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

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Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

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

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

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

IDC ***01*** *00:17:28.3±0.4, 10°.31S×75°.55W, h0km, mb5.1/25, mb1 5.2/27, mb1mx5.2/28, mbtmp5.0/27, ML4.1/1, MS4.9/26, Ms1 4.9/26, ms1mx4.9/29, Error ellipse: s-maj=13.9km s-min=9.9km az=82.0*

ISCJB ***01*** *00:17:31.0±0.1, 10°.29S±0°.03×75°.60W±0°.02, h27km, mb5.3/231, MS5.0/80, Error ellipse: s-maj=4.2km s-min=2.8km az=36.4*

GCMT ***01*** *00:17:30.9±0.1, 10°.38S×75°.42W, h12km, MW5.4, Moment Tensor Solution. s65,c109; s15,c16; Moment tensor: Scale 10^{17}Nm; M_{rr}1.56±.02; $M_{\theta\theta}$-0.19±.02; $M_{\phi\phi}$-1.37±.02; $M_{r\theta}$0.24±.06; $M_{\theta\phi}$0.61±.02; $M_{\phi r}$0.64±.06; Best double couple: $M_0$1.70000×10^{17} NP1:ϕ_s142.00000°, δ38.00000°, λ66.00000°. NP2:ϕ_s352.00000°, δ56.00000°, λ108.00000°. Principal axes: T 1.7600, Plg73.0000°, Azm309.0000°; N -0.0600, Plg15.0000°, Azm162.0000°; P -1.7100, Plg9.0000°, Azm69.0000°; Data Used: II IU G CN IC. Surface waves: sta= 95, comp=190, per= 50.*

MOS ***01*** *00:17:32.1±1.0, 10°.29S×75°.57W, h33km, mb5.5/88, MS5.0/23 Error ellipse: s-maj=7.3km s-min=4.8km az=95.8*

NEIC ***01*** *00:17:33.2±1.4, 10°.37S×75°.51W, h33km±9km, mb5.4/189, MS5.0/43, ML5.3(LIM), Error ellipse: s-maj=4.5km s-min=3.0km az=225.0*

NEIC Forty-five people injured in Oxapampa. About 60 houses destroyed and 25 damaged in Huancabamba. Landslides destroyed roads between Huancabamba and Pozuzo. Felt [VI] at Espiritu Pata, Huancabamba, Jatunpata, Lanturache, Tingo and Torrebamba; [III] at Chotabanda, Oxapampa, Palcazu and Pozuzo; [II] at Puerto Bermudez and Villa Rica.

ISC 01 00:17:32.8±1.6, **10°.36S**±0°.03×**75°.50W**±0°.02, **h28**km±11km, **h29**km±1.7km**:pP-P, n1114, σ0s.74**/965, **mb5.3**/231, **MS5.0**/80, **225C-207D, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	**Nana**	**2.09**	**219**	Pn	**Pn**	**00 18 05.0**	**-0.9**
	64μm,0.4s						
NNA	**Nana**	**2.09**	**219**	Pn	**Pn**	**00 18 05.8**	**-0.1**
	476nm,0.3s,baz=36,slow=17,SNR=577						
NNA				Lg		00 18 32.9	
	1μm,0.3s,baz=246,slow=12,SNR=9.5						
NNA				LR	LR	00 18 51.8	
	comp=Z,25μm,20.0s,baz=53,slow=40						
NNA	**Nana**	**2.09**	**219**	*e*Pn	**Pn**	**00 18 05.7**	**-0.1**
NNA				*e*Sn	**Sn**	**00 18 32.8**	**+1.9**
ATAH	**Atahualpa**	**4.29**	**318**	Pn	**Pn**	**00 18 39.0**	**+2.8**
	28nm,0.3s,baz=126,slow=10,SNR=126						
ATAH				Lg		00 19 41.4	
	58nm,0.3s,baz=307,slow=12,SNR=5.4						
ATAH				LR	LR	00 20 18.9	
	comp=Z,9μm,21.1s,baz=304,slow=40						
LPAZ	**La Paz**	**9.28**	**130**	Pn	**Pn**	**00 19 47.0**	**+2.3**
	0.8nm,0.3s,baz=331,slow=13,SNR=51						
LPAZ				Pg	Pn	00 20 16.5	+32
	1.9nm,0.3s,baz=5.9,slow=13,SNR=7.2						
LPAZ				Lg		00 22 23.1	
	4.5nm,0.3s,baz=172,slow=21,SNR=6.6						
LPAZ				LR	LR	00 23 36.4	
	comp=Z,6μm,18.6s,baz=322,slow=39						
LPAZ	**La Paz**	**9.28**	**130**	*e*Pn	**Pn**	**00 19 45.9**	**+1.1**
LPAZ				*e*Sn	**Sn**	**00 21 27.9**	**-0.4**
OTAV	**Otavalo**	**10.93**	**344**	*e*Pn	**Pn**	**00 20 07.8**	**+0.5**
OTAV				Sn	**Sn**	**00 22 08.4**	**-0.4**
ROSC	**El Rosal**	**15.16**	**4**	Pn	**Pn**	**00 21 02.8**	**-2.2**
	0.5nm,0.3s,baz=73,slow=23,SNR=3.5						
ROSC				Lg		00 25 34.0	
	1.2nm,0.3s,baz=269,slow=23,SNR=2.7						
ROSC				LR	LR	00 27 38.8	
	comp=Z,6μm,18.5s,baz=193,slow=40						
ROSC	**El Rosal**	**15.16**	**4**	*e*Pn	**Pn**	**00 21 07.0**	**+2.0**
ROSC				Sn	**Sn**	**00 23 53.2**	**+1.0**
ROSC				Lg		00 25 34.0	
ROSC				LR	LR	00 27 38.8	
LCO	**Las Campanas**	**19.09**	**167**	*e*P	**Pn**	**00 21 53.5**	**-0.8**
	64nm,1.0s						
LCO				Sn	**Sn**	**00 25 26.4**	**-1.0**
BCIP	**Isla Barro Col**	**19.87**	**347**	*e*P	**Pn**	**00 22 01.6**	**-2.0**
CFAA	**Coronel Fontan**	**22.19**	**163**	P	**P**	**00 22 26.6**	**-0.2**
	2.1nm,0.6s,baz=340,slow=9.8,SNR=28						
CFAA				LR	LR	00 30 12.2	
	comp=Z,276nm,19.9s,baz=121,slow=34						
JTS	**JuntasAbangare**	**22.56**	**335**	P	**P**	**00 22 29.7**	**-1.2**
	12nm,0.8s,mb4.3,baz=133,slow=7.2,SNR=7.9						
JTS				LR	LR	00 30 50.8	
	comp=Z,2μm,18.9s,MS4.6,baz=168,slow=36						
JTS	**JuntasAbangare**	**22.56**	**335**	*e*P	**P**	**00 22 31.9**	**+1.0**
JTS				pmax	pmax		
	comp=Z,181nm,1.5s						
JTS				MLR	MLR		
	comp=Z,2μm,19.0s						
JTS	**JuntasAbangare**	**22.56**	**335**	*e*P	**P**	**00 22 31.9**	**+1.1**
	comp=Z,181nm,1.5s,mb5.3						
JTS				LR	LR		
	comp=Z,2μm,19.0s,MS4.7						
PCRV	**Puerto La Cruz**	**23.09**	**28**	P	**P**	**00 22 36.1**	**-0.3**
	comp=Z,12nm,0.5s,mb4.5,baz=296,slow=5.8,SNR=4.4						
PCRV				Lg		00 29 43.2	
	comp=Z,15nm,0.8s,baz=152,slow=18,SNR=3.3						
PCRV				LR	LR	00 32 27.9	
	comp=Z,15μm,19.9s,MS5.4,baz=202,slow=39						
FCH	**Farellones**	**23.36**	**169**	*e*P	**P**	**00 22 35.2**	**-3.9**
CPUP	**Villa Florida**	**23.40**	**135**	P	**P**	**00 22 38.8**	**-0.9**
	comp=Z,29nm,0.8s,mb4.8,baz=301,slow=9.3,SNR=67						
CPUP				LR	LR	00 33 37.4	
	comp=Z,4μm,19.6s,MS4.9,baz=313,slow=41						
CPUP	**Villa Florida**	**23.40**	**135**	P	**P**	**00 22 38.8**	**-0.9**
CPUP				LR	LR	00 33 37.4	
LMEL	**Las Melosas**	**23.88**	**169**	*e*P	**P**	**00 22 44.7**	**+0.7**
LMEL	**Las Melosas**	**23.88**	**169**	*e*P	**P**	**00 22 44.7**	**+0.7**
GRGR	**Grenville**	**26.24**	**32**	*e*P	**P**	**00 23 03.9**	**-1.7**
	comp=Z,539nm,1.1s,mb6.0						
TGUH	**Tegucigalpa,Un**	**26.92**	**334**	*e*P	**P**	**00 23 12.0**	**+0.3**
	comp=Z,85nm,1.3s,mb5.1						
TGUH				*e*PcP	PcP	00 26 34.7	+1.1
TGUH				LR	LR		
	comp=Z,1μm,21.0s,MS4.5						
BBGH	**Gun Hill**	**28.21**	**34**	PFAKE		00 23 40.0	+17
BBGH				LR	LR		
	comp=Z,9μm,20.0s,MS5.3						
MTDJ	**Mount Denham**	**28.47**	**356**	*e*P	**P**	**00 23 26.0**	**+0.5**
	comp=Z,278nm,1.5s,mb5.7						
APG	**El Apazote**	**29.24**	**329**	P	**P**	**00 23 31.2**	**-1.2**
	comp=Z,19nm,1.0s,mb4.8,baz=157,slow=8.4,SNR=16						
APG				LR	LR	00 34 06.8	
	comp=Z,2μm,21.6s,MS4.6,baz=151,slow=34						
ICM	**Isla Caja Muer**	**29.44**	**18**	*e*P	**P**	**00 23 35.9**	**+1.8**
SDDR	**Presa de Saban**	**29.45**	**8**	PFAKE		00 23 50.0	+16
SDDR				LR	LR		
	comp=Z,5μm,22.0s,MS5.1						
LSP	**Las Mesas**	**29.54**	**16**	*e*P	**P**	**00 23 34.9**	**-0.2**
OBIP	**Obispado Ponce**	**29.55**	**17**	*e*P	**P**	**00 23 35.0**	**-0.2**
	comp=Z,118nm,1.0s,mb5.6						
MPR	**Mayaguez**	**29.56**	**16**	*e*P	**P**	**00 23 35.1**	**-0.1**
CELP	**Cerrillos**	**29.59**	**17**	*e*P	**P**	**00 23 35.7**	**+0.2**
LRS	**Lares**	**29.72**	**17**	*e*P	**P**	**00 23 39.2**	**+2.6**
SJG	**San Juan**	**29.76**	**18**	P	**P**	**00 23 36.1**	**-0.9**
	comp=Z,40nm,0.8s,mb5.2,baz=228,slow=2.8,SNR=10						
SJG	**San Juan**	**29.76**	**18**	*e*P	**P**	**00 23 36.4**	**-0.6**
SJG				pmax	pmax		
	comp=Z,83nm,1.1s						
SJG				MLR	MLR		
	comp=Z,2μm,20.0s						
SJG	**San Juan**	**29.76**	**18**	*e*P	**P**	**00 23 36.4**	**-0.6**
	comp=Z,83nm,1.1s,mb5.4						
SJG				LR	LR		
	comp=Z,2μm,20.0s,MS4.8						
AOPR	**Arecibo Observ**	**29.80**	**17**	*e*P	**P**	**00 23 37.2**	**-0.1**
	comp=Z,62nm,0.9s,mb5.3						
SPB	**Sao Paulo**	**29.82**	**120**	P	**P**	**00 23 37.5**	**-0.1**
	comp=Z,18nm,0.8s,mb4.8						
HUMP	**Col San Antoni**	**29.88**	**19**	*e*P	**P**	**00 23 39.6**	**+1.5**
	comp=Z,50nm,1.0s,mb5.2						
MTP	**Monte Pirata**	**29.93**	**19**	*e*P	**P**	**00 23 38.0**	**-0.6**
	comp=Z,58nm,1.1s,mb5.2						
CBYP	**Canovanas**	**30.00**	**19**	*e*P	**P**	**00 23 37.4**	**-1.7**
	comp=Z,97nm,1.1s,mb5.4						
TRQA	**Tornquist**	**30.14**	**158**	*e*P	**P**	**00 23 38.9**	**-1.3**
	comp=Z,99nm,1.5s,mb5.3						
TRQA				LR	LR		
	comp=Z,2μm,21.0s,MS4.8						
PLCA	**Paso Flores**	**30.57**	**173**	P	**P**	**00 23 44.0**	**0.0**
	comp=Z,6.5nm,0.8s,mb4.5,baz=347,slow=8.7,SNR=7.7						
PLCA				PcP	PcP	00 26 45.3	+3.0
	comp=Z,9.6nm,1.1s,baz=308,slow=2.2,SNR=3.8						
PLCA				LR	LR	00 34 33.8	
	comp=Z,696nm,18.4s,MS4.3,baz=179,slow=34						
PLCA	**Paso Flores**	**30.57**	**173**	P	**P**	**00 23 44.0**	**0.0**
PLCA						00 26 45.3	
ANWB	**Willy Bob**	**30.97**	**26**	*e*P	**P**	**00 23 45.0**	**-2.7**
	comp=Z,303nm,1.3s,mb6.0						
TEIG	**Tepich**	**32.89**	**338**	*e*P	**P**	**00 24 04.6**	**+0.1**
	comp=Z,86nm,1.0s,mb5.6						
TEIG				LR	LR		
	comp=Z,2μm,19.0s,MS4.8						
CMIG	**Matias Romero**	**33.33**	**325**	P	**P**	**00 24 07.4**	**-1.1**
	comp=Z,12nm,0.9s,mb4.8,baz=120,slow=4.9,SNR=14						
CMIG				PcP	PcP	00 26 51.6	+1.4
	comp=Z,8.7nm,1.0s,baz=72,slow=1.3,SNR=5.1						
CMIG				LR	LR	00 35 45.9	
	comp=Z,1μm,22.0s,MS4.6,baz=137,slow=33						
CAM4	**Nova Friburgo**	**33.70**	**115**	⇑*i*P	**P**	**00 24 11.2**	**-0.5**
CAM4				*i*		00 24 17.0	
CAM4				*i*		00 24 25.4	
CAM4				*i*		00 24 31.1	
CAM4				*i*		00 25 02.3	
RPN	**Rapa Nui**	**35.96**	**238**	LR	LR	00 34 18.4	
	comp=Z,525nm,20.9s,MS4.3,baz=59,slow=28						
DWPF	**Disney**	**38.67**	**352**	PFAKE		00 25 10.0	+16
DWPF				LR	LR		
	comp=Z,1μm,21.0s,MS4.7						
RCBR	**Riachuelo**	**39.44**	**87**	*e*P	**P**	**00 25 00.8**	**0.0**
	comp=Z,28nm,1.0s,mb5.0						
RCBR				LR	LR		
	comp=Z,2μm,20.0s,MS5.0						
BRAL	**Brewton**	**42.60**	**345**	*e*P	**P**	**00 25 27.3**	**+0.8**
	comp=Z,123nm,1.3s,mb5.5						
NHSC	**New Hope**	**43.45**	**354**	*e*P	**P**	**00 25 34.0**	**+0.7**
	comp=Z,125nm,1.0s,mb5.6						
KVTX	**Kingsville**	**43.48**	**331**	*e*P	**P**	**00 25 35.5**	**+1.8**
	comp=Z,121nm,1.0s,mb5.6						
BBSR	**BB Station**	**43.72**	**13**	PFAKE		00 25 50.0	+14
BBSR				LR	LR		
	comp=Z,1μm,19.0s,MS4.8						
GOGA	**Godfrey**	**44.18**	**350**	*e*P	**P**	**00 25 39.1**	**-0.1**
GOGA				pmax	pmax		
	comp=Z,79nm,1.7s,mb5.2						
GOGA	**Godfrey**	**44.18**	**350**	*e*P	**P**	**00 25 39.1**	**-0.1**
	comp=Z,79nm,1.7s,mb5.2						
LRAL	**Lakeview Retre**	**44.52**	**346**	*e*P	**P**	**00 25 40.9**	**-1.0**
	comp=Z,45nm,0.9s,mb5.3						
HKT	**Hockley**	**44.60**	**335**	⇑*e*P	**P**	**00 25 43.1**	**+0.5**
HKT				*e*		00 27 25.1	
HKT				pmax	pmax		
	comp=Z,109nm,1.6s,mb5.4						
HKT	**Hockley**	**44.60**	**335**	⇑*e*P	**P**	**00 25 43.1**	**+0.5**
	comp=Z,109nm,1.6s,mb5.4						
HKT				*e*PcP	PcP	00 27 25.1	-0.2
VBMS	**Vicksburg**	**44.70**	**342**	*e*P	**P**	**00 25 43.2**	**-0.2**
	comp=Z,73nm,1.4s,mb5.3						
JSC	**Jenkinsville**	**44.73**	**353**	*e*P	**P**	**00 25 42.9**	**-0.7**
CNNC	**Cliffs of the**	**45.40**	**357**	*e*P	**P**	**00 25 50.4**	**+1.5**
	comp=Z,102nm,1.3s,mb5.5						
NATX	**Nacogdoches**	**45.72**	**337**	*e*P	**P**	**00 25 52.5**	**+1.0**
	comp=Z,289nm,1.5s,mb6.0						
CPCT	**Cooper Cave**	**46.35**	**350**	*e*P	**P**	**00 25 56.1**	**-0.3**
CPCT				*e*PcP	PcP	00 27 31.5	+0.2
SWET	**Sewanee**	**46.39**	**348**	*e*P	**P**	**00 25 55.3**	**-1.3**
TKL	**Tuckaleechee C**	**46.43**	**351**	*e*P	**P**	**00 25 56.4**	**-0.6**
OXF	**Oxford**	**46.53**	**344**	*e*P	**P**	**00 25 56.3**	**-1.5**
OXF				*e*		00 27 32.4	
OXF				pmax	pmax		
	comp=Z,122nm,1.1s,mb5.7						
OXF				MLR	MLR		
	comp=Z,422nm,19.0s,MS4.4						
OXF	**Oxford**	**46.53**	**344**	*e*P	**P**	**00 25 56.3**	**-1.6**
	comp=Z,122nm,1.1s,mb5.8						
OXF				*e*PcP	PcP	00 27 32.4	+0.5
OXF				LR	LR		
	comp=Z,422nm,19.0s,MS4.4						
JCT	**Junction City**	**46.84**	**331**	*e*P	**P**	**00 26 00.6**	**+0.3**
JCT				pmax	pmax		
	comp=Z,38nm,1.1s,mb5.2						
JCT	**Junction City**	**46.84**	**331**	*e*P	**P**	**00 26 00.6**	**+0.2**
	comp=Z,38nm,1.1s,mb5.2						
VWCC	**Virginia Weste**	**47.53**	**355**	*e*P	**P**	**00 26 06.6**	**+1.0**
BLA	**Blacksburg**	**47.54**	**355**	⇓*e*P	**P**	**00 26 05.8**	**+0.1**
BLA						00 27 35.9	
BLA				pmax	pmax		
	comp=Z,90nm,1.4s,mb5.6						
BLA	**Blacksburg**	**47.54**	**355**	⇓*e*P	**P**	**00 26 05.8**	**+0.1**
	comp=Z,90nm,1.4s,mb5.6						
BLA				PcP	PcP	00 27 35.9	+0.5
ELN	**Prospectdale**	**47.59**	**354**	*e*P	**P**	**00 26 05.9**	**-0.1**
628A	**Black Gap, Mar**	**47.60**	**327**	⇓P	**P**	**00 26 06.6**	**+0.3**
	baz=48						
UALR	**University of**	**47.64**	**341**	*e*P	**P**	**00 26 05.4**	**-1.0**
	comp=Z,85nm,1.0s,mb5.7						
WVT	**Waverly**	**47.67**	**346**	*e*P	**P**	**00 26 03.7**	**-3.0**
WVT				pmax	pmax		
	comp=Z,42nm,1.3s,mb5.3						
WVT				MLR	MLR		
	comp=Z,868nm,19.0s,MS4.8						
WVT	**Waverly**	**47.67**	**346**	*e*P	**P**	**00 26 03.7**	**-3.0**
	comp=Z,42nm,1.3s,mb5.3						
WVT				LR	LR		
	comp=Z,868nm,19.0s,MS4.8						
MIAR	**Mount Ida**	**47.83**	**340**	*e*P	**P**	**00 26 06.9**	**-1.1**
MIAR				pmax	pmax		
	comp=Z,47nm,0.9s,mb5.5						
MIAR				MLR	MLR		
	comp=Z,441nm,21.0s,MS4.4						
MIAR	**Mount Ida**	**47.83**	**340**	*e*P	**P**	**00 26 06.9**	**-1.1**
	comp=Z,47nm,0.9s,mb5.5						
MIAR				LR	LR		
	comp=Z,441nm,21.0s,MS4.4						
627A	**Terlingua Ranc**	**47.85**	**327**	⇑P	**P**	**00 26 08.3**	**+0.1**
	baz=48,SNR=28						
JSRW	**J. Sargeant Re**	**47.85**	**357**	*e*P	**P**	**00 26 08.9**	**+0.9**
TXAR	**Lajitas Array**	**47.91**	**326**	P	**P**	**00 26 08.0**	**-0.7**
	comp=Z,12nm,0.8s,mb5.0,baz=148,slow=8.9,SNR=55						
TXAR				PcP	PcP	00 27 37.7	+0.8
	comp=Z,4.5nm,0.9s,baz=148,slow=7.1,SNR=3.8						
TXAR				LR	LR	00 44 41.3	
	comp=Z,882nm,20.3s,MS4.7,baz=300,slow=34						
TXAR	**Lajitas Array**	**47.91**	**326**	P	**P**	**00 26 08.0**	**-0.6**
TXAR						00 27 37.7	
TXAR	**Lajitas Array**	**47.91**	**326**	P	**P**	**00 26 08.0**	**-0.7**
TXAR				PcP	PcP	00 27 37.7	+0.8
TXAR				LR	LR	00 44 41.2	
GNAR	**Gosnell**	**48.06**	**344**	*e*P	**P**	**00 26 09.1**	**-0.7**
	comp=Z,950nm,1.0s,mb6.8						
528A	**Cox Ranch, San**	**48.08**	**328**	⇑P	**P**	**00 26 09.6**	**-0.4**
	baz=48,SNR=29						
626A	**Big Bend Ranch**	**48.33**	**326**	⇓P	**P**	**00 26 12.1**	**+0.2**
	baz=48,SNR=64						
428A	**Kincaid Ranch,**	**48.48**	**328**	⇑P	**P**	**00 26 13.1**	**0.0**
	baz=49,SNR=14						
527A	**Woodward Ranch**	**48.51**	**327**	⇑P	**P**	**00 26 13.2**	**-0.1**
	baz=49,SNR=48						
PARMO	**Parma**	**48.65**	**345**	*e*P	**P**	**00 26 13.6**	**-0.7**
526A	**Mary Lane Ranc**	**48.70**	**326**	⇑P	**P**	**00 26 15.0**	**+0.2**
	baz=49,SNR=47						
427A	**Hayter Ranch,**	**48.95**	**328**	⇓P	**P**	**00 26 16.4**	**-0.3**
	baz=49,SNR=14						
328A	**Wristen Ranch,**	**49.07**	**329**	⇑P	**P**	**00 26 17.2**	**-0.3**
	baz=49,SNR=32						
426A	**McDonald Obser**	**49.14**	**327**	⇓P	**P**	**00 26 17.9**	**-0.2**
	baz=49,SNR=30						
WCI	**Wyandotte Cave**	**49.37**	**349**	*e*P	**P**	**00 26 18.8**	**-1.0**
USIN	**University of**	**49.40**	**347**	*e*P	**P**	**00 26 18.9**	**-1.0**
	comp=Z,69nm,1.0s,mb5.6						
SIUC	**Southern Illin**	**49.52**	**346**	*e*P	**P**	**00 26 19.7**	**-1.2**
	comp=Z,93nm,0.9s,mb5.8						
326A	**Caldwell Ranch**	**49.62**	**328**	⇓P	**P**	**00 26 21.4**	**-0.4**
	baz=50,SNR=25						
227A	**Bennet, Jal**	**49.82**	**329**	⇑P	**P**	**00 26 22.9**	**-0.3**
	baz=50,SNR=19						
MCWV	**Mont Chateau**	**49.92**	**356**	*e*P	**P**	**00 26 24.8**	**+0.8**
WMOK	**Wichita Mounta**	**49.98**	**335**	*e*P	**P**	**00 26 23.9**	**-0.6**
WMOK				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.2						
WMOK				MLR	MLR		
	comp=Z,456nm,22.0s,MS4.4						
WMOK	**Wichita Mounta**	**49.98**	**335**	*e*P	**P**	**00 26 23.9**	**-0.6**
	comp=Z,24nm,1.0s,mb5.2						
WMOK				LR	LR		
	comp=Z,456nm,22.0s,MS4.4						
FVM	**French Village**	**50.08**	**345**	*e*P	**P**	**00 26 23.3**	**-1.8**
FVM				pmax	pmax		
	comp=Z,84nm,0.9s,mb5.8						
FVM	**French Village**	**50.08**	**345**	*e*P	**P**	**00 26 23.2**	**-1.9**
	comp=Z,84nm,0.9s,mb5.8						
MVL	**Millersville**	**50.10**	**359**	*e*P	**P**	**00 26 25.5**	**+0.2**
	comp=Z,65nm,1.4s,mb5.5						
325A	**Bean Ranch, Si**	**50.19**	**327**	⇓P	**P**	**00 26 25.8**	**-0.4**
	baz=50,SNR=50						
OLIL	**Olney**	**50.23**	**347**	*e*P	**P**	**00 26 25.7**	**-0.6**
	comp=Z,50nm,0.8s,mb5.6						
226A	**Malaga, Loving**	**50.27**	**328**	⇓P	**P**	**00 26 26.9**	**+0.2**
	baz=50,SNR=30						
CLNB	**Carlsbad**	**50.32**	**328**	*e*P	**P**	**00 26 27.4**	**+0.3**
	comp=Z,2.7nm,0.5s,mb4.5						
CLNB				*e*PcP	PcP	00 27 45.9	+0.3
BLO	**Bloomington**	**50.33**	**349**	*e*P	**P**	**00 26 25.7**	**-1.3**
BLO				pmax	pmax		
	comp=Z,212nm,1.7s,mb5.9						
BLO	**Bloomington**	**50.33**	**349**	*e*P	**P**	**00 26 25.7**	**-1.3**
	comp=Z,212nm,1.7s,mb5.9						
127A	**Arkansas Junct**	**50.38**	**329**	⇑P	**P**	**00 26 26.9**	**-0.6**
	baz=51,SNR=15						
GDL2	**Guadalupe Moun**	**50.52**	**328**	*e*P	**P**	**00 26 28.9**	**+0.3**
324A	**Moseley Ranch,**	**50.53**	**326**	⇓P	**P**	**00 26 28.0**	**-0.7**
	baz=51,SNR=40						
SLM	**Saint Louis**	**50.64**	**345**	*e*P	**P**	**00 26 29.6**	**+0.2**
SLM				pmax	pmax		
	comp=Z,88nm,1.3s,mb5.5						
SLM	**Saint Louis**	**50.64**	**345**	*e*P	**P**	**00 26 29.6**	**+0.2**
	comp=Z,88nm,1.3s,mb5.5						
MNTX	**Cornudas Mount**	**50.67**	**327**	⇑*e*P	**P**	**00 26 28.8**	**-1.0**
	comp=Z,53nm,1.4s,mb5.3						
MNTX				*e*PcP	PcP	00 27 47.5	+0.6
225A	**Deer Hill, Car**	**50.69**	**328**	⇓P	**P**	**00 26 29.8**	**0.0**
	baz=51,SNR=41						
126A	**Clayton Basin,**	**50.69**	**329**	⇑P	**P**	**00 26 29.8**	**-0.1**
	baz=51,SNR=16						
126A				⇓S	**S**	**00 33 46.7**	**+3.3**
	baz=51						
SSPA	**Standing Stone**	**50.78**	**358**	*e*P	**P**	**00 26 30.2**	**-0.2**
	comp=Z,40nm,1.3s,mb5.2						
SSPA				*e*PcP	PcP	00 27 47.1	0.0
ACSO	**Alum Creek Sta**	**50.81**	**353**	*e*P	**P**	**00 26 29.4**	**-1.2**
	comp=Z,95nm,1.0s,mb5.7						
ACSO				LR	LR		
	comp=Z,754nm,21.0s,MS4.7						
Z27A	**Tatum**	**50.82**	**330**	⇑P	**P**	**00 26 30.1**	**-0.7**
	baz=51,SNR=34						
CPRX	**Cap Rock**	**50.92**	**329**	*e*P	**P**	**00 26 32.0**	**+0.4**
	comp=Z,38nm,0.9s,mb5.3						
125A	**Gardner Draw,**	**51.03**	**328**	⇑P	**P**	**00 26 32.2**	**-0.3**
	baz=51,SNR=29						
224A	**Cornudas Mount**	**51.03**	**327**	⇓P	**P**	**00 26 31.9**	**-0.6**
	baz=51,SNR=41						
PAL	**Palisades**	**51.12**	**2**	*e*P	**P**	**00 26 35.2**	**+2.2**
PAL				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
PAL	**Palisades**	**51.12**	**2**	*e*P	**P**	**00 26 35.2**	**+2.2**
	comp=Z,30nm,1.0s,mb5.2						
MSTX	**Muleshoe**	**51.13**	**331**	⇑P	**P**	**00 26 32.5**	**-0.7**
	baz=51,SNR=16						
Z26A	**Caprock**	**51.17**	**329**	⇑P	**P**	**00 26 33.1**	**-0.4**
	baz=51,SNR=41						
Y27A	**Causey**	**51.26**	**330**	⇓P	**P**	**00 26 33.2**	**-0.9**
	baz=52,SNR=28						
AMTX	**Amarillo**	**51.37**	**332**	*e*P	**P**	**00 26 35.2**	**+0.2**
YLE	**Yale**	**51.47**	**2**	*e*P	**P**	**00 26 37.3**	**+1.7**
223A	**Chaparral, Ant**	**51.47**	**326**	⇑P	**P**	**00 26 35.3**	**-0.5**
	baz=52						
124A	**Stringfield Ra**	**51.48**	**327**	⇓P	**P**	**00 26 35.7**	**-0.1**
	baz=52,SNR=28						
Z25A	**Roswell**	**51.55**	**329**	⇑P	**P**	**00 26 35.8**	**-0.5**
	baz=52,SNR=23						
Y26A	**Elida**	**51.61**	**330**	⇑P	**P**	**00 26 36.2**	**-0.6**
	baz=52						
X27A	**F and S Farms,**	**51.84**	**331**	⇓P	**P**	**00 26 37.8**	**-0.6**
	baz=52,SNR=20						
123A	**Bell Site, Whi**	**51.86**	**327**	⇑P	**P**	**00 26 38.5**	**-0.2**
	baz=52						
222A	**Williams Famil**	**51.92**	**326**	⇑P	**P**	**00 26 39.3**	**+0.2**
	baz=52,SNR=44						
ALLY	**Alegheny Colle**	**51.92**	**356**	*e*P	**P**	**00 26 39.6**	**+0.6**
	comp=Z,106nm,1.4s,mb5.6						
Z24A	**Sheeppen Canyo**	**51.92**	**328**	⇑P	**P**	**00 26 38.9**	**-0.2**
	baz=52,SNR=51						
Y25A	**Mesa, Roswell**	**52.05**	**329**	⇑P	**P**	**00 26 39.4**	**-0.6**
	baz=52,SNR=8.0						
X26A	**CR and CF Fran**	**52.11**	**330**	⇑P	**P**	**00 26 40.0**	**-0.5**
	baz=52,SNR=29						
320A	**Kipp Ranch, An**	**52.16**	**324**	⇑P	**P**	**00 26 41.5**	**+0.5**
	baz=52,SNR=18						
W27A	**Bowe Ranch, En**	**52.16**	**331**	⇓P	**P**	**00 26 40.4**	**-0.5**
	baz=52,SNR=34						
221A	**Mesquite Ranch**	**52.23**	**325**	⇑P	**P**	**00 26 41.8**	**+0.4**
	baz=52						
HDIL	**Hopedale**	**52.24**	**347**	*e*P	**P**	**00 26 39.6**	**-1.8**
BINY	**Binghamton**	**52.30**	**360**	*e*P	**P**	**00 26 41.5**	**-0.2**
122A	**Conniff Cattle**	**52.31**	**326**	⇑P	**P**	**00 26 42.4**	**+0.4**
	baz=52,SNR=6.5						
Z23A	**Rita Site, Whi**	**52.33**	**327**	⇑P	**P**	**00 26 42.1**	**0.0**
	baz=52,SNR=14						
ERPA	**Erie**	**52.38**	**356**	*e*P	**P**	**00 26 43.5**	**+1.2**
Y24A	**Capitan**	**52.43**	**328**	⇑P	**P**	**00 26 42.3**	**-0.6**
	baz=53,SNR=15						
X25A	**Clemmons Ranch**	**52.51**	**330**	⇑P	**P**	**00 26 42.7**	**-0.8**
	baz=53,SNR=11						
W26A	**Owens Ranch, T**	**52.52**	**331**	⇓P	**P**	**00 26 42.9**	**-0.6**
	baz=53,SNR=7.6						
220A	**Playas Peak, P**	**52.58**	**324**	⇓P	**P**	**00 26 44.4**	**+0.4**
	baz=53,SNR=71						
121A	**Cookes Peak, D**	**52.62**	**325**	⇓P	**P**	**00 26 44.9**	**+0.6**
	baz=53,SNR=28						
319A	**Douglas**	**52.63**	**323**	⇑P	**P**	**00 26 44.7**	**+0.3**
	baz=53,SNR=42						
Z22A	**Elephant Butte**	**52.72**	**327**	⇑P	**P**	**00 26 45.1**	**0.0**
	baz=53,SNR=30						
Y23A	**Lovelace Mesa,**	**52.75**	**328**	⇑P	**P**	**00 26 45.0**	**-0.3**
	baz=53,SNR=19						
TRY	**Troy**	**52.85**	**2**	*e*P	**P**	**00 26 48.1**	**+2.3**
X24A	**Lazy VL Ranch,**	**52.93**	**329**	⇓P	**P**	**00 26 46.0**	**-0.5**
	baz=53						
AAM	**Ann Arbor**	**52.93**	**352**	*e*P	**P**	**00 26 46.5**	**+0.1**
AAM				pmax	pmax		
	comp=Z,37nm,1.2s,mb5.2						
AAM	**Ann Arbor**	**52.93**	**352**	*e*P	**P**	**00 26 46.5**	**+0.1**
	comp=Z,37nm,1.2s,mb5.2						
W25A	**X Bar L Ranch,**	**52.96**	**330**	⇑P	**P**	**00 26 46.0**	**-0.8**
	baz=53,SNR=33						
KSU1	**Kansas State U**	**52.98**	**339**	PFAKE		00 27 00.0	+13
KSU1				LR	LR		
	comp=Z,426nm,20.0s,MS4.5						
219A	**White Tail Can**	**53.07**	**324**	⇑P	**P**	**00 26 48.1**	**+0.4**
	baz=53,SNR=56						
318A	**Bisbee**	**53.09**	**323**	⇑P	**P**	**00 26 48.2**	**+0.3**
	baz=53,SNR=40						
V26A	**Tequesquite Ra**	**53.10**	**331**	⇑P	**P**	**00 26 47.2**	**-0.6**
	baz=53,SNR=32						
120A	**U Bar Ranch, L**	**53.11**	**325**	⇑P	**P**	**00 26 48.4**	**+0.5**
	baz=53,SNR=28						
Z21A	**St. Cloud Mine**	**53.14**	**326**	⇑P	**P**	**00 26 48.5**	**+0.4**
	baz=53,SNR=33						
BNM	**Barren Site**	**53.22**	**328**	*e*P	**P**	**00 26 49.0**	**+0.2**
	comp=Z,39nm,1.4s,mb5.2						
BNM				*e*PcP	PcP	00 27 59.0	+2.6
Y22A	**Socorro**	**53.24**	**327**	⇑P	**P**	**00 26 48.8**	**-0.1**
	baz=53,SNR=17						
Y22D	**IRIS PASSCAL I**	**53.32**	**327**	⇑P	**P**	**00 26 50.2**	**+0.7**
	baz=54						
X23A	**Hourglass Bar**	**53.33**	**328**	⇑P	**P**	**00 26 49.2**	**-0.3**
	baz=54						
LPM	**Los Pinos Moun**	**53.35**	**328**	*e*P	**P**	**00 26 50.2**	**+0.6**
LENM	**Lemitar**	**53.42**	**327**	*e*P	**P**	**00 26 51.3**	**+1.1**
W24A	**Lazy 6 Ranch,**	**53.42**	**329**	⇓P	**P**	**00 26 49.5**	**-0.7**
	baz=54,SNR=20						
ACCN	**Adirondack Com**	**53.51**	**2**	*e*P	**P**	**00 26 51.7**	**+1.1**
	comp=Z,63nm,1.4s,mb5.4						
Z20A	**Nine Sixteen R**	**53.51**	**325**	⇓P	**P**	**00 26 51.2**	**+0.4**
	baz=54,SNR=55						
218A	**Dragoon**	**53.51**	**323**	⇑P	**P**	**00 26 51.1**	**+0.2**
	baz=54,SNR=18						
V25A	**Rancho No Teng**	**53.53**	**331**	⇓P	**P**	**00 26 50.6**	**-0.4**
	baz=54,SNR=56						
U26A	**Atchley Ranch,**	**53.57**	**332**	⇑P	**P**	**00 26 50.7**	**-0.5**
	baz=54,SNR=17						
119A	**Ashpeak Ranch,**	**53.65**	**324**	⇓P	**P**	**00 26 52.2**	**+0.2**
	baz=54,SNR=12						

Y21A **Point of Rocks** 53.67 327 ⇓P P 00 26 52.6 +0.5
baz=54,SNR=45
LAZ **Ladron** 53.69 327 eP P 00 26 52.8 +0.7
comp=Z,24nm,1.3s,mb5.0
LAZ ePcP PcP 00 27 56.5 -1.7
X22A **Bernardo** 53.70 328 ⇑P P 00 26 52.7 +0.5
baz=54
W23A **Werner Place,** 53.76 329 ⇑P P 00 26 52.5 -0.1
baz=54,SNR=8.4
CBKS **Cedar Bluff** 53.88 337 eP P 00 26 55.1 +1.6
U25A **Circle Dot Ran** 53.89 331 ⇓P P 00 26 53.3 -0.3
baz=54,SNR=23
118A **Homack Ranch,** 53.95 324 ⇓P P 00 26 54.2 +0.1
baz=54,SNR=29
Y20A **Horse Springs,** 53.98 326 ⇓P P 00 26 54.8 +0.5
baz=54,SNR=22
Z19A **T-Link Ranch,** 54.02 325 ⇓P P 00 26 55.1 +0.5
baz=54,SNR=5.2
W22A **Albuquerque** 54.06 328 ⇓P P 00 26 55.4 +0.5
baz=54
X21A **Alamocita Cree** 54.06 327 ⇑P P 00 26 55.6 +0.7
baz=54,SNR=68
NCB **Newcomb** 54.08 1 eP P 00 26 54.7 -0.1
TUC **Tucson** 54.19 323 eP P 00 26 56.2 +0.4
TUC e 00 27 59.8
TUC pmax pmax
comp=Z,19nm,0.8s,mb5.1
TUC **Tucson** 54.19 323 eP P 00 26 56.2 +0.3
comp=Z,19nm,0.8s,mb5.1
TUC ePcP PcP 00 27 59.8 -0.4
V23A **Ortiz Mt. (NFS** 54.23 329 ⇑P P 00 26 56.2 +0.1
baz=54,SNR=10
Z18A **Geronimo** 54.31 324 ⇓P P 00 26 57.0 +0.3
baz=54
U24A **Moreno Valley** 54.31 330 ⇑P P 00 26 57.0 +0.4
baz=54
117A **Oracle** 54.35 323 ⇑P P 00 26 57.0 0.0
baz=54,SNR=53
216A **Three Points,** 54.37 322 ⇑P P 00 26 57.2 0.0
baz=55,SNR=21
LBNH **Lisbon** 54.43 3 eP P 00 26 57.8 +0.4
LBNH pmax pmax
comp=Z,21nm,0.9s,mb5.1
LBNH **Lisbon** 54.43 3 eP P 00 26 57.8 +0.4
comp=Z,21nm,0.9s,mb5.1
T25A **Trinidad** 54.48 332 ⇑P P 00 26 57.9 0.0
baz=55,SNR=44
SCIA **State Center** 54.49 344 eP P 00 26 57.7 -0.1
W21A **San Fidel** 54.50 328 ⇓P P 00 26 58.3 +0.2
baz=55,SNR=8.6
Y19A **Nutrioso** 54.50 325 ⇓P P 00 26 58.8 +0.7
baz=55,SNR=30
X20A **Quemado** 54.52 326 ⇓P P 00 26 58.6 +0.4
baz=55,SNR=21
U23A **El Rito** 54.70 330 ⇑P P 00 26 59.4 0.0
baz=55,SNR=14
JFWS **Jewell Farm** 54.70 347 eP P 00 26 57.9 -1.4
JFWS e 00 28 02.2
JFWS pmax pmax
comp=Z,30nm,0.9s,mb5.3
JFWS **Jewell Farm** 54.70 347 eP P 00 26 57.9 -1.5
comp=Z,30nm,0.9s,mb5.3
JFWS ePcP PcP 00 28 02.2 +0.4
Z17A **San Carlos Hig** 54.71 324 ⇓P P 00 26 59.4 -0.2
baz=55,SNR=7.7
LONY **Lake Ozonia** 54.72 1 eP P 00 27 00.0 +0.6
V22A **San Miguel Ran** 54.73 329 ⇓P P 00 26 59.7 0.0
baz=55,SNR=28
Y18A **Canyon Day Jun** 54.81 325 ⇓P P 00 27 00.3 0.0
baz=55,SNR=19
116A **Eloy** 54.91 322 ⇓P P 00 27 01.2 +0.1
baz=55,SNR=14
S25A **Robets Cordova** 54.92 332 ⇑P P 00 27 00.7 -0.3
baz=55,SNR=30
FRNY **Flat Rock** 54.96 2 eP P 00 27 01.2 0.0
comp=Z,53nm,1.1s,mb5.5
W20A **Ramah** 54.96 327 ⇑P P 00 27 01.7 +0.3
baz=55,SNR=25
V21A **Milan** 55.02 328 ⇑P P 00 27 02.1 +0.3
baz=55,SNR=6.5
U22A **Llaves** 55.07 329 ⇓P P 00 27 02.5 +0.4
baz=55,SNR=6.2
214A **Organ Pipe Nat** 55.17 321 ⇓P P 00 27 03.0 0.0
baz=55,SNR=32
T23A **Casias Ranch,** 55.18 330 ⇑P P 00 27 02.7 -0.2
baz=55,SNR=5.1
Y17A **Roosevelt** 55.21 324 ⇓P P 00 27 03.3 0.0
baz=55,SNR=19
S24A **Houchin Ranch,** 55.27 331 ⇓P P 00 27 03.8 +0.3
baz=56,SNR=19
Z16A **Peralta Trail,** 55.30 323 ⇓P P 00 27 03.7 -0.2
baz=56,SNR=14
X18A **Snowflake** 55.31 325 ⇑P P 00 27 04.1 +0.1
baz=56,SNR=17
115A **Sonoran Desert** 55.33 322 ⇓P P 00 27 04.3 +0.2
baz=56,SNR=9.7
W19A **Sanders** 55.43 326 ⇓P P 00 27 05.0 +0.2
baz=56,SNR=26
V20A **Brimhall** 55.45 328 ⇑P P 00 27 05.1 +0.1
baz=56,SNR=7.5
SDCO **Great Sand Dun** 55.49 331 eP P 00 27 05.1 -0.1
SDCO LR LR
comp=Z,521nm,21.0s,MS4.6
U21A **Nageezi** 55.51 329 ⇑P P 00 27 05.4 0.0
baz=56,SNR=18
T22A **Edith** 55.59 330 ⇓P P 00 27 06.1 +0.2
baz=56,SNR=14
W18A **Petrified Fore** 55.63 326 ⇓P P 00 27 06.2 0.0
baz=56
PKME **Peaks-Kenny Pk** 55.64 5 eP P 00 27 05.8 -0.3
comp=Z,70nm,1.3s,mb5.5
X17A **Forest Lakes** 55.66 325 ⇓P P 00 27 06.9 +0.5
baz=56,SNR=29
R24A **Sanders Place,** 55.69 332 ⇓P P 00 27 06.8 +0.2
baz=56
S23A **Nye Farm, Mont** 55.69 331 ⇑P P 00 27 06.8 +0.2
baz=56
Z15A **Gila River Ind** 55.70 323 ⇓P P 00 27 06.7 -0.1
baz=56,SNR=7.0
V19A **Window Rock** 55.70 327 ⇓P P 00 27 06.9 +0.2
baz=56
Y16A **Circle Bar Ran** 55.71 324 ⇓P P 00 27 07.1 +0.3
baz=56,SNR=29
114A **Black Gap (USA** 55.76 322 ⇑P P 00 27 07.4 +0.2
baz=56,SNR=26
Q25A **Bedland, Calha** 55.86 333 ⇓P P 00 27 07.9 +0.2
baz=56
T21A **Navajo Lake** 55.89 329 ⇓P P 00 27 08.4 +0.4
baz=56,SNR=5.4
U20A **Newcomb** 55.92 328 ⇓P P 00 27 08.4 +0.1
baz=56
X16A **Lo Mia Camp, P** 56.08 324 ⇑P P 00 27 09.6 +0.2
baz=56,SNR=53
S22A **4UR Ranch, Cre** 56.12 330 ⇑P P 00 27 09.8 +0.1
baz=56,SNR=19
W17A **Winslow** 56.14 325 ⇑P P 00 27 10.2 +0.3
baz=56
V18A **Ganado** 56.17 326 ⇓P P 00 27 09.8 -0.3
baz=56
U19A **Dine' College,** 56.22 327 ⇓P P 00 27 09.7 -0.7
baz=56
Z14A **Wintersburg** 56.22 322 ⇓P P 00 27 10.6 +0.1
baz=56
Y15A **Casa Rosa Ranc** 56.27 323 ⇓P P 00 27 10.7 -0.1
baz=56,SNR=28
P25A **Willow Gulch B** 56.31 334 ⇓P P 00 27 11.2 +0.1
baz=56,SNR=10
113A **Mohawk Valley,** 56.31 321 ⇓P P 00 27 11.0 -0.1
baz=56
R22A **Saguache, Gunn** 56.47 331 ⇓P P 00 27 12.1 -0.1
baz=57
T19A **Beclabito** 56.53 328 ⇑P P 00 27 12.3 -0.3
baz=57,SNR=18
S21A **Coal Bank Pass** 56.53 329 ⇑P P 00 27 12.2 -0.5
baz=57,SNR=11
Z13A **Yuma Proving G** 56.54 322 ⇓P P 00 27 12.7 -0.1
baz=57,SNR=9.9
MVCO **Mesa Verde** 56.55 329 ⇓P P 00 27 12.7 0.0
baz=57
MVCO **Mesa Verde** 56.55 329 eP P 00 27 13.0 +0.3
V17A **Tonalea, Kykot** 56.58 326 ⇓P P 00 27 13.1 +0.1
baz=57,SNR=93
X15A **Humboldt** 56.59 324 ⇓P P 00 27 13.3 +0.2
baz=57,SNR=25
W16A **Flagstaff** 56.62 325 ⇓P P 00 27 13.8 +0.5
baz=57,SNR=13
OGNE **Ogallala** 56.62 336 eP P 00 27 12.8 -0.3
OGNE ePcP PcP 00 28 09.1 -0.2

P24A **Kohler Place,** 56.64 333 ⇓P P 00 27 13.1 -0.2
baz=57
Y14A **Wickenburg** 56.66 323 ⇑P P 00 27 13.8 +0.2
baz=57,SNR=17
112A **Yuma** 56.66 320 ⇑P P 00 27 13.5 -0.1
baz=57
U18A **Rough Rock, Ch** 56.67 327 ⇓P P 00 27 13.5 -0.1
baz=57,SNR=10.0
WUAZ **Wupatki** 56.83 325 ⇑P P 00 27 15.2 +0.4
baz=57
WUAZ **Wupatki** 56.83 325 eP P 00 27 15.4 +0.7
X14A **Yava** 56.96 323 ⇓P P 00 27 16.0 +0.3
baz=57,SNR=22
R21A **Cimarron** 56.97 330 ⇑P P 00 27 15.7 0.0
baz=57,SNR=9.5
Q22A **Crested Butte,** 57.04 331 ⇑P P 00 27 16.3 0.0
baz=57,SNR=11
Y13A **Salome** 57.06 322 ⇓P P 00 27 16.5 +0.1
baz=57,SNR=25
W15A **Williams** 57.09 324 ⇓P P 00 27 17.3 +0.6
baz=57,SNR=6.9
ECSD **EROS Data Cent** 57.16 342 eP P 00 27 15.3 -1.7
GLA **Glamis** 57.16 321 ⇓P P 00 27 17.3 +0.1
baz=57
GLA **Glamis** 57.16 321 eP P 00 27 18.6 +1.5
ISCO **Idaho Springs** 57.19 333 eP P 00 27 17.6 +0.3
T18A **Mexican Hat** 57.20 328 ⇑P P 00 27 16.7 -0.7
baz=57,SNR=50
U17A **Shonto** 57.23 327 ⇓P P 00 27 17.6 0.0
baz=57,SNR=10.0
R20A **Redvale** 57.24 329 ⇓P P 00 27 17.9 +0.3
baz=58,SNR=41
SACV **Santiago Islan** 57.25 65 eP P 00 27 17.7 -0.4
comp=Z,24nm,1.0s,mb5.2
S19A **Harvey Farm, M** 57.28 329 ⇓P P 00 27 17.7 -0.3
baz=58,SNR=12
PV01 **Paradox Valley** 57.29 329 eP P 00 27 18.4 +0.5
comp=Z,3μm,1.0s
PV01 ePcP PcP 00 28 12.5 +0.4
SMCO **Snowmass** 57.32 331 eP P 00 27 18.9 +0.7
Q21A **Lamborn Mesa,** 57.34 330 ⇓P P 00 27 18.3 0.0
baz=58
Y12C **Blythe** 57.44 322 ⇑P P 00 27 19.3 +0.1
baz=58,SNR=18
V15A **Kaibab Nationa** 57.50 325 ⇑P P 00 27 20.0 +0.5
baz=58,SNR=9.7
COWI **Conover** 57.52 349 eP P 00 27 17.7 -1.7
comp=Z,22nm,0.9s,mb5.2
COWI ePcP PcP 00 28 12.9 +0.2
PDMCI **Parker Dam,Lak** 57.58 322 ⇓P P 00 27 20.0 -0.2
baz=58,SNR=9.9
W14A **Seligman** 57.59 324 ⇑P P 00 27 20.7 +0.5
baz=58,SNR=9.5
T17A **Navajo Res., N** 57.60 327 ⇓P P 00 27 20.6 +0.4
baz=58,SNR=70
PV04 **Paradox Valley** 57.66 329 eP P 00 27 22.0 +1.4
S18A **Hurst Farm, Bl** 57.68 328 ⇑P P 00 27 20.8 0.0
baz=58,SNR=64
DVTC **Desert V Tower** 57.71 320 ⇑P P 00 27 21.2 +0.2
baz=58
PV10 **Paradox Valley** 57.71 329 eP P 00 27 21.0 0.0
comp=Z,258nm,0.8s,mb6.3
PV10 ePcP PcP 00 28 15.5 +1.8
R19A **Curley Farm, L** 57.76 329 ⇓P P 00 27 20.7 -0.6
baz=58,SNR=7.3
Q20A **Ridgley Place,** 57.79 330 ⇑P P 00 27 21.3 -0.2
baz=58
P21A **Newcastle** 57.82 331 ⇑P P 00 27 22.0 +0.3
baz=58,SNR=27
V14A **Boquillas Ranc** 57.90 324 ⇓P P 00 27 23.1 +0.8
baz=58,SNR=48
BC3 **Big Chuckawall** 57.95 321 ⇑P P 00 27 23.0 +0.3
baz=58,SNR=23
T16A **Glen Canyon Da** 57.97 326 ⇓P P 00 27 23.1 +0.3
baz=58,SNR=5.9
W13A **Hualapai Mount** 57.98 323 ⇓P P 00 27 23.6 +0.7
baz=58,SNR=68
U15A **North Rim** 58.00 325 ⇓P P 00 27 23.5 +0.5
baz=58,SNR=48
RKT **Rikitea** 58.00 249 eS S 00 35 22.2 -0.3
comp=Z,2μm,29.5s
RKT eLR LR 00 44 29.4
comp=Z,1μm,29.8s,baz=90
MONP **Monument Peak** 58.06 320 ⇓P P 00 27 23.8 +0.3
baz=58
S17A **Black Ridge (B** 58.07 327 ⇑P P 00 27 23.6 +0.1
baz=58
IRM **Iron Mountain** 58.10 321 ⇓P P 00 27 24.0 +0.2
baz=58,SNR=90
R18A **Canyonlands Na** 58.16 328 ⇓P P 00 27 23.5 -0.6
baz=58,SNR=10
NEE2 **Needles Airpor** 58.19 322 ⇓P P 00 27 24.4 0.0
baz=58
P20A **De Beque** 58.26 330 ⇓P P 00 27 24.8 0.0
baz=58
Q19A **Hogan Spring (** 58.27 329 ⇑P P 00 27 24.5 -0.3
baz=58,SNR=34
PHWY **Pilot Hill** 58.34 334 eP P 00 27 25.1 -0.2
O21A **Pagoda** 58.38 332 ⇑P P 00 27 26.0 +0.4
baz=59
N22A **Wattenberg Ran** 58.38 333 ⇑P P 00 27 26.1 +0.5
baz=59
T15A **Red Dirt Ranch** 58.48 326 ⇑P P 00 27 26.8 +0.5
baz=59,SNR=12
U14A **Mt Trumbull** 58.50 325 ⇑P P 00 27 27.0 +0.5
baz=59,SNR=41
109C **Camp Elliot, M** 58.50 319 ⇑P P 00 27 26.9 +0.3
baz=59
BELC **Belle Mtn. Jos** 58.52 321 ⇑P P 00 27 27.0 +0.3
baz=59,SNR=11
PFO **Pinyon Flat Ob** 58.55 320 P P 00 27 28.9 +2.0
comp=Z,180nm,0.9s,mb6.1,SNR=7.0
PFO **Pinyon Flat Ob** 58.55 320 ⇑P P 00 27 27.2 +0.3
baz=59,SNR=11
PFO **Pinyon Flat Ob** 58.55 320 eP P 00 27 27.5 +0.6
S16A **Weppner Ranch,** 58.56 327 ⇑P P 00 27 26.7 -0.2
baz=59,SNR=34
V13A **Grand Canyon W** 58.56 324 ⇓P P 00 27 27.3 +0.3
baz=59,SNR=40
R17A **Hanksville Air** 58.60 328 ⇓P P 00 27 27.0 -0.2
baz=59,SNR=62
P19A **Cripple Cowboy** 58.65 330 ⇑P P 00 27 27.2 -0.3
baz=59,SNR=16
O20A **White River Ci** 58.68 331 ⇓P P 00 27 27.6 -0.1
baz=59,SNR=11
LDFC **Landfair** 58.70 322 eP P 00 27 28.4 +0.5
comp=Z,109nm,1.4s,mb5.7
LDFC ePcP PcP 00 28 17.9 +0.2
W12A **Cal Nev Ari** 58.71 323 ⇑P P 00 27 28.0 0.0
baz=59,SNR=5.8
Q18A **Rafter H Ranch** 58.82 329 ⇑P P 00 27 28.7 0.0
baz=59,SNR=30
GMRC **Granite Mounta** 58.83 322 ⇓P P 00 27 29.3 +0.4
baz=59,SNR=38
N21A **Black Mountain** 58.83 332 ⇑P P 00 27 29.1 +0.3
baz=59,SNR=15
T14A **Hurricane** 58.90 325 ⇓P P 00 27 29.8 +0.5
baz=59,SNR=9.1
R16A **Teasdale** 58.91 327 ⇓P P 00 27 29.6 +0.3
baz=59,SNR=18
S15A **Panguitch** 58.94 326 ⇓P P 00 27 29.9 +0.3
baz=59
U13A **Pakoon Wash** 58.94 324 ⇓P P 00 27 30.2 +0.6
baz=59,SNR=18
V12A **Nelson** 58.98 323 ⇑P P 00 27 30.1 +0.2
baz=59,SNR=33
MURC **Murrieta** 59.02 320 ⇑P P 00 27 30.2 +0.1
baz=59,SNR=7.2
SRU **San Rafael** 59.02 329 ⇑P P 00 27 29.8 -0.3
baz=59,SNR=29
SRU **San Rafael** 59.02 329 eP P 00 27 30.0 -0.1
Q16A **Castle Valley** 59.22 328 ⇑P P 00 27 31.5 +0.1
baz=59,SNR=14
O19A **Miners Draw (B** 59.23 330 ⇑P P 00 27 31.3 -0.2
baz=60,SNR=10.0
N20A **Spence Gulch,** 59.24 331 ⇓P P 00 27 31.4 -0.1
baz=60,SNR=19
BBRC **Big Bear Solar** 59.27 320 ⇓P P 00 27 33.0 +1.0
baz=60
P18A **Preston Nutter** 59.27 329 ⇑P P 00 27 32.1 +0.3
baz=60
HEC **Hector,Ludlow** 59.27 321 ⇓P P 00 27 32.5 +0.5
baz=60,SNR=6.8
R15A **Junction** 59.28 327 ⇑P P 00 27 32.1 +0.2
baz=60
U12A **Valley of Fire** 59.29 324 ⇑P P 00 27 32.1 +0.1
baz=60,SNR=6.2
T13A **Saint George** 59.33 325 ⇑P P 00 27 32.8 +0.5

baz=60,SNR=8.7
L22A **Ellis Ranch, M** 59.36 334 ⇑P P 00 27 32.6 +0.2
baz=60,SNR=6.1
CCUT **Cedar City** 59.40 325 eP P 00 27 33.2 +0.5
comp=Z,30nm,1.3s,mb5.2
CCUT ePcP PcP 00 28 20.1 -0.3
V11A **Goodsprings** 59.41 323 ⇑P P 00 27 33.0 +0.1
baz=60,SNR=11
P17A **Butcher Ranch,** 59.41 329 ⇑P P 00 27 32.6 -0.1
baz=60,SNR=23
RWWY **Rawlins** 59.43 333 eP P 00 27 33.1 +0.3
TUQ **Turquoise Moun** 59.43 322 ⇑P P 00 27 33.2 +0.2
baz=60,SNR=6.3
M21A **Separation Pea** 59.43 333 ⇓P P 00 27 32.6 -0.3
baz=60,SNR=11
S14A **Cedar City** 59.44 326 ⇑P P 00 27 33.4 +0.3
baz=60,SNR=5.9
MSU **Marysvale** 59.45 327 eP P 00 27 33.4 +0.3
SCI **San Clemente I** 59.49 318 ⇓P P 00 27 33.6 +0.1
baz=60
TMUT **Trail Mountain** 59.52 328 eP P 00 27 34.1 +0.6
ARUT **Antelope Range** 59.61 326 eP P 00 27 34.7 +0.5
ARUT e pP 00 27 43.8 +0.7
ARUT pmax pmax
comp=Z,62nm,1.3s,mb5.5
ARUT **Antelope Range** 59.61 326 eP P 00 27 34.7 +0.5
comp=Z,62nm,1.3s,mb5.5
ARUT e pP 00 27 43.8 +0.7
O18A **Roosevelt** 59.64 330 ⇓P P 00 27 34.5 +0.1
baz=60
CIS **Catalina Islan** 59.67 319 ⇓P P 00 27 34.9 +0.2
baz=60
S13A **Holt Ranch, En** 59.70 325 ⇑P P 00 27 35.6 +0.8
baz=60,SNR=30
M20A **Sweetwater, Wa** 59.72 332 ⇑P P 00 27 34.6 -0.3
baz=60,SNR=11
N19A **John Jarvie Ra** 59.72 331 ⇓P P 00 27 34.2 -0.7
baz=60,SNR=15
BFSC **Mount Baldy Ra** 59.72 320 ⇑P P 00 27 35.2 +0.1
baz=60,SNR=7.9
L21A **Rawlins** 59.72 333 ⇑P P 00 27 34.1 -0.7
baz=60,SNR=16
RRX **Edison Barstow** 59.72 321 ⇑P P 00 27 35.4 +0.4
baz=60
EYMN **Ely** 59.76 348 eP P 00 27 34.1 -0.8
U11A **Corn Creek** 59.77 323 ⇓P P 00 27 36.1 +0.8
baz=60
FMP **Fort Macarthur** 59.79 319 ⇓P P 00 27 35.9 +0.4
baz=60
GSC **Goldstone** 59.88 321 ⇓P P 00 27 36.4 +0.3
baz=60,SNR=20
GSC **Goldstone** 59.88 321 eP P 00 27 37.0 +0.9
Q15A **Fillmore** 59.91 327 ⇓P P 00 27 36.4 +0.1
baz=60
O17A **Robinson Place** 59.95 329 ⇓P P 00 27 36.7 +0.2
baz=60,SNR=30
SHOC **Shoshone** 59.96 322 ⇑P P 00 27 36.6 -0.1
baz=60,SNR=6.5
MWC **Mount Wilson** 59.96 320 eP P 00 27 36.7 0.0
MWC pmax pmax
comp=Z,24nm,0.8s,mb5.3
MWC **Mount Wilson** 59.96 320 eP P 00 27 36.7 0.0
comp=Z,24nm,0.8s,mb5.3
P16A **Fountain Green** 59.98 328 ⇓P P 00 27 36.9 +0.2
baz=60
PASC **Pasadena Art C** 60.01 320 eP P 00 27 39.5 +2.5
N18A **Larsen Ranch,** 60.02 331 ⇑P P 00 27 36.5 -0.5
baz=60,SNR=22
RSSD **Black Hills** 60.09 337 eP P 00 27 36.9 -0.5
RSSD pmax pmax
comp=Z,34nm,1.3s,mb5.2
RSSD MLR MLR
comp=Z,469nm,20.0s,MS4.6
RSSD **Black Hills** 60.09 337 eP P 00 27 36.9 -0.5
comp=Z,34nm,1.3s,mb5.2
RSSD LR LR
comp=Z,469nm,20.0s,MS4.6
DECC **Green Verdugo** 60.15 320 ⇑P P 00 27 38.3 +0.3
baz=60
M19A **Rock Springs** 60.18 331 ⇓P P 00 27 37.3 -0.7
baz=60
R13A **O'Grain Ranch,** 60.19 326 ⇑P P 00 27 38.9 +0.7
baz=60
L20A **Wamsutter** 60.20 332 ⇓P P 00 27 37.8 -0.3
baz=60
T11A **Corn Creek, Al** 60.24 324 ⇑P P 00 27 38.9 +0.4
baz=60,SNR=31
MPU **Maple Canyon** 60.27 329 eP P 00 27 39.9 +1.2
P15A **Leamington** 60.28 328 ⇓P P 00 27 38.9 +0.2
baz=60,SNR=6.7
S12A **Delamar Landin** 60.28 325 ⇑P P 00 27 39.3 +0.5
baz=60
SNCC **San Nicolas Is** 60.30 318 ⇑P P 00 27 39.1 0.0
baz=60
U10A **Ash Meadows, A** 60.33 323 ⇓P P 00 27 39.6 +0.4
baz=60,SNR=11
EDW2 **Edwards Air Fo** 60.34 320 ⇓P P 00 27 39.3 0.0
baz=60,SNR=9.2
O16A **Springville** 60.34 329 ⇓P P 00 27 39.0 -0.1
baz=61,SNR=18
DAU **Daniels Canyon** 60.37 329 eP P 00 27 40.2 +0.8
Q14A **Sevier Lake (B** 60.38 327 ⇓P P 00 27 39.9 +0.4
baz=61,SNR=54
NLU **North Lily Min** 60.45 328 eP P 00 27 40.7 +0.8
BLG **Laguna Peak** 60.54 319 ⇓P P 00 27 40.7 +0.1
baz=61,SNR=5.7
LRMC **Laurel Mountai** 60.54 321 ⇑P P 00 27 40.9 +0.3
baz=61
M18A **Lyman** 60.56 331 ⇑P P 00 27 39.6 -1.0
baz=61,SNR=7.5
N17A **Moffit Pass** 60.56 330 ⇑P P 00 27 40.7 0.0
baz=61,SNR=7.6
JLU **Jordanelle** 60.61 329 eP P 00 27 41.7 +0.7
OSI **Osito Adit** 60.64 320 ⇓P P 00 27 41.5 +0.2
baz=61
OSI **Osito Adit** 60.64 320 eP P 00 27 41.6 +0.3
R12A **Pony Springs,** 60.65 325 ⇑P P 00 27 41.7 +0.5
baz=61,SNR=23
FURC **Furnace Creek,** 60.69 322 ⇓P P 00 27 41.6 0.0
baz=61,SNR=30
P14A **Drum Mountains** 60.71 327 ⇑P P 00 27 42.1 +0.4
baz=61,SNR=45
K20A **Yellowstone Ra** 60.71 333 ⇓P P 00 27 40.7 -0.9
baz=61,SNR=14
L19A **Farson** 60.74 332 ⇓P P 00 27 41.5 -0.4
baz=61,SNR=16
Q13A **Wheeler Ranch,** 60.77 326 ⇓P P 00 27 42.4 +0.3
baz=61,SNR=38
MPMC **Manual Prospec** 60.80 322 ⇑P P 00 27 42.0 -0.4
baz=61,SNR=20
N16A **Rees Ranch, Co** 60.82 329 ⇑P P 00 27 42.5 0.0
baz=61,SNR=15
S11A **Rachel** 60.82 324 ⇑P P 00 27 42.9 +0.4
baz=61,SNR=9.3
CTU **Camp Tracy** 60.83 329 eP P 00 27 42.9 +0.4
BSC **Santa Cruz Isl** 60.83 319 ⇑P P 00 27 42.4 -0.2
baz=61
M17A **Scullys Gap (B** 60.88 330 ⇓P P 00 27 42.0 -0.9
baz=61,SNR=22
O15A **The Old Anders** 60.90 328 ⇑P P 00 27 43.2 +0.2
baz=61,SNR=16
L18A **Fontenelle, Gr** 60.92 331 ⇑P P 00 27 42.6 -0.4
baz=61
NOQ **North Oquirrh** 60.99 329 eP P 00 27 45.6 +2.0
DUG **Dugway** 61.01 328 ⇑P P 00 27 44.1 +0.4
baz=61
DUG **Dugway** 61.01 328 eP P 00 27 44.1 +0.4
ARVC **Arvin** 61.03 320 ⇓P P 00 27 44.4 +0.4
baz=61
K19A **Absolon Red Bu** 61.07 332 ⇓P P 00 27 43.0 -1.1
baz=61,SNR=17
AGMN **Agassiz Nation** 61.12 345 eP P 00 27 42.9 -1.4
P13A **Bates Ranch, G** 61.12 327 ⇑P P 00 27 44.8 +0.3
baz=61,SNR=34
ISA **Isabella** 61.15 321 ⇑P P 00 27 44.9 +0.1
baz=61,SNR=20
ISA **Isabella** 61.15 321 eP P 00 27 45.3 +0.5
SBC **Santa Barbara** 61.16 319 ⇑P P 00 27 45.1 +0.2
baz=61
R11A **Troy Canyon, C** 61.21 325 ⇑P P 00 27 45.6 +0.5
baz=61,SNR=20
Q12A **Willow Creek R** 61.27 326 ⇑P P 00 27 45.7 +0.1
baz=62,SNR=12
GRAC **Grapevine Rang** 61.34 322 ⇓P P 00 27 46.4 +0.4
baz=62
PDAR **Pinedale Array** 61.35 332 P P 00 27 45.4 -0.6
comp=Z,15nm,1.1s,mb5.0,baz=141,slow=3.1,SNR=40

PDAR PcP PcP 00 28 28.8 +0.7
comp=Z,5.7nm,1.0s,baz=152,slow=4.2,SNR=4.2
PDAR PKP2bc 00 57 11.8
comp=Z,0.5nm,0.8s,baz=300,slow=2.9,SNR=3.8
PDAR Pinedale Array 61.35 332 P P 00 27 45.4 -0.6
PDAR PcP PcP 00 28 28.8 +0.7
PDAR ⇑e 00 57 11.8
BW06 Boulder Array 61.35 332 ⇓P P 00 27 45.3 -0.6
baz=62
BW06 Boulder Array 61.35 332 eP P 00 27 44.9 -1.0
N15A Stansbury Isla 61.37 329 ⇓P P 00 27 45.8 -0.4
baz=62,SNR=7.1
CWC Cottonwood Cre 61.41 322 ⇓P P 00 27 46.6 +0.1
baz=62,SNR=6.5
HWUT Hardware Ranch 61.42 330 eP P 00 27 46.2 -0.3
comp=Z,98nm,1.4s,mb5.8
HWUT ePcP PcP 00 28 28.8 +0.4
HWUT LR LR
comp=Z,1μm,20.0s,MS5.1
L17A Cokeville 61.46 331 ⇓P P 00 27 45.7 -1.0
baz=62,SNR=17
K18A Toltan Ranch, 61.48 332 ⇑P P 00 27 46.5 -0.3
baz=62,SNR=20
S10A Tonopah Range, 61.50 324 ⇑P P 00 27 47.5 +0.3
baz=62,SNR=48
PKM Peak Mountain 61.51 319 ⇑P P 00 27 47.6 +0.4
baz=62,SNR=11
R10A Warm Springs 61.58 324 ⇓P P 00 27 48.3 +0.7
baz=62,SNR=12
O13A Hicks Ranch, I 61.58 327 ⇑P P 00 27 48.1 +0.5
baz=62
Q11A Duckwater 61.59 325 ⇓P P 00 27 48.2 +0.5
baz=62,SNR=41
P12A McGill 61.62 326 ⇑P P 00 27 48.3 +0.5
baz=62,SNR=34
VES Vestal, Richgr 61.64 320 ⇓P P 00 27 47.5 -0.6
baz=62
SPUT South Promonto 61.64 329 eP P 00 27 48.9 +0.9
BGU Big Grassy Mou 61.66 328 eP P 00 27 47.4 -0.7
comp=Z,33nm,1.2s,mb5.3
L16A Fish Haven 61.67 330 ⇑P P 00 27 47.3 -0.9
baz=62,SNR=5.3
N14A Grayback Hills 61.69 328 ⇓P P 00 27 48.0 -0.3
baz=62,SNR=37
M15A Larsen Ranch, 61.76 329 ⇑P P 00 27 48.2 -0.5
baz=62,SNR=11
SMMC Simmler 61.89 319 ⇓P P 00 27 50.1 +0.3
baz=62,SNR=11
TIN Tinemaha 61.90 322 ⇓P P 00 27 50.3 +0.5
baz=62
J18A Kendall Valley 61.91 332 ⇑P P 00 27 48.9 -0.9
baz=62,SNR=21
TPH Tonopah 61.97 323 PFAKE 00 28 00.0 +10
TPH LR LR
comp=Z,418nm,19.0s,MS4.6
K17A Gardner Place, 61.98 331 ⇓P P 00 27 49.8 -0.4
baz=62
Q10A Clear Creek Ra 62.00 325 ⇓P P 00 27 51.2 +0.7
baz=62,SNR=8.4
RCTC Rector, Farmer 62.04 321 ⇓P P 00 27 50.3 -0.5
baz=62
AHID Auburn Hatcher 62.07 331 eP P 00 27 52.3 +1.4
O12A Currie 62.09 327 ⇑P P 00 27 51.1 +0.1
baz=62,SNR=51
L15A Malad City 62.13 330 ⇑P P 00 27 50.6 -0.7
baz=62,SNR=35
P11A Circle Ranch, 62.14 326 ⇑P P 00 27 51.8 +0.4
baz=62
HVU Hansel Valley 62.16 329 eP P 00 27 51.6 +0.2
I18A Diamond G Ranc 62.20 332 ⇓P P 00 27 51.0 -0.6
baz=62,SNR=14
N13A Wendover, West 62.22 328 ⇓P P 00 27 51.6 -0.3
baz=62,SNR=7.9
N13A Wendover, West 62.22 328 eP P 00 27 51.3 -0.5
comp=Z,50nm,1.3s,mb5.5
M14A Sheep Mountain 62.24 329 ⇑P P 00 27 51.5 -0.5
baz=62,SNR=38
MTUM Tungsten Hills 62.29 322 eP P 00 27 53.0 +0.5
J17A Brown Place, J 62.35 332 ⇑P P 00 27 52.1 -0.5
baz=63,SNR=6.0
K16A Soda Springs 62.36 331 ⇑P P 00 27 52.7 0.0
baz=63,SNR=13
REDW Red Top Meadow 62.41 332 eP P 00 27 53.1 0.0
SNOW Snow King Moun 62.44 332 eP P 00 27 56.8 +3.5
LOHW Long Hollow 62.49 332 eP P 00 27 53.4 -0.2
comp=Z,20nm,1.2s,mb5.1
O11A Cowboy Ranch, 62.49 326 ⇑P P 00 27 54.1 +0.4
baz=63
TPAW Teton Pass 62.56 332 eP P 00 27 54.1 +0.1
M13A Montello 62.56 328 ⇓P P 00 27 53.6 -0.5
baz=63,SNR=19
M13A Montello 62.56 328 eP P 00 27 53.2 -1.0
comp=Z,15nm,1.0s,mb5.1
M13A ePcP PcP 00 28 31.8 -1.3
L14A Malta 62.58 329 ⇓P P 00 27 53.4 -0.9
baz=63,SNR=23
P10A Eureka 62.58 325 ⇑P P 00 27 54.1 -0.3
baz=63,SNR=6.6
RRI2 Red Ridge 62.62 331 eP P 00 27 51.8 -2.7
N12A Clover Valley, 62.66 327 ⇓P P 00 27 54.8 0.0
baz=63
N12A Clover Valley, 62.66 327 eP P 00 27 54.9 0.0
comp=Z,14nm,1.1s,mb5.0
ELK Elko 62.69 327 eP P 00 27 55.5 +0.5
ELK pmax pmax
comp=Z,30nm,1.1s
ELK Elko 62.69 327 eP P 00 27 55.5 +0.5
comp=Z,30nm,1.1s,mb5.3
J16A Bone 62.70 331 ⇓P P 00 27 54.6 -0.5
baz=63,SNR=6.8
K15A Arbon 62.71 330 ⇓P P 00 27 54.7 -0.4
baz=63,SNR=15
I17A Pilgrim Ck. 62.71 332 ⇑P P 00 27 55.5 +0.4
baz=63
DCID1 Drake Creek 62.75 332 eP P 00 27 55.8 +0.5
NVAR Mina Array Bea 62.84 323 P P 00 27 56.5 +0.4
comp=Z,12nm,0.8s,mb5.1,baz=136,slow=5.2,SNR=60
NVAR Mina Array Bea 62.84 323 P P 00 27 56.5 +0.4
IMW Indian Meadow 62.86 332 eP P 00 27 56.4 +0.3
ULM Lac du Bonnet 62.92 345 P P 00 27 55.1 -1.2
comp=Z,52nm,0.8s,mb5.7,baz=158,slow=6.7,SNR=28
ULM LR LR 00 58 32.4
comp=Z,862nm,20.7s,MS4.9,baz=340,slow=39
ULM Lac du Bonnet 62.92 345 eP P 00 27 54.8 -1.6
comp=Z,65nm,1.0s,mb5.7
K14A Jones Ranch, D 62.92 330 ⇑P P 00 27 55.7 -0.8
baz=63,SNR=18
L13A Double Diamond 62.98 329 ⇑P P 00 27 56.7 -0.2
baz=63,SNR=12
M12A Wells 63.00 328 ⇑P P 00 27 56.5 -0.6
baz=63,SNR=18
N11A Elko Archery C 63.01 327 ⇑P P 00 27 57.2 0.0
baz=63
O10A Cortez Mining, 63.07 326 ⇑P P 00 27 57.8 +0.3
baz=63,SNR=11
RLMT Red Lodge 63.07 334 P P 00 27 57.0 -0.4
baz=63
RLMT Red Lodge 63.07 334 eP P 00 27 57.4 0.0
LAO LASA Array 63.08 337 eP P 00 27 56.8 -0.7
comp=Z,45nm,1.2s,mb5.5
LAO ePcP PcP 00 28 35.2 +0.1
I16A Newdale 63.10 332 ⇓P P 00 27 57.4 -0.3
baz=63,SNR=15
J15A Blackfoot 63.19 331 ⇓P P 00 27 58.1 -0.2
baz=63,SNR=25
YFT Old Faithful 63.24 332 eP P 00 28 01.9 +3.3
G18A Lazy EL Ranch, 63.35 334 ⇑P P 00 27 58.6 -0.7
baz=64,SNR=26
N10A Dunphy 63.37 326 ⇓P P 00 27 59.5 0.0
baz=64
K13A Stover Farm, H 63.45 329 ⇑P P 00 27 59.7 -0.4
baz=64
M11A Holland Ranch, 63.47 327 ⇓P P 00 27 60.0 -0.3
baz=64,SNR=14
BMN Battle Mountai 63.56 325 eP P 00 28 01.9 +1.1
WAKR Walker 63.56 323 eP P 00 28 01.7 +0.8
L12A House Creek Ra 63.57 328 ⇓P P 00 28 00.7 -0.1
baz=64
H16A Russell Place, 63.62 332 ⇓P P 00 28 01.3 +0.2
baz=64,SNR=25
TAOE Nuku Hiva Isla 63.66 265 eLR LR 00 47 07.3
comp=Z,2μm,25.4s,baz=102
J14A Carey 63.67 330 ⇓P P 00 28 01.6 +0.2
baz=64,SNR=47
I15A Monteview 63.67 331 ⇑P P 00 28 01.6 +0.2
baz=64
SAO San Andreas Ge 63.71 320 eP P 00 28 02.4 +0.5
DGMT Dagmar 63.83 339 ⇑P P 00 28 02.1 -0.2
baz=64
DGMT Dagmar 63.83 339 eP P 00 28 04.5 +2.1
CMB Columbia Colle 63.84 322 eP P 00 28 02.4 -0.3
CMB pmax pmax
comp=Z,17nm,0.9s,mb5.1
CMB MLR MLR
comp=Z,401nm,19.0s,MS4.6
CMB Columbia Colle 63.84 322 eP P 00 28 02.4 -0.3
comp=Z,17nm,0.9s,mb5.1
CMB LR LR
comp=Z,401nm,19.0s,MS4.6
K12A Draper Farm, C 63.86 329 ⇑P P 00 28 02.9 +0.1
baz=64,SNR=50
G17A Pierce Place, 63.87 333 ⇓P P 00 28 02.3 -0.5
baz=64
F18A Big Timber 63.88 334 ⇑P P 00 28 02.4 -0.4
baz=64,SNR=54
M10A I.L. Ranch, Tu 63.94 327 ⇑P P 00 28 02.6 -0.7
baz=64,SNR=8.5
L11A Cat Creek Ranc 63.97 328 ⇑P P 00 28 03.5 0.0
baz=64,SNR=33
J13A Cove Ranch, Pi 64.05 330 ⇓P P 00 28 03.8 -0.1
baz=64,SNR=8.6
I14A Mackay 64.08 330 ⇑P P 00 28 04.4 +0.2
baz=64,SNR=20
H15A Lima 64.21 331 ⇓P P 00 28 05.3 +0.3
baz=64,SNR=14
WCN Washoe City 64.27 323 ⇓P P 00 28 05.8 +0.3
baz=64,SNR=7.1
G16A Moss Hill, Enn 64.28 332 ⇓P P 00 28 05.3 -0.1
baz=64,SNR=11
HLID Hailey 64.28 330 ⇓P P 00 28 05.6 +0.1
baz=64
HLID Hailey 64.28 330 eP P 00 28 05.8 +0.3
comp=Z,26nm,1.1s,mb5.2
HLID ePcP PcP 00 28 40.8 +0.7
HLID LR LR
comp=Z,627nm,21.0s,MS4.8
F17A Fitzpatrick Pl 64.29 333 ⇑P P 00 28 05.5 0.0
baz=64,SNR=15
L10A Juniper Basin 64.29 327 ⇓P P 00 28 05.4 -0.1
baz=64,SNR=20
PAHR Pah Rah Range 64.31 324 eP P 00 28 06.5 +0.7
I13A Wildhorse Cree 64.39 330 ⇑P P 00 28 06.3 +0.1
baz=65,SNR=35
J12A Stokes Ranch, 64.40 329 ⇓P P 00 28 06.0 -0.3
baz=65,SNR=14
E18A Harlowton 64.48 334 ⇑P P 00 28 06.3 -0.5
baz=65,SNR=29
BOZ Bozeman (W) 64.52 333 ⇑P P 00 28 06.4 -0.6
baz=65
BOZ Bozeman (W) 64.52 333 eP P 00 28 06.5 -0.5
BOZ e 00 28 40.1
BOZ pmax pmax
comp=Z,46nm,1.5s,mb5.3
BOZ Bozeman (W) 64.52 333 eP P 00 28 06.5 -0.5
comp=Z,46nm,1.5s,mb5.3
BOZ ePcP PcP 00 28 40.1 -0.9
K11A Parker Ranch, 64.54 328 ⇑P P 00 28 07.0 -0.2
baz=65,SNR=35
G15A Dillon 64.55 332 ⇑P P 00 28 06.9 -0.3
baz=65,SNR=19
H14A Leadore 64.55 331 ⇓P P 00 28 07.2 0.0
baz=65,SNR=30
F16A Kennard Place, 64.62 333 ⇑P P 00 28 07.0 -0.6
baz=65,SNR=9.0
DLMT Dillon 64.75 332 eP P 00 28 04.3 -4.2
E17A Martinsdale 64.81 334 ⇓P P 00 28 08.5 -0.4
baz=65,SNR=30
I12A Atlanta 64.81 329 ⇑P P 00 28 09.1 +0.2
baz=65,SNR=23
SAC San Andreas 64.82 320 eP P 00 28 11.0 +1.9
MFID Camas Ranch 64.89 329 ⇓P P 00 28 09.4 0.0
baz=65,SNR=86
D18A Linhart Farms, 64.93 335 ⇑P P 00 28 09.3 -0.3
baz=65,SNR=31
H13A Challis 64.94 330 ⇑P P 00 28 09.8 0.0
baz=65
K10A MacKenzie Ranc 64.99 328 ⇑P P 00 28 10.1 0.0
baz=65,SNR=38
BEKR Beckworth 64.99 323 ⇓P P 00 28 10.4 +0.2
baz=65,SNR=29
F15A Butte 65.06 332 ⇑P P 00 28 10.0 -0.5
baz=65,SNR=8.0
H12A Diamond D Ranc 65.22 330 ⇓P P 00 28 11.5 -0.1
baz=65,SNR=27
E16A East Helena 65.22 333 ⇓P P 00 28 10.9 -0.6
baz=65
D17A Six Diamond Ra 65.27 334 ⇓P P 00 28 11.4 -0.4
baz=66,SNR=37
I11A Placerville 65.31 329 ⇑P P 00 28 11.7 -0.5
baz=66,SNR=41
G13A Cobalt 65.32 331 ⇓P P 00 28 11.8 -0.4
baz=66,SNR=22
OHCM Honcut 65.32 322 eP P 00 28 14.3 +1.9
SCHQ Schefferville 65.35 6 P P 00 28 10.7 -1.5
comp=Z,20nm,1.1s,mb5.1,baz=179,slow=6.6,SNR=7.0
SCHQ LR LR 00 57 30.5
comp=Z,497nm,19.4s,MS4.7,baz=244,slow=37
SCHQ Schefferville 65.35 6 eP P 00 28 11.1 -1.1
comp=Z,32nm,1.2s,mb5.2
SCHQ ePcP PcP 00 28 43.8 -0.3
SCHQ LR LR
comp=Z,956nm,22.0s,MS5.0
J10A Berg Farm, Mel 65.39 328 ⇑P P 00 28 12.1 -0.6
baz=66
F14A Wisdom 65.44 332 ⇓P P 00 28 12.9 -0.1
baz=66
MCCM Marconi Confer 65.45 320 eP P 00 28 13.1 -0.2
D16A Dana Ranch, Ca 65.55 334 ⇑P P 00 28 13.3 -0.4
baz=66,SNR=25
E15A Deer Lodge 65.57 333 ⇑P P 00 28 12.9 -0.9
baz=66,SNR=10
EGMT Eagleton 65.57 335 ⇓P P 00 28 12.9 -0.9
baz=66
EGMT Eagleton 65.57 335 eP P 00 28 13.3 -0.5
comp=Z,42nm,1.0s,mb5.4
C17A Wharram Farm, 65.68 335 ⇑P P 00 28 13.9 -0.6
baz=66,SNR=21
I10A Payette 65.87 329 ⇓P P 00 28 15.4 -0.4
baz=66
G12A Big Creek, Yel 65.87 330 ⇑P P 00 28 15.3 -0.4
baz=66
B18A Beardsley Farm 65.87 336 ⇑P P 00 28 15.3 -0.4
baz=66,SNR=24
F13A Darby 65.88 331 ⇓P P 00 28 15.4 -0.3
baz=66,SNR=16
H11A Donnelly 65.91 330 ⇑P P 00 28 15.3 -0.7
baz=66,SNR=12
E14A Clinton 65.95 332 ⇓P P 00 28 16.1 -0.2
baz=66,SNR=5.1
D15A Lincoln 65.98 333 ⇓P P 00 28 15.5 -0.9
baz=66
HOPS Hopland 66.08 321 eP P 00 28 17.1 -0.2
comp=Z,50nm,1.4s,mb5.3
H10A Noah's Angus R 66.19 329 ⇓P P 00 28 16.8 -1.1
baz=66,SNR=8.0
B17A L&G Farms, Che 66.21 335 ⇑P P 00 28 17.1 -0.8
baz=66,SNR=5.9
C16A Fuhringer Ranc 66.23 334 ⇓P P 00 28 17.7 -0.3
baz=66,SNR=28
J08A Circle Bar Ran 66.24 327 ⇓P P 00 28 17.8 -0.4
baz=66
I09A Lost Marbles R 66.28 328 ⇓P P 00 28 17.9 -0.5
baz=66,SNR=5.8
MOD Modoc 66.28 325 eP P 00 28 18.3 -0.2
comp=Z,61nm,1.1s,mb5.5
MOD e pP 00 28 27.2 -0.2
E13A Victor 66.29 332 ⇓P P 00 28 18.3 -0.1
baz=66,SNR=18
F12A Elk City 66.29 331 ⇓P P 00 28 18.0 -0.5
baz=66,SNR=20
A18A Metzger Ranch, 66.32 336 ⇓P P 00 28 17.7 -0.9
baz=67,SNR=42
D14A Greenough 66.46 333 ⇓P P 00 28 19.1 -0.4
baz=67,SNR=12
MSO Missoula 66.47 332 eP P 00 28 19.7 +0.2
LTIM Timbered Crate 66.49 324 P P 00 28 19.7 -0.2
G11A Walters Elk Ra 66.53 330 ⇓P P 00 28 19.3 -0.7
baz=67,SNR=19
C15A Salmond Ranch, 66.58 334 ⇑P P 00 28 20.3 0.0
baz=67,SNR=51
B16A M & M Farms, S 66.69 335 ⇓P P 00 28 20.1 -0.8
baz=67,SNR=6.2
WDC Whiskeytown Da 66.73 323 eP P 00 28 19.5 -1.9
WDC e 00 28 48.1
WDC pmax pmax
comp=Z,12nm,0.9s,mb4.9
WDC Whiskeytown Da 66.73 323 eP P 00 28 19.5 -1.9
comp=Z,12nm,0.9s,mb4.9
WDC ePcP PcP 00 28 48.1 -2.2
KCPM Cahto Peak 66.82 321 eP P 00 28 23.3 +1.3
F11A Grangeville 66.82 330 ⇓P P 00 28 21.0 -0.9
baz=67,SNR=31
G10A Bishop Farm, J 66.88 329 ⇓P P 00 28 21.9 -0.3
baz=67,SNR=17
D13A Huson 66.90 332 ⇑P P 00 28 22.0 -0.3
baz=67,SNR=10
E12A Beaver Dam Sad 66.92 331 ⇓P P 00 28 21.9 -0.6
baz=67
B15A Bradely Ranch, 66.97 334 ⇑P P 00 28 22.1 -0.7
baz=67,SNR=22
C14A Swan Lake 67.08 333 ⇑P P 00 28 23.5 0.0
baz=67
H08A Prairie City 67.14 328 ⇑P P 00 28 24.0 +0.1
baz=67,SNR=64
K05A Summer Lake 67.14 325 ⇑P P 00 28 24.1 +0.2
baz=67,SNR=38
G09A Cove 67.20 329 ⇑P P 00 28 24.1 -0.2
baz=67,SNR=46
D12A Red Ives Fores 67.28 332 ⇓P P 00 28 24.4 -0.3
baz=68
B14A Marquette Ranc 67.32 334 ⇑P P 00 28 24.4 -0.5
baz=68,SNR=27
C13A Hot Springs 67.39 333 ⇓P P 00 28 25.4 +0.1
baz=68,SNR=20
F10A Beach Ranch, E 67.41 330 ⇑P P 00 28 25.8 +0.3
baz=68,SNR=11
YBH Yreka Blue Hor 67.55 324 eP P 00 28 25.7 -0.9
A15A Johnson Ranch, 67.56 334 ⇑P P 00 28 25.4 -1.0
baz=68,SNR=13
KHMM Horse Mountain 67.63 322 eP P 00 28 28.1 +1.0
G08A Pilot Rock 67.81 328 ⇑P P 00 28 28.1 -0.1
baz=68,SNR=16
C12B Naegeli Ranch, 67.82 332 ⇑P P 00 28 28.1 0.0
baz=68,SNR=7.9
A14A Double T Ranch 67.85 334 ⇓P P 00 28 27.4 -0.8
baz=68,SNR=23
B13A Whitefish 67.85 333 ⇓P P 00 28 28.1 -0.2
baz=68,SNR=6.2
LNOR Lincton Mounta 67.87 329 eP P 00 28 30.1 +1.6
WALA Waterton Lakes 68.12 334 eP P 00 28 30.2 +0.2
comp=Z,0.9nm,0.8s,mb3.9
HUMO Hull Mountain 68.24 324 eP P 00 28 30.9 0.0
comp=Z,8.1nm,1.0s,mb4.7
HUMO ePcP PcP 00 28 57.1 +0.6
E09A Wood Farm, Sta 68.24 330 ⇑P P 00 28 30.1 -0.7
baz=68,SNR=5.9
A13A Flathead Natio 68.25 334 ⇓P P 00 28 30.8 0.0
baz=68
C11A Tepee Creek (N 68.28 332 ⇓P P 00 28 30.9 -0.1
baz=68
B12A Libby 68.43 333 ⇓P P 00 28 31.9 -0.1
baz=69
FFC Flin Flon 68.57 344 P P 00 28 31.9 -0.8
comp=Z,103nm,1.2s,mb5.6,SNR=8.8
FFC Flin Flon 68.57 344 eP P 00 28 31.5 -1.2
FFC pmax pmax
comp=Z,15nm,0.9s,mb4.9
FFC Flin Flon 68.57 344 eP P 00 28 31.5 -1.2
comp=Z,16nm,0.9s,mb4.9
G06A Carlson Farm, 68.65 327 ⇑P P 00 28 34.4 +1.0
baz=69
CROR Criterion Ridg 68.67 327 P P 00 28 34.7 +1.1
E08A Dider Farm, El 68.68 329 ⇓P P 00 28 33.1 -0.5
baz=69
F07A Phinny Hill Vi 68.72 328 ⇑P P 00 28 34.2 +0.4
baz=69
A12A Yaak River Ran 68.80 333 ⇓P P 00 28 34.4 +0.2
baz=69,SNR=13
HAWA Hanford 68.86 329 eP P 00 28 34.8 +0.1
comp=Z,20nm,1.0s,mb5.0
RSW Rattlesnake Hi 68.89 329 eP P 00 28 36.3 +1.5
NEW Newport 68.99 332 eP P 00 28 34.6 -0.8
NEW pmax pmax
comp=Z,20nm,0.9s
NEW MLR MLR
comp=Z,519nm,19.0s
NEW Newport 68.99 332 eP P 00 28 34.5 -0.9
comp=Z,20nm,0.9s,mb5.0
NEW LR LR
comp=Z,519nm,19.0s,MS4.8
D08A Wollman Farm, 69.00 330 ⇑P P 00 28 35.1 -0.5
baz=69,SNR=5.1
H04A Detroit Lake 69.12 326 ⇑P P 00 28 35.8 -0.6
baz=69,SNR=10
OD2 Odessa Site #2 69.13 330 P P 00 28 36.7 +0.4
KEBM Edson Butte 69.20 324 eP P 00 28 39.5 +2.7
HOOD Mount Hood Mea 69.25 327 eP P 00 28 40.4 +3.3
G04A Mulino 69.62 327 ⇓P P 00 28 38.9 -0.5
baz=70,SNR=5.7
COR Corvallis 69.68 326 eP P 00 28 40.6 +0.8
COR pmax pmax
comp=Z,118nm,1.4s,mb5.6
COR Corvallis 69.68 326 eP P 00 28 40.6 +0.8
comp=Z,118nm,1.4s,mb5.6
NAC Naches 69.75 329 P P 00 28 40.7 +0.6
TBM Table Mountain 69.92 329 P P 00 28 43.1 +1.8
F04A Amboy 70.05 327 ⇑P P 00 28 41.7 -0.4
baz=70,SNR=6.3
ETW Entiat 70.08 330 eP P 00 28 43.1 +0.9
B08A Colville Reser 70.10 331 ⇑P P 00 28 41.8 -0.5
baz=70,SNR=14
LON Longmire 70.27 328 eP P 00 28 44.6 +1.3
FCC Fort Churchill 70.51 350 eP P 00 28 44.3 -0.3
comp=Z,1.4nm,1.1s,mb3.8
D05A Enumclaw 70.64 328 ⇑P P 00 28 45.2 -0.4
baz=71,SNR=10
F03A Seaside 70.67 327 ⇓P P 00 28 44.7 -1.1
baz=71
EDM Edmonton 71.07 337 eP P 00 28 47.4 -0.7
RPW Rockport 71.23 330 eP P 00 28 50.3 +1.1
B06A Marblemount 71.27 330 ⇓P P 00 28 48.7 -0.7
baz=72
JCW Jim Creek 71.27 329 eP P 00 28 50.6 +1.2
comp=Z,20nm,0.9s,mb5.0
GNW Green Mountain 71.32 328 eP P 00 28 49.6 -0.1
comp=Z,9.3nm,1.0s,mb4.7
TBI Tubuai 71.32 249 eS S 00 38 04.8 -1.9
comp=Z,1μm,31.0s
TBI eLR LR 00 50 39.2
comp=Z,2μm,30.2s
NLWA Neilton Lookou 71.75 328 ⇑P P 00 28 52.3 0.0
baz=72
NLWA Neilton Lookou 71.75 328 eP P 00 28 53.1 +0.7
comp=Z,35nm,0.9s,mb5.3
PPT Papeete 71.87 255 eS S 00 38 12.1 -1.1
comp=Z,2μm,37.0s
PPT eLR LR 00 50 53.2
comp=Z,4μm,26.0s,baz=100
PPT Papeete 71.87 255 LR LR 00 52 07.1
comp=Z,1μm,20.7s,MS5.2,baz=130,slow=29
A05A Maple Falls 71.88 330 ⇓P P 00 28 52.7 -0.4
baz=72
LIC Lamto 72.08 80⇑iP P 00 28 53.1 -2.0
comp=Z,183nm,1.4s,mb5.5,baz=254
LIC eMLR MLR
comp=Z,6μm,19.8s,MS5.6
LIC Lamto 72.08 80 eP P 00 28 53.2 -1.9
comp=Z,164nm,1.4s,mb5.8
LIC Lamto 72.08 80⇑iP P 00 28 53.1 -2.0
comp=Z,91nm,1.4s,mb5.5
LIC LR LR
comp=Z,3μm,19.8s,MS5.6
TIC Toumodi 72.18 80 eP P 00 28 54.8 -0.9
comp=Z,146nm,1.3s,mb5.8
TIC Toumodi 72.18 80 eP P 00 28 54.8 -0.9
TIC pmax pmax
comp=Z,146nm,1.3s,mb5.8
PGC Sidney 72.34 329 eP P 00 28 55.1 -0.7
comp=Z,1.2nm,0.9s,mb3.8
DBIC Dimbokro 72.34 80 P P 00 28 55.1 -1.5
comp=Z,61nm,1.1s,mb5.4,baz=232,slow=5.6,SNR=15
DBIC LR LR 00 58 51.8
comp=Z,4μm,18.7s,MS5.7,baz=220,slow=34
DBIC Dimbokro 72.34 80 eP P 00 28 55.3 -1.3
DBIC pmax pmax
comp=Z,92nm,1.2s
DBIC MLR MLR
comp=Z,4μm,19.0s
DBIC Dimbokro 72.34 80 eP P 00 28 55.3 -1.4
comp=Z,92nm,1.2s,mb5.6
DBIC LR LR

comp=Z,4µm,19.0s,MS5.7
KIC Kosan Boka 72.39 80 *e*P **P 00 28 55.2 -1.7**
comp=Z,125nm,1.2s,mb5.7
PFVI Vila Bisbo 78.23 49 *e*P **P 00 29 32.1 +2.1**
comp=Z,139nm,1.8s,mb5.6
PFVI *e*S S 00 39 29.4 +6.2
PFVI *e*LR LR 00 54 23.0
comp=Z,2µm,18.0s
PMAFR Mafra 78.61 47 *e*S S 00 39 30.1 +2.9
PMAFR *e*LQ 00 50 55.2
PMAFR *e*LR LR 00 54 28.2
comp=Z,2µm,22.0s
LIS Lisbon 78.61 47 *e*P **P 00 29 32.0 -0.1**
LIS *e*S S 00 39 26.9 -0.4
LIS *e*S S 00 39 27.4 +0.2
LIS AMS AMS 00 59 58.4
comp=Z,2µm,20.8s,MS5.5
LIS Lisbon 78.61 47 *e*P **P 00 29 32.0 -0.1**
LIS *e*S S 00 39 26.9 -0.4
LIS A 00 59 58.4
comp=Z,2µm,20.8s
LIS Lisbon 78.61 47 *e*P **P 00 29 31.9 -0.2**
LIS *e*S S 00 39 26.8 -0.5
YKA Yellowknife Ar 78.68 343 P **P 00 29 31.1 -0.8**
comp=Z,36nm,1.0s,mb5.2,baz=137,slow=6.1,SNR=34
PBDV Barranco-do-Ve 78.93 49 *e*P **P 00 29 36.4 +2.5**
comp=Z,63nm,1.7s,mb5.3
PBDV *e*S S 00 39 30.9 +0.1
PBDV *e*LQ 00 52 55.1
PBDV *e*LR LR 00 54 41.4
comp=Z,2µm,22.0s
PCVE Castro Verde 79.00 48 *e*P **P 00 29 35.6 +1.3**
comp=Z,66nm,1.1s,mb5.5
PCVE *e*S S 00 39 36.4 +4.9
PCVE *e*LQ 00 52 01.5
PCVE *e*LR LR 00 54 50.8
comp=Z,2µm,22.0s
PVAQ Vaqueiros 79.15 49 *e*P **P 00 29 36.1 +1.0**
comp=Z,58nm,1.3s,mb5.3
PVAQ *e*S S 00 39 38.7 +5.6
PVAQ *e*LQ 00 53 02.6
PVAQ *e*LR LR 00 54 42.3
comp=Z,2µm,22.0s
PBEJ Beja 79.28 48 *e*P **P 00 29 36.5 +0.8**
comp=Z,33nm,1.5s,mb5.0
EVOP Sao Brissos 79.28 47 *e*P **P 00 29 36.0 +0.3**
EVOP *e*S S 00 39 34.5 +0.1
EVOP *e*S S 00 39 34.6 +0.2
EVOP AMS AMS 01 00 17.8
comp=Z,2µm,20.4s,MS5.5
EVOP Sao Brissos 79.28 47 *e*P **P 00 29 36.0 +0.2**
EVOP *e*S S 00 39 34.4 0.0
EVO Evora 79.36 47 *e*P **P 00 29 36.0 -0.2**
comp=Z,79nm,1.0s,mb5.3
EVO *e*MLR MLR
comp=Z,3µm,21.8s,MS5.3
EVO Evora 79.36 47 *e*P **P 00 29 37.0 +0.8**
comp=Z,41nm,1.4s,mb5.2
EGRO El Granado 79.37 49 P **P 00 29 37.8 +1.5**
comp=Z,92nm,1.4s,mb5.5
MAIT Maitri 79.38 160 *e*P **P 00 29 36.9 +1.1**
NVL N'lazarevskaya 79.42 160‖ *e*P **P 00 29 35.8 -0.1**
NVL pmax pmax
comp=Z,34nm,0.9s,mb5.3
PTOM Tomar 79.49 46 *e*P **P 00 29 37.5 +0.6**
comp=Z,64nm,1.3s,mb5.4
QSPA South Pole Qui 79.77 180 LR LR 01 00 40.8
comp=Z,335nm,19.0s,MS4.7,baz=181,slow=32
QSPA South Pole Qui 79.77 180 *e*P **P 00 29 38.3 +0.6**
comp=Z,74nm,1.4s,mb5.4
QSPA LR LR
comp=Z,766nm,21.0s,MS5.0
PESTR Estremoz 79.79 47 *e*P **P 00 29 39.8 +1.3**
comp=Z,86nm,1.4s,mb5.5
PESTR *e*S S 00 39 44.0 +4.2
PESTR *e*LR LR 00 54 37.1
comp=Z,2µm,22.0s
PBAR Barrancos 79.94 48 *e*P **P 00 29 39.2 -0.1**
comp=Z,43nm,1.9s,mb5.0
PBAR *e*S S 00 39 47.2 +5.8
PBAR *e*LQ 00 51 14.9
PBAR *e*LR LR 00 55 03.8
comp=Z,2µm,22.0s
EMIN Mina Concepcio 80.06 49 P **P 00 29 41.8 +1.8**
comp=Z,133nm,1.8s,mb5.6
PMRV Marv??o 80.15 47 *e*P **P 00 29 39.6 -0.8**
comp=Z,33nm,1.6s,mb5.0
PMRV *e*S S 00 39 46.5 +3.0
PMRV *e*LQ 00 51 03.0
PMRV *e*LR LR 00 55 06.8
comp=Z,2µm,22.0s
EBAD Badajoz 80.17 48 P **P 00 29 43.2 +2.7**
comp=Z,130nm,3.0s
PVIS Viseu 80.28 45 *e*P **P 00 29 41.5 +0.4**
comp=Z,64nm,1.2s,mb5.4
ESPR Espera 80.34 50 P **P 00 29 42.0 +0.5**
comp=Z,217nm,2.5s,mb5.6
MTE Manteigas 80.41 46 *e*P **P 00 29 42.0 +0.2**
comp=Z,45nm,1.6s,mb5.2
MTE *e*S S 00 39 50.6 +4.4
MTE *e*LR LR 00 55 21.2
comp=Z,2µm,22.0s
MTE Manteigas 80.41 46 *e*P **P 00 29 41.6 -0.3**
comp=Z,35nm,1.1s,mb5.2
EJIF Jimena Fronter 80.49 50 P **P 00 29 45.3 +2.9**
EJIF pmax pmax
comp=Z,42nm,1.0s,mb5.3
EJIF Jimena Fronter 80.49 50 P **P 00 29 45.3 +2.9**
comp=Z,42nm,1.0s,mb5.3
PCAB Cabril 80.57 45 *e*P **P 00 29 42.8 +0.1**
comp=Z,46nm,1.8s,mb5.1
ELOB Lobios 80.61 44 P **P 00 29 44.4 +1.5**
comp=Z,112nm,2.3s,mb5.4
PVRL Vila Real 80.62 45 *e*P **P 00 29 43.9 +1.0**
comp=Z,36nm,1.3s,mb5.2
EMIJ Mijas 81.06 50 P **P 00 29 45.5 +0.1**
comp=Z,102nm,1.6s,mb5.5
MVO Moncorvo 81.06 45 *e*P **P 00 29 45.4 +0.1**
comp=Z,48nm,1.1s,mb5.3
MVO *e*S S 00 39 59.6 +6.6
MVO *e*LQ 00 50 26.1
MVO *e*LR LR 00 55 41.5
comp=Z,923nm,24.0s
MVO Moncorvo 81.06 45 P **P 00 29 44.8 -0.5**
ECAB El Cabril 81.09 49 P **P 00 29 46.7 +1.1**
comp=Z,157nm,2.2s,mb5.5
EPLA Plasencia 81.32 47 P **P 00 29 46.8 +0.1**
EPLA pmax pmax
comp=Z,119nm,1.4s,mb5.6
EPLA Plasencia 81.32 47 P **P 00 29 46.8 +0.1**
comp=Z,118nm,1.4s,mb5.6
DLBC Dease Lake 81.46 334 LR LR 01 11 20.3
comp=Z,606nm,21.9s,MS4.9,baz=136,slow=40
DLBC Dease Lake 81.46 334 *e*P **P 00 29 46.8 -0.2**
PBRG Braganca 81.50 45 *e*P **P 00 29 47.9 +0.3**
comp=Z,29nm,1.6s,mb5.0
ECAL Calabor 81.55 45 P **P 00 29 49.3 +1.4**
comp=Z,104nm,1.4s,mb5.6
ELOJ Sierra Loja 81.72 50 P **P 00 29 50.2 +1.3**
ELOJ pmax pmax
comp=Z,34nm,0.8s,mb5.3
ELOJ Sierra Loja 81.72 50 P **P 00 29 50.2 +1.3**
comp=Z,34nm,0.8s,mb5.3
EADA Adamuz 81.75 49 P **P 00 29 50.0 +1.0**
comp=Z,93nm,1.3s,mb5.5
EPON Pontenova 81.79 43 P **P 00 29 48.8 -0.3**
comp=Z,167nm,2.0s,mb5.6
ECOG Cogollos-Vega 82.20 50 P **P 00 29 52.2 +0.8**
ECOG pmax pmax
comp=Z,49nm,1.2s,mb5.3
ECOG Cogollos-Vega 82.20 50 P **P 00 29 52.2 +0.8**
comp=Z,49nm,1.2s,mb5.3
EBAN Banos Encina 82.33 49 P **P 00 29 52.9 +0.8**
EBAN pmax pmax
comp=Z,36nm,1.0s,mb5.3
EBAN Banos Encina 82.33 49 P **P 00 29 52.9 +0.8**
comp=Z,36nm,1.0s,mb5.3
PAB San Pablo 82.39 48 *e*P **P 00 29 52.6 +0.3**
PAB pmax pmax
comp=Z,63nm,1.4s,mb5.3
PAB San Pablo 82.39 48 *e*P **P 00 29 52.6 +0.2**
comp=Z,63nm,1.4s,mb5.3
EBER Berja 82.59 50 P **P 00 29 55.2 +1.7**
comp=Z,143nm,1.6s,mb5.8
ESDC Sonseca Array 82.71 48 P **P 00 29 54.4 +0.4**
comp=Z,27nm,1.1s,mb5.2,baz=255,slow=5.2,SNR=53
ESDC LR LR 01 02 08.8
comp=Z,1µm,21.7s,MS5.3,baz=260,slow=32
ESLA Sonseca Array 82.71 48 *e*P **P 00 29 54.2 +0.1**
comp=Z,12nm,1.2s,mb4.8
ESLA LR LR
comp=Z,12µm,22.0s
ESBB Sonseca Array 82.71 48 P **P 00 29 53.5 -0.5**
EQES Quesada 82.75 50 P **P 00 29 54.9 +0.6**
comp=Z,172nm,1.7s,mb5.8
EARI Arriondas 83.10 44 P **P 00 29 56.8 +0.8**
comp=Z,146nm,1.7s,mb5.7
EHUE Huescar 83.11 50 P **P 00 29 55.8 -0.3**
EHUE pmax pmax
comp=Z,117nm,1.6s,mb5.7
EHUE Huescar 83.11 50 P **P 00 29 55.8 -0.3**
comp=Z,117nm,1.6s,mb5.7
ENIJ Nijar 83.13 51 P **P 00 29 56.8 +0.5**
ENIJ pmax pmax
comp=Z,21nm,0.6s,mb5.3
ENIJ Nijar 83.13 51 P **P 00 29 56.8 +0.5**
comp=Z,21nm,0.6s,mb5.3
EVIA Vianos 83.44 49 P **P 00 29 58.9 +1.1**
EVIA pmax pmax
comp=Z,119nm,1.0s,mb5.9
EVIA Vianos 83.44 49 P **P 00 29 58.9 +1.1**
comp=Z,118nm,1.0s,mb5.9
ETOB Tobarra 84.15 49 P **P 00 30 03.4 +1.9**
comp=Z,202nm,1.9s,mb5.9
CART Cartagena 84.24 50 P **P 00 30 01.5 -0.5**
ELAN Lanestosa 84.29 44 P **P 00 30 02.0 0.0**
comp=Z,199nm,2.3s,mb5.8
SKAG Skagway 84.32 334 *e*P **P 00 30 02.0 +0.2**
comp=Z,24nm,1.2s,mb5.2
ETOR Torete 84.47 47 P **P 00 30 05.2 +2.2**
ETOR pmax pmax
comp=Z,22nm,1.2s,mb5.2
ETOR Torete 84.47 47 P **P 00 30 05.2 +2.2**
comp=Z,22nm,1.2s,mb5.2
ECRI Cripan 84.72 45 P **P 00 30 05.7 +1.4**
ECRI pmax pmax
comp=Z,22nm,1.2s,mb5.2
ECRI Cripan 84.72 45 P **P 00 30 05.7 +1.4**
comp=Z,22nm,1.2s,mb5.2
BORG Borgarnes 85.08 20 P **P 00 30 06.5 +1.0**
comp=Z,64nm,1.0s,mb5.7,baz=220,slow=3.6,SNR=7.0
BORG Borgarnes 85.08 20 *e*P **P 00 30 05.8 +0.2**
BORG pmax pmax
comp=Z,95nm,1.1s
BORG Borgarnes 85.08 20 *e*P **P 00 30 05.8 +0.2**
comp=Z,95nm,1.1s,mb5.8
EBEN Beniarda 85.16 49 P **P 00 30 08.0 +1.4**
comp=Z,59nm,1.5s,mb5.5
EMOS Mosqueruela 85.47 48 P **P 00 30 10.5 +2.5**
comp=Z,216nm,2.9s,mb5.8
SBA Scott Base 85.55 191 *e*P **P 00 30 07.7 -0.2**
SBA pmax pmax
comp=Z,39nm,1.4s,mb5.4
SBA MLR MLR
comp=Z,616nm,19.0s,MS5.0
SBA Scott Base 85.55 191 *e*P **P 00 30 07.7 -0.1**
comp=Z,39nm,1.4s,mb5.4
SBA LR LR
comp=Z,616nm,19.0s,MS5.0
BST Brest 85.63 39 *e*P **P 00 30 09.0 +0.3**
RES Resolute Bay 85.73 355 *e*P **P 00 30 09.1 +0.5**
RES pmax pmax
comp=Z,17nm,1.0s,mb5.2
RES Resolute Bay 85.73 355 *e*P **P 00 30 09.1 +0.4**
comp=Z,17nm,1.0s,mb5.2
SJPF Ste Jean 85.78 45 *e*P **P 00 30 08.7 -0.8**
comp=Z,69nm,1.4s,mb5.4
SJPF Ste Jean 85.78 45 *e*P **P 00 30 08.7 -0.8**
SJPF pmax pmax
comp=Z,34nm,1.4s,mb5.4
SJPF Ste Jean 85.78 45 *e*P **P 00 30 08.7 -0.8**
comp=Z,34nm,1.4s,mb5.4
TAM Tamanrasset 85.82 66 *e*P **P 00 30 10.3 +0.1**
TAM pmax pmax
comp=Z,44nm,1.0s,mb5.6
TAM Tamanrasset 85.82 66 *e*P **P 00 30 10.3 +0.1**
comp=Z,44nm,1.0s,mb5.6
ETSF Etsaut 86.18 45 *e*P **P 00 30 11.5 0.0**
comp=Z,27nm,1.4s,mb5.0
ETSF Etsaut 86.18 45 *e*P **P 00 30 11.5 0.0**
ETSF pmax pmax
comp=Z,14nm,1.4s,mb5.0
ETSF Etsaut 86.18 45 *e*P **P 00 30 11.5 0.0**
comp=Z,14nm,1.4s,mb5.0
SUMG Summit 86.20 10 *e*P **P 00 30 11.2 +0.2**
comp=Z,136nm,1.1s,mb6.1
SUMG Summit 86.20 10 *i* P **P 00 30 11.2 +0.2**
comp=Z,83nm,1.1s,mb5.9
PNL Peninsula 86.22 333 *e*P **P 00 30 11.1 -0.2**
comp=Z,41nm,1.1s,mb5.6
ERTA Horta de San J 86.23 47 P **P 00 30 11.7 -0.1**
comp=Z,99nm,2.1s,mb5.7
EBIE Bielsa 86.61 46 P **P 00 30 14.0 +0.4**
comp=Z,196nm,3.6s
EPF Esparros 86.85 45 *e*P **P 00 30 14.6 -0.2**
comp=Z,38nm,1.4s,mb5.1
EPF Esparros 86.85 45 *e*P **P 00 30 14.6 -0.2**
EPF pmax pmax
comp=Z,19nm,1.4s,mb5.1
EPF Esparros 86.85 45 *e*P **P 00 30 14.6 -0.2**
comp=Z,19nm,1.4s,mb5.1
CSOR Sort 87.22 46 P **P 00 30 16.7 +0.1**
comp=Z,116nm,3.1s
SALF Salau 87.36 46 *e*P **P 00 30 17.6 +0.3**
MFF Saint Martin d 87.58 42 *e*P **P 00 30 17.5 -0.8**
comp=Z,14nm,0.8s,mb4.9
MFF Saint Martin d 87.58 42 *e*P **P 00 30 17.5 -0.8**
MFF pmax pmax
comp=Z,7.0nm,0.8s,mb4.9
MFF Saint Martin d 87.58 42 *e*P **P 00 30 17.5 -0.8**
comp=Z,7.2nm,0.8s,mb5.0
GRR Gorron 87.68 40 *e*P **P 00 30 17.8 -0.9**
comp=Z,32nm,1.3s,mb5.1
GRR Gorron 87.68 40 *e*P **P 00 30 17.8 -0.9**
GRR pmax pmax
comp=Z,16nm,1.3s,mb5.1
GRR Gorron 87.68 40 *e*P **P 00 30 17.8 -0.9**
comp=Z,16nm,1.3s,mb5.1
LFF La Frestale 87.68 44 *e*P **P 00 30 18.0 -0.8**
comp=Z,31nm,1.1s,mb5.2
LFF La Frestale 87.68 44 *e*P **P 00 30 18.0 -0.8**
LFF pmax pmax
comp=Z,16nm,1.1s,mb5.2
LFF La Frestale 87.68 44 *e*P **P 00 30 18.0 -0.8**
comp=Z,16nm,1.1s,mb5.2
ETOS Mallorca 87.72 49 P **P 00 30 18.1 -1.0**
comp=Z,25nm,1.2s,mb5.3
CLLI Llivia 87.84 46 P **P 00 30 21.5 +1.9**
CFON Fontmartina 87.98 47 P **P 00 30 21.4 +1.1**
comp=Z,116nm,3.0s
FLN La Foliniere 88.03 40 *e*P **P 00 30 19.6 -0.8**
comp=Z,40nm,1.2s,mb5.2
FLN *e*MLR MLR
comp=Z,1µm,21.2s,MS5.1
FLN La Foliniere 88.03 40 *e*P **P 00 30 19.6 -0.8**
FLN pmax pmax
comp=Z,20nm,1.2s,mb5.2
FLN MLR MLR
comp=Z,1µm,21.3s,MS5.4
FLN La Foliniere 88.03 40 *e*P **P 00 30 19.6 -0.8**
comp=Z,20nm,1.2s,mb5.2
FLN LR LR
comp=Z,1µm,21.3s,MS5.4
LDF La Druitiere 88.21 40 *e*P **P 00 30 20.4 -0.8**
comp=Z,42nm,1.3s,mb5.2
LDF La Druitiere 88.21 40 *e*P **P 00 30 20.4 -0.8**
LDF pmax pmax
comp=Z,21nm,1.3s,mb5.2
LDF La Druitiere 88.21 40 *e*P **P 00 30 20.4 -0.8**
comp=Z,21nm,1.3s,mb5.2
MTLF Montolieu 88.25 45 *e*P **P 00 30 20.5 -1.0**
comp=Z,28nm,1.4s,mb5.0
MTLF Montolieu 88.25 45 *e*P **P 00 30 20.5 -1.0**
MTLF pmax pmax
comp=Z,14nm,1.4s,mb5.0
MTLF Montolieu 88.25 45 *e*P **P 00 30 20.5 -1.0**
comp=Z,14nm,1.4s,mb5.0
DAWY Dawson 88.28 337 *e*P **P 00 30 20.4 -0.8**
FILF Fillols 88.28 46 *e*P **P 00 30 21.2 -0.5**
RJF Les Rejaudoux 88.31 43 *e*P **P 00 30 20.9 -0.9**
comp=Z,55nm,1.4s,mb5.3
RJF *e*MLR MLR
comp=Z,1µm,22.0s,MS4.9
RJF Les Rejaudoux 88.31 43 *e*P **P 00 30 20.9 -0.9**
RJF pmax pmax
comp=Z,27nm,1.4s,mb5.3
RJF MLR MLR
comp=Z,1µm,22.0s,MS5.2
RJF Les Rejaudoux 88.31 43 *e*P **P 00 30 20.9 -0.9**
comp=Z,27nm,1.4s,mb5.3
RJF LR LR
comp=Z,1µm,22.0s,MS5.2
SCO Scoresbysund 88.38 16 *i* P **P 00 30 22.9 +1.4**
SCO pmax pmax
comp=Z,12nm,0.9s,mb5.1
SCO Scoresbysund 88.38 16 *i* P **P 00 30 22.9 +1.4**
comp=Z,12nm,0.9s,mb5.1
INK Inuvik 88.40 342 LR LR 01 14 05.6
comp=Z,921nm,19.0s,MS5.2,baz=130,slow=38
INK Inuvik 88.40 342 *e*P **P 00 30 20.7 -1.0**
INK pmax pmax
comp=Z,108nm,1.0s
INK Inuvik 88.40 342 *e*P **P 00 30 20.7 -1.0**
comp=Z,108nm,1.0s,mb6.0
EJON La Jonquera 88.48 46 P **P 00 30 23.0 +0.4**
comp=Z,10nm,1.5s,mb4.8
CAF Calviac 88.58 44 *e*P **P 00 30 22.2 -0.8**
comp=Z,44nm,1.3s,mb5.3
CAF Calviac 88.58 44 *e*P **P 00 30 22.2 -0.8**
CAF pmax pmax
comp=Z,22nm,1.3s,mb5.3
CAF Calviac 88.58 44 *e*P **P 00 30 22.2 -0.8**
comp=Z,22nm,1.3s,mb5.3
ESK Eskdalemuir 88.60 33 PFAKE 00 30 30.0 +7.1
ESK LR LR
comp=Z,1µm,20.0s,MS5.3
EKA Eskdalemuir Ar 88.63 33 P **P 00 30 24.1 +1.1**
comp=Z,4.3nm,1.0s,mb4.7,baz=255,slow=6.5,SNR=4.1
TCF Toulx Ste Croi 89.05 43 *e*P **P 00 30 24.2 -1.0**
comp=Z,27nm,1.3s,mb5.1
TCF Toulx Ste Croi 89.05 43 *e*P **P 00 30 24.2 -1.0**
TCF pmax pmax
comp=Z,14nm,1.3s,mb5.1
TCF Toulx Ste Croi 89.05 43 *e*P **P 00 30 24.2 -1.0**
comp=Z,14nm,1.3s,mb5.1
SYO Syowa Base 89.07 161‖ *e*P **P 00 30 23.2 -1.8**
SYO Syowa Base 89.07 161‖ *e*PcP PcP 00 30 25.1 -1.3
BMRM Bremner River 89.12 333 *e*P **P 00 30 24.9 -0.3**
comp=Z,34nm,1.0s,mb5.6
EGAK Eagle 89.29 337 *e*P **P 00 30 25.7 -0.3**
comp=Z,87nm,1.0s,mb6.0
PYM Petit Puy Mans 89.44 43 *e*P **P 00 30 26.8 -0.3**
LBL Lubilhac 89.47 44 *e*P **P 00 30 28.7 +1.5**
TSUM Tsumeb 89.52 109 LR LR 01 08 41.3
comp=Z,2µm,19.0s,MS5.6,baz=297,slow=34
BGF Bois d'Agland 89.55 43 *e*P **P 00 30 26.7 -0.9**
comp=Z,88nm,1.3s,mb5.6
BGF Bois d'Agland 89.55 43 *e*P **P 00 30 26.7 -0.9**
BGF pmax pmax
comp=Z,44nm,1.3s,mb5.6
BGF Bois d'Agland 89.55 43 *e*P **P 00 30 26.7 -0.9**
comp=Z,44nm,1.3s,mb5.6
LASF Ste Croix 89.59 45 *e*P **P 00 30 27.5 -0.3**
comp=Z,19nm,1.2s,mb5.0
HYF Humbligny 89.60 42 *e*P **P 00 30 27.1 -0.7**
AGO Saint Agoulin 89.61 43 *e*P **P 00 30 29.2 +1.4**
DIV Divide 89.71 333 *e*P **P 00 30 27.6 -0.3**
comp=Z,49nm,1.0s,mb5.8
SUR Sutherland 89.79 123 LR LR 01 05 13.1
comp=Z,369nm,20.4s,MS4.8,baz=261,slow=32
SUR Sutherland 89.79 123 PFAKE 00 30 40.0 +11
SUR LR LR
comp=Z,2µm,21.0s,MS5.5
AVF Avril sur Loir 89.95 42 *e*P **P 00 30 28.2 -1.2**
comp=Z,45nm,1.4s,mb5.3
AVF Avril sur Loir 89.95 42 *e*P **P 00 30 28.2 -1.2**
AVF pmax pmax
comp=Z,23nm,1.4s,mb5.3
AVF Avril sur Loir 89.95 42 *e*P **P 00 30 28.2 -1.2**
comp=Z,22nm,1.4s,mb5.3
SSF Saint Saulge 90.12 42 *e*P **P 00 30 29.0 -1.2**
comp=Z,36nm,1.3s,mb5.2
SSF Saint Saulge 90.12 42 *e*P **P 00 30 29.0 -1.2**
SSF pmax pmax
comp=Z,18nm,1.3s,mb5.2
SSF Saint Saulge 90.12 42 *e*P **P 00 30 29.0 -1.2**
comp=Z,18nm,1.3s,mb5.2
SMF Signal de Mont 90.23 43 *e*P **P 00 30 29.8 -1.0**
comp=Z,50nm,1.2s,mb5.4
SMF Signal de Mont 90.23 43 *e*P **P 00 30 29.8 -1.0**
SMF pmax pmax
comp=Z,25nm,1.2s,mb5.4
SMF Signal de Mont 90.23 43 *e*P **P 00 30 29.8 -1.0**
comp=Z,25nm,1.2s,mb5.4
PAX Paxson 90.28 335 *e*P **P 00 30 29.7 -0.9**
PAX pmax pmax
comp=Z,44nm,1.0s,mb5.7
PAX Paxson 90.28 335 *e*P **P 00 30 29.7 -0.9**
comp=Z,44nm,1.0s,mb5.8
VIVF Saint-Julien-l 90.35 44 *e*P **P 00 30 31.0 -0.4**
comp=Z,23nm,1.1s,mb5.1
VIVF Saint-Julien-l 90.35 44 *e*P **P 00 30 31.0 -0.4**
VIVF pmax pmax
comp=Z,12nm,1.1s,mb5.1
VIVF Saint-Julien-l 90.35 44 *e*P **P 00 30 31.0 -0.4**
comp=Z,12nm,1.1s,mb5.1
SSB Saint Sauveur 90.36 44 *e*P **P 00 30 31.2 -0.2**
SSB pmax pmax
comp=Z,15nm,1.2s,mb5.2
SSB Saint Sauveur 90.36 44 *e*P **P 00 30 31.2 -0.2**
comp=Z,15nm,1.2s,mb5.2
LOR Lormes 90.41 42 *e*P **P 00 30 30.3 -1.2**
comp=Z,34nm,1.4s,mb5.2
LOR *e*MLR MLR
comp=Z,1µm,22.2s,MS5.0
LOR Lormes 90.41 42 *e*P **P 00 30 30.3 -1.2**
LOR pmax pmax
comp=Z,17nm,1.4s,mb5.2
LOR MLR MLR
comp=Z,1µm,22.3s,MS5.3
LOR Lormes 90.41 42 *e*P **P 00 30 30.3 -1.2**
comp=Z,17nm,1.4s,mb5.2
LOR LR LR
comp=Z,1µm,22.3s,MS5.3
SMRF Simiane la Rot 90.77 46 *e*P **P 00 30 33.2 -0.1**
comp=Z,30nm,1.2s,mb5.2
SMRF Simiane la Rot 90.77 46 *e*P **P 00 30 33.2 -0.1**
comp=Z,30nm,1.2s,mb5.5
SEW Seward 91.05 331 *e*P **P 00 30 33.2 -1.0**
comp=Z,39nm,1.1s,mb5.7
ORIF Oris-en-Rattie 91.20 45 *e*P **P 00 30 35.4 +0.1**
comp=Z,17nm,0.9s,mb5.1
ORIF *e*MLR MLR
comp=Z,2µm,22.0s,MS5.1
ORIF Oris-en-Rattie 91.20 45 *e*P **P 00 30 35.4 +0.1**
ORIF pmax pmax
comp=Z,9.0nm,0.9s,mb5.1
ORIF Oris-en-Rattie 91.20 45 *e*P **P 00 30 35.4 +0.1**
comp=Z,8.7nm,0.9s,mb5.1
LMR La Mourre 91.28 46 *e*P **P 00 30 35.2 -0.5**
comp=Z,37nm,1.2s,mb5.3
LMR La Mourre 91.28 46 *e*P **P 00 30 35.2 -0.5**
LMR pmax pmax
comp=Z,18nm,1.2s,mb5.3
LMR La Mourre 91.28 46 *e*P **P 00 30 35.2 -0.5**
comp=Z,18nm,1.2s,mb5.3
BAIF Baives 91.33 39 *e*P **P 00 30 35.0 -0.8**
comp=Z,15nm,1.1s,mb4.9
BAIF Baives 91.33 39 *e*P **P 00 30 35.0 -0.8**
BAIF pmax pmax
comp=Z,7.0nm,1.1s,mb4.9
BAIF Baives 91.33 39 *e*P **P 00 30 35.0 -0.8**
comp=Z,7.4nm,1.1s,mb4.9
PMR Palmer 91.39 333 *e*P **P 00 30 35.8 0.0**
PMR pmax pmax
comp=Z,4.0nm,0.4s,mb5.1
PMR Palmer 91.39 333 *e*P **P 00 30 35.8 0.0**
comp=Z,4.1nm,0.4s,mb5.1
FRF La Foret Royal 91.43 46 *e*P **P 00 30 35.7 -0.7**
comp=Z,32nm,1.2s,mb5.2
FRF La Foret Royal 91.43 46 *e*P **P 00 30 35.7 -0.7**
FRF pmax pmax
comp=Z,16nm,1.2s,mb5.2
FRF La Foret Royal 91.43 46 *e*P **P 00 30 35.7 -0.7**
comp=Z,16nm,1.2s,mb5.2
MEZF Maizieres J'vi 91.49 41 *e*P **P 00 30 35.8 -0.7**
RC01 Rabbit Creek A 91.50 332 *e*P **P 00 30 35.4 -0.9**
comp=Z,26nm,1.0s,mb5.5
DOU Dourbes 91.58 39 P **P 00 30 35.8 -1.1**
comp=Z,10nm,3.0s

UCC	Uccle	91.61	39	P	P	00 30 37.2	+0.1
CABF	La Chapelle	91.73	43	eP	P	00 30 37.2	-0.5
MBDF	Montbardon	91.78	45	eP	P	00 30 36.6	-1.4
	comp=Z,14nm,1.1s,mb4.9						
MBDF	Montbardon	91.78	45	eP	P	00 30 36.6	-1.4
MBDF				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.9						
MBDF	Montbardon	91.78	45	eP	P	00 30 36.6	-1.4
	comp=Z,7.1nm,1.1s,mb4.9						
BNI	Bardonecchia	91.78	45	eP	P	00 30 39.3	+1.3
BNI				pmax	pmax		
	comp=Z,17nm,1.6s,mb5.1						
BNI	Bardonecchia	91.78	45	eP	P	00 30 39.3	+1.3
	comp=Z,17nm,1.6s,mb5.1						
KEST	Kesra	91.83	54	P	P	00 30 39.1	+0.6
	comp=Z,4.0nm,0.9s,mb4.7,baz=90,slow=3.1,SNR=10						
KEST				LR	LR	01 12 38.7	
	comp=Z,395nm,19.4s,MS4.9,baz=91,slow=36						
KEST	Kesra	91.83	54	eP	P	00 30 39.4	+1.0
MVIF	Mont Vial	91.86	46	eP	P	00 30 38.2	-0.2
KDAK	Kodiak Island	91.89	329	P	P	00 30 38.0	-0.2
	comp=Z,124nm,1.3s,mb6.1,SNR=8.4						
KDAK	Kodiak Island	91.89	329	eP	P	00 30 38.1	-0.1
KDAK				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.4						
KDAK	Kodiak Island	91.89	329	eP	P	00 30 38.1	-0.1
	comp=Z,20nm,1.0s,mb5.4						
LPL	La Plagne	91.92	44	eP	P	00 30 38.9	+0.3
	comp=Z,34nm,1.2s,mb5.3						
LPL	La Plagne	91.92	44	eP	P	00 30 38.9	+0.3
LPL				pmax	pmax		
	comp=Z,17nm,1.2s,mb5.2						
LPL	La Plagne	91.92	44	eP	P	00 30 38.9	+0.3
	comp=Z,17nm,1.2s,mb5.2						
LPG	La Plagne	91.93	44	eP	P	00 30 39.1	+0.4
	comp=Z,38nm,1.2s,mb5.3						
LPG	La Plagne	91.93	44	eP	P	00 30 39.1	+0.4
LPG				pmax	pmax		
	comp=Z,19nm,1.2s,mb5.3						
LPG	La Plagne	91.93	44	eP	P	00 30 39.1	+0.4
	comp=Z,19nm,1.2s,mb5.3						
TOUF	Mont Tournerai	91.95	46	eP	P	00 30 39.1	+0.3
COLA	College	91.96	336	eP	P	00 30 37.5	-0.8
COLA				pmax	pmax		
	comp=Z,53nm,1.0s,mb5.8						
COLA				MLR	MLR		
	comp=Z,366nm,21.0s,MS4.8						
COLA	College	91.96	336	eP	P	00 30 37.5	-0.9
	comp=Z,53nm,1.0s,mb5.8						
COLA				LR	LR		
	comp=Z,366nm,21.0s,MS4.8						
REVF	Revere	91.98	46	eP	P	00 30 38.7	-0.2
LUCF	Luceram	92.00	46	eP	P	00 30 38.7	-0.3
MCK	McKinley	92.01	335	eP	P	00 30 38.2	-0.4
MCK				pmax	pmax		
	comp=Z,17nm,1.0s,mb5.3						
MCK	McKinley	92.01	335	eP	P	00 30 38.2	-0.4
	comp=Z,17nm,1.0s,mb5.3						
SBF	Sospel	92.05	46	eP	P	00 30 38.7	-0.6
	comp=Z,38nm,1.2s,mb5.3						
SBF	Sospel	92.05	46	eP	P	00 30 38.7	-0.6
SBF				pmax	pmax		
	comp=Z,19nm,1.2s,mb5.3						
SBF	Sospel	92.05	46	eP	P	00 30 38.7	-0.6
	comp=Z,19nm,1.2s,mb5.3						
AUTN	L'Aution	92.08	46	eP	P	00 30 39.5	+0.1
OHAK	Old Harbor	92.10	328	eP	P	00 30 38.1	-1.1
	comp=Z,30nm,1.0s,mb5.6						
BCLA	Clavier	92.10	39	P	P	00 30 39.2	-0.2
	comp=Z,10nm,2.6s,mb4.7						
SAOF	Saorge	92.16	46	eP	P	00 30 39.7	-0.1
LOMF	Lomont	92.39	42	eP	P	00 30 40.7	0.0
WLF	Walferdange	92.46	40	P	P	00 30 42.0	+1.0
	comp=Z,9.4nm,1.5s,mb4.9						
WLF	Walferdange	92.46	40	eSP	SP	00 42 46.1	-7.6
WLF				eSS	SS	00 47 57.8	+2.9
WLF	Walferdange	92.46	40	eP	P	00 30 40.9	-0.1
TRF	Thorofare Moun	92.50	334	eP	P	00 30 40.4	-0.5
	comp=Z,27nm,1.0s,mb5.5						
HINF	Hinteralfeld	92.51	42	eP	P	00 30 40.3	-1.0
VSL	Villasalto	92.59	50	eP	P	00 30 41.4	-0.5
	comp=Z,22nm,1.3s,mb5.4						
RSO	Redoubt South	92.73	331	eP	P	00 30 40.6	-1.3
ECH	Echery	92.79	42	eP	P	00 30 42.1	-0.5
DAG	Danmarks Havn	92.86	11⇑	eP	P	00 30 41.8	-0.5
DAG				pmax	pmax		
	comp=Z,11nm,0.9s,mb5.3						
DAG	Danmarks Havn	92.86	11⇑	eP	P	00 30 41.8	-0.5
	comp=Z,11nm,0.9s,mb5.3						
DAG	Danmarks Havn	92.86	11⇑	iP	P	00 30 41.8	-0.5
	comp=Z,11nm,0.9s,mb5.3						
PGF	Pioggiola	92.90	47	eP	P	00 30 42.9	-0.3
	comp=Z,14nm,1.4s,mb4.9						
PGF	Pioggiola	92.90	47	eP	P	00 30 42.9	-0.3
PGF				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.9						
PGF	Pioggiola	92.90	47	eP	P	00 30 42.9	-0.3
	comp=Z,7.1nm,1.4s,mb4.9						
CDF	Champ du Feu	92.91	41	eP	P	00 30 42.3	-0.8
BPAW	Bear Paw Mtn.	92.99	335	eP	P	00 30 42.0	-1.1
	comp=Z,42nm,1.0s,mb5.8						
PPLA	Purkeypile	93.15	333	eP	P	00 30 42.9	-1.0
	comp=Z,37nm,1.0s,mb5.8						
FELD	Feldberg im Sc	93.28	42	eP	P	00 30 43.1	-1.7
BUG	Bochum--Univer	93.54	38	eSP	SP	00 42 59.7	-5.9
BUG				eSS	SS	00 48 13.9	+3.6
BFO	Black Forest	93.58	42	eSP	SP	00 42 58.3	-7.9
BFO				eSS	SS	00 48 16.0	+5.0
COLD	Coldfoot	93.64	338	eP	P	00 30 46.0	-0.1
	comp=Z,14nm,1.1s,mb5.3						
TUE	Stuetta	93.90	44	eP	P	00 30 48.1	+0.3
	comp=Z,5.2nm,0.9s,mb5.0						
TNS	Taunus Mts	94.03	40	eSP	SP	00 43 04.9	-6.1
TNS				eSS	SS	00 48 22.4	+5.1
SVW2	Sparrevohn	94.23	331	eP	P	00 30 47.2	-1.7
STU	Stuttgart	94.23	41	eSP	SP	00 43 05.8	-7.5
STU				eSS	SS	00 48 24.5	+4.2
DAVOX	Davos/Dischmat	94.32	43	P	P	00 30 49.7	0.0
	comp=Z,1.5nm,0.5s,mb4.7,baz=264,slow=5.6,SNR=5.6						
BOSA	Boshof	94.38	120	P	P	00 30 51.3	+0.8
	comp=Z,17nm,1.1s,mb5.4,baz=245,slow=5.6,SNR=10						
BOSA				LR	LR	01 11 08.9	
	comp=Z,2µm,19.0s,MS5.6,baz=254,slow=34						
BOSA	Boshof	94.38	120	eP	P	00 30 50.3	-0.2
BOSA				pmax	pmax		
	comp=Z,18nm,1.1s,mb5.4						
BOSA	Boshof	94.38	120	eP	P	00 30 50.3	-0.1
	comp=Z,18nm,1.1s,mb5.4						
DAVA	Damuels	94.41	43⇑	iPcP	PcP	00 30 51.5	+1.0
	comp=Z,8.4nm,1.4s						
TTA	Tatalina	94.85	333	eP	P	00 30 51.3	-0.4
FETA	Feichten	94.93	43⇑	iP	P	00 30 52.0	-0.5
	comp=Z,10nm,1.4s,mb5.1						
UBBA	Unterbreizbach	95.11	39	eSP	SP	00 43 17.4	-5.5
UBBA				eSS	SS	00 48 37.4	+4.7
NRDL	Niedersach Rie	95.47	38	eSP	SP	00 43 20.4	-6.3
NRDL				eSS	SS	00 48 41.2	+3.5
FUR	Furstenfeldbru	95.49	42	eSP	SP	00 43 20.9	-6.3
FUR				eSS	SS	00 48 45.3	+7.1
CLZ	Clausthal	95.52	38	eSP	SP	00 43 22.9	-4.4
CLZ				eSS	SS	00 48 43.5	+5.1
LBTB	Lobatse	95.55	117	P	P	00 30 56.9	+1.0
	comp=Z,14nm,1.0s,mb5.3,baz=273,slow=5.1,SNR=12						
LBTB	Lobatse	95.55	117	eP	P	00 30 55.1	-0.8
LBTB				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.4						
LBTB				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.3						
LBTB	Lobatse	95.55	117	eP	P	00 30 55.1	-0.8
	comp=Z,17nm,1.1s,mb5.4						
LBTB				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
GRF	Grafenberg Arr	95.70	41	eSP	SP	00 43 23.2	-6.2
GRF				eSS	SS	00 48 46.9	+5.8
GRF				eL		01 09 59.8	
	comp=Z,961nm,21.6s						
BSEG	Bad Segeberg	95.83	36	eSP	SP	00 43 24.5	-6.1
BSEG				eSS	SS	00 48 46.8	+4.0
AQU	L'Aquila	96.08	48	P	P	00 30 57.7	-0.1
ABTA	Abfaltersbach	96.10	44⇑	iP	P	00 30 56.5	-1.3
	comp=Z,17nm,1.2s,mb5.4						
MOX	Moxa	96.10	40	eSP	SP	00 43 28.0	-5.7
MOX				eSS	SS	00 48 58.0	+11
MOX							
	comp=Z,700nm,21.0s						
MOX	Moxa	96.10	40	eSP	SP	00 43 28.4	-5.3
MOX				eSS	SS	00 48 52.9	+6.2
RJOB	Jochberg	96.43	43	eSP	SP	00 43 32.4	-5.1
RJOB				eSS	SS	00 49 00.4	+8.8
NKC	Novy Kostel	96.56	40	eP	P	00 31 00.8	+1.0
NKC				MLR	MLR		
	comp=Z,1µm,21.4s,MS5.3						
NKC	Novy Kostel	96.56	40	eP	P	00 31 00.8	+1.0
NKC				AMS	AMS	01 10 20.0	
	comp=Z,1µm,21.4s						
TANN	Tannenbergstha	96.60	40	eSP	SP	00 43 33.6	-5.6
TANN				eSS	SS	00 49 00.8	+7.0
WET	Wettzell	96.69	41	eSP	SP	00 43 34.6	-5.6
WET				eSS	SS	00 49 01.9	+6.8
KBA	Koelnbreinsper	96.71	43⇑	iPcP	PcP	00 31 01.4	+0.7
	comp=Z,8.9nm,0.9s						
MAW	Mawson	96.71	165	P	P	00 31 00.1	-0.1
	comp=Z,8.3nm,0.8s,mb5.2,baz=231,slow=6.5,SNR=12						
MAW				LR	LR	01 15 09.7	
	comp=Z,611nm,20.2s,MS5.1,baz=235,slow=36						
MAW	Mawson	96.71	165	eP	P	00 31 00.5	+0.3
MAW				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MAW				MLR	MLR		
	comp=Z,1µm,21.0s						
MAW	Mawson	96.71	165	eP	P	00 31 00.5	+0.3
	comp=Z,3.2nm,1.0s,mb4.7						
MAW				LR	LR		
	comp=Z,1µm,21.0s,MS5.3						
CLL	Collm	97.06	39	eSP	SP	00 43 39.2	-5.0
CLL				eSS	SS	00 49 07.6	+7.3
CLL	Collm	97.06	39	eP	P	00 31 03.0	+1.0
CLL				eS	S	00 42 24.0	+0.9
CLL				MLR	MLR		
	comp=Z,1µm,20.9s,MS5.3						
CLL	Collm	97.06	39	eP	P	00 31 03.0	+1.0
CLL				eS	S	00 42 24.0	+0.9
CLL				ePS	PS	00 43 45.0	-3.2
CLL				ePPS		00 44 31.0	
CLL				eSS	SS	00 49 12.0	+12
CLL				e		00 52 06.0	
CLL				eSSSS		00 56 42.0	
CLL				Lm		01 11 00.0	
	comp=Z,1µm,20.9s						
KHC	Kasperske Hory	97.14	41	eP	P	00 31 03.7	+1.2
KHC				e	pP	00 31 12.0	+0.3
KHC				MLR	MLR		
	comp=Z,800nm,22.1s,MS5.2						
KHC	Kasperske Hory	97.14	41	ePdif	P	00 31 03.7	+1.2
KHC				e	pP	00 31 12.0	+0.3
KHC				LR	LR		
	comp=Z,800nm,22.1s,MS5.2						
KHC	Kasperske Hory	97.14	41	eP	P	00 31 03.7	+1.2
KHC				epP	pP	00 31 12.0	+0.3
KHC				AMS	AMS	01 10 40.0	
	comp=Z,800nm,22.1s						
GEC2	GERESS Array S	97.18	42	eSP	SP	00 43 38.8	-6.8
GEC2				eSS	SS	00 49 07.6	+5.4
NB2	NORSAR Subarra	97.39	29	P	P	00 31 03.8	+0.5
	comp=Z,16nm,1.2s,mb5.3,baz=263,slow=4.6						
NOA	NORSAR Array B	97.39	29	P	P	00 31 03.4	+0.1
	comp=Z,6.5nm,1.0s,mb5.0,baz=261,slow=4.5,SNR=8.0						
NOA				LR	LR	01 13 23.1	
	comp=Z,368nm,19.5s,MS4.9,baz=270,slow=34						
BRG	Berggiesshubel	97.59	40	eSP	SP	00 43 43.5	-6.5
BRG				eSS	SS	00 49 16.2	+8.4
BRG	Berggiesshubel	97.59	40	eP	P	00 31 03.1	-1.3
	comp=Z,1.8nm,1.0s,mb4.6						
BRG							
	comp=N,454nm,29.6s						
BRG							
	comp=E,710nm,30.0s						
BRG							
	comp=Z,645nm,27.5s						
BRG	Berggiesshubel	97.59	40	eP	P	00 31 03.1	-1.4
BRG				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb4.3						
BRG				MLR	MLR		
	comp=N,272nm,29.6s,MS4.8						
BRG				MLR	MLR		
	comp=E,425nm,30.0s,MS4.8						
BRG				MLR	MLR		
	comp=Z,386nm,27.5s,MS4.8						
PRU	Pruhonice	97.87	41	eP	P	00 31 06.8	+1.1
PRU				MLR	MLR		
	comp=Z,700nm,19.7s,MS5.2						
PRU	Pruhonice	97.87	41	ePdif	P	00 31 06.8	+1.1
PRU				LR	LR		
	comp=Z,700nm,19.7s,MS5.2						
PRU	Pruhonice	97.87	41	eP	P	00 31 06.8	+1.1
PRU				AMS	AMS	01 14 20.0	
	comp=Z,700nm,19.7s						
PVCC	Panska Ves	97.95	40	eP	P	00 31 08.1	+2.0
PVCC				e	pP	00 31 15.9	+0.6
PVCC				MLR	MLR		
	comp=Z,1µm,21.6s,MS5.3						
PVCC	Panska Ves	97.95	40	ePdif	P	00 31 08.1	+2.0
PVCC				e	pP	00 31 15.9	+0.6
PVCC				LR	LR		
	comp=Z,1µm,21.6s,MS5.3						
PVCC	Panska Ves	97.95	40	eP	P	00 31 08.1	+2.0
PVCC				epP	pP	00 31 15.9	+0.6
PVCC				AMS	AMS	01 11 20.0	
	comp=Z,1µm,21.6s						
TIP	Timpagrande	98.19	52	eP	P	00 31 07.0	-0.5
TREC	Trest	98.40	41	eP	P	00 31 07.6	-0.5
TREC				e	pP	00 31 17.7	+0.3
TREC				MLR	MLR		
	comp=Z,900nm,21.7s,MS5.2						
TREC	Trest	98.40	41	eP	P	00 31 07.6	-0.5
TREC				epP	pP	00 31 17.7	+0.3
TREC				AMS	AMS	01 11 50.0	
	comp=Z,900nm,21.7s						
HFS	Hagfors	98.50	30	P	P	00 31 08.7	+0.4
	comp=Z,9.5nm,1.1s,mb5.2,baz=262,slow=4.5,SNR=6.4						
CSNA	Conrad Observa	98.50	43⇑	iPdiff	P	00 31 08.2	-0.4
	comp=Z,9.0nm,1.2s,mb5.2						
BSD	Bornholm Skovb	98.64	36	iP	P	00 31 02.4	-6.7
BSD				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.6						
BSD	Bornholm Skovb	98.64	36	iP	P	00 31 02.4	-6.7
	comp=Z,17nm,0.9s,mb5.6						
UPC	Upice	98.86	40	eP	P	00 31 11.7	+1.5
DPC	Dobruska-Polom	99.05	40	eP	P	00 31 12.4	+1.4
DPC				e	pP	00 31 20.9	+0.7
DPC				MLR	MLR		
	comp=Z,800nm,22.6s,MS5.2						
DPC	Dobruska-Polom	99.05	40	ePdif	P	00 31 12.4	+1.4
DPC				e	pP	00 31 20.9	+0.7
DPC				LR	LR		
	comp=Z,800nm,22.6s,MS5.2						
DPC	Dobruska-Polom	99.05	40	eP	P	00 31 12.4	+1.4
DPC				epP	pP	00 31 20.9	+0.7
DPC				AMS	AMS	01 11 30.0	
	comp=Z,800nm,22.6s						
VRAC	Vranov	99.12	41	P	P	00 31 11.0	-0.3
	comp=Z,1.3nm,0.4s,mb4.8,baz=278,slow=8.6,SNR=4.7						
ZST	Bratislava	99.36	43	eP	P	00 31 14.8	+2.4
ZST				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.9						
ZST	Bratislava	99.36	43	eP	P	00 31 14.8	+2.4
	comp=Z,3.7nm,1.1s,mb4.8						
ZST	Bratislava	99.36	43	PDIF	P	00 31 14.8	+2.4
SMOL	Smolenice	99.61	42	eP	Pdif	00 31 15.6	+2.1
SMOL	Smolenice	99.61	42	PDIF	Pdif	00 31 15.6	+2.1
MORC	Moravsky Berou	99.78	41	eP	Pdif	00 31 14.2	0.0
MORC				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.8						
MORC	Moravsky Berou	99.78	41	eP	Pdif	00 31 14.2	-0.1
	comp=Z,4.1nm,1.1s						
OKC	Ostrava-Krasne	100.18	41	AMS	AMS	01 15 50.0	
	comp=Z,600nm,20.8s						
LSZ	Lusaka	100.25	108	P	Pdif	00 31 18.3	+2.0
	comp=Z,4.6nm,1.1s,baz=270,slow=4.7,SNR=5.6						
LSZ	Lusaka	100.25	108	eP	Pdif	00 31 18.7	+2.4
LSZ				pmax	pmax		
	comp=Z,11nm,1.5s						
LSZ				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.8						
LSZ	Lusaka	100.25	108	ePdif	Pdif	00 31 18.7	+2.4
	comp=Z,11nm,1.5s						
LSZ				LR	LR		
	comp=Z,3µm,20.0s,MS5.8						
VYHS	Vyhne	100.54	42	eP	Pdif	00 31 18.9	+1.3
VYHS				pmax	pmax		
	comp=Z,3.0nm,1.2s						
VYHS	Vyhne	100.54	42	eP	Pdif	00 31 18.9	+1.3
	comp=Z,3.0nm,1.2s						
VYHS	Vyhne	100.54	42	PDIF	Pdif	00 31 18.9	+1.3
KECS	Kecovo	101.63	42	eP	Pdif	00 31 25.3	+2.8
KECS				pmax	pmax		
	comp=Z,3.0nm,1.4s						
KECS	Kecovo	101.63	42	eP	Pdif	00 31 25.3	+2.8
	comp=Z,3.4nm,1.4s						
KECS	Kecovo	101.63	42	PDIF	Pdif	00 31 25.3	+2.8
CRVS	Cervenica-Dubn	102.29	42	eP	Pdif	00 31 27.0	+1.6
CRVS				pmax	pmax		
	comp=Z,79nm,3.4s						
CRVS	Cervenica-Dubn	102.29	42	eP	Pdif	00 31 27.0	+1.6
	comp=Z,79nm,3.4s						
CRVS	Cervenica-Dubn	102.29	42	PDIF	Pdif	00 31 27.0	+1.6
CASY	Casey	103.44	183	PFAKE		00 31 40.0	+9.5
CASY				LR	LR		
	comp=Z,792nm,19.0s,MS5.3						
FINES	FINESS Array B	104.57	29	PKKPbc	PKKPbc	00 47 20.5	-2.4
	comp=Z,1.5nm,0.8s,baz=354,slow=1.9,SNR=3.9						
MLR	Muntele Rosu	105.33	46	PP	PP	00 35 58.6	-2.1
	comp=Z,1.3nm,0.8s,baz=241,slow=6.9,SNR=4.4						
AKASG	Malin Array Be	107.27	40	PP	PP	00 36 12.9	-2.0
	comp=Z,0.8nm,0.4s,baz=268,slow=6.8,SNR=5.6						
DZM	Mont Dzumac	111.25	241	eLR	LR	01 09 08.9	
	comp=Z,1µm,23.5s						
BRTR	Keskin Array B	111.25	51	PKiKP	PKiKP	00 36 04.4	+0.2
	comp=Z,1.0nm,0.9s,baz=176,slow=3.7,SNR=4.3						
BRTR				PKKPbc	PKKPbc	00 47 11.7	+11
	comp=Z,2.0nm,1.1s,baz=38,slow=4.7,SNR=4.0						
KMBO	Kilima Mbogo	112.15	95	PFAKE		00 36 20.0	+13
KMBO				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
ANN	Anapa	113.48	46	iPKIKP	PKiKP	00 36 02.3	-6.0
ANN				e		00 36 55.8	
ANN				pmax	pmax		
	comp=Z,35nm,1.0s						
ANN				MLR	MLR		
	comp=N,607nm,20.0s,MS5.3						
ANN				MLR	MLR		
	comp=E,535nm,20.0s,MS5.3						
ANN				MLR	MLR		
	comp=Z,599nm,20.0s,MS5.2						
SOC	Sochi	115.30	47	iPKIKP	PKPdf	00 36 06.9	-4.9
SOC				e		00 37 10.3	
SOC				e		00 42 55.1	
SOC				ePS	PS	00 46 45.0	-8.2
SOC				eSS	SS	00 53 11.7	+2.8
SOC				eSSS		00 57 26.2	
SOC				MLR	MLR		
	comp=Z,303nm,19.0s,MS4.9						
TIXI	Tiksi	116.96	352⇑	ePKIKP	PKPdf	00 36 13.3	-0.9
ARU	Arti	121.92	28	iPKIKP	PKPdf	00 36 24.8	+0.6
ARU						00 37 58.3	
ARU						00 43 20.6	
ARU	Arti	121.92	28	ePKPdf	PKPdf	00 36 23.9	-0.3
AKTK	Aktyubinsk	124.79	34	PKP	PKPdf	00 36 29.6	-0.3
AKTK				PP	PP	00 38 19.1	+1.6
AKTO	Aktyubinsk	124.79	34	PKP	PKPdf	00 36 29.6	-0.3
	comp=Z,7.6nm,1.0s,baz=299,slow=3.1,SNR=21						
AKTO				PP	PP	00 38 19.1	+1.6
	comp=Z,0.9nm,0.8s,baz=303,slow=13,SNR=3.5						
STKA	Stephens Creek	125.02	219	PKP	PKPdf	00 36 31.4	+0.4
	comp=Z,10nm,0.9s,baz=42,slow=5.0,SNR=7.6						
STKA	Stephens Creek	125.02	219	ePKPdf	PKPdf	00 36 31.3	+0.3
YAK	Yakutsk	125.26	346	ePKIKP	PKPdf	00 36 29.7	-0.7
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,27nm,1.0s						
CTA	Charters Tower	128.97	234	ePKP	PKPdf	00 36 39.7	+0.9
	comp=Z,10nm,1.0s						
CTAO	Charters Tower	128.97	234	ePKIKP	PKPdf	00 36 38.8	0.0
CTAO				MLR	MLR		
	comp=Z,805nm,19.0s,MS5.4						
BRVK	Borovoye	129.31	26	ePKIKP	PKPdf	00 36 37.4	-1.0
BRVK				e		00 38 47.0	
BVAR	Borovoye Array	129.38	26	PKP	PKPdf	00 36 38.8	+0.2
	comp=Z,6.3nm,0.9s,baz=270,slow=1.5,SNR=31						
NVS	Novosibirsk	132.54	17	ePKIKP	PKPdf	00 36 43.7	-0.8
NVS				pmax	pmax		
	comp=Z,34nm,1.9s						
NVS				pmax	pmax		
	comp=N,4.0nm,1.2s						
NVS				pmax	pmax		
	comp=E,10.0nm,1.3s						
ZAA0	Zalesovo Array	133.76	16	ePKPdf	PKPdf	00 36 46.6	-0.2
ZALV	Zalesovo Beam	133.76	16	PKhKP		00 36 37.0	
	comp=E,0.6nm,0.5s,baz=303,slow=3.0,SNR=4.4						
ZALV				PKP	PKPdf	00 36 46.7	-0.1
	comp=E,7.3nm,0.5s,baz=266,slow=1.7,SNR=23						
ZALV				SKPbc	SKPbc	00 40 16.0	+2.2
	comp=E,4.6nm,1.0s,baz=337,slow=3.4,SNR=4.8						
ZALV	Zalesovo Beam	133.76	16	PKHKP		00 36 37.0	
ZALV						00 36 46.7	
ZALV	Zalesovo Beam	133.76	16	PKP		00 36 37.0	
ZALV				PKP	PKPdf	00 36 46.7	-0.1
ZALV				SKPbc	SKPbc	00 40 16.0	+2.2
HABR	Khabarovsk	134.20	332	ePKIKP	PKPdf	00 36 47.1	-0.7
HABR				e		00 36 58.2	
HABR						00 43 55.6	
HABR				PS	PS	00 49 35.7	-3.7
HABR				pmax	pmax		
	comp=Z,77nm,2.8s						
HABR				pmax	pmax		
	comp=N,20nm,1.8s						
HABR				pmax	pmax		
	comp=E,55nm,2.0s						
KURK	Kurchatov	134.48	23	ePKIKP	PKPdf	00 36 48.2	-0.1
KURK				e		00 39 21.0	
KLR	Kul'dur	135.10	335	ePKIKP	PKPdf	00 36 46.0	-3.5
KLR				e		00 39 20.4	
NWAO	Narrogin (SRO)	135.28	195	PP	PP	00 39 22.0	-2.9
	comp=E,12nm,0.9s,baz=74,slow=5.4,SNR=6.1						
ASAR	Alice Springs	135.61	220	PKhKP		00 36 40.6	
	comp=E,0.4nm,0.7s,baz=147,slow=2.7,SNR=4.3						
ASAR				PKP	PKPdf	00 36 51.5	+0.2
	comp=E,13nm,0.8s,baz=132,slow=2.0,SNR=34						
WRAB	Tennant Creek	137.93	224	ePKIKP	PKPdf	00 36 55.5	-0.1
WRAB				MLR	MLR		
	comp=Z,542nm,19.0s,MS5.3						
WRA	Warramunga Arr	137.93	224	PKP	PKPdf	00 36 55.7	+0.1
	comp=Z,16nm,0.9s,baz=132,slow=1.6,SNR=44						
EKS2	Erkin-Say	138.12	34	ePKPdf	PKPdf	00 36 55.6	+0.4
AML	Almayashu	138.42	35	ePKPdf	PKPdf	00 36 56.2	+0.3
TKM2	Tokmak 2	138.93	33	ePKIKP	PKPdf	00 36 52.6	-4.2
TKM2				e		00 36 57.1	
MK31	Makanchi Array	139.08	23	ePKIKP	PKPdf	00 36 55.3	-1.6
MKAR	Makanchi Array	139.08	23	PKP	PKPdf	00 36 55.6	-1.3
	comp=Z,14nm,1.1s,baz=329,slow=2.1,SNR=18						
MKAR				SKPbc	SKPbc	00 40 31.2	+1.0
	comp=Z,1.8nm,1.0s,baz=50,slow=8.0,SNR=3.6						
MDJ	Mudanjiang	139.59	332	PKP	PKPdf	00 36 57.2	-0.7
KBL	Kabul	139.68	48	PKIKP	PKPdf	00 36 58.6	+0.2
MJAR	Matsushiro Arr	139.91	316	PKhKP		00 36 51.4	
	comp=Z,6.7nm,0.9s,baz=75,slow=2.1,SNR=11						
MAJO	Matsushiro	139.91	316	ePKHKP		00 36 50.9	
MAT	Matsushiro	139.91	316	PKP		00 36 50.3	
KSH	Kashi	141.44	36	ePKP	PKPdf	00 36 56.5	-4.9
KSH				PKS		00 40 30.4	
KSH				SKS	SKSdf	00 44 05.8	-3.9
KSH				AMB	AMB		
	comp=Z,140nm,4.7s						
KSH				LR	LR		
	comp=N,130nm,5.2s						
KSH				LR	LR		
	comp=E,130nm,5.0s						
KSH				LR	LR		
	comp=Z,530nm,29.2s,MS5.1						
CN2	Changchun	142.05	335	ePKP	PKPdf	00 36 58.2	-4.2
CN2				epPKP	pPKPdf	00 37 08.0	-3.9
CN2				ePP	PP	00 40 07.6	+0.4
CN2				eSS	SS	00 58 35.6	-2.6
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,300nm,20.0s,MS5.1						
CN2				LR	LR		
	comp=E,200nm,20.0s,MS5.1						
CN2				LR	LR		
	comp=Z,500nm,22.0s,MS5.2						
ULN	Ulaanbaatar	142.55	357	ePKIKP	PKPdf	00 36 59.8	-3.3
SONM	Songino Array	142.61	358	PKhKP		00 36 59.5	
	comp=Z,5.7nm,1.0s,baz=328,slow=1.6,SNR=12						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
WMQ	**Urumqi**	**143.61**	**21**	PKP	PKPdf	00 37 03.3	-1.9
WMQ				pPKP	pPKPdf	00 37 13.9	-0.7
WMQ				sPKP		00 37 17.7	
WMQ				PP	PP	00 40 19.6	+3.1
WMQ				SKS	SKSdf	00 44 07.6	-5.3
WMQ				SKKS	SKKSac	00 47 04.9	-3.3
WMQ				AMB	AMB		
	comp=Z,43nm,9.1s						
WMQ				LR	LR		
	comp=N,440nm,22.0s,MS5.3						
WMQ				LR	LR		
	comp=E,350nm,21.4s,MS5.3						
WMQ				LR	LR		
	comp=Z,570nm,20.6s,MS5.3						
KAKA	**Kakadu**	**144.01**	**231**	*e*PKP	PKPdf	00 37 07.6	+0.9
	comp=Z,3μm,7.8s						
KAKA	**Kakadu**	**144.01**	**231**	*e*PKPdf	PKPdf	00 37 06.5	-0.1
SNY	**Shenyang**	**144.45**	**335**	⇑PKP	PKPdf	00 37 02.3	-4.4
SNY				PP	PP	00 40 21.7	+0.1
SNY				SS	SS	00 59 02.7	-3.3
SNY				AMB	AMB		
	comp=Z,110nm,5.3s						
SNY				LR	LR		
	comp=N,260nm,20.4s,MS5.1						
SNY				LR	LR		
	comp=E,190nm,20.4s,MS5.1						
SNY				LR	LR		
	comp=Z,310nm,24.3s,MS5.0						
KNA	**Kununurra**	**144.64**	**223**	*e*PKP	PKPdf	00 37 06.2	-1.5
	comp=Z,62nm,1.1s						
FITZ	**Fitzroy Crossi**	**144.85**	**217**	*e*PKP	PKPdf	00 37 06.2	-1.9
	comp=Z,34nm,0.7s						
FITZ	**Fitzroy Crossi**	**144.85**	**217**	PKP	PKPdf	00 37 06.3	-1.8
	comp=Z,52nm,1.1s,baz=180,slow=3.0,SNR=35						
FITZ	**Fitzroy Crossi**	**144.85**	**217**	*e*PKPdf	PKPdf	00 37 06.7	-1.4
MBWA	**Marble Bar**	**145.29**	**206**	*e*PKP	PKPdf	00 37 07.8	-1.0
MBWA	**Marble Bar**	**145.29**	**206**	*e*PKP	PKPdf	00 37 07.3	-1.4
THN	**Thein Dam**	**145.55**	**46**	*e*PKP	PKPdf	00 37 07.7	-1.2
KSRS	**Korea Array**	**145.75**	**326**	PKPbc	PKPbc	00 37 08.8	-0.7
	comp=Z,82nm,1.0s,baz=48,slow=3.0,SNR=78						
KSRS				SKPbc	SKPbc	00 40 52.6	+5.5
	comp=Z,0.6nm,0.4s,baz=56,slow=1.0,SNR=4.5						
GIRL	**Giralia**	**145.84**	**196**	*e*PKP	PKPdf	00 37 04.7	-5.0
	comp=Z,356nm,1.2s						
KKR	**Kurukshetra**	**147.66**	**49**	*e*PKP	PKPdf	00 37 08.9	-3.6
DL2	**Dalian**	**147.71**	**335**	PKPbc	PKPbc	00 37 13.1	-2.0
KHET	**Khetri**	**147.81**	**53**	*e*PKP	PKPdf	00 37 10.6	-2.2
KHET				*e*x	x	00 37 15.6	
DDI	**Dehra Dun**	**148.37**	**47**	*e*x	x	00 37 17.6	
DDI				*e*x	x	00 38 03.8	
NDI	**New Delhi**	**148.61**	**51**	*e*x	x	00 37 16.0	
AYAN	**Aya Nagar**	**148.64**	**51**	*e*PKP	PKPdf	00 37 13.0	-1.2
AYAN				*e*x	x	00 37 13.3	
BJI	**Beijing**	**148.67**	**343**	PKPbc	PKPdf	00 37 14.0	+0.1
BJI				PP	PP	00 40 52.1	+5.8
BJI				SS	SS	00 59 50.0	-3.4
BJI				AMB	AMB		
	comp=Z,130nm,6.7s						
BJI				LR	LR		
	comp=N,330nm,26.7s,MS5.1						
BJI				LR	LR		
	comp=E,210nm,22.8s,MS5.1						
BJI				LR	LR		
	comp=Z,500nm,24.0s,MS5.2						
SONA	**Sohna**	**148.72**	**51**	*e*PKP	PKPdf	00 37 13.3	-1.0
SONA				AML	AML	00 37 26.9	
	comp=N,7.8nm,0.1s						
SONA				AML	AML	00 37 26.9	
	comp=E,9.0nm,0.1s						
BISR	**Bishrakh**	**148.84**	**51**	*e*PKP	PKPdf	00 37 13.9	-0.6
HHC	**Hu-ho-hao-te**	**148.99**	**350**	*e*PKPbc	PKPdf	00 37 10.7	-3.7
HHC				PKS		00 40 43.8	
HHC				PP	PP	00 40 47.3	-0.8
HHC				SKS	SKSdf	00 44 17.1	-3.6
HHC				SKKS	SKKSac	00 47 37.1	-1.5
HHC				SS	SS	00 59 56.8	0.0
HHC				AMB	AMB		
	comp=Z,89nm,10.4s						
HHC				LR	LR		
	comp=N,270nm,21.4s,MS5.1						
HHC				LR	LR		
	comp=E,230nm,22.0s,MS5.1						
HHC				LR	LR		
	comp=Z,400nm,21.3s,MS5.2						
POO	**Poona**	**149.27**	**71**	*e*PKP	PKPdf	00 37 13.4	-2.0
POO				AMb	AMB	00 37 28.9	
	comp=Z,139nm,1.1s						
JOSI	**Joshimath**	**149.31**	**45**	*e*PKP	PKPdf	00 37 14.3	-0.9
JOSI				*e*PKP		00 37 15.6	
JOSI				*e*x	x	00 37 33.1	
JOSI				AML	AML	00 37 35.4	
	comp=E,192nm,0.7s						
JOSI				AML	AML	00 37 35.5	
	comp=N,188nm,0.6s						
BTO	**Baotou**	**149.48**	**352**	*e*PKPbc	PKPdf	00 37 14.5	-0.6
KAD	**Karad**	**149.79**	**73**	*e*PKP	PKPdf	00 37 15.0	-1.3
GTA	**Gaotai**	**150.77**	**7**	PKPbc	PKPdf	00 37 17.9	+0.7
GTA				pPKP	pPKPdf	00 37 28.4	+1.7
GTA				sPKP		00 37 32.1	
GTA				PKS		00 40 51.5	
GTA				PP	PP	00 41 05.1	+6.8
GTA				SKS	SKSdf	00 44 18.5	-4.6
GTA				SKKS	SKKSac	00 47 48.4	-0.1
GTA				SS	SS	01 00 19.9	+3.4
GTA				AMB	AMB		
	comp=Z,110nm,6.5s						
GTA				LR	LR		
	comp=N,220nm,30.6s						
GTA				LR	LR		
	comp=E,160nm,23.5s						
GTA				LR	LR		
	comp=Z,420nm,28.3s,MS5.1						
BHPL	**Bhopal**	**151.16**	**60**	*e*PKP	PKPdf	00 37 17.5	-0.8
BHPL				AMb	AMB	00 37 26.1	
	comp=Z,22nm,1.0s						
TIA	**Tai'an**	**151.83**	**338**	*e*PKPbc	PKPdf	00 37 18.7	-0.2
LZH	**Lanzhou**	**154.38**	**1**	*e*PKPbc	PKPdf	00 37 22.1	-0.5
LZH				pPKP	pPKPdf	00 37 29.9	-2.2
LZH				sPKP		00 37 32.7	
LZH				PKPab	PKPab	00 37 46.2	+1.3
LZH				PKS		00 40 57.5	
LZH				PP	PP	00 41 25.1	+6.4
LZH				SKS	SKSdf	00 44 20.3	-7.3
LZH				SKKS	SKKSac	00 48 09.2	+1.0
LZH				SS	SS	01 01 02.0	+6.0
LZH				AMB	AMB		
	comp=Z,130nm,5.9s						
LZH				LR	LR		
	comp=N,320nm,17.3s						
LZH				LR	LR		
	comp=Z,540nm,19.2s,MS5.4						
NJ2	**Nanjing**	**154.66**	**331**	*e*PKPbc	PKPdf	00 37 17.9	-5.2
DMN	**Daman**	**154.95**	**44**	*e*P	PKPab	00 37 48.3	+0.5
	comp=Z,159nm,1.1s						
KKN	**Kakani**	**154.95**	**44**	*e*P	PKPab	00 37 48.4	+0.6
	comp=Z,89nm,1.1s						
PKIN	**Phulchoki**	**155.17**	**44**	*e*P	PKPab	00 37 48.9	+0.2
	comp=Z,46nm,1.2s						
PKI	**Pulchoki**	**155.18**	**44**	*e*P	PKPab	00 37 48.9	+0.2
	comp=Z,64nm,1.1s						
GUN	**Gumba**	**155.28**	**42**	*e*P	PKPab	00 37 49.7	+0.6
	comp=Z,124nm,1.1s						
RAMN	**Ramite**	**156.39**	**43**	*e*P	PKPab	00 37 49.5	-4.4
TAPN	**Taplejung**	**156.85**	**41**	*e*P	PKPab	00 37 49.6	-6.3
ODAN	**Odare**	**156.98**	**42**	*e*P	PKPab	00 37 48.6	-7.8
LSA	**Lhasa**	**157.07**	**31**	PKP	PKPdf	00 37 26.2	-0.2
WHN	**Wuhan**	**157.92**	**337**	PKP	PKPdf	00 37 31.0	+3.5
WHN				PP	PP	00 41 45.8	+7.0
WHN				LR	LR		
	comp=N,840nm,20.8s,MS5.7						
WHN				LR	LR		
	comp=E,470nm,16.6s,MS5.7						
WHN				LR	LR		
	comp=Z,1μm,26.0s						
CD2	**Chengdu**	**159.54**	**2**	PKP	PKPdf	00 37 26.7	-2.7
CD2				pPKP	pPKPdf	00 37 37.5	-1.4
CD2				sPKP		00 37 41.1	
CD2				PKS		00 40 58.8	
CD2				PP	PP	00 41 49.0	+1.8
CD2				SKS	SKSdf	00 44 26.9	-6.2
CD2				SKKS	SKKSac	00 48 31.9	-3.7
CD2				SS	SS	01 01 50.0	-1.3
CD2				AMB	AMB		
	comp=Z,170nm,7.7s						
CD2				LR	LR		
	comp=N,330nm,18.4s						
CD2				LR	LR		
	comp=Z,840nm,29.7s						
GYA	**Guiyang**	**163.85**	**353**	*i* PKP	PKPdf	00 37 35.2	+1.2
GYA				sPKP		00 37 45.9	
GYA				PKPab	PKPab	00 38 28.3	+2.1
GYA				PKS		00 41 04.2	
GYA				PP	PP	00 42 15.6	+5.3
GYA				SKKS	SKKSac	00 48 57.9	0.0
GYA				SS	SS	01 02 38.0	+1.6
GYA				AMB	AMB		
	comp=Z,170nm,8.7s						
GYA				LR	LR		
	comp=N,250nm,24.3s						
GYA				LR	LR		
	comp=E,280nm,25.4s						
GYA				LR	LR		
	comp=Z,320nm,23.6s						
KMI	**Kunming**	**165.22**	**6**	PKP	PKPdf	00 37 36.8	+1.6
KMI				pPKP	pPKPdf	00 37 43.8	-0.9
KMI				sPKP		00 37 46.6	
KMI				PKPab	PKPab	00 38 33.7	+1.5
KMI				PKS		00 41 06.0	
KMI				PP	PP	00 42 21.1	+3.7
KMI				SKS	SKSdf	00 44 34.1	-3.7
KMI				SKKS	SKKSac	00 49 04.5	-0.4
KMI				SS	SS	01 02 51.7	+1.3
KMI				AMB	AMB		
	comp=Z,33nm,3.1s						
KMI				LR	LR		
	comp=N,350nm,20.5s						
KMI				LR	LR		
	comp=E,360nm,21.5s						
KMI				LR	LR		
	comp=Z,410nm,17.3s						
QIZ	**Qiongzhong**	**169.95**	**330**	PKP	PKPdf	00 37 37.0	-1.7
QIZ				PP	PP	00 42 42.1	-0.2
QIZ				SS	SS	01 03 42.5	+3.3
QIZ				AMB	AMB		
	comp=Z,90nm,3.0s						
QIZ				LR	LR		
	comp=N,360nm,19.1s						
QIZ				LR	LR		
	comp=E,200nm,25.0s						
QIZ				LR	LR		
	comp=Z,440nm,26.1s						
CHTO	**Chiang Mai**	**170.02**	**32**	*e*PKIKP	PKPdf	00 37 38.4	-0.4
CHTO				*e*		00 38 53.5	
CMAR	**Chiang Mai Arr**	**170.32**	**33**	PKP	PKPdf	00 37 39.4	+0.5
	comp=Z,3.5nm,0.8s,baz=282,slow=1.7,SNR=23						
CMAR				PKPab	PKPab	00 38 56.6	+1.6
	comp=Z,8.0nm,0.9s,baz=322,slow=5.1,SNR=14						
CMAR				PP	PP	00 42 44.6	+0.4
	comp=Z,1.0nm,0.3s,baz=301,slow=19,SNR=4.3						
PSI	**Prapat**	**170.67**	**143**	PKP	PKPdf	00 37 38.7	-0.6
	comp=Z,18nm,1.0s,baz=184,slow=7.8,SNR=9.7						
PSI				PKPab	PKPab	00 38 58.0	+1.2
	comp=Z,8.8nm,1.0s,baz=235,slow=5.8,SNR=4.8						
PSI	**Prapat**	**170.67**	**143**	PKP	PKPdf	00 37 38.7	-0.6
PSI				PKPab	PKPab	00 38 58.0	+1.2

*TIR **01** 00:17:52.6±5.0, 41°.12N×20°.12E, h0^{km}±999^{km}, ML3.4*
*ISCJB **01** 00:18:00.9±0.5, 41°.15N±0°.03×20°.20E±0°.04, h8^{km}±6^{km}, Error ellipse: s-maj=5.4km s-min=4.2km az=25.6*
*CSEM **01** 00:18:00.9±0.2, 41°.14N×20°.18E, h10^{km}, ML2.7/2, Error ellipse: s-maj=6.1km s-min=4.1km az=60.0*
*THE **01** 00:18:00.9, 41°.30N×20°.23E, h27^{km}±1^{km}, ML2.7/2, Error ellipse: s-maj=2.6km s-min=0.7km az=358.0*
*SKO **01** 00:18:01.1, 41°.14N×20°.16E, h10^{km}, M1.2, ML1.8*
ISC 01 00:18:01.5±0.5**, 41°.15N**±0°.03×**20°.20E**±0°.04**, h14**^{km}±7^{km}**, n21,** σ0^{s}.**97**/42**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.32**	**308**	P	**Pg**	**00 18 07.1**	**-1.0**
TIR				S	**Sg**	**00 18 13.0**	**+0.5**
TIR	**Tirane**	**0.32**	**308**	P	**Pg**	**00 18 07.1**	**-1.0**
TIR				S	**Sg**	**00 18 13.0**	**+0.5**
OHR	**Ohrid**	**0.45**	**95**	*i* Pg	**Pg**	**00 18 10.2**	**-0.3**
OHR				*i* Sg	**Sg**	**00 18 18.1**	**+1.5**
OHR				*e*Lg		00 18 18.2	
	comp=N,50nm,0.6s						
OHR				*e*Lg		00 18 18.4	
	comp=E,50nm,0.6s						
OHR	**Ohrid**	**0.45**	**95**	P	**Pg**	**00 18 10.1**	**-0.4**
OHR				S	**Sg**	**00 18 18.2**	**+1.6**
OHR	**Ohrid**	**0.45**	**95**	P	**Pg**	**00 18 10.1**	**-0.4**
OHR				S	**Sg**	**00 18 18.2**	**+1.6**
KRUS	**Krusevo**	**0.82**	**74**	*i* Pg	**Pg**	**00 18 16.1**	**-1.3**
KRUS				*i* Sg	**Sg**	**00 18 29.0**	**+0.8**
KRUS				*e*Lg		00 18 29.2	
	comp=N,8.5nm,0.4s						
KRUS				*e*Lg		00 18 30.3	
	comp=E,7.7nm,0.3s						
BIA	**Bitola**	**0.86**	**98**	*i* Pg	**Pg**	**00 18 16.8**	**-1.3**
BIA				*i* Sg	**Sg**	**00 18 29.5**	**+0.1**
BIA				*e*Lg		00 18 30.2	
	comp=N,8.7nm,0.5s						
BIA				*e*Lg		00 18 31.1	
	comp=E,10.0nm,0.4s						
BIA	**Bitola**	**0.86**	**98**	P	**Pg**	**00 18 16.7**	**-1.5**
BIA				S	**Sg**	**00 18 29.0**	**-0.4**
BIA	**Bitola**	**0.86**	**98**	P	**Pg**	**00 18 16.7**	**-1.5**
BIA				S	**Sg**	**00 18 29.0**	**-0.4**
PUK	**Puka**	**0.92**	**346**	*i* PG	**Pg**	**00 18 17.7**	**-1.6**
PUK				*i* SG	**Sg**	**00 18 32.1**	**+0.7**
PUK	**Puka**	**0.92**	**346**	*i* Pg	**Pg**	**00 18 17.7**	**-1.6**
	SNR=90						
PUK				*i* Sg	**Sg**	**00 18 32.1**	**+0.7**
	SNR=90						
FNA	**Florina**	**0.96**	**112**	P	**Pb**	**00 18 19.5**	**-0.5**
FNA				S	**Sb**	**00 18 32.0**	**-0.6**
FNA	**Florina**	**0.96**	**112**	P	**Pb**	**00 18 19.5**	**-0.5**
FNA				S	**Sb**	**00 18 32.0**	**-0.6**
NEST	**Nestorio**	**0.98**	**138**	P	**Pb**	**00 18 19.9**	**-0.3**
NEST				S	**Sb**	**00 18 34.5**	**+1.5**
NEST	**Nestorio**	**0.98**	**138**	P	**Pb**	**00 18 19.9**	**-0.3**
NEST				S	**Sb**	**00 18 34.5**	**+1.5**
BCI	**Bajram Curri**	**1.22**	**355**	*i* PG	**Pg**	**00 18 25.2**	**+0.2**
BCI				*i* SG	**Sg**	**00 18 42.5**	**+1.6**
BCI	**Bajram Curri**	**1.22**	**355**	*i* Pg	**Pg**	**00 18 25.2**	**+0.2**
	SNR=90						
BCI				*i* Sg	**Sg**	**00 18 42.5**	**+1.6**
	SNR=90						
SRN	**Sarande**	**1.28**	**187**	*i* PG	**Pn**	**00 18 24.1**	**-0.9**
SRN				*i* SG	**Sg**	**00 18 43.4**	**+0.7**
SRN	**Sarande**	**1.28**	**187**	*i* Pg	**Pn**	**00 18 24.1**	**-0.9**
	SNR=90						
SRN				*i* Sg	**Sg**	**00 18 43.4**	**+0.7**
	SNR=90						
KEK	**Kerkira**	**1.47**	**192**	P	**Pn**	**00 18 27.4**	**-0.2**
KEK				S	**Sn**	**00 18 47.6**	**+1.0**
KEK	**Kerkira**	**1.47**	**192**	P	**Pn**	**00 18 27.4**	**-0.2**
KEK				S	**Sn**	**00 18 47.6**	**+1.0**

CASC 01 00:31:08.1±2.5**, 12°.13N**×**87°.90W, h70**^{km}±123^{km}**, MD3.7, ML3.6, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**1.00**	**56**	*e*P	Pn	00 31 26.3	-0.4
CRIN				AML	AML	00 31 42.0	
	comp=E,1μm,0.4s						
CRIN				*e*S	Sn	00 31 42.3	+1.8
LEON	**Leon**	**1.02**	**74**	*e*P	Pn	00 31 26.5	-0.4
CNCH	**Conchagua**	**1.14**	**3**	*e*P	Pn	00 31 28.1	-0.3
CNCH				*e*S	Sn	00 31 43.1	-0.5
CNGN	**Cerro Negro**	**1.23**	**72**	*e*P	Pn	00 31 29.0	-0.5
CNGN				*e*S	Sn	00 31 48.8	+3.2
CNGN				AML	AML	00 31 48.8	
	comp=E,213nm,0.4s						
COPN	**Copaltepe**	**1.28**	**88**	*e*P	Pn	00 31 29.0	-1.2
BLLM	**Bellamira**	**1.35**	**346**	*e*P	Pn	00 31 31.4	+0.3
BLLM				*e*S	Sn	00 31 49.1	+0.8
MOMN	**Momotombo**	**1.35**	**78**	*e*P	Pn	00 31 31.0	-0.1
CSAN		**1.44**	**88**	*e*P	Pn	00 31 32.0	-0.3
CSAN				*e*S	Sn	00 31 52.7	+2.1
CSAN				AML	AML	00 31 53.6	
	comp=Z,3μm,0.2s						
XAVN	**Gruta Xavier**	**1.54**	**89**	*e*P	Pn	00 31 33.8	+0.3
TICN	**Ticuantepe**	**1.63**	**93**	*e*P	Pn	00 31 35.4	+0.6
LFRS	**El Faro**	**1.87**	**323**	*e*P	Pn	00 31 39.8	+1.8
LFRS				*e*S	Sn	00 32 04.4	+3.7
SSN	**San Juan del S**	**2.16**	**112**	*e*P	Pn	00 31 41.0	-1.0
BOAB	**BOACO BROADBAN**	**2.20**	**81**	*e*P	Pn	00 31 42.7	+0.2

MAN 01 00:35:24, 7°.05N×126°.08E, h36^{km}, mb4.5, ML3.3, MS3.2, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.21**	**121**	*e*P	Pn	00 35 34.6	+3.6
MATI				*e*S	Sn	00 35 38.7	+2.9
DMPH	**Davao City--Mi**	**0.56**	**273**	⇓*e*P	Pn	00 35 37.1	+1.5
DMPH				*e*S	Sn	00 35 47.1	+3.4
BUKP	**Musuan**	**1.30**	**309**	*e*P	Pn	00 35 47.0	+1.4
BUKP				*e*S	Sn	00 36 00.4	-1.4
PAGZ	**Pagadian**	**2.79**	**287**	*e*P	Pn	00 36 07.9	+1.7

*ISK **01** 00:42:29.4, 40°.20N×33°.96E, h5^{km}, MD3.0*
*ISCJB **01** 00:42:30.4±0.6, 40°.02N±0°.03×34°.00E±0°.04, h1^{km}±9^{km}, Error ellipse: s-maj=5.7km s-min=4.8km az=164.8*
*DDA **01** 00:42:30.4, 40°.01N×34°.00E, h7^{km}±2^{km}, Md2.8*
*CSEM **01** 00:42:30.6±0.3, 40°.04N×34°.01E, h5^{km}, MD2.8, Error ellipse: s-maj=7.3km s-min=6.1km az=165.0*
ISC 01 00:42:31.1±0.6**, 40°.02N**±0°.03×**34°.01E**±0°.04**, h4**^{km}±8^{km}**, n22,** σ0^{s}.**83**/32**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CDAG	**Cicekdag**	**0.48**	**144**	*i* P	**Pg**	**00 42 39.9**	**-0.4**
CDAG				*i* S	**Sg**	**00 42 46.8**	**+0.2**
CDAG	**Cicekdag**	**0.48**	**144**	*i* P	**Pg**	**00 42 39.9**	**-0.4**
CDAG				*i* S	**Sg**	**00 42 46.8**	**+0.2**
CORM	**Corum**	**0.51**	**71**	*e*PG	**Pg**	**00 42 39.7**	**-1.1**
CORM				*e*SG	**Sg**	**00 42 47.6**	**+0.2**
CORM	**Corum**	**0.51**	**71**	*e*Pg	**Pg**	**00 42 39.7**	**-1.1**
CORM				*e*Sg	**Sg**	**00 42 47.6**	**+0.2**
ELDT	**Eldivan**	**0.65**	**317**	*i* P	**Pg**	**00 42 43.0**	**-0.5**
ELDT				*i* S	**Sg**	**00 42 52.2**	**+0.3**
ELDT	**Eldivan**	**0.65**	**317**	*i* P	**Pg**	**00 42 43.0**	**-0.5**
ELDT				*i* S	**Sg**	**00 42 52.2**	**+0.2**
BBAL	**Bala**	**0.83**	**236**	*i* P	**Pg**	**00 42 46.9**	**0.0**
BBAL				*i* S	**Sg**	**00 42 58.4**	**+0.7**
BBAL	**Bala**	**0.83**	**236**	*i* P	**Pg**	**00 42 46.9**	**-0.1**
BBAL				*i* S	**Sg**	**00 42 58.4**	**+0.7**
CTKT	**Corum**	**0.85**	**44**	*i* P	**Pg**	**00 42 48.0**	**+0.5**
CTKT				*i* S	**Sg**	**00 42 59.7**	**+1.2**
CTKT	**Corum**	**0.85**	**44**	*i* P	**Pg**	**00 42 48.0**	**+0.6**
CTKT				*i* S	**Sg**	**00 42 59.7**	**+1.2**
LOD	**Lodumlu**	**0.96**	**263**	*e*PG	**Pg**	**00 42 48.5**	**-1.1**
LOD	**Lodumlu**	**0.96**	**263**	*e*Pg	**Pg**	**00 42 48.5**	**-1.0**
YOZ	**Yozgat**	**1.08**	**110**	*e*PN	**Pn**	**00 42 52.3**	**-0.7**
YOZ	**Yozgat**	**1.08**	**110**	*e*Pn	**Pn**	**00 42 52.3**	**-0.7**
BYBT	**Boyabat**	**1.56**	**21**	*e*PN	**Pn**	**00 42 56.3**	**-3.4**
BYBT	**Boyabat**	**1.56**	**21**	*e*Pn	**Pn**	**00 42 56.3**	**-3.4**
BALT	**Daday**	**1.59**	**343**	*i* P	**Pn**	**00 43 00.5**	**+0.5**
BALT	**Daday**	**1.59**	**343**	*i* P	**Pn**	**00 43 00.5**	**+0.5**
SULT	**Sultanhani-AKS**	**1.85**	**192**	*e*PN	**Pn**	**00 43 05.1**	**+1.4**
SULT	**Sultanhani-AKS**	**1.85**	**192**	*e*Pn	**Pn**	**00 43 05.1**	**+1.5**
SVSK	**Karacayir**	**2.30**	**91**	*e*PN	**Pn**	**00 43 09.4**	**-0.4**
SVSK	**Karacayir**	**2.30**	**91**	*e*Pn	**Pn**	**00 43 09.5**	**-0.3**

*ATH **01** 00:44:20.4, 37°.95N×21°.49E, h23^{km}±1^{km}, MD3.3/15*
*NEIC **01** 00:44:20.4, 37°.95N×21°.49E, h23^{km}, MD3.3(ATH), After ATH.*
*ISCJB **01** 00:44:21.4±0.3, 37°.95N±0°.02×21°.49E±0°.03, h27^{km}±3^{km}, Error ellipse: s-maj=4.0km s-min=3.4km az=21.5*
*CSEM **01** 00:44:21.1±0.2, 37°.92N×21°.48E, h19^{km}, MD3.3, Error ellipse: s-maj=5.2km s-min=4.3km az=22.0*
*THE **01** 00:44:21.2, 37°.93N×21°.50E, h0^{km}±1^{km}, ML2.9/11, Error ellipse: s-maj=1.6km s-min=0.5km az=235.0*
ISC 01 00:44:21.4±0.3**, 37°.95N**±0°.02×**21°.49E**±0°.03**, h25**^{km}±3^{km}**, n60,** σ1^{s}.**13**/107**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.11**	**350**	*e*Pb	**Pb**	**00 44 25.5**	**-0.7**
RLS				*e*Sb	**Sb**	**00 44 29.1**	**-0.3**
RLS	**Riolos of Patr**	**0.11**	**350**	*e*PB	**Pb**	**00 44 25.5**	**-0.7**
RLS				*e*SB	**Sb**	**00 44 29.1**	**-0.3**
RLS	**Riolos of Patr**	**0.11**	**350**	*e*Pb	**Pb**	**00 44 25.5**	**-0.7**
RLS				*e*Sb	**Sb**	**00 44 29.1**	**-0.3**
UPR	**University Cam**	**0.41**	**34**	*e*PB	**Pb**	**00 44 29.3**	**-0.8**
UPR				*e*SB	**Sb**	**00 44 35.2**	**-0.9**
UPR	**University Cam**	**0.41**	**34**	P	**Pb**	**00 44 29.3**	**-0.8**
UPR				S	**Sb**	**00 44 35.8**	**-0.3**
UPR	**University Cam**	**0.41**	**34**	P	**Pb**	**00 44 29.3**	**-0.8**
UPR				*e*Sb	**Sb**	**00 44 35.2**	**-0.9**
UPR				S	**Sb**	**00 44 35.8**	**-0.3**
LAKA	**Lakka**	**0.48**	**52**	P	**Pb**	**00 44 30.7**	**-0.7**
LAKA				S	**Sb**	**00 44 38.3**	**+0.2**
KFL	**Anninata**	**0.58**	**287**	P	**Pb**	**00 44 32.5**	**-0.5**
KFL				S	**Sb**	**00 44 41.6**	**+0.8**
KFL	**Anninata**	**0.58**	**287**	P	**Pb**	**00 44 32.5**	**-0.5**
KFL				S	**Sb**	**00 44 41.6**	**+0.8**
EFP	**Efpalio**	**0.58**	**34**	*e*PN	**Pn**	**00 44 32.1**	**-2.0**
EFP				*e*SN	**Sb**	**00 44 40.1**	**-0.7**
EFP	**Efpalio**	**0.58**	**34**	P	**Pb**	**00 44 32.3**	**-0.7**
EFP				S	**Sb**	**00 44 41.5**	**+0.7**
EFP	**Efpalio**	**0.58**	**34**	*e*Pn	**Pn**	**00 44 32.1**	**-2.0**
EFP				S	**Sb**	**00 44 41.5**	**+0.7**
TRIZ	**Trizonia**	**0.62**	**47**	P	**Pb**	**00 44 32.9**	**-0.7**
TRIZ				S	**Sb**	**00 44 42.3**	**+0.3**
GUR	**Goura**	**0.67**	**90**	*e*PN	**Pn**	**00 44 33.3**	**-2.0**
GUR				*e*SN	**Sn**	**00 44 43.5**	**-1.5**
GUR	**Goura**	**0.67**	**90**	P	**Pb**	**00 44 33.5**	**-1.0**
GUR				S	**Sb**	**00 44 43.6**	**+0.2**
GUR	**Goura**	**0.67**	**90**	P	**Pb**	**00 44 33.5**	**-1.0**
GUR				*e*Sn	**Sn**	**00 44 43.5**	**-1.5**
KALE	**Kalithea**	**0.68**	**49**	P	**Pb**	**00 44 33.9**	**-0.7**
KALE				S	**Sb**	**00 44 44.8**	**+1.2**
KALE	**Kalithea**	**0.68**	**49**	P	**Pb**	**00 44 33.9**	**-0.7**
KALE				S	**Sb**	**00 44 44.8**	**+1.2**
VLS	**Valsamata**	**0.75**	**288**	*e*Pn	**Pn**	**00 44 34.7**	**-1.7**
VLS				*e*Sn	**Sn**	**00 44 46.2**	**-0.7**
VLS	**Valsamata**	**0.75**	**288**	*e*PN	**Pn**	**00 44 34.7**	**-1.7**
VLS				*e*SN	**Sn**	**00 44 46.2**	**-0.7**
VLS	**Valsamata**	**0.75**	**288**	P	**Pb**	**00 44 34.8**	**-1.0**
VLS				S	**Sb**	**00 44 47.4**	**+1.8**
VLS	**Valsamata**	**0.75**	**288**	P	**Pb**	**00 44 34.8**	**-1.0**
VLS				*e*Sn	**Sn**	**00 44 46.2**	**-0.7**
VLS				S	**Sb**	**00 44 47.4**	**+1.8**
ITM	**Ithomi**	**0.84**	**156**	*e*Pn	**Pn**	**00 44 37.1**	**-0.5**
ITM				*e*Sn	**Sn**	**00 44 48.4**	**-0.7**
ITM	**Ithomi**	**0.84**	**156**	*e*PN	**Pn**	**00 44 37.1**	**-0.5**
ITM				*e*SN	**Sn**	**00 44 48.4**	**-0.7**
ITM	**Ithomi**	**0.84**	**156**	P	**Pb**	**00 44 37.3**	**0.0**
ITM				S	**Sb**	**00 44 49.1**	**+1.0**
ITM	**Ithomi**	**0.84**	**156**	*e*Pn	**Pn**	**00 44 37.1**	**-0.5**
ITM				*e*Sn	**Sn**	**00 44 48.4**	**-0.7**
ITM				S	**Sb**	**00 44 49.1**	**+1.0**
VLX	**Vlachokerasia**	**0.91**	**129**	*e*PN	**Pn**	**00 44 37.6**	**-0.9**
VLX				*e*SN	**Sn**	**00 44 50.7**	**-0.1**
VLX	**Vlachokerasia**	**0.91**	**129**	P	**Pb**	**00 44 37.5**	**-1.0**
VLX				S	**Sb**	**00 44 51.9**	**+1.8**
VLX	**Vlachokerasia**	**0.91**	**129**	P	**Pb**	**00 44 37.5**	**-1.0**
VLX				*e*Sn	**Sn**	**00 44 50.7**	**-0.1**
VLX				S	**Sb**	**00 44 51.9**	**+1.8**
DSF	**Desfina**	**0.94**	**60**	P	**Pb**	**00 44 38.3**	**-0.7**
DSF				S	**Sb**	**00 44 52.2**	**+1.2**
DSF	**Desfina**	**0.94**	**60**	P	**Pb**	**00 44 38.3**	**-0.7**
DSF				S	**Sb**	**00 44 52.2**	**+1.2**
EVR	**Evrytania**	**1.00**	**14**	*e*Pn	**Pn**	**00 44 39.6**	**-0.2**
EVR	**Evrytania**	**1.00**	**14**	*e*PN	**Pn**	**00 44 39.6**	**-0.2**
EVR	**Evrytania**	**1.00**	**14**	*e*Pn	**Pn**	**00 44 39.6**	**-0.2**
PYL	**PYLOS**	**1.07**	**169**	*e*PN	**Pn**	**00 44 41.2**	**+0.5**
PYL	**PYLOS**	**1.07**	**169**	P	**Pn**	**00 44 40.8**	**+0.1**
PYL				S	**Sb**	**00 44 56.8**	**+2.1**
PYL	**PYLOS**	**1.07**	**169**	*e*Pn	**Pn**	**00 44 41.2**	**+0.5**
PYL				S	**Sb**	**00 44 56.8**	**+2.1**
LKD2	**Lefkada island**	**1.07**	**322**	P	**Pn**	**00 44 40.8**	**0.0**
LKD2				S	**Sb**	**00 44 56.9**	**+2.1**
LKD2	**Lefkada island**	**1.07**	**322**	P	**Pn**	**00 44 40.8**	**0.0**
LKD2				S	**Sb**	**00 44 56.9**	**+2.1**
LTK	**Loutraki**	**1.17**	**86**	*e*PN	**Pn**	**00 44 42.3**	**+0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LTK	**Loutraki**	**1.17**	**86**	P	**Pn**	**00 44 42.5**	**+0.4**
LTK				S	**Sn**	**00 44 59.3**	**+2.1**
LTK	**Loutraki**	**1.17**	**86**	*e*Pn	**Pn**	**00 44 42.3**	**+0.2**
LTK				S	**Sn**	**00 44 59.3**	**+2.1**
AGG	**Agios Georgios**	**1.26**	**31**	*e*Pn	**Pn**	**00 44 44.6**	**+1.2**
AGG	**Agios Georgios**	**1.26**	**31**	*e*PN	**Pn**	**00 44 44.6**	**+1.2**
AGG	**Agios Georgios**	**1.26**	**31**	P	**Pn**	**00 44 45.0**	**+1.6**
AGG				S	**Sn**	**00 45 04.0**	**+4.5**
AGG	**Agios Georgios**	**1.26**	**31**	*e*Pn	**Pn**	**00 44 44.6**	**+1.2**
AGG	**Agios Georgios**	**1.26**	**31**	P	**Pn**	**00 44 45.0**	**+1.6**
AGG				S	**Sn**	**00 45 04.0**	**+4.5**
LKR	**Lokris**	**1.38**	**59**	*e*Pn	**Pn**	**00 44 46.7**	**+1.7**
LKR	**Lokris**	**1.38**	**59**	*e*PN	**Pn**	**00 44 46.7**	**+1.7**
LKR	**Lokris**	**1.38**	**59**	*e*Pn	**Pn**	**00 44 46.7**	**+1.7**
DID	**Didima**	**1.45**	**107**	*e*PN	**Pn**	**00 44 47.9**	**+1.9**
DID	**Didima**	**1.45**	**107**	P	**Pn**	**00 44 47.5**	**+1.5**
DID				S	**Sn**	**00 45 08.6**	**+4.4**
DID	**Didima**	**1.45**	**107**	P	**Pn**	**00 44 47.5**	**+1.5**
DID	**Didima**	**1.45**	**107**	*e*Pn	**Pn**	**00 44 47.9**	**+1.9**
DID				S	**Sn**	**00 45 08.6**	**+4.4**
THL	**Klokotos Trika**	**1.67**	**14**	*e*PN	**Pn**	**00 44 51.0**	**+2.0**
THL	**Klokotos Trika**	**1.67**	**14**	P	**Pn**	**00 44 50.6**	**+1.6**
THL				S	**Sn**	**00 45 14.2**	**+4.6**
THL	**Klokotos Trika**	**1.67**	**14**	P	**Pn**	**00 44 50.6**	**+1.6**
THL	**Klokotos Trika**	**1.67**	**14**	*e*Pn	**Pn**	**00 44 51.0**	**+2.0**
THL				S	**Sn**	**00 45 14.2**	**+4.6**
VLI	**Veliai**	**1.68**	**136**	*e*Pb	**Pb**	**00 44 50.0**	**-1.6**
VLI	**Veliai**	**1.68**	**136**	*e*PB	**Pb**	**00 44 50.0**	**-1.6**

ISCJB ***01*** *00:47:55.1±0.4, 58°.38S±0°.07×22°.1W±0°.1, h10km, mb4.5/20, MS4.4/9, Error ellipse: s-maj=10.4km s-min=8.5km az=35.7*

IDC ***01*** *00:47:55.6±0.5, 58°.36S×22°.10W, h0km, mb4.6/14, mb1 4.6/14, mb1mx4.5/20, mbtmp4.6/14, MS4.3/8, Ms1 4.3/8, ms1mx4.1/19, Error ellipse: s-maj=18.7km s-min=13.5km az=16.0*

GCMT ***01*** *00:48:00.7±0.3, 58°.68S×22°.15W, h39km±1km, MW5.3, Moment Tensor Solution. s20,c23; s72,c100; Moment tensor: Scale 10^{17}Nm; M_{rr}0.05±.07; $M_{\theta\theta}$-0.41±.06; $M_{\phi\phi}$0.36±.05; $M_{r\theta}$0.20±.04; $M_{\theta\phi}$1.17±.03; $M_{\phi r}$-0.22±.04; Best double couple: $M_0$1.30000×10^{17} NP1:ϕ_s260.00000°, δ79.00000°, λ-6.00000°. NP2:ϕ_s352.00000°, δ84.00000°, λ-169.00000°. Principal axes: T 1.2100, Plg3.0000°, Azm126.0000°; N 0.1100, Plg77.0000°, Azm21.0000°; P -1.3200, Plg12.0000°, Azm216.0000°; Data Used: II IC IU G CN.*

NEIC ***01*** *00:48:00.6±0.3, 58°.32S×22°.18W, h35km, mb4.8/11 Error ellipse: s-maj=11.0km s-min=9.0km az=195.0*

ISC 01 00:47:57.0±0.4**, 58°.39S**±0°.07×**22°.1W**±0°.1**, h10**km**, n57, σ1ˢ21**/37**, mb4.5**/20**, MS4.4**/9**, 1D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.61**	**160**	*e*	**Pn**	**00 51 09.2**	**-0.5**
VNA1				*e*		00 53 19.9	
MAIT	**Maitri**	**18.73**	**145**	*e*P	**Pn**	**00 52 15.5**	**-0.3**
PMSA	**Palmer Station**	**20.64**	**234**	P	**P**	**00 52 36.7**	**+0.6**
	42nm,1.0s,baz=156,slow=18,SNR=2.6						
PMSA	**Palmer Station**	**20.64**	**234**	*e*P	**P**	**00 52 36.6**	**+0.4**
USHA	**Ushuaia**	**25.36**	**258**	P	**P**	**00 53 23.8**	**0.0**
	7.5nm,0.7s,mb4.3,baz=92,slow=9.0,SNR=4.5						
USHA				LR	LR	01 00 38.0	
	comp=Z,890nm,20.5s,MS4.3,baz=93,slow=30						
SYO	**Syowa Base**	**27.99**	**137**	⇓*e*P	**P**	**00 53 44.6**	**-2.7**
QSPA	**South Pole Qui**	**31.85**	**180**	P	**P**	**00 54 22.4**	**+1.0**
	8.3nm,0.8s,mb4.6,baz=215,slow=3.9,SNR=35						
QSPA	**South Pole Qui**	**31.85**	**180**	P	**P**	**00 54 22.4**	**+1.0**
TRQA	**Tornquist**	**32.78**	**291**	*e*P	**P**	**00 54 29.1**	**-0.8**
	3.7nm,0.7s,mb4.4						
PLCA	**Paso Flores**	**35.13**	**279**	P	**P**	**00 54 50.5**	**+0.2**
	5.2nm,0.7s,mb4.6,baz=150,slow=6.3,SNR=13						
PLCA				LR	LR	01 07 38.5	
	comp=Z,535nm,19.0s,MS4.3,baz=279,slow=34						
PLCA	**Paso Flores**	**35.13**	**279**	*e*P	**P**	**00 54 50.7**	**+0.3**
	4.8nm,0.6s,mb4.6						
PLCA				LR	LR	01 07 38.5	
MAW	**Mawson**	**36.59**	**140**	*e*P	**P**	**00 55 02.0**	**-0.5**
	15nm,1.0s,mb4.8						
MAW	**Mawson**	**36.59**	**140**	P	**P**	**00 55 02.7**	**+0.2**
	18nm,1.0s,mb4.9,baz=242,slow=8.7,SNR=24						
MAW				PKKP		01 19 32.3	
	1.4nm,0.3s,baz=74,slow=6.9,SNR=7.4						
MAW	**Mawson**	**36.59**	**140**	*e*P	**P**	**00 55 02.6**	**+0.1**
	5.0nm,1.0s,mb4.3						
MAW				*e*		00 55 13.4	
MAW				PKKP		01 19 32.3	
SUR	**Sutherland**	**38.77**	**67**	P	**P**	**00 55 22.6**	**+1.2**
CPUP	**Villa Florida**	**40.45**	**307**	P	**P**	**00 55 34.0**	**-1.4**
	21nm,0.9s,mb4.8,baz=136,slow=7.0,SNR=20						
CPUP				LR	LR	01 09 37.1	
	comp=Z,439nm,18.7s,MS4.3,baz=168,slow=32						
CPUP	**Villa Florida**	**40.45**	**307**	*e*P	**P**	**00 55 33.2**	**-2.2**
	60nm,0.8s,mb5.4						
CPUP				LR	LR	01 09 37.1	
CFAA	**Coronel Fontan**	**41.02**	**290**	P	**P**	**00 55 38.5**	**-1.5**
	0.6nm,0.7s,mb3.4,baz=137,slow=8.1,SNR=12						
CFAA				LR	LR	01 10 21.6	
	comp=Z,50nm,21.7s,MS3.3,baz=118,slow=33						
SBA	**Scott Base**	**43.90**	**183**	*e*P	**P**	**00 56 05.0**	**+2.0**
	18nm,1.0s,mb4.8						
SBA				*e*PcP	PcP	00 57 48.4	-0.3
BOSA	**Boshof**	**44.04**	**68**	P	**P**	**00 56 03.8**	**-0.8**
	4.4nm,0.8s,mb4.3,baz=155,slow=8.8,SNR=5.6						
BOSA	**Boshof**	**44.04**	**68**	*e*P	**P**	**00 56 03.5**	**-1.1**
	6.4nm,0.9s,mb4.3						
LBTB	**Lobatse**	**47.21**	**66**	P	**P**	**00 56 28.9**	**-0.8**
	4.9nm,0.9s,mb4.5,baz=230,slow=8.4,SNR=6.5						
TSUM	**Tsumeb**	**48.61**	**53**	P	**P**	**00 56 41.8**	**+1.2**
	2.7nm,0.9s,mb4.3,baz=188,slow=8.3,SNR=5.6						
CASY	**Casey**	**50.72**	**157**	*e*P	**P**	**00 56 56.7**	**+0.6**
CASY	**Casey**	**50.72**	**157**	*e*P	**P**	**00 56 56.7**	**+0.6**
	21nm,1.0s,mb5.0						
CASY				*e*PcP	PcP	00 58 15.1	+2.0
CASY				*e*PP	PP	00 58 53.2	+1.5
SIV	**San Ignacio**	**51.22**	**309**	P	**P**	**00 56 59.2**	**-1.3**
	6.1nm,0.7s,mb4.6,baz=155,slow=7.6,SNR=13						
LPAZ	**La Paz**	**53.99**	**301**	P	**P**	**00 57 21.5**	**+0.5**
	6.9nm,0.5s,mb4.8,baz=150,slow=6.2,SNR=22						
LPAZ				LR	LR	01 17 05.2	
	comp=Z,294nm,18.6s,MS4.4,baz=113,slow=32						
LPAZ	**La Paz**	**53.99**	**301**	*e*P	**P**	**00 57 20.4**	**-0.6**
	16nm,0.7s,mb5.1						
LPAZ				LR	LR	01 17 05.2	
LSZ	**Lusaka**	**56.80**	**62**	*e*P	**P**	**00 57 39.3**	**-1.9**
	5.2nm,0.9s,mb4.6						
MSKU	**Masuku**	**63.12**	**41**	P	**P**	**00 58 24.8**	**+0.2**
DBIC	**Dimbokro**	**66.32**	**19**	P	**P**	**00 58 47.2**	**+1.8**
	7.1nm,1.1s,mb4.6,baz=124,slow=21,SNR=4.0						
OTAV	**Otavalo**	**73.26**	**300**	*e*P	**P**	**00 59 29.0**	**+0.8**
	23nm,1.4s,mb4.9						
ROSC	**El Rosal**	**75.54**	**306**	P	**P**	**00 59 44.0**	**+2.5**
	5.0nm,0.6s,mb4.7,baz=53,slow=16,SNR=7.2						
ROSC				LR	LR	01 31 14.9	
	comp=Z,126nm,18.7s,MS4.2,baz=206,slow=34						
NWAO	**Narrogin (SRO)**	**82.88**	**146**	*e*P	**P**	**01 00 20.3**	**-1.1**
TAM	**Tamanrasset**	**84.07**	**25**	*e*P	**P**	**01 00 30.0**	**+2.6**
	17nm,2.0s,mb4.8						
STKA	**Stephens Creek**	**89.04**	**166**	LR	LR	01 37 31.2	
	comp=Z,566nm,18.4s,MS5.0,baz=197,slow=33						
STKA	**Stephens Creek**	**89.04**	**166**	P	**P**	**01 00 52.2**	**+0.3**
PPT	**Papeete**	**92.92**	**229**	LR	LR	01 36 26.6	
	comp=Z,229nm,18.1s,MS4.7,baz=141,slow=31						
ASAR	**Alice Springs**	**95.84**	**158**	P	**P**	**01 01 22.9**	**-0.6**
	0.7nm,1.0s,mb4.0,baz=191,slow=4.3,SNR=4.7						
AKBB	**Malin Array Si**	**116.52**	**34**	PKPdf	PKPdf	01 06 39.8	0.0
PDAR	**Pinedale Array**	**123.92**	**298**	PKP	PKPdf	01 06 55.4	+1.2
	0.2nm,0.3s,baz=52,slow=2.4,SNR=2.5						
HWUT	**Hardware Ranch**	**123.98**	**295**	*e*PKPdf	PKPdf	01 06 54.4	0.0
NVAR	**Mina Array Bea**	**124.83**	**288**	PKP	PKPdf	01 06 58.8	+2.7
	0.2nm,0.3s,baz=342,slow=42,SNR=2.5						
FINES	**FINESS Array B**	**125.21**	**26**	PKP	PKPdf	01 06 56.6	+0.5
	0.9nm,0.7s,baz=159,slow=2.9,SNR=8.0						
JOF	**Joensuu**	**127.73**	**28**	*e*P	PKPdf	01 06 59.4	-1.5
JOF	**Joensuu**	**127.73**	**28**	*e*p	PKPdf	01 06 59.4	-1.5
	5.0nm,0.9s						
ARCES	**ARCESS Array B**	**132.13**	**20**	PKP	PKPdf	01 07 10.2	+1.2
	3.3nm,1.0s,baz=243,slow=2.4,SNR=6.5						
BVAR	**Borovoye Array**	**133.72**	**57**	PKP	PKPdf	01 07 14.2	+1.7
	0.6nm,0.6s,baz=48,slow=2.2,SNR=4.2						
MKAR	**Makanchi Array**	**135.02**	**70**	PKP	PKPdf	01 07 13.9	-1.3
	0.5nm,0.7s,baz=2.5,slow=8.5,SNR=4.6						
YKA	**Yellowknife Ar**	**139.79**	**314**	PKP	PKPdf	01 07 23.6	+0.2
	3.0nm,1.0s,baz=218,slow=41,SNR=2.5						
DLBC	**Dease Lake**	**143.94**	**302**	PKP	PKPdf	01 07 31.4	+0.4
	3.3nm,1.0s,baz=129,slow=5.4,SNR=4.4						
HHC	**Hu-ho-hao-te**	**146.05**	**101**	*e*PKPbc	PKPbc	01 07 36.7	+0.5
HHC				PP	PP	01 11 03.6	+5.1
HHC				PKS		01 11 10.9	
HHC				SKS	SKSdf	01 14 43.3	-0.5
HHC				SKKS	SKKSac	01 17 51.7	+1.9
HHC				SS	SS	01 29 56.8	+3.1
HHC				AMB	AMB		
	comp=Z,75nm,9.1s						
HHC				LR	LR		
	comp=N,99nm,21.5s,MS4.7						
HHC				LR	LR		
	comp=E,110nm,21.5s,MS4.7						
HHC				LR	LR		
	comp=Z,130nm,21.9s,MS4.7						
SONM	**Songino Array**	**148.09**	**86**	PKPbc	PKPbc	01 07 40.5	-1.1
	comp=Z,3.7nm,0.8s,baz=218,slow=3.2,SNR=16						
INK	**Inuvik**	**149.40**	**317**	PKPbc	PKPbc	01 07 43.2	-1.1
	comp=Z,5.5nm,0.9s,baz=42,slow=3.4,SNR=13						
INK	**Inuvik**	**149.40**	**317**	PKPbc	PKPbc	01 07 43.2	-1.1
KSRS	**Korea Array**	**151.37**	**124**	PKPbc	PKPbc	01 07 48.4	-1.7
	comp=Z,0.9nm,0.5s,baz=217,slow=2.0,SNR=6.1						
MJAR	**Matsushiro Arr**	**154.58**	**141**	PKPbc	PKPbc	01 07 59.3	+2.1
	comp=Z,0.5nm,0.4s,baz=128,slow=41,SNR=2.8						
MJAR				PKPab	PKPab	01 08 12.2	+0.4
	comp=Z,0.7nm,0.4s,baz=43,slow=37,SNR=3.7						

ISCJB ***01*** *00:53:23.6±0.4, 32°.33N±0°.02×115°.26W±0°.02, h8km±3km, Error ellipse: s-maj=2.9km s-min=2.3km az=176.3*

ECX ***01*** *00:53:25.9±0.6, 32°.31N×115°.30W, h7km, MD3.5, ML3.5*

NEIC ***01*** *00:53:25.9, 32°.31N×115°.30W, h7km, ML3.6(PAS), ML3.5(ECX), After ECX.*

ISC 01 00:53:24.6±0.3**, 32°.30N**±0°.02×**115°.29W**±0°.02**, h14**km±2km**, n65, σ1ˢ12**/103**, 25C-25D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EMX	**El Mayor**	**0.31**	**172**	⇓*e*P	**Pg**	**00 53 31.6**	**+0.6**
EMX				*e*S	**Sg**	**00 53 36.4**	**+1.2**
SGL	**Mount Signal**	**0.51**	**314**	⇓*i*P	**Pg**	**00 53 34.5**	**-0.2**
EMSC	**East Mesa**	**0.51**	**30**	*i* P	**Pg**	**00 53 35.5**	**+0.7**
ERPC	**Ernies Place**	**0.55**	**325**	*i* P	**Pg**	**00 53 35.5**	**+0.2**
YUH	**Yuha Desert**	**0.64**	**304**	⇓*i*P	**Pg**	**00 53 36.6**	**-0.4**
112A	**Yuma**	**0.65**	**68**	P	**Pg**	**00 53 37.4**	**+0.1**
	baz=0.7,SNR=124						
112A				⇓S	**Sg**	**00 53 46.6**	**+0.7**
	baz=0.7						
RDX	**Rancho Dawling**	**0.66**	**237**	⇑*e*P	**Pg**	**00 53 37.5**	**0.0**
RDX				*e*S	**Sg**	**00 53 47.1**	**+0.9**
RDX				⇓*e*		00 53 48.5	
	comp=N,2µm,0.3s						
RDX	**Rancho Dawling**	**0.66**	**237**	*e*P	**Pg**	**00 53 37.5**	**0.0**
RDX				*e*S	**Sg**	**00 53 47.1**	**+0.9**
COK	**Cook Ranch**	**0.66**	**327**	⇓*i*P	**Pg**	**00 53 37.2**	**-0.3**
YMD	**Yuma Desert**	**0.68**	**68**	⇑*i*P	**Pg**	**00 53 37.9**	**-0.1**
RMX	**La Rumorosa**	**0.73**	**295**	⇓*e*P	**Pg**	**00 53 38.2**	**-0.6**
RMX				*e*S	**Sg**	**00 53 48.2**	**-0.3**
SWSC	**Sam W. Stewart**	**0.77**	**327**	⇓S	**Sg**	**00 53 49.0**	**-0.8**
	baz=0.8						
DVTC	**Desert V Tower**	**0.77**	**298**	⇓P	**Pg**	**00 53 39.0**	**-0.6**
	baz=0.8,SNR=46						
DVTC				⇑S	**Sg**	**00 53 49.2**	**-0.6**
	baz=0.8						
ECBX	**El Chinero**	**0.85**	**166**	⇓*e*P	**Pg**	**00 53 40.8**	**-0.2**
ECBX				*e*S	**Sg**	**00 53 52.3**	**+0.2**
GLA	**Glamis**	**0.85**	**27**	P	**Pg**	**00 53 40.0**	**-1.1**
	baz=0.8,SNR=298						
GLA				⇑S	**Sg**	**00 53 51.3**	**-0.9**
	baz=0.8						
GLA	**Glamis**	**0.85**	**27**	*e*P	**Pg**	**00 53 40.1**	**-1.1**
GLA				*e*S	**Sg**	**00 53 51.1**	**-1.2**
MONP	**Monument Peak**	**1.12**	**302**	⇑P	**Pb**	**00 53 44.5**	**-1.3**
	baz=1.1,SNR=122						
MONP				⇑S	**Sb**	**00 53 59.5**	**-0.8**
	baz=1.1						
CBX	**Cerro Bola**	**1.16**	**271**	⇑*e*P	**Pb**	**00 53 46.0**	**-0.5**
CBX				*e*S	**Sb**	**00 54 01.1**	**-0.3**
BAR	**Barrett**	**1.23**	**289**	*e*P	**Pn**	**00 53 46.4**	**-1.0**
BAR				*e*S	**Sb**	**00 54 02.6**	**-0.7**
CCX	**Cicese**	**1.24**	**250**	*e*P	**Pn**	**00 53 47.3**	**-0.2**
CCX				*e*S	**Sb**	**00 54 03.8**	**+0.2**
SPX	**San Pedro Mart**	**1.25**	**187**	*e*P	**Pn**	**00 53 47.7**	**-0.1**
SPX				*e*S	**Sb**	**00 54 05.0**	**+0.9**
ECNX	**Esteban Cantu**	**1.28**	**240**	⇑*e*P	**Pn**	**00 53 48.0**	**-0.1**
ECNX				⇑*e*P		00 53 47.3	
ECNX				*e*S	**Sb**	**00 54 03.8**	**-0.9**
ECNX				*e*S	**Sb**	**00 54 05.5**	**+0.8**
PBX	**Punta Banda**	**1.33**	**246**	⇑*e*P	**Pn**	**00 53 48.7**	**-0.2**
PBX				*e*S	**Sb**	**00 54 07.0**	**+0.5**
BC3	**Big Chuckawall**	**1.36**	**354**	P	**Pn**	**00 53 47.6**	**-1.7**
	baz=1.4,SNR=74						
BC3				⇑S	**Sn**	**00 54 04.4**	**-2.7**
	baz=1.4						
113A	**Mohawk Valley,**	**1.37**	**69**	⇓P	**Pn**	**00 53 48.2**	**-1.2**
	baz=1.4,SNR=43						
113A				⇑S	**Sn**	**00 54 05.8**	**-1.6**
	baz=1.4						
Y12C	**Blythe**	**1.59**	**24**	⇑P	**Pn**	**00 53 50.9**	**-1.4**
	baz=1.6						
PFO	**Pinyon Flat Ob**	**1.63**	**324**	P	**Pn**	**00 53 51.3**	**-1.7**
	baz=1.6,SNR=53						
PFO	**Pinyon Flat Ob**	**1.63**	**324**	*e*Pn	**Pn**	**00 53 50.7**	**-2.3**
PFO				*e*S	**Sn**	**00 54 11.1**	**-2.7**
109C	**Camp Elliot, M**	**1.64**	**292**	⇑P	**Pn**	**00 53 52.0**	**-1.0**
	baz=1.6						
109C				⇓Sb	**Sb**	**00 54 14.7**	**-0.5**
	baz=1.6						
Z13A	**Yuma Proving G**	**1.65**	**56**	⇑P	**Pn**	**00 53 52.1**	**-1.1**
	baz=1.6,SNR=158						
IRM	**Iron Mountain**	**1.86**	**4**	⇑P	**Pn**	**00 53 54.6**	**-1.5**
	baz=1.9,SNR=36						
Y13A	**Salome**	**1.95**	**39**	⇓P	**Pn**	**00 53 56.1**	**-1.3**
	baz=1.9						
MURC	**Murrieta**	**2.06**	**310**	⇑Sb	**Sb**	**00 54 28.1**	**+0.6**
	baz=2.0						
114A	**Black Gap (USA**	**2.09**	**77**	⇓P	**Pn**	**00 53 58.1**	**-1.1**
	baz=2.1,SNR=29						
114A				⇑Sb	**Sb**	**00 54 29.4**	**+1.3**
	baz=2.1						
214A	**Organ Pipe Nat**	**2.13**	**98**	P	**Pn**	**00 53 58.5**	**-1.3**
	baz=2.1,SNR=28						
Z14A	**Wintersburg**	**2.25**	**61**	⇓P	**Pn**	**00 54 00.5**	**-0.9**
	baz=2.2						
GMRC	**Granite Mounta**	**2.50**	**353**	⇑P	**Pn**	**00 54 03.5**	**-1.4**
	baz=2.5						
115A	**Sonoran Desert**	**2.62**	**80**	⇓P	**Pn**	**00 54 05.6**	**-0.9**
	baz=2.6						
BFSC	**Mount Baldy Ra**	**2.77**	**315**	⇑Sb	**Sb**	**00 54 48.9**	**+1.2**
	baz=2.8						
LDFC	**Landfair**	**2.78**	**3**	*e*Pn	**Pn**	**00 54 09.1**	**+0.3**
LDFC				*e*Pg	**Pg**	**00 54 18.4**	**+0.5**
LDFC				S	**Sn**	**00 54 48.9**	**+6.8**
Z15A	**Gila River Ind**	**2.82**	**69**	⇓P	**Pn**	**00 54 08.4**	**-1.0**
	baz=2.8,SNR=12						
CIS	**Catalina Islan**	**2.84**	**294**	⇓Sb	**Sb**	**00 54 50.8**	**+1.0**
	baz=2.8						
FMP	**Fort Macarthur**	**2.89**	**300**	⇓Sb	**Sb**	**00 54 52.0**	**+0.8**
	baz=2.9						
Y15A	**Casa Rosa Ranc**	**2.98**	**56**	⇓P	**Pn**	**00 54 10.4**	**-1.2**
	baz=3.0,SNR=17						
MWC	**Mount Wilson**	**3.01**	**310**	*e*Pn	**Pn**	**00 54 15.3**	**+3.4**
MWC				*e*Sn	**Sn**	**00 54 50.4**	**+2.6**
W13A	**Hualapai Mount**	**3.03**	**22**	⇑Sb	**Sb**	**00 54 57.1**	**+1.8**
	baz=3.0						
PASC	**Pasadena Art C**	**3.06**	**308**	*e*Pn	**Pn**	**00 54 14.2**	**+1.6**
PASC				*e*Pg	**Pg**	**00 54 23.2**	**-0.1**
PASC				Sn	**Sn**	**00 54 51.8**	**+2.7**
PASC				*e*Sg	**Sg**	**00 55 02.7**	**-0.2**
GSC	**Goldstone**	**3.25**	**338**	*e*Pn	**Pn**	**00 54 18.8**	**+3.5**
GSC				*e*Pg	**Pg**	**00 54 28.0**	**+1.1**
Z16A	**Peralta Trail,**	**3.42**	**71**	⇓P	**Pn**	**00 54 16.6**	**-0.9**
	baz=3.4,SNR=6.6						
V13A	**Grand Canyon W**	**3.71**	**17**	⇓P	**Pn**	**00 54 22.5**	**+0.9**
	baz=3.7						
X16A	**Lo Mia Camp, P**	**3.86**	**56**	⇑P	**Pn**	**00 54 24.2**	**+0.7**
	baz=3.9						
117A	**Oracle**	**3.86**	**85**	⇓P	**Pn**	**00 54 22.9**	**-0.7**
	baz=3.9,SNR=10						
Y17A	**Roosevelt**	**3.99**	**68**	⇑P	**Pn**	**00 54 24.5**	**-0.9**
	baz=4.0,SNR=30						
U12A	**Valley of Fire**	**4.17**	**8**	⇓P	**Pn**	**00 54 27.6**	**-0.4**
	baz=4.2						
Z17A	**San Carlos Hig**	**4.18**	**75**	⇑P	**Pn**	**00 54 27.8**	**-0.2**
	baz=4.2						
U13A	**Pakoon Wash**	**4.25**	**15**	⇑P	**Pn**	**00 54 30.1**	**+1.1**
	baz=4.3						
ISA	**Isabella**	**4.27**	**323**	*e*Pn	**Pn**	**00 54 30.2**	**+0.9**
ISA				*e*Pg	**Pg**	**00 54 46.6**	**+0.1**
ISA				*e*Sg	**Sg**	**00 55 41.4**	**-0.4**
WUAZ	**Wupatki**	**4.58**	**44**	*e*Pn	**Pn**	**00 54 35.4**	**+2.0**
WUAZ				*e*Sn	**Sn**	**00 55 28.0**	**+1.6**
318A	**Bisbee**	**4.59**	**99**	⇓P	**Pn**	**00 54 33.2**	**-0.5**
	baz=4.6,SNR=5.2						
CCUT	**Cedar City**	**5.48**	**16**	*e*Pn	**Pn**	**00 54 49.5**	**+3.7**
	comp=N,8.1nm,0.7s						
CCUT				*e*Pg	**Pg**	**00 55 10.9**	**+1.4**
CCUT				*e*Sg	**Sg**	**00 56 21.0**	**+0.5**
MSU	**Marysvale**	**6.70**	**21**	*e*Pn	**Pn**	**00 55 03.8**	**+1.1**
MSU				*e*Pg	**Pg**	**00 55 30.5**	**-2.5**
MSU				*e*Sg	**Sg**	**00 57 01.4**	**+1.7**
LAZ	**Ladron**	**7.14**	**71**	Pn	**Pn**	**00 55 10.4**	**+1.7**
MVCO	**Mesa Verde**	**7.44**	**47**	*e*Pn	**Pn**	**00 55 15.3**	**+2.5**
MVCO				*e*Sg	**Sn**	**00 57 23.4**	**+47**
SRU	**San Rafael**	**7.83**	**28**	*e*Pn	**Pn**	**00 55 22.1**	**+4.0**
SRU				*e*Pg	**Pn**	**00 55 54.1**	**+36**
SRU				*e*S	Sn	00 57 37.1	+51
PV04	**Paradox Valley**	**8.01**	**39**	*e*Pn	**Pn**	**00 55 23.5**	**+2.9**
PV04				*e*Pg	Pn	00 55 55.9	+35
PV04				*e*Sg	Sn	00 57 39.2	+48

IDC ***01*** *01:04:14.9±0.6, 10°.33S×75°.49W, h0km, mb4.1/9, mb1 4.3/13, mb1mx4.2/21, mbtmp4.1/13, ML3.8/4, MS3.8/2, Ms1 3.8/2, ms1mx3.1/30, Error ellipse: s-maj=14.8km s-min=12.3km az=96.0*

BJI ***01*** *01:04:15.0, 9°.88S×75°.45W, h28km, mB5.0/4, Ms5.1/5, Ms7 4.8/5*

ISCJB ***01*** *01:04:16.6±2.2, 10°.29S±0°.05×75°.38W±0°.06, h24km±16km, mb4.5/25, MS3.6/2, Error ellipse: s-maj=10.3km s-min=8.0km az=162.3*

NEIC ***01*** *01:04:18.7±2.3, 10°.34S×75°.39W, h28km±17km, mb4.7/18, ML4.4(LIM), Error ellipse: s-maj=13.1km s-min=7.4km az=60.0*

NEIC Felt [II] at Pozuzo.

ISC 01 01:04:18.9±2.3**, 10°.34S**±0°.05×**75°.40W**±0°.06**, h24**km±17km**, n262, σ0ˢ47**/252**, mb4.5**/25**, MS3.6**/2**, 101C-107D, Central Peru**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.17**	**221**	Pn	**Pn**	**01 04 51.9**	**-1.6**
	92nm,0.3s,baz=31,slow=18,SNR=102						
NNA				Pg	**Pn**	**01 04 54.6**	**+1.1**
	95nm,0.3s,baz=40,slow=14,SNR=121						
NNA				Lg		01 05 20.1	
	116nm,0.3s,baz=218,slow=20,SNR=10						
NNA	**Nana**	**2.17**	**221**	*e*Pn	**Pn**	**01 04 52.7**	**-0.8**
NNA				*e*Sn	**Sn**	**01 05 19.5**	**-0.2**
ATAH	**Atahualpa**	**4.34**	**317**	Pn	**Pn**	**01 05 22.9**	**-0.6**
	14nm,0.3s,baz=167,slow=5.2,SNR=72						
ATAH				Lg		01 06 24.7	
	11nm,0.3s,baz=332,slow=12,SNR=4.7						
LPAZ	**La Paz**	**9.22**	**131**	Pn	**Pn**	**01 06 30.9**	**+0.4**
	0.1nm,0.3s,baz=327,slow=18,SNR=3.1						
LPAZ				Lg		01 09 08.0	
	0.3nm,0.3s,baz=181,slow=23,SNR=2.7						
OTAV	**Otavalo**	**10.93**	**344**	*e*Pn	**Pn**	**01 06 54.6**	**+0.6**
OTAV				*e*Sn	**Sn**	**01 08 47.0**	**-8.6**
SIV	**San Ignacio**	**15.04**	**113**	Pn	**Pn**	**01 07 48.8**	**-1.2**
	0.5nm,0.3s,baz=310,slow=11,SNR=15						
SIV				Lg		01 12 11.9	
	0.4nm,0.3s,baz=222,slow=22,SNR=3.7						
ROSC	**El Rosal**	**15.13**	**4**	Pn	**Pn**	**01 07 55.1**	**+3.9**
	0.4nm,0.3s,baz=80,slow=20,SNR=4.0						
ROSC				Lg		01 12 26.3	
	0.3nm,0.3s,baz=83,slow=23,SNR=3.6						
ROSC	**El Rosal**	**15.13**	**4**	*e*Pn	**Pn**	**01 07 51.3**	**+0.1**
ROSC				Lg		01 12 26.3	
CFAA	**Coronel Fontan**	**22.18**	**164**	P	**P**	**01 09 14.9**	**+1.6**
	0.2nm,0.4s,baz=332,slow=8.0,SNR=5.7						
PCRV	**Puerto La Cruz**	**23.02**	**28**	LR	LR	01 19 22.3	
	comp=Z,402nm,18.2s,MS3.9,baz=8.0,slow=39						
CPUP	**Villa Florida**	**23.34**	**135**	P	**P**	**01 09 26.1**	**+0.4**
	0.4nm,0.3s,baz=306,slow=8.3,SNR=6.7						
CPUP				LR	LR	01 20 58.0	
	comp=Z,144nm,21.2s,MS3.4,baz=65,slow=43						
CPUP	**Villa Florida**	**23.34**	**135**	*e*P	**P**	**01 09 22.0**	**-3.7**
	21nm,1.2s,mb4.5						
CPUP				LR	LR	01 20 58.0	
NATX	**Nacogdoches**	**45.74**	**337**	*e*P	**P**	**01 12 39.4**	**+1.0**
	33nm,1.4s,mb5.1						
627A	**Terlingua Ranc**	**47.88**	**327**	⇑P	**P**	**01 12 54.7**	**-0.5**
	baz=48						
TXAR	**Lajitas Array**	**47.94**	**326**	P	**P**	**01 12 55.1**	**-0.5**
	1.2nm,0.6s,mb4.1,baz=148,slow=7.6,SNR=11						
TXAR				PcP	PcP	01 14 24.6	+0.8
	0.7nm,0.9s,baz=150,slow=5.3,SNR=4.6						
626A	**Big Bend Ranch**	**48.37**	**326**	⇑P	**P**	**01 12 59.2**	**+0.3**
	baz=49,SNR=8.6						
527A	**Woodward Ranch**	**48.55**	**327**	⇑P	**P**	**01 13 00.2**	**-0.1**
	baz=49						
526A	**Mary Lane Ranc**	**48.74**	**326**	⇓P	**P**	**01 13 02.2**	**+0.4**
	baz=49,SNR=6.2						
427A	**Hayter Ranch,**	**48.99**	**328**	⇑P	**P**	**01 13 03.7**	**0.0**
	baz=49						
328A	**Wristen Ranch,**	**49.10**	**329**	⇓P	**P**	**01 13 05.0**	**+0.4**
	baz=50						
426A	**McDonald Obser**	**49.18**	**327**	⇓P	**P**	**01 13 05.1**	**-0.1**
	baz=50						
326A	**Caldwell Ranch**	**49.66**	**328**	⇓P	**P**	**01 13 09.1**	**+0.3**
	baz=50						
325A	**Bean Ranch, Si**	**50.23**	**327**	⇓P	**P**	**01 13 12.8**	**-0.4**
	baz=51,SNR=7.2						
226A	**Malaga, Loving**	**50.31**	**328**	⇑P	**P**	**01 13 14.0**	**+0.3**
	baz=51						
127A	**Arkansas Junct**	**50.41**	**329**	⇑P	**P**	**01 13 14.9**	**+0.3**
	baz=51						
GDL2	**Guadalupe Moun**	**50.55**	**328**	*e*P	**P**	**01 13 15.5**	**-0.2**
	7.4nm,1.5s,mb4.4						
324A	**Moseley Ranch,**	**50.56**	**326**	⇑P	**P**	**01 13 14.9**	**-0.9**
	baz=51,SNR=5.6						
225A	**Deer Hill, Car**	**50.72**	**327**	⇓P	**P**	**01 13 16.7**	**-0.2**
	baz=51,SNR=7.1						
126A	**Clayton Basin,**	**50.73**	**329**	⇑P	**P**	**01 13 16.7**	**-0.2**
	baz=51						
Z27A	**Tatum**	**50.85**	**330**	⇓P	**P**	**01 13 17.8**	**-0.1**
	baz=51						
CPRX	**Cap Rock**	**50.95**	**329**	*e*P	**P**	**01 13 17.9**	**-0.8**
125A	**Gardner Draw,**	**51.07**	**328**	⇓P	**P**	**01 13 19.3**	**-0.2**
	baz=51						
224A	**Cornudas Mount**	**51.07**	**327**	⇑P	**P**	**01 13 19.3**	**-0.2**
	baz=51,SNR=6.6						
Z26A	**Caprock**	**51.20**	**329**	⇑P	**P**	**01 13 20.2**	**-0.3**
	baz=52						
Y27A	**Causey**	**51.29**	**330**	⇓P	**P**	**01 13 20.7**	**-0.4**
	baz=52						
124A	**Stringfield Ra**	**51.52**	**327**	⇑P	**P**	**01 13 23.0**	**+0.2**
	baz=52,SNR=7.1						
Z25A	**Roswell**	**51.58**	**328**	⇑P	**P**	**01 13 23.3**	**-0.1**
	baz=52						
X27A	**F and S Farms,**	**51.87**	**331**	⇑P	**P**	**01 13 25.4**	**0.0**
	baz=52						
Z24A	**Sheeppen Canyo**	**51.96**	**328**	⇑P	**P**	**01 13 26.1**	**-0.1**
	baz=52,SNR=9.1						
Y25A	**Mesa, Roswell**	**52.08**	**329**	⇑P	**P**	**01 13 26.7**	**-0.3**
	baz=52						
X26A	**CR and CF Fran**	**52.14**	**330**	⇓P	**P**	**01 13 27.7**	**+0.2**
	baz=52						
W27A	**Bowe Ranch, En**	**52.19**	**331**	⇑P	**P**	**01 13 27.3**	**-0.5**
	baz=53						
320A	**Kipp Ranch, An**	**52.20**	**324**	⇑P	**P**	**01 13 28.1**	**+0.1**
	baz=53						
Z23A	**Rita Site, Whi**	**52.37**	**327**	⇓P	**P**	**01 13 29.6**	**+0.4**
	baz=53						
Y24A	**Capitan**	**52.46**	**328**	⇓P	**P**	**01 13 30.2**	**+0.3**
	baz=53						
220A	**Playas Peak, P**	**52.62**	**324**	⇑P	**P**	**01 13 31.2**	**+0.1**
	baz=53,SNR=8.9						
121A	**Cookes Peak, D**	**52.66**	**325**	⇓P	**P**	**01 13 31.1**	**-0.2**
	baz=53						
319A	**Douglas**	**52.67**	**323**	⇑P	**P**	**01 13 31.3**	**-0.2**
	baz=53						
Z22A	**Elephant Butte**	**52.75**	**327**	⇓P	**P**	**01 13 31.7**	**-0.3**
	baz=53						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
Y23A	Lovelace Mesa, baz=53	52.79	328	⇑P	P	01 13 32.5	+0.2
W25A	X Bar L Ranch, baz=53	52.99	330	⇓P	P	01 13 33.2	-0.5
219A	White Tail Can baz=54	53.11	324	⇓P	P	01 13 34.4	-0.3
318A	Bisbee baz=54	53.14	323	⇑P	P	01 13 34.6	-0.3
120A	U Bar Ranch, L baz=54	53.15	325	⇓P	P	01 13 34.7	-0.3
Z21A	St. Cloud Mine baz=54	53.18	326	⇓P	P	01 13 35.0	-0.2
W24A	Lazy 6 Ranch, baz=54	53.46	329	⇓P	P	01 13 37.4	+0.2
Z20A	Nine Sixteen R baz=54,SNR=8.4	53.55	325	⇑P	P	01 13 38.0	+0.1
218A	Dragoon baz=54	53.55	323	⇓P	P	01 13 37.8	-0.2
V25A	Rancho No Teng baz=54,SNR=8.0	53.56	330	⇑P	P	01 13 37.8	-0.2
U26A	Atchley Ranch, baz=54	53.60	332	⇓P	P	01 13 38.7	+0.5
Y21A	Point of Rocks baz=54,SNR=6.1	53.71	327	⇓P	P	01 13 39.6	+0.5
LAZ	Ladron 3.8nm,1.4s,mb4.1	53.72	327	*e*P	P	01 13 38.5	-0.7
U25A	Circle Dot Ran baz=54	53.91	331	⇓P	P	01 13 40.1	-0.4
118A	Homack Ranch, baz=54	53.99	324	⇑P	P	01 13 40.7	-0.4
Y20A	Horse Springs, baz=54	54.02	326	⇓P	P	01 13 41.3	0.0
X21A	Alamocita Cree baz=54,SNR=12	54.10	327	⇓P	P	01 13 41.8	-0.1
117A	Oracle baz=55,SNR=7.7	54.39	323	⇓P	P	01 13 43.9	-0.2
216A	Three Points, baz=55	54.42	322	⇓P	P	01 13 43.8	-0.4
T25A	Trinidad baz=55,SNR=6.5	54.51	332	⇑P	P	01 13 44.9	0.0
Y19A	Nutrioso baz=55	54.54	325	⇑P	P	01 13 45.3	+0.1
U23A	El Rito baz=55	54.73	330	⇑P	P	01 13 46.8	+0.3
V22A	San Miguel Ran baz=55	54.77	329	⇓P	P	01 13 46.7	-0.1
Y18A	Canyon Day Jun baz=55	54.85	325	⇓P	P	01 13 47.1	-0.3
S25A	Robets Cordova baz=55	54.95	332	⇓P	P	01 13 48.1	+0.1
116A	Eloy baz=55	54.96	322	⇓P	P	01 13 48.1	-0.1
W20A	Ramah baz=55	55.00	327	⇑P	P	01 13 48.7	+0.3
214A	Organ Pipe Nat baz=56,SNR=6.7	55.22	321	⇑P	P	01 13 50.2	+0.1
Y17A	Roosevelt baz=56	55.26	324	⇓P	P	01 13 50.2	-0.2
S24A	Houchin Ranch, baz=56	55.29	331	⇓P	P	01 13 50.2	-0.3
X18A	Snowflake baz=56	55.35	325	⇑P	P	01 13 51.0	0.0
SDCO	Great Sand Dun 7.7nm,1.1s,mb4.7	55.52	331	*e*P	P	01 13 51.9	-0.2
U21A	Nageezi baz=56	55.55	329	⇓P	P	01 13 52.7	+0.3
X17A	Forest Lakes baz=56	55.70	325	⇓P	P	01 13 53.7	+0.2
Y16A	Circle Bar Ran baz=56,SNR=6.4	55.76	324	⇑P	P	01 13 53.9	0.0
114A	Black Gap (USA baz=56	55.80	322	⇓P	P	01 13 54.5	+0.2
X16A	Lo Mia Camp, P baz=56,SNR=7.2	56.12	324	⇑P	P	01 13 56.5	0.0
S22A	4UR Ranch, Cre baz=56	56.16	330	⇑P	P	01 13 56.5	-0.2
Y15A	Casa Rosa Ranc baz=57	56.31	323	⇓P	P	01 13 57.6	-0.3
R22A	Saguache, Gunn baz=57	56.50	331	⇑P	P	01 13 59.2	+0.1
T19A	Beclabito baz=57	56.56	328	⇓P	P	01 14 00.2	+0.5
V17A	Tonalea, Kykot baz=57,SNR=16	56.62	326	⇑P	P	01 13 59.8	-0.3
X15A	Humboldt baz=57	56.63	324	⇓P	P	01 14 00.2	+0.1
Y14A	Wickenburg baz=57	56.70	323	⇓P	P	01 14 00.8	+0.2
WUAZ	Wupatki 11nm,1.2s,mb4.8	56.87	325	*e*P	P	01 14 01.0	-0.8
R21A	Cimarron baz=57	57.00	330	⇓P	P	01 14 02.6	0.0
X14A	Yava baz=57	57.00	323	⇑P	P	01 14 02.9	+0.1
Y13A	Salome baz=58	57.11	322	⇑P	P	01 14 03.6	0.0
ECSD	EROS Data Cent 9.2nm,1.3s,mb4.7	57.17	342	*e*P	P	01 14 02.4	-1.4
GLA	Glamis baz=58	57.21	321	⇑P	P	01 14 04.3	0.0
T18A	Mexican Hat baz=58,SNR=8.7	57.24	327	⇓P	P	01 14 04.3	-0.1
S19A	Harvey Farm, M baz=58	57.31	328	⇑P	P	01 14 05.6	+0.7
Y12C	Blythe baz=58	57.49	321	⇓P	P	01 14 06.4	+0.2
V15A	Kaibab Nationa baz=58	57.54	325	⇑P	P	01 14 06.8	+0.2
PDMCI	Parker Dam,Lak baz=58	57.63	322	⇓P	P	01 14 07.4	+0.2
W14A	Seligman baz=58	57.63	324	⇓P	P	01 14 07.6	+0.3
T17A	Navajo Res., N baz=58,SNR=7.7	57.63	327	⇑P	P	01 14 07.2	0.0
S18A	Hurst Farm, Bl baz=58,SNR=9.4	57.72	328	⇑P	P	01 14 07.7	-0.1
P21A	Newcastle baz=58	57.85	331	⇑P	P	01 14 09.2	+0.5
V14A	Boquillas Ranc baz=58	57.94	324	⇓P	P	01 14 09.7	+0.3
BC3	Big Chuckawall baz=58	58.00	321	⇓P	P	01 14 10.0	+0.1
W13A	Hualapai Mount baz=58,SNR=5.3	58.02	323	⇑P	P	01 14 10.2	+0.2
U15A	North Rim baz=58,SNR=7.8	58.04	325	⇓P	P	01 14 10.3	+0.2
S17A	Black Ridge (B baz=58	58.10	327	⇑P	P	01 14 10.7	+0.2
IRM	Iron Mountain baz=58,SNR=11	58.15	321	⇓P	P	01 14 10.6	-0.3
R18A	Canyonlands Na baz=59	58.19	328	⇑P	P	01 14 11.0	-0.1
Q19A	Hogan Spring (baz=59,SNR=5.7	58.30	329	⇓P	P	01 14 11.5	-0.3
T15A	Red Dirt Ranch baz=59	58.52	326	⇓P	P	01 14 13.6	+0.2
U14A	Mt Trumbull baz=59,SNR=5.2	58.54	325	⇓P	P	01 14 13.3	-0.3
BELC	Belle Mtn. Jos baz=59	58.57	321	⇑P	P	01 14 13.7	-0.1
S16A	Weppner Ranch, baz=59,SNR=6.1	58.59	327	⇓P	P	01 14 13.7	-0.2
PFO	Pinyon Flat Ob baz=59	58.60	320	⇑P	P	01 14 14.6	+0.5
V13A	Grand Canyon W baz=59	58.60	324	⇓P	P	01 14 14.1	+0.1
R17A	Hanksville Air baz=59,SNR=7.9	58.64	328	⇓P	P	01 14 14.0	-0.2
P19A	Cripple Cowboy baz=59	58.68	330	⇑P	P	01 14 14.6	+0.1
O20A	White River Ci baz=59	58.71	331	⇓P	P	01 14 14.6	0.0
Q18A	Rafter H Ranch baz=59	58.85	329	⇓P	P	01 14 16.2	+0.6
N21A	Black Mountain baz=59	58.86	332	⇑P	P	01 14 15.9	+0.2
GMRC	Granite Mounta baz=59	58.88	322	⇓P	P	01 14 16.1	+0.2
T14A	Hurricane baz=59	58.94	325	⇑P	P	01 14 16.6	+0.2
R16A	Teasdale baz=59	58.95	327	⇓P	P	01 14 16.8	+0.4
U13A	Pakoon Wash baz=59	58.98	324	⇓P	P	01 14 17.0	+0.3
V12A	Nelson baz=59	59.03	323	⇓P	P	01 14 17.2	+0.2
SRU	San Rafael baz=59	59.06	329	⇑P	P	01 14 17.2	0.0
SRU	San Rafael 10nm,1.3s,mb4.7	59.06	329	*e*P	P	01 14 16.8	-0.3
Q16A	Castle Valley baz=60	59.25	328	⇑P	P	01 14 19.0	+0.5
O19A	Miners Draw (B baz=60	59.26	330	⇑P	P	01 14 18.6	+0.1
N20A	Spence Gulch, baz=60	59.27	331	⇑P	P	01 14 18.2	-0.3
P18A	Preston Nutter baz=60	59.31	329	⇑P	P	01 14 18.9	+0.1
U12A	Valley of Fire baz=60	59.33	324	⇓P	P	01 14 19.1	+0.1
T13A	Saint George baz=60	59.37	325	⇑P	P	01 14 19.6	+0.2
L22A	Ellis Ranch, M baz=60	59.38	333	⇓P	P	01 14 19.2	-0.1
P17A	Butcher Ranch, baz=60	59.44	329	⇓P	P	01 14 20.3	+0.5
V11A	Goodsprings baz=60	59.45	323	⇑P	P	01 14 20.1	+0.2
M21A	Separation Pea baz=60	59.46	333	⇓P	P	01 14 20.3	+0.5
L21A	Rawlins baz=60	59.75	333	⇓P	P	01 14 21.9	+0.1
O17A	Robinson Place baz=60,SNR=5.8	59.98	329	⇓P	P	01 14 23.5	+0.1
N18A	Larsen Ranch, baz=60	60.05	331	⇓P	P	01 14 24.4	+0.5
R13A	O'Grain Ranch, baz=61	60.23	326	⇑P	P	01 14 25.4	+0.2
T11A	Corn Creek, Al baz=61	60.28	324	⇓P	P	01 14 25.8	+0.2
P15A	Leamington baz=61	60.31	328	⇓P	P	01 14 25.8	0.0
O16A	Springville baz=61	60.38	329	⇑P	P	01 14 26.6	+0.4
DAU	Daniels Canyon 17nm,1.4s,mb4.9	60.41	329	*e*P	P	01 14 27.1	+0.7
Q14A	Sevier Lake (B baz=61,SNR=9.8	60.42	327	⇓P	P	01 14 26.5	0.0
R12A	Pony Springs, baz=61	60.69	325	⇑P	P	01 14 28.6	+0.2
K20A	Yellowstone Ra baz=61	60.74	333	⇑P	P	01 14 28.6	0.0
P14A	Drum Mountains baz=61,SNR=6.6	60.74	327	⇑P	P	01 14 28.6	-0.1
L19A	Farson baz=61	60.77	332	⇑P	P	01 14 29.0	+0.2
DUG	Dugway 14nm,1.3s,mb5.0	61.05	328	*e*P	P	01 14 30.8	0.0
K19A	Absolon Red Bu baz=62	61.10	332	⇑P	P	01 14 31.0	0.0
AGMN	Agassiz Nation 11nm,1.3s,mb4.8	61.12	345	*e*P	P	01 14 29.3	-1.8
P13A	Bates Ranch, G baz=62	61.16	327	⇓P	P	01 14 31.7	+0.3
R11A	Troy Canyon, C baz=62,SNR=6.4	61.25	325	⇓P	P	01 14 31.9	-0.3
Q12A	Willow Creek R baz=62	61.31	326	⇑P	P	01 14 32.8	+0.2
PDAR	Pinedale Array 2.0nm,1.1s,mb4.2,baz=145,slow=5.4,SNR=11	61.38	332	P	P	01 14 31.7	-1.2
HWUT	Hardware Ranch 20nm,1.4s,mb5.1	61.46	330	*e*P	P	01 14 32.6	-0.8
L17A	Cokeville baz=62	61.49	331	⇑P	P	01 14 34.0	+0.3
K18A	Toltan Ranch, baz=62	61.50	331	⇓P	P	01 14 34.0	+0.2
S10A	Tonopah Range, baz=62	61.55	324	⇓P	P	01 14 34.2	+0.1
PKM	Peak Mountain baz=62	61.56	319	⇓P	P	01 14 34.4	0.0
P12A	McGill baz=62,SNR=6.5	61.66	326	⇓P	P	01 14 34.7	-0.1
N14A	Grayback Hills baz=62	61.72	328	⇓P	P	01 14 35.7	+0.4
J18A	Kendall Valley baz=62	61.94	332	⇓P	P	01 14 36.8	+0.1
O12A	Currie baz=62,SNR=6.1	62.13	327	⇑P	P	01 14 37.9	-0.1
L15A	Malad City baz=62,SNR=6.2	62.16	330	⇑P	P	01 14 38.0	-0.2
I18A	Diamond G Ranc baz=63	62.22	332	⇓P	P	01 14 38.6	0.0
M14A	Sheep Mountain baz=63,SNR=9.5	62.28	329	⇑P	P	01 14 39.1	0.0
J16A	Bone baz=63	62.73	331	⇑P	P	01 14 42.2	+0.2
K15A	Arbon baz=63	62.74	330	⇓P	P	01 14 42.5	+0.4
NVAR	Mina Array Bea 1.5nm,0.8s,mb4.2,baz=157,slow=9.2,SNR=9.7	62.89	323	P	P	01 14 43.3	+0.2
ULM	Lac du Bonnet 3.9nm,0.5s,mb4.8,baz=142,slow=3.1,SNR=3.8	62.93	345	P	P	01 14 41.9	-1.2
K14A	Jones Ranch, D baz=63	62.95	329	⇓P	P	01 14 43.8	+0.3
L13A	Double Diamond baz=63	63.01	329	⇓P	P	01 14 44.2	+0.3
M12A	Wells baz=63	63.03	328	⇑P	P	01 14 44.2	+0.1
I16A	Newdale baz=64	63.13	331	⇓P	P	01 14 44.7	+0.1
J15A	Blackfoot baz=64	63.22	331	⇓P	P	01 14 45.1	-0.2
G18A	Lazy EL Ranch, baz=64	63.37	334	⇑P	P	01 14 46.1	-0.1
M11A	Holland Ranch, baz=64	63.51	327	⇑P	P	01 14 47.0	-0.2
L12A	House Creek Ra baz=64	63.60	328	⇓P	P	01 14 47.7	-0.1
H16A	Russell Place, baz=64	63.65	332	⇓P	P	01 14 48.3	+0.2
J14A	Carey baz=64	63.70	330	⇓P	P	01 14 47.9	-0.6
K12A	Draper Farm, C baz=64,SNR=6.8	63.90	328	⇑P	P	01 14 49.7	-0.1
F18A	Big Timber baz=64	63.90	334	⇑P	P	01 14 50.1	+0.4
L11A	Cat Creek Ranc baz=64	64.01	328	⇓P	P	01 14 50.9	+0.4
J13A	Cove Ranch, Pi baz=64	64.08	329	⇑P	P	01 14 51.2	+0.3
I14A	Mackay baz=64	64.11	330	⇑P	P	01 14 50.8	-0.3
H15A	Lima baz=65	64.24	331	⇓P	P	01 14 52.5	+0.6
F17A	Fitzpatrick Pl baz=65	64.31	333	⇑P	P	01 14 52.8	+0.4
I13A	Wildhorse Cree baz=65	64.43	330	⇓P	P	01 14 53.6	+0.4
E18A	Harlowton baz=65	64.51	334	⇑P	P	01 14 54.2	+0.5
BOZ	Bozeman (W) 5.3nm,1.3s,mb4.4	64.55	333	*e*P	P	01 14 51.1	-2.8
G15A	Dillon baz=65	64.58	332	⇑P	P	01 14 54.3	+0.2
H14A	Leadore baz=65	64.58	331	⇓P	P	01 14 54.5	+0.3
K11A	Parker Ranch, baz=65	64.58	328	⇑P	P	01 14 54.4	+0.1
E17A	Martinsdale baz=65	64.83	334	⇑P	P	01 14 55.9	+0.1
I12A	Atlanta baz=65	64.85	329	⇑P	P	01 14 56.2	+0.3
MFID	Camas Ranch baz=65,SNR=11	64.93	329	⇓P	P	01 14 56.3	-0.2
D18A	Linhart Farms, baz=65	64.96	335	⇑P	P	01 14 56.6	0.0
H13A	Challis baz=65	64.97	330	⇓P	P	01 14 56.3	-0.4
K10A	MacKenzie Ranc baz=65	65.02	327	⇓P	P	01 14 57.1	0.0
BEKR	Beckworth baz=65	65.03	323	⇑P	P	01 14 57.3	0.0
H12A	Diamond D Ranc baz=66	65.25	330	⇓P	P	01 14 58.7	+0.2
D17A	Six Diamond Ra baz=66	65.30	334	⇓P	P	01 14 58.9	+0.1
G13A	Cobalt baz=66	65.35	331	⇑P	P	01 14 59.3	+0.2
I11A	Placerville baz=66	65.35	329	⇓P	P	01 14 59.6	+0.4
D16A	Dana Ranch, Ca baz=66	65.57	334	⇓P	P	01 15 00.8	+0.2
E15A	Deer Lodge baz=66	65.60	333	⇓P	P	01 15 01.2	+0.5
C17A	Wharram Farm, baz=66	65.70	335	⇓P	P	01 15 01.8	+0.4
B18A	Beardsley Farm baz=66	65.90	336	⇑P	P	01 15 03.1	+0.5
G12A	Big Creek, Yel baz=66	65.90	330	⇑P	P	01 15 03.2	+0.4
F13A	Darby baz=66	65.91	331	⇑P	P	01 15 03.4	+0.7
C16A	Fuhringer Ranc baz=67	66.25	334	⇑P	P	01 15 05.8	+0.8
F12A	Elk City baz=67	66.32	331	⇑P	P	01 15 05.2	-0.2
MSO	Missoula 6.7nm,1.2s,mb4.5	66.49	332	*e*P	P	01 15 05.8	-0.7
G11A	Walters Elk Ra baz=67	66.56	330	⇑P	P	01 15 07.0	0.0
C15A	Salmond Ranch, baz=67,SNR=7.5	66.61	334	⇑P	P	01 15 07.2	0.0
F11A	Grangeville baz=67	66.85	330	⇑P	P	01 15 08.9	0.0
KCPM	Cahto Peak 9.4nm,1.4s,mb4.6	66.86	321	*e*P	P	01 15 09.2	+0.2
D13A	Huson baz=67	66.93	332	⇑P	P	01 15 09.7	+0.4
E12A	Beaver Dam Sad baz=67	66.95	331	⇑P	P	01 15 09.9	+0.4
B15A	Bradely Ranch, baz=67	67.00	334	⇑P	P	01 15 09.9	+0.2
C14A	Swan Lake baz=68	67.11	333	⇓P	P	01 15 10.6	+0.2
H08A	Prairie City baz=68	67.17	328	⇑P	P	01 15 10.6	-0.3
K05A	Summer Lake baz=68	67.18	325	⇓P	P	01 15 11.2	+0.2
G09A	Cove baz=68,SNR=5.5	67.23	329	⇑P	P	01 15 10.6	-0.6
A15A	Johnson Ranch, baz=68	67.58	334	⇓P	P	01 15 13.8	+0.5
YBH	Yreka Blue Hor 4.0nm,1.2s,mb4.3	67.59	323	*e*P	P	01 15 12.8	-0.8
A14A	Double T Ranch baz=68	67.87	334	⇓P	P	01 15 15.5	+0.3
A13A	Flathead Natio baz=69	68.27	333	⇓P	P	01 15 18.2	+0.4
E09A	Wood Farm, Sta baz=69	68.28	330	⇓P	P	01 15 18.1	+0.2
C11A	Tepee Creek (N baz=69	68.31	332	⇑P	P	01 15 18.6	+0.7
EDM	Edmonton	71.09	337	*e*P	P	01 15 33.8	-1.2
DBIC	Dimbokro 1.3nm,0.4s,mb4.2,baz=236,slow=5.9,SNR=6.4	72.24	80	P	P	01 15 42.8	0.0
DLBC	Dease Lake 2.1nm,0.8s,mb4.2,baz=150,slow=4.6,SNR=4.8	81.49	334	P	P	01 16 33.6	-0.3
DLBC	Dease Lake	81.49	334	P	P	01 16 33.0	-0.9
ESDC	Sonseca Array 0.1nm,0.3s,mb3.4,baz=267,slow=5.9,SNR=6.1	82.62	48	P	P	01 16 41.0	+0.7
DAWY	Dawson	88.30	337	*e*P	P	01 17 07.9	-0.2
INK	Inuvik 9.9nm,1.1s,mb5.0,baz=117,slow=5.5,SNR=14	88.41	342	P	P	01 17 07.9	-0.6
INK	Inuvik 13nm,1.1s,mb5.1	88.41	342	*e*P	P	01 17 07.4	-1.1
EGAK	Eagle 12nm,1.1s,mb5.1	89.31	337	*e*P	P	01 17 10.4	-2.4
SVW2	Sparrevohn	94.26	331	*e*P	P	01 17 33.5	-2.3
ZALV	Zalesovo Beam 0.8nm,0.5s,baz=238,slow=2.7,SNR=6.4	133.72	16	PKP	PKPdf	01 23 33.2	-0.4
KURK	Kurchatov 0.4nm,0.3s,baz=310,slow=2.5,SNR=4.0	134.42	23	PKP	PKPdf	01 23 35.4	+0.4
ASAR	Alice Springs 0.5nm,0.8s,baz=103,slow=1.7,SNR=3.6	135.69	220	PKP	PKPdf	01 23 37.8	-0.5
WRA	Warramunga Arr 0.6nm,0.5s,baz=132,slow=2.0,SNR=3.4	138.02	224	PKP	PKPdf	01 23 43.0	+0.3
CN2	Changchun	142.07	335	*e*PKP	PKPdf	01 23 43.6	-5.6
WMQ	Urumqi	143.56	21	*e*PKP	PKPdf	01 23 45.3	-6.6
WMQ	comp=N,210nm,22.8s			LR	LR		
WMQ	comp=E,330nm,24.6s			LR	LR		
WMQ	comp=Z,270nm,21.0s			LR	LR		
KSRS	Korea Array comp=Z,5.7nm,0.9s,baz=50,slow=2.6,SNR=26	145.79	326	PKPbc	PKPbc	01 23 55.8	-0.6
HHC	Hu-ho-hao-te	148.99	350	*e*PKPbc	PKPdf	01 23 56.1	-5.1
HHC				PP	PP	01 27 33.4	-1.4
HHC	comp=Z,130nm,9.5s			AMB	AMB		
NJ2	Nanjing	154.69	331	*e*PKPbc	PKPdf	01 24 03.6	-6.4
CD2	Chengdu	159.51	2	PKP	PKPdf	01 24 08.7	-7.5
GYA	Guiyang	163.84	353	PKP	PKPdf	01 24 19.2	-1.6
GYA				PKS		01 27 49.9	
GYA				PP	PP	01 28 58.0	+1.0
GYA	comp=Z,110nm,8.4s			AMB	AMB		
GYA	comp=N,120nm,23.3s			LR	LR		
GYA	comp=E,110nm,24.2s			LR	LR		
GYA	comp=Z,130nm,23.0s			LR	LR		
KMI	Kunming	165.19	7	PKP	PKPdf	01 24 20.3	-1.7

IDC 01 01:12:22.9±0.9**, 18.°40N×145.°61E, h0**km**, mb4.1**/5**, mb1 4.5**/5**, mb1mx3.9**/22**, mbtmp4.1**/5**, Error ellipse: s-maj=44.2km s-min=23.7km az=106.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr 2.8nm,0.3s,baz=19,slow=8.4,SNR=12	39.68	197	P	P	01 19 56.8	-0.1
ASAR	Alice Springs 1.2nm,0.3s,baz=16,slow=6.9,SNR=24	43.34	196	P	P	01 20 26.6	-0.3
BVAR	Borovoye Array 0.4nm,0.5s,baz=76,slow=12,SNR=4.2	66.65	320	P	P	01 23 15.5	+0.2
NVAR	Mina Array Bea 1.2nm,0.6s,baz=267,slow=6.0,SNR=8.7	83.39	52	P	P	01 24 52.4	+0.1
PDAR	Pinedale Array 0.4nm,0.3s,baz=271,slow=1.4,SNR=4.2	88.09	45	P	P	01 25 15.0	-0.6
LPAZ	La Paz 0.6nm,0.4s,baz=297,slow=2.3,SNR=5.3	147.75	92	PKPbc	PKPbc	01 32 12.2	+1.7

GUC 01 01:19:30.9±0.6**, 31.°64S×68.°92W, h1**km±9km**, MD3.7, ML3.0, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	Combarbala	1.84	284	*e*P	Pn	01 20 03.7	+0.1
CMCH				*i* S	Sn	01 20 28.6	+1.1
CMCH	comp=E,777nm,0.5s			AML	AML	01 20 33.9	
FCH	Farellones comp=N,68nm,0.2s	2.05	214	AML	AML	01 20 34.7	
PEL	Peldehue	2.12	224	*e*P	Pn	01 20 08.3	+0.8
PEL				*i* S	Sn	01 20 35.9	+1.5
PEL	comp=E,84nm,0.1s			AML	AML	01 20 40.2	
CLCH	Cerro Calan	2.23	218	*e*P	Pn	01 20 09.9	+1.0
CLCH				*i* S	Sn	01 20 39.4	+2.4
CLCH	comp=E,201nm,0.5s			AML	AML	01 20 42.6	
LMEL	Las Melosas	2.46	206	*e*P	Pn	01 20 13.2	+1.1
LMEL				*i* S	Sn	01 20 46.1	+3.4
LMEL	comp=N,59nm,0.2s			AML	AML	01 20 50.7	

IDC 01 01:52:19.3±8.3**, 10.°40N×91.°23E, h0**km**, mb3.8**/5**, mb1 4.0**/5**, mb1mx3.6**/24**, mbtmp3.8**/5**, Error ellipse: s-maj=431.9km s-min=22.2km az=60.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array 0.9nm,0.9s,baz=184,slow=11,SNR=4.9	37.06	350	P	P	01 59 30.9	0.0
KURK	Kurchatov 0.4nm,0.5s,baz=178,slow=6.5,SNR=3.3	41.52	348	P	P	02 00 07.5	-0.7
FITZ	Fitzroy Crossi 4.1nm,0.8s,baz=320,slow=7.9,SNR=6.1	44.22	130	P	P	02 00 30.1	-0.4
WRA	Warramunga Arr 1.9nm,0.8s,baz=306,slow=8.5,SNR=7.5	52.05	125	P	P	02 01 30.7	-0.5
ASAR	Alice Springs 0.5nm,0.6s,baz=303,slow=6.8,SNR=5.8	53.73	130	P	P	02 01 44.2	+0.8

BJI ***01*** *01:54:40.0, 58.°10S×21.°90W, h10km, mB5.7/23, Ms5.5/28, Ms7 5.2/29*

ISCJB **01** *01:54:40.2±0.2, 58.°20S±0.°04×21.°82W±0.°08, h10km, mb5.6/40, MS5.1/214, Error ellipse: s-maj=6.3km s-min=5.6km az=40.9*

IDC **01** *01:54:40.0±0.3, 58.°18S×21.°85W, h0km, mb5.3/21, mb1 5.3/21, mb1mx5.3/22, mbtmp5.3/21, MS5.0/20, Ms1 5.0/20, ms1mx4.9/24, Error ellipse: s-maj=14.2km s-min=11.7km az=13.0*

NEIC **01** *01:54:41.4±0.1, 58.°12S×21.°88W, h10km, mb5.7/30, MS5.1/177, MW5.6, Error ellipse: s-maj=8.4km s-min=6.7km az=191.0, Moment Tensor Solution. s10 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.93; $M_{\theta\theta}$-2.11; $M_{\phi\phi}$3.04; $M_{r\theta}$0.47; $M_{\theta\phi}$2.41; $M_{\phi r}$-0.17; Best double couple: $M_0$3.60000×10^{17} NP1:ϕ_s246.00000°, δ81.00000°, λ-9.00000°. NP2:ϕ_s337.00000°, δ81.00000°, λ-171.00000°. Principal axes: T 3.9900, Plg0.0000°, Azm291.0000°; N -0.8200, Plg77.0000°, Azm22.0000°; P -3.1700, Plg12.0000°, Azm201.0000°;*

MOS **01** *01:54:44.5±0.9, 58.°11S×21.°58W, h33km, mb5.6/31, MS5.0/33 Error ellipse: s-maj=24.6km s-min=13.9km az=94.7*

GCMT **01** *01:54:45.6±0.1, 58.°35S×21.°57W, h12km, MW5.6, Moment Tensor Solution. s70,c115; s29,c31; Moment tensor: Scale 10^{17}Nm; M_{rr}1.78±.04; $M_{\theta\theta}$-3.04±.03; $M_{\phi\phi}$1.26±.04; $M_{r\theta}$-0.49±.09; $M_{\theta\phi}$0.81±.03; $M_{\phi r}$-0.92±.11; Best double couple: $M_0$2.90000×10^{17} NP1:ϕ_s133.00000°, δ54.00000°, λ142.00000°. NP2:ϕ_s248.00000°, δ60.00000°, λ43.00000°. Principal axes: T 2.6100, Plg51.0000°, Azm104.0000°; N 0.6000, Plg39.0000°, Azm276.0000°; P -3.2100, Plg4.0000°, Azm10.0000°; Data Used: II IU IC G CN. Surface waves: sta= 99, comp=183, per= 50.*

DJA **01** *01:54:45, 58.°40S×20.°99W, h10km, Mw6.1/7*

ISC 01 01:54:40.8±3.0, **58.°25S**±0.°04×**21.°81W**±0.°08, **h3km**±18km, **n801, σ1.s02**/117, **mb5.6**/40, **MS5.1**/214, **188C-168D, East of South Sandwich Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.69**	**161**	*e*Pn	**Pn**	**01 57 55.4**	**0.0**
VNA1				*e*		01 57 56.9	
VNA1				*e*		02 00 11.5	
MAIT	**Maitri**	**18.77**	**145**	*e*P	**Pn**	**01 59 00.9**	**0.0**
MAIT				*e*S	**Sn**	**02 02 28.1**	**-2.7**
NVL	**N'lazarevskaya**	**18.79**	**145**	*e*P	**Pn**	**01 58 59.4**	**-1.8**
NVL				*e*S	**Sn**	**02 02 23.9**	**-7.6**
NVL				pmax	pmax		
	comp=Z,38nm,0.7s						
NVL				MLR	MLR		
	comp=Z,3μm,15.0s						
PMSA	**Palmer Station**	**20.83**	**234**	P	**P**	**01 59 22.8**	**-0.1**
	comp=Z,40nm,0.9s,baz=39,slow=4.3,SNR=2.5						
PMSA				LR	LR	02 06 13.8	
	comp=Z,2μm,21.4s,MS4.5,baz=90,slow=33						
USHA	**Ushuaia**	**25.53**	**257**	P	**P**	**02 00 10.7**	**+0.7**
	comp=Z,34nm,0.9s,mb4.9,baz=77,slow=7.2,SNR=6.4						
USHA				LR	LR	02 07 52.7	
	comp=Z,4μm,21.9s,MS4.9,baz=78,slow=31						
SYO	**Syowa Base**	**28.00**	**138**	⇓*e*P	**P**	**02 00 30.4**	**-1.8**
SYO	**Syowa Base**	**28.00**	**138**	⇓*i*P	**P**	**02 00 37.0**	**+4.8**
QSPA	**South Pole Qui**	**31.99**	**180**	P	**P**	**02 01 09.7**	**+2.2**
	comp=Z,56nm,0.9s,mb5.4,baz=207,slow=4.7,SNR=93						
QSPA				LR	LR	02 13 14.6	
	comp=Z,3μm,18.1s,MS5.1,baz=16,slow=35						
QSPA	**South Pole Qui**	**31.99**	**180**	*e*P	**P**	**02 01 09.6**	**+2.2**
	comp=Z,237nm,1.0s,mb6.0						
QSPA				*e*PcP	PcP	02 03 58.1	+1.2
QSPA				LR	LR		
	comp=Z,3μm,20.0s,MS5.0						
TRQA	**Tornquist**	**32.86**	**290**	*e*P	**P**	**02 01 14.4**	**-1.1**
	comp=Z,57nm,1.4s,mb5.3						
TRQA				LR	LR		
	comp=Z,1μm,19.0s,MS4.6						
PLCA	**Paso Flores**	**35.25**	**278**	P	**P**	**02 01 35.5**	**-0.6**
	comp=Z,55nm,0.8s,mb5.5,baz=143,slow=8.0,SNR=42						
PLCA				LR	LR	02 16 14.4	
	comp=Z,2μm,18.7s,MS4.8,baz=121,slow=37						
PLCA	**Paso Flores**	**35.25**	**278**	*e*P	**P**	**02 01 35.0**	**-1.1**
PLCA				pmax	pmax		
	comp=Z,96nm,1.0s						
PLCA				MLR	MLR		
	comp=Z,2μm,20.0s						
PLCA	**Paso Flores**	**35.25**	**278**	*e*P	**P**	**02 01 35.0**	**-1.1**
	comp=Z,96nm,1.0s,mb5.7						
PLCA				LR	LR		
	comp=Z,2μm,20.0s,MS4.9						
ELIM	**Elim**	**36.28**	**68**	⇑*i*P	**P**	**02 01 45.1**	**+0.1**
MAW	**Mawson**	**36.60**	**140**	*e*P	**P**	**02 01 48.2**	**+0.7**
	comp=Z,50nm,0.9s,mb5.3						
MAW	**Mawson**	**36.60**	**140**	P	**P**	**02 01 48.4**	**+0.9**
	comp=Z,74nm,1.0s,mb5.5,baz=239,slow=8.9,SNR=79						
MAW				PcP	PcP	02 04 11.4	+1.1
	comp=Z,25nm,1.0s,baz=257,slow=4.0,SNR=5.6						
MAW				LR	LR	02 15 13.2	
	comp=Z,1μm,18.8s,MS4.8,baz=253,slow=34						
MAW	**Mawson**	**36.60**	**140**	*e*P	**P**	**02 01 48.3**	**+0.8**
MAW				*i*		02 04 11.3	
MAW				pmax	pmax		
	comp=Z,26nm,1.1s						
MAW				MLR	MLR		
	comp=Z,3μm,19.0s						
MAW	**Mawson**	**36.60**	**140**	*e*P	**P**	**02 01 48.3**	**+0.9**
	comp=Z,26nm,1.1s,mb5.0						
MAW				*i* PcP	PcP	02 04 11.3	+1.0
MAW				LR	LR		
	comp=Z,3μm,19.0s,MS5.0						
SUR	**Sutherland**	**38.59**	**67**	P	**P**	**02 02 05.7**	**+1.1**
	comp=Z,39nm,0.9s,mb5.1,baz=208,slow=8.1,SNR=16						
SUR				LR	LR	02 13 43.3	
	comp=Z,2μm,18.3s,MS4.9,baz=83,slow=30						
SUR	**Sutherland**	**38.59**	**67**	*e*P	**P**	**02 02 05.5**	**+0.9**
	comp=Z,453nm,1.9s,mb5.9						
SUR				LR	LR		
	comp=Z,2μm,19.0s,MS4.9						
SUR	**Sutherland**	**38.59**	**67**	P	**P**	**02 02 05.9**	**+1.2**
	comp=Z,368nm,1.1s,mb6.0,SNR=6.0						
SUR	**Sutherland**	**38.59**	**67**	⇑*i*P	**P**	**02 02 05.7**	**+1.0**
SUR				AMS	AMS	02 14 02.7	
	comp=Z,1μm,20.0s,MS4.8						
CAM4	**Nova Friburgo**	**38.86**	**328**	⇓*i*P	**P**	**02 02 08.6**	**+1.6**
CAM4				*i*	pP	02 02 08.4	+0.4
CAM4				*i*	pP	02 02 09.5	+1.5
CAM4				*i*		02 02 20.8	
CAM4				*i*		02 02 32.6	
CAM4				*i*		02 02 41.1	
KOMG	**Komaggas**	**39.16**	**61**	*e*P	**P**	**02 02 10.0**	**+0.6**
KOMG				AMS	AMS	02 14 26.1	
	comp=Z,3μm,19.7s,MS5.2						
SPB	**Sao Paulo**	**39.18**	**321**	*e*P	**P**	**02 02 09.7**	**+0.1**
	comp=Z,79nm,1.1s,mb5.4						
SPB				LR	LR		
	comp=Z,1μm,21.0s,MS4.8						
CPUP	**Villa Florida**	**40.48**	**307**	P	**P**	**02 02 20.4**	**0.0**
	comp=Z,20nm,0.6s,mb5.0,baz=134,slow=7.3,SNR=109						
CPUP	**Villa Florida**	**40.48**	**307**	*e*P	**P**	**02 02 20.4**	**-0.1**
	comp=Z,90nm,0.7s,mb5.6						
CPUP				LR	LR		
	comp=Z,190nm,19.0s,MS4.0						
GRM	**Grahamstown**	**40.67**	**74**	⇑*i*P	**P**	**02 02 22.0**	**0.0**
GRM				AMS	AMS	02 15 46.0	
	comp=Z,3μm,18.2s,MS5.2						
SOE	**Somerset East**	**40.68**	**72**	⇑*i*P	**P**	**02 02 22.2**	**+0.2**
SOE				AMS	AMS	02 15 50.5	
	comp=Z,2μm,18.7s,MS5.1						
CFAA	**Coronel Fontan**	**41.10**	**290**	P	**P**	**02 02 23.3**	**-2.2**
	comp=Z,2.7nm,1.0s,baz=146,slow=8.4,SNR=22						
CFAA				PcP	PcP	02 04 25.3	+0.3
	comp=Z,0.8nm,0.7s,baz=143,slow=4.8,SNR=4.9						
PKA	**Prieska**	**41.77**	**66**	⇑*i*P	**P**	**02 02 30.8**	**-0.2**
PKA				AMS	AMS	02 15 41.0	
	comp=Z,648nm,20.1s,MS4.5						
UPI	**Upington**	**42.13**	**64**	⇑*i*P	**P**	**02 02 34.5**	**+0.5**
UPI				AMS	AMS	02 09 34.9	
	comp=Z,8μm,22.2s,MS5.5						
HVD	**Gariep Dam**	**42.34**	**70**	⇑*i*P	**P**	**02 02 36.2**	**+0.5**
HVD				AMS	AMS	02 16 40.2	
	comp=Z,3μm,19.3s,MS5.2						
BOSA	**Boshof**	**43.86**	**68**	P	**P**	**02 02 47.3**	**-0.7**
	comp=Z,75nm,1.0s,mb5.4,baz=213,slow=8.4,SNR=75						
BOSA				LR	LR	02 17 22.9	
	comp=Z,2μm,18.8s,MS5.0,baz=221,slow=31						
BOSA	**Boshof**	**43.86**	**68**	⇑*e*P	**P**	**02 02 47.6**	**-0.4**
BOSA				*e*		02 04 33.6	
BOSA				pmax	pmax		
	comp=Z,137nm,1.1s,mb5.6						
BOSA				MLR	MLR		
	comp=Z,2μm,20.0s,MS5.0						
BOSA	**Boshof**	**43.86**	**68**	⇑*e*P	**P**	**02 02 47.6**	**-0.3**
	comp=Z,137nm,1.1s,mb5.6						
BOSA				*e*PcP	PcP	02 04 33.6	-0.6
BOSA				LR	LR		
	comp=Z,2μm,20.0s,MS5.0						
BOSA	**Boshof**	**43.86**	**68**	⇑*i*P	**P**	**02 02 47.5**	**-0.4**
BOSA				AMS	AMS	02 17 24.5	
	comp=Z,2μm,19.9s,MS5.0						
SBA	**Scott Base**	**44.05**	**183**	*e*P	**P**	**02 02 51.7**	**+2.7**
SBA				pmax	pmax		
	comp=Z,110nm,1.1s,mb5.5						
SBA				MLR	MLR		
	comp=Z,1μm,20.0s,MS4.8						
SBA	**Scott Base**	**44.05**	**183**	*e*P	**P**	**02 02 51.7**	**+2.7**
	comp=Z,110nm,1.1s,mb5.5						
SBA				LR	LR		
	comp=Z,1μm,20.0s,MS4.8						
LCO	**Las Campanas**	**44.44**	**289**	*e*P	**P**	**02 02 50.9**	**-1.7**
	comp=Z,42nm,1.0s,mb5.1						
LCO				LR	LR		
	comp=Z,1μm,19.0s,MS4.9						
SWZ	**Schweizer**	**45.08**	**67**	⇑*i*P	**P**	**02 02 57.3**	**-0.5**
SWZ				AMS	AMS	02 18 11.5	
	comp=Z,2μm,20.0s,MS5.1						
SEK	**Senekal**	**45.27**	**71**	⇑*i*P	**P**	**02 02 59.5**	**+0.2**
SEK				AMS	AMS	02 18 36.8	
	comp=Z,4μm,18.8s,MS5.3						
PRYS	**Parys**	**46.29**	**69**	⇑*i*P	**P**	**02 03 06.9**	**-0.5**
PRYS				AMS	AMS	02 19 10.9	
	comp=Z,2μm,19.6s,MS5.1						
MIR	**Mirnyy**	**46.45**	**150**	⇑*i*P	**P**	**02 03 09.0**	**+0.9**
MIR				*e**PP	pP	02 03 22.0	+13
MIR				*e*		02 04 44.0	
MIR				*e*S	**S**	**02 09 57.0**	**+0.9**
MIR				pmax	pmax		
	comp=Z,182nm,1.4s,mb5.8						
MIR				pmax	pmax		
	comp=Z,1μm,6.0s						
MIR				pmax	pmax		
	comp=N,710nm,4.0s						
MIR				pmax	pmax		
	comp=E,510nm,4.0s						
MIR				smax			
	comp=N,1μm,14.0s						
MIR				smax			
	comp=E,690nm,12.0s						
MIR				MLR	MLR		
	comp=N,1μm,16.0s,MS5.1						
MIR				MLR	MLR		
	comp=E,2μm,16.0s,MS5.1						
MIR				MLR	MLR		
	comp=Z,2μm,16.0s,MS5.1						
KSR	**Koster**	**46.96**	**68**	⇑*i*P	**P**	**02 03 12.3**	**-0.3**
LBTB	**Lobatse**	**47.03**	**66**	*e*P	**P**	**02 03 12.8**	**-0.3**
LBTB				*e*		02 04 45.6	
LBTB				pmax	pmax		
	comp=Z,212nm,1.3s,mb5.9						
LBTB				MLR	MLR		
	comp=Z,2μm,21.0s,MS5.1						
LBTB	**Lobatse**	**47.03**	**66**	*e*P	**P**	**02 03 12.8**	**-0.4**
	comp=Z,212nm,1.3s,mb5.9						
LBTB				*e*PcP	PcP	02 04 45.5	+0.3
LBTB				LR	LR		
	comp=Z,2μm,21.0s,MS5.1						
LBTB	**Lobatse**	**47.03**	**66**	⇑*i*P	**P**	**02 03 12.8**	**-0.4**
LBTB				AMS	AMS	02 18 49.4	
	comp=Z,2μm,21.0s,MS4.9						
ERPM	**east rand prop**	**47.21**	**70**	⇑*i*P	**P**	**02 03 15.1**	**+0.6**
ERPM				AMS	AMS	02 20 09.6	
	comp=Z,3μm,18.8s,MS5.3						
SLR	**Silverton**	**47.74**	**69**	⇑*i*P	**P**	**02 03 18.0**	**-0.6**
SLR				AMS	AMS	02 20 12.7	
	comp=Z,3μm,18.9s,MS5.3						
POGA	**Pongola**	**48.06**	**74**	⇑*i*P	**P**	**02 03 21.4**	**+0.3**
POGA				AMS	AMS	02 09 42.6	
	comp=Z,3μm,19.7s,MS5.3						
CASY	**Casey**	**50.79**	**157**	⇑*i*P	**P**	**02 03 42.9**	**+1.4**
CASY	**Casey**	**50.79**	**157**	*e*P	**P**	**02 03 43.0**	**+1.5**
	comp=Z,162nm,1.0s,mb5.9						
CASY				*e*PcP	PcP	02 04 59.0	+0.8
CASY				LR	LR		
	comp=Z,5μm,19.0s,MS5.6						
MSNA	**Messina**	**51.44**	**69**	⇑*i*P	**P**	**02 03 46.2**	**-0.7**
MSNA				AMS	AMS	02 23 03.2	
	comp=Z,2μm,18.1s,MS5.2						
RCBR	**Riachuelo**	**53.43**	**342**	PFAKE		02 04 10.0	+8.3
RCBR				LR	LR		
	comp=Z,2μm,21.0s,MS5.2						
LPAZ	**La Paz**	**54.04**	**301**	P	**P**	**02 04 07.8**	**+1.6**
	comp=Z,79nm,0.8s,mb5.7,baz=142,slow=6.3,SNR=128						
LPAZ				LR	LR	02 26 17.6	
	comp=Z,726nm,18.2s,MS4.8,baz=151,slow=35						
LPAZ	**La Paz**	**54.04**	**301**	⇑*e*P	**P**	**02 04 07.8**	**+1.6**
	comp=Z,217nm,1.0s,mb6.0						
LPAZ				*e*		02 04 17.4	
LPAZ				LR	LR		
	comp=Z,841nm,20.0s,MS4.8						
DRV	**Dumont d'Urvil**	**54.66**	**171**	S	**S**	**02 11 59.0**	**+8.9**
DRV				SS	SS	02 15 33.0	+1.1
DRV				R		02 20 00.0	
LSZ	**Lusaka**	**56.61**	**62**	*e*P	**P**	**02 04 24.3**	**-0.4**
LSZ				*e*		02 05 22.1	
LSZ				pmax	pmax		
	comp=Z,65nm,0.9s,mb5.7						
LSZ				MLR	MLR		
	comp=Z,3μm,22.0s,MS5.3						
LSZ	**Lusaka**	**56.61**	**62**	*e*P	**P**	**02 04 24.3**	**-0.4**
	comp=Z,65nm,0.9s,mb5.7						
LSZ				*e*PcP	PcP	02 05 22.1	+1.0
LSZ				LR	LR		
	comp=Z,3μm,22.0s,MS5.3						
NNA	**Nana**	**61.86**	**295**	P	**P**	**02 05 02.9**	**+1.8**
	comp=Z,614nm,1.3s,mb6.6,SNR=5.8						
NNA	**Nana**	**61.86**	**295**	PFAKE		02 05 10.0	+8.9
NNA				LR	LR		
	comp=Z,822nm,20.0s,MS4.9						
ABPO	**Ambohimpanom**	**63.01**	**83**	*e*P	**P**	**02 05 10.4**	**+1.7**
ABPO				pmax	pmax		
	comp=Z,144nm,1.7s,mb5.8						
ABPO				MLR	MLR		
	comp=Z,1μm,19.0s,MS5.0						
ABPO	**Ambohimpanom**	**63.01**	**83**	*e*P	**P**	**02 05 10.4**	**+1.7**
	comp=Z,144nm,1.7s,mb5.8						
ABPO				LR	LR		
	comp=Z,1μm,19.0s,MS5.0						
OPO	**Ambohidratompo**	**63.35**	**82**	P	**P**	**02 05 11.8**	**+0.8**
	comp=Z,24nm,1.0s,mb5.3,baz=203,slow=6.0,SNR=20						
LIC	**Lamto**	**65.68**	**18**	*e*P	**P**	**02 05 24.7**	**-1.5**
	comp=Z,160nm,1.4s,mb5.8						
RER	**Riviere de l'E**	**65.74**	**91**	*e*P	**P**	**02 05 28.0**	**+1.4**
	comp=Z,197nm,1.0s,mb6.1						
KIC	**Kosan Boka**	**65.86**	**19**	*e*P	**P**	**02 05 25.8**	**-1.5**
TIC	**Toumodi**	**66.09**	**18**	*e*P	**P**	**02 05 27.1**	**-1.7**
RPN	**Rapa Nui**	**66.09**	**257**	LR	LR	02 28 51.9	
	comp=Z,669nm,20.0s,MS4.8,baz=142,slow=31						
DBIC	**Dimbokro**	**66.14**	**18**	P	**P**	**02 05 28.4**	**-0.8**
	comp=Z,19nm,0.8s,mb5.2,baz=164,slow=7.9,SNR=17						
DBIC				LR	LR	02 27 15.4	
	comp=Z,2μm,20.9s,MS5.3,baz=168,slow=30						
DBIC	**Dimbokro**	**66.14**	**18**	*e*P	**P**	**02 05 28.3**	**-0.9**
DBIC				pmax	pmax		
	comp=Z,20nm,0.8s						
DBIC				MLR	MLR		
	comp=Z,2μm,21.0s						
DBIC	**Dimbokro**	**66.14**	**18**	*e*P	**P**	**02 05 28.2**	**-0.9**
	comp=Z,20nm,0.8s,mb5.2						
DBIC				LR	LR		
	comp=Z,2μm,21.0s,MS5.4						
DBIC	**Dimbokro**	**66.14**	**18**	⇑*i*P	**P**	**02 05 27.9**	**-1.3**
SACV	**Santiago Islan**	**72.97**	**358**	PFAKE		02 06 20.0	+8.8
SACV				LR	LR		
	comp=Z,813nm,19.0s,MS5.0						
KMBO	**Kilima Mbogo**	**73.24**	**64**	P	**P**	**02 06 14.3**	**+1.3**
	comp=Z,24nm,1.2s,mb5.0,baz=180,slow=24,SNR=20						
KMBO				LR	LR	02 35 38.2	
	comp=Z,2μm,18.1s,MS5.5,baz=270,slow=34						
KMBO	**Kilima Mbogo**	**73.24**	**64**	*e*P	**P**	**02 06 16.0**	**+3.0**
	comp=Z,75nm,1.5s,mb5.4						
KMBO				LR	LR		
	comp=Z,2μm,20.0s,MS5.4						
KMBO	**Kilima Mbogo**	**73.24**	**64**	⇑*i*P	**P**	**02 06 15.9**	**+2.9**
KMBO	**Kilima Mbogo**	**73.24**	**64**	P	**P**	**02 06 16.9**	**+3.9**
	SNR=10						
OTAV	**Otavalo**	**73.31**	**299**	*e*P	**P**	**02 06 14.7**	**+1.2**
	comp=Z,82nm,1.2s,mb5.5						
OTAV				LR	LR		
	comp=Z,456nm,20.0s,MS4.8						
ROSC	**El Rosal**	**75.57**	**305**	P	**P**	**02 06 27.2**	**+0.7**
	comp=Z,19nm,0.7s,mb5.2,baz=141,slow=4.4,SNR=24						
ROSC				LR	LR	02 40 07.8	
	comp=Z,704nm,18.1s,MS5.0,baz=12,slow=36						
ROSC	**El Rosal**	**75.57**	**305**	*e*P	**P**	**02 06 27.0**	**+0.4**
GRGR	**Grenville**	**77.30**	**320**	PFAKE		02 06 50.0	+14
GRGR				LR	LR		
	comp=Z,682nm,20.0s,MS5.0						
SDV	**Santo Domingo**	**77.66**	**310**	PFAKE		02 06 50.0	+12
SDV				LR	LR		
	comp=Z,334nm,20.0s,MS4.7						
RPZ	**Rata Peaks**	**77.84**	**190**	P	**P**	**02 06 39.9**	**+0.8**
	comp=Z,43nm,0.9s,mb5.4,baz=154,slow=5.0,SNR=4.5						
RPZ				LR	LR	02 38 45.1	
	comp=Z,855nm,19.2s,MS5.1,baz=301,slow=34						
RPZ	**Rata Peaks**	**77.84**	**190**	*e*P	**P**	**02 06 39.6**	**+0.5**
	comp=Z,48nm,0.9s,mb5.4						
PAYG	**Puerto Ayora**	**78.24**	**288**	PFAKE		02 06 50.0	+8.4
PAYG				LR	LR		
	comp=Z,764nm,20.0s,MS5.0						
MSEY	**Mahe Island**	**79.36**	**82**	PFAKE		02 07 00.0	+12
MSEY				LR	LR		
	comp=Z,1μm,21.0s,MS5.2						
FDF	**Fort de France**	**79.56**	**321**	PFAKE		02 07 00.0	+11
FDF				LR	LR		
	comp=Z,474nm,21.0s,MS4.8						
THZ	**Tophouse**	**79.60**	**191**	*e*P*	**P**	**02 06 48.1**	**-0.7**
SNZO	**South Karori**	**79.85**	**193**	PFAKE		02 07 00.0	+10
SNZO				LR	LR		
	comp=Z,1μm,20.0s,MS5.2						
NNZ	**Nelson**	**80.09**	**192**	*e*P*	**P**	**02 06 50.8**	**-0.6**
BCIP	**Isla Barro Col**	**81.83**	**302**	PFAKE		02 07 10.0	+9.0
BCIP				LR	LR		
	comp=Z,541nm,22.0s,MS4.9						
RKT	**Rikitea**	**81.96**	**239**	*e*LQ		02 29 15.3	
	comp=Z,2μm,31.8s						
RKT				*e*LR	LR	02 32 45.0	
	comp=Z,2μm,26.2s,baz=151						
ANWB	**Willy Bob**	**82.51**	**322**	PFAKE		02 07 10.0	+5.6
ANWB				LR	LR		
	comp=Z,518nm,22.0s,MS4.8						
URZ	**Urewera**	**82.55**	**195**	P	**P**	**02 07 05.3**	**+0.7**
URZ	**Urewera**	**82.55**	**195**	*e*P	**P**	**02 07 05.2**	**+0.6**
	comp=Z,215nm,1.7s,mb5.9						
NWAO	**Narrogin (SRO)**	**82.92**	**146**	P	**P**	**02 07 06.0**	**-0.6**
	comp=Z,24nm,0.8s,mb5.3,baz=195,slow=6.3,SNR=13						
NWAO	**Narrogin (SRO)**	**82.92**	**146**	*e*P	**P**	**02 07 06.5**	**0.0**
NWAO				pmax	pmax		
	comp=Z,17nm,0.8s						
NWAO	**Narrogin (SRO)**	**82.92**	**146**	*e*P	**P**	**02 07 06.5**	**-0.1**
	comp=Z,17nm,0.8s,mb5.1						
TAM	**Tamanrasset**	**83.88**	**25**	⇑*i*P	**P**	**02 07 12.4**	**+1.0**
TAM				*e*		02 10 24.2	
TAM				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.3						
TAM				MLR	MLR		
	comp=Z,751nm,20.0s,MS5.1						
TAM	**Tamanrasset**	**83.88**	**25**	⇑*i*P	**P**	**02 07 12.4**	**+1.1**
	comp=Z,30nm,1.1s,mb5.3						
TAM				*e*PP	PP	02 10 24.2	-0.9
TAM				LR	LR		
	comp=Z,751nm,20.0s,MS5.1						
TOO	**Toolangi**	**83.94**	**170**	*e*P	**P**	**02 07 11.5**	**-0.3**
KLBR	**Kellerberrin**	**84.32**	**146**	*e*P	**P**	**02 07 12.5**	**-1.3**
	comp=Z,113nm,1.3s,mb5.8						
SJG	**San Juan**	**84.41**	**318**	*e*P	**P**	**02 07 13.2**	**-1.0**
SJG				pmax	pmax		
	comp=Z,45nm,1.2s						
SJG				MLR	MLR		
	comp=Z,608nm,20.0s						
SJG	**San Juan**	**84.41**	**318**	*e*P	**P**	**02 07 13.2**	**-1.0**
	comp=Z,45nm,1.2s,mb5.5						
SJG				LR	LR		
	comp=Z,608nm,20.0s,MS5.0						
CBYP	**Canovanas**	**84.45**	**318**	*e*P	**P**	**02 07 12.7**	**-1.7**
	comp=Z,36nm,0.9s,mb5.5						
JTS	**JuntasAbangare**	**85.16**	**298**	P	**P**	**02 07 18.3**	**+0.2**
	comp=Z,258nm,1.3s,mb6.2,SNR=9.6						
JTS	**JuntasAbangare**	**85.16**	**298**	⇑*i*P	**P**	**02 07 18.8**	**+0.7**
JTS	**JuntasAbangare**	**85.16**	**298**	*e*P	**P**	**02 07 18.7**	**+0.6**
	comp=Z,150nm,1.5s,mb5.9						
JTS				LR	LR		
	comp=Z,328nm,22.0s,MS4.7						
CAN	**Canberra**	**86.47**	**172**	PFAKE		02 07 40.0	+16
CAN				LR	LR		
	comp=Z,1μm,22.0s,MS5.2						
CNB	**Canberra Magne**	**86.50**	**173**	*e*P	**P**	**02 07 25.3**	**+0.7**
ATD	**Arta Tunnel**	**86.95**	**62**	P	**P**	**02 07 27.9**	**+1.0**
	comp=Z,23nm,1.0s,mb5.4,baz=304,slow=7.2,SNR=6.2						
ATD				LR	LR	02 44 44.4	
	comp=Z,1μm,18.3s,MS5.4,baz=5.8,slow=35						
SDDR	**Presa de Saban**	**87.09**	**314**	PFAKE		02 07 40.0	+13
SDDR				LR	LR		
	comp=Z,637nm,22.0s,MS5.0						
FORT	**Forrest**	**87.79**	**154**	⇑*i*P	**P**	**02 07 31.3**	**+0.4**
	comp=Z,144nm,0.9s,mb6.2						
FORT	**Forrest**	**87.79**	**154**	*e*P	**P**	**02 07 31.3**	**+0.4**
	comp=Z,209nm,1.0s,mb6.3						
TBI	**Tubuai**	**87.84**	**227**	*e*S	S	02 18 11.0	-3.7
	comp=Z,883nm,27.0s						
TBI				*e*LQ		02 31 46.4	
	comp=Z,605nm,26.8s						
TBI				*e*LR	LR	02 35 28.2	
	comp=Z,898nm,25.0s						
MTDJ	**Mount Denham**	**88.90**	**308**	PFAKE		02 07 50.0	+14
MTDJ				LR	LR		
	comp=Z,640nm,22.0s,MS5.0						
STKA	**Stephens Creek**	**89.14**	**166**	⇑*i*P	**P**	**02 07 37.5**	**+0.2**
	comp=Z,41nm,1.1s,mb5.7						
STKA	**Stephens Creek**	**89.14**	**166**	P	**P**	**02 07 37.6**	**+0.3**
	comp=Z,47nm,1.0s,mb5.8,baz=172,slow=6.0,SNR=27						
STKA				LR	LR	02 44 15.3	
	comp=Z,4μm,21.9s,MS5.8,baz=188,slow=33						
STKA	**Stephens Creek**	**89.14**	**166**	*e*P	**P**	**02 07 37.6**	**+0.3**
	comp=Z,25nm,1.4s,mb5.4						
GRTK	**Grand Turk**	**89.34**	**315**	PFAKE		02 07 50.0	+12
GRTK				LR	LR		
	comp=Z,471nm,19.0s,MS4.9						
GTBY	**Guantanamo Bay**	**89.44**	**311**	PFAKE		02 07 50.0	+11
GTBY				LR	LR		
	comp=Z,861nm,20.0s,MS5.2						
TGUH	**Tegucigalpa,Un**	**89.53**	**298**	*e*P	**P**	**02 07 39.1**	**0.0**
	comp=Z,39nm,1.2s,mb5.6						
TGUH				LR	LR		
	comp=Z,388nm,22.0s,MS4.8						
RAO	**Raoul Island**	**90.57**	**201**	LR	LR	02 43 05.8	
	comp=Z,517nm,20.0s,MS5.0,baz=247,slow=32						
ARMA	**Armidale**	**91.50**	**174**	*e*P	**P**	**02 07 47.0**	**-1.3**
PPT	**Papeete**	**93.11**	**229**	*e*LR	LR	02 37 56.2	
	comp=Z,2μm,23.0s,baz=160						
PPT	**Papeete**	**93.11**	**229**	LR	LR	02 42 18.8	
	comp=Z,889nm,18.4s,MS5.2,baz=156,slow=31						
COCO	**West Island**	**94.00**	**121**	PFAKE		02 08 10.0	+10
COCO				LR	LR		
	comp=Z,936nm,21.0s,MS5.2						
MBWA	**Marble Bar**	**94.70**	**144**	PFAKE		02 08 10.0	+6.8
MBWA				LR	LR		
	comp=Z,754nm,20.0s,MS5.2						
RMQ	**Roma**	**95.22**	**172**	*e*P	**P**	**02 08 05.4**	**-0.1**
	comp=Z,27nm,1.0s,mb5.6						
SFS	**San Fernando**	**95.26**	**13**	PFAKE		02 08 20.0	+15
SFS				LR	LR		
	comp=Z,1μm,20.0s,MS5.4						
TEIG	**Tepich**	**95.36**	**300**	PFAKE		02 08 20.0	+14
TEIG				LR	LR		
	comp=Z,410nm,19.0s,MS4.9						
ASAR	**Alice Springs**	**95.92**	**158**	P	**P**	**02 08 08.1**	**-0.6**
	comp=Z,16nm,1.0s,mb5.4,baz=197,slow=4.3,SNR=71						
ASAR				PP	PP	02 11 58.9	-1.0
	comp=Z,2.0nm,0.9s,baz=190,slow=7.3,SNR=4.3						
ASAR	**Alice Springs**	**95.92**	**158**	P	**P**	**02 08 08.1**	**-0.6**
ASAR						02 11 58.9	
ASAR				pmax	pmax		
	comp=Z,16nm,1.0s						
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
TAOE	**Nuku Hiva Isla**	**96.79**	**241**	*e*LR	LR	02 39 37.1	
	comp=Z,2μm,22.2s						
BBSR	**BB Station**	**97.15**	**325**	PFAKE		02 08 20.0	+6.2
BBSR				LR	LR		
	comp=Z,507nm,19.0s,MS5.0						
KEST	**Kesra**	**97.20**	**25**	P	**P**	**02 08 13.8**	**-0.1**
	comp=Z,1.3nm,1.0s,baz=208,slow=4.8,SNR=4.7						

KEST LR LR 02 50 24.1
comp=Z,381nm,18.1s,MS4.9,baz=5.7,slow=34
PAB San Pablo 98.52 14 PFAKE 02 08 30.0 +10
PAB LR LR
comp=Z,612nm,19.0s,MS5.1
WDD Wield Dalam 98.57 29 PFAKE 02 08 30.0 +10
WDD LR LR
comp=Z,401nm,19.0s,MS4.9
ESDC Sonseca Array 98.70 14 P **P** **02 08 20.3 -0.3**
comp=Z,0.3nm,0.6s,baz=169,slow=4.4,SNR=4.2
ESDC LR LR 02 51 18.9
comp=Z,397nm,18.8s,MS4.9,baz=165,slow=34
ESLA Sonseca Array 98.70 14 PFAKE 02 08 30.0 +9.4
ESLA LR LR
comp=Z,3μm,19.0s,MS5.8
MTE Manteigas 99.01 11 PFAKE 02 08 30.0 +8.0
MTE LR LR
comp=Z,991nm,22.0s,MS5.3
DWPF Disney 99.30 309 PFAKE 02 08 30.0 +6.4
DWPF LR LR
comp=Z,545nm,22.0s,MS5.0
WRA Warramunga Arr 99.62 157 P **P** **02 08 24.4 -1.0**
comp=Z,5.2nm,0.9s,mb5.0,baz=197,slow=4.0,SNR=17
WRA PP PP 02 12 29.9 +1.6
comp=Z,5.5nm,1.2s,baz=193,slow=6.8,SNR=4.9
WRA LR LR 02 55 43.0
comp=Z,850nm,18.9s,MS5.3,baz=160,slow=37
WRA Warramunga Arr 99.62 157 P **P** **02 08 24.4 -1.0**
WRA 02 12 29.9
WRA pmax pmax
comp=Z,5.0nm,0.9s
WRA pmax pmax
comp=Z,6.0nm,1.2s
WRA MLR MLR
comp=Z,850nm,18.9s
WRA Warramunga Arr 99.62 157 P **P** **02 08 24.4 -1.0**
WRA PP PP 02 12 29.9 +1.6
WRA LR LR 02 55 43.0
WRAB Tennant Creek 99.64 157 PFAKE 02 08 40.0 +14
WRAB LR LR
comp=Z,1μm,19.0s,MS5.4
DZM Mont Dzumac 99.69 188 *e*LR LR 02 41 05.0
comp=Z,945nm,22.2s
VSL Villasalto 100.82 24 PFAKE 02 08 40.0 +9.1
VSL LR LR
comp=Z,974nm,22.0s,MS5.3
CEL Celeste 101.19 29 PFAKE 02 08 40.0 +7.5
CEL LR LR
comp=Z,520nm,22.0s,MS5.0
CTAO Charters Tower 101.33 169 PFAKE 02 08 40.0 +6.9
CTAO LR LR
comp=Z,2μm,22.0s,MS5.6
TIP Timpagrande 102.28 30 PFAKE 02 08 50.0 +13
TIP LR LR
comp=Z,671nm,22.0s,MS5.1
MSVF Nonsavu 102.54 199 PFAKE 02 08 50.0 +12
MSVF LR LR
comp=Z,2μm,21.0s,MS5.6
MMAI Mount Meron Ar 102.69 46 Pdiff Pdif 02 08 37.6 -1.6
comp=Z,0.5nm,0.3s,baz=168,slow=41,SNR=3.0
MMAI PP PP 02 12 52.5 -0.1
comp=Z,1.9nm,0.7s,baz=245,slow=14,SNR=7.0
CUC Castrocucco 102.80 29 PFAKE 02 08 50.0 +10
CUC LR LR
comp=Z,343nm,22.0s,MS4.8
NHSC New Hope 103.22 313 PFAKE 02 08 50.0 +8.5
NHSC LR LR
comp=Z,362nm,19.0s,MS4.9
CSS Prodhromos 103.65 44 PFAKE 02 08 50.0 +6.6
CSS LR LR
comp=Z,632nm,22.0s,MS5.1
BRAL Brewton 104.19 306 PFAKE 02 09 00.0 +14
BRAL LR LR
comp=Z,430nm,21.0s,MS5.0
CNNC Cliffs of the 104.24 316 PFAKE 02 09 00.0 +14
CNNC LR LR
comp=Z,648nm,21.0s,MS5.1
AQU L'Aquila 104.45 26 PFAKE 02 09 00.0 +13
AQU LR LR
comp=Z,885nm,21.0s,MS5.3
GOGA Godfrey 104.79 310 PFAKE 02 09 00.0 +11
GOGA LR LR
comp=Z,426nm,21.0s,MS5.0
TIR Tirane 105.14 31 PFAKE 02 13 10.0 +6.5
TIR LR LR
comp=Z,408nm,22.0s,MS4.9
ISP Isparta 105.21 41 PFAKE 02 13 10.0 +6.3
ISP LR LR
comp=Z,275nm,20.0s,MS4.8
SSB Saint Sauveur 105.46 19 PFAKE 02 13 10.0 +6.1
SSB LR LR
comp=Z,731nm,19.0s,MS5.2
VLC Villacollemand 105.50 23 PFAKE 02 13 10.0 +6.0
VLC LR LR
comp=Z,628nm,21.0s,MS5.1
BNI Bardonecchia 105.62 21 PFAKE 02 13 20.0 +16
BNI LR LR
comp=Z,990nm,19.0s,MS5.4
LRAL Lakeview Retre 105.91 308 PFAKE 02 13 20.0 +15
LRAL LR LR
comp=Z,623nm,22.0s,MS5.1
KVTX Kingsville 106.11 296 PFAKE 02 13 20.0 +14
KVTX LR LR
comp=Z,339nm,20.0s,MS4.9
CBN Corbin 106.69 317 PFAKE 02 13 20.0 +14
CBN LR LR
comp=Z,337nm,21.0s,MS4.9
VBMS Vicksburg 106.71 304 PFAKE 02 13 20.0 +13
VBMS LR LR
comp=Z,261nm,20.0s,MS4.8
BLA Blacksburg 106.93 315 PFAKE 02 13 20.0 +13
BLA LR LR
comp=Z,484nm,22.0s,MS5.0
HKT Hockley 107.17 299 PFAKE 02 13 20.0 +12
HKT LR LR
comp=Z,225nm,19.0s,MS4.7
TUE Stuetta 107.50 22 PFAKE 02 13 20.0 +12
TUE LR LR
comp=Z,550nm,21.0s,MS5.1
TRI Trieste 107.71 25 PFAKE 02 13 20.0 +12
TRI LR LR
comp=Z,632nm,20.0s,MS5.2
BRTR Keskin Array B 108.00 42 PKiKP PKiKP 02 13 07.8 -1.1
comp=Z,1.0nm,1.0s,baz=114,slow=5.5,SNR=3.5
BRTR PP PP 02 13 26.1 -5.7
comp=Z,2.6nm,1.0s,baz=169,slow=7.1,SNR=8.8
BRTR PKKPbc PKKPbc 02 24 23.6 +3.5
comp=Z,0.5nm,0.8s,baz=36,slow=9.2,SNR=2.9
BR131 Keskin Array S 108.00 42 PFAKE 02 13 20.0 +11
BR131 LR LR
comp=Z,356nm,19.0s,MS5.0
OXF Oxford 108.20 307 PFAKE 02 13 20.0 +11
OXF LR LR
comp=Z,413nm,21.0s,MS5.0
ECH Echery 108.76 20 PFAKE 02 13 20.0 +10
ECH LR LR
comp=Z,544nm,19.0s,MS5.1
MCWV Mont Chateau 108.87 316 PFAKE 02 13 20.0 +10
MCWV LR LR
comp=Z,402nm,20.0s,MS5.0
KBA Koelnbreinsper 108.91 25⇑ *i*PP PP 02 13 36.7 -1.7
comp=Z,8.2nm,1.2s
WVT Waverly 108.92 309 PFAKE 02 13 20.0 +9.3
WVT LR LR
comp=Z,348nm,21.0s,MS4.9
SSPA Standing Stone 109.03 318 PFAKE 02 13 20.0 +9.3
SSPA LR LR
comp=Z,405nm,21.0s,MS5.0
BFO Black Forest 109.08 21 PFAKE 02 13 20.0 +9.4
BFO LR LR
comp=Z,1μm,19.0s,MS5.4
JCT Junction City 109.48 296 PFAKE 02 13 20.0 +8.1
JCT LR LR
comp=Z,226nm,19.0s,MS4.8
BINY Binghamton 109.76 320 PFAKE 02 13 20.0 +8.0
BINY LR LR
comp=Z,618nm,21.0s,MS5.2
WLF Walferdange 109.98 19 PFAKE 02 13 20.0 +7.8
WLF LR LR
comp=Z,664nm,22.0s,MS5.2
MIAR Mount Ida 110.03 303 PFAKE 02 13 20.0 +7.2
MIAR LR LR
comp=Z,243nm,20.0s,MS4.8
WCI Wyandotte Cave 110.10 311 PFAKE 02 13 20.0 +7.2
WCI LR LR
comp=Z,267nm,20.0s,MS4.8

LBNH Lisbon 110.27 324 PFAKE 02 13 20.0 +7.1
LBNH LR LR
comp=Z,529nm,20.0s,MS5.1
CONA Conrad Observa 110.28 26 P PP 02 13 38.8 -9.5
comp=Z,12nm,1.5s
627A Terlingua Ranc 110.35 293 ⇓P PKiKP 02 13 13.2 -0.3
baz=110
TXAR Lajitas Array 110.38 293 PKiKP PKiKP 02 13 12.9 -0.8
comp=Z,1.7nm,1.0s,baz=318,slow=1.7,SNR=8.7
TXAR PKKPbc PKKPbc 02 24 15.5 +3.4
comp=Z,0.6nm,0.9s,baz=316,slow=5.2,SNR=5.4
TXAR Lajitas Array 110.38 293 *i* PKIKP PKiKP 02 13 12.9 -0.8
TXAR 02 24 15.5
TXAR pmax pmax
comp=Z,2.0nm,1.0s
TXAR pmax pmax
comp=Z,1.0nm,1.0s
ACSO Alum Creek Sta 110.54 314 PFAKE 02 13 20.0 +6.4
ACSO LR LR
comp=Z,415nm,20.0s,MS5.0
NCB Newcomb 110.75 322 PFAKE 02 13 20.0 +6.1
NCB LR LR
comp=Z,587nm,21.0s,MS5.1
KHC Kasperske Hory 110.91 24 *e*PP PP 02 13 49.6 -3.1
KHC *e*PS PS 02 23 19.8 -2.7
KHC AMS AMS 02 51 40.0
comp=Z,600nm,24.9s
GRF Grafenberg Arr 110.95 22 *e*L 02 54 49.0
comp=Z,828nm,21.7s
527A Woodward Ranch 111.03 293 ⇓P PKiKP 02 13 14.2 -0.7
baz=111
ERPA Erie 111.08 317 PFAKE 02 13 30.0 +15
ERPA LR LR
comp=Z,527nm,22.0s,MS5.1
KULM Kulim 111.12 116 PFAKE 02 13 30.0 +14
KULM LR LR
comp=Z,683nm,20.0s,MS5.2
PSZ Piszkesteto 111.25 29 PFAKE 02 13 30.0 +15
PSZ LR LR
comp=Z,315nm,20.0s,MS4.9
LONY Lake Ozonia 111.45 322 PFAKE 02 13 30.0 +15
LONY LR LR
comp=Z,489nm,21.0s,MS5.1
TREC Trest 111.48 25 *e*PP PP 02 13 52.9 -4.0
TREC *e*PS PS 02 23 28.2 +0.4
TREC *e*x x 02 29 57.7
TREC AMS AMS 02 54 30.0
comp=Z,600nm,21.7s
VYHS Vyhne 111.52 28 *e*P PKiKP 02 13 20.0 +4.8
VYHS Vyhne 111.52 28 *e*PKP PKiKP 02 13 20.0 +4.8
NKC Novy Kostel 111.71 23 *e*PS PS 02 23 33.6 +3.7
NKC *e*x x 02 29 52.8
NKC AMS AMS 02 54 50.0
comp=Z,500nm,19.2s
PRU Pruhonice 111.92 24 *e*PP PP 02 14 01.9 +1.9
PRU *e*PS PS 02 23 29.2 -2.6
PRU *e*x x 02 29 48.7
PRU AMS AMS 02 51 40.0
comp=Z,600nm,26.5s
PRA Prague 111.98 24 PDIFF Pdif 02 09 20.0 -0.5
PRA AMS AMS 02 47 11.0
KSM Kuching 112.10 127 PFAKE 02 13 30.0 +13
KSM LR LR
comp=Z,505nm,19.0s,MS5.1
326A Caldwell Ranch 112.17 294⇑P PKiKP 02 13 16.6 -0.4
baz=112
PVCC Panska Ves 112.44 24 *e*x SS 02 29 29.8 -15
PVCC AMS AMS 02 53 10.0
comp=Z,500nm,21.7s
WMOK Wichita Mounta 112.54 300 PFAKE 02 13 30.0 +12
WMOK LR LR
comp=Z,213nm,21.0s,MS4.7
HNR Honiara 112.54 182 PFAKE 02 13 30.0 +12
HNR LR LR
comp=Z,490nm,20.0s,MS5.1
GNI Garni 112.57 50 PFAKE 02 13 30.0 +13
GNI LR LR
comp=Z,670nm,20.0s,MS5.2
AAM Ann Arbor 112.58 315 PFAKE 02 13 30.0 +13
AAM LR LR
comp=Z,478nm,21.0s,MS5.1
OKC Ostrava-Krasne 112.61 27 *e*PP PP 02 14 03.0 -1.9
OKC *e*PS PS 02 23 43.4 +5.3
OKC AMS AMS 02 54 10.0
comp=Z,400nm,20.6s
DPC Dobruska-Polom 112.66 25 *e*PP PP 02 14 00.3 -5.0
DPC *e*PS PS 02 23 43.3 +4.7
DPC *e*x x 02 30 05.6
CLL Collm 112.84 23 *e*SKKSac SKKSac 02 21 01.0 -7.1
CLL *e*PS PS 02 23 46.0 +5.8
CLL *e*PPS 02 24 58.0
CLL *e*SS SS 02 29 46.0 -3.8
CLL *e*PPPrev 02 31 54.0
CLL *e*SSS 02 33 47.0
CLL Lm 02 55 00.0
comp=Z,600nm,21.7s
KIS Kishinev 112.90 35 *e*PP PP 02 14 03.0 -4.1
KIS LRM 03 02 08.0
comp=Z,200nm,17.0s
MNTX Cornudas Mount 113.16 293 PFAKE 02 13 30.0 +11
MNTX LR LR
comp=Z,321nm,20.0s,MS4.9
HDIL Hopedale 113.29 310 PFAKE 02 13 30.0 +11
HDIL LR LR
comp=Z,398nm,21.0s,MS5.0
Z27A Tatum 113.44 296 ⇓P PKiKP 02 13 18.3 -1.1
baz=114
224A Cornudas Mount 113.54 293⇑P PKiKP 02 13 19.2 -0.4
baz=114
KWP Kalwaria Pacla 113.56 30 PFAKE 02 13 30.0 +11
KWP LR LR
comp=Z,668nm,20.0s,MS5.2
SOC Sochi 113.57 44 *i* PKIKP PKiKP 02 13 16.7 -2.5
SOC *e*PS PS 02 23 41.2 -5.9
SOC *e* 02 24 50.7
SOC *e*SS SS 02 29 58.6 -1.1
SOC *e*SSS 02 34 10.8
125A Gardner Draw, 113.60 294⇑P PKiKP 02 13 18.7 -1.0
baz=114
MSTX Muleshoe 113.77 296⇑P PKiKP 02 13 19.4 -0.5
baz=114
Z26A Caprock 113.77 295 ⇓P PKiKP 02 13 19.0 -0.9
baz=114
ANN Anapa 113.80 42 *i* PKIKP PKiKP 02 13 19.6 0.0
ANN *e* 02 14 16.4
ANN *e* 02 20 03.6
ANN pmax pmax
comp=Z,37nm,1.5s
Y27A Causey 113.88 296 ⇓P PKiKP 02 13 19.6 -0.5
baz=114
AMTX Amarillo 114.00 298 PFAKE 02 13 30.0 +10
AMTX LR LR
comp=Z,351nm,21.0s,MS4.9
124A Stringfield Ra 114.02 293⇑P PKiKP 02 13 20.2 -0.2
baz=114
XMAS Kiritimati 114.07 230 PFAKE 02 13 30.0 +8.8
XMAS LR LR
comp=Z,925nm,20.0s,MS5.4
ESK Eskdalemuir 114.20 12 PFAKE 02 13 30.0 +10
ESK LR LR
comp=Z,1μm,20.0s,MS5.4
Y26A Elida 114.23 295 ⇓P PKiKP 02 13 20.5 -0.3
baz=114
320A Kipp Ranch, An 114.42 290 ⇓P PKiKP 02 13 21.0 -0.3
baz=114
X26A CR and CF Fran 114.74 296⇑P PKiKP 02 13 21.3 -0.5
baz=115
W27A Bowe Ranch, En 114.80 297 ⇓P PKiKP 02 13 21.4 -0.5
baz=115
319A Douglas 114.82 290⇑P PKiKP 02 13 21.6 -0.4
baz=115
Z23A Rita Site, Whi 114.85 293⇑P PKiKP 02 13 22.0 -0.1
baz=115
220A Playas Peak, P 114.88 291⇑P PKiKP 02 13 21.6 -0.5
baz=115
KIV Kislovodsk 115.00 46 *i* PKIKP PKiKP 02 13 21.9 -0.1
KIV *e* 02 14 22.8
KIV *e*PS PS 02 24 03.5 +3.4
KIV *e*SS SS 02 30 19.1 +0.6
KIV pmax pmax
comp=Z,10.0nm,1.2s
KIV MLR MLR
comp=Z,493nm,21.0s,MS5.1
KIV Kislovodsk 115.00 46⇑ *i*PKP PKiKP 02 13 21.0 -1.0
KIV LR LR

comp=Z,473nm,19.0s,MS5.1
Y24A Capitan 115.01 294 ⇓P PKiKP 02 13 22.0 -0.3
baz=115
121A Cookes Peak, D 115.02 292⇑P PKiKP 02 13 22.3 -0.1
baz=115
KSU1 Kansas State U 115.17 304 PFAKE 02 13 30.0 +7.5
KSU1 LR LR
comp=Z,413nm,20.0s,MS5.0
318A Bisbee 115.23 289 ⇓P PKiKP 02 13 22.4 -0.4
baz=115
Y23A Lovelace Mesa, 115.31 294 ⇓P PKPdf 02 13 23.0 +0.1
baz=115
219A White Tail Can 115.32 290⇑P PKPdf 02 13 22.8 -0.1
baz=115
120A U Bar Ranch, L 115.45 291 ⇓P PKPdf 02 13 23.2 0.0
baz=116
W25A X Bar L Ranch, 115.59 296⇑P PKPdf 02 13 23.3 -0.1
baz=116
Z21A St. Cloud Mine 115.59 292 ⇓P PKPdf 02 13 23.3 -0.2
baz=116
JFWS Jewell Farm 115.66 311 PFAKE 02 13 30.0 +6.7
JFWS LR LR
comp=Z,263nm,20.0s,MS4.8
Y22A Socorro 115.76 293 ⇓P PKPdf 02 13 23.8 +0.1
baz=116
Z20A Nine Sixteen R 115.89 291⇑P PKPdf 02 13 23.8 -0.2
baz=116
119A Ashpeak Ranch, 115.96 291⇑P PKPdf 02 13 24.1 -0.1
baz=116
W24A Lazy 6 Ranch, 116.03 295⇑P PKPdf 02 13 24.1 -0.1
baz=116
SCIA State Center 116.04 308 PFAKE 02 13 40.0 +16
SCIA LR LR
comp=Z,433nm,19.0s,MS5.1
MAK Makhachkala 116.05 50 *i* PKIKP PKPdf 02 13 23.8 -0.2
MAK *i* 02 14 29.1
MAK *e* 02 20 13.0
MAK *e* 02 20 34.8
MAK *i* PS PS 02 24 13.5 +3.7
MAK *e*SS SS 02 30 28.3 -4.0
MAK pmax pmax
comp=Z,18nm,0.4s
Y21A Point of Rocks 116.16 293 ⇓P PKPdf 02 13 24.5 -0.1
baz=116
V25A Rancho No Teng 116.17 296 ⇓P PKPdf 02 13 24.1 -0.4
baz=116
118A Homack Ranch, 116.19 290 ⇓P PKPdf 02 13 24.5 -0.1
baz=116
U26A Atchley Ranch, 116.20 297 ⇓P PKPdf 02 13 24.0 -0.6
baz=116
KIEV Kiev 116.32 33 PFAKE 02 13 40.0 +16
KIEV LR LR
comp=Z,345nm,22.0s,MS4.9
CBKS Cedar Bluff 116.32 302 PFAKE 02 13 40.0 +15
CBKS LR LR
comp=Z,432nm,22.0s,MS5.0
TUC Tucson 116.33 289 *e*PKIKP PKPdf 02 13 24.7 -0.2
TUC MLR MLR
comp=Z,351nm,21.0s,MS5.0
AKASG Malin Array Be 116.33 33 PKP PKPdf 02 13 23.2 -1.1
comp=Z,1.0nm,0.5s,baz=230,slow=2.3,SNR=11
AKASG PP PP 02 14 31.1 -0.1
comp=Z,0.9nm,0.6s,baz=205,slow=6.5,SNR=6.7
AKASG PKKPbc PKKPbc 02 23 53.0 +0.6
comp=Z,0.2nm,0.3s,baz=34,slow=4.1,SNR=4.1
AKASG Malin Array Be 116.33 33 PKIKP PKPdf 02 13 23.2 -1.1
AKASG 02 14 31.1
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKASG pmax pmax
comp=Z,1.0nm,0.6s
AKASG Malin Array Be 116.33 33 PKP PKPdf 02 13 23.2 -1.1
AKASG PP PP 02 14 31.1 -0.1
AKASG PKKPbc PKKPbc 02 23 53.0 +0.6
Z19A T-Link Ranch, 116.36 291 ⇓P PKPdf 02 13 25.1 +0.2
baz=116
Y20A Horse Springs, 116.42 292 ⇓P PKPdf 02 13 24.9 -0.2
baz=116
117A Oracle 116.51 289 ⇓P PKPdf 02 13 24.1 -1.1
baz=117,SNR=5.8
U25A Circle Dot Ran 116.52 297 ⇓P PKPdf 02 13 24.9 -0.2
baz=117
X21A Alamocita Cree 116.57 293⇑P PKPdf 02 13 25.1 -0.2
baz=117
Y19A Nutrioso 116.89 291⇑P PKPdf 02 13 25.7 -0.2
baz=117
U24A Moreno Valley 116.94 296 ⇓P PKPdf 02 13 26.1 +0.2
baz=117
Z17A San Carlos Hig 116.96 290⇑P PKPdf 02 13 25.9 -0.2
baz=117
X20A Quemado 116.99 292 ⇓P PKPdf 02 13 26.2 +0.1
baz=117
T25A Trinidad 117.12 297⇑P PKPdf 02 13 26.2 -0.1
baz=117
Y18A Canyon Day Jun 117.13 291⇑P PKPdf 02 13 26.5 0.0
baz=117
U23A El Rito 117.31 295 ⇓P PKPdf 02 13 26.7 0.0
baz=117
V22A San Miguel Ran 117.32 294 ⇓P PKPdf 02 13 26.7 0.0
baz=117
115A Sonoran Desert 117.36 288 ⇓P PKPdf 02 13 26.6 -0.3
baz=117
W20A Ramah 117.46 293⇑P PKPdf 02 13 26.7 -0.3
baz=118
Y17A Roosevelt 117.47 290⇑P PKPdf 02 13 26.4 -0.7
baz=118,SNR=9.2
Z16A Peralta Trail, 117.47 289⇑P PKPdf 02 13 26.7 -0.4
baz=118
S25A Robets Cordova 117.55 297 ⇓P PKPdf 02 13 26.9 -0.2
baz=118
X18A Snowflake 117.69 291⇑P PKPdf 02 13 27.4 -0.1
baz=118
114A Black Gap (USA 117.73 288⇑P PKPdf 02 13 27.2 -0.4
baz=118
COWI Conover 117.89 313 PFAKE 02 13 40.0 +13
COWI LR LR
comp=Z,435nm,20.0s,MS5.1
S24A Houchin Ranch, 117.90 297 ⇓P PKPdf 02 13 27.7 -0.1
baz=118
Y16A Circle Bar Ran 117.93 290⇑P PKPdf 02 13 27.0 -1.0
baz=118,SNR=5.1
X17A Forest Lakes 117.96 290 ⇓P PKPdf 02 13 28.2 +0.2
baz=118
U21A Nageezi 118.09 294 ⇓P PKPdf 02 13 28.2 0.0
baz=118
SDCO Great Sand Dun 118.12 297 PFAKE 02 13 40.0 +12
SDCO LR LR
comp=Z,281nm,21.0s,MS4.9
113A Mohawk Valley, 118.19 287 ⇓P PKPdf 02 13 28.5 0.0
baz=118
T22A Edith 118.20 295⇑P PKPdf 02 13 28.4 0.0
baz=118
Z14A Wintersburg 118.25 288 ⇓P PKPdf 02 13 28.5 -0.1
baz=118
R24A Sanders Place, 118.33 297 ⇓P PKPdf 02 13 28.5 0.0
baz=118
X16A Lo Mia Camp, P 118.34 290 ⇓P PKPdf 02 13 28.8 0.0
baz=118,SNR=11
Y15A Casa Rosa Ranc 118.42 289 ⇓P PKPdf 02 13 28.7 -0.2
baz=118
SCHQ Schefferville 118.43 332 PKP PKPdf 02 13 27.1 -1.1
comp=Z,5.5nm,0.9s,baz=203,slow=15,SNR=3.6
SCHQ Schefferville 118.43 332 PKP PKPdf 02 13 27.1 -1.1
SCHQ LR LR
comp=Z,799nm,22.0s,MS5.3
Q25A Bedland, Calha 118.47 298⇑P PKPdf 02 13 28.7 -0.1
baz=118
Z13A Yuma Proving G 118.48 288⇑P PKPdf 02 13 28.7 -0.4
baz=118
V18A Ganado 118.63 292⇑P PKPdf 02 13 29.0 -0.3
baz=119
Y14A Wickenburg 118.74 289 ⇓P PKPdf 02 13 28.8 -0.7
baz=119,SNR=5.8
S22A 4UR Ranch, Cre 118.75 296 ⇓P PKPdf 02 13 29.4 +0.1
baz=119
X15A Humboldt 118.79 290⇑P PKPdf 02 13 29.1 -0.5
baz=119,SNR=5.7
W16A Flagstaff 118.93 290 ⇓P PKPdf 02 13 29.8 -0.1
baz=119
GLA Glamis 118.95 287 ⇓P PKPdf 02 13 29.4 -0.5
baz=119
ECSD EROS Data Cent 118.96 307 *e*PKPdf PKPdf 02 13 28.4 -1.2
ECSD LR LR
comp=Z,400nm,20.0s,MS5.0
V17A Tonalea, Kykot 118.98 291 ⇓P PKPdf 02 13 29.5 -0.4
baz=119,SNR=10
T19A Beclabito 119.08 294 ⇓P PKPdf 02 13 29.4 -0.6

baz=119,SNR=7.5
OGNE **Ogallala** 119.08 301 PFAKE 02 13 40.0 +10
OGNE LR LR
comp=Z,304nm,20.0s,MS4.9
R22A **Saguache, Gunn** 119.10 296 ⇓P PKPdf 02 13 30.2 +0.2
baz=119
X14A **Yava** 119.11 289 ⇓P PKPdf 02 13 29.7 -0.5
baz=119,SNR=6.2
MVCO **Mesa Verde** 119.12 294 *e*PKPdf PKPdf 02 13 29.0 -1.1
MVCO LR LR
comp=Z,322nm,19.0s,MS5.0
S21A **Coal Bank Pass** 119.14 295 ⇑P PKPdf 02 13 30.2 0.0
baz=119
U18A **Rough Rock, Ch** 119.16 293 ⇓P PKPdf 02 13 30.5 +0.2
baz=119
WUAZ **Wupatki** 119.18 291 *e*PKPdf PKPdf 02 13 30.3 0.0
WUAZ LR LR
comp=Z,313nm,21.0s,MS4.9
Y12C **Blythe** 119.36 287 ⇓P PKPdf 02 13 30.8 +0.1
baz=119
R21A **Cimarron** 119.59 296 ⇑P PKPdf 02 13 30.9 -0.1
baz=120
PDMCI **Parker Dam,Lak** 119.60 288 ⇑P PKPdf 02 13 30.6 -0.6
baz=120,SNR=6.0
MONP **Monument Peak** 119.64 285 ⇑P PKPdf 02 13 31.2 0.0
baz=120
Q22A **Crested Butte,** 119.68 296 ⇑P PKPdf 02 13 31.3 +0.2
baz=120
U17A **Shonto** 119.69 292 ⇑P PKPdf 02 13 31.1 -0.1
baz=120
VORD **Divnogorie** 119.73 40 *e*PKIKP PKPdf 02 13 29.6 -1.2
VORD pmax pmax
comp=N,1.0nm,0.8s
T18A **Mexican Hat** 119.73 293 ⇓P PKPdf 02 13 30.9 -0.4
baz=120,SNR=13
BC3 **Big Chuckawall** 119.75 287 ⇑P PKPdf 02 13 31.2 -0.3
baz=120
W14A **Seligman** 119.79 289 ⇓P PKPdf 02 13 31.2 -0.3
baz=120,SNR=10
ISCO **Idaho Springs** 119.81 298 *e*PKIKP PKPdf 02 13 30.5 -0.9
ISCO MLR MLR
comp=Z,243nm,20.0s,MS4.8
V15A **Kaibab Nationa** 119.82 290 ⇑P PKPdf 02 13 31.3 -0.2
baz=120
S19A **Harvey Farm, M** 119.86 294 ⇓P PKPdf 02 13 31.4 -0.1
baz=120
VSR **Storozhevoye** 119.90 39 *e*PKIKP PKPdf 02 13 29.8 -1.3
VSR pmax pmax
comp=Z,10.0nm,1.1s
VSR pmax pmax
comp=N,10.0nm,1.4s
VSR pmax pmax
comp=E,10.0nm,1.3s
SMCO **Snowmass** 119.96 297 *e*PKPdf PKPdf 02 13 32.1 +0.4
Q21A **Lamborn Mesa,** 119.97 296 ⇑P PKPdf 02 13 31.8 +0.1
baz=120
IRM **Iron Mountain** 120.00 287 ⇓P PKPdf 02 13 31.5 -0.4
baz=120,SNR=5.5
T17A **Navajo Res., N** 120.08 292 ⇓P PKPdf 02 13 32.3 +0.4
baz=120,SNR=24
W13A **Hualapai Mount** 120.10 289 ⇑P PKPdf 02 13 32.1 0.0
baz=120,SNR=9.1
KONO **Kongsberg** 120.13 18 PFAKE 02 13 40.0 +8.7
KONO LR LR
comp=Z,487nm,21.0s,MS5.1
V14A **Boquillas Ranc** 120.14 290 ⇓P PKPdf 02 13 32.3 +0.2
baz=120,SNR=8.9
PFO **Pinyon Flat Ob** 120.22 286 PFAKE 02 13 40.0 +7.6
PFO LR LR
comp=Z,286nm,20.0s,MS4.9
S18A **Hurst Farm, Bl** 120.23 293 ⇑P PKPdf 02 13 32.1 -0.1
baz=120,SNR=7.3
BELC **Belle Mtn. Jos** 120.30 286 ⇓P PKPdf 02 13 32.5 0.0
baz=120
DDI **Dehra Dun** 120.31 81 *ex* PKPdf 02 13 30.0 -2.6
EYMN **Ely** 120.33 313 PFAKE 02 13 40.0 +7.9
EYMN LR LR
comp=Z,567nm,19.0s,MS5.2
R19A **Curley Farm, L** 120.35 294 ⇓P PKPdf 02 13 32.1 -0.3
baz=120,SNR=5.2
U15A **North Rim** 120.36 291 ⇑P PKPdf 02 13 32.4 -0.1
baz=120,SNR=5.7
Q20A **Ridgley Place,** 120.41 296 ⇑P PKPdf 02 13 32.3 -0.3
baz=120,SNR=5.1
T16A **Glen Canyon Da** 120.41 292 ⇑P PKPdf 02 13 32.5 -0.1
baz=120
S17A **Black Ridge (B** 120.58 293 ⇓P PKPdf 02 13 33.1 +0.1
baz=121
MURC **Murrieta** 120.60 285 ⇑P PKPdf 02 13 32.4 -0.6
baz=121
R18A **Canyonlands Na** 120.73 294 ⇓P PKPdf 02 13 33.0 -0.2
baz=121
GMRC **Granite Mounta** 120.74 287 ⇑P PKPdf 02 13 33.4 0.0
baz=121
V13A **Grand Canyon W** 120.75 289 ⇑P PKPdf 02 13 33.1 -0.2
baz=121
U14A **Mt Trumbull** 120.79 290 ⇑P PKPdf 02 13 33.1 -0.3
baz=121
SCI **San Clemente I** 120.80 284 ⇑P PKPdf 02 13 33.1 -0.4
baz=121
Q19A **Hogan Spring (** 120.87 295 ⇑P PKPdf 02 13 33.8 +0.3
baz=121,SNR=9.6
P20A **De Beque** 120.89 296 ⇓P PKPdf 02 13 33.1 -0.3
baz=121,SNR=5.9
PHWY **Pilot Hill** 120.93 299 *e*PKPdf PKPdf 02 13 32.7 -0.8
N22A **Wattenberg Ran** 121.00 298 ⇑P PKPdf 02 13 33.4 -0.3
baz=121,SNR=7.0
S16A **Weppner Ranch,** 121.03 292 ⇑P PKPdf 02 13 33.1 -0.7
baz=121,SNR=5.8
V12A **Nelson** 121.08 288 ⇓P PKPdf 02 13 33.8 -0.2
baz=121,SNR=5.1
R17A **Hanksville Air** 121.15 293 ⇓P PKPdf 02 13 33.4 -0.6
baz=121,SNR=20
U13A **Pakoon Wash** 121.18 290 ⇑P PKPdf 02 13 34.4 +0.3
baz=121,SNR=10
T14A **Hurricane** 121.25 291 ⇑P PKPdf 02 13 34.1 -0.1
baz=121
P19A **Cripple Cowboy** 121.27 296 ⇓P PKPdf 02 13 34.1 0.0
baz=121
O20A **White River Ci** 121.31 296 ⇑P PKPdf 02 13 33.7 -0.6
baz=121,SNR=9.9
BFSC **Mount Baldy Ra** 121.33 285 ⇑P PKPdf 02 13 34.4 -0.1
baz=121
Q18A **Rafter H Ranch** 121.41 294 ⇓P PKPdf 02 13 34.0 -0.4
baz=122
R16A **Teasdale** 121.42 293 ⇓P PKPdf 02 13 34.6 +0.1
baz=122,SNR=19
V11A **Goodsprings** 121.46 288 ⇑P PKPdf 02 13 34.5 -0.2
baz=122
N21A **Black Mountain** 121.47 297 ⇑P PKPdf 02 13 34.1 -0.4
baz=122,SNR=7.5
U12A **Valley of Fire** 121.48 289 ⇓P PKPdf 02 13 34.4 -0.3
baz=122
CM31 **Chiang Mai Arr** 121.58 107 *e*PKPdf PKPdf 02 13 35.1 -0.3
CM31 LR LR
comp=Z,382nm,20.0s,MS5.0
CMAR **Chiang Mai Arr** 121.58 107 PKP PKPdf 02 13 35.1 -0.4
comp=Z,28nm,0.9s,baz=236,slow=3.7,SNR=89
CMAR PKKPbc PKKPbc 02 23 34.0 +1.3
comp=Z,2.3nm,0.7s,baz=1.4,slow=3.5,SNR=9.1
CMAR **Chiang Mai Arr** 121.58 107 PKIKP PKPdf 02 13 35.1 -0.3
CMAR pmax pmax
comp=Z,28nm,0.9s
CMAR pmax pmax
comp=Z,2.0nm,0.7s
SRU **San Rafael** 121.60 294 ⇑P PKPdf 02 13 34.1 -0.7
baz=122,SNR=7.5
SRU **San Rafael** 121.60 294 *e*PKPdf PKPdf 02 13 34.1 -0.7
T13A **Saint George** 121.62 290 ⇑P PKPdf 02 13 34.9 -0.1
baz=122,SNR=6.6
NB2 **NORSAR Subarra** 121.71 18 PKPdf PKPdf 02 13 33.1 -1.2
comp=Z,13nm,1.4s,baz=202,slow=1.9
NB2 **NORSAR Subarra** 121.71 18 PKPdf PKPdf 02 13 33.1 -1.2
baz=202,slow=1.9
NOA **NORSAR Array B** 121.71 18 PKP PKPdf 02 13 33.7 -0.6
comp=Z,2.4nm,0.8s,baz=186,slow=1.6,SNR=5.3
NOA PKKPbc PKKPbc 02 23 33.2 +0.2
comp=Z,3.7nm,0.9s,baz=20,slow=2.6,SNR=7.9
NOA **NORSAR Array B** 121.71 18 PKIKP PKPdf 02 13 33.7 -0.6
NOA pmax pmax
comp=Z,2.0nm,0.8s
NOA pmax pmax
comp=Z,4.0nm,0.9s
GSC **Goldstone** 121.73 287 ⇑P PKPdf 02 13 35.1 -0.1
baz=122
CCUT **Cedar City** 121.77 291 *e*PKPdf PKPdf 02 13 35.2 0.0
S14A **Cedar City** 121.84 291 ⇑P PKPdf 02 13 35.1 -0.2
baz=122

DMN **Daman** 121.86 88 *e*P PKPdf 02 13 34.7 -1.0
comp=Z,111nm,1.0s
O19A **Miners Draw (B** 121.86 296 ⇓P PKPdf 02 13 34.8 -0.5
baz=122,SNR=11
N20A **Spence Gulch,** 121.87 297 ⇓P PKPdf 02 13 34.8 -0.5
baz=122,SNR=5.7
P18A **Preston Nutter** 121.87 295 ⇓P PKPdf 02 13 35.4 0.0
baz=122,SNR=16
CHTO **Chiang Mai** 121.88 107 *e*PKIKP PKPdf 02 13 35.7 -0.3
CHTO MLR MLR
comp=Z,380nm,20.0s,MS5.0
CHTO **Chiang Mai** 121.88 107 PKPdf PKPdf 02 13 35.7 -0.3
SNR=8.8
MSU **Marysvale** 121.94 292 *e*PKIKP PKPdf 02 13 35.9 +0.4
MVU **Marysvale** 121.95 292 PFAKE 02 13 50.0 +14
MVU LR LR
comp=Z,301nm,21.0s,MS4.9
L22A **Ellis Ranch, M** 121.96 299 ⇑P PKPdf 02 13 35.5 0.0
baz=122
PKIN **Phulchoki** 121.98 89 *e*P PKPdf 02 13 34.8 -1.1
comp=Z,66nm,0.8s
PKI **Pulchoki** 121.99 89 *e*P PKPdf 02 13 34.7 -1.2
comp=Z,133nm,1.1s
P17A **Butcher Ranch,** 121.99 294 ⇓P PKPdf 02 13 35.6 +0.1
baz=122
ARUT **Antelope Range** 121.99 291 *e*PKIKP PKPdf 02 13 35.8 +0.2
ARUT *e* 02 15 09.5
EDW2 **Edwards Air Fo** 122.00 285 ⇑P PKPdf 02 13 35.6 -0.1
baz=122
S13A **Holt Ranch, En** 122.04 291 ⇓P PKPdf 02 13 35.9 +0.2
baz=122,SNR=9.6
RWWY **Rawlins** 122.05 298 *e*PKPdf PKPdf 02 13 34.9 -0.7
M21A **Separation Pea** 122.06 298 ⇓P PKPdf 02 13 34.8 -0.8
baz=122,SNR=9.1
TMUT **Trail Mountain** 122.08 294 *e*PKPdf PKPdf 02 13 35.8 +0.1
KKN **Kakani** 122.09 88 *e*P PKPdf 02 13 34.9 -1.2
comp=Z,64nm,0.8s
RAMN **Ramite** 122.12 90 *e*P PKPdf 02 13 35.5 -0.7
comp=Z,274nm,1.1s
O18A **Roosevelt** 122.26 295 ⇑P PKPdf 02 13 36.2 +0.1
baz=122,SNR=9.4
AGMN **Agassiz Nation** 122.33 311 *e*PKPdf PKPdf 02 13 34.3 -1.6
AGMN LR LR
comp=Z,553nm,19.0s,MS5.2
L21A **Rawlins** 122.34 298 ⇓P PKPdf 02 13 35.3 -0.9
baz=122,SNR=9.6
N19A **John Jarvie Ra** 122.35 296 ⇓P PKPdf 02 13 36.2 0.0
baz=122
U10A **Ash Meadows, A** 122.37 288 ⇑P PKPdf 02 13 36.8 +0.4
baz=122
OBN **Obninsk** 122.37 35 ⇓*e*PKIKP PKPdf 02 13 35.0 -0.8
OBN *e* 02 13 43.8
OBN *e*PPS 02 25 05.7
OBN *e*SS SS 02 31 53.7 +0.1
OBN pmax pmax
comp=Z,16nm,0.7s
OBN **Obninsk** 122.37 35 ⇓*e*PKP PKPdf 02 13 35.1 -0.7
Q15A **Fillmore** 122.42 293 ⇑P PKPdf 02 13 36.8 +0.4
baz=122
T11A **Corn Creek, Al** 122.45 289 ⇑P PKPdf 02 13 36.8 +0.3
baz=122,SNR=7.9
ODAN **Odare** 122.46 91 *e*P PKPdf 02 13 36.0 -0.9
comp=Z,181nm,1.2s
RSSD **Black Hills** 122.50 302 *e*PKIKP PKPdf 02 13 35.7 -0.7
RSSD MLR MLR
comp=Z,846nm,22.0s,MS5.3
GUN **Gumba** 122.51 89 *e*P PKPdf 02 13 36.0 -0.9
comp=Z,166nm,1.0s
P16A **Fountain Green** 122.54 294 ⇑P PKPdf 02 13 37.1 +0.4
baz=123
S12A **Delamar Landin** 122.55 290 ⇓P PKPdf 02 13 37.4 +0.7
baz=123,SNR=7.7
O17A **Robinson Place** 122.55 295 ⇓P PKPdf 02 13 36.8 +0.2
baz=123,SNR=9.3
R13A **O'Grain Ranch,** 122.56 291 ⇓P PKPdf 02 13 37.0 +0.3
baz=123
N18A **Larsen Ranch,** 122.65 296 ⇓P PKPdf 02 13 36.8 0.0
baz=123
MPMC **Manual Prospec** 122.67 287 ⇓P PKPdf 02 13 37.5 +0.5
baz=123
FURC **Furnace Creek,** 122.67 287 ⇓P PKPdf 02 13 37.5 +0.6
baz=123
BORG **Borgarnes** 122.68 0 PFAKE 02 13 50.0 +14
BORG LR LR
comp=Z,975nm,20.0s,MS5.5
P15A **Leamington** 122.81 293 ⇓P PKPdf 02 13 37.2 0.0
baz=123,SNR=7.1
M19A **Rock Springs** 122.82 297 ⇓P PKPdf 02 13 36.7 -0.3
baz=123,SNR=6.4
L20A **Wamsutter** 122.82 298 ⇓P PKPdf 02 13 36.8 -0.3
baz=123,SNR=9.7
MPU **Maple Canyon** 122.84 294 *e*PKPdf PKPdf 02 13 37.8 +0.6
Q14A **Sevier Lake (B** 122.85 292 ⇓P PKPdf 02 13 37.5 +0.3
baz=123,SNR=19
ISA **Isabella** 122.86 286 ⇓P PKPdf 02 13 37.8 +0.4
baz=123
ISA **Isabella** 122.86 286 *e*PKPdf PKPdf 02 13 37.8 +0.5
DAC **Darwin (Calif)** 122.89 287 PFAKE 02 13 50.0 +13
DAC LR LR
comp=Z,329nm,19.0s,MS5.0
PKM **Peak Mountain** 122.95 284 ⇑P PKPdf 02 13 37.9 +0.4
baz=123
DAU **Daniels Canyon** 122.97 294 *e*PKIKP PKPdf 02 13 38.3 +0.9
R12A **Pony Springs,** 122.99 291 ⇑P PKPdf 02 13 37.8 +0.2
baz=123,SNR=5.4
NLU **North Lily Min** 123.01 294 *e*PKPdf PKPdf 02 13 37.8 +0.3
TAPN **Taplejung** 123.03 91 *e*P PKPdf 02 13 36.2 -1.8
comp=Z,85nm,1.2s
S11A **Rachel** 123.03 289 ⇑P PKPdf 02 13 38.0 +0.3
baz=123
DAV **Davao City (W)** 123.08 140 PFAKE 02 13 50.0 +11
DAV LR LR
comp=Z,300nm,19.0s,MS5.0
Q13A **Wheeler Ranch,** 123.19 291 ⇓P PKPdf 02 13 38.1 +0.2
baz=123,SNR=8.2
M18A **Lyman** 123.19 296 ⇓P PKPdf 02 13 37.7 -0.1
baz=123
JLU **Jordanelle** 123.21 294 *e*PKPdf PKPdf 02 13 37.9 +0.1
P14A **Drum Mountains** 123.21 293 ⇑P PKPdf 02 13 38.0 +0.1
baz=123,SNR=5.6
K20A **Yellowstone Ra** 123.33 298 ⇓P PKPdf 02 13 37.1 -0.9
baz=123
L19A **Farson** 123.38 297 ⇓P PKPdf 02 13 38.2 0.0
baz=123
N16A **Rees Ranch, Co** 123.42 295 ⇑P PKPdf 02 13 38.5 +0.2
baz=124
CTU **Camp Tracy** 123.42 294 *e*PKPdf PKPdf 02 13 38.2 -0.1
O15A **The Old Anders** 123.45 294 ⇓P PKPdf 02 13 38.5 +0.2
baz=124
R11A **Troy Canyon, C** 123.49 290 ⇓P PKPdf 02 13 38.7 +0.2
baz=124,SNR=9.0
M17A **Scullys Gap (B** 123.51 296 ⇑P PKPdf 02 13 37.9 -0.5
baz=124
DUG **Dugway** 123.56 293 *e*PKIKP PKPdf 02 13 38.5 0.0
DUG *e* 02 15 19.6
DUG MLR MLR
comp=Z,385nm,20.0s,MS5.1
L18A **Fontenelle, Gr** 123.56 296 ⇓P PKPdf 02 13 38.5 0.0
baz=124
P13A **Bates Ranch, G** 123.57 292 ⇑P PKPdf 02 13 38.8 +0.2
baz=124,SNR=11
Q12A **Willow Creek R** 123.65 291 ⇓P PKPdf 02 13 38.8 +0.1
baz=124,SNR=8.0
S10A **Tonopah Range,** 123.67 289 ⇓P PKPdf 02 13 38.9 +0.1
baz=124,SNR=6.8
K19A **Absolon Red Bu** 123.69 298 ⇑P PKPdf 02 13 37.5 -1.2
baz=124,SNR=12
RCTC **Rector, Farmer** 123.75 286 ⇑P PKPdf 02 13 39.2 +0.2
baz=124
SHL **Shillong** 123.79 96 ⇑*e*P PKPdf 02 13 38.0 -1.5
R10A **Warm Springs** 123.80 289 ⇑P PKPdf 02 13 39.5 +0.4
baz=124,SNR=5.1
TIN **Tinemaha** 123.82 287 ⇑P PKPdf 02 13 39.2 +0.1
baz=124
ULM **Lac du Bonnet** 123.89 312 PKP PKPdf 02 13 37.1 -1.8
comp=Z,7.7nm,0.6s,baz=336,slow=0.8,SNR=6.8
ULM **Lac du Bonnet** 123.89 312 *e*PKPdf PKPdf 02 13 37.1 -1.7
ULM LR LR
comp=Z,828nm,21.0s,MS5.4
Q11A **Duckwater** 123.91 290 ⇓P PKPdf 02 13 39.5 +0.3
baz=124
N15A **Stansbury Isla** 123.95 294 ⇓P PKPdf 02 13 39.4 +0.1
baz=124,SNR=10.0
BW06 **Boulder Array** 123.98 297 PFAKE 02 13 50.0 +11
BW06 LR LR
comp=Z,385nm,19.0s,MS5.1
PDAR **Pinedale Array** 123.98 297 PKP PKPdf 02 13 38.0 -1.2
comp=Z,2.8nm,0.8s,baz=139,slow=3.4,SNR=20
P12A **McGill** 124.02 291 ⇓P PKPdf 02 13 39.5 0.0
baz=124
HWUT **Hardware Ranch** 124.04 295 *e*PKPdf PKPdf 02 13 39.1 -0.3
HWUT *e*PP PP 02 15 25.2 +0.9
HWUT LR LR
comp=Z,383nm,20.0s,MS5.1
O13A **Hicks Ranch, I** 124.08 292 ⇑P PKPdf 02 13 39.4 -0.2
baz=124
L17A **Cokeville** 124.09 296 ⇑P PKPdf 02 13 38.9 -0.6
baz=124
TPH **Tonopah** 124.10 288 PFAKE 02 13 50.0 +10
TPH LR LR
comp=Z,276nm,19.0s,MS4.9
K18A **Toltan Ranch,** 124.11 297 ⇓P PKPdf 02 13 39.4 -0.1
baz=124
BGU **Big Grassy Mou** 124.22 294 *e*PKPdf PKPdf 02 13 39.9 +0.1
SPUT **South Promonto** 124.24 294 *e*PKPdf PKPdf 02 13 39.9 0.0
N14A **Grayback Hills** 124.24 293 ⇓P PKPdf 02 13 40.1 +0.2
baz=124,SNR=17
Q10A **Clear Creek Ra** 124.26 290 ⇑P PKPdf 02 13 39.7 -0.2
baz=124
L16A **Fish Haven** 124.29 296 ⇓P PKPdf 02 13 39.6 -0.2
baz=124
M15A **Larsen Ranch,** 124.35 294 ⇑P PKPdf 02 13 39.7 -0.4
baz=124,SNR=12
P11A **Circle Ranch,** 124.50 291 ⇓P PKPdf 02 13 40.2 -0.2
baz=125
J18A **Kendall Valley** 124.54 297 ⇑P PKPdf 02 13 39.5 -0.8
baz=125
O12A **Currie** 124.55 292 ⇑P PKPdf 02 13 40.7 +0.2
baz=125,SNR=16
MLAC **Mammoth Lakes** 124.57 287 ⇑P PKPdf 02 13 41.0 +0.4
baz=125
K17A **Gardner Place,** 124.61 297 ⇑P PKPdf 02 13 40.6 +0.2
baz=125
AHID **Auburn Hatcher** 124.71 296 PFAKE 02 13 50.0 +9.3
AHID LR LR
comp=Z,341nm,22.0s,MS5.0
L15A **Malad City** 124.74 295 ⇓P PKPdf 02 13 40.4 -0.4
baz=125,SNR=10
N13A **Wendover, West** 124.74 293 ⇓P PKPdf 02 13 41.0 +0.2
baz=125
N13A **Wendover, West** 124.74 293 *e*PKPdf PKPdf 02 13 41.2 +0.4
HVU **Hansel Valley** 124.75 294 *e*PKIKP PKPdf 02 13 40.6 -0.2
M14A **Sheep Mountain** 124.82 294 ⇑P PKPdf 02 13 41.2 +0.3
baz=125,SNR=23
I18A **Diamond G Ranc** 124.82 298 ⇓P PKPdf 02 13 40.4 -0.5
baz=125
O11A **Cowboy Ranch,** 124.90 291 ⇑P PKPdf 02 13 41.5 +0.3
baz=125,SNR=9.8
P10A **Eureka** 124.91 290 ⇓P PKPdf 02 13 41.1 -0.1
baz=125
NVAR **Mina Array Bea** 124.91 288 PKP PKPdf 02 13 41.7 +0.5
comp=Z,3.5nm,0.7s,baz=157,slow=4.2,SNR=16
J17A **Brown Place, J** 124.98 297 ⇓P PKPdf 02 13 41.3 +0.2
baz=125
K16A **Soda Springs** 124.99 296 ⇓P PKPdf 02 13 41.6 +0.4
baz=125
FINES **FINESS Array B** 125.03 26 PKP PKPdf 02 13 39.5 -1.1
comp=Z,4.1nm,0.7s,baz=186,slow=1.9,SNR=13
FINES **FINESS Array B** 125.03 26 PKIKP PKPdf 02 13 39.5 -1.1
FINES pmax pmax
comp=Z,4.0nm,0.7s
SNOW **Snow King Moun** 125.08 297 *e*PKPdf PKPdf 02 13 41.4 +0.1
M13A **Montello** 125.11 293 ⇑P PKPdf 02 13 41.6 +0.1
baz=125,SNR=9.2
M13A **Montello** 125.11 293 *e*PKPdf PKPdf 02 13 41.6 +0.1
LOHW **Long Hollow** 125.12 297 *e*PKPdf PKPdf 02 13 41.3 -0.1
N12A **Clover Valley,** 125.14 292 ⇓P PKPdf 02 13 42.1 +0.5
baz=125,SNR=11
N12A **Clover Valley,** 125.14 292 *e*PKPdf PKPdf 02 13 42.0 +0.4
ELK **Elko** 125.16 292 PFAKE 02 13 50.0 +8.4
ELK LR LR
comp=Z,334nm,20.0s,MS5.0
L14A **Malta** 125.17 294 ⇑P PKPdf 02 13 41.7 +0.1
baz=125,SNR=10.0
TPAW **Teton Pass** 125.19 297 *e*PKPdf PKPdf 02 13 41.8 +0.2
SAO **San Andreas Ge** 125.23 284 *e*PKIKP PKPdf 02 13 42.1 +0.2
SAO MLR MLR
comp=Z,254nm,21.0s,MS4.9
RRI2 **Red Ridge** 125.26 297 *e*PKPdf PKPdf 02 13 41.9 +0.2
K15A **Arbon** 125.33 295 ⇓P PKPdf 02 13 41.8 0.0
baz=125,SNR=9.1
J16A **Bone** 125.34 296 ⇓P PKPdf 02 13 41.9 0.0
baz=125,SNR=5.2
I17A **Pilgrim Ck.** 125.34 298 ⇓P PKPdf 02 13 41.9 +0.1
baz=125
O10A **Cortez Mining,** 125.44 291 ⇓P PKPdf 02 13 42.6 +0.4
baz=126
N11A **Elko Archery C** 125.46 292 ⇓P PKPdf 02 13 42.6 +0.4
baz=126
LAO **LASA Array** 125.47 303 *e*PKPdf PKPdf 02 13 41.5 -0.5
LAO LR LR
comp=Z,524nm,21.0s,MS5.2
IMW **Indian Meadow** 125.50 297 *e*PKPdf PKPdf 02 13 42.3 +0.2
M12A **Wells** 125.51 293 ⇑P PKPdf 02 13 42.6 +0.3
baz=126,SNR=15
K14A **Jones Ranch, D** 125.53 295 ⇓P PKPdf 02 13 42.6 +0.4
baz=126,SNR=13
L13A **Double Diamond** 125.55 294 ⇑P PKPdf 02 13 43.0 +0.6
baz=126,SNR=12
RLMT **Red Lodge** 125.65 299 *e*PKPdf PKPdf 02 13 42.1 -0.3
RLMT LR LR
comp=Z,702nm,22.0s,MS5.3
CMB **Columbia Colle** 125.67 286 *e*PKIKP PKPdf 02 13 42.9 +0.2
CMB MLR MLR
comp=Z,273nm,22.0s,MS4.9
H17A **Grant Village** 125.70 298 ⇑P PKPdf 02 13 43.3 +0.8
baz=126
I16A **Newdale** 125.74 297 ⇑P PKPdf 02 13 43.0 +0.4
baz=126,SNR=5.7
LKWY **Lake** 125.75 298 PFAKE 02 13 50.0 +7.4
LKWY LR LR
comp=Z,620nm,19.0s,MS5.3
N10A **Dunphy** 125.77 291 ⇓P PKPdf 02 13 43.1 +0.3
baz=126
J15A **Blackfoot** 125.82 296 ⇑P PKPdf 02 13 43.6 +0.8
baz=126,SNR=27
BMN **Battle Mountai** 125.90 290 *e*PKIKP PKPdf 02 13 42.5 -0.5
BMN MLR MLR
comp=Z,329nm,20.0s,MS5.0
G18A **Lazy EL Ranch,** 125.93 299 ⇑P PKPdf 02 13 42.8 -0.1
baz=126
DGMT **Dagmar** 125.94 305 *e*PKPdf PKPdf 02 13 42.7 -0.1
DGMT LR LR
comp=Z,518nm,22.0s,MS5.2
M11A **Holland Ranch,** 125.95 292 ⇓P PKPdf 02 13 43.9 +0.8
baz=126,SNR=12
K13A **Stover Farm, H** 126.05 294 ⇑P PKPdf 02 13 43.7 +0.5
baz=126
L12A **House Creek Ra** 126.12 293 ⇓P PKPdf 02 13 43.8 +0.4
baz=126,SNR=6.8
H16A **Russell Place,** 126.25 298 ⇑P PKPdf 02 13 44.0 +0.4
baz=126
J14A **Carey** 126.28 295 ⇓P PKPdf 02 13 44.5 +0.8
baz=126,SNR=18
I15A **Monteview** 126.30 296 ⇑P PKPdf 02 13 44.3 +0.7
baz=126
WCN **Washoe City** 126.31 288 ⇓P PKPdf 02 13 44.5 +0.6
baz=126
GCMT **Greycliff** 126.34 300 *e*PKPdf PKPdf 02 13 43.2 -0.5
AKTK **Aktyubinsk** 126.35 51 PKP PKPdf 02 13 42.8 -0.8
AKTK PP PP 02 15 37.0 -2.7
AKTO **Aktyubinsk** 126.35 51 PKP PKPdf 02 13 42.8 -0.8
comp=Z,21nm,1.1s,baz=189,slow=2.7,SNR=35
AKTO PP PP 02 15 37.0 -2.7
comp=Z,6.3nm,1.1s,baz=224,slow=7.8,SNR=6.1
AKTO **Aktyubinsk** 126.35 51 PKIKP PKPdf 02 13 42.8 -0.7
AKTO 02 15 37.0
AKTO pmax pmax
comp=Z,21nm,1.2s
AKTO pmax pmax
comp=Z,6.0nm,1.1s
KSH **Kashi** 126.39 72 PKP PKPdf 02 13 43.0 -1.0
KSH PKS 02 17 18.1
KSH SKS SKSdf 02 20 53.3 -2.8
KSH LR LR
comp=N,140nm,5.5s
KSH LR LR
comp=E,100nm,4.8s
KSH LR LR
comp=Z,240nm,10.8s,MS5.1
M10A **I.L. Ranch, Tu** 126.39 292 ⇑P PKPdf 02 13 44.5 +0.6
baz=126
K12A **Draper Farm, C** 126.43 294 ⇓P PKPdf 02 13 44.6 +0.6
baz=126,SNR=7.6

F18A Big Timber 126.45 300 ⇑P PKPdf 02 13 43.7 -0.2
baz=126
G17A Pierce Place, 126.48 299 ⇑P PKPdf 02 13 44.4 +0.5
baz=127
L11A Cat Creek Ranc 126.49 293 ⇑P PKPdf 02 13 44.8 +0.7
baz=127,SNR=16
J13A Cove Ranch, Pi 126.66 295 ⇑P PKPdf 02 13 44.9 +0.5
baz=127,SNR=8.8
I14A Mackay 126.71 296 ⇑P PKPdf 02 13 45.3 +0.8
baz=127,SNR=28
LSA Lhasa 126.72 92 PKP PKPdf 02 13 44.5 -0.5
L10A Juniper Basin 126.78 292 ⇑P PKPdf 02 13 45.1 +0.5
baz=127,SNR=8.4
H15A Lima 126.84 297 ⇑P PKPdf 02 13 45.4 +0.7
baz=127,SNR=8.7
F17A Fitzpatrick Pl 126.88 299 ⇑P PKPdf 02 13 45.3 +0.6
baz=127,SNR=17
HLID Hailey 126.89 295 PFAKE 02 14 00.0 +15
HLID LR LR
comp=Z,298nm,19.0s,MS5.0
G16A Moss Hill, Enn 126.91 298 ⇑P PKPdf 02 13 45.1 +0.3
baz=127,SNR=15
J12A Stokes Ranch, 126.99 294 ⇑P PKPdf 02 13 45.4 +0.4
baz=127,SNR=19
I13A Wildhorse Cree 127.02 295 ⇓P PKPdf 02 13 45.6 +0.6
baz=127,SNR=12
MCCM Marconi Confer 127.02 284 PFAKE 02 14 00.0 +15
MCCM LR LR
comp=Z,380nm,22.0s,MS5.0
E18A Harlowton 127.04 300 ⇑P PKPdf 02 13 45.0 0.0
baz=127,SNR=11
BEKR Beckworth 127.04 288 ⇓P PKPdf 02 13 45.6 +0.4
baz=127
K11A Parker Ranch, 127.08 293 ⇓P PKPdf 02 13 45.6 +0.4
baz=127,SNR=19
MCMT McKenzie Canyo 127.10 297 *e*PKPdf PKPdf 02 13 45.6 +0.4
BOZ Bozeman (W) 127.14 298 *e*PKIKP PKPdf 02 13 45.3 +0.1
BOZ MLR MLR
comp=Z,353nm,19.0s,MS5.1
G15A Dillon 127.18 297 ⇑P PKPdf 02 13 45.7 +0.4
baz=127,SNR=16
H14A Leadore 127.18 296 ⇓P PKPdf 02 13 45.9 +0.6
baz=127,SNR=26
AML Almayashu 127.23 68 P PKPdf 02 13 45.5 0.0
SNR=22
AML Almayashu 127.23 68 *e*PKPdf PKPdf 02 13 45.3 -0.2
F16A Kennard Place, 127.24 298 ⇓P PKPdf 02 13 45.7 +0.3
baz=127,SNR=7.0
DLMT Dillon 127.38 297 *e*PKPdf PKPdf 02 13 46.3 +0.6
E17A Martinsdale 127.39 300 ⇓P PKPdf 02 13 45.9 +0.2
baz=128,SNR=15
LCCM Lewis and Clar 127.40 298 P PKPdf 02 13 46.5 +0.8
QIZ Qiongzhong 127.41 117 PKP PKPdf 02 13 47.1 +0.5
QIZ PP PP 02 15 48.8 +2.3
QIZ SS SS 02 32 59.8 +2.8
QIZ AMB AMB
comp=Z,110nm,4.2s
QIZ LR LR
comp=N,370nm,20.7s
QIZ LR LR
comp=Z,460nm,19.9s,MS5.2
I12A Atlanta 127.41 294 ⇓P PKPdf 02 13 46.3 +0.5
baz=128,SNR=11
D18A Linhart Farms, 127.46 301 ⇑P PKPdf 02 13 45.5 -0.3
baz=128,SNR=6.3
MFID Camas Ranch 127.47 294 ⇓P PKPdf 02 13 46.1 +0.2
baz=128,SNR=5.8
K10A MacKenzie Ranc 127.50 292 ⇑P PKPdf 02 13 46.6 +0.6
baz=128,SNR=13
JOF Joensuu 127.55 28 *e*PKIKP PKPdf 02 13 44.0 -1.4
JOF pmax pmax
comp=Z,40nm,1.1s
JOF Joensuu 127.55 28 *e*p PKPdf 02 13 44.0 -1.4
comp=Z,40nm,1.1s
H13A Challis 127.57 296 ⇓P PKPdf 02 13 46.1 +0.1
baz=128
LRM Limekiln Ridge 127.65 298 *e*PKPdf PKPdf 02 13 46.5 +0.3
EKS2 Erkin-Say 127.67 68 P PKPdf 02 13 46.1 -0.2
SNR=20
EKS2 Erkin-Say 127.67 68 *e*PKPdf PKPdf 02 13 46.0 -0.4
EKS2 LR LR
comp=Z,653nm,20.0s,MS5.3
F15A Butte 127.69 298 ⇑P PKPdf 02 13 46.7 +0.4
baz=128,SNR=9.4
HOPS Hopland 127.76 285 PFAKE 02 14 00.0 +13
HOPS LR LR
comp=Z,316nm,22.0s,MS5.0
E16A East Helena 127.82 299 ⇓P PKPdf 02 13 46.5 0.0
baz=128,SNR=5.5
D17A Six Diamond Ra 127.83 300 ⇓P PKPdf 02 13 46.4 -0.1
baz=128,SNR=18
H12A Diamond D Ranc 127.84 295 ⇑P PKPdf 02 13 47.0 +0.4
baz=128,SNR=15
I11A Placerville 127.90 294 ⇓P PKPdf 02 13 46.9 +0.1
baz=128
J10A Berg Farm, Mel 127.93 293 ⇑P PKPdf 02 13 46.8 0.0
baz=128
G13A Cobalt 127.95 296 ⇑P PKPdf 02 13 46.6 -0.1
baz=128,SNR=6.4
KZA Kyzart 127.95 70 P PKPdf 02 13 47.2 +0.3
SNR=17
AAK Ala-Archa 128.00 69 P PKPdf 02 13 47.2 +0.2
SNR=12
AAK Ala-Archa 128.00 69 PKP PKPdf 02 13 46.5 -0.4
comp=Z,8.4nm,0.5s,baz=168,slow=2.3,SNR=30
AAK Ala-Archa 128.00 69 PKIKP PKPdf 02 13 46.5 -0.5
AAK pmax pmax
comp=Z,8.0nm,0.5s
EGMT Eagleton 128.05 302 *e*PKPdf PKPdf 02 13 46.7 -0.2
EGMT LR LR
comp=Z,601nm,22.0s,MS5.2
F14A Wisdom 128.08 297 ⇓P PKPdf 02 13 47.1 +0.1
baz=128
WVOR Wild Horse Val 128.11 291 *e*PKIKP PKPdf 02 13 47.6 +0.4
WVOR MLR MLR
comp=Z,440nm,20.0s,MS5.1
D16A Dana Ranch, Ca 128.13 300 ⇓P PKPdf 02 13 47.1 +0.1
baz=128,SNR=14
E15A Deer Lodge 128.19 298 ⇑P PKPdf 02 13 47.0 -0.2
baz=128
FRU Bishkek 128.21 68 *e*PKIKP PKPdf 02 13 45.6 -1.7
FRU pmax pmax
comp=Z,102nm,1.8s
C17A Wharram Farm, 128.22 301 ⇑P PKPdf 02 13 46.8 -0.4
baz=128,SNR=15
KBK Karagaybulak 128.24 69 P PKPdf 02 13 47.5 +0.1
SNR=8.0
B18A Beardsley Farm 128.34 302 ⇑P PKPdf 02 13 47.0 -0.4
baz=128,SNR=14
CHMS Chumysh 128.39 68 P PKPdf 02 13 46.9 -0.8
SNR=6.3
I10A Payette 128.44 294 ⇓P PKPdf 02 13 48.2 +0.5
baz=128
USP Ospenovka 128.47 68 P PKPdf 02 13 47.0 -0.8
SNR=8.6
G12A Big Creek, Yel 128.50 295 ⇓P PKPdf 02 13 47.6 -0.2
baz=129
H11A Donnelly 128.51 295 ⇑P PKPdf 02 13 48.2 +0.3
baz=129,SNR=11
F13A Darby 128.51 297 ⇑P PKPdf 02 13 47.5 -0.3
baz=129,SNR=14
MOD Modoc 128.54 289 *e*PKPdf PKPdf 02 13 48.6 +0.5
MOD LR LR
comp=Z,275nm,20.0s,MS4.9
E14A Clinton 128.58 298 ⇑P PKPdf 02 13 48.2 +0.3
baz=129
D15A Lincoln 128.59 299 ⇑P PKPdf 02 13 48.1 +0.2
baz=129,SNR=8.3
WDC Whiskeytown Da 128.68 287 *e*PKIKP PKPdf 02 13 48.2 -0.1
WDC MLR MLR
comp=Z,259nm,19.0s,MS4.9
J08A Circle Bar Ran 128.71 292 ⇓P PKPdf 02 13 48.9 +0.6
baz=129
B17A L&G Farms, Che 128.72 301 ⇓P PKPdf 02 13 47.9 -0.3
baz=129,SNR=16
TKM2 Tokmak 2 128.75 69 P PKPdf 02 13 47.5 -0.9
SNR=14
TKM2 Tokmak 2 128.75 69 *e*PKPdf PKPdf 02 13 47.4 -1.0
TKM2 *e*PP PP 02 15 55.6 +0.1
TKM2 LR LR
comp=Z,839nm,20.0s,MS5.4
A18A Metzger Ranch, 128.75 302 ⇑P PKPdf 02 13 47.8 -0.4
baz=129,SNR=8.6
H10A Noah's Angus R 128.78 294 ⇓P PKPdf 02 13 48.1 -0.3
baz=129,SNR=7.0
C16A Fuhringer Ranc 128.79 300 ⇓P PKPdf 02 13 47.9 -0.4
baz=129,SNR=24

I09A Lost Marbles R 128.81 293 ⇑P PKPdf 02 13 47.6 -0.9
baz=129
CHMT Chamberlain Mo 128.83 298 *e*PKPdf PKPdf 02 13 48.3 -0.1
E13A Victor 128.93 297 ⇑P PKPdf 02 13 48.5 -0.1
baz=129,SNR=14
F12A Elk City 128.93 296 ⇓P PKPdf 02 13 48.1 -0.6
baz=129
KMI Kunming 129.06 106 PKP PKPdf 02 13 50.1 +0.5
KMI PP PP 02 16 06.3 +8.8
KMI SKKS SKKSac 02 22 56.0 +0.8
KMI AMB AMB
comp=Z,110nm,9.9s
KMI LR LR
comp=N,210nm,16.2s,MS5.0
KMI LR LR
comp=E,240nm,21.0s,MS5.0
KMI LR LR
comp=Z,340nm,18.2s,MS5.1
D14A Greenough 129.07 298 ⇑P PKPdf 02 13 48.3 -0.6
baz=129,SNR=11
MSO Missoula 129.09 298 *e*PKPdf PKPdf 02 13 48.7 -0.2
MSO LR LR
comp=Z,371nm,20.0s,MS5.1
G11A Walters Elk Ra 129.15 295 ⇓P PKPdf 02 13 49.1 +0.1
baz=129,SNR=11
C15A Salmond Ranch, 129.17 300 ⇓P PKPdf 02 13 48.4 -0.6
baz=129,SNR=6.7
SLMT Seeley Lake 129.19 299 *e*PKPdf PKPdf 02 13 48.6 -0.4
B16A M & M Farms, S 129.22 301 ⇓P PKPdf 02 13 48.2 -0.8
baz=129
BMO Blue Mountains 129.24 294 *e*PKIKP PKPdf 02 13 48.9 -0.4
H09A Durkee 129.28 293 ⇓P PKPdf 02 13 49.2 -0.1
baz=129
K05A Summer Lake 129.44 290 ⇑P PKPdf 02 13 50.3 +0.6
baz=130
F11A Grangeville 129.45 296 ⇑P PKPdf 02 13 48.7 -1.0
baz=130,SNR=8.1
G10A Bishop Farm, J 129.48 294 ⇓P PKPdf 02 13 49.4 -0.3
baz=130,SNR=15
D13A Huson 129.53 298 ⇓P PKPdf 02 13 48.9 -0.8
baz=130,SNR=12
B15A Bradely Ranch, 129.54 300 ⇑P PKPdf 02 13 48.2 -1.5
baz=130,SNR=6.2
E12A Beaver Dam Sad 129.56 296 ⇑P PKPdf 02 13 49.0 -0.8
baz=130
SWMT Swartz Lake 129.62 298 *e*PKPdf PKPdf 02 13 49.3 -0.5
YBH Yreka Blue Hor 129.62 287 *e*PKIKP PKPdf 02 13 50.0 -0.1
YBH MLR MLR
comp=Z,268nm,20.0s
H08A Prairie City 129.66 293 ⇓P PKPdf 02 13 49.8 -0.3
baz=130
C14A Swan Lake 129.69 299 ⇑P PKPdf 02 13 49.4 -0.6
baz=130
FFC Flin Flon 129.72 312 *i* PKIKP PKPdf 02 13 49.9 +0.1
FFC Flin Flon 129.72 312 *e*PKPdf PKPdf 02 13 49.4 -0.4
FFC LR LR
comp=Z,424nm,20.0s,MS5.1
G09A Cove 129.78 294 ⇓P PKPdf 02 13 49.7 -0.6
baz=130
YBMT Yellow Bay 129.88 299 *e*PKPdf PKPdf 02 13 50.2 -0.1
B14A Marquette Ranc 129.90 300 ⇓P PKPdf 02 13 49.4 -1.0
baz=130,SNR=9.8
D12A Red Ives Fores 129.92 297 ⇑P PKPdf 02 13 49.5 -1.0
baz=130
JTMT Jette 129.92 298 *e*PKPdf PKPdf 02 13 49.8 -0.6
C13A Hot Springs 130.01 298 ⇓P PKPdf 02 13 49.6 -1.0
baz=130
F10A Beach Ranch, E 130.03 295 ⇑P PKPdf 02 13 50.0 -0.7
baz=130
A15A Johnson Ranch, 130.10 301 ⇓P PKPdf 02 13 49.7 -1.1
baz=130,SNR=13
BSMT Bassoo Peak 130.23 298 *e*PKPdf PKPdf 02 13 50.5 -0.5
G08A Pilot Rock 130.37 293 ⇓P PKPdf 02 13 51.7 +0.3
baz=130
HUMO Hull Mountain 130.39 288 *e*PKPdf PKPdf 02 13 51.6 +0.1
HUMO LR LR
comp=Z,300nm,21.0s,MS5.0
A14A Double T Ranch 130.41 300 ⇓P PKPdf 02 13 50.9 -0.4
baz=130,SNR=19
C12B Naegeli Ranch, 130.45 298 ⇓P PKPdf 02 13 50.6 -0.9
baz=130
B13A Whitefish 130.46 299 ⇓P PKPdf 02 13 50.6 -0.8
baz=130,SNR=10
WALA Waterton Lakes 130.70 300 *e*PKPdf PKPdf 02 13 51.9 +0.1
A13A Flathead Natio 130.84 299 ⇓P PKPdf 02 13 51.5 -0.6
baz=131
E09A Wood Farm, Sta 130.86 295 ⇓P PKPdf 02 13 51.7 -0.6
baz=131
C11A Tepee Creek (N 130.91 297 ⇑P PKPdf 02 13 51.2 -1.2
baz=131
ARU Arti 131.04 47 *i* PKIKP PKPdf 02 13 51.7 -0.6
ARU Arti 131.04 47 *e*PKPdf PKPdf 02 13 51.7 -0.6
ARU LR LR
comp=Z,147nm,21.0s,MS4.7
B12A Libby 131.05 298 ⇑P PKPdf 02 13 51.9 -0.6
baz=131
SUMG Summit 131.05 353 *e*PKPdf PKPdf 02 13 52.5 +0.6
F07A Phinny Hill Vi 131.27 293 ⇓P PKPdf 02 13 52.8 -0.2
baz=131
E08A Dider Farm, El 131.28 294 ⇑P PKPdf 02 13 52.9 -0.1
baz=131
A12A Yaak River Ran 131.41 299 ⇑P PKPdf 02 13 52.4 -0.9
baz=132
HAWA Hanford 131.44 294 *e*PKPdf PKPdf 02 13 50.9 -2.4
HAWA LR LR
comp=Z,380nm,19.0s,MS5.1
RSW Rattlesnake Hi 131.47 294 *e*PKPdf PKPdf 02 13 54.1 +0.6
H04A Detroit Lake 131.51 290 ⇑P PKPdf 02 13 53.2 -0.4
baz=132
D08A Wollman Farm, 131.62 295 ⇑P PKPdf 02 13 53.3 -0.3
baz=132
NEW Newport 131.62 297 *e*PKIKP PKPdf 02 13 52.5 -1.1
NEW MLR MLR
comp=Z,452nm,19.0s
E07A Sunnyside 131.71 294 ⇑P PKPdf 02 13 54.0 +0.2
baz=132
OD2 Odessa Site #2 131.75 295 *e*PKPdf PKPdf 02 13 53.3 -0.6
APA Apatity 131.91 25 ⇑*i*PKIKP PKPdf 02 13 52.4 -1.2
APA *e* 02 16 22.0
ARCES ARCESS Array B 131.95 20 PKhKP PKPpre 02 13 38.3
comp=Z,1.6nm,0.8s,baz=47,slow=20,SNR=3.4
ARCES PKP PKPdf 02 13 52.2 -1.4
comp=Z,2.0nm,0.3s,baz=218,slow=1.9,SNR=41
ARCES ARCESS Array B 131.95 20 PKHKP PKPpre 02 13 38.3
ARCES 02 13 52.2
ARCES pmax pmax
comp=Z,2.0nm,0.8s
ARCES pmax pmax
comp=Z,2.0nm,0.4s
ARCES ARCESS Array B 131.95 20 PKP PKPpre 02 13 38.3
ARCES PKP PKPdf 02 13 52.2 -1.4
COR Corvallis 132.00 290 PFAKE 02 14 10.0 +16
COR LR LR
comp=Z,380nm,20.0s,MS5.1
G04A Mulino 132.03 291 ⇑P PKPdf 02 13 53.7 -0.8
baz=132
SVE Sverdlovsk 132.13 47 *i* PKIKP PKPdf 02 13 53.9 -0.4
SVE pmax pmax
comp=Z,70nm,1.6s
SVE MLR MLR
comp=Z,456nm,23.0s,MS5.1
GYA Guiyang 132.15 109 Pdif Pdif 02 10 51.0 +0.9
GYA PKP PKPdf 02 13 56.4 +1.0
GYA PP PP 02 16 23.9 +6.4
GYA PKS 02 17 30.2
GYA SKKS SKKSac 02 23 14.5 +0.3
GYA SS SS 02 33 58.7 +3.2
GYA AMB AMB
comp=Z,180nm,7.9s
GYA LR LR
comp=N,320nm,24.3s,MS5.0
GYA LR LR
comp=E,210nm,25.2s,MS5.0
GYA LR LR
comp=Z,330nm,25.0s,MS4.9
EPH Ephrata 132.15 295 P PKPdf 02 13 55.1 +0.5
KEV Kevo 132.41 21 PFAKE 02 14 10.0 +16
KEV LR LR
comp=Z,661nm,20.0s,MS5.3
LVZ Lovozero 132.46 25 PFAKE 02 14 10.0 +15
LVZ LR LR
comp=Z,628nm,19.0s,MS5.3
F04A Amboy 132.52 291 ⇑P PKPdf 02 13 54.7 -0.8
baz=133
B08A Colville Reser 132.73 296 ⇑P PKPdf 02 13 55.2 -0.6
baz=133

LON Longmire 132.80 293 *e*PKIKP PKPdf 02 13 55.5 -0.4
F03A Seaside 133.08 291 ⇑P PKPdf 02 13 55.7 -0.8
baz=133
D05A Enumclaw 133.19 293 ⇓P PKPdf 02 13 56.7 0.0
baz=133
EDM Edmonton 133.37 304 *e*PKIKP PKPdf 02 13 55.9 -0.9
BRVK Borovoye 133.50 56 *e*PKHKP PKPpre 02 13 41.8
BRVK *e* 02 13 56.0
BRVK *e* 02 16 25.4
BRVK MLR MLR
comp=Z,498nm,20.0s,MS5.2
BRVK Borovoye 133.50 56 *e*PKPpre PKPpre 02 13 41.8
BRVK *e*PKPdf PKPdf 02 13 56.0 -1.1
BRVK ⇑*i*PKP PKPdf 02 13 56.7 -0.3
BRVK *e*PP PP 02 16 25.4 -0.7
BRVK LR LR
comp=Z,498nm,20.0s,MS5.2
BRVK Borovoye 133.50 56 PKPdf PKPdf 02 13 56.7 -0.3
SNR=7.5
BVAR Borovoye Array 133.52 56 PKhKP PKPpre 02 13 42.2
comp=Z,2.3nm,0.8s,baz=225,slow=3.6,SNR=13
BVAR PKP PKPdf 02 13 55.8 -1.3
comp=Z,11nm,0.9s,baz=232,slow=1.7,SNR=24
BVAR PP PP 02 16 25.4 -0.9
comp=Z,1.3nm,0.7s,baz=210,slow=8.6,SNR=4.7
BVAR Borovoye Array 133.52 56 PKHKP PKPpre 02 13 42.2
BVAR 02 13 55.8
BVAR 02 16 25.4
BVAR pmax pmax
comp=Z,2.0nm,0.8s
BVAR pmax pmax
comp=Z,11nm,0.9s
BVAR pmax pmax
comp=Z,1.0nm,0.7s
JCW Jim Creek 133.86 294 P PKPdf 02 13 57.6 -0.3
B06A Marblemount 133.87 295 ⇓P PKPdf 02 13 57.2 -0.7
baz=134
NLWA Neilton Lookou 134.25 292 PFAKE 02 14 10.0 +11
NLWA LR LR
comp=Z,455nm,20.0s,MS5.2
CD2 Chengdu 134.28 102 PKP PKPdf 02 13 56.0 -3.3
CD2 sPKP 02 14 06.0
CD2 PP PP 02 16 33.0 +1.8
CD2 PKS 02 17 31.0
CD2 SKS SKSdf 02 21 01.7 -9.2
CD2 SKKS SKKSac 02 23 19.4 -7.6
CD2 SS SS 02 34 17.4 -4.0
CD2 AMB AMB
comp=Z,340nm,13.1s
CD2 LR LR
comp=N,260nm,15.5s
CD2 LR LR
comp=Z,360nm,19.0s,MS5.1
GUMO Guam 134.31 162 PFAKE 02 14 10.0 +10
GUMO LR LR
comp=Z,354nm,20.0s,MS5.1
A05A Maple Falls 134.49 295 ⇑P PKPdf 02 13 58.6 -0.4
baz=134
DAG Danmarks Havn 134.78 1 *i* P PKPpre 02 13 53.0
MK31 Makanchi Array 134.84 70 *e*PKHKP PKPpre 02 13 44.7
MK31 *e* 02 13 58.2
MKAR Makanchi Array 134.84 70 PKhKP PKPpre 02 13 45.3
comp=Z,1.0nm,0.8s,baz=250,slow=7.1,SNR=6.3
MKAR PKP PKPdf 02 13 58.0 -1.8
comp=Z,8.5nm,0.9s,baz=247,slow=1.7,SNR=30
MKAR PP PP 02 16 36.7 +1.9
comp=Z,1.3nm,0.9s,baz=227,slow=4.8,SNR=3.0
MKAR Makanchi Array 134.84 70 PKHKP PKPpre 02 13 45.3
MKAR 02 13 58.0
MKAR 02 16 36.7
MKAR pmax pmax
comp=Z,1.0nm,0.9s
MKAR pmax pmax
comp=Z,9.0nm,0.9s
MKAR pmax pmax
comp=Z,1.0nm,1.0s
WMQ Urumqi 135.51 77 PKP PKPdf 02 13 58.0 -3.1
WMQ PP PP 02 16 39.2 +0.2
WMQ SKS SKSdf 02 21 03.6 -8.8
WMQ SKKS SKKSac 02 23 26.0 -7.8
WMQ SS SS 02 34 30.0 -6.3
WMQ AMB AMB
comp=Z,84nm,8.1s
WMQ LR LR
comp=N,270nm,21.4s,MS5.1
WMQ LR LR
comp=E,330nm,23.0s,MS5.1
WMQ LR LR
comp=Z,270nm,21.5s,MS4.9
KURK Kurchatov 135.73 64 PKhKP PKPpre 02 13 47.8
comp=Z,1.1nm,0.3s,baz=232,slow=3.5,SNR=7.5
KURK PKP PKPdf 02 13 59.9 -1.4
comp=Z,5.6nm,0.7s,baz=237,slow=2.9,SNR=19
KURK PP PP 02 16 40.3 0.0
comp=Z,0.9nm,0.6s,baz=240,slow=6.2,SNR=7.4
KURK Kurchatov 135.73 64 PKHKP PKPpre 02 13 47.8
KURK 02 13 59.9
KURK 02 16 40.3
KURK pmax pmax
comp=Z,1.0nm,0.3s
KURK pmax pmax
comp=Z,6.0nm,0.7s
KURK pmax pmax
comp=Z,1.0nm,0.6s
KURK Kurchatov 135.73 64 PKP PKPpre 02 13 47.8
KURK *e*PKPdf PKPdf 02 14 00.3 -1.0
KURK *e*PP PP 02 16 41.8 +1.5
KURK LR LR
comp=Z,382nm,19.0s,MS5.1
KURK Kurchatov 135.73 64 PKPdf PKPdf 02 14 00.7 -0.5
SNR=7.6
TATO Taipei 137.83 126 PFAKE 02 14 20.0 +14
TATO LR LR
comp=Z,259nm,20.0s,MS5.0
SPITS Spitsbergen Ar 138.14 11 PKP PKPdf 02 14 06.3 +1.3
comp=Z,6.8nm,0.8s,baz=156,slow=26,SNR=5.6
SPITS Spitsbergen Ar 138.14 11 PKIKP PKPdf 02 14 06.3 +1.3
SPITS pmax pmax
comp=Z,7.0nm,0.8s
LZH Lanzhou 138.36 98 *e*PKP PKPdf 02 14 06.7 0.0
LZH PP PP 02 16 56.1 -0.7
LZH PKS 02 17 40.1
LZH SKS SKSdf 02 21 10.3 -7.4
LZH SKKS SKKSac 02 23 46.2 -5.0
LZH SS SS 02 35 09.3 -0.9
LZH AMB AMB
comp=Z,340nm,4.8s
LZH LR LR
comp=E,430nm,14.5s
LZH LR LR
comp=Z,650nm,15.6s,MS5.5
KBS Kingsbay 138.40 9 PFAKE 02 14 20.0 +15
KBS LR LR
comp=Z,419nm,19.0s,MS5.2
WHN Wuhan 139.31 114 ⇓PKP PKPdf 02 14 09.6 +1.0
XAN Xi'an 139.41 105 PKP PKPdf 02 14 02.6 -6.1
YKA Yellowknife Ar 139.79 314 PKhKP PKPpre 02 13 57.4
comp=Z,1.2nm,0.6s,baz=94,slow=18,SNR=3.8
YKA PKP PKPdf 02 14 07.8 -0.6
comp=Z,14nm,0.8s,baz=130,slow=2.4,SNR=22
YKA PP PP 02 17 03.9 -1.5
comp=Z,3.5nm,0.8s,baz=120,slow=6.5,SNR=9.0
YKA Yellowknife Ar 139.79 314 PKHKP PKPpre 02 13 57.4
YKA 02 14 07.8
YKA 02 17 03.9
YKA pmax pmax
comp=Z,1.0nm,0.6s
YKA pmax pmax
comp=Z,14nm,0.8s
YKA pmax pmax
comp=Z,4.0nm,0.8s
YKA Yellowknife Ar 139.79 314 PKP PKPdf 02 14 07.8 -0.6
YKA PP PP 02 17 03.9 -1.5
NVS Novosibirsk 140.51 61 *e*PKHKP PKPpre 02 14 01.0
NVS pmax pmax
comp=N,10.0nm,1.1s
NVS pmax pmax
comp=E,9.0nm,1.1s
NVS pmax pmax
comp=Z,21nm,1.1s
WAKE Wake Island 140.59 193 PFAKE 02 14 20.0 +8.8
WAKE LR LR
comp=Z,315nm,20.0s,MS5.1
ZAA0 Zalesovo Array 140.72 63 *e*PKPpre PKPpre 02 14 00.7
ZAA0 *e*PKPdf PKPdf 02 14 08.6 -1.7

ZALV Zalesovo Beam 140.72 63 PKhKP PKPpre 02 14 00.5
comp=Z,6.5nm,0.9s,baz=209,slow=2.7,SNR=14
ZALV PKP PKPdf 02 14 09.2 -1.2
comp=Z,4.8nm,0.7s,baz=151,slow=3.4,SNR=8.8
ZALV PP PP 02 17 12.8 +1.6
comp=Z,3.7nm,0.9s,baz=223,slow=6.1,SNR=6.7
ZALV Zalesovo Beam 140.72 63 PKHKP PKPpre 02 14 00.5
ZALV 02 14 09.2
ZALV 02 17 12.8
ZALV pmax pmax
comp=Z,7.0nm,0.9s
ZALV pmax pmax
comp=Z,5.0nm,0.7s
ZALV pmax pmax
comp=Z,4.0nm,0.9s
RES Resolute Bay 141.02 336 PKhKP PKPpre 02 14 02.4
comp=Z,4.8nm,0.7s,baz=179,slow=3.8,SNR=11
RES PKP PKPdf 02 14 09.3 -1.1
comp=Z,10nm,1.1s,baz=159,slow=1.9,SNR=6.9
RES Resolute Bay 141.02 336 *e*PKHKP PKPpre 02 14 03.2
RES 02 14 09.3
RES Resolute Bay 141.02 336 *e*PKPpre PKPpre 02 14 03.2
RES PKP PKPdf 02 14 09.3 -1.1
RES *e*PKPdf PKPdf 02 14 10.1 -0.2
NJ2 Nanjing 142.71 117 *e*PKP PKPdf 02 14 04.2 -10
NJ2 pPKP pPKPdf 02 14 31.6 +16
NJ2 sPKP 02 14 42.7
NJ2 PP PP 02 17 22.0 -1.2
NJ2 PKS 02 20 32.0
NJ2 SKS SKSdf 02 21 03.0 -22
NJ2 SKKS SKKSac 02 23 57.5 -19
NJ2 SS SS 02 35 50.0 -11
NJ2 AMB AMB
comp=Z,260nm,6.9s
NJ2 LR LR
comp=N,900nm,30.7s
NJ2 LR LR
comp=E,1μm,23.5s
NJ2 LR LR
comp=Z,420nm,26.4s,MS5.1
CRAG Craig 143.82 296 *e*PKPdf PKPdf 02 14 13.7 -2.1
DLBC Dease Lake 143.98 302 *e*PKPdf PKPdf 02 14 13.9 -2.1
BTO Baotou 144.96 99 *e*PKPbc PKPdf 02 14 16.9 -1.4
TIA Tai'an 145.25 111 ⇓PKPbc PKPbc 02 14 18.3 -0.4
SIT Sitka 145.71 297 *e*PKIKP PKPdf 02 14 18.2 -0.8
HHC Hu-ho-hao-te 145.94 100 *e*PKPbc PKPbc 02 14 19.3 -1.4
HHC PP PP 02 17 45.5 +2.7
HHC PKS 02 17 53.1
HHC SKS SKSdf 02 21 26.3 -3.1
HHC SKKS SKKSac 02 24 35.0 +0.2
HHC SS SS 02 36 39.6 +1.5
HHC AMB AMB
comp=Z,360nm,9.2s
HHC LR LR
comp=N,300nm,19.1s,MS5.3
HHC LR LR
comp=E,420nm,19.2s,MS5.3
HHC LR LR
comp=Z,360nm,19.3s,MS5.2
SKAG Skagway 146.88 301 *e*PKPdf PKPdf 02 14 19.0 -1.9
SKAG *e*PKPbc PKPbc 02 14 22.8 0.0
CBIJ Chichi jima 146.89 153 PKPbc PKPbc 02 14 22.4 -1.6
comp=Z,89nm,0.6s,baz=272,slow=18,SNR=4.3
MOY Mondy 147.40 76 *e*PKIKP PKPdf 02 14 21.0 -1.1
MOY pmax pmax
comp=Z,192nm,1.5s
BJI Beijing 147.72 106 PKPbc PKPbc 02 14 22.5 -3.3
BJI SS SS 02 37 00.1 +1.9
BJI AMB AMB
comp=Z,320nm,15.9s
BJI LR LR
comp=N,250nm,18.4s,MS5.1
BJI LR LR
comp=E,170nm,21.2s,MS5.1
BJI LR LR
comp=Z,280nm,25.8s,MS4.9
SONM Songino Array 147.94 86 PKPbc PKPbc 02 14 25.5 -0.7
comp=Z,90nm,1.0s,baz=215,slow=2.8,SNR=76
ULN Ulaanbaatar 148.31 86 *e*PKIKP PKPdf 02 14 22.8 -0.9
ULN *e* 02 14 26.7
ULN MLR MLR
comp=Z,324nm,20.0s,MS5.1
ULN Ulaanbaatar 148.31 86 PKPdf PKPdf 02 14 23.1 -0.6
SNR=65
TLY Talaya 148.78 78 *c i*PKHKP PKPdf 02 14 22.7 -1.6
TLY *e* 02 17 58.3
TLY pmax pmax
comp=Z,127nm,1.6s
TLY Talaya 148.78 78 *e*PKPdf PKPdf 02 14 23.6 -0.7
TLY *e*PKPbc PKPbc 02 14 28.5 +0.3
TLY LR LR
comp=Z,425nm,22.0s,MS5.2
PNL Peninsula 148.83 300 *e*PKPdf PKPdf 02 14 21.6 -2.5
PNL *e*PKPbc PKPbc 02 14 27.6 -0.4
INK Inuvik 149.39 317 PKPbc PKPbc 02 14 28.4 -0.8
comp=Z,57nm,0.8s,baz=89,slow=3.2,SNR=132
INK Inuvik 149.39 317 *e*PKPdf PKPdf 02 14 21.8 -3.0
INK *e*PKPbc PKPbc 02 14 28.4 -0.8
IRK Irkutsk 149.41 78 ⇑*i*PKIKP PKPdf 02 14 24.0 -1.3
IRK *e* 02 14 34.0
IRK pmax pmax
comp=Z,191nm,1.6s
DL2 Dalian 149.57 113 PKPbc PKPbc 02 14 30.3 -0.3
DAWY Dawson 150.46 308 *e*PKPdf PKPdf 02 14 23.4 -3.2
DAWY *e*PKPbc PKPbc 02 14 31.3 -0.6
INCN Inchon 150.78 121 *e*PKPdf PKPdf 02 14 27.3 -0.7
INCN *e*PKPbc PKPbc 02 14 33.1 -0.4
INCN LR LR
comp=Z,548nm,20.0s,MS5.3
INCN Inchon 150.78 121 PKPdf PKPbc 02 14 33.4 -0.2
SNR=7.4
KSRS Korea Array 151.33 123 PKP PKPdf 02 14 28.1 -0.7
comp=Z,3.3nm,0.8s,baz=198,slow=1.5,SNR=16
KSRS PKPbc PKPbc 02 14 34.2 -0.6
comp=Z,34nm,0.9s,baz=209,slow=2.2,SNR=65
KSRS PKPab PKPab 02 14 42.7 -0.3
comp=Z,17nm,1.1s,baz=220,slow=4.1,SNR=8.2
KSRS Korea Array 151.33 123 PKIKP PKPdf 02 14 28.1 -0.7
KSRS 02 14 34.3
KSRS 02 14 42.7
KSRS pmax pmax
comp=Z,3.0nm,0.9s
KSRS pmax pmax
comp=Z,34nm,0.9s
KSRS pmax pmax
comp=Z,17nm,1.1s
EGAK Eagle 151.40 309 *e*PKPdf PKPdf 02 14 24.1 -3.9
EGAK *e*PKPbc PKPbc 02 14 33.2 -0.9
EGAK LR LR
comp=Z,334nm,22.0s,MS5.1
BMRM Bremner River 151.72 300 *e*PKPdf PKPdf 02 14 25.5 -3.1
BMRM *e*PKPbc PKPbc 02 14 35.0 0.0
MENT Mentasta 151.96 304 *e*PKPbc PKPbc 02 14 35.5 0.0
DIV Divide 152.31 300 *e*PKPdf PKPdf 02 14 27.9 -1.6
DIV *e*PKPbc PKPbc 02 14 36.5 +0.2
SNY Shenyang 152.77 112 ⇓PKPbc PKPbc 02 14 37.0 -1.0
SNY PP PP 02 18 18.3 -3.9
SNY SS SS 02 38 03.9 +10
SNY AMB AMB
comp=Z,340nm,16.3s
SNY LR LR
comp=N,250nm,21.6s,MS5.2
SNY LR LR
comp=E,380nm,22.2s,MS5.2
SNY LR LR
comp=Z,300nm,19.8s,MS5.1
SEW Seward 153.68 297 *e*PKPdf PKPdf 02 14 30.1 -1.4
SEW *e*PKPbc PKPbc 02 14 38.7 -0.7
PMR Palmer 153.99 300 *e*PKIKP PKPdf 02 14 28.5 -3.4
PMR *e* 02 14 40.3
RC01 Rabbit Creek A 154.13 299 *e*PKPdf PKPdf 02 14 29.0 -3.1
CIT Chita 154.13 84 *e*PKP2 PKPab 02 14 54.2 -0.2
COLA College 154.20 308 PFAKE 02 14 40.0 +7.8
COLA LR LR
comp=Z,380nm,21.0s,MS5.2
KDAK Kodiak Island 154.38 290 PKPbc PKPbc 02 14 40.6 -0.3
comp=Z,9.1nm,0.7s,baz=132,slow=1.2,SNR=13
KDAK PKPab PKPab 02 14 55.3 0.0
comp=Z,10nm,0.7s,baz=168,slow=3.0,SNR=8.3
KDAK Kodiak Island 154.38 290 *e*PKPbc PKPbc 02 14 40.4 -0.5
KDAK LR LR
comp=Z,408nm,21.0s,MS5.2
MCK McKinley 154.44 305 *e*PKIKP PKPdf 02 14 29.6 -2.9
MCK *e* 02 14 40.5

OHAK Old Harbor 154.52 289 *e*PKPdf PKPdf 02 14 27.4 -5.5
OHAK *e*PKPbc PKPbc 02 14 38.5 -2.8
MAJO Matsushiro 154.60 140 *e*PKIKP PKPdf 02 14 32.9 -0.8
MAJO *e* 02 14 41.8
MAJO MLR MLR
comp=Z,355nm,20.0s,MS5.2
MAT Matsushiro 154.60 140 PKP PKPdf 02 14 32.5 -1.2
MJAR Matsushiro Arr 154.60 140 PKP PKPdf 02 14 33.1 -0.5
comp=Z,0.7nm,0.4s,baz=188,slow=3.9,SNR=7.4
MJAR PKPbc PKPbc 02 14 41.4 -0.7
comp=Z,10nm,1.0s,baz=210,slow=2.9,SNR=23
MJAR PKPab PKPab 02 14 55.7 -1.1
comp=Z,14nm,0.9s,baz=192,slow=4.8,SNR=13
MJAR Matsushiro Arr 154.60 140 PKIKP PKPdf 02 14 33.1 -0.6
MJAR 02 14 41.4
MJAR 02 14 55.7
MJAR pmax pmax
comp=Z,1.0nm,0.4s
MJAR pmax pmax
comp=Z,10.0nm,1.0s
MJAR pmax pmax
comp=Z,14nm,1.0s
TRF Thorofare Moun 154.97 304 *e*PKPdf PKPdf 02 14 29.1 -4.1
TRF *e*PKPbc PKPbc 02 14 41.5 -0.6
CN2 Changchun 155.15 111 *e*PKP PKPdf 02 14 33.3 -0.9
BPAW Bear Paw Mtn. 155.40 305 *e*PKPdf PKPdf 02 14 28.9 -4.9
BPAW *e*PKPbc PKPdf 02 14 41.9 +8.1
COLD Coldfoot 155.46 313 *e*PKPdf PKPdf 02 14 29.8 -4.0
COLD *e*PKPbc PKPdf 02 14 42.3 +8.5
PPLA Purkeypile 155.70 302 *e*PKPdf PKPdf 02 14 31.9 -2.3
SVW2 Sparrevohn 156.87 297 *e*PKPab PKPab 02 15 05.0 -0.9
TTA Tatalina 157.43 301 *e*PKIKP PKPdf 02 14 30.4 -6.1
MDJ Mudanjiang 157.77 115 PKP PKPdf 02 14 36.0 -1.5
ERM Erimo 161.18 143 PFAKE 02 14 50.0 +8.5
ERM LR LR
comp=Z,382nm,20.0s
TIXI Tiksi 162.01 30 PFAKE 02 14 50.0 +8.5
TIXI LR LR
comp=Z,361nm,20.0s
KLR Kul'dur 162.05 109 *e*PKIKP PKPdf 02 14 36.6 -5.6
KLR pmax pmax
comp=Z,90nm,2.0s
KLR pmax pmax
comp=Z,100nm,1.8s
CLNS Chul'man 162.17 80 *e*PKP2 PKPab 02 15 29.4 +0.3
CLNS pmax pmax
comp=E,29nm,1.1s
CLNS pmax pmax
comp=N,14nm,1.2s
CLNS pmax pmax
comp=Z,44nm,1.2s
HABR Khabarovsk 163.16 115 *e*PKP2 PKPab 02 15 32.2 -1.4
HABR 02 19 17.7
HABR 02 21 43.8
HABR SS SS 02 39 41.5 -3.4
HABR pmax pmax
comp=N,33nm,2.4s
HABR pmax pmax
comp=Z,106nm,2.0s
HABR pmax pmax
comp=E,75nm,1.8s
YSS Yuzh-Sakhalins 165.35 134 *c i*PKIKP PKPdf 02 14 44.0 -1.3
YSS *e* 02 19 29.0
YSS pmax pmax
comp=Z,60nm,1.2s
YSS Yuzh-Sakhalins 165.35 134 PFAKE 02 15 00.0 +15
YSS LR LR
comp=Z,170nm,21.0s
YAK Yakutsk 165.37 63 *e*PKP2 PKPab 02 15 42.0 -1.0
YAK pmax pmax
comp=Z,36nm,0.9s
YAK pmax pmax
comp=E,9.0nm,0.9s
YAK pmax pmax
comp=N,4.0nm,0.9s
YAK pmax pmax
comp=Z,13nm,0.8s
YAK Yakutsk 165.37 63 PFAKE 02 15 00.0 +15
YAK LR LR
comp=Z,410nm,22.0s
BILL Bilibino 169.53 343 ⇓*e*PKIKP PKPdf 02 14 43.2 -4.5
BILL *e* 02 47 26.1
BILL pmax pmax
comp=Z,8.0nm,1.3s
BILL Biiibino 169.53 343 PFAKE 02 15 00.0 +12
BILL LR LR
comp=Z,838nm,22.0s
PET Petropavlovsk 174.75 183 PFAKE 02 15 00.0 +10
PET LR LR
comp=Z,712nm,21.0s
PETK Petropavlovsk- 174.84 177 PKP PKPdf 02 14 49.1 -1.4
comp=Z,8.7nm,1.0s,baz=130,slow=2.3,SNR=5.5
PETK PKPab PKPab 02 16 24.9 -0.2
comp=Z,20nm,1.0s,baz=144,slow=5.3,SNR=10
PETK PP PP 02 20 18.4 +0.7
comp=Z,3.7nm,0.9s,baz=292,slow=7.8,SNR=4.2
PETK Petropavlovsk- 174.84 177 PKIKP PKPdf 02 14 49.1 -1.4
PETK 02 16 24.9
PETK 02 20 18.4
PETK pmax pmax
comp=Z,9.0nm,1.0s
PETK pmax pmax
comp=Z,20nm,1.0s
PETK pmax pmax
comp=Z,4.0nm,0.9s

*TRN **01** 01:55:28.3, 18°.22N×64°.24W, h29km*
*RSPR **01** 01:55:29.1, 18°.25N×64°.07W, h13km±16km, MD3.2/3, MD3.2/3*
*NEIC **01** 01:55:29.1, 18°.25N×64°.07W, h13km, MD3.3(RSPR), After RSPR.*
ISC 01 01:55:28.2±2.2, 18°.23N±0°.09×64°.1W±0°.1, h22km±8km, n15, σ0°61/26, 6C-4D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.53**	**291**	⇑*e*P		**Pb**	**01 55 38.7**	**-0.1**
TBVI				*e*S		**Sb**	**01 55 46.8**	**+0.7**
TBVI	**Tortola**	**0.53**	**291**	⇑*e*P		**Pb**	**01 55 38.7**	**-0.1**
TBVI				*e*S		**Sb**	**01 55 46.8**	**+0.7**
CDVI	**St. Croix**	**0.80**	**234**	⇑*e*P		**Pb**	**01 55 42.8**	**-0.5**
CDVI				*e*S		**Sb**	**01 55 54.0**	**+0.4**
CDVI	**St. Croix**	**0.80**	**234**	⇑*e*P		**Pb**	**01 55 42.8**	**-0.5**
CDVI				*e*S		**Sb**	**01 55 54.5**	**+0.9**
STVI	**Saint Thomas**	**0.83**	**279**	⇓*e*P		**Pb**	**01 55 42.9**	**-0.9**
STVI				*e*S		**Sb**	**01 55 54.2**	**-0.3**
STVI	**Saint Thomas**	**0.83**	**279**	⇓*e*P		**Pb**	**01 55 42.9**	**-0.9**
STVI				*e*S		**Sb**	**01 55 54.2**	**-0.3**
MTP	**Monte Pirata**	**1.39**	**265**	⇑*e*P		**Pn**	**01 55 52.0**	**-0.3**
MTP	**Monte Pirata**	**1.39**	**265**	*e*S		**Sn**	**01 56 08.8**	**-1.2**
MTP	**Monte Pirata**	**1.39**	**265**	*e*Pn		**Pn**	**01 55 52.2**	**-0.1**
MTP				*e*S		**Sn**	**01 56 09.1**	**-0.9**
MTP	**Monte Pirata**	**1.39**	**265**	⇑*e*P		**Pn**	**01 55 52.3**	**0.0**
MTP				*e*S		**Sn**	**01 56 08.8**	**-1.2**
HUMP	**Col San Antoni**	**1.67**	**267**	⇓*e*P		**Pn**	**01 55 56.6**	**+0.5**
HUMP	**Col San Antoni**	**1.67**	**267**	*e*S		**Sn**	**01 56 17.0**	**+0.1**
HUMP	**Col San Antoni**	**1.67**	**267**	*e*Pn		**Pn**	**01 55 57.3**	**+1.2**
HUMP				*e*S		**Sn**	**01 56 17.3**	**+0.4**
HUMP	**Col San Antoni**	**1.67**	**267**	⇓*e*P		**Pn**	**01 55 56.6**	**+0.5**
HUMP				*e*S		**Sn**	**01 56 17.0**	**+0.1**
CBYP	**Canovanas**	**1.68**	**272**	*e*Pn		**Pn**	**01 55 56.8**	**+0.6**
CBYP				*e*S		**Sn**	**01 56 17.1**	**+0.1**

*IDC **01** 02:08:34.2±2.5, 18°.09S×177°.47W, h300km±25km, mb3.8/4, mb1 4.0/5, mb1mx3.6/17, mbtmp3.8/5, Error ellipse: s-maj=102.8km s-min=17.8km az=150.0*
*ISCJB **01** 02:08:38.1±2.4, 17°.8S±0°.8×177°.1W±0°.3, h410km±25km, mb3.8/5, Error ellipse: s-maj=128.8km s-min=12.2km az=159.7*
*NEIC **01** 02:08:39.3±1.6, 17°.41S×177°.23W, h402km±17km, mb3.6/1, Error ellipse: s-maj=117.1km s-min=15.9km az=159.0*
ISC 01 02:08:39.1±2.3, 17°.7S±0°.8×177°.1W±0°.3, h402km±24km, n11, σ0°64/12, mb3.8/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.61**	**269**	*e*Pn		**Pn**	**02 09 56.6**	**-0.6**
MSVF				*e*S		**S**	**02 11 01.1**	**+0.4**
AFI	**Afiamalu**	**6.37**	**54**	P		**Pn**	**02 10 15.4**	**-0.4**
AFI				S		**S**	**02 11 34.2**	**-0.6**

1.3nm,0.3s,baz=17,slow=22,SNR=2.4
AFI Afiamalu 6.37 54 *e*Pn **Pn 02 10 15.5 -0.4**
AFI *e*S **S 02 11 37.8 +3.1**
STKA Stephens Creek 39.81 241 P **P 02 15 36.0 +0.5**
2.8nm,0.3s,mb4.0,baz=72,slow=9.6,SNR=4.3
STKA Stephens Creek 39.81 241 P **P 02 15 36.0 +0.5**
WRAB Tennant Creek 45.88 259 *e*P **P 02 16 23.2 -0.4**
1.5nm,0.5s,mb3.6
WRA Warramunga Arr 45.88 259 P **P 02 16 23.6 -0.2**
1.1nm,0.3s,mb3.6,baz=98,slow=6.7,SNR=10.0
ASAR Alice Springs 46.04 254 P **P 02 16 25.2 +0.4**
19nm,0.6s,mb4.6,baz=90,slow=8.2,SNR=208
TXAR Lajitas Array 84.84 57 P **P 02 20 37.2 +7.2**
0.6nm,0.8s,mb3.4,baz=217,slow=6.1,SNR=5.2
BRTR Keskin Array B 145.50 316 PKPbc PKPbc 02 27 38.2 +6.9
0.5nm,0.5s,baz=73,slow=2.7,SNR=3.9
MMAI Mount Meron Ar 147.06 304 PKPbc PKPbc 02 27 42.0 +6.0
0.7nm,0.4s,baz=113,slow=6.9,SNR=3.2

*NEIC **01** 02:32:19.6±0.7, 0°.96S×100°.23E, h35km, mb4.2/2, Error ellipse: s-maj=38.4km s-min=11.0km az=60.0*
NEIC Felt [II] at Padang.
*ISCJB **01** 02:32:23.7±0.4, 0°.91S±0°.04×100°.04E±0°.05, h89km±3km, mb4.0/11, Error ellipse: s-maj=8.2km s-min=6.8km az=144.9*
*IDC **01** 02:32:23.8±1.0, 0°.75S×100°.41E, h68km±6km, mb3.7/9, mb1 3.8/11, mb1mx3.6/22, mbtmp3.7/11, Error ellipse: s-maj=48.5km s-min=14.8km az=58.0*
*DJA **01** 02:32:26, 0°.93S×100°.01E, h39km, MLv4.0/10*
ISC 01 02:32:24.8±0.4, 0°.91S±0°.04×100°.04E±0°.05, h81km±4km, h70km±2.1km: pP-P, n32, σ1°13/37, mb4.0/11, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
PDSI	**Padang**	**0.42**	**90**	P		**Pn**	**02 32 37.3**	**-0.7**
PDSI				S		**Sn**	**02 32 46.8**	**-1.0**
PPI	**Padang Panjang**	**0.58**	**38**	P		**Pn**	**02 32 38.5**	**-0.8**
PPI				S		**Sn**	**02 32 49.0**	**-1.1**
SISI	**Saibi**	**1.03**	**247**	P		**Pn**	**02 32 44.8**	**+0.5**
SISI				S		**Sn**	**02 32 58.4**	**-0.5**
SDSI	**Sungai Dareh**	**1.39**	**91**	P		**Pn**	**02 32 48.8**	**+0.1**
SDSI				S		**Sn**	**02 33 07.7**	**+0.9**
BKNI	**Bangkinang**	**1.59**	**39**	P		**Pn**	**02 32 51.7**	**+0.4**
BKNI				S		**Sn**	**02 33 16.1**	**+4.8**
MNSI	**Mandailing Nat**	**1.76**	**345**	P		**Pn**	**02 32 53.7**	**+0.2**
MNSI				S		**Sn**	**02 33 15.9**	**+0.6**
PPSI	**Pulau Pagai**	**1.84**	**181**	P		**Pn**	**02 32 54.7**	**+0.1**
PPSI				S		**Sn**	**02 33 28.8**	**+12**
PSI	**Prapat**	**3.85**	**343**	P		**Pn**	**02 33 19.0**	**-2.8**
	5.0nm,0.3s,baz=350,slow=2.9,SNR=14							
PSI	**Prapat**	**3.85**	**343**	P		**Pn**	**02 33 19.0**	**-2.8**
MNAI	**Manna**	**4.50**	**140**	P		**Pn**	**02 33 32.6**	**+2.1**
TPTI		**5.03**	**325**	P		**Pn**	**02 33 39.2**	**+1.3**
	0.1nm14nm,0.9s							
IPM	**Ipoh**	**5.45**	**10**	P		**Pn**	**02 33 45.9**	**+2.4**
	0.1nm27nm,0.9s							
MDSI	**Maura Dua**	**5.45**	**131**	P		**Pn**	**02 33 45.0**	**+1.5**
	0.1nm29nm,0.8s							
KULM	**Kulim**	**6.19**	**6**	P		**Pn**	**02 33 54.9**	**+1.2**
CMAR	**Chiang Mai Arr**	**19.28**	**357**	P		**Pn**	**02 36 42.5**	**-2.5**
	baz=185,slow=12,SNR=2.3							
WRA	**Warramunga Arr**	**38.52**	**122**	P		**P**	**02 39 37.0**	**-2.5**
	0.6nm,0.4s,mb3.7,baz=302,slow=9.1,SNR=5.3							
ASAR	**Alice Springs**	**39.87**	**127**	P		**P**	**02 39 50.3**	**-0.5**
	0.8nm,0.5s,mb3.8,baz=304,slow=7.7,SNR=10							
TKM2	**Tokmak 2**	**48.86**	**336**	*e*P		**P**	**02 41 02.7**	**+0.5**
	4.2nm,1.0s,mb4.3							
SONM	**Songino Array**	**48.87**	**6**	P		**P**	**02 41 01.3**	**-0.8**
	0.9nm,0.8s,mb3.8,baz=177,slow=8.6,SNR=5.2							
STKA	**Stephens Creek**	**49.84**	**132**	P		**P**	**02 41 08.6**	**-1.3**
	1.9nm,0.6s,mb4.2,baz=308,slow=12,SNR=3.5							
MK31	**Makanchi Array**	**50.00**	**344**	*e*P		**P**	**02 41 10.7**	**-0.1**
MKAR	**Makanchi Array**	**50.00**	**344**	P		**P**	**02 41 10.9**	**+0.1**
	1.3nm,0.4s,mb4.2,baz=155,slow=8.9,SNR=28							
MKAR				pP		pP	02 41 28.5	-2.3
	1.1nm,0.5s,baz=155,slow=8.5,SNR=5.0							
MKAR	**Makanchi Array**	**50.00**	**344**	P		**P**	**02 41 10.9**	**+0.1**
MKAR				pP		pP	02 41 28.5	-2.3
KURK	**Kurchatov**	**54.58**	**343**	*e*P		**P**	**02 41 44.6**	**0.0**
	1.5nm,0.8s,mb4.1							
KURK				*e*		pP	02 42 02.6	-2.4
ZALV	**Zalesovo Beam**	**56.11**	**349**	P		**P**	**02 41 55.2**	**-0.4**
	1.5nm,0.5s,mb4.2,baz=152,slow=6.6,SNR=7.3							
ZALV				pP		pP	02 42 13.4	-2.5
	1.7nm,0.5s,baz=182,slow=7.4,SNR=4.0							
BVAR	**Borovoye Array**	**59.18**	**340**	P		**P**	**02 42 16.6**	**-0.5**
	1.4nm,0.5s,mb4.2,baz=147,slow=8.1,SNR=6.8							
BVAR				pP		pP	02 42 34.2	-3.5
	2.8nm,0.6s,baz=148,slow=8.9,SNR=7.0							
FINES	**FINESS Array B**	**83.17**	**332**	P		**P**	**02 44 41.9**	**+0.2**
	0.4nm,0.5s,mb3.5,baz=72,slow=6.2,SNR=4.0							
FINES				pP		pP	02 45 01.6	-1.8
	2.5nm,1.1s,baz=104,slow=8.0,SNR=2.4							
FINES	**FINESS Array B**	**83.17**	**332**	P		**P**	**02 44 41.9**	**+0.2**
FINES				pP		pP	02 45 01.6	-1.8
ARCES	**ARCESS Array B**	**85.47**	**340**	P		**P**	**02 44 54.9**	**+1.7**
	1.4nm,0.8s,mb3.9,baz=122,slow=4.6,SNR=4.3							
ARCES				pP		pP	02 45 12.2	-2.8
	0.9nm,0.4s,baz=106,slow=4.4,SNR=2.4							
ARCES	**ARCESS Array B**	**85.47**	**340**	P		**P**	**02 44 54.9**	**+1.7**
ARCES				pP		pP	02 45 12.2	-2.8
TXAR	**Lajitas Array**	**143.81**	**36**	PKP		PKPdf	02 51 50.0	-1.4
	0.2nm,0.6s,baz=336,slow=2.7,SNR=4.0							
CPUP	**Villa Florida**	**145.21**	**217**	PKPbc		PKPbc	02 51 54.9	+1.3
	0.3nm,0.4s,baz=108,slow=6.4,SNR=3.1							

*NIED **01** 02:36:00, 39°.20N×141°.00E, h5km, Mw3.7 Best double couple: M0:3.80000×10^14 NP1:φ0=10.00000°, δ47.00000°, λ94.00000°. NP2:φ0=184.00000°, δ43.00000°, λ86.00000°.*
*ISCJB **01** 02:36:56.7±0.4, 39°.13N±0°.03×140°.95E±0°.04, h10km, mb3.7/6, Error ellipse: s-maj=4.8km s-min=4.0km az=141.5*
*NEIC **01** 02:36:56.9, 39°.16N×140°.95E, h10km, MG3.9(JMA), After JMA.*
*JMA **01** 02:36:56.9, 39°.16N×140°.95E, h10km, M3.6 Broadband fault plane solution: P waves. NP1:φ0=247.00000°, δ43.00000°, λ-157.00000°. NP2:φ0=139.00000°, δ74.00000°, λ-49.00000°. Principal axes: T Plg19.0000°, Azm200.0000°; N Plg39.0000°, Azm306.0000°; P Plg45.0000°, Azm90.0000°;*
JMA Felt II J1.
*IDC **01** 02:37:01.9±4.1, 39°.07N×140°.67E, h35km±33km, mb3.5/6, mb1 3.7/9, mb1mx3.5/27, mbtmp3.6/9, ML3.5/3 Error ellipse: s-maj=33.2km s-min=17.6km az=107.0*
ISC 01 02:36:57.6±0.4, 39°.14N±0°.03×140°.96E±0°.04, h10km, n21, σ0°95/27, mb3.7/6, 3C-3D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.28**	**132**	⇓P		**Pg**	**02 37 02.6**	**-0.6**
JMK				S		**Sg**	**02 37 06.8**	**-0.1**
JRG	**Rokugo**	**0.36**	**316**	⇓P		**Pg**	**02 37 03.9**	**-0.9**
JRG				S		**Sg**	**02 37 09.0**	**-0.6**
JOM	**Ohasama**	**0.42**	**38**	⇑P		**Pg**	**02 37 05.0**	**-0.9**
JOM				S		**Sg**	**02 37 10.7**	**-0.9**
JYK	**Kaneyama**	**0.52**	**245**	⇑P		**Pg**	**02 37 07.0**	**-0.6**
JYK				S		**Sg**	**02 37 14.0**	**-0.4**
OFUJ	**Ofunato**	**0.56**	**96**	⇓P		**Pg**	**02 37 07.8**	**-0.6**
JOU	**Okura**	**0.80**	**197**	⇑P		**Pg**	**02 37 12.5**	**-0.6**
ERM	**Erimo**	**3.33**	**30**	*e*Pn		**Pn**	**02 37 50.7**	**+1.0**
ERM				*e*S		**Sn**	**02 38 31.4**	**+2.2**
MAJO	**Matsushiro**	**3.38**	**221**	*e*Pn		**Pn**	**02 37 51.9**	**+1.4**
MAT	**Matsushiro**	**3.38**	**221**	P		**Pn**	**02 37 51.7**	**+1.3**
MAT				S		**Sn**	**02 38 36.7**	**+6.1**
MJAR	**Matsushiro Arr**	**3.38**	**221**	Pn		**Pn**	**02 37 51.0**	**+0.5**
	1.2nm,0.3s,baz=28,slow=13,SNR=11							
MJAR				Lg			02 38 42.8	
	1.0nm,0.3s,baz=356,slow=16,SNR=4.5							
ASAJ	**Asahikawa**	**5.12**	**13**	Pn		**Pn**	**02 38 17.8**	**+3.4**
	1.6nm,0.3s,baz=184,slow=22,SNR=4.1							
KSRS	**Korea Array**	**10.38**	**265**	Pn		**Pn**	**02 39 27.4**	**+0.9**
	1.1nm,0.3s,baz=78,slow=14,SNR=21							
KSRS				Sn		**Sn**	**02 41 29.4**	**+6.5**
	0.1nm,0.3s,baz=75,slow=25,SNR=4.9							
MKAR	**Makanchi Array**	**42.73**	**300**	P		**P**	**02 44 54.2**	**-0.5**
	0.8nm,0.8s,mb3.5,baz=84,slow=11,SNR=4.4							
MKAR	**Makanchi Array**	**42.73**	**300**	P		**P**	**02 44 54.2**	**-0.5**
INK	**Inuvik**	**52.69**	**28**	P		**P**	**02 46 12.3**	**+0.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	0.9nm,0.7s,mb3.8,baz=313,slow=7.7,SNR=6.0						
INK	Inuvik	52.69	28	P	P	02 46 12.3	+0.6
WRA	Warramunga Arr	59.09	187	P	P	02 46 57.2	-0.8
	1.2nm,0.8s,mb4.0,baz=5.2,slow=7.2,SNR=4.9						
ASAR	Alice Springs	62.82	187	P	P	02 47 23.2	-0.1
	0.3nm,0.7s,mb3.5,baz=2.2,slow=4.6,SNR=4.2						
FINES	FINESS Array B	66.79	332	P	P	02 47 48.1	-0.8
	1.4nm,0.7s,mb4.1,baz=40,slow=6.2,SNR=4.0						
PDAR	Pinedale Array	76.45	46	P	P	02 48 51.4	+4.0
	0.2nm,0.3s,mb3.5,baz=347,slow=3.7,SNR=4.0						
LPAZ	La Paz	145.88	56	PKPbc	PKPbc	02 56 39.1	+1.5
	0.7nm,0.9s,baz=48,slow=6.2,SNR=3.5						

*BJI **01** 02:48:37.9, 58°.70N×137°.40W, h11km, mB4.6/2, mb4.8/4, Ms4.6/2, Ms7 4.5/2*
*ISCJB **01** 02:48:41.5±0.2, 58°.73N±0°.02×137°.63W±0°.04, h10km, mb4.0/16, Error ellipse: s-maj=3.8km s-min=2.4km az=28.3*
*PGC **01** 02:48:42.9±0.1, 58°.73N×137°.45W, h1km, ML4.3, ML4.3/4, 132km Ese of Yakutat, Ak Southeastern Alaska*
*IDC **01** 02:48:42.1±0.8, 58°.74N×137°.51W, h0km, mb3.8/10, mb1 4.0/15, mb1mx3.8/30, mbtmp3.9/15, ML3.7/5, MS3.6/3, Ms1 3.6/3, ms1mx3.1/39, Error ellipse: s-maj=17.2km s-min=10.3km az=21.0*
*NEIC **01** 02:48:42.9, 58°.73N×137°.45W, h1km, mb3.9/12, ML4.5(PMR), ML4.2(AEIC), MW4.3(PGC), MW4.2(SLM), After PGC.*
NEIC Felt at Gustavus and Haines.
ISC 01 02:48:43.6±0.2**, 58°.79N**±0°.02×**137°.51W**±0°.04**, h10**km**, n87, σ1s.35**/109**, mb4.0**/16**, 9D, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLBC	Pleasant Camp	0.89	41	⇓P	Pg	02 48 59.3	-1.5
PLBC				S	Sg	02 49 11.4	-1.0
PLBC	Pleasant Camp	0.89	41	⇓P	Pg	02 48 59.3	-1.5
PLBC				⇓S	Sg	02 49 11.4	-1.0
PNL	Peninsula	1.31	313	ePn	Pn	02 49 05.8	-2.1
PNL				eS	Sb	02 49 24.8	-0.3
SKAG	Skagway	1.31	58	ePn	Pn	02 49 06.0	-1.9
SKAG				eS	Sb	02 49 24.0	-1.2
YKU2	Yakutat	1.33	304	eP	Pn	02 49 07.9	-0.2
BESE	Bessie Mountai	1.41	98	P	Pn	02 49 06.4	-2.8
HYT	Haines Junctio	2.04	0	ePn	Pn	02 49 18.0	0.0
HYT				eSn	Sb	02 49 45.7	-0.4
HYT	Haines Junctio	2.04	0	⇑Pn	Pn	02 49 18.0	+0.1
HYT				⇑Sg	Sb	02 49 47.3	+1.2
SIT	Sitka	2.09	145	ePn	Pn	02 49 15.4	-3.3
SIT				eSn	Sn	02 49 42.9	-1.8
WHY	Whitehorse	2.30	34	P	Pn	02 49 20.9	-0.6
WHY				S	Sb	02 49 52.4	-1.2
WHY	Whitehorse	2.30	34	⇑Pn	Pn	02 49 21.6	+0.1
WHY				⇓Pg	Pb	02 49 24.3	-0.8
WHY				⇓Sg	Sb	02 49 55.2	+1.6
DLBC	Dease Lake	3.93	92	Pn	Pn	02 49 43.1	-0.8
	3.7nm,0.3s,baz=271,slow=8.9,SNR=34						
DLBC				Pg	Pb	02 49 52.5	-0.4
	18nm,0.3s,baz=280,slow=16,SNR=34						
DLBC				Sn	Sn	02 50 32.7	+2.7
	20nm,0.3s,baz=207,slow=7.3,SNR=6.3						
DLBC				Lg		02 50 42.4	
	42nm,0.3s,baz=225,slow=25,SNR=5.1						
DLBC	Dease Lake	3.93	92	ePn	Pn	02 49 43.0	-1.0
DLBC				eS	Sb	02 50 43.3	+2.8
DLBC	Dease Lake	3.93	92	Pn	Pn	02 49 43.2	-0.7
DLBC				⇓Pg	Pb	02 49 53.4	+0.4
DLBC				⇑Sg	Sb	02 50 43.5	+3.0
CRAG	Craig	4.10	142	ePn	Pn	02 49 45.2	-1.0
CRAG				eS	Sb	02 50 47.8	+2.5
BMRM	Bremner River	4.19	304	ePn	Pn	02 49 47.9	+0.5
BMRM				eS	Sb	02 50 43.9	-3.9
EYAK	Cordova Ski Ar	4.53	296	ePn	Pn	02 49 52.3	+0.1
DIV	Divide	4.77	303	ePn	Pn	02 49 56.9	+1.6
DIV				eSn	Sn	02 50 52.4	+1.8
MENT	Mentasta	5.15	327	ePn	Pn	02 50 01.6	+1.0
DAWY	Dawson	5.37	351	P	Pn	02 50 04.7	+1.1
DAWY	Dawson	5.37	351	⇑Pn	Pn	02 50 04.3	+0.7
NDB	Naden	5.47	150	⇓Pn	Pn	02 50 02.2	-2.9
RUBB	Prince Rupert	6.01	135	⇑Pn	Pn	02 50 11.1	-1.3
SML	Sawmill	6.17	304	P	Pn	02 50 15.2	+0.6
VIB	Van Inlet	6.21	151	Sn	Sn	02 51 20.6	-5.5
SEW	Seward	6.23	287	ePn	Pn	02 50 14.9	-0.5
	18nm,0.7s						
SEW				eSn	Sn	02 51 24.1	-2.5
EGAK	Eagle	6.25	346	P	Pn	02 50 16.5	+0.8
DIB	Dawson Inlet,	6.27	151	Pn	Pn	02 50 12.6	-3.5
DIB				Sn	Sn	02 51 23.1	-4.6
	SNR=404						
DIB	Dawson Inlet,	6.27	151	⇓Pn	Pn	02 50 13.4	-2.7
PMR	Palmer	6.44	301	ePn	Pn	02 50 18.6	+0.3
PMR				eS	Sb	02 51 47.4	-5.1
MOBC	Moresby Island	6.46	149	⇓Pn	Pn	02 50 17.7	-0.9
RC01	Rabbit Creek A	6.56	296	ePn	Pn	02 50 20.7	+0.7
	24nm,0.5s						
SLKM	Skilak Lake	6.67	290	ePn	Pn	02 50 21.4	-0.1
RND	Reindeer	7.18	315	P	Pn	02 50 29.3	+0.8
MCK	McKinley	7.40	317	ePn	Pn	02 50 31.0	-0.6
TRF	Thorofare Moun	7.75	312	P	Pn	02 50 36.9	+0.7
COLA	College	7.81	326	ePn	Pn	02 50 37.5	+0.4
RSO	Redoubt South	7.91	289	ePn	Pn	02 50 38.3	-0.2
KDAK	Kodiak Island	8.01	269	Pn	Pn	02 50 38.0	-1.8
	4.8nm,0.3s,baz=77,slow=8.7,SNR=26						
KDAK				LR	LR	02 54 02.1	
	comp=Z,284nm,18.1s,baz=28,slow=40						
KDAK	Kodiak Island	8.01	269	ePn	Pn	02 50 37.5	-2.3
KDAK				eS	Sn	02 52 10.8	+0.5
PPLA	Purkeypile	8.26	306	ePn	Pn	02 50 43.4	+0.2
PPLA				eS	Sn	02 52 20.3	+3.9
BPAW	Bear Paw Mtn.	8.36	315	P	Pn	02 50 43.8	-0.8
BBB	Bella Bella	8.50	137	Pn	Pn	02 50 47.1	+0.5
	0.4nm,0.3s,baz=164,slow=14,SNR=3.2						
BBB				Lg		02 53 07.4	
	0.4nm,0.3s,baz=85,slow=19,SNR=3.4						
BBB				LR	LR	02 53 36.8	
	comp=Z,122nm,20.7s,baz=145,slow=35						
OHAK	Old Harbor	8.52	266	P	Pn	02 50 44.2	-2.7
CHUM	Lake Minchumin	8.74	312	P	Pn	02 50 49.0	-1.0
SVW2	Sparrevohn	9.35	292	ePn	Pn	02 50 57.1	-1.2
INK	Inuvik	9.72	9	Pn	Pn	02 51 05.3	+2.1
	0.4nm,0.3s,baz=187,slow=17,SNR=11						
INK				Lg		02 53 44.6	
	0.2nm,0.3s,baz=77,slow=33,SNR=3.7						
INK	Inuvik	9.72	9	ePn	Pn	02 51 05.7	+2.5
TTA	Tatalina	9.91	303	ePn	Pn	02 51 04.9	-1.0
COLD	Coldfoot	10.22	331	ePn	Pn	02 51 11.9	+1.8
	5.0nm,0.7s						
YKA	Yellowknife Ar	11.81	62	Pn	Pn	02 51 30.4	-1.4
	0.2nm,0.3s,baz=178,slow=1.6,SNR=10						
YKA				Lg		02 54 51.3	
	0.2nm,0.3s,baz=104,slow=28,SNR=4.1						
YKA	Yellowknife Ar	11.81	62	Pn	Pn	02 51 30.4	-1.4
YKA				Lg		02 54 51.3	
SDPT	Sand Point	12.94	264	ePn	Pn	02 51 47.7	+0.4
EDM	Edmonton	14.57	102	ePn	Pn	02 52 09.5	-0.1
LON	Longmire	15.30	135	ePn	Pn	02 52 22.4	+3.0
WALA	Waterton Lakes	16.88	115	ePn	Pn	02 52 38.8	-0.9
	0.3nm,1.3s						
SLMT	Seeley Lake	18.39	118	ePn	Pn	02 53 00.2	+1.8
	1.1nm,0.7s						
MSO	Missoula	18.49	120	eP	Pn	02 52 58.0	-1.6
	5.6nm,1.3s						
CHMT	Chamberlain Mo	18.74	119	eP	Pn	02 53 04.8	+2.1
YBH	Yreka Blue Hor	19.44	145	P	Pn	02 53 14.2	+3.0
	0.1nm,0.3s,baz=3.5,slow=12,SNR=5.2						
EGMT	Eagleton	19.59	111	eP	Pn	02 53 13.3	+0.4
	59nm,2.1s						
LRM	Limekiln Ridge	19.93	120	eP	Pn	02 53 17.8	+0.9
WVOR	Wild Horse Val	20.17	136	eP	P	02 53 19.7	+1.8
	5.5nm,1.0s						
MCMT	McKenzie Canyo	20.52	122	eP	P	02 53 21.9	+0.2
	1.3nm,0.8s						
WDC	Whiskeytown Da	20.55	146	eP	P	02 53 23.8	+1.8
	12nm,1.3s						
HLID	Hailey	20.86	127	eP	P	02 53 26.9	+1.5
	3.0nm,1.0s						
IMW	Indian Meadow	22.10	121	eP	P	02 53 41.5	+2.9
	14nm,1.3s,mb4.2						
RES	Resolute Bay	22.35	28	P	P	02 53 42.5	+1.3
	2.7nm,0.7s,mb3.8,baz=242,slow=11,SNR=8.5						
RES	Resolute Bay	22.35	28	eP	P	02 53 41.7	+0.5
	2.6nm,0.8s,mb3.7						
TPAW	Teton Pass	22.41	121	eP	P	02 53 44.4	+2.3
	9.3nm,1.1s,mb4.1						
PDAR	Pinedale Array	23.61	120	P	P	02 53 55.8	+1.2
	0.7nm,0.9s,mb3.1,baz=341,slow=8.5,SNR=5.3						
NVAR	Mina Array Bea	23.84	140	P	P	02 53 57.6	+0.8
	1.1nm,0.7s,mb3.4,baz=315,slow=8.1,SNR=5.2						
DUG	Dugway	24.33	129	eP	P	02 54 03.7	+2.5
	4.0nm,1.0s,mb3.8						
MSU	Marysvale	26.02	130	eP	P	02 54 15.1	-1.5
	3.2nm,1.3s,mb3.7						
CN2	Changchun	57.14	301	eP	P	02 58 31.1	+1.1
SONM	Songino Array	61.54	317	P	P	02 59 01.4	+1.1
	1.7nm,0.9s,mb4.2,baz=42,slow=8.7,SNR=7.3						
ZALV	Zalesovo Beam	62.55	333	P	P	02 59 08.0	+1.0
	0.5nm,0.3s,mb4.2,baz=34,slow=5.9,SNR=4.8						
HHC	Hu-ho-hao-te	65.47	309	eP	P	02 59 24.2	-2.2
HHC				S	S	03 08 07.3	-3.5
BVAR	Borovoye Array	66.27	342	P	P	02 59 31.6	+0.2
	0.6nm,0.4s,mb4.0,baz=233,slow=36,SNR=5.2						
MKAR	Makanchi Array	69.79	332	P	P	02 59 52.4	-1.2
	0.4nm,0.7s,mb3.5,baz=53,slow=6.2,SNR=4.5						
MKAR	Makanchi Array	69.79	332	P	P	02 59 52.4	-1.2
AKASG	Malin Array Be	70.33	9	P	P	02 59 55.9	-1.0
	0.6nm,0.4s,mb3.9,baz=355,slow=6.6,SNR=4.6						
ESDC	Sonseca Array	74.58	35	P	P	03 00 22.4	0.0
	0.3nm,0.6s,mb3.4,baz=326,slow=7.7,SNR=4.5						
MLR	Muntele Rosu	75.19	12	LR	LR	03 34 06.6	
	comp=Z,128nm,19.1s,baz=178,slow=36						
GYA	Guiyang	79.92	305	P	P	03 00 52.8	+0.3
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
KMI	Kunming	82.75	307	P	P	03 01 06.5	-1.0
KMI				pP	pP	03 01 08.3	-2.5
KMI				sP	sP	03 01 09.5	-2.5
KMI				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.8						
CMAR	Chiang Mai Arr	90.26	308	P	P	03 01 44.6	+0.2
	comp=Z,1.0nm,0.3s,mb4.6,baz=16,slow=5.3,SNR=5.0						

*NEIC **01** 03:00:31.4, 58°.77N×137°.60W, h1km, ML2.6(PGC), ML2.5(AEIC), After PGC.*
PGC 01 03:00:31.4±0.0**, 58°.77N**×**137°.60W, h1**km**, ML2.6**/4**, 7D, 123km Ese of Yakutat, Ak Southeastern Alaska, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLBC	Pleasant Camp	0.94	42	⇓P	Pg	03 00 48.3	-1.0
PLBC				S	Sg	03 01 00.5	-1.0
PLBC	Pleasant Camp	0.94	42	⇓P	Pg	03 00 48.3	-1.0
PLBC				⇑S	Sg	03 01 00.5	-1.0
PNL	Peninsula	1.29	315	ePn	Pn	03 00 55.4	-1.2
PNL				eSg	Sg	03 01 15.7	+2.8
SKAG	Skagway	1.36	58	ePn	Pn	03 00 55.3	-2.1
SKAG				eSg	Sg	03 01 12.6	-2.4
HYT	Haines Junctio	2.06	1	Pn	Pn	03 01 07.3	+0.2
HYT				Sg	Sg	03 01 36.4	-1.2
HYT	Haines Junctio	2.06	1	⇓Pn	Pn	03 01 07.3	+0.2
HYT				⇑Sg	Sg	03 01 36.4	-1.2
SIT	Sitka	2.10	144	ePn	Pn	03 01 07.6	0.0
SIT				eS	Sn	03 01 35.8	+1.5
WHY	Whitehorse	2.34	35	⇓Pn	Pn	03 01 11.1	+0.2
WHY				Pg	Pg	03 01 13.2	-3.0
WHY				Sg	Sg	03 01 44.0	-2.6
WHY	Whitehorse	2.34	35	⇓Pn	Pn	03 01 11.1	+0.2
WHY				⇑Pg	Pg	03 01 13.2	-3.0
WHY				⇓Sg	Sg	03 01 44.0	-2.6
DLBC	Dease Lake	3.97	92	ePn	Pn	03 01 32.8	-0.6
DLBC				eS	Sn	03 02 31.7	+11
DLBC	Dease Lake	3.97	92	⇑Pn	Pn	03 01 32.2	-1.1
DLBC				⇓Sn	Sn	03 02 17.6	-2.9
DLBC				⇑Sg	Sg	03 02 34.2	-4.7
DAWY	Dawson	5.38	352	ePn	Pn	03 01 52.7	0.0
EGAK	Eagle	6.26	346	ePn	Pn	03 02 06.2	+1.4
EGAK				eS	Sn	03 03 20.7	+3.9
BPAW	Bear Paw Mtn.	8.34	315	ePn	Pn	03 02 37.3	+4.1

*ISCJB **01** 03:04:35.9±0.5, 40°.98N±0°.03×34°.96E±0°.04, h10km, Error ellipse: s-maj=4.6km s-min=3.7km az=138.7*
*DDA **01** 03:04:36.0, 40°.96N×35°.00E, h10km±1km, Md2.8*
*ISK **01** 03:04:35.3, 40°.98N×34°.98E, h7km, MD2.9*
*CSEM **01** 03:04:35.8±0.1, 40°.98N×34°.98E, h2km, MD2.8, Error ellipse: s-maj=1.5km s-min=1.2km az=158.0*
ISC 01 03:04:36.1±0.5**, 40°.96N**±0°.03×**34°.99E**±0°.04**, h4**km±8km**, n26, σ0s.58**/41**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTKT	Corum	0.37	204	i P	Pg	03 04 43.7	+0.5
CTKT				i S	Sg	03 04 49.2	+1.2
CTKT	Corum	0.37	204	i P	Pg	03 04 43.7	+0.5
CTKT				i S	Sg	03 04 49.2	+1.2
BYBT	Boyabat	0.53	342	ePG	Pg	03 04 45.9	-0.5
BYBT	Boyabat	0.53	342	ePg	Pg	03 04 45.9	-0.4
DIKM	Dikmen	0.72	17	ePG	Pg	03 04 49.4	-0.5
DIKM				eSG	Sg	03 04 59.6	+0.5
DIKM	Dikmen	0.72	17	ePg	Pg	03 04 49.4	-0.4
DIKM				eSg	Sg	03 04 59.6	+0.5
TOS	Tosya	0.73	276	ePG	Pg	03 04 49.7	-0.4
TOS	Tosya	0.73	276	ePg	Pg	03 04 49.7	-0.4
KVT	Kavak	0.81	81	ePG	Pg	03 04 51.2	-0.4
KVT	Kavak	0.81	81	ePg	Pg	03 04 51.3	-0.3
CORM	Corum	0.83	199	ePG	Pg	03 04 52.0	+0.1
CORM	Corum	0.83	199	ePg	Pg	03 04 52.1	+0.1
ILGA	Ilgaz	0.96	276	i P	Pg	03 04 54.4	-0.2
ILGA				i S	Sg	03 05 06.8	-0.3
ILGA	Ilgaz	0.96	276	i P	Pg	03 04 54.4	-0.2
ILGA				i S	Sg	03 05 06.8	-0.3
ELDT	Eldivan	1.27	249	i P	Pg	03 05 00.1	-0.4
ELDT				i S	Sg	03 05 17.1	0.0
ELDT	Eldivan	1.27	249	i P	Pg	03 05 00.1	-0.4
ELDT				i S	Sg	03 05 17.1	+0.1
BALT	Daday	1.33	296	i P	Pn	03 05 02.1	+0.6
BALT				i S	Sg	03 05 20.3	+1.3
BALT	Daday	1.33	296	i P	Pn	03 05 02.1	+0.6
BALT				i S	Sg	03 05 20.3	+1.3
ERBA	Erbaa	1.37	101	i P	Pn	03 05 01.6	-0.4
ERBA				i S	Sg	03 05 20.7	+0.6
ERBA	Erbaa	1.37	101	i P	Pn	03 05 01.6	-0.4
ERBA				i S	Sg	03 05 20.7	+0.6
CDAG	Cicekdag	1.42	200	i P	Pn	03 05 02.7	+0.1
CDAG				i S	Sg	03 05 21.4	-0.2
CDAG	Cicekdag	1.42	200	i P	Pn	03 05 02.7	0.0
CDAG				i S	Sg	03 05 21.4	-0.2
SVSK	Karacayir	1.86	124	ePN	Pn	03 05 08.7	-0.1
SVSK	Karacayir	1.86	124	ePn	Pn	03 05 08.7	0.0
BBAL	Bala	2.01	226	i P	Pg	03 05 13.4	-1.2
BBAL				i S	Sg	03 05 40.3	-0.3
BBAL	Bala	2.01	226	i P	Pg	03 05 13.4	-1.2

*IDC **01** 03:45:12.7±33.0, 31°.91N×103°.80E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.3/24, mbtmp3.6/3, Error ellipse: s-maj=779.7km s-min=46.9km az=123.0*
*BJI **01** 03:45:20.0, 31°.75N×104°.46E, h12km, ML3.1/9*
ISC 01 03:45:17.1±3.0**, 31°.72N**±0°.09×**104°.4E**±0°.4**, h6**km±32km**, n5, σ0s.65**/7**, mb3.7**/2**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CD2	Chengdu	1.00	216	Pg	Pg	03 45 36.0	-0.3
CD2				Sg	Sg	03 45 49.6	+0.4
CD2				smax			
	comp=N,1μm,0.4s						
CD2				smax			
	comp=E,1μm,0.4s						
LZH	Lanzhou	4.38	354	ePg	Pg	03 46 40.4	-0.7
LZH				Sg	Sg	03 47 38.2	+0.4
LZH				smax			
	comp=N,27nm,0.5s						
LZH				smax			
	comp=E,42nm,0.5s						
KSRS	Korea Array	20.14	67	P	P	03 49 52.6	+0.7
	comp=E,1.1nm,0.7s,baz=256,slow=11,SNR=4.7						
WRA	Warramunga Arr	58.83	147	P	P	03 55 16.1	-0.4
	comp=E,0.3nm,0.3s,mb3.7,baz=336,slow=7.5,SNR=5.4						
ASAR	Alice Springs	61.87	149	P	P	03 55 37.0	-0.2
	comp=E,0.3nm,0.5s,mb3.7,baz=328,slow=6.8,SNR=4.6						

*ISCJB **01** 03:49:14.7±2.2, 7°.5N±0°.1×94°.3E±0°.2, h137km±21km, mb4.1/14, Error ellipse: s-maj=32.9km s-min=11.8km az=154.1*
*IDC **01** 03:49:15.3±3.8, 7°.56N×94°.33E, h120km±37km, mb3.7/10, mb1 3.7/12, mb1mx3.5/25, mbtmp3.7/12, Error ellipse: s-maj=39.4km s-min=16.1km az=78.0*
*NEIC **01** 03:49:15.9±1.6, 7°.52N×94°.38E, h129km±16km, mb4.2/2, Error ellipse: s-maj=21.7km s-min=8.2km az=74.0*
ISC 01 03:49:15.2±1.8**, 7°.5N**±0°.1×**94°.3E**±0°.2**, h123**km±18km**, n28, σ0s.95**/25**, mb4.2**/14**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	6.62	135	P	Pn	03 50 50.4	+0.3
	2.1nm,0.3s,baz=326,slow=15,SNR=5.6						
CMAR	Chiang Mai Arr	11.78	22	P	Pn	03 52 00.1	+0.7
	baz=213,slow=15,SNR=11						
ODAN	Odare	20.30	342	eP	P	03 53 43.1	+1.8
RAMN	Ramite	20.63	340	eP	P	03 53 45.5	+0.5
TAPN	Taplejung	20.66	343	eP	P	03 53 45.3	0.0
	22nm,0.5s						
PKI	Pulchoki	21.62	338	eP	P	03 53 54.3	-1.2
	20nm,0.5s,mb4.7						
PKIN	Phulchoki	21.63	338	eP	P	03 53 54.8	-0.8
	24nm,0.5s,mb4.8						
GUN	Gumba	21.76	340	eP	P	03 53 55.4	-1.6
	25nm,0.6s,mb4.8						
KKN	Kakani	21.86	338	eP	P	03 53 56.1	-2.0
MK31	Makanchi Array	40.44	347	P	P	03 56 41.8	+0.4
MKAR	Makanchi Array	40.44	347	P	P	03 56 40.8	-0.6
	2.0nm,0.5s,mb4.2,baz=160,slow=7.4,SNR=20						
SONM	Songino Array	41.47	12	P	P	03 56 50.8	+1.0
	1.4nm,1.1s,mb3.7,baz=194,slow=12,SNR=3.8						
KURK	Kurchatov	44.96	346	P	P	03 57 18.3	+0.5
	4.4nm,0.5s,mb4.5,baz=175,slow=6.9,SNR=23						
KURK	Kurchatov	44.96	346	P	P	03 57 18.5	+0.7
	1.7nm,0.4s,mb4.1						
ZALV	Zalesovo Beam	46.91	352	P	P	03 57 34.0	+1.0
	2.1nm,0.3s,mb4.3,baz=181,slow=6.7,SNR=7.1						
WRA	Warramunga Arr	47.98	125	P	P	03 57 41.1	-0.8
	0.2nm,0.3s,mb3.4,baz=306,slow=8.6,SNR=3.3						
WRA				pP	pP	03 58 08.4	-2.0
	0.3nm,0.4s,baz=306,slow=8.4,SNR=1.6						
WRAB	Tennant Creek	47.98	125	eP	P	03 57 40.7	-1.2
BVAR	Borovoye Array	49.34	341	P	P	03 57 52.1	+0.3
	2.0nm,0.7s,mb4.2,baz=147,slow=8.3,SNR=9.3						
BRVK	Borovoye	49.41	341	eP	P	03 57 52.6	+0.3
	2.0nm,0.5s,mb4.3						
ASAR	Alice Springs	49.62	130	pP	pP	03 58 20.1	-2.9
	0.4nm,0.6s,baz=301,slow=7.9,SNR=4.1						
AKTK	Aktyubinsk	52.30	331	P	P	03 58 13.3	-0.6
AKTO	Aktyubinsk	52.30	331	P	P	03 58 13.3	-0.6
	1.5nm,0.6s,mb4.2,baz=122,slow=7.8,SNR=6.8						
FINES	FINESS Array B	73.06	332	P	P	04 00 31.8	+0.2
	1.4nm,0.8s,mb3.9,baz=98,slow=5.8,SNR=3.7						
BOSA	Boshof	75.49	238	P	P	04 00 48.1	+1.8
	3.6nm,0.9s,mb4.1,baz=74,slow=4.4,SNR=4.9						
ARCES	ARCESS Array B	75.62	340	P	P	04 00 46.7	+0.4
	1.5nm,0.8s,mb3.8,baz=91,slow=7.3,SNR=3.7						
ARCES	ARCESS Array B	75.62	340	P	P	04 00 46.7	+0.4
CPUP	Villa Florida	147.14	232	PKPbc	PKPbc	04 08 45.0	+0.4
	0.2nm,0.3s,baz=63,slow=4.5,SNR=3.6						
CFAA	Coronel Fontan	151.01	212	PKPbc	PKPbc	04 08 55.0	+0.8
	0.2nm,0.7s,baz=130,slow=6.0,SNR=4.0						

WEL 01 04:03:23.5±0.3**, 36°.54S**×**177°.29E, h237**km±3km**, ML4.0**/5**, Error ellipse: s-maj=5.1km s-min=4.7km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.31	142	PN	Pn	04 03 58.9	-0.1
MXZ				eSN	S	04 04 26.9	0.0
PUZ	Puketiti	1.71	154	PN	Pn	04 04 02.3	+0.1
PUZ				SN	S	04 04 31.8	-0.9
URZ	Urewera	1.73	185	PN	Pn	04 04 02.4	+0.2
URZ				SN	S	04 04 32.8	-0.1
MWZ	Matawai	1.81	174	PN	Pn	04 04 03.4	+0.4
MWZ				SN	S	04 04 33.9	-0.3
CNGZ	Carnagh Statio	2.08	160	PN	Pn	04 04 06.1	+0.6
RAHZ	Arahi	2.38	184	PN	Pn	04 04 08.9	+0.4
KNZ	Kokohu	2.50	173	PN	Pn	04 04 09.5	-0.1
NMHZ	Naumai	2.59	188	PN	Pn	04 04 11.3	+0.7
MHGZ	Mahia Peninsul	2.66	170	PN	Pn	04 04 11.5	+0.2
BKZ	Black Stump Fm	2.70	193	PN	Pn	04 04 11.4	-0.4
OTVZ	Oturere	2.92	206	PN	Pn	04 04 14.4	+0.3
MCHZ	McNeill Hill	2.94	189	PN	Pn	04 04 14.3	0.0
TUVZ	Tukino	3.02	205	PN	Pn	04 04 15.2	0.0
WNVZ	Wahianoa	3.09	205	ePN	Pn	04 04 15.9	-0.1
MOVZ	Moawhango	3.11	203	PN	Pn	04 04 16.5	+0.2
KAHZ	Kahuranaki	3.27	186	PN	Pn	04 04 17.7	-0.4
PNHZ	Pukenui	3.48	194	PN	Pn	04 04 19.3	-1.1
PXZ	Pawanui	3.51	185	PN	Pn	04 04 19.5	-1.2
PRHZ	Porangahau	3.76	188	PN	Pn	04 04 22.7	-1.0
DVHZ	Dannevirke	3.86	193	PN	Pn	04 04 23.1	-1.8
POWZ	Post Office Ro	4.03	197	PN	Pn	04 04 25.7	-1.2
BFZ	Birch Farm	4.22	191	PN	Pn	04 04 27.4	-1.8
MRZ	Mangatainoka R	4.33	198	PN	Pn	04 04 28.4	-2.1
HOWZ	Holdsworth Sta	4.57	197	PN	Pn	04 04 31.6	-1.8
OGWZ	Otaki Gorge	4.59	201	PN	Pn	04 04 31.3	-2.3
KIW	Kapiti Island	4.70	203	PN	Pn	04 04 32.9	-2.2
PLWZ	Palliser	5.27	197	PN	Pn	04 04 39.7	-2.3
TUWZ	Tuamarina	5.54	207	PN	Pn	04 04 43.4	-2.0
NNZ	Nelson	5.58	212	PN	Pn	04 04 44.2	-1.8
QRZ	Quartz Range	5.68	220	ePN	Pn	04 04 44.5	-2.6
THZ	Tophouse	6.23	212	PN	Pn	04 04 52.4	-1.7
KHZ	Kahutara	6.55	205	PN	Pn	04 04 55.9	-2.2
DSZ	Denniston Nort	6.73	218	ePN	Pn	04 04 57.1	-3.3
LTZ	Lake Taylor	7.34	210	ePN	Pn	04 05 05.7	-2.5
MQZ	McQueen's Vall	7.99	205	PN	Pn	04 05 12.8	-3.7
FOZ	Fox Glacier	9.12	217	ePN	Pn	04 05 26.1	-4.8
ODZ	Otahua Downs	9.88	209	PN	Pn	04 05 38.3	-2.1

*ISCJB **01** 04:04:50.1±0.4, 58°.17S±0°.08×22°.0W±0°.1, h10km, mb4.6/19, MS3.9/7, Error ellipse: s-maj=13.2km s-min=9.6km az=34.2*
*IDC **01** 04:04:50.2±0.5, 58°.17S×22°.01W, h0km, mb4.7/13, mb1 4.7/13, mb1mx4.6/18, mbtmp4.6/13, MS3.7/6, Ms1 3.7/6, ms1mx3.6/15, Error ellipse: s-maj=20.2km s-min=13.9km az=21.0*
*NEIC **01** 04:04:54.7±3.8, 58°.13S×21°.98W, h30km±25km, mb4.8/10, Error ellipse: s-maj=9.7km s-min=6.8km az=205.0*
ISC 01 04:04:52.0±0.4**, 58°.18S**±0°.08×**22°.0W**±0°.1**, h10**km**, n61, σ0s.97**/30**, mb4.6**/18**, MS3.9**/7**, East of South Sandwich Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	13.79	161	e	Pn	04 08 05.7	-1.5
MAIT	Maitri	18.87	145	eP	Pn	04 09 07.6	-4.9
USHA	Ushuaia	25.47	257	P	P	04 10 18.9	-0.9
	12nm,0.9s,mb4.4,baz=343,slow=9.6,SNR=4.2						
QSPA	South Pole Qui	32.06	180	P	P	04 11 19.6	+1.3
	6.8nm,0.9s,mb4.5,baz=210,slow=6.5,SNR=16						
QSPA				PcP	PcP	04 14 07.6	+0.3
	5.5nm,0.9s,baz=130,slow=5.2,SNR=3.0						
TRQA	Tornquist	32.76	290	eP	P	04 11 24.3	-0.5
PLCA	Paso Flores	35.16	278	P	P	04 11 44.6	-1.0
	15nm,0.8s,mb5.0,baz=142,slow=7.2,SNR=28						
PLCA				LR	LR	04 26 59.3	
	comp=Z,58nm,18.4s,MS3.4,baz=289,slow=38						
PLCA	Paso Flores	35.16	278	eP	P	04 11 44.5	-1.0
	16nm,0.9s,mb4.9						
PLCA				LR	LR	04 26 59.3	
MAW	Mawson	36.71	140	P	P	04 11 58.9	+0.3
	7.5nm,1.0s,mb4.5,baz=250,slow=10,SNR=5.3						
MAW				PcP	PcP	04 14 21.4	+0.7
	3.5nm,0.8s,baz=235,slow=4.6,SNR=4.7						
MAW	Mawson	36.71	140	eP	P	04 11 58.5	-0.1
	1.2nm,1.1s,mb3.6						
MAW				PcP	PcP	04 14 21.4	+0.7
CPUP	Villa Florida	40.37	307	P	P	04 12 30.2	+0.5
	8.5nm,0.8s,mb4.5,baz=136,slow=7.5,SNR=33						
CPUP				LR	LR	04 25 38.5	
	comp=Z,43nm,20.9s,MS3.3,baz=328,slow=31						
CPUP	Villa Florida	40.37	307	eP	P	04 12 29.9	+0.2
	30nm,0.8s,mb5.1						
CPUP				LR	LR	04 25 38.5	
CFAA	Coronel Fontan	41.00	290	P	P	04 12 32.9	-2.0
	0.7nm,0.8s,mb3.4,baz=155,slow=8.0,SNR=15						
CFAA	Coronel Fontan	41.00	290	P	P	04 12 32.9	-2.0

BOSA Boshof 43.91 69 P P 04 12 58.8 +0.2
2.7nm,0.8s,mb4.1,baz=250,slow=13,SNR=11
BOSA Boshof 43.91 69 eP P 04 12 58.6 +0.1
4.6nm,0.8s,mb4.3
SBA Scott Base 44.12 183 P P 04 13 01.5 +1.7
23nm,1.4s,mb4.7
LBTB Lobatse 47.07 66 P P 04 13 23.3 -0.4
4.0nm,0.8s,mb4.4,baz=218,slow=8.4,SNR=7.2
LBTB Lobatse 47.07 66 eP P 04 13 23.9 +0.2
4.5nm,0.7s,mb4.5
TSUM Tsumeb 48.44 54 P P 04 13 34.1 -0.2
2.8nm,0.9s,mb4.3,baz=203,slow=8.1,SNR=6.5
TSUM Tsumeb 48.44 54 P P 04 13 34.1 -0.2
CASY Casey 50.89 157 eP P 04 13 53.1 +0.6
13nm,0.9s,mb4.9
LPAZ La Paz 53.93 301 P P 04 14 17.4 +1.8
26nm,0.7s,mb5.3,baz=150,slow=5.4,SNR=160
LPAZ La Paz 53.93 301 eP P 04 14 17.4 +1.8
30nm,0.7s,mb5.3
LSZ Lusaka 56.65 62 eP P 04 14 34.7 -0.5
5.4nm,0.8s,mb4.6
NNA Nana 61.76 295 eP P 04 15 11.3 +0.7
13nm,0.8s,mb5.1
DBIC Dimbokro 66.10 19 LR LR 04 36 39.9
comp=Z,98nm,21.0s,MS4.0,baz=82,slow=29
OTAV Otavalo 73.20 299 eP P 04 16 24.1 +1.1
4.8nm,0.8s,mb4.5
ROSC El Rosal 75.46 305 P P 04 16 36.2 +0.1
8.4nm,0.7s,mb4.8,baz=90,slow=21,SNR=6.1
STKA Stephens Creek 89.23 166 P P 04 17 47.2 -0.7
8.4nm,0.9s,mb5.1,baz=188,slow=4.3,SNR=7.2
STKA LR LR 04 54 56.5
comp=Z,170nm,18.2s,MS4.5,baz=205,slow=34
STKA Stephens Creek 89.23 166 P P 04 17 47.2 -0.7
STKA LR LR 04 54 56.5
ASAR Alice Springs 96.02 158 P P 04 18 18.8 -0.6
2.0nm,0.9s,mb4.6,baz=203,slow=3.7,SNR=11
KEST Kesra 97.17 25 LR LR 04 55 39.0
comp=Z,31nm,21.3s,MS3.8,baz=229,slow=31
ESDC Sonseca Array 98.65 14 LR LR 05 00 05.0
comp=Z,42nm,21.4s,MS3.9,baz=310,slow=34
WRA Warramunga Arr 99.72 157 P Pdif 04 18 35.0 -1.2
0.9nm,0.8s,baz=198,slow=3.9,SNR=3.0
CMAR Chiang Mai Arr 121.68 107 PKP PKPdf 04 23 45.5 -0.3
3.2nm,0.8s,baz=232,slow=4.0,SNR=8.0
PDAR Pinedale Array 123.88 298 PKP PKPdf 04 23 48.4 -0.8
0.5nm,0.6s,baz=139,slow=4.9,SNR=5.1
HWUT Hardware Ranch 123.94 295 ePKPdf PKPdf 04 23 49.2 -0.1
NVAR Mina Array Bea 124.82 288 PKP PKPdf 04 23 51.5 +0.3
0.9nm,0.7s,baz=165,slow=3.9,SNR=4.8
FINES FINESS Array B 125.00 26 PKP PKPdf 04 23 50.4 -0.3
1.8nm,0.7s,baz=202,slow=4.1,SNR=5.9
MSO Missoula 128.99 298 ePKPdf PKPdf 04 23 58.5 -0.3
BMO Blue Mountains 129.14 294 ePKPdf PKPdf 04 23 59.5 +0.4
ARCES ARCESS Array B 131.91 20 PKP PKPdf 04 24 03.0 -0.6
2.0nm,0.8s,baz=325,slow=1.5,SNR=5.2
BVAR Borovoye Array 133.55 56 PKP PKPdf 04 24 07.5 +0.2
0.7nm,0.6s,baz=234,slow=32,SNR=5.2
MKAR Makanchi Array 134.90 70 PKP PKPdf 04 24 09.3 -0.7
0.8nm,0.7s,baz=132,slow=1.8,SNR=9
MKAR Makanchi Array 134.90 70 PKP PKPdf 04 24 09.3 -0.7
GTA Gaotai 138.80 91 ePKP PKPdf 04 24 19.7 +2.2
GTA sPKP 04 24 27.5
YKA Yellowknife Ar 139.69 314 PKP PKPdf 04 24 17.7 -0.6
3.6nm,0.8s,baz=126,slow=2.4,SNR=6.4
ZALV Zalesovo Beam 140.76 63 PKhKP 04 24 14.7
0.5nm,0.4s,baz=214,slow=1.6,SNR=3.8
ZALV PKP PKPdf 04 24 21.4 +0.9
0.4nm,0.3s,baz=219,slow=1.8,SNR=3.4
HHC Hu-ho-hao-te 146.03 100 ePKPbc PKPbc 04 24 30.7 -0.4
HHC PP PP 04 27 57.4 +3.9
HHC PKS 04 28 04.7
HHC SKS SKSdf 04 31 38.3 -0.5
HHC SKKS SKKSac 04 34 46.2 +1.5
HHC SS SS 04 46 51.2 +2.6
HHC AMB AMB
comp=Z,100nm,9.2s
HHC LR LR
comp=N,120nm,20.0s,MS4.8
HHC LR LR
comp=E,98nm,20.2s,MS4.8
HHC LR LR
comp=Z,120nm,20.8s,MS4.7
BJI Beijing 147.82 106 PKPbc PKPbc 04 24 35.6 -0.6
SONM Songino Array 148.02 86 PKPbc PKPbc 04 24 36.0 -0.5
comp=Z,9.4nm,0.9s,baz=218,slow=3.2,SNR=40
ULN Ulaanbaatar 148.38 86 ePKPbc PKPbc 04 24 37.3 -0.2
INK Inuvik 149.28 317 PKPbc PKPbc 04 24 38.4 -0.7
comp=Z,9.5nm,0.6s,baz=80,slow=2.8,SNR=32
INK Inuvik 149.28 317 ePKPbc PKPbc 04 24 38.5 -0.7
DAWY Dawson 150.35 308 ePKPbc PKPbc 04 24 41.1 -0.7
EGAK Eagle 151.29 309 ePKPbc PKPbc 04 24 43.1 -0.9
KSRS Korea Array 151.44 123 PKPbc PKPbc 04 24 44.9 -0.3
comp=Z,3.5nm,0.8s,baz=205,slow=2.1,SNR=15
BMRM Bremner River 151.62 300 ePKPbc PKPbc 04 24 45.1 +0.3
MJAR Matsushiro Arr 154.71 140 PKPbc PKPbc 04 24 51.9 -0.6
comp=Z,0.6nm,0.3s,baz=242,slow=7.8,SNR=4.5
MJAR PKPab PKPab 04 25 07.0 -0.5
comp=Z,0.7nm,0.4s,baz=195,slow=3.8,SNR=4.6
BPAW Bear Paw Mtn. 155.29 305 ePKPbc PKPdf 04 24 52.5 +8.7
BPAW ePKPab PKPab 04 25 09.2 +0.1
PETK Petropavlovsk- 174.91 178 PKPab PKPab 04 26 35.0 -0.5
comp=Z,2.1nm,0.8s,baz=160,slow=6.0,SNR=3.5

CASC 01 04:45:26.9±1.6, 14.°61N×92.°36W, h87km±20km, MD3.7
ISCJB 01 04:45:28.4±0.8, 14.°76N±0.°09×92.°25W±0.°06, h82km±8km, Error ellipse: s-maj=17.3km s-min=4.8km az=33.3
MEX 01 04:45:29.3±0.6, 14.°81N×92.°06W, h81km±7km, MD4.4
NEIC 01 04:45:29.2, 14.°84N×92.°02W, h80km, MD4.4(MEX), After MEX.
ISC 01 04:45:29.6±0.8, 14.°77N±0.°09×92.°24W±0.°07, h74km±8km, n17, σ0.s97/26, 1C, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.14	351	eP	Pn	04 45 39.7	-0.8
THIG				iS	Sn	04 45 48.4	0.0
JAT	Jato	0.74	128	eP	Pn	04 45 44.3	-1.0
TP2	Tecpan 2	1.18	89	⇑eP	Pn	04 45 51.4	+0.8
PCIG		1.32	315	eP	Pn	04 45 52.4	0.0
PCIG				eS	Sn	04 46 10.5	+1.1
FUG	Fuego 3	1.40	103	eP	Pn	04 45 52.9	-0.4
PCG	Pacaya	1.63	103	eS	Sn	04 46 17.7	+1.0
TGIG		2.17	337	eP	Pn	04 46 03.2	-0.4
TGIG				eS	Sn	04 46 28.4	-1.1
MRL	Marmol	2.48	83	eP	Pn	04 46 08.3	+0.4
LBRS	Las Brisas	3.27	108	eP	Pn	04 46 19.6	-1.7
LFRS	El Faro	3.29	110	eP	Pn	04 46 18.3	-0.5
LFRS				eS	Sn	04 46 58.5	+1.6
CMIG	Matias Romero	3.43	313	eP	Pn	04 46 21.4	+0.7
CMIG				eS	Sn	04 47 02.3	+2.1
CMIG	Matias Romero	3.43	313	eP	Pn	04 46 21.4	+0.7
CMIG				iS	Sn	04 47 01.1	+0.9
SNVI	San Vicente	3.50	109	eP	Pn	04 46 20.2	-1.5
SNVI				eS	Sn	04 47 03.4	+1.4
HUIG	Huatulco	3.86	285	eP	Pn	04 46 26.7	+0.1
HUIG				eS	Sn	04 47 06.6	-4.2
HUIG	Huatulco	3.86	285	eP	Pn	04 46 26.7	+0.1
HUIG				iS	Sn	04 47 15.2	+4.5
TEIG	Tepich	6.61	34	ePn	Pn	04 47 03.3	-1.0
	17nm,0.5s						
JTS	JuntasAbangare	8.40	121	ePn	Pn	04 47 28.5	-0.2

PGC 01 04:55:42.5±0.8, 50.°02N×128.°71W, h10km, ML2.9/8, Mw3.6, 3D, 119km Wsw of Pt. Hardy, Bc Vancouver Island Region, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BPBC	Brooks Peninsu	0.62	77	⇑P	Pg	04 55 54.1	-0.4
BPBC				⇓S	Sg	04 56 01.9	-0.8
HOLB	Holberg	0.72	31	⇑P	Pg	04 55 56.0	-0.5
HOLB				⇑S	Sg	04 56 04.7	-1.3
EDB	Eliza Dome	1.04	97	⇑P	Pg	04 56 00.5	-2.0
EDB				⇑S	Sg	04 56 13.9	-2.0
MAYB	Maynard	1.06	68	⇑P	Pg	04 56 00.5	-2.4
MAYB				⇑S	Sg	04 56 13.7	-3.0
PHC	Port Hardy	1.07	49	⇑P	Pg	04 56 00.9	-2.2
PHC				⇓S	Sg	04 56 13.7	-3.3
WOSB	Woss	1.39	83	⇑Pn	Pn	04 56 06.0	-1.9
WOSB				⇑Sn	Sn	04 56 22.4	-3.8
ETB	Estevan Point	1.55	114	⇓Pn	Pn	04 56 08.9	-1.3
GDR	Gold River	1.75	97	Pn	Pn	04 56 11.1	-1.8
BBB	Bella Bella	2.20	10	⇑Pn	Pn	04 56 18.0	-1.1
BBB				⇑Sn	Sn	04 56 41.9	-4.4

MDD 01 04:55:54.5±2.2, 36.°79N×12.°47W, h0km, mb3.7/9, Error ellipse: s-maj=18.7km s-min=17.5km az=52.0, PRIMO
NEIC 01 04:55:54.4, 36.°79N×12.°45W, h0km, MG3.7(MDD), After MDD.
CSEM 01 04:55:56.9±0.5, 36.°91N×12.°27W, h10km, ML3.0/9, Error ellipse: s-maj=8.8km s-min=8.3km az=32.0
INMG 01 04:55:56.0±0.8, 36.°60N×12.°83W, h10km, ML2.1, Error ellipse: s-maj=5.9km s-min=3.3km az=124.0
ISC 01 04:55:57.1±1.2, 36.°97N±0.°06×12.°28W±0.°07, h10km, n76, σ0.s99/128, 3C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	2.77	86	ePn	Pn	04 56 41.0	-0.5
PFVI				eSn	Sn	04 57 15.1	+0.1
PFVI				A		04 57 16.4	
	2.0nm,0.1s						
PFVI	Vila Bisbo	2.77	86	⇑P	Pn	04 56 41.0	-0.5
PFVI				S	Sn	04 57 15.2	+0.2
PFVI	Vila Bisbo	2.77	86	⇑P	Pn	04 56 41.0	-0.5
	3.3nm,0.1s,SNR=18						
PFVI				S	Sn	04 57 15.2	+0.2
	4.3nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	2.77	86	⇑P	Pn	04 56 41.0	-0.5
	3.3nm,0.1s,SNR=18						
PFVI				S	Sn	04 57 15.2	+0.2
	4.3nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	2.77	86	P	Pn	04 56 41.0	-0.5
	3.3nm,0.1s,SNR=18						
PFVI				eSn	Sn	04 57 15.1	+0.1
	2.0nm,0.1s						
PMAFR	Mafra	3.09	49	eSn	Sn	04 57 26.2	+3.3
PMAFR				A		04 57 27.5	
	19nm,0.2s						
PMAFR	Mafra	3.09	49	P	Pn	04 56 47.6	+1.6
	0.6nm,0.1s,SNR=4.0						
PMAFR				S	Sn	04 57 26.3	+3.3
	18nm,0.2s,SNR=19						
PMAFR	Mafra	3.09	49	P	Pn	04 56 47.6	+1.6
	0.6nm,0.1s,SNR=4.0						
PMAFR				S	Sn	04 57 26.3	+3.3
	18nm,0.2s,SNR=19						
PMAFR	Mafra	3.09	49	P	Pn	04 56 46.6	+0.7
	0.6nm,0.1s,SNR=4.0						
PMAFR				S	Sn	04 57 24.2	+1.3
	18nm,0.2s,SNR=19						
PMAFR				eSn	Sn	04 57 26.2	+3.3
	19nm,0.2s						
PCVE	Castro Verde	3.45	78	ePn	Pn	04 56 50.8	0.0
PCVE				eSn	Sn	04 57 32.2	+0.5
PCVE				A		04 57 36.1	
	1.2nm,0.1s						
PCVE	Castro Verde	3.45	78	P	Pn	04 56 50.8	0.0
PCVE				S	Sn	04 57 32.2	+0.5
	1.2nm,0.1s						
PCVE	Castro Verde	3.45	78	P	Pn	04 56 50.8	0.0
PCVE				S	Sn	04 57 32.2	+0.5
	1.2nm,0.1s						
PCVE	Castro Verde	3.45	78	ePn	Pn	04 56 50.8	0.0
PCVE				eSn	Sn	04 57 32.2	+0.5
	1.2nm,0.1s						
MOE	Montemor	3.48	62	eSn	Sn	04 57 34.1	+1.5
MOE	Montemor	3.48	62	eSn	Sn	04 57 34.1	+1.5
PBDV	Barranco-do-Ve	3.49	84	ePn	Pn	04 56 51.4	0.0
PBDV				eSn	Sn	04 57 34.6	+1.8
PBDV				A		04 57 49.5	
	3.5nm,0.8s						
PBDV	Barranco-do-Ve	3.49	84	P	Pn	04 56 51.4	0.0
PBDV				S	Sn	04 57 34.6	+1.8
	3.5nm,0.8s						
PBDV	Barranco-do-Ve	3.49	84	P	Pn	04 56 51.4	0.0
PBDV				S	Sn	04 57 34.6	+1.8
	3.5nm,0.8s						
PBDV	Barranco-do-Ve	3.49	84	ePn	Pn	04 56 51.4	0.0
PBDV				eSn	Sn	04 57 34.6	+1.8
	3.5nm,0.8s						
PVAQ	Vaqueiros	3.67	82	ePn	Pn	04 56 54.7	+0.8
PVAQ				eSn	Sn	04 57 37.1	-0.1
PVAQ				A		04 57 43.7	
	1.3nm,0.1s						
PVAQ	Vaqueiros	3.67	82	P	Pn	04 56 54.7	+0.8
PVAQ				S	Sn	04 57 37.1	-0.1
	1.3nm,0.1s						
PVAQ	Vaqueiros	3.67	82	P	Pn	04 56 54.7	+0.8
PVAQ				S	Sn	04 57 37.1	-0.1
	1.3nm,0.1s						
PVAQ	Vaqueiros	3.67	82	ePn	Pn	04 56 54.7	+0.8
PVAQ				eSn	Sn	04 57 37.1	-0.1
	1.3nm,0.1s						
EVO	Evora	3.73	64	eSn	Sn	04 57 40.0	+1.4
EVO				A		04 57 41.8	
	4.2nm,0.1s						
EVO	Evora	3.73	64	S	Sn	04 57 40.0	+1.4
	4.2nm,0.1s						
EVO	Evora	3.73	64	S	Sn	04 57 40.0	+1.4
	4.2nm,0.1s						
EVO	Evora	3.73	64	eSn	Sn	04 57 40.0	+1.4
	4.2nm,0.1s						
EGRO	El Granado	3.87	80	P	Pn	04 56 56.0	-0.6
EGRO				S	Sn	04 57 41.6	-0.6
EGRO	El Granado	3.87	80	P	Pn	04 56 56.0	-0.6
	0.5nm,0.1s,SNR=4.0						
EGRO				S	Sn	04 57 41.6	-0.6
	0.7nm,0.1s,SNR=4.0						
EGRO	El Granado	3.87	80	P	Pn	04 56 56.0	-0.6
	0.5nm,0.1s,SNR=4.0						
EGRO				S	Sn	04 57 41.6	-0.6
	0.7nm,0.1s,SNR=4.0						
EGRO	El Granado	3.87	80	P	Pn	04 56 56.0	-0.6
	0.5nm,0.1s,SNR=7.9						
EGRO				S	Sn	04 57 41.6	-0.6
	0.7nm,0.1s,SNR=7.9						
PESTR	Estremoz	4.17	62	eSn	Sn	04 57 50.3	+0.8
PESTR				A		04 57 54.0	
	2.0nm,0.7s						
PESTR	Estremoz	4.17	62	S	Sn	04 57 50.3	+0.8
	2.0nm,0.7s						
PESTR	Estremoz	4.17	62	S	Sn	04 57 50.3	+0.8
	2.0nm,0.7s						
PESTR	Estremoz	4.17	62	eSn	Sn	04 57 50.3	+0.8
	2.0nm,0.7s						
PBAR	Barrancos	4.34	72	eSn	Sn	04 57 53.4	-0.2
PBAR				A		04 58 01.6	
	0.9nm,0.2s						
PBAR	Barrancos	4.34	72	S	Sn	04 57 53.4	-0.2
	0.9nm,0.2s						
PBAR	Barrancos	4.34	72	S	Sn	04 57 53.4	-0.2
	0.9nm,0.2s						
PBAR	Barrancos	4.34	72	eSn	Sn	04 57 53.4	-0.2
	0.9nm,0.2s						
EBAD	Badajoz	4.54	65	P	Pn	04 57 06.0	+0.2
EBAD				S	Sn	04 57 58.9	+0.3
EBAD	Badajoz	4.54	65	P	Pn	04 57 06.0	+0.2
	0.2nm,0.1s,SNR=6.4						
EBAD				S	Sn	04 57 58.9	+0.3
	1.1nm,0.1s,SNR=7.9						
EBAD	Badajoz	4.54	65	P	Pn	04 57 06.0	+0.2
	0.2nm,0.1s,SNR=6.4						
EBAD				S	Sn	04 57 58.9	+0.3
	1.1nm,0.1s,SNR=7.9						
EBAD	Badajoz	4.54	65	P	Pn	04 57 06.0	+0.2
	0.2nm,0.1s,SNR=6.4						
EBAD				S	Sn	04 57 58.9	+0.3
	1.1nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	4.54	78	P	Pn	04 57 05.2	-0.7
EMIN				S	Sn	04 57 56.6	-2.1
EMIN	Mina Concepcio	4.54	78	P	Pn	04 57 05.2	-0.7
	0.2nm,0.1s,SNR=7.9						
EMIN				S	Sn	04 57 56.6	-2.1
	0.3nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	4.54	78	P	Pn	04 57 05.2	-0.7
	0.2nm,0.1s,SNR=7.9						
EMIN				S	Sn	04 57 56.6	-2.1
	0.3nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	4.54	78	P	Pn	04 57 05.2	-0.6
	0.2nm,0.1s,SNR=7.9						
EMIN				S	Sn	04 57 56.6	-2.1
	0.3nm,0.1s,SNR=7.9						
PMRV	Marv??o	4.57	56	ePn	Pn	04 57 07.1	+0.9
PMRV				eSn	Sn	04 57 59.9	+0.5
PMRV				A		04 58 01.1	
	1.3nm,0.2s						
PMRV	Marv??o	4.57	56	P	Pn	04 57 07.1	+0.9
PMRV				Sn	Sn	04 57 59.9	+0.5
	1.3nm,0.2s						
PMRV	Marv??o	4.57	56	P	Pn	04 57 07.1	+0.9
PMRV				Sn	Sn	04 57 59.9	+0.5
	1.3nm,0.2s						
PMRV	Marv??o	4.57	56	ePn	Pn	04 57 07.1	+0.9
PMRV				eSn	Sn	04 57 59.9	+0.5
	1.3nm,0.2s						
ECAB	El Cabril	5.57	76	P	Pn	04 57 19.0	-1.0
ECAB				S	Sn	04 58 22.5	-1.4
ECAB	El Cabril	5.57	76	P	Pn	04 57 20.4	+0.4
	0.3nm,0.0s,SNR=7.9						
ECAB				S	Sn	04 58 22.5	-1.4
	0.5nm,0.1s,SNR=7.9						
ECAB	El Cabril	5.57	76	P	Pn	04 57 20.4	+0.4
	0.3nm,0.0s,SNR=7.9						
ECAB				S	Sn	04 58 22.5	-1.4
	0.5nm,0.1s,SNR=7.9						
ECAB	El Cabril	5.57	76	P	Pn	04 57 19.0	-1.0
	0.3nm,0.0s,SNR=7.9						
ECAB				S	Sn	04 58 22.5	-1.5
	0.5nm,0.1s,SNR=7.9						
EPLA	Plasencia	5.76	56	S	Sn	04 58 28.4	-0.4
	0.3nm,0.1s,SNR=7.9						
EPLA	Plasencia	5.76	56	S	Sn	04 58 28.4	-0.4
	0.3nm,0.1s,SNR=7.9						
EPLA	Plasencia	5.76	56	S	Sn	04 58 28.4	-0.4
	0.3nm,0.1s,SNR=7.9						
MVO	Moncorvo	5.85	43	S	Sn	04 58 29.9	-1.1
	1.0nm,0.1s,SNR=7.9						
MVO	Moncorvo	5.85	43	S	Sn	04 58 29.9	-1.1
	1.0nm,0.1s,SNR=7.9						
MVO	Moncorvo	5.85	43	S	Sn	04 58 29.9	-1.1
	1.0nm,0.1s,SNR=7.9						
ELOB	Lobios	5.88	32	S	Sn	04 58 30.5	-1.3
	1.2nm,0.1s,SNR=7.9						
ELOB	Lobios	5.88	32	S	Sn	04 58 30.5	-1.3
	1.2nm,0.1s,SNR=7.9						
ELOB	Lobios	5.88	32	S	Sn	04 58 30.5	-1.3
	1.2nm,0.1s,SNR=7.9						
EADA	Adamuz	6.24	77	P	Pn	04 57 28.6	-0.6
EADA				S	Sn	04 58 39.2	-1.3
EADA	Adamuz	6.24	77	P	Pn	04 57 28.6	-0.6
	0.3nm,0.1s,SNR=7.9						
EADA				S	Sn	04 58 39.2	-1.3
	0.3nm,0.1s,SNR=7.9						
EADA	Adamuz	6.24	77	P	Pn	04 57 28.6	-0.6
	0.3nm,0.1s,SNR=7.9						
EADA				S	Sn	04 58 39.2	-1.3
	0.3nm,0.1s,SNR=7.9						
EADA	Adamuz	6.24	77	P	Pn	04 57 28.6	-0.6
	0.3nm,0.1s,SNR=7.9						
EADA				S	Sn	04 58 39.2	-1.3
	0.3nm,0.1s,SNR=7.9						
EMAZ	Mazaricos	6.49	22	P	Pn	04 57 32.9	+0.3
EMAZ				S	Sn	04 58 43.5	-3.2
EMAZ	Mazaricos	6.49	22	P	Pn	04 57 32.6	0.0
	0.2nm,0.1s,SNR=4.0						
EMAZ				S	Sn	04 58 43.5	-3.2
	2.5nm,0.1s,SNR=5.9						
EMAZ	Mazaricos	6.49	22	P	Pn	04 57 32.6	0.0
	0.2nm,0.1s,SNR=4.0						
EMAZ				S	Sn	04 58 43.5	-3.2
	2.5nm,0.1s,SNR=5.9						
EMAZ	Mazaricos	6.49	22	P	Pn	04 57 32.9	+0.3
	0.2nm,0.1s,SNR=4.0						
ECAL	Calabor	6.56	39	P	Pn	04 57 34.4	+0.8
ECAL				S	Sn	04 58 48.8	+0.3
ECAL	Calabor	6.56	39	P	Pn	04 57 33.6	0.0
	0.1nm,0.1s,SNR=4.0						
ECAL				S	Sn	04 58 48.8	+0.3
	0.8nm,0.2s,SNR=7.9						
ECAL	Calabor	6.56	39	P	Pn	04 57 33.6	0.0
	0.1nm,0.1s,SNR=4.0						
ECAL				S	Sn	04 58 48.8	+0.3
	0.8nm,0.2s,SNR=7.9						
ECAL	Calabor	6.56	39	P	Pn	04 57 34.4	+0.8
	0.1nm,0.1s,SNR=4.0						
ECAL				S	Sn	04 58 48.8	+0.3
	0.8nm,0.2s,SNR=7.9						

PGC 01 04:56:14.4±0.0, 58.°76N×137.°49W, h1km, ML2.6/5, 129km Ese of Yakutat, Ak Southeastern Alaska
NEIC 01 04:56:14.7, 58.°81N×137.°40W, h9km, ML2.6(PGC), ML2.5(AEIC), 2C-6D, After AEIC., Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLBC	Pleasant Camp	0.84	39	⇓P	Pg	04 56 30.6	-0.3
PLBC				S	Sg	04 56 42.6	+0.8
PLBC	Pleasant Camp	0.84	39	⇓P	Pg	04 56 30.6	-0.3
PLBC				⇓S	Sg	04 56 42.6	+0.8
SKAG	Skagway	1.25	58	ePn	Pn	04 56 37.4	-1.0
SKAG				eS	Sb	04 56 54.8	0.0
PNL	Peninsula	1.34	311	ePn	Pn	04 56 37.4	-2.2
PNL				eS	Sb	04 56 57.9	+0.6
HYT	Haines Junctio	2.02	359	⇑Pn	Pn	04 56 49.7	+0.7
HYT				S	Sn	04 57 17.7	+3.3
HYT	Haines Junctio	2.02	359	⇑Pn	Pn	04 56 49.7	+0.7
HYT				⇑Sg	Sg	04 57 17.7	-2.0
SIT	Sitka	2.08	147	ePn	Pn	04 56 49.7	+0.1
SIT				eS	Sn	04 57 15.1	-0.5
WHY	Whitehorse	2.25	33	⇓Pn	Pn	04 56 53.5	+1.4
WHY				⇓Pg	Pg	04 56 55.6	-2.3
WHY				⇓Sg	Sg	04 57 26.4	-0.6
DLBC	Dease Lake	3.88	92	⇑Pn	Pn	04 57 14.5	+0.2
DLBC				Sg	Sg	04 58 15.9	-3.1
DLBC	Dease Lake	3.88	92	⇑Pn	Pn	04 57 14.5	+0.2
DLBC				⇑Sg	Sg	04 58 15.9	-3.1
BMRM	Bremner River	4.23	304	Pn	Pn	04 57 19.9	+0.7
DAWY	Dawson	5.36	351	ePn	Pn	04 57 35.9	+1.1
DAWY				eS	Sn	04 58 36.8	+0.2
DAWY	Dawson	5.36	351	⇑Pn	Pn	04 57 36.0	+1.2
DAWY				⇑Sg	Sg	04 59 01.4	-5.3
EGAK	Eagle	6.25	345	ePn	Pn	04 57 46.1	-0.8
EGAK				eSn	Sn	04 58 53.5	-4.9

ISCJB 01 05:01:47.3±2.5, 18.°60N±0.°07×146.°4E±0.°2, h87km±22km, mb4.0/19, Error ellipse: s-maj=25.4km s-min=12.0km az=172.0
IDC 01 05:01:48.0±3.9, 18.°63N×146.°41E, h77km±35km, mb3.7/13, mb1 3.9/15, mb1mx3.8/25, mbtmp3.8/15, MS3.2/2, Ms1 3.3/2, ms1mx2.7/23, Error ellipse: s-maj=29.1km s-min=13.6km az=81.0
NEIC 01 05:01:48.8±1.7, 18.°58N×146.°47E, h87km±15km, mb4.2/6, Error ellipse: s-maj=16.5km s-min=8.3km az=84.0
ISC 01 05:01:47.9±2.1, 18.°63N±0.°07×146.°4E±0.°2, h78km±19km, n29, σ0.s82/25, mb4.0/19, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	5.23	197	P	Pn	05 03 04.2	+0.6
GUMO	Guam	5.23	197	ePn	Pn	05 03 04.4	+0.7
MJAR	Matsushiro Arr	19.26	340	P	P	05 06 06.7	-1.2
	0.4nm,0.3s,baz=170,slow=11,SNR=5.6						
MJAR	Matsushiro Arr	19.26	340	P	Pn	05 06 06.7	-1.2
KSRS	Korea Array	24.80	323	P	P	05 07 02.1	-0.5
	1.6nm,0.7s,mb3.6,baz=149,slow=9.1,SNR=6.2						
COEN	Coen	32.54	186	eP	P	05 08 10.5	-1.1
	40nm,0.6s						
PETK	Petropavlovsk-	35.51	12	LR	LR	05 22 27.5	
	comp=Z,24nm,20.2s,baz=99,slow=35						
WRAB	Tennant Creek	40.12	198	eP	P	05 09 16.5	+0.4
	3.2nm,0.7s,mb4.3						
WRA	Warramunga Arr	40.13	198	P	P	05 09 15.9	-0.3
	3.0nm,0.9s,mb4.1,baz=31,slow=8.0,SNR=5.1						
FITZ	Fitzroy Crossi	41.84	210	P	P	05 09 30.1	-0.3
	2.1nm,0.6s,mb4.0,baz=43,slow=12,SNR=7.4						
FITZ	Fitzroy Crossi	41.84	210	eP	P	05 09 29.8	-0.5
	2.2nm,0.6s,mb4.1						
SONM	Songino Array	43.64	321	P	P	05 09 45.0	+0.3
	1.3nm,0.8s,mb3.7,baz=140,slow=7.9,SNR=6.5						
ASAR	Alice Springs	43.78	197	P	P	05 09 45.1	-0.9
	0.5nm,0.5s,mb3.5,baz=26,slow=7.6,SNR=9.0						
ASAR				PcP	PcP	05 11 32.0	+0.5
	1.0nm,0.8s,baz=41,slow=2.1,SNR=5.2						
CMAR	Chiang Mai Arr	44.93	278	LR	LR	05 28 33.8	
	comp=Z,34nm,18.4s,baz=205,slow=36						
STKA	Stephens Creek	50.43	185	P	P	05 10 38.4	+0.8

	3.1nm,0.8s,mb4.3,baz=7.3,slow=18,SNR=4.2						
ZALV	**Zalesovo Beam**	**58.50**	**322**	P	**P**	**05 11 35.1**	**-0.8**
	1.3nm,0.6s,mb4.1,baz=100,slow=8.1,SNR=5.5						
MKAR	**Makanchi Array**	**59.02**	**314**	P	**P**	**05 11 40.1**	**+0.5**
	0.4nm,0.5s,mb3.7,baz=109,slow=7.9,SNR=3.8						
KURK	**Kurchatov**	**61.80**	**318**	*e*P	**P**	**05 12 00.5**	**+2.0**
	1.9nm,0.7s,mb4.2						
BVAR	**Borovoye Array**	**66.98**	**320**	P	**P**	**05 12 32.9**	**+0.7**
	2.4nm,0.7s,mb4.1,baz=88,slow=7.6,SNR=13						
BRVK	**Borovoye**	**67.04**	**320**	*e*P	**P**	**05 12 33.5**	**+0.8**
	2.0nm,0.8s,mb4.0						
NEW	**Newport**	**80.49**	**42**	*e*P	**P**	**05 13 51.8**	**+0.4**
	2.6nm,0.9s,mb4.1						
CMB	**Columbia Colle**	**81.18**	**53**	*e*P	**P**	**05 13 55.6**	**+0.3**
	0.9nm,0.5s,mb3.9						
NVAR	**Mina Array Bea**	**82.63**	**52**	P	**P**	**05 14 03.8**	**+0.9**
	1.8nm,0.9s,mb3.9,baz=270,slow=6.7,SNR=8.2						
ARCES	**ARCESS Array B**	**82.78**	**342**	P	**P**	**05 14 03.5**	**+0.5**
	6.0nm,1.0s,mb4.4,baz=52,slow=6.3,SNR=9.4						
JOF	**Joensuu**	**84.38**	**335**	*e*p	**P**	**05 14 10.3**	**-1.1**
	8.5nm,0.7s,mb4.7						
FINES	**FINESS Array B**	**87.24**	**335**	P	**P**	**05 14 24.9**	**-0.7**
	1.8nm,0.6s,mb4.2,baz=57,slow=7.0,SNR=7.0						
PDAR	**Pinedale Array**	**87.37**	**46**	P	**P**	**05 14 25.5**	**-1.1**
	0.3nm,0.9s,mb3.2,baz=317,slow=7.8,SNR=3.5						
LPAZ	**La Paz**	**146.97**	**91**	PKPbc	PKPbc	05 21 24.1	+1.7
	1.9nm,1.0s,baz=300,slow=1.9,SNR=7.2						
LPAZ	**La Paz**	**146.97**	**91**	*e*PKPbc	PKPbc	05 21 23.3	+0.9

FUNV 01 05:03:49.0, 9°.72N × 73°.26W, h141km, MW3.6, 1C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VIRV	**Villa del Rosa**	**1.15**	**47**	*e*P	Pn	05 04 13.7	-0.6
VIRV				*e*S	Sn	05 04 31.4	-2.2
CAPV	**Capacho**	**2.06**	**153**	⇓*i*P	Pn	05 04 23.9	-0.5
CAPV				*e*S	Sn	05 04 49.7	-1.9
VIGV	**El Vigia**	**2.06**	**115**	*e*P	Pn	05 04 23.7	-0.7
VIGV				*e*S	Sn	05 04 49.2	-2.3
QARV	**Quebrada Arrib**	**2.74**	**80**	*e*P	Pn	05 04 32.3	-0.4
QARV				*e*S	Sn	05 05 03.5	-2.9
SOCV	**Socops**	**2.77**	**121**	⇑*i*P	Pn	05 04 32.6	-0.5
SOCV				*e*S	Sn	05 05 03.7	-3.4
DABV	**Dabajuro**	**2.85**	**65**	*e*P	Pn	05 04 33.3	-0.8
DABV				*e*S	Sn	05 05 05.7	-3.1
CURV	**Curarigua**	**3.26**	**85**	*e*P	Pn	05 04 38.4	-1.0
CURV				*e*S	Sn	05 05 14.3	-4.1
SIQV	**Siquisique**	**3.52**	**74**	*e*P	Pn	05 04 41.5	-1.3
SIQV				*e*S	Sn	05 05 20.6	-3.8
SANV	**Sanarito**	**3.68**	**93**	*e*P	Pn	05 04 44.2	-0.6
SANV				*e*S	Sn	05 05 23.8	-4.3
MONV	**Montecano**	**3.92**	**55**	*e*P	Pn	05 04 46.2	-1.8
MONV				*e*S	Sn	05 05 29.0	-4.8
TEPV	**Terepaima**	**4.02**	**86**	*e*P	Pn	05 04 48.1	-1.2
TEPV				*e*S	Sn	05 05 31.3	-4.7
JACV	**Jacura**	**4.57**	**72**	*e*P	Pn	05 04 54.7	-1.8
JACV				*e*S	Sn	05 05 44.2	-4.8
BAUV	**El Baul**	**5.21**	**98**	*e*P	Pn	05 05 02.7	-2.4
BAUV				*e*S	Sn	05 05 58.1	-6.3
TURV	**Turiamo**	**5.39**	**82**	*e*P	Pn	05 05 05.7	-1.8
TURV				*e*S	Sn	05 06 02.3	-6.4
PAYV	**Puerto Ayacuch**	**7.01**	**127**	*e*P	Pn	05 05 25.8	-3.3
CAOV	**Caicara del Or**	**7.26**	**109**	*e*P	Pn	05 05 29.1	-3.5
CAOV				*e*S	Sn	05 06 44.9	-8.9

NNC 01 05:06:36.2±3.4**, 37°.02N × 70°.97E, h185**km±57km**, mb2.6, mpv3.5, 2C-3D, Error ellipse: s-maj=44.0km s-min=16.9km az=35.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**4.66**	**56**	⇓*i*Pn	Pn	05 07 40.6	-5.1
KSH				Sn	Sn	05 08 33.0	-7.3
KSH				smax			
	comp=N,17nm,0.7s						
KSH				smax			
	comp=E,15nm,0.6s						
KK31	**Karatay Array**	**6.08**	**357**	⇓P	Pn	05 08 04.4	+0.2
	comp=E,0.7nm,0.2s,baz=178,slow=12,SNR=21						
KK31				⇓S	Sn	05 09 14.3	+0.6
	comp=E,3.7nm,0.5s,baz=181,slow=20,SNR=16						
TKM2	**Tokmak 2**	**6.88**	**30**	⇑P	Pn	05 08 14.8	+0.2
	comp=E,3.5nm,0.5s						
AB31	**Akbulak array**	**14.62**	**330**	⇑P	Pn	05 09 54.2	+0.1
	comp=E,0.4nm,0.3s,baz=143,slow=12,SNR=11						

*NIED **01** 05:39:00, 36°.50N × 141°.10E, h35km, Mw3.6 Best double couple: $M_0$2.97000×10^14 NP1:ϕ_s38.00000°, δ70.00000°, λ88.00000°. NP2:ϕ_s223.00000°, δ20.00000°, λ96.00000°.*
*JMA **01** 05:39:28.9±0.1, 36°.44N × 141°.11E, h46km±1km, M3.7 JMA Felt I J1.*
ISC 01 05:39:28.4±2.0**, 36°.42N**±0°.09**×141°.2E**±0°.1**, h28**km±8km**, n7, σ0s.57**/12**, 5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.51**	**292**	⇓P	**Pb**	**05 39 39.4**	**+0.5**
JHO				S	**Sb**	**05 39 46.5**	**+0.5**
ONAJ	**Iwakimizuishiy**	**0.74**	**337**	⇓P	**Pb**	**05 39 42.2**	**-0.5**
JYT	**Yasato**	**0.80**	**256**	⇓P	**Pb**	**05 39 43.4**	**-0.3**
JYT				S	**Sb**	**05 39 53.6**	**-0.6**
JFK	**Kawauchi**	**0.97**	**347**	⇓P	**Pn**	**05 39 45.3**	**-0.9**
JSB	**Shiboa**	**1.14**	**299**	P	**Pn**	**05 39 48.8**	**+0.4**
JSB				S	**Sn**	**05 40 03.1**	**+0.1**
JFT	**Otama**	**1.28**	**329**	⇓P	**Pn**	**05 39 50.9**	**+0.5**
JFT				S	**Sn**	**05 40 06.4**	**-0.2**
MAT	**Matsushiro**	**2.38**	**274**	P	**Pn**	**05 40 06.6**	**+1.1**
MAT				S	**Sn**	**05 40 33.2**	**-0.6**

IDC 01 05:42:02.8±9.5**, 3°.76N × 128°.39E, h0**km**, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.5**/22**, mbtmp3.7**/4**, Error ellipse: s-maj=157.3km s-min=92.7km az=148.0, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.89**	**187**	P	P	05 46 58.8	+1.3
	0.3nm,0.3s,baz=11,slow=10,SNR=6.2						
WRA	**Warramunga Arr**	**24.27**	**166**	P	P	05 47 21.0	-0.7
	0.9nm,0.3s,baz=345,slow=10,SNR=19						
ASAR	**Alice Springs**	**27.78**	**169**	P	P	05 47 53.3	-0.3
	0.4nm,0.3s,baz=347,slow=6.8,SNR=6.1						
STKA	**Stephens Creek**	**37.60**	**161**	P	P	05 49 19.4	+0.2
	1.5nm,0.5s,baz=324,slow=9.6,SNR=5.8						

IDC 01 05:44:35.5±3.2**, 8°.81N × 128°.25E, h0**km**, mb3.8**/6**, mb1 3.9**/6**, mb1mx3.7**/23**, mbtmp3.8**/6**, Error ellipse: s-maj=278.9km s-min=20.1km az=69.0, East of Philippine Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**29.19**	**168**	P	P	05 50 39.5	+0.7
	0.6nm,1.1s,baz=350,slow=9.6,SNR=3.6						
ASAR	**Alice Springs**	**32.74**	**170**	P	P	05 51 09.4	-0.7
	0.3nm,0.4s,baz=338,slow=6.2,SNR=5.4						
MKAR	**Makanchi Array**	**54.37**	**323**	P	P	05 54 04.2	+0.2
	1.0nm,0.6s,baz=118,slow=7.7,SNR=7.6						
ZALV	**Zalesovo Beam**	**56.84**	**331**	P	P	05 54 21.4	-0.3
	0.5nm,0.5s,baz=132,slow=4.3,SNR=2.8						
KURK	**Kurchatov**	**58.37**	**325**	P	P	05 54 32.8	+0.2
	1.0nm,0.3s,baz=120,slow=6.8,SNR=4.0						
BVAR	**Borovoye Array**	**63.97**	**325**	P	P	05 55 10.5	0.0
	1.2nm,0.7s,baz=101,slow=7.5,SNR=6.5						

*IDC **01** 05:50:53.7±1.2, 10°.84N × 91°.56E, h0km, mb4.1/9, mb1 4.1/10, mb1mx3.9/25, mbtmp4.0/10, ML3.8/1, Error ellipse: s-maj=49.5km s-min=15.4km az=61.0*
*BJI **01** 05:50:55.8, 10°.99N × 91°.91E, h14km, mB4.7/2, mb4.2/8*
*NEIC **01** 05:50:55.2±0.6, 10°.84N × 91°.61E, h10km, mb4.5/3, Error ellipse: s-maj=17.8km s-min=9.0km az=64.0*
ISC 01 05:50:54.5±3.7**, 10°.79N**±0°.10**×91°.6E**±0°.1**, h5**km±23km**, n19, σ0s.79**/20**, mb4.2**/12**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.42**	**42**	Pn	**Pn**	**05 53 24.1**	**-0.6**
	0.2nm,0.3s,baz=232,slow=15,SNR=3.7						
VIS	**Vishakhapatnam**	**10.56**	**312**	*i* P	**Pn**	**05 53 27.8**	**+1.1**
VIS				*i* S	**Sn**	**05 55 15.5**	**-10**
VIS				*i* S	**Sn**	**05 55 15.5**	**-10**
VIS				*e*x	x	05 55 18.2	
	comp=N,209nm,0.8s						
GTA	**Gaotai**	**29.43**	**13**	*e*P	**P**	**05 56 59.2**	**+0.1**
GTA				pP	pP	05 57 03.7	+3.2
GTA				sP	sP	05 57 07.2	+6.1
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.1						
HHC	**Hu-ho-hao-te**	**34.74**	**27**	*e*P	**P**	**05 57 47.9**	**+2.2**
HHC				S	**S**	**06 03 17.1**	**+0.6**
HHC				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.0						
HHC				pmax	pmax		
	comp=Z,62nm,6.5s						
MKAR	**Makanchi Array**	**36.74**	**349**	P	**P**	**05 58 02.7**	**0.0**
	comp=Z,2.2nm,0.8s,mb4.0,baz=170,slow=8.6,SNR=19						
MKAR	**Makanchi Array**	**36.74**	**349**	P	**P**	**05 58 02.7**	**0.0**
SONM	**Songino Array**	**38.97**	**16**	P	**P**	**05 58 21.2**	**-0.4**
	comp=Z,2.5nm,0.9s,mb4.0,baz=200,slow=9.6,SNR=8.5						
KURK	**Kurchatov**	**41.21**	**347**	P	**P**	**05 58 39.4**	**-0.8**
	comp=Z,2.1nm,0.3s,mb4.2,baz=162,slow=7.0,SNR=10						
KURK	**Kurchatov**	**41.21**	**347**	*e*P	**P**	**05 58 40.2**	**0.0**
	comp=Z,0.8nm,0.4s,mb3.7						
ZALV	**Zalesovo Beam**	**43.38**	**354**	P	**P**	**05 58 57.3**	**-0.5**
	comp=Z,1.5nm,0.6s,mb3.9,baz=181,slow=9.6,SNR=7.7						
FITZ	**Fitzroy Crossi**	**44.20**	**130**	P	**P**	**05 59 04.8**	**-0.1**
	comp=Z,4.8nm,0.7s,mb4.4,baz=332,slow=5.0,SNR=18						
FITZ	**Fitzroy Crossi**	**44.20**	**130**	*e*P	**P**	**05 59 04.6**	**-0.3**
	comp=Z,6.7nm,0.6s,mb4.5						
FITZ				*e*		05 59 13.3	
WRA	**Warramunga Arr**	**51.99**	**126**	P	**P**	**06 00 05.0**	**-0.1**
	comp=Z,0.7nm,0.3s,mb4.1,baz=300,slow=10.0,SNR=15						
WRAB	**Tennant Creek**	**52.00**	**126**	*e*P	**P**	**06 00 05.3**	**+0.1**
	comp=Z,5.0nm,0.7s,mb4.5						
WRAB				*e*		06 00 13.4	
ASAR	**Alice Springs**	**53.70**	**130**	P	**P**	**06 00 18.5**	**+0.7**
	comp=Z,1.6nm,0.7s,mb4.1,baz=309,slow=7.3,SNR=16						
ASAR				PcP	PcP	06 01 24.9	+0.8
	comp=Z,1.3nm,0.7s,baz=310,slow=3.9,SNR=6.8						
FINES	**FINESS Array B**	**68.97**	**332**	P	**P**	**06 01 59.5**	**-1.2**
	comp=Z,1.3nm,0.7s,mb4.0,baz=150,slow=8.8,SNR=3.8						
ARCES	**ARCESS Array B**	**71.69**	**340**	P	**P**	**06 02 16.5**	**-0.6**
	comp=Z,1.3nm,0.8s,mb3.9,baz=101,slow=4.3,SNR=4.2						
TXAR	**Lajitas Array**	**137.48**	**20**	PKP	PKPdf	06 10 20.7	+0.5
	comp=Z,0.2nm,0.7s,baz=321,slow=1.8,SNR=3.4						
TXAR	**Lajitas Array**	**137.48**	**20**	PKP	PKPdf	06 10 20.7	+0.5

CASC 01 06:01:35.1±2.2**, 11°.49N × 86°.27W, h69**km±12km**, MD3.8, ML3.1, 1C-1D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSN	**San Juan del S**	**0.45**	**115**	*e*P	Pn	06 01 47.3	0.0
APON	**Apoyo**	**0.47**	**25**	*e*P	Pn	06 01 48.1	+0.5
APON				*e*S	Sn	06 01 58.6	+2.0
CRUN	**El Crucero**	**0.49**	**356**	*e*P	Pn	06 01 49.1	+1.3
TICN	**Ticuantepe**	**0.54**	**3**	*e*P	Pn	06 01 48.7	+0.4
CONN	**Concepcion**	**0.63**	**83**	*e*P	Pn	06 01 48.9	-0.3
CONN				*e*S	Sn	06 01 59.7	+0.2
MGAN	**Managua**	**0.65**	**2**	*e*P	Pn	06 01 49.4	0.0
MGAN				*e*S	Sn	06 02 00.9	+0.9
XAVN	**Gruta Xavier**	**0.66**	**355**	*e*P	Pn	06 01 49.8	+0.3
XAVN				*e*S	Sn	06 02 00.9	+0.8
CSAN		**0.71**	**347**	*e*P	Pn	06 01 50.2	+0.2
COPN	**Copaltepe**	**0.76**	**335**	*e*P	Pn	06 01 50.9	+0.3
HUEN		**0.85**	**6**	*e*P	Pn	06 01 51.8	+0.1
MOMN	**Momotombo**	**0.95**	**344**	*e*P	Pn	06 01 53.5	+0.5
MOMN				*e*S	Sn	06 02 07.4	+1.2
GB1A	**Borinquen Arri**	**1.08**	**128**	*i* P	Pn	06 01 54.1	-0.4
LAPC	**Finca la Perla**	**1.09**	**131**	*i* P	Pn	06 01 53.7	-1.0
LAPC				*i* S	Sn	06 02 08.1	-1.1
NY14	**Universidad de**	**1.10**	**139**	*i* P	Pn	06 01 54.8	0.0
LEON	**Leon**	**1.11**	**326**	*e*P	Pn	06 01 55.3	+0.3
LEON				*e*S	Sn	06 02 10.0	+0.3
BOAB	**BOACO BROADBAN**	**.12**	**31**	*e*P	Pn	06 01 54.5	-0.6
BOAB				*e*S	Sn	06 02 09.5	-0.4
GPS1	**Guardaparques**	**1.15**	**128**	*i* P	Pn	06 01 55.2	-0.2
GPS3	**Bodega del ICE**	**1.15**	**129**	*i* P	Pn	06 01 54.6	-0.8
GPS2	**Hotel Rincˆ‡n**	**1.16**	**129**	*i* P	Pn	06 01 55.3	-0.3
TELN	**Telica**	**1.24**	**333**	*e*P	Pn	06 01 57.5	+0.9
VCR	**Vista de Mar**	**1.49**	**155**	⇓*e*P	Pn	06 01 59.4	-0.6
JCR	**Jicaral**	**1.98**	**145**	*e*P	Pn	06 02 06.4	-0.1
CGA2	**Cerro Gallo 2**	**2.29**	**129**	*e*P	Pn	06 02 10.8	0.0
CGA2				*e*S	Sn	06 02 39.6	+1.6
CNCH	**Conchagua**	**2.35**	**319**	*e*P	Pn	06 02 11.7	+0.3
CNCH				*e*S	Sn	06 02 39.9	+0.7
CNCH				AML	AML	06 02 52.3	
	comp=Z,146nm,0.4s						
PRS1	**Puriscal**	**2.43**	**128**	*e*P	Pn	06 02 13.0	+0.4
PRS1				*e*S	Sn	06 02 45.3	+4.0
LAJ	**Bijagual**	**2.66**	**127**	*e*P	Pn	06 02 14.7	-0.9
URSC	**Urasca**	**2.95**	**124**	⇑*e*P	Pn	06 02 20.0	+0.4
BUS	**Buena Vista**	**3.12**	**128**	*e*P	Pn	06 02 23.9	+1.9
BUS				*e*S	Sn	06 03 02.4	+4.1
LFRS	**El Faro**	**3.46**	**308**	*e*P	Pn	06 02 28.1	+1.5
LFRS				*e*S	Sn	06 03 06.5	+0.1
BAR1		**3.66**	**127**	*e*P	Pn	06 02 30.3	+1.0
BAR1				*e*S	Sn	06 03 14.2	+2.8

*IDC **01** 06:18:03.0±2.5, 5°.31S × 147°.80E, h0km, mb4.0/5, mb1 4.4/6, mb1mx4.0/16, mbtmp4.2/6, Error ellipse: s-maj=76.9km s-min=23.5km az=100.0*
*ISCJB **01** 06:18:22.2±3.6, 5°.7S±0°.1×147°.3E±0°.3, h158km±29km, mb4.1/7, Error ellipse: s-maj=41.6km s-min=22.8km az=3.6*
*NEIC **01** 06:18:22.5±3.5, 5°.50S × 147°.18E, h147km±28km, mb4.4/3, Error ellipse: s-maj=32.9km s-min=20.4km az=84.0*
ISC 01 06:18:23.3±3.5**, 5°.6S**±0°.2**×147°.3E**±0°.3**, h155**km±28km**, n15, σ0s.63**/17**, mb4.1**/7**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**9.22**	**206**	*e*Pn	**Pn**	**06 20 33.3**	**+0.3**
COEN				*e*Sn	**Sn**	**06 22 10.6**	**-4.8**
KAKA	**Kakadu**	**16.27**	**243**	*e*P	**Pn**	**06 22 03.4**	**+0.2**
	6.3nm,0.3s						
KAKA	**Kakadu**	**16.27**	**243**	*e*P	**Pn**	**06 22 01.9**	**-1.3**
	14nm,0.5s						
WRAB	**Tennant Creek**	**19.00**	**220**	*e*P	**P**	**06 22 33.4**	**+0.2**
	27nm,0.9s						
WRA	**Warramunga Arr**	**19.01**	**220**	P	**P**	**06 22 33.3**	**0.0**
	2.6nm,0.3s,baz=42,slow=12,SNR=130						
ASAR	**Alice Springs**	**22.09**	**214**	P	**P**	**06 23 06.5**	**+0.3**
	5.8nm,0.6s,mb4.2,baz=51,slow=8.7,SNR=71						
FITZ	**Fitzroy Crossi**	**24.52**	**238**	*e*P	**P**	**06 23 28.8**	**+0.2**
	19nm,0.7s,mb4.7						
FITZ	**Fitzroy Crossi**	**24.52**	**238**	P	**P**	**06 23 28.9**	**+0.2**
	5.4nm,0.3s,mb4.5,baz=71,slow=9.2,SNR=56						
FITZ	**Fitzroy Crossi**	**24.52**	**238**	*e*P	**P**	**06 23 28.5**	**-0.1**
STKA	**Stephens Creek**	**26.66**	**191**	P	**P**	**06 23 47.3**	**-0.4**
	2.2nm,0.8s,mb3.9,baz=6.0,slow=11,SNR=3.2						
STKA	**Stephens Creek**	**26.66**	**191**	*e*P	**P**	**06 23 48.1**	**+0.3**
	1.9nm,1.1s,mb3.6						
KLBR	**Kellerberrin**	**37.85**	**223**	*e*P	**P**	**06 25 25.0**	**-0.2**
	3.9nm,0.3s,mb4.5						
HHC	**Hu-ho-hao-te**	**56.67**	**328**	*e*P	**P**	**06 27 51.7**	**+1.2**
HHC				S	**S**	**06 35 31.4**	**+0.5**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
HHC				pmax	pmax		
	comp=Z,31nm,6.4s						
MKAR	**Makanchi Array**	**77.40**	**320**	P	**P**	**06 30 01.1**	**-0.2**
	comp=Z,0.2nm,0.6s,mb2.9,baz=94,slow=5.9,SNR=3.1						
ZALV	**Zalesovo Beam**	**78.86**	**328**	P	**P**	**06 30 07.7**	**-1.4**
	comp=Z,0.6nm,0.4s,mb3.6,baz=134,slow=12,SNR=3.2						

JMA 01 06:36:58.4±0.5**, 37°.61N × 134°.50E, h425**km±5km**, M3.6, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHS	**Saijyo**	**2.83**	**204**	P	P	06 38 02.1	-0.2
JSD	**Sado**	**3.01**	**81**	P	P	06 38 03.8	+0.3
JAG	**Ashikaga**	**4.14**	**105**	P	P	06 38 14.5	+1.3
JYT	**Yasato**	**4.77**	**105**	P	P	06 38 19.8	+0.6
JHO	**Hitachi**	**4.95**	**100**	P	P	06 38 20.5	-0.6
JMM	**Marumori**	**5.00**	**85**	P	P	06 38 22.4	+1.0
JFK	**Kawauchi**	**5.08**	**91**	P	P	06 38 22.4	+0.1
JFK				*e*S	S	06 39 28.6	-2.0
BSO4	**Boso 4**	**5.39**	**117**	P	P	06 38 26.5	+1.0
BSO4				*e*S	S	06 39 35.1	-1.4
JMK	**Ichinoseki**	**5.45**	**74**	P	P	06 38 26.9	+0.8
BSO3	**Boso 3**	**5.61**	**118**	P	P	06 38 28.2	+0.4
BSO3				*e*S	S	06 39 38.5	-2.1
BSO1	**Boso 1**	**6.01**	**117**	P	P	06 38 32.2	+0.2
BSO1				*e*S	S	06 39 46.8	-1.6

*CSEM **01** 06:43:04.6±0.4, 28°.15N × 57°.03E, h2km, ML3.4, Error ellipse: s-maj=15.6km s-min=9.1km az=138.0*
*ISCJB **01** 06:43:06.8±1.1, 27°.98N±0°.08×57°.08E±0°.09, h45km±11km, mb3.8/9, Error ellipse: s-maj=15.7km s-min=10.9km az=135.4*
*IDC **01** 06:43:06.1±4.3, 28°.40N × 56°.97E, h0km, mb3.9/8, mb1 4.0/9, mb1mx3.7/27, mbtmp3.9/9, ML4.2/1, MS2.8/1, Ms1 2.8/1, ms1mx2.2/36, Error ellipse: s-maj=84.1km s-min=24.8km az=168.0*
*NEIC **01** 06:43:06.0, 28°.13N × 57°.01E, h28km, ML3.4(THR), After THR.*
ISC 01 06:43:08.0±1.2**, 27°.98N**±0°.08**×57°.04E**±0°.09**, h38**km±12km**, n29, σ0s.79**/30**, mb3.8**/9**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.97**	**233**	Pg	**Pn**	**06 43 25.0**	**0.0**
BNDS	**Bandar-Abbas**	**0.97**	**233**	Pg	**Pn**	**06 43 25.0**	**0.0**
KRBR	**Kerman**	**2.01**	**353**	Pn	**Pn**	**06 43 38.0**	**-1.3**
KRBR				Sg	**Sn**	**06 44 04.0**	**+0.8**
KRBR	**Kerman**	**2.01**	**353**	Pn	**Pn**	**06 43 38.0**	**-1.3**
KRBR				*e*Sg	**Sn**	**06 44 04.0**	**+0.8**
GHIR	**Ghir-Karzin**	**3.59**	**276**	Pn	**Pn**	**06 44 01.0**	**-0.1**
GHIR	**Ghir-Karzin**	**3.59**	**276**	Pn	**Pn**	**06 44 01.0**	**-0.1**
ZHSF	**Zahedan**	**3.66**	**63**	Pn	**Pn**	**06 44 02.0**	**0.0**
ZHSF	**Zahedan**	**3.66**	**63**	Pn	**Pn**	**06 44 02.0**	**0.0**
GNI	**Garni**	**15.82**	**323**	LR	LR	06 53 26.3	
	comp=Z,31nm,18.2s,baz=128,slow=40						
EIL	**Elat**	**19.43**	**280**	P	**Pn**	**06 47 33.7**	**+1.2**
	0.7nm,0.3s,baz=42,slow=8.0,SNR=3.2						
EIL	**Elat**	**19.43**	**280**	P	**Pn**	**06 47 33.7**	**+1.2**
EIL	**Elat**	**19.43**	**280**	P	**Pn**	**06 47 33.7**	**+1.2**
AKTK	**Aktyubinsk**	**22.43**	**2**	P	**P**	**06 48 03.4**	**+0.1**
AKTK	**Aktyubinsk**	**22.43**	**2**	P	**P**	**06 48 03.4**	**+0.1**
AKTO	**Aktyubinsk**	**22.43**	**2**	P	**P**	**06 48 03.4**	**+0.1**
	2.3nm,0.7s,mb3.7,baz=176,slow=11,SNR=7.5						
BRTR	**Keskin Array B**	**22.62**	**307**	P	**P**	**06 48 06.0**	**+0.6**
	1.4nm,0.7s,mb3.5,baz=112,slow=11,SNR=6.7						
BRTR	**Keskin Array B**	**22.62**	**307**	P	**P**	**06 48 06.0**	**+0.6**
BVAR	**Borovoye Array**	**26.90**	**18**	P	**P**	**06 48 45.7**	**+0.5**
	2.0nm,0.7s,mb3.8,baz=199,slow=8.8,SNR=13						
BVAR	**Borovoye Array**	**26.90**	**18**	P	**P**	**06 48 45.7**	**+0.5**
MKAR	**Makanchi Array**	**27.29**	**40**	P	**P**	**06 48 49.7**	**+0.9**
	0.8nm,0.8s,mb3.3,baz=231,slow=7.7,SNR=5.3						
KURK	**Kurchatov**	**27.98**	**30**	P	**P**	**06 48 54.5**	**-0.3**
	0.9nm,0.8s,mb3.5,baz=230,slow=8.9,SNR=3.8						
KURK	**Kurchatov**	**27.98**	**30**	P	**P**	**06 48 54.5**	**-0.4**
ZALV	**Zalesovo Beam**	**32.96**	**30**	P	**P**	**06 49 39.6**	**+0.7**
	2.3nm,0.6s,mb4.3,baz=228,slow=8.2,SNR=7.6						
JOF	**Joensuu**	**38.77**	**342**	*e*P	**P**	**06 50 26.8**	**-1.7**
JOF	**Joensuu**	**38.77**	**342**	*e*p	**P**	**06 50 26.8**	**-1.7**
	1.6nm,0.5s,mb4.0						
FINES	**FINESS Array B**	**39.31**	**337**	P	**P**	**06 50 32.0**	**-1.0**
	2.8nm,0.6s,mb4.2,baz=124,slow=10,SNR=10						
FINES	**FINESS Array B**	**39.31**	**337**	P	**P**	**06 50 32.0**	**-1.0**
ARCES	**ARCESS Array B**	**45.41**	**345**	P	**P**	**06 51 21.9**	**-0.6**
	2.0nm,0.8s,mb4.0,baz=141,slow=7.8,SNR=5.7						
ARCES	**ARCESS Array B**	**45.41**	**345**	P	**P**	**06 51 21.9**	**-0.6**

*CSEM **01** 06:47:40.8±0.2, 38°.22N × 38°.27E, h8km, MD2.8, Error ellipse: s-maj=4.6km s-min=3.8km az=19.0*
*ISK **01** 06:47:40.9, 38°.20N × 38°.34E, h4km, MD2.8*
*ISCJB **01** 06:47:41.7±0.6, 38°.28N±0°.07×38°.28E±0°.05, h9km±8km, Error ellipse: s-maj=11.8km s-min=5.5km az=166.9*
*DDA **01** 06:47:41.3, 38°.32N × 38°.29E, h7km±2km, Md2.7*
ISC 01 06:47:41.9±0.6**, 38°.29N**±0°.05**×38°.28E**±0°.05**, h13**km±7km**, n15, σ0s.96**/22**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MYA	**Malataya**	**0.12**	**74**	PG	**Pg**	**06 47 44.5**	**-0.5**
MYA				*e*SG	**Sg**	**06 47 47.4**	**-0.1**
MYA	**Malataya**	**0.12**	**74**	*i* Pg	**Pg**	**06 47 44.6**	**-0.5**
MYA				*e*Sg	**Sg**	**06 47 47.4**	**0.0**
AKCD	**Akcadag**	**0.28**	**271**	*i* P	**Pg**	**06 47 47.1**	**-0.7**
AKCD				*i* S	**Sg**	**06 47 51.9**	**+0.2**
AKCD	**Akcadag**	**0.28**	**271**	*i* P	**Pg**	**06 47 47.1**	**-0.7**
AKCD				*i* S	**Sg**	**06 47 51.9**	**+0.2**
ELZG	**Elazig**	**0.59**	**69**	*i* P	**Pg**	**06 47 53.1**	**-0.2**
ELZG				*i* S	**Sg**	**06 48 03.0**	**+1.8**
ELZG	**Elazig**	**0.59**	**69**	*i* P	**Pg**	**06 47 53.1**	**-0.3**
ELZG				*i* S	**Sg**	**06 48 03.0**	**+1.8**
DARE	**Darende-Malaty**	**0.76**	**331**	*e*PG	**Pg**	**06 47 56.3**	**-0.3**
DARE	**Darende-Malaty**	**0.76**	**331**	*e*Pg	**Pg**	**06 47 56.3**	**-0.3**
URFA	**Urfa**	**0.95**	**153**	*e*PG	**Pg**	**06 47 57.9**	**-2.4**
URFA	**Urfa**	**0.95**	**153**	*e*Pg	**Pg**	**06 47 57.9**	**-2.3**
PTK	**Pertek**	**1.06**	**55**	*e*PN	**Pn**	**06 48 02.2**	**-0.1**
PTK	**Pertek**	**1.06**	**55**	*e*Pn	**Pn**	**06 48 02.2**	**-0.1**
GZT	**Gaziantep**	**1.09**	**211**	*i* P	**Pb**	**06 48 02.6**	**0.0**
GZT				*i* S	**Sg**	**06 48 18.9**	**+1.7**
GAZ	**Gaziantep**	**1.40**	**217**	*e*PN	**Pn**	**06 48 07.2**	**+0.2**
GAZ	**Gaziantep**	**1.40**	**217**	*e*Pn	**Pn**	**06 48 07.3**	**+0.2**

IDC 01 06:52:20.8±1.8**, 2°.86S × 128°.48E, h0**km**, mb3.8**/3**, mb1 4.1**/4**, mb1mx3.7**/20**, mbtmp3.9**/4**, ML3.9**/1**, Error ellipse: s-maj=139.4km s-min=23.9km az=68.0, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.92**	**162**	P	Pn	06 56 31.6	0.0
	0.4nm,0.3s,baz=340,slow=11,SNR=7.6						
ASAR	**Alice Springs**	**21.34**	**166**	P	P	06 57 08.8	-0.9
	8.6nm,0.6s,baz=343,slow=11,SNR=46						
MKAR	**Makanchi Array**	**63.95**	**327**	P	P	07 02 56.1	+0.2
	0.3nm,0.5s,baz=99,slow=8.9,SNR=2.5						
KURK	**Kurchatov**	**68.22**	**328**	P	P	07 03 23.6	+0.5
	0.2nm,0.4s,baz=131,slow=6.2,SNR=2.9						

*NEIC **01** 07:06:26.8, 12°.48N × 60°.98W, h70km, MD3.5(TRN), After TRN.*
TRN 01 07:06:26.0, 12°.51N × 60°.96W, h76km**, MD3.5, 5C-2D, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRIC	**Isle de Caille**	**0.65**	**250**	⇑*e*P	Pn	07 06 42.2	+1.4
GRIC				*e*S	Sn	07 06 53.5	+1.8
GRSS	**Sisters**	**0.67**	**252**	*e*P	Pn	07 06 42.2	+1.2
GRSS				*e*S	Sn	07 06 53.7	+1.7
GRSS	**Sisters**	**0.67**	**252**	*e*P	Pn	07 06 42.2	+1.2
GRSS				*e*S	Sn	07 06 53.7	+1.7
FCV	**Fort Charlotte**	**0.70**	**337**	*e*P	Pn	07 06 43.2	+1.9
FCV				*e*S	Sn	07 06 60.0	+7.3
FCV	**Fort Charlotte**	**0.70**	**337**	*e*P	Pn	07 06 43.2	+1.9
GRHS	**Sauteurs**	**0.72**	**247**	*e*P	Pn	07 06 42.6	+1.1
GRHS				*e*S	Sn	07 06 54.0	+0.9
GRHS	**Sauteurs**	**0.72**	**247**	*e*P	Pn	07 06 42.6	+1.1
GRHS				*e*S	Sn	07 06 54.0	+0.9
GRW	**Mount Saint Ca**	**0.77**	**243**	⇑*i*P	Pn	07 06 43.6	+1.5
GRW				*e*S	Sn	07 06 54.3	+0.4
GRW	**Mount Saint Ca**	**0.77**	**243**	⇑*i*P	Pn	07 06 43.6	+1.5
GRW				*e*S	Sn	07 06 56.0	+2.0
GRGR	**Grenville**	**0.77**	**241**	*e*Pn	Pn	07 06 42.2	+0.1
GRGR				*e*Sn	Sn	07 06 54.7	+0.6
SVB	**Belmont**	**0.81**	**340**	*e*P	Pn	07 06 43.8	+1.2
SVB				*e*S	Sn	07 06 56.9	+2.1
SVB	**Belmont**	**0.81**	**340**	*e*P	Pn	07 06 43.8	+1.2
SVB				*e*S	Sn	07 06 56.9	+2.1
SVV	**Soufriere Volc**	**0.84**	**343**	*e*P	Pn	07 06 45.5	+2.6
SVV				*e*S	Sn	07 06 59.4	+4.0
SVV	**Soufriere Volc**	**0.84**	**343**	*e*P	Pn	07 06 45.5	+2.6
SVV				*e*S	Sn	07 06 57.6	+2.1
SSV	**Crater Summit**	**0.84**	**345**	*e*P	Pn	07 06 45.7	+2.8
SSV	**Crater Summit**	**0.84**	**345**	*e*P	Pn	07 06 43.6	+0.7
MCLT	**Moule a Chique**	**1.19**	**1**	⇑*i*P	Pn	07 06 48.4	+1.2
MCLT				*e*S	Sn	07 07 04.4	+1.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MCLT	Moule a Chique	1.19	1⇑	iP	Pn	07 06 48.4	+1.2
MCLT				eS	Sn	07 07 04.4	+1.3
TOSP	Speyside	1.28	161	eP	Pn	07 06 49.7	+1.4
TOSP				eS	Sn	07 07 06.7	+1.7
SLB	Belfond	1.31	357⇓	eP	Pn	07 06 50.8	+2.1
SLB				eS	Sn	07 07 08.8	+3.0
SLB	Belfond	1.31	357⇓	eP	Pn	07 06 50.8	+2.1
SLB				eS	Sn	07 07 08.8	+3.0
SLPE	Piton Saint Es	1.32	359	eP	Pn	07 06 51.0	+2.1
SLPE				eS	Sn	07 07 08.4	+2.3
SLPE	Piton Saint Es	1.32	359	eP	Pn	07 06 51.0	+2.1
SLPE				eS	Sn	07 07 08.4	+2.3
TRN	Trinidad (W)	1.90	193	eP	Pn	07 06 58.6	+2.2
TRN				eS	Sn	07 07 20.2	+0.6
TRN	Trinidad (W)	1.90	193	eP	Pn	07 06 58.6	+2.2
TRN				eS	Sn	07 07 20.2	+0.6

CASC 01 07:43:50.0±1.6, 12.°48N×87.°84W, h57km±17km, MD3.7, 1C-1D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CNCH	Conchagua	0.79	1⇓	eP	Pn	07 44 05.2	-0.1
CNCH				eS	Sn	07 44 17.7	+1.2
CRIN	San Cristobal	0.80	74	eP	Pn	07 44 05.9	+0.5
CRIN				eS	Sn	07 44 17.8	+1.1
LEON	Leon	0.93	94	eP	Pn	07 44 06.5	-0.6
TELN	Telica	0.99	83	eP	Pn	07 44 07.3	-0.6
BLLM	Bellamira	1.03	338	eP	Pn	07 44 08.6	+0.2
BLLM				eS	Sn	07 44 22.4	+0.4
VSM	San Miguel	1.03	336	eP	Pn	07 44 08.5	+0.1
VSM				eS	Sn	07 44 23.2	+1.2
CNGN	Cerro Negro	1.12	89	eP	Pn	07 44 09.3	-0.1
CNGN				eS	Sn	07 44 23.7	-0.2
COPN	Copaltepe	1.26	103	eP	Pn	07 44 11.3	-0.1
COPN				eS	Sn	07 44 27.2	-0.1
MOMN	Momotombo	1.27	93	eP	Pn	07 44 12.0	+0.5
MOMN				eS	Sn	07 44 28.0	+0.3
CAHU	Cacacuatique	1.33	344	eP	Pn	07 44 13.3	+0.9
CAHU				eS	Sn	07 44 30.6	+1.4
CSAN		1.42	102	eP	Pn	07 44 14.2	+0.6
CSAN				eS	Sn	07 44 31.0	-0.2
TICN	Ticuantepe	1.64	106	eP	Pn	07 44 16.9	+0.4
LFRS	El Faro	1.65	314	eP	Pn	07 44 17.2	+0.6
LFRS				eS	Sn	07 44 37.6	+0.9
TGUH	Tegucigalpa,Un	1.66	19⇑	eP	Pn	07 44 17.6	+0.7
TGUH				eS	Sn	07 44 38.1	+0.9

*ISCJB **01** 07:49:38.7±0.7, 58.°0S±0.°1×22.°1W±0.°2, h10km, mb4.4/9, MS3.9/8, Error ellipse: s-maj=20.7km s-min=13.4km az=143.6*
*IDC **01** 07:49:38.5±0.8, 58.°09S×22.°02W, h0km, mb4.5/7, mb1 4.6/7, mb1mx4.3/16, mbtmp4.4/7, MS3.9/8, Ms1 3.8/8, ms1mx3.6/17, Error ellipse: s-maj=26.4km s-min=21.4km az=28.0*
*NEIC **01** 07:49:40.0±0.6, 58.°05S×21.°99W, h10km, mb4.7/6, Error ellipse: s-maj=23.4km s-min=13.4km az=60.0*
ISC 01 07:49:40.5±0.7, 58.°0S±0.°1×22.°1W±0.°2, h10km, n24, σ0.s91/15, mb4.4/9, MS3.9/8, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	13.94	161	e	Pn	07 52 53.0	-4.7
MAIT	Maitri	19.02	146	eP	Pn	07 54 03.9	+1.1
USHA	Ushuaia	25.43	257	LR	LR	08 02 49.9	
	comp=Z,214nm,20.2s,MS3.7,baz=291,slow=31						
QSPA	South Pole Qui	32.21	180	P	P	07 56 07.6	-0.4
	4.3nm,0.9s,mb4.3,baz=205,slow=5.4,SNR=14						
QSPA	South Pole Qui	32.21	180	eP	P	07 56 07.3	-0.7
	7.3nm,1.0s,mb4.5						
PLCA	Paso Flores	35.07	278	P	P	07 56 31.9	-1.4
	10nm,0.8s,mb4.8,baz=143,slow=7.9,SNR=20						
PLCA				LR	LR	08 09 11.1	
	comp=Z,105nm,18.7s,MS3.6,baz=280,slow=33						
PLCA	Paso Flores	35.07	278	eP	P	07 56 31.8	-1.5
	7.9nm,0.7s,mb4.8						
PLCA				LR	LR	08 09 11.1	
MAW	Mawson	36.86	140	LR	LR	08 09 38.8	
	comp=Z,182nm,19.4s,MS3.9,baz=40,slow=33						
CPUP	Villa Florida	40.23	307	P	P	07 57 17.2	+0.1
	6.0nm,0.8s,mb4.4,baz=134,slow=7.9,SNR=24						
CPUP				LR	LR	08 10 58.3	
	comp=Z,100nm,18.5s,MS3.7,baz=143,slow=32						
CPUP	Villa Florida	40.23	307	eP	P	07 57 17.5	+0.4
	22nm,0.8s,mb5.0						
CPUP				LR	LR	08 10 58.3	
BOSA	Boshof	43.91	69	P	P	07 57 46.7	-0.4
	6.0nm,1.1s,mb4.2,baz=182,slow=6.8,SNR=3.6						
SBA	Scott Base	44.26	183	eP	P	07 57 49.7	+0.4
	14nm,1.3s,mb4.5						
CASY	Casey	51.05	157	eP	P	07 58 41.2	-0.9
	4.3nm,0.9s,mb4.4						
LPAZ	La Paz	53.80	301	P	P	07 59 05.2	+2.1
	15nm,0.8s,mb5.0,baz=152,slow=5.7,SNR=57						
LPAZ				LR	LR	08 19 09.3	
	comp=Z,71nm,21.4s,MS3.7,baz=121,slow=33						
LPAZ	La Paz	53.80	301	eP	P	07 59 04.9	+1.8
	20nm,0.8s,mb5.1						
LPAZ				LR	LR	08 19 09.3	
DBIC	Dimbokro	65.99	19	LR	LR	08 22 23.9	
	comp=Z,66nm,19.9s,MS3.8,baz=141,slow=30						
TORD	Torodi Ar. Bea	73.57	24	P	P	08 01 13.1	-0.4
	1.2nm,0.5s,mb4.1,baz=203,slow=6.0,SNR=28						
TORD				LR	LR	08 26 16.9	
	comp=Z,66nm,18.0s,MS4.0,baz=280,slow=30						
PPT	Papeete	93.14	229	LR	LR	08 35 10.1	
	comp=Z,153nm,19.5s,MS4.5,baz=143,slow=29						
ASAR	Alice Springs	96.17	158	P	P	08 03 08.6	+0.1
	0.3nm,0.8s,mb3.8,baz=175,slow=4.4,SNR=2.7						
HHC	Hu-ho-hao-te	146.12	100	ePKPbc	PKPbc	08 09 15.2	-4.7
HHC				PP	PP	08 12 42.5	0.0
HHC				SS	SS	08 31 36.3	-1.8
HHC				AMB	AMB		
	comp=Z,50nm,9.3s						
SONM	Songino Array	148.07	86	PKPbc	PKPbc	08 09 24.0	-1.1
	comp=Z,1.5nm,0.7s,baz=239,slow=2.8,SNR=7.7						
INK	Inuvik	149.13	318	PKPbc	PKPbc	08 09 26.3	-0.9
	comp=Z,3.1nm,0.7s,baz=97,slow=1.7,SNR=10						
INK	Inuvik	149.13	318	ePKPbc	PKPbc	08 09 26.9	-0.3
DAWY	Dawson	150.21	308	ePKPbc	PKPbc	08 09 29.5	-0.4

*NEIC **01** 07:52:35.1, 16.°25N×97.°62W, h3km, MD3.9(MEX), After MEX.*
MEX 01 07:52:35.2±0.4, 16.°29N×97.°61W, h6km±8km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.51	282	eP	Pg	07 52 44.5	-0.5
PNIG				i S	Sg	07 52 52.1	+0.5
PNIG	Pinotepa	0.51	282	eP	Pg	07 52 44.5	-0.5
PNIG				i S	Sg	07 52 52.1	+0.5
VHO	Vista Hermosa	1.15	47	eP	Pg	07 52 54.5	-2.8
VHO				eS	Sg	07 53 09.3	-2.9
VHO	Vista Hermosa	1.15	47	i P	Pg	07 52 54.3	-3.0
VHO				eS	Sg	07 53 09.0	-3.2
HUIG	Huatulco	1.53	109	eP	Pn	07 52 59.8	-3.3
HUIG				i S	Sn	07 53 18.4	-5.0
HUIG	Huatulco	1.53	109	eP	Pn	07 52 59.8	-3.3
HUIG				i S	Sn	07 53 18.4	-5.0
TPIG	Tehuac#an	2.13	6	eP	Pn	07 53 08.9	-2.5
TPIG				i S	Sn	07 53 34.2	-4.1
CMIG	Matias Romero	2.73	73	eP	Pn	07 53 16.1	-3.6
CMIG				eS	Sn	07 53 48.1	-5.0
CMIG				i S	Sn	07 53 52.8	-0.3
CMIG	Matias Romero	2.73	73	eP	Pn	07 53 16.1	-3.6
CMIG				i S	Sn	07 53 48.2	-4.8

*NIED **01** 07:55:00, 47.°10N×153.°00E, h32km, Mw4.1 Best double couple: $M_0$1.63000×10^15 NP1:ϕ_s303.00000°, δ88.00000°, λ23.00000°. NP2:ϕ_s213.00000°, δ67.00000°, λ178.00000°.*
*IDC **01** 07:55:39.8±0.7, 47.°05N×152.°84E, h30km±5km, mb3.9/16, mb1 4.1/17, mb1mx4.0/27, mbtmp3.9/17, ML3.9/1, MS3.4/9, Ms1 3.4/9, ms1mx3.0/37, Error ellipse: s-maj=20.3km s-min=12.8km az=150.0*
*SKHL **01** 07:55:39.7±1.0, 46.°66N×153.°29E, h42km±10km, mb4.6/5*
*ISCJB **01** 07:55:41.7±1.0, 46.°90N±0.°08×153.°00E±0.°09, h64km±8km, mb4.2/22, Error ellipse: s-maj=15.2km s-min=6.3km az=143.2*
*MOS **01** 07:55:41.2±1.1, 46.°83N×153.°09E, h63km, mb4.5/11, Error ellipse: s-maj=14.5km s-min=9.0km az=55.4*
*NEIC **01** 07:55:44.9±1.5, 47.°09N×152.°90E, h74km±13km, mb4.2/7, Error ellipse: s-maj=15.9km s-min=8.9km az=147.0*
ISC 01 07:55:44.3±0.9, 46.°94N±0.°08×152.°96E±0.°09, h69km±7km, h46km±5.3km:pP-P, n74, σ0.s92/76, mb4.1/22, 4C, Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.94	246	ePN	Pn	07 56 40.8	-1.3
KUR				eS	Sn	07 57 27.0	0.0
KUR				pmax	pmax		
	comp=Z,90nm,0.5s						
KUR				smax			
	comp=N,280nm,0.7s						
KUR				smax			
	comp=E,100nm,0.7s						
KUR	Kuril'sk	3.94	246	eP	Pn	07 56 40.8	-1.3
KUR				AMB	AMB	07 56 42.0	
	comp=E,90nm,0.5s						
KUR				eS	Sn	07 57 27.0	0.0
SKR	Severo-Kuril's	4.29	28	ePN	Pn	07 56 47.0	+0.1
SKR				eS	Sn	07 57 30.5	-5.0
SKR				pmax	pmax		
	comp=N,40nm,0.5s						
SKR				pmax	pmax		
	comp=Z,50nm,0.5s						
SKR				pmax	pmax		
	comp=E,90nm,1.0s						
SKR				smax			
	comp=N,120nm,0.5s						
SKR				smax			
	comp=E,190nm,0.5s						
SKR	Severo-Kuril's	4.29	28	eP	Pn	07 56 47.0	+0.1
SKR				AMB	AMB	07 56 49.0	
	comp=E,40nm,0.5s						
SKR				AMB	AMB	07 56 49.0	
	comp=E,50nm,0.5s						
SKR				AMB	AMB	07 56 49.0	
	comp=E,90nm,1.0s						
SKR				erx	rx	07 56 56.5	
SKR				eS	Sn	07 57 30.5	-5.0
SKR				A		07 57 47.5	
	comp=E,120nm,0.5s						
SKR				A		07 57 47.5	
	comp=E,190nm,0.5s						
SKR				A		07 57 47.5	
	comp=E,110nm,0.5s						
YUK	Yuzh-Kuril'sk	5.78	242⇑	iPN	Pn	07 57 06.9	-0.4
YUK				i S	Sn	07 58 12.8	+0.7
YUK				pmax	pmax		
	comp=Z,100nm,0.9s						
YUK				pmax	pmax		
	comp=N,550nm,0.3s						
YUK				pmax	pmax		
	comp=E,840nm,0.9s						
YUK				smax			
	comp=E,940nm,0.4s						
YUK				smax			
	comp=N,229nm,0.8s						
YUK				smax			
	comp=N,940nm,1.7s						
YUK				smax			
	comp=E,290nm,0.9s						
YUK	Yuzh-Kuril'sk	5.78	242⇑	iP	Pn	07 57 06.9	-0.4
YUK				AMB	AMB	07 57 13.9	
	comp=E,55nm,0.3s						
YUK				AMB	AMB	07 57 13.9	
	comp=E,100nm,0.9s						
YUK				AMB	AMB	07 57 13.9	
	comp=E,84nm,0.8s						
YUK				i S	Sn	07 58 12.8	+0.7
YUK				A		07 58 30.6	
	comp=E,330nm,0.4s						
YUK				A		07 58 30.6	
	comp=E,176nm,0.4s						
PETK	Petropavlovsk-	6.88	25	Pn	Pn	07 57 21.8	-0.6
	comp=E,0.8nm,0.3s,baz=222,slow=14,SNR=5.2						
PETK				Sn	Sn	07 58 44.9	+5.7
	baz=237,slow=24,SNR=2.0						
PETK				LR	LR	08 00 08.0	
	comp=E,52nm,18.6s,baz=229,slow=39						
PETK	Petropavlovsk-	6.88	25	PN	Pn	07 57 21.8	-0.6
PETK						07 58 44.9	
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK				MLR	MLR		
	comp=Z,52nm,18.6s						
YSS	Yuzh-Sakhalins	6.99	274	ePN	Pn	07 57 25.3	+1.5
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS	Yuzh-Sakhalins	6.99	274	eP	Pn	07 57 25.3	+1.5
YSS				AMB	AMB	07 57 27.8	
	comp=Z,30nm,1.0s						
PET	Petropavlovsk	7.11	29	ePN	Pn	07 57 31.1	+5.7
PET				pmax	pmax		
	comp=Z,18nm,0.9s						
PET				MLR	MLR		
	comp=Z,100nm,12.0s						
ASAJ	Asahikawa	7.81	253	Pn	Pn	07 57 36.2	+1.2
	comp=Z,1.6nm,0.3s,baz=59,slow=10,SNR=15						
ASAJ				LR	LR	08 00 23.4	
	comp=Z,115nm,20.8s,baz=168,slow=37						
ASAJ	Asahikawa	7.81	253	PN	Pn	07 57 36.2	+1.2
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,115nm,20.8s						
TYV	Tymovskoe	7.84	304	eP	Pn	07 57 35.2	-0.2
TYV				AMB	AMB	07 57 37.0	
	comp=Z,18nm,1.0s						
TYV				AMB	AMB	07 57 37.0	
	comp=Z,22nm,1.0s						
ERM	Erimo	8.56	238	ePN	Pn	07 57 43.6	-1.8
ERM	Erimo	8.56	238	eP	Pn	07 57 43.6	-1.8
FX1	Attu Island--F	14.29	58	Pn	Pn	07 58 58.7	-4.2
	comp=Z,2.0nm,0.3s,baz=180,slow=3.0,SNR=12						
FX1				Sn	Sn	08 01 25.3	-14
	comp=Z,2.9nm,0.3s,baz=318,slow=20,SNR=8.7						
FX1	Attu Island--F	14.29	58	ePn	Pn	07 59 00.1	-2.8
FX1				eSn	Sn	08 01 27.2	-13
KLR	Kul'dur	14.36	287	eP	Pn	07 59 04.1	+0.4
MJAR	Matsushiro Arr	15.11	232	Pn	Pn	07 59 16.9	+3.2
	comp=Z,0.3nm,0.3s,baz=36,slow=9.1,SNR=7.7						
SEY	Seymchan	16.03	359	eP	Pn	07 59 26.8	+1.7
KSRS	Korea Array	20.76	252	P	P	08 00 19.4	+0.1
	comp=Z,1.7nm,0.6s,baz=59,slow=10,SNR=7.3						
KSRS	Korea Array	20.76	252	P	P	08 00 19.4	+0.1
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SONM	Songino Array	31.17	289	LR	LR	08 15 31.3	
	comp=Z,56nm,19.3s,baz=120,slow=38						
WHN	Wuhan	33.88	255	P	sP	08 02 43.0	-1.9
COLD	Coldfoot	35.23	34	eP	P	08 02 31.5	0.0
	comp=Z,3.1nm,0.9s,mb4.1						
COLD				e	pP	08 02 44.9	-3.3
COLA	College	36.05	39	eP	P	08 02 39.1	+0.6
COLA				e	pP	08 02 52.2	-3.1
COLA				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
COLA	College	36.05	39	eP	P	08 02 39.0	+0.5
	comp=Z,3.3nm,0.9s,mb4.3						
COLA				e	pP	08 02 52.2	-3.1
EGAK	Eagle	38.91	39	eP	P	08 03 02.0	-0.7
	comp=Z,11nm,1.7s,mb4.4						
EGAK				e	pP	08 03 15.2	-4.4
INK	Inuvik	41.55	33	P	P	08 03 23.7	-0.7
	comp=Z,3.0nm,0.8s,mb4.1,baz=285,slow=7.6,SNR=8.2						
INK	Inuvik	41.55	33	eP	P	08 03 24.7	+0.3
INK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
INK	Inuvik	41.55	33	eP	P	08 03 24.7	+0.3
	comp=Z,3.4nm,0.8s,mb4.1						
ZALV	Zalesovo Beam	42.41	306	LR	LR	08 22 28.7	
	comp=Z,47nm,18.5s,baz=108,slow=38						
MK31	Makanchi Array	46.76	297	eP	P	08 04 05.7	-0.6
MKAR	Makanchi Array	46.76	297	P	P	08 04 03.3	-3.0
	comp=Z,0.8nm,0.8s,mb3.5,baz=76,slow=10,SNR=6.0						
MKAR				LR	LR	08 24 54.4	
	comp=Z,71nm,18.4s,baz=359,slow=38						
MKAR	Makanchi Array	46.76	297	P	P	08 04 03.3	-3.0
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR				MLR	MLR		
	comp=Z,71nm,18.4s						
KURK	Kurchatov	47.17	303	P	P	08 04 08.5	-0.9
	comp=Z,1.4nm,0.7s,mb3.8,baz=70,slow=8.5,SNR=4.4						
KURK	Kurchatov	47.17	303	P	P	08 04 08.5	-1.0
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.6						
KURK	Kurchatov	47.17	303	eP	P	08 04 08.0	-1.4
	comp=Z,1.2nm,0.6s,mb3.8						
YKA	Yellowknife Ar	50.83	37	P	P	08 04 37.6	+0.4
	comp=Z,1.7nm,0.8s,mb4.1,baz=295,slow=6.3,SNR=4.1						
CMAR	Chiang Mai Arr	52.31	256	P	P	08 04 49.4	+0.4
	comp=Z,1.4nm,0.5s,mb4.3,baz=32,slow=7.9,SNR=8.7						
CMAR	Chiang Mai Arr	52.31	256	P	P	08 04 49.4	+0.5
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AAK	Ala-Archa	53.66	296	LR	LR	08 28 56.9	
	comp=Z,61nm,20.4s,baz=317,slow=37						
WALA	Waterton Lakes	58.40	50	eP	P	08 05 32.3	0.0
	comp=Z,0.1nm,1.0s						
WALA				e	pP	08 05 47.1	-3.0
AKTO	Aktyubinsk	58.52	312	LR	LR	08 33 12.8	
	comp=Z,46nm,18.2s,baz=171,slow=39						
SUMG	Summit	60.52	4	eP	P	08 05 46.7	+0.3
	comp=Z,16nm,1.0s,mb5.0						
NVAR	Mina Array Bea	62.44	62	P	P	08 06 00.7	+0.7
	comp=Z,0.6nm,0.6s,mb3.8,baz=290,slow=6.7,SNR=8.5						
FINES	FINESS Array B	63.82	335	P	P	08 06 07.2	-1.5
	comp=Z,4.2nm,0.7s,mb4.4,baz=35,slow=7.0,SNR=12						
FINES	FINESS Array B	63.82	335	P	P	08 06 07.2	-1.5
FINES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
FINES	FINESS Array B	63.82	335	P	P	08 06 07.2	-1.5
PDAR	Pinedale Array	64.72	54	P	P	08 06 15.2	+0.4
	comp=Z,1.4nm,0.8s,mb3.8,baz=299,slow=2.0,SNR=12						
RSSD	Black Hills	66.78	50	eP	P	08 06 27.9	-0.2
RSSD				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.0						
RSSD	Black Hills	66.78	50	eP	P	08 06 27.9	-0.2
	comp=Z,3.4nm,1.1s,mb4.1						
PV10	Paradox Valley	67.95	57	eP	P	08 06 36.8	+1.2
	comp=Z,71nm,0.9s						
NB2	NORSAR Subarra	68.01	341	P	P	08 06 34.9	-0.7
	comp=Z,4.4nm,0.7s,mb4.4,baz=29,slow=6.5						
NOA	NORSAR Array B	68.01	341	P	P	08 06 34.7	-0.9
	comp=Z,5.5nm,0.9s,mb4.4,baz=28,slow=6.4,SNR=14						
NOA				LR	LR	08 40 42.5	
	comp=Z,17nm,18.4s,baz=105,slow=40						
NOA	NORSAR Array B	68.01	341	P	P	08 06 34.7	-0.9
NOA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NOA				MLR	MLR		
	comp=Z,17nm,18.4s						
WRA	Warramunga Arr	68.66	199	P	P	08 06 39.4	-0.6
	comp=Z,0.3nm,0.7s,mb3.2,baz=14,slow=6.6,SNR=3.8						
WRA				pP	pP	08 06 50.2	-8.2
	comp=Z,0.9nm,0.8s,baz=20,slow=7.0,SNR=3.9						
WRA	Warramunga Arr	68.66	199	P	P	08 06 39.4	-0.6
WRA				pP	pP	08 06 50.2	-8.2
AKASG	Malin Array Be	71.33	326	P	P	08 06 54.7	-1.4
	comp=Z,2.0nm,0.3s,mb4.4,baz=33,slow=6.2,SNR=8.9						
AKASG	Malin Array Be	71.33	326	eP	P	08 06 55.0	-1.2
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKASG	Malin Array Be	71.33	326	P	P	08 06 54.7	-1.4
ASAR	Alice Springs	72.36	198	P	P	08 07 02.9	+0.4
	comp=Z,0.7nm,0.7s,mb3.6,baz=15,slow=5.8,SNR=7.9						
ASAR				pP	pP	08 07 12.2	-8.8
	comp=Z,0.4nm,0.7s,baz=6.5,slow=5.5,SNR=3.3						
ASAR	Alice Springs	72.36	198	P	P	08 07 02.9	+0.4
ASAR				*PP	pP	08 07 12.2	-8.8
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BUR08	Bucovina Ar. S	75.35	326	eP	P	08 07 19.7	-0.1
TXAR	Lajitas Array	77.49	60	P	P	08 07 32.4	+0.1
	comp=Z,1.2nm,0.5s,mb3.9,baz=298,slow=4.1,SNR=24						
TXAR				pP	pP	08 07 42.4	-8.6
	comp=Z,1.0nm,0.7s,baz=296,slow=4.7,SNR=7.5						
TXAR	Lajitas Array	77.49	60	P	P	08 07 32.4	+0.1
TXAR				*PP	pP	08 07 42.4	-8.5
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	Keskin Array B	78.18	317	P	P	08 07 36.5	+0.6
	comp=Z,1.6nm,0.8s,mb3.8,baz=90,slow=2.5,SNR=7.1						
BRTR	Keskin Array B	78.18	317	eP	P	08 07 36.6	+0.7
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CONA	Conrad Observa	78.38	332⇑	iP	P	08 07 37.7	+0.8
	comp=Z,3.5nm,1.0s,mb4.1						
KBA	Koelnbreinsper	79.92	333⇑	iP	P	08 07 46.1	+0.8
	comp=Z,4.7nm,0.7s,mb4.4						
MMAI	Mount Meron Ar	82.61	311	P	P	08 07 59.9	+0.1
	comp=Z,3.1nm,0.6s,mb4.3,baz=49,slow=6.7,SNR=3.7						
MMAI				LR	LR	08 51 35.0	
	comp=Z,41nm,18.5s,baz=215,slow=41						
CPUP	Villa Florida	148.46	60	PKPbc	PKPbc	08 15 21.7	-1.2
	comp=Z,0.3nm,0.4s,baz=250,slow=4.5,SNR=4.9						
CPUP	Villa Florida	148.46	60	PKPbc	PKPbc	08 15 21.7	-1.2

IDC 01 08:06:54.4±0.8, 30.°30S×177.°63W, h0km, mb4.1/6, mb1 4.3/7, mb1mx4.1/17, mbtmp4.2/7, ML4.1/1, Error ellipse: s-maj=26.9km s-min=19.8km az=92.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.08	346	Pn	Pn	08 07 17.7	+1.0
	2µm,0.3s,baz=107,slow=7.8,SNR=154						
URZ	Urewera	9.05	207	Pn	Pn	08 09 03.4	-2.9
	0.4nm,0.3s,baz=342,slow=16,SNR=3.4						
URZ				Sn	Sn	08 10 41.9	-7.0
	1.2nm,0.3s,baz=118,slow=20,SNR=9.0						
RPZ	Rata Peaks	16.13	211	Pn	Pn	08 10 42.5	+0.1
	0.7nm,0.3s,baz=15,slow=12,SNR=3.9						
RPZ				Sn	Sn	08 13 28.5	-13
	0.5nm,0.3s,baz=347,slow=16,SNR=2.9						
STKA	Stephens Creek	34.81	257	P	P	08 13 50.0	+3.0
	3.4nm,0.6s,baz=134,slow=23,SNR=15						
ASAR	Alice Springs	43.44	267	P	P	08 14 59.2	0.0
	1.1nm,0.5s,baz=104,slow=6.8,SNR=22						
WRA	Warramunga Arr	44.42	272	P	P	08 15 07.0	-0.1
	2.9nm,0.6s,baz=110,slow=8.1,SNR=44						
FITZ	Fitzroy Crossi	52.68	270	P	P	08 16 11.3	+0.5
	1.9nm,0.8s,baz=131,slow=13,SNR=3.1						
QSPA	South Pole Qui	59.81	180	P	P	08 17 02.2	+1.3
	2.4nm,0.9s,baz=26,slow=3.8,SNR=12						
PETK	Petropavlovsk-	85.80	345	P	P	08 19 35.1	-0.1
	3.3nm,0.8s,baz=158,slow=1.6,SNR=3.5						
NVAR	Mina Array Bea	87.95	43	P	P	08 19 47.1	+1.1
	0.3nm,0.8s,baz=226,slow=7.4,SNR=3.3						
MKAR	Makanchi Array	117.95	310	PKP	PKPdf	08 25 41.7	-1.0
	0.1nm,0.4s,baz=58,slow=2.7,SNR=2.9						
KURK	Kurchatov	121.21	314	PKP	PKPdf	08 25 47.9	-1.0
	1.6nm,0.3s,baz=111,slow=1.2,SNR=6.1						
BVAR	Borovoye Array	126.56	316	PKP	PKPdf	08 25 58.2	-0.8
	0.5nm,0.4s,baz=318,slow=1.9,SNR=3.6						
FINES	FINESS Array B	145.16	340	PKPbc	PKPbc	08 26 31.7	-1.0
	3.1nm,0.5s,baz=44,slow=4.6,SNR=21						
AKASG	Malin Array Be	151.41	323	PKPbc	PKPbc	08 26 49.0	-0.8
	0.7nm,0.4s,baz=54,slow=3.3,SNR=6.0						
BRTR	Keskin Array B	152.83	299	PKPbc	PKPbc	08 26 53.2	-0.2
	0.7nm,0.6s,baz=148,slow=7.3,SNR=4.6						
TORD	Torodi Ar. Bea	162.92	178	PKPab	PKPab	08 27 47.7	-0.5
	0.4nm,0.8s,baz=160,slow=3.4,SNR=2.6						

IDC 01 08:29:16.7±8.0, 10.°64N×92.°39E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/23, mbtmp3.3/3, Error ellipse: s-maj=417.0km s-min=27.8km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	37.03	348	P	P	08 36 28.2	0.0
	0.3nm,0.7s,baz=153,slow=9.3,SNR=3.3						
WRA	Warramunga Arr	51.27	126	P	P	08 38 22.7	-0.1
	0.4nm,0.9s,baz=307,slow=8.2,SNR=6.8						
ASAR	Alice Springs	53.01	130	P	P	08 38 35.6	0.0
	0.2nm,0.5s,baz=301,slow=6.5,SNR=4.7						

*IDC **01** 08:49:13.8±0.7, 16.°45N×90.°88W, h0km, mb3.9/10,*

mb1 4.1/12, mb1mx4.0/23, mbtmp3.9/12, ML3.3/1, MS3.9/19, Ms1 3.9/19, ms1mx3.8/29, Error ellipse: s-maj=21.4km s-min=10.3km az=64.0

SZGRF ***01*** *08:49:16.0, 16°.44N×91°.74W, h33km, mb5.1, Mexico-Guatemala border region*

MEX ***01*** *08:49:17.8±1.3, 16°.45N×90°.66W, h25km, MD4.6*

ISCJB ***01*** *08:49:17.5±0.2, 16°.52N±0°.02×90°.85W±0°.03, h33km, mb4.3/36, MS4.0/15, Error ellipse: s-maj=3.8km s-min=3.2km az=167.8*

BJI ***01*** *08:49:17.1, 16°.40N×90°.60W, h30km, mB4.9/1, Ms4.8/2, Ms7 4.3/2*

NEIC ***01*** *08:49:18.1, 16°.44N×90°.62W, h30km, mb4.4/36, MD4.7(MEX), After MEX.*

CASC ***01*** *08:49:19.2±1.4, 15°.69N×92°.17W, h99km±48km, MD4.0, mb4.4(NEIC)*

ISC 01 08:49:19.6±0.2, 16°.51N±0°.02×90°.86W±0°.03, h35km, n243, σ0°.992/237, mb4.3/36, MS4.0/15, 72C-66D, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APG	**El Apazote**	**1.55**	**166**	Pg	**Pn**	**08 49 41.1**	**-3.5**
	126nm,0.3s,baz=332,slow=16,SNR=2115						
APG				Lg		08 50 01.1	
	887nm,0.3s,baz=279,slow=20,SNR=29						
TP2	**Tecpan 2**	**1.72**	**185**	*e*P	**Pn**	**08 49 45.4**	**-1.7**
MRL	**Marmol**	**1.83**	**142**	*e*P	**Pn**	**08 49 48.1**	**-0.4**
FG6		**1.94**	**181**	*e*P	**Pn**	**08 49 48.2**	**-1.8**
NBG	**Las Nubes**	**1.98**	**165**	*e*P	**Pn**	**08 49 48.3**	**-2.2**
FUG	**Fuego 3**	**2.05**	**179**	*e*P	**Pn**	**08 49 50.1**	**-1.5**
THIG		**2.09**	**220**	*e*P	**Pn**	**08 49 50.6**	**-1.5**
THIG				*e*S	**Sn**	**08 50 17.0**	**+0.1**
JAT	**Jato**	**2.30**	**199**	*e*P	**Pn**	**08 49 56.4**	**+1.4**
PCIG		**2.40**	**251**	*e*P	**Pn**	**08 49 54.2**	**-2.2**
PCIG				*i* S	**Sn**	**08 50 25.7**	**+1.1**
SCIG	**Sabancuy**	**2.46**	**353**	*e*P	**Pn**	**08 49 55.5**	**-1.7**
SCIG				*i* S	**Sn**	**08 50 26.0**	**-0.1**
RTR	**El Retiro**	**2.85**	**155**	*e*P	**Pn**	**08 50 06.6**	**+4.0**
SNJE	**San Jose**	**2.89**	**155**	*e*P	**Pn**	**08 50 07.2**	**+4.0**
SNJE				*e*S	**Sn**	**08 50 44.7**	**+7.9**
BOQS	**Boqueron**	**3.15**	**151**	*e*P	**Pn**	**08 50 10.8**	**+4.0**
BOQS				*e*S	**Sn**	**08 50 52.1**	**+8.9**
LBRS	**Las Brisas**	**3.27**	**147**	*e*P	**Pn**	**08 50 13.8**	**+5.4**
LFRS	**El Faro**	**3.36**	**149**	*e*P	**Pn**	**08 50 13.7**	**+4.2**
LFRS				*e*S	**Sn**	**08 50 57.4**	**+9.2**
CMIG	**Matias Romero**	**3.89**	**279**	Pn	**Pn**	**08 50 14.1**	**-2.9**
	2.1nm,0.3s,baz=73,slow=10.0,SNR=21						
CMIG				Sn	**Sn**	**08 50 59.6**	**-1.8**
	14nm,0.3s,baz=92,slow=15,SNR=4.8						
CMIG				Lg		08 51 17.1	
	19nm,0.3s,baz=192,slow=22,SNR=5.6						
CMIG				LR	LR	08 52 14.8	
	comp=Z,3μm,19.7s,baz=320,slow=47						
CMIG	**Matias Romero**	**3.89**	**279**	*e*P	**Pn**	**08 50 16.5**	**-0.4**
CMIG				Sn	**Sn**	**08 50 59.6**	**-1.8**
CMIG				*i* S	**Sn**	**08 51 05.0**	**+3.5**
CMIG				Lg		08 51 17.1	
CMIG				LR	LR	08 52 14.8	
CMIG	**Matias Romero**	**3.89**	**279**	*e*P	**Pn**	**08 50 16.5**	**-0.4**
CMIG				*i* S	**Sn**	**08 51 02.9**	**+1.4**
TGUH	**Tegucigalpa,Un**	**4.24**	**125**	*e*Pn	**Pn**	**08 50 19.6**	**-2.1**
TEIG	**Tepich**	**4.44**	**33**	*e*Pn	**Pn**	**08 50 22.8**	**-1.6**
TEIG				*e*Sn	**Sn**	**08 51 16.1**	**+1.2**
HUIG	**Huatulco**	**5.09**	**262**	*e*P	**Pn**	**08 50 35.0**	**+1.5**
HUIG				*i* S	**Sn**	**08 51 34.8**	**+3.7**
HUIG	**Huatulco**	**5.09**	**262**	*i* P	**Pn**	**08 50 32.7**	**-0.7**
HUIG				*i* S	**Sn**	**08 51 32.0**	**+0.9**
JTS	**JuntasAbangare**	**8.44**	**136**	Pn	**Pn**	**08 51 20.4**	**+1.0**
	0.2nm,0.3s,baz=262,slow=14,SNR=3.5						
JTS				LR	LR	08 54 47.4	
	comp=Z,368nm,20.2s,baz=333,slow=40						
GTBY	**Guantanamo Bay**	**15.35**	**75**	*e*P	**Pn**	**08 52 54.9**	**+1.3**
	29nm,0.8s						
JCT	**Junction City**	**16.13**	**331**	*e*P	**Pn**	**08 53 04.4**	**+0.8**
	6.8nm,0.3s						
JCT				*e*Sn	**Sn**	**08 55 57.1**	**-4.4**
627A	**Terlingua Ranc**	**17.27**	**320**	⇓P	**Pn**	**08 53 17.8**	**-0.3**
	baz=17,SNR=11						
TXAR	**Lajitas Array**	**17.36**	**320**	P	**Pn**	**08 53 20.4**	**+1.3**
	0.1nm,0.3s,baz=134,slow=5.4,SNR=24						
TXAR				LR	LR	09 01 44.1	
	comp=Z,79nm,19.6s,baz=185,slow=43						
528A	**Cox Ranch, San**	**17.43**	**323**	⇑P	**Pn**	**08 53 18.8**	**-1.3**
	baz=18						
428A	**Kincaid Ranch,**	**17.80**	**325**	⇓P	**Pn**	**08 53 23.7**	**-0.9**
	baz=18						
626A	**Big Bend Ranch**	**17.80**	**319**	⇑P	**Pn**	**08 53 23.6**	**-1.0**
	baz=18						
527A	**Woodward Ranch**	**17.90**	**322**	⇓P	**Pn**	**08 53 24.5**	**-1.3**
	baz=18						
GOGA	**Godfrey**	**18.10**	**20**	*e*P	**Pn**	**08 53 29.2**	**+0.9**
	13nm,1.0s						
MIAR	**Mount Ida**	**18.12**	**353**	*e*P	**Pn**	**08 53 27.1**	**-1.4**
	67nm,1.8s						
MIAR				*e*S	**S**	**08 56 36.6**	**-18**
526A	**Mary Lane Ranc**	**18.13**	**320**	⇓P	**Pn**	**08 53 27.5**	**-1.1**
	baz=18						
UALR	**University of**	**18.24**	**356**	*e*P	**Pn**	**08 53 29.5**	**-0.4**
	50nm,1.5s						
427A	**Hayter Ranch,**	**18.30**	**324**	⇑P	**Pn**	**08 53 29.5**	**-1.1**
	baz=18						
328A	**Wristen Ranch,**	**18.37**	**326**	⇑P	**Pn**	**08 53 30.7**	**-0.8**
	baz=18						
426A	**McDonald Obser**	**18.53**	**322**	⇑P	**Pn**	**08 53 32.6**	**-0.9**
	baz=19						
SDDR	**Presa de Saban**	**18.81**	**80**	*e*P	**Pn**	**08 53 36.8**	**-0.1**
	11nm,0.5s						
326A	**Caldwell Ranch**	**18.97**	**323**	⇓P	**Pn**	**08 53 36.8**	**-2.1**
	baz=19						
227A	**Bennet, Jal**	**19.12**	**326**	⇓P	**Pn**	**08 53 38.1**	**-2.5**
	baz=19						
SWET	**Sewanee**	**19.14**	**12**	*e*P	**Pn**	**08 53 39.0**	**-1.9**
WMOK	**Wichita Mounta**	**19.49**	**340**	*e*P	**Pn**	**08 53 42.5**	**-2.5**
	36nm,2.0s						
WMOK				*e*S	**S**	**08 57 08.5**	**-13**
325A	**Bean Ranch, Si**	**19.59**	**322**	⇑P	**Pn**	**08 53 42.4**	**-3.8**
	baz=20						
226A	**Malaga, Loving**	**19.60**	**325**	⇑P	**Pn**	**08 53 42.6**	**-3.8**
	baz=20						
127A	**Arkansas Junct**	**19.67**	**327**	⇑P	**Pn**	**08 53 45.2**	**-2.0**
	baz=20						
WVT	**Waverly**	**19.73**	**7**	*e*P	**Pn**	**08 53 46.6**	**-1.2**
	8.9nm,0.8s						
ROSC	**El Rosal**	**19.93**	**124**	P	**Pn**	**08 53 49.3**	**-1.1**
	baz=79,slow=17,SNR=25						
ROSC				LR	LR	09 01 54.0	
	comp=Z,286nm,20.1s,baz=52,slow=38						
ROSC	**El Rosal**	**19.93**	**124**	*e*P	**Pn**	**08 53 49.7**	**-0.7**
324A	**Moseley Ranch,**	**19.95**	**321**	⇓P	**Pn**	**08 53 48.0**	**-2.6**
	baz=20						
126A	**Clayton Basin,**	**20.00**	**326**	⇓P	**Pn**	**08 53 47.7**	**-3.4**
	baz=20						
225A	**Deer Hill, Car**	**20.04**	**323**	⇓P	**P**	**08 53 49.2**	**-0.4**
	baz=20,SNR=6.3						
TKL	**Tuckaleechee C**	**20.09**	**17**	P	**P**	**08 53 51.3**	**+1.1**
	4.8nm,0.9s,baz=216,slow=12,SNR=3.9						
TKL				LR	LR	09 02 10.1	
	comp=Z,596nm,21.0s,MS3.9,baz=206,slow=38						
TKL	**Tuckaleechee C**	**20.09**	**17**	*e*P	**P**	**08 53 51.9**	**+1.8**
Z27A	**Tatum**	**20.11**	**329**	⇑P	**P**	**08 53 49.2**	**-1.1**
	baz=20,SNR=30						
OTAV	**Otavalo**	**20.28**	**142**	*e*P	**P**	**08 53 52.6**	**+0.2**
	35nm,1.5s						
125A	**Gardner Draw,**	**20.36**	**325**	⇑P	**P**	**08 53 51.7**	**-1.3**
	baz=20						
MSTX	**Muleshoe**	**20.42**	**331**	⇑P	**P**	**08 53 52.7**	**-1.0**
	baz=20,SNR=5.5						
224A	**Cornudas Mount**	**20.43**	**322**	⇓P	**P**	**08 53 52.9**	**-0.9**
	baz=20,SNR=6.0						
Z26A	**Caprock**	**20.46**	**327**	⇓P	**P**	**08 53 52.9**	**-1.3**
	baz=20,SNR=7.8						
Y27A	**Causey**	**20.54**	**330**	⇓P	**P**	**08 53 53.7**	**-1.3**
	baz=21,SNR=7.0						
AMTX	**Amarillo**	**20.70**	**334**	*e*P	**P**	**08 53 56.2**	**-0.6**
	14nm,0.9s						
124A	**Stringfield Ra**	**20.84**	**323**	⇑P	**P**	**08 53 58.4**	**+0.1**
	baz=21						
Z25A	**Roswell**	**20.86**	**326**	⇑P	**P**	**08 53 57.2**	**-1.3**
	baz=21						
X27A	**F and S Farms,**	**21.13**	**331**	⇑P	**P**	**08 54 00.4**	**-1.0**
	baz=21						
SIUC	**Southern Illin**	**21.17**	**4**	*e*P	**P**	**08 54 02.4**	**+0.6**
	21nm,0.8s,mb4.5						
Z24A	**Sheeppen Canyo**	**21.25**	**325**	⇑P	**P**	**08 54 03.4**	**+0.6**
	baz=21						
Y25A	**Mesa, Roswell**	**21.34**	**327**	⇓P	**P**	**08 54 03.4**	**-0.3**
	baz=21,SNR=18						
X26A	**CR and CF Fran**	**21.39**	**330**	⇓P	**P**	**08 54 03.9**	**-0.3**
	baz=22						
W27A	**Bowe Ranch, En**	**21.46**	**332**	⇑P	**P**	**08 54 04.5**	**-0.5**
	baz=22						
Y24A	**Capitan**	**21.74**	**326**	⇑P	**P**	**08 54 07.8**	**-0.2**
	baz=22,SNR=13						
221A	**Mesquite Ranch**	**21.77**	**318**	⇓P	**P**	**08 54 08.6**	**+0.3**
	baz=22						
320A	**Kipp Ranch, An**	**21.83**	**316**	⇓P	**P**	**08 54 09.0**	**+0.1**
	baz=22,SNR=13						
WCI	**Wyandotte Cave**	**22.01**	**10**	*e*P	**P**	**08 54 12.4**	**+1.7**
	21nm,1.1s,mb4.5						
Y23A	**Lovelace Mesa,**	**22.08**	**325**	⇓P	**P**	**08 54 11.9**	**+0.3**
	baz=22						
Z22A	**Elephant Butte**	**22.11**	**322**	⇓P	**P**	**08 54 12.4**	**+0.4**
	baz=22						
121A	**Cookes Peak, D**	**22.12**	**319**	⇑P	**P**	**08 54 12.3**	**+0.3**
	baz=22,SNR=5.8						
220A	**Playas Peak, P**	**22.18**	**317**	⇓P	**P**	**08 54 12.7**	**-0.1**
	baz=22,SNR=7.7						
W25A	**X Bar L Ranch,**	**22.24**	**329**	⇓P	**P**	**08 54 13.7**	**+0.4**
	baz=22,SNR=10						
OLIL	**Olney**	**22.27**	**6**	*e*P	**P**	**08 54 13.3**	**-0.3**
	14nm,0.8s,mb4.4						
V26A	**Tequesquite Ra**	**22.39**	**331**	⇑P	**P**	**08 54 15.2**	**+0.3**
	baz=22,SNR=8.0						
BNM	**Barren Site**	**22.57**	**324**	*e*P	**P**	**08 54 18.4**	**+1.6**
	2.8nm,0.9s,mb3.7						
Y22A	**Socorro**	**22.60**	**323**	⇓P	**P**	**08 54 17.4**	**+0.3**
	baz=23						
120A	**U Bar Ranch, L**	**22.67**	**318**	⇑P	**P**	**08 54 17.8**	**0.0**
	baz=23						
W24A	**Lazy 6 Ranch,**	**22.71**	**328**	⇑P	**P**	**08 54 18.1**	**-0.2**
	baz=23,SNR=7.2						
219A	**White Tail Can**	**22.73**	**316**	⇑P	**P**	**08 54 18.6**	**+0.1**
	baz=23						
V25A	**Rancho No Teng**	**22.82**	**330**	⇑P	**P**	**08 54 19.3**	**-0.1**
	baz=23						
U26A	**Atchley Ranch,**	**22.87**	**332**	⇑P	**P**	**08 54 19.7**	**-0.3**
	baz=23						
318A	**Bisbee**	**22.89**	**314**	⇓P	**P**	**08 54 20.0**	**-0.2**
	baz=23,SNR=5.0						
LAZ	**Ladron**	**23.04**	**324**	*e*P	**P**	**08 54 22.9**	**+1.2**
	20nm,1.7s,mb4.3						
LAZ				*e*		08 54 39.6	
W23A	**Werner Place,**	**23.06**	**327**	⇑P	**P**	**08 54 22.2**	**+0.3**
	baz=23,SNR=6.5						
ANMO	**Albuquerque**	**23.07**	**326**	P	**P**	**08 54 22.2**	**+0.1**
	0.9nm,0.9s,mb3.2,baz=144,slow=12,SNR=5.7						
ANMO				LR	LR	09 06 38.1	
	comp=Z,69nm,18.5s,MS3.1,baz=75,slow=45						
ANMO	**Albuquerque**	**23.07**	**326**	P	**P**	**08 54 22.2**	**+0.1**
ANMO				LR	LR	09 06 38.1	
Y21A	**Point of Rocks**	**23.07**	**322**	⇑P	**P**	**08 54 22.3**	**+0.3**
	baz=23						
U25A	**Circle Dot Ran**	**23.18**	**331**	⇑P	**P**	**08 54 22.6**	**-0.6**
	baz=23						
119A	**Ashpeak Ranch,**	**23.24**	**318**	⇓P	**P**	**08 54 24.0**	**+0.1**
	baz=23						
Y20A	**Horse Springs,**	**23.41**	**321**	⇑P	**P**	**08 54 26.0**	**+0.3**
	baz=24,SNR=6.4						
X21A	**Alamocita Cree**	**23.44**	**323**	⇑P	**P**	**08 54 26.3**	**+0.4**
	baz=24,SNR=7.2						
V23A	**Ortiz Mt. (NFS**	**23.52**	**327**	⇑P	**P**	**08 54 26.1**	**-0.5**
	baz=24						
CBKS	**Cedar Bluff**	**23.54**	**342**	*e*P	**P**	**08 54 26.2**	**-0.6**
	26nm,1.3s,mb4.5						
118A	**Homack Ranch,**	**23.60**	**316**	⇑P	**P**	**08 54 27.1**	**-0.3**
	baz=24,SNR=5.6						
SJG	**San Juan**	**23.64**	**82**	LR	LR	09 02 37.0	
	comp=Z,211nm,20.2s,MS3.6,baz=24,slow=34						
T25A	**Trinidad**	**23.79**	**332**	⇑P	**P**	**08 54 28.9**	**-0.2**
	baz=24,SNR=10						
W21A	**San Fidel**	**23.84**	**324**	⇓P	**P**	**08 54 29.4**	**-0.2**
	baz=24,SNR=5.1						
Z18A	**Geronimo**	**23.92**	**317**	⇓P	**P**	**08 54 30.3**	**0.0**
	baz=24						
X20A	**Quemado**	**23.93**	**322**	⇓P	**P**	**08 54 30.4**	**+0.1**
	baz=24,SNR=8.5						
TUC	**Tucson**	**23.94**	**315**	*e*P	**P**	**08 54 30.9**	**+0.3**
	14nm,1.4s,mb4.2						
U23A	**El Rito**	**23.98**	**328**	⇓P	**P**	**08 54 31.0**	**+0.1**
	baz=24,SNR=21						
Y19A	**Nutrioso**	**23.98**	**320**	⇓P	**P**	**08 54 31.1**	**+0.2**
	baz=24,SNR=8.1						
HDIL	**Hopedale**	**24.00**	**3**	*e*P	**P**	**08 54 29.7**	**-1.3**
	4.4nm,0.3s,mb4.4						
V22A	**San Miguel Ran**	**24.03**	**327**	⇑P	**P**	**08 54 31.1**	**-0.2**
	baz=24,SNR=7.7						
117A	**Oracle**	**24.07**	**315**	⇓P	**P**	**08 54 30.7**	**-1.0**
	baz=24						
S25A	**Robets Cordova**	**24.23**	**333**	⇑P	**P**	**08 54 32.9**	**-0.2**
	baz=24						
W20A	**Ramah**	**24.34**	**323**	⇑P	**P**	**08 54 33.3**	**-0.8**
	baz=24						
Y18A	**Canyon Day Jun**	**24.36**	**318**	⇑P	**P**	**08 54 34.8**	**+0.5**
	baz=24,SNR=5.9						
U22A	**Llaves**	**24.36**	**327**	⇑P	**P**	**08 54 34.7**	**+0.5**
	baz=24,SNR=9.2						
T23A	**Casias Ranch,**	**24.46**	**330**	⇑P	**P**	**08 54 35.5**	**+0.3**
	baz=24,SNR=5.8						
S24A	**Houchin Ranch,**	**24.56**	**332**	⇓P	**P**	**08 54 36.9**	**+0.8**
	baz=25,SNR=6.2						
SDCO	**Great Sand Dun**	**24.78**	**331**	*e*P	**P**	**08 54 39.2**	**+1.1**
	16nm,1.6s,mb4.3						
U21A	**Nageezi**	**24.82**	**326**	⇑P	**P**	**08 54 39.4**	**+0.9**
	baz=25						
T22A	**Edith**	**24.87**	**328**	⇑P	**P**	**08 54 40.1**	**+1.1**
	baz=25						
T21A	**Navajo Lake**	**25.18**	**327**	⇓P	**P**	**08 54 42.8**	**+1.1**
	baz=25						
X17A	**Forest Lakes**	**25.21**	**318**	⇓P	**P**	**08 54 42.9**	**+0.9**
	baz=25						
Q25A	**Bedland, Calha**	**25.21**	**335**	⇓P	**P**	**08 54 43.2**	**+1.2**
	baz=25						
U20A	**Newcomb**	**25.25**	**325**	⇓P	**P**	**08 54 43.4**	**+1.1**
	baz=25						
Y16A	**Circle Bar Ran**	**25.35**	**317**	⇑P	**P**	**08 54 44.4**	**+1.1**
	baz=25						
S22A	**4UR Ranch, Cre**	**25.41**	**329**	⇓P	**P**	**08 54 45.0**	**+1.1**
	baz=26						
U19A	**Dine' College,**	**25.57**	**324**	⇑P	**P**	**08 54 45.8**	**+0.5**
	baz=26						
V18A	**Ganado**	**25.58**	**322**	⇓P	**P**	**08 54 46.2**	**+0.8**
	baz=26						
MVCO	**Mesa Verde**	**25.85**	**326**	⇓P	**P**	**08 54 48.4**	**+0.5**
	baz=26						
MVCO	**Mesa Verde**	**25.85**	**326**	*e*P	**P**	**08 54 49.1**	**+1.3**
	17nm,1.4s,mb4.4						
T19A	**Beclabito**	**25.85**	**325**	⇑P	**P**	**08 54 48.6**	**+0.7**
	baz=26						
V17A	**Tonalea, Kykot**	**26.04**	**321**	⇑P	**P**	**08 54 49.8**	**+0.2**
	baz=26,SNR=6.7						
PCRV	**Puerto La Cruz**	**26.27**	**101**	LR	LR	09 06 38.5	
	comp=Z,220nm,18.4s,MS3.7,baz=128,slow=40						
JFWS	**Jewell Farm**	**26.32**	**1**	*e*P	**P**	**08 54 52.5**	**+0.4**
	83nm,2.3s,mb4.9						
ISCO	**Idaho Springs**	**26.52**	**334**	*e*P	**P**	**08 54 56.1**	**+2.2**
	1.6nm,0.9s,mb3.5						
ATAH	**Atahualpa**	**26.54**	**151**	P	**P**	**08 54 54.9**	**+0.7**
	6.9nm,0.9s,mb4.2,baz=338,slow=11,SNR=4.4						
PV01	**Paradox Valley**	**26.58**	**328**	*e*P	**P**	**08 54 54.9**	**+0.4**
S19A	**Harvey Farm, M**	**26.59**	**326**	⇑P	**P**	**08 54 54.7**	**+0.2**
	baz=27						
PV04	**Paradox Valley**	**26.95**	**328**	*e*P	**P**	**08 54 58.2**	**+0.5**
PV10	**Paradox Valley**	**27.00**	**327**	*e*P	**P**	**08 54 58.3**	**0.0**
	54nm,0.8s,mb5.1						
S18A	**Hurst Farm, Bl**	**27.01**	**325**	⇓P	**P**	**08 54 59.0**	**+0.7**
	baz=27						
V15A	**Kaibab Nationa**	**27.01**	**319**	⇑P	**P**	**08 54 58.4**	**0.0**
	baz=27						
R18A	**Canyonlands Na**	**27.46**	**326**	⇓P	**P**	**08 55 02.5**	**+0.2**
	baz=28						
U15A	**North Rim**	**27.48**	**320**	⇑P	**P**	**08 55 03.3**	**+0.8**
	baz=28						
T15A	**Red Dirt Ranch**	**27.92**	**321**	⇓P	**P**	**08 55 06.5**	**+0.1**
	baz=28						
R17A	**Hanksville Air**	**27.93**	**325**	⇓P	**P**	**08 55 06.7**	**+0.2**
	baz=28						
S16A	**Weppner Ranch,**	**27.93**	**323**	⇑P	**P**	**08 55 07.0**	**+0.5**
	baz=28						
BC3	**Big Chuckawall**	**27.95**	**312**	⇓P	**P**	**08 55 06.5**	**-0.3**
	baz=28						
U13A	**Pakoon Wash**	**28.52**	**318**	⇓P	**P**	**08 55 11.8**	**0.0**
	baz=29						
N20A	**Spence Gulch,**	**28.53**	**332**	⇓P	**P**	**08 55 12.0**	**+0.1**
	baz=29						
S14A	**Cedar City**	**28.88**	**321**	⇑P	**P**	**08 55 15.8**	**+0.8**
	baz=29						
ARUT	**Antelope Range**	**29.06**	**321**	*e*P	**P**	**08 55 17.9**	**+1.3**
	3.1nm,0.9s,mb4.0						
S13A	**Holt Ranch, En**	**29.18**	**320**	⇑P	**P**	**08 55 18.5**	**+0.8**
	baz=29,SNR=8.0						
N18A	**Larsen Ranch,**	**29.30**	**330**	⇑P	**P**	**08 55 18.1**	**-0.6**
	baz=29						
DAU	**Daniels Canyon**	**29.66**	**327**	*e*P	**P**	**08 55 23.5**	**+1.6**
SADO	**Sadowa**	**29.85**	**17**	LR	LR	09 08 22.6	
	comp=Z,515nm,19.2s,MS4.2,baz=241,slow=38						
P14A	**Drum Mountains**	**30.05**	**324**	⇓P	**P**	**08 55 25.9**	**+0.5**
	baz=30						
Q13A	**Wheeler Ranch,**	**30.17**	**322**	⇑P	**P**	**08 55 26.3**	**-0.1**
	baz=30						
S11A	**Rachel**	**30.39**	**319**	⇑P	**P**	**08 55 28.6**	**+0.2**
	baz=30						
P13A	**Bates Ranch, G**	**30.50**	**323**	⇓P	**P**	**08 55 29.8**	**+0.5**
	baz=31						
PDAR	**Pinedale Array**	**30.66**	**332**	P	**P**	**08 55 31.1**	**+0.4**
	0.2nm,0.6s,mb3.2,baz=116,slow=10,SNR=2.5						
R11A	**Troy Canyon, C**	**30.72**	**320**	⇓P	**P**	**08 55 30.5**	**-0.9**
	baz=31						
N14A	**Grayback Hills**	**31.00**	**326**	⇓P	**P**	**08 55 33.7**	**0.0**
	baz=31						
Q11A	**Duckwater**	**31.07**	**321**	⇓P	**P**	**08 55 34.8**	**+0.4**
	baz=31						
S10A	**Tonopah Range,**	**31.10**	**318**	⇓P	**P**	**08 55 35.3**	**+0.6**
	baz=31,SNR=6.5						
ISA	**Isabella**	**31.11**	**313**	*e*P	**P**	**08 55 36.6**	**+1.8**
	2.5nm,0.9s,mb4.0						
R10A	**Warm Springs**	**31.13**	**319**	⇓P	**P**	**08 55 35.1**	**+0.2**
	baz=31						
BSC	**Santa Cruz Isl**	**31.15**	**309**	⇑P	**P**	**08 55 34.4**	**-0.8**
	baz=31						
LONY	**Lake Ozonia**	**31.21**	**23**	*e*P	**P**	**08 55 35.8**	**+0.3**
	13nm,1.3s,mb4.6						
J18A	**Kendall Valley**	**31.22**	**332**	⇑P	**P**	**08 55 36.1**	**+0.5**
	baz=31						
O12A	**Currie**	**31.46**	**324**	⇓P	**P**	**08 55 38.6**	**+0.8**
	baz=32						
Q10A	**Clear Creek Ra**	**31.52**	**320**	⇑P	**P**	**08 55 39.6**	**+1.3**
	baz=32						
M14A	**Sheep Mountain**	**31.55**	**327**	⇓P	**P**	**08 55 39.2**	**+0.7**
	baz=32						
REDW	**Red Top Meadow**	**31.71**	**332**	*e*P	**P**	**08 55 40.8**	**+0.9**
	16nm,1.4s,mb4.6						
SNOW	**Snow King Moun**	**31.74**	**332**	*e*P	**P**	**08 55 41.2**	**+1.0**
	10nm,1.1s,mb4.6						
TPAW	**Teton Pass**	**31.86**	**332**	*e*P	**P**	**08 55 41.4**	**+0.1**
	16nm,1.5s,mb4.6						
L14A	**Malta**	**31.87**	**328**	⇑P	**P**	**08 55 41.9**	**+0.5**
	baz=32						
M13A	**Montello**	**31.88**	**326**	⇑P	**P**	**08 55 41.6**	**+0.1**
	baz=32,SNR=6.4						
M13A	**Montello**	**31.88**	**326**	*e*P	**P**	**08 55 41.8**	**+0.3**
	20nm,1.6s,mb4.7						
O11A	**Cowboy Ranch,**	**31.89**	**323**	⇓P	**P**	**08 55 42.2**	**+0.6**
	baz=32						
N12A	**Clover Valley,**	**32.02**	**324**	⇓P	**P**	**08 55 43.0**	**+0.3**
	baz=32						
P10A	**Eureka**	**32.05**	**321**	⇑P	**P**	**08 55 43.4**	**+0.4**
	baz=32						
NVAR	**Mina Array Bea**	**32.49**	**318**	P	**P**	**08 55 48.1**	**+1.2**
	1.7nm,0.7s,mb4.0,baz=130,slow=8.7,SNR=16						
M11A	**Holland Ranch,**	**32.83**	**324**	⇓P	**P**	**08 55 49.7**	**-0.1**
	baz=33						
J14A	**Carey**	**32.95**	**329**	⇑P	**P**	**08 55 50.3**	**-0.5**
	baz=33						
F18A	**Big Timber**	**33.27**	**336**	⇓P	**P**	**08 55 52.8**	**-0.8**
	baz=33						
L11A	**Cat Creek Ranc**	**33.30**	**325**	⇑P	**P**	**08 55 53.1**	**-0.8**
	baz=33						
M10A	**I.L. Ranch, Tu**	**33.31**	**324**	⇑P	**P**	**08 55 54.6**	**+0.6**
	baz=33						
I14A	**Mackay**	**33.36**	**330**	⇓P	**P**	**08 55 55.3**	**+0.9**
	baz=33						
HLID	**Hailey**	**33.57**	**328**	*e*P	**P**	**08 55 56.7**	**+0.5**
	4.3nm,1.4s,mb4.2						
F17A	**Fitzpatrick Pl**	**33.65**	**335**	⇓P	**P**	**08 55 57.7**	**+0.8**
	baz=34						
I13A	**Wildhorse Cree**	**33.68**	**329**	⇑P	**P**	**08 55 57.5**	**+0.4**
	baz=34						
MCMT	**McKenzie Canyo**	**33.76**	**331**	*e*P	**P**	**08 55 59.1**	**+1.3**
	9.7nm,1.9s,mb4.4						
H14A	**Leadore**

FINES	**FINESS Array B**	87.77	25	P	P	09 02 03.5	-1.3
	comp=Z,0.7nm,0.6s,mb4.1,baz=261,slow=9.3,SNR=2.9						
TORD	**Torodi Ar. Bea**	88.73	77	LR	LR	09 37 25.7	
	comp=Z,119nm,19.3s,MS4.3,baz=275,slow=33						
DZM	**Mont Dzumac**	107.52	252	*e*LR	LR	09 39 04.5	
	comp=Z,124nm,21.5s						
CN2	**Changchun**	111.40	333	*e*PKP	PKiKP	09 07 48.2	-2.0
HHC	**Hu-ho-hao-te**	119.25	341	*e*PKP	PKPdf	09 08 00.2	-5.2
HHC				AMB	AMB		
	comp=Z,50nm,9.3s						
WMQ	**Urumqi**	119.95	1	PKP	PKPdf	09 08 05.4	-1.2
WMQ				LR	LR		
	comp=E,230nm,28.0s						
WMQ				LR	LR		
	comp=Z,78nm,22.6s						
CD2	**Chengdu**	130.80	343	PKP	PKPdf	09 08 25.7	-2.1
WRA	**Warramunga Arr**	137.02	258	PKP	PKPdf	09 08 38.0	-1.6
	comp=Z,0.4nm,0.8s,baz=89,slow=2.8,SNR=4.9						
ASAR	**Alice Springs**	137.49	253	PKP	PKPdf	09 08 40.0	-0.4
	comp=Z,0.6nm,0.9s,baz=86,slow=3.2,SNR=3.3						

IDC 01 08:56:23.1±2.4, 10°.59N×92°.75E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.5/24, mbtmp3.7/5, ML3.7/1, MS3.2/3, Ms1 3.2/3, ms1mx2.7/38, Error ellipse: s-maj=76.3km s-min=22.7km az=71.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	9.85	37	Pn	Pn	08 58 46.2	+0.1
	0.2nm,0.3s,baz=220,slow=10.0,SNR=4.8						
PSI	**Prapat**	9.87	141	LR	LR	09 02 37.7	
	comp=Z,54nm,18.4s,baz=203,slow=38						
SONM	**Songino Array**	38.87	15	P	P	09 03 50.2	+0.1
	0.5nm,0.5s,baz=204,slow=7.2,SNR=2.5						
KURK	**Kurchatov**	41.67	346	LR	LR	09 24 21.3	
	comp=Z,30nm,21.0s,baz=245,slow=40						
ZALV	**Zalesovo Beam**	43.71	353	P	P	09 04 29.6	-0.2
	0.5nm,0.3s,baz=178,slow=8.7,SNR=3.4						
WRA	**Warramunga Arr**	50.95	126	P	P	09 05 26.7	0.0
	0.3nm,0.5s,baz=306,slow=8.4,SNR=16						
ASAR	**Alice Springs**	52.70	131	P	P	09 05 39.9	+0.1
	1.0nm,0.7s,baz=305,slow=6.5,SNR=13						
PETK	**Petropavlovsk-**	66.63	37	LR	LR	09 36 24.0	
	comp=Z,38nm,20.3s,baz=222,slow=36						

*IDC **01** 08:59:23.6±1.3, 36°.30N×21°.84E, h0km, mb3.9/5, mb1 3.8/6, mb1mx3.6/27, mbtmp3.8/6, ML2.9/1, Error ellipse: s-maj=30.1km s-min=25.4km az=120.0*
*ISCJB **01** 08:59:23.3±1.0, 36°.06N±0°.03×21°.84E±0°.05, h6km±6km, mb3.7/5, Error ellipse: s-maj=7.6km s-min=4.4km az=147.7*
*NEIC **01** 08:59:24.1, 36°.07N×21°.85E, h5km, ML3.4(ATH), After ATH.*
*ATH **01** 08:59:24.1, 36°.07N×21°.85E, h5km±4km, MD3.8/22, ML3.4*
*CSEM **01** 08:59:26.5±0.5, 36°.24N×21°.95E, h2km, ML4.0/3, Error ellipse: s-maj=11.8km s-min=6.5km az=46.0*
*THE **01** 08:59:27.0, 36°.24N×21°.85E, h0km±3km, ML4.0/3, Error ellipse: s-maj=4.6km s-min=2.0km az=241.0*

ISC 01 08:59:23.8±1.0, 36°.06N±0°.04×21°.86E±0°.06, h7km±6km, n93, σ1§14/112, mb3.7/5, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	0.84	353	*e*PG	Pg	08 59 39.5	-0.5
PYL				*e*SB	Sg	08 59 52.2	+1.2
PYL	**PYLOS**	0.84	353	P	Pg	08 59 39.3	-0.7
PYL				S	Sg	08 59 50.6	-0.4
PYL	**PYLOS**	0.84	353	*e*Pg	Pg	08 59 39.5	-0.5
PYL				*e*Sb	Sg	08 59 52.2	+1.2
KYTH	**Kithira**	0.97	76	*e*Pn	Pg	08 59 43.7	+1.1
KYTH	**Kithira**	0.97	76	*e*PN	Pg	08 59 43.7	+1.1
KYTH	**Kithira**	0.97	76	*e*Pn	Pg	08 59 43.7	+1.1
VLI	**Veliai**	1.09	52	*e*Pg	Pg	08 59 44.5	-0.2
VLI				*e*Sb	Sg	09 00 00.4	+1.5
VLI	**Veliai**	1.09	52	*e*PG	Pg	08 59 44.5	-0.2
VLI				*e*SB	Sg	09 00 00.4	+1.5
VLI	**Veliai**	1.09	52	*e*Pg	Pg	08 59 44.5	-0.2
VLI				*e*Sb	Sg	09 00 00.4	+1.5
ITM	**Ithomi**	1.12	3	*e*Pg	Pg	08 59 44.6	-0.8
ITM				*e*Sb	Sb	09 00 00.8	+0.5
ITM	**Ithomi**	1.12	3	*e*PG	Pg	08 59 44.6	-0.8
ITM				*e*SB	Sb	09 00 00.8	+0.5
ITM	**Ithomi**	1.12	3	P	Pg	08 59 44.7	-0.7
ITM				S	Sg	08 59 57.8	-2.1
ITM	**Ithomi**	1.12	3	*e*Pg	Pg	08 59 44.6	-0.8
ITM				S	Sg	08 59 57.8	-2.1
ITM				*e*Sb	Sb	09 00 00.8	+0.5
VLX	**Vlachokerasia**	1.37	17	*e*PG	Pn	08 59 49.1	-0.3
VLX				*e*SB	Sg	09 00 09.4	+1.3
VLX	**Vlachokerasia**	1.37	17	P	Pn	08 59 49.3	-0.1
VLX				S	Sb	09 00 07.8	+0.2
VLX	**Vlachokerasia**	1.37	17	P	Pn	08 59 49.3	-0.1
KARN	**Karanos**	1.79	111	*e*PN	Pg	08 59 58.3	+0.1
KARN	**Karanos**	1.79	111	P	Pg	08 59 58.7	+0.5
KARN				S	Sg	09 00 25.7	+4.2
KARN	**Karanos**	1.79	111	S	Sg	09 00 25.7	+4.2
KARN	**Karanos**	1.79	111	*e*Pn	Pg	08 59 58.3	+0.1
KARN	**Karanos**	1.79	111	P	Pg	08 59 58.7	+0.5
DID	**Didima**	1.82	37	*e*PG	Pb	08 59 57.8	+0.4
DID				*e*SN	Sg	09 00 22.9	+0.6
DID	**Didima**	1.82	37	P	Pb	08 59 57.9	+0.5
DID	**Didima**	1.82	37	*e*Pg	Pb	08 59 57.8	+0.4
GUR	**Goura**	1.91	11	*e*PG	Pb	08 59 59.3	+0.2
GUR	**Goura**	1.91	11	P	Pb	08 59 59.7	+0.6
GUR	**Goura**	1.91	11	*e*Pg	Pb	08 59 59.3	+0.2
GUR	**Goura**	1.91	11	P	Pb	08 59 59.7	+0.6
VAM	**Vamos**	2.01	108	*e*Pn	Pb	09 00 02.0	+1.4
VAM	**Vamos**	2.01	108	*e*PN	Pb	09 00 02.0	+1.4
VAM	**Vamos**	2.01	108	*e*Pn	Pb	09 00 02.0	+1.4
RLS	**Riolos of Patr**	2.02	351	*e*Pg	Pb	09 00 01.0	+0.1
RLS	**Riolos of Patr**	2.02	351	*e*PG	Pb	09 00 01.0	+0.1
RLS	**Riolos of Patr**	2.02	351	*e*Pg	Pb	09 00 01.0	+0.1
NAIG	**Nisos Aigina**	2.14	37	*e*Pg	Pg	09 00 04.1	-0.8
NAIG	**Nisos Aigina**	2.14	37	*e*PG	Pg	09 00 04.1	-0.8
NAIG	**Nisos Aigina**	2.14	37	*e*Pg	Pg	09 00 04.1	-0.8
LTK	**Loutraki**	2.15	24	*e*PN	Pb	09 00 03.2	+0.1
LTK	**Loutraki**	2.15	24	P	Pb	09 00 03.4	+0.3
LTK	**Loutraki**	2.15	24	*e*Pn	Pb	09 00 03.2	+0.1
LAKA	**Lakka**	2.18	2	P	Pb	09 00 03.9	+0.3
LAKA	**Lakka**	2.18	2	P	Pb	09 00 03.9	+0.3
TRIZ	**Trizonia**	2.31	4	P	Pb	09 00 06.7	+0.9
TRIZ	**Trizonia**	2.31	4	P	Pb	09 00 06.7	+0.9
KALE	**Kalithea**	2.34	5	P	Pb	09 00 06.4	+0.1
KALE	**Kalithea**	2.34	5	P	Pb	09 00 06.4	+0.1
VLS	**Valsamata**	2.35	335	*e*Pg	Pb	09 00 06.8	+0.3
VLS	**Valsamata**	2.35	335	*e*PG	Pb	09 00 06.8	+0.3
VLS	**Valsamata**	2.35	335	*e*Pg	Pb	09 00 06.8	+0.3
EFP	**Efpalio**	2.37	1	*e*PG	Pb	09 00 07.2	+0.5
EFP	**Efpalio**	2.37	1	P	Pb	09 00 07.5	+0.8
EFP	**Efpalio**	2.37	1	P	Pb	09 00 07.5	+0.8
EFP	**Efpalio**	2.37	1	*e*Pg	Pb	09 00 07.2	+0.5
VLY	**Voula,Athens**	2.37	40	*e*Pg	Pb	09 00 07.5	+0.7
VLY	**Voula,Athens**	2.37	40	*e*PG	Pb	09 00 07.5	+0.7
VLY	**Voula,Athens**	2.37	40	*e*Pg	Pb	09 00 07.5	+0.7
DSF	**Desfina**	2.41	12	P	Pb	09 00 07.1	-0.4
ATH	**Athens Observa**	2.42	37	*e*Pn	Pb	09 00 07.4	-0.3
ATH	**Athens Observa**	2.42	37	*e*PN	Pb	09 00 07.4	-0.3
ATH	**Athens Observa**	2.42	37	*e*Pn	Pb	09 00 07.4	-0.3
IDI	**Anoyia**	2.58	106	Pn	Pb	09 00 09.3	-1.1
	2.3nm,0.3s,baz=302,slow=16,SNR=7.4						
IDI	**Anoyia**	2.58	106	*e*Pn	Pb	09 00 09.2	-1.2
IDI	**Anoyia**	2.58	106	*e*PN	Pb	09 00 09.2	-1.2
IDI	**Anoyia**	2.58	106	*e*Pn	Pb	09 00 09.2	-1.2
LKR	**Lokris**	2.74	19	*e*Pn	Pb	09 00 11.2	-2.0
LKR	**Lokris**	2.74	19	*e*PN	Pb	09 00 11.2	-2.0
LKR	**Lokris**	2.74	19	*e*Pn	Pb	09 00 11.2	-2.0
LKD2	**Lefkada island**	2.89	341	P	Pb	09 00 13.6	-2.1
LKD2				S	Sn	09 00 46.4	+1.2
LKD2	**Lefkada island**	2.89	341	P	Pb	09 00 13.6	-2.1
LKD2				S	Sn	09 00 46.4	+1.2
AGG	**Agios Georgios**	2.98	7	*e*Pn	Pb	09 00 15.7	-1.6
AGG	**Agios Georgios**	2.98	7	*e*PN	Pb	09 00 15.7	-1.6
AGG	**Agios Georgios**	2.98	7	*e*Pn	Pb	09 00 15.7	-1.6
LAST	**Lasithi**	3.08	106	*e*Pn	Pb	09 00 16.7	-2.2
LAST	**Lasithi**	3.08	106	*e*PN	Pb	09 00 16.7	-2.2
LAST	**Lasithi**	3.08	106	*e*Pn	Pb	09 00 16.7	-2.2
THL	**Klokotos Trika**	3.50	2	*e*PB	Pb	09 00 23.1	-3.0
KEK	**Kerkira**	4.00	337	*e*Pn	Pn	09 00 28.7	+3.2
KEK	**Kerkira**	4.00	337	*e*PN	Pn	09 00 28.7	+3.2
KEK	**Kerkira**	4.00	337	P	Pn	09 00 26.9	+1.4
KEK				S	Sn	09 01 12.4	-0.1
KEK	**Kerkira**	4.00	337	P	Pn	09 00 26.9	+1.4
KEK	**Kerkira**	4.00	337	*e*Pn	Pn	09 00 28.7	+3.2
KEK				S	Sn	09 01 12.4	-0.1
TIP	**Timpagrande**	5.11	309	*e*Pn	Pn	09 00 42.2	+1.4
	5.1nm,0.5s						
TIP	**Timpagrande**	5.11	309	*e*Pn	Pn	09 00 42.2	+1.4
	5.1nm,0.5s						
CUC	**Castrocucco**	6.18	311	*e*Pn	Pn	09 00 59.0	+3.6
	15nm,0.6s						
CUC	**Castrocucco**	6.18	311	*e*Pn	Pn	09 00 59.0	+3.5
	15nm,0.6s						
BARS	**Barje**	6.75	360	*e*Pn	Pn	09 01 03.9	+0.6
DIVS	**Divibare**	8.16	350	*e*Pn	Pn	09 01 21.7	-0.9
ESDC	**Sonseca Array**	20.68	288	P	P	09 04 10.3	+6.0
	1.2nm,0.4s,baz=82,slow=11,SNR=8.7						
HFS	**Hagfors**	24.66	350	P	P	09 04 44.9	0.0
	0.7nm,0.6s,mb3.4,baz=167,slow=13,SNR=2.4						
FINES	**FINESS Array B**	25.55	5	P	P	09 04 51.1	-1.8
	2.4nm,1.0s,mb3.7,baz=206,slow=12,SNR=2.3						
TORD	**Torodi Ar. Bea**	29.15	224	P	P	09 05 27.8	+2.2
	0.9nm,0.7s,mb3.6,baz=34,slow=9.3,SNR=7.1						
KURK	**Kurchatov**	42.72	52	P	P	09 07 19.5	-1.8
	2.8nm,0.2s,mb4.6,baz=281,slow=8.4,SNR=1.3						
MKAR	**Makanchi Array**	45.53	57	P	P	09 07 43.5	-0.3
	0.2nm,0.4s,mb3.4,baz=293,slow=6.7,SNR=2.6						

*ISCJB **01** 09:03:13.9±0.5, 36°.07N±0°.03×21°.89E±0°.04, h10km, mb3.8/6, Error ellipse: s-maj=4.9km s-min=3.2km az=43.9*
*IDC **01** 09:03:13.9±1.3, 36°.16N×21°.89E, h0km, mb3.7/5, mb1 3.5/7, mb1mx3.4/28, mbtmp3.5/7, ML2.9/2, Error ellipse: s-maj=32.8km s-min=22.7km az=144.0*
*ATH **01** 09:03:14.2, 36°.08N×21°.87E, h5km±1km, MD3.9/24, ML3.4*
*NEIC **01** 09:03:14.2, 36°.08N×21°.87E, h5km, ML3.4(ATH), After ATH.*
*THE **01** 09:03:17.5, 36°.19N×22°.03E, h0km±2km, ML3.9/2, Error ellipse: s-maj=3.7km s-min=1.3km az=240.0*
*CSEM **01** 09:03:17.1±0.4, 36°.15N×21°.98E, h2km, ML3.9/2, Error ellipse: s-maj=9.9km s-min=4.9km az=50.0*

ISC 01 09:03:14.7±0.5, 36°.09N±0°.03×21°.89E±0°.04, h10km, n99, σ1§31/126, mb3.7/6, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	0.81	352	*e*PB	Pg	09 03 29.0	-1.4
PYL				*e*SB	Sg	09 03 41.1	+0.1
PYL	**PYLOS**	0.81	352	P	Pg	09 03 30.6	+0.2
PYL				S	Sg	09 03 42.2	+1.2
PYL	**PYLOS**	0.81	352	*e*Pb	Pg	09 03 29.0	-1.4
PYL	**PYLOS**	0.81	352	P	Pg	09 03 30.6	+0.2
PYL				*e*Sb	Sg	09 03 41.1	+0.1
PYL				S	Sg	09 03 42.2	+1.2
KYTH	**Kithira**	0.95	78	*e*Pn	Pg	09 03 33.0	0.0
KYTH	**Kithira**	0.95	78	*e*PN	Pg	09 03 33.0	0.0
KYTH	**Kithira**	0.95	78	*e*Pn	Pg	09 03 33.0	0.0
VLI	**Veliai**	1.05	53	*e*Pb	Pg	09 03 34.6	-0.4
VLI				*e*Sb	Sg	09 03 49.3	+0.6
VLI	**Veliai**	1.05	53	*e*PB	Pg	09 03 34.6	-0.4
VLI				*e*SB	Sg	09 03 49.3	+0.6
VLI	**Veliai**	1.05	53	*e*Pb	Pg	09 03 34.6	-0.4
VLI				*e*Sb	Sg	09 03 49.3	+0.6
ITM	**Ithomi**	1.09	2	*e*Pg	Pg	09 03 34.4	-1.3
ITM				*e*Sb	Sg	09 03 50.7	+0.9
ITM	**Ithomi**	1.09	2	*e*PG	Pg	09 03 34.4	-1.3
ITM				*e*SB	Sg	09 03 50.7	+0.9
ITM	**Ithomi**	1.09	2	P	Pg	09 03 35.6	-0.1
ITM				S	Sg	09 03 50.8	+1.0
ITM	**Ithomi**	1.09	2	*e*Pg	Pg	09 03 34.4	-1.3
ITM	**Ithomi**	1.09	2	P	Pg	09 03 35.6	-0.1
ITM				S	Sg	09 03 50.8	+1.0
VLX	**Vlachokerasia**	1.34	17	*e*PN	Pn	09 03 39.0	-0.5
VLX				*e*SB	Sb	09 03 58.7	+1.6
VLX	**Vlachokerasia**	1.34	17	P	Pn	09 03 39.4	-0.1
VLX				S	Sb	09 03 58.5	+1.4
VLX	**Vlachokerasia**	1.34	17	*e*Pn	Pn	09 03 39.0	-0.5
VLX	**Vlachokerasia**	1.34	17	P	Pn	09 03 39.4	-0.1
VLX				S	Sb	09 03 58.5	+1.4
DID	**Didima**	1.78	37	*e*PG	Pb	09 03 47.7	+0.2
DID				*e*SN	Sg	09 04 12.3	+0.3
DID	**Didima**	1.78	37	P	Pb	09 03 47.5	0.0
DID				S	Sn	09 04 08.8	+0.5
DID	**Didima**	1.78	37	P	Pb	09 03 47.5	0.0
DID				S	Sn	09 04 08.8	+0.5
DID				*e*Sn	Sg	09 04 12.3	+0.3
KARN	**Karanos**	1.79	112	*e*PG	Pb	09 03 47.5	-0.1
KARN	**Karanos**	1.79	112	P	Pg	09 03 48.2	-0.8
KARN				S	Sg	09 04 11.5	-0.7
KARN	**Karanos**	1.79	112	*e*Pg	Pb	09 03 47.5	-0.1
KARN	**Karanos**	1.79	112	P	Pg	09 03 48.2	-0.8
KARN				S	Sg	09 04 11.5	-0.7
GUR	**Goura**	1.88	11	*e*PN	Pb	09 03 48.8	-0.3
GUR	**Goura**	1.88	11	P	Pb	09 03 49.5	+0.4
GUR	**Goura**	1.88	11	*e*Pn	Pb	09 03 48.8	-0.3
GUR	**Goura**	1.88	11	P	Pb	09 03 49.5	+0.4
VAM	**Vamos**	2.00	109	*e*Pn	Pb	09 03 51.0	-0.2
VAM	**Vamos**	2.00	109	*e*PN	Pb	09 03 51.0	-0.2
VAM	**Vamos**	2.00	109	*e*Pn	Pb	09 03 51.0	-0.2
NAIG	**Nisos Aigina**	2.10	37	*e*Pn	Pb	09 03 52.6	-0.4
NAIG	**Nisos Aigina**	2.10	37	*e*PN	Pb	09 03 52.6	-0.4
NAIG	**Nisos Aigina**	2.10	37	*e*Pn	Pb	09 03 52.6	-0.4
LTK	**Loutraki**	2.12	24	*e*PN	Pb	09 03 52.3	-0.9
LTK	**Loutraki**	2.12	24	P	Pb	09 03 53.2	0.0
LTK	**Loutraki**	2.12	24	*e*Pn	Pb	09 03 52.3	-0.9
LTK	**Loutraki**	2.12	24	P	Pb	09 03 53.2	0.0
KALE	**Kalithea**	2.31	5	P	Pg	09 03 57.1	-1.9
KALE	**Kalithea**	2.31	5	P	Pg	09 03 57.1	-1.9
VLS	**Valsamata**	2.33	334	*e*Pn	Pb	09 03 55.7	-1.1
VLS	**Valsamata**	2.33	334	*e*PN	Pb	09 03 55.7	-1.1
VLS	**Valsamata**	2.33	334	*e*Pn	Pb	09 03 55.7	-1.1
VLY	**Voula,Athens**	2.33	40	*e*Pn	Pb	09 03 55.5	-1.3
VLY	**Voula,Athens**	2.33	40	*e*PN	Pb	09 03 55.5	-1.3
VLY	**Voula,Athens**	2.33	40	*e*Pn	Pb	09 03 55.5	-1.3
EFP	**Efpalio**	2.33	0	*e*PN	Pb	09 03 57.0	+0.1
EFP	**Efpalio**	2.33	0	*e*Pg	Pb	09 03 57.0	+0.1
DSF	**Desfina**	2.37	12	P	Pg	09 03 58.1	-2.1
DSF	**Desfina**	2.37	12	P	Pg	09 03 58.1	-2.1
ATH	**Athens Observa**	2.38	37	*e*Pn	Pb	09 03 56.8	-0.9
ATH	**Athens Observa**	2.38	37	*e*PN	Pb	09 03 56.8	-0.9
ATH	**Athens Observa**	2.38	37	*e*Pn	Pb	09 03 56.8	-0.9
IDI	**Anoyia**	2.57	107	Pn	Pb	09 03 59.1	-1.9
	2.9nm,0.3s,baz=285,slow=16,SNR=10						
IDI				Sn	Sb	09 04 35.5	+2.9
	6.4nm,0.3s,baz=270,slow=20,SNR=3.3						
IDI	**Anoyia**	2.57	107	*e*Pn	Pb	09 03 58.9	-2.1
IDI	**Anoyia**	2.57	107	*e*PN	Pb	09 03 58.9	-2.1
IDI	**Anoyia**	2.57	107	*e*Pn	Pb	09 03 58.9	-2.1
SIVA	**Sivas**	2.61	113	*e*Pn	Pb	09 04 00.2	-1.4
SIVA	**Sivas**	2.61	113	*e*PN	Pb	09 04 00.2	-1.4
SIVA	**Sivas**	2.61	113	*e*Pn	Pb	09 04 00.2	-1.4
LKR	**Lokris**	2.71	19	*e*Pn	Pn	09 04 00.8	+2.5
LKR	**Lokris**	2.71	19	*e*PN	Pn	09 04 00.8	+2.5
LKR	**Lokris**	2.71	19	*e*Pn	Pn	09 04 00.8	+2.5
EVR	**Evrytania**	2.82	359	*e*Pn	Pb	09 04 03.4	-1.8
EVR	**Evrytania**	2.82	359	*e*PN	Pb	09 04 03.4	-1.8
EVR	**Evrytania**	2.82	359	*e*Pn	Pb	09 04 03.4	-1.8
LKD2	**Lefkada island**	2.87	340	P	Pb	09 04 03.9	-2.1
LKD2				S	Sb	09 04 39.5	-1.6
LKD2	**Lefkada island**	2.87	340	P	Pb	09 04 03.9	-2.1
LKD2				S	Sb	09 04 39.5	-1.6
AGG	**Agios Georgios**	2.95	7	*e*Pn	Pn	09 04 04.5	+2.9
AGG	**Agios Georgios**	2.95	7	*e*PN	Pn	09 04 04.5	+2.9
AGG	**Agios Georgios**	2.95	7	*e*Pn	Pn	09 04 04.5	+2.9
LAST	**Lasithi**	3.07	107	*e*Pn	Pn	09 04 05.5	+2.2
LAST	**Lasithi**	3.07	107	*e*PN	Pn	09 04 05.5	+2.2
LAST	**Lasithi**	3.07	107	*e*Pn	Pn	09 04 05.5	+2.2
APE	**Apeiranthos**	3.09	70	*e*Pn	Pn	09 04 06.1	+2.5
APE	**Apeiranthos**	3.09	70	*e*PN	Pn	09 04 06.1	+2.5
APE	**Apeiranthos**	3.09	70	*e*Pn	Pn	09 04 06.1	+2.5
THL	**Klokotos Trika**	3.47	2	*e*PN	Pn	09 04 11.5	+2.7
THL	**Klokotos Trika**	3.47	2	*e*Pn	Pn	09 04 11.5	+2.7
KEK	**Kerkira**	3.98	336	*e*Pn	Pn	09 04 19.3	+3.6
KEK	**Kerkira**	3.98	336	*e*PN	Pn	09 04 19.3	+3.6
KEK	**Kerkira**	3.98	336	*e*Pn	Pn	09 04 19.3	+3.6
PLG	**Polygyros**	4.45	16	*e*Pn	Pn	09 04 25.5	+3.2
PLG	**Polygyros**	4.45	16	*e*PN	Pn	09 04 25.5	+3.2
PLG	**Polygyros**	4.45	16	*e*Pn	Pn	09 04 25.5	+3.2
TIP	**Timpagrande**	5.11	309	*e*Pn	Pn	09 04 30.7	-0.6
	9.1nm,0.9s						
TIP				*e*Sn	Sn	09 05 31.0	+0.7
TIP	**Timpagrande**	5.11	309	*e*Pn	Pn	09 04 30.7	-0.6
	9.1nm,0.9s						
TIP				*e*Sn	Sn	09 05 31.0	+0.7
CUC	**Castrocucco**	6.17	311	*e*Pn	Pn	09 04 49.0	+3.1
	10nm,0.6s						
CUC				*e*Sn	Sn	09 06 01.4	+4.8
CUC	**Castrocucco**	6.17	311	*e*Pn	Pn	09 04 49.0	+3.0
	10nm,0.6s						
CUC				*e*Sn	Sn	09 06 01.4	+4.8
BARS	**Barje**	6.72	360	*e*Pn	Pn	09 04 53.7	+0.3
BRTR	**Keskin Array B**	9.97	65	Pn	Pn	09 05 39.7	+1.7
	0.1nm,0.3s,baz=251,slow=11,SNR=4.1						
HFS	**Hagfors**	24.64	350	P	P	09 08 36.5	+1.4
	0.5nm,0.3s,mb3.5,baz=161,slow=9.2,SNR=3.7						
TORD	**Torodi Ar. Bea**	29.18	224	P	P	09 09 17.4	+1.0
	0.9nm,0.7s,mb3.6,baz=35,slow=9.0,SNR=7.4						
BVAR	**Borovoye Array**	37.67	48	P	P	09 10 30.1	+0.2
	0.2nm,0.3s,mb3.3,baz=235,slow=5.1,SNR=2.5						
KURK	**Kurchatov**	42.68	52	P	P	09 11 11.0	-0.5
	3.5nm,0.3s,mb4.6,baz=282,slow=8.8,SNR=2.6						
MKAR	**Makanchi Array**	45.50	57	P	P	09 11 33.1	-1.0
	0.4nm,0.5s,mb3.5,baz=273,slow=8.1,SNR=4.0						
ZALV	**Zalesovo Beam**	46.30	47	P	P	09 11 40.2	-0.2
	0.7nm,0.3s,mb4.0,baz=282,slow=7.2,SNR=3.1						

NNC 01 09:09:05.8±2.8, 39°.00N×58°.27E, h0km, mb3.8, 3C-2D, Error ellipse: s-maj=23.2km s-min=15.2km az=43.0, Turkmenistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	10.11	62	⇓P	Pn	09 11 32.5	+0.4
	0.8nm,0.5s,baz=242,slow=17,SNR=12						
KK31				⇑S	Sn	09 13 27.4	+1.2
	2.2nm,0.7s						
AB31	**Akbulak array**	10.32	6	P	Pn	09 11 34.8	-0.2
	1.1nm,0.6s,baz=188,slow=13,SNR=19						
AB31				⇑S	Sn	09 13 33.0	+1.7
	2.0nm,0.5s,baz=190,slow=24,SNR=5.4						
ZRNK	**Zerenda**	15.79	24	⇑S	Sn	09 15 46.7	+1.7
	3.8nm,1.0s						
BRVK	**Borovoye**	16.31	27	⇓S	Sn	09 15 58.1	+0.6
	3.7nm,0.7s						

*IDC **01** 09:24:24.4±6.5, 37°.96N×75°.90E, h86km±55km, mb3.7/8, mb1 3.7/12, mb1mx3.5/29, mbtmp3.6/12, ML3.7/4, Error ellipse: s-maj=35.4km s-min=27.4km az=4.0*
*ISCJB **01** 09:24:29.1±0.4, 38°.18N±0°.03×75°.79E±0°.09, h136km±6km, mb3.8/9, Error ellipse: s-maj=12.1km s-min=3.9km az=159.1*
*NEIC **01** 09:24:29.1±1.8, 38°.09N×75°.82E, h126km±12km, Error ellipse: s-maj=19.2km s-min=11.9km az=177.0*
*BJI **01** 09:24:37.0, 38°.50N×76°.49E, h15km, ML3.4/5*
*NNC **01** 09:24:39.5±5.1, 38°.93N×75°.45E, h168km±47km, mb3.1, mpv4.0, Error ellipse: s-maj=56.8km s-min=24.5km az=7.0*

ISC 01 09:24:30.1±0.4, 38°.17N±0°.03×75°.83E±0°.09, h131km±6km, n56, σ1§13/66, mb3.8/9, 1C-7D, Southern Xinjiang

AB31 S **S** **09 30 51.6 -16**
comp=N,1.6nm,0.6s,baz=134,slow=24,SNR=6.1
ZALV Zalesovo Beam 16.95 18 P **Pn** **09 28 18.9 0.0**
comp=N,0.4nm,0.3s,baz=234,slow=11,SNR=3.4
AKTK Aktyubinsk 17.63 320 P **Pn** **09 28 25.5 -1.7**
AKTO Aktyubinsk 17.63 320 P **Pn** **09 28 25.5 -1.7**
comp=N,0.3nm,0.3s,baz=114,slow=14,SNR=7.0
BRTR Keskin Array B 32.63 286 P **P** **09 30 50.1 +0.9**
comp=N,0.3nm,0.5s,mb3.3,baz=60,slow=8.5,SNR=3.9
JOF Joensuu 36.44 327 *eP* **P** **09 31 21.3 -0.4**
JOF Joensuu 36.44 327 *ep* **P** **09 31 21.3 -0.4**
comp=N,1.8nm,0.4s,mb4.0
FINES FINESS Array B 38.33 324 P **P** **09 31 38.1 +0.5**
comp=N,2.6nm,0.3s,mb4.3,baz=114,slow=9.6,SNR=19
ARCES ARCESS Array B 41.14 336 P **P** **09 32 01.7 +1.0**
comp=N,2.1nm,0.6s,mb4.0,baz=104,slow=10,SNR=5.2
HFS Hagfors 44.17 321 P **P** **09 32 25.6 +0.3**
comp=N,2.7nm,0.6s,mb4.1,baz=98,slow=9.1,SNR=9.7
NB2 NORSAR Subarra 45.40 322 P **P** **09 32 35.1 0.0**
comp=Z,1.1nm,0.5s,mb3.7,baz=90,slow=7.9
NOA NORSAR Array B 45.40 322 P **P** **09 32 35.3 +0.2**
comp=Z,0.6nm,0.4s,mb3.6,baz=90,slow=8.5,SNR=7.3
TORD Torodi Ar. Bea 69.57 271 P **P** **09 35 24.6 -0.5**
comp=Z,0.8nm,0.3s,mb4.0,baz=48,slow=5.7,SNR=40
YKA Yellowknife Ar 79.33 5 P **P** **09 36 21.4 +0.7**
comp=Z,1.9nm,0.7s,mb3.9,baz=345,slow=5.5,SNR=9.5
ASAR Alice Springs 82.16 128 P **P** **09 36 35.1 -1.2**
comp=Z,0.1nm,0.3s,mb2.9,baz=316,slow=6.7,SNR=2.8

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*ISCJB **01** 09:34:21.7±0.9, 16°.4S±0°.2×176°.2W±0°.1, h380km±12km, mb3.6/9, Error ellipse: s-maj=34.8km s-min=14.2km az=147.7*
*IDC **01** 09:34:21.3±1.4, 16°.29S×176°.31W, h356km±18km, mb3.3/8, mb1 3.5/9, mb1mx3.4/19, mbtmp3.4/9, Error ellipse: s-maj=31.6km s-min=13.8km az=140.0*
*NEIC **01** 09:34:23.0±1.0, 16°.36S×176°.19W, h379km±11km, mb3.9/1, Error ellipse: s-maj=32.1km s-min=13.8km az=149.0*
ISC 01 09:34:22.5±0.8, 16°.4S±0°.2×176°.2W±0°.1, h374km±11km, n14, σ1°14/15, mb3.6/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.88**	**61**	P	**Pn**	**09 35 42.0**	**+0.1**
	12nm,0.3s,baz=88,slow=1.5,SNR=19						
AFI				S	**S**	**09 36 45.5**	**-0.8**
	1.6nm,0.3s,baz=180,slow=20,SNR=2.3						
AFI	**Afiamalu**	**4.88**	**61**	P	**Pn**	**09 35 42.0**	**0.0**
AFI				S	**S**	**09 36 45.5**	**-0.8**
MSVF	**Nonsavu**	**5.71**	**255**	*e*Pn	**Pn**	**09 35 52.9**	**+1.9**
	68nm,0.8s						
URZ	**Urewera**	**22.61**	**194**	P	**P**	**09 38 51.6**	**-0.8**
	8.6nm,0.9s,mb4.0,baz=336,slow=16,SNR=5.6						
STKA	**Stephens Creek**	**41.27**	**240**	P	**P**	**09 41 33.2**	**+0.3**
	3.6nm,1.0s,mb3.6,baz=113,slow=7.7,SNR=3.3						
WRAB	**Tennant Creek**	**47.04**	**258**	*e*P	**P**	**09 42 17.7**	**-0.7**
	9.9nm,1.4s,mb3.9						
WRA	**Warramunga Arr**	**47.05**	**258**	P	**P**	**09 42 17.5**	**-0.9**
	1.0nm,0.6s,mb3.2,baz=89,slow=6.8,SNR=27						
ASAR	**Alice Springs**	**47.30**	**253**	P	**P**	**09 42 19.4**	**-0.9**
	2.6nm,0.4s,mb3.8,baz=88,slow=8.2,SNR=75						
FITZ	**Fitzroy Crossi**	**55.43**	**259**	P	**P**	**09 43 20.5**	**+0.5**
	1.0nm,0.6s,mb3.3,baz=70,slow=12,SNR=4.0						
FITZ	**Fitzroy Crossi**	**55.43**	**259**	P	**P**	**09 43 20.5**	**+0.5**
FITZ				P		09 43 21.0	
PETK	**Petropavlovsk-**	**72.77**	**344**	P	**P**	**09 45 09.2**	**-1.5**
	2.3nm,0.7s,mb4.0,baz=120,slow=8.1,SNR=5.5						
NVAR	**Mina Array Bea**	**76.82**	**43**	P	**P**	**09 45 35.3**	**+1.2**
	0.8nm,0.7s,mb3.5,baz=228,slow=9.6,SNR=6.9						
TXAR	**Lajitas Array**	**83.35**	**57**	P	**P**	**09 46 11.5**	**+2.7**
	0.3nm,0.9s,mb3.1,baz=231,slow=5.7,SNR=3.1						
BRTR	**Keskin Array B**	**145.16**	**318**	PKPbc	PKPbc	09 53 16.6	-0.1
	1.0nm,0.6s,baz=70,slow=1.7,SNR=6.7						

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*SKO **01** 09:40:08.7, 40°.82N×20°.79E, h22km, M0.6, ML1.1*
*ISCJB **01** 09:40:09.3±2.1, 40°.84N±0°.05×20°.8E±0°.1, h33km±24km, Error ellipse: s-maj=18.1km s-min=9.1km az=3.2*
*THE **01** 09:40:09.1, 40°.88N×20°.80E, h31km±6km, ML2.5/1, Error ellipse: s-maj=6.4km s-min=0.8km az=321.0*
ISC 01 09:40:08.6±1.5, 40°.85N±0°.05×20°.7E±0°.1, h33km±9km, n6, σ0°68/12, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHR	**Ohrid**	**0.27**	**12**	*i* Pg	**Pb**	**09 40 15.9**	**-0.1**
OHR				*i* Sg	**Sb**	**09 40 20.8**	**-0.1**
OHR				*e*Lg		09 40 20.9	
	comp=N,22nm,0.4s						
OHR				*e*Lg		09 40 21.1	
	comp=E,35nm,0.6s						
OHR	**Ohrid**	**0.27**	**12**	P	**Pb**	**09 40 15.9**	**-0.1**
OHR				S	**Sb**	**09 40 20.6**	**-0.3**
BIA	**Bitola**	**0.48**	**69**	*e*Pg	**Pb**	**09 40 17.8**	**-1.1**
BIA				*e*Lg		09 40 25.8	
	comp=N,16nm,0.2s						
BIA				*i* Sg	**Sb**	**09 40 25.9**	**-0.1**
BIA				*e*Lg		09 40 26.4	
	comp=E,16nm,0.2s						
FNA	**Florina**	**0.50**	**98**	P	**Pb**	**09 40 18.8**	**-0.3**
FNA				S	**Sb**	**09 40 26.0**	**-0.4**
NEST	**Nestorio**	**0.50**	**151**	P	**Pb**	**09 40 18.9**	**-0.3**
NEST				S	**Sb**	**09 40 27.5**	**+1.1**
KRUS	**Krusevo**	**0.65**	**37**	*i* Pg	**Pn**	**09 40 21.6**	**+0.1**
KRUS				*i* Sg	**Sb**	**09 40 31.9**	**+1.4**
KRUS				*e*Lg		09 40 32.5	
	comp=E,4.5nm,0.3s						
KRUS				*e*Lg		09 40 32.9	
	comp=N,5.3nm,0.2s						

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*ISCJB **01** 09:45:50.5±0.7, 19°.34N±0°.07×99°.5E±0°.1, h10km, mb3.7/6, Error ellipse: s-maj=19.3km s-min=6.7km az=22.2*
*IDC **01** 09:45:51.2±1.0, 19°.36N×99°.49E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.6/24, mbtmp3.8/6, MS3.4/2, Ms1 3.4/2, ms1mx2.7/29, Error ellipse: s-maj=27.1km s-min=10.5km az=110.0*
*NEIC **01** 09:45:52.5±0.6, 19°.29N×99°.35E, h10km, mb3.7/1, Error ellipse: s-maj=15.9km s-min=6.6km az=107.0*
ISC 01 09:45:52.5±0.7, 19°.32N±0°.06×99°.4E±0°.1, h10km, n14, σ0°87/13, mb3.7/6, Thailand

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHTO	**Chiang Mai**	**0.65**	**219**	*e*Pg	**Pg**	**09 46 04.2**	**-0.9**
CM31	**Chiang Mai Arr**	**0.95**	**206**	*e*Pg	**Pg**	**09 46 10.0**	**-0.8**
CM31				*e*Sg	**Sg**	**09 46 24.9**	**+1.7**
CMAR	**Chiang Mai Arr**	**0.95**	**206**	Pg	**Pg**	**09 46 10.5**	**-0.3**
	294nm,0.3s,baz=15,slow=15,SNR=887						
CMAR				Lg		09 46 26.5	
	488nm,0.3s,baz=32,slow=28,SNR=36						
CMAR	**Chiang Mai Arr**	**0.95**	**206**	Pg	**Pg**	**09 46 10.6**	**-0.3**
CMAR				Lg		09 46 26.5	
PSI	**Prapat**	**16.43**	**182**	LR	LR	09 55 56.8	
	comp=Z,152nm,18.6s,baz=60,slow=36						
SONM	**Songino Array**	**29.01**	**10**	P	**P**	**09 51 54.0**	**+1.6**
	1.3nm,1.0s,mb3.6,baz=196,slow=12,SNR=5.9						
MKAR	**Makanchi Array**	**30.77**	**337**	P	**P**	**09 52 07.8**	**-0.3**
	0.5nm,0.6s,mb3.5,baz=139,slow=9.5,SNR=3.7						
KURK	**Kurchatov**	**35.38**	**337**	P	**P**	**09 52 47.8**	**-0.5**
	2.0nm,0.2s,mb4.6,baz=146,slow=8.5,SNR=1.5						
KURK	**Kurchatov**	**35.38**	**337**	*e*P	**P**	**09 52 48.7**	**+0.4**
	0.7nm,0.6s,mb3.8						
ZALV	**Zalesovo Beam**	**36.33**	**345**	P	**P**	**09 52 56.2**	**-0.1**
	0.6nm,0.3s,mb4.0,baz=153,slow=10.0,SNR=4.4						
ZALV	**Zalesovo Beam**	**36.33**	**345**	P	**P**	**09 52 56.2**	**-0.1**
WRA	**Warramunga Arr**	**51.93**	**137**	P	**P**	**09 55 01.1**	**-0.7**
	0.8nm,1.1s,mb3.5,baz=322,slow=7.7,SNR=3.1						
ASAR	**Alice Springs**	**54.40**	**140**	P	**P**	**09 55 20.2**	**+0.2**
	0.7nm,0.9s,mb3.6,baz=321,slow=7.3,SNR=5.2						
NOA	**NORSAR Array B**	**72.42**	**329**	LR	LR	10 33 15.0	
	comp=Z,18nm,20.4s,baz=95,slow=39						

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*NEIC **01** 09:51:12.1, 16°.49N×98°.34W, h29km, MD4.1(MEX), After MEX.*
MEX 01 09:51:12.1±0.8, 16°.49N×98°.34W, h29km±13km, MD4.1, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.23**	**115**	*e*P	Pb	09 51 16.6	-1.9
PNIG				*i* S	Sb	09 51 21.9	-0.9
PNIG	**Pinotepa**	**0.23**	**115**	*e*P	Pb	09 51 16.6	-1.9
PNIG				*i* S	Sb	09 51 21.9	-0.9
VHO	**Vista Hermosa**	**1.64**	**69**	*e*P	Pn	09 51 37.6	-1.5
VHO	**Vista Hermosa**	**1.64**	**69**	*e*P	Pn	09 51 37.6	-1.5
CAIG	**El Cayaco**	**1.93**	**287**	*i* P	Pn	09 51 42.1	-0.9
CAIG				*i* S	Sn	09 52 04.4	-1.9
CAIG	**El Cayaco**	**1.93**	**287**	*i* P	Pn	09 51 42.1	-0.9
CAIG				*i* S	Sn	09 52 04.4	-1.9
TPIG	**Tehuac#an**	**2.13**	**26**	*i* P	Pn	09 51 43.5	-2.3
TPIG				*i* S	Sn	09 52 08.3	-3.0
HUIG	**Huatulco**	**2.26**	**108**	*i* P	Pn	09 51 46.3	-1.2
HUIG				*i* S	Sn	09 52 11.7	-2.8
HUIG	**Huatulco**	**2.26**	**108**	*i* P	Pn	09 51 46.3	-1.2
HUIG				*i* S	Sn	09 52 11.7	-2.8
YAIG	**Yautepec**	**2.46**	**344**	*i* P	Pn	09 51 49.1	-1.2
YAIG				*i* S	Sn	09 52 17.3	-2.1
YAIG	**Yautepec**	**2.46**	**344**	*i* P	Pn	09 51 49.1	-1.2
YAIG				*i* S	Sn	09 52 17.3	-2.1
CMIG	**Matias Romero**	**3.36**	**79**	*e*P	Pn	09 52 00.4	-2.3
CMIG				*i* S	Sn	09 52 38.4	-3.3
CMIG	**Matias Romero**	**3.36**	**79**	*e*P	Pn	09 52 00.4	-2.3
CMIG				*i* S	Sn	09 52 38.4	-3.3

GUC 01 09:57:35.0±0.5, 20°.19S×69°.25W, h103km±4km, ML3.5, 1C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMBC	**Humberston**	**0.60**	**261**	⇑*iP*	Pn	09 57 52.0	+0.2
HMBC				*e*S	Sn	09 58 05.5	+1.0
HMBC				AML	AML	09 58 06.0	
	comp=E,4μm,0.1s						
PB01	**Plate Boundary**	**0.88**	**194**	⇓*eP*	Pn	09 57 54.5	+0.1
PB01				*e*S	Sn	09 58 09.8	+0.8
PB01				AML	AML	09 58 11.0	
	comp=N,2μm,0.2s						
MNMC	**Miæe Miæ**	**1.10**	**343**	*e*P	Pn	09 57 57.5	+0.8
MNMC				*e*S	Sn	09 58 14.6	+1.5
MNMC				AML	AML	09 58 17.6	
	comp=E,2μm,0.2s						
PB04	**Plate Boundary**	**2.08**	**186**	*e*P	Pn	09 58 11.8	+3.1
PB04				*e*S	Sn	09 58 39.6	+5.1
CEN1	**Los Morros**	**3.31**	**195**	*e*P	Pn	09 58 29.4	+4.5
CEN1				*e*S	Sn	09 59 10.5	+7.0
CEN1				AML	AML	09 59 20.1	
	comp=N,32nm,0.4s						

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*NEIC **01** 09:59:13.7±1.8, 18°.71N×147°.49E, h10km, Error ellipse: s-maj=45.3km s-min=22.6km az=71.0*
IDC 01 09:59:12.2±3.6, 18°.72N×147°.46E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.5/22, mbtmp3.7/4, Error ellipse: s-maj=171.5km s-min=26.1km az=87.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.52**	**199**	P	P	10 06 52.6	-0.6
	0.4nm,0.6s,baz=22,slow=8.9,SNR=13						
ASAR	**Alice Springs**	**44.16**	**198**	P	P	10 07 23.4	+0.6
	0.3nm,0.7s,baz=16,slow=6.9,SNR=4.9						
BVAR	**Borovoye Array**	**67.52**	**320**	P	P	10 10 10.1	-0.1
	0.7nm,0.5s,baz=106,slow=9.1,SNR=4.5						
FINES	**FINESS Array B**	**87.55**	**336**	P	P	10 12 02.1	+0.2
	0.4nm,0.4s,baz=74,slow=4.9,SNR=2.8						

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*TAP **01** 10:04:23.3, 22°.78N×121°.72E, h7km±1km, ML2.8, D*
ISC 01 10:04:23.2±1.0, 22°.81N±0°.04×121°.82E±0°.06, h5km±8km, n22, σ0°89/30, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTN	**Taitung**	**0.62**	**265**	*e*P	**Pg**	**10 04 35.5**	**+0.3**
	baz=267						
TTN				S	**Sg**	**10 04 43.3**	**0.0**
	baz=267						
TWG	**Pinlang**	**0.69**	**271**	*e*P	**Pg**	**10 04 36.0**	**-0.5**
	78nm,0.4s						
TWG	**Pinlang**	**0.69**	**271**	*i* P	**Pg**	**10 04 36.2**	**-0.3**
	baz=273						
TWG				S	**Sg**	**10 04 45.3**	**-0.1**
	baz=273						
TWF1	**Yuli**	**0.72**	**318**	P	**Pg**	**10 04 37.2**	**+0.1**
	baz=326						
YULB	**Yu-li**	**0.75**	**320**	*e*P	**Pg**	**10 04 37.2**	**-0.4**
	22nm,0.2s						
LAY	**Lan-yu**	**0.81**	**198**	P	**Pg**	**10 04 39.0**	**+0.2**
	baz=191						
LAY				*e*S	**Sg**	**10 04 50.4**	**+1.1**
	baz=191						
ECL	**Taimali**	**0.83**	**255**	P	**Pg**	**10 04 38.5**	**-0.6**
	baz=255						
ECL				*e*S	**Sg**	**10 04 48.2**	**-1.6**
	baz=255						
EHY	**Hungye**	**0.83**	**327**	*e*P	**Pg**	**10 04 39.1**	**0.0**
	baz=333						
ELDTW	**Lidau**	**0.83**	**297**	P	**Pg**	**10 04 38.3**	**-0.9**
	baz=302						
EAST	**Anshuo**	**0.99**	**245**	P	**Pg**	**10 04 41.4**	**-0.9**
	baz=243						
STYT	**Tauyuan**	**1.04**	**290**	*e*P	**Pg**	**10 04 42.4**	**-0.7**
	baz=293						
ESL	**Shilin**	**1.06**	**341**	*e*P	**Pg**	**10 04 43.9**	**+0.4**
	baz=345						
SGST	**Jiashian**	**1.17**	**283**	*e*P	**Pg**	**10 04 48.4**	**+2.7**
	baz=286						
SGST				*e*S	**Sg**	**10 04 60.0**	**-0.9**
	baz=286						
WTP	**Ta-pu**	**1.19**	**291**	*e*P	**Pg**	**10 04 46.9**	**+0.8**
	baz=294						
WTP				*e*S	**Sg**	**10 05 03.1**	**+1.6**
	baz=294						
SCZT	**Fangliau**	**1.19**	**249**	*e*P	**Pg**	**10 04 46.3**	**+0.2**
	baz=248						
TPUB	**Ta-pu**	**1.20**	**294**	P	**Pg**	**10 04 44.1**	**-2.1**
	11nm,0.2s						
CHN1	**Nanshi**	**1.24**	**288**	*e*P	**Pg**	**10 04 47.4**	**+0.3**
	baz=290						
CHN1				*e*S	**Sg**	**10 05 05.2**	**+1.9**
	baz=290						
TWK	**Hsinying**	**1.30**	**290**	*e*P	**Pn**	**10 04 48.4**	**+0.3**
	baz=293						
CHN5	**Tsauling**	**1.31**	**307**	P	**Pn**	**10 04 48.1**	**0.0**
	baz=310						
CHN5				S	**Sg**	**10 05 05.5**	**+0.2**
	baz=310						
SMLT	**Sun Moon Lake**	**1.36**	**322**	*e*P	**Pn**	**10 04 48.8**	**0.0**
	baz=325						
TYC	**Yuchr**	**1.40**	**321**	P	**Pn**	**10 04 49.7**	**+0.3**
	baz=325						
WHF	**Hehuan Shan**	**1.42**	**339**	*e*P	**Pn**	**10 04 49.1**	**-0.6**
	baz=343						

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*SOF **01** 10:17:41.9, 40°.54N×21°.41E, h2km, MD2.9*
*NEIC **01** 10:17:45.8, 40°.67N×21°.55E, h23km, MD3.5(ATH), After ATH.*
*SKO **01** 10:17:45.6, 40°.59N×21°.48E, h2km, M2.5, ML3.0*
*ATH **01** 10:17:45.8, 40°.67N×21°.55E, h23km±1km, MD3.5/14*
*ISCJB **01** 10:17:45.9±0.3, 40°.67N±0°.02×21°.51E±0°.02, h8km±3km, Error ellipse: s-maj=3.0km s-min=2.9km az=138.6*
*CSEM **01** 10:17:46.2±0.1, 40°.67N×21°.53E, h8km, ML3.7/7, Error ellipse: s-maj=2.7km s-min=2.4km az=22.0*
*THE **01** 10:17:46.4, 40°.66N×21°.52E, h2km±1km, ML3.7/7, Error ellipse: s-maj=1.7km s-min=0.7km az=288.0*
*TIR **01** 10:17:50.5±2.9, 40°.81N×20°.48E, h2km±364km, ML3.2*
ISC 01 10:17:46.6±0.3, 40°.67N±0°.02×21°.52E±0°.02, h9km±3km, n93, σ0°92/155, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FNA	**Florina**	**0.16**	**317**	P	**Pg**	**10 17 49.3**	**-0.8**
FNA	**Florina**	**0.16**	**317**	P	**Pg**	**10 17 49.8**	**-0.3**
FNA				S	**Sg**	**10 17 52.9**	**+0.5**
FNA	**Florina**	**0.16**	**317**	P	**Pg**	**10 17 49.8**	**-0.3**
FNA				S	**Sg**	**10 17 52.9**	**+0.5**
BIA	**Bitola**	**0.38**	**337**	*i* Pg	**Pg**	**10 17 53.1**	**-1.0**
BIA				*i* Sg	**Sg**	**10 17 59.9**	**+0.7**
BIA				*e*Lg		10 18 00.0	
	comp=E,1μm,0.2s						
BIA				*e*Lg		10 18 00.0	
	comp=N,675nm,0.2s						
BIA	**Bitola**	**0.38**	**337**	P	**Pg**	**10 17 53.1**	**-1.0**
BIA				S	**Sg**	**10 17 59.6**	**+0.4**
BIA	**Bitola**	**0.38**	**337**	P	**Pg**	**10 17 53.1**	**-1.0**
BIA				S	**Sg**	**10 17 59.6**	**+0.4**
KZN	**Kozani**	**0.41**	**152**	*e*Pb	**Pg**	**10 17 54.2**	**-0.4**
KZN				*e*Sb	**Sg**	**10 18 01.0**	**+1.1**
KZN	**Kozani**	**0.41**	**152**	*e*PB	**Pg**	**10 17 54.2**	**-0.4**
KZN				*e*SB	**Sg**	**10 18 01.0**	**+1.1**
KZN	**Kozani**	**0.41**	**152**	P	**Pg**	**10 17 54.3**	**-0.3**
KZN				S	**Sg**	**10 18 01.2**	**+1.3**
KZN	**Kozani**	**0.41**	**152**	*e*Pb	**Pg**	**10 17 54.2**	**-0.4**
KZN				*e*Sb	**Sg**	**10 18 01.0**	**+1.1**
NEST	**Nestorio**	**0.44**	**235**	P	**Pg**	**10 17 54.1**	**-1.0**
NEST				S	**Sg**	**10 18 00.6**	**-0.3**
NEST	**Nestorio**	**0.44**	**235**	P	**Pg**	**10 17 54.1**	**-1.0**
NEST				S	**Sg**	**10 18 00.6**	**-0.3**
KBN	**Korca**	**0.56**	**266**	*i* PG	**Pg**	**10 17 55.9**	**-1.5**
KBN				*i* SG	**Sg**	**10 18 04.7**	**0.0**
KBN	**Korca**	**0.56**	**266**	*i* Pg	**Pg**	**10 17 55.9**	**-1.5**
	SNR=95						
KBN				*i* Sg	**Sg**	**10 18 04.7**	**0.0**
	SNR=95						
OHR	**Ohrid**	**0.70**	**309**	*i* Pg	**Pg**	**10 17 58.6**	**-1.5**
OHR				*i* Sg	**Sg**	**10 18 10.0**	**+0.6**
OHR				*e*Lg		10 18 10.5	
	comp=N,930nm,0.5s						
OHR				*e*Lg		10 18 10.6	
	comp=E,623nm,0.4s						
OHR	**Ohrid**	**0.70**	**309**	P	**Pg**	**10 17 58.7**	**-1.5**
OHR				S	**Sg**	**10 18 09.9**	**+0.5**
OHR	**Ohrid**	**0.70**	**309**	P	**Pg**	**10 17 58.7**	**-1.5**
OHR				S	**Sg**	**10 18 09.9**	**+0.5**
KRUS	**Krusevo**	**0.73**	**344**	*i* Pg	**Pg**	**10 17 59.1**	**-1.6**
KRUS				*i* Sg	**Sg**	**10 18 10.7**	**+0.4**
KRUS				*e*Lg		10 18 10.7	
	comp=E,126nm,0.2s						
KRUS				*e*Lg		10 18 10.8	
	comp=N,126nm,0.2s						
VAY	**Valandovo**	**1.03**	**50**	*i* Pg	**Pg**	**10 18 05.5**	**-0.9**
VAY				*i* Sg	**Sg**	**10 18 21.4**	**+1.6**
VAY				*e*Lg		10 18 24.0	
	comp=N,412nm,1.1s						
VAY				*e*Lg		10 18 25.9	
	comp=E,236nm,0.9s						
VAY	**Valandovo**	**1.03**	**50**	P	**Pg**	**10 18 05.6**	**-0.8**
VAY				S	**Sg**	**10 18 21.2**	**+1.4**
VAY	**Valandovo**	**1.03**	**50**	P	**Pg**	**10 18 05.6**	**-0.8**
VAY				S	**Sg**	**10 18 21.2**	**+1.4**
THE	**Thessaloniki**	**1.10**	**91**	P	**Pg**	**10 18 07.1**	**-0.7**
THE				S	**Sg**	**10 18 22.3**	**+0.2**
THE	**Thessaloniki**	**1.10**	**91**	P	**Pg**	**10 18 07.1**	**-0.7**
THE				S	**Sg**	**10 18 22.3**	**+0.2**
JAN	**Janina**	**1.13**	**207**	*e*Pn	**Pg**	**10 18 08.0**	**-0.3**
JAN	**Janina**	**1.13**	**207**	*e*PN	**Pg**	**10 18 08.0**	**-0.3**
JAN	**Janina**	**1.13**	**207**	*e*Pn	**Pg**	**10 18 08.0**	**-0.3**
THL	**Klokotos Trika**	**1.16**	**161**	*e*PN	**Pn**	**10 18 07.8**	**-1.3**
THL				*e*SN	**Sn**	**10 18 24.4**	**-0.6**
THL	**Klokotos Trika**	**1.16**	**161**	P	**Pb**	**10 18 08.0**	**-0.9**
THL				S	**Sb**	**10 18 25.7**	**+1.6**
THL	**Klokotos Trika**	**1.16**	**161**	P	**Pb**	**10 18 08.0**	**-0.9**
THL				*e*Sn	**Sn**	**10 18 24.4**	**-0.6**
THL				S	**Sb**	**10 18 25.7**	**+1.6**
HORT	**Hortiatis**	**1.21**	**93**	P	**Pb**	**10 18 08.6**	**-1.0**
HORT				S	**Sb**	**10 18 26.0**	**+0.8**
HORT	**Hortiatis**	**1.21**	**93**	P	**Pb**	**10 18 08.6**	**-1.0**
HORT				S	**Sb**	**10 18 26.0**	**+0.8**
SKO	**Skopje**	**1.31**	**357**	*i* Pg	**Pg**	**10 18 12.5**	**+0.8**
SKO				*i* Sg	**Sg**	**10 18 29.7**	**+1.1**
SKO				*e*Lg		10 18 30.2	
	comp=E,237nm,1.0s						
SKO				*e*Lg		10 18 30.6	
	comp=N,197nm,0.8s						
SRN	**Sarande**	**1.40**	**236**	*i* PG	**Pg**	**10 18 14.6**	**+1.1**
SRN				*i* SG	**Sg**	**10 18 33.4**	**+1.7**
SRN	**Sarande**	**1.40**	**236**	*i* Pg	**Pg**	**10 18 14.6**	**+1.1**
	SNR=91						
SRN				*i* Sg	**Sg**	**10 18 33.4**	**+1.7**
	SNR=91						
SOH	**Sokhos**	**1.40**	**83**	*e*Pn	**Pn**	**10 18 12.1**	**-0.2**
SOH				*e*Sn	**Sn**	**10 18 30.2**	**-0.7**
SOH	**Sokhos**	**1.40**	**83**	*e*PN	**Pn**	**10 18 12.1**	**-0.2**
SOH				*e*SN	**Sn**	**10 18 30.2**	**-0.7**
SOH	**Sokhos**	**1.40**	**83**	P	**Pn**	**10 18 12.1**	**-0.2**
SOH				S	**Sb**	**10 18 33.3**	**+2.4**
SOH	**Sokhos**	**1.40**	**83**	P	**Pn**	**10 18 12.1**	**-0.2**
SOH				*e*Sn	**Sn**	**10 18 30.2**	**-0.7**
PLG	**Polygyros**	**1.50**	**101**	*e*Pn	**Pn**	**10 18 13.3**	**-0.3**
PLG				*e*Sn	**Sn**	**10 18 32.7**	**-0.6**
PLG	**Polygyros**	**1.50**	**101**	*e*PN	**Pn**	**10 18 13.3**	**-0.3**
PLG				*e*SN	**Sn**	**10 18 32.7**	**-0.6**
PLG	**Polygyros**	**1.50**	**101**	P	**Pn**	**10 18 13.8**	**+0.2**
PLG				S	**Sn**	**10 18 33.4**	**+0.1**
PLG	**Polygyros**	**1.50**	**101**	*e*Pn	**Pn**	**10 18 13.3**	**-0.3**
PLG	**Polygyros**	**1.50**	**101**	P	**Pn**	**10 18 13.8**	**+0.2**
PLG				*e*Sn	**Sn**	**10 18 32.7**	**-0.6**
PLG				S	**Sn**	**10 18 33.4**	**+0.1**
KEK	**Kerkira**	**1.63**	**235**	*e*Pn	**Pn**	**10 18 16.0**	**+0.6**
KEK				*e*Sn	**Sn**	**10 18 37.0**	**+0.6**
KEK	**Kerkira**	**1.63**	**235**	*e*PN	**Pn**	**10 18 16.0**	**+0.6**
KEK				*e*SN	**Sn**	**10 18 37.0**	**+0.6**
KEK	**Kerkira**	**1.63**	**235**	*e*Pn	**Pn**	**10 18 16.0**	**+0.6**
KEK				*e*Sn	**Sn**	**10 18 37.0**	**+0.6**
KKB	**Krupnik**	**1.68**	**44**	*i* P	**Pn**	**10 18 16.2**	**0.0**
KKB	**Krupnik**	**1.68**	**44**	*i* P	**Pn**	**10 18 16.2**	**0.0**
AGG	**Agios Georgios**	**1.76**	**159**	*e*Pb	**Pn**	**10 18 16.5**	**-0.7**
AGG				*e*Sn	**Sn**	**10 18 40.3**	**+0.6**
AGG	**Agios Georgios**	**1.76**	**159**	*e*PB	**Pn**	**10 18 16.5**	**-0.7**
AGG				*e*SN	**Sn

ITM	Ithomi	3.50	175	ePn	Pn	10 18 42.1	+1.0
STON	Ston	3.61	309	ePn	Pn	10 18 44.7	+2.1
STON				Sn	Sn	10 19 23.8	-1.5
STON	Ston	3.61	309	ePn	Pn	10 18 44.7	+2.1
STON				Sn	Sn	10 19 23.7	-1.6
DIVS	Divibare	3.61	342	ePn	Pn	10 18 42.6	-0.1
PYL	PYLOS	3.77	177	ePN	Pn	10 18 45.1	+0.2
PYL	PYLOS	3.77	177	ePn	Pn	10 18 45.1	+0.2

*ISCJB **01** 10:18:17.4±0.5, 28°.97N±0°.06×139°.9E±0°.1, h420km±6km, mb3.3/5, Error ellipse: s-maj=18.3km s-min=6.8km az=160.5*
*IDC **01** 10:18:17.5±0.8, 28°.90N×139°.62E, h402km±9km, mb3.0/5, mb1 3.3/9, mb1mx3.0/26, mbtmp3.1/9, Error ellipse: s-maj=24.2km s-min=11.0km az=77.0*
*JMA **01** 10:18:18.4±0.3, 29°.03N×140°.01E, h419km±5km, M3.8*
*NEIC **01** 10:18:18.4, 29°.03N×140°.01E, h419km, MG3.8(JMA), After JMA.*

ISC 01 10:18:18.5±0.5, 28°.99N±0°.05×140°.0E±0°.1, h411km±6km, n25, σ1§04/31, mb3.3/5, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.73	133	P	P	10 19 20.7	+0.1
13nm,0.3s,baz=300,slow=15,SNR=5.2							
CBIJ				S	S	10 20 10.4	-0.3
32nm,0.3s,baz=303,slow=22,SNR=6.8							
CBIJ	Chichi jima	2.73	133	P	P	10 19 21.3	+0.7
CBIJ				S	S	10 20 10.5	-0.3
JHHJ	Haha-jima-NKT	3.07	140	P	P	10 19 23.7	+0.4
JHHJ				S	S	10 20 15.6	0.0
JHJ2	Mitsune	4.11	358	P	P	10 19 33.2	+1.0
JHJ2				eS	S	10 20 30.6	-1.5
JHJ	Hachijo jima 2	4.12	358	P	P	10 19 33.3	+1.0
4.8nm,0.3s,baz=240,slow=23,SNR=6.4							
JHJ				S	S	10 20 31.7	-0.6
22nm,0.3s,baz=79,slow=22,SNR=5.0							
BSO1	Boso 1	5.71	9	P	P	10 19 49.1	+0.8
BSO1				S	S	10 21 00.2	-1.4
JWZ	Kozaga	5.80	322	P	P	10 19 50.3	+1.0
JIE	Ise	6.05	334	P	P	10 19 53.5	+1.5
JOD2	Odawara 2	6.29	354	P	P	10 19 54.5	-0.1
JRY	Ryogami san	7.06	353	P	P	10 20 02.6	-0.4
JRY				eS	S	10 21 24.2	-4.3
JTO	Tosashimizu	7.25	304	P	P	10 20 05.7	+0.5
MJAR	Matsushiro Arr	7.67	349	P	P	10 20 08.6	-1.2
1.4nm,0.3s,baz=169,slow=10,SNR=9.3							
MJAR	Matsushiro Arr	7.67	349	P	P	10 20 08.6	-1.2
MAJO	Matsushiro	7.67	349	eP	P	10 20 09.2	-0.6
8.3nm,0.6s							
MAT	Matsushiro	7.67	349	P	P	10 20 09.0	-0.8
MAT				eS	S	10 21 42.0	+1.0
JHS	Saijyo	8.34	318	P	P	10 20 18.2	+1.0
KSRS	Korea Array	13.13	313	P	P	10 21 09.9	-0.2
0.6nm,0.3s,baz=130,slow=12,SNR=13							
MKAR	Makanchi Array	47.75	308	P	P	10 26 13.7	-2.5
0.2nm,0.3s,mb2.9,baz=83,slow=11,SNR=4.9							
WRA	Warramunga Arr	48.95	187	P	P	10 26 24.2	-1.2
1.9nm,0.4s,mb3.7,baz=1.5,slow=7.7,SNR=76							
WRA				PcP	PcP	10 27 42.1	-0.3
0.3nm,0.4s,baz=359,slow=4.0,SNR=5.6							
ASAR	Alice Springs	52.68	187	P	P	10 26 51.5	-1.3
0.5nm,0.3s,mb3.2,baz=4.3,slow=5.4,SNR=20							
NVAR	Mina Array Bea	80.88	51	P	P	10 29 50.2	+1.9
0.5nm,0.5s,mb3.5,baz=278,slow=5.8,SNR=7.3							
NVAR	Mina Array Bea	80.88	51	P	P	10 29 50.2	+1.9
PDAR	Pinedale Array	84.24	44	P	P	10 30 06.3	+1.0
0.4nm,0.7s,mb3.3,baz=128,slow=2.4,SNR=4.1							
LPAZ	La Paz	151.24	70	PKPbc	PKPbc	10 37 26.5	+1.7
0.8nm,0.5s,baz=202,slow=3.0,SNR=4.9							
LPAZ	La Paz	151.24	70	PKPbc	PKPbc	10 37 26.5	+1.7

NNC 01 10:27:03.2±2.9, 50°.47N×73°.31E, h0km, mb3.5, mpv3.2, 9C-2D, Error ellipse: s-maj=46.8km s-min=10.9km az=29.0, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VOSK	Vostochnaya	2.68	328	⇑Pn	Pn	10 27 46.4	-1.1
5.4nm,0.5s							
VOSK				⇑Sn	Sn	10 28 19.2	-1.5
5.8nm,0.5s							
BRVK	Borovoye	3.20	325	⇑Pn	Pn	10 27 57.8	+3.1
6.1nm,0.5s							
BRVK				⇑Sn	Sn	10 28 35.6	+2.1
21nm,0.5s							
KURK	Kurchatov	3.39	84	⇑Pn	Pn	10 27 55.3	-2.0
4.2nm,0.6s							
KURK				⇑Sn	Sn	10 28 40.8	+2.6
40nm,0.7s							
ZRNK	Zerenda	3.65	314	⇑Pn	Pn	10 28 00.9	+0.1
2.6nm,0.5s							
ZRNK				⇓Sn	Sn	10 28 44.9	+0.3
12nm,0.6s							
MK31	Makanchi Array	7.00	118	⇑Pg	Pg	10 29 10.2	-7.0
0.8nm,0.6s,baz=291,slow=15,SNR=4.2							
MK31				⇓Sn	Sn	10 30 08.2	+1.2
1.7nm,0.7s,baz=322,slow=14,SNR=4.7							
MK31				⇑Lg		10 30 46.5	
6.1nm,0.7s,baz=322,slow=24,SNR=6.3							

*ISCJB **01** 10:38:07.5±0.3, 33°.12S±0°.07×15°.99W±0°.10, h10km, mb4.8/41, MS4.0/22, Error ellipse: s-maj=12.9km s-min=9.0km az=34.3*
*IDC **01** 10:38:07.5±0.6, 33°.09S×15°.98W, h0km, mb4.3/13, mb1 4.4/13, mb1mx4.3/19, mbtmp4.3/13, MS3.9/15, Ms1 3.9/15, ms1mx3.9/18, Error ellipse: s-maj=24.5km s-min=15.6km az=155.0*
*NEIC **01** 10:38:09.3±0.2, 33°.08S×16°.01W, h10km, mb5.0/27, MS4.5/4, Error ellipse: s-maj=9.8km s-min=6.1km az=128.0*

ISC 01 10:38:09.3±0.3, 33°.09S±0°.07×15°.99W±0°.10, h10km, n104, σ0§61/91, mb4.8/41, MS4.0/22, 4C-3D, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAM4	Nova Friburgo	25.77	288	(P)	P	10 43 40.6	+0.1
CAM4				i	pP	10 43 44.1	+0.6
CAM4				i		10 43 52.5	
CAM4				i		10 44 02.4	
CAM4				i		10 44 08.9	
SUR	Sutherland	30.87	99	LR	LR	10 53 50.9	
comp=Z,174nm,18.1s,MS3.8,baz=188,slow=31							
BOSA	Boshof	35.53	94	LR	LR	10 55 49.7	
comp=Z,157nm,19.6s,MS3.8,baz=80,slow=30							
CPUP	Villa Florida	36.35	270	P	P	10 45 13.3	-0.3
0.5nm,0.5s,baz=128,slow=8.6,SNR=3.2							
CPUP				LR	LR	10 58 31.8	
comp=Z,125nm,19.1s,MS3.7,baz=268,slow=34							
LIC	Lamto	40.46	17	⇑iP	P	10 45 47.3	-0.9
190nm,1.4s,mb5.3,baz=200							
LIC				eMLR	MLR		
comp=Z,374nm,20.5s,MS3.9							
LIC	Lamto	40.46	17	eP	P	10 45 47.3	-0.9
comp=Z,171nm,1.4s,mb5.6							
LIC	Lamto	40.46	17	⇑iP	P	10 45 47.3	-0.9
comp=Z,95nm,1.4s,mb5.3							
LIC				LR	LR		
comp=Z,190nm,20.5s,MS3.9							
MAIT	Maitri	40.64	166	eP	P	10 45 49.0	-0.1
KIC	Kosan Boka	40.66	17	eP	P	10 45 49.0	-0.9
comp=Z,75nm,0.6s,mb5.5							
TIC	Toumodi	40.87	17	eP	P	10 45 50.6	-1.0
comp=Z,24nm,0.2s,mb5.5							
DBIC	Dimbokro	40.93	17	P	P	10 45 51.6	-0.5
comp=Z,19nm,0.7s,mb4.8,baz=172,slow=8.1,SNR=28							
DBIC				LR	LR	10 58 30.7	
comp=Z,270nm,20.7s,MS4.1,baz=177,slow=30							
USHA	Ushuaia	42.33	223	LR	LR	10 59 58.8	
comp=Z,251nm,18.8s,MS4.1,baz=52,slow=31							
PMSA	Palmer Station	43.00	208	LR	LR	10 59 22.4	
comp=Z,239nm,20.1s,MS4.1,baz=14,slow=30							
LSZ	Lusaka	43.67	77	P	P	10 46 14.3	-0.2
comp=Z,6.7nm,1.1s,mb4.3,baz=243,slow=9.0,SNR=7.2							
PLCA	Paso Flores	43.69	244	P	P	10 46 15.0	+0.6
comp=Z,5.5nm,1.1s,mb4.2,baz=106,slow=4.7,SNR=5.5							
PLCA				LR	LR	11 02 54.4	
comp=Z,82nm,19.1s,MS3.6,baz=73,slow=34							
PLCA	Paso Flores	43.69	244	P	P	10 46 15.0	+0.6
PLCA				LR	LR	11 02 54.4	
CFAA	Coronel Fontan	43.79	257	P	P	10 46 14.5	-0.8
comp=Z,0.3nm,0.7s,baz=82,slow=7.6,SNR=3.0							
SIV	San Ignacio	44.04	282	P	P	10 46 18.5	+1.0
comp=Z,5.4nm,0.9s,mb4.3,baz=122,slow=11,SNR=20							
SYO	Syowa Base	47.33	156	⇓eP	P	10 46 39.4	-3.4
LPAZ	La Paz	49.74	276	P	P	10 47 01.1	-1.0
comp=Z,2.0nm,0.9s,mb4.2,baz=99,slow=8.9,SNR=8.0							
LPAZ				LR	LR	11 07 18.3	
comp=Z,84nm,19.3s,MS3.8,baz=51,slow=35							
MAW	Mawson	55.66	153	eP	P	10 47 44.4	-0.8
comp=Z,4.9nm,0.8s,mb4.6							
MAW	Mawson	55.66	153	P	P	10 47 45.1	-0.1
comp=Z,5.6nm,0.8s,mb4.7,baz=275,slow=6.6,SNR=12							
MAW				LR	LR	11 05 57.6	
comp=Z,256nm,21.9s,MS4.3,baz=267,slow=30							
QSPA	South Pole Qui	57.16	180	eP	P	10 47 57.1	+1.4
comp=Z,31nm,1.2s,mb5.2							
ROSC	El Rosal	66.83	293	LR	LR	11 14 20.5	
comp=Z,115nm,18.4s,MS4.1,baz=15,slow=32							
SBA	Scott Base	69.30	181	eP	P	10 49 15.3	-0.9
comp=Z,26nm,1.4s,mb5.0							
EVO	Evora	71.64	7	⇑iP	P	10 49 30.8	-0.1
comp=Z,74nm,1.5s,mb5.1							
EVO				eMLR	MLR		
comp=Z,121nm,20.0s,MS3.9							
KEST	Kesra	72.46	21	P	P	10 49 36.0	+0.1
comp=Z,3.0nm,0.9s,mb4.2,baz=112,slow=1.9,SNR=12							
KEST				LR	LR	11 18 21.1	
comp=Z,91nm,18.8s,MS4.1,baz=273,slow=33							
KEST	Kesra	72.46	21	eP	P	10 49 36.5	+0.7
ESDC	Sonseca Array	73.25	10	P	P	10 49 40.0	-0.5
comp=Z,0.2nm,0.3s,baz=187,slow=6.5,SNR=7.0							
ESDC				LR	LR	11 21 18.2	
comp=Z,99nm,18.9s,MS4.1,baz=85,slow=35							
ETSF	Etsaut	76.93	12	eP	P	10 50 01.8	+0.2
comp=Z,12nm,0.9s,mb4.5							
ETSF	Etsaut	76.93	12	eP	P	10 50 01.8	+0.2
comp=Z,6.3nm,0.9s,mb4.5							
SJPF	Ste Jean	77.03	11	eP	P	10 50 02.5	+0.3
EPF	Esparros	77.22	12	eP	P	10 50 03.4	+0.2
MTLF	Montolieu	77.86	13	eP	P	10 50 06.0	-0.8
comp=Z,22nm,1.3s,mb4.6							
MTLF	Montolieu	77.86	13	eP	P	10 50 06.0	-0.8
comp=Z,11nm,1.3s,mb4.6							
TIP	Timpagrande	78.06	25	eP	P	10 50 08.0	0.0
comp=Z,22nm,1.2s,mb5.0							
IDI	Amoyia	78.07	33	P	P	10 50 09.0	+0.8
comp=Z,8.3nm,0.7s,mb4.8,baz=252,slow=6.4,SNR=4.0							
LMR	La Mourre	78.79	17	eP	P	10 50 11.2	-0.8
comp=Z,26nm,1.0s,mb4.8							
LMR	La Mourre	78.79	17	eP	P	10 50 11.2	-0.8
comp=Z,13nm,1.0s,mb4.8							
EIL	Elat	78.89	44	P	P	10 50 13.5	+0.7
comp=Z,2.7nm,0.7s,mb4.3,baz=201,slow=8.6,SNR=4.5							
EIL	Elat	78.89	44	P	P	10 50 13.5	+0.7
LASF	Ste Croix	78.90	14	eP	P	10 50 12.3	-0.2
comp=Z,24nm,1.4s,mb4.6							
FRF	La Foret Royal	79.04	17	eP	P	10 50 12.8	-0.5
comp=Z,6.4nm,0.6s,mb4.4							
FRF	La Foret Royal	79.04	17	eP	P	10 50 12.8	-0.5
comp=Z,3.2nm,0.6s,mb4.4							
LFF	La Frestale	79.14	12	eP	P	10 50 14.2	+0.4
SMRF	Simiane la Rot	79.18	16	eP	P	10 50 14.2	+0.1
CAF	Calviac	79.36	13	eP	P	10 50 14.8	-0.2
comp=Z,32nm,1.4s,mb4.8							
CAF	Calviac	79.36	13	eP	P	10 50 14.8	-0.2
comp=Z,16nm,1.4s,mb4.8							
SBF	Sospel	79.52	17	eP	P	10 50 15.6	-0.3
RJF	Les Rejaudoux	79.63	12	eP	P	10 50 16.4	-0.1
RJF				eMLR	MLR		
comp=Z,242nm,19.2s,MS4.2							
RJF	Les Rejaudoux	79.63	12	eP	P	10 50 16.4	-0.1
RJF				LR	LR		
comp=Z,240nm,19.3s,MS4.5							
VIVF	Saint-Julien-l	79.82	15	eP	P	10 50 17.6	+0.1
comp=Z,56nm,1.4s,mb5.0							
VIVF	Saint-Julien-l	79.82	15	eP	P	10 50 17.6	+0.1
comp=Z,28nm,1.4s,mb5.0							
ORIF	Oris-en-Rattie	80.14	16	eP	P	10 50 19.7	+0.4
comp=Z,14nm,0.8s,mb4.6							
ORIF				eMLR	MLR		
comp=Z,294nm,18.5s,MS4.4							
ORIF	Oris-en-Rattie	80.14	16	eP	P	10 50 19.7	+0.4
comp=Z,6.8nm,0.8s,mb4.6							
MBDF	Montbardon	80.17	16	eP	P	10 50 19.9	+0.5
comp=Z,33nm,1.1s,mb4.9							
MBDF	Montbardon	80.17	16	eP	P	10 50 19.9	+0.5
comp=Z,16nm,1.1s,mb4.9							
TCF	Toulx Ste Croi	80.70	13	eP	P	10 50 22.4	+0.1
comp=Z,34nm,1.5s,mb4.8							
TCF	Toulx Ste Croi	80.70	13	eP	P	10 50 22.4	+0.1
comp=Z,17nm,1.5s,mb4.8							
LPG	La Plagne	80.89	16	eP	P	10 50 23.9	+0.6
comp=Z,31nm,1.1s,mb4.9							
LPG	La Plagne	80.89	16	eP	P	10 50 23.9	+0.6
comp=Z,16nm,1.1s,mb4.8							
LPL	La Plagne	80.91	16	eP	P	10 50 23.8	+0.4
comp=Z,26nm,0.9s,mb4.9							
LPL	La Plagne	80.91	16	eP	P	10 50 23.8	+0.4
comp=Z,13nm,0.9s,mb4.9							
SMF	Signal de Mont	81.36	14	eP	P	10 50 25.8	+0.1
AVF	Avril sur Loir	81.40	13	eP	P	10 50 26.1	+0.1
comp=Z,36nm,1.2s,mb4.9							
AVF	Avril sur Loir	81.40	13	eP	P	10 50 26.1	+0.1
comp=Z,18nm,1.2s,mb4.9							
MMAI	Mount Meron Ar	81.64	42	LR	LR	11 23 55.0	
comp=Z,58nm,19.2s,MS4.0,baz=140,slow=34							
SSF	Saint Saulge	81.69	13	eP	P	10 50 27.5	0.0
comp=Z,30nm,1.3s,mb4.8							
SSF	Saint Saulge	81.69	13	eP	P	10 50 27.5	0.0
comp=Z,15nm,1.3s,mb4.8							
CABF	La Chapelle	81.80	15	eP	P	10 50 27.7	-0.4
LOR	Lormes	81.96	14	eP	P	10 50 28.8	-0.1
LOR				eMLR	MLR		
comp=Z,158nm,22.5s,MS4.0							
LOR	Lormes	81.96	14	eP	P	10 50 28.8	-0.1
LOR				LR	LR		
comp=Z,160nm,22.5s,MS4.3							
GRR	Gorron	82.23	10	eP	P	10 50 30.2	-0.1
FLN	La Foliniere	82.65	10	eP	P	10 50 32.5	0.0
comp=Z,65nm,1.4s,mb5.2							
FLN				eMLR	MLR		
comp=Z,203nm,20.5s,MS4.2							
FLN	La Foliniere	82.65	10	eP	P	10 50 32.5	0.0
comp=Z,33nm,1.4s,mb5.2							
FLN				LR	LR		
comp=Z,200nm,20.5s,MS4.5							
HINF	Hinteralfeld	83.11	15	eP	P	10 50 34.3	-0.6
comp=Z,52nm,1.7s,mb5.0							
HINF	Hinteralfeld	83.11	15	eP	P	10 50 34.3	-0.6
comp=Z,26nm,1.7s,mb5.0							
HAU	Haudompre	83.17	15	eP	P	10 50 34.8	-0.4
HAU				eMLR	MLR		
comp=Z,169nm,19.2s,MS4.1							
HAU	Haudompre	83.17	15	eP	P	10 50 34.8	-0.4
HAU				LR	LR		
comp=Z,170nm,19.3s,MS4.4							
MEZF	Maizieres J'vi	83.38	14	eP	P	10 50 36.5	+0.3
BAIF	Baives	84.70	13	eP	P	10 50 43.1	+0.1
comp=Z,66nm,1.5s,mb5.2							
BAIF	Baives	84.70	13	eP	P	10 50 43.1	+0.1
comp=Z,33nm,1.5s,mb5.2							
GIVF	Givet	84.86	13	eP	P	10 50 43.8	+0.1
BRTR	Keskin Array B	85.79	36	P	P	10 50 49.0	+0.3
comp=Z,0.6nm,0.6s,mb4.0,baz=193,slow=5.1,SNR=6.0							
KHC	Kasperske Hory	85.99	19	eP	P	10 50 49.3	-0.1
comp=Z,4.1nm,1.1s,mb4.6							
PSZ	Piszkesteto	86.82	23	eP	P	10 50 53.8	+0.2
comp=Z,15nm,1.2s,mb5.1							
PSZ	Piszkesteto	86.82	23	⇓iP	P	10 50 53.8	+0.3
DRGR		86.83	25	⇑iP	P	10 50 54.2	+0.6
MLR	Muntele Rosu	86.96	28	P	P	10 50 54.0	-0.2
comp=Z,17nm,1.1s,mb5.2,baz=297,slow=4.5,SNR=13							
MLR	Muntele Rosu	86.96	28	⇓iP	P	10 50 54.4	+0.1
VYHS	Vyhne	86.98	22	eP	P	10 50 54.6	+0.3
comp=Z,11nm,1.7s,mb4.8							
VYHS	Vyhne	86.98	22	eP	P	10 50 54.6	+0.3
KECS	Kecovo	87.51	23	eP	P	10 50 58.4	+1.5
comp=Z,3.1nm,1.1s,mb4.5							
KECS	Kecovo	87.51	23	eP	P	10 50 58.4	+1.5
CRVS	Cervenica-Dubn	88.20	24	eP	P	10 51 01.6	+1.5
comp=Z,11nm,1.4s,mb4.9							
CRVS	Cervenica-Dubn	88.20	24	eP	P	10 51 01.6	+1.5
AKASG	Malin Array Be	92.48	27	P	P	10 51 19.6	-0.5
comp=Z,0.6nm,0.4s,mb4.3,baz=219,slow=4.8,SNR=9.5							
NOA	NORSAR Array B	96.39	13	LR	LR	11 31 52.7	
comp=Z,40nm,20.4s,MS3.9,baz=180,slow=34							
SCHQ	Schefferville	97.84	333	LR	LR	11 25 31.6	
comp=Z,69nm,21.1s,MS4.1,baz=160,slow=29							
NVAR	Mina Array Bea	118.49	299	PKP	PKPdf	10 56 57.6	+0.4
comp=Z,0.2nm,0.7s,baz=154,slow=3.0,SNR=3.0							
CMAR	Chiang Mai Arr	120.46	87	PKP	PKPdf	10 56 59.7	-1.8
comp=Z,0.6nm,0.4s,baz=240,slow=3.0,SNR=2.9							
TTA	Tatalina	141.03	332	ePKPdf	PKPdf	10 57 40.5	+1.5
BILL	Bilibino	144.98	359	ePKPdf	PKPdf	10 57 45.3	-0.5
KSRS	Korea Array	150.33	71	PKPbc	PKPbc	10 58 00.1	-0.7
comp=Z,0.6nm,0.5s,baz=241,slow=2.6,SNR=6.3							

*ISCJB **01** 10:48:20.8±0.6, 40°.66N±0°.03×21°.50E±0°.05, h13km±6km, Error ellipse: s-maj=6.2km s-min=4.3km az=155.5*
*SKO **01** 10:48:20.0, 40°.67N×21°.53E, h15km, M1.8, ML2.2*
*THE **01** 10:48:21.3, 40°.66N×21°.50E, h9km±2km, ML3.3/2, Error ellipse: s-maj=2.6km s-min=0.9km az=300.0*
*CSEM **01** 10:48:21.3, 40°.66N×21°.50E, h9km, ML3.3/2, After THE*

ISC 01 10:48:20.9±0.7, 40°.67N±0°.03×21°.50E±0°.06, h18km±7km, n16, σ1§01/32, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FNA	Florina	0.15	322	P	Pg	10 48 24.9	-0.2
FNA				S	Sg	10 48 27.9	0.0
FNA	Florina	0.15	322	P	Pg	10 48 24.9	-0.2
FNA				S	Sg	10 48 27.9	0.0
BIA	Bitola	0.38	340	i Pg	Pg	10 48 28.1	-0.6
BIA				i Sg	Sg	10 48 34.6	+0.6
BIA				eLg		10 48 34.9	
comp=E,272nm,0.2s							
BIA				eLg		10 48 34.9	
comp=N,181nm,0.2s							
BIA	Bitola	0.38	340	P	Pg	10 48 28.0	-0.8
BIA				S	Sg	10 48 34.8	+0.8
BIA	Bitola	0.38	340	P	Pg	10 48 28.0	-0.8
BIA				S	Sg	10 48 34.8	+0.8
KZN	Kozani	0.41	150	P	Pg	10 48 28.9	-0.5
KZN				S	Sg	10 48 35.7	+0.6
KZN	Kozani	0.41	150	P	Pg	10 48 28.9	-0.5
KZN				S	Sg	10 48 35.7	+0.6
NEST	Nestorio	0.42	234	P	Pg	10 48 28.9	-0.7
NEST				S	Sg	10 48 35.6	+0.2
NEST	Nestorio	0.42	234	P	Pg	10 48 28.9	-0.7
NEST				S	Sg	10 48 35.6	+0.2
OHR	Ohrid	0.69	310	i Pg	Pg	10 48 33.6	-0.9
OHR				i Sg	Sg	10 48 45.0	+1.3
OHR				eLg		10 48 45.2	
comp=N,152nm,0.5s							
OHR				eLg		10 48 45.3	
comp=E,116nm,0.4s							
OHR	Ohrid	0.69	310	P	Pg	10 48 33.7	-0.8
OHR				S	Sg	10 48 45.1	+1.4
OHR	Ohrid	0.69	310	P	Pg	10 48 33.7	-0.8
OHR				S	Sg	10 48 45.1	+1.4
KRUS	Krusevo	0.73	345	i Pg	Pg	10 48 34.1	-1.0
KRUS				i Sg	Sg	10 48 45.6	+0.7
KRUS				eLg		10 48 46.0	
comp=N,36nm,0.2s							
KRUS				eLg		10 48 46.0	
comp=E,23nm,0.2s							
VAY	Valandovo	1.04	51	i Pg	Pg	10 48 39.6	-1.5
VAY				i Sg	Sg	10 48 58.0	+3.2
VAY				eLg		10 48 58.2	
comp=E,31nm,0.7s							
VAY				eLg		10 48 58.5	
comp=N,14nm,0.4s							
THL	Klokotos Trika	1.17	160	P	Pn	10 48 41.9	-0.5
THL				S	Sb	10 49 00.5	+3.1
THL	Klokotos Trika	1.17	160	P	Pn	10 48 41.9	-0.5
THL				S	Sb	10 49 00.5	+3.1

*ISCJB **01** 10:51:59.0±0.7, 56°.1S±0°.2×150°.9W±0°.2, h10km, mb4.7/10, MS3.7/4, Error ellipse: s-maj=29.1km s-min=15.8km az=7.6*
*IDC **01** 10:51:59.4±0.8, 56°.28S×150°.88W, h0km, mb4.4/6, mb1 4.6/6, mb1mx4.4/12, mbtmp4.4/6, MS3.7/4, Ms1 3.7/4, ms1mx3.4/15, Error ellipse: s-maj=140.5km s-min=17.7km az=7.0*
*NEIC **01** 10:52:00.6±0.4, 56°.08S×150°.80W, h10km, mb4.5/2, Error ellipse: s-maj=24.9km s-min=13.7km az=190.0*

ISC 01 10:52:00.9±0.7, 56°.1S±0°.2×150°.8W±0°.2, h10km, n27, σ1§14/11, mb4.7/10, MS3.7/4, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	27.79	296	LR	LR	11 06 04.3	
comp=Z,96nm,20.7s,MS3.4,baz=18,slow=30							
TBI	Tubuai	32.72	2	eLR	LR	11 07 19.6	
164nm,31.2s							
TBI				eT		11 33 39.3	
38nm,0.3s							
QSPA	South Pole Qui	34.05	180	PcP	PcP	11 01 20.5	-1.3
2.5nm,1.0s,baz=191,slow=1.0,SNR=4.3							
QSPA	South Pole Qui	34.05	180	eP	P	10 58 43.6	-1.0
10.0nm,1.1s,mb4.7							
RKT	Rikitea	34.95	26	eLR	LR	11 08 32.6	
264nm,28.0s							
RKT				eT		11 36 24.6	
8.5nm,0.3s							
PAE	Paea	38.38	2	eT		11 40 42.8	
2.2nm,0.2s							
PPT	Papeete	38.47	2	eLR	LR	11 09 43.3	
197nm,26.5s							
PPT	Papeete	38.47	2	LR	LR	11 10 19.4	
comp=Z,177nm,19.4s,MS3.9,baz=134,slow=28							
STKA	Stephens Creek	51.89	268	P	P	11 01 10.4	+1.0
8.2nm,0.8s,mb4.7,baz=104,slow=6.3,SNR=9.9							
PLCA	Paso Flores	52.39

DRGR		**0.97**	**47**⇑	*i*P	Pg	10 57 44.0 +0.3
DRGR				*i* S	Sg	10 57 58.4 +2.1
DRGR		**0.97**	**47**⇑	*i*P	Pg	10 57 44.0 +0.3
DRGR		**0.97**	**47**	S	Sg	10 57 58.4 +2.1
GZR	**Gura Zlata**	**1.06**	**134**⇓	*i*P	Pg	10 57 46.3 +0.9
GZR				*i* S	Sg	10 57 59.8 +0.6
GZR	**Gura Zlata**	**1.06**	**134**⇓	*i*P	Pg	10 57 46.3 +0.9

NIED ***01*** *11:17:00,39.°00N×140.°70E,h5km,Mw4.1 Best double couple: M0=1.60000×10^15 NP1:φs=170.00000°,δ83.00000°, λ-9.00000°. NP2:φs=261.00000°,δ81.00000°, λ-173.00000°.*

BJI ***01*** *11:17:46.7,38.°98N×141.°01E,h10km,mB4.7/18,mb4.5/26, Ms4.0/21,Ms7 3.8/21*

ISCJB ***01*** *11:17:49.1±0.5,38.°99N±0.°02×140.°57E±0.°02,h3km±3km, mb4.4/57,MS3.8/15,Error ellipse: s-maj=4.2km s-min=2.7km az=156.5*

JMA ***01*** *11:17:49.5±0.1,38.°96N×140.°66E,h2km±1km,M4.3 Broadband fault plane solution: P waves. NP1: φs=168.00000°,δ65.00000°,λ-20.00000°. NP2: φs=267.00000°,δ72.00000°,λ-153.00000°. Principal axes: T Plg5.0000°, Azm36.0000°; N Plg59.0000°, Azm298.0000°; P Plg31.0000°, Azm129.0000°;*

JMA Felt III J1.

IDC ***01*** *11:17:49.4±0.6,38.°96N×140.°55E,h0km,mb4.2/16, mb1 4.4/18,mb1mx4.3/27,mbtmp4.2/18,ML3.6/2,MS3.4/11, Ms1 3.4/11,ms1mx3.2/37 Error ellipse: s-maj=17.3km s-min=12.8km az=123.0*

NEIC ***01*** *11:17:52.7±2.5,38.°98N×140.°49E,h18km±15km,mb4.5/29, MW4.1(NIED),Error ellipse: s-maj=5.9km s-min=4.5km az=157.0*

NEIC Recorded [3 JMA] in Miyagi and [2 JMA] in Akita and Yamagata.

MOS ***01*** *11:17:53.6±1.0,39.°02N×140.°46E,h38km,mb4.5/31,Error ellipse: s-maj=10.5km s-min=6.7km az=83.4*

ISC 01 11:17:50.1±0.5,38.°96N±0.°02×140.°60E±0.°02,h0km±3km, n381,σ0s59/396,mb4.5/57,MS3.8/15,121C-125D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.19**	**257**	⇑P	**Pg**	**11 17 54.4**	**+0.7**
JYK				S	**Sg**	**11 17 57.7**	**+1.5**
JRG	**Rokugo**	**0.43**	**4**	⇑P	**Pg**	**11 17 58.2**	**-0.3**
JRG				S	**Sg**	**11 18 05.0**	**+0.9**
JMK	**Ichinoseki**	**0.49**	**91**	⇓P	**Pg**	**11 17 58.0**	**-1.4**
JMK				S	**Sg**	**11 18 03.9**	**-1.8**
JOU	**Okura**	**0.60**	**175**	P	**Pg**	**11 18 01.2**	**-0.3**
JOU				S	**Sg**	**11 18 09.1**	**-0.2**
JOM	**Ohasama**	**0.74**	**46**	⇑P	**Pg**	**11 18 03.0**	**-1.4**
JIO	**Ouri**	**0.78**	**130**	⇓P	**Pg**	**11 18 03.2**	**-1.8**
JIO				S	**Sg**	**11 18 13.1**	**-2.0**
JYA	**Atsumi**	**0.78**	**242**	⇑P	**Pg**	**11 18 05.2**	**+0.1**
JYA				S	**Sg**	**11 18 16.4**	**+1.2**
JYS	**Shirataka**	**0.85**	**209**	⇑P	**Pg**	**11 18 06.1**	**-0.2**
JYS				S	**Sg**	**11 18 17.8**	**+0.5**
MAJO	**Matsushiro**	**3.07**	**219**	*e*Pn	**Pn**	**11 18 40.0**	**+0.2**
MAJO				*e*Sn	**Sn**	**11 19 18.1**	**+0.9**
MAT	**Matsushiro**	**3.07**	**219**	P	**Pn**	**11 18 40.0**	**+0.2**
MAT				S	**Sn**	**11 19 21.1**	**+3.9**
MJAR	**Matsushiro Arr**	**3.07**	**219**	Pn	**Pn**	**11 18 40.1**	**+0.3**
	9.3nm,0.3s,baz=324,slow=28,SNR=80						
MJAR				Lg		11 19 25.1	
	6.6nm,0.3s,baz=224,slow=12,SNR=4.3						
MJAR				LR	LR	11 19 54.0	
	comp=Z,417nm,21.3s,baz=35,slow=41						
MJAR	**Matsushiro Arr**	**3.07**	**219**	P	**Pn**	**11 18 40.1**	**+0.3**
MJAR						11 19 25.1	
MJAR				pmax	pmax		
	comp=Z,9.0nm,0.3s						
MJAR				MLR	MLR		
	comp=Z,417nm,21.3s						
ERM	**Erimo**	**3.62**	**32**	*e*Pn	**Pn**	**11 18 47.9**	**+0.5**
ERM				*e*Sn	**Sn**	**11 19 34.9**	**+4.1**
ASAJ	**Asahikawa**	**5.37**	**16**	Pn	**Pn**	**11 19 12.1**	**+0.8**
	comp=Z,1.7nm,0.3s,baz=313,slow=26,SNR=16						
ASAJ	**Asahikawa**	**5.37**	**16**	P	**Pn**	**11 19 12.1**	**+0.8**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
YSS	**Yuzh-Sakhalins**	**8.14**	**11**	*e*P	**Pn**	**11 19 50.0**	**+0.5**
YSS				MLR	MLR		
	comp=Z,300nm,12.0s						
YSS				MLR	MLR		
	comp=N,400nm,10.0s						
MDJ	**Mudanjiang**	**9.97**	**308**	P	**Pn**	**11 20 14.0**	**-0.5**
MDJ				S	**Sn**	**11 22 06.1**	**-0.9**
MDJ				PcP	PcP	11 26 26.3	+0.1
MDJ				PcS	PcS	11 29 59.8	+0.3
MDJ				ScS	ScS	11 33 33.2	-0.9
MDJ				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MDJ				pmax	pmax		
	comp=Z,42nm,4.5s						
MDJ				LR	LR		
	comp=N,120nm,11.6s						
MDJ				LR	LR		
	comp=E,140nm,19.3s						
MDJ				LR	LR		
	comp=Z,200nm,16.2s						
KSRS	**Korea Array**	**10.09**	**265**	Pn	**Pn**	**11 20 18.6**	**+2.5**
	comp=Z,3.0nm,0.3s,baz=72,slow=14,SNR=34						
KSRS				Sn	**Sn**	**11 22 14.3**	**+4.3**
	comp=Z,1.3nm,0.3s,baz=75,slow=24,SNR=8.4						
KSRS				LR	LR	11 23 45.5	
	comp=Z,134nm,18.5s,baz=75,slow=35						
KSRS	**Korea Array**	**10.09**	**265**	P	**Pn**	**11 20 18.7**	**+2.5**
KSRS						11 22 14.3	
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.3s						
KSRS				smax			
	comp=N,1.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,134nm,18.5s						
HABR	**Khabarovsk**	**10.32**	**339**	P	**Pn**	**11 20 25.3**	**+6.1**
HABR				*e*		11 22 12.7	
HABR				MLR	MLR		
	comp=Z,186nm,16.0s						
CBIJ	**Chichi jima**	**11.91**	**173**	LR	LR	11 25 51.5	
	comp=Z,50nm,18.2s,baz=25,slow=40						
KLR	**Kul'dur**	**12.06**	**331**	*e*P	**Pn**	**11 20 43.4**	**+0.3**
KLR				MLR	MLR		
	comp=Z,500nm,14.0s						
CN2	**Changchun**	**12.36**	**298**	*e*P	**Pn**	**11 20 48.2**	**+1.0**
CN2				*es*P		11 20 54.0	
CN2				*e*S	**Sn**	**11 23 05.2**	**-0.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,100nm,13.0s						
CN2				LR	LR		
	comp=E,200nm,13.0s						
CN2				LR	LR		
	comp=Z,300nm,15.0s						
PETK	**Petropavlovsk-**	**18.40**	**34**	LR	LR	11 29 43.9	
	comp=Z,52nm,18.1s,baz=60,slow=39						
BJI	**Beijing**	**18.87**	**281**	P	**Pn**	**11 22 10.9**	**-1.3**
BJI				S	**Sn**	**11 25 41.4**	**-2.4**
BJI				sS	sS	11 25 49.6	+2.6
BJI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BJI				LR	LR		
	comp=N,250nm,12.2s						
BJI				LR	LR		
	comp=E,120nm,13.4s						
BJI				LR	LR		
	comp=Z,49nm,18.2s						
NJ2	**Nanjing**	**18.97**	**255**	*e*P	**Pn**	**11 22 13.5**	**0.0**
NJ2				pP	pP	11 22 17.1	+4.1
NJ2				sP	sP	11 22 20.5	+7.5
NJ2				PP		11 22 29.9	
NJ2				S	**Sn**	**11 25 40.0**	**-6.5**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,150nm,4.0s						
NJ2				LR	LR		
	comp=N,140nm,9.9s						
NJ2				LR	LR		
	comp=E,220nm,15.2s						
NJ2				LR	LR		
	comp=Z,140nm,14.3s						
HHC	**Hu-ho-hao-te**	**22.31**	**284**	*e*P	**P**	**11 22 48.1**	**-0.9**
HHC				sP	sP	11 22 53.5	+4.4
HHC				PP		11 23 14.8	
HHC				PcP	PcP	11 26 45.5	+0.7
HHC				S	**S**	**11 26 47.2**	**-8.1**
HHC				ScS	ScS	11 34 04.8	-3.5
HHC				pmax	pmax		
	comp=Z,11nm,0.5s,mb4.5						
HHC				pmax	pmax		
	comp=Z,62nm,4.9s						
HHC				LR	LR		
	comp=N,430nm,10.3s,MS4.3						
HHC				LR	LR		
	comp=E,460nm,10.6s,MS4.3						
HHC				LR	LR		
	comp=Z,490nm,11.0s,MS4.2						
YAK	**Yakutsk**	**24.05**	**347**	*e*P	**P**	**11 23 03.3**	**-3.3**
YAK				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.5						
YAK				pmax	pmax		
	comp=E,2.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
YAK				MLR	MLR		
	comp=Z,93nm,14.0s,MS3.4						
ULN	**Ulaanbaatar**	**25.77**	**301**	P	**P**	**11 23 22.0**	**-0.4**
SONM	**Songino Array**	**26.21**	**301**	P	**P**	**11 23 25.3**	**-1.0**
	comp=Z,0.6nm,0.5s,mb3.5,baz=115,slow=7.8,SNR=5.5						
SONM				LR	LR	11 33 57.5	
	comp=Z,86nm,18.5s,MS3.3,baz=189,slow=37						
SONM	**Songino Array**	**26.21**	**301**	P	**P**	**11 23 25.3**	**-1.0**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM				MLR	MLR		
	comp=Z,86nm,18.5s						
LZH	**Lanzhou**	**29.16**	**276**	*e*P	**P**	**11 23 53.8**	**+0.9**
LZH				pP		11 23 58.1	
LZH				sP	sP	11 24 01.0	+8.0
LZH				PcP	PcP	11 27 02.2	+1.7
LZH				*e*S	**S**	**11 28 42.4**	**-3.6**
LZH				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.7						
LZH				pmax	pmax		
	comp=Z,65nm,4.6s						
LZH				LR	LR		
	comp=N,280nm,12.0s						
LZH				LR	LR		
	comp=Z,400nm,13.6s,MS4.2						
GYA	**Guiyang**	**30.97**	**256**	P	**P**	**11 24 09.8**	**+0.8**
GYA				PcP	PcP	11 27 06.7	+1.4
GYA				S	**S**	**11 29 13.2**	**-1.4**
GYA				ScP	ScP	11 30 48.6	-0.6
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
GYA				pmax	pmax		
	comp=Z,80nm,4.9s						
GYA				LR	LR		
	comp=N,430nm,17.0s,MS4.3						
GYA				LR	LR		
	comp=E,420nm,16.4s,MS4.3						
GYA				LR	LR		
	comp=Z,460nm,15.9s,MS4.2						
CD2	**Chengdu**	**31.09**	**266**	P	**P**	**11 24 10.2**	**+0.2**
CD2				pP		11 24 14.2	
CD2				sP	sP	11 24 16.3	+6.2
CD2				PP	PP	11 25 12.2	-7.7
CD2				S	**S**	**11 29 13.4**	**-2.9**
CD2				pmax	pmax		
	comp=Z,30nm,0.5s,mb5.5						
CD2				pmax	pmax		
	comp=Z,90nm,4.9s						
CD2				LR	LR		
	comp=N,230nm,12.5s						
CD2				LR	LR		
	comp=Z,150nm,13.7s,MS3.8						
BILL	**Bilibino**	**32.38**	**18**	P	**P**	**11 24 21.0**	**+0.1**
BILL				SS	SS	11 31 27.0	-27
BILL				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
BILL				MLR	MLR		
	comp=Z,100nm,15.0s,MS3.6						
QIZ	**Qiongzhong**	**33.20**	**242**	P	**P**	**11 24 28.0**	**-0.6**
QIZ				S	**S**	**11 29 48.7**	**-0.6**
QIZ				pmax	pmax		
	comp=Z,23nm,2.0s,mb4.8						
QIZ				LR	LR		
	comp=N,180nm,3.4s						
QIZ				LR	LR		
	comp=E,55nm,3.1s						
QIZ				LR	LR		
	comp=Z,150nm,15.9s,MS3.8						
KMI	**Kunming**	**34.67**	**258**	P	**P**	**11 24 42.6**	**+1.2**
KMI				pP		11 24 45.6	
KMI				sP	sP	11 24 46.9	+5.4
KMI				PP	PP	11 25 59.1	-0.7
KMI				S	**S**	**11 30 10.9**	**-1.2**
KMI				SS	SS	11 32 22.4	-20
KMI				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
KMI				pmax	pmax		
	comp=Z,44nm,4.5s						
KMI				LR	LR		
	comp=N,100nm,18.0s,MS3.8						
KMI				LR	LR		
	comp=E,120nm,15.0s,MS3.8						
KMI				LR	LR		
	comp=Z,89nm,13.5s,MS3.7						
WMQ	**Urumqi**	**39.42**	**295**	*e*P	**P**	**11 25 21.0**	**-0.6**
WMQ				pP		11 25 25.4	
WMQ				sP	sP	11 25 28.0	+6.3
WMQ				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.2						
ZAA0	**Zalesovo Array**	**40.15**	**311**	*e*P	**P**	**11 25 26.6**	**-0.9**
ZALV	**Zalesovo Beam**	**40.15**	**311**	P	**P**	**11 25 26.6**	**-0.9**
	comp=Z,5.6nm,0.8s,mb4.3,baz=90,slow=7.4,SNR=19						
ZALV				PcP	PcP	11 27 31.4	-0.4
	comp=Z,1.4nm,0.5s,baz=79,slow=2.7,SNR=4.0						
ZALV				LR	LR	11 42 13.8	
	comp=Z,27nm,21.9s,MS3.1,baz=55,slow=36						
ZALV	**Zalesovo Beam**	**40.15**	**311**	P	**P**	**11 25 26.6**	**-0.9**
ZALV						11 27 31.5	
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.3						
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.7						
ZALV				MLR	MLR		
	comp=Z,27nm,21.9s,MS3.0						
NVS	**Novosibirsk**	**41.06**	**312**	*e*P	**P**	**11 25 34.5**	**-0.5**
MK31	**Makanchi Array**	**42.57**	**300**	*e*P	**P**	**11 25 47.0**	**-0.5**
MKAR	**Makanchi Array**	**42.57**	**300**	P	**P**	**11 25 47.0**	**-0.5**
	comp=Z,2.6nm,0.7s,mb4.1,baz=87,slow=11,SNR=19						
MKAR	**Makanchi Array**	**42.57**	**300**	P	**P**	**11 25 47.0**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MKAR	**Makanchi Array**	**42.57**	**300**	P	**P**	**11 25 47.0**	**-0.5**
KURK	**Kurchatov**	**44.25**	**306**	*d*iP	**P**	**11 25 59.7**	**-1.3**
KURK				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.8						
KURK	**Kurchatov**	**44.25**	**306**	*e*P	**P**	**11 25 59.9**	**-1.1**
	comp=Z,17nm,0.8s,mb4.8						
KDAK	**Kodiak Island**	**46.12**	**43**	P	**P**	**11 26 14.7**	**-1.0**
	comp=Z,6.2nm,0.8s,mb4.7,baz=201,slow=4.0,SNR=4.9						
KDAK	**Kodiak Island**	**46.12**	**43**	P	**P**	**11 26 14.7**	**-1.0**
KDAK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
TKM2	**Tokmak 2**	**48.17**	**297**	*e*P	**P**	**11 26 32.3**	**+0.4**
TKM2				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.0						
TKM2	**Tokmak 2**	**48.17**	**297**	*e*P	**P**	**11 26 32.3**	**+0.4**
	comp=Z,9.0nm,0.8s,mb5.0						
BVAR	**Borovoye Array**	**48.81**	**311**	P	**P**	**11 26 36.8**	**+0.1**
	comp=Z,1.0nm,0.5s,mb4.1,baz=78,slow=5.9,SNR=6.0						
BVAR				PcP	PcP	11 28 01.2	-0.3
	comp=Z,1.5nm,0.7s,baz=73,slow=5.1,SNR=6.3						
BVAR	**Borovoye Array**	**48.81**	**311**	P	**P**	**11 26 36.8**	**+0.1**
BVAR						11 28 01.2	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRVK	**Borovoye**	**48.87**	**311**	*e*P	**P**	**11 26 36.5**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.7						
KSH	**Kashi**	**49.05**	**292**	*e*P	**P**	**11 26 42.5**	**+3.7**
KSH				pP		11 26 47.2	
KSH				sP	sP	11 26 49.5	+11
KSH				PcP	PcP	11 28 06.3	+3.7
KSH				PP	PP	11 28 37.2	+5.1
KSH				ScP	ScP	11 31 58.2	-0.7
KSH				PcS	PcS	11 32 00.5	+1.6
KSH				S	**S**	**11 33 47.4**	**+3.0**
KSH				ScS	ScS	11 36 31.1	-1.2
KSH				SS	SS	11 37 15.5	+0.5
KSH				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
KSH				pmax	pmax		
	comp=Z,72nm,5.9s						
KSH				LR	LR		
	comp=N,150nm,10.8s						
KSH				LR	LR		
	comp=E,96nm,6.6s						
KSH				LR	LR		
	comp=Z,110nm,4.9s						
MENT	**Mentasta**	**49.83**	**35**	*e*P	**P**	**11 26 45.1**	**+0.7**
INK	**Inuvik**	**52.98**	**28**	P	**P**	**11 27 07.5**	**-0.4**
	comp=Z,4.9nm,0.8s,mb4.5,baz=284,slow=6.6,SNR=7.9						
INK	**Inuvik**	**52.98**	**28**	P	**P**	**11 27 07.5**	**-0.4**
INK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
INK	**Inuvik**	**52.98**	**28**	*e*P	**P**	**11 27 07.7**	**-0.2**
	comp=Z,5.1nm,0.8s,mb4.5						
HYT	**Haines Junctio**	**53.15**	**37**	*e*P	**P**	**11 27 09.3**	**0.0**
SVE	**Sverdlovsk**	**53.28**	**318**	*e*P	**P**	**11 27 10.0**	**-0.3**
SVE				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
ARU	**Arti**	**54.50**	**317**	*d*iP	**P**	**11 27 18.4**	**-0.8**
ARU				*e*		11 29 16.0	
ARU				S	**S**	**11 34 54.5**	**-4.4**
ARU				SS	SS	11 38 30.1	-11
ARU				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
ARU	**Arti**	**54.50**	**317**	*e*P	**P**	**11 27 18.5**	**-0.7**
	comp=Z,6.7nm,0.9s,mb4.7						
WRAB	**Tennant Creek**	**58.88**	**187**	*e*P	**P**	**11 27 49.8**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
WRAB	**Tennant Creek**	**58.88**	**187**	*e*P	**P**	**11 27 49.8**	**-0.8**
	comp=Z,3.7nm,0.7s,mb4.5						
WRA	**Warramunga Arr**	**58.88**	**187**	P	**P**	**11 27 49.4**	**-1.3**
	comp=Z,4.8nm,0.8s,mb4.6,baz=5.2,slow=7.5,SNR=38						
WRA	**Warramunga Arr**	**58.88**	**187**	P	**P**	**11 27 49.4**	**-1.3**
WRA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WRA	**Warramunga Arr**	**58.88**	**187**	P	**P**	**11 27 49.4**	**-1.3**
RES	**Resolute Bay**	**60.90**	**15**	*e*P	**P**	**11 28 02.9**	**-1.1**
RES				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.9						
RES	**Resolute Bay**	**60.90**	**15**	*e*P	**P**	**11 28 02.9**	**-1.1**
	comp=Z,8.6nm,0.9s,mb4.9						
YKA	**Yellowknife Ar**	**62.47**	**30**	P	**P**	**11 28 13.5**	**-1.3**
	comp=Z,0.8nm,0.7s,mb4.1,baz=303,slow=6.7,SNR=3.5						
YKA	**Yellowknife Ar**	**62.47**	**30**	P	**P**	**11 28 13.5**	**-1.2**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**62.61**	**187**	P	**P**	**11 28 15.7**	**-0.4**
	comp=Z,2.1nm,0.8s,mb4.3,baz=9.9,slow=4.7,SNR=25						
ASAR	**Alice Springs**	**62.61**	**187**	P	**P**	**11 28 15.7**	**-0.3**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FINES	**FINESS Array B**	**66.81**	**332**	P	**P**	**11 28 41.8**	**-1.3**
	comp=Z,1.8nm,0.6s,mb4.5,baz=76,slow=8.0,SNR=5.3						
FINES	**FINESS Array B**	**66.81**	**332**	P	**P**	**11 28 41.8**	**-1.3**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
B08A	**Colville Reser**	**67.94**	**45**	⇑P	**P**	**11 28 50.4**	**0.0**
	baz=68						
H04A	**Detroit Lake**	**68.35**	**50**	⇑P	**P**	**11 28 53.4**	**+0.3**
	baz=68						
D08A	**Wollman Farm,**	**68.90**	**46**	⇓P	**P**	**11 28 56.3**	**-0.2**
	baz=69						
KIV	**Kislovodsk**	**69.17**	**310**	*e*P	**P**	**11 28 58.3**	**+0.1**
KIV				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.2						
NEW	**Newport**	**69.20**	**44**	*e*P	**P**	**11 28 58.5**	**+0.2**
NEW				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NEW	**Newport**	**69.20**	**44**	*e*P	**P**	**11 28 58.5**	**+0.1**
	comp=Z,2.6nm,0.7s,mb4.6						
YBH	**Yreka Blue Hor**	**69.68**	**52**	*e*P	**P**	**11 29 02.6**	**+1.2**
YBH				pmax	pmax		
	comp=Z,4.0nm,1.1s						
YBH	**Yreka Blue Hor**	**69.68**	**52**	*e*P	**P**	**11 29 02.5**	**+1.1**
	comp=Z,4.0nm,1.1s,mb4.5						
C11A	**Tepee Creek (N**	**69.92**	**44**	⇑P	**P**	**11 29 03.0**	**+0.2**
	baz=70						
K05A	**Summer Lake**	**70.23**	**51**	⇑P	**P**	**11 29 05.3**	**+0.6**
	baz=70						
KCPM	**Cahto Peak**	**70.29**	**55**	*e*P	**P**	**11 29 05.9**	**+0.7**
	comp=Z,3.5nm,0.8s,mb4.5						
WDC	**Whiskeytown Da**	**70.44**	**53**	*e*P	**P**	**11 29 06.3**	**+0.2**
WDC				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.5						
WDC	**Whiskeytown Da**	**70.44**	**53**	*e*P	**P**	**11 29 06.3**	**+0.2**
	comp=Z,3.2nm,0.8s,mb4.5						
H08A	**Prairie City**	**70.51**	**48**	⇑P	**P**	**11 29 06.2**	**-0.2**
	baz=70						
B13A	**Whitefish**	**70.57**	**43**	⇓P	**P**	**11 29 06.8**	**+0.1**
	baz=70						
G09A	**Cove**	**70.58**	**47**	⇓P	**P**	**11 29 06.9**	**0.0**
	baz=70						
A14A	**Double T Ranch**	**70.76**	**42**	⇑P	**P**	**11 29 07.6**	**-0.3**
	baz=70						
D12A	**Red Ives Fores**	**70.88**	**45**	⇓P	**P**	**11 29 07.9**	**-0.8**
	baz=71						
C13A	**Hot Springs**	**70.93**	**44**	⇑P	**P**	**11 29 08.7**	**-0.3**
	baz=71						
G10A	**Bishop Farm, J**	**70.94**	**47**	⇑P	**P**	**11 29 09.1**	**0.0**
	baz=71						
JTMT	**Jette**	**71.04**	**44**	*e*P	**P**	**11 29 09.6**	**-0.1**
BMO	**Blue Mountains**	**71.10**	**47**	*e*P	**P**	**11 29 09.9**	**-0.2**
BMO				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb4.0						
BMO	**Blue Mountains**	**71.10**	**47**	*e*P	**P**	**11 29 09.9**	**-0.2**
	comp=Z,1.1nm,0.8s,mb4.0						
A15A	**Johnson Ranch,**	**71.11**	**42**	⇑P	**P**	**11 29 09.6**	**-0.4**
	baz=71						
F11A	**Grangeville**	**71.14**	**46**	⇓P	**P**	**11 29 10.1**	**-0.1**
	baz=71						
B14A	**Marquette Ranc**	**71.21**	**43**	⇑P	**P**	**11 29 10.1**	**-0.5**
	baz=71						
J08A	**Circle Bar Ran**	**71.30**	**49**	⇑P	**P**	**11 29 11.2**	**-0.1**
	baz=71						
SWMT	**Swartz Lake**	**71.34**	**44**	*e*P	**P**	**11 29 11.6**	**+0.2**
	comp=Z,2.3nm,0.8s,mb4.4						
D13A	**Huson**	**71.34**	**44**	⇓P	**P**	**11 29 11.0**	**-0.5**
	baz=71						
I09A	**Lost Marbles R**	**71.37**	**48**	⇑P	**P**	**11 29 11.3**	**-0.4**
	baz=71						
H10A	**Noah's Angus R**	**71.58**	**47**	⇓P	**P**	**11 29 12.6**	**-0.4**
	baz=71						
B15A	**Bradely Ranch,**	**71.61**	**42**	⇓P	**P**	**11 29 12.9**	**-0.2**
	baz=71,SNR=6.5						
F12A	**Elk City**	**71.72**	**46**	⇓P	**P**	**11 29 13.8**	**+0.1**
	baz=72,SNR=6.5						
ANN	**Anapa**	**71.74**	**313**	*e*P	**P**	**11 29 11.7**	**-2.2**
ANN				*e*S	S	11 38 30.1	-4.8
ANN				pmax	pmax		
	comp=Z,39nm,1.7s,mb5.3						
WVOR	**Wild Horse Val**	**71.75**	**50**	*e*P	**P**	**11 29 15.0**	**+1.0**
WVOR				pmax	pmax		
	comp=Z,8.0nm,1.8s,mb4.5						
WVOR	**Wild Horse Val**	**71.75**	**50**	*e*P	**P**	**11 29 15.0**	**+1.0**
	comp=Z,7.5nm,1.8s,mb4.5						
SLMT	**Seeley Lake**	**71.78**	**44**	*e*P	**P**	**11 29 14.2**	**+0.1**
I10A	**Payette**	**71

comp=Z,1.3nm,0.7s,mb4.2,baz=38,slow=6.2
NOA **NORSAR Array B** 72.16 337 P P 11 29 14.4 -1.7
comp=Z,1.4nm,0.9s,mb4.1,baz=39,slow=6.1,SNR=3.0
NOA **NORSAR Array B** 72.16 337 P P 11 29 14.4 -1.8
NOA pmax pmax
comp=Z,1.0nm,0.9s
F13A **Darby** 72.21 45 ⇓P P 11 29 16.3 -0.4
baz=72
BEKR **Beckworth** 72.21 53 ⇑P P 11 29 16.7 -0.2
baz=72
C16A **Fuhringer Ranc** 72.36 42 ⇓P P 11 29 17.5 -0.1
baz=72
AKASG **Malin Array Be** 72.38 322 P P 11 29 16.5 -1.2
comp=Z,2.2nm,0.5s,mb4.5,baz=46,slow=5.9,SNR=10
AKASG **Malin Array Be** 72.38 322 P P 11 29 16.5 -1.2
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKASG **Malin Array Be** 72.38 322 P P 11 29 16.5 -1.2
AKBB **Malin Array Si** 72.38 322 eP P 11 29 17.4 -0.3
D15A **Lincoln** 72.42 43 ⇑P P 11 29 18.1 +0.1
baz=72
FFC **Flin Flon** 72.44 33 eP P 11 29 17.3 -0.6
I11A **Placerville** 72.44 48 ⇓P P 11 29 18.1 0.0
baz=72
K10A **MacKenzie Ranc** 72.59 49 ⇑P P 11 29 19.1 +0.1
baz=72,SNR=5.5
H12A **Diamond D Ranc** 72.68 46 ⇑P P 11 29 19.3 -0.3
baz=72
G13A **Cobalt** 72.69 46 ⇓P P 11 29 19.4 -0.3
baz=72
E15A **Deer Lodge** 72.74 44 ⇑P P 11 29 19.5 -0.4
baz=72,SNR=6.4
MFID **Camas Ranch** 72.81 48 ⇑P P 11 29 20.3 -0.1
baz=73
PAHR **Pah Rah Range** 72.91 53 eP P 11 29 21.2 +0.2
comp=Z,5.3nm,0.8s,mb4.7
WCN **Washoe City** 72.92 53 ⇑P P 11 29 21.3 +0.2
baz=73
D16A **Dana Ranch, Ca** 72.95 43 ⇓P P 11 29 21.0 -0.1
baz=73
I12A **Atlanta** 72.98 47 ⇓P P 11 29 21.2 -0.1
baz=73
B18A **Beardsley Farm** 73.00 41 ⇓P P 11 29 21.1 -0.3
baz=73
H13A **Challis** 73.01 46 ⇓P P 11 29 21.1 -0.4
baz=73
K11A **Parker Ranch,** 73.09 48 ⇓P P 11 29 21.6 -0.4
baz=73
F15A **Butte** 73.19 44 ⇑P P 11 29 22.5 -0.1
baz=73,SNR=8.6
E16A **East Helena** 73.19 43 ⇓P P 11 29 22.3 -0.3
baz=73
LRM **Limekiln Ridge** 73.22 44 eP P 11 29 22.9 +0.2
L10A **Juniper Basin** 73.25 49 ⇓P P 11 29 23.0 0.0
baz=73
EGMT **Eagleton** 73.25 41 eP P 11 29 23.3 +0.4
comp=Z,8.9nm,0.8s,mb5.0
CMB **Columbia Colle** 73.28 55 eP P 11 29 23.3 +0.1
DLMT **Dillon** 73.43 45 eP P 11 29 24.3 +0.3
comp=Z,5.5nm,0.8s,mb4.7
H14A **Leadore** 73.47 46 ⇑P P 11 29 24.0 -0.3
baz=73
I13A **Wildhorse Cree** 73.48 47 ⇓P P 11 29 24.2 -0.1
baz=73
HLID **Hailey** 73.53 47 eP P 11 29 25.2 +0.6
comp=Z,1.0nm,0.8s,mb3.9
M10A **I.L. Ranch, Tu** 73.55 50 ⇑P P 11 29 24.7 -0.1
baz=73
WAKR **Walker** 73.60 54 eP P 11 29 25.8 +0.7
G15A **Dillon** 73.61 45 ⇑P P 11 29 25.0 0.0
baz=73
L11A **Cat Creek Ranc** 73.62 49 ⇑P P 11 29 25.2 +0.1
baz=73,SNR=6.4
E17A **Martinsdale** 73.67 43 ⇓P P 11 29 25.5 +0.1
baz=73
F16A **Kennard Place,** 73.69 44 ⇓P P 11 29 25.4 -0.2
baz=74
D18A **Linhart Farms,** 73.76 42 ⇑P P 11 29 25.6 -0.3
baz=74
J13A **Cove Ranch, Pi** 73.77 47 ⇓P P 11 29 26.2 +0.1
baz=74
BOZ **Bozeman (W)** 73.78 44 eP P 11 29 26.6 +0.6
BOZ pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
BOZ **Bozeman (W)** 73.78 44 eP P 11 29 26.6 +0.5
comp=Z,3.6nm,0.7s,mb4.5
K12A **Draper Farm, C** 73.83 48 ⇓P P 11 29 26.1 -0.2
baz=74
I14A **Mackay** 73.85 46 ⇓P P 11 29 26.6 +0.1
baz=74
G16A **Moss Hill, Enn** 73.95 45 ⇑P P 11 29 27.0 0.0
baz=74
M11A **Holland Ranch,** 74.05 49 ⇓P P 11 29 28.3 +0.6
baz=74,SNR=6.3
E18A **Harlowton** 74.11 43 ⇑P P 11 29 28.3 +0.3
baz=74
F17A **Fitzpatrick Pl** 74.14 43 ⇓P P 11 29 28.3 +0.2
baz=74
J14A **Carey** 74.19 47 ⇑P P 11 29 28.7 +0.2
baz=74
NVAR **Mina Array Bea** 74.35 53 P P 11 29 30.0 +0.5
comp=Z,3.9nm,0.8s,mb4.5,baz=282,slow=5.7,SNR=32
G17A **Pierce Place,** 74.47 44 ⇓P P 11 29 30.0 -0.1
baz=74
M12A **Wells** 74.58 49 ⇑P P 11 29 30.8 0.0
baz=74,SNR=5.1
H16A **Russell Place,** 74.59 45 ⇑P P 11 29 30.5 -0.3
baz=74
F18A **Big Timber** 74.64 43 ⇓P P 11 29 31.1 0.0
baz=74,SNR=7.3
L13A **Double Diamond** 74.72 48 ⇑P P 11 29 31.5 -0.1
baz=74
J15A **Blackfoot** 74.76 46 ⇑P P 11 29 32.1 +0.3
baz=74
N12A **Clover Valley,** 74.85 50 ⇓P P 11 29 32.4 0.0
baz=75
K14A **Jones Ranch, D** 74.88 47 ⇓P P 11 29 32.6 +0.1
baz=75
O11A **Cowboy Ranch,** 74.93 50 ⇑P P 11 29 33.0 +0.2
baz=75
I16A **Newdale** 74.99 45 ⇓P P 11 29 33.3 +0.2
baz=75,SNR=7.6
K15A **Arbon** 75.16 47 ⇓P P 11 29 34.5 +0.4
baz=75
L14A **Malta** 75.16 48 ⇑P P 11 29 34.5 +0.4
baz=75
IMW **Indian Meadow** 75.28 45 eP P 11 29 36.2 +1.5
comp=Z,3.9nm,0.8s,mb4.5
Q10A **Clear Creek Ra** 75.29 52 ⇑P P 11 29 35.2 +0.3
baz=75,SNR=5.7
J16A **Bone** 75.30 46 ⇓P P 11 29 35.3 +0.3
baz=75
O12A **Currie** 75.39 50 ⇓P P 11 29 35.9 +0.4
baz=75,SNR=6.4
M14A **Sheep Mountain** 75.44 48 ⇑P P 11 29 35.9 +0.1
baz=75
TPAW **Teton Pass** 75.53 45 eP P 11 29 37.5 +1.3
comp=Z,63nm,3.0s
K16A **Soda Springs** 75.60 46 ⇑P P 11 29 37.5 +0.8
baz=75
L15A **Malad City** 75.67 47 ⇑P P 11 29 37.1 0.0
baz=76
S10A **Tonopah Range,** 75.73 53 ⇑P P 11 29 37.7 +0.2
baz=76,SNR=8.5
Q11A **Duckwater** 75.73 52 ⇓P P 11 29 37.9 +0.4
baz=76
J17A **Brown Place, J** 75.75 45 ⇑P P 11 29 37.8 +0.3
baz=76
P12A **McGill** 75.79 51 ⇑P P 11 29 38.2 +0.4
baz=76
GRAC **Grapevine Rang** 75.81 54 ⇓P P 11 29 38.3 +0.3
baz=76,SNR=6.6
N14A **Grayback Hills** 75.94 49 ⇑P P 11 29 38.7 0.0
baz=76
M15A **Larsen Ranch,** 75.98 48 ⇑P P 11 29 38.7 -0.1
baz=76
R11A **Troy Canyon, C** 76.08 52 ⇓P P 11 29 39.8 +0.3
baz=76,SNR=8.7
Q12A **Willow Creek R** 76.11 51 ⇓P P 11 29 39.8 +0.2
baz=76
N15A **Stansbury Isla** 76.31 48 ⇓P P 11 29 41.0 +0.2
baz=76
MPMC **Manual Prospec** 76.32 55 ⇑P P 11 29 40.8 0.0
baz=76
P13A **Bates Ranch, G** 76.34 50 ⇑P P 11 29 41.2 +0.3
baz=76
BUR08 **Bucovina Ar. S** 76.39 321 eP P 11 29 41.3 +0.2
HWUT **Hardware Ranch** 76.40 47 eP P 11 29 42.5 +1.3
comp=Z,102nm,1.0s
S11A **Rachel** 76.42 53 ⇓P P 11 29 41.7 +0.3
baz=76,SNR=7.8
FURC **Furnace Creek,** 76.46 54 ⇓P P 11 29 41.8 +0.1
baz=76
L17A **Cokeville** 76.47 47 ⇓P P 11 29 42.1 +0.5
baz=76
K18A **Toltan Ranch,** 76.59 46 ⇑P P 11 29 42.4 +0.1
baz=76
Q13A **Wheeler Ranch,** 76.65 51 ⇑P P 11 29 43.2 +0.5
baz=76
R12A **Pony Springs,** 76.69 51 ⇓P P 11 29 42.9 -0.1
baz=76
EDW2 **Edwards Air Fo** 76.72 56 ⇑P P 11 29 43.4 +0.2
baz=76
BW06 **Boulder Array** 76.78 45 eP P 11 29 43.5 +0.1
PDAR **Pinedale Array** 76.78 45 P P 11 29 43.1 -0.2
comp=Z,2.0nm,0.7s,mb4.3,baz=298,slow=3.1,SNR=22
P14A **Drum Mountains** 76.82 50 ⇑P P 11 29 43.8 +0.1
baz=77
U10A **Ash Meadows, A** 76.83 54 ⇓P P 11 29 44.2 +0.5
baz=77
T11A **Corn Creek, Al** 77.00 53 ⇓P P 11 29 44.9 +0.2
baz=77,SNR=11
L18A **Fontenelle, Gr** 77.06 46 ⇓P P 11 29 45.1 +0.1
baz=77
Q14A **Sevier Lake (B** 77.08 50 ⇑P P 11 29 45.5 +0.4
baz=77,SNR=9.9
BRTR **Keskin Array B** 77.10 311 P P 11 29 44.9 -0.3
comp=Z,0.8nm,0.6s,mb4.0,baz=101,slow=6.4,SNR=7.0
BRTR **Keskin Array B** 77.10 311 eP P 11 29 46.7 +1.5
BRTR pmax pmax
comp=Z,1.0nm,0.6s
L19A **Farson** 77.33 46 ⇓P P 11 29 46.2 -0.3
baz=77
MLR **Muntele Rosu** 77.50 319 LR LR 12 06 40.1
comp=Z,65nm,18.1s,MS4.0,baz=346,slow=38
S13A **Holt Ranch, En** 77.62 52 ⇑P P 11 29 48.6 +0.4
baz=77,SNR=5.5
ARUT **Antelope Range** 77.75 51 eP P 11 29 49.0 +0.1
ARUT pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
ARUT **Antelope Range** 77.75 51 eP P 11 29 49.0 +0.1
comp=Z,2.0nm,0.9s,mb4.2
O17A **Robinson Place** 77.79 48 ⇓P P 11 29 48.7 -0.4
baz=78
BBRC **Big Bear Solar** 77.80 56 ⇑P P 11 29 49.1 -0.1
baz=78
HEC **Hector,Ludlow** 77.82 55 ⇑P P 11 29 49.1 -0.3
baz=78
N18A **Larsen Ranch,** 77.89 47 ⇓P P 11 29 49.6 0.0
baz=78
S14A **Cedar City** 77.93 51 ⇑P P 11 29 50.2 +0.3
baz=78
U12A **Valley of Fire** 77.94 53 ⇑P P 11 29 50.0 +0.1
baz=78
CCUT **Cedar City** 77.95 51 eP P 11 29 51.0 +1.0
comp=Z,2.3nm,0.8s,mb4.4
T13A **Saint George** 77.95 52 ⇑P P 11 29 50.1 0.0
baz=78
L20A **Wamsutter** 77.95 45 ⇓P P 11 29 49.8 -0.2
baz=78
O18A **Roosevelt** 78.17 48 ⇑P P 11 29 51.5 +0.3
baz=78
R15A **Junction** 78.18 50 ⇑P P 11 29 51.8 +0.5
baz=78
V12A **Nelson** 78.19 54 ⇓P P 11 29 51.8 +0.4
baz=78
P17A **Butcher Ranch,** 78.27 49 ⇓P P 11 29 52.3 +0.6
baz=78
GMRC **Granite Mounta** 78.28 55 ⇑P P 11 29 52.4 +0.4
baz=78
U13A **Pakoon Wash** 78.31 53 ⇑P P 11 29 52.3 +0.3
baz=78
M20A **Sweetwater, Wa** 78.39 46 ⇑P P 11 29 52.3 -0.1
baz=78
L21A **Rawlins** 78.52 45 ⇓P P 11 29 53.3 +0.2
baz=78
BELC **Belle Mtn. Jos** 78.56 56 ⇓P P 11 29 53.1 -0.4
baz=78
R16A **Teasdale** 78.61 50 ⇑P P 11 29 54.5 +0.8
baz=78,SNR=8.1
SRU **San Rafael** 78.63 49 eP P 11 29 54.2 +0.4
SRU pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
SRU **San Rafael** 78.63 49 eP P 11 29 54.2 +0.4
comp=Z,4.4nm,0.8s,mb4.5
V13A **Grand Canyon W** 78.65 53 ⇓P P 11 29 54.0 +0.1
baz=78
M21A **Separation Pea** 78.76 45 ⇑P P 11 29 54.1 -0.3
baz=78
N20A **Spence Gulch,** 78.78 46 ⇑P P 11 29 54.6 +0.1
baz=78
U14A **Mt Trumbull** 78.79 52 ⇑P P 11 29 54.6 -0.1
baz=79
RSSD **Black Hills** 78.82 42 eP P 11 29 54.9 +0.2
RSSD pmax pmax
comp=Z,1.0nm,0.6s,mb4.0
RSSD **Black Hills** 78.82 42 eP P 11 29 54.9 +0.1
comp=Z,1.1nm,0.6s,mb4.1
S16A **Weppner Ranch,** 78.90 50 ⇑P P 11 29 55.7 +0.4
baz=79
BC3 **Big Chuckawall** 79.13 56 ⇑P P 11 29 56.3 -0.3
baz=79
VRAC **Vranov** 79.16 326 LR LR 12 10 34.3
comp=Z,32nm,18.7s,MS3.7,baz=133,slow=40
P19A **Cripple Cowboy** 79.18 47 ⇓P P 11 29 57.0 +0.2
baz=79
N21A **Black Mountain** 79.25 46 ⇑P P 11 29 57.1 -0.1
baz=79
O20A **White River Ci** 79.26 47 ⇑P P 11 29 56.8 -0.4
baz=79
U15A **North Rim** 79.33 52 ⇓P P 11 29 58.3 +0.6
baz=79,SNR=6.1
V14A **Boquillas Ranc** 79.34 53 ⇑P P 11 29 58.2 +0.5
baz=79,SNR=6.6
S17A **Black Ridge (B** 79.44 50 ⇑P P 11 29 58.1 -0.1
baz=79,SNR=7.4
T16A **Glen Canyon Da** 79.44 51 ⇓P P 11 29 57.6 -0.6
baz=79
Q19A **Hogan Spring (** 79.47 48 ⇑P P 11 29 57.6 -0.8
baz=79
R18A **Canyonlands Na** 79.48 49 ⇓P P 11 29 58.2 -0.3
baz=79
PDMCI **Parker Dam,Lak** 79.55 54 ⇑P P 11 29 58.8 -0.1
baz=79
W14A **Seligman** 79.63 53 ⇑P P 11 29 59.6 +0.3
baz=79
Y12C **Blythe** 79.66 55 ⇓P P 11 29 59.1 -0.4
baz=80
V15A **Kaibab Nationa** 79.80 52 ⇓P P 11 30 00.4 +0.2
baz=80
N22A **Wattenberg Ran** 79.81 45 ⇓P P 11 30 00.0 -0.2
baz=80
S18A **Hurst Farm, Bl** 79.88 49 ⇓P P 11 30 00.6 0.0
baz=80,SNR=6.6
R19A **Curley Farm, L** 79.91 49 ⇑P P 11 30 00.8 0.0
baz=80
GLA **Glamis** 79.91 56 ⇓P P 11 30 01.0 +0.1
baz=80
Q20A **Ridgley Place,** 80.03 48 ⇑P P 11 30 01.2 -0.2
baz=80
Y13A **Salome** 80.06 55 ⇓P P 11 30 01.9 +0.2
baz=80
P21A **Newcastle** 80.13 47 ⇓P P 11 30 02.4 +0.4
baz=80
U17A **Shonto** 80.20 51 ⇑P P 11 30 02.9 +0.5
baz=80
X14A **Yava** 80.23 53 ⇓P P 11 30 02.6 +0.1
baz=80,SNR=5.9
T18A **Mexican Hat** 80.32 50 ⇑P P 11 30 02.7 -0.3
baz=80,SNR=6.4
MMAI **Mount Meron Ar** 80.33 305 LR LR 12 08 38.2
comp=Z,35nm,19.1s,MS3.7,baz=200,slow=38
S19A **Harvey Farm, M** 80.35 49 ⇓P P 11 30 03.0 -0.2
baz=80,SNR=7.5
WUAZ **Wupatki** 80.48 52 eP P 11 30 04.8 +0.9
R20A **Redvale** 80.50 48 ⇓P P 11 30 04.1 +0.2
baz=80
Y14A **Wickenburg** 80.50 54 ⇑P P 11 30 04.2 +0.2
baz=80
Z13A **Yuma Proving G** 80.57 55 ⇑P P 11 30 04.5 +0.1
baz=80,SNR=7.5
X15A **Humboldt** 80.63 53 ⇑P P 11 30 05.2 +0.4
baz=80,SNR=6.2
W16A **Flagstaff** 80.67 52 ⇑P P 11 30 05.2 +0.3
baz=80
V17A **Tonalea, Kykot** 80.77 51 ⇓P P 11 30 05.9 +0.5
baz=81,SNR=9.1
113A **Mohawk Valley,** 80.78 55 ⇓P P 11 30 05.5 0.0
baz=81
U18A **Rough Rock, Ch** 80.80 50 ⇓P P 11 30 05.9 +0.3
baz=81,SNR=5.1
R21A **Cimarron** 80.85 48 ⇓P P 11 30 06.0 +0.2
baz=81
Q22A **Crested Butte,** 80.88 47 ⇑P P 11 30 05.7 -0.3
baz=81
Y15A **Casa Rosa Ranc** 80.92 54 ⇓P P 11 30 06.6 +0.3
baz=81,SNR=7.4
ISCO **Idaho Springs** 80.97 46 eP P 11 30 06.8 +0.4
ISCO pmax pmax
comp=Z,1.0nm,0.7s,mb4.0
ISCO **Idaho Springs** 80.97 46 eP P 11 30 06.8 +0.4
comp=Z,1.2nm,0.7s,mb4.0
T19A **Beclabito** 81.03 50 ⇑P P 11 30 06.8 0.0
baz=81
MVCO **Mesa Verde** 81.08 49 eP P 11 30 07.6 +0.5
comp=Z,2.5nm,0.6s,mb4.4
X16A **Lo Mia Camp, P** 81.17 53 ⇑P P 11 30 08.1 +0.5
baz=81,SNR=5.5
S21A **Coal Bank Pass** 81.19 48 ⇓P P 11 30 08.1 +0.5
baz=81
V18A **Ganado** 81.23 51 ⇑P P 11 30 08.1 +0.1
baz=81
U19A **Dine' College,** 81.28 50 ⇓P P 11 30 08.5 +0.4
baz=81,SNR=6.2
114A **Black Gap (USA** 81.35 55 ⇑P P 11 30 08.8 +0.2
baz=81
R22A **Saguache, Gunn** 81.40 47 ⇓P P 11 30 09.4 +0.6
baz=81
Y16A **Circle Bar Ran** 81.50 53 ⇑P P 11 30 09.8 +0.4
baz=81
X17A **Forest Lakes** 81.61 52 ⇓P P 11 30 10.2 +0.3
baz=81
S22A **4UR Ranch, Cre** 81.69 48 ⇑P P 11 30 10.5 +0.2
baz=82
W19A **Sanders** 81.97 51 ⇑P P 11 30 12.3 +0.5
baz=82,SNR=6.3
X18A **Snowflake** 82.01 52 ⇓P P 11 30 12.0 -0.1
baz=82
Y17A **Roosevelt** 82.02 53 ⇓P P 11 30 12.1 0.0
baz=82
V20A **Brimhall** 82.06 50 ⇓P P 11 30 12.4 +0.1
baz=82
U21A **Nageezi** 82.11 49 ⇓P P 11 30 12.9 +0.3
baz=82
T22A **Edith** 82.15 48 ⇓P P 11 30 13.2 +0.5
baz=82
R24A **Sanders Place,** 82.34 46 ⇓P P 11 30 13.8 0.0
baz=82
Y18A **Canyon Day Jun** 82.46 52 ⇓P P 11 30 14.5 0.0
baz=82
W20A **Ramah** 82.49 51 ⇑P P 11 30 14.8 +0.2
baz=82
Z17A **San Carlos Hig** 82.51 53 ⇑P P 11 30 14.9 +0.2
baz=82
V21A **Milan** 82.55 50 ⇑P P 11 30 15.2 +0.3
baz=82
T23A **Casias Ranch,** 82.64 48 ⇑P P 11 30 15.5 +0.2
baz=82
S24A **Houchin Ranch,** 82.69 47 ⇑P P 11 30 15.7 +0.2
baz=82
ECSD **EROS Data Cent** 82.80 38 eP P 11 30 14.8 -1.2
comp=Z,2.9nm,0.7s,mb4.6
X20A **Quemado** 82.89 51 ⇑P P 11 30 16.9 +0.2
baz=83
V22A **San Miguel Ran** 82.90 49 ⇓P P 11 30 16.9 +0.2
baz=83
U23A **El Rito** 83.04 48 ⇓P P 11 30 17.8 +0.4
baz=83
118A **Homack Ranch,** 83.27 53 ⇑P P 11 30 18.8 +0.1
baz=83
X21A **Alamocita Cree** 83.39 51 ⇓P P 11 30 19.8 +0.6
baz=83
Y20A **Horse Springs,** 83.39 51 ⇓P P 11 30 19.8 +0.5
baz=83,SNR=5.5
V23A **Ortiz Mt. (NFS** 83.45 49 ⇑P P 11 30 20.3 +0.8
baz=83
218A **Dragoon** 83.66 54 ⇓P P 11 30 21.3 +0.7
baz=84
Z20A **Nine Sixteen R** 83.80 52 ⇓P P 11 30 21.7 +0.4
baz=84
ANMO **Albuquerque** 83.83 50 eP P 11 30 22.6 +1.1
ANMO pmax pmax
comp=Z,2.0nm,0.8s
ANMO **Albuquerque** 83.83 50 eP P 11 30 22.6 +1.1
comp=Z,1.9nm,0.8s,mb4.4
W23A **Werner Place,** 83.87 49 ⇑P P 11 30 22.0 +0.3
baz=84
DAVOX **Davos/Dischmat** 83.95 328 LR LR 12 09 28.5
comp=Z,54nm,19.2s,MS3.9,baz=264,slow=37
318A **Bisbee** 84.06 54 ⇓P P 11 30 22.8 +0.1
baz=84,SNR=6.5
219A **White Tail Can** 84.14 53 ⇓P P 11 30 23.3 +0.1
baz=84
120A **U Bar Ranch, L** 84.16 53 ⇓P P 11 30 23.6 +0.4
baz=84
Y22A **Socorro** 84.23 51 ⇓P P 11 30 23.8 +0.2
baz=84
Z21A **St. Cloud Mine** 84.23 51 ⇓P P 11 30 24.0 +0.5
baz=84
W24A **Lazy 6 Ranch,** 84.27 49 ⇑P P 11 30 24.2 +0.4
baz=84
BNM **Barren Site** 84.28 50 eP P 11 30 24.6 +0.7
comp=Z,3.6nm,1.2s,mb4.5
V25A **Rancho No Teng** 84.29 48 ⇑P P 11 30 24.3 +0.4
baz=84
U26A **Atchley Ranch,** 84.40 47 ⇑P P 11 30 24.8 +0.4
baz=84
319A **Douglas** 84.55 54 ⇑P P 11 30 25.4 +0.1
baz=84
220A **Playas Peak, P** 84.66 53 ⇓P P 11 30 26.3 +0.5
baz=84
121A **Cookes Peak, D** 84.69 52 ⇑P P 11 30 26.2 +0.2
baz=84
Z22A **Elephant Butte** 84.70 51 ⇓P P 11 30 26.3 +0.3
baz=84
Y23A **Lovelace Mesa,** 84.78 50 ⇓P P 11 30 26.3 0.0
baz=85
W25A **X Bar L Ranch,** 84.82 48 ⇑P P 11 30 26.6 +0.1
baz=85
320A **Kipp Ranch, An** 85.05 53 ⇑P P 11 30 27.6 -0.1
baz=85
Z23A **Rita Site, Whi** 85.14 51 ⇓P P 11 30 28.1 0.0
baz=85
W26A **Owens Ranch, T** 85.31 48 ⇓P P 11 30 28.9 -0.1
baz=85
X26A **CR and CF Fran** 85.67 48 ⇓P P 11 30 30.4 -0.3
baz=85
W27A **Bowe Ranch, En** 85.74 47 ⇓P P 11 30 31.0 -0.1
baz=86
124A **Stringfield Ra** 85.99 51 ⇓P P 11 30 32.0 -0.4
baz=86
X27A **F and S Farms,** 86.01 48 ⇑P P 11 30 32.5 0.0
baz=86
Z25A **Roswell** 86.03 50 ⇓P P 11 30 32.4 -0.2
baz=86
224A **Cornudas Mount** 86.39 51 ⇓P P 11 30 34.1 -0.3
baz=86
Z26A **Caprock** 86.47 49 ⇓P P 11 30 34.3 -0.4
baz=86
125A **Gardner Draw,** 86.50 50 ⇓P P 11 30 34.4 -0.6
baz=86
Y27A **Causey** 86.52 48 ⇓P P 11 30 34.4 -0.6
baz=86
MSTX **Muleshoe** 86.68 48 ⇓P P 11 30 35.6 -0.2
baz=86
324A **Moseley Ranch,** 86.86 51 ⇓P P 11 30 36.5 -0.2
baz=87
Z27A **Tatum** 86.89 49 ⇑P P 11 30 36.3 -0.6
baz=87
GDL2 **Guadalupe Moun** 87.00 50 eP P 11 30 33.6 -3.7
325A **Bean Ranch, Si** 87.22 51 ⇓P P 11 30 37.2 -1.3
baz=87
326A **Caldwell Ranch** 87.86 51 ⇓P P 11 30 40.6 -0.9
baz=88
426A **McDonald Obser** 88.28 51 ⇓P P 11 30 42.9 -0.7
baz=88
WMOK **Wichita Mounta** 88.39 45 eP P 11 30 44.1 +0.1
427A **Hayter Ranch,** 88.53 51 ⇑P P 11 30 44.4 -0.3
baz=88
526A **Mary Lane Ranc** 88.68 52 ⇓P P 11 30 45.1 -0.3
baz=88
527A **Woodward Ranch** 88.91 51 ⇑P P 11 30 46.0 -0.6
baz=89
428A **Kincaid Ranch,** 89.05 50 ⇑P P 11 30 45.9 -1.3

baz=89
528A Cox Ranch, San 89.40 51 ⇑P P 11 30 48.2 -0.6
baz=89
TXAR Lajitas Array 89.45 52 P P 11 30 48.7 -0.4
comp=Z,1.0nm,0.7s,mb4.1,baz=290,slow=2.9,SNR=16
TXAR Lajitas Array 89.45 52 P P 11 30 48.7 -0.4
TXAR pmax pmax
comp=Z,1.0nm,0.7s
627A Terlingua Ranc 89.54 52 ⇑P P 11 30 49.1 -0.4
baz=89
JCT Junction City 90.94 49 *e*P P 11 30 55.7 -0.3
LPAZ La Paz 146.22 56 PKPbc PKPbc 11 37 32.6 -0.2
comp=Z,5.9nm,1.1s,baz=347,slow=5.6,SNR=14

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*IDC **01** 11:50:27.9±2.0, 36°.76N×141°.88E, h0km, mb3.6/6, mb1 3.7/8, mb1mx3.6/26, mbtmp3.7/8, ML3.9/2, Error ellipse: s-maj=54.2km s-min=19.6km az=67.0*
*ISCJB **01** 11:50:35.2±0.9, 36°.59N±0°.04×141°.29E±0°.07, h48km±7km, mb3.5/6, Error ellipse: s-maj=10.1km s-min=5.9km az=13.6.*
*JMA **01** 11:50:35.9±0.1, 36°.60N×141°.23E, h46km±2km, M3.3*
*NEIC **01** 11:50:36.0, 36°.60N×141°.23E, h46km, MG3.3(JMA), After JMA.*
ISC 01 11:50:35.6±1.0, 36°.61N±0°.04×141°.29E±0°.06, h31km±5km, n20, σ1§03/33, mb3.5/6, 1C-5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.58**	**270**	⇓P	**Pb**	**11 50 47.3**	**-0.1**
JHO				S	**Sb**	**11 50 55.4**	**0.0**
ONAJ	**Iwakimizuishiy**	**0.63**	**321**	⇓P	**Pb**	**11 50 48.0**	**-0.2**
ONAJ				S	**Sb**	**11 50 56.5**	**-0.3**
JFK	**Kawauchi**	**0.83**	**336**	P	**Pn**	**11 50 50.9**	**-0.2**
JFK				S	**Sb**	**11 51 01.0**	**-1.3**
JYT	**Yasato**	**0.96**	**247**	⇓P	**Pn**	**11 50 52.5**	**-0.5**
JYT				*e*S	**Sn**	**11 51 03.1**	**-2.6**
JFT	**Otama**	**1.19**	**320**	⇓P	**Pn**	**11 50 56.9**	**+0.8**
JFT				S	**Sn**	**11 51 11.6**	**+0.4**
JMM	**Marumori**	**1.32**	**343**	P	**Pn**	**11 50 58.1**	**+0.2**
JMM				*e*S	**Sn**	**11 51 14.1**	**-0.3**
JAG	**Ashikaga**	**1.49**	**263**	P	**Pn**	**11 51 00.5**	**+0.2**
JAG				*e*S	**Sn**	**11 51 18.5**	**-0.2**
JFY	**Yanaizu**	**1.50**	**303**	⇑P	**Pn**	**11 51 01.3**	**+0.9**
JFY				*e*S	**Sn**	**11 51 20.2**	**+1.3**
JKT	**Katashina**	**1.65**	**276**	⇓P	**Pn**	**11 51 03.4**	**+1.0**
JKT				*e*S	**Sn**	**11 51 20.9**	**-1.7**
MJAR	**Matsushiro Arr**	**2.48**	**269**	Pn	**Pn**	**11 51 15.0**	**+1.1**
17nm,0.3s,baz=114,slow=10,SNR=153
MJAR Sn **Sn** **11 51 47.1** **+3.9**
5.3nm,0.3s,baz=281,slow=30,SNR=4.7
MAJO Matsushiro **2.48** **269** *e*Pn **Pn** **11 51 15.8** **+1.9**
MAJO *e*Sn **Sn** **11 51 42.2** **-1.0**
MAT Matsushiro **2.48** **269** P **Pn** **11 51 15.4** **+1.5**
MAT S **Sn** **11 51 43.4** **+0.2**
JHJ Hachijo jima 2 **3.69** **200** Pn **Pn** **11 51 31.1** **+0.5**
20nm,0.3s,baz=98,slow=22,SNR=14
JHJ Sn **Sn** **11 52 13.5** **+0.4**
18nm,0.3s,baz=79,slow=23,SNR=6.6
SONM Songino Array **27.94** **305** P **Pn** **11 56 22.8** **-0.2**
0.5nm,0.5s,mb3.4,baz=98,slow=10,SNR=2.6
ZALV Zalesovo Beam **42.13** **313** P **Pn** **11 58 22.2** **-2.6**
0.7nm,0.5s,mb3.6,baz=97,slow=6.0,SNR=3.2
MKAR Makanchi Array **44.26** **302** P **Pn** **11 58 42.4** **+0.3**
0.3nm,0.7s,mb3.1,baz=88,slow=12,SNR=3.6
KURK Kurchatov **46.12** **308** P **Pn** **11 58 57.2** **+0.4**
0.8nm,0.5s,mb4.0,baz=84,slow=8.0,SNR=4.1
KURK Kurchatov **46.12** **308** P **Pn** **11 58 57.2** **+0.4**
WRA Warramunga Arr **56.63** **188** P **Pn** **12 00 15.1** **-0.6**
0.5nm,0.4s,mb3.9,baz=6.1,slow=7.4,SNR=20
ASAR Alice Springs **60.35** **188** P **Pn** **12 00 38.9** **-2.8**
0.3nm,0.8s,mb3.4,baz=16,slow=12,SNR=3.5

GUC 01 11:52:41.3±0.6, 19°.38S×69°.32W, h98km±5km, ML3.6, 2C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNMC	**Miæe Miæ**	**0.36**	**314**	⇑*e*P	Pn	11 52 56.6	+0.7
MNMC				*i* S	Sn	11 53 08.2	+1.2
MNMC				AML	AML	11 53 09.7	
comp=E,7μm,0.1s
PSGC Pisagua **0.79** **254** *e*P Pn 11 52 59.3 0.0
PSGC *i* S Sn 11 53 13.7 +0.7
HMBC Humberston **1.04** **211** ⇑*e*P Pn 11 53 02.5 +0.5
HMBC *e*S Sn 11 53 18.5 +0.9
HMBC AML AML 11 53 20.4
comp=N,968nm,0.6s
PB01 Plate Boundary **1.66** **186** ⇓*e*P Pn 11 53 10.1 +0.7
PB01 *i* S Sn 11 53 32.1 +1.3
PB01 AML AML 11 53 35.7
comp=E,678nm,0.6s
PB04 Plate Boundary **2.87** **183** *e*P Pn 11 53 27.9 +2.6
PB04 *e*S Sn 11 54 04.3 +5.1
CEN1 Los Morros **4.07** **192** *e*P Pn 11 53 44.2 +2.8
CEN1 *e*S Sn 11 54 33.3 +5.3

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*BJI **01** 12:00:22.6, 51°.80N×169°.70W, h28km, mB4.7/4, mb4.4/5, Ms4.6/2, Ms7 4.5/2*
*NEIC **01** 12:00:25.6, 51°.85N×169°.74W, h29km, mb4.2/7, ML3.7(AEIC), After AEIC.*
*IDC **01** 12:00:28.9±6.2, 52°.06N×170°.01W, h46km±60km, mb3.8/21, mb1 4.0/22, mb1mx3.9/30, mbtmp3.8/22, ML4.8/1, MS3.5/4, Ms1 3.5/4, ms1mx3.0/36, Error ellipse: s-maj=22.0km s-min=14.0km az=180.0*
ISC 01 12:00:25.8±2.4, 51°.96N±0°.09×169°.94W±0°.08, h24km±16km, n50, σ1§13/52, mb4.1/24, MS3.6/3, 2C, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKFG	**Magazine Ridge**	**1.91**	**40**	P	**Pn**	**12 00 56.6**	**0.0**
OKFG				S	**Sn**	**12 01 22.8**	**+2.9**
UNV	**Unalaska Valle**	**2.81**	**46**	P	**Pn**	**12 01 09.2**	**+0.1**
UNV				S	**Sn**	**12 01 43.5**	**+1.3**
AKUT	**Akutan**	**3.33**	**48**	*e*Pn	**Pn**	**12 01 21.5**	**+5.3**
AKUT				*e*Sn	**Sn**	**12 02 10.8**	**+16**
SPIA	**Saint Paul Isl**	**5.23**	**358**	P	**Pn**	**12 01 44.4**	**+2.1**
AMKA	**Amchitka**	**6.72**	**269**	P	**Pn**	**12 02 04.4**	**+1.7**
FX1	**Attu Island--F**	**10.36**	**282**	P	**Pn**	**12 02 56.0**	**+3.3**
1.8nm,0.3s,baz=273,slow=20,SNR=13
FX1 LR LR 12 06 45.7
comp=Z,135nm,20.3s,baz=123,slow=37
OHAK Old Harbor **10.99** **55** *e*Pn **Pn** **12 02 59.2** **-2.0**
110nm,0.6s
KDAK Kodiak Island **11.56** **53** P **Pn** **12 03 08.0** **-1.0**
1.3nm,0.3s,baz=273,slow=7.4,SNR=9.5
RSO Redoubt South **12.77** **41** *e*Pn **Pn** **12 03 28.1** **+2.6**
TTA Tatalina **13.27** **29** *e*Pn **Pn** **12 03 32.7** **+0.4**
12nm,1.2s
COLA College **17.22** **33** *e*Pn **Pn** **12 04 22.4** **-1.8**
3.5nm,0.8s
MENT Mentasta **17.73** **42** *e*P **Pn** **12 04 30.7** **0.0**
EGAK Eagle **19.58** **38** *e*P **Pn** **12 04 51.9** **-1.1**
3.6nm,0.5s
PEA0B Petropavlovsk- **19.63** **286** *e*P **Pn** **12 04 53.1** **-0.6**
PETK Petropavlovsk- **19.63** **286** P **Pn** **12 04 52.9** **-0.9**
3.1nm,0.3s,baz=84,slow=14,SNR=119
BILL Bilibino **19.80** **333** P **Pn** **12 04 54.4** **-1.2**
4.9nm,0.9s
DAWY Dawson **19.97** **41** *e*P **Pn** **12 04 56.0** **-1.7**
SKAG Skagway **20.69** **55** *e*P **P** **12 05 02.7** **-1.1**
17nm,0.7s
INK Inuvik **23.88** **33** P **P** **12 05 35.2** **-1.7**
2.3nm,0.4s,mb3.9,baz=267,slow=6.5,SNR=12
INK Inuvik **23.88** **33** P **P** **12 05 35.2** **-1.8**
YKA Yellowknife Ar **30.78** **48** P **P** **12 06 39.6** **+0.8**
1.6nm,0.6s,mb4.0,baz=276,slow=6.9,SNR=14
EDM Edmonton **33.64** **65** *e*P **P** **12 07 00.3** **-3.7**
NVAR Mina Array Bea **38.01** **90** P **P** **12 07 44.3** **+2.6**
0.2nm,0.5s,mb3.1,baz=278,slow=8.6,SNR=2.5
PDAR Pinedale Array **40.83** **78** P **P** **12 08 05.9** **+0.8**
0.8nm,0.6s,mb3.5,baz=322,slow=4.5,SNR=5.7
KSRS Korea Array **45.10** **277** P **P** **12 08 40.5** **+0.7**
1.7nm,0.8s,mb3.9,baz=50,slow=7.4,SNR=4.6
SPITS Spitsbergen Ar **50.07** **358** P **P** **12 09 17.1** **-0.7**
1.2nm,0.4s,mb4.3,baz=22,slow=7.2,SNR=4.8
DAG Danmarks Havn **50.24** **8** ⇑*i*P **P** **12 09 18.4** **-0.7**
2.1nm,0.5s,mb4.4
DAG Danmarks Havn **50.24** **8** ⇑*i*P **P** **12 09 18.4** **-0.7**
2.1nm,0.5s,mb4.4
MNTX Cornudas Mount **50.41** **87** *e*P **P** **12 09 21.9** **+1.0**
5.8nm,1.6s,mb4.4
SONM Songino Array **51.20** **301** P **P** **12 09 27.3** **+0.6**
1.4nm,1.0s,mb3.9,baz=64,slow=6.9,SNR=6.9
SONM LR LR 12 33 08.0
comp=Z,65nm,19.8s,MS3.6,baz=79,slow=38
SUMG Summit **51.27** **17** *e*P **P** **12 09 27.8** **+0.9**
12nm,0.9s,mb4.8
TXAR Lajitas Array **53.11** **88** P **P** **12 09 41.5** **+0.4**
0.5nm,0.7s,mb3.6,baz=301,slow=5.9,SNR=6.1
TXAR LR LR 12 32 35.4
comp=Z,42nm,18.6s,MS3.5,baz=0.0,slow=36
TXAR Lajitas Array **53.11** **88** P **P** **12 09 41.5** **+0.4**
TXAR LR LR 12 32 35.4
SCHQ Schefferville **55.97** **43** P **P** **12 10 02.0** **+0.5**
2.5nm,0.7s,mb4.4,baz=14,slow=2.6,SNR=4.1
SCHQ LR LR 12 36 52.2
comp=Z,68nm,18.3s,MS3.8,baz=185,slow=39
ZALV Zalesovo Beam **57.48** **317** PcP PcP 12 11 06.3 +0.6
1.2nm,0.6s,baz=72,slow=4.7,SNR=5.4
ARCES ARCESS Array B **58.29** **354** P **P** **12 10 17.6** **-0.2**
1.4nm,0.5s,mb4.2,baz=15,slow=6.4,SNR=8.4
KURK Kurchatov **62.44** **318** P **P** **12 10 47.0** **+0.6**
0.9nm,0.6s,mb4.1,baz=44,slow=6.9,SNR=2.9
KURK Kurchatov **62.44** **318** P **P** **12 10 47.0** **+0.6**
MKAR Makanchi Array **63.83** **313** P **P** **12 10 54.6** **-1.0**
0.3nm,0.3s,mb3.6,baz=44,slow=7.8,SNR=7.1
BVAR Borovoye Array **63.83** **324** P **P** **12 10 55.5** **-0.1**
2.2nm,0.4s,mb4.5,baz=58,slow=7.0,SNR=16
FINES FINESS Array B **66.22** **352** P **P** **12 11 10.5** **-0.4**
2.0nm,0.6s,mb4.4,baz=10,slow=8.5,SNR=2.4
NB2 NORSAR Subarra **67.34** **359** P **P** **12 11 17.6** **-0.5**
comp=Z,1.2nm,0.6s,mb4.1,baz=1.2,slow=6.5
NOA NORSAR Array B **67.34** **359** P **P** **12 11 18.4** **+0.3**
comp=Z,2.0nm,0.9s,mb4.2,baz=1.3,slow=6.4,SNR=4.6
AKTK Aktyubinsk **70.19** **330** P **P** **12 11 36.0** **0.0**
AKTO Aktyubinsk **70.19** **330** P **P** **12 11 36.0** **0.0**
comp=Z,3.3nm,0.6s,mb4.5,baz=60,slow=5.8,SNR=12
CMAR Chiang Mai Arr **76.36** **282** P **P** **12 12 13.8** **+0.9**
comp=Z,1.5nm,0.6s,mb4.1,baz=37,slow=7.3,SNR=9.3
AKASG Malin Array Be **76.43** **348** P **P** **12 12 11.4** **-1.4**
comp=Z,0.9nm,0.4s,mb4.0,baz=17,slow=6.6,SNR=4.1
WRA Warramunga Arr **86.47** **231** P **P** **12 13 05.2** **-1.0**
comp=Z,0.3nm,0.7s,mb3.6,baz=37,slow=5.7,SNR=4.1
ESDC Sonseca Array **87.92** **11** P **P** **12 13 13.3** **+0.2**
comp=Z,0.5nm,0.4s,mb4.1,baz=339,slow=4.3,SNR=4.1
ASAR Alice Springs **89.86** **230** P **P** **12 13 22.2** **0.0**
comp=Z,1.0nm,0.7s,mb4.2,baz=26,slow=4.6,SNR=17

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*ISCJB **01** 12:02:36.6±1.3, 55°.14N±0°.09×157°.8W±0°.1, h46km±9km, mb4.0/13, Error ellipse: s-maj=16.9km s-min=7.9km az=154.5*
*NEIC **01** 12:02:36.6, 55°.11N×157°.75W, h16km, ML3.6(AEIC), After AEIC.*
*IDC **01** 12:02:38.5±1.0, 56°.23N×158°.63W, h0km, mb4.0/14, mb1 4.2/16, mb1mx4.0/29, mbtmp4.0/16, ML3.7/2, MS3.2/1, Ms1 3.2/1, ms1mx2.5/30, Error ellipse: s-maj=28.9km s-min=16.3km az=175.0*
ISC 01 12:02:38.2±1.3, 55°.2N±0°.1×157°.8W±0°.1, h40km±9km, n30, σ1§06/30, mb4.0/13, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHGN	**Chignik**	**1.15**	**342**	P	**Pn**	**12 02 56.5**	**-1.2**
CHGN				S	**Sn**	**12 03 13.2**	**+1.0**
SDPT	**Sand Point**	**1.54**	**276**	P	**Pn**	**12 03 01.9**	**-1.2**
SDPT				S	**Sn**	**12 03 22.2**	**+0.3**
OHAK	**Old Harbor**	**3.22**	**49**	P	**Pn**	**12 03 26.0**	**-0.1**
FALS	**False Pass**	**3.26**	**266**	*e*Pn	**Pn**	**12 03 28.5**	**+1.8**
KDAK	**Kodiak Island**	**3.87**	**46**	Pn	**Pn**	**12 03 34.9**	**-0.1**
4.0nm,0.3s,baz=230,slow=6.0,SNR=16
KDAK Sn **Sn** **12 04 16.4** **-2.7**
8.0nm,0.3s,baz=111,slow=22,SNR=6.8
KDAK Kodiak Island **3.87** **46** P **Pn** **12 03 35.0** **-0.1**
RSO Redoubt South **5.91** **25** *e*Pn **Pn** **12 04 05.8** **+2.7**
RSO *e*Sn **Sn** **12 05 15.3** **+5.9**
FX1 Attu Island--F **17.16** **274** Pn **Pn** **12 06 33.6** **-1.1**
1.0nm,0.3s,baz=74,slow=20,SNR=5.0
INK Inuvik **17.26** **31** Pn **Pn** **12 06 35.2** **-0.5**
1.5nm,0.3s,baz=220,slow=11,SNR=11
YKA Yellowknife Ar **23.10** **54** P **P** **12 07 42.2** **+2.1**
1.1nm,0.6s,mb3.5,baz=270,slow=8.7,SNR=5.2
YKA Yellowknife Ar **23.10** **54** P **P** **12 07 42.2** **+2.1**
PETK Petropavlovsk- **25.82** **284** P **P** **12 08 04.0** **-1.3**
4.0nm,0.8s,mb4.0,baz=80,slow=12,SNR=4.9
PETK Petropavlovsk- **25.82** **284** P **P** **12 08 04.0** **-1.3**
YBH Yreka Blue Hor **26.56** **106** LR LR 12 16 44.8
comp=Z,45nm,19.7s,baz=306,slow=31
NVAR Mina Array Bea **31.28** **106** P pP 12 09 10.2 +5.2
0.5nm,0.7s,baz=298,slow=9.7,SNR=4.6
TXAR Lajitas Array **46.16** **101** P pP 12 11 10.9 +1.0
0.9nm,0.6s,baz=305,slow=3.2,SNR=5.2
SONM Songino Array **55.50** **306** P **P** **12 12 09.0** **+0.3**
0.4nm,0.3s,mb3.9,baz=38,slow=6.1,SNR=3.6
ARCES ARCESS Array B **55.54** **359** P **P** **12 12 07.8** **-0.8**
1.0nm,0.6s,mb4.0,baz=28,slow=7.7,SNR=4.8
FINES FINESS Array B **63.65** **358** P **P** **12 13 03.8** **-0.8**
1.5nm,0.5s,mb4.3,baz=359,slow=11,SNR=3.8
KURK Kurchatov **64.47** **324** P **P** **12 13 11.0** **+0.9**
0.4nm,0.4s,mb3.8,baz=27,slow=6.5,SNR=2.6
BVAR Borovoye Array **65.03** **330** P **P** **12 13 13.9** **+0.2**
2.1nm,0.7s,mb4.3,baz=33,slow=7.1,SNR=6.8
MKAR Makanchi Array **66.48** **320** P **P** **12 13 22.7** **-0.5**
0.5nm,0.5s,mb3.8,baz=44,slow=8.7,SNR=4.5
AKTK Aktyubinsk **70.56** **337** P **P** **12 13 48.2** **-0.4**
AKTO Aktyubinsk **70.56** **337** P **P** **12 13 48.2** **-0.4**
1.9nm,0.7s,mb4.1,baz=352,slow=7.3,SNR=4.8
AKASG Malin Array Be **74.30** **355** P **P** **12 14 10.4** **-0.4**
1.9nm,0.5s,mb4.3,baz=8.9,slow=6.0,SNR=4.4
CMAR Chiang Mai Arr **82.36** **291** P **P** **12 14 56.1** **+0.4**
1.2nm,0.7s,mb3.9,baz=12,slow=5.2,SNR=6.8
ESDC Sonseca Array **82.87** **20** P **P** **12 14 58.9** **+0.8**
0.3nm,0.3s,mb3.8,baz=330,slow=4.5,SNR=4.5
ESDC Sonseca Array **82.87** **20** P **P** **12 14 58.9** **+0.7**
BRTR Keskin Array B **84.93** **351** P **P** **12 15 09.7** **+1.0**
0.7nm,0.8s,mb3.8,baz=15,slow=7.4,SNR=3.2
QSPA South Pole Qui **144.99** **180** PKPbc PKPdf 12 22 18.5 +9.5
1.5nm,0.5s,baz=89,slow=2.3,SNR=17

IDC 01 12:09:47.5±25.0, 19°.39S×178°.08W, h380km±257km, mb3.2/6, mb1 3.4/6, mb1mx3.2/18, mbtmp3.2/6, Error ellipse: s-maj=188.0km s-min=58.7km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.54**	**263**	P	P	12 15 54.0	+0.6
1.0nm,0.4s,baz=90,slow=11,SNR=7.0
WRA Warramunga Arr **44.69** **261** P **P** 12 17 24.3 -0.4
0.3nm,0.3s,baz=95,slow=7.4,SNR=28
ASAR Alice Springs **44.71** **256** P P 12 17 24.4 -0.4
2.2nm,0.7s,baz=94,slow=7.9,SNR=45
FITZ Fitzroy Crossi **53.10** **262** P P 12 18 28.1 +0.2
0.9nm,0.6s,baz=107,slow=15,SNR=4.0
TXAR Lajitas Array **86.53** **57** P P 12 21 49.0 +0.1
0.2nm,0.6s,baz=228,slow=8.4,SNR=4.1
PDAR Pinedale Array **88.21** **43** P P 12 21 56.8 +0.3
0.2nm,0.4s,baz=250,slow=2.7,SNR=3.7

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*ISCJB **01** 12:17:12.3±0.8, 56°.0S±0°.2×26°.3W±0°.3, h10km, mb4.4/8, MS4.3/6, Error ellipse: s-maj=28.8km s-min=15.5km az=139.5*
*IDC **01** 12:17:12.2±0.9, 55°.92S×26°.27W, h0km, mb4.5/6, mb1 4.5/6, mb1mx4.3/14, mbtmp4.4/6, MS4.3/6, Ms1 4.3/6, ms1mx4.0/16, Error ellipse: s-maj=37.3km s-min=19.9km az=48.0*
*NEIC **01** 12:17:13.6±0.4, 55°.92S×26°.29W, h10km, mb4.6/3, Error ellipse: s-maj=22.7km s-min=13.1km az=50.0*
ISC 01 12:17:14.0±0.8, 56°.0S±0°.2×26°.3W±0°.3, h10km, n24, σ0§75/13, mb4.4/8, MS4.3/6, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAIT	**Maitri**	**22.02**	**147**	*e*P	**P**	**12 22 07.3**	**-0.7**
QSPA	**South Pole Qui**	**34.28**	**180**	P	**P**	**12 24 00.3**	**+0.7**
19nm,0.6s,mb5.2,baz=194,slow=2.7,SNR=70
QSPA South Pole Qui **34.28** **180** *e*P **P** **12 24 00.2** **+0.6**
16nm,0.6s,mb5.1
CPUP Villa Florida **37.15** **310** P **P** **12 24 23.7** **-1.1**
2.3nm,0.6s,mb4.2,baz=128,slow=8.3,SNR=13
CPUP Villa Florida **37.15** **310** *e*P **P** **12 24 24.0** **-0.8**
MAW Mawson **39.90** **143** P **P** **12 24 47.8** **+0.4**
2.9nm,0.6s,mb4.2,baz=209,slow=5.7,SNR=16
MAW Mawson **39.90** **143** *e*P **P** **12 24 48.0** **+0.5**
BOSA Boshof **45.45** **75** P **P** **12 25 33.3** **+0.4**
0.9nm,0.5s,mb3.9,baz=233,slow=5.1,SNR=3.4
BOSA LR LR 12 41 19.4
comp=Z,623nm,18.6s,MS4.6,baz=164,slow=32
SBA Scott Base **46.19** **184** *e*P **P** **12 25 30.0** **-8.2**
5.3nm,0.9s,mb4.5
LPAZ La Paz **50.76** **304** P **P** **12 26 15.0** **+1.0**
2.6nm,0.4s,mb4.5,baz=162,slow=7.7,SNR=15
LPAZ LR LR 12 46 42.4
comp=Z,81nm,19.1s,MS3.8,baz=156,slow=35
LPAZ La Paz **50.76** **304** *e*P **P** **12 26 14.8** **+0.8**
2.6nm,0.5s,mb4.4
LPAZ LR LR 12 46 42.4
RPN Rapa Nui **64.18** **259** LR LR 12 49 35.6
comp=Z,157nm,21.2s,MS4.2,baz=340,slow=30
DBIC Dimbokro **64.89** **24** LR LR 12 50 41.1
comp=Z,169nm,18.4s,MS4.3,baz=148,slow=31
STKA Stephens Creek **91.89** **170** LR LR 13 09 38.0
comp=Z,313nm,20.5s,MS4.7,baz=205,slow=34
PPT Papeete **92.66** **233** LR LR 13 00 02.7
comp=Z,188nm,20.4s,MS4.5,baz=64,slow=28
ASAR Alice Springs **96.90** **162** P **P** **12 30 53.2** **-1.1**
0.4nm,0.8s,mb4.0,baz=196,slow=4.9,SNR=5.0
EIDS Eidsvold **98.95** **178** *e*P **P** **12 30 55.0** **+0.5**
1.2nm,0.5s,mb4.7
YKA Yellowknife Ar **136.46** **318** PKP PKPdf 12 36 34.8 +0.3
0.4nm,0.6s,baz=130,slow=2.4,SNR=4.4
YKA Yellowknife Ar **136.46** **318** PKP PKPdf 12 36 34.8 +0.3
INK Inuvik **146.07** **320** *e*PKPdf PKPdf 12 36 51.4 -0.1
DAWY Dawson **147.12** **312** *e*PKPbc PKPbc 12 36 54.7 -0.9
MENT Mentasta **148.65** **309** *e*PKPbc PKPbc 12 36 59.1 -0.6
SONM Songino Array **150.21** **86** PKPbc PKPbc 12 37 02.7 -1.3
0.9nm,0.5s,baz=226,slow=2.5,SNR=5.8
COLA College **150.87** **312** *e*PKPdf PKPdf 12 36 57.9 -1.5
COLA *e*PKPbc PKPbc 12 37 03.7 -1.4
COLA *e*PKPab PKPab 12 37 12.2 -0.4

MEX 01 12:25:28.6±0.7, 17°.03N×100°.42W, h12km±6km, MD3.5, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.15**	**82**	*e*P	Pg	12 25 31.2	-0.9
CAIG				*e*S	Sg	12 25 34.6	0.0
ZIIG	**Zihuatanejo**	**1.15**	**300**	*e*P	Pb	12 25 46.3	-4.2
ZIIG				*e*S	Sb	12 26 01.7	-3.7
MEIG	**Mezcala**	**1.18**	**40**	*e*P	Pb	12 25 46.6	-4.3
MEIG				*e*S	Sb	12 26 01.9	-4.3
PNIG	**Pinotepa**	**2.29**	**106**	*i* P	Pn	12 26 03.7	-2.5
PNIG				*i* S	Sn	12 26 30.1	-4.3

IDC 01 12:28:16.8±10.0, 13°.95N×93°.78E, h139km±99km, mb2.9/2, mb1 3.1/3, mb1mx2.8/23, mbtmp2.9/3, ML4.0/1, Error ellipse: s-maj=83.5km s-min=60.2km az=42.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**6.69**	**47**	P	Pn	12 29 52.9	+0.3
0.7nm,0.3s,baz=236,slow=15,SNR=13
CMAR S Sn 12 31 08.0 +0.4
0.4nm,0.3s,baz=234,slow=28,SNR=6.3
WRA Warramunga Arr **52.22** **129** P P 12 37 13.7 -0.1
0.1nm,0.3s,baz=308,slow=9.4,SNR=9.6
ASAR Alice Springs **54.20** **133** P P 12 37 28.3 +0.1
0.4nm,0.6s,baz=312,slow=7.0,SNR=8.6

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*ISCJB **01** 12:31:56.8±0.4, 40°.63N±0°.02×21°.55E±0°.03, h0km±4km, Error ellipse: s-maj=3.5km s-min=2.9km az=162.0*
*NEIC **01** 12:31:57.4, 40°.65N×21°.52E, h23km, MD3.5(ATH), After ATH.*
*THE **01** 12:31:57.6, 40°.66N×21°.47E, h15km±1km, ML3.7/3, Error ellipse: s-maj=1.5km s-min=0.6km az=277.0*
*CSEM **01** 12:31:57.1±0.1, 40°.65N×21°.52E, h5km, ML3.7/3, Error ellipse: s-maj=4.2km s-min=3.1km az=64.0*
*SKO **01** 12:31:57.7, 40°.61N×21°.51E, h0km, M2.3, ML2.7*
*ATH **01** 12:31:57.4, 40°.65N×21°.52E, h23km±1km, MD3.5/13*
*TIR **01** 12:31:58.1±3.3, 40°.74N×21°.35E, h6km±14km, ML4.0*
ISC 01 12:31:57.4±0.4, 40°.63N±0°.02×21°.54E±0°.03, h1km±4km, n70, σ1§03/112, 5C, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FNA	**Florina**	**0.20**	**320**	P	**Pg**	**12 32 01.4**	**+0.2**
FNA				S	**Sg**	**12 32 04.3**	**+0.5**
FNA	**Florina**	**0.20**	**320**	P	**Pg**	**12 32 01.4**	**+0.2**
FNA				S	**Sg**	**12 32 04.3**	**+0.5**
KZN	**Kozani**	**0.37**	**152**	⇑*i*Pb	**Pg**	**12 32 05.7**	**+1.2**
KZN				*e*Sb	**Sg**	**12 32 12.5**	**+3.3**
KZN	**Kozani**	**0.37**	**152**	⇑*i*PB	**Pg**	**12 32 05.7**	**+1.2**
KZN				*e*SB	**Sg**	**12 32 12.5**	**+3.3**
KZN	**Kozani**	**0.37**	**152**	P	**Pg**	**12 32 05.7**	**+1.2**
KZN				S	**Sg**	**12 32 12.6**	**+3.4**
KZN	**Kozani**	**0.37**	**152**	P	**Pg**	**12 32 05.7**	**+1.2**
KZN				*e*Sb	**Sg**	**12 32 12.5**	**+3.3**
BIA	**Bitola**	**0.42**	**337**	*i* Pg	**Pg**	**12 32 04.6**	**-0.9**
BIA				*i* Sg	**Sg**	**12 32 11.2**	**+0.2**
BIA				*e*Lg		12 32 11.4
comp=N,537nm,0.3s
BIA *e*Lg 12 32 11.4
comp=E,842nm,0.2s
BIA Bitola **0.42** **337** P **Pg** **12 32 04.6** **-0.9**
BIA S **Sg** **12 32 11.0** **0.0**
BIA Bitola **0.42** **337** P **Pg** **12 32 04.6** **-0.9**
BIA S **Sg** **12 32 11.0** **0.0**
NEST Nestorio **0.44** **240** P **Pg** **12 32 05.5** **-0.3**
NEST S **Sg** **12 32 11.7** **+0.3**
NEST Nestorio **0.44** **240** P **Pg** **12 32 05.5** **-0.3**
NEST S **Sg** **12 32 11.7** **+0.3**
KBN Korca **0.58** **269** *i* PG **Pg** **12 32 07.5** **-0.9**
KBN *i* SG **Sg** **12 32 15.1** **-0.8**
OHR Ohrid **0.74** **311** *i* Pg **Pg** **12 32 09.8** **-1.9**
OHR *i* Sg **Sg** **12 32 21.5** **+0.3**
OHR *e*Lg 12 32 21.6
comp=E,388nm,0.5s
OHR *e*Lg 12 32 21.7
comp=N,546nm,0.5s
OHR Ohrid **0.74** **311** P **Pg** **12 32 09.7** **-1.9**
OHR S **Sg** **12 32 21.5** **+0.3**
OHR Ohrid **0.74** **311** P **Pg** **12 32 09.7** **-1.9**
OHR S **Sg** **12 32 21.5** **+0.3**
KRUS Krusevo **0.77** **343** *i* Pg **Pg** **12 32 10.6** **-1.6**
KRUS *i* Sg **Sg** **12 32 22.5** **+0.3**
KRUS *e*Lg 12 32 22.7
comp=E,106nm,0.2s
KRUS *e*Lg 12 32 23.0
comp=N,118nm,0.4s
VAY Valandovo **1.04** **48** *i* Pg **Pg** **12 32 17.1** **-0.2**
VAY *i* Sg **Sg** **12 32 32.4** **+1.6**
VAY *e*Lg 12 32 35.3
comp=N,99nm,0.6s
VAY *e*Lg 12 32 35.4
comp=E,141nm,0.7s
JAN Janina **1.11** **209** *e*Pb **Pg** **12 32 17.8** **-0.9**
JAN Janina **1.11** **209** *e*PB **Pg** **12 32 17.8** **-0.9**
JAN Janina **1.11** **209** *e*Pb **Pg** **12 32 17.8** **-0.9**
THL Klokotos Trika **1.13** **161** ⇑*i*PN **Pg** **12 32 19.2** **+0.2**
THL *e*SB **Sb** **12 32 35.8** **+1.0**
THL Klokotos Trika **1.13** **161** P **Pg** **12 32 18.2** **-0.8**
THL S **Sg** **12 32 35.0** **+1.4**
THL Klokotos Trika **1.13** **161** P **Pg** **12 32 18.2** **-0.8**
THL Klokotos Trika **1.13** **161** ⇑*i*Pn **Pg** **12 32 19.2** **+0.2**
THL S **Sg** **12 32 35.0** **+1.4**
THL *e*Sb **Sb** **12 32 35.8** **+1.0**
HORT Hortiatis **1.18** **91**

SOH				*e*SN		**Sn**		**12 32 42.9**	**0.0**
SOH	**Sokhos**	**1.39**	**82**	*e*Pn		**Pn**		**12 32 23.3**	**-0.6**
SOH				*e*Sn		**Sn**		**12 32 42.9**	**0.0**
SRN	**Sarande**	**1.40**	**238**	*i* PN		**Pn**		**12 32 26.3**	**+2.2**
SRN				*i* SN		**Sn**		**12 32 45.0**	**+1.8**
PLG	**Polygyros**	**1.47**	**99**	*e*Pn		**Pn**		**12 32 25.1**	**0.0**
PLG				*e*Sn		**Sn**		**12 32 44.4**	**-0.6**
PLG	**Polygyros**	**1.47**	**99**	*e*PN		**Pn**		**12 32 25.1**	**0.0**
PLG				*e*SN		**Sn**		**12 32 44.4**	**-0.6**
PLG	**Polygyros**	**1.47**	**99**	*e*Pn		**Pn**		**12 32 25.1**	**0.0**
PLG				*e*Sn		**Sn**		**12 32 44.4**	**-0.6**
KEK	**Kerkira**	**1.62**	**236**	*e*Pn		**Pn**		**12 32 27.1**	**0.0**
KEK				*e*Sn		**Sn**		**12 32 48.1**	**-0.6**
KEK	**Kerkira**	**1.62**	**236**	*e*PN		**Pn**		**12 32 27.1**	**0.0**
KEK				*e*SN		**Sn**		**12 32 48.1**	**-0.6**
KEK	**Kerkira**	**1.62**	**236**	*e*Pn		**Pn**		**12 32 27.1**	**0.0**
KEK				*e*Sn		**Sn**		**12 32 48.1**	**-0.6**
AGG	**Agios Georgios**	**1.72**	**159**	*e*Pn		**Pn**		**12 32 28.2**	**-0.3**
AGG				*e*Sn		**Sn**		**12 32 50.5**	**-0.5**
AGG	**Agios Georgios**	**1.72**	**159**	*e*PN		**Pn**		**12 32 28.2**	**-0.3**
AGG				*e*SN		**Sn**		**12 32 50.5**	**-0.5**
AGG	**Agios Georgios**	**1.72**	**159**	P		**Pn**		**12 32 28.2**	**-0.3**
AGG	**Agios Georgios**	**1.72**	**159**	P		**Pn**		**12 32 28.2**	**-0.3**
AGG				*e*Sn		**Sn**		**12 32 50.5**	**-0.5**
EVR	**Evrytania**	**1.73**	**173**	*e*Pn		**Pn**		**12 32 28.5**	**-0.1**
EVR				*e*Sn		**Sn**		**12 32 51.0**	**-0.2**
EVR	**Evrytania**	**1.73**	**173**	*e*PN		**Pn**		**12 32 28.5**	**-0.1**
EVR				*e*SN		**Sn**		**12 32 51.0**	**-0.2**
EVR	**Evrytania**	**1.73**	**173**	*e*Pn		**Pn**		**12 32 28.5**	**-0.1**
EVR				*e*Sn		**Sn**		**12 32 51.0**	**-0.2**
XOR	**Xorichti**	**1.79**	**134**	P		**Pn**		**12 32 28.6**	**-0.8**
XOR	**Xorichti**	**1.79**	**134**	P		**Pn**		**12 32 28.6**	**-0.8**
NEO	**Neokhori**	**1.85**	**135**	*e*Pb		**Pb**		**12 32 29.5**	**-0.8**
NEO	**Neokhori**	**1.85**	**135**	*e*PB		**Pn**		**12 32 29.5**	**-0.8**
NEO	**Neokhori**	**1.85**	**135**	*e*Pb		**Pn**		**12 32 29.5**	**-0.8**
PUK	**Puka**	**1.88**	**319**	*i* PN		**Pn**		**12 32 32.8**	**+2.1**
PUK				*i* SN		**Sn**		**12 32 58.0**	**+2.9**
NVR	**Nevrokopi**	**1.90**	**67**	*e*Pn		**Pn**		**12 32 31.0**	**+0.1**
NVR	**Nevrokopi**	**1.90**	**67**	*e*PN		**Pn**		**12 32 31.0**	**+0.1**
NVR	**Nevrokopi**	**1.90**	**67**	*e*Pn		**Pn**		**12 32 31.0**	**+0.1**
BCI	**Bajram Curri**	**2.06**	**328**	*i* PN		**Pn**		**12 32 33.0**	**-0.1**
BCI				*i* SN		**Sn**		**12 32 59.0**	**-0.4**
BARS	**Barje**	**2.19**	**5⇑**	*i*Pn		**Pn**		**12 32 34.1**	**-0.9**
EFP	**Efpalio**	**2.22**	**173**	*e*PB		**Pn**		**12 32 35.8**	**+0.4**
EFP				*e*SN		**Sn**		**12 33 03.0**	**-0.4**
EFP	**Efpalio**	**2.22**	**173**	*e*Pb		**Pn**		**12 32 35.8**	**+0.4**
EFP				*e*Sn		**Sn**		**12 33 03.0**	**-0.4**
LKR	**Lokris**	**2.28**	**150**	*e*Pb		**Pb**		**12 32 37.0**	**-2.3**
LKR	**Lokris**	**2.28**	**150**	*e*PB		**Pb**		**12 32 37.0**	**-2.3**
LKR	**Lokris**	**2.28**	**150**	*e*Pb		**Pb**		**12 32 37.0**	**-2.3**
VLS	**Valsamata**	**2.56**	**197**	*e*Pb		**Pn**		**12 32 41.2**	**+1.1**
VLS	**Valsamata**	**2.56**	**197**	*e*PB		**Pn**		**12 32 41.2**	**+1.1**
VLS	**Valsamata**	**2.56**	**197**	*e*Pb		**Pn**		**12 32 41.2**	**+1.1**
RLS	**Riolos of Patr**	**2.57**	**181**	*e*Pn		**Pn**		**12 32 39.8**	**-0.4**
RLS	**Riolos of Patr**	**2.57**	**181**	*e*PN		**Pn**		**12 32 39.8**	**-0.4**
RLS	**Riolos of Patr**	**2.57**	**181**	*e*Pn		**Pn**		**12 32 39.8**	**-0.4**
GUR	**Goura**	**2.76**	**167**	*e*PN		**Pn**		**12 32 42.5**	**-0.3**
GUR	**Goura**	**2.76**	**167**	*e*Pn		**Pn**		**12 32 42.5**	**-0.3**
BBLS	**Lazići**	**3.60**	**335**	*e*Pn		**Pn**		**12 32 55.3**	**+1.0**
DIVS	**Divibare**	**3.65**	**342**	*e*Pn		**Pn**		**12 32 52.4**	**-2.6**

*ISCJB **01** 12:45:24.5±0.5, 40.°50N±0.°03×29.°21E±0.°04, h3km±6km, Error ellipse: s-maj=5.3km s-min=5.0km az=36.0*
*CSEM **01** 12:45:24.8±0.1, 40.°48N×29.°19E, h5km, MD2.7, Error ellipse: s-maj=2.2km s-min=1.7km az=20.0*
*DDA **01** 12:45:24.6, 40.°45N×29.°27E, h2km±5km, Md2.5*
*ISK **01** 12:45:24.0, 40.°46N×29.°18E, h4km, MD2.7*

ISC 01 12:45:24.8±0.5, 40.°49N±0.°03×29.°21E±0.°04, h4km±6km, n30, σ0°69/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEMT	**Gemlik**	**0.06**	**195**	PG	**Pg**	**12 45 25.3**	**-0.8**
GEMT	**Gemlik**	**0.06**	**195**	*i* Pg	**Pg**	**12 45 25.3**	**-0.8**
YLV	**Yalova**	**0.15**	**58**	*e*PG	**Pg**	**12 45 28.4**	**+0.7**
YLV	**Yalova**	**0.15**	**58**	*e*Pg	**Pg**	**12 45 28.4**	**+0.7**
ARMT	**Armutlu**	**0.28**	**286**	*e*PG	**Pg**	**12 45 29.9**	**-0.2**
ARMT				*e*SG	**Sg**	**12 45 34.2**	**+0.5**
ARMT	**Armutlu**	**0.28**	**286**	*e*Pg	**Pg**	**12 45 29.9**	**-0.2**
ARMT				*e*Sg	**Sg**	**12 45 34.2**	**+0.5**
ULDT	**Uludag**	**0.35**	**189**	*i* P	**Pg**	**12 45 30.7**	**-0.9**
ULDT				*i* S	**Sg**	**12 45 36.9**	**+0.7**
ULDT	**Uludag**	**0.35**	**189**	*i* P	**Pg**	**12 45 30.7**	**-0.9**
ULDT				*i* S	**Sg**	**12 45 36.9**	**+0.8**
ADVT	**Abdulvahap**	**0.41**	**98**	*e*PG	**Pg**	**12 45 32.9**	**+0.2**
ADVT	**Abdulvahap**	**0.41**	**98**	*e*Pg	**Pg**	**12 45 32.9**	**+0.2**
HRT	**Hereke**	**0.48**	**46**	*e*PG	**Pg**	**12 45 34.6**	**+0.5**
HRT	**Hereke**	**0.48**	**46**	*e*Pg	**Pg**	**12 45 34.6**	**+0.5**
ISK	**Istanbul-Kandi**	**0.59**	**349**	*e*PG	**Pg**	**12 45 36.3**	**+0.2**
ISK	**Istanbul-Kandi**	**0.59**	**349**	*e*Pg	**Pg**	**12 45 36.3**	**+0.2**
KLYT	**Kilyos**	**0.77**	**351**	*e*PG	**Pg**	**12 45 39.8**	**+0.2**
KLYT	**Kilyos**	**0.77**	**351**	*e*Pg	**Pg**	**12 45 39.8**	**+0.1**
CTKS	**Kestanelik-??a**	**0.92**	**325**	*e*PG	**Pg**	**12 45 42.3**	**-0.1**
CTKS	**Kestanelik-??a**	**0.92**	**325**	*e*Pg	**Pg**	**12 45 42.3**	**-0.1**
DURS	**Dursunbey**	**1.05**	**213**	*e*P	**Pg**	**12 45 45.8**	**+0.9**
DURS				*i* S	**Sg**	**12 45 57.9**	**-0.7**
DURS	**Dursunbey**	**1.05**	**213**	*e*P	**Pg**	**12 45 45.8**	**+0.8**
DURS				*i* S	**Sg**	**12 45 57.9**	**-0.7**
BORA	**Eskisehir**	**1.13**	**122**	*i* P	**Pg**	**12 45 45.4**	**-1.1**
BORA				*i* S	**Sg**	**12 46 01.4**	**+0.2**
BORA	**Eskisehir**	**1.13**	**122**	*i* P	**Pg**	**12 45 45.4**	**-1.1**
BORA				*i* S	**Sg**	**12 46 01.4**	**+0.2**
CTYL	**Yal??k??y-??at**	**1.21**	**325**	*e*PN	**Pn**	**12 45 47.8**	**-0.7**
CTYL	**Yal??k??y-??at**	**1.21**	**325**	*e*Pn	**Pn**	**12 45 47.8**	**-0.7**
GONE	**Gonen-Balikesi**	**1.25**	**250**	*e*PN	**Pn**	**12 45 47.8**	**-1.2**
GONE	**Gonen-Balikesi**	**1.25**	**250**	*e*Pn	**Pn**	**12 45 47.8**	**-1.2**
GDZ	**Gediz**	**1.41**	**171**	*i* P	**Pn**	**12 45 50.6**	**-0.8**
GDZ				*i* S	**Sb**	**12 46 11.1**	**+1.0**
GDZ	**Gediz**	**1.41**	**171**	*i* P	**Pn**	**12 45 50.6**	**-0.7**
GDZ				*i* S	**Sb**	**12 46 11.1**	**+1.0**
BALY	**Balya**	**1.43**	**239**	*i* P	**Pn**	**12 45 51.8**	**+0.3**
BALY				*i* S	**Sb**	**12 46 11.6**	**+1.0**
BALY	**Balya**	**1.43**	**239**	*i* P	**Pn**	**12 45 51.8**	**+0.3**
BALY				*i* S	**Sb**	**12 46 11.6**	**+1.0**

*ISCJB **01** 12:48:38.4±0.5, 51.°75N±0.°08×179.°24E±0.°07, h113km±5km, mb3.8/16, Error ellipse: s-maj=14.1km s-min=7.2km az=4.2*
*IDC **01** 12:48:39.8±0.7, 51.°88N×179.°26E, h106km±6km, mb3.5/13, mb1 3.7/15, mb1mx3.6/29, mbtmp3.5/15, Error ellipse: s-maj=20.4km s-min=9.4km az=2.0*
*NEIC **01** 12:48:39.4±0.5, 51.°75N×179.°32E, mb4.1/2, Error ellipse: s-maj=12.8km s-min=7.1km az=169.0*

ISC 01 12:48:39.5±0.5, 51.°74N±0.°08×179.°28E±0.°07, h107km±5km, h110km±3.1km: pP-P, n33, σ1°07/37, mb3.8/16, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.36**	**178**	P	**Pn**	**12 48 55.1**	**-0.2**
AMKA				S	**Sn**	**12 49 06.8**	**-0.2**
SMY	**Shemya**	**3.33**	**289**	P	**Pn**	**12 49 29.9**	**+0.1**
SMY				S	**Sn**	**12 50 10.7**	**+2.0**
FX1	**Attu Island--F**	**3.92**	**289**	P	**Pn**	**12 49 37.2**	**-0.5**
FX1	11nm,0.3s,baz=8.9,slow=14,SNR=66			S	**Sn**	**12 50 21.4**	**-1.4**
FX1	**Attu Island--F**	**3.92**	**289**	P	**Pn**	**12 49 37.2**	**-0.5**
FX1	23nm,0.3s,baz=256,slow=21,SNR=7.9			S	**Sn**	**12 50 21.4**	**-1.4**
SPIA	**Saint Paul Isl**	**8.18**	**44**	P	**Pn**	**12 50 35.9**	**+0.7**
PETK	**Petropavlovsk-**	**13.23**	**284**	P	**Pn**	**12 51 47.3**	**+4.3**
	0.2nm,0.3s,baz=85,slow=16,SNR=6.3						
KDAK	**Kodiak Island**	**17.24**	**58**	P	**Pn**	**12 52 31.2**	**-2.1**
	0.9nm,0.3s,baz=264,slow=6.1,SNR=7.5						
KDAK	**Kodiak Island**	**17.24**	**58**	P	**Pn**	**12 52 31.2**	**-2.1**
BILL	**Bilibino**	**17.53**	**344**	*e*P	**Pn**	**12 52 37.8**	**+1.1**
	10.0nm,1.0s						
MENT	**Mentasta**	**22.54**	**46**	*e*P	**P**	**12 53 31.0**	**+0.7**
EGAK	**Eagle**	**24.07**	**42**	*e*P	**P**	**12 53 44.0**	**-0.5**
	8.4nm,1.0s,mb4.0						
DAWY	**Dawson**	**24.67**	**44**	*e*P	**P**	**12 53 51.8**	**+1.9**
INK	**Inuvik**	**27.86**	**36**	P	**P**	**12 54 18.1**	**-0.4**
	1.0nm,0.5s,mb3.6,baz=236,slow=3.6,SNR=3.6						
YKA	**Yellowknife Ar**	**35.85**	**46**	P	**P**	**12 55 27.6**	**-0.8**
	0.3nm,0.3s,mb3.7,baz=281,slow=9.2,SNR=8.5						
YKA	**Yellowknife Ar**	**35.85**	**46**	P	**P**	**12 55 27.6**	**-0.8**
NVAR	**Mina Array Bea**	**44.69**	**82**	P	**P**	**12 56 42.3**	**+0.8**
	0.4nm,0.5s,mb3.4,baz=303,slow=7.4,SNR=5.6						
NVAR				pP	pP	12 57 08.1	+1.7
	0.5nm,0.8s,baz=264,slow=6.0,SNR=3.2						
NVAR	**Mina Array Bea**	**44.69**	**82**	P	**P**	**12 56 42.3**	**+0.8**
NVAR				pP	pP	12 57 08.1	+1.7
SONM	**Songino Array**	**45.41**	**295**	P	**P**	**12 56 48.7**	**+1.7**
	1.2nm,0.5s,mb3.9,baz=58,slow=9.5,SNR=6.4						
HHC	**Hu-ho-hao-te**	**46.44**	**284**	*e*P	**P**	**12 56 53.1**	**-2.1**
HHC				pP	pP	12 57 19.9	-0.4
HHC				sP	sP	12 57 32.3	-0.1
HHC				PcP	PcP	12 58 26.7	-1.4
HHC				PP	PP	12 58 43.7	-2.0
HHC				ScP	ScP	13 02 08.5	-2.9
HHC				PcS	PcS	13 02 20.2	-2.6
HHC				S	**S**	**13 03 31.4**	**-3.4**
HHC				sS	sS	13 04 17.6	-0.3
HHC				ScS	ScS	13 06 34.1	-4.9
HHC				SS	SS	13 06 51.4	-10
HHC				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.8						
HHC				pmax	pmax		
	comp=Z,86nm,6.6s						
HHC				LR	LR		
	comp=N,130nm,15.1s						
HHC				LR	LR		
	comp=E,110nm,15.0s						
HHC				LR	LR		
	comp=Z,86nm,15.6s						
PDAR	**Pinedale Array**	**47.34**	**71**	P	**P**	**12 57 01.6**	**-0.6**
	comp=Z,0.7nm,0.5s,mb3.7,baz=334,slow=3.5,SNR=6.8						
PDAR				pP	pP	12 57 29.1	+1.8
	comp=Z,0.7nm,0.5s,baz=313,slow=4.9,SNR=4.7						
ZALV	**Zalesovo Beam**	**52.91**	**312**	P	**P**	**12 57 43.3**	**-0.7**
	comp=Z,0.5nm,0.4s,mb3.9,baz=47,slow=8.5,SNR=2.9						
MK31	**Makanchi Array**	**58.86**	**307**	*e*P	**P**	**12 58 26.5**	**-0.1**
MKAR	**Makanchi Array**	**58.86**	**307**	P	**P**	**12 58 26.5**	**-0.1**
	comp=Z,1.3nm,0.3s,mb4.4,baz=50,slow=7.6,SNR=22						
GYA	**Guiyang**	**59.09**	**274**	P	**P**	**12 58 27.0**	**-1.5**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
TXAR	**Lajitas Array**	**59.78**	**80**	P	**P**	**12 58 33.3**	**+0.2**
	comp=Z,0.3nm,0.6s,mb3.5,baz=302,slow=4.6,SNR=7.3						
TXAR				pP	pP	12 58 59.3	0.0
	comp=Z,0.2nm,0.4s,baz=309,slow=6.9,SNR=2.4						
BVAR	**Borovoye Array**	**59.83**	**319**	P	**P**	**12 58 32.8**	**-0.4**
	comp=Z,0.8nm,0.4s,mb4.1,baz=61,slow=6.5,SNR=4.9						
NB2	**NORSAR Subarra**	**67.17**	**354**	P	**P**	**12 59 20.3**	**-0.9**
	comp=Z,1.1nm,0.5s,mb3.9,baz=9.2,slow=6.5						
NOA	**NORSAR Array B**	**67.17**	**354**	P	**P**	**12 59 20.6**	**-0.6**
	comp=Z,1.3nm,0.5s,mb4.0,baz=8.5,slow=6.4,SNR=7.3						
CMAR	**Chiang Mai Arr**	**69.78**	**274**	P	**P**	**12 59 39.5**	**+1.3**
	comp=Z,0.7nm,0.6s,mb3.7,baz=27,slow=7.3,SNR=5.5						
WRA	**Warramunga Arr**	**81.46**	**222**	P	**P**	**13 00 45.6**	**+1.1**
	comp=Z,0.1nm,0.5s,mb2.9,baz=28,slow=6.4,SNR=3.5						
WRA				pP	pP	13 01 11.3	-0.8
	comp=Z,0.6nm,0.9s,baz=34,slow=6.2,SNR=2.4						
HYB	**Hyderabad**	**82.96**	**289**	*e*P	**P**	**13 00 58.0**	**+5.4**
ASAR	**Alice Springs**	**84.96**	**221**	P	**P**	**13 01 03.1**	**+0.7**
	comp=Z,0.1nm,0.4s,mb3.1,baz=27,slow=5.5,SNR=4.5						
ASAR				pP	pP	13 01 30.1	-0.1
	comp=Z,0.3nm,0.6s,baz=24,slow=4.7,SNR=2.6						
BOSA	**Boshof**	**149.83**	**310**	PKPbc	PKPbc	13 08 16.7	+0.1
	comp=Z,1.0nm,0.5s,baz=41,slow=4.0,SNR=5.5						

MAN 01 13:14:02, 18.°11N×120.°73E, h2km, mb4.5, ML3.3, MS3.2, 2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**0.24**	**335⇓**	*i*P	Pg	13 14 07.7	+1.2
PIP				*i* S	Sg	13 14 13.9	+4.3
ABRA	**Dolores**	**0.46**	**182**	*e*P	Pg	13 14 10.6	-0.2
ABRA				*e*S	Sg	13 14 16.2	-0.5
APYP	**Conner**	**0.55**	**116**	*e*P	Pg	13 14 13.5	+0.9
APYP				*e*S	Sg	13 14 21.1	+1.3
SGCP	**Mt. Cagua**	**1.26**	**84**	*e*P	Pg	13 14 26.2	-0.1
BCPH	**Baguio City Da**	**1.72**	**185⇓**	*e*P	Pn	13 14 30.2	-2.8
BCPH				*e*S	Sn	13 14 56.0	+0.4
BOLP	**Bolinao**	**1.89**	**204**	*e*P	Pn	13 14 35.5	+0.3
BALP	**Baler**	**2.49**	**161**	*e*P	Pn	13 14 45.3	+1.7
BBP	**Basco**	**2.60**	**27**	*e*P	Pn	13 14 45.3	+0.2

*IDC **01** 13:29:43.0±10.0, 7.°52S×156.°27E, h444km±119km, mb3.1/6, mb1 3.3/7, mb1mx3.1/18, mbtmp3.1/7, Error ellipse: s-maj=92.9km s-min=55.8km az=116.0*

NEIC 01 13:29:37.6±1.3, 7.°54S×156.°97E, h420km±25km, mb3.9/1, Error ellipse: s-maj=39.3km s-min=16.0km az=130.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.50**	**123**	*e*P	P	13 30 45.7	-0.7
COEN	**Coen**	**14.97**	**244**	P	P	13 32 50.2	+1.1
CTA	**Charters Tower**	**16.23**	**219**	P	P	13 33 03.4	+0.9
	0.8nm,0.3s,baz=47,slow=12,SNR=6.0						
CTA	**Charters Tower**	**16.23**	**219**	P	P	13 33 03.4	+0.9
CTAO	**Charters Tower**	**16.23**	**219**	*e*P	P	13 33 03.4	+0.8
EIDS	**Eidsvold**	**18.59**	**197**	*e*P	P	13 33 28.8	+1.3
WRAB	**Tennant Creek**	**25.14**	**238**	*e*P	P	13 34 26.4	-0.9
	1.8nm,0.4s						
WRA	**Warramunga Arr**	**25.16**	**238**	P	P	13 34 26.5	-0.9
	1.4nm,0.3s,baz=62,slow=8.9,SNR=51						
ASAR	**Alice Springs**	**27.32**	**231**	P	P	13 34 45.4	-1.1
	0.5nm,0.4s,baz=56,slow=10,SNR=14						
FITZ	**Fitzroy Crossi**	**32.24**	**248**	P	P	13 35 27.7	-1.8
	1.0nm,0.3s,baz=49,slow=9.5,SNR=16						
CMAR	**Chiang Mai Arr**	**62.78**	**295**	P	P	13 39 21.4	+0.6
	0.3nm,0.6s,baz=111,slow=5.1,SNR=3.0						
SONM	**Songino Array**	**70.86**	**327**	P	P	13 40 11.4	+1.0
	0.4nm,0.5s,baz=113,slow=3.7,SNR=2.5						
SONM	**Songino Array**	**70.86**	**327**	P	P	13 40 11.4	+1.0
MK31	**Makanchi Array**	**85.11**	**318**	*e*P	P	13 41 27.9	+0.2
MKAR	**Makanchi Array**	**85.11**	**318**	P	P	13 41 28.1	+0.4
	0.6nm,0.6s,baz=97,slow=4.9,SNR=7.5						

IDC 01 14:01:57.1±5.0, 17.°14S×174.°83W, h158km±39km, mb3.8/2, mb1 3.9/3, mb1mx3.4/17, mbtmp3.7/3, Error ellipse: s-maj=144.0km s-min=29.7km az=146.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.36**	**43**	P	Pn	14 03 04.2	+2.0
	4.2nm,0.3s,baz=81,slow=22,SNR=13						
AFI				S	Sn	14 03 52.7	-0.4
	25nm,0.3s,baz=249,slow=23,SNR=16						
WRA	**Warramunga Arr**	**48.13**	**258**	P	P	14 10 21.2	-0.2
	1.0nm,0.5s,baz=96,slow=7.1,SNR=27						
WRA				PcP	PcP	14 11 46.1	-0.4
	0.6nm,1.1s,baz=90,slow=3.0,SNR=3.4						
ASAR	**Alice Springs**	**48.28**	**253**	P	P	14 10 22.4	-0.1
	4.5nm,0.6s,baz=89,slow=8.8,SNR=127						
ASAR				PcP	PcP	14 11 46.5	-0.5
	0.5nm,0.7s,baz=105,slow=3.9,SNR=5.0						
BRTR	**Keskin Array B**	**146.58**	**318**	PKPbc	PKPbc	14 21 20.4	+0.2
	0.5nm,0.6s,baz=153,slow=4.1,SNR=4.1						

*CSEM **01** 14:26:11.3, 46.°39N×6.°87E, h-0km, ML0.9, Suspected Mining explosion. After ZUR*

ZUR 01 14:26:11.3, 46.°39N×6.°87E, h-0km±3km, ML0.9/4, 4C, Suspected Mining explosion., Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIGLE	**Aigle**	**0.08**	**128⇑**	*i*Pg		14 26 13.1	
	4µm,0.8s						
AIGLE	**Aigle**	**0.08**	**128⇑**	*i*Pg		14 26 13.1	
	4µm,0.8s						
GRYON	**Gryon**	**0.22**	**129⇑**	*i*Pg		14 26 15.7	
	18nm,1.6s						
GRYON				*e*Sg		14 26 19.0	
	18nm,1.6s						
GRYON	**Gryon**	**0.22**	**129⇑**	*i*Pg		14 26 15.7	
	18nm,1.6s						
GRYON				*e*Sg		14 26 19.0	
	18nm,1.6s						
SALAN	**Lac Salanfe**	**0.26**	**163**	*e*Pg		14 26 16.8	
	13nm,1.1s						
SALAN				*e*Sg		14 26 20.5	
	13nm,1.1s						
SALAN	**Lac Salanfe**	**0.26**	**163**	*e*Pg		14 26 16.8	
	13nm,1.1s						
SALAN				*e*Sg		14 26 20.5	
	13nm,1.1s						
SENIN	**Lac Senin/Sane**	**0.30**	**95**	*e*Pg		14 26 17.3	
	76nm,0.5s						
SENIN				*e*Sg		14 26 22.1	
	76nm,0.5s						
SENIN	**Lac Senin/Sane**	**0.30**	**95**	*e*Pg		14 26 17.3	
	76nm,0.5s						
SENIN				*e*Sg		14 26 22.1	
	76nm,0.5s						

*MOS **01** 15:13:40.4±1.3, 23.°46S×179.°93E, h470km, mb4.7/11, Error ellipse: s-maj=15.6km s-min=11.9km az=146.4*
*ISCJB **01** 15:13:41.3±0.7, 23.°71S±0.°04×179.°95E±0.°05, h507km±7km, mb4.4/50, Error ellipse: s-maj=7.5km s-min=4.9km az=33.5*
*IDC **01** 15:13:43.3±0.7, 23.°64S×179.°99E, h521km±6km, mb3.9/16, mb1 4.2/17, mb1mx4.1/18, mbtmp4.0/17, Error ellipse: s-maj=12.9km s-min=11.3km az=117.0*
*SZGRF **01** 15:13:44.8, 23.°78S×179.°77W, h545km, South of Fiji Islands*
*NEIC **01** 15:13:44.5±0.2, 23.°56S×179.°86E, mb4.6/32, Error ellipse: s-maj=9.6km s-min=5.9km az=146.0*

ISC 01 15:13:42.7±0.6, 23.°81S±0.°04×179.°99E±0.°05, h514km±7km, h531km±3.2km: pP-P, n430, σ0°62/341, mb4.4/50, 123C-104D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.74**	**161**	S	**S**	**15 16 32.3**	**-1.9**
	27nm,0.3s,baz=66,slow=20,SNR=2.7						
MSVF	**Nonsavu**	**6.31**	**343**	*e*P	**P**	**15 15 21.9**	**-0.8**
	80nm,0.6s						
AFI	**Afiamalu**	**12.55**	**40**	P	**P**	**15 16 21.3**	**-5.8**
	3.3nm,0.3s,baz=42,slow=19,SNR=6.4						
AFI	**Afiamalu**	**12.55**	**40**	P	**P**	**15 16 21.3**	**-5.8**
OUZ	**Omahuta**	**12.66**	**205**	*e*P	**P**	**15 16 32.2**	**+4.3**
	177nm,1.2s						
OUZ	**Omahuta**	**12.66**	**205**	PN	**P**	**15 16 32.3**	**+4.3**
MXZ	**Matakaoa Point**	**13.79**	**186**	*e*PN	**P**	**15 16 39.5**	**-0.3**
OTAZ	**Otara**	**13.81**	**197**	PN	**P**	**15 16 43.5**	**+3.6**
PUZ	**Puketiti**	**14.30**	**186**	PN	**P**	**15 16 45.9**	**+0.8**
PUZ				SN	**S**	**15 19 17.8**	**+2.3**
URZ	**Urewera**	**14.62**	**189**	P	**P**	**15 16 49.4**	**+1.0**
	14nm,0.3s,baz=346,slow=2.8,SNR=74						
URZ				S	**S**	**15 19 22.8**	**+1.1**
	2.2nm,0.3s,baz=198,slow=20,SNR=12						
URZ	**Urewera**	**14.62**	**189**	*e*P	**P**	**15 16 47.7**	**-0.7**
	141nm,0.7s						
URZ	**Urewera**	**14.62**	**189**	*e*PN	**P**	**15 16 46.6**	**-1.8**
MWZ	**Matawai**	**14.64**	**188**	*e*PN	**P**	**15 16 48.5**	**-0.1**
RAHZ	**Arahi**	**15.27**	**189**	*e*PN	**P**	**15 16 54.6**	**-0.5**
HIZ	**Hauiti**	**15.30**	**195**	*e*PN	**P**	**15 16 56.8**	**+1.2**
BKZ	**Black Stump Fm**	**15.60**	**190**	*e*PN	**P**	**15 16 56.8**	**-1.8**
MCHZ	**McNeill Hill**	**15.84**	**189**	*e*PN	**P**	**15 17 02.4**	**+1.3**
KAHZ	**Kahuranaki**	**16.16**	**189**	*e*PN	**P**	**15 17 03.7**	**-0.7**
PXZ	**Pawanui**	**16.39**	**189**	*e*PN	**P**	**15 17 06.7**	**-0.1**
WPHZ	**Waipukurau**	**16.49**	**190**	SN	**S**	**15 19 55.2**	**-0.9**
BFZ	**Birch Farm**	**17.12**	**190**	*e*PN	**P**	**15 17 12.2**	**-1.8**
MRZ	**Mangatainoka R**	**17.21**	**191**	*e*PN	**P**	**15 17 12.4**	**-2.4**
MRZ				SN	**S**	**15 20 07.3**	**-0.8**
OGWZ	**Otaki Gorge**	**17.44**	**192**	*e*PN	**P**	**15 17 14.7**	**-2.3**
KIW	**Kapiti Island**	**17.54**	**193**	*e*PN	**P**	**15 17 16.7**	**-1.1**
CAW	**Cannon Point**	**17.74**	**192**	PN	**P**	**15 17 18.8**	**-0.9**
SNZO	**South Karori**	**18.01**	**193**	*e*P	**P**	**15 17 22.5**	**+

KSRS **Korea Array** 78.17 320 P P 15 24 48.2 -0.3
comp=Z,1.6nm,0.8s,mb3.4,baz=132,slow=5.4,SNR=5.1
PMSA **Palmer Station** 79.00 157 pP pP 15 26 46.2 +3.1
comp=Z,70nm,1.1s,baz=152,slow=3.4,SNR=2.7
PETK **Petropavlovsk-** 79.00 347 P P 15 24 51.5 -1.1
comp=Z,4.0nm,0.7s,mb3.8,baz=117,slow=7.1,SNR=7.9
PETK pP pP 15 26 46.9 +3.7
comp=Z,4.4nm,1.0s,baz=138,slow=7.1,SNR=3.7
MDJ **Mudanjiang** 82.18 326 P P 15 25 09.7 +0.3
MDJ pmax pmax
comp=Z,8.0nm,0.8s,mb4.2
MONP **Monument Peak** 82.77 49 ⇑P P 15 25 12.9 +0.3
baz=83
EDW2 **Edwards Air Fo** 82.83 47 ⇑P P 15 25 12.9 0.0
baz=83
DVTC **Desert V Tower** 82.86 50 ⇓P P 15 25 13.2 +0.1
baz=83
WHN **Wuhan** 82.94 308 eP P 15 25 13.3 -0.2
ISA **Isabella** 82.96 46 ⇑P P 15 25 13.3 -0.2
baz=83,SNR=9.0
SYO **Syowa Base** 83.10 193 ⇓eP P 15 25 12.4 -1.3
SYO **Syowa Base** 83.10 193 ⇓ePcP PcP 15 25 14.2 -2.8
CMB **Columbia Colle** 83.14 43 eP P 15 25 13.6 -0.7
CMB pmax pmax
comp=Z,5.0nm,0.8s,mb4.1
CMB **Columbia Colle** 83.14 43 eP P 15 25 13.6 -0.7
comp=Z,5.4nm,0.8s,mb4.1
PFO **Pinyon Flat Ob** 83.15 49 ⇑P P 15 25 14.7 +0.2
baz=83
SWSC **Sam W. Stewart** 83.23 50 ⇑P P 15 25 14.9 0.0
baz=83
LRMC **Laurel Mountai** 83.38 47 ⇑P P 15 25 15.3 -0.3
baz=84,SNR=5.4
WDC **Whiskeytown Da** 83.39 40 eP P 15 25 15.5 0.0
WDC pmax pmax
comp=Z,15nm,1.2s,mb4.4
WDC **Whiskeytown Da** 83.39 40 eP P 15 25 15.5 0.0
comp=Z,15nm,1.2s,mb4.4
CWC **Cottonwood Cre** 83.67 46 ⇑P P 15 25 16.7 -0.3
baz=84
BELC **Belle Mtn. Jos** 83.68 49 ⇓P P 15 25 17.3 +0.2
baz=84
CN2 **Changchun** 83.81 324 eP P 15 25 17.4 -0.1
CN2 epP pP 15 27 11.2 +1.4
CN2 eS S 15 34 55.2 -2.5
CN2 pmax pmax
comp=Z,20nm,0.7s,mb4.8
CN2 pmax pmax
comp=Z,200nm,3.0s
MPMC **Manual Prospec** 83.84 46 ⇑P P 15 25 17.6 -0.3
baz=84,SNR=7.2
GSC **Goldstone** 83.87 47 ⇓P P 15 25 17.8 -0.2
baz=84,SNR=6.5
GSC **Goldstone** 83.87 47 eP P 15 25 18.2 +0.2
GSC pmax pmax
comp=Z,4.0nm,0.9s,mb4.0
GSC **Goldstone** 83.87 47 eP P 15 25 18.2 +0.2
comp=Z,4.0nm,0.9s,mb4.0
BC3 **Big Chuckawall** 83.87 49 ⇑P P 15 25 18.3 +0.2
baz=84
HEC **Hector,Ludlow** 83.92 48 ⇓P P 15 25 18.0 -0.3
baz=84
GLA **Glamis** 83.97 50 ⇓P P 15 25 19.0 +0.4
baz=84
GLA **Glamis** 83.97 50 eP P 15 25 19.3 +0.7
GLA pmax pmax
comp=Z,17nm,1.0s,mb4.5
GLA **Glamis** 83.97 50 eP P 15 25 19.3 +0.7
comp=Z,17nm,1.0s,mb4.5
YBH **Yreka Blue Hor** 84.02 39 eP P 15 25 18.9 +0.3
YBH pmax pmax
comp=Z,5.0nm,1.0s
YBH **Yreka Blue Hor** 84.02 39 eP P 15 25 18.9 +0.2
comp=Z,5.3nm,1.0s,mb4.0
WCN **Washoe City** 84.30 43 ⇓P P 15 25 20.1 +0.1
baz=84
GMRC **Granite Mounta** 84.35 48 ⇓P P 15 25 20.5 +0.1
baz=84
IRM **Iron Mountain** 84.36 49 ⇓P P 15 25 20.8 +0.3
baz=84
HUMO **Hull Mountain** 84.43 38 eP P 15 25 20.8 +0.2
comp=Z,17nm,1.3s,mb4.4
FURC **Furnace Creek,** 84.50 46 ⇓P P 15 25 20.4 -0.7
baz=85
113A **Mohawk Valley,** 84.57 51 ⇑P P 15 25 21.7 +0.1
baz=85
Y12C **Blythe** 84.57 50 ⇑P P 15 25 21.7 +0.2
baz=85
NVAR **Mina Array Bea** 84.69 44 P P 15 25 21.6 -0.4
comp=Z,6.0nm,1.1s,mb4.0,baz=218,slow=8.6,SNR=24
NVAR pP pP 15 27 18.4 +3.8
comp=Z,0.8nm,0.9s,baz=236,slow=9.0,SNR=2.8
214A **Organ Pipe Nat** 84.82 52 ⇑P P 15 25 23.0 +0.2
baz=85
U10A **Ash Meadows, A** 84.82 47 ⇓P P 15 25 23.2 +0.5
baz=85
Z13A **Yuma Proving G** 84.88 50 ⇑P P 15 25 23.3 +0.2
baz=85
LDFC **Landfair** 84.89 48 eP P 15 25 23.8 +0.7
comp=Z,9.2nm,0.4s,mb4.7
Y13A **Salome** 85.09 50 ⇓P P 15 25 24.3 +0.3
baz=85
V11A **Goodsprings** 85.09 47 ⇓P P 15 25 23.9 -0.2
baz=85
PDMCI **Parker Dam,Lak** 85.13 49 ⇑P P 15 25 24.2 -0.1
baz=85
W12A **Cal Nev Ari** 85.18 48 ⇓P P 15 25 24.6 +0.1
baz=85
114A **Black Gap (USA** 85.19 51 ⇓P P 15 25 24.7 +0.1
baz=85
V12A **Nelson** 85.42 48 ⇑P P 15 25 25.8 +0.1
baz=86
Z14A **Wintersburg** 85.47 51 ⇑P P 15 25 26.3 +0.3
baz=86
S10A **Tonopah Range,** 85.50 45 ⇑P P 15 25 25.7 -0.3
baz=86
MOD **Modoc** 85.53 40 eP P 15 25 26.0 -0.1
K05A **Summer Lake** 85.69 39 ⇑P P 15 25 27.1 +0.3
baz=86
Y14A **Wickenburg** 85.73 50 ⇓P P 15 25 26.8 -0.4
baz=86
W13A **Hualapai Mount** 85.74 49 ⇑P P 15 25 27.0 -0.3
baz=86
216A **Three Points,** 85.82 52 ⇓P P 15 25 28.1 +0.4
baz=86
S11A **Rachel** 85.89 46 ⇓P P 15 25 28.0 +0.1
baz=86
R10A **Warm Springs** 85.89 45 ⇑P P 15 25 27.9 0.0
baz=86
116A **Eloy** 85.93 52 ⇑P P 15 25 28.2 0.0
baz=86
T11A **Corn Creek, Al** 86.02 46 ⇑P P 15 25 28.5 0.0
baz=86,SNR=11
V13A **Grand Canyon W** 86.08 48 ⇑P P 15 25 28.7 -0.1
baz=86,SNR=6.9
X14A **Yava** 86.09 50 ⇑P P 15 25 29.2 +0.3
baz=86
Q10A **Clear Creek Ra** 86.14 45 ⇓P P 15 25 28.9 0.0
baz=86
H04A **Detroit Lake** 86.18 37 ⇑P P 15 25 29.0 0.0
baz=86
Y15A **Casa Rosa Ranc** 86.21 50 ⇓P P 15 25 29.6 +0.2
baz=86
W14A **Seligman** 86.36 49 ⇑P P 15 25 30.5 +0.3
baz=86,SNR=5.5
R11A **Troy Canyon, C** 86.39 45 ⇑P P 15 25 31.0 +0.8
baz=86
U13A **Pakoon Wash** 86.40 48 ⇓P P 15 25 30.6 +0.3
baz=86,SNR=9.3
S12A **Delamar Landin** 86.47 46 ⇑P P 15 25 30.9 +0.3
baz=87
TUC **Tucson** 86.47 52 eP P 15 25 31.1 +0.4
TUC pmax pmax
comp=Z,22nm,1.2s,mb4.7
TUC **Tucson** 86.47 52 eP P 15 25 31.1 +0.3
comp=Z,22nm,1.2s,mb4.7
P10A **Eureka** 86.55 44 ⇑P P 15 25 31.3 +0.3
baz=87
X15A **Humboldt** 86.56 50 ⇓P P 15 25 31.3 +0.2
baz=87
V14A **Boquillas Ranc** 86.57 49 ⇑P P 15 25 31.4 +0.3
baz=87,SNR=7.3
318A **Bisbee** 86.61 54 ⇓P P 15 25 32.2 +0.8
baz=87,SNR=13
117A **Oracle** 86.64 52 ⇑P P 15 25 32.1 +0.6
baz=87,SNR=8.4
GYA **Guiyang** 86.69 301 P P 15 25 31.0 -0.9
GYA pP pP 15 27 28.4 +3.3
GYA sP sP 15 28 21.0 +3.7
GYA PP PP 15 29 06.3 +2.5
GYA SKS 15 35 07.0
GYA sS sS 15 38 49.5 +1.6
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
Y16A **Circle Bar Ran** 86.78 51 ⇑P P 15 25 32.6 +0.4
baz=87,SNR=6.6
218A **Dragoon** 86.84 53 ⇓P P 15 25 33.2 +0.7
baz=87,SNR=11
F04A **Amboy** 86.84 36 ⇓P P 15 25 32.4 +0.3
baz=87
WVOR **Wild Horse Val** 86.84 41 eP P 15 25 32.3 +0.1
WVOR pmax pmax
comp=Z,20nm,1.4s,mb4.5
WVOR **Wild Horse Val** 86.84 41 eP P 15 25 32.3 0.0
comp=Z,20nm,1.4s,mb4.6
U14A **Mt Trumbull** 86.94 48 ⇑P P 15 25 33.1 +0.3
baz=87,SNR=13
BJI **Beijing** 86.96 316 P P 15 25 33.0 +0.2
BJI pP pP 15 27 27.2 +1.1
BJI sP sP 15 28 19.9 +1.6
BJI S S 15 35 30.1 +2.0
BJI sS sS 15 38 53.7 +3.7
BJI pmax pmax
comp=Z,4.0nm,0.8s,mb4.1
BJI pmax pmax
comp=Z,55nm,4.0s
R12A **Pony Springs,** 87.02 46 ⇑P P 15 25 33.6 +0.4
baz=87
X16A **Lo Mia Camp, P** 87.08 50 ⇑P P 15 25 34.0 +0.4
baz=87
319A **Douglas** 87.10 54 ⇓P P 15 25 34.6 +0.9
baz=87,SNR=8.4
S13A **Holt Ranch, En** 87.11 47 ⇑P P 15 25 34.0 +0.4
baz=87
Y17A **Roosevelt** 87.14 51 ⇓P P 15 25 34.4 +0.5
baz=87
118A **Homack Ranch,** 87.23 53 ⇓P P 15 25 34.8 +0.5
baz=87,SNR=10
V15A **Kaibab Nationa** 87.31 49 ⇓P P 15 25 35.0 +0.4
baz=87,SNR=5.8
O11A **Cowboy Ranch,** 87.35 44 ⇓P P 15 25 35.1 +0.4
baz=87
R13A **O'Grain Ranch,** 87.36 46 ⇑P P 15 25 35.3 +0.6
baz=88
219A **White Tail Can** 87.43 53 ⇓P P 15 25 35.6 +0.4
baz=88,SNR=8.9
J08A **Circle Bar Ran** 87.49 40 ⇑P P 15 25 35.0 -0.2
baz=88,SNR=14
U15A **North Rim** 87.55 48 ⇑P P 15 25 36.2 +0.5
baz=88,SNR=16
M10A **I.L. Ranch, Tu** 87.58 42 ⇑P P 15 25 36.0 +0.2
baz=88,SNR=10
320A **Kipp Ranch, An** 87.64 54 ⇑P P 15 25 37.2 +1.0
baz=88,SNR=10
Y18A **Canyon Day Jun** 87.76 52 ⇓P P 15 25 37.5 +0.8
baz=88,SNR=6.0
119A **Ashpeak Ranch,** 87.78 53 ⇑P P 15 25 37.3 +0.4
baz=88
T15A **Red Dirt Ranch** 87.80 48 ⇓P P 15 25 37.0 +0.1
baz=88,SNR=6.6
D05A **Enumclaw** 87.86 35 ⇑P P 15 25 37.7 +0.8
baz=88
220A **Playas Peak, P** 87.92 54 ⇓P P 15 25 37.9 +0.4
baz=88,SNR=8.0
L10A **Juniper Basin** 87.94 42 ⇓P P 15 25 37.1 -0.3
baz=88,SNR=12
M11A **Holland Ranch,** 88.00 43 ⇓P P 15 25 38.0 +0.3
baz=88
O12A **Currie** 88.00 44 ⇑P P 15 25 37.8 +0.1
baz=88
P13A **Bates Ranch, G** 88.03 45 ⇓P P 15 25 38.5 +0.6
baz=88
H08A **Prairie City** 88.06 39 ⇑P P 15 25 37.9 0.0
baz=88
Z19A **T-Link Ranch,** 88.07 52 ⇓P P 15 25 38.5 +0.2
baz=88
K10A **MacKenzie Ranc** 88.10 41 ⇓P P 15 25 38.0 -0.2
baz=88,SNR=12
N12A **Clover Valley,** 88.14 43 ⇓P P 15 25 38.1 -0.3
baz=88,SNR=6.2
120A **U Bar Ranch, L** 88.16 53 ⇓P P 15 25 39.0 +0.3
baz=88
V17A **Tonalea, Kykot** 88.16 50 ⇑P P 15 25 38.5 -0.1
baz=88,SNR=9.8
X18A **Snowflake** 88.20 51 ⇑P P 15 25 38.6 -0.2
baz=88
Q14A **Sevier Lake (B** 88.25 46 ⇓P P 15 25 38.8 -0.1
baz=88,SNR=12
PLCA **Paso Flores** 88.34 134 P P 15 25 40.6 +1.2
comp=Z,8.6nm,1.2s,mb4.3,baz=277,slow=6.0,SNR=4.0
G08A **Pilot Rock** 88.36 38 ⇑P P 15 25 39.0 -0.3
baz=88,SNR=12
Y19A **Nutrioso** 88.41 52 ⇑P P 15 25 40.0 +0.2
baz=88,SNR=6.3
L11A **Cat Creek Ranc** 88.43 42 ⇓P P 15 25 39.8 +0.1
baz=88,SNR=14
Z20A **Nine Sixteen R** 88.47 53 ⇑P P 15 25 40.4 +0.3
baz=89,SNR=6.2
M12A **Wells** 88.53 43 ⇓P P 15 25 39.9 -0.3
baz=89,SNR=6.3
K11A **Parker Ranch,** 88.61 41 ⇓P P 15 25 40.5 0.0
baz=89,SNR=11
N13A **Wendover, West** 88.67 44 ⇓P P 15 25 40.9 0.0
baz=89
XAN **Xi'an** 88.67 308 P P 15 25 41.8 +0.8
XAN pmax pmax
comp=Z,2.0nm,1.1s,mb3.9
HAWA **Hanford** 88.70 37 eP P 15 25 41.0 +0.1
comp=Z,4.7nm,0.8s,mb4.4
S16A **Weppner Ranch,** 88.70 48 ⇑P P 15 25 40.9 -0.1
baz=89
U17A **Shonto** 88.76 49 ⇑P P 15 25 41.7 +0.4
baz=89
V18A **Ganado** 88.81 50 ⇑P P 15 25 41.4 -0.2
baz=89
Q15A **Fillmore** 88.85 46 ⇑P P 15 25 42.1 +0.4
baz=89
T17A **Navajo Res., N** 88.86 48 ⇓P P 15 25 42.0 +0.2
baz=89,SNR=7.0
L12A **House Creek Ra** 88.88 42 ⇑P P 15 25 41.9 +0.1
baz=89,SNR=8.7
M13A **Montello** 88.97 43 ⇑P P 15 25 41.9 -0.3
baz=89,SNR=17
ETW **Entiat** 89.00 36 eP P 15 25 42.2 0.0
comp=Z,11nm,0.9s,mb4.7
Y20A **Horse Springs,** 89.02 52 ⇑P P 15 25 43.0 +0.4
baz=89,SNR=9.0
G09A **Cove** 89.02 39 ⇓P P 15 25 41.8 -0.6
baz=89,SNR=6.5
BMO **Blue Mountains** 89.05 39 eP P 15 25 42.3 -0.2
BMO pmax pmax
comp=Z,2.0nm,1.1s,mb3.9
BMO **Blue Mountains** 89.05 39 eP P 15 25 42.3 -0.2
comp=Z,1.9nm,1.1s,mb3.8
R16A **Teasdale** 89.07 47 ⇓P P 15 25 43.0 +0.2
baz=89,SNR=5.4
MFID **Camas Ranch** 89.09 41 ⇓P P 15 25 42.4 -0.3
baz=89,SNR=6.5
SEY **Seymchan** 89.17 348 ⇑iP P 15 25 40.9 -1.7
KMI **Kunming** 89.21 298 P P 15 25 44.8 +1.1
KMI pmax pmax
comp=Z,10.0nm,1.5s,mb4.4
U18A **Rough Rock, Ch** 89.21 49 ⇓P P 15 25 43.4 -0.1
baz=89
H10A **Noah's Angus R** 89.22 40 ⇓P P 15 25 42.4 -0.9
baz=89,SNR=7.8
K12A **Draper Farm, C** 89.22 42 ⇑P P 15 25 42.9 -0.4
baz=89
P15A **Leamington** 89.22 46 ⇑P P 15 25 43.6 +0.2
baz=89
Z21A **St. Cloud Mine** 89.24 53 ⇓P P 15 25 44.0 +0.3
baz=89
X20A **Quemado** 89.24 52 ⇓P P 15 25 44.1 +0.4
baz=89,SNR=5.9
I11A **Placerville** 89.30 41 ⇑P P 15 25 43.2 -0.5
baz=89,SNR=9.1
G10A **Bishop Farm, J** 89.41 39 ⇑P P 15 25 43.7 -0.4
baz=90
D08A **Wollman Farm,** 89.44 37 ⇓P P 15 25 44.0 -0.2
baz=90
J12A **Stokes Ranch,** 89.44 41 ⇓P P 15 25 44.2 -0.1
baz=90,SNR=11
CMAR **Chiang Mai Arr** 89.48 290 P P 15 25 46.3 +1.2
comp=Z,3.5nm,0.9s,mb4.2,baz=142,slow=3.3,SNR=19
CMAR pP pP 15 27 42.0 +2.9
comp=Z,3.3nm,1.0s,baz=119,slow=3.0,SNR=3.6
L13A **Double Diamond** 89.51 43 ⇑P P 15 25 44.7 0.0
baz=90
W20A **Ramah** 89.53 51 ⇑P P 15 25 45.1 +0.2
baz=90,SNR=7.4
M14A **Sheep Mountain** 89.57 44 ⇓P P 15 25 44.6 -0.3
baz=90,SNR=8.0
T18A **Mexican Hat** 89.57 49 ⇑P P 15 25 45.0 -0.2
baz=90,SNR=16
Y21A **Point of Rocks** 89.58 52 ⇑P P 15 25 45.7 +0.5
baz=90,SNR=22
Q16A **Castle Valley** 89.61 47 ⇓P P 15 25 45.3 +0.1
baz=90
U19A **Dine' College,** 89.61 50 ⇑P P 15 25 45.1 -0.2
baz=90
CHTO **Chiang Mai** 89.64 291 eP P 15 25 46.4 +0.6
CHTO pmax pmax
comp=Z,8.0nm,1.1s,mb4.5
CHTO **Chiang Mai** 89.64 291 eP P 15 25 46.4 +0.5
comp=Z,7.7nm,1.1s,mb4.5
R17A **Hanksville Air** 89.66 47 ⇑P P 15 25 45.2 -0.3
baz=90,SNR=8.2
X21A **Alamocita Cree** 89.71 52 ⇓P P 15 25 46.4 +0.6
baz=90,SNR=11
H11A **Donnelly** 89.71 40 ⇑P P 15 25 45.1 -0.4
baz=90,SNR=9.8
I12A **Atlanta** 89.72 41 ⇓P P 15 25 45.5 -0.1
baz=90,SNR=6.1
Z22A **Elephant Butte** 89.73 53 ⇑P P 15 25 46.1 +0.1
baz=90,SNR=14
K13A **Stover Farm, H** 89.73 42 ⇓P P 15 25 45.7 0.0
baz=90
F10A **Beach Ranch, E** 89.74 38 ⇓P P 15 25 44.9 -0.7
baz=90
OD2 **Odessa Site #2** 89.75 37 eP P 15 25 45.4 -0.3
comp=Z,2.0nm,0.5s,mb4.2
S18A **Hurst Farm, Bl** 89.77 48 ⇑P P 15 25 45.4 -0.6
baz=90
TMUT **Trail Mountain** 89.78 46 eP P 15 25 46.5 +0.4
comp=Z,14nm,1.0s,mb4.7
V20A **Brimhall** 89.89 50 ⇑P P 15 25 46.4 -0.2
baz=90
324A **Moseley Ranch,** 89.97 55 ⇓P P 15 25 47.0 -0.1
baz=90,SNR=7.8
B08A **Colville Reser** 89.99 36 ⇑P P 15 25 46.1 -0.6
baz=90
HLID **Hailey** 90.03 41 eP P 15 25 47.1 0.0
comp=Z,2.5nm,0.6s,mb4.2
O16A **Springville** 90.06 45 ⇓P P 15 25 47.2 -0.1
baz=90
HVU **Hansel Valley** 90.08 44 eP P 15 25 47.4 +0.1
HVU pmax pmax
comp=Z,30nm,1.7s,mb4.8
HVU **Hansel Valley** 90.08 44 eP P 15 25 47.4 +0.1
comp=Z,30nm,1.7s,mb4.8
J13A **Cove Ranch, Pi** 90.08 42 ⇓P P 15 25 47.1 -0.2
baz=90,SNR=7.8
M15A **Larsen Ranch,** 90.11 44 ⇓P P 15 25 47.2 -0.4
baz=90,SNR=7.6
626A **Big Bend Ranch** 90.13 58 ⇑P P 15 25 48.0 +0.1
baz=90,SNR=10
SRU **San Rafael** 90.14 47 eP P 15 25 47.7 0.0
SRU pmax pmax
comp=Z,21nm,1.2s,mb4.8
SRU **San Rafael** 90.14 47 eP P 15 25 47.7 0.0
comp=Z,21nm,1.2s,mb4.8
MNTX **Cornudas Mount** 90.17 55 eP P 15 25 47.6 -0.4
comp=Z,16nm,1.5s,mb4.6
R18A **Canyonlands Na** 90.19 48 ⇑P P 15 25 47.4 -0.6
baz=90,SNR=9.6
K14A **Jones Ranch, D** 90.24 43 ⇓P P 15 25 47.9 -0.1
baz=90
224A **Cornudas Mount** 90.24 55 ⇓P P 15 25 48.4 +0.1
baz=90,SNR=5.1
H12A **Diamond D Ranc** 90.31 40 ⇑P P 15 25 47.8 -0.5
baz=90,SNR=8.0
325A **Bean Ranch, Si** 90.32 56 ⇑P P 15 25 48.4 -0.4
baz=90,SNR=8.9
HHC **Hu-ho-hao-te** 90.34 315 eP P 15 25 48.8 +0.2
HHC pP pP 15 27 46.2 +3.5
HHC sP sP 15 28 38.6 +4.0
HHC PP PP 15 29 35.1 +2.8
HHC SKS 15 35 29.1
HHC S S 15 35 55.6 -3.5
HHC sS sS 15 39 24.4 +1.4
HHC SS SS 15 42 16.2 +0.9
HHC pmax pmax
comp=Z,12nm,0.7s,mb4.8
HHC pmax pmax
comp=Z,64nm,7.1s
TXAR **Lajitas Array** 90.39 58 P P 15 25 49.3 +0.2
comp=Z,4.2nm,0.8s,mb4.3,baz=205,slow=5.5,SNR=36
526A **Mary Lane Ranc** 90.39 57 ⇑P P 15 25 49.0 -0.1
baz=90,SNR=7.2
Q18A **Rafter H Ranch** 90.40 47 ⇑P P 15 25 48.3 -0.6
baz=90,SNR=5.8
BNM **Barren Site** 90.40 53 eP P 15 25 49.3 +0.3
comp=Z,6.6nm,1.4s,mb4.3
I13A **Wildhorse Cree** 90.40 41 ⇓P P 15 25 48.7 -0.1
baz=90
L15A **Malad City** 90.44 44 ⇑P P 15 25 48.6 -0.5
baz=90,SNR=7.0
J14A **Carey** 90.44 42 ⇑P P 15 25 49.4 +0.4
baz=90,SNR=10
O17A **Robinson Place** 90.56 46 ⇑P P 15 25 49.7 +0.1
baz=91,SNR=16
R19A **Curley Farm, L** 90.58 48 ⇑P P 15 25 49.5 -0.3
baz=91
124A **Stringfield Ra** 90.58 54 ⇓P P 15 25 50.2 +0.3
baz=91,SNR=5.4
627A **Terlingua Ranc** 90.66 58 ⇓P P 15 25 50.3 -0.1
baz=91,SNR=7.4
H13A **Challis** 90.68 41 ⇑P P 15 25 49.9 -0.2
baz=91,SNR=6.8
K15A **Arbon** 90.71 43 ⇑P P 15 25 50.4 +0.2
baz=91
Y23A **Lovelace Mesa,** 90.72 53 ⇑P P 15 25 50.3 -0.2
baz=91
426A **McDonald Obser** 90.72 57 ⇓P P 15 25 50.5 -0.1
baz=91,SNR=7.3
F12A **Elk City** 90.75 39 ⇑P P 15 25 50.1 -0.2
baz=91
HWUT **Hardware Ranch** 90.75 44 eP P 15 25 49.5 -1.0
comp=Z,2.6nm,0.7s,mb4.3
U21A **Nageezi** 90.76 50 ⇑P P 15 25 50.5 -0.1
baz=91,SNR=14
225A **Deer Hill, Car** 90.78 55 ⇑P P 15 25 50.6 -0.2
baz=91
527A **Woodward Ranch** 90.80 57 ⇓P P 15 25 50.8 -0.2
baz=91,SNR=6.0
I14A **Mackay** 90.81 42 ⇓P P 15 25 50.5 -0.1
baz=91,SNR=7.0
Q19A **Hogan Spring (** 90.91 47 ⇓P P 15 25 50.8 -0.4
baz=91
G13A **Cobalt** 90.98 40 ⇑P P 15 25 51.1 -0.3
baz=91
CD2 **Chengdu** 91.02 303 P P 15 25 51.0 -1.0
CD2 pP pP 15 27 51.0 +4.9
CD2 sP sP 15 28 43.0 +5.0
CD2 PP PP 15 29 40.0 +2.2
CD2 SKS 15 35 31.0
CD2 S S 15 36 00.6 -5.0
CD2 sS sS 15 39 33.0 +3.1
CD2 SS SS 15 42 24.5 -0.8
CD2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
CD2 pmax pmax
comp=Z,110nm,6.0s
L16A **Fish Haven** 91.05 44 ⇓P P 15 25 51.4 -0.4
baz=91,SNR=5.9
J15A **Blackfoot** 91.15 42 ⇓P P 15 25 52.3 +0.1
baz=91,SNR=8.2
125A **Gardner Draw,** 91.16 55 ⇑P P 15 25 52.1 -0.4
baz=91
Y24A **Capitan** 91.17 53 ⇑P P 15 25 52.4 -0.2
baz=91,SNR=7.3
H14A **Leadore** 91.24 41 ⇓P P 15 25 52.7 +0.1
baz=91
M17A **Scullys Gap (B** 91.26 45 ⇑P P 15 25 52.6 -0.2
baz=91
S21A **Coal Bank Pass** 91.27 49 ⇓P P 15 25 52.9 -0.1
baz=91
427A **Hayter Ranch,** 91.28 57 ⇑P P 15 25 52.9 -0.3
baz=91
226A **Malaga, Loving** 91.30 55 ⇓P P 15 25 53.0 -0.3
baz=91
F13A **Darby** 91.31 40 ⇑P P 15 25 52.2 -0.7
baz=91

U22A	**Llaves**	91.31	51	⇑P		P		15 25 52.7	-0.4
	baz=91								
C11A	**Tepee Creek (N**	91.36	37	⇓P		P		15 25 53.0	-0.1
	baz=91								
Z25A	**Roswell**	91.40	54	⇑P		P		15 25 53.9	+0.3
	baz=92								
P19A	**Cripple Cowboy**	91.44	47	⇓P		P		15 25 53.5	-0.2
	baz=92								
528A	**Cox Ranch, San**	91.44	58	⇓P		P		15 25 54.0	+0.1
	baz=92								
J16A	**Bone**	91.60	43	⇓P		P		15 25 54.1	-0.2
	baz=92,SNR=5.2								
M18A	**Lyman**	91.62	45	⇑P		P		15 25 54.4	-0.1
	baz=92								
N18A	**Larsen Ranch,**	91.65	46	⇑P		P		15 25 54.6	0.0
	baz=92								
MCMT	**McKenzie Canyo**	91.66	41	*e*P		P		15 25 54.3	-0.3
	comp=Z,2.2nm,1.2s,mb4.1								
H15A	**Lima**	91.67	41	⇑P		P		15 25 54.6	0.0
	baz=92								
Y25A	**Mesa, Roswell**	91.71	54	⇓P		P		15 25 54.7	-0.4
	baz=92								
U23A	**El Rito**	91.75	51	⇓P		P		15 25 55.5	+0.3
	baz=92								
K17A	**Gardner Place,**	91.76	44	⇑P		P		15 25 55.7	+0.6
	baz=92								
P20A	**De Beque**	91.77	47	⇑P		P		15 25 55.4	+0.2
	baz=92								
428A	**Kincaid Ranch,**	91.78	57	⇓P		P		15 25 55.5	+0.1
	baz=92								
R21A	**Cimarron**	91.78	49	⇓P		P		15 25 55.3	0.0
	baz=92								
W24A	**Lazy 6 Ranch,**	91.79	52	⇑P		P		15 25 55.0	-0.5
	baz=92								
Z26A	**Caprock**	91.94	54	⇓P		P		15 25 56.0	-0.2
	baz=92								
S22A	**4UR Ranch, Cre**	91.98	49	⇓P		P		15 25 56.2	0.0
	baz=92								
K18A	**Toltan Ranch,**	92.25	44	⇓P		P		15 25 57.4	0.0
	baz=92								
R22A	**Saguache, Gunn**	92.26	49	⇓P		P		15 25 58.1	+0.6
	baz=92								
L19A	**Farson**	92.42	45	⇓P		P		15 25 58.1	0.0
	baz=92								
Q22A	**Crested Butte,**	92.46	48	⇑P		P		15 25 58.1	-0.3
	baz=92								
W25A	**X Bar L Ranch,**	92.48	53	⇑P		P		15 25 58.1	-0.5
	baz=93								
N20A	**Spence Gulch,**	92.51	46	⇓P		P		15 25 58.7	+0.1
	baz=93								
J18A	**Kendall Valley**	92.56	43	⇓P		P		15 25 58.6	-0.1
	baz=93								
PDAR	**Pinedale Array**	92.63	44	P		P		15 25 59.0	-0.1
	comp=Z,2.8nm,1.0s,mb4.3,baz=222,slow=2.0,SNR=15								
PDAR				pP		pP		15 27 58.2	+4.9
	comp=Z,0.8nm,1.0s,baz=258,slow=4.4,SNR=3.5								
V25A	**Rancho No Teng**	92.65	52	⇓P		P		15 25 58.7	-0.6
	baz=93								
Y27A	**Causey**	92.83	54	⇑P		P		15 25 59.7	-0.6
	baz=93								
M20A	**Sweetwater, Wa**	92.88	46	⇓P		P		15 25 59.9	-0.4
	baz=93								
L20A	**Wamsutter**	93.03	45	⇓P		P		15 26 01.1	+0.1
	baz=93								
S24A	**Houchin Ranch,**	93.06	50	⇓P		P		15 26 01.7	+0.5
	baz=93								
M21A	**Separation Pea**	93.48	46	⇓P		P		15 26 02.6	-0.4
	baz=94								
A14A	**Double T Ranch**	93.56	37	⇓P		P		15 26 02.9	-0.3
	baz=94								
D16A	**Dana Ranch, Ca**	93.60	40	⇑P		P		15 26 03.5	+0.1
	baz=94								
S25A	**Robets Cordova**	93.62	50	⇑P		P		15 26 03.5	-0.3
	baz=94								
F18A	**Big Timber**	94.11	41	⇑P		P		15 26 05.3	-0.5
	baz=94								
SONM	**Songino Array**	97.03	319	pP		pP		15 28 16.4	+2.8
	comp=Z,0.9nm,0.9s,baz=114,slow=3.6,SNR=3.7								
ZALV	**Zalesovo Beam**	111.87	321	PKiKP		PKiKP		15 31 16.6	-2.0
	comp=Z,0.3nm,0.3s,baz=103,slow=2.3,SNR=4.7								
MKAR	**Makanchi Array**	112.08	313	PKiKP		PKiKP		15 31 17.5	-1.7
	comp=Z,0.5nm,0.5s,baz=46,slow=4.2,SNR=5.2								
MKAR				PKKPbc		PKKPbc		15 42 12.3	-0.8
	comp=Z,0.3nm,0.7s,baz=319,slow=3.5,SNR=3.7								
MKAR	**Makanchi Array**	112.08	313	PKPdf		PKiKP		15 31 17.5	-1.7
MKAR				PKKPbc		PKKPbc		15 42 12.3	-0.8
KURK	**Kurchatov**	115.13	316	PKP		PKPdf		15 31 23.1	-1.8
	comp=Z,0.7nm,0.3s,baz=98,slow=1.9,SNR=7.3								
KURK	**Kurchatov**	115.13	316	⇑*i*PKiKP		PKPdf		15 31 23.5	-1.4
KURK				pmax		pmax			
	comp=Z,6.0nm,1.7s								
BVAR	**Borovoye Array**	120.36	319	PKP		PKPdf		15 31 33.5	-1.4
	comp=Z,1.4nm,0.3s,baz=90,slow=3.0,SNR=17								
BVAR				SKP				15 34 20.9	
	comp=Z,1.3nm,1.0s,baz=72,slow=4.8,SNR=3.7								
BRVK	**Borovoye**	120.43	319	*c i*PKiKP		PKPdf		15 31 33.9	-1.2
BRVK				pmax		pmax			
	comp=Z,4.0nm,1.2s								
BRVK	**Borovoye**	120.43	319	*e*PKPdf		PKPdf		15 31 33.6	-1.5
BOSA	**Boshof**	122.48	206	PKP		PKPdf		15 31 38.2	-1.7
	comp=Z,3.7nm,0.9s,baz=147,slow=7.0,SNR=4.7								
BOSA	**Boshof**	122.48	206	PKP		PKPdf		15 31 38.2	-1.8
ARU	**Arti**	126.80	324	*i* PKiKP		PKPdf		15 31 46.4	-0.8
ARU								15 38 03.3	
ARU	**Arti**	126.80	324	*e*PKPdf		PKPdf		15 31 46.3	-0.8
ARCES	**ARCESS Array B**	131.79	348	PKP		PKPdf		15 31 54.9	-1.4
	comp=Z,3.9nm,0.8s,baz=83,slow=2.1,SNR=8.0								
JOF	**Joensuu**	135.64	340	*e*PKiKP		PKPdf		15 32 01.8	-1.9
JOF				pmax		pmax			
	comp=Z,5.0nm,0.9s								
FINES	**FINESS Array B**	138.35	341	PKhKP				15 31 58.3	
	comp=Z,0.6nm,0.4s,baz=58,slow=3.4,SNR=5.8								
FINES				SKPbc		SKPbc		15 34 53.3	-1.3
	comp=Z,3.6nm,0.8s,baz=101,slow=1.9,SNR=7.9								
FINES	**FINESS Array B**	138.35	341	PKP				15 31 58.3	
FINES				SKPbc		SKPbc		15 34 53.3	-1.3
NOA	**NORSAR Array B**	141.99	351	PKhKP				15 32 08.6	
	comp=Z,3.6nm,0.8s,baz=16,slow=4.6,SNR=12								
KONO	**Kongsberg**	143.55	352	*e*PKHKP		PKPdf		15 32 15.0	-3.1
AKASG	**Malin Array Be**	144.89	327	PKP		PKPdf		15 32 19.6	-1.1
	comp=Z,6.5nm,0.5s,baz=44,slow=3.9,SNR=33								
AKASG				pPKP		pPKPdf		15 34 23.5	+1.2
	comp=Z,1.3nm,0.6s,baz=45,slow=3.0,SNR=2.7								
SUW	**Suwalki**	145.18	336	*e*PKP		PKPdf		15 32 21.3	+0.3
SIM	**Simferopol'**	145.19	316	*e*PKiKP		PKPdf		15 32 23.0	+1.6
SIM				pmax		pmax			
	comp=Z,22nm,1.1s								
BR131	**Keskin Array S**	147.51	307	*e*PKPbc		PKPbc		15 32 28.2	-0.6
BRTR	**Keskin Array B**	147.51	307	PKPbc		PKPbc		15 32 28.1	-0.8
	comp=Z,3.0nm,0.7s,baz=159,slow=3.8,SNR=14								
BRTR				PKPab		PKPab		15 32 32.9	+0.1
	comp=Z,5.8nm,0.9s,baz=89,slow=5.2,SNR=14								
BRTR				pPKPbc		pPKPbc		15 34 29.1	+0.3
	comp=Z,2.3nm,1.0s,baz=131,slow=5.1,SNR=5.2								
BRTR	**Keskin Array B**	147.51	307	PKiKP		PKPbc		15 32 28.1	-0.8
BRTR								15 32 32.9	
MMAI	**Mount Meron Ar**	147.65	294	PKPbc		PKPbc		15 32 29.8	+0.4
	comp=Z,8.5nm,0.5s,baz=72,slow=5.5,SNR=19								
MMAI				pPKPbc		pPKPbc		15 34 29.5	+0.2
	comp=Z,7.3nm,0.8s,baz=48,slow=8.0,SNR=4.5								
GKP	**Gorka Klasztor**	147.81	340	*e*PKP		PKPbc		15 32 29.1	-0.1
LVV	**L'vov**	147.95	330	*i* PKiKP		PKPbc		15 32 28.4	-1.2
LVV				MLR		MLR			
	comp=N,200nm,16.0s								
LVV				MLR		MLR			
	comp=E,100nm,16.0s								
LVV				MLR		MLR			
	comp=Z,200nm,16.0s								
KWP	**Kalwaria Pacla**	148.68	331	*e*PKP		PKPbc		15 32 31.1	-0.3
KWP	**Kalwaria Pacla**	148.68	331	*e*PKPbc		PKPbc		15 32 30.9	-0.6
BUR08	**Bucovina Ar. S**	148.88	326	*e*PKPbc		PKPbc		15 32 31.8	-0.3
BSEG	**Bad Segeberg**	148.92	348	*e*PKPbc		PKPbc		15 32 31.0	-0.9
OJC	**Ojcow**	149.45	335	*e*PKHKP		PKPdf		15 32 30.7	+2.5
STHS	**Stebnicka Huta**	149.48	332	*e*PKP		PKPbc		15 32 33.6	+0.2
STHS				*e*				15 34 36.1	
STHS	**Stebnicka Huta**	149.48	332	*e*PKP		PKPbc		15 32 33.6	+0.2
STHS				*e*				15 34 36.1	
UZH	**Uzhgorod**	149.60	330	*e*PKHKP		PKPbc		15 32 33.1	-0.6
UZH				*e*				15 32 37.7	
CRVS	**Cervenica-Dubn**	149.77	331	*e*PKP		PKPbc		15 32 33.8	-0.3
CRVS				*e*				15 34 39.7	
CRVS	**Cervenica-Dubn**	149.77	331	*e*PKP		PKPbc		15 32 33.8	-0.3
CRVS				*e*				15 34 39.7	
NIE	**Niedzica**	149.87	333	*e*PKP		PKPbc		15 32 34.5	+0.2
KSP	**Ksiaz**	150.20	339	*e*PKP		PKPbc		15 32 34.6	-0.5
KSP	**Ksiaz**	150.20	339	*e*PKHKP		PKPbc		15 32 34.8	-0.3
NRDL	**Niedersach Rie**	150.33	347	*e*PKPbc		PKPbc		15 32 34.3	-1.0
NRDL				*ep*PKPbc		pPKPbc		15 34 41.4	+5.5
OKC	**Ostrava-Krasne**	150.39	336	*e*PKiKP		PKPbc		15 32 35.3	-0.2
OKC				*e*				15 32 43.7	
OKC	**Ostrava-Krasne**	150.39	336	⇑*e*PKP		PKPbc		15 32 35.3	-0.2
OKC				*e*PKPab		PKPab		15 32 43.7	-0.5
KECS	**Kecovo**	150.51	332	*e*PKiKP		PKPbc		15 32 35.7	-0.2
KECS				*e*				15 32 44.6	
KECS	**Kecovo**	150.51	332	*e*PKP		PKPbc		15 32 35.7	-0.2
KECS				*e*				15 32 44.6	
KECS				*e*				15 34 44.4	
KECS	**Kecovo**	150.51	332	*e*PKP		PKPbc		15 32 35.7	-0.2
KECS				*e*				15 32 44.6	
KECS				*e*				15 34 44.4	
UPC	**Upice**	150.58	339	*e*PKiKP		PKPbc		15 32 35.6	-0.3
UPC	**Upice**	150.58	339	⇑*e*PKP		PKPbc		15 32 35.6	-0.3
DPC	**Dobruska-Polom**	150.61	338	*e*PKiKP		PKPbc		15 32 35.7	-0.3
DPC				*e*				15 32 45.6	
DPC	**Dobruska-Polom**	150.61	338	⇑*e*PKP		PKPbc		15 32 35.7	-0.3
DPC				*e*PKPab		PKPab		15 32 45.6	+0.5
MORC	**Moravsky Berou**	150.66	336	*e*PKiKP		PKPbc		15 32 34.9	-1.3
CLL	**Collm**	150.76	343	*e*PKPbc		PKPbc		15 32 35.2	-1.1
CLL				*ep*PKPbc		pPKPbc		15 34 41.6	+4.6
CLL	**Collm**	150.76	343	⇑*i*PKiKP		PKPbc		15 32 35.3	-1.0
CLL				*i*				15 32 44.7	
CLL				pmax		pmax			
	comp=Z,30nm,0.9s								
CLL				pmax		pmax			
	comp=Z,9.0nm,1.0s								
BRG	**Berggiesshubel**	150.89	342	*e*PKPbc		PKPbc		15 32 35.7	-1.0
BRG				*ep*PKPbc		pPKPbc		15 34 41.7	+4.4
BRG	**Berggiesshubel**	150.89	342	*i* PKP		PKPbc		15 32 36.0	-0.7
	comp=Z,17nm,1.0s								
BRG				*i* pPKP		pPKPdf		15 34 42.4	+10
	comp=Z,14nm,1.2s								
BRG	**Berggiesshubel**	150.89	342	*i* PKiKP		PKPbc		15 32 36.0	-0.7
BRG				pmax		pmax			
	comp=Z,10.0nm,1.0s								
BRG				pmax		pmax			
	comp=Z,8.0nm,1.2s								
CLZ	**Clausthal**	150.89	347	*e*PKPbc		PKPbc		15 32 36.0	-0.6
CLZ				*e*PKPab		PKPab		15 32 45.0	-1.3
CLZ				*ep*PKPbc		pPKPbc		15 34 42.3	+5.0
IBBN	**Ibbenburen**	150.93	350	*e*PKPbc		PKPbc		15 32 35.8	-0.9
IBBN				*e*PKPab		PKPab		15 32 45.1	-1.3
PVCC	**Panska Ves**	151.01	341	*e*PKiKP		PKPbc		15 32 36.8	-0.1
PVCC	**Panska Ves**	151.01	341	⇑*e*PKP		PKPbc		15 32 36.8	-0.1
VYHS	**Vyhne**	151.20	334	*e*PKiKP		PKPbc		15 32 36.8	-0.6
VYHS				*e*				15 32 47.9	
VYHS	**Vyhne**	151.20	334	*e*PKP		PKPbc		15 32 36.8	-0.6
VYHS				*e*				15 32 47.9	
VYHS				*e*				15 34 43.3	
VYHS	**Vyhne**	151.20	334	*e*PKP		PKPbc		15 32 36.8	-0.6
VYHS				*e*				15 32 47.9	
VYHS				*e*				15 34 43.3	
KOLL	**Kolacno**	151.31	334	*e*PKiKP		PKPbc		15 32 37.9	+0.2
KOLL	**Kolacno**	151.31	334	*e*PKP		PKPbc		15 32 37.8	+0.1
PRU	**Pruhonice**	151.50	340	*e*PKiKP		PKPbc		15 32 38.1	0.0
PRU	**Pruhonice**	151.50	340	⇑*e*PKP		PKPbc		15 32 38.1	0.0
TANN	**Tannenbergstha**	151.72	343	*e*PKPbc		PKPbc		15 32 37.6	-0.9
TANN				*ep*PKPbc		pPKPbc		15 34 45.4	+6.1
MOX	**Moxa**	151.73	344	*e*PKP		PKPbc		15 32 38.1	-0.4
	comp=Z,11nm,1.1s								
MOX				*e*				15 32 48.3	
MOX				*e*				15 34 44.7	
MOX	**Moxa**	151.73	344	*e*PKPbc		PKPbc		15 32 37.6	-0.9
MOX				*e*PKPab		PKPab		15 32 48.6	-1.2
MOX				*ep*PKPbc		pPKPbc		15 34 44.5	+5.2
TREC	**Trest**	151.79	338	*e*PKiKP		PKPbc		15 32 38.7	0.0
TREC	**Trest**	151.79	338	⇑*e*PKP		PKPbc		15 32 38.7	0.0
BUG	**Bochum--Univer**	151.84	350	*ep*PKPbc		pPKPbc		15 34 44.0	+4.4
NKC	**Novy Kostel**	151.89	343	*e*PKiKP		PKPbc		15 32 38.5	-0.4
NKC	**Novy Kostel**	151.89	343	⇑*e*PKP		PKPbc		15 32 38.5	-0.4
KHC	**Kasperske Hory**	152.55	340	*e*PKiKP		PKPdf		15 32 32.2	-0.7
KHC				*e*				15 32 39.6	
KHC				*e*				15 32 53.1	
KHC	**Kasperske Hory**	152.55	340	*e*PKPDF		PKPdf		15 32 32.2	-0.7
KHC				⇑*e*PKP		PKPbc		15 32 39.6	-0.8
KHC				*e*PKPAB		PKPab		15 32 53.1	-0.3
GRF	**Grafenberg Arr**	152.70	344	*e*PKPab		PKPab		15 32 53.3	-0.7
WET	**Wettzell**	152.75	341	*e*PKPbc		PKPbc		15 32 39.8	-1.0
GEC2	**GERESS Array S**	152.76	340	*e*PKPbc		PKPbc		15 32 39.8	-1.1
GEC2				*e*PKPab		PKPab		15 32 54.3	0.0
CONA	**Conrad Observa**	152.82	336	⇑*i*PKiKP		PKiKP		15 32 40.6	-0.6
	comp=Z,9.5nm,1.3s								
TNS	**Taunus Mts**	152.82	348	*e*PKPbc		PKPbc		15 32 40.3	-0.7
TNS				*e*PKPab		PKPab		15 32 53.5	-0.9
MEM	**Membach**	152.84	352	PKPbc		PKPbc		15 32 40.9	-0.1
BCLA	**Clavier**	153.11	352	PKPbc		PKPbc		15 32 41.8	+0.2
SNF	**Seneffe**	153.14	354	PKPab		PKPab		15 32 55.2	-0.6
DOU	**Dourbes**	153.51	353	PKPbc		PKPbc		15 32 42.2	-0.2
WLF	**Walferdange**	153.74	351	*e*PKPbc		PKPbc		15 32 42.7	-0.3
FUR	**Furstenfeldbru**	154.09	343	*e*PKPab		PKPab		15 33 00.1	+0.2
CDF	**Champ du Feu**	154.77	349	*e*PKP2		PKPab		15 33 01.4	-1.4
	comp=Z,9.8nm,1.0s								
RETA	**Reutte**	154.85	343	⇑*i*PKPab		PKPab		15 33 03.2	-0.1
	comp=Z,6.2nm,0.9s								
HAU	**Haudompre**	155.33	350	*e*PKP2		PKPab		15 33 03.6	-1.6
HINF	**Hinteralfeld**	155.42	349	*e*PKP2		PKPab		15 33 03.7	-2.0
AVF	**Avril sur Loir**	156.91	354	*e*PKP2		PKPab		15 33 10.4	-1.7
DBIC	**Dimbokro**	162.34	164	PKPab		PKPab		15 33 36.9	+0.3
	comp=Z,9.2nm,1.1s,baz=167,slow=6.9,SNR=4.3								
ESDC	**Sonseca Array**	163.83	11	PKPab		PKPab		15 33 41.2	-1.4
	comp=Z,0.3nm,0.3s,baz=339,slow=4.9,SNR=5.3								
TORD	**Torodi Ar. Bea**	169.28	189	PKP		PKPdf		15 32 50.4	-1.1
	comp=Z,4.2nm,1.1s,baz=298,slow=1.4,SNR=9.9								
TORD				PKPab		PKPab		15 34 08.0	+0.8
	comp=Z,4.1nm,0.9s,baz=178,slow=3.6,SNR=17								
TORD	**Torodi Ar. Bea**	169.28	189	PKP		PKPdf		15 32 50.4	-1.1
TORD				PKPab		PKPab		15 34 08.0	+0.8

IDC 01 15:24:08.7±7.4, 1°80N×96°13E, h0km, mb3.8/2, mb1 3.6/4, mb1mx3.3/24, mbtmp3.5/4, ML2.9/2, Error ellipse: s-maj=140.0km s-min=42.6km az=13.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	2.96	70	Pn	Pn	15 24 56.7	-0.3
	1.1nm,0.3s,baz=236,slow=7.2,SNR=4.3						
CMAR	**Chiang Mai Arr**	16.78	9	Pn	Pn	15 28 05.3	0.0
	0.0nm,0.3s,baz=195,slow=10.0,SNR=4.8						
MKAR	**Makanchi Array**	46.41	347	P	P	15 32 37.0	+0.1
	0.5nm,0.6s,baz=164,slow=10.0,SNR=4.2						
ZALV	**Zalesovo Beam**	52.81	352	P	P	15 33 25.5	-0.1
	1.2nm,0.6s,baz=178,slow=8.1,SNR=5.9						

*IDC **01** 15:50:27.2±0.6, 52°.42N×168°.21W, h0km, mb4.7/30, mb1 4.8/30, mb1mx4.7/37, mbtmp4.7/30, MS4.2/17, Ms1 4.3/17, ms1mx4.0/39, Error ellipse: s-maj=17.8km s-min=10.9km az=170.0*

*ISCJB **01** 15:50:28.7±1.0, 52°.35N×0°.04×168°.28W±0°.03, h17km±6km, mb4.9/203, MS4.4/45, Error ellipse: s-maj=6.5km s-min=2.5km az=18.7*

*BJI **01** 15:50:28.9, 52°.99N×168°.63W, h8km, mB5.1/26, mb5.0/44, Ms4.9/32, Ms7 4.6/32*

*MOS **01** 15:50:31.1±1.1, 52°.41N×168°.31W, h33km, mb5.2/81, MS4.5/16, Error ellipse: s-maj=8.7km s-min=4.8km az=92.8*

*NEIC **01** 15:50:32.5±1.0, 52°.40N×168°.29W, h31km±6km, mb4.9/110, MS4.5/4, ML4.3(AEIC), Error ellipse: s-maj=6.2km s-min=2.9km az=194.0*

*GCMT **01** 15:50:33.5±0.3, 52°.23N×168°.16W, h16km, MW5.0, Moment Tensor Solution. s40,c62; s70,c109; Moment tensor: Scale 10^{16}Nm; M_{rr}3.01±.14; $M_{\theta\theta}$-2.47±.11; $M_{\phi\phi}$-0.54±.08; $M_{r\theta}$2.30±.29; $M_{\theta\phi}$-1.05±.07; $M_{r\phi}$0.93±.27; Best double couple: $M_0$3.90000×10^{16} NP1:ϕ_s245.00000°, δ25.00000°, λ88.00000°. NP2:ϕ_s67.00000°, δ65.00000°, λ91.00000°. Principal axes: T 3.9100, Plg70.0000°, Azm339.0000°; N -0.0800, Plg1.0000°, Azm247.0000°; P -3.8300, Plg20.0000°, Azm157.0000°; Data Used: II IU IC G CN.*

*SZGRF **01** 15:50:45.9, 54°.45N×169°.78W, h33km, mb5.1, Fox Islands, Aleutian Islands, United States*

ISC 01 15:50:31.2±0.9, 52°.43N±0°.04×168°.26W±0°.03, h20km±6km, h25km±4.1km: pP-P, n702, σ0°.70/705, mb4.9/203, MS4.4/45,

151C-133D, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	0.65	327	P	Pb	15 50 45.7	+1.8
NIKO				S	Sb	15 50 58.0	+5.4
OKFG	**Magazine Ridge**	1.01	12	P	Pb	15 50 50.5	+0.5
OKFG				S	Sb	15 51 08.5	+5.8
UNV	**Unalaska Valle**	1.77	36	P	Pn	15 51 00.5	-0.2
AKGG	**Akutan Green G**	2.24	37	P	Pn	15 51 07.5	+0.5
AKUT	**Akutan**	2.27	40	*e*P	Pn	15 51 00.9	-6.6
SPIA	**Saint Paul Isl**	4.89	347	P	Pn	15 51 47.2	+3.7
SDPT	**Sand Point**	5.46	54	*e*P	Pn	15 51 50.9	-0.3
CHGN	**Chignik**	6.94	52	Pn	Pn	15 52 10.2	-1.3
AMKA	**Amchitka**	7.77	267	*e*P	Pn	15 52 24.1	+1.1
OHAK	**Old Harbor**	9.88	55	*e*P	Pn	15 52 50.7	-1.2
	5.0nm,0.3s						
KDAK	**Kodiak Island**	10.45	53	Pn	Pn	15 52 57.8	-1.9
	2.6nm,0.3s,baz=257,slow=6.9,SNR=20						
KDAK	**Kodiak Island**	10.45	53	*i* P	Pn	15 52 57.8	-1.9
KDAK	**Kodiak Island**	10.45	53	*e*Pn	Pn	15 52 57.0	-2.7
	28nm,0.7s						
SVW2	**Sparrevohn**	11.11	34	*e*P	Pn	15 53 11.8	+3.1
RSO	**Redoubt South**	11.74	41	*e*P	Pn	15 53 18.6	+1.4
TTA	**Tatalina**	12.37	27	*e*P	Pn	15 53 29.1	+3.2
PMR	**Palmer**	13.83	41	P	Pn	15 53 43.1	-2.8
PMR				pmax	pmax		
	comp=Z,9.0nm,0.5s						
PMR	**Palmer**	13.83	41	P	Pn	15 53 43.1	-2.8
	comp=Z,8.8nm,0.5s						
COLA	**College**	16.27	32	*e*P	Pn	15 54 17.1	-1.1
COLA				pmax	pmax		
	comp=Z,29nm,1.0s						
COLA	**College**	16.27	32	*e*P	Pn	15 54 17.1	-1.1
	comp=Z,29nm,1.0s						
MENT	**Mentasta**	16.70	41	*e*P	Pn	15 54 24.7	+1.1
EGAK	**Eagle**	18.57	38	*e*P	Pn	15 54 44.9	-1.9
	comp=Z,17nm,0.8s						
DAWY	**Dawson**	18.94	41	*e*P	Pn	15 54 49.7	-1.5
SIT	**Sitka**	19.45	63	*e*P	Pn	15 54 54.8	-2.6
SIT				pmax	pmax		
	comp=Z,23nm,0.8s						
SIT	**Sitka**	19.45	63	*e*P	Pn	15 54 54.8	-2.6
	comp=Z,22nm,0.8s						
SKAG	**Skagway**	19.58	56	*e*P	Pn	15 54 58.8	-0.1
	comp=Z,63nm,1.3s						
PET	**Petropavlovsk**	19.95	285	*e*P	Pn	15 55 01.7	-1.7
PET				*e*S	Sn	15 58 37.7	-9.3
PET				pmax	pmax		
	comp=Z,69nm,1.0s						
PET				pmax	pmax		
	comp=Z,200nm,12.9s						
PET				MLR	MLR		
	comp=Z,800nm,16.0s						
PET				MLR	MLR		
	comp=Z,800nm,19.0s						
PET	**Petropavlovsk**	19.95	285	*e*P	Pn	15 55 01.6	-1.9
	comp=Z,38nm,0.6s						
PEA0B	**Petropavlovsk-**	20.50	285	*e*P	P	15 55 07.5	-0.1
PETK	**Petropavlovsk-**	20.50	285	P	P	15 55 07.8	+0.1
	comp=Z,38nm,0.4s,baz=83,slow=14,SNR=348						
PETK				LR	LR	16 01 56.0	
	comp=Z,408nm,21.6s,MS3.8,baz=245,slow=34						
CRAG	**Craig**	20.77	68	*e*P	P	15 55 11.9	+1.4
	comp=Z,20nm,0.2s						
DLBC	**Dease Lake**	22.27	59	P	P	15 55 27.2	+0.6
	comp=Z,9.9nm,1.0s,mb4.2,baz=270,slow=11,SNR=16						
INK

YAK	Yakutsk	33.64	311	eP	P	15 57 07.0	-3.0
	comp=N,22nm,0.8s,mb5.1						
MOD	Modoc	33.68	89	eP	P	15 57 10.9	+0.4
	comp=N,23nm,1.1s,mb5.0						
HOPS	Hopland	33.72	95	eP	P	15 57 11.4	+0.5
	comp=N,17nm,1.1s,mb4.9						
G10A	Bishop Farm, J	33.78	81	⇓P	P	15 57 11.5	+0.2
	baz=34,SNR=8.3						
BMO	Blue Mountains	33.90	82	eP	P	15 57 13.0	+0.7
BMO				pmax	pmax		
	comp=Z,12nm,1.5s,mb4.6						
BMO	Blue Mountains	33.90	82	eP	P	15 57 13.0	+0.6
	comp=Z,12nm,1.5s,mb4.6						
BSMT	Bassoo Peak	33.92	76	eP	P	15 57 12.6	+0.1
	comp=Z,8.8nm,1.0s,mb4.6						
J08A	Circle Bar Ran	33.98	85	⇑P	P	15 57 13.1	-0.1
	baz=34,SNR=6.0						
ERM	Erimo	34.00	272	c iP	P	15 57 14.0	+0.8
F11A	Grangeville	34.06	80	⇑P	P	15 57 13.8	+0.1
	baz=34						
E12A	Beaver Dam Sad	34.15	79	⇓P	P	15 57 14.0	-0.5
	baz=34,SNR=7.4						
A14A	Double T Ranch	34.20	73	⇓P	P	15 57 14.4	-0.6
	baz=34,SNR=7.8						
H10A	Noah's Angus R	34.37	82	⇑P	P	15 57 16.3	-0.1
	baz=34,SNR=22						
WVOR	Wild Horse Val	34.40	87	eP	P	15 57 17.1	+0.4
WVOR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
WVOR	Wild Horse Val	34.40	87	eP	P	15 57 17.1	+0.4
	comp=Z,10nm,0.9s,mb4.8						
D13A	Huson	34.48	77	⇑P	P	15 57 16.9	-0.4
	baz=34						
B14A	Marquette Ranc	34.57	74	⇓P	P	15 57 18.1	-0.1
	baz=34						
C14A	Swan Lake	34.57	75	⇓P	P	15 57 17.9	-0.3
	baz=34						
A15A	Johnson Ranch,	34.61	73	⇑P	P	15 57 17.3	-1.1
	baz=34						
F12A	Elk City	34.67	79	⇑P	P	15 57 19.0	0.0
	baz=34,SNR=14						
H11A	Donnelly	34.76	82	⇑P	P	15 57 19.9	+0.1
	baz=35						
MSO	Missoula	34.92	77	P	P	15 57 21.2	0.0
	comp=Z,0.6nm,0.5s,mb3.8						
E13A	Victor	34.96	78	⇑P	P	15 57 21.4	-0.1
	baz=35						
SLMT	Seeley Lake	34.98	76	P	P	15 57 20.4	-1.3
	comp=Z,4.7nm,0.7s,mb4.5						
B15A	Bradely Ranch,	35.02	74	⇑P	P	15 57 21.7	-0.3
	baz=35						
D14A	Greenough	35.05	76	⇑P	P	15 57 22.3	0.0
	baz=35,SNR=5.7						
F13A	Darby	35.21	79	⇓P	P	15 57 23.8	+0.2
	baz=35,SNR=5.1						
I11A	Placerville	35.21	83	⇑P	P	15 57 23.9	+0.2
	baz=35,SNR=5.1						
C15A	Salmond Ranch,	35.25	75	⇑P	P	15 57 23.9	-0.1
	baz=35,SNR=14						
K10A	MacKenzie Ranc	35.28	85	⇓P	P	15 57 24.4	0.0
	baz=35,SNR=10						
CHMT	Chamberlain Mo	35.28	76	eP	P	15 57 23.6	-0.7
	comp=Z,2.4nm,0.6s,mb4.3						
E14A	Clinton	35.39	77	⇑P	P	15 57 25.1	-0.1
	baz=35						
B16A	M & M Farms, S	35.47	73	⇑P	P	15 57 25.8	-0.1
	baz=35						
HABR	Khabarovsk	35.52	287	ceP	P	15 57 24.9	-1.4
HABR						15 58 43.7	
HABR				e		15 59 53.0	
HABR				eS	S	16 03 01.1	+0.7
HABR				eSS	SS	16 05 21.0	-14
HABR				e		16 07 43.6	
HABR				pmax	pmax		
	comp=Z,52nm,1.4s,mb5.3						
HABR				pmax	pmax		
	comp=E,31nm,1.1s						
HABR				pmax	pmax		
	comp=N,20nm,2.0s						
HABR				MLR	MLR		
	comp=Z,322nm,19.0s,MS4.1						
H12A	Diamond D Ranc	35.54	81	⇓P	P	15 57 26.4	-0.2
	baz=35						
WCN	Washoe City	35.56	92	⇑P	P	15 57 26.8	0.0
	baz=35						
MFID	Camas Ranch	35.56	83	⇓P	P	15 57 26.6	-0.2
	baz=35						
G13A	Cobalt	35.63	80	⇑P	P	15 57 27.1	-0.1
	baz=35,SNR=7.4						
D15A	Lincoln	35.66	76	⇓P	P	15 57 27.4	-0.1
	baz=35						
C16A	Fuhringer Ranc	35.74	74	⇓P	P	15 57 27.8	-0.4
	baz=36,SNR=5.1						
F14A	Wisdom	35.77	78	⇓P	P	15 57 28.4	-0.1
	baz=36						
I12A	Atlanta	35.78	82	⇓P	P	15 57 29.0	+0.4
	baz=36,SNR=9.6						
K11A	Parker Ranch,	35.80	84	⇓P	P	15 57 28.9	+0.1
	baz=36,SNR=7.7						
E15A	Deer Lodge	35.89	77	⇓P	P	15 57 29.3	-0.2
	baz=36						
H13A	Challis	35.89	81	⇓P	P	15 57 29.3	-0.3
	baz=36						
L10A	Juniper Basin	35.92	86	⇑P	P	15 57 29.8	-0.1
	baz=36						
CMB	Columbia Colle	35.96	94	eP	P	15 57 30.5	+0.3
CMB				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
CMB	Columbia Colle	35.96	94	eP	P	15 57 30.5	+0.2
	comp=Z,9.0nm,0.9s,mb4.7						
RES	Resolute Bay	36.02	26	P	P	15 57 28.3	-2.1
	comp=Z,1.4nm,0.5s,mb4.2,baz=239,slow=4.5,SNR=5.7						
B17A	L&G Farms, Che	36.06	73	⇓P	P	15 57 30.7	-0.3
	baz=36						
D16A	Dana Ranch, Ca	36.24	75	⇑P	P	15 57 32.5	0.0
	baz=36						
L11A	Cat Creek Ranc	36.31	85	⇑P	P	15 57 33.8	+0.7
	baz=36,SNR=15						
I13A	Wildhorse Cree	36.33	81	⇓P	P	15 57 33.7	+0.4
	baz=36,SNR=11						
HLID	Hailey	36.34	82	eP	P	15 57 34.3	+0.8
	comp=Z,6.5nm,0.2s,mb5.2						
H14A	Leadore	36.40	80	⇑P	P	15 57 34.2	+0.3
	baz=36,SNR=7.1						
E16A	East Helena	36.41	76	⇓P	P	15 57 34.5	+0.5
	baz=36						
DLMT	Dillon	36.47	78	eP	P	15 57 34.9	+0.4
	comp=Z,9.5nm,1.1s,mb4.6						
K12A	Draper Farm, C	36.56	84	⇓P	P	15 57 35.3	0.0
	baz=36						
J13A	Cove Ranch, Pi	36.58	82	⇑P	P	15 57 35.8	+0.3
	baz=36,SNR=7.0						
MCMT	McKenzie Canyo	36.60	79	eP	P	15 57 35.0	-0.6
	comp=Z,4.7nm,0.7s,mb4.4						
B18A	Beardsley Farm	36.61	72	⇓P	P	15 57 35.5	-0.2
	baz=36						
G15A	Dillon	36.64	79	⇑P	P	15 57 35.7	-0.3
	baz=36						
D17A	Six Diamond Ra	36.69	75	⇓P	P	15 57 36.4	+0.1
	baz=36						
M11A	Holland Ranch,	36.71	86	⇑P	P	15 57 36.7	+0.1
	baz=36						
I14A	Mackay	36.72	81	⇑P	P	15 57 37.0	+0.4
	baz=36,SNR=11						
L12A	House Creek Ra	36.77	84	⇓P	P	15 57 37.1	0.0
	baz=37						
F16A	Kennard Place,	36.83	77	⇑P	P	15 57 37.4	-0.1
	baz=37						
H15A	Lima	36.84	79	⇓P	P	15 57 37.8	+0.2
	baz=37						
BOZ	Bozeman (W)	36.90	77	eP	P	15 57 37.9	-0.2
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.6						
BOZ	Bozeman (W)	36.90	77	eP	P	15 57 37.9	-0.3
	comp=Z,3.7nm,0.4s,mb4.6						
E17A	Martinsdale	36.94	76	⇑P	P	15 57 38.7	+0.3
	baz=37,SNR=6.7						
NVAR	Mina Array Bea	36.99	92	P	P	15 57 39.2	+0.2
	comp=Z,7.6nm,0.7s,mb4.6,baz=291,slow=8.4,SNR=48						
G16A	Moss Hill, Enn	37.02	78	⇓P	P	15 57 38.9	-0.3
	baz=37						
J14A	Carey	37.02	82	⇓P	P	15 57 39.7	+0.6
	baz=37,SNR=7.6						
K13A	Stover Farm, H	37.05	83	⇓P	P	15 57 40.0	+0.5
	baz=37						
KLR	Kul'dur	37.08	290	eP	P	15 57 34.0	-5.6
KLR				MLR	MLR		
	comp=E,700nm,17.0s						
KLR				MLR	MLR		
	comp=Z,900nm,17.0s,MS4.6						
D18A	Linhart Farms,	37.19	74	⇑P	P	15 57 40.8	+0.2
	baz=37						
M12A	Wells	37.26	85	⇓P	P	15 57 41.8	+0.5
	baz=37,SNR=6.8						
F17A	Fitzpatrick Pl	37.34	76	⇑P	P	15 57 41.9	0.0
	baz=37						
E18A	Harlowton	37.44	75	⇓P	P	15 57 42.8	+0.1
	baz=37						
N12A	Clover Valley,	37.51	86	⇑P	P	15 57 44.0	+0.6
	baz=37,SNR=9.7						
O11A	Cowboy Ranch,	37.56	88	⇓P	P	15 57 43.9	0.0
	baz=37						
H16A	Russell Place,	37.63	78	⇑P	P	15 57 44.5	+0.2
	baz=37,SNR=5.9						
J15A	Blackfoot	37.63	81	⇑P	P	15 57 44.8	+0.5
	baz=37						
F18A	Big Timber	37.90	76	⇑P	P	15 57 46.7	+0.1
	baz=38						
Q10A	Clear Creek Ra	37.91	90	⇑P	P	15 57 47.1	+0.3
	baz=38,SNR=12						
L14A	Malta	37.92	83	⇓P	P	15 57 47.4	+0.5
	baz=38,SNR=7.0						
K15A	Arbon	37.98	82	⇓P	P	15 57 47.8	+0.5
	baz=38						
O12A	Currie	38.04	87	⇓P	P	15 57 48.0	+0.1
	baz=38,SNR=17						
M14A	Sheep Mountain	38.16	84	⇑P	P	15 57 49.0	+0.1
	baz=38,SNR=5.3						
J16A	Bone	38.20	81	⇓P	P	15 57 49.4	+0.2
	baz=38,SNR=7.0						
H17A	Grant Village	38.20	78	⇑P	P	15 57 50.1	+0.9
	baz=38						
IMW	Indian Meadow	38.26	79	eP	P	15 57 50.1	+0.4
	comp=Z,7.7nm,0.8s,mb4.4						
RRI2	Red Ridge	38.33	80	eP	P	15 57 51.6	+1.3
	comp=Z,12nm,0.9s,mb4.6						
HVU	Hansel Valley	38.35	83	eP	P	15 57 50.6	+0.2
HVU				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.3						
HVU	Hansel Valley	38.35	83	eP	P	15 57 50.5	+0.1
	comp=Z,6.6nm,1.0s,mb4.3						
Q11A	Duckwater	38.35	89	⇓P	P	15 57 50.6	+0.1
	baz=38,SNR=6.0						
S10A	Tonopah Range,	38.35	91	⇓P	P	15 57 50.5	0.0
	baz=38,SNR=16						
PKM	Peak Mountain	38.36	98	⇑P	P	15 57 51.1	+0.5
	baz=38						
P12A	McGill	38.42	88	⇑P	P	15 57 51.4	+0.3
	baz=38,SNR=9.2						
L15A	Malad City	38.45	83	⇑P	P	15 57 51.3	0.0
	baz=38						
GRAC	Grapevine Rang	38.47	93	⇓P	P	15 57 51.5	+0.1
	baz=38,SNR=6.6						
TPAW	Teton Pass	38.48	80	eP	P	15 57 52.5	+1.0
	comp=Z,16nm,1.4s,mb4.6						
RLMT	Red Lodge	38.59	77	eP	P	15 57 53.0	+0.6
	comp=Z,16nm,0.9s,mb4.7						
REDW	Red Top Meadow	38.61	80	eP	P	15 57 53.6	+1.0
	comp=Z,18nm,1.4s,mb4.6						
LOHW	Long Hollow	38.62	80	eP	P	15 57 53.4	+0.8
ISA	Isabella	38.67	96	⇑P	P	15 57 52.6	-0.6
	baz=39,SNR=7.3						
ISA	Isabella	38.67	96	eP	P	15 57 52.6	-0.6
ISA				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
ISA	Isabella	38.67	96	eP	P	15 57 52.6	-0.5
	comp=Z,8.2nm,0.8s,mb4.5						
BGU	Big Grassy Mou	38.69	85	eP	P	15 57 54.0	+0.6
	comp=Z,21nm,1.4s,mb4.7						
R11A	Troy Canyon, C	38.70	90	⇓P	P	15 57 53.3	-0.2
	baz=39,SNR=12						
M15A	Larsen Ranch,	38.73	84	⇓P	P	15 57 53.6	-0.1
	baz=38						
P13A	Bates Ranch, G	38.98	87	⇓P	P	15 57 56.2	+0.4
	baz=39						
MPMC	Manual Prospec	39.01	94	⇑P	P	15 57 55.9	-0.1
	baz=39,SNR=8.7						
L16A	Fish Haven	39.03	82	⇑P	P	15 57 56.4	+0.2
	baz=39,SNR=5.7						
I18A	Diamond G Ranc	39.04	79	⇓P	P	15 57 56.4	+0.1
	baz=39						
S11A	Rachel	39.05	91	⇓P	P	15 57 56.9	+0.5
	baz=39						
FURC	Furnace Creek,	39.12	93	⇑P	P	15 57 56.8	-0.2
	baz=39,SNR=6.3						
HWUT	Hardware Ranch	39.18	83	eP	P	15 57 58.0	+0.6
	comp=Z,3.8nm,0.9s,mb4.1						
DUG	Dugway	39.26	85	eP	P	15 57 59.0	+0.9
DUG				pmax	pmax		
	comp=Z,25nm,1.5s,mb4.7						
DUG	Dugway	39.26	85	eP	P	15 57 59.0	+0.8
	comp=Z,25nm,1.5s,mb4.7						
LRMC	Laurel Mountai	39.27	95	⇓P	P	15 57 57.8	-0.4
	baz=39						
Q13A	Wheeler Ranch,	39.28	88	⇑P	P	15 57 58.5	+0.2
	baz=39						
R12A	Pony Springs,	39.31	89	⇑P	P	15 57 58.7	+0.1
	baz=39						
L17A	Cokeville	39.32	82	⇑P	P	15 57 58.7	+0.1
	baz=39,SNR=6.5						
P14A	Drum Mountains	39.47	86	⇓P	P	15 58 00.2	+0.3
	baz=39						
K18A	Toltan Ranch,	39.51	80	⇓P	P	15 57 59.9	-0.3
	baz=39						
S12A	Delamar Landin	39.62	90	⇑P	P	15 58 01.1	0.0
	baz=40						
T11A	Corn Creek, Al	39.63	91	⇑P	P	15 58 01.3	+0.1
	baz=40,SNR=9.5						
Q14A	Sevier Lake (B	39.72	87	⇑P	P	15 58 01.8	-0.1
	baz=40,SNR=8.9						
PDAR	Pinedale Array	39.73	80	P	P	15 58 01.6	-0.4
	comp=Z,7.4nm,0.9s,mb4.4,baz=308,slow=5.2,SNR=46						
R13A	O'Grain Ranch,	39.80	89	⇓P	P	15 58 02.6	0.0
	baz=40						
M17A	Scullys Gap (B	39.81	82	⇑P	P	15 58 02.6	-0.1
	baz=40						
JLU	Jordanelle	39.85	84	eP	P	15 58 03.7	+0.7
NLU	North Lily Min	39.86	85	eP	P	15 58 03.7	+0.6
	comp=Z,2.7nm,0.7s,mb4.1						
GSC	Goldstone	39.92	95	⇑P	P	15 58 03.3	-0.4
	baz=40,SNR=8.4						
GSC	Goldstone	39.92	95	eP	P	15 58 03.6	-0.1
GSC				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.8						
GSC	Goldstone	39.92	95	eP	P	15 58 03.6	-0.1
	comp=Z,15nm,0.8s,mb4.8						
DAU	Daniels Canyon	40.08	84	eP	P	15 58 06.0	+1.1
DAU				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.6						
DAU	Daniels Canyon	40.08	84	eP	P	15 58 06.0	+1.1
	comp=Z,13nm,1.0s,mb4.6						
BFSC	Mount Baldy Ra	40.12	96	⇑P	P	15 58 04.9	-0.4
	baz=40						
K19A	Absolon Red Bu	40.12	79	⇓P	P	15 58 05.0	-0.3
	baz=40,SNR=12						
M18A	Lyman	40.20	82	⇓P	P	15 58 05.9	0.0
	baz=40						
L19A	Farson	40.23	81	⇓P	P	15 58 06.2	0.0
	baz=40						
S13A	Holt Ranch, En	40.24	89	⇑P	P	15 58 06.7	+0.4
	baz=40						
ARUT	Antelope Range	40.37	89	eP	P	15 58 08.1	+0.7
ARUT				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.3						
ARUT	Antelope Range	40.37	89	eP	P	15 58 08.1	+0.7
	comp=Z,7.4nm,1.0s,mb4.4						
MAJO	Matsushiro	40.38	269	eP	P	15 58 06.8	-0.6
MAJO				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.0						
MAJO	Matsushiro	40.38	269	eP	P	15 58 06.8	-0.7
	comp=Z,29nm,1.0s,mb5.0						
MJAR	Matsushiro Arr	40.38	269	P	P	15 58 06.9	-0.5
	comp=Z,3.0nm,0.5s,mb4.3,baz=46,slow=6.7,SNR=17						
MAT	Matsushiro	40.38	269	P	P	15 58 06.7	-0.7
MAT				S	S	16 04 15.0	+0.8
K20A	Yellowstone Ra	40.52	79	⇓P	P	15 58 07.7	-0.8
	baz=40,SNR=10.0						
HEC	Hector,Ludlow	40.53	95	⇓P	P	15 58 08.3	-0.4
	baz=40						
CCUT	Cedar City	40.57	89	eP	P	15 58 10.0	+1.0
	comp=Z,7.8nm,1.2s,mb4.2						
T13A	Saint George	40.57	90	⇑P	P	15 58 09.2	+0.1
	baz=40						
MSU	Marysvale	40.69	87	eP	P	15 58 11.0	+1.0
MSU				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
MSU	Marysvale	40.69	87	eP	P	15 58 11.0	+1.0
	comp=Z,3.6nm,0.9s,mb4.0						
N18A	Larsen Ranch,	40.71	82	⇓P	P	15 58 09.8	-0.3
	baz=40						
L20A	Wamsutter	40.90	80	⇓P	P	15 58 12.0	+0.3
	baz=41						
P17A	Butcher Ranch,	40.97	85	⇑P	P	15 58 12.5	+0.2
	baz=41						
GMRC	Granite Mounta	40.97	94	⇓P	P	15 58 12.5	+0.1
	baz=41						
Q16A	Castle Valley	41.05	86	⇓P	P	15 58 13.4	+0.4
	baz=41						
T14A	Hurricane	41.05	89	⇑P	P	15 58 13.4	+0.4
	baz=41						
N19A	John Jarvie Ra	41.06	82	⇑P	P	15 58 12.8	-0.2
	baz=41						
R16A	Teasdale	41.25	87	⇑P	P	15 58 15.4	+0.7
	baz=41						
V13A	Grand Canyon W	41.28	92	⇓P	P	15 58 15.3	+0.3
	baz=41						
BELC	Belle Mtn. Jos	41.29	95	⇑P	P	15 58 14.3	-0.7
	baz=41						
M20A	Sweetwater, Wa	41.30	81	⇓P	P	15 58 14.6	-0.4
	baz=41						
SRU	San Rafael	41.32	85	eP	P	15 58 15.8	+0.6
SRU				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.5						
SRU	San Rafael	41.32	85	eP	P	15 58 15.8	+0.6
	comp=Z,10nm,0.9s,mb4.5						
U14A	Mt Trumbull	41.41	90	⇑P	P	15 58 16.2	+0.2
	baz=41						
O19A	Miners Draw (B	41.45	83	⇓P	P	15 58 15.7	-0.5
	baz=41,SNR=19						
L21A	Rawlins	41.51	79	⇑P	P	15 58 16.4	-0.3
	baz=41,SNR=8.9						
S16A	Weppner Ranch,	41.54	88	⇑P	P	15 58 17.0	0.0
	baz=41						
Q18A	Rafter H Ranch	41.57	85	⇑P	P	15 58 16.6	-0.6
	baz=41,SNR=12						
R17A	Hanksville Air	41.64	86	⇓P	P	15 58 17.7	-0.1
	baz=42,SNR=8.1						
N20A	Spence Gulch,	41.65	81	⇑P	P	15 58 17.6	-0.2
	baz=41,SNR=5.5						
IRM	Iron Mountain	41.70	94	⇑P	P	15 58 18.2	-0.1
	baz=42						
M21A	Separation Pea	41.73	80	⇓P	P	15 58 18.4	-0.1
	baz=42						
W13A	Hualapai Mount	41.84	92	⇓P	P	15 58 19.5	0.0
	baz=42						
BC3	Big Chuckawall	41.86	95	⇓P	P	15 58 19.0	-0.6
	baz=42						
P19A	Cripple Cowboy	41.94	83	⇓P	P	15 58 20.0	-0.3
	baz=42,SNR=15						
U15A	North Rim	41.95	90	⇓P	P	15 58 20.1	-0.2
	baz=42,SNR=9.2						
V14A	Boquillas Ranc	41.97	91	⇑P	P	15 58 20.5	0.0
	baz=42						
S17A	Black Ridge (B	42.08	87	⇓P	P	15 58 21.0	-0.4
	baz=42						
O20A	White River Ci	42.08	82	⇓P	P	15 58 20.8	-0.6
	baz=42,SNR=13						
N21A	Black Mountain	42.14	81	⇓P	P	15 58 21.3	-0.6
	baz=42,SNR=9.2						
R18A	Canyonlands Na	42.16	85	⇑P	P	15 58 21.3	-0.7
	baz=42,SNR=5.9						
Q19A	Hogan Spring (	42.19	84	⇑P	P	15 58 21.2	-1.0
	baz=42,SNR=6.0						
RSSD	Black Hills	42.25	75	eP	P	15 58 22.3	-0.4
RSSD				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.1						
RSSD	Black Hills	42.25	75	eP	P	15 58 22.3	-0.4
	comp=Z,4.2nm,0.8s,mb4.1						
W14A	Seligman	42.26	92	⇓P	P	15 58 22.9	0.0
	baz=42						
Y12C	Blythe	42.36	94	⇑P	P	15 58 23.2	-0.5
	baz=42						
P20A	De Beque	42.38	83	⇓P	P	15 58 23.2	-0.6
	baz=42						
V15A	Kaibab Nationa	42.41	90	⇓P	P	15 58 24.2	0.0
	baz=42,SNR=6.9						
T17A	Navajo Res., N	42.49	88	⇓P	P	15 58 24.2	-0.5
	baz=42						
O21A	Pagoda	42.50	82	⇓P	P	15 58 24.0	-0.8
	baz=42,SNR=8.6						
S18A	Hurst Farm, Bl	42.54	86	⇓P	P	15 58 24.5	-0.6
	baz=42,SNR=13						
R19A	Curley Farm, L	42.61	85	⇑P	P	15 58 25.6	-0.1
	baz=42						
GLA	Glamis	42.65	95	⇑P	P	15 58 25.7	-0.4
	baz=42						
N22A	Wattenberg Ran	42.76	80	⇓P	P	15 58 26.8	-0.1
	baz=42						
Q20A	Ridgley Place,	42.78	84	⇑P	P	15 58 26.8	-0.3
	baz=43						
X14A	Yava	42.87	92	⇑P	P	15 58 27.9	0.0
	baz=43,SNR=6.0						
P21A	Newcastle	42.94	82	⇑P	P	15 58 28.3	-0.1
	baz=43						
T18A	Mexican Hat	42.97	87	⇑P	P	15 58 27.7	-0.9
	baz=43,SNR=10						
S19A	Harvey Farm, M	43.03	86	⇓P	P	15 58 28.6	-0.5
	baz=43,SNR=7.6						
WUAZ	Wupatki	43.10	90	eP	P	15 58 30.3	+0.6
	comp=Z,7.8nm,0.9s,mb4.4						
PV01	Paradox Valley	43.13	85	eP	P	15 58 29.4	-0.6
	comp=Z,1μm,0.8s						
Y14A	Wickenburg	43.16	93	⇓P	P	15 58 30.3	+0.1
	baz=43						
R20A	Redvale	43.21	85	⇓P	P	15 58 30.1	-0.5
	baz=43						
X15A	Humboldt	43.26	92	⇓P	P	15 58 31.3	+0.3
	baz=43						
Z13A	Yuma Proving G	43.26	94	⇓P	P	15 58 30.9	-0.1
	baz=43						
W16A	Flagstaff	43.29	90	⇑P	P	15 58 31.6	+0.4
	baz=43						
Q21A	Lamborn Mesa,	43.29	83	⇓P	P	15 58 31.3	0.0
	baz=43						
V17A	Tonalea, Kykot	43.39	89	⇑P	P	15 58 32.5	+0.5
	baz=43						
ULM	Lac du Bonnet	43.52	63	LR	LR	16 17 04.4	
	comp=Z,423nm,19.7s,MS4.3,baz=272,slow=37						
Y15A	Casa Rosa Ranc	43.56	92	⇑P	P	15 58 33.4	0.0
	baz=43						
R21A	Cimarron	43.60	84	⇓P	P	15 58 33.6	-0.1
	baz=43						
CN2	Changchun	43.65	286	⇑P	P	15 58 33.2	-0.8
CN2				eS	S	16 05 02.6	+0.2
CN2				pmax	pmax		
	comp=Z,30nm,0.6s,mb5.2						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,300nm,15.0s,MS4.5						
CN2				LR	LR		
	comp=E,400nm,15.0s,MS4.5						
CN2				LR	LR		
	comp=Z,600nm,16.0s,MS4.6		

baz=44
V20A Brimhall 44.70 87 ⇓P **P 15 58 42.7 +0.1**
baz=44
U21A Nageezi 44.78 86 ⇓P **P 15 58 43.3 +0.1**
baz=45,SNR=13
T22A Edith 44.86 85 ⇑P **P 15 58 44.1 +0.3**
baz=45,SNR=8.2
W20A Ramah 45.12 88 ⇓P **P 15 58 46.3 +0.4**
baz=45
R24A Sanders Place, 45.17 82 ⇑P **P 15 58 46.4 +0.1**
baz=45
SDCO Great Sand Dun 45.24 83 *e*P **P 15 58 46.6 -0.3**
comp=Z,9.8nm,1.1s,mb4.5
Q25A Bedland, Calha 45.26 81 ⇑P **P 15 58 47.2 +0.3**
baz=45
U22A Llaves 45.30 85 ⇓P **P 15 58 47.7 +0.4**
baz=45
117A Oracle 45.48 92 ⇑P **P 15 58 49.1 +0.3**
baz=45
S24A Houchin Ranch, 45.49 83 ⇑P **P 15 58 48.9 +0.1**
baz=45,SNR=8.0
X20A Quemado 45.51 89 ⇓P **P 15 58 49.7 +0.7**
baz=45
V22A San Miguel Ran 45.57 86 ⇑P **P 15 58 49.3 -0.2**
baz=45
TUC Tucson 45.63 93 *e*P **P 15 58 50.1 +0.1**
TUC pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
TUC Tucson 45.63 93 *e*P **P 15 58 50.1 +0.1**
comp=Z,10.0nm,1.3s,mb4.6
U23A El Rito 45.74 85 ⇓P **P 15 58 50.9 +0.1**
baz=46,SNR=6.9
118A Homack Ranch, 45.90 92 ⇓P **P 15 58 52.6 +0.5**
baz=46
S25A Robets Cordova 45.95 82 ⇓P **P 15 58 52.4 -0.1**
baz=46,SNR=9.5
X21A Alamocita Cree 46.01 88 ⇓P **P 15 58 53.6 +0.6**
baz=46,SNR=12
Y20A Horse Springs, 46.01 89 ⇓P **P 15 58 53.8 +0.8**
baz=46
KSRS Korea Array 46.07 277 P **P 15 58 53.8 +0.4**
comp=Z,14nm,0.9s,mb4.9,baz=54,slow=7.2,SNR=32
KSRS LR LR 16 19 02.9
comp=Z,209nm,18.8s,MS4.1,baz=52,slow=37
V23A Ortiz Mt. (NFS 46.13 86 ⇑P **P 15 58 54.6 +0.7**
baz=46
119A Ashpeak Ranch, 46.22 91 ⇑P **P 15 58 55.4 +0.7**
baz=46
T25A Trinidad 46.30 83 ⇑P **P 15 58 55.4 +0.2**
baz=46,SNR=13
218A Dragoon 46.31 92 ⇓P **P 15 58 55.6 +0.2**
baz=46
Y21A Point of Rocks 46.38 89 ⇓P **P 15 58 56.1 +0.3**
baz=46
Z20A Nine Sixteen R 46.42 90 ⇓P **P 15 58 56.3 +0.1**
baz=46
LAZ Ladron 46.44 88 *e*P **P 15 58 56.7 +0.3**
comp=Z,17nm,1.8s,mb4.7
W23A Werner Place, 46.53 86 ⇓P **P 15 58 57.5 +0.4**
baz=46
318A Bisbee 46.72 93 ⇓P **P 15 58 58.6 0.0**
baz=47
219A White Tail Can 46.78 92 ⇑P **P 15 58 58.9 -0.1**
baz=47
U25A Circle Dot Ran 46.78 84 ⇑P **P 15 58 58.3 -0.7**
baz=47,SNR=14
120A U Bar Ranch, L 46.78 91 ⇓P **P 15 58 59.6 +0.5**
baz=47
ECSD EROS Data Cent 46.81 71 *e*P **P 15 58 56.8 -2.4**
comp=Z,4.4nm,0.6s,mb4.6
INCN Inchon 46.83 278 *e*P **P 15 59 00.4 +1.0**
comp=Z,38nm,1.0s,mb5.3
Y22A Socorro 46.86 88 ⇑P **P 15 58 59.6 0.0**
baz=47
BNM Barren Site 46.92 88 *e*P **P 15 59 00.2 +0.1**
comp=Z,18nm,1.4s,mb4.8
W24A Lazy 6 Ranch, 46.96 86 ⇑P **P 15 59 00.7 +0.3**
baz=47
V25A Rancho No Teng 47.02 84 ⇓P **P 15 59 01.1 +0.2**
baz=47
U26A Atchley Ranch, 47.19 83 ⇑P **P 15 59 01.5 -0.7**
baz=47,SNR=7.6
220A Playas Peak, P 47.29 91 ⇓P **P 15 59 02.7 -0.3**
baz=47,SNR=6.3
121A Cookes Peak, D 47.31 90 ⇑P **P 15 59 03.3 +0.1**
baz=47
Z22A Elephant Butte 47.32 89 ⇑P **P 15 59 03.3 +0.1**
baz=47
Y23A Lovelace Mesa, 47.42 87 ⇓P **P 15 59 03.8 -0.2**
baz=47,SNR=7.2
W25A X Bar L Ranch, 47.53 85 ⇑P **P 15 59 04.7 -0.1**
baz=47,SNR=12
V26A Tequesquite Ra 47.56 84 ⇓P **P 15 59 04.7 -0.3**
baz=47,SNR=6.6
320A Kipp Ranch, An 47.68 92 ⇓P **P 15 59 05.9 -0.2**
baz=48
Y24A Capitan 47.80 87 ⇓P **P 15 59 06.8 -0.1**
baz=48,SNR=8.7
W26A Owens Ranch, T 48.04 85 ⇑P **P 15 59 08.8 0.0**
baz=48
Z24A Sheeppen Canyo 48.25 87 ⇓P **P 15 59 10.2 -0.2**
baz=48,SNR=5.6
Y25A Mesa, Roswell 48.26 86 ⇑P **P 15 59 10.2 -0.3**
baz=48,SNR=7.3
X26A CR and CF Fran 48.37 85 ⇑P **P 15 59 11.1 -0.3**
baz=48,SNR=6.3
W27A Bowe Ranch, En 48.48 84 ⇑P **P 15 59 11.8 -0.4**
baz=48
FRB Frobisher Bay 48.54 36 P **P 15 59 11.2 -1.0**
comp=Z,4.5nm,0.5s,mb4.8
124A Stringfield Ra 48.62 88 ⇓P **P 15 59 13.2 -0.1**
baz=48,SNR=6.1
Z25A Roswell 48.68 87 ⇑P **P 15 59 13.8 0.0**
baz=48
224A Cornudas Mount 49.01 89 ⇑P **P 15 59 15.9 -0.4**
baz=49,SNR=7.0
Z26A Caprock 49.13 86 ⇑P **P 15 59 17.2 -0.1**
baz=49,SNR=13
125A Gardner Draw, 49.14 88 ⇑P **P 15 59 17.1 -0.2**
baz=49
Y27A Causey 49.22 85 ⇓P **P 15 59 17.5 -0.4**
baz=49,SNR=7.1
MNTX Cornudas Mount 49.36 89 *e*P **P 15 59 18.9 -0.1**
comp=Z,7.1nm,0.9s,mb4.7
MSTX Muleshoe 49.40 85 ⇑P **P 15 59 18.8 -0.4**
baz=49,SNR=6.4
225A Deer Hill, Car 49.42 88 ⇓P **P 15 59 19.3 -0.1**
baz=49,SNR=6.4
324A Moseley Ranch, 49.48 89 ⇑P **P 15 59 19.5 -0.4**
baz=49
126A Clayton Basin, 49.54 87 ⇑P **P 15 59 19.8 -0.5**
baz=49
Z27A Tatum 49.57 86 ⇓P **P 15 59 20.1 -0.5**
baz=49,SNR=7.3
DAG Danmarks Havn 49.63 9⇑*i*P **P 15 59 19.6 -0.9**
DAG pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
DAG Danmarks Havn 49.63 9⇑*i*P **P 15 59 19.6 -0.9**
comp=Z,5.6nm,0.5s,mb4.8
DAG Danmarks Havn 49.63 9⇑*i*P **P 15 59 19.6 -0.9**
comp=Z,5.6nm,0.5s,mb4.8
GDL2 Guadalupe Moun 49.63 88 P **P 15 59 20.3 -0.8**
comp=Z,4.0nm,0.9s,mb4.5
325A Bean Ranch, Si 49.84 89 ⇓P **P 15 59 21.7 -0.9**
baz=50,SNR=15
226A Malaga, Loving 49.89 88 ⇑P **P 15 59 22.8 -0.3**
baz=50,SNR=5.6
IRK Irkutsk 50.20 307 *e*P **P 15 59 23.6 -1.5**
IRK pmax pmax
comp=Z,30nm,1.8s,mb5.0
326A Caldwell Ranch 50.48 88 ⇑P **P 15 59 26.9 -0.7**
baz=50,SNR=5.5
SUMG Summit 50.52 17 *e*P **P 15 59 27.4 +0.1**
SUMG pmax pmax
comp=Z,30nm,0.8s
SUMG Summit 50.52 17 *e*P **P 15 59 27.4 +0.1**
comp=Z,30nm,0.8s,mb5.3
SUMG Summit 50.52 17 *i*P **P 15 59 27.8 +0.5**
comp=Z,22nm,0.7s,mb5.2
TLY Talaya 50.85 307 *e*P **P 15 59 29.6 -0.4**
TLY *e* 16 01 24.5
TLY *e*S **S 16 06 54.8 +10**
TLY pmax pmax
comp=Z,27nm,1.8s,mb4.9
TLY MLR MLR
comp=Z,425nm,18.0s,MS4.5
426A McDonald Obser 50.91 89 ⇑P **P 15 59 30.2 -0.6**
baz=51,SNR=5.1

328A Wristen Ranch, 51.15 87 ⇓P **P 15 59 32.0 -0.6**
baz=51,SNR=5.5
427A Hayter Ranch, 51.16 88 ⇓P **P 15 59 32.0 -0.7**
baz=51
526A Mary Lane Ranc 51.30 90 ⇓P **P 15 59 33.3 -0.3**
baz=51,SNR=8.7
WMOK Wichita Mounta 51.30 81 *e*P **P 15 59 32.3 -1.4**
WMOK pmax pmax
comp=Z,43nm,1.0s,mb5.3
WMOK Wichita Mounta 51.30 81 *e*P **P 15 59 32.3 -1.3**
comp=Z,43nm,1.0s,mb5.3
BJI Beijing 51.41 288 P **P 15 59 34.5 +0.1**
BJI pmax pmax
comp=Z,15nm,0.8s,mb5.0
BJI pmax pmax
comp=Z,73nm,5.3s
BJI LR LR
comp=N,590nm,17.6s,MS4.8
BJI LR LR
comp=E,550nm,17.2s,MS4.8
BJI LR LR
comp=Z,460nm,17.9s,MS4.5
ULN Ulaanbaatar 51.49 301 *e*P **P 15 59 34.4 -0.5**
ULN pmax pmax
comp=Z,7.0nm,0.4s,mb4.9
ULN Ulaanbaatar 51.49 301 *e*P **P 15 59 34.4 -0.5**
comp=Z,7.3nm,0.4s,mb5.0
527A Woodward Ranch 51.53 89 ⇑P **P 15 59 34.8 -0.6**
baz=51,SNR=7.5
626A Big Bend Ranch 51.63 90 ⇑P **P 15 59 35.7 -0.4**
baz=52,SNR=9.9
428A Kincaid Ranch, 51.69 88 ⇓P **P 15 59 35.9 -0.7**
baz=52,SNR=9.4
SONM Songino Array 51.85 301 P **P 15 59 36.5 -1.0**
comp=Z,5.3nm,0.6s,mb4.7,baz=56,slow=5.6,SNR=38
SONM PcP PcP 16 00 49.3 -1.0
comp=Z,1.6nm,0.5s,baz=44,slow=2.4,SNR=4.1
528A Cox Ranch, San 52.02 88 ⇓P **P 15 59 38.7 -0.4**
baz=52
TXAR Lajitas Array 52.07 90 P **P 15 59 36.9 -2.6**
comp=Z,8.0nm,0.9s,mb4.6,baz=308,slow=6.2,SNR=44
MOY Mondy 52.15 308 *e*P **P 15 59 39.7 0.0**
MOY pmax pmax
comp=Z,23nm,1.8s,mb4.8
627A Terlingua Ranc 52.16 90 ⇑P **P 15 59 39.4 -0.7**
baz=52,SNR=9.9
HHC Hu-ho-hao-te 53.53 292 *e*P **P 15 59 49.3 -0.8**
HHC PcP PcP 16 00 57.0 +0.3
HHC PP PP 16 01 51.1 +0.7
HHC ScP ScP 16 04 54.5 +1.5
HHC S **S 16 07 19.7 -2.0**
HHC ScS ScS 16 09 36.8 -1.3
HHC SS SS 16 10 59.3 -2.3
HHC pmax pmax
comp=Z,14nm,0.7s,mb5.0
HHC pmax pmax
comp=Z,200nm,7.2s
HHC LR LR
comp=N,450nm,17.0s,MS4.8
HHC LR LR
comp=E,510nm,17.0s,MS4.8
HHC LR LR
comp=Z,510nm,17.3s,MS4.6
JCT Junction City 53.62 86 *e*P **P 15 59 49.6 -1.3**
JCT pmax pmax
comp=Z,28nm,1.3s,mb5.0
JCT Junction City 53.62 86 *e*P **P 15 59 49.6 -1.3**
comp=Z,28nm,1.3s,mb5.0
MIAR Mount Ida 54.57 78 *e*P **P 15 59 56.9 -0.9**
MIAR pmax pmax
comp=Z,18nm,1.2s,mb5.0
MIAR Mount Ida 54.57 78 *e*P **P 15 59 56.9 -0.9**
comp=Z,18nm,1.2s,mb5.0
BTO Baotou 54.57 292 *e*P **P 15 59 57.7 0.0**
SCO Scoresbysund 55.01 13 *i*P **P 15 59 59.6 -0.9**
SCO pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
SCO Scoresbysund 55.01 13 *i*P **P 15 59 59.6 -0.9**
comp=Z,7.3nm,0.7s,mb4.8
NJ2 Nanjing 55.21 279 *e*P **P 16 00 03.4 +1.0**
NJ2 pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
WVT Waverly 56.87 72 *e*P **P 16 00 13.2 -1.1**
WVT pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
WVT Waverly 56.87 72 *e*P **P 16 00 13.2 -1.1**
comp=Z,3.7nm,0.6s,mb4.6
KEV Kevo 57.62 354 *e*P **P 16 00 16.3 -2.7**
KEV pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
KEV Kevo 57.62 354 *e*P **P 16 00 16.3 -2.7**
comp=Z,9.9nm,0.6s,mb5.0
KEV Kevo 57.62 354 *e*p **P 16 00 16.3 -2.7**
comp=Z,9.9nm,0.6s,mb5.0
NVS Novosibirsk 57.83 320⇑*i*P **P 16 00 18.8 -1.9**
NVS pmax pmax
comp=Z,20nm,1.7s,mb4.9
NVS pmax pmax
comp=N,13nm,1.6s
NVS pmax pmax
comp=E,9.0nm,1.4s
ZAA0 Zalesovo Array 57.84 318 *e*P **P 16 00 20.1 -0.7**
ZALV Zalesovo Beam 57.84 318 P **P 16 00 20.1 -0.7**
comp=E,2.3nm,0.5s,mb4.5,baz=45,slow=6.5,SNR=15
ZALV PcP PcP 16 01 13.3 +0.2
comp=E,1.2nm,0.5s,baz=50,slow=2.9,SNR=4.5
ZALV LR LR 16 26 49.6
comp=E,215nm,18.6s,MS4.3,baz=224,slow=38
ZALV Zalesovo Beam 57.84 318 P **P 16 00 20.1 -0.7**
ZALV 16 01 13.3
ZALV Zalesovo Beam 57.84 318 P **P 16 00 20.1 -0.7**
ZALV PcP PcP 16 01 13.3 +0.2
ZALV LR LR 16 26 49.6
ARCES ARCESS Array B 57.93 354 P **P 16 00 19.8 -1.5**
comp=E,4.6nm,0.7s,mb4.6,baz=9.7,slow=10.0,SNR=20
ARE0 ARCESS Array S 57.93 354 *e*P **P 16 00 20.6 -0.6**
LVZ Lovozero 58.78 350 *e*P **P 16 00 26.3 -0.9**
LVZ pmax pmax
comp=Z,14nm,1.0s,mb5.0
WHN Wuhan 58.99 281 P **P 16 00 27.3 -1.9**
WHN S **S 16 08 37.7 +3.2**
WHN LR LR
comp=N,380nm,14.4s,MS4.8
WHN LR LR
comp=E,270nm,11.0s,MS4.8
WHN LR LR
comp=Z,440nm,19.4s
XAN Xi'an 59.73 287 P **P 16 00 33.2 -1.1**
XAN pP pP 16 00 43.5 +2.7
XAN sP sP 16 00 47.0 +3.7
XAN pmax pmax
comp=Z,6.0nm,1.5s,mb4.4
XAN pmax pmax
comp=Z,26nm,6.4s
XAN LR LR
comp=N,49nm,18.6s,MS4.2
XAN LR LR
comp=E,170nm,23.0s,MS4.2
XAN LR LR
comp=Z,100nm,24.4s,MS3.9
GTA Gaotai 61.05 298 *e*P **P 16 00 42.7 -0.5**
GTA pP pP 16 00 47.6 -2.2
GTA sP sP 16 00 50.4 -1.9
GTA PP PP 16 03 00.5 +3.1
GTA S **S 16 08 59.7 -1.0**
GTA sS sS 16 09 08.9 -2.6
GTA pmax pmax
comp=Z,17nm,1.5s,mb5.0
GTA pmax pmax
comp=Z,100nm,5.4s
GTA LR LR
comp=N,310nm,18.7s,MS4.8
GTA LR LR
comp=E,620nm,17.5s,MS4.8
GTA LR LR
comp=Z,510nm,19.0s,MS4.7
LZH Lanzhou 61.19 293 *e*P **P 16 00 44.9 +0.7**
LZH pP pP 16 00 49.4 -1.4
LZH sP sP 16 00 53.0 -0.3
LZH PcP PcP 16 01 28.9 +2.1
LZH PP PP 16 03 00.0 +1.3
LZH *e*S **S 16 08 58.1 -4.5**
LZH sS sS 16 09 05.6 -7.8
LZH SS SS 16 12 56.7 -5.4
LZH pmax pmax
comp=Z,26nm,1.2s,mb5.2

LZH pmax pmax
comp=Z,170nm,5.8s
LZH LR LR
comp=N,540nm,14.9s
LZH LR LR
comp=Z,750nm,16.0s,MS4.9
SOKR Solikamsk 62.59 336*d i*P **P 16 00 53.4 +0.1**
SOKR pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
SOKR MLR MLR
comp=Z,430nm,17.0s,MS4.7
KURK Kurchatov 62.78 319 P **P 16 00 54.7 +0.1**
comp=Z,3.2nm,0.5s,mb4.7,baz=45,slow=7.5,SNR=20
KURK PP PP 16 03 16.4 +4.2
comp=Z,0.7nm,0.7s,baz=44,slow=8.9,SNR=3.5
KURK Kurchatov 62.78 319*c i*P **P 16 00 53.6 -1.0**
KURK pmax pmax
comp=Z,18nm,1.7s,mb4.9
KURK Kurchatov 62.78 319 *e*P **P 16 00 53.7 -0.9**
comp=Z,14nm,1.3s,mb4.9
SVE Sverdlovsk 63.95 333⇑*e*P **P 16 01 02.7 +0.4**
SVE pmax pmax
comp=Z,37nm,1.4s,mb5.2
SVE MLR MLR
comp=Z,398nm,17.0s,MS4.7
JOF Joensuu 63.97 350 *e*P **P 16 01 01.1 -1.2**
JOF Joensuu 63.97 350 *e*p **P 16 01 01.1 -1.2**
comp=Z,8.1nm,0.5s,mb5.0
WMQ Urumqi 64.03 309 P **P 16 01 03.0 0.0**
WMQ pP pP 16 01 07.6 -2.0
WMQ sP sP 16 01 10.0 -2.1
WMQ PcP PcP 16 01 38.7 +0.5
WMQ PP PP 16 03 25.3 +1.9
WMQ *e*S **S 16 09 36.6 -1.4**
WMQ ScS ScS 16 10 52.3 -3.1
WMQ SS SS 16 13 45.5 -0.5
WMQ pmax pmax
comp=Z,23nm,0.6s,mb5.4
WMQ pmax pmax
comp=Z,37nm,10.0s
WMQ LR LR
comp=N,520nm,20.0s,MS4.8
WMQ LR LR
comp=E,260nm,19.7s,MS4.8
WMQ LR LR
comp=Z,330nm,17.0s,MS4.6
BVAR Borovoye Array 64.05 325 P **P 16 01 03.0 0.0**
comp=Z,15nm,0.5s,mb5.3,baz=56,slow=6.1,SNR=62
BRVK Borovoye 64.06 325*c i*P **P 16 01 03.0 -0.1**
BRVK pmax pmax
comp=Z,33nm,1.7s,mb5.1
BRVK Borovoye 64.06 325 *e*P **P 16 01 03.1 0.0**
comp=Z,8.7nm,0.4s,mb5.1
MK31 Makanchi Array 64.25 314 *e*P **P 16 01 03.4 -1.1**
MKAR Makanchi Array 64.25 314 P **P 16 01 03.5 -1.0**
comp=Z,3.2nm,0.7s,mb4.4,baz=52,slow=7.9,SNR=20
MKAR LR LR 16 30 21.6
comp=Z,343nm,18.0s,MS4.6,baz=38,slow=37
ARU Arti 64.87 333*c i*P **P 16 01 07.9 -0.4**
ARU *e* 16 03 31.3
ARU S **S 16 09 50.4 +2.4**
ARU SS SS 16 13 57.2 -1.3
ARU pmax pmax
comp=Z,37nm,1.7s,mb5.1
ARU Arti 64.87 333 *e*P **P 16 01 07.7 -0.7**
comp=Z,40nm,1.1s,mb5.4
CD2 Chengdu 65.00 289 P **P 16 01 10.7 +1.1**
CD2 PcP PcP 16 01 44.1 +1.7
CD2 PP PP 16 03 35.2 +2.9
CD2 S **S 16 09 51.0 +0.7**
CD2 SKS 16 11 02.7
CD2 SS SS 16 14 03.8 +2.1
CD2 pmax pmax
comp=Z,40nm,0.8s,mb5.5
CD2 pmax pmax
comp=Z,160nm,4.5s
CD2 LR LR
comp=N,450nm,15.5s
CD2 LR LR
comp=Z,420nm,17.2s,MS4.7
TAOE Nuku Hiva Isla 65.62 149 *e*LR LR 16 20 58.2
comp=Z,293nm,25.2s
FINES FINESS Array B 65.90 353 P **P 16 01 14.1 -0.8**
comp=Z,10nm,0.5s,mb5.1,baz=19,slow=8.4,SNR=28
FINES LR LR 16 31 57.4
comp=Z,173nm,19.4s,MS4.3,baz=201,slow=38
GYA Guiyang 66.58 283⇑*i*P **P 16 01 19.3 -0.5**
GYA PcP PcP 16 01 50.0 +1.0
GYA PP PP 16 03 48.7 +2.5
GYA ScP 16 05 53.2
GYA S S 16 10 10.8 +1.1
GYA SKS 16 11 14.3
GYA SS SS 16 14 28.0 +1.5
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,110nm,5.4s
GYA LR LR
comp=N,460nm,18.0s,MS4.9
GYA LR LR
comp=E,450nm,19.4s,MS4.9
GYA LR LR
comp=Z,480nm,18.9s,MS4.7
NB2 NORSAR Subarra 66.88 0 P **P 16 01 20.5 -0.7**
comp=Z,7.4nm,0.6s,mb4.9,baz=0.5,slow=6.2
NOA NORSAR Array B 66.88 0 P **P 16 01 20.8 -0.4**
comp=Z,5.6nm,0.5s,mb4.8,baz=0.2,slow=6.3,SNR=39
NOA LR LR 16 32 39.9
comp=Z,111nm,18.6s,MS4.1,baz=0.0,slow=38
TGY Tagaytay City 67.25 264 P **P 16 01 24.5 +0.3**
comp=Z,55nm,0.6s,mb5.7,baz=347,slow=21,SNR=4.9
TGY Tagaytay City 67.25 264 P **P 16 01 24.5 +0.3**
KONO Kongsberg 68.26 1 *e*P **P 16 01 29.4 -0.5**
KMI Kunming 69.91 285 P **P 16 01 41.8 +1.1**
KMI pP pP 16 01 43.3 -4.0
KMI PcP PcP 16 02 04.9 +1.9
KMI PP PP 16 04 17.8 +2.7
KMI S S 16 10 49.6 +0.2
KMI SS SS 16 15 19.5 +1.5
KMI pmax pmax
comp=Z,14nm,1.8s,mb4.6
KMI pmax pmax
comp=Z,190nm,3.5s
KMI LR LR
comp=N,190nm,15.4s,MS4.7
KMI LR LR
comp=E,250nm,13.7s,MS4.7
KMI LR LR
comp=Z,250nm,16.0s,MS4.6
TKM2 Tokmak 2 70.23 316 P **P 16 01 43.0 +0.6**
SNR=10
QIZ Qiongzhong 70.25 276 P **P 16 01 43.2 +0.4**
QIZ S S 16 10 59.7 +6.2
QIZ LR LR
comp=Z,160nm,18.8s,MS4.3
AKTK Aktyubinsk 70.30 331 P **P 16 01 42.5 -0.2**
AKTO Aktyubinsk 70.30 331 P **P 16 01 42.5 -0.2**
comp=Z,6.9nm,0.6s,mb4.8,baz=48,slow=6.3,SNR=30
USP Ospenovka 70.41 316 P **P 16 01 43.7 +0.2**
SNR=12
ULHL Ulahol 70.50 315 P **P 16 01 44.3 +0.3**
SNR=5.8
CHMS Chumysh 70.53 316 P **P 16 01 44.4 +0.2**
SNR=5.9
FRU Bishkek 70.72 316 *e*P **P 16 01 46.0 +0.6**
FRU pmax pmax
comp=Z,50nm,1.8s,mb5.1
KBK Karagaybulak 70.72 316 P **P 16 01 45.9 +0.5**
SNR=5.6
OBN Obninsk 70.86 345*oe*P **P 16 01 44.9 -1.1**
OBN *e* 16 01 53.8
OBN 16 02 06.0
OBN *e* 16 11 00.4
OBN pmax pmax
comp=Z,35nm,1.7s,mb5.0
AAK Ala-Archa 70.93 316 P **P 16 01 46.9 +0.2**
comp=Z,2.2nm,0.3s,mb4.5,baz=108,slow=1.6,SNR=14
KZA Kyzart 71.06 315 P **P 16 01 48.2 +0.7**
SNR=8.2
EKS2 Erkin-Say 71.21 317 P **P 16 01 48.9 +0.5**
SNR=9.9
PPT Papeete 71.57 161 *e*LR LR 16 23 20.6
comp=Z,236nm,24.8s
PPT Papeete 71.57 161 LR LR 16 30 22.1
comp=Z,154nm,18.2s,MS4.3,baz=356,slow=34
AML Almayashu 71.69 316 P **P 16 01 52.6 +1.3**

SNR=5.2
KSH **Kashi** 72.83 313 P P 16 02 01.4 +3.3
KSH pP pP 16 02 06.5 +1.7
KSH sP sP 16 02 08.4 +1.1
KSH PcP PcP 16 02 17.6 +2.4
KSH PP PP 16 04 46.3 +6.6
KSH S S 16 11 27.4 +4.5
KSH sS sS 16 11 36.7 +2.8
KSH SKS 16 12 02.4
KSH ScS ScS 16 12 06.2 +1.8
KSH pmax pmax
comp=Z,32nm,1.2s,mb5.1
KSH LR LR
comp=N,140nm,9.2s
KSH LR LR
comp=E,190nm,11.9s
KSH LR LR
comp=Z,510nm,17.1s
LSA **Lhasa** 73.03 297 P P 16 02 00.5 +1.0
SUW **Suwalki** 73.50 353 eP P 16 02 01.8 0.0
BSEG **Bad Segeberg** 74.00 1 eP P 16 02 04.7 -0.1
comp=Z,40nm,1.7s,mb5.1
VSR **Storozhevoye** 74.17 342 eP P 16 02 05.0 -0.8
VSR pmax pmax
comp=Z,8.0nm,0.4s,mb5.0
VSR pmax pmax
comp=N,3.0nm,0.3s
VSR pmax pmax
comp=E,2.0nm,0.3s
VSR MLR MLR
comp=Z,280nm,16.0s,MS4.7
VSR MLR MLR
comp=N,130nm,19.0s,MS4.4
VSR MLR MLR
comp=E,140nm,16.0s,MS4.4
NRDL **Niedersach Rie** 75.44 1 eP P 16 02 12.9 -0.2
comp=Z,16nm,1.4s,mb4.8
RUE **Ruedersdorf** 75.45 359 eP P 16 02 13.0 -0.2
comp=Z,32nm,0.5s,mb5.5
IBBN **Ibbenburen** 75.58 3 eP P 16 02 14.1 +0.1
comp=Z,29nm,1.2s,mb5.1
SHL **Shillong** 75.84 293 ePKP P 16 02 15.2 -0.6
WTSB **Winterswijk** 75.90 3 eP P 16 02 15.7 0.0
comp=Z,28nm,1.7s,mb4.9
CLZ **Clausthal** 76.10 1 eP P 16 02 16.9 0.0
comp=Z,44nm,1.7s,mb5.1
AKASG **Malin Array Be** 76.19 349 P P 16 02 16.2 -1.2
comp=Z,6.1nm,0.5s,mb4.8,baz=15,slow=6.0,SNR=23
AKASG **Malin Array Be** 76.19 349 P P 16 02 16.2 -1.2
AKBB **Malin Array Si** 76.19 349 eP P 16 02 16.0 -1.4
KIEV **Kiev** 76.20 349 eP P 16 02 16.1 -1.4
KIEV pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
KIEV **Kiev** 76.20 349 eP P 16 02 16.1 -1.3
comp=Z,9.5nm,0.6s,mb4.9
BUG **Bochum--Univer** 76.44 3 eP P 16 02 19.1 +0.3
comp=Z,42nm,1.5s,mb5.2
CLL **Collm** 76.63 359 eP P 16 02 19.3 -0.6
comp=Z,18nm,1.4s,mb4.8
CLL **Collm** 76.63 359 eP P 16 02 19.0 -0.9
CLL e 16 02 33.0
CLL **Collm** 76.63 359 eP P 16 02 19.0 -0.9
comp=Z,18nm,1.4s,mb4.8
CLL esP sP 16 02 33.0 +3.9
CLL eSS SS 16 17 18.0 +19
CLL Lm 16 43 00.0
comp=N,100nm,18.9s
CLL Lm 16 43 00.0
comp=E,100nm,18.8s
TAPN **Taplejung** 76.75 298 eP P 16 02 21.0 0.0
comp=E,29nm,0.5s,mb5.4
CHTO **Chiang Mai** 76.99 284 eP P 16 02 22.3 -0.1
CHTO pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
CHTO **Chiang Mai** 76.99 284 eP P 16 02 22.3 -0.1
comp=Z,8.6nm,1.1s,mb4.6
BRG **Berggiesshubel** 77.06 359 eP P 16 02 21.7 -0.6
comp=Z,16nm,1.3s,mb4.8
BRG **Berggiesshubel** 77.06 359 i P P 16 02 22.4 0.0
comp=Z,16nm,1.3s,mb4.8
BRG **Berggiesshubel** 77.06 359 i P P 16 02 22.4 +0.1
BRG pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
HGN **Heimansgroeve** 77.07 4 eP P 16 02 21.8 -0.6
comp=Z,26nm,1.9s,mb4.8
UBBA **Unterbreizbach** 77.12 1 eP P 16 02 23.0 +0.3
comp=Z,19nm,1.6s,mb4.8
TBI **Tubuai** 77.22 162 eLR LR 16 25 25.9
comp=Z,206nm,34.2s
MEM **Membach** 77.22 4 P P 16 02 24.5 +1.2
comp=Z,9.4nm,1.4s,mb4.5
SNF **Seneffe** 77.25 5 P P 16 02 24.8 +1.4
CM31 **Chiang Mai Arr** 77.26 284 eP P 16 02 24.2 +0.2
comp=Z,5.0nm,0.6s,mb4.6
CMAR **Chiang Mai Arr** 77.26 284 P P 16 02 23.9 0.0
comp=Z,9.0nm,0.9s,mb4.7,baz=24,slow=5.4,SNR=48
CMAR LR LR 16 39 38.1
comp=Z,186nm,19.2s,MS4.4,baz=218,slow=38
GUN **Gumba** 77.29 299 eP P 16 02 24.1 +0.1
comp=Z,31nm,0.5s,mb5.5
MOX **Moxa** 77.30 0 eP P 16 02 24.0 +0.3
comp=Z,32nm,1.6s,mb5.0
MOX **Moxa** 77.30 0 eP P 16 02 23.3 -0.4
comp=Z,26nm,1.5s,mb4.9
ODAN **Odare** 77.31 297 eP P 16 02 23.9 -0.2
comp=Z,10.0nm,0.4s,mb5.1
JIRN **Jiri** 77.32 299 eP P 16 02 24.1 -0.1
comp=Z,26nm,0.5s,mb5.4
UPC **Upice** 77.38 357 eP P 16 02 24.6 +0.5
BCLA **Clavier** 77.38 4 P P 16 02 24.9 +0.8
comp=Z,14nm,1.8s,mb4.6
PVCC **Panska Ves** 77.39 358 eP P 16 02 25.7 +1.5
PVCC AMS AMS 16 42 30.0
comp=Z,200nm,13.1s
DZM **Mont Dzumac** 77.40 204 eLR LR 16 26 17.1
comp=Z,180nm,27.4s
WERD **Werda** 77.50 360 eP P 16 02 24.8 0.0
comp=Z,21nm,1.6s,mb4.8
OJC **Ojcow** 77.50 355 eP P 16 02 22.8 -2.0
DPC **Dobruska-Polom** 77.52 357 eP P 16 02 25.6 +0.6
DPC epP pP 16 02 37.3 +5.6
DPC **Dobruska-Polom** 77.52 357 eP P 16 02 25.6 +0.6
DPC epP pP 16 02 37.3 +5.6
DPC AMS AMS 16 44 40.0
comp=Z,200nm,15.0s
TANN **Tannenbergstha** 77.53 360 eP P 16 02 25.0 0.0
comp=Z,26nm,1.7s,mb4.9
GUNZ **Gunzen** 77.58 360 eP P 16 02 25.5 +0.2
comp=Z,30nm,1.8s,mb4.9
LVV **L'vov** 77.60 352 i P P 16 02 24.4 -1.0
RAMN **Ramite** 77.66 298 eP P 16 02 25.8 -0.3
comp=Z,57nm,0.7s,mb5.6
DOU **Dourbes** 77.67 5 P P 16 02 26.1 +0.3
GIVF **Givet** 77.68 5 eP P 16 02 25.8 0.0
TNS **Taunus Mts** 77.69 2 eP P 16 02 25.8 -0.1
comp=Z,28nm,1.4s,mb5.0
BAIF **Baives** 77.69 5 eP P 16 02 26.1 +0.2
comp=Z,29nm,1.1s,mb4.8
BAIF **Baives** 77.69 5 eP P 16 02 26.1 +0.2
BAIF pmax pmax
comp=Z,14nm,1.1s,mb4.8
BAIF **Baives** 77.69 5 eP P 16 02 26.1 +0.2
comp=Z,14nm,1.1s,mb4.8
KKN **Kakani** 77.70 300 eP P 16 02 25.9 -0.5
comp=Z,14nm,0.4s,mb5.2
NKC **Novy Kostel** 77.71 360 eP P 16 02 27.5 +1.5
NKC AMS AMS 16 48 00.0
PKI **Pulchoki** 77.81 299 eP P 16 02 26.4 -0.5
PKIN **Phulchoki** 77.81 299 eP P 16 02 26.6 -0.4
comp=Z,55nm,1.2s,mb5.3
KWP **Kalwaria Pacla** 77.89 353 eP P 16 02 27.8 +0.7
PRU **Pruhonice** 77.93 358 eP P 16 02 28.8 +1.6
PRU AMS AMS 16 46 00.0
comp=Z,200nm,17.7s
DMN **Daman** 77.94 300 eP P 16 02 27.1 -0.6
OKC **Ostrava-Krasne** 77.97 356 eP P 16 02 28.1 +0.7
OKC epP pP 16 02 38.3 +4.1
OKC **Ostrava-Krasne** 77.97 356 eP P 16 02 28.1 +0.7
OKC epP pP 16 02 38.3 +4.1
OKC AMS AMS 16 46 20.0
comp=Z,300nm,14.0s
MORC **Moravsky Berou** 78.05 356 P P 16 02 29.0 +1.1
MORC **Moravsky Berou** 78.05 356 eP P 16 02 27.7 -0.2
comp=Z,27nm,1.4s,mb5.0
MORC **Moravsky Berou** 78.05 356 ⇓i P P 16 02 29.0 +1.1
WLF **Walferdange** 78.17 4 P P 16 02 30.3 +1.7
comp=Z,17nm,1.9s,mb4.6
WLF **Walferdange** 78.17 4 eP P 16 02 28.9 +0.3
comp=Z,26nm,1.4s,mb5.0
STHS **Stebnicka Huta** 78.21 354 eP P 16 02 30.4 +1.6
STHS pmax pmax
comp=Z,15nm,1.3s,mb4.8
STHS **Stebnicka Huta** 78.21 354 eP P 16 02 30.4 +1.6
comp=Z,15nm,1.3s,mb4.8
STHS **Stebnicka Huta** 78.21 354 eP P 16 02 30.4 +1.6
GRF **Grafenberg Arr** 78.26 0 eP P 16 02 29.4 +0.4
comp=Z,64nm,1.5s,mb5.3
GRF **Grafenberg Arr** 78.26 0 eP P 16 02 29.4 +0.4
GRF pmax pmax
comp=Z,64nm,1.5s,mb5.3
VRAC **Vranov** 78.56 357 P P 16 02 31.4 +0.7
VRAC **Vranov** 78.56 357 ⇓i P P 16 02 31.4 +0.7
TREC **Trest** 78.60 357 eP P 16 02 31.5 +0.5
TREC MLR MLR
comp=Z,300nm,10.7s,MS4.9
TREC **Trest** 78.60 357 eP P 16 02 31.5 +0.5
TREC AMS AMS 16 45 10.0
comp=Z,300nm,10.7s
FLN **La Foliniere** 78.65 8 eP P 16 02 30.8 -0.4
FLN eMLR MLR
comp=Z,222nm,18.0s,MS4.2
FLN **La Foliniere** 78.65 8 eP P 16 02 30.8 -0.4
FLN LR LR
comp=Z,220nm,18.0s,MS4.5
CRVS **Cervenica-Dubn** 78.71 353 eP P 16 02 32.1 +0.5
CRVS pmax pmax
comp=Z,22nm,1.5s,mb4.9
CRVS **Cervenica-Dubn** 78.71 353 eP P 16 02 32.1 +0.5
comp=Z,22nm,1.5s,mb4.9
CRVS **Cervenica-Dubn** 78.71 353 eP P 16 02 32.1 +0.5
ROSF **Rostrenen** 78.80 10 eP P 16 02 32.2 +0.1
WET **Wettzell** 78.80 359 eP P 16 02 32.4 +0.3
comp=Z,20nm,1.5s,mb4.8
KHC **Kasperske Hory** 78.81 359 eP P 16 02 33.2 +1.1
KHC e*PP pP 16 02 43.9 +5.1
KHC MLR MLR
comp=Z,300nm,21.9s,MS4.6
KHC **Kasperske Hory** 78.81 359 eP P 16 02 32.4 +0.3
comp=Z,30nm,1.4s,mb5.0
KHC **Kasperske Hory** 78.81 359 eP P 16 02 33.2 +1.1
KHC epP pP 16 02 43.9 +5.1
KHC AMS AMS 16 46 40.0
comp=Z,300nm,21.9s
LDF **La Druitiere** 78.85 8 eP P 16 02 31.8 -0.5
comp=Z,13nm,0.7s,mb4.7
LDF **La Druitiere** 78.85 8 eP P 16 02 31.8 -0.5
LDF pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
LDF **La Druitiere** 78.85 8 eP P 16 02 31.8 -0.5
comp=Z,6.7nm,0.6s,mb4.8
UZH **Uzhgorod** 78.92 353 eP P 16 02 32.7 0.0
UZH e pP 16 02 38.7 -0.7
UZH e 16 02 47.7
SGMF **Saint Gilles** 78.96 10 eP P 16 02 32.7 -0.2
comp=Z,48nm,1.1s,mb5.0
SGMF **Saint Gilles** 78.96 10 eP P 16 02 32.7 -0.2
SGMF pmax pmax
comp=Z,24nm,1.1s,mb5.0
SGMF **Saint Gilles** 78.96 10 eP P 16 02 32.7 -0.2
comp=Z,24nm,1.1s,mb5.0
GRR **Gon** 78.99 9 eP P 16 02 32.9 -0.2
comp=Z,48nm,1.2s,mb5.0
GRR **Gorron** 78.99 9 eP P 16 02 32.9 -0.2
GRR pmax pmax
comp=Z,24nm,1.2s,mb5.0
GRR **Gorron** 78.99 9 eP P 16 02 32.9 -0.2
comp=Z,24nm,1.2s,mb5.0
GEC2 **GERESS Array S** 79.09 359 eP P 16 02 33.7 0.0
comp=Z,27nm,1.5s,mb5.0
STU **Stuttgart** 79.16 2 eP P 16 02 33.8 -0.2
comp=Z,36nm,1.5s,mb5.1
KECS **Kecovo** 79.19 354 eP P 16 02 35.3 +1.1
KECS pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
KECS **Kecovo** 79.19 354 eP P 16 02 35.3 +1.1
comp=Z,6.9nm,1.1s,mb4.5
KECS **Kecovo** 79.19 354 eP P 16 02 35.3 +1.1
KOLL **Kolacno** 79.21 356 eP P 16 02 35.7 +1.4
KOLL **Kolacno** 79.21 356 eP P 16 02 35.7 +1.4
VYHS **Vyhne** 79.27 355 eP P 16 02 35.1 +0.4
VYHS pmax pmax
comp=Z,16nm,1.3s,mb4.8
VYHS **Vyhne** 79.27 355 eP P 16 02 35.1 +0.4
comp=Z,16nm,1.3s,mb4.8
VYHS **Vyhne** 79.27 355 eP P 16 02 35.1 +0.4
MEZF **Maizieres J'vi** 79.29 5 eP P 16 02 35.0 +0.3
CDF **Champ du Feu** 79.47 3 eP P 16 02 35.9 +0.2
comp=Z,74nm,1.7s,mb5.0
CDF **Champ du Feu** 79.47 3 eP P 16 02 35.9 +0.2
CDF pmax pmax
comp=Z,37nm,1.7s,mb5.0
CDF **Champ du Feu** 79.47 3 eP P 16 02 35.9 +0.2
comp=Z,37nm,1.7s,mb5.0
BFO **Black Forest** 79.58 2 eP P 16 02 36.4 +0.1
comp=Z,19nm,1.3s,mb4.9
BFO **Black Forest** 79.58 2 eP P 16 02 36.8 +0.5
BFO pmax pmax
comp=Z,15nm,1.4s,mb4.7
BFO **Black Forest** 79.58 2 eP P 16 02 36.8 +0.4
comp=Z,15nm,1.4s,mb4.7
BUR08 **Bucovina Ar. S** 79.64 351 eP P 16 02 37.5 +0.9
BURAR **Bucovina Array** 79.67 351 ⇓i P P 16 02 37.5 +0.7
FUR **Furstenfeldbru** 79.78 0 eP P 16 02 38.3 +0.9
comp=Z,79nm,1.6s,mb5.4
PSZ **Piszkesteto** 79.79 354 P P 16 02 39.0 +1.5
PSZ **Piszkesteto** 79.79 354 eP P 16 02 38.8 +1.3
comp=Z,36nm,1.5s,mb5.1
PSZ **Piszkesteto** 79.79 354 ⇓i P P 16 02 39.0 +1.5
HAU **Haudompre** 79.84 4 eP P 16 02 37.8 +0.1
comp=Z,33nm,1.1s,mb4.9
HAU eMLR MLR
comp=Z,186nm,20.5s,MS4.1
HAU **Haudompre** 79.84 4 eP P 16 02 37.8 +0.1
HAU pmax pmax
comp=Z,17nm,1.1s,mb4.9
HAU MLR MLR
comp=Z,190nm,20.5s,MS4.4
HAU **Haudompre** 79.84 4 eP P 16 02 37.8 +0.1
comp=Z,16nm,1.1s,mb4.9
HAU LR LR
comp=Z,190nm,20.5s,MS4.4
KIS **Kishinev** 79.88 348 eP P 16 02 37.0 -1.0
KIS LRM 16 41 34.0
comp=Z,300nm,20.0s
KIS **Kishinev** 79.88 348 eP P 16 02 37.0 -1.0
KIS MLR MLR
comp=Z,300nm,20.0s,MS4.6
KIS MLR MLR
comp=Z,300nm,20.0s
CONA **Conrad Observa** 79.96 357 ⇑i P P 16 02 39.2 +0.8
comp=Z,33nm,1.4s,mb5.1,SNR=17
KBL **Kabul** 80.03 315 eP P 16 02 37.9 -1.1
KBL pmax pmax
comp=Z,27nm,1.1s,mb5.1
KBL **Kabul** 80.03 315 eP P 16 02 37.9 -1.1
comp=Z,27nm,1.1s,mb5.1
HINF **Hinteralfeld** 80.05 3 eP P 16 02 38.9 0.0
comp=Z,70nm,1.5s,mb5.1
HINF **Hinteralfeld** 80.05 3 eP P 16 02 38.9 0.0
HINF pmax pmax
comp=Z,35nm,1.5s,mb5.1
HINF **Hinteralfeld** 80.05 3 eP P 16 02 38.9 0.0
comp=Z,35nm,1.5s,mb5.1
MOA **Molln** 80.08 358 ⇑i P P 16 02 39.3 +0.3
comp=Z,13nm,1.4s,mb4.7
MAK **Makhachkala** 80.09 334 eP P 16 02 36.3 -2.9
MAK e 16 05 35.6
MAK eS S 16 12 41.8 -0.4
MAK pmax pmax
comp=Z,151nm,1.1s,mb5.8
RJOB **Jochberg** 80.21 359 eP P 16 02 40.0 +0.3
comp=Z,9.0nm,1.1s,mb4.6
BUD **Budapest** 80.27 355 ⇑eP P 16 02 38.1 -2.0
KIV **Kislovodsk** 80.35 338 eP P 16 02 41.3 +0.7
KIV pmax pmax
comp=Z,17nm,1.0s,mb4.9
KIV **Kislovodsk** 80.35 338 P P 16 02 41.0 +0.3
comp=Z,14nm,0.8s,mb5.0
LOR **Lormes** 80.45 5 eP P 16 02 41.1 0.0
comp=Z,63nm,1.4s,mb5.1
LOR eMLR MLR
comp=Z,254nm,19.8s,MS4.3
LOR **Lormes** 80.45 5 eP P 16 02 41.1 0.0
LOR pmax pmax
comp=Z,32nm,1.4s,mb5.1
LOR MLR MLR
comp=Z,250nm,19.8s,MS4.6
LOR **Lormes** 80.45 5 eP P 16 02 41.1 0.0
comp=Z,32nm,1.4s,mb5.0
LOR LR LR
comp=Z,250nm,19.8s,MS4.6
RETA **Reutte** 80.46 1 ⇑i P P 16 02 41.6 +0.5
comp=Z,16nm,1.3s,mb4.8
MOTA **Moosalm** 80.61 0 ⇑i P P 16 02 42.5 +0.6
comp=Z,9.5nm,0.7s,mb4.8
SSF **Saint Saulge** 80.64 6 eP P 16 02 42.2 +0.1
comp=Z,51nm,1.3s,mb5.0
SSF **Saint Saulge** 80.64 6 eP P 16 02 42.2 +0.1
SSF pmax pmax
comp=Z,25nm,1.3s,mb5.0
SSF **Saint Saulge** 80.64 6 eP P 16 02 42.2 +0.1
comp=Z,26nm,1.3s,mb5.0
RKT **Rikitea** 80.64 149 eLR LR 16 27 50.9
comp=Z,396nm,33.2s
ARSA **Arzberg** 80.65 357 ⇑i P P 16 02 42.8 +0.7
comp=Z,23nm,1.3s,mb4.9,SNR=10
ANN **Anapa** 80.66 342 eP P 16 02 39.6 -2.6
ANN pmax pmax
comp=Z,41nm,1.5s,mb5.1
WTTA **Wattenberg** 80.69 0 P 16 02 43.2 +0.9
comp=Z,42nm,1.5s,mb5.1
DRGR 80.71 352 P P 16 02 43.4 +0.9
DRGR 80.71 352 ⇓i P P 16 02 43.4 +0.9
MFF **Saint Martin d** 80.82 8 eP P 16 02 43.1 0.0
comp=Z,78nm,1.2s,mb5.2
MFF **Saint Martin d** 80.82 8 eP P 16 02 43.1 0.0
MFF pmax pmax
comp=Z,39nm,1.2s,mb5.2
MFF **Saint Martin d** 80.82 8 eP P 16 02 43.1 0.0
comp=Z,39nm,1.2s,mb5.2
KBA **Koelnbreinsper** 80.86 359 ⇑i P P 16 02 44.3 +1.1
comp=Z,68nm,1.4s,mb5.4,SNR=22
AVF **Avril sur Loir** 80.90 6 eP P 16 02 43.4 -0.1
comp=Z,40nm,1.1s,mb5.0
AVF **Avril sur Loir** 80.90 6 eP P 16 02 43.4 -0.1
AVF pmax pmax
comp=Z,20nm,1.1s,mb5.0
AVF **Avril sur Loir** 80.90 6 eP P 16 02 43.4 -0.1
comp=Z,20nm,1.1s,mb5.0
FETA **Feichten** 80.93 1 ⇑i P P 16 02 44.4 +0.8
comp=Z,20nm,1.0s,mb5.0
SMF **Signal de Mont** 81.07 5 eP P 16 02 44.3 -0.1
comp=Z,48nm,1.2s,mb5.0
SMF **Signal de Mont** 81.07 5 eP P 16 02 44.3 -0.1
SMF pmax pmax
comp=Z,24nm,1.2s,mb5.0
SMF **Signal de Mont** 81.07 5 eP P 16 02 44.3 -0.1
comp=Z,24nm,1.2s,mb5.0
BGF **Bois d'Agland** 81.10 6 eP P 16 02 44.5 0.0
comp=Z,49nm,1.1s,mb5.0
BGF **Bois d'Agland** 81.10 6 eP P 16 02 44.5 0.0
BGF pmax pmax
comp=Z,24nm,1.1s,mb5.0
BGF **Bois d'Agland** 81.10 6 eP P 16 02 44.5 0.0
comp=Z,24nm,1.1s,mb5.0
ZEI **Tsey** 81.19 337 eP P 16 02 44.1 -1.0
ZEI pmax pmax
comp=Z,7.0nm,0.4s,mb4.9
ABTA **Abfaltersbach** 81.20 359 ⇑i P P 16 02 45.4 +0.3
comp=Z,26nm,1.3s,mb5.0,SNR=9.8
CABF **La Chapelle** 81.22 4 eP P 16 02 45.8 +0.6
comp=Z,171nm,1.6s,mb5.4
CABF **La Chapelle** 81.22 4 eP P 16 02 45.8 +0.6
CABF pmax pmax
comp=Z,85nm,1.6s,mb5.4
CABF **La Chapelle** 81.22 4 eP P 16 02 45.8 +0.6
comp=Z,85nm,1.6s,mb5.4
SOKA **Soboth** 81.23 358 ⇑i P P 16 02 45.7 +0.5
comp=Z,54nm,1.5s,mb5.3
MYKA **Terra Mystica** 81.31 359 ⇓i P P 16 02 46.4 +0.7
comp=Z,23nm,1.6s,mb4.9
TCF **Toulx Ste Croi** 81.32 7 eP P 16 02 45.5 -0.2
OBKA **Obir** 81.41 358 ⇑i P P 16 02 46.8 +0.6
comp=Z,20nm,0.9s,mb5.0
GROS **Grobnik** 81.44 357 i P P 16 02 46.6 +0.3
TUE **Stuetta** 81.46 2 eP P 16 02 48.0 +1.5
comp=Z,32nm,1.4s,mb5.1
ROBS **Robic** 81.69 359 i P P 16 02 47.3 -0.4
MLR **Muntele Rosu** 81.70 350 ⇓i P P 16 02 48.8 +1.1
VOIR 81.84 351 P P 16 02 49.6 +1.1
VOIR 81.84 351 ⇓i P P 16 02 49.5 +1.0
BZS **Buzias** 81.97 353 P P 16 02 49.6 +0.5
BZS **Buzias** 81.97 353 ⇓i P P 16 02 49.6 +0.5
GZR **Gura Zlata** 82.10 352 P P 16 02 50.2 +0.4
GZR **Gura Zlata** 82.10 352 ⇓i P P 16 02 50.2 +0.4
RJF **Les Rejaudoux** 82.25 7 eP P 16 02 50.5 -0.1
RJF eMLR MLR
comp=Z,229nm,19.2s,MS4.2
RJF **Les Rejaudoux** 82.25 7 eP P 16 02 50.5 -0.1
RJF LR LR
comp=Z,230nm,19.3s,MS4.6
CTA **Charters Tower** 82.32 223 P P 16 02 49.9 -1.2
comp=Z,3.6nm,0.7s,mb4.4,baz=52,slow=5.7,SNR=5.8
CTA **Charters Tower** 82.32 223 P P 16 02 49.9 -1.2
LPL **La Plagne** 82.34 4 eP P 16 02 51.0 -0.1
LPG **La Plagne** 82.36 4 eP P 16 02 51.3 +0.1
LFF **La Frestale** 82.55 8 eP P 16 02 51.8 -0.4
comp=Z,38nm,0.8s,mb5.2
LFF **La Frestale** 82.55 8 eP P 16 02 51.8 -0.4
LFF pmax pmax
comp=Z,19nm,0.8s,mb5.2
LFF **La Frestale** 82.55 8 eP P 16 02 51.8 -0.4
comp=Z,19nm,0.8s,mb5.2
CAF **Calviac** 82.67 7 eP P 16 02 53.1 +0.3
comp=Z,18nm,0.9s,mb4.8
CAF **Calviac** 82.67 7 eP P 16 02 53.1 +0.3
CAF pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
CAF **Calviac** 82.67 7 eP P 16 02 53.1 +0.3
comp=Z,9.0nm,0.9s,mb4.8
BNI **Bardonecchia** 82.80 4 eP P 16 02 54.9 +1.4
BNI pmax pmax
comp=Z,27nm,1.3s,mb5.1
BNI **Bardonecchia** 82.80 4 eP P 16 02 54.9 +1.4
comp=Z,27nm,1.3s,mb5.1
ORIF **Oris-en-Rattie** 82.90 4 eP P 16 02 54.9 +0.9
comp=Z,12nm,0.7s,mb4.7
ORIF eMLR MLR
comp=Z,188nm,21.5s,MS4.1
ORIF **Oris-en-Rattie** 82.90 4 eP P 16 02 54.9 +0.9
ORIF pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
ORIF **Oris-en-Rattie** 82.90 4 eP P 16 02 54.9 +0.9
comp=Z,5.8nm,0.7s,mb4.7
VIVF **Saint-Julien-l** 82.90 5 eP P 16 02 54.6 +0.5
comp=Z,25nm,1.1s,mb4.8
VIVF **Saint-Julien-l** 82.90 5 eP P 16 02 54.6 +0.5
VIVF pmax pmax
comp=Z,12nm,1.1s,mb4.8
VIVF **Saint-Julien-l** 82.90 5 eP P 16 02 54.6 +0.5
comp=Z,12nm,1.1s,mb4.8
MBDF **Montbardon** 83.13 4 eP P 16 02 56.7 +1.5
comp=Z,20nm,0.7s,mb5.0
MBDF **Montbardon** 83.13 4 eP P 16 02 56.7 +1.5
MBDF pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
MBDF **Montbardon** 83.13 4 eP P 16 02 56.7 +1.5
comp=Z,9.8nm,0.7s,mb5.0
GNI **Garni** 83.45 335 eP P 16 02 57.4 +0.5
GNI pmax pmax
comp=Z,13nm,1.6s
SMRF **Simiane la Rot** 83.83 4 eP P 16 03 00.1 +1.3
comp=Z,66nm,1.4s,mb5.3
SMRF **Simiane la Rot** 83.83 4 eP P 16 03 00.1 +1.3
comp=Z,66nm,1.4s,mb5.6
SBF **Sospel** 84.02 3 eP P 16 03 00.0 +0.2
SJPF **Ste Jean** 84.18 10 eP P 16 03 01.3 +0.7
comp=Z,23nm,0.9s,mb5.0
SJPF **Ste Jean** 84.18 10 eP P 16 03 01.3 +0.7
SJPF pmax pmax
comp=Z,12nm,0.9s,mb5.0
SJPF **Ste Jean** 84.18 10 eP P 16 03 01.3 +0.7
comp=Z,12nm,0.9s,mb5.0
MTLF **Montolieu** 84.26 7 eP P 16 03 01.5 +0.5
comp=Z,48nm,1.3s,mb5.2
MTLF **Montolieu** 84.26 7 eP P 16 03 01.5 +0.5
MTLF pmax pmax
comp=Z,24nm,1.3s,mb5.2

MTLF	Montolieu	84.26	7	eP	P	16 03 01.5	+0.5
	comp=Z,24nm,1.3s,mb5.2						
FRF	La Foret Royal	84.29	4	eP	P	16 03 01.5	+0.3
	comp=Z,27nm,0.9s,mb5.1						
FRF	La Foret Royal	84.29	4	eP	P	16 03 01.5	+0.3
FRF				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.1						
FRF	La Foret Royal	84.29	4	eP	P	16 03 01.5	+0.3
	comp=Z,14nm,0.9s,mb5.1						
EPF	Esparros	84.41	8	eP	P	16 03 01.4	-0.4
	comp=Z,18nm,1.0s,mb4.9						
EPF	Esparros	84.41	8	eP	P	16 03 01.4	-0.4
EPF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
EPF	Esparros	84.41	8	eP	P	16 03 01.4	-0.4
	comp=Z,9.2nm,1.0s,mb4.9						
ETSF	Etsaut	84.46	9	eP	P	16 03 02.8	+0.7
	comp=Z,32nm,0.9s,mb5.2						
ETSF	Etsaut	84.46	9	eP	P	16 03 02.8	+0.7
ETSF				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.2						
ETSF	Etsaut	84.46	9	eP	P	16 03 02.8	+0.7
	comp=Z,16nm,0.9s,mb5.1						
LMR	La Mourre	84.51	4	eP	P	16 03 02.8	+0.5
	comp=Z,60nm,1.3s,mb5.3						
LMR	La Mourre	84.51	4	eP	P	16 03 02.8	+0.5
LMR				pmax	pmax		
	comp=Z,30nm,1.3s,mb5.3						
LMR	La Mourre	84.51	4	eP	P	16 03 02.8	+0.5
	comp=Z,30nm,1.3s,mb5.3						
BR131	Keskin Array S	86.27	343	eP	P	16 03 12.1	+0.9
	comp=Z,4.8nm,0.6s,mb4.9						
BRTR	Keskin Array B	86.27	343	P	P	16 03 11.7	+0.6
	comp=Z,5.6nm,0.5s,mb5.0,baz=13,slow=2.8,SNR=38						
BRTR				LR	LR	16 50 00.1	
	comp=Z,78nm,19.7s,MS4.1,baz=206,slow=41						
BRTR	Keskin Array B	86.27	343	ceP	P	16 03 11.6	+0.5
BRTR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ESDC	Sonseca Array	87.26	12	P	P	16 03 16.6	+0.5
	comp=Z,2.2nm,0.6s,mb4.6,baz=345,slow=4.9,SNR=8.0						
ESDC				LR	LR	16 45 37.5	
	comp=Z,188nm,18.9s,MS4.5,baz=325,slow=38						
PSI	Prapat	89.52	274	P	P	16 03 26.0	-1.1
	comp=Z,8.4nm,0.8s,mb5.1,baz=13,slow=2.9,SNR=6.2						
URZ	Urewera	91.21	191	LR	LR	16 43 36.2	
	comp=Z,120nm,18.6s,MS4.4,baz=342,slow=35						
KEST	Kesra	92.19	2	P	P	16 03 38.2	-0.9
	comp=Z,0.4nm,0.5s,mb4.0,baz=50,slow=6.8,SNR=3.9						
MMAI	Mount Meron Ar	92.44	340	P	P	16 03 40.0	-0.4
	comp=Z,0.5nm,0.4s,mb4.2,baz=347,slow=4.4,SNR=3.9						
MMAI				LR	LR	16 54 09.4	
	comp=Z,153nm,18.1s,MS4.5,baz=35,slow=41						
LBTB	Lobatse	150.67	334	ePKIKP	PKPbc	16 10 21.3	-0.2
MAW	Mawson	151.34	218	PKP	PKPdf	16 10 15.4	-0.2
	comp=Z,0.9nm,0.5s,baz=211,slow=8.5,SNR=4.5						
MAW				PKPbc	PKPbc	16 10 20.4	-1.3
	comp=Z,4.1nm,0.8s,baz=302,slow=3.9,SNR=6.7						
MAW				PKPab	PKPab	16 10 28.0	-2.0
	comp=Z,4.4nm,0.8s,baz=121,slow=4.4,SNR=7.0						
BOSA	Boshof	154.17	332	PKPbc	PKPbc	16 10 28.6	-0.6
	comp=Z,2.1nm,0.8s,baz=277,slow=1.3,SNR=5.4						
BOSA				PKPab	PKPab	16 10 42.3	-0.7
	comp=Z,1.3nm,0.5s,baz=312,slow=8.9,SNR=3.9						

*IDC **01** 15:58:08.4±3.2, 1°67′N×127°54′E, h90km±28km, mb4.0/5, mb1 4.1/6, mb1mx3.5/21, mbtmp3.9/6, Error ellipse: s-maj=80.2km s-min=14.3km az=69.0*
*NEIC **01** 15:58:10.7±2.3, 1°59′N×127°46′E, h112km±24km, mb4.2/2, Error ellipse: s-maj=58.8km s-min=8.1km az=69.0*
*ISCJB **01** 15:58:11.6±0.8, 1°71′N±0°06′×127°51′E±0°07, h142km±6km, mb4.2/6, Error ellipse: s-maj=13.0km s-min=8.2km az=148.7*
*DJA **01** 15:58:14, 1°75′N×127°42′E, h117km, MLv4.6/6*
ISC 01 15:58:12.7±0.8, 1°69′N±0°06×127°51′E±0°08, h136km±6km, n18, σ1°08/24, mb4.2/6, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	0.92	189	P	Pn	15 58 35.9	+0.3
TNTI				S	Sn	15 58 53.4	+0.5
MNI	Manado	2.68	265	P	Pn	15 58 54.8	-0.7
MNI				S	Sn	15 59 26.0	-2.4
SGSI	Sangihe	2.80	315	P	Pn	15 58 56.1	-1.0
SGSI				S	Sn	15 59 31.2	0.0
NLAI	Namlea	4.91	185	P	Pn	15 59 24.3	-0.5
AAI	Ambon	5.38	173	P	Pn	15 59 32.7	+1.6
	0.4nm116nm,1.3s						
LUWI	Luwuk	5.46	240	P	Pn	15 59 33.1	+1.0
	1.3nm4μm168nm,0.7s						
LUWI				S	Sn	16 00 35.9	+1.9
	1.3nm4μm168nm,0.7s						
TTSI	Tana Toraja	9.01	239	P	Pn	16 00 18.4	-1.4
SPSI	Sidrap Palu	9.56	234	P	Pn	16 00 26.9	-0.3
BKSI	Bulukumba	10.15	227	P	Pn	16 00 36.3	+1.3
FITZ	Fitzroy Crossi	19.75	185	P	P	16 02 30.9	-1.2
	0.2nm,0.3s,baz=36,slow=11,SNR=8.5						
WRAB	Tennant Creek	22.51	163	eP	P	16 03 00.3	-1.1
	14nm,0.9s,mb4.4						
WRA	Warramunga Arr	22.52	163	P	P	16 03 00.6	-0.7
	11nm,0.6s,mb4.4,baz=343,slow=10,SNR=93						
WRA				S	S	16 06 57.6	-0.5
	1.3nm,1.0s,baz=335,slow=20,SNR=5.0						
ASAR	Alice Springs	25.96	167	P	P	16 03 31.7	-0.9
	2.5nm,0.5s,mb4.1,baz=350,slow=7.1,SNR=49						
ASAR				S	S	16 08 01.2	+8.1
	0.5nm,0.9s,baz=332,slow=18,SNR=4.1						
STKA	Stephens Creek	35.96	159	P	P	16 05 00.7	+0.4
	12nm,0.4s,mb4.8,baz=330,slow=8.6,SNR=45						
MK31	Makanchi Array	59.67	326	eP	P	16 08 03.9	+1.3
MKAR	Makanchi Array	59.67	326	P	P	16 08 04.0	+1.3
	0.7nm,0.4s,mb3.8,baz=113,slow=8.8,SNR=5.9						
KURK	Kurchatov	63.87	328	P	P	16 08 31.2	+0.5
	1.0nm,0.6s,mb3.8,baz=130,slow=6.1,SNR=3.9						
KURK	Kurchatov	63.87	328	eP	P	16 08 31.1	+0.5
	0.9nm,0.4s,mb4.0						

CASC 01 16:04:57.5±2.1, 12°60′N×87°98′W, h70km±33km, MD3.6, ML3.0, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	Conchagua	0.69	12	eP	Pn	16 05 12.4	+0.1
CNCH				eS	Sn	16 05 23.3	+0.1
VSM	San Miguel	0.87	341	eP	Pn	16 05 15.6	+1.2
BLLM	Bellamira	0.87	344	eP	Pn	16 05 14.8	+0.3
BLLM				eS	Sn	16 05 27.6	+0.5
CRIN	San Cristobal	0.92	84	eP	Pn	16 05 15.5	+0.5
TELN	Telica	1.12	90	eP	Pn	16 05 17.2	-0.3
CAHU	Cacacuatique	1.19	349	eP	Pn	16 05 19.5	+1.1
CAHU				eS	Sn	16 05 35.9	+1.9
CNGN	Cerro Negro	1.26	94	eP	Pn	16 05 19.1	-0.2
SNVI	San Vicente	1.31	321	eP	Pn	16 05 20.7	+0.8
SNVI				eS	Sn	16 05 37.4	+0.6
COPN	Copaltepe	1.42	107	eP	Pn	16 05 21.4	-0.1
COPN				eS	Sn	16 05 38.9	-0.6
COPN				AML	AML	16 05 41.7	
	comp=Z,216nm,0.2s						
MOMN	Momotombo	1.42	97	eP	Pn	16 05 21.9	+0.4
CSAN		1.58	105	eP	Pn	16 05 23.6	0.0
CSAN				eS	Sn	16 05 43.2	-0.1
APYN	Apoyeque	1.64	103	eP	Pn	16 05 24.6	+0.3
TICN	Ticuantepe	1.80	108	eP	Pn	16 05 26.2	-0.3

IDC 01 16:09:39.0±13.0, 2°49′N×94°43′W, h0km, mb3.8/4, mb1 4.2/4, mb1mx3.9/17, mbtmp3.8/4, MS3.7/12, Ms1 3.7/12, ms1mx3.5/30, Error ellipse: s-maj=272.6km s-min=171.4km az=21.0, Galapagos Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTS	JuntasAbangare	12.19	50	LR	LR	16 16 05.2	
	comp=Z,367nm,20.5s,baz=106,slow=32						
APG	El Apazote	13.03	17	LR	LR	16 15 54.1	
	comp=Z,126nm,20.1s,baz=218,slow=29						
CMIG	Matias Romero	14.51	358	LR	LR	16 17 24.7	
	comp=Z,454nm,22.0s,baz=20,slow=32						
ATAH	Atahualpa	18.65	121	LR	LR	16 19 37.4	
	comp=Z,150nm,19.9s,baz=158,slow=32						
TXAR	Lajitas Array	28.10	343	P	P	16 15 32.9	+0.2
	0.5nm,0.7s,baz=163,slow=9.7,SNR=6.0						
TXAR				LR	LR	16 25 27.4	
	comp=Z,239nm,18.7s,baz=245,slow=34						
LPAZ	La Paz	32.00	127	LR	LR	16 26 40.9	
	comp=Z,35nm,18.2s,baz=308,slow=32						
RPN	Rapa Nui	32.77	205	LR	LR	16 26 03.9	
	comp=Z,159nm,18.7s,baz=311,slow=30						
NVAR	Mina Array Bea	41.90	332	P	P	16 17 31.2	0.0
	1.8nm,1.0s,baz=157,slow=9.2,SNR=5.6						
CFAA	Coronel Fontan	42.07	146	LR	LR	16 31 08.8	
	comp=Z,20nm,18.7s,baz=134,slow=31						
PDAR	Pinedale Array	42.31	343	P	P	16 17 34.9	+0.3
	1.7nm,0.9s,baz=148,slow=7.1,SNR=9.1						
PDAR				LR	LR	16 34 13.3	
	comp=Z,236nm,21.8s,baz=200,slow=35						
YBH	Yreka Blue Hor	46.59	331	LR	LR	16 36 30.7	
	comp=Z,85nm,18.1s,baz=187,slow=35						
PLCA	Paso Flores	48.23	156	LR	LR	16 33 59.5	
	comp=Z,224nm,18.4s,baz=84,slow=30						
USHA	Ushuaia	61.03	163	LR	LR	16 38 58.1	
	comp=Z,112nm,18.9s,baz=49,slow=29						
YKA	Yellowknife Ar	61.73	350	P	P	16 19 58.9	0.0
	1.3nm,1.0s,baz=155,slow=7.4,SNR=4.9						

IDC 01 16:29:31.7±6.7, 6°23′S×147°62′E, h0km, mb3.9/3, mb1 4.1/4, mb1mx3.6/16, mbtmp3.9/4, Error ellipse: s-maj=102.5km s-min=60.7km az=32.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.76	222	P	Pn	16 33 52.6	-0.3
	0.3nm,0.3s,baz=48,slow=12,SNR=13						
ASAR	Alice Springs	21.78	216	P	P	16 34 25.9	+0.6
	1.7nm,0.7s,baz=52,slow=8.5,SNR=38						
FITZ	Fitzroy Crossi	24.47	239	P	P	16 34 52.1	-0.5
	2.7nm,0.4s,baz=65,slow=8.9,SNR=32						
STKA	Stephens Creek	26.13	192	P	P	16 35 07.7	+0.2
	2.6nm,0.7s,baz=2.5,slow=12,SNR=3.3						

IDC 01 16:31:59.0±39.0, 3°53′N×95°83′W, h0km, mb3.5/3, mb1 4.0/3, mb1mx3.7/16, mbtmp3.5/3, Error ellipse: s-maj=703.8km s-min=243.5km az=146.0, Eastcentral Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	Lajitas Array	26.72	345	P	P	16 37 40.4	+0.2
	0.6nm,0.8s,baz=165,slow=10.0,SNR=5.6						
NVAR	Mina Array Bea	40.34	332	P	P	16 39 38.7	+0.3
	0.5nm,0.6s,baz=158,slow=9.7,SNR=4.5						
PDAR	Pinedale Array	40.94	345	P	P	16 39 43.5	+0.1
	0.7nm,0.8s,baz=161,slow=12,SNR=5.7						

MAN 01 16:35:23, 6°28N×124°16E, h26km, mb4.7, ML3.5, MS3.5, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	General Santos	0.81	104	eP	Pb	16 35 42.0	+3.5
GSPH				eS	Sb	16 35 57.3	+8.2
CTBH	Cotabato--PC H	0.94	6	⇑iP	Pn	16 35 40.5	0.0
CTBH				i S	Sb	16 35 53.5	+0.8
PAGZ	Pagadian	1.73	334	eP	Pn	16 35 53.0	+1.6
BUKP	Musuan	1.82	30	eP	Pn	16 35 55.2	+2.5
IPIL	Ipil	2.17	314	eP	Pn	16 35 58.4	+0.9
IPIL				eS	Sn	16 36 13.8	-10
CGP	Cagayan de Oro	2.22	14	⇓eP	Pn	16 36 03.1	+4.9
CGP				eS	Sn	16 36 15.6	-9.3

*ISCJB **01** 16:53:02.2±0.5, 52°68N±0°04×159°16E±0°08, h115km±3km, mb3.6/9, Error ellipse: s-maj=10.3km s-min=4.4km az=39.3*
*KRSC **01** 16:53:02.9±0.3, 52°66N×159°38E, h101km±40km, ML3.8*
*MOS **01** 16:53:03.6±1.4, 52°87N×158°56E, h115km, mb3.9/7, Error ellipse: s-maj=30.0km s-min=15.0km az=82.3*
*NEIC **01** 16:53:04.8±0.9, 52°83N×158°69E, h114km±5km, mb3.9/2, Error ellipse: s-maj=20.6km s-min=11.4km az=117.0*
*IDC **01** 16:53:05.8±1.5, 52°80N×158°48E, h121km±5km, mb3.3/8, mb1 3.5/8, mb1mx3.2/27, mbtmp3.3/8, Error ellipse: s-maj=33.9km s-min=21.3km az=114.0*
ISC 01 16:53:03.2±0.5, 52°67N±0°04×159°18E±0°08, h111km±3km, n44, σ1°09/62, mb3.6/9, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PET	Petropavlovsk	0.48	319	ePN	Pn	16 53 19.2	-0.7
PET				eS	Sn	16 53 31.2	-1.2
PET				pmax	pmax		
	comp=Z,108nm,0.4s						
PET				smax			
	comp=E,600nm,0.6s						
PET				smax			
	comp=E,717nm,0.6s						
PET				smax			
	comp=N,604nm,0.4s						
PET	Petropavlovsk	0.48	319	i P	Pn	16 53 19.3	-0.6
PET				i S	Sn	16 53 31.3	-1.1
PET	Petropavlovsk	0.48	319	ePn	Pn	16 53 19.2	-0.7
NLC	Nalytchevo	0.51	12	eP	Pn	16 53 19.7	-0.4
NLC				i S	Sn	16 53 31.9	-1.0
AVH	Avacha	0.65	336	i P	Pn	16 53 21.5	+0.4
AVH				i S	Sn	16 53 35.0	+0.3
SPN	Mys Shipunski	0.67	50	eP	Pn	16 53 20.7	-0.6
SPN				i S	Sn	16 53 33.4	-1.5
GRL	Gorelyy	0.68	261	P	Pn	16 53 22.8	+1.4
GRL				i S	Sn	16 53 36.4	+1.3
PEA0B	Petropavlovsk-	1.00	297	eP	Pn	16 53 23.8	-0.5
PETK	Petropavlovsk-	1.00	297	P	Pn	16 53 23.9	-0.4
	comp=N,5.7nm,0.3s,baz=106,slow=16,SNR=510						
PETK				S	Sn	16 53 39.6	-0.7
	comp=N,10nm,0.3s,baz=25,slow=3.9,SNR=22						
PETK	Petropavlovsk-	1.00	297	PN	Pn	16 53 24.0	-0.3
PETK				S	Sn	16 53 39.6	-0.7
PETK				pmax	pmax		
	comp=Z,6.0nm,0.3s						
PETK				smax			
	comp=N,10.0nm,0.3s						
GNL	Ganaly	1.27	325	i P	Pn	16 53 27.2	0.0
GNL				i S	Sn	16 53 44.8	-0.7
KII	Karymskiy	1.38	7	eP	Pn	16 53 28.9	+0.4
KII				i S	Sn	16 53 48.0	+0.2
MIPR	Malaya Ipel'ka	1.53	256	eP	Pn	16 53 30.6	+0.3
MIPR				i S	Sn	16 53 51.3	+0.4
MKZ	Mys Kozlova	2.43	38	i P	Pn	16 53 41.4	-0.2
MKZ				i S	Sn	16 54 09.1	-2.0
SKR	Severo-Kuril's	2.75	225	ePN	Pn	16 53 46.1	+0.3
SKR				eS	Sn	16 54 18.1	-0.6
SKR				pmax	pmax		
	comp=E,50nm,0.4s						
SKR				pmax	pmax		
	comp=Z,90nm,0.4s						
SKR				smax			
	comp=N,370nm,0.2s						
SKR				smax			
	comp=E,310nm,0.2s						
ALID	Alaid	2.88	233	P	Pn	16 53 47.6	0.0
KMNR	Kamenistaya	3.16	11	i P	Pn	16 53 53.0	+1.9
KMNR				eS	Sn	16 54 28.3	+0.1
KPT	Kopyto	3.36	10	P	Pn	16 53 55.2	+1.3
KPT				i S	Sn	16 54 32.8	-0.2
KOZ	Kozyrevsk	3.42	7	P	Pn	16 53 56.2	+1.5
ZLN	Zelenaya	3.49	15	P	Pn	16 53 57.6	+2.0
KLY	Klyuchi	3.75	13	P	Pn	16 54 01.1	+2.0
KLY				i S	Sn	16 54 43.8	+1.4
KBTR	Krutoberegovo	4.14	30	i P	Pn	16 54 04.7	+0.5
KBTR				i S	Sn	16 54 48.7	-2.9
SRKR	Sorokina	4.16	15	P	Pn	16 54 06.4	+1.9
BKI	Bering	4.75	55	eP	Pn	16 54 12.2	-0.3
BKI				i S	Sn	16 55 01.3	-5.1
MAJO	Matsushiro	21.85	231	eP	P	16 57 46.9	+0.3
MJAR	Matsushiro Arr	21.85	231	P	P	16 57 47.4	+0.9
	comp=E,0.6nm,0.4s,mb3.2,baz=23,slow=12,SNR=4.9						
MJAR	Matsushiro Arr	21.85	231	P	P	16 57 47.4	+0.8
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TIXI	Tiksi	23.24	336	eP	P	16 57 59.3	-0.8
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.7						
TIXI	Tiksi	23.24	336	eP	P	16 57 59.3	-0.8
	comp=Z,1.8nm,0.5s,mb3.7						
INK	Inuvik	34.55	37	P	P	16 59 44.4	+3.9
	comp=Z,2.7nm,0.8s,mb4.2,baz=279,slow=2.9,SNR=3.3						
INK	Inuvik	34.55	37	P	P	16 59 44.4	+4.0
INK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
INK	Inuvik	34.55	37	P	P	16 59 43.1	+2.7
	comp=Z,2.5nm,0.7s,mb4.2						
SPITS	Spitsbergen Ar	47.46	350	P	P	17 01 26.0	0.0
	comp=Z,0.7nm,0.4s,mb3.7,baz=76,slow=8.2,SNR=3.1						
SPITS	Spitsbergen Ar	47.46	350	P	P	17 01 26.0	0.0
SPITS				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KURK	Kurchatov	47.48	302	P	P	17 01 24.6	-1.9
MKAR	Makanchi Array	47.84	295	P	P	17 01 27.3	-2.0
	comp=Z,0.3nm,0.4s,mb3.5,baz=58,slow=7.5,SNR=2.7						
BVAR	Borovoye Array	50.22	308	P	P	17 01 45.4	-1.9
	comp=Z,0.6nm,0.5s,mb3.8,baz=66,slow=8.0,SNR=4.9						
BVAR	Borovoye Array	50.22	308	P	P	17 01 45.4	-1.9
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	FINESS Array B	60.29	336	P	P	17 02 58.8	-0.6
	comp=Z,0.8nm,0.6s,mb3.9,baz=42,slow=8.8,SNR=3.6						
FINES	FINESS Array B	60.29	336	P	P	17 02 58.8	-0.6
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NB2	NORSAR Subarra	63.79	343	P	P	17 03 21.9	-0.9
	comp=Z,1.2nm,0.6s,mb3.9,baz=25,slow=6.9						
NOA	NORSAR Array B	63.79	343	P	P	17 03 22.4	-0.4
	comp=Z,1.3nm,0.8s,mb3.8,baz=22,slow=6.7,SNR=4.0						
NOA	NORSAR Array B	63.79	343	P	P	17 03 22.5	-0.3
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRA	Warramunga Arr	75.46	204	P	P	17 04 35.6	+0.8
	comp=Z,0.2nm,0.7s,mb2.9,baz=22,slow=6.3,SNR=2.9						

*CSEM **01** 17:03:26.5±0.5, 36°57N×28°20E, h2km, MD2.8, Error ellipse: s-maj=9.7km s-min=4.2km az=172.0*
*DDA **01** 17:03:29.9, 36°61N×28°01E, h7km±4km, Md2.8*
*ISK **01** 17:03:29.7, 36°70N×28°00E, h15km, MD2.8*
ISC 01 17:03:26.3±1.8, 36°57N±0°09×28°21E±0°05, h10km, n14, σ1°07/22, 2C, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TURN	Turunc	0.44	46	⇑iP	Pg	17 03 34.7	-0.2
TURN				i S	Sg	17 03 38.5	-2.3
TURN	Turunc	0.44	46	i P	Pg	17 03 34.7	-0.2
TURN				i S	Sg	17 03 38.5	-2.3
DAT	Datca	0.53	288	ePG	Pg	17 03 37.1	+0.5
DAT				eSG	Sg	17 03 42.6	-1.1
DAT	Datca	0.53	288	ePg	Pg	17 03 37.1	+0.4
DAT				eSg	Sg	17 03 42.6	-1.1
YER	Yerkesik	0.57	6	ePG	Pg	17 03 39.8	+2.4
YER	Yerkesik	0.57	6	ePg	Pg	17 03 39.8	+2.4
BDRM	Kayabasi	0.79	309	i P	Pg	17 03 41.8	+0.2
BDRM				i S	Sg	17 03 50.9	-1.0
BDRM	Kayabasi	0.79	309	i P	Pg	17 03 41.8	+0.2
BDRM				i S	Sg	17 03 50.9	-1.0
MLSB	Milas	0.81	335	ePG	Pg	17 03 42.2	+0.4
MLSB	Milas	0.81	335	ePg	Pg	17 03 42.2	+0.3
BODT	Bodrum	0.87	305	ePG	Pg	17 03 43.0	-0.1
BODT	Bodrum	0.87	305	ePg	Pg	17 03 43.0	-0.2
AYDN	Tasoluk	1.12	347	⇑iP	Pg	17 03 48.9	+1.0
AYDN				i S	Sg	17 04 02.8	+0.2
AYDN	Tasoluk	1.12	347	i P	Pg	17 03 48.9	+1.0
AYDN				i S	Sg	17 04 02.8	+0.3

*ISCJB **01** 17:07:00.3±0.7, 40°39N±0°04×127°02W±0°07, h10km, mb4.0/9, MS3.5/8, Error ellipse: s-maj=8.2km s-min=4.3km az=152.4*
*NEIC **01** 17:07:00.8±0.8, 40°32N×127°18W, h10km, mb3.9/8, ML3.6(NCEDC), Error ellipse: s-maj=10.9km s-min=4.8km az=68.0*
*IDC **01** 17:07:08.0±1.6, 40°38N×126°38W, h0km, mb3.9/6, mb1 4.0/10, mb1mx3.8/28, mbtmp3.8/10, ML3.4/3, MS3.4/11, Ms1 3.4/11, ms1mx3.2/38, Error ellipse: s-maj=22.2km s-min=19.2km az=42.0*
ISC 01 17:07:02.2±0.7, 40°37N±0°04×127°04W±0°07, h10km, n82, σ1°34/82, mb4.0/9, MS3.5/8, 2C-1D, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTRM	Thompson Ridge	3.17	60	P	Pn	17 07 51.0	-1.1
HOPS	Hopland	3.36	113	ePn	Pn	17 07 53.3	-1.4
HOPS				eSn	Sn	17 08 33.6	-1.0
WDC	Whiskeytown Da	3.44	85	ePn	Pn	17 07 54.7	-1.1
WDC				eSn	Sn	17 08 34.2	-2.4
YBH	Yreka Blue Hor	3.55	66	Pn	Pn	17 07 57.4	+0.1
	13nm,0.3s,baz=268,slow=8.5,SNR=122						
YBH				Sn	Sn	17 08 37.3	-2.0
	9.0nm,0.3s,baz=40,slow=21,SNR=4.3						
YBH				LR	LR	17 09 01.8	
	comp=Z,416nm,19.8s,baz=256,slow=37						
HUMO	Hull Mountain	3.80	53	ePn	Pn	17 07 59.6	-1.1
HUMO				eSn	Sn	17 08 43.1	-2.4
MCCM	Marconi Confer	3.92	123	ePn	Pn	17 08 00.8	-1.7
MCCM				eSn	Sn	17 08 45.8	-2.7
DBO	Dodson Butte	3.95	45	⇑P	Pn	17 08 01.7	-1.2
BUOR	Burton Butte	4.09	61	P	Pn	17 08 05.7	+1.0
BBOR	Butler Butte	4.13	51	⇓P	Pn	17 08 04.8	-0.5
RNO	Roman Nose	4.31	34	P	Pn	17 08 06.9	-0.9
LASM	Arnica Sink	4.32	72	P	Pn	17 08 08.3	+0.4
LBCM	Butte Creek Ri	4.36	82	P	Pn	17 08 09.5	+1.0
COR	Corvallis	5.04	32	ePn	Pn	17 08 16.9	-0.9
	28nm,0.7s						
IRO	Indian Ridge	5.08	43	⇑P	Pn	17 08 18.1	-0.3
MOD	Modoc	5.32	71	ePn	Pn	17 08 21.0	-0.6
	16nm,0.8s						
HEBO	Mount Hebo	5.41	25	ePn	Pn	17 08 22.4	-0.5
	30nm,0.9s						
CMB	Columbia Colle	5.67	112	ePn	Pn	17 08 27.4	+0.9
	50nm,0.6s						
CMB				eSn	Sn	17 09 33.6	+2.0
SAO	San Andreas Ge	5.67	128	ePn	Pn	17 08 24.4	-2.1
	71nm,0.7s						
SAO				eSn	Sn	17 09 28.1	-3.6
WVOR	Wild Horse Val	6.65	69	ePn	Pn	17 08 38.0	-1.9
	11nm,0.9s						
NVAR	Mina Array Bea	7.04	103	Pn	Pn	17 08 47.5	+2.2
	0

MSO	Missoula	11.48	51	*e*Pn	Pn	17 09 46.3 +0.3
	4.3nm,0.9s					
BSMT	Bassoo Peak	11.55	46	*e*Pn	Pn	17 09 46.3 -0.7
	5.5nm,1.1s					
MSU	Marysvale	11.65	94	Pn	Pn	17 09 52.2 +3.8
	2.4nm,1.1s					
DLMT	Dillon	11.71	60	*e*Pn	Pn	17 09 51.7 +2.4
	9.1nm,1.0s					
CHMT	Chamberlain Mo	11.94	52	*e*Pn	Pn	17 09 52.8 +0.5
SLMT	Seeley Lake	11.95	50	*e*Pn	Pn	17 09 52.4 -0.1
	5.7nm,0.9s					
LRM	Limekiln Ridge	11.97	58	*e*Pn	Pn	17 09 54.8 +1.9
	24nm,1.0s					
GLA	Glamis	12.21	123	Pn	Pn	17 09 54.7 -1.6
DCID1	Drake Creek	12.23	70	Pn	Pn	17 09 57.0 +0.5
QLMT	Earthquake Lak	12.34	64	Pn	Pn	17 10 00.4 +2.6
BOZ	Bozeman (W)	12.45	60	*e*Pn	Pn	17 10 00.4 +1.0
	5.5nm,1.3s					
IMW	Indian Meadow	12.46	68	Pn	Pn	17 09 58.9 -0.7
	3.3nm,0.9s					
WUAZ	Wupatki	13.28	106	*e*Pn	Pn	17 10 13.5 +2.8
	16nm,1.2s					
PDAR	Pinedale Array	13.31	74	Pn	Pn	17 10 13.9 +2.7
	0.0nm,0.3s,baz=272,slow=12,SNR=4.5					
DIB	Dawson Inlet,	13.36	346	T		17 23 59.2
VIB	Van Inlet	13.42	346	T		17 24 00.0
GCMT	Greycliff	13.80	61	*e*Pn	Pn	17 10 19.7 +1.9
	3.4nm,1.1s					
TUC	Tucson	15.36	116	Pn	Pn	17 10 38.0 -1.0
	6.4nm,1.0s					
EDM	Edmonton	15.87	31	Pn	Pn	17 10 44.0 -1.5
LAZ	Ladron	16.89	104	*e*Pn	Pn	17 11 04.8 +6.2
	9.1nm,1.6s					
SDCO	Great Sand Dun	16.93	92	*e*Pn	Pn	17 11 00.8 +1.6
	28nm,2.1s					
ANMO	Albuquerque	17.16	102	Pn	Pn	17 11 05.4 +3.4
	0.1nm,0.3s,baz=266,slow=7.6,SNR=3.3					
ANMO				LR	LR	17 17 58.7
	comp=Z,60nm,20.6s,baz=120,slow=39					
BNM	Barren Site	17.38	104	Pn	Pn	17 11 04.9 +0.1
	3.3nm,0.9s					
SIT	Sitka	17.55	345	Pn	Pn	17 11 05.6 -1.1
MNTX	Cornudas Mount	19.50	110	*e*P	Pn	17 11 29.9 -0.8
	3.6nm,1.2s					
FFC	Flin Flon	22.03	41	*e*P	P	17 11 57.5 +0.9
	14nm,1.1s,mb4.3					
TXAR	Lajitas Array	22.05	113	P	P	17 12 00.4 +3.3
	2.7nm,0.9s,mb3.7,baz=304,slow=7.2,SNR=24					
ECSD	EROS Data Cent	22.78	71	*e*P	P	17 12 04.4 -0.4
	9.8nm,1.1s,mb4.2					
YKA	Yellowknife Ar	23.39	15	P	P	17 12 15.9 +5.0
	1.6nm,0.8s,mb3.5,baz=201,slow=12,SNR=4.6					
AGMN	Agassiz Nation	23.55	60	*e*P	P	17 12 13.7 +0.9
	15nm,1.4s,mb4.2					
ULM	Lac du Bonnet	23.89	55	P	P	17 12 20.2 +4.4
	7.6nm,0.9s,mb4.1,baz=263,slow=9.4,SNR=5.1					
ULM				LR	LR	17 21 50.8
	comp=Z,154nm,19.2s,MS3.5,baz=186,slow=38					
MENT	Mentasta	24.70	342	*e*P	P	17 12 23.8 +0.7
DAWY	Dawson	24.82	347	P	P	17 12 21.7 -2.4
INK	Inuvik	28.22	355	LR	LR	17 22 36.3
	comp=Z,50nm,19.4s,MS3.1,baz=98,slow=33					
SADO	Sadowa	35.15	67	LR	LR	17 29 05.4
	comp=Z,110nm,18.4s,MS3.6,baz=129,slow=38					
CMIG	Matias Romero	36.19	120	LR	LR	17 30 29.3
	comp=Z,57nm,21.2s,MS3.3,baz=326,slow=39					
RES	Resolute Bay	37.45	13	P	P	17 14 22.6 +7.3
	2.1nm,0.8s,mb4.0,baz=245,slow=9.2,SNR=4.2					
SCHQ	Schefferville	41.77	49	LR	LR	17 32 12.9
	comp=Z,91nm,18.2s,MS3.7,baz=278,slow=36					
NOA	NORSAR Array B	73.37	20	P	P	17 18 41.5 +7.6
	1.7nm,0.9s,mb4.0,baz=328,slow=5.5,SNR=3.4					
NOA				LR	LR	17 53 50.0
	comp=Z,22nm,19.2s,MS3.5,baz=310,slow=38					
NOA	NORSAR Array B	73.37	20	P	P	17 18 41.5 +7.6
NOA				LR	LR	17 53 50.0
LPAZ	La Paz	78.52	123	P	P	17 19 07.8 +4.0
	1.1nm,0.8s,mb3.9,baz=330,slow=5.6,SNR=4.1					
SONM	Songino Array	80.21	327	LR	LR	17 53 18.3
	comp=Z,54nm,18.5s,MS3.9,baz=280,slow=34					
KEST	Kesra	94.30	34	LR	LR	18 00 08.0
	comp=Z,18nm,20.2s,MS3.5,baz=228,slow=34					

*ATH **01** 17:17:04.3, 37°.91N±20°.97E, h32km±1km, MD3.7/24, ML3.2*
*THE **01** 17:17:04.7, 37°.86N×21°.01E, h8km±2km, ML3.6/5, Error ellipse: s-maj=2.8km s-min=0.6km az=336.0*
*NEIC **01** 17:17:04.3, 37°.91N×20°.97E, h32km, ML3.2(ATH), After ATH.*
*CSEM **01** 17:17:04.9±0.2, 37°.90N×21°.00E, h15km, ML3.6/5, Error ellipse: s-maj=4.8km s-min=3.3km az=44.0*
*ISCJB **01** 17:17:05.0±0.5, 37°.90N±0°.03×20°.93E±0°.04, h27km±4km, Error ellipse: s-maj=5.6km s-min=4.4km az=41.2*

ISC 01 17:17:04.9±0.5, 37°.90N±0°.03×20°.98E±0°.03, h16km±3km, n102, σ0°97/128, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KFL	Anninata	0.26	325	P	Pg	17 17 11.2	+0.6
KFL	Anninata	0.26	325	P	Pg	17 17 11.2	+0.6
VLS	Valsamata	0.41	312	*e*Pb	Pg	17 17 13.6	+0.3
VLS				*e*Sb	Sg	17 17 21.3	+2.4
VLS	Valsamata	0.41	312	*e*PB	Pg	17 17 13.6	+0.3
VLS				*e*SB	Sg	17 17 21.3	+2.4
VLS	Valsamata	0.41	312	P	Pg	17 17 13.6	+0.3
VLS				S	Sg	17 17 20.1	+1.2
VLS	Valsamata	0.41	312	P	Pg	17 17 13.6	+0.3
VLS				S	Sg	17 17 20.1	+1.2
VLS				*e*Sb	Sg	17 17 21.3	+2.4
RLS	Riolos of Patr	0.42	68	*e*Pb	Pg	17 17 13.4	0.0
RLS				*e*Sb	Sg	17 17 21.0	+1.9
RLS	Riolos of Patr	0.42	68	*e*PB	Pg	17 17 13.4	0.0
RLS				*e*SB	Sg	17 17 21.0	+1.9
RLS	Riolos of Patr	0.42	68	*e*Pb	Pg	17 17 13.4	0.0
UPR	University Cam	0.74	59	*e*PN	Pg	17 17 19.5	+0.1
UPR	University Cam	0.74	59	*e*Pn	Pg	17 17 19.5	+0.1
LAKA	Lakka	0.86	66	P	Pg	17 17 20.7	-0.9
LAKA				S	Sg	17 17 33.6	+0.6
LAKA	Lakka	0.86	66	P	Pg	17 17 20.7	-0.9
LAKA				S	Sg	17 17 33.6	+0.6
EFP	Efpalio	0.90	54	*e*PN	Pg	17 17 21.5	-0.9
EFP				*e*SN	Sn	17 17 35.3	-0.2
EFP	Efpalio	0.90	54	P	Pg	17 17 21.5	-0.9
EFP				S	Sg	17 17 34.7	+0.4
EFP	Efpalio	0.90	54	P	Pg	17 17 21.5	-0.9
EFP				S	Sg	17 17 34.7	+0.4
EFP				*e*Sn	Sn	17 17 35.3	-0.2
LKD2	Lefkada island	0.92	344	P	Pg	17 17 22.8	0.0
LKD2				S	Sg	17 17 37.4	+2.5
LKD2	Lefkada island	0.92	344	P	Pg	17 17 22.8	0.0
LKD2				S	Sg	17 17 37.4	+2.5
TRIZ	Trizonia	0.98	61	P	Pg	17 17 22.6	-1.3
TRIZ				S	Sg	17 17 37.7	+0.9
TRIZ	Trizonia	0.98	61	P	Pg	17 17 22.6	-1.3
KALE	Kalithea	1.04	62	P	Pg	17 17 23.6	-1.4
KALE				S	Sg	17 17 39.2	+0.6
KALE	Kalithea	1.04	62	P	Pg	17 17 23.6	-1.4
KALE				S	Sg	17 17 39.2	+0.6
ITM	Ithomi	1.04	133	P	Pg	17 17 23.3	-1.8
ITM	Ithomi	1.04	133	*e*PB	Pg	17 17 23.5	-1.6
ITM				*e*SN	Sg	17 17 39.3	+0.6
ITM	Ithomi	1.04	133	P	Pg	17 17 23.5	-1.6
ITM	Ithomi	1.04	133	P	Pg	17 17 23.5	-1.6
ITM				*e*Sn	Sg	17 17 39.3	+0.6
GUR	Goura	1.08	88	*e*PB	Pg	17 17 24.1	-1.7
GUR	Goura	1.08	88	P	Pg	17 17 24.1	-1.7
GUR	Goura	1.08	88	P	Pg	17 17 24.1	-1.7
PYL	PYLOS	1.17	148	*e*PB	Pb	17 17 25.6	-1.2
PYL				*e*SN	Sn	17 17 42.8	+0.6
PYL	PYLOS	1.17	148	P	Pn	17 17 25.8	-0.8
PYL	PYLOS	1.17	148	P	Pn	17 17 25.8	-0.8
PYL				*e*Sn	Sn	17 17 42.8	+0.6
EVR	Evrytania	1.21	33	*e*Pn	Pn	17 17 27.2	+0.1
EVR	Evrytania	1.21	33	*e*PN	Pn	17 17 27.2	+0.1
EVR	Evrytania	1.21	33	*e*Pn	Pn	17 17 27.2	+0.1
VLX	Vlachokerasia	1.23	115	*e*PN	Pn	17 17 27.7	+0.3
VLX				*e*SN	Sn	17 17 44.4	+0.7
VLX	Vlachokerasia	1.23	115	*e*Pn	Pn	17 17 27.7	+0.3
VLX				*e*Sn	Sn	17 17 44.4	+0.7
DSF	Desfina	1.32	67	P	Pn	17 17 28.6	-0.1
DSF	Desfina	1.32	67	P	Pn	17 17 28.6	-0.1
AGG	Agios Georgios	1.54	43	*e*Pn	Pn	17 17 31.6	-0.1
AGG	Agios Georgios	1.54	43	*e*PN	Pn	17 17 31.6	-0.1
AGG	Agios Georgios	1.54	43	*e*Pn	Pn	17 17 31.6	-0.1
LTK	Loutraki	1.58	85	*e*PN	Pn	17 17 32.8	+0.6
LTK	Loutraki	1.58	85	*e*Pn	Pn	17 17 32.8	+0.6
JAN	Janina	1.76	357	*e*Pb	Pn	17 17 34.4	-0.2
JAN	Janina	1.76	357	*e*PB	Pn	17 17 34.4	-0.2
JAN	Janina	1.76	357	*e*Pb	Pn	17 17 34.4	-0.2
LKR	Lokris	1.76	64	*e*Pb	Pn	17 17 34.9	+0.2
LKR	Lokris	1.76	64	*e*PB	Pn	17 17 34.9	+0.2
LKR	Lokris	1.76	64	*e*Pb	Pn	17 17 34.9	+0.2
DID	Didima	1.83	102	*e*PN	Pn	17 17 35.8	+0.1
DID				*e*SN	Sn	17 17 59.1	+0.5
DID	Didima	1.83	102	P	Pn	17 17 35.5	-0.2
DID	Didima	1.83	102	P	Pn	17 17 35.5	-0.2
DID	Didima	1.83	102	*e*Pn	Pn	17 17 35.8	+0.1
DID				*e*Sn	Sn	17 17 59.1	+0.5
VLI	Veliai	1.96	126	*e*Pn	Pn	17 17 37.7	+0.3
VLI	Veliai	1.96	126	*e*PN	Pn	17 17 37.7	+0.3
VLI	Veliai	1.96	126	*e*Pn	Pn	17 17 37.7	+0.3
NAIG	Nisos Aigina	1.99	93	*e*Pb	Pn	17 17 38.4	+0.5
NAIG	Nisos Aigina	1.99	93	*e*PB	Pn	17 17 38.4	+0.5
NAIG	Nisos Aigina	1.99	93	*e*Pb	Pn	17 17 38.4	+0.5
KEK	Kerkira	2.03	333	*e*Pn	Pn	17 17 37.5	-0.9
KEK	Kerkira	2.03	333	*e*PN	Pn	17 17 37.5	-0.9
KEK	Kerkira	2.03	333	*e*Pn	Pn	17 17 37.5	-0.9
ATH	Athens Observa	2.17	87	*e*Pn	Pn	17 17 39.5	-0.8
ATH	Athens Observa	2.17	87	*e*PN	Pn	17 17 39.5	-0.8
ATH	Athens Observa	2.17	87	*e*Pn	Pn	17 17 39.5	-0.8
VLY	Voula,Athens	2.23	90	*e*Pn	Pn	17 17 41.0	-0.1
VLY	Voula,Athens	2.23	90	*e*PN	Pn	17 17 41.0	-0.1
VLY	Voula,Athens	2.23	90	*e*Pn	Pn	17 17 41.0	-0.1
NEO	Neokhori	2.25	51	*e*Pn	Pn	17 17 41.8	+0.4
NEO	Neokhori	2.25	51	*e*PN	Pn	17 17 41.8	+0.4
NEO	Neokhori	2.25	51	*e*Pn	Pn	17 17 41.8	+0.4
XOR	Xorichti	2.27	49	P	Pn	17 17 42.2	+0.5
XOR	Xorichti	2.27	49	P	Pn	17 17 42.2	+0.5
PTL	Penteli	2.29	85	*e*Pn	Pn	17 17 41.0	-0.9
PTL	Penteli	2.29	85	*e*PN	Pn	17 17 41.0	-0.9
PTL	Penteli	2.29	85	*e*Pn	Pn	17 17 41.0	-0.9
KYTH	Kithira	2.31	134	*e*Pn	Pn	17 17 43.0	+0.8
KYTH	Kithira	2.31	134	*e*PN	Pn	17 17 43.0	+0.8
KYTH	Kithira	2.31	134	*e*Pn	Pn	17 17 43.0	+0.8
KZN	Kozani	2.48	14	*e*Pn	Pn	17 17 44.1	-0.5
KZN	Kozani	2.48	14	*e*PN	Pn	17 17 44.1	-0.5
KZN	Kozani	2.48	14	*e*Pn	Pn	17 17 44.1	-0.5
AOS	Alonnisos	2.61	60	P	Pn	17 17 48.5	+2.2
AOS	Alonnisos	2.61	60	P	Pn	17 17 48.5	+2.2
BIA	Bitola	3.13	5	*e*Pn	Pg	17 18 03.1	-1.7
PLG	Polygyros	3.13	37	*e*Pn	Pn	17 17 52.6	-0.9
PLG	Polygyros	3.13	37	*e*PN	Pn	17 17 52.6	-0.9
PLG	Polygyros	3.13	37	*e*Pn	Pn	17 17 52.6	-0.9
OHR	Ohrid	3.21	358	*e*Pn	Pg	17 18 04.1	-2.3
KARN	Karanos	3.44	136	*e*PN	Pn	17 17 57.9	+0.2
KARN	Karanos	3.44	136	*e*Pn	Pn	17 17 57.9	+0.2
SOH	Sokhos	3.45	32	*e*Pn	Pn	17 17 58.5	+0.6
SOH	Sokhos	3.45	32	*e*PN	Pn	17 17 58.5	+0.6
SOH	Sokhos	3.45	32	*e*Pn	Pn	17 17 58.5	+0.6
KRUS	Krusevo	3.47	3	*e*Pn	Pn	17 17 57.0	-1.2
TIP	Timpagrande	3.54	292	P	Pn	17 18 00.3	+1.1
TIP	Timpagrande	3.54	292	P	Pn	17 18 00.3	+1.1
VAY	Valandovo	3.63	19	*e*Pn	Pb	17 18 07.6	-1.1
IDI	Anoyia	4.09	128	*e*Pn	Pn	17 18 08.1	+1.4
IDI	Anoyia	4.09	128	*e*PN	Pn	17 18 08.1	+1.4
IDI	Anoyia	4.09	128	*e*Pn	Pn	17 18 08.1	+1.4

*ISCJB **01** 17:17:59.9±0.5, 52°.91N±0°.08×175°.95W±0°.07, h209km±4km, mb3.9/19, Error ellipse: s-maj=12.5km s-min=6.7km az=179.5*
*BJI **01** 17:18:00.5, 52°.70N×176°.00W, h213km, mB4.4/3, mb4.6/6*
*NEIC **01** 17:18:00.6±0.6, 52°.72N×176°.04W, h213km±7km, mb4.1/11, Error ellipse: s-maj=14.2km s-min=8.3km az=171.0*
*IDC **01** 17:18:05.4±1.4, 52°.86N×176°.08W, h257km±9km, mb3.6/10, mb1 3.8/10, mb1mx3.3/30, mbtmp3.6/10, Error ellipse: s-maj=32.4km s-min=12.6km az=21.0*

ISC 01 17:18:01.0±0.5, 52°.94N±0°.08×175°.94W±0°.07, h203km±5km, h255km±1.9km; pP-P, n209, σ0°57/216, mb3.9/19, 84C-87D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	Great Sitkin T	0.85	185	*e*Pn	Pn	17 18 30.3	+0.3
GSTR				*e*Sn	Sn	17 18 52.9	+0.4
AMKA	Amchitka	3.32	244	P	Pn	17 18 52.2	-2.2
AMKA				S	Sn	17 19 31.4	-5.0
FX1	Attu Island--F	6.59	274	P	Pn	17 19 35.3	-0.5
SDPT	Sand Point	9.39	69	*e*Pn	Pn	17 20 12.7	+0.6
OHAK	Old Harbor	13.64	63	*e*P	Pn	17 21 04.6	-1.4
	43nm,0.5s						
OHAK				*e*S	S	17 23 27.9	-10
SVW2	Sparrevohn	13.72	45	*e*Pn	Pn	17 21 11.0	+4.0
KDAK	Kodiak Island	14.11	61	P	Pn	17 21 12.2	+0.4
	5.4nm,0.3s,baz=260,slow=7.0,SNR=50						
KDAK				S	S	17 23 43.8	-4.7
	1.2nm,0.3s,baz=165,slow=23,SNR=7.6						
KDAK	Kodiak Island	14.11	61	*e*P	Pn	17 21 11.1	-0.7
	11nm,0.3s						
KDAK				*e*S	S	17 23 38.7	-10
TTA	Tatalina	14.50	39	*e*P	Pn	17 21 20.6	+4.1
	5.4nm,0.8s						
COLA	College	18.59	39	*e*P	P	17 22 03.7	+1.1
	7.7nm,0.7s						
MENT	Mentasta	19.59	47	*e*P	P	17 22 14.6	+1.2
EGAK	Eagle	21.21	42	*e*P	P	17 22 31.6	+1.1
	4.4nm,0.5s,mb4.2						
DAWY	Dawson	21.76	45	*e*P	P	17 22 36.9	+0.7
INK	Inuvik	25.17	36	P	P	17 23 07.7	+0.5
	1.8nm,0.4s,mb4.0,baz=253,slow=9.9,SNR=7.5						
INK	Inuvik	25.17	36	*e*P	P	17 23 08.1	+1.0
	9.6nm,1.2s,mb4.3						
YKA	Yellowknife Ar	32.88	49	P	P	17 24 15.6	+0.3
	2.6nm,0.5s,mb4.0,baz=286,slow=9.3,SNR=35						
YKA				pP	pP	17 25 06.4	+10
	0.5nm,0.6s,baz=281,slow=8.1,SNR=3.2						
F03A	Seaside	34.11	80	⇓P	P	17 24 27.4	+1.3
	baz=34						
F04A	Amboy	34.79	80	⇑P	P	17 24 32.9	+0.9
	baz=34						
H04A	Detroit Lake	35.59	81	⇓P	P	17 24 39.8	+1.0
	baz=35						
D08A	Wollman Farm,	36.28	76	⇓P	P	17 24 44.7	+0.1
	baz=36						
EDM	Edmonton	36.53	64	*e*P	P	17 24 45.7	-0.9
YBH	Yreka Blue Hor	36.96	86	P	P	17 24 52.0	+1.6
	baz=301,slow=5.7						
C11A	Tepee Creek (N	37.43	73	⇓P	P	17 24 53.9	-0.4
	baz=37						
K05A	Summer Lake	37.47	83	⇓P	P	17 24 56.2	+1.5
	baz=37,SNR=7.1						
B13A	Whitefish	38.19	71	⇑P	P	17 25 00.2	-0.4
	baz=38						
BSMT	Bassoo Peak	38.27	72	*e*P	P	17 25 00.9	-0.5
	2.9nm,0.6s,mb4.0						
G10A	Bishop Farm, J	38.27	77	⇓P	P	17 25 01.7	+0.3
	baz=38						
MOD	Modoc	38.31	84	*e*P	P	17 25 01.9	+0.2
	2.7nm,0.5s,mb4.0						
A14A	Double T Ranch	38.48	70	⇑P	P	17 25 02.3	-0.8
	baz=38,SNR=6.6						
E12A	Beaver Dam Sad	38.57	75	⇓P	P	17 25 03.7	-0.1
	baz=38						
A15A	Johnson Ranch,	38.87	70	⇓P	P	17 25 05.3	-0.9
	baz=39						
B14A	Marquette Ranc	38.88	71	⇑P	P	17 25 05.7	-0.6
	baz=39						
H10A	Noah's Angus R	38.88	78	⇑P	P	17 25 06.6	+0.2
	baz=39						
WVOR	Wild Horse Val	38.99	82	*e*P	P	17 25 07.6	+0.2
	3.5nm,1.0s,mb3.8						
F12A	Elk City	39.12	75	⇑P	P	17 25 08.2	-0.1
	baz=39						
H11A	Donnelly	39.25	77	⇑P	P	17 25 09.8	+0.3
	baz=39						
B15A	Bradely Ranch,	39.31	70	⇓P	P	17 25 09.0	-0.9
	baz=39						
D14A	Greenough	39.42	73	⇑P	P	17 25 10.6	-0.2
	baz=39						
C15A	Salmond Ranch,	39.56	71	⇑P	P	17 25 11.6	-0.4
	baz=39,SNR=6.2						
F13A	Darby	39.64	75	⇑P	P	17 25 12.4	-0.2
	baz=39						
B16A	M & M Farms, S	39.74	70	⇑P	P	17 25 12.5	-1.0
	baz=40						
K10A	MacKenzie Ranc	39.85	80	⇑P	P	17 25 15.0	+0.6
	baz=40						
H12A	Diamond D Ranc	40.02	77	⇓P	P	17 25 15.6	-0.3
	baz=40						
C16A	Fuhringer Ranc	40.04	71	⇓P	P	17 25 15.4	-0.6
	baz=40						
G13A	Cobalt	40.08	76	⇓P	P	17 25 16.4	+0.1
	baz=40						
E15A	Deer Lodge	40.27	73	⇑P	P	17 25 17.5	-0.4
	baz=40						
I12A	Atlanta	40.29	78	⇑P	P	17 25 18.2	+0.2
	baz=40						
B17A	L&G Farms, Che	40.32	69	⇑P	P	17 25 17.2	-1.0
	baz=40						
K11A	Parker Ranch,	40.35	80	⇑P	P	17 25 19.0	+0.4
	baz=40						
L10A	Juniper Basin	40.50	81	⇑P	P	17 25 20.3	+0.5
	baz=40						
C17A	Wharram Farm,	40.69	70	⇑P	P	17 25 20.5	-0.8
	baz=40						
M10A	I.L. Ranch, Tu	40.79	82	⇑P	P	17 25 22.7	+0.5
	baz=40						
I13A	Wildhorse Cree	40.82	77	⇑P	P	17 25 22.3	-0.1
	baz=41,SNR=5.9						
B18A	Beardsley Farm	40.84	69	⇓P	P	17 25 21.6	-1.0
	baz=41						
H14A	Leadore	40.86	76	⇑P	P	17 25 22.6	-0.1
	baz=41						
L11A	Cat Creek Ranc	40.88	80	⇓P	P	17 25 23.2	+0.3
	baz=41,SNR=6.2						
MCMT	McKenzie Canyo	41.04	75	*e*P	P	17 25 23.6	-0.6
	0.6nm,0.2s,mb3.7						
G15A	Dillon	41.06	74	⇓P	P	17 25 24.2	-0.1
	baz=41						
J13A	Cove Ranch, Pi	41.09	78	⇓P	P	17 25 24.9	+0.3
	baz=41						
K12A	Draper Farm, C	41.10	79	⇓P	P	17 25 25.0	+0.3
	baz=41						
I14A	Mackay	41.21	77	⇓P	P	17 25 25.7	+0.2
	baz=41						
E17A	Martinsdale	41.28	72	⇑P	P	17 25 25.6	-0.5
	baz=41						
BOZ	Bozeman (W)	41.29	73	*e*P	P	17 25 25.4	-0.8
	1.1nm,0.5s,mb3.5						
M11A	Holland Ranch,	41.30	81	⇑P	P	17 25 26.7	+0.4
	baz=41						
L12A	House Creek Ra	41.33	80	⇑P	P	17 25 26.8	+0.2
	baz=41,SNR=7.2						
G16A	Moss Hill, Enn	41.42	74	⇑P	P	17 25 26.9	-0.4
	baz=41						
J14A	Carey	41.52	77	⇓P	P	17 25 28.7	+0.6
	baz=41						
O10A	Cortez Mining,	41.57	83	⇓P	P	17 25 29.1	+0.6
	baz=41						
NVAR	Mina Array Bea	41.65	87	P	P	17 25 29.9	+0.7
	1.4nm,0.6s,mb3.6,baz=299,slow=7.3,SNR=11						
NVAR	Mina Array Bea	41.65	87	P	P	17 25 29.9	+0.7
E18A	Harlowton	41.76	71	⇑P	P	17 25 29.7	-0.3
	baz=42						
M12A	Wells	41.83	81	⇓P	P	17 25 31.3	+0.7
	baz=42						
L13A	Double Diamond	42.00	79	⇓P	P	17 25 32.7	+0.7
	baz=42						
H16A	Russell Place,	42.05	74	⇓P	P	17 25 32.2	-0.1
	baz=42						
M13A	Montello	42.31	80	⇑P	P	17 25 34.9	+0.4
	baz=42						
L14A	Malta	42.45	79	⇑P	P	17 25 35.9	+0.2
	baz=42						
K15A	Arbon	42.48	78	⇑P	P	17 25 36.2	+0.3
	baz=42						
N13A	Wendover, West	42.60	81	⇓P	P	17 25 37.2	+0.4
	baz=42						
O12A	Currie	42.64	82	⇓P	P	17 25 37.6	+0.5
	baz=42						
Q11A	Duckwater	42.98	84	⇓P	P	17 25 40.1	+0.1
	baz=43,SNR=6.8						
S10A	Tonopah Range,	43.01	86	⇑P	P	17 25 40.6	+0.5
	baz=43						
P12A	McGill	43.04	83	⇓P	P	17 25 40.8	+0.5
	baz=43						
GRAC	Grapevine Rang	43.14	87	⇓P	P	17 25 42.0	+0.8
	baz=43						
R11A	Troy Canyon, C	43.34	85	⇑P	P	17 25 43.0	+0.1
	baz=43,SNR=7.8						
ISA	Isabella	43.35	90	⇓P	P	17 25 43.1	+0.1
	baz=43						
P13A	Bates Ranch, G	43.58	82	⇑P	P	17 25 45.0	+0.2
	baz=43						
MPMC	Manual Prospec	43.69	89	⇑P	P	17 25 46.1	+0.5
	baz=43						
S11A	Rachel	43.70	86	⇓P	P	17 25 46.0	+0.3
	baz=43						
FURC	Furnace Creek,	43.80	88	⇑P	P	17 25 46.9	+0.4
	baz=44						
Q13A	Wheeler Ranch,	43.90	83	⇑P	P	17 25 47.2	-0.1
	baz=44						
LRMC	Laurel Mountai	43.95	89	⇓P	P	17 25 47.8	+0.1
	baz=

V15A	Kaibab Nationa	47.06	85	⇑P	P	17 26 12.4	+0.4
	baz=47,SNR=6.5						
T17A	Navajo Res., N	47.10	83	⇓P	P	17 26 12.1	-0.3
	baz=47						
S18A	Hurst Farm, Bl	47.13	81	⇑P	P	17 26 11.7	-0.8
	baz=47						
R19A	Curley Farm, L	47.17	80	⇑P	P	17 26 12.5	-0.4
	baz=47						
Y13A	Salome	47.42	88	⇓P	P	17 26 14.6	-0.3
	baz=47						
X14A	Yava	47.54	87	⇑P	P	17 26 16.1	+0.3
	baz=47						
T18A	Mexican Hat	47.56	82	⇓P	P	17 26 15.2	-0.7
	baz=47						
S19A	Harvey Farm, M	47.60	81	⇓P	P	17 26 16.0	-0.2
	baz=47						
PV01	Paradox Valley	47.69	80	eP	P	17 26 16.2	-0.7
	204nm,0.6s						
X15A	Humboldt	47.92	86	⇓P	P	17 26 19.2	+0.6
	baz=48						
Z13A	Yuma Proving G	47.94	89	⇓P	P	17 26 18.7	-0.1
	baz=48						
V17A	Tonalea, Kykot	48.02	84	⇑P	P	17 26 20.0	+0.6
	baz=48						
Y15A	Casa Rosa Ranc	48.23	87	⇑P	P	17 26 21.1	0.0
	baz=48						
T19A	Beclabito	48.28	81	⇓P	P	17 26 21.0	-0.4
	baz=48,SNR=9.4						
X16A	Lo Mia Camp, P	48.45	86	⇓P	P	17 26 23.2	+0.5
	baz=48						
S21A	Coal Bank Pass	48.46	80	⇑P	P	17 26 22.6	-0.2
	baz=48						
V18A	Ganado	48.48	83	⇓P	P	17 26 23.0	+0.1
	baz=48						
U19A	Dine' College,	48.52	82	⇓P	P	17 26 23.3	0.0
	baz=48						
R22A	Saguache, Gunn	48.70	78	⇓P	P	17 26 24.8	+0.2
	baz=48						
114A	Black Gap (USA	48.72	88	⇓P	P	17 26 25.0	+0.2
	baz=48						
SPITS	Spitsbergen Ar	48.93	357	P	P	17 26 26.0	+0.2
	1.9nm,0.4s,mb3.7,baz=48,slow=7.9,SNR=8.7						
HHC	Hu-ho-hao-te	48.95	286	eP	P	17 26 27.3	+0.9
HHC				S	S	17 33 14.4	-0.1
HHC				pmax	pmax		
	comp=Z,17nm,0.7s,mb4.5						
HHC				pmax	pmax		
	comp=Z,88nm,6.8s						
S22A	4UR Ranch, Cre	48.98	79	⇑P	P	17 26 27.1	+0.4
	baz=49						
Y17A	Roosevelt	49.30	86	⇓P	P	17 26 29.4	+0.2
	baz=49						
214A	Organ Pipe Nat	49.32	89	⇑P	P	17 26 29.5	+0.1
	baz=49						
U21A	Nageezi	49.36	81	⇓P	P	17 26 29.3	-0.3
	baz=49						
T22A	Edith	49.42	80	⇓P	P	17 26 29.8	-0.2
	baz=49						
Y18A	Canyon Day Jun	49.73	85	⇓P	P	17 26 32.7	+0.2
	baz=49						
U22A	Llaves	49.88	80	⇓P	P	17 26 33.5	0.0
	baz=50						
S24A	Houchin Ranch,	50.01	78	⇓P	P	17 26 34.5	0.0
	baz=50						
X20A	Quemado	50.13	83	⇑P	P	17 26 35.5	0.0
	baz=50						
117A	Oracle	50.14	87	⇓P	P	17 26 35.6	+0.1
	baz=50						
V22A	San Miguel Ran	50.16	81	⇑P	P	17 26 35.7	+0.1
	baz=50						
U23A	El Rito	50.30	80	⇑P	P	17 26 36.8	+0.1
	baz=50						
118A	Homack Ranch,	50.56	86	⇓P	P	17 26 38.8	+0.1
	baz=50,SNR=5.7						
X21A	Alamocita Cree	50.63	83	⇑P	P	17 26 39.7	+0.6
	baz=50						
Y20A	Horse Springs,	50.64	84	⇓P	P	17 26 39.8	+0.5
	baz=50						
119A	Ashpeak Ranch,	50.88	86	⇑P	P	17 26 41.4	+0.4
	baz=51						
218A	Dragoon	50.98	87	⇑P	P	17 26 41.9	+0.1
	baz=51						
Y21A	Point of Rocks	51.00	83	⇓P	P	17 26 42.4	+0.5
	baz=51						
Z20A	Nine Sixteen R	51.06	85	⇓P	P	17 26 42.5	+0.1
	baz=51						
U25A	Circle Dot Ran	51.32	79	⇑P	P	17 26 43.9	-0.4
	baz=51						
318A	Bisbee	51.39	87	⇓P	P	17 26 44.8	0.0
	baz=51						
120A	U Bar Ranch, L	51.43	85	⇓P	P	17 26 45.1	0.0
	baz=51						
219A	White Tail Can	51.44	86	⇑P	P	17 26 45.4	+0.2
	baz=51						
W24A	Lazy 6 Ranch,	51.53	80	⇑P	P	17 26 45.6	-0.2
	baz=51						
V25A	Rancho No Teng	51.57	79	⇓P	P	17 26 46.1	-0.1
	baz=51						
U26A	Atchley Ranch,	51.71	78	⇑P	P	17 26 47.0	-0.2
	baz=51						
Z22A	Elephant Butte	51.94	83	⇑P	P	17 26 49.1	+0.2
	baz=52						
220A	Playas Peak, P	51.95	86	⇑P	P	17 26 48.5	-0.5
	baz=52,SNR=6.1						
121A	Cookes Peak, D	51.95	85	⇑P	P	17 26 49.1	+0.1
	baz=52						
Y23A	Lovelace Mesa,	52.02	82	⇑P	P	17 26 49.6	+0.1
	baz=52						
W25A	X Bar L Ranch,	52.09	80	⇑P	P	17 26 49.6	-0.3
	baz=52						
320A	Kipp Ranch, An	52.34	86	⇓P	P	17 26 52.1	+0.2
	baz=52						
Y24A	Capitan	52.40	82	⇑P	P	17 26 52.3	0.0
	baz=52						
Y25A	Mesa, Roswell	52.84	81	⇑P	P	17 26 55.1	-0.4
	baz=53						
Z24A	Sheeppen Canyo	52.85	82	⇓P	P	17 26 55.4	-0.2
	baz=53						
X26A	CR and CF Fran	52.94	80	⇓P	P	17 26 55.5	-0.6
	baz=53						
224A	Cornudas Mount	53.64	83	⇓P	P	17 27 00.9	-0.4
	baz=53						
Z26A	Caprock	53.72	81	⇓P	P	17 27 01.4	-0.5
	baz=53						
125A	Gardner Draw,	53.75	82	⇓P	P	17 27 02.0	-0.1
	baz=54						
Y27A	Causey	53.78	80	⇑P	P	17 27 02.0	-0.3
	baz=54						
225A	Deer Hill, Car	54.03	83	⇓P	P	17 27 04.1	-0.1
	baz=54						
324A	Moseley Ranch,	54.11	84	⇓P	P	17 27 04.1	-0.7
	baz=54						
Z27A	Tatum	54.15	81	⇓P	P	17 27 04.3	-0.7
	baz=54						
325A	Bean Ranch, Si	54.47	84	⇑P	P	17 27 07.0	-0.3
	baz=54						
326A	Caldwell Ranch	55.10	83	⇑P	P	17 27 11.5	-0.4
	baz=55						
426A	McDonald Obser	55.53	83	⇓P	P	17 27 14.2	-0.7
	baz=55						
328A	Wristen Ranch,	55.76	82	⇑P	P	17 27 15.4	-1.1
	baz=56						
427A	Hayter Ranch,	55.78	83	⇑P	P	17 27 15.9	-0.9
	baz=56						
526A	Mary Lane Ranc	55.93	84	⇓P	P	17 27 17.5	-0.3
	baz=56						
527A	Woodward Ranch	56.16	84	⇑P	P	17 27 18.8	-0.6
	baz=56						
626A	Big Bend Ranch	56.27	84	⇓P	P	17 27 19.7	-0.5
	baz=56						
428A	Kincaid Ranch,	56.30	82	⇓P	P	17 27 20.0	-0.3
	baz=56						
528A	Cox Ranch, San	56.64	83	⇓P	P	17 27 22.2	-0.6
	baz=56						
TXAR	Lajitas Array	56.71	84	P	P	17 27 22.6	-0.7
	comp=Z,2.4nm,0.8s,mb3.9,baz=303,slow=5.1,SNR=28						
TXAR				PcP	PcP	17 28 15.3	-1.6
	comp=Z,0.3nm,0.7s,baz=252,slow=2.4,SNR=3.5						
627A	Terlingua Ranc	56.79	84	⇑P	P	17 27 23.0	-0.9
	baz=56						
ARCES	ARCESS Array B	56.84	351	P	P	17 27 23.1	-0.5
	comp=Z,1.8nm,0.8s,mb3.8,baz=22,slow=7.3,SNR=3.9						
KURK	Kurchatov	59.20	314	P	P	17 27 39.4	-0.9
	comp=Z,0.2nm,0.3s,mb3.2,baz=44,slow=6.4,SNR=2.8						
KURK				pP	pP	17 28 35.7	+9.4
	comp=Z,0.3nm,0.5s,baz=43,slow=6.9,SNR=2.3						
WMQ	Urumqi	59.96	304	eP	P	17 27 50.0	+4.5
CD2	Chengdu	60.36	283	P	P	17 27 50.7	+2.2
CD2				pP	pP	17 28 37.9	+3.2
CD2				sP	sP	17 29 00.2	+3.4
CD2				PP	PP	17 30 08.3	+4.6
CD2				S	S	17 35 47.7	+0.9
CD2				sS	sS	17 37 09.7	+2.2
CD2				SS	SS	17 39 50.2	+2.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.7						
CD2				pmax	pmax		
	comp=Z,100nm,4.6s						
BVAR	Borovoye Array	60.82	321	P	P	17 27 50.3	-0.9
	comp=Z,0.5nm,0.5s,mb3.4,baz=38,slow=7.3,SNR=4.3						
BVAR				pP	pP	17 28 48.5	+11
	comp=Z,0.8nm,0.5s,baz=52,slow=7.8,SNR=4.7						
GYA	Guiyang	61.89	277	P	P	17 28 01.0	+2.2
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4						
CMIG	Matias Romero	71.18	86	P	P	17 28 56.9	-0.8
	comp=Z,2.1nm,0.7s,mb3.9,baz=343,slow=11,SNR=4.1						

WEL 01 17:25:35.0±0.1, 38°.90S×176°.60E, h59km±1km, ML3.5/8, 3C-4D, Error ellipse: s-maj=0.8km s-min=0.7km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NMHZ	Naumai	0.26	141	⇑PN	Pn	17 25 44.5	-0.2
NMHZ				SN	Sn	17 25 52.2	+0.6
BKZ	Black Stump Fm	0.28	197	⇓PN	Pn	17 25 44.0	-0.8
RAHZ	Arahi	0.38	93	⇑PN	Pn	17 25 45.5	-0.1
RAHZ				SN	Sn	17 25 54.3	+0.9
ALRZ	Allen Road	0.39	329	⇓PN	Pn	17 25 45.4	-0.3
HATZ	Hinemaiaia	0.40	271	PN	Pn	17 25 45.3	-0.5
PRRZ	Plateau Road	0.43	338	⇓PN	Pn	17 25 45.9	-0.3
PRRZ				SN	Sn	17 25 53.4	-0.7
MCHZ	McNeill Hill	0.55	172	⇑PN	Pn	17 25 48.0	+0.5
WHTZ	Whakaora	0.55	294	PN	Pn	17 25 47.5	+0.1
RRRZ	Republican Roa	0.56	353	PN	Pn	17 25 47.3	-0.3
HRRZ	Handcock Road	0.56	334	PN	Pn	17 25 47.1	-0.5
HRRZ				SN	Sn	17 25 55.6	-1.1
RITZ	Rihia Road	0.58	262	PN	Pn	17 25 47.7	0.0
RATZ	Rangitukua	0.65	272	PN	Pn	17 25 48.4	-0.1
TARZ	Mount Tarawera	0.67	354	PN	Pn	17 25 49.0	+0.3
WATZ	Wairara	0.70	285	PN	Pn	17 25 49.0	-0.2
KATZ	Kakaramea	0.71	263	PN	Pn	17 25 49.2	0.0
URZ	Urewera	0.75	32	PN	Pn	17 25 49.3	-0.5
KRVZ	Karewarewa	0.77	255	PN	Pn	17 25 49.9	-0.2
OTVZ	Oturere	0.77	250	⇓PN	Pn	17 25 50.0	-0.1
EDRZ	Edgecumbe	0.80	8	PN	Pn	17 25 50.3	-0.1
OMRZ	Omania	0.81	347	PN	Pn	17 25 50.5	0.0
WTVZ	West Tongariro	0.81	254	PN	Pn	17 25 50.5	-0.1
TUVZ	Tukino	0.82	243	PN	Pn	17 25 50.6	-0.1
NGZ	Ngauruhoe	0.82	250	PN	Pn	17 25 50.7	0.0
MOVZ	Moawhango	0.83	232	PN	Pn	17 25 50.3	-0.5
KNZ	Kokohu	0.85	99	PN	Pn	17 25 50.9	-0.1
WPVZ	Whakapapa	0.88	249	PN	Pn	17 25 51.2	-0.1
DRZ	Dome Shelter	0.89	245	PN	Pn	17 25 51.7	+0.1
FWVZ	Far West T-bar	0.89	246	PN	Pn	17 25 51.4	-0.1
WNVZ	Wahianoa	0.89	241	PN	Pn	17 25 51.5	-0.1
TRVZ	Turoa	0.91	243	PN	Pn	17 25 51.7	-0.1
MWZ	Matawai	0.92	53	PN	Pn	17 25 51.9	0.0
TWVZ	Taurewa	0.92	259	PN	Pn	17 25 51.6	-0.3
KAHZ	Kahuranaki	0.92	167	PN	Pn	17 25 52.1	+0.1
KAHZ				SN	Sn	17 26 05.6	+1.1
MTVZ	Mangateitei	1.00	241	PN	Pn	17 25 52.8	-0.2
PRGZ	Paritu Road	1.00	92	PN	Pn	17 25 52.8	-0.2
PKVZ	Pokaka	1.05	248	PN	Pn	17 25 53.5	-0.2
MHGZ	Mahia Peninsul	1.05	104	PN	Pn	17 25 53.4	-0.2
PNHZ	Pukenui	1.06	197	PN	Pn	17 25 53.6	-0.2
PXZ	Pawanui	1.15	170	PN	Pn	17 25 54.1	-0.9
WPHZ	Waipukurau	1.17	186	PN	Pn	17 25 54.7	-0.6
TSZ	Takapari Road	1.26	203	PN	Pn	17 25 56.0	-0.5
PRHZ	Porangahau	1.37	179	PN	Pn	17 25 57.0	-0.9
HIZ	Hauiti	1.42	285	PN	Pn	17 25 58.9	+0.4
TOZ	Tahuroa Road	1.45	323	PN	Pn	17 25 58.7	-0.2
VRZ	Vera Road	1.45	260	PN	Pn	17 25 59.3	+0.4
WAZ	Wanganui	1.52	235	PN	Pn	17 26 00.2	+0.3
PUZ	Puketiti	1.54	58	PN	Pn	17 26 00.1	-0.1
MXZ	Matakaoa Point	1.89	46	PN	Pn	17 26 05.7	+0.7
MRZ	Mangatainoka R	1.93	204	PN	Pn	17 26 03.8	-1.7
PKE	Pukeiti	2.05	261	ePN	Pn	17 26 08.5	+1.3
KIW	Kapiti Island	2.35	213	PN	Pn	17 26 09.8	-1.5
MQZ	McQueen's Vall	5.65	210	SN	Sn	17 27 51.1	-8.7
CTZ	Chatham Island	7.03	136	PN	Pn	17 27 12.7	-2.5
CTZ				SN	Sn	17 28 21.6	-12

IDC 01 17:41:04.7±1.9, 1°.27S×138°.02E, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.7/16, mbtmp3.7/7, ML3.6/1, MS3.1/1, Ms1 3.1/1, ms1mx2.5/22, Error ellipse: s-maj=84.6km s-min=19.8km az=83.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.90	191	P	Pn	17 45 28.6	+1.1
	0.2nm,0.3s,baz=10.0,slow=12,SNR=12						
WRA				S	Sn	17 48 45.7	-14
	0.1nm,0.3s,baz=12,slow=23,SNR=3.5						
FITZ	Fitzroy Crossi	20.68	215	P	P	17 45 45.4	-1.0
	1.1nm,0.7s,baz=66,slow=16,SNR=4.2						
ASAR	Alice Springs	22.62	190	P	P	17 46 07.7	+0.5
	3.2nm,0.6s,baz=16,slow=11,SNR=20						
STKA	Stephens Creek	30.63	174	P	P	17 47 19.8	-0.8
	2.2nm,0.9s,baz=356,slow=14,SNR=2.3						
KSRS	Korea Array	39.65	347	LR	LR	18 02 16.7	
	comp=Z,24nm,19.2s,baz=312,slow=32						
MKAR	Makanchi Array	68.24	322	P	P	17 52 06.5	-0.8
	0.3nm,0.6s,baz=120,slow=7.8,SNR=3.9						
ZALV	Zalesovo Beam	70.36	330	P	P	17 52 20.0	-0.2
	0.6nm,0.8s,baz=100,slow=7.5,SNR=3.0						
BVAR	Borovoye Array	77.75	325	P	P	17 53 04.7	+1.3
	0.7nm,0.8s,baz=104,slow=6.1,SNR=5.4						

*IDC **01** 17:49:01.6±0.8, 13°.20N×125°.27E, h0km, mb3.9/11, mb1 4.1/11, mb1mx3.9/22, mbtmp3.9/11, MS3.2/2, Ms1 3.3/2, ms1mx2.4/35, Error ellipse: s-maj=34.0km s-min=13.9km az=72.0*

*NEIC **01** 17:49:01.7±6.2, 13°.21N×125°.26E, h2km±39km, mb4.3/6, Error ellipse: s-maj=15.6km s-min=7.3km az=73.0*

*MAN **01** 17:49:05, 13°.32N×125°.28E, h29km, mb5.3, ML4.3, MS4.6*

*ISCJB **01** 17:49:06.2±1.0, 13°.28N±0°.04×125°.26E±0°.08, h49km±8km, mb4.1/17, MS3.1/2, Error ellipse: s-maj=13.8km s-min=6.0km az=162.5*

ISC 01 17:49:07.4±0.9, 13°.26N±0°.04×125°.27E±0°.08, h41km±8km, n43, σ1°.06/47, mb4.1/17, MS3.1/2, 2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	Cataman	0.95	219	eP	Pn	17 49 23.9	-0.4
PVCP	Virac	1.14	287	eP	Pn	17 49 25.2	-1.6
PVCP				eS	Sn	17 49 39.9	-1.4
BESP	Borongan	1.66	174	eP	Pn	17 49 33.0	-0.9
OCLP	Ormoc	2.29	197	eP	Pn	17 49 44.1	+1.4
AUQP	San Andres	2.53	272	eP	Pn	17 49 47.5	+1.6
GQP	Guinayangan	2.82	283	⇓eP	Pn	17 49 49.2	-0.8
GQP				eS	Sn	17 49 59.3	-23
BOAC	Boac	3.34	274	eP	Pn	17 49 57.0	-0.1
POLP	Polilio Island	3.55	295	eP	Pn	17 50 01.6	+1.6
GUIM	Jordan	3.71	225	eP	Pn	17 50 02.8	+0.6
SJMP	San Jose	4.13	259	eP	Pn	17 50 09.5	+1.6
BALP	Baler	4.35	305	eP	Pn	17 50 09.8	-1.1
BALP				eS	Sn	17 50 36.4	-24
PALP	Palanan	4.67	324	eP	Pn	17 50 14.9	-0.6
PALP				eS	Sn	17 50 47.5	-21
CUYO	Cuyo Island	4.80	241	eP	Pn	17 50 17.5	+0.3
LUBP	Lubang	4.91	276	eP	Pn	17 50 19.1	+0.5
CAUP	Cauayan	4.95	318	eP	Pn	17 50 19.3	+0.1
BUSP	Coron	5.11	256	eP	Pn	17 50 22.1	+0.7
BUKP	Musuan	5.35	182	eP	Pn	17 50 28.8	+4.0
BCPH	Baguio City Da	5.50	305	⇓iP	Pn	17 50 25.2	-1.5
BCPH				iS	Sn	17 51 24.4	-4.3
PAGZ	Pagadian	5.69	199	eP	Pn	17 50 30.4	+1.0
APYP	Conner	6.00	320	eP	Pn	17 50 34.8	+1.2
ABRA	Dolores	6.19	315	eP	Pn	17 50 36.6	+0.3
YHNB	Yeheng	11.93	343	Pn	Pn	17 51 53.1	-1.8
KSM	Kuching	18.88	233	eP	Pn	17 53 24.1	-1.2
	9.1nm,1.0s						
KSRS	Korea Array	24.21	5	P	P	17 54 18.7	-1.5
	2.3nm,0.9s,mb3.6,baz=177,slow=9.3,SNR=4.3						
CM31	Chiang Mai Arr	25.83	285	P	P	17 54 34.3	-0.8
CMAR	Chiang Mai Arr	25.83	285	P	P	17 54 34.9	-0.3
	2.1nm,0.8s,mb3.7,baz=95,slow=7.7,SNR=18						
CMAR				LR	LR	18 04 37.4	
	comp=Z,43nm,19.2s,MS3.0,baz=185,slow=36						
HHC	Hu-ho-hao-te	29.99	339	eP	P	17 55 13.9	+1.9
HHC				S	S	18 00 12.3	+5.1
HHC				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.8						
HHC				pmax	pmax		
	comp=Z,53nm,5.7s						
FITZ	Fitzroy Crossi	31.16	179	P	P	17 55 21.0	-1.6
	comp=Z,2.5nm,0.6s,mb4.2,baz=22,slow=7.0,SNR=16						
WRAB	Tennant Creek	34.17	165	eP	P	17 55 48.2	-0.7
	comp=Z,4.2nm,1.0s,mb4.3						
WRA	Warramunga Arr	34.18	165	P	P	17 55 48.1	-0.8
	comp=Z,0.5nm,0.4s,mb3.8,baz=332,slow=9.9,SNR=12						
ASAR	Alice Springs	37.66	167	P	P	17 56 18.6	-0.1
	comp=Z,0.7nm,0.4s,mb3.8,baz=346,slow=7.0,SNR=18						
ASAR				S	S	18 02 05.2	-0.8
	comp=Z,0.4nm,0.8s,baz=340,slow=12,SNR=6.7						
ULN	Ulaanbaatar	37.70	340	eP	P	17 56 20.4	+1.6
	comp=Z,6.0nm,1.3s,mb4.2						
SONM	Songino Array	37.89	339	P	P	17 56 21.4	+1.0
	comp=Z,1.8nm,1.0s,mb3.8,baz=154,slow=9.0,SNR=10						
PETK	Petropavlovsk-	47.37	26	P	P	17 57 38.1	+0.9
	comp=Z,2.8nm,0.9s,mb4.2,baz=182,slow=4.3,SNR=3.5						
PETK				LR	LR	18 16 59.8	
	comp=Z,29nm,18.1s,MS3.3,baz=54,slow=35						
STKA	Stephens Creek	47.53	161	P	P	17 57 38.6	-0.1
	comp=Z,8.5nm,1.2s,mb4.6,baz=8.0,slow=7.9,SNR=6.1						
STKA	Stephens Creek	47.53	161	eP	P	17 57 38.5	-0.2
MK31	Makanchi Array	49.08	322	eP	P	17 57 51.5	+1.0
MKAR	Makanchi Array	49.08	322	P	P	17 57 51.1	+0.6
	comp=Z,2.1nm,0.9s,mb4.2,baz=112,slow=9.4,SNR=17						
ZALV	Zalesovo Beam	51.55	331	P	P	17 58 09.3	+0.2
	comp=Z,0.4nm,0.4s,mb3.7,baz=108,slow=9.5,SNR=2.6						
KURK	Kurchatov	53.07	325	eP	P	17 58 21.2	+0.7
	comp=Z,12nm,1.0s,mb4.8						
BVAR	Borovoye Array	58.67	325	P	P	17 59 01.4	+0.9
	comp=Z,0.4nm,0.5s,mb3.7,baz=124,slow=6.2,SNR=3.7						
BRVK	Borovoye	58.74	325	P	P	17 59 00.9	-0.1
	comp=Z,7.9nm,1.2s,mb4.6						
ABKAR	Akbulak array	63.99	319	P	P	17 59 34.8	-1.8
	comp=Z,1.8nm,0.9s,mb4.1						

IDC 01 18:01:01.5±8.2, 10°.74N×91°.72E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.1/22, mbtmp3.2/3, Error ellipse: s-maj=421.5km s-min=27.5km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	36.81	349	P	P	18 08 11.1	0.0
	0.2nm,0.5s,baz=171,slow=6.6,SNR=3.9						
WRA	Warramunga Arr	51.86	126	P	P	18 10 12.4	+0.4
	0.3nm,0.8s,baz=307,slow=8.3,SNR=3.3						
ASAR	Alice Springs	53.58	130	P	P	18 10 24.2	-0.4
	0.2nm,0.8s,baz=306,slow=7.5,SNR=3.8						

IDC 01 18:03:22.4±3.0, 10°.91N×91°.65E, h0km, mb3.4/5, mb1 3.5/5, mb1mx3.3/23, mbtmp3.4/5, MS3.1/1, Ms1 3.1/1, ms1mx2.4/18, Error ellipse: s-maj=125.8km s-min=21.6km az=62.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	10.81	138	LR	LR	18 10 06.2	
	comp=Z,93nm,20.2s,baz=326,slow=37						
MKAR	Makanchi Array	36.63	349	P	P	18 10 30.6	+0.2
	0.4nm,0.7s,baz=160,slow=7.5,SNR=5.8						
SONM	Songino Array	38.84	16	P	P	18 10 49.4	+0.3
	0.7nm,0.8s,baz=207,slow=6.0,SNR=3.9						
KURK	Kurchatov	41.11	347	P	P	18 11 07.0	-0.9
	0.4nm,0.8s,baz=165,slow=7.7,SNR=2.4						
WRA	Warramunga Arr	52.02	126	P	P	18 12 33.9	-0.1
	0.2nm,0.3s,baz=302,slow=10,SNR=13						
ASAR	Alice Springs	53.73	130	P	P	18 12 46.6	0.0
	0.1nm,0.4s,baz=311,slow=7.6,SNR=5.7						

*ISCJB **01** 18:10:22.5±0.4, 43°.79N±0°.04×105°.27W±0°.05, h0km, Error ellipse: s-maj=5.8km s-min=5.4km az=143.7*

*IDC **01** 18:10:23.4±1.6, 43°.60N×105°.33W, h0km, mb1 3.7/5, mb1mx3.4/27, mbtmp3.4/5, ML3.4/5, Error ellipse: s-maj=41.8km s-min=9.7km az=151.0*

*NEIC **01** 18:10:24.1±0.4, 43°.77N×105°.27W, h0km, ML3.2, Error ellipse: s-maj=5.0km s-min=4.7km az=158.0, Suspected Mining explosion.*

NEIC 60 km [40 miles] SSE of Gillette.

ISC 01 18:10:24.2±0.4, 43°.78N±0°.04×105°.26W±0°.05, h0km, n39, σ0°.96/40, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.95	69	ePg	Pg	18 10 42.3	0.0
PHWY	Pilot Hill	2.48	183	ePn	Pn	18 11 05.8	-0.1
RWWY	Rawlins	2.54	215	ePn	Pn	18 11 07.1	+0.5
LAO	LASA Array	2.98	347	ePn	Pn	18 11 13.3	+0.6
RLMT	Red Lodge	3.17	296	ePn	Pn	18 11 15.3	+0.1
BW06	Boulder Array	3.30	254	ePn	Pn	18 11 17.2	+0.1
PDAR	Pinedale Array	3.30	254	Pn	Pn	18 11 17.0	0.0
	4.6nm,0.3s,baz=73,slow=16,SNR=51						
PDAR				Pg	Pg	18 11 25.8	-1.6
	15nm,0.3s,baz=68,slow=22,SNR=33						
PDAR				Lg		18 12 03.0	
	20nm,0.3s,baz=74,slow=33,SNR=12						
OGNE	Ogallala	3.71	139	ePn	Pn	18 11 23.2	+0.5
GCMT	Gre

18C-6D, Error ellipse: s-maj=1.2km s-min=0.7km az=90.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUWZ	**D'Urville Isla**	**0.51**	**108**	⇑PN	Pn	18 26 34.7	+0.2
DUWZ				SN	Sn	18 26 51.0	-1.0
NNZ	**Nelson**	**0.58**	**173**	⇑PN	Pn	18 26 34.8	0.0
NNZ				SN	Sn	18 26 51.8	-0.9
NNZ	**Nelson**	**0.58**	**173**	P	Pn	18 26 34.5	-0.4
QRZ	**Quartz Range**	**0.61**	**252**	⇑PN	Pn	18 26 35.0	0.0
QRZ	**Quartz Range**	**0.61**	**252**	P	Pn	18 26 34.9	-0.1
TUWZ	**Tuamarina**	**0.93**	**148**	⇑PN	Pn	18 26 37.4	+0.3
TCW	**Tory Channel**	**0.94**	**128**	⇑PN	Pn	18 26 37.7	+0.5
TCW	**Tory Channel**	**0.94**	**128**	P	Pn	18 26 37.7	+0.5
THZ	**Tophouse**	**1.15**	**194**	⇑PN	Pn	18 26 38.9	0.0
THZ	**Tophouse**	**1.15**	**194**	P	Pn	18 26 38.9	-0.1
THZ				S	Sn	18 26 58.9	-1.1
BSWZ	**Blackbirch Sta**	**1.16**	**158**	⇑PN	Pn	18 26 39.3	+0.3
KIW	**Kapiti Island**	**1.25**	**100**	⇑PN	Pn	18 26 39.9	+0.1
KIW	**Kapiti Island**	**1.25**	**100**	P	Pn	18 26 40.0	+0.2
KIW				S	Sn	18 26 57.3	-4.1
SNZO	**South Karori**	**1.26**	**122**	⇑PN	Pn	18 26 39.9	0.0
WEL	**Wellington**	**1.29**	**120**	PN	Pn	18 26 40.2	+0.1
WEL	**Wellington**	**1.29**	**120**	P	Pn	18 26 40.3	+0.1
CMWZ	**Cape Campbell**	**1.30**	**148**	PN	Pn	18 26 40.9	+0.6
CMWZ	**Cape Campbell**	**1.30**	**148**	P	Pn	18 26 40.9	+0.6
BHW	**Baring Head**	**1.42**	**123**	⇑PN	Pn	18 26 41.2	-0.2
BHW	**Baring Head**	**1.42**	**123**	P	Pn	18 26 41.2	-0.2
CAW	**Cannon Point**	**1.43**	**110**	⇑PN	Pn	18 26 41.4	-0.1
CAW	**Cannon Point**	**1.43**	**110**	P	Pn	18 26 41.4	-0.1
NWEZ	**Newall Road**	**1.44**	**18**	PN	Pn	18 26 41.9	+0.2
NWEZ	**Newall Road**	**1.44**	**18**	P	Pn	18 26 41.9	+0.2
OGWZ	**Otaki Gorge**	**1.44**	**97**	PN	Pn	18 26 41.8	+0.1
PKE	**Pukeiti**	**1.54**	**21**	⇓PN	Pn	18 26 42.7	0.0
PKE	**Pukeiti**	**1.54**	**21**	P	Pn	18 26 42.7	0.0
DSZ	**Denniston Nort**	**1.57**	**225**	⇓PN	Pn	18 26 42.7	-0.3
DSZ	**Denniston Nort**	**1.57**	**225**	P	Pn	18 26 42.6	-0.3
WAZ	**Wanganui**	**1.57**	**56**	PN	Pn	18 26 43.3	+0.3
WAZ	**Wanganui**	**1.57**	**56**	P	Pn	18 26 43.4	+0.4
DREZ	**Durham Road**	**1.61**	**26**	PN	Pn	18 26 43.3	-0.1
DREZ				SN	Sn	18 27 07.4	-0.4
MSWZ	**Moikau Station**	**1.67**	**118**	⇑PN	Pn	18 26 43.8	-0.2
MSWZ	**Moikau Station**	**1.67**	**118**	P	Pn	18 26 43.8	-0.2
HOWZ	**Holdsworth Sta**	**1.71**	**99**	PN	Pn	18 26 44.3	-0.1
MRZ	**Mangatainoka R**	**1.74**	**91**	PN	Pn	18 26 44.4	-0.3
MRZ	**Mangatainoka R**	**1.74**	**91**	P	Pn	18 26 44.4	-0.3
PLWZ	**Palliser**	**1.75**	**123**	⇑PN	Pn	18 26 44.6	-0.2
MTW	**Mount Morrison**	**1.75**	**108**	⇑PN	Pn	18 26 44.7	-0.2
MTW	**Mount Morrison**	**1.75**	**108**	P	Pn	18 26 44.7	-0.2
MHEZ	**Mangahewa**	**1.76**	**27**	PN	Pn	18 26 44.9	0.0
PAWZ	**Paruwai Farm**	**1.78**	**115**	⇑PN	Pn	18 26 44.9	-0.2
PAWZ	**Paruwai Farm**	**1.78**	**115**	P	Pn	18 26 44.9	-0.2
KHZ	**Kahutara**	**1.78**	**174**	⇑PN	Pn	18 26 45.0	-0.1
KHZ	**Kahutara**	**1.78**	**174**	P	Pn	18 26 44.6	-0.5
VRZ	**Vera Road**	**1.89**	**37**	⇓PN	Pn	18 26 45.7	-0.7
POWZ	**Post Office Ro**	**1.91**	**83**	⇓PN	Pn	18 26 46.2	-0.3
TRWZ	**Traveller**	**1.96**	**113**	⇑PN	Pn	18 26 47.0	-0.2
TIWZ	**Tintock**	**1.98**	**95**	⇓PN	Pn	18 26 47.1	-0.2
TMWZ	**Te Maipa**	**2.02**	**104**	⇑PN	Pn	18 26 47.7	-0.1
PKVZ	**Pokaka**	**2.08**	**50**	PN	Pn	18 26 48.2	-0.4
MTVZ	**Mangateitei**	**2.09**	**54**	PN	Pn	18 26 48.4	-0.2
TSZ	**Takapari Road**	**2.12**	**75**	PN	Pn	18 26 48.4	-0.6
TSZ	**Takapari Road**	**2.12**	**75**	P	Pn	18 26 48.2	-0.8
TRVZ	**Turoa**	**2.19**	**53**	PN	Pn	18 26 49.2	-0.7
WNVZ	**Wahianoa**	**2.21**	**54**	PN	Pn	18 26 49.4	-0.6
WNVZ	**Wahianoa**	**2.21**	**54**	P	Pn	18 26 49.5	-0.5
DRZ	**Dome Shelter**	**2.22**	**53**	PN	Pn	18 26 49.6	-0.5
DRZ	**Dome Shelter**	**2.22**	**53**	P	Pn	18 26 49.8	-0.3
DVHZ	**Dannevirke**	**2.22**	**82**	PN	Pn	18 26 49.5	-0.7
FWVZ	**Far West T-bar**	**2.23**	**52**	PN	Pn	18 26 49.5	-0.7
FWVZ	**Far West T-bar**	**2.23**	**52**	P	Pn	18 26 49.5	-0.7
BFZ	**Birch Farm**	**2.25**	**92**	PN	Pn	18 26 50.1	-0.3
BFZ	**Birch Farm**	**2.25**	**92**	P	Pn	18 26 50.1	-0.3
WPVZ	**Whakapapa**	**2.25**	**51**	PN	Pn	18 26 49.7	-0.8
MOVZ	**Moawhango**	**2.26**	**58**	PN	Pn	18 26 49.6	-1.0
MOVZ	**Moawhango**	**2.26**	**58**	P	Pn	18 26 49.6	-1.0
LTZ	**Lake Taylor**	**2.27**	**199**	PN	Pn	18 26 50.1	-0.5
LTZ	**Lake Taylor**	**2.27**	**199**	P	Pn	18 26 50.1	-0.5
TUVZ	**Tukino**	**2.28**	**54**	PN	Pn	18 26 50.3	-0.5
TUVZ	**Tukino**	**2.28**	**54**	P	Pn	18 26 50.3	-0.5
TWVZ	**Taurewa**	**2.28**	**47**	PN	Pn	18 26 50.0	-0.9
TWVZ	**Taurewa**	**2.28**	**47**	P	Pn	18 26 50.0	-0.9
NGZ	**Ngauruhoe**	**2.31**	**51**	PN	Pn	18 26 50.3	-0.9
NGZ	**Ngauruhoe**	**2.31**	**51**	P	Pn	18 26 50.3	-0.8
WTVZ	**West Tongariro**	**2.34**	**50**	PN	Pn	18 26 50.6	-0.9
PNHZ	**Pukenui**	**2.34**	**73**	PN	Pn	18 26 50.8	-0.8
OTVZ	**Oturere**	**2.35**	**52**	PN	Pn	18 26 51.0	-0.7
KRVZ	**Karewarewa**	**2.38**	**50**	PN	Pn	18 26 51.0	-1.0
HIZ	**Hauiti**	**2.45**	**30**	PN	Pn	18 26 51.8	-1.1
WPHZ	**Waipukurau**	**2.48**	**77**	PN	Pn	18 26 52.6	-0.6
KATZ	**Kakaramea**	**2.49**	**49**	PN	Pn	18 26 52.5	-0.8
KATZ	**Kakaramea**	**2.49**	**49**	P	Pn	18 26 52.5	-0.9
PRHZ	**Porangahau**	**2.58**	**83**	PN	Pn	18 26 54.0	-0.4
RITZ	**Rihia Road**	**2.58**	**51**	PN	Pn	18 26 53.7	-0.8
RITZ	**Rihia Road**	**2.58**	**51**	P	Pn	18 26 53.7	-0.8
RATZ	**Rangitukua**	**2.61**	**48**	PN	Pn	18 26 54.2	-0.6
RATZ	**Rangitukua**	**2.61**	**48**	P	Pn	18 26 54.2	-0.6
WATZ	**Wairara**	**2.70**	**45**	PN	Pn	18 26 55.1	-0.8
WATZ	**Wairara**	**2.70**	**45**	P	Pn	18 26 55.1	-0.8
HATZ	**Hinemaiaia**	**2.78**	**52**	PN	Pn	18 26 55.2	-1.7
HATZ	**Hinemaiaia**	**2.78**	**52**	P	Pn	18 26 55.2	-1.7
PXZ	**Pawanui**	**2.80**	**79**	PN	Pn	18 26 56.3	-0.8
BKZ	**Black Stump Fm**	**2.87**	**60**	⇓PN	Pn	18 26 56.5	-1.5
KAHZ	**Kahuranaki**	**2.87**	**74**	PN	Pn	18 26 57.3	-0.7
MCHZ	**McNeill Hill**	**2.88**	**66**	PN	Pn	18 26 57.4	-0.7
CRLZ	**Canterbury Las**	**2.97**	**189**	PN	Pn	18 26 57.6	-1.6
CRLZ	**Canterbury Las**	**2.97**	**189**	P	Pn	18 26 57.6	-1.5
CKHZ	**Cape Kidnapper**	**3.06**	**72**	PN	Pn	18 26 59.4	-1.0
WVZ	**Waitaha Valley**	**3.09**	**217**	PN	Pn	18 26 59.2	-1.5
WVZ	**Waitaha Valley**	**3.09**	**217**	P	Pn	18 26 59.2	-1.4
MQZ	**McQueen's Vall**	**3.10**	**189**	PN	Pn	18 26 58.7	-2.0
MQZ	**McQueen's Vall**	**3.10**	**189**	P	Pn	18 26 58.7	-2.0
NMHZ	**Naumai**	**3.12**	**61**	PN	Pn	18 27 00.3	-0.7
ALRZ	**Allen Road**	**3.14**	**50**	PN	Pn	18 26 59.7	-1.6
PRRZ	**Plateau Road**	**3.22**	**49**	PN	Pn	18 27 00.8	-1.4
TOZ	**Tahuroa Road**	**3.38**	**31**	PN	Pn	18 27 02.7	-1.6
TOZ	**Tahuroa Road**	**3.38**	**31**	P	Pn	18 27 02.7	-1.7
RRRZ	**Republican Roa**	**3.39**	**48**	PN	Pn	18 27 02.8	-1.8
RAHZ	**Arahi**	**3.40**	**61**	PN	Pn	18 27 03.3	-1.3
RPZ	**Rata Peaks**	**3.49**	**208**	PN	Pn	18 27 03.6	-2.0
RPZ	**Rata Peaks**	**3.49**	**208**	P	Pn	18 27 03.6	-2.1
KNZ	**Kokohu**	**3.75**	**66**	PN	Pn	18 27 07.1	-1.9
KNZ	**Kokohu**	**3.75**	**66**	P	Pn	18 27 07.1	-1.9
URZ	**Urewera**	**3.80**	**52**	PN	Pn	18 27 06.9	-2.8
URZ	**Urewera**	**3.80**	**52**	P	Pn	18 27 06.9	-2.8
WTAZ	**Waiatarua**	**3.84**	**16**	P	Pn	18 27 10.6	+0.3
MHGZ	**Mahia Peninsul**	**3.85**	**69**	PN	Pn	18 27 08.7	-1.6
PRGZ	**Paritu Road**	**3.93**	**66**	PN	Pn	18 27 09.6	-1.9
FOZ	**Fox Glacier**	**3.96**	**221**	PN	Pn	18 27 08.5	-3.2
FOZ	**Fox Glacier**	**3.96**	**221**	P	Pn	18 27 08.5	-3.2
MWZ	**Matawai**	**4.01**	**56**	PN	Pn	18 27 09.8	-2.6
MWZ	**Matawai**	**4.01**	**56**	P	Pn	18 27 09.8	-2.6
KUZ	**Kuaotunu**	**4.33**	**27**	PN	Pn	18 27 15.3	-1.3
KUZ	**Kuaotunu**	**4.33**	**27**	P	Pn	18 27 15.3	-1.3
CNGZ	**Carnagh Statio**	**4.37**	**62**	PN	Pn	18 27 15.0	-2.1
LBZ	**Lake Benmore**	**4.39**	**211**	PN	Pn	18 27 14.8	-2.4
PUZ	**Puketiti**	**4.63**	**58**	PN	Pn	18 27 17.4	-3.0
JCZ	**Jackson Bay**	**4.80**	**223**	PN	Pn	18 27 20.3	-2.3
JCZ	**Jackson Bay**	**4.80**	**223**	P	Pn	18 27 20.3	-2.3
ODZ	**Otahua Downs**	**4.81**	**203**	PN	Pn	18 27 20.9	-1.8
ODZ	**Otahua Downs**	**4.81**	**203**	P	Pn	18 27 20.9	-1.8
MXZ	**Matakaoa Point**	**4.97**	**53**	PN	Pn	18 27 22.2	-2.7
MXZ	**Matakaoa Point**	**4.97**	**53**	P	Pn	18 27 22.2	-2.7
WKZ	**Wanaka**	**5.23**	**216**	PN	Pn	18 27 25.0	-3.2
WKZ	**Wanaka**	**5.23**	**216**	P	Pn	18 27 25.0	-3.3
EAZ	**Earnscleugh**	**5.44**	**211**	PN	Pn	18 27 27.7	-3.2
EAZ	**Earnscleugh**	**5.44**	**211**	P	Pn	18 27 27.7	-3.3
MSZ	**Milford Sound**	**5.64**	**223**	PN	Pn	18 27 31.2	-2.5
MSZ	**Milford Sound**	**5.64**	**223**	P	Pn	18 27 31.2	-2.5
TUZ	**Tuapeka**	**5.94**	**205**	PN	Pn	18 27 35.4	-2.2
TUZ	**Tuapeka**	**5.94**	**205**	P	Pn	18 27 35.4	-2.2
TUZ	**Tuapeka**	**5.94**	**205**	PN	Pn	18 27 35.4	-2.2
TUZ				SN	Sn	18 28 37.4	-7.6
MLZ	**Mavora Lakes**	**6.01**	**217**	PN	Pn	18 27 36.5	-2.1
MLZ	**Mavora Lakes**	**6.01**	**217**	P	Pn	18 27 36.5	-2.1
MLZ	**Mavora Lakes**	**6.01**	**217**	PN	Pn	18 27 36.2	-2.4
MLZ				SN	Sn	18 28 39.5	-7.2
WHZ	**Wether Hill Ro**	**6.54**	**215**	PN	Pn	18 27 41.8	-3.7
WHZ	**Wether Hill Ro**	**6.54**	**215**	P	Pn	18 27 41.8	-3.7
WHZ	**Wether Hill Ro**	**6.54**	**215**	PN	Pn	18 27 41.8	-3.7
WHZ				SN	Sn	18 28 51.5	-7.7
SYZ	**Scrubby Hill**	**6.62**	**206**	PN	Pn	18 27 44.0	-2.5
SYZ	**Scrubby Hill**	**6.62**	**206**	PN	Pn	18 27 44.0	-2.5
SYZ				SN	Sn	18 28 53.7	-7.4
APZ	**The Paps**	**7.28**	**210**	PN	Pn	18 27 52.1	-3.2
APZ	**The Paps**	**7.28**	**210**	P	Pn	18 27 52.1	-3.2
APZ	**The Paps**	**7.28**	**210**	PN	Pn	18 27 52.0	-3.3
APZ				SN	Sn	18 29 09.9	-7.0
CTZ	**Chatham Island**	**8.10**	**116**	*e*PN	Pn	18 28 06.7	+0.4

ISC 01 18:33:28.3±0.9, 36°.0N±0°.1×70°.8E±0°.2, h151km±20km, n12, σ0§90/14, 2C, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.38**	**157**	⇑P	**Pn**	**18 34 08.1**	**+0.1**
CEP				S	**Sn**	**18 34 39.0**	**+0.4**
CHCP	**Chirah Chowk**	**3.11**	**139**	P	**Pn**	**18 34 18.1**	**+1.0**
THN	**Thein Dam**	**5.42**	**130**	*e*PKP	**Pn**	**18 34 46.6**	**-0.7**
THN				*e*S	**Sn**	**18 35 48.1**	**-0.9**
DMN	**Daman**	**14.76**	**121**	*e*P	**Pn**	**18 36 48.8**	**-0.9**
KKN	**Kakani**	**14.77**	**120**	*e*P	**Pn**	**18 36 49.2**	**-0.7**
PKIN	**Phulchoki** 6.4nm,0.5s	**14.98**	**120**	*e*P	**Pn**	**18 36 53.0**	**+0.5**
PKI	**Pulchoki** 5.7nm,0.3s	**15.00**	**120**	*e*P	**Pn**	**18 36 53.1**	**+0.4**
AB31	**Akbulak array** 4.0nm,0.5s,baz=158,slow=12,SNR=139	**15.42**	**332**	⇑P	**Pn**	**18 36 55.9**	**-1.8**
JIRN	**Jiri**	**15.50**	**118**	*e*P	**Pn**	**18 36 58.5**	**-0.3**
TAPN	**Taplejung** 11nm,0.5s	**16.77**	**116**	*e*P	**Pn**	**18 37 16.2**	**+1.8**
BVAR	**Borovoye Array** 0.0nm,0.3s,baz=157,slow=27,SNR=5.7	**16.99**	**359**	S	**S**	**18 40 26.0**	**+0.5**
AKTO	**Aktyubinsk** 0.3nm,0.3s,baz=146,slow=13,SNR=17	**17.11**	**331**	P	**Pn**	**18 37 18.9**	**+0.6**

*IDC **01** 18:33:06.9±3.3, 35°.77N×72°.93E, h0km, mb3.7/2, mb1 3.5/5, mb1mx3.3/25, mbtmp3.4/5, ML3.4/3, Error ellipse: s-maj=51.1km s-min=31.5km az=129.0*
*NNC **01** 18:34:09.3±3.3, 41°.38N×73°.03E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=37.8km s-min=16.0km az=172.0*

ISC 01 18:33:28.6±3.2, 38°.1N±0°.3×71°.9E±0°.2, h10km, n19, σ1§17/20, mb3.5/2, 2C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu** SNR=133	**4.23**	**18**	P	**Pn**	**18 34 28.1**	**-4.9**
KZA	**Kyzart** SNR=98	**4.70**	**32**	P	**Pn**	**18 34 41.2**	**+1.6**
EKS2	**Erkin-Say** SNR=82	**4.75**	**17**	P	**Pn**	**18 34 37.0**	**-3.2**
AAK	**Ala-Archa** SNR=177	**4.92**	**23**	P	**Pn**	**18 34 41.2**	**-1.3**
KBK	**Karagaybulak** SNR=48	**5.09**	**26**	P	**Pn**	**18 34 44.9**	**+0.1**
KK31	**Karatay Array** 4.0nm,0.3s,baz=131,slow=13,SNR=48	**5.10**	**348**	Pn	**Pn**	**18 34 52.5**	**+7.5**
KK31	42nm,0.5s,baz=132,slow=29,SNR=9.8			⇓Lg		18 35 29.6	
ULHL	**Ulahol** SNR=12	**5.28**	**37**	P	**Pn**	**18 34 53.0**	**+5.6**
CHMS	**Chumysh** SNR=23	**5.33**	**23**	P	**Pn**	**18 34 47.1**	**-1.0**
USP	**Ospenovka** SNR=19	**5.50**	**20**	P	**Pn**	**18 34 49.0**	**-1.6**
TKM2	**Tokmak 2** 18nm,0.3s	**5.55**	**29**	⇓Pn	**Pn**	**18 34 51.7**	**+0.5**
TKM2	47nm,0.5s			⇑Lg		18 35 27.2	
TKM2	**Tokmak 2** SNR=55	**5.55**	**29**	P	**Pn**	**18 34 51.6**	**+0.5**
KNDC	**Almaty** 10nm,0.3s	**6.37**	**35**	⇓Pg	**Pn**	**18 35 09.8**	**+7.4**
KNDC	87nm,0.8s			⇓Lg		18 35 58.2	
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=221,slow=10,SNR=3.2	**11.55**	**38**	Pn	**Pn**	**18 36 13.8**	**+0.4**
MKAR	0.3nm,0.3s,baz=235,slow=24,SNR=7.8			Sn	**Sn**	**18 38 39.0**	**+17**
VOSK	**Vostochnaya** 0.7nm,0.7s	**14.62**	**358**	⇑Pn	**Pn**	**18 36 54.9**	**-0.4**
BVAR	**Borovoye Array** 0.1nm,0.3s,baz=170,slow=18,SNR=3.8	**14.95**	**356**	P	**Pn**	**18 37 08.4**	**+8.6**
ZRNK	**Zerenda** 1.0nm,0.8s	**14.97**	**353**	⇓Pn	**Pn**	**18 37 02.4**	**+2.3**
ZALV	**Zalesovo Beam** 0.1nm,0.3s,baz=227,slow=14,SNR=2.4	**18.14**	**25**	P	**Pn**	**18 37 41.1**	**+0.7**
FINES	**FINESS Array B** 0.7nm,0.7s,mb3.6,baz=104,slow=14,SNR=4.5	**36.58**	**325**	P	**P**	**18 40 34.5**	**+0.3**
NOA	**NORSAR Array B** 0.5nm,0.5s,mb3.5,baz=98,slow=7.9,SNR=2.8	**43.55**	**322**	P	**P**	**18 41 31.4**	**-0.7**

*IDC **01** 18:46:23.5±3.3, 38°.58N×21°.86E, h0km, mb3.4/6, mb1 3.5/7, mb1mx3.4/25, mbtmp3.5/7, ML2.9/1, MS2.7/1, Ms1 2.7/1, ms1mx2.1/32, Error ellipse: s-maj=72.9km s-min=25.0km az=54.0*
*ATH **01** 18:46:26.3, 38°.22N×21°.58E, h34km, MD3.1/7, ML3.0*
*THE **01** 18:46:27.8, 38°.22N×21°.59E, h23km±1km, ML3.9/9, Error ellipse: s-maj=1.3km s-min=0.8km az=67.0*
*NEIC **01** 18:46:27.4, 38°.23N×21°.61E, h12km, ML3.4(ATH), After ATH.*
*CSEM **01** 18:46:27.3±0.2, 38°.24N×21°.59E, h24km±1km, ML3.0, Error ellipse: s-maj=3.5km s-min=2.9km az=50.0*
*ISCJB **01** 18:46:27.1±0.3, 38°.22N±0°.02×21°.59E±0°.02, h30km±2km, mb3.5/7, Error ellipse: s-maj=3.6km s-min=3.0km az=39.3*

ISC 01 18:46:27.4±0.3, 38°.22N±0°.02×21°.59E±0°.02, h27km±2km, n158, σ1§09/212, mb3.5/7, 2C-2D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.17**	**67**	*e*PB	**Pb**	**18 46 32.9**	**-0.1**
UPR				*e*SB	**Sb**	**18 46 38.3**	**+1.5**
UPR	**University Cam**	**0.17**	**67**	P	**Pb**	**18 46 32.9**	**-0.1**
UPR				S	**Sb**	**18 46 37.4**	**+0.6**
UPR	**University Cam**	**0.17**	**67**	P	**Pb**	**18 46 32.9**	**-0.1**
UPR				S	**Sb**	**18 46 37.4**	**+0.6**
UPR				*e*Sb	**Sb**	**18 46 38.3**	**+1.5**
RLS	**Riolos of Patr**	**0.18**	**211**	*e*Pb	**Pb**	**18 46 33.4**	**+0.2**
RLS				*e*Sb	**Sb**	**18 46 38.0**	**+1.0**
RLS	**Riolos of Patr**	**0.18**	**211**	*e*PB	**Pb**	**18 46 33.4**	**+0.2**
RLS				*e*SB	**Sb**	**18 46 38.0**	**+1.0**
RLS	**Riolos of Patr**	**0.18**	**211**	*e*Pb	**Pb**	**18 46 33.4**	**+0.2**
RLS				*e*Sb	**Sb**	**18 46 38.0**	**+1.0**
LAKA	**Lakka**	**0.31**	**85**	P	**Pb**	**18 46 34.4**	**-0.3**
LAKA				S	**Sb**	**18 46 40.3**	**+0.6**
LAKA	**Lakka**	**0.31**	**85**	P	**Pb**	**18 46 34.4**	**-0.3**
LAKA				S	**Sb**	**18 46 40.3**	**+0.6**
EFP	**Efpalio**	**0.33**	**50**	*e*PB	**Pb**	**18 46 34.3**	**-0.7**
EFP				*e*SB	**Sb**	**18 46 40.3**	**+0.1**
EFP	**Efpalio**	**0.33**	**50**	P	**Pb**	**18 46 34.4**	**-0.6**
EFP				S	**Sb**	**18 46 41.1**	**+0.9**
EFP	**Efpalio**	**0.33**	**50**	*e*Pb	**Pb**	**18 46 34.3**	**-0.7**
EFP				*e*Sb	**Sb**	**18 46 40.3**	**+0.1**
EFP				S	**Sb**	**18 46 41.1**	**+0.9**
TRIZ	**Trizonia**	**0.41**	**68**	P	**Pb**	**18 46 35.6**	**-0.6**
TRIZ				S	**Sb**	**18 46 42.9**	**+0.6**
TRIZ	**Trizonia**	**0.41**	**68**	P	**Pb**	**18 46 35.6**	**-0.6**
TRIZ				S	**Sb**	**18 46 42.9**	**+0.6**
KALE	**Kalithea**	**0.47**	**68**	P	**Pb**	**18 46 36.4**	**-0.8**
KALE				S	**Sb**	**18 46 45.1**	**+1.3**
KALE	**Kalithea**	**0.47**	**68**	P	**Pb**	**18 46 36.4**	**-0.8**
KALE				S	**Sb**	**18 46 45.1**	**+1.3**
KFL	**Anninata**	**0.64**	**261**	P	**Pb**	**18 46 39.8**	**-0.2**
KFL	**Anninata**	**0.64**	**261**	P	**Pb**	**18 46 39.8**	**-0.2**
GUR	**Goura**	**0.66**	**115**	*e*PN	**Pn**	**18 46 39.3**	**-1.6**
GUR				*e*SN	**Sn**	**18 46 49.9**	**-0.4**
GUR	**Goura**	**0.66**	**115**	P	**Pb**	**18 46 39.6**	**-0.7**
GUR				S	**Sb**	**18 46 49.3**	**+0.2**
GUR	**Goura**	**0.66**	**115**	*e*Pn	**Pn**	**18 46 39.3**	**-1.6**
GUR	**Goura**	**0.66**	**115**	P	**Pb**	**18 46 39.6**	**-0.7**
GUR				S	**Sb**	**18 46 49.3**	**+0.2**
GUR				*e*Sn	**Sn**	**18 46 49.9**	**-0.4**
EVR	**Evrytania**	**0.72**	**14**	*e*Pn	**Pn**	**18 46 40.7**	**-1.1**
EVR				*e*Sn	**Sn**	**18 46 51.6**	**-0.3**
EVR	**Evrytania**	**0.72**	**14**	*e*PN	**Pn**	**18 46 40.7**	**-1.1**
EVR				*e*SN	**Sn**	**18 46 51.6**	**-0.3**
EVR	**Evrytania**	**0.72**	**14**	*e*Pn	**Pn**	**18 46 40.7**	**-1.1**
EVR				*e*Sn	**Sn**	**18 46 51.6**	**-0.3**
DSF	**Desfina**	**0.76**	**75**	P	**Pb**	**18 46 41.0**	**-1.1**
DSF	**Desfina**	**0.76**	**75**	P	**Pb**	**18 46 41.0**	**-1.1**
VLS	**Valsamata**	**0.79**	**267**	*e*Pn	**Pb**	**18 46 41.8**	**-0.7**
VLS	**Valsamata**	**0.79**	**267**	*e*Pn	**Pb**	**18 46 41.8**	**-0.7**
VLS	**Valsamata**	**0.79**	**267**	P	**Pb**	**18 46 41.8**	**-0.7**
VLS				S	**Sb**	**18 46 53.6**	**+0.8**
VLS	**Valsamata**	**0.79**	**267**	P	**Pb**	**18 46 41.8**	**-0.7**
VLS				S	**Sb**	**18 46 53.6**	**+0.8**
LKD2	**Lefkada island**	**0.93**	**308**	P	**Pn**	**18 46 43.9**	**-0.7**
LKD2				S	**Sb**	**18 46 57.1**	**+0.3**
LKD2	**Lefkada island**	**0.93**	**308**	P	**Pn**	**18 46 43.9**	**-0.7**
LKD2				S	**Sb**	**18 46 57.1**	**+0.3**
AGG	**Agios Georgios**	**0.99**	**36**	*e*Pn	**Pn**	**18 46 45.5**	**0.0**
AGG				*e*Sn	**Sn**	**18 46 59.5**	**+0.9**
AGG	**Agios Georgios**	**0.99**	**36**	*e*PN	**Pn**	**18 46 45.5**	**0.0**
AGG				*e*SN	**Sn**	**18 46 59.5**	**+0.9**
AGG	**Agios Georgios**	**0.99**	**36**	P	**Pn**	**18 46 45.6**	**+0.1**
AGG				S	**Sn**	**18 46 58.7**	**+0.1**
AGG	**Agios Georgios**	**0.99**	**36**	P	**Pn**	**18 46 45.6**	**+0.1**
AGG				S	**Sn**	**18 46 58.7**	**+0.1**
AGG				*e*Sn	**Sn**	**18 46 59.5**	**+0.9**
VLX	**Vlachokerasia**	**1.05**	**143**	*e*PN	**Pn**	**18 46 46.8**	**+0.5**
VLX				*e*SN	**Sn**	**18 47 00.2**	**+0.2**
VLX	**Vlachokerasia**	**1.05**	**143**	P	**Pn**	**18 46 47.1**	**+0.8**
VLX				S	**Sn**	**18 47 00.5**	**+0.5**
VLX	**Vlachokerasia**	**1.05**	**143**	*e*Pn	**Pn**	**18 46 46.8**	**+0.5**
VLX	**Vlachokerasia**	**1.05**	**143**	P	**Pn**	**18 46 47.1**	**+0.8**
VLX				*e*Sn	**Sn**	**18 47 00.2**	**+0.2**
VLX				S	**Sn**	**18 47 00.5**	**+0.5**
ITM	**Ithomi**	**1.07**	**165**	*e*Pn	**Pn**	**18 46 47.1**	**+0.5**
ITM				*e*Sn	**Sn**	**18 47 01.0**	**+0.5**
ITM	**Ithomi**	**1.07**	**165**	*e*PN	**Pn**	**18 46 47.1**	**+0.5**
ITM				*e*SN	**Sn**	**18 47 01.0**	**+0.5**
ITM	**Ithomi**	**1.07**	**165**	P	**Pn**	**18 46 47.4**	**+0.8**
ITM	**Ithomi**	**1.07**	**165**	*e*Pn	**Pn**	**18 46 47.1**	**+0.5**
ITM	**Ithomi**	**1.07**	**165**	P	**Pn**	**18 46 47.4**	**+0.8**
ITM				*e*Sn	**Sn**	**18 47 01.0**	**+0.5**
LTK	**Loutraki**	**1.10**	**100**	*e*PN	**Pn**	**18 46 46.9**	**-0.1**
LTK	**Loutraki**	**1.10**	**100**	P	**Pn**	**18 46 47.1**	**+0.1**
LTK	**Loutraki**	**1.10**	**100**	P	**Pn**	**18 46 47.1**	**+0.1**
LKR	**

BRTR	Keskin Array B	9.51	77	Pn		Pn	18 48 42.7	+0.3
GNI	Garni	18.05	77	LR		LR	18 58 19.3	
	comp=Z,24nm,19.5s,baz=274,slow=40							
HFS	Hagfors	22.50	350	P		P	18 51 22.0	-2.5
	1.3nm,0.5s,mb3.6,baz=149,slow=12,SNR=7.7							
FINES	FINESS Array B	23.42	5	P		P	18 51 29.5	-4.6
	1.0nm,0.8s,mb3.3,baz=172,slow=8.6,SNR=6.3							
NOA	NORSAR Array B	23.75	347	P		P	18 51 33.5	-3.7
	0.3nm,0.6s,mb2.9,baz=158,slow=12,SNR=4.7							
ARCES	ARCESS Array B	31.45	3	P		P	18 52 43.1	-3.0
	1.7nm,1.0s,mb3.8,baz=193,slow=8.7,SNR=3.7							
MKAR	Makanchi Array	44.56	59	P		P	18 54 34.1	-2.7
	0.3nm,0.5s,mb3.4,baz=282,slow=6.5,SNR=6.4							
ZALV	Zalesovo Beam	45.04	48	P		P	18 54 37.0	-3.4
	0.9nm,0.4s,mb3.9,baz=277,slow=9.2,SNR=4.3							
SONM	Songino Array	59.78	51	P		P	18 56 28.0	-1.9
	0.2nm,0.5s,mb3.4,baz=316,slow=6.0,SNR=2.6							
SONM	Songino Array	59.78	51	P		P	18 56 28.0	-1.8

*ISCJB **01** 18:47:08.6±0.3, 38°.70N±0°.02×22°.84E±0°.02, h10km±2km, Error ellipse: s-maj=2.8km s-min=2.5km az=141.5*
*CSEM **01** 18:47:08.7±0.1, 38°.71N×22°.84E, h12km, ML4.0/13, Error ellipse: s-maj=2.8km s-min=2.2km az=115.0*
*NEIC **01** 18:47:08.4, 38°.72N×22°.85E, h25km, ML3.7(ATH), After ATH.*
*ATH **01** 18:47:08.4, 38°.72N×22°.85E, h25km, MD3.6/19, ML3.7*
*THE **01** 18:47:09.3, 38°.70N×22°.82E, h8km, ML4.0/13, Error ellipse: s-maj=0.8km s-min=0.3km az=169.0*

ISC 01 18:47:09.2±0.3, 38°.71N±0°.02×22°.84E±0°.02, h12km±2km, n90, σ0°65/146, 2C, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKR	Lokris	0.14	115	P	Pg	18 47 12.5	0.0
LKR				S	Sg	18 47 15.0	+0.2
LKR	Lokris	0.14	115	P	Pg	18 47 12.5	0.0
ATAL	Atalanti	0.14	96	P	Pg	18 47 12.7	+0.2
ATAL				S	Sg	18 47 15.4	+0.5
ATAL	Atalanti	0.14	96	P	Pg	18 47 12.7	+0.2
DSF	Desfina	0.39	220	P	Pg	18 47 16.1	-0.7
DSF				S	Sg	18 47 21.8	-0.2
DSF	Desfina	0.39	220	P	Pg	18 47 16.1	-0.7
DSF				S	Sg	18 47 21.8	-0.2
AGG	Agios Georgios	0.51	308	ePn	Pg	18 47 18.8	-0.3
AGG				eSn	Sg	18 47 26.0	+0.1
AGG	Agios Georgios	0.51	308	ePN	Pg	18 47 18.8	-0.3
AGG				eSN	Sg	18 47 26.0	+0.1
AGG	Agios Georgios	0.51	308	P	Pg	18 47 19.0	-0.1
AGG				S	Sg	18 47 25.8	-0.1
AGG	Agios Georgios	0.51	308	P	Pg	18 47 19.0	-0.1
AGG				S	Sg	18 47 25.8	-0.1
KALE	Kalithea	0.64	240	P	Pg	18 47 21.1	-0.4
KALE				S	Sg	18 47 30.3	+0.4
KALE	Kalithea	0.64	240	P	Pg	18 47 21.1	-0.4
KALE				S	Sg	18 47 30.3	+0.4
NEO	Neokhori	0.67	26	ePn	Pg	18 47 21.6	-0.6
NEO				eSn	Sg	18 47 30.6	-0.3
NEO	Neokhori	0.67	26	ePN	Pg	18 47 21.6	-0.6
NEO				eSN	Sg	18 47 30.6	-0.3
NEO	Neokhori	0.67	26	ePn	Pg	18 47 21.6	-0.6
NEO				eSn	Sg	18 47 30.6	-0.3
LTK	Loutraki	0.69	172	ePB	Pg	18 47 21.6	-1.0
LTK				eSN	Sg	18 47 32.7	+1.1
LTK	Loutraki	0.69	172	P	Pg	18 47 22.4	-0.2
LTK				S	Sg	18 47 32.3	+0.7
LTK	Loutraki	0.69	172	ePb	Pg	18 47 21.6	-1.0
LTK	Loutraki	0.69	172	P	Pg	18 47 22.4	-0.2
LTK				S	Sg	18 47 32.3	+0.7
LTK				eSn	Sg	18 47 32.7	+1.1
TRIZ	Trizonia	0.69	241	P	Pg	18 47 21.9	-0.7
TRIZ				S	Sg	18 47 31.8	+0.1
TRIZ	Trizonia	0.69	241	P	Pg	18 47 21.9	-0.7
TRIZ				S	Sg	18 47 31.8	+0.1
XOR	Xorichti	0.71	22	P	Pg	18 47 22.2	-0.8
XOR				S	Sg	18 47 33.3	+1.0
XOR	Xorichti	0.71	22	P	Pg	18 47 22.2	-0.8
XOR				S	Sg	18 47 33.3	+1.0
EFP	Efpalio	0.79	249	ePN	Pg	18 47 24.1	-0.3
EFP				eSN	Sg	18 47 35.5	+0.8
EFP	Efpalio	0.79	249	P	Pg	18 47 24.1	-0.3
EFP				S	Sg	18 47 35.4	+0.7
EFP	Efpalio	0.79	249	P	Pg	18 47 24.1	-0.3
EFP				eSn	Sg	18 47 35.5	+0.8
LAKA	Lakka	0.82	236	P	Pg	18 47 24.8	-0.3
LAKA				S	Sg	18 47 36.5	+0.7
LAKA	Lakka	0.82	236	P	Pg	18 47 24.8	-0.3
LAKA				S	Sg	18 47 36.5	+0.7
EVR	Evrytania	0.83	285	ePn	Pg	18 47 24.6	-0.7
EVR				eSn	Sg	18 47 36.8	+0.6
EVR	Evrytania	0.83	285	ePN	Pg	18 47 24.6	-0.7
EVR				eSN	Sg	18 47 36.8	+0.6
EVR	Evrytania	0.83	285	ePn	Pg	18 47 24.6	-0.7
EVR				eSn	Sg	18 47 36.8	+0.6
GUR	Goura	0.86	207	ePN	Pg	18 47 26.0	+0.1
GUR				eSN	Sg	18 47 38.0	+0.8
GUR	Goura	0.86	207	P	Pg	18 47 25.0	-0.9
GUR				S	Sg	18 47 37.3	+0.1
GUR	Goura	0.86	207	P	Pg	18 47 25.0	-0.9
GUR	Goura	0.86	207	ePn	Pg	18 47 26.0	+0.1
GUR				S	Sg	18 47 37.3	+0.1
GUR				eSn	Sg	18 47 38.0	+0.8
AOS	Alonnisos	0.93	60	P	Pg	18 47 26.9	-0.3
AOS				S	Sg	18 47 40.3	+1.0
AOS	Alonnisos	0.93	60	P	Pg	18 47 26.9	-0.3
AOS				S	Sg	18 47 40.3	+1.0
ATH	Athens Observa	1.01	137	ePn	Pg	18 47 28.1	-0.5
ATH				eSn	Sg	18 47 41.5	-0.2
ATH	Athens Observa	1.01	137	ePN	Pg	18 47 28.1	-0.5
ATH				eSN	Sg	18 47 41.5	-0.2
ATH	Athens Observa	1.01	137	ePn	Pg	18 47 28.1	-0.5
ATH				eSn	Sg	18 47 41.5	-0.2
PTL	Penteli	1.04	129	ePn	Pg	18 47 28.5	-0.7
PTL				eSn	Sg	18 47 41.9	-0.8
PTL	Penteli	1.04	129	ePN	Pg	18 47 28.5	-0.7
PTL				eSN	Sg	18 47 41.9	-0.8
PTL	Penteli	1.04	129	ePn	Pg	18 47 28.5	-0.7
PTL				eSn	Sg	18 47 41.9	-0.8
ATHU	Athens Univers	1.05	135	P	Pg	18 47 29.4	0.0
ATHU				S	Sg	18 47 44.0	+1.0
ATHU	Athens Univers	1.05	135	P	Pg	18 47 29.4	0.0
ATHU				S	Sg	18 47 44.0	+1.0
THL	Klokotos Trika	1.07	323	ePN	Pn	18 47 29.3	-0.8
THL	Klokotos Trika	1.07	323	ePn	Pn	18 47 29.3	-0.8
NAIG	Nisos Aigina	1.08	152	ePn	Pn	18 47 29.2	-0.9
NAIG	Nisos Aigina	1.08	152	ePN	Pn	18 47 29.2	-0.9
NAIG	Nisos Aigina	1.08	152	ePn	Pn	18 47 29.2	-0.9
VLY	Voula,Athens	1.14	138	ePn	Pg	18 47 30.8	-0.2
VLY				eSn	Sg	18 47 45.9	+0.1
VLY	Voula,Athens	1.14	138	ePN	Pg	18 47 30.8	-0.2
VLY				eSN	Sg	18 47 45.9	+0.1
VLY	Voula,Athens	1.14	138	ePn	Pg	18 47 30.8	-0.2
VLY				eSn	Sg	18 47 45.9	+0.1
DID	Didima	1.24	165	ePN	Pn	18 47 32.0	-0.4
DID				eSN	Sn	18 47 49.4	+0.4
DID	Didima	1.24	165	P	Pn	18 47 31.7	-0.7
DID				S	Sn	18 47 49.4	+0.4
DID	Didima	1.24	165	P	Pn	18 47 31.7	-0.7
DID	Didima	1.24	165	ePn	Pn	18 47 32.0	-0.4
DID				S	Sn	18 47 49.4	+0.4
RLS	Riolos of Patr	1.26	239	ePn	Pn	18 47 33.0	+0.3
RLS				eSn	Sn	18 47 49.9	+0.3
RLS	Riolos of Patr	1.26	239	ePN	Pn	18 47 33.0	+0.3
RLS				eSN	Sn	18 47 49.9	+0.3
RLS	Riolos of Patr	1.26	239	ePn	Pn	18 47 33.0	+0.3
RLS				eSn	Sn	18 47 49.9	+0.3
PAIG	Paliouri	1.38	28	P	Pn	18 47 34.1	-0.2
PAIG				S	Sn	18 47 54.2	+1.7
PAIG	Paliouri	1.38	28	P	Pn	18 47 34.1	-0.2
VLX	Vlachokerasia	1.39	195	ePN	Pn	18 47 34.2	-0.2
VLX	Vlachokerasia	1.39	195	ePn	Pn	18 47 34.3	-0.1
ITM	Ithomi	1.69	206	ePn	Pn	18 47 39.1	+0.5
ITM	Ithomi	1.69	206	ePN	Pn	18 47 39.1	+0.5
ITM	Ithomi	1.69	206	ePn	Pn	18 47 39.1	+0.5
PLG	Polygyros	1.73	15	ePn	Pn	18 47 38.3	-0.8
PLG				eSn	Sn	18 47 59.9	-1.2
PLG	Polygyros	1.73	15	ePN	Pn	18 47 38.3	-0.8
PLG				eSN	Sn	18 47 59.9	-1.2
PLG	Polygyros	1.73	15	P	Pn	18 47 38.6	-0.5
PLG	Polygyros	1.73	15	ePn	Pn	18 47 38.3	-0.8
PLG	Polygyros	1.73	15	P	Pn	18 47 38.6	-0.5
PLG				eSn	Sn	18 47 59.9	-1.2
OUR	Ouranopolis	1.85	28	P	Pn	18 47 40.4	-0.4
OUR	Ouranopolis	1.85	28	P	Pn	18 47 40.4	-0.4
VLI	Veliai	1.99	178	ePn	Pn	18 47 42.9	+0.2
VLI	Veliai	1.99	178	ePN	Pn	18 47 42.9	+0.2
VLI	Veliai	1.99	178	ePn	Pn	18 47 42.9	+0.2
SOH	Sokhos	2.15	10	ePb	Pn	18 47 45.1	+0.2
SOH	Sokhos	2.15	10	ePB	Pn	18 47 45.1	+0.2
SOH	Sokhos	2.15	10	P	Pn	18 47 45.1	+0.2
SOH	Sokhos	2.15	10	P	Pn	18 47 45.1	+0.2
KYTH	Kithira	2.43	176	ePn	Pn	18 47 48.6	-0.1
KYTH	Kithira	2.43	176	ePN	Pn	18 47 48.6	-0.1
KYTH	Kithira	2.43	176	ePn	Pn	18 47 48.6	-0.1
KAVA	Kavala	2.62	29	P	Pn	18 47 51.9	+0.5
KAVA	Kavala	2.62	29	P	Pn	18 47 51.9	+0.5
KARN	Karanos	3.41	165	ePN	Pn	18 48 02.5	+0.3
KARN	Karanos	3.41	165	ePn	Pn	18 48 02.5	+0.3
VTS	Vitosha	3.89	4⇑	iP	Pn	18 48 11.6	+2.8
VTS	Vitosha	3.89	4⇑	iP	Pn	18 48 11.6	+2.8

IDC 01 18:50:16.6±2.2, 27°.66N×143°.39E, h0km, mb3.6/2, mb1 3.8/3, mb1mx3.3/22, mbtmp3.5/3, ML3.2/1, Error ellipse: s-maj=34.9km s-min=31.2km az=170.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.21	243	Pn	Pn	18 50 40.6	-0.3
	9.3nm,0.3s,baz=282,slow=20,SNR=5.1						
CBIJ				Sn	Sn	18 50 59.6	+1.6
	18nm,0.3s,baz=78,slow=23,SNR=14						
MJAR	Matsushiro Arr	9.88	335	Pn	Pn	18 52 39.7	-0.2
	0.2nm,0.3s,baz=154,slow=12,SNR=3.2						
WRA	Warramunga Arr	48.13	191	P	P	18 58 59.0	+0.6
	1.2nm,0.5s,baz=12,slow=8.5,SNR=15						
ASAR	Alice Springs	51.84	191	P	P	18 59 25.9	-0.7
	0.2nm,0.6s,baz=10.0,slow=7.0,SNR=5.5						

*ISCJB **01** 18:50:19.7±0.3, 38°.25N±0°.02×21°.56E±0°.03, h25km±2km, Error ellipse: s-maj=3.6km s-min=3.3km az=166.9*
*ATH **01** 18:50:19.0, 38°.24N×21°.55E, h30km, MD3.4/25, ML3.0*
*NEIC **01** 18:50:19.0, 38°.24N×21°.55E, h30km, ML3.0(ATH), After ATH.*
*CSEM **01** 18:50:19.7±0.1, 38°.24N×21°.57E, h20km, ML3.5/7, Error ellipse: s-maj=3.3km s-min=3.0km az=16.0*
*THE **01** 18:50:20.2, 38°.21N×21°.60E, h20km, ML3.5/7, Error ellipse: s-maj=1.0km s-min=0.6km az=162.0*

ISC 01 18:50:19.9±0.3, 38°.24N±0°.02×21°.56E±0°.03, h22km±3km, n112, σ1°03/165, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	University Cam	0.18	77	ePB	Pb	18 50 25.5	+0.6
UPR				eSB	Sb	18 50 30.5	+2.1
UPR	University Cam	0.18	77	P	Pb	18 50 25.3	+0.4
UPR	University Cam	0.18	77	P	Pb	18 50 25.3	+0.4
UPR				eSb	Sb	18 50 30.5	+2.1
RLS	Riolos of Patr	0.20	203	ePb	Pb	18 50 25.6	+0.4
RLS				eSb	Sb	18 50 30.7	+2.0
RLS	Riolos of Patr	0.20	203	ePB	Pb	18 50 25.6	+0.4
RLS				eSB	Sb	18 50 30.7	+2.0
RLS	Riolos of Patr	0.20	203	ePb	Pb	18 50 25.6	+0.4
RLS				eSb	Sb	18 50 30.7	+2.0
EFP	Efpalio	0.33	55	ePB	Pb	18 50 27.2	+0.1
EFP				eSB	Sb	18 50 33.3	+1.3
EFP	Efpalio	0.33	55	P	Pb	18 50 27.3	+0.2
EFP				S	Sb	18 50 32.3	+0.3
EFP	Efpalio	0.33	55	P	Pb	18 50 27.3	+0.2
EFP				S	Sb	18 50 32.3	+0.3
EFP				eSb	Sb	18 50 33.3	+1.3
LAKA	Lakka	0.33	90	P	Pb	18 50 26.6	-0.5
LAKA				S	Sb	18 50 31.7	-0.3
LAKA	Lakka	0.33	90	P	Pb	18 50 26.6	-0.5
LAKA				S	Sb	18 50 31.7	-0.3
TRIZ	Trizonia	0.42	73	P	Pb	18 50 28.0	-0.6
TRIZ				S	Sb	18 50 34.8	+0.2
TRIZ	Trizonia	0.42	73	P	Pb	18 50 28.0	-0.6
TRIZ				S	Sb	18 50 34.8	+0.2
KALE	Kalithea	0.48	72	P	Pb	18 50 28.9	-0.7
KALE				S	Sb	18 50 36.4	+0.2
KALE	Kalithea	0.48	72	P	Pb	18 50 28.9	-0.7
KALE				S	Sb	18 50 36.4	+0.2
KFL	Anninata	0.62	258	P	Pb	18 50 32.7	+0.6
KFL	Anninata	0.62	258	P	Pb	18 50 32.7	+0.6
GUR	Goura	0.69	116	ePN	Pn	18 50 32.4	-1.9
GUR				eSN	Sn	18 50 43.3	-1.0
GUR	Goura	0.69	116	P	Pb	18 50 32.1	-1.1
GUR	Goura	0.69	116	P	Pb	18 50 32.1	-1.1
GUR	Goura	0.69	116	ePn	Pn	18 50 32.4	-1.9
GUR				eSn	Sn	18 50 43.3	-1.0
EVR	Evrytania	0.70	16	ePn	Pn	18 50 33.7	-0.8
EVR				eSn	Sn	18 50 43.0	-1.7
EVR	Evrytania	0.70	16	ePN	Pn	18 50 33.7	-0.8
EVR				eSN	Sn	18 50 43.0	-1.7
EVR	Evrytania	0.70	16	ePn	Pn	18 50 33.7	-0.8
EVR				eSn	Sn	18 50 43.0	-1.7
VLS	Valsamata	0.77	266	ePn	Pn	18 50 34.2	-1.2
VLS	Valsamata	0.77	266	ePN	Pn	18 50 34.2	-1.2
VLS	Valsamata	0.77	266	P	Pb	18 50 34.5	-0.1
VLS	Valsamata	0.77	266	ePn	Pn	18 50 34.2	-1.2
VLS	Valsamata	0.77	266	P	Pb	18 50 34.5	-0.1
DSF	Desfina	0.78	77	P	Pb	18 50 33.9	-0.8
DSF	Desfina	0.78	77	P	Pb	18 50 33.9	-0.8
LKD2	Lefkada island	0.90	308	P	Pb	18 50 37.3	+0.6
LKD2	Lefkada island	0.90	308	P	Pb	18 50 37.3	+0.6
AGG	Agios Georgios	0.98	37	ePn	Pn	18 50 38.1	-0.3
AGG				eSn	Sn	18 50 52.3	+0.7
AGG	Agios Georgios	0.98	37	ePN	Pn	18 50 38.1	-0.3
AGG				eSN	Sn	18 50 52.3	+0.7
AGG	Agios Georgios	0.98	37	P	Pb	18 50 38.4	+0.2
AGG				S	Sb	18 50 51.9	+1.1
AGG	Agios Georgios	0.98	37	ePn	Pn	18 50 38.1	-0.3
AGG	Agios Georgios	0.98	37	P	Pb	18 50 38.4	+0.2
AGG				S	Sb	18 50 51.9	+1.1
AGG				eSn	Sn	18 50 52.3	+0.7
VLX	Vlachokerasia	1.08	143	ePN	Pn	18 50 39.7	0.0
VLX				eSN	Sn	18 50 55.1	+1.0
VLX	Vlachokerasia	1.08	143	ePn	Pn	18 50 39.7	0.0
VLX				eSn	Sn	18 50 55.1	+1.0
ITM	Ithomi	1.10	165	ePn	Pn	18 50 40.1	+0.1
ITM				eSn	Sn	18 50 54.6	+0.2
ITM	Ithomi	1.10	165	ePN	Pn	18 50 40.1	+0.1
ITM				eSN	Sn	18 50 54.6	+0.2
ITM	Ithomi	1.10	165	P	Pn	18 50 39.5	-0.5
ITM	Ithomi	1.10	165	P	Pn	18 50 39.5	-0.5
ITM	Ithomi	1.10	165	ePn	Pn	18 50 40.1	+0.1
ITM				eSn	Sn	18 50 54.6	+0.2
LTK	Loutraki	1.13	101	ePB	Pn	18 50 39.7	-0.7
LTK	Loutraki	1.13	101	P	Pn	18 50 39.7	-0.7
LTK	Loutraki	1.13	101	P	Pn	18 50 39.7	-0.7
LKR	Lokris	1.20	70	ePb	Pn	18 50 40.9	-0.4
LKR	Lokris	1.20	70	ePB	Pn	18 50 40.9	-0.4
LKR	Lokris	1.20	70	P	Pn	18 50 40.9	-0.4
LKR				S	Sn	18 50 56.8	-0.1
LKR	Lokris	1.20	70	P	Pn	18 50 40.9	-0.4
LKR				S	Sn	18 50 56.8	-0.1
ATAL	Atalanti	1.23	68	P	Pn	18 50 41.4	-0.4
ATAL				S	Sn	18 50 57.8	+0.1
ATAL	Atalanti	1.23	68	P	Pn	18 50 41.4	-0.4
ATAL				S	Sn	18 50 57.8	+0.1
PYL	PYLOS	1.35	174	ePN	Pn	18 50 44.4	+1.0
PYL				eSN	Sn	18 51 02.2	+1.5
PYL	PYLOS	1.35	174	ePn	Pn	18 50 44.4	+1.0
PYL				eSn	Sn	18 51 02.2	+1.5
THL	Klokotos Trika	1.37	15	ePN	Pn	18 50 44.6	+0.9
THL				eSN	Sn	18 51 02.9	+1.8
THL	Klokotos Trika	1.37	15	P	Pn	18 50 45.0	+1.3
THL	Klokotos Trika	1.37	15	ePn	Pn	18 50 44.6	+0.9
THL	Klokotos Trika	1.37	15	P	Pn	18 50 45.0	+1.3
THL				eSn	Sn	18 51 02.9	+1.8
DID	Didima	1.51	118	ePB	Pb	18 50 45.6	-1.7
DID				eSN	Sn	18 51 05.2	+0.5
DID	Didima	1.51	118	ePb	Pb	18 50 45.6	-1.7
DID				eSn	Sn	18 51 05.2	+0.5
JAN	Janina	1.52	339	ePn	Pn	18 50 46.2	+0.5
JAN	Janina	1.52	339	ePN	Pn	18 50 46.2	+0.5
JAN	Janina	1.52	339	ePn	Pn	18 50 46.2	+0.5
NAIG	Nisos Aigina	1.60	107	ePb	Pb	18 50 46.5	-2.2
NAIG	Nisos Aigina	1.60	107	ePB	Pb	18 50 46.5	-2.2
NAIG	Nisos Aigina	1.60	107	ePb	Pb	18 50 46.5	-2.2
NEO	Neokhori	1.68	50	ePn	Pn	18 50 48.7	+0.8
NEO				P		18 50 52.0	
NEO				eSn	Sn	18 51 09.7	+0.9
NEO	Neokhori	1.68	50	ePN	Pn	18 50 48.7	+0.8
NEO				eSN	Sn	18 51 09.7	+0.9
NEO	Neokhori	1.68	50	ePn	Pn	18 50 48.7	+0.8
ATH	Athens Observa	1.72	98	ePn	Pn	18 50 48.2	-0.3
ATH	Athens Observa	1.72	98	ePN	Pn	18 50 48.2	-0.3
ATH	Athens Observa	1.72	98	ePn	Pn	18 50 48.2	-0.3
VLY	Voula,Athens	1.80	102	ePn	Pn	18 50 49.6	0.0
VLY				eSn	Sn	18 51 12.7	+0.9
VLY	Voula,Athens	1.80	102	ePN	Pn	18 50 49.6	0.0
VLY				eSN	Sn	18 51 12.7	+0.9
VLY	Voula,Athens	1.80	102	ePn	Pn	18 50 49.6	0.0
VLY				eSn	Sn	18 51 12.7	+0.9
PTL	Penteli	1.82	95	ePn	Pn	18 50 49.7	-0.2
PTL				eSn	Sn	18 51 13.1	+0.7
PTL	Penteli	1.82	95	ePN	Pn	18 50 49.7	-0.2
PTL				eSN	Sn	18 51 13.1	+0.7
PTL	Penteli	1.82	95	ePn	Pn	18 50 49.7	-0.2
PTL				eSn	Sn	18 51 13.1	+0.7
VLI	Veliai	1.87	144	ePb	Pb	18 50 51.7	-1.7
VLI				eSn	Sn	18 51 15.3	+1.8
VLI	Veliai	1.87	144	ePB	Pb	18 50 51.7	-1.7
VLI				eSN	Sn	18 51 15.2	+1.7
VLI	Veliai	1.87	144	ePb	Pb	18 50 51.7	-1.7
VLI				eSn	Sn	18 51 15.3	+1.8
KEK	Kerkira	2.01	317	ePn	Pn	18 50 52.7	+0.2
KEK	Kerkira	2.01	317	ePN	Pn	18 50 52.7	+0.2
KEK	Kerkira	2.01	317	ePn	Pn	18 50 52.7	+0.2
KZN	Kozani	2.07	4	ePb	Pb	18 50 54.9	-1.8
KZN	Kozani	2.07	4	ePB	Pb	18 50 54.9	-1.8
KZN	Kozani	2.07	4	ePb	Pb	18 50 54.9	-1.8
KYTH	Kithira	2.28	149	ePb	Pb	18 50 58.3	-2.1
KYTH	Kithira	2.28	149	ePB	Pb	18 50 58.3	-2.1
KYTH	Kithira	2.28	149	ePb	Pb	18 50 58.3	-2.1
FNA	Florina	2.54	357	P	Pn	18 51 01.2	+1.4
FNA	Florina	2.54	357	P	Pn	18 51 01.2	+1.4
PLG	Polygyros	2.58	34	ePn	Pn	18 51 00.2	-0.1
PLG	Polygyros	2.58	34	ePN	Pn	18 51 00.2	-0.1
PLG	Polygyros	2.58	34	ePn	Pn	18 51 00.2	-0.1
SOH	Sokhos	2.92	28	ePn	Pn	18 51 06.1	+1.0
SOH	Sokhos	2.92	28	ePN	Pn	18 51 06.1	+1.0
SOH	Sokhos	2.92	28	ePn	Pn	18 51 06.1	+1.0
OHR	Ohrid	2.93	349	*i* Pn	Pn	18 51 04.5	-0.6
KRUS	Krusevo	3.13	356	*i* Pn	Pn	18 51 08.4	+0.4
VAY	Valandovo	3.17	14	*i* Pn	Pn	18 51 10.5	+2.0
TIP	Timpagrande	3.87	285	P	Pn	18 51 19.2	+1.1
TIP	Timpagrande	3.87	285	P	Pn	18 51 19.2	+1.1
VTS	Vitosha	4.52	16	ePn	Pn	18 51 26.0	-1.0
BARS	Barje	4.57	2	ePn	Pn	18 51 27.9	+0.2
STON	Ston	5.48	329	ePn	Pn	18 51 38.7	-1.5
STON				Sn	Sn	18 52 36.7	-5.8
STON	Ston	5.48	329	ePn	Pn	18 51 38.6	-1.6
BBLS	Lazići	5.85	344	ePn	Pn	18 51 44.1	-1.2
NVLJ	Novalja	8.07	324	ePn	Pn	18 52 14.1	-1.7
NVLJ				Sn	Sn	18 53 40.0	-6.2
NVLJ	Novalja	8.07	324	ePn	Pn	18 52 14.0	-1.7

*ISCJB **01** 19:00:55.5±0.9, 26°.31S±0°.08×179°.5E±0°.1, h496km±15km, mb4.1/16, Error ellipse: s-maj=18.9km s-min=12.6km az=3.0*
*NEIC **01** 19:00:55.9±0.7, 26°.23S×179°.49E, h484km±9km, mb3.9/10, Error ellipse: s-maj=12.9km s-min=9.9km az=122.0*
*IDC **01** 19:00:57.5±1.9, 26°.39S×179°.37E, h490km±21km, mb3.6/4, mb1 3.7/6, mb1mx3.4/16, mbtmp3.6/6, Error ellipse: s-maj=35.6km s-min=18.4km az=170.0*

ISC 01 19:00:56.2±0.9, 26°.28S±0°.10×179°.5E±0°.1, h489km±15km, n38, σ0°82/32, mb4.1/16, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	3.73	143	P	P	19 02 12.2	+0.6
	48nm,0.3s,baz=107,slow=19,SNR=2.6						
URZ	Urewera	12.12	189	P	P	19 03 35.3	-0.6
	2.3nm,0.3s,baz=354,slow=4.0,SNR=14						
URZ				S	S	19 05 44.0	-3.5
	0.3nm,0.3s,baz=122,slow=19,SNR=4.1						
AFI	Afiamalu	14.77	35	P	P	19 04 02.6	-1.7
	4.3nm,0.3s,baz=32,slow=19,SNR=4.6						
AFI	Afiamalu	14.77	35	P	P	19 04 02.6	-1.7
AFI				ePn	P	19 04 03

ISC 01 19:12:20.5±1.0, 13°33N±0°.04×125°.64E±0°.08, h44km±8km, n59, σ1°03/64, mb4.3/30, MS3.1/5, 3C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	Catarman	1.25	230	eP	Pn	19 12 41.8	+0.2
CNP				eS	Sn	19 12 56.0	-1.2
PVCP	Virac	1.47	281	eP	Pn	19 12 43.6	-0.9
PVCP				eS	Sn	19 12 58.3	-4.3
OCLP	Ormoc	2.48	204	eP	Pn	19 13 00.0	+1.6
AUQP	San Andres	2.88	270	eP	Pn	19 13 05.7	+1.7
GQP	Guinayangan	3.16	281⇑	eP	Pn	19 13 07.2	-0.6
GQP				eS	Sn	19 13 43.8	-0.4
LLP	Lapu-Lapu	3.41	209	eP	Pn	19 13 10.8	-0.5
LLP				eS	Sn	19 13 50.8	+0.3
BOAC	Boac	3.69	272	eP	Pn	19 13 15.6	+0.5
POLP	Polilio Island	3.85	292	eP	Pn	19 13 16.9	-0.4
TBP	Tagbilaran	4.01	206	eP	Pn	19 13 20.1	+0.5
TBP				eS	Sn	19 14 05.6	+0.3
GUIM	Jordan	4.01	228	eP	Pn	19 13 20.3	+0.8
BALP	Baler	4.61	302	eP	Pn	19 13 25.3	-2.4
TGY	Tagaytay City	4.63	280	Pn	Pn	19 13 31.1	+3.0
	19nm,0.3s,baz=85,slow=2.2,SNR=3.1						
PALP	Palanan	4.84	321	eP	Pn	19 13 30.3	-0.6
PCPH	Palayan	4.93	297⇑	eP	Pn	19 13 29.5	-2.6
PCPH				eS	Sn	19 14 22.5	-5.4
CUYO	Cuyo Island	5.15	242	eP	Pn	19 13 35.8	+0.7
BCPH	Baguio City Da	5.75	302⇑	iP	Pn	19 13 42.2	-1.3
BCPH				iS	Sn	19 14 43.9	-4.3
PAGZ	Pagadian	5.88	202	eP	Pn	19 13 46.8	+1.6
APYP	Conner	6.18	317	eP	Pn	19 13 50.4	+1.0
ABRA	Dolores	6.40	313	eP	Pn	19 13 53.2	+0.9
KSM	Kuching	19.21	233	P	Pn	19 16 40.7	-1.6
	2.8nm,0.6s						
CBIJ	Chichi jima	20.67	46	LR	LR	19 23 26.1	
	comp=Z,64nm,18.5s,MS3.0,baz=106,slow=33						
KSRS	Korea Array	24.11	4	P	P	19 17 31.9	-0.2
	1.4nm,0.8s,mb3.5,baz=186,slow=10,SNR=5.0						
KSRS				LR	LR	19 28 20.1	
	comp=Z,54nm,18.2s,MS3.1,baz=170,slow=40						
KULM	Kulim	25.90	254	P	P	19 17 48.8	+0.1
	5.4nm,0.9s,mb4.1						
CMAR	Chiang Mai Arr	26.16	285	LR	LR	19 28 25.3	
	comp=Z,39nm,21.1s,MS2.9,baz=185,slow=37						
PSI	Prapat	28.41	251	P	P	19 18 11.6	+0.4
	2.8nm,0.4s,mb4.2,baz=166,slow=15,SNR=4.5						
HHC	Hu-ho-hao-te	30.06	338	eP	P	19 18 28.5	+3.0
HHC				S	S	19 23 22.1	+1.2
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.7						
HHC				pmax	pmax		
	comp=Z,100nm,5.7s						
WRAB	Tennant Creek	34.15	165	P	P	19 18 59.6	-1.9
	comp=Z,3.6nm,0.8s,mb4.3						
WRA	Warramunga Arr	34.15	165	P	P	19 18 59.3	-2.3
	comp=Z,1.4nm,0.7s,mb4.0,baz=343,slow=9.2,SNR=7.4						
WRA				PcP	PcP	19 21 37.6	-0.5
	comp=Z,0.3nm,0.4s,baz=342,slow=2.9,SNR=5.4						
LSA	Lhasa	35.81	303	P	P	19 19 18.1	+2.2
ASAR	Alice Springs	37.65	168	P	P	19 19 31.6	+0.2
	comp=Z,1.9nm,0.5s,mb4.1,baz=348,slow=6.7,SNR=40						
ASAR				PcP	PcP	19 21 48.1	-0.3
	comp=Z,0.9nm,0.7s,baz=338,slow=3.2,SNR=4.6						
ULN	Ulaanbaatar	37.76	339	eP	P	19 19 32.2	0.0
	comp=Z,3.8nm,0.9s,mb4.1						
SONM	Songino Array	37.96	339	P	P	19 19 34.2	+0.4
	comp=Z,1.3nm,0.6s,mb3.8,baz=157,slow=9.8,SNR=8.2						
SONM				LR	LR	19 35 10.6	
	comp=Z,34nm,18.8s,MS3.2,baz=328,slow=36						
TLY	Talaya	42.17	340	P	P	19 20 08.4	-0.3
	comp=Z,2.0nm,0.8s,mb3.8						
MORW	Morawa	43.15	192	eP	P	19 20 15.7	-1.3
KMBL	Kambalda	44.58	185	eP	P	19 20 28.1	-0.3
	comp=Z,4.4nm,0.5s,mb5.5						
KLBR	Kellerberrin	45.30	189	eP	P	19 20 33.8	-0.3
	comp=Z,66nm,1.9s,mb5.1						
NWAO	Narrogin (SRO)	46.69	190	eP	P	19 20 44.7	-0.3
	comp=Z,4.1nm,0.4s,mb4.7						
BBOO	Buckleboo	46.95	168	eP	P	19 20 47.3	+0.3
	comp=Z,13nm,0.4s,mb5.2						
PETK	Petropavlovsk-	47.15	26	LR	LR	19 42 20.9	
	comp=Z,28nm,18.1s,MS3.3,baz=359,slow=38						
STKA	Stephens Creek	47.48	161	eP	P	19 20 51.2	0.0
	comp=Z,5.6nm,0.6s,mb4.7						
STKA	Stephens Creek	47.48	161	P	P	19 20 51.3	+0.1
	comp=Z,8.3nm,0.7s,mb4.8,baz=331,slow=11,SNR=18						
CMSA	Cobar Meteorol	48.58	157	eP	P	19 21 00.3	+0.6
MK31	Makanchi Array	49.25	321	eP	P	19 21 05.3	+0.6
MKAR	Makanchi Array	49.25	321	P	P	19 21 05.5	+0.8
	comp=Z,4.8nm,0.8s,mb4.6,baz=113,slow=9.5,SNR=61						
ZALV	Zalesovo Beam	51.67	330	P	P	19 21 22.6	-0.3
	comp=Z,1.1nm,0.5s,mb4.1,baz=118,slow=7.9,SNR=5.7						
AML	Almayashu	53.17	313	P	P	19 21 35.7	+1.5
	comp=Z,4.7nm,0.8s,mb4.5						
KURK	Kurchatov	53.22	325	eP	P	19 21 34.7	+0.3
	comp=Z,12nm,0.9s,mb4.8						
EKS2	Erkin-Say	53.27	314	eP	P	19 21 35.6	+0.7
	comp=Z,3.6nm,0.9s,mb4.3						
KBL	Kabul	55.13	303	eP	P	19 21 49.0	+0.4
	comp=Z,3.0nm,0.9s,mb4.3						
BVAR	Borovoye Array	58.82	325	P	P	19 22 14.9	+0.5
	comp=Z,1.5nm,0.6s,mb4.2,baz=118,slow=9.2,SNR=17						
BRVK	Borovoye	58.89	325	eP	P	19 22 14.8	-0.1
	comp=Z,5.1nm,0.9s,mb4.5						
ABKAR	Akbulak array	64.18	318	eP	P	19 22 50.2	-0.4
	comp=Z,2.3nm,0.8s,mb4.3						
ARU	Arti	66.35	326	eP	P	19 23 03.6	-1.0
	comp=Z,1.5nm,0.5s,mb4.3						
ARCES	ARCESS Array B	81.13	339	P	P	19 24 31.1	+0.1
	comp=Z,4.0nm,0.9s,mb4.3,baz=74,slow=9.1,SNR=5.3						
FINES	FINESS Array B	82.92	331	P	P	19 24 40.0	-0.5
	comp=Z,0.9nm,0.4s,mb4.1,baz=83,slow=4.3,SNR=8.7						
FINES	FINESS Array B	82.92	331	P	P	19 24 40.0	-0.6
MMAI	Mount Meron Ar	83.06	302	P	P	19 24 42.7	+0.8
	comp=Z,1.0nm,0.5s,mb4.1,baz=72,slow=12,SNR=4.7						
AKASG	Malin Array Be	83.82	321	P	P	19 24 44.4	-1.0
	comp=Z,0.3nm,0.4s,mb3.8,baz=62,slow=4.7,SNR=5.1						
NOA	NORSAR Array B	89.76	334	P	P	19 25 12.5	-1.6
	comp=Z,0.3nm,0.5s,mb3.9,baz=64,slow=4.5,SNR=3.7						

*IDC **01** 19:19:02.9±1.3, 31°.35N×104°.16E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/22, mbtmp3.4/4, Error ellipse: s-maj=203.7km s-min=23.7km az=56.0*
*BJI **01** 19:19:06.0, 30°.92N×103°.42E, h12km, ML3.3/13, Ms3.2/1, Ms7 2.9/1*

ISC 01 19:19:03.6±1.6, 31°.04N±0°.05×103°.34E±0°.07, h5km±10km, n8, σ1°17/15, mb3.4/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.38	110	Pg	Pg	19 19 13.7	+2.7
CD2				Sg	Sg	19 19 20.8	+4.9
CD2				smax			
	comp=N,3μm,0.6s						
CD2				smax			
	comp=E,5μm,0.6s						
LZH	Lanzhou	5.05	5	ePg	Pg	19 20 38.9	-1.5
LZH				Sg	Sg	19 21 44.8	-1.1
LZH				smax			
	comp=N,12nm,0.6s						
LZH				smax			
	comp=E,21nm,0.6s						
GYA	Guiyang	5.42	147	Pn	Pn	19 20 25.3	+0.3
GYA				Sn	Sn	19 21 26.5	-1.3
GYA				Sg	Sg	19 21 52.5	-5.1
GYA				smax			
	comp=N,30nm,0.8s						
GYA				smax			
	comp=E,30nm,0.8s						
XAN	Xi'an	5.58	56	Pn	Pn	19 20 22.7	-4.6
XAN				Pg	Pg	19 20 51.1	+0.5
XAN				Sn	Sn	19 21 32.2	+0.4
XAN				Sg	Sg	19 22 03.1	+0.2
XAN				smax			
	comp=N,50nm,0.9s						
XAN				smax			
	comp=E,21nm,0.8s						
MKAR	Makanchi Array	22.60	320	P	P	19 24 06.9	+2.0
	comp=E,0.3nm,0.4s,mb3.0,baz=119,slow=12,SNR=5.0						
ZALV	Zalesovo Beam	26.50	335	P	P	19 24 42.6	+0.9
	comp=E,0.4nm,0.5s,mb3.2,baz=128,slow=9.3,SNR=2.7						
WRA	Warramunga Arr	58.79	145	P	P	19 29 01.6	-1.3
	comp=E,0.6nm,0.8s,mb3.7,baz=338,slow=7.4,SNR=5.0						
ASAR	Alice Springs	61.78	148	P	P	19 29 23.2	-0.1
	comp=E,0.3nm,0.7s,mb3.5,baz=338,slow=7.0,SNR=3.3						

WEL 01 19:26:02.1±0.7, 35°.35S×178°.88E, h33km, ML3.7/8, Error ellipse: s-maj=11.0km s-min=5.6km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.26	192	eP*	Pb	19 26 38.3	-3.9
MXZ				S*	Sb	19 27 03.0	-6.7
PUZ	Puketiti	2.76	190	ePN	Pn	19 26 43.9	-0.2
PUZ				SN	Sn	19 27 14.0	-2.3
MWZ	Matawai	3.17	200	eP*	Pb	19 26 50.1	-7.6
CNGZ	Carnagh Statio	3.17	190	ePN	Pn	19 26 48.8	-0.9
URZ	Urewera	3.23	206	eP*	Pb	19 26 50.4	-8.4
URZ				S*	Sb	19 27 28.4	-9.3
KNZ	Kokohu	3.79	194	PN	Pn	19 26 57.3	-0.8
KAHZ	Kahuranaki	4.71	199	ePN	Pn	19 27 08.2	-2.7
PXZ	Pawanui	4.94	198	ePN	Pn	19 27 10.0	-4.0
PXZ				SN	Sn	19 28 01.9	-8.0
TSZ	Takapari Road	5.24	205	ePN	Pn	19 27 13.3	-4.8
MRZ	Mangatainoka R	5.91	205	ePN	Pn	19 27 21.3	-6.0
MRZ				eSN	Sn	19 28 23.0	-11
THZ	Tophouse	7.93	214	ePN	Pn	19 27 50.9	-4.1
CTZ	Chatham Island	9.07	159	ePN	Pn	19 28 08.6	-2.0
CTZ				eSN	Sn	19 29 37.7	-14

*IDC **01** 19:31:21.8±0.9, 7°.45N×94°.35E, h0km, mb3.8/9, mb1 3.9/11, mb1mx3.7/23, mbtmp3.8/11, ML3.7/2, Error ellipse: s-maj=34.4km s-min=18.5km az=65.0*
*ISCJB **01** 19:31:27.4±2.5, 7°.54N±0°.09×94°.6E±0°.1, h50km±23km, mb3.8/12, Error ellipse: s-maj=25.5km s-min=10.7km az=152.2*
*NEIC **01** 19:31:28.3±2.4, 7°.48N×94°.50E, h45km±22km, mb3.8/3, Error ellipse: s-maj=31.0km s-min=10.5km az=68.0*

ISC 01 19:31:29.5±2.0, 7°.52N±0°.10×94°.6E±0°.1, h53km±18km, n20, σ1°24/21, mb3.8/12, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	6.38	137	Pn	Pn	19 33 01.6	+0.7
	1.0nm,0.3s,baz=304,slow=16,SNR=2.6						
KULM	Kulim	6.42	110	ePn	Pn	19 33 01.1	-0.5
	6.4nm,0.6s						
KULM				eSn	Sn	19 34 13.6	0.0
CMAR	Chiang Mai Arr	11.67	21	Pn	Pn	19 34 13.8	+0.4
	0.2nm,0.3s,baz=212,slow=14,SNR=6.9						
CHTO	Chiang Mai	12.00	20	eP	Pn	19 34 17.5	-0.4
	2.1nm,1.0s						
KSM	Kuching	16.78	110	eP	Pn	19 35 21.2	+0.1
	4.0nm,0.9s						
LSA	Lhasa	22.30	352	P	P	19 36 17.0	-5.5
EKS2	Erkin-Say	39.51	336	P	P	19 38 57.1	+2.1
	1.5nm,0.9s,mb3.7						
MK31	Makanchi Array	40.52	347	eP	P	19 39 02.2	-1.2
MKAR	Makanchi Array	40.52	347	P	P	19 39 01.1	-2.3
	1.8nm,0.7s,mb3.8,baz=169,slow=7.8,SNR=18						
SONM	Songino Array	41.41	12	P	P	19 39 11.2	+0.5
	0.7nm,0.6s,mb3.5,baz=188,slow=9.9,SNR=6.4						
KURK	Kurchatov	45.05	346	eP	P	19 39 38.8	-1.3
	2.0nm,0.8s,mb4.0						
ZAA0	Zalesovo Array	46.96	352	eP	P	19 39 56.6	+1.6
ZALV	Zalesovo Beam	46.96	352	P	P	19 39 53.8	-1.2
	2.5nm,0.7s,mb4.2,baz=184,slow=7.4,SNR=13						
WRA	Warramunga Arr	47.70	126	P	P	19 40 00.7	-0.6
	0.5nm,0.8s,mb3.6,baz=306,slow=8.5,SNR=4.2						
ASAR	Alice Springs	49.35	130	P	P	19 40 14.2	+0.3
	0.5nm,0.9s,mb3.5,baz=301,slow=7.5,SNR=3.6						
BVAR	Borovoye Array	49.46	341	P	P	19 40 12.8	-1.5
	0.8nm,0.8s,mb3.8,baz=132,slow=8.2,SNR=5.0						
AKASG	Malin Array Be	68.70	322	P	P	19 42 29.7	+2.2
	0.2nm,0.3s,mb3.6,baz=72,slow=9.3,SNR=4.2						
FINES	FINESS Array B	73.22	332	P	P	19 42 56.1	+1.4
	1.1nm,0.6s,mb4.0,baz=101,slow=6.0,SNR=6.0						
BOSA	Boshof	75.77	238	P	P	19 43 08.4	-1.8
	2.1nm,0.9s,mb4.1,baz=101,slow=5.2,SNR=4.1						
NOA	NORSAR Array B	80.25	331	P	P	19 43 36.1	+1.7
	0.3nm,0.6s,mb3.4,baz=89,slow=5.7,SNR=3.5						

*IDC **01** 19:35:35.1±0.6, 7°.68N×94°.33E, h0km, mb4.0/13, mb1 4.0/15, mb1mx3.9/24, mbtmp3.9/15, ML3.8/2, Error ellipse: s-maj=20.8km s-min=14.3km az=74.0*
*ISCJB **01** 19:35:39.8±1.4, 7°.63N±0°.05×94°.47E±0°.08, h49km±13km, mb4.3/33, Error ellipse: s-maj=13.6km s-min=7.4km az=159.0*
*BJI **01** 19:35:40.2, 7°.62N×94°.27E, h26km, mB4.6/5, mb4.5/10, Ms3.9/1, Ms7 3.7/1*
*NEIC **01** 19:35:41.6±1.3, 7°.67N×94°.46E, h52km±13km, mb4.3/14, Error ellipse: s-maj=14.2km s-min=6.5km az=69.0*

ISC 01 19:35:42.4±1.1, 7°.63N±0°.05×94°.49E±0°.08, h56km±11km, n51, σ1°11/51, mb4.3/33, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	6.52	137	Pn	Pn	19 37 17.4	+1.6
	0.7nm,0.3s,baz=341,slow=18,SNR=3.0						
KULM	Kulim	6.55	110	ePn	Pn	19 37 16.1	-0.1
	18nm,0.6s						
KULM				eSn	Sn	19 38 22.5	-7.2
CM31	Chiang Mai Arr	11.60	22	Pn	Pn	19 38 23.0	-2.3
CMAR	Chiang Mai Arr	11.60	22	Pn	Pn	19 38 23.9	-1.4
	0.3nm,0.3s,baz=203,slow=21,SNR=3.9						
CHTO	Chiang Mai	11.93	21	ePn	Pn	19 38 30.6	+0.8
	3.3nm,0.8s						
KSM	Kuching	16.91	110	Pn	Pn	19 39 33.5	-1.9
	15nm,1.2s						
ODAN	Odare	20.27	341	eP	P	19 40 14.5	+1.0
	26nm,0.8s						
RAMN	Ramite	20.62	340	eP	P	19 40 18.2	+1.0
	72nm,0.9s						
TAPN	Taplejung	20.64	343	eP	P	19 40 18.2	+0.8
	40nm,0.8s						
PKI	Pulchoki	21.61	338	eP	P	19 40 28.4	+0.5
	36nm,0.9s,mb4.8						
PKIN	Phulchoki	21.62	338	eP	P	19 40 28.3	+0.3
	24nm,0.7s,mb4.7						
GUN	Gumba	21.75	339	eP	P	19 40 30.3	+0.9
	45nm,0.8s,mb4.9						
DMN	Daman	21.77	337	eP	P	19 40 30.3	+0.8
	38nm,0.8s,mb4.9						
KKN	Kakani	21.86	338	eP	P	19 40 31.0	+0.5
	28nm,0.9s,mb4.7						
LSA	Lhasa	22.18	352	P	P	19 40 35.9	+2.1
GTA	Gaotai	32.00	8	eP	P	19 42 10.1	+6.7
GTA				pP	pP	19 42 14.3	-3.1
GTA				sP	sP	19 42 17.3	-6.7
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.2						
KBL	Kabul	35.57	322	P	P	19 42 33.7	-0.8
	comp=Z,2.3nm,0.8s,mb4.2						
HHC	Hu-ho-hao-te	36.41	22	eP	P	19 42 42.0	+0.4
HHC				S	S	19 48 20.6	+1.4
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
HHC				pmax	pmax		
	comp=Z,74nm,6.4s						
MBWA	Marble Bar	37.86	140	P	P	19 42 51.7	-2.4
AML	Almayashu	38.97	335	ePn	P	19 43 03.0	-0.2
	comp=Z,5.5nm,0.6s,mb4.5						
EKS2	Erkin-Say	39.37	336	P	P	19 43 05.4	-1.1
	comp=Z,1.9nm,0.7s,mb3.9						
MK31	Makanchi Array	40.40	347	eP	P	19 43 14.3	-0.6
MKAR	Makanchi Array	40.40	347	P	P	19 43 14.0	-1.0
	comp=Z,4.5nm,0.7s,mb4.3,baz=168,slow=8.4,SNR=20						
SONM	Songino Array	41.32	12	P	P	19 43 23.7	+1.2
	comp=Z,0.4nm,0.6s,mb3.3,baz=198,slow=9.1,SNR=4.0						
ULN	Ulaanbaatar	41.49	13	P	P	19 43 26.0	+2.1
	comp=Z,1.1nm,0.7s,mb3.6						
KURK	Kurchatov	44.93	346	eP	P	19 43 51.5	-0.1
	comp=Z,6.9nm,0.8s,mb4.5						
NWAO	Narrogin (SRO)	45.78	153	eP	P	19 43 59.0	+0.4
	comp=Z,24nm,1.2s,mb5.0						
ZAA0	Zalesovo Array	46.84	352	eP	P	19 44 05.7	-0.9
ZALV	Zalesovo Beam	46.84	352	P	P	19 44 07.0	+0.4
	comp=Z,1.2nm,0.5s,mb4.0,baz=180,slow=8.1,SNR=7.4						
WRA	Warramunga Arr	47.84	126	P	P	19 44 14.4	-0.5
	comp=Z,1.0nm,0.9s,mb3.9,baz=305,slow=8.5,SNR=11						
WRAB	Tennant Creek	47.85	126	P	P	19 44 16.8	+1.8
	comp=Z,6.8nm,1.1s,mb4.6						
BVAR	Borovoye Array	49.33	341	P	P	19 44 26.1	+0.3
	comp=Z,1.8nm,0.8s,mb4.2,baz=134,slow=11,SNR=14						
BRVK	Borovoye	49.39	341	P	P	19 44 26.1	-0.2
	comp=Z,1.8nm,0.8s,mb4.2						
ASAR	Alice Springs	49.50	130	P	P	19 44 28.8	+1.2
	comp=Z,0.5nm,0.6s,mb3.7,baz=303,slow=7.5,SNR=11						
ASAR				PcP	PcP	19 45 50.8	+1.8
	comp=Z,0.8nm,0.7s,baz=308,slow=3.2,SNR=5.4						
ABKAR	Akbulak array	50.60	331	eP	P	19 44 33.3	-2.3
	comp=Z,0.6nm,0.4s,mb3.9						
OPO	Ambohidratompo	53.42	240	P	P	19 44 57.0	0.0
	comp=Z,1.4nm,0.5s,mb4.1,baz=8.7,slow=3.4,SNR=7.9						
ARU	Arti	56.24	337	P	P	19 45 21.9	+5.0
	comp=Z,3.6nm,1.0s,mb4.4						
KMBO	Kilima Mbogo	57.74	264	P	P	19 45 28.9	+0.7
	comp=Z,0.8nm,0.5s,mb4.0,baz=178,slow=24,SNR=5.7						
KMBO	Kilima Mbogo	57.74	264	eP	P	19 45 28.7	+0.5
	comp=Z,4.3nm,0.9s,mb4.5						
YAK	Yakutsk	60.12	18	P	P	19 45 42.6	-1.1
BRTR	Keskin Array B	62.84	311	P	P	19 46 00.2	-2.4
	comp=Z,0.5nm,0.5s,mb3.9,baz=140,slow=7.3,SNR=4.1						
LSZ	Lusaka	69.51	251	eP	P	19 46 45.6	-0.1
	comp=Z,1.9nm,0.7s,mb4.1						
FINES	FINESS Array B	73.08	332	P	P	19 47 05.4	-1.1
	comp=Z,1.7nm,0.7s,mb4.1,baz=75,slow=5.9,SNR=7.1						
LBTB	Lobatse	74.43	241	eP	P	19 47 14.4	-0.7
	comp=Z,5.3nm,0.8s,mb4.5						
ARCES	ARCESS Array B	75.61	340	P	P	19 47 20.7	-0.3
	comp=Z,1.2nm,0.9s,mb3.8,baz=108,slow=8.6,SNR=4.2						
BOSA	Boshof	75.75	238	P	P	19 47 22.8	+0.2
	comp=Z,3.9nm,0.7s,mb4.5,baz=172,slow=3.3,SNR=14						
MAW	Mawson	78.37	192	P	P	19 47 37.8	+1.3
	comp=Z,1.4nm,0.5s,mb4.2,baz=16,slow=9.5,SNR=9.9						
NB2	NORSAR Subarra	80.11	331	P	P	19 47 45.5	-0.7
	comp=Z,1.3nm,0.7s,mb4.0,baz=87,slow=5.3						
NOA	NORSAR Array B	80.11	331	P	P	19 47 45.4	-0.8
	comp=Z,1.1nm,0.9s,mb3.8,baz=93,slow=5.7,SNR=4.2						
CPUP	Villa Florida	147.38	232	PKPbc	PKPbc	19 55 20.3	-0.5
	comp=Z,2.6nm,0.6s,baz=124,slow=3.0,SNR=9.6						
CPUP	Villa Florida	147.38	232	PKPbc	PKPbc	19 55 20.3	-0.5

*ISCJB **01** 19:36:48.0±0.3, 43°.26N±0°.01×0°.51W±0°.02, h4km±2km, Error ellipse: s-maj=2.5km s-min=2.2km az=152.2*
*CSEM **01** 19:36:49.4±0.1, 43°.19N×0°.54W, h8km, ML2.7/22, Error ellipse: s-maj=1.9km s-min=1.6km az=157.0*
*NEIC **01** 19:36:49.8, 43°.07N×0°.58W, h5km, ML2.6(LDG), ML2.5(STR), After STR.*
*LDG **01** 19:36:50.6±0.1, 43°.14N×0°.54W, h5km, Md2.7/3, Ml2.6/20, Error ellipse: s-maj=1.5km s-min=1.1km az=156.0*
*STR **01** 19:36:50.0±0.2, 43°.09N×0°.56W, h5km, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*MDD **01** 19:36:50.4±0.2, 43°.13N×0°.55W, h0km, mb2.7/1, mbLg2.1/29, Error ellipse: s-maj=2.6km s-min=1.4km az=6.0, PRIMO*

ISC 01 19:36:49.2±0.2, 43°.20N±0°.01×0°.54W±0°.02, h8km±2km, n192, σ0°97/305, 2D, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
REYF	Montagne du Re	0.17	139	Pg	Pg	19 36 53.0	+0.4
REYF	Montagne du Re	0.17	139	Pg	Pg	19 36 53.1	+0.5
REYF				Lg		19 36 55.0	
REYF	Montagne du Re	0.17	139	Pg	Pg	19 36 53.1	+0.5
REYF				Lg		19 36 55.0	
REYF	Montagne du Re	0.17	139	Pg	Pg	19 36 53.0	+0.4
ORDF	Ordiarp	0.29	274	Pg	Pg	19 36 56.1	+1.2
ORDF	Ordiarp	0.29	274	Pg	Pg	19 36 56.0	+1.1
ORDF				Lg		19 37 00.6	
ORDF	Ordiarp	0.29	274	Pg	Pg	19 36 56.0	+1.1
ORDF				Lg		19 37 00.6	
ORDF	Ordiarp	0.29	274	Pg	Pg	19 36 56.1	+1.2
ETSF	Etsaut	0.30	183	ePg	Pg	19 36 54.2	-0.8
ETSF				eSg	Sg	19 36 56.6	-2.4
	143nm,0.2s						
ETSF	Etsaut	0.30	183	Pg	Pg	19 36 54.2	-0.8
ETSF				Lg		19 36 56.6	
	72nm,0.2s						
ETSF	Etsaut	0.30	183	Pg	Pg	19 36 54.2	-0.8
ETSF				Lg		19 36 56.6	
	72nm,0.2s						
ETSF	Etsaut	0.30	183	ePg	Pg	19 36 54.2	-0.8
ETSF				eSg	Sg	19 36 56.6	-2.4
	72nm,0.2s						
LARF	Larrau	0.36	245	Pg	Pg	19 36 56.6	+0.3
LARF				Lg		19 37 01.6	
LARF	Larrau	0.36	245	Pg	Pg	19 36 56.6	+0.3
LARF				Lg		19 37 01.6	
LABF	Labassere	0.47	108	Pg	Pg	19 36 59.0	+0.6
LABF				Sg	Sg	19 37 05.7	+1.1
LABF	Labassere	0.47	108	Pg	Pg	19 36 58.8	+0.5
LABF				Lg		19 37 05.0	
LABF	Labassere	0.47	108	Pg	Pg	19 36 58.8	+0.5
LABF				Lg		19 37 05.0	
LABF	Labassere	0.47	108	Pg	Pg	19 36 59.0	+0.6
LABF				Sg	Sg	19 37 05.7	+1.1
SJPF	Ste Jean	0.51	261	ePg	Pg	19 36 59.0	0.0
SJPF				eSg	Sg	19 37 05.4

100nm,0.1s,SNR=7.9
IPRE Itoiz 0.71 237 Pg Pg 19 37 03.2 +0.3
2.5nm,0.1s,SNR=7.9
IPRE Lg 19 37 12.1
29nm,0.3s,SNR=7.9
IPRE Itoiz 0.71 237 Pg Pg 19 37 03.2 +0.3
2.5nm,0.1s,SNR=7.9
IPRE Lg 19 37 12.1
29nm,0.3s,SNR=7.9
IPRE Itoiz 0.71 237 Pg Pg 19 37 03.2 +0.2
2.5nm,0.1s,SNR=7.9
IPRE Lg 19 37 12.1
29nm,0.3s,SNR=7.9
ELIZ Elizondo 0.72 268 Pg Pg 19 37 03.1 -0.1
3.9nm,0.2s,SNR=19
ELIZ Lg 19 37 13.5
37nm,0.3s,SNR=7.9
ELIZ Elizondo 0.72 268 Pg Pg 19 37 03.1 -0.1
3.9nm,0.2s,SNR=19
ELIZ Lg 19 37 13.5
37nm,0.3s,SNR=7.9
ELIZ Elizondo 0.72 268 Pg Pg 19 37 03.2 +0.1
3.9nm,0.2s,SNR=19
ELIZ Lg 19 37 12.8
37nm,0.3s,SNR=7.9
IZUN Zunzarren 0.75 244 Pg Pg 19 37 03.5 -0.1
4.7nm,0.2s,SNR=7.9
IZUN Lg 19 37 13.7
11nm,0.2s,SNR=7.9
IZUN Zunzarren 0.75 244 Pg Pg 19 37 03.5 -0.1
4.7nm,0.2s,SNR=7.9
IZUN Lg 19 37 13.7
11nm,0.2s,SNR=7.9
IZUN Zunzarren 0.75 244 Pg Pg 19 37 03.5 -0.1
4.7nm,0.2s,SNR=7.9
IZUN Lg 19 37 14.6
11nm,0.2s,SNR=7.9
RESF Ens 0.75 121 Pg Pg 19 37 04.4 +0.7
RESF Sg Sg 19 37 13.8 +0.3
RESF Ens 0.75 121 Pg Pg 19 37 03.5 -0.2
RESF Lg 19 37 12.6
RESF Ens 0.75 121 Pg Pg 19 37 03.5 -0.2
RESF Lg 19 37 12.6
RESF Ens 0.75 121 Pg Pg 19 37 04.4 +0.7
RESF Sg Sg 19 37 13.8 +0.3
IUSE Utxeti 0.78 252 Pg Pg 19 37 04.5 +0.3
1.3nm,0.1s,SNR=8.0
IUSE Lg 19 37 14.7
6.5nm,0.2s,SNR=7.9
IUSE Utxeti 0.78 252 Pg Pg 19 37 04.5 +0.3
1.3nm,0.1s,SNR=8.0
IUSE Lg 19 37 14.7
6.5nm,0.2s,SNR=7.9
IUSE Utxeti 0.78 252 Pg Pg 19 37 04.5 +0.3
1.3nm,0.1s,SNR=8.0
IUSE Lg 19 37 14.7
6.5nm,0.2s,SNR=7.9
IUNC Unciti 0.83 238 Pg Pg 19 37 05.8 +0.6
3.8nm,0.1s,SNR=7.9
IUNC Lg 19 37 16.6
13nm,0.1s,SNR=7.9
IUNC Unciti 0.83 238 Pg Pg 19 37 05.8 +0.6
3.8nm,0.1s,SNR=7.9
IUNC Lg 19 37 16.6
13nm,0.1s,SNR=7.9
IUNC Unciti 0.83 238 Pg Pg 19 37 05.8 +0.6
3.8nm,0.1s,SNR=7.9
IUNC Lg 19 37 16.6
13nm,0.1s,SNR=7.9
EARA Aranguren 0.87 241 Pg Pg 19 37 06.4 +0.4
4.2nm,0.1s,SNR=7.9
EARA Lg 19 37 17.7
16nm,0.1s,SNR=7.9
EARA Aranguren 0.87 241 Pg Pg 19 37 06.4 +0.4
4.2nm,0.1s,SNR=7.9
EARA Lg 19 37 17.7
16nm,0.1s,SNR=7.9
EARA Aranguren 0.87 241 Pg Pg 19 37 06.4 +0.4
4.2nm,0.1s,SNR=7.9
EARA Lg 19 37 17.7
16nm,0.1s,SNR=7.9
MELF Melles 1.01 108 Pg Pg 19 37 09.2 +0.7
MELF Sg Sg 19 37 21.9 +0.3
MELF Melles 1.01 108 Pg Pg 19 37 08.8 +0.3
MELF Lg 19 37 21.2
MELF Melles 1.01 108 Pg Pg 19 37 08.8 +0.3
MELF Lg 19 37 21.2
MELF Melles 1.01 108 Pg Pg 19 37 09.2 +0.7
MELF Sg Sg 19 37 21.9 +0.3
MLS Moulis 1.22 101 Lg 19 37 27.9
MLS Moulis 1.22 101 Lg 19 37 27.9
SALF Salau 1.34 108 Pg Pg 19 37 15.1 +0.1
SALF Sg Sg 19 37 33.3 +1.0
SALF Salau 1.34 108 Pg Pg 19 37 15.2 +0.3
SALF Lg 19 37 32.5
SALF Salau 1.34 108 Pg Pg 19 37 15.2 +0.3
SALF Lg 19 37 32.5
SALF Salau 1.34 108 Pg Pg 19 37 15.1 +0.1
SALF Sg Sg 19 37 33.3 +1.0
ESAC San Caprasio 1.47 178 Pg Pg 19 37 16.8 -0.7
28nm,0.3s,SNR=19
ESAC Lg 19 37 34.8
141nm,0.3s,SNR=7.9
ESAC San Caprasio 1.47 178 Pg Pg 19 37 16.8 -0.7
28nm,0.3s,SNR=19
ESAC Lg 19 37 34.8
141nm,0.3s,SNR=7.9
ESAC San Caprasio 1.47 178 Pn Pn 19 37 16.8 +0.7
28nm,0.3s,SNR=19
ESAC Sn Sn 19 37 34.8 -0.7
141nm,0.3s,SNR=7.9
CSOR Sort 1.48 123 Pg Pg 19 37 16.9 -0.7
0.1nm,0.1s,SNR=26
CSOR Lg 19 37 36.0
20nm,0.3s,SNR=7.9
CSOR Sort 1.48 123 Pg Pg 19 37 16.9 -0.7
0.1nm,0.1s,SNR=26
CSOR Lg 19 37 36.0
20nm,0.3s,SNR=7.9
CSOR Sort 1.48 123 Pn Pn 19 37 16.9 +0.7
0.1nm,0.1s,SNR=26
CSOR Sn Sn 19 37 36.0 +0.3
20nm,0.3s,SNR=7.9
ECRI Cripan 1.56 249 Pg Pg 19 37 18.4 -0.8
1.7nm,0.1s,SNR=7.9
ECRI Lg 19 37 39.4
8.9nm,0.2s,SNR=7.9
ECRI Cripan 1.56 249 Pg Pg 19 37 18.4 -0.8
1.7nm,0.1s,SNR=7.9
ECRI Lg 19 37 39.4
8.9nm,0.2s,SNR=7.9
ECRI Cripan 1.56 249 Pn Pn 19 37 18.4 +1.1
1.1nm,0.1s,SNR=7.9
ECRI Cripan 1.56 249 Pg Pg 19 37 19.6 +0.4
1.7nm,0.1s,SNR=7.9
ECRI Sn Sn 19 37 39.4 +1.7
8.9nm,0.2s,SNR=7.9
GRBF Gourbit 1.56 102 Pg Pg 19 37 20.4 +1.2
GRBF Lg 19 37 40.5
GRBF Gourbit 1.56 102 Pg Pg 19 37 20.4 +1.2
GRBF Lg 19 37 40.5
LFF La Frestale 1.97 27 ePg Pg 19 37 28.9 +1.9
LFF eSg Sg 19 37 53.8 +1.2
13nm,0.2s
LFF La Frestale 1.97 27 ePn Pn 19 37 23.9 +0.9
LFF ePg Pg 19 37 28.9 +1.9
LFF eSg Sg 19 37 53.8 +1.2
LFF La Frestale 1.97 27 Pn Pn 19 37 23.9 +0.9
LFF Pg Pg 19 37 28.9 +1.9
LFF Lg 19 37 53.8
6.3nm,0.2s
LFF La Frestale 1.97 27 Pn Pn 19 37 23.9 +0.9
LFF Pg Pg 19 37 28.9 +1.9
LFF Lg 19 37 53.8
6.3nm,0.2s
LFF La Frestale 1.97 27 ePn Pn 19 37 23.9 +0.9
LFF La Frestale 1.97 27 ePg Pg 19 37 28.9 +1.9
LFF eSg Sg 19 37 53.8 +1.2
6.3nm,0.2s
CLLI Llivia 1.98 110 Pg Pg 19 37 27.4 +0.2
3.9nm,0.3s,SNR=17
CLLI Lg 19 37 53.9
9.8nm,0.3s,SNR=7.9
CLLI Llivia 1.98 110 Pg Pg 19 37 27.4 +0.2
3.9nm,0.3s,SNR=17
CLLI Lg 19 37 53.9
9.8nm,0.3s,SNR=7.9
CLLI Llivia 1.98 110 Pg Pg 19 37 27.5 +0.3
3.9nm,0.3s,SNR=17
CLLI Lg 19 37 53.9
9.8nm,0.3s,SNR=7.9
MTLF Montolieu 2.02 85 ePg Pg 19 37 27.4 -0.5
MTLF eSg Sg 19 37 53.2 -0.9
8.2nm,0.3s
MTLF Montolieu 2.02 85 ePn Pn 19 37 23.8 +0.2
MTLF ePg Pg 19 37 27.4 -0.5
MTLF eSg Sg 19 37 53.2 -0.9
MTLF Montolieu 2.02 85 Pn Pn 19 37 23.8 +0.2
MTLF Pg Pg 19 37 27.4 -0.5
MTLF Lg 19 37 53.2
4.1nm,0.3s
MTLF Montolieu 2.02 85 Pn Pn 19 37 23.8 +0.2
MTLF Pg Pg 19 37 27.4 -0.5
MTLF Lg 19 37 53.2
4.1nm,0.3s
MTLF Montolieu 2.02 85 ePn Pn 19 37 23.8 +0.2
MTLF Montolieu 2.02 85 ePg Pg 19 37 27.4 -0.5
MTLF eSg Sg 19 37 53.2 -0.9
4.1nm,0.3s
VALF Valcebollere 2.04 112 Pg Pg 19 37 29.0 +0.6
VALF Sg Sg 19 37 56.0 +1.2
VALF Valcebollere 2.04 112 Pg Pg 19 37 29.1 +0.7
VALF Lg 19 37 54.3
VALF Valcebollere 2.04 112 Pg Pg 19 37 29.1 +0.7
VALF Lg 19 37 54.3
VALF Valcebollere 2.04 112 Pg Pg 19 37 29.0 +0.6
VALF Sg Sg 19 37 56.0 +1.2
ELAN Lanestosa 2.12 272 Pn Pn 19 37 26.5 +1.6
0.5nm,0.3s,SNR=7.9
ELAN Lg 19 37 56.0
1.5nm,0.2s,SNR=7.9
ELAN Lanestosa 2.12 272 Pn Pn 19 37 26.5 +1.6
0.5nm,0.3s,SNR=7.9
ELAN Lg 19 37 56.0
1.5nm,0.2s,SNR=7.9
ELAN Lanestosa 2.12 272 Pn Pn 19 37 26.5 +1.6
0.5nm,0.3s,SNR=7.9
ELAN Lg 19 37 56.8
1.5nm,0.2s,SNR=7.9
EPOB Poblet 2.20 146 Pn Pn 19 37 26.1 0.0
2.3nm,0.5s,SNR=13
EPOB Pg Pg 19 37 30.2 -1.2
0.7nm,0.1s,SNR=7.9
EPOB Lg 19 37 56.6
SNR=7.9
EPOB Poblet 2.20 146 Pn Pn 19 37 26.1 0.0
2.3nm,0.5s,SNR=13
EPOB Pg Pg 19 37 30.2 -1.2
0.7nm,0.1s,SNR=7.9
EPOB Lg 19 37 56.6
SNR=7.9
EPOB Poblet 2.20 146 Pn Pn 19 37 26.3 +0.2
2.3nm,0.5s,SNR=13
EPOB Poblet 2.20 146 Pg Pg 19 37 29.6 -1.7
0.7nm,0.1s,SNR=7.9
EPOB Sn Sn 19 37 56.9 +3.5
SNR=7.9
ERTA Horta de San J 2.33 163 Pg Pg 19 37 31.3 -2.5
2.0nm,0.1s,SNR=7.9
ERTA Lg 19 38 00.4
SNR=7.9
ERTA Horta de San J 2.33 163 Pg Pg 19 37 31.3 -2.5
2.0nm,0.1s,SNR=7.9
ERTA Lg 19 38 00.4
SNR=7.9
ERTA Horta de San J 2.33 163 Pg Pg 19 37 31.3 -2.6
2.0nm,0.1s,SNR=7.9
ERTA Lg 19 38 01.2
SNR=7.9
CAF Calviac 2.55 46 ePg Pg 19 37 38.5 +0.4
CAF eSg Sg 19 38 12.9 +1.7
6.2nm,0.2s
CAF Calviac 2.55 46 ePn Pn 19 37 31.5 +0.6
CAF ePg Pg 19 37 38.5 +0.4
CAF eSg Sg 19 38 12.9 +1.7
CAF Calviac 2.55 46 Pn Pn 19 37 31.5 +0.6
CAF Pg Pg 19 37 38.5 +0.4
CAF Lg 19 38 12.9
3.1nm,0.2s
CAF Calviac 2.55 46 Pn Pn 19 37 31.5 +0.6
CAF Pg Pg 19 37 38.5 +0.4
CAF Lg 19 38 12.9
3.1nm,0.2s
CAF Calviac 2.55 46 ePn Pn 19 37 31.5 +0.6
CAF Calviac 2.55 46 ePg Pg 19 37 38.5 +0.4
CAF eSg Sg 19 38 12.9 +1.7
3.1nm,0.2s
RJF Les Rejaudoux 2.58 34 ePg Pg 19 37 39.7 +1.1
RJF eSg Sg 19 38 13.1 +1.2
7.0nm,0.2s
RJF Les Rejaudoux 2.58 34 ePn Pn 19 37 31.8 +0.6
RJF ePg Pg 19 37 39.7 +1.1
RJF eSg Sg 19 38 13.1 +1.2
RJF Les Rejaudoux 2.58 34 Pn Pn 19 37 31.8 +0.6
RJF Pg Pg 19 37 39.7 +1.1
RJF Lg 19 38 13.1
3.5nm,0.2s
RJF Les Rejaudoux 2.58 34 Pn Pn 19 37 31.8 +0.6
RJF Pg Pg 19 37 39.7 +1.1
RJF Lg 19 38 13.1
3.5nm,0.2s
RJF Les Rejaudoux 2.58 34 ePn Pn 19 37 31.8 +0.6
RJF Les Rejaudoux 2.58 34 ePg Pg 19 37 39.7 +1.1
RJF eSg Sg 19 38 13.1 +1.2
3.5nm,0.2s
CFON Fontmartina 2.63 122 Pn Pn 19 37 33.5 +1.6
0.6nm,0.1s,SNR=7.9
CFON Pg Pg 19 37 38.8 -0.8
2.4nm,0.1s,SNR=7.9
CFON Lg 19 38 12.1
SNR=7.9
CFON Fontmartina 2.63 122 Pn Pn 19 37 33.5 +1.6
0.6nm,0.1s,SNR=7.9
CFON Pg Pg 19 37 38.8 -0.8
2.4nm,0.1s,SNR=7.9
CFON Lg 19 38 12.1
SNR=7.9
CFON Fontmartina 2.63 122 Pn Pn 19 37 33.5 +1.6
0.6nm,0.1s,SNR=7.9
CFON Lg 19 38 11.7
SNR=7.9
ETOR Torete 2.63 206 Pn Pn 19 37 32.7 +0.7
0.4nm,0.2s,SNR=7.9
ETOR Sn Sn 19 38 03.0 -1.0
9.8nm,0.2s,SNR=7.9
ETOR Lg 19 38 11.7
12nm,0.2s,SNR=7.9
ETOR Torete 2.63 206 Pn Pn 19 37 32.7 +0.7
0.4nm,0.2s,SNR=7.9
ETOR Sn Sn 19 38 03.0 -1.0
9.8nm,0.2s,SNR=7.9
ETOR Lg 19 38 11.7
12nm,0.2s,SNR=7.9
ETOR Torete 2.63 206 Pn Pn 19 37 32.7 +0.7
0.4nm,0.2s,SNR=7.9
ETOR Sn Sn 19 38 03.0 -1.1
SNR=7.9
EJON La Jonquera 2.63 105 Pg Pg 19 37 37.9 -1.7
0.6nm,0.1s,SNR=4.0
EJON Lg 19 38 13.8
1.5nm,0.2s,SNR=7.9
EJON La Jonquera 2.63 105 Pg Pg 19 37 37.9 -1.7
0.6nm,0.1s,SNR=4.0
EJON Lg 19 38 13.8
1.5nm,0.2s,SNR=7.9
EMOS Mosqueruela 2.83 179 Pg Pg 19 37 41.3 -2.2
1.5nm,0.2s,SNR=7.9
EMOS Sn Sn 19 38 06.6 -2.4
1.1nm,0.1s,SNR=7.9
EMOS Lg 19 38 19.3
5.4nm,0.3s,SNR=7.9
EMOS Mosqueruela 2.83 179 Pg Pg 19 37 41.3 -2.2
1.5nm,0.2s,SNR=7.9
EMOS Sn Sn 19 38 06.6 -2.4
1.1nm,0.1s,SNR=7.9
EMOS Lg 19 38 19.3
5.4nm,0.3s,SNR=7.9
LASF Ste Croix 3.31 73 ePg Pg 19 37 52.4 -0.3
LASF eSg Sg 19 38 35.2 -0.3
5.4nm,0.4s
LASF Ste Croix 3.31 73 ePn Pn 19 37 43.9 +2.5
LASF ePg Pg 19 37 52.4 -0.3
LASF eSg Sg 19 38 35.2 -0.3
LASF Ste Croix 3.31 73 Pn Pn 19 37 43.9 +2.5
LASF Pg Pg 19 37 52.4 -0.3
LASF Lg 19 38 35.2
2.7nm,0.4s
LASF Ste Croix 3.31 73 Pn Pn 19 37 43.9 +2.5
LASF Pg Pg 19 37 52.4 -0.3
LASF Lg 19 38 35.2
2.7nm,0.4s
LASF Ste Croix 3.31 73 ePn Pn 19 37 43.9 +2.5
LASF Ste Croix 3.31 73 ePg Pg 19 37 52.4 -0.3
LASF eSg Sg 19 38 35.2 -0.3
2.7nm,0.4s
EARI Arriondas 3.41 273 Pn Pn 19 37 44.4 +1.6
0.2nm,0.2s,SNR=7.9
EARI Sn Sn 19 38 23.3 -0.1
0.1nm,0.2s,SNR=7.9
EARI Arriondas 3.41 273 Pn Pn 19 37 44.4 +1.6
0.2nm,0.2s,SNR=7.9
EARI Sn Sn 19 38 23.3 -0.1
0.1nm,0.2s,SNR=7.9
MFF Saint Martin d 3.42 5 ePg Pg 19 37 54.8 +0.1
MFF eSg Sg 19 38 39.3 +0.3
2.0nm,0.2s
MFF Saint Martin d 3.42 5 ePn Pn 19 37 43.4 +0.6
MFF ePg Pg 19 37 54.8 +0.1
MFF eSg Sg 19 38 39.3 +0.3
MFF Saint Martin d 3.42 5 Pn Pn 19 37 43.4 +0.6
MFF Pg Pg 19 37 54.8 +0.1
MFF Lg 19 38 39.3
1.0nm,0.2s
MFF Saint Martin d 3.42 5 Pn Pn 19 37 43.4 +0.6
MFF Pg Pg 19 37 54.8 +0.1
MFF Lg 19 38 39.3
1.0nm,0.2s
MFF Saint Martin d 3.42 5 ePn Pn 19 37 43.4 +0.6
MFF Saint Martin d 3.42 5 ePg Pg 19 37 54.8 +0.1
MFF eSg Sg 19 38 39.3 +0.3
1.0nm,0.2s
TCF Toulx Ste Croi 3.66 31 ePg Pg 19 37 59.4 +0.1
TCF eSn Sn 19 38 27.3 -2.2
TCF eSg Sg 19 38 46.8 0.0
2.9nm,0.2s
TCF Toulx Ste Croi 3.66 31 ePn Pn 19 37 46.3 +0.1
TCF ePg Pg 19 37 59.4 +0.1
TCF eSn Sn 19 38 27.3 -2.2
TCF eSg Sg 19 38 46.8 0.0
TCF Toulx Ste Croi 3.66 31 Pn Pn 19 37 46.3 +0.1
TCF Pg Pg 19 37 59.4 +0.1
TCF Sn Sn 19 38 27.3 -2.2
TCF Lg 19 38 46.8
1.4nm,0.2s
TCF Toulx Ste Croi 3.66 31 Pn Pn 19 37 46.3 +0.1
TCF Pg Pg 19 37 59.4 +0.1
TCF Sn Sn 19 38 27.3 -2.2
TCF Lg 19 38 46.8
1.4nm,0.2s
TCF Toulx Ste Croi 3.66 31 ePn Pn 19 37 46.3 +0.1
TCF Toulx Ste Croi 3.66 31 ePg Pg 19 37 59.4 +0.1
TCF eSn Sn 19 38 27.3 -2.2
TCF eSg Sg 19 38 46.8 0.0
1.5nm,0.2s
VIVF Saint-Julien-l 4.11 64 ePn Pn 19 37 52.4 +0.1
VIVF eSg Sg 19 39 00.6 -0.6
2.0nm,0.3s
VIVF Saint-Julien-l 4.11 64 Pn Pn 19 37 52.4 +0.1
VIVF Lg 19 39 00.6
1.0nm,0.3s
VIVF Saint-Julien-l 4.11 64 Pn Pn 19 37 52.4 +0.1
VIVF Lg 19 39 00.6
1.0nm,0.3s
VIVF Saint-Julien-l 4.11 64 ePn Pn 19 37 52.4 +0.1
VIVF eSg Sg 19 39 00.6 -0.6
1.0nm,0.3s
BGF Bois d'Agland 4.13 34 ePg Pg 19 38 07.6 -0.8
BGF eSg Sg 19 39 01.8 -0.2
14nm,0.4s
BGF Bois d'Agland 4.13 34 ePn Pn 19 37 52.7 0.0
BGF ePg Pg 19 38 07.6 -0.8
BGF eSg Sg 19 39 01.8 -0.2
BGF Bois d'Agland 4.13 34 Pn Pn 19 37 52.7 0.0
BGF Pg Pg 19 38 07.6 -0.8
BGF Lg 19 39 01.8
6.8nm,0.4s
BGF Bois d'Agland 4.13 34 Pn Pn 19 37 52.7 0.0
BGF Pg Pg 19 38 07.6 -0.8
BGF Lg 19 39 01.8
6.8nm,0.4s
BGF Bois d'Agland 4.13 34 ePn Pn 19 37 52.7 0.0
BGF Bois d'Agland 4.13 34 ePg Pg 19 38 07.6 -0.8
BGF eSg Sg 19 39 01.8 -0.2
6.8nm,0.4s
SMRF Simiane la Rot 4.51 78 ePn Pn 19 37 57.8 0.0
SMRF eSg Sg 19 39 12.6 -1.4
1.9nm,0.5s
SMRF Simiane la Rot 4.51 78 ePn Pn 19 37 57.8 0.0
SMRF eSg Sg 19 39 12.6 -1.4
0.9nm,0.5s
AVF Avril sur Loir 4.53 36 ePn Pn 19 37 58.5 +0.4
AVF eSg Sg 19 39 14.0 -0.7
3.0nm,0.5s
AVF Avril sur Loir 4.53 36 ePn Pn 19 37 58.5 +0.4
AVF eSg Sg 19 39 14.0 -0.7
1.5nm,0.5s
SMF Signal de Mont 4.64 41 ePn Pn 19 37 59.9 +0.2
SMF eSg Sg 19 39 17.3 -1.0
4.2nm,0.4s
SMF Signal de Mont 4.64 41 ePn Pn 19 37 59.9 +0.2
SMF eSg Sg 19 39 17.3 -1.0
2.1nm,0.4s
HYF Humbligny 4.65 28 ePn Pn 19 37 59.6 -0.1
HYF eSg Sg 19 39 17.8 -0.7
HYF Humbligny 4.65 28 ePn Pn 19 37 59.6 -0.1
HYF eSg Sg 19 39 17.8 -0.7
ECAL Calabor 4.75 257 Pn Pn 19 38 00.9 -0.1
SNR=7.9
ECAL Sn Sn 19 38 54.4 -1.8
SNR=7.9
ECAL Calabor 4.75 257 Pn Pn 19 38 00.9 -0.1
SNR=7.9
ECAL Sn Sn 19 38 54.4 -1.8
SNR=7.9
ECAL Calabor 4.75 257 Pn Pn 19 38 00.9 -0.2
SNR=7.9
ECAL Sn Sn 19 38 54.4 -1.8
SNR=7.9
SSF Saint Saulge 4.81 35 ePn Pn 19 38 02.3 +0.4
SSF eSn Sn 19 38 55.5 -2.3
SSF eSg Sg 19 39 22.9 -0.7
1.8nm,0.4s
SSF Saint Saulge 4.81 35 ePn Pn 19 38 02.3 +0.4
SSF eSn Sn 19 38 55.5 -2.3
SSF eSg Sg 19 39 22.9 -0.7
0.9nm,0.4s
QUIF Quistinic 5.07 340 ePn Pn 19 38 06.1 +0.6
QUIF eSg Sg 19 39 31.0 -0.9
1.4nm,0.4s
QUIF Quistinic 5.07 340 ePn Pn 19 38 06.1 +0.6
QUIF eSg Sg 19 39 31.0 -0.9
0.7nm,0.4s
LOR Lormes 5.12 36 ePn Pn 19 38 06.0 -0.2
LOR eSg Sg 19 39 32.4 -1.2
2.7nm,0.4s
LOR Lormes 5.12 36 ePn Pn 19 38 06.0 -0.2
LOR eSg Sg 19 39 32.4 -1.2
1.4nm,0.4s
GRR Gorron 5.20 358 ePn Pn 19 38 07.7 +0.4
GRR eSg Sg 19 39 35.2 -0.9
0.8nm,0.2s
GRR Gorron 5.20 358 ePn Pn 19 38 07.7 +0.4
GRR eSg Sg 19 39 35.2 -0.9
0.4nm,0.2s
SGMF Saint Gilles 5.25 345 ePn Pn 19 38 07.9 -0.1
SGMF eSn Sn 19 39 06.4 -2.3
0.8nm,0.4s
SGMF Saint Gilles 5.25 345 ePn Pn 19 38 07.9 -0.1
SGMF eSn Sn 19 39 06.4 -2.3
0.4nm,0.4s
LDF La Druitiere 5.41 3 ePn Pn 19 38 10.4 +0.3
LDF eSg Sg 19 39 41.7 -1.1
0.5nm,0.2s
LDF La Druitiere 5.41 3 ePn Pn 19 38 10.4 +0.3
LDF eSg Sg 19 39 41.7 -1.1
0.2nm,0.2s

IDC ***01*** *19:40:30.1±0.5, 7°.72N×94°.37E, h0km, mb4.2/18, mb1 4.3/19, mb1mx4.2/26, mbtmp4.2/19, ML3.3/2, MS3.9/20, Ms1 3.9/20, ms1mx3.6/45, Error ellipse: s-maj=19.6km s-min=12.5km az=70.0*

MOS ***01*** *19:40:33.3±1.0, 7°.72N×94°.51E, h33km, mb4.8/24, MS4.1/4, Error ellipse: s-maj=11.8km s-min=6.7km az=112.8*

ISCJB ***01*** *19:40:35.2±0.6, 7°.68N±0°.03×94°.39E±0°.04, h49km±6km, mb4.6/64, MS4.0/32, Error ellipse: s-maj=6.5km s-min=4.9km az=148.5*

NEIC ***01*** *19:40:36.5±0.8, 7°.73N×94°.49E, h49km±8km, mb4.6/19, Error ellipse: s-maj=8.7km s-min=5.9km az=69.0*

BJI ***01*** *19:40:36.4, 7°.54N×94°.32E, h65km, mB4.8/28, mb4.5/33, Ms4.4/30, Ms7 4.1/28*

DJA ***01*** *19:41:01, 6°.27N×95°.40E, h15km, mb4.6/5*

ISC 01 19:40:37.7±0.5, 7.70N±0°.03×94°.43E±0°.03, h55km±5km, h66km±3.5km:pP-P,n158,σ1§11/158, mb4.6/64, MS4.0/32, 9C-1D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**2.36**	**159**	P	**Pn**	**19 41 15.1**	**+1.1**
BSI				S	**Sn**	**19 41 41.1**	**-0.6**
PBA	**Port Blair**	**4.26**	**337**	*ex*	x	19 42 08.8	
PBA				*ex*	x	19 43 25.0	
TPTI		**5.20**	**148**	P	**Pn**	**19 41 54.2**	**+1.3**
PSI	**Prapat**	**6.61**	**137**	Pn	**Pn**	**19 42 10.8**	**-1.5**
	1.6nm,0.3s,baz=343,slow=11,SNR=4.3						
PSI				LR	LR	19 45 06.8	
	comp=Z,2μm,19.7s,baz=310,slow=41						
PSI	**Prapat**	**6.61**	**137**	Pn	**Pn**	**19 42 10.8**	**-1.5**
PSI				LR	LR	19 45 06.8	
KULM	**Kulim**	**6.63**	**111**	P	**Pn**	**19 42 11.7**	**-0.9**
KULM	**Kulim**	**6.63**	**111**	*e*Pn	**Pn**	**19 42 11.2**	**-1.4**
FRIM	**Kepong**	**8.43**	**121**	P	**Pn**	**19 42 36.1**	**-1.1**
MNSI	**Mandailing Nat**	**8.57**	**143**	P	**Pn**	**19 42 39.2**	**0.0**
	0.2nm2μm34nm,1.1s						
KTGM	**Kuala Trenggan**	**8.96**	**105**	P	**Pn**	**19 42 44.1**	**-0.5**
BKNI	**Bangkinang**	**9.86**	**138**	P	**Pn**	**19 42 58.2**	**+1.4**
	0.4nm88nm,1.3s						
PPI	**Padang Panjang**	**10.06**	**143**	P	**Pn**	**19 42 59.2**	**-0.3**
	7μm68nm,1.6s						
KGM	**Kluang**	**10.50**	**122**	P	**Pn**	**19 43 04.3**	**-1.3**
SDSI	**Sungai Dareh**	**11.06**	**141**	P	**Pn**	**19 43 12.6**	**-0.7**
	15nm,1.2s						
MYKOM	**Kota Tinggi**	**11.07**	**122**	P	**Pn**	**19 43 12.2**	**-1.2**
CM31	**Chiang Mai Arr**	**11.55**	**22**	*e*Pn	**Pn**	**19 43 21.2**	**+1.2**
	1.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**11.55**	**22**	Pn	**Pn**	**19 43 16.2**	**-3.7**
	0.0nm,0.3s,baz=213,slow=14,SNR=2.7						
CMAR				LR	LR	19 48 00.6	
	comp=Z,446nm,18.4s,baz=294,slow=39						
CHTO	**Chiang Mai**	**11.88**	**21**	*e*P	**Pn**	**19 43 24.7**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,18nm,1.4s						
CHTO	**Chiang Mai**	**11.88**	**21**	*e*Pn	**Pn**	**19 43 24.7**	**+0.2**
	comp=Z,18nm,1.4s						
PALK	**Pallekele**	**13.62**	**269**	*e*P	**Pn**	**19 43 49.0**	**+0.8**
KSI	**Kapahiang**	**13.91**	**144**	P	**Pn**	**19 44 00.1**	**+7.9**
VIS	**Vishakhapatnam**	**14.70**	**314**	*e*PKP	**Pn**	**19 44 00.5**	**-2.1**
KSM	**Kuching**	**16.99**	**111**	P	**Pn**	**19 44 32.3**	**+0.6**
SHL	**Shillong**	**17.93**	**353**	*e*PKP	**Pn**	**19 44 42.2**	**-1.0**
SHL				*ex*	x	19 48 21.0	
BOK	**Bokaro**	**17.98**	**334**	*e*PKP	**Pn**	**19 44 42.1**	**-1.6**
BOK				AMb	AMB	19 44 49.8	
	comp=Z,36nm,1.9s						
HYB	**Hyderabad**	**18.24**	**303**	*e*P	**Pn**	**19 44 50.0**	**+2.9**
SBUM	**Sibu**	**18.47**	**105**	P	**Pn**	**19 44 50.9**	**+1.1**
QIZ	**Qiongzhong**	**18.73**	**52**	P	**Pn**	**19 44 53.3**	**+0.3**
QIZ				pP	pP	19 45 05.4	+1.2
QIZ				sP	sP	19 45 14.0	+2.8
QIZ				S	**S**	**19 48 22.9**	**+0.4**
QIZ				sS	sS	19 48 43.3	+1.1
QIZ				LR	LR		
	comp=N,1μm,12.8s						
QIZ				LR	LR		
	comp=E,270nm,13.2s						
QIZ				LR	LR		
	comp=Z,660nm,10.6s						
KMI	**Kunming**	**19.05**	**24**	P	**Pn**	**19 44 59.4**	**+2.6**
KMI				pP	pP	19 45 13.9	+6.2
KMI				PP		19 45 18.4	
KMI				sP	sP	19 45 22.7	+8.0
KMI				S	**S**	**19 48 26.1**	**-2.8**
KMI				sS	sS	19 48 47.2	-1.4
KMI				SS		19 48 56.4	
KMI				pmax	pmax		
	comp=Z,6.0nm,1.4s						
KMI				pmax	pmax		
	comp=Z,180nm,3.6s						
KMI				LR	LR		
	comp=N,360nm,12.0s						
KMI				LR	LR		
	comp=E,330nm,12.8s						
KMI				LR	LR		
	comp=Z,360nm,12.4s						
ODAN	**Odare**	**20.19**	**342**	*e*P	**P**	**19 45 06.7**	**-1.2**
	comp=Z,128nm,1.4s						
RAMN	**Ramite**	**20.53**	**340**	*e*P	**P**	**19 45 10.3**	**-1.3**
	comp=Z,155nm,1.0s						
TAPN	**Taplejung**	**20.55**	**343**	*e*P	**P**	**19 45 10.9**	**-0.9**
	comp=Z,135nm,1.1s						
AKL	**Akola**	**21.23**	**309**	*e*PKP	**P**	**19 45 19.0**	**-0.2**
PKI	**Pulchoki**	**21.53**	**338**	*e*P	**P**	**19 45 22.7**	**+0.4**
	comp=Z,72nm,1.0s,mb5.1						
PKIN	**Phulchoki**	**21.54**	**338**	*e*P	**P**	**19 45 22.2**	**-0.2**
	comp=Z,69nm,1.0s,mb5.0						
GOA	**Goa**	**21.60**	**293**	*ex*	x	19 45 14.1	
GUN	**Gumba**	**21.66**	**339**	*e*P	**P**	**19 45 24.1**	**+0.3**
	comp=Z,196nm,1.2s,mb5.4						
DMN	**Daman**	**21.68**	**337**	*e*P	**P**	**19 45 24.0**	**+0.1**
	comp=Z,132nm,1.0s,mb5.3						
KKN	**Kakani**	**21.77**	**338**	*e*P	**P**	**19 45 24.9**	**0.0**
	comp=Z,76nm,1.0s,mb5.1						
GYA	**Guiyang**	**21.98**	**30**	P	**P**	**19 45 28.9**	**+1.7**
GYA				pP		19 45 45.2	
GYA				sP	sP	19 45 54.0	+7.5
GYA				PP		19 45 57.8	
GYA				S	**S**	**19 49 25.3**	**-1.5**
GYA				sS	sS	19 49 47.8	+0.6
GYA				SS		19 50 05.4	
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.6						
GYA				pmax	pmax		
	comp=Z,110nm,4.6s						
GYA				LR	LR		
	comp=N,560nm,14.0s,MS4.2						
GYA				LR	LR		
	comp=E,450nm,15.4s,MS4.2						
GYA				LR	LR		
	comp=Z,580nm,13.9s,MS4.2						
LSA	**Lhasa**	**22.10**	**352**	P	**P**	**19 45 27.8**	**-0.5**
BHPL	**Bhopal**	**22.48**	**315**	*e*PKP	**P**	**19 45 33.1**	**+0.6**
BHPL				AMb	AMB	19 45 35.3	
	comp=Z,24nm,1.1s,mb4.6						
MYLDM	**Lahad Datu**	**24.05**	**95**	P	**P**	**19 45 51.1**	**+3.1**
CD2	**Chengdu**	**24.68**	**19**	P	**P**	**19 45 54.3**	**+0.8**
CD2				pP		19 46 11.4	
CD2				sP	sP	19 46 20.7	+6.9
CD2				PP		19 46 34.3	
CD2				S	**S**	**19 50 08.7**	**-2.8**
CD2				sS	sS	19 50 38.4	+3.6
CD2				SS		19 51 11.4	
CD2				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.5						
CD2				pmax	pmax		
	comp=Z,130nm,7.7s						
CD2				LR	LR		
	comp=N,540nm,10.6s						
CD2				LR	LR		
	comp=Z,370nm,8.9s						
AGRA	**Agra**	**24.93**	**323**	*ex*	**P**	**19 45 53.1**	**-2.7**
AGRA				AMb	AMB	19 45 54.2	
	comp=Z,62nm,0.4s,mb5.5						
SONA	**Sohna**	**26.20**	**323**	*e*PKP	**P**	**19 46 07.0**	**-0.3**
JOSI	**Joshimath**	**26.66**	**330**	*e*PKP	**P**	**19 46 13.3**	**+1.9**
KHET	**Khetri**	**26.84**	**321**	*e*PKP	**P**	**19 46 13.1**	**0.0**
KHET				AMb	AMB	19 46 20.0	
	comp=Z,24nm,2.1s,mb4.3						
DDI	**Dehra Dun**	**27.24**	**328**	*ex*	**P**	**19 46 18.0**	**+1.3**
KLP	**Kalpa**	**28.11**	**330**	*e*PKP	**P**	**19 46 24.9**	**+0.5**
KLP				AMb	AMB	19 46 41.2	
	comp=Z,9.9nm,0.7s,mb4.5						
WHN	**Wuhan**	**29.40**	**37**	P	**P**	**19 46 44.5**	**+8.6**
LZH	**Lanzhou**	**29.53**	**16**	*e*P	**P**	**19 46 37.7**	**+0.7**
LZH				PP	PP	19 47 38.4	-6.1
LZH				PcP	PcP	19 49 38.7	-2.5
LZH				*e*S	**S**	**19 51 26.4**	**-1.5**
LZH				SS	SS	19 53 03.1	-32
LZH				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.5						
LZH				pmax	pmax		
	comp=Z,68nm,5.0s						
LZH				LR	LR		
	comp=N,480nm,14.0s						
LZH				LR	LR		
	comp=Z,530nm,15.0s,MS4.3						
GTA	**Gaotai**	**31.94**	**8**	*e*P	**P**	**19 47 00.5**	**+2.3**
GTA				pP	pP	19 47 14.8	+2.7
GTA				sP	sP	19 47 23.4	+4.8
GTA				PP	PP	19 48 09.4	-1.8
GTA				S	**S**	**19 52 06.6**	**+1.1**
GTA				sS	sS	19 52 32.2	+3.1
GTA				SS	SS	19 54 02.9	-22
GTA				pmax	pmax		
	comp=Z,4.0nm,2.3s,mb3.8						
GTA				pmax	pmax		
	comp=Z,130nm,6.5s						
GTA				LR	LR		
	comp=N,71nm,9.8s						
GTA				LR	LR		
	comp=E,85nm,12.8s						
GTA				LR	LR		
	comp=Z,85nm,13.4s,MS3.6						
NJ2	**Nanjing**	**33.22**	**40**	*e*P	**P**	**19 47 12.1**	**+2.6**
NJ2				pP	pP	19 47 27.2	+3.7
NJ2				sP	sP	19 47 35.0	+5.0
NJ2				PP	PP	19 48 26.6	+1.1
NJ2				S	**S**	**19 52 25.0**	**-0.6**
NJ2				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
NJ2				pmax	pmax		
	comp=Z,60nm,8.5s						
NJ2				LR	LR		
	comp=N,260nm,14.2s,MS4.2						
NJ2				LR	LR		
	comp=E,230nm,12.5s,MS4.2						
NJ2				LR	LR		
	comp=Z,100nm,16.5s,MS3.6						
SSE	**Sheshan**	**34.15**	**43**	P	**P**	**19 47 21.4**	**+3.8**
SSE				S	**S**	**19 52 43.4**	**+3.3**
SSE				pmax	pmax		
	comp=Z,39nm,0.7s,mb5.5						
SSE				pmax	pmax		
	comp=Z,110nm,9.7s						
SSE				LR	LR		
	comp=N,320nm,15.2s,MS4.2						
SSE				LR	LR		
	comp=E,170nm,15.2s,MS4.2						
SSE				LR	LR		
	comp=Z,210nm,11.9s,MS4.1						
KBL	**Kabul**	**35.48**	**322**	*e*P	**P**	**19 47 28.2**	**-0.9**
KBL				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
KBL	**Kabul**	**35.48**	**322**	*e*P	**P**	**19 47 28.1**	**-0.9**
	comp=Z,4.1nm,0.6s,mb4.5						
KSH	**Kashi**	**35.75**	**335**	*e*P	**P**	**19 47 31.0**	**-0.2**
KSH				pP	pP	19 47 49.4	+4.1
KSH				sP	sP	19 47 58.2	+6.4
KSH				PP	PP	19 48 53.5	+0.2
KSH				PcP	PcP	19 49 58.2	-0.1
KSH				S	**S**	**19 53 00.9**	**-3.5**
KSH				sS	sS	19 53 31.6	+3.4
KSH				ScP	ScP	19 53 36.3	-3.6
KSH				PcS	PcS	19 53 44.4	-1.2
KSH				SS	SS	19 55 24.7	-17
KSH				ScS	ScS	19 57 40.7	-4.2
KSH				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
KSH				pmax	pmax		
	comp=Z,100nm,5.1s						
KSH				LR	LR		
	comp=N,170nm,8.7s						
KSH				LR	LR		
	comp=E,200nm,8.7s						
KSH				LR	LR		
	comp=Z,300nm,12.2s,MS4.3						
HHC	**Hu-ho-hao-te**	**36.37**	**22**	*e*P	**P**	**19 47 36.4**	**-0.1**
HHC				pP	pP	19 47 53.7	+3.1
HHC				sP	sP	19 48 02.6	+5.5
HHC				PP	PP	19 49 01.9	+1.7
HHC				PcP	PcP	19 49 59.7	-0.4
HHC				S	**S**	**19 53 11.8**	**-2.1**
HHC				ScP	ScP	19 53 38.4	-3.8
HHC				sS	sS	19 53 41.2	+3.5
HHC				PcS	PcS	19 53 46.6	-1.2
HHC				SS	SS	19 55 41.0	-14
HHC				ScS	ScS	19 57 43.1	-5.2
HHC				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
HHC				pmax	pmax		
	comp=Z,63nm,5.9s						
HHC				LR	LR		
	comp=N,220nm,13.2s,MS4.3						
HHC				LR	LR		
	comp=E,310nm,13.6s,MS4.3						
HHC				LR	LR		
	comp=Z,210nm,14.5s,MS4.0						
WMQ	**Urumqi**	**36.45**	**352**	P	**P**	**19 47 38.4**	**+1.2**
WMQ				pP	pP	19 47 53.5	+2.2
WMQ				sP	sP	19 48 00.7	+2.9
WMQ				PP	PP	19 49 03.5	+2.4
WMQ				*e*S	**S**	**19 53 14.9**	**-0.2**
WMQ				SS	SS	19 55 42.8	-13
WMQ				ScS	ScS	19 57 46.9	-1.8
WMQ				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.0						
WMQ				pmax	pmax		
	comp=Z,110nm,5.4s						
WMQ				LR	LR		
	comp=N,260nm,14.8s,MS4.2						
WMQ				LR	LR		
	comp=E,130nm,13.0s,MS4.2						
WMQ				LR	LR		
	comp=Z,230nm,14.4s,MS4.1						
BJI	**Beijing**	**37.62**	**28**	P	**P**	**19 47 48.0**	**+0.8**
BJI				sP	sP	19 48 09.7	+1.9
BJI				S	**S**	**19 53 35.0**	**+2.0**
BJI				sS	sS	19 54 03.0	+6.1
BJI				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.4						
BJI				pmax	pmax		
	comp=Z,57nm,3.8s						
BJI				LR	LR		
	comp=N,480nm,10.9s,MS4.6						
BJI				LR	LR		
	comp=E,460nm,14.6s,MS4.6						
BJI				LR	LR		
	comp=Z,100nm,19.9s						
AML	**Almayashu**	**38.88**	**335**	*e*P	**P**	**19 47 58.3**	**+0.6**
AML				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
AML	**Almayashu**	**38.88**	**335**	*e*P	**P**	**19 47 58.3**	**+0.5**
	comp=Z,8.9nm,0.9s,mb4.5						
AAK	**Ala-Archa**	**38.97**	**336**	P	**P**	**19 47 58.6**	**+0.1**
	comp=Z,1.0nm,0.3s,mb4.1,baz=153,slow=11,SNR=5.2						
AAK				LR	LR	20 05 43.4	
	comp=Z,278nm,19.6s,MS4.1,baz=140,slow=39						
EKS2	**Erkin-Say**	**39.28**	**336**	*e*P	**P**	**19 48 00.5**	**-0.6**
EKS2				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
EKS2	**Erkin-Say**	**39.28**	**336**	*e*P	**P**	**19 48 00.5**	**-0.6**
	comp=Z,3.5nm,0.8s,mb4.1						
MK31	**Makanchi Array**	**40.32**	**347**	*e*P	**P**	**19 48 08.6**	**-1.0**
MKAR	**Makanchi Array**	**40.32**	**347**	P	**P**	**19 48 08.3**	**-1.3**
	comp=Z,4.7nm,1.0s,mb4.2,baz=163,slow=8.3,SNR=18						
MKAR	**Makanchi Array**	**40.32**	**347**	*ce*P	**P**	**19 48 09.0**	**-0.6**
MKAR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MKAR	**Makanchi Array**	**40.32**	**347**	P	**P**	**19 48 08.3**	**-1.3**
SONM	**Songino Array**	**41.27**	**12**	P	**P**	**19 48 18.3**	**+0.9**
	comp=Z,3.5nm,1.1s,mb3.9,baz=199,slow=8.7,SNR=9.1						
SONM				PcP	PcP	19 50 17.3	+2.0
	comp=Z,0.8nm,0.9s,baz=172,slow=3.9,SNR=3.3						
SONM				LR	LR	20 08 57.0	
	comp=Z,134nm,18.3s,MS3.9,baz=176,slow=41						
SONM	**Songino Array**	**41.27**	**12**	P	**P**	**19 48 18.3**	**+0.9**
SONM						19 50 17.3	
ULN	**Ulaanbaatar**	**41.44**	**13**	*e*P	**P**	**19 48 20.4**	**+1.6**
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.9						
ULN	**Ulaanbaatar**	**41.44**	**13**	*e*P	**P**	**19 48 20.4**	**+1.5**
	comp=Z,2.8nm,1.0s,mb3.9						
KURK	**Kurchatov**	**44.84**	**346**	LR	LR	20 10 37.2	
	comp=Z,77nm,20.4s,MS3.6,baz=120,slow=40						
KURK	**Kurchatov**	**44.84**	**346**	*ce*P	**P**	**19 48 45.7**	**-0.6**
KURK				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.7						
KURK	**Kurchatov**	**44.84**	**346**	*e*P	**P**	**19 48 45.1**	**-1.2**
	comp=Z,21nm,1.1s,mb4.9						
CN2	**Changchun**	**45.02**	**32**	*e*P	**P**	**19 48 49.3**	**+1.5**
CN2				*es*P	sP	19 49 14.3	+5.6
CN2				*e*S	**S**	**19 55 22.2**	**-0.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,14.0s,MS4.3						
CN2				LR	LR		
	comp=E,200nm,14.0s,MS4.3						
CN2				LR	LR		
	comp=Z,300nm,16.0s,MS4.3						
NWAO	**Narrogin (SRO)**	**45.87**	**153**	P	**P**	**19 48 53.7**	**-1.0**
	comp=Z,14nm,1.0s,mb4.8,baz=314,slow=11,SNR=3.8						
NWAO	**Narrogin (SRO)**	**45.87**	**153**	P	**P**	**19 48 53.7**	**-1.0**
ZAA0	**Zalesovo Array**	**46.76**	**352**	*e*P	**P**	**19 49 00.7**	**-0.7**
ZALV	**Zalesovo Beam**	**46.76**	**352**	P	**P**	**19 49 01.5**	**+0.1**
	comp=Z,4.3nm,0.6s,mb4.5,baz=181,slow=7.8,SNR=17						
NVS	**Novosibirsk**	**47.85**	**351**	*e*P	**P**	**19 49 10.2**	**+0.4**
NVS				*e*S	**S**	**19 55 57.9**	**-4.9**
NVS				pmax	pmax		
	comp=Z,15nm,1.6s,mb4.8						
NVS				pmax	pmax		
	comp=N,14nm,1.8s						
NVS				pmax	pmax		
	comp=E,8.0nm,1.1s						
NVS				smax			
	comp=E,20nm,2.1s						
WRA	**Warramunga Arr**	**47.93**	**126**	P	**P**	**19 49 10.7**	**-0.3**
	comp=E,1.6nm,1.0s,mb4.0,baz=280,slow=5.8,SNR=23						
WRA				LR	LR	20 10 47.4	
	comp=E,149nm,21.1s,MS3.9,baz=195,slow=38						
WRAB	**Tennant Creek**	**47.93**	**126**	*e*P	**P**	**19 49 10.2**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
WRAB	**Tennant Creek**	**47.93**	**126**	*e*P	**P**	**19 49 10.2**	**-0.8**
	comp=Z,4.4nm,0.8s,mb4.5						
BVAR	**Borovoye Array**	**49.24**	**341**	P	**P**	**19 49 20.1**	**-0.4**
	comp=Z,3.8nm,1.0s,mb4.4,baz=153,slow=4.3,SNR=9.7						
BVAR				PcP	PcP	19 50 44.1	+1.2
	comp=Z,1.2nm,0.8s,baz=145,slow=5.4,SNR=3.5						
BRVK	**Borovoye**	**49.30**	**341**	*e*P	**P**	**19 49 20.8**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
BRVK	**Borovoye**	**49.30**	**341**	*e*P	**P**	**19 49 21.5**	**+0.5**
	comp=Z,5.1nm,1.0s,mb4.5						
ASAR	**Alice Springs**	**49.59**	**130**	P	**P**	**19 49 23.6**	**0.0**
	comp=Z,2.0nm,0.9s,mb4.2,baz=304,slow=6.9,SNR=11						
ASAR				PcP	PcP	19 50 46.0	+1.3
	comp=Z,1.5nm,0.8s,baz=316,slow=4.2,SNR=6.7						
ABKAR	**Akbulak array**	**50.52**	**331**	*e*P	**P**	**19 49 29.1**	**-1.2**
	comp=Z,15nm,0.8s,mb5.0						
ATD	**Arta Tunnel**	**50.95**	**279**	LR	LR	20 07 44.0	
	comp=Z,92nm,21.9s,MS3.8,baz=61,slow=32						
OPO	**Ambohidratompo**	**53.41**	**240**	P	**P**	**19 49 53.5**	**+1.2**
	comp=Z,2.5nm,0.7s,mb4.3,baz=48,slow=4.5,SNR=9.4						
GNI	**Garni**	**54.76**	**314**	*e*P	**P**	**19 50 02.9**	**+1.1**
GNI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SVE	**Sverdlovsk**	**55.66**	**338**	*e*P	**P**	**19 50 09.5**	**+1.5**
SVE				*e*		19 52 18.0	
SVE				*e*SS	SS	20 01 31.8	-4.1
SVE				pmax	pmax		
	comp=Z,25nm,1.5s,mb5.0						
SVE				MLR	MLR		
	comp=Z,236nm,21.0s,MS4.2						
ARU	**Arti**	**56.16**	**337**	*d i*P	**P**	**19 50 11.3**	**-0.3**
ARU				S	**S**	**19 57 53.7**	**-2.9**
ARU				pmax	pmax		
	comp=Z,8.0nm,1.7s,mb4.5						
ARU	**Arti**	**56.16**	**337**	*e*P	**P**	**19 50 11.0**	**-0.6**
	comp=Z,12nm,1.3s,mb4.8						
KIV	**Kislovodsk**	**57.63**	**318**	*e*P	**P**	**19 50 22.2**	**-0.1**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
KIV				MLR	MLR		
	comp=Z,46nm,18.0s,MS3.6						
KIV	**Kislovodsk**	**57.63**	**318**	P	**P**	**19 50 20.6**	**-1.6**
	comp=Z,9.4nm,0.9s,mb4.8						
KMBO	**Kilima Mbogo**	**57.69**	**264**	P	**P**	**19 50 24.0**	**+0.8**
	comp=Z,3.5nm,0.8s,mb4.4,baz=0.9,slow=24,SNR=8.6						
KMBO				LR	LR	20 12 12.5	
	comp=Z,137nm,18.1s,MS4.1,baz=90,slow=33						
SOKR	**Solikamsk**	**59.06**	**339**	*e*P	**P**	**19 50 33.9**	**+2.0**
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
STKA	**Stephens Creek**	**59.78**	**134**	LR	LR	20 17 20.5	
	comp=Z,226nm,21.7s,MS4.3,baz=23,slow=37						
STKA	**Stephens Creek**	**59.78**	**134**	P	**P**	**19 50 30.1**	**-7.3**
STKA				pmax	pmax		
	comp=Z,9.0nm,1.7s						
STKA	**Stephens Creek**	**59.78**	**134**	P	**P**	**19 50 30.1**	**-7.3**
	comp=Z,8.8nm,1.7s,mb4.5						
MMAI	**Mount Meron Ar**	**59.95**	**304**	LR	LR	20 16 41.0	
	comp=Z,60nm,19.1s,MS3.8,baz=90,slow=36						
BRTR	**Keskin Array B**	**62.76**	**311**	P	**P**	**19 50 55.5**	**-1.9**
	comp=Z,2.0nm,0.8s,mb4.3,baz=134,slow=8.8,SNR=5.3						
BRTR				LR	LR	20 21 15.7	
	comp=Z,46nm,20.8s,MS3.6,baz=208,slow=39						
BRTR	**Keskin Array B**	**62.76**	**311**	*ce*P	**P**	**19 50 59.2**	**+1.8**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MOS	**Moscow**	**65.37**	**329**	*e*P	**P**	**19 51 13.4**	**-0.8**
OBN	**Obninsk**	**65.67**	**328**	*e*P	**P**	**19 51 16.8**	**+0.6**
OBN				*e*		19 51 25.6	
OBN				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.7						
OBN				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.1						
AKASG	**Malin Array Be**	**68.46**	**322**	P	**P**	**19 51 33.3**	**-0.7**
	comp=Z,0.3nm,0.4s,mb3.7,baz=78,slow=5.9,SNR=3.4						
AKASG				LR	LR	20 27 21.9	
	comp=Z,56nm,18.2s,MS3.8,baz=225,slow=41						
SEY	**Seymchan**	**68.96**	**25**	*ce*P	**P**	**19 51 41.9**	**+5.1**
LSZ	**Lusaka**	**69.48**	**251**	*e*P	**P**	**19 51 41.1**	**+0.2**
LSZ				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
LSZ	**Lusaka**	**69.48**	**251**	*e*P	**P**	**19 51 41.1**	**+0.2**
	comp=Z,4.4nm,1.1s,mb4.3						
MLR	**Muntele Rosu**	**69.49**	**316**	LR	LR	20 28 43.4	
	comp=Z,67nm,18.7s,MS3.9,baz=315,slow=42						
JOF	**Joensuu**	**71.12**	**334**	*e*P	**P**	**19 51 48.2**	**-1.9**
JOF	**Joensuu**	**71.12**	**334**	*ep*	**P**	**19 51 48.2**	**-1.9**
	comp=Z,4.4nm,0.6s,mb4.6

LBTB	**Lobatse**	**74.41**	**241**	*e*P	**P**	**19 52 10.8**	**+0.5**
	comp=Z,13nm,1.3s,mb4.7						
VYHS	**Vyhne**	**74.72**	**318**	*e*P	**P**	**19 52 16.1**	**+4.4**
VYHS				pmax	pmax		
	comp=Z,26nm,3.1s						
VYHS	**Vyhne**	**74.72**	**318**	*e*P	**P**	**19 52 16.1**	**+4.4**
	comp=Z,26nm,3.1s						
VYHS	**Vyhne**	**74.72**	**318**	*e*P	**P**	**19 52 16.1**	**+4.4**
CASY	**Casey**	**74.73**	**173**	*e*P	**P**	**19 52 09.6**	**-1.6**
	comp=Z,6.8nm,1.0s,mb4.5						
ARCES	**ARCESS Array B**	**75.52**	**340**	P	**P**	**19 52 16.2**	**+0.4**
	comp=Z,3.7nm,0.8s,mb4.3,baz=100,slow=6.7,SNR=5.7						
BOSA	**Boshof**	**75.74**	**238**	P	**P**	**19 52 17.2**	**-0.7**
	comp=Z,7.5nm,0.8s,mb4.7,baz=57,slow=3.4,SNR=16						
BOSA				LR	LR	20 21 56.5	
	comp=Z,67nm,19.0s,MS4.0,baz=340,slow=33						
BOSA	**Boshof**	**75.74**	**238**	*e*P	**P**	**19 52 18.3**	**+0.4**
BOSA				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.9						
BOSA	**Boshof**	**75.74**	**238**	*e*P	**P**	**19 52 18.3**	**+0.4**
	comp=Z,18nm,1.1s,mb4.9						
SOKA	**Soboth**	**77.17**	**316**	⇑*i*P	**P**	**19 52 25.4**	**-0.2**
	comp=Z,4.4nm,1.0s,mb4.3						
MAW	**Mawson**	**78.43**	**192**	P	**P**	**19 52 32.8**	**+0.7**
	comp=Z,5.9nm,0.9s,mb4.5,baz=10.0,slow=5.8,SNR=13						
CLL	**Collm**	**78.67**	**321**	*e*P	**P**	**19 52 39.0**	**+5.1**
HFS	**Hagfors**	**78.75**	**330**	LR	LR	20 32 08.7	
	comp=Z,93nm,18.2s,MS4.2,baz=75,slow=39						
NB2	**NORSAR Subarra**	**80.02**	**331**	P	**P**	**19 52 40.1**	**-0.9**
	comp=Z,3.0nm,0.7s,mb4.3,baz=96,slow=5.1						
NOA	**NORSAR Array B**	**80.02**	**331**	P	**P**	**19 52 40.7**	**-0.3**
	comp=Z,0.8nm,0.6s,mb3.9,baz=92,slow=5.8,SNR=5.7						
NOA				LR	LR	20 33 24.3	
	comp=Z,63nm,18.4s,MS4.0,baz=105,slow=40						
NOA	**NORSAR Array B**	**80.02**	**331**	P	**P**	**19 52 40.7**	**-0.3**
NOA				LR	LR	20 33 24.2	
SPITS	**Spitsbergen Ar**	**80.06**	**348**	LR	LR	20 35 31.8	
	comp=Z,72nm,18.4s,MS4.0,baz=125,slow=41						
FETA	**Feichten**	**80.12**	**316**	⇑*i*P	**P**	**19 52 41.8**	**-0.1**
	comp=Z,3.0nm,1.1s,mb4.1						
SUR	**Sutherland**	**80.47**	**235**	*e*P	**P**	**19 52 44.9**	**+0.8**
	comp=Z,26nm,1.1s,mb5.1						
LPG	**La Plagne**	**82.94**	**315**	*e*P	**P**	**19 52 56.3**	**-0.5**
	comp=Z,12nm,1.0s,mb4.6						
LPG	**La Plagne**	**82.94**	**315**	*e*P	**P**	**19 52 56.3**	**-0.5**
LPG				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
LPG	**La Plagne**	**82.94**	**315**	*e*P	**P**	**19 52 56.3**	**-0.5**
	comp=Z,6.1nm,1.0s,mb4.6						
LPL	**La Plagne**	**82.95**	**315**	*e*P	**P**	**19 52 56.3**	**-0.6**
	comp=Z,7.2nm,0.7s,mb4.5						
LPL	**La Plagne**	**82.95**	**315**	*e*P	**P**	**19 52 56.3**	**-0.6**
LPL				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
LPL	**La Plagne**	**82.95**	**315**	*e*P	**P**	**19 52 56.3**	**-0.6**
	comp=Z,3.6nm,0.7s,mb4.5						
ORIF	**Oris-en-Rattie**	**83.60**	**314**	*e*P	**P**	**19 53 00.9**	**+0.7**
JMIC	**Jan Mayen**	**86.96**	**341**	LR	LR	20 34 45.1	
	comp=Z,105nm,18.6s,MS4.3,baz=74,slow=37						
ESDC	**Sonseca Array**	**91.55**	**310**	P	**P**	**19 53 38.5**	**-0.3**
	comp=Z,0.5nm,0.5s,mb4.1,baz=28,slow=5.8,SNR=3.7						
ESDC	**Sonseca Array**	**91.55**	**310**	P	**P**	**19 53 38.5**	**-0.3**
MDT	**Midelt**	**93.40**	**304**	LR	LR	20 36 11.7	
	comp=Z,73nm,21.1s,MS4.1,baz=338,slow=36						
PDAR	**Pinedale Array**	**125.22**	**21**	PKP	PKPdf	19 59 32.9	+0.4
	comp=Z,0.8nm,1.0s,baz=96,slow=3.0,SNR=5.0						
TXAR	**Lajitas Array**	**139.26**	**25**	PKP	PKPdf	19 59 59.2	-0.1
	comp=Z,0.2nm,0.7s,baz=289,slow=8.4,SNR=3.3						
TXAR	**Lajitas Array**	**139.26**	**25**	PKP	PKPdf	19 59 59.2	-0.1
PLCA	**Paso Flores**	**144.49**	**200**	PKP	PKPdf	20 00 07.5	-0.7
	comp=Z,5.0nm,0.9s,baz=125,slow=2.2,SNR=8.7						
CPUP	**Villa Florida**	**147.38**	**232**	PKPbc	PKPbc	20 00 16.1	0.0
	comp=Z,3.0nm,0.6s,baz=135,slow=1.1,SNR=13						

*ISCJB **01** 19:41:09.5±0.4, 39°.31N±0°.03×29°.15E±0°.03, h10km, Error ellipse: s-maj=3.8km s-min=3.4km az=1.6*
*CSEM **01** 19:41:09.2±0.1, 39°.33N×29°.15E, h2km, MD3.1, Error ellipse: s-maj=2.5km s-min=2.3km az=7.0*
*DDA **01** 19:41:09.4, 39°.37N×29°.23E, h4km±1km, Md3.1*
*ISK **01** 19:41:09.0, 39°.29N×29°.12E, h8km, MD2.9*
ISC 01 19:41:09.3±0.5, 39°.34N±0°.03×29°.17E±0°.03, h1km±8km, n36, σ0°.83/50, 2C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	**Gediz**	**0.35**	**136**	*i* P	**Pg**	**19 41 16.0**	**+0.1**
GDZ				*i* S	**Sg**	**19 41 21.0**	**+0.7**
GDZ	**Gediz**	**0.35**	**136**	*i* P	**Pg**	**19 41 16.0**	**+0.1**
GDZ				*i* S	**Sg**	**19 41 21.0**	**+0.6**
DEMI	**Demirci**	**0.46**	**230**	⇑*i*P	**Pg**	**19 41 18.0**	**-0.1**
DEMI				*i* S	**Sg**	**19 41 25.5**	**+1.3**
DEMI	**Demirci**	**0.46**	**230**	*i* P	**Pg**	**19 41 18.0**	**-0.1**
DEMI				*i* S	**Sg**	**19 41 25.5**	**+1.4**
DURS	**Dursunbey**	**0.60**	**296**	*i* P	**Pg**	**19 41 20.1**	**-0.7**
DURS				*i* S	**Sg**	**19 41 28.4**	**-0.2**
DURS	**Dursunbey**	**0.60**	**296**	*i* P	**Pg**	**19 41 20.1**	**-0.7**
DURS				*i* S	**Sg**	**19 41 28.4**	**-0.2**
ALT	**Altintas**	**0.78**	**111**	*e*PG	**Pg**	**19 41 24.6**	**+0.4**
ALT	**Altintas**	**0.78**	**111**	*e*Pg	**Pg**	**19 41 24.6**	**+0.3**
KULA	**Kula-Manisa**	**0.92**	**206**	*e*PG	**Pg**	**19 41 25.6**	**-1.2**
KULA				*e*SG	**Sg**	**19 41 38.0**	**-0.7**
KULA	**Kula-Manisa**	**0.92**	**206**	*e*Pg	**Pg**	**19 41 25.6**	**-1.2**
KULA				*e*Sg	**Sg**	**19 41 38.0**	**-0.7**
KHAL	**Karahalli**	**1.00**	**165**	*i* P	**Pg**	**19 41 28.9**	**+0.5**
KHAL				*i* S	**Sg**	**19 41 41.2**	**-0.1**
KHAL	**Karahalli**	**1.00**	**165**	*i* P	**Pg**	**19 41 28.9**	**+0.5**
KHAL				*i* S	**Sg**	**19 41 41.2**	**-0.2**
BALB	**Balikesir**	**1.04**	**287**	*e*PG	**Pg**	**19 41 29.2**	**-0.2**
BALB	**Balikesir**	**1.04**	**287**	*e*Pg	**Pg**	**19 41 29.2**	**-0.1**
KHL	**Karahalli**	**1.05**	**165**	*e*PG	**Pg**	**19 41 29.1**	**-0.4**
KHL	**Karahalli**	**1.05**	**165**	*e*Pg	**Pg**	**19 41 29.1**	**-0.3**
GEMT	**Gemlik**	**1.09**	**1**	*e*PN	**Pn**	**19 41 31.4**	**-0.5**
GEMT	**Gemlik**	**1.09**	**1**	*e*Pn	**Pn**	**19 41 31.4**	**-0.4**
BORA	**Eskisehir**	**1.13**	**61**	*i* P	**Pg**	**19 41 28.5**	**-2.4**
BORA				*i* S	**Sg**	**19 41 46.5**	**+1.0**
AKHS	**Akhisar**	**1.15**	**247**	⇑*i*P	**Pg**	**19 41 30.9**	**-0.5**
AKHS				*i* S	**Sg**	**19 41 47.2**	**+0.9**
AKHS	**Akhisar**	**1.15**	**247**	*i* P	**Pg**	**19 41 30.9**	**-0.5**
AKHS				*i* S	**Sg**	**19 41 47.2**	**+0.9**
ADVT	**Abdulvahap**	**1.18**	**22**	*e*PN	**Pn**	**19 41 33.1**	**+0.2**
ADVT	**Abdulvahap**	**1.18**	**22**	*e*Pn	**Pn**	**19 41 33.1**	**+0.2**
ARMT	**Armutlu**	**1.25**	**349**	*e*PN	**Pn**	**19 41 33.8**	**-0.2**
ARMT	**Armutlu**	**1.25**	**349**	*e*Pn	**Pn**	**19 41 33.8**	**-0.1**
BALY	**Balya**	**1.27**	**289**	*i* P	**Pg**	**19 41 32.7**	**-0.8**
BALY				*i* S	**Sg**	**19 41 52.3**	**+2.3**
BALY	**Balya**	**1.27**	**289**	*i* P	**Pg**	**19 41 32.7**	**-0.9**
ESKT	**Eskisehir**	**1.31**	**82**	*e*PN	**Pn**	**19 41 35.1**	**+0.3**
ESKT	**Eskisehir**	**1.31**	**82**	*e*Pn	**Pn**	**19 41 35.1**	**+0.3**
SHUT	**Suhut-Afyon**	**1.33**	**126**	*e*PN	**Pn**	**19 41 34.5**	**-0.5**
SHUT	**Suhut-Afyon**	**1.33**	**126**	*e*Pn	**Pn**	**19 41 34.5**	**-0.5**
GONE	**Gonen-Balikesi**	**1.35**	**302**	*e*PN	**Pn**	**19 41 34.6**	**-0.7**
GULT	**Gulveren**	**1.50**	**43**	*e*PN	**Pn**	**19 41 38.0**	**+0.6**
GULT	**Gulveren**	**1.50**	**43**	*e*Pn	**Pn**	**19 41 38.0**	**+0.6**
MDU	**Mudurnu**	**1.93**	**54**	*e*PN	**Pn**	**19 41 44.0**	**+0.7**
MDU	**Mudurnu**	**1.93**	**54**	*e*Pn	**Pn**	**19 41 44.0**	**+0.7**

*IDC **01** 19:52:29.0±0.6, 7°.69N×94°.46E, h0km, mb3.9/13, mb1 3.9/15, mb1mx3.7/26, mbtmp3.8/15, ML3.2/1, MS3.2/1, Ms1 3.2/1, ms1mx2.6/40, Error ellipse: s-maj=22.1km s-min=14.7km az=74.0*
*ISCJB **01** 19:52:33.9±2.1, 7°.69N±0°.06×94°.53E±0°.10, h48km±20km, mb4.1/19, Error ellipse: s-maj=17.4km s-min=8.3km az=153.5*
*NEIC **01** 19:52:33.6±0.5, 7°.65N×94°.46E, h35km, mb4.3/5, Error ellipse: s-maj=14.0km s-min=11.0km az=49.0*
ISC 01 19:52:37.4±1.5, 7°.69N±0°.07×94°.57E±0°.10, h63km±15km, n41, σ1°.37/41, mb4.1/19, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	**Kulim**	**6.50**	**111**	*e*Pn	**Pn**	**19 54 03.7**	**-6.8**
	9.7nm,0.7s						
KULM				*e*Sn	**Sn**	**19 55 23.5**	**+0.3**
PSI	**Prapat**	**6.51**	**138**	Pn	**Pn**	**19 54 09.8**	**-0.8**
	0.5nm,0.3s,baz=315,slow=7.1,SNR=1.7						
PSI				LR	LR	19 56 18.1	
	comp=Z,179nm,18.6s,baz=38,slow=34						
PSI	**Prapat**	**6.51**	**138**	Pn	**Pn**	**19 54 09.8**	**-0.8**
PSI				LR	LR	19 56 18.1	
CMAR	**Chiang Mai Arr**	**11.52**	**21**	Pn	**Pn**	**19 55 17.1**	**-2.1**
	baz=202,slow=9.3,SNR=2.4						
CHTO	**Chiang Mai**	**11.85**	**21**	Pn	**Pn**	**19 55 24.2**	**+0.6**
	1.9nm,0.8s						
PALK	**Pallekele**	**13.75**	**269**	*e*Pn	**Pn**	**19 55 42.1**	**-7.4**
	10nm,0.6s						
ODAN	**Odare**	**20.25**	**341**	*e*P	**P**	**19 57 06.8**	**-0.9**
	11nm,0.6s						
TAPN	**Taplejung**	**20.61**	**342**	*e*P	**P**	**19 57 11.1**	**-0.4**
	35nm,0.8s						
PKI	**Pulchoki**	**21.59**	**337**	*e*P	**P**	**19 57 24.6**	**+2.5**
PKIN	**Phulchoki**	**21.61**	**337**	*e*P	**P**	**19 57 24.6**	**+2.4**
	14nm,0.8s,mb4.4						
GUN	**Gumba**	**21.73**	**339**	*e*P	**P**	**19 57 26.3**	**+2.7**
DMN	**Daman**	**21.75**	**337**	*e*P	**P**	**19 57 26.2**	**+2.4**
	22nm,0.8s,mb4.6						
KKN	**Kakani**	**21.84**	**337**	*e*P	**P**	**19 57 27.1**	**+2.3**
LSA	**Lhasa**	**22.13**	**352**	P	**P**	**19 57 28.5**	**+0.7**
EKS2	**Erkin-Say**	**39.35**	**336**	P	**P**	**19 59 59.2**	**-1.5**
	2.0nm,0.9s,mb3.9						
MK31	**Makanchi Array**	**40.36**	**347**	*e*P	**P**	**20 00 08.2**	**-0.8**
MKAR	**Makanchi Array**	**40.36**	**347**	P	**P**	**20 00 07.5**	**-1.5**
	2.9nm,0.7s,mb4.1,baz=165,slow=9.7,SNR=9.3						
MKAR	**Makanchi Array**	**40.36**	**347**	P	**P**	**20 00 07.5**	**-1.5**
SONM	**Songino Array**	**41.25**	**12**	P	**P**	**20 00 16.6**	**+0.3**
	0.1nm,0.4s,baz=158,slow=4.7,SNR=3.0						
KURK	**Kurchatov**	**44.89**	**346**	P	**P**	**20 00 43.9**	**-1.8**
	0.7nm,0.6s,mb3.7,baz=169,slow=7.0,SNR=5.2						
ZAA0	**Zalesovo Array**	**46.80**	**352**	*e*P	**P**	**20 00 58.5**	**-2.0**
ZALV	**Zalesovo Beam**	**46.80**	**352**	P	**P**	**20 01 00.2**	**-0.3**
	0.6nm,0.4s,mb3.9,baz=165,slow=8.4,SNR=5.1						
ZALV	**Zalesovo Beam**	**46.80**	**352**	P	**P**	**20 01 00.2**	**-0.4**
WRA	**Warramunga Arr**	**47.81**	**126**	P	**P**	**20 01 09.0**	**0.0**
	0.3nm,0.4s,mb3.6,baz=305,slow=8.5,SNR=13						
WRA	**Warramunga Arr**	**47.81**	**126**	P	**P**	**20 01 09.0**	**0.0**
WRAB	**Tennant Creek**	**47.81**	**126**	P	**P**	**20 01 09.8**	**+0.7**
	2.2nm,0.8s,mb4.2						
BVAR	**Borovoye Array**	**49.30**	**341**	P	**P**	**20 01 20.2**	**+0.2**
	1.5nm,0.8s,mb4.1,baz=141,slow=7.3,SNR=9.7						
ASAR	**Alice Springs**	**49.47**	**130**	P	**P**	**20 01 21.5**	**-0.2**
	0.4nm,0.6s,mb3.6,baz=304,slow=7.2,SNR=11						
ASAR				PcP	PcP	20 02 43.7	+0.6
	0.8nm,0.8s,baz=312,slow=3.9,SNR=5.2						
OPO	**Ambohidratompo**	**53.52**	**240**	P	**P**	**20 01 52.3**	**+0.3**
	2.4nm,0.9s,mb4.1,baz=348,slow=14,SNR=5.3						
ARU	**Arti**	**56.23**	**337**	*e*P	**P**	**20 02 13.2**	**+2.3**
	5.8nm,1.3s,mb4.5						
KMBO	**Kilima Mbogo**	**57.82**	**264**	P	**P**	**20 02 23.0**	**0.0**
	0.5nm,0.2s,mb4.1,baz=180,slow=24,SNR=3.6						
KMBO	**Kilima Mbogo**	**57.82**	**264**	P	**P**	**20 02 23.0**	**0.0**
STKA	**Stephens Creek**	**59.67**	**134**	P	**P**	**20 02 37.8**	**+2.2**
	2.7nm,1.3s,mb4.1						
LSZ	**Lusaka**	**69.60**	**251**	*e*P	**P**	**20 03 37.0**	**-3.6**
FINES	**FINESS Array B**	**73.07**	**332**	P	**P**	**20 03 59.1**	**-1.6**
	2.6nm,0.9s,mb4.2,baz=96,slow=5.9,SNR=5.5						
LBTB	**Lobatse**	**74.52**	**241**	*e*P	**P**	**20 04 09.2**	**-0.6**
	6.9nm,1.1s,mb4.5						
BOSA	**Boshof**	**75.84**	**238**	P	**P**	**20 04 16.2**	**-1.2**
	2.3nm,0.6s,mb4.3,baz=127,slow=12,SNR=7.2						
MAW	**Mawson**	**78.44**	**192**	P	**P**	**20 04 32.1**	**+1.1**
	1.7nm,0.6s,mb4.2,baz=33,slow=4.7,SNR=6.7						
NB2	**NORSAR Subarra**	**80.10**	**331**	P	**P**	**20 04 39.0**	**-1.3**
	comp=Z,2.0nm,0.9s,mb4.0,baz=96,slow=5.1						
NOA	**NORSAR Array B**	**80.10**	**331**	P	**P**	**20 04 41.5**	**+1.2**
	comp=Z,1.3nm,0.9s,mb3.9,baz=95,slow=5.2,SNR=3.5						
CPUP	**Villa Florida**	**147.48**	**232**	PKPbc	PKPbc	20 12 14.4	-0.8
	comp=Z,0.6nm,0.4s,baz=143,slow=4.1,SNR=4.2						

*IDC **01** 19:57:52.5±0.6, 31°.34N×103°.93E, h0km, mb4.2/17, mb1 4.3/19, mb1mx4.2/26, mbtmp4.2/19, ML3.5/2, MS3.7/5, Ms1 3.7/5, ms1mx3.2/42, Error ellipse: s-maj=26.5km s-min=11.9km az=54.0*
*BJI **01** 19:57:53.9, 31°.29N×104°.06E, h14km, mB4.6/14, mb4.5/23, ML4.4/23, Ms4.3/30, Ms7 4.1/22*
*ISCJB **01** 19:57:54.6±0.7, 31°.28N±0°.03×103°.92E±0°.04, h29km±5km, mb4.4/45, MS3.6/6, Error ellipse: s-maj=5.3km s-min=4.2km az=166.5*
*MOS **01** 19:57:55.2±1.0, 31°.34N×103°.99E, h32km, mb4.7/24, Error ellipse: s-maj=11.0km s-min=6.2km az=106.7*
*NEIC **01** 19:57:56.2±2.1, 31°.39N×103°.97E, h25km±15km, mb4.5/24, Error ellipse: s-maj=7.7km s-min=5.2km az=70.0*
ISC 01 19:57:54.6±0.8, 31°.33N±0°.02×103°.97E±0°.03, h13km±5km, n130, σ1°.22/144, mb4.4/45, MS3.6/6, 12C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.46**	**203**	Pg	**Pg**	**19 58 03.3**	**-0.3**
CD2				Sg	**Sg**	**19 58 10.3**	**+0.6**
CD2				smax			
	comp=N,17μm,0.7s						
CD2				smax			
	comp=E,47μm,0.4s						
LZH	**Lanzhou**	**4.74**	**359**	*e*Pn	**Pn**	**19 59 06.7**	**+1.0**
LZH				Pg	**Pb**	**19 59 18.6**	**+1.1**
LZH				Sn	**Sn**	**20 00 02.5**	**+2.0**
LZH				Sg	**Sg**	**20 00 19.5**	**-7.4**
LZH				smax			
	comp=N,250nm,1.1s						
LZH				smax			
	comp=E,1μm,1.0s						
LZH				LR	LR		
	comp=N,2μm,5.6s						
LZH				LR	LR		
	comp=Z,3μm,6.7s						
XAN	**Xi'an**	**4.97**	**56**	Pn	**Pn**	**19 59 08.8**	**-0.1**
XAN				Sn	**Sb**	**20 00 16.0**	**-5.2**
XAN				Sg	**Sg**	**20 00 31.6**	**-2.7**
XAN				smax			
	comp=N,470nm,1.2s						
XAN				smax			
	comp=E,280nm,1.0s						
XAN				LR	LR		
	comp=N,2μm,6.8s						
XAN				LR	LR		
	comp=E,280nm,6.4s						
GYA	**Guiyang**	**5.40**	**153**	Pn	**Pn**	**19 59 15.3**	**+0.5**
GYA				Sn	**Sn**	**20 00 16.8**	**0.0**
GYA				Sg	**Sg**	**20 00 48.8**	**+0.8**
GYA				smax			
	comp=N,640nm,0.9s						
GYA				smax			
	comp=E,460nm,0.8s						
KMI	**Kunming**	**6.28**	**190**	Pn	**Pn**	**19 59 28.4**	**+1.5**
KMI				Sn	**Sn**	**20 00 35.8**	**-2.7**
KMI				Sg	**Sg**	**20 01 11.4**	**-4.8**
KMI				smax			
	comp=N,150nm,1.6s						
KMI				smax			
	comp=E,120nm,1.7s						
KMI				LR	LR		
	comp=N,1μm,7.6s						
KMI				LR	LR		
	comp=E,1μm,8.2s						
GTA	**Gaotai**	**8.74**	**338**	*e*P	**Pn**	**20 00 05.8**	**+5.2**
GTA				pP		20 00 10.6	
GTA				sP		20 00 13.7	
GTA				S	**Sn**	**20 01 48.8**	**+10**
GTA				sS		20 01 54.5	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,120nm,3.9s						
GTA				LR	LR		
	comp=N,1μm,12.2s						
GTA				LR	LR		
	comp=E,590nm,10.4s						
GTA				LR	LR		
	comp=Z,1μm,14.0s						
WHN	**Wuhan**	**8.96**	**92**	P	**Pn**	**20 00 05.8**	**+2.2**
WHN				S	**Sn**	**20 01 41.2**	**-3.1**
WHN				LR	LR		
	comp=N,2μm,6.5s						
WHN				LR	LR		
	comp=E,4μm,7.1s						
WHN				LR	LR		
	comp=Z,4μm,8.8s						
BTO	**Baotou**	**10.47**	**26**	*e*P	**Pn**	**20 00 31.9**	**+7.6**
BTO				LR	LR		
	comp=N,240nm,8.8s						
BTO				LR	LR		
	comp=E,230nm,10.4s						
LSA	**Lhasa**	**11.17**	**265**	P	**Pn**	**20 00 35.7**	**+1.8**
LSA				LR	LR		
	comp=E,850nm,9.9s						
LSA				LR	LR		
	comp=Z,1μm,9.9s						
HHC	**Hu-ho-hao-te**	**11.31**	**31**	*e*P	**Pn**	**20 00 34.1**	**-1.6**
HHC				PP		20 00 43.1	
HHC				S	**Sn**	**20 02 38.3**	**-3.6**
HHC				PcS	PcS	20 10 01.6	-2.2
HHC				pmax	pmax		
	comp=Z,13nm,0.5s						
HHC				pmax	pmax		
	comp=Z,97nm,5.1s						
HHC				LR	LR		
	comp=N,550nm,8.1s						
HHC				LR	LR		
	comp=E,510nm,8.2s						
HHC				LR	LR		
	comp=Z,350nm,8.1s						
SHL	**Shillong**	**12.08**	**245**	*e*PKP	**Pn**	**20 00 46.0**	**-0.4**
NJ2	**Nanjing**	**12.70**	**83**	*e*P	**Pn**	**20 01 00.0**	**+5.1**
NJ2				pP		20 01 03.5	
NJ2				sP		20 01 06.5	
NJ2				PP		20 01 09.8	
NJ2				S	**Sn**	**20 03 12.8**	**-3.4**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,20nm,3.9s						
NJ2				LR	LR		
	comp=N,500nm,7.2s						
NJ2				LR	LR		
	comp=E,1μm,11.2s						
NJ2				LR	LR		
	comp=Z,1μm,13.0s						
CHTO	**Chiang Mai**	**13.27**	**201**	*e*P	**Pn**	**20 01 03.8**	**+1.2**
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CHTO	**Chiang Mai**	**13.27**	**201**	*e*Pn	**Pn**	**20 01 03.8**	**+1.1**
	comp=Z,9.3nm,0.9s						
QIZ	**Qiongzhong**	**13.35**	**155**	P	**Pn**	**20 01 04.1**	**+0.3**
QIZ				S	**Sn**	**20 03 31.6**	**-0.5**
QIZ				pmax	pmax		
	comp=Z,32nm,1.8s						
QIZ				LR	LR		
	comp=N,600nm,11.6s						
QIZ				LR	LR		
	comp=Z,770nm,12.9s						
CM31	**Chiang Mai Arr**	**13.60**	**201**	*e*Pn	**Pn**	**20 01 08.8**	**+1.6**
	comp=Z,9.2nm,0.8s						
CMAR	**Chiang Mai Arr**	**13.60**	**201**	Pn	**Pn**	**20 01 07.7**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=8.8,slow=11,SNR=17						
TAPN	**Taplejung**	**14.72**	**258**	*e*P	**Pn**	**20 01 20.2**	**-2.3**
SSE	**Sheshan**	**14.74**	**86**	P	**Pn**	**20 01 21.1**	**-1.6**
SSE				pmax	pmax		
	comp=Z,30nm,0.7s						
SSE				pmax	pmax		
	comp=Z,110nm,7.6s						
SSE				LR	LR		
	comp=N,220nm,12.0s						
SSE				LR	LR		
	comp=E,540nm,12.0s						
SSE				LR	LR		
	comp=Z,630nm,11.7s						
ODAN	**Odare**	**15.16**	**257**	*e*P	**Pn**	**20 01 24.9**	**-3.4**
	comp=Z,18nm,0.5s						
JIRN	**Jiri**	**15.90**	**261**	*e*P	**Pn**	**20 01 36.3**	**-1.8**
GUN	**Gumba**	**16.09**	**262**	*e*P	**Pn**	**20 01 38.5**	**-2.0**
	comp=Z,24nm,0.3s						
SONM	**Songino Array**	**16.59**	**6**	Pn	**Pn**	**20 01 46.6**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=187,slow=12,SNR=12						
PKI	**Pulchoki**	**16.59**	**262**	*e*P	**Pn**	**20 01 44.5**	**-2.4**
	comp=Z,37nm,0.5s						
PKIN	**Phulchoki**	**16.60**	**262**	*e*P	**Pn**	**20 01 44.8**	**-2.2**
	comp=Z,27nm,0.4s						
KKN	**Kakani**	**16.64**	**262**	*e*P	**Pn**	**20 01 45.0**	**-2.5**
	comp=Z,56nm,0.7s						
ULN	**Ulaanbaatar**	**16.68**	**7**	*e*P	**Pn**	**20 01 45.3**	**-2.6**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ULN	**Ulaanbaatar**	**16.68**	**7**	*e*Pn	**Pn**	**20 01 45.2**	**-2.6**
	comp=Z,3.3nm,0.7s						
YHNB	**Yeheng**	**16.74**	**109**	*e*Pn	**Pn**	**20 01 51.0**	**+2.2**
	comp=Z,18nm,0.8s						
SSLB	**Suanglung**	**16.82**	**112**	*e*Pn	**Pn**	**20 01 50.7**	**+0.9**
	comp=Z,33nm,0.9s						
DMN	**Daman**	**16.84**	**262**	*e*P	**Pn**	**20 01 47.3**	**-2.7**
	comp=Z,50nm,0.8s						
TLY	**Talaya**	**20.33**	**359**	P	**P**	**20 02 30.4**	**+0.1**
MOY	**Mondy**	**20.44**	**355**	*e*P	**P**	**20 02 33.9**	**+2.5**
KSRS	**Korea Array**	**20.67**	**66**	P	**P**	**20 02 34.4**	**+0.3**
	comp=Z,8.8nm,0.7s,baz=248,slow=10,SNR=15						
KSRS	**Korea Array**	**20.67**	**66**	P	**P**	**20 02 34.4**	**+0.4**
KSRS				pmax	pmax		
	comp=Z,9.0nm,0.7s						
IRK	**Irkutsk**	**20.90**	**1**	*e*P	**P**	**20 02 38.3**	**+1.9**
IRK				pmax	pmax		
	comp=Z,40nm,1.3s						
CN2	**Changchun**	**21.02**	**48**	*e*P	**P**	**20 02 38.9**	**+1.1**
CN2				pmax	pmax		
	comp=Z,20nm,0.7s,mb4.6						
KZLR	**Kyzyl**	**21.53**	**344**	*i* P	**P**	**20 02 44.0**	**+0.8**
DDI	**Dehra Dun**	**22.26**	**274**	*ex* P	**P**	**20 02 55.4**	**+4.2**
MK31	**Makanchi Array**	**22.73**	**319**	*e*P	**P**	**20 02 56.4**	**+0.3**
MKAR	**Makanchi Array**	**22.73**	**319**	P	**P**	**20 02 56.3**	**+0.2**
	comp=Z,4.6nm,0.5s,mb4.2,baz=124,slow=10,SNR=56						
MKAR				ScP	ScP	20 10 25.2	0.0
	comp=Z,0.5nm,0.8s,baz=90,slow=2.5,SNR=4.8						
MKAR				LR	LR

SVE pmax pmax
comp=Z,12nm,1.3s,mb4.5
ARU Arti 40.18 322 *c iP* **P 20 05 30.6 +0.4**
ARU S **S 20 11 38.0 +1.6**
ARU SS SS 20 14 31.7 -2.4
ARU pmax pmax
comp=Z,13nm,1.5s,mb4.4
ARU Arti 40.18 322 *eP* **P 20 05 30.4 +0.2**
comp=Z,3.4nm,0.4s,mb4.4
GNI Garni 48.09 298 *eP* **P 20 06 35.6 +1.7**
GNI pmax pmax
comp=Z,7.0nm,1.2s
KIV Kislovodsk 49.09 303 *eP* **P 20 06 41.6 +0.1**
KIV pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
KIV MLR MLR
comp=Z,64nm,16.0s,MS3.7
KIV Kislovodsk 49.09 303 *eP* **P 20 06 41.8 +0.3**
comp=Z,9.3nm,1.3s,mb4.7
BILL Bilibino 51.02 25 *eP* **P 20 06 54.4 -1.4**
BILL Bilibino 51.02 25 *eP* **P 20 06 54.4 -1.4**
FITZ Fitzroy Crossi 53.38 154 P **P 20 07 13.5 -0.4**
comp=Z,1.2nm,0.5s,mb4.1,baz=293,slow=7.1,SNR=9.3
JOF Joensuu 54.77 328 *eP* **P 20 07 22.8 -0.7**
JOF Joensuu 54.77 328 *ep* **P 20 07 22.8 -0.7**
comp=Z,5.0nm,0.5s,mb4.8
KEV Kevo 56.48 336 *eP* **P 20 07 34.7 -1.0**
KEV pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
KEV Kevo 56.48 336 *eP* **P 20 07 34.7 -1.0**
comp=Z,10nm,0.7s,mb5.0
KEV Kevo 56.48 336 *ep* **P 20 07 34.7 -1.0**
comp=Z,10nm,0.7s,mb5.0
BRTR Keskin Array B 56.53 299 P **P 20 07 36.5 0.0**
comp=Z,0.9nm,0.7s,mb3.9,baz=92,slow=6.2,SNR=6.6
ARCES ARCESS Array B 57.00 336 P **P 20 07 39.4 0.0**
comp=Z,2.9nm,0.5s,mb4.5,baz=92,slow=7.6,SNR=24
ARCES PcP PcP 20 08 33.6 -0.8
comp=Z,0.9nm,0.5s,baz=92,slow=3.6,SNR=6.2
MMAI Mount Meron Ar 57.09 291 P **P 20 07 40.5 -0.2**
comp=Z,0.7nm,0.4s,mb4.0,baz=41,slow=9.0,SNR=4.2
AKASG Malin Array Be 57.14 313 P **P 20 07 39.6 -1.1**
comp=Z,0.4nm,0.3s,mb3.9,baz=68,slow=7.0,SNR=5.4
FINES FINESS Array B 57.31 326 P **P 20 07 41.5 -0.2**
comp=Z,3.5nm,0.5s,mb4.6,baz=96,slow=7.2,SNR=28
WRAB Tennant Creek 58.73 146 *eP* **P 20 07 51.9 -0.2**
WRAB pmax pmax
comp=Z,22nm,0.7s,mb5.3
WRAB Tennant Creek 58.73 146 *eP* **P 20 07 51.9 -0.2**
comp=Z,22nm,0.7s,mb5.3
WRA Warramunga Arr 58.73 146 P **P 20 07 52.5 +0.4**
comp=Z,16nm,0.4s,mb5.4,baz=339,slow=7.9,SNR=563
ASAR Alice Springs 61.75 149 P **P 20 08 13.0 +0.2**
comp=Z,1.5nm,0.4s,mb4.5,baz=347,slow=6.5,SNR=28
CRVS Cervenica-Dubn 62.45 312 *eP* **P 20 08 20.2 +2.9**
CRVS Cervenica-Dubn 62.45 312 *eP* **P 20 08 20.2 +2.9**
VYHS Vyhne 64.23 313 *eP* **P 20 08 33.3 +4.2**
VYHS pmax pmax
comp=Z,7.0nm,1.7s,mb4.4
VYHS Vyhne 64.23 313 *eP* **P 20 08 33.3 +4.2**
comp=Z,6.7nm,1.7s,mb4.4
VYHS Vyhne 64.23 313 *eP* **P 20 08 33.3 +4.2**
NB2 NORSAR Subarra 64.40 327 P **P 20 08 29.0 -1.0**
comp=Z,1.7nm,0.5s,mb4.3,baz=73,slow=6.9
NOA NORSAR Array B 64.40 327 P **P 20 08 29.2 -0.8**
comp=Z,1.6nm,0.4s,mb4.4,baz=75,slow=5.4,SNR=16
NOA NORSAR Array B 64.40 327 P **P 20 08 29.2 -0.8**
VRAC Vranov 65.36 314 LR LR 20 38 41.6
comp=Z,90nm,18.8s,MS4.0,baz=85,slow=38
BRG Berggiesshubel 66.42 316 *eP* **P 20 08 42.9 -0.3**
comp=Z,1.8nm,0.7s,mb4.2
BRG Berggiesshubel 66.42 316 *eP* **P 20 08 42.9 -0.3**
BRG pmax pmax
comp=Z,1.0nm,0.7s,mb4.0
CLL Collm 66.81 317 *i* P **P 20 08 48.6 +2.9**
CLL Collm 66.81 317 *i* (P) **P 20 08 48.6 +2.9**
HNR Honiara 67.16 117 P **P 20 08 53.0 +4.5**
HNR pmax pmax
comp=Z,45nm,0.8s,mb5.5
HNR Honiara 67.16 117 P **P 20 08 53.0 +4.5**
comp=Z,45nm,0.8s,mb5.5
COLA College 69.28 26 P **P 20 08 59.9 -1.1**
COLA pmax pmax
comp=Z,13nm,1.1s,mb4.8
COLA College 69.28 26 P **P 20 08 59.9 -1.1**
comp=Z,13nm,1.1s,mb4.8
PMR Palmer 70.40 29 P **P 20 09 07.7 -0.2**
PMR pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
PMR Palmer 70.40 29 P **P 20 09 07.7 -0.3**
comp=Z,6.3nm,0.9s,mb4.5
CDF Champ du Feu 71.37 316 *i* P **P 20 09 13.7 -0.4**
comp=Z,2.7nm,0.5s,mb4.2
CDF Champ du Feu 71.37 316 *i* P **P 20 09 13.7 -0.4**
CDF pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
CDF Champ du Feu 71.37 316 *i* P **P 20 09 13.7 -0.4**
comp=Z,1.4nm,0.5s,mb4.2
STKA Stephens Creek 72.26 147 P **P 20 09 21.4 +1.9**
comp=Z,3.9nm,0.9s,mb4.3,baz=328,slow=12,SNR=4.0
LPG La Plagne 73.01 313 *i* P **P 20 09 24.4 +0.5**
comp=Z,14nm,0.7s,mb4.7
LPG La Plagne 73.01 313 *i* P **P 20 09 24.4 +0.5**
LPG pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
LPG La Plagne 73.01 313 *i* P **P 20 09 24.4 +0.5**
comp=Z,6.8nm,0.7s,mb4.7
LPL La Plagne 73.01 313 *i* P **P 20 09 24.4 +0.5**
comp=Z,13nm,0.6s,mb4.7
LPL La Plagne 73.01 313 *i* P **P 20 09 24.4 +0.5**
LPL pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
LPL La Plagne 73.01 313 *i* P **P 20 09 24.4 +0.5**
comp=Z,6.4nm,0.6s,mb4.7
SMF Signal de Mont 74.25 315 *eP* **P 20 09 30.2 -1.0**
comp=Z,3.8nm,0.6s,mb4.2
SMF Signal de Mont 74.25 315 *eP* **P 20 09 30.2 -1.0**
SMF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
SMF Signal de Mont 74.25 315 *eP* **P 20 09 30.2 -1.0**
comp=Z,1.9nm,0.6s,mb4.2
AVF Avril sur Loir 74.47 315 *eP* **P 20 09 31.9 -0.6**
comp=Z,9.3nm,0.9s,mb4.4
AVF Avril sur Loir 74.47 315 *eP* **P 20 09 31.9 -0.6**
AVF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
AVF Avril sur Loir 74.47 315 *eP* **P 20 09 31.9 -0.6**
comp=Z,4.7nm,0.9s,mb4.4
TCF Toulx Ste Croi 75.41 315 *eP* **P 20 09 37.8 -0.1**
comp=Z,19nm,1.1s,mb4.6
TCF Toulx Ste Croi 75.41 315 *eP* **P 20 09 37.8 -0.1**
TCF pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
TCF Toulx Ste Croi 75.41 315 *eP* **P 20 09 37.8 -0.1**
comp=Z,9.6nm,1.1s,mb4.6
YKA Yellowknife Ar 81.51 17 P **P 20 10 11.3 +0.1**
comp=Z,1.0nm,0.7s,mb3.9,baz=331,slow=5.6,SNR=5.1
YKA Yellowknife Ar 81.51 17 P **P 20 10 11.3 0.0**
YKA pmax pmax
comp=Z,1.0nm,0.7s
ESDC Sonseca Array 82.78 312 P **P 20 10 18.2 -0.1**
comp=Z,0.1nm,0.3s,mb3.4,baz=40,slow=4.8,SNR=3.3
LSZ Lusaka 86.13 250 *eP* **P 20 10 35.1 -0.6**
LSZ pmax pmax
comp=Z,3.0nm,0.9s,mb4.5
LSZ Lusaka 86.13 250 *eP* **P 20 10 35.0 -0.6**
comp=Z,3.0nm,0.9s,mb4.5

*ATH **01** 20:09:05.5, 38°.24N×21°.56E, h30km, MD2.6/7, ML2.3*
*ISCJB **01** 20:09:06.2±0.5, 38°.23N±0°.04×21°.60E±0°.04, h27km±3km, Error ellipse: s-maj=6.3km s-min=4.9km az=151.1*
*CSEM **01** 20:09:06.4±0.2, 38°.26N×21°.59E, h22km±1km, ML2.3, Error ellipse: s-maj=4.4km s-min=3.6km az=151.0*
*THE **01** 20:09:06.5, 38°.25N×21°.59E, h18km, ML2.5/6, Error ellipse: s-maj=1.4km s-min=0.8km az=359.0*
ISC 01 20:09:06.3±0.5, 38°.23N±0°.04×21°.60E±0°.04, h27km±3km, n45, σ0°80/66**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.16**	**69**	*e*PB	**Pb**	**20 09 11.7**	**0.0**
UPR				*e*SB	**Sb**	**20 09 16.2**	**+0.9**
UPR	**University Cam**	**0.16**	**69**	*e*Pb	**Pb**	**20 09 11.7**	**0.0**
UPR				*e*Sb	**Sb**	**20 09 16.2**	**+0.9**
RLS	**Riolos of Patr**	**0.20**	**212**	*e*PB	**Pb**	**20 09 12.2**	**+0.1**
RLS				*e*SB	**Sb**	**20 09 17.0**	**+1.1**
RLS	**Riolos of Patr**	**0.20**	**212**	*e*Pb	**Pb**	**20 09 12.2**	**+0.1**
RLS				*e*Sb	**Sb**	**20 09 17.0**	**+1.1**
LAKA	**Lakka**	**0.30**	**87**	P	**Pb**	**20 09 13.2**	**-0.2**
LAKA				S	**Sb**	**20 09 18.6**	**+0.3**
LAKA	**Lakka**	**0.30**	**87**	P	**Pb**	**20 09 13.2**	**-0.2**
LAKA				S	**Sb**	**20 09 18.6**	**+0.3**
EFP	**Efpalio**	**0.32**	**50**	*e*PB	**Pb**	**20 09 13.3**	**-0.3**
EFP				*e*SB	**Sb**	**20 09 19.1**	**+0.5**
EFP	**Efpalio**	**0.32**	**50**	P	**Pb**	**20 09 13.3**	**-0.3**
EFP				S	**Sb**	**20 09 18.5**	**-0.1**
EFP	**Efpalio**	**0.32**	**50**	P	**Pb**	**20 09 13.3**	**-0.3**
EFP				S	**Sb**	**20 09 18.5**	**-0.1**
EFP				*e*Sb	**Sb**	**20 09 19.1**	**+0.5**
TRIZ	**Trizonia**	**0.40**	**69**	P	**Pb**	**20 09 14.5**	**-0.4**
TRIZ				S	**Sb**	**20 09 20.7**	**-0.1**
TRIZ	**Trizonia**	**0.40**	**69**	P	**Pb**	**20 09 14.5**	**-0.4**
TRIZ				S	**Sb**	**20 09 20.7**	**-0.1**
KALE	**Kalithea**	**0.46**	**69**	P	**Pb**	**20 09 15.3**	**-0.5**
KALE				S	**Sb**	**20 09 22.4**	**+0.1**
KALE	**Kalithea**	**0.46**	**69**	P	**Pb**	**20 09 15.3**	**-0.5**
KALE				S	**Sb**	**20 09 22.4**	**+0.1**
GUR	**Goura**	**0.66**	**116**	*e*PN	**Pn**	**20 09 18.7**	**-1.1**
GUR				*e*SN	**Sn**	**20 09 29.5**	**+0.3**
GUR	**Goura**	**0.66**	**116**	P	**Pb**	**20 09 18.5**	**-0.6**
GUR				S	**Sn**	**20 09 29.5**	**+0.3**
GUR	**Goura**	**0.66**	**116**	P	**Pb**	**20 09 18.5**	**-0.6**
GUR				S	**Sn**	**20 09 29.5**	**+0.3**
EVR	**Evrytania**	**0.71**	**13**	*e*PN	**Pn**	**20 09 20.0**	**-0.5**
EVR				*e*SN	**Sn**	**20 09 30.6**	**0.0**
EVR	**Evrytania**	**0.71**	**13**	*e*Pn	**Pn**	**20 09 20.0**	**-0.5**
EVR				*e*Sn	**Sn**	**20 09 30.6**	**0.0**
DSF	**Desfina**	**0.75**	**75**	P	**Pb**	**20 09 19.9**	**-0.9**
DSF				S	**Sb**	**20 09 31.8**	**+1.1**
DSF	**Desfina**	**0.75**	**75**	P	**Pb**	**20 09 19.9**	**-0.9**
DSF				S	**Sb**	**20 09 31.8**	**+1.1**
VLS	**Valsamata**	**0.80**	**267**	*e*PN	**Pn**	**20 09 20.8**	**-0.9**
VLS	**Valsamata**	**0.80**	**267**	P	**Pb**	**20 09 20.9**	**-0.6**
VLS	**Valsamata**	**0.80**	**267**	P	**Pb**	**20 09 20.9**	**-0.6**
LKD2	**Lefkada island**	**0.93**	**308**	P	**Pn**	**20 09 23.4**	**-0.1**
LKD2	**Lefkada island**	**0.93**	**308**	P	**Pn**	**20 09 23.4**	**-0.1**
AGG	**Agios Georgios**	**0.98**	**36**	*e*PN	**Pn**	**20 09 24.0**	**-0.3**
AGG	**Agios Georgios**	**0.98**	**36**	P	**Pn**	**20 09 24.1**	**-0.2**
AGG	**Agios Georgios**	**0.98**	**36**	P	**Pn**	**20 09 24.1**	**-0.2**
ITM	**Ithomi**	**1.08**	**166**	*e*PN	**Pn**	**20 09 26.6**	**+1.0**
ITM	**Ithomi**	**1.08**	**166**	P	**Pn**	**20 09 26.5**	**+0.9**
ITM	**Ithomi**	**1.08**	**166**	P	**Pn**	**20 09 26.5**	**+0.9**
LTK	**Loutraki**	**1.10**	**100**	*e*PN	**Pn**	**20 09 26.5**	**+0.6**
LTK	**Loutraki**	**1.10**	**100**	P	**Pn**	**20 09 26.7**	**+0.8**
LTK	**Loutraki**	**1.10**	**100**	P	**Pn**	**20 09 26.7**	**+0.8**
LKR	**Lokris**	**1.18**	**68**	*e*PN	**Pn**	**20 09 27.9**	**+0.9**
LKR	**Lokris**	**1.18**	**68**	*e*Pn	**Pn**	**20 09 27.9**	**+0.9**
PYL	**PYLOS**	**1.33**	**175**	*e*PN	**Pn**	**20 09 30.6**	**+1.5**
PYL	**PYLOS**	**1.33**	**175**	*e*Pn	**Pn**	**20 09 30.6**	**+1.5**
THL	**Klokotos Trika**	**1.38**	**14**	*e*PN	**Pn**	**20 09 31.0**	**+1.3**
THL	**Klokotos Trika**	**1.38**	**14**	*e*Pn	**Pn**	**20 09 31.0**	**+1.3**
NAIG	**Nisos Aigina**	**1.56**	**107**	*e*PB	**Pb**	**20 09 33.0**	**-1.5**
ATH	**Athens Observa**	**1.69**	**98**	*e*PN	**Pn**	**20 09 34.9**	**+0.9**
ATH	**Athens Observa**	**1.69**	**98**	*e*Pn	**Pn**	**20 09 34.9**	**+0.9**
VLY	**Voula,Athens**	**1.77**	**101**	*e*PB	**Pb**	**20 09 36.8**	**-1.3**
VLI	**Veliai**	**1.84**	**144**	*e*PB	**Pb**	**20 09 37.8**	**-1.5**

IDC 01 20:11:37.9±4.5, 19°.19S×176°.94W, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.8/17, mbtmp4.0/4, Error ellipse: s-maj=179.1km s-min=59.8km az=143.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.26**	**243**	P	P	20 19 08.2	-0.2
	4.8nm,1.1s,baz=81,slow=16,SNR=2.6						
WRA	**Warramunga Arr**	**45.78**	**261**	P	P	20 20 02.2	+0.5
	0.4nm,0.3s,baz=96,slow=7.7,SNR=22						
ASAR	**Alice Springs**	**45.80**	**255**	P	P	20 20 01.9	+0.2
	1.5nm,0.5s,baz=95,slow=7.9,SNR=34						
FITZ	**Fitzroy Crossi**	**54.20**	**261**	P	P	20 21 04.6	-1.1
	0.8nm,0.6s,baz=90,slow=8.1,SNR=4.3						
MMAI	**Mount Meron Ar**	**148.00**	**302**	PKPbc	PKPbc	20 31 25.2	-0.5
	0.6nm,0.5s,baz=49,slow=9.7,SNR=3.1						

*IDC **01** 20:14:52.6±2.8, 7°.87N×94°.69E, h0km, mb3.3/6, mb1 3.4/7, mb1mx3.3/25, mbtmp3.3/7, Error ellipse: s-maj=162.7km s-min=20.0km az=57.0*
*NEIC **01** 20:14:55.9±1.0, 7°.53N×94°.23E, h35km, mb4.3/1, Error ellipse: s-maj=29.9km s-min=10.6km az=56.0*
ISC 01 20:14:56.0±3.1, 7°.6N±0°.1×94°.4E±0°.1, h28km±23km, n14, σ1°23/16**, mb3.8/8, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**6.55**	**136**	Pn	**Pn**	**20 16 30.3**	**-0.2**
	baz=323,slow=20,SNR=1.5						
KULM	**Kulim**	**6.64**	**109**	*e*Pn	**Pn**	**20 16 33.1**	**+1.4**
KULM				*e*Sn	**Sn**	**20 17 44.8**	**-1.7**
CHTO	**Chiang Mai**	**12.05**	**21**	Pn	**Pn**	**20 17 46.3**	**+0.4**
LSA	**Lhasa**	**22.24**	**353**	P	**P**	**20 19 56.6**	**+6.0**
HHC	**Hu-ho-hao-te**	**36.53**	**22**	*e*P	**P**	**20 22 00.6**	**+1.4**
HHC				S	**S**	**20 27 41.2**	**+1.4**
HHC				pmax	pmax		
	comp=Z,13nm,0.6s,mb4.9						
HHC				pmax	pmax		
	comp=Z,73nm,6.4s						
MK31	**Makanchi Array**	**40.45**	**347**	*e*P	**P**	**20 22 30.3**	**-1.7**
MKAR	**Makanchi Array**	**40.45**	**347**	P	**P**	**20 22 29.5**	**-2.5**
	comp=Z,0.2nm,0.5s,mb3.1,baz=170,slow=9.6,SNR=3.5						
KURK	**Kurchatov**	**44.98**	**346**	P	**P**	**20 23 07.0**	**-1.7**
	comp=Z,1.8nm,0.8s,mb3.9,baz=170,slow=7.2,SNR=4.2						
ZALV	**Zalesovo Beam**	**46.90**	**352**	P	**P**	**20 23 23.1**	**-0.7**
	comp=Z,0.3nm,0.3s,mb3.7,baz=150,slow=10.0,SNR=2.3						
WRA	**Warramunga Arr**	**47.89**	**125**	P	**P**	**20 23 32.8**	**+0.8**
	comp=Z,0.1nm,0.4s,mb3.2,baz=305,slow=8.4,SNR=4.7						
ASAR	**Alice Springs**	**49.54**	**130**	P	**P**	**20 23 45.0**	**+0.4**
	comp=Z,0.2nm,0.7s,mb3.3,baz=302,slow=7.6,SNR=2.8						
AKTK	**Aktyubinsk**	**52.34**	**331**	P	**P**	**20 24 05.7**	**+0.4**
AKTO	**Aktyubinsk**	**52.34**	**331**	P	**P**	**20 24 05.7**	**+0.4**
	comp=Z,0.4nm,0.5s,mb3.6,baz=162,slow=4.8,SNR=3.7						
ARU	**Arti**	**56.27**	**337**	P	**P**	**20 24 35.3**	**+1.5**
	comp=Z,2.9nm,0.9s,mb4.3						

*IDC **01** 20:29:60.0±1.0, 17°.42S×173°.97W, h0km, mb4.2/6, mb1 4.5/6, mb1mx4.1/18, mbtmp4.2/6, MS3.7/5, Ms1 3.7/5, ms1mx3.4/19, Error ellipse: s-maj=53.8km s-min=21.0km az=141.0*
*NEIC **01** 20:30:00.9±0.8, 17°.25S×173°.88W, h10km, mb4.4/2, Error ellipse: s-maj=39.4km s-min=13.9km az=134.0*
*ISCJB **01** 20:30:02.6±0.9, 17°.2S±0°.2×173°.9W±0°.2, h33km, mb4.4/9, MS3.7/4, Error ellipse: s-maj=32.8km s-min=8.6km az=39.8*
ISC 01 20:30:04.6±0.9, 17°.3S±0°.1×173°.9W±0°.2, h35km, n27, σ1°09/15**, mb4.4/9, MS3.7/4, 3C, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.93**	**32**	Pn	**Pn**	**20 30 58.1**	**-4.4**
	1.6nm,0.3s,baz=106,slow=15,SNR=2.6						
AFI				Sn	**Sn**	**20 31 46.4**	**-1.1**
	23nm,0.3s,baz=105,slow=22,SNR=9.2						
AFI	**Afiamalu**	**3.93**	**32**	Pn	**Pn**	**20 30 58.1**	**-4.4**
AFI				*e*Pn	**Pn**	**20 30 58.4**	**-4.1**
AFI				Sn	**Sn**	**20 31 46.4**	**-1.1**
RAO	**Raoul Island**	**12.47**	**196**	LR	LR	20 36 58.9	
	comp=Z,308nm,20.5s,baz=297,slow=34						
URZ	**Urewera**	**22.33**	**199**	P	**P**	**20 34 58.0**	**-1.2**
	8.2nm,0.6s,mb4.3,baz=343,slow=11,SNR=4.3						
HNR	**Honiara**	**26.59**	**284**	LR	LR	20 43 32.6	
	comp=Z,62nm,20.2s,MS3.1,baz=112,slow=31						
EIDS	**Eidsvold**	**33.52**	**250**	P	**P**	**20 36 42.1**	**+1.1**
	2.9nm,0.9s,mb4.2						
STKA	**Stephens Creek**	**42.70**	**242**	P	**P**	**20 37 57.3**	**-1.0**
	2.1nm,0.9s,mb3.9,baz=103,slow=18,SNR=3.1						
WRAB	**Tennant Creek**	**48.96**	**258**	P	**P**	**20 38 48.6**	**+0.7**
	6.3nm,1.2s,mb4.5						
WRA	**Warramunga Arr**	**48.97**	**258**	P	**P**	**20 38 47.7**	**-0.3**
	1.2nm,0.5s,mb4.2,baz=97,slow=7.7,SNR=26						
WRA	**Warramunga Arr**	**48.97**	**258**	P	**P**	**20 38 47.7**	**-0.3**
ASAR	**Alice Springs**	**49.09**	**253**	P	**P**	**20 38 48.2**	**-0.6**
	5.9nm,0.8s,mb4.7,baz=89,slow=8.4,SNR=62						
NVAR	**Mina Array Bea**	**76.05**	**42**	P	**P**	**20 41 50.6**	**+2.1**
	1.2nm,0.8s,mb3.9,baz=228,slow=10,SNR=8.3						
KSRS	**Korea Array**	**77.17**	**316**	LR	LR	21 12 31.2	
	comp=Z,47nm,18.5s,MS3.8,baz=144,slow=33						
PDAR	**Pinedale Array**	**83.98**	**42**	P	**P**	**20 42 32.6**	**+1.3**
	1.3nm,0.7s,mb4.1,baz=234,slow=3.1,SNR=12						
HHC	**Hu-ho-hao-te**	**89.95**	**313**	*e*P	**P**	**20 43 00.2**	**-0.1**
HHC				S	S	20 53 50.7	+0.1
HHC				pmax	pmax		
	comp=Z,18nm,0.7s,mb5.5						
HHC				pmax	pmax		
	comp=Z,120nm,6.6s						
CMAR	**Chiang Mai Arr**	**92.75**	**288**	LR	LR	21 23 38.6	
	comp=Z,40nm,18.1s,MS3.9,baz=180,slow=35						
SONM	**Songino Array**	**95.92**	**318**	LR	LR	21 25 22.2	
	comp=Z,52nm,18.5s,MS4.0,baz=174,slow=35						
MKAR	**Makanchi Array**	**111.79**	**314**	PKiKP	PKiKP	20 48 36.6	+0.9
	comp=Z,0.4nm,0.6s,baz=75,slow=1.4,SNR=5.2						
BVAR	**Borovoye Array**	**119.06**	**321**	PKP	PKPdf	20 48 50.8	+1.3
	comp=Z,1.4nm,0.7s,baz=79,slow=0.5,SNR=13						
CLL	**Collm**	**145.62**	**352**	*i*PKPbc	PKPbc	20 49 41.1	+1.8
	comp=Z,9.0nm,0.9s						
BRG	**Berggiesshubel**	**145.91**	**351**	*e*(P)	PKPdf	20 49 41.0	+1.5
	comp=Z,2.2nm,1.1s						
DPC	**Dobruska-Polom**	**146.01**	**348**	*e*PKP	PKPab	20 49 43.5	+2.4
BRTR	**Keskin Array B**	**147.28**	**319**	PKPbc	PKPbc	20 49 45.9	+1.2
	comp=Z,2.1nm,0.7s,baz=116,slow=2.9,SNR=13						
KHC	**Kasperske Hory**	**147.66**	**351**	*e*PKP	PKPab	20 49 47.8	+0.2
CONA	**Conrad Observa**	**148.41**	**347**	*i*pPKPbc	PKPab	20 49 50.1	-0.5
	comp=Z,3.4nm,1.0s						
MMAI	**Mount Meron Ar**	**149.34**	**306**	PKPbc	PKPbc	20 49 51.5	+1.2
	comp=Z,3.0nm,0.7s,baz=114,slow=2.0,SNR=8.2						
FETA	**Feichten**	**150.10**	**354**	*i*pPKPbc	PKPbc	20 49 53.8	+2.2
	comp=Z,3.5nm,1.1s						

*ISCJB **01** 20:46:32.0±0.5, 37°.81N±0°.02×27°.58E±0°.06, h10km, Error ellipse: s-maj=6.3km s-min=3.1km az=1.2*
*DDA **01** 20:46:31.8, 37°.81N×27°.62E, h7km±2km, Md3.0*
*ISK **01** 20:46:31.9, 37°.81N×27°.59E, h4km, MD3.1*
*CSEM **01** 20:46:32.3±0.2, 37°.82N×27°.62E, h2km, MD3.0, Error ellipse: s-maj=6.2km s-min=3.4km az=96.0*
ISC 01 20:46:32.6±0.5, 37°.81N±0°.02×27°.61E±0°.06, h2km±7km, n32, σ0°52/38**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYDN	**Tasoluk**	**0.26**	**125**	*i* P	**Pg**	**20 46 37.5**	**-0.2**
AYDN				*i* S	**Sg**	**20 46 40.8**	**-0.3**
MLSB	**Milas**	**0.53**	**165**	*e*PG	**Pg**	**20 46 42.5**	**-0.3**
MLSB	**Milas**	**0.53**	**165**	*e*Pg	**Pg**	**20 46 42.5**	**-0.3**
BLCB	**Balcova**	**0.72**	**322**	*e*PG	**Pg**	**20 46 46.6**	**+0.1**
BLCB	**Balcova**	**0.72**	**322**	*e*Pg	**Pg**	**20 46 46.6**	**+0.1**
BDRM	**Kayabasi**	**0.76**	**190**	*i* P	**Pg**	**20 46 46.4**	**-0.7**
BDRM				*i* S	**Sg**	**20 46 56.9**	**0.0**
BDRM	**Kayabasi**	**0.76**	**190**	*i* P	**Pg**	**20 46 46.3**	**-0.8**
BODT	**Bodrum**	**0.78**	**198**	*e*PG	**Pg**	**20 46 47.5**	**-0.2**
BODT				*e*SG	**Sg**	**20 46 58.9**	**+1.1**
BODT	**Bodrum**	**0.78**	**198**	*e*Pg	**Pg**	**20 46 47.5**	**-0.1**
BODT				*e*Sg	**Sg**	**20 46 58.9**	**+1.1**
YER	**Yerkesik**	**0.86**	**141**	*e*PG	**Pg**	**20 46 49.2**	**0.0**
AKHS	**Akhisar**	**1.08**	**9**	*i* P	**Pg**	**20 46 52.7**	**-0.6**
AKHS				*i* S	**Sg**	**20 47 07.7**	**+0.5**
AKHS	**Akhisar**	**1.08**	**9**	*i* P	**Pg**	**20 46 52.7**	**-0.6**
AKS	**Akhisar**	**1.08**	**9**	*e*PN	**Pg**	**20 46 53.3**	**0.0**
AKS	**Akhisar**	**1.08**	**9**	*e*Pn	**Pg**	**20 46 53.3**	**0.0**
DAT	**Datca**	**1.08**	**181**	*e*PG	**Pg**	**20 46 53.2**	**-0.1**
DAT	**Datca**	**1.08**	**181**	*e*Pg	**Pg**	**20 46 53.2**	**-0.1**
KULA	**Kula-Manisa**	**1.09**	**50**	*e*PN	**Pg**	**20 46 53.6**	**+0.1**
KULA	**Kula-Manisa**	**1.09**	**50**	*e*Pn	**Pg**	**20 46 53.6**	**+0.1**
DENT	**Denizli**	**1.13**	**92**	*e*PN	**Pg**	**20 46 54.5**	**+0.2**
DENT	**Denizli**	**1.13**	**92**	*e*Pn	**Pg**	**20 46 54.5**	**+0.2**
KHL	**Karahalli**	**1.60**	**71**	*e*PN	**Pn**	**20 47 02.0**	**+0.2**
KHL	**Karahalli**	**1.60**	**71**	*e*Pn	**Pn**	**20 47 02.0**	**+0.2**
GLHS	**Glhisar (BURDU**	**1.64**	**113**	*e*PN	**Pn**	**20 47 02.6**	**+0.2**
GLHS	**Glhisar (BURDU**	**1.64**	**113**	*e*Pn	**Pn**	**20 47 02.6**	**+0.2**
BALB	**Balikesir**	**1.84**	**7**	*e*PN	**Pn**	**20 47 05.3**	**+0.2**
BALB	**Balikesir**	**1.84**	**7**	*e*Pn	**Pn**	**20 47 05.3**	**+0.2**
BALY	**Balya**	**1.93**	**0**	*i* P	**Pn**	**20 47 04.5**	**-1.8**
BALY				*i* S	**Sg**	**20 47 34.8**	**+0.3**
ELL	**Elmali**	**2.12**	**119**	*e*PN	**Pn**	**20 47 09.4**	**+0.4**
ELL	**Elmali**	**2.12**	**119**	*e*Pn	**Pn**	**20 47 09.4**	**+0.4**
GONE	**Gonen-Balikesi**	**2.23**	**2**	*e*PN	**Pn**	**20 47 10.8**	**+0.3**
ALT	**Altintas**	**2.33**	**57**	*e*PN	**Pn**	**20 47 12.1**	**+0.3**
ALT	**Altintas**	**2.33**	**57**	*e*Pn	**Pn**	**20 47 12.1**	**+0.3**

*ISCJB **01** 20:59:34.2±0.5, 40°.64N±0°.03×21°.44E±0°.05, h15km±11km, Error ellipse: s-maj=6.6km s-min=5.0km az=166.8*
*CSEM **01** 20:59:34.1, 40°.65N×21°.45E, h14km, ML3.0/2, After THE*
*THE **01** 20:59:34.1, 40°.65N×21°.45E, h14km±1km, ML3.0/2, Error ellipse: s-maj=1.3km s-min=0.5km az=22.0*
*SKO **01** 20:59:34.9, 40°.75N×21°.41E, h19km, M1.5, ML1.8*
ISC 01 20:59:34.0±0.6, 40°.65N±0°.03×21°.47E±0°.05, h18km±5km, n18, σ0°60/32**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FNA	**Florina**	**0.15**	**333**	P	**Pg**	**20 59 38.0**	**-0.2**
FNA				S	**Sg**	**20 59 40.9**	**-0.1**
**

AOS	**Alonnisos**	**0.40**	**43**		**Pg**	**21 08 36.9**	**0.0**
AOS				S	**Sg**	**21 08 43.2**	**+0.9**
ATAL	**Atalanti**	**0.43 246**		P	**Pg**	**21 08 37.2**	**-0.2**
ATAL				S	**Sg**	**21 08 42.8**	**-0.5**
ATAL	**Atalanti**	**0.43 246**		P	**Pg**	**21 08 37.2**	**-0.2**
ATAL				S	**Sg**	**21 08 42.8**	**-0.5**
LKR	**Lokris**	**0.47 242**		*e*PB	**Pg**	**21 08 37.7**	**-0.4**
LKR				*e*SB	**Sg**	**21 08 44.7**	**+0.4**
LKR	**Lokris**	**0.47 242**		P	**Pg**	**21 08 37.7**	**-0.4**
LKR				S	**Sg**	**21 08 44.4**	**+0.1**
LKR	**Lokris**	**0.47 242**		P	**Pg**	**21 08 37.7**	**-0.4**
LKR				S	**Sg**	**21 08 44.4**	**+0.1**
LKR				*e*Sb	**Sg**	**21 08 44.7**	**+0.4**
NEO	**Neokhori**	**0.49 331**		*e*PB	**Pg**	**21 08 38.8**	**+0.3**
NEO				*e*SB	**Sg**	**21 08 45.4**	**+0.3**
NEO	**Neokhori**	**0.49 331**		*e*Pb	**Pg**	**21 08 38.8**	**+0.3**
NEO				*e*Sb	**Sg**	**21 08 45.4**	**+0.3**
XOR	**Xorichti**	**0.56 332**		P	**Pg**	**21 08 39.8**	**+0.1**
XOR				S	**Sg**	**21 08 47.1**	**0.0**
XOR	**Xorichti**	**0.56 332**		P	**Pg**	**21 08 39.8**	**+0.1**
XOR				S	**Sg**	**21 08 47.1**	**0.0**
PTL	**Penteli**	**0.86 162**		*e*PN	**Pg**	**21 08 45.5**	**0.0**
PTL				*e*SN	**Sg**	**21 08 57.7**	**+0.9**
PTL	**Penteli**	**0.86 162**		*e*Pn	**Pg**	**21 08 45.5**	**0.0**
PTL				*e*Sn	**Sg**	**21 08 57.7**	**+0.9**
DSF	**Desfina**	**0.91 240**		P	**Pg**	**21 08 45.2**	**-1.2**
DSF				S	**Sg**	**21 08 58.5**	**+0.2**
DSF	**Desfina**	**0.91 240**		P	**Pg**	**21 08 45.2**	**-1.2**
DSF				S	**Sg**	**21 08 58.5**	**+0.2**
ATH	**Athens Observa**	**0.91 171**		*e*PN	**Pg**	**21 08 46.2**	**-0.2**
ATH	**Athens Observa**	**0.91 171**		*e*Pn	**Pg**	**21 08 46.2**	**-0.2**
AGG	**Agios Georgios**	**0.94 279**		*e*PN	**Pg**	**21 08 46.6**	**-0.5**
AGG	**Agios Georgios**	**0.94 279**		P	**Pg**	**21 08 46.4**	**-0.7**
AGG				S	**Sg**	**21 09 00.1**	**+0.7**
AGG	**Agios Georgios**	**0.94 279**		P	**Pg**	**21 08 46.4**	**-0.7**
AGG				S	**Sg**	**21 09 00.1**	**+0.7**
LTK	**Loutraki**	**0.96 208**		P	**Pg**	**21 08 46.4**	**-0.9**
LTK				S	**Sg**	**21 09 01.0**	**+1.2**
LTK	**Loutraki**	**0.96 208**		P	**Pg**	**21 08 46.4**	**-0.9**
LTK				S	**Sg**	**21 09 01.0**	**+1.2**
VLY	**Voula,Athens**	**1.04 168**		*e*PN	**Pg**	**21 08 48.2**	**-0.7**
VLY				*e*SN	**Sg**	**21 09 02.8**	**+0.4**
VLY	**Voula,Athens**	**1.04 168**		*e*Pn	**Pg**	**21 08 48.2**	**-0.7**
VLY				*e*Sn	**Sg**	**21 09 02.8**	**+0.4**
PAIG	**Paliouri**	**1.06**	**6**	P	**Pg**	**21 08 48.9**	**-0.3**
PAIG	**Paliouri**	**1.06**	**6**	P	**Pg**	**21 08 48.9**	**-0.3**
NAIG	**Nisos Aigina**	**1.11 182**		*e*PN	**Pg**	**21 08 49.6**	**-0.7**
NAIG	**Nisos Aigina**	**1.11 182**		*e*Pn	**Pg**	**21 08 49.6**	**-0.7**
KALE	**Kalithea**	**1.19 247**		P	**Pn**	**21 08 50.7**	**-0.4**
KALE				S	**Sb**	**21 09 07.7**	**+1.3**
KALE	**Kalithea**	**1.19 247**		P	**Pn**	**21 08 50.7**	**-0.4**
KALE				S	**Sb**	**21 09 07.7**	**+1.3**
PLG	**Polygyros**	**1.50 358**		*e*PN	**Pn**	**21 08 55.1**	**-0.3**
PLG	**Polygyros**	**1.50 358**		*e*Pn	**Pn**	**21 08 55.1**	**-0.3**

*ISCJB **01** 21:10:45.1±0.5, 0°.28N±0°.07×121°.99E±0°.08, h193km±5km, mb3.5/8, Error ellipse: s-maj=14.4km s-min=10.2km az=155.8*
*NEIC **01** 21:10:46.8±5.4, 0°.38N×122°.20E, h194km±55km, mb3.5/4, Error ellipse: s-maj=22.7km s-min=9.3km az=49.0*
*IDC **01** 21:10:47.5±7.0, 0°.33N×122°.14E, h197km±71km, mb3.2/5, mb1 3.3/6, mb1mx3.0/22, mbtmp3.2/6, Error ellipse: s-maj=89.4km s-min=15.5km az=64.0*
*DJA **01** 21:10:47, 0°.33N×121°.96E, h165km, MLv3.5/4*

ISC 01 21:10:46.5±0.5, 0°.28N±0°.07×122°.03E±0°.08, h187km±5km, n23, σ0°90/25, mb3.6/8, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.21**	**337**	P	**Pn**	**21 11 10.0**	**-1.3**
APSI	**Ampana**	**1.24**	**198**	P	**Pn**	**21 11 17.2**	**+0.4**
LUWI	**Luwuk**	**1.51**	**150**	P	**Pn**	**21 11 19.2**	**0.0**
LUWI				S	**Sn**	**21 11 43.6**	**-0.9**
KMSI	**Cibinong**	**1.98**	**81**	P	**Pn**	**21 11 24.3**	**+0.5**
KMSI				S	**Sn**	**21 11 54.0**	**+1.3**
FITZ	**Fitzroy Crossi**	**18.61**	**169**	P	**P**	**21 14 50.1**	**+0.3**
	0.1nm,0.3s,baz=336,slow=10.0,SNR=3.9						
FITZ	**Fitzroy Crossi**	**18.61**	**169**	*e*P	**P**	**21 14 50.3**	**+0.5**
	0.8nm,0.4s						
KULM	**Kulim**	**21.92**	**283**	P	**P**	**21 15 27.7**	**+2.5**
WRAB	**Tennant Creek**	**23.44**	**150**	*e*P	**P**	**21 15 37.0**	**-2.0**
	1.0nm,0.6s,mb3.4						
WRA	**Warramunga Arr**	**23.44**	**150**	P	**P**	**21 15 38.5**	**-0.5**
	0.7nm,0.5s,mb3.4,baz=326,slow=11,SNR=10						
ASAR	**Alice Springs**	**26.45**	**155**	P	**P**	**21 16 06.8**	**+0.5**
	0.3nm,0.6s,mb3.1,baz=344,slow=13,SNR=8.3						
ASAR				PcP	PcP	21 19 25.8	-0.8
	0.3nm,0.3s,baz=349,slow=2.2,SNR=7.2						
COCO	**West Island**	**27.90**	**243**	P	**P**	**21 16 20.8**	**+1.4**
CM31	**Chiang Mai Arr**	**28.99**	**310**	*e*P	**P**	**21 16 28.4**	**-0.5**
STKA	**Stephens Creek**	**36.96**	**152**	P	**P**	**21 17 38.0**	**+0.2**
	1.9nm,0.5s,mb4.0,baz=312,slow=12,SNR=2.9						
PALK	**Pallekele**	**41.79**	**281**	*e*P	**P**	**21 18 18.2**	**+0.2**
ULN	**Ulaanbaatar**	**49.15**	**347**	*e*P	**P**	**21 19 15.2**	**0.0**
	0.9nm,0.6s,mb3.6						
SONM	**Songino Array**	**49.28**	**346**	P	**P**	**21 19 16.1**	**-0.1**
	0.9nm,0.6s,mb3.6,baz=164,slow=9.1,SNR=7.1						
MK31	**Makanchi Array**	**57.87**	**329**	*e*P	**P**	**21 20 18.3**	**-0.3**
MKAR	**Makanchi Array**	**57.87**	**329**	P	**P**	**21 20 18.8**	**+0.1**
	0.6nm,0.3s,mb3.9,baz=123,slow=8.5,SNR=18						
UCH	**Uchtor**	**59.67**	**321**	P	**P**	**21 20 32.1**	**+0.8**
KBL	**Kabul**	**60.02**	**310**	P	**P**	**21 20 32.9**	**-0.8**
KURK	**Kurchatov**	**62.25**	**330**	*e*P	**P**	**21 20 47.5**	**-0.9**
	0.9nm,0.6s,mb3.8						
MCQ	**Macquarie Isla**	**62.46**	**157**	P	**P**	**21 20 50.3**	**+0.6**
ARU	**Arti**	**75.39**	**329**	P	**P**	**21 22 08.2**	**-1.2**

IDC 01 21:22:44.8±4.6, 22°.28S×66°.77W, h48km±38km, mb1 3.8/3, mb1mx3.5/16, mbtmp3.7/3, ML3.6/3, Error ellipse: s-maj=72.1km s-min=34.2km az=56.0, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**3.35**	**250**	*e*P	Pn	21 23 30.4	-4.3
HMBC	**Humberston**	**3.53**	**304**	*e*P	Pn	21 23 32.4	-4.7
MNMC	**Miaee Miaẽ**	**4.11**	**319**	*e*P	Pn	21 23 40.4	-4.6
PSGC	**Pisagua**	**4.12**	**310**	*e*P	Pn	21 23 39.2	-6.0
LPAZ	**La Paz**	**6.10**	**348**	P	Pn	21 24 13.1	+0.7
	0.1nm,0.3s,baz=170,slow=7.8,SNR=16						
SIV	**San Ignacio**	**8.25**	**42**	P	Pn	21 24 42.0	0.0
	1.4nm,0.3s,baz=236,slow=15,SNR=28						
CPUP	**Villa Florida**	**9.50**	**117**	P	Pn	21 24 58.9	-0.2
	0.3nm,0.3s,baz=285,slow=19,SNR=7.5						
ASAR	**Alice Springs**	**130.10**	**205**	PKP	PKPdf	21 41 50.0	-0.2
	0.7nm,0.9s,baz=142,slow=1.6,SNR=5.3						
MKAR	**Makanchi Array**	**145.06**	**38**	PKPbc	PKPbc	21 42 15.4	-0.8
	1.6nm,1.0s,baz=308,slow=2.8,SNR=7.1						

*NEIC **01** 21:43:41.5, 22°.68S×66°.97W, h250km, mb3.7/2, After GUC.*

GUC 01 21:43:41.5±0.4, 22°.68S×66°.97W, h250km, ML4.1,5C, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**2.36**	**280**	⇑*i*P	Pn	21 44 36.0	+8.6
PB04				*i* S	S	21 45 17.4	+14
PB04				AML	AML	21 45 21.1	
	comp=N,168nm,0.2s						
MACH	**Maria Elena**	**2.62**	**280**	⇑*i*P	Pn	21 44 32.4	+2.4
MACH				*i* S	S	21 45 11.4	+3.2
PB01	**Plate Boundary**	**2.85**	**304**	⇑*i*P	Pn	21 44 34.5	+2.1
PB01				*i* S	S	21 45 14.7	+2.1
PB01				AML	AML	21 45 17.4	
	comp=N,287nm,0.2s						
CEN1	**Los Morros**	**3.06**	**256**	*e*P	Pn	21 44 39.2	+4.6
CEN1				*i* S	S	21 45 22.5	+5.9
ANCH	**Antofagasta**	**3.32**	**252**	⇑*i*P	Pn	21 44 40.0	+2.5
ANCH				*i* S	S	21 45 24.1	+2.3
ANCH	**Antofagasta**	**3.32**	**252**	⇑*i*P	Pn	21 44 40.0	+2.5
ANCH				*i* S	S	21 45 24.1	+2.3
PSGC	**Pisagua**	**4.25**	**316**	*e*P	Pn	21 44 49.6	+1.3
PSGC				*i* S	S	21 45 42.6	+1.3
MNMC	**Miaee Miaẽ**	**4.30**	**325**	*e*P	Pn	21 44 51.2	+2.3
MNMC				*i* S	S	21 45 45.4	+3.0
LPAZ	**La Paz**	**6.45**	**350**	*e*Pn	Pn	21 45 16.4	+1.0
	comp=N,3.6nm,0.5s						
LPAZ				S	S	21 46 31.9	+1.3
LCO	**Las Campanas**	**7.14**	**207**	*e*Pn	Pn	21 45 24.3	+0.3
LCO				S	S	21 46 34.9	-11
CPUP	**Villa Florida**	**9.50**	**114**	*e*Pn	Pn	21 45 53.9	+0.2
NNA	**Nana**	**14.20**	**317**	Pn	Pn	21 46 52.2	+0.1
TRQA	**Tornquist**	**15.92**	**165**	P	Pn	21 47 10.1	-2.4
PLCA	**Paso Flores**	**18.25**	**189**	*e*P	P	21 47 37.4	+0.7
	comp=N,2.5nm,0.9s						

*ISCJB **01** 22:02:31.8±0.7, 37°.95N±0°.03×21°.52E±0°.03, h1km±8km, Error ellipse: s-maj=5.4km s-min=4.5km az=6.3*
*CSEM **01** 22:02:32.0±0.2, 37°.96N×21°.52E, h8km, MD2.6, Error ellipse: s-maj=3.1km s-min=2.9km az=4.0*
*ATH **01** 22:02:32.5, 38°.01N×21°.57E, h4km, MD2.6/5*
*THE **01** 22:02:32.0, 37°.94N×21°.52E, h6km, ML2.2/6, Error ellipse: s-maj=1.0km s-min=0.4km az=167.0*

ISC 01 22:02:32.3±0.6, 37°.96N±0°.04×21°.51E±0°.04, h7km±6km, n26, σ0°67/50, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.10**	**341**	*e*PG	**Pg**	**22 02 34.4**	**-0.3**
RLS				*e*SG	**Sg**	**22 02 36.4**	**+0.1**
RLS	**Riolos of Patr**	**0.10**	**341**	*e*Pg	**Pg**	**22 02 34.4**	**-0.3**
RLS				*e*Sg	**Sg**	**22 02 36.4**	**+0.1**
LAKA	**Lakka**	**0.46**	**53**	P	**Pg**	**22 02 41.0**	**-0.2**
LAKA				S	**Sg**	**22 02 47.7**	**+0.4**
LAKA	**Lakka**	**0.46**	**53**	P	**Pg**	**22 02 41.0**	**-0.2**
LAKA				S	**Sg**	**22 02 47.7**	**+0.4**
EFP	**Efpalio**	**0.56**	**34**	*e*PG	**Pg**	**22 02 42.0**	**-1.1**
EFP				*e*SG	**Sg**	**22 02 49.1**	**-1.3**
EFP	**Efpalio**	**0.56**	**34**	P	**Pg**	**22 02 42.8**	**-0.3**
EFP				S	**Sg**	**22 02 51.1**	**+0.7**
EFP	**Efpalio**	**0.56**	**34**	*e*Pg	**Pg**	**22 02 42.0**	**-1.1**
EFP	**Efpalio**	**0.56**	**34**	P	**Pg**	**22 02 42.8**	**-0.3**
EFP				*e*Sg	**Sg**	**22 02 49.1**	**-1.3**
EFP				S	**Sg**	**22 02 51.1**	**+0.7**
TRIZ	**Trizonia**	**0.60**	**47**	P	**Pg**	**22 02 43.3**	**-0.5**
TRIZ				S	**Sg**	**22 02 52.5**	**+0.8**
TRIZ	**Trizonia**	**0.60**	**47**	P	**Pg**	**22 02 43.3**	**-0.5**
TRIZ				S	**Sg**	**22 02 52.5**	**+0.8**
KALE	**Kalithea**	**0.66**	**49**	P	**Pg**	**22 02 44.5**	**-0.4**
KALE				S	**Sg**	**22 02 54.1**	**+0.6**
KALE	**Kalithea**	**0.66**	**49**	P	**Pg**	**22 02 44.5**	**-0.4**
KALE				S	**Sg**	**22 02 54.1**	**+0.6**
GUR	**Goura**	**0.66**	**92**	*e*PG	**Pg**	**22 02 44.1**	**-0.8**
GUR				*e*SG	**Sg**	**22 02 52.7**	**-0.8**
GUR	**Goura**	**0.66**	**92**	P	**Pg**	**22 02 44.3**	**-0.6**
GUR				S	**Sg**	**22 02 53.6**	**+0.1**
GUR	**Goura**	**0.66**	**92**	*e*Pg	**Pg**	**22 02 44.1**	**-0.8**
GUR	**Goura**	**0.66**	**92**	P	**Pg**	**22 02 44.3**	**-0.6**
GUR				*e*Sg	**Sg**	**22 02 52.7**	**-0.8**
GUR				S	**Sg**	**22 02 53.6**	**+0.1**
VLS	**Valsamata**	**0.76**	**287**	P	**Pg**	**22 02 46.5**	**-0.4**
VLS				S	**Sg**	**22 02 57.6**	**+0.9**
VLS	**Valsamata**	**0.76**	**287**	P	**Pg**	**22 02 46.5**	**-0.4**
VLS				S	**Sg**	**22 02 57.6**	**+0.9**
VLX	**Vlachokerasia**	**0.91**	**130**	*e*PB	**Pb**	**22 02 49.6**	**-0.6**
VLX				*e*SG	**Sg**	**22 03 02.5**	**+1.1**
VLX	**Vlachokerasia**	**0.91**	**130**	*e*Pb	**Pb**	**22 02 49.6**	**-0.6**
VLX				*e*Sg	**Sg**	**22 03 02.5**	**+1.1**
DSF	**Desfina**	**0.92**	**60**	P	**Pg**	**22 02 49.0**	**-0.9**
DSF				S	**Sg**	**22 03 02.5**	**+0.6**
DSF	**Desfina**	**0.92**	**60**	P	**Pg**	**22 02 49.0**	**-0.9**
DSF				S	**Sg**	**22 03 02.5**	**+0.6**
PYL	**PYLOS**	**1.08**	**170**	*e*PB	**Pb**	**22 02 53.8**	**+0.6**
PYL	**PYLOS**	**1.08**	**170**	*e*Pb	**Pb**	**22 02 53.8**	**+0.6**
AGG	**Agios Georgios**	**1.24**	**31**	P	**Pn**	**22 02 55.4**	**-0.6**
AGG				S	**Sb**	**22 03 13.0**	**+0.9**
AGG	**Agios Georgios**	**1.24**	**31**	P	**Pn**	**22 02 55.4**	**-0.6**
AGG				S	**Sb**	**22 03 13.0**	**+0.9**

*ISCJB **01** 22:07:27.4±0.5, 36°.44N±0°.03×71°.32E±0°.05, h108km±7km, mb3.8/8, Error ellipse: s-maj=6.3km s-min=4.1km az=161.0*
*NEIC **01** 22:07:29.4±0.8, 36°.51N×71°.11E, h98km±9km, mb3.7/5, Error ellipse: s-maj=14.6km s-min=7.1km az=140.0*
*NNC **01** 22:07:33.6±4.6, 36°.85N×70°.88E, h95km±59km, mb3.4, mpv3.8, Error ellipse: s-maj=35.9km s-min=27.2km az=18.0*
*IDC **01** 22:07:35.8±7.5, 36°.98N×71°.05E, h130km±52km, mb3.3/3, mb1 3.4/8, mb1mx3.2/26, mbtmp3.3/8, Error ellipse: s-maj=59.6km s-min=32.3km az=6.0*

ISC 01 22:07:28.6±0.4, 36°.41N±0°.03×71°.31E±0°.05, h107km±7km, n57, σ1°18/73, mb3.8/8, 6C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.63**	**225**	*e*Pn	**Pn**	**22 08 09.3**	**-0.3**
KBL				Sn	**Sn**	**22 08 40.8**	**-0.3**
CHCP	**Chirah Chowk**	**3.18**	**149**	P	**Pn**	**22 08 20.0**	**+3.1**
KSH	**Kashi**	**4.81**	**49**	Pn	**Pn**	**22 08 37.6**	**-1.2**
KSH				Sn	**Sn**	**22 09 27.7**	**-5.7**
KSH				smax			
	comp=N,150nm,0.4s						
KSH				smax			
	comp=E,130nm,0.5s						
THN	**Thein Dam**	**5.39**	**136**	*e*PKP	**Pn**	**22 08 47.6**	**+1.0**
THN				*e*S	**Sn**	**22 09 47.6**	**+0.2**
AML	**Almayashu**	**6.00**	**17**	P	**Pn**	**22 08 56.1**	**+1.3**
	SNR=25						
KZA	**Kyzart**	**6.43**	**27**	P	**Pn**	**22 09 02.1**	**+1.4**
	SNR=7.2						
EKS2	**Erkin-Say**	**6.53**	**16**	P	**Pn**	**22 09 03.3**	**+1.4**
	SNR=9.8						
EKS2	**Erkin-Say**	**6.53**	**16**	*e*Pn	**Pn**	**22 09 03.0**	**+1.0**
	comp=E,5.5nm,0.6s						
EKS2				*e*Sn	**Sn**	**22 10 12.0**	**-2.8**
AAK	**Ala-Archa**	**6.68**	**21**	P	**Pn**	**22 09 05.8**	**+1.7**
	SNR=6.6						
AAK	**Ala-Archa**	**6.68**	**21**	P	**Pn**	**22 09 05.4**	**+1.3**
	comp=E,2.1nm,0.3s,baz=192,slow=7.3,SNR=8.0						
AAK				S	**Sn**	**22 10 18.0**	**-0.7**
	comp=E,2.1nm,0.3s,baz=98,slow=22,SNR=15						
KK31	**Karatay Array**	**6.71**	**355**	P	**Pn**	**22 09 04.0**	**-0.5**
	comp=E,2.9nm,0.3s,baz=174,slow=12,SNR=151						
KK31				⇑S	**Sn**	**22 10 14.4**	**-4.9**
	comp=E,6.9nm,0.3s,baz=187,slow=24,SNR=9.4						
SDNR	**Sundarnagar**	**6.79**	**135**	*e*PKP	**Pn**	**22 09 05.5**	**-0.2**
SDNR				*e*S	**Sn**	**22 10 19.5**	**-2.0**
CHMS	**Chumysh**	**7.09**	**21**	P	**Pn**	**22 09 11.4**	**+1.7**
	SNR=5.8						
TKM2	**Tokmak 2**	**7.29**	**26**	⇑P	**Pn**	**22 09 13.0**	**+0.7**
	comp=E,4.0nm,0.6s						
TKM2				⇑S	**Sn**	**22 10 33.1**	**-0.3**
	comp=E,17nm,0.8s						
TKM2	**Tokmak 2**	**7.29**	**26**	P	**Pn**	**22 09 13.3**	**+0.9**
	SNR=6.3						
KLP	**Kalpa**	**7.54**	**128**	*e*PKP	**Pn**	**22 09 18.6**	**+2.7**
KLP				*e*S	**Sn**	**22 10 39.5**	**-0.3**
KLP				AML	AML	22 10 41.5	
	comp=E,122nm,0.4s						
KLP				AML	AML	22 10 41.9	
	comp=N,68nm,0.3s						
DDI	**Dehra Dun**	**8.29**	**135**	*ex*	**Sn**	**22 11 01.0**	**+3.1**
JOSI	**Joshimath**	**9.03**	**128**	*e*PKP	**Pn**	**22 09 36.6**	**+0.5**
JOSI				*e*S	**Sn**	**22 11 12.4**	**-3.5**
JOSI				AML	AML	22 11 16.9	
	comp=E,87nm,0.4s						
JOSI				AML	AML	22 11 17.7	
	comp=N,104nm,0.4s						
KHET	**Khetri**	**9.14**	**154**	*e*S	**Sn**	**22 11 11.1**	**-7.6**
KHET				AML	AML	22 11 16.6	
	comp=N,25nm,0.2s						
KHET				AML	AML	22 11 17.6	
	comp=E,29nm,0.2s						
SONA	**Sohna**	**9.49**	**147**	*e*S	**Sn**	**22 11 19.7**	**-7.5**
SONA				AML	AML	22 11 25.0	
	comp=N,15nm,0.6s						
SONA				AML	AML	22 11 27.6	
	comp=E,22nm,0.0s						
MK31	**Makanchi Array**	**13.22**	**35**	P	**Pn**	**22 10 38.0**	**+6.1**
	comp=E,1.5nm,0.9s,baz=204,slow=11,SNR=8.9						
MK31	**Makanchi Array**	**13.22**	**35**	*e*P	**Pn**	**22 10 34.3**	**+2.4**
MKAR	**Makanchi Array**	**13.22**	**35**	P	**Pn**	**22 10 32.4**	**+0.5**
	comp=E,0.1nm,0.3s,baz=213,slow=13,SNR=3.4						
DMN	**Daman**	**14.62**	**123**	*e*P	**Pn**	**22 10 48.9**	**-1.2**
	comp=E,7.4nm,0.4s						
KKN	**Kakani**	**14.62**	**122**	*e*P	**Pn**	**22 10 49.5**	**-0.7**
	comp=E,16nm,0.4s						
PKIN	**Phulchoki**	**14.84**	**122**	*e*P	**Pn**	**22 10 52.0**	**-0.9**
	comp=E,7.6nm,0.4s						
PKI	**Pulchoki**	**14.85**	**122**	*e*P	**Pn**	**22 10 51.9**	**-1.2**
	comp=E,14nm,0.7s						
GUN	**Gumba**	**14.96**	**120**	*e*P	**Pn**	**22 10 55.7**	**+1.2**
KURK	**Kurchatov**	**15.23**	**18**	P	**Pn**	**22 10 57.5**	**-0.2**
	comp=E,0.1nm,0.3s,baz=208,slow=10,SNR=14						
KURK	**Kurchatov**	**15.23**	**18**	*e*Pn	**Pn**	**22 10 58.3**	**+0.6**
KURK				Sn	**Sn**	**22 13 42.1**	**-3.8**
AB31	**Akbulak array**	**15.28**	**331**	⇑P	**Pn**	**22 10 55.3**	**-3.0**
	comp=E,0.7nm,0.4s,baz=166,slow=9.8,SNR=35						
AB31				S	**S**	**22 13 37.9**	**-18**
	comp=E,8.1nm,0.6s,baz=153,slow=23,SNR=9.0						
ABKAR	**Akbulak array**	**15.28**	**331**	*e*Pn	**Pn**	**22 10 55.1**	**-3.2**
	comp=E,1.3nm,0.4s						
ABKAR				*e*Sn	**Sn**	**22 13 29.1**	**-18**
RAMN	**Ramite**	**16.06**	**122**	*e*P	**Pn**	**22 11 06.9**	**-1.3**
VOSK	**Vostochnaya**	**16.31**	**359**	⇑P	**Pn**	**22 11 10.9**	**-0.2**
	comp=E,1.2nm,0.6s						
TAPN	**Taplejung**	**16.59**	**118**	*e*P	**Pn**	**22 11 15.5**	**+0.8**
	comp=E,22nm,0.6s						
ZRNK	**Zerenda**	**16.61**	**355**	⇑P	**Pn**	**22 11 15.1**	**+0.2**
	comp=E,0.7nm,0.4s						
BVAR	**Borovoye Array**	**16.62**	**358**	P	**Pn**	**22 11 14.4**	**-0.5**
	comp=E,0.5nm,0.3s,baz=153,slow=9.5,SNR=9.6						
BVAR				S	**S**	**22 14 11.3**	**-12**
	comp=E,0.1nm,0.3s,baz=168,slow=23,SNR=5.0						
BRVK	**Borovoye**	**16.66**	**358**	⇓P	**Pn**	**22 11 15.6**	**+0.2**
	comp=E,1.8nm,0.5s						
BRVK	**Borovoye**	**16.66**	**358**	*e*Pn	**Pn**	**22 11 16.1**	**+0.7**
	comp=E,1.4nm,0.4s						
ODAN	**Odare**	**16.66**	**120**	*e*P	**Pn**	**22 11 14.1**	**-1.5**
	comp=E,5.8nm,0.5s						
AKTK	**Aktyubinsk**	**16.98**	**330**	P	**Pn**	**22 11 17.8**	**-1.5**
AKTK				S	**S**	**22 14 15.5**	**-13**
AKTO	**Aktyubinsk**	**16.98**	**330**	P	**Pn**	**22 11 17.8**	**-1.5**
	comp=E,0.4nm,0.3s,baz=124,slow=13,SNR=8.8						
AKTO				S	**S**	**22 14 15.5**	**-13**
	comp=E,0.2nm,0.3s,baz=347,slow=23,SNR=6.1						
ZAA0	**Zalesovo Array**	**19.89**	**24**	*e*P	**P**	**22 11 51.3**	**0.0**
ZALV	**Zalesovo Beam**	**19.89**	**24**	P	**P**	**22 11 51.5**	**+0.2**
	comp=E,0.7nm,0.3s,baz=218,slow=10,SNR=11						
GNI	**Garni**	**21.16**	**288**	*e*P	**P**	**22 12 04.6**	**-0.4**
	comp=E,2.8nm,0.7s,mb3.7						
ARU	**Arti**	**21.80**	**341**	*e*P	**P**	**22 12 11.2**	**-0.4**
	comp=E,6.6nm,1.2s,mb3.8						
KIV	**Kislovodsk**	**23.05**	**298**	P	**P**	**22 12 26.2**	**+1.7**
ULN	**Ulaanbaatar**	**28.62**	**55**	P	**P**	**22 13 18.2**	**+3.5**
JOF	**Joensuu**	**36.07**	**330**	*ep*	**P**	**22 14 19.1**	**-0.3**
	comp=E,1.5nm,0.6s,mb4.1						
FINES	**FINESS Array B**	**37.70**	**326**	P	**P**	**22 14 33.6**	**+0.3**
	comp=E,1.0nm,0.7s,mb3.8,baz=114,slow=8.3,SNR=5.7						
PSZ	**Piszkesteto**	**39.13**	**304**	*e*P	**P**	**22 14 46.0**	**+0.6**
	comp=E,1.4nm,0.6s,mb4.0						
MORC	**Moravsky Berou**	**40.62**	**307**	*e*P	**P**	**22 14 58.1**	**+0.5**
ARCES	**ARCESS Array B**	**41.32**	**338**	P	**P**	**22 15 04.1**	**+0.9**
	comp=E,1.7nm,0.9s,mb3.9,baz=70,slow=10,SNR=3.8						
NB2	**NORSAR Subarra**	**44.60**	**323**	P	**P**	**22 15 29.7**	**0.0**
	comp=Z,0.4nm,0.4s,mb3.5,baz=98,slow=7.9						
NOA	**NORSAR Array B**	**44.60**	**323**	P	**P**	**22 15 30.1**	**+0.3**
	comp=Z,0.4nm,0.5s,mb3.4,baz=100,slow=8.1,SNR=5.2						
YKA	**Yellowknife Ar**	**81.32**	**3**	P	**P**	**22 19 33.7**	**+1.0**
	comp=Z,0.4nm,0.5s,mb3.5,baz=352,slow=5.5,SNR=5.9						
YKA	**Yellowknife Ar**	**81.32**	**3**	P	**P**	**22 19 33.7**	**+1.0**

KRSC 01 22:12:29.7±1.3, 49°.82N×156°.63E, h32km±31km, ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**1.26**	**327**	*e*P	Pn	22 12 52.6	+1.6
ALID				*e*S	Sn	22 13 09.1	+2.3
MIPR	**Malaya Ipel'ka**	**2.46**	**2**	P	Pn	22 13 09.3	+1.8
MIPR				*e*S	Sn	22 13 38.4	+1.9
AVH	**Avacha**	**3.69**	**20

baz=173,slow=22,SNR=50
FIA0 Lg 22 45 54.8
baz=169,slow=30,SNR=8.8
FINES FINESS Array B 2.34 345 Pn **Pn 22 45 21.6 +1.1**
comp=Z,1.7nm,0.3s,baz=163,slow=13,SNR=55
FINES Lg 22 45 51.2
comp=Z,3.9nm,0.3s,baz=168,slow=30,SNR=33
FINES Rg 22 46 04.0
comp=Z,60nm,1.1s,baz=167,slow=26,SNR=19
SLIT Slitere, Latvi 3.09 242 *e*P **Pg 22 45 39.9 0.0**
SNR=50
SLIT *e*S **Sg 22 46 17.7 -2.1**
comp=Z,221nm,1.1s,SNR=50
KEF Keuruu 3.22 339 *e*P **Pn 22 45 34.2 +1.7**
KEF *e*S **Sn 22 46 12.2 +0.7**
KEF MSG 22 46 15.9
comp=Z,1.7nm,0.3s
KEF Keuruu 3.22 339 P **Pn 22 45 34.1 +1.6**
RAF Rauma 3.34 306 *e*P **Pn 22 45 36.9 +2.7**
RAF *e*S **Sn 22 46 14.6 +0.1**
RAF Rauma 3.34 306 P **Pn 22 45 36.8 +2.7**
RAF S **Sn 22 46 14.5 0.0**
ISAL Salakas 3.69 191 *e*P **Pg 22 45 51.0 -0.5**
ISAL AMB AMB 22 45 52.8
comp=Z,3.0nm,0.7s
ISAL Salakas 3.69 191 *e*P **Pg 22 45 51.0 -0.5**
AAL Aland 3.85 288 *e*SG **Sg 22 46 40.8 -3.6**
AAL Aland 3.85 288 Sg **Sg 22 46 40.8 -3.6**
IIGN Ignalina 3.90 189 *e*P **Pg 22 45 54.4 -1.1**
IIGN AMB AMB 22 45 55.5
comp=Z,3.3nm,0.8s
IIGN Ignalina 3.90 189 *e*P **Pg 22 45 54.4 -1.1**
IDID Didziasalis 3.91 185 *e*P **Pg 22 45 54.3 -1.3**
IDID AMB AMB 22 45 56.0
comp=Z,3.8nm,0.8s
IDID Didziasalis 3.91 185 *e*P **Pg 22 45 54.3 -1.2**
comp=Z,3.8nm,0.8s
HFS Hagfors 6.98 284 Pn **Pn 22 46 25.8 +1.8**
baz=100,slow=12
HFS Sn **Sn 22 47 42.5 -1.5**
baz=113,slow=37
HFS Lg 22 48 17.5
baz=90,slow=37
HFS Hagfors 6.98 284 Pn **Pn 22 46 25.6 +1.6**
comp=Z,0.1nm,0.3s,baz=96,slow=13,SNR=4.1
HFS Lg 22 48 16.7
comp=Z,0.2nm,0.3s,baz=93,slow=31,SNR=5.0
HFS Hagfors 6.98 284 PN **Pn 22 46 25.8 +1.8**
HFS SN **Sn 22 47 42.5 -1.5**
HFS SG **Sg 22 48 17.5 -7.1**
HFS Hagfors 6.98 284 Pn **Pn 22 46 25.8 +1.7**
baz=100,slow=12
NB2 NORSAR Subarra 8.26 290 Pn **Pn 22 46 42.0 +0.4**
NB2 NORSAR Subarra 8.26 290 PN **Pn 22 46 42.0 +0.4**
NOA NORSAR Array B 8.26 290 Pn **Pn 22 46 42.2 +0.6**
comp=Z,0.1nm,0.3s,baz=97,slow=10,SNR=3.4
NOA Lg 22 48 57.1
comp=Z,0.2nm,0.3s,baz=101,slow=11,SNR=3.8
AKASG Malin Array Be 8.58 172 Pn **Pn 22 46 47.6 +1.6**
comp=Z,0.9nm,0.3s,baz=352,slow=13,SNR=6.9
ARA0 ARCESS Array S 10.41 356 Pn **Pn 22 47 09.0 -2.0**
ARA0 Sn **Sn 22 48 59.8 -8.5**
baz=175,slow=22
ARA0 Lg 22 50 01.8
baz=166,slow=37
ARA0 ARCESS Array S 10.41 356 PN **Pn 22 47 09.0 -2.0**
ARA0 SN **Sn 22 48 59.8 -8.5**
ARA0 SG Sn 22 50 01.8 +54
ARA0 ARCESS Array S 10.41 356 Pn **Pn 22 47 09.0 -2.1**
ARCES ARCESS Array B 10.41 356 Pn **Pn 22 47 08.7 -2.3**
comp=Z,0.1nm,0.3s,baz=170,slow=11,SNR=6.0
BVAR Borovoye Array 24.43 86 P **P 22 50 06.3 +5.7**
comp=Z,0.3nm,0.5s,baz=316,slow=10,SNR=6.4
BVAR LR LR 23 01 15.4
comp=Z,40nm,18.0s,baz=354,slow=40

GUC 01 23:12:03.3±0.6, 21°.56S×68°.56W, h135km±9km, MD3.5, ML3.4, 5C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**1.01**	**300**	⇑*i*P			Pn	23 12 27.4	+0.6
PB01				*i*S			Sn	23 12 45.4	+0.9
PB01				AML			AML	23 12 47.9	
comp=E,593nm,0.5s									
PB04	**Plate Boundary**	**1.11**	**231**	⇑*i*P			Pn	23 12 34.3	+6.7
PB04				*i*S			Sn	23 12 57.8	+12
PB04				AML			AML	23 13 07.0	
comp=E,287nm,0.5s									
MACH	**Maria Elena**	**1.28**	**240**	*i*P			Pn	23 12 30.1	+0.8
MACH				*i*S			Sn	23 12 50.8	+1.5
HMBC	**Humberston**	**1.78**	**315**	⇑*i*P			Pn	23 12 35.9	+0.9
HMBC				*i*S			Sn	23 13 00.4	+1.2
HMBC				AML			AML	23 13 04.5	
comp=N,404nm,0.6s									
CEN1	**Los Morros**	**2.37**	**220**	⇑*i*P			Pn	23 12 42.3	+0.2
CEN1				*i*S			Sn	23 13 14.6	+2.7
CEN1				AML			AML	23 13 25.1	
comp=E,144nm,0.3s									
PSGC	**Pisagua**	**2.44**	**323**	⇑*i*P			Pn	23 12 43.2	+0.2
PSGC				*e*S			Sn	23 13 13.9	+0.3
PSGC				AML			AML	23 13 15.7	
comp=E,156nm,0.6s									
MNMC	**Miæe Miæ**	**2.61**	**338**	*e*P			Pn	23 12 46.4	+1.3
MNMC				*i*S			Sn	23 13 19.4	+2.2
MNMC				AML			AML	23 13 21.7	
comp=E,201nm,0.5s									

NIED ***01*** *23:15:00, 44°.90N×149°.70E, h35km, Mw4.8 Best double couple: M0 1.89000×10^16 NP1:φs35.00000°, δ64.00000°, λ89.00000°. NP2:φs217.00000°, δ26.00000°, λ92.00000°.*
BJI ***01*** *23:15:10.6, 44°.65N×149°.86E, h51km, mB4.8/30, mb4.9/41, Ms4.4/38, Ms7 4.3/36*
JMA ***01*** *23:15:10.3±0.5, 44°.87N×149°.70E, h30km, M5.1*
MOS ***01*** *23:15:11.7±0.9, 44°.77N×149°.52E, h46km, mb5.0/69, MS4.3/20, Error ellipse: s-maj=7.2km s-min=4.6km az=102.9*
ISCJB ***01*** *23:15:11.5±0.1, 44°.72N±0°.03×149°.53E±0°.02, h46km, mb4.8/179, MS4.3/45, Error ellipse: s-maj=4.4km s-min=1.5km az=163.5*
SKHL ***01*** *23:15:12.5±0.9, 44°.83N×149°.63E, h55km±4km, mb5.5/1, mbh5.2/1, Ms4.2/3*
NEIC ***01*** *23:15:12.8±0.5, 44°.74N×149°.50E, h42km±4km, mb4.9/92, MS4.5/3, Error ellipse: s-maj=4.8km s-min=2.7km az=166.0*
IDC ***01*** *23:15:13.5±0.5, 44°.89N×149°.59E, h47km±5km, mb4.2/20, mb1 4.4/22, mb1mx4.3/26, mbtmp4.2/22, MS4.2/25, Ms1 4.2/25, ms1mx4.1/35, Error ellipse: s-maj=15.2km s-min=11.2km az=148.0*
BGS ***01*** *23:15:15.5±2.0, 44°.95N×148°.52E, h49km, mb4.9*
GCMT ***01*** *23:15:16.3±0.5, 44°.73N×149°.64E, h31km±1km, MW4.9, Moment Tensor Solution. s31,c41; s49,c68; Moment tensor: Scale 10^16 Nm; Mrr 1.88±.16; Mθθ -1.16±.10; Mφφ -0.73±.10; Mrθ 1.19±.14; Mrφ -1.26±.06; Mθφ 0.77±.12; Best double couple: M0 2.50000×10^16 NP1:φs224.00000°, δ28.00000°, λ81.00000°. NP2:φs55.00000°, δ62.00000°, λ95.00000°. Principal axes: T 2.3300, Plg72.0000°, Azm336.0000°; N 0.3200, Plg4.0000°, Azm232.0000°; P -2.6600, Plg17.0000°, Azm141.0000°; Data Used: II IU IC G CN.*
SZGRF ***01*** *23:15:21.9, 46°.50N×148°.50E, h33km, mb5.1, MS4.4, Northwest of Kuril Islands, Russia*

ISC 01 23:15:13.6±0.1, 44°.76N±0°.03×149°.50E±0°.02, h48km, h48km±1.6km: pP-P, n829, σ0.67/842, mb4.8/179, MS4.3/45, 173C-170D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.25**	**293**	⇓*i*PN			**Pn**	**23 15 32.9**	**-1.8**
KUR				*e*S			**Sn**	**23 15 47.5**	**-2.8**
KUR				pmax			pmax		
comp=Z,9μm,2.0s									
KUR				pmax			pmax		
comp=N,2μm,0.5s									
KUR				pmax			pmax		
comp=E,1μm,0.5s									
KUR				pmax			pmax		
comp=Z,2μm,0.5s									
KUR				smax					
comp=N,25μm,3.0s									
KUR				smax					
comp=E,10μm,3.0s									
KUR				smax					
comp=N,2μm,0.5s									
KUR				smax					
comp=E,5μm,0.5s									
KUR	**Kuril'sk**	**1.25**	**293**	⇓*i*P			**Pn**	**23 15 32.9**	**-1.8**
KUR				AMB			AMB	23 15 40.0	
comp=E,9μm,2.0s									
KUR				AMB			AMB	23 15 41.3	
comp=E,2μm,0.5s									
KUR				AMB			AMB	23 15 41.3	
comp=E,1μm,0.5s									
KUR				AMB			AMB	23 15 41.3	
comp=E,2μm,0.5s									
KUR				*e*S			**Sn**	**23 15 47.5**	**-2.8**
KUR				A				23 15 52.0	
comp=E,25μm,3.0s									
KUR				A				23 15 52.0	
comp=E,10μm,3.0s									
KUR				A				23 15 56.0	
comp=E,2μm,0.5s									
KUR				A				23 15 56.0	
comp=E,5μm,0.5s									
YUK	**Yuzh-Kuril'sk**	**2.71**	**256**	⇑*i*PN			**Pn**	**23 15 55.2**	**+0.6**
YUK				*i*S			**Sn**	**23 16 28.1**	**+2.0**
YUK				pmax			pmax		
comp=Z,450nm,0.7s									
YUK				pmax			pmax		
comp=E,300nm,0.6s									
YUK				pmax			pmax		
comp=Z,720nm,0.6s									
YUK				pmax			pmax		
comp=N,270nm,0.2s									
YUK				smax					
comp=N,700nm,0.7s									
YUK				smax					
comp=E,4μm,0.7s									
YUK				smax					
comp=N,1μm,0.5s									
YUK				smax					
comp=E,4μm,0.5s									
YUK				MLR			MLR		
comp=E,3μm,16.0s									
YUK				MLR			MLR		
comp=Z,3μm,16.0s									
YUK				MLR			MLR		
comp=N,3μm,18.0s									
YUK	**Yuzh-Kuril'sk**	**2.71**	**256**	⇑*i*P			**Pn**	**23 15 55.2**	**+0.6**
YUK				AMB			AMB	23 16 02.0	
comp=N,350nm,0.4s									
YUK				AMB			AMB	23 16 02.0	
comp=N,390nm,0.4s									
YUK				AMB			AMB	23 16 02.0	
comp=N,770nm,0.2s									
YUK				*e*S			**Sn**	**23 16 27.9**	**+1.8**
YUK				A				23 16 35.7	
comp=N,2μm,0.5s									
YUK				A				23 16 35.7	
comp=N,4μm,0.5s									
YUK				AMS			AMS	23 16 58.0	
comp=N,3μm,14.0s									
YUK				AMS			AMS	23 16 58.8	
comp=N,3μm,17.0s									
YUK				AMS			AMS	23 16 58.8	
comp=N,3μm,17.0s									
NEM2	**Nemuro 2**	**3.04**	**244**	P			**Pn**	**23 15 57.5**	**-1.7**
NEM2				*e*S			**Sn**	**23 16 32.1**	**-2.3**
JRA	**Rausu**	**3.25**	**257**	P			**Pn**	**23 16 02.6**	**+0.6**
JRA				*e*S			**Sn**	**23 16 42.3**	**+3.0**
JNK	**Nakash**	**3.63**	**253**	P			**Pn**	**23 16 07.1**	**-0.2**
JNK				*e*S			**Sn**	**23 16 49.7**	**+0.8**
JAK	**Akkeshi**	**3.89**	**245**	P			**Pn**	**23 16 09.9**	**-1.0**
JAK				*e*S			**Sn**	**23 16 54.4**	**-0.9**
JTKR	**Abashiri--Toko**	**4.09**	**261**	P			**Pn**	**23 16 15.3**	**+1.8**
JTKR				*e*S			**Sn**	**23 17 06.4**	**+6.4**
JAR	**Ashorobuto**	**4.38**	**252**	P			**Pn**	**23 16 18.3**	**+0.7**
JAR				*e*S			**Sn**	**23 17 10.4**	**+3.1**
JMP	**Maruseppu**	**4.46**	**262**	P			**Pn**	**23 16 20.8**	**+2.1**
JOB	**Onbets**	**4.50**	**248**	P			**Pn**	**23 16 18.9**	**-0.3**
JOB				*e*S			**Sn**	**23 17 11.0**	**+0.8**
JKK2	**Kamakawa 2**	**4.92**	**262**	P			**Pn**	**23 16 27.2**	**+2.2**
JCH	**Churui**	**4.94**	**246**	P			**Pn**	**23 16 24.8**	**-0.4**
JCH				*e*S			**Sn**	**23 17 20.1**	**-0.9**
ASAJ	**Asahikawa**	**4.98**	**265**	P			**Pn**	**23 16 27.1**	**+1.2**
comp=N,4.7nm,0.3s,baz=77,slow=13,SNR=11									
ASAJ				LR			LR	23 18 34.1	
comp=N,3μm,19.6s,baz=109,slow=40									
ASAJ	**Asahikawa**	**4.98**	**265**	PN			**Pn**	**23 16 27.1**	**+1.3**
ASAJ				pmax			pmax		
comp=Z,5.0nm,0.3s									
ASAJ				MLR			MLR		
comp=Z,3μm,19.6s									
ASAJ	**Asahikawa**	**4.98**	**265**	P			**Pn**	**23 16 28.5**	**+2.7**
YSS	**Yuzh-Sakhalins**	**5.20**	**297**	⇑*i*PN			**Pn**	**23 16 30.0**	**+1.3**
YSS				*e*S			**Sn**	**23 17 30.0**	**+2.7**
YSS				MLR			MLR		
comp=Z,3μm,15.0s									
YSS				MLR			MLR		
comp=E,3μm,16.0s									
YSS	**Yuzh-Sakhalins**	**5.20**	**297**	*e*Pn			**Pn**	**23 16 28.5**	**-0.2**
YSS				*e*Sn			**Sn**	**23 17 25.1**	**-2.2**
YSS	**Yuzh-Sakhalins**	**5.20**	**297**	⇑*i*P			**Pn**	**23 16 30.0**	**+1.3**
YSS				*e*S			**Sn**	**23 17 30.0**	**+2.7**
YSS				eLR			LR	23 18 10.0	
YSS				AMS			AMS	23 18 38.0	
comp=E,3μm,15.0s									
YSS				AMS			AMS	23 18 38.0	
comp=E,3μm,16.0s									
JFR	**Furan**	**5.23**	**255**	P			**Pn**	**23 16 31.2**	**+1.9**
JFR				*e*S			**Sn**	**23 17 28.9**	**+0.6**
JEM	**Erimo**	**5.37**	**242**	P			**Pn**	**23 16 31.4**	**+0.2**
JEM				*e*S			**Sn**	**23 17 32.0**	**+0.3**
ERM	**Erimo**	**5.37**	**242**	*e*Pn			**Pn**	**23 16 31.4**	**+0.3**
ERM				*e*Sn			**Sn**	**23 17 30.7**	**-1.0**
JAB	**Ashibetsu**	**5.38**	**259**	P			**Pn**	**23 16 34.3**	**+3.0**
JWK2	**Keihoku**	**5.42**	**279**	P			**Pn**	**23 16 35.9**	**+4.2**
JNBK	**Urakawa-nobuka**	**5.50**	**246**	P			**Pn**	**23 16 32.4**	**-0.5**
JNBK				*e*S			**Sn**	**23 17 33.4**	**-1.3**
JBT2	**Biratori 2**	**5.53**	**252**	P			**Pn**	**23 16 33.7**	**+0.3**
JEW	**Eniwo**	**6.13**	**255**	P			**Pn**	**23 16 43.4**	**+1.8**
JEW				*e*S			**Sn**	**23 17 54.4**	**+4.0**
JNB	**Noboribetsu**	**6.55**	**252**	P			**Pn**	**23 16 48.0**	**+0.6**
JNB				*e*S			**Sn**	**23 18 00.8**	**+0.1**
JKB	**Kayabe**	**6.81**	**248**	P			**Pn**	**23 16 50.2**	**-0.7**
JKB				*e*S			**Sn**	**23 18 03.2**	**-3.8**
JYM2	**Yakumo 2**	**7.15**	**252**	P			**Pn**	**23 16 56.1**	**+0.6**
JANG	**Nango**	**7.34**	**236**	P			**Pn**	**23 16 55.2**	**-3.0**
JTM	**Tenmabayashi**	**7.36**	**240**	P			**Pn**	**23 16 57.2**	**-1.3**
JSR	**Shiriuchi**	**7.38**	**247**	P			**Pn**	**23 16 58.5**	**-0.2**
SKR	**Severo-Kuril's**	**7.42**	**35**	*e*PN			Px	23 17 17.0	
SKR				pmax			pmax		
comp=Z,50nm,0.5s									
SKR				MLR			MLR		
comp=Z,1μm,14.0s									
JTH	**Tanohata**	**7.43**	**232**	P			**Pn**	**23 16 55.5**	**-3.8**
TYV	**Tymovskoe**	**7.64**	**325**	*e*P			**Pn**	**23 17 03.0**	**+0.7**
TYV				AMB			AMB	23 17 06.5	
comp=Z,44nm,1.0s									
JOSM	**Okushiri--Mats**	**7.77**	**253**	P			**Pn**	**23 17 04.2**	**+0.1**
JOG2	**Oga 2**	**8.66**	**239**	*e*S			**Sn**	**23 18 48.0**	**-4.6**
JYA	**Atsumi**	**9.56**	**233**	*e*S			**Sn**	**23 19 07.9**	**-6.7**
JFK	**Kawauchi**	**9.84**	**224**	*e*S			**Sn**	**23 19 11.6**	**-10**
PEA0B	**Petropavlovsk-**	**9.94**	**30**	*e*Pn			**Pn**	**23 17 34.2**	**+0.6**
PETK	**Petropavlovsk-**	**9.94**	**30**	P			**Pn**	**23 17 32.5**	**-1.1**
comp=Z,0.6nm,0.3s,baz=188,slow=8.5,SNR=12									
PETK				LR			LR	23 21 23.5	
comp=Z,701nm,19.6s,baz=216,slow=38									
PETK	**Petropavlovsk-**	**9.94**	**30**	PN			**Pn**	**23 17 32.5**	**-1.1**
PETK				pmax			pmax		
comp=Z,1.0nm,0.3s									
PETK				MLR			MLR		
comp=Z,701nm,19.6s									
NKL	**Nikolayevsk**	**10.20**	**329**	*e*P			**Pn**	**23 17 36.0**	**-1.2**
NKL				AMB			AMB	23 17 38.5	
comp=Z,70nm,1.2s									
NKL				AMB			AMB	23 17 38.5	
comp=Z,140nm,1.2s									
NKL				AMB			AMB	23 17 39.0	
comp=Z,300nm,3.0s									
NKL				AMB			AMB	23 17 39.0	
comp=Z,400nm,3.0s									
NKL				*e*L				23 20 36.0	
NKL				AMS			AMS	23 21 45.0	
comp=Z,1μm,16.0s									
NKL				AMS			AMS	23 21 45.0	
comp=Z,1μm,16.0s									
PET	**Petropavlovsk**	**10.22**	**33**	*e*PN			**Pn**	**23 17 39.9**	**+2.3**
PET				pmax			pmax		
comp=Z,100nm,18.5s									
PET				pmax			pmax		
comp=Z,15nm,1.0s									
PET				MLR			MLR		
comp=Z,900nm,13.0s									
PET				MLR			MLR		
comp=Z,800nm,15.0s									
PET	**Petropavlovsk**	**10.22**	**33**	*e*Pn			**Pn**	**23 17 37.9**	**+0.4**
HABR	**Khabarovsk**	**10.61**	**296**	PN			**Pn**	**23 17 40.7**	**-2.1**
HABR				pmax			pmax		
comp=E,27nm,1.0s									
HABR				pmax			pmax		
comp=Z,32nm,1.4s									
HABR				pmax			pmax		
comp=N,29nm,1.9s									
MJAR	**Matsushiro Arr**	**11.86**	**230**	P			**Pn**	**23 17 57.6**	**-2.4**
comp=N,1.2nm,0.3s,baz=28,slow=14,SNR=10									
MJAR				LR			LR	23 23 52.0	
comp=N,516nm,18.3s,baz=65,slow=43									
MJAR	**Matsushiro Arr**	**11.86**	**230**	PN			**Pn**	**23 17 57.7**	**-2.3**
MJAR				pmax			pmax		
comp=Z,1.0nm,0.3s									
MJAR				MLR			MLR		
comp=Z,516nm,18.3s									
MAJO	**Matsushiro**	**11.86**	**230**	*e*PN			**Pn**	**23 17 58.0**	**-2.0**
MAT	**Matsushiro**	**11.86**	**230**	P			**Pn**	**23 17 57.5**	**-2.5**
MAT				S			**Sn**	**23 20 17.0**	**+6.1**
KLR	**Kul'dur**	**12.91**	**297**	*e*PN			**Pn**	**23 18 15.8**	**+1.6**
KLR				*e*				23 20 50.0	
KLR				pmax			pmax		
comp=E,67nm,1.4s									
KLR				pmax			pmax		
comp=Z,30nm,1.4s									
KLR				MLR			MLR		
comp=N,900nm,15.0s									
KLR				MLR			MLR		
comp=Z,1μm,15.0s									
MDJ	**Mudanjiang**	**14.16**	**276**	P			**Pn**	**23 18 30.9**	**-0.5**
MDJ				S			**Sn**	**23 21 06.0**	**-0.9**
MDJ				PcP			PcP	23 23 47.9	+0.7
MDJ				PcS			PcS	23 27 23.2	+1.3
MDJ				ScS			ScS	23 30 55.1	+1.3
MDJ				pmax			pmax		
comp=Z,3.0nm,0.7s									
MDJ				pmax			pmax		
comp=Z,45nm,5.4s									
MDJ				LR			LR		
comp=N,510nm,16.0s									
MDJ				LR			LR		
comp=E,610nm,16.0s									
MDJ				LR			LR		
comp=Z,890nm,16.0s									
ZEA	**Zeya**	**17.02**	**310**	*e*P			**Pn**	**23 19 07.7**	**-0.2**
ZEA				AMB			AMB	23 19 18.9	
comp=Z,39nm,1.2s									
ZEA				AMB			AMB	23 19 18.9	
comp=Z,35nm,1.0s									
CN2	**Changchun**	**17.24**	**275**	*e*P			**Pn**	**23 19 10.5**	**-0.3**
CN2				pmax			pmax		
comp=Z,10.0nm,0.6s									
KSRS	**Korea Array**	**17.79**	**253**	P			**Pn**	**23 19 16.6**	**-1.0**
comp=Z,0.3nm,0.3s,baz=58,slow=11,SNR=9.0									
KSRS				LR			LR	23 26 24.9	
comp=Z,604nm,18.3s,baz=64,slow=38									
SEY	**Seymchan**	**18.28**	**4**	*d*iP			**Pn**	**23 19 22.8**	**-0.6**
CBIJ	**Chichi jima**	**18.58**	**201**	LR			LR	23 27 17.9	
comp=Z,114nm,18.1s,baz=88,slow=39									
SNY	**Shenyang**	**19.07**	**270**	⇓P			**Pn**	**23 19 31.3**	**-1.8**
SNY				pmax			pmax		
comp=Z,11nm,1.8s									
SNY				pmax			pmax		
comp=Z,100nm,5.8s									
SNY				LR			LR		
comp=N,370nm,18.0s									
SNY				LR			LR		
comp=E,480nm,18.0s									
SNY				LR			LR		
comp=Z,560nm,20.4s									
YAK	**Yakutsk**	**20.80**	**333**	*e*P			**P**	**23 19 48.8**	**-1.7**
YAK				pmax			pmax		
comp=E,10.0nm,1.3s									
YAK				pmax			pmax		
comp=Z,36nm,0.9s									
YAK				pmax			pmax		
comp=N,14nm,1.2s									
YAK				MLR			MLR		
comp=Z,693nm,16.0s,MS4.1									
YAK				MLR			MLR		
comp=N,412nm,15.0s,MS4.1									
YAK				MLR			MLR		
comp=E,424nm,17.0s,MS4.1									
YAK	**Yakutsk**	**20.80**	**333**	*e*P			**P**	**23 19 49.4**	**-1.0**
comp=E,69nm,0.7s									
BILL	**Bilibino**	**24.93**	**15**	⇓*e*P			**P**	**23 20 30.8**	**-1.1**
BILL				*e*				23 21 06.4	
BILL				pmax			pmax		
comp=Z,12nm,1.2s,mb4.3									
BILL				MLR			MLR		
comp=Z,500nm,14.0s,MS4.2									
BILL	**Bilibino**	**24.93**	**15**	*e*P			**P**	**23 20 29.5**	**-2.4**
comp=Z,5.0nm,0.5s,mb4.3									
BJI	**Beijing**	**24.95**	**271**	P			**P**	**23 20 31.9**	**-0.4**
BJI				pP				23 20 44.0	
BJI				sP			sP	23 20 48.4	-2.0
BJI				S			**S**	**23 24 54.2**	**+1.7**
BJI				sS			sS	23 25 12.3	-1.0
BJI				pmax			pmax		
comp=Z,17nm,1.4s,mb4.4									
BJI				pmax			pmax		
comp=Z,170nm,4.4s									
BJI				LR			LR		
comp=N,320nm,17.0s,MS4.1									
BJI				LR			LR		
comp=E,530nm,20.8s,MS4.1									
BJI				LR			LR		
comp=Z,490nm,21.9s,MS4.0									
NJ2	**Nanjing**	**26.99**	**253**	*e*P			**P**	**23 20 54.6**	**+3.8**
NJ2				pP			pP	23 20 59.1	-4.1
NJ2				PP				23 21 39.8	
NJ2				S			**S**	**23 25 27.0**	**+2.2**
NJ2				sS			sS	23 25 44.0	-1.8
NJ2				pmax			pmax		
comp=Z,30nm,0.7s,mb4.9									
NJ2				pmax			pmax		
comp=Z,110nm,4.6s									
NJ2				LR			LR		
comp=N,520nm,18.2s,MS4.3									
NJ2				LR			LR		
comp=E,440nm,17.3s,MS4.3									
NJ2				LR			LR		
comp=Z,690nm,17.8s,MS4.3									
HHC	**Hu-ho-hao-te**	**27.93**	**275**	*e*P			**P**	**23 20 59.3**	**+0.1**
HHC				sP			sP	23 21 17.6	+0.3
HHC				PP			PP	23 21 49.8	-13
HHC				PcP			PcP	23 24 14.3	+0.8
HHC				S			**S**	**23 25 37.4**	**-2.2**
HHC				ScP			ScP	23 27 50.8	+0.6
HHC				PcS			PcS	23 27 55.6	+0.1
HHC				pmax			pmax		
comp=Z,21nm,0.9s,mb4.8									
HHC				pmax			pmax		
comp=Z,110nm,5.4s									
HHC				LR			LR		
comp=N,510nm,13.2s,MS4.5									
HHC				LR			LR		
comp=E,570nm,12.5s,MS4.5									
HHC				LR			LR		
comp=Z,690nm,13.3s,MS4.4									
BTO	**Baotou**	**29.12**	**276**	*e*P			**P**	**23 21 09.6**	**-0.1**
ULN	**Ulaanbaatar**	**29.21**	**291**	*e*P			**P**	**23 21 10.9**	**+0.4**
ULN				pmax			pmax		
comp=Z,5.0nm,1.2s,mb4.1									
ULN	**Ulaanbaatar**	**29.21**	**291**	*e*P			**P**	**23 21 10.9**	**+0.4**
comp=Z,4.6nm,1.2s,mb4.1									
SONM	**Songino Array**	**29.66**	**291**	P			**P**	**23 21 14.9**	**+0.5**
comp=Z,1.8nm,0.7s,mb3.9,baz=82,slow=7.9,SNR=9.1									
SONM				PcP			PcP	23 24 18.0	+0.3
comp=Z,1.5nm,0.7s,baz=88,slow=3.4,

SONM Songino Array 29.66 291 P **P** **23 21 14.9 +0.5**
SONM 23 24 18.0
SONM pmax pmax
comp=Z,2.0nm,0.7s
SONM MLR MLR
comp=Z,635nm,18.2s
TLY Talaya 30.90 300 *e*P pP 23 21 40.3 +2.5
TLY *e* 23 22 44.3
TLY *e*SS SS 23 28 35.4 -3.6
TLY pmax pmax
comp=Z,5.0nm,1.1s,mb4.3
TLY MLR MLR
comp=Z,707nm,16.0s,MS4.4
XAN Xi'an 32.83 265 P **P** **23 21 41.4 -1.1**
XAN pP pP 23 21 54.0 -1.0
XAN ScS ScS 23 32 06.3 -0.1
XAN pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
XAN pmax pmax
comp=Z,13nm,7.1s
XAN LR LR
comp=N,140nm,16.9s,MS3.8
XAN LR LR
comp=E,89nm,16.9s,MS3.8
XAN LR LR
comp=Z,85nm,18.3s,MS3.5
LZH Lanzhou 35.42 272 *e*P **P** **23 22 06.2 +1.2**
LZH pP pP 23 22 18.9 +1.3
LZH sP sP 23 22 23.0 -0.2
LZH PcP PcP 23 24 34.8 +1.0
LZH *e*S **S** **23 27 36.4 0.0**
LZH sS sS 23 27 57.4 -0.2
LZH SS SS 23 29 58.7 -13
LZH pmax pmax
comp=Z,27nm,1.0s,mb5.1
LZH pmax pmax
comp=Z,140nm,5.2s
LZH LR LR
comp=N,1μm,14.3s
LZH LR LR
comp=Z,1μm,17.9s,MS4.8
TTA Tatalina 35.58 40 *e*P **P** **23 22 05.7 -0.2**
GTA Gaotai 36.79 279 P **P** **23 22 17.7 +1.1**
GTA pP pP 23 22 30.0 +0.7
GTA sP sP 23 22 35.3 +0.4
GTA PP PP 23 23 43.7 +2.8
GTA PcP PcP 23 24 38.9 +1.1
GTA S **S** **23 27 56.7 -0.5**
GTA sS sS 23 28 17.5 -1.0
GTA SS SS 23 30 26.3 -13
GTA pmax pmax
comp=Z,33nm,1.0s,mb5.1
GTA pmax pmax
comp=Z,120nm,7.4s
GTA LR LR
comp=N,260nm,16.9s,MS4.3
GTA LR LR
comp=E,290nm,15.5s,MS4.3
GTA LR LR
comp=Z,430nm,13.7s,MS4.4
RSO Redoubt South 37.07 44 *e*P **P** **23 22 18.9 +0.2**
KDAK Kodiak Island 37.32 48 P **P** **23 22 19.6 -1.3**
comp=Z,24nm,0.9s,mb5.0,baz=335,slow=3.3,SNR=9.6
KDAK Kodiak Island 37.32 48 *ce*P **P** **23 22 19.9 -0.9**
KDAK Kodiak Island 37.32 48 *e*P **P** **23 22 19.8 -1.0**
comp=Z,24nm,1.0s,mb5.0
BPAW Bear Paw Mtn. 37.89 38 *e*P **P** **23 22 25.7 +0.1**
CD2 Chengdu 38.18 265 P **P** **23 22 28.4 -0.1**
CD2 pP pP 23 22 40.6 -0.6
CD2 sP sP 23 22 46.0 -0.8
CD2 PP PP 23 24 00.0 +3.7
CD2 S **S** **23 28 17.8 -0.7**
CD2 sS sS 23 28 38.9 -0.9
CD2 SS SS 23 30 58.4 -9.2
CD2 pmax pmax
comp=Z,30nm,0.8s,mb5.1
CD2 pmax pmax
comp=Z,90nm,5.7s
CD2 LR LR
comp=N,230nm,11.3s
CD2 LR LR
comp=Z,240nm,16.0s,MS4.1
PMR Palmer 38.78 42 *e*P **P** **23 22 32.4 -0.7**
PMR pmax pmax
comp=Z,20nm,0.6s,mb5.0
PMR Palmer 38.78 42 *e*P **P** **23 22 32.4 -0.7**
comp=Z,20nm,0.6s,mb5.0
GYA Guiyang 38.80 257 P **P** **23 22 33.8 +0.1**
GYA pP pP 23 22 48.3 +1.9
GYA sP sP 23 22 53.2 +1.2
GYA PP PP 23 24 07.6 +4.4
GYA PcP PcP 23 24 46.0 +1.8
GYA S **S** **23 28 27.6 -0.3**
GYA ScP ScP 23 28 29.0 +0.7
GYA sS sS 23 28 51.2 +2.0
GYA SS SS 23 31 11.0 -9.2
GYA pmax pmax
comp=Z,20nm,0.8s,mb4.9
GYA pmax pmax
comp=Z,120nm,4.6s
GYA LR LR
comp=N,560nm,17.0s,MS4.5
GYA LR LR
comp=E,450nm,18.4s,MS4.5
GYA LR LR
comp=Z,580nm,16.9s,MS4.5
COLA College 39.26 37 *e*P **P** **23 22 36.8 -0.2**
COLA pmax pmax
comp=Z,20nm,0.8s,mb4.9
COLA College 39.26 37 *e*P **P** **23 22 36.8 -0.3**
comp=Z,20nm,0.8s,mb4.9
QIZ Qiongzhong 41.73 245 P **P** **23 22 56.9 -1.0**
QIZ sP sP 23 23 15.0 -1.4
QIZ S **S** **23 29 12.3 +0.6**
QIZ pmax pmax
comp=Z,24nm,1.4s,mb4.6
QIZ pmax pmax
comp=Z,100nm,6.0s
QIZ LR LR
comp=N,250nm,19.1s
QIZ LR LR
comp=Z,270nm,18.7s,MS4.2
ZALV Zalesovo Beam 41.74 307 P **P** **23 22 56.2 -1.5**
comp=Z,0.4nm,0.3s,mb3.5,baz=90,slow=6.2,SNR=3.3
ZALV PcP PcP 23 24 53.2 0.0
comp=Z,4.9nm,0.7s,baz=80,slow=3.0,SNR=18
ZALV pPcP 23 25 05.8
comp=Z,3.4nm,0.8s,baz=81,slow=3.4,SNR=7.3
ZALV ScP ScP 23 28 39.9 +0.6
comp=Z,0.8nm,0.7s,baz=68,slow=5.3,SNR=3.6
ZALV LR LR 23 41 34.6
comp=Z,301nm,18.1s,MS4.2,baz=306,slow=38
ZALV Zalesovo Beam 41.74 307 P **P** **23 22 56.2 -1.5**
ZALV 23 24 53.3
ZALV 23 25 05.9
ZALV MLR MLR
comp=Z,301nm,18.1s,MS4.2
ZALV Zalesovo Beam 41.74 307 P **P** **23 22 56.2 -1.5**
ZALV PcP PcP 23 24 53.2 0.0
ZALV pPcP 23 25 05.8
ZALV ScP ScP 23 28 39.9 +0.6
ZALV LR LR 23 41 34.6
EGAK Eagle 42.12 37 *e*P **P** **23 22 59.9 -0.7**
comp=Z,29nm,1.0s,mb4.9
KMI Kunming 42.38 258 P **P** **23 23 04.3 +1.1**
KMI pP pP 23 23 17.5 +1.4
KMI sP sP 23 23 23.0 +1.4
KMI PP PP 23 24 46.2 +4.2
KMI S **S** **23 29 21.1 -0.1**
KMI sS sS 23 29 44.0 +1.3
KMI SS SS 23 32 24.0 -7.3
KMI pmax pmax
comp=Z,10.0nm,1.1s,mb4.4
KMI pmax pmax
comp=Z,54nm,4.2s
KMI LR LR
comp=N,160nm,19.0s,MS4.1
KMI LR LR
comp=E,190nm,18.3s,MS4.1
KMI LR LR
comp=Z,210nm,16.1s,MS4.1
DAWY Dawson 42.97 38 *e*P **P** **23 23 07.2 -0.3**
WMQ Urumqi 43.29 292 P **P** **23 23 12.1 +1.7**
WMQ pP pP 23 23 24.4 +1.1
WMQ sP sP 23 23 29.8 +0.9
WMQ PP PP 23 24 55.4 +3.9
WMQ PcP PcP 23 25 01.1 +2.5
WMQ *e*S **S** **23 29 35.8 +1.6**
WMQ SS SS 23 32 43.1 -5.5
WMQ ScS ScS 23 33 05.6 -0.3
WMQ pmax pmax
comp=Z,11nm,1.0s,mb4.5
WMQ pmax pmax
comp=Z,140nm,5.4s
WMQ LR LR
comp=N,370nm,16.8s,MS4.4
WMQ LR LR
comp=E,230nm,18.5s,MS4.4
WMQ LR LR
comp=Z,330nm,19.0s,MS4.3
HYT Haines Junctio 44.45 42 *e*P **P** **23 23 21.0 +1.5**
INK Inuvik 44.67 31 *e*P **P** **23 23 20.9 -0.2**
INK pmax pmax
comp=Z,12nm,0.9s
INK Inuvik 44.67 31 *e*P **P** **23 23 20.9 -0.2**
comp=Z,12nm,0.9s,mb4.7
MK31 Makanchi Array 45.61 298 *e*P **P** **23 23 28.9 0.0**
MK31 *e* 23 25 18.1
MKAR Makanchi Array 45.61 298 P **P** **23 23 28.6 -0.3**
comp=Z,7.0nm,0.6s,mb4.8,baz=75,slow=8.6,SNR=81
MKAR PcP PcP 23 25 06.5 0.0
comp=Z,3.1nm,0.7s,baz=69,slow=6.6,SNR=3.5
MKAR pPcP 23 25 18.8
comp=Z,2.8nm,0.7s,baz=61,slow=5.7,SNR=4.2
MKAR LR LR 23 43 54.4
comp=Z,876nm,18.3s,MS4.7,baz=66,slow=38
MKAR Makanchi Array 45.61 298 P **P** **23 23 28.6 -0.3**
MKAR 23 25 06.5
MKAR 23 25 18.8
MKAR pmax pmax
comp=Z,7.0nm,0.6s
MKAR pmax pmax
comp=Z,3.0nm,0.7s
MKAR MLR MLR
comp=Z,876nm,18.3s
MKAR Makanchi Array 45.61 298 P **P** **23 23 28.6 -0.3**
MKAR PcP PcP 23 25 06.5 0.0
MKAR pPcP 23 25 18.8
MKAR LR LR 23 43 54.4
KURK Kurchatov 46.37 304 *e*P **P** **23 23 33.8 -1.0**
KURK *e* 23 25 08.8
KURK pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
KURK Kurchatov 46.37 304 *e*P **P** **23 23 33.8 -0.9**
comp=Z,7.0nm,1.1s,mb4.5
KURK *e*PcP PcP 23 25 08.8 -0.3
DLBC Dease Lake 48.79 44 *e*P **P** **23 23 54.0 +0.6**
DLBC *e* pP 23 24 05.0 -1.5
CHTO Chiang Mai 49.18 255 *e*P **P** **23 23 57.3 +0.4**
CHTO pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
CHTO Chiang Mai 49.18 255 *e*P **P** **23 23 57.3 +0.4**
comp=Z,4.1nm,0.9s,mb4.5
CMAR Chiang Mai Arr 49.42 255 P **P** **23 23 59.7 +0.9**
comp=Z,1.2nm,0.6s,mb4.1,baz=46,slow=7.3,SNR=9.0
CMAR LR LR 23 47 10.9
comp=Z,243nm,18.5s,MS4.2,baz=273,slow=39
CMAR Chiang Mai Arr 49.42 255 P **P** **23 23 59.7 +0.9**
CMAR pmax pmax
comp=Z,1.0nm,0.6s
CMAR MLR MLR
comp=Z,243nm,18.5s
SHL Shillong 49.77 267 *e*PKP **P** **23 24 02.0 +0.6**
BVAR Borovoye Array 50.17 309 P **P** **23 24 03.9 -0.1**
comp=Z,1.0nm,0.6s,mb4.0,baz=78,slow=7.5,SNR=9.6
BVAR PcP PcP 23 25 22.0 -0.7
comp=Z,3.9nm,0.8s,baz=64,slow=3.4,SNR=8.3
BVAR Borovoye Array 50.17 309 P **P** **23 24 03.9 -0.1**
BVAR 23 25 22.0
BVAR pmax pmax
comp=Z,1.0nm,0.6s
BRVK Borovoye 50.21 309 *c i*P **P** **23 24 03.7 -0.6**
BRVK pmax pmax
comp=Z,9.0nm,1.7s,mb4.5
BRVK Borovoye 50.21 309 *e*P **P** **23 24 04.6 +0.2**
comp=Z,6.1nm,0.9s,mb4.6
ULHL Ulahol 51.51 295 P **P** **23 24 14.8 +0.6**
SNR=11
TKM2 Tokmak 2 51.59 296 P **P** **23 24 15.4 +0.6**
SNR=5.7
TKM2 Tokmak 2 51.59 296 *e*P **P** **23 24 14.7 -0.2**
TKM2 pmax pmax
comp=Z,18nm,1.4s,mb4.8
TKM2 Tokmak 2 51.59 296 *e*P **P** **23 24 14.7 -0.1**
comp=Z,18nm,1.4s,mb4.8
TAPN Taplejung 51.67 272 *e*P **P** **23 24 14.9 -0.7**
comp=Z,22nm,0.7s,mb5.2
USP Ospenovka 52.12 297 P **P** **23 24 19.3 +0.5**
SNR=7.1
KBK Karagaybulak 52.14 296 P **P** **23 24 19.7 +0.8**
SNR=7.5
ODAN Odare 52.19 272 *e*P **P** **23 24 19.2 -0.3**
comp=Z,7.7nm,0.5s,mb4.9
KZA Kyzart 52.23 295 P **P** **23 24 21.2 +1.5**
SNR=11
JIRN Jiri 52.56 274 *e*P **P** **23 24 22.3 0.0**
GUN Gumba 52.63 274 *e*P **P** **23 24 22.8 0.0**
comp=Z,65nm,0.8s,mb5.6
RAMN Ramite 52.70 273 *e*P **P** **23 24 22.8 -0.5**
EKS2 Erkin-Say 52.88 296 P **P** **23 24 25.1 +0.6**
SNR=9.0
EKS2 Erkin-Say 52.88 296 *e*P **P** **23 24 24.7 +0.3**
comp=Z,12nm,1.2s,mb4.7
EKS2 *e*PcP PcP 23 25 33.2 +0.2
KSH Kashi 53.06 292 P **P** **23 24 29.8 +4.0**
KSH pP pP 23 24 42.8 +3.8
KSH sP sP 23 24 47.7 +3.2
KSH PcP PcP 23 25 37.5 +3.8
KSH PP PP 23 26 31.2 +5.5
KSH ScP ScP 23 29 29.1 +2.0
KSH PcS PcS 23 29 34.1 +1.6
KSH S **S** **23 31 56.5 +4.3**
KSH ScS ScS 23 34 12.1 +1.0
KSH SS SS 23 35 35.7 +4.2
KSH pmax pmax
comp=Z,20nm,1.4s,mb4.8
KSH pmax pmax
comp=Z,81nm,4.2s
KSH LR LR
comp=N,310nm,13.6s
KSH LR LR
comp=E,200nm,8.0s
KSH LR LR
comp=Z,400nm,14.0s,MS4.6
KKN Kakani 53.13 274 *e*P **P** **23 24 26.3 -0.2**
comp=Z,50nm,0.9s,mb5.4
PKI Pulchoki 53.17 274 *e*P **P** **23 24 26.4 -0.4**
PKIN Phulchoki 53.18 274 *e*P **P** **23 24 27.1 +0.3**
comp=Z,18nm,0.7s,mb5.1
AML Almayashu 53.20 296 P **P** **23 24 28.0 +1.2**
SNR=5.7
DMN Daman 53.36 274 *e*P **P** **23 24 28.1 -0.1**
comp=Z,43nm,0.7s,mb5.5
RES Resolute Bay 53.51 17 *e*P **P** **23 24 28.4 -0.2**
RES pmax pmax
comp=Z,38nm,0.9s,mb5.3
RES Resolute Bay 53.51 17 *e*P **P** **23 24 28.4 -0.2**
comp=Z,38nm,0.9s,mb5.3
SVE Sverdlovsk 53.56 317 *e*P **P** **23 24 28.0 -1.2**
SVE pmax pmax
comp=Z,11nm,1.4s,mb4.6
SVE MLR MLR
comp=Z,442nm,17.0s,MS4.6
YKA Yellowknife Ar 54.02 35 P **P** **23 24 32.2 -0.3**
comp=Z,9.0nm,0.9s,mb4.7,baz=299,slow=7.0,SNR=29
YKA pP pP 23 24 43.5 -2.1
comp=Z,5.7nm,0.8s,baz=299,slow=7.1,SNR=12
YKA Yellowknife Ar 54.02 35 P **P** **23 24 32.2 -0.3**
YKA *PP pP 23 24 43.5 -2.2
YKA pmax pmax
comp=Z,9.0nm,0.9s
YKA Yellowknife Ar 54.02 35 P **P** **23 24 32.2 -0.3**
YKA pP pP 23 24 43.5 -2.1
ARU Arti 54.76 317 *d i*P **P** **23 24 37.5 -0.4**
ARU *e* 23 26 37.2
ARU S **S** **23 32 17.4 +2.7**
ARU SS SS 23 35 57.3 -0.3
ARU pmax pmax
comp=Z,16nm,1.7s,mb4.8
ARU MLR MLR
comp=Z,366nm,16.0s,MS4.5
ARU Arti 54.76 317 *e*P **P** **23 24 36.8 -1.2**
comp=Z,28nm,1.7s,mb5.0
ARU PcP PcP 23 25 39.6 -0.3
NLWA Neilton Lookou 57.09 54 ⇓P **P** **23 24 55.0 +0.3**
baz=57
NLWA Neilton Lookou 57.09 54 *e*P **P** **23 24 55.2 +0.5**
comp=Z,14nm,1.0s,mb4.9
ABKAR Akbulak array 57.74 309 *e*P **P** **23 24 58.7 -0.6**
comp=Z,4.8nm,0.4s,mb4.9
JCW Jim Creek 57.77 52 *e*P **P** **23 24 59.7 +0.2**
AKTO Aktyubinsk 58.15 311 LR LR 23 52 13.1
comp=Z,383nm,19.1s,MS4.5,baz=108,slow=38
D05A Enumclaw 58.28 53 ⇑P **P** **23 25 03.5 +0.4**
baz=58
F04A Amboy 58.72 55 ⇓P **P** **23 25 06.6 +0.4**
baz=58
B08A Colville Reser 59.12 51 ⇓P **P** **23 25 08.5 -0.4**
baz=59,SNR=6.5
EDM Edmonton 59.51 44 *e*P **P** **23 25 11.6 +0.1**
H04A Detroit Lake 59.55 56 ⇓P **P** **23 25 12.0 0.0**
baz=59
OD2 Odessa Site #2 60.02 52 *e*P **P** **23 25 14.9 -0.2**
RSW Rattlesnake Hi 60.09 53 *e*P **P** **23 25 15.8 +0.1**
D08A Wollman Farm, 60.09 52 ⇑P **P** **23 25 15.5 -0.1**
baz=60
G06A Carlson Farm, 60.15 55 ⇑P **P** **23 25 16.2 +0.1**
baz=60
NEW Newport 60.39 50 *e*P **P** **23 25 17.6 -0.1**
NEW *e* 23 26 03.0
NEW pmax pmax
comp=Z,9.0nm,0.9s
NEW Newport 60.39 50 *e*P **P** **23 25 17.6 -0.1**
comp=Z,8.9nm,0.9s,mb4.8
NEW *e*PcP PcP 23 26 03.0 +0.7
KBL Kabul 60.42 291 *e*P **P** **23 25 17.8 -0.3**
KBL *e* 23 26 02.5
KBL pmax pmax
comp=Z,18nm,0.9s,mb5.1
KBL Kabul 60.42 291 *e*P **P** **23 25 17.8 -0.3**
comp=Z,18nm,0.9s,mb5.1
KBL *e*PcP PcP 23 26 02.5 -0.1
E09A Wood Farm, Sta 60.84 52 ⇓P **P** **23 25 20.6 -0.1**
baz=61
YBH Yreka Blue Hor 60.93 59 *e*P **P** **23 25 22.5 +1.1**
YBH pmax pmax
comp=Z,7.0nm,1.1s
YBH Yreka Blue Hor 60.93 59 *e*P **P** **23 25 22.5 +1.1**
comp=Z,6.7nm,1.1s,mb4.7
G08A Pilot Rock 61.09 54 ⇑P **P** **23 25 22.5 +0.1**
baz=61
C11A Tepee Creek (N 61.11 50 ⇑P **P** **23 25 22.4 -0.2**
baz=61
K05A Summer Lake 61.45 57 ⇓P **P** **23 25 25.3 +0.4**
baz=61,SNR=7.7
A13A Flathead Natio 61.46 48 ⇑P **P** **23 25 24.5 -0.4**
baz=61
C12B Naegeli Ranch, 61.62 50 ⇓P **P** **23 25 25.8 -0.2**
baz=61
WALA Waterton Lakes 61.66 48 *e*P **P** **23 25 26.5 +0.3**
comp=Z,0.4nm,1.0s,mb3.5
F10A Beach Ranch, E 61.67 52 ⇓P **P** **23 25 26.2 -0.1**
baz=62
H08A Prairie City 61.70 54 ⇓P **P** **23 25 26.6 0.0**
baz=62
WDC Whiskeytown Da 61.70 60 *e*P **P** **23 25 25.9 -0.8**
WDC pmax pmax
comp=Z,8.0nm,1.2s,mb4.7
WDC Whiskeytown Da 61.70 60 *e*P **P** **23 25 25.9 -0.8**
comp=Z,8.0nm,1.2s,mb4.7
B13A Whitefish 61.77 49 ⇑P **P** **23 25 27.1 +0.1**
baz=62,SNR=16
G09A Cove 61.77 53 ⇓P **P** **23 25 27.3 +0.3**
baz=62
BSMT Bassoo Peak 61.91 49 *e*P **P** **23 25 28.6 +0.7**
A14A Double T Ranch 61.97 48 ⇑P **P** **23 25 27.9 -0.4**
baz=62,SNR=7.7
JOF Joensuu 61.97 333 *e*P **P** **23 25 26.3 -1.8**
JOF pmax pmax
comp=Z,2.0nm,0.4s,mb4.6
JOF Joensuu 61.97 333 *ep* **P** **23 25 26.3 -1.8**
comp=Z,2.2nm,0.4s,mb4.6
C13A Hot Springs 62.12 49 ⇓P **P** **23 25 28.9 -0.5**
baz=62
G10A Bishop Farm, J 62.13 53 ⇑P **P** **23 25 29.4 -0.1**
baz=62
H09A Durkee 62.20 54 ⇑P **P** **23 25 30.0 +0.1**
baz=62
JTMT Jette 62.24 49 *e*P **P** **23 25 30.8 +0.7**
MOD Modoc 62.28 57 *e*P **P** **23 25 31.2 +0.7**
comp=Z,6.4nm,0.9s,mb4.8
YBMT Yellow Bay 62.32 49 *e*P **P** **23 25 31.2 +0.6**
F11A Grangeville 62.32 52 ⇑P **P** **23 25 30.3 -0.5**
baz=62,SNR=7.3
A15A Johnson Ranch, 62.33 47 ⇑P **P** **23 25 29.9 -0.8**
baz=62,SNR=7.0
E12A Beaver Dam Sad 62.33 51 ⇑P **P** **23 25 30.5 -0.3**
baz=62
B14A Marquette Ranc 62.41 48 ⇓P **P** **23 25 31.1 -0.2**
baz=62
J08A Circle Bar Ran 62.50 55 ⇓P **P** **23 25 31.9 -0.1**
baz=62,SNR=5.3
C14A Swan Lake 62.52 49 ⇓P **P** **23 25 31.7 -0.3**
baz=62
D13A Huson 62.54 50 ⇓P **P** **23 25 31.7 -0.4**
baz=62,SNR=9.8
SWMT Swartz Lake 62.54 49 *e*P **P** **23 25 32.6 +0.5**
G11A Walters Elk Ra 62.55 52 ⇓P **P** **23 25 32.0 -0.3**
baz=62
I09A Lost Marbles R 62.56 54 ⇓P **P** **23 25 32.4 0.0**
baz=62
H10A Noah's Angus R 62.77 53 ⇑P **P** **23 25 33.4 -0.3**
baz=63,SNR=7.0
B15A Bradely Ranch, 62.82 48 ⇓P **P** **23 25 33.2 -0.8**
baz=63,SNR=5.5
SUMG Summit 62.83 3 *e*P **P** **23 25 33.2 -0.5**
comp=Z,20nm,1.0s,mb5.2
SUMG Summit 62.83 3 *i*P **P** **23 25 33.1 -0.6**
comp=Z,16nm,1.0s,mb5.1
F12A Elk City 62.91 52 ⇓P **P** **23 25 34.9 +0.2**
baz=63
WVOR Wild Horse Val 62.96 56 *e*P **P** **23 25 35.3 +0.2**
WVOR *e* pP 23 25 46.8 -1.7
WVOR *e* 23 26 12.1
WVOR pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
WVOR Wild Horse Val 62.96 56 *e*P **P** **23 25 35.2 +0.2**
comp=Z,4.8nm,0.9s,mb4.6
WVOR *e* pP 23 25 46.8 -1.7
WVOR *e*PcP PcP 23 26 12.1 -0.6
SLMT Seeley Lake 62.97 49 *e*P **P** **23 25 35.1 0.0**
MSO Missoula 62.98 50 *e*P **P** **23 25 35.3 +0.2**
comp=Z,9.6nm,1.0s,mb4.9
I10A Payette 63.04 54 ⇓P **P** **23 25 35.8 +0.2**
baz=63
D14A Greenough 63.06 50 ⇓P **P** **23 25 35.2 -0.5**
baz=63,SNR=17
E13A Victor 63.08 50 ⇑P **P** **23 25 35.5 -0.3**
baz=63
H11A Donnelly 63.12 53 ⇑P **P** **23 25 35.7 -0.3**
baz=63
C15A Salmond Ranch, 63.12 49 ⇓P **P** **23 25 36.0 0.0**
baz=63
B16A M & M Farms, S 63.21 48 ⇓P **P** **23 25 35.9 -0.7**
baz=63,SNR=7.6
G12A Big Creek, Yel 63.25 52 ⇓P **P** **23 25 36.5 -0.4**
baz=63
CHMT Chamberlain Mo 63.30 50 *e*P **P** **23 25 37.3 0.0**
F13A Darby 63.40 51 ⇑P **P** **23 25 37.4 -0.4**
baz=63
E14A Clinton 63.48 50 ⇓P **P** **23 25 38.1 -0.3**
baz=63
C16A Fuhringer Ranc 63.57 48 ⇓P **P** **23 25 39.0 0.0**
baz=63,SNR=9.9
D15A Lincoln 63.62 49 ⇑P **P** **23 25 39.1 -0.3**
baz=63
I11A Placerville 63.63 54 ⇑P **P** **23 25 39.2 -0.2**
baz=63
B17A L&G Farms, Che 63.76 47 ⇓P **P** **23 25 39.8 -0.4**
baz=64
K10A MacKenzie Ranc 63.79 55 ⇓P **P** **23 25 40.9 +0.4**
baz=64
A18A Metzger Ranch, 63.86 46 ⇓P **P** **23 25 40.1 -0.8**
baz=64,SNR=6.0
H12A Diamond D Ranc 63.87 52 ⇓P **P** **23 25 41.2 +0.2**
baz=64
FFC Flin Flon 63.88 38 *ce*P **P** **23 25 41.5 +0.6**

FFC **Flin Flon** 63.88 38 eP P 23 25 40.9 0.0
comp=Z,15nm,1.0s,mb5.0
G13A **Cobalt** 63.88 52 ⇓P P 23 25 40.3 -0.7
baz=64,SNR=10
E15A **Deer Lodge** 63.94 50 ⇓P P 23 25 41.0 -0.4
baz=64,SNR=9.9
MFID **Camas Ranch** 64.01 54 ⇓P P 23 25 42.0 0.0
baz=64
D16A **Dana Ranch, Ca** 64.15 49 ⇑P P 23 25 42.6 -0.2
baz=64,SNR=9.9
PAHR **Pah Rah Range** 64.16 59 eP P 23 25 42.5 -0.5
comp=Z,13nm,1.2s,mb4.8
I12A **Atlanta** 64.17 53 ⇑P P 23 25 42.8 -0.2
baz=64,SNR=9.3
WCN **Washoe City** 64.18 60 ⇓P P 23 25 43.4 +0.2
baz=64
C17A **Wharram Farm,** 64.19 48 ⇑P P 23 25 42.5 -0.6
baz=64,SNR=9.1
H13A **Challis** 64.19 52 ⇓P P 23 25 42.8 -0.4
baz=64
B18A **Beardsley Farm** 64.23 47 ⇓P P 23 25 43.2 -0.1
baz=64,SNR=6.5
K11A **Parker Ranch,** 64.28 55 ⇓P P 23 25 43.7 -0.1
baz=64
FCC **Fort Churchill** 64.30 31 eP P 23 25 42.8 -0.8
F15A **Butte** 64.38 50 ⇓P P 23 25 44.1 -0.3
baz=64,SNR=12
E16A **East Helena** 64.39 49 ⇑P P 23 25 44.5 +0.1
baz=64
LRM **Limekiln Ridge** 64.42 50 eP P 23 25 45.0 +0.5
L10A **Juniper Basin** 64.45 55 ⇑P P 23 25 44.9 0.0
baz=64
EGMT **Eagleton** 64.47 47 ⇑P P 23 25 44.6 -0.3
baz=64
EGMT **Eagleton** 64.47 47 eP P 23 25 44.9 0.0
comp=Z,25nm,1.0s,mb5.2
J12A **Stokes Ranch,** 64.53 54 ⇑P P 23 25 45.5 +0.2
baz=64
D17A **Six Diamond Ra** 64.53 48 ⇓P P 23 25 44.8 -0.6
baz=64,SNR=6.7
DLMT **Dillon** 64.62 51 eP P 23 25 46.8 +0.9
comp=Z,14nm,1.4s,mb4.8
H14A **Leadore** 64.66 52 ⇓P P 23 25 46.2 0.0
baz=64
I13A **Wildhorse Cree** 64.67 53 ⇓P P 23 25 46.6 +0.3
baz=64
HLID **Hailey** 64.72 53 ⇑P P 23 25 46.5 -0.1
baz=64
HLID **Hailey** 64.72 53 eP P 23 25 47.1 +0.5
comp=Z,3.0nm,0.8s,mb4.4
HLID ePcP PcP 23 26 20.6 +0.7
FINES **FINESS Array B** 64.73 334 P P 23 25 44.5 -1.9
comp=Z,2.9nm,0.6s,mb4.5,baz=42,slow=7.6,SNR=15
FINES LR LR 23 57 19.7
comp=Z,244nm,18.1s,MS4.4,baz=313,slow=39
FINES **FINESS Array B** 64.73 334 P P 23 25 44.5 -1.9
FINES pmax pmax
comp=Z,3.0nm,0.6s
FINES MLR MLR
comp=Z,244nm,18.1s
FINES **FINESS Array B** 64.73 334 P P 23 25 44.5 -1.9
FINES LR LR 23 57 19.7
M10A **I.L. Ranch, Tu** 64.76 56 ⇓P P 23 25 47.4 +0.5
baz=65
G15A **Dillon** 64.80 51 ⇑P P 23 25 47.0 -0.1
baz=65,SNR=6.5
L11A **Cat Creek Ranc** 64.82 55 ⇓P P 23 25 47.6 +0.3
baz=65,SNR=6.1
WAKR **Walker** 64.87 60 eP P 23 25 47.8 +0.2
E17A **Martinsdale** 64.88 49 ⇑P P 23 25 47.5 0.0
baz=65,SNR=12
F16A **Kennard Place,** 64.89 50 ⇓P P 23 25 47.6 -0.1
baz=65
J13A **Cove Ranch, Pi** 64.96 53 ⇑P P 23 25 48.3 +0.1
baz=65
D18A **Linhart Farms,** 64.97 48 ⇑P P 23 25 48.0 -0.2
baz=65
BOZ **Bozeman (W)** 64.97 50 ⇓P P 23 25 48.1 -0.2
baz=65
BOZ **Bozeman (W)** 64.97 50 eP P 23 25 48.6 +0.4
BOZ e pP 23 26 00.9 -0.8
BOZ pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
BOZ **Bozeman (W)** 64.97 50 eP P 23 25 48.6 +0.4
comp=Z,6.3nm,0.8s,mb4.7
BOZ e pP 23 26 00.9 -0.8
K12A **Draper Farm, C** 65.02 54 ⇑P P 23 25 48.6 0.0
baz=65
I14A **Mackay** 65.04 52 ⇓P P 23 25 48.7 0.0
baz=65,SNR=5.1
H15A **Lima** 65.06 51 ⇓P P 23 25 48.8 0.0
baz=65
G16A **Moss Hill, Enn** 65.14 50 ⇑P P 23 25 49.1 -0.2
baz=65,SNR=11
M11A **Holland Ranch,** 65.25 56 ⇑P P 23 25 50.5 +0.4
baz=65
L12A **House Creek Ra** 65.26 55 ⇑P P 23 25 50.4 +0.2
baz=65
E18A **Harlowton** 65.31 48 ⇑P P 23 25 50.5 +0.1
baz=65,SNR=5.1
F17A **Fitzpatrick Pl** 65.33 49 ⇑P P 23 25 50.7 +0.1
baz=65,SNR=5.8
J14A **Carey** 65.38 53 ⇓P P 23 25 51.6 +0.7
baz=65,SNR=9.3
OBN **Obninsk** 65.49 324⇑eP P 23 25 50.7 -0.7
OBN e*PP pP 23 26 03.8 -1.1
OBN 23 26 21.0
OBN pmax pmax
comp=Z,17nm,1.7s,mb4.8
OBN MLR MLR
comp=Z,200nm,16.0s,MS4.4
NVAR **Mina Array Bea** 65.61 60 P P 23 25 52.9 +0.5
comp=Z,2.9nm,1.0s,mb4.3,baz=284,slow=6.9,SNR=15
NVAR pP pP 23 26 05.0 -1.0
comp=Z,1.9nm,0.7s,baz=276,slow=7.5,SNR=6.7
NVAR **Mina Array Bea** 65.61 60 P P 23 25 52.9 +0.4
NVAR pP pP 23 26 05.0 -1.0
G17A **Pierce Place,** 65.66 50 ⇓P P 23 25 53.4 +0.7
baz=65
M12A **Wells** 65.78 55 ⇓P P 23 25 53.8 +0.3
baz=66
H16A **Russell Place,** 65.78 51 ⇑P P 23 25 53.7 +0.3
baz=66
F18A **Big Timber** 65.84 49 ⇓P P 23 25 54.0 +0.2
baz=66,SNR=8.7
WRAB **Tennant Creek** 65.85 196 eP P 23 25 53.9 -0.1
WRA **Warramunga Arr** 65.86 196 P P 23 25 53.7 -0.4
comp=Z,2.9nm,0.8s,mb4.4,baz=15,slow=6.8,SNR=13
WRA pP pP 23 26 08.9 +1.3
comp=Z,7.1nm,0.9s,baz=17,slow=6.8,SNR=11
WRA **Warramunga Arr** 65.86 196 P P 23 25 53.7 -0.4
WRA *PP pP 23 26 08.9 +1.3
WRA pmax pmax
comp=Z,3.0nm,0.8s
WRA **Warramunga Arr** 65.86 196 P P 23 25 53.7 -0.4
WRA pP pP 23 26 08.9 +1.3
L13A **Double Diamond** 65.92 54 ⇑P P 23 25 54.7 +0.4
baz=66
GCMT **Greycliff** 65.94 49 eP P 23 25 55.3 +0.8
comp=Z,3.1nm,0.6s,mb4.5
J15A **Blackfoot** 65.95 52 ⇑P P 23 25 54.7 +0.1
baz=66
P10A **Eureka** 65.99 58 ⇓P P 23 25 55.2 +0.4
baz=66
N12A **Clover Valley,** 66.06 56 ⇓P P 23 25 55.7 +0.4
baz=66
K14A **Jones Ranch, D** 66.07 53 ⇓P P 23 25 55.6 +0.3
baz=66
O11A **Cowboy Ranch,** 66.15 57 ⇑P P 23 25 56.3 +0.4
baz=66
I16A **Newdale** 66.17 51 ⇑P P 23 25 56.4 +0.4
baz=66
K15A **Arbon** 66.35 53 ⇓P P 23 25 57.6 +0.5
baz=66
L14A **Malta** 66.36 54 ⇑P P 23 25 57.6 +0.4
baz=66
IMW **Indian Meadow** 66.47 51 eP P 23 25 58.5 +0.7
comp=Z,6.3nm,0.8s,mb4.7
J16A **Bone** 66.49 52 ⇓P P 23 25 58.1 +0.1
baz=66
Q10A **Clear Creek Ra** 66.53 58 ⇓P P 23 25 58.5 +0.2
baz=66
N13A **Wendover, West** 66.55 55 ⇑P P 23 25 58.8 +0.3
baz=66
RLMT **Red Lodge** 66.59 49 ⇓P P 23 25 59.0 +0.4
baz=66
RLMT **Red Lodge** 66.59 49 eP P 23 25 59.5 +0.9
comp=Z,20nm,1.4s,mb5.0
RRI2 **Red Ridge** 66.61 52 eP P 23 26 00.0 +1.2
comp=Z,10nm,0.9s,mb4.9
M14A **Sheep Mountain** 66.63 54 ⇓P P 23 25 59.3 +0.3
baz=66
TPAW **Teton Pass** 66.72 51 eP P 23 26 00.8 +1.3
comp=Z,12nm,0.9s,mb4.9
VES **Vestal, Richgr** 66.75 62 ⇑P P 23 25 59.7 -0.1
baz=67
K16A **Soda Springs** 66.79 52 ⇓P P 23 26 00.3 +0.4
baz=67
LOHW **Long Hollow** 66.83 51 eP P 23 26 01.3 +1.1
comp=Z,9.3nm,1.2s,mb4.7
REDW **Red Top Meadow** 66.86 51 eP P 23 26 01.6 +1.2
comp=Z,11nm,1.1s,mb4.8
R10A **Warm Springs** 66.92 59 ⇓P P 23 26 01.2 +0.3
baz=67
S10A **Tonopah Range,** 66.98 59 ⇓P P 23 26 01.7 +0.5
baz=67
DGMT **Dagmar** 67.00 44 ⇓P P 23 26 00.7 -0.5
baz=67
P12A **McGill** 67.01 57 ⇓P P 23 26 01.3 -0.1
baz=67
VSR **Storozhevoye** 67.05 320 eP P 23 25 59.8 -1.7
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
VSR pmax pmax
comp=N,2.0nm,0.4s
VSR pmax pmax
comp=E,2.0nm,0.4s
N14A **Grayback Hills** 67.14 55 ⇑P P 23 26 02.6 +0.4
baz=67
M15A **Larsen Ranch,** 67.18 54 ⇑P P 23 26 02.2 -0.2
baz=67,SNR=7.5
I18A **Diamond G Ranc** 67.21 51 ⇑P P 23 26 02.9 +0.3
baz=67
ISA **Isabella** 67.25 62 eP P 23 26 01.5 -1.5
SPUT **South Promonto** 67.28 54 eP P 23 26 03.2 +0.2
comp=E,8.9nm,1.1s,mb4.7
R11A **Troy Canyon, C** 67.32 58 ⇑P P 23 26 03.5 +0.1
baz=67
Q12A **Willow Creek R** 67.33 57 ⇑P P 23 26 03.6 +0.1
baz=67
J18A **Kendall Valley** 67.42 51 ⇓P P 23 26 03.5 -0.4
baz=67
N15A **Stansbury Isla** 67.50 54 ⇓P P 23 26 04.7 +0.2
baz=67
BSC **Santa Cruz Isl** 67.57 64 ⇓P P 23 26 05.8 +0.8
baz=67
HWUT **Hardware Ranch** 67.59 53 eP P 23 26 05.7 +0.6
comp=E,6.5nm,1.1s,mb4.6
MPMC **Manual Prospec** 67.61 61 ⇑P P 23 26 05.5 +0.3
baz=67
FURC **Furnace Creek,** 67.74 60 ⇓P P 23 26 06.6 +0.5
baz=68
K18A **Toltan Ranch,** 67.78 52 ⇓P P 23 26 06.2 0.0
baz=68
DUG **Dugway** 67.78 55 ⇓P P 23 26 06.0 -0.2
baz=68
DUG **Dugway** 67.78 55 eP P 23 26 06.1 -0.2
DUG pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
DUG **Dugway** 67.78 55 eP P 23 26 06.1 -0.2
comp=Z,6.4nm,1.0s,mb4.6
BW06 **Boulder Array** 67.97 51 ⇓P P 23 26 06.9 -0.5
baz=68
BW06 **Boulder Array** 67.97 51 eP P 23 26 07.5 +0.1
comp=Z,5.8nm,1.0s,mb4.6
PDAR **Pinedale Array** 67.97 51 P P 23 26 06.6 -0.8
comp=Z,3.1nm,0.8s,mb4.4,baz=304,slow=3.2,SNR=25
PDAR LR LR 23 57 13.6
comp=Z,76nm,20.2s,MS3.9,baz=129,slow=37
P14A **Drum Mountains** 68.02 56 ⇓P P 23 26 08.0 +0.2
baz=68
U10A **Ash Meadows, A** 68.10 60 ⇑P P 23 26 09.0 +0.7
baz=68
AFI **Afiamalu** 68.16 139 LR LR 23 49 28.7
comp=Z,152nm,21.4s,MS4.2,baz=313,slow=30
M17A **Scullys Gap (B** 68.19 53 ⇑P P 23 26 08.8 0.0
baz=68
T11A **Corn Creek, Al** 68.25 59 ⇑P P 23 26 09.6 +0.3
baz=68
Q14A **Sevier Lake (B** 68.29 56 ⇓P P 23 26 09.8 +0.3
baz=68
K19A **Absolon Red Bu** 68.32 51 ⇓P P 23 26 09.3 -0.3
baz=68
N17A **Moffit Pass** 68.44 53 ⇓P P 23 26 10.4 0.0
baz=68
L19A **Farson** 68.52 52 ⇓P P 23 26 10.6 -0.2
baz=68
M18A **Lyman** 68.56 53 ⇑P P 23 26 11.0 -0.1
baz=68
K20A **Yellowstone Ra** 68.71 51 ⇓P P 23 26 11.6 -0.5
baz=68
S13A **Holt Ranch, En** 68.86 58 ⇓P P 23 26 13.3 +0.3
baz=69
O17A **Robinson Place** 68.99 54 ⇑P P 23 26 14.1 +0.3
baz=69
IZAR **Zarasai** 69.03 330 eP P 23 26 13.9 +0.2
IZAR AMB AMB 23 26 15.1
comp=Z,4.2nm,1.2s,mb4.3
CCUT **Cedar City** 69.18 58 eP P 23 26 15.7 +0.7
comp=Z,10nm,1.3s,mb4.6
IDID **Didziasalis** 69.18 329 eP P 23 26 14.8 0.0
IDID AMB AMB 23 26 16.1
comp=Z,6.7nm,0.9s,mb4.6
T13A **Saint George** 69.19 58 ⇑P P 23 26 15.5 +0.3
baz=69
ISAL **Salakas** 69.21 330 eP P 23 26 15.0 +0.1
ISAL AMB AMB 23 26 16.3
comp=Z,6.1nm,1.0s,mb4.5
NB2 **NORSAR Subarra** 69.26 340 P P 23 26 13.5 -1.6
comp=Z,5.1nm,0.7s,mb4.6,baz=28,slow=6.2
NOA **NORSAR Array B** 69.26 340 P P 23 26 13.9 -1.2
comp=Z,3.2nm,0.5s,mb4.5,baz=29,slow=6.5,SNR=29
NOA LR LR 00 03 09.1
comp=Z,121nm,18.8s,MS4.2,baz=15,slow=42
IIGN **Ignalina** 69.34 329 eP P 23 26 15.8 +0.1
IIGN AMB AMB 23 26 17.2
comp=Z,6.3nm,0.9s,mb4.5
R15A **Junction** 69.39 56 ⇑P P 23 26 16.5 +0.2
baz=69
GOF **Gofitskoye** 69.39 313⇑iP P 23 26 10.6 -5.6
GOF pmax pmax
comp=Z,60nm,0.8s,mb5.6
N19A **John Jarvie Ra** 69.42 53 ⇓P P 23 26 16.3 -0.2
baz=69
V12A **Nelson** 69.46 60 ⇑P P 23 26 17.2 +0.4
baz=69
P17A **Butcher Ranch,** 69.46 55 ⇓P P 23 26 16.7 0.0
baz=69
U13A **Pakoon Wash** 69.55 59 ⇓P P 23 26 17.5 +0.2
baz=69,SNR=7.7
ASAR **Alice Springs** 69.57 195 P P 23 26 17.9 +0.5
comp=Z,1.5nm,0.7s,mb4.0,baz=11,slow=5.9,SNR=9.2
ASAR pP pP 23 26 32.9 +1.9
comp=Z,3.1nm,0.7s,baz=15,slow=5.8,SNR=9.9
ASAR **Alice Springs** 69.57 195 P P 23 26 17.9 +0.5
ASAR *PP pP 23 26 32.9 +1.9
ASAR pmax pmax
comp=Z,2.0nm,0.7s
GMRC **Granite Mounta** 69.58 61 ⇑P P 23 26 17.5 0.0
baz=69
M20A **Sweetwater, Wa** 69.58 52 ⇑P P 23 26 17.4 0.0
baz=69
P18A **Preston Nutter** 69.65 54 ⇓P P 23 26 17.9 0.0
baz=69
T14A **Hurricane** 69.66 58 ⇑P P 23 26 18.1 +0.1
baz=70
ULM **Lac du Bonnet** 69.67 38 P P 23 26 16.6 -1.2
comp=Z,4.0nm,0.7s,mb4.5,baz=284,slow=5.7,SNR=3.3
S15A **Panguitch** 69.69 57 ⇓P P 23 26 18.7 +0.5
baz=70
L21A **Rawlins** 69.71 51 ⇓P P 23 26 18.0 -0.2
baz=70
R16A **Teasdale** 69.81 56 ⇑P P 23 26 19.6 +0.7
baz=70
SRU **San Rafael** 69.83 55 ⇑P P 23 26 18.8 -0.2
baz=70
SRU **San Rafael** 69.83 55 eP P 23 26 19.3 +0.3
SRU pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
SRU **San Rafael** 69.83 55 eP P 23 26 19.2 +0.2
comp=Z,7.9nm,0.9s,mb4.6
PALK **Pallekele** 69.89 260 P P 23 26 18.7 -1.0
V13A **Grand Canyon W** 69.91 59 ⇓P P 23 26 19.5 -0.1
baz=70
M21A **Separation Pea** 69.95 51 ⇑P P 23 26 19.6 -0.1
baz=70
N20A **Spence Gulch,** 69.97 52 ⇓P P 23 26 19.9 0.0
baz=70,SNR=7.4
U14A **Mt Trumbull** 70.03 58 ⇓P P 23 26 20.5 +0.2
baz=70
RSSD **Black Hills** 70.04 47 eP P 23 26 19.4 -0.8
S16A **Weppner Ranch,** 70.12 56 ⇑P P 23 26 21.2 +0.4
baz=70
R17A **Hanksville Air** 70.18 55 ⇑P P 23 26 21.0 -0.1
baz=70
L22A **Ellis Ranch, M** 70.18 50 ⇓P P 23 26 20.9 -0.2
baz=70,SNR=5.6
IRM **Iron Mountain** 70.30 61 ⇑P P 23 26 21.9 -0.1
baz=70
KIV **Kislovodsk** 70.33 313 eP P 23 26 22.4 +0.4
KIV pmax pmax
comp=Z,54nm,1.1s,mb5.4
KIV MLR MLR
comp=Z,475nm,19.0s,MS4.8
KIV **Kislovodsk** 70.33 313 eP P 23 26 23.3 +1.3
P19A **Cripple Cowboy** 70.37 53 ⇓P P 23 26 21.9 -0.4
baz=70
N21A **Black Mountain** 70.44 52 ⇑P P 23 26 22.3 -0.4
baz=70
BC3 **Big Chuckawall** 70.44 62 ⇓P P 23 26 23.0 +0.2
baz=70
O20A **White River Ci** 70.45 53 ⇑P P 23 26 22.4 -0.4
baz=70
W13A **Hualapai Mount** 70.47 60 ⇓P P 23 26 23.0 +0.1
baz=70
ZEI **Tsey** 70.51 311 eP P 23 26 22.4 -0.7
ZEI pmax pmax
comp=Z,12nm,0.6s,mb5.0
U15A **North Rim** 70.56 58 ⇑P P 23 26 23.8 +0.3
baz=70,SNR=5.9
V14A **Boquillas Ranc** 70.59 59 ⇑P P 23 26 24.0 +0.3
baz=70,SNR=11
DGRG **David-gareji** 70.61 309 P P 23 26 24.4 +0.7
S17A **Black Ridge (B** 70.65 56 ⇑P P 23 26 23.7 -0.3
baz=70
Q19A **Hogan Spring (** 70.66 54 ⇑P P 23 26 24.0 -0.1
baz=70
R18A **Canyonlands Na** 70.68 55 ⇓P P 23 26 23.9 -0.3
baz=70
MTA **Mtatsminda** 70.76 310 P P 23 26 25.7 +1.0
TBLG **Delisi** 70.76 310 eP P 23 26 25.8 +1.1
TBLG **Delisi** 70.76 310 P P 23 26 25.9 +1.2
KEH **Kehvi** 70.80 311 P P 23 26 24.5 -0.4
PDMCI **Parker Dam,Lak** 70.83 61 ⇑P P 23 26 25.5 +0.3
baz=71
ONI **Oni** 70.87 311 P P 23 26 27.0 +1.7
W14A **Seligman** 70.88 59 ⇓P P 23 26 25.4 -0.2
baz=71
GOR **Gori** 70.93 310 P P 23 26 26.5 +0.8
MBWA **Marble Bar** 71.01 209 eP P 23 26 25.9 -0.3
V15A **Kaibab Nationa** 71.03 58 ⇑P P 23 26 26.8 +0.4
baz=71
T17A **Navajo Res., N** 71.07 57 ⇓P P 23 26 26.6 0.0
baz=71
S18A **Hurst Farm, Bl** 71.08 56 ⇑P P 23 26 26.4 -0.3
baz=71,SNR=5.7
AGMN **Agassiz Nation** 71.09 40 eP P 23 26 25.2 -1.4
comp=Z,16nm,1.0s,mb4.9
R19A **Curley Farm, L** 71.11 55 ⇓P P 23 26 26.6 -0.3
baz=71
Q20A **Ridgley Place,** 71.22 54 ⇑P P 23 26 27.1 -0.4
baz=71
GLA **Glamis** 71.23 62 ⇑P P 23 26 27.9 +0.3
baz=71
P21A **Newcastle** 71.32 53 ⇓P P 23 26 27.9 -0.2
baz=71,SNR=5.4
Y13A **Salome** 71.35 61 ⇑P P 23 26 28.6 +0.3
baz=71
O22A **Kremmling** 71.39 52 ⇓P P 23 26 28.1 -0.4
baz=71
U17A **Shonto** 71.42 57 ⇑P P 23 26 29.1 +0.3
baz=71
SUW **Suwalki** 71.49 330 eP P 23 26 28.6 -0.3
SUW **Suwalki** 71.49 330 P P 23 26 27.5 -1.3
comp=Z,17nm,1.0s,mb4.9
X14A **Yava** 71.50 60 ⇓P P 23 26 29.1 -0.2
baz=71
T18A **Mexican Hat** 71.53 56 ⇓P P 23 26 29.0 -0.3
baz=71
S19A **Harvey Farm, M** 71.55 55 ⇓P P 23 26 29.0 -0.5
baz=71,SNR=6.2
PV01 **Paradox Valley** 71.62 54 eP P 23 26 30.0 +0.1
comp=Z,217nm,0.7s
R20A **Redvale** 71.69 54 ⇑P P 23 26 30.2 -0.1
baz=72
Q21A **Lamborn Mesa,** 71.71 53 ⇑P P 23 26 30.3 -0.2
baz=72
AKASG **Malin Array Be** 71.75 325 P P 23 26 30.1 -0.4
comp=Z,11nm,0.7s,mb4.9,baz=36,slow=5.9,SNR=46
AKASG LR LR 23 59 59.5
comp=Z,160nm,21.2s,MS4.3,baz=50,slow=38
AKASG **Malin Array Be** 71.75 325 P P 23 26 30.1 -0.4
AKASG pmax pmax
comp=Z,11nm,0.7s
AKASG MLR MLR
comp=Z,160nm,21.2s
AKBB **Malin Array Si** 71.75 325 eP P 23 26 29.9 -0.6
KIEV **Kiev** 71.76 325 eP P 23 26 29.8 -0.7
KIEV pmax pmax
comp=Z,31nm,1.0s,mb5.2
KIEV **Kiev** 71.76 325 eP P 23 26 29.8 -0.8
comp=Z,31nm,1.0s,mb5.2
Y14A **Wickenburg** 71.78 60 ⇑P P 23 26 30.8 -0.1
baz=72
SMCO **Snowmass** 71.82 53 eP P 23 26 31.6 +0.5
comp=Z,4.6nm,0.8s,mb4.5
GNI **Garni** 71.84 309 LR LR 00 02 55.3
comp=Z,97nm,21.0s,MS4.0,baz=64,slow=40
GNI **Garni** 71.84 309c iP P 23 26 30.5 -0.7
GNI pmax pmax
comp=Z,19nm,1.5s
GNI **Garni** 71.84 309 eP P 23 26 30.8 -0.5
comp=Z,14nm,0.9s,mb4.9
Z13A **Yuma Proving G** 71.87 61 ⇓P P 23 26 31.3 -0.2
baz=72
X15A **Humboldt** 71.89 59 ⇑P P 23 26 31.9 +0.3
baz=72,SNR=5.6
S20A **Disappointment** 71.94 55 ⇑P P 23 26 31.7 -0.2
baz=72
V17A **Tonalea, Kykot** 72.00 58 ⇑P P 23 26 32.6 +0.4
baz=72,SNR=11
U18A **Rough Rock, Ch** 72.01 56 ⇑P P 23 26 32.4 +0.1
baz=72
R21A **Cimarron** 72.05 54 ⇑P P 23 26 32.7 +0.3
baz=72
Q22A **Crested Butte,** 72.07 53 ⇓P P 23 26 32.6 0.0
baz=72
SOC **Sochi** 72.13 314 eP P 23 26 31.1 -1.8
SOC eS S 23 35 53.7 +2.4
SOC e 23 36 26.1
SOC pmax pmax
comp=Z,28nm,0.7s,mb5.3
ISCO **Idaho Springs** 72.16 51 eP P 23 26 33.8 +0.7
Y15A **Casa Rosa Ranc** 72.18 60 ⇑P P 23 26 33.5 +0.1
baz=72
T19A **Beclabito** 72.24 56 ⇓P P 23 26 33.4 -0.3
baz=72
MVCO **Mesa Verde** 72.28 55 ⇓P P 23 26 33.5 -0.5
baz=72
MVCO **Mesa Verde** 72.28 55 eP P 23 26 34.2 +0.3
comp=Z,5.9nm,0.9s,mb4.5
S21A **Coal Bank Pass** 72.39 54 ⇓P P 23 26 34.5 0.0
baz=72
ANN **Anapa** 72.41 316 eP P 23 26 32.4 -2.1
ANN eS S 23 35 56.8 +2.3
ANN pmax pmax
comp=Z,45nm,1.1s,mb5.3
X16A **Lo Mia Camp, P** 72.42 59 ⇑P P 23 26 34.9 +0.1
baz=72,SNR=6.9
V18A **Ganado** 72.46 57 ⇑P P 23 26 35.1 +0.1
baz=72
U19A **Dine' College,** 72.49 56 ⇑P P 23 26 35.1 0.0
baz=72
114A **Black Gap (USA** 72.65 61 ⇓P P 23 26 36.6 +0.4
baz=72
Y16A **Circle Bar Ran** 72.76 59 ⇑P P 23 26 37.1 +0.3
baz=73
X17A **Forest Lakes** 72.86 59 ⇓P P 23 26 38.2 +0.8
baz=73
S22A **4UR Ranch, Cre** 72.89 54 ⇑P P 23 26 37.8 +0.3
baz=73
Q24A **Divide** 73.00 52 ⇓P P 23 26 38.1 0.0

baz=73
Z16A Peralta Trail, 73.15 60 ⇊P P 23 26 39.5 +0.4
baz=73
P25A Willow Gulch B 73.16 51 ⇑P P 23 26 38.9 -0.1
baz=73
W19A Sanders 73.19 57 ⇊P P 23 26 39.5 +0.2
baz=73
214A Organ Pipe Nat 73.23 62 ⇊P P 23 26 39.8 +0.2
baz=73
V20A Brimhall 73.27 56 ⇊P P 23 26 39.8 0.0
baz=73
EYMN Ely 73.31 38 *e*P P 23 26 38.1 -1.7
comp=Z,26nm,1.3s,mb5.0
U21A Nageezi 73.31 55 ⇊P P 23 26 40.0 0.0
baz=73
OGNE Ogallala 73.31 49 *e*P P 23 26 39.4 -0.6
comp=Z,30nm,0.9s,mb5.2
BSD Bornholm Skovb 73.32 335 *i* P P 23 26 38.4 -1.3
BSD pmax pmax
comp=Z,11nm,0.9s,mb4.8
BSD Bornholm Skovb 73.32 335 *i* P P 23 26 38.4 -1.3
comp=Z,11nm,0.9s,mb4.8
T22A Edith 73.35 54 ⇊P P 23 26 40.4 +0.2
baz=73
R24A Sanders Place, 73.53 52 ⇑P P 23 26 41.2 -0.1
baz=73
Q25A Bedland, Calha 73.53 51 ⇊P P 23 26 41.2 -0.1
baz=73
SDCO Great Sand Dun 73.64 53 *e*P P 23 26 41.2 -0.8
Y18A Canyon Day Jun 73.71 59 ⇑P P 23 26 42.8 +0.4
baz=74
V21A Milan 73.75 56 ⇑P P 23 26 42.7 +0.1
baz=74
Z17A San Carlos Hig 73.77 59 ⇊P P 23 26 43.0 +0.3
baz=74
U22A Llaves 73.81 55 ⇑P P 23 26 43.2 +0.2
baz=74
S24A Houchin Ranch, 73.88 53 ⇊P P 23 26 43.4 +0.1
baz=74
SIM Simferopol' 73.91 318 *e*P P 23 26 46.0 +2.6
SIM pmax pmax
comp=Z,14nm,0.8s,mb4.9
SIM MLR MLR
comp=Z,140nm,15.3s,MS4.4
216A Three Points, 74.04 61 ⇑P P 23 26 44.3 -0.1
baz=74
ECSD EROS Data Cent 74.08 44 *e*P P 23 26 43.2 -1.2
comp=Z,18nm,1.0s,mb5.0
117A Oracle 74.10 60 ⇊P P 23 26 44.5 -0.2
baz=74
V22A San Miguel Ran 74.10 55 ⇊P P 23 26 45.0 +0.3
baz=74
X20A Quemado 74.11 57 ⇑P P 23 26 45.0 +0.2
baz=74,SNR=5.4
U23A El Rito 74.23 54 ⇑P P 23 26 45.9 +0.4
baz=74,SNR=7.2
TUC Tucson 74.25 60 *e*P P 23 26 45.8 +0.2
S25A Robets Cordova 74.31 52 ⇑P P 23 26 45.3 -0.5
baz=74
LVV L'vov 74.52 327 *e*P P 23 26 46.6 -0.2
118A Homack Ranch, 74.53 59 ⇊P P 23 26 47.3 +0.2
baz=74,SNR=7.1
X21A Alamocita Cree 74.60 57 ⇑P P 23 26 48.2 +0.6
baz=74,SNR=5.6
Y20A Horse Springs, 74.62 57 ⇊P P 23 26 48.4 +0.7
baz=74
T25A Trinidad 74.69 53 ⇑P P 23 26 48.0 0.0
baz=74
U24A Moreno Valley 74.70 54 ⇑P P 23 26 48.5 +0.3
baz=74
KIS Kishinev 74.77 322 *e*P P 23 26 46.0 -2.3
KIS LRM 00 02 16.0
comp=Z,300nm,16.0s
119A Ashpeak Ranch, 74.85 59 ⇑P P 23 26 49.4 +0.4
baz=75
Y21A Point of Rocks 74.97 57 ⇑P P 23 26 50.4 +0.6
baz=75
Z20A Nine Sixteen R 75.04 58 ⇑P P 23 26 50.3 +0.2
baz=75
IAS Iasi 75.15 323 P P 23 26 50.7 +0.1
IAS Iasi 75.15 323 ⇊*i*P P 23 26 50.7 +0.1
KWP Kalwaria Pacla 75.19 327 *e*P P 23 26 51.7 +1.1
KWP Kalwaria Pacla 75.19 327 *e*P P 23 26 51.2 +0.5
KWP pmax pmax
comp=Z,77nm,1.0s,mb5.6
KWP Kalwaria Pacla 75.19 327 *e*P P 23 26 51.1 +0.5
comp=Z,77nm,1.0s,mb5.6
KWP Kalwaria Pacla 75.19 327 ⇑*i*P P 23 26 51.6 +0.9
U25A Circle Dot Ran 75.21 53 ⇑P P 23 26 51.0 -0.1
baz=75
318A Bisbee 75.34 60 ⇑P P 23 26 52.1 +0.2
baz=75
219A White Tail Can 75.40 59 ⇊P P 23 26 52.5 +0.3
baz=75
120A U Bar Ranch, L 75.41 59 ⇊P P 23 26 52.5 +0.3
baz=75
LEOM Leova 75.42 322 P P 23 26 52.6 +0.5
LEOM Leova 75.42 322 ⇑*i*P P 23 26 51.6 -0.5
Y22A Socorro 75.44 57 ⇊P P 23 26 52.4 -0.1
baz=75
X23A Hourglass Bar 75.45 56 ⇑P P 23 26 52.6 +0.1
baz=75
Z21A St. Cloud Mine 75.46 58 ⇑P P 23 26 52.8 +0.2
baz=75,SNR=7.3
W24A Lazy 6 Ranch, 75.47 55 ⇑P P 23 26 52.9 +0.3
baz=75,SNR=6.2
V25A Rancho No Teng 75.49 54 ⇊P P 23 26 52.8 +0.2
baz=75
BSEG Bad Segeberg 75.69 336 *e*P P 23 26 53.3 -0.2
comp=Z,13nm,1.0s,mb4.8
BUR08 Bucovina Ar. S 75.79 325 *e*P P 23 26 54.1 0.0
OJC Ojcow 75.79 329 ⇑*i*P P 23 26 52.4 -1.7
BURAR Bucovina Array 75.80 325 ⇊P P 23 26 54.9 +0.6
BURAR Bucovina Array 75.80 325 ⇊*i*P P 23 26 54.9 +0.6
319A Douglas 75.82 60 ⇊P P 23 26 55.0 +0.4
baz=76
MDO Dochfour 75.85 346 P P 23 26 54.1 -0.2
MDO Dochfour 75.85 346 *e*P P 23 26 54.1 -0.2
220A Playas Peak, P 75.92 59 ⇑P P 23 26 55.3 +0.2
baz=76
STHS Stebnicka Huta 75.92 328 *e*P P 23 26 55.7 +0.8
STHS pmax pmax
comp=Z,17nm,1.0s,mb4.9
STHS Stebnicka Huta 75.92 328 *e*P P 23 26 55.7 +0.8
comp=Z,16nm,1.0s,mb4.9
STHS Stebnicka Huta 75.92 328 *e*P P 23 26 55.7 +0.8
Z22A Elephant Butte 75.92 57 ⇊P P 23 26 55.3 +0.1
baz=76,SNR=8.3
121A Cookes Peak, D 75.93 58 ⇑P P 23 26 55.5 +0.3
baz=76,SNR=5.1
KAC Achnashellach 75.95 346 P P 23 26 54.3 -0.6
KAC Achnashellach 75.95 346 *e*P P 23 26 54.3 -0.6
Y23A Lovelace Mesa, 75.99 56 ⇑P P 23 26 55.7 +0.2
baz=76,SNR=6.5
W25A X Bar L Ranch, 76.01 54 ⇊P P 23 26 55.7 0.0
baz=76,SNR=7.9
SCHQ Schefferville 76.09 21 P P 23 26 55.5 -0.2
comp=Z,7.0nm,1.0s,mb4.5,baz=22,slow=9.9,SNR=3.6
SCHQ LR LR 00 02 57.4
comp=Z,180nm,18.9s,MS4.4,baz=139,slow=38
SCHQ Schefferville 76.09 21 *e*P P 23 26 56.0 +0.2
UZH Uzhgorod 76.16 327 *e*P P 23 26 55.6 -0.6
UZH *e* pP 23 27 09.4 -0.7
UZH *e* 23 27 18.6
KPL Plockton 76.17 346 P P 23 26 55.7 -0.5
KPL pmax AMb AMB 23 27 06.0
comp=Z,95nm,5.4s
KPL Plockton 76.17 346 *e*P P 23 26 55.7 -0.5
KPL AMb AMB 23 27 06.0
comp=Z,95nm,5.4s
TLCR 76.17 321 ⇊P P 23 26 56.7 +0.3
TLCR 76.17 321 ⇊*i*P P 23 26 56.7 +0.3
KSB Sheil Bridge 76.25 346 P P 23 26 56.3 -0.3
KSB Sheil Bridge 76.25 346 *e*P P 23 26 56.3 -0.3
CRVS Cervenica-Dubn 76.25 328 *e*P P 23 26 57.2 +0.4
CRVS pmax pmax
comp=Z,13nm,1.1s,mb4.8
CRVS Cervenica-Dubn 76.25 328 *e*P P 23 26 57.2 +0.4
comp=Z,13nm,1.1s,mb4.8
CRVS Cervenica-Dubn 76.25 328 *e*P P 23 26 57.2 +0.4
NIE Niedzica 76.26 329 *e*P P 23 26 57.7 +0.9
221A Mesquite Ranch 76.30 59 ⇑P P 23 26 57.7 +0.4
baz=76
320A Kipp Ranch, An 76.31 59 ⇑P P 23 26 57.9 +0.5
baz=76
Y24A Capitan 76.36 56 ⇊P P 23 26 57.4 -0.3
baz=76,SNR=6.4
BMR Baia Mare 76.45 326 ⇊P P 23 26 59.2 +1.2
BMR Baia Mare 76.45 326 ⇊*i*P P 23 26 59.2 +1.2
TRPA Tarpa 76.47 327 ⇑*i*P P 23 26 58.3 +0.3
RAC Raciborz 76.48 330 *e*P P 23 26 58.8 +0.7
KSP Ksiaz 76.50 332 *e*P P 23 26 58.8 +0.7
KSP Ksiaz 76.50 332 *e*P P 23 26 58.3 +0.1
W26A Owens Ranch, T 76.51 54 ⇑P P 23 26 58.6 +0.1
baz=76
VRI Vrincioaia 76.55 323 ⇊P P 23 26 59.3 +0.8
VRI Vrincioaia 76.55 323 ⇊*i*P P 23 26 59.3 +0.8
KAR1 Arisaig 76.60 346 P P 23 26 58.2 -0.4
KAR1 Arisaig 76.60 346 *e*P P 23 26 58.2 -0.4
STKA Stephens Creek 76.61 187 LR LR 23 57 20.5
comp=Z,280nm,20.8s,MS4.6,baz=26,slow=33
OKC Ostrava-Krasne 76.70 330 *e*P P 23 26 59.9 +0.6
Y25A Mesa, Roswell 76.80 55 ⇑P P 23 27 00.0 -0.1
baz=77
Z24A Sheeppen Canyo 76.82 56 ⇑P P 23 27 00.5 +0.2
baz=77
X26A CR and CF Fran 76.86 54 ⇊P P 23 27 00.7 +0.1
baz=77
UPC Upice 76.88 332 *e*P P 23 27 01.0 +0.7
DPC Dobruska-Polom 76.91 331 *e*P P 23 27 01.3 +0.8
TIRR Tirgusor 76.92 321 ⇑P P 23 27 01.4 +0.8
TIRR Tirgusor 76.92 321 ⇑*i*P P 23 27 01.4 +0.8
W27A Bowe Ranch, En 76.93 53 ⇑P P 23 27 00.9 0.0
baz=77
MORC Moravsky Berou 76.97 330 ⇊P P 23 27 01.1 +0.3
MORC Moravsky Berou 76.97 330 *e*P P 23 27 00.5 -0.3
MORC Moravsky Berou 76.97 330 ⇊*i*P P 23 27 01.1 +0.3
KECS Kecovo 76.97 328 *e*P P 23 27 01.1 +0.3
KECS pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
KECS Kecovo 76.97 328 *e*P P 23 27 01.1 +0.3
comp=Z,6.9nm,0.9s,mb4.6
KECS Kecovo 76.97 328 *e*P P 23 27 01.1 +0.3
LIKS Likavka 77.01 329 *e*P P 23 27 02.5 +1.4
LIKS pmax pmax
comp=Z,35nm,1.1s,mb5.2
LIKS Likavka 77.01 329 *e*P P 23 27 02.5 +1.4
comp=Z,35nm,1.1s,mb5.2
LIKS Likavka 77.01 329 *e*P P 23 27 02.5 +1.4
NRDL Niedersach Rie 77.02 336 *e*P P 23 27 00.9 -0.2
comp=Z,10.0nm,1.1s,mb4.7
SCIA State Center 77.11 43 *e*P P 23 27 01.6 -0.2
CLL Collm 77.18 334 *e*P P 23 27 01.2 -0.8
comp=Z,31nm,1.0s,mb5.2
CLL Collm 77.18 334 ⇑*i*P P 23 27 01.5 -0.5
CLL pmax pmax
comp=Z,31nm,1.0s,mb5.2
CLL MLR MLR
comp=Z,200nm,18.5s,MS4.5
CLL Collm 77.18 334 ⇑*i*P P 23 27 01.5 -0.5
CLL Collm 77.18 334 ⇑*i*P P 23 27 01.5 -0.5
comp=Z,31nm,1.0s,mb5.2
CLL *e*PcP PcP 23 27 12.0 -0.6
CLL *es*P sP 23 27 19.0 -2.2
CLL *e*(SS) 23 42 30.0
CLL Lm 00 04 00.0
comp=Z,200nm,18.5s
MLR Muntele Rosu 77.19 323 ⇑P P 23 27 03.0 +0.9
MLR Muntele Rosu 77.19 323 ⇑*i*P P 23 27 03.0 +0.9
124A Stringfield Ra 77.21 57 ⇊P P 23 27 02.6 +0.1
baz=77
Z25A Roswell 77.24 56 ⇑P P 23 27 02.4 -0.3
baz=77
BRG Berggiesshubel 77.25 333 *e*P P 23 27 01.9 -0.5
comp=Z,13nm,1.3s,mb4.7
BRG Berggiesshubel 77.25 333 *i* P P 23 27 02.0 -0.4
comp=Z,8.7nm,1.0s,mb4.6
BRG Berggiesshubel 77.25 333 *i* P P 23 27 02.0 -0.4
BRG pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
BRG smax
comp=N,1.0nm,0.4s
Y26A Elida 77.30 55 ⇑P P 23 27 02.2 -0.8
baz=77
PVCC Panska Ves 77.34 332 *e*P P 23 27 03.4 +0.5
PGBU Glenifferbraes 77.42 345 P P 23 27 02.5 -0.7
PGBU AMb AMB 23 27 15.2
comp=N,93nm,5.0s
PGBU Glenifferbraes 77.42 345 *e*P P 23 27 02.5 -0.7
PGBU AMb AMB 23 27 15.2
comp=Z,93nm,5.0s
DRGR 77.48 326 ⇊P P 23 27 04.3 +0.5
DRGR 77.48 326 ⇊*i*P P 23 27 04.3 +0.5
CLZ Clausthal 77.52 335 *e*P P 23 27 03.9 0.0
comp=Z,34nm,1.3s,mb5.1
VYHS Vyhne 77.58 329 *e*P P 23 27 04.7 +0.5
VYHS pmax pmax
comp=Z,12nm,1.2s,mb4.7
VYHS Vyhne 77.58 329 *e*P P 23 27 04.7 +0.5
comp=Z,12nm,1.2s,mb4.7
VYHS Vyhne 77.58 329 *e*P P 23 27 04.7 +0.5
VOIR 77.61 324 ⇊P P 23 27 05.5 +1.0
VOIR 77.61 324 ⇊*i*P P 23 27 05.5 +1.0
224A Cornudas Mount 77.61 57 ⇑P P 23 27 04.7 0.0
baz=77
PSZ Piszkesteto 77.66 328 ⇊P P 23 27 05.8 +1.1
PSZ Piszkesteto 77.66 328 *e*P P 23 27 05.7 +1.0
PSZ Piszkesteto 77.66 328 ⇊*i*P P 23 27 05.8 +1.1
KOLL Kolacno 77.66 329 *e*P P 23 27 05.1 +0.4
KOLL Kolacno 77.66 329 *e*P P 23 27 05.1 +0.4
Z26A Caprock 77.68 55 ⇊P P 23 27 04.7 -0.4
baz=78,SNR=9.1
VRAC Vranov 77.69 331 ⇊P P 23 27 05.9 +1.0
VRAC Vranov 77.69 331 ⇊*i*P P 23 27 05.9 +1.0
125A Gardner Draw, 77.71 56 ⇊P P 23 27 05.2 -0.1
baz=78
Y27A Causey 77.71 54 ⇊P P 23 27 05.1 -0.2
baz=78
PRU Pruhonice 77.82 332 *e*P P 23 27 06.5 +0.9
PRU Pruhonice 77.82 332 *e*P P 23 27 06.5 +0.9
IBBN Ibbenburen 77.85 337 *e*P P 23 27 05.3 -0.4
comp=Z,27nm,1.2s,mb5.0
MSTX Muleshoe 77.88 54 ⇑P P 23 27 06.1 -0.1
baz=78
NAY Al-Naaiem 77.94 299 *e*P P 23 27 06.5 -0.2
NAY AMb AMB 23 27 08.8
comp=Z,16nm,0.7s,mb5.0
MNTX Cornudas Mount 77.96 57 *e*P P 23 27 06.6 -0.1
comp=Z,2.9nm,0.9s,mb4.2
RDF Al-Radifah 77.97 299 *e*P P 23 27 06.9 +0.1
RDF AMb AMB 23 27 07.5
comp=Z,39nm,0.8s,mb5.4
225A Deer Hill, Car 78.00 57 ⇊P P 23 27 07.0 +0.1
baz=78
BRTR Keskin Array B 78.05 315 P P 23 27 07.8 +0.7
comp=Z,6.3nm,0.9s,mb4.5,baz=57,slow=4.6,SNR=39
BRTR LR LR 00 07 58.2
comp=Z,88nm,18.4s,MS4.1,baz=92,slow=41
SMOL Smolenice 78.07 330 *e*P P 23 27 08.0 +1.0
SMOL Smolenice 78.07 330 *e*P P 23 27 08.0 +1.0
324A Moseley Ranch, 78.08 58 ⇑P P 23 27 07.1 -0.3
baz=78
Z27A Tatum 78.09 55 ⇑P P 23 27 07.2 -0.2
baz=78,SNR=12
TANN Tannenbergstha 78.12 334 *e*P P 23 27 06.8 -0.5
comp=Z,10.0nm,1.1s,mb4.7
MOX Moxa 78.19 334 *e*P P 23 27 07.4 -0.2
comp=Z,19nm,1.2s,mb4.9
MOX Moxa 78.19 334 *e*P P 23 27 07.3 -0.3
comp=Z,16nm,1.2s,mb4.8
GDL2 Guadalupe Moun 78.21 56 *e*P P 23 27 08.3 +0.2
NKC Novy Kostel 78.29 333 *e*P P 23 27 08.5 +0.3
BUD Budapest 78.35 328 ⇑*e*P P 23 27 05.2 -3.3
325A Bean Ranch, Si 78.44 57 ⇑P P 23 27 09.1 -0.3
baz=78
ZST Bratislava 78.45 330 *e*P P 23 27 09.9 +0.8
ZST pmax pmax
comp=Z,11nm,0.9s,mb4.8
ZST Bratislava 78.45 330 *e*P P 23 27 09.9 +0.8
comp=Z,11nm,0.9s,mb4.8
ZST Bratislava 78.45 330 *e*P P 23 27 09.9 +0.8
226A Malaga, Loving 78.47 56 ⇑P P 23 27 09.3 -0.2
baz=78
UBBA Unterbreizbach 78.53 335 *e*P P 23 27 09.3 -0.2
comp=Z,12nm,1.5s,mb4.6
GZR Gura Zlata 78.59 325 ⇊P P 23 27 09.6 -0.3
GZR Gura Zlata 78.59 325 ⇊*i*P P 23 27 09.6 -0.3
HPK Haverah Park 78.61 343 P P 23 27 09.6 -0.3
HPK AMb AMB 23 27 21.9
comp=Z,74nm,2.5s,mb5.2
HPK Haverah Park 78.61 343 *e*P P 23 27 09.6 -0.3
HPK AMb AMB 23 27 21.9
comp=Z,74nm,2.5s,mb5.2
BUG Bochum--Univer 78.77 337 *e*P P 23 27 10.4 -0.4
comp=Z,18nm,1.1s,mb4.9
425A Indio Mountain 78.85 58 ⇑P P 23 27 11.4 -0.3
baz=79
KHC Kasperske Hory 78.87 332 *e*P P 23 27 11.0 -0.4
comp=Z,26nm,1.0s,mb5.1
KHC Kasperske Hory 78.87 332 *e*P P 23 27 11.8 +0.4
BZS Buzias 78.88 326 ⇑P P 23 27 11.6 +0.1
BZS Buzias 78.88 326 ⇑*i*P P 23 27 11.6 +0.1
326A Caldwell Ranch 79.07 57 ⇑P P 23 27 12.5 -0.3
baz=79
WET Wettzell 79.09 333 *e*P P 23 27 12.9 +0.3
comp=Z,31nm,1.1s,mb5.2
CONA Conrad Observa 79.12 330 ⇊*i*P P 23 27 13.4 +0.6
comp=Z,23nm,1.1s,mb5.0,SNR=16
GRF Grafenberg Arr 79.15 334 *e*L 00 06 27.7
comp=Z,164nm,18.6s
GRF Grafenberg Arr 79.15 334 *e*P P 23 27 13.1 +0.2
GRF pmax pmax
comp=Z,41nm,1.0s,mb5.3
GRF MLR MLR
comp=Z,200nm,18.6s,MS4.5
GRF Grafenberg Arr 79.15 334 *e*P P 23 27 13.1 +0.2
comp=Z,41nm,1.0s,mb5.3
GRF LR LR
comp=Z,200nm,18.6s,MS4.5
KBI1 Birley Grange 79.25 343 P P 23 27 12.6 -0.8
KBI1 Birley Grange 79.25 343 *e*P P 23 27 12.6 -0.8
RAO Raoul Island 79.43 151 LR LR 23 59 50.1
comp=Z,152nm,19.4s,MS4.3,baz=290,slow=34
426A McDonald Obser 79.51 57 ⇊P P 23 27 14.9 -0.3
baz=79
TNS Taunus Mts 79.52 336 *e*P P 23 27 14.7 -0.2
comp=Z,22nm,1.1s,mb5.0
PKSM Moragy 79.55 328 ⇑P P 23 27 14.5 -0.7
PKSM Moragy 79.55 328 ⇑*i*P P 23 27 14.5 -0.7
WMOK Wichita Mounta 79.58 51 *e*P P 23 27 15.1 -0.4
CWF Charnwood Fore 79.69 342 P P 23 27 15.0 -0.8
CWF AMb AMB 23 27 16.1
comp=Z,34nm,4.0s
CWF Charnwood Fore 79.69 342 *e*P P 23 27 15.0 -0.8
CWF AMb AMB 23 27 16.1
comp=Z,34nm,4.0s
328A Wristen Ranch, 79.72 56 ⇑P P 23 27 16.0 -0.4
baz=80,SNR=8.6
HGN Heimansgroeve 79.74 337 *e*P P 23 27 15.4 -0.7
comp=Z,21nm,1.3s,mb4.9
MOA Molln 79.75 331 ⇑*i*P P 23 27 16.1 -0.1
comp=Z,8.2nm,1.1s,mb4.6
427A Hayter Ranch, 79.75 57 ⇊P P 23 27 16.3 -0.2
baz=80
MEM Membach 79.86 337 P P 23 27 16.8 +0.1
comp=Z,11nm,1.2s,mb4.7
526A Mary Lane Ranc 79.91 58 ⇑P P 23 27 17.4 0.0
baz=80,SNR=7.8
HDIL Hopedale 80.02 41 *e*P P 23 27 17.5 -0.4
UCC Uccle 80.13 338 P P 23 27 18.6 +0.4
527A Woodward Ranch 80.13 57 ⇊P P 23 27 18.2 -0.4
baz=80,SNR=5.6
BCLA Clavier 80.23 338 P P 23 27 18.6 -0.1
KOGS Kog 80.24 329 *e*P P 23 27 18.7 -0.2
626A Big Bend Ranch 80.25 58 ⇑P P 23 27 18.8 -0.4
baz=80,SNR=7.4
428A Kincaid Ranch, 80.27 56 ⇊P P 23 27 19.4 +0.1
baz=80
RJOB Jochberg 80.34 332 *e*P P 23 27 19.8 +0.4
comp=Z,14nm,1.0s,mb4.8
SNF Seneffe 80.42 338 P P 23 27 20.0 +0.3
FUR Furstenfeldbru 80.47 333 *e*P P 23 27 20.2 +0.1
comp=Z,28nm,1.0s,mb5.2
SOKA Soboth 80.49 330 ⇑*i*P P 23 27 20.3 +0.1
comp=Z,22nm,1.1s,mb5.0
PERS Pernice 80.49 330 *e*P P 23 27 20.3 +0.1
STU Stuttgart 80.58 335 *e*P P 23 27 20.4 -0.3
comp=Z,15nm,0.8s,mb5.0
528A Cox Ranch, San 80.61 57 ⇊P P 23 27 21.0 -0.2
baz=80,SNR=6.7
GIVF Givet 80.64 338 *e*P P 23 27 20.4 -0.6
comp=Z,24nm,1.0s,mb4.8
GIVF Givet 80.64 338 *e*P P 23 27 20.4 -0.6
GIVF pmax pmax
comp=Z,12nm,1.0s,mb4.8
GIVF Givet 80.64 338 *e*P P 23 27 20.4 -0.6
comp=Z,12nm,1.0s,mb4.8
WLF Walferdange 80.68 337 *e*P P 23 27 22.0 +0.8
comp=Z,26nm,1.5s,mb4.9
TXAR Lajitas Array 80.69 58 P P 23 27 20.8 -0.8
comp=Z,5.1nm,0.8s,mb4.5,baz=296,slow=4.0,SNR=44
TXAR pP pP 23 27 34.0 -1.5
comp=Z,4.7nm,0.7s,baz=302,slow=3.7,SNR=11
TXAR Lajitas Array 80.69 58 P P 23 27 20.8 -0.8
TXAR *PP pP 23 27 34.0 -1.5
TXAR pmax pmax
comp=Z,5.0nm,0.8s
TXAR Lajitas Array 80.69 58 P P 23 27 20.8 -0.8
TXAR pP pP 23 27 34.0 -1.5
DOU Dourbes 80.71 338 P P 23 27 20.9 -0.4
KBA Koelnbreinsper 80.73 331 ⇑*i*P P 23 27 22.0 +0.5
comp=Z,34nm,1.4s,mb5.1,SNR=13
MCH1 Michaelchurch 80.74 343 P P 23 27 21.0 -0.5
MCH1 AMb AMB 23 27 21.7
comp=Z,48nm,1.8s,mb5.1
MCH1 Michaelchurch 80.74 343 *e*P P 23 27 21.0 -0.5
MCH1 AMb AMB 23 27 21.7
comp=Z,48nm,1.8s,mb5.1
627A Terlingua Ranc 80.77 58 ⇑P P 23 27 21.6 -0.4
baz=81,SNR=5.0
BAIF Baives 80.85 338 *e*P P 23 27 21.5 -0.6
comp=Z,34nm,1.3s,mb4.8
BAIF Baives 80.85 338 *e*P P 23 27 21.5 -0.6
BAIF pmax pmax
comp=Z,17nm,1.3s,mb4.8
BAIF Baives 80.85 338 *e*P P 23 27 21.5 -0.6
comp=Z,17nm,1.3s,mb4.8
WOL Wolverton 81.01 342 P P 23 27 22.5 -0.4
WOL Wolverton 81.01 342 *e*P P 23 27 22.5 -0.4
MYKA Terra Mystica 81.02 331 ⇑*i*P P 23 27 22.5 -0.5
comp=Z,13nm,1.2s,mb4.7
628A Black Gap, Mar 81.04 57 ⇊P P 23 27 22.9 -0.6
baz=81
WATA Walderalm 81.10 333 ⇑*i*P P 23 27 23.9 +0.4
comp=Z,30nm,1.3s,mb5.1
WTTA Wattenberg 81.14 332 ⇑*i*P P 23 27 23.9 +0.2
comp=Z,19nm,0.9s,mb5.0
LJU Ljubljana 81.21 330 *i* P P 23 27 23.5 -0.5
RETA Reutte 81.23 333 ⇊*i*P P 23 27 24.1 -0.1
comp=Z,18nm,1.2s,mb4.9
BFO Black Forest 81.24 335 *e*P P 23 27 23.9 -0.3
comp=Z,16nm,1.2s,mb4.8
MOTA Moosalm 81.24 333 ⇑*i*P P 23 27 24.4 +0.2
comp=Z,24nm,1.0s,mb5.1,SNR=13
BOJS Bojanci 81.41 329 *e*P P 23 27 24.8 -0.4
CDF Champ du Feu 81.48 336 *e*P P 23 27 25.0 -0.5
comp=Z,35nm,1.3s,mb4.8
CDF Champ du Feu 81.48 336 *e*P P 23 27 25.0 -0.5
CDF pmax pmax
comp=Z,18nm,1.3s,mb4.8
CDF Champ du Feu 81.48 336 *e*P P 23 27 25.0 -0.5
comp=Z,18nm,1.3s,mb4.8
FVM French Village 81.49 44 *e*P P 23 27 25.3 -0.4
CEY Cerknica 81.51 330 *e*P P 23 27 25.0 -0.6
FETA Feichten 81.65 333 ⇑*i*P P 23 27 26.6 +0.2
comp=Z,11nm,1.1s,mb4.7
DAVA Damuels 81.69 334 ⇑*i*P P 23 27 26.9 +0.3
comp=Z,14nm,1.0s,mb4.8
ASF Jabal al Asfar 81.97 308 LR LR 00 10 35.2
comp=Z,103nm,18.5s,MS4.2,baz=251,slow=40
MEZF Maizieres J'vi 82.04 337 *e*P P 23 27 28.2 -0.2
comp=Z,38nm,1.1s,mb4.9
MEZF Maizieres J'vi 82.04 337 *e*P P 23 27 28.2 -0.2
comp=Z,38nm,1.1s,mb5.2
HAU Haudompre 82.12 336 *e*P P 23 27 28.1 -0.7
HAU *e*MLR MLR
comp=Z,177nm,19.0s,MS4.2
HAU Haudompre 82.12 336 *e*P P 23 27 28.1 -0.7
HAU LR LR
comp=Z,180nm,19.0s,MS4.5
DAVOX Davos/Dischmat 82.14 333 LR LR 00 09 04.6
comp=Z,130nm,18.4s,MS4.3,baz=173,slow=39
JCT Junction City 82.14 55 *e*P P 23 27 28.3 -1.0
HINF Hinteralfeld 82.14 336 *e*P P 23 27 28.2 -0.8
comp=Z,11nm,1.1s,mb4.4
HINF Hinteralfeld 82.14 336 *e*P P 23 27 28.2 -0.8
HINF pmax pmax

comp=Z,6.0nm,1.1s,mb4.4
HINF Hinteralfeld 82.14 336 *e*P **P 23 27 28.2 -0.8**
comp=Z,5.7nm,1.1s,mb4.4
MMAI Mount Meron Ar 82.17 309 P **P 23 27 30.5 +1.1**
comp=Z,6.6nm,0.6s,mb4.7,baz=38,slow=7.4,SNR=18
MMAI LR LR 00 10 02.5
comp=Z,147nm,18.1s,MS4.4,baz=85,slow=40
SIUC Southern Illin 82.30 43 *e*P **P 23 27 29.7 -0.2**
MIAR Mount Ida 82.54 48 *e*P **P 23 27 31.0 -0.3**
TAOE Nuku Hiva Isla 82.56 110 *e*LR LR 23 53 27.1
comp=Z,200nm,25.2s
PPT Papeete 83.12 123 *e*LR LR 23 53 41.1
comp=Z,251nm,25.0s
PPT Papeete 83.12 123 LR LR 00 01 36.0
comp=Z,227nm,18.1s,MS4.6,baz=355,slow=34
ACSO Alum Creek Sta 83.15 38 *e*P **P 23 27 34.0 -0.3**
WCI Wyandotte Cave 83.28 41 *e*P **P 23 27 35.0 -0.1**
LDF La Druitiere 83.30 340 *e*P **P 23 27 34.4 -0.5**
comp=Z,11nm,0.9s,mb4.6
LDF La Druitiere 83.30 340 *e*P **P 23 27 34.4 -0.5**
LDF pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
LDF La Druitiere 83.30 340 *e*P **P 23 27 34.4 -0.5**
comp=Z,5.6nm,0.9s,mb4.6
CABF La Chapelle 83.45 336 *e*P **P 23 27 35.6 -0.2**
comp=Z,11nm,0.9s,mb4.6
CABF La Chapelle 83.45 336 *e*P **P 23 27 35.6 -0.2**
CABF pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
CABF La Chapelle 83.45 336 *e*P **P 23 27 35.6 -0.2**
comp=Z,5.6nm,0.9s,mb4.6
GRR Gorron 83.66 341 *e*P **P 23 27 36.5 -0.3**
comp=Z,54nm,1.1s,mb5.3
GRR Gorron 83.66 341 *e*P **P 23 27 36.5 -0.3**
GRR pmax pmax
comp=Z,27nm,1.1s,mb5.3
GRR Gorron 83.66 341 *e*P **P 23 27 36.5 -0.3**
comp=Z,27nm,1.1s,mb5.3
SSF Saint Saulge 83.78 337 *e*P **P 23 27 37.0 -0.4**
comp=Z,8.2nm,0.8s,mb4.6
SSF Saint Saulge 83.78 337 *e*P **P 23 27 37.0 -0.4**
SSF pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
SSF Saint Saulge 83.78 337 *e*P **P 23 27 37.0 -0.4**
comp=Z,4.1nm,0.8s,mb4.6
HYF Humbligny 83.82 338 *e*P **P 23 27 37.7 0.0**
SMF Signal de Mont 84.07 337 *e*P **P 23 27 38.7 -0.2**
comp=Z,35nm,1.0s,mb5.2
SMF Signal de Mont 84.07 337 *e*P **P 23 27 38.7 -0.2**
SMF pmax pmax
comp=Z,17nm,1.0s,mb5.1
SMF Signal de Mont 84.07 337 *e*P **P 23 27 38.7 -0.2**
comp=Z,17nm,1.0s,mb5.1
AVF Avril sur Loir 84.07 337 *e*P **P 23 27 38.8 -0.1**
comp=Z,50nm,1.4s,mb5.2
AVF Avril sur Loir 84.07 337 *e*P **P 23 27 38.8 -0.1**
AVF pmax pmax
comp=Z,25nm,1.4s,mb5.2
AVF Avril sur Loir 84.07 337 *e*P **P 23 27 38.8 -0.1**
comp=Z,25nm,1.4s,mb5.2
SGMF Saint Gilles 84.18 342 *e*P **P 23 27 39.5 0.0**
comp=Z,16nm,0.8s,mb4.9
SGMF Saint Gilles 84.18 342 *e*P **P 23 27 39.5 0.0**
SGMF pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
SGMF Saint Gilles 84.18 342 *e*P **P 23 27 39.5 0.0**
comp=Z,7.9nm,0.8s,mb4.9
WVT Waverly 84.23 43 *e*P **P 23 27 39.4 -0.5**
WVT *e* pP 23 27 52.8 -1.1
LPL La Plagne 84.25 335 *e*P **P 23 27 40.2 +0.3**
comp=Z,19nm,1.2s,mb4.8
LPL La Plagne 84.25 335 *e*P **P 23 27 40.2 +0.3**
LPL pmax pmax
comp=Z,10.0nm,1.2s,mb4.8
LPL La Plagne 84.25 335 *e*P **P 23 27 40.2 +0.3**
comp=Z,9.6nm,1.2s,mb4.8
LPG La Plagne 84.26 335 *e*P **P 23 27 40.4 +0.5**
comp=Z,16nm,1.0s,mb4.8
LPG La Plagne 84.26 335 *e*P **P 23 27 40.4 +0.5**
LPG pmax pmax
comp=Z,8.0nm,1.0s,mb4.8
LPG La Plagne 84.26 335 *e*P **P 23 27 40.4 +0.5**
comp=Z,7.8nm,1.0s,mb4.8
ROSF Rostrenen 84.26 342 *e*P **P 23 27 41.0 +1.1**
comp=Z,71nm,1.2s,mb5.4
ROSF Rostrenen 84.26 342 *e*P **P 23 27 41.0 +1.1**
ROSF pmax pmax
comp=Z,35nm,1.2s,mb5.4
ROSF Rostrenen 84.26 342 *e*P **P 23 27 41.0 +1.1**
comp=Z,35nm,1.2s,mb5.4
VLC Villacollemand 84.29 332 *e*P **P 23 27 41.5 +1.4**
BGF Bois d'Agland 84.42 338 *e*P **P 23 27 40.7 0.0**
QUIF Quistinic 84.64 342 *e*P **P 23 27 41.5 -0.3**
comp=Z,32nm,1.1s,mb5.1
QUIF Quistinic 84.64 342 *e*P **P 23 27 41.5 -0.3**
QUIF pmax pmax
comp=Z,16nm,1.1s,mb5.1
QUIF Quistinic 84.64 342 *e*P **P 23 27 41.5 -0.3**
comp=Z,16nm,1.1s,mb5.1
BNI Bardonecchia 84.69 335 *e*P **P 23 27 42.4 +0.3**
TCF Toulx Ste Croi 84.84 338 *e*P **P 23 27 42.8 0.0**
SSPA Standing Stone 84.94 34 *e*P **P 23 27 43.0 -0.5**
MBDF Montbardon 84.95 334 *e*P **P 23 27 43.4 0.0**
comp=Z,13nm,0.8s,mb4.8
MBDF Montbardon 84.95 334 *e*P **P 23 27 43.4 0.0**
MBDF pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
MBDF Montbardon 84.95 334 *e*P **P 23 27 43.4 0.0**
comp=Z,6.3nm,0.8s,mb4.8
EIL Elat 84.95 307 LR LR 00 12 47.0
comp=Z,193nm,18.4s,MS4.5,baz=195,slow=41
ORIF Oris-en-Rattie 85.05 335 *e*P **P 23 27 44.2 +0.3**
comp=Z,17nm,0.8s,mb4.9
ORIF *e*MLR MLR
comp=Z,171nm,21.2s,MS4.1
ORIF Oris-en-Rattie 85.05 335 *e*P **P 23 27 44.2 +0.3**
ORIF pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
ORIF Oris-en-Rattie 85.05 335 *e*P **P 23 27 44.2 +0.3**
comp=Z,8.5nm,0.8s,mb4.9
MFF Saint Martin d 85.16 340 *e*P **P 23 27 44.4 0.0**
comp=Z,9.6nm,0.6s,mb4.8
MFF Saint Martin d 85.16 340 *e*P **P 23 27 44.4 0.0**
MFF pmax pmax
comp=Z,5.0nm,0.6s,mb4.8
MFF Saint Martin d 85.16 340 *e*P **P 23 27 44.4 0.0**
comp=Z,4.8nm,0.6s,mb4.8
VIVF Saint-Julien-l 85.46 336 *e*P **P 23 27 46.3 +0.3**
comp=Z,21nm,1.1s,mb4.9
VIVF Saint-Julien-l 85.46 336 *e*P **P 23 27 46.3 +0.3**
VIVF pmax pmax
comp=Z,11nm,1.1s,mb4.9
VIVF Saint-Julien-l 85.46 336 *e*P **P 23 27 46.3 +0.3**
comp=Z,11nm,1.1s,mb4.9
SBF Sospel 85.52 334 *e*P **P 23 27 45.6 -0.7**
comp=Z,35nm,1.0s,mb5.3
SBF Sospel 85.52 334 *e*P **P 23 27 45.6 -0.7**
SBF pmax pmax
comp=Z,18nm,1.0s,mb5.3
SBF Sospel 85.52 334 *e*P **P 23 27 45.6 -0.7**
comp=Z,18nm,1.0s,mb5.2
SWET Sewanee 85.88 43 *e*P **P 23 27 47.7 -0.5**
RJF Les Rejaudoux 85.94 338 *e*P **P 23 27 48.5 +0.2**
comp=Z,45nm,1.6s,mb5.2
RJF *e*MLR MLR
comp=Z,246nm,18.5s,MS4.3
RJF Les Rejaudoux 85.94 338 *e*P **P 23 27 48.5 +0.2**
RJF pmax pmax
comp=Z,23nm,1.6s,mb5.2
RJF MLR MLR
comp=Z,250nm,18.5s,MS4.6
RJF Les Rejaudoux 85.94 338 *e*P **P 23 27 48.5 +0.2**
comp=Z,23nm,1.6s,mb5.2
RJF LR LR
comp=Z,250nm,18.5s,MS4.6
SMRF Simiane la Rot 86.00 335 *e*P **P 23 27 49.0 +0.4**
comp=Z,23nm,1.3s,mb5.0
SMRF Simiane la Rot 86.00 335 *e*P **P 23 27 49.0 +0.4**
comp=Z,23nm,1.3s,mb5.2
FRF La Foret Royal 86.04 334 *e*P **P 23 27 48.4 -0.5**
comp=Z,24nm,1.3s,mb5.0
FRF La Foret Royal 86.04 334 *e*P **P 23 27 48.4 -0.5**
FRF pmax pmax
comp=Z,12nm,1.3s,mb5.0
FRF La Foret Royal 86.04 334 *e*P **P 23 27 48.4 -0.5**
comp=Z,12nm,1.3s,mb5.0
CAF Calviac 86.14 337 *e*P **P 23 27 49.9 +0.6**

TIP Timpagrande 86.23 325 *e*P **P 23 27 49.8 -0.1**
LMR La Mourre 86.29 334 *e*P **P 23 27 49.7 -0.4**
comp=Z,60nm,1.2s,mb5.4
LMR La Mourre 86.29 334 *e*P **P 23 27 49.7 -0.4**
LMR pmax pmax
comp=Z,30nm,1.2s,mb5.4
LMR La Mourre 86.29 334 *e*P **P 23 27 49.7 -0.4**
comp=Z,30nm,1.2s,mb5.4
CPCT Cooper Cave 86.36 41 *e*P **P 23 27 50.4 -0.2**
LASF Ste Croix 86.41 336 *e*P **P 23 27 51.1 +0.4**
LFF La Frestale 86.48 338 *e*P **P 23 27 51.3 +0.3**
comp=Z,41nm,1.2s,mb5.2
LFF La Frestale 86.48 338 *e*P **P 23 27 51.3 +0.3**
LFF pmax pmax
comp=Z,21nm,1.2s,mb5.2
LFF La Frestale 86.48 338 *e*P **P 23 27 51.3 +0.3**
comp=Z,21nm,1.2s,mb5.2
TKL Tuckaleechee C 86.54 41 *e*P **P 23 27 50.4 -1.1**
MTLF Montolieu 87.56 337 *e*P **P 23 27 56.4 +0.1**
comp=Z,14nm,1.2s,mb4.8
MTLF Montolieu 87.56 337 *e*P **P 23 27 56.4 +0.1**
MTLF pmax pmax
comp=Z,7.0nm,1.2s,mb4.8
MTLF Montolieu 87.56 337 *e*P **P 23 27 56.4 +0.1**
comp=Z,6.9nm,1.2s,mb4.8
TBI Tubuai 87.68 126 *e*LR LR 23 55 47.2
comp=Z,309nm,28.8s
EPF Esparros 88.36 338 *e*P **P 23 28 00.2 +0.1**
comp=Z,26nm,1.4s,mb5.0
EPF Esparros 88.36 338 *e*P **P 23 28 00.2 +0.1**
EPF pmax pmax
comp=Z,13nm,1.4s,mb5.0
EPF Esparros 88.36 338 *e*P **P 23 28 00.2 +0.1**
comp=Z,13nm,1.4s,mb5.0
SJPF Ste Jean 88.69 339 *e*P **P 23 28 02.2 +0.6**
ETSF Etsaut 88.72 338 *e*P **P 23 28 02.4 +0.6**
comp=Z,5.9nm,0.7s,mb4.7
ETSF Etsaut 88.72 338 *e*P **P 23 28 02.4 +0.6**
ETSF pmax pmax
comp=Z,3.0nm,0.7s,mb4.7
ETSF Etsaut 88.72 338 *e*P **P 23 28 02.4 +0.6**
comp=Z,3.0nm,0.7s,mb4.7
KEST Kesra 92.12 329 P **P 23 28 17.8 0.0**
comp=Z,1.5nm,0.8s,mb4.3,baz=328,slow=5.7,SNR=6.7
KEST Kesra 92.12 329 *e*P **P 23 28 17.0 -0.8**
RKT Rikitea 96.32 116 *e*LR LR 23 59 48.4
comp=Z,332nm,33.8s
QSPA South Pole Qui 134.50 180 *e*PKPdf PKPdf 23 34 25.6 +0.9
LPAZ La Paz 137.52 60 PKP PKPdf 23 34 32.6 +0.3
comp=Z,0.9nm,0.8s,baz=358,slow=3.4,SNR=4.5
LPAZ La Paz 137.52 60 PKIKP PKPdf 23 34 32.6 +0.3
LPAZ pmax pmax
comp=Z,1.0nm,0.8s
LPAZ La Paz 137.52 60 *e*PKPdf PKPdf 23 34 32.8 +0.5
LCO Las Campanas 144.61 77 *e*PKPdf PKPdf 23 34 43.2 -1.5
PLCA Paso Flores 150.53 96 PKPbc PKPbc 23 34 58.9 -0.6
comp=Z,6.2nm,0.8s,baz=276,slow=4.0,SNR=15

*CSEM **01** 23:26:35.9±0.1, 37°.96N×21°.48E, h8km, MD3.2, Error ellipse: s-maj=2.8km s-min=2.6km az=60.0*
*NEIC **01** 23:26:36.2, 37°.98N×21°.45E, h5km, MD3.2(ATH), After ATH.*
*THE **01** 23:26:36.6, 37°.98N×21°.50E, h5km±1km, ML2.6/7, Error ellipse: s-maj=1.5km s-min=0.5km az=165.0*
ATH 01 23:26:36.2, 37°.98N×21°.45E, h5km±2km, MD3.2/14, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.40**	**41**	*e*PG	Pg	23 26 43.6	-0.4
UPR				*e*SB	Sg	23 26 50.9	+1.7
UPR	**University Cam**	**0.40**	**41**	*e*Pg	Pg	23 26 43.6	-0.4
UPR				*e*Sb	Sg	23 26 50.9	+1.7
LAKA	**Lakka**	**0.49**	**58**	P	Pg	23 26 45.1	-0.6
LAKA				S	Sg	23 26 51.9	-0.2
LAKA	**Lakka**	**0.49**	**58**	S	Sg	23 26 51.9	-0.2
LAKA	**Lakka**	**0.49**	**58**	P	Pg	23 26 45.1	-0.6
EFP	**Efpalio**	**0.57**	**39**	*e*PG	Pg	23 26 47.1	-0.1
EFP				*e*SB	Sg	23 26 56.2	+1.5
EFP	**Efpalio**	**0.57**	**39**	P	Pg	23 26 47.3	+0.1
EFP				S	Sg	23 26 55.3	+0.6
EFP	**Efpalio**	**0.57**	**39**	*e*Pg	Pg	23 26 47.1	-0.1
EFP				S	Sg	23 26 55.3	+0.6
EFP				*e*Sb	Sg	23 26 56.2	+1.5
TRIZ	**Trizonia**	**0.62**	**52**	P	Pg	23 26 47.7	-0.5
TRIZ				S	Sg	23 26 56.4	+0.1
TRIZ	**Trizonia**	**0.62**	**52**	P	Pg	23 26 47.7	-0.5
TRIZ				S	Sg	23 26 56.4	+0.1
KALE	**Kalithea**	**0.68**	**53**	P	Pg	23 26 48.7	-0.6
KALE				S	Sg	23 26 57.9	-0.2
KALE	**Kalithea**	**0.68**	**53**	P	Pg	23 26 48.7	-0.6
KALE				S	Sg	23 26 57.9	-0.2
GUR	**Goura**	**0.71**	**93**	*e*PB	Pb	23 26 49.7	-1.3
GUR				*e*SB	Sb	23 27 00.0	-1.0
GUR	**Goura**	**0.71**	**93**	P	Pg	23 26 48.5	-1.3
GUR				S	Sg	23 26 58.7	-0.2
GUR	**Goura**	**0.71**	**93**	P	Pg	23 26 48.5	-1.3
GUR	**Goura**	**0.71**	**93**	*e*Pb	Pb	23 26 49.7	-1.3
GUR				S	Sg	23 26 58.7	-0.2
GUR				*e*Sb	Sb	23 27 00.0	-1.0
VLS	**Valsamata**	**0.71**	**286**	*e*Pg	Pg	23 26 49.4	-0.4
VLS				*e*Sb	Sb	23 27 01.2	+0.2
VLS	**Valsamata**	**0.71**	**286**	*e*PG	Pg	23 26 49.4	-0.4
VLS				*e*SB	Sb	23 27 01.2	+0.2
VLS	**Valsamata**	**0.71**	**286**	P	Pg	23 26 50.2	+0.4
VLS				S	Sg	23 27 01.6	+2.6
VLS	**Valsamata**	**0.71**	**286**	*e*Pg	Pg	23 26 49.4	-0.4
VLS	**Valsamata**	**0.71**	**286**	P	Pg	23 26 50.2	+0.4
VLS				*e*Sb	Sb	23 27 01.2	+0.2
VLS				S	Sg	23 27 01.6	+2.6
ITM	**Ithomi**	**0.88**	**154**	*e*Pg	Pg	23 26 52.8	-0.4
ITM				*e*Sb	Sb	23 27 06.2	+0.1
ITM	**Ithomi**	**0.88**	**154**	*e*PG	Pg	23 26 52.8	-0.4
ITM				*e*SB	Sb	23 27 06.2	+0.1
ITM	**Ithomi**	**0.88**	**154**	P	Pg	23 26 53.0	-0.2
ITM	**Ithomi**	**0.88**	**154**	*e*Pg	Pg	23 26 52.8	-0.4
ITM				*e*Sb	Sb	23 27 06.2	+0.1
DSF	**Desfina**	**0.95**	**63**	P	Pg	23 26 53.3	-1.2
DSF				S	Sg	23 27 07.1	+0.3
DSF	**Desfina**	**0.95**	**63**	P	Pg	23 26 53.3	-1.2
DSF				S	Sg	23 27 07.1	+0.3
VLX	**Vlachokerasia**	**0.96**	**129**	*e*PG	Pg	23 26 54.2	-0.3
VLX				*e*SB	Sb	23 27 08.2	0.0
VLX	**Vlachokerasia**	**0.96**	**129**	P	Pg	23 26 54.1	-0.4
VLX				S	Sg	23 27 07.7	+0.8
VLX	**Vlachokerasia**	**0.96**	**129**	P	Pg	23 26 54.1	-0.4
VLX				S	Sg	23 27 07.7	+0.8
VLX				*e*Sb	Sb	23 27 08.2	0.0
EVR	**Evrytania**	**0.98**	**17**	*e*Pn	Pn	23 26 55.4	-1.2
EVR				*e*Sb	Sb	23 27 08.5	-0.3
EVR	**Evrytania**	**0.98**	**17**	*e*PN	Pn	23 26 55.4	-1.2
EVR				*e*SB	Sb	23 27 08.5	-0.3
EVR	**Evrytania**	**0.98**	**17**	*e*Pn	Pn	23 26 55.4	-1.2
EVR				*e*Sb	Sb	23 27 08.5	-0.3
PYL	**PYLOS**	**1.11**	**168**	*e*PB	Pb	23 26 57.3	-0.5
PYL	**PYLOS**	**1.11**	**168**	*e*Pb	Pb	23 26 57.3	-0.5
LTK	**Loutraki**	**1.20**	**87**	*e*PB	Pb	23 26 59.2	-0.2
LTK	**Loutraki**	**1.20**	**87**	P	Pg	23 26 58.0	-1.2
LTK	**Loutraki**	**1.20**	**87**	P	Pg	23 26 58.0	-1.2
LTK	**Loutraki**	**1.20**	**87**	*e*Pb	Pb	23 26 59.2	-0.2
AGG	**Agios Georgios**	**1.25**	**33**	*e*Pb	Pb	23 27 00.3	+0.1
AGG	**Agios Georgios**	**1.25**	**33**	*e*PB	Pb	23 27 00.3	+0.1
AGG	**Agios Georgios**	**1.25**	**33**	P	Pg	23 26 59.7	-0.5
AGG				S	Sg	23 27 17.4	+1.0
AGG	**Agios Georgios**	**1.25**	**33**	P	Pg	23 26 59.7	-0.5
AGG	**Agios Georgios**	**1.25**	**33**	*e*Pb	Pb	23 27 00.3	+0.1
AGG				S	Sg	23 27 17.4	+1.0
DID	**Didima**	**1.49**	**108**	*e*PG	Pg	23 27 03.5	-1.3
DID	**Didima**	**1.49**	**108**	*e*Pg	Pg	23 27 03.5	-1.3
THL	**Klokotos Trika**	**1.64**	**15**	*e*PB	Pb	23 27 07.4	+0.4
THL				*e*SB	Sb	23 27 30.6	+2.6
THL	**Klokotos Trika**	**1.64**	**15**	*e*Pb	Pb	23 27 07.4	+0.4
THL				*e*Sb	Sb	23 27 30.6	+2.6
VLI	**Veliai**	**1.73**	**136**	*e*Pn	Pn	23 27 09.6	+2.7
VLI	**Veliai**	**1.73**	**136**	*e*PN	Pn	23 27 09.6	+2.7
KYTH	**Kithira**	**2.12**	**143**	*e*Pg	Pg	23 27 15.6	-1.2
KYTH	**Kithira**	**2.12**	**143**	*e*PG	Pg	23 27 15.6	-1.2
KYTH	**Kithira**	**2.12**	**143**	*e*Pg	Pg	23 27 15.6	-1.2

*ISCJB **01** 23:34:58.1±0.6, 50°.31N±0°.04×18°.86E±0°.04, h0km, Error ellipse: s-maj=6.6km s-min=2.6km az=19.0*
*CSEM **01** 23:34:58.8±0.3, 50°.33N×18°.89E, h1km, ML2.5/4, Error ellipse: s-maj=7.6km s-min=3.0km az=6.0*
*WAR **01** 23:34:58.6, 50°.24N×18°.92E*
*PRU **01** 23:35:00.6, 50°.26N×18°.88E, h0km*
ISC 01 23:34:59.8±0.6, 50°.27N±0°.04×18°.89E±0°.03, h0km, n24, σ1§20/40, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.59**	**94**	*e*Pg	**Pg**	**23 35 10.0**	**-1.1**
OJC				*e*Sg	**Sg**	**23 35 18.1**	**-0.6**
OKC	**Ostrava-Krasne**	**0.64**	**228**	*e*PG	**Pg**	**23 35 13.0**	**+0.9**
OKC				*e*SG	**Sg**	**23 35 21.3**	**+0.9**
comp=Z,19nm,1.0s							
OKC	**Ostrava-Krasne**	**0.64**	**228**	Pg	**Pg**	**23 35 13.0**	**+0.9**
OKC				Sg	**Sg**	**23 35 21.3**	**+0.9**
comp=Z,19nm,1.0s							
NIE	**Niedzica**	**1.26**	**132**	*e*Pg	**Pg**	**23 35 24.3**	**+0.4**
NIE				*e*Sg	**Sg**	**23 35 41.4**	**+1.3**
NIE	**Niedzica**	**1.26**	**132**	*e*Pg	**Pg**	**23 35 24.3**	**+0.4**
NIE				*e*Sg	**Sg**	**23 35 41.4**	**+1.3**
DPC	**Dobruska-Polom**	**1.65**	**274**	*e*PG	**Pg**	**23 35 30.2**	**-1.1**
DPC				*e*SG	**Sg**	**23 35 52.5**	**-0.2**
comp=Z,9.1nm,0.3s							
DPC	**Dobruska-Polom**	**1.65**	**274**	Pg	**Pg**	**23 35 30.2**	**-1.1**
DPC				Sg	**Sg**	**23 35 52.5**	**-0.2**
comp=Z,9.1nm,0.3s							
KOLL	**Kolacno**	**1.72**	**191**	*e*SN	**Sn**	**23 35 54.0**	**+0.4**
KOLL	**Kolacno**	**1.72**	**191**	*e*Sn	**Sn**	**23 35 54.0**	**+0.4**
KOLL	**Kolacno**	**1.72**	**191**	*e*	**Pn**	**23 35 32.9**	**+1.9**
KOLL				*e*Sn	**Sn**	**23 35 54.0**	**+0.4**
KOLL	**Kolacno**	**1.72**	**191**	*e*	**Pn**	**23 35 32.9**	**+1.9**
STHS	**Stebnicka Huta**	**1.75**	**118**	*e*PN	**Pn**	**23 35 33.6**	**+2.3**
STHS				*e*SN	**Sn**	**23 35 55.2**	**+0.9**
STHS	**Stebnicka Huta**	**1.75**	**118**	*e*Pn	**Pn**	**23 35 33.6**	**+2.3**
KSP	**Ksiaz**	**1.75**	**290**	*e*Pg	**Sn**	**23 35 52.3**	**-2.1**
KSP				*e*Sg	**Sg**	**23 35 56.5**	**+0.5**
VYHS	**Vyhne**	**1.78**	**181**	*e*PN	**Pn**	**23 35 31.5**	**-0.2**
VYHS				*e*SN	**Sn**	**23 35 53.3**	**-1.7**
VYHS	**Vyhne**	**1.78**	**181**	*e*Pn	**Pn**	**23 35 31.5**	**-0.2**
VYHS				*e*Sn	**Sn**	**23 35 53.3**	**-1.7**
KECS	**Kecovo**	**2.07**	**149**	*e*PN	**Pn**	**23 35 34.3**	**-1.5**
KECS				*e*SN	**Sn**	**23 35 59.9**	**-2.3**
CRVS	**Cervenica-Dubn**	**2.16**	**128**	*e*PG	**Pg**	**23 35 40.9**	**-0.3**
CRVS				*e*SN	**Sn**	**23 36 05.0**	**+0.5**
CRVS	**Cervenica-Dubn**	**2.16**	**128**	*e*Pg	**Pg**	**23 35 40.9**	**-0.3**
CRVS				*e*Sn	**Sn**	**23 36 05.0**	**+0.5**
PRU	**Pruhonice**	**2.81**	**266**	*e*SG	**Sg**	**23 36 29.5**	**-0.5**
comp=Z,2.1nm,0.4s							
PRU	**Pruhonice**	**2.81**	**266**	Sg	**Sg**	**23 36 29.5**	**-0.5**
comp=Z,2.1nm,0.4s							
BRG	**Berggiesshubel**	**3.21**	**283**	SG	**Sg**	**23 36 43.8**	**+0.9**
comp=Z,1.8nm,0.4s							
KHC	**Kasperske Hory**	**3.63**	**254**	*e*PG	**Pg**	**23 36 05.0**	**-4.3**
KHC				*e*SG	**Sg**	**23 36 55.2**	**-1.1**
comp=Z,2.5nm,0.5s							
CLL	**Collm**	**3.88**	**288**	*e*Sg	**Sg**	**23 37 06.0**	**+1.7**

*IDC **01** 23:50:45.4±5.0, 37°.02N×69°.15E, h0km, mb3.7/3, mb1 3.8/8, mb1mx3.5/27, mbtmp3.8/8, ML3.4/5, MS3.3/3, Ms1 3.3/3, ms1mx2.8/34, Error ellipse: s-maj=78.5km s-min=22.8km az=166.0*
*MOS **01** 23:50:58.7±1.9, 38°.23N×68°.89E, h33km, mb4.1/3, Error ellipse: s-maj=14.7km s-min=8.1km az=75.7*
*NNC **01** 23:50:59.9±4.5, 38°.47N×68°.79E, h9km±18km, mb4.2, mpv4.0, Error ellipse: s-maj=28.8km s-min=15.7km az=28.0*
*NEIC **01** 23:51:03.9±0.8, 38°.54N×68°.92E, h49km±12km, mb3.7/3, Error ellipse: s-maj=10.3km s-min=7.7km az=106.0*
NEIC Felt at Dushanbe.
ISC 01 23:50:58.8±1.2, 38°.21N±0°.04×68°.66E±0°.06, h23km±11km, n63, σ1§41/73, mb3.6/3, 5C-5D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**3.68**	**175**	*e*Pn	**Pb**	**23 52 02.4**	**-0.7**
KBL				Sn	**Sb**	**23 52 52.9**	**+5.8**
KK31	**Karatay Array**	**5.08**	**15**	Pn	**Pn**	**23 52 13.1**	**-0.4**
2.4nm,0.3s,baz=200,slow=14,SNR=66							
KK31				Pg	**Pb**	**23 52 27.7**	**+0.8**
16nm,0.5s,baz=203,slow=9.9,SNR=17							
KK31				Lg		23 53 31.6	
116nm,0.7s,baz=195,slow=29,SNR=9.9							
AML	**Almayashu**	**5.49**	**43**	P	**Pn**	**23 52 19.2**	**+0.1**
SNR=52							
KSH	**Kashi**	**5.85**	**75**	*e*Pn	**Pn**	**23 52 19.8**	**-4.2**
KSH				Sn	**Sn**	**23 53 22.1**	**-8.3**
KSH				smax			
comp=N,86nm,0.6s							
KSH				smax			
comp=E,87nm,0.6s							
KSH	**Kashi**	**5.85**	**75**	Pn	**Pn**	**23 52 19.4**	**-4.6**
KSH				Sn	**Sn**	**23 53 21.2**	**-9.2**
EKS2	**Erkin-Say**	**5.91**	**40**	P	**Pn**	**23 52 28.6**	**+3.8**
SNR=9.9							
EKS2	**Erkin-Say**	**5.91**	**40**	*e*Pn	**Pn**	**23 52 25.3**	**+0.5**
comp=E,23nm,0.6s							
EKS2				*e*Sn	**Sn**	**23 53 40.5**	**+8.6**
AAK	**Ala-Archa**	**6.27**	**43**	Pn	**Pn**	**23 52 31.1**	**+1.3**
comp=E,2.2nm,0.3s,baz=205,slow=4.8,SNR=14							
AAK				Sn	**Sn**	**23 53 40.8**	**+0.3**
comp=E,1.7nm,0.3s,baz=288,slow=20,SNR=3.1							
AAK				LR	LR	23 55 13.0	
comp=E,203nm,18.8s,baz=231,slow=38							
AAK	**Ala-Archa**	**6.27**	**43**	PN	**Pn**	**23 52 31.1**	**+1.4**
AAK						23 53 40.8	
AAK				pmax	pmax		
comp=Z,2.0nm,0.3s							
AAK				smax			
comp=N,2.0nm,0.3s							
AAK				MLR	MLR		
comp=Z,203nm,18.8s							
KZA	**Kyzart**	**6.35**	**51**	P	**Pn**	**23 52 32.5**	**+1.6**
SNR=10							
FRU	**Bishkek**	**6.47**	**43**	*e*PN	**Pn**	**23 52 37.0**	**+4.5**
FRU				*i*		23 52 54.0	
FRU				pmax	pmax		
comp=Z,50nm,2.2s							
KBK	**Karagaybulak**	**6.53**	**45**	P	**Pn**	**23 52 35.4**	**+2.0**
SNR=16							
CHMS	**Chumysh**	**6.66**	**42**	P	**Pn**	**23 52 38.9**	**+3.9**
SNR=8.4							
ULHL	**Ulahol**	**7.06**	**53**	P	**Pn**	**23 52 41.0**	**+0.4**
SNR=8.6							
TKM2	**Tokmak 2**	**7.07**	**46**	⇑Pn	**Pn**	**23 52 40.0**	**-0.8**
comp=Z,10nm,0.6s							
TKM2	**Tokmak 2**	**7.07**	**46**	P	**Pn**	**23 52 40.9**	**+0.1**
SNR=11							
TKM2	**Tokmak 2**	**7.07**	**46**	*e*PN	**Pn**	**23 52 40.3**	**-0.4**
TKM2				*e*		23 54 03.1	
TKM2				pmax	pmax		
comp=Z,20nm,0.6s							
TKM2	**Tokmak 2**	**7.07**	**46**	*e*Pn	**Pn**	**23 52 40.3**	**-0.4**
comp=Z,20nm,0.6s							
TKM2				*e*Sn	**Sn**	**23 54 03.1**	**+2.8**
AB31	**Akbulak array**	**12.70**	**333**	Pn	**Pn**	**23 53 56.0**	**-1.8**
comp=Z,1.9nm,0.5s,baz=156,slow=14,SNR=89							
AB31				Sn	**Sn**	**23 56 17.1**	**-1.3**
comp=Z,3.9nm,0.7s,baz=157,slow=22,SNR=3.8							
ABKAR	**Akbulak array**	**12.70**	**333**	*e*Pn	**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKTK				Sn	Sn	23 56 58.4	-0.9
AKTO	**Aktyubinsk**	**14.38**	**332**	Pn	Pn	23 54 22.2	+1.4
	comp=Z,0.2nm,0.3s,baz=164,slow=18,SNR=3.9						
AKTO				Sn	Sn	23 56 58.4	-0.9
	comp=Z,0.2nm,0.3s,baz=309,slow=18,SNR=4.8						
VOSK	**Vostochnaya**	**14.60**	**6**	⇑Pn	Pn	23 54 24.4	+0.7
	comp=Z,2.0nm,0.8s						
VOSK				⇓Lg		23 58 35.0	
ZRNK	**Zerenda**	**14.74**	**1**	⇑Pn	Pn	23 54 26.6	+1.0
	comp=Z,1.6nm,0.6s						
ZRNK				⇓Lg		23 58 41.0	
	comp=Z,40nm,1.6s						
BVAR	**Borovoye Array**	**14.86**	**4**	Pn	Pn	23 54 28.7	+1.5
	comp=Z,0.3nm,0.3s,baz=184,slow=10.0,SNR=3.1						
BRVK	**Borovoye**	**14.89**	**4**	⇑Pn	Pn	23 54 27.7	+0.1
	comp=Z,5.0nm,0.6s						
BRVK				⇓Lg		23 58 43.1	
	comp=Z,24nm,1.1s						
BRVK	**Borovoye**	**14.89**	**4**	*e*P	Pn	23 54 26.6	-1.1
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BRVK	**Borovoye**	**14.89**	**4**	*e*Pn	Pn	23 54 26.6	-1.1
	comp=Z,3.8nm,0.6s						
KKN	**Kakani**	**17.36**	**122**	*e*P	Pn	23 55 00.0	+0.5
	comp=Z,12nm,0.5s						
DMN	**Daman**	**17.36**	**123**	*e*P	Pn	23 55 00.3	+0.7
	comp=Z,16nm,0.7s						
PKIN	**Phulchoki**	**17.58**	**122**	*e*P	Pn	23 55 02.7	+0.5
	comp=Z,12nm,0.6s						
PKI	**Pulchoki**	**17.59**	**122**	*e*P	Pn	23 55 03.1	+0.7
	comp=Z,16nm,0.6s						
GUN	**Gumba**	**17.69**	**120**	*e*P	Pn	23 55 02.4	-1.2
	comp=Z,19nm,0.5s						
GNI	**Garni**	**18.64**	**283**	*e*P	Pn	23 55 19.2	+4.1
GNI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GNI	**Garni**	**18.64**	**283**	*e*P	Pn	23 55 19.2	+4.1
	comp=Z,3.8nm,0.7s						
RAMN	**Ramite**	**18.80**	**121**	*e*P	Pn	23 55 16.0	-1.1
ZAA0	**Zalesovo Array**	**19.24**	**30**	*e*P	Pn	23 55 19.8	-2.5
ZALV	**Zalesovo Beam**	**19.24**	**30**	P	Pn	23 55 19.8	-2.5
	comp=Z,6.2nm,0.7s,baz=227,slow=11,SNR=27						
ZALV				LR	LR	00 03 18.9	
	comp=Z,34nm,19.4s,baz=209,slow=38						
ZALV	**Zalesovo Beam**	**19.24**	**30**	P	Pn	23 55 19.8	-2.5
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ZALV				MLR	MLR		
	comp=Z,34nm,19.4s						
ZALV	**Zalesovo Beam**	**19.24**	**30**	P	Pn	23 55 19.8	-2.5
ZALV				LR	LR	00 03 18.9	
TAPN	**Taplejung**	**19.30**	**119**	*e*P	Pn	23 55 19.3	-3.9
NVS	**Novosibirsk**	**19.35**	**26**	*e*P	Pn	23 55 22.4	-1.2
ODAN	**Odare**	**19.39**	**120**	*e*P	Pn	23 55 22.3	-2.0
	comp=Z,15nm,0.6s						
ARU	**Arti**	**19.43**	**343**	*e*P	Pn	23 55 27.3	+2.8
ARU				S	Sn	23 58 54.2	-7.5
ARU	**Arti**	**19.43**	**343**	*e*P	Pn	23 55 23.0	-1.5
	comp=Z,2.1nm,0.5s						
KIV	**Kislovodsk**	**20.36**	**295**	*e*P	P	23 55 37.2	+3.7
KIV				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KIV	**Kislovodsk**	**20.36**	**295**	*e*P	P	23 55 37.2	+3.7
	comp=Z,4.8nm,0.7s						
OBN	**Obninsk**	**27.43**	**318**	P	P	23 56 44.1	+1.6
PALK	**Pallekele**	**32.67**	**157**	*e*P	P	23 57 34.0	+4.7
FINES	**FINESS Array B**	**35.02**	**325**	P	P	23 57 49.5	+0.3
	comp=Z,0.7nm,0.4s,mb3.9,baz=101,slow=9.9,SNR=9.9						
FINES	**FINESS Array B**	**35.02**	**325**	P	P	23 57 49.5	+0.3
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	**35.02**	**325**	P	P	23 57 49.5	+0.2
PSZ	**Piszkesteto**	**36.38**	**301**	P	P	23 58 03.0	+1.9
ARCES	**ARCESS Array B**	**38.85**	**337**	P	P	23 58 23.0	+1.4
	comp=Z,2.2nm,0.9s,mb3.9,baz=89,slow=4.8,SNR=2.6						
ARCES	**ARCESS Array B**	**38.85**	**337**	P	P	23 58 23.0	+1.3
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NOA	**NORSAR Array B**	**41.89**	**322**	P	P	23 58 46.8	-0.2
	comp=Z,0.3nm,0.6s,mb3.1,baz=98,slow=8.2,SNR=2.7						
PSI	**Prapat**	**44.81**	**134**	LR	LR	00 19 37.1	
	comp=Z,111nm,19.5s,baz=189,slow=40						

*ISCJB **01** 23:53:55.3±1.2, 77°.03N±0°.08×19°.1E±0°.4, h10km, Error ellipse: s-maj=12.2km s-min=10.4km az=141.9*
*NAO **01** 23:53:57.0±1.0, 76°.97N×18°.82E, ML2.1*
*CSEM **01** 23:53:57.5±0.1, 77°.01N×18°.35E, h10km, ML2.1, Error ellipse: s-maj=7.1km s-min=0.9km az=66.0*
*BER **01** 23:53:59.3±2.5, 77°.01N×19°.09E, h19km±40km, MD2.7, ML2.5, ML2.1(NAO)*

ISC 01 23:53:57.7±2.2, 77°.06N±0°.08×18°.7E±0°.5, h12km±19km, n10, σ0s26/15, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSP	**Hornsund**	**0.72**	**267**	*e*P	Pg	23 54 11.8	+0.3
HSP				*e*S	Sg	23 54 20.8	-0.1
SPA0	**Spitsbergen Ar**	**1.23**	**337**	Pg	Pg	23 54 21.6	+0.3
	baz=153,slow=22						
SPA0				Lg		23 54 39.2	
	baz=154,slow=28						
SPA0	**Spitsbergen Ar**	**1.23**	**337**	Pg	Pg	23 54 21.6	+0.3
	baz=153,slow=22						
SPA0				Lg		23 54 39.2	
	baz=154,slow=28						
SPA0	**Spitsbergen Ar**	**1.23**	**337**	Pg	Pg	23 54 21.6	+0.2
	baz=153,slow=19,SNR=683						
SPA0				Lg		23 54 39.2	
	baz=154,slow=26,SNR=90						
KBS	**Kingsbay**	**2.35**	**326**	Pn	Pn	23 54 36.1	+0.1
KBS				Pg	Pg	23 54 42.0	-0.7
KBS				Lg		23 55 12.5	
KBS	**Kingsbay**	**2.35**	**326**	*e*P	Pn	23 54 36.2	+0.2
KBS				*e*Pg	Pg	23 54 42.5	-0.2
KBS				AML	AML	23 55 18.4	
	comp=Z,56nm,0.3s						
KBS	**Kingsbay**	**2.35**	**326**	Pn	Pn	23 54 36.1	+0.1
ARA0	**ARCESS Array S**	**7.80**	**162**	Pn	Pn	23 55 50.8	-0.1
	baz=358,slow=11						
ARA0				Sn	Sn	23 57 10.1	-8.9
	baz=350,slow=16						
ARA0	**ARCESS Array S**	**7.80**	**162**	Pn	Pn	23 55 50.8	-0.1
	baz=358,slow=11						
ARA0				Sn	Sn	23 57 10.1	-8.9
	baz=350,slow=16						
ARA0	**ARCESS Array S**	**7.80**	**162**	Pn	Pn	23 55 50.8	-0.1
	baz=358,slow=10,SNR=4.3						

*ISCJB **02** 00:01:13.6±0.5, 37°.85N±0°.02×29°.40E±0°.04, h9km±5km, Error ellipse: s-maj=5.6km s-min=3.8km az=13.5*
*CSEM **02** 00:01:13.5±0.2, 37°.85N×29°.40E, h12km, MD2.9, Error ellipse: s-maj=4.2km s-min=3.0km az=104.0*
*ISK **02** 00:01:13.6, 37°.84N×29°.44E, h7km, MD2.9*
*DDA **02** 00:01:13.5, 37°.87N×29°.35E, h7km±3km, Md2.9*

ISC 02 00:01:14.0±0.5, 37°.86N±0°.02×29°.38E±0°.04, h15km±4km, n23, σ0s87/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.29**	**250**	*e*PG	Pg	00 01 20.7	+0.5
DENT				*e*SG	Sg	00 01 25.7	+1.3
DENT	**Denizli**	**0.29**	**250**	*e*Pg	Pg	00 01 20.7	+0.5
DENT				*e*Sg	Sg	00 01 25.7	+1.3
DNZL	**Cakiroluk**	**0.31**	**238**	*i* P	Pg	00 01 19.6	-0.9
DNZL				*i* S	Sg	00 01 24.5	-0.4
DNZL	**Cakiroluk**	**0.31**	**238**	*i* P	Pg	00 01 19.6	-0.9
DNZL				*i* S	Sg	00 01 24.5	-0.4
KHL	**Karahalli**	**0.48**	**13**	*e*PG	Pg	00 01 23.2	-0.3
KHL				*e*SG	Sg	00 01 30.8	+0.9
KHL	**Karahalli**	**0.48**	**13**	*e*Pg	Pg	00 01 23.2	-0.3
KHL				*e*Sg	Sg	00 01 30.8	+0.9
KHAL	**Karahalli**	**0.52**	**10**	*i* P	Pg	00 01 23.3	-0.9
KHAL				*i* S	Sg	00 01 30.9	-0.3
KHAL	**Karahalli**	**0.52**	**10**	*i* P	Pg	00 01 23.3	-1.0
KHAL				*i* S	Sg	00 01 30.9	-0.3
GOLH	**Golhisar**	**0.64**	**167**	*i* P	Pg	00 01 25.5	-0.9
GOLH				*i* S	Sg	00 01 36.8	+1.9
GOLH	**Golhisar**	**0.64**	**167**	*i* P	Pg	00 01 25.5	-0.9
GLHS	**Glhisar (BURDU**	**0.71**	**172**	*e*PG	Pg	00 01 27.6	-0.2
GLHS				*e*SG	Sg	00 01 36.8	-0.3
GLHS	**Glhisar (BURDU**	**0.71**	**172**	*e*Pg	Pg	00 01 27.6	-0.1
GLHS				*e*Sg	Sg	00 01 36.8	-0.3
ISP	**Isparta**	**0.90**	**92**	*e*PG	Pg	00 01 30.5	-1.0
SHUT	**Suhut-Afyon**	**1.15**	**53**	*e*PN	Pn	00 01 36.0	+0.4
SHUT	**Suhut-Afyon**	**1.15**	**53**	*e*Pn	Pn	00 01 36.0	+0.4
ELL	**Elmali**	**1.18**	**159**	*e*PN	Pn	00 01 35.9	-0.1
ELL	**Elmali**	**1.18**	**159**	*e*Pn	Pn	00 01 35.9	-0.1
AYDN	**Tasoluk**	**1.21**	**261**	*i* P	Pn	00 01 35.9	-0.4
AYDN				*i* S	Sb	00 01 51.7	-0.2
AYDN	**Tasoluk**	**1.21**	**261**	*i* P	Pn	00 01 35.9	-0.4
AYDN				*i* S	Sb	00 01 51.7	-0.2
GDZ	**Gediz**	**1.23**	**4**	*e*P	Pn	00 01 36.7	+0.1
GDZ				*i* S	Sb	00 01 54.8	+2.1
GDZ	**Gediz**	**1.23**	**4**	*e*P	Pn	00 01 36.7	0.0
GDZ				*i* S	Sb	00 01 54.8	+2.1
DEMI	**Demirci**	**1.29**	**336**	*i* P	Pn	00 01 37.9	+0.4
DEMI				*i* S	Sb	00 01 53.2	-1.2
DEMI	**Demirci**	**1.29**	**336**	*i* P	Pn	00 01 37.9	+0.4
DEMI				*i* S	Sb	00 01 53.2	-1.2

IDC 02 00:05:49.8±6.7, 6°.05S×120°.07E, h492km±102km, mb2.9/3, mb1 3.1/5, mb1mx2.8/21, mbtmp2.9/5, Error ellipse: s-maj=102.6km s-min=28.1km az=55.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**13.15**	**156**	P	P	00 08 40.8	+0.1
	0.4nm,0.3s,baz=331,slow=10,SNR=25						
WRA	**Warramunga Arr**	**19.57**	**136**	P	P	00 09 45.5	+0.5
	0.6nm,0.3s,baz=312,slow=11,SNR=13						
ASAR	**Alice Springs**	**22.00**	**144**	P	P	00 10 06.7	-0.4
	0.6nm,0.3s,baz=322,slow=8.3,SNR=12						
SONM	**Songino Array**	**54.99**	**349**	P	P	00 14 33.7	-0.2
	0.2nm,0.3s,baz=167,slow=6.8,SNR=2.6						
MKAR	**Makanchi Array**	**62.36**	**332**	P	P	00 15 24.0	+0.3
	1.1nm,0.7s,baz=132,slow=2.1,SNR=12						

*ISCJB **02** 00:08:29.5±0.4, 12°.45N±0°.08×44°.18W±0°.07, h10km, mb4.4/25, MS4.0/20, Error ellipse: s-maj=12.6km s-min=7.5km az=141.5*
*IDC **02** 00:08:29.9±0.8, 12°.41N×44°.22W, h0km, mb3.9/9, mb1 4.1/9, mb1mx3.8/22, mbtmp3.9/9, MS4.0/20, Ms1 4.0/20, ms1mx3.9/26, Error ellipse: s-maj=30.1km s-min=17.7km az=131.0*
*NEIC **02** 00:08:31.4±0.3, 12°.45N×44°.20W, h10km, mb4.6/17, Error ellipse: s-maj=10.5km s-min=6.3km az=143.0*
*GCMT **02** 00:08:35.4±0.3, 12°.72N×44°.43W, h17km±1km, MW5.0, Moment Tensor Solution. s34,c45; s73,c109; Moment tensor: Scale 10^{16}Nm; M_{rr}=0.79±.12; $M_{\theta\theta}$=0.51±.10; $M_{\phi\phi}$=1.30±.11; $M_{r\theta}$=1.11±.29; $M_{\theta\phi}$=3.38±.11; $M_{r\phi}$=0.27±.30; Best double couple: M_0=3.70000×10^{16} NP1:ϕ_s=7.00000°, δ71.00000°, λ=4.00000°. NP2:ϕ_s=99.00000°, δ86.00000°, λ=161.00000°. Principal axes: T 4.0600, Plg11.0000°, Azm231.0000°; N -0.7400, Plg70.0000°, Azm110.0000°; P -3.3200, Plg16.0000°, Azm325.0000°; Data Used: IU II CN IC G.*

ISC 02 00:08:31.6±0.4, 12°.45N±0°.08×44°.17W±0°.07, h10km, n77, σ0s83/58, mb4.4/25, MS4.0/20, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SACV	**Santiago Islan**	**20.14**	**80**	P	P	00 13 06.8	+0.7
ROSC	**El Rosal**	**30.73**	**258**	LR	LR	00 25 30.5	
	comp=Z,222nm,21.6s,MS3.8,baz=28,slow=33						
SIV	**San Ignacio**	**32.83**	**211**	P	P	00 15 05.4	-0.2
	1.1nm,0.7s,mb3.9						
OTAV	**Otavalo**	**36.10**	**253**	*e*P	P	00 15 33.3	-0.7
	2.3nm,0.8s,mb4.2						
LPAZ	**La Paz**	**37.10**	**220**	P	P	00 15 42.1	-0.4
	1.7nm,0.8s,mb4.0,baz=16,slow=7.2,SNR=12						
LPAZ				LR	LR	00 31 01.5	
	comp=Z,477nm,19.6s,MS4.3,baz=346,slow=36						
LPAZ	**La Paz**	**37.10**	**220**	*e*P	P	00 15 42.1	-0.4
	3.1nm,0.8s,mb4.2						
LPAZ				LR	LR	00 31 01.5	
DBIC	**Dimbokro**	**39.16**	**95**	P	P	00 16 00.2	+0.3
	3.9nm,0.9s,mb4.1,baz=262,slow=13,SNR=3.1						
DBIC				LR	LR	00 29 55.0	
	comp=Z,112nm,19.3s,MS3.7,baz=264,slow=33						
DBIC	**Dimbokro**	**39.16**	**95**	*e*P	P	00 16 00.2	+0.2
	11nm,1.0s,mb4.6						
DBIC				LR	LR	00 29 55.0	
PMAFR	**Mafra**	**40.64**	**43**	*e*LR	LR	00 27 00.4	
PVAQ	**Vaqueiros**	**40.96**	**46**	*e*LR	LR	00 27 14.8	
PESTR	**Estremoz**	**41.74**	**44**	*e*P	P	00 16 27.1	+6.1
PESTR				*e*LR	LR	00 27 06.2	
PBAR	**Barrancos**	**41.79**	**46**	*e*LR	LR	00 27 37.8	
PMRV	**Marv??o**	**42.15**	**44**	*e*LR	LR	00 27 50.9	
MTE	**Manteigas**	**42.53**	**42**	*e*LR	LR	00 27 56.5	
MVO	**Moncorvo**	**43.25**	**42**	*e*LR	LR	00 28 44.2	
ESDC	**Sonseca Array**	**44.61**	**45**	P	P	00 16 44.1	-0.1
	1.7nm,0.9s,mb3.9,baz=250,slow=8.1,SNR=7.3						
ESDC				LR	LR	00 32 17.5	
	comp=Z,117nm,20.2s,MS3.8,baz=205,slow=32						
ESDC	**Sonseca Array**	**44.61**	**45**	P	P	00 16 44.1	-0.1
ESDC				LR	LR	00 32 17.4	
ESLA	**Sonseca Array**	**44.61**	**45**	P	P	00 16 44.4	+0.3
SCHQ	**Schefferville**	**45.87**	**342**	LR	LR	00 33 06.4	
	comp=Z,190nm,19.2s,MS4.0,baz=114,slow=32						
SHEL	**Horse Pasture**	**47.35**	**126**	*e*P	P	00 17 05.8	-0.2
SJPF	**Ste Jean**	**47.98**	**42**	*e*P	P	00 17 10.4	-0.2
	32nm,1.2s,mb4.9						
SJPF	**Ste Jean**	**47.98**	**42**	*e*P	P	00 17 10.4	-0.2
	16nm,1.2s,mb4.9						
TAM	**Tamanrasset**	**48.27**	**71**	*e*P	P	00 17 16.0	+2.8
	6.9nm,1.3s,mb4.5						
ETSF	**Etsaut**	**48.32**	**43**	*e*P	P	00 17 13.8	+0.5
	25nm,1.3s,mb4.8						
ETSF	**Etsaut**	**48.32**	**43**	*e*P	P	00 17 13.8	+0.5
	12nm,1.3s,mb4.8						
LCO	**Las Campanas**	**48.54**	**211**	P	P	00 17 15.3	+0.2
EPF	**Esparros**	**48.97**	**43**	*e*P	P	00 17 17.1	-1.2
	35nm,1.5s,mb4.9						
EPF	**Esparros**	**48.97**	**43**	*e*P	P	00 17 17.1	-1.2
	18nm,1.5s,mb4.9						
QUIF	**Quistinic**	**49.13**	**36**	*e*P	P	00 17 18.3	-1.1
	87nm,1.5s,mb5.3						
QUIF	**Quistinic**	**49.13**	**36**	*e*P	P	00 17 18.3	-1.1
	44nm,1.5s,mb5.3						
CFAA	**Coronel Fontan**	**49.51**	**207**	LR	LR	00 37 23.4	
	comp=Z,25nm,18.6s,MS3.2,baz=32,slow=35						
LFF	**La Frestale**	**50.05**	**41**	*e*P	P	00 17 25.9	-0.6
MTLF	**Montolieu**	**50.35**	**43**	*e*P	P	00 17 28.9	+0.1
	32nm,1.6s,mb4.8						
MTLF	**Montolieu**	**50.35**	**43**	*e*P	P	00 17 28.9	+0.1
	16nm,1.6s,mb4.8						
DSB	**Dublin**	**50.57**	**28**	*e*P	P	00 17 30.5	+0.2
GRR	**Gorron**	**50.70**	**36**	*e*P	P	00 17 30.2	-1.1
RJF	**Les Rejaudoux**	**50.70**	**41**	*e*P	P	00 17 29.6	-1.9
CAF	**Calviac**	**50.90**	**41**	*e*P	P	00 17 33.7	+0.8
	14nm,1.1s,mb4.5						
CAF	**Calviac**	**50.90**	**41**	*e*P	P	00 17 33.7	+0.8
	7.2nm,1.1s,mb4.5						
TCF	**Toulx Ste Croi**	**51.57**	**40**	*e*P	P	00 17 36.0	-1.9
	44nm,1.5s,mb4.8						
TCF	**Toulx Ste Croi**	**51.57**	**40**	*e*P	P	00 17 36.0	-1.9
	22nm,1.5s,mb4.9						
LASF	**Ste Croix**	**51.73**	**43**	*e*P	P	00 17 38.0	-1.2
	30nm,1.3s,mb4.8						
AVF	**Avril sur Loir**	**52.49**	**40**	*e*P	P	00 17 45.2	+0.4
VIVF	**Saint-Julien-l**	**52.57**	**42**	*e*P	P	00 17 46.4	+1.0
SSF	**Saint Saulge**	**52.70**	**39**	*e*P	P	00 17 46.4	0.0
	9.8nm,1.0s,mb4.4						
SSF	**Saint Saulge**	**52.70**	**39**	*e*P	P	00 17 46.4	0.0
	4.9nm,1.0s,mb4.4						
TRQA	**Tornquist**	**52.94**	**198**	*e*P	P	00 17 48.9	+0.8
LMR	**La Mourre**	**53.27**	**45**	*e*P	P	00 17 49.7	-0.9
KEST	**Kesra**	**53.34**	**55**	LR	LR	00 40 09.0	
	comp=Z,55nm,18.3s,MS3.6,baz=199,slow=36						
FRF	**La Foret Royal**	**53.44**	**45**	*e*P	P	00 17 52.2	+0.4
MEZF	**Maizieres J´vi**	**54.25**	**38**	*e*P	P	00 17 58.7	+1.0
BAIF	**Baives**	**54.41**	**36**	*e*P	P	00 17 58.5	-0.4
HAU	**Haudompre**	**54.85**	**39**	*e*P	P	00 18 01.4	-0.6
HINF	**Hinteralfeld**	**55.09**	**40**	*e*P	P	00 18 05.1	+1.3
ULM	**Lac du Bonnet**	**56.44**	**323**	LR	LR	00 38 40.3	
	comp=Z,129nm,19.4s,MS4.0,baz=151,slow=32						
TXAR	**Lajitas Array**	**57.49**	**297**	P	P	00 18 20.6	-0.7
	0.6nm,0.9s,mb3.6,baz=108,slow=8.3,SNR=6.2						
TXAR				LR	LR	00 40 55.1	
	comp=Z,75nm,20.1s,MS3.8,baz=0.0,slow=34						
PLCA	**Paso Flores**	**58.28**	**203**	P	P	00 18 26.0	-0.5
	3.6nm,1.0s,mb4.3,baz=66,slow=12,SNR=3.2						
PLCA				LR	LR	00 46 14.1	
	comp=Z,211nm,18.1s,MS4.3,baz=66,slow=39						
PLCA	**Paso Flores**	**58.28**	**203**	*e*P	P	00 18 25.3	-1.2
PLCA				LR	LR	00 46 14.1	
SDCO	**Great Sand Dun**	**59.86**	**306**	P	P	00 18 38.7	+1.1
	1.5nm,0.8s,mb4.1						
CLL	**Collm**	**60.06**	**37**	*i* (sP)	sP	00 18 42.3	-0.9
CLL				*e*S	S	00 26 56.0	+4.4
CLL				Lm		00 39 00.0	
	comp=Z,200nm,21.3s						
ISCO	**Idaho Springs**	**60.24**	**309**	*e*P	P	00 18 40.9	+0.6
	comp=Z,5.0nm,0.9s,mb4.5						
ANMO	**Albuquerque**	**60.31**	**303**	LR	LR	00 41 44.7	
	comp=Z,230nm,21.1s,MS4.3,baz=279,slow=33						
NOA	**NORSAR Array B**	**62.80**	**27**	P	P	00 18 57.8	+0.7
	comp=Z,0.4nm,0.8s,mb3.6,baz=254,slow=6.2,SNR=2.5						
NOA				LR	LR	00 40 33.0	
	comp=Z,112nm,21.1s,MS4.0,baz=245,slow=31						
PDAR	**Pinedale Array**	**63.61**	**312**	LR	LR	00 43 44.0	
	comp=Z,149nm,19.6s,MS4.2,baz=125,slow=33						
HWUT	**Hardware Ranch**	**64.96**	**310**	*e*P	P	00 19 11.8	+0.1
	comp=Z,5.3nm,1.0s,mb4.5						
BGU	**Big Grassy Mou**	**66.00**	**309**	*e*P	P	00 19 18.8	+0.3
	comp=Z,4.3nm,1.0s,mb4.4						
BSMT	**Bassoo Peak**	**67.87**	**317**	*e*P	P	00 19 30.3	0.0
	comp=Z,3.7nm,1.1s,mb4.3						
FINES	**FINESS Array B**	**69.73**	**29**	LR	LR	00 43 54.7	
	comp=Z,140nm,21.9s,MS4.2,baz=274,slow=30						
AKASG	**Malin Array Be**	**69.95**	**40**	LR	LR	00 46 18.8	
	comp=Z,88nm,21.8s,MS4.0,baz=265,slow=32						
YKA	**Yellowknife Ar**	**70.02**	**332**	P	P	00 19 44.0	+0.7
	comp=Z,1.2nm,1.0s,mb3.8,baz=109,slow=6.7,SNR=5.1						
YKA	**Yellowknife Ar**	**70.02**	**332**	P	P	00 19 44.0	+0.7
BRTR	**Keskin Array B**	**72.82**	**52**	P	P	00 20 00.9	+0.2
	comp=Z,1.2nm,0.8s,mb3.9,baz=282,slow=6.2,SNR=7.2						
BRTR				LR	LR	00 53 06.6	
	comp=Z,34nm,18.2s,MS3.7,baz=50,slow=37						
MMAI	**Mount Meron Ar**	**74.65**	**59**	LR	LR	00 53 21.4	
	comp=Z,73nm,18.8s,MS4.0,baz=325,slow=36						
INK	**Inuvik**	**78.29**	**338**	LR	LR	00 53 21.0	
	comp=Z,175nm,18.2s,MS4.4,baz=78,slow=34						
BOSA	**Boshof**	**78.48**	**123**	LR	LR	00 47 39.3	
	comp=Z,184nm,18.8s,MS4.4,baz=305,slow=30						
KDAK	**Kodiak Island**	**89.10**	**329**	LR	LR	00 57 11.9	
	comp=Z,114nm,18.5s,MS4.3,baz=98,slow=33						
BRVK	**Borovoye**	**94.20**	**33**	P	P	00 21 51.4	+0.6

*CSEM **02** 00:19:06.2, 42°.85N×47°.09E, h4km, mb3.8, After OBN*
*MOS **02** 00:19:06.2±2.3, 42°.85N×47°.09E, h4km, mb3.8/1, Error ellipse: s-maj=11.0km s-min=8.4km az=96.4*
*ISCJB **02** 00:19:08.9±0.5, 42°.91N±0°.03×47°.00E±0°.03, h10km, Error ellipse: s-maj=3.9km s-min=2.9km az=14.9*

ISC 02 00:19:09.6±0.5, 42°.91N±0°.03×47°.03E±0°.03, h10km, n31, σ1s18/57, 2C-1D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUJR	**Buynaksk**	**0.10**	**146**	⇑*i* PG	Pg	00 19 10.0	-2.3
BUJR				pmax	pmax		
	comp=Z,334nm,0.2s						
BUJR	**Buynaksk**	**0.10**	**146**	*i* Pg	Pg	00 19 10.0	-2.3
	comp=Z,334nm,0.2s						
KRNR	**Karanay**	**0.12**	**227**	*e*PG	Pg	00 19 10.8	-1.7
KRNR				*i* S	Sg	00 19 13.2	-1.4
KRNR	**Karanay**	**0.12**	**227**	*e*Pg	Pg	00 19 10.8	-1.7
KRNR				*i* Sg	Sg	00 19 13.2	-1.4
DBC	**Dubki**	**0.18**	**307**	*e*PG	Pg	00 19 12.3	-1.2
DBC				*e*S	Sg	00 19 17.0	+0.8
DBC	**Dubki**	**0.18**	**307**	*e*Pg	Pg	00 19 12.3	-1.2
DBC				*e*Sg	Sg	00 19 17.0	+0.8
UNCR	**Uncukul**	**0.26**	**221**	⇓*i* PG	Pg	00 19 13.0	-1.9
UNCR				*e*S	Sg	00 19 19.0	+0.5
UNCR				pmax	pmax		
	comp=Z,193nm,0.3s						
UNCR	**Uncukul**	**0.26**	**221**	*i* Pg	Pg	00 19 13.0	-1.9
	comp=Z,193nm,0.3s						
UNCR				*e*Sg	Sg	00 19 19.0	+0.5
ARKR	**Arakani**	**0.31**	**185**	*i* PG	Pg	00 19 14.5	-1.3
ARKR				*i* S	Sg	00 19 19.5	-0.4
ARKR	**Arakani**	**0.31**	**185**	*i* Pg	Pg	00 19 14.5	-1.3
ARKR				*i* Sg	Sg	00 19 19.5	-0.4
DLMR	**Dylym**	**0.33**	**299**	*e*PG	Pg	00 19 17.0	+0.8
DLMR				*e*S	Sg	00 19 22.5	+1.8
DLMR				pmax	pmax		

DNZL				*i* S	Sg	00 27 49.3	-0.2
DNZL	**Cakiroluk**	**0.33**	**241**	*i* P	Pg	00 27 44.3	-0.6
DNZL				*i* S	Sg	00 27 49.3	-0.2
KHL	**Karahalli**	**0.48**	**10**	*e*PG	Pg	00 27 46.3	-1.3
KHL				*e*SG	Sg	00 27 54.9	+0.9
KHL	**Karahalli**	**0.48**	**10**	*e*Pg	Pg	00 27 46.3	-1.3
KHL				*e*Sg	Sg	00 27 54.9	+0.9
KHAL	**Karahalli**	**0.52**	**7**	*i* P	Pg	00 27 48.1	-0.3
KHAL				*i* S	Sg	00 27 55.5	+0.2
KHAL	**Karahalli**	**0.52**	**7**	*i* P	Pg	00 27 48.1	-0.3
KHAL				*i* S	Sg	00 27 55.5	+0.1
GOLH	**Golhisar**	**0.62**	**169**	*i* P	Pg	00 27 50.4	+0.2
GOLH				*i* S	Sg	00 28 00.5	+2.0
GOLH	**Golhisar**	**0.62**	**169**	*i* P	Pg	00 27 50.4	+0.1
GOLH				*i* S	Sg	00 28 00.5	+2.0
SHUT	**Suhut-Afyon**	**1.14**	**52**	*e*PN	Pn	00 27 59.1	-0.4
SHUT				*e*SN	Sn	00 28 13.3	-1.5
SHUT	**Suhut-Afyon**	**1.14**	**52**	*e*Pn	Pn	00 27 59.1	-0.4
SHUT				*e*Sn	Sn	00 28 13.3	-1.6
AYDN	**Tasoluk**	**1.23**	**262**	*i* P	Pn	00 28 00.8	0.0
AYDN				*i* S	Sb	00 28 16.8	-0.1
AYDN	**Tasoluk**	**1.23**	**262**	*i* P	Pn	00 28 00.8	0.0
AYDN				*i* S	Sb	00 28 16.8	0.0
GDZ	**Gediz**	**1.24**	**2**	*i* P	Pn	00 28 01.3	+0.4
GDZ				*i* S	Sb	00 28 19.6	+2.6
GDZ	**Gediz**	**1.24**	**2**	*i* P	Pn	00 28 01.3	+0.4
GDZ				*i* S	Sb	00 28 19.6	+2.6
DEMI	**Demirci**	**1.31**	**335**	*i* P	Pn	00 28 02.5	+0.6
DEMI				*i* S	Sb	00 28 19.5	+0.4
DEMI	**Demirci**	**1.31**	**335**	*i* P	Pn	00 28 02.5	+0.6
DEMI				*i* S	Sb	00 28 19.5	+0.4
ALT	**Altintas**	**1.32**	**24**	*e*PN	Pn	00 28 01.2	-0.8
ALT	**Altintas**	**1.32**	**24**	*e*Pn	Pn	00 28 01.2	-0.8

*IDC **02** 00:33:51.3±2.4, 10°.90N×91°.72E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.6/23, mbtmp3.8/7, MS3.5/1, Ms1 3.5/1, ms1mx2.6/22, Error ellipse: s-maj=105.7km s-min=17.9km az=62.0*
*ISCJB **02** 00:34:00.8±0.8, 12°.3N±0°.1×94°.3E±0°.2, h33km, mb3.7/6, Error ellipse: s-maj=34.5km s-min=10.7km az=151.4*
*NEIC **02** 00:34:03.1±0.7, 12°.26N×94°.34E, h35km, mb4.1/2, Error ellipse: s-maj=28.8km s-min=9.6km az=62.0*
ISC 02 00:34:03.0±0.8, 12°.3N±0°.1×94°.3E±0°.2, h35km, n20, σ1§10/18, mb3.7/6, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	**Kulim**	**9.37**	**137**	Pn	**Pn**	**00 36 15.5**	**-0.1**
KKM	**Kota Kinabalu**	**22.52**	**104**	P	**P**	**00 38 59.0**	**-0.9**
COCO	**West Island**	**24.43**	**174**	P	**P**	**00 39 18.4**	**-0.2**
MK31	**Makanchi Array**	**35.87**	**346**	*e*P	**P**	**00 40 59.2**	**-0.2**
MKAR	**Makanchi Array**	**35.87**	**346**	P	**P**	**00 40 59.6**	**+0.2**
	2.0nm,0.7s,mb4.2,baz=166,slow=8.3,SNR=20						
MKAR	**Makanchi Array**	**35.87**	**346**	P	**P**	**00 40 59.6**	**+0.2**
SONM	**Songino Array**	**36.88**	**14**	P	pP	00 41 18.2	0.0
	1.1nm,0.8s,baz=201,slow=7.9,SNR=6.9						
SONM	**Songino Array**	**36.88**	**14**	P	pP	00 41 18.2	0.0
MBWA	**Marble Bar**	**41.58**	**143**	P	**P**	**00 41 46.9**	**-0.8**
ZALV	**Zalesovo Beam**	**42.25**	**352**	P	**P**	**00 41 54.1**	**+1.4**
	1.3nm,0.4s,mb3.9,baz=170,slow=9.0,SNR=9.4						
ZALV				LR	LR	01 04 05.3	
	comp=Z,65nm,20.0s,baz=52,slow=42						
ZALV	**Zalesovo Beam**	**42.25**	**352**	P	**P**	**00 41 54.1**	**+1.4**
ZALV				LR	LR	01 04 05.3	
FITZ	**Fitzroy Crossi**	**43.23**	**134**	P	**P**	**00 42 02.1**	**+1.0**
	1.0nm,0.7s,mb3.7,baz=290,slow=12,SNR=3.5						
FITZ	**Fitzroy Crossi**	**43.23**	**134**	*e*P	**P**	**00 42 00.3**	**-0.8**
	1.6nm,0.6s						
BVAR	**Borovoye Array**	**44.91**	**340**	P	**P**	**00 42 11.5**	**-2.7**
	0.4nm,0.5s,mb3.5,baz=141,slow=5.0,SNR=5.2						
BVAR	**Borovoye Array**	**44.91**	**340**	P	**P**	**00 42 11.5**	**-2.7**
WRA	**Warramunga Arr**	**50.79**	**129**	P	**P**	**00 43 02.2**	**+2.0**
	0.3nm,0.3s,mb3.6,baz=308,slow=8.1,SNR=2.9						
WRA	**Warramunga Arr**	**50.79**	**129**	P	**P**	**00 43 02.2**	**+2.0**
WRAB	**Tennant Creek**	**50.79**	**129**	*e*P	**P**	**00 42 59.4**	**-0.8**
	1.8nm,0.6s						
ASAR	**Alice Springs**	**52.70**	**133**	P	**P**	**00 43 15.4**	**+1.1**
	0.3nm,0.5s,mb3.5,baz=304,slow=6.5,SNR=4.6						
ASAR	**Alice Springs**	**52.70**	**133**	P	**P**	**00 43 15.4**	**+1.1**

WEL 02 00:36:47.6±0.5, 41°.73S×178°.04E, h33km, ML3.6/20, Error ellipse: s-maj=4.6km s-min=3.0km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TMWZ	**Te Maipa**	**1.73**	**290**	SN	Sn	00 37 34.5	-1.8
TRWZ	**Traveller**	**1.80**	**280**	SN	Sn	00 37 36.9	-1.0
PRHZ	**Porangahau**	**1.81**	**323**	PN	Pn	00 37 15.7	-0.7
PRHZ				SN	Sn	00 37 36.7	-1.4
MTW	**Mount Morrison**	**1.99**	**286**	PN	Pn	00 37 18.0	-1.0
MTW				SN	Sn	00 37 40.1	-2.6
DVHZ	**Dannevirke**	**2.01**	**315**	PN	Pn	00 37 18.7	-0.5
DVHZ				SN	Sn	00 37 41.5	-1.7
WPHZ	**Waipukurau**	**2.06**	**323**	PN	Pn	00 37 19.6	-0.3
WPHZ				SN	Sn	00 37 42.7	-1.7
HOWZ	**Holdsworth Sta**	**2.08**	**293**	PN	Pn	00 37 19.6	-0.5
PLWZ	**Palliser**	**2.10**	**273**	PN	Pn	00 37 18.9	-1.5
MSWZ	**Moikau Station**	**2.12**	**278**	PN	Pn	00 37 19.4	-1.3
KAHZ	**Kahuranaki**	**2.12**	**335**	PN	Pn	00 37 20.1	-0.7
MRZ	**Mangatainoka R**	**2.14**	**299**	PN	Pn	00 37 20.8	-0.2
POWZ	**Post Office Ro**	**2.18**	**307**	PN	Pn	00 37 21.7	+0.2
PNHZ	**Pukenui**	**2.29**	**322**	PN	Pn	00 37 22.7	-0.3
PNHZ				SN	Sn	00 37 48.0	-2.1
TSZ	**Takapari Road**	**2.29**	**316**	PN	Pn	00 37 22.9	-0.3
TSZ				SN	Sn	00 37 48.1	-2.1
OGWZ	**Otaki Gorge**	**2.35**	**292**	PN	Pn	00 37 23.7	-0.2
MCHZ	**McNeill Hill**	**2.50**	**335**	PN	Pn	00 37 25.3	-0.6
KIW	**Kapiti Island**	**2.51**	**289**	PN	Pn	00 37 26.1	0.0
KNZ	**Kokohu**	**2.72**	**354**	PN	Pn	00 37 26.7	-2.2
NMHZ	**Naumai**	**2.79**	**340**	PN	Pn	00 37 29.2	-0.7
BKZ	**Black Stump Fm**	**2.82**	**335**	PN	Pn	00 37 29.5	-0.8
TCW	**Tory Channel**	**2.88**	**279**	PN	Pn	00 37 30.5	-0.6
MOVZ	**Moawhango**	**2.90**	**322**	PN	Pn	00 37 31.9	+0.5
WNVZ	**Wahianoa**	**3.04**	**321**	PN	Pn	00 37 34.4	+1.1
WAZ	**Wanganui**	**3.04**	**309**	PN	Pn	00 37 35.3	+1.8
FWVZ	**Far West T-bar**	**3.12**	**322**	PN	Pn	00 37 35.1	+0.7
BSWZ	**Blackbirch Sta**	**3.12**	**269**	PN	Pn	00 37 33.4	-1.0
KRVZ	**Karewarewa**	**3.21**	**324**	PN	Pn	00 37 36.5	+0.9
WTVZ	**West Tongariro**	**3.21**	**324**	PN	Pn	00 37 36.4	+0.7
MWZ	**Matawai**	**3.41**	**353**	PN	Pn	00 37 36.0	-2.4
URZ	**Urewera**	**3.54**	**348**	PN	Pn	00 37 38.4	-1.9
THZ	**Tophouse**	**3.84**	**268**	PN	Pn	00 37 43.0	-1.4
HIZ	**Hauiti**	**4.03**	**322**	PN	Pn	00 37 47.0	0.0
QRZ	**Quartz Range**	**4.25**	**280**	PN	Pn	00 37 50.0	0.0
MQZ	**McQueen's Vall**	**4.44**	**242**	PN	Pn	00 37 49.9	-2.6
LBZ	**Lake Benmore**	**6.34**	**243**	PN	Pn	00 38 17.2	-1.5

*BJI **02** 00:40:33.0, 44°.30N×130°.00W, h10km, mB4.9/6, mb4.8/6, Ms4.4/3, Ms7 4.1/3*
*ISCJB **02** 00:40:34.6±0.5, 44°.39N±0°.04×129°.82W±0°.05, h10km, mb4.3/6, MS3.4/4, Error ellipse: s-maj=5.8km s-min=5.3km az=43.5*
*NEIC **02** 00:40:35.8±1.0, 44°.34N×129°.97W, h10km, mb4.0/7, Error ellipse: s-maj=11.7km s-min=5.1km az=88.0*
*IDC **02** 00:40:39.6±4.5, 44°.15N×129°.02W, h0km, mb3.4/2, mb1 3.7/6, mb1mx3.5/26, mbtmp3.4/6, ML3.5/4, MS3.3/3, Ms1 3.3/3, ms1mx2.8/21, Error ellipse: s-maj=69.9km s-min=30.4km az=64.0*
ISC 02 00:40:36.1±0.5, 44°.38N±0°.04×129°.93W±0°.05, h10km, n78, σ1§09/87, mb4.3/6, MS3.4/4, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**4.33**	**108**	*e*Pn	**Pn**	**00 41 36.5**	**-5.5**
COR	**Corvallis**	**4.75**	**85**	*e*Pn	**Pn**	**00 41 45.6**	**-2.1**
COR				*e*Sn	**Sn**	**00 42 36.7**	**-6.1**
DBO	**Dodson Butte**	**5.01**	**102**	P	**Pn**	**00 41 47.0**	**-4.2**
NLWA	**Neilton Lookou**	**5.19**	**52**	*e*Pn	**Pn**	**00 41 54.5**	**+0.7**
NLWA				*e*Sn	**Sn**	**00 42 51.2**	**-2.5**
HUMO	**Hull Mountain**	**5.38**	**107**	*e*Pn	**Pn**	**00 41 51.8**	**-4.4**
HUMO				*e*Sn	**Sn**	**00 42 47.2**	**-11**
OSD	**Olympics--Snow**	**5.53**	**49**	P	**Pn**	**00 41 59.4**	**+1.0**
LVP	**Lakeview Peak**	**5.58**	**70**	P	**Pn**	**00 41 59.1**	**+0.1**
MTMW	**Mount Mitchell**	**5.70**	**71**	P	**Pn**	**00 42 00.1**	**-0.5**
GNW	**Green Mountain**	**5.89**	**55**	*e*Pn	**Pn**	**00 42 03.1**	**-0.2**
	7.5nm,0.6s						
GNW				*e*Sn	**Sn**	**00 43 08.5**	**-2.3**
YBH	**Yreka Blue Hor**	**5.92**	**114**	Pn	**Pn**	**00 41 59.0**	**-4.7**
	0.4nm,0.3s,baz=297,slow=12,SNR=10						
YBH				Sn	**Sn**	**00 43 02.5**	**-9.0**
	0.4nm,0.3s,baz=236,slow=18,SNR=3.9						
YBH	**Yreka Blue Hor**	**5.92**	**114**	*e*Pn	**Pn**	**00 42 02.5**	**-1.2**
YBH				*e*Sn	**Sn**	**00 43 00.9**	**-11**
HOOD	**Mount Hood Mea**	**5.96**	**78**	*e*Pn	**Pn**	**00 42 03.1**	**-1.2**
HOOD				*e*Sn	**Sn**	**00 43 09.8**	**-2.8**
LON	**Longmire**	**6.17**	**65**	*e*Pn	**Pn**	**00 42 07.6**	**+0.4**
PGC	**Sidney**	**6.18**	**44**	*e*Pn	**Pn**	**00 42 08.0**	**+0.6**
WDC	**Whiskeytown Da**	**6.65**	**122**	*e*Pn	**Pn**	**00 42 14.1**	**+0.3**
KCPM	**Cahto Peak**	**6.66**	**133**	*e*Pn	**Pn**	**00 42 12.6**	**-1.3**
JCW	**Jim Creek**	**6.73**	**53**	*e*Pn	**Pn**	**00 42 15.8**	**+1.0**
JCW				*e*Sn	**Sn**	**00 43 32.6**	**+1.2**
RPW	**Rockport**	**7.10**	**52**	*e*Pn	**Pn**	**00 42 21.2**	**+1.3**
RPW				Sn	**Sn**	**00 43 38.0**	**-2.6**
HOPS	**Hopland**	**7.44**	**134**	*e*Pn	**Pn**	**00 42 22.2**	**-2.4**
MOD	**Modoc**	**7.47**	**106**	*e*Pn	**Pn**	**00 42 25.7**	**+0.8**
RSW	**Rattlesnake Hi**	**7.55**	**71**	Pn	**Pn**	**00 42 26.3**	**+0.1**
HAWA	**Hanford**	**7.59**	**71**	*e*Pn	**Pn**	**00 42 28.0**	**+1.3**
HAWA				*e*Sn	**Sn**	**00 43 51.7**	**-1.0**
OD2	**Odessa Site #2**	**8.39**	**65**	*e*Pn	**Pn**	**00 42 37.6**	**0.0**
WVOR	**Wild Horse Val**	**8.45**	**99**	*e*Pn	**Pn**	**00 42 38.8**	**+0.3**
	2.3nm,0.7s						
BMO	**Blue Mountains**	**9.02**	**83**	*e*Pn	**Pn**	**00 42 44.7**	**-1.6**
CMB	**Columbia Colle**	**9.58**	**128**	*e*Pn	**Pn**	**00 42 54.0**	**0.0**
NEW	**Newport**	**9.68**	**62**	*e*Pn	**Pn**	**00 42 57.0**	**+1.8**
WAKR	**Walker**	**9.82**	**123**	*e*Pn	**Pn**	**00 42 59.0**	**+1.7**
BMN	**Battle Mountai**	**10.19**	**108**	Pn	**Pn**	**00 43 02.2**	**-0.2**
NVAR	**Mina Array Bea**	**10.56**	**120**	Pn	**Pn**	**00 43 04.9**	**-2.5**
	0.2nm,0.3s,baz=294,slow=14,SNR=7.4						
BSMT	**Bassoo Peak**	**11.07**	**66**	*e*Pn	**Pn**	**00 43 14.7**	**+0.4**
HLID	**Hailey**	**11.22**	**89**	*e*Pn	**Pn**	**00 43 17.2**	**+0.8**
HLID				*e*Sn	**Sn**	**00 45 25.4**	**+3.6**
JTMT	**Jette**	**11.38**	**67**	*e*Pn	**Pn**	**00 43 18.7**	**+0.1**
ELK	**Elko**	**11.43**	**103**	Pn	**Pn**	**00 43 19.0**	**-0.2**
	0.1nm,0.3s,baz=285,slow=12,SNR=4.8						
ELK	**Elko**	**11.43**	**103**	Pn	**Pn**	**00 43 19.0**	**-0.3**
MSO	**Missoula**	**11.47**	**72**	*e*Pn	**Pn**	**00 43 19.7**	**-0.1**
SLMT	**Seeley Lake**	**11.82**	**70**	*e*Pn	**Pn**	**00 43 24.6**	**-0.1**
WALA	**Waterton Lakes**	**11.95**	**61**	*e*Pn	**Pn**	**00 43 28.8**	**+2.5**
CHMT	**Chamberlain Mo**	**11.95**	**72**	*e*Pn	**Pn**	**00 43 26.6**	**+0.3**
	2.2nm,1.0s						
MCMT	**McKenzie Canyo**	**12.19**	**82**	*e*Pn	**Pn**	**00 43 29.7**	**+0.1**
	1.7nm,0.9s						
DLMT	**Dillon**	**12.34**	**79**	*e*Pn	**Pn**	**00 43 32.1**	**+0.3**
ISA	**Isabella**	**12.36**	**131**	Pn	**Pn**	**00 43 32.0**	**0.0**
LRM	**Limekiln Ridge**	**12.44**	**77**	*e*Pn	**Pn**	**00 43 33.6**	**+0.6**
BOZ	**Bozeman (W)**	**13.02**	**78**	*e*Pn	**Pn**	**00 43 41.3**	**+0.4**
GSC	**Goldstone**	**13.55**	**128**	*e*Pn	**Pn**	**00 43 48.8**	**+0.6**
IMW	**Indian Meadow**	**13.65**	**85**	*e*Pn	**Pn**	**00 43 50.7**	**+1.1**
TPAW	**Teton Pass**	**13.71**	**87**	*e*Pn	**Pn**	**00 43 51.6**	**+1.1**
HWUT	**Hardware Ranch**	**13.73**	**95**	*e*Pn	**Pn**	**00 43 50.6**	**-0.1**
REDW	**Red Top Meadow**	**13.81**	**88**	*e*Pb	**Pn**	**00 43 53.2**	**+1.5**
ARUT	**Anaconda Range**	**14.06**	**112**	*e*Pn	**Pn**	**00 43 55.9**	**+0.6**
	2.1nm,0.4s						
CCUT	**Cedar City**	**14.25**	**113**	*e*Pn	**Pn**	**00 43 59.0**	**+1.2**
MSU	**Marysvale**	**14.54**	**108**	*e*Pn	**Pn**	**00 44 03.1**	**+1.3**
	18nm,1.5s						
PDAR	**Pinedale Array**	**14.86**	**89**	Pn	**Pn**	**00 44 05.5**	**-0.5**
	0.1nm,0.3s,baz=280,slow=11,SNR=2.6						
SRU	**San Rafael**	**15.40**	**103**	*e*Pn	**Pn**	**00 44 13.2**	**-0.1**
	22nm,1.0s						
WUAZ	**Wupatki**	**16.73**	**116**	*e*Pn	**Pn**	**00 44 30.7**	**+0.2**
PV01	**Paradox Valley**	**17.21**	**104**	*e*Pn	**Pn**	**00 44 36.6**	**+0.2**
	1μm,1.1s						
MVCO	**Mesa Verde**	**17.71**	**106**	*e*Pn	**Pn**	**00 44 40.3**	**-2.4**
SMCO	**Snowmass**	**17.87**	**99**	*e*Pn	**Pn**	**00 44 46.6**	**+1.9**
RSSD	**Black Hills**	**18.54**	**82**	*e*P	**Pn**	**00 44 52.8**	**0.0**
ISCO	**Idaho Springs**	**18.60**	**96**	*e*P	**Pn**	**00 44 54.0**	**+0.5**
SDCO	**Great Sand Dun**	**19.54**	**101**	*e*P	**Pn**	**00 45 04.1**	**-0.8**
	2.8nm,0.9s						
LAZ	**Ladron**	**20.18**	**112**	*e*P	**P**	**00 45 10.4**	**-0.3**
	2.7nm,1.2s						
YKA	**Yellowknife Ar**	**20.21**	**21**	P	**P**	**00 45 16.0**	**+5.2**
	2.5nm,0.9s,baz=208,slow=12,SNR=5.7						
BNM	**Barren Site**	**20.67**	**112**	*e*P	**P**	**00 45 16.4**	**+0.4**
	2.1nm,0.9s						
FFC	**Flin Flon**	**20.74**	**50**	*e*P	**P**	**00 45 16.5**	**-0.1**
	43nm,1.6s						
ULM	**Lac du Bonnet**	**23.68**	**64**	LR	LR	00 54 51.2	
	comp=Z,83nm,20.1s,MS3.2,baz=147,slow=37						
ECSD	**EROS Data Cent**	**23.87**	**80**	*e*P	**P**	**00 45 49.2**	**-0.3**
	5.8nm,1.0s,mb4.0						
TXAR	**Lajitas Array**	**25.68**	**117**	P	**P**	**00 46 04.9**	**-1.3**
	1.2nm,1.0s,mb3.4,baz=299,slow=8.5,SNR=8.9						
TXAR				LR	LR	00 57 21.8	
	comp=Z,36nm,18.4s,MS2.9,baz=205,slow=40						
WMOK	**Wichita Mounta**	**25.74**	**101**	*e*P	**P**	**00 46 06.9**	**+0.2**
	8.6nm,0.9s,mb4.3						
SCHQ	**Schefferville**	**40.87**	**52**	LR	LR	01 04 16.8	
	comp=Z,67nm,18.3s,MS3.5,baz=245,slow=35						
CN2	**Changchun**	**69.53**	**312**	*e*P	**P**	**00 51 45.0**	**+0.2**
BJI	**Beijing**	**77.08**	**314**	P	**P**	**00 52 27.7**	**-1.6**
BJI				PP	PP	00 55 19.8	-2.4
BJI				S	S	01 02 08.0	-10
BJI				SS	SS	01 07 12.1	-2.1
BJI				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.6						
BJI				pmax	pmax		
	comp=Z,81nm,4.4s						
BJI				LR	LR		
	comp=N,120nm,26.9s,MS4.2						
BJI				LR	LR		
	comp=E,110nm,25.2s,MS4.2						
BJI				LR	LR		
	comp=Z,63nm,21.0s,MS3.9						
HHC	**Hu-ho-hao-te**	**78.78**	**317**	*e*P	**P**	**00 52 37.2**	**-1.6**
HHC				S	S	01 02 32.2	-4.2
HHC				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
HHC				pmax	pmax		
	comp=Z,50nm,7.4s						
NJ2	**Nanjing**	**81.50**	**307**	*e*P	**P**	**00 52 54.7**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
KURK	**Kurchatov**	**82.09**	**342**	P	**P**	**00 52 56.3**	**-0.1**
WMQ	**Urumqi**	**86.00**	**334**	*e*P	**P**	**00 53 17.1**	**+0.7**
CD2	**Chengdu**	**90.50**	**316**	P	**P**	**00 53 37.2**	**-1.0**
CD2				pP	pP	00 53 42.0	+0.5
CD2				sP	sP	00 53 44.2	+1.5
CD2				PP	PP	00 57 13.3	+1.3
CD2				SKS		01 04 05.8	
CD2				S	S	01 04 28.3	-5.1
CD2				SS	SS	01 10 31.2	-1.5
CD2				pmax	pmax		
	comp=Z,110nm,4.5s						
CD2				LR	LR		
	comp=N,180nm,8.9s						
CD2				LR	LR		
	comp=Z,120nm,6.5s						
GYA	**Guiyang**	**92.58**	**311**	P	**P**	**00 53 47.0**	**-0.9**

*IDC **02** 00:53:23.0±0.6, 7°.45N×82°.84W, h0km, mb4.3/14, mb1 4.5/20, mb1mx4.4/25, mbtmp4.4/20, ML4.3/4, MS3.5/10, Ms1 3.6/10, ms1mx3.4/25, Error ellipse: s-maj=22.9km s-min=12.6km az=51.0*
*CASC **02** 00:53:27.8±7.1, 7°.53N×82°.89W, h106km±66km, MD4.4, ML4.1, mb4.6(NEIC)*
*ISCJB **02** 00:53:28.7±0.3, 7°.74N±0°.05×82°.63W±0°.03, h33km, mb4.5/69, MS3.8/7, Error ellipse: s-maj=7.7km s-min=3.0km az=27.1*
*BJI **02** 00:53:28.2, 7°.50N×82°.70W, h35km, mB5.0/4, Ms5.0/4, Ms7 4.4/4*
*NEIC **02** 00:53:29.2±0.7, 7°.52N×82°.69W, h35km±6km, mb4.6/52, Error ellipse: s-maj=7.4km s-min=4.0km az=208.0*
ISC 02 00:53:30.9±0.3, 7.77N±0°.05×82°.60W±0°.03, h35km, (h27km±1.4km:pP-P), n434, σ0§77/423, mb4.5/69, MS3.8/7, 131C-117D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTCR	**Cotoan**	**1.13**	**352**	⇓*i*P	**Pn**	**00 53 59.2**	**+8.9**
BAR1		**1.62**	**334**	*e*P	**Pn**	**00 53 55.4**	**-1.7**
BAR1				⇑*e*P		00 53 55.4	
CNI	**Changuinola**	**1.64**	**3**	*e*P	**Pn**	**00 53 58.0**	**+0.7**
BUS	**Buena Vista**	**2.11**	**327**	⇑*e*P	**Pn**	**00 54 02.4**	**-1.4**
BUS				*e*P		00 54 02.4	
QCR	**Quepos**	**2.26**	**317**	*e*P	**Pn**	**00 54 01.4**	**-4.4**
QCR				*e*P		00 54 02.3	
QCR				*e*S	**Sn**	**00 54 29.0**	**-3.5**
QCR				*e*S	**Sn**	**00 54 32.2**	**-0.2**
URSC	**Urasca**	**2.36**	**331**	*e*P	**Pn**	**00 54 06.5**	**-0.7**
URSC				⇓*e*P		00 54 06.7	
LAJ	**Bijagual**	**2.57**	**324**	⇑*e*P	**Pn**	**00 54 08.7**	**-1.4**
LAJ				*e*P		00 54 08.7	
SJS	**Escuela Geolog**	**2.59**	**326**	*e*P	**Pn**	**00 54 09.0**	**-1.4**
SJS				*e*P		00 54 09.4	
SJS				*e*S	**Sn**	**00 54 42.9**	**+2.2**
SJS				*e*S	**Sn**	**00 54 43.3**	**+2.7**
PRS1	**Puriscal**	**2.78**	**323**	⇑*e*P	**Pn**	**00 54 09.7**	**-3.2**
CGA2	**Cerro Gallo 2**	**2.90**	**321**	*e*P	**Pn**	**00 54 12.6**	**-2.0**
BCIP	**Isla Barro Col**	**3.07**	**63**	*e*Pn	**Pn**	**00 54 18.8**	**+1.8**
BCIP				*e*Sn	**Sn**	**00 55 00.3**	**+7.8**
JCR	**Jicaral**	**3.23**	**310**	*e*P	**Pn**	**00 54 16.1**	**-3.1**
JTS	**JuntasAbangare**	**3.42**	**317**	Pn	**Pn**	**00 54 18.7**	**-3.1**
	114nm,0.3s,baz=138,slow=6.8,SNR=282						
JTS				LR	LR	00 55 42.5	
	comp=Z,904nm,21.0s,baz=105,slow=40						
JTS	**JuntasAbangare**	**3.42**	**317**	*e*Pn	**Pn**	**00 54 19.0**	**-2.7**
JTS				*e*Sn	**Sn**	**00 54 59.4**	**-1.6**
VCR	**Vista de Mar**	**3.80**	**308**	*e*P	**Pn**	**00 54 23.5**	**-3.6**
GPS3	**Bodega del ICE**	**4.03**	**318**	*i* P	**Pn**	**00 54 29.4**	**-0.8**
GPS3				*i* S	**Sn**	**00 55 17.1**	**+0.8**
NY14	**Universidad de**	**4.07**	**315**	*i* P	**Pn**	**00 54 29.3**	**-1.4**
NY14				*i* S	**Sn**	**00 55 15.4**	**-1.8**
LAPC	**Finca la Perla**	**4.09**	**317**	*i* P	**Pn**	**00 54 29.8**	**-1.1**
LAPC				*i* S	**Sn**	**00 55 16.6**	**-1.0**
GB1A	**Borinquen Arri**	**4.10**	**318**	*i* S	**Sn**	**00 55 18.7**	**+0.8**
SSN	**San Juan del S**	**4.76**	**318**	*e*P	**Pn**	**00 54 38.5**	**-1.7**
SSN				*e*S	**Sn**	**00 55 34.3**	**+0.2**
CONN	**Concepcion**	**4.81**	**322**	*e*P	**Pn**	**00 54 40.9**	**0.0**
BOAB	**BOACO BROADBAN**	**5.54**	**327**	*e*P	**Pn**	**00 54 50.3**	**-0.7**
TICN	**Ticuantepe**	**5.55**	**320**	*e*P	**Pn**	**00 54 51.1**	**+0.1**
HUEN		**5.74**	**323**	*e*P	**Pn**	**00 54 52.4**	**-1.3**
CSAN		**5.78**	**320**	*e*P	**Pn**	**00 54 54.0**	**-0.3**
COPN	**Copaltepe**	**5.89**	**318**	*e*P	**Pn**	**00 54 54.9**	**-0.8**
COPN				*e*S	**Sn**	**00 56 01.0**	**-1.0**
MOMN	**Momotombo**	**6.03**	**320**	*e*P	**Pn**	**00 54 57.6**	**-0.1**
LEON	**Leon**	**6.26**	**318**	*e*P	**Pn**	**00 54 59.8**	**-1.0**
CRIN	**San Cristobal**	**6.57**	**319**	AML	AML	00 56 08.5	
	comp=N,882nm,0.6s						
TGUH	**Tegucigalpa,Un**	**7.75**	**324**	*e*Pn	**Pn**	**00 55 21.6**	**+0.2**
OTAV	**Otavalo**	**8.55**	**151**	*e*Pn	**Pn**	**00 55 28.8**	**-3.5**
ROSC	**El Rosal**	**8.71**	**109**	Pn	**Pn**	**00 55 34.3**	**-0.3**
	comp=N,2.2nm,0.3s,baz=289,slow=15,SNR=12						
ROSC	**El Rosal**	**8.71**	**109**	*e*Pn	**Pn**	**00 55 34.5**	**-0.1**
APG	**El Apazote**	**10.54**	**314**	Pn	**Pn**	**00 55 56.0**	**-3.6**
	comp=N,1.2nm,0.3s,baz=152,slow=9.5,SNR=16						
APG				LR	LR	00 59 44.5	
	comp=N,302nm,21.9s,baz=124,slow=36						
SDV	**Santo Domingo**	**11.89**	**84**	*e*Pn	**Pn**	**00 56 18.1**	**-0.1**
CMIG	**Matias Romero**	**15.15**	**309**	Pn	**Pn**	**00 57 00.0**	**-2.4**
	comp=N,0.5nm,0.3s,baz=102,slow=18,SNR=6.5						
CMIG				LR	LR

baz=35,SNR=7.2
120A U Bar Ranch, L 34.52 319 ⇑P P 01 00 17.1 +1.1
baz=35,SNR=22
219A White Tail Can 34.59 318 ⇑P P 01 00 17.0 +0.4
baz=35,SNR=7.8
318A Bisbee 34.74 316 ⇑P P 01 00 18.0 +0.1
baz=35
ANMO Albuquerque 34.81 324 P P 01 00 18.4 -0.1
comp=N,3.5nm,0.8s,mb4.3,baz=143,slow=9.0,SNR=13
Z20A Nine Sixteen R 34.86 320 ⇓P P 01 00 19.9 +1.0
baz=35,SNR=22
Y21A Point of Rocks 34.88 322 ⇓P P 01 00 20.1 +1.0
baz=35,SNR=11
119A Ashpeak Ranch, 35.10 319 ⇓P P 01 00 21.8 +0.8
baz=35,SNR=10
218A Dragoon 35.10 317 ⇑P P 01 00 21.5 +0.5
baz=35
U24A Moreno Valley 35.22 327 ⇓P P 01 00 22.9 +1.0
baz=35
X21A Alamocita Cree 35.24 322 ⇑P P 01 00 22.7 +0.5
baz=35,SNR=22
Y20A Horse Springs, 35.24 321 ⇓P P 01 00 23.4 +1.2
baz=35,SNR=10
T25A Trinidad 35.32 329 ⇑P P 01 00 23.4 +0.6
baz=36
Z19A T-Link Ranch, 35.41 320 ⇑P P 01 00 23.6 0.0
baz=36
118A Homack Ranch, 35.45 318 ⇓P P 01 00 24.6 +0.5
baz=36,SNR=6.2
JFWS Jewell Farm 35.65 350 eP P 01 00 24.6 -1.0
comp=N,7.3nm,0.8s,mb4.7
U23A El Rito 35.66 326 ⇓P P 01 00 26.0 +0.2
baz=36,SNR=6.5
X20A Quemado 35.74 322 ⇑P P 01 00 27.0 +0.5
baz=36
TUC Tucson 35.80 317 eP P 01 00 27.6 +0.6
comp=N,4.4nm,1.0s,mb4.3
Y19A Nutrioso 35.83 320 ⇑P P 01 00 28.2 +1.0
baz=36,SNR=13
117A Oracle 35.93 317 ⇓P P 01 00 28.6 +0.4
baz=36
U22A Llaves 36.06 326 ⇓P P 01 00 29.9 +0.7
baz=36
216A Three Points, 36.08 316 ⇑P P 01 00 29.9 +0.4
baz=36
T23A Casias Ranch, 36.09 327 ⇓P P 01 00 30.3 +0.8
baz=36
V21A Milan 36.10 324 ⇑P P 01 00 29.9 +0.4
baz=36
S24A Houchin Ranch, 36.12 329 ⇓P P 01 00 30.1 +0.4
baz=36
W20A Ramah 36.14 323 ⇑P P 01 00 30.6 +0.7
baz=36,SNR=13
X19A St. Johns 36.16 321 ⇑P P 01 00 31.0 +0.9
baz=36,SNR=14
Y18A Canyon Day Jun 36.21 319 ⇓P P 01 00 31.3 +0.8
baz=36,SNR=8.0
SDCO Great Sand Dun 36.34 329 eP P 01 00 31.9 +0.3
comp=N,26nm,2.2s,mb4.8
T22A Edith 36.55 326 ⇓P P 01 00 33.9 +0.6
baz=37
116A Eloy 36.58 316 ⇓P P 01 00 34.0 +0.3
baz=37
V20A Brimhall 36.58 323 ⇑P P 01 00 34.3 +0.7
baz=37
X18A Snowflake 36.64 321 ⇓P P 01 00 34.8 +0.6
baz=37,SNR=6.0
Y17A Roosevelt 36.68 319 ⇓P P 01 00 34.7 +0.2
baz=37
V19A Window Rock 36.86 323 ⇑P P 01 00 37.0 +0.9
baz=37
T21A Navajo Lake 36.88 326 ⇓P P 01 00 36.8 +0.6
baz=37
W18A Petrified Fore 36.88 321 ⇑P P 01 00 37.1 +0.9
baz=37,SNR=5.8
214A Organ Pipe Nat 37.00 315 ⇑P P 01 00 37.5 +0.3
baz=37,SNR=7.1
115A Sonoran Desert 37.02 316 ⇓P P 01 00 37.5 +0.1
baz=37
S22A 4UR Ranch, Cre 37.04 327 ⇑P P 01 00 38.1 +0.6
baz=37
X17A Forest Lakes 37.06 320 ⇑P P 01 00 39.1 +1.4
baz=37,SNR=8.2
Y16A Circle Bar Ran 37.21 318 ⇓P P 01 00 39.8 +0.7
baz=37,SNR=5.7
U19A Dine' College, 37.35 323 ⇑P P 01 00 40.9 +0.7
baz=38
R22A Saguache, Gunn 37.36 328 ⇓P P 01 00 40.5 +0.2
baz=38
V18A Ganado 37.40 322 ⇓P P 01 00 40.8 +0.2
baz=38
W17A Winslow 37.47 321 ⇓P P 01 00 41.7 +0.5
baz=38
114A Black Gap (USA 37.50 316 ⇑P P 01 00 41.6 +0.1
baz=38,SNR=5.4
X16A Lo Mia Camp, P 37.52 319 ⇑P P 01 00 42.3 +0.7
baz=38,SNR=8.8
MVCO Mesa Verde 37.58 325 eP P 01 00 41.9 -0.2
comp=N,25nm,1.3s,mb4.8
T19A Beclabito 37.61 324 ⇑P P 01 00 42.9 +0.5
baz=38,SNR=10
U18A Rough Rock, Ch 37.83 323 ⇓P P 01 00 45.0 +0.8
baz=38
ECSD EROS Data Cent 37.87 343 eP P 01 00 44.5 +0.1
comp=N,5.2nm,1.1s,mb4.2
V17A Tonalea, Kykot 37.87 321 ⇑P P 01 00 45.2 +0.7
baz=38,SNR=35
Z14A Wintersburg 37.89 316 ⇓P P 01 00 45.2 +0.4
baz=38
Q22A Crested Butte, 37.91 328 ⇑P P 01 00 45.3 +0.4
baz=38
W16A Flagstaff 38.00 320 ⇑P P 01 00 46.3 +0.6
baz=38
X15A Humboldt 38.08 319 ⇓P P 01 00 46.9 +0.5
baz=38,SNR=7.5
WUAZ Wupatki 38.16 321 eP P 01 00 48.5 +1.4
comp=N,23nm,1.0s,mb4.9
SMCO Snowmass 38.18 329 eP P 01 00 48.1 +1.0
comp=N,5.4nm,1.1s,mb4.2
Y14A Wickenburg 38.26 317 ⇓P P 01 00 48.4 +0.4
baz=38
PV01 Paradox Valley 38.27 326 eP P 01 00 48.3 +0.4
comp=N,222nm,1.0s
Z13A Yuma Proving G 38.28 316 ⇑P P 01 00 48.0 -0.2
baz=38,SNR=7.9
S19A Harvey Farm, M 38.31 325 ⇑P P 01 00 48.8 +0.5
baz=38
T18A Mexican Hat 38.32 324 ⇑P P 01 00 48.3 -0.1
baz=38,SNR=7.1
U17A Shonto 38.43 322 ⇓P P 01 00 50.1 +0.9
baz=39
X14A Yava 38.50 318 ⇑P P 01 00 50.1 +0.2
baz=39,SNR=7.0
W15A Williams 38.52 319 ⇑P P 01 00 51.2 +1.1
baz=39
Y13A Salome 38.75 316 ⇓P P 01 00 52.2 +0.1
baz=39,SNR=9.4
S18A Hurst Farm, Bl 38.77 324 ⇓P P 01 00 52.5 +0.4
baz=39
T17A Navajo Res., N 38.77 323 ⇑P P 01 00 52.5 +0.3
baz=39,SNR=6.8
V15A Kaibab Nationa 38.86 320 ⇑P P 01 00 53.8 +0.9
baz=39,SNR=31
GLA Glamis 39.02 315 ⇑P P 01 00 54.4 +0.1
baz=39,SNR=6.9
GLA Glamis 39.02 315 eP P 01 00 55.0 +0.7
comp=N,19nm,1.0s,mb4.8
W14A Seligman 39.07 319 ⇓P P 01 00 55.5 +0.8
baz=39
R18A Canyonlands Na 39.19 325 ⇓P P 01 00 55.9 +0.3
baz=39
T16A Glen Canyon Da 39.19 322 ⇑P P 01 00 56.5 +0.9
baz=39
Y12C Blythe 39.19 316 ⇓P P 01 00 56.2 +0.5
baz=39
PDMCI Parker Dam,Lak 39.24 317 ⇓P P 01 00 56.3 +0.2
baz=39
V14A Boquillas Ranc 39.34 319 ⇑P P 01 00 58.0 +1.1
baz=40,SNR=20
W13A Hualapai Mount 39.53 318 ⇑P P 01 00 59.0 +0.5
baz=40
N21A Black Mountain 39.65 330 ⇑P P 01 01 00.4 +1.0
baz=40
SWSC Sam W. Stewart 39.65 314 ⇑P P 01 01 00.0 +0.5
baz=40
R17A Hanksville Air 39.67 325 ⇑P P 01 00 59.8 +0.1
baz=40,SNR=6.0
S16A Weppner Ranch, 39.73 323 ⇑P P 01 01 00.7 +0.6
baz=40,SNR=8.6
T15A Red Dirt Ranch 39.75 322 ⇓P P 01 01 01.0 +0.7
baz=40,SNR=8.8
BC3 Big Chuckawall 39.79 315 ⇑P P 01 01 00.7 0.0
baz=40
Q18A Rafter H Ranch 39.82 326 ⇑P P 01 01 01.3 +0.4
baz=40
IRM Iron Mountain 39.85 316 ⇓P P 01 01 01.4 +0.2
baz=40
U14A Mt Trumbull 39.87 320 ⇑P P 01 01 01.8 +0.5
baz=40,SNR=7.9
R16A Teasdale 40.03 324 ⇑P P 01 01 03.0 +0.4
baz=40,SNR=17
V13A Grand Canyon W 40.04 319 ⇑P P 01 01 03.5 +0.8
baz=40,SNR=6.9
SRU San Rafael 40.04 326 ⇑P P 01 01 03.2 +0.5
baz=40
SRU San Rafael 40.04 326 eP P 01 01 03.1 +0.4
comp=N,8.6nm,0.8s,mb4.5
MONP Monument Peak 40.07 313 ⇓P P 01 01 03.2 +0.1
baz=40
L22A Ellis Ranch, M 40.10 332 ⇓P P 01 01 03.8 +0.7
baz=40
RWWY Rawlins 40.20 331 eP P 01 01 03.6 -0.4
comp=N,53nm,2.2s,mb4.9
T14A Hurricane 40.21 321 ⇑P P 01 01 05.0 +0.9
baz=40
P18A Preston Nutter 40.25 326 ⇑P P 01 01 05.1 +0.7
baz=40
BELC Belle Mtn. Jos 40.35 315 ⇓P P 01 01 05.6 +0.2
baz=40
U13A Pakoon Wash 40.37 320 ⇓P P 01 01 06.3 +0.9
baz=40,SNR=13
P17A Butcher Ranch, 40.41 326 ⇓P P 01 01 06.5 +0.7
baz=41
R15A Junction 40.45 323 ⇓P P 01 01 06.7 +0.5
baz=41
L21A Rawlins 40.49 331 ⇑P P 01 01 06.2 -0.1
baz=41
V12A Nelson 40.54 318 ⇑P P 01 01 07.1 +0.2
baz=41
GMRC Granite Mounta 40.55 316 ⇓P P 01 01 07.5 +0.5
baz=41
MSU Marysvale 40.59 323 eP P 01 01 08.3 +1.0
CCUT Cedar City 40.69 321 eP P 01 01 09.1 +1.0
comp=N,9.6nm,1.2s,mb4.3
T13A Saint George 40.70 320 ⇑P P 01 01 09.2 +1.0
baz=41,SNR=6.7
S14A Cedar City 40.70 322 ⇓P P 01 01 08.6 +0.4
baz=41
RSSD Black Hills 40.76 336 eP P 01 01 08.1 -0.4
O17A Robinson Place 40.92 327 ⇑P P 01 01 10.4 +0.5
baz=41
V11A Goodsprings 40.99 318 ⇑P P 01 01 10.7 +0.1
baz=41
MURC Murrieta 41.00 314 ⇓P P 01 01 10.4 -0.3
baz=41
S13A Holt Ranch, En 41.02 321 ⇓P P 01 01 12.1 +1.3
baz=41,SNR=20
HEC Hector,Ludlow 41.03 316 ⇓P P 01 01 11.4 +0.4
baz=41,SNR=5.1
DAU Daniels Canyon 41.35 326 eP P 01 01 14.1 +0.6
comp=N,15nm,1.6s,mb4.4
R13A O'Grain Ranch, 41.46 322 ⇑P P 01 01 15.4 +1.0
baz=42,SNR=8.1
CFAA Coronel Fontan 41.49 161 P P 01 01 10.5 -4.2
comp=N,0.2nm,0.6s,baz=313,slow=2.7,SNR=4.5
Q14A Sevier Lake (B 41.55 323 ⇑P P 01 01 15.9 +0.7
baz=42,SNR=18
GSC Goldstone 41.62 316 ⇑P P 01 01 16.0 +0.2
baz=42,SNR=6.5
GSC Goldstone 41.62 316 eP P 01 01 16.6 +0.8
comp=N,13nm,1.1s,mb4.5
S12A Delamar Landin 41.65 320 ⇑P P 01 01 16.9 +0.8
baz=42
T11A Corn Creek, Al 41.67 320 ⇓P P 01 01 16.9 +0.7
baz=42,SNR=7.5
L18A Fontenelle, Gr 41.78 329 ⇓P P 01 01 16.1 -0.9
baz=42
M17A Scullys Gap (B 41.78 328 ⇓P P 01 01 16.2 -0.8
baz=42,SNR=5.9
P14A Drum Mountains 41.82 324 ⇑P P 01 01 17.9 +0.5
baz=42,SNR=9.7
K19A Atsolon Red Bu 41.86 331 ⇑P P 01 01 16.7 -0.9
baz=42,SNR=6.1
U10A Ash Meadows, A 41.92 318 ⇑P P 01 01 18.5 +0.3
baz=42
AGMN Agassiz Nation 41.93 347 eP P 01 01 16.7 -1.4
comp=N,7.8nm,1.1s,mb4.2
Q13A Wheeler Ranch, 41.98 323 ⇑P P 01 01 18.9 +0.3
baz=42,SNR=5.7
DUG Dugway 42.08 325 eP P 01 01 20.2 +0.8
comp=N,12nm,1.4s,mb4.3
PDAR Pineddale Array 42.16 330 P P 01 01 18.7 -1.4
comp=N,1.3nm,0.9s,mb3.5,baz=132,slow=10,SNR=11
PDAR PcP PcP 01 03 12.0 -2.1
comp=N,1.0nm,1.0s,baz=110,slow=4.3,SNR=4.5
BW06 Boulder Array 42.16 330 ⇑P P 01 01 20.0 -0.1
baz=42
BW06 Boulder Array 42.16 330 eP P 01 01 19.4 -0.7
comp=N,5.9nm,1.3s,mb4.1
EDW2 Edwards Air Fo 42.22 315 ⇑P P 01 01 19.8 -0.9
baz=42
S11A Rachel 42.25 320 ⇓P P 01 01 21.2 +0.3
baz=42
P13A Bates Ranch, G 42.29 323 ⇓P P 01 01 22.1 +0.9
baz=42,SNR=12
FURC Furnace Creek, 42.30 318 ⇑P P 01 01 21.6 +0.3
baz=42,SNR=9.1
K18A Toltan Ranch, 42.30 330 ⇓P P 01 01 21.5 +0.2
baz=42
HWUT Hardware Ranch 42.35 327 eP P 01 01 21.5 -0.1
MPMC Manual Prospec 42.50 317 ⇓P P 01 01 22.9 0.0
baz=43,SNR=6.5
Q12A Willow Creek R 42.52 322 ⇓P P 01 01 23.6 +0.6
baz=43,SNR=7.8
SPUT South Promonto 42.62 326 eP P 01 01 25.0 +1.1
comp=N,7.9nm,1.1s,mb4.4
BGU Big Grassy Mou 42.69 326 eP P 01 01 24.4 0.0
comp=N,19nm,1.4s,mb4.6
BGU ePcP PcP 01 03 15.0 -0.9
J18A Kendall Valley 42.72 330 ⇑P P 01 01 24.2 -0.4
baz=43
N14A Grayback Hills 42.73 325 ⇓P P 01 01 24.9 +0.2
baz=43,SNR=21
M15A Larsen Ranch, 42.73 327 ⇓P P 01 01 24.8 0.0
baz=43,SNR=6.2
Q11A Duckwater 42.91 321 ⇓P P 01 01 26.7 +0.5
baz=43
GRAC Grapevine Rang 42.93 318 ⇑P P 01 01 26.9 +0.4
baz=43
S10A Tonopah Range, 42.95 320 ⇓P P 01 01 27.0 +0.3
baz=43,SNR=12
ISA Isabella 42.96 316 ⇓P P 01 01 26.9 +0.1
baz=43
ISA Isabella 42.96 316 eP P 01 01 27.9 +1.2
comp=N,5.8nm,0.9s,mb4.3
R10A Warm Springs 42.98 320 ⇓P P 01 01 27.6 +0.8
baz=43,SNR=5.1
L15A Malad City 43.07 327 ⇑P P 01 01 27.3 -0.2
baz=43
J17A Brown Place, J 43.17 330 ⇑P P 01 01 28.1 -0.1
baz=43
REDW Red Top Meadow 43.24 330 eP P 01 01 28.8 -0.1
comp=N,6.6nm,1.0s,mb4.3
O12A Currie 43.24 324 ⇓P P 01 01 29.2 +0.3
baz=43,SNR=11
M14A Sheep Mountain 43.25 326 ⇑P P 01 01 28.7 -0.2
baz=44,SNR=16
N13A Wendover, West 43.31 325 ⇓P P 01 01 29.9 +0.4
baz=44
TPAW Teton Pass 43.38 330 eP P 01 01 30.2 +0.2
comp=N,14nm,1.6s,mb4.4
L14A Malta 43.55 327 ⇑P P 01 01 31.4 0.0
baz=44
M13A Montello 43.62 325 ⇓P P 01 01 31.5 -0.4
baz=44,SNR=6.7
O11A Cowboy Ranch, 43.70 323 ⇓P P 01 01 32.5 -0.1
baz=44
ULM Lac du Bonnet 43.77 348 P P 01 01 32.1 -0.8
comp=N,8.3nm,0.5s,mb4.7,baz=154,slow=6.5,SNR=6.8
N12A Clover Valley, 43.79 324 ⇑P P 01 01 33.2 -0.2
baz=44,SNR=9.0
RLMT Red Lodge 43.80 333 ⇓P P 01 01 33.2 -0.1
baz=44
K14A Jones Ranch, D 43.87 327 ⇑P P 01 01 33.7 -0.2
baz=44,SNR=9.5
M12A Wells 44.08 325 ⇓P P 01 01 35.0 -0.6
baz=44,SNR=6.1
N11A Elko Archery C 44.17 323 ⇑P P 01 01 36.9 +0.5
baz=44
O10A Cortez Mining, 44.30 322 ⇓P P 01 01 37.9 +0.4
baz=44
NVAR Mina Array Bea 44.35 319 P P 01 01 37.9 +0.1
comp=N,3.5nm,0.7s,mb4.2,baz=135,slow=7.3,SNR=35
NVAR PcP PcP 01 03 20.4 -1.1
comp=N,0.7nm,0.6s,baz=129,slow=5.0,SNR=4.0
K13A Stover Farm, H 44.43 327 ⇓P P 01 01 38.4 0.0
baz=45
J14A Carey 44.58 328 ⇓P P 01 01 39.3 -0.4
baz=45,SNR=7.9
M11A Holland Ranch, 44.59 324 ⇑P P 01 01 39.5 -0.3
baz=45,SNR=6.3
F18A Big Timber 44.60 333 ⇓P P 01 01 39.2 -0.5
baz=45
L12A House Creek Ra 44.61 325 ⇓P P 01 01 39.2 -0.7
baz=45
BMN Battle Mountai 44.83 322 eP P 01 01 42.4 +0.7
K12A Draper Farm, C 44.87 326 ⇓P P 01 01 41.6 -0.3
baz=45,SNR=6.7
I14A Mackay 44.97 328 ⇓P P 01 01 42.9 +0.2
baz=45
J13A Cove Ranch, Pi 44.98 327 ⇑P P 01 01 42.9 +0.1
baz=45
F17A Fitzpatrick Pl 45.03 332 ⇑P P 01 01 43.0 -0.2
baz=45
H15A Lima 45.04 330 ⇑P P 01 01 43.4 +0.2
baz=45
L11A Cat Creek Ranc 45.04 325 ⇑P P 01 01 42.7 -0.7
baz=45,SNR=15
G16A Moss Hill, Enn 45.07 331 ⇓P P 01 01 43.8 +0.4
baz=45
WAKR Walker 45.13 318 eP P 01 01 45.0 +1.0
E18A Harlowton 45.20 334 ⇓P P 01 01 45.0 +0.5
baz=45
HLID Hailey 45.22 327 ⇓P P 01 01 44.5 -0.3
baz=45
HLID Hailey 45.22 327 eP P 01 01 44.8 +0.1
BOZ Bozeman (W) 45.29 331 ⇓P P 01 01 45.1 -0.1
baz=46
BOZ Bozeman (W) 45.29 331 eP P 01 01 44.4 -0.8
MCMT McKenzie Canyo 45.29 330 eP P 01 01 45.6 +0.4
comp=N,1.8nm,1.1s,mb3.8
I13A Wildhorse Cree 45.31 328 ⇓P P 01 01 45.2 -0.2
baz=46,SNR=8.6
J12A Stokes Ranch, 45.38 327 ⇓P P 01 01 45.5 -0.5
baz=46,SNR=13
L10A Juniper Basin 45.40 324 ⇓P P 01 01 45.6 -0.5
baz=46,SNR=5.8
H14A Leadore 45.41 329 ⇓P P 01 01 46.3 +0.2
baz=46,SNR=6.3
CMB Columbia Colle 45.51 317 eP P 01 01 46.3 -0.8
E17A Martinsdale 45.54 333 ⇑P P 01 01 47.0 -0.2
baz=46
DLMT Dillon 45.55 330 eP P 01 01 48.8 +1.5
comp=N,4.0nm,1.0s,mb4.3
K11A Parker Ranch, 45.59 325 ⇓P P 01 01 47.3 -0.3
baz=46,SNR=15
D18A Linhart Farms, 45.63 334 ⇓P P 01 01 47.7 -0.2
baz=46
PAHR Pah Rah Range 45.76 320 eP P 01 01 50.0 +1.0
comp=N,76nm,2.4s,mb5.2
I12A Atlanta 45.77 327 ⇑P P 01 01 49.1 +0.1
baz=46,SNR=7.6
LRM Limekiln Ridge 45.81 331 eP P 01 01 49.3 -0.1
H13A Challis 45.82 328 ⇑P P 01 01 49.7 +0.2
baz=46
F15A Butte 45.85 331 ⇑P P 01 01 49.7 +0.1
baz=46
MFID Camas Ranch 45.89 326 ⇑P P 01 01 49.6 -0.4
baz=46,SNR=6.7
E16A East Helena 45.97 332 ⇑P P 01 01 50.3 -0.3
baz=46
D17A Six Diamond Ra 45.99 333 ⇑P P 01 01 50.1 -0.6
baz=46,SNR=5.2
K10A MacKenzie Ranc 46.07 325 ⇑P P 01 01 51.0 -0.4
baz=46,SNR=15
G13A Cobalt 46.18 329 ⇓P P 01 01 51.9 -0.4
baz=46
D16A Dana Ranch, Ca 46.28 333 ⇑P P 01 01 52.4 -0.7
baz=46
E15A Deer Lodge 46.34 331 ⇓P P 01 01 53.1 -0.4
baz=47
C17A Wharram Farm, 46.39 334 ⇑P P 01 01 53.0 -0.8
baz=47,SNR=5.4
B18A Beardsley Farm 46.56 335 ⇑P P 01 01 54.6 -0.5
baz=47
F13A Darby 46.71 330 ⇓P P 01 01 56.1 -0.3
baz=47
G12A Big Creek, Yel 46.77 328 ⇓P P 01 01 56.7 -0.2
baz=47
H11A Donnelly 46.84 327 ⇑P P 01 01 56.7 -0.8
baz=47,SNR=5.9
I10A Payette 46.87 326 ⇑P P 01 01 57.1 -0.5
baz=47
WVOR Wild Horse Val 46.88 323 eP P 01 01 57.6 -0.2
comp=N,54nm,1.2s,mb5.3
E13A Victor 47.10 330 ⇑P P 01 01 58.8 -0.7
baz=47
F12A Elk City 47.16 329 ⇓P P 01 01 59.1 -0.8
baz=47,SNR=6.5
H10A Noah's Angus R 47.16 327 ⇑P P 01 01 58.7 -1.3
baz=47,SNR=7.0
I09A Lost Marbles R 47.31 326 ⇓P P 01 02 00.2 -1.0
baz=48,SNR=8.4
C15A Salmond Ranch, 47.32 333 ⇑P P 01 02 01.0 -0.1
baz=48
J08A Circle Bar Ran 47.35 324 ⇓P P 01 02 00.7 -0.7
baz=48,SNR=5.6
G11A Walters Elk Ra 47.44 328 ⇓P P 01 02 01.7 -0.4
baz=48
MOD Modoc 47.57 322 eP P 01 02 02.5 -0.7
BMO Blue Mountains 47.64 327 eP P 01 02 02.5 -1.2
D13A Huson 47.69 331 ⇓P P 01 02 04.4 +0.3
baz=48
B15A Bradely Ranch, 47.70 333 ⇓P P 01 02 03.1 -0.9
baz=48
F11A Grangeville 47.71 329 ⇓P P 01 02 03.4 -0.8
baz=48
H09A Durkee 47.71 326 ⇑P P 01 02 03.6 -0.7
baz=48
E12A Beaver Dam Sad 47.77 329 ⇑P P 01 02 03.5 -1.1
baz=48
G10A Bishop Farm, J 47.82 327 ⇓P P 01 02 04.3 -0.7
baz=48
B14A Marquette Ranc 48.05 333 ⇓P P 01 02 06.7 -0.1
baz=48
D12A Red Ives Fores 48.10 330 ⇑P P 01 02 06.6 -0.6
baz=48
C13A Hot Springs 48.16 331 ⇑P P 01 02 07.0 -0.6
baz=48
G09A Cove 48.17 327 ⇓P P 01 02 06.5 -1.2
baz=48,SNR=5.5
H08A Prairie City 48.18 326 ⇑P P 01 02 06.7 -1.1
baz=48,SNR=6.7
LASM Arnica Sink 48.20 321 P P 01 02 07.9 -0.1
A15A Johnson Ranch, 48.27 334 ⇑P P 01 02 07.7 -0.8
baz=48
K05A Summer Lake 48.40 322 ⇑P P 01 02 09.1 -0.5
baz=49
KCPM Cahto Peak 48.50 317 eP P 01 02 11.4 +1.0
A14A Double T Ranch 48.57 333 ⇑P P 01 02 10.6 -0.2
baz=49
G08A Pilot Rock 48.82 326 ⇑P P 01 02 11.9 -0.9
baz=49,SNR=8.8
WALA Waterton Lakes 48.85 333 P P 01 02 12.3 -0.6
C11A Tepee Creek (N 49.09 330 ⇓P P 01 02 14.8 0.0
baz=49
E09A Wood Farm, Sta 49.16 328 ⇑P P 01 02 15.3 -0.1
baz=49
KHMM Horse Mountain 49.19 319 eP P 01 02 16.0 +0.3
PLCA Paso Flores 49.52 168 P P 01 02 13.8 -4.3
comp=N,3.2nm,0.7s,mb4.5,baz=353,slow=8.5,SNR=8.8
PLCA Paso Flores 49.52 168 eP P 01 02 13.9 -4.2
G06A Carlson Farm, 49.72 325 ⇑P P 01 02 18.9 -0.8
baz=50
CROR Criterion Ridg 49.77 325 P P 01 02 20.7 +0.6
IRO Indian Ridge 49.95 323 P P 01 02 21.1 -0.3
BPO Bald Peter 49.98 324 P P 01 02 22.4 +0.7
H04A Detroit Lake 50.29 324 ⇓P P 01 02 23.3 -0.7
baz=50
HOOD Mount Hood Mea 50.35 325 eP P 01 02 25.0 +0.6
KEBM Edson Butte 50.60 321 eP P 01 02 27.2 +0.7
COR Corvallis 50.90 323 eP P 01 02 27.3 -1.3
comp=N,13nm,0.8s,mb4.9
LON Longmire 51.28 326 eP P 01 02 31.2 -0.2

D05A **Enumclaw** 51.64 327 ⇑P P 01 02 33.4 -0.7
baz=52,SNR=5.2
F03A **Seaside** 51.80 324 ⇑P P 01 02 35.0 -0.3
baz=52
JCW **Jim Creek** 52.22 328 *eP* P 01 02 37.5 -0.9
GNW **Green Mountain** 52.33 326 *eP* P 01 02 38.0 -1.2
comp=N,8.2nm,1.2s,mb4.5
NLWA **Neilton Lookou** 52.80 326 *eP* P 01 02 43.0 +0.3
comp=N,29nm,1.3s,mb5.0
YKA **Yellowknife Ar** 59.40 343 P P 01 03 28.1 -1.4
comp=N,1.4nm,0.6s,mb4.1,baz=137,slow=6.9,SNR=20
DLBC **Dease Lake** 62.17 334 *eP* P 01 03 48.1 -0.4
RES **Resolute Bay** 67.25 356 *eP* P 01 04 19.8 -1.6
DAWY **Dawson** 68.95 337 *eP* P 01 04 31.4 -0.8
INK **Inuvik** 69.09 342 P P 01 04 31.6 -1.4
comp=N,12nm,1.1s,mb4.7,baz=139,slow=8.3,SNR=6.8
INK **Inuvik** 69.09 342 *eP* P 01 04 32.3 -0.7
comp=N,16nm,1.2s,mb4.8
PPT **Papeete** 70.76 248 LR LR 01 25 51.9
comp=N,99nm,20.3s,MS4.1,baz=32,slow=28
EVO **Evora** 73.15 52 *eP* P 01 04 57.6 -0.6
comp=N,21nm,0.8s,mb4.8
EVO **Evora** 73.15 52 *eP* P 01 04 58.4 +0.2
comp=N,12nm,1.4s,mb4.6
EVO *epP* pP 01 05 06.3 -2.8
PVIS **Viseu** 73.39 50 *eP* P 01 04 59.6 0.0
comp=N,21nm,1.2s,mb5.0
PVIS *epP* pP 01 05 07.5 -3.0
PESTR **Estremoz** 73.50 52 *eP* P 01 05 00.6 +0.3
comp=N,19nm,1.1s,mb4.9
PESTR *epP* pP 01 05 08.8 -2.4
RSO **Redoubt South** 73.54 331 *eP* P 01 04 59.6 -0.4
MTE **Manteigas** 73.63 50 *eP* P 01 05 01.0 0.0
comp=N,15nm,1.1s,mb4.8
MTE *epP* pP 01 05 09.7 -2.2
PCBR **Castelo Branco** 73.65 51 *eP* P 01 05 01.1 0.0
comp=N,20nm,1.3s,mb4.9
PCBR *epP* pP 01 05 09.2 -2.8
BPAW **Bear Paw Mtn.** 73.68 335 *eP* P 01 04 59.9 -0.9
comp=N,13nm,1.2s,mb4.7
PMRV **Marv??o** 73.69 51 *eP* P 01 05 01.1 -0.3
comp=N,14nm,1.4s,mb4.7
PMRV *epP* pP 01 05 09.5 -2.8
PPLA **Purkeypile** 73.88 333 *eP* P 01 05 00.8 -1.2
comp=N,37nm,1.6s,mb5.1
PBAR **Barrancos** 73.90 53 *eP* P 01 05 03.0 +0.4
comp=N,16nm,0.9s,mb5.0
PBAR *epP* pP 01 05 11.0 -2.5
MVO **Moncorvo** 74.07 50 *eP* P 01 05 03.7 +0.1
comp=N,23nm,1.8s,mb4.8
MVO *epP* pP 01 05 11.8 -2.7
ESDC **Sonseca Array** 76.35 51 P P 01 05 17.1 +0.4
comp=N,3.6nm,0.7s,mb4.4,baz=273,slow=5.4,SNR=23
ESLA **Sonseca Array** 76.35 51 *eP* P 01 05 17.0 +0.3
comp=N,2.3nm,0.8s,mb4.2
LIC **Lamto** 76.91 85 *eP* P 01 05 19.6 -0.8
comp=N,40nm,1.2s,mb4.9
LIC **Lamto** 76.91 85 *eP* P 01 05 19.6 -0.8
comp=N,20nm,1.2s,mb4.9
DBIC **Dimbokro** 77.03 85 P P 01 05 20.2 -0.8
comp=N,5.6nm,1.1s,mb4.4,baz=304,slow=15,SNR=2.8
DBIC LR LR 01 39 31.6
comp=N,42nm,19.9s,MS3.8,baz=141,slow=36
SJPF **Ste Jean** 78.45 48 *eP* P 01 05 28.7 +0.3
comp=N,16nm,0.8s,mb4.7
SJPF **Ste Jean** 78.45 48 *eP* P 01 05 28.7 +0.3
comp=N,8.1nm,0.8s,mb4.7
ETSF **Etsaut** 78.94 48 *eP* P 01 05 31.3 +0.2
comp=N,8.2nm,0.9s,mb4.3
ETSF **Etsaut** 78.94 48 *eP* P 01 05 31.3 +0.2
comp=N,4.1nm,0.9s,mb4.4
LDF **La Druitiere** 79.25 42 *eP* P 01 05 31.8 -0.9
comp=N,5.9nm,0.9s,mb4.2
LDF **La Druitiere** 79.25 42 *eP* P 01 05 31.8 -0.9
comp=N,3.0nm,0.9s,mb4.2
EPF **Esparros** 79.60 48 *eP* P 01 05 34.7 0.0
comp=N,14nm,1.0s,mb4.6
EPF **Esparros** 79.60 48 *eP* P 01 05 34.7 0.0
comp=N,7.3nm,1.0s,mb4.6
TCF **Toulx Ste Croi** 80.86 44 *eP* P 01 05 40.4 -1.0
comp=N,3.4nm,0.6s,mb4.1
TCF **Toulx Ste Croi** 80.86 44 *eP* P 01 05 40.4 -1.0
comp=N,1.7nm,0.6s,mb4.2
MTLF **Montolieu** 80.96 47 *eP* P 01 05 41.6 -0.4
comp=N,11nm,1.1s,mb4.4
MTLF **Montolieu** 80.96 47 *eP* P 01 05 41.6 -0.4
comp=N,5.7nm,1.1s,mb4.4
SSF **Saint Saulge** 81.72 44 *eP* P 01 05 44.6 -1.4
comp=N,3.5nm,0.6s,mb4.1
SSF **Saint Saulge** 81.72 44 *eP* P 01 05 44.6 -1.4
comp=N,1.8nm,0.6s,mb4.2
LOR **Lormes** 81.95 43 *eP* P 01 05 44.8 -2.4
LASF **Ste Croix** 82.11 47 *eP* P 01 05 46.8 -1.3
VIVF **Saint-Julien-I** 82.65 46 *eP* P 01 05 51.0 +0.1
comp=N,16nm,1.1s,mb4.7
VIVF **Saint-Julien-I** 82.65 46 *eP* P 01 05 51.0 +0.1
comp=N,8.1nm,1.1s,mb4.7
ORIF **Oris-en-Rattie** 83.50 46 *eP* P 01 05 54.4 -0.9
LMR **La Mourre** 84.09 47 *eP* P 01 05 57.6 -0.7
comp=N,10nm,1.1s,mb4.5
LMR **La Mourre** 84.09 47 *eP* P 01 05 57.6 -0.7
comp=N,5.1nm,1.1s,mb4.6
MBDF **Montbardon** 84.15 46 *eP* P 01 05 58.7 +0.1
comp=N,14nm,1.3s,mb4.7
MBDF **Montbardon** 84.15 46 *eP* P 01 05 58.7 +0.1
comp=N,7.1nm,1.3s,mb4.6
FRF **La Foret Royal** 84.17 47 *eP* P 01 05 58.0 -0.7
comp=N,7.3nm,1.1s,mb4.4
FRF **La Foret Royal** 84.17 47 *eP* P 01 05 58.0 -0.7
comp=N,3.7nm,1.1s,mb4.4
NB2 **NORSAR Subarra** 85.11 29 P P 01 06 02.3 -0.8
comp=Z,4.0nm,0.9s,mb4.5,baz=275,slow=5.1
NOA **NORSAR Array B** 85.11 29 P P 01 06 02.5 -0.6
comp=Z,1.6nm,0.8s,mb4.2,baz=276,slow=4.7,SNR=7.6
NOA LR LR 01 41 31.6
comp=Z,24nm,18.1s,MS3.6,baz=225,slow=34
NOA **NORSAR Array B** 85.11 29 P P 01 06 02.5 -0.6
NOA LR LR 01 41 31.6
VSL **Villasalto** 86.64 51 *eP* P 01 06 10.5 -0.7
comp=Z,4.6nm,1.0s,mb4.7
CLL **Collm** 87.49 39 *eP* P 01 06 14.0 -1.0
CLL *epP* pP 01 06 25.0 -1.1
FINES **FINESS Array B** 91.99 27 P P 01 06 33.9 -2.0
comp=Z,0.4nm,0.5s,mb4.0,baz=292,slow=6.0,SNR=4.7
FINES **FINESS Array B** 91.99 27 P P 01 06 33.9 -2.0
QSPA **South Pole Qui** 97.76 180 P P 01 06 58.4 -3.5
comp=Z,1.1nm,0.9s,mb4.4,baz=192,slow=5.4,SNR=3.8
QSPA **South Pole Qui** 97.76 180 P P 01 06 58.4 -3.5
CN2 **Changchun** 122.73 336 *e*PKP PKPdf 01 12 21.6 -1.8
MKAR **Makanchi Array** 124.04 12 PKP PKPdf 01 12 22.9 -2.9
comp=Z,0.1nm,0.3s,baz=339,slow=1.9,SNR=2.9
SONM **Songino Array** 124.07 353 PKP PKPdf 01 12 23.4 -2.4
comp=Z,0.8nm,0.8s,baz=5.7,slow=1.4,SNR=4.3
KSRS **Korea Array** 126.73 330 PKP PKPdf 01 12 28.9 -2.4
comp=Z,4.0nm,0.8s,baz=4.2,slow=2.5,SNR=12
WMQ **Urumqi** 127.91 9 *e*PKP PKPdf 01 12 31.0 -2.3
WMQ LR LR
comp=N,84nm,25.6s
WMQ LR LR
comp=Z,47nm,21.8s,MS4.1
BJI **Beijing** 129.37 341 PKP PKPdf 01 12 35.6 -0.6
BJI SS SS 01 32 06.0 +3.5
BJI LR LR
comp=N,86nm,15.8s,MS4.7
BJI LR LR
comp=E,100nm,15.2s,MS4.7
BJI LR LR
comp=Z,23nm,17.4s,MS3.9
HHC **Hu-ho-hao-te** 129.90 346 *e*PKP PKPdf 01 12 32.1 -5.1
HHC PP PP 01 14 48.1 +0.5
HHC SS SS 01 32 07.6 -1.3
HHC AMB AMB
comp=Z,46nm,9.2s
NJ2 **Nanjing** 135.42 334 *e*PKP PKPdf 01 12 46.2 -1.7
LZH **Lanzhou** 135.96 352 *e*PKP PKPdf 01 12 47.6 -1.1
LZH sPKP 01 13 02.0
CD2 **Chengdu** 141.06 351 PKP PKPdf 01 12 54.9 -3.4
ASAR **Alice Springs** 141.62 241 PKhKP PKPpre 01 12 50.4
comp=Z,0.8nm,0.8s,baz=110,slow=3.0,SNR=3.5
ASAR PKP PKPdf 01 12 55.7 -3.7
comp=Z,1.7nm,0.8s,baz=112,slow=1.7,SNR=10
ASAR **Alice Springs** 141.62 241 PKP PKPpre 01 12 50.4
ASAR PKP PKPdf 01 12 55.7 -3.7
WRA **Warramunga Arr** 142.24 247 PKhKP PKPpre 01 12 49.9
comp=Z,2.7nm,0.9s,baz=105,slow=2.4,SNR=8.5
WRA PKP PKPdf 01 12 57.0 -3.6
comp=Z,2.4nm,0.9s,baz=99,slow=2.7,SNR=6.1
GYA **Guiyang** 144.81 345 *e*PKPbc PKPdf 01 13 02.8 -2.2
GYA PP PP 01 16 24.8 +4.1
GYA AMB AMB
comp=Z,60nm,7.9s
SHL **Shillong** 146.44 9 *e*PKP PKPdf 01 13 08.0 +0.2
KMI **Kunming** 146.90 351 PKPbc PKPbc 01 13 07.1 -3.3
KMI pPKP pPKPdf 01 13 13.3 -6.8
KMI sPKP 01 13 15.7
HYB **Hyderabad** 148.81 37 *i* PKP PKPdf 01 13 12.5 +0.6
FITZ **Fitzroy Crossi** 150.67 247 PKPdf PKPdf 01 13 13.8 -1.0
CMAR **Chiang Mai Arr** 153.90 357 PKP PKPdf 01 13 17.6 -2.1
comp=Z,0.5nm,0.3s,baz=321,slow=2.3,SNR=4.7
CMAR PKPbc PKPbc 01 13 25.3 -2.3
comp=Z,0.8nm,0.3s,baz=336,slow=2.8,SNR=6.5

NEIC ***02*** *01:02:26.5±0.4, 31°.23S×179°.88E, h398km±5km, mb4.1/6, Error ellipse: s-maj=12.0km s-min=5.0km az=105.0*
IDC ***02*** *01:02:27.6±1.4, 30°.99S×179°.80E, h400km±14km, mb3.7/5, mb1 4.0/7, mb1mx3.7/17, mbtmp3.9/7, Error ellipse: s-maj=20.8km s-min=16.6km az=139.0*
ISC 02 01:02:31.8±0.7, 31°.59S±0°.06×179°.5E±0°.2, h420km±12km, n110, σ1§16/128, mb4.0/10, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.25**	**45**	P	**P**	**01 03 27.8**	**-11**
	184nm,0.3s,baz=240,slow=20,SNR=15						
RAO				S	**S**	**01 04 11.0**	**-22**
	234nm,0.3s,baz=255,slow=20,SNR=9.7						
MXZ	**Matakaoa Point**	**6.04**	**189**	P	**P**	**01 04 03.9**	**-1.5**
MXZ	**Matakaoa Point**	**6.04**	**189**	PN	**P**	**01 04 03.6**	**-1.7**
MXZ				SN	**S**	**01 05 20.8**	**-1.0**
WIZ	**White Island**	**6.21**	**197**	PN	**P**	**01 04 09.8**	**+2.5**
PUZ	**Puketiti**	**6.54**	**188**	P	**P**	**01 04 09.1**	**-1.7**
PUZ				S	**S**	**01 05 32.0**	**+0.3**
PUZ	**Puketiti**	**6.54**	**188**	PN	**P**	**01 04 09.1**	**-1.7**
PUZ				SN	**S**	**01 05 32.0**	**+0.3**
TGRZ	**Tauranga**	**6.67**	**202**	P	**P**	**01 04 16.0**	**+3.8**
TGRZ	**Tauranga**	**6.67**	**202**	PN	**P**	**01 04 16.0**	**+3.8**
OPRZ	**Ohinepanea**	**6.69**	**200**	PN	**P**	**01 04 14.7**	**+2.3**
MWZ	**Matawai**	**6.92**	**193**	P	**P**	**01 04 14.3**	**-0.5**
MWZ	**Matawai**	**6.92**	**193**	PN	**P**	**01 04 13.1**	**-1.7**
MWZ				SN	**S**	**01 05 40.7**	**+1.5**
URZ	**Urewera**	**6.93**	**196**	P	**P**	**01 04 13.4**	**-1.6**
	72nm,0.3s,baz=3.6,slow=4.5,SNR=106						
URZ				S	**S**	**01 05 38.7**	**-0.8**
	38nm,0.3s,baz=72,slow=20,SNR=18						
URZ	**Urewera**	**6.93**	**196**	P	**P**	**01 04 13.5**	**-1.5**
URZ	**Urewera**	**6.93**	**196**	PN	**P**	**01 04 13.1**	**-1.8**
URZ				SN	**S**	**01 05 38.4**	**-1.0**
CNGZ	**Carnagh Statio**	**6.96**	**188**	PN	**P**	**01 04 14.1**	**-1.2**
TARZ	**Mount Tarawera**	**7.06**	**199**	PN	**P**	**01 04 19.9**	**+3.5**
RRRZ	**Republican Roa**	**7.16**	**199**	PN	**P**	**01 04 18.5**	**+1.0**
PRGZ	**Paritu Road**	**7.43**	**190**	PN	**P**	**01 04 22.0**	**+1.5**
PRGZ				SN	**S**	**01 05 48.6**	**-0.9**
KNZ	**Kokohu**	**7.56**	**191**	P	**P**	**01 04 21.6**	**-0.3**
KNZ	**Kokohu**	**7.56**	**191**	PN	**P**	**01 04 21.1**	**-0.8**
KNZ				SN	**S**	**01 05 50.7**	**-1.4**
RAHZ	**Arahi**	**7.57**	**194**	PN	**P**	**01 04 21.9**	**0.0**
RAHZ				SN	**S**	**01 05 51.9**	**-0.3**
MHGZ	**Mahia Peninsul**	**7.66**	**189**	PN	**P**	**01 04 22.7**	**-0.3**
NMHZ	**Naumai**	**7.80**	**195**	PN	**P**	**01 04 25.9**	**+1.4**
HIZ	**Hauiti**	**7.88**	**207**	PN	**P**	**01 04 28.3**	**+3.0**
BKZ	**Black Stump Fm**	**7.94**	**197**	PN	**P**	**01 04 25.3**	**-0.8**
BKZ				SN	**S**	**01 05 59.4**	**-0.5**
MCHZ	**McNeill Hill**	**8.16**	**195**	PN	**P**	**01 04 29.8**	**+1.4**
MCHZ				SN	**S**	**01 06 06.6**	**+2.4**
TWVZ	**Taurewa**	**8.16**	**203**	PN	**P**	**01 04 31.0**	**+2.5**
NGZ	**Ngauruhoe**	**8.20**	**202**	P	**P**	**01 04 30.7**	**+1.7**
NGZ	**Ngauruhoe**	**8.20**	**202**	PN	**P**	**01 04 30.7**	**+1.7**
WPVZ	**Whakapapa**	**8.24**	**202**	PN	**P**	**01 04 31.1**	**+1.7**
TUVZ	**Tukino**	**8.27**	**201**	*e*PN	**P**	**01 04 30.4**	**+0.7**
CKHZ	**Cape Kidnapper**	**8.28**	**193**	PN	**P**	**01 04 30.2**	**+0.3**
CKHZ				SN	**S**	**01 06 08.1**	**+1.3**
FWVZ	**Far West T-bar**	**8.29**	**202**	PN	**P**	**01 04 29.1**	**-0.8**
FWVZ				SN	**S**	**01 06 10.9**	**+4.0**
WNVZ	**Wahianoa**	**8.34**	**201**	P	**P**	**01 04 31.1**	**+0.6**
VRZ	**Vera Road**	**8.44**	**206**	PN	**P**	**01 04 33.6**	**+1.9**
KAHZ	**Kahuranaki**	**8.46**	**194**	PN	**P**	**01 04 31.1**	**-0.6**
KAHZ				SN	**S**	**01 06 12.4**	**+2.1**
PXZ	**Pawanui**	**8.69**	**193**	PN	**P**	**01 04 33.7**	**-0.6**
PXZ				SN	**S**	**01 06 13.0**	**-2.0**
PNHZ	**Pukenui**	**8.72**	**197**	PN	**P**	**01 04 32.3**	**-2.4**
WPHZ	**Waipukurau**	**8.81**	**195**	PN	**P**	**01 04 35.8**	**+0.1**
WPHZ				SN	**S**	**01 06 18.2**	**+0.7**
TSZ	**Takapari Road**	**8.92**	**198**	P	**P**	**01 04 36.3**	**-0.6**
TSZ	**Takapari Road**	**8.92**	**198**	PN	**P**	**01 04 36.1**	**-0.8**
TSZ				SN	**S**	**01 06 18.2**	**-1.5**
WAZ	**Wanganui**	**8.93**	**203**	PN	**P**	**01 04 37.4**	**+0.4**
PRHZ	**Porangahau**	**8.96**	**194**	P	**P**	**01 04 37.5**	**+0.2**
PRHZ	**Porangahau**	**8.96**	**194**	PN	**P**	**01 04 37.4**	**+0.1**
PRHZ				SN	**S**	**01 06 18.8**	**-1.8**
DVHZ	**Dannevirke**	**9.10**	**196**	P	**P**	**01 04 38.6**	**-0.2**
POWZ	**Post Office Ro**	**9.28**	**198**	PN	**P**	**01 04 41.3**	**+0.4**
BFZ	**Birch Farm**	**9.44**	**195**	P	**P**	**01 04 42.5**	**-0.1**
BFZ	**Birch Farm**	**9.44**	**195**	PN	**P**	**01 04 41.3**	**-1.4**
BFZ				SN	**S**	**01 06 28.3**	**-2.0**
MRZ	**Mangatainoka R**	**9.58**	**198**	P	**P**	**01 04 43.7**	**-0.5**
MRZ	**Mangatainoka R**	**9.58**	**198**	PN	**P**	**01 04 43.7**	**-0.5**
TIWZ	**Tintock**	**9.61**	**196**	P	**P**	**01 04 45.3**	**+0.7**
TIWZ	**Tintock**	**9.61**	**196**	PN	**P**	**01 04 45.3**	**+0.7**
HOWZ	**Holdsworth Sta**	**9.82**	**198**	*e*PN	**P**	**01 04 46.0**	**-0.9**
OGWZ	**Otaki Gorge**	**9.84**	**199**	*e*PN	**P**	**01 04 46.0**	**-1.1**
TMWZ	**Te Maipa**	**9.93**	**196**	PN	**P**	**01 04 48.2**	**+0.2**
KIW	**Kapiti Island**	**9.96**	**200**	P	**P**	**01 04 48.5**	**+0.1**
KIW	**Kapiti Island**	**9.96**	**200**	PN	**P**	**01 04 48.1**	**-0.2**
KIW				SN	**S**	**01 06 39.9**	**-0.9**
MTW	**Mount Morrison**	**10.07**	**197**	P	**P**	**01 04 49.3**	**-0.3**
MTW	**Mount Morrison**	**10.07**	**197**	*e*PN	**P**	**01 04 49.1**	**-0.5**
CAW	**Cannon Point**	**10.14**	**199**	P	**P**	**01 04 49.9**	**-0.5**
CAW	**Cannon Point**	**10.14**	**199**	*e*PN	**P**	**01 04 49.5**	**-0.8**
TRWZ	**Traveller**	**10.25**	**196**	PN	**P**	**01 04 52.3**	**+0.7**
PAWZ	**Paruwai Farm**	**10.30**	**197**	P	**P**	**01 04 52.3**	**+0.2**
PAWZ	**Paruwai Farm**	**10.30**	**197**	*e*PN	**P**	**01 04 52.9**	**+0.7**
MSWZ	**Moikau Station**	**10.38**	**198**	*e*PN	**P**	**01 04 52.5**	**-0.5**
WEL	**Wellington**	**10.39**	**200**	P	**P**	**01 04 54.1**	**+1.0**
SNZO	**South Karori**	**10.43**	**200**	P	**P**	**01 04 53.2**	**-0.4**
SNZO	**South Karori**	**10.43**	**200**	PN	**P**	**01 04 52.2**	**-1.4**
SNZO				SN	**S**	**01 06 50.3**	**-0.1**
TCW	**Tory Channel**	**10.47**	**202**	P	**P**	**01 04 53.2**	**-0.8**
TCW	**Tory Channel**	**10.47**	**202**	*e*PN	**P**	**01 04 53.1**	**-0.9**
PLWZ	**Palliser**	**10.52**	**198**	*e*PN	**P**	**01 04 54.1**	**-0.4**
TUWZ	**Tuamarina**	**10.78**	**203**	PN	**P**	**01 04 56.9**	**-0.5**
QRZ	**Quartz Range**	**10.78**	**209**	P	**P**	**01 04 58.0**	**+0.5**
QRZ	**Quartz Range**	**10.78**	**209**	PN	**P**	**01 04 57.9**	**+0.4**
QRZ				SN	**S**	**01 06 60.0**	**+2.3**
NNZ	**Nelson**	**10.79**	**205**	P	**P**	**01 04 57.4**	**-0.1**
NNZ	**Nelson**	**10.79**	**205**	PN	**P**	**01 04 56.7**	**-0.8**
NNZ				SN	**S**	**01 06 56.7**	**-1.0**
THZ	**Tophouse**	**11.44**	**206**	P	**P**	**01 05 04.3**	**-0.3**
THZ	**Tophouse**	**11.44**	**206**	PN	**P**	**01 05 04.1**	**-0.5**
THZ				SN	**S**	**01 07 09.4**	**-1.4**
KHZ	**Kahutara**	**11.80**	**202**	P	**P**	**01 05 09.7**	**+1.1**
KHZ	**Kahutara**	**11.80**	**202**	PN	**P**	**01 05 09.6**	**+1.0**
KHZ				SN	**S**	**01 07 18.4**	**+0.3**
MQZ	**McQueen's Vall**	**13.24**	**202**	P	**P**	**01 05 25.6**	**+1.2**
MQZ	**McQueen's Vall**	**13.24**	**202**	PN	**P**	**01 05 25.2**	**+0.8**
MQZ				SN	**S**	**01 07 47.3**	**+0.3**
RPZ	**Rata Peaks**	**13.81**	**206**	P	**P**	**01 05 30.2**	**-0.3**
	1.4nm,0.3s,baz=354,slow=15,SNR=7.4						
RPZ				S	**S**	**01 08 01.0**	**+2.7**
	1.3nm,0.3s,baz=72,slow=17,SNR=4.3						
RPZ	**Rata Peaks**	**13.81**	**206**	*e*P	**P**	**01 05 30.2**	**-0.4**
	43nm,1.2s						
RPZ				S	**S**	**01 08 01.0**	**+2.7**
MSVF	**Nonsavu**	**13.85**	**354**	*e*P	**P**	**01 05 23.6**	**-7.8**
	33nm,0.8s						
FOZ	**Fox Glacier**	**14.23**	**210**	PN	**P**	**01 05 36.6**	**+1.4**
WKZ	**Wanaka**	**15.54**	**209**	PN	**P**	**01 05 48.8**	**-0.4**
AFI	**Afiamalu**	**19.34**	**27**	P	**P**	**01 06 19.9**	**-9.2**
	8.6nm,0.3s,baz=202,slow=16,SNR=11						
CTAO	**Charters Tower**	**31.89**	**283**	*e*P	**P**	**01 08 20.1**	**-0.6**
	7.7nm,1.1s,mb4.0						
STKA	**Stephens Creek**	**32.10**	**259**	P	**P**	**01 08 22.3**	**-0.1**
	6.0nm,0.7s,mb4.1,baz=69,slow=10.0,SNR=8.4						
ASAR	**Alice Springs**	**40.90**	**269**	P	**P**	**01 09 35.5**	**-0.2**
	2.5nm,0.6s,mb3.7,baz=105,slow=7.7,SNR=21						
WRAB	**Tennant Creek**	**41.99**	**275**	*e*P	**P**	**01 09 42.7**	**-1.8**
	4.0nm,0.6s,mb3.9						
WRA	**Warramunga Arr**	**42.00**	**275**	P	**P**	**01 09 43.9**	**-0.6**
	3.8nm,0.5s,mb4.0,baz=113,slow=7.7,SNR=11						
FORT	**Forrest**	**43.65**	**257**	*e*P	**P**	**01 09 57.7**	**+0.3**
	25nm,0.6s,mb4.7						
CASY	**Casey**	**53.07**	**208**	*e*P	**P**	**01 11 08.2**	**+0.5**
	4.8nm,0.6s,mb3.9						
MBWA	**Marble Bar**	**53.95**	**266**	*e*P	**P**	**01 11 13.6**	**-1.1**
	4.5nm,0.7s,mb3.8						
QSPA	**South Pole Qui**	**58.52**	**180**	P	**P**	**01 11 47.6**	**+2.0**
	13nm,0.8s,mb4.3,baz=23,slow=2.1,SNR=64						
QSPA	**South Pole Qui**	**58.52**	**180**	P	**P**	**01 11 47.6**	**+2.0**
KSRS	**Korea Array**	**83.87**	**321**	P	**P**	**01 14 11.2**	**-4.7**
	1.5nm,0.7s,mb3.8,baz=149,slow=6.2,SNR=4.8						
MKAR	**Makanchi Array**	**116.87**	**310**	PKP	PKPdf	01 20 24.1	-3.0
	0.3nm,0.6s,baz=90,slow=2.9,SNR=3.6						
BVAR	**Borovoye Array**	**125.72**	**315**	PKP	PKPdf	01 20 41.3	-2.6
	0.9nm,0.6s,baz=120,slow=5.2,SNR=4.2						
BVAR	**Borovoye Array**	**125.72**	**315**	PKP	PKPdf	01 20 41.3	-2.6
FINES	**FINESS Array B**	**145.46**	**338**	PKPbc	PKPbc	01 21 17.1	-3.9
	7.4nm,0.5s,baz=46,slow=3.5,SNR=96						
NB2	**NORSAR Subarra**	**149.54**	**349**	PKP	PKPbc	01 21 27.8	-4.0
	comp=Z,1.3nm,0.6s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**149.54**	**349**	PKPbc	PKPbc	01 21 27.6	-4.2
	comp=Z,1.5nm,0.6s,baz=15,slow=4.2,SNR=9.6						
MMAI	**Mount Meron Ar**	**149.68**	**282**	PKPbc	PKPbc	01 21 31.9	-1.2
	comp=Z,2.3nm,0.6s,baz=90,slow=1.6,SNR=7.4						
AKASG	**Malin Array Be**	**150.86**	**320**	PKPbc	PKPbc	01 21 31.9	-3.3
	comp=Z,2.6nm,0.8s,baz=66,slow=2.4,SNR=7.2						
AKASG	**Malin Array Be**	**150.86**	**320**	PKPbc	PKPbc	01 21 31.9	-3.3
BR131	**Keskin Array S**	**151.20**	**296**	*e*PKPbc	PKPbc	01 21 33.6	-2.8
BRTR	**Keskin Array B**	**151.20**	**296**	PKPbc	PKPbc	01 21 34.0	-2.3
	comp=Z,1.0nm,0.6s,baz=125,slow=3.2,SNR=9.2						

ISCJB ***02*** *01:36:13.9±0.8, 31°.82S±0°.08×179°.8E±0°.2, h341km±11km, mb3.6/7, Error ellipse: s-maj=27.2km s-min=9.9km az=16.4*
IDC ***02*** *01:36:14.5±0.8, 31°.75S×179°.86E, h331km±10km, mb3.6/5, mb1 3.8/7, mb1mx3.5/18, mbtmp3.7/7, Error ellipse: s-maj=20.1km s-min=13.5km az=111.0*
NEIC ***02*** *01:36:14.6±0.8, 31°.76S×179°.89E, h338km±11km, mb3.6/2, Error ellipse: s-maj=22.4km s-min=15.6km az=108.0*
ISC 02 01:36:15.6±0.9, 31°.86S±0°.09×179°.7E±0°.2, h331km±12km, n53, σ1§09/55, mb3.6/7, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.32**	**39**	P	**Pn**	**01 37 14.7**	**-1.9**
	74nm,0.3s,baz=252,slow=20,SNR=3.7						
RAO				S	Sx	01 38 01.9	
	147nm,0.3s,baz=197,slow=19,SNR=4.5						
MXZ	**Matakaoa Point**	**5.80**	**191**	PN	**Pn**	**01 37 43.9**	**+0.6**
MXZ				SN	**S**	**01 38 55.0**	**+0.7**
PUZ	**Puketiti**	**6.31**	**190**	PN	**Pn**	**01 37 51.8**	**+2.6**
PUZ				SN	**S**	**01 39 03.7**	**-1.4**
MWZ	**Matawai**	**6.70**	**195**	*e*PN	**Pn**	**01 37 54.1**	**+0.3**
MWZ				SN	**S**	**01 39 13.5**	**0.0**
CNGZ	**Carnagh Statio**	**6.72**	**190**	PN	**Pn**	**01 37 54.8**	**+0.8**
URZ	**Urewera**	**6.72**	**198**	P	**Pn**	**01 37 54.1**	**0.0**
	27nm,0.3s,baz=348,slow=14,SNR=90						
URZ				S	**S**	**01 39 14.3**	**+0.3**
	42nm,0.3s,baz=66,slow=20,SNR=24						
URZ	**Urewera**	**6.72**	**198**	PN	**Pn**	**01 37 53.8**	**-0.3**
URZ				SN	**S**	**01 39 12.7**	**-1.3**
PRGZ	**Paritu Road**	**7.20**	**191**	*e*PN	**Pn**	**01 38 01.1**	**+1.4**
KNZ	**Kokohu**	**7.33**	**192**	PN	**Pn**	**01 38 00.3**	**-0.9**
KNZ				SN	**S**	**01 39 24.6**	**-2.5**
MHGZ	**Mahia Peninsul**	**7.42**	**191**	*e*PN	**Pn**	**01 38 03.4**	**+1.1**
NMHZ	**Naumai**	**7.59**	**197**	*e*PN	**Pn**	**01 38 04.3**	**-0.1**
BKZ	**Black Stump Fm**	**7.74**	**199**	*e*PN	**Pn**	**01 38 08.0**	**+1.9**
OTVZ	**Oturere**	**7.99**	**203**	PN	**Pn**	**01 38 12.1**	**+2.9**
CKHZ	**Cape Kidnapper**	**8.06**	**194**	*e*PN	**Pn**	**01 38 11.7**	**+1.6**
WNVZ	**Wahianoa**	**8.16**	**203**	*e*PN	**Pn**	**01 38 11.8**	**+0.6**
KAHZ	**Kahuranaki**	**8.24**	**195**	*e*PN	**Pn**	**01 38 13.3**	**+1.1**
PXZ	**Pawanui**	**8.47**	**195**	*e*PN	**Pn**	**01 38 14.1**	**-0.8**
PXZ				SN	Sx	01 39 47.6	
PNHZ	**Pukenui**	**8.52**	**198**	*e*PN	**Pn**	**01 38 14.1**	**-1.4**
PNHZ				SN	Sx	01 39 49.8	
WPHZ	**Waipukurau**	**8.60**	**197**	PN	**Pn**	**01 38 17.9**	**+1.4**
WPHZ				SN	Sx	01 39 51.6	
TSZ	**Takapari Road**	**8.72**	**199**	PN	**Pn**	**01 38 18.2**	**+0.3**
PRHZ	**Porangahau**	**8.74**	**196**	*e*PN	**Pn**	**01 38 18.5**	**+0.3**
WAZ	**Wanganui**	**8.75**	**205**	PN	**Pn**	**01 38 20.5**	**+2.2**
WAZ				SN	**S**	**01 39 59.8**	**+1.3**
DVHZ	**Dannevirke**	**8.89**	**198**	*e*PN	**Pn**	**01 38 20.4**	**+0.4**
POWZ	**Post Office Ro**	**9.08**	**199**	*e*PN	**Pn**	**01 38 22.6**	**+0.2**
BFZ	**Birch Farm**	**9.23**	**197**	PN	**Pn**	**01 38 24.0**	**-0.1**
BFZ				SN	Sx	01 40 04.3	
MRZ	**Mangatainoka R**	**9.39**	**200**	PN	**Pn**	**01 38 25.1**	**-0.9**
HOWZ

KNZ	**Kokohu**	**6.67 192**	PN	**Pn**	**01 42 28.6**	**+0.9**
KNZ			SN	**S**	**01 43 42.1**	**-3.6**
BKZ	**Black Stump Fm**	**7.08 199**	PN	**Pn**	**01 42 35.1**	**+2.4**
CKHZ	**Cape Kidnapper**	**7.40 194**	PN	**Pn**	**01 42 39.2**	**+2.4**
FWVZ	**Far West T-bar**	**7.45 204**	*e*PN	**Pn**	**01 42 38.5**	**+1.1**
WNVZ	**Wahianoa**	**7.50 203**	PN	**Pn**	**01 42 40.3**	**+2.3**
KAHZ	**Kahuranaki**	**7.58 195**	PN	**Pn**	**01 42 37.4**	**-1.6**
PXZ	**Pawanui**	**7.80 195**	PN	**Pn**	**01 42 41.9**	**+0.1**
PXZ			SN	Sx	01 44 06.0	
WPHZ	**Waipukurau**	**7.93 197**	*e*PN	**Pn**	**01 42 44.6**	**+1.2**
TSZ	**Takapari Road**	**8.05 199**	*e*PN	**Pn**	**01 42 45.5**	**+0.6**
TSZ			SN	Sx	01 44 13.9	
PRHZ	**Porangahau**	**8.08 195**	*e*PN	**Pn**	**01 42 45.5**	**+0.3**
PRHZ			SN	Sx	01 44 14.7	
WAZ	**Wanganui**	**8.09 205**	PN	**Pn**	**01 42 47.1**	**+1.7**
DVHZ	**Dannevirke**	**8.22 198**	*e*PN	**Pn**	**01 42 47.1**	**+0.2**
POWZ	**Post Office Ro**	**8.42 200**	PN	**Pn**	**01 42 49.7**	**+0.3**
BFZ	**Birch Farm**	**8.56 197**	PN	**Pn**	**01 42 51.7**	**+0.4**
BFZ			SN	Sx	01 44 23.7	
MRZ	**Mangatainoka R**	**8.72 200**	*e*PN	**Pn**	**01 42 51.4**	**-1.7**
TIWZ	**Tintock**	**8.74 198**	PN	**Pn**	**01 42 54.2**	**+0.7**
OGWZ	**Otaki Gorge**	**8.99 201**	*e*PN	**Pn**	**01 42 53.8**	**-2.6**
TMWZ	**Te Maipa**	**9.05 197**	*e*PN	**Pn**	**01 42 57.2**	**-0.1**
KIW	**Kapiti Island**	**9.11 202**	PN	**Pn**	**01 42 57.6**	**-0.4**
TRWZ	**Traveller**	**9.38 198**	*e*PN	**Pn**	**01 43 00.7**	**-0.7**
SNZO	**South Karori**	**9.58 202**	*e*Pn	**Pn**	**01 43 03.6**	**-0.2**
SNZO	**South Karori**	**9.58 202**	*e*PN	**Pn**	**01 43 00.9**	**-2.9**
BHW	**Baring Head**	**9.62 201**	PN	**Pn**	**01 43 03.5**	**-0.8**
TCW	**Tory Channel**	**9.63 204**	*e*PN	**Pn**	**01 43 02.4**	**-2.0**
TUWZ	**Tuamarina**	**9.94 205**	PN	**Pn**	**01 43 06.8**	**-1.5**
NNZ	**Nelson**	**9.96 207**	PN	**Pn**	**01 43 08.0**	**-0.7**
NNZ			SN	Sx	01 44 56.4	
QRZ	**Quartz Range**	**9.99 212**	PN	**Pn**	**01 43 09.4**	**+0.4**
THZ	**Tophouse**	**10.62 208**	*e*PN	**Pn**	**01 43 14.9**	**-1.8**
THZ			SN	Sx	01 45 10.2	
KHZ	**Kahutara**	**10.95 204**	*e*Pn	**Pn**	**01 43 20.9**	**0.0**
48nm,0.3s						
KHZ	**Kahutara**	**10.95 204**	PN	**Pn**	**01 43 19.7**	**-1.2**
CTZ	**Chatham Island**	**11.64 166**	PN	**Pn**	**01 43 37.3**	**+8.0**
LTZ	**Lake Taylor**	**11.73 207**	PN	**Pn**	**01 43 29.9**	**-0.5**
MQZ	**McQueen's Vall**	**12.40 204**	PN	**Pn**	**01 43 36.5**	**-2.1**
MQZ			SN	Sx	01 45 45.8	
RPZ	**Rata Peaks**	**12.99 208**	*e*Pn	**Pn**	**01 43 47.8**	**+2.0**
FOZ	**Fox Glacier**	**13.45 212**	PN	**Pn**	**01 43 49.6**	**-1.7**
LBZ	**Lake Benmore**	**13.90 209**	PN	**Pn**	**01 43 55.9**	**-0.9**
ODZ	**Otahua Downs**	**14.27 206**	PN	**Pn**	**01 44 00.9**	**-0.3**
EAZ	**Earnscleugh**	**14.95 209**	PN	**Pn**	**01 44 08.0**	**-1.3**
ASAR	**Alice Springs**	**40.87 271**	P	**P**	**01 48 07.3**	**+1.0**
0.9nm,0.7s,mb3.1,baz=109,slow=7.7,SNR=7.3						
WRA	**Warramunga Arr**	**42.06 276**	P	**P**	**01 48 16.5**	**+0.6**
1.2nm,0.3s,mb3.6,baz=113,slow=8.2,SNR=6.0						
WRA	**Warramunga Arr**	**42.06 276**	P	**P**	**01 48 16.5**	**+0.6**
QSPA	**South Pole Qui**	**57.62 180**	P	**P**	**01 50 13.0**	**+1.4**
11nm,0.7s,mb4.4,baz=28,slow=2.5,SNR=35						
QSPA	**South Pole Qui**	**57.62 180**	P	**P**	**01 50 13.0**	**+1.4**
FINES	**FINESS Array B**	**146.29 337**	PKPbc	PKPbc	01 59 55.8	-2.2
1.0nm,0.6s,baz=50,slow=4.3,SNR=12						

IDC 02 01:46:27.7±1.0, 16°.72N×146°.52E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.5/24, mbtmp3.5/5, ML4.9/1, Error ellipse: s-maj=48.0km s-min=21.0km az=107.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.50**	**207**	Pn		Pn		01 47 24.2	+0.8
102nm,0.3s,baz=5.2,slow=4.2,SNR=30									
GUMO				Sn		Sn		01 48 02.4	-3.1
68nm,0.3s,baz=18,slow=20,SNR=7.4									
WRA	**Warramunga Arr**	**38.35**	**199**	P		P		01 53 50.5	-0.1
0.3nm,0.5s,baz=22,slow=9.2,SNR=2.6									
ASAR	**Alice Springs**	**41.99**	**197**	P		P		01 54 20.3	-0.5
0.1nm,0.4s,baz=20,slow=6.8,SNR=2.8									
KURK	**Kurchatov**	**63.26**	**319**	P		P		01 56 58.7	+0.6
0.2nm,0.5s,baz=91,slow=7.2,SNR=3.1									
YKA	**Yellowknife Ar**	**79.36**	**28**	P		P		01 58 34.2	-1.1
0.3nm,0.5s,baz=294,slow=5.7,SNR=3.4									
NVAR	**Mina Array Bea**	**83.74**	**52**	P		P		01 59 01.0	+2.0
0.4nm,0.6s,baz=269,slow=5.1,SNR=4.2									

*BJI **02** 01:52:34.4, 6°.85S×155°.75E, h88km, mB5.0/22, mb4.9/32, Ms4.7/12, Ms7 4.5/13*
*ISCJB **02** 01:52:34.9±1.1, 7°.02S±0°.05×155°.76E±0°.05, h94km±10km, mb4.8/62, Error ellipse: s-maj=8.9km s-min=8.1km az=168.6*
*NEIC **02** 01:52:35.7±1.0, 6°.98S×155°.72E, h85km±8km, mb4.8/24, Error ellipse: s-maj=7.1km s-min=5.8km az=146.0*
*IDC **02** 01:52:35.4±2.3, 7°.01S×155°.73E, h82km±21km, mb4.5/23, mb1 4.5/25, mb1mx4.5/26, mbtmp4.5/25, MS3.8/13, Ms1 3.8/13, ms1mx3.7/21, Error ellipse: s-maj=13.6km s-min=11.5km az=90.0*
*MOS **02** 01:52:35.4±1.0, 7°.02S×155°.65E, h85km, mb4.7/12, Error ellipse: s-maj=10.4km s-min=9.6km az=95.2*
*DJA **02** 01:52:49, 7°.17S×155°.40E, h194km, mb4.9/13*
ISC 02 01:52:37.3±1.0, 7°.05S±0°.05×155°.78E±0°.05, h102km±9km, h93km±3.2km; pP-P, n229, σ1§02/121, mb4.8/62, 7C-6D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.75**	**120**	P		**Pn**		**01 53 46.0**	**-0.8**
40nm,0.3s,baz=241,slow=7.2,SNR=4.8									
HNR				S		**Sn**		**01 54 40.3**	**-0.4**
36nm,0.3s,baz=353,slow=19,SNR=4.2									
HNR				LR		LR		01 55 40.1	
comp=Z,1μm,18.1s,baz=296,slow=38									
HNR	**Honiara**	**4.75**	**120**	*e*Pn		**Pn**		**01 53 46.1**	**-0.6**
HNR				*e*Sn		**Sn**		**01 54 45.9**	**+5.1**
COEN	**Coen**	**14.17**	**240**	*e*Pn		**Pn**		**01 55 53.1**	**-0.4**
JAY	**Jayapura**	**15.68**	**286**	P		**Pn**		**01 56 14.4**	**+1.7**
CTA	**Charters Tower**	**15.92**	**215**	P		**Pn**		**01 56 15.6**	**0.0**
0.8nm,0.3s,baz=32,slow=14,SNR=20									
CTA				LR		LR		02 01 30.3	
comp=Z,528nm,18.5s,baz=48,slow=34									
CTA	**Charters Tower**	**15.92**	**215**	P		**Pn**		**01 56 15.6**	**0.0**
CTA				LR		LR		02 01 30.3	
CTAO	**Charters Tower**	**15.92**	**215**	*e*P		**Pn**		**01 56 16.2**	**+0.6**
CTAO				pmax		pmax			
comp=Z,17nm,0.8s									
CTAO	**Charters Tower**	**15.92**	**215**	*e*P		**Pn**		**01 56 16.2**	**+0.6**
comp=Z,17nm,0.8s									
CTAO	**Charters Tower**	**15.92**	**215**	P		**Pn**		**01 56 17.3**	**+1.7**
comp=Z,29nm,1.3s									
SMPI	**Sarmi**	**17.74**	**286**	P		**Pn**		**01 56 39.4**	**+1.4**
comp=Z,87nm,1.0s									
EIDS	**Eidsvold**	**18.77**	**193**	*e*P		**P**		**01 56 49.6**	**+1.1**
comp=Z,12nm,0.6s									
GUMO	**Guam**	**23.19**	**332**	LR		LR		02 05 24.9	
comp=Z,94nm,20.9s,baz=147,slow=33									
KAKA	**Kakadu**	**23.67**	**254**	*e*P		**P**		**01 57 39.2**	**-0.5**
comp=Z,87nm,0.6s,mb5.3									
KAKA	**Kakadu**	**23.67**	**254**	P		**P**		**01 57 39.8**	**0.0**
comp=Z,592nmcomp=Z,81nm,0.7s,mb5.2									
MSVF	**Nonsavu**	**24.17**	**118**	*e*P		**P**		**01 57 44.5**	**+0.1**
MSVF				pmax		pmax			
comp=Z,46nm,1.0s,mb4.8									
MSVF	**Nonsavu**	**24.17**	**118**	*e*P		**P**		**01 57 44.5**	**+0.2**
comp=Z,46nm,1.0s,mb4.8									
WRAB	**Tennant Creek**	**24.42**	**236**	*e*P		**P**		**01 57 46.5**	**-0.1**
WRAB				pmax		pmax			
comp=Z,40nm,0.9s,mb4.8									
WRAB	**Tennant Creek**	**24.42**	**236**	*e*P		**P**		**01 57 46.5**	**-0.1**
comp=Z,40nm,0.9s,mb4.7									
WRAB	**Tennant Creek**	**24.42**	**236**	P		**P**		**01 57 46.3**	**-0.3**
comp=Z,33nm,0.9s,mb4.7									
WRA	**Warramunga Arr**	**24.43**	**236**	P		**P**		**01 57 46.9**	**+0.2**
comp=Z,5.4nm,0.3s,mb4.3,baz=60,slow=9.4,SNR=40									
WRA				PcP		PcP		02 01 24.2	+0.9
comp=Z,3.5nm,0.6s,baz=62,slow=2.3,SNR=7.5									
ASAR	**Alice Springs**	**26.73**	**229**	P		**P**		**01 58 07.0**	**-0.5**
comp=Z,4.9nm,0.4s,mb4.4,baz=59,slow=9.9,SNR=78									
ASAR				PcP		PcP		02 01 29.4	+0.9
comp=Z,3.3nm,0.4s,baz=63,slow=2.5,SNR=9.2									
KNA	**Kununurra**	**27.83**	**250**	P		**P**		**01 58 17.5**	**+0.1**
comp=Z,804nmcomp=Z,88nm,0.7s,mb5.4									
STKA	**Stephens Creek**	**28.03**	**206**	P		**P**		**01 58 18.9**	**0.0**
comp=Z,11nm,0.6s,mb4.6,baz=9.8,slow=9.1,SNR=8.8									
STKA				PcP		PcP		02 01 31.7	+0.3
comp=Z,4.3nm,0.7s,baz=355,slow=3.5,SNR=3.9									
STKA				LR		LR		02 10 08.3	
comp=Z,285nm,20.2s,baz=26,slow=38									
STKA	**Stephens Creek**	**28.03**	**206**	*e*P		**P**		**01 58 18.6**	**-0.3**
STKA				pmax		pmax			
comp=Z,3.0nm,0.8s									
STKA	**Stephens Creek**	**28.03**	**206**	*e*P		**P**		**01 58 18.6**	**-0.4**
comp=Z,2.7nm,0.8s,mb3.8									
FITZ	**Fitzroy Crossi**	**31.35**	**247**	P		**P**		**01 58 47.9**	**-0.6**
comp=Z,39nm,0.6s,mb5.3,baz=84,slow=7.9,SNR=151									
FITZ	**Fitzroy Crossi**	**31.35**	**247**	*e*P		**P**		**01 58 47.7**	**-0.8**
comp=Z,34nm,0.6s,mb5.2									
FITZ	**Fitzroy Crossi**	**31.35**	**247**	P		**P**		**01 58 47.9**	**-0.6**
comp=Z,109nm,0.7s,mb5.7									
AFI	**Afiamalu**	**32.59**	**105**	LR		LR		02 09 33.3	
comp=Z,170nm,18.6s,baz=237,slow=31									
FORT	**Forrest**	**35.09**	**224**	*e*P		**P**		**01 59 20.0**	**-0.9**
comp=Z,53nm,0.6s,mb5.5									
URZ	**Urewera**	**36.58**	**151**	P		**P**		**01 59 34.3**	**+0.7**
comp=Z,8.7nm,0.5s,mb5.0,baz=255,slow=3.1,SNR=6.9									
URZ				LR		LR		02 11 55.3	
comp=Z,126nm,18.8s,baz=168,slow=32									
MBWA	**Marble Bar**	**37.56**	**244**	*e*P		**P**		**01 59 41.1**	**-0.9**
comp=Z,19nm,0.5s,mb5.2									
MBWA	**Marble Bar**	**37.56**	**244**	P		**P**		**01 59 41.5**	**-0.5**
comp=Z,40nm,0.9s,mb5.3									
RPZ	**Rata Peaks**	**38.90**	**162**	P		**P**		**01 59 53.6**	**+0.6**
comp=Z,24nm,0.4s,mb5.4,baz=37,slow=1.3,SNR=18									
RPZ	**Rata Peaks**	**38.90**	**162**	*e*P		**P**		**01 59 53.1**	**+0.1**
comp=Z,24nm,0.4s,mb5.4									
NWAO	**Narrogin (SRO)**	**44.05**	**229**	P		**P**		**02 00 34.1**	**-1.1**
comp=Z,7.8nm,0.7s,mb4.6,baz=74,slow=7.9,SNR=5.6									
MJAR	**Matsushiro Arr**	**46.39**	**340**	P		**P**		**02 00 51.3**	**-2.3**
comp=Z,1.4nm,0.4s,mb4.0,baz=162,slow=6.9,SNR=3.9									
MJAR				LR		LR		02 17 40.5	
comp=Z,82nm,20.7s,baz=245,slow=32									
MJAR	**Matsushiro Arr**	**46.39**	**340**	P		**P**		**02 00 51.3**	**-2.3**
MJAR				LR		LR		02 17 40.5	
CGJI	**Cibinong**	**49.72**	**267**	P		**P**		**02 01 17.9**	**-1.8**
KSRS	**Korea Array**	**51.35**	**332**	P		**P**		**02 01 32.7**	**+1.2**
comp=Z,1.6nm,0.7s,mb4.2,baz=140,slow=7.9,SNR=5.5									
KSRS				LR		LR		02 20 05.9	
comp=Z,47nm,19.6s,baz=7.6,slow=32									
QIZ	**Qiongzhong**	**52.16**	**301**	P		**P**		**02 01 34.4**	**-3.4**
QIZ				S		**S**		**02 08 55.8**	**+1.0**
QIZ				pmax		pmax			
comp=Z,19nm,1.6s,mb4.9									
QIZ				pmax		pmax			
comp=Z,100nm,5.7s									
QIZ				LR		LR			
comp=Z,150nm,17.8s									
ASAJ	**Asahikawa**	**52.30**	**348**	P		**P**		**02 01 37.6**	**-0.8**
comp=Z,6.6nm,0.3s,mb5.1,baz=207,slow=4.5,SNR=4.7									
NJ2	**Nanjing**	**52.45**	**320**	*e*P		**P**		**02 01 40.4**	**+0.6**
NJ2				pmax		pmax			
comp=Z,10.0nm,0.5s,mb5.1									
PPT	**Papeete**	**54.23**	**107**	LR		LR		02 22 43.0	
comp=Z,148nm,18.6s,baz=83,slow=33									
SDSI	**Sungai Dareh**	**54.53**	**274**	P		**P**		**02 01 54.1**	**-1.2**
comp=Z,27nm,0.5s,mb5.5									
PDSI	**Padang**	**55.49**	**274**	P		**P**		**02 02 00.7**	**-1.5**
PPI	**Padang Panjang**	**55.61**	**274**	P		**P**		**02 02 02.0**	**-1.2**
comp=Z,26nm,0.9s,mb5.2									
MDJ	**Mudanjiang**	**56.58**	**338**	P		**P**		**02 02 09.5**	**+0.1**
MDJ				pmax		pmax			
comp=Z,7.0nm,1.0s,mb4.7									
MDJ				pmax		pmax			
comp=Z,33nm,4.3s									
MNSI	**Mandailing Nat**	**56.61**	**276**	P		**P**		**02 02 08.8**	**-1.4**
comp=Z,32nm,1.0s,mb5.3									
CN2	**Changchun**	**57.57**	**334**	*e*P		**P**		**02 02 18.0**	**+1.6**
GYA	**Guiyang**	**58.11**	**307**	P		**P**		**02 02 21.9**	**+1.4**
GYA				pP		pP		02 02 46.3	+0.9
GYA				sP		sP		02 02 54.8	-1.9
GYA				PcP		PcP		02 03 12.0	+0.8
GYA				PP		PP		02 04 34.2	+3.8
GYA				ScP		ScP		02 07 03.8	+1.6
GYA				PcS		PcS		02 07 14.3	+1.4
GYA				S		**S**		**02 10 15.9**	**+1.8**
GYA				sS		sS		02 10 53.2	-3.6
GYA				SS		SS		02 14 09.0	+1.7
GYA				pmax		pmax			
comp=Z,10.0nm,1.0s,mb4.8									
GYA				pmax		pmax			
comp=Z,110nm,5.4s									
GYA				LR		LR			
comp=N,510nm,19.0s									
GYA				LR		LR			
comp=E,480nm,18.4s									
GYA				LR		LR			
comp=Z,520nm,17.9s									
BJI	**Beijing**	**59.41**	**325**	P		**P**		**02 02 30.3**	**+1.1**
BJI				S		**S**		**02 10 34.2**	**+3.8**
BJI				pmax		pmax			
comp=Z,6.0nm,0.5s,mb4.9									
BJI				pmax		pmax			
comp=Z,49nm,3.5s									
BJI				LR		LR			
comp=N,110nm,25.9s									
BJI				LR		LR			
comp=E,86nm,25.4s									
KLR	**Kul'dur**	**59.85**	**342**	*e*P		**P**		**02 02 28.0**	**-4.1**
PETK	**Petropavlovsk-**	**59.95**	**1**	P		**P**		**02 02 33.1**	**+0.4**
comp=E,3.6nm,0.6s,mb4.6,baz=150,slow=7.0,SNR=14									
PETK				LR		LR		02 23 54.3	
comp=E,78nm,21.6s,baz=171,slow=31									
XAN	**Xi'an**	**60.29**	**316**	P		**P**		**02 02 34.2**	**-1.2**
XAN				pmax		pmax			
comp=Z,10.0nm,4.4s									
KMI	**Kunming**	**60.69**	**304**	P		**P**		**02 02 39.3**	**+1.0**
KMI				pP		pP		02 03 02.0	-1.5
KMI				sP		sP		02 03 12.8	-1.9
KMI				PP		PP		02 04 57.1	+3.8
KMI				S		**S**		**02 10 47.6**	**+0.1**
KMI				sS		sS		02 11 27.1	-3.4
KMI				SS		SS		02 14 49.8	+1.8
KMI				pmax		pmax			
comp=Z,12nm,1.0s,mb4.9									
KMI				pmax		pmax			
comp=Z,110nm,5.6s									
KMI				LR		LR			
comp=N,93nm,22.1s									
KMI				LR		LR			
comp=E,98nm,17.2s									
KMI				LR		LR			
comp=Z,95nm,17.7s									
CMAR	**Chiang Mai Arr**	**61.51**	**295**	P		**P**		**02 02 45.0**	**+1.0**
comp=Z,11nm,0.7s,mb5.0,baz=121,slow=5.3,SNR=39									
CMAR				LR		LR		02 30 41.0	
comp=Z,38nm,18.3s,baz=266,slow=37									
CHTO	**Chiang Mai**	**61.63**	**296**	*e*P		**P**		**02 02 45.1**	**+0.3**
CHTO				pmax		pmax			
comp=Z,3.0nm,0.4s,mb4.7									
CHTO	**Chiang Mai**	**61.63**	**296**	*e*P		**P**		**02 02 45.1**	**+0.3**
comp=Z,3.2nm,0.4s,mb4.7									
CHTO	**Chiang Mai**	**61.63**	**296**	P		**P**		**02 02 45.2**	**+0.4**
comp=Z,24nm,1.3s,mb5.1									
CD2	**Chengdu**	**62.44**	**310**	P		**P**		**02 02 48.2**	**-1.8**
CD2				pP		pP		02 03 12.4	-2.8
CD2				sP		sP		02 03 23.5	-2.9
CD2				PP		PP		02 05 08.2	-0.5
CD2				S		**S**		**02 11 06.2**	**-3.2**
CD2				sS		sS		02 11 48.0	-4.6
CD2				SS		SS		02 15 12.7	-2.5
CD2				pmax		pmax			
comp=Z,30nm,0.6s,mb5.5									
CD2				pmax		pmax			
comp=Z,100nm,4.1s									
CD2				LR		LR			
comp=N,170nm,4.8s									
CD2				LR		LR			
comp=Z,210nm,8.9s									
HHC	**Hu-ho-hao-te**	**62.60**	**323**	*e*P		**P**		**02 02 50.8**	**0.0**
HHC				pP		pP		02 03 12.9	-3.2
HHC				sP		sP		02 03 24.3	-3.0
HHC				PcP		PcP		02 03 27.9	-1.0
HHC				PP		PP		02 05 11.3	+1.5
HHC				ScP		ScP		02 07 20.2	-1.6
HHC				PcS		PcS		02 07 30.7	-1.5
HHC				S		**S**		**02 11 10.1**	**-0.8**
HHC				sS		sS		02 11 50.2	-4.0
HHC				ScS		ScS		02 12 30.3	-3.5
HHC				SS		SS		02 15 18.1	+0.8
HHC				pmax		pmax			
comp=Z,10.0nm,0.7s,mb4.8									
HHC				pmax		pmax			
comp=Z,61nm,7.3s									
HHC				LR		LR			
comp=N,220nm,16.7s									
HHC				LR		LR			
comp=E,240nm,16.3s									
HHC				LR		LR			
comp=Z,300nm,16.8s									
LZH	**Lanzhou**	**64.90**	**315**	*e*P		**P**		**02 03 07.2**	**+1.1**
LZH				pP		pP		02 03 27.6	-3.9
LZH				sP		sP		02 03 36.1	-6.5
LZH				PcP		PcP		02 03 40.0	+1.5
LZH				PP		PP		02 05 33.0	+2.8
LZH				*e*S		**S**		**02 11 39.5**	**-0.2**
LZH				sS		sS		02 12 22.4	-0.8
LZH				SS		SS		02 15 55.2	+1.8
LZH				pmax		pmax			
comp=Z,18nm,1.1s,mb4.8									
LZH				pmax		pmax			
comp=Z,100nm,4.0s									
CASY	**Casey**	**66.79**	**198**	*e*P		**P**		**02 03 17.8**	**+0.2**
comp=Z,10nm,0.8s,mb4.7									
GTA	**Gaotai**	**69.31**	**317**	*e*P		**P**		**02 03 34.0**	**+0.1**
GTA				pmax		pmax			
comp=Z,4.0nm,1.0s,mb4.2									
ULN	**Ulaanbaatar**	**69.47**	**327**	*e*P		**P**		**02 03 35.4**	**+0.7**
ULN				pmax		pmax			
comp=Z,12nm,0.8s,mb4.8									
ULN	**Ulaanbaatar**	**69.47**	**327**	*e*P		**P**		**02 03 35.4**	**+0.7**
comp=Z,12nm,0.8s,mb4.8									
ULN	**Ulaanbaatar**	**69.47**	**327**	P		**P**		**02 03 35.5**	**+0.8**
SONM	**Songino Array**	**69.80**	**327**	P		**P**		**02 03 37.4**	**+0.7**
comp=Z,12nm,0.7s,mb4.8,baz=132,slow=6.4,SNR=54									
SONM				PKP2bc				02 31 42.6	
comp=Z,0.7nm,0.9s,baz=270,slow=3.9,SNR=4.4									
SONM	**Songino Array**	**69.80**	**327**	P		**P**		**02 03 37.4**	**+0.7**
SONM				⇑*e*				02 31 42.6	
SHL	**Shillong**	**70.00**	**300**	*e*PKP		**P**		**02 03 39.5**	**+1.1**
SBA	**Scott Base**	**71.00**	**178**	*e*P		**P**		**02 03 45.1**	**+1.5**
SBA				pmax		pmax			
comp=Z,9.0nm,1.1s,mb4.5									
SBA	**Scott Base**	**71.00**	**178**	*e*P		**P**		**02 03 45.1**	**+1.5**
comp=Z,8.9nm,1.1s,mb4.5									
TLY	**Talaya**	**73.51**	**329**	*e*P		**P**		**02 03 58.8**	**0.0**
TLY				pmax		pmax			
comp=Z,8.0nm,1.0s,mb4.4									
TAPN	**Taplejung**	**74.10**	**301**	*e*P		**P**		**02 04 04.1**	**+1.2**
comp=Z,29nm,0.6s,mb5.2									
ODAN	**Odare**	**74.23**	**300**	*e*P		**P**		**02 04 04.4**	**+0.8**
comp=Z,42nm,0.5s,mb5.4									
BILL	**Bilibino**	**75.28**	**4**	*e*P		**P**		**02 04 09.0**	**+0.2**
BILL				*e*				02 04 21.1	
BILL				pmax		pmax			
comp=Z,12nm,1.2s,mb4.5									
BILL	**Bilibino**	**75.28**	**4**	*e*P		**P**		**02 04 08.9**	**+0.2**
comp=Z,6.2nm,0.5s,mb4.6									
GUN	**Gumba**	**75.81**	**301**	*e*P		**P**		**02 04 13.4**	**+0.7**
comp=Z,33nm,0.5s,mb5.3									
PKI	**Pulchoki**	**76.12**	**301**	*e*P		**P**		**02 04 15.0**	**+0.5**
comp=Z,18nm,0.5s,mb5.0									
PKIN	**Phulchoki**	**76.14**	**301**	*e*P		**P**		**02 04 15.2**	**+0.6**
comp=Z,15nm,0.5s,mb5.0									
KKN	**Kakani**	**76.29**	**301**	*e*P		**P**		**02 04 15.9**	**+0.5**
comp=Z,25nm,0.5s,mb5.2									
DMN	**Daman**	**76.39**	**301**	*e*P		**P**		**02 04 15.9**	**-0.1**
comp=Z,50nm,0.8s,mb5.3									
WMQ	**Urumqi**	**79.40**	**317**	*e*P		**P**		**02 04 31.5**	**-0.8**
WMQ				pP		pP		02 04 57.2	-1.4
WMQ				sP		sP		02 05 07.8	-1.7
WMQ				pmax		pmax			
comp=Z,11nm,0.5s,mb4.9									
WMQ				pmax		pmax			
comp=Z,100nm,5.0s									
WMQ				LR		LR			
comp=N,78nm,30.0s									
WMQ				LR		LR			
comp=Z,47nm,21.4s									
RC01	**Rabbit Creek A**	**80.00**	**24**	*e*P		**P**		**02 04 34.4**	**-0.7**
comp=Z,3.9nm,0.4s,mb4.6									
HYB	**Hyderabad**	**80.03**	**289**	*e*P		**P**		**02 04 36.0**	**-0.2**
HYB	**Hyderabad**	**80.03**	**289**	*i* P		**P**		**02 04 36.0**	**-0.2**
BPAW	**Bear Paw Mtn.**	**81.29**	**21**	*e*P		**P**		**02 04 40.7**	**-1.2**
comp=Z,4μm,1.2s									
COLA	**College**	**82.85**	**21**	*e*P		**P**		**02 04 48.2**	**-1.9**
COLA				pmax		pmax			

MMAI	Mount Meron Ar	119.20	304	PKP	PKPdf	02 11 15.8 +0.7
	comp=Z,0.3nm,0.4s,baz=56,slow=3.6,SNR=2.8					
NB2	NORSAR Subarra	120.00	341	PKPdf	PKPdf	02 11 15.2 -0.5
	comp=Z,2.3nm,0.6s,baz=41,slow=1.9					
NOA	NORSAR Array B	120.00	341	PKP	PKPdf	02 11 15.4 -0.3
	comp=Z,1.6nm,0.5s,baz=45,slow=1.9,SNR=14					
NAO01	NORSAR Array S	120.26	341	ePKPdf	PKPdf	02 11 16.7 +0.5
BOSA	Boshof	120.60	231	PKP	PKPdf	02 11 18.4 +0.5
	comp=Z,4.5nm,0.7s,baz=110,slow=1.0,SNR=13					
BOSA	Boshof	120.60	231	ePKPdf	PKPdf	02 11 18.2 +0.3
BUR08	Bucovina Ar. S	121.76	323	ePKPdf	PKPdf	02 11 20.6 +1.1
LBTB	Lobatse	121.99	235	ePKIKP	PKPdf	02 11 21.1 +0.4
KWP	Kalwaria Pacla	122.23	326	ePKP	PKPdf	02 11 20.8 +0.4
KWP	Kalwaria Pacla	122.23	326	ePKPdf	PKPdf	02 11 20.4 0.0
KWP	Kalwaria Pacla	122.23	326	⇓iP	PKPdf	02 11 20.9 +0.5
MLR	Muntele Rosu	122.27	320	⇓iP	PKPdf	02 11 20.6 0.0
BSD	Bornholm Skovb	122.83	334	i PKIKP	PKPdf	02 11 20.4 -0.9
BSD				pmax	pmax	
	comp=Z,5.0nm,0.7s					
BSD	Bornholm Skovb	122.83	334	i P	PKPdf	02 11 20.4 -0.9
	comp=Z,5.2nm,0.7s					
CFAA	Coronel Fontan	123.06	135	PKP	PKPdf	02 11 21.5 -1.1
	comp=Z,0.3nm,0.5s,baz=221,slow=5.4,SNR=5.0					
STHS	Stebnicka Huta	123.16	326	ePKIKP	PKPdf	02 11 23.4 +1.3
STHS	Stebnicka Huta	123.16	326	ePKP	PKPdf	02 11 23.4 +1.3
CRVS	Cervenica-Dubn	123.31	326	ePKIKP	PKPdf	02 11 23.6 +1.1
CRVS	Cervenica-Dubn	123.31	326	ePKP	PKPdf	02 11 23.6 +1.1
OJC	Ojcow	123.50	328	ePKIKP	PKPdf	02 11 21.3 -1.5
LSZ	Lusaka	123.54	247	ePKIKP	PKPdf	02 11 24.3 +0.5
NIE	Niedzica	123.67	327	ePKP	PKPdf	02 11 24.4 +1.3
MORC	Moravsky Berou	124.94	328	ePKIKP	PKPdf	02 11 26.1 +0.5
MORC	Moravsky Berou	124.94	328	⇑iP	PKPdf	02 11 25.8 +0.2
VYHS	Vyhne	124.99	326	ePKIKP	PKPdf	02 11 26.1 +0.4
VYHS	Vyhne	124.99	326	ePKP	PKPdf	02 11 26.1 +0.4
DPC	Dobruska-Polom	125.23	329	ePKPdf	PKPdf	02 11 25.9 -0.2
PVCC	Panska Ves	125.99	330	ePKPdf	PKPdf	02 11 28.1 +0.6
BRG	Berggiesshubel	126.07	331	i PKP	PKPdf	02 11 28.5 +0.8
	comp=Z,4.2nm,0.5s					
BRG	Berggiesshubel	126.07	331	i PKIKP	PKPdf	02 11 28.5 +0.8
BRG				pmax	pmax	
	comp=Z,3.0nm,0.5s					
CLL	Collm	126.23	332	i PKP	PKPdf	02 11 28.2 +0.2
CLL				eSKP		02 14 51.0
CLL	Collm	126.23	332	i PKPdf	PKPdf	02 11 28.2 +0.2
	comp=Z,6.0nm,0.8s					
TREC	Trest	126.30	329	ePKIKP	PKPdf	02 11 28.8 +0.6
TREC	Trest	126.30	329	ePKPdf	PKPdf	02 11 28.8 +0.6
PRU	Pruhonice	126.35	330	ePKPdf	PKPdf	02 11 29.2 +1.0
PKSM	Moragy	126.37	324	⇓iP	PKPdf	02 11 28.9 +0.5
CONA	Conrad Observa	126.94	327	⇑iPKiKP	PKiKP	02 11 29.8 -0.1
	comp=Z,2.7nm,0.5s					
NKC	Novy Kostel	127.21	331	ePKPdf	PKPdf	02 11 30.9 +1.0
KHC	Kasperske Hory	127.38	330	ePKP	PKPdf	02 11 31.1 +0.9
KHC				e		02 11 44.0
KHC	Kasperske Hory	127.38	330	ePKPdf	PKPdf	02 11 31.1 +0.9
KHC				ex	x	02 11 44.0
GRF	Grafenberg Arr	128.16	331	ePKIKP	PKPdf	02 11 32.8 +1.1
WTTA	Wattenberg	129.58	329	⇓iPKiKP	PKiKP	02 11 35.1 -0.1
	comp=Z,4.4nm,0.4s					
STU	Stuttgart	129.75	332	ePKIKP	PKPdf	02 11 34.7 -0.1
RETA	Reutte	129.88	330	⇓iPKiKP	PKiKP	02 11 35.8 -0.1
	comp=Z,2.0nm,0.4s					
FETA	Feichten	130.21	329	⇓iPKiKP	PKiKP	02 11 36.5 0.0
	comp=Z,4.6nm,0.9s					
DAVA	Damuels	130.45	330	⇑iPKPdf	PKPdf	02 11 36.1 -0.1
	comp=Z,5.1nm,0.7s					
GIVF	Givet	130.70	336	ePKIKP	PKPdf	02 11 37.5 +1.0
LPAZ	La Paz	130.75	118	ePKIKP	PKPdf	02 11 39.0 +1.4
CDF	Champ du Feu	130.90	333	ePKIKP	PKPdf	02 11 37.4 +0.4
BAIF	Baives	130.98	336	ePKIKP	PKPdf	02 11 37.5 +0.4
HINF	Hinteralfeld	131.53	332	ePKIKP	PKPdf	02 11 38.8 +0.6
	comp=Z,5.3nm,0.5s					
HAU	Haudompre	131.62	333	ePKIKP	PKPdf	02 11 39.1 +0.8
	comp=Z,1.7nm,0.7s					
AQU	L'Aquila	131.65	323	ePKIKP	PKPdf	02 11 39.2 +0.6
MEZF	Maizieres J'vi	131.83	334	ePKIKP	PKPdf	02 11 40.1 +1.4
	comp=Z,18nm,0.6s					
CABF	La Chapelle	132.77	332	ePKIKP	PKPdf	02 11 42.1 +1.5
	comp=Z,9.8nm,0.6s					
LPL	La Plagne	133.25	330	ePKIKP	PKPdf	02 11 42.1 +0.6
	comp=Z,7.0nm,0.6s					
LPG	La Plagne	133.25	330	ePKIKP	PKPdf	02 11 42.3 +0.8
	comp=Z,8.7nm,0.6s					
LOR	Lormes	133.29	334	ePKIKP	PKPdf	02 11 41.9 +0.4
	comp=Z,6.4nm,0.6s					
SSF	Saint Saulge	133.60	334	ePKIKP	PKPdf	02 11 42.4 +0.3
	comp=Z,4.5nm,0.5s					
BNI	Bardonecchia	133.61	330	ePKIKP	PKPdf	02 11 42.5 +0.3
SMF	Signal de Mont	133.77	333	ePKIKP	PKPdf	02 11 42.7 +0.3
	comp=Z,2.8nm,0.3s					
MBDF	Montbardon	133.79	329	ePKIKP	PKPdf	02 11 43.0 +0.5
LDF	La Druitiere	133.84	338	ePKIKP	PKPdf	02 11 43.4 +0.9
	comp=Z,4.2nm,0.5s					
AVF	Avril sur Loir	133.88	334	ePKIKP	PKPdf	02 11 42.9 +0.3
ORIF	Oris-en-Rattie	134.10	330	ePKIKP	PKPdf	02 11 43.4 +0.3
	comp=Z,7.5nm,0.6s					
BGF	Bois d'Agland	134.28	334	ePKIKP	PKPdf	02 11 44.7 +1.3
	comp=Z,8.1nm,0.5s					
GRR	Gorron	134.29	338	ePKIKP	PKPdf	02 11 44.5 +1.1
	comp=Z,8.7nm,0.6s					
FRF	La Foret Royal	134.67	328	ePKIKP	PKPdf	02 11 44.1 -0.1
	comp=Z,5.9nm,0.6s					
VIVF	Saint-Julien-l	134.73	331	ePKIKP	PKPdf	02 11 44.5 +0.2
	comp=Z,5.7nm,0.6s					
TCF	Toulx Ste Croi	134.76	334	ePKIKP	PKPdf	02 11 45.7 +1.4
	comp=Z,13nm,0.8s					
LMR	La Mourre	134.90	328	ePKIKP	PKPdf	02 11 44.5 -0.2
	comp=Z,7.2nm,0.7s					
SMRF	Simiane la Rot	134.93	330	ePKIKP	PKPdf	02 11 45.1 +0.4
MFF	Saint Martin d	135.49	336	ePKIKP	PKPdf	02 11 47.0 +1.3
	comp=Z,7.1nm,0.7s					
LASF	Ste Croix	135.70	331	ePKIKP	PKPdf	02 11 46.6 +0.5
	comp=Z,3.9nm,0.4s					
RJF	Les Rejaudoux	135.84	334	ePKIKP	PKPdf	02 11 48.4 +2.1
CAF	Calviac	135.89	333	ePKIKP	PKPdf	02 11 48.2 +1.7
LFF	La Frestale	136.46	334	ePKIKP	PKPdf	02 11 49.2 +1.7
	comp=Z,6.4nm,0.7s					
MTLF	Montolieu	137.04	332	ePKIKP	PKPdf	02 11 50.3 +1.7
	comp=Z,5.5nm,0.6s					
ETSF	Etsaut	138.65	333	ePKIKP	PKPdf	02 11 53.1 +1.5
	comp=Z,7.7nm,0.6s					
SJPF	Ste Jean	138.77	334	ePKIKP	PKPdf	02 11 54.1 +2.3
MVO	Moncorvo	142.73	338	ePKP	PKPdf	02 11 55.5 -3.6
ESDC	Sonseca Array	142.77	334	PKhKP		02 11 55.5
	comp=Z,0.3nm,0.4s,baz=13,slow=3.8,SNR=4.5					
PVIS	Viseu	143.44	339	ePKP	PKPdf	02 11 57.8 -2.5
MTE	Manteigas	143.59	338	ePKP	PKPdf	02 12 01.4 +0.8
PCBR	Castelo Branco	144.06	338	ePKP	PKPdf	02 12 00.6 -0.8
PMRV	Marv??o	144.38	337	ePKP	PKPdf	02 12 01.3 -0.7
PTOM	Tomar	144.59	339	ePKP	PKPdf	02 12 01.8 -0.6
PESTR	Estremoz	144.95	337	ePKP	PKPdf	02 12 02.7 -0.3
PBAR	Barrancos	145.32	336	ePKP	PKPdf	02 12 04.1 +0.4
EVO	Evora	145.40	337	⇑iPKIKP	PKPdf	02 12 04.1 +0.3
	comp=Z,9.0nm,0.6s					
EVO	Evora	145.40	337	ePKP	PKPdf	02 12 04.3 +0.5
PMAFR	Mafra	145.49	339	ePKP	PKPdf	02 12 04.9 +1.0
CAM4	Nova Friburgo	145.69	149	(P)	PKPdf	02 12 05.2 +0.5
CAM4				i		02 12 15.2
CAM4				i		02 12 18.9
PBEJ	Beja	145.78	337	ePKP	PKPdf	02 12 05.5 +1.0
PCVE	Castro Verde	146.19	337	ePKP	PKPdf	02 12 06.5 +1.3
PVAQ	Vaqueiros	146.26	336	ePKP	PKPdf	02 12 08.6 +3.3
TAM	Tamanrasset	147.38	302	ePKP2	PKPab	02 12 10.7 -1.5
KIC	Kosan Boka	160.65	269	ePKP2	PKPab	02 13 08.5 -0.1
	comp=Z,28nm,0.5s					
DBIC	Dimbokro	160.77	270	PKPab	PKPab	02 13 09.4 +0.2
	comp=Z,11nm,0.6s,baz=76,slow=5.8,SNR=19					
DBIC	Dimbokro	160.77	270	ePKPab	PKPab	02 13 09.2 0.0
LIC	Lamto	160.92	269	ePKP2	PKPab	02 13 09.4 -0.4
	comp=Z,44nm,0.9s					
LIC	Lamto	160.92	269	ePKP2	PKPab	02 13 09.9 +0.1
	comp=Z,18nm,0.6s					
TIC	Toumodi	160.94	270	ePKP2	PKPab	02 13 10.0 +0.1
	comp=Z,15nm,0.5s					

*IDC **02** 01:58:44.5±2.0, 17.°58S×178.°58W, h546^{km}±24^{km}, mb3.4/6, mb1 3.6/7, mb1mx3.3/18, mbtmp3.5/7, Error ellipse: s-maj=31.6km s-min=16.6km az=161.0*

*ISCJB **02** 01:58:45.0±1.0, 17.°5S±0.°3×178.°6W±0.°1, h578^{km}±14^{km}, mb4.4/12, Error ellipse: s-maj=42.4km s-min=17.8km az=164.2*

*NEIC **02** 01:58:45.7±0.9, 17.°54S×178.°54W, h573^{km}±11^{km}, mb4.4/4,*

Error ellipse: s-maj=37.9km s-min=14.7km az=162.0

ISC 02 01:58:46.1±1.0, 17.°5S±0.°3×178.°6W±0.°1, h574^{km}±13^{km}, n18, σ1°09/16, mb4.4/12, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.23	266	ePn	P	02 00 06.2	+1.8
AFI	Afiamalu	7.46	62	P	P	02 00 36.9	-2.5
	5.5nm,0.3s,baz=180,slow=16,SNR=5.9						
CTA	Charters Tower	33.36	260	P	P	02 04 38.0	+0.1
	3.3nm,0.4s,mb4.3,baz=97,slow=10,SNR=7.3						
CTAO	Charters Tower	33.36	260	eP	P	02 04 37.3	-0.6
	3.4nm,0.4s,mb4.3						
COEN	Coen	36.95	270	eP	P	02 05 08.0	+0.3
	67nm,0.6s,mb5.3						
STKA	Stephens Creek	38.68	241	P	P	02 05 22.1	+0.5
	6.3nm,0.4s,mb4.5,baz=94,slow=10,SNR=13						
WRAB	Tennant Creek	44.54	259	eP	P	02 06 06.8	-1.1
	5.4nm,0.4s,mb4.4						
WRA	Warramunga Arr	44.55	259	P	P	02 06 07.5	-0.4
	5.5nm,0.5s,mb4.4,baz=94,slow=6.8,SNR=57						
ASAR	Alice Springs	44.75	254	P	P	02 06 09.4	0.0
	44nm,0.5s,mb5.2,baz=88,slow=8.1,SNR=401						
KAKA	Kakadu	47.44	269	eP	P	02 06 29.7	-0.2
	26nm,0.4s,mb5.1						
FORT	Forrest	50.03	244	eP	P	02 06 47.6	-1.3
	16nm,0.5s,mb4.7						
MBWA	Marble Bar	58.02	256	eP	P	02 07 44.3	-0.8
	8.0nm,0.6s,mb4.0						
QSPA	South Pole Qui	72.53	180	P	P	02 09 15.5	+0.6
	1.2nm,0.8s,mb3.5,baz=93,slow=2.0,SNR=4.8						
QSPA	South Pole Qui	72.53	180	P	P	02 09 15.5	+0.6
TXAR	Lajitas Array	85.92	58	P	P	02 10 28.1	+1.8
	0.5nm,0.7s,mb3.2,baz=214,slow=6.3,SNR=8.2						
CMAR	Chiang Mai Arr	88.61	290	P	P	02 10 40.2	+1.1
	0.6nm,0.3s,mb3.9,baz=131,slow=4.4,SNR=4.3						
BRTR	Keskin Array B	144.40	315	PKP	PKPdf	02 17 18.0	+0.3
	0.9nm,0.7s,baz=48,slow=2.1,SNR=7.5						
MMAI	Mount Meron Ar	145.80	303	PKPbc	PKPbc	02 17 22.5	+0.4
	1.3nm,0.4s,baz=73,slow=5.0,SNR=6.5						

*CSEM **02** 02:01:29.2, 38.°11N×22.°67E, h7^{km}, ML2.4/11, After THE*

THE 02 02:01:29.2, 38.°11N×22.°67E, h7^{km}±1^{km}, ML2.4/11, Error ellipse: s-maj=1.0km s-min=0.4km az=231.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTK	Loutraki	0.25	111	P	Pg	02 01 34.3	+0.2
LTK				S	Sg	02 01 37.8	+0.4
LTK	Loutraki	0.25	111	P	Pg	02 01 34.3	+0.2
LTK				S	Sg	02 01 37.8	+0.4
GUR	Goura	0.32	236	P	Pg	02 01 35.5	+0.1
GUR				S	Sg	02 01 39.8	+0.3
GUR	Goura	0.32	236	P	Pg	02 01 35.5	+0.1
GUR				S	Sg	02 01 39.8	+0.3
DSF	Desfina	0.32	339	P	Pg	02 01 35.6	+0.1
DSF				S	Sg	02 01 40.2	+0.5
DSF	Desfina	0.32	339	P	Pg	02 01 35.6	+0.1
DSF				S	Sg	02 01 40.2	+0.5
KALE	Kalithea	0.51	304	P	Pg	02 01 39.3	+0.3
KALE				S	Sg	02 01 46.1	+0.5
KALE	Kalithea	0.51	304	P	Pg	02 01 39.3	+0.3
KALE				S	Sg	02 01 46.1	+0.5
TRIZ	Trizonia	0.54	298	P	Pg	02 01 39.7	+0.1
TRIZ				S	Sg	02 01 47.7	+1.1
TRIZ	Trizonia	0.54	298	P	Pg	02 01 39.7	+0.1
TRIZ				S	Sg	02 01 47.7	+1.1
LAKA	Lakka	0.56	283	P	Pg	02 01 40.1	0.0
LAKA				S	Sg	02 01 47.8	+0.4
LAKA	Lakka	0.56	283	P	Pg	02 01 40.1	0.0
LAKA				S	Sg	02 01 47.8	+0.4
LKR	Lokris	0.59	25	P	Pg	02 01 40.0	-0.7
LKR				S	Sg	02 01 49.5	+1.0
LKR	Lokris	0.59	25	P	Pg	02 01 40.0	-0.7
LKR				S	Sg	02 01 49.5	+1.0
ATAL	Atalanti	0.64	25	P	Pg	02 01 40.9	-0.7
ATAL				S	Sg	02 01 51.1	+1.2
ATAL	Atalanti	0.64	25	P	Pg	02 01 40.9	-0.7
ATAL				S	Sg	02 01 51.1	+1.2
EFP	Efpalio	0.68	298	ePB	Pg	02 01 42.3	0.0
EFP	Efpalio	0.68	298	P	Pg	02 01 42.3	0.0
EFP				S	Sg	02 01 52.1	+0.9
EFP	Efpalio	0.68	298	ePb	Pg	02 01 42.3	0.0
EFP	Efpalio	0.68	298	P	Pg	02 01 42.3	0.0
EFP				S	Sg	02 01 52.1	+0.9
DID	Didima	0.75	143	P	Pg	02 01 43.4	-0.2
DID				S	Sg	02 01 54.5	+1.1
DID	Didima	0.75	143	P	Pg	02 01 43.4	-0.2
DID				S	Sg	02 01 54.5	+1.1
VLX	Vlachokerasia	0.78	198	P	Pg	02 01 43.8	-0.3
VLX				S	Sg	02 01 55.4	+1.2
VLX	Vlachokerasia	0.78	198	P	Pg	02 01 43.8	-0.3
VLX				S	Sg	02 01 55.4	+1.2
AGG	Agios Georgios	0.95	344	P	Pg	02 01 46.5	-0.9
AGG				S	Sg	02 02 00.3	+0.6
AGG	Agios Georgios	0.95	344	P	Pg	02 01 46.5	-0.9
AGG				S	Sg	02 02 00.3	+0.6
XOR	Xorichti	1.32	18	P	Pn	02 01 53.0	-0.9
XOR				S	Sb	02 02 12.3	+1.0
XOR	Xorichti	1.32	18	P	Pn	02 01 53.0	-0.9
XOR				S	Sb	02 02 12.3	+1.0
AOS	Alonnisos	1.42	41	P	Pn	02 01 54.1	-1.2
AOS				S	Sb	02 02 13.6	-0.6
AOS	Alonnisos	1.42	41	P	Pn	02 01 54.1	-1.2
AOS				S	Sb	02 02 13.6	-0.6

*IDC **02** 02:19:42.9±1.6, 14.°10N×93.°04W, h0^{km}, mb3.9/5, mb1 4.2/8, mb1mx3.9/23, mbtmp3.8/8, ML3.8/3, MS3.6/9, Ms1 3.6/9, ms1mx3.3/29, Error ellipse: s-maj=48.8km s-min=21.1km az=41.0*

*NEIC **02** 02:19:44.9, 14.°10N×93.°37W, h19^{km}, mb4.3/23, MD4.5(MEX), After MEX.*

*ISCJB **02** 02:19:44.0±1.7, 14.°24N±0.°05×93.°06W±0.°03, h7^{km}±12^{km}, mb4.2/25, MS3.7/9, Error ellipse: s-maj=8.4km s-min=4.6km az=23.4*

*CASC **02** 02:19:45.1±1.5, 14.°02N×93.°16W, h79^{km}±66^{km}, MD4.2, mb4.3(NEIC)*

*BJI **02** 02:19:46.9, 14.°10N×93.°40W, h19^{km}, mB5.1/1, Ms4.7/1*

*MEX **02** 02:19:47.1±0.8, 14.°19N×93.°18W, h13^{km}±17^{km}, MD4.5*

ISC 02 02:19:45.7±2.0, 14.°27N±0.°05×93.°00W±0.°04, h6^{km}±13^{km}, n191, σ0°80/187, mb4.2/25, MS3.7/9, 49C-57D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.95	48	i P	Pb	02 20 04.6	0.0
THIG				i S	Sb	02 20 19.1	+1.6
JAT	Jato	1.32	88	eP	Pn	02 20 11.2	+0.5
PCIG		1.44	351	eP	Pn	02 20 09.5	-2.9
PCIG				i S	Sn	02 20 27.8	-3.9
TP2	Tecpan 2	1.98	75	eP	Pn	02 20 20.8	+1.1
FG6		2.07	82	eP	Pn	02 20 21.3	+0.3
FUG	Fuego 3	2.10	85	eP	Pn	02 20 21.0	-0.3
PCG	Pacaya	2.32	87	eP	Pn	02 20 24.5	+0.1
IXG	Ixpaco	2.47	92	eP	Pn	02 20 25.9	-0.5
TGIG		2.50	357	eP	Pn	02 20 26.6	-0.3
TGIG				eS	Sn	02 20 55.9	-1.8
APG	El Apazote	2.56	73	Pn	Pn	02 20 28.3	+0.6
	19nm,0.3s,baz=249,slow=14,SNR=103						
APG				Sn	Sn	02 21 05.3	+6.2
	49nm,0.3s,baz=170,slow=18,SNR=8.8						
NBG	Las Nubes	2.59	83	eP	Pn	02 20 29.8	+1.7
RBDL	Robledal	3.21	92	eP	Pn	02 20 35.9	-0.8
RTR	El Retiro	3.27	96	eP	Pn	02 20 36.8	-0.7
MRL	Marmol	3.29	76	eP	Pn	02 20 39.0	+1.2
SBLS	San Blas	3.30	97	eP	Pn	02 20 37.1	-0.8
SNJE	San Jose	3.31	96	eP	Pn	02 20 37.4	-0.7
CMIG	Matias Romero	3.34	327	Pn	Pn	02 20 36.8	-1.7
	9.1nm,0.3s,baz=152,slow=13,SNR=41						
CMIG				Sn	Sn	02 21 16.9	-1.7
	36nm,0.3s,baz=99,slow=18,SNR=11						
CMIG				LR	LR	02 22 08.8	
	comp=Z,175nm,18.4s,baz=323,slow=42						
HUIG	Huatulco	3.36	297	eP	Pn	02 20 29.5	-9.2
HUIG				eS	Sn	02 21 05.4	-13
HUIG	Huatulco	3.36	297	eP	Pn	02 20 34.4	-4.3
HUIG				i S	Sn	02 21 12.8	-6.1
MTO2	Montecristo 2	3.52	87	eP	Pn	02 20 39.3	-1.7
BOQS	Boqueron	3.65	98	eP	Pn	02 20 41.8	-0.9
LBRS	Las Brisas	3.87	97	eP	Pn	02 20 45.4	-0.4
LFRS	El Faro	3.87	99	eP	Pn	02 20 44.3	-1.5
TUIG	Tuzandepetl	3.99	340	i S	Sn	02 21 30.7	-3.7
SNVI	San Vicente	4.09	99	eP	Pn	02 20 48.1	-0.6
VHO	Vista Hermosa	4.55	308	i P	Pn	02 20 52.2	-3.0
VHO				eS	Sn	02 21 43.9	-4.6
CNCH	Conchagua	5.11	100	eP	Pn	02 21 02.1	-0.7
PNIG	Pinotepa	5.38	294	i P	Pn	02 21 04.2	-2.4
PNIG				i S	Sn	02 22 03.1	-5.8
TGUH	Tegucigalpa,Un	5.55	91	ePn	Pn	02 21 11.6	+2.7
	90nm,1.0s						
TPIG	Tehuac#an	5.88	315	i P	Pn	02 21 12.4	-1.0
TPIG				i S	Sn	02 22 16.3	-4.9
LVIG	Laguna Verde	6.33	329	i P	Pn	02 21 19.2	-0.5
LVIG				i S	Sn	02 22 27.9	-4.5
TEIG	Tepich	7.45	37	ePn	Pn	02 21 34.1	-0.8
JTS	JuntasAbangare	8.80	116	Pn	Pn	02 21 53.6	+0.1
	0.4nm,0.3s,baz=311,slow=19,SNR=2.5						
JTS				Sn	Sn	02 23 54.2	+21
	0.2nm,0.3s,baz=297,slow=20,SNR=2.9						
JTS	JuntasAbangare	8.80	116	ePn	Pn	02 21 58.6	+5.1
JTS				Sn	Sn	02 23 54.2	+21
628A	Black Gap, Mar	17.69	330	⇑P	Pn	02 23 53.1	+0.3
	baz=18						
627A	Terlingua Ranc	17.91	329	⇑P	Pn	02 23 56.4	+0.9
	baz=18,SNR=15						
TXAR	Lajitas Array	17.95	328	P	Pn	02 23 55.0	-1.0
	0.1nm,0.3s,baz=143,slow=18,SNR=15						
528A	Cox Ranch, San	18.21	332	⇓P	Pn	02 23 59.7	+0.5
	baz=18						
626A	Big Bend Ranch	18.37	328	⇑P	Pn	02 24 02.2	+1.1
	baz=18,SNR=14						
527A	Woodward Ranch	18.59	330	⇓P	Pn	02 24 04.2	+0.4
	baz=18,SNR=10						
428A	Kincaid Ranch,	18.65	333	⇓P	Pn	02 24 04.8	+0.3
	baz=18						
526A	Mary Lane Ranc	18.75	329	⇓P	Pn	02 24 06.3	+0.4
	baz=19,SNR=11						
427A	Hayter Ranch,	19.08	332	⇑P	Pn	02 24 09.8	+0.1
	baz=19						
426A	McDonald Obser	19.22	330	⇑P	Pn	02 24 11.3	-0.2
	baz=19						
328A	Wristen Ranch,	19.27	334	⇓P	Pn	02 24 11.9	-0.1
	baz=19,SNR=8.8						
326A	Caldwell Ranch	19.73	331	⇑P	Pn	02 24 16.8	-0.9
	baz=20						
227A	Bennet, Jal	20.02	334	⇑P	P	02 24 20.3	+1.1
	baz=20						
MIAR	Mount Ida	20.20	359	eP	P	02 24 20.1	-1.1
	15nm,0.8s						
325A	Bean Ranch, Si	20.26	329	⇑P	P	02 24 23.0	+1.1
	baz=20						
226A	Malaga, Loving	20.42	332	⇑P	P	02 24 24.2	+0.6
	baz=20						
324A	Moseley Ranch,	20.57	328	⇓P	P	02 24 25.3	0.0
	baz=20,SNR=8.4						
127A	Arkansas Junct	20.62	334	⇓P	P	02 24 25.9	+0.1
	baz=20						
GDL2	Guadalupe Moun	20.65	332	eP	P	02 24 27.1	+1.0
MNTX	Cornudas Mount	20.73	329	eP	P	02 24 26.8	-0.2
	2.9nm,0.9s						
225A	Deer Hill, Car	20.79	331	⇓P	P	02 24 28.2	+0.5
	baz=21						
126A	Clayton Basin,	20.88	333	⇓P	P	02 24 28.7	+0.1
	baz=21						
GOGA	Godfrey	20.93	23	eP	P	02 24 30.2	+1.0
	9.0nm,0.9s						
WMOK	Wichita Mounta	21.04	347	eP	P	02 24 30.4	0.0
	53nm,2.8s,mb4.4						
224A	Cornudas Mount	21.10	329	⇓P	P	02 24 30.6	-0.5
	baz=21,SNR=7.9						
Z27A	Tatum	21.11	336	⇑P	P	02 24 30.5	-0.6
	baz=21,SNR=8.5						
CPRX	Cap Rock	21.14	334	eP	P	02 24 31.6	+0.2
	11nm,0.9s,mb4.2						
125A	Gardner Draw,	21.17	332	⇑P	P	02 24 31.4	-0.4
	baz=21,SNR=15						
Z26A	Caprock	21.39	334	⇓P	P	02 24 33.7	-0.5
	baz=21,SNR=7.9						
124A	Stringfield Ra	21.58	330	⇓P	P	02

T21A	Navajo Lake	26.08	333	⇓P	P	02 25 20.8 +0.7
	baz=26					
R24A	Sanders Place,	26.17	338	⇓P	P	02 25 21.5 +0.5
	baz=26					
S22A	4UR Ranch, Cre	26.42	335	⇑P	P	02 25 23.7 +0.5
	baz=26					
Q25A	Bedland, Calha	26.48	340	⇓P	P	02 25 24.0 +0.3
	baz=26					
PV01	Paradox Valley	27.49	333	eP	P	02 25 36.3 +3.5
	1μm,1.7s					
PV04	Paradox Valley	27.85	333	eP	P	02 25 36.6 +0.6
Q19A	Hogan Spring (	28.47	333	⇑P	P	02 25 42.5 +0.9
	baz=28					
N22A	Wattenberg Ran	28.93	339	⇓P	P	02 25 46.1 +0.5
	baz=29					
U13A	Pakoon Wash	28.95	323	⇓P	P	02 25 46.5 +0.7
	baz=29					
N21A	Black Mountain	29.28	337	⇑P	P	02 25 49.3 +0.6
	baz=29					
N20A	Spence Gulch,	29.63	336	⇑P	P	02 25 52.7 +0.8
	baz=30,SNR=6.0					
M20A	Sweetwater, Wa	30.16	337	⇑P	P	02 25 56.9 +0.4
	baz=30					
L18A	Fontenelle, Gr	31.26	335	⇑P	P	02 26 06.5 +0.2
	baz=31					
S10A	Tonopah Range,	31.51	323	⇓P	P	02 26 09.0 +0.5
	baz=31					
HWUT	Hardware Ranch	31.65	333	eP	P	02 26 10.0 +0.3
	1.1nm,0.7s,mb3.8					
PDAR	Pinedale Array	31.78	337	P	P	02 26 10.7 -0.2
	1.0nm,0.9s,mb3.7,baz=129,slow=7.1,SNR=7.1					
K18A	Toltan Ranch,	31.86	336	⇓P	P	02 26 11.6 +0.1
	baz=32					
L16A	Fish Haven	31.93	334	⇑P	P	02 26 12.3 +0.2
	baz=32					
K17A	Gardner Place,	32.31	335	⇓P	P	02 26 16.3 +0.8
	baz=32					
J18A	Kendall Valley	32.34	336	⇑P	P	02 26 16.4 +0.7
	baz=32					
J17A	Brown Place, J	32.74	336	⇑P	P	02 26 19.9 +0.7
	baz=33					
REDW	Red Top Meadow	32.80	336	eP	P	02 26 19.9 +0.2
	13nm,0.9s,mb4.9					
SNOW	Snow King Moun	32.84	336	eP	P	02 26 20.6 +0.5
	24nm,0.9s,mb5.1					
NVAR	Mina Array Bea	32.86	322	P	P	02 26 21.4 +1.1
	1.5nm,0.7s,mb4.0,baz=134,slow=10,SNR=12					
NVAR	Mina Array Bea	32.86	322	P	P	02 26 21.4 +1.1
LOHW	Long Hollow	32.91	336	eP	P	02 26 20.7 0.0
	5.2nm,0.7s,mb4.6					
TPAW	Teton Pass	32.94	336	eP	P	02 26 22.0 +1.1
	7.1nm,0.9s,mb4.6					
IMW	Indian Meadow	33.28	336	eP	P	02 26 26.0 +2.1
	4.6nm,1.0s,mb4.4					
J14A	Carey	33.89	333	⇓P	P	02 26 29.7 +0.4
	baz=34					
L11A	Cat Creek Ranc	34.06	329	⇓P	P	02 26 30.6 -0.1
	baz=34					
HLID	Hailey	34.48	332	⇑P	P	02 26 34.1 -0.3
	baz=34					
HLID	Hailey	34.48	332	eP	P	02 26 34.0 -0.4
	1.6nm,0.9s,mb4.0					
F18A	Big Timber	34.54	339	⇑P	P	02 26 34.7 -0.2
	baz=34					
MCMT	McKenzie Canyo	34.82	335	eP	P	02 26 38.2 +1.0
	3.7nm,0.9s,mb4.3					
F17A	Fitzpatrick Pl	34.88	338	⇑P	P	02 26 37.6 -0.2
	baz=35,SNR=7.3					
G15A	Dillon	34.95	336	⇓P	P	02 26 38.1 -0.3
	baz=35					
I12A	Atlanta	34.99	332	⇑P	P	02 26 38.3 -0.5
	baz=35					
BOZ	Bozeman (W)	35.01	337	⇓P	P	02 26 39.5 +0.6
	baz=35					
BOZ	Bozeman (W)	35.01	337	eP	P	02 26 40.4 +1.4
	3.5nm,1.3s,mb4.1					
DLMT	Dillon	35.15	336	eP	P	02 26 40.4 +0.2
	6.8nm,1.0s,mb4.5					
E18A	Harlowton	35.19	340	⇑P	P	02 26 40.0 -0.4
	baz=35					
H13A	Challis	35.20	333	⇓P	P	02 26 40.6 0.0
	baz=35					
E17A	Martinsdale	35.42	339	⇑P	P	02 26 42.6 +0.1
	baz=35					
H12A	Diamond D Ranc	35.45	333	⇑P	P	02 26 42.7 -0.1
	baz=35					
I11A	Placerville	35.47	331	⇑P	P	02 26 42.8 -0.1
	baz=35					
LRM	Limekiln Ridge	35.48	336	eP	P	02 26 42.7 -0.3
F15A	Butte	35.51	336	⇓P	P	02 26 43.5 +0.3
	baz=35					
WVOR	Wild Horse Val	35.73	327	eP	P	02 26 45.5 +0.3
	2.5nm,1.0s,mb4.1					
E15A	Deer Lodge	36.05	337	⇑P	P	02 26 47.9 +0.1
	baz=36					
H11A	Donnelly	36.09	332	⇓P	P	02 26 47.4 -0.8
	baz=36					
G12A	Big Creek, Yel	36.11	333	⇑P	P	02 26 47.5 -1.0
	baz=36					
F13A	Darby	36.21	334	⇑P	P	02 26 48.5 -0.7
	baz=36					
C17A	Wharram Farm,	36.40	340	⇓P	P	02 26 50.3 -0.5
	baz=36					
EGMT	Eagleton	36.41	341	⇑P	P	02 26 50.0 -0.9
	baz=36					
EGMT	Eagleton	36.41	341	eP	P	02 26 50.9 -0.1
	10nm,1.4s,mb4.6					
F12A	Elk City	36.57	334	⇓P	P	02 26 51.9 -0.5
	baz=36,SNR=5.7					
E13A	Victor	36.68	335	⇓P	P	02 26 52.6 -0.6
	baz=36					
G11A	Walters Elk Ra	36.74	332	⇓P	P	02 26 53.1 -0.7
	baz=37					
B18A	Beardsley Farm	36.75	341	⇑P	P	02 26 53.1 -0.7
	baz=37					
C16A	Fuhringer Ranc	36.88	339	⇑P	P	02 26 54.0 -0.9
	baz=37					
MSO	Missoula	36.89	336	eP	P	02 26 54.6 -0.4
	2.7nm,1.0s,mb4.0					
D14A	Greenough	36.93	337	⇓P	P	02 26 54.5 -0.8
	baz=37					
A18A	Metzger Ranch,	37.24	342	⇓P	P	02 26 57.1 -0.8
	baz=37					
D13A	Huson	37.31	336	⇓P	P	02 26 57.5 -1.1
	baz=37					
F10A	Beach Ranch, E	37.62	332	⇓P	P	02 26 59.9 -1.3
	baz=37					
D12A	Red Ives Fores	37.64	335	⇑P	P	02 27 00.3 -1.1
	baz=38					
A15A	Johnson Ranch,	38.23	339	⇑P	P	02 27 05.6 -0.8
	baz=38					
A14A	Double T Ranch	38.47	338	⇓P	P	02 27 07.7 -0.7
	baz=38					
LPAZ	La Paz	39.05	140	LR	LR	02 41 57.0
	comp=Z,66nm,19.8s,MS3.5,baz=224,slow=34					
SIV	San Ignacio	43.58	132	P	P	02 27 47.8 -3.1
	1.3nm,0.8s,mb3.7,baz=301,slow=15,SNR=3.8					
SCHQ	Schefferville	45.31	21	LR	LR	02 49 26.0
	comp=Z,164nm,18.5s,MS4.0,baz=288,slow=39					
YKA	Yellowknife Ar	50.55	347	P	P	02 28 42.7 -2.0
	3.2nm,0.7s,mb4.4,baz=151,slow=7.5,SNR=27					
YKA	Yellowknife Ar	50.55	347	P	P	02 28 42.7 -2.0
ESDC	Sonseca Array	80.31	52	LR	LR	03 02 45.8
	comp=Z,61nm,18.6s,MS4.0,baz=130,slow=32					
NOA	NORSAR Array B	84.37	28	LR	LR	03 07 59.2
	comp=Z,41nm,18.8s,MS3.8,baz=5.0,slow=34					
FINES	FINESS Array B	90.67	25	LR	LR	03 15 11.3
	comp=Z,37nm,18.2s,MS3.9,baz=131,slow=37					
CN2	Changchun	112.39	331	ePKP	PKiKP	02 38 20.6 -2.3
BJI	Beijing	119.54	335	PKP	PKPdf	02 38 37.8 +1.0
BJI				SS	SS	02 56 19.4 -1.4
BJI				LR	LR	
	comp=N,96nm,24.8s,MS4.4					
BJI				LR	LR	
	comp=E,60nm,24.7s,MS4.4					
HHC	Hu-ho-hao-te	120.62	339	ePKP	PKPdf	02 38 36.1 -2.7
HHC				PP	PP	02 40 04.7 -0.2
HHC				AMB	AMB	
	comp=Z,60nm,9.0s					
WMQ	Urumqi	122.19	359	ePKP	PKPdf	02 38 42.8 +1.1
NJ2	Nanjing	124.75	327	ePKP	PKPdf	02 38 45.1 -1.9
CD2	Chengdu	132.28	340	PKP	PKPdf	02 38 58.0 -3.4
CMAR	Chiang Mai Arr	145.42	340	PKPbc	PKPbc	02 39 23.2 -2.2
	comp=Z,1.2nm,0.4s,baz=348,slow=3.9,SNR=6.0					

*JMA **02** 03:05:46.0±0.1, 40°.34N×142°.40E, h40km±1km, M3.6*

ISC 02 03:05:46.2±1.6, 40°.37N±0°.04×142°.4E±0°.1, h33km±6km, n10, σ0°.840/20, 1C-6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	Tanohata	0.59	223	⇓P	Pb	03 05 57.8	-0.4
JTH				eS	Sb	03 06 06.4	+0.1
JANG	Nango	0.67	271	⇑P	Pn	03 05 59.2	-0.1
JANG				eS	Sb	03 06 08.5	0.0
JKZ	Kuzumaki	0.90	245	⇓P	Pn	03 06 02.5	0.0
JKZ				S	Sn	03 06 14.2	-0.1
MIYJ	Miyakonagasawa	0.90	209	⇓P	Pn	03 06 02.1	-0.5
MIYJ				S	Sn	03 06 14.0	-0.4
JTM	Tenmabayashi	1.09	293	P	Pn	03 06 05.1	0.0
JTM				S	Sn	03 06 19.1	+0.1
JOM	Ohasama	1.23	224	⇓P	Pn	03 06 07.0	0.0
JOM				eS	Sn	03 06 22.2	-0.3
JAH	Hinai	1.35	263	⇓P	Pn	03 06 09.0	+0.3
JAH				S	Sn	03 06 25.7	+0.2
JOT	Ohata	1.43	315	P	Pn	03 06 09.8	-0.1
JOT				eS	Sn	03 06 27.3	-0.3
JMK	Ichinoseki	1.68	213	⇓P	Pn	03 06 13.2	0.0
JMK				eS	Sn	03 06 33.7	+0.1
MAT	Matsushiro	5.03	222	P	Pn	03 07 00.9	+1.5
MAT				S	Sn	03 08 01.3	+4.9

*ISCJB **02** 03:42:52.7±0.4, 12°.55N±0°.08×44°.56W±0°.07, h10km, mb4.4/38, MS3.8/18, Error ellipse: s-maj=14.0km s-min=7.6km az=143.5*

*IDC **02** 03:42:52.7±0.6, 12°.59N×44°.49W, h0km, mb4.1/13, mb1 4.3/13, mb1mx4.1/26, mbtmp4.1/13, MS3.8/13, Ms1 3.8/13, ms1mx3.7/20, Error ellipse: s-maj=27.7km s-min=14.3km az=130.0*

*NEIC **02** 03:42:54.5±0.3, 12°.54N×44°.54W, h10km, mb4.6/23, MS4.0/3, Error ellipse: s-maj=10.6km s-min=5.9km az=144.0*

*GCMT **02** 03:42:59.6±0.3, 12°.79N×44°.55W, h17km±1km, MW4.8, Moment Tensor Solution. s15,c18; s65,c95; Moment tensor: Scale 10^16 Nm; M_{rr}-0.38±.09; $M_{\theta\theta}$-0.18±.07; $M_{\phi\phi}$0.56±.07; $M_{r\theta}$-0.70±.21; $M_{\theta\phi}$-1.80±.07; $M_{\phi r}$-0.11±.19; Best double couple: $M_0$2.00000×10^16 NP1:ϕ_s4.00000°, δ68.00000°, λ-10.00000°. NP2:ϕ_s98.00000°, δ81.00000°, λ-158.00000°. Principal axes: T 2.0800, Plg9.0000°, Azm229.0000°; N -0.1800, Plg66.0000°, Azm119.0000°; P -1.9000, Plg22.0000°, Azm323.0000°; Data Used: IU II G IC CN.*

ISC 02 03:42:54.7±0.4, 12°.54N±0°.08×44°.53W±0°.07, h10km, n83, σ0°.878/74, mb4.4/38, MS3.8/18, 1C, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIV	San Ignacio	32.73	210	P	P	03 49 27.7	-0.1
	2.3nm,0.9s,mb4.1,baz=40,slow=7.5,SNR=10						
OTAV	Otavalo	35.79	253	eP	P	03 49 54.5	0.0
	2.6nm,0.8s,mb4.2						
LPAZ	La Paz	36.94	220	P	P	03 50 05.6	+1.4
	5.8nm,1.0s,mb4.4,baz=25,slow=9.4,SNR=13						
LPAZ				LR	LR	04 05 26.0	
	comp=Z,288nm,19.1s,MS4.1,baz=139,slow=37						
LPAZ	La Paz	36.94	220	eP	P	03 50 05.0	+0.8
	7.2nm,1.0s,mb4.5						
LPAZ				LR	LR	04 05 26.0	
TIC	Toumodi	39.37	95	eP	P	03 50 24.4	-0.4
	53nm,1.4s,mb5.1						
LIC	Lamto	39.44	95	eP	P	03 50 25.0	-0.4
	50nm,1.2s,mb5.1						
LIC	Lamto	39.44	95	eP	P	03 50 25.3	-0.1
	45nm,1.2s,mb4.8						
LIC				eMLR	MLR		
	comp=Z,133nm,18.8s,MS3.5						
LIC	Lamto	39.44	95	eP	P	03 50 25.3	-0.1
	comp=Z,23nm,1.2s,mb4.8						
LIC				LR	LR		
	comp=Z,70nm,18.8s,MS3.5						
DBIC	Dimbokro	39.52	95	P	P	03 50 24.1	-2.0
	comp=Z,7.7nm,0.9s,mb4.4,baz=270,slow=9.1,SNR=6.7						
DBIC				LR	LR	04 05 13.3	
	comp=Z,66nm,18.8s,MS3.5,baz=261,slow=34						
KIC	Kosan Boka	39.69	95	eP	P	03 50 23.1	-4.4
	comp=Z,45nm,1.6s,mb4.9						
PCVE	Castro Verde	41.03	46	eP	P	03 50 39.3	+1.0
	comp=Z,19nm,1.1s,mb4.6						
PBEJ	Beja	41.33	46	eP	P	03 50 42.0	+1.2
	comp=Z,19nm,1.6s,mb4.5						
EVO	Evora	41.47	45	⇑iP	P	03 50 41.3	-0.6
	comp=Z,26nm,0.9s,mb4.6						
EVO				eMLR	MLR		
	comp=Z,220nm,22.0s,MS3.7						
EVO	Evora	41.47	45	eP	P	03 50 42.3	+0.4
	comp=Z,10nm,1.0s,mb4.4						
MDT	Midelt	41.67	54	P	P	03 50 43.6	-0.1
	comp=Z,4.6nm,1.1s,mb4.0,baz=243,slow=9.2,SNR=4.2						
PCBR	Castelo Branco	42.47	43	eP	P	03 50 50.2	+0.2
	comp=Z,16nm,1.8s,mb4.3						
PVIS	Viseu	42.63	42	eP	P	03 50 51.4	+0.1
	comp=Z,21nm,1.2s,mb4.8						
MTE	Manteigas	42.70	43	eP	P	03 50 52.5	+0.6
	comp=Z,35nm,1.3s,mb4.9						
EBER	Berja	44.45	50	P	P	03 51 07.6	+1.5
	comp=Z,6.1nm,0.7s,mb4.4						
EQES	Quesada	44.66	48	P	P	03 51 08.0	+0.2
	comp=Z,4.7nm,0.7s,mb4.4						
ESDC	Sonseca Array	44.80	45	P	P	03 51 08.3	-0.5
	comp=Z,1.2nm,0.8s,mb3.8,baz=241,slow=7.5,SNR=65						
ESDC				LR	LR	04 05 09.2	
	comp=Z,117nm,20.6s,MS3.8,baz=250,slow=30						
ESDC	Sonseca Array	44.80	45	P	P	03 51 09.1	+0.3
	comp=Z,3.0nm,0.8s,mb4.2						
ENIJ	Nijar	44.98	50	P	P	03 51 11.2	+0.9
	comp=Z,14nm,0.8s,mb4.8						
EHUE	Huescar	45.01	48	P	P	03 51 10.6	+0.1
	comp=Z,34nm,3.0s						
EVIA	Vianos	45.40	47	P	P	03 51 13.6	0.0
	comp=Z,10nm,0.7s,mb4.8						
WVT	Waverly	45.42	309	eP	P	03 51 14.2	+0.4
	comp=Z,1.5nm,0.6s,mb4.0						
SCHQ	Schefferville	45.68	342	LR	LR	04 07 18.6	
	comp=Z,104nm,18.9s,MS3.8,baz=148,slow=32						
ETOB	Tobarra	46.09	48	P	P	03 51 20.0	+0.9
	comp=Z,7.7nm,0.8s,mb4.7						
ELAN	Lanestosa	46.76	41	P	P	03 51 26.4	+2.1
	comp=Z,4.9nm,0.9s,mb4.4						
SJPF	Ste Jean	48.15	42	eP	P	03 51 35.7	+0.6
	comp=Z,27nm,1.0s,mb4.9						
SJPF	Ste Jean	48.15	42	eP	P	03 51 35.7	+0.6
	comp=Z,14nm,1.0s,mb4.9						
ERTA	Horta de San J	48.32	46	P	P	03 51 35.4	-1.0
	comp=Z,60nm,4.7s						
ETSF	Etsaut	48.50	43	eP	P	03 51 38.4	+0.6
	comp=Z,21nm,1.2s,mb4.8						
ETSF	Etsaut	48.50	43	eP	P	03 51 38.4	+0.6
	comp=Z,11nm,1.2s,mb4.8						
EBIE	Bielsa	48.88	43	P	P	03 51 40.1	-0.6
	comp=Z,215nm,5.3s						
EPF	Esparros	49.15	43	eP	P	03 51 43.6	+0.8
	comp=Z,7.6nm,0.8s,mb4.5						
EPF	Esparros	49.15	43	eP	P	03 51 43.6	+0.8
	comp=Z,3.8nm,0.8s,mb4.5						
QUIF	Quistinic	49.27	36	eP	P	03 51 43.5	-0.1
CSOR	Sort	49.42	44	P	P	03 51 45.5	+0.6
	comp=Z,227nm,4.7s						
CFAA	Coronel Fontan	49.43	207	P	P	03 51 45.6	+0.6
	comp=Z,0.3nm,0.8s,mb3.4,baz=46,slow=1.9,SNR=5.5						
CLLI	Llivia	50.04	44	P	P	03 51 47.1	-2.4
CFON	Fontmartina	50.09	45	P	P	03 51 49.4	-0.6
	comp=Z,226nm,4.1s						
MFF	Saint Martin d	50.41	39	eP	P	03 51 52.1	-0.2
MTLF	Montolieu	50.53	44	eP	P	03 51 53.3	0.0
	comp=Z,32nm,1.6s,mb4.7						
MTLF	Montolieu	50.53	44	eP	P	03 51 53.3	0.0
	comp=Z,16nm,1.6s,mb4.7						
GRR	Gorron	50.84	36	eP	P	03 51 55.2	-0.3
RJF	Les Rejaudoux	50.87	41	eP	P	03 51 55.0	-0.8
RJF				eMLR	MLR		
	comp=Z,254nm,21.0s,MS3.9						
RJF	Les Rejaudoux	50.87	41	eP	P	03 51 55.0	-0.8
RJF				LR	LR		
	comp=Z,250nm,21.0s,MS4.2						
CAF	Calviac	51.06	42	eP	P	03 51 57.0	-0.3
TCF	Toulx Ste Croi	51.73	40	eP	P	03 52 02.2	0.0
	comp=Z,35nm,1.6s,mb4.8						
TCF	Toulx Ste Croi	51.73	40	eP	P	03 52 02.2	0.0
	comp=Z,17nm,1.6s,mb4.7						
LASF	Ste Croix	51.91	43	eP	P	03 52 03.8	+0.2
	comp=Z,27nm,1.4s,mb4.7						
AVF	Avril sur Loir	52.65	40	eP	P	03 52 09.0	-0.1
VIVF	Saint-Julien-l	52.74	43	eP	P	03 52 09.4	-0.4
LMR	La Mourre	53.45	45	eP	P	03 52 14.9	-0.2
ORIF	Oris-en-Rattie	53.57	43	eP	P	03 52 16.7	+0.8
ORIF				eMLR	MLR		
	comp=Z,277nm,21.5s,MS4.0						
KEST	Kesra	53.58	55	LR	LR	04 12 29.5	
	comp=Z,36nm,21.4s,MS3.4,baz=252,slow=33						
FRF	La Foret Royal	53.62	45	eP	P	03 52 16.2	-0.1
HAU	Haudompre	55.00	39	eP	P	03 52 25.8	-0.5
HAU				eMLR	MLR		
	comp=Z,174nm,22.0s,MS3.8						
HAU	Haudompre	55.00	39	eP	P	03 52 25.8	-0.5
HAU				LR	LR		
	comp=Z,170nm,22.0s,MS4.1						
HINF	Hinterlafeld	55.25	40	eP	P	03 52 29.2	+1.2
ULM	Lac du Bonnet	56.15	323	LR	LR	04 12 31.7	
	comp=Z,7.7nm,21.3s,MS3.8,baz=57,slow=32						
TXAR	Lajitas Array	57.14	297	P	P	03 52 42.2	+0.2
	comp=Z,0.3nm,0.8s,mb3.4,baz=122,slow=6.1,SNR=4.2						
TXAR				LR	LR	04 16 54.6	
	comp=Z,38nm,18.4s,MS3.5,baz=5.0,slow=36						
PLCA	Paso Flores	58.22	203	P	P	03 52 48.6	-0.6
	comp=Z,2.7nm,0.8s,mb4.3,baz=31,slow=10.0,SNR=6.0						
PLCA	Paso Flores	58.22	203	eP	P	03 52 49.3	+0.2
	comp=Z,3.0nm,0.8s,mb4.4						
CLL	Collm	60.20	38	eP	P	03 53 02.0	-0.9
CLL				e(sP)	sP	03 53 11.0	+3.7
CLL				L		04 13 00.0	
	comp=Z,100nm,21.7s						
NOA	NORSAR Array B	62.88	27	LR	LR	04 14 22.6	
	comp=Z,84nm,21.9s,MS3.9,baz=235,slow=30						
PDAR	Pinedale Array	63.29	312	LR	LR	04 17 47.4	
	comp=Z,71nm,19.1s,MS3.9,baz=106,slow=33						
HFS	Hagfors	63.64	28	P	P	03 53 24.8	-0.9
	comp=Z,2.4nm,0.7s,mb4.3,baz=251,slow=4.5,SNR=7.1						
HFS	Hagfors	63.64	28	P	P	03 53 24.8	-0.9
TPAW	Teton Pass	64.39	312	eP	P	03 53 30.8	-0.3
	comp=Z,2.3nm,0.8s,mb4.3						
HWUT	Hardware Ranch	64.63	310	eP	P	03 53 32.2	-0.5
	comp=Z,2.4nm,0.9s,mb4.2						
MLR	Muntele Rosu	67.49	46	P	P	03 53 50.3	-0.7
	comp=Z,2.0nm,0.7s,mb4.3,baz=216,slow=19,SNR=3.4						
YKA	Yellowknife Ar	69.78	332	P	P	03 54 03.2	-1.7
	comp=Z,0.6nm,0.9s,mb3.5,baz=99,slow=6.9,SNR=5.9						
YKA	Yellowknife Ar	69.78	332	P	P	03 54 03.2	-1.7
FINES	FINESS Array B	69.82	29	LR	LR	04 19 18.2	
	comp=Z,88nm,21.7s,MS4.0,baz=97,slow=31						
AKASG	Malin Array Be	70.11	40	LR	LR	04 20 19.3	
	comp=Z,72nm,20.9s,MS3.9,baz=230,slow=32						
ARCES	ARCESS Array B	71.39	20	P	P	03 54 14.1	-0.5
	comp=Z,1.2nm,0.8s,mb3.9,baz=272,slow=5.1,SNR=3.2						
ARCES	ARCESS Array B	71.39	20	P	P	03 54 14.1	-0.6
BR131	Keskin Array S	73.04	52	eP	P	03 54 25.1	0.0
	comp=Z,0.4nm,0.4s,mb3.7						
BRTR	Keskin Array B	73.04	52	P	P	03 54 25.2	+0.1
	comp=Z,1.9nm,0.7s,mb4.1,baz=262,slow=5.9,SNR=15						
MMAI	Mount Meron Ar	74.91	59	LR	LR	04 28 52.7	
	comp=Z,43nm,18.1s,MS3.8,baz=170,slow=37						
BOSA	Boshof	78.82	123	LR	LR	04 22 40.3	
	comp=Z,130nm,18.6s,MS4.3,baz=179,slow=30						

*MOS **02** 03:54:47.6±1.0, 1°.28N×126°.50E, h33km, mb5.0/14, Error ellipse: s-maj=19.7km s-min=7.8km az=115.3*

*BJI **02** 03:54:48.2, 1°.20N×126°.76E, h43km, mB4.8/23, mb4.7/34, Ms4.6/20, Ms7 4.3/18*

*NEIC **02** 03:54:49.6±0.2, 1°.31N×126°.61E, h35km, mb4.9/24, Error ellipse: s-maj=10.2km s-min=4.7km az=72.0*

NEIC Felt [III] on Ternate, Indonesia.

*ISCJB **02** 03:54:53.5±0.6, 1°.26N±0°.03×126°.59E±0°.04, h86km±5km, mb4.6/53, Error ellipse: s-maj=7.9km s-min=5.1km az=155.3*

*IDC **02** 03:54:54.1±2.4, 1°.13N×126°.52E, h80km±21km, mb4.2/15, mb1 4.2/17, mb1mx4.1/23, mbtmp4.2/17, MS3.3/3, Ms1 3.4/3, ms1mx2.8/23, Error ellipse: s-maj=19.4km s-min=8.2km az=77.0*

*DJA **02** 03:54:56, 1°.18N×126°.58E, h47km, mb5.2/18*

ISC 02 03:54:54.6±0.6, 1°.23N±0°.04×126°.65E±0°.05, h81km±5km, h36km±1.7km; pP-P, n129, σ1°.916/128, mb4.6/53, 1C-2D, Northern Moluccan Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	0.85	122	P	Pn	03 55 11.4	-0.5
MNI	Manado	1.82	277	P	Pn	03 55 21.4	-2.7
SGSI	Sangihe	2.69	335	P	Pn	03 55 36.8	+1.1
NLAI	Namlea	4.46	174	P	Pn	03 55 58.8	-1.0
LUWI	Luwuk	4.49	240	P	Pn	03 56 00.4	+0.2
MRSI	Marisa	4.77	261	P	Pn	03 56 04.9	+0.9
AAI	Ambon	5.12	162	P	Pn	03 56 12.0	+3.2
	1.8nm204nm,0.6s						
APSI	Ampana	5.43	247	P	Pn	03 56 13.7	+0.6
	3.3nm598nm,0.8s						
KDI	Kendari	6.54	218	P	Pn	03 56 25.4	-2.8
	0.7nm2μm209nm,0.7s						
PCI	Palu	7.13	253	P	Pn	03 56 40.6	+4.3
	0.5nm1μm121nm,0.9s						
TTSI	Tana Toraja	8.04	238	P	Pn	03 56 47.0	-1.7
	1μm114nm,1.0s						
SPSI	Sidrap Palu	8.60	233	P	Pn	03 56 56.9	+0.6
BNSI	Bone	8.60	229	P	Pn	03 56 54.3	-2.1
	139nm,0.8s						
TLE	Tual	9.14	138	P	Pn	03 57 07.3	+3.6
	474nm,0.9s						
BKSI	Bulukumba	9.21	225	P	Pn	03 57 04.8	+0.1
	984nm100nm,0.6s						
KAPI	Kappang	9.27	228	P	Pn	03 57 02.3	-3.2
	3.0nm,0.3s,baz=33,slow=5.3,SNR=8.4						
KAPI				S	Sn	03 58 41.5	-6.6
	3.3nm,0.3s,baz=68,slow=19,SNR=3.4						
KAPI	Kappang	9.27	228	ePn	Pn	03 57 03.1	-2.4
KAPI				eSn	Sn	03 58 43.5	-4.6
BAKI	Biak	9.76	104	P	Pn	03 57 16.7	+4.5
	5μm376nm,1.5s						

comp=Z,69nm,0.8s,mb5.0
SSLB Suanglung 23.09 347 *e*P **P 03 59 51.8 -1.9**
comp=Z,26nm,0.6s,mb4.7
MDSI Maura Dua 23.16 256 P **P 03 59 57.2 +2.8**
comp=Z,14nm,0.9s,mb4.3
MBWA Marble Bar 23.25 197 *e*P **P 03 59 52.8 -2.3**
MBWA Marble Bar 23.25 197 *e*P **P 03 59 53.2 -1.9**
comp=Z,12nm,0.8s,mb4.3
YHNB Yeheng 23.86 348 *e*P **P 03 59 59.2 -1.3**
comp=Z,26nm,0.6s,mb4.7
SDSI Sungai Dareh 25.31 265 P **P 04 00 18.0 +4.0**
ASAR Alice Springs 25.73 165 P **P 04 00 17.2 -0.4**
comp=Z,7.6nm,0.4s,mb4.5,baz=342,slow=6.4,SNR=80
ASAR S **S 04 04 41.2 +0.4**
comp=Z,2.7nm,0.8s,baz=345,slow=17,SNR=6.8
PSI Prapat 27.75 274 P **P 04 00 35.9 -0.1**
comp=Z,3.9nm,0.5s,mb4.2,baz=12,slow=3.9,SNR=5.4
CTA Charters Tower 28.60 139 P **P 04 00 43.7 +0.3**
comp=Z,7.9nm,0.7s,mb4.4,baz=321,slow=10.0,SNR=8.5
CTA Charters Tower 28.60 139 P **P 04 00 43.7 +0.3**
CTAO Charters Tower 28.60 139 *e*P **P 04 00 43.6 +0.2**
CTAO pmax pmax
comp=Z,13nm,1.1s,mb4.5
CTAO Charters Tower 28.60 139 *e*P **P 04 00 43.6 +0.2**
comp=Z,13nm,1.1s,mb4.5
NJ2 Nanjing 31.53 347 *e*P **P 04 01 10.1 +1.0**
NJ2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
GYA Guiyang 31.60 324 P **P 04 01 11.0 +1.1**
GYA pP pP 04 01 21.4 -7.3
GYA sP sP 04 01 26.3 -12
GYA PP PP 04 02 17.9 -4.8
GYA PcP PcP 04 04 03.0 +2.4
GYA S **S 04 06 17.9 +4.8**
GYA sS sS 04 06 34.2 -11
GYA ScP ScP 04 07 42.1 +5.2
GYA SS SS 04 08 06.7 -25
GYA pmax pmax
comp=Z,20nm,0.8s,mb4.9
GYA pmax pmax
comp=Z,120nm,4.6s
GYA LR LR
comp=N,580nm,17.2s
GYA LR LR
comp=E,470nm,18.0s
GYA LR LR
comp=Z,540nm,17.4s
FORT Forrest 31.86 178 *e*P **P 04 01 11.8 -0.2**
comp=Z,39nm,0.6s,mb5.3
CMAR Chiang Mai Arr 32.13 304 LR LR 04 15 33.3
comp=Z,60nm,19.6s,baz=210,slow=39
KMI Kunming 33.12 318 P **P 04 01 23.3 +0.1**
KMI pP pP 04 01 33.9 -8.2
KMI sP sP 04 01 38.3 -13
KMI PP PP 04 02 36.3 -3.3
KMI S **S 04 06 40.9 +4.1**
KMI sS sS 04 06 58.0 -11
KMI SS SS 04 08 42.7 -20
KMI pmax pmax
comp=Z,8.0nm,1.5s,mb4.3
KMI pmax pmax
comp=Z,62nm,4.4s
KMI LR LR
comp=N,70nm,18.5s
KMI LR LR
comp=E,90nm,17.5s
KMI LR LR
comp=Z,110nm,16.9s
KLBR Kellerberrin 33.71 194 *e*P **P 04 01 28.0 -0.2**
comp=Z,11nm,0.9s,mb4.7
EIDS Eidsvold 35.47 140 *e*P **P 04 01 43.4 -0.1**
comp=Z,11nm,0.9s,mb4.7
STKA Stephens Creek 35.84 158 *e*P **P 04 01 46.2 -0.4**
comp=Z,8.9nm,0.6s,mb4.9
STKA Stephens Creek 35.84 158 P **P 04 01 46.2 -0.4**
comp=Z,9.6nm,0.6s,mb4.9,baz=317,slow=7.1,SNR=7.8
STKA Stephens Creek 35.84 158 *e*P **P 04 01 46.4 -0.2**
STKA pmax pmax
comp=Z,3.0nm,0.8s
STKA Stephens Creek 35.84 158 *e*P **P 04 01 46.4 -0.2**
comp=Z,2.8nm,0.8s,mb4.2
KSRS Korea Array 36.07 2 P **P 04 01 48.8 +0.4**
comp=Z,4.2nm,0.6s,mb4.5,baz=180,slow=9.5,SNR=17
KSRS LR LR 04 15 14.8
comp=Z,27nm,20.3s,baz=15,slow=34
CD2 Chengdu 36.63 326 P **P 04 01 53.8 +0.5**
CD2 pP pP 04 02 03.5 -8.9
CD2 sP sP 04 02 07.5 -14
CD2 PP PP 04 03 18.8 +0.6
CD2 S **S 04 07 33.8 +3.2**
CD2 sS sS 04 07 49.9 -13
CD2 SS SS 04 10 01.2 -13
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
CD2 pmax pmax
comp=Z,100nm,7.1s
CD2 LR LR
comp=N,130nm,6.0s
CD2 LR LR
comp=Z,160nm,8.3s
MJAR Matsushiro Arr 36.73 16 P **P 04 01 53.2 -0.9**
comp=Z,1.0nm,0.4s,mb4.1,baz=191,slow=8.8,SNR=6.4
ARMA Armidale 39.45 145 *e*P **P 04 02 18.3 +1.2**
ARMA Armidale 39.45 145 *e*P **P 04 02 18.4 +1.4**
comp=Z,33nm,1.3s,mb5.0
BJI Beijing 39.79 347 P **P 04 02 19.3 -0.4**
BJI S **S 04 08 23.9 +5.9**
BJI pmax pmax
comp=Z,10.0nm,1.1s,mb4.6
BJI pmax pmax
comp=Z,66nm,4.5s
BJI LR LR
comp=N,95nm,24.5s
BJI LR LR
comp=E,82nm,25.1s
LZH Lanzhou 40.62 331 *e*P **P 04 02 26.5 -0.2**
LZH pP pP 04 02 37.7 -8.3
LZH sP sP 04 02 42.5 -13
LZH PP PP 04 04 02.0 +0.2
LZH PcP PcP 04 04 28.2 +0.9
LZH *e*S **S 04 08 31.0 +0.4**
LZH SS SS 04 11 28.4 -5.4
LZH pmax pmax
comp=Z,25nm,1.2s,mb4.9
LZH pmax pmax
comp=Z,88nm,4.6s
LZH LR LR
comp=E,270nm,15.1s
LZH LR LR
comp=Z,420nm,16.7s
HHC Hu-ho-hao-te 41.74 343 *e*P **P 04 02 38.4 +2.6**
HHC sP sP 04 02 52.6 -12
HHC PP PP 04 04 18.4 +4.6
HHC PcP PcP 04 04 34.6 +3.8
HHC ScP ScP 04 08 21.2 +7.1
HHC PcS PcS 04 08 24.9 +2.6
HHC S **S 04 08 53.5 +6.5**
HHC sS sS 04 09 10.1 -10
HHC SS SS 04 11 54.8 -1.0
HHC ScS ScS 04 12 36.8 +5.8
HHC pmax pmax
comp=Z,13nm,0.6s,mb4.8
HHC pmax pmax
comp=Z,68nm,6.6s
HHC LR LR
comp=N,310nm,15.1s
HHC LR LR
comp=E,310nm,15.9s
HHC LR LR
comp=Z,320nm,14.5s
CN2 Changchun 42.40 359 *e*P **P 04 02 40.9 -0.2**
CN2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
MDJ Mudanjiang 43.28 3 P **P 04 02 48.7 +0.5**
MDJ pP pP 04 02 57.6 -10
MDJ sP sP 04 03 02.0 -15
MDJ PP PP 04 04 28.7 -1.6
MDJ PcP PcP 04 04 35.9 0.0
MDJ ScP ScP 04 08 25.3 +5.1
MDJ PcS PcS 04 08 29.3 +0.9
MDJ S **S 04 09 14.5 +5.0**
MDJ ScS ScS 04 12 45.4 +5.1
MDJ pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
MDJ pmax pmax
comp=Z,38nm,10.2s
GTA Gaotai 45.20 330 *e*P **P 04 03 03.0 -0.6**
GTA pmax pmax
comp=Z,2.0nm,0.7s,mb4.0
KLR Kul'dur 48.02 4 *e*P **P 04 03 20.7 -4.8**
ULN Ulaanbaatar 49.46 343 *e*P **P 04 03 37.6 +1.1**
ULN pmax pmax
comp=Z,23nm,1.7s,mb4.8
ULN Ulaanbaatar 49.46 343 *e*P **P 04 03 37.6 +1.1**
comp=Z,23nm,1.7s,mb4.8
SONM Songino Array 49.63 342 P **P 04 03 37.7 -0.2**
comp=Z,1.4nm,0.6s,mb4.1,baz=162,slow=9.5,SNR=8.5
SONM LR LR 04 27 54.2
comp=Z,34nm,18.4s,baz=350,slow=40
WMQ Urumqi 54.73 326 *e*P **P 04 04 16.5 +0.8**
WMQ pP pP 04 04 26.5 -9.4
WMQ sP sP 04 04 30.5 -14
WMQ pmax pmax
comp=Z,15nm,0.5s,mb5.3
WMQ pmax pmax
comp=Z,96nm,3.8s
WMQ LR LR
comp=N,55nm,22.6s
WMQ LR LR
comp=Z,75nm,20.8s
PETK Petropavlovsk- 57.77 22 P **P 04 04 38.4 +1.3**
comp=Z,2.0nm,0.8s,mb4.2,baz=220,slow=3.8,SNR=2.9
MK31 Makanchi Array 59.56 326 *c e*P **P 04 04 48.6 -1.1**
MK31 pmax pmax
comp=Z,2.0nm,0.3s,mb4.6
MK31 Makanchi Array 59.56 326 *e*P **P 04 04 49.1 -0.6**
MKAR Makanchi Array 59.56 326 P **P 04 04 49.0 -0.8**
comp=Z,3.7nm,0.5s,mb4.7,baz=120,slow=8.7,SNR=55
YAK Yakutsk 60.70 2 *e*P **P 04 04 57.3 +0.1**
YAK pmax pmax
comp=Z,19nm,0.7s,mb5.2
TKM2 Tokmak 2 61.57 319 *e*P **P 04 05 02.9 -0.6**
TKM2 pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
TKM2 Tokmak 2 61.57 319 *e*P **P 04 05 02.9 -0.6**
comp=Z,3.8nm,0.6s,mb4.6
AML Almayashu 62.47 318 *e*P **P 04 05 09.5 0.0**
AML pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
AML Almayashu 62.47 318 *e*P **P 04 05 09.5 0.0**
comp=Z,5.8nm,0.7s,mb4.7
EKS2 Erkin-Say 62.65 319 *e*P **P 04 05 10.8 +0.1**
EKS2 pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
EKS2 Erkin-Say 62.65 319 *e*P **P 04 05 10.8 +0.1**
comp=Z,4.7nm,0.9s,mb4.4
ZALV Zalesovo Beam 62.77 334 P **P 04 05 10.6 -0.7**
comp=Z,1.5nm,0.3s,mb4.4,baz=134,slow=8.5,SNR=6.0
ZALV Zalesovo Beam 62.77 334 P **P 04 05 10.6 -0.7**
KURK Kurchatov 63.80 328 P **P 04 05 17.3 -0.9**
comp=Z,6.0nm,0.6s,mb4.6,baz=126,slow=6.4,SNR=27
KURK Kurchatov 63.80 328 *d i*P **P 04 05 17.5 -0.7**
KURK pmax pmax
comp=Z,12nm,0.7s,mb4.8
KURK Kurchatov 63.80 328 *e*P **P 04 05 17.4 -0.7**
comp=Z,15nm,0.7s,mb4.9
NVS Novosibirsk 64.06 334 *e*P **P 04 05 17.5 -2.3**
SEY Seymchan 64.47 13 *e*P **P 04 05 22.8 +0.5**
VOSK Vostochnaya 68.91 327 P **P 04 05 49.2 -1.6**
VOSK pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
BVAR Borovoye Array 69.37 328 P **P 04 05 53.5 -0.1**
comp=Z,1.1nm,0.4s,mb4.0,baz=134,slow=8.5,SNR=11
BRVK Borovoye 69.44 328 *d i*P **P 04 05 53.7 -0.3**
BRVK pmax pmax
comp=Z,10.0nm,1.2s,mb4.5
BRVK Borovoye 69.44 328 *e*P **P 04 05 54.1 0.0**
comp=Z,9.7nm,0.8s,mb4.7
ZRNK Zerenda 70.08 327 *i*P **P 04 05 57.4 -0.6**
ZRNK pmax pmax
comp=Z,11nm,1.0s,mb4.6
ABKAR Akbulak array 74.03 321 *e*P **P 04 06 21.0 -0.7**
comp=Z,2.3nm,0.5s,mb4.2
AKTK Aktyubinsk 75.56 322 P **P 04 06 30.4 0.0**
AKTO Aktyubinsk 75.56 322 P **P 04 06 30.4 0.0**
baz=111,slow=8.6
SVE Sverdlovsk 76.04 329 *e*P **P 04 06 32.8 -0.3**
SVE pmax pmax
comp=Z,14nm,1.0s,mb4.7
ARU Arti 77.00 328 *e*P **P 04 06 37.9 -0.6**
ARU Arti 77.00 328 *e*P **P 04 06 37.9 -0.6**
MAW Mawson 81.39 200 P **P 04 07 02.7 +0.5**
comp=Z,0.8nm,0.7s,mb3.7,baz=60,slow=14,SNR=2.4
SBA Scott Base 81.88 172 *e*P **P 04 07 06.4 +1.8**
SBA pmax pmax
comp=Z,115nm,2.8s,mb5.2
SBA Scott Base 81.88 172 *e*P **P 04 07 06.4 +1.8**
comp=Z,115nm,2.8s,mb5.2
TTA Tatalina 83.16 27 *e*P **P 04 07 13.0 +1.5**
ZEI Tsey 83.84 313 *e*P **P 04 07 15.5 0.0**
ZEI pmax pmax
comp=Z,4.0nm,0.3s,mb4.7
BRTR Keskin Array B 91.54 310 P **P 04 07 51.6 -1.0**
comp=Z,0.7nm,0.8s,mb3.9,baz=129,slow=6.9,SNR=4.5
ARCES ARCESS Array B 92.75 340 P **P 04 07 56.6 -0.9**
comp=Z,1.8nm,0.9s,mb4.4,baz=70,slow=5.0,SNR=5.6
BUR08 Bucovina Ar. S 96.81 318 *e*P **P 04 08 17.4 +0.9**
CRVS Cervenica-Dubn 99.02 320 *e*P Px 04 08 37.1
CRVS Cervenica-Dubn 99.02 320 pPDIF Px 04 08 37.1
KECS Kecovo 99.75 320 *e*P Pdif 04 08 29.7 +0.1
KECS Kecovo 99.75 320 PDIF Pdif 04 08 29.7 +0.1
CLL Collm 103.60 324 *e*Pdif Pdif 04 08 44.0 -2.7
CLL *e* 04 08 54.0
HOOD Mount Hood Mea 104.22 43 *e*Pdif Pdif 04 08 48.0 -1.4
MNTX Cornudas Mount 120.88 52 *e*PKPdf PKPdf 04 13 39.4 +1.1
TXAR Lajitas Array 123.17 53 PKP PKPdf 04 13 43.9 +1.2
comp=Z,0.6nm,0.6s,baz=266,slow=0.3,SNR=13
JCT Junction City 125.73 50 *e*PKIKP PKPdf 04 13 48.5 +0.9
WVT Waverly 130.90 37 *e*PKIKP PKPdf 04 13 58.1 +0.8
LCO Las Campanas 147.79 151 *e*PKPbc PKPbc 04 14 32.1 +1.1

IDC 02 04:06:26.7±3.8, 10°76N×91°86E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/22, mbtmp3.6/4, Error ellipse: s-maj=140.9km s-min=25.5km az=67.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.82**	**349**	P	P	04 13 36.7	+0.3
0.3nm,0.7s,baz=158,slow=8.3,SNR=3.1							
SONM	**Songino Array**	**38.93**	**16**	P	P	04 13 54.0	-0.2
0.3nm,0.4s,baz=198,slow=7.6,SNR=2.9							
WRA	**Warramunga Arr**	**51.76**	**126**	P	P	04 15 37.4	+1.0
0.9nm,0.3s,baz=306,slow=8.4,SNR=6.9							
ASAR	**Alice Springs**	**53.48**	**130**	P	P	04 15 48.1	-1.0
0.5nm,0.6s,baz=302,slow=7.2,SNR=5.8							

*CSEM **02** 04:14:45.9±0.2, 51°47N×16°13E, h2km, ML3.1/13, Error ellipse: s-maj=3.7km s-min=2.6km az=28.0*
*ISCJB **02** 04:14:45.2±0.6, 51°40N±0°03×16°14E±0°03, h0km, Error ellipse: s-maj=4.3km s-min=2.4km az=15.6*
*IPEC **02** 04:14:46.0±0.3, 51°51N×16°21E, h1km±1km, ML2.1/4, Error ellipse: s-maj=1.8km s-min=0.6km az=29.0*
*PRU **02** 04:14:47.8, 51°41N×16°10E, h0km*
*WAR **02** 04:14:47.5, 51°47N×16°11E, ML2.7, Mining Induced*
*VIE **02** 04:14:48.7±0.5, 51°27N×16°16E, h0km, mb2.3/5, ML2.6/5, Error ellipse: s-maj=2.9km s-min=2.7km az=152.0 62 km WNW of Wroclaw Suspected Mining induced.*

ISC 02 04:14:45.7±0.5, 51.49N±0°03×16.13E±0°03, h0km, n49, σ0°97/87, 4C-2D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.65**	**171**	*e*Pg	**Pg**	**04 14 59.1**	**+0.8**
KSP				*e*Sg	**Sg**	**04 15 08.5**	**+1.8**
KSP	**Ksiaz**	**0.65**	**171**	*e*Pg	**Pg**	**04 14 59.2**	**+1.0**
KSP				*e*Sg	**Sg**	**04 15 07.9**	**+1.2**
KSP				*e*L		04 15 10.5	
KSP	**Ksiaz**	**0.65**	**171**	*e*Pg	**Pg**	**04 14 59.1**	**+0.9**
baz=355							
KSP				*e*Sg	**Sg**	**04 15 07.8**	**+1.1**
baz=355							
UPC	**Upice**	**0.98**	**184**	*e*PG	**Pg**	**04 15 05.2**	**+0.6**
UPC	**Upice**	**0.98**	**184**	*e*Pg	**Pg**	**04 15 05.0**	**+0.4**
baz=7.0							
DPC	**Dobruska-Polom**	**1.15**	**174**	*e*PG	**Pg**	**04 15 08.0**	**+0.3**
DPC				*e*SG	**Sg**	**04 15 22.5**	**0.0**
comp=Z,26nm,0.4s							
DPC	**Dobruska-Polom**	**1.15**	**174**	*e*Pg	**Pg**	**04 15 07.8**	**+0.1**
baz=356							
DPC				Sg	**Sg**	**04 15 22.5**	**0.0**
comp=Z,26nm,0.4s							
PVCC	**Panska Ves**	**1.37**	**226**	*e*PG	**Pg**	**04 15 12.3**	**+0.2**
PVCC				*e*SG	**Sg**	**04 15 30.8**	**+1.0**
comp=Z,101nm,0.3s							
PVCC	**Panska Ves**	**1.37**	**226**	*e*Pn	**Pn**	**04 15 12.5**	**+0.4**
baz=46							
PVCC				Sg	**Sg**	**04 15 30.8**	**+1.0**
comp=Z,101nm,0.3s							
BRG	**Berggiesshubel**	**1.50**	**247**	PG	**Pg**	**04 15 14.8**	**+0.2**
BRG				SG	**Sg**	**04 15 35.0**	**+0.9**
comp=Z,29nm,0.5s							
BRG	**Berggiesshubel**	**1.50**	**247**	*e*Pn	**Pn**	**04 15 14.7**	**+0.8**
baz=65							
BRG				*e*Sg	**Sg**	**04 15 33.9**	**-0.2**
baz=65							
PRU	**Pruhonice**	**1.81**	**214**	*e*PN	**Pn**	**04 15 18.3**	**+0.2**
PRU				*e*PG	**Pg**	**04 15 20.2**	**-0.1**
PRU				*e*SG	**Sg**	**04 15 42.7**	**-1.0**
comp=Z,15nm,0.5s							
PRU	**Pruhonice**	**1.81**	**214**	Pn	**Pn**	**04 15 18.3**	**+0.2**
PRU	**Pruhonice**	**1.81**	**214**	Pg	**Pg**	**04 15 20.2**	**-0.1**
PRU				Sg	**Sg**	**04 15 42.7**	**-1.0**
comp=Z,15nm,0.5s							
MORC	**Moravsky Berou**	**1.94**	**152**	*e*Pn	**Pn**	**04 15 19.7**	**-0.1**
baz=334							
MORC				*e*Sg	**Sg**	**04 15 45.8**	**-2.1**
comp=Z,8.2nm,0.2s,baz=334							
CLL	**Collm**	**1.96**	**266**	*e*Pn	**Pn**	**04 15 19.0**	**-1.3**
CLL				*i* Pg	**Pg**	**04 15 23.0**	**-0.4**
CLL				*i*		04 15 26.8	
CLL				*e*		04 15 38.0	
CLL				*e*Sg	**Sg**	**04 15 49.0**	**+0.2**
comp=Z,16nm,0.6s							
CLL	**Collm**	**1.96**	**266**	*e*Pn	**Pn**	**04 15 20.7**	**+0.4**
baz=83							
CLL				*e*Sg	**Sg**	**04 15 47.3**	**-1.5**
baz=83							
OKC	**Ostrava-Krasne**	**2.09**	**141**	*e*SG	**Sg**	**04 15 51.6**	**-1.3**
comp=Z,19nm,0.5s							
OKC	**Ostrava-Krasne**	**2.09**	**141**	Sg	**Sg**	**04 15 51.6**	**-1.3**
comp=Z,19nm,0.5s							
VRAC	**Vranov**	**2.20**	**172**	*e*Pn	**Pn**	**04 15 23.8**	**+0.3**
baz=354							
VRAC				*e*Sg	**Sg**	**04 15 54.8**	**-1.6**
comp=Z,11nm,0.3s,baz=354							
TREC	**Trest**	**2.23**	**191**	*e*PN	**Pn**	**04 15 25.6**	**+1.7**
TREC				*e*PG	**Pg**	**04 15 28.0**	**-0.5**
TREC	**Trest**	**2.23**	**191**	*e*Pn	**Pn**	**04 15 25.5**	**+1.6**
baz=12							
TREC	**Trest**	**2.23**	**191**	Pg	**Pg**	**04 15 28.0**	**-0.5**
TREC				*e*Sg	**Sg**	**04 15 56.8**	**-0.6**
baz=12							
KRUC	**Moravsky**	**2.43**	**176**	*e*Pg	**Pg**	**04 15 30.8**	**-1.6**
baz=357							
KRUC				*e*Sg	**Sg**	**04 16 01.9**	**-2.0**
comp=Z,7.3nm,0.4s,baz=357							
NKC	**Novy Kostel**	**2.65**	**243**	*e*PN	**Pn**	**04 15 30.3**	**+0.7**
NKC				*e*PG	**Pg**	**04 15 36.3**	**-0.1**
NKC				*e*SG	**Sg**	**04 16 11.4**	**+0.7**
comp=Z,20nm,0.3s							
NKC	**Novy Kostel**	**2.65**	**243**	*e*Pn	**Pn**	**04 15 30.1**	**+0.5**
baz=60							
OJC	**Ojcow**	**2.65**	**117**	*e*Pg	**Pg**	**04 15 36.2**	**-0.3**
OJC				*e*Sg	**Sg**	**04 16 11.2**	**+0.4**
JAVC	**Velka Javorina**	**2.81**	**159**	*e*Sg	**Sg**	**04 16 14.1**	**-1.9**
comp=Z,9.5nm,0.5s,baz=341							
KHC	**Kasperske Hory**	**2.87**	**216**	*e*PN	**Pn**	**04 15 33.2**	**+0.5**
KHC				*e*PG	**Pg**	**04 15 39.1**	**-1.6**
KHC				*e*SN	**Sn**	**04 16 08.1**	**+0.2**
KHC				*e*SG	**Sg**	**04 16 17.2**	**-0.6**
comp=Z,9.8nm,0.4s							
KHC	**Kasperske Hory**	**2.87**	**216**	Pn	**Pn**	**04 15 33.2**	**+0.5**
MOX	**Moxa**	**2.97**	**255**	*e*PG	**Pg**	**04 15 42.6**	**0.0**
MOX				*e*SG	**Sg**	**04 16 22.0**	**+1.0**
MOX	**Moxa**	**2.97**	**255**	*e*Pg	**Pg**	**04 15 41.7**	**-0.9**
baz=72							
MOX				*e*Sg	**Sg**	**04 16 20.9**	**-0.1**
baz=72							
WET	**Wettzell**	**3.14**	**223**	*e*Pn	**Pn**	**04 15 36.8**	**+0.5**
baz=41							
KOLL	**Kolacno**	**3.26**	**152**	*e*SG	**Sg**	**04 16 31.2**	**+0.8**
KOLL	**Kolacno**	**3.26**	**152**	*e*Sg	**Sg**	**04 16 31.2**	**+0.8**
NIE	**Niedzica**	**3.38**	**126**	*e*P	**Pg**	**04 15 50.3**	**-0.2**
NIE				*e*S	**Sg**	**04 16 34.9**	**+0.5**
VYHS	**Vyhne**	**3.47**	**149**	*e*PG	**Pg**	**04 15 53.9**	**+1.7**
VYHS				*e*SG	**Sg**	**04 16 40.3**	**+3.2**
CONA	**Conrad Observa**	**3.57**	**183**	⇓*i*Pn	**Pn**	**04 15 42.5**	**+0.2**
CONA				⇑*i*Sg	**Sg**	**04 16 40.0**	**-0.2**
comp=Z,11nm,0.5s							
CONA	**Conrad Observa**	**3.57**	**183**	Pn	**Pn**	**04 15 42.5**	**+0.2**
CONA				Sg	**Sg**	**04 16 40.0**	**-0.2**
comp=Z,11nm,0.5s							
BSD	**Bornholm Skovb**	**3.71**	**349**	*i* P	**Pn**	**04 15 43.3**	**-0.9**
BSD				*i* S	**Sn**	**04 16 25.5**	**-3.0**
BSD	**Bornholm Skovb**	**3.71**	**349**	*i* P	**Pn**	**04 15 43.3**	**-0.9**
BSD				*i* S	**Sn**	**04 16 25.5**	**-3.0**
MOA	**Molln**	**3.84**	**199**	⇑*i*Pn	**Pn**	**04 15 46.5**	**+0.6**
MOA				⇓*i*Sg	**Sg**	**04 16 49.4**	**+0.5**
comp=Z,8.4nm,0.5s							
MOA	**Molln**	**3.84**	**199**	Pn	**Pn**	**04 15 46.5**	**+0.5**
MOA				Sg	**Sg**	**04 16 49.4**	**+0.5**
comp=Z,8.4nm,0.5s							
STHS	**Stebnicka Huta**	**3.87**	**120**	*e*SG	**Sg**	**04 16 53.1**	**+3.1**
STHS	**Stebnicka Huta**	**3.87**	**120**	*e*Sg	**Sg**	**04 16 53.1**	**+3.1**
CRVS	**Cervenica-Dubn**	**4.29**	**125**	*e*SG	**Sg**	**04 17 03.8**	**+0.2**
CRVS	**Cervenica-Dubn**	**4.29**	**125**	*e*Sg	**Sg**	**04 17 03.8**	**+0.2**
KBA	**Koelnbreinsper**	**4.77**	**203**	⇑*i*Pn	**Pn**	**04 15 59.3**	**+0.4**
KBA				⇑*i*Sg	**Sg**	**04 17 19.5**	**+0.6**
comp=Z,7.5nm,0.8s							
KBA	**Koelnbreinsper**	**4.77**	**203**	Pn	**Pn**	**04 15 59.3**	**+0.5**
KBA				Sg	**Sg**	**04 17 19.5**	**+0.5**
comp=Z,7.5nm,0.8s							

*CSEM **02** 04:24:58.5±0.3, 33°35N×35°37E, h2km, ML3.1, Error ellipse: s-maj=9.3km s-min=3.9km az=100.0*
*GRAL **02** 04:24:58.9±0.3, 33°32N×35°42E, h4km±2km, MD3.1*

ISC 02 04:24:58.4±2.6, 33°3N±0°1×35°40E±0°10, h13km±10km, n7, σ0°16/12, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.16**	**339**	*e*P	**Pg**	**04 25 02.3**	**+0.1**
MATL	**Matarih**	**0.16**	**339**	*e*P	**Pg**	**04 25 02.3**	**+0.1**
RCY	**Rachaya**	**0.38**	**68**	*e*P	**Pg**	**04 25 06.0**	**-0.1**
RCY				*e*S	**Sg**	**04 25 11.3**	**+0.1**
RCY	**Rachaya**	**0.38**	**68**	*e*P	**Pg**	**04 25 06.0**	**-0.1**
RCY				*e*S	**Sg**	**04 25 11.4**	**+0.1**
BHL	**Bhannes**	**0.60**	**21**	*e*P	**Pg**	**04 25 09.9**	**-0.3**
BHL				*e*S	**Sg**	**04 25 18.2**	**+0.1**
BHL	**Bhannes**	**0.60**	**21**	*e*P	**Pg**	**04 25 09.9**	**-0.3**
BHL				*e*S	**Sg**	**04 25 18.2**	**+0.1**
HWQ	**Hawqa**	**1.04**	**26**	*e*P	**Pb**	**04 25 18.5**	**+0.2**
HWQ				*e*S	**Sb**	**04 25 31.7**	**-0.1**

*THE **02** 04:25:53.1, 36°07N×21°69E, h5km±2km, ML3.6/2, Error ellipse: s-maj=6.1km s-min=1.1km az=266.0*
*CSEM **02** 04:25:53.3±0.9, 36°10N×21°86E, h8km, MD3.4, Error ellipse: s-maj=17.7km s-min=8.1km az=55.0*
*ATH **02** 04:25:54.2, 36°15N×21°88E, h10km±3km, MD3.4/7*

ISC 02 04:25:52.6±2.0, 36°06N±0°07×21°85E±0°09, h4km±14km, n20, σ0°79/34, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.83**	**354**	*e*PB	**Pg**	**04 26 08.7**	**0.0**
PYL				*e*SB	**Sg**	**04 26 18.5**	**-1.0**
PYL	**PYLOS**	**0.83**	**354**	P	**Pg**	**04 26 08.8**	**+0.1**
PYL				S	**Sg**	**04 26 19.8**	**+0.3**
PYL	**PYLOS**	**0.83**	**354**	*e*Pb	**Pg**	**04 26 08.7**	**0.0**
PYL				*e*Sb	**Sg**	**04 26 18.5**	**-1.0**
PYL				S	**Sg**	**04 26 19.8**	**+0.3**
KYTH	**Kithira**	**0.99**	**77**	*e*PG	**Pg**	**04 26 11.8**	**+0.3**
KYTH	**Kithira**	**0.99**	**77**	*e*Pg	**Pg**	**04 26 11.8**	**+0.3**
VLI	**Veliai**	**1.09**	**53**	*e*PG	**Pg**	**04 26 13.5**	**-0.1**
VLI				*e*SB	**Sg**	**04 26 28.0**	**+0.2**
VLI	**Veliai**	**1.09**	**53**	*e*Pg	**Pg**	**04 26 13.5**	**-0.1**
VLI				*e*Sb	**Sg**	**04 26 28.0**	**+0.2**

ITM	**Ithomi**	**1.12**	**3**	*e*PN	**Pg**	**04 26 14.2**	**+0.2**
ITM				*e*SB	**Sg**	**04 26 28.0**	**-0.5**
ITM	**Ithomi**	**1.12**	**3**	P	**Pg**	**04 26 14.2**	**+0.2**
ITM				S	**Sg**	**04 26 30.6**	**+2.1**
ITM	**Ithomi**	**1.12**	**3**	P	**Pg**	**04 26 14.2**	**+0.2**
ITM				*e*Sb	**Sg**	**04 26 28.0**	**-0.5**
ITM				S	**Sg**	**04 26 30.6**	**+2.1**
VLX	**Vlachokerasia**	**1.37**	**18**	*e*PB	**Pn**	**04 26 18.4**	**-0.1**
VLX	**Vlachokerasia**	**1.37**	**18**	P	**Pn**	**04 26 18.4**	**-0.1**
VLX				S	**Sg**	**04 26 38.3**	**+1.5**
VLX	**Vlachokerasia**	**1.37**	**18**	P	**Pn**	**04 26 18.4**	**-0.1**
VLX				S	**Sg**	**04 26 38.3**	**+1.5**
KARN	**Karanos**	**1.81**	**111**	P	**Pn**	**04 26 25.5**	**+1.0**
KARN	**Karanos**	**1.81**	**111**	P	**Pn**	**04 26 25.5**	**+1.0**
DID	**Didima**	**1.82**	**37**	*e*PG	**Pg**	**04 26 26.3**	**-1.2**
DID	**Didima**	**1.82**	**37**	P	**Pb**	**04 26 25.7**	**-0.8**
DID				S	**Sg**	**04 26 50.5**	**-0.7**
DID	**Didima**	**1.82**	**37**	P	**Pb**	**04 26 25.7**	**-0.8**
DID	**Didima**	**1.82**	**37**	*e*Pg	**Pg**	**04 26 26.3**	**-1.2**
DID				S	**Sg**	**04 26 50.5**	**-0.7**
EFP	**Efpalio**	**2.36**	**1**	*e*PG	**Pb**	**04 26 35.3**	**-0.4**

IDC 02 04:39:52.9±2.9, 55.′55N×86.′31E, h0km, mb1 3.0/3, mb1mx2.9/27, mbtmp3.0/3, ML3.0/3, Error ellipse: s-maj=32.2km s-min=21.2km az=85.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.83**	**209**	Pn	Pn	04 40 25.0	-0.5
	5.4nm,0.3s,baz=32,slow=16,SNR=33						
ZALV				Lg		04 40 51.1	
	3.5nm,0.3s,baz=28,slow=27,SNR=9.4						
KURK	**Kurchatov**	**6.70**	**227**	Pn	Pn	04 41 33.8	+1.4
	0.1nm,0.3s,baz=46,slow=14,SNR=5.9						
KURK				Lg		04 43 29.8	
	0.0nm,0.3s,baz=47,slow=34,SNR=4.6						
MKAR	**Makanchi Array**	**9.12**	**198**	Pn	Pn	04 42 06.2	+0.5
	0.1nm,0.3s,baz=12,slow=10,SNR=2.7						
MKAR				Lg		04 44 40.0	
	0.0nm,0.3s,baz=34,slow=31,SNR=6.2						
BVAR	**Borovoye Array**	**9.65**	**261**	Pn	Pn	04 42 11.6	-1.2
	0.4nm,0.3s,baz=72,slow=16,SNR=4.0						

IDC 02 04:50:59.2±21.0, 19.′64S×178.′13W, h650km±277km, mb2.8/5, mb1 3.2/5, mb1mx3.0/16, mbtmp2.8/5, Error ellipse: s-maj=233.3km s-min=62.8km az=144.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.46**	**263**	P	P	04 56 48.0	+0.3
	2.6nm,0.6s,baz=98,slow=7.1,SNR=3.9						
ASAR	**Alice Springs**	**44.60**	**256**	P	P	04 58 16.8	+0.2
	1.9nm,0.7s,baz=92,slow=7.9,SNR=18						
WRA	**Warramunga Arr**	**44.60**	**261**	P	P	04 58 16.5	-0.1
	0.5nm,0.3s,baz=91,slow=8.4,SNR=4.3						
NVAR	**Mina Array Bea**	**80.49**	**44**	P	P	05 02 07.7	+2.0
	0.3nm,0.5s,baz=224,slow=8.3,SNR=4.3						
TXAR	**Lajitas Array**	**86.70**	**57**	P	P	05 02 35.0	-1.4
	0.7nm,0.9s,baz=216,slow=9.0,SNR=6.5						

DJA 02 04:55:09, 0.′35S×122.′02E, h10km, MLv4.7/13
ISCJB 02 04:55:10.1±0.6, 0.′37S±0.′04×122.′04E±0.′04, h37km±7km, mb4.2/16, Error ellipse: s-maj=7.2km s-min=6.1km az=30.6
IDC 02 04:55:11.9±5.9, 0.′40S×122.′12E, h37km±54km, mb3.8/9, mb1 4.0/10, mb1mx3.8/21, mbtmp3.9/10, ML4.8/1, MS3.2/1, Ms1 3.2/1, ms1mx2.6/29, Error ellipse: s-maj=37.5km s-min=17.8km az=61.0
NEIC 02 04:55:11.6±2.6, 0.′40S×122.′13E, h35km±26km, mb4.4/7, Error ellipse: s-maj=23.0km s-min=9.4km az=49.0
ISC 02 04:55:12.3±0.6, 0.′41S±0.′05×122.′06E±0.′04, h39km±8km, n39, σ0°93/42, mb4.2/16, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	**Ampana**	**0.65**	**220**	P	**Pn**	**04 55 21.9**	**-3.1**
APSI				S	**Sn**	**04 55 32.3**	**-1.8**
MRSI	**Marisa**	**0.89**	**352**	P	**Pn**	**04 55 23.3**	**-5.0**
LUWI	**Luwuk**	**0.95**	**131**	P	**Pn**	**04 55 27.0**	**-2.1**
KMSI	**Cibinong**	**2.15**	**63**	P	**Pn**	**04 55 45.4**	**-0.3**
PCI	**Palu**	**2.28**	**258**	P	**Pn**	**04 55 47.7**	**+0.3**
MPSI	**Mapaga**	**2.29**	**289**	P	**Pn**	**04 55 44.1**	**-3.5**
TTSI	**Tana Toraja**	**3.45**	**221**	P	**Pn**	**04 56 04.5**	**+1.0**
KDI	**Kendari**	**3.57**	**171**	P	**Pn**	**04 56 04.6**	**-0.6**
SPSI	**Sidrap Palu**	**4.21**	**213**	P	**Pn**	**04 56 14.7**	**+0.7**
SPSI				S	**Sn**	**04 57 04.3**	**+2.4**
BNSI	**Bone**	**4.42**	**206**	P	**Pn**	**04 56 17.8**	**+0.9**
KAPI	**Kappang**	**5.12**	**207**	Pn	**Pn**	**04 56 25.8**	**-0.7**
	32nm,0.3s,baz=19,slow=5.9,SNR=59						
KAPI				Sn	**Sn**	**04 57 24.0**	**-0.5**
	6.4nm,0.3s,baz=101,slow=21,SNR=6.2						
KAPI				LR	LR	04 58 46.8	
	comp=Z,273nm,19.8s,baz=265,slow=42						
BKSI	**Bulukumba**	**5.25**	**202**	P	**Pn**	**04 56 28.8**	**+0.5**
	0.4nm1μm95nm,0.8s						
TNTI	**Ternate**	**5.43**	**78**	P	**Pn**	**04 56 32.1**	**+1.3**
	0.5nm62nm,0.9s						
LBMI	**Labuha**	**5.44**	**92**	P	**Pn**	**04 56 31.0**	**+0.1**
	1.0nm3μm103nm,0.9s						
NLAI	**Namlea**	**5.76**	**119**	P	**Pn**	**04 56 36.6**	**+1.2**
	0.6nm3μm112nm,0.9s						
KBKI	**Kotabaru**	**6.55**	**244**	P	**Pn**	**04 56 46.0**	**-0.2**
	0.3nm2μm44nm,0.8s						
MYLDM	**Lahad Datu**	**6.59**	**327**	P	**Pn**	**04 56 46.9**	**+0.1**
MMRI	**Maumere**	**8.17**	**179**	P	**Pn**	**04 57 09.2**	**+0.8**
	64nm,0.7s						
FITZ	**Fitzroy Crossi**	**17.93**	**169**	P	**Pn**	**04 59 18.6**	**-0.1**
	14nm,2.6s						
WRAB	**Tennant Creek**	**22.83**	**149**	*e*P	**P**	**05 00 11.6**	**-0.4**
	4.1nm,0.6s,mb4.0						
WRAB	**Tennant Creek**	**22.83**	**149**	P	**P**	**05 00 11.6**	**-0.5**
WRA	**Warramunga Arr**	**22.83**	**149**	P	**P**	**05 00 11.9**	**-0.2**
	3.8nm,0.5s,mb4.1,baz=330,slow=10,SNR=24						
ASAR	**Alice Springs**	**25.82**	**154**	P	**P**	**05 00 40.0**	**0.0**
	1.7nm,0.6s,mb3.8,baz=346,slow=15,SNR=16						
ASAR				PcP	PcP	05 04 08.8	-0.1
	0.4nm,0.4s,baz=351,slow=2.2,SNR=4.5						
CMAR	**Chiang Mai Arr**	**29.46**	**311**	P	**P**	**05 01 14.8**	**+2.2**
	0.7nm,0.4s,mb3.8,baz=141,slow=6.6,SNR=4.0						
CHTO	**Chiang Mai**	**29.67**	**311**	*e*P	**P**	**05 01 15.3**	**+0.8**
	2.5nm,0.6s,mb4.1						
MJAR	**Matsushiro Arr**	**39.71**	**21**	P	**P**	**05 02 40.4**	**-0.5**
	1.0nm,0.5s,mb3.8,baz=334,slow=14,SNR=5.2						
ULN	**Ulaanbaatar**	**49.83**	**347**	*e*P	**P**	**05 04 01.7**	**+0.4**
	2.0nm,0.4s,mb4.5						
SONM	**Songino Array**	**49.95**	**346**	P	**P**	**05 04 02.3**	**+0.1**
	2.1nm,0.6s,mb4.3,baz=163,slow=9.0,SNR=15						
MK31	**Makanchi Array**	**58.47**	**329**	*e*P	**P**	**05 05 04.0**	**-0.3**
MKAR	**Makanchi Array**	**58.47**	**329**	P	**P**	**05 05 04.5**	**+0.2**
	1.3nm,0.4s,mb4.3,baz=125,slow=8.6,SNR=26						
TKM2	**Tokmak 2**	**59.92**	**322**	*e*P	**P**	**05 05 15.1**	**+0.6**
	2.1nm,0.6s,mb4.3						
KBL	**Kabul**	**60.49**	**311**	*e*P	**P**	**05 05 18.7**	**+0.2**
	4.6nm,0.5s,mb4.8						
EKS2	**Erkin-Say**	**60.92**	**321**	*e*P	**P**	**05 05 21.4**	**+0.1**
	2.0nm,0.6s,mb4.4						
ZALV	**Zalesovo Beam**	**62.30**	**336**	P	**P**	**05 05 29.6**	**-0.7**
	0.9nm,0.4s,mb4.2,baz=141,slow=15,SNR=4.0						
KURK	**Kurchatov**	**62.87**	**331**	*e*P	**P**	**05 05 32.9**	**-1.3**
	7.5nm,1.0s,mb4.8						
BVAR	**Borovoye Array**	**68.35**	**329**	P	**P**	**05 06 08.8**	**-0.8**
	0.6nm,0.6s,mb3.8,baz=146,slow=9.0,SNR=4.9						
ABKAR	**Abkulak array**	**72.48**	**323**	*e*P	**P**	**05 06 34.8**	**-0.1**
AKTK	**Aktyubinsk**	**74.07**	**323**	P	**P**	**05 06 43.9**	**-0.4**
AKTO	**Aktyubinsk**	**74.07**	**323**	P	**P**	**05 06 43.9**	**-0.4**
	0.6nm,0.6s,mb3.7,baz=185,slow=2.4,SNR=3.6						

NEIC 02 05:19:39.8, 39.′96S×176.′77E, h44km, ML3.9(WEL), After WEL.
WEL 02 05:19:39.2±0.2, 40.′00S×176.′80E, h48km±1km, ML3.9/21, 3C-7D, Error ellipse: s-maj=1.6km s-min=1.1km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PXZ	**Pawanui**	**0.06**	**126**	⇑PN	Pn	05 19 46.6	-0.1
PXZ				SN	Sn	05 19 51.9	-0.2
KAHZ	**Kahuranaki**	**0.21**	**17**	⇑PN	Pn	05 19 47.1	-0.3
KAHZ				SN	Sn	05 19 52.8	-0.4
WPHZ	**Waipukurau**	**0.28**	**256**	⇓PN	Pn	05 19 48.0	0.0
WPHZ				SN	Sn	05 19 54.5	+0.2
PRHZ	**Porangahau**	**0.30**	**205**	⇓PN	Pn	05 19 48.6	+0.4
PRHZ				SN	Sn	05 19 55.3	+0.7
CKHZ	**Cape Kidnapper**	**0.40**	**33**	PN	Pn	05 19 49.0	-0.2
CKHZ				SN	Sn	05 19 56.2	0.0
PNHZ	**Pukenui**	**0.47**	**280**	⇓PN	Pn	05 19 49.6	-0.4
MCHZ	**McNeill Hill**	**0.56**	**352**	PN	Pn	05 19 51.1	0.0
DVHZ	**Dannevirke**	**0.57**	**238**	⇓PN	Pn	05 19 51.4	+0.1
TSZ	**Takapari Road**	**0.65**	**264**	⇓PN	Pn	05 19 52.0	-0.1
BFZ	**Birch Farm**	**0.80**	**212**	⇓PN	Pn	05 19 54.6	+0.3
BKZ	**Black Stump Fm**	**0.86**	**344**	⇑PN	Pn	05 19 54.9	-0.2
NMHZ	**Naumai**	**0.90**	**0**	PN	Pn	05 19 55.8	+0.3
MRZ	**Mangatainoka R**	**1.15**	**234**	⇓PN	Pn	05 19 58.8	0.0
KNZ	**Kokohu**	**1.19**	**35**	PN	Pn	05 19 58.9	-0.5
FWVZ	**Far West T-bar**	**1.21**	**307**	PN	Pn	05 20 00.8	+1.0
WAZ	**Wanganui**	**1.42**	**279**	P	Pn	05 20 04.1	+1.6
MTW	**Mount Morrison**	**1.52**	**220**	PN	Pn	05 20 03.0	-1.0
MTW	**Mount Morrison**	**1.52**	**220**	P	Pn	05 20 03.0	-1.0
TRWZ	**Traveller**	**1.64**	**211**	PN	Pn	05 20 04.6	-0.9
CAW	**Cannon Point**	**1.72**	**229**	PN	Pn	05 20 05.9	-0.8
CAW	**Cannon Point**	**1.72**	**229**	P	Pn	05 20 05.9	-0.8
URZ	**Urewera**	**1.75**	**8**	PN	Pn	05 20 06.4	-0.7
URZ	**Urewera**	**1.75**	**8**	*e*Pn	Pn	05 20 06.5	-0.6
URZ				*e*Sn	Sn	05 20 27.6	-0.6
MWZ	**Matawai**	**1.75**	**19**	PN	Pn	05 20 06.2	-0.9
SNZO	**South Karori**	**2.06**	**230**	PN	Pn	05 20 10.3	-1.1
SNZO	**South Karori**	**2.06**	**230**	P	Pn	05 20 10.3	-1.1
HIZ	**Hauiti**	**2.11**	**314**	PN	Pn	05 20 12.3	+0.2
HIZ	**Hauiti**	**2.11**	**314**	P	Pn	05 20 12.3	+0.2
PUZ	**Puketiti**	**2.23**	**31**	P	Pn	05 20 09.5	-4.2
TCW	**Tory Channel**	**2.27**	**237**	PN	Pn	05 20 13.1	-1.1
TCW	**Tory Channel**	**2.27**	**237**	P	Pn	05 20 13.1	-1.1
DUWZ	**D'Urville Isla**	**2.34**	**249**	PN	Pn	05 20 14.8	-0.4
TUWZ	**Tuamarina**	**2.60**	**236**	PN	Pn	05 20 17.4	-1.3
MXZ	**Matakaoa Point**	**2.70**	**26**	PN	Pn	05 20 19.6	-0.5
MXZ	**Matakaoa Point**	**2.70**	**26**	P	Pn	05 20 19.6	-0.5
BSWZ	**Blackbirch Sta**	**2.80**	**231**	PN	Pn	05 20 20.2	-1.3
NNZ	**Nelson**	**2.87**	**244**	PN	Pn	05 20 21.8	-0.7
NNZ	**Nelson**	**2.87**	**244**	P	Pn	05 20 21.8	-0.7
QRZ	**Quartz Range**	**3.36**	**254**	PN	Pn	05 20 28.3	-0.9
QRZ	**Quartz Range**	**3.36**	**254**	P	Pn	05 20 28.3	-0.9
THZ	**Tophouse**	**3.44**	**238**	PN	Pn	05 20 28.6	-1.7
THZ	**Tophouse**	**3.44**	**238**	P	Pn	05 20 28.6	-1.6
MQZ	**McQueen's Vall**	**4.83**	**219**	PN	Pn	05 20 47.0	-2.3
MQZ	**McQueen's Vall**	**4.83**	**219**	P	Pn	05 20 47.0	-2.3
CTZ	**Chatham Island**	**6.17**	**129**	PN	Pn	05 21 08.4	+0.7
LBZ	**Lake Benmore**	**6.58**	**226**	PN	Pn	05 21 10.9	-2.4
LBZ	**Lake Benmore**	**6.58**	**226**	P	Pn	05 21 10.9	-2.5
ODZ	**Otahua Downs**	**6.79**	**220**	PN	Pn	05 21 13.7	-2.4
ODZ	**Otahua Downs**	**6.79**	**220**	P	Pn	05 21 13.7	-2.5

IDC 02 05:25:03.5±3.6, 23.′53S×179.′31W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/15, mbtmp3.8/3, Error ellipse: s-maj=163.2km s-min=43.8km az=148.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**35.45**	**248**	P	P	05 32 02.0	+0.4
	2.3nm,0.5s,baz=114,slow=7.0,SNR=5.9						
ASAR	**Alice Springs**	**42.72**	**260**	P	P	05 33 03.0	+0.4
	0.3nm,0.4s,baz=92,slow=7.5,SNR=5.1						
WRA	**Warramunga Arr**	**43.06**	**266**	P	P	05 33 06.1	+0.6
	0.4nm,0.3s,baz=99,slow=7.0,SNR=12						
ARCES	**ARCESS Array B**	**131.66**	**349**	PKP	PKPdf	05 44 15.6	-2.1
	1.9nm,0.8s,baz=46,slow=2.6,SNR=3.8						
AKASG	**Malin Array Be**	**145.00**	**328**	PKPbc	PKPbc	05 44 40.1	-1.7
	0.5nm,0.4s,baz=43,slow=4.4,SNR=5.3						

NNC 02 05:28:28.2±8.2, 41.′09N×74.′07E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=79.7km s-min=29.2km az=164.0
KNET 02 05:28:29.2±0.6, 41.′35N×73.′93E, h3km±2km, ml3.1, Error ellipse: s-maj=3.3km s-min=1.6km az=35.0
ISC 02 05:28:29.1±1.2, 41.′25N±0.′07×73.′66E±0.′06, h10km, n12, σ1°20/22, 8C-10D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**0.88**	**2**	P	**Pg**	**05 28 44.9**	**-1.2**
	348nm,0.1s,SNR=153						
AML				⇓S	**Sg**	**05 28 57.2**	**-0.4**
	270nm,0.2s						
EKS2	**Erkin-Say**	**1.42**	**4**	P	**Pn**	**05 28 54.3**	**-0.6**
	49nm,0.2s,SNR=119						
EKS2				⇓S	**Sn**	**05 29 14.4**	**+0.8**
	116nm,0.3s						
KZA	**Kyzart**	**1.45**	**55**	⇑P	**Pn**	**05 28 53.0**	**-2.4**
	85nm,0.3s,SNR=14						
KZA				⇑S	**Sn**	**05 29 11.8**	**-2.7**
	114nm,0.2s						
AAK	**Ala-Archa**	**1.52**	**24**	⇓P	**Pn**	**05 28 55.4**	**-0.9**
	84nm,0.2s,SNR=72						
AAK				⇑S	**Sn**	**05 29 15.2**	**-1.0**
	179nm,0.3s						
KBK	**Karagaybulak**	**1.70**	**34**	⇓P	**Pn**	**05 28 58.4**	**-0.5**
	94nm,0.1s,SNR=9.3						
KBK				⇑S	**Sn**	**05 29 20.6**	**-0.1**
	273nm,0.3s						
CHMS	**Chumysh**	**1.93**	**25**	⇓P	**Pn**	**05 29 02.6**	**+0.6**
	31nm,0.1s,SNR=27						
CHMS				⇓S	**Sn**	**05 29 27.3**	**+1.1**
	152nm,0.4s						
USP	**Ospenovka**	**2.11**	**17**	⇓P	**Pn**	**05 29 06.2**	**+1.7**
	108nm,0.2s,SNR=140						
USP				⇑S	**Sn**	**05 29 34.6**	**+3.9**
	74nm,0.2s						
ULHL	**Ulahol**	**2.17**	**62**	⇑P	**Pn**	**05 29 04.6**	**-0.7**
	17nm,0.2s,SNR=52						
ULHL				⇑S	**Sn**	**05 29 33.9**	**+1.6**
	88nm,0.4s						
TKM2	**Tokmak 2**	**2.21**	**40**	⇓Pn	**Pn**	**05 29 06.6**	**+0.9**
	14nm,0.3s						
TKM2				⇑Sn	**Sn**	**05 29 34.3**	**+1.1**
	74nm,0.4s						
TKM2	**Tokmak 2**	**2.21**	**40**	⇓P	**Pn**	**05 29 07.0**	**+1.2**
	33nm,0.2s,SNR=67						
KK31	**Karatay Array**	**2.98**	**309**	Pn	**Pn**	**05 29 18.5**	**+2.1**
	7.5nm,0.3s,baz=125,slow=16,SNR=160						
KK31				⇓Sn	**Sg**	**05 30 04.3**	**-0.7**
	26nm,0.3s,baz=122,slow=29,SNR=12						
AB31	**Akbulak array**	**12.54**	**314**	Pn	**Pn**	**05 31 27.2**	**-0.2**
	0.6nm,0.6s,baz=122,slow=14,SNR=6.9						

ISK 02 05:36:42.2, 38.′04N×29.′22E, h2km, MD2.8
ISCJB 02 05:36:43.3±0.4, 38.′01N±0.′02×29.′30E±0.′05, h4km±7km, Error ellipse: s-maj=6.3km s-min=3.4km az=18.0
DDA 02 05:36:43.5, 37.′97N×29.′31E, h9km±1km, Md2.8
CSEM 02 05:36:43.5±0.1, 38.′00N×29.′30E, h10km, MD2.8, Error ellipse: s-maj=4.4km s-min=2.7km az=111.0
ISC 02 05:36:43.8±0.4, 38.′00N±0.′02×29.′30E±0.′05, h10km±6km, n27, σ0°63/41, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.32**	**220**	*e*PG	**Pg**	**05 36 49.4**	**-0.8**
DENT				*e*SG	**Sg**	**05 36 54.7**	**+0.1**
DENT	**Denizli**	**0.32**	**220**	*e*Pg	**Pg**	**05 36 49.4**	**-0.8**
DENT				*e*Sg	**Sg**	**05 36 54.7**	**+0.1**
KHL	**Karahalli**	**0.37**	**29**	*e*PG	**Pg**	**05 36 50.4**	**-0.6**
KHL				*e*SG	**Sg**	**05 36 56.6**	**+0.6**
KHL	**Karahalli**	**0.37**	**29**	*e*Pg	**Pg**	**05 36 50.4**	**-0.7**
KHL				*e*Sg	**Sg**	**05 36 56.6**	**+0.6**
DNZL	**Cakiroluk**	**0.37**	**212**	*i* P	**Pg**	**05 36 51.0**	**-0.1**
DNZL				*i* S	**Sg**	**05 36 56.1**	**+0.1**
DNZL	**Cakiroluk**	**0.37**	**212**	*i* P	**Pg**	**05 36 51.0**	**-0.1**
KHAL	**Karahalli**	**0.40**	**23**	*i* P	**Pg**	**05 36 51.6**	**0.0**
KHAL				*i* S	**Sg**	**05 36 58.0**	**+1.0**
KHAL	**Karahalli**	**0.40**	**23**	*i* P	**Pg**	**05 36 51.6**	**-0.1**
KHAL				*i* S	**Sg**	**05 36 58.0**	**+1.0**
GOLH	**Golhisar**	**0.79**	**165**	*i* P	**Pg**	**05 36 57.9**	**-1.2**
GOLH				*i* S	**Sg**	**05 37 10.3**	**+0.8**
GOLH	**Golhisar**	**0.79**	**165**	*i* P	**Pg**	**05 36 57.9**	**-1.2**
GLHS	**Glhisar (BURDU**	**0.86**	**169**	*e*PG	**Pg**	**05 37 00.5**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.86**	**169**	*e*Pg	**Pg**	**05 37 00.5**	**+0.1**
ISP	**Isparta**	**0.99**	**100**	*e*PG	**Pg**	**05 37 03.1**	**+0.3**
GDZ	**Gediz**	**1.09**	**8**	*i* P	**Pg**	**05 37 04.5**	**-0.3**
GDZ				*i* S	**Sg**	**05 37 18.7**	**-0.4**
GDZ	**Gediz**	**1.09**	**8**	*i* P	**Pg**	**05 37 04.5**	**-0.4**
GDZ				*i* S	**Sg**	**05 37 18.7**	**-0.4**
SHUT	**Suhut-Afyon**	**1.13**	**61**	*e*PN	**Pg**	**05 37 05.3**	**-0.3**
SHUT	**Suhut-Afyon**	**1.13**	**61**	*e*Pn	**Pg**	**05 37 05.3**	**-0.3**
DEMI	**Demirci**	**1.13**	**337**	*i* P	**Pg**	**05 37 06.0**	**+0.4**
DEMI				*i* S	**Sg**	**05 37 20.4**	**0.0**
DEMI	**Demirci**	**1.13**	**337**	*i* P	**Pg**	**05 37 06.0**	**+0.4**
DEMI				*i* S	**Sg**	**05 37 20.4**	**0.0**
AYDN	**Tasoluk**	**1.17**	**254**	*i* P	**Pb**	**05 37 06.2**	**0.0**
AYDN				*i* S	**Sb**	**05 37 22.5**	**+1.0**
AYDN	**Tasoluk**	**1.17**	**254**	*i* P	**Pb**	**05 37 06.2**	**0.0**
AYDN				*i* S	**Sb**	**05 37 22.5**	**+1.1**
YER	**Yerkesik**	**1.18**	**223**	*e*PN	**Pn**	**05 37 05.5**	**-0.9**
YER	**Yerkesik**	**1.18**	**223**	*e*Pn	**Pn**	**05 37 05.5**	**-0.9**
ALT	**Altintas**	**1.23**	**31**	*e*PN	**Pn**	**05 37 06.4**	**-0.7**
ALT	**Altintas**	**1.23**	**31**	*e*Pn	**Pn**	**05 37 06.4**	**-0.7**
ELL	**Elmali**	**1.34**	**159**	*e*PN	**Pn**	**05 37 09.6**	**+0.9**
ELL	**Elmali**	**1.34**	**159**	*e*Pn	**Pn**	**05 37 09.6**	**+0.9**

IDC 02 05:52:33.7±2.1, 54.′26N×86.′03E, h0km, mb1 3.4/2, mb1mx3.2/26, mbtmp3.4/2, ML3.2/2, Error ellipse: s-maj=17.0km s-min=2.3km az=66.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**0.78**	**247**	Pg	Pg	05 52 47.2	-1.3
	1.5nm,0.3s,baz=64,slow=17,SNR=18						
ZALV				Lg		05 52 59.9	
	7.6nm,0.3s,baz=71,slow=29,SNR=33						
KURK	**Kurchatov**	**5.75**	**235**	Pn	Pn	05 54 03.3	+3.1
	0.2nm,0.3s,baz=52,slow=14,SNR=15						
KURK				Lg		05 55 39.1	
	0.1nm,0.3s,baz=44,slow=28,SNR=4.4						
MKAR	**Makanchi Array**	**7.84**	**199**	Pn	Pn	05 54 29.2	+0.3
	0.4nm,0.3s,baz=24,slow=12,SNR=27						
MKAR				Sn	Sn	05 55 58.6	+0.3
	0.1nm,0.3s,baz=30,slow=27,SNR=8.5						
MKAR				Lg		05 56 41.7	
	0.1nm,0.3s,baz=29,slow=30,SNR=8.7						

ISK 02 05:56:11.6, 38.′00N×29.′28E, h15km, MD2.7
ISCJB 02 05:56:12.3±0.5, 37.′98N±0.′03×29.′35E±0.′05, h8km±5km, Error ellipse: s-maj=6.7km s-min=3.6km az=23.6
CSEM 02 05:56:12.1±0.1, 37.′97N×29.′35E, h12km, MD2.7, Error ellipse: s-maj=2.8km s-min=1.4km az=112.0
DDA 02 05:56:12.2, 37.′98N×29.′33E, h8km±1km, Md2.8
ISC 02 05:56:12.6±0.4, 37.′99N±0.′03×29.′33E±0.′05, h14km±5km, n25, σ0°58/41, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.33**	**225**	*e*PG	**Pg**	**05 56 18.7**	**-0.6**
DENT				*e*SG	**Sg**	**05 56 23.6**	**-0.2**
DENT	**Denizli**	**0.33**	**225**	*e*Pg	**Pg**	**05 56 18.7**	**-0.6**
DENT				*e*Sg	**Sg**	**05 56 23.6**	**-0.2**
KHL	**Karahalli**	**0.37**	**24**	*e*PG	**Pg**	**05 56 19.4**	**-0.6**
KHL				*e*SG	**Sg**	**05 56 25.8**	**+0.7**
KHL	**Karahalli**	**0.37**	**24**	*e*Pg	**Pg**	**05 56 19.4**	**-0.7**
KHL				*e*Sg	**Sg**	**05 56 25.8**	**+0.7**
DNZL	**Cakiroluk**	**0.37**	**217**	*i* P	**Pg**	**05 56 19.8**	**-0.3**
DNZL				*i* S	**Sg**	**05 56 24.9**	**-0.2**
DNZL	**Cakiroluk**	**0.37**	**217**	*i* P	**Pg**	**05 56 19.8**	**-0.3**
DNZL				*i* S	**Sg**	**05 56 24.9**	**-0.2**
KHAL	**Karahalli**	**0.40**	**18**	*i* P	**Pg**	**05 56 20.4**	**-0.3**
KHAL				*i* S	**Sg**	**05 56 26.7**	**+0.5**
KHAL	**Karahalli**	**0.40**	**18**	*i* P	**Pg**	**05 56 20.4**	**-0.3**
KHAL				*i* S	**Sg**	**05 56 26.7**	**+0.5**
GOLH	**Golhisar**	**0.77**	**166**	*i* P	**Pg**	**05 56 26.9**	**-0.6**
GOLH				*i* S	**Sg**	**05 56 39.0**	**+1.4**
GOLH	**Golhisar**	**0.77**	**166**	*i* P	**Pg**	**05 56 27.0**	**-0.5**
GOLH				*i* S	**Sg**	**05 56 39.0**	**+1.4**
GLHS	**Glhisar (BURDU**

TWM1	Shoushan	0.60	249	*e*P	Pg	06 06 44.9 0.0
	baz=243					
CHN3	Shinhua	0.61	274	P	Pg	06 06 46.5 +1.2
	baz=271					
CHN3				*e*S	Sg	06 06 56.7 +3.5
	baz=271					
CHN5	Tsauling	0.65	330	⇓*i*P	Pg	06 06 45.3 -0.6
	baz=334					
CHN5				*e*S	Sg	06 06 52.7 -1.5
	baz=334					
EAST	Anshuo	0.67	194	⇓P	Pg	06 06 46.3 -0.1
	baz=189					
EAST				*e*S	Sg	06 06 54.4 -0.7
	baz=189					
TAW	Tawu	0.69	190	*e*P	Pg	06 06 46.5 -0.2
	baz=193					
CHY	Chiayi	0.72	310	*e*P	Pg	06 06 46.6 -0.7
	baz=312					
CHY				*e*S	Sg	06 06 57.2 +0.5
	baz=312					
TAI1	Yung-k'ang	0.74	270	*e*P	Pg	06 06 49.0 +1.3
	baz=269					
TAI1				*e*S	Sg	06 07 00.3 +3.0
	baz=269					
SSLB	Suanglung	0.75	355	*e*Pg	Pg	06 06 46.6 -1.3
SSLB				*e*Sg	Sg	06 06 56.1 -1.6
SCZT	Fangliau	0.76	210	⇓*i*P	Pg	06 06 47.3 -0.8
	baz=212					
WGK	Gukeng	0.78	327	*e*P	Pg	06 06 48.7 +0.3
	baz=330					
WGK				*e*S	Sg	06 06 58.9 +0.4
	baz=330					
SCLT	Jiali	0.78	280	*e*P	Pg	06 06 50.4 +1.9
	baz=295					
SCLT				*e*S	Sg	06 07 01.7 +3.1
	baz=295					
KAU	Kaohsiung	0.81	235	*e*P	Pg	06 06 50.4 +1.4
	baz=249					
CHN8	Yiju	0.81	292	*e*P	Pg	06 06 49.0 -0.1
	baz=294					
CHN8				*e*S	Sg	06 07 01.3 +1.6
	baz=294					
SMLT	Sun Moon Lake	0.85	352	P	Pg	06 06 49.1 -0.8
	baz=6.0					
SMLT				*e*S	Sg	06 07 04.3 +3.3
	baz=6.0					
ESL	Shilin	0.86	26	P	Pg	06 06 48.9 -1.1
	baz=46					
TYC	Yuchr	0.88	350	P	Pg	06 06 49.4 -1.0
	baz=359					
TYC				*e*S	Sg	06 07 03.9 +2.1
	baz=359					
WNT	Mingjian	0.90	339	*e*P	Pg	06 06 50.5 -0.2
	baz=344					
WNT				*e*S	Sg	06 07 03.6 +1.3
	baz=344					
TWP	Hsiaoliuchiu	0.92	222	*e*P	Pg	06 06 53.6 +2.4
	baz=211					
TWP				*e*S	Sg	06 07 10.2 +7.1
	baz=211					
HEN	Hengchun	1.06	195	*e*P	Pg	06 06 53.9 +0.1
	baz=199					
HEN				*e*S	Sg	06 07 12.0 +4.4
	baz=199					
HWA	Hwalien	1.08	29	*e*P	Pg	06 06 54.0 -0.1
	baz=35					
LAY	Lan-yu	1.10	154	*e*P	Pg	06 06 53.1 -1.6
	baz=150					
TWK1	Hengchun	1.11	191	*e*P	Pg	06 06 54.8 0.0
	baz=176					
WHF	Hehuan Shan	1.12	11	*e*P	Pg	06 06 53.2 -1.9
	baz=22					
WHF				*e*S	Sg	06 07 10.8 +1.1
	baz=22					
TSEB	Hengchuen, Pin	1.14	186	*e*P	Pg	06 06 54.3 -1.0
	baz=193					
TSEB				*e*S	Sg	06 07 15.2 +5.2
	baz=193					
TCU	Taichung	1.15	344	*e*P	Pg	06 06 55.6 0.0
	baz=347					
TCU				*e*S	Sg	06 07 12.9 +2.3
	baz=347					
TWD	Chiawan	1.16	27	P	Pg	06 06 54.7 -1.1
	baz=40					
TWD				*e*S	Sg	06 07 10.4 -0.5
	baz=40					
TWT	Tachien	1.22	6	*e*P	Pg	06 06 55.9 -1.0
	baz=16					
TWT				*e*S	Sg	06 07 14.6 +1.9
	baz=16					
NACB	Ninganchiao	1.25	25	*e*Pn	Pn	06 06 55.4 -2.7
TWQ1	Liyutan	1.33	350	*e*P	Pg	06 06 59.2 +0.2
	baz=354					
TWQ1				*e*S	Sg	06 07 17.8 +1.6
	baz=354					
NSY	Sanyi	1.40	350	*e*P	Pn	06 07 00.2 0.0
	baz=352					
NSY				*e*S	Sg	06 07 20.1 +1.8
	baz=352					
NNS	Nan Shan	1.43	13	*e*P	Pn	06 06 59.3 -1.4
	baz=31					
NNS				*e*S	Sg	06 07 18.9 -0.7
	baz=31					
PNG	Penghu	1.45	292	*e*P	Pn	06 06 58.0 -3.0
	baz=293					
PNG				*e*S	Sg	06 07 16.5 -3.8
	baz=293					
ENA	Nanau	1.53	25	*e*P	Pn	06 07 00.8 -1.3
	baz=40					
NSTT	Nanjuang	1.59	359	*e*P	Pn	06 07 02.1 -0.8
	baz=3.0					
NSTT				*e*S	Sn	06 07 24.3 +0.2
	baz=3.0					
YHNB	Yeheng	1.66	11	*e*Pn	Pn	06 07 03.4 -0.4
YHNB				*e*Sn	Sn	06 07 23.7 -2.1
NSK	Sanguang	1.66	10	*e*P	Pn	06 07 03.6 -0.3
	baz=27					
NSK				*e*S	Sn	06 07 26.9 +1.1
	baz=27					
ENTT	Nioudou	1.67	17	P	Pn	06 07 03.9 -0.1
	baz=33					
ENTT				*e*S	Sn	06 07 28.3 +2.1
	baz=33					
TWC	Suao	1.74	25	*e*P	Pn	06 07 04.8 -0.1
	baz=30					
TWC				S	Sn	06 07 27.8 0.0
	baz=30					
TWE	Neicheng	1.78	19	*e*P	Pn	06 07 05.8 +0.3
	baz=39					
TATO	Taipei	1.98	12	*e*Pn	Pn	06 07 05.2 -3.0
TWA	Mucha	2.00	15	*e*P	Pn	06 07 10.0 +1.4
	baz=34					
TAP1	Taipei	2.04	13	*e*P	Pn	06 07 10.4 +1.3
	baz=357					
TWS1	Kuangyinshan	2.09	10	*e*P	Pn	06 07 12.4 +2.7
	baz=353					
TWS1				*e*S	Sn	06 07 41.3 +4.9
	baz=353					
NWF	Wu-fen Shan	2.14	19	*e*P	Pn	06 07 11.8 +1.3
	baz=37					
TWB1	Santiao Chiao	2.15	24	*e*P	Pn	06 07 10.0 -0.6
	baz=40					
TWY	Chenhua	2.29	13	*e*P	Pn	06 07 14.5 +2.0
	baz=357					
QZH	Quanzhou	2.93	311	Pn	Pn	06 07 20.3 -1.0
QZH				Sn	Sn	06 07 51.2 -6.0
QZH				smax		
	comp=N,130nm,0.7s					
QZH				smax		
	comp=E,130nm,0.9s					

CSEM 02 06:25:10.2±0.3, 33°.68N×49°.01E, h2km, ML3.7, Error ellipse: s-maj=9.2km s-min=5.6km az=121.0, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAO	Ashtian	1.21	44	*e*Pg	Pg	06 25 34.2	+0.8
ASAO				*e*Sg	Sg	06 25 51.2	+2.1
SHGR	Shooshtar-Gavs	1.57	187	*e*Pg	Pg	06 25 40.0	-0.4
SNGE	Sanandaj	1.97	316	*e*Pg	Pg	06 25 47.5	-0.5
GHVR	GHOM	2.06	66	*e*Pg	Pg	06 25 48.9	-0.7
NASN	Na'in	3.30	104	*e*Sg	Sg	06 26 55.5	-0.7
MIB	Mutribah	4.12	201	*e*P	Pn	06 26 14.9	+0.8
MIB				*e*S	Sn	06 27 02.3	-0.5
	61nm,0.6s						
NAY	Al-Naaiem	4.67	199	*e*P	Pn	06 26 22.2	+0.6
NAY				*e*S	Sn	06 27 16.2	-0.2
RDF	Al-Radifah	4.90	195	*e*P	Pn	06 26 25.7	+0.9
RDF				*e*S	Sn	06 27 20.0	-2.1

*IDC **02** 06:25:26.4±1.6, 6°.62N×126°.16E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.6/23, mbtmp3.8/6, Error ellipse: s-maj=120.7km s-min=18.4km az=68.0*
*NEIC **02** 06:25:27.1±0.7, 6°.80N×126°.55E, h10km, Error ellipse: s-maj=20.9km s-min=8.7km az=49.0*
*ISCJB **02** 06:25:31.0±0.8, 6°.6N±0°.1×126°.20E±0°.09, h51km±8km, mb3.7/6, Error ellipse: s-maj=20.6km s-min=10.3km az=39.0*
*MAN **02** 06:25:31, 6°.68N×126°.16E, h30km, mb4.6, ML3.5, MS3.4*
ISC 02 06:25:32.0±1.0, 6°.6N±0°.1×126°.14E±0°.08, h39km±12km, n13, σ0°.99/18, mb3.7/6, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	Mati	0.36	18	*e*P	Pn	06 25 41.0	+0.1
MATI				*e*S	Sn	06 25 47.0	-0.1
DAV	Davao City (W)	0.73	310	*e*Pg	Pn	06 25 46.5	+0.7
DAV				*e*Sg	Sn	06 25 53.3	-2.5
DMPH	Davao City--Mi	0.79	307	⇑*e*P	Pn	06 25 46.2	-0.4
DMPH				*e*S	Sn	06 25 58.2	+0.9
BUKP	Musuan	1.66	320	*e*P	Pn	06 25 58.0	-0.6
BUKP				*e*S	Sn	06 26 15.3	-3.5
CGP	Cagayan de Oro	2.34	322	⇓*e*P	Pn	06 26 08.5	+0.6
CGP				*e*S	Sn	06 26 38.3	+2.9
FITZ	Fitzroy Crossi	24.55	181	P	P	06 30 49.3	+1.1
	1.2nm,0.7s,mb3.5,baz=12,slow=11,SNR=4.1						
WRA	Warramunga Arr	27.58	163	P	P	06 31 15.8	+0.2
	0.3nm,0.5s,mb3.2,baz=342,slow=10,SNR=2.8						
ASAR	Alice Springs	31.02	166	P	P	06 31 45.4	-0.7
	0.5nm,0.4s,mb3.7,baz=341,slow=7.3,SNR=8.5						
STKA	Stephens Creek	41.00	160	P	P	06 33 10.9	-0.5
	1.9nm,0.7s,mb3.8,baz=348,slow=9.3,SNR=3.0						
MK31	Makanchi Array	54.89	324	*e*P	P	06 34 58.1	-0.5
MKAR	Makanchi Array	54.89	324	P	P	06 34 59.0	+0.3
	1.1nm,0.7s,mb4.0,baz=124,slow=8.1,SNR=15						
MKAR	Makanchi Array	54.89	324	P	P	06 34 59.0	+0.3
KURK	Kurchatov	59.03	327	P	P	06 35 27.7	-0.1
	0.9nm,0.5s,mb4.1,baz=122,slow=7.2,SNR=6.6						

KRSC 02 06:36:57.8±0.9, 52°.52N×162°.31E, h12km±18km, ML3.5, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLC	Nalytchevo	1.91	291	*e*P	Pn	06 37 29.8	-0.3
NLC				*i* S	Sn	06 37 53.2	-0.9
MKZ	Mys Kozlova	2.07	351	*e*P	Pn	06 37 33.4	+1.1
MKZ				*i* S	Sn	06 37 59.6	+1.6
AVH	Avacha	2.29	290	*e*P	Pn	06 37 37.4	+2.1
AVH				*i* S	Sn	06 38 05.7	+2.3
GNL	Ganaly	2.88	296	*e*P	Pn	06 37 45.3	+1.8
GNL				*i* S	Sn	06 38 20.8	+2.7
KMNR	Kamenistaya	3.46	340	P	Pn	06 37 54.3	+2.8
KBTR	Krutoberegovo	3.71	4	P	Pn	06 37 55.5	+0.7

*NEIC **02** 07:14:31.2, 31°.19S×68°.64W, h130km, MG3.5(GUC), After GUC.*
GUC 02 07:14:31.2±0.9, 31°.19S×68°.64W, h130km±71km, ML3.5, 2C-4D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	Combarbala	2.02	270	⇑*i*P	Pn	07 15 06.0	+0.5
CMCH				*i* S	Sn	07 15 33.0	+1.3
CMCH	Combarbala	2.02	270	⇑*i*P	Pn	07 15 06.0	+0.5
CMCH				*i* S	Sn	07 15 33.0	+1.3
CMCH				AML	AML	07 15 34.0	
	comp=N,691nm,0.4s						
TLL	Tololo Astrono	2.13	298	*e*P	Pn	07 15 07.3	+0.6
TLL				*i* S	Sn	07 15 35.4	+1.5
TLL	Tololo Astrono	2.13	298	*e*P	Pn	07 15 07.3	+0.6
TLL				*i* S	Sn	07 15 35.4	+1.5
TLL				AML	AML	07 15 38.0	
	comp=N,217nm,0.4s						
FCH	Farellones	2.55	213	*e*P	Pn	07 15 13.5	+1.5
FCH	Farellones	2.55	213	*e*P	Pn	07 15 13.5	+1.5
FCH				AML	AML	07 15 50.3	
	comp=E,87nm,0.4s						
PEL	Peldehue	2.61	221	*i* P	Pn	07 15 13.3	+0.5
PEL				*i* S	Sn	07 15 45.0	+0.3
PEL				AML	AML	07 15 49.8	
	comp=E,157nm,0.3s						
CLCH	Cerro Calan	2.72	216	*i* P	Pn	07 15 15.5	+1.3
CLCH				*i* S	Sn	07 15 48.0	+0.6
CLCH				AML	AML	07 15 52.5	
	comp=E,191nm,0.5s						
LCO	Las Campanas	2.81	320	⇓*i*P	Pn	07 15 16.1	+0.7
LCO				*i* S	Sn	07 15 51.0	+1.5
LCO	Las Campanas	2.81	320	⇓*i*P	Pn	07 15 16.1	+0.7
LCO				*i* S	Sn	07 15 51.0	+1.5
LCO				AML	AML	07 15 53.4	
	comp=E,184nm,0.1s						
ANTU	Antumapu	2.91	215	*e*P	Pn	07 15 17.2	+0.6
ANTU	Antumapu	2.91	215	*e*P	Pn	07 15 17.2	+0.6
ANTU				AML	AML	07 15 56.1	
	comp=E,84nm,0.4s						
LMEL	Las Melosas	2.96	206	⇓*i*P	Pn	07 15 18.3	+1.0
LMEL	Las Melosas	2.96	206	⇓*i*P	Pn	07 15 18.3	+1.0
LMEL				AML	AML	07 16 04.7	
	comp=N,65nm,0.2s						
LNV	Longovilo	3.62	220	*e*P	Pn	07 15 24.1	-1.8
LNV				*i* S	Sn	07 16 05.4	-2.8
LNV	Longovilo	3.62	220	*e*P	Pn	07 15 24.1	-1.8
LNV				*i* S	Sn	07 16 05.4	-2.8

*CSEM **02** 07:40:04.1±0.4, 37°.03N×28°.34E, h30km, MD2.6, Error ellipse: s-maj=11.4km s-min=8.8km az=26.0*
*ISCJB **02** 07:40:05.2±1.2, 37°.00N±0°.06×28°.26E±0°.07, h21km±14km, Error ellipse: s-maj=12.4km s-min=7.3km az=40.3*
*DDA **02** 07:40:06.0, 37°.03N×28°.12E, h7km±2km, Md2.6*
*ISK **02** 07:40:06.9, 37°.09N×28°.18E, h14km, MD2.6*
ISC 02 07:40:05.1±1.0, 37°.01N±0°.06×28°.26E±0°.07, h23km±13km, n14, σ0°.94/21, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.13	7	*e*PG	Pb	07 40 10.2	+0.6
YER				*e*SG	Sb	07 40 12.7	0.0
YER	Yerkesik	0.13	7	*e*Pg	Pb	07 40 10.3	+0.7
YER				*e*Sg	Sb	07 40 12.7	0.0
TURN	Turunc	0.30	116	*i* P	Pb	07 40 11.5	-0.5
TURN				*i* S	Sb	07 40 16.1	-0.6
TURN	Turunc	0.30	116	*i* P	Pb	07 40 11.5	-0.4
TURN				*i* S	Sb	07 40 16.1	-0.5
MLSB	Milas	0.48	307	*e*PG	Pb	07 40 15.1	+0.2
MLSB	Milas	0.48	307	*e*Pg	Pb	07 40 15.1	+0.2
DAT	Datca	0.61	243	*e*PG	Pb	07 40 19.1	+2.0
DAT	Datca	0.61	243	*e*Pg	Pb	07 40 19.1	+2.0
BDRM	Kayabasi	0.66	275	*i* P	Pb	07 40 16.8	-1.1
BDRM				*i* S	Sb	07 40 24.7	-1.8
BDRM	Kayabasi	0.66	275	*i* P	Pb	07 40 16.8	-1.0
AYDN	Tasoluk	0.72	335	*i* P	Pb	07 40 19.2	+0.3
AYDN				*i* S	Sb	07 40 28.2	-0.2
AYDN	Tasoluk	0.72	335	*i* P	Pb	07 40 19.2	+0.3
AYDN				*i* S	Sb	07 40 28.2	-0.2
BODT	Bodrum	0.76	274	*e*PG	Pb	07 40 20.6	+1.0
BODT	Bodrum	0.76	274	*e*Pg	Pb	07 40 20.6	+1.0

*IDC **02** 08:08:02.0±1.0, 11°.41N×141°.83E, h0km, mb3.6/8, mb1 3.8/9, mb1mx3.7/24, mbtmp3.7/9, ML3.7/1, MS2.8/3, Ms1 2.8/3, ms1mx2.4/28, Error ellipse: s-maj=35.6km s-min=21.1km az=101.0*
*ISCJB **02** 08:08:05.0±0.6, 11°.4N±0°.1×141°.8E±0°.1, h33km, mb3.7/9, MS2.6/2, Error ellipse: s-maj=18.7km s-min=9.2km az=43.4*
*NEIC **02** 08:08:07.0±0.5, 11°.39N×141°.93E, h35km, mb3.9/1, Error ellipse: s-maj=18.8km s-min=10.7km az=111.0*
ISC 02 08:08:07.2±0.6, 11°.4N±0°.1×141°.8E±0°.1, h35km, n14, σ0°.83/12, mb3.7/9, MS2.6/2, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	3.70	53	Pn	Pn	08 09 00.6	-1.4
	5.9nm,0.3s,baz=184,slow=15,SNR=4.9						
GUMO	Guam	3.70	53	*e*Pn	Pn	08 08 60.0	-2.0
GUMO				Sn	Sn	08 09 45.4	+1.0
CBIJ	Chichi jima	15.64	1	LR	LR	08 16 23.2	
	comp=Z,44nm,21.7s,baz=108,slow=32						
JHJ	Hachijo jima 2	21.72	355	LR	LR	08 21 08.1	
	comp=Z,37nm,18.6s,MS2.8,baz=280,slow=36						
KSRS	Korea Array	28.80	337	LR	LR	08 25 00.6	
	comp=Z,9.8nm,18.1s,MS2.5,baz=205,slow=35						
WRAB	Tennant Creek	31.97	193	P	P	08 14 29.9	-0.3
	1.1nm,0.6s,mb3.9						
WRA	Warramunga Arr	31.98	193	P	P	08 14 29.7	-0.5
	0.8nm,0.8s,mb3.6,baz=12,slow=10,SNR=5.8						
ASAR	Alice Springs	35.68	192	P	P	08 15 03.0	+0.7
	0.3nm,0.7s,mb3.4,baz=22,slow=12,SNR=4.8						
PETK	Petropavlovsk-	43.53	14	P	P	08 16 06.1	-1.3
	0.9nm,0.3s,mb3.9,baz=43,slow=24,SNR=2.5						
SONM	Songino Array	46.90	328	P	P	08 16 33.7	-0.5
	0.4nm,0.4s,mb3.7,baz=120,slow=5.8,SNR=2.9						
KURK	Kurchatov	64.38	321	P	P	08 18 40.2	+0.6
	1.2nm,0.7s,mb4.0,baz=111,slow=6.3,SNR=5.1						
BVAR	Borovoye Array	69.82	322	P	P	08 19 14.8	+0.7
	1.2nm,0.4s,mb4.2,baz=237,slow=42,SNR=1.9						
YKA	Yellowknife Ar	86.17	27	P	P	08 20 45.1	+0.5
	0.1nm,0.6s,mb3.2,baz=85,slow=17,SNR=1.7						
NVAR	Mina Array Bea	90.62	51	P	P	08 21 06.9	+0.6
	0.3nm,0.6s,mb3.8,baz=266,slow=4.0,SNR=2.1						

*IDC **02** 08:08:34.7±6.8, 33°.81N×71°.52E, h0km, mb3.8/4, mb1 3.8/9, mb1mx3.6/28, mbtmp3.8/9, ML3.4/5, MS2.9/5, Ms1 2.9/5, ms1mx2.6/30, Error ellipse: s-maj=118.9km s-min=30.2km az=148.0*
*ISCJB **02** 08:08:37.4±0.8, 33°.59N±0°.04×71°.58E±0°.06, h71km±13km, mb3.6/4, Error ellipse: s-maj=8.7km s-min=6.4km az=157.0*
*NNC **02** 08:08:37.3±7.1, 33°.97N×70°.90E, h0km, mb3.9, Error ellipse: s-maj=106.6km s-min=74.2km az=84.0*
*NEIC **02** 08:08:38.1±1.1, 33°.53N×71°.68E, h53km±12km, mb3.7/2, Error ellipse: s-maj=19.1km s-min=9.3km az=128.0*
NEIC Felt at Peshawar.
*NDI **02** 08:08:44.5±3.2, 33°.19N×71°.64E, h53km, ML3.6, mb3.7(NEIC)*
ISC 02 08:08:38.3±0.6, 33°.66N±0°.04×71°.64E±0°.06, h53km±12km, n43, σ1°.53/50, mb3.7/4, MS2.8/3, 1C-5D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.32	293	*e*Pn	Pn	08 09 14.7	+0.7
KBL				*e*Sn	Sn	08 09 46.8	+5.4
THN	Thein Dam	3.64	109	*e*PKP	Pn	08 09 36.1	+4.1
THN				*ex*	x	08 10 34.9	
SDNR	Sundarnagar	4.99	114	*e*PKP	Pn	08 09 52.9	+2.3
SDNR				*ex*	x	08 11 17.5	
SMLA	Simla	5.32	117	*i* P	Pn	08 09 58.7	+3.6
SMLA				*i* x	Sn	08 11 00.1	+5.2
SMLA						08 11 01.9	
	comp=E,771nm,0.3s						
SMLA						08 11 01.9	
	comp=N,899nm,0.3s						
KHET	Khetri	6.62	146	*e*S	Sn	08 11 17.4	-10
KSH	Kashi	6.81	30	Pn	Pn	08 10 13.0	-2.4
KSH				Sn	Sn	08 11 20.0	-12
KSH				smax			
	comp=N,60nm,0.5s						
KSH				smax			
	comp=E,38nm,0.3s						
NDI	New Delhi	6.89	135	*e*PKP	Pn	08 10 19.5	+2.9
SONA	Sohna	7.14	138	*e*PKP	Pn	08 10 21.4	+1.4
SONA				*ex*	Sn	08 11 33.8	-6.0
SONA				AML	AML	08 12 32.0	
	comp=N,14nm,0.3s						
SONA				AML	AML	08 12 35.9	
	comp=E,24nm,0.1s						
JOSI	Joshimath	7.40	113	*e*PKP	Pn	08 10 27.7	+4.1
JOSI				*e*S	Sn	08 11 43.4	-2.7
JOSI				AML	AML	08 12 15.1	
	comp=N,90nm,0.3s						
JOSI				AML	AML	08 12 16.4	
	comp=E,77nm,0.6s						
AGRA	Agra	8.41	138	*e*S	Sn	08 12 00.9	-10
AGRA				AML	AML	08 13 24.9	
	comp=N,76nm,0.3s						
AGRA				AML	AML	08 13 27.1	
	comp=E,56nm,0.3s						
AML	Almayashu	8.61	10	*e*Pn	Pn	08 10 41.7	+1.6
	comp=E,12nm,0.4s						
EKS2	Erkin-Say	9.14	10	*e*Pn	Pn	08 10 48.8	+1.4
	comp=E,4.2nm,0.6s						
AAK	Ala-Archa	9.24	13	Pn	Pn	08 10 52.0	+3.3
	comp=E,0.8nm,0.3s,baz=199,slow=4.0,SNR=2.6						
AAK				LR	LR	08 14 46.7	
	comp=E,63nm,21.8s,baz=208,slow=41						
KK31	Karatay Array	9.47	355	Pn	Pn	08 10 50.9	-1.0
	comp=E,1.7nm,0.3s,baz=183,slow=14,SNR=38						
KK31				⇓Sn	Sn	08 12 35.1	-1.7
	comp=E,4.1nm,0.6s,baz=187,slow=25,SNR=4.2						
KAR	Karachi	9.54	205	Pn	Pn	08 10 50.9	-2.0
KAR				Sn	Sn	08 12 38.7	0.0
TKM2	Tokmak 2	9.75	17	*e*Pn	Pn	08 10 58.6	+2.8
GKN	Gorkha	12.51	113	*e*P	Pn	08 11 33.2	-0.3
	comp=E,7.8nm,0.3s						
DMN	Daman	13.07	114	*e*P	Pn	08 11 41.3	+0.2
	comp=E,6.3nm,0.3s						
KKN	Kakani	13.11	113	*e*P	Pn	08 11 41.1	-0.6
	comp=E,22nm,0.8s						
PKIN	Phulchoki	13.30	113	*e*P	Pn	08 11 43.9	-0.5
	comp=E,36nm,0.7s						
PKI	Pulchoki	13.32	113	*e*P	Pn	08 11 44.2	-0.3
	comp=E,9.8nm,0.4s						
GUN	Gumba	13.51	111	*e*P	Pn	08 11 45.6	-1.6
	comp=E,8.3nm,0.3s						
RAMN	Ramite	14.54	113	*e*P	Pn	08 12 00.6	-0.4
	comp=E,16nm,0.8s						
MK31	Makanchi Array	15.42	29	⇑P	Pn	08 12 17.7	+5.6
	comp=E,0.7nm,0.6s,baz=209,slow=12,SNR=8.2						
MK31	Makanchi Array	15.42	29	*e*Pn	Pn	08 12 13.8	+1.6
MKAR	Makanchi Array	15.42	29	Pn	Pn	08 12 14.3	+2.1
	comp=E,0.1nm,0.3s,baz=209,slow=40,SNR=2.6						
KURK	Kurchatov	17.80	15	⇓P	Pn	08 12 41.2	-0.7
	comp=E,7.1nm,1.0s						
KURK	Kurchatov	17.80	15	P	Pn	08 12 40.5	-1.4
	comp=E,0.1nm,0.3s,baz=204,slow=10,SNR=21						
KURK				LR	LR	08 19 38.9	
	comp=E,44nm,19.9s,baz=195,slow=38						
KURK	Kurchatov	17.80	15	*e*P	Pn	08 12 41.6	-0.3
	comp=E,4.9nm,0.9s						
KURK				LR	LR	08 19 38.9	
AB31	Akbulak array	17.84	334	⇓P	Pn	08 12 39.6	-2.9
	comp=E,0.6nm,0.4s,baz=152,slow=18,SNR=23						
ZRNK	Zerenda	19.38	355	⇓P	Pn	08 12 59.1	-1.9
BVAR	Borovoye Array	19.38	358	P	Pn	08 13 00.5	-0.5
	comp=E,0.2nm,0.3s,baz=167,slow=10.0,SNR=8.0						
BRVK	Borovoye	19.41	358	⇓P	Pn	08 13 05.4	+4.0
	comp=E,4.0nm,0.8s						
BRVK	Borovoye	19.41	358	P	Pn	08 13 00.1	-1.3
	comp=E,3.0nm,0.7s						
AKTK	Aktyubinsk	19.52	333	P	Pn	08 13 01.3	-1.4
AKTO	Aktyubinsk	19.52	333	P	Pn	08 13 01.3	-1.4
	comp=E,0.4nm,0.3s,baz=159,slow=6.9,SNR=14						
ZAA0	Zalesovo Array	22.33	21	*e*P	P	08 13 31.5	+0.3
ZALV	Zalesovo Beam	22.33	21	P	P	08 13 31.6	+0.4
	comp=E,1.5nm,0.5s,mb3.7,baz=216,slow=12,SNR=4.5						
ZALV				LR	LR	08 21 54.4	
	comp=E,8.9nm,19.6s,MS2.2,baz=71,slow=36						
BRTR	Keskin Array B	30.90

ellipse: s-maj=5.1km s-min=0.9km az=86.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZN	**Kozani**	**0.26**	**250**	P	Pg	08 09 41.0	+0.3
KZN				S	Sg	08 09 44.8	+0.8
KZN	**Kozani**	**0.26**	**250**	P	Pg	08 09 41.0	+0.3
KZN				S	Sg	08 09 44.8	+0.8
FNA	**Florina**	**0.67**	**306**	P	Pg	08 09 48.3	-0.3
FNA				S	Sg	08 09 58.5	+1.3
FNA	**Florina**	**0.67**	**306**	P	Pg	08 09 48.3	-0.3
FNA				S	Sg	08 09 58.5	+1.3
NEST	**Nestorio**	**0.79**	**272**	P	Pg	08 09 50.4	-0.6
NEST				S	Sg	08 10 02.4	+1.1
NEST	**Nestorio**	**0.79**	**272**	P	Pg	08 09 50.4	-0.6
NEST				S	Sg	08 10 02.4	+1.1
THL	**Klokotos Trika**	**0.83**	**184**	P	Pg	08 09 51.7	0.0
THL	**Klokotos Trika**	**0.83**	**184**	P	Pg	08 09 51.7	0.0
VAY	**Valandovo**	**1.00**	**21**	*e*Pn	Pn	08 09 59.0	+2.0
KRUS	**Krusevo**	**1.16**	**327**	*e*Pn	Pn	08 09 59.8	+0.5

*ISCJB **02** 08:10:46.4±0.7, 35°.01S±0°.06×70°.1W±0°.1, h147km±8km, mb4.3/2, Error ellipse: s-maj=19.1km s-min=8.8km az=17.9*
*GUC **02** 08:10:46.6±0.8, 34°.95S×70°.35W, h160km±8km, MD3.2, ML3.3*
*NEIC **02** 08:10:46.6, 34°.95S×70°.35W, h160km, MD3.2(GUC), After GUC.*
*IDC **02** 08:10:47.4±2.1, 35°.07S×69°.71W, h144km±18km, mb4.1/2, mb1 3.5/5, mb1mx3.3/14, mbtmp3.4/5, Error ellipse: s-maj=47.1km s-min=17.3km az=96.0*

ISC 02 08:10:47.2±0.7, 35°.03S±0°.06×70°.1W±0°.1, h141km±8km, n27, σ0s74/44, mb4.3/2, 6C-10D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NICH	**Los Niches**	**0.94**	**272**	*e*P	**Pn**	**08 11 10.6**	**0.0**
NICH				*i* S	**Sn**	**08 11 28.5**	**+0.2**
CACH	**El Canelo**	**1.01**	**335**	⇓*i*P	**Pn**	**08 11 11.4**	**+0.2**
CACH	**El Canelo**	**1.01**	**335**	⇓*i*P	**Pn**	**08 11 11.4**	**+0.2**
LMEL	**Las Melosas**	**1.19**	**355**	⇓*i*P	**Pn**	**08 11 13.4**	**+0.6**
LMEL	**Las Melosas**	**1.19**	**355**	⇓*i*P	**Pn**	**08 11 13.4**	**+0.6**
LMEL				AML	AML	08 11 43.7	
	comp=N,389nm,0.3s						
CHCH	**Chadas Angostu**	**1.19**	**337**	⇑*i*P	**Pn**	**08 11 12.9**	**0.0**
CHCH				*i* S	**Sn**	**08 11 33.2**	**+0.7**
CHCH	**Chadas Angostu**	**1.19**	**337**	⇑*i*P	**Pn**	**08 11 12.9**	**0.0**
CHCH				*i* S	**Sn**	**08 11 33.2**	**+0.7**
SJCH	**San Jose de Ma**	**1.41**	**351**	*e*P	**Pn**	**08 11 15.9**	**+0.8**
SJCH				*i* S	**Sn**	**08 11 37.6**	**+1.3**
SJCH	**San Jose de Ma**	**1.41**	**351**	*e*P	**Pn**	**08 11 15.9**	**+0.8**
SJCH				*i* S	**Sn**	**08 11 37.6**	**+1.3**
SJCH				AML	AML	08 11 39.1	
	comp=E,221nm,0.4s						
PCH	**Pirque**	**1.45**	**346**	⇑*i*P	**Pn**	**08 11 15.9**	**+0.3**
PCH				*i* S	**Sn**	**08 11 37.8**	**+0.6**
PCH	**Pirque**	**1.45**	**346**	⇑*i*P	**Pn**	**08 11 15.9**	**+0.3**
PCH				*i* S	**Sn**	**08 11 37.8**	**+0.6**
ANTU	**Antumapu**	**1.53**	**343**	⇓*i*P	**Pn**	**08 11 16.4**	**0.0**
ANTU				*i* S	**Sn**	**08 11 38.5**	**-0.2**
ANTU	**Antumapu**	**1.53**	**343**	⇓*i*P	**Pn**	**08 11 16.4**	**0.0**
ANTU				*i* S	**Sn**	**08 11 38.5**	**-0.2**
ANTU				AML	AML	08 11 39.5	
	comp=N,598nm,0.3s						
LNV	**Longovilo**	**1.53**	**314**	⇓*i*P	**Pn**	**08 11 15.7**	**-0.7**
LNV				*i* S	**Sn**	**08 11 37.2**	**-1.6**
LNV	**Longovilo**	**1.53**	**314**	⇓*i*P	**Pn**	**08 11 15.7**	**-0.7**
LNV				*i* S	**Sn**	**08 11 37.2**	**-1.6**
TACH	**Talagante**	**1.55**	**333**	⇑*i*P	**Pn**	**08 11 16.1**	**-0.5**
TACH				*i* S	**Sn**	**08 11 38.3**	**-0.7**
TACH	**Talagante**	**1.55**	**333**	⇑*i*P	**Pn**	**08 11 16.1**	**-0.5**
TACH				*i* S	**Sn**	**08 11 38.3**	**-0.7**
SAN	**Santiago**	**1.65**	**343**	*i* P	**Pn**	**08 11 17.5**	**-0.2**
SAN				*i* S	**Sn**	**08 11 40.8**	**-0.2**
SAN	**Santiago**	**1.65**	**343**	*i* P	**Pn**	**08 11 17.5**	**-0.2**
SAN				*i* S	**Sn**	**08 11 40.8**	**-0.2**
SAN				AML	AML	08 11 44.4	
	comp=E,590nm,0.3s						
CLCH	**Cerro Calan**	**1.68**	**347**	⇓*i*P	**Pn**	**08 11 18.2**	**+0.2**
CLCH				*i* S	**Sn**	**08 11 41.3**	**-0.3**
CLCH				AML	AML	08 11 43.7	
	comp=E,420nm,0.5s						
FCH	**Farellones**	**1.71**	**354**	⇓*i*P	**Pn**	**08 11 17.5**	**-1.0**
FCH				*i* S	**Sn**	**08 11 43.3**	**+1.0**
FCH				AML	AML	08 11 45.6	
	comp=E,263nm,0.2s						
CFAA	**Coronel Fontan**	**3.75**	**25**	P	**Pn**	**08 11 43.5**	**-0.5**
	comp=E,1.7nm,0.3s,baz=198,slow=12,SNR=301						
CFAA				S	**Sn**	**08 12 26.6**	**-1.4**
	comp=E,1.3nm,0.3s,baz=332,slow=18,SNR=21						
PLCA	**Paso Flores**	**5.70**	**184**	P	**Pn**	**08 12 10.1**	**+0.4**
	comp=E,0.3nm,0.3s,baz=28,slow=13,SNR=2.6						
LPAZ	**La Paz**	**18.75**	**6**	P	**P**	**08 14 56.8**	**+1.5**
	comp=E,0.1nm,0.3s,baz=184,slow=7.1,SNR=5.2						
ROSC	**El Rosal**	**39.88**	**353**	P	**P**	**08 18 08.0**	**+0.7**
	comp=E,3.8nm,0.3s,mb4.5,baz=272,slow=22,SNR=5.5						
BOSA	**Boshof**	**78.17**	**117**	P	**P**	**08 22 29.9**	**-1.1**
	comp=E,5.9nm,1.2s,mb4.1,baz=182,slow=14,SNR=4.1						
WRA	**Warramunga Arr**	**120.61**	**207**	PKP	PKPdf	08 29 21.7	-1.0
	comp=E,0.3nm,0.8s,baz=158,slow=1.7,SNR=4.9						

IDC 02 08:29:23.2±3.6, 10°.17N×95°.26E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.3/23, mbtmp3.6/3, Error ellipse: s-maj=372.1km s-min=29.5km az=49.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**48.74**	**128**	P	P	08 38 09.7	-0.3
	0.3nm,0.4s,baz=307,slow=8.2,SNR=16						
ASAR	**Alice Springs**	**50.58**	**132**	P	P	08 38 24.4	+0.3
	0.4nm,0.8s,baz=324,slow=6.2,SNR=4.8						
FINES	**FINESS Array B**	**71.22**	**332**	P	P	08 40 44.0	+0.1
	0.6nm,0.4s,baz=100,slow=9.9,SNR=5.4						

BJI 02 08:31:01.9, 32°.84N×105°.67E, h17km, mB4.3/1, mb4.1/3, ML3.6/9, Ms3.2/4, Ms7 3.2/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.52**	**221**	Pn	Pn	08 31 41.0	-1.0
CD2				Pg	Pg	08 31 43.2	-7.0
CD2				Sn	Sn	08 32 10.7	-1.6
CD2				Sg	Sg	08 32 15.7	-7.2
CD2				smax			
	comp=N,1μm,0.7s						
CD2				smax			
	comp=E,590nm,0.8s						
XAN	**Xi'an**	**2.97**	**65**	Pn	Pn	08 31 49.7	+1.5
XAN				Pg	Pg	08 31 55.8	-3.0
XAN				Sn	Sn	08 32 27.3	+3.8
XAN				Sg	Sg	08 32 36.4	-0.9
XAN				smax			
	comp=N,150nm,0.8s						
XAN				smax			
	comp=E,95nm,0.7s						
LZH	**Lanzhou**	**3.57**	**336**	*e*Pn	Pn	08 31 58.8	+2.3
LZH				Pg	Pg	08 32 06.2	-4.2
LZH				Sn	Sn	08 32 40.9	+2.6
LZH				Sg	Sg	08 32 50.5	-6.2
LZH				smax			
	comp=N,210nm,0.8s						
LZH				smax			
	comp=E,210nm,0.7s						
LZH				LR	LR		
	comp=N,300nm,7.2s						
LZH				LR	LR		
	comp=Z,350nm,7.9s						
WHN	**Wuhan**	**7.74**	**105**	*e*Pn	Pn	08 32 57.1	+3.3
WHN				Sn	Sn	08 34 20.8	-0.3
GTA	**Gaotai**	**8.09**	**326**	*e*P	Pn	08 32 49.7	-8.8
GTA				pP		08 32 54.1	
GTA				sP		08 32 57.3	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						

*ISCJB **02** 08:51:11.3±1.2, 76°.97N±0°.08×19°.4E±0°.4, h10km, Error ellipse: s-maj=13.3km s-min=10.3km az=136.8*
*CSEM **02** 08:51:13.6±0.5, 76°.92N×18°.31E, h10km, ML2.0, Error ellipse: s-maj=56.3km s-min=7.5km az=66.0*
*NAO **02** 08:51:14.5±1.8, 76°.90N×17°.92E, h17km±18km, ML2.0*
*BER **02** 08:51:15.6±4.0, 76°.92N×18°.72E, h15km, MD2.5, ML2.3, ML2.0(NAO)*

ISC 02 08:51:13.5±2.2, 77°.02N±0°.07×19°.0E±0°.5, h8km±20km, n10, σ0s91/15, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSP	**Hornsund**	**0.79**	**271**	*e*P	**Pg**	**08 51 29.6**	**+1.0**
HSP				*e*S	**Sg**	**08 51 38.4**	**-0.4**
SPA0	**Spitsbergen Ar**	**1.29**	**335**	Pg	**Pg**	**08 51 39.1**	**+0.8**
	baz=153,slow=22						
SPA0				Lg		08 51 55.8	
	baz=172,slow=28						
SPA0	**Spitsbergen Ar**	**1.29**	**335**	Pg	**Pg**	**08 51 39.1**	**+0.8**
	baz=153,slow=20,SNR=375						
SPA0				Lg		08 51 55.8	
	baz=172,slow=23						
KBS	**Kingsbay**	**2.42**	**326**	Pn	**Pn**	**08 51 53.6**	**+0.4**
KBS				Pg	**Pg**	**08 51 59.4**	**-0.3**
KBS				Lg		08 52 28.8	
KBS	**Kingsbay**	**2.42**	**326**	*e*P	**Pn**	**08 51 54.8**	**+1.6**
KBS				*e*Sg	**Sg**	**08 52 29.8**	**-1.3**
KBS				AML	AML	08 52 37.9	
	comp=Z,36nm,0.3s						
KBS	**Kingsbay**	**2.42**	**326**	Pn	**Pn**	**08 51 53.6**	**+0.5**
KBS	**Kingsbay**	**2.42**	**326**	*e*P	**Pn**	**08 51 54.8**	**+1.7**
	SNR=55						
KBS	**Kingsbay**	**2.42**	**326**	Pg	**Pg**	**08 51 59.4**	**-0.3**
KBS				*e*Sg	**Sg**	**08 52 29.8**	**-1.2**
	comp=Z,36nm,0.3s,SNR=91						
ARA0	**ARCESS Array S**	**7.75**	**163**	Pn	**Pn**	**08 53 05.3**	**-0.9**
	slow=11						
ARA0				Sn	**Sn**	**08 54 26.4**	**-7.6**
	baz=5.0,slow=22						
ARA0	**ARCESS Array S**	**7.75**	**163**	Pn	**Pn**	**08 53 05.3**	**-0.9**
	slow=11						

MEX 02 09:02:17.6±1.2, 16°.72N×94°.41W, h122km±24km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**1.23**	**87**	*i* P	Pn	09 02 41.1	-1.1
TGIG				*i* S	Sn	09 02 58.5	-2.3
PCIG		**1.53**	**131**	*e*P	Pn	09 02 44.2	-1.3
PCIG				*i* S	Sn	09 03 05.6	-1.1
HUIG	**Huatulco**	**1.89**	**240**	*i* P	Pn	09 02 47.5	-2.2
HUIG				*i* S	Sn	09 03 12.8	-1.5
VHO	**Vista Hermosa**	**2.25**	**279**	*i* P	Pn	09 02 54.0	-0.3
VHO				*i* S	Sn	09 03 21.5	-0.9
PNIG	**Pinotepa**	**3.58**	**265**	*e*P	Pn	09 03 09.7	-1.9
PNIG				*i* S	Sn	09 03 50.8	-2.6

*NEIC **02** 09:13:34.0, 30°.61S×72°.47W, h36km, ML2.6(GUC), After GUC.*

GUC 02 09:13:34.0±0.9, 30°.61S×72°.47W, h36km±7km, MD3.5, ML2.6, 2C-2D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**1.38**	**114**	⇓*i*P	Pn	09 13 57.9	+1.2
CMCH				*i* S	Sn	09 14 16.2	+2.4
CMCH	**Combarbala**	**1.38**	**114**	⇓*i*P	Pn	09 13 57.9	+1.2
CMCH				*i* S	Sn	09 14 16.2	+2.4
CMCH				AML	AML	09 14 25.9	
	comp=N,157nm,0.6s						
TLL	**Tololo Astrono**	**1.50**	**73**	⇑*i*P	Pn	09 14 00.7	+2.2
TLL				*i* S	Sn	09 14 20.9	+4.1
TLL	**Tololo Astrono**	**1.50**	**73**	⇑*i*P	Pn	09 14 00.7	+2.2
TLL				*i* S	Sn	09 14 20.9	+4.1
TLL				AML	AML	09 14 26.4	
	comp=N,58nm,0.5s						
LCO	**Las Campanas**	**2.22**	**44**	*e*P	Pn	09 14 09.9	+1.6
LCO				*i* S	Sn	09 14 37.8	+3.4
LCO	**Las Campanas**	**2.22**	**44**	*e*P	Pn	09 14 09.9	+1.6
LCO				*i* S	Sn	09 14 37.8	+3.4
LCO				AML	AML	09 14 39.4	
	comp=N,28nm,0.2s						
LMEL	**Las Melosas**	**3.75**	**150**	*e*P	Pn	09 14 31.8	+2.4
LMEL				*i* S	Sn	09 15 14.6	+2.3
LMEL	**Las Melosas**	**3.75**	**150**	*e*P	Pn	09 14 31.8	+2.4
LMEL				*i* S	Sn	09 15 14.6	+2.3
LMEL				AML	AML	09 15 17.3	
	comp=N,35nm,0.2s						

*ROM **02** 09:17:50.2±0.6, 36°.15N×12°.67E, h10km, Ml4.0/21, Error ellipse: s-maj=8.8km s-min=3.4km az=38.0*
*CSEM **02** 09:17:51.8±0.2, 36°.22N×12°.71E, h10km, ML3.7, Error ellipse: s-maj=5.0km s-min=3.8km az=120.0*
*NEIC **02** 09:17:51.6±1.1, 36°.25N×12°.75E, h10km, ML3.9(ROM), Error ellipse: s-maj=18.2km s-min=10.3km az=166.0*
*IDC **02** 09:17:51.6±1.6, 36°.41N×12°.56E, h0km, mb3.7/8, mb1 3.7/11, mb1mx3.7/26, mbtmp3.7/11, ML3.2/2, MS3.0/10, Ms1 3.0/10, ms1mx2.8/37, Error ellipse: s-maj=40.2km s-min=14.9km az=156.0*

ISC 02 09:17:51.2±1.4, 36°.20N±0°.03×12°.73E±0°.04, h5km±9km, n111, σ0s96/119, mb3.7/9, MS3.1/5, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WDD	**Wield Dalam**	**1.50**	**102**	*e*Pn	**Pn**	**09 18 18.1**	**-0.6**
WDD				*e*Sn	**Sn**	**09 18 37.8**	**-0.8**
WDD	**Wield Dalam**	**1.50**	**102**	Pn	**Pn**	**09 18 18.5**	**-0.2**
WDD				Sn	**Sn**	**09 18 37.6**	**-0.9**
	3μm,0.8s						
WDD	**Wield Dalam**	**1.50**	**102**	Pn	**Pn**	**09 18 18.5**	**-0.2**
WDD				*e*Sn	**Sn**	**09 18 37.8**	**-0.7**
RAFF	**Raffo Rosso**	**1.66**	**52**	Pn	**Pn**	**09 18 20.2**	**-0.8**
RAFF	**Raffo Rosso**	**1.66**	**52**	Pn	**Pn**	**09 18 20.2**	**-0.8**
	2μm,0.6s						
RAFF	**Raffo Rosso**	**1.66**	**52**	Pn	**Pn**	**09 18 20.2**	**-0.8**
	2μm,0.6s						
CORL	**Corleone**	**1.75**	**15**	Pn	**Pn**	**09 18 21.3**	**-0.9**
	2μm,0.9s						
CORL	**Corleone**	**1.75**	**15**	Pn	**Pn**	**09 18 21.3**	**-0.9**
	2μm,0.9s						
RESU	**Resuttano**	**1.79**	**36**	Pn	**Pn**	**09 18 24.2**	**+1.4**
	622nm,0.5s						
RESU	**Resuttano**	**1.79**	**36**	Pn	**Pn**	**09 18 24.2**	**+1.4**
	622nm,0.5s						
ERC	**Erice**	**1.84**	**357**	Pn	**Pn**	**09 18 22.5**	**-0.9**
ERC	**Erice**	**1.84**	**357**	Pn	**Pn**	**09 18 22.5**	**-0.9**
ERC	**Erice**	**1.84**	**357**	Pn	**Pn**	**09 18 22.5**	**-0.9**
VAE	**Valguarnera**	**1.86**	**46**	Pg	**Pg**	**09 18 24.5**	**-2.3**
	20nm,0.3s,baz=150,slow=5.2,SNR=15						
VAE				Lg		09 18 47.8	
	62nm,0.3s,baz=270,slow=11,SNR=7.0						
VAE	**Valguarnera**	**1.86**	**46**	Pg	**Pg**	**09 18 24.5**	**-2.3**
VAE				Lg		09 18 47.8	
HVZN	**Vizzini**	**1.87**	**58**	Pn	**Pn**	**09 18 23.0**	**-0.9**
HVZN	**Vizzini**	**1.87**	**58**	Pn	**Pn**	**09 18 23.0**	**-0.9**
	3μm,0.7s						
HVZN	**Vizzini**	**1.87**	**58**	Pn	**Pn**	**09 18 23.0**	**-0.9**
	3μm,0.7s						
GIB	**Gibilmanna**	**2.07**	**30**	Pn	**Pn**	**09 18 26.7**	**+0.2**
GIB				Sn	**Sn**	**09 18 54.6**	**+1.9**
GIB	**Gibilmanna**	**2.07**	**30**	Pn	**Pn**	**09 18 26.7**	**+0.2**
GIB				Sn	**Sn**	**09 18 54.6**	**+1.9**
	3μm,0.5s						
GIB	**Gibilmanna**	**2.07**	**30**	Pn	**Pn**	**09 18 26.7**	**+0.2**
GIB				Sn	**Sn**	**09 18 54.6**	**+1.9**
	3μm,0.5s						
GALF	**Gagliano Caste**	**2.11**	**44**	Pn	**Pn**	**09 18 28.1**	**+1.0**
	2μm,0.5s						
GALF	**Gagliano Caste**	**2.11**	**44**	Pn	**Pn**	**09 18 28.1**	**+1.0**
	2μm,0.5s						
SSY	**Sortino**	**2.11**	**63**	Pn	**Pn**	**09 18 26.6**	**-0.6**
SSY				Sg	**Sg**	**09 18 52.7**	**-6.4**
SSY	**Sortino**	**2.11**	**63**	Pn	**Pn**	**09 18 26.6**	**-0.6**
SSY				Sg	**Sg**	**09 18 52.7**	**-6.4**
	2μm,0.6s						
SSY	**Sortino**	**2.11**	**63**	Pn	**Pn**	**09 18 26.6**	**-0.6**
ECNV	**Catenanuova**	**2.12**	**48**	Pn	**Pn**	**09 18 27.8**	**+0.6**
	2μm,1.0s						
ECNV	**Catenanuova**	**2.12**	**48**	Pn	**Pn**	**09 18 27.8**	**+0.6**
	2μm,1.0s						
ESLN	**Serra La Nave**	**2.34**	**50**	Pn	**Pn**	**09 18 31.4**	**+1.1**
	1μm,0.3s						
ESLN	**Serra La Nave**	**2.34**	**50**	Pn	**Pn**	**09 18 31.4**	**+1.1**
	1μm,0.3s						
USI	**Ustica**	**2.53**	**8**	Pn	**Pn**	**09 18 32.0**	**-0.9**
USI	**Ustica**	**2.53**	**8**	Pn	**Pn**	**09 18 32.0**	**-0.9**
	200nm,0.2s						
USI	**Ustica**	**2.53**	**8**	Pn	**Pn**	**09 18 32.0**	**-0.9**
	200nm,0.2s						
MMME	**Mongiuffi-Meli**	**2.66**	**49**	Pn	**Pn**	**09 18 34.8**	**+0.1**
MMME	**Mongiuffi-Meli**	**2.66**	**49**	Pn	**Pn**	**09 18 34.8**	**+0.1**
ACL	**Alicudi**	**2.67**	**29**	Pn	**Pn**	**09 18 33.9**	**-0.9**
	805nm,0.4s						
IACL	**Alicudi**	**2.67**	**29**	Pn	**Pn**	**09 18 33.9**	**-0.9**
	805nm,0.4s						
IFIL	**Filicudi I Eol**	**2.78**	**31**	Pn	**Pn**	**09 18 35.6**	**-0.7**
IFIL	**Filicudi I Eol**	**2.78**	**31**	Pn	**Pn**	**09 18 35.6**	**-0.7**
KEST	**Kesra**	**2.78**	**261**	Pn	**Pn**	**09 18 37.6**	**+1.2**
	4.1nm,0.3s,baz=51,slow=6.9,SNR=128						
KEST				Lg		09 19 11.7	
	10.0nm,0.3s,baz=328,slow=23,SNR=17						
KEST	**Kesra**	**2.78**	**261**	*e*Pn	**Pn**	**09 18 36.5**	**+0.1**
KEST				*e*Sn	**Sn**	**09 19 09.8**	**-0.5**
KEST	**Kesra**	**2.78**	**261**	*e*Pn	**Pn**	**09 18 36.5**	**+0.1**
KEST				*e*Sn	**Sn**	**09 19 09.8**	**-0.5**
VPL	**Vulcano Piano**	**2.82**	**39**	Pn	**Pn**	**09 18 36.8**	**-0.1**
VPL	**Vulcano Piano**	**2.82**	**39**	Pn	**Pn**	**09 18 36.8**	**-0.1**
LLI	**Lipari**	**2.86**	**38**	Pn	**Pn**	**09 18 37.1**	**-0.3**
LLI	**Lipari**	**2.86**	**38**	Pn	**Pn**	**09 18 37.1**	**-0.3**
MILZ	**Milazzo**	**2.88**	**43**	Pn	**Pn**	**09 18 37.9**	**+0.2**
	358nm,0.5s						
MILZ	**Milazzo**	**2.88**	**43**	Pn	**Pn**	**09 18 37.9**	**+0.2**
	358nm,0.5s						
MSRU	**Castanea**	**3.03**	**46**	Pn	**Pn**	**09 18 40.2**	**+0.4**
MSRU	**Castanea**	**3.03**	**46**	Pn	**Pn**	**09 18 40.2**	**+0.4**
MPAZ	**Palizzi**	**3.15**	**55**	Pn	**Pn**	**09 18 41.7**	**+0.2**
MPAZ	**Palizzi**	**3.15**	**55**	Pn	**Pn**	**09 18 41.7**	**+0.2**
MSCL	**Scilla**	**3.18**	**49**	Pn	**Pn**	**09 18 42.4**	**+0.6**
	362nm,0.9s						
MSCL	**Scilla**	**3.18**	**49**	Pn	**Pn**	**09 18 42.4**	**+0.6**
	362nm,0.9s						
SOI	**Samo**	**3.25**	**54**	Pn	**Pn**	**09 18 42.9**	**+0.1**
SOI	**Samo**	**3.25**	**54**	Pn	**Pn**	**09 18 42.9**	**+0.1**
	98nm,0.6s						
SOI	**Samo**	**3.25**	**54**	Pn	**Pn**	**09 18 42.9**	**+0.1**
	98nm,0.6s						
CEL	**Celeste**	**3.26**	**50**	*e*Pn	**Pn**	**09 18 43.2**	**+0.3**
CEL				Pn	**Pn**	**09 18 43.5**	**+0.6**
CEL				*e*Sn	**Sn**	**09 19 20.6**	**-1.5**
CEL	**Celeste**	**3.26**	**50**	Pn	**Pn**	**09 18 43.5**	**+0.6**
	181nm,0.7s						
CEL	**Celeste**	**3.26**	**50**	*e*Pn	**Pn**	**09 18 43.2**	**+0.3**
ALAS	**Alassa**	**3.47**	**196**	*i* P	**Pn**	**09 18 46.5**	**+0.6**
	198nm,1.0s,SNR=117						
JOPP	**Joppolo**	**3.48**	**45**	Pn	**Pn**	**09 18 46.0**	**0.0**
JOPP	**Joppolo**	**3.48**	**45**	Pn	**Pn**	**09 18 46.0**	**0.0**
GHAR	**Gharyan**	**4.08**	**176**	*i* P	**Pn**	**09 18 55.6**	**+1.4**
	78nm,1.5s,SNR=112						
GHAR				*e*S	**Sn**	**09 19 40.9**	**-1.4**
	81nm,0.7s,SNR=112						
CARO	**Carolei**	**4.12**	**41**	Pn	**Pn**	**09 18 55.4**	**+0.7**
	41nm,0.4s						
CARO	**Carolei**	**4.12**	**41**	Pn	**Pn**	**09 18 55.4**	**+0.7**
	41nm,0.4s						
VSL	**Villasalto**	**4.22**	**322**	*e*Pn	**Pn**	**09 18 55.4**	**-0.8**
VSL				Pn	**Pn**	**09 18 55.6**	**-0.6**
VSL				*e*Sn	**Sn**	**09 19 40.1**	**-5.7**
VSL	**Villasalto**	**4.22**	**322**	Pn	**Pn**	**09 18 55.6**	**-0.6**
	63nm,0.4s						
VSL	**Villasalto**	**4.22**	**322**	Pn	**Pn**	**09 18 55.6**	**-0.6**
	63nm,0.4s						
SERS	**Sersale**	**4.23**	**47**	Pn	**Pn**	**09 18 57.2**	**+0.9**
	98nm,0.7s						
SERS	**Sersale**	**4.23**	**47**	Pn	**Pn**	**09 18 57.2**	**+0.9**
	98nm,0.7s						
ABSA	**Djebel Ababsia**	**4.24**	**273**	P	**Pn**	**09 18 57.7**	**+1.2**
CMAH	**Djebel Manchou**	**4.30**	**277**	P	**Pn**	**09 18 56.6**	**-0.7**
TIP	**Timpagrande**	**4.37**	**46**	*e*Pn	**Pn**	**09 18 58.2**	**+0.1**
TIP				Pn	**Pn**	**09 18 59.0**	**+0.8**
TIP	**Timpagrande**	**4.37**	**46**	Pn	**Pn**	**09 18 59.0**	**+0.8**
	54nm,0.9s						
TIP	**Timpagrande**	**4.37**	**46**	*e*Pn	**Pn**	**09 18 58.2**	**0.0**
BULG	**Bulgheria - Ca**	**4.40**	**28**	Pn	**Pn**	**09 18 58.4**	**-0.2**
BULG	**Bulgheria - Ca**	**4.40**	**28**	Pn	**Pn**	**09 18 58.4**	**-0.2**
CUC	**Castrocucco**	**4.50**	**32**	*e*Pn	**Pn**	**09 19 00.0**	**0.0**
CUC				*e*Sn	**Sn**	**09 19 50.9**	**-1.8**
CUC	**Castrocucco**	**4.50**	**32**	*e*Pn	**Pn**	**09 19 00.0**	**0.0**
CUC				*e*Sn	**Sn**	**09 19 50.9**	**-1.8**
SIRI	**Monte Sirino -**	**4.68**	**31**	Pn	**Pn**	**09 19 03.7**	**+1.2**
	61nm,0.5s						
SIRI	**Monte Sirino -**	**4.68**	**31**	Pn	**Pn**	**09 19 03.7**	**+1.2**
	61nm,0.5s						
MCEL	**Monticello**	**4.78**	**30**	Pn	**Pn**	**09 19 04.6**	**+0.8**
MCEL	**Monticello**	**4.78**	**30**	Pn	**Pn**	**09 19 04.6**	**+0.8**
DGI	**Dorgali Grotta**	**4.79**	**330**	Pn	**Pn**	**09 19 03.7**	**-0.2**
DGI	**Dorgali Grotta**	**4.79**	**330**	Pn	**Pn**	**09 19 03.7**	**-0.2**
	48nm,0.5s						
DGI	**Dorgali Grotta**	**4.79**	**330**	Pn	**Pn**	**09 19 03.7**	**-0.2**
	48nm,0.5s						
LGHD	**Ghdames**	**6.75**	**205**	*i* P	**Pn**	**09 19 26.3**	**-4.7**
	18nm,1.3s,SNR=103						
LJFR	**Jufra**	**7.54**	**159**	*i* P	**Pn**	**09 19 40.9**	**-0.9**
	16nm,0.4s,SNR=101						
IDI	**Anoyia**	**9.93**	**92**	LR	LR	09 24 46.8	
	comp=Z,60nm,19.8s,baz=278,slow=41						
**DAV

NLAI	**Namlea**	**4.43**	**333**	P		**Pn**	**09 19 25.3**	**-0.1**
KAKA	**Kakadu**	**6.36**	**150**	*e*Pn		**Pn**	**09 19 52.2**	**+1.3**
	245nm,0.6s							
KAKA				*e*Sn		**Sn**	**09 21 00.4**	**-2.2**
KAKA	**Kakadu**	**6.36**	**150**	P		**Pn**	**09 19 52.2**	**+1.3**
	0.7nm4μm161nm,0.6s							
KNA	**Kununurra**	**8.50**	**182**	P		**Pn**	**09 20 20.1**	**+0.7**
	0.5nm1μm67nm,0.7s							
FITZ	**Fitzroy Crossi**	**11.36**	**197**	*e*Pn		**Pn**	**09 20 57.4**	**+0.2**
FITZ				*e*Sn		**Sn**	**09 22 52.6**	**-10**
FITZ	**Fitzroy Crossi**	**11.36**	**197**	P		**Pn**	**09 20 57.1**	**-0.1**
	18nm,4.3s							
WRAB	**Tennant Creek**	**13.62**	**159**	*e*Pn		**Pn**	**09 21 24.5**	**-1.9**
	14nm,0.8s							
WRAB				*e*Sn		**Sn**	**09 23 52.8**	**-4.6**
WRAB	**Tennant Creek**	**13.62**	**159**	P		**Pn**	**09 21 24.7**	**-1.7**
	20nm,0.8s							
WRA	**Warramunga Arr**	**13.63**	**159**	Pn		**Pn**	**09 21 24.6**	**-1.9**
	1.3nm,0.3s,baz=324,slow=13,SNR=45							
WRA				Sn		**Sn**	**09 23 51.8**	**-5.7**
	1.0nm,0.3s,baz=335,slow=23,SNR=5.5							
COEN	**Coen**	**15.33**	**117**	P		**Pn**	**09 21 48.6**	**+0.7**
	48nm,2.3s							
MBWA	**Marble Bar**	**16.59**	**212**	*e*Pn		**Pn**	**09 22 04.4**	**+1.2**
MBWA	**Marble Bar**	**16.59**	**212**	P		**Pn**	**09 22 03.8**	**+0.6**
ASAR	**Alice Springs**	**16.99**	**165**	P		**Pn**	**09 22 09.8**	**+1.8**
	1.9nm,0.3s,baz=342,slow=10,SNR=234							
ASAR				S		**S**	**09 25 17.5**	**+0.6**
	0.3nm,0.3s,baz=349,slow=26,SNR=4.9							
STKA	**Stephens Creek**	**27.16**	**156**	P		**P**	**09 23 49.5**	**+1.1**
	1.9nm,0.9s,mb3.7,baz=328,slow=13,SNR=2.9							
TPUB	**Ta-pu**	**31.44**	**345**	*e*P		**P**	**09 24 17.7**	**-8.7**
	22nm,0.4s,mb5.2							
MKAR	**Makanchi Array**	**67.93**	**327**	P		**P**	**09 29 00.6**	**-1.0**
	0.3nm,0.3s,mb3.5,baz=116,slow=8.1,SNR=10							
KURK	**Kurchatov**	**72.25**	**329**	P		**P**	**09 29 26.8**	**-1.1**
	0.6nm,0.5s,mb3.6,baz=125,slow=5.6,SNR=3.8							

CSEM ***02*** *09:29:15.1±0.2, 33.°45N×35.°56E, h12km, Mc1.5, Error ellipse: s-maj=5.0km s-min=3.4km az=56.0*
ISCJB ***02*** *09:29:15.4±0.8, 33.°47N±0.°03×35.°59E±0.°05, h13km±5km, Error ellipse: s-maj=7.0km s-min=5.1km az=152.4*
NSSC ***02*** *09:29:15, 33.°43N×35.°57E, h11km±3km*
NEIC ***02*** *09:29:15.7, 33.°43N×35.°56E, h20km, ML3.1(GII), ML2.9(GRAL), After GRAL.*
NEIC Felt at Srifa, Lebanon.
GRAL ***02*** *09:29:16.4±0.4, 33.°43N×35.°61E, h0km±71km, MD3.0*
ISC 02 09:29:15.6±0.8, 33.°45N±0.°03×35.°58E±0.°05, h14km±4km, n23, σ0.°55/40, 4D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCY	**Rachaya**	**0.20**	**81**	*e*P	**Pg**	**09 29 20.0**	**-0.2**
RCY				*e*S	**Sg**	**09 29 22.7**	**-0.7**
RCY	**Rachaya**	**0.20**	**81**	*e*P	**Pg**	**09 29 20.0**	**-0.2**
RCY				*e*S	**Sg**	**09 29 22.7**	**-0.6**
MATL	**Matarih**	**0.21**	**279**	*e*P	**Pg**	**09 29 20.7**	**+0.4**
MATL	**Matarih**	**0.21**	**279**	*e*P	**Pg**	**09 29 20.5**	**+0.2**
MATL	**Matarih**	**0.21**	**279**	*e*P	**Pg**	**09 29 20.5**	**+0.2**
KSDI	**Kefar Szold**	**0.27**	**166**	*e*S	**Sg**	**09 29 25.3**	**+0.1**
KSDI	**Kefar Szold**	**0.27**	**166**	*e*S	**Sg**	**09 29 25.3**	**+0.2**
BRBR	**Barbar**	**0.31**	**98**	⇓P	**Pg**	**09 29 21.0**	**-1.0**
BRBR				⇓S	**Sg**	**09 29 26.0**	**-0.4**
BRBR	**Barbar**	**0.31**	**98**	⇓*i*P	**Pg**	**09 29 21.7**	**-0.3**
BRBR				⇓*i*S	**Sg**	**09 29 26.9**	**+0.5**
BHL	**Bhannes**	**0.45**	**8**	*e*P	**Pg**	**09 29 24.8**	**+0.2**
BHL				*e*S	**Sg**	**09 29 31.2**	**+0.5**
BHL	**Bhannes**	**0.45**	**8**	*e*P	**Pg**	**09 29 24.8**	**+0.2**
BHL				*e*S	**Sg**	**09 29 31.3**	**+0.6**
BHL	**Bhannes**	**0.45**	**8**	*e*P	**Pg**	**09 29 24.8**	**+0.2**
BHL				*e*S	**Sg**	**09 29 31.2**	**+0.5**
QASN	**Qassioun**	**0.59**	**82**	⇑P	**Pg**	**09 29 27.0**	**-0.1**
QASN				⇑S	**Sg**	**09 29 35.0**	**+0.1**
QASN	**Qassioun**	**0.59**	**82**	⇑*i*P	**Pg**	**09 29 27.0**	**-0.1**
QASN				⇑*i*S	**Sg**	**09 29 36.0**	**+1.1**
TOTH	**TOTAH**	**0.72**	**97**	⇑P	**Pg**	**09 29 29.0**	**-0.5**
TOTH				⇑S	**Sg**	**09 29 40.0**	**+1.0**
TOTH	**TOTAH**	**0.72**	**97**	⇑*i*P	**Pg**	**09 29 29.7**	**+0.2**
TOTH				⇑*i*S	**Sg**	**09 29 40.1**	**+1.1**
HWQ	**Hawqa**	**0.88**	**20**	*e*P	**Pg**	**09 29 33.5**	**+1.0**
HWQ	**Hawqa**	**0.88**	**20**	*e*P	**Pg**	**09 29 31.6**	**-1.0**
HWQ				*e*S	**Sg**	**09 29 43.5**	**-0.6**
HWQ	**Hawqa**	**0.88**	**20**	*e*P	**Pg**	**09 29 31.6**	**-1.0**
HWQ				*e*S	**Sg**	**09 29 43.5**	**-0.6**
SALA	**Sala**	**1.22**	**127**	⇑P	**Pn**	**09 29 38.0**	**-0.2**
SALA				⇑S	**Sb**	**09 29 53.0**	**-1.0**
SALA	**Sala**	**1.22**	**127**	⇑*i*P	**Pn**	**09 29 38.3**	**+0.1**
SALA				⇑*i*S	**Sb**	**09 29 53.8**	**-0.2**
ZALF	**Zalf**	**1.56**	**109**	⇑P	**Pn**	**09 29 43.0**	**+0.1**
ZALF				⇑S	**Sn**	**09 30 03.0**	**0.0**
ZALF	**Zalf**	**1.56**	**109**	⇑*i*P	**Pn**	**09 29 43.2**	**+0.3**
ZALF				⇑*i*S	**Sn**	**09 30 03.1**	**+0.1**

IDC ***02*** *10:09:44.9±1.2, 2.°49N×95.°77E, h0km, mb4.4/12, mb1 4.4/14, mb1mx4.1/27, mbtmp4.3/14, ML3.4/1, MS3.0/1, Ms1 3.0/1, ms1mx2.4/43, Error ellipse: s-maj=39.8km s-min=14.0km az=51.0*
DJA ***02*** *10:09:47, 2.°64N×95.°69E, h10km, mb4.8/6*
ISCJB ***02*** *10:09:48.9±1.5, 2.°50N±0.°06×95.°77E±0.°10, h44km±13km, mb4.5/26, Error ellipse: s-maj=17.9km s-min=7.2km az=151.7*
BJI ***02*** *10:09:49.5, 3.°07N×96.°19E, h15km, mB4.8/2, mb4.7/8*
NEIC ***02*** *10:09:49.9±0.6, 2.°45N×95.°79E, h35km, mb4.2/4, Error ellipse: s-maj=14.0km s-min=7.5km az=49.0*
ISC 02 10:09:53.1±1.2, 2.°61N±0.°05×95.°97E±0.°09, h60km±12km, h13km±5.7km: pP-P, n48, σ0.°79/48, mb4.5/26, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**1.37**	**62**	P	**Pn**	**10 10 14.1**	**-2.0**
TPTI				S	**Sn**	**10 10 36.4**	**+3.4**
TSI	**Tuntungan**	**2.74**	**71**	P	**Pn**	**10 10 35.8**	**+1.1**
BSI	**Banda Aceh**	**2.95**	**347**	P	**Pn**	**10 10 33.1**	**-4.4**
PSI	**Prapat**	**2.96**	**86**	Pn	**Pn**	**10 10 37.8**	**+0.2**
	4.8nm,0.3s,baz=284,slow=7.5,SNR=24						
PSI				LR	LR	10 11 60.0	
	comp=Z,253nm,20.1s,baz=265,slow=43						
MNSI	**Mandailing Nat**	**4.03**	**116**	P	**Pn**	**10 10 53.1**	**+0.7**
KULM	**Kulim**	**5.38**	**60**	*e*Pn	**Pn**	**10 11 10.1**	**-0.7**
	89nm,1.0s						
KULM				*e*Sn	**Sn**	**10 12 10.2**	**-1.2**
KULM	**Kulim**	**5.38**	**60**	P	**Pn**	**10 11 10.6**	**-0.2**
	795nm91nm,1.0s						
IPM	**Ipoh**	**5.38**	**70**	P	**Pn**	**10 11 11.0**	**+0.2**
	642nm62nm,0.8s						
SDSI	**Sungai Dareh**	**6.49**	**123**	P	**Pn**	**10 11 26.9**	**+0.8**
	770nm14nm,0.7s						
MNAI	**Manna**	**9.83**	**135**	P	**Pn**	**10 12 11.2**	**-0.6**
	226nm,1.5s						
MDSI	**Maura Dua**	**10.81**	**131**	P	**Pn**	**10 12 24.7**	**-0.5**
	22nm,0.7s						
KLSI		**11.37**	**130**	P	**Pn**	**10 12 32.4**	**-0.4**
CM31	**Chiang Mai Arr**	**16.02**	**10**	*e*Pn	**Pn**	**10 13 35.9**	**+1.2**
CMAR	**Chiang Mai Arr**	**16.02**	**10**	Pn	**Pn**	**10 13 35.2**	**+0.5**
	0.6nm,0.3s,baz=196,slow=11,SNR=16						
SHL	**Shillong**	**23.16**	**351**	*e*PKP	**P**	**10 14 52.0**	**-2.7**
KAPI	**Kappang**	**24.94**	**108**	P	**P**	**10 15 11.5**	**+0.4**
	11nm,0.9s,mb4.4,baz=274,slow=12,SNR=5.7						
KAPI	**Kappang**	**24.94**	**108**	P	**P**	**10 15 11.4**	**+0.4**
ODAN	**Odare**	**25.48**	**342**	*e*P	**P**	**10 15 16.0**	**+0.2**
	35nm,0.7s,mb5.0						
RAMN	**Ramite**	**25.82**	**341**	*e*P	**P**	**10 15 18.8**	**0.0**
	40nm,0.5s,mb5.2						
TAPN	**Taplejung**	**25.84**	**343**	*e*P	**P**	**10 15 19.4**	**+0.4**
	43nm,1.0s,mb5.0						
JIRN	**Jiri**	**26.61**	**340**	*e*P	**P**	**10 15 26.2**	**+0.2**
PKI	**Pulchoki**	**26.80**	**339**	*e*P	**P**	**10 15 27.0**	**-0.7**
	16nm,0.6s,mb4.7						
DMN	**Daman**	**26.94**	**338**	*e*P	**P**	**10 15 28.5**	**-0.5**
	15nm,0.6s,mb4.7						
GUN	**Gumba**	**26.95**	**340**	*e*P	**P**	**10 15 29.0**	**0.0**
	47nm,0.7s,mb5.1						
KKN	**Kakani**	**27.05**	**339**	*e*P	**P**	**10 15 29.1**	**-0.8**
	38nm,0.8s,mb5.0						
LSA	**Lhasa**	**27.33**	**351**	P	**P**	**10 15 32.5**	**+0.1**
GKN	**Gorkha**	**27.48**	**338**	*e*P	**P**	**10 15 33.3**	**-0.5**
	50nm,0.9s,mb5.1						
LZH	**Lanzhou**	**34.10**	**11**	*e*P	**P**	**10 16 30.8**	**-1.3**
LZH				pP	pP	10 16 36.0	-11
LZH				sP	sP	10 16 38.5	-15
LZH				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.8						
FITZ	**Fitzroy Crossi**	**35.75**	**126**	P	**P**	**10 16 46.0**	**-0.5**
	comp=Z,1.5nm,0.8s,mb4.0,baz=295,slow=12,SNR=3.9						
GTA	**Gaotai**	**36.80**	**5**	*e*P	**P**	**10 16 54.7**	**-0.5**
GTA				pP	pP	10 16 59.0	-11
GTA				sP	sP	10 17 02.1	-15
GTA				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.7						
WRA	**Warramunga Arr**	**43.82**	**122**	P	**P**	**10 17 53.2**	**-0.3**
	comp=Z,0.8nm,0.3s,mb3.9,baz=302,slow=9.2,SNR=26						
WRAB	**Tennant Creek**	**43.83**	**122**	P	**P**	**10 17 52.6**	**-1.0**
	comp=Z,3.0nm,0.9s,mb4.0						
EKS2	**Erkin-Say**	**44.53**	**337**	*e*P	**P**	**10 18 00.4**	**+1.5**
	comp=Z,2.3nm,0.5s,mb4.3						
ASAR	**Alice Springs**	**45.22**	**127**	P	**P**	**10 18 06.0**	**+1.3**
	comp=Z,0.6nm,0.4s,mb3.7,baz=300,slow=7.9,SNR=19						
KSRS	**Korea Array**	**45.42**	**36**	P	**P**	**10 18 05.9**	**-0.1**
	comp=Z,1.6nm,0.6s,mb4.0,baz=232,slow=8.4,SNR=6.2						
MK31	**Makanchi Array**	**45.59**	**347**	*e*P	**P**	**10 18 07.3**	**+0.1**
MK31				*e*pP	pP	10 18 14.0	-8.7
MKAR	**Makanchi Array**	**45.59**	**347**	P	**P**	**10 18 07.4**	**+0.2**
	comp=Z,4.5nm,0.4s,mb4.8,baz=160,slow=8.7,SNR=124						
SONM	**Songino Array**	**45.95**	**10**	P	**P**	**10 18 10.4**	**+0.4**
	comp=Z,4.4nm,0.6s,mb4.6,baz=191,slow=8.9,SNR=23						
ULN	**Ulaanbaatar**	**46.09**	**10**	*e*P	**P**	**10 18 11.2**	**+0.1**
	comp=Z,1.8nm,0.7s,mb4.1						
KURK	**Kurchatov**	**50.13**	**346**	P	**P**	**10 18 42.4**	**+0.2**
	comp=Z,3.3nm,0.5s,mb4.7,baz=164,slow=6.9,SNR=13						
ZAA0	**Zalesovo Array**	**51.99**	**352**	*e*P	**P**	**10 18 56.2**	**+0.1**
ZALV	**Zalesovo Beam**	**51.99**	**352**	P	**P**	**10 18 56.5**	**+0.3**
	comp=Z,8.6nm,0.6s,mb4.8,baz=182,slow=7.0,SNR=33						
BVAR	**Borovoye Array**	**54.53**	**341**	P	**P**	**10 19 14.7**	**0.0**
	comp=Z,2.0nm,0.6s,mb4.3,baz=163,slow=10,SNR=9.2						
ABKAR	**Akbulak array**	**55.70**	**332**	*e*P	**P**	**10 19 23.4**	**+0.1**
	comp=Z,3.7nm,0.7s,mb4.5						
FINES	**FINESS Array B**	**78.19**	**333**	P	**P**	**10 21 46.2**	**+0.4**
	comp=Z,2.2nm,0.7s,mb4.2,baz=66,slow=6.5,SNR=6.3						
ARCES	**ARCESS Array B**	**80.81**	**340**	P	**P**	**10 22 00.8**	**+0.9**
	comp=Z,1.1nm,0.4s,mb4.2,baz=98,slow=6.0,SNR=26						
TXAR	**Lajitas Array**	**143.09**	**29**	PKP	PKPdf	10 29 19.3	-1.7
	comp=Z,0.1nm,0.4s,baz=130,slow=1.5,SNR=4.3						
TXAR	**Lajitas Array**	**143.09**	**29**	PKP	PKPdf	10 29 19.3	-1.8

NOU ***02*** *10:38:13.8±0.9, 19.°48S×170.°98E, h10km, MD3.1, ML2.8*
IDC ***02*** *10:38:14.2±1.4, 22.°72S×171.°56E, h0km, mb4.1/7, mb1 4.4/8, mb1mx4.2/16, mbtmp4.2/8, ML3.7/1, MS3.9/13, Ms1 3.9/13, ms1mx3.8/20, Error ellipse: s-maj=46.0km s-min=28.2km az=158.0*
ISCJB ***02*** *10:38:19.0±1.5, 22.°9S±0.°1×171.°40E±0.°07, h42km±14km, mb4.3/11, MS4.0/9, Error ellipse: s-maj=16.9km s-min=10.5km az=6.6*
NEIC ***02*** *10:38:23.5±2.5, 22.°88S×171.°51E, h74km±26km, mb4.5/5, Error ellipse: s-maj=18.1km s-min=13.5km az=130.0*
ISC 02 10:38:20.8±1.4, 22.°86S±0.°10×171.°43E±0.°07, h44km±12km, n33, σ1.°00/24, mb4.3/11, MS4.0/9, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**4.26**	**279**	*e*S	**Sn**	**10 40 13.5**	**+1.9**
LASL	**Noumea**	**4.56**	**277**	*e*P	**Pn**	**10 39 26.5**	**-0.8**
LASL				*e*S	**Sn**	**10 40 19.6**	**+0.6**
DZM	**Mont Dzumac**	**4.68**	**279**	*e*Pn	**Pn**	**10 39 28.0**	**-0.9**
	44nm,0.2s						
DZM				*e*Sn	**Sn**	**10 40 20.9**	**-1.0**
	88nm,0.3s						
NOUC	**Port Laguerre**	**4.80**	**278**	*e*P	**Pn**	**10 39 29.3**	**-1.2**
NOUC				*e*S	**Sn**	**10 40 25.3**	**+0.4**
NOUC				AMP		10 40 30.4	
	comp=Z,31nm,0.0s						
RAO	**Raoul Island**	**11.49**	**126**	LR	LR	10 44 29.0	
	comp=Z,371nm,21.4s,baz=338,slow=33						
FUNA	**Funafuti**	**16.09**	**29**	*e*Pn	**Pn**	**10 42 05.0**	**+1.1**
	comp=Z,195nm,1.5s						
URZ	**Urewera**	**16.10**	**164**	Pn	**Pn**	**10 42 04.9**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=276,slow=7.5,SNR=5.3						
URZ				LR	LR	10 46 46.9	
	comp=Z,762nm,20.6s,baz=353,slow=32						
HNR	**Honiara**	**17.30**	**319**	LR	LR	10 47 28.2	
	comp=Z,173nm,18.6s,baz=168,slow=32						
AFI	**Afiamalu**	**18.24**	**64**	LR	LR	10 47 30.3	
	comp=Z,201nm,18.1s,baz=233,slow=31						
ARMA	**Armidale**	**19.22**	**243**	*e*P	**Pn**	**10 42 46.7**	**+4.3**
ARMA	**Armidale**	**19.22**	**243**	*e*P	**Pn**	**10 42 43.6**	**+1.2**
	comp=Z,13nm,1.2s						
RPZ	**Rata Peaks**	**20.80**	**181**	LR	LR	10 49 56.0	
	comp=Z,320nm,21.5s,MS3.7,baz=26,slow=34						
STKA	**Stephens Creek**	**27.90**	**245**	P	**P**	**10 44 07.3**	**+0.5**
	comp=Z,2.9nm,0.9s,mb3.9,baz=38,slow=5.7,SNR=2.7						
STKA				LR	LR	10 52 47.3	
	comp=Z,233nm,21.9s,MS3.7,baz=214,slow=31						
STKA	**Stephens Creek**	**27.90**	**245**	P	**P**	**10 44 07.3**	**+0.5**
STKA				LR	LR	10 52 47.3	
ASAR	**Alice Springs**	**34.42**	**261**	P	**P**	**10 45 04.9**	**+0.7**
	comp=Z,1.5nm,0.6s,mb4.1,baz=84,slow=8.9,SNR=24						
WRAB	**Tennant Creek**	**34.59**	**268**	*e*P	**P**	**10 45 04.5**	**-1.1**
	comp=Z,2.2nm,0.6s,mb4.3						
WRA	**Warramunga Arr**	**34.60**	**268**	P	**P**	**10 45 04.8**	**-1.0**
	comp=Z,1.2nm,0.5s,mb4.1,baz=97,slow=8.6,SNR=21						
PPT	**Papeete**	**36.90**	**89**	*e*LR	LR	10 55 14.1	
	comp=Z,101nm,22.0s						
KAKA	**Kakadu**	**38.37**	**278**	*e*P	**P**	**10 45 37.4**	**-0.6**
	comp=Z,6.3nm,0.5s,mb4.6						
FITZ	**Fitzroy Crossi**	**43.03**	**268**	*e*P	**P**	**10 46 16.4**	**0.0**
	comp=Z,11nm,0.9s,mb4.6						
FITZ	**Fitzroy Crossi**	**43.03**	**268**	P	**P**	**10 46 16.7**	**+0.3**
	comp=Z,5.9nm,0.8s,mb4.4,baz=101,slow=9.4,SNR=6.9						
MBWA	**Marble Bar**	**47.76**	**262**	*e*P	**P**	**10 46 53.4**	**-0.5**
	comp=Z,8.3nm,0.8s,mb4.8						
MJAR	**Matsushiro Arr**	**66.89**	**331**	LR	LR	11 15 16.8	
	comp=Z,68nm,19.3s,MS3.9,baz=210,slow=33						
QSPA	**South Pole Qui**	**67.21**	**180**	*e*P	**P**	**10 49 09.5**	**-0.4**
	comp=Z,8.9nm,1.1s,mb4.7						
KSRS	**Korea Array**	**72.63**	**325**	LR	LR	11 18 51.3	
	comp=Z,36nm,18.9s,MS3.7,baz=133,slow=34						
MAW	**Mawson**	**75.86**	**202**	LR	LR	11 20 40.1	
	comp=Z,106nm,18.1s,MS4.2,baz=296,slow=34						
PETK	**Petropavlovsk-**	**76.58**	**352**	LR	LR	11 19 50.3	
	comp=Z,73nm,19.0s,MS4.0,baz=340,slow=33						
CMAR	**Chiang Mai Arr**	**81.84**	**294**	P	**P**	**10 50 37.2**	**+1.4**
	comp=Z,0.9nm,0.3s,mb4.1,baz=143,slow=4.5,SNR=4.4						
NVAR	**Mina Array Bea**	**89.69**	**48**	P	**P**	**10 51 12.4**	**-1.8**
	comp=Z,0.5nm,0.6s,mb4.0,baz=232,slow=6.8,SNR=6.8						
SONM	**Songino Array**	**91.33**	**322**	P	**P**	**10 51 22.7**	**+1.1**
	comp=Z,0.4nm,0.5s,mb4.0,baz=151,slow=6.3,SNR=3.0						
PLCA	**Paso Flores**	**94.48**	**138**	LR	LR	11 23 45.1	
	comp=Z,123nm,18.6s,MS4.4,baz=338,slow=29						
TXAR	**Lajitas Array**	**96.70**	**61**	LR	LR	11 26 19.9	
	comp=Z,71nm,20.8s,MS4.1,baz=355,slow=30						
PDAR	**Pinedale Array**	**97.58**	**47**	LR	LR	11 32 30.9	
	comp=Z,47nm,18.1s,MS4.0,baz=255,slow=33						

ISK ***02*** *10:56:33.9, 39.°71N×29.°52E, h5km, MD2.9*
ISCJB ***02*** *10:56:34.4±0.5, 39.°67N±0.°03×29.°46E±0.°04, h10km, Error ellipse: s-maj=4.4km s-min=3.7km az=165.3*
CSEM ***02*** *10:56:34.3±0.2, 39.°67N×29.°46E, h2km, MD2.9, Error ellipse: s-maj=3.6km s-min=2.9km az=55.0*
ISC 02 10:56:34.7±0.5, 39.°67N±0.°03×29.°46E±0.°04, h5km±6km, n38, σ0.°70/46, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULDT	**Uludag**	**0.53**	**332**	*i*P	**Pg**	**10 56 44.2**	**-0.8**
ULDT	**Uludag**	**0.53**	**332**	*i*P	**Pg**	**10 56 44.2**	**-0.8**
ULDT				*i*S	**Sg**	**10 56 52.8**	**+0.8**
GDZ	**Gediz**	**0.58**	**178**	*i*P	**Pg**	**10 56 45.1**	**-0.7**
GDZ	**Gediz**	**0.58**	**178**	*i*P	**Pg**	**10 56 45.2**	**-0.7**
GDZ				*i*S	**Sg**	**10 56 54.3**	**+0.9**
CAVI	**Cavuskoy**	**0.61**	**29**	*e*PG	**Pg**	**10 56 45.8**	**-0.6**
CAVI				*e*SG	**Sg**	**10 56 55.5**	**+1.1**
CAVI	**Cavuskoy**	**0.61**	**29**	*e*Pg	**Pg**	**10 56 45.8**	**-0.6**
CAVI				*e*Sg	**Sg**	**10 56 55.5**	**+1.2**
DURS	**Dursunbey**	**0.77**	**265**	*i*P	**Pg**	**10 56 48.2**	**-1.3**
DURS	**Dursunbey**	**0.77**	**265**	*i*P	**Pg**	**10 56 48.2**	**-1.2**
DURS				*i*S	**Sg**	**10 57 00.2**	**+0.8**
ADVT	**Abdulvahap**	**0.79**	**15**	*e*PG	**Pg**	**10 56 49.4**	**-0.6**
ADVT				*e*SG	**Sg**	**10 57 00.9**	**+0.7**
ADVT	**Abdulvahap**	**0.79**	**15**	*e*Pg	**Pg**	**10 56 49.4**	**-0.5**
ADVT				*e*Sg	**Sg**	**10 57 00.9**	**+0.7**
ALT	**Altintas**	**0.79**	**140**	*e*PG	**Pg**	**10 56 50.4**	**+0.4**
ALT	**Altintas**	**0.79**	**140**	*e*Pg	**Pg**	**10 56 50.4**	**+0.4**
GEMT	**Gemlik**	**0.79**	**345**	*e*PG	**Pg**	**10 56 50.0**	**0.0**
GEMT	**Gemlik**	**0.79**	**345**	*e*Pg	**Pg**	**10 56 50.0**	**0.0**
GPA	**Golpazari**	**0.90**	**46**	*e*PG	**Pg**	**10 56 51.3**	**-0.7**
GPA	**Golpazari**	**0.90**	**46**	*e*Pg	**Pg**	**10 56 51.3**	**-0.7**
ARMT	**Armutlu**	**1.01**	**333**	*e*PG	**Pg**	**10 56 54.2**	**+0.1**
ARMT	**Armutlu**	**1.01**	**333**	*e*Pg	**Pg**	**10 56 54.2**	**+0.1**
ESKT	**Eskisehir**	**1.08**	**97**	*e*PG	**Pg**	**10 56 55.2**	**-0.3**
ESKT	**Eskisehir**	**1.08**	**97**	*i*P	**Pg**	**10 56 54.5**	**-1.0**
ESKT	**Eskisehir**	**1.08**	**97**	*e*Pg	**Pg**	**10 56 55.2**	**-0.3**
SEYT	**Eskypehyr**	**1.08**	**97**	*i*P	**Pg**	**10 56 54.5**	**-1.0**
SEYT				*i*S	**Sg**	**10 57 10.4**	**+0.8**
GULT	**Gulveren**	**1.11**	**46**	*e*PG	**Pg**	**10 56 55.3**	**-0.8**
GULT	**Gulveren**	**1.11**	**46**	*e*Pg	**Pg**	**10 56 55.3**	**-0.7**
HRT	**Hereke**	**1.16**	**8**	*e*PN	**Pn**	**10 56 56.5**	**-1.2**
HRT	**Hereke**	**1.16**	**8**	*e*Pn	**Pn**	**10 56 56.5**	**-1.2**
ISK	**Istanbul-Kandi**	**1.43**	**348**	*e*PN	**Pn**	**10 57 01.6**	**+0.2**
ISK	**Istanbul-Kandi**	**1.43**	**348**	*e*Pn	**Pn**	**10 57 01.6**	**+0.2**
SILT	**Sile**	**1.49**	**5**	*e*PN	**Pn**	**10 57 02.3**	**+0.1**
SILT	**Sile**	**1.49**	**5**	*e*Pn	**Pn**	**10 57 02.3**	**+0.1**
MDU	**Mudurnu**	**1.56**	**59**	*e*PN	**Pn**	**10 57 03.1**	**-0.1**
MDU	**Mudurnu**	**1.56**	**59**	*e*Pn	**Pn**	**10 57 03.1**	**-0.1**
SVRH	**Sivrihisar-ESK**	**1.61**	**97**	*e*PN	**Pn**	**10 57 04.1**	**+0.3**
SVRH	**Sivrihisar-ESK**	**1.61**	**97**	*e*Pn	**Pn**	**10 57 04.1**	**+0.3**
KLYT	**Kilyos**	**1.61**	**349**	*e*PN	**Pn**	**10 57 04.3**	**+0.4**
KLYT	**Kilyos**	**1.61**	**349**	*e*Pn	**Pn**	**10 57 04.3**	**+0.4**
CTKS	**Kestanelik-??a**	**1.73**	**335**	*e*PN	**Pn**	**10 57 06.0**	**+0.5**
CTKS	**Kestanelik-??a**	**1.73**	**335**	*e*Pn	**Pn**	**10 57 06.0**	**+0.5**

ISCJB ***02*** *10:59:41.1±0.7, 61.°07N±0.°03×28.°74E±0.°08, h0km, Error ellipse: s-maj=6.4km s-min=4.2km az=31.2*
HEL ***02*** *10:59:41.7±0.2, 60.°93N×28.°99E, h0km, ML2.0, ML2.5(NAO), Explosion*
NAO ***02*** *10:59:42.2±1.8, 60.°88N×28.°85E, ML2.5*
CSEM ***02*** *10:59:42.0±0.3, 61.°02N×28.°79E, h1km, ML2.8/4, Error ellipse: s-maj=7.2km s-min=4.7km az=125.0, Mining explosion.*
BER ***02*** *10:59:42.0±3.8, 60.°90N×28.°99E, h0km±20km, ML2.5(NAO)*
IDC ***02*** *10:59:43.6±3.1, 60.°95N×28.°74E, h0km, mb1 3.5/3, mb1mx3.1/26, mbtmp3.5/3, ML3.2/3, Error ellipse: s-maj=35.7km s-min=14.4km az=135.0*
NEIC ***02*** *10:59:45.8±2.6, 61.°17N×28.°39E, h10km, ML2.5(BER), Error ellipse: s-maj=32.6km s-min=10.3km az=143.0*
ISC 02 10:59:41.8±0.7, 61.°01N±0.°03×28.°84E±0.°08, h0km, n37, σ0.°99/58, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VJF	**Virojoki**	**0.79**	**233**	*e*P	**Pg**	**10 59 56.3**	**-0.6**
VJF				*e*SB	**Sb**	**11 00 08.0**	**-1.5**
VJF				*e*RG		11 00

ARCES			Lg			11 04 16.2	
	comp=Z,0.4nm,0.3s,baz=165,slow=29,SNR=5.0						
ARCES	**ARCESS Array B**	**8.67**	**352**	Pn	**Pn**	**11 01 48.7**	**+0.4**
ARCES			Lg			11 04 16.2	
ARCES	**ARCESS Array B**	**8.67**	**352**	Pn	**Pn**	**11 01 48.7**	**+0.5**

*NEIC **02** 10:59:47.5, 32°.02S×71°.47W, h37km, MD3.7(GUC), After GUC.*

GUC 02 10:59:47.5±0.9, 32°.02S×71°.47W, h37km±2km, MD3.7, ML3.0, 2C-11D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.14**	**350**	⇓*i*P	Pn	10 59 54.1	+0.1
CHNG				*i* S	Sn	10 59 58.7	+0.3
CHNG				AML	AML	10 59 59.0	
	comp=E,2μm,0.1s						
CMCH	**Combarbala**	**0.93**	**26**	⇑*i*P	Pn	11 00 04.3	+0.2
CMCH				*i* S	Sn	11 00 17.6	+1.4
CMCH	**Combarbala**	**0.93**	**26**	⇑*i*P	Pn	11 00 04.3	+0.2
CMCH				*i* S	Sn	11 00 17.6	+1.4
CMCH				AML	AML	11 00 19.7	
	comp=E,2μm,0.3s						
JACH	**Jahuel**	**1.00**	**132**	*e*P	Pn	11 00 06.2	+1.2
JACH				*i* S	Sn	11 00 19.6	+1.8
JACH	**Jahuel**	**1.00**	**132**	*e*P	Pn	11 00 06.2	+1.2
JACH				*i* S	Sn	11 00 19.6	+1.8
IHA	**Instituto Hidr**	**1.02**	**188**	*i* P	Pn	11 00 05.7	+0.4
IHA				*i* S	Sn	11 00 19.4	+1.1
IHA	**Instituto Hidr**	**1.02**	**188**	*i* P	Pn	11 00 05.7	+0.4
IHA				*i* S	Sn	11 00 19.4	+1.1
PEL	**Peldehue**	**1.30**	**150**	⇓*i*P	Pn	11 00 10.2	+1.0
PEL				*i* S	Sn	11 00 27.6	+2.2
PEL				AML	AML	11 00 29.1	
	comp=E,733nm,0.4s						
OVCH	**Ovalle**	**1.42**	**9**	*i* P	Pn	11 00 12.6	+1.8
OVCH				*i* S	Sn	11 00 31.6	+3.2
OVCH	**Ovalle**	**1.42**	**9**	*i* P	Pn	11 00 12.6	+1.8
OVCH				*i* S	Sn	11 00 31.6	+3.2
OVCH				AML	AML	11 00 33.5	
	comp=N,448nm,0.4s						
CLCH	**Cerro Calan**	**1.59**	**150**	⇓*i*P	Pn	11 00 14.9	+1.8
CLCH				*i* S	Sn	11 00 35.9	+3.5
CLCH				AML	AML	11 00 37.1	
	comp=N,323nm,0.4s						
FCH	**Farellones**	**1.64**	**143**	⇓*i*P	Pn	11 00 15.6	+1.7
FCH				S	Sn	11 00 36.4	+2.6
FCH	**Farellones**	**1.64**	**143**	⇓*i*P	Pn	11 00 15.6	+1.7
FCH				*i* S	Sn	11 00 36.4	+2.6
FCH				AML	AML	11 00 39.3	
	comp=N,107nm,0.2s						
TACH	**Talagante**	**1.69**	**165**	⇓*i*P	Pn	11 00 15.9	+1.3
TACH	**Talagante**	**1.69**	**165**	⇓*i*P	Pn	11 00 15.9	+1.3
ANTU	**Antumapu**	**1.70**	**156**	*e*P	Pn	11 00 16.4	+1.8
ANTU	**Antumapu**	**1.70**	**156**	*e*P	Pn	11 00 16.4	+1.8
ANTU				AML	AML	11 00 46.0	
	comp=E,148nm,0.2s						
PCH	**Pirque**	**1.79**	**154**	*e*P	Pn	11 00 17.2	+1.3
PCH	**Pirque**	**1.79**	**154**	*e*P	Pn	11 00 17.2	+1.3
TLL	**Tololo Astrono**	**1.93**	**17**	⇓*i*P	Pn	11 00 19.8	+2.0
TLL	**Tololo Astrono**	**1.93**	**17**	⇓*i*P	Pn	11 00 19.8	+2.0
TLL				AML	AML	11 00 49.4	
	comp=E,182nm,0.4s						
CHCH	**Chadas Angostu**	**2.03**	**160**	*e*P	Pn	11 00 20.9	+1.7
CHCH				S	Sn	11 00 46.9	+3.5
CHCH	**Chadas Angostu**	**2.03**	**160**	*e*P	Pn	11 00 20.9	+1.7
CHCH				*i* S	Sn	11 00 46.9	+3.5
LMEL	**Las Melosas**	**2.12**	**150**	⇓*i*P	Pn	11 00 22.3	+1.9
LMEL	**Las Melosas**	**2.12**	**150**	⇓*i*P	Pn	11 00 22.3	+1.9
LMEL				AML	AML	11 00 53.4	
	comp=N,259nm,0.2s						
CACH	**El Canelo**	**2.22**	**161**	*e*P	Pn	11 00 24.1	+2.3
CACH	**El Canelo**	**2.22**	**161**	*e*P	Pn	11 00 24.1	+2.3
LCO	**Las Campanas**	**3.07**	**13**	*e*P	Pn	11 00 34.8	+1.3
LCO				*i* S	Sn	11 01 11.7	+2.7
LCO	**Las Campanas**	**3.07**	**13**	*e*P	Pn	11 00 34.8	+1.3
LCO				*i* S	Sn	11 01 11.7	+2.7

*NIC **02** 11:15:47.9±0.1, 34°.88N×32°.53E, h25km, ML2.7, MW2.8*
*CSEM **02** 11:15:48.2±0.7, 34°.80N×32°.64E, h2km, Mw2.8, Error ellipse: s-maj=16.2km s-min=7.5km az=8.0*
*ISK **02** 11:15:52.8, 35°.05N×32°.94E, h14km, MD3.0*

ISC 02 11:15:48.2±1.6, 34°.80N±0°.09×32°.65E±0°.06, h0km±13km, n16, σ0°87/22, 2D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPCY	**Paphos**	**0.26**	**289**	⇓P	**Pg**	**11 15 53.2**	**0.0**
PPCY	**Paphos**	**0.26**	**289**	⇓P	**Pg**	**11 15 53.2**	**0.0**
ALFC	**Alevga**	**0.36**	**354**	P	**Pg**	**11 15 54.6**	**-0.5**
	29nm,0.1s						
ALFC				S	**Sg**	**11 15 59.7**	**0.0**
ALFC	**Alevga**	**0.36**	**354**	P	**Pg**	**11 15 54.6**	**-0.5**
	29nm,0.1s						
ALFC				S	**Sg**	**11 15 59.7**	**0.0**
LEF	**Lefka**	**0.38**	**32**	*e*PG	**Pg**	**11 15 56.2**	**+0.8**
LEF	**Lefka**	**0.38**	**32**	*e*Pg	**Pg**	**11 15 56.2**	**+0.8**
CSS	**Prodhromos**	**0.59**	**74**	P	**Pg**	**11 15 59.7**	**+0.3**
	0.1nm,0.3s						
CSS				S	**Sg**	**11 16 09.3**	**+2.3**
CSS	**Prodhromos**	**0.59**	**74**	*e*PG	**Pg**	**11 15 59.9**	**+0.5**
CSS				*e*SG	**Sg**	**11 16 05.5**	**-1.5**
CSS	**Prodhromos**	**0.59**	**74**	P	**Pg**	**11 15 59.7**	**+0.3**
	0.1nm,0.3s						
CSS	**Prodhromos**	**0.59**	**74**	*e*Pg	**Pg**	**11 15 59.9**	**+0.5**
CSS				*e*Sg	**Sg**	**11 16 05.5**	**-1.5**
CSS				S	**Sg**	**11 16 09.3**	**+2.3**
LFK	**Lefkose**	**0.87**	**56**	*e*PG	**Pg**	**11 16 04.0**	**-0.9**
LFK	**Lefkose**	**0.87**	**56**	*e*Pg	**Pg**	**11 16 04.0**	**-0.9**
IKL	**Isikli**	**1.67**	**30**	*e*PN	**Pn**	**11 16 17.7**	**-0.9**
IKL	**Isikli**	**1.67**	**30**	*e*Pn	**Pn**	**11 16 17.7**	**-0.9**
HDMB	**Hadim**	**2.16**	**357**	*e*PN	**Pn**	**11 16 26.4**	**+0.9**
HDMB	**Hadim**	**2.16**	**357**	*e*Pn	**Pn**	**11 16 26.4**	**+1.0**

*IDC **02** 11:20:03.3±1.7, 0°.11S×125°.69E, h0km, mb3.4/3, mb1 3.7/4, mb1mx3.5/21, mbtmp3.6/4, ML3.5/1, Error ellipse: s-maj=52.9km s-min=26.7km az=65.0*
*ISCJB **02** 11:20:10.0±0.7, 0°.34S±0°.09×125°.45E±0°.05, h67km±13km, mb3.4/3, Error ellipse: s-maj=15.3km s-min=8.2km az=7.2*
*DJA **02** 11:20:12, 0°.10N×125°.62E, h52km, MLv4.0/8*

ISC 02 11:20:11.1±0.7, 0°.30S±0°.09×125°.48E±0°.05, h58km±13km, n13, σ0°61/15, mb3.4/3, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**1.73**	**300**	P	**Pn**	**11 20 38.7**	**-0.2**
MNI	**Manado**	**1.85**	**340**	P	**Pn**	**11 20 40.1**	**-0.4**
LBMI	**Labuha**	**2.05**	**99**	P	**Pn**	**11 20 43.0**	**-0.2**
LBMI				S	**Sn**	**11 21 08.0**	**+0.3**
LUWI	**Luwuk**	**2.80**	**255**	P	**Pn**	**11 20 57.9**	**+4.4**
LUWI				S	**Sn**	**11 21 35.7**	**+10**
MRSI	**Marisa**	**3.62**	**282**	P	**Pn**	**11 21 06.4**	**+1.7**
APSI	**Ampana**	**3.88**	**261**	P	**Pn**	**11 21 08.2**	**0.0**
AAI	**Ambon**	**4.32**	**141**	P	**Pn**	**11 21 20.4**	**+6.1**
TTSI	**Tana Toraja**	**6.28**	**244**	P	**Pn**	**11 21 40.8**	**-0.4**
SPSI	**Sidrap Palu**	**6.76**	**237**	P	**Pn**	**11 21 47.2**	**-0.6**
KAPI	**Kappang**	**7.39**	**231**	Pn	**Pn**	**11 21 56.4**	**0.0**
	0.7nm,0.3s,baz=38,slow=19,SNR=3.9						
WRA	**Warramunga Arr**	**21.36**	**157**	P	**P**	**11 24 53.3**	**-0.4**
	1.6nm,0.8s,mb3.4,baz=335,slow=11,SNR=14						
ASAR	**Alice Springs**	**24.62**	**161**	P	**P**	**11 25 26.9**	**+0.7**
	0.8nm,1.1s,mb3.1,baz=353,slow=9.2,SNR=5.0						
MKAR	**Makanchi Array**	**60.19**	**327**	P	**P**	**11 30 12.7**	**-0.3**
	0.3nm,0.5s,mb3.6,baz=118,slow=9.9,SNR=5.1						

*DDA **02** 11:52:38.0, 38°.32N×39°.55E, h2km±3km, Md3.5, Ml3.7*
*ISK **02** 11:52:38.4, 38°.35N×39°.49E, h2km, MD3.4*
*ISCJB **02** 11:52:39.2±0.3, 38°.30N±0°.03×39°.51E±0°.03, h10km, Error ellipse: s-maj=3.7km s-min=2.8km az=12.6*
*CSEM **02** 11:52:39.7±0.2, 38°.34N×39°.48E, h5km, MD3.4, Error ellipse: s-maj=4.7km s-min=3.8km az=177.0*

ISC 02 11:52:39.7±0.3, 38°.32N±0°.03×39°.53E±0°.03, h10km, n44, σ1°07/59, 1C-2D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVRC	**Sivrice-ELAZID**	**0.18**	**289**	P G	**Pg**	**11 52 42.3**	**-1.2**

SVRC	**Sivrice-ELAZID**	**0.18**	**289**	*i* Pg	**Pg**	**11 52 42.3**	**-1.3**
ELZG	**Elazig**	**0.46**	**293**	⇑*i*P	**Pg**	**11 52 47.3**	**-1.4**
ELZG				*i* S	**Sg**	**11 52 55.3**	**+0.5**
ELZG	**Elazig**	**0.46**	**293**	*i* P	**Pg**	**11 52 47.3**	**-1.4**
ELZG				*i* S	**Sg**	**11 52 55.3**	**+0.5**
PTK	**Pertek**	**0.58**	**350**	PG	**Pg**	**11 52 49.4**	**-1.6**
PTK				*e*SG	**Sg**	**11 52 58.6**	**0.0**
PTK	**Pertek**	**0.58**	**350**	*i* Pg	**Pg**	**11 52 49.4**	**-1.5**
PTK				*e*Sg	**Sg**	**11 52 58.6**	**0.0**
DIYA	**Diyarbakir**	**0.61**	**130**	*i* P	**Pg**	**11 52 50.7**	**-0.8**
DIYA				*i* S	**Sg**	**11 52 59.4**	**-0.2**
DIYA	**Diyarbakir**	**0.61**	**130**	*i* P	**Pg**	**11 52 50.7**	**-0.8**
DIYA				*i* S	**Sg**	**11 52 59.4**	**-0.2**
MYA	**Malataya**	**0.86**	**271**	*e*PG	**Pg**	**11 52 54.9**	**-1.4**
MYA	**Malataya**	**0.86**	**271**	*e*Pg	**Pg**	**11 52 54.9**	**-1.4**
BINT	**Bingol**	**0.94**	**53**	*e*PG	**Pg**	**11 52 57.5**	**-0.2**
BINT	**Bingol**	**0.94**	**53**	*e*Pg	**Pg**	**11 52 57.5**	**-0.2**
URFA	**Urfa**	**1.04**	**213**	*e*PG	**Pg**	**11 52 59.0**	**-0.6**
URFA	**Urfa**	**1.04**	**213**	*e*Pg	**Pg**	**11 52 59.0**	**-0.6**
KEMA	**Kemaliye**	**1.24**	**320**	*i* P	**Pn**	**11 53 02.3**	**-0.8**
KEMA				*i* S	**Sb**	**11 53 18.3**	**-1.0**
KEMA	**Kemaliye**	**1.24**	**320**	*i* P	**Pn**	**11 53 02.3**	**-0.8**
KEMA				*i* S	**Sb**	**11 53 18.3**	**-1.0**
ATAB	**Bozova**	**1.29**	**229**	*i* P	**Pn**	**11 53 03.3**	**-0.5**
ATAB				*i* S	**Sb**	**11 53 22.0**	**+1.3**
ATAB	**Bozova**	**1.29**	**229**	*i* P	**Pn**	**11 53 03.3**	**-0.4**
ATAB				*i* S	**Sb**	**11 53 22.0**	**+1.4**
MARD	**Mardin**	**1.41**	**135**	⇓*i*P	**Pn**	**11 53 04.5**	**-0.9**
MARD				*i* S	**Sn**	**11 53 23.3**	**-0.8**
BNGL	**BINGOL**	**1.42**	**63**	*i* P	**Pn**	**11 53 04.6**	**-0.9**
BNGL				*i* S	**Sn**	**11 53 25.6**	**+1.3**
BEST	**Besiri**	**1.44**	**107**	*i* P	**Pn**	**11 53 04.9**	**-0.9**
BEST				*i* S	**Sn**	**11 53 24.6**	**-0.2**
DARE	**Darende-Malaty**	**1.49**	**296**	*e*PN	**Pg**	**11 53 08.9**	**+0.7**
DARE	**Darende-Malaty**	**1.49**	**296**	*e*Pn	**Pg**	**11 53 08.9**	**+0.7**
BTMT	**Batman**	**1.55**	**94**	*e*PN	**Pn**	**11 53 06.4**	**-0.9**
GZT	**Gaziantep**	**1.83**	**239**	⇓*i*P	**Pn**	**11 53 10.6**	**-0.5**
GZT				*i* S	**Sg**	**11 53 38.9**	**+0.5**
GUMT	**Gumushane**	**2.14**	**359**	*e*PN	**Pn**	**11 53 16.1**	**+0.7**
GUMT	**Gumushane**	**2.14**	**359**	*e*Pn	**Pn**	**11 53 16.1**	**+0.7**
GAZ	**Gaziantep**	**2.16**	**239**	*e*PN	**Pn**	**11 53 17.0**	**+1.3**
GAZ	**Gaziantep**	**2.16**	**239**	*e*Pn	**Pn**	**11 53 17.0**	**+1.3**
KMRS	**Kahramanmaras**	**2.23**	**249**	*e*PN	**Pn**	**11 53 17.8**	**+1.2**
KMRS	**Kahramanmaras**	**2.23**	**249**	*e*Pn	**Pn**	**11 53 17.8**	**+1.2**
SARI	**SarD1z-Kayseri**	**2.25**	**280**	*e*PN	**Pb**	**11 53 20.3**	**-0.1**
PINB	**Pinarbasi**	**2.48**	**279**	*i* P	**Pn**	**11 53 22.3**	**+2.2**
PINB	**Pinarbasi**	**2.48**	**279**	*i* P	**Pn**	**11 53 22.3**	**+2.3**
KUZU	**Kuzuini**	**2.48**	**232**	*i* P	**Pg**	**11 53 25.9**	**-1.3**
KUZU				*i* S	**Sg**	**11 53 59.1**	**-0.4**
SVSK	**Karacayir**	**2.53**	**310**	*e*PN	**Pn**	**11 53 21.4**	**+0.7**
SVSK	**Karacayir**	**2.53**	**310**	*e*Pn	**Pn**	**11 53 21.4**	**+0.6**
KOZT	**Kozan**	**3.04**	**255**	*e*PN	**Pn**	**11 53 29.3**	**+1.5**
CUKT	**Cukurca**	**3.41**	**107**	*e*PN	**Pn**	**11 53 34.9**	**+2.1**
CUKT	**Cukurca**	**3.41**	**107**	*e*Pn	**Pn**	**11 53 34.9**	**+2.1**
HKR	**Hakkari**	**3.41**	**101**	*e*PN	**Pn**	**11 53 35.0**	**+2.1**
HKR	**Hakkari**	**3.41**	**101**	*e*Pn	**Pn**	**11 53 35.0**	**+2.1**
BCA	**Borcka**	**3.51**	**27**	*e*PN	**Pn**	**11 53 35.7**	**+1.4**
BCA	**Borcka**	**3.51**	**27**	*e*Pn	**Pn**	**11 53 35.7**	**+1.4**

IDC 02 11:54:55.1±2.2, 0°.95N×126°.99E, h0km, mb3.1/3, mb1 3.4/3, mb1mx3.2/19, mbtmp3.2/3, Error ellipse: s-maj=167.1km s-min=27.2km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.98**	**161**	P	P	11 59 50.5	-0.4
	0.3nm,0.3s,baz=340,slow=11,SNR=12						
ASAR	**Alice Springs**	**25.38**	**165**	P	P	12 00 24.7	+0.5
	0.1nm,0.3s,baz=347,slow=13,SNR=8.6						
MKAR	**Makanchi Array**	**59.98**	**326**	P	P	12 05 03.5	0.0
	0.2nm,0.5s,baz=114,slow=9.6,SNR=3.7						

IDC 02 12:30:29.6±13.0, 10°.38N×91°.86E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/23, mbtmp3.4/3, Error ellipse: s-maj=684.9km s-min=30.6km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**37.19**	**349**	P	P	12 37 42.4	0.0
	0.3nm,0.6s,baz=170,slow=8.0,SNR=3.6						
WRA	**Warramunga Arr**	**51.54**	**126**	P	P	12 39 37.5	-0.2
	0.2nm,0.5s,baz=309,slow=8.0,SNR=5.1						
ASAR	**Alice Springs**	**53.24**	**130**	P	P	12 39 50.3	+0.1
	0.8nm,0.9s,baz=302,slow=6.6,SNR=7.5						

*ISK **02** 12:43:48.7, 37°.36N×28°.38E, h18km, MD2.7*
*DDA **02** 12:43:51.5, 37°.22N×28°.21E, h7km±5km, Md2.7*
*CSEM **02** 12:43:51.9±0.3, 37°.22N×28°.24E, h2km, MD2.7, Error ellipse: s-maj=7.3km s-min=4.7km az=23.0*
*ISCJB **02** 12:43:52.2±0.5, 37°.22N±0°.04×28°.21E±0°.04, h6km±6km, Error ellipse: s-maj=7.3km s-min=3.8km az=30.4*

ISC 02 12:43:52.6±0.5, 37°.21N±0°.03×28°.20E±0°.03, h8km±5km, n24, σ1°27/41, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.10**	**137**	PG	**Pg**	**12 43 54.5**	**-0.5**
YER				*e*SG	**Sg**	**12 43 58.8**	**+2.2**
YER	**Yerkesik**	**0.10**	**137**	*i* Pg	**Pg**	**12 43 54.5**	**-0.5**
YER				*e*Sg	**Sg**	**12 43 58.8**	**+2.2**
MLSB	**Milas**	**0.35**	**285**	*e*PG	**Pg**	**12 43 58.9**	**-0.6**
MLSB				*e*SG	**Sg**	**12 44 06.2**	**+2.1**
MLSB	**Milas**	**0.35**	**285**	*e*Pg	**Pg**	**12 43 58.9**	**-0.6**
MLSB				*e*Sg	**Sg**	**12 44 06.2**	**+2.1**
TURN	**Turunc**	**0.46**	**136**	*i* P	**Pg**	**12 43 59.9**	**-1.8**
TURN				*i* S	**Sg**	**12 44 07.4**	**-0.3**
TURN	**Turunc**	**0.46**	**136**	*i* P	**Pg**	**12 43 59.9**	**-1.8**
TURN				*i* S	**Sg**	**12 44 07.4**	**-0.3**
AYDN	**Tasoluk**	**0.52**	**331**	*i* P	**Pg**	**12 44 01.7**	**-1.0**
AYDN				*i* S	**Sg**	**12 44 09.3**	**-0.3**
AYDN	**Tasoluk**	**0.52**	**331**	*i* P	**Pg**	**12 44 01.7**	**-1.0**
AYDN				*i* S	**Sg**	**12 44 09.3**	**-0.2**
BDRM	**Kayabasi**	**0.62**	**257**	*i* P	**Pg**	**12 44 04.1**	**-0.5**
BDRM				*i* S	**Sg**	**12 44 13.2**	**+0.5**
BDRM	**Kayabasi**	**0.62**	**257**	*i* P	**Pg**	**12 44 04.1**	**-0.5**
BDRM				*i* S	**Sg**	**12 44 13.2**	**+0.5**
BODT	**Bodrum**	**0.72**	**259**	*e*PG	**Pg**	**12 44 06.6**	**0.0**
BODT	**Bodrum**	**0.72**	**259**	*e*Pg	**Pg**	**12 44 06.6**	**0.0**
DNZL	**Cakiroluk**	**0.83**	**54**	*i* P	**Pg**	**12 44 07.9**	**-0.7**
DNZL				*i* S	**Sg**	**12 44 20.7**	**+1.3**
DNZL	**Cakiroluk**	**0.83**	**54**	*i* P	**Pg**	**12 44 07.9**	**-0.7**
GCAM	**G?zelcaml?**	**0.91**	**303**	*i* P	**Pg**	**12 44 07.8**	**-2.4**
GCAM				*i* S	**Sg**	**12 44 22.5**	**+0.4**
GCAM	**G?zelcaml?**	**0.91**	**303**	*i* P	**Pg**	**12 44 07.8**	**-2.4**
GCAM				*i* S	**Sg**	**12 44 22.5**	**+0.4**
GOLH	**Golhisar**	**1.09**	**88**	*i* P	**Pg**	**12 44 10.8**	**-2.7**
GOLH				*i* S	**Sg**	**12 44 30.8**	**+3.1**
GOLH	**Golhisar**	**1.09**	**88**	*i* P	**Pg**	**12 44 10.8**	**-2.7**
AKAS	**Kas**	**1.49**	**130**	*i* P	**Pn**	**12 44 20.6**	**+1.0**
AKAS				*i* S	**Sn**	**12 44 39.4**	**+0.2**
AKAS	**Kas**	**1.49**	**130**	*i* P	**Pn**	**12 44 20.6**	**+0.9**
AKAS				*i* S	**Sn**	**12 44 39.4**	**+0.1**
KHAL	**Karahalli**	**1.55**	**41**	*i* P	**Pn**	**12 44 20.0**	**-0.5**
KHAL				*i* S	**Sn**	**12 44 31.7**	**-9.0**
KHAL	**Karahalli**	**1.55**	**41**	*i* P	**Pn**	**12 44 20.0**	**-0.5**
AKHS	**Akhisar**	**1.70**	**350**	*i* P	**Pn**	**12 44 24.4**	**+1.9**
AKHS	**Akhisar**	**1.70**	**350**	*i* P	**Pn**	**12 44 24.4**	**+1.9**

*ISCJB **02** 12:46:02.9±0.5, 19°.37S±0°.04×177°.69W±0°.04, h585km±7km, mb4.5/48, Error ellipse: s-maj=7.3km s-min=5.2km az=40.6*
*NEIC **02** 12:46:02.4±0.2, 19°.23S×177°.60W, mb4.4/24, Error ellipse: s-maj=10.0km s-min=6.9km az=132.0*
*IDC **02** 12:46:03.2±0.5, 19°.26S×177°.64W, h577km±5km, mb4.1/17, mb1 4.2/19, mb1mx4.2/21, mbtmp4.2/19, Error ellipse: s-maj=11.4km s-min=8.6km az=140.0*
*SZGRF **02** 12:46:03.2, 19°.74S×177°.70W, h587km, Fiji Islands region*
*MOS **02** 12:46:04.5±1.8, 19°.26S×177°.79W, h573km, mb4.5/6, Error ellipse: s-maj=14.4km s-min=12.9km az=99.1*

ISC 02 12:46:03.4±0.5, 19°.36S±0°.04×177°.64W±0°.04, h577km±6km, h575km±2.0km: pP-P, n572, σ0°63/384, mb4.5/48, 172C-166D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.40**	**291**	*e*P	**P**	**12 47 30.6**	**+0.4**
MSVF				*e*S	**S**	**12 48 42.0**	**+1.1**
AFI	**Afiamalu**	**7.81**	**47**	P	**P**	**12 47 55.3**	**-4.9**
	21nm,0.3s,baz=212,slow=1.5,SNR=83						
AFI				S	**S**	**12 49 27.2**	**-8.7**
	18nm,0.3s,baz=184,slow=22,SNR=10						
AFI	**Afiamalu**	**7.81**	**47**	*e*P	**P**	**12 47 55.4**	**-4.8**
AFI				pmax	pmax		
	comp=Z,298nm,0.8s						
AFI	**Afiamalu**	**7.81**	**47**	*e*P	**P**	**12 47 55.4**	**-4.9**
	comp=Z,298nm,0.8s						
RAO	**Raoul Island**	**9.85**	**181**	P	**P**	**12 48 19.3**	**-0.8**
	comp=Z,64nm,0.3s,baz=343,slow=19,SNR=4.3						
RAO				S	**S**	**12 50 10.5**	**-1.9**
	comp=Z,65nm,0.3s,baz=81,slow=23,SNR=7.7						
FUNA	**Funafuti**	**11.20**	**344**	*e*P	**P**	**12 48 32.8**	**-1.2**
	comp=Z,248nm,1.0s						
RAR	**Rarotonga**	**16.86**	**99**	*e*P	**P**	**12 49 29.0**	**-0.7**
RAR				pmax	pmax		
	comp=Z,2μm,3.0s						
RAR	**Rarotonga**	**16.86**	**99**	*e*P	**P**	**12 49 29.0**	**-0.7**
	comp=Z,2μm,3.0s						
OUZ	**Omahuta**	**17.60**	**204**	*e*P	**P**	**12 49 39.8**	**+3.7**
	comp=Z,251nm,1.1s						
OUZ	**Omahuta**	**17.60**	**204**	PN	**P**	**12 49 39.6**	**+3.5**
OTAZ	**Otara**	**18.70**	**199**	PN	**P**	**12 49 49.0**	**+2.8**
MWZ	**Matawai**	**19.37**	**192**	PN	**P**	**12 49 51.3**	**-1.0**
URZ	**Urewera**	**19.38**	**193**	P	**P**	**12 49 51.3**	**-1.1**
	comp=Z,17nm,0.3s,baz=11,slow=3.9,SNR=82						
URZ				S	**S**	**12 52 56.5**	**-1.4**
	comp=Z,1.1nm,0.3s,baz=3.4,slow=22,SNR=6.5						
URZ	**Urewera**	**19.38**	**193**	*e*P	**P**	**12 49 51.4**	**-1.0**
	comp=Z,142nm,0.7s						
URZ	**Urewera**	**19.38**	**193**	PN	**P**	**12 49 50.5**	**-1.9**
QRZ	**Quartz Range**	**22.99**	**199**	PN	**P**	**12 50 25.3**	**+0.6**
NNZ	**Nelson**	**23.10**	**197**	PN	**P**	**12 50 25.5**	**-0.2**
THZ	**Tophouse**	**23.74**	**198**	PN	**P**	**12 50 30.8**	**-0.5**
HNR	**Honiara**	**23.82**	**291**	P	**P**	**12 50 32.3**	**-0.2**
	comp=Z,20nm,0.4s,mb5.1,baz=46,slow=2.8,SNR=5.6						
KHZ	**Kahutara**	**24.17**	**196**	*e*P	**P**	**12 50 34.5**	**-0.6**
	comp=Z,69nm,0.9s,mb5.3						
RPZ	**Rata Peaks**	**26.07**	**199**	P	**P**	**12 50 53.5**	**+1.6**
	comp=Z,20nm,0.7s,mb4.9,baz=347,slow=1.4,SNR=11						
FOZ	**Fox Glacier**	**26.38**	**201**	PN	**P**	**12 50 53.9**	**-0.7**
LBZ	**Lake Benmore**	**26.95**	**199**	PN	**P**	**12 50 58.5**	**-1.1**
ARMA	**Armidale**	**29.88**	**242**	*e*P	**P**	**12 51 27.1**	**+1.8**
CNB	**Canberra Magne**	**33.15**	**235**	*e*P	**P**	**12 51 54.3**	**+1.2**
CTA	**Charters Tower**	**33.95**	**263**	⇑*i*P	**P**	**12 52 00.6**	**+0.6**
	comp=Z,17nm,0.8s,mb4.7						
CTA	**Charters Tower**	**33.95**	**263**	P	**P**	**12 52 00.9**	**+0.9**
	comp=Z,18nm,0.5s,mb4.9,baz=92,slow=10,SNR=37						
CTA				PcP	PcP	12 54 21.4	+0.2
	comp=Z,7.6nm,0.9s,baz=1.2,slow=3.0,SNR=3.3						
COEN	**Coen**	**37.86**	**272**	*e*P	**P**	**12 52 32.9**	**+0.6**
	comp=Z,134nm,0.8s,mb5.5						
STKA	**Stephens Creek**	**38.59**	**243**	*e*P	**P**	**12 52 38.5**	**+0.5**
	comp=Z,52nm,0.9s,mb5.1						
STKA	**Stephens Creek**	**38.59**	**243**	P	**P**	**12 52 39.0**	**+1.0**
	comp=Z,61nm,0.9s,mb5.1,baz=86,slow=8.6,SNR=54						
STKA				PcP	PcP	12 54 35.9	+0.5
	comp=Z,11nm,0.9s,baz=127,slow=3.5,SNR=3.6						
STKA				ScP	ScP	12 57 30.9	+1.8
	comp=Z,4.7nm,0.8s,baz=27,slow=12,SNR=3.8						
WRA	**Warramunga Arr**	**45.10**	**261**	P	**P**	**12 53 28.6**	**-0.6**
	comp=Z,18nm,1.1s,mb4.5,baz=97,slow=5.9,SNR=175						
WRA				PcP	PcP	12 54 57.5	0.0
	comp=Z,12nm,0.9s,baz=90,slow=3.6,SNR=16						
WRA				S	**S**	**12 59 26.0**	**-1.3**
	comp=Z,8.5nm,1.0s,baz=94,slow=14,SNR=

NVAR	Mina Array Bea	79.97	43	P	P	12 57 12.8	-0.5
NVAR				pP	pP	12 59 14.4	-0.9
NVAR				PKKPbc	PKKPbc	13 15 54.9	+0.4
Y12C	Blythe	80.01	49	⇓P	P	12 57 13.9	+0.2
	baz=80						
113A	Mohawk Valley,	80.05	50	⇑P	P	12 57 14.2	+0.3
	baz=80						
U10A	Ash Meadows, A	80.17	46	⇑P	P	12 57 14.7	+0.3
	baz=80						
214A	Organ Pipe Nat	80.34	51	⇓P	P	12 57 15.8	+0.4
	baz=80,SNR=5.2						
Z13A	Yuma Proving G	80.35	50	⇓P	P	12 57 15.7	+0.2
	baz=80,SNR=6.4						
V11A	Goodsprings	80.47	47	⇑P	P	12 57 15.9	-0.1
	baz=80						
PDMCI	Parker Dam,Lak	80.57	49	⇓P	P	12 57 16.8	+0.2
	baz=81						
COR	Corvallis	80.63	36	eP	P	12 57 15.8	-0.8
COR				pmax	pmax		
	comp=Z,9.0nm,0.4s,mb4.5						
COR	Corvallis	80.63	36	eP	P	12 57 15.8	-0.8
	comp=Z,8.5nm,0.4s,mb4.5						
114A	Black Gap (USA	80.69	51	⇓P	P	12 57 17.3	+0.2
	baz=81						
S10A	Tonopah Range,	80.81	45	⇓P	P	12 57 17.6	0.0
	baz=81,SNR=16						
V12A	Nelson	80.81	47	⇑P	P	12 57 18.0	+0.3
	baz=81						
K05A	Summer Lake	80.87	39	⇓P	P	12 57 18.0	+0.1
	baz=81,SNR=16						
Z14A	Wintersburg	80.95	50	⇑P	P	12 57 18.7	+0.2
	baz=81						
W13A	Hualapai Mount	81.16	48	⇓P	P	12 57 19.9	+0.4
	baz=81						
Y14A	Wickenburg	81.19	49	⇑P	P	12 57 19.6	-0.2
	baz=81						
R10A	Warm Springs	81.20	44	⇑P	P	12 57 19.9	+0.2
	baz=81,SNR=8.6						
S11A	Rachel	81.22	45	⇑P	P	12 57 19.5	-0.3
	baz=81,SNR=5.3						
H04A	Detroit Lake	81.32	36	⇑P	P	12 57 19.4	-0.7
	baz=81,SNR=6.4						
F03A	Seaside	81.34	35	⇓P	P	12 57 20.8	+0.6
	baz=81						
T11A	Corn Creek, Al	81.36	46	⇑P	P	12 57 20.6	+0.1
	baz=81,SNR=12						
216A	Three Points,	81.37	52	⇓P	P	12 57 21.5	+0.9
	baz=81,SNR=7.7						
U12A	Valley of Fire	81.39	47	⇑P	P	12 57 21.1	+0.4
	baz=82						
Q10A	Clear Creek Ra	81.43	44	⇓P	P	12 57 21.3	+0.5
	baz=82						
116A	Eloy	81.46	51	⇓P	P	12 57 21.4	+0.3
	baz=82,SNR=7.1						
V13A	Grand Canyon W	81.48	47	⇑P	P	12 57 20.9	-0.2
	baz=82						
X14A	Yava	81.54	49	⇓P	P	12 57 21.9	+0.4
	baz=82,SNR=5.0						
CN2	Changchun	81.61	322	eP	P	12 57 24.0	+2.4
Y15A	Casa Rosa Ranc	81.68	50	⇓P	P	12 57 22.6	+0.4
	baz=82,SNR=12						
R11A	Troy Canyon, C	81.70	45	⇑P	P	12 57 21.9	-0.3
	baz=82,SNR=9.2						
U13A	Pakoon Wash	81.78	47	⇑P	P	12 57 22.9	+0.2
	baz=82,SNR=11						
W14A	Seligman	81.78	48	⇓P	P	12 57 23.3	+0.6
	baz=82,SNR=9.9						
S12A	Delamar Landin	81.80	46	⇑P	P	12 57 22.9	+0.1
	baz=82						
Q11A	Duckwater	81.93	44	⇓P	P	12 57 23.3	-0.1
	baz=82						
F04A	Amboy	81.96	35	⇓P	P	12 57 23.7	+0.3
	baz=82						
V14A	Boquillas Ranc	81.98	48	⇑P	P	12 57 24.3	+0.6
	baz=82,SNR=9.9						
X15A	Humboldt	82.02	49	⇑P	P	12 57 24.4	+0.4
	baz=82,SNR=9.5						
Z16A	Peralta Trail,	82.04	51	⇓P	P	12 57 24.4	+0.3
	baz=82						
WVOR	Wild Horse Val	82.04	40	eP	P	12 57 23.7	-0.2
WVOR				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.4						
WVOR	Wild Horse Val	82.04	40	eP	P	12 57 23.6	-0.2
	comp=Z,12nm,1.0s,mb4.4						
T13A	Saint George	82.13	46	⇑P	P	12 57 25.0	+0.5
	baz=82						
O10A	Cortez Mining,	82.17	43	⇓P	P	12 57 24.9	+0.3
	baz=82						
117A	Oracle	82.17	52	⇑P	P	12 57 25.5	+0.7
	baz=82,SNR=14						
318A	Bisbee	82.19	53	⇑P	P	12 57 25.5	+0.6
	baz=82,SNR=14						
P11A	Circle Ranch,	82.24	43	⇓P	P	12 57 25.2	+0.3
	baz=82						
Y16A	Circle Bar Ran	82.27	50	⇓P	P	12 57 25.7	+0.5
	baz=82,SNR=12						
U14A	Mt Trumbull	82.33	47	⇑P	P	12 57 26.0	+0.5
	baz=82,SNR=21						
TDL	Tradedollar La	82.33	35	P	P	12 57 25.8	+0.5
W15A	Williams	82.34	49	⇑P	P	12 57 26.3	+0.8
	baz=82						
R12A	Pony Springs,	82.34	45	⇓P	P	12 57 25.6	+0.1
	baz=82,SNR=11						
218A	Dragoon	82.40	52	⇓P	P	12 57 26.8	+0.8
	baz=82,SNR=11						
GULW	Guler Mountain	82.41	36	P	P	12 57 25.7	+0.1
S13A	Holt Ranch, En	82.46	46	⇑P	P	12 57 26.0	-0.1
	baz=82,SNR=6.2						
G06A	Carlson Farm,	82.53	37	⇓P	P	12 57 25.9	-0.4
	baz=83						
VTHM	Trough	82.53	37	P	P	12 57 26.3	0.0
X16A	Lo Mia Camp, P	82.56	50	⇑P	P	12 57 27.2	+0.6
	baz=83,SNR=17						
Q12A	Willow Creek R	82.57	44	⇑P	P	12 57 26.6	-0.1
	baz=83						
O11A	Cowboy Ranch,	82.62	43	⇓P	P	12 57 27.0	+0.1
	baz=83						
Y17A	Roosevelt	82.64	51	⇑P	P	12 57 27.5	+0.4
	baz=83,SNR=5.7						
J08A	Circle Bar Ran	82.67	39	⇓P	P	12 57 26.6	-0.4
	baz=83,SNR=9.0						
R13A	O'Grain Ranch,	82.69	45	⇓P	P	12 57 27.6	+0.3
	baz=83						
319A	Douglas	82.70	53	⇓P	P	12 57 28.2	+0.7
	baz=83,SNR=7.9						
T14A	Hurricane	82.72	47	⇓P	P	12 57 27.7	+0.2
	baz=83,SNR=6.5						
V15A	Kaibab Nationa	82.73	48	⇓P	P	12 57 28.0	+0.5
	baz=83,SNR=10						
MAW	Mawson	82.75	200	eP	P	12 57 26.2	-0.8
	comp=Z,12nm,0.8s						
MAW	Mawson	82.75	200	P	P	12 57 26.9	-0.1
	comp=Z,18nm,0.8s,mb4.6,baz=124,slow=6.0,SNR=39						
118A	Homack Ranch,	82.78	52	⇓P	P	12 57 28.6	+0.8
	baz=83,SNR=12						
M10A	I.L. Ranch, Tu	82.82	41	⇓P	P	12 57 27.8	0.0
	baz=83,SNR=12						
W16A	Flagstaff	82.82	49	⇑P	P	12 57 28.3	+0.3
	baz=83,SNR=8.1						
ARUT	Antelope Range	82.85	46	eP	P	12 57 28.1	0.0
ARUT				e*PP	pP	12 59 30.5	-0.7
ARUT				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.3						
ARUT	Antelope Range	82.85	46	eP	P	12 57 28.1	0.0
	comp=Z,12nm,1.2s,mb4.3						
ARUT				epP	pP	12 59 30.5	-0.7
D05A	Enumclaw	82.97	35	⇑P	P	12 57 29.1	+0.7
	baz=83						
X17A	Forest Lakes	82.97	50	⇑P	P	12 57 29.5	+0.8
	baz=83						
219A	White Tail Can	83.01	53	⇑P	P	12 57 29.4	+0.5
	baz=83,SNR=13						
S14A	Cedar City	83.02	46	⇑P	P	12 57 29.2	+0.3
	baz=83						
Q13A	Wheeler Ranch,	83.06	45	⇑P	P	12 57 28.8	-0.3
	baz=83,SNR=6.8						
WUAZ	Wupatki	83.14	49	eP	P	12 57 30.2	+0.7
	comp=Z,17nm,1.3s,mb4.4						
WUAZ				epP	pP	12 59 35.4	+2.5
L10A	Juniper Basin	83.17	41	⇑P	P	12 57 29.5	0.0
	baz=83						
T15A	Red Dirt Ranch	83.18	47	⇑P	P	12 57 29.8	+0.1
	baz=83,SNR=13						
H08A	Prairie City	83.23	38	⇓P	P	12 57 29.2	-0.6
	baz=83						
M11A	Holland Ranch,	83.24	42	⇓P	P	12 57 29.7	-0.2
	baz=83,SNR=5.6						
320A	Kipp Ranch, An	83.25	54	⇑P	P	12 57 31.4	+1.2
	baz=83,SNR=18						
Y18A	Canyon Day Jun	83.27	51	⇑P	P	12 57 30.8	+0.5
	baz=83,SNR=11						
O12A	Currie	83.28	43	⇓P	P	12 57 29.9	-0.2
	baz=83,SNR=7.2						
K10A	MacKenzie Ranc	83.31	40	⇑P	P	12 57 30.1	-0.2
	baz=83,SNR=7.8						
P13A	Bates Ranch, G	83.33	44	⇓P	P	12 57 30.3	-0.1
	baz=83,SNR=12						
119A	Ashpeak Ranch,	83.33	52	⇓P	P	12 57 31.2	+0.6
	baz=83,SNR=5.3						
N12A	Clover Valley,	83.41	43	⇑P	P	12 57 30.4	-0.4
	baz=84,SNR=7.9						
I09A	Lost Marbles R	83.46	39	⇑P	P	12 57 30.4	-0.6
	baz=84,SNR=5.0						
G08A	Pilot Rock	83.51	37	⇓P	P	12 57 30.8	-0.4
	baz=84,SNR=8.3						
220A	Playas Peak, P	83.51	53	⇓P	P	12 57 32.1	+0.6
	baz=84,SNR=12						
S15A	Panguitch	83.53	46	⇓P	P	12 57 32.2	+0.8
	baz=84						
Q14A	Sevier Lake (B	83.58	45	⇓P	P	12 57 31.8	+0.1
	baz=84						
Z19A	T-Link Ranch,	83.61	52	⇑P	P	12 57 32.5	+0.6
	baz=84						
V17A	Tonalea, Kykot	83.61	49	⇓P	P	12 57 32.0	+0.1
	baz=84,SNR=17						
L11A	Cat Creek Ranc	83.66	41	⇓P	P	12 57 32.1	+0.1
	baz=84,SNR=10						
X18A	Snowflake	83.69	50	⇓P	P	12 57 32.6	+0.3
	baz=84						
120A	U Bar Ranch, L	83.73	52	⇑P	P	12 57 33.2	+0.6
	baz=84,SNR=5.3						
T16A	Glen Canyon Da	83.77	47	⇑P	P	12 57 33.0	+0.4
	baz=84						
M12A	Wells	83.79	42	⇑P	P	12 57 32.3	-0.3
	baz=84,SNR=6.3						
K11A	Parker Ranch,	83.82	41	⇓P	P	12 57 32.6	-0.2
	baz=84,SNR=6.8						
H09A	Durkee	83.90	38	⇑P	P	12 57 32.6	-0.5
	baz=84,SNR=6.2						
Y19A	Nutrioso	83.92	51	⇑P	P	12 57 34.2	+0.7
	baz=84,SNR=11						
N13A	Wendover, West	83.94	43	⇑P	P	12 57 33.7	+0.3
	baz=84						
Z20A	Nine Sixteen R	84.02	52	⇓P	P	12 57 34.7	+0.8
	baz=84,SNR=8.5						
P14A	Drum Mountains	84.03	45	⇓P	P	12 57 33.9	+0.1
	baz=84						
S16A	Weppner Ranch,	84.08	47	⇓P	P	12 57 33.9	-0.3
	baz=84						
L12A	House Creek Ra	84.11	42	⇑P	P	12 57 34.9	+0.7
	baz=84						
X19A	St. Johns	84.12	51	⇑P	P	12 57 34.5	+0.1
	baz=84,SNR=6.8						
221A	Mesquite Ranch	84.13	53	⇑P	P	12 57 35.3	+0.8
	baz=84						
E08A	Dider Farm, El	84.16	36	⇓P	P	12 57 34.2	-0.1
	baz=84						
U17A	Shonto	84.17	48	⇑P	P	12 57 35.0	+0.3
	baz=84						
G09A	Cove	84.18	38	⇓P	P	12 57 34.5	+0.1
	baz=84						
Q15A	Fillmore	84.18	45	⇑P	P	12 57 34.7	+0.1
	baz=84						
BMO	Blue Mountains	84.22	38	eP	P	12 57 33.9	-0.8
BMO				pmax	pmax		
	comp=Z,12nm,1.6s,mb4.2						
BMO	Blue Mountains	84.22	38	eP	P	12 57 33.9	-0.8
	comp=Z,12nm,1.6s,mb4.2						
M13A	Montello	84.23	43	⇑P	P	12 57 34.6	-0.2
	baz=84,SNR=10						
V18A	Ganado	84.26	49	⇑P	P	12 57 35.1	0.0
	baz=84,SNR=5.9						
T17A	Navajo Res., N	84.27	48	⇑P	P	12 57 35.5	+0.3
	baz=84,SNR=8.3						
MFID	Camas Ranch	84.30	40	⇑P	P	12 57 34.9	-0.2
	baz=84,SNR=6.4						
121A	Cookes Peak, D	84.36	53	⇓P	P	12 57 36.4	+0.7
	baz=84,SNR=10.0						
H10A	Noah's Angus R	84.40	39	⇓P	P	12 57 34.9	-0.7
	baz=84,SNR=12						
R16A	Teasdale	84.43	46	⇓P	P	12 57 36.3	+0.4
	baz=84,SNR=5.1						
K12A	Draper Farm, C	84.45	41	⇑P	P	12 57 36.0	+0.2
	baz=84						
I11A	Placerville	84.50	40	⇑P	P	12 57 35.7	-0.4
	baz=85,SNR=5.5						
Y20A	Horse Springs,	84.55	51	⇓P	P	12 57 37.3	+0.7
	baz=85,SNR=12						
D08A	Wollman Farm,	84.57	36	⇓P	P	12 57 36.2	-0.1
	baz=85						
G10A	Bishop Farm, J	84.58	38	⇓P	P	12 57 35.7	-0.7
	baz=85,SNR=5.9						
S17A	Black Ridge (B	84.58	47	⇓P	P	12 57 36.0	-0.6
	baz=85,SNR=7.0						
U18A	Rough Rock, Ch	84.65	49	⇑P	P	12 57 36.9	-0.1
	baz=85,SNR=7.9						
J12A	Stokes Ranch,	84.66	41	⇓P	P	12 57 36.9	0.0
	baz=85,SNR=5.6						
X20A	Quemado	84.75	51	⇓P	P	12 57 37.9	+0.3
	baz=85,SNR=5.1						
Z21A	St. Cloud Mine	84.80	52	⇑P	P	12 57 38.7	+0.9
	baz=85,SNR=16						
M14A	Sheep Mountain	84.83	43	⇑P	P	12 57 37.5	-0.2
	baz=85						
F10A	Beach Ranch, E	84.90	38	⇑P	P	12 57 37.1	-0.8
	baz=85,SNR=7.5						
H11A	Donnelly	84.90	39	⇑P	P	12 57 37.5	-0.5
	baz=85,SNR=9.6						
I12A	Atlanta	84.93	40	⇑P	P	12 57 38.0	-0.2
	baz=85,SNR=7.3						
K13A	Stover Farm, H	84.97	42	⇓P	P	12 57 38.7	+0.3
	baz=85						
T18A	Mexican Hat	84.99	48	⇓P	P	12 57 38.8	+0.2
	baz=85,SNR=21						
W20A	Ramah	85.02	50	⇑P	P	12 57 39.1	+0.3
	baz=85,SNR=10						
R17A	Hanksville Air	85.03	47	⇓P	P	12 57 38.3	-0.5
	baz=85,SNR=5.5						
U19A	Dine' College,	85.06	49	⇑P	P	12 57 38.9	0.0
	baz=85,SNR=6.8						
Y21A	Point of Rocks	85.11	52	⇑P	P	12 57 40.1	+0.8
	baz=85,SNR=17						
X21A	Alamocita Cree	85.23	51	⇑P	P	12 57 40.0	+0.2
	baz=85,SNR=8.0						
HLID	Hailey	85.25	41	P	P	12 57 39.8	+0.1
	baz=85,SNR=10.0						
TRF	Thorofare Moun	85.27	12	eP	P	12 57 37.7	-1.7
	comp=Z,10nm,1.2s,mb4.3						
TRF				epP	pP	12 59 45.4	+2.0
Z22A	Elephant Butte	85.30	53	⇑P	P	12 57 40.5	+0.3
	baz=85,SNR=13						
J13A	Cove Ranch, Pi	85.31	41	⇑P	P	12 57 39.8	-0.2
	baz=85,SNR=9.0						
BJI	Beijing	85.32	315	P	P	12 57 41.9	+1.7
BJI				S	S	13 07 26.1	+2.8
BJI				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.5						
BJI				pmax	pmax		
	comp=Z,76nm,4.5s						
SEY	Seymchan	85.35	347	⇓eP	P	12 57 38.1	-1.6
F11A	Grangeville	85.47	38	⇓P	P	12 57 39.2	-1.5
	baz=86						
H12A	Diamond D Ranc	85.51	40	⇓P	P	12 57 40.2	-0.7
	baz=86,SNR=13						
PNT	Penticton	85.53	34	P	P	12 57 40.4	-0.5
R18A	Canyonlands Na	85.57	47	⇓P	P	12 57 41.1	-0.3
	baz=86,SNR=11						
I13A	Wildhorse Cree	85.62	40	⇑P	P	12 57 41.0	-0.4
	baz=86						
324A	Moseley Ranch,	85.63	55	⇓P	P	12 57 41.9	+0.1
	baz=86,SNR=12						
J14A	Carey	85.67	41	⇓P	P	12 57 41.8	0.0
	baz=86,SNR=8.5						
LAZ	Ladron	85.69	51	eP	P	12 57 42.6	+0.6
	comp=Z,2.4nm,1.0s,mb3.8						
LAZ				epP	pP	12 59 48.5	+2.3
L15A	Malad City	85.71	43	⇓P	P	12 57 41.5	-0.4
	baz=86						
Q18A	Rafter H Ranch	85.75	46	⇓P	P	12 57 41.7	-0.6
	baz=86,SNR=5.3						
S19A	Harvey Farm, M	85.79	48	⇓P	P	12 57 42.2	-0.3
	baz=86,SNR=5.0						
MNTX	Cornudas Mount	85.82	54	eP	P	12 57 42.8	+0.1
	comp=Z,23nm,1.5s,mb4.6						
X22A	Bernardo	85.83	51	⇓P	P	12 57 42.8	+0.1
	baz=86						
Z23A	Rita Site, Whi	85.85	53	⇑P	P	12 57 42.7	-0.1
	baz=86						
224A	Cornudas Mount	85.87	54	⇓P	P	12 57 43.3	+0.3
	baz=86,SNR=12						
H13A	Challis	85.88	40	⇑P	P	12 57 42.3	-0.4
	baz=86,SNR=7.9						
O17A	Robinson Place	85.88	45	⇓P	P	12 57 42.9	+0.1
	baz=86,SNR=9.0						
626A	Big Bend Ranch	85.88	57	⇑P	P	12 57 43.6	+0.6
	baz=86,SNR=25						
F12A	Elk City	85.92	38	⇓P	P	12 57 42.2	-0.7
	baz=86,SNR=31						
BNM	Barren Site	85.95	52	eP	P	12 57 43.4	+0.1
	comp=Z,2.0nm,0.6s,mb3.9						
BNM				epP	pP	12 59 46.5	-1.2
V21A	Milan	85.96	50	⇑P	P	12 57 43.2	0.0
	baz=86,SNR=6.1						
R19A	Curley Farm, L	85.97	47	⇓P	P	12 57 42.9	-0.4
	baz=86,SNR=5.4						
325A	Bean Ranch, Si	86.00	55	⇑P	P	12 57 43.6	0.0
	baz=86,SNR=18						
I14A	Mackay	86.03	41	⇑P	P	12 57 43.4	0.0
	baz=86,SNR=11						
526A	Mary Lane Ranc	86.13	56	⇓P	P	12 57 44.6	+0.4
	baz=86,SNR=24						
TXAR	Lajitas Array	86.16	57	P	P	12 57 44.6	+0.2
	comp=Z,6.0nm,1.0s,mb4.2,baz=219,slow=7.0,SNR=110						
TXAR				pP	pP	12 59 48.9	0.0
	comp=Z,0.9nm,1.0s,baz=220,slow=3.3,SNR=4.1						
TXAR				PKKPbc	PKKPbc	13 15 39.7	0.0
	comp=Z,0.3nm,0.9s,baz=105,slow=9.6,SNR=4.6						
TXAR	Lajitas Array	86.16	57	P	P	12 57 44.6	+0.2
TXAR				*PP	pP	12 59 48.9	+0.1
TXAR	Lajitas Array	86.16	57	P	P	12 57 44.6	+0.2
TXAR				pP	pP	12 59 48.9	+0.1
TXAR				PKKPbc	PKKPbc	13 15 39.7	0.0
G13A	Cobalt	86.17	39	⇑P	P	12 57 43.7	-0.4
	baz=86,SNR=7.8						
W22A	Albuquerque	86.19	51	⇓P	P	12 57 45.0	+0.6
	baz=86						
124A	Stringfield Ra	86.20	54	⇓P	P	12 57 44.9	+0.4
	baz=86,SNR=8.4						
U21A	Nageezi	86.23	49	⇓P	P	12 57 44.5	0.0
	baz=86,SNR=26						
Q19A	Hogan Spring (	86.28	47	⇑P	P	12 57 44.6	-0.1
	baz=86						
Y23A	Lovelace Mesa,	86.28	52	⇑P	P	12 57 44.8	-0.1
	baz=86						
L16A	Fish Haven	86.33	43	⇑P	P	12 57 44.2	-0.7
	baz=86						
PV01	Paradox Valley	86.37	48	eP	P	12 57 45.0	-0.2
	comp=Z,432nm,0.9s						
PV01				epP	pP	12 59 49.2	-0.5
GYA	Guiyang	86.38	299	P	P	12 57 47.0	+1.5
GYA				pP	pP	12 59 52.8	+2.8
GYA				sP	sP	13 00 48.0	-0.1
GYA				PP	PP	13 01 21.2	+3.2
GYA				SKS		13 07 17.4	
GYA				S	S	13 07 35.0	+1.1
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4						
J15A	Blackfoot	86.39	42	⇑P	P	12 57 45.4	+0.3
	baz=86,SNR=8.1						
225A	Deer Hill, Car	86.42	54	⇓P	P	12 57 46.1	+0.5
	baz=86,SNR=10						
426A	McDonald Obser	86.43	56	⇑P	P	12 57 45.9	+0.3
	baz=86,SNR=29						
627A	Terlingua Ranc	86.43	57	⇓P	P	12 57 46.1	+0.4
	baz=86,SNR=23						
H14A	Leadore	86.44	40	⇓P	P	12 57 45.2	-0.1
	baz=86,SNR=10.0						
X23A	Hourglass Bar	86.47	52	⇑P	P	12 57 46.0	+0.3
	baz=86						
F13A	Darby	86.48	39	⇑P	P	12 57 44.7	-0.8
	baz=87,SNR=9.5						
V22A	San Miguel Ran	86.53	50	⇓P	P	12 57 46.0	0.0
	baz=87						
527A	Woodward Ranch	86.54	57	⇑P	P	12 57 46.5	+0.3
	baz=87,SNR=18						
T21A	Navajo Lake	86.57	49	⇓P	P	12 57 46.0	-0.1
	baz=87						
D12A	Red Ives Fores	86.58	37	⇓P	P	12 57 46.6	+0.7
	baz=87						
K16A	Soda Springs	86.64	42	⇑P	P	12 57 46.3	0.0
	baz=87						
I15A	Monteview	86.67	41	⇓P	P	12 57 46.8	+0.4
	baz=87						
S21A	Coal Bank Pass	86.70	48	⇓P	P	12 57 46.7	0.0
	baz=87,SNR=9.6						
326A	Caldwell Ranch	86.74	55	⇓P	P	12 57 46.9	-0.2
	baz=87,SNR=6.7						
Y24A	Capitan	86.74	52	⇑P	P	12 57 47.2	+0.2
	baz=87,SNR=20						
U22A	Llaves	86.78	50	⇑P	P	12 57 47.0	-0.1
	baz=87						
125A	Gardner Draw,	86.78	54	⇓P	P	12 57 47.4	+0.1
	baz=87,SNR=6.5						
P19A	Cripple Cowboy	86.79	46	⇑P	P	12 57 46.7	-0.4
	baz=87						
GDL2	Guadalupe Moun	86.81	54	epP	pP	12 59 54.4	+2.3
628A	Black Gap, Mar	86.84	57	⇑P	P	12 57 47.9	+0.3
	baz=87,SNR=13						
MCMT	McKenzie Canyo	86.87	40	eP	P	12 57 47.6	+0.3
	comp=Z,7.8nm,1.1s,mb4.3						
MCMT				epP	pP	12 59 50.5	-1.6
H15A	Lima	86.89	40	⇑P	P	12 57 47.5	+0.1
	baz=87						
E13A	Victor	86.92	38	⇓P	P	12 57 46.9	-0.6
	baz=87						
Q20A	Ridgley Place,	86.94	47	⇑P	P	12 57 47.8	0.0
	baz=87						
226A	Malaga, Loving	86.96	55	⇓P	P	12 57 47.9	-0.1
	baz=87,SNR=10						
N18A	Larsen Ranch,	86.97	45	⇑P	P	12 57 47.7	-0.2
	baz=87						
V23A	Ortiz Mt. (NFS	86.99	51	⇑P	P	12 57 48.7	+0.6
	baz=87						
427A	Hayter Ranch,	87.00	56	⇑P	P	12 57 48.7	+0.4
	baz=87,SNR=37						
Z25A	Roswell	87.00	53	⇑P	P	12 57 48.6	+0.3
	baz=87,SNR=5.5						
O19A	Miners Draw (B	87.01	45	⇓P	P	12 57 48.0	-0.1
	baz=87						
X24A	Lazy VL Ranch,	87.02	52	⇓P	P	12 57 48.0	-0.3
	baz=87						
COLA	College	87.03	12	eP	P	12 57 45.5	-2.1
COLA				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
COLA	College	87.03	12	eP	P	12 57 45.5	-2.1
	comp=Z,8.5nm,1.0s,mb

F15A	Butte	87.61	39	⇑P	P	12 57 50.5	-0.3
	baz=88,SNR=8.7						
328A	Wristen Ranch,	87.68	56	⇓P	P	12 57 51.1	-0.4
	baz=88,SNR=8.7						
R22A	Saguache, Gunn	87.68	48	⇓P	P	12 57 51.5	+0.2
	baz=88,SNR=6.9						
G16A	Moss Hill, Enn	87.71	40	⇑P	P	12 57 51.2	-0.1
	baz=88,SNR=8.7						
L19A	Farson	87.72	44	⇓P	P	12 57 51.4	0.0
	baz=88,SNR=5.2						
127A	Arkansas Junct	87.79	54	⇑P	P	12 57 51.8	-0.2
	baz=88						
H16A	Russell Place,	87.79	41	⇓P	P	12 57 52.4	+0.7
	baz=88,SNR=14						
E15A	Deer Lodge	87.82	39	⇓P	P	12 57 51.7	0.0
	baz=88						
J18A	Kendall Valley	87.82	43	⇓P	P	12 57 51.6	-0.3
	baz=88,SNR=22						
N20A	Spence Gulch,	87.84	45	⇑P	P	12 57 51.9	-0.1
	baz=88,SNR=6.7						
Q22A	Crested Butte,	87.86	48	⇑P	P	12 57 51.7	-0.4
	baz=88						
BW06	Boulder Array	87.90	43	⇓P	P	12 57 51.8	-0.5
	baz=88						
PDAR	Pinedale Array	87.90	43	P	P	12 57 51.6	-0.6
	comp=Z,3.6nm,0.8s,mb4.1,baz=233,slow=2.6,SNR=28						
PDAR				pP	pP	12 59 56.0	-1.4
	comp=Z,0.7nm,0.9s,baz=225,slow=7.5,SNR=3.9						
PDAR				PKKPbc	PKKPbc	13 15 34.1	-2.0
	comp=Z,0.9nm,0.8s,baz=72,slow=4.8,SNR=6.9						
SYO	Syowa Base	87.91	193	⇑eP	P	12 57 49.4	-2.5
SYO	Syowa Base	87.91	193	⇓iPcP	PcP	12 57 50.8	-2.3
LCCM	Lewis and Clar	87.97	40	P	P	12 57 52.6	+0.1
W25A	X Bar L Ranch,	88.02	52	⇑P	P	12 57 52.2	-0.8
	baz=88,SNR=8.0						
BOZ	Bozeman (W)	88.03	40	⇑P	P	12 57 52.6	-0.1
	baz=88						
H17A	Grant Village	88.05	41	⇓P	P	12 57 54.1	+1.2
	baz=88						
F16A	Kennard Place,	88.10	40	⇓P	P	12 57 53.2	+0.1
	baz=88,SNR=6.4						
Z27A	Tatum	88.16	54	⇑P	P	12 57 52.9	-0.8
	baz=88,SNR=5.3						
V25A	Rancho No Teng	88.17	51	⇑P	P	12 57 53.1	-0.5
	baz=88,SNR=7.1						
M20A	Sweetwater, Wa	88.20	45	⇑P	P	12 57 53.7	0.0
	baz=88						
D15A	Lincoln	88.21	38	⇑P	P	12 57 53.4	-0.1
	baz=88						
N21A	Black Mountain	88.31	46	⇓P	P	12 57 54.0	-0.1
	baz=88,SNR=5.1						
L20A	Wamsutter	88.34	44	⇑P	P	12 57 54.1	-0.1
	baz=88,SNR=5.2						
K19A	Absolon Red Bu	88.39	43	⇓P	P	12 57 54.2	-0.3
	baz=88						
EGAK	Eagle	88.42	15	epP	pP	13 00 00.3	+0.9
Y27A	Causey	88.43	53	⇑P	P	12 57 54.3	-0.7
	baz=88,SNR=8.1						
HRY	Holter Researc	88.45	39	eP	P	12 57 54.4	-0.3
E16A	East Helena	88.45	39	⇑P	P	12 57 55.0	+0.3
	baz=88						
W26A	Owens Ranch, T	88.48	52	⇓P	P	12 57 54.9	-0.2
	baz=88						
S24A	Houchin Ranch,	88.52	49	⇓P	P	12 57 55.2	0.0
	baz=89						
U25A	Circle Dot Ran	88.56	51	⇓P	P	12 57 55.2	-0.3
	baz=89						
K20A	Yellowstone Ra	88.64	44	⇓P	P	12 57 54.7	-1.0
	baz=89,SNR=6.3						
A14A	Double T Ranch	88.70	36	⇓P	P	12 57 55.1	-0.7
	baz=89						
F17A	Fitzpatrick Pl	88.75	40	⇑P	P	12 57 56.4	+0.3
	baz=89						
MSTX	Muleshoe	88.77	53	⇓P	P	12 57 56.0	-0.5
	baz=89,SNR=6.0						
V26A	Tequesquite Ra	88.77	51	⇓P	P	12 57 55.6	-0.8
	baz=89						
D16A	Dana Ranch, Ca	88.78	39	⇑P	P	12 57 55.9	-0.3
	baz=89						
X27A	F and S Farms,	88.80	53	⇓P	P	12 57 56.4	-0.2
	baz=89						
M21A	Separation Pea	88.80	45	⇑P	P	12 57 55.8	-0.6
	baz=89,SNR=5.5						
HHC	Hu-ho-hao-te	88.80	314	eP	P	12 57 56.6	+0.1
HHC				pP	pP	13 00 01.9	+0.1
HHC				sP	sP	13 00 58.3	-1.4
HHC				PP	PP	13 01 39.6	+2.8
HHC				SKS		13 07 31.4	
HHC				S	S	13 07 55.1	-0.6
HHC				sS	sS	13 11 37.2	-2.1
HHC				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.8						
HHC				pmax	pmax		
	comp=Z,73nm,6.7s						
B15A	Bradely Ranch,	88.84	37	⇑P	P	12 57 55.1	-1.4
	baz=89						
R24A	Sanders Place,	88.85	49	⇑P	P	12 57 56.8	0.0
	baz=89						
T25A	Trinidad	88.88	50	⇓P	P	12 57 56.6	-0.3
	baz=89						
E17A	Martinsdale	88.90	39	⇓P	P	12 57 56.9	+0.1
	baz=89						
L21A	Rawlins	88.96	45	⇓P	P	12 57 57.0	-0.2
	baz=89						
W27A	Bowe Ranch, En	89.00	52	⇑P	P	12 57 56.8	-0.7
	baz=89,SNR=6.1						
N22A	Wattenberg Ran	89.05	46	⇓P	P	12 57 57.6	0.0
	baz=89,SNR=5.1						
U26A	Atchley Ranch,	89.05	51	⇓P	P	12 57 57.3	-0.4
	baz=89						
C16A	Fuhringer Ranc	89.05	38	⇓P	P	12 57 57.2	-0.3
	baz=89						
S25A	Robets Cordova	89.08	49	⇓P	P	12 57 57.4	-0.4
	baz=89,SNR=6.6						
G18A	Lazy EL Ranch,	89.13	41	⇓P	P	12 57 58.0	+0.1
	baz=89						
KMI	Kunming	89.14	297	P	P	12 58 00.1	+1.7
KMI				pP	pP	13 00 05.9	+2.1
KMI				sP	sP	13 01 02.4	+0.8
KMI				S	S	13 08 00.3	+0.9
KMI				sS	sS	13 11 42.3	-0.9
KMI				SS	SS	13 14 15.8	+4.2
KMI				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.5						
KMI				pmax	pmax		
	comp=Z,66nm,5.8s						
GCMT	Greycliff	89.30	40	eP	P	12 57 59.1	+0.4
	comp=Z,1.3nm,0.7s,mb3.9						
GCMT				epP	pP	13 00 02.7	-1.4
F18A	Big Timber	89.32	40	⇑P	P	12 57 59.0	+0.2
	baz=89						
D17A	Six Diamond Ra	89.35	39	⇓P	P	12 57 58.7	-0.1
	baz=89						
E18A	Harlowton	89.52	40	⇓P	P	12 57 59.8	+0.2
	baz=90						
C17A	Wharram Farm,	89.54	38	⇓P	P	12 57 59.3	-0.5
	baz=90						
PLCA	Paso Flores	89.81	133	P	P	12 58 02.4	+1.1
	comp=Z,5.6nm,1.0s,mb4.4,baz=288,slow=3.5,SNR=7.7						
B17A	L&G Farms, Che	89.85	38	⇑P	P	12 58 00.4	-0.8
	baz=90						
D18A	Linhart Farms,	89.89	39	⇓P	P	12 58 01.4	+0.1
	baz=90						
VNA1	Neumayer--Stat	89.92	176	eP	P	12 58 01.1	-0.1
CMAR	Chiang Mai Arr	90.05	289	P	P	12 58 03.6	+0.8
	comp=Z,6.3nm,1.0s,mb4.4,baz=116,slow=3.0,SNR=29						
CMAR				pP	pP	13 00 09.2	+0.7
	comp=Z,0.4nm,0.4s,baz=128,slow=3.8,SNR=1.6						
CMAR				PKKPbc	PKKPbc	13 15 28.6	-1.3
	comp=Z,0.7nm,0.6s,baz=307,slow=4.3,SNR=4.1						
CMAR	Chiang Mai Arr	90.05	289	P	P	12 58 03.6	+0.8
CMAR				*PP	pP	13 00 09.2	+0.8
CD2	Chengdu	90.46	303	P	P	12 58 05.8	+1.4
CD2				pP	pP	13 00 10.7	+0.6
CD2				sP	sP	13 01 06.6	-1.2
CD2				PP	PP	13 01 53.5	+3.5
CD2				SKS		13 07 42.8	
CD2				S	S	13 08 11.5	+0.4
CD2				sS	sS	13 11 53.3	-2.4
CD2				SS	SS	13 14 33.9	+3.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.9						
CD2				pmax	pmax		
	comp=Z,110nm,6.3s						
B18A	Beardsley Farm	90.49	38	⇑P	P	12 58 03.4	-0.7
	baz=91						
A18A	Metzger Ranch,	90.71	38	⇑P	P	12 58 04.5	-0.5
	baz=91						
LAO	LASA Array	91.83	41	eP	P	12 58 10.9	+0.6
	comp=Z,1.4nm,0.6s,mb4.2						
LZH	Lanzhou	92.35	307	eP	P	12 58 14.3	+1.3
LZH				pP	pP	13 00 21.0	+2.1
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
SONM	Songino Array	95.12	319	pP	pP	13 00 31.4	-0.1
	comp=Z,0.4nm,0.7s,baz=116,slow=3.4,SNR=2.4						
SONM				PP	PP	13 02 29.9	+4.5
	comp=Z,0.7nm,0.7s,baz=100,slow=8.1,SNR=4.4						
YKA	Yellowknife Ar	95.34	25	P	P	12 58 24.1	-1.8
	comp=Z,1.3nm,0.9s,mb4.1,baz=242,slow=4.3,SNR=8.1						
YKA				PKKPbc	PKKPbc	13 15 14.7	-3.2
	comp=Z,0.3nm,0.7s,baz=32,slow=2.6,SNR=4.7						
YKA	Yellowknife Ar	95.34	25	P	P	12 58 24.1	-1.8
YKA				PKKPbc	PKKPbc	13 15 14.7	-3.2
ZALV	Zalesovo Beam	109.82	321	PKiKP	PKiKP	13 03 27.7	-1.5
	comp=Z,2.1nm,0.6s,baz=117,slow=1.2,SNR=9.5						
ZALV	Zalesovo Beam	109.82	321	PKPdf	PKiKP	13 03 27.7	-1.5
MKAR	Makanchi Array	110.66	314	PKiKP	PKiKP	13 03 29.5	-1.5
	comp=Z,1.8nm,0.5s,baz=177,slow=0.7,SNR=26						
MKAR				PP	PP	13 04 19.0	-0.5
	comp=Z,0.8nm,0.8s,baz=91,slow=6.1,SNR=4.8						
MKAR				SKiKP		13 06 13.3	
	comp=Z,0.6nm,0.7s,baz=100,slow=0.9,SNR=5.4						
MKAR				PKKPbc	PKKPbc	13 14 30.9	-1.7
	comp=Z,1.2nm,0.8s,baz=262,slow=4.5,SNR=12						
MKAR	Makanchi Array	110.66	314	PKiKP	PKiKP	13 03 29.5	-1.5
MKAR						13 04 19.0	
MKAR	Makanchi Array	110.66	314	PKPdf	PKiKP	13 03 29.5	-1.5
MKAR				PP	PP	13 04 19.0	-0.5
MKAR				PKKPbc	PKKPbc	13 14 30.9	-1.7
KURK	Kurchatov	113.39	318	PKiKP	PKiKP	13 03 34.7	-1.3
	comp=Z,3.3nm,0.7s,baz=97,slow=1.9,SNR=7.9						
KURK				PP	PP	13 04 38.8	+0.2
	comp=Z,0.7nm,0.7s,baz=89,slow=7.2,SNR=3.6						
KURK				SKiKP		13 06 17.8	
	comp=Z,0.4nm,0.3s,baz=98,slow=1.7,SNR=4.8						
KURK				PKKPbc	PKKPbc	13 14 22.7	-1.0
	comp=Z,1.1nm,0.8s,baz=277,slow=4.0,SNR=4.1						
KURK	Kurchatov	113.39	318	PKPdf	PKiKP	13 03 34.7	-1.3
KURK				PP	PP	13 04 38.8	+0.2
KURK				PKKPbc	PKKPbc	13 14 22.7	-1.0
AAK	Ala-Archa	115.86	309	PKP	PKPdf	13 03 40.4	-0.7
	comp=Z,1.1nm,0.3s,baz=209,slow=8.5,SNR=4.6						
AAK	Ala-Archa	115.86	309	PKP	PKPdf	13 03 40.4	-0.7
BVAR	Borovoye Array	118.42	320	PKP	PKPdf	13 03 44.5	-1.2
	comp=Z,3.9nm,0.4s,baz=94,slow=1.9,SNR=28						
BVAR				SKiKP		13 06 28.4	
	comp=Z,1.6nm,0.9s,baz=96,slow=1.5,SNR=5.8						
BRVK	Borovoye	118.48	320	⇑iPKIKP	PKPdf	13 03 44.9	-0.9
BRVK	Borovoye	118.48	320	ePKPdf	PKPdf	13 03 44.8	-1.0
SVE	Sverdlovsk	123.24	326	ePKIKP	PKPdf	13 03 53.8	-1.0
SVE				pmax	pmax		
	comp=Z,16nm,1.0s						
ARU	Arti	124.45	326	i PKIKP	PKPdf	13 03 56.3	-0.9
ARU						13 05 53.0	
ARU				SS	SS	13 22 02.0	+0.2
ARU	Arti	124.45	326	ePKPdf	PKPdf	13 03 56.4	-0.8
AKTK	Aktyubinsk	126.44	319	PKP	PKPdf	13 04 00.5	-0.6
AKTO	Aktyubinsk	126.44	319	PKP	PKPdf	13 04 00.5	-0.6
	comp=Z,4.0nm,0.8s,baz=96,slow=3.7,SNR=13						
KEV	Kevo	127.42	349	ePKIKP	PKPdf	13 04 01.1	-1.4
KEV				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BOSA	Boshof	127.42	206	PKP	PKPdf	13 04 03.6	-0.2
	comp=Z,9.2nm,0.9s,baz=197,slow=2.6,SNR=7.9						
JOF	Joensuu	132.15	343	ePKIKP	PKPdf	13 04 09.6	-2.0
JOF				pmax	pmax		
	comp=Z,11nm,0.8s						
FINES	FINESS Array B	134.78	344	PKP	PKPdf	13 04 16.3	-0.3
	comp=Z,5.0nm,0.8s,baz=67,slow=5.0,SNR=8.3						
FINES				SKPbc	SKPbc	13 06 52.8	-0.5
	comp=Z,4.5nm,0.9s,baz=60,slow=5.6,SNR=7.9						
FINES	FINESS Array B	134.78	344	PKP	PKPdf	13 04 16.3	-0.3
FINES				SKPbc	SKPbc	13 06 52.8	-0.5
OBN	Obninsk	135.92	332	i PKIKP	PKPdf	13 04 17.6	-1.3
OBN				eSS	SS	13 24 19.6	-0.2
OBN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VSR	Storozhevoye	137.02	326	ePKIKP	PKPdf	13 04 19.8	-1.3
VSR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
VSR				pmax	pmax		
	comp=N,3.0nm,0.4s						
VSR				pmax	pmax		
	comp=E,7.0nm,1.1s						
LSZ	Lusaka	137.21	218	ePKIKP	PKPdf	13 04 22.6	+0.1
NOA	NORSAR Array B	137.90	354	PKhKP	PKPpre	13 04 13.3	
	comp=E,1.8nm,0.8s,baz=15,slow=5.0,SNR=4.9						
NOA				PKP	PKPdf	13 04 21.7	-0.7
	comp=E,0.6nm,0.6s,baz=9.7,slow=3.2,SNR=6.7						
ZEI	Tsey	138.02	313	ePKIKP	PKPdf	13 04 23.8	+0.6
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KMBO	Kilima Mbogo	140.16	243	PKhKP	PKPpre	13 04 21.8	
	comp=Z,2.4nm,0.8s,baz=180,slow=24,SNR=5.5						
ANN	Anapa	141.40	319	i PKHKP	PKPpre	13 04 07.3	
ANN				pmax	pmax		
	comp=Z,51nm,1.0s						
AKASG	Malin Array Be	142.18	332	PKhKP	PKPpre	13 04 23.0	
	comp=Z,1.4nm,0.3s,baz=42,slow=3.7,SNR=7.1						
AKASG				PKP	PKPdf	13 04 31.3	+0.9
	comp=Z,3.0nm,0.7s,baz=50,slow=1.7,SNR=7.3						
AKASG				SKPbc	SKPbc	13 07 13.4	-0.7
	comp=Z,0.7nm,0.4s,baz=36,slow=2.6,SNR=8.8						
AKASG	Malin Array Be	142.18	332	PKHKP	PKPpre	13 04 23.0	
AKASG						13 04 31.3	
EKA	Eskdalemuir Ar	143.84	5	PKP	PKPdf	13 04 31.1	-2.1
	comp=Z,12nm,0.9s,baz=343,slow=3.4,SNR=17						
GKP	Gorka Klasztor	144.25	345	ePKP	PKPdf	13 04 33.1	-0.9
BSEG	Bad Segeberg	144.95	352	ePKPbc	PKPdf	13 04 35.2	+0.1
LVV	L'vov	145.02	335	ePKHKP	PKPdf	13 04 35.0	-0.4
LEOM	Leova	145.61	328	⇓PKIKP	PKPbc	13 04 38.4	+0.3
LEOM	Leova	145.61	328	⇓iP	PKPbc	13 04 38.4	+0.3
KWP	Kalwaria Pacla	145.69	336	ePKP	PKPdf	13 04 37.9	+1.4
KWP	Kalwaria Pacla	145.69	336	⇑PKIKP	PKPdf	13 04 37.3	+0.8
KWP	Kalwaria Pacla	145.69	336	⇑iP	PKPdf	13 04 37.3	+0.8
TLCR		146.18	326	⇑PKIKP	PKPbc	13 04 39.5	-0.2
TLCR		146.18	326	⇑iP	PKPbc	13 04 39.5	-0.2
BUR08	Bucovina Ar. S	146.22	332	ePKPdf	PKPdf	13 04 36.6	-0.9
BUR08				ePKPbc	PKPbc	13 04 39.9	+0.2
BURAR	Bucovina Array	146.23	332	⇓PKIKP	PKPbc	13 04 39.8	0.0
BURAR	Bucovina Array	146.23	332	⇓iP	PKPbc	13 04 39.8	0.0
BR131	Keskin Array S	146.31	314	ePKPdf	PKPdf	13 04 37.3	-0.6
BR131				ePKPbc	PKPbc	13 04 40.0	-0.2
BRTR	Keskin Array B	146.31	314	PKP	PKPdf	13 04 37.1	-0.8
	comp=Z,12nm,0.8s,baz=116,slow=3.4,SNR=44						
BRTR				PKPbc	PKPbc	13 04 39.1	-1.2
	comp=Z,12nm,0.8s,baz=139,slow=2.8,SNR=37						
BRTR				pPKPbc		13 06 51.9	
	comp=Z,1.9nm,1.0s,baz=57,slow=4.6,SNR=3.7						
BRTR				SKPbc	SKPbc	13 07 24.2	+0.1
	comp=Z,2.1nm,0.8s,baz=90,slow=4.3,SNR=4.8						
BRTR	Keskin Array B	146.31	314	PKHKP	PKPdf	13 04 37.1	-0.8
BRTR						13 04 39.1	
BRTR						13 06 51.9	
NRDL	Niedersach Rie	146.38	351	ePKPbc	PKPbc	13 04 39.1	-0.9
STHS	Stebnicka Huta	146.41	338	ePKIKP	PKPbc	13 04 40.3	+0.1
STHS	Stebnicka Huta	146.41	338	ePKP	PKPbc	13 04 40.3	+0.1
CFR	Carcaliu	146.54	326	⇓PKIKP	PKPbc	13 04 40.7	0.0
CFR	Carcaliu	146.54	326	⇓iP	PKPbc	13 04 40.7	0.0
UZH	Uzhgorod	146.66	336	⇓iPKIKP	PKPbc	13 04 40.4	-0.5
UZH				e		13 06 51.4	
KSP	Ksiaz	146.70	344	ePKP	PKPbc	13 04 40.7	-0.2
KSP	Ksiaz	146.70	344	ePKIKP	PKPbc	13 04 40.5	-0.4
NIE	Niedzica	146.73	338	ePKPdf	PKPdf	13 04 39.1	+0.8
NIE				ePKPbc	PKPbc	13 04 39.9	-1.2
NIE				ePKPab	PKPab	13 04 41.4	-2.7
NIE	Niedzica	146.73	338	ePKIKP	PKPdf	13 04 39.1	+0.8
NIE				e		13 04 39.9	
CRVS	Cervenica-Dubn	146.75	337	ePKHKP	PKPdf	13 04 38.1	-0.2
CRVS				e		13 04 41.0	
CRVS				e		13 06 54.1	
CRVS	Cervenica-Dubn	146.75	337	ePKP	PKPdf	13 04 38.1	-0.2
CRVS				e		13 04 41.0	
CRVS				e		13 06 54.1	
VRI	Vrincioaia	146.79	328	⇑PKIKP	PKPbc	13 04 41.0	-0.3
VRI	Vrincioaia	146.79	328	⇑iP	PKPbc	13 04 41.0	-0.3
IBBN	Ibbenburen	146.85	354	ePKPbc	PKPbc	13 04 40.4	-0.9
TIRR	Tirgusor	146.87	325	⇑PKIKP	PKPbc	13 04 40.7	-0.9
TIRR	Tirgusor	146.87	325	⇑iP	PKPbc	13 04 40.7	-0.9
CLZ	Clausthal	146.98	351	ePKPbc	PKPbc	13 04 41.3	-0.3
CLL	Collm	147.03	348	ePKPbc	PKPbc	13 04 41.1	-0.7
CLL	Collm	147.03	348	⇓ePKHKP	PKPdf	13 04 39.0	+0.3
CLL				i		13 04 41.0	
CLL				e		13 04 44.0	
CLL				pmax	pmax		
	comp=Z,47nm,1.1s						
CLL				pmax	pmax		
	comp=Z,15nm,1.2s						
OKC	Ostrava-Krasne	147.08	341	ePKIKP	PKPbc	13 04 41.7	-0.3
OKC	Ostrava-Krasne	147.08	341	ePKPbc	PKPbc	13 04 41.7	-0.3
OKC				epPKP	pPKPdf	13 06 56.6	+3.2
UPC	Upice	147.08	344	ePKIKP	PKPbc	13 04 41.9	0.0
UPC				e		13 06 53.0	
UPC	Upice	147.08	344	ePKPbc	PKPbc	13 04 41.9	0.0
UPC				epPKP	pPKPdf	13 06 53.0	-0.3
DPC	Dobruska-Polom	147.14	343	ePKIKP	PKPbc	13 04 41.9	-0.2
DPC				e		13 06 53.3	
DPC	Dobruska-Polom	147.14	343	ePKPbc	PKPbc	13 04 41.9	-0.2
DPC				epPKP	pPKPdf	13 06 53.3	-0.2
BRG	Berggiesshubel	147.24	346	ePKPbc	PKPbc	13 04 41.7	-0.7
BRG	Berggiesshubel	147.24	346	ePKP	PKPdf	13 04 38.4	-0.7
	comp=Z,2.7nm,0.4s						
BRG				i		13 04 42.1	
	comp=Z,15nm,1.1s						
BRG	Berggiesshubel	147.24	346	ePKHKP	PKPdf	13 04 38.4	-0.7
BRG				i		13 04 42.1	
BRG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
BRG				pmax	pmax		
	comp=Z,9.0nm,1.1s						
WTSB	Winterswijk	147.28	355	PKP	PKPbc	13 04 41.5	-0.9
	comp=Z,36nm,1.0s						
MORC	Moravsky Berou	147.31	342	⇓PKIKP	PKPbc	13 04 42.1	-0.5
MORC	Moravsky Berou	147.31	342	ePKPdf	PKPdf	13 04 38.7	-0.6
MORC				ePKPbc	PKPbc	13 04 42.2	-0.4
MORC	Moravsky Berou	147.31	342	⇓iP	PKPbc	13 04 42.1	-0.5
ISR	Istrita	147.41	327	⇑PKIKP	PKPbc	13 04 42.9	-0.1
ISR	Istrita	147.41	327	⇑iP	PKPbc	13 04 42.9	-0.1
PVCC	Panska Ves	147.42	345	ePKIKP	PKPbc	13 04 42.7	-0.1
PVCC	Panska Ves	147.42	345	ePKPbc	PKPbc	13 04 42.7	-0.1
MLR	Muntele Rosu	147.44	328	⇓PKIKP	PKPbc	13 04 42.4	-0.7
MLR	Muntele Rosu	147.44	328	⇓iP	PKPbc	13 04 42.4	-0.7
KECS	Kecovo	147.46	337	ePKIKP	PKPbc	13 04 43.0	0.0
KECS				e		13 06 56.5	
KECS	Kecovo	147.46	337	ePKP	PKPbc	13 04 43.0	0.0
KECS				e		13 06 56.5	
MMAI	Mount Meron Ar	147.53	301	PKPbc	PKPbc	13 04 43.2	-0.4
	comp=Z,12nm,0.5s,baz=52,slow=5.4,SNR=18						
PRU	Pruhonice	147.93	345	ePKHKP	PKPbc	13 04 44.1	0.0
PRU	Pruhonice	147.93	345	ePKPbc	PKPbc	13 04 44.1	0.0
PRU				epPKP	pPKPdf	13 06 56.7	+1.9
MOX	Moxa	147.93	349	ePKP	PKPdf	13 04 40.2	0.0
	comp=Z,37nm,1.6s						
MOX	Moxa	147.93	349	ePKPbc	PKPbc	13 04 43.3	-0.8
DRGR		147.96	333	⇑PKHKP	PKPbc	13 04 44.2	-0.1
DRGR		147.96	333	⇑iP	PKPbc	13 04 44.2	-0.1
VRAC	Vranov	148.01	342	⇓PKHKP	PKPbc	13 04 44.2	-0.2
VYHS	Vyhne	148.03	339	ePKP	PKPbc	13 04 44.5	+0.1
VYHS				e		13 06 56.4	
VYHS	Vyhne	148.03	339	ePKP	PKPbc	13 04 44.5	+0.1
VYHS				e		13 06 56.3	
KOLL	Kolacno	148.10	340	ePKHKP	PKPbc	13 04 44.6	0.0
KOLL	Kolacno	148.10	340	ePKP	PKPbc	13 04 44.5	-0.1
PSZ	Piszkesteto	148.15	337	ePKIKP	PKPdf	13 04 40.8	+0.1
PSZ				e		13 04 44.7	
PSZ				e		13 04 49.8	
NKC	Novy Kostel	148.16	348	ePKHKP	PKPbc	13 04 44.7	0.0
NKC	Novy Kostel	148.16	348	ePKPbc	PKPbc	13 04 44.7	0.0
NKC				epPKP	pPKPdf	13 06 56.0	+0.8
PRD	Provadia	148.24	324	P	PKPbc	13 04 44.8	-0.4
TREC	Trest	148.33	344	ePKHKP	PKPbc	13 04 44.7	-0.5
TREC	Trest	148.33	344	ePKPbc	PKPbc	13 04 44.7	-0.5
SMOL	Smolenice	148.47	341	ePKHKP	PKPbc	13 04 46.0	+0.5
SMOL	Smolenice	148.47	341	ePKP	PKPbc	13 04 46.0	+0.5
HGN	Heimansgroeve	148.54	356	ePKP	PKPbc	13 04 44.3	-1.3
	comp=Z,21nm,1.4s						
MEM	Membach	148.69	356	PKPbc	PKPbc	13 04 45.5	-0.5
TNS	Taunus Mts	148.83	352	ePKPbc	PKPbc	13 04 45.8	-0.5
BUD	Budapest	148.83	338	⇓ePKP	PKPbc	13 04 44.2	-2.2
ZST	Bratislava	148.85	341	ePKHKP	PKPbc	13 04 47.1	+0.6

MMB	**Musomiste**	**151.34**	**325**	P	PKPbc	13 04 51.4	-1.1
HINF	**Hinteralfeld**	**151.38**	**354**	*e*PKP1	PKPbc	13 04 51.4	-1.0
	comp=Z,23nm,0.8s						
ABTA	**Abfaltersbach**	**151.44**	**345**	⇑*i*PKPdf	PKPdf	13 04 44.8	-1.0
	comp=Z,13nm,1.3s						
ABTA				⇑*i*PKPbc	PKPbc	13 04 51.6	-0.9
	comp=Z,32nm,0.7s						
DAVA	**Damuels**	**151.48**	**349**	⇓*e*PKPdf	PKPdf	13 04 46.1	+0.2
	comp=Z,2.3nm,0.9s						
DAVA				⇑*i*PKiKP	PKiKP	13 04 52.4	-0.5
	comp=Z,29nm,1.0s						
KKB	**Krupnik**	**151.49**	**326**	P	PKPbc	13 04 51.2	-1.6
LJU	**Ljubljana**	**151.56**	**342**	*e*PKIKP	PKPdf	13 04 45.1	-0.9
LJU				*e*		13 04 51.1	
LJU				*e*		13 05 00.0	
LJU	**Ljubljana**	**151.56**	**342**	*e*PKPdf	PKPdf	13 04 45.1	-0.9
LJU				*e*PKPbc	PKPbc	13 04 51.1	-1.7
LJU				*e*PKPab	PKPab	13 05 00.0	-4.1
LJU				*ep*PKPbc	pPKPbc	13 07 06.5	+0.2
FETA	**Feichten**	**151.57**	**348**	⇑*i*PKPdf	PKPdf	13 04 45.8	-0.3
	comp=Z,8.4nm,1.1s						
FETA				*i* PKiKP	PKiKP	13 04 52.8	-0.3
	comp=Z,28nm,1.0s,SNR=7.2						
LOR	**Lormes**	**152.14**	**358**	*e*PKP1	PKPbc	13 04 53.3	-0.8
	comp=Z,54nm,1.0s						
HYF	**Humbligny**	**152.16**	**360**	*e*PKP1	PKPbc	13 04 53.7	-0.4
SSF	**Saint Saulge**	**152.36**	**358**	*e*PKP1	PKPbc	13 04 53.8	-0.8
	comp=Z,39nm,0.9s						
TUE	**Stuetta**	**152.36**	**350**	*e*PKPdf	PKPdf	13 04 47.0	-0.2
TUE				*e*PKPbc	PKPbc	13 04 54.6	0.0
TUE				*ep*PKPdf	pPKPdf	13 07 08.0	+6.0
AVF	**Avril sur Loir**	**152.63**	**359**	*e*PKP1	PKPbc	13 04 54.1	-1.1
	comp=Z,12nm,0.9s						
CABF	**La Chapelle**	**152.65**	**354**	*e*PKP1	PKPbc	13 04 55.0	-0.2
	comp=Z,78nm,1.2s						
MFF	**Saint Martin d**	**152.75**	**4**	*e*PKP1	PKPbc	13 04 54.4	-1.0
	comp=Z,39nm,1.0s						
SMF	**Signal de Mont**	**152.76**	**358**	*e*PKP1	PKPbc	13 04 54.5	-1.0
	comp=Z,33nm,1.2s						
BGF	**Bois d'Agland**	**152.87**	**359**	*e*PKP1	PKPbc	13 04 54.9	-0.8
	comp=Z,34nm,0.8s						
TCF	**Toulx Ste Croi**	**153.15**	**0**	*e*PKP1	PKPbc	13 04 55.4	-0.9
	comp=Z,28nm,1.0s						
LPL	**La Plagne**	**153.67**	**353**	*e*PKP1	PKPbc	13 04 57.4	0.0
	comp=Z,24nm,1.2s						
LPG	**La Plagne**	**153.68**	**353**	*e*PKP1	PKPbc	13 04 57.6	+0.1
	comp=Z,23nm,1.2s						
RJF	**Les Rejaudoux**	**154.12**	**1**	*e*PKP1	PKPbc	13 04 57.5	-0.9
BNI	**Bardonecchia**	**154.13**	**353**	*e*PKIKP	PKPdf	13 04 49.5	-0.2
BNI				*e*		13 04 58.2	
BNI				*e*		13 05 14.6	
ORIF	**Oris-en-Rattie**	**154.35**	**354**	*e*PKP1	PKPbc	13 04 58.3	-0.6
MBDF	**Montbardon**	**154.44**	**353**	*e*PKP1	PKPbc	13 04 58.5	-0.6
	comp=Z,8.4nm,0.7s						
KEST	**Kesra**	**162.57**	**341**	PKP	PKPdf	13 04 59.9	-0.1
	comp=Z,1.0nm,0.8s,baz=155,slow=5.3,SNR=3.7						
LIC	**Lamto**	**165.09**	**150**	*e*PKIKP	PKPdf	13 05 01.7	-1.2
	comp=Z,71nm,1.2s						
LIC	**Lamto**	**165.09**	**150**	*e*PKIKP	PKPdf	13 05 01.5	-1.4
	comp=Z,68nm,1.2s						
MDT	**Midelt**	**165.22**	**24**	PKP	PKPdf	13 05 01.9	-0.6
	comp=Z,6.9nm,1.1s,baz=253,slow=2.4,SNR=5.2						
KIC	**Kosan Boka**	**165.35**	**151**	*e*PKIKP	PKPdf	13 05 01.9	-1.2
	comp=Z,40nm,1.1s						
TIC	**Toumodi**	**165.47**	**149**	*e*PKIKP	PKPdf	13 05 02.2	-1.0
	comp=Z,58nm,1.2s						
DBIC	**Dimbokro**	**165.56**	**150**	PKP	PKPdf	13 05 02.5	-0.8
	comp=Z,6.6nm,0.8s,baz=154,slow=2.4,SNR=6.7						
TORD	**Torodi Ar. Bea**	**173.79**	**174**	PKP	PKPdf	13 05 06.3	-1.7
	comp=Z,8.1nm,1.0s,baz=317,slow=1.1,SNR=28						
TORD				PKPab	PKPab	13 06 42.6	+0.5
	comp=Z,2.7nm,0.7s,baz=186,slow=3.5,SNR=10						
TORD				PP	PP	13 10 32.1	-1.1
	comp=Z,4.5nm,1.1s,baz=211,slow=3.3,SNR=7.0						

IDC 02 12:58:30.4±17.0, 22°.33S×175°.16W, h0km, mb4.3/5, mb1 4.4/5, mb1mx3.9/18, mbtmp4.3/5, Error ellipse: s-maj=321.5km s-min=149.8km az=80.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**35.98**	**266**	P	P	13 05 34.5	+1.3
	5.4nm,0.4s,baz=96,slow=11,SNR=16						
STKA	**Stephens Creek**	**39.44**	**247**	P	P	13 06 01.4	-1.0
	3.0nm,0.9s,baz=95,slow=12,SNR=2.8						
ASAR	**Alice Springs**	**46.70**	**258**	P	P	13 07 00.5	-0.9
	1.4nm,0.6s,baz=96,slow=7.3,SNR=42						
WRA	**Warramunga Arr**	**46.99**	**263**	P	P	13 07 02.9	-0.7
	2.2nm,0.3s,baz=96,slow=8.4,SNR=122						
FITZ	**Fitzroy Crossi**	**55.42**	**263**	P	P	13 08 07.8	+0.8
	2.1nm,0.8s,baz=112,slow=5.4,SNR=4.7						

*IDC **02** 12:59:44.0±1.3, 31°.87N×104°.46E, h0km, mb3.3/3, mb1 3.6/5, mb1mx3.4/27, mbtmp3.3/5, ML4.0/2, MS3.3/1, Ms1 3.3/1, ms1mx2.4/20, Error ellipse: s-maj=59.8km s-min=24.4km az=62.0*
*BJI **02** 12:59:47.9, 31°.69N×104°.34E, h16km, ML3.1/10*
ISC 02 12:59:44.4±0.8, 31°.80N±0°.04×104°.28E±0°.07, h1km±8km, n8, σ0°88/15, mb3.4/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.99**	**207**	Pg	**Pg**	**13 00 02.9**	**-0.5**
CD2				Sg	**Sg**	**13 00 15.9**	**-0.4**
CD2				smax			
	comp=N,1μm,0.8s						
CD2				smax			
	comp=E,1μm,0.5s						
LZH	**Lanzhou**	**4.29**	**355**	*e*Pn	**Pb**	**13 00 58.9**	**-1.6**
LZH				Pg	**Pg**	**13 01 07.3**	**+0.7**
LZH				Sn	**Sb**	**13 01 48.4**	**-4.3**
LZH				Sg	**Sg**	**13 02 02.3**	**+0.2**
LZH				smax			
	comp=N,38nm,0.5s						
LZH				smax			
	comp=E,55nm,0.6s						
XAN	**Xi'an**	**4.50**	**59**	Pn	**Pb**	**13 00 59.4**	**-4.7**
XAN				Pg	**Pg**	**13 01 11.3**	**+0.7**
XAN				Sn	**Sb**	**13 01 54.3**	**-4.5**
XAN				Sg	**Sg**	**13 02 08.6**	**-0.3**
XAN				smax			
	comp=N,29nm,0.7s						
XAN				smax			
	comp=E,21nm,0.9s						
CMAR	**Chiang Mai Arr**	**14.13**	**201**	Pn	**Pn**	**13 03 08.0**	**+2.3**
	comp=E,0.6nm,0.3s,baz=12,slow=14,SNR=7.1						
SONM	**Songino Array**	**16.09**	**5**	Pn	**Pn**	**13 03 32.1**	**+0.4**
	comp=E,0.1nm,0.3s,baz=190,slow=7.3,SNR=2.4						
MKAR	**Makanchi Array**	**22.55**	**318**	P	**P**	**13 04 45.8**	**+0.1**
	comp=E,0.2nm,0.7s,mb2.7,baz=115,slow=10,SNR=2.1						
MKAR				LR	LR	13 13 35.6	
	comp=E,71nm,20.2s,baz=11,slow=37						
WRA	**Warramunga Arr**	**58.97**	**147**	P	**P**	**13 09 45.3**	**-0.2**
	comp=E,0.4nm,0.4s,mb3.8,baz=340,slow=7.7,SNR=12						
ASAR	**Alice Springs**	**62.01**	**149**	P	**P**	**13 10 05.7**	**-0.6**
	comp=E,0.7nm,1.1s,mb3.7,baz=338,slow=7.1,SNR=3.7						

*CSEM **02** 13:03:48.6, 39°.69N×29°.45E, h7km, MD2.7, After DDA*
DDA 02 13:03:48.6, 39°.69N×29°.45E, h7km±5km, Md2.7, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULDT	**Uludag**	**0.51**	**332**	*i* P	Pg	13 03 59.5	+0.9
ULDT				*i* S	Sg	13 04 07.7	+2.5
ULDT	**Uludag**	**0.51**	**332**	*i* P	Pg	13 03 59.5	+1.0
ULDT				*i* S	Sg	13 04 07.7	+2.5
GDZ	**Gediz**	**0.60**	**177**	*i* P	Pg	13 04 00.6	+0.5
GDZ				*i* S	Sg	13 04 08.7	+0.9
GDZ	**Gediz**	**0.60**	**177**	*i* P	Pg	13 04 00.6	+0.5
GDZ				*i* S	Sg	13 04 08.7	+0.8
DURS	**Dursunbey**	**0.76**	**264**	*i* P	Pg	13 04 02.4	-0.7
DURS				*i* S	Sg	13 04 13.0	+0.1
DURS	**Dursunbey**	**0.76**	**264**	*i* P	Pg	13 04 02.4	-0.7
DURS				*i* S	Sg	13 04 13.0	+0.1
BORA	**Eskisehir**	**0.80**	**76**	*i* P	Pg	13 04 04.4	+0.5
BORA				*i* S	Sg	13 04 12.1	-2.2
BORA	**Eskisehir**	**0.80**	**76**	*i* P	Pg	13 04 04.4	+0.4
BORA				*i* S	Sg	13 04 12.1	-2.3
ESKT	**Eskisehir**	**1.10**	**98**	*i* P	Pg	13 04 09.4	-0.2
ESKT				*i* S	Sg	13 04 29.4	+5.6
SEYT	**Eskypehyr**	**1.10**	**98**	*i* P	Pg	13 04 09.4	-0.2
SEYT				*i* S	Sg	13 04 29.4	+5.5
KHAL	**Karahalli**	**1.31**	**178**	*i* P	Pn	13 04 13.9	+0.6
KHAL	**Karahalli**	**1.31**	**178**	*i* P	Pn	13 04 13.9	+0.6
BALY	**Balya**	**1.41**	**273**	*i* P	Pn	13 04 16.0	+1.4
BALY				*i* S	Sb	13 04 36.4	+3.0
BALY	**Balya**	**1.41**	**273**	*i* P	Pn	13 04 16.0	+1.4
BALY				*i* S	Sb	13 04 36.4	+3.0

*NEIC **02** 13:10:53.9, 17°.91N×99°.59W, h5km, MD3.7(MEX), After MEX.*
MEX 02 13:10:54.2±0.8, 17°.92N×99°.61W, h5km, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEIG	**Mezcala**	**0.01**	**317**	*e*P	Pg	13 10 54.0	-1.1
MEIG				*i* S	Sg	13 10 55.4	-0.4
PLIG	**Platanillo**	**0.48**	**13**	*e*P	Pg	13 11 03.0	-0.5
PLIG				*i* S	Sg	13 11 10.6	+0.8
PLIG	**Platanillo**	**0.48**	**13**	*e*P	Pg	13 11 03.0	-0.5
PLIG				*i* S	Sg	13 11 10.0	+0.1
CAIG	**El Cayaco**	**1.07**	**216**	*e*P	Pg	13 11 11.3	-3.4
CAIG				*i* S	Sg	13 11 25.8	-2.8
CAIG	**El Cayaco**	**1.07**	**216**	*e*P	Pg	13 11 11.3	-3.4
CAIG				*i* S	Sg	13 11 25.8	-2.8
YAIG	**Yautepec**	**1.07**	**29**	*i* P	Pg	13 11 12.3	-2.5
YAIG				*i* S	Sg	13 11 26.4	-2.4
YAIG	**Yautepec**	**1.07**	**29**	*i* P	Pg	13 11 12.3	-2.5
YAIG				*i* S	Sg	13 11 26.8	-1.9
PPM	**Popocatepetl**	**1.48**	**39**	*e*P	Pn	13 11 21.9	+0.4
PPM				*i* S	Sn	13 11 39.8	-1.4
ZIIG	**Zihuatanejo**	**1.79**	**260**	*e*P	Pn	13 11 23.4	-2.4
ZIIG				*i* S	Sn	13 11 44.5	-4.5
ZIIG	**Zihuatanejo**	**1.79**	**260**	*e*P	Pn	13 11 23.4	-2.4
ZIIG				*i* S	Sn	13 11 44.5	-4.5
PNIG	**Pinotepa**	**2.08**	**137**	*i* S	Sn	13 11 52.0	-4.0
PNIG	**Pinotepa**	**2.08**	**137**	*i* S	Sn	13 11 52.0	-4.0
TPIG	**Tehuac#an**	**2.20**	**77**	*i* P	Pn	13 11 28.8	-2.6
TPIG				*i* S	Sn	13 11 55.4	-3.6
MOIG	**Morelia**	**2.30**	**320**	*i* P	Pn	13 11 29.6	-3.2
MOIG				*i* S	Sn	13 11 58.4	-3.1

*IDC **02** 13:24:45.6±0.7, 10°.44S×113°.64E, h0km, mb4.0/13, mb1 4.1/14, mb1mx4.1/22, mbtmp4.1/14, ML4.5/1, MS3.3/5, Ms1 3.4/5, ms1mx2.9/26, Error ellipse: s-maj=25.2km s-min=9.9km az=48.0*
*NEIC **02** 13:24:47.3±0.5, 10°.43S×113°.58E, h10km, mb4.2/2, Error ellipse: s-maj=16.4km s-min=8.9km az=55.0*
*ISCJB **02** 13:24:51.4±0.8, 10°.51S±0°.05×113°.32E±0°.03, h59km±8km, mb4.1/18, MS3.4/4, Error ellipse: s-maj=8.2km s-min=4.9km az=11.6*
*DJA **02** 13:24:53, 10°.31S×113°.35E, h108km, MLv4.5/13*
ISC 02 13:24:51.6±0.8, 10°.56S±0°.04×113°.33E±0°.03, h42km±7km, n53, σ1°08/69, mb4.1/18, MS3.4/4, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**2.28**	**3**	P	**Pn**	**13 25 26.1**	**-0.7**
GMJI				S	**Sn**	**13 25 52.9**	**-0.7**
IGBI	**Denpasar**	**2.49**	**46**	P	**Pn**	**13 25 29.7**	**0.0**
IGBI				S	**Sn**	**13 25 57.6**	**-1.3**
NBBI	**Negara**	**2.52**	**30**	P	**Pn**	**13 25 32.9**	**+2.7**
NBBI				S	**Sn**	**13 26 00.0**	**+0.3**
KRKI	**Karangkates**	**2.54**	**340**	P	**Pn**	**13 25 31.5**	**+1.1**
KRKI				S	**Sn**	**13 26 00.1**	**0.0**
BYJI	**Banyuwangi**	**2.54**	**24**	P	**Pn**	**13 25 33.2**	**+2.8**
BYJI				S	**Sn**	**13 25 59.2**	**-1.0**
DNP	**Denpasar**	**2.64**	**45**	P	Px	13 25 42.8	
DNP				PP	S	**13 26 02.3**	**-0.2**
ABJI	**Asem Bagus**	**2.89**	**18**	P	**Pn**	**13 25 33.1**	**-2.1**
PWJI	**Pagerwojo**	**2.94**	**329**	P	**Pn**	**13 25 36.1**	**+0.2**
PWJI				S	**Sn**	**13 26 10.2**	**+0.3**
SRBI	**Singaraja**	**3.09**	**37**	P	**Pn**	**13 25 38.5**	**+0.6**
SRBI				S	**Sn**	**13 26 13.1**	**-0.5**
KHKI	**Kahang-Kahang**	**3.14**	**46**	P	**Pn**	**13 25 39.9**	**+1.3**
KHKI				S	**Sn**	**13 26 15.5**	**+0.7**
PCJI	**Pacitan**	**3.17**	**318**	S	**Sn**	**13 26 16.2**	**+0.6**
SJI	**Sawahan**	**3.20**	**331**	P	**Pn**	**13 25 40.2**	**+0.7**
SJI				S	**Sn**	**13 26 17.2**	**+0.7**
KMMI	**Kalianget**	**3.55**	**10**	P	**Pn**	**13 25 45.3**	**+1.1**
NGJI	**Ngawi**	**3.67**	**330**	P	**Pn**	**13 25 51.2**	**+5.3**
NGJI				S	**Sn**	**13 26 32.9**	**+4.9**
UGM	**Wanagama**	**3.82**	**313**	P	**Pn**	**13 25 48.4**	**+0.4**
UGM				S	**Sn**	**13 26 30.8**	**-0.9**
YOGI	**Yogyakarta**	**4.05**	**312**	P	**Pn**	**13 25 49.2**	**-1.9**
YOGI				S	**Sn**	**13 26 37.4**	**+0.1**
KAPI	**Kappang**	**8.42**	**50**	Sn	**Sn**	**13 28 18.9**	**-6.0**
	1.9nm,0.3s,baz=195,slow=22,SNR=7.3						
KAPI	**Kappang**	**8.42**	**50**	P	**Pn**	**13 26 45.1**	**-6.0**
CGJI	**Cibinong**	**8.51**	**297**	P	**Pn**	**13 26 52.8**	**+0.4**
CGJI				S	**Sn**	**13 28 24.6**	**-2.5**
MBWA	**Marble Bar**	**12.20**	**150**	*e*P	**Pn**	**13 27 35.9**	**-7.0**
MBWA				*e*S	**Sn**	**13 29 37.5**	**-20**
MBWA	**Marble Bar**	**12.20**	**150**	*e*P	**Pn**	**13 27 36.2**	**-6.7**
	18nm,0.3s						
FITZ	**Fitzroy Crossi**	**14.08**	**124**	*e*P	**Pn**	**13 28 02.6**	**-6.0**
	12nm,0.6s						
FITZ				*e*S	**Sn**	**13 30 26.8**	**-17**
FITZ	**Fitzroy Crossi**	**14.08**	**124**	Pn	**Pn**	**13 28 02.5**	**-6.1**
	1.7nm,0.3s,baz=312,slow=7.4,SNR=54						
FITZ				Sn	**Sn**	**13 30 29.2**	**-14**
	0.5nm,0.3s,baz=38,slow=19,SNR=4.9						
FITZ				LR	LR	13 32 43.7	
	comp=Z,128nm,21.9s,baz=319,slow=34						
FITZ	**Fitzroy Crossi**	**14.08**	**124**	*e*P	**Pn**	**13 28 02.7**	**-6.0**
FITZ				Sn	**Sn**	**13 30 29.2**	**-14**
FITZ				LR	LR	13 32 43.7	
KNA	**Kununurra**	**15.89**	**111**	*e*P	**Pn**	**13 28 28.1**	**-4.3**
	4.0nm,0.3s						
KAKA	**Kakadu**	**18.84**	**98**	*e*P	**Pn**	**13 29 10.5**	**+1.5**
KLBR	**Kellerberrin**	**21.32**	**170**	*e*P	**P**	**13 29 39.2**	**+4.2**
	31nm,1.7s,mb4.4						
WRA	**Warramunga Arr**	**22.29**	**117**	P	**P**	**13 29 44.0**	**-1.5**
	1.8nm,0.5s,mb3.8,baz=289,slow=12,SNR=27						
WRA				S	**S**	**13 33 47.4**	**-1.2**
	0.5nm,0.6s,baz=289,slow=22,SNR=3.5						
WRA	**Warramunga Arr**	**22.29**	**117**	P	**P**	**13 29 44.0**	**-1.5**
WRA				S	**S**	**13 33 47.4**	**-1.2**
WRAB	**Tennant Creek**	**22.30**	**117**	*e*P	**P**	**13 29 45.7**	**+0.2**
	4.6nm,0.6s,mb4.1						
NWAO	**Narrogin (SRO)**	**22.55**	**171**	P	**P**	**13 29 48.9**	**+0.8**
	3.7nm,0.8s,mb3.9,baz=79,slow=10,SNR=2.3						
ASAR	**Alice Springs**	**23.55**	**126**	P	**P**	**13 29 57.9**	**-0.6**
	2.5nm,0.6s,mb3.8,baz=300,slow=9.0,SNR=57						
ASAR				S	**S**	**13 34 11.1**	**+1.6**
	0.4nm,1.0s,baz=303,slow=23,SNR=3.3						
FORT	**Forrest**	**24.33**	**148**	*e*P	**P**	**13 30 05.6**	**+0.1**
	13nm,0.7s,mb4.5						
CMAR	**Chiang Mai Arr**	**32.14**	**334**	P	**P**	**13 31 16.9**	**+1.6**
	1.5nm,0.7s,mb3.9,baz=164,slow=8.4,SNR=8.1						
CMAR				LR	LR	13 44 30.7	
	comp=Z,30nm,21.1s,MS3.0,baz=200,slow=37						
STKA	**Stephens Creek**	**33.65**	**133**	P	**P**	**13 31 28.0**	**-0.5**
	1.1nm,0.5s,mb4.1,baz=278,slow=24,SNR=5.2						
KSRS	**Korea Array**	**49.69**	**15**	P	**P**	**13 33 37.8**	**-1.6**
	3.6nm,0.9s,mb4.4,baz=188,slow=7.4,SNR=9.0						
HHC	**Hu-ho-hao-te**	**51.18**	**358**	*e*P	**P**	**13 33 51.5**	**+0.9**
HHC				S	**S**	**13 41 08.7**	**+2.9**
HHC				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.1						
HHC				pmax	pmax		
	comp=Z,93nm,6.6s						
MJAR	**Matsushiro Arr**	**52.38**	**25**	P	**P**	**13 33 56.7**	**-2.9**
	comp=Z,0.8nm,0.5s,mb3.9,baz=201,slow=6.5,SNR=3.9						
ULN	**Ulaanbaatar**	**58.43**	**355**	*e*P	**P**	**13 34 42.3**	**-0.7**
SONM	**Songino Array**	**58.46**	**355**	P	**P**	**13 34 42.3**	**-0.9**
	comp=Z,1.2nm,0.5s,mb4.2,baz=177,slow=9.8,SNR=11						
SONM				LR	LR	14 00 34.6	
	comp=Z,29nm,18.8s,MS3.4,baz=360,slow=37						
MK31	**Makanchi Array**	**63.48**	**337**	*e*P	**P**	**13 35 17.0**	**-0.3**
MKAR	**Makanchi Array**	**63.48**	**337**	P	**P**	**13 35 17.4**	**+0.2**
	comp=Z,0.4nm,0.4s,mb3.9,baz=150,slow=7.0,SNR=15						
MKAR	**Makanchi Array**	**63.48**	**337**	P	**P**	**13 35 17.4**	**+0.2**
MAW	**Mawson**	**65.91**	**199**	P	**P**	**13 35 32.4**	**-0.5**
	comp=Z,1.4nm,0.6s,mb4.2,baz=264,slow=21,SNR=3.6						
KURK	**Kurchatov**	**68.08**	**337**	LR	LR	14 07 32.9	
	comp=Z,23nm,20.3s,MS3.4,baz=175,slow=38						
KURK	**Kurchatov**	**68.08**	**337**	*e*P	**P**	**13 35 46.9**	**+0.1**
	comp=Z,2.8nm,1.0s,mb4.2						
ZALV	**Zalesovo Beam**	**68.66**	**342**	P	**P**	**13 35 50.1**	**-0.3**
	comp=Z,0.9nm,0.4s,mb4.0,baz=160,slow=4.7,SNR=6.0						
BVAR	**Borovoye Array**	**73.16**	**335**	P	**P**	**13 36 18.2**	**+0.5**
	comp=Z,1.1nm,0.6s,mb4.0,baz=134,slow=8.5,SNR=7.6						
KMBO	**Kilima Mbogo**	**76.11**	**271**	LR	LR	14 05 48.4	
	comp=Z,44nm,18.5s,MS3.8,baz=94,slow=32						
BRTR	**Keskin Array B**	**88.86**	**311**	P	**P**	**13 37 42.7**	**+1.1**
	comp=Z,1.2nm,0.8s,mb4.3,baz=134,slow=7.1,SNR=7.4						
YKA	**Yellowknife Ar**	**117.85**	**23**	PKP	PKPdf	13 43 33.8	+0.7
	comp=Z,0.7nm,0.7s,baz=305,slow=2.3,SNR=3.9						
MIAR	**Mount Ida**	**145.75**	**42**	*e*PKP	PKPdf	13 44 27.3	+1.2
WVT	**Waverly**	**148.13**	**34**	*e*PKPbc	PKPbc	13 44 33.9	+0.6

*ISCJB **02** 13:39:33.9±0.4, 37°.92N±0°.02×21°.49E±0°.03, h3km±4km, Error ellipse: s-maj=3.9km s-min=3.3km az=37.8*
*ATH **02** 13:39:33.8, 37°.98N×21°.44E, h23km±1km, MD3.0/14*
*NEIC **02** 13:39:33.8, 37°.98N×21°.44E, h23km, MD3.0(ATH), After ATH.*
*THE **02** 13:39:34.1, 37°.91N×21°.50E, h3km±1km, ML3.2/10, Error ellipse: s-maj=1.6km s-min=0.7km az=222.0*
*CSEM **02** 13:39:34.2±0.3, 37°.94N×21°.46E, h19km, MD3.0, Error ellipse: s-maj=5.4km s-min=4.8km az=65.0*
ISC 02 13:39:34.7±0.4, 37°.92N±0°.02×21°.49E±0°.03, h8km±4km, n62, σ1°07/104, 12C, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.14**	**351**	*e*Pb	**Pg**	**13 39 38.1**	**+0.4**
RLS				*e*Sb	**Sg**	**13 39 41.8**	**+2.0**
RLS	**Riolos of Patr**	**0.14**	**351**	*e*PB	**Pg**	**13 39 38.1**	**+0.4**
RLS				*e*SB	**Sg**	**13 39 41.8**	**+2.0**
RLS	**Riolos of Patr**	**0.14**	**351**	*e*Pb	**Pg**	**13 39 38.1**	**+0.4**
RLS				*e*Sb	**Sg**	**13 39 41.8**	**+2.0**
UPR	**University Cam**	**0.43**	**32**	*e*PB	**Pg**	**13 39 42.9**	**-0.2**
UPR				*e*SB	**Sg**	**13 39 49.5**	**+0.7**
UPR	**University Cam**	**0.43**	**32**	P	**Pg**	**13 39 42.7**	**-0.4**
UPR				S	**Sg**	**13 39 49.6**	**+0.8**
UPR	**University Cam**	**0.43**	**32**	*e*Pb	**Pg**	**13 39 42.9**	**-0.2**
UPR				S	**Sg**	**13 39 49.6**	**+0.8**
LAKA	**Lakka**	**0.50**	**50**	P	**Pg**	**13 39 43.7**	**-0.7**
LAKA				S	**Sg**	**13 39 51.4**	**+0.5**
LAKA	**Lakka**	**0.50**	**50**	P	**Pg**	**13 39 43.7**	**-0.7**
LAKA				S	**Sg**	**13 39 51.4**	**+0.5**
KFL	**Anninata**	**0.59**	**289**	P	**Pg**	**13 39 45.2**	**-0.9**
KFL				S	**Sg**	**13 39 55.0**	**+1.2**
KFL	**Anninata**	**0.59**	**289**	P	**Pg**	**13 39 45.2**	**-0.9**
KFL				S	**Sg**	**13 39 55.0**	**+1.2**
EFP	**Efpalio**	**0.60**	**32**	⇑*i*PN	**Pg**	**13 39 45.2**	**-1.1**
EFP				*e*SN	**Sg**	**13 39 53.8**	**-0.4**
EFP	**Efpalio**	**0.60**	**32**	P	**Pg**	**13 39 45.2**	**-1.1**
EFP				S	**Sg**	**13 39 55.1**	**+0.9**
EFP	**Efpalio**	**0.60**	**32**	P	**Pg**	**13 39 45.2**	**-1.1**
EFP				S	**Sg**	**13 39 55.1**	**+0.9**
GUR	**Goura**	**0.67**	**88**	*e*PB	**Pg**	**13 39 46.5**	**-1.1**
GUR				*e*SN	**Sg**	**13 39 57.5**	**+1.2**
GUR	**Goura**	**0.67**	**88**	P	**Pg**	**13 39 45.9**	**-1.7**
GUR				S	**Sg**	**13 39 56.6**	**+0.3**
GUR	**Goura**	**0.67**	**88**	P	**Pg**	**13 39 45.9**	**-1.7**
GUR	**Goura**	**0.67**	**88**	*e*Pb	**Pg**	**13 39 46.5**	**-1.1**
GUR				S	**Sg**	**13 39 56.6**	**+0.3**
GUR				*e*Sn	**Sg**	**13 39 57.5**	**+1.2**
KALE	**Kalithea**	**0.69**	**47**	P	**Pg**	**13 39 46.8**	**-1.3**
KALE				S	**Sg**	**13 39 57.9**	**+0.8**
KALE	**Kalithea**	**0.69**	**47**	P	**Pg**	**13 39 46.8**	**-1.3**
KALE				S	**Sg**	**13 39 57.9**	**+0.8**
VLS	**Valsamata**	**0.76**	**290**	⇑*i*Pn	**Pg**	**13 39 47.6**	**-1.7**
VLS	**Valsamata**	**0.76**	**290**	⇑*i*PN	**Pg**	**13 39 47.6**	**-1.7**
VLS	**Valsamata**	**0.76**	**290**	P	**Pg**	**13 39 47.6**	**-1.7**
VLS				S	**Sg**	**13 40 00.1**	**+0.9**
VLS	**Valsamata**	**0.76**	**290**	P	**Pg**	**13 39 47.6**	**-1.7**
VLS				S	**Sg**	**13 40 00.1**	**+0.9**
ITM	**

baz=299
STYT *i* S **Sg** **13 56 11.9 -2.2**
baz=299
TWF1 Yuli **0.39 35** ⇓*i*P **Pg** **13 56 12.6 +0.6**
baz=46
TWF1 *e*S **Sg** **13 56 18.3 +1.2**
baz=46
YULB Yu-li **0.43 32** *e*Pg **Pg** **13 56 12.6 0.0**
SGST Jiashian **0.43 277** ⇓*i*P **Pg** **13 56 11.8 -0.9**
baz=277
ECL Taimali **0.44 192** ⇑P **Pg** **13 56 12.9 +0.1**
baz=181
ECL *e*S **Sg** **13 56 18.8 +0.2**
baz=181
WTP Ta-pu **0.45 298** ⇓*i*P **Pg** **13 56 12.2 -0.9**
baz=304
WTP *i* S **Sg** **13 56 18.0 -1.0**
baz=304
TPUB Ta-pu **0.47 305** *e*Pg **Pg** **13 56 12.3 -1.2**
SSD Sandimen **0.48 234** ⇓*i*P **Pg** **13 56 12.3 -1.3**
baz=218
SSD *e*S **Sg** **13 56 17.4 -2.4**
baz=218
CHN1 Nanshi **0.50 288** ⇓*i*P **Pg** **13 56 13.6 -0.5**
baz=287
CHN1 S **Sg** **13 56 20.5 -0.2**
baz=287
CHN4 Tsaushan **0.53 307** ⇓*i*P **Pg** **13 56 14.0 -0.6**
baz=320
CHN4 *e*S **Sg** **13 56 20.9 -0.5**
baz=320
ALS Alishan **0.53 335** P **Pg** **13 56 13.8 -0.8**
baz=343
EHY Hungye **0.54 28** ⇓*i*P **Pg** **13 56 14.6 -0.1**
baz=37
EHY *e*S **Sg** **13 56 21.8 +0.1**
baz=37
TWK Hsinying **0.57 295** ⇓*i*P **Pg** **13 56 14.7 -0.6**
baz=296
TWK S **Sg** **13 56 22.5 -0.2**
baz=296
TWM1 Shoushan **0.61 250** *e*P **Pg** **13 56 16.1 0.0**
baz=244
CHN3 Shinhua **0.63 274** *e*P **Pg** **13 56 17.3 +0.8**
baz=271
CHN5 Tsauling **0.66 329** *e*P **Pg** **13 56 16.3 -0.8**
baz=334
EAST Anshuo **0.67 196** ⇓*i*P **Pg** **13 56 17.3 0.0**
baz=189
EAST *e*S **Sg** **13 56 26.4 +0.5**
baz=189
TAW Tawu **0.68 192** *e*P **Pg** **13 56 17.6 +0.1**
baz=177
TAW *e*S **Sg** **13 56 26.1 -0.3**
baz=177
CHY Chiayi **0.74 309** *e*P **Pg** **13 56 18.3 -0.3**
baz=312
CHY *e*S **Sg** **13 56 28.2 0.0**
baz=312
TAI1 Yung-k'ang **0.76 271** *e*P **Pg** **13 56 19.0 0.0**
baz=269
TAI1 *e*S **Sg** **13 56 30.7 +1.9**
baz=269
SSLB Suanglung **0.76 353** *e*P **Pg** **13 56 17.5 -1.5**
SCZT Fangliau **0.77 211** ⇓*i*P **Pg** **13 56 18.3 -0.8**
baz=204
WGK Gukeng **0.79 326** *e*P **Pg** **13 56 19.1 -0.5**
baz=330
SCLT Jiali **0.80 281** *e*P **Pg** **13 56 21.4 +1.6**
baz=296
KAU Kaohsiung **0.82 236** *e*P **Pg** **13 56 22.8 +2.6**
baz=230
CHN8 Yiju **0.83 292** *e*P **Pg** **13 56 20.1 -0.2**
baz=293
CHN8 *e*S **Sg** **13 56 32.0 +0.8**
baz=293
ESL Shilin **0.86 24** ⇓P **Pg** **13 56 20.2 -0.7**
baz=46
SMLT Sun Moon Lake **0.86 351** *e*P **Pg** **13 56 20.1 -0.8**
baz=2.0
TYC Yuchr **0.89 349** *e*P **Pg** **13 56 20.6 -0.8**
baz=359
TYC *e*S **Sg** **13 56 34.3 +1.4**
baz=359
WNT Mingjian **0.91 338** *e*P **Pg** **13 56 22.2 +0.4**
baz=343
WNT *e*S **Sg** **13 56 35.0 +1.4**
baz=343
TWP Hsiaoliuchiu **0.93 223** *e*P **Pg** **13 56 24.4 +2.2**
baz=220
HEN Hengchun **1.06 196** *e*P **Pg** **13 56 25.8 +1.0**
baz=199
HWA Hwalien **1.07 28** *e*P **Pg** **13 56 23.7 -1.3**
baz=35
LAY Lan-yu **1.09 155** *e*P **Pg** **13 56 22.7 -2.6**
baz=150
TWK1 Hengchun **1.10 192** *e*P **Pg** **13 56 25.8 +0.2**
baz=197
TWK1 *e*S **Sg** **13 56 43.9 +3.9**
baz=197
WHF Hehuan Shan **1.13 10** *e*P **Pg** **13 56 24.6 -1.5**
baz=21
WHF *e*S **Sg** **13 56 42.9 +2.3**
baz=21
TSEB Hengchuen, Pin **1.13 187** *e*P **Pg** **13 56 26.4 +0.3**
baz=174
TWD Chiawan **1.16 26** *e*P **Pg** **13 56 25.8 -0.8**
baz=39
TWD *e*S **Sg** **13 56 41.9 +0.2**
baz=39
TCU Taichung **1.16 343** *e*P **Pg** **13 56 27.2 +0.5**
baz=347
TCU *e*S **Sg** **13 56 43.9 +2.0**
baz=347
TWT Tachien **1.22 5** *e*P **Pg** **13 56 27.0 -0.8**
baz=356
NACB Ninganchiao **1.24 24** *e*P **Pg** **13 56 26.2 -2.0**
TWQ1 Liyutan **1.34 349** *e*P **Pn** **13 56 29.5 -0.5**
baz=353
TWQ1 *e*S **Sg** **13 56 48.6 +1.2**
baz=353
NSY Sanyi **1.40 349** *e*P **Pn** **13 56 30.2 -0.7**
baz=353
NSY *e*S **Sb** **13 56 51.6 +2.0**
baz=353
NNS Nan Shan **1.43 12** *e*P **Pn** **13 56 30.5 -0.8**
baz=30
NNS *e*S **Sb** **13 56 51.5 +1.1**
baz=30
PNG Penghu **1.47 292** *e*P **Pn** **13 56 29.3 -2.5**
baz=293
PNG *e*S **Sb** **13 56 47.7 -3.9**
baz=293
ENA Nanau **1.53 24** *e*P **Pn** **13 56 31.8 -0.8**
baz=40
NSTT Nanjuang **1.59 358** *e*P **Pn** **13 56 33.6 +0.2**
baz=3.0
NSTT *e*S **Sn** **13 56 55.2 +0.6**
baz=3.0
YHNB Yeheng **1.66 10** *e*P **Pn** **13 56 34.4 0.0**
NSK Sanguang **1.66 10** *e*P **Pn** **13 56 34.7 +0.3**
baz=26
NSK *e*S **Sn** **13 56 58.0 +1.7**
baz=26
ENTT Nioudou **1.67 16** P **Pn** **13 56 35.1 +0.6**
baz=32
ENTT *e*S **Sn** **13 56 59.5 +3.0**
baz=32
TWC Suao **1.73 25** *e*P **Pn** **13 56 35.6 +0.2**
baz=29
TWC *e*S **Sn** **13 56 59.1 +1.1**
baz=29
TWE Neicheng **1.78 18** *e*P **Pn** **13 56 36.9 +0.9**
baz=39
ILA Ilan **1.84 20** *e*P **Pn** **13 56 37.0 +0.1**
baz=40
TATO Taipei **1.98 12** *e*P **Pn** **13 56 39.6 +0.9**
TWA Mucha **2.00 14** *e*P **Pn** **13 56 41.0 +1.9**
baz=34
TWS1 Kuangyinshan **2.09 9** *e*P **Pn** **13 56 41.8 +1.5**
baz=14
NWF Wu-fen Shan **2.14 18** *e*P **Pn** **13 56 43.3 +2.3**
baz=37
TWB1 Santiao Chiao **2.15 23** *e*P **Pn** **13 56 40.0 -1.1**
baz=41
YOJ Yonaguni jima **2.29 51** P **Pn** **13 56 42.4 -0.7**
YOJ S **Sn** **13 57 11.2 -0.7**
HATJ Hateruma jima **2.73 67** P **Pn** **13 56 48.1 -1.0**
HATJ S **Sn** **13 57 21.7 -0.9**
KNM Kinmen **2.77 300** *e*P **Pn** **13 56 52.3 +2.7**
baz=301
IRIF Iriomote-Funau **2.78 62** P **Pn** **13 56 49.2 -0.6**
IRIF *e*S **Sn** **13 57 23.3 -0.6**
JKRS Kuro-shima **2.97 66** P **Pn** **13 56 51.8 -0.6**
JKRS S **Sn** **13 57 27.1 -1.4**
JIJ Ishigaki jima **3.13 64** P **Pn** **13 56 53.5 -1.1**
JIJ S **Sn** **13 57 30.0 -2.5**
JTJ Tarama **3.71 64** P **Pn** **13 57 01.9 -0.7**
JOGS Gusukube **4.34 66** P **Pn** **13 57 10.9 -0.4**

IDC 02 14:03:36.5±3.7, 6°22S×146°30E, h0km, mb2.7/1, mb1 3.1/2, mb1mx3.0/15, mbtmp2.9/2, ML2.9/1, MS3.3/1, Ms1 3.3/1, ms1mx3.0/3, Error ellipse: s-maj=142.8km s-min=52.5km az=119.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.92**	**219**	P	Pn	14 07 46.4	-0.9
	0.0nm,0.3s,baz=42,slow=12,SNR=3.6						
WRA				LR	LR	14 14 55.7	
	comp=Z,92nm,20.6s,baz=210,slow=38						
ASAR	**Alice Springs**	**21.05**	**213**	P	P	14 08 21.7	-0.6
	0.1nm,0.4s,baz=50,slow=8.4,SNR=8.9						
TORD	**Torodi Ar. Bea**	**144.47**	**284**	PKP	PKPdf	14 23 16.9	+0.9
	1.2nm,0.6s,baz=75,slow=3.2,SNR=10						

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*ISCJB **02** 14:18:28.8±0.5, 37°71N±0°03×27°38E±0°04, h10km±5km, Error ellipse: s-maj=6.8km s-min=4.0km az=136.8*
*DDA **02** 14:18:28.1, 37°79N×27°38E, h7km±1km, Md2.8*
*ISK **02** 14:18:28.8, 37°73N×27°46E, h18km, MD3.0*
*CSEM **02** 14:18:29.2±0.1, 37°73N×27°44E, h15km, MD2.8, Error ellipse: s-maj=4.3km s-min=2.2km az=64.0*
ISC 02 14:18:28.9±0.5, 37°71N±0°03×27°37E±0°05, h14km±4km, n26, σ0°95/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.10**	**266**	*i* P	**Pg**	**14 18 31.0**	**-1.2**
GCAM				*i* S	**Sg**	**14 18 33.9**	**-0.5**
AYDN	**Tasoluk**	**0.41**	**96**	*i* P	**Pg**	**14 18 36.6**	**-0.6**
AYDN				*i* S	**Sg**	**14 18 42.8**	**+0.1**
AYDN	**Tasoluk**	**0.41**	**96**	*i* P	**Pg**	**14 18 36.6**	**-0.6**
AYDN				*i* S	**Sg**	**14 18 42.8**	**+0.1**
MLSB	**Milas**	**0.53**	**141**	*e*PG	**Pg**	**14 18 39.1**	**-0.2**
MLSB				*e*SG	**Sg**	**14 18 46.9**	**+0.5**
MLSB	**Milas**	**0.53**	**141**	*e*Pg	**Pg**	**14 18 39.1**	**-0.2**
MLSB				*e*Sg	**Sg**	**14 18 46.9**	**+0.6**
BDRM	**Kayabasi**	**0.65**	**174**	*i* P	**Pg**	**14 18 42.5**	**+0.9**
BDRM				*i* S	**Sg**	**14 18 44.7**	**-5.3**
BDRM	**Kayabasi**	**0.65**	**174**	*i* P	**Pg**	**14 18 42.5**	**+1.0**
BODT	**Bodrum**	**0.65**	**184**	*e*PG	**Pg**	**14 18 42.5**	**+1.0**
BODT	**Bodrum**	**0.65**	**184**	*e*Pg	**Pg**	**14 18 42.5**	**+0.9**
IZM	**Izmir**	**0.69**	**353**	*e*PG	**Pg**	**14 18 42.9**	**+0.4**
IZM				*e*SG	**Sg**	**14 18 53.2**	**+1.6**
IZM	**Izmir**	**0.69**	**353**	*e*Pg	**Pg**	**14 18 42.9**	**+0.4**
IZM				*e*Sg	**Sg**	**14 18 53.2**	**+1.6**
BLCB	**Balcova**	**0.72**	**339**	*e*PG	**Pg**	**14 18 43.2**	**+0.2**
BLCB	**Balcova**	**0.72**	**339**	*e*Pg	**Pg**	**14 18 43.2**	**+0.2**
URLA	**Izmir**	**0.89**	**317**	*i* P	**Pb**	**14 18 44.5**	**-1.6**
URLA				*i* S	**Sb**	**14 18 59.2**	**+1.4**
URLA	**Izmir**	**0.89**	**317**	*i* P	**Pb**	**14 18 44.5**	**-1.6**
URLA				*i* S	**Sb**	**14 18 59.2**	**+1.4**
YER	**Yerkesik**	**0.93**	**128**	*e*PG	**Pg**	**14 18 46.2**	**-0.6**
YER	**Yerkesik**	**0.93**	**128**	*e*Pg	**Pg**	**14 18 46.2**	**-0.7**
DAT	**Datca**	**0.99**	**170**	*e*PG	**Pg**	**14 18 48.7**	**+0.6**
DAT	**Datca**	**0.99**	**170**	*e*Pg	**Pg**	**14 18 48.7**	**+0.6**
AKS	**Akhisar**	**1.22**	**17**	*e*PN	**Pn**	**14 18 50.3**	**-1.3**
AKS	**Akhisar**	**1.22**	**17**	*e*Pn	**Pn**	**14 18 50.3**	**-1.2**
TURN	**Turunc**	**1.29**	**130**	*i* P	**Pn**	**14 18 49.2**	**-3.2**
TURN				*i* S	**Sb**	**14 19 09.5**	**+0.2**
KULA	**Kula-Manisa**	**1.30**	**51**	*e*PN	**Pn**	**14 18 51.5**	**-1.1**
KULA	**Kula-Manisa**	**1.30**	**51**	*e*Pn	**Pn**	**14 18 51.5**	**-1.1**
DNZL	**Cakiroluk**	**1.33**	**90**	*i* P	**Pn**	**14 18 53.6**	**+0.5**
DNZL				*i* S	**Sn**	**14 19 11.2**	**+0.6**
DNZL	**Cakiroluk**	**1.33**	**90**	*i* P	**Pn**	**14 18 53.6**	**+0.5**
DNZL				*i* S	**Sn**	**14 19 11.2**	**+0.6**

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*DDA **02** 14:22:38.4, 38°32N×39°55E, h3km±4km, Md3.2*
*ISCJB **02** 14:22:39.1±0.6, 38°32N±0°03×39°53E±0°03, h1km±6km, Error ellipse: s-maj=4.9km s-min=3.6km az=20.5*
*CSEM **02** 14:22:39.5±0.2, 38°33N×39°50E, h2km, MD3.3, Error ellipse: s-maj=3.5km s-min=3.3km az=4.0*
*ISK **02** 14:22:39.2, 38°34N×39°48E, h5km, MD3.3*
ISC 02 14:22:39.4±0.5, 38°32N±0°03×39°54E±0°03, h3km±6km, n35, σ1°02/50, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVRC	**Sivrice-ELAZID**	**0.19**	**288**	*e*PG	**Pg**	**14 22 42.5**	**-0.6**
SVRC	**Sivrice-ELAZID**	**0.19**	**288**	*e*Pg	**Pg**	**14 22 42.5**	**-0.7**
ELZG	**Elazig**	**0.47**	**292**	*i* P	**Pg**	**14 22 47.8**	**-0.7**
ELZG				*i* S	**Sg**	**14 22 56.1**	**+1.6**
ELZG	**Elazig**	**0.47**	**292**	*i* P	**Pg**	**14 22 47.8**	**-0.7**
ELZG				*i* S	**Sg**	**14 22 56.1**	**+1.5**
PTK	**Pertek**	**0.58**	**349**	*e*PG	**Pg**	**14 22 50.8**	**+0.1**
PTK				*e*SG	**Sg**	**14 22 57.6**	**-0.6**
PTK	**Pertek**	**0.58**	**349**	*e*Pg	**Pg**	**14 22 50.8**	**+0.2**
PTK				*e*Sg	**Sg**	**14 22 57.6**	**-0.6**
DIYA	**Diyarbakir**	**0.61**	**131**	*i* P	**Pg**	**14 22 51.2**	**+0.1**
DIYA				*i* S	**Sg**	**14 23 01.5**	**+2.6**
DIYA	**Diyarbakir**	**0.61**	**131**	*i* P	**Pg**	**14 22 51.2**	**+0.2**
DIYA				*i* S	**Sg**	**14 23 01.5**	**+2.6**
MYA	**Malataya**	**0.88**	**271**	*e*PG	**Pg**	**14 22 55.2**	**-1.0**
MYA				*e*SG	**Sg**	**14 23 08.3**	**+0.7**
MYA	**Malataya**	**0.88**	**271**	*e*Pg	**Pg**	**14 22 55.2**	**-1.0**
MYA				*e*Sg	**Sg**	**14 23 08.3**	**+0.7**
BINT	**Bingol**	**0.93**	**53**	*e*PG	**Pg**	**14 22 58.4**	**+1.1**
BINT	**Bingol**	**0.93**	**53**	*e*Pg	**Pg**	**14 22 58.4**	**+1.2**
URFA	**Urfa**	**1.04**	**213**	*e*PG	**Pg**	**14 22 59.2**	**-0.3**
URFA	**Urfa**	**1.04**	**213**	*e*Pg	**Pg**	**14 22 59.2**	**-0.3**
KEMA	**Kemaliye**	**1.25**	**320**	*i* P	**Pg**	**14 23 02.3**	**-1.1**
KEMA				*i* S	**Sg**	**14 23 18.8**	**-0.9**
KEMA	**Kemaliye**	**1.25**	**320**	*i* P	**Pg**	**14 23 02.3**	**-1.1**
KEMA				*i* S	**Sg**	**14 23 18.8**	**-0.9**
ATAB	**Bozova**	**1.30**	**230**	*e*P	**Pg**	**14 23 03.2**	**-1.2**
ATAB				*i* S	**Sg**	**14 23 22.1**	**+0.9**
ATAB	**Bozova**	**1.30**	**230**	*e*P	**Pg**	**14 23 03.2**	**-1.1**
ATAB				*i* S	**Sg**	**14 23 22.1**	**+0.9**
MARD	**Mardin**	**1.40**	**135**	*i* P	**Pn**	**14 23 04.1**	**-1.8**
MARD				*i* S	**Sb**	**14 23 23.3**	**-1.2**
BNGL	**BINGOL**	**1.41**	**63**	*i* P	**Pn**	**14 23 06.0**	**+0.1**
BNGL				*i* S	**Sb**	**14 23 26.2**	**+1.4**
BEST	**Besiri**	**1.43**	**107**	*i* P	**Pn**	**14 23 05.2**	**-1.1**
BEST				*i* S	**Sb**	**14 23 25.5**	**+0.1**
EZC	**Erzincan**	**1.44**	**354**	*e*PN	**Pn**	**14 23 06.1**	**-0.2**
DARE	**Darende-Malaty**	**1.50**	**295**	*e*PN	**Pn**	**14 23 08.5**	**+1.3**
DARE	**Darende-Malaty**	**1.50**	**295**	*e*Pn	**Pn**	**14 23 08.5**	**+1.3**
BTMT	**Batman**	**1.54**	**94**	*e*PN	**Pn**	**14 23 06.7**	**-1.1**
GUMT	**Gumushane**	**2.14**	**359**	*e*PN	**Pn**	**14 23 16.3**	**+0.3**
GUMT	**Gumushane**	**2.14**	**359**	*e*Pn	**Pn**	**14 23 16.3**	**+0.3**
GAZ	**Gaziantep**	**2.17**	**239**	*e*PN	**Pn**	**14 23 16.6**	**+0.1**
GAZ	**Gaziantep**	**2.17**	**239**	*e*Pn	**Pn**	**14 23 16.6**	**+0.1**
KMRS	**Kahramanmaras**	**2.24**	**250**	*e*PN	**Pn**	**14 23 17.4**	**0.0**
KMRS	**Kahramanmaras**	**2.24**	**250**	*e*Pn	**Pn**	**14 23 17.4**	**0.0**
SARI	**SarD1z-Kayseri**	**2.26**	**280**	*e*PN	**Pn**	**14 23 20.3**	**+2.7**
SVSK	**Karacayir**	**2.54**	**310**	*e*PN	**Pn**	**14 23 21.5**	**0.0**
SVSK	**Karacayir**	**2.54**	**310**	*e*Pn	**Pn**	**14 23 21.5**	**0.0**
KOZT	**Kozan**	**3.05**	**255**	*e*PN	**Pn**	**14 23 29.0**	**+0.4**

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*BJI **02** 14:55:06.2, 0°73N×97°23E, h25km, mB4.9/32, mb4.8/47, Ms4.6/41, Ms7 4.3/39*
*ISCJB **02** 14:55:07.6±0.9, 1°05N±0°04×97°03E±0°04, h17km±6km, mb4.7/63, MS4.1/28, Error ellipse: s-maj=7.8km s-min=3.8km az=137.4*
*IDC **02** 14:55:10.0±0.8, 1°07N×97°08E, h21km±3km, mb4.2/17, mb1 4.3/19, mb1mx4.1/28, mbtmp4.2/19, ML4.0/2, MS3.8/10, Ms1 3.8/10, ms1mx3.4/34, Error ellipse: s-maj=26.3km s-min=10.8km az=53.0*
*DJA **02** 14:55:10, 1°22N×97°02E, h94km, MLv4.7/12*
*MOS **02** 14:55:10.3±0.9, 1°20N×97°22E, h33km, mb4.8/16, Error ellipse: s-maj=17.4km s-min=8.0km az=104.0*
*NEIC **02** 14:55:10.2±0.3, 1°11N×97°08E, mb4.9/12, Error ellipse: s-maj=8.7km s-min=5.6km az=54.0*
ISC 02 14:55:10.5±0.9, 1°12N±0°03×97°07E±0°04, h20km±6km, h23km±5km: pP-P, n141, σ1s17/159, mb4.7/63, MS4.1/28, 5C-3D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**2.13**	**3**	P	**Pn**	**14 55 43.5**	**-1.4**
TPTI				S	**Sn**	**14 56 06.7**	**-4.1**
PSI	**Prapat**	**2.50**	**48**	Pn	**Pn**	**14 55 49.2**	**-0.8**
	7.5nm,0.3s,baz=210,slow=7.9,SNR=7.7						
PSI				LR	LR	14 56 39.8	
	comp=Z,1μm,19.7s,baz=312,slow=37						
PSI	**Prapat**	**2.50**	**48**	Pn	**Pn**	**14 55 49.2**	**-0.8**
PSI				LR	LR	14 56 39.8	
MNSI	**Mandailing Nat**	**2.53**	**97**	P	**Pn**	**14 55 49.9**	**-0.5**
MNSI				S	**Sn**	**14 56 22.4**	**+1.7**
SISI	**Saibi**	**3.16**	**140**	P	**Pn**	**14 55 59.2**	**+0.1**
SISI				S	**Sn**	**14 56 38.9**	**+2.7**
PPI	**Padang Panjang**	**3.68**	**115**	P	**Pn**	**14 56 06.3**	**+0.1**
PDSI	**Padang**	**3.95**	**121**	P	**Pn**	**14 56 10.6**	**+0.7**
BKNI	**Bangkinang**	**4.05**	**101**	P	**Pn**	**14 56 11.2**	**-0.1**
BKNI				S	**Sn**	**14 57 00.3**	**+2.1**
BSI	**Banda Aceh**	**4.70**	**338**	P	**Pn**	**14 56 17.9**	**-2.3**
BSI				S	**Sn**	**14 57 09.8**	**-4.4**
SDSI	**Sungai Dareh**	**4.81**	**115**	P	**Pn**	**14 56 21.5**	**-0.3**
IPM	**Ipoh**	**5.18**	**50**	P	**Pn**	**14 56 27.6**	**+0.8**
IPM	**Ipoh**	**5.18**	**50**	P	**Pn**	**14 56 27.5**	**+0.7**
	0.7nm2μm197nm,0.8s						
KRJI	**Kerinci**	**5.43**	**126**	S	**Sn**	**14 57 34.9**	**+2.7**
KULM	**Kulim**	**5.48**	**41**	P	**Pn**	**14 56 31.1**	**+0.2**
KULM	**Kulim**	**5.48**	**41**	*e*Pn	**Pn**	**14 56 30.6**	**-0.3**
	157nm,0.7s						
KULM				*e*		14 56 37.0	
KULM	**Kulim**	**5.48**	**41**	P	**Pn**	**14 56 29.7**	**-1.2**
	0.9nm2μm258nm,0.9s						
KGM	**Kluang**	**6.31**	**82**	P	**Pn**	**14 56 43.2**	**+0.7**
MYKOM	**Kota Tinggi**	**6.81**	**84**	P	**Pn**	**14 56 49.5**	**+0.1**
MYKOM	**Kota Tinggi**	**6.81**	**84**	P	**Pn**	**14 56 48.6**	**-0.8**
	0.2nm537nm52nm,1.1s						
KSI	**Kapahiang**	**7.28**	**131**	P	**Pn**	**14 56 56.7**	**+1.0**
	2.1nm163nm,0.8s						
KSI				S	**Sn**	**14 58 17.1**	**-0.7**
	2.1nm163nm,0.8s						
KTGM	**Kuala Trenggan**	**7.36**	**55**	P	**Pn**	**14 56 56.7**	**-0.2**
MNAI	**Manna**	**8.01**	**133**	S	**Sn**	**14 58 32.5**	**-3.4**
MDSI	**Maura Dua**	**9.03**	**128**	P	**Pn**	**14 57 18.7**	**-1.0**
	50nm,0.9s						
MDSI				S	**Sn**	**14 58 59.5**	**-1.3**
	50nm,0.9s						
LWLI	**Liwa**	**9.27**	**131**	P	**Pn**	**14 57 21.8**	**-1.3**
LWLI				S	**Sn**	**14 59 06.6**	**-0.2**
KLSI		**9.59**	**127**	P	**Pn**	**14 57 26.4**	**-1.0**
	69nm,0.9s						
KASI	**Kota Agung**	**9.93**	**132**	P	**Pn**	**14 57 32.4**	**+0.3**
	58nm,1.0s						
TPI	**Tanjungpandan**	**11.26**	**110**	P	**Pn**	**14 57 49.4**	**-1.0**
	30nm,1.0s						
CGJI	**Cibinong**	**11.54**	**132**	P	**Pn**	**14 57 53.3**	**-0.8**
KSM	**Kuching**	**13.24**	**88**	P	**Pn**	**14 58 18.6**	**+1.1**
KSM	**Kuching**	**13.24**	**88**	Pn	**Pn**	**14 58 18.7**	**+1.2**
	20nm,1.0s						
KSM	**Kuching**	**13.24**	**88**	P	Px	14 58 29.0	
STKI	**Sintang**	**14.45**	**94**	P	**Pn**	**14 58 36.0**	**+2.0**
SBUM	**Sibu**	**15.20**	**85**	P	**Pn**	**14 58 45.0**	**+0.9**
BTM	**Bintulu**	**16.14**	**82**	P	**Pn**	**14 58 56.8**	**+0.5**
CM31	**Chiang Mai Arr**	**17.33**	**6**	P	**Pn**	**14 59 09.7**	**-1.6**
	7.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**17.33**	**6**	P	**Pn**	**14 59 10.5**	**-0.8**
	0.5nm,0.3s,baz=198,slow=11,SNR=25						
CHTO	**Chiang Mai**	**17.68**	**6**	*e*P	**Pn**	**14 59 14.2**	**-1.5**
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CHTO	**Chiang Mai**	**17.68**	**6**	*e*P	**Pn**	**14 59 14.2**	**-1.5**
	comp=Z,8.8nm,0.9s						
KKM	**Kota Kinabalu**	**19.72**	**75**	P	**Pn**	**14 59 40.3**	**-0.2**
SDKM	**Sandakan**	**20.59**	**77**	P	**P**	**14 59 48.3**	**-0.1**
QIZ	**Qiongzhong**	**21.77**	**34**	P	**P**	**15 00 00.1**	**-0.9**
QIZ				pP		15 00 06.6	
QIZ				sP	sP	15 00 10.6	+1.2
QIZ				S	**S**	**15 04 00.6**	**-0.5**
QIZ				pmax	pmax		
	comp=Z,22nm,1.6s,mb4.3						
QIZ				LR	LR		
	comp=N,380nm,14.3s,MS4.0						
QIZ				LR	LR		
	comp=E,280nm,15.7s,MS4.0						
QIZ				LR	LR		
	comp=Z,550nm,13.2s,MS4.1						
MYLDM	**Lahad Datu**	**21.77**	**79**	P	**P**	**15 00 02.8**	**+1.5**
KAPI	**Kappang**	**23.46**	**105**	P	**P**	**15 00 17.4**	**-1.8**
	comp=Z,12nm,0.9s,mb4.3,baz=288,slow=15,SNR=3.3						
HYB	**Hyderabad**	**24.37**	**313**	*e*P	**P**	**15 00 31.0**	**+3.6**
KMI	**Kunming**	**24.49**	**12**	P	**P**	**15 00 29.4**	**+1.0**
KMI				pP		15 00 36.1	
KMI				sP	sP	15 00 39.3	+2.3
KMI				PP		15 01 07.0	
KMI				S	**S**	**15 04 47.9**	**+0.1**
KMI				sS	sS	15 04 58.1	+0.2
KMI				SS		15 05 43.6	
KMI				pmax	pmax		
	comp=Z,59nm,1.2s,mb4.9						
KMI				pmax	pmax		
	comp=Z,190nm,3.1s						
KMI				LR	LR		
	comp=N,930nm,15.0s,MS4.5						
KMI				LR	LR		
	comp=E,490nm,14.3s,MS4.5						
KMI				LR	LR		
	comp=Z,1μm,14.3s,MS4.5						
SHL	**Shillong**	**24.82**	**349**	*e*PKP	**P**	**15 00 33.0**	**+1.6**
GYA	**Guiyang**	**26.84**	**19**	P	**P**	**15 00 51.9**	**+2.2**
GYA				pP	pP	15 00 58.7	+2.9
GYA				PP		15 01 38.2	
GYA				PcP	PcP	15 04 15.2	+3.0
GYA				S	**S**	**15 05 25.3**	**+0.2**
GYA				sS	sS	15 05 36.9	+1.6
GYA				SS		15 06 39.4	
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.7						
GYA				pmax	pmax		
	comp=Z,120nm,4.6s						
GYA				LR	LR		
	comp=N,580nm,16.2s,MS4.3						
GYA				LR	LR		
	comp=E,470nm,17.0s,MS4.3						
GYA				LR	LR		
	comp=Z,540nm,15.4s,MS4.2						
ODAN	**Odare**	**27.23**	**341**	*e*P	**P**	**15 00 54.9**	**+1.7**
	comp=Z,44nm,0.8s,mb5.0						
RAMN	**Ramite**	**27.58**	**340**	*e*P	**P**	**15 00 58.6**	**+2.2**
	comp=Z,61nm,1.1s,mb5.1						
TAPN	**Taplejung**	**27.59**	**342**	*e*P	**P**	**15 00 56.7**	**+0.3**
	comp=Z,75nm,0.9s,mb5.3						
JIRN	**Jiri**	**28.38**	**339**	*e*P	**P**	**15 01 05.5**	**+2.0**
	comp=Z,64nm,0.9s,mb5.2						
PKI	**Pulchoki**	**28.58**	**338**	*e*P	**P**	**15 01 08.2**	**+2.9**
	comp=Z,47nm,1.1s,mb5.1						
PKIN	**Phulchoki**	**28.59**	**338**	*e*P	**P**	**15 01 08.3**	**+2.9**
GUN	**Gumba**	**28.72**	**339**	*e*P	**P**	**15 01 08.3**	**+1.8**
	comp=Z,29nm,0.6s,mb5.2						
DMN	**Daman**	**28.73**	**338**	*e*P	**P**	**15 01 09.8**	**+3.2**
	comp=Z,32nm,1.0s,mb5.0						
KKN	**Kakani**	**28.83**	**338**	*e*P	**P**	**15 01 10.2**	**+2.7**
	comp=Z,42nm,1.1s,mb5.1						
GKN	**Gorkha**	**29.26**	**337**	*e*P	**P**	**15 01 12.8**	**+1.5**
	comp=Z,50nm,1.0s,mb5.2						
CD2	**Chengdu**	**30.30**	**11**	P	**P**	**15 01 23.1**	**+2.6**
CD2				pP	pP	15 01 28.9	+2.2
CD2				sP	sP	15 01 31.9	+2.7
CD2				PP	PP	15 02 23.0	-6.2
CD2				S	**S**	**15 06 21.6**	**+2.0**
CD2				sS	sS	15 06 32.0	+2.2
CD2				SS	SS	15 08 01.5	-28
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.

comp=Z,48nm,1.3s,mb5.2
SSLB Suanglung 32.31 44 *e*P **P 15 01 38.3 0.0**
comp=Z,30nm,0.9s,mb5.1
WHN Wuhan 33.55 28 P **P 15 01 55.0 +5.9**
WHN S **S 15 07 21.8 +11**
WHN LR LR
comp=N,580nm,15.0s,MS4.5
WHN LR LR
comp=E,530nm,18.3s,MS4.5
WHN LR LR
comp=Z,620nm,17.4s,MS4.4
FITZ Fitzroy Crossi 33.99 126 P **P 15 01 51.3 -1.7**
comp=Z,2.9nm,0.8s,mb4.3,baz=294,slow=10,SNR=6.3
XAN Xi'an 34.58 17 P **P 15 01 56.6 -1.4**
XAN pP pP 15 02 02.3 -1.9
XAN sP sP 15 02 05.4 -1.3
XAN S **S 15 07 21.3 -4.9**
XAN pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
XAN pmax pmax
comp=Z,18nm,6.5s
XAN LR LR
comp=N,280nm,11.8s,MS4.2
XAN LR LR
comp=E,140nm,15.7s,MS4.2
XAN LR LR
comp=Z,140nm,16.2s,MS3.8
LZH Lanzhou 35.36 10 *e*P **P 15 02 05.3 +0.7**
LZH pP pP 15 02 10.4 -0.5
LZH sP sP 15 02 12.1 -1.3
LZH PP PP 15 03 26.5 +1.4
LZH PcP PcP 15 04 36.7 +2.0
LZH *e*S **S 15 07 38.0 -0.1**
LZH sS sS 15 07 49.0 +0.7
LZH pmax pmax
comp=Z,49nm,1.3s,mb5.3
LZH pmax pmax
comp=Z,190nm,5.1s
LZH LR LR
comp=N,810nm,13.5s
LZH LR LR
comp=Z,1μm,14.8s,MS4.8
NJ2 Nanjing 37.01 32 *e*P **P 15 02 18.8 0.0**
NJ2 pP pP 15 02 26.1 +1.1
NJ2 sP sP 15 02 29.5 +2.0
NJ2 PP PP 15 03 45.4 +2.0
NJ2 S **S 15 08 01.0 -2.4**
NJ2 sS sS 15 08 19.0 +5.3
NJ2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
NJ2 pmax pmax
comp=Z,80nm,11.5s
NJ2 LR LR
comp=N,340nm,16.3s,MS4.3
NJ2 LR LR
comp=E,310nm,17.8s,MS4.3
NJ2 LR LR
comp=Z,750nm,15.5s,MS4.6
GTA Gaotai 38.20 3 *e*P **P 15 02 28.7 -0.1**
GTA pP pP 15 02 34.6 -0.4
GTA sP sP 15 02 37.7 +0.2
GTA PP PP 15 03 58.4 +2.1
GTA PcP PcP 15 04 43.7 +0.5
GTA S **S 15 08 20.5 -0.8**
GTA pmax pmax
comp=Z,19nm,1.1s,mb4.7
GTA pmax pmax
comp=Z,63nm,6.8s
GTA LR LR
comp=N,220nm,14.3s,MS4.2
GTA LR LR
comp=E,190nm,14.0s,MS4.2
GTA LR LR
comp=Z,250nm,15.5s,MS4.1
HHC Hu-ho-hao-te 41.68 17 *e*P **P 15 02 57.4 -0.3**
HHC sP sP 15 03 06.3 -0.1
HHC PP PP 15 04 37.8 +3.6
HHC PcP PcP 15 04 53.9 -0.4
HHC ScP ScP 15 08 41.8 -1.8
HHC PcS PcS 15 08 44.0 -1.6
HHC S **S 15 09 13.8 +0.4**
HHC SS SS 15 12 14.4 -4.8
HHC ScS ScS 15 12 56.8 -3.3
HHC pmax pmax
comp=Z,16nm,0.6s,mb4.8
HHC pmax pmax
comp=Z,59nm,6.0s
HHC LR LR
comp=N,320nm,15.9s,MS4.5
HHC LR LR
comp=E,380nm,15.5s,MS4.5
HHC LR LR
comp=Z,330nm,15.4s,MS4.3
WRA Warramunga Arr 42.10 122 P **P 15 03 00.5 -1.0**
comp=Z,4.5nm,0.7s,mb4.2,baz=300,slow=9.1,SNR=41
WRA pP pP 15 03 06.9 -0.9
comp=Z,4.4nm,0.7s,baz=300,slow=9.0,SNR=13
WRA Warramunga Arr 42.10 122 P **P 15 03 00.5 -1.0**
WRA pP pP 15 03 06.9 -0.9
WRAB Tennant Creek 42.11 122 *e*P **P 15 03 00.5 -1.0**
WRAB pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
WRAB Tennant Creek 42.11 122 *e*P **P 15 03 00.5 -1.1**
comp=Z,5.8nm,0.8s,mb4.3
BJI Beijing 42.47 22 P **P 15 03 04.5 +0.4**
BJI S **S 15 09 27.3 +2.2**
BJI pmax pmax
comp=Z,33nm,0.8s,mb5.0
BJI pmax pmax
comp=Z,71nm,3.8s
BJI LR LR
comp=N,140nm,11.8s,MS4.3
BJI LR LR
comp=E,220nm,16.8s,MS4.3
BJI LR LR
comp=Z,67nm,19.6s,MS3.5
KSH Kashi 42.79 336 *e*P **P 15 03 06.3 -0.5**
KSH pP pP 15 03 13.6 +0.5
KSH sP sP 15 03 16.7 +1.1
KSH PP PP 15 04 47.4 +1.1
KSH PcP PcP 15 04 58.6 +0.6
KSH ScP ScP 15 08 46.3 -1.8
KSH PcS PcS 15 08 49.6 -0.5
KSH S **S 15 09 27.8 -2.1**
KSH ScS ScS 15 13 03.5 -3.5
KSH pmax pmax
comp=Z,5.0nm,0.9s,mb4.2
KSH pmax pmax
comp=Z,74nm,4.7s
KSH LR LR
comp=N,85nm,5.7s
KSH LR LR
comp=E,72nm,3.7s
KSH LR LR
comp=Z,85nm,5.9s
FORT Forrest 43.30 140 *e*P **P 15 03 13.1 +2.1**
comp=Z,7.4nm,0.6s,mb4.6
FORT *e*pP pP 15 03 19.2 +1.9
FORT Forrest 43.30 140 *e*P **P 15 03 12.2 +1.1**
comp=Z,28nm,0.6s,mb5.2
WMQ Urumqi 43.33 350 P **P 15 03 11.5 +0.4**
WMQ pP pP 15 03 19.0 +1.6
WMQ sP sP 15 03 22.3 +2.4
WMQ PP PP 15 04 54.5 +2.4
WMQ PcP PcP 15 05 00.5 +0.8
WMQ *e*S **S 15 09 37.0 -0.7**
WMQ SS SS 15 12 43.5 -8.3
WMQ ScS ScS 15 13 07.5 -2.7
WMQ pmax pmax
comp=Z,17nm,1.1s,mb4.7
WMQ pmax pmax
comp=Z,85nm,3.0s
WMQ LR LR
comp=N,69nm,20.2s,MS3.8
WMQ LR LR
comp=E,120nm,22.4s,MS3.8
WMQ LR LR
comp=Z,87nm,20.8s,MS3.6
ASAR Alice Springs 43.45 127 P **P 15 03 11.7 -0.7**
comp=Z,4.7nm,0.9s,mb4.2,baz=298,slow=8.1,SNR=47
ASAR pP pP 15 03 17.9 -0.7
comp=Z,6.4nm,0.8s,baz=302,slow=7.8,SNR=22
ASAR PcP PcP 15 05 00.3 -0.2
comp=Z,0.7nm,0.9s,baz=309,slow=4.5,SNR=2.9
ASAR pPcP 15 05 07.7
comp=Z,0.9nm,0.9s,baz=331,slow=2.2,SNR=4.2
ASAR Alice Springs 43.45 127 P **P 15 03 11.7 -0.7**
ASAR *PP pP 15 03 18.0 -0.7
ASAR 15 05 00.3
KSRS Korea Array 45.99 35 P **P 15 03 32.0 -0.4**
comp=Z,18nm,0.9s,mb5.0,baz=223,slow=9.1,SNR=45
KSRS LR LR 15 23 07.4
comp=Z,77nm,21.1s,MS3.6,baz=7.0,slow=36
EKS2 Erkin-Say 46.33 336 *e*P **P 15 03 36.3 +1.3**
EKS2 pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
EKS2 Erkin-Say 46.33 336 *e*P **P 15 03 36.3 +1.3**
comp=Z,4.7nm,0.8s,mb4.5
SNY Shenyang 47.04 27 ⇑P **P 15 03 40.3 -0.3**
SNY S **S 15 10 23.3 -8.1**
SNY pmax pmax
comp=Z,18nm,0.7s,mb5.1
SNY pmax pmax
comp=Z,110nm,3.5s
SNY LR LR
comp=N,240nm,16.2s,MS4.4
SNY LR LR
comp=E,230nm,12.8s,MS4.4
SNY LR LR
comp=Z,300nm,16.7s,MS4.3
SONM Songino Array 47.23 9 P **P 15 03 42.3 +0.4**
comp=Z,7.8nm,1.0s,mb4.6,baz=191,slow=8.5,SNR=24
SONM PcP PcP 15 05 13.6 +0.5
comp=Z,2.0nm,0.8s,baz=193,slow=4.8,SNR=3.5
SONM pPcP 15 05 20.2
comp=Z,2.3nm,0.9s,baz=193,slow=5.0,SNR=3.5
SONM Songino Array 47.23 9 P **P 15 03 42.3 +0.3**
SONM 15 05 13.6
MK31 Makanchi Array 47.29 346 *ce*P **P 15 03 42.6 +0.2**
MK31 pmax pmax
comp=Z,13nm,0.8s,mb4.9
MK31 Makanchi Array 47.29 346 *e*P **P 15 03 42.7 +0.3**
MKAR Makanchi Array 47.29 346 P **P 15 03 42.4 -0.1**
comp=Z,6.0nm,0.7s,mb4.6,baz=159,slow=8.0,SNR=74
MKAR Makanchi Array 47.29 346 *i* P **P 15 03 43.0 +0.6**
MKAR pmax pmax
comp=Z,6.0nm,0.7s
ULN Ulaanbaatar 47.36 9 *e*P **P 15 03 43.2 +0.2**
ULN pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
ULN Ulaanbaatar 47.36 9 *e*P **P 15 03 43.2 +0.2**
comp=Z,5.5nm,0.9s,mb4.5
CN2 Changchun 49.44 27 *e*P **P 15 03 58.2 -0.9**
CN2 *e*pP pP 15 04 04.5 -1.0
CN2 *e*S **S 15 11 03.2 -2.1**
CN2 pmax pmax
comp=Z,20nm,0.8s,mb5.2
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,15.0s,MS4.4
CN2 LR LR
comp=E,200nm,15.0s,MS4.4
CN2 LR LR
comp=Z,300nm,15.0s,MS4.4
TLY Talaya 50.69 5 *e*P **P 15 04 08.5 +0.1**
TLY *e*PPP 15 07 05.3
TLY *e*S **S 15 11 21.5 -0.9**
TLY *e*SS SS 15 14 57.6 +0.5
TLY *e*SSS 15 16 16.8
TLY pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
TLY MLR MLR
comp=Z,165nm,17.0s,MS4.1
KURK Kurchatov 51.84 345 P **P 15 04 16.6 -0.5**
comp=Z,4.8nm,0.8s,mb4.5,baz=158,slow=7.7,SNR=9.4
KURK LR LR 15 31 25.3
comp=Z,102nm,18.7s,MS3.9,baz=180,slow=42
KURK Kurchatov 51.84 345 *c i* P **P 15 04 17.2 +0.1**
KURK pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
MJAR Matsushiro Arr 51.84 42 LR LR 15 27 36.1
comp=Z,80nm,19.3s,MS3.8,baz=235,slow=38
MDJ Mudanjiang 52.01 29 P **P 15 04 18.4 0.0**
MDJ PcP PcP 15 05 30.0 -0.6
MDJ PP PP 15 06 15.8 -0.9
MDJ ScP ScP 15 09 26.0 -0.7
MDJ PcS PcS 15 09 28.9 +0.3
MDJ S **S 15 11 42.4 +1.5**
MDJ ScS ScS 15 14 06.9 -0.6
MDJ SS SS 15 15 15.9 -2.3
MDJ pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
MDJ pmax pmax
comp=Z,64nm,6.1s
MDJ LR LR
comp=N,150nm,17.5s,MS4.2
MDJ LR LR
comp=E,130nm,15.7s,MS4.2
MDJ LR LR
comp=Z,210nm,15.2s,MS4.3
CTA Charters Tower 52.59 116 P **P 15 04 22.1 -1.0**
comp=Z,1.1nm,0.4s,mb4.1,baz=36,slow=8.7,SNR=2.8
CTA pP pP 15 04 29.0 -0.6
comp=Z,5.0nm,0.9s,baz=292,slow=12,SNR=3.2
STKA Stephens Creek 53.40 132 *e*P **P 15 04 29.1 +0.1**
comp=Z,3.7nm,0.6s,mb4.5
STKA Stephens Creek 53.40 132 *e*P **P 15 04 36.2 +7.2**
comp=Z,8.6nm,0.7s,mb4.8
STKA Stephens Creek 53.40 132 P **P 15 04 28.6 -0.4**
comp=Z,4.6nm,0.6s,mb4.6,baz=308,slow=8.2,SNR=5.2
STKA pP pP 15 04 35.4 0.0
comp=Z,12nm,0.8s,baz=324,slow=8.6,SNR=7.4
ZAA0 Zalesovo Array 53.62 351 *e*P **P 15 04 29.9 -0.2**
ZALV Zalesovo Beam 53.62 351 P **P 15 04 30.4 +0.2**
comp=Z,15nm,0.8s,mb5.0,baz=176,slow=5.9,SNR=54
ZALV LR LR 15 31 14.4
comp=Z,42nm,18.5s,MS3.5,baz=148,slow=40
NVS Novosibirsk 54.73 350 *e*P **P 15 04 37.3 -1.0**
NVS *e*S **S 15 12 10.9 -6.7**
NVS pmax pmax
comp=Z,16nm,1.1s,mb5.0
NVS pmax pmax
comp=N,10.0nm,1.2s
NVS pmax pmax
comp=E,6.0nm,1.1s
NVS smax
comp=E,16nm,2.0s
BVAR Borovoye Array 56.28 341 P **P 15 04 49.0 -0.5**
comp=E,4.2nm,0.7s,mb4.5,baz=144,slow=8.5,SNR=27
BVAR pP pP 15 04 55.7 -0.2
comp=E,4.3nm,0.7s,baz=142,slow=8.5,SNR=14
CMSA Cobar Meteorol 56.34 130 *e*P **P 15 04 51.0 +0.7**
CMSA *e*pP pP 15 04 57.8 +1.0
BRVK Borovoye 56.35 341 *d i* P **P 15 04 49.4 -0.5**
BRVK pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
BRVK MLR MLR
comp=Z,113nm,20.0s,MS4.0
KLR Kul'dur 56.39 27 *e*P **P 15 04 46.3 -4.0**
HABR Khabarovsk 57.39 29 *e*P **P 15 04 55.4 -2.1**
HABR *e**SP sP 15 05 09.8 +3.4
HABR 15 05 48.8
HABR S **S 15 12 51.0 -2.2**
HABR *e* 15 13 03.7
HABR *e*S **S 15 13 08.5 +15**
HABR 15 14 42.0
HABR pmax pmax
comp=Z,28nm,2.1s,mb4.9
HABR pmax pmax
comp=N,6.0nm,0.8s
HABR pmax pmax
comp=E,17nm,1.3s
HABR MLR MLR
comp=Z,113nm,19.0s,MS4.0
AB31 Akbulak array 57.52 332 *ce*P **P 15 04 58.0 -0.4**
AB31 pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
ABKAR Akbulak array 57.52 332 *e*P **P 15 04 57.8 -0.6**
comp=Z,7.2nm,0.7s,mb4.8
ABKAR *e* pP 15 05 04.2 -0.6
EIDS Eidsvold 58.45 121 *e*P **P 15 05 05.4 +0.1**
EIDS *e*pP pP 15 05 11.9 +0.1
EIDS Eidsvold 58.45 121 *e*P **P 15 05 05.2 -0.1**
comp=Z,17nm,0.7s,mb5.2
EIDS *e* pP 15 05 11.8 0.0
AKTO Aktyubinsk 59.24 332 LR LR 15 34 28.2
comp=Z,54nm,18.4s,MS3.7,baz=310,slow=40
SVE Sverdlovsk 62.72 338 ⇑*e*P **P 15 05 34.0 +0.2**
SVE pmax pmax
comp=Z,12nm,0.9s,mb5.0
ARU Arti 63.21 337 *d i* P **P 15 05 36.5 -0.6**
ARU *e* 15 07 53.3
ARU S **S 15 14 07.7 +0.2**
ARU SS SS 15 18 06.3 -7.6
ARU pmax pmax
comp=Z,4.0nm,1.0s,mb4.5
ARU Arti 63.21 337 *e*P **P 15 05 36.2 -0.9**
comp=Z,5.7nm,0.9s,mb4.7
ARU *e* pP 15 05 42.9 -0.8
KIV Kislovodsk 64.28 319 *e*P **P 15 05 39.5 -4.9**
KIV pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
KIV MLR MLR
comp=Z,41nm,18.0s,MS3.7
YAK Yakutsk 65.54 16 *e*P **P 15 05 50.6 -1.6**
YAK pmax pmax
comp=Z,28nm,1.2s,mb5.2
YAK pmax pmax
comp=E,9.0nm,1.8s
YAK pmax pmax
comp=N,8.0nm,1.4s
SOKR Solikamsk 66.11 339 *e*P **P 15 05 54.5 -1.5**
SOKR pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
BRTR Keskin Array B 69.07 312 P **P 15 06 15.2 0.0**
comp=Z,0.6nm,0.6s,mb3.7,baz=146,slow=7.5,SNR=3.7
PETK Petropavlovsk- 71.88 34 P **P 15 06 30.6 -1.4**
comp=Z,2.6nm,0.8s,mb4.2,baz=141,slow=7.6,SNR=4.4
PETK LR LR 15 42 13.3
comp=Z,37nm,18.2s,MS3.7,baz=77,slow=39
MAW Mawson 72.60 193 LR LR 15 34 58.6
comp=Z,108nm,19.1s,MS4.1,baz=250,slow=33
OBN Obninsk 72.62 328 *e*P **P 15 06 37.9 +1.5**
OBN *e* 15 09 17.4
OBN *e*SS SS 15 20 39.8 +0.2
OBN pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
SEY Seymchan 73.89 23 ⇓*e*P **P 15 06 43.8 +0.1**
BOSA Boshof 74.62 240 LR LR 15 34 33.2
comp=Z,86nm,18.3s,MS4.1,baz=141,slow=32
AKASG Malin Array Be 75.24 322 P **P 15 06 50.5 -1.3**
comp=Z,0.2nm,0.3s,baz=88,slow=4.7,SNR=2.4
UZH Uzhgorod 79.12 319 *e*P **P 15 07 20.8 +7.1**
FINES FINESS Array B 80.01 333 P **P 15 07 17.7 -0.5**
comp=Z,1.3nm,0.8s,mb3.9,baz=101,slow=9.9,SNR=4.3
BILL Bilibino 81.29 21 *e*P **P 15 07 25.5 +0.6**
BILL *e* 15 10 31.8
BILL *e*S S 15 17 33.8 -0.4
BILL pmax pmax
comp=Z,1.0nm,1.1s,mb3.7
NB2 NORSAR Subarra 87.01 331 P **P 15 07 53.6 -0.6**
comp=Z,2.4nm,0.9s,mb4.4,baz=94,slow=5.3
NOA NORSAR Array B 87.01 331 P **P 15 07 53.4 -0.8**
comp=Z,1.2nm,0.8s,mb4.2,baz=98,slow=5.2,SNR=3.9
NOA LR LR 15 54 43.1
comp=Z,42nm,18.5s,MS3.9,baz=90,slow=41
NOA NORSAR Array B 87.01 331 P **P 15 07 53.4 -0.8**
NOA LR LR 15 54 43.1
ECH Echery 89.11 318 *e*P **P 15 08 05.6 +1.1**
ECH pmax pmax
comp=Z,22nm,0.8s,mb5.5
ECH Echery 89.11 318 *e*P **P 15 08 05.6 +1.1**
comp=Z,22nm,0.8s,mb5.5
NVAR Mina Array Bea 128.93 36 PKP PKPdf 15 14 17.1 -0.1
comp=Z,0.3nm,0.7s,baz=263,slow=4.3,SNR=3.2
TXAR Lajitas Array 143.81 32 PKP PKPdf 15 14 42.2 -2.8
comp=Z,0.8nm,0.9s,baz=20,slow=4.0,SNR=5.8
TXAR Lajitas Array 143.81 32 PKP PKPdf 15 14 42.2 -2.8
JCT Junction City 144.71 26 *e*PKIKP PKPdf 15 14 45.3 -1.2
JCT *e* 15 14 52.4
CPUP Villa Florida 144.85 222 PKP PKPdf 15 14 46.1 -0.8
comp=Z,2.1nm,0.6s,baz=114,slow=2.5,SNR=9.3
LRAL Lakeview Retre 145.82 6 *e*PKPdf PKPdf 15 14 47.9 -0.5

CSEM ***02*** *15:10:19.3, 40°.24N×30°.01E, h15km, MD2.9, After ISK*
ISK 02 15:10:19.3, 40°.24N×30°.01E, h15km, MD2.9, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAVI	**Cavuskoy**	**0.14**	**256**	*e*PG	Pg	15 10 23.3	+0.3
CAVI	**Cavuskoy**	**0.14**	**256**	*e*Pg	Pg	15 10 23.3	+0.3
GPA	**Golpazari**	**0.23**	**77**	*e*PG	Pg	15 10 24.4	-0.1
GPA				*e*SG	Sg	15 10 30.1	+2.1
GPA	**Golpazari**	**0.23**	**77**	*e*Pg	Pg	15 10 24.4	-0.1
GPA				*e*Sg	Sg	15 10 30.1	+2.1
ADVT	**Abdulvahap**	**0.29**	**313**	*e*PG	Pg	15 10 25.7	+0.3
ADVT	**Abdulvahap**	**0.29**	**313**	*e*Pg	Pg	15 10 25.7	+0.3
GULT	**Gulveren**	**0.43**	**63**	*e*PG	Pg	15 10 27.5	-0.4
GULT				*e*SG	Sg	15 10 35.4	+1.7
GULT	**Gulveren**	**0.43**	**63**	*e*Pg	Pg	15 10 27.5	-0.4
GULT				*e*Sg	Sg	15 10 35.4	+1.6
YLV	**Yalova**	**0.59**	**304**	*e*PG	Pg	15 10 31.6	+0.7
YLV	**Yalova**	**0.59**	**304**	*e*Pg	Pg	15 10 31.6	+0.7
GEMT	**Gemlik**	**0.66**	**288**	*e*PG	Pg	15 10 32.9	+0.7
GEMT	**Gemlik**	**0.66**	**288**	*e*Pg	Pg	15 10 32.9	+0.7
ARMT	**Armutlu**	**0.94**	**291**	*e*PG	Pg	15 10 38.1	+0.6
ARMT	**Armutlu**	**0.94**	**291**	*e*Pg	Pg	15 10 38.1	+0.6
MDU	**Mudurnu**	**0.95**	**76**	*e*PG	Pg	15 10 37.2	-0.4
MDU	**Mudurnu**	**0.95**	**76**	*e*Pg	Pg	15 10 37.2	-0.4
ALT	**Altintas**	**1.18**	**176**	*e*PN	Pn	15 10 42.2	+0.9
ALT	**Altintas**	**1.18**	**176**	*e*Pn	Pn	15 10 42.2	+0.9

MAN 02 15:20:00, 7°.46N×126°.06E, h60km, mb4.6, ML3.4, MS3.3, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.55**	**160**	*e*P	Pn	15 20 14.7	+2.2
MATI				*e*S	Sn	15 20 21.5	-0.1
BUKP	**Musuan**	**1.08**	**293**	*e*P	Pn	15 20 20.6	+1.5
BUKP				*e*S	Sn	15 20 35.0	+1.8
CGP	**Cagayan de Oro**	**1.68**	**306**	⇑*e*P	Pn	15 20 29.6	+2.5
CGP				*i* S	Sn	15 20 50.8	+3.2
PAGZ	**Pagadian**	**2.69**	**278**	*e*P	Pn	15 20 45.1	+4.3
PAGZ				*e*S	Sn	15 20 53.2	-19

ISCJB ***02*** *15:23:47.5±0.6, 36°.55N±0°.07×69°.7E±0°.1, h255km±8km, mb3.0/3, Error ellipse: s-maj=15.7km s-min=8.5km az=32.7*
NEIC ***02*** *15:23:48.6±0.7, 36°.51N×69°.89E, h252km±9km, mb3.6/4, Error ellipse: s-maj=16.6km s-min=8.8km az=141.0*
NNC ***02*** *15:23:50.4±5.1, 36°.76N×69°.64E, h242km±46km, mb2.7, mpv3.8, Error ellipse: s-maj=47.0km s-min=27.0km az=4.0*
IDC ***02*** *15:23:50.9±5.5, 36°.66N×69°.89E, h268km±43km, mb3.1/4, mb1 3.2/9, mb1mx2.9/29, mbtmp3.1/9, Error ellipse: s-maj=56.2km s-min=22.2km az=171.0*
ISC 02 15:23:48.5±0.7, 36°.49N±0°.08×69°.9E±0°.1, h250km±9km, n25, σ0°75/30, mb3.2/3, 5C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.05**	**199**	*e*P	**Pn**	**15 24 32.1**	**+0.7**
KBL				*e*S	**S**	**15 25 04.8**	**-0.5**
KSH	**Kashi**	**5.70**	**56**	Pn	**Pn**	**15 25 07.6**	**-5.2**
KSH				Sn	**S**	**15 26 06.8**	**-13**
KSH				smax			
KSH	comp=N,62nm,0.7s			smax			
KK31	comp=E,74nm,1.0s **Karatay Array**	**6.62**	**4**	⇑P	**Pn**	**15 25 24.0**	**-0.2**
KK31	comp=E,5.0nm,0.7s,baz=183,slow=13,SNR=37			⇓S	**S**	**15 26 36.3**	**-4.7**
EKS2	comp=E,1.3nm,0.5s,baz=188,slow=24,SNR=5.0 **Erkin-Say**	**6.87**	**25**	*e*P	**Pn**	**15 25 27.5**	**+0.2**
AAK	comp=E,10nm,0.8s **Ala-Archa**	**7.11**	**29**	P	**Pn**	**15 25 30.8**	**+0.5**
AAK	comp=E,1.1nm,0.3s,baz=207,slow=4.8,SNR=15			S	**S**	**15 26 52.2**	**+0.1**
TKM2	comp=E,0.6nm,0.3s,baz=156,slow=20,SNR=4.3 **Tokmak 2**	**7.80**	**33**	⇑P	**Pn**	**15 25 38.4**	**-0.7**
TKM2	comp=E,3.9nm,0.7s			⇑S	**S**	**15 27 09.1**	**+1.0**
TKM2	comp=E,2.6nm,0.7s **Tokmak 2**	**7.80**	**33**	*e*P	**Pn**	**15 25 38.8**	**-0.3**
MK31	comp=E,3.0nm,0.6s **Makanchi Array**	**13.86**	**38**	⇓P	**Pn**	**15 26 54.6**	**0.0**
MK31	comp=E,1.7nm,0.6s,baz=232,slow=9.8,SNR=23 **Makanchi Array**	**13.86**	**38**	*e*P	**Pn**	**15 26 53.8**	**-0.9**
MKAR	**Makanchi Array**	**13.86**	**38**	P	**Pn**	**15 26 54.7**	**+0.1**
	comp=E,0.2nm,0.3s,baz=220,slow=15,SNR=32						
AB31	**Akbulak array**	**14.66**	**334**	P	**Pn**	**15 27 03.2**	**-1.2**

comp=E,0.5nm,0.5s,baz=144,slow=12,SNR=18
ABKAR Akbulak array 14.66 334 *e*P **Pn 15 27 03.5 -0.9**
comp=E,0.6nm,0.4s
KURK Kurchatov 15.56 21 ⇑P **Pn 15 27 13.4 -1.6**
comp=E,2.1nm,0.7s
KURK Kurchatov 15.56 21 P **Pn 15 27 12.7 -2.4**
comp=E,0.3nm,0.3s,baz=211,slow=11,SNR=46
KURK Kurchatov 15.56 21 *e*P **Pn 15 27 13.8 -1.2**
comp=E,2.5nm,0.8s
VOSK Vostochnaya 16.25 2 ⇓P **P 15 27 21.6 -0.2**
comp=E,2.3nm,0.8s
AKTK Aktyubinsk 16.34 332 P **P 15 27 23.6 +0.9**
AKTO Aktyubinsk 16.34 332 P **P 15 27 23.6 +0.9**
comp=E,0.4nm,0.3s,baz=144,slow=10,SNR=7.3
ZRNK Zerenda 16.47 358 ⇑P **P 15 27 24.9 +0.8**
comp=E,1.1nm,0.5s
BVAR Borovoye Array 16.54 1 P **P 15 27 25.3 +0.4**
comp=E,0.4nm,0.3s,baz=179,slow=10,SNR=11
ZALV Zalesovo Beam 20.32 26 P **P 15 28 04.7 -0.8**
comp=E,2.4nm,0.6s,baz=225,slow=10.0,SNR=10
BRTR Keskin Array B 28.55 288 P **P 15 29 22.2 +1.0**
comp=E,0.2nm,0.4s,mb3.1,baz=104,slow=10,SNR=4.7
SONM Songino Array 29.11 56 P **P 15 29 26.3 +0.3**
comp=E,0.2nm,0.4s,mb3.1,baz=256,slow=12,SNR=4.2
NB2 NORSAR Subarra 43.83 323 P **P 15 31 28.8 -0.8**
comp=Z,0.7nm,0.6s,mb3.2,baz=98,slow=7.9
NOA NORSAR Array B 43.83 323 P **P 15 31 28.9 -0.7**
comp=Z,1.0nm,0.6s,mb3.3,baz=99,slow=7.9,SNR=4.2

CASC 02 15:45:01.2±2.4, 13°.79N×92°.13W, h65km±72km, MD3.6, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.71**	**42**	*e*P	Pn	15 45 16.5	+0.6
FUG	**Fuego 3**	**1.41**	**62**	*e*P	Pn	15 45 25.1	+0.3
FG6		**1.43**	**57**	*e*P	Pn	15 45 25.1	0.0
TP2	**Tecpan 2**	**1.46**	**47**	*e*P	Pn	15 45 26.9	+1.4
IXG	**Ixpaco**	**1.67**	**76**	*e*P	Pn	15 45 28.4	+0.1
IXG				*e*S	Sn	15 45 50.8	+2.0
NBG	**Las Nubes**	**1.90**	**65**	*e*P	Pn	15 45 34.1	+2.7
RBDL	**Robledal**	**2.39**	**82**	*e*P	Pn	15 45 38.2	+0.1
RBDL				*e*S	Sn	15 46 07.4	+1.1
SNJE	**San Jose**	**2.45**	**88**	*e*P	Pn	15 45 38.0	-0.9
MRL	**Marmol**	**2.68**	**61**	*e*P	Pn	15 45 46.7	+4.7

*ISCJB **02** 15:50:24.0±0.5, 39°.09N±0°.03×141°.01E±0°.05, h10km, mb3.7/2, Error ellipse: s-maj=5.3km s-min=4.6km az=11.6*
*IDC **02** 15:50:23.3±1.8, 38°.89N×141°.38E, h0km, mb3.5/2, mb1 3.5/5, mb1mx3.3/26, mbtmp3.4/5, ML3.1/3, Error ellipse: s-maj=46.0km s-min=31.5km az=106.0*
*JMA **02** 15:50:24.1, 39°.10N×140°.95E, h9km±1km, M3.3*
JMA Felt I J1.
ISC 02 15:50:24.5±0.6, 39°.08N±0°.03×140°.98E±0°.05, h10km, n12, σ0°.80/18, mb3.7/2, 1C-5D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.23**	**125**	⇓P	**Pg**	**15 50 29.1**	**-0.1**
JMK				S	**Sg**	**15 50 32.6**	**+0.3**
JRG	**Rokugo**	**0.41**	**319**	⇓P	**Pg**	**15 50 31.7**	**-0.9**
JOM	**Ohasama**	**0.46**	**32**	⇓P	**Pg**	**15 50 32.9**	**-0.6**
JOM				*e*S	**Sg**	**15 50 39.4**	**-0.1**
JYK	**Kaneyama**	**0.51**	**252**	⇓P	**Pg**	**15 50 33.8**	**-0.7**
JIO	**Ouri**	**0.69**	**155**	⇓P	**Pg**	**15 50 37.4**	**-0.4**
JIO				S	**Sg**	**15 50 46.6**	**-0.2**
JOU	**Okura**	**0.76**	**199**	⇑P	**Pg**	**15 50 38.8**	**-0.3**
JOU				S	**Sg**	**15 50 48.9**	**-0.1**
MJAR	**Matsushiro Arr**	**3.35**	**222**	Pn	**Pn**	**15 51 18.1**	**+1.2**
	1.0nm,0.3s,baz=31,slow=13,SNR=6.8						
MAT	**Matsushiro**	**3.36**	**222**	P	**Pn**	**15 51 18.3**	**+1.3**
MAT				*e*S	**Sn**	**15 52 01.4**	**+4.6**
ASAJ	**Asahikawa**	**5.17**	**13**	Pn	**Pn**	**15 51 43.8**	**+1.8**
	0.5nm,0.3s,baz=154,slow=30,SNR=5.8						
KSRS	**Korea Array**	**10.40**	**265**	Pn	**Pn**	**15 52 58.0**	**+4.3**
	0.2nm,0.3s,baz=75,slow=14,SNR=5.0						
KSRS				Sn	**Sn**	**15 54 55.1**	**+4.9**
	0.3nm,0.3s,baz=77,slow=22,SNR=4.6						
WRA	**Warramunga Arr**	**59.04**	**187**	P	**P**	**16 00 24.2**	**-0.4**
	0.5nm,0.5s,mb3.8,baz=6.3,slow=7.4,SNR=7.1						
ASAR	**Alice Springs**	**62.77**	**187**	P	**P**	**16 00 49.1**	**-0.8**
	0.3nm,0.7s,mb3.5,baz=359,slow=5.8,SNR=6.9						

*PRU **02** 15:54:20.9, 46°.46N×16°.22E, h2km*
*ISCJB **02** 15:54:20.1±0.3, 46°.48N±0°.01×16°.30E±0°.02, h10km±2km, Error ellipse: s-maj=2.6km s-min=2.3km az=35.5*
*NEIC **02** 15:54:21.6±0.5, 46°.46N×16°.21E, h10km, ML2.5(LJU), Error ellipse: s-maj=6.6km s-min=4.0km az=142.0*
NEIC Felt at Ormoz.
*CSEM **02** 15:54:21.1±0.1, 46°.48N×16°.26E, h8km, ML3.4/10, Error ellipse: s-maj=2.5km s-min=2.3km az=136.0*
*BEO **02** 15:54:21.3±0.8, 46°.56N×16°.55E, h1km, ML2.8/6*
*LJU **02** 15:54:21.3, 46°.48N×16°.19E, h10km, ML2.5*
*VIE **02** 15:54:22.1±1.0, 46°.47N×16°.20E, h6km±5km, mb2.5/6, ML3.1/6, Error ellipse: s-maj=6.7km s-min=4.3km az=89.0*
21 km NNW of Varazdin
*IPEC **02** 15:54:23.3±0.2, 46°.54N×16°.20E, h21km±1km, ML2.6/1, Error ellipse: s-maj=1.5km s-min=1.0km az=154.0*
ISC 02 15:54:21.3±0.3, 46°.46N±0°.01×16°.28E±0°.02, h11km±2km, n105, σ1°.04/179, 13C-7D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOGS	**Kog**	**0.03**	**239**	*i* Pg	**Pg**	**15 54 23.1**	**-0.1**
KOGS				*i* Sg	**Sg**	**15 54 24.6**	**-0.1**
KOGS							
	comp=Z,4μm,0.1s						
KOGS	**Kog**	**0.03**	**239**	*i* Pg	**Pg**	**15 54 23.1**	**-0.1**
KOGS				*i* Sg	**Sg**	**15 54 24.6**	**-0.1**
KOGS	**Kog**	**0.03**	**239**	*i* Pg	**Pg**	**15 54 23.1**	**-0.2**
KOGS				*i* Sg	**Sg**	**15 54 24.6**	**-0.1**
	comp=Z,4μm,0.1s						
GROS	**Grobnik**	**0.54**	**270**	*i* Pg	**Pg**	**15 54 31.2**	**-0.6**
GROS				*i* Sg	**Sg**	**15 54 38.3**	**-0.6**
GROS	**Grobnik**	**0.54**	**270**	*i* Pg	**Pg**	**15 54 31.2**	**-0.6**
GROS				*i* Sg	**Sg**	**15 54 38.3**	**-0.6**
GOLS	**Golise**	**0.64**	**226**	*i* Pg	**Pg**	**15 54 33.8**	**0.0**
GOLS				*i* Sg	**Sg**	**15 54 42.7**	**+0.6**
GOLS							
	comp=Z,293nm,0.4s						
GOLS	**Golise**	**0.64**	**226**	*i* Pg	**Pg**	**15 54 33.8**	**0.0**
GOLS				*i* Sg	**Sg**	**15 54 42.7**	**+0.6**
GOLS	**Golise**	**0.64**	**226**	*i* Pg	**Pg**	**15 54 33.7**	**-0.1**
GOLS				*i* Sg	**Sg**	**15 54 42.7**	**+0.5**
	comp=Z,293nm,0.4s						
DOBS	**Dobrina**	**0.65**	**241**	*i* Pg	**Pg**	**15 54 33.4**	**-0.5**
DOBS							
	comp=Z,191nm,0.2s						
DOBS	**Dobrina**	**0.65**	**241**	*i* Pg	**Pg**	**15 54 33.3**	**-0.5**
	comp=Z,191nm,0.2s						
GCIS	**Gornji Cirnik**	**0.75**	**218**	*i* Pg	**Pg**	**15 54 35.5**	**-0.2**
GCIS							
	comp=Z,223nm,0.3s						
GCIS	**Gornji Cirnik**	**0.75**	**218**	*i* Pg	**Pg**	**15 54 35.5**	**-0.3**
	comp=Z,223nm,0.3s						
CESS	**Cesta pri Krsk**	**0.75**	**230**	*i* Pg	**Pg**	**15 54 35.8**	**0.0**
CESS				*i* Sg	**Sg**	**15 54 45.8**	**+0.2**
CESS	**Cesta pri Krsk**	**0.75**	**230**	*i* Pg	**Pg**	**15 54 35.8**	**0.0**
CESS				*i* Sg	**Sg**	**15 54 45.8**	**+0.2**
BISS	**Bistriski jare**	**0.82**	**284**	*i* Pg	**Pg**	**15 54 36.1**	**-1.0**
BISS	**Bistriski jare**	**0.82**	**284**	*i* Pg	**Pg**	**15 54 36.1**	**-1.0**
PERS	**Pernice**	**0.82**	**283**	*e*Pg	**Pg**	**15 54 36.4**	**-0.8**
PERS				*i* Sg	**Sg**	**15 54 47.3**	**-0.7**
PERS	**Pernice**	**0.82**	**283**	*e*Pg	**Pg**	**15 54 36.4**	**-0.8**
PERS				*i* Sg	**Sg**	**15 54 47.3**	**-0.6**
LEGS	**Legarje**	**0.84**	**233**	*i* Pg	**Pg**	**15 54 37.2**	**-0.3**
LEGS				*e*Sg	**Sg**	**15 54 48.7**	**+0.1**
LEGS	**Legarje**	**0.84**	**233**	*i* Pg	**Pg**	**15 54 37.2**	**-0.4**
LEGS				*e*Sg	**Sg**	**15 54 48.7**	**+0.1**
CRES	**Cresnjev**	**0.86**	**222**	*e*Pg	**Pg**	**15 54 37.6**	**-0.2**
CRES				*e*Sg	**Sg**	**15 54 48.7**	**-0.3**
CRES							
	comp=Z,97nm,0.2s						
CRES	**Cresnjev**	**0.86**	**222**	*e*Pg	**Pg**	**15 54 37.6**	**-0.2**
CRES				*e*Sg	**Sg**	**15 54 48.7**	**-0.3**
CRES	**Cresnjev**	**0.86**	**222**	*e*Pg	**Pg**	**15 54 37.7**	**-0.1**
CRES				*e*Sg	**Sg**	**15 54 48.7**	**-0.3**
	comp=Z,97nm,0.2s						
ZAVS	**Zavodnje**	**0.87**	**269**	*e*Pg	**Pg**	**15 54 37.6**	**-0.5**
ZAVS				*e*Sg	**Sg**	**15 54 49.0**	**-0.4**
ZAVS							
	comp=Z,156nm,0.2s						
SOKA	**Soboth**	**0.89**	**285**	⇑*e*Pg	**Pg**	**15 54 37.4**	**-1.1**
	comp=Z,24nm,0.2s						
SOKA				⇓*e*Sg	**Sg**	**15 54 51.9**	**+1.8**
	comp=Z,126nm,0.3s						
SOKA	**Soboth**	**0.89**	**285**	Pg	**Pg**	**15 54 37.4**	**-1.1**
	comp=Z,24nm,0.2s						
SOKA				Sg	**Sg**	**15 54 51.9**	**+1.9**
	comp=Z,126nm,0.3s						
ARSA	**Arzberg**	**0.95**	**327**	⇓*i*Pg	**Pg**	**15 54 39.1**	**-0.4**
ARSA				*i* Sg	**Sg**	**15 54 52.6**	**+0.7**
ARSA	**Arzberg**	**0.95**	**327**	⇑*e*Pg	**Pg**	**15 54 38.5**	**-1.0**
	comp=Z,28nm,0.2s,SNR=50						
ARSA				⇑*e*Sg	**Sg**	**15 54 53.6**	**+1.7**
	comp=Z,302nm,0.3s						
ARSA	**Arzberg**	**0.95**	**327**	Pg	**Pg**	**15 54 38.5**	**-1.0**
	comp=Z,28nm,0.2s,SNR=50						
ARSA				*e*Sg	**Sg**	**15 54 51.6**	**-0.3**
	baz=147						
PDKS	**Podkum**	**0.98**	**246**	*i* Pg	**Pg**	**15 54 39.5**	**-0.6**
PDKS				*i* Sg	**Sg**	**15 54 54.0**	**+1.1**
PDKS	**Podkum**	**0.98**	**246**	*i* Pg	**Pg**	**15 54 39.5**	**-0.6**
PDKS				*i* Sg	**Sg**	**15 54 54.0**	**+1.2**
SISC	**Sisak**	**0.99**	**176**	*e*Pg	**Pg**	**15 54 41.9**	**+1.5**
SISC				Sg	**Sg**	**15 54 56.0**	**+2.7**
SISC	**Sisak**	**0.99**	**176**	*e*Pg	**Pg**	**15 54 41.8**	**+1.4**
SISC				Sg	**Sg**	**15 54 55.9**	**+2.6**
VNDS	**Vrh nad Dolski**	**1.15**	**252**	*i* Pg	**Pg**	**15 54 42.5**	**-1.0**
VNDS				*i* Sg	**Sg**	**15 54 59.3**	**+0.8**
VNDS							
	comp=Z,99nm,0.2s						
BOJS	**Bojanci**	**1.20**	**217**	*i* Pg	**Pg**	**15 54 43.1**	**-1.2**
BOJS							
	comp=Z,67nm,0.4s						
BOJS	**Bojanci**	**1.20**	**217**	*i* Pg	**Pg**	**15 54 43.1**	**-1.2**
	comp=Z,67nm,0.4s						
OBKA	**Obir**	**1.20**	**273**	⇑*i*Pg	**Pg**	**15 54 43.5**	**-0.9**
	comp=Z,4.5nm,0.2s,SNR=36						
OBKA				⇓*e*Sg	**Sg**	**15 55 00.2**	**+0.2**
	comp=Z,122nm,0.3s						
OBKA	**Obir**	**1.20**	**273**	Pg	**Pg**	**15 54 43.5**	**-0.8**
	comp=Z,4.5nm,0.2s,SNR=36						
OBKA				*e*Sg	**Sg**	**15 54 59.9**	**0.0**
	baz=88						
OBKA				Sn	**Sn**	**15 55 00.2**	**0.0**
VISS	**Visnje**	**1.20**	**237**	*i* Pg	**Pn**	**15 54 43.1**	**-0.9**
VISS				*e*Sg	**Sg**	**15 54 58.8**	**-1.2**
VISS							
	comp=Z,49nm,0.4s						
VISS	**Visnje**	**1.20**	**237**	*i* Pg	**Pn**	**15 54 43.1**	**-0.9**
VISS				*e*Sg	**Sg**	**15 54 58.8**	**-1.2**
VISS	**Visnje**	**1.20**	**237**	*i* Pg	**Pn**	**15 54 43.1**	**-0.9**
VISS				*e*Sg	**Sg**	**15 54 58.8**	**-1.2**
	comp=Z,49nm,0.4s						
MOZS	**Mozjanca**	**1.28**	**263**	*e*Pg	**Pn**	**15 54 44.8**	**-0.3**
MOZS				*e*Sg	**Sg**	**15 55 02.0**	**-0.7**
MOZS							
	comp=Z,26nm,0.2s						
LJU	**Ljubljana**	**1.29**	**252**	*i* Pg	**Pn**	**15 54 45.3**	**+0.1**
LJU				*i* Sg	**Sg**	**15 55 03.7**	**+1.0**
LJU	**Ljubljana**	**1.29**	**252**	*i* Pg	**Pn**	**15 54 45.3**	**+0.1**
LJU				*i* Sg	**Sg**	**15 55 03.7**	**+0.9**
PKS9	**Tamasi**	**1.38**	**84**	⇓*e*Pn	**Pn**	**15 54 48.9**	**+2.4**
PKS9				*e*Sn	**Sn**	**15 55 09.4**	**+4.6**
CRNS	**Crni Vrh**	**1.45**	**256**	*i* Pg	**Pg**	**15 54 46.8**	**-2.4**
CRNS				*e*Sg	**Sg**	**15 55 08.4**	**+0.4**
CRNS							
	comp=Z,42nm,0.2s						
CONA	**Conrad Observa**	**1.50**	**349**	⇓*e*Pn	**Pn**	**15 54 48.1**	**+0.1**
	comp=Z,1.2nm,0.2s,SNR=47						
CONA				⇑*i*Sn	**Sn**	**15 55 11.8**	**+4.2**
	comp=Z,58nm,0.6s						
CONA	**Conrad Observa**	**1.50**	**349**	Pn	**Pn**	**15 54 48.1**	**0.0**
CONA				Sn	**Sn**	**15 55 11.8**	**+4.3**
	comp=Z,58nm,0.6s						
CSNA	**Conrad Observa**	**1.50**	**349**	⇑*i*Pn	**Pn**	**15 54 49.2**	**+1.1**
CSNA	**Conrad Observa**	**1.50**	**349**	Pn	**Pn**	**15 54 49.2**	**+1.1**
PKSM	**Moragy**	**1.65**	**98**	*e*Pn	**Pn**	**15 54 48.7**	**-1.5**
PKSM				*e*Sn	**Sn**	**15 55 09.3**	**-2.1**
PKSM	**Moragy**	**1.65**	**98**	⇑*i*P	**Pn**	**15 54 49.1**	**-1.1**
PKSM	**Moragy**	**1.65**	**98**	⇑*i*P	**Pn**	**15 54 49.1**	**-1.1**
PKSM				*e*Sn	**Sn**	**15 55 09.3**	**-2.1**
VOY	**Vojsko**	**1.71**	**256**	*e*Pn	**Pn**	**15 54 52.4**	**+1.4**
PKSG		**1.72**	**56**	*e*Pn	**Pn**	**15 54 54.5**	**+3.4**
ZST	**Bratislava**	**1.82**	**18**	*e*P	**Pg**	**15 54 57.7**	**+1.4**
ZST				*e*		15 55 20.9	
ZST	**Bratislava**	**1.82**	**18**	*e*PG	**Pg**	**15 54 57.7**	**+1.4**
ZST				*e*SG	**Sg**	**15 55 20.9**	**+1.0**
BLY	**Banja Luka**	**1.83**	**159**	*e*Pn	**Pn**	**15 54 53.1**	**+0.5**
BLY				*e*Sg	**Sg**	**15 55 19.6**	**-0.4**
BLY	**Banja Luka**	**1.83**	**159**	*e*Pn	**Pn**	**15 54 53.1**	**+0.5**
DRE	**Drenchia**	**1.85**	**262**	⇑*i*Pg	**Pn**	**15 54 52.6**	**-0.4**
DRE				*i* Sg	**Sg**	**15 54 71.8**	**+1.0**
DRE	**Drenchia**	**1.85**	**262**	*i* Pg	**Pn**	**15 54 52.6**	**-0.3**
MOA	**Molln**	**1.96**	**316**	⇑*e*Pn	**Pn**	**15 54 55.3**	**+0.9**
	comp=Z,2.9nm,0.2s,SNR=17						
MOA				⇑*e*Sn	**Sn**	**15 55 20.2**	**+1.3**
	comp=Z,25nm,0.2s						
MOA	**Molln**	**1.96**	**316**	*e*Pn	**Pn**	**15 54 55.2**	**+0.8**
	baz=134						
MOA				Sn	**Sn**	**15 55 20.2**	**+1.3**
	comp=Z,25nm,0.2s						
KBA	**Koelnbreinsper**	**2.11**	**288**	⇑*e*Pn	**Pn**	**15 54 56.9**	**+0.4**
	comp=Z,2.3nm,0.3s						
KBA				⇓*e*Sg	**Sg**	**15 55 29.4**	**+0.2**
	comp=Z,22nm,0.4s						
KBA	**Koelnbreinsper**	**2.11**	**288**	*e*Pn	**Pn**	**15 54 56.5**	**0.0**
	baz=104						
KBA				Sg	**Sg**	**15 55 29.4**	**+0.3**
	comp=Z,22nm,0.4s						
BUD	**Budapest**	**2.14**	**60**	*e*PB	**Sn**	**15 55 15.0**	**-8.4**
BUD				*e*Sg	Sx	15 56 01.0	
NVLJ	**Novalja**	**2.14**	**208**	*e*Pn	**Pn**	**15 54 57.6**	**+0.7**
NVLJ				Sn	**Sn**	**15 55 23.7**	**+0.2**
NVLJ	**Novalja**	**2.14**	**208**	*e*Pn	**Pn**	**15 54 57.6**	**+0.7**
NVLJ				Sn	**Sn**	**15 55 23.7**	**+0.2**
SMOL	**Smolenice**	**2.20**	**20**	*e*P	**Pg**	**15 55 04.4**	**+1.0**
SMOL				*e*		15 55 33.6	
SMOL	**Smolenice**	**2.20**	**20**	*e*PG	**Pg**	**15 55 04.4**	**+1.0**
SMOL				*e*SG	**Sg**	**15 55 33.6**	**+1.8**
KOLL	**Kolacno**	**2.56**	**33**	*e*SN	**Sn**	**15 55 31.5**	**-2.3**
KOLL	**Kolacno**	**2.56**	**33**	*e*Sn	**Sn**	**15 55 31.5**	**-2.3**
KRUC	**Moravsky**	**2.60**	**2**	*e*Sn	**Sn**	**15 55 33.5**	**-1.4**
	baz=183						
KRUC				*e*Sg	**Sg**	**15 55 43.2**	**-1.7**
	comp=Z,24nm,0.5s,baz=183						
VYHS	**Vyhne**	**2.67**	**39**	*e*Pn	**Pn**	**15 55 05.8**	**+1.6**
VYHS				*e*Sn	**Sn**	**15 55 36.4**	**-0.1**
VYHS				*e*Sg	**Sg**	**15 55 47.9**	**+0.8**
VYHS	**Vyhne**	**2.67**	**39**	*e*PN	**Pn**	**15 55 05.8**	**+1.6**
VYHS				*e*SN	**Sn**	**15 55 36.4**	**-0.1**
VYHS				*e*SG	**Sg**	**15 55 47.9**	**+0.8**
VYHS	**Vyhne**	**2.67**	**39**	*e*Pn	**Pn**	**15 55 05.8**	**+1.6**
VYHS				*e*Sn	**Sn**	**15 55 36.4**	**-0.1**
VYHS				*e*Sg	**Sg**	**15 55 47.9**	**+0.8**
FRGS	**Fruska Gora**	**2.79**	**117**	*e*Pn	**Pn**	**15 55 05.0**	**-0.9**
FRGS				*e*Sn	**Sn**	**15 55 39.0**	**-0.5**
FGSL	**Fruska Gora**	**2.79**	**117**	*e*Pn	**Pn**	**15 55 05.0**	**-0.9**
FGSL				*e*Sn	**Sn**	**15 55 39.0**	**-0.5**
VRAC	**Vranov**	**2.86**	**4**	*e*Sn	**Sn**	**15 55 39.0**	**-2.1**
	baz=186						
PSZ	**Piszkesteto**	**2.86**	**58**	⇑*i*P	**Pn**	**15 55 00.4**	**-6.4**
PSZ	**Piszkesteto**	**2.86**	**58**	*e*Pg	**Pg**	**15 55 15.7**	**-0.4**
	baz=243						
KHC	**Kasperske Hory**	**3.23**	**327**	*e*Pn	**Pn**	**15 55 13.3**	**+1.4**
KHC				*e*Sn	**Sn**	**15 55 50.4**	**0.0**
KHC				*e*Sg	**Sg**	**15 56 03.2**	**-1.9**
KHC	**Kasperske Hory**	**3.23**	**327**	*e*PN	**Pn**	**15 55 13.3**	**+1.4**
KHC				*e*SN	**Sn**	**15 55 50.4**	**0.0**
KHC				*e*SG	**Sg**	**15 56 03.2**	**-1.9**
	comp=Z,12nm,0.5s						
KHC	**Kasperske Hory**	**3.23**	**327**	*e*Pn	**Pn**	**15 55 13.3**	**+1.4**
KHC				*e*Sn	**Sn**	**15 55 50.4**	**0.0**
KHC				Sg	**Sg**	**15 56 03.2**	**-1.9**
	comp=Z,12nm,0.5s						
BBLS	**Lazići**	**3.41**	**138**	*e*Pn	**Pn**	**15 55 14.7**	**+0.4**
BBLS	**Lazići**	**3.41**	**138**	*e*Pn	**Pn**	**15 55 14.7**	**+0.4**
MORC	**Moravsky Berou**	**3.42**	**14**	⇓*i*P	**Pn**	**15 55 15.4**	**+0.9**
KECS	**Kecovo**	**3.50**	**53**	*e*Pn	**Pn**	**15 55 16.2**	**+0.7**
KECS	**Kecovo**	**3.50**	**53**	*e*PN	**Pn**	**15 55 16.2**	**+0.7**
DIVS	**Divibare**	**3.53**	**131**	*e*Pn	**Pn**	**15 55 15.9**	**-0.1**
DIVS	**Divibare**	**3.53**	**131**	*e*Pn	**Pn**	**15 55 15.9**	**-0.1**
PRU	**Pruhonice**	**3.72**	**342**	*e*SG	**Sg**	**15 56 19.3**	**-1.3**
	comp=Z,15nm,0.7s						
PRU	**Pruhonice**	**3.72**	**342**	Sg	**Sg**	**15 56 19.3**	**-1.3**
	comp=Z,15nm,0.7s						
STON	**Ston**	**3.73**	**164**	*e*Pn	**Pn**	**15 55 20.4**	**+1.7**
STON				Sn	**Sn**	**15 56 03.4**	**+0.8**
STON	**Ston**	**3.73**	**164**	*e*Pn	**Pn**	**15 55 20.4**	**+1.6**
STON				Sn	**Sn**	**15 56 03.3**	**+0.7**
DPC	**Dobruska-Polom**	**3.89**	**0**	*e*SG	**Sg**	**15 56 24.9**	**-1.3**
	comp=Z,9.0nm,0.6s						
DPC	**Dobruska-Polom**	**3.89**	**0**	Sg	**Sg**	**15 56 24.9**	**-1.3**
	comp=Z,9.0nm,0.6s						
GRUS	**Gruza**	**4.05**	**128**	*e*Pn	**Pn**	**15 55 23.2**	**0.0**
GRUS	**Gruza**	**4.05**	**128**	*e*Pn	**Pn**	**15 55 23.2**	**0.0**
NKC	**Novy Kostel**	**4.56**	**327**	*e*Pn	**Pn**	**15 55 31.1**	**+1.0**
NKC				*e*Sg	**Sg**	**15 56 43.0**	**-4.6**
NKC	**Novy Kostel**	**4.56**	**327**	*e*PN	**Pn**	**15 55 31.1**	**+1.0**
NKC				*e*SG	**Sg**	**15 56 43.0**	**-4.6**
	comp=Z,10nm,0.7s						
NKC	**Novy Kostel**	**4.56**	**327**	*e*Pn	**Pn**	**15 55 31.1**	**+1.0**
NKC				Sg	**Sg**	**15 56 43.0**	**-4.6**
	comp=Z,10nm,0.7s						
BRG	**Berggiesshubel**	**4.68**	**342**	SG	**Sg**	**15 56 52.7**	**+1.2**
	comp=Z,4.5nm,0.5s						
CLL	**Collm**	**5.31**	**337**	*e*Sg	**Sg**	**15 57 13.0**	**+1.3**
	comp=Z,11nm,0.9s						
BARS	**Barje**	**5.37**	**131**	*e*Pn	**Pn**	**15 55 41.5**	**+0.2**
BARS				*e*Sn	**Sn**	**15 56 41.3**	**-1.8**

*CSEM **02** 15:57:27.7±0.3, 39°.34N×20°.82E, h73km±5km, ML3.0/6, Error ellipse: s-maj=6.4km s-min=4.0km az=22.0*
*THE **02** 15:57:29.9, 39°.39N×20°.93E, h28km±4km, ML3.0/6, Error ellipse: s-maj=5.1km s-min=1.3km az=208.0*
ATH 02 15:57:26.5, 39°.30N×20°.84E, h64km±16km, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKD2	**Lefkada island**	**0.53**	**196**	P	Pn	15 57 41.6	+2.5
LKD2				S	Sn	15 57 52.6	+4.3
LKD2	**Lefkada island**	**0.53**	**196**	P	Pn	15 57 41.6	+2.5
LKD2				S	Sn	15 57 52.6	+4.3
KEK	**Kerkira**	**0.91**	**297**	*e*P	Pn	15 57 45.0	+1.5
KEK				*e*S	Sn	15 57 56.8	+0.8
KEK	**Kerkira**	**0.91**	**297**	P	Pn	15 57 45.0	+1.5
KEK				S	Sn	15 58 00.0	+4.0
KEK	**Kerkira**	**0.91**	**297**	P	Pn	15 57 45.0	+1.5
KEK				*e*S	Sn	15 57 56.8	+0.8
THL	**Klokotos Trika**	**0.95**	**73**	*e*P	Pn	15 57 45.4	+1.4
THL				*e*S	Sn	15 57 58.5	+1.5
THL	**Klokotos Trika**	**0.95**	**73**	P	Pn	15 57 45.4	+1.4
THL				S	Sn	15 57 58.5	+1.5
THL	**Klokotos Trika**	**0.95**	**73**	P	Pn	15 57 45.4	+1.4
THL				S	Sn	15 57 58.5	+1.5
NEST	**Nestorio**	**1.12**	**8**	P	Pn	15 57 48.1	+1.8
NEST				S	Sn	15 58 01.4	+0.4
NEST	**Nestorio**	**1.12**	**8**	P	Pn	15 57 48.1	+1.8
NEST				S	Sn	15 58 01.4	+0.4
KZN	**Kozani**	**1.23**	**35**	*e*P	Pn	15 57 48.3	+0.6
KZN				*e*S	Sn	15 58 05.1	+1.5
KZN	**Kozani**	**1.23**	**35**	P	Pn	15 57 49.5	+1.8
KZN				S	Sn	15 58 03.4	-0.2
KZN	**Kozani**	**1.23**	**35**	P	Pn	15 57 49.5	+1.8
KZN				*e*S	Sn	15 58 05.1	+1.5
FNA	**Florina**	**1.54**	**15**	P	Pn	15 57 53.9	+2.1
FNA				S	Sn	15 58 12.2	+1.4
FNA	**Florina**	**1.54**	**15**	P	Pn	15 57 53.9	+2.1
FNA				S	Sn	15 58 12.2	+1.4
VLY	**Voula,Athens**	**2.73**	**121**	*e*P	Pn	15 58 09.2	+1.3
VLY	**Voula,Athens**	**2.73**	**121**	*e*P	Pn	15 58 09.2	+1.3
PE1	**Pezze di Greco**	**3.02**	**301**	*e*Pn	Pn	15 58 13.8	+1.9
PE1				*e*Sn	Sn	15 58 44.1	-2.8
SG1	**Sgolgore (BA)**	**3.54**	**

DID	**Didima**	**1.44**	**108**	*e*Pn	**Pn**	**15 57 54.0 +2.3**
NEO	**Neokhori**	**1.90**	**44**	*e*P	**Pn**	**15 57 57.6 -0.4**
NEO	**Neokhori**	**1.90**	**44**	*e*P	**Pn**	**15 57 57.6 -0.4**
NEO	**Neokhori**	**1.90**	**44**	*e*P	**Pn**	**15 57 57.6 -0.4**
XOR	**Xorichti**	**1.92**	**43**	P	**Pn**	**15 57 57.8 -0.5**
XOR				S	**Sn**	**15 58 19.4 -2.2**
XOR	**Xorichti**	**1.92**	**43**	P	**Pn**	**15 57 57.8 -0.5**
XOR				S	**Sn**	**15 58 19.4 -2.2**
AOS	**Alonnisos**	**2.21**	**56**	P	**Pn**	**15 58 04.3 +1.9**
AOS	**Alonnisos**	**2.21**	**56**	P	**Pn**	**15 58 04.3 +1.9**

*NOU **02** 15:58:45.2±1.1,20°.33S×168°.57E,h10km,MD2.7,ML2.7*
*IDC **02** 15:58:47.4±5.2,20°.20S×167°.99E,h0km,mb3.7/4,*
mb1 3.8/4,mb1mx3.7/14,mbtmp3.7/4,MS3.8/2,Ms1 3.8/2,
ms1mx3.0/22,Error ellipse: s-maj=138.6km s-min=45.1km
az=127.0

ISC 02 15:58:45.4±4.1,20°.7S±0°.3×168°.5E±0°.4,h6km±34km,n9,
σ0$47/10,mb3.6/4,MS3.8/2,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.11**	**225**	*e*P	**Pn**	**15 59 21.1**	**-0.4**
BAYA				*e*S	**Sn**	**15 59 47.2**	**-0.8**
PLUM	**Mont Dore**	**2.36**	**227**	*e*P	**Pn**	**15 59 25.1**	**+0.3**
PLUM				*e*S	**Sn**	**15 59 54.6**	**+0.5**
NOUC	**Port Laguerre**	**2.50**	**234**	*e*P	**Pn**	**15 59 26.8**	**+0.1**
NOUC				*e*S	**Sn**	**15 59 57.9**	**+0.4**
NOUC				AMP		16 00 01.5	
	comp=Z,75nm,0.0s						
STKA	**Stephens Creek**	**26.51**	**240**	P	**P**	**16 04 24.6**	**+0.6**
	comp=Z,1.8nm,1.0s,mb3.5,baz=102,slow=9.3,SNR=4.2						
WRA	**Warramunga Arr**	**32.01**	**265**	P	**P**	**16 05 12.2**	**-0.7**
	comp=Z,0.3nm,0.4s,mb3.5,baz=91,slow=8.5,SNR=17						
ASAR	**Alice Springs**	**32.13**	**258**	P	**P**	**16 05 13.8**	**-0.1**
	comp=Z,1.3nm,0.8s,mb3.8,baz=90,slow=9.3,SNR=21						
CBIJ	**Chichi jima**	**53.87**	**331**	LR	LR	16 31 07.9	
	comp=Z,29nm,18.1s,MS3.4,baz=118,slow=36						
SONM	**Songino Array**	**87.93**	**323**	P	**P**	**16 11 36.2**	**+0.1**
	comp=Z,0.4nm,0.7s,mb3.7,baz=142,slow=7.3,SNR=2.8						
PDAR	**Pinedale Array**	**98.09**	**47**	LR	LR	16 47 23.8	
	comp=Z,100nm,20.3s,MS4.3,baz=350,slow=30						

*ISCJB **02** 16:04:57.0±0.9,31°.32N±0°.03×104°.16E±0°.07,h12km±7km,*
mb3.5/6,Error ellipse: s-maj=10.0km s-min=5.3km
az=178.9
*IDC **02** 16:04:56.2±1.1,31°.24N×103°.86E,h0km,mb3.5/6,*
mb1 3.6/7,mb1mx3.4/25,mbtmp3.5/7,ML3.4/1,Error
ellipse: s-maj=43.0km s-min=18.7km az=56.0
*NEIC **02** 16:04:57.9±0.7,31°.28N×103°.91E,h10km,mb4.4/1,Error*
ellipse: s-maj=32.6km s-min=11.0km az=64.0
*BJI **02** 16:04:59.4,31°.42N×104°.07E,h15km,ML3.3/11*

ISC 02 16:04:59.4±1.2,31°.35N±0°.05×103°.97E±0°.09,h16km±9km,
n13,σ0$95/20,mb3.5/6,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.47**	**202**	Pg	**Pg**	**16 05 08.1**	**-0.8**
CD2				Sg	**Sg**	**16 05 15.9**	**+0.6**
CD2				smax			
	comp=N,2μm,0.6s						
CD2				smax			
	comp=E,1μm,0.5s						
LZH	**Lanzhou**	**4.72**	**359**	*e*Pg	**Pg**	**16 06 39.4**	**+10**
LZH				Sg	**Sg**	**16 07 35.5**	**+4.4**
LZH				smax			
	comp=N,38nm,0.5s						
LZH				smax			
	comp=E,36nm,0.5s						
XAN	**Xi'an**	**4.96**	**56**	Pn	**Pn**	**16 06 11.8**	**-1.4**
XAN				Sn	**Sn**	**16 07 05.4**	**-4.8**
XAN				Sg	**Sg**	**16 07 30.8**	**-7.9**
XAN				smax			
	comp=N,58nm,0.7s						
XAN				smax			
	comp=E,35nm,0.7s						
GYA	**Guiyang**	**5.42**	**153**	Pn	**Pn**	**16 06 21.8**	**+2.3**
GYA				Sn	**Sn**	**16 07 21.7**	**+0.2**
GYA				Sg	**Sg**	**16 07 52.9**	**-0.4**
GYA				smax			
	comp=N,50nm,0.8s						
GYA				smax			
	comp=E,40nm,0.9s						
HHC	**Hu-ho-hao-te**	**11.29**	**31**	*e*P	**Pn**	**16 07 40.7**	**+0.7**
HHC				S	**Sn**	**16 09 49.3**	**+3.5**
SONM	**Songino Array**	**16.57**	**6**	Pn	**Pn**	**16 08 51.6**	**+0.8**
	comp=E,0.1nm,0.3s,baz=193,slow=5.8,SNR=2.7						
KSRS	**Korea Array**	**20.66**	**66**	P	**P**	**16 09 38.9**	**+0.5**
	comp=E,0.6nm,0.6s,baz=258,slow=10,SNR=4.3						
MKAR	**Makanchi Array**	**22.72**	**319**	P	**P**	**16 10 00.9**	**+0.6**
	comp=E,0.2nm,0.5s,mb2.8,baz=113,slow=11,SNR=3.4						
ZALV	**Zalesovo Beam**	**26.45**	**334**	P	**P**	**16 10 34.4**	**-0.9**
	comp=E,0.3nm,0.4s,mb3.2,baz=97,slow=4.6,SNR=2.9						
KURK	**Kurchatov**	**26.98**	**323**	P	**P**	**16 10 39.6**	**-0.5**
	comp=E,0.2nm,0.3s,mb3.2,baz=133,slow=9.0,SNR=3.6						
WRAB	**Tennant Creek**	**58.74**	**146**	P	**P**	**16 14 56.4**	**-0.2**
	comp=E,3.3nm,1.0s,mb4.3						
WRA	**Warramunga Arr**	**58.74**	**146**	P	**P**	**16 14 56.1**	**-0.4**
	comp=E,0.9nm,0.6s,mb4.0,baz=338,slow=8.0,SNR=5.0						
ASAR	**Alice Springs**	**61.76**	**149**	P	**P**	**16 15 16.2**	**-1.0**
	comp=E,0.3nm,0.7s,mb3.5,baz=339,slow=6.9,SNR=3.0						

IDC 02 16:06:20.9±31.0,20°.55S×179°.36W,h0km,mb3.7/4,
mb1 3.9/4,mb1mx3.7/16,mbtmp3.7/4,MS3.1/1,Ms1 3.1/1,
ms1mx2.4/21,Error ellipse: s-maj=578.0km
s-min=145.8km az=88.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**22.81**	**296**	LR	LR	16 18 50.6	
	comp=Z,48nm,18.9s,baz=183,slow=33						
STKA	**Stephens Creek**	**36.62**	**244**	P	P	16 13 29.0	-0.1
	1.2nm,0.8s,baz=75,slow=12,SNR=3.6						
ASAR	**Alice Springs**	**43.26**	**257**	P	P	16 14 22.5	-1.9
	0.8nm,0.6s,baz=92,slow=8.2,SNR=10						
WRA	**Warramunga Arr**	**43.33**	**262**	P	P	16 14 26.3	+1.3
	0.3nm,0.3s,baz=96,slow=7.5,SNR=8.9						
FITZ	**Fitzroy Crossi**	**51.75**	**263**	P	P	16 15 31.0	+0.4
	1.1nm,0.9s,baz=80,slow=17,SNR=2.7						

IDC 02 16:07:41.5±2.1,3°.01N×128°.74E,h0km,mb3.4/3,
mb1 3.6/3,mb1mx3.3/20,mbtmp3.4/3,MS3.2/1,Ms1 3.2/1,
ms1mx2.4/19,Error ellipse: s-maj=140.9km
s-min=24.7km az=68.0,North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.46**	**167**	P	P	16 12 53.1	+0.1
	0.9nm,0.4s,baz=347,slow=11,SNR=22						
ASAR	**Alice Springs**	**26.99**	**170**	P	P	16 13 24.9	-0.3
	0.2nm,0.5s,baz=351,slow=7.5,SNR=7.4						
MJAR	**Matsushiro Arr**	**34.49**	**14**	LR	LR	16 26 37.5	
	comp=Z,42nm,20.5s,baz=190,slow=33						
MKAR	**Makanchi Array**	**59.29**	**325**	P	P	16 17 45.3	+0.2
	0.2nm,0.5s,baz=117,slow=8.9,SNR=4.4						

*IDC **02** 16:18:50.7±0.8,38°.39N×21°.75E,h0km,mb4.0/14,*
mb1 4.0/19,mb1mx3.9/34,mbtmp4.0/19,ML3.7/5,MS3.0/5,
Ms1 3.0/5,ms1mx2.6/41,Error ellipse: s-maj=16.5km
s-min=14.1km az=123.0
*ISCJB **02** 16:18:51.8±0.2,38°.35N±0°.01×21°.75E±0°.02,h11km±2km,*
mb4.0/19,MS3.0/4,Error ellipse: s-maj=2.4km
s-min=2.0km az=24.9
*PDG **02** 16:18:52.3±0.6,38°.35N×21°.77E,h8km±1km,ML3.8/10,*
Error ellipse: s-maj=0.9km s-min=1.1km az=0.0
*ATH **02** 16:18:52.1,38°.34N×21°.78E,h13km±1km,MD3.6/32,*
ML3.7
*CSEM **02** 16:18:52.4±0.1,38°.32N×21°.80E,h8km,mb4.0/15,Error*
ellipse: s-maj=3.3km s-min=2.6km az=36.0
*THE **02** 16:18:52.5,38°.36N×21°.76E,h8km,ML4.2/13,Error*
ellipse: s-maj=0.9km s-min=0.6km az=162.0
*NEIC **02** 16:18:52.1,38°.34N×21°.78E,h13km,mb4.0/6,*
ML3.8(PDG),ML3.7(ATH),After ATH.
NEIC Felt at Patrai and Rion.
*MOS **02** 16:18:54.5±1.1,38°.37N×21°.82E,h33km,mb4.2/12,Error*
ellipse: s-maj=6.9km s-min=3.9km az=95.0

ISC 02 16:18:52.8±0.2,38°.34N±0°.01×21°.79E±0°.02,h7km±2km,
n368,σ1$22/451,mb4.0/19,MS3.0/4,26C-11D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.05**	**180**	*e*PG	**Pg**	**16 18 54.3**	**-0.1**
UPR				*e*SG	**Sg**	**16 18 56.5**	**+1.0**
UPR	**University Cam**	**0.05**	**180**	P	**Pg**	**16 18 54.3**	**-0.1**
UPR				S	**Sg**	**16 18 56.5**	**+1.0**
UPR	**University Cam**	**0.05**	**180**	*e*Pg	**Pg**	**16 18 54.3**	**-0.1**
UPR				*e*Sg	**Sg**	**16 18 56.5**	**+1.0**
EFP	**Efpalio**	**0.13**	**45**	*e*PG	**Pg**	**16 18 55.3**	**-0.3**
EFP				*e*SG	**Sg**	**16 18 58.1**	**+0.6**
EFP	**Efpalio**	**0.13**	**45**	P	**Pg**	**16 18 55.2**	**-0.4**
EFP				S	**Sg**	**16 18 58.1**	**+0.6**
EFP	**Efpalio**	**0.13**	**45**	*e*Pg	**Pg**	**16 18 55.3**	**-0.3**
EFP				*e*Sg	**Sg**	**16 18 58.1**	**+0.6**
LAKA	**Lakka**	**0.18**	**122**	P	**Pg**	**16 18 56.5**	**+0.1**
LAKA				S	**Sg**	**16 19 00.2**	**+1.4**
LAKA	**Lakka**	**0.18**	**122**	P	**Pg**	**16 18 56.5**	**+0.1**
LAKA				S	**Sg**	**16 19 00.2**	**+1.4**
KALE	**Kalithea**	**0.28**	**78**	P	**Pg**	**16 18 58.1**	**-0.2**
KALE				S	**Sg**	**16 19 03.1**	**+1.0**
KALE	**Kalithea**	**0.28**	**78**	P	**Pg**	**16 18 58.1**	**-0.2**
KALE				S	**Sg**	**16 19 03.1**	**+1.0**
RLS	**Riolos of Patr**	**0.37**	**222**	*e*Pb	**Pg**	**16 18 59.4**	**-0.6**
RLS				*e*Sb	**Sg**	**16 19 05.5**	**+0.5**
RLS	**Riolos of Patr**	**0.37**	**222**	*e*PB	**Pg**	**16 18 59.4**	**-0.6**
RLS				*e*SB	**Sg**	**16 19 05.5**	**+0.5**
RLS	**Riolos of Patr**	**0.37**	**222**	*e*Pb	**Pg**	**16 18 59.4**	**-0.6**
RLS				*e*Sb	**Sg**	**16 19 05.5**	**+0.5**
EVR	**Evrytania**	**0.58**	**2**	*e*Pb	**Pg**	**16 19 03.4**	**-0.6**
EVR	**Evrytania**	**0.58**	**2**	*e*PB	**Pg**	**16 19 03.4**	**-0.6**
EVR	**Evrytania**	**0.58**	**2**	*e*Pb	**Pg**	**16 19 03.4**	**-0.6**
DSF	**Desfina**	**0.59**	**82**	P	**Pg**	**16 19 03.2**	**-0.9**
DSF				S	**Sg**	**16 19 12.8**	**+1.1**
GUR	**Goura**	**0.59**	**132**	*e*PG	**Pg**	**16 19 03.5**	**-0.7**
GUR				*e*SB	**Sg**	**16 19 12.4**	**+0.5**
GUR	**Goura**	**0.59**	**132**	P	**Pg**	**16 19 03.5**	**-0.7**
GUR				S	**Sg**	**16 19 13.5**	**+1.6**
GUR	**Goura**	**0.59**	**132**	*e*Pg	**Pg**	**16 19 03.5**	**-0.7**
GUR				*e*Sb	**Sg**	**16 19 12.4**	**+0.5**
GUR				S	**Sg**	**16 19 13.5**	**+1.6**
AGG	**Agios Georgios**	**0.81**	**32**	*e*Pg	**Pg**	**16 19 07.0**	**-1.3**
AGG				*e*Sb	**Sg**	**16 19 19.4**	**+0.6**
AGG	**Agios Georgios**	**0.81**	**32**	*e*PG	**Pg**	**16 19 07.0**	**-1.3**
AGG				*e*SB	**Sg**	**16 19 19.4**	**+0.6**
AGG	**Agios Georgios**	**0.81**	**32**	P	**Pg**	**16 19 06.9**	**-1.4**
AGG				S	**Sg**	**16 19 19.2**	**+0.4**
AGG	**Agios Georgios**	**0.81**	**32**	*e*Pg	**Pg**	**16 19 07.0**	**-1.3**
AGG				S	**Sg**	**16 19 19.2**	**+0.4**
KFL	**Anninata**	**0.82**	**254**	P	**Pg**	**16 19 07.1**	**-1.4**
KFL				S	**Sg**	**16 19 20.1**	**+1.0**
VLS	**Valsamata**	**0.95**	**261**	*e*Pb	**Pg**	**16 19 09.1**	**-2.0**
VLS				*e*Sb	**Sg**	**16 19 23.9**	**+0.4**
VLS	**Valsamata**	**0.95**	**261**	*e*PB	**Pg**	**16 19 09.1**	**-2.0**
VLS				*e*SB	**Sg**	**16 19 23.9**	**+0.4**
VLS	**Valsamata**	**0.95**	**261**	P	**Pg**	**16 19 09.0**	**-2.1**
VLS				S	**Sg**	**16 19 23.9**	**+0.4**
VLS	**Valsamata**	**0.95**	**261**	*e*Pb	**Pg**	**16 19 09.1**	**-2.0**
VLS				*e*Sb	**Sg**	**16 19 23.9**	**+0.4**
LTK	**Loutraki**	**0.98**	**108**	*e*PN	**Pg**	**16 19 11.3**	**-0.3**
LTK	**Loutraki**	**0.98**	**108**	P	**Pg**	**16 19 11.4**	**-0.2**
LTK				S	**Sg**	**16 19 26.8**	**+2.5**
LTK	**Loutraki**	**0.98**	**108**	P	**Pg**	**16 19 11.4**	**-0.2**
LTK				S	**Sg**	**16 19 26.8**	**+2.5**
LKD2	**Lefkada island**	**0.99**	**297**	P	**Pg**	**16 19 10.1**	**-1.8**
LKD2				S	**Sg**	**16 19 25.6**	**+0.8**
LKD2	**Lefkada island**	**0.99**	**297**	P	**Pg**	**16 19 10.1**	**-1.8**
LKD2				S	**Sg**	**16 19 25.6**	**+0.8**
LKR	**Lokris**	**1.00**	**71**	*e*Pg	**Pg**	**16 19 11.0**	**-1.0**
LKR	**Lokris**	**1.00**	**71**	*e*PG	**Pg**	**16 19 11.0**	**-1.0**
LKR	**Lokris**	**1.00**	**71**	P	**Pg**	**16 19 10.8**	**-1.2**
LKR				S	**Sg**	**16 19 25.8**	**+0.8**
LKR	**Lokris**	**1.00**	**71**	*e*Pg	**Pg**	**16 19 11.0**	**-1.0**
LKR				S	**Sg**	**16 19 25.8**	**+0.8**
VLX	**Vlachokerasia**	**1.07**	**154**	*e*PG	**Pg**	**16 19 11.9**	**-1.4**
VLX	**Vlachokerasia**	**1.07**	**154**	P	**Pg**	**16 19 12.3**	**-1.0**
VLX				S	**Sg**	**16 19 28.9**	**+1.7**
VLX	**Vlachokerasia**	**1.07**	**154**	*e*Pg	**Pg**	**16 19 11.9**	**-1.4**
VLX				S	**Sg**	**16 19 28.9**	**+1.7**
ITM	**Ithomi**	**1.16**	**174**	*e*Pn	**Pn**	**16 19 13.7**	**-1.6**
ITM	**Ithomi**	**1.16**	**174**	*e*PN	**Pn**	**16 19 13.7**	**-1.6**
ITM	**Ithomi**	**1.16**	**174**	P	**Pg**	**16 19 13.9**	**-1.1**
ITM				S	**Sg**	**16 19 31.3**	**+1.3**
ITM	**Ithomi**	**1.16**	**174**	*e*Pn	**Pn**	**16 19 13.7**	**-1.6**
ITM				S	**Sg**	**16 19 31.3**	**+1.3**
THL	**Klokotos Trika**	**1.24**	**8**	*e*PB	**Pb**	**16 19 15.6**	**-0.9**
THL	**Klokotos Trika**	**1.24**	**8**	P	**Pn**	**16 19 14.7**	**-1.8**
THL				S	**Sb**	**16 19 32.1**	**-0.6**
THL	**Klokotos Trika**	**1.24**	**8**	P	**Pn**	**16 19 14.7**	**-1.8**
THL	**Klokotos Trika**	**1.24**	**8**	*e*Pb	**Pb**	**16 19 15.6**	**-0.9**
THL				S	**Sb**	**16 19 32.1**	**-0.6**
DID	**Didima**	**1.41**	**125**	*e*PB	**Pb**	**16 19 19.0**	**-0.4**
DID				*e*SB	**Sb**	**16 19 38.7**	**+1.1**
DID	**Didima**	**1.41**	**125**	P	**Pn**	**16 19 18.8**	**0.0**
DID				S	**Sb**	**16 19 38.8**	**+1.2**
DID	**Didima**	**1.41**	**125**	*e*Pb	**Pb**	**16 19 19.0**	**-0.4**
DID				*e*Sb	**Sb**	**16 19 38.7**	**+1.1**
PYL	**PYLOS**	**1.44**	**181**	*e*PG	**Pg**	**16 19 18.7**	**-1.6**
PYL	**PYLOS**	**1.44**	**181**	P	**Pn**	**16 19 18.6**	**-0.6**
PYL				S	**Sn**	**16 19 38.8**	**+0.6**
PYL	**PYLOS**	**1.44**	**181**	*e*Pg	**Pg**	**16 19 18.7**	**-1.6**
PYL				S	**Sn**	**16 19 38.8**	**+0.6**
NAIG	**Nisos Aigina**	**1.46**	**113**	*e*Pb	**Pb**	**16 19 20.1**	**-0.1**
NAIG	**Nisos Aigina**	**1.46**	**113**	*e*PB	**Pb**	**16 19 20.1**	**-0.1**
NAIG	**Nisos Aigina**	**1.46**	**113**	*e*Pb	**Pb**	**16 19 20.1**	**-0.1**
NEO	**Neokhori**	**1.48**	**49**	*e*Pg	**Pg**	**16 19 19.2**	**-2.0**
NEO				*e*Sb	**Sb**	**16 19 40.3**	**+0.6**
NEO	**Neokhori**	**1.48**	**49**	*e*PG	**Pg**	**16 19 19.2**	**-2.0**
NEO				*e*SB	**Sb**	**16 19 40.3**	**+0.6**
NEO	**Neokhori**	**1.48**	**49**	*e*Pg	**Pg**	**16 19 19.2**	**-2.0**
NEO				*e*Sb	**Sb**	**16 19 40.3**	**+0.6**
XOR	**Xorichti**	**1.50**	**46**	P	**Pn**	**16 19 19.3**	**-0.8**
XOR	**Xorichti**	**1.50**	**46**	P	**Pn**	**16 19 19.6**	**-0.5**
XOR				S	**Sn**	**16 19 39.7**	**-0.2**
XOR	**Xorichti**	**1.50**	**46**	P	**Pn**	**16 19 19.6**	**-0.5**
XOR				S	**Sn**	**16 19 39.7**	**-0.2**
JAN	**Janina**	**1.51**	**331**	*e*P	**Pb**	**16 19 20.8**	**-0.2**
JAN	**Janina**	**1.51**	**331**	*e*PB	**Pb**	**16 19 20.8**	**-0.2**
JAN	**Janina**	**1.51**	**331**	*e*Pb	**Pb**	**16 19 20.8**	**-0.2**
ATH	**Athens Observa**	**1.56**	**103**	*e*P	**Pn**	**16 19 21.0**	**+0.1**
ATH	**Athens Observa**	**1.56**	**103**	*e*PG	**Pn**	**16 19 21.0**	**+0.1**
ATH	**Athens Observa**	**1.56**	**103**	*e*Pg	**Pn**	**16 19 21.0**	**+0.1**
ATHU	**Athens Univers**	**1.62**	**103**	P	**Pn**	**16 19 21.8**	**+0.2**
ATHU				S	**Sn**	**16 19 43.2**	**+0.5**
ATHU	**Athens Univers**	**1.62**	**103**	P	**Pn**	**16 19 21.8**	**+0.2**
ATHU				S	**Sn**	**16 19 43.2**	**+0.5**
VLY	**Voula,Athens**	**1.66**	**106**	*e*Pg	**Pg**	**16 19 22.5**	**-2.0**
VLY	**Voula,Athens**	**1.66**	**106**	*e*PG	**Pg**	**16 19 22.5**	**-2.0**
VLY	**Voula,Athens**	**1.66**	**106**	*e*Pg	**Pg**	**16 19 22.5**	**-2.0**
PTL	**Penteli**	**1.66**	**99**	*e*Pg	**Pg**	**16 19 24.4**	**-0.2**
PTL	**Penteli**	**1.66**	**99**	*e*PG	**Pg**	**16 19 24.4**	**-0.2**
PTL	**Penteli**	**1.66**	**99**	*e*Pg	**Pg**	**16 19 24.4**	**-0.2**
AOS	**Alonnisos**	**1.84**	**62**	P	**Pn**	**16 19 23.8**	**-0.9**
AOS	**Alonnisos**	**1.84**	**62**	P	**Pn**	**16 19 23.6**	**-1.1**
AOS	**Alonnisos**	**1.84**	**62**	P	**Pn**	**16 19 23.8**	**-0.9**
VLI	**Veliai**	**1.85**	**150**	*e*Pg	**Pg**	**16 19 27.0**	**-1.3**
VLI	**Veliai**	**1.85**	**150**	*e*PG	**Pg**	**16 19 27.0**	**-1.3**
VLI	**Veliai**	**1.85**	**150**	*e*Pg	**Pg**	**16 19 27.0**	**-1.3**
KZN	**Kozani**	**1.97**	**360**	*e*P	**Pn**	**16 19 28.0**	**+1.5**
KZN	**Kozani**	**1.97**	**360**	*e*PN	**Pn**	**16 19 28.0**	**+1.5**
KZN	**Kozani**	**1.97**	**360**	P	**Pn**	**16 19 26.8**	**+0.3**
KZN	**Kozani**	**1.97**	**360**	P	**Pn**	**16 19 26.8**	**+0.3**
KZN	**Kozani**	**1.97**	**360**	*e*Pn	**Pn**	**16 19 28.0**	**+1.5**
KEK	**Kerkira**	**2.07**	**312**	*e*Pn	**Pn**	**16 19 28.4**	**+0.5**
KEK	**Kerkira**	**2.07**	**312**	*e*PN	**Pn**	**16 19 28.4**	**+0.5**
KEK	**Kerkira**	**2.07**	**312**	*e*Pn	**Pn**	**16 19 28.4**	**+0.5**
SRN	**Sarande**	**2.08**	**319**	*i* PN	**Pn**	**16 19 26.0**	**-1.9**
SRN	**Sarande**	**2.08**	**319**	*i* Pn	**Pn**	**16 19 26.0**	**-2.0**
PAIG	**Paliouri**	**2.17**	**42**	P	**Pn**	**16 19 28.0**	**-1.2**
PAIG	**Paliouri**	**2.17**	**42**	P	**Pn**	**16 19 28.1**	**-1.1**
PAIG	**Paliouri**	**2.17**	**42**	P	**Pn**	**16 19 28.1**	**-1.1**
KYTH	**Kithira**	**2.28**	**154**	*e*Pn	**Pn**	**16 19 32.2**	**+1.5**
KYTH	**Kithira**	**2.28**	**154**	*e*PN	**Pn**	**16 19 32.2**	**+1.5**
KYTH	**Kithira**	**2.28**	**154**	*e*Pn	**Pn**	**16 19 32.2**	**+1.5**
PLG	**Polygyros**	**2.41**	**32**	*e*P	**Pn**	**16 19 32.0**	**-0.5**
PLG	**Polygyros**	**2.41**	**32**	*e*PB	**Pn**	**16 19 32.0**	**-0.5**
PLG	**Polygyros**	**2.41**	**32**	P	**Pn**	**16 19 32.3**	**-0.2**
PLG	**Polygyros**	**2.41**	**32**	P	**Pn**	**16 19 32.3**	**-0.2**
KBN	**Korca**	**2.41**	**342**	*i* PN	**Pn**	**16 19 39.4**	**+6.8**
FNA	**Florina**	**2.47**	**353**	P	**Pn**	**16 19 34.9**	**+1.6**
FNA	**Florina**	**2.47**	**353**	P	**Pn**	**16 19 35.1**	**+1.8**
FNA	**Florina**	**2.47**	**353**	P	**Pn**	**16 19 34.9**	**+1.6**
HORT	**Hortiatis**	**2.48**	**24**	P	**Pn**	**16 19 32.9**	**-0.6**
HORT				S	**Sn**	**16 20 02.8**	**-1.1**
HORT	**Hortiatis**	**2.48**	**24**	P	**Pn**	**16 19 32.9**	**-0.6**
HORT				S	**Sn**	**16 20 02.8**	**-1.1**
OUR	**Ouranopolis**	**2.62**	**40**	P	**Pn**	**16 19 34.2**	**-1.3**
OUR	**Ouranopolis**	**2.62**	**40**	P	**Pn**	**16 19 34.2**	**-1.3**
BIA	**Bitola**	**2.71**	**353**	*i* Pn	**Pn**	**16 19 36.7**	**+0.1**
SOH	**Sokhos**	**2.76**	**26**	*e*P	**Pn**	**16 19 38.8**	**+1.4**
SOH	**Sokhos**	**2.76**	**26**	*e*PB	**Pn**	**16 19 38.8**	**+1.4**
SOH	**Sokhos**	**2.76**	**26**	P	**Pn**	**16 19 37.7**	**+0.3**
SOH	**Sokhos**	**2.76**	**26**	P	**Pn**	**16 19 37.7**	**+0.3**
OHR	**Ohrid**	**2.88**	**345**	*i* Pn	**Pn**	**16 19 40.6**	**+1.7**
VAY	**Valandovo**	**3.04**	**11**	*i* Pn	**Pn**	**16 19 41.0**	**-0.3**
VAY				*i* Sn	**Sn**	**16 20 18.4**	**+0.5**
KRUS	**Krusevo**	**3.06**	**352**	*i* Pn	**Pn**	**16 19 39.2**	**-2.3**
LIA	**Limnos Island**	**3.07**	**58**	*e*Pn	**Pn**	**16 19 41.5**	**-0.1**
LIA	**Limnos Island**	**3.07**	**58**	*e*PN	**Pn**	**16 19 41.5**	**-0.1**
LIA	**Limnos Island**	**3.07**	**58**	*e*Pn	**Pn**	**16 19 41.5**	**-0.1**
APE	**Apeiranthos**	**3.23**	**112**	⇓P	**Pn**	**16 19 44.5**	**+0.7**
APE	**Apeiranthos**	**3.23**	**112**	⇓*i*P	**Pn**	**16 19 44.5**	**+0.7**
APE	**Apeiranthos**	**3.23**	**112**	P	**Pn**	**16 19 44.5**	**+0.7**
TIR	**Tirane**	**3.35**	**334**	*e*P	**Pn**	**16 19 44.2**	**-1.3**
TIR	**Tirane**	**3.35**	**334**	*e*P	**Pn**	**16 19 44.2**	**-1.3**
KARN	**Karanos**	**3.39**	**149**	⇑*i*PB	**Pb**	**16 19 48.5**	**-4.6**
KAVA	**Kavala**	**3.39**	**38**	P	**Pn**	**16 19 45.2**	**-0.8**
KAVA	**Kavala**	**3.39**	**38**	P	**Pn**	**16 19 45.2**	**-0.8**
NVR	**Nevrokopi**	**3.41**	**27**	*e*Pn	**Pn**	**16 19 46.9**	**+0.6**
NVR	**Nevrokopi**	**3.41**	**27**	*e*PN	**Pn**	**16 19 46.9**	**+0.6**
NVR	**Nevrokopi**	**3.41**	**27**	*e*Pn	**Pn**	**16 19 46.9**	**+0.6**
VAM	**Vamos**	**3.50**	**146**	*e*P	**Pn**	**16 19 50.1**	**+2.5**
VAM	**Vamos**	**3.50**	**146**	*e*PN	**Pn**	**16 19 50.1**	**+2.5**
MMB	**Musomiste**	**3.58**	**24**	P	**Pn**	**16 19 48.3**	**-0.3**
MMB	**Musomiste**	**3.58**	**24**	P	**Pn**	**16 19 48.3**	**-0.3**
PRK	**Paraskevi**	**3.62**	**74**	*e*P	**Pn**	**16 19 49.5**	**+0.3**
PRK	**Paraskevi**	**3.62**	**74**	*e*PN	**Pn**	**16 19 49.5**	**+0.3**
PRK	**Paraskevi**	**3.62**	**74**	*e*Pn	**Pn**	**16 19 49.5**	**+0.3**
SKO	**Skopje**	**3.64**	**356**	*i* Pn	**Pn**	**16 19 51.6**	**+2.2**
KKB	**Krupnik**	**3.67**	**15**	P	**Pn**	**16 19 49.5**	**-0.3**
KKB	**Krupnik**	**3.67**	**15**	P	**Pn**	**16 19 49.5**	**-0.3**
IDI	**Anoyia**	**3.93**	**140**	Pn	**Pn**	**16 19 54.2**	**+0.8**
	1.4nm,0.3s,baz=331,slow=13,SNR=13						
IDI				Sn	**Sn**	**16 20 42.7**	**+2.9**
	3.9nm,0.3s,baz=270,slow=20,SNR=3.6						
IDI	**Anoyia**	**3.93**	**140**	*e*Pn	**Pn**	**16 19 55.4**	**+2.0**
IDI	**Anoyia**	**3.93**	**140**	*e*PN	**Pn**	**16 19 55.4**	**+2.0**
IDI	**Anoyia**	**

comp=Z,0.7nm,0.3s,baz=236,slow=7.6,SNR=15
MLR Muntele Rosu 7.79 22 P **Pn 16 20 47.7 +1.2**
MLR pmax pmax
comp=Z,1.0nm,0.3s
MLR Muntele Rosu 7.79 22 P **Pn 16 20 47.7 +1.2**
comp=Z,1.0nm,0.3s
NRCA Norcia 7.98 307 Pn **Pn 16 20 49.9 +0.8**
NRCA Norcia 7.98 307 Pn **Pn 16 20 49.9 +0.8**
NVLJ Novalja 8.10 322 *e*Pn **Pn 16 20 49.6 -1.1**
NVLJ Sn **Sn 16 22 16.9 -5.6**
NVLJ Novalja 8.10 322 *e*Pn **Pn 16 20 49.6 -1.1**
PLOR Plostina 8.33 24 ||P **Pn 16 20 56.7 +2.8**
PLOR Plostina 8.33 24 ||*i*P **Pn 16 20 56.7 +2.8**
PLOR Plostina 8.33 24 P **Pn 16 20 56.7 +2.8**
VRI Vrincioaia 8.37 24 ||P **Pn 16 20 57.8 +3.4**
VRI Vrincioaia 8.37 24 ||*i*P **Pn 16 20 57.8 +3.4**
BOJS Bojanci 8.66 328 *i* Pn **Pn 16 20 57.3 -1.0**
BOJS *i* Sn **Sn 16 22 30.7 -5.5**
BOJS Bojanci 8.66 328 *i* Pn **Pn 16 20 57.3 -1.1**
SKDS Skadanscina 9.24 324 *i* Pn **Pn 16 21 04.3 -2.0**
SKDS *i* Sn **Sn 16 22 47.3 -3.2**
BR131 Keskin Array S 9.33 78 *e*P **Pn 16 21 09.8 +2.2**
comp=Z,1.0nm,0.3s
BR131 Keskin Array S 9.33 78 *e*P **Pn 16 21 09.8 +2.3**
comp=Z,1.0nm,0.3s
BRTR Keskin Array B 9.33 78 Pn **Pn 16 21 07.3 -0.2**
comp=Z,0.6nm,0.3s,baz=259,slow=12,SNR=9.4
BRTR Keskin Array B 9.33 78 *i* P **Pn 16 21 10.1 +2.6**
BRTR pmax pmax
comp=Z,1.0nm,0.5s
BRTR Keskin Array B 9.33 78 Pn **Pn 16 21 07.3 -0.2**
BUD Budapest 9.37 348 ||*e* **Pn 16 21 16.5 +8.5**
JAVS Javornik 9.48 325 *i* Pn **Pn 16 21 07.7 -1.9**
JAVS *i* Sn **Sn 16 22 51.8 -4.5**
JAVS Javornik 9.48 325 *i* Pn **Pn 16 21 07.7 -1.9**
PERS Pernice 9.64 331 *i* Pn **Pn 16 21 11.2 -0.7**
PERS Pernice 9.64 331 *i* Pn **Pn 16 21 11.2 -0.7**
PERS *i* Sn **Sn 16 22 55.2 -5.1**
PERS Pernice 9.64 331 *i* Pn **Pn 16 21 11.1 -0.7**
VOY Vojsko 9.66 325 *e*Pn **Pn 16 21 11.0 -1.1**
VOY *e* 16 21 26.0
VOY *e* 16 22 59.5
VOY Vojsko 9.66 325 *e*Pn **Pn 16 21 11.0 -1.1**
PSZ Piszkesteto 9.68 352 P **Pn 16 21 13.2 +0.9**
PSZ pmax pmax
comp=Z,39nm,0.9s
PSZ Piszkesteto 9.68 352 P **Pn 16 21 13.2 +0.9**
comp=Z,38nm,0.9s
PSZ Piszkesteto 9.68 352 P **Pn 16 21 13.2 +0.9**
comp=Z,39nm,0.9s
KEST Kesra 10.28 259 Pn **Pn 16 21 28.2 +7.7**
comp=Z,0.1nm,0.3s,baz=336,slow=6.2,SNR=4.7
VYHS Vyhne 10.38 349 *e*P **Pn 16 21 22.9 +1.0**
VYHS Vyhne 10.38 349 *e*PN **Pn 16 21 22.9 +1.0**
VYHS Vyhne 10.38 349 *e*Pn **Pn 16 21 22.9 +1.0**
CRVS Cervenica-Dubn 10.57 359 *e*P **Pn 16 21 24.7 +0.2**
CRVS Cervenica-Dubn 10.57 359 *e*PN **Pn 16 21 24.7 +0.2**
CRVS Cervenica-Dubn 10.57 359 *e*Pn **Pn 16 21 24.7 +0.2**
NIE Niedzica 11.13 355 *e*P **Pn 16 21 41.9 +10**
VRAC Vranov 11.59 343 Pn **Pn 16 21 44.9 +6.4**
baz=183,slow=16,SNR=3.2
TREC Trest 11.86 340 AMS AMS 16 26 40.0
comp=Z,600nm,9.8s
DAVOX Davos/Dischmat 12.17 318 Pn **Pn 16 21 47.8 +1.4**
comp=Z,0.3nm,0.3s,baz=162,slow=19,SNR=2.8
DAVOX Sn **Sn 16 23 57.4 -4.7**
comp=Z,0.2nm,0.3s,baz=143,slow=20,SNR=2.6
DAVOX LR LR 16 27 03.4
comp=Z,54nm,21.2s,baz=98,slow=41
DAVOX Davos/Dischmat 12.17 318 P **Pn 16 21 47.8 +1.4**
DAVOX 16 23 57.4
DAVOX Davos/Dischmat 12.17 318 P **Pn 16 21 47.8 +1.4**
KHC Kasperske Hory 12.31 334 *e*P **Pn 16 21 54.3 +6.0**
KHC MLR MLR
comp=Z,500nm,10.1s
KHC Kasperske Hory 12.31 334 *e*P **Pn 16 21 54.3 +6.0**
KHC *e* 16 22 07.3
KHC Kasperske Hory 12.31 334 *e*P **Pn 16 21 54.3 +6.0**
KHC *ex* x 16 22 07.3
KHC AMS AMS 16 27 00.0
comp=Z,500nm,10.1s
DPC Dobruska-Polom 12.63 344 AMS AMS 16 27 40.0
comp=Z,200nm,10.9s
PRU Pruhonice 12.75 338 AMS AMS 16 27 10.0
comp=Z,500nm,10.1s
PVCC Panska Ves 13.23 339 AMS AMS 16 27 30.0
comp=Z,500nm,10.0s
LPG La Plagne 13.28 307 *e*P **Pn 16 22 03.9 +2.4**
LPG La Plagne 13.28 307 *e*P **Pn 16 22 03.9 +2.4**
LPL La Plagne 13.30 307 *e*P **Pn 16 22 04.0 +2.2**
LPL La Plagne 13.30 307 *e*P **Pn 16 22 04.0 +2.2**
ANN Anapa 13.37 56 *e*P Px 16 22 17.8
ANN pmax pmax
comp=Z,36nm,1.3s
AKASG Malin Array Be 13.44 21 Pn **Pn 16 22 02.9 -0.9**
comp=Z,0.5nm,0.3s,baz=206,slow=12,SNR=2.4
AKASG Malin Array Be 13.44 21 P **Pn 16 22 02.9 -0.9**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKASG Malin Array Be 13.44 21 P **Pn 16 22 02.9 -0.9**
comp=Z,1.0nm,0.3s
NKC Novy Kostel 13.63 334 AMS AMS 16 27 50.0
comp=Z,400nm,20.7s
EIL Elat 13.91 124 Pn **Pn 16 22 11.5 +1.2**
comp=Z,0.2nm,0.3s,baz=346,slow=19,SNR=3.9
EIL Elat 13.91 124 Pn **Pn 16 22 11.5 +1.2**
EIL Elat 13.91 124 Pn **Pn 16 22 11.5 +1.2**
CLL Collm 14.38 337 *e*PP 16 22 25.0
HINF Hinteralfeld 14.43 316 *e*P **Pn 16 22 17.3 0.0**
SMF Signal de Mont 15.60 308 *e*P **Pn 16 22 35.6 +2.7**
comp=Z,19nm,1.0s
SMF Signal de Mont 15.60 308 *e*P **Pn 16 22 35.6 +2.7**
SMF pmax pmax
comp=Z,9.0nm,1.0s
SMF Signal de Mont 15.60 308 *e*P **Pn 16 22 35.6 +2.7**
comp=Z,9.4nm,1.0s
SMF Signal de Mont 15.60 308 *e*P **Pn 16 22 35.6 +2.7**
comp=Z,8nm,1.0s
SUW Suwalki 15.71 3 *e*P **Pn 16 22 37.0 +2.7**
SUW Suwalki 15.71 3 *e*P **Pn 16 22 37.0 +2.7**
LOR Lormes 15.87 310 *e*P **Pn 16 22 38.9 +2.5**
LOR Lormes 15.87 310 *e*P **Pn 16 22 38.9 +2.5**
AVF Avril sur Loir 15.97 308 *e*P **Pn 16 22 39.9 +2.2**
comp=Z,16nm,1.0s
AVF Avril sur Loir 15.97 308 *e*P **Pn 16 22 39.9 +2.2**
AVF pmax pmax
comp=Z,8.0nm,1.0s
AVF Avril sur Loir 15.97 308 *e*P **Pn 16 22 39.9 +2.2**
comp=Z,7.8nm,1.0s
AVF Avril sur Loir 15.97 308 *e*P **Pn 16 22 39.9 +2.2**
comp=Z,15nm,1.0s
SSF Saint Saulge 15.99 309 *e*P **Pn 16 22 41.8 +3.8**
comp=Z,35nm,1.1s
SSF Saint Saulge 15.99 309 *e*P **Pn 16 22 41.8 +3.8**
SSF pmax pmax
comp=Z,17nm,1.1s
SSF Saint Saulge 15.99 309 *e*P **Pn 16 22 41.8 +3.8**
comp=Z,17nm,1.1s
SSF Saint Saulge 15.99 309 *e*P **Pn 16 22 41.8 +3.8**
comp=Z,34nm,1.1s
VSR Storozhevoye 17.78 38 *e*P **Pn 16 23 00.6 +0.1**
VSR pmax pmax
comp=Z,6.0nm,0.6s
VSR pmax pmax
comp=N,10.0nm,1.3s
VSR pmax pmax
comp=E,20nm,1.3s
VSR Storozhevoye 17.78 38 *e*P **Pn 16 23 00.6 +0.1**
comp=E,6.0nm,0.6s
OBN Obninsk 19.54 26 *e*P **Pn 16 23 21.4 -0.4**
OBN pmax pmax
comp=Z,4.0nm,0.8s
OBN MLR MLR
comp=Z,100nm,15.0s
OBN Obninsk 19.54 26 *e*P **Pn 16 23 21.4 -0.4**
comp=Z,100nm,15.0s
ESDC Sonseca Array 20.04 282 P **P 16 23 26.9 +0.6**
comp=Z,1.1nm,0.6s,baz=75,slow=11,SNR=5.1
ESDC Sonseca Array 20.04 282 P **P 16 23 26.9 +0.7**
VSU Vasula 20.40 7 *i* P **P 16 23 29.8 -0.1**
VSU Vasula 20.40 7 *i* P **P 16 23 29.8 -0.1**
HFS Hagfors 22.42 349 P **P 16 23 49.1 -2.5**
comp=Z,2.3nm,0.6s,mb3.8,baz=140,slow=12,SNR=8.9
HFS Hagfors 22.42 349 P **P 16 23 49.1 -2.5**
HFS pmax pmax
comp=Z,2.0nm,0.6s
FINES FINESS Array B 23.29 5 P **P 16 23 58.3 -2.5**
comp=Z,4.4nm,0.9s,mb3.9,baz=235,slow=6.7,SNR=7.2
FINES LR LR 16 34 00.4
comp=Z,86nm,18.1s,MS3.2,baz=0.0,slow=39
FINES FINESS Array B 23.29 5 P **P 16 23 58.3 -2.5**
FINES pmax pmax
comp=Z,4.0nm,0.9s
FINES MLR MLR
comp=Z,86nm,18.2s
NB2 NORSAR Subarra 23.67 347 P **P 16 24 02.5 -2.2**
comp=Z,0.4nm,0.7s,mb3.0,baz=152,slow=11
NB2 NORSAR Subarra 23.67 347 P **P 16 24 02.5 -2.2**
comp=Z,0.4nm,0.7s,mb3.0,SNR=3.9
NOA NORSAR Array B 23.67 347 P **P 16 24 02.4 -2.3**
comp=Z,4.6nm,0.8s,mb4.0,baz=154,slow=9.3,SNR=16
NOA LR LR 16 33 21.8
comp=Z,23nm,20.2s,MS2.6,baz=155,slow=37
NOA NORSAR Array B 23.67 347 P **P 16 24 02.4 -2.3**
NOA pmax pmax
comp=Z,5.0nm,0.8s
NOA MLR MLR
comp=Z,23nm,20.2s
NOA NORSAR Array B 23.67 347 P **P 16 24 02.4 -2.3**
NOA LR LR 16 33 21.8
EKA Eskdalemuir Ar 23.89 323 P **P 16 24 05.2 -1.5**
comp=Z,6.5nm,0.8s,mb4.1,baz=124,slow=9.8,SNR=23
EKA Eskdalemuir Ar 23.89 323 P **P 16 24 05.3 -1.4**
EKA pmax pmax
comp=Z,7.0nm,0.8s
EKA Eskdalemuir Ar 23.89 323 P **P 16 24 05.3 -1.4**
comp=Z,7.0nm,0.8s,mb4.1
AKTK Aktyubinsk 28.29 53 P **P 16 24 44.5 -2.0**
AKTK LR LR 16 37 47.9
AKTK Aktyubinsk 28.29 53 P **P 16 24 44.6 -2.0**
comp=Z,24nm,19.5s
AKTO Aktyubinsk 28.29 53 P **P 16 24 44.5 -2.0**
comp=Z,1.0nm,0.5s,mb3.7,baz=207,slow=4.5,SNR=3.8
AKTO LR LR 16 37 47.9
comp=Z,24nm,19.4s,MS2.8,baz=57,slow=40
AKTO Aktyubinsk 28.29 53 P **P 16 24 44.6 -2.0**
AKTO pmax pmax
comp=Z,1.0nm,0.5s,mb3.7
AKTO MLR MLR
comp=Z,24nm,19.5s,MS2.8
ABKAR Akbulak array 29.33 56 *e*P **P 16 24 55.2 -0.7**
comp=Z,1.1nm,0.6s,mb3.8
ABKAR Akbulak array 29.33 56 *e*P **P 16 24 55.2 -0.6**
comp=Z,1.1nm,0.6s,mb3.8
ARU Arti 30.28 41 *e i*P **P 16 25 05.4 +1.2**
ARU *e* 16 26 00.9
ARU S **S 16 30 05.2 +1.1**
ARU SS SS 16 31 35.8 -37
ARU pmax pmax
comp=Z,7.0nm,1.7s,mb4.1
ARU Arti 30.28 41 *i* P **P 16 25 05.4 +1.2**
comp=Z,7.0nm,1.7s,mb4.1
ARU S **S 16 30 05.2 +1.1**
TORD Torodi Ar. Bea 30.79 221 P **P 16 25 08.2 -0.9**
comp=Z,4.0nm,0.7s,mb4.4,baz=131,slow=8.3,SNR=11
BRVK Borovoye 36.19 50 ||*e*P **P 16 25 55.5 -0.2**
BRVK pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
BRVK Borovoye 36.19 50 *e*P **P 16 25 55.5 -0.2**
comp=Z,4.0nm,1.1s,mb4.3
BVAR Borovoye Array 36.26 50 P **P 16 25 55.1 -1.1**
comp=Z,0.9nm,0.7s,mb3.8,baz=260,slow=5.9,SNR=6.7
BVAR Borovoye Array 36.26 50 P **P 16 25 55.1 -1.2**
BVAR pmax pmax
comp=Z,1.0nm,0.7s
BVAR Borovoye Array 36.26 50 P **P 16 25 55.1 -1.2**
comp=Z,1.0nm,0.7s,mb3.9
EKS2 Erkin-Say 39.26 67 *e*P **P 16 26 22.1 +0.3**
comp=Z,3.3nm,0.8s,mb4.1
EKS2 Erkin-Say 39.26 67 *e*P **P 16 26 22.1 +0.3**
comp=Z,3.3nm,0.8s,mb4.1
DBIC Dimbokro 39.69 224 P **P 16 26 25.1 -0.6**
comp=Z,4.5nm,0.9s,mb4.2,baz=30,slow=13,SNR=3.7
DBIC Dimbokro 39.69 224 P **P 16 26 25.1 -0.5**
DBIC pmax pmax
comp=Z,5.0nm,0.9s
DBIC Dimbokro 39.69 224 P **P 16 26 25.1 -0.5**
comp=Z,5.0nm,0.9s,mb4.2
LIC Lamto 40.15 224 *e*P **P 16 26 28.4 -1.1**
comp=Z,10nm,0.7s,mb4.4
LIC Lamto 40.15 224 *e*P **P 16 26 28.4 -1.1**
comp=Z,5.1nm,0.7s,mb4.4
LIC Lamto 40.15 224 *e*P **P 16 26 28.4 -1.1**
comp=Z,5.1nm,0.7s,mb4.4
KURK Kurchatov 41.38 54 P **P 16 26 38.0 -1.3**
comp=Z,2.7nm,0.7s,mb4.0,baz=281,slow=8.8,SNR=11
KURK Kurchatov 41.38 54 ||*e*P **P 16 26 38.2 -1.1**
KURK pmax pmax
comp=Z,5.0nm,1.4s,mb4.0
KURK Kurchatov 41.38 54 P **P 16 26 38.0 -1.3**
KURK Kurchatov 41.38 54 *e*P **P 16 26 38.2 -1.1**
comp=Z,5.0nm,1.4s,mb4.0
NVS Novosibirsk 43.84 47 *e*P **P 16 26 58.0 -1.2**
NVS pmax pmax
comp=N,11nm,2.0s
NVS pmax pmax
comp=Z,20nm,2.0s,mb4.5
NVS pmax pmax
comp=E,4.0nm,1.1s
NVS Novosibirsk 43.84 47 *e*P **P 16 26 58.0 -1.2**
MK31 Makanchi Array 44.37 59 *e*P **P 16 27 02.3 -1.2**
MK31 Makanchi Array 44.37 59 *e*P **P 16 27 02.3 -1.2**
MKAR Makanchi Array 44.37 59 P **P 16 27 02.7 -0.8**
comp=E,5.7nm,0.6s,mb4.5,baz=283,slow=6.6,SNR=95
MKAR Makanchi Array 44.37 59 *i* P **P 16 27 02.7 -0.8**
MKAR pmax pmax
comp=Z,6.0nm,0.6s
MKAR Makanchi Array 44.37 59 P **P 16 27 02.7 -0.8**
MKAR Makanchi Array 44.37 59 *i* P **P 16 27 02.7 -0.8**
comp=Z,6.0nm,0.6s,mb4.5
ZAA0 Zalesovo Array 44.84 48 *e*P **P 16 27 05.8 -1.5**
ZAA0 Zalesovo Array 44.84 48 *e*P **P 16 27 05.8 -1.4**
ZALV Zalesovo Beam 44.84 48 P **P 16 27 06.1 -1.1**
comp=Z,3.0nm,0.5s,mb4.4,baz=278,slow=8.5,SNR=21
ZALV Zalesovo Beam 44.84 48 P **P 16 27 06.1 -1.1**
ZALV pmax pmax
comp=Z,3.0nm,0.5s,mb4.4
ZALV Zalesovo Beam 44.84 48 P **P 16 27 06.1 -1.2**
ZALV Zalesovo Beam 44.84 48 P **P 16 27 06.1 -1.1**
comp=Z,3.0nm,0.5s,mb4.4
SONM Songino Array 59.59 51 P **P 16 28 55.5 -1.4**
comp=Z,0.5nm,0.6s,mb3.7,baz=300,slow=6.0,SNR=6.2
SONM Songino Array 59.59 51 P **P 16 28 55.5 -1.4**
SONM pmax pmax
comp=Z,1.0nm,0.6s
SONM Songino Array 59.59 51 P **P 16 28 55.5 -1.4**
comp=Z,1.0nm,0.6s,mb4.0
KSRS Korea Array 78.46 51 P **P 16 30 51.8 -2.5**
comp=Z,0.8nm,0.6s,mb3.8,baz=318,slow=4.0,SNR=4.1
KSRS LR LR 17 12 41.1
comp=Z,12nm,18.9s,MS3.2,baz=210,slow=41
KSRS Korea Array 78.46 51 P **P 16 30 51.8 -2.5**
KSRS pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
KSRS MLR MLR
comp=Z,12nm,18.9s,MS3.2
KSRS Korea Array 78.46 51 P **P 16 30 51.8 -2.5**
comp=Z,12nm,18.9s

IDC 02 16:20:19.6±2.2, 6°.60S×129°.84E, h0km, mb3.5/1, mb1 3.6/4, mb1mx3.3/18, mbtmp3.4/4, ML3.4/3, Error ellipse: s-maj=88.9km s-min=28.2km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.14**	**199**	Pn		Pn	Pn	16 23 13.9	0.0
	0.3nm,0.3s,baz=80,slow=17,SNR=19								
FITZ				Sn		Sn	Sn	16 25 15.0	-15
	0.2nm,0.3s,baz=270,slow=20,SNR=4.8								
WRA	**Warramunga Arr**	**13.96**	**162**	Pn		Pn	Pn	16 23 38.6	-0.2
	0.2nm,0.3s,baz=345,slow=14,SNR=14								
WRA				Sn		Sn	Sn	16 25 59.5	-15
	0.4nm,0.3s,baz=336,slow=22,SNR=12								
ASAR	**Alice Springs**	**17.41**	**167**	P		Pn		16 24 24.3	+0.3
	0.1nm,0.3s,baz=342,slow=9.0,SNR=13								
ASAR				S		Sn		16 27 23.9	-15
	0.1nm,0.3s,baz=347,slow=25,SNR=4.1								
MKAR	**Makanchi Array**	**67.81**	**327**	P		P		16 31 19.5	+0.1
	0.2nm,0.4s,baz=120,slow=7.2,SNR=6.0								

ISCJB ***02*** *16:28:26.8±1.2, 18°.8S±0°.1×177°.64W±0°.10, h401km±15km, mb3.9/16, Error ellipse: s-maj=19.8km s-min=11.4km az=143.9*
IDC ***02*** *16:28:27.9±2.0, 18°.90S×177°.57W, h402km±21km, mb3.6/13, mb1 3.8/15, mb1mx3.7/20, mbtmp3.6/15, Error ellipse: s-maj=17.0km s-min=11.1km az=154.0*
NEIC ***02*** *16:28:31.8±1.1, 18°.94S×177°.67W, h445km±11km, mb3.9/2, Error ellipse: s-maj=14.2km s-min=12.0km az=147.0*
ISC 02 16:28:27.8±2.3, 18°.9S±0°.1×177°.60W±0°.10, h398km±26km, n35, σ0s74/29, mb3.9/16, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.28**	**284**	*e*P		**Pn**	**Pn**	**16 29 49.3**	**+6.9**
AFI	**Afiamalu**	**7.44**	**50**	P				16 30 17.2	
	5.3nm,0.3s,baz=44,slow=11,SNR=15								
AFI				S			**S**	**16 31 41.1**	**-4.1**
	2.7nm,0.3s,baz=37,slow=20,SNR=4.4								
URZ	**Urewera**	**19.89**	**192**	P		**P**	**P**	**16 32 30.8**	**-0.3**
	0.3nm,0.3s,baz=118,slow=17,SNR=4.4								
EIDS	**Eidsvold**	**29.69**	**252**	*e*P		**P**	**P**	**16 33 59.2**	**+0.2**
ARMA	**Armidale**	**30.16**	**242**	*e*P		**P**	**P**	**16 34 04.2**	**+1.2**
CTA	**Charters Tower**	**34.06**	**262**	*e*P		**P**	**P**	**16 34 36.6**	**-0.2**
	7.3nm,0.7s,mb4.1								
CTA	**Charters Tower**	**34.06**	**262**	P		**P**	**P**	**16 34 36.6**	**-0.2**
	7.5nm,0.6s,mb4.2,baz=96,slow=10,SNR=13								
CTAO	**Charters Tower**	**34.06**	**262**	*e*P		**P**	**P**	**16 34 36.6**	**-0.2**
CMSA	**Cobar Meteorol**	**35.37**	**242**	*e*P		**P**	**P**	**16 34 47.7**	**-0.1**
STKA	**Stephens Creek**	**38.87**	**242**	*e*P		**P**	**P**	**16 35 17.5**	**+0.8**
	3.9nm,0.3s,mb4.2								
STKA	**Stephens Creek**	**38.87**	**242**	P		**P**	**P**	**16 35 17.2**	**+0.5**
	5.8nm,0.4s,mb4.3,baz=96,slow=6.8,SNR=40								
STKA	**Stephens Creek**	**38.87**	**242**	*e*P		**P**	**P**	**16 35 17.4**	**+0.6**
WRAB	**Tennant Creek**	**45.22**	**260**	*e*P		**P**	**P**	**16 36 06.6**	**-1.0**
	2.5nm,0.5s,mb3.8								
WRA	**Warramunga Arr**	**45.23**	**260**	P		**P**	**P**	**16 36 06.5**	**-1.1**
	2.3nm,0.5s,mb3.8,baz=97,slow=6.6,SNR=70								
WRA				PcP		PcP	PcP	16 37 39.6	-0.3
	0.5nm,0.4s,baz=93,slow=3.8,SNR=5.1								
WRA	**Warramunga Arr**	**45.23**	**260**	P		**P**	**P**	**16 36 06.5**	**-1.1**
WRA				PcP		PcP	PcP	16 37 39.6	-0.3
ASAR	**Alice Springs**	**45.29**	**255**	P		**P**	**P**	**16 36 07.8**	**-0.3**
	11nm,0.5s,mb4.5,baz=89,slow=8.8,SNR=394								
ASAR				PcP		PcP	PcP	16 37 39.6	-0.5
	0.9nm,0.5s,baz=105,slow=4.2,SNR=5.4								
ASAR				S			**S**	**16 42 12.8**	**-5.3**
	0.5nm,0.8s,baz=95,slow=14,SNR=4.5								
FITZ	**Fitzroy Crossi**	**53.64**	**261**	P		**P**	**P**	**16 37 10.3**	**0.0**
	2.4nm,0.6s,mb3.6,baz=3.5,slow=11,SNR=9.9								
RPN	**Rapa Nui**	**62.73**	**111**	P		**P**	**P**	**16 38 11.0**	**-1.5**
	22nm,0.3s,mb5.1,baz=270,slow=1.0,SNR=2.4								
MJAR	**Matsushiro Arr**	**69.11**	**323**	P		**P**	**P**	**16 38 52.3**	**0.0**
	1.8nm,0.4s,mb4.0,baz=153,slow=6.1,SNR=8.9								
QSPA	**South Pole Qui**	**71.21**	**180**	*e*P		**P**	**P**	**16 39 05.6**	**+1.3**
	4.8nm,1.2s,mb3.9								
PETK	**Petropavlovsk-**	**74.78**	**345**	P		**P**	**P**	**16 39 25.2**	**+0.1**
	2.9nm,0.6s,mb4.1,baz=98,slow=7.2,SNR=5.6								
KSRS	**Korea Array**	**75.91**	**318**	P		**P**	**P**	**16 39 31.5**	**-0.4**
	0.8nm,0.6s,mb3.5,baz=131,slow=7.0,SNR=5.0								
NVAR	**Mina Array Bea**	**79.57**	**43**	P		**P**	**P**	**16 39 53.1**	**+1.3**
	1.1nm,0.7s,mb3.6,baz=222,slow=9.2,SNR=9.0								
MAW	**Mawson**	**83.24**	**200**	P		**P**	**P**	**16 40 10.4**	**0.0**
	1.3nm,0.7s,mb3.8,baz=141,slow=6.5,SNR=3.4								
TXAR	**Lajitas Array**	**85.85**	**57**	P		**P**	**P**	**16 40 23.9**	**-0.1**
	1.5nm,0.8s,mb3.8,baz=240,slow=10.0,SNR=16								
TXAR	**Lajitas Array**	**85.85**	**57**	P		**P**	**P**	**16 40 23.9**	**-0.1**
PDAR	**Pinedale Array**	**87.50**	**43**	P		**P**	**P**	**16 40 31.1**	**-0.5**
	0.7nm,0.9s,mb3.4,baz=183,slow=3.0,SNR=6.0								
SONM	**Songino Array**	**94.76**	**319**	P		**P**	**P**	**16 41 05.7**	**+0.7**
	0.2nm,0.5s,mb3.4,baz=143,slow=5.0,SNR=2.5								
BVAR	**Borovoye Array**	**118.05**	**321**	PKP			PKPdf	16 46 25.8	-2.0
	0.3nm,0.4s,baz=151,slow=3.3,SNR=3.5								
ARCES	**ARCESS Array B**	**127.37**	**350**	PKP			PKPdf	16 46 44.6	-0.6
	1.6nm,0.3s,baz=54,slow=1.7,SNR=2.0								
FINES	**FINESS Array B**	**134.29**	**344**	PKP			PKPdf	16 46 58.4	0.0
	2.1nm,0.9s,baz=42,slow=2.3,SNR=3.9								
BRTR	**Keskin Array B**	**145.99**	**314**	PKPbc			PKPbc	16 47 21.5	-0.3
	2.3nm,0.7s,baz=132,slow=3.6,SNR=12								
CLL	**Collm**	**146.54**	**348**	||*i*PKPbc		PKPbc	16 47 22.3	-0.6
	comp=Z,7.0nm,0.8s								
BRG	**Berggiesshubel**	**146.75**	**347**	*e*P			PKPbc	16 47 23.3	-0.2
	comp=Z,2.7nm,0.9s								
MMAI	**Mount Meron Ar**	**147.29**	**302**	PKPbc			PKPbc	16 47 25.9	+0.3
	comp=Z,3.2nm,0.5s,baz=71,slow=5.4,SNR=5.6								

IDC ***02*** *16:36:26.6±1.2, 6°.01S×103°.91E, h0km, mb3.9/9, mb1 4.0/9, mb1mx3.8/21, mbtmp3.9/9, Error ellipse: s-maj=61.9km s-min=15.3km az=53.0*
NEIC ***02*** *16:36:31.7±0.7, 6°.04S×103°.96E, h35km, mb4.3/3, Error ellipse: s-maj=36.6km s-min=7.0km az=51.0*
NEIC Felt [II] at Krui and Liwa.
ISCJB ***02*** *16:36:32.6±1.0, 6°.08S±0°.06×103°.99E±0°.06, h60km±8km, mb4.1/13, Error ellipse: s-maj=13.1km s-min=5.4km az=137.4*
DJA ***02*** *16:36:32, 6°.02S×104°.13E, h5km, MLv4.6/11*
ISC 02 16:36:34.0±0.9, 6°.06S±0°.06×104°.01E±0°.06, h54km±8km, n36, σ1s28/48, mb4.1/13, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**0.71**	**42**	P		**Pn**	**Pn**	**16 36 43.2**	**-4.9**
KASI				S		**Sn**	**Sn**	**16 36 52.4**	**-6.0**
LWLI	**Liwa**	**1.03**	**3**	P		**Pn**	**Pn**	**16 36 49.8**	**-2.5**
LWLI				S		**Sn**	**Sn**	**16 37 03.8**	**-2.0**
BLSI	**Bandar Lampung**	**1.41**	**61**	P		**Pn**	**Pn**	**16 36 54.7**	**-2.6**
BLSI				S		**Sn**	**Sn**	**16 37 14.5**	**-0.2**
KLI	**Kotabumi**	**1.45**	**35**	P		**Pn**	**Pn**	**16 36 56.6**	**-1.3**
KLI				S		**Sn**	**Sn**	**16 37 17.2**	**+1.3**
KLSI		**1.53**	**28**	P		**Pn**	**Pn**	**16 36 57.8**	**-1.2**
KLSI				S		**Sn**	**Sn**	**16 37 19.4**	**+1.5**
MDSI	**Maura Dua**	**1.57**	**6**	P		**Pn**	**Pn**	**16 36 58.5**	**-1.0**
MDSI				S		**Sn**	**Sn**	**16 37 19.9**	**+1.2**
RBSI	**Rajabasa**	**1.73**	**83**	P		**Pn**	**Pn**	**16 36 59.6**	**-2.1**
RBSI				S		**Sn**	**Sn**	**16 37 22.4**	**-0.4**
CGJI	**Cibinong**	**1.76**	**108**	P		**Pn**	**Pn**	**16 36 59.0**	**-3.1**
CGJI				S		**Sn**	**Sn**	**16 37 22.6**	**-0.8**
MNAI	**Manna**	**1.98**	**328**	P		**Pn**	**Pn**	**16 37 06.4**	**+1.2**
MNAI				S		**Sn**	**Sn**	**16 37 33.6**	**+4.7**
SBJI	**Serang**	**2.11**	**92**	P		**Pn**	**Pn**	**16 37 06.3**	**-0.6**
SBJI				S		**Sn**	**Sn**	**16 37 33.0**	**+1.1**
LHSI	**Lahat**	**2.27**	**348**	P		**Pn**	**Pn**	**16 37 11.0**	**+1.9**
TNG	**Tangerang**	**2.62**	**93**	S		**Sn**	**Sn**	**16 37 51.6**	**+7.0**
TNG				S		**Sn**	**Sn**	**16 37 51.7**	**+7.1**
SKJI	**Sukabumi**	**2.70**	**111**	P		**Pn**	**Pn**	**16 37 15.7**	**+0.7**
SKJI				S		**Sn**	**Sn**	**16 37 50.6**	**+4.2**
KSI	**Kapahiang**	**2.77**	**329**	P		**Pn**	**Pn**	**16 37 18.2**	**+2.2**
CBJI	**Citeko**	**2.84**	**97**	P		**Pn**	**Pn**	**16 37 18.7**	**+1.7**
LEM	**Lembang**	**3.66**	**102**	P		**Pn**	**Pn**	**16 37 29.9**	**+1.7**
PWJI	**Pagerwojo**	**7.98**	**105**	P		**Pn**	**Pn**	**16 38 28.9**	**+1.5**
MBWA	**Marble Bar**	**21.39**	**136**	P		**P**	**P**	**16 41 17.0**	**-0.3**
	8.3nm,0.6s,mb4.2								
FITZ	**Fitzroy Crossi**	**24.27**	**121**	*e*P		**P**	**P**	**16 41 46.5**	**+0.2**
CMAR	**Chiang Mai Arr**	**24.86**	**348**	P		**P**	**P**	**16 41 51.6**	**-0.1**
	1.0nm,0.5s,mb3.6,baz=182,slow=9.3,SNR=9.5								
WRA	**Warramunga Arr**	**32.53**	**118**	P		**P**	**P**	**16 42 59.6

comp=Z,0.6nm,0.4s,mb4.1,baz=140,slow=7.0,SNR=3.2
BVAR Borovoye Array 65.37 338 P **P 16 47 09.4 -1.3**
comp=Z,0.4nm,0.5s,mb3.7,baz=128,slow=9.3,SNR=2.4
ABKAR Akbulak array 67.11 330 *e*P **P 16 47 21.6 -0.3**
comp=Z,1.3nm,0.5s,mb4.2
BRTR Keskin Array B 78.99 312 P **P 16 48 32.3 -0.1**
comp=Z,0.6nm,0.7s,mb3.7,baz=138,slow=8.9,SNR=1.9
BRTR Keskin Array B 78.99 312 P **P 16 48 32.3 -0.1**
TXAR Lajitas Array 145.09 45 PKPbc PKPbc 16 56 05.4 -0.3
comp=Z,1.1nm,0.7s,baz=237,slow=1.0,SNR=13

IDC 02 16:44:07.7±1.9, 10°.55N×91°.44E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.4/24, mbtmp3.5/6, Error ellipse: s-maj=69.9km s-min=20.0km az=64.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.70**	**42**	Pn	Pn	16 46 42.6	+0.3
	baz=225,slow=11,SNR=3.2						
MKAR	**Makanchi Array**	**36.95**	**350**	P	P	16 51 19.1	+0.7
	0.3nm,0.7s,baz=180,slow=8.7,SNR=3.4						
ZALV	**Zalesovo Beam**	**43.60**	**354**	P	P	16 52 12.7	-0.9
	0.3nm,0.5s,baz=174,slow=4.3,SNR=2.5						
FITZ	**Fitzroy Crossi**	**44.16**	**130**	P	P	16 52 18.4	-0.2
	2.2nm,0.8s,baz=329,slow=5.9,SNR=6.3						
WRA	**Warramunga Arr**	**51.98**	**126**	P	P	16 53 18.8	-0.2
	0.4nm,0.4s,baz=307,slow=8.3,SNR=20						
ASAR	**Alice Springs**	**53.67**	**130**	P	P	16 53 31.8	+0.3
	0.6nm,0.6s,baz=301,slow=7.6,SNR=16						

MEX 02 16:57:39.7±1.5, 17°.54N×94°.67W, h173km±25km, MD3.8, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**1.66**	**117**	*i* P	Pn	16 58 11.8	-0.9
TGIG				*i* S	Sn	16 58 35.1	-2.9
VHO	**Vista Hermosa**	**2.02**	**257**	*i* P	Pn	16 58 16.2	-0.4
VHO				*i* S	Sn	16 58 44.1	-0.9
HUIG	**Huatulco**	**2.23**	**218**	*i* P	Pn	16 58 16.2	-2.8
HUIG				*i* S	Sn	16 58 46.9	-2.4
PCIG		**2.29**	**142**	*e*P	Pn	16 58 19.3	-0.3
PCIG				*i* S	Sn	16 58 48.5	-1.9
PNIG	**Pinotepa**	**3.50**	**252**	*i* P	Pn	16 58 31.6	-2.6
PNIG				*i* S	Sn	16 59 13.8	-2.9

*IDC **02** 17:01:40.2±1.2, 7°.16S×155°.41E, h0km, mb3.8/6, mb1 3.8/7, mb1mx3.6/17, mbtmp3.8/7, ML3.5/1, Error ellipse: s-maj=29.7km s-min=25.8km az=82.0*
*ISCJB **02** 17:01:43.3±0.8, 7°.3S±0°.1×155°.5E±0°.1, h33km, mb3.6/6, Error ellipse: s-maj=20.2km s-min=16.9km az=27.3*
*NEIC **02** 17:01:45.1±0.6, 7°.24S×155°.50E, h35km, Error ellipse: s-maj=16.5km s-min=13.8km az=212.0*
ISC 02 17:01:45.2±0.8, 7°.3S±0°.1×155°.5E±0°.1, h35km, n8, σ0°.59/9, mb3.6/6, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.91**	**117**	Pn	**Pn**	**17 02 56.6**	**+0.1**
	1.9nm,0.3s,baz=269,slow=5.7,SNR=2.7						
HNR				Sn	**Sn**	**17 03 58.9**	**+6.9**
	3.3nm,0.3s,baz=49,slow=19,SNR=3.2						
WRA	**Warramunga Arr**	**24.09**	**236**	P	**P**	**17 06 58.4**	**+0.7**
	1.0nm,0.8s,mb3.3,baz=60,slow=9.3,SNR=6.6						
ASAR	**Alice Springs**	**26.38**	**229**	P	**P**	**17 07 18.3**	**-0.2**
	0.3nm,0.7s,mb3.0,baz=59,slow=9.7,SNR=5.3						
STKA	**Stephens Creek**	**27.72**	**206**	P	**P**	**17 07 30.1**	**-0.4**
	1.5nm,0.9s,mb3.6,baz=27,slow=9.0,SNR=2.8						
SONM	**Songino Array**	**69.82**	**327**	P	**P**	**17 12 53.2**	**+1.0**
	0.5nm,0.5s,mb3.7,baz=114,slow=1.7,SNR=4.4						
MK31	**Makanchi Array**	**83.92**	**319**	*e*P	**P**	**17 14 11.6**	**0.0**
MKAR	**Makanchi Array**	**83.92**	**319**	P	**P**	**17 14 10.7**	**-1.0**
	1.0nm,0.7s,mb4.1,baz=101,slow=5.6,SNR=16						
ZALV	**Zalesovo Beam**	**84.67**	**326**	P	**P**	**17 14 15.0**	**-0.3**
	0.8nm,0.6s,mb4.1,baz=123,slow=4.8,SNR=4.6						

*ISCJB **02** 17:07:39.3±1.4, 24°.5S±0°.4×179°.9E±0°.2, h500km, mb4.1/11, Error ellipse: s-maj=57.8km s-min=21.6km az=161.7*
*IDC **02** 17:07:39.8±3.0, 24°.56S×179°.93E, h496km±25km, mb3.5/5, mb1 3.7/5, mb1mx3.3/15, mbtmp3.5/5, Error ellipse: s-maj=85.5km s-min=25.5km az=162.0*
*NEIC **02** 17:07:39.9±1.4, 24°.62S×179°.93E, h500km, mb4.3/1, Error ellipse: s-maj=99.7km s-min=21.9km az=164.0*
ISC 02 17:07:40.2±1.4, 24°.5S±0°.4×179°.9E±0°.2, h500km, n15, σ0°.70/15, mb4.1/11, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EIDS	**Eidsvold**	**26.16**	**262**	*e*P	**P**	**17 12 34.6**	**+0.7**
RMQ	**Roma**	**28.18**	**259**	*e*P	**P**	**17 12 53.1**	**+1.4**
	3.4nm,0.5s,mb4.0						
CMSA	**Cobar Meteorol**	**30.94**	**249**	*e*P	**P**	**17 13 15.9**	**+0.3**
CTA	**Charters Tower**	**31.42**	**271**	*e*P	**P**	**17 13 20.5**	**+0.6**
	7.8nm,0.4s,mb4.5						
CTA	**Charters Tower**	**31.42**	**271**	P	**P**	**17 13 20.6**	**+0.7**
	9.5nm,0.4s,mb4.6,baz=96,slow=11,SNR=32						
MTSU	**Mount Surprise**	**33.71**	**274**	*e*P	**P**	**17 13 40.0**	**+0.6**
	11nm,0.5s,mb4.5						
STKA	**Stephens Creek**	**34.45**	**249**	*e*P	**P**	**17 13 45.8**	**+0.4**
	2.2nm,0.6s,mb3.8						
STKA	**Stephens Creek**	**34.45**	**249**	P	**P**	**17 13 45.1**	**-0.3**
	2.1nm,0.6s,mb3.8,baz=100,slow=9.3,SNR=9.4						
BBOO	**Buckleboo**	**39.16**	**248**	*e*P	**P**	**17 14 23.5**	**-0.8**
	1.9nm,0.2s,mb4.2						
ASAR	**Alice Springs**	**41.88**	**261**	P	**P**	**17 14 45.8**	**-0.4**
	1.0nm,0.5s,mb3.5,baz=99,slow=9.1,SNR=45						
ASAR				ScP	ScP	17 19 32.5	-0.5
	1.4nm,1.2s,baz=100,slow=4.4,SNR=4.2						
WRAB	**Tennant Creek**	**42.30**	**267**	*e*P	**P**	**17 14 48.6**	**-0.9**
	3.8nm,0.4s,mb4.2						
WRA	**Warramunga Arr**	**42.31**	**267**	P	**P**	**17 14 48.9**	**-0.7**
	4.3nm,0.4s,mb4.3,baz=104,slow=8.3,SNR=79						
WRA				ScP	ScP	17 19 35.4	+0.6
	1.9nm,0.8s,baz=99,slow=3.8,SNR=13						
KAKA	**Kakadu**	**46.30**	**276**	*e*P	**P**	**17 15 19.8**	**-0.8**
	21nm,1.4s,mb4.4						
KNA	**Kununurra**	**48.60**	**270**	*e*P	**P**	**17 15 37.6**	**-0.3**
	12nm,1.1s,mb4.1						
TXAR	**Lajitas Array**	**90.80**	**58**	P	**P**	**17 19 50.0**	**+0.3**
	0.7nm,0.8s,mb3.6,baz=224,slow=5.8,SNR=7.9						

*ISCJB **02** 17:11:15.0±0.4, 18°.83S±0°.04×69°.33W±0°.04, h98km±4km, mb4.4/48, Error ellipse: s-maj=7.6km s-min=6.3km az=40.3*
*NEIC **02** 17:11:16.2±0.3, 19°.02S×69°.39W, mb4.5/34, Error ellipse: s-maj=11.3km s-min=6.9km az=46.0*
NEIC Felt [II] at Arica, Camina, Huara, Pozo Almonte and Putre.
*BJI **02** 17:11:17.2, 19°.00S×69°.40W, h104km, mB4.8/5*
*IDC **02** 17:11:17.7±0.6, 18°.84S×69°.30W, h111km±4km, mb4.1/17, mb1 4.2/17, mb1mx4.2/21, mbtmp4.1/17, MS3.5/3, Ms1 3.5/3, ms1mx3.0/17, Error ellipse: s-maj=16.3km s-min=12.0km az=47.0*
*GUC **02** 17:11:17.5±0.4, 19°.03S×69°.50W, h104km±2km, ML4.8*
ISC 02 17:11:16.7±0.4, 18°.91S±0°.04×69°.31W±0°.04, h99km±4km, h107km±.8km; pP-P, n365, σ0°.72/351, mb4.4/49, 132C-132D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNMC	**Miæe Miæ**	**0.35**	**231**	⇓*i* P	**Pn**	**17 11 32.6**	**+1.2**
MNMC				*i* S	**Sn**	**17 11 44.3**	**+1.8**
MNMC				AML	AML	17 11 48.2	
	comp=E,104μm,0.4s						
PSGC	**Pisagua**	**1.03**	**228**	⇑*i* P	**Pn**	**17 11 36.5**	**-0.9**
PSGC				*i* S	**Sn**	**17 11 51.1**	**+1.9**
PSGC				AML	AML	17 11 52.1	
	comp=E,35μm,0.3s						
HMBC	**Humberston**	**1.47**	**202**	⇑*i* P	**Pn**	**17 11 42.1**	**-0.4**
HMBC				*i* S	**Sn**	**17 12 00.8**	**+0.9**
HMBC				AML	AML	17 12 05.8	
	comp=N,15μm,0.3s						
PB01	**Plate Boundary**	**2.13**	**184**	⇑*i* P	**Pn**	**17 11 51.2**	**+0.2**
PB01				*i* S	**Sn**	**17 12 16.5**	**+0.5**
PB01				AML	AML	17 12 20.5	
	comp=E,4μm,0.4s						
LPAZ	**La Paz**	**2.84**	**24**	P	**Pn**	**17 12 05.0**	**+4.7**
	comp=E,12nm,0.3s,baz=190,slow=7.4,SNR=172						
LPAZ				S	**Sn**	**17 12 40.8**	**+7.4**
	comp=E,14nm,0.3s,baz=197,slow=11,SNR=8.3						
LPAZ	**La Paz**	**2.84**	**24**	*e*Pn	**Pn**	**17 12 04.8**	**+4.4**
PB04	**Plate Boundary**	**3.34**	**183**	*e*P	**Pn**	**17 12 08.4**	**+1.4**
PB04				*i* S	**Sn**	**17 12 47.2**	**+1.7**
PB04				AML	AML	17 13 09.2	
	comp=N,2μm,0.7s						
SIV	**San Ignacio**	**8.38**	**71**	P	**Pn**	**17 13 15.9**	**+0.5**
	comp=N,12nm,0.3s,baz=262,slow=12,SNR=342						
SIV				S	**Sn**	**17 14 49.4**	**+1.0**
	baz=161,slow=21,SNR=5.8						
NNA	**Nana**	**10.00**	**312**	*e*Pn	**Pn**	**17 13 33.7**	**-3.9**
LCO	**Las Campanas**	**10.13**	**187**	*e*Pn	**Pn**	**17 13 33.2**	**-6.0**
	comp=N,36nm,0.7s						
LCO				*e*Sn	**Sn**	**17 15 22.7**	**-8.3**
CFAA	**Coronel Fontan**	**12.68**	**176**	P	**Pn**	**17 14 09.9**	**-3.5**
	comp=N,0.1nm,0.3s,baz=3.7,slow=15,SNR=3.7						
CPUP	**Villa Florida**	**13.29**	**126**	P	**Pn**	**17 14 19.9**	**-1.6**
	comp=N,3.0nm,0.3s,baz=288,slow=12,SNR=27						
CPUP	**Villa Florida**	**13.29**	**126**	*e*Pn	**Pn**	**17 14 19.8**	**-1.7**
TRQA	**Tornquist**	**20.12**	**163**	*e*P	**P**	**17 15 42.4**	**-0.3**
	comp=N,21nm,0.6s						
OTAV	**Otavalo**	**21.04**	**334**	*e*P	**P**	**17 15 55.5**	**+2.7**
	comp=N,7.9nm,0.8s,mb4.1						
OTAV				*e*pP		17 16 13.2	
PLCA	**Paso Flores**	**21.77**	**183**	P	**P**	**17 16 00.1**	**-0.3**
	comp=N,20nm,0.9s,mb4.5,baz=1.0,slow=11,SNR=34						
PLCA	**Paso Flores**	**21.77**	**183**	*e*P	**P**	**17 15 59.6**	**-0.8**
	comp=N,31nm,1.0s,mb4.6						
ROSC	**El Rosal**	**24.13**	**348**	LR	LR	17 27 28.6	
	comp=N,46nm,20.5s,baz=23,slow=40						
RCBR	**Riachuelo**	**35.04**	**73**	*e*P	**P**	**17 18 01.6**	**+1.3**
	comp=N,29nm,0.7s,mb5.2						
AGPR	**Aguadilla, PR**	**37.21**	**3**	*e*P	**P**	**17 18 18.9**	**+0.3**
	comp=N,101nm,1.1s						
APG	**El Apazote**	**39.62**	**327**	P	**P**	**17 18 38.5**	**-0.4**
	comp=N,5.8nm,0.8s,mb4.4,baz=142,slow=8.4,SNR=6.2						
APG				pP	pP	17 19 03.8	+2.0
	comp=N,5.4nm,0.8s,baz=154,slow=11,SNR=3.9						
CMIG	**Matias Romero**	**43.73**	**323**	P	**P**	**17 19 12.0**	**-0.4**
	comp=N,4.8nm,0.7s,mb4.3,baz=74,slow=4.9,SNR=6.5						
CPCT	**Cooper Cave**	**55.95**	**345**	*e*P	**P**	**17 20 43.0**	**-1.7**
TKL	**Tuckaleechee C**	**55.98**	**346**	P	**P**	**17 20 43.5**	**-1.3**
	comp=N,4.2nm,0.9s,mb4.5,baz=166,slow=10,SNR=4.6						
TKL	**Tuckaleechee C**	**55.98**	**346**	P	**P**	**17 20 43.5**	**-1.3**
SWET	**Sewanee**	**56.09**	**344**	*e*P	**P**	**17 20 42.8**	**-2.9**
SWET				*e*pP	pP	17 21 10.2	+0.3
ELN	**Prospectdale**	**56.87**	**349**	*e*P	**P**	**17 20 50.4**	**-0.8**
ELN				*e*pP	pP	17 21 15.8	+0.4
WVT	**Waverly**	**57.48**	**342**	*e*P	**P**	**17 20 52.8**	**-2.7**
	comp=N,3.3nm,0.8s,mb4.4						
WVT				*e*pP	pP	17 21 19.0	-0.8
MIAR	**Mount Ida**	**57.95**	**336**	*e*P	**P**	**17 20 57.2**	**-1.6**
	comp=N,8.2nm,1.3s,mb4.6						
MIAR				*e*pP	pP	17 21 22.4	-0.7
628A	**Black Gap, Mar**	**58.00**	**325**	⇓P	**P**	**17 20 58.8**	**-0.4**
	baz=58,SNR=14						
627A	**Terlingua Ranc**	**58.24**	**325**	⇓P	**P**	**17 21 00.2**	**-0.8**
	baz=58,SNR=7.7						
TXAR	**Lajitas Array**	**58.30**	**325**	P	**P**	**17 21 00.3**	**-1.0**
	comp=N,1.6nm,0.8s,mb4.1,baz=149,slow=7.5,SNR=17						
TXAR				pP	pP	17 21 26.9	+1.2
	comp=N,0.8nm,0.8s,baz=168,slow=7.4,SNR=4.6						
TXAR	**Lajitas Array**	**58.30**	**325**	P	**P**	**17 21 00.3**	**-1.1**
TXAR				pP	pP	17 21 26.9	+1.2
528A	**Cox Ranch, San**	**58.48**	**326**	⇑P	**P**	**17 21 01.6**	**-0.9**
	baz=59,SNR=5.7						
626A	**Big Bend Ranch**	**58.73**	**324**	⇑P	**P**	**17 21 03.7**	**-0.6**
	baz=59,SNR=18						
428A	**Kincaid Ranch,**	**58.87**	**326**	⇓P	**P**	**17 21 04.6**	**-0.7**
	baz=59						
527A	**Woodward Ranch**	**58.91**	**325**	⇓P	**P**	**17 21 04.6**	**-0.9**
	baz=59,SNR=8.0						
526A	**Mary Lane Ranc**	**59.10**	**325**	⇓P	**P**	**17 21 06.3**	**-0.5**
	baz=59,SNR=11						
427A	**Hayter Ranch,**	**59.34**	**326**	⇑P	**P**	**17 21 07.4**	**-1.1**
	baz=60,SNR=5.1						
SIUC	**Southern Illin**	**59.36**	**342**	*e*P	**P**	**17 21 07.0**	**-1.5**
	comp=N,18nm,0.6s,mb5.3						
SIUC				*e*pP	pP	17 21 32.8	-0.1
328A	**Wristen Ranch,**	**59.45**	**327**	⇓P	**P**	**17 21 08.5**	**-0.8**
	baz=60						
426A	**McDonald Obser**	**59.54**	**325**	⇑P	**P**	**17 21 09.1**	**-0.8**
	baz=60,SNR=6.6						
FVM	**French Village**	**59.97**	**341**	*e*P	**P**	**17 21 11.3**	**-1.4**
	comp=N,11nm,0.6s,mb5.0						
FVM				*e*pP	pP	17 21 36.5	-0.7
326A	**Caldwell Ranch**	**60.02**	**326**	⇑P	**P**	**17 21 12.1**	**-1.0**
	baz=60,SNR=7.0						
227A	**Bennet, Jal**	**60.20**	**327**	⇓P	**P**	**17 21 13.6**	**-0.8**
	baz=60						
WMOK	**Wichita Mounta**	**60.26**	**332**	*e*P	**P**	**17 21 12.2**	**-2.5**
	comp=N,2.1nm,0.7s,mb4.3						
325A	**Bean Ranch, Si**	**60.59**	**325**	⇑P	**P**	**17 21 16.2**	**-0.9**
	baz=61,SNR=21						
226A	**Malaga, Loving**	**60.66**	**326**	⇑P	**P**	**17 21 17.0**	**-0.5**
	baz=61,SNR=8.3						
GDL2	**Guadalupe Moun**	**60.91**	**326**	*e*P	**P**	**17 21 17.9**	**-1.3**
	comp=N,9.1nm,0.9s,mb4.8						
GDL2				*e*pP	pP	17 21 45.0	+1.2
324A	**Moseley Ranch,**	**60.92**	**325**	⇓P	**P**	**17 21 17.7**	**-1.6**
	baz=61,SNR=7.3						
MNTX	**Cornudas Mount**	**61.07**	**325**	*e*P	**P**	**17 21 18.5**	**-1.8**
	comp=N,5.7nm,1.1s,mb4.5						
MNTX				*e*pP	pP	17 21 44.6	-0.2
225A	**Deer Hill, Car**	**61.08**	**326**	⇓P	**P**	**17 21 19.5**	**-0.9**
	baz=61,SNR=6.5						
Z27A	**Tatum**	**61.20**	**328**	⇑P	**P**	**17 21 19.6**	**-1.5**
	baz=62,SNR=9.0						
125A	**Gardner Draw,**	**61.42**	**326**	⇓P	**P**	**17 21 21.4**	**-1.3**
	baz=62						
224A	**Cornudas Mount**	**61.43**	**325**	⇑P	**P**	**17 21 21.4**	**-1.4**
	baz=62,SNR=9.9						
MSTX	**Muleshoe**	**61.50**	**329**	⇓P	**P**	**17 21 21.7**	**-1.4**
	baz=62,SNR=9.2						
Z26A	**Caprock**	**61.55**	**327**	⇑P	**P**	**17 21 22.6**	**-0.9**
	baz=62						
Y27A	**Causey**	**61.62**	**328**	⇑P	**P**	**17 21 22.7**	**-1.3**
	baz=62						
124A	**Stringfield Ra**	**61.88**	**326**	⇑P	**P**	**17 21 24.8**	**-0.9**
	baz=62,SNR=7.0						
Z25A	**Roswell**	**61.94**	**327**	⇓P	**P**	**17 21 25.0**	**-1.1**
	baz=62						
Z24A	**Sheeppen Canyo**	**62.32**	**326**	⇓P	**P**	**17 21 27.7**	**-1.0**
	baz=63,SNR=6.0						
Y25A	**Mesa, Roswell**	**62.43**	**327**	⇓P	**P**	**17 21 28.2**	**-1.1**
	baz=63						
X26A	**CR and CF Fran**	**62.48**	**328**	⇓P	**P**	**17 21 28.7**	**-1.0**
	baz=63						
W27A	**Bowe Ranch, En**	**62.52**	**329**	⇓P	**P**	**17 21 28.7**	**-1.2**
	baz=63						
Z23A	**Rita Site, Whi**	**62.73**	**326**	⇓P	**P**	**17 21 31.0**	**-0.3**
	baz=63						
W26A	**Owens Ranch, T**	**62.88**	**329**	⇓P	**P**	**17 21 31.5**	**-0.9**
	baz=63						
220A	**Playas Peak, P**	**62.97**	**323**	⇓P	**P**	**17 21 32.8**	**-0.3**
	baz=63,SNR=7.8						
121A	**Cookes Peak, D**	**63.02**	**324**	⇓P	**P**	**17 21 33.6**	**+0.2**
	baz=63						
319A	**Douglas**	**63.02**	**322**	⇑P	**P**	**17 21 33.2**	**-0.2**
	baz=63						
Z22A	**Elephant Butte**	**63.12**	**325**	⇑P	**P**	**17 21 33.7**	**-0.2**
	baz=63,SNR=12						
Y23A	**Lovelace Mesa,**	**63.15**	**326**	⇓P	**P**	**17 21 33.8**	**-0.4**
	baz=63						
X24A	**Lazy VL Ranch,**	**63.31**	**327**	⇓P	**P**	**17 21 34.3**	**-0.9**
	baz=64						
W25A	**X Bar L Ranch,**	**63.33**	**328**	⇑P	**P**	**17 21 34.3**	**-1.0**
	baz=64,SNR=5.1						
V26A	**Tequesquite Ra**	**63.46**	**329**	⇓P	**P**	**17 21 35.2**	**-1.0**
	baz=64						
219A	**White Tail Can**	**63.46**	**322**	⇑P	**P**	**17 21 36.0**	**-0.3**
	baz=64						
318A	**Bisbee**	**63.48**	**321**	⇑P	**P**	**17 21 36.3**	**-0.1**
	baz=64						
120A	**U Bar Ranch, L**	**63.51**	**323**	⇑P	**P**	**17 21 36.5**	**-0.1**
	baz=64						
BNM	**Barren Site**	**63.62**	**326**	*e*P	**P**	**17 21 37.1**	**-0.1**
	comp=N,2.8nm,0.9s,mb4.1						
W24A	**Lazy 6 Ranch,**	**63.80**	**327**	⇑P	**P**	**17 21 37.5**	**-0.9**
	baz=64						
V25A	**Rancho No Teng**	**63.90**	**328**	⇓P	**P**	**17 21 38.3**	**-0.8**
	baz=64,SNR=8.5						
Z20A	**Nine Sixteen R**	**63.91**	**324**	⇑P	**P**	**17 21 39.3**	**+0.2**
	baz=64,SNR=6.7						
U26A	**Atchley Ranch,**	**63.92**	**329**	⇑P	**P**	**17 21 38.4**	**-0.7**
	baz=64,SNR=5.5						
Y21A	**Point of Rocks**	**64.07**	**325**	⇑P	**P**	**17 21 40.6**	**+0.3**
	baz=64,SNR=6.0						
V24A	**Rampart Ranch,**	**64.14**	**328**	⇓P	**P**	**17 21 40.3**	**-0.4**
	baz=64						
ANMO	**Albuquerque**	**64.14**	**327**	P	**P**	**17 21 40.2**	**-0.5**
	comp=N,1.9nm,0.8s,mb4.0,baz=140,slow=6.8,SNR=4.4						
ANMO	**Albuquerque**	**64.14**	**327**	P	**P**	**17 21 40.2**	**-0.5**
U25A	**Circle Dot Ran**	**64.24**	**329**	⇓P	**P**	**17 21 40.7**	**-0.6**
	baz=64,SNR=7.6						
118A	**Homack Ranch,**	**64.34**	**322**	⇑P	**P**	**17 21 41.9**	**-0.1**
	baz=65						
Y20A	**Horse Springs,**	**64.38**	**324**	⇓P	**P**	**17 21 42.4**	**+0.2**
	baz=65						
Z19A	**T-Link Ranch,**	**64.42**	**323**	⇑P	**P**	**17 21 42.9**	**+0.4**
	baz=65						
X21A	**Alamocita Cree**	**64.46**	**325**	⇓P	**P**	**17 21 42.9**	**+0.1**
	baz=65,SNR=6.4						
V23A	**Ortiz Mt. (NFS**	**64.61**	**327**	⇓P	**P**	**17 21 43.7**	**0.0**
	baz=65						
117A	**Oracle**	**64.74**	**322**	⇓P	**P**	**17 21 44.5**	**-0.2**
	baz=65						
216A	**Three Points,**	**64.76**	**321**	⇓P	**P**	**17 21 44.9**	**+0.1**
	baz=65						
T25A	**Trinidad**	**64.83**	**329**	⇓P	**P**	**17 21 44.8**	**-0.3**
	baz=65						
Y19A	**Nutrioso**	**64.90**	**324**	⇓P	**P**	**17 21 46.3**	**+0.6**
	baz=65						
X20A	**Quemado**	**64.92**	**325**	⇓P	**P**	**17 21 45.9**	**+0.2**
	baz=65						
U23A	**El Rito**	**65.07**	**328**	⇑P	**P**	**17 21 46.4**	**-0.3**
	baz=65						
V22A	**San Miguel Ran**	**65.12**	**327**	⇑P	**P**	**17 21 47.1**	**+0.1**
	baz=65,SNR=9.6						
Y18A	**Canyon Day Jun**	**65.21**	**323**	⇑P	**P**	**17 21 47.8**	**+0.2**
	baz=66						
S25A	**Robets Cordova**	**65.26**	**330**	⇑P	**P**	**17 21 47.2**	**-0.6**
	baz=66						
116A	**Eloy**	**65.30**	**321**	⇑P	**P**	**17 21 48.5**	**+0.2**
	baz=66						
W20A	**Ramah**	**65.36**	**325**	⇓P	**P**	**17 21 48.8**	**+0.2**
	baz=66						
V21A	**Milan**	**65.41**	**326**	⇓P	**P**	**17 21 49.1**	**+0.2**
	baz=66						
U22A	**Llaves**	**65.45**	**327**	⇑P	**P**	**17 21 49.3**	**+0.2**
	baz=66						
214A	**Organ Pipe Nat**	**65.54**	**320**	⇓P	**P**	**17 21 50.2**	**+0.4**
	baz=66						
Y17A	**Roosevelt**	**65.61**	**323**	⇑P	**P**	**17 21 50.4**	**+0.1**
	baz=66,SNR=6.1						
S24A	**Houchin Ranch,**	**65.62**	**329**	⇑P	**P**	**17 21 50.3**	**+0.1**
	baz=66						
SDCO	**Great Sand Dun**	**65.84**	**329**	*e*P	**P**	**17 21 51.3**	**-0.3**
	comp=N,8.8nm,1.1s,mb4.5						
SDCO				*e*pP	pP	17 22 16.0	-0.5
V20A	**Brimhall**	**65.85**	**326**	⇓P	**P**	**17 21 51.7**	**0.0**
	baz=66						
U21A	**Nageezi**	**65.90**	**327**	⇑P	**P**	**17 21 51.9**	**-0.1**
	baz=66,SNR=5.7						
T22A	**Edith**	**65.96**	**328**	⇑P	**P**	**17 21 52.9**	**+0.4**
	baz=66						
V19A	**Window Rock**	**66.09**	**325**	⇓P	**P**	**17 21 53.4**	**+0.1**
	baz=66						
Y16A	**Circle Bar Ran**	**66.11**	**322**	⇓P	**P**	**17 21 54.0**	**+0.6**
	baz=66						
114A	**Black Gap (USA**	**66.14**	**321**	⇑P	**P**	**17 21 53.7**	**+0.1**
	baz=66						
Q25A	**Bedland, Calha**	**66.18**	**331**	⇑P	**P**	**17 21 53.4**	**-0.4**
	baz=66						
T21A	**Navajo Lake**	**66.27**	**327**	⇓P	**P**	**17 21 53.9**	**-0.4**
	baz=66						
U20A	**Newcomb**	**66.31**	**326**	⇑P	**P**	**17 21 54.3**	**-0.4**
	baz=67						
X16A	**Lo Mia Camp, P**	**66.47**	**323**	⇓P	**P**	**17 21 56.1**	**+0.4**
	baz=67						
S22A	**4UR Ranch, Cre**	**66.49**	**328**	⇓P	**P**	**17 21 55.7**	**-0.1**
	baz=67						
P25A	**Willow Gulch B**	**66.62**	**331**	⇓P	**P**	**17 21 56.3**	**-0.2**
	baz=67						
Y15A	**Casa Rosa Ranc**	**66.66**	**322**	⇑P	**P**	**17 21 57.2**	**+0.2**
	baz=67						
S21A	**Coal Bank Pass**	**66.91**	**328**	⇓P	**P**	**17 21 58.4**	**0.0**
	baz=67						
T19A	**Beclabito**	**66.92**	**326**	⇓P	**P**	**17 21 58.4**	**-0.1**
	baz=67						
X15A	**Humboldt**	**66.98**	**322**	⇓P	**P**	**17 21 59.4**	**+0.4**
	baz=67						
V17A	**Tonalea, Kykot**	**66.98**	**324**	⇓P	**P**	**17 21 58.9**	**0.0**
	baz=67						
W16A	**Flagstaff**	**67.01**	**323**	⇑P	**P**	**17 21 59.7**	**+0.6**
	baz=67						
U18A	**Rough Rock, Ch**	**67.06**	**325**	⇓P	**P**	**17 21 59.6**	**+0.1**
	baz=67				

S16A	Weppner Ranch,	68.95	325	⇑P	P	17 22 11.6 +0.4
	baz=69					
V13A	Grand Canyon W	68.96	322	⇑P	P	17 22 11.8 +0.5
	baz=69,SNR=7.0					
R17A	Hanksville Air	69.00	326	⇓P	P	17 22 11.5 0.0
	baz=69,SNR=6.5					
P19A	Cripple Cowboy	69.02	328	⇑P	P	17 22 11.6 0.0
	baz=69					
O20A	White River Ci	69.04	329	⇓P	P	17 22 11.6 -0.1
	baz=69					
GMRC	Granite Mounta	69.21	320	⇑P	P	17 22 13.7 +0.8
	baz=69					
T14A	Hurricane	69.30	324	⇑P	P	17 22 14.2 +0.8
	baz=70					
U13A	Pakoon Wash	69.34	323	⇑P	P	17 22 14.2 +0.5
	baz=70					
V12A	Nelson	69.38	322	⇓P	P	17 22 14.4 +0.5
	baz=70					
N20A	Spence Gulch,	69.59	329	⇓P	P	17 22 14.8 -0.3
	baz=70,SNR=5.1					
O19A	Miners Draw (B	69.60	328	⇑P	P	17 22 15.0 -0.2
	baz=70					
Q16A	Castle Valley	69.61	326	⇓P	P	17 22 15.6 +0.3
	baz=70					
HEC	Hector,Ludlow	69.65	320	⇓P	P	17 22 16.5 +0.9
	baz=70					
P18A	Preston Nutter	69.65	327	⇑P	P	17 22 15.8 +0.2
	baz=70,SNR=5.5					
U12A	Valley of Fire	69.68	322	⇓P	P	17 22 16.1 +0.3
	baz=70					
T13A	Saint George	69.73	323	⇓P	P	17 22 16.9 +0.8
	baz=70					
M21A	Separation Pea	69.76	330	⇑P	P	17 22 16.1 -0.1
	baz=70					
ARUT	Antelope Range	70.01	324	eP	P	17 22 18.9 +1.1
	comp=N,2.3nm,0.6s,mb4.2					
ARUT				epP	pP	17 22 43.9 +1.1
L21A	Rawlins	70.04	331	⇓P	P	17 22 17.4 -0.5
	baz=70,SNR=5.7					
M20A	Sweetwater, Wa	70.06	330	⇓P	P	17 22 17.9 -0.1
	baz=70					
N19A	John Jarvie Ra	70.08	329	⇑P	P	17 22 18.0 -0.1
	baz=70					
S13A	Holt Ranch, En	70.10	324	⇑P	P	17 22 19.3 +1.0
	baz=70,SNR=6.9					
GSC	Goldstone	70.25	320	⇑P	P	17 22 19.9 +0.6
	baz=70					
RSSD	Black Hills	70.31	334	eP	P	17 22 19.2 -0.2
	comp=N,1.3nm,0.6s,mb3.9					
O17A	Robinson Place	70.33	327	⇑P	P	17 22 19.9 +0.2
	baz=71,SNR=6.6					
N18A	Larsen Ranch,	70.38	329	⇑P	P	17 22 20.5 +0.6
	baz=71					
L20A	Wamsutter	70.53	330	⇑P	P	17 22 20.7 -0.1
	baz=71					
R13A	O'Grain Ranch,	70.59	324	⇓P	P	17 22 22.2 +1.0
	baz=71					
T11A	Corn Creek, Al	70.64	323	⇑P	P	17 22 22.3 +0.7
	baz=71,SNR=7.2					
EDW2	Edwards Air Fo	70.70	319	⇑P	P	17 22 22.7 +0.6
	baz=71					
U10A	Ash Meadows, A	70.72	321	⇑P	P	17 22 23.0 +0.9
	baz=71					
DAU	Daniels Canyon	70.75	327	eP	P	17 22 21.6 -0.6
	comp=N,4.3nm,1.0s,mb4.2					
DAU				epP	pP	17 22 48.7 +1.3
Q14A	Sevier Lake (B	70.78	325	⇓P	P	17 22 23.2 +0.8
	baz=71,SNR=11					
LRMC	Laurel Mountai	70.91	320	⇑P	P	17 22 23.5 +0.2
	baz=71					
N17A	Moffit Pass	70.94	328	⇓P	P	17 22 23.8 +0.5
	baz=71					
K20A	Yellowstone Ra	71.03	331	⇓P	P	17 22 23.5 -0.3
	baz=71					
R12A	Pony Springs,	71.05	324	⇑P	P	17 22 25.1 +1.0
	baz=71,SNR=6.3					
FURC	Furnace Creek,	71.07	321	⇓P	P	17 22 25.3 +1.0
	baz=71					
L19A	Farson	71.09	330	⇓P	P	17 22 24.1 -0.1
	baz=71					
P14A	Drum Mountains	71.10	326	⇑P	P	17 22 25.2 +0.8
	baz=71,SNR=7.6					
Q13A	Wheeler Ranch,	71.16	325	⇓P	P	17 22 25.6 +0.8
	baz=71					
MPMC	Manual Prospec	71.17	320	⇑P	P	17 22 25.4 +0.5
	baz=71					
N16A	Rees Ranch, Co	71.20	328	⇓P	P	17 22 25.6 +0.7
	baz=72					
M17A	Scullys Gap (B	71.25	328	⇑P	P	17 22 25.3 +0.1
	baz=72					
QSPA	South Pole Qui	71.27	180	P	P	17 22 25.6 +0.8
	comp=N,4.5nm,0.6s,mb4.5,baz=159,slow=2.0,SNR=52					
L18A	Fontenelle, Gr	71.28	329	⇓P	P	17 22 25.6 +0.2
	baz=72					
K19A	Absolon Red Bu	71.40	330	⇑P	P	17 22 25.6 -0.4
	baz=72					
DUG	Dugway	71.40	326	⇑P	P	17 22 26.4 +0.2
	baz=72					
ISA	Isabella	71.51	319	⇑P	P	17 22 27.9 +1.0
	baz=72					
ISA	Isabella	71.51	319	eP	P	17 22 27.3 +0.4
	comp=N,3.6nm,0.8s,mb4.2					
ISA				epP	pP	17 22 53.6 +1.5
P13A	Bates Ranch, G	71.52	325	⇓P	P	17 22 27.5 +0.7
	baz=72					
R11A	Troy Canyon, C	71.61	323	⇓P	P	17 22 28.0 +0.6
	baz=72,SNR=7.6					
Q12A	Willow Creek R	71.67	324	⇓P	P	17 22 28.5 +0.7
	baz=72					
PDAR	Pinedale Array	71.69	330	P	P	17 22 27.0 -0.8
	comp=N,1.0nm,0.8s,mb3.7,baz=129,slow=5.9,SNR=7.2					
PDAR				pP	pP	17 22 55.1 +2.1
	comp=N,1.1nm,0.7s,baz=112,slow=6.9,SNR=5.5					
HWUT	Hardware Ranch	71.80	328	eP	P	17 22 27.9 -0.6
	comp=N,4.0nm,0.8s,mb4.3					
L17A	Cokeville	71.82	329	⇑P	P	17 22 28.6 0.0
	baz=72					
K18A	Toltan Ranch,	71.82	330	⇓P	P	17 22 28.8 +0.2
	baz=72					
PKM	Peak Mountain	71.86	318	⇑P	P	17 22 29.7 +0.8
	baz=72					
S10A	Tonopah Range,	71.90	322	⇓P	P	17 22 29.7 +0.6
	baz=72,SNR=6.0					
Q11A	Duckwater	72.00	324	⇑P	P	17 22 30.4 +0.7
	baz=72					
P12A	McGill	72.02	324	⇑P	P	17 22 30.6 +0.8
	baz=72					
N14A	Grayback Hills	72.08	326	⇑P	P	17 22 30.4 +0.2
	baz=72					
M15A	Larsen Ranch,	72.14	327	⇑P	P	17 22 30.8 +0.3
	baz=72					
J18A	Kendall Valley	72.25	330	⇑P	P	17 22 30.9 -0.2
	baz=73					
Q10A	Clear Creek Ra	72.40	323	⇓P	P	17 22 33.0 +0.8
	baz=73					
O12A	Currie	72.49	325	⇓P	P	17 22 33.0 +0.3
	baz=73,SNR=9.9					
L15A	Malad City	72.50	328	⇓P	P	17 22 32.4 -0.3
	baz=73,SNR=6.4					
I18A	Diamond G Ranc	72.53	330	⇑P	P	17 22 32.8 0.0
	baz=73					
M14A	Sheep Mountain	72.63	327	⇑P	P	17 22 33.2 -0.2
	baz=73,SNR=7.3					
K16A	Soda Springs	72.72	329	⇑P	P	17 22 34.7 +0.8
	baz=73					
L14A	Malta	72.96	327	⇓P	P	17 22 35.4 0.0
	baz=73					
RRI2	Red Ridge	72.97	329	eP	P	17 22 35.5 +0.1
	comp=N,4.5nm,0.8s,mb4.3					
RRI2				epP	pP	17 23 01.7 +1.0
J16A	Bone	73.06	329	⇑P	P	17 22 36.2 +0.3
	baz=73					
K15A	Arbon	73.08	328	⇑P	P	17 22 36.0 0.0
	baz=73					
ELK	Elko	73.09	325	P	P	17 22 35.8 -0.4
	comp=N,1.4nm,0.7s,mb3.9,baz=71,slow=3.2,SNR=6.7					
ELK				pP	pP	17 23 03.6 +2.2
	comp=N,1.5nm,0.8s,baz=201,slow=7.7,SNR=3.5					
NVAR	Mina Array Bea	73.23	322	P	P	17 22 37.8 +0.7
	comp=N,2.5nm,0.9s,mb4.0,baz=156,slow=7.4,SNR=13					
NVAR				pP	pP	17 23 05.1 +2.7
	comp=N,2.2nm,0.8s,baz=156,slow=7.5,SNR=7.1					
L13A	Double Diamond	73.36	327	⇓P	P	17 22 37.8 +0.1
	baz=74,SNR=6.5					
RLMT	Red Lodge	73.37	332	⇓P	P	17 22 38.2 +0.5
	baz=74					
RLMT	Red Lodge	73.37	332	eP	P	17 22 37.9 +0.2
	comp=N,2.2nm,0.6s,mb4.2					
M12A	Wells	73.39	326	⇓P	P	17 22 38.3 +0.3
	baz=74					
SCHQ	Schefferville	73.47	1	P	P	17 22 40.5 +2.4
	comp=N,2.3nm,0.7s,mb4.1,baz=222,slow=12,SNR=2.1					
SCHQ				pP	pP	17 23 05.6 +2.2
	comp=N,4.9nm,0.9s,baz=216,slow=4.2,SNR=3.4					
SCHQ	Schefferville	73.47	1	P	P	17 22 40.5 +2.4
SCHQ				pP	pP	17 23 05.6 +2.2
J15A	Blackfoot	73.56	329	⇑P	P	17 22 38.9 +0.1
	baz=74,SNR=5.3					
G18A	Lazy EL Ranch,	73.65	332	⇓P	P	17 22 39.2 -0.2
	baz=74,SNR=6.4					
K13A	Stover Farm, H	73.84	327	⇑P	P	17 22 41.3 +0.7
	baz=74					
M11A	Holland Ranch,	73.87	325	⇑P	P	17 22 41.4 +0.6
	baz=74,SNR=7.0					
DGMT	Dagmar	73.96	337	⇑P	P	17 22 41.6 +0.5
	baz=74					
H16A	Russell Place,	73.96	330	⇑P	P	17 22 41.8 +0.6
	baz=74					
L12A	House Creek Ra	73.96	326	⇑P	P	17 22 41.8 +0.6
	baz=74,SNR=5.6					
J14A	Carey	74.04	328	⇑P	P	17 22 42.3 +0.7
	baz=74,SNR=6.8					
GCMT	Greycliff	74.06	332	eP	P	17 22 41.9 +0.1
	comp=N,6.9nm,1.0s,mb4.3					
GCMT				epP	pP	17 23 08.2 +1.1
F18A	Big Timber	74.17	332	⇑P	P	17 22 42.4 0.0
	baz=74,SNR=12					
K12A	Draper Farm, C	74.25	327	⇓P	P	17 22 43.7 +0.7
	baz=74					
M10A	I.L. Ranch, Tu	74.34	325	⇑P	P	17 22 44.2 +0.8
	baz=75					
L11A	Cat Creek Ranc	74.36	326	⇓P	P	17 22 44.0 +0.3
	baz=75,SNR=6.7					
J13A	Cove Ranch, Pi	74.42	328	⇑P	P	17 22 44.0 0.0
	baz=75					
I14A	Mackay	74.44	329	⇓P	P	17 22 44.5 +0.4
	baz=75					
F17A	Fitzpatrick Pl	74.59	331	⇓P	P	17 22 45.1 +0.3
	baz=75,SNR=5.1					
G16A	Moss Hill, Enn	74.61	330	⇑P	P	17 22 45.2 +0.2
	baz=75					
HLID	Hailey	74.66	328	eP	P	17 22 45.7 +0.4
	comp=N,8.4nm,1.0s,mb4.4					
HLID				epP	pP	17 23 11.7 +1.1
L10A	Juniper Basin	74.68	326	⇓P	P	17 22 45.8 +0.4
	baz=75,SNR=6.3					
I13A	Wildhorse Cree	74.77	328	⇑P	P	17 22 46.6 +0.7
	baz=75,SNR=8.4					
E18A	Harlowton	74.77	332	⇓P	P	17 22 45.9 0.0
	baz=75,SNR=5.3					
J12A	Stokes Ranch,	74.79	327	⇓P	P	17 22 46.4 +0.3
	baz=75					
MCMT	McKenzie Canyo	74.81	329	eP	P	17 22 46.6 +0.5
	comp=N,2.9nm,1.0s,mb4.0					
MCMT				epP	pP	17 23 14.0 +2.5
BOZ	Bozeman (W)	74.84	331	⇑P	P	17 22 46.4 +0.1
	baz=75					
H14A	Leadore	74.91	329	⇓P	P	17 22 47.1 +0.4
	baz=75					
K11A	Parker Ranch,	74.94	326	⇓P	P	17 22 47.4 +0.5
	baz=75					
E17A	Martinsdale	75.11	332	⇓P	P	17 22 47.7 -0.1
	baz=75,SNR=8.3					
I12A	Atlanta	75.19	328	⇑P	P	17 22 49.2 +0.9
	baz=76					
D18A	Linhart Farms,	75.20	333	⇑P	P	17 22 48.3 0.0
	baz=76					
MFID	Camas Ranch	75.28	327	⇑P	P	17 22 49.3 +0.5
	baz=76,SNR=6.0					
H13A	Challis	75.30	329	⇓P	P	17 22 49.3 +0.3
	baz=76,SNR=9.3					
BEKR	Beckworth	75.38	322	⇓P	P	17 22 49.8 +0.2
	baz=76					
K10A	MacKenzie Ranc	75.38	326	⇓P	P	17 22 49.6 +0.2
	baz=76,SNR=6.3					
F15A	Butte	75.39	330	⇓P	P	17 22 49.7 +0.3
	baz=76					
E16A	East Helena	75.53	331	⇓P	P	17 22 50.7 +0.5
	baz=76					
D17A	Six Diamond Ra	75.56	332	⇑P	P	17 22 50.3 -0.1
	baz=76,SNR=8.4					
H12A	Diamond D Ranc	75.59	328	⇑P	P	17 22 50.9 +0.3
	baz=76					
G13A	Cobalt	75.67	329	⇑P	P	17 22 51.8 +0.7
	baz=76,SNR=18					
EGMT	Eagleton	75.83	333	⇓P	P	17 22 51.9 0.0
	baz=76					
EGMT	Eagleton	75.83	333	eP	P	17 22 51.5 -0.4
	comp=N,6.9nm,1.0s,mb4.3					
EGMT				epP	pP	17 23 17.2 -0.1
D16A	Dana Ranch, Ca	75.85	332	⇑P	P	17 22 52.5 +0.4
	baz=76,SNR=12					
E15A	Deer Lodge	75.89	331	⇑P	P	17 22 52.3 0.0
	baz=76					
C17A	Wharram Farm,	75.96	333	⇑P	P	17 22 52.5 -0.1
	baz=76					
B18A	Beardsley Farm	76.12	334	⇓P	P	17 22 53.3 -0.2
	baz=76,SNR=5.1					
F13A	Darby	76.23	329	⇑P	P	17 22 54.5 +0.3
	baz=76,SNR=11					
G12A	Big Creek, Yel	76.24	328	⇑P	P	17 22 54.6 +0.3
	baz=76					
H11A	Donnelly	76.28	328	⇓P	P	17 22 54.9 +0.4
	baz=77					
E14A	Clinton	76.28	330	⇓P	P	17 22 55.1 +0.6
	baz=77					
D15A	Lincoln	76.30	331	⇓P	P	17 22 55.1 +0.5
	baz=77					
C16A	Fuhringer Ranc	76.52	332	⇓P	P	17 22 55.5 -0.3
	baz=77					
A18A	Metzger Ranch,	76.56	334	⇑P	P	17 22 55.4 -0.6
	baz=77					
H10A	Noah's Angus R	76.58	327	⇓P	P	17 22 56.9 +0.7
	baz=77					
E13A	Victor	76.63	330	⇑P	P	17 22 56.8 +0.3
	baz=77					
F12A	Elk City	76.65	329	⇓P	P	17 22 56.7 +0.1
	baz=77,SNR=6.2					
I09A	Lost Marbles R	76.67	326	⇑P	P	17 22 56.9 +0.2
	baz=77					
TORD	Torodi Ar. Bea	76.86	71	P	P	17 22 57.1 -1.4
	comp=N,3.8nm,0.5s,mb4.4,baz=243,slow=5.9					
C15A	Salmond Ranch,	76.88	332	⇓P	P	17 22 58.1 +0.2
	baz=77,SNR=14					
G11A	Walters Elk Ra	76.90	328	⇓P	P	17 22 58.8 +0.8
	baz=77					
BMO	Blue Mountains	77.05	327	eP	P	17 22 58.2 -0.6
	comp=N,6.5nm,1.1s,mb4.3					
BMO				epP	pP	17 23 26.0 +1.7
F11A	Grangeville	77.19	328	⇓P	P	17 23 00.0 +0.4
	baz=78					
D13A	Huson	77.23	330	⇑P	P	17 23 00.1 +0.2
	baz=78,SNR=5.7					
G10A	Bishop Farm, J	77.26	328	⇓P	P	17 23 00.4 +0.5
	baz=78,SNR=12					
B15A	Bradely Ranch,	77.27	332	⇑P	P	17 22 59.5 -0.5
	baz=78,SNR=6.1					
E12A	Beaver Dam Sad	77.28	329	⇑P	P	17 23 00.1 0.0
	baz=78					
C14A	Swan Lake	77.40	331	⇑P	P	17 23 00.9 +0.2
	baz=78					
H08A	Prairie City	77.53	326	⇓P	P	17 23 02.4 +0.8
	baz=78					
K05A	Summer Lake	77.54	324	⇓P	P	17 23 02.5 +0.9
	baz=78					
G09A	Cove	77.58	327	⇑P	P	17 23 02.3 +0.5
	baz=78,SNR=5.3					
B14A	Marquette Ranc	77.62	332	⇓P	P	17 23 02.0 +0.1
	baz=78					
D12A	Red Ives Fores	77.63	330	⇓P	P	17 23 02.3 +0.3
	baz=78					
C13A	Hot Springs	77.71	331	⇑P	P	17 23 02.5 +0.1
	baz=78					
F10A	Beach Ranch, E	77.78	328	⇓P	P	17 23 03.3 +0.4
	baz=78					
YBH	Yreka Blue Hor	77.94	322	P	P	17 23 02.8 -1.1
	comp=N,0.8nm,0.6s,mb3.6,baz=136,slow=7.0,SNR=4.5					
A14A	Double T Ranch	78.14	332	⇓P	P	17 23 04.4 -0.4
	baz=78					
C12B	Naegeli Ranch,	78.16	330	⇑P	P	17 23 05.3 +0.3
	baz=78					
B13A	Whitefish	78.17	331	⇑P	P	17 23 04.9 -0.1
	baz=78					
G08A	Pilot Rock	78.20	327	⇓P	P	17 23 05.8 +0.6
	baz=78					
SBA	Scott Base	78.29	190	eP	P	17 23 06.5 +1.1
WALA	Waterton Lakes	78.42	332	eP	P	17 23 05.8 -0.5
	comp=N,0.3nm,1.0s					
WALA				epP	pP	17 23 33.1 +1.2
A13A	Flathead Natio	78.55	332	⇑P	P	17 23 07.4 +0.3
	baz=79					
E09A	Wood Farm, Sta	78.62	328	⇓P	P	17 23 07.8 +0.3
	baz=79					
C11A	Tepee Creek (N	78.62	330	⇓P	P	17 23 07.4 0.0
	baz=79,SNR=9.6					
F04A	Amboy	80.45	326	⇓P	P	17 23 18.0 +0.6
	baz=81					
B08A	Colville Reser	80.47	329	⇓P	P	17 23 17.6 +0.1
	baz=81					
HEBO	Mount Hebo	80.72	324	eP	P	17 23 16.3 -2.6
D05A	Enumclaw	81.03	327	⇑P	P	17 23 21.0 +0.5
	baz=81					
EDM	Edmonton	81.27	335	eP	P	17 23 20.3 -1.3
EDM				epP	pP	17 23 47.8 +0.5
EDM				esP	sP	17 23 59.0 +1.0
JCW	Jim Creek	81.65	327	eP	P	17 23 22.6 -1.2
JCW				epP	pP	17 23 50.0 +0.4
ESDC	Sonseca Array	84.27	45	P	P	17 23 38.0 +0.6
	comp=N,1.5nm,0.8s,mb3.9,baz=242,slow=4.7,SNR=6.2					
BOSA	Boshof	85.00	118	P	P	17 23 41.7 +0.1
	comp=N,3.5nm,1.0s,mb4.3,baz=263,slow=8.1,SNR=4.0					
BOSA				LR	LR	17 57 18.7
	comp=N,62nm,18.3s,baz=337,slow=32					
BOSA	Boshof	85.00	118	P	P	17 23 41.7 +0.1
BOSA				LR	LR	17 57 18.7
LBTB	Lobatse	86.45	115	eP	P	17 23 48.6 -0.2
	comp=N,21nm,1.5s,mb4.8					
MAW	Mawson	86.91	163	P	P	17 23 50.4 +0.2
	comp=N,3.0nm,1.0s,mb4.2,baz=261,slow=4.1,SNR=3.5					
YKA	Yellowknife Ar	88.63	341	P	P	17 23 57.5 -0.7
	comp=N,12nm,0.8s,mb5.0,baz=135,slow=4.7,SNR=48					
YKA				pP	pP	17 24 26.1 +1.8
	comp=N,11nm,0.7s,baz=135,slow=4.8,SNR=18					
YKA	Yellowknife Ar	88.63	341	P	P	17 23 57.5 -0.7
YKA				pP	pP	17 24 26.1 +1.8
EPF	Esparros	88.72	43	eP	P	17 23 57.7 -1.4
	comp=N,2.6nm,0.6s,mb4.1					
EPF	Esparros	88.72	43	eP	P	17 23 57.7 -1.4
	comp=N,1.3nm,0.6s,mb4.1					
DLBC	Dease Lake	91.74	333	eP	P	17 24 12.4 -0.4
BRTR	Keskin Array B	111.63	54	PP	PP	17 30 22.9 -0.4
	comp=N,0.7nm,0.6s,baz=263,slow=4.9,SNR=3.6					
ASAR	Alice Springs	132.00	209	PKhKP		17 29 59.2
	comp=N,0.5nm,1.1s,baz=141,slow=2.7,SNR=4.3					
ASAR				PKP	PKPdf	17 30 18.3 -1.1
	comp=N,1.3nm,0.6s,baz=140,slow=1.5,SNR=28					
ASAR				SKPab		17 33 34.5
	comp=N,2.2nm,1.1s,baz=151,slow=5.5,SNR=5.2					
WRA	Warramunga Arr	134.96	212	PKhKP		17 30 13.4
	comp=N,0.3nm,0.6s,baz=115,slow=1.1,SNR=3.6					
WRA				PKP	PKPdf	17 30 24.3 -0.8
	comp=N,3.1nm,0.6s,baz=147,slow=1.7,SNR=32					
WRA				pPKP	pPKPdf	17 30 54.9 +2.6
	comp=N,1.1nm,0.7s,baz=145,slow=1.6,SNR=2.9					
ZAA0	Zalesovo Array	139.76	24	ePKPdf	PKPdf	17 30 32.4 -0.4
ZAA0				epPKPdf	pPKPdf	17 31 02.9 +2.8
ZALV	Zalesovo Beam	139.76	24	PKhKP		17 30 27.2
	comp=N,0.4nm,0.4s,baz=343,slow=4.5,SNR=2.5					
ZALV				PKP	PKPdf	17 30 31.7 -1.1
	comp=N,1.2nm,0.7s,baz=289,slow=3.3,SNR=7.4					
ZALV				pPKP	pPKPdf	17 31 03.3 +3.2
	comp=N,2.5nm,0.7s,baz=294,slow=2.5,SNR=6.3					
ZALV				SKPbc	SKPbc	17 33 57.6 -2.0
	comp=N,1.0nm,0.7s,baz=327,slow=2.5,SNR=4.4					
MKAR	Makanchi Array	143.73	34	PKP	PKPdf	17 30 39.4 -0.7
	comp=N,0.5nm,0.6s,baz=349,slow=2.9,SNR=5.7					
MKAR				pPKP	pPKPdf	17 31 11.0 +3.6
	comp=N,0.8nm,0.6s,baz=338,slow=1.8,SNR=6.2					
MKAR				SKPbc	SKPbc	17 34 07.5 -2.4
	comp=N,0.6nm,0.9s,baz=321,slow=1.6,SNR=4.6					
MKAR	Makanchi Array	143.73	34	PKP	PKPdf	17 30 39.4 -0.7
MKAR				pPKP	pPKPdf	17 31 11.0 +3.6
MKAR				SKPbc	SKPbc	17 34 07.5 -2.4
WMQ	Urumqi	148.55	33	ePKPbc	PKPdf	17 30 47.2 -1.2
MJAR	Matsushiro Arr	150.13	312	PKPbc	PKPbc	17 30 55.9 -0.4
	comp=N,3.3nm,0.7s,baz=86,slow=1.2,SNR=9.9					
MJAR	Matsushiro Arr	150.13	312	PKPbc	PKPbc	17 30 55.9 -0.4
MAJO	Matsushiro	150.13	312	ePKPbc	PKPbc	17 30 55.0 -1.3
MAJO				epPKPbc	pPKPbc	17 31 25.0 +1.6
MAT	Matsushiro	150.13	312	PKP	PKPbc	17 30 55.9 -0.4
SONM	Songino Array	150.94	6	PKPbc	PKPbc	17 30 58.0 +0.2
	comp=N,4.1nm,0.6s,baz=313,slow=1.5,SNR=25					
SONM				PKPab	PKPab	17 31 02.9 -2.5
	comp=N,1.2nm,0.6s,baz=290,slow=1.2,SNR=4.5					
ULN	Ulaanbaatar	150.97	5	ePKPbc	PKPbc	17 30 58.1 +0.2
ULN				epPKPbc	pPKPbc	17 31 27.0 +1.9
CN2	Changchun	152.26	337	ePKPbc	PKPdf	17 30 53.5 -0.7
HHC	Hu-ho-hao-te	158.12	358	ePKP	PKPdf	17 30 58.1 -4.1
HHC				PP	PP	17 35 15.9 +0.7
HHC				SS	SS	17 55 06.1 +0.2
HHC				AMB	AMB	
	comp=Z,74nm,8.7s					
BJI	Beijing	158.42	348	PKP	PKPdf	17 31 00.6 -2.0
BJI				SS	SS	17 55 11.6 +2.4
BJI				LR	LR	
	comp=N,79nm,26.0s					
BJI				LR	LR	
	comp=E,70nm,27.4s					
BJI				LR	LR	
	comp=Z,15nm,22.3s					
NJ2	Nanjing	164.99	332	ePKP	PKPdf	17 31 08.3 -1.4
CD2	Chengdu	166.50	26	PKP	PKPdf	17 31 08.8 -2.1
KMI	Kunming	170.38	49	PKP	PKPdf	17 31 11.3 -2.4
GYA	Guiyang	171.62	26	ePKP	PKPdf	17 31 11.0 -3.3
GYA				sPKP		17 31 50.6
GYA				PKPab	PKPab	17 32 36.5 +0.6
GYA				PKS		17 34 41.8
GYA				PP	PP	17 36 28.3 +2.3
GYA				AMB	AMB	
	comp=Z,80nm,8.0s					

ISCJB ***02*** *17:21:32.3±0.9, 24°.01N±0°.03×122°.23E±0°.02, h10km±6km, Error ellipse: s-maj=4.9km s-min=2.8km az=172.1*
TAP ***02*** *17:21:32.0, 24°.02N×122°.31E, h27km, ML2.8, D*
JMA ***02*** *17:21:34.2±0.3, 24°.14N×122°.24E, h21km, M2.3*
ISC 02 17:21:32.6±0.6, 24°.02N±0°.03×122°.22E±0°.02, h13km±4km, n24, σ0°72/43, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	Chiawan	0.57	277	eP	Pg	17 21 44.5	+0.7
	baz=275						
ENA	Nanau	0.60	313	eP	Pg	17 21 43.9	-0.4
	baz=308						
ENA				eS	Sg	17 21 54.0	+1.8
	baz=308						
TWC	Suao	0.68	330	eP	Pg	17 21 45.2	-0.6
	baz=325						
TWC				eS

NWF	**Wu-fen Shan**	**1.12**	**339**	*e*S	**Sb**	**17 22 07.4**	**-1.0**
	baz=335						
SMLT	**Sun Moon Lake**	**1.21**	**264**	*e*P	**Pn**	**17 21 54.8**	**-0.4**
	baz=264						
SMLT				*e*S	**Sb**	**17 22 10.2**	**-0.7**
	baz=264						
TYC	**Yuchr**	**1.25**	**265**	*e*P	**Pn**	**17 21 55.0**	**-0.7**
	baz=265						
TYC				*e*S	**Sb**	**17 22 11.7**	**-0.3**
	baz=265						
NSTT	**Nanjuang**	**1.27**	**299**	*e*P	**Pn**	**17 21 55.5**	**-0.5**
	baz=297						
NSTT				*e*S	**Sb**	**17 22 13.2**	**+0.7**
	baz=297						
TWQ1	**Liyutan**	**1.36**	**284**	*e*P	**Pn**	**17 21 57.6**	**+0.3**
	baz=283						
TWQ1				*e*S	**Sn**	**17 22 15.9**	**+0.8**
	baz=283						
ALS	**Alishan**	**1.39**	**249**	*e*P	**Pn**	**17 21 57.6**	**0.0**
	baz=249						
ALS				*e*S	**Sn**	**17 22 14.4**	**-1.4**
	baz=249						
IRIF	**Iriomote-Funau**	**1.42**	**77**	P	**Pn**	**17 21 58.7**	**+0.6**
IRIF				S	**Sn**	**17 22 17.1**	**+0.5**
HATJ	**Hateruma jima**	**1.45**	**88**	P	**Pn**	**17 21 59.0**	**+0.5**
HATJ				S	**Sn**	**17 22 17.3**	**-0.2**
CHN5	**Tsauling**	**1.47**	**254**	*e*P	**Pn**	**17 21 59.0**	**+0.3**
	baz=254						
CHN5				*e*S	**Sn**	**17 22 18.7**	**+0.9**
	baz=254						
JKRS	**Kuro-shima**	**1.65**	**82**	P	**Pn**	**17 22 02.3**	**+1.0**
JKRS				S	**Sn**	**17 22 23.7**	**+1.3**
JIJ	**Ishigaki jima**	**1.79**	**78**	P	**Pn**	**17 22 03.2**	**0.0**
JIJ				S	**Sn**	**17 22 25.3**	**-0.5**
JTJ	**Tarama**	**2.35**	**74**	P	**Pn**	**17 22 11.7**	**+0.8**

WEL 02 17:34:27.1±0.5, 37°08S×176°71E, h227km±4km, ML3.7/10, Error ellipse: s-maj=7.7km s-min=5.0km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**1.23**	**165**	PN	Pn	17 35 01.4	+0.3
URZ				SN	S	17 35 27.8	0.0
MWZ	**Matawai**	**1.42**	**153**	PN	Pn	17 35 02.9	+0.4
MWZ				SN	S	17 35 29.1	-1.3
CNGZ	**Carnagh Statio**	**1.84**	**140**	PN	Pn	17 35 06.9	+0.8
KNZ	**Kokohu**	**2.09**	**159**	PN	Pn	17 35 08.5	0.0
BKZ	**Black Stump Fm**	**2.10**	**185**	PN	Pn	17 35 08.8	+0.2
BKZ				SN	S	17 35 40.3	-0.9
FWVZ	**Far West T-bar**	**2.36**	**202**	PN	Pn	17 35 11.8	+0.6
MCHZ	**McNeill Hill**	**2.37**	**180**	SN	S	17 35 46.6	+0.5
MOVZ	**Moawhango**	**2.45**	**198**	PN	Pn	17 35 12.5	+0.4
CKHZ	**Cape Kidnapper**	**2.60**	**174**	*e*PN	Pn	17 35 13.8	+0.2
KAHZ	**Kahuranaki**	**2.72**	**177**	PN	Pn	17 35 15.1	+0.1
KAHZ				SN	S	17 35 53.7	+0.9
PNHZ	**Pukenui**	**2.86**	**188**	PN	Pn	17 35 16.2	-0.4
PXZ	**Pawanui**	**2.96**	**178**	PN	Pn	17 35 17.0	-0.6
WPHZ	**Waipukurau**	**2.99**	**184**	SN	S	17 35 56.7	-1.6
TSZ	**Takapari Road**	**3.04**	**191**	PN	Pn	17 35 18.1	-0.4
DVHZ	**Dannevirke**	**3.25**	**187**	PN	Pn	17 35 20.1	-0.8
MRZ	**Mangatainoka R**	**3.69**	**193**	*e*PN	Pn	17 35 24.8	-1.3
MRZ				SN	S	17 36 09.7	-3.0
OGWZ	**Otaki Gorge**	**3.92**	**197**	PN	Pn	17 35 27.6	-1.3
KIW	**Kapiti Island**	**4.03**	**200**	PN	Pn	17 35 28.9	-1.3
TCW	**Tory Channel**	**4.54**	**204**	*e*PN	Pn	17 35 35.0	-1.4
PLWZ	**Palliser**	**4.63**	**194**	*e*PN	Pn	17 35 35.2	-2.3
TUWZ	**Tuamarina**	**4.85**	**205**	PN	Pn	17 35 38.8	-1.4
NNZ	**Nelson**	**4.88**	**211**	PN	Pn	17 35 38.8	-1.8
NNZ				SN	S	17 36 37.8	-1.1
THZ	**Tophouse**	**5.53**	**211**	PN	Pn	17 35 48.0	-0.7
KHZ	**Kahutara**	**5.87**	**204**	PN	Pn	17 35 51.2	-1.8
LTZ	**Lake Taylor**	**6.64**	**209**	PN	Pn	17 36 00.6	-2.2
MQZ	**McQueen's Vall**	**7.31**	**204**	*e*PN	Pn	17 36 08.1	-3.2
MQZ				SN	S	17 37 27.9	-6.9
ODZ	**Otahua Downs**	**9.18**	**208**	PN	Pn	17 36 33.7	-1.6

*IDC **02** 17:52:44.0±1.1, 12°90N×124°94E, h0km, mb3.5/8, mb1 3.7/8, mb1mx3.5/21, mbtmp3.5/8, MS3.0/1, Ms1 3.0/1, ms1mx2.5/19, Error ellipse: s-maj=62.4km s-min=16.7km az=64.0*
*ISCJB **02** 17:52:56.0±3.1, 12°8N±0°2×124°8E±0°3, h120km±27km, mb3.8/10, Error ellipse: s-maj=52.8km s-min=13.5km az=153.7*
*NEIC **02** 17:52:57.2±3.0, 12°84N×124°83E, h116km±25km, mb4.6/1, Error ellipse: s-maj=45.1km s-min=10.8km az=63.0*
ISC 02 17:52:58.0±3.0, 12°8N±0°2×124°7E±0°3, h120km±25km, n13, σ0°82/13, mb3.8/10, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**3.92**	**290**	Pn	**Pn**	**17 53 56.6**	**0.0**
	47nm,0.3s,baz=186,slow=9.2,SNR=2.4						
CMAR	**Chiang Mai Arr**	**25.46**	**286**	P	**P**	**17 58 15.5**	**+0.5**
	0.9nm,0.8s,mb3.3,baz=85,slow=7.3,SNR=6.3						
MJAR	**Matsushiro Arr**	**26.60**	**25**	LR	LR	18 06 38.6	
	comp=Z,35nm,20.1s,baz=240,slow=32						
HHC	**Hu-ho-hao-te**	**30.27**	**340**	*e*P	**P**	**17 58 58.9**	**+1.3**
HHC				S	**S**	**18 03 49.3**	**+0.7**
HHC				pmax	pmax		
	comp=Z,13nm,0.6s,mb4.7						
HHC				pmax	pmax		
	comp=Z,48nm,6.3s						
WRA	**Warramunga Arr**	**33.85**	**164**	P	**P**	**17 59 29.5**	**+0.4**
	comp=Z,0.5nm,0.8s,mb3.4,baz=340,slow=9.2,SNR=3.7						
ASAR	**Alice Springs**	**37.30**	**166**	P	**P**	**17 59 59.5**	**+0.9**
	comp=Z,0.3nm,0.4s,mb3.5,baz=347,slow=6.8,SNR=17						
SONM	**Songino Array**	**38.17**	**340**	P	**P**	**18 00 05.1**	**-0.5**
	comp=Z,0.4nm,0.4s,mb3.6,baz=163,slow=11,SNR=5.1						
STKA	**Stephens Creek**	**47.24**	**160**	P	**P**	**18 01 17.8**	**-1.2**
	comp=Z,1.2nm,0.7s,mb3.7,baz=344,slow=15,SNR=1.9						
MK31	**Makanchi Array**	**49.14**	**322**	*e*P	**P**	**18 01 32.4**	**-1.1**
MKAR	**Makanchi Array**	**49.14**	**322**	P	**P**	**18 01 32.6**	**-0.9**
	comp=Z,0.7nm,0.8s,mb3.6,baz=114,slow=8.3,SNR=6.9						
ZALV	**Zalesovo Beam**	**51.73**	**331**	P	**P**	**18 01 53.8**	**+0.9**
	comp=Z,0.2nm,0.3s,mb3.6,baz=131,slow=7.9,SNR=2.3						
KURK	**Kurchatov**	**53.17**	**325**	*e*P	**P**	**18 02 02.7**	**-0.9**
	comp=Z,8.3nm,1.1s,mb4.7						
BVAR	**Borovoye Array**	**58.77**	**325**	P	**P**	**18 02 43.5**	**+0.1**
	comp=Z,0.2nm,0.4s,mb3.5,baz=81,slow=9.2,SNR=3.1						

*ISCJB **02** 18:02:52.5±1.6, 29°94N±0°05×50°79E±0°05, h8km±13km, Error ellipse: s-maj=8.3km s-min=6.7km az=140.7*
*TEH **02** 18:02:53.3, 29°83N×50°69E, h14km*
*KISR **02** 18:02:53.7±0.6, 30°00N×50°21E, h34km±45km, ML3.2*
ISC 02 18:02:53.2±2.2, 29°94N±0°05×50°76E±0°06, h3km±18km, n20, σ0°53/27, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPAR	**Pars**	**1.99**	**92**	*e*Pn	**Pn**	**18 03 27.5**	**-0.2**
IPAR				*e*Sg	**Sg**	**18 03 57.2**	**0.0**
IPAR				*e*		18 04 13.2	
	comp=Z,2μm,0.6s						
ISRV	**Sarvestan**	**2.12**	**104**	*e*Pn	**Pn**	**18 03 29.1**	**-0.4**
ISRV				*e*Sg	**Sg**	**18 04 01.2**	**-0.2**
ISRV				*e*		18 04 13.4	
	comp=Z,1μm,0.3s						
IGAR	**Gharneh**	**2.69**	**24**	*e*Pn	**Pn**	**18 03 38.2**	**+0.7**
IGAR				*e*		18 03 45.1	
	comp=Z,1μm,0.1s						
IPIR	**Pirpir**	**2.74**	**2**	*e*Pn	**Pn**	**18 03 38.5**	**+0.4**
IPIR				*e*		18 04 23.6	
	comp=Z,2μm,0.3s						
KBD	**Kabd**	**2.78**	**255**	*e*P	**Pn**	**18 03 39.0**	**+0.4**
KBD				*e*S	**Sn**	**18 04 13.5**	**+0.8**
KBD				AML	AML	18 04 14.0	
	comp=Z,63nm,0.3s						
RDF	**Al-Radifah**	**2.98**	**251**	*e*P	**Pn**	**18 03 41.6**	**+0.3**
RDF				*e*S	**Sn**	**18 04 17.8**	**+0.2**
RDF				AML	AML	18 04 23.1	
	comp=Z,122nm,0.3s						
NAY	**Al-Naaiem**	**3.14**	**258**	*e*P	**Pn**	**18 03 43.6**	**+0.1**
NAY				*e*S	**Sn**	**18 04 20.4**	**-1.2**
NAY				AML	AML	18 04 21.9	
	comp=Z,42nm,0.5s						
ISAD	**Sadrabad**	**3.19**	**51**	*e*Pn	**Pn**	**18 03 44.8**	**+0.5**
IZEF	**Zefreh**	**3.24**	**24**	*e*Pn	**Pn**	**18 03 45.7**	**+0.7**
IZEF				*e*		18 03 53.6	
	comp=Z,513nm,0.2s						
IKLH	**Kolahrood**	**3.44**	**11**	*e*Pn	**Pn**	**18 03 48.2**	**+0.4**
IKLH				*e*		18 04 42.4	
	comp=Z,474nm,0.2s						
IMEH	**Mehriz**	**3.62**	**65**	*e*Pn	**Pn**	**18 03 50.3**	**+0.1**
IMEH				*e*		18 03 52.9	
	comp=Z,254nm,0.1s						
ICHK	**Chekchek**	**3.88**	**53**	*e*Pn	**Pn**	**18 03 53.8**	**0.0**
ICHK				*e*		18 04 57.5	
	comp=Z,318nm,0.2s						
ISFB	**Sefidab**	**4.58**	**16**	*e*	**Pg**	**18 04 25.9**	**+4.9**
	comp=Z,205nm,0.2s						
ISFB				*e*Pn	**Pn**	**18 04 03.5**	**+0.1**
IVRN	**Varamin**	**5.11**	**9**	*e*Pn	**Pn**	**18 04 10.4**	**-0.3**
IVRN				*e*Pn	**Pn**	**18 04 10.6**	**-0.1**
IVRN				*e*		18 04 11.1	
	comp=Z,259nm,0.1s						
IRAZ	**Razeghan**	**5.50**	**353**	*e*Pn	**Pn**	**18 04 15.5**	**-0.5**
IRAZ				*e*		18 05 54.4	
	comp=Z,198nm,0.4s						
IDMV	**Damavand**	**5.73**	**10**	*e*Pn	**Pn**	**18 04 19.1**	**0.0**
IDMV				*e*		18 04 21.0	
	comp=Z,236nm,0.1s						
ILIN	**Lien**	**5.92**	**328**	*e*Pn	**Pn**	**18 04 20.5**	**-1.2**
ILIN				*e*		18 05 35.3	
	comp=N,509nm,0.1s						
IFIR	**Firoozkooh**	**5.93**	**16**	*e*Pn	**Pn**	**18 04 22.0**	**0.0**
IFIR				*e*		18 04 27.1	
	comp=Z,119nm,0.1s						
IANJ	**Anjilo**	**6.12**	**25**	*e*Pn	**Pn**	**18 04 23.7**	**-0.9**
ISHM	**Shahmirzad**	**6.23**	**19**	*e*Pn	**Pn**	**18 04 25.8**	**-0.2**
ISHM				*e*		18 04 30.3	
	comp=Z,153nm,0.1s						

*IDC **02** 18:15:59.7±1.1, 30°93N×103°52E, h0km, mb3.3/5, mb1 3.4/7, mb1mx3.3/25, mbtmp3.2/7, ML3.2/2, Error ellipse: s-maj=36.3km s-min=20.1km az=66.0*
*NEIC **02** 18:16:01.3±0.7, 30°96N×103°60E, h10km, mb4.1/1, Error ellipse: s-maj=24.0km s-min=11.2km az=86.0*
*BJI **02** 18:16:02.1, 31°05N×103°43E, h14km, ML3.4/12*
ISC 02 18:16:00.7±1.2, 31°07N±0°04×103°39E±0°07, h7km±7km, n12, σ1°29/17, mb3.4/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.36**	**117**	Pg	**Pg**	**18 16 07.7**	**+0.1**
CD2				Sg	**Sg**	**18 16 13.5**	**+1.2**
CD2				smax			
	comp=N,7μm,0.6s						
CD2				smax			
	comp=E,10μm,0.5s						
LZH	**Lanzhou**	**5.02**	**4**	*e*Pg	**Pg**	**18 17 34.2**	**-2.6**
LZH				Sg	**Sg**	**18 18 41.1**	**-0.7**
LZH				smax			
	comp=N,25nm,0.5s						
LZH				smax			
	comp=E,45nm,0.5s						
XAN	**Xi'an**	**5.53**	**56**	Pn	**Pn**	**18 17 22.7**	**-0.8**
XAN				Sn	**Sn**	**18 18 25.7**	**-1.6**
XAN				Sg	**Sg**	**18 18 53.3**	**-5.0**
XAN				smax			
	comp=N,57nm,0.9s						
XAN				smax			
	comp=E,28nm,0.7s						
HHC	**Hu-ho-hao-te**	**11.79**	**32**	*e*P	**Pn**	**18 18 50.3**	**+1.1**
HHC				S	**Sn**	**18 21 02.8**	**+1.8**
CMAR	**Chiang Mai Arr**	**13.19**	**199**	Pn	**Pn**	**18 19 08.4**	**-0.1**
	comp=E,0.0nm,0.3s,baz=7.9,slow=8.4,SNR=2.8						
SONM	**Songino Array**	**16.90**	**7**	P	**Pn**	**18 19 60.0**	**+2.4**
	comp=E,0.1nm,0.3s,baz=185,slow=14,SNR=2.9						
KSRS	**Korea Array**	**21.22**	**66**	P	**P**	**18 20 47.0**	**-0.2**
	comp=E,1.1nm,0.6s,mb3.4,baz=247,slow=8.5,SNR=5.3						
MKAR	**Makanchi Array**	**22.61**	**320**	P	**P**	**18 21 04.9**	**+3.1**
	comp=E,0.2nm,0.7s,mb2.7,baz=141,slow=7.4,SNR=3.1						
ZALV	**Zalesovo Beam**	**26.49**	**335**	P	**P**	**18 21 38.7**	**+0.3**
	comp=E,0.3nm,0.4s,mb3.2,baz=126,slow=7.7,SNR=4.3						
WRA	**Warramunga Arr**	**58.79**	**146**	P	**P**	**18 25 58.3**	**-1.5**
	comp=E,0.5nm,0.4s,mb3.9,baz=337,slow=7.5,SNR=14						
ASAR	**Alice Springs**	**61.78**	**148**	P	**P**	**18 26 19.1**	**-1.1**
	comp=E,0.1nm,0.3s,mb3.5,baz=341,slow=7.0,SNR=4.9						
BPAW	**Bear Paw Mtn.**	**68.91**	**27**	*e*P	**P**	**18 27 06.1**	**+0.2**
	comp=E,0.8nm,0.7s,mb3.8						

*NEIC **02** 18:20:01.4±1.3, 30°11S×66°73W, h115km±13km, Error ellipse: s-maj=31.1km s-min=16.7km az=124.0*
IDC 02 18:20:02.1±1.6, 30°24S×66°72W, h117km±17km, mb1 3.7/2, mb1mx3.2/15, mbtmp3.4/2, Error ellipse: s-maj=55.0km s-min=19.6km az=134.0, La Rioja Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**1.89**	**223**	P	Pn	18 20 34.1	+0.1
	7.8nm,0.3s,baz=6.5,slow=13,SNR=705						
CFAA				S	Sn	18 20 58.9	+0.5
	13nm,0.3s,baz=303,slow=22,SNR=38						
LCO	**Las Campanas**	**3.68**	**288**	*e*P	Pn	18 20 45.8	-12
CPUP	**Villa Florida**	**9.14**	**67**	P	Pn	18 22 10.8	-0.3
	0.3nm,0.3s,baz=246,slow=20,SNR=2.1						
CPUP	**Villa Florida**	**9.14**	**67**	P	Pn	18 22 10.8	-0.3
LPAZ	**La Paz**	**13.95**	**354**	P	Pn	18 23 14.8	+0.2
	2.0nm,0.3s,baz=177,slow=4.9,SNR=38						
SIV	**San Ignacio**	**15.09**	**21**	P	Pn	18 23 24.5	-4.8
	0.2nm,0.3s,baz=222,slow=12,SNR=5.9						
WRA	**Warramunga Arr**	**126.15**	**205**	PKP	PKPdf	18 38 50.1	-1.2
	1.2nm,1.2s,baz=151,slow=1.7,SNR=4.6						
KURK	**Kurchatov**	**147.06**	**42**	PKPbc	PKPbc	18 39 30.1	-0.7
	0.4nm,0.5s,baz=295,slow=3.4,SNR=4.2						
ZALV	**Zalesovo Beam**	**148.63**	**33**	PKPbc	PKPbc	18 39 35.0	+0.1
	1.1nm,0.5s,baz=322,slow=3.1,SNR=6.8						
MKAR	**Makanchi Array**	**150.90**	**47**	PKPbc	PKPbc	18 39 40.7	+0.1
	0.7nm,0.7s,baz=302,slow=2.3,SNR=9.8						
MKAR				PKPab	PKPab	18 39 47.8	-0.6
	0.4nm,0.6s,baz=313,slow=3.7,SNR=4.6						

*IDC **02** 18:23:21.2±1.8, 28°96N×141°20E, h0km, mb3.3/2, mb1 3.5/5, mb1mx3.3/25, mbtmp3.5/5, ML3.2/2, Error ellipse: s-maj=93.5km s-min=22.3km az=76.0*
*ISCJB **02** 18:23:22.8±0.5, 29°05N±0°06×141°5E±0°3, h33km, mb3.5/2, Error ellipse: s-maj=36.7km s-min=4.6km az=167.5*
*JMA **02** 18:23:23.1, 29°05N×141°56E, h43km, M3.8*
ISC 02 18:23:24.8±0.5, 29°02N±0°07×141°6E±0°3, h35km, n12, σ0°87/19, mb3.5/2, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.97**	**166**	Pn	**Pn**	**18 23 56.6**	**+0.8**
	53nm,0.3s,baz=31,slow=8.6,SNR=88						
CBIJ				Sn	**Sn**	**18 24 17.4**	**-1.9**
	164nm,0.3s,baz=21,slow=22,SNR=17						
CBIJ	**Chichi jima**	**1.97**	**166**	P	**Pn**	**18 23 55.6**	**-0.2**
CBIJ				S	**Sn**	**18 24 17.4**	**-1.9**
JHHJ	**Haha-jima-NKT**	**2.43**	**168**	P	**Pn**	**18 24 02.2**	**+0.2**
JHHJ				*e*S	**Sn**	**18 24 30.8**	**+0.4**
JHJ2	**Mitsune**	**4.37**	**340**	P	**Pn**	**18 24 28.2**	**-0.5**
JHJ2				*e*S	**Sn**	**18 25 13.4**	**-5.0**
JHJ	**Hachijo jima 2**	**4.39**	**339**	Pn	**Pn**	**18 24 27.9**	**-1.0**
	3.4nm,0.3s,baz=94,slow=19,SNR=3.9						
JHJ				Sn	**Sn**	**18 25 12.3**	**-6.5**
	5.6nm,0.3s,baz=76,slow=19,SNR=4.3						
BSO1	**Boso 1**	**5.65**	**355**	P	**Pn**	**18 24 46.9**	**+0.6**
BSO1				*e*S	**Sn**	**18 25 50.4**	**+0.5**
JHU	**Hanno**	**7.10**	**344**	P	**Pn**	**18 25 07.1**	**+0.9**
JHO	**Hitachi**	**7.63**	**354**	P	**Pn**	**18 25 13.4**	**0.0**
JHO				*e*S	**Sn**	**18 26 34.9**	**-3.7**
MJAR	**Matsushiro Arr**	**8.04**	**340**	Pn	**Pn**	**18 25 18.0**	**-1.1**
	0.3nm,0.3s,baz=130,slow=14,SNR=4.0						
JFK	**Kawauchi**	**8.35**	**356**	P	**Pn**	**18 25 23.5**	**+0.1**
WRA	**Warramunga Arr**	**49.18**	**189**	P	**P**	**18 32 10.2**	**+0.7**
	0.3nm,0.3s,mb3.8,baz=8.1,slow=8.5,SNR=15						
ASAR	**Alice Springs**	**52.90**	**189**	P	**P**	**18 32 38.3**	**+0.9**
	0.2nm,0.8s,mb3.1,baz=10,slow=5.7,SNR=2.8						

IGQ 02 18:52:22.4, 2°24S×79°80W, h13km±2km, Mb4.3, Ms4.1, 7C-7D, Error ellipse: s-maj=5.0km s-min=1.4km az=105.9, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIOE	**Riobamba**	**1.27**	**68**	⇑S	Sb	18 53 02.7	+0.3
RIOE	**Riobamba**	**1.27**	**68**	⇑P	Pn	18 52 46.6	+0.8
IGUA	**Igualata**	**1.38**	**57**	P	Pn	18 52 49.0	+1.6
CHIS	**Cerro-Chispas-**	**1.50**	**322**	P	Pn	18 52 50.2	+1.2
BMAS	**Trigal station**	**1.51**	**61**	P	Pn	18 52 50.7	+1.5
BIL2	**Estacion Bilba**	**1.52**	**59**	P	Pn	18 52 51.2	+1.9
ARRY	**Arrayan**	**1.53**	**62**	⇑P	Pn	18 52 50.7	+1.3
JUI6	**Juive**	**1.56**	**59**	P	Pn	18 52 51.5	+1.6
RETU	**Refugio**	**1.57**	**60**	P	Pn	18 52 52.1	+2.2
ULBA	**Ulba**	**1.60**	**61**	⇑P	Pn	18 52 52.7	+2.3
MACE	**Macas**	**1.60**	**90**	P	Pn	18 52 51.5	+1.0
MACE	**Macas**	**1.60**	**90**	S	Sn	18 53 12.1	+1.1
RUN5	**Runtun**	**1.60**	**59**	P	Pn	18 52 52.4	+2.0
BRUN	**Tungurahua Vol**	**1.61**	**60**	⇑P	Pn	18 52 52.5	+1.9
BRUN	**Tungurahua Vol**	**1.61**	**60**	⇑S	Sn	18 53 12.7	+1.5
PISA	**Pisayambo**	**1.84**	**50**	P	Pn	18 52 56.8	+3.1
JAMA	**Jama**	**2.01**	**348**	P	Pn	18 52 56.6	+0.6
BMOR	**Cotopaxi Volca**	**2.02**	**42**	⇓P	Pn	18 52 59.1	+3.0
CAMI	**Rancho Maria**	**2.02**	**40**	P	Pn	18 52 59.9	+3.7
MOV1	**Cotopaxi Vol s**	**2.04**	**42**	P	Pn	18 52 59.8	+3.3
BNAS	**Cotopaxi Volca**	**2.04**	**40**	⇓P	Pn	18 52 59.9	+3.4
BREF	**Cotopaxi Volca**	**2.07**	**41**	P	Pn	18 53 00.6	+3.7
BTAM	**Cotopaxi Volca**	**2.10**	**42**	P	Pn	18 53 00.3	+3.1
BVC2	**Cotopaxi Volca**	**2.10**	**42**	⇑P	Pn	18 53 00.6	+3.3
TAMB	**Tambo**	**2.10**	**43**	⇓P	Pn	18 53 00.7	+3.4
VC1	**Cotopaxi 1**	**2.12**	**41**	P	Pn	18 53 00.8	+3.3
COV1	**Cotopaxi Volc**	**2.14**	**43**	⇓P	Pn	18 53 00.9	+3.0
MAG1	**Magdalena**	**2.15**	**1**	P	Pn	18 52 59.6	+1.6
PITA	**Cotopaxi Volc**	**2.16**	**39**	P	Pn	18 53 01.5	+3.4
JUA2	**San Juan 2**	**2.34**	**31**	⇓P	Pn	18 53 03.5	+2.9
TERV	**Terraza Guagua**	**2.38**	**30**	P	Pn	18 53 04.1	+3.0
TERV	**Terraza Guagua**	**2.38**	**30**	S	Sn	18 53 34.4	+4.3
GGP	**Refugio Guagua**	**2.38**	**30**	⇓P	Pn	18 53 04.1	+2.9
PINO	**Pino**	**2.39**	**30**	⇓P	Pn	18 53 04.0	+2.8
ANTI	**Antisana**	**2.42**	**43**	P	Pn	18 53 05.1	+3.4
YANA	**Yana**	**2.44**	**30**	P	Pn	18 53 04.7	+2.7
CAYR	**Refugio Cayamb**	**2.87**	**39**	P	Pn	18 53 11.2	+3.3
CAYA	**Cayambe**	**2.93**	**38**	P	Pn	18 53 11.5	+2.8
COTA	**Cotacachi**	**2.95**	**30**	P	Pn	18 53 11.8	+2.8

*TAP **02** 19:16:44.7, 22°74N×121°81E, h8km±1km, ML3.0, D*
*JMA **02** 19:16:47.3±0.3, 22°82N×121°95E, h78km, M2.6*
ISC 02 19:16:43.5±0.5, 22°74N±0°02×121°91E±0°02, h4km±3km, n46, σ1°02/79, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTN	**Taitung**	**0.70**	**271**	*e*P	**Pg**	**19 16 58.1**	**+1.1**
	baz=271						
TTN				S	**Sg**	**19 17 06.7**	**+0.5**
	baz=271						
LAY	**Lan-yu**	**0.77**	**206**	*e*P	**Pg**	**19 16 58.9**	**+0.6**
	baz=198						
LAY				*e*S	**Sg**	**19 17 08.0**	**-0.3**
	baz=198						
TWG	**Pinlang**	**0.78**	**276**	P	**Pg**	**19 16 59.6**	**+1.2**
	baz=276						
TWG				*e*S	**Sg**	**19 17 08.9**	**+0.4**
	baz=276						
TWF1	**Yuli**	**0.83**	**317**	P	**Pg**	**19 17 00.3**	**+0.9**
	baz=322						
TWF1				*e*S	**Sg**	**19 17 11.1**	**+0.8**
	baz=322						
ECL	**Taimali**	**0.89**	**261**	⇑*i*P	**Pg**	**19 17 00.7**	**+0.1**
	baz=259						
ECL				*e*S	**Sg**	**19 17 11.2**	**-1.0**
	baz=259						
EHY	**Hungye**	**0.94**	**325**	P	**Pg**	**19 17 02.0**	**+0.6**
	baz=329						
EHY				*e*S	**Sg**	**19 17 14.0**	**+0.4**
	baz=329						
ELDTW	**Lidau**	**0.94**	**299**	*e*P	**Pg**	**19 17 01.7**	**+0.2**
	baz=301						
ELDTW				*e*S	**Sg**	**19 17 12.7**	**-1.0**
	baz=301						
TAW	**Tawu**	**1.01**	**248**	*e*P	**Pg**	**19 17 03.1**	**+0.2**
	baz=245						
TAW				*e*S	**Sg**	**19 17 15.8**	**-0.2**
	baz=245						
EAST	**Anshuo**	**1.04**	**250**	P	**Pg**	**19 17 03.1**	**-0.4**
	baz=247						
EAST				*e*S	**Sg**	**19 17 15.6**	**-1.5**
	baz=247						
STYT	**Tauyuan**	**1.14**	**292**	*e*S	**Sg**	**19 17 18.6**	**-1.7**
	baz=293						
ESL	**Shilin**	**1.16**	**338**	*e*P	**Pg**	**19 17 05.8**	**+0.1**
	baz=342						
ESL				*e*S	**Sg**	**19 17 19.8**	**-1.0**
	baz=342						
SSD	**Sandimen**	**1.18**	**271**	*e*P	**Pg**	**19 17 05.3**	**-0.8**
	baz=270						
SCZT	**Fangliau**	**1.25**	**253**	*e*P	**Pg**	**19 17 07.4**	**0.0**
	baz=251						
SCZT				*e*S	**Sg**	**19 17 23.5**	**-0.1**
	baz=251						
TSEB	**Hengchuen, Pin**	**1.25**	**228**	*e*S	**Sg**	**19 17 23.7**	**0.0**
	baz=226						
SGST	**Jiashian**	**1.27**	**286**	*e*P	**Pn**	**19 17 08.3**	**+0.4**
	baz=286						
SGST				*e*S	**

	baz=301						
TCU	**Taichung**	**1.80**	**321**	*e*S	**Sn**	**19 17 39.6**	**+1.0**
	baz=323						
TWQ1	**Liyutan**	**1.91**	**327**	*e*P	**Pn**	**19 17 19.0**	**+2.2**
	baz=329						
TWQ1				*e*S	**Sn**	**19 17 42.9**	**+1.6**
	baz=329						
TWE	**Neicheng**	**1.99**	**354**	*e*S	**Sn**	**19 17 44.2**	**+1.0**
	baz=356						
YOJ	**Yonaguni jima**	**1.99**	**30**	P	**Pn**	**19 17 18.4**	**+0.5**
YOJ				*e*S	**Sn**	**19 17 41.7**	**-1.5**
NSK	**Sanguang**	**2.00**	**345**	*e*P	**Pn**	**19 17 18.4**	**+0.4**
	baz=348						
NSK				*e*S	**Sn**	**19 17 41.7**	**-1.6**
	baz=348						
NSTT	**Nanjuang**	**2.06**	**336**	*e*S	**Sn**	**19 17 45.8**	**+0.9**
	baz=338						
HATJ	**Hateruma jima**	**2.18**	**53**	P	**Pn**	**19 17 21.1**	**+0.6**
HATJ				*e*S	**Sn**	**19 17 46.4**	**-1.5**
IRIF	**Iriomote-Funau**	**2.31**	**46**	P	**Pn**	**19 17 23.0**	**+0.8**
IRIF				*e*S	**Sn**	**19 17 49.8**	**-1.2**
JKRS	**Kuro-shima**	**2.44**	**52**	P	**Pn**	**19 17 25.0**	**+1.0**
JKRS				*e*S	**Sn**	**19 17 53.2**	**-1.1**
JIJ	**Ishigaki jima**	**2.61**	**51**	P	**Pn**	**19 17 26.7**	**+0.3**
JIJ				*e*S	**Sn**	**19 17 57.0**	**-1.5**
JTJ	**Tarama**	**3.18**	**53**	P	**Pn**	**19 17 35.1**	**+0.8**
JTJ				*e*S	**Sn**	**19 18 11.4**	**-1.3**

MOS ***02*** *19:24:33.6±0.8, 6°.12S×130°.95E, h47km, mb4.9/17, Error ellipse: s-maj=16.0km s-min=8.2km az=117.4*
BJI ***02*** *19:24:34.9, 6°.30S×130°.80E, h53km, mB4.8/22, mb4.8/28, Ms4.7/17, Ms7 4.4/16*
ISCJB ***02*** *19:24:37.2±0.2, 6°.50S±0°.03×131°.11E±0°.03, h104km, mb4.7/59, Error ellipse: s-maj=4.3km s-min=4.0km az=44.3*
DJA ***02*** *19:24:38, 6°.31S×131°.18E, h104km, mb5.1/38*
NEIC ***02*** *19:24:41.0±0.4, 6°.32S×130°.85E, mb4.6/27, Error ellipse: s-maj=13.4km s-min=8.3km az=65.0*
IDC ***02*** *19:24:41.8±0.7, 6°.16S×130°.96E, h102km±5km, mb4.2/14, mb1 4.3/15, mb1mx4.2/19, mbtmp4.3/15, MS3.6/4, Ms1 3.6/4, ms1mx2.9/20, Error ellipse: s-maj=18.8km s-min=11.6km az=75.0*
ISC 02 19:24:39.1±0.2, 6°.54S±0°.03×131°.10E±0°.03, h106km, h106km±2.6km; pP-P, n180, σ1929/198, mb4.7/59, 3C-5D, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**1.85**	**61**	P	**Pn**	**19 25 08.7**	**-1.3**
TLE				S	**Sn**	**19 25 28.9**	**-4.8**
AAI	**Ambon**	**4.05**	**314**	P	**Pn**	**19 25 34.0**	**-5.1**
AAI				S	**Sn**	**19 26 14.8**	**-11**
NLAI	**Namlea**	**5.16**	**309**	P	**Pn**	**19 25 51.6**	**-2.5**
	1.8nm5μm521nm,0.6s						
KAKA	**Kakadu**	**6.27**	**168**	||*i*P	**Pn**	**19 26 10.5**	**+1.3**
	462nm,0.6s						
KAKA				*e*S	**Sn**	**19 27 19.9**	**+0.4**
KAKA	**Kakadu**	**6.27**	**168**	*e*Pn	**Pn**	**19 26 10.0**	**+0.8**
	1μm,0.6s						
KAKA				*e*Sn	**Sn**	**19 27 18.8**	**-0.7**
KAKA	**Kakadu**	**6.27**	**168**	P	**Pn**	**19 26 10.6**	**+1.4**
	7.9nm1μm,0.6s						
BAKI	**Biak**	**7.29**	**43**	P	**Pn**	**19 26 19.7**	**-3.2**
	0.8nm2μm175nm,0.7s						
BAKI				S	**Sn**	**19 27 37.0**	**-7.2**
	0.8nm2μm175nm,0.7s						
TNTI	**Ternate**	**8.16**	**333**	P	**Pn**	**19 26 31.5**	**-3.4**
	61nm,0.8s						
SMPI	**Sarmi**	**8.83**	**60**	P	**Pn**	**19 26 42.9**	**-1.0**
	50nm,0.8s						
KDI	**Kendari**	**8.83**	**286**	P	**Pn**	**19 26 43.1**	**-0.8**
	1μm183nm,1.0s						
MMRI	**Maumere**	**9.03**	**256**	P	**Pn**	**19 26 48.6**	**+1.9**
	2μm190nm,1.0s						
MMPI	**Merauke**	**9.40**	**102**	P	**Pn**	**19 26 52.7**	**+1.1**
MMPI				S	**Sn**	**19 28 31.9**	**-3.6**
KNA	**Kununurra**	**9.44**	**194**	P	**Pn**	**19 26 52.8**	**+0.7**
	816nm,0.9s						
LUWI	**Luwuk**	**9.94**	**303**	P	**Pn**	**19 26 58.2**	**-0.9**
	2μm199nm,1.4s						
KMSI	**Cibinong**	**10.02**	**315**	P	**Pn**	**19 26 57.8**	**-2.3**
	162nm,1.1s						
MNI	**Manado**	**10.10**	**322**	P	**Pn**	**19 26 56.0**	**-5.2**
	1μm79nm,0.7s						
JAY	**Jayapura**	**10.37**	**68**	P	**Pn**	**19 27 03.6**	**-1.3**
APSI	**Ampana**	**10.96**	**300**	P	**Pn**	**19 27 13.0**	**+0.1**
	3μm322nm,1.0s						
BKSI	**Bulukumba**	**10.99**	**276**	P	**Pn**	**19 27 13.9**	**+0.7**
	1μm143nm,1.2s						
WSI	**Waingapu**	**11.14**	**253**	P	**Pn**	**19 27 13.3**	**-1.9**
	4μm350nm,0.8s						
BNSI	**Bone**	**11.15**	**280**	P	**Pn**	**19 27 17.6**	**+2.2**
	1μm126nm,1.1s						
KAPI	**Kappang**	**11.40**	**277**	P	**Pn**	**19 27 18.1**	**-0.6**
	9.2nm,0.3s,baz=105,slow=6.7,SNR=24						
KAPI				LR	LR	19 32 55.8	
	comp=Z,319nm,18.1s,baz=94,slow=44						
MRSI	**Marisa**	**11.50**	**307**	P	**Pn**	**19 27 17.2**	**-2.8**
	5μm55nm,1.1s						
SPSI	**Sidrap Palu**	**11.57**	**282**	P	**Pn**	**19 27 22.2**	**+1.2**
	1μm107nm,0.7s						
TTSI	**Tana Toraja**	**11.77**	**287**	P	**Pn**	**19 27 25.3**	**+1.7**
	105nm,1.2s						
PCI	**Palu**	**12.55**	**296**	P	**Pn**	**19 27 34.6**	**+0.6**
	1μm88nm,1.0s						
FITZ	**Fitzroy Crossi**	**12.67**	**204**	*e*P	**Pn**	**19 27 32.9**	**-2.6**
	70nm,0.4s						
FITZ				*e*S	**Sn**	**19 29 47.0**	**-7.9**
FITZ	**Fitzroy Crossi**	**12.67**	**204**	P	**Pn**	**19 27 33.0**	**-2.5**
	9.7nm,0.3s,baz=33,slow=10,SNR=175						
FITZ				S	**Sn**	**19 29 46.7**	**-8.2**
	11nm,0.3s,baz=121,slow=21,SNR=8.1						
FITZ				LR	LR	19 33 24.8	
	comp=Z,292nm,19.1s,baz=28,slow=40						
FITZ	**Fitzroy Crossi**	**12.67**	**204**	*e*Pn	**Pn**	**19 27 33.0**	**-2.5**
	46nm,0.6s						
FITZ				*e*Sn	**Sn**	**19 29 44.5**	**-10**
FITZ	**Fitzroy Crossi**	**12.67**	**204**	P	**Pn**	**19 27 33.7**	**-1.8**
	129nm,0.7s						
WRAB	**Tennant Creek**	**13.68**	**167**	*e*P	**Pn**	**19 27 46.7**	**-2.0**
WRAB				pmax	pmax		
	comp=Z,121nm,0.6s						
WRAB	**Tennant Creek**	**13.68**	**167**	*e*Pn	**Pn**	**19 27 46.7**	**-2.0**
	comp=Z,121nm,0.6s						
WRAB				*e*Sn	**Sn**	**19 30 14.3**	**-5.1**
WRAB	**Tennant Creek**	**13.68**	**167**	P	**Pn**	**19 27 47.1**	**-1.6**
	comp=Z,194nm,0.7s						
WRA	**Warramunga Arr**	**13.69**	**167**	P	**Pn**	**19 27 46.9**	**-1.9**
	comp=Z,13nm,0.3s,baz=343,slow=13,SNR=212						
WRA				S	**Sn**	**19 30 15.3**	**-4.3**
	comp=Z,11nm,0.3s,baz=353,slow=23,SNR=8.8						
WRA	**Warramunga Arr**	**13.69**	**167**	P	**Pn**	**19 27 46.9**	**-1.9**
WRA				S	**Sn**	**19 30 15.3**	**-4.3**
COEN	**Coen**	**13.97**	**123**	*e*Pn	**Pn**	**19 27 51.2**	**-1.3**
	comp=Z,130nm,0.6s						
COEN				*e*Sn	**Sn**	**19 30 15.6**	**-11**
COEN	**Coen**	**13.97**	**123**	P	**Pn**	**19 27 54.8**	**+2.3**
	comp=Z,119nm,1.3s						
KHKI	**Kahang-Kahang**	**15.47**	**262**	P	**Pn**	**19 28 10.0**	**-1.6**
	comp=Z,44nm,1.4s						
SRBI	**Singaraja**	**15.84**	**263**	P	**Pn**	**19 28 13.4**	**-2.8**
	comp=Z,40nm,0.9s						
KMMI	**Kalianget**	**17.02**	**267**	P	**Pn**	**19 28 34.7**	**+3.9**
	comp=Z,136nm,0.8s						
TSM	**Tawau**	**17.04**	**309**	P	**Pn**	**19 28 27.9**	**-3.0**
MYLDM	**Lahad Datu**	**17.14**	**312**	P	**Pn**	**19 28 30.0**	**-2.2**
ASAR	**Alice Springs**	**17.24**	**171**	P	**Pn**	**19 28 34.4**	**+1.0**
	comp=Z,14nm,0.3s,baz=349,slow=12,SNR=277						
ASAR				S	**S**	**19 31 43.2**	**-2.5**
	comp=Z,3.1nm,0.3s,baz=351,slow=26,SNR=6.9						
GMJI	**Gumukmas**	**17.60**	**263**	P	**Pn**	**19 28 36.6**	**-1.1**
	comp=Z,40nm,1.5s						
MBWA	**Marble Bar**	**18.23**	**216**	*e*Pn	**Pn**	**19 28 45.4**	**+0.1**
	comp=Z,26nm,0.6s						
MBWA				*e*Sn	**Sn**	**19 31 55.8**	**-13**
MBWA	**Marble Bar**	**18.23**	**216**	P	**P**	**19 28 45.8**	**+1.6**
	comp=Z,57nm,1.4s						
SDKM	**Sandakan**	**18.41**	**311**	P	**P**	**19 28 46.5**	**+0.3**
PWJI	**Pagerwojo**	**19.20**	**264**	P	**P**	**19 28 55.2**	**+0.4**
	comp=Z,45nm,0.7s						
SJI	**Sawahan**	**19.22**	**265**	P	**P**	**19 28 56.9**	**+1.8**
	comp=Z,48nm,0.6s						
KKM	**Kota Kinabalu**	**19.42**	**310**	P	**P**	**19 28 56.6**	**-0.5**
KKM	**Kota Kinabalu**	**19.42**	**310**	*e*Pn	**Pn**	**19 28 54.9**	**-4.5**
	comp=Z,28nm,0.7s						
KKM	**Kota Kinabalu**	**19.42**	**310**	P	**P**	**19 28 55.2**	**-2.0**
	comp=Z,45nm,1.2s						
NGJI	**Ngawi**	**19.52**	**266**	P	**P**	**19 28 58.5**	**+0.3**
	comp=Z,51nm,2.0s						
KDM	**Kudat**	**19.53**	**313**	P	**P**	**19 29 01.2**	**+2.8**
PCJI	**Pacitan**	**19.83**	**264**	P	**P**	**19 29 00.8**	**-0.9**
CTA	**Charters Tower**	**19.94**	**134**	*e*P	**P**	**19 29 09.2**	**+6.4**
	comp=Z,20nm,0.6s						
CTA	**Charters Tower**	**19.94**	**134**	P	**P**	**19 29 09.5**	**+6.7**
	comp=Z,28nm,0.7s,baz=314,slow=12,SNR=41						
CTA				S	**S**	**19 32 48.8**	**+7.3**
	comp=Z,5.7nm,0.6s,baz=43,slow=18,SNR=3.5						
CTAO	**Charters Tower**	**19.94**	**134**	||*e*P	**P**	**19 29 09.0**	**+6.2**
CTAO				pmax	pmax		
	comp=Z,43nm,1.0s						
CTAO	**Charters Tower**	**19.94**	**134**	||*e*P	**P**	**19 29 09.0**	**+6.2**
	comp=Z,43nm,1.0s						
CTAO				*e*S	**S**	**19 33 02.9**	**+21**
CTAO	**Charters Tower**	**19.94**	**134**	P	**P**	**19 29 09.7**	**+6.9**
BTM	**Bintulu**	**20.43**	**298**	P	**P**	**19 29 09.9**	**+1.8**
STKI	**Sintang**	**20.65**	**288**	P	**P**	**19 29 10.0**	**-0.5**
	comp=Z,3μmcomp=Z,25nm,1.4s						
SBUM	**Sibu**	**20.86**	**295**	P	**P**	**19 29 12.2**	**-0.6**
SBUM	**Sibu**	**20.86**	**295**	P	**P**	**19 29 11.2**	**-1.5**
	comp=Z,28nm,0.9s						
KSM	**Kuching**	**22.23**	**290**	P	**P**	**19 29 26.7**	**-0.7**
KSM	**Kuching**	**22.23**	**290**	*e*P	**P**	**19 29 24.8**	**-2.5**
	comp=Z,21nm,0.9s,mb4.5						
KSM	**Kuching**	**22.23**	**290**	P	**P**	**19 29 25.8**	**-1.5**
	comp=Z,27nm,1.0s,mb4.5						
TGY	**Tagaytay City**	**22.85**	**334**	P	**P**	**19 29 33.4**	**-0.2**
	comp=Z,41nm,0.3s,mb5.2,baz=151,slow=19,SNR=4.8						
LEM	**Lembang**	**23.33**	**268**	P	**P**	**19 29 38.0**	**-0.1**
	comp=Z,83nm,1.0s,mb5.0						
CBJI	**Citeko**	**24.10**	**269**	P	**P**	**19 29 42.3**	**-2.8**
	comp=Z,266nm,0.9s,mb5.6						
FORT	**Forrest**	**24.28**	**186**	*e*P	**P**	**19 29 51.4**	**+4.8**
	comp=Z,90nm,0.6s,mb5.3						
FORT	**Forrest**	**24.28**	**186**	*e*P	**P**	**19 29 51.2**	**+4.7**
	comp=Z,98nm,0.6s,mb5.3						
FORT				*e*S	S	19 34 30.2	+32
STKA	**Stephens Creek**	**27.05**	**160**	*e*P	**P**	**19 30 16.1**	**+4.6**
	comp=Z,4.2nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**27.05**	**160**	P	**P**	**19 30 16.6**	**+5.0**
	comp=Z,3.5nm,0.6s,mb4.0,baz=350,slow=5.9,SNR=9.7						
STKA	**Stephens Creek**	**27.05**	**160**	*e*P	**P**	**19 30 15.9**	**+4.4**
STKA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
STKA	**Stephens Creek**	**27.05**	**160**	*e*P	**P**	**19 30 15.8**	**+4.3**
	comp=Z,4.3nm,0.8s,mb4.0						
KLBR	**Kellerberrin**	**27.88**	**205**	*e*P	**P**	**19 30 23.2**	**+4.3**
	comp=Z,5.6nm,0.3s,mb4.6						
MYKOM	**Kota Tinggi**	**28.44**	**286**	P	**P**	**19 30 24.8**	**+0.7**
HNR	**Honiara**	**28.70**	**98**	LR	LR	19 41 36.5	
	comp=Z,133nm,19.3s,baz=292,slow=35						
KGM	**Kluang**	**29.01**	**286**	P	**P**	**19 30 29.3**	**0.0**
NWAO	**Narrogin (SRO)**	**29.25**	**204**	P	**P**	**19 30 35.8**	**+4.7**
	comp=Z,5.7nm,0.4s,mb4.6,baz=23,slow=16,SNR=15						
NWAO	**Narrogin (SRO)**	**29.25**	**204**	*e*P	**P**	**19 30 35.2**	**+4.1**
NWAO				pmax	pmax		
	comp=Z,18nm,1.2s						
NWAO	**Narrogin (SRO)**	**29.25**	**204**	*e*P	**P**	**19 30 35.2**	**+4.1**
	comp=Z,18nm,1.2s,mb4.6						
SDSI	**Sungai Dareh**	**30.12**	**279**	P	**P**	**19 30 34.7**	**-4.4**
KTGM	**Kuala Trenggan**	**30.30**	**292**	P	**P**	**19 30 42.8**	**+2.1**
FRIM	**Kepong**	**30.99**	**287**	P	**P**	**19 30 46.2**	**-0.5**
PPI	**Padang Panjang**	**31.23**	**280**	P	**P**	**19 30 46.8**	**-2.0**
	comp=Z,2μmcomp=Z,19nm,0.9s,mb4.8						
IPM	**Ipoh**	**31.96**	**289**	P	**P**	**19 30 56.1**	**+0.8**
MNSI	**Mandailing Nat**	**32.30**	**282**	P	**P**	**19 30 56.3**	**-1.9**
KULM	**Kulim**	**32.59**	**290**	P	**P**	**19 31 01.2**	**+0.4**
KULM	**Kulim**	**32.59**	**290**	*e*P	**P**	**19 30 59.4**	**-1.4**
	comp=Z,5.9nm,0.6s,mb4.6						
PSI	**Prapat**	**33.44**	**285**	P	**P**	**19 31 08.5**	**+0.3**
	comp=Z,22nm,0.8s,mb5.0,baz=112,slow=3.4,SNR=13						
PSI	**Prapat**	**33.44**	**285**	P	**P**	**19 31 08.5**	**+0.3**
NJ2	**Nanjing**	**40.11**	**344**	*e*P	**P**	**19 32 04.4**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
WHN	**Wuhan**	**40.22**	**337**	*e*P	**P**	**19 32 09.2**	**+3.9**
CM31	**Chiang Mai Arr**	**40.29**	**309**	*e*P	**P**	**19 32 05.3**	**-0.8**
	comp=Z,4.6nm,0.5s,mb4.6						
CMAR	**Chiang Mai Arr**	**40.29**	**309**	P	**P**	**19 32 05.7**	**-0.5**
	comp=Z,11nm,0.8s,mb4.7,baz=141,slow=7.6,SNR=67						
CMAR				ScP	ScP	19 37 51.0	+3.2
	comp=Z,1.5nm,1.0s,baz=139,slow=4.8,SNR=5.4						
CMAR				LR	LR	19 47 42.1	
	comp=Z,43nm,21.2s,baz=130,slow=35						
GYA	**Guiyang**	**40.47**	**325**	P	**P**	**19 32 08.0**	**+0.5**
GYA				pP	pP	19 32 20.4	-11
GYA				sP	sP	19 32 26.6	-17
GYA				PP	PP	19 33 45.2	+2.4
GYA				ScP	ScP	19 37 57.8	+10
GYA				S	**S**	**19 38 11.2**	**+2.7**
GYA				sS	sS	19 38 32.0	-19
GYA				SS	SS	19 41 04.5	-7.7
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
GYA				pmax	pmax		
	comp=Z,110nm,4.9s						
GYA				LR	LR		
	comp=N,480nm,17.2s						
GYA				LR	LR		
	comp=E,440nm,18.0s						
GYA				LR	LR		
	comp=Z,490nm,17.4s						
CHTO	**Chiang Mai**	**40.49**	**309**	*e*P	**P**	**19 32 06.8**	**-1.0**
CHTO				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.0						
CHTO	**Chiang Mai**	**40.49**	**309**	*e*P	**P**	**19 32 06.8**	**-1.0**
	comp=Z,18nm,0.8s,mb5.0						
KMI	**Kunming**	**41.86**	**320**	P	**P**	**19 32 21.1**	**+2.2**
KMI				pP	pP	19 32 32.2	-11
KMI				sP	sP	19 32 37.7	-18
KMI				PP	PP	19 33 58.2	+0.3
KMI				S	**S**	**19 38 32.8**	**+3.6**
KMI				sS	sS	19 38 53.1	-18
KMI				SS	SS	19 41 33.2	-6.5
KMI				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.2						
KMI				pmax	pmax		
	comp=Z,98nm,4.3s						
KMI				LR	LR		
	comp=N,100nm,13.9s						
KMI				LR	LR		
	comp=E,72nm,14.5s						
KMI				LR	LR		
	comp=Z,72nm,17.2s						
MAJO	**Matsushiro**	**43.37**	**8**	*e*P	**P**	**19 32 29.5**	**-1.4**
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
MAJO	**Matsushiro**	**43.37**	**8**	*e*P	**P**	**19 32 29.5**	**-1.4**
	comp=Z,5.1nm,0.8s,mb4.3						
MAJO				*e*	pP	19 32 53.5	-2.0
MAT	**Matsushiro**	**43.37**	**8**	P	**P**	**19 32 29.6**	**-1.3**
MJAR	**Matsushiro Arr**	**43.37**	**8**	P	**P**	**19 32 29.8**	**-1.1**
	comp=Z,1.6nm,0.8s,mb3.8,baz=185,slow=9.6,SNR=9.9						
MJAR				pP	pP	19 32 53.7	-1.8
	comp=Z,8.4nm,0.8s,baz=188,slow=9.6,SNR=9.4						
MJAR	**Matsushiro Arr**	**43.37**	**8**	P	**P**	**19 32 29.8**	**-1.1**
MJAR				pP	pP	19 32 53.7	-1.8
KSRS	**Korea Array**	**43.86**	**356**	P	**P**	**19 32 33.9**	**-0.9**
	comp=Z,2.1nm,0.6s,mb4.1,baz=171,slow=8.5,SNR=12						
KSRS				pP	pP	19 32 60.0	+0.4
	comp=Z,2.4nm,0.7s,baz=172,slow=9.3,SNR=5.0						
CD2	**Chengdu**	**45.51**	**326**	P	**P**	**19 32 49.1**	**+1.0**
CD2				pP	pP	19 33 01.5	-11
CD2				sP	sP	19 33 06.8	-18
CD2				PP	PP	19 34 36.2	-0.6
CD2				S	**S**	**19 39 25.7**	**+3.5**
CD2				sS	sS	19 39 46.6	-18
CD2				SS	SS	19 42 40.1	-7.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.8						
CD2				pmax	pmax		
	comp=Z,80nm,6.1s						
CD2				LR	LR		
	comp=N,130nm,6.0s						
CD2				LR	LR		
	comp=Z,150nm,6.0s						
BJI	**Beijing**	**48.35**	**345**	P	**P**	**19 33 09.8**	**-0.2**
BJI				S	**S**	**19 40 02.7**	**+0.4**
BJI				pmax	pmax		
	comp=Z,14nm,0.5s,mb5.0						
BJI				pmax	pmax		
	comp=Z,50nm,3.8s						
BJI				LR	LR		
	comp=N,73nm,24.9s						
BJI				LR	LR		
	comp=E,65nm,25.8s						
VLA	**Vladivostok**	**49.43**	**1**	*d*P	**P**	**19 33 22.5**	**+4.3**
VLA				pmax	pmax		
	comp=Z,96nm,0.6s,mb5.9						
LZH	**Lanzhou**	**49.53**	**331**	*e*P	**P**	**19 33 24.7**	**+5.6**
LZH				pP	pP	19 33 36.1	-8.1
LZH				sP	sP	19 33 41.0	-15
LZH				PcP	PcP	19 34 46.3	+6.8
LZH				PP	PP	19 35 16.1	+1.7
LZH				*e*S	**S**	**19 40 26.6**	**+7.7**
LZH				sS	sS	19 40 45.2	-17
LZH				SS	SS	19 43 51.7	-0.8
LZH				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
LZH				pmax	pmax		
	comp=Z,69nm,4.2s						
CN2	**Changchun**	**50.36**	**355**	*e*P	**P**	**19 33 25.0**	**-0.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
HHC	**Hu-ho-hao-te**	**50.46**	**341**	*e*P	**P**	**19 33 27.5**	**+1.5**
HHC				sP	sP	19 33 44.8	-18
HHC				PcP	PcP	19 34 45.9	+3.1
HHC				PP	PP	19 35 24.0	+1.2
HHC				ScP	ScP	19 38 36.9	+7.7
HHC				PcS	PcS	19 38 41.7	+1.7
HHC				S	**S**	**19 40 35.6**	**+3.9**
HHC				sS	sS	19 40 55.9	-19
HHC				ScS	ScS	19 43 11.6	+5.0
HHC				SS	SS	19 44 06.3	-0.9
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
HHC				pmax	pmax		
	comp=Z,70nm,6.4s						
HHC				LR	LR		
	comp=N,97nm,15.4s						
HHC				LR	LR		
	comp=E,94nm,15.5s						
HHC				LR	LR		
	comp=Z,94nm,15.1s						
PALK	**Pallekele**	**52.12**	**284**	*e*P	**P**	**19 33 38.0**	**-0.9**
PALK				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.9						
PALK	**Pallekele**	**52.12**	**284**	*e*P	**P**	**19 33 38.0**	**-0.9**
	comp=Z,8.9nm,0.7s,mb4.9						
ODAN	**Odare**	**53.79**	**310**	*e*P	**P**	**19 33 50.4**	**-0.6**
	comp=Z,17nm,0.4s,mb5.4						
TAPN	**Taplejung**	**53.81**	**311**	*e*P	**P**	**19 33 50.8**	**-0.3**
	comp=Z,18nm,0.4s,mb5.4						
GTA	**Gaotai**	**54.11**	**330**	*e*P	**P**	**19 33 53.9**	**+0.8**
GTA				pP	pP	19 34 06.4	-12
GTA				sP	sP	19 34 11.7	-19
GTA				PP	PP	19 35 57.5	+1.7
GTA				S	**S**	**19 41 24.9**	**+3.3**
GTA				sS	sS	19 41 47.5	-18
GTA				SS	SS	19 45 06.9	+2.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.4						
GTA				pmax	pmax		
	comp=Z,52nm,5.7s						
GTA				LR	LR		
	comp=N,81nm,15.2s						
GTA				LR	LR		
	comp=E,86nm,15.2s						
GTA				LR	LR		
	comp=Z,59nm,15.2s						
RAMN	**Ramite**	**54.44**	**310**	*e*P	**P**	**19 33 55.1**	**-0.6**
	comp=Z,67nm,0.7s,mb5.8						
HABR	**Khabarovsk**	**54.89**	**3**	P	**P**	**19 33 57.9**	**-0.6**
HABR				*e*		19 34 57.5	
HABR				*e*PPP		19 37 15.5	
HABR				*e*S	**S**	**19 41 31.9**	**+0.2**
HABR				*e*		19 43 35.7	
HABR				*e*SS	SS	19 45 18.1	+1.3
HABR				MLR	MLR		
	comp=Z,42nm,17.0s						
JIRN	**Jiri**	**55.12**	**310**	*e*P	**P**	**19 34 00.2**	**-0.4**
	comp=Z,10nm,0.4s,mb5.2						
GUN	**Gumba**	**55.48**	**310**	*e*P	**P**	**19 34 02.9**	**-0.3**
	comp=Z,43nm,0.6s,mb5.7						
KLR	**Kul'dur**	**55.54**	**1**	*e*P	**P**	**19 34 01.8**	**-1.4**
PKI	**Pulchoki**	**55.67**	**310**	*e*P	**P**	**19 34 04.1**	**-0.4**
	comp=Z,9.3nm,0.4s,mb5.2						
KKN	**Kakani**	**55.88**	**310**	*e*P	**P**	**19 34 05.4**	**-0.6**
	comp=Z,11nm,0.4s,mb5.2						
DMN	**Daman**	**55.92**	**310**	*e*P	**P**	**19 34 05.9**	**-0.4**
	comp=Z,9.5nm,0.4s,mb5.2						
GKN	**Gorkha**	**56.48**	**310**	*e*P	**P**	**19 34 09.7**	**-0.6**
	comp=Z,23nm,0.3s,mb5.6						
ULN	**Ulaanbaatar**	**58.17**	**341**	*e*P	**P**	**19 34 22.4**	**+0.6**
ULN				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
ULN	**Ulaanbaatar**	**58.17**	**341**	*e*P	**P**	**19 34 22.4**	**+0.6**
	comp=Z,7.3nm,0.8s,mb4.8						
ULN				*e*	pP	19 34 48.0	+0.4
SONM	**Songino Array**	**58.36**	**341**	P	**P**	**19 34 24.1**	**+1.0**
	comp=Z,1.6nm,0.6s,mb4.2,baz=168,slow=5.7,SNR=12						
SONM				pP	pP	19 34 49.3	+0.3
	comp=Z,3.6nm,0.8s,baz=167,slow=6.7,SNR=7.2						
MOY	**Mondy**	**63.46**	**340**	*e*P	**P**	**19 35 02.9**	**+5.3**
PETK	**Petropavlovsk-**	**63.55**	**18**	P	**P**	**19 34 59.2**	**+1.1**
	comp=Z,3.2nm,0.7s,mb4.2,baz=188,slow=4.6,SNR=5.5						
PETK				pP	pP	19 35 23.9	-0.5
	comp=Z,4.7nm,0.8s,baz=189,slow=7.3,SNR=5.

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKM2				*e*	pP	19 36 06.1	-1.9
SEY	**Seymchan**	**71.16**	**10**	*i* P	**P**	**19 35 47.3**	**+1.4**
AML	**Almayashu**	**71.19**	**319**	P	**P**	**19 35 48.9**	**+2.4**
SNR=15							
AML	**Almayashu**	**71.19**	**319**	*e*P	**P**	**19 35 48.5**	**+2.0**
AML				pmax	pmax		
comp=Z,17nm,1.0s,mb4.8							
AML	**Almayashu**	**71.19**	**319**	*e*P	**P**	**19 35 48.5**	**+1.9**
comp=Z,17nm,1.0s,mb4.8							
USP	**Ospenovka**	**71.20**	**320**	P	**P**	**19 35 48.0**	**+1.4**
SNR=7.5							
KBL	**Kabul**	**71.31**	**310**	*e*P	**P**	**19 35 48.1**	**+0.6**
KBL				pmax	pmax		
comp=Z,12nm,1.0s,mb4.7							
KBL	**Kabul**	**71.31**	**310**	*e*P	**P**	**19 35 48.1**	**+0.6**
comp=Z,12nm,1.0s,mb4.7							
EKS2	**Erkin-Say**	**71.38**	**319**	P	**P**	**19 35 49.0**	**+1.3**
SNR=11							
EKS2	**Erkin-Say**	**71.38**	**319**	*e*P	**P**	**19 35 49.0**	**+1.3**
EKS2				*e*	pP	19 36 13.9	-0.5
EKS2				pmax	pmax		
comp=Z,7.0nm,0.8s,mb4.5							
EKS2	**Erkin-Say**	**71.38**	**319**	*e*P	**P**	**19 35 49.0**	**+1.3**
comp=Z,7.4nm,0.8s,mb4.6							
EKS2				*e*	pP	19 36 13.9	-0.5
ZAA0	**Zalesovo Array**	**71.66**	**333**	*e*P	**P**	**19 35 48.4**	**-0.7**
ZAA0				*e*	pP	19 36 16.4	+0.6
ZAA0				*e*PP	PP	19 38 25.6	-4.1
ZALV	**Zalesovo Beam**	**71.66**	**333**	P	**P**	**19 35 49.5**	**+0.4**
comp=Z,1.5nm,0.5s,mb4.1,baz=117,slow=5.2,SNR=12							
ZALV				pP	pP	19 36 17.1	+1.2
comp=Z,2.7nm,0.6s,baz=113,slow=4.7,SNR=4.3							
KURK	**Kurchatov**	**72.70**	**328**	*c i*P	**P**	**19 35 56.1**	**+0.7**
KURK				pmax	pmax		
comp=Z,7.0nm,1.2s,mb4.4							
KURK	**Kurchatov**	**72.70**	**328**	*e*P	**P**	**19 35 55.7**	**+0.3**
comp=Z,10nm,0.9s,mb4.7							
KURK				*e*	pP	19 36 23.4	+1.2
NVS	**Novosibirsk**	**72.94**	**333**	*e*P	**P**	**19 35 57.0**	**+0.3**
NVS				*e*S	S	19 45 13.7	-1.1
NVS				pmax	pmax		
comp=N,7.0nm,1.9s							
NVS				pmax	pmax		
comp=Z,14nm,1.9s,mb4.5							
NVS				pmax	pmax		
comp=E,3.0nm,0.9s							
NVS				smax			
comp=E,20nm,1.9s							
NVS				smax			
comp=N,21nm,2.0s							
SBA	**Scott Base**	**73.65**	**173**	P	**P**	**19 36 08.7**	**+8.1**
KK31	**Karatay Array**	**73.72**	**318**	*i* P	**P**	**19 36 02.6**	**+1.0**
KK31				pmax	pmax		
comp=Z,5.0nm,0.9s,mb4.2							
MAW	**Mawson**	**75.78**	**202**	P	**P**	**19 36 18.6**	**+5.6**
comp=Z,1.5nm,0.5s,mb4.0,baz=87,slow=12,SNR=9.0							
MAW	**Mawson**	**75.78**	**202**	*e*P	**P**	**19 36 18.0**	**+5.0**
MAW				pmax	pmax		
comp=Z,2.0nm,1.2s							
MAW	**Mawson**	**75.78**	**202**	*e*P	**P**	**19 36 17.9**	**+5.0**
comp=Z,1.9nm,1.2s,mb3.7							
VOSK	**Vostochnaya**	**77.80**	**327**	P	**P**	**19 36 24.8**	**+0.2**
VOSK				pmax	pmax		
comp=Z,2.0nm,0.6s,mb4.0							
TIXI	**Tiksi**	**78.04**	**359**	*e*P	**P**	**19 36 26.1**	**+0.6**
BVAR	**Borovoye Array**	**78.26**	**327**	P	**P**	**19 36 28.0**	**+0.9**
comp=Z,1.4nm,0.5s,mb4.0,baz=123,slow=5.5,SNR=17							
BRVK	**Borovoye**	**78.33**	**327**	*c i*P	**P**	**19 36 28.3**	**+0.8**
BRVK				pmax	pmax		
comp=Z,5.0nm,1.1s,mb4.2							
BRVK	**Borovoye**	**78.33**	**327**	*e*P	**P**	**19 36 27.8**	**+0.3**
comp=Z,2.1nm,0.6s,mb4.0							
ZRNK	**Zerenda**	**78.97**	**327**	P	**P**	**19 36 31.5**	**+0.5**
ZRNK				pmax	pmax		
comp=Z,4.0nm,0.8s,mb4.3							
ABKAR	**Akbulak array**	**82.83**	**321**	*e*P	**P**	**19 36 51.6**	**0.0**
comp=Z,3.9nm,0.9s,mb4.2							
SYO	**Syowa Base**	**84.49**	**201**	⇑*e*X		19 37 14.0	
ARU	**Arti**	**85.90**	**328**	*d i*P	**P**	**19 37 07.2**	**+0.3**
ARU						19 40 21.9	
ARU				S	S	19 47 21.7	-10
ARU				pmax	pmax		
comp=Z,5.0nm,1.0s,mb4.4							
ARU	**Arti**	**85.90**	**328**	*e*P	**P**	**19 37 06.5**	**-0.5**
comp=Z,3.3nm,0.6s,mb4.4							
KMBO	**Kilima Mbogo**	**93.70**	**268**	*e*P	**P**	**19 37 47.7**	**+3.1**
KMBO				pmax	pmax		
comp=Z,5.0nm,1.2s							
KMBO	**Kilima Mbogo**	**93.70**	**268**	*e*P	**P**	**19 37 47.7**	**+3.1**
comp=Z,5.0nm,1.2s,mb4.7							
LSZ	**Lusaka**	**100.64**	**253**	P	Pdif	19 38 18.2	+3.1
CPUP	**Villa Florida**	**146.32**	**166**	PKPbc	PKPbc	19 44 12.9	+4.7
comp=Z,1.2nm,0.5s,baz=144,slow=3.6,SNR=7.4							
CPUP	**Villa Florida**	**146.32**	**166**	*e*PKPdf	PKPbc	19 44 11.9	+3.6
LPAZ	**La Paz**	**150.39**	**140**	PKPbc	PKPbc	19 44 25.3	+6.2
comp=Z,4.1nm,0.9s,baz=82,slow=2.2,SNR=14							
LPAZ	**La Paz**	**150.39**	**140**	*e*PKPbc	PKPbc	19 44 25.1	+5.9

*IDC **02** 19:30:31.7±0.9, 15°.36S×173°.19W, h0km, mb4.0/6, mb1 4.3/6, mb1mx4.0/19, mbtmp4.0/6, MS3.1/1, Ms1 3.0/1, ms1mx2.5/21, Error ellipse: s-maj=53.3km s-min=18.4km az=142.0*
*NEIC **02** 19:30:33.5±0.6, 15°.31S×173°.25W, h10km, mb4.1/3, Error ellipse: s-maj=35.3km s-min=11.4km az=139.0*
*ISCJB **02** 19:30:35.5±0.7, 15°.3S±0°.2×173°.3W±0°.2, h33km, mb3.9/9, Error ellipse: s-maj=41.6km s-min=13.1km az=137.5*
ISC 02 19:30:37.4±0.7, 15°.4S±0°.2×173°.2W±0°.2, h35km, n13, σ1º00/12, mb3.9/9, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.01**	**44**	Pn	**Pn**	**19 31 06.0**	**-2.9**
88nm,0.3s,baz=50,slow=3.0,SNR=110							
AFI				Sn	**Sn**	**19 31 26.5**	**-6.4**
75nm,0.3s,baz=224,slow=22,SNR=6.3							
AFI				LR	LR	19 31 47.7	
comp=Z,372nm,20.9s,baz=230,slow=38							
URZ	**Urewera**	**24.35**	**199**	P	**P**	**19 35 51.6**	**-0.5**
9.7nm,0.6s,mb4.4,baz=350,slow=10.0,SNR=5.3							
URZ	**Urewera**	**24.35**	**199**	*e*P	**P**	**19 35 52.0**	**-0.1**
STKA	**Stephens Creek**	**44.20**	**240**	LR	LR	19 54 29.1	
comp=Z,21nm,18.6s,baz=23,slow=32							
WRA	**Warramunga Arr**	**50.01**	**257**	P	**P**	**19 39 28.5**	**-0.3**
0.3nm,0.7s,mb3.5,baz=94,slow=6.8,SNR=3.7							
ASAR	**Alice Springs**	**50.28**	**252**	P	**P**	**19 39 30.2**	**-0.6**
1.7nm,0.6s,mb4.3,baz=87,slow=7.9,SNR=10							
NVAR	**Mina Array Bea**	**74.19**	**42**	P	**P**	**19 42 11.4**	**+0.8**
1.6nm,0.9s,mb3.9,baz=224,slow=10.0,SNR=8.0							
BMO	**Blue Mountains**	**78.49**	**37**	*e*P	**P**	**19 42 35.6**	**+0.7**
1.1nm,0.8s,mb3.8							
HLID	**Hailey**	**79.49**	**39**	*e*P	**P**	**19 42 41.7**	**+1.3**
4.7nm,1.1s,mb4.3							
TXAR	**Lajitas Array**	**80.45**	**56**	P	**P**	**19 42 45.5**	**-0.4**
0.5nm,0.7s,mb3.5,baz=222,slow=5.0,SNR=8.1							
MCMT	**McKenzie Canyo**	**81.12**	**39**	*e*P	**P**	**19 42 50.5**	**+1.4**
1.5nm,1.0s,mb3.9							
PDAR	**Pinedale Array**	**82.12**	**42**	P	**P**	**19 42 53.9**	**-0.6**
1.0nm,0.9s,mb3.8,baz=222,slow=2.0,SNR=6.7							
BRTR	**Keskin Array B**	**146.23**	**321**	PKPbc	PKPbc	19 50 14.3	-0.1
0.8nm,0.6s,baz=116,slow=2.9,SNR=5.4							

*DDA **02** 19:42:29.4, 37°.56N×43°.95E, h4km±1km, Md3.7*
*ISCJB **02** 19:42:32.4±0.3, 37°.52N±0°.02×44°.01E±0°.03, h10km, mb3.7/14, MS3.1/7, Error ellipse: s-maj=3.5km s-min=3.0km az=27.8*
*MOS **02** 19:42:32.9±1.4, 37°.40N×43°.99E, h10km, mb4.0/7, Error ellipse: s-maj=12.6km s-min=7.8km az=85.9*
*ISK **02** 19:42:32.4, 37°.63N×43°.89E, h2km, ML4.2*
*IDC **02** 19:42:33.9±0.9, 37°.60N×44°.01E, h0km, mb3.7/9, mb1 3.8/16, mb1mx3.6/30, mbtmp3.7/16, ML3.6/5, MS3.2/11, Ms1 3.2/11, ms1mx3.0/35, Error ellipse: s-maj=16.6km s-min=10.2km az=132.0*
*CSEM **02** 19:42:33.3±0.2, 37°.58N×43°.97E, h2km, mb3.8/8, Error ellipse: s-maj=5.1km s-min=4.5km az=93.0*
*NEIC **02** 19:42:35.2±4.7, 37°.57N×43°.97E, h12km±33km, mb4.0/6, ML4.1(ISK), Error ellipse: s-maj=10.8km s-min=7.5km az=156.0*
ISC 02 19:42:34.4±0.3, 37°.58N±0°.02×43°.95E±0°.03, h10km, n126, σ1º19/134, mb3.7/14, MS3.1/7, 1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HKR	**Hakkari**	**0.16**	**271**	PG	**Pg**	**19 42 35.7**	**-2.3**
HKR	**Hakkari**	**0.16**	**271**	*i* Pg	**Pg**	**19 42 35.7**	**-2.3**
HAKT	**HAKKARI**	**0.19**	**265**	*i* P	**Pg**	**19 42 33.7**	**-4.8**
HAKT				*i* S	**Sg**	**19 42 37.1**	**-4.1**
HAKT	**HAKKARI**	**0.19**	**265**	*i* P	**Pg**	**19 42 33.7**	**-4.8**
HAKT				*i* S	**Sg**	**19 42 37.1**	**-4.1**
CUKT	**Cukurca**	**0.42**	**220**	*e*PG	**Pg**	**19 42 42.0**	**-0.7**
CUKT				*e*SG	**Sg**	**19 42 49.1**	**+0.7**
CUKT	**Cukurca**	**0.42**	**220**	*e*Pg	**Pg**	**19 42 42.0**	**-0.7**
CUKT				*e*Sg	**Sg**	**19 42 49.1**	**+0.7**
VANT	**Van**	**1.00**	**328**	*e*PG	**Pg**	**19 42 51.3**	**-2.3**
TVAN	**Van**	**1.04**	**336**	*i* P	**Pg**	**19 42 49.8**	**-4.6**
TVAN				*i* S	**Sg**	**19 42 57.5**	**-11**
TVAN	**Van**	**1.04**	**336**	*i* P	**Pg**	**19 42 49.8**	**-4.7**
CLDR	**Caldiran**	**1.56**	**359**	*e*PN	**Pb**	**19 43 01.5**	**-1.9**
CLDR	**Caldiran**	**1.56**	**359**	*e*Pn	**Pb**	**19 43 01.5**	**-1.9**
TATV	**Tatvan**	**1.62**	**306**	*i* P	**Pn**	**19 43 01.0**	**-2.0**
TATV				*i* S	**Sg**	**19 43 24.8**	**-1.7**
TATV	**Tatvan**	**1.62**	**306**	*i* P	**Pn**	**19 43 01.0**	**-2.0**
TATV				*i* S	**Sg**	**19 43 24.8**	**-1.7**
MAKU	**Maku**	**1.87**	**18**	*e*Pg	**Pn**	**19 43 06.1**	**-0.3**
MAKU				*e*Sg	**Sn**	**19 43 28.8**	**-1.2**
DYDN	**Diyadin**	**1.98**	**354**	*i* P	**Pn**	**19 43 07.2**	**-0.7**
DYDN	**Diyadin**	**1.98**	**354**	*i* P	**Pn**	**19 43 07.2**	**-0.7**
TUTA	**Tutak**	**2.03**	**334**	*i* P	**Pn**	**19 43 07.3**	**-1.3**
TUTA				*i* S	**Sn**	**19 43 36.2**	**+2.2**
TUTA	**Tutak**	**2.03**	**334**	*i* P	**Pn**	**19 43 07.3**	**-1.3**
TUTA				*i* S	**Sn**	**19 43 36.2**	**+2.2**
AGRB	**Hanur-Agry**	**2.13**	**340**	*e*PN	**Pn**	**19 43 09.2**	**-0.8**
AGRB	**Hanur-Agry**	**2.13**	**340**	*e*Pn	**Pn**	**19 43 09.3**	**-0.7**
BEST	**Besiri**	**2.15**	**279**	*i* P	**Pn**	**19 43 09.2**	**-1.1**
MARD	**Mardin**	**2.54**	**265**	*i* P	**Pn**	**19 43 14.4**	**-1.2**
MARD				*i* S	**Sb**	**19 43 50.8**	**-0.4**
BNGL	**BINGOL**	**2.59**	**303**	*i* P	**Pb**	**19 43 19.8**	**-1.2**
GNI	**Garni**	**2.64**	**13**	*e*PN	**Pn**	**19 43 17.2**	**+0.2**
GNI	**Garni**	**2.64**	**13**	Pn	**Pn**	**19 43 18.8**	**+1.7**
4.1nm,0.3s,baz=349,slow=2.4,SNR=24							
GNI				Pg	**Pg**	**19 43 23.1**	**-1.9**
10nm,0.3s,baz=163,slow=20,SNR=39							
GNI				Lg		19 43 57.0	
5.5nm,0.3s,baz=192,slow=22,SNR=5.8							
GNI	**Garni**	**2.64**	**13**	*e*P	**Pn**	**19 43 18.5**	**+1.4**
GNI	**Garni**	**2.64**	**13**	*e*Pn	**Pn**	**19 43 17.2**	**+0.1**
GNI	**Garni**	**2.64**	**13**	*e*P	**Pn**	**19 43 18.5**	**+1.4**
GNI	**Garni**	**2.64**	**13**	Pg	**Pg**	**19 43 23.1**	**-2.0**
BINT	**Bingol**	**3.02**	**297**	*e*PN	**Pn**	**19 43 22.3**	**+0.1**
BINT	**Bingol**	**3.02**	**297**	*e*Pn	**Pn**	**19 43 22.3**	**+0.1**
DIYA	**Diyarbakir**	**3.05**	**278**	*i* P	**Pn**	**19 43 21.5**	**-1.2**
DIYA	**Diyarbakir**	**3.05**	**278**	*i* P	**Pn**	**19 43 21.5**	**-1.2**
EZM	**Erzurum**	**3.08**	**320**	*e*PN	**Pn**	**19 43 22.9**	**-0.1**
KARS	**Kars**	**3.12**	**348**	*e*PN	**Pn**	**19 43 23.3**	**-0.4**
SNGE	**Sanandaj**	**3.70**	**131**	*e*Pn	**Pn**	**19 43 35.2**	**+3.6**
SNGE				*e*Sg	**Sg**	**19 44 32.7**	**-0.5**
SVRC	**Sivrice-ELAZID**	**3.75**	**284**	*e*PN	**Pn**	**19 43 32.0**	**-0.3**
SVRC	**Sivrice-ELAZID**	**3.75**	**284**	*e*Pn	**Pn**	**19 43 32.0**	**-0.3**
PTK	**Pertek**	**3.82**	**292**	*e*PN	**Pn**	**19 43 33.4**	**+0.2**
PTK	**Pertek**	**3.82**	**292**	*e*Pn	**Pn**	**19 43 33.4**	**+0.2**
DGRG	**David-gareji**	**4.02**	**15**	P	**Pg**	**19 43 51.7**	**+0.2**
DGRG				S	**Sg**	**19 44 47.4**	**+3.8**
URFA	**Urfa**	**4.08**	**270**	*e*PN	**Pn**	**19 43 37.6**	**+0.8**
URFA	**Urfa**	**4.08**	**270**	*e*Pn	**Pn**	**19 43 37.6**	**+0.8**
MTA	**Mtatsminda**	**4.16**	**9**	P	**Pb**	**19 43 48.2**	**+0.4**
MTA				S	**Sg**	**19 44 48.3**	**+0.3**
TBLG	**Delisi**	**4.19**	**8**	*e*P	**Pb**	**19 43 43.5**	**-4.7**
TBLG	**Delisi**	**4.19**	**8**	P	**Pb**	**19 43 43.5**	**-4.7**
TBLG				S	**Sg**	**19 44 49.6**	**+0.6**
EZC	**Erzincan**	**4.20**	**303**	*e*PN	**Pn**	**19 43 38.8**	**+0.3**
BCA	**Borcka**	**4.26**	**336**	*e*PN	**Pn**	**19 43 39.7**	**+0.4**
BCA	**Borcka**	**4.26**	**336**	*e*Pn	**Pn**	**19 43 39.7**	**+0.4**
BHD	**Baghdad**	**4.31**	**175**	*ex*	x	19 43 38.0	
BHD				*i x*	x	19 43 53.0	
BHD				*ex*	x	19 44 30.0	
BHD				*i x*	x	19 44 52.0	
BHD	**Baghdad**	**4.31**	**175**	*e*Pn	**Pn**	**19 43 38.0**	**-2.0**
ONI	**Oni**	**5.02**	**356**	P	**Pb**	**19 44 03.3**	**+0.9**
ONI				S	**Sg**	**19 45 23.2**	**+7.5**
DARE	**Darende-Malaty**	**5.03**	**288**	*e*PN	**Pn**	**19 43 53.3**	**+3.5**
ZEI	**Tsey**	**5.19**	**360**	*e*P	**Pn**	**19 43 57.8**	**+5.8**
ZEI				pmax	pmax		
comp=Z,8.0nm,0.5s							
GAZ	**Gaziantep**	**5.38**	**268**	*e*PN	**Pn**	**19 43 56.1**	**+1.4**
GAZ	**Gaziantep**	**5.38**	**268**	*e*Pn	**Pn**	**19 43 56.1**	**+1.4**
KMRS	**Kahramanmaras**	**5.60**	**271**	*e*PN	**Pn**	**19 43 59.1**	**+1.4**
KMRS	**Kahramanmaras**	**5.60**	**271**	*e*Pn	**Pn**	**19 43 59.1**	**+1.4**
KIV	**Kislovodsk**	**6.44**	**352**	*e*P	**Pn**	**19 44 13.5**	**+4.2**
KIV				pmax	pmax		
comp=Z,18nm,1.1s							
KIV				MLR	MLR		
comp=Z,119nm,8.0s							
KIV	**Kislovodsk**	**6.44**	**352**	*e*P	**Pn**	**19 44 11.4**	**+2.2**
comp=Z,19nm,1.0s							
KIV	**Kislovodsk**	**6.44**	**352**	*e*P	**Pn**	**19 44 11.4**	**+2.1**
comp=Z,19nm,1.0s							
KOZT	**Kozan**	**6.46**	**272**	*e*PN	**Pn**	**19 44 11.3**	**+1.8**
KOZT	**Kozan**	**6.46**	**272**	*e*Pn	**Pn**	**19 44 11.3**	**+1.9**
ASF	**Jabal al Asfar**	**7.91**	**229**	Pn	**Pn**	**19 44 30.8**	**+1.3**
comp=Z,1.3nm,0.3s,baz=266,slow=9.6,SNR=6.9							
ASF				Lg		19 46 46.7	
comp=Z,0.9nm,0.3s,baz=47,slow=19,SNR=4.4							
ASF				LR	LR	19 48 24.6	
comp=Z,74nm,20.8s,baz=263,slow=44							
MMAI	**Mount Meron Ar**	**8.34**	**239**	Pn	**Pn**	**19 44 35.5**	**+0.3**
comp=Z,1.2nm,0.3s,baz=64,slow=16,SNR=10							
MMAI				Lg		19 47 02.5	
comp=Z,1.1nm,0.3s,baz=57,slow=36,SNR=3.6							
MMAI				LR	LR	19 48 16.3	
comp=Z,223nm,20.4s,baz=75,slow=41							
BRTR	**Keskin Array B**	**8.35**	**288**	Pn	**Pn**	**19 44 35.9**	**+0.5**
comp=Z,0.0nm,0.3s,baz=110,slow=12,SNR=2.5							
BRTR				Pg	Pn	19 45 10.8	+35
comp=Z,0.1nm,0.3s,baz=124,slow=17,SNR=10							
BRTR				Lg		19 47 11.9	
comp=Z,0.0nm,0.3s,baz=121,slow=27,SNR=3.3							
BRTR	**Keskin Array B**	**8.35**	**288**	P	**Pn**	**19 44 35.9**	**+0.5**
NAY	**Al-Naaiem**	**8.75**	**161**	*e*P	**Pn**	**19 44 39.8**	**-1.2**
NAY				AML	AML	19 46 18.9	
comp=Z,5.3nm,0.7s							
NAY	**Al-Naaiem**	**8.75**	**161**	*e*P	**Pn**	**19 44 39.8**	**-1.2**
KBD	**Kabd**	**8.94**	**158**	*e*P	**Pn**	**19 44 43.1**	**-0.5**
KBD	**Kabd**	**8.94**	**158**	*e*P	**Pn**	**19 44 43.1**	**-0.5**
RDF	**Al-Radifah**	**9.14**	**160**	*e*P	**Pn**	**19 44 45.8**	**-0.4**
RDF				AML	AML	19 46 27.8	
comp=Z,8.1nm,0.7s							
RDF	**Al-Radifah**	**9.14**	**160**	*e*P	**Pn**	**19 44 45.8**	**-0.5**
EIL	**Elat**	**10.88**	**226**	Pn	**Pn**	**19 45 10.4**	**+0.3**
comp=Z,0.2nm,0.3s,baz=3.4,slow=17,SNR=2.1							
EIL				Lg		19 48 14.1	
comp=Z,0.2nm,0.3s,baz=349,slow=14,SNR=4.1							
EIL				LR	LR	19 49 34.5	
comp=Z,106nm,18.4s,baz=92,slow=38							
EIL	**Elat**	**10.88**	**226**	Pn	**Pn**	**19 45 10.4**	**+0.3**
MLR	**Muntele Rosu**	**15.61**	**306**	Pn	**Pn**	**19 46 16.0**	**+1.7**
comp=Z,0.0nm,0.3s,baz=111,slow=16,SNR=3.1							
MLR	**Muntele Rosu**	**15.61**	**306**	Pn	**Pn**	**19 46 16.0**	**+1.7**
AKTK	**Aktyubinsk**	**16.32**	**34**	Pn	**Pn**	**19 46 23.0**	**-0.5**
AKTK				LR	LR	19 54 18.5	
AKTK	**Aktyubinsk**	**16.32**	**34**	Pn	**Pn**	**19 46 23.0**	**-0.5**
AKTO	**Aktyubinsk**	**16.32**	**34**	Pn	**Pn**	**19 46 23.0**	**-0.5**
comp=Z,0.1nm,0.3s,baz=223,slow=12,SNR=7.5							
AKTO				LR	LR	19 54 18.5	
comp=Z,67nm,18.4s,baz=41,slow=43							
ABKAR	**Akbulak array**	**16.43**	**40**	*e*P	**Pn**	**19 46 23.4**	**-1.5**
comp=Z,1.8nm,0.7s							
BUR08	**Bucovina Ar. S**	**17.04**	**312**	*e*P	**Pn**	**19 46 32.2**	**-0.3**
OBN	**Obninsk**	**18.25**	**346**	*e*P	**Pn**	**19 46 49.8**	**+2.3**
OBN				*e*SS		19 50 22.5	
OBN				pmax	pmax		
comp=Z,10.0nm,1.2s							
OBN				MLR	MLR		
comp=Z,100nm,15.0s							
OBN	**Obninsk**	**18.25**	**346**	*e*P	**Pn**	**19 46 49.8**	**+2.3**
comp=Z,10.0nm,1.2s							
KBL	**Kabul**	**20.50**	**91**	*e*P	**P**	**19 47 15.4**	**+2.9**
KBL				pmax	pmax		
comp=Z,6.0nm,1.0s							
KBL	**Kabul**	**20.50**	**91**	*e*P	**P**	**19 47 15.3**	**+2.9**
comp=Z,6.2nm,1.0s							
NIE	**Niedzica**	**20.74**	**312**	*e*PX		19 47 18.6	
ARU	**Arti**	**21.25**	**23**	P	**P**	**19 47 19.8**	**-0.6**
ARU	**Arti**	**21.25**	**23**	*e*P	**P**	**19 47 19.7**	**-0.7**
comp=Z,6.8nm,0.7s,mb4.1							
ARU	**Arti**	**21.25**	**23**	P	**P**	**19 47 19.8**	**-0.6**
TIP	**Timpagrande**	**21.35**	**283**	*e*P	**P**	**19 47 21.2**	**-0.5**
comp=Z,7.0nm,0.9s,mb4.0							
TIP	**Timpagrande**	**21.35**	**283**	*e*P	**P**	**19 47 21.2**	**-0.5**
comp=Z,6.9nm,0.9s,mb4.0							
CUC	**Castrocucco**	**22.03**	**285**	*e*P	**P**	**19 47 28.9**	**0.0**
comp=Z,6.0nm,0.9s,mb4.0							
CUC	**Castrocucco**	**22.03**	**285**	*e*P	**P**	**19 47 28.9**	**0.0**
comp=Z,6.0nm,0.9s,mb4.0							
VRAC	**Vranov**	**22.93**	**309**	P	**P**	**19 47 40.2**	**+1.7**
comp=Z,2.2nm,0.8s,mb3.7,baz=88,slow=13,SNR=4.8							
VRAC				LR	LR	19 58 52.8	
comp=Z,67nm,19.9s,MS3.1,baz=121,slow=43							
VRAC	**Vranov**	**22.93**	**309**	P	**P**	**19 47 40.2**	**+1.8**
VRAC				pmax	pmax		
comp=Z,2.0nm,0.8s							
VRAC				MLR	MLR		
comp=Z,67nm,19.9s							
VRAC	**Vranov**	**22.93**	**309**	P	**P**	**19 47 40.2**	**+1.8**
comp=Z,67nm,19.9s							
EKS2	**Erkin-Say**	**23.30**	**68**	*e*P	**P**	**19 47 42.1**	**-0.3**
comp=Z,4.3nm,1.1s,mb3.8							
EKS2	**Erkin-Say**	**23.30**	**68**	*e*P	**P**	**19 47 42.1**	**-0.3**
comp=Z,4.3nm,1.1s,mb3.8							
BRVK	**Borovoye**	**23.95**	**41**	*i* P	Px	19 47 58.2	
BRVK				pmax	pmax		
comp=Z,9.0nm,1.1s,mb4.1							
BVAR	**Borovoye Array**	**23.98**	**41**	P	**P**	**19 47 49.5**	**+0.6**
comp=Z,0.9nm,0.6s,mb3.4,baz=246,slow=9.6,SNR=6.1							
BVAR	**Borovoye Array**	**23.98**	**41**	P	**P**	**19 47 49.5**	**+0.6**
BVAR				pmax	pmax		
comp=Z,1.0nm,0.6s							
BVAR	**Borovoye Array**	**23.98**	**41**	P	**P**	**19 47 49.5**	**+0.6**
comp=Z,1.0nm,0.6s,mb3.4							
CLL	**Collm**	**25.78**	**312**	*e*pP	pP	19 48 08.0	-0.3
ATD	**Arta Tunnel**	**25.95**	**182**	LR	LR	19 57 32.4	
comp=Z,44nm,20.1s,MS3.0,baz=349,slow=35							
FINES	**FINESS Array B**	**26.38**	**341**	P	**P**	**19 48 11.4**	**+0.9**
comp=Z,1.5nm,0.8s,mb3.5,baz=151,slow=8.3,SNR=5.9							
FINES	**FINESS Array B**	**26.38**	**341**	P	**P**	**19 48 11.4**	**+0.9**
FINES				pmax	pmax		
comp=Z,2.0nm,0.8s							
FINES	**FINESS Array B**	**26.38**	**341**	P	**P**	**19 48 11.4**	**+0.9**
comp=Z,2.0nm,0.8s,mb3.7							
DAVOX	**Davos/Dischmat**	**26.69**	**301**	LR	LR	20 00 27.9	
comp=Z,51nm,20.1s,MS3.1,baz=89,slow=40							
KEST	**Kesra**	**27.73**	**277**	P	**P**	**19 48 25.6**	**+2.6**
comp=Z,1.0nm,0.9s,mb3.5,baz=63,slow=2.3,SNR=2.5							
KURK	**Kurchatov**	**27.86**	**51**	P	**P**	**19 48 24.0**	**+0.1**
comp=Z,0.4nm,0.5s,mb3.3,baz=261,slow=9.1,SNR=4.7							
KURK	**Kurchatov**	**27.86**	**51**	P	**P**	**19 48 24.0**	**+0.1**
MK31	**Makanchi Array**	**29.62**	**60**	*e*P	**P**	**19 48 39.5**	**-0.1**
MK31	**Makanchi Array**	**29.62**	**60**	*e*P	**P**	**19 48 39.5**	**-0.1**
MKAR	**Makanchi Array**	**29.62**	**60**	P	**P**	**19 48 40.4**	**+0.7**
comp=Z,0.4nm,0.6s,mb3.3,baz=270,slow=5.8,SNR=5.9							
MKAR	**Makanchi Array**	**29.62**	**60**	P	**P**	**19 48 40.3**	**+0.7**
HFS	**Hagfors**	**29.63**	**329**	P	**P**	**19 48 41.1**	**+1.5**
comp=Z,0.9nm,0.7s,mb3.6,baz=139,slow=9.0,SNR=3.4							
HFS	**Hagfors**	**29.63**	**329**	P	**P**	**19 48 41.1**	**+1.5**
HFS				pmax	pmax		
comp=Z,1.0nm,0.7s							
HFS	**Hagfors**	**29.63**	**329**	P	**

IDC ***02*** *20:22:54.7±0.5, 35°.75N×88°.37E, h0km, mb4.3/16, mb1 4.5/22, mb1mx4.4/28, mbtmp4.4/22, ML4.1/5, MS4.6/24, Ms1 4.6/24, ms1mx4.5/28, Error ellipse: s-maj=16.0km s-min=9.3km az=64.0*

LDG ***02*** *20:22:55.3±0.2, 35°.83N×88°.21E, h10km, Mb5.0/15, Ms4.6/7, Error ellipse: s-maj=8.6km s-min=5.0km az=116.0*

SZGRF ***02*** *20:22:55.6, 34°.50N×88°.45E, h33km, mb4.8, Xizang*

NEIC ***02*** *20:22:56.7±0.2, 35°.78N×88°.36E, h10km, mb4.8/46, Error ellipse: s-maj=6.3km s-min=4.4km az=225.0*

MOS ***02*** *20:22:58.3±1.1, 35°.73N×88°.33E, h33km, mb4.9/50, MS4.7/42, Error ellipse: s-maj=8.4km s-min=4.3km az=124.5*

GCMT ***02*** *20:22:59.9±0.1, 35°.72N×88°.36E, h18km, MW5.2, Moment Tensor Solution. s47,c69; s93,c183; Moment tensor: Scale 10^16^Nm; Mrr-1.74±.18; Mθθ-4.36±.14; Mφφ6.10±.16; Mrθ1.06±.35; Mθφ6.49±.14; Mφr-0.58±.36; Best double couple: M0*8.50000×10^16^ *NP1:φ=250.00000°, δ82.00000°, λ-8.00000°. NP2:φ=341.00000°, δ82.00000°, λ-172.00000°. Principal axes: T 9.2100, Plg0.0000°, Azm116.0000°; N -1.5000, Plg79.0000°, Azm24.0000°; P -7.7100, Plg11.0000°, Azm206.0000°; Data Used: II IU CN IC G.*

ISC 02 20:22:56.9±0.1,**35°.69N**±0°.02×**88°.36E**±0°.02,**h10**km, **(h11**km±2.4km**:pP-P), n310**, σ1§**12**/334, **mb4.7**/95, **MS4.8**/58, **23C-5D, Xizang**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**6.42**	**158**	Pn		**Pn**		**20 24 35.6**	**+4.1**
LSA				Sn		**Sn**		**20 25 53.5**	**+8.7**
LSA				LR		LR			
	comp=E,31μm,13.2s								
GUN	**Gumba**	**8.04**	**196**	*e*P		**Pn**		**20 24 55.7**	**+2.0**
	comp=E,94nm,1.0s								
WMQ	**Urumqi**	**8.13**	**357**	P		**Pn**		**20 24 56.0**	**+1.0**
WMQ				pP				20 24 59.1	
WMQ				sP				20 25 02.0	
WMQ				S		**Sn**		**20 26 28.5**	**+1.6**
WMQ				sS				20 26 33.4	
WMQ				pmax		pmax			
	comp=Z,220nm,1.0s								
WMQ				smax					
	comp=N,440nm,0.9s								
WMQ				smax					
	comp=E,600nm,0.8s								
WMQ				LR		LR			
	comp=N,5μm,9.7s								
WMQ				LR		LR			
	comp=E,17μm,10.3s								
WMQ				LR		LR			
	comp=Z,3μm,9.1s								
JIRN	**Jiri**	**8.22**	**194**	*e*P		**Pn**		**20 24 57.8**	**+1.6**
GKN	**Gorkha**	**8.29**	**203**	*e*P		**Pn**		**20 24 56.7**	**-0.5**
	comp=Z,23nm,0.7s								
KKN	**Kakani**	**8.30**	**199**	*e*P		**Pn**		**20 24 57.8**	**+0.5**
	comp=Z,87nm,1.2s								
TAPN	**Taplejung**	**8.34**	**184**	*e*P		**Pn**		**20 24 59.2**	**+1.4**
	comp=Z,112nm,0.8s								
PKI	**Pulchoki**	**8.48**	**198**	*e*P		**Pn**		**20 25 00.2**	**+0.5**
	comp=Z,62nm,0.9s								
DMN	**Daman**	**8.52**	**200**	*e*P		**Pn**		**20 25 00.2**	**-0.1**
	comp=Z,210nm,1.4s								
ODAN	**Odare**	**8.84**	**186**	*e*P		**Pn**		**20 25 04.5**	**-0.2**
	comp=Z,189nm,1.0s								
RAMN	**Ramite**	**8.84**	**190**	*e*P		**Pn**		**20 25 04.4**	**-0.3**
	comp=Z,330nm,1.3s								
JOSI	**Joshimath**	**8.98**	**238**	*e*PKP		**Pn**		**20 25 06.5**	**-0.1**
GTA	**Gaotai**	**9.82**	**64**	↑P		**Pn**		**20 25 18.9**	**+0.8**
GTA				pP				20 25 23.3	
GTA				sP				20 25 26.4	
GTA				S		**Sn**		**20 27 06.7**	**-1.7**
GTA				pmax		pmax			
	comp=Z,2.0nm,0.8s								
GTA				pmax		pmax			
	comp=Z,110nm,5.4s								
GTA				LR		LR			
	comp=N,28μm,15.5s								
GTA				LR		LR			
	comp=E,9μm,12.2s								
GTA				LR		LR			
	comp=Z,8μm,13.4s								
SHL	**Shillong**	**10.54**	**162**	*e*PKP		**Pn**		**20 25 27.0**	**-1.0**
SHL				*ex*		x		20 28 13.0	
KSH	**Kashi**	**10.54**	**295**	Pn		**Pn**		**20 25 29.4**	**+1.4**
KSH	**Kashi**	**10.54**	**295**	P		**Pn**		**20 25 30.3**	**+2.3**
KSH				pP				20 25 33.2	
KSH				sP				20 25 36.1	
KSH				PP				20 25 38.5	
KSH				S		**Sn**		**20 27 28.9**	**+2.9**
KSH				SS				20 27 42.8	
KSH				PcP		PcP		20 31 34.2	+2.1
KSH				pmax		pmax			
	comp=Z,280nm,1.7s								
KSH				LR		LR			
	comp=N,4μm,7.3s								
KSH				LR		LR			
	comp=E,6μm,10.9s								
KSH				LR		LR			
	comp=Z,10μm,15.4s								
ULHL	**Ulahol**	**11.47**	**308**	P		**Pn**		**20 25 41.8**	**+1.1**
	SNR=15								
AAA	**Alma-Ata**	**11.61**	**314**	*e*P		**Pn**		**20 25 43.0**	**+0.4**
AAA				*e*S		**Sn**		**20 27 55.7**	**+3.4**
AAA				pmax		pmax			
	comp=Z,2μm,3.0s								
AAA				smax					
	comp=E,700nm,5.2s								
AAA				MLR		MLR			
	comp=Z,12μm,15.0s								
BISR	**Bishrakh**	**11.66**	**236**	*e*PKP		**Pn**		**20 25 41.7**	**-1.6**
AYAN	**Aya Nagar**	**11.93**	**236**	*e*PKP		**Pn**		**20 25 44.5**	**-2.5**
AYAN				AMb		AMB		20 25 48.8	
	comp=Z,22nm,1.1s								
MK31	**Makanchi Array**	**11.99**	**340**	*e*P		**Pn**		**20 25 45.7**	**-2.0**
MK31				pmax		pmax			
	comp=Z,61nm,1.0s								
MK31	**Makanchi Array**	**11.99**	**340**	*e*Pn		**Pn**		**20 25 45.4**	**-2.4**
MKAR	**Makanchi Array**	**11.99**	**340**	Pn		**Pn**		**20 25 45.6**	**-2.1**
	comp=Z,3.4nm,0.3s,baz=150,slow=15,SNR=77								
MKAR				Lg				20 29 17.4	
	comp=Z,0.0nm,0.3s,baz=160,slow=26,SNR=3.0								
MKAR				LR		LR		20 31 09.3	
	comp=Z,3μm,18.9s,baz=154,slow=41								
KZA	**Kyzart**	**12.04**	**306**	P		**Pn**		**20 25 48.9**	**+0.5**
	SNR=27								
BOK	**Bokaro**	**12.05**	**191**	*e*PKP		**Pn**		**20 25 47.5**	**-1.1**
BOK				AMb		AMB		20 25 49.4	
	comp=Z,26nm,1.0s								
SONA	**Sohna**	**12.11**	**235**	*e*PKP		**Pn**		**20 25 47.5**	**-1.9**
SONA				*ex*		x		20 29 41.7	
TKM2	**Tokmak 2**	**12.23**	**310**	P		**Pn**		**20 25 50.9**	**-0.1**
	SNR=65								
TKM2	**Tokmak 2**	**12.23**	**310**	P		**Pn**		**20 25 50.5**	**-0.6**
TKM2				pmax		pmax			
	comp=Z,122nm,1.6s								
TKM2	**Tokmak 2**	**12.23**	**310**	*e*Pn		**Pn**		**20 25 50.5**	**-0.6**
	comp=Z,133nm,1.4s								
AGRA	**Agra**	**12.25**	**229**	*e*PKP		**Pn**		**20 25 48.8**	**-2.5**
KBK	**Karagaybulak**	**12.51**	**308**	P		**Pn**		**20 25 54.8**	**0.0**
	SNR=22								
LZH	**Lanzhou**	**12.57**	**84**	*e*P		**Pn**		**20 25 56.0**	**+0.3**
LZH				pP				20 26 03.7	
LZH				sP				20 26 05.5	
LZH				PP				20 26 09.6	
LZH				*e*S		**Sn**		**20 28 15.4**	**-0.3**
LZH				sS				20 28 26.4	
LZH				SS				20 28 34.0	
LZH				pmax		pmax			
	comp=Z,54nm,1.2s								
LZH				pmax		pmax			
	comp=Z,270nm,5.6s								
LZH				LR		LR			
	comp=N,2μm,9.6s								
LZH				LR		LR			
	comp=Z,4μm,10.9s								
AAK	**Ala-Archa**	**12.79**	**307**	P		**Pn**		**20 25 59.5**	**+0.8**
	SNR=24								
AAK	**Ala-Archa**	**12.79**	**307**	Pn		**Pn**		**20 25 58.2**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=126,slow=8.7,SNR=59								
AAK				LR		LR		20 31 51.7	
	comp=Z,6μm,21.5s,baz=107,slow=42								
CHMS	**Chumysh**	**12.80**	**309**	P		**Pn**		**20 25 58.7**	**-0.2**
	SNR=12								
FRU	**Bishkek**	**12.81**	**308**	*e*P		**Pn**		**20 25 58.0**	**-0.9**
FRU				pmax		pmax			
	comp=Z,100nm,1.6s								
FRU				pmax		pmax			
	comp=E,320nm,1.6s								
KHET	**Khetri**	**13.09**	**238**	*e*PKP		**Pn**		**20 25 59.7**	**-3.1**
AML	**Almayashu**	**13.10**	**304**	P		**Pn**		**20 26 03.4**	**+0.5**
	SNR=17								
AML	**Almayashu**	**13.10**	**304**	*e*Pn		**Pn**		**20 26 02.4**	**-0.5**
	comp=E,66nm,1.4s								
USP	**Ospenovka**	**13.10**	**309**	P		**Pn**		**20 26 02.1**	**-0.8**
	SNR=8.8								
EKS2	**Erkin-Say**	**13.27**	**306**	P		**Pn**		**20 26 05.8**	**+0.5**
	SNR=40								
EKS2	**Erkin-Say**	**13.27**	**306**	*e*Pn		**Pn**		**20 26 05.2**	**-0.1**
	comp=E,62nm,1.2s								
CD2	**Chengdu**	**13.73**	**106**	P		**Pn**		**20 26 12.9**	**+1.3**
CD2				pP				20 26 15.7	
CD2				sP				20 26 19.2	
CD2				PP				20 26 24.0	
CD2				S		**Sn**		**20 28 47.6**	**+3.4**
CD2				sS				20 28 52.3	
CD2				SS				20 29 03.0	
CD2				pmax		pmax			
	comp=Z,20nm,1.5s								
CD2				pmax		pmax			
	comp=Z,330nm,6.5s								
CD2				LR		LR			
	comp=N,11μm,11.9s								
CD2				LR		LR			
	comp=Z,6μm,7.2s								
AJM	**Ajmer**	**14.90**	**236**	*e*PKP		**Pn**		**20 26 28.5**	**+0.9**
AJM				AMb		AMB		20 26 36.1	
	comp=Z,46nm,1.1s								
AJM				*ex*		x		20 30 25.8	
BHPL	**Bhopal**	**15.62**	**220**	*ex*		**Pn**		**20 26 33.9**	**-3.3**
BHPL				AMb		AMB		20 26 41.4	
	comp=Z,34nm,1.1s								
KK31	**Karatay Array**	**15.64**	**304**	P		**Pn**		**20 26 35.9**	**-1.4**
KK31				pmax		pmax			
	comp=Z,79nm,1.4s								
KBL	**Kabul**	**15.85**	**271**	*e*P		**Pn**		**20 26 37.6**	**-2.5**
KBL				pmax		pmax			
	comp=Z,89nm,1.4s								
KBL	**Kabul**	**15.85**	**271**	*e*Pn		**Pn**		**20 26 37.6**	**-2.4**
	comp=Z,89nm,1.4s								
KMI	**Kunming**	**16.25**	**126**	P		**Pn**		**20 26 46.8**	**+1.5**
KMI				pP		pP		20 26 50.5	-0.7
KMI				sP		sP		20 26 52.2	-0.3
KMI				PP				20 27 00.5	
KMI				S		**Sn**		**20 29 49.4**	**+3.7**
KMI				sS		sS		20 29 53.0	-10
KMI				SS				20 30 09.0	
KMI				pmax		pmax			
	comp=Z,11nm,1.4s								
KMI				pmax		pmax			
	comp=Z,300nm,4.0s								
KMI				LR		LR			
	comp=N,2μm,7.2s								
KMI				LR		LR			
	comp=E,1μm,9.0s								
KMI				LR		LR			
	comp=Z,3μm,9.3s								
KURK	**Kurchatov**	**16.59**	**338**	Pn		**Pn**		**20 26 44.9**	**-4.5**
	comp=Z,0.2nm,0.3s,baz=134,slow=11,SNR=77								
KURK				Sn		**Sn**		**20 29 58.1**	**+4.7**
	baz=135,slow=26,SNR=2.5								
KURK				Lg				20 31 39.6	
	comp=Z,0.0nm,0.3s,baz=129,slow=28,SNR=3.8								
KURK				LR		LR		20 33 55.6	
	comp=Z,3μm,19.6s,baz=150,slow=40								
KURK	**Kurchatov**	**16.59**	**338**	*c i*P		**Pn**		**20 26 46.7**	**-2.7**
KURK				pmax		pmax			
	comp=Z,73nm,1.7s								
KURK				MLR		MLR			
	comp=Z,2μm,18.0s								
KURK	**Kurchatov**	**16.59**	**338**	*e*Pn		**Pn**		**20 26 45.7**	**-3.6**
	comp=Z,78nm,1.4s								
XAN	**Xi'an**	**16.96**	**90**	P		**Pn**		**20 26 52.1**	**-2.1**
XAN				pP		pP		20 26 56.3	-2.6
XAN				S		**Sn**		**20 30 05.0**	**+2.3**
XAN				sS		sS		20 30 12.2	-5.2
XAN				pmax		pmax			
	comp=Z,41nm,4.5s								
XAN				LR		LR			
	comp=N,2μm,12.7s								
XAN				LR		LR			
	comp=E,1μm,11.6s								
XAN				LR		LR			
	comp=Z,990nm,12.4s								
BTO	**Baotou**	**17.72**	**67**	*e*P		**Pn**		**20 27 01.6**	**-2.0**
BTO				S		**Sn**		**20 30 25.2**	**+4.2**
BTO				LR		LR			
	comp=N,6μm,16.7s								
BTO				LR		LR			
	comp=E,2μm,15.2s								
AKL	**Akola**	**17.95**	**217**	*i* P		**Pn**		**20 27 05.6**	**-1.0**
AKL				*i* P				20 27 05.6	
AKL				*ex*		x		20 27 08.4	
	comp=Z,95nm,1.6s								
SONM	**Songino Array**	**18.06**	**42**	P		**Pn**		**20 27 07.3**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=232,slow=11,SNR=41								
SONM				Lg				20 32 22.6	
	comp=Z,0.1nm,0.3s,baz=232,slow=31,SNR=5.8								
SONM				LR		LR		20 34 41.0	
	comp=Z,2μm,20.9s,baz=232,slow=39								
GYA	**Guiyang**	**18.16**	**115**	↑*i* P		**Pn**		**20 27 07.6**	**-1.5**
GYA				PP				20 27 26.9	
GYA				S		**Sn**		**20 30 31.8**	**0.0**
GYA				SS				20 30 55.6	
GYA				pmax		pmax			
	comp=Z,20nm,0.8s								
GYA				pmax		pmax			
	comp=Z,120nm,4.3s								
GYA				LR		LR			
	comp=N,5μm,10.2s								
GYA				LR		LR			
	comp=E,7μm,11.4s								
GYA				LR		LR			
	comp=Z,9μm,10.9s								
MOY	**Mondy**	**18.35**	**26**	*e*P		**Pn**		**20 27 12.6**	**+1.3**
MOY				pmax		pmax			
	comp=Z,145nm,3.0s								
ZAA0	**Zalesovo Array**	**18.42**	**353**	*e*Pn		**Pn**		**20 27 08.3**	**-3.9**
ZALV	**Zalesovo Beam**	**18.42**	**353**	P		**Pn**		**20 27 08.7**	**-3.5**
	comp=Z,0.8nm,0.3s,baz=172,slow=11,SNR=41								
ZALV				S		**Sn**		**20 30 36.1**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=194,slow=24,SNR=2.7								
ZALV				LR		LR		20 35 03.2	
	comp=Z,2μm,19.6s,baz=173,slow=40								
ZALV	**Zalesovo Beam**	**18.42**	**353**	P		**Pn**		**20 27 08.7**	**-3.5**
ZALV				S		**Sn**		**20 30 36.1**	**-1.7**
ZALV				pmax		pmax			
	comp=Z,1.0nm,0.3s								
ZALV				MLR		MLR			
	comp=Z,2μm,19.6s								
ULN	**Ulaanbaatar**	**18.44**	**43**	*e*P		**Pn**		**20 27 12.2**	**-0.3**
VIS	**Vishakhapatnam**	**18.45**	**195**	*e*PKP		**Pn**		**20 27 12.8**	**0.0**
VIS				AMb		AMB		20 27 15.2	
	comp=Z,47nm,1.5s								
QUE	**Quetta**	**18.78**	**259**	*e*P		x		20 27 22.0	
QUE				*e*S		x		20 31 11.0	
HHC	**Hu-ho-hao-te**	**18.91**	**67**	*e*P		**Pn**		**20 27 17.9**	**-0.3**
HHC				sP		sP		20 27 22.8	+1.0
HHC				PP				20 27 34.0	
HHC				S		**Sn**		**20 30 45.4**	**-4.5**
HHC				sS		sS		20 30 49.3	-7.7
HHC				SS				20 31 10.3	
HHC				PcP		PcP		20 31 44.1	+0.6
HHC				ScS		ScS		20 38 58.6	-2.0
HHC				pmax		pmax			
	comp=Z,33nm,1.0s								
HHC				pmax		pmax			
	comp=Z,300nm,5.4s								
HHC				LR		LR			
	comp=N,3μm,12.5s								
HHC				LR		LR			
	comp=E,3μm,12.9s								
HHC				LR		LR			
	comp=Z,3μm,12.8s								
CHTO	**Chiang Mai**	**19.24**	**148**	*e*P		**Pn**		**20 27 22.9**	**+0.6**
CHTO				pmax		pmax			
	comp=Z,14nm,1.1s								
CHTO	**Chiang Mai**	**19.24**	**148**	*e*P		**Pn**		**20 27 22.9**	**+0.5**
	comp=Z,14nm,1.1s								
TLY	**Talaya**	**19.37**	**30**	*c i*P		**Pn**		**20 27 18.7**	**-4.9**
TLY				pmax		pmax			
	comp=Z,18nm,1.7s								
TLY				MLR		MLR			
	comp=Z,3μm,18.0s								
TLY	**Talaya**	**19.37**	**30**	*e*P		**Pn**		**20 27 23.9**	**+0.3**
NVS	**Novosibirsk**	**19.48**	**351**	*e*P		**Pn**		**20 27 21.3**	**-3.6**
NVS				*e*S		**Sn**		**20 30 59.4**	**-3.8**
NVS				pmax		pmax			
	comp=Z,97nm,2.7s								
NVS				pmax		pmax			
	comp=N,125nm,2.4s								
NVS				smax					
	comp=N,113nm,2.0s								
CM31	**Chiang Mai Arr**	**19.56**	**149**	*e*P		**Pn**		**20 27 27.5**	**+1.4**
	comp=N,10nm,0.9s								
CMAR	**Chiang Mai Arr**	**19.56**	**149**	P		**Pn**		**20 27 25.0**	**-1.1**
	comp=N,0.2nm,0.3s,baz=329,slow=10,SNR=19								
CMAR				LR		LR		20 35 44.0	
	comp=N,2μm,21.8s,baz=333,slow=39								
IRK	**Irkutsk**	**20.05**	**29**	*e*P		**P**		**20 27 31.5**	**+1.6**
IRK				*e*				20 27 53.5	
IRK				pmax		pmax			
	comp=Z,115nm,1.7s								
HYB	**Hyderabad**	**20.18**	**208**	*e*P		**P**		**20 27 31.5**	**-0.1**
HYB				*e*				20 34 04.5	
HYB	**Hyderabad**	**20.18**	**208**	*i* P		**P**		**20 27 31.5**	**-0.1**
KRAR	**Krasnoyarsk**	**20.56**	**7**	*i* P		**P**		**20 27 36.6**	**+1.2**
KRAR				pmax		pmax			
	comp=Z,136nm,1.5s								
KRAR				MLR		MLR			
	comp=Z,2μm,18.0s,MS4.5								
VOSK	**Vostochnaya**	**21.00**	**330**	P		**P**		**20 27 39.6**	**-0.7**
VOSK				pmax		pmax			
	comp=Z,34nm,1.2s,mb4.5								
BVAR	**Borovoye Array**	**21.47**	**329**	P		**P**		**20 27 44.6**	**-0.7**
	comp=Z,3.6nm,0.6s,mb3.9,baz=134,slow=13,SNR=39								
BVAR	**Borovoye Array**	**21.47**	**329**	P		**P**		**20 27 44.6**	**-0.7**
BVAR				pmax		pmax			
	comp=Z,4.0nm,0.6s								
BRVK	**Borovoye**	**21.54**	**329**	*c i*P		**P**		**20 27 45.3**	**-0.7**
BRVK				pmax		pmax			
	comp=Z,24nm,1.7s,mb4.3								
BRVK				MLR		MLR			
	comp=Z,3μm,22.0s,MS4.7								
BRVK	**Borovoye**	**21.54**	**329**	*e*P		**P**		**20 27 45.3**	**-0.7**
	comp=Z,40nm,1.1s,mb4.8								
ZRNK	**Zerenda**	**22.00**	**328**	P		**P**		**20 27 49.9**	**-1.1**
ZRNK				pmax		pmax			
	comp=Z,71nm,1.6s,mb4.8								
WHN	**Wuhan**	**22.34**	**96**	*e*P		**P**		**20 27 55.4**	**+0.6**
WHN				LR		LR			
	comp=N,7μm,8.0s								
WHN				LR		LR			
	comp=E,3μm,8.3s								
WHN				LR		LR			
	comp=Z,6μm,8.8s								
BJI	**Beijing**	**22.34**	**70**	P		**P**		**20 27 54.5**	**-0.3**
BJI				S		**S**		**20 32 00.2**	**-0.3**
BJI				pmax		pmax			
	comp=Z,25nm,1.2s,mb4.5								
BJI				pmax		pmax			
	comp=Z,120nm,4.1s								
BJI				LR		LR			
	comp=N,7μm,13.6s,MS5.3								
BJI				LR		LR			
	comp=E,4μm,16.5s,MS5.3								
BJI				LR		LR			
	comp=Z,2μm,17.8s,MS4.5								
TIA	**Tai'an**	**23.26**	**80**	*e*P		**P**		**20 28 05.2**	**+0.7**
TIA				LR		LR			
	comp=N,4μm,11.0s,MS5.1								
TIA				LR		LR			
	comp=E,1μm,12.0s,MS5.1								
CIT	**Chita**	**24.24**	**40**	*e*P		**P**		**20 28 14.2**	**+0.5**
CIT				pmax		pmax			
	comp=Z,53nm,2.4s,mb4.5								
AB31	**Akbulak array**	**24.79**	**312**	P		**P**		**20 28 18.7**	**0.0**
AB31				pmax		pmax			
	comp=Z,20nm,0.9s,mb4.7								
ABKAR	**Akbulak array**	**24.79**	**312**	*e*P		**P**		**20 28 18.3**	**-0.4**
	comp=Z,11nm,0.8s,mb4.5								
GZH	**Guangzhou**	**25.05**	**113**	P		**P**		**20 28 20.6**	**-0.8**
GZH				S		**S**		**20 32 38.8**	**-6.9**
GZH				LR		LR			
	comp=N,2μm,12.8s,MS5.0								
GZH				LR		LR			
	comp=E,2μm,11.6s,MS5.0								
GZH				LR		LR			
	comp=Z,3μm,13.9s,MS5.0								
QIZ	**Qiongzhong**	**25.20**	**126**	P		**P**		**20 28 24.1**	**+1.4**
QIZ				pP		pP		20 28 27.0	+1.2
QIZ				sP		sP		20 28 29.7	+2.7
QIZ				S		**S**		**20 32 50.7**	**+2.6**
QIZ				pmax		pmax			
	comp=Z,230nm,9.7s								
QIZ				LR		LR			
	comp=N,2μm,14.6s,MS4.9								
QIZ				LR		LR			
	comp=E,2μm,14.6s,MS4.9								
QIZ				LR		LR			
	comp=Z,3μm,16.0s,MS4.9								
NJ2	**Nanjing**	**25.53**	**89**	*e*P		**P**		**20 28 29.4**	**+3.8**
NJ2				pP		pP		20 28 33.6	+4.9
NJ2				sP		sP		20 28 36.4	+6.5
NJ2				PP				20 29 09.0	
NJ2				S		**S**		**20 32 57.0**	**+3.9**
NJ2				sS		sS		20 33 05.0	+6.8
NJ2				pmax		pmax			
	comp=Z,10.0nm,0.6s,mb4.5								
NJ2				pmax		pmax			
	comp=Z,240nm,6.4s								
NJ2				LR		LR			
	comp=N,2μm,12.0s,MS5.1								
NJ2				LR		LR			
	comp=E,2μm,10.3s,MS5.1								
NJ2				LR		LR			
	comp=Z,2μm,9.9s								
AKTK	**Aktyubinsk**	**26.39**	**313**	P		**P**		**20 28 33.5**	**+0.3**
AKTK				LR		LR		20 40 24.8	
AKTO	**Aktyubinsk**	**26.39**	**313**	P		**P**		**20 28 33.5**	**+0.3**
	comp=Z,5.3nm,0.8s,mb4.1,baz=106,slow=9.5,SNR=9.9								
AKTO				LR		LR		20 40 24.8	
	comp=Z,2μm,19.2s,MS4.7,baz=118,slow=40								
AKTO	**Aktyubinsk**	**26.39**	**313**	P		**P**		**20 28 33.5**	**+0.3**
AKTO				pmax		pmax			
	comp=Z,5.0nm,0.8s,mb4.1								
AKTO				MLR		MLR			
	comp=Z,2μm,19.2s,MS4.7								
SSE	**Sheshan**	**27.71**	**90**	P		**P**		**20 28 42.9**	**-2.5**
SSE				S		**S**		**20 33 26.2**	**-1.5**
SSE				sS		sS		20 33 31.5	-1.2
SSE				pmax		pmax			
	comp=Z,37nm,0.7s,mb5.1								
SSE				pmax		pmax			
	comp=Z,78nm,10.6s								
SSE				LR		LR			
	comp=N,2μm,16.1s,MS4.8								
SSE				LR		LR			
	comp=E,820nm,16.1s,MS4.8								
SSE				LR		LR			
	comp=Z,1μm,11.5s,MS4.7								
SNY	**Shenyang**	**28.00**	**67**	↓P		**P**		**20 28 47.8**	**0.0**
SNY				S		**S**		**20 33 33.6**	**+1.6**
SNY				pmax		pmax			
	comp=Z,8.0nm,0.5s,mb4.6								
SNY				pmax		pmax			
	comp=Z,63nm,3.5s								
SNY				LR		LR			
	comp=N,9μm,14.5s								
SNY				LR		LR			
	comp=Z,4μm,18.0s,MS5.0								
QZH	**Quanzhou**	**28.11**	**104**	*e*P		**P**		**20 28 51.0**	**+2.1**
QZH				S		**S**		**20 33 38.

ARU e 20 29 47.9
ARU ePPP 20 29 55.6
ARU S **S** **20 33 47.9 +2.0**
ARU SS SS 20 35 07.0 -41
ARU SSS 20 35 27.7
ARU pmax pmax
comp=Z,30nm,1.7s,mb4.8
ARU MLR MLR
comp=Z,3μm,17.0s,MS5.0
ARU Arti 28.91 325 eP **P** **20 28 53.8 -1.9**
comp=Z,31nm,1.5s,mb4.8
CN2 Changchun 29.45 63 eP **P** **20 29 01.0 +0.3**
CN2 esP sP 20 29 08.0 +3.0
CN2 eS **S** **20 33 53.1 -1.6**
CN2 pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,2μm,15.0s,MS5.2
CN2 LR LR
comp=E,3μm,15.0s,MS5.2
CN2 LR LR
comp=Z,4μm,16.0s,MS5.1
SOKR Solikamsk 31.46 329c iP **P** **20 29 20.0 +1.8**
SOKR pmax pmax
comp=Z,20nm,1.2s,mb4.8
SOKR MLR MLR
comp=Z,2μm,15.0s,MS4.8
KSRS Korea Array 31.67 75 P **P** **20 29 20.3 0.0**
comp=Z,3.8nm,0.9s,mb4.2,baz=271,slow=8.4,SNR=9.1
KSRS LR LR 20 42 44.4
comp=Z,1μm,19.2s,MS4.6,baz=275,slow=38
KSRS Korea Array 31.67 75 P **P** **20 29 20.3 0.0**
KSRS pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
KSRS MLR MLR
comp=Z,1μm,19.2s,MS4.6
MAK Makhachkala 32.18 296 eP **P** **20 29 22.5 -2.3**
MAK eS **S** **20 34 31.6 -5.9**
MAK eSS SS 20 36 27.7 -28
MAK MLR MLR
comp=Z,3μm,17.0s,MS5.0
MDJ Mudanjiang 32.46 61 P **P** **20 29 26.7 -0.5**
MDJ pP pP 20 29 28.4 -1.9
MDJ sP sP 20 29 31.6 +0.1
MDJ PP PP 20 30 39.4 -1.1
MDJ PcP PcP 20 32 15.2 +1.0
MDJ S **S** **20 34 39.5 -2.3**
MDJ ScP ScP 20 35 56.9 -1.1
MDJ PcS PcS 20 35 59.0 0.0
MDJ ScS ScS 20 39 59.0 +1.8
MDJ pmax pmax
comp=Z,4.0nm,1.1s,mb4.2
MDJ pmax pmax
comp=Z,39nm,5.0s
MDJ LR LR
comp=N,320nm,17.2s,MS4.5
MDJ LR LR
comp=E,670nm,16.9s,MS4.5
MDJ LR LR
comp=Z,800nm,17.5s,MS4.5
DGRG David-gareji 33.83 293 P **P** **20 29 41.9 +2.7**
MTA Mtatsminda 34.25 293 P **P** **20 29 43.9 +1.1**
KLR Kul'dur 34.27 53 eP **P** **20 29 38.6 -4.3**
KLR eS **S** **20 35 14.0 +4.2**
KLR MLR MLR
comp=E,4μm,13.0s
KLR MLR MLR
comp=Z,4μm,13.0s,MS5.3
TBLG Delisi 34.28 294 eP **P** **20 29 44.7 +1.5**
TBLG Delisi 34.28 294 P **P** **20 29 44.8 +1.6**
GNI Garni 34.44 291⇑eP **P** **20 29 46.7 +2.2**
GNI pmax pmax
comp=Z,31nm,1.2s
GNI Garni 34.44 291 eP **P** **20 29 45.5 +1.0**
comp=Z,33nm,1.0s,mb5.2
ZEI Tsey 34.83 295 eP **P** **20 29 51.7 +3.8**
ZEI pmax pmax
comp=Z,7.0nm,0.4s,mb4.9
RDF Al-Radifah 34.96 271 eP **P** **20 29 49.7 +0.5**
RDF AMb AMB 20 29 53.5
comp=Z,45nm,1.7s,mb5.1
NAY Al-Naaiem 35.09 271 eP **P** **20 29 49.7 -0.5**
NAY AMb AMB 20 29 54.6
comp=Z,28nm,1.2s,mb5.1
ONI Oni 35.17 295 P **P** **20 29 53.6 +2.8**
KIV Kislovodsk 35.66 298 eP **P** **20 29 57.4 +2.4**
KIV ePPP 20 31 28.6
KIV eS **S** **20 35 34.1 +2.8**
KIV pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
KIV MLR MLR
comp=Z,410nm,15.0s,MS4.3
KIV Kislovodsk 35.66 298 eP **P** **20 29 56.1 +1.1**
comp=Z,10nm,1.1s,mb4.7
HABR Khabarovsk 36.38 55 eP **P** **20 29 59.6 -1.5**
HABR eSS SS 20 38 09.6 -11
HABR pmax pmax
comp=N,4.0nm,0.7s
HABR pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
HABR pmax pmax
comp=E,9.0nm,0.8s
HABR MLR MLR
comp=Z,1μm,12.0s,MS5.0
YAK Yakutsk 36.83 31 eP **P** **20 30 04.3 -0.4**
YAK e*PP pP 20 30 15.7 +7.9
YAK e 20 31 30.7
YAK ePPP 20 31 49.4
YAK e 20 32 23.4
YAK eS **S** **20 35 54.1 +5.4**
YAK e*SS sS 20 36 07.7 +14
YAK pmax pmax
comp=E,3.0nm,0.9s
YAK pmax pmax
comp=Z,12nm,1.0s,mb4.7
YAK pmax pmax
comp=Z,47nm,2.8s,mb4.8
YAK smax
comp=E,99nm,6.8s
YAK smax
comp=N,93nm,3.9s
YAK MLR MLR
comp=N,562nm,15.0s,MS4.8
YAK MLR MLR
comp=E,971nm,12.0s,MS4.8
YAK MLR MLR
comp=Z,801nm,12.0s,MS4.7
YAK Yakutsk 36.83 31 eP **P** **20 30 03.6 -1.1**
comp=Z,7.9nm,0.5s,mb4.8
SOC Sochi 37.83 297 eP **P** **20 30 17.1 +3.6**
SOC e 20 31 41.7
SOC ePPP 20 32 26.7
SOC eS **S** **20 36 02.0 -2.4**
VSR Storozhevoye 38.17 310 eP **P** **20 30 16.8 +0.5**
VSR pmax pmax
comp=Z,10.0nm,0.7s,mb4.7
VSR pmax pmax
comp=N,4.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,1.2s
VSR MLR MLR
comp=Z,1μm,15.0s,MS4.9
VSR MLR MLR
comp=N,360nm,12.0s,MS4.7
VSR MLR MLR
comp=E,670nm,15.0s,MS4.7
KKM Kota Kinabalu 39.06 132 eP **P** **20 30 24.9 +0.8**
comp=E,52nm,1.1s,mb5.2
ANN Anapa 39.36 299 e PcP 20 32 26.8 -7.8
ANN pmax pmax
comp=Z,22nm,1.0s,mb4.8
MOS Moscow 39.61 317 eP **P** **20 30 27.6 -0.7**
MOS pmax pmax
comp=Z,89nm,0.8s,mb5.5
MOS pmax pmax
comp=Z,220nm,1.5s,mb5.7
MOS MLR MLR
comp=E,1μm,12.0s
MOS MLR MLR
comp=Z,2μm,12.0s,MS5.1
KSM Kuching 39.68 144 eP **P** **20 30 29.8 +0.5**
comp=Z,26nm,1.2s,mb4.8
MJAR Matsushiro Arr 39.91 74 P **P** **20 30 31.0 -0.1**
comp=Z,3.2nm,0.9s,mb4.0,baz=279,slow=9.9,SNR=9.2
MJAR LR LR 20 47 42.9
comp=Z,802nm,19.3s,MS4.6,baz=280,slow=37
MJAR Matsushiro Arr 39.91 74 P **P** **20 30 31.0 0.0**
MJAR pmax pmax
comp=Z,3.0nm,0.9s
MJAR MLR MLR
comp=Z,802nm,19.3s
OBN Obninsk 40.12 316c iP **P** **20 30 32.0 -0.5**
OBN pmax pmax
comp=Z,65nm,1.7s,mb5.1
OBN MLR MLR
comp=Z,1μm,17.0s,MS4.9
OBN Obninsk 40.12 316 eP **P** **20 30 31.6 -0.9**
comp=Z,92nm,1.6s,mb5.3
TIXI Tiksi 41.67 18 eP **P** **20 30 44.3 -0.8**
TIXI pmax pmax
comp=Z,9.0nm,0.9s,mb4.4
TIXI MLR MLR
comp=Z,1μm,12.0s,MS5.1
TIXI Tiksi 41.67 18 eP **P** **20 30 44.2 -0.9**
comp=Z,7.8nm,0.9s,mb4.3
SIM Simferopol' 41.69 300 P **P** **20 30 48.2 +2.6**
SIM S **S** **20 37 08.4 +6.1**
SIM pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
SIM MLR MLR
comp=Z,1μm,17.0s,MS4.9
BR131 Keskin Array S 42.92 292 eP **P** **20 30 55.6 -0.1**
comp=Z,2.9nm,0.7s,mb4.1
BRTR Keskin Array B 42.92 292 P **P** **20 30 56.0 +0.4**
comp=Z,5.4nm,1.0s,mb4.2,baz=96,slow=6.3,SNR=28
BRTR Keskin Array B 42.92 292 P **P** **20 30 56.1 +0.4**
BRTR pmax pmax
comp=Z,5.0nm,1.0s
LVZ Lovozero 43.95 334 iP **P** **20 31 04.8 +1.2**
LVZ pmax pmax
comp=Z,38nm,2.1s,mb4.8
LVZ MLR MLR
comp=Z,2μm,16.0s,MS5.0
JOF Joensuu 44.02 326 eP **P** **20 31 02.6 -1.6**
JOF pmax pmax
comp=Z,15nm,0.7s,mb4.8
JOF Joensuu 44.02 326 ep **P** **20 31 02.6 -1.6**
comp=Z,15nm,0.7s,mb4.8
APA Apatity 44.30 333⇑eP **P** **20 31 09.0 +2.6**
APA e 20 32 46.0
APA e 20 32 56.0
APA eS **S** **20 37 46.0 +6.1**
APA pmax pmax
comp=Z,18nm,1.2s,mb4.7
APA MLR MLR
comp=Z,2μm,11.0s,MS5.3
AKASG Malin Array Be 44.45 309 P **P** **20 31 07.3 -0.5**
comp=Z,0.4nm,0.3s,mb3.6,baz=78,slow=6.7,SNR=16
AKASG LR LR 20 51 43.7
comp=Z,2μm,20.1s,MS5.0,baz=90,slow=39
AKBB Malin Array Si 44.45 309 eP **P** **20 31 07.7 -0.2**
KIEV Kiev 44.46 309 eP **P** **20 31 07.5 -0.5**
KIEV pmax pmax
comp=Z,11nm,1.2s,mb4.5
KIEV Kiev 44.46 309 eP **P** **20 31 07.5 -0.5**
comp=Z,11nm,1.2s,mb4.5
KIS Kishinev 45.10 304 e **P** **20 31 10.0 -3.1**
KIS LRM 20 52 56.0
comp=Z,700nm,20.0s
TLCR 45.38 301⇓iP **P** **20 31 15.7 +0.4**
IDID Didziasalis 45.75 315 eP **P** **20 31 18.4 +0.2**
IDID AMB AMB 20 31 20.3
comp=Z,6.9nm,1.0s,mb4.5
VSU Vasula 45.78 320c iP **P** **20 31 17.9 -0.4**
VSU pmax pmax
comp=Z,107nm,1.9s,mb5.5
VSU MLR MLR
comp=Z,1μm,15.0s,MS5.0
IZAR Zarasai 46.02 316 eP **P** **20 31 20.4 +0.1**
IZAR AMB AMB 20 31 22.5
comp=Z,8.1nm,1.2s,mb4.5
IIGN Ignalina 46.05 315 eP **P** **20 31 20.7 +0.2**
IIGN AMB AMB 20 31 22.9
comp=Z,10nm,1.5s,mb4.5
ISAL Salakas 46.10 316 eP **P** **20 31 21.0 +0.2**
ISAL AMB AMB 20 31 23.2
comp=Z,10nm,0.9s,mb4.7
FINES FINESS Array B 46.27 324 P **P** **20 31 21.3 -0.8**
comp=Z,5.8nm,0.6s,mb4.7,baz=95,slow=8.5,SNR=24
FINES LR LR 20 50 21.1
comp=Z,629nm,19.7s,MS4.6,baz=91,slow=36
FINES FINESS Array B 46.27 324 P **P** **20 31 21.3 -0.8**
FINES pmax pmax
comp=Z,6.0nm,0.6s
FINES MLR MLR
comp=Z,629nm,19.7s
PLOR Plostina 46.76 302⇑iP **P** **20 31 27.5 +1.3**
PLOR Plostina 46.76 302⇑iP **P** **20 31 27.5 +1.3**
KEV Kevo 47.13 335 eP **P** **20 31 26.7 -2.0**
KEV pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
KEV Kevo 47.13 335 eP **P** **20 31 26.7 -2.0**
comp=Z,6.1nm,0.7s,mb4.6
KEV Kevo 47.13 335 ep **P** **20 31 26.7 -2.0**
comp=Z,6.1nm,0.7s,mb4.6
SEY Seymchan 47.19 34⇑eP **P** **20 31 30.2 +0.9**
MLR Muntele Rosu 47.31 302⇑iP **P** **20 31 32.5 +2.0**
MLR Muntele Rosu 47.31 302⇑iP **P** **20 31 32.5 +2.0**
BURAR Bucovina Array 47.43 305⇑iP **P** **20 31 31.7 +0.3**
BURAR Bucovina Array 47.43 305⇑iP **P** **20 31 31.7 +0.3**
BUR08 Bucovina Ar. S 47.43 305 eP **P** **20 31 31.3 -0.2**
ATD Arta Tunnel 47.59 251 LR LR 20 54 07.5
comp=Z,224nm,18.6s,MS4.2,baz=216,slow=39
ARCES ARCESS Array B 47.60 335 P **P** **20 31 31.9 -0.4**
comp=Z,3.4nm,0.4s,mb4.7,baz=95,slow=8.2,SNR=3.3
ARE0 ARCESS Array S 47.60 335 eP **P** **20 31 32.3 -0.1**
LVV L'vov 47.86 308 eP **P** **20 31 34.2 -0.5**
LVV e 20 33 29.4
LVV MLR MLR
comp=E,900nm,16.0s,MS4.9
LVV MLR MLR
comp=N,300nm,15.0s,MS4.9
LVV MLR MLR
comp=E,1μm,15.0s
SUW Suwalki 47.89 314 eP **P** **20 31 35.7 +0.9**
SUW LMZ 20 53 04.3
comp=E,2μm,18.5s
VOIR 47.94 302⇑iP **P** **20 31 35.2 -0.2**
VOIR 47.94 302⇑iP **P** **20 31 35.2 -0.2**
KWP Kalwaria Pacla 48.74 308 eP **P** **20 31 42.9 +1.4**
KWP LMZ 20 53 53.6
comp=E,1μm,24.7s
KWP Kalwaria Pacla 48.74 308 eP **P** **20 31 41.8 +0.3**
comp=E,17nm,1.1s,mb5.0
UZH Uzhgorod 49.18 307 eP **P** **20 31 45.2 +0.3**
UZH i 20 31 50.6
UZH eS **S** **20 38 48.0 -2.3**
UZH e 20 42 20.0
UZH MLR MLR
comp=N,660nm,18.0s,MS4.9
UZH MLR MLR
comp=E,1μm,18.0s,MS4.9
UZH MLR MLR
comp=Z,700nm,18.0s,MS4.7
DRGR 49.26 304⇓iP **P** **20 31 45.5 0.0**
DRGR 49.26 304⇓iP **P** **20 31 45.5 0.0**
CRVS Cervenica-Dubn 49.67 307 eP **P** **20 31 51.1 +2.5**
comp=Z,26nm,2.7s,mb4.8
CRVS eS S 20 38 36.5 -21
CRVS LR LR
comp=Z,800nm,23.4s,MS4.7
CRVS Cervenica-Dubn 49.67 307 eP **P** **20 31 51.0 +2.4**
CRVS e 20 38 36.5
STHS Stebnicka Huta 49.72 308 eP **P** **20 31 49.0 0.0**
STHS pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
STHS Stebnicka Huta 49.72 308 eP **P** **20 31 49.0 0.0**
comp=Z,2.8nm,0.8s,mb4.3
STHS Stebnicka Huta 49.72 308 eP **P** **20 31 49.0 0.0**
KAPI Kappang 50.07 137 LR LR 20 54 12.2
comp=Z,223nm,20.3s,MS4.2,baz=166,slow=38
NIE Niedzica 50.31 308 eP **P** **20 31 54.5 +1.0**
KECS Kecovo 50.39 307 eP **P** **20 31 55.2 +1.1**
KECS pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
KECS Kecovo 50.39 307 eP **P** **20 31 55.2 +1.1**
comp=Z,1.9nm,0.7s,mb4.2
KECS Kecovo 50.39 307 eP **P** **20 31 55.2 +1.1**
PETK Petropavlovsk- 50.47 47 LR LR 20 55 14.5
comp=Z,205nm,19.8s,MS4.1,baz=281,slow=38
PSZ Piszkesteto 50.89 306 P **P** **20 31 57.6 -0.3**
PSZ pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
PSZ Piszkesteto 50.89 306 P **P** **20 31 57.6 -0.4**
comp=Z,3.5nm,0.8s,mb4.3
VYHS Vyhne 51.46 307 eP **P** **20 32 02.9 +0.8**
comp=Z,9.6nm,1.8s,mb4.4
VYHS ePP PP 20 34 02.5 +3.4
VYHS eS **S** **20 39 29.0 +7.0**
VYHS eSS SS 20 43 16.1 +19
VYHS LR LR
comp=Z,700nm,22.0s,MS4.6
VYHS Vyhne 51.46 307 eP **P** **20 32 02.9 +0.8**
VYHS ePP PP 20 34 02.5 +3.4
VYHS eS **S** **20 39 29.0 +7.0**
VYHS eSS SS 20 43 16.1 +19
OKC Ostrava-Krasne 51.60 309 AMS AMS 20 55 30.0
comp=Z,1μm,15.0s
KOLL Kolacno 51.72 307 eP **P** **20 32 04.7 +0.6**
KOLL Kolacno 51.72 307 eP **P** **20 32 04.7 +0.6**
MORC Moravsky Berou 52.00 309 eP **P** **20 32 05.9 -0.3**
MORC pmax pmax
comp=Z,27nm,1.9s,mb4.8
MORC Moravsky Berou 52.00 309 eP **P** **20 32 05.9 -0.3**
comp=Z,27nm,1.9s,mb4.9
KSP Ksiaz 52.55 311 eP **P** **20 32 12.0 +1.8**
KSP LMZ 20 56 05.6
comp=Z,2μm,19.7s
DPC Dobruska-Polom 52.64 310 eP **P** **20 32 11.6 +0.7**
DPC MLR MLR
comp=Z,2μm,19.7s,MS5.0
DPC Dobruska-Polom 52.64 310 eP **P** **20 32 11.6 +0.7**
DPC Dobruska-Polom 52.64 310 eP **P** **20 32 11.6 +0.7**
DPC AMS AMS 20 56 00.0
comp=Z,2μm,19.7s
ZST Bratislava 52.65 307 eS **S** **20 39 39.5 +1.1**
ZST eSS SS 20 43 25.4 +9.1
UPC Upice 52.80 310 eP **P** **20 32 13.0 +0.9**
BILL Bilibino 52.97 27⇑eP **P** **20 32 14.2 +1.1**
BILL e 20 34 15.6
BILL pmax pmax
comp=Z,19nm,1.7s,mb4.8
BILL MLR MLR
comp=Z,1μm,18.0s,MS5.0
BILL Bilibino 52.97 27 P **P** **20 32 13.6 +0.5**
comp=Z,3.8nm,0.5s,mb4.6
TREC Trest 53.42 309 AMS AMS 20 59 00.0
comp=Z,1μm,15.9s
NB2 NORSAR Subarra 53.45 324 P **P** **20 32 15.7 -1.0**
comp=Z,51nm,1.7s,mb5.2,baz=82,slow=7.4
NOA NORSAR Array B 53.45 324 P **P** **20 32 16.0 -0.7**
comp=Z,5.4nm,0.6s,mb4.7,baz=82,slow=7.4,SNR=30
NOA LR LR 20 56 29.1
comp=Z,954nm,18.0s,MS4.9,baz=85,slow=38
NOA NORSAR Array B 53.45 324 P **P** **20 32 16.0 -0.7**
NOA pmax pmax
comp=Z,5.0nm,0.6s
NOA MLR MLR
comp=Z,954nm,18.0s
NOA NORSAR Array B 53.45 324 P **P** **20 32 16.0 -0.7**
NOA LR LR 20 56 29.1
CONA Conrad Observa 53.52 307⇑iPP **P** **20 32 18.0 +0.5**
comp=Z,10nm,1.4s,mb4.6
NAO01 NORSAR Array S 53.64 324 eP **P** **20 32 17.0 -1.1**
comp=Z,6.5nm,0.8s,mb4.6
PVCC Panska Ves 53.69 310 eP **P** **20 32 19.4 +0.8**
PVCC MLR MLR
comp=Z,1μm,16.4s,MS5.0
PVCC Panska Ves 53.69 310 eP **P** **20 32 19.4 +0.8**
PVCC AMS AMS 20 56 30.0
comp=Z,1μm,16.4s
PRU Pruhonice 53.84 310 eP **P** **20 32 20.4 +0.7**
PRU MLR MLR
comp=Z,2μm,15.9s,MS5.2
PRU Pruhonice 53.84 310 eP **P** **20 32 20.4 +0.7**
PRU AMS AMS 20 56 40.0
comp=Z,2μm,15.9s
BRG Berggiesshubel 53.99 311 eP **P** **20 32 20.7 -0.1**
comp=Z,13nm,1.6s,mb4.6
BRG Berggiesshubel 53.99 311 eP **P** **20 32 21.0 +0.2**
comp=Z,3.3nm,0.8s,mb4.3
BRG e 20 32 37.6
comp=Z,6.8nm,1.2s
BRG S **S** **20 40 15.0 +19**
BRG
comp=N,939nm,15.9s
BRG
comp=E,867nm,13.2s
BRG
comp=Z,569nm,15.9s
BRG Berggiesshubel 53.99 311 eP **P** **20 32 21.0 +0.2**
BRG e 20 32 37.6
BRG S **S** **20 40 15.0 +19**
BRG pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
BRG pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
BRG MLR MLR
comp=N,562nm,15.9s,MS4.9
BRG MLR MLR
comp=E,519nm,13.2s,MS4.9
BRG MLR MLR
comp=Z,341nm,15.9s,MS4.5
SOKA Soboth 54.41 306⇑iPP **P** **20 32 24.0 +0.1**
comp=Z,10nm,1.4s,mb4.6
CLL Collm 54.46 312 eP **P** **20 32 24.2 0.0**
comp=Z,10.0nm,1.3s,mb4.6
CLL Collm 54.46 312 eP **P** **20 32 24.0 -0.2**
CLL e 20 32 39.0
CLL eS **S** **20 40 15.0 +12**
CLL pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
CLL MLR MLR
comp=Z,900nm,21.0s,MS4.8
CLL Collm 54.46 312 eP **P** **20 32 24.0 -0.2**
CLL e 20 32 39.0
CLL eS **S** **20 40 15.0 +12**
CLL Collm 54.46 312 eP **P** **20 32 24.0 -0.2**
comp=Z,10.0nm,1.3s,mb4.6
CLL e 20 32 58.0
CLL ePP PP 20 34 24.0 -2.1
CLL eSS SS 20 43 45.0 +0.3
CLL LmH 20 53 00.0
comp=N,2μm,18.7s
CLL LmH 20 53 00.0
comp=E,500nm,22.0s
CLL LmV 20 58 00.0
comp=Z,900nm,21.0s
GEC2 GERESS Array S 54.67 309 eP **P** **20 32 26.7 +0.9**
comp=Z,7.0nm,1.1s,mb4.6
KHC Kasperske Hory 54.67 309 eP **P** **20 32 25.9 +0.1**
KHC MLR MLR
comp=Z,900nm,17.8s,MS4.9
KHC Kasperske Hory 54.67 309 eP **P** **20 32 25.9 +0.1**
KHC AMS AMS 20 59 20.0
comp=Z,900nm,17.8s
NKC Novy Kostel 55.08 311 AMS AMS 20 57 20.0
comp=Z,1μm,14.1s
MOX Moxa 55.48 311 eP **P** **20 32 30.0 -1.6**
comp=Z,26nm,2.0s,mb4.9
MOX
comp=Z,900nm,21.0s
MOX Moxa 55.48 311 eP **P** **20 32 32.6 +1.0**
comp=Z,20nm,1.9s,mb4.8
TIP Timpagrande 55.59 297 eP **P** **20 32 31.5 -1.1**
comp=Z,9.7nm,1.4s,mb4.6
NRDL Niedersach Rie 55.88 314 eP **P** **20 32 35.4 +0.9**
comp=Z,12nm,1.0s,mb4.9
CLZ Clausthal 55.90 313 eP **P** **20 32 35.1 +0.5**
comp=Z,13nm,1.1s,mb4.9
CUC Castrocucco 55.98 298 eP **P** **20 32 34.2 -1.2**
comp=Z,5.3nm,0.8s,mb4.6
GRF Grafenberg Arr 55.99 310 eP **P** **20 32 35.9 +0.6**
comp=Z,18nm,1.3s,mb4.9
GRF Grafenberg Arr 55.99 310 eP **P** **20 32 35.9 +0.6**
GRF pmax pmax
comp=Z,18nm,1.3s,mb4.9
MOTA Moosalm 56.77 308⇑iPP **P** **20 32 41.4 +0.4**
comp=Z,8.2nm,1.1s,mb4.7
AQU L'Aquila 56.87 301 P **P** **20 32 41.4 -0.4**
TNS Taunus Mts 57.54 311 eP **P** **20 32 46.4 +0.1**
BFO Black Forest 58.22 309 eP **P** **20 32 51.0 -0.1**
comp=Z,8.0nm,1.4s,mb4.6
CDF Champ du Feu 58.85 310 eP **P** **20 32 55.4 -0.2**

comp=Z,22nm,1.1s,mb4.8
CDF Champ du Feu 58.85 310 *e*P **P 20 32 55.4 -0.2**
CDF pmax pmax
comp=Z,11nm,1.1s,mb4.8
CDF Champ du Feu 58.85 310 *e*P **P 20 32 55.4 -0.2**
comp=Z,11nm,1.1s,mb4.8
HINF Hinteralfeld 59.33 309 *e*P **P 20 32 58.5 -0.3**
KMBO Kilima Mbogo 60.02 244 P **P 20 33 03.2 -0.8**
comp=Z,21nm,0.8s,mb4.2,baz=180,slow=24,SNR=5.3
KMBO LR LR 20 57 43.7
comp=Z,333nm,21.8s,MS4.4,baz=79,slow=35
KMBO Kilima Mbogo 60.02 244 *e*P **P 20 33 03.4 -0.7**
MEZF Maizieres J'vi 60.21 310 *e*P **P 20 33 05.1 +0.2**
LPG La Plagne 60.23 307 *e*P **P 20 33 05.6 +0.5**
comp=Z,18nm,0.8s,mb4.8
LPG La Plagne 60.23 307 *e*P **P 20 33 05.6 +0.5**
LPG pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
LPG La Plagne 60.23 307 *e*P **P 20 33 05.6 +0.5**
comp=Z,9.1nm,0.8s,mb4.9
LPL La Plagne 60.24 307 *e*P **P 20 33 05.6 +0.4**
comp=Z,18nm,0.9s,mb4.8
LPL La Plagne 60.24 307 *e*P **P 20 33 05.6 +0.4**
LPL pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
LPL La Plagne 60.24 307 *e*P **P 20 33 05.6 +0.4**
comp=Z,9.1nm,0.9s,mb4.8
CABF La Chapelle 60.25 308 *e*P **P 20 33 04.9 -0.3**
SBF Sospel 60.40 305 *e*P **P 20 33 06.0 -0.3**
comp=Z,34nm,1.0s,mb5.0
SBF Sospel 60.40 305 *e*P **P 20 33 06.0 -0.3**
SBF pmax pmax
comp=Z,17nm,1.0s,mb5.0
SBF Sospel 60.40 305 *e*P **P 20 33 06.0 -0.3**
comp=Z,17nm,1.0s,mb5.0
ORIF Oris-en-Rattie 61.02 306 *e*P **P 20 33 09.9 -0.6**
ORIF *e*MLR MLR
comp=Z,1μm,23.0s,MS4.7
FRF La Foret Royal 61.04 305 *e*P **P 20 33 11.6 +0.9**
comp=Z,31nm,1.3s,mb5.0
FRF La Foret Royal 61.04 305 *e*P **P 20 33 11.6 +0.9**
FRF pmax pmax
comp=Z,16nm,1.3s,mb5.0
FRF La Foret Royal 61.04 305 *e*P **P 20 33 11.6 +0.9**
comp=Z,16nm,1.3s,mb5.0
SMF Signal de Mont 61.67 309 *e*P **P 20 33 14.3 -0.6**
comp=Z,33nm,1.3s,mb5.0
SMF Signal de Mont 61.67 309 *e*P **P 20 33 14.3 -0.6**
SMF pmax pmax
comp=Z,17nm,1.3s,mb5.0
SMF Signal de Mont 61.67 309 *e*P **P 20 33 14.3 -0.6**
comp=Z,16nm,1.3s,mb5.0
SSF Saint Saulge 61.72 309 *e*P **P 20 33 14.5 -0.7**
comp=Z,11nm,0.9s,mb4.7
SSF Saint Saulge 61.72 309 *e*P **P 20 33 14.5 -0.7**
SSF pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
SSF Saint Saulge 61.72 309 *e*P **P 20 33 14.5 -0.7**
comp=Z,5.5nm,0.9s,mb4.7
VIVF Saint-Julien-l 61.84 307 *e*P **P 20 33 16.5 +0.5**
comp=Z,13nm,1.0s,mb4.7
VIVF Saint-Julien-l 61.84 307 *e*P **P 20 33 16.5 +0.5**
VIVF pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
VIVF Saint-Julien-l 61.84 307 *e*P **P 20 33 16.5 +0.5**
comp=Z,6.6nm,1.0s,mb4.7
AVF Avril sur Loir 61.92 309 *e*P **P 20 33 16.1 -0.5**
comp=Z,26nm,1.2s,mb4.9
AVF Avril sur Loir 61.92 309 *e*P **P 20 33 16.1 -0.5**
AVF pmax pmax
comp=Z,13nm,1.2s,mb4.9
AVF Avril sur Loir 61.92 309 *e*P **P 20 33 16.1 -0.5**
comp=Z,13nm,1.2s,mb4.9
KEST Kesra 62.36 296 LR LR 21 05 24.4
comp=Z,187nm,19.3s,MS4.3,baz=31,slow=41
TCF Toulx Ste Croi 62.84 309 *e*P **P 20 33 22.6 -0.1**
comp=Z,26nm,1.2s,mb5.0
TCF Toulx Ste Croi 62.84 309 *e*P **P 20 33 22.6 -0.1**
TCF pmax pmax
comp=Z,13nm,1.2s,mb4.9
TCF Toulx Ste Croi 62.84 309 *e*P **P 20 33 22.6 -0.1**
comp=Z,13nm,1.2s,mb4.9
MBWA Marble Bar 63.88 147 *e*P **P 20 33 29.0 -0.8**
comp=Z,11nm,1.0s,mb4.8
FITZ Fitzroy Crossi 64.11 140 P **P 20 33 31.3 0.0**
comp=Z,6.0nm,0.9s,mb4.6,baz=341,slow=4.5,SNR=7.9
ESDC Sonseca Array 69.89 305 LR LR 21 07 44.7
comp=Z,390nm,20.6s,MS4.6,baz=340,slow=38
WRAB Tennant Creek 70.41 134 P **P 20 34 11.0 -0.3**
WRA Warramunga Arr 70.41 134 P **P 20 34 10.9 -0.4**
comp=Z,2.3nm,0.7s,mb4.2,baz=328,slow=6.1,SNR=14
WRA Warramunga Arr 70.41 134 P **P 20 34 11.0 -0.3**
WRA pmax pmax
comp=Z,2.0nm,0.7s
PPLA Purkeypile 70.55 25 *e*P **P 20 34 11.4 -0.2**
comp=Z,72nm,1.8s,mb5.3
COLA College 70.61 22 *e*P **P 20 34 11.7 -0.3**
RC01 Rabbit Creek A 72.63 26 *e*P **P 20 34 24.2 0.0**
comp=Z,20nm,1.1s,mb5.0
EGAK Eagle 72.64 20 *e*P **P 20 34 23.9 -0.3**
comp=Z,7.2nm,1.2s,mb4.5
ASAR Alice Springs 73.09 137 P **P 20 34 26.9 -0.4**
comp=Z,1.9nm,0.8s,mb4.0,baz=326,slow=6.0,SNR=14
ASAR Alice Springs 73.09 137 P **P 20 34 27.0 -0.3**
ASAR pmax pmax
comp=Z,2.0nm,0.8s
DAWY Dawson 73.68 20 *e*P **P 20 34 29.7 -0.6**
LSZ Lusaka 76.19 240 LR LR 21 10 20.9
comp=Z,355nm,20.1s,MS4.7,baz=255,slow=37
YKA Yellowknife Ar 80.42 11 P **P 20 35 07.2 -1.1**
comp=Z,3.7nm,0.9s,mb4.3,baz=346,slow=4.8,SNR=14
YKA Yellowknife Ar 80.42 11 P **P 20 35 07.2 -1.1**
YKA pmax pmax
comp=Z,4.0nm,0.9s
STKA Stephens Creek 83.73 137 P **P 20 35 25.2 -0.8**
comp=Z,1.2nm,0.7s,mb4.2,baz=310,slow=20,SNR=3.4
STKA LR LR 21 16 02.8
comp=Z,205nm,21.3s,MS4.5,baz=80,slow=38
LBTB Lobatse 84.62 234 *e*P **P 20 35 29.5 -1.2**
LBTB pmax pmax
comp=Z,10.0nm,1.1s,mb4.9
LBTB Lobatse 84.62 234 *e*P **P 20 35 29.5 -1.2**
comp=Z,10nm,1.1s,mb4.9
BOSA Boshof 87.30 232 P **P 20 35 43.4 -0.5**
comp=Z,2.3nm,0.8s,mb4.4,baz=72,slow=7.4,SNR=4.9
BOSA LR LR 21 17 59.0
comp=Z,216nm,18.0s,MS4.6,baz=47,slow=38
BOSA Boshof 87.30 232 P **P 20 35 43.4 -0.5**
BOSA pmax pmax
comp=Z,2.0nm,0.8s,mb4.4
BOSA MLR MLR
comp=Z,217nm,18.0s,MS4.6
BOSA Boshof 87.30 232 P **P 20 35 42.2 -1.6**
comp=Z,4.3nm,1.0s,mb4.6
SCHQ Schefferville 87.35 346 LR LR 21 17 11.9
comp=Z,427nm,20.8s,MS4.8,baz=26,slow=37
DBIC Dimbokro 88.76 277 P **P 20 35 50.4 -0.8**
comp=Z,4.9nm,1.0s,mb4.8,baz=78,slow=14,SNR=2.5
DBIC LR LR 21 19 41.5
comp=Z,471nm,18.9s,MS4.9,baz=43,slow=38
DBIC Dimbokro 88.76 277 P **P 20 35 50.4 -0.8**
DBIC pmax pmax
comp=Z,5.0nm,1.0s
DBIC MLR MLR
comp=Z,471nm,18.9s
DBIC Dimbokro 88.76 277 P **P 20 35 50.4 -0.8**
DBIC LR LR 21 19 41.5
FFC Flin Flon 89.51 6 *i*P **P 20 35 53.7 -0.3**
FFC Flin Flon 89.51 6 *e*P **P 20 35 52.6 -1.4**
comp=Z,4.1nm,0.9s,mb4.8
ULM Lac du Bonnet 94.35 3 LR LR 21 22 18.4
comp=Z,372nm,19.2s,MS4.9,baz=29,slow=38
CPUP Villa Florida 149.28 278 PKP PKPdf 20 42 40.2 -1.6
comp=Z,1.3nm,0.6s,baz=126,slow=3.5,SNR=7.5
CPUP PKPbc PKPbc 20 42 43.8 -2.3
comp=Z,1.3nm,0.6s,baz=49,slow=5.8,SNR=7.5
LPAZ La Paz 151.49 307 PKP PKPdf 20 42 45.3 -0.2
comp=Z,1.8nm,0.9s,baz=276,slow=0.8,SNR=6.3
LPAZ PKPbc PKPbc 20 42 50.2 -1.4
comp=Z,2.5nm,0.9s,baz=19,slow=6.5,SNR=6.7
LPAZ La Paz 151.49 307 *e*PKPdf PKPdf 20 42 45.2 -0.2

CSEM 02 20:45:15.4±0.5, 29°.46N×49°.29E, h2km, ML3.7, Error ellipse: s-maj=17.1km s-min=6.5km az=143.0, Persian Gulf

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBD	**Kabd**	**1.43**	**259**	*e*P	Pn	20 45 42.2	-0.1
KBD				*e*S	Sg	20 46 01.5	+0.3
RDF	**Al-Radifah**	**1.61**	**251**	*e*P	Pn	20 45 44.7	-0.2
RDF				*e*S	Sn	20 46 06.4	+0.1
MIB	**Mutribah**	**1.73**	**282**	*e*P	Pn	20 45 46.8	+0.2
MIB				*e*S	Sn	20 46 10.5	+1.2
NAY	**Al-Naaiem**	**1.80**	**264**	*e*P	Pn	20 45 47.4	-0.1
SHGR	**Shooshtar-Gavs**	**2.67**	**351**	*e*Pg	Pg	20 45 59.7	-7.0
NASN	**Na'in**	**4.49**	**41**	*e*Pn	Pn	20 46 25.6	+1.2
SNGE	**Sanandaj**	**5.85**	**344**	*e*Pn	Pn	20 46 42.4	-0.8
SNGE				*e*Sg	Sn	20 47 47.5	-3.3

IDC ***02*** *20:46:18.3±1.5, 1°.15N×96°.99E, h0km, mb3.8/7, mb1 3.8/9, mb1mx3.6/23, mbtmp3.7/9, ML3.2/2, MS3.1/1, Ms1 3.1/1, ms1mx2.4/24, Error ellipse: s-maj=42.7km s-min=20.0km az=57.0*
ISCJB ***02*** *20:46:22.9±6.0, 1°.2N±0°.2×97°.1E±0°.3, h44km±43km, mb3.8/8, Error ellipse: s-maj=67.9km s-min=17.9km az=147.0*
NEIC ***02*** *20:46:23.7±0.8, 1°.19N×97°.07E, h35km, Error ellipse: s-maj=18.7km s-min=10.9km az=58.0*
ISC 02 20:46:24.5±6.0, 1°.2N±0°.2×97°.2E±0°.4, h38km±44km, n13, σ0§20/13, mb3.8/8, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.35**	**49**	Pn	**Pn**	**20 47 00.6**	**0.0**
PSI	2.8nm,0.3s,baz=282,slow=4.8,SNR=11			LR	LR	20 47 39.2	
	comp=Z,315nm,18.3s,baz=81,slow=33						
PSI	**Prapat**	**2.35**	**49**	Pn	**Pn**	**20 47 00.6**	**0.0**
PSI				LR	LR	20 47 39.2	
CMAR	**Chiang Mai Arr**	**17.20**	**6**	P	**Pn**	**20 50 22.0**	**0.0**
	0.0nm,0.3s,baz=200,slow=9.1,SNR=5.7						
GTA	**Gaotai**	**38.07**	**3**	*e*P	**P**	**20 53 39.8**	**+0.4**
GTA				pP	pP	20 53 44.2	-6.1
GTA				sP	sP	20 53 47.4	-7.5
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.8						
WRA	**Warramunga Arr**	**42.09**	**122**	P	**P**	**20 54 13.0**	**-0.1**
	comp=Z,0.7nm,0.7s,mb3.4,baz=301,slow=9.1,SNR=5.5						
ASAR	**Alice Springs**	**43.45**	**127**	P	**P**	**20 54 24.2**	**+0.2**
	comp=Z,0.4nm,0.8s,mb3.2,baz=303,slow=8.2,SNR=3.8						
KSRS	**Korea Array**	**45.84**	**35**	P	**P**	**20 54 42.8**	**-0.1**
	comp=Z,2.0nm,0.8s,mb4.1,baz=216,slow=10,SNR=6.4						
SONM	**Songino Array**	**47.10**	**8**	P	**P**	**20 54 52.5**	**-0.1**
	comp=Z,1.3nm,0.8s,mb3.9,baz=187,slow=9.2,SNR=11						
MK31	**Makanchi Array**	**47.20**	**346**	*e*P	**P**	**20 54 53.6**	**+0.3**
MKAR	**Makanchi Array**	**47.20**	**346**	P	**P**	**20 54 53.4**	**+0.1**
	comp=Z,0.9nm,0.6s,mb3.9,baz=160,slow=8.7,SNR=12						
MKAR	**Makanchi Array**	**47.20**	**346**	P	**P**	**20 54 53.4**	**0.0**
ZALV	**Zalesovo Beam**	**53.51**	**351**	P	**P**	**20 55 40.9**	**-0.1**
	comp=Z,1.7nm,0.4s,mb4.3,baz=180,slow=7.1,SNR=13						
BVAR	**Borovoye Array**	**56.20**	**341**	P	**P**	**20 56 00.1**	**-0.4**
	comp=Z,0.9nm,0.7s,mb3.9,baz=128,slow=9.3,SNR=6.7						

IDC ***02*** *21:16:07.8±1.3, 31°.78N×104°.83E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.4/25, mbtmp3.5/5, ML3.7/1, Error ellipse: s-maj=74.4km s-min=21.8km az=56.0*
ISCJB ***02*** *21:16:08.5±1.7, 31°.30N±0°.05×104°.0E±0°.1, h5km±14km, mb3.5/4, Error ellipse: s-maj=15.2km s-min=7.7km az=1.2*
BJI ***02*** *21:16:11.3, 31°.29N×104°.02E, h13km, ML3.3/14*
ISC 02 21:16:10.3±1.1, 31°.23N±0°.05×103°.97E±0°.07, h13km±10km, n9, σ1§12/16, mb3.5/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.37**	**210**	Pg	**Pg**	**21 16 17.4**	**-0.3**
CD2				Sg	**Sg**	**21 16 23.9**	**+1.2**
CD2				smax			
	comp=N,5μm,0.7s						
CD2				smax			
	comp=E,5μm,0.7s						
LZH	**Lanzhou**	**4.85**	**359**	*e*Pg	**Pb**	**21 17 32.7**	**-2.3**
LZH				Sg	**Sb**	**21 18 33.5**	**+0.3**
LZH				smax			
	comp=N,35nm,0.5s						
LZH				smax			
	comp=E,34nm,0.6s						
XAN	**Xi'an**	**5.03**	**55**	Pn	**Pn**	**21 17 24.2**	**-1.2**
XAN				Pg	**Pb**	**21 17 40.2**	**+2.1**
XAN				Sn	**Sn**	**21 18 24.3**	**+0.9**
XAN				Sg	**Sb**	**21 18 44.4**	**+5.9**
XAN				smax			
	comp=N,69nm,0.8s						
XAN				smax			
	comp=E,28nm,0.8s						
GYA	**Guiyang**	**5.31**	**153**	Pn	**Pn**	**21 17 34.9**	**+5.6**
GYA				Sn	**Sn**	**21 18 37.3**	**+7.0**
GYA				Sg	**Sg**	**21 18 59.6**	**-1.1**
GYA				smax			
	comp=N,30nm,0.8s						
GYA				smax			
	comp=E,40nm,0.7s						
CMAR	**Chiang Mai Arr**	**13.51**	**201**	Pn	**Pn**	**21 19 31.1**	**+9.4**
	comp=E,0.1nm,0.3s,baz=10,slow=9.1,SNR=7.2						
MKAR	**Makanchi Array**	**22.81**	**319**	P	**P**	**21 21 13.5**	**+0.8**
	comp=E,0.1nm,0.4s,mb2.6,baz=117,slow=10,SNR=4.3						
KURK	**Kurchatov**	**27.08**	**323**	P	**P**	**21 21 51.5**	**-1.0**
	comp=E,0.4nm,0.8s,mb3.0,baz=125,slow=9.3,SNR=4.6						
WRA	**Warramunga Arr**	**58.64**	**146**	P	**P**	**21 26 07.6**	**+0.3**
	comp=E,2.5nm,0.5s,mb4.5,baz=339,slow=7.9,SNR=17						
ASAR	**Alice Springs**	**61.66**	**149**	P	**P**	**21 26 27.9**	**0.0**
	comp=E,0.3nm,0.4s,mb3.7,baz=334,slow=7.2,SNR=4.6						

IDC 02 21:23:39.1±1.7, 2°.77N×128°.68E, h0km, mb3.5/7, mb1 3.7/7, mb1mx3.5/21, mbtmp3.6/7, Error ellipse: s-maj=201.2km s-min=17.1km az=70.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.24**	**166**	P	P	21 28 48.1	-0.1
	0.9nm,0.5s,baz=345,slow=11,SNR=14						
ASAR	**Alice Springs**	**26.76**	**169**	P	P	21 29 20.4	-0.3
	0.3nm,0.6s,baz=357,slow=8.2,SNR=6.7						
STKA	**Stephens Creek**	**36.57**	**161**	P	P	21 30 47.4	+0.6
	0.5nm,0.3s,baz=344,slow=7.4,SNR=3.6						
SONM	**Songino Array**	**48.84**	**340**	P	P	21 32 26.6	+0.4
	0.2nm,0.6s,baz=151,slow=6.3,SNR=2.3						
MKAR	**Makanchi Array**	**59.46**	**325**	P	P	21 33 44.9	+1.1
	0.5nm,0.7s,baz=114,slow=8.2,SNR=8.2						
ZALV	**Zalesovo Beam**	**62.33**	**332**	P	P	21 34 01.9	-1.3
	0.4nm,0.4s,baz=104,slow=6.1,SNR=2.5						
KURK	**Kurchatov**	**63.60**	**327**	P	P	21 34 11.2	-0.4
	0.7nm,0.7s,baz=122,slow=6.1,SNR=6.8						

NEIC ***02*** *21:50:13.4, 35°.08N×26°.70E, h27km, MD3.6(ATH), After ATH.*
CSEM ***02*** *21:50:13.4, 35°.08N×26°.70E, h27km, MD3.6, After ATH*
ATH 02 21:50:13.5, 35°.08N×26°.70E, h26km±1km, MD3.6/10, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.40**	**275**	*e*Pb	Pb	21 50 21.9	-0.2
ZKR				*e*Sb	Sb	21 50 29.3	+1.4
ZKR	**Zakros**	**0.40**	**275**	*e*PB	Pb	21 50 21.9	-0.2
ZKR				*e*SB	Sb	21 50 29.2	+1.3
ZKR	**Zakros**	**0.40**	**275**	*e*Pb	Pb	21 50 21.9	-0.2
ZKR				*e*Sb	Sb	21 50 29.3	+1.4
KARP	**Karpathos**	**0.60**	**39**	*e*Pn	Pn	21 50 25.5	-0.8
KARP				*e*Sn	Sn	21 50 34.7	-0.5
KARP	**Karpathos**	**0.60**	**39**	*e*PN	Pn	21 50 25.5	-0.8
KARP				*e*SN	Sn	21 50 34.7	-0.5
KARP	**Karpathos**	**0.60**	**39**	*e*Pn	Pn	21 50 25.5	-0.8
KARP				*e*Sn	Sn	21 50 34.7	-0.5
NPS	**Neapolis**	**0.91**	**282**	*e*Pn	Pn	21 50 31.0	+0.4
NPS				*e*Sn	Sn	21 50 43.0	+0.2
NPS	**Neapolis**	**0.91**	**282**	*e*PN	Pn	21 50 31.0	+0.4
NPS				*e*SN	Sn	21 50 43.0	+0.2
NPS	**Neapolis**	**0.91**	**282**	*e*Pn	Pn	21 50 31.0	+0.4
NPS				*e*Sn	Sn	21 50 43.0	+0.2
LAST	**Lasithi**	**1.00**	**275**	*e*Pn	Pn	21 50 32.3	+0.4
LAST				*e*Sn	Sn	21 50 47.0	+1.8
LAST	**Lasithi**	**1.00**	**275**	*e*PN	Pn	21 50 32.3	+0.4
LAST				*e*SN	Sn	21 50 47.0	+1.8
LAST	**Lasithi**	**1.00**	**275**	*e*Pn	Pn	21 50 32.3	+0.4
LAST				*e*Sn	Sn	21 50 47.0	+1.8
SIVA	**Sivas**	**1.55**	**268**	*e*Pn	Pn	21 50 41.6	+2.2
SIVA	**Sivas**	**1.55**	**268**	*e*PN	Pn	21 50 41.6	+2.2
SIVA	**Sivas**	**1.55**	**268**	*e*Pn	Pn	21 50 41.6	+2.2
ARG	**Arkhangelos**	**1.62**	**45**	*e*Pn	Pn	21 50 42.5	+2.1
ARG	**Arkhangelos**	**1.62**	**45**	*e*PN	Pn	21 50 42.5	+2.1
ARG	**Arkhangelos**	**1.62**	**45**	*e*Pn	Pn	21 50 42.5	+2.1
VAM	**Vamos**	**2.07**	**280**	*e*Pb	Pb	21 50 49.2	-1.2
VAM	**Vamos**	**2.07**	**280**	*e*PB	Pb	21 50 49.2	-1.2
VAM	**Vamos**	**2.07**	**280**	*e*Pb	Pb	21 50 49.2	-1.2
KARN	**Karanos**	**2.30**	**279**	*e*PN	Pn	21 50 52.2	+2.5
KARN	**Karanos**	**2.30**	**279**	*e*Pn	Pn	21 50 52.2	+2.5
KYTH	**Kithira**	**3.21**	**293**	*e*Pn	Pn	21 51 03.8	+1.5
KYTH	**Kithira**	**3.21**	**293**	*e*PN	Pn	21 51 03.8	+1.5
KYTH	**Kithira**	**3.21**	**293**	*e*Pn	Pn	21 51 03.8	+1.5
VLI	**Veliai**	**3.46**	**299**	*e*Pn	Pn	21 51 06.2	+0.5
VLI	**Veliai**	**3.46**	**299**	*e*PN	Pn	21 51 07.8	+2.1
VLI	**Veliai**	**3.46**	**299**	*e*Pn	Pn	21 51 06.2	+0.5
ITM	**Ithomi**	**4.39**	**300**	*e*Pn	Pn	21 51 21.7	+3.2
ITM	**Ithomi**	**4.39**	**300**	*e*PN	Pn	21 51 21.7	+3.2
ITM	**Ithomi**	**4.39**	**300**	*e*Pn	Pn	21 51 21.7	+3.2

ISCJB ***02*** *22:01:14.8±0.4, 32°.27N±0°.04×105°.30E±0°.05, h10km, mb3.9/16, Error ellipse: s-maj=6.2km s-min=5.2km az=28.1*
IDC ***02*** *22:01:16.1±0.8, 32°.37N×105°.19E, h0km, mb3.8/10, mb1 3.9/13, mb1mx3.8/27, mbtmp3.8/13, ML3.5/3, Error ellipse: s-maj=31.4km s-min=16.2km az=54.0*
NEIC ***02*** *22:01:17.6±0.5, 32°.38N×105°.18E, h10km, mb3.9/8, Error ellipse: s-maj=12.6km s-min=7.6km az=80.0*
BJI ***02*** *22:01:18.5, 32°.33N×105°.22E, h14km, mB4.4/1, mb4.0/2, ML4.0/15, Ms3.8/6, Ms7 3.5/5*
ISC 02 22:01:17.0±0.4, 32°.31N±0°.04×105°.26E±0°.04, h10km, n31, σ1§02/40, mb3.9/16, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.90**	**223**	Pg	**Pg**	**22 01 52.2**	**-1.1**
CD2				Sg	**Sg**	**22 02 16.6**	**-1.3**
CD2				smax			
	comp=N,6μm,0.6s						
CD2				smax			
	comp=E,2μm,0.6s						
XAN	**Xi'an**	**3.52**	**60**	Pn	**Pn**	**22 02 14.8**	**+3.1**
XAN				Pg	**Pg**	**22 02 23.1**	**-1.4**
XAN				Sn	**Sn**	**22 02 58.3**	**+4.9**
XAN				Sg	**Sg**	**22 03 08.6**	**-1.5**
XAN				smax			
	comp=N,440nm,0.6s						
XAN				smax			
	comp=E,180nm,0.6s						
XAN				LR	LR		
	comp=N,290nm,5.1s						
XAN				LR	LR		
	comp=E,100nm,8.4s						
XAN				LR	LR		
	comp=Z,100nm,9.3s						
LZH	**Lanzhou**	**3.95**	**343**	Pn	**Pn**	**22 02 20.5**	**+2.9**
LZH				Pg	**Pg**	**22 02 28.5**	**-4.1**
LZH				Sn	**Sn**	**22 03 08.8**	**+4.9**
LZH				Sg	**Sg**	**22 03 18.0**	**-5.7**
LZH				smax			
	comp=N,520nm,0.7s						
LZH				smax			
	comp=E,1μm,0.8s						
LZH				LR	LR		
	comp=E,1μm,7.5s						
LZH				LR	LR		
	comp=Z,1μm,9.7s						
GYA	**Guiyang**	**5.96**	**168**	Pn	**Pn**	**22 02 50.5**	**+5.2**
GYA				Sn	**Sn**	**22 03 53.6**	**0.0**
GYA				smax			
	comp=N,130nm,0.8s						
GYA				smax			
	comp=E,110nm,0.8s						
WHN	**Wuhan**	**7.96**	**100**	*e*P	**Pn**	**22 03 05.3**	**-7.5**
WHN				S	**Sn**	**22 04 42.3**	**-0.6**
WHN				LR	LR		
	comp=N,880nm,5.4s						
WHN				LR	LR		
	comp=E,530nm,4.8s						
WHN				LR	LR		
	comp=Z,310nm,14.0s						
CMAR	**Chiang Mai Arr**	**14.92**	**204**	Pn	**Pn**	**22 04 50.0**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=8.9,slow=6.4,SNR=3.8						
SONM	**Songino Array**	**15.53**	**3**	Pn	**Pn**	**22 04 57.0**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=186,slow=14,SNR=11						
ULN	**Ulaanbaatar**	**15.60**	**4**	*e*Pn	**Pn**	**22 04 56.8**	**0.0**
	comp=Z,2.3nm,0.9s						
KSRS	**Korea Array**	**19.27**	**68**	P	**Pn**	**22 05 43.4**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=252,slow=10,SNR=9.3						
MK31	**Makanchi Array**	**22.76**	**316**	*e*P	**P**	**22 06 18.8**	**-0.4**
MK31				*e*PcP	PcP	22 10 10.6	-0.3
MKAR	**Makanchi Array**	**22.76**	**316**	P	**P**	**22 06 19.9**	**+0.7**
	comp=Z,2.0nm,0.7s,mb3.6,baz=119,slow=11,SNR=22						
TKM2	**Tokmak 2**	**25.65**	**303**	*e*P	**P**	**22 06 47.2**	**+0.4**
	comp=Z,2.7nm,0.8s,mb3.8						
ZAA0	**Zalesovo Array**	**26.09**	**332**	*e*P	**P**	**22 06 51.0**	**+0.3**
ZALV	**Zalesovo Beam**	**26.09**	**332**	P	**P**	**22 06 50.9**	**+0.2**
	comp=Z,1.5nm,0.6s,mb3.7,baz=140,slow=11,SNR=5.8						
EKS2	**Erkin-Say**	**26.90**	**302**	P	**P**	**22 06 58.0**	**-0.1**
KURK	**Kurchatov**	**26.90**	**321**	P	**P**	**22 06 57.9**	**-0.1**
	comp=Z,2.0nm,0.8s,mb3.7,baz=122,slow=10,SNR=7.3						
KURK	**Kurchatov**	**26.90**	**321**	*e*P	**P**	**22 06 56.9**	**-1.1**
	comp=Z,2.2nm,0.8s,mb3.7						
BVAR	**Borovoye Array**	**32.48**	**320**	P	**P**	**22 07 47.6**	**+0.1**
	comp=Z,0.7nm,0.7s,mb3.6,baz=116,slow=8.8,SNR=6.4						
BRVK	**Borovoye**	**32.55**	**320**	*e*P	**P**	**22 07 47.6**	**-0.5**
	comp=Z,0.8nm,0.5s,mb3.9						
ABKAR	**Akbulak array**	**37.63**	**310**	*e*P	**P**	**22 08 32.2**	**+0.3**
	comp=Z,0.6nm,0.5s,mb3.6						
ARU	**Arti**	**40.10**	**321**	*e*P	**P**	**22 08 51.7**	**-0.8**
	comp=Z,2.2nm,0.9s,mb3.9						
KIV	**Kislovodsk**	**49.49**	**303**	*e*P	**P**	**22 10 06.1**	**-1.4**
	comp=Z,3.3nm,0.6s,mb4.5						
BR131	**Keskin Array S**	**57.01**	**299**	*e*P	**P**	**22 11 03.1**	**+0.2**
BRTR	**Keskin Array B**	**57.01**	**299**	P	**P**	**22 11 03.8**	**+0.9**
	comp=Z,0.4nm,0.5s,mb3.7,baz=98,slow=5.4,SNR=3.0						
FINES	**FINESS Array B**	**57.12**	**326**	P	**P**	**22 11 03.2**	**-0.1**
	comp=Z,1.6nm,0.7s,mb4.2,baz=96,slow=6.9,SNR=7.0						
WRA	**Warramunga Arr**	**58.94**	**148**	P	**P**	**22 11 17.8**	**+1.3**
	comp=Z,1.2nm,0.6s,mb4.1,baz=342,slow=7.5,SNR=7.4						
KWP	**Kalwaria Pacla**	**61.61**	**313**	*e*P	**P**	**22 11 34.5**	**-0.1**
	comp=Z,2.6nm,0.6s,mb4.5						
ASAR	**Alice Springs**	**62.02**	**150**	P	**P**	**22 11 38.9**	**+1.3**
	comp=Z,0.5nm,0.5s,mb3.9,baz=334,slow=6.4,SNR=7.7						
NB2	**NORSAR Subarra**	**64.18**	**327**	P	**P**	**22 11 50.2**	**-1.3**
	comp=Z,0.5nm,0.5s,mb3.8,baz=74,slow=6.5						
NOA	**NORSAR Array B**	**64.18**	**327**	P	**P**	**22 11 49.8**	**-1.7**
	comp=Z,0.2nm,0.4s,mb3.5,baz=71,slow=5.1,SNR=3.5						
YKA	**Yellowknife Ar**	**80.25**	**18**	P	**P**	**22 13 27.8**	**+0.3**
	comp=Z,1.3nm

AAI	**Ambon**	**10.82 261**	P	**Pn**	**22 28 23.6**	**+2.0**
KAKA	**Kakadu**	**12.35 211**	*e*P	**Pn**	**22 28 40.3**	**-2.1**
	31nm,0.5s					
KAKA			*e*S	**Sn**	**22 30 53.4**	**-5.9**
KAKA	**Kakadu**	**12.35 211**	*e*Pn	**Pn**	**22 28 40.7**	**-1.7**
	86nm,0.5s					
KAKA			*e*Sn	**Sn**	**22 30 53.7**	**-5.6**
KAKA	**Kakadu**	**12.35 211**	P	**Pn**	**22 28 41.3**	**-1.1**
COEN	**Coen**	**12.52 161**	P	**Pn**	**22 28 46.9**	**+2.1**
	93nm,1.7s					
DAV	**Davao City (W)**	**16.12 304**	Pn	**Pn**	**22 29 35.7**	**+2.5**
LUWI	**Luwuk**	**16.17 273**	P	**Pn**	**22 29 33.6**	**-0.3**
	76nm,1.2s					
KNA	**Kununurra**	**16.86 216**	*e*P	**Pn**	**22 29 41.0**	**-1.6**
	31nm,0.5s					
KNA			*e*S	**Sn**	**22 32 39.9**	**-9.3**
KNA	**Kununurra**	**16.86 216**	P	**Pn**	**22 29 42.3**	**-0.2**
MRSI	**Marisa**	**17.16 278**	P	**Pn**	**22 29 47.5**	**+1.1**
	29nm,0.6s					
APSI	**Ampana**	**17.30 274**	P	**Pn**	**22 29 49.0**	**+0.9**
	7µm86nm,1.2s					
WRAB	**Tennant Creek**	**18.29 194**	*e*P	**Pn**	**22 29 58.9**	**-1.3**
WRAB			pmax	pmax		
	comp=Z,46nm,0.7s					
WRAB	**Tennant Creek**	**18.29 194**	*e*P	**Pn**	**22 29 58.9**	**-1.3**
	comp=Z,46nm,0.7s					
WRAB	**Tennant Creek**	**18.29 194**	P	**Pn**	**22 30 00.1**	**-0.1**
	comp=Z,69nm,0.8s					
WRA	**Warramunga Arr**	**18.30 194**	P	**Pn**	**22 29 58.7**	**-1.6**
	comp=Z,3.9nm,0.3s,baz=15,slow=12,SNR=67					
WRA			S	**Sn**	**22 33 15.2**	**-8.8**
	comp=Z,0.5nm,0.3s,baz=11,slow=22,SNR=5.4					
WRA			LR	LR	22 37 28.0	
	comp=Z,394nm,21.3s,baz=20,slow=38					
WRA	**Warramunga Arr**	**18.30 194**	P	**Pn**	**22 29 58.7**	**-1.6**
WRA			S	**Sn**	**22 33 15.2**	**-8.8**
TTSI	**Tana Toraja**	**19.10 267**	P	**Pn**	**22 30 10.9**	**+0.7**
PCI	**Palu**	**19.11 273**	P	**Pn**	**22 30 14.3**	**+4.1**
SPSI	**Sidrap Palu**	**19.21 264**	P	**Pn**	**22 30 11.9**	**+0.4**
	comp=Z,1µmcomp=Z,49nm,1.4s					
CTA	**Charters Tower**	**19.27 159**	P	**Pn**	**22 30 13.1**	**+1.0**
	comp=Z,1.2nm,0.3s,baz=338,slow=11,SNR=14					
CTA	**Charters Tower**	**19.27 159**	P	**Pn**	**22 30 13.1**	**+1.0**
CTAO	**Charters Tower**	**19.27 159**	*e*P	**Pn**	**22 30 13.5**	**+1.4**
CTAO			pmax	pmax		
	comp=Z,13nm,0.7s					
CTAO	**Charters Tower**	**19.27 159**	*e*P	**Pn**	**22 30 13.5**	**+1.4**
	comp=Z,13nm,0.7s					
CTAO	**Charters Tower**	**19.27 159**	P	**Pn**	**22 30 13.5**	**+1.4**
	comp=Z,25nm,0.9s					
KAPI	**Kappang**	**19.34 261**	P	**Pn**	**22 30 10.5**	**-2.5**
	comp=Z,0.2nm,0.3s,baz=142,slow=6.1,SNR=4.1					
FITZ	**Fitzroy Crossi**	**20.56 218**	*e*P	**P**	**22 30 24.7**	**-0.4**
	comp=Z,31nm,0.9s					
FITZ			*e*S	**S**	**22 34 05.1**	**-8.8**
FITZ	**Fitzroy Crossi**	**20.56 218**	P	**P**	**22 30 24.9**	**-0.2**
	comp=Z,18nm,0.8s,baz=70,slow=2.4,SNR=10					
FITZ			S	**S**	**22 34 08.5**	**-5.4**
	comp=Z,5.1nm,0.7s,baz=190,slow=12,SNR=3.8					
FITZ	**Fitzroy Crossi**	**20.56 218**	*e*P	**P**	**22 30 25.1**	**0.0**
	comp=Z,18nm,0.9s					
FITZ			*e*S	**S**	**22 34 05.6**	**-8.3**
FITZ	**Fitzroy Crossi**	**20.56 218**	P	**P**	**22 30 25.2**	**+0.1**
	comp=Z,58nm,0.9s					
ASAR	**Alice Springs**	**21.99 192**	P	**P**	**22 30 39.9**	**-0.5**
	comp=Z,50nm,0.9s,mb5.0,baz=24,slow=9.8,SNR=196					
ASAR			S	**S**	**22 34 43.1**	**+1.2**
	comp=Z,2.1nm,0.7s,baz=18,slow=24,SNR=4.4					
HNR	**Honiara**	**22.15 110**	P	**P**	**22 30 41.2**	**-1.0**
	comp=Z,34nm,0.5s,mb5.1,baz=201,slow=14,SNR=3.2					
HNR	**Honiara**	**22.15 110**	*e*P	**P**	**22 30 41.5**	**-0.7**
HNR			pmax	pmax		
	comp=Z,77nm,0.9s,mb5.1					
HNR	**Honiara**	**22.15 110**	*e*P	**P**	**22 30 41.5**	**-0.7**
	comp=Z,78nm,0.9s,mb5.1					
TGY	**Tagaytay City**	**24.01 313**	P	**P**	**22 31 00.8**	**-0.2**
	comp=Z,72nm,0.3s,mb5.6,baz=244,slow=12,SNR=6.6					
KHKI	**Kahang-Kahang**	**24.02 254**	P	**P**	**22 31 00.0**	**-1.2**
	comp=Z,98nm,1.3s,mb5.1					
KKM	**Kota Kinabalu**	**24.07 290**	*e*P	**P**	**22 31 01.1**	**-0.6**
	comp=Z,29nm,0.8s,mb4.8					
EIDS	**Eidsvold**	**25.95 154**	*e*P	**P**	**22 31 19.8**	**+1.2**
	comp=Z,68nm,1.0s,mb5.1					
RMQ	**Roma**	**26.03 160**	*e*P	**P**	**22 31 20.4**	**+1.0**
	comp=Z,53nm,0.9s,mb5.1					
MBWA	**Marble Bar**	**26.62 223**	*e*P	**P**	**22 31 24.4**	**-0.4**
MBWA	**Marble Bar**	**26.62 223**	*e*P	**P**	**22 31 24.3**	**-0.4**
	comp=Z,45nm,1.0s,mb5.0					
MBWA	**Marble Bar**	**26.62 223**	P	**P**	**22 31 24.7**	**-0.1**
	comp=Z,53nm,1.1s,mb5.0					
SBUM	**Sibu**	**27.07 279**	P	**P**	**22 31 30.1**	**+1.2**
	comp=Z,11nm,1.3s,mb4.2					
KSM	**Kuching**	**28.82 277**	*e*P	**P**	**22 31 43.1**	**-1.5**
CBIJ	**Chichi jima**	**29.19 6**	LR	LR	22 42 00.8	
	comp=Z,88nm,18.9s,MS3.4,baz=85,slow=33					
STKA	**Stephens Creek**	**29.74 175**	*e*P	**P**	**22 31 52.1**	**-0.3**
	comp=Z,5.6nm,0.5s,mb4.5					
STKA	**Stephens Creek**	**29.74 175**	P	**P**	**22 31 52.2**	**-0.2**
	comp=Z,7.2nm,0.6s,mb4.6,baz=342,slow=8.2,SNR=28					
STKA			LR	LR	22 45 08.0	
	comp=Z,370nm,18.5s,MS4.0,baz=8.9,slow=39					
STKA	**Stephens Creek**	**29.74 175**	*e*P	**P**	**22 31 52.5**	**+0.1**
STKA			pmax	pmax		
	comp=Z,25nm,2.3s					
STKA	**Stephens Creek**	**29.74 175**	*e*P	**P**	**22 31 52.5**	**+0.1**
	comp=Z,26nm,2.3s,mb4.5					
FORT	**Forrest**	**30.33 199**	*e*P	**P**	**22 31 58.2**	**+0.5**
	comp=Z,46nm,0.6s,mb5.4					
FORT	**Forrest**	**30.33 199**	*e*P	**P**	**22 31 58.3**	**+0.6**
	comp=Z,70nm,0.8s,mb5.4					
BBOO	**Buckleboo**	**30.68 185**	*e*P	**P**	**22 32 00.6**	**-0.1**
	comp=Z,24nm,1.1s,mb4.9					
MEEK	**Meekatharra**	**31.23 217**	*e*P	**P**	**22 32 06.1**	**+0.4**
YHNB	**Yeheng**	**31.58 328**	*e*P	**P**	**22 32 08.1**	**-0.7**
CNB	**Canberra Magne**	**34.45 165**	*e*P	**P**	**22 32 34.7**	**+0.9**
MORW	**Morawa**	**34.56 217**	*e*P	**P**	**22 32 34.2**	**-0.6**
ARPS	**Mount Arapiles**	**34.61 176**	*e*P	**P**	**22 32 35.5**	**+0.4**
	comp=Z,104nm,0.9s,mb5.8					
MDSI	**Maura Dua**	**34.76 265**	P	**P**	**22 32 36.9**	**+0.1**
NWAO	**Narrogin (SRO)**	**36.81 211**	*e*P	**P**	**22 32 54.3**	**+0.2**
	comp=Z,150nm,0.9s,mb5.8					
NWAO	**Narrogin (SRO)**	**36.81 211**	*e*P	**P**	**22 32 53.7**	**-0.4**
SDSI	**Sungai Dareh**	**37.49 271**	P	**P**	**22 33 00.1**	**-0.1**
MJAR	**Matsushiro Arr**	**38.44 359**	P	**P**	**22 33 06.7**	**-1.1**
	comp=Z,0.8nm,0.6s,baz=171,slow=8.6,SNR=4.9					
MJAR			PcP	PcP	22 35 20.4	-0.4
	comp=Z,2.1nm,0.8s,baz=163,slow=2.1,SNR=5.5					
MAJO	**Matsushiro**	**38.44 359**	P	**P**	**22 33 08.8**	**+1.0**
PDSI	**Padang**	**38.46 271**	P	**P**	**22 33 10.7**	**+2.4**
PPI	**Padang Panjang**	**38.54 272**	P	**P**	**22 33 09.6**	**+0.6**
KULM	**Kulim**	**38.92 281**	*e*P	**P**	**22 33 10.9**	**-1.3**
WHN	**Wuhan**	**40.02 326**	*e*P	**P**	**22 33 22.0**	**+0.9**
KSRS	**Korea Array**	**40.64 347**	P	**P**	**22 33 25.6**	**-0.5**
	comp=Z,1.6nm,0.8s,baz=152,slow=11,SNR=6.9					
KSRS			PcP	PcP	22 35 27.2	-0.5
	comp=Z,1.9nm,0.9s,baz=162,slow=5.1,SNR=5.2					
KSRS			LR	LR	22 49 21.2	
	comp=Z,68nm,18.4s,MS3.5,baz=150,slow=35					
GYA	**Guiyang**	**42.13 315**	P	**P**	**22 33 40.0**	**+1.4**
GYA			pP	pP	22 33 49.4	+2.8
GYA			sP	sP	22 33 54.3	+4.5
GYA			PP	PP	22 35 21.0	+4.6
GYA			ScP	ScP	22 39 21.9	0.0
GYA			S	**S**	**22 39 57.5**	**+0.6**
GYA			sS	sS	22 40 13.2	+3.1
GYA			SS	SS	22 42 59.0	-6.3
GYA			pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4					
GYA			pmax	pmax		
	comp=Z,110nm,4.9s					
GYA			LR	LR		
	comp=N,580nm,17.8s,MS4.6					
GYA			LR	LR		
	comp=E,540nm,18.2s,MS4.6					
GYA			LR	LR		
	comp=Z,690nm,17.8s,MS4.6					
KMI	**Kunming**	**44.28 310**	P	**P**	**22 33 58.9**	**+3.0**
KMI			pP	pP	22 34 06.5	+2.5
KMI			sP	sP	22 34 10.6	+3.4
KMI			PP	PP	22 35 42.7	+3.2
KMI			S	**S**	**22 40 28.2**	**-0.2**
KMI			sS	sS	22 40 44.6	+2.9
KMI			SS	SS	22 43 38.4	-9.0
KMI			pmax	pmax		
	comp=Z,14nm,1.1s,mb4.6					
KMI			pmax	pmax		
	comp=Z,34nm,3.1s					
KMI			LR	LR		
	comp=N,85nm,17.6s,MS3.9					
KMI			LR	LR		
	comp=E,88nm,13.7s,MS3.9					
KMI			LR	LR		
	comp=Z,100nm,13.8s,MS3.9					
CM31	**Chiang Mai Arr**	**44.31 299**	*e*P	**P**	**22 33 56.5**	**+0.2**
CMAR	**Chiang Mai Arr**	**44.31 299**	P	**P**	**22 33 56.2**	**0.0**
	comp=Z,13nm,0.8s,mb4.7,baz=119,slow=6.5,SNR=106					
CMAR			PcP	PcP	22 35 40.5	+0.2
	comp=Z,3.6nm,0.9s,baz=135,slow=1.8,SNR=12					
CHTO	**Chiang Mai**	**44.45 300**	*e*P	**P**	**22 33 56.3**	**-1.1**
CHTO			pmax	pmax		
	comp=Z,12nm,0.9s,mb4.6					
CHTO	**Chiang Mai**	**44.45 300**	*e*P	**P**	**22 33 56.3**	**-1.1**
	comp=Z,12nm,0.9s,mb4.6					
VLA	**Vladivostok**	**45.45 353**	*d i*P	**P**	**22 34 05.7**	**+0.8**
VLA			pmax	pmax		
	comp=Z,96nm,0.6s,mb5.8					
XAN	**Xi'an**	**45.69 325**	P	**P**	**22 34 06.5**	**-0.5**
XAN			pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2					
XAN			pmax	pmax		
	comp=Z,13nm,5.2s					
BJI	**Beijing**	**46.81 336**	P	**P**	**22 34 15.0**	**-0.7**
BJI			S	**S**	**22 41 05.6**	**+1.1**
BJI			pmax	pmax		
	comp=Z,16nm,1.1s,mb4.9					
BJI			pmax	pmax		
	comp=Z,94nm,3.8s					
BJI			LR	LR		
	comp=N,100nm,14.8s,MS4.1					
BJI			LR	LR		
	comp=E,110nm,13.9s,MS4.1					
BJI			LR	LR		
	comp=Z,72nm,19.8s					
CD2	**Chengdu**	**46.87 317**	P	**P**	**22 34 16.5**	**+0.2**
CD2			pP	pP	22 34 26.4	+2.0
CD2			sP	sP	22 34 30.3	+2.7
CD2			PP	PP	22 36 06.5	-0.3
CD2			S	**S**	**22 41 04.2**	**-1.4**
CD2			sS	sS	22 41 20.8	+1.9
CD2			SS	SS	22 44 23.0	-10
CD2			pmax	pmax		
	comp=Z,50nm,0.8s,mb5.5					
CD2			pmax	pmax		
	comp=Z,80nm,5.4s					
CD2			LR	LR		
	comp=N,170nm,8.3s					
CD2			LR	LR		
	comp=Z,120nm,7.7s					
CN2	**Changchun**	**47.26 347**	*e*P	**P**	**22 34 22.0**	**+2.9**
CN2			*es*P	sP	22 34 35.0	+4.6
CN2			*e*S	**S**	**22 41 12.9**	**+2.2**
CN2			pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9					
CN2			pmax	pmax		
	comp=Z,200nm,3.0s					
CN2			LR	LR		
	comp=N,200nm,15.0s,MS4.4					
CN2			LR	LR		
	comp=E,200nm,15.0s,MS4.4					
CN2			LR	LR		
	comp=Z,400nm,16.0s,MS4.5					
YSS	**Yuzh-Sakhalins**	**48.95 3⇑**	*e*P	**P**	**22 34 30.8**	**-1.4**
YSS			pmax	pmax		
	comp=Z,90nm,1.0s,mb5.8					
HHC	**Hu-ho-hao-te**	**49.48 333**	*e*P	**P**	**22 34 36.8**	**+0.5**
HHC			sP	sP	22 34 50.7	+3.1
HHC			PcP	PcP	22 35 58.2	0.0
HHC			PP	PP	22 36 32.0	+1.2
HHC			ScP	ScP	22 39 50.1	-1.9
HHC			PcS	PcS	22 39 53.8	-0.9
HHC			S	**S**	**22 41 41.6**	**-0.6**
HHC			sS	sS	22 41 57.5	+1.9
HHC			ScS	ScS	22 44 23.3	-3.2
HHC			SS	SS	22 45 10.7	-3.8
HHC			pmax	pmax		
	comp=Z,12nm,0.6s,mb5.1					
HHC			pmax	pmax		
	comp=Z,68nm,6.6s					
HHC			LR	LR		
	comp=N,250nm,16.9s,MS4.4					
HHC			LR	LR		
	comp=E,250nm,16.3s,MS4.4					
HHC			LR	LR		
	comp=Z,280nm,16.4s,MS4.3					
LZH	**Lanzhou**	**50.11 323**	*e*P	**P**	**22 34 42.4**	**+1.1**
LZH			pP	pP	22 34 51.3	+1.9
LZH			sP	sP	22 34 55.9	+3.3
LZH			PcP	PcP	22 36 03.9	+3.3
LZH			PP	PP	22 36 40.0	+3.3
LZH			*e*S	**S**	**22 41 53.5**	**+2.2**
LZH			sS	sS	22 42 09.3	+4.6
LZH			SS	SS	22 45 26.4	+1.5
LZH			pmax	pmax		
	comp=Z,21nm,1.1s,mb5.1					
LZH			pmax	pmax		
	comp=Z,94nm,4.5s					
LZH			LR	LR		
	comp=N,540nm,14.5s					
LZH			LR	LR		
	comp=Z,650nm,15.6s,MS4.7					
HABR	**Khabarovsk**	**50.47 357**	*e*P	**P**	**22 34 41.9**	**-1.8**
HABR			*PP	pP	22 34 51.8	0.0
HABR			*e*S	**S**	**22 41 54.2**	**-1.6**
HABR			*SS	sS	22 42 11.2	+2.0
HABR			*e*		22 44 29.8	
HABR			*e*SS	SS	22 45 29.4	-0.7
HABR			SSS		22 46 59.2	
HABR			pmax	pmax		
	comp=E,16nm,1.0s					
HABR			pmax	pmax		
	comp=Z,26nm,1.0s,mb5.2					
HABR			pmax	pmax		
	comp=N,17nm,0.9s					
HABR			MLR	MLR		
	comp=Z,101nm,19.0s,MS3.9					
KLR	**Kul'dur**	**51.49 354**	*e*P	**P**	**22 34 47.0**	**-4.4**
SHL	**Shillong**	**53.15 304**	*e*PKP	**P**	**22 35 07.5**	**+3.3**
GTA	**Gaotai**	**54.70 323**	*e*P	**P**	**22 35 15.5**	**+0.3**
GTA			pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8					
LSA	**Lhasa**	**55.49 309**	P	**P**	**22 35 22.2**	**+1.1**
ULN	**Ulaanbaatar**	**56.99 335**	*e*P	**P**	**22 35 32.2**	**+0.7**
PETK	**Petropavlovsk-**	**57.21 13**	P	**P**	**22 35 33.0**	**0.0**
	comp=Z,4.6nm,0.9s,mb4.5,baz=172,slow=4.0,SNR=5.2					
PETK			LR	LR	23 02 48.6	
	comp=Z,45nm,18.0s,MS3.6,baz=104,slow=39					
PETK	**Petropavlovsk-**	**57.21 13**	P	**P**	**22 35 33.0**	**0.0**
PETK			LR	LR	23 02 48.6	
SONM	**Songino Array**	**57.25 334**	P	**P**	**22 35 33.3**	**-0.1**
	comp=Z,2.9nm,0.6s,mb4.5,baz=153,slow=7.7,SNR=28					
TAPN	**Taplejung**	**57.29 305**	*e*P	**P**	**22 35 33.0**	**-1.0**
	comp=Z,58nm,1.1s,mb5.5					
ODAN	**Odare**	**57.37 304**	*e*P	**P**	**22 35 33.5**	**-1.1**
	comp=Z,67nm,1.1s,mb5.6					
RAMN	**Ramite**	**58.06 304**	*e*P	**P**	**22 35 38.1**	**-1.4**
	comp=Z,82nm,1.2s,mb5.6					
JIRN	**Jiri**	**58.66 304**	*e*P	**P**	**22 35 42.7**	**-0.9**
	comp=Z,24nm,0.7s,mb5.3					
PALK	**Pallekele**	**58.82 280**	P	**P**	**22 35 45.6**	**+0.6**
GUN	**Gumba**	**59.01 304**	*e*P	**P**	**22 35 45.3**	**-0.7**
	comp=Z,42nm,0.7s,mb5.6					
PKI	**Pulchoki**	**59.27 304**	*e*P	**P**	**22 35 47.0**	**-0.9**
	comp=Z,47nm,1.2s,mb5.4					
PKIN	**Phulchoki**	**59.29 304**	*e*P	**P**	**22 35 47.2**	**-0.8**
	comp=Z,15nm,0.7s,mb5.2					
KKN	**Kakani**	**59.46 304**	*e*P	**P**	**22 35 48.2**	**-1.0**
	comp=Z,52nm,0.8s,mb5.6					
DMN	**Daman**	**59.54 304**	*e*P	**P**	**22 35 49.0**	**-0.7**
	comp=Z,62nm,1.0s,mb5.6					
GKN	**Gorkha**	**60.07 304**	*e*P	**P**	**22 35 52.4**	**-0.9**
	comp=Z,69nm,0.7s,mb5.8					
TLY	**Talaya**	**61.34 336**	*e*P	**P**	**22 36 01.2**	**-0.3**
TLY			pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.9					
TLY			MLR	MLR		
	comp=Z,49nm,17.0s,MS3.7					
HYB	**Hyderabad**	**62.55 291**	*e*P	**P**	**22 36 10.0**	**-0.3**
HYB	**Hyderabad**	**62.55 291**	*i* P	**P**	**22 36 10.0**	**-0.3**
YAK	**Yakutsk**	**64.33 355**	*e*P	**P**	**22 36 20.2**	**-1.1**
YAK			pmax	pmax		
	comp=Z,28nm,0.9s,mb5.3					
YAK			pmax	pmax		
	comp=E,2.0nm,0.8s					
YAK			pmax	pmax		
	comp=N,9.0nm,1.0s					
YAK	**Yakutsk**	**64.33 355**	*e*P	**P**	**22 36 20.6**	**-0.6**
WMQ	**Urumqi**	**64.66 321**	P	**P**	**22 36 24.3**	**+0.6**
WMQ			pP	pP	22 36 34.4	+2.3
WMQ			sP	sP	22 36 38.4	+3.2
WMQ			PcP	PcP	22 36 58.0	+0.6
WMQ			PP	PP	22 38 48.4	+2.2
WMQ			pmax	pmax		
	comp=Z,23nm,0.7s,mb5.3					
WMQ			pmax	pmax		
	comp=Z,140nm,5.4s					
WMQ			LR	LR		
	comp=N,42nm,17.0s					
WMQ			LR	LR		
	comp=Z,33nm,16.0s,MS3.6					
CASY	**Casey**	**67.12 192**	*e*P	**P**	**22 36 38.0**	**-1.2**
	comp=Z,5.1nm,0.9s,mb4.5					
MK31	**Makanchi Array**	**69.43 322**	*ce*P	**P**	**22 36 54.2**	**+0.2**
MK31			pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9					
MK31	**Makanchi Array**	**69.43 322**	*e*P	**P**	**22 36 53.7**	**-0.3**
MKAR	**Makanchi Array**	**69.43 322**	P	**P**	**22 36 54.1**	**+0.1**
	comp=Z,8.9nm,0.8s,mb4.8,baz=114,slow=7.3,SNR=103					
KSH	**Kashi**	**70.81 313**	P	**P**	**22 37 04.6**	**+1.9**
KSH			pP	pP	22 37 14.4	+3.3
KSH			sP	sP	22 37 18.4	+4.2
KSH			PcP	PcP	22 37 24.3	+1.0
KSH			PP	PP	22 39 43.3	+3.5
KSH			S	S	22 46 15.7	-0.5
KSH			sS	sS	22 46 32.5	+2.5
KSH			SKS		22 46 59.0	
KSH			ScS	ScS	22 47 01.2	-3.7
KSH			SS	SS	22 50 49.3	+0.3
KSH			pmax	pmax		
	comp=Z,16nm,1.1s,mb4.9					
KSH			pmax	pmax		
	comp=Z,100nm,5.6s					
KSH			LR	LR		
	comp=N,57nm,5.6s					
KSH			LR	LR		
	comp=E,73nm,5.5s					
KSH			LR	LR		
	comp=Z,96nm,5.5s					
ZAA0	**Zalesovo Array**	**71.51 330**	*e*P	**P**	**22 37 05.4**	**-1.2**
ZALV	**Zalesovo Beam**	**71.51 330**	P	**P**	**22 37 05.5**	**-1.1**
	comp=Z,4.0nm,0.8s,mb4.4,baz=112,slow=6.6,SNR=13					
ZALV	**Zalesovo Beam**	**71.51 330**	P	**P**	**22 37 05.5**	**-1.1**
KZA	**Kyzart**	**72.19 316**	P	**P**	**22 37 12.5**	**+1.6**
	SNR=14					
TKM2	**Tokmak 2**	**72.24 316**	P	**P**	**22 37 11.8**	**+0.6**
	SNR=15					
TKM2	**Tokmak 2**	**72.24 316**	*e*P	**P**	**22 37 11.3**	**+0.1**
TKM2			pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6					
TKM2	**Tokmak 2**	**72.24 316**	*e*P	**P**	**22 37 11.3**	**+0.1**
	comp=Z,6.8nm,0.8s,mb4.6					
KBK	**Karagaybulak**	**72.60 316**	P	**P**	**22 37 14.3**	**+0.9**
	SNR=5.1					
NVS	**Novosibirsk**	**72.76 330**	*e*P	**P**	**22 37 12.6**	**-1.4**
NVS			pmax	pmax		
	comp=Z,14nm,1.2s,mb4.8					
NVS			pmax	pmax		
	comp=N,4.0nm,1.4s					
NVS			pmax	pmax		
	comp=E,14nm,1.5s					
CHMS	**Chumysh**	**72.85 316**	P	**P**	**22 37 15.3**	**+0.5**
	SNR=5.9					
AAK	**Ala-Archa**	**72.90 316**	P	**P**	**22 37 15.7**	**+0.5**
	comp=E,1.4nm,0.5s,mb4.2,baz=78,slow=4.3,SNR=5.9					
USP	**Ospenovka**	**73.11 316**	P	**P**	**22 37 16.8**	**+0.4**
	SNR=11					
AML	**Almayashu**	**73.30 315**	P	**P**	**22 37 18.9**	**+1.4**
	SNR=20					
AML	**Almayashu**	**73.30 315**	*e*P	**P**	**22 37 18.5**	**+1.0**
AML			pmax	pmax		
	comp=Z,16nm,0.8s,mb5.0					
AML	**Almayashu**	**73.30 315**	*e*P	**P**	**22 37 18.5**	**+0.9**
	comp=Z,16nm,0.8s,mb5.0					
KURK	**Kurchatov**	**73.33 325**	P	**P**	**22 37 17.3**	**-0.2**
	comp=Z,9.0nm,0.9s,mb4.7,baz=114,slow=5.6,SNR=30					
KURK	**Kurchatov**	**73.33 325**	*e*P	**P**	**22 37 16.8**	**-0.7**
KURK			pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8					
KURK	**Kurchatov**	**73.33 325**	*e*P	**P**	**22 37 16.8**	**-0.7**
	comp=Z,12nm,1.0s,mb4.8					
EKS2	**Erkin-Say**	**73.41 316**	P	**P**	**22 37 19.0**	**+0.8**
	SNR=12					
EKS2	**Erkin-Say**	**73.41 316**	*e*P	**P**	**22 37 18.7**	**+0.5**
EKS2			pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8					
EKS2	**Erkin-Say**	**73.41 316**	*e*P	**P**	**22 37 18.7**	**+0.5**
	comp=Z,13nm,1.1s,mb4.8					
KBL	**Kabul**	**74.73 307**	*e*P	**P**	**22 37 25.4**	**-0.6**
KBL			pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8					
KBL	**Kabul**	**74.73 307**	*e*P	**P**	**22 37 25.4**	**-0.7**
	comp=Z,9.8nm,0.9s,mb4.7					
KK31	**Karatay Array**	**75.83 315**	*ce*P	**P**	**22 37 32.1**	**-0.1**
KK31			pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4					
SBA	**Scott Base**	**77.14 174**	*e*P	**P**	**22 37 39.1**	**+0.1**
SBA			pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3					
SBA	**Scott Base**	**77.14 174**	*e*P	**P**	**22 37 39.1**	**+0.2**
	comp=Z,3.8nm,0.9s,mb4.3					
BVAR	**Borovoye Array**	**78.92 325**	P	**P**	**22 37 49.3**	**0.0**
	comp=Z,9.7nm,0.6s,mb4.9,baz=114,slow=7.9,SNR=77					
BRVK	**Borovoye**	**79.00 325**	*d i*P	**P**	**22 37 48.9**	**-0.8**
BRVK			pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0					
BRVK	**Borovoye**	**79.00 325**	*e*P	**P**	**22 37 49.5**	**-0.2**
	comp=Z,30nm,1.3s,mb5.1					
MAW	**Mawson**	**82.77 202**	P	**P**	**22 38 09.1**	**-0.5**
	comp=Z,4.0nm,0.8s,mb4.5,baz=55,slow=5.5,SNR=7.9					
MAW			LR	LR	23 11 38.7	
	comp=Z,71nm,19.9s,MS4.0,baz=319,slow=33					
MAW	**Mawson**	**82.77 202**	P	**P**	**22 38 08.2**	**-1.4**
MCK	**McKinley**	**84.04 25**	P	**P**	**22 38 16.9**	**+0.8**
AB31	**Akbulak array**	**84.38 320**	*ce*P	**P**	**22 38 17.9**	**-0.3**
AB31			pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.5					
ABKAR	**Akbulak array**	**84.38 320**	*e*P	**P**	**22 38 17.3**	**-0.9**
	comp=Z,15nm,1.2s,mb5.0					
**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.46**	**161**	P	P	22 48 56.3	+0.3
	2.3nm,0.6s,baz=340,slow=11,SNR=6.5						
ASAR	**Alice Springs**	**25.86**	**165**	P	P	22 49 28.6	+0.1
	0.5nm,0.4s,baz=343,slow=10,SNR=10						
STKA	**Stephens Creek**	**35.95**	**158**	P	P	22 50 57.2	-0.3
	1.3nm,0.7s,baz=323,slow=10,SNR=2.3						
KURK	**Kurchatov**	**63.73**	**328**	P	P	22 54 28.6	0.0
	0.5nm,0.5s,baz=130,slow=5.9,SNR=4.3						

*IDC **02** 22:44:40.9±0.9, 1°.03S×127°.55E, h0km, mb4.0/7, mb1 4.1/9, mb1mx3.9/21, mbtmp4.0/9, ML4.0/2, Error ellipse: s-maj=50.5km s-min=16.8km az=70.0*
*ISCJB **02** 22:44:44.1±0.6, 1°.10S±0°.07×127°.5E±0°.1, h33km, mb4.0/12, Error ellipse: s-maj=19.5km s-min=8.8km az=167.1*
*NEIC **02** 22:44:46.2±0.4, 1°.09S×127°.49E, h35km, mb4.2/7, Error ellipse: s-maj=12.5km s-min=5.5km az=77.0*
ISC 02 22:44:46.1±0.6,**1°.12S**±0°.07×**127°.5E**±0°.1,**h35**km,**n25,** σ0§**74**/**25**,**mb4.0**/12,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**8.68**	**243**	Pn	**Pn**	**22 46 49.0**	**-0.3**
	1.4nm,0.3s,baz=65,slow=15,SNR=2.9						
KAPI	**Kappang**	**8.68**	**243**	*e*Pn	**Pn**	**22 46 49.0**	**-0.4**
FITZ	**Fitzroy Crossi**	**16.98**	**186**	P	**Pn**	**22 48 41.3**	**+0.2**
WRA	**Warramunga Arr**	**19.86**	**161**	P	**Pn**	**22 49 13.9**	**-2.1**
	0.5nm,0.3s,baz=344,slow=12,SNR=7.6						
MBWA	**Marble Bar**	**21.33**	**200**	*e*P	**P**	**22 49 31.1**	**+0.9**
ASAR	**Alice Springs**	**23.25**	**165**	P	**P**	**22 49 50.8**	**+0.1**
	2.8nm,0.8s,mb3.8,baz=346,slow=11,SNR=15						
STKA	**Stephens Creek**	**33.35**	**158**	P	**P**	**22 51 22.4**	**+1.3**
	1.8nm,0.7s,mb4.1,baz=337,slow=13,SNR=4.2						
STKA	**Stephens Creek**	**33.35**	**158**	*e*P	**P**	**22 51 22.4**	**+1.4**
	1.2nm,1.0s,mb3.8						
LSA	**Lhasa**	**46.31**	**314**	P	**P**	**22 53 10.1**	**+1.4**
PALK	**Pallekele**	**47.46**	**281**	P	**P**	**22 53 16.9**	**-1.1**
ULN	**Ulaanbaatar**	**51.95**	**343**	*e*P	**P**	**22 53 51.3**	**-0.2**
	1.2nm,0.6s,mb4.0						
SONM	**Songino Array**	**52.12**	**342**	P	**P**	**22 53 53.2**	**+0.3**
	1.0nm,0.6s,mb3.9,baz=154,slow=8.5,SNR=9.2						
MK31	**Makanchi Array**	**61.99**	**326**	*e*P	**P**	**22 55 03.1**	**+0.3**
MKAR	**Makanchi Array**	**61.99**	**326**	P	**P**	**22 55 03.1**	**+0.4**
	1.2nm,0.4s,mb4.4,baz=117,slow=8.1,SNR=24						
TKM2	**Tokmak 2**	**63.92**	**320**	*e*P	**P**	**22 55 15.9**	**+0.3**
	1.2nm,0.6s,mb4.1						
EKS2	**Erkin-Say**	**64.98**	**319**	*e*P	**P**	**22 55 23.1**	**+0.5**
	1.6nm,0.7s,mb4.2						
KBL	**Kabul**	**65.14**	**309**	P	**P**	**22 55 23.6**	**-0.2**
ZALV	**Zalesovo Beam**	**65.25**	**334**	P	**P**	**22 55 23.4**	**-0.7**
	0.5nm,0.5s,mb3.8,baz=153,slow=10.0,SNR=3.9						
CASY	**Casey**	**66.14**	**187**	*e*P	**P**	**22 55 29.6**	**-0.1**
	1.9nm,0.6s,mb4.3						
KURK	**Kurchatov**	**66.25**	**328**	P	**P**	**22 55 29.4**	**-1.1**
	2.1nm,0.7s,mb4.3,baz=129,slow=6.0,SNR=15						
KURK	**Kurchatov**	**66.25**	**328**	*e*P	**P**	**22 55 29.6**	**-0.9**
	2.2nm,0.6s,mb4.4						
BVAR	**Borovoye Array**	**71.81**	**328**	P	**P**	**22 56 04.8**	**-0.3**
	0.8nm,0.7s,mb3.8,baz=144,slow=8.4,SNR=5.6						
BRVK	**Borovoye**	**71.88**	**328**	*e*P	**P**	**22 56 05.4**	**-0.1**
	1.1nm,0.6s,mb4.0						
ARU	**Arti**	**79.44**	**328**	P	**P**	**22 56 48.4**	**-0.3**
GNI	**Garni**	**85.20**	**310**	P	**P**	**22 57 19.5**	**+0.3**

*IDC **02** 22:54:15.1±1.3, 1°.39S×126°.89E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.6/20, mbtmp3.6/6, ML3.6/1, Error ellipse: s-maj=205.0km s-min=17.9km az=67.0*
*ISCJB **02** 22:54:18.6±1.9, 1°.39S±0°.07×126°.9E±0°.1, h39km±17km, mb3.8/8, Error ellipse: s-maj=22.6km s-min=10.7km az=160.8*
*NEIC **02** 22:54:21.4±1.0, 1°.42S×126°.87E, h49km±9km, mb4.2/3, Error ellipse: s-maj=13.7km s-min=6.4km az=70.0*
ISC 02 22:54:20.9±1.5,**1°.43S**±0°.07×**126°.9E**±0°.1,**h44**km±13km, **n21**, σ0§**83**/**21**,**mb3.8**/**8**,**Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**7.98**	**243**	*e*Pn	**Pn**	**22 56 14.4**	**0.0**
DAV	**Davao City (W)**	**8.55**	**351**	Pn	**Pn**	**22 56 22.8**	**+0.6**
KKM	**Kota Kinabalu**	**13.01**	**305**	Pn	**Pn**	**22 57 22.7**	**-0.5**
FITZ	**Fitzroy Crossi**	**16.61**	**184**	Pn	**Pn**	**22 58 11.6**	**+0.9**
KSM	**Kuching**	**16.85**	**280**	Pn	**Pn**	**22 58 13.7**	**-0.1**
WRA	**Warramunga Arr**	**19.78**	**159**	P	**Pn**	**22 58 47.2**	**-2.1**
	0.2nm,0.3s,baz=342,slow=12,SNR=5.1						
ASAR	**Alice Springs**	**23.12**	**163**	P	**P**	**22 59 23.6**	**+0.4**
	0.9nm,0.6s,mb3.4,baz=344,slow=10,SNR=15						
STKA	**Stephens Creek**	**33.30**	**157**	P	**P**	**23 00 55.1**	**+0.6**
	1.7nm,0.8s,mb4.0,baz=343,slow=14,SNR=2.7						
SONM	**Songino Array**	**52.23**	**343**	P	**P**	**23 03 28.0**	**+0.5**
	0.2nm,0.5s,mb3.3,baz=152,slow=9.9,SNR=4.0						
MK31	**Makanchi Array**	**61.91**	**327**	*e*P	**P**	**23 04 36.1**	**+0.2**
MKAR	**Makanchi Array**	**61.91**	**327**	P	**P**	**23 04 37.6**	**+1.6**
	0.6nm,0.5s,mb4.0,baz=120,slow=8.4,SNR=12						
TKM2	**Tokmak 2**	**63.76**	**320**	*e*P	**P**	**23 04 48.6**	**+0.2**
	0.7nm,0.6s,mb3.9						
UCH	**Uchtor**	**64.12**	**319**	P	**P**	**23 04 51.8**	**+1.0**
KBL	**Kabul**	**64.86**	**309**	P	**P**	**23 04 55.7**	**0.0**
KURK	**Kurchatov**	**66.19**	**329**	*e*P	**P**	**23 05 03.2**	**-0.8**
	1.2nm,0.6s,mb4.1						
BVAR	**Borovoye Array**	**71.74**	**328**	P	**P**	**23 05 37.1**	**-1.3**
	0.3nm,0.5s,mb3.4,baz=134,slow=4.2,SNR=3.2						
BRVK	**Borovoye**	**71.81**	**328**	P	**P**	**23 05 37.5**	**-1.4**
ARU	**Arti**	**79.38**	**328**	P	**P**	**23 06 21.6**	**-0.5**
GNI	**Garni**	**84.93**	**310**	*e*P	**P**	**23 06 51.5**	**-0.1**
	6.8nm,1.0s,mb4.7						
KIV	**Kislovodsk**	**86.82**	**314**	P	**P**	**23 07 00.7**	**-0.1**
LSZ	**Lusaka**	**98.04**	**254**	P	**P**	**23 07 54.1**	**+0.7**

*IDC **02** 22:59:30.2±10.0, 5°.14S×102°.01E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/21, mbtmp3.4/3, Error ellipse: s-maj=519.3km s-min=28.5km az=51.0*
*ISCJB **02** 22:59:32.9±1.4, 5°.05S±0°.1×102°.0E±0°.1, h33km, mb3.5/3, Error ellipse: s-maj=21.6km s-min=14.4km az=144.5*
*DJA **02** 22:59:32, 4°.39S×101°.74E, h53km, MLv3.5/4*
ISC 02 22:59:35.8±1.5,**5°.0S**±0°.1×**102°.1E**±0°.1,**h35**km,**n8,** σ1§**05**/**9**, **mb3.5**/**3**,**Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**1.10**	**55**	P	**Pn**	**22 59 51.2**	**-3.5**
MNAI				S	**Sn**	**23 00 08.4**	**-0.2**
KSI	**Kapahiang**	**1.44**	**22**	P	**Pn**	**22 59 52.5**	**-6.9**
KSI				S	Sx	23 00 06.1	
LWLI	**Liwa**	**1.99**	**91**	P	**Pn**	**23 00 09.0**	**+2.0**
MDSI	**Maura Dua**	**2.17**	**77**	P	**Pn**	**23 00 08.9**	**-0.6**
KLSI		**2.68**	**84**	P	**Pn**	**23 00 17.1**	**+0.6**
WRA	**Warramunga Arr**	**34.74**	**118**	P	**P**	**23 06 22.6**	**-0.4**
	0.3nm,0.3s,mb3.7,baz=299,slow=8.8,SNR=3.2						
ASAR	**Alice Springs**	**35.86**	**124**	P	**P**	**23 06 31.5**	**-1.0**
	0.3nm,0.7s,mb3.4,baz=302,slow=8.1,SNR=3.4						
MKAR	**Makanchi Array**	**54.46**	**343**	P	**P**	**23 09 00.3**	**+0.6**
	0.3nm,0.5s,mb3.5,baz=160,slow=8.9,SNR=6.6						

*IDC **02** 23:51:07.6±0.8, 27°.34N×102°.73E, h0km, mb3.9/13, mb1 4.0/13, mb1mx3.9/26, mbtmp3.9/13, MS3.6/9, Ms1 3.6/9, ms1mx3.2/29, Error ellipse: s-maj=32.8km s-min=15.3km az=51.0*
*BJI **02** 23:51:08.8, 27°.35N×102°.78E, h12km, mB4.5/6, mb4.3/11, ML4.2/18, Ms4.4/8, Ms7 3.8/7*
*NEIC **02** 23:51:09.7±0.4, 27°.51N×102°.87E, h10km, mb4.2/9, Error ellipse: s-maj=11.5km s-min=5.6km az=86.0*
*ISCJB **02** 23:51:11.4±0.3, 27°.51N±0°.03×102°.74E±0°.05, h33km, mb4.0/21, MS3.5/8, Error ellipse: s-maj=5.8km s-min=4.7km az=176.7*
ISC 02 23:51:10.6±1.8,**27°.52N**±0°.03×**102°.84E**±0°.05,**h14**km±12km, **n54**, σ0§**94**/**56**,**mb4.0**/21,**MS3.5**/**8**,**2C-2D**,**Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**2.39**	**182**	Pg	**Pn**	**23 51 48.7**	**-0.6**
KMI				Sg	**Sn**	**23 52 18.3**	**-0.1**
KMI				smax			
	comp=N,740nm,1.2s						
KMI				smax			
	comp=E,790nm,1.1s						
GYA	**Guiyang**	**3.57**	**106**	Pn	**Pn**	**23 52 07.6**	**+2.0**
GYA				Sn	**Sn**	**23 52 51.6**	**+4.0**
GYA				Sg	**Sg**	**23 53 04.0**	**-1.4**
GYA				smax			
	comp=N,400nm,0.8s						
GYA				smax			
	comp=E,400nm,0.8s						
XAN	**Xi'an**	**8.34**	**37**	P	**Pn**	**23 53 11.9**	**+0.7**
XAN				S	**Sn**	**23 54 53.7**	**+8.5**
XAN				smax			
	comp=N,160nm,1.1s						
XAN				smax			
	comp=E,72nm,1.1s						
XAN				LR	LR		
	comp=N,680nm,7.3s						
XAN				LR	LR		
	comp=E,460nm,7.0s						
XAN				LR	LR		
	comp=Z,240nm,10.1s						
LZH	**Lanzhou**	**8.59**	**5**	*e*P	**Pn**	**23 53 15.5**	**+1.0**
LZH				S	**Sn**	**23 54 48.9**	**-2.2**
LZH				smax			
	comp=N,75nm,1.2s						
LZH				smax			
	comp=E,120nm,1.2s						
LZH				LR	LR		
	comp=E,3μm,8.0s						
LZH				LR	LR		
	comp=Z,3μm,8.6s						
CHTO	**Chiang Mai**	**9.37**	**203**	*e*Pn	**Pn**	**23 53 25.6**	**+0.3**
	comp=Z,47nm,1.7s						
CM31	**Chiang Mai Arr**	**9.70**	**202**	*e*Pn	**Pn**	**23 53 29.8**	**-0.1**
	comp=Z,5.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**9.70**	**202**	Pn	**Pn**	**23 53 30.6**	**+0.7**
	baz=13,slow=13,SNR=18						
CMAR				Pg	Pn	23 54 04.5	+35
	comp=Z,0.5nm,0.3s,baz=5.6,slow=16,SNR=14						
CMAR				Lg		23 56 13.2	
	comp=Z,0.4nm,0.3s,baz=23,slow=30,SNR=3.2						
CMAR				LR	LR	23 57 33.5	
	comp=Z,470nm,19.3s,baz=202,slow=41						
LSA	**Lhasa**	**10.50**	**285**	P	**Pn**	**23 53 40.8**	**0.0**
WHN	**Wuhan**	**10.52**	**71**	*e*P	**Pn**	**23 53 45.0**	**+4.0**
WHN				LR	LR		
	comp=Z,3μm,9.0s						
HHC	**Hu-ho-hao-te**	**15.12**	**26**	*e*P	**Pn**	**23 54 42.8**	**-0.9**
HHC				PP		23 54 55.0	
HHC				S	**Sn**	**23 57 31.0**	**0.0**
HHC				SS		23 57 48.3	
HHC				PcP	PcP	23 59 50.8	0.0
HHC				pmax	pmax		
	comp=Z,15nm,0.5s						
HHC				pmax	pmax		
	comp=Z,36nm,5.2s						
HHC				LR	LR		
	comp=N,500nm,10.3s						
HHC				LR	LR		
	comp=E,500nm,10.6s						
HHC				LR	LR		
	comp=Z,410nm,9.8s						
SONM	**Songino Array**	**20.47**	**7**	P	**P**	**23 55 49.8**	**+2.0**
	comp=Z,5.7nm,1.1s,baz=190,slow=11,SNR=24						
SONM				LR	LR	00 04 47.6	
	comp=Z,268nm,18.1s,MS3.6,baz=184,slow=40						
ULN	**Ulaanbaatar**	**20.58**	**8**	*e*P	**P**	**23 55 49.8**	**+0.8**
	comp=Z,16nm,1.1s						
KSRS	**Korea Array**	**23.30**	**59**	P	**P**	**23 56 18.8**	**+0.6**
	comp=Z,2.0nm,0.6s,mb3.7,baz=240,slow=11,SNR=9.4						
KSRS				LR	LR	00 05 04.9	
	comp=Z,109nm,18.0s,MS3.4,baz=64,slow=36						
TLY	**Talaya**	**24.14**	**1**	P	**P**	**23 56 26.4**	**+0.3**
CN2	**Changchun**	**24.41**	**42**	*e*P	**P**	**23 56 29.1**	**+0.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.2						
PSI	**Prapat**	**24.86**	**189**	LR	LR	00 06 42.7	
	comp=Z,136nm,20.8s,MS3.4,baz=194,slow=38						
MK31	**Makanchi Array**	**25.14**	**325**	*e*P	**P**	**23 56 35.7**	**+0.6**
MKAR	**Makanchi Array**	**25.14**	**325**	P	**P**	**23 56 34.9**	**-0.3**
	comp=Z,1.2nm,0.5s,mb3.7,baz=125,slow=12,SNR=22						
TKM2	**Tokmak 2**	**26.89**	**312**	*e*P	**P**	**23 56 49.6**	**-1.4**
	comp=Z,1.0nm,0.6s,mb3.5						
AAK	**Ala-Archa**	**27.50**	**311**	P	**P**	**23 56 56.7**	**+0.1**
	comp=Z,1.1nm,0.3s,mb4.0,baz=198,slow=3.2,SNR=2.2						
AAK				LR	LR	00 09 42.9	
	comp=Z,103nm,21.8s,MS3.4,baz=29,slow=40						
AML	**Almayashu**	**27.85**	**309**	*e*P	**P**	**23 56 59.2**	**-0.5**
	comp=Z,1.2nm,0.6s,mb3.7						
EKS2	**Erkin-Say**	**28.00**	**310**	*e*P	**P**	**23 57 01.8**	**+0.7**
	comp=Z,3.7nm,1.0s,mb4.0						
PALK	**Pallekele**	**29.08**	**230**	*e*P	**P**	**23 57 11.4**	**+0.5**
ZALV	**Zalesovo Beam**	**29.55**	**338**	P	**P**	**23 57 14.3**	**-0.4**
	comp=Z,0.6nm,0.5s,mb3.6,baz=152,slow=13,SNR=6.4						
ZALV				LR	LR	00 09 58.5	
	comp=Z,42nm,18.6s,MS3.1,baz=185,slow=38						
ZALV	**Zalesovo Beam**	**29.55**	**338**	P	**P**	**23 57 14.3**	**-0.4**
ZALV				LR	LR	00 09 58.5	
KURK	**Kurchatov**	**29.58**	**328**	P	**P**	**23 57 14.3**	**-0.6**
	comp=Z,1.2nm,0.6s,mb3.8,baz=135,slow=9.7,SNR=10						
KURK	**Kurchatov**	**29.58**	**328**	*e*P	**P**	**23 57 14.4**	**-0.5**
	comp=Z,2.7nm,0.6s,mb4.2						
MJAR	**Mashiro Arr**	**31.16**	**64**	LR	LR	00 11 33.9	
	comp=Z,170nm,18.2s,MS3.8,baz=240,slow=39						
BVAR	**Borovoye Array**	**35.02**	**326**	P	**P**	**23 58 02.9**	**+0.3**
	comp=Z,0.4nm,0.6s,mb3.6,baz=183,slow=5.8,SNR=3.3						
BRVK	**Borovoye**	**35.09**	**326**	P	**P**	**23 58 03.2**	**0.0**
ABKAR	**Akbulak array**	**39.33**	**315**	*e*P	**P**	**23 58 39.6**	**+0.3**
	comp=Z,0.5nm,0.4s,mb3.6						
AKTK	**Aktyubinsk**	**40.87**	**316**	P	**P**	**23 58 51.5**	**-0.6**
AKTO	**Aktyubinsk**	**40.87**	**316**	P	**P**	**23 58 51.5**	**-0.6**
	comp=Z,0.3nm,0.3s,mb3.4,baz=100,slow=12,SNR=2.7						
ARU	**Arti**	**42.66**	**325**	*e*P	**P**	**23 59 05.9**	**-0.7**
PETK	**Petropavlovsk-**	**47.56**	**42**	LR	LR	00 21 53.0	
	comp=Z,38nm,20.9s,MS3.4,baz=76,slow=39						
GNI	**Garni**	**49.09**	**301**	P	**P**	**23 59 57.7**	**+0.1**
WRAB	**Tennant Creek**	**56.18**	**144**	*e*P	**P**	**00 00 49.6**	**-0.6**
	comp=Z,2.3nm,0.5s,mb4.5						
WRA	**Warramunga Arr**	**56.18**	**144**	P	**P**	**00 00 48.6**	**-1.5**
	comp=Z,1.9nm,0.5s,mb4.4,baz=333,slow=8.3,SNR=10						
JOF	**Joensuu**	**57.49**	**329**	*e*p	**P**	**00 00 58.4**	**-0.6**
	comp=Z,2.8nm,0.5s,mb4.5						
BR131	**Keskin Array S**	**57.60**	**301**	P	**P**	**00 01 00.1**	**-0.1**
MMAI	**Mount Meron Ar**	**57.62**	**293**	LR	LR	00 29 42.9	
	comp=Z,47nm,18.0s,MS3.6,baz=145,slow=40						
ASAR	**Alice Springs**	**59.06**	**147**	P	**P**	**00 01 09.2**	**-1.3**
	comp=Z,0.9nm,0.5s,mb4.0,baz=328,slow=5.8,SNR=13						
AKASG	**Malin Array Be**	**59.07**	**315**	P	**P**	**00 01 11.2**	**+0.9**
	comp=Z,0.8nm,0.4s,mb4.1,baz=78,slow=5.9,SNR=24						
KEV	**Kevo**	**59.57**	**337**	*e*p	**P**	**00 01 11.8**	**-1.6**
FINES	**FINESS Array B**	**59.95**	**327**	P	**P**	**00 01 15.6**	**-0.5**
	comp=Z,0.6nm,0.3s,mb4.1,baz=92,slow=6.9,SNR=9.6						
FINES	**FINESS Array B**	**59.95**	**327**	P	**P**	**00 01 15.6**	**-0.5**
VRI	**Vrincioaia**	**61.46**	**309**	⇓*i*P	**P**	**00 01 30.0**	**+3.3**
MLR	**Muntele Rosu**	**62.08**	**309**	⇑*i*P	**P**	**00 01 34.4**	**+3.6**
KWP	**Kalwaria Pacla**	**63.38**	**314**	*e*P	**P**	**00 01 39.1**	**-0.3**
	comp=Z,8.2nm,0.9s,mb4.9						
KWP				*e*PcP	PcP	00 02 16.1	-0.2
KWP				*e*PP	PP	00 03 58.6	0.0
KWP	**Kalwaria Pacla**	**63.38**	**314**	⇑*i*P	**P**	**00 01 40.7**	**+1.3**
DRGR		**63.99**	**311**	⇓*i*P	**P**	**00 01 45.0**	**+1.5**
MORC	**Moravsky Berou**	**66.60**	**315**	*e*P	**P**	**00 02 00.4**	**0.0**
	comp=Z,2.2nm,0.9s,mb4.2						
NB2	**NORSAR Subarra**	**67.09**	**328**	P	**P**	**00 02 02.1**	**-1.3**
	comp=Z,1.3nm,0.7s,mb4.1,baz=75,slow=6.5						
NOA	**NORSAR Array B**	**67.09**	**328**	P	**P**	**00 02 02.4**	**-1.0**
	comp=Z,1.2nm,0.8s,mb4.0,baz=75,slow=6.5,SNR=5.5						

*IDC **03** 00:01:58.3±1.5, 31°.55N×103°.91E, h0km, mb3.5/4, mb1 3.6/5, mb1mx3.4/25, mbtmp3.5/5, ML3.3/1, Error ellipse: s-maj=87.7km s-min=24.4km az=58.0*
*BJI **03** 00:01:59.4, 31°.48N×103°.99E, h17km, ML3.3/10*
ISC 03 00:01:56.2±0.9,**31°.30N**±0°.08×**104°.29E**±0°.07,**h7**km±10km, **n8,** σ0§**97**/**13**,**mb3.4**/**4**,**Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.59**	**230**	Pg	**Pg**	**00 02 07.6**	**-0.1**
CD2				Sg	**Sg**	**00 02 15.3**	**-0.1**
CD2				smax			
	comp=N,2μm,0.8s						
CD2				smax			
	comp=E,3μm,0.7s						
XAN	**Xi'an**	**4.77**	**54**	Pn	**Pn**	**00 03 11.6**	**+3.1**
XAN				Pg	**Pg**	**00 03 28.9**	**+1.3**
XAN				Sn	**Sn**	**00 04 03.6**	**-0.4**
XAN				Sg	**Sg**	**00 04 27.6**	**-1.8**
XAN				smax			
	comp=N,63nm,0.8s						
XAN				smax			
	comp=E,34nm,0.9s						
LZH	**Lanzhou**	**4.79**	**356**	*e*Pg	**Pb**	**00 03 20.1**	**-0.4**
LZH				Sg	**Sb**	**00 04 18.8**	**+0.5**
LZH				smax			
	comp=N,58nm,0.9s						
LZH				smax			
	comp=E,68nm,1.0s						
SONM	**Songino Array**	**16.59**	**5**	Pn	**Pn**	**00 05 50.2**	**+1.0**
	comp=E,0.1nm,0.3s,baz=192,slow=13,SNR=3.2						
MKAR	**Makanchi Array**	**22.94**	**319**	P	**P**	**00 07 00.0**	**-0.8**
	comp=E,0.6nm,0.9s,mb3.0,baz=113,slow=12,SNR=4.3						
ZALV	**Zalesovo Beam**	**26.62**	**334**	P	**P**	**00 07 34.8**	**-0.2**
	comp=E,0.8nm,0.6s,mb3.4,baz=126,slow=10,SNR=6.4						
KURK	**Kurchatov**	**27.18**	**323**	P	**P**	**00 07 39.5**	**-0.7**
	comp=E,0.7nm,1.0s,mb3.2,baz=128,slow=8.5,SNR=5.0						
WRA	**Warramunga Arr**	**58.55**	**146**	P	**P**	**00 11 59.4**	**+5.9**
	comp=E,1.0nm,0.6s,mb4.0,baz=341,slow=7.3,SNR=5.3						

*IDC **03** 00:05:34.2±0.8, 23°.12N×120°.88E, h0km, mb3.7/13, mb1 3.9/13, mb1mx3.8/24, mbtmp3.7/13, MS3.3/1, Ms1 3.3/1, ms1mx2.6/27, Error ellipse: s-maj=25.4km s-min=16.7km az=67.0*
*BJI **03** 00:05:37.0, 23°.20N×120°.70E, h15km, ML4.0/4*
*TAP **03** 00:05:37.4, 23°.19N×120°.67E, h15km, ML4.3, B*
*NEIC **03** 00:05:37.9, 23°.19N×120°.71E, h6km, ML4.5(TAP), After TAP.*
NEIC Recorded [4 TAP] in Chia-i and Kao-hsiung; [1 TAP] in Hua-lien, P'ing-tung, T'ai-nan and T'ai-tung.
*ISCJB **03** 00:05:38.3±0.2, 23°.16N±0°.01×120°.65E±0°.02, h20km±2km, mb3.7/11, Error ellipse: s-maj=2.6km s-min=2.1km az=11.6*
ISC 03 00:05:38.4±0.2,**23°.17N**±0°.01×**120°.67E**±0°.02,**h16**km±1km, **n89**, σ1§**07**/139,**mb3.7**/11,**21C-7D**,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STYT	**Tauyuan**	**0.08**	**95**	⇓*i*P	**Pg**	**00 05 41.1**	**-0.4**
	baz=109						
WTP	**Ta-pu**	**0.09**	**327**	⇓*i*P	**Pg**	**00 05 41.0**	**-0.7**
	baz=317						
SGST	**Jiashian**	**0.12**	**221**	⇓*i*P	**Pg**	**00 05 41.7**	**-0.2**
	baz=217						
SGST				*e*S	**Sg**	**00 05 44.5**	**+0.3**
	baz=217						
CHN1	**Nanshi**	**0.13**	**276**	⇑*i*P	**Pg**	**00 05 41.6**	**-0.4**
	baz=276						
TPUB	**Ta-pu**	**0.13**	**345**	*e*P	**Pg**	**00 05 41.2**	**-0.9**
TPUB				*e*S	**Sg**	**00 05 44.1**	**-0.5**
TWK	**Hsinying**	**0.19**	**300**	⇑*i*P	**Pg**	**00 05 42.4**	**-0.6**
	baz=295						
TWK				*e*S	**Sg**	**00 05 46.0**	**-0.1**
	baz=295						
CHN4	**Tsaushan**	**0.19**	**339**	⇑*i*P	**Pg**	**00 05 42.4**	**-0.6**
	baz=336						
CHN4				S	**Sg**	**00 05 45.8**	**-0.3**
	baz=336						
CHN3	**Shinhua**	**0.29**	**251**	⇑*i*P	**Pg**	**00 05 45.5**	**+0.8**
	baz=257						
CHN3				*e*S	**Sg**	**00 05 51.4**	**+2.6**
	baz=257						
ELDTW	**Lidau**	**0.32**	**87**	⇑*i*P	**Pg**	**00 05 44.8**	**-0.3**
	baz=90						
ELDTW				*e*S	**Sg**	**00 05 49.8**	**+0.1**
	baz=90						
ALS	**Alishan**	**0.36**	**21**	⇓*i*P	**Pg**	**00 05 45.3**	**-0.5**
	baz=29						
ALS				*e*S	**Sg**	**00 05 51.3**	**+0.5**
	baz=29						
CHY	**Chiayi**	**0.40**	**326**	⇑*i*P	**Pg**	**00 05 46.2**	**-0.2**
	baz=324						
CHY				*i* S	**Sg**	**00 05 52.6**	**+0.8**
	baz=324						
TWM1	**Shoushan**	**0.41**	**213**	⇓*i*P	**Pg**	**00 05 48.1**	**+1.4**
	baz=212						
SSD	**Sandimen**	**0.42**	**184**	⇑*i*P	**Pg**	**00 05 47.0**	**+0.1**
	baz=175						
SSD				*e*S	**Sg**	**00 05 53.3**	**+0.7**
	baz=175						
CHN5	**Tsauling**	**0.42**	**1**	P	**Pg**	**00 05 46.2**	**-0.8**
	baz=1.0						
TAI1	**Yung-k'ang**	**0.42**	**252**	*e*P	**Pg**	**00 05 47.4**	**+0.5**
	baz=260						
TAI1				*e*S	**Sg**	**00 05 55.1**	**+2.3**
	baz=260						
SCLT	**Jiali**	**0.43**	**271**	P	**Pg**	**00 05 47.4**	**+0.3**
	baz=280						
SCLT				S	**Sg**	**00 05 55.4**	**+2.3**
	baz=280						
CHN8	**Yiju**	**0.45**	**293**	⇑*i*P	**Pg**	**00 05 47.3**	**-0.2**
	baz=291						
CHN8				*e*S	**Sg**	**00 05 55.1**	**+1.5**
	baz=291						
TWG	**Pinlang**	**0.51**	**133**	⇓*i*P	**Pg**	**00 05 48.3**	**-0.2**
TWG				*e*S	**Sg**	**00 05 55.8**	**+0.4**
TWG	**Pinlang**	**0.51**	**133**	⇑*i*P	**Pg**

ESL					*e*S		**Sb**	**00 06 10.3**	**+1.5**
	baz=47								
TCU	**Taichung**	**0.97**	**0**		*e*P		**Pb**	**00 05 55.8**	**-1.1**
	baz=1.0								
TCU					*e*S		**Sb**	**00 06 09.2**	**-0.3**
	baz=1.0								
PNG	**Penghu**	**1.10**	**291**	⇑	*i*P		**Pb**	**00 05 57.2**	**-1.8**
	baz=291								
PNG					*e*S		**Sb**	**00 06 11.7**	**-1.4**
	baz=291								
WHF	**Hehuan Shan**	**1.11**	**29**		*e*P		**Pb**	**00 05 58.1**	**-1.2**
	baz=21								
WHF					*e*S		**Sb**	**00 06 16.1**	**+2.6**
	baz=21								
HEN	**Hengchun**	**1.16**	**177**		*e*P		**Pn**	**00 05 59.6**	**-0.4**
	baz=177								
TWT	**Tachien**	**1.17**	**23**		P		**Pn**	**00 05 59.7**	**-0.5**
	baz=32								
TWT					S		**Sb**	**00 06 15.9**	**+0.6**
	baz=32								
TWQ1	**Liyutan**	**1.18**	**5**		P		**Pn**	**00 05 59.6**	**-0.6**
	baz=6.0								
TWQ1					*e*S		**Sb**	**00 06 16.0**	**+0.7**
	baz=6.0								
HWA	**Hwalien**	**1.18**	**47**		*e*P		**Pn**	**00 06 00.3**	**+0.1**
	baz=45								
HWA					S		**Sb**	**00 06 16.3**	**+1.0**
	baz=45								
TWK1	**Hengchun**	**1.23**	**174**		P		**Pn**	**00 06 00.7**	**-0.2**
	baz=193								
NSY	**Sanyi**	**1.24**	**4**		*e*P		**Pn**	**00 06 00.7**	**-0.4**
	baz=354								
NSY					*e*S		**Sb**	**00 06 18.9**	**+1.6**
	baz=354								
TWD	**Chiawan**	**1.24**	**43**		P		**Pn**	**00 06 00.9**	**-0.3**
	baz=56								
TWD					*e*S		**Sb**	**00 06 17.4**	**+0.2**
	baz=56								
TSEB	**Hengchuen, Pin**	**1.28**	**170**		*e*P		**Pn**	**00 06 01.2**	**-0.5**
	baz=190								
NACB	**Ninganchiao**	**1.31**	**40**		*e*Pn		**Pn**	**00 06 01.6**	**-0.5**
NACB					*e*Sn		**Sn**	**00 06 18.7**	**-0.5**
LAY	**Lan-yu**	**1.39**	**144**		*e*P		**Pn**	**00 06 01.9**	**-1.3**
	baz=133								
NNS	**Nan Shan**	**1.42**	**27**	⇑	P		**Pn**	**00 06 03.9**	**+0.4**
	baz=28								
NNS					*e*S		**Sn**	**00 06 22.7**	**+0.8**
	baz=28								
NSTT	**Nanjuang**	**1.49**	**12**		*e*P		**Pn**	**00 06 03.8**	**-0.7**
	baz=14								
NSTT					*e*S		**Sn**	**00 06 23.3**	**-0.3**
	baz=14								
ENA	**Nanau**	**1.59**	**38**		*e*P		**Pn**	**00 06 05.9**	**0.0**
	baz=53								
NSK	**Sanguang**	**1.63**	**23**		P		**Pn**	**00 06 06.4**	**0.0**
	baz=15								
NSK					*e*S		**Sn**	**00 06 28.7**	**+1.7**
	baz=15								
YHNB	**Yeheng**	**1.63**	**23**		*e*Pn		**Pn**	**00 06 06.3**	**0.0**
YHNB					*e*Sn		**Sn**	**00 06 29.4**	**+2.3**
ENTT	**Nioudou**	**1.68**	**29**		P		**Pn**	**00 06 08.0**	**+0.9**
	baz=30								
ENTT					*e*S		**Sn**	**00 06 31.7**	**+3.4**
	baz=30								
TWE	**Neicheng**	**1.79**	**30**		P		**Pn**	**00 06 09.9**	**+1.2**
	baz=31								
TWE					S		**Sn**	**00 06 34.0**	**+2.8**
	baz=31								
TWC	**Suao**	**1.79**	**37**		*e*P		**Pn**	**00 06 09.3**	**+0.6**
	baz=48								
TWC					*e*S		**Sn**	**00 06 33.2**	**+2.0**
	baz=48								
NCU	**National Centr**	**1.85**	**15**		*e*P		**Pn**	**00 06 08.6**	**-0.9**
	baz=358								
TATO	**Taipei**	**1.95**	**22**		*e*Pn		**Pn**	**00 06 11.8**	**+1.0**
TATO					*e*Sn		**Sn**	**00 06 35.9**	**+0.9**
TWA	**Mucha**	**1.99**	**25**		*e*P		**Pn**	**00 06 13.4**	**+2.1**
	baz=25								
TAP1	**Taipei**	**2.02**	**23**		*e*P		**Pn**	**00 06 15.5**	**+3.7**
	baz=23								
TWS1	**Kuangyinshan**	**2.04**	**19**		*e*P		**Pn**	**00 06 13.1**	**+1.0**
	baz=360								
NWF	**Wu-fen Shan**	**2.15**	**28**		*e*P		**Pn**	**00 06 14.6**	**+1.0**
	baz=9.0								
TWB1	**Santiao Chiao**	**2.19**	**33**		*e*P		**Pn**	**00 06 15.3**	**+1.2**
	baz=46								
TWB1					*e*S		**Sn**	**00 06 44.1**	**+3.1**
	baz=46								
TWY	**Chenhua**	**2.26**	**22**		*e*P		**Pn**	**00 06 13.9**	**-1.2**
	baz=19								
KNM	**Kinmen**	**2.39**	**302**		*e*P		**Pn**	**00 06 16.5**	**-0.5**
	baz=300								
YOJ	**Yonaguni jima**	**2.50**	**59**		*e*P		**Pn**	**00 06 17.6**	**-0.9**
	baz=55								
YOJ					*e*S		**Sn**	**00 06 50.1**	**+1.5**
	baz=55								
QZH	**Quanzhou**	**2.59**	**313**		Pn		**Pn**	**00 06 18.2**	**-1.5**
QZH					Pg		**Pg**	**00 06 24.4**	**-3.7**
QZH					Sn		**Sn**	**00 06 47.5**	**-3.3**
QZH					smax				
	comp=N,750nm,0.5s								
QZH					smax				
	comp=E,870nm,0.8s								
PCYT	**Pengchaiyu**	**2.76**	**27**		*e*P		**Pn**	**00 06 21.3**	**-0.7**
	baz=12								
KSRS	**Korea Array**	**15.54**	**22**		Pn		**Pn**	**00 09 17.6**	**+0.7**
	comp=E,0.3nm,0.3s,baz=202,slow=13,SNR=5.4								
MJAR	**Matsushiro Arr**	**20.18**	**45**		P		**P**	**00 10 10.1**	**-2.2**
	comp=E,0.8nm,0.4s,baz=234,slow=9.9,SNR=2.6								
CMAR	**Chiang Mai Arr**	**20.84**	**261**		P		**P**	**00 10 20.1**	**+0.6**
	comp=E,0.6nm,0.5s,baz=68,slow=7.3,SNR=4.5								
SONM	**Songino Array**	**27.12**	**339**		P		**P**	**00 11 19.2**	**-1.3**
	comp=E,0.4nm,0.6s,mb3.1,baz=167,slow=8.9,SNR=3.3								
SONM					LR		LR	00 23 16.3	
	comp=E,59nm,18.2s,baz=152,slow=39								
SONM	**Songino Array**	**27.12**	**339**		P		**P**	**00 11 19.2**	**-1.3**
SONM					LR		LR	00 23 16.3	
MKAR	**Makanchi Array**	**38.74**	**317**		P		**P**	**00 13 01.6**	**-0.2**
	comp=E,0.6nm,0.6s,mb3.5,baz=110,slow=11,SNR=9.3								
ZALV	**Zalesovo Beam**	**40.84**	**328**		P		**P**	**00 13 18.9**	**-0.3**
	comp=E,0.5nm,0.4s,mb3.5,baz=126,slow=7.7,SNR=4.7								
PETK	**Petropavlovsk-**	**40.97**	**34**		P		**P**	**00 13 17.7**	**-2.5**
	comp=E,0.3nm,0.3s,mb3.5,baz=265,slow=16,SNR=5.5								
KURK	**Kurchatov**	**42.57**	**321**		P		**P**	**00 13 32.7**	**-0.7**
	comp=E,0.3nm,0.3s,mb3.5,baz=125,slow=8.2,SNR=4.8								
KURK	**Kurchatov**	**42.57**	**321**		P		**P**	**00 13 32.7**	**-0.7**
WRA	**Warramunga Arr**	**44.88**	**162**		P		**P**	**00 13 49.0**	**-3.2**
	comp=E,1.1nm,0.6s,mb3.9,baz=345,slow=8.6,SNR=4.7								
BVAR	**Borovoye Array**	**48.16**	**321**		P		**P**	**00 14 17.6**	**-0.1**
	comp=E,1.2nm,0.7s,mb4.0,baz=272,slow=38,SNR=4.6								
ASAR	**Alice Springs**	**48.30**	**164**		P		**P**	**00 14 17.2**	**-1.9**
	comp=E,0.4nm,0.5s,mb3.7,baz=342,slow=8.1,SNR=4.7								
STKA	**Stephens Creek**	**58.28**	**159**		P		**P**	**00 15 29.8**	**-2.6**
	comp=E,2.0nm,0.7s,mb4.2,baz=16,slow=12,SNR=4.7								
STKA	**Stephens Creek**	**58.28**	**159**		P		**P**	**00 15 29.8**	**-2.6**
NOA	**NORSAR Array B**	**78.89**	**332**		P		**P**	**00 17 39.7**	**-1.0**
	comp=E,0.4nm,0.7s,mb3.5,baz=60,slow=5.3,SNR=3.2								
YKA	**Yellowknife Ar**	**84.08**	**23**		P		**P**	**00 18 06.8**	**-1.4**
	comp=E,0.8nm,0.5s,mb4.1,baz=310,slow=4.7,SNR=7.9								

IDC 03 00:16:22.8±4.4, 2°.45S×139°.52E, h0km, mb3.6/3, mb1 3.7/4, mb1mx3.5/15, mbtmp3.6/4, ML3.6/1, MS3.2/1, Ms1 3.2/1, ms1mx2.4/20, Error ellipse: s-maj=182.3km s-min=25.6km az=88.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.11**	**196**	P	Pn	00 20 36.3	+0.4
	0.2nm,0.3s,baz=16,slow=12,SNR=4.5						
ASAR	**Alice Springs**	**21.78**	**194**	P	P	00 21 16.1	-0.2
	1.4nm,0.7s,baz=20,slow=11,SNR=12						
MJAR	**Matsushiro Arr**	**38.81**	**358**	LR	LR	00 38 16.2	
	comp=Z,30nm,19.6s,baz=150,slow=34						
MKAR	**Makanchi Array**	**70.08**	**322**	P	P	00 27 37.3	+0.4
	0.9nm,0.9s,baz=116,slow=7.7,SNR=7.4						
KURK	**Kurchatov**	**73.98**	**325**	P	P	00 28 00.1	0.0
	0.4nm,0.8s,baz=112,slow=5.1,SNR=3.4						

GUC 03 00:29:47.0±0.5, 23°.93S×67°.64W, h226km±36km, ML3.5, 2C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**2.37**	**314**	⇑ *i*P	Pn	00 30 38.1	+6.9
PB04				*i*S	S	00 31 17.2	+11
PB04				AML	AML	00 31 19.4	
	comp=N,97nm,0.6s						
CEN1	**Los Morros**	**2.41**	**282**	⇓ *i*P	Pn	00 30 35.6	+4.0
CEN1				*i*S	S	00 31 11.1	+4.5
CEN1				AML	AML	00 31 12.5	
	comp=N,57nm,0.4s						
ANCH	**Antofagasta**	**2.55**	**275**	⇑ *i*P	Pn	00 30 34.6	+1.5
ANCH				*i*S	S	00 31 10.8	+1.6
PB01	**Plate Boundary**	**3.34**	**329**	⇓ *i*P	Pn	00 30 44.1	+2.1
PB01				*e*S	S	00 31 27.6	+2.4
PB01				AML	AML	00 31 31.8	
	comp=E,30nm,0.3s						
MNMC	**Miæe Miæ**	**5.11**	**339**	*e*P	Pn	00 31 04.9	+1.4
MNMC				*e*S	S	00 32 08.2	+4.0

IDC 03 00:54:06.1±16.0, 29°.16N×83°.35E, h0km, mb3.5/3, mb1 3.5/4, mb1mx3.2/25, mbtmp3.5/4, ML3.2/1, Error ellipse: s-maj=273.7km s-min=68.1km az=28.0, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**17.62**	**358**	P	Pn	00 58 12.6	-0.3
	0.1nm,0.3s,baz=170,slow=12,SNR=5.9						
KURK	**Kurchatov**	**21.82**	**352**	P	P	00 58 59.9	+0.1
	0.7nm,0.5s,baz=163,slow=10,SNR=6.7						
ZALV	**Zalesovo Beam**	**24.79**	**2**	P	P	00 59 28.7	-0.8
	0.9nm,0.5s,baz=171,slow=9.9,SNR=6.8						
SONM	**Songino Array**	**25.77**	**37**	P	P	00 59 39.1	+0.6
	0.5nm,0.7s,baz=232,slow=8.9,SNR=4.2						

*ISCJB **03** 00:55:11.8±0.5, 45°.58N±0°.03×26°.37E±0°.05, h152km±5km, Error ellipse: s-maj=5.2km s-min=4.4km az=171.6*
*BUC **03** 00:55:11.5±0.8, 45°.59N×26°.33E, h160km±7km, MD4.5/2, Error ellipse: s-maj=6.0km s-min=5.2km az=103.0*
*CSEM **03** 00:55:11.9±0.2, 45°.57N×26°.36E, h153km±2km, MD4.5/2, Error ellipse: s-maj=4.2km s-min=3.6km az=82.0*
*NEIC **03** 00:55:12.4, 45°.58N×26°.38E, h150km, MD3.3(BUC), After BUC.*
*SOF **03** 00:55:17.7, 45°.11N×26°.45E, h11km, MD3.0*

ISC 03 00:55:12.3±0.5, 45°.57N±0°.03×26°.39E±0°.04, h153km±4km, n117, σ0°63/172, 62C-36D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLR	**Muntele Rosu**	**0.32**	**255**	⇑P	**Pn**	**00 55 33.4**	**+0.2**
MLR				S	**Sn**	**00 55 48.8**	**-0.3**
MLR	**Muntele Rosu**	**0.32**	**255**	⇑ *i*P	**Pn**	**00 55 33.4**	**+0.2**
MLR				*i*S	**Sn**	**00 55 48.8**	**-0.3**
MLR	**Muntele Rosu**	**0.32**	**255**	⇑ *i*P	**Pn**	**00 55 33.4**	**+0.2**
MLR	**Muntele Rosu**	**0.32**	**255**	⇑ *i*P	**Pn**	**00 55 33.4**	**+0.2**
MLR				*i*S	**Sn**	**00 55 48.8**	**-0.3**
PLOR	**Plostina**	**0.33**	**34**	⇑ *i*P	**Pn**	**00 55 33.2**	**-0.1**
PLOR				*i*S	**Sn**	**00 55 49.8**	**+0.5**
PLOR	**Plostina**	**0.33**	**34**	⇑ *i*P	**Pn**	**00 55 33.2**	**-0.1**
PLOR	**Plostina**	**0.33**	**34**	⇑ *i*P	**Pn**	**00 55 33.2**	**-0.1**
PLOR				*i*S	**Sn**	**00 55 49.8**	**+0.5**
VRI	**Vrincioaia**	**0.38**	**39**	⇑P	**Pn**	**00 55 33.5**	**+0.1**
VRI				S	**Sn**	**00 55 50.0**	**+0.4**
VRI	**Vrincioaia**	**0.38**	**39**	⇑ *i*P	**Pn**	**00 55 33.5**	**+0.1**
VRI				*i*S	**Sn**	**00 55 50.0**	**+0.4**
VRI	**Vrincioaia**	**0.38**	**39**	⇑ *i*P	**Pn**	**00 55 33.5**	**+0.1**
VRI	**Vrincioaia**	**0.38**	**39**	⇑ *i*P	**Pn**	**00 55 33.5**	**+0.1**
VRI				*i*S	**Sn**	**00 55 50.0**	**+0.4**
GRER		**0.46**	**115**	⇑ *i*P	**Pn**	**00 55 35.0**	**+1.2**
GRER				*i*S	**Sn**	**00 55 49.8**	**-0.3**
GRER		**0.46**	**115**	⇑ *i*P	**Pn**	**00 55 35.0**	**+1.2**
GRER		**0.46**	**115**	⇑ *i*P	**Pn**	**00 55 35.0**	**+1.2**
GRER				*i*S	**Sn**	**00 55 49.8**	**-0.3**
ODB	**Odobesti**	**0.51**	**67**	⇑P	**Pn**	**00 55 34.6**	**+0.5**
ODB				S	**Sn**	**00 55 49.8**	**-0.7**
ODB	**Odobesti**	**0.51**	**67**	⇑ *i*P	**Pn**	**00 55 35.2**	**+1.2**
ODB				*i*S	**Sn**	**00 55 49.6**	**-1.0**
ODB	**Odobesti**	**0.51**	**67**	⇑ *i*P	**Pn**	**00 55 35.2**	**+1.2**
ODB	**Odobesti**	**0.51**	**67**	⇑P	**Pn**	**00 55 34.6**	**+0.6**
ODB				S	**Sn**	**00 55 49.8**	**-0.8**
PETR		**0.61**	**76**	⇓P	**Pn**	**00 55 35.0**	**+0.4**
PETR				S	**Sn**	**00 55 52.8**	**+1.3**
PETR		**0.61**	**76**	⇑ *i*P	**Pn**	**00 55 35.4**	**+0.8**
PETR				*i*S	**Sn**	**00 55 51.3**	**-0.2**
PETR		**0.61**	**76**	⇑ *i*P	**Pn**	**00 55 35.4**	**+0.8**
PETR		**0.61**	**76**	⇓P	**Pn**	**00 55 35.0**	**+0.4**
PETR				S	**Sn**	**00 55 52.8**	**+1.3**
SULR		**0.90**	**186**	⇑P	**Pn**	**00 55 36.9**	**+0.4**
SULR				S	**Sn**	**00 55 55.6**	**+0.6**
SULR		**0.90**	**186**	⇑ *i*P	**Pn**	**00 55 36.9**	**+0.3**
SULR				*i*S	**Sn**	**00 55 55.7**	**+0.7**
SULR		**0.90**	**186**	⇑ *i*P	**Pn**	**00 55 36.9**	**+0.3**
SULR		**0.90**	**186**	⇑ *i*P	**Pn**	**00 55 36.9**	**+0.3**
SULR				*i*S	**Sn**	**00 55 55.7**	**+0.7**
VOIR		**0.95**	**262**	⇓P	**Pn**	**00 55 36.5**	**-0.5**
VOIR				S	**Sn**	**00 55 55.4**	**-0.2**
VOIR		**0.95**	**262**	⇓ *i*P	**Pn**	**00 55 36.5**	**-0.4**
VOIR				*i*S	**Sn**	**00 55 55.4**	**-0.3**
VOIR		**0.95**	**262**	⇓ *i*P	**Pn**	**00 55 36.5**	**-0.4**
VOIR		**0.95**	**262**	⇓ *i*P	**Pn**	**00 55 36.5**	**-0.4**
VOIR				*i*S	**Sn**	**00 55 55.4**	**-0.3**
TESR		**0.95**	**11**	⇑P	**Pn**	**00 55 36.8**	**-0.2**
TESR		**0.95**	**11**	⇑ *i*P	**Pn**	**00 55 36.7**	**-0.3**
TESR		**0.95**	**11**	⇑ *i*P	**Pn**	**00 55 36.7**	**-0.3**
TESR		**0.95**	**11**	⇑P	**Pn**	**00 55 36.8**	**-0.2**
AMRR	**Amara**	**1.18**	**145**	⇓P	**Pn**	**00 55 39.4**	**+0.4**
AMRR				S	**Sn**	**00 55 59.5**	**+0.3**
AMRR	**Amara**	**1.18**	**145**	⇑ *i*P	**Pn**	**00 55 39.3**	**+0.4**
AMRR				*i*S	**Sn**	**00 55 59.5**	**+0.3**
AMRR	**Amara**	**1.18**	**145**	⇑ *i*P	**Pn**	**00 55 39.3**	**+0.4**
AMRR	**Amara**	**1.18**	**145**	⇑ *i*P	**Pn**	**00 55 39.3**	**+0.4**
AMRR				*i*S	**Sn**	**00 55 59.5**	**+0.3**
BUC1	**Bucharest**	**1.25**	**192**	⇓P	**Pn**	**00 55 39.7**	**+0.1**
BUC1				S	**Sn**	**00 56 00.1**	**-0.4**
BUC1	**Bucharest**	**1.25**	**192**	⇓ *i*P	**Pn**	**00 55 39.7**	**+0.1**
BUC1				*i*S	**Sn**	**00 56 00.1**	**-0.4**
BUC1	**Bucharest**	**1.25**	**192**	⇓ *i*P	**Pn**	**00 55 39.7**	**+0.1**
BUC1	**Bucharest**	**1.25**	**192**	⇓ *i*P	**Pn**	**00 55 39.7**	**+0.1**
BUC1				*i*S	**Sn**	**00 56 00.1**	**-0.4**
CFR	**Carcaliu**	**1.30**	**107**	⇓P	**Pn**	**00 55 40.1**	**+0.1**
CFR				S	**Sn**	**00 56 01.2**	**0.0**
CFR	**Carcaliu**	**1.30**	**107**	⇑ *i*P	**Pn**	**00 55 40.1**	**+0.1**
CFR				*i*S	**Sn**	**00 56 00.9**	**-0.3**
CFR	**Carcaliu**	**1.30**	**107**	⇑ *i*P	**Pn**	**00 55 40.1**	**+0.1**
CFR	**Carcaliu**	**1.30**	**107**	⇑ *i*P	**Pn**	**00 55 40.1**	**+0.1**
CFR				*i*S	**Sn**	**00 56 00.9**	**-0.3**
LEOM	**Leova**	**1.58**	**55**	⇑ *i*P	**Pn**	**00 55 43.3**	**+0.4**
LEOM				*i*S	**Sn**	**00 56 05.4**	**-0.9**
LEOM	**Leova**	**1.58**	**55**	⇑ *i*P	**Pn**	**00 55 43.3**	**+0.4**
LEOM	**Leova**	**1.58**	**55**	⇑ *i*P	**Pn**	**00 55 43.3**	**+0.4**
LEOM				*i*S	**Sn**	**00 56 05.4**	**-0.9**
CVD	**Cernavoda**	**1.72**	**137**	⇓P	**Pn**	**00 55 44.6**	**+0.1**
CVD				S	**Sn**	**00 56 08.2**	**-0.9**
CVD	**Cernavoda**	**1.72**	**137**	⇓ *i*P	**Pn**	**00 55 44.6**	**+0.2**
CVD				*i*S	**Sn**	**00 56 08.2**	**-0.8**
CVD	**Cernavoda**	**1.72**	**137**	⇓ *i*P	**Pn**	**00 55 44.6**	**+0.2**
CVD	**Cernavoda**	**1.72**	**137**	⇓ *i*P	**Pn**	**00 55 44.6**	**+0.2**
CVD				*i*S	**Sn**	**00 56 08.2**	**-0.8**
TLCR		**1.76**	**102**	⇑P	**Pn**	**00 55 45.0**	**+0.2**
TLCR				S	**Sn**	**00 56 10.0**	**+0.3**
TLCR		**1.76**	**102**	⇑ *i*P	**Pn**	**00 55 45.0**	**+0.2**
TLCR				*i*S	**Sn**	**00 56 10.0**	**+0.3**
TLCR		**1.76**	**102**	⇑ *i*P	**Pn**	**00 55 45.0**	**+0.2**
TLCR		**1.76**	**102**	⇑ *i*P	**Pn**	**00 55 45.0**	**+0.2**
TLCR				*i*S	**Sn**	**00 56 10.0**	**+0.3**
IAS	**Iasi**	**1.81**	**26**	⇑P	**Pn**	**00 55 45.5**	**0.0**
IAS				S	**Sn**	**00 56 09.7**	**-1.2**
IAS	**Iasi**	**1.81**	**26**	⇑ *i*P	**Pn**	**00 55 45.5**	**+0.1**
IAS				*i*S	**Sn**	**00 56 09.9**	**-1.0**
IAS	**Iasi**	**1.81**	**26**	⇑ *i*P	**Pn**	**00 55 45.5**	**+0.1**
IAS	**Iasi**	**1.81**	**26**	⇑ *i*P	**Pn**	**00 55 45.5**	**+0.1**
IAS				*i*S	**Sn**	**00 56 09.9**	**-1.0**
TIRR	**Tirgusor**	**1.82**	**127**	⇓P	**Pn**	**00 55 45.8**	**+0.3**
TIRR				S	**Sn**	**00 56 09.9**	**-1.1**
TIRR	**Tirgusor**	**1.82**	**127**	⇓ *i*P	**Pn**	**00 55 45.8**	**+0.2**
TIRR				*i*S	**Sn**	**00 56 10.5**	**-0.5**
TIRR	**Tirgusor**	**1.82**	**127**	⇓ *i*P	**Pn**	**00 55 45.8**	**+0.2**
TIRR	**Tirgusor**	**1.82**	**127**	⇓ *i*P	**Pn**	**00 55 45.8**	**+0.2**
TIRR				*i*S	**Sn**	**00 56 10.5**	**-0.5**
ZIMR		**2.05**	**201**	⇑P	**Pn**	**00 55 47.9**	**-0.3**
ZIMR				S	**Sn**	**00 56 14.8**	**-0.9**
ZIMR		**2.05**	**201**	⇑ *i*P	**Pn**	**00 55 47.9**	**-0.3**
ZIMR				*i*S	**Sn**	**00 56 14.8**	**-0.9**
ZIMR		**2.05**	**201**	⇑ *i*P	**Pn**	**00 55 47.9**	**-0.3**
BUR01	**Bucovina Ar. S**	**2.19**	**339**	⇓P	**Pn**	**00 55 50.8**	**+0.9**
BUR01	**Bucovina Ar. S**	**2.19**	**339**	⇓P	**Pn**	**00 55 50.8**	**+1.0**
BURAR	**Bucovina Array**	**2.19**	**339**	⇓P	**Pn**	**00 55 51.1**	**+1.2**
BURAR				S	**Sn**	**00 56 19.6**	**+0.8**
BURAR	**Bucovina Array**	**2.19**	**339**	⇓ *i*P	**Pn**	**00 55 50.9**	**+1.1**
BURAR	**Bucovina Array**	**2.19**	**339**	⇓ *i*P	**Pn**	**00 55 50.9**	**+1.1**
BURAR	**Bucovina Array**	**2.19**	**339**	⇓ *i*P	**Pn**	**00 55 50.9**	**+1.1**
BURAR				S	**Sn**	**00 56 19.6**	**+0.8**
KIS	**Kishinev**	**2.21**	**49**	⇑ *i*P	**Pn**	**00 55 49.0**	**-1.0**
	400nm,0.5s						
KIS				*i*S	**Sn**	**00 56 17.0**	**-2.0**
	700nm,0.5s						
KIS	**Kishinev**	**2.21**	**49**	⇑P	**Pn**	**00 55 50.0**	**0.0**
KIS				S	**Sn**	**00 56 17.9**	**-1.2**
KIS	**Kishinev**	**2.21**	**49**	⇑ *i*P	**Pn**	**00 55 50.0**	**0.0**
KIS				*i*S	**Sn**	**00 56 18.2**	**-0.8**
KIS	**Kishinev**	**2.21**	**49**	⇑ *i*P	**Pn**	**00 55 50.0**	**0.0**
KIS	**Kishinev**	**2.21**	**49**	⇑ *i*P	**Pn**	**00 55 50.0**	**0.0**
KIS				*i*S	**Sn**	**00 56 18.2**	**-0.8**
BUR08	**Bucovina Ar. S**	**2.23**	**339**	*e*Pn	**Pn**	**00 55 50.7**	**+0.5**
BUR08				*e*Sn	**Sn**	**00 56 19.6**	**+0.1**
BUR08	**Bucovina Ar. S**	**2.23**	**339**	*e*Pn	**Pn**	**00 55 50.7**	**+0.5**
BUR08				*e*Sn	**Sn**	**00 56 19.5**	**+0.1**
PSN	**Preselentsi**	**2.29**	**145**	P	**Pn**	**00 55 51.7**	**+0.7**
PSN	**Preselentsi**	**2.29**	**145**	P	**Pn**	**00 55 51.7**	**+0.7**
SZH	**Strazhica**	**2.33**	**188**	P	**Pn**	**00 55 51.2**	**-0.3**
SZH	**Strazhica**	**2.33**	**188**	P	**Pn**	**00 55 51.2**	**-0.3**
PVL	**Pavlikeni**	**2.48**	**198**	P	**Pn**	**00 55 54.3**	**+1.0**
PVL	**Pavlikeni**	**2.48**	**198**	P	**Pn**	**00 55 54.3**	**+1.0**
GZR	**Gura Zlata**	**2.54**	**267**	⇓P	**Pn**	**00 55 53.9**	**-0.1**
GZR	**Gura Zlata**	**2.54**	**267**	⇑ *i*P	**Pn**	**00 55 53.9**	**-0.2**
GZR	**Gura Zlata**	**2.54**	**267**	⇑ *i*P	**Pn**	**00 55 53.9**	**-0.2**
GZR	**Gura Zlata**	**2.54**	**267**	⇑ *i*P	**Pn**	**00 55 53.9**	**-0.2**
DRGR		**2.83**	**297**	⇓P	**Pn**	**00 55 56.6**	**-1.0**
DRGR		**2.83**	**297**	⇓ *i*P	**Pn**	**00 55 56.6**	**-1.0**
DRGR		**2.83**	**297**	⇓ *i*P	**Pn**	**00 55 56.6**	**-1.0**
DRGR		**2.83**	**297**	⇓ *i*P	**Pn**	**00 55 56.6**	**-1.0**
BMR	**Baia Mare**	**2.89**	**318**	⇓P	**Pn**	**00 55 58.1**	**-0.2**
BMR	**Baia Mare**	**2.89**	**318**	⇑ *i*P	**Pn**	**00 55 57.8**	**-0.6**
BMR	**Baia Mare**	**2.89**	**318**	⇑ *i*P	**Pn**	**00 55 57.8**	**-0.6**
BMR	**Baia Mare**	**2.89**	**318**	⇓P	**Pn**	**00 55 58.1**	**-0.3**
BZS	**Buzias**	**3.35**	**272**	⇑P	**Pn**	**00 56 03.4**	**-0.8**
BZS	**Buzias**	**3.35**	**272**	⇑ *i*P	**Pn**	**00 56 03.4**	**-0.8**
BZS	**Buzias**	**3.35**	**272**	⇑ *i*P	**Pn**	**00 56 03.4**	**-0.8**
BZS	**Buzias**	**3.35**	**272**	⇑ *i*P	**Pn**	**00 56 03.4**	**-0.8**
ZAPS	**Zavoj**	**3.54**	**231**	*e*Pn	**Pn**	**00 56 05.4**	**-1.2**
TRPA	**Tarpa**	**3.67**	**315**	⇓ *i*P	**Pn**	**00 56 07.9**	**-0.4**
TRPA	**Tarpa**	**3.67**	**315**	⇓ *i*P	**Pn**	**00 56 07.9**	**-0.4**
TRPA	**Tarpa**	**3.67**	**315**	⇓ *i*P	**Pn**	**00 56 07.9**	**-0.4**
NISS		**3.85**	**237**	*e*Pn	**Pn**	**00 56 10.3**	**-0.3**
CRVS	**Cervenica-Dubn**	**4.72**	**317**	*e*PN	**Pn**

ULN	**Ulaanbaatar**	**25.81**	**295**	*e*P	**P**	**01 05 31.6**	**+0.4**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.8						
ULN	**Ulaanbaatar**	**25.81**	**295**	*e*P	**P**	**01 05 31.6**	**+0.3**
	comp=Z,2.4nm,0.6s,mb3.9						
SONM	**Songino Array**	**26.26**	**295**	P	**P**	**01 05 35.5**	**+0.2**
	comp=Z,5.2nm,1.0s,mb4.0,baz=90,slow=9.0,SNR=22						
SONM	**Songino Array**	**26.26**	**295**	P	**P**	**01 05 35.5**	**+0.3**
SONM				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA	**Gaotai**	**32.52**	**280**	*e*P	**P**	**01 06 31.9**	**+1.0**
GTA				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
ZAA0	**Zalesovo Array**	**39.46**	**308**	*e*P	**P**	**01 07 29.4**	**-0.5**
ZALV	**Zalesovo Beam**	**39.46**	**308**	P	**P**	**01 07 29.9**	**0.0**
	comp=Z,6.5nm,0.8s,mb4.4,baz=86,slow=7.6,SNR=28						
ZALV				PcP	PcP	01 09 36.6	+0.1
	comp=Z,1.3nm,0.6s,baz=64,slow=3.4,SNR=5.2						
ZALV	**Zalesovo Beam**	**39.46**	**308**	P	**P**	**01 07 29.9**	**0.0**
ZALV						01 09 36.7	
ZALV				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
MK31	**Makanchi Array**	**42.55**	**298**	*e*P	**P**	**01 07 55.4**	**0.0**
MKAR	**Makanchi Array**	**42.55**	**298**	P	**P**	**01 07 55.6**	**+0.1**
	comp=Z,3.2nm,0.6s,mb4.2,baz=81,slow=9.8,SNR=29						
MKAR				PcP	PcP	01 09 47.1	+0.3
	comp=Z,0.5nm,0.5s,baz=61,slow=4.7,SNR=3.6						
MKAR				LR	LR	01 25 47.5	
	comp=Z,18nm,19.6s,baz=358,slow=36						
MKAR	**Makanchi Array**	**42.55**	**298**	P	**P**	**01 07 55.6**	**+0.2**
MKAR						01 09 47.1	
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR				MLR	MLR		
	comp=Z,18nm,19.6s						
KURK	**Kurchatov**	**43.81**	**304**	P	**P**	**01 08 05.2**	**-0.3**
	comp=Z,8.3nm,0.6s,mb4.6,baz=76,slow=8.7,SNR=25						
KURK	**Kurchatov**	**43.81**	**304**	P	**P**	**01 08 05.3**	**-0.2**
KURK				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.6						
CMAR	**Chiang Mai Arr**	**44.17**	**251**	P	**P**	**01 08 08.7**	**-0.1**
	comp=Z,0.9nm,0.4s,mb3.9,baz=40,slow=6.9,SNR=5.0						
CMAR	**Chiang Mai Arr**	**44.17**	**251**	P	**P**	**01 08 08.7**	**-0.1**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BVAR	**Borovoye Array**	**48.06**	**309**	P	**P**	**01 08 39.0**	**+0.1**
	comp=Z,3.0nm,0.5s,mb4.6,baz=79,slow=8.7,SNR=26						
BVAR				PcP	PcP	01 10 06.2	+0.4
	comp=Z,1.0nm,0.5s,baz=51,slow=3.1,SNR=5.8						
BVAR	**Borovoye Array**	**48.06**	**309**	P	**P**	**01 08 39.0**	**+0.1**
BVAR						01 10 06.2	
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TKM2	**Tokmak 2**	**48.36**	**295**	*e*P	**P**	**01 08 41.8**	**+0.4**
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
TKM2	**Tokmak 2**	**48.36**	**295**	*e*P	**P**	**01 08 41.8**	**+0.5**
	comp=Z,6.2nm,0.9s,mb4.6						
ARU	**Arti**	**53.31**	**316**	P	**P**	**01 09 18.0**	**-0.3**
ARU	**Arti**	**53.31**	**316**	*e*P	**P**	**01 09 17.9**	**-0.5**
	comp=Z,9.1nm,1.0s,mb4.7						
ABKAR	**Akbulak array**	**55.57**	**308**	*e*P	**P**	**01 09 34.8**	**0.0**
	comp=Z,2.9nm,0.5s,mb4.6						
AKTK	**Aktyubinsk**	**56.15**	**310**	P	**P**	**01 09 38.4**	**-0.6**
AKTO	**Aktyubinsk**	**56.15**	**310**	P	**P**	**01 09 38.4**	**-0.6**
	comp=Z,0.7nm,0.3s,mb4.1,baz=55,slow=4.8,SNR=4.4						
AKTO	**Aktyubinsk**	**56.15**	**310**	P	**P**	**01 09 38.4**	**-0.6**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
RES	**Resolute Bay**	**57.21**	**16**	P	**P**	**01 09 45.1**	**-1.1**
	comp=Z,2.3nm,0.5s,mb4.5,baz=310,slow=6.4,SNR=12						
RES	**Resolute Bay**	**57.21**	**16**	*e*P	**P**	**01 09 45.3**	**-0.9**
KEV	**Kevo**	**58.98**	**339**	*e*P	**P**	**01 09 57.5**	**-1.1**
KEV	**Kevo**	**58.98**	**339**	*e*p	**P**	**01 09 57.5**	**-1.1**
JOF	**Joensuu**	**61.92**	**331**	*e*P	**P**	**01 10 16.7**	**-2.0**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.7						
JOF	**Joensuu**	**61.92**	**331**	*e*p	**P**	**01 10 16.7**	**-2.0**
	comp=Z,2.5nm,0.5s,mb4.6						
WRA	**Warramunga Arr**	**62.43**	**189**	P	**P**	**01 10 22.3**	**-0.2**
	comp=Z,0.2nm,0.4s,mb3.6,baz=4.7,slow=7.4,SNR=3.3						
KAF	**Kangasniemi**	**64.21**	**332**	*e*P	**P**	**01 10 32.0**	**-1.9**
KAF	**Kangasniemi**	**64.21**	**332**	*e*p	**P**	**01 10 32.0**	**-1.9**
FINES	**FINESS Array B**	**64.75**	**332**	P	**P**	**01 10 36.7**	**-0.7**
	comp=Z,2.3nm,0.5s,mb4.5,baz=52,slow=6.6,SNR=41						
FINES	**FINESS Array B**	**64.75**	**332**	P	**P**	**01 10 36.7**	**-0.7**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
NB2	**NORSAR Subarra**	**69.81**	**337**	P	**P**	**01 11 08.7**	**-0.7**
	comp=Z,0.9nm,0.5s,mb4.0,baz=34,slow=6.5						
NOA	**NORSAR Array B**	**69.81**	**337**	P	**P**	**01 11 08.6**	**-0.8**
	comp=Z,1.2nm,0.8s,mb3.9,baz=37,slow=6.1,SNR=16						
NOA				LR	LR	01 47 21.7	
	comp=Z,16nm,20.5s,baz=205,slow=41						
NOA	**NORSAR Array B**	**69.81**	**337**	P	**P**	**01 11 08.6**	**-0.8**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA				MLR	MLR		
	comp=Z,16nm,20.5s						
AKASG	**Malin Array Be**	**70.89**	**322**	P	**P**	**01 11 15.3**	**-0.9**
	comp=Z,0.7nm,0.3s,mb4.0,baz=42,slow=7.7,SNR=6.5						
AKASG	**Malin Array Be**	**70.89**	**322**	P	**P**	**01 11 15.3**	**-0.9**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**70.89**	**322**	P	**P**	**01 11 15.3**	**-0.9**
NVAR	**Mina Array Bea**	**70.93**	**55**	P	**P**	**01 11 18.8**	**+2.1**
	comp=Z,0.6nm,0.7s,mb3.6,baz=258,slow=10,SNR=5.2						
NVAR	**Mina Array Bea**	**70.93**	**55**	P	**P**	**01 11 18.8**	**+2.1**
BRTR	**Keskin Array B**	**76.28**	**311**	P	**P**	**01 11 48.1**	**+0.2**
	comp=Z,0.8nm,0.6s,mb3.8,baz=64,slow=3.7,SNR=5.2						
BRTR	**Keskin Array B**	**76.28**	**311**	P	**P**	**01 11 48.2**	**+0.2**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CLL	**Collm**	**77.14**	**330**	⇑*i*P	**P**	**01 11 52.2**	**-0.4**
MMAI	**Mount Meron Ar**	**79.91**	**306**	P	**P**	**01 12 09.0**	**+0.8**
	comp=Z,2.0nm,0.7s,mb4.2,baz=19,slow=9.4,SNR=4.8						
LPL	**La Plagne**	**84.27**	**331**	*e*P	**P**	**01 12 31.0**	**+0.2**
LPG	**La Plagne**	**84.28**	**331**	*e*P	**P**	**01 12 31.2**	**+0.3**
AVF	**Avril sur Loir**	**84.34**	**333**	*e*P	**P**	**01 12 30.9**	**-0.2**
	comp=Z,5.1nm,0.7s,mb4.5						
AVF	**Avril sur Loir**	**84.34**	**333**	*e*P	**P**	**01 12 30.9**	**-0.2**
AVF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.5						
AVF	**Avril sur Loir**	**84.34**	**333**	*e*P	**P**	**01 12 30.9**	**-0.2**
	comp=Z,2.5nm,0.7s,mb4.5						
ORIF	**Oris-en-Rattie**	**85.09**	**331**	*e*P	**P**	**01 12 35.0**	**0.0**
FRF	**La Foret Royal**	**85.98**	**330**	*e*P	**P**	**01 12 38.5**	**-0.9**
TXAR	**Lajitas Array**	**85.99**	**53**	P	**P**	**01 12 40.6**	**+0.9**
	comp=Z,0.5nm,0.6s,mb4.0,baz=292,slow=3.2,SNR=8.3						
TXAR	**Lajitas Array**	**85.99**	**53**	P	**P**	**01 12 40.7**	**+1.0**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
LMR	**La Mourre**	**86.22**	**330**	*e*P	**P**	**01 12 40.1**	**-0.5**
	comp=Z,3.6nm,0.6s,mb4.5						
LMR	**La Mourre**	**86.22**	**330**	*e*P	**P**	**01 12 40.1**	**-0.5**
LMR				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.5						
LMR	**La Mourre**	**86.22**	**330**	*e*P	**P**	**01 12 40.1**	**-0.5**
	comp=Z,1.8nm,0.6s,mb4.5						

ISCJB ***03*** *01:38:43.4±0.6, 15°.39N±0°.03×123°.00E±0°.06, h43km±6km, mb4.2/23, MS3.3/5, Error ellipse: s-maj=10.6km s-min=5.0km az=170.3*

BJI ***03*** *01:38:43.4, 15°.38N×123°.44E, h42km, mB4.2/3, mb4.5/4, Ms3.9/1, Ms7 3.7/1*

MAN ***03*** *01:38:43, 15°.43N×122°.85E, h21km, mb4.9, ML3.8, MS3.9*

MAN INTENSITY II - BALER AURORA.

IDC ***03*** *01:38:45.2±0.7, 15°.36N×123°.14E, h44km±5km, mb3.8/16, mb1 4.0/17, mb1mx3.9/23, mbtmp3.8/17, ML4.7/1, MS3.2/4, Ms1 3.2/4, ms1mx3.0/29, Error ellipse: s-maj=14.4km s-min=9.5km az=124.0*

NEIC ***03*** *01:38:45.3±1.8, 15°.32N×123°.05E, h44km±17km, mb4.4/6, Error ellipse: s-maj=12.9km s-min=7.5km az=67.0*

NEIC Felt [II PIVS] at Baler, Luzon.

ISC 03 01:38:43.3±1.6, 15°.40N±0°.03×123°.05E±0°.06, h26km±12km, h44km±1.5km:pP-P, n61, σ1§18/60, mb4.2/23, MS3.3/5, 1C,

Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**1.26**	**238**	*e*P	**Pn**	**01 39 02.9**	**-2.3**
BALP	**Baler**	**1.46**	**284**	*e*P	**Pn**	**01 39 05.1**	**-2.9**
GQP	**Guinayangan**	**1.59**	**201**	⇑*i*P	**Pn**	**01 39 10.0**	**+0.2**
GQP				*i* S	**Sn**	**01 39 30.0**	**+0.6**
PALP	**Palanan**	**1.76**	**340**	*e*P	**Pn**	**01 39 11.0**	**-1.1**
PCPH	**Palayan**	**1.89**	**275**	*e*P	**Pn**	**01 39 11.5**	**-2.3**
PVCP	**Virac**	**2.08**	**149**	*e*P	**Pn**	**01 39 17.2**	**+0.6**
AUQP	**San Andres**	**2.09**	**190**	*e*P	**Pn**	**01 39 18.8**	**+2.1**
BOAC	**Boac**	**2.25**	**211**	*e*P	**Pn**	**01 39 19.4**	**+0.6**
TGY	**Tagaytay City**	**2.41**	**238**	P	**Pn**	**01 39 22.0**	**+1.0**
	178nm,0.3s,baz=87,slow=4.0,SNR=16						
TGY				S	**Sn**	**01 39 53.3**	**+3.5**
	217nm,0.3s,baz=311,slow=20,SNR=6.8						
CVP	**Callao Caves**	**2.58**	**333**	*e*P	**Pn**	**01 39 22.3**	**-1.0**
SGCP	**Mt. Cagua**	**2.99**	**341**	*e*P	**Pn**	**01 39 28.9**	**-0.1**
APYP	**Conner**	**3.00**	**325**	*e*P	**Pn**	**01 39 29.8**	**+0.6**
SCZP	**Santa Cruz**	**3.04**	**278**	*e*P	Px	01 39 53.0	
ABRA	**Dolores**	**3.17**	**315**	*e*P	**Pn**	**01 39 32.5**	**+1.1**
BOLP	**Bolinao**	**3.17**	**288**	*e*P	**Pn**	**01 39 31.4**	**-0.1**
OTRP	**Odiongan**	**3.17**	**198**	*e*P	**Pn**	**01 39 32.0**	**+0.4**
CNP	**Catarman**	**3.27**	**151**	*e*P	**Pn**	**01 39 35.3**	**+2.4**
SJMP	**San Jose**	**3.46**	**213**	*e*P	**Pn**	**01 39 37.0**	**+1.4**
GUIM	**Jordan**	**4.76**	**185**	*e*P	**Pn**	**01 39 56.5**	**+3.1**
CUYO	**Cuyo Island**	**4.93**	**204**	*e*P	**Pn**	**01 39 55.4**	**-0.3**
BBP	**Basco**	**5.12**	**349**	*e*P	**Pn**	**01 39 57.1**	**-1.2**
KSM	**Kuching**	**18.69**	**223**	P	**Pn**	**01 43 00.3**	**+0.1**
	16nm,1.2s						
CBIJ	**Chichi jima**	**21.27**	**54**	LR	LR	01 50 06.6	
	comp=Z,58nm,21.7s,MS2.9,baz=176,slow=32						
KSRS	**Korea Array**	**22.39**	**10**	P	**P**	**01 43 39.3**	**-0.4**
	1.2nm,0.6s,mb3.5,baz=201,slow=11,SNR=4.4						
KSRS				LR	LR	01 51 19.1	
	comp=Z,58nm,20.7s,MS3.0,baz=163,slow=34						
CMAR	**Chiang Mai Arr**	**23.25**	**281**	P	**P**	**01 43 48.7**	**-0.3**
	3.7nm,0.7s,mb3.9,baz=87,slow=7.8,SNR=18						
MJAR	**Matsushiro Arr**	**25.02**	**30**	P	**P**	**01 44 05.6**	**+0.4**
	1.4nm,0.6s,mb3.7,baz=199,slow=8.4,SNR=4.9						
MJAR	**Matsushiro Arr**	**25.02**	**30**	P	**P**	**01 44 05.6**	**+0.4**
HHC	**Hu-ho-hao-te**	**27.25**	**341**	*e*P	**P**	**01 44 28.8**	**+3.5**
HHC				pP	pP	01 44 40.3	+7.3
HHC				sP	sP	01 44 46.5	+10
HHC				PP		01 45 17.1	
HHC				PcP	PcP	01 47 47.7	+2.9
HHC				S	**S**	**01 49 04.2**	**+1.2**
HHC				sS	sS	01 49 24.1	+8.4
HHC				SS		01 50 23.3	
HHC				ScP	ScP	01 51 22.5	-1.2
HHC				PcS	PcS	01 51 27.3	+0.9
HHC				ScS	ScS	01 55 13.6	-1.3
HHC				pmax	pmax		
	comp=Z,12nm,0.5s,mb4.7						
HHC				pmax	pmax		
	comp=Z,84nm,5.2s						
HHC				LR	LR		
	comp=N,140nm,12.6s,MS3.8						
HHC				LR	LR		
	comp=E,98nm,12.3s,MS3.8						
HHC				LR	LR		
	comp=Z,120nm,12.4s,MS3.7						
SONM	**Songino Array**	**35.16**	**340**	P	**P**	**01 45 35.4**	**+0.6**
	comp=Z,1.0nm,0.5s,mb4.0,baz=157,slow=11,SNR=8.6						
SONM				LR	LR	02 00 45.6	
	comp=Z,119nm,19.6s,MS3.6,baz=158,slow=38						
MBWA	**Marble Bar**	**36.47**	**185**	*e*P	**P**	**01 45 43.9**	**-2.4**
WRAB	**Tennant Creek**	**36.82**	**162**	*e*P	**P**	**01 45 49.0**	**-0.3**
	comp=Z,16nm,1.1s,mb4.8						
WRA	**Warramunga Arr**	**36.83**	**162**	P	**P**	**01 45 47.6**	**-1.8**
	comp=Z,7.7nm,0.8s,mb4.6,baz=342,slow=9.8,SNR=26						
ASAR	**Alice Springs**	**40.25**	**164**	P	**P**	**01 46 17.2**	**-0.8**
	comp=Z,4.3nm,0.9s,mb4.2,baz=346,slow=7.5,SNR=25						
MEEK	**Meekatharra**	**42.00**	**186**	*e*P	**P**	**01 46 30.4**	**-2.0**
MORW	**Morawa**	**44.72**	**189**	*e*P	**P**	**01 46 52.3**	**-2.0**
MK31	**Makanchi Array**	**46.08**	**321**	*e*P	**P**	**01 47 05.8**	**+0.8**
MK31				*e*		01 47 17.4	
MKAR	**Makanchi Array**	**46.08**	**321**	P	**P**	**01 47 05.8**	**+0.8**
	comp=Z,3.7nm,0.8s,mb4.4,baz=113,slow=8.6,SNR=32						
MKAR				pP	pP	01 47 17.4	+4.5
	comp=Z,10nm,0.7s,baz=116,slow=9.0,SNR=36						
MKAR	**Makanchi Array**	**46.08**	**321**	P	**P**	**01 47 05.8**	**+0.8**
MKAR				pP	pP	01 47 17.4	+4.5
PETK	**Petropavlovsk-**	**46.46**	**28**	P	**P**	**01 47 08.2**	**+0.3**
	comp=Z,3.1nm,0.6s,mb4.4,baz=170,slow=3.4,SNR=6.5						
KMBL	**Kainbaijta**	**46.51**	**181**	*e*P	**P**	**01 47 06.8**	**-1.6**
	comp=Z,78nm,0.4s						
NWAO	**Narrogin (SRO)**	**48.37**	**187**	*e*P	**P**	**01 47 21.4**	**-1.5**
	comp=Z,62nm,0.5s						
ZAA0	**Zalesovo Array**	**48.65**	**331**	P	**P**	**01 47 25.2**	**+0.3**
ZALV	**Zalesovo Beam**	**48.65**	**331**	P	**P**	**01 47 25.2**	**+0.3**
	comp=Z,1.5nm,0.6s,mb4.2,baz=119,slow=7.1,SNR=7.8						
ZALV				pP	pP	01 47 36.5	+3.7
	comp=Z,4.3nm,0.8s,baz=118,slow=5.5,SNR=6.1						
ZALV				LR	LR	02 12 06.5	
	comp=Z,14nm,19.3s,MS3.0,baz=339,slow=41						
BBOO	**Buckleboo**	**49.52**	**166**	*e*P	**P**	**01 47 31.0**	**-0.8**
	comp=Z,14nm,0.6s,mb5.2						
KURK	**Kurchatov**	**50.09**	**325**	*e*P	**P**	**01 47 36.8**	**+0.8**
	comp=Z,32nm,0.8s,mb5.4						
KURK				*e*		01 47 47.4	
STKA	**Stephens Creek**	**50.26**	**159**	*e*P	**P**	**01 47 36.9**	**-0.5**
	comp=Z,3.7nm,0.8s,mb4.5						
STKA	**Stephens Creek**	**50.26**	**159**	P	**P**	**01 47 37.1**	**-0.2**
	comp=Z,3.9nm,0.8s,mb4.5,baz=342,slow=6.2,SNR=7.6						
CMSA	**Cobar Meteorol**	**51.48**	**155**	*e*P	**P**	**01 47 47.1**	**+0.5**
BVAR	**Borovoye Array**	**55.69**	**324**	P	**P**	**01 48 16.7**	**-0.6**
	comp=Z,0.9nm,0.5s,mb4.0,baz=121,slow=7.3,SNR=6.6						
BVAR				pP	pP	01 48 30.7	+5.3
	comp=Z,1.8nm,0.4s,baz=117,slow=6.4,SNR=9.5						
BRVK	**Borovoye**	**55.76**	**324**	*e*P	**P**	**01 48 19.0**	**+1.2**
	comp=Z,1.1nm,0.6s,mb4.1						
BRVK				*e*		01 48 30.5	
ABKAR	**Akbulak array**	**60.97**	**318**	*e*P	**P**	**01 48 54.5**	**+0.3**
	comp=Z,3.1nm,0.7s,mb4.5						
ABKAR				*e*		01 49 06.1	
BPAW	**Bear Paw Mtn.**	**74.53**	**27**	*e*P	**P**	**01 50 21.3**	**+1.9**
	comp=Z,4.3nm,1.0s,mb4.3						
JOF	**Joensuu**	**77.22**	**332**	*e*p	sP	01 50 47.2	+1.0
	comp=Z,2.4nm,0.5s						
KAF	**Kangasniemi**	**79.65**	**332**	*e*p	PcP	01 50 56.8	+0.8
	comp=Z,1.6nm,0.7s						
BRTR	**Keskin Array B**	**79.89**	**308**	P	**P**	**01 50 51.0**	**+1.1**
	comp=Z,0.3nm,0.5s,mb3.5,baz=96,slow=2.7,SNR=2.9						
BRTR				pP	pP	01 51 03.9	+5.6
	comp=Z,0.6nm,0.7s,baz=83,slow=3.1,SNR=2.9						
FINES	**FINESS Array B**	**79.91**	**331**	P	**P**	**01 50 49.7**	**+0.1**
	comp=Z,0.8nm,0.5s,mb3.9,baz=56,slow=4.1,SNR=6.5						
FINES				pP	pP	01 51 02.9	+4.9
	comp=Z,1.2nm,0.4s,baz=55,slow=5.8,SNR=3.0						
AKASG	**Malin Array Be**	**80.64**	**320**	P	**P**	**01 50 53.8**	**0.0**
	comp=Z,0.2nm,0.3s,mb3.5,baz=67,slow=4.5,SNR=2.8						
AKASG				pP	pP	01 51 06.9	+4.8
	comp=Z,1.7nm,0.8s,baz=67,slow=5.3,SNR=2.7						
NB2	**NORSAR Subarra**	**86.80**	**333**	P	**P**	**01 51 24.8**	**-0.3**
	comp=Z,1.4nm,0.5s,mb4.5,baz=66,slow=4.8						
NOA	**NORSAR Array B**	**86.80**	**333**	P	**P**	**01 51 23.9**	**-1.1**
	comp=Z,0.8nm,0.7s,mb4.0,baz=65,slow=4.8,SNR=4.3						
NOA				pP	pP	01 51 38.2	+4.7
	comp=Z,1.5nm,0.6s,baz=65,slow=4.8,SNR=6.6						
NOA	**NORSAR Array B**	**86.80**	**333**	P	**P**	**01 51 23.9**	**-1.1**
NOA				pP	pP	01 51 38.2	+4.7
YKA	**Yellowknife Ar**	**90.34**	**23**	P	**P**	**01 51 42.1**	**+0.3**
	comp=Z,0.4nm,0.6s,mb3.9,baz=301,slow=5.0,SNR=3.4						

CASC 03 01:46:49.5±1.6, 13°.65N×90°.74W, h37km±9km, MD3.8, 4D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**0.75**	**10**	*e*P	Pn	01 47 04.1	+0.5
FUG	**Fuego 3**	**0.80**	**353**	*e*P	Pn	01 47 04.3	0.0
FG6		**0.91**	**351**	*e*P	Pn	01 47 06.0	+0.1
NBG	**Las Nubes**	**1.00**	**22**	*e*P	Pn	01 47 08.5	+1.4
NBG				*e*S	Sn	01 47 23.1	+3.0
RTR	**El Retiro**	**1.09**	**77**	⇓*e*P	Pn	01 47 08.7	+0.4
JAT	**Jato**	**1.09**	**307**	*e*P	Pn	01 47 08.5	+0.2
SBLS	**San Blas**	**1.10**	**80**	⇓*i*P	Pn	01 47 08.5	+0.1
SBLS				*e*S	Sn	01 47 22.8	+0.4
SNJE	**San Jose**	**1.12**	**79**	⇓*e*P	Pn	01 47 09.0	+0.3
SNJE				*e*S	Sn	01 47 23.5	+0.6
TP2	**Tecpan 2**	**1.16**	**346**	⇓*e*P	Pn	01 47 10.0	+0.7
TP2				*e*S	Sn	01 47 24.7	+0.9
BOQS	**Boqueron**	**1.42**	**86**	*e*P	Pn	01 47 13.1	+0.3
BOQS				*e*S	Sn	01 47 31.4	+1.1
LFRS	**El Faro**	**1.63**	**91**	*e*P	Pn	01 47 16.0	+0.3
LBRS	**Las Brisas**	**1.65**	**87**	*e*P	Pn	01 47 16.1	+0.1
MRL	**Marmol**	**1.73**	**36**	*e*P	Pn	01 47 18.1	+1.0
SNVI	**San Vicente**	**1.85**	**91**	*e*P	Pn	01 47 19.2	+0.5
BLLM	**Bellamira**	**2.44**	**95**	*e*P	Pn	01 47 28.0	+1.2
CNCH	**Conchagua**	**2.85**	**97**	*e*P	Pn	01 47 33.4	+0.9

IDC ***03*** *02:00:48.6±2.2, 5°.84S×131°.27E, h0km, mb4.1/3, mb1 4.3/5, mb1mx3.9/16, mbtmp4.2/5, ML4.3/2, Error ellipse: s-maj=230.8km s-min=22.6km az=70.0*

NEIC ***03*** *02:01:06.0±3.0, 6°.89S×129°.40E, h138km±31km, mb4.1/1, Error ellipse: s-maj=39.3km s-min=21.8km az=62.0*

ISCJB ***03*** *02:01:07.8±2.1, 7°.11S±0°.09×129°.6E±0°.1, h183km±22km, mb3.7/3, Error ellipse: s-maj=20.9km s-min=14.7km az=165.6*

ISC 03 02:01:08.4±1.6, 7°.17S±0°.08×129°.5E±0°.1, h170km±15km, n14, σ1§32/21, mb3.7/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.23**	**152**	*e*Pn	**Pn**	**02 02 39.9**	**+1.6**
	72nm,0.4s						
KAKA				*e*Sn	**Sn**	**02 03 48.1**	**-0.9**
FITZ	**Fitzroy Crossi**	**11.50**	**199**	*e*Pn	**Pn**	**02 03 49.0**	**+1.3**
FITZ				*e*S	**Sn**	**02 05 54.6**	**-0.6**
WRAB	**Tennant Creek**	**13.54**	**160**	*e*Pn	**Pn**	**02 04 14.6**	**+0.9**
	9.2nm,1.0s						
WRAB				*e*S	**Sn**	**02 06 41.2**	**-2.9**
WRA	**Warramunga Arr**	**13.54**	**160**	Pn	**Pn**	**02 04 13.2**	**-0.6**
	1.2nm,0.3s,baz=343,slow=13,SNR=12						
WRA				Sn	**Sn**	**02 06 38.3**	**-6.0**
	1.8nm,0.3s,baz=332,slow=22,SNR=8.6						
WRA	**Warramunga Arr**	**13.54**	**160**	Pn	**Pn**	**02 04 13.2**	**-0.6**
WRA				Sn	**Sn**	**02 06 38.3**	**-6.0**
ASAR	**Alice Springs**	**16.94**	**166**	P	**Pn**	**02 04 59.2**	**+3.6**
	1.4nm,0.3s,baz=348,slow=12,SNR=69						
ASAR				S	**S**	**02 08 03.2**	**+0.3**
	0.5nm,0.3s,baz=352,slow=28,SNR=6.1						
ASAR	**Alice Springs**	**16.94**	**166**	P	**Pn**	**02 04 59.2**	**+3.6**
ASAR				S	**S**	**02 08 03.2**	**+0.3**
STKA	**Stephens Creek**	**27.05**	**157**	P	**P**	**02 06 38.0**	**+2.9**
	1.1nm,0.5s,mb3.8,baz=354,slow=9.2,SNR=4.0						
STKA	**Stephens Creek**	**27.05**	**157**	P	**P**	**02 06 38.0**	**+2.9**
MK31	**Makanchi Array**	**68.09**	**327**	*e*P	**P**	**02 11 49.7**	**-0.1**
MKAR	**Makanchi Array**	**68.09**	**327**	P	**P**	**02 11 49.6**	**-0.2**
	0.8nm,0.4s,mb3.8,baz=111,slow=8.2,SNR=25						
MKAR	**Makanchi Array**	**68.09**	**327**	P	**P**	**02 11 49.6**	**-0.2**
ZALV	**Zalesovo Beam**	**71.51**	**334**	P	**P**	**02 12 08.7**	**-1.8**
	0.4nm,0.3s,mb3.6,baz=143,slow=5.0,SNR=4.0						
ZALV	**Zalesovo Beam**	**71.51**	**334**	P	**P**	**02 12 08.7**	**-1.8**

BJI ***03*** *02:23:56.7, 39°.09N×71°.46E, h20km, mB4.4/6, mb4.3/10, ML4.0/3, Ms3.8/4, Ms7 3.5/4*

IDC ***03*** *02:23:58.0±0.7, 39°.16N×71°.97E, h0km, mb4.1/12, mb1 4.3/18, mb1mx4.1/29, mbtmp4.1/18, ML3.9/6, MS3.3/9, Ms1 3.3/9, ms1mx3.1/31, Error ellipse: s-maj=12.7km s-min=11.6km az=131.0*

ISCJB ***03*** *02:24:01.8±0.7, 39°.04N±0°.03×72°.04E±0°.06, h43km±7km, mb4.2/25, MS3.3/10, Error ellipse: s-maj=7.7km s-min=3.8km az=159.8*

*MO

MKAR Lg 02 29 34.0
NDI New Delhi 11.23 156 *ex* **Pn 02 26 43.0 +0.4**
NDI *e*S **Sn 02 28 46.0 -0.7**
AYAN Aya Nagar 11.39 157 *e*S **Sn 02 28 50.5 -0.1**
KHET Khetri 11.43 163 *e*S **Sn 02 28 49.3 -2.2**
SONA Sohna 11.60 158 *e*S **Sn 02 28 55.4 -0.2**
KURK Kurchatov 12.49 20 ⇓Pn **Pn 02 26 53.5 -6.0**
comp=N,7.4nm,1.0s
KURK ⇓Lg 02 30 33.6
comp=N,42nm,1.0s
KURK Kurchatov 12.49 20 Pn **Pn 02 26 53.8 -5.8**
comp=N,0.2nm,0.3s,baz=216,slow=12,SNR=36
KURK Sn **Sn 02 29 09.7 -7.3**
comp=N,0.0nm,0.3s,baz=202,slow=28,SNR=4.0
KURK Lg 02 30 25.2
comp=N,0.1nm,0.3s,baz=149,slow=38,SNR=5.4
KURK LR LR 02 31 57.6
comp=N,153nm,21.2s,baz=220,slow=39
KURK Kurchatov 12.49 20*d i*P **Pn 02 26 54.5 -5.1**
KURK pmax pmax
comp=Z,13nm,1.7s
KURK Kurchatov 12.49 20 *e*Pn **Pn 02 26 54.5 -5.1**
KURK Sn **Sn 02 29 09.7 -7.3**
KURK Lg 02 30 25.2
KURK LR LR 02 31 57.6
AGRA Agra 12.82 156 *e*S **Sn 02 29 23.3 -2.0**
AGRA AML AML 02 29 31.3
comp=E,86nm,0.3s
AGRA AML AML 02 29 32.9
comp=N,114nm,0.1s
AB31 Akbulak array 13.35 323 Pn **Pn 02 27 04.2 -7.2**
comp=N,11nm,0.8s,baz=132,slow=12,SNR=104
AB31 ⇑Sn **Sn 02 29 28.3 -10**
comp=N,15nm,0.8s,baz=136,slow=23,SNR=9.0
AB31 Akbulak array 13.35 323 *i* P **Pn 02 27 04.2 -7.2**
AB31 *i* 02 29 23.8
AB31 pmax pmax
comp=Z,2.0nm,0.3s
AB31 smax
comp=N,2.0nm,0.3s
BVAR Borovoye Array 13.97 356 Pn **Pn 02 27 13.7 -6.0**
comp=N,0.4nm,0.3s,baz=165,slow=12,SNR=22
BVAR Lg 02 31 17.0
comp=N,0.3nm,0.3s,baz=138,slow=25,SNR=5.8
ZRNK Zerenda 14.01 352 ⇑Pn **Pn 02 27 15.2 -5.1**
comp=N,7.9nm,0.7s
ZRNK ⇑Lg 02 31 19.7
comp=N,20nm,1.2s
ZRNK Zerenda 14.01 352 *i* P **Pn 02 27 15.1 -5.1**
ZRNK pmax pmax
comp=Z,8.0nm,0.7s
BRVK Borovoye 14.01 356 ⇓Pn **Pn 02 27 13.8 -6.5**
comp=Z,20nm,1.1s
BRVK ⇓Lg 02 31 20.2
comp=Z,40nm,1.0s
BRVK Borovoye 14.01 356⇑ *e*P **Pn 02 27 14.6 -5.7**
BRVK pmax pmax
comp=Z,15nm,1.2s
BRVK Borovoye 14.01 356 *e*Pn **Pn 02 27 14.4 -5.9**
comp=Z,8.9nm,0.7s
AKTK Aktyubinsk 15.07 323 Pn **Pn 02 27 28.5 -5.7**
AKTK Sn **Sn 02 30 12.2 -10**
AKTK Lg 02 31 51.1
AKTK LR LR 02 33 58.2
AKTO Aktyubinsk 15.07 323 Pn **Pn 02 27 28.5 -5.7**
comp=Z,0.5nm,0.3s,baz=134,slow=13,SNR=18
AKTO Sn **Sn 02 30 10.2 -10**
comp=Z,0.5nm,0.3s,baz=168,slow=20,SNR=4.9
AKTO Lg 02 31 51.1
baz=129,slow=20,SNR=1.9
AKTO LR LR 02 33 58.2
comp=Z,141nm,21.9s,baz=304,slow=40
AKTO Aktyubinsk 15.07 323 P **Pn 02 27 28.5 -5.7**
AKTO 02 30 10.2
AKTO pmax pmax
comp=Z,1.0nm,0.3s
AKTO smax
comp=N,1.0nm,0.3s
AKTO MLR MLR
comp=Z,141nm,21.9s
GKN Gorkha 15.22 133 *e*P **Pn 02 27 35.5 -0.8**
comp=Z,175nm,0.5s
KKN Kakani 15.75 132 *e*P **Pn 02 27 37.8 -5.4**
comp=Z,131nm,0.5s
DMN Daman 15.79 133 *e*P **Pn 02 27 40.0 -3.6**
comp=Z,44nm,0.7s
PKIN Phulchoki 15.98 132 *e*P **Pn 02 27 41.1 -5.0**
comp=Z,61nm,0.6s
PKI Pulchoki 15.99 132 *e*P **Pn 02 27 41.3 -4.9**
comp=Z,92nm,0.6s
GUN Gumba 16.01 130 *e*P **Pn 02 27 40.1 -6.4**
comp=Z,57nm,0.8s
JIRN Jiri 16.38 130 *e*P **Pn 02 27 45.3 -5.9**
comp=Z,47nm,0.5s
RAMN Ramite 17.15 131 *e*P **Pn 02 27 55.7 -5.1**
comp=Z,69nm,0.6s
ZAA0 Zalesovo Array 17.19 26 *e*Pn **Pn 02 27 58.5 -2.6**
ZALV Zalesovo Beam 17.19 26 P **Pn 02 27 58.5 -2.6**
comp=Z,3.4nm,0.3s,baz=214,slow=10,SNR=53
ZALV Lg 02 33 02.6
comp=Z,0.2nm,0.3s,baz=206,slow=23,SNR=3.8
ZALV LR LR 02 34 51.3
comp=Z,117nm,18.6s,baz=247,slow=38
NVS Novosibirsk 17.44 22 *e*P **Pn 02 27 57.1 -7.1**
NVS *e*S **S 02 31 16.7 -6.6**
NVS pmax pmax
comp=N,28nm,1.4s
NVS pmax pmax
comp=Z,22nm,1.4s
NVS smax
comp=N,29nm,1.9s
ODAN Odare 17.69 129 *e*P **Pn 02 28 03.6 -3.8**
comp=N,35nm,0.7s
MAK Makhachkala 18.92 290 *e*P pP 02 28 33.2 +0.5
MAK MLR MLR
comp=Z,228nm,15.0s
SVE Sverdlovsk 19.27 341 *e*P **Pn 02 28 22.1 -4.1**
SVE *e*S **S 02 31 40.7 -19**
SVE pmax pmax
comp=Z,11nm,0.8s
SVE MLR MLR
comp=Z,552nm,11.0s
ARU Arti 19.50 337*d i*P **Pn 02 28 25.2 -3.9**
ARU S **S 02 31 51.9 -13**
ARU pmax pmax
comp=Z,14nm,1.2s
ARU Arti 19.50 337 *e*P **Pn 02 28 25.4 -3.7**
comp=Z,14nm,0.9s
DGRG David-gareji 20.49 285 P **P 02 28 43.5 +5.3**
GNI Garni 21.06 282 P **P 02 28 44.0 -0.4**
comp=Z,7.2nm,0.6s,mb4.2,baz=328,slow=10.0,SNR=4.6
GNI LR LR 02 38 17.6
comp=Z,54nm,19.7s,MS2.9,baz=237,slow=41
GNI Garni 21.06 282*d i*P **P 02 28 52.5 +8.1**
GNI pmax pmax
comp=Z,27nm,1.0s
GNI MLR MLR
comp=Z,61nm,26.0s
GTA Gaotai 21.45 80 *e*P **P 02 28 51.7 +3.1**
GTA pP 02 28 55.7
GTA sP sP 02 28 58.3 -8.5
GTA pmax pmax
comp=Z,6.0nm,0.7s,mb4.0
GTA pmax pmax
comp=Z,60nm,4.8s
GTA LR LR
comp=N,86nm,10.2s,MS3.6
GTA LR LR
comp=E,96nm,12.3s,MS3.6
GTA LR LR
comp=Z,85nm,14.4s,MS3.3
ZEI Tsey 21.56 289 *e*P **P 02 28 52.5 +2.7**
ZEI pmax pmax
comp=Z,10.0nm,0.5s,mb4.5
ONI Oni 21.89 288 P **P 02 28 54.9 +1.6**
KIV Kislovodsk 22.47 292 *e*P **P 02 29 05.3 +5.9**
KIV *e*S **S 02 33 01.1 -1.8**
KIV pmax pmax
comp=Z,19nm,1.1s,mb4.4
KIV MLR MLR
comp=Z,36nm,13.0s,MS3.0
SOKR Solikamsk 22.67 340 *e*P **P 02 28 58.5 -2.8**
SOKR pmax pmax
comp=Z,8.0nm,0.9s,mb4.2
SOKR MLR MLR
comp=Z,180nm,14.0s,MS3.7

VSR Storozhevoye 25.95 309 *e*P **P 02 29 33.8 +1.7**
VSR pmax pmax
comp=Z,10.0nm,1.1s,mb4.3
VSR pmax pmax
comp=N,5.0nm,0.9s
VSR pmax pmax
comp=E,10.0nm,1.5s
VSR MLR MLR
comp=Z,170nm,14.0s,MS3.7
VSR MLR MLR
comp=N,190nm,20.0s
VSR MLR MLR
comp=E,130nm,19.0s
SONM Songino Array 26.20 59 P **P 02 29 35.9 +1.4**
comp=E,0.7nm,0.7s,mb3.3,baz=253,slow=4.5,SNR=5.5
SONM LR LR 02 41 02.6
comp=E,60nm,19.4s,MS3.1,baz=142,slow=39
SONM Songino Array 26.20 59 P **P 02 29 35.9 +1.4**
SONM pmax pmax
comp=Z,1.0nm,0.7s
SONM MLR MLR
comp=Z,60nm,19.4s
OBN Obninsk 28.59 316⇓*e*P **P 02 29 58.1 +2.3**
OBN *e* 02 30 44.3
OBN *e*S **S 02 34 37.4 -2.9**
OBN pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
OBN MLR MLR
comp=Z,100nm,16.0s,MS3.5
BRTR Keskin Array B 29.56 284 P **P 02 30 04.5 0.0**
comp=Z,2.0nm,0.9s,mb3.9,baz=83,slow=9.0,SNR=7.4
BRTR Keskin Array B 29.56 284 P **P 02 30 04.5 0.0**
BRTR pmax pmax
comp=Z,2.0nm,0.9s
MMAI Mount Meron Ar 30.13 270 LR LR 02 45 21.3
comp=Z,23nm,18.9s,MS2.8,baz=105,slow=43
HHC Hu-ho-hao-te 30.13 74 *e*P **P 02 30 15.8 +6.2**
HHC S **S 02 35 05.0 +0.3**
HHC pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
HHC pmax pmax
comp=Z,42nm,6.0s
CMAR Chiang Mai Arr 31.07 124 P **P 02 30 18.6 +0.6**
comp=Z,0.9nm,0.4s,mb4.0,baz=302,slow=7.6,SNR=4.4
CMAR Chiang Mai Arr 31.07 124 P **P 02 30 18.7 +0.7**
CMAR pmax pmax
comp=Z,1.0nm,0.4s
FINES FINESS Array B 35.84 324 P **P 02 30 57.5 -1.5**
comp=Z,1.6nm,0.7s,mb4.0,baz=114,slow=6.7,SNR=7.0
FINES LR LR 02 46 21.9
comp=Z,121nm,20.0s,MS3.7,baz=19,slow=38
FINES FINESS Array B 35.84 324 P **P 02 30 57.6 -1.5**
FINES pmax pmax
comp=Z,2.0nm,0.7s
FINES MLR MLR
comp=Z,121nm,20.0s
ARCES ARCESS Array B 39.09 336 P **P 02 31 25.8 -0.6**
comp=Z,2.8nm,0.8s,mb4.1,baz=100,slow=10,SNR=3.3
ARCES ARCESS Array B 39.09 336 P **P 02 31 25.8 -0.6**
ARCES pmax pmax
comp=Z,3.0nm,0.8s
CUC Castrocucco 42.77 290 *e*P **P 02 31 58.0 +0.9**
comp=Z,6.2nm,0.7s,mb4.5
NB2 NORSAR Subarra 42.85 321 P **P 02 31 55.5 -1.9**
comp=Z,2.3nm,0.8s,mb4.0,baz=91,slow=8.6
NOA NORSAR Array B 42.85 321 P **P 02 31 55.7 -1.7**
comp=Z,1.5nm,0.7s,mb3.8,baz=92,slow=8.0,SNR=9.6
NOA LR LR 02 50 47.4
comp=Z,59nm,21.5s,MS3.5,baz=80,slow=38
NOA NORSAR Array B 42.85 321 P **P 02 31 55.7 -1.7**
NOA pmax pmax
comp=Z,2.0nm,0.7s
NOA MLR MLR
comp=Z,59nm,21.5s
NOA NORSAR Array B 42.85 321 P **P 02 31 55.7 -1.7**
NOA LR LR 02 50 47.4
LPG La Plagne 47.55 300 *e*P **P 02 32 35.9 +1.0**
comp=Z,7.2nm,0.5s,mb4.6
LPG La Plagne 47.55 300 *e*P **P 02 32 35.9 +1.0**
LPG pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
LPG La Plagne 47.55 300 *e*P **P 02 32 35.9 +1.0**
comp=Z,3.6nm,0.5s,mb4.7
LPL La Plagne 47.56 300 *e*P **P 02 32 35.2 +0.2**
comp=Z,11nm,0.8s,mb4.6
LPL La Plagne 47.56 300 *e*P **P 02 32 35.2 +0.2**
LPL pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
LPL La Plagne 47.56 300 *e*P **P 02 32 35.2 +0.2**
comp=Z,5.3nm,0.8s,mb4.6
MBDF Montbardon 47.76 299 *e*P **P 02 32 37.1 +0.5**
KEST Kesra 49.06 287 P **P 02 32 47.0 +0.3**
comp=Z,0.5nm,0.5s,mb3.8,baz=344,slow=6.3,SNR=4.3
SSF Saint Saulge 49.25 303 *e*P **P 02 32 48.8 +0.8**
AVF Avril sur Loir 49.43 303 *e*P **P 02 32 48.5 -0.9**
comp=Z,25nm,1.3s,mb4.8
AVF Avril sur Loir 49.43 303 *e*P **P 02 32 48.5 -0.9**
AVF pmax pmax
comp=Z,12nm,1.3s,mb4.8
AVF Avril sur Loir 49.43 303 *e*P **P 02 32 48.5 -0.9**
comp=Z,12nm,1.3s,mb4.8
ESDC Sonseca Array 57.03 297 P **P 02 33 43.8 -1.5**
comp=Z,1.8nm,0.7s,mb4.2,baz=49,slow=7.0,SNR=4.4
COLA College 71.74 17 *e*P **P 02 35 20.9 -0.1**
COLA pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
COLA College 71.74 17 *e*P **P 02 35 20.9 -0.1**
comp=Z,5.6nm,1.0s,mb4.5
YKA Yellowknife Ar 78.60 3 P **P 02 36 00.8 +0.3**
comp=Z,2.3nm,0.8s,mb4.2,baz=349,slow=5.7,SNR=6.8
YKA Yellowknife Ar 78.60 3 P **P 02 36 00.8 +0.3**
YKA pmax pmax
comp=Z,2.0nm,0.8s
BOSA Boshof 80.29 221 P **P 02 36 10.9 +0.9**
comp=Z,3.0nm,1.0s,mb4.2,baz=211,slow=2.0,SNR=3.1
BOSA Boshof 80.29 221 P **P 02 36 10.9 +0.9**
BOSA pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
WRA Warramunga Arr 82.66 123 P **P 02 36 23.6 +0.8**
comp=Z,1.4nm,0.9s,mb4.0,baz=325,slow=5.4,SNR=7.3
WRA Warramunga Arr 82.66 123 P **P 02 36 23.6 +0.8**
WRA pmax pmax
comp=Z,1.0nm,0.9s
ASAR Alice Springs 85.06 126 P **P 02 36 36.4 +1.4**
comp=Z,1.1nm,0.8s,mb4.0,baz=312,slow=5.0,SNR=7.4
ASAR Alice Springs 85.06 126 P **P 02 36 36.4 +1.4**
ASAR pmax pmax
comp=Z,1.0nm,0.8s
FFC Flin Flon 86.40 357 *i* P **P 02 36 45.9 +4.7**
CTA Charters Tower 90.86 115 LR LR 03 19 49.7
comp=Z,2μm,18.1s,baz=190,slow=37

*NEIC **03** 02:24:30.5, 17°.15N×94°.02W, h181km, MD4.2(MEX), After MEX.*
MEX 03 02:24:30.5±0.8, 17°.15N×94°.02W, h181km±12km, MD4.2, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.83**	**266**	*e*P	Pn	02 24 55.7	-1.4
CMIG				*e*S	Sn	02 25 14.7	-2.8
CMIG	**Matias Romero**	**0.83**	**266**	*e*P	Pn	02 24 55.7	-1.4
CMIG				*e*S	Sn	02 25 14.7	-2.8
TGIG		**0.93**	**113**	*e*P	Pn	02 24 55.9	-1.8
TGIG				*e*S	Sn	02 25 16.7	-2.0
TUIG	**Tuzandepetl**	**0.96**	**336**	*e*P	Pn	02 24 56.9	-1.1
TUIG				*e*S	Sn	02 25 17.3	-2.0
TUIG	**Tuzandepetl**	**0.96**	**336**	*e*P	Pn	02 24 56.9	-1.1
TUIG				*e*S	Sn	02 25 17.3	-2.0
PCIG		**1.63**	**152**	*e*P	Pn	02 25 03.2	-0.5
PCIG				*e*S	Sn	02 25 27.6	-1.9
HUIG	**Huatulco**	**2.43**	**236**	*e*P	Pn	02 25 09.5	-3.0
HUIG				*e*S	Sn	02 25 42.8	-2.1
HUIG	**Huatulco**	**2.43**	**236**	*e*P	Pn	02 25 09.5	-3.0
HUIG				*e*S	Sn	02 25 42.8	-2.1
VHO	**Vista Hermosa**	**2.60**	**269**	*e*P	Pn	02 25 13.9	-0.5
VHO				*e*S	Sn	02 25 47.9	-0.5
VHO	**Vista Hermosa**	**2.60**	**269**	*e*P	Pn	02 25 13.9	-0.5
VHO				*e*S	Sn	02 25 47.9	-0.5
TPIG	**Tehuac#an**	**3.43**	**292**	*e*P	Pn	02 25 24.6	+0.2
TPIG				*e*S	Sn	02 26 04.7	-1.8
PNIG	**Pinotepa**	**4.01**	**260**	*e*P	Pn	02 25 29.3	-2.4
PNIG				*e*S	Sn	02 26 18.4	-1.2
PNIG	**Pinotepa**	**4.01**	**260**	*e*P	Pn	02 25 29.3	-2.4
PNIG				*e*S	Sn	02 26 18.4	-1.2
TEIG	**Tepich**	**6.24**	**60**	*e*Pn	Pn	02 25 58.1	-2.5

*ISCJB **03** 02:26:34.9±1.9, 31°.24N±0°.06×142°.8E±0°.1, h15km±14km, mb3.9/9, Error ellipse: s-maj=17.7km s-min=6.0km az=154.1*
*JMA **03** 02:26:36.2±0.2, 31°.18N×142°.84E, h51km, M4.3*
*NEIC **03** 02:26:39.6±0.6, 31°.16N×142°.85E, h35km, MG4.3(JMA), Error ellipse: s-maj=22.4km s-min=11.7km az=59.0*
*IDC **03** 02:26:39.4±0.9, 31°.09N×142°.85E, h33km±7km, mb3.7/9, mb1 3.9/11, mb1mx3.7/25, mbtmp3.7/11, ML3.6/2, Error ellipse: s-maj=26.4km s-min=18.3km az=68.0*
ISC 03 02:26:37.2±2.0, 31°.23N±0°.06×142°.8E±0°.1, h19km±13km, h37km±2.1km; pP-P, n27, σ0s99/39, mb3.9/9, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.17**	**307**	P	**Pn**	**02 27 26.0**	**0.0**
JHJ2				*e*S	**Sn**	**02 28 02.3**	**-1.0**
BSO1	**Boso 1**	**3.75**	**336**	P	**Pn**	**02 27 33.6**	**-0.5**
BSO1				*e*S	**Sn**	**02 28 16.5**	**-1.3**
BSO2	**Boso 2**	**3.92**	**334**	*e*S	**Sn**	**02 28 21.4**	**-0.5**
BSO3	**Boso 3**	**4.06**	**332**	P	**Pn**	**02 27 38.3**	**0.0**
BSO3				S	**Sn**	**02 28 26.1**	**+0.8**
CBIJ	**Chichi jima**	**4.15**	**188**	P	**Pn**	**02 27 37.8**	**-1.8**
CBIJ				*e*S	**Sn**	**02 28 22.5**	**-5.2**
BSO4	**Boso 4**	**4.29**	**332**	P	**Pn**	**02 27 41.6**	**+0.1**
BSO4				*e*S	**Sn**	**02 28 30.6**	**-0.5**
JOD2	**Odawara 2**	**5.10**	**323**	P	**Pn**	**02 27 51.5**	**-1.1**
JOD2				*e*S	**Sn**	**02 28 51.1**	**+0.2**
JHO	**Hitachi**	**5.69**	**341**	P	**Pn**	**02 28 00.3**	**-0.4**
JHO				S	**Sn**	**02 29 00.9**	**-4.6**
JRY	**Ryogami san**	**5.79**	**327**	P	**Pn**	**02 28 02.3**	**+0.2**
JRY				S	**Sn**	**02 29 07.5**	**-0.4**
MJAR	**Matsushiro Arr**	**6.54**	**325**	Pn	**Pn**	**02 28 12.5**	**0.0**
	2.3nm,0.3s,baz=154,slow=11,SNR=12						
MJAR				Sn	**Sn**	**02 29 26.1**	**-0.5**
	1.1nm,0.3s,baz=54,slow=49,SNR=3.5						
MAJO	**Matsushiro**	**6.54**	**325**	*e*Pn	**Pn**	**02 28 13.9**	**+1.4**
MAJO				*e*S	**Sn**	**02 29 18.2**	**-8.4**
MAT	**Matsushiro**	**6.54**	**325**	P	**Pn**	**02 28 13.3**	**+0.8**
MAT				S	**Sn**	**02 29 27.4**	**+0.8**
MAT	**Matsushiro**	**6.54**	**325**	P	**Pn**	**02 28 13.5**	**+1.0**
MAT				*e*S	**Sn**	**02 29 26.5**	**-0.1**
JMK	**Ichinoseki**	**7.82**	**351**	P	**Pn**	**02 28 28.2**	**-1.7**
JMK				S	**Sn**	**02 29 51.4**	**-6.5**
KSRS	**Korea Array**	**13.78**	**301**	Pn	**Pn**	**02 29 54.8**	**+3.2**
	0.2nm,0.3s,baz=109,slow=12,SNR=6.3						
SONM	**Songino Array**	**32.26**	**311**	P	**P**	**02 33 06.6**	**+2.1**
	0.7nm,0.6s,mb3.7,baz=130,slow=9.2,SNR=5.6						
MKAR	**Makanchi Array**	**48.36**	**307**	P	**P**	**02 35 18.8**	**+1.1**
	1.9nm,0.6s,mb4.3,baz=88,slow=8.5,SNR=19						
MKAR	**Makanchi Array**	**48.36**	**307**	P	**P**	**02 35 18.8**	**+1.1**
KURK	**Kurchatov**	**50.56**	**312**	P	**P**	**02 35 35.2**	**+0.9**
	1.2nm,0.6s,mb4.0,baz=89,slow=7.1,SNR=4.2						
WRA	**Warramunga Arr**	**51.52**	**190**	P	**P**	**02 35 40.5**	**-1.3**
	1.9nm,0.7s,mb4.1,baz=9.5,slow=7.8,SNR=9.0						
WRA				pP	pP	02 35 50.9	+3.1
	2.6nm,0.5s,baz=9.1,slow=7.8,SNR=10						
WRA	**Warramunga Arr**	**51.52**	**190**	P	**P**	**02 35 40.5**	**-1.3**
WRA				pP	pP	02 35 50.9	+3.1
ASAR	**Alice Springs**	**55.24**	**190**	P	**P**	**02 36 08.9**	**-0.2**
	0.2nm,0.4s,mb3.5,baz=7.8,slow=7.5,SNR=3.0						
ASAR				pP	pP	02 36 18.3	+3.2
	0.6nm,0.6s,baz=359,slow=5.2,SNR=4.6						
FINES	**FINESS Array B**	**74.50**	**334**	P	**P**	**02 38 15.6**	**+1.4**
	3.1nm,1.0s,mb4.2,baz=67,slow=3.6,SNR=3.5						
NVAR	**Mina Array Bea**	**77.56**	**53**	P	**P**	**02 38 32.8**	**+0.7**
	0.4nm,0.6s,mb3.5,baz=290,slow=5.3,SNR=4.1						
BRTR	**Keskin Array B**	**83.61**	**313**	P	**P**	**02 39 05.5**	**+1.0**
	1.0nm,0.7s,mb4.0,baz=126,slow=4.6,SNR=5.3						
TXAR	**Lajitas Array**	**92.69**	**53**	P	**P**	**02 39 47.6**	**-0.7**
	0.3nm,0.6s,mb3.9,baz=302,slow=7.1,SNR=3.7						
TXAR				pP	pP	02 39 60.0	+5.3
	0.1nm,0.4s,baz=342,slow=8.5,SNR=2.2						
LPAZ	**La Paz**	**148.14**	**69**	PKPbc	PKPbc	02 46 23.2	+0.9
	0.9nm,0.6s,baz=328,slow=3.5,SNR=5.2						

MEX 03 02:34:05.6±0.8, 13°.93N×93°.15W, h6km±44km, MD4.0, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.30**	**41**	*i* P	Pn	02 34 27.0	-3.2
THIG				*i* S	Sb	02 34 42.4	-4.9
PCIG		**1.77**	**358**	*i* P	Pn	02 34 32.7	-4.0
PCIG				*i* S	Sn	02 34 54.6	-5.0
TGIG		**2.83**	**1**	*e*P	Pn	02 34 48.8	-2.6
TGIG				*i* S	Sn	02 35 22.7	-3.1
HUIG	**Huatulco**	**3.40**	**303**	*i* P	Pn	02 34 56.5	-2.7
PNIG	**Pinotepa**	**5.39**	**298**	*i* P	Pn	02 35 25.2	-1.4

*CSEM **03** 02:34:22.4±0.2, 33°.36N×35°.41E, h2km, ML3.1, Error ellipse: s-maj=6.1km s-min=2.3km az=98.0*
GRAL 03 02:34:23.2±0.3, 33°.33N×35°.44E, h0km±2km, MD3.1, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.18**	**330**	*e*P	Pg	02 34 26.5	-0.3
MATL	**Matarih**	**0.18**	**330**	*e*P	Pg	02 34 26.5	-0.2
RCY	**Rachaya**	**0.35**	**64**	*e*P	Pg	02 34 29.7	-0.3
RCY				*e*S	Sg	02 34 34.8	+0.2
RCY	**Rachaya**	**0.35**	**64**	*e*P	Pg	02 34 29.7	-0.3
RCY				*e*S	Sg	02 34 34.8	+0.3
BHL	**Bhannes**	**0.60**	**17**	*e*P	Pg	02 34 33.8	-0.9
BHL				*e*S	Sg	02 34 42.0	-0.5
BHL	**Bhannes**	**0.60**	**17**	*e*P	Pg	02 34 33.8	-0.9
BHL				*e*S	Sg	02 34 42.0	-0.5
HWQ	**Hawqa**	**1.03**	**24**	*e*P	Pg	02 34 41.8	-1.3
HWQ				*e*S	Sg	02 34 55.4	-1.1
HWQ	**Hawqa**	**1.03**	**24**	*e*P	Pg	02 34 41.8	-1.3
HWQ				*e*S	Sg	02 34 55.4	-1.1
FKH	**Fakeheh**	**1.21**	**41**	*e*P	Pg	02 34 45.1	-1.3
FKH				*e*S	Sg	02 35 01.2	-0.9
FKH	**Fakeheh**	**1.21**	**41**	*e*P	Pg	02 34 45.1	-1.3
FKH				*e*S	Sg	02 35 01.2	-0.8

*MOS **03** 03:02:33.8±1.0, 23°.20S×179°.73W, h538km, mb5.9/35, MS5.0/7, Error ellipse: s-maj=8.2km s-min=7.3km az=60.0*
*BJI **03** 03:02:34.7, 23°.02S×179°.48W, h554km, mB5.5/38, mb5.7/57*
*ISCJB **03** 03:02:34.2±0.4, 23°.42S±0°.02×179°.78W±0°.02, h551km±4km, mb5.6/201, Error ellipse: s-maj=3.7km s-min=2.6km az=144.9*
*SZGRF **03** 03:02:35.9, 23°.08S×179°.06W, h560km, South of Fiji Islands*
*IDC **03** 03:02:37.4±0.3, 23°.35S×179°.79W, h575km±3km, mb5.2/24, mb1 5.3/24, mb1mx5.3/24, mbtmp5.2/24, Error ellipse: s-maj=7.2km s-min=7.1km az=128.0*
*NEIC **03** 03:02:37.6±0.1, 23°.37S×179°.78W, mb5.6/119, MW6.2, MW6.2, Error ellipse: s-maj=4.8km s-min=3.5km az=151.0, Moment Tensor Solution. s60 Moment tensor: Scale 10^18^Nm; M_{rr}=1.02; $M_{\theta\theta}$=1.96; $M_{\phi\phi}$=-0.94; $M_{r\theta}$=1.72; $M_{r\phi}$=0.04; $M_{\theta\phi}$=0.39; Best double couple: M_0=2.40000×10^18^ NP1: ϕ_s=253.00000°, δ=72.00000°, λ=-107.00000°. NP2: ϕ_s=117.00000°, δ=25.00000°, λ=-49.00000°. Principal axes: T 2.7600, Plg24.0000°, Azm356.0000°; N -0.8300, Plg16.0000°, Azm258.0000°; P -1.9200, Plg59.0000°, Azm139.0000°;*
*DJA **03** 03:02:37, 23°.50S×179°.31W, h650km, Mw5.8/43*
*GCMT **03** 03:02:41.3±0.1, 23°.41S×179°.69W, h590km, MW6.2, Moment Tensor Solution. s112,c285; s85,c128; Moment tensor: Scale 10^18^Nm; M_{rr}=1.27±.02; $M_{\theta\theta}$=2.79±.02; $M_{\phi\phi}$=-1.52±.03; $M_{r\theta}$=1.60±.02; $M_{\phi\phi}$=-0.38±.02; $M_{r\phi}$=0.48±.02; Best double couple: M_0=2.80000×10^18^ NP1:ϕ_s=134.00000°, δ=41.00000°, λ=-27.00000°. NP2: ϕ_s=245.00000°, δ=73.00000°, λ=-128.00000°. Principal axes: T 3.3500, Plg19.0000°, Azm3.0000°; N -1.0900, Plg36.0000°, Azm258.0000°; P -2.2700, Plg48.0000°, Azm115.0000°; Data Used: II IU CN IC G.*
ISC 03 03:02:36.0±0.3, 23°.51S±0°.02×179°.74W±0°.02,

h562km.4km,**h564**km.2.4km:**pP-P,n1728**,α0°**80**/931,
mb5.6/200,**300C-302D**,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.94**	**164**	P	**P**	**03 04 15.4**	**+0.9**
	3μm,0.3s,baz=94,slow=8.4,SNR=126						
RAO				S	**S**	**03 05 31.8**	**-3.5**
	633nm,0.3s,baz=80,slow=21,SNR=2.1						
MSVF	**Nonsavu**	**6.11**	**340**	P	**P**	**03 04 15.1**	**-1.2**
	21μm,0.5s						
MSVF	**Nonsavu**	**6.11**	**340**	*e*P	**P**	**03 04 15.6**	**-0.7**
	2μm,0.6s						
MSVF				*e*S	**S**	**03 05 39.8**	**+1.6**
AFI	**Afiamalu**	**12.17**	**40**	P	**P**	**03 05 11.4**	**-5.0**
	185nm,0.3s,baz=48,slow=3.1,SNR=157						
AFI				S	**S**	**03 07 20.7**	**-7.6**
	136nm,0.3s,baz=33,slow=22,SNR=5.6						
AFI	**Afiamalu**	**12.17**	**40**	P	**P**	**03 05 11.4**	**-5.0**
AFI				S	**S**	**03 07 20.7**	**-7.6**
AFI				pmax	pmax		
	comp=Z,185nm,0.3s						
AFI				smax			
	comp=N,136nm,0.3s						
AFI	**Afiamalu**	**12.17**	**40**	*e*P	**P**	**03 05 11.3**	**-5.1**
	comp=N,5μm,0.8s						
ONTRN	**Noumea**	**12.78**	**273**	*e*P	**P**	**03 05 22.9**	**+0.4**
DZM	**Mont Dzumac**	**12.82**	**274**	⇓*i*P	**P**	**03 05 23.9**	**+0.9**
	comp=N,915nm,1.2s						
NOUC	**Port Laguerre**	**12.95**	**274**	*e*P	**P**	**03 05 23.7**	**-0.6**
OUZ	**Omahuta**	**13.03**	**205**	*e*P	**P**	**03 05 27.9**	**+3.0**
	comp=N,1μm,1.0s						
OUZ				*e*S	**S**	**03 07 59.3**	**+15**
OUZ				*e*ScP	ScP	03 12 50.6	+0.2
OUZ	**Omahuta**	**13.03**	**205**	PN	**P**	**03 05 27.9**	**+3.1**
KUZ	**Kuaotunu**	**13.76**	**195**	PN	**P**	**03 05 33.1**	**+0.8**
KAAZ	**Kauri Point**	**14.10**	**199**	PN	**P**	**03 05 38.0**	**+2.1**
MXZ	**Matakaoa Point**	**14.10**	**186**	PN	**P**	**03 05 34.1**	**-1.8**
OTAZ	**Otara**	**14.16**	**198**	PN	**P**	**03 05 38.8**	**+2.4**
MKAZ	**Moumakai**	**14.24**	**197**	PN	**P**	**03 05 39.1**	**+1.8**
WTAZ	**Waiatarua**	**14.24**	**199**	PN	**P**	**03 05 39.3**	**+2.0**
PUZ	**Puketiti**	**14.61**	**186**	*e*PN	**P**	**03 05 40.8**	**-0.3**
TOZ	**Tahuroa Road**	**14.75**	**195**	PN	**P**	**03 05 43.8**	**+1.3**
FUNA	**Funafuti**	**14.94**	**356**	*e*P	**P**	**03 05 40.5**	**-4.3**
	comp=N,1μm,0.6s						
URZ	**Urewera**	**14.94**	**190**	P	**P**	**03 05 42.5**	**-2.0**
	comp=N,154nm,0.3s,baz=22,slow=2.3,SNR=130						
URZ				S	**S**	**03 08 17.1**	**-2.4**
	comp=N,71nm,0.3s,baz=100,slow=23,SNR=12						
URZ	**Urewera**	**14.94**	**190**	*e*P	**P**	**03 05 42.6**	**-1.9**
	comp=N,87nm,0.3s						
URZ				*e*S	**S**	**03 08 16.6**	**-2.9**
URZ	**Urewera**	**14.94**	**190**	PN	**P**	**03 05 41.8**	**-2.7**
MWZ	**Matawai**	**14.96**	**188**	PN	**P**	**03 05 43.6**	**-1.0**
MWZ				SN	**S**	**03 08 14.6**	**-5.1**
CNGZ	**Carnagh Statio**	**15.03**	**186**	PN	**P**	**03 05 45.5**	**+0.1**
RRRZ	**Republican Roa**	**15.12**	**191**	PN	**P**	**03 05 46.0**	**-0.3**
HRRZ	**Handcock Road**	**15.21**	**192**	PN	**P**	**03 05 47.4**	**+0.2**
PRGZ	**Paritu Road**	**15.49**	**187**	*e*PN	**P**	**03 05 49.7**	**-0.4**
RAHZ	**Arahi**	**15.59**	**189**	*e*PN	**P**	**03 05 48.9**	**-2.0**
KNZ	**Kokohu**	**15.62**	**187**	PN	**P**	**03 05 49.4**	**-1.7**
HIZ	**Hauiti**	**15.65**	**196**	PN	**P**	**03 05 52.9**	**+1.5**
BKZ	**Black Stump Fm**	**15.93**	**191**	PN	**P**	**03 05 51.8**	**-2.3**
OTVZ	**Oturere**	**16.08**	**193**	PN	**P**	**03 05 54.7**	**-0.7**
OTVZ				SN	**S**	**03 08 38.6**	**+0.3**
MCHZ	**McNeill Hill**	**16.17**	**190**	PN	**P**	**03 05 54.3**	**-1.9**
MCHZ				SN	**S**	**03 08 32.8**	**-6.9**
FWVZ	**Far West T-bar**	**16.20**	**193**	PN	**P**	**03 05 55.7**	**-0.8**
VRZ	**Vera Road**	**16.25**	**195**	PN	**P**	**03 05 58.3**	**+1.3**
CKHZ	**Cape Kidnapper**	**16.32**	**189**	PN	**P**	**03 05 56.1**	**-1.5**
CKHZ				SN	**S**	**03 08 39.8**	**-2.4**
PXZ	**Pawanui**	**16.72**	**189**	PN	**P**	**03 05 59.8**	**-1.4**
PXZ				SN	**S**	**03 08 43.7**	**-5.0**
WAZ	**Wanganui**	**16.80**	**194**	*e*PN	**P**	**03 06 00.2**	**-1.8**
TSZ	**Takapari Road**	**16.89**	**191**	PN	**P**	**03 06 01.2**	**-1.6**
DVHZ	**Dannevirke**	**17.09**	**191**	PN	**P**	**03 06 03.4**	**-1.3**
DVHZ				SN	**S**	**03 08 51.6**	**-3.1**
POWZ	**Post Office Ro**	**17.25**	**192**	PN	**P**	**03 06 05.1**	**-1.0**
BFZ	**Birch Farm**	**17.45**	**190**	PN	**P**	**03 06 06.8**	**-1.2**
BFZ				*e*SN	**S**	**03 08 54.8**	**-5.8**
MRZ	**Mangatainoka R**	**17.55**	**192**	PN	**P**	**03 06 07.3**	**-1.6**
MRZ				SN	**S**	**03 09 00.3**	**-1.9**
KIW	**Kapiti Island**	**17.87**	**193**	PN	**P**	**03 06 11.0**	**-0.9**
TMWZ	**Te Maipa**	**17.92**	**191**	PN	**P**	**03 06 12.1**	**-0.2**
DUWZ	**D'Urville Isla**	**18.04**	**196**	PN	**P**	**03 06 13.7**	**+0.3**
CAW	**Cannon Point**	**18.08**	**193**	PN	**P**	**03 06 13.1**	**-0.6**
TRWZ	**Traveller**	**18.24**	**191**	PN	**P**	**03 06 13.9**	**-1.3**
MSWZ	**Moikau Station**	**18.34**	**192**	PN	**P**	**03 06 14.6**	**-1.5**
SNZO	**South Karori**	**18.35**	**193**	*e*P	**P**	**03 06 16.4**	**+0.2**
	comp=N,904nm,0.7s						
SNZO	**South Karori**	**18.35**	**193**	PN	**P**	**03 06 16.2**	**0.0**
TCW	**Tory Channel**	**18.35**	**194**	*e*PN	**P**	**03 06 15.0**	**-1.2**
TCW				SN	**S**	**03 09 13.5**	**-1.7**
QRZ	**Quartz Range**	**18.45**	**199**	PN	**P**	**03 06 18.8**	**+1.8**
QRZ				SN	**S**	**03 09 20.1**	**+3.2**
PLWZ	**Palliser**	**18.49**	**192**	PN	**P**	**03 06 15.8**	**-1.6**
NNZ	**Nelson**	**18.57**	**196**	PN	**P**	**03 06 17.3**	**-0.9**
NNZ				SN	**S**	**03 09 17.8**	**-1.1**
RAR	**Rarotonga**	**18.61**	**87**	*e*P	**P**	**03 06 17.9**	**-1.0**
RAR				pmax	pmax		
	comp=Z,502nm,1.0s						
RAR	**Rarotonga**	**18.61**	**87**	*e*P	**P**	**03 06 17.9**	**-1.0**
	comp=Z,502nm,1.0s						
TUWZ	**Tuamarina**	**18.63**	**195**	PN	**P**	**03 06 18.6**	**-0.2**
CMWZ	**Cape Campbell**	**18.87**	**194**	PN	**P**	**03 06 22.2**	**+1.2**
CMWZ				SN	**S**	**03 09 26.9**	**+3.2**
THZ	**Tophouse**	**19.21**	**197**	PN	**P**	**03 06 24.7**	**+0.6**
THZ				SN	**S**	**03 09 26.4**	**-2.7**
KHZ	**Kahutara**	**19.66**	**195**	*e*P	**P**	**03 06 28.2**	**+0.1**
	comp=Z,769nm,0.6s						
KHZ				*e*S	**S**	**03 09 34.2**	**-2.2**
KHZ	**Kahutara**	**19.66**	**195**	PN	**P**	**03 06 28.0**	**-0.1**
KHZ				SN	**S**	**03 09 32.7**	**-3.7**
LTZ	**Lake Taylor**	**20.33**	**197**	PN	**P**	**03 06 33.6**	**-0.5**
LTZ				*e*SN	**S**	**03 09 44.3**	**-2.6**
WVZ	**Waitaha Valley**	**21.04**	**200**	PN	**P**	**03 06 40.6**	**0.0**
MQZ	**McQueen's Vall**	**21.09**	**195**	PN	**P**	**03 06 41.8**	**+0.7**
RPZ	**Rata Peaks**	**21.53**	**198**	P	**P**	**03 06 47.1**	**+2.1**
	comp=Z,631nm,0.8s,mb6.3,baz=34,slow=4.6,SNR=68						
RPZ				S	**S**	**03 10 08.0**	**+2.1**
	comp=Z,37nm,0.6s,baz=319,slow=8.5,SNR=3.1						
RPZ	**Rata Peaks**	**21.53**	**198**	*e*P	**P**	**03 06 46.4**	**+1.5**
	comp=Z,529nm,0.8s,mb6.2						
RPZ				*e*S	**S**	**03 10 09.1**	**+3.2**
RPZ	**Rata Peaks**	**21.53**	**198**	PN	**P**	**03 06 44.4**	**-0.5**
FOZ	**Fox Glacier**	**21.82**	**201**	PN	**P**	**03 06 47.2**	**-0.4**
LBZ	**Lake Benmore**	**22.40**	**199**	PN	**P**	**03 06 51.6**	**-1.2**
JCZ	**Jackson Bay**	**22.58**	**202**	PN	**P**	**03 06 55.4**	**+1.0**
ODZ	**Otahua Downs**	**22.87**	**198**	*e*P	**P**	**03 06 57.3**	**+0.4**
	comp=Z,114nm,0.7s,mb5.6						
ODZ	**Otahua Downs**	**22.87**	**198**	PN	**P**	**03 06 57.3**	**+0.4**
WKZ	**Wanaka**	**23.16**	**201**	PN	**P**	**03 06 59.0**	**-0.5**
EAZ	**Earnscleugh**	**23.43**	**200**	PN	**P**	**03 07 02.3**	**+0.4**
MLZ	**Mavora Lakes**	**23.90**	**201**	PN	**P**	**03 07 07.6**	**+1.5**
HNR	**Honiara**	**23.94**	**302**	P	**P**	**03 07 06.1**	**-0.8**
	comp=Z,118nm,0.5s,mb5.8,baz=153,slow=2.3,SNR=2.8						
HNR				S	**S**	**03 10 41.9**	**-2.7**
	comp=Z,492nm,1.1s,baz=250,slow=2.9,SNR=3.8						
HNR	**Honiara**	**23.94**	**302**	P	**P**	**03 07 06.1**	**-0.8**
HNR				S	**S**	**03 10 41.9**	**-2.7**
HNR				pmax	pmax		
	comp=Z,118nm,0.5s,mb5.8						
HNR				smax			
	comp=N,492nm,1.1s						
TUZ	**Tuapeka**	**23.99**	**198**	PN	**P**	**03 07 08.3**	**+1.5**
WHZ	**Wether Hill Ro**	**24.46**	**201**	PN	**P**	**03 07 12.3**	**+1.4**
ARMA	**Armidale**	**26.38**	**249**	*e*P	**P**	**03 07 29.7**	**+1.5**
ARMA				*e*S	**S**	**03 11 24.4**	**+1.9**
ARMA				*e*SCP	ScP	03 13 24.3	+2.4
ARMA				*e*		03 14 15.9	
ARMA				*e*SCS	ScS	03 17 18.5	+5.2
ARMA	**Armidale**	**26.38**	**249**	*e*P	**P**	**03 07 30.4**	**+2.2**
	comp=N,600nm,1.5s,mb6.0						
ARMA				*e*ScP	ScP	03 13 24.4	+2.5
EIDS	**Eidsvold**	**26.60**	**260**	*e*P	**P**	**03 07 31.4**	**+1.1**
	comp=N,593nm,1.3s,mb6.1						
EIDS				*e*S	**S**	**03 11 23.2**	**-3.0**
EIDS				*e*ScP	ScP	03 13 24.1	+1.5
RIV	**Riverview**	**27.44**	**241**	*e*P	**P**	**03 07 40.0**	**+2.6**
RIV				*e*S	**S**	**03 11 49.7**	**+3.7**
RIV				*e*SCP	ScP	03 13 27.3	+2.3
TBI	**Tubuai**	**27.76**	**96**	⇓*i*P	**P**	**03 07 40.5**	**+0.1**
	comp=N,3μm,1.1s						
TBI				*e*ScP	ScP	03 13 26.0	-0.2
	comp=N,355nm,1.0s						
PAE	**Paea**	**28.80**	**84**	⇓*i*P	**P**	**03 07 48.6**	**-0.9**
	comp=N,255nm,1.1s,mb5.8						
PAE				*e*ScP	ScP	03 13 29.1	-0.5
	comp=N,27nm,1.0s						
PPT	**Papeete**	**28.83**	**84**	⇓*i*P	**P**	**03 07 49.2**	**-0.5**
	comp=N,1μm,1.2s,mb6.3						
PPT				*e*ScP	ScP	03 13 29.5	-0.2
	comp=N,131nm,1.1s						
PPT	**Papeete**	**28.83**	**84**	P	**P**	**03 07 49.2**	**-0.6**
	comp=N,840nm,0.9s,mb6.3,baz=231,slow=3.4,SNR=78						
PPT				ScP	ScP	03 13 29.9	+0.2
	comp=N,118nm,0.9s,baz=113,slow=4.4,SNR=9.3						
PPT	**Papeete**	**28.83**	**84**	P	**P**	**03 07 49.2**	**-0.5**
PPT				pmax	pmax		
	comp=Z,840nm,1.0s						
PPT				pmax	pmax		
	comp=N,118nm,0.9s						
TIAR	**Tiarei**	**29.04**	**84**	⇓*i*P	**P**	**03 07 51.1**	**-0.5**
	comp=N,2μm,1.0s,mb6.7						
TIAR				*e*pP		03 09 19.9	
	comp=N,255nm,1.0s						
TIAR				*e*ScP	ScP	03 13 30.0	-0.4
	comp=N,149nm,0.9s						
CNB	**Canberra Magne**	**29.25**	**239**	⇓*i*P	**P**	**03 07 55.4**	**+2.2**
CNB				*e*S	**S**	**03 12 09.9**	**+2.9**
CNB				*e*SCP	ScP	03 13 32.4	+1.7
CAN	**Canberra**	**29.54**	**239**	*e*P	**P**	**03 07 57.8**	**+2.1**
CAN				*e*S	**S**	**03 12 15.0**	**+3.5**
CAN				pmax	pmax		
	comp=Z,1μm,1.4s,mb6.2						
CAN	**Canberra**	**29.54**	**239**	*e*P	**P**	**03 07 57.8**	**+2.1**
	comp=Z,1μm,1.4s,mb6.2						
CAN				*e*S	**S**	**03 12 15.0**	**+3.5**
MEH	**Mehetia**	**30.12**	**85**	⇓*i*P	**P**	**03 07 59.9**	**-1.0**
	comp=Z,2μm,1.2s,mb6.5						
MEH				*e*ScP	ScP	03 13 33.2	-0.7
	comp=Z,189nm,1.0s						
PMOR	**Pomariorio Ree**	**31.18**	**80**	⇓*i*P	**P**	**03 08 09.2**	**-0.8**
	comp=Z,2μm,1.1s,mb6.5						
PMOR				*e*ScP	ScP	03 13 37.3	-0.2
	comp=Z,251nm,1.1s						
CTA	**Charters Tower**	**31.71**	**270**	⇓*i*P	**P**	**03 08 15.3**	**+0.8**
	comp=Z,420nm,0.4s,mb6.3						
CTA				*e*S	**S**	**03 12 44.5**	**-0.7**
CTA				*e*SCP	ScP	03 13 41.2	+2.0
CTA				*e*		03 15 40.4	
CTA				*e*SCS	ScS	03 17 42.3	+3.1
CTA	**Charters Tower**	**31.71**	**270**	P	**P**	**03 08 15.4**	**+0.9**
	comp=Z,554nm,0.5s,mb6.4,baz=93,slow=10,SNR=671						
CTA				S	**S**	**03 12 43.9**	**-1.3**
	comp=Z,28nm,0.8s,baz=291,slow=18,SNR=13						
CTA				ScP	ScP	03 13 39.4	+0.2
	comp=Z,44nm,0.8s,baz=119,slow=6.3,SNR=4.2						
CTA	**Charters Tower**	**31.71**	**270**	P	**P**	**03 08 15.4**	**+0.9**
CTA				S	**S**	**03 12 43.9**	**-1.3**
CTA				pmax	pmax		
	comp=Z,554nm,0.5s						
CTA				smax			
	comp=N,28nm,0.8s						
CTA				pmax	pmax		
	comp=N,44nm,0.8s						
CTA	**Charters Tower**	**31.71**	**270**	P	**P**	**03 08 15.4**	**+0.9**
CTA				S	**S**	**03 12 43.9**	**-1.3**
CTA				ScP	ScP	03 13 39.4	+0.2
CTAO	**Charters Tower**	**31.71**	**270**	*e*P	**P**	**03 08 15.4**	**+0.9**
CTAO				pmax	pmax		
	comp=Z,699nm,0.5s,mb6.5						
CTAO	**Charters Tower**	**31.71**	**270**	*e*P	**P**	**03 08 15.4**	**+0.9**
	comp=Z,699nm,0.5s,mb6.5						
CTAO	**Charters Tower**	**31.71**	**270**	P	**P**	**03 08 15.4**	**+0.9**
	comp=Z,1μm,0.9s,mb6.4						
TOO	**Toolangi**	**32.85**	**237**	⇓*i*P	**P**	**03 08 25.6**	**+1.6**
TOO				*e*S	**S**	**03 13 04.2**	**+2.0**
MOO	**Moorlands**	**33.26**	**227**	*e*P	**P**	**03 08 29.3**	**+2.0**
XMAS	**Kiritimati**	**33.41**	**44**	*e*P	**P**	**03 08 27.8**	**-1.2**
	comp=Z,807nm,0.9s,mb6.2						
KWAJ	**Kwajalein Atol**	**34.41**	**337**	*e*P	**P**	**03 08 36.5**	**-0.8**
	comp=Z,520nm,0.6s,mb6.2						
STKA	**Stephens Creek**	**35.09**	**248**	⇓*i*P	**P**	**03 08 44.0**	**+1.3**
	comp=Z,205nm,0.9s,mb5.7						
STKA				*e*S	**S**	**03 13 36.2**	**+0.2**
STKA				*e*		03 16 28.6	
STKA				*e*SCS	ScS	03 17 57.4	+0.5
STKA	**Stephens Creek**	**35.09**	**248**	P	**P**	**03 08 44.0**	**+1.3**
	comp=Z,228nm,0.8s,mb5.7,baz=89,slow=8.8,SNR=125						
STKA				PcP	PcP	03 10 58.1	-0.3
	comp=Z,54nm,0.8s,baz=40,slow=5.1,SNR=3.3						
STKA	**Stephens Creek**	**35.09**	**248**	*e*P	**P**	**03 08 44.1**	**+1.4**
	comp=Z,209nm,1.6s,mb5.4						
COEN	**Coen**	**36.29**	**278**	*e*P	**P**	**03 08 53.8**	**+0.9**
	comp=Z,3μm,1.3s,mb6.7						
COEN	**Coen**	**36.29**	**278**	P	**P**	**03 08 53.8**	**+0.9**
	comp=Z,871nm,1.3s,mb6.1						
TAOE	**Nuku Hiva Isla**	**40.56**	**76**	⇓*i*P	**P**	**03 09 27.4**	**-0.1**
	comp=Z,3μm,1.0s,mb6.7						
MMPI	**Merauke**	**40.98**	**285**	P	**P**	**03 09 30.0**	**-0.8**
	comp=Z,1μm,0.8s,mb6.6						
RKT	**Rikitea**	**40.99**	**99**	⇓*i*P	**P**	**03 09 30.7**	**-0.1**
	comp=Z,612nm,1.0s,mb6.1						
RKT				*e*ScP	ScP	03 14 14.2	+0.4
	comp=Z,132nm,1.3s						
JOHN	**Johnston Islan**	**41.23**	**15**	*e*P	**P**	**03 09 31.2**	**-1.4**
	comp=Z,1μm,1.0s,mb6.4						
ASAR	**Alice Springs**	**42.33**	**260**	P	**P**	**03 09 41.8**	**+0.4**
	comp=Z,391nm,0.9s,mb5.9,baz=100,slow=7.2,SNR=819						
ASAR				PcP	PcP	03 11 22.7	+0.9
	comp=Z,44nm,0.7s,baz=85,slow=6.4,SNR=4.6						
ASAR				S	**S**	**03 15 21.3**	**-1.0**
	comp=Z,69nm,0.9s,baz=101,slow=15,SNR=16						
ASAR				ScS	ScS	03 18 39.6	-0.5
	comp=Z,8.9nm,0.9s,baz=95,slow=7.5,SNR=4.2						
ASAR				P3KPbc		03 38 48.4	
	comp=Z,3.8nm,1.0s,baz=280,slow=4.0,SNR=14						
ASAR				PKP2bc		03 41 59.5	
	comp=Z,2.6nm,1.0s,baz=286,slow=4.7,SNR=8.2						
ASAR	**Alice Springs**	**42.33**	**260**	P	**P**	**03 09 41.8**	**+0.5**
ASAR				pP		03 11 22.7	+1.9
ASAR				S	**S**	**03 15 21.3**	**-1.0**
ASAR						03 18 39.6	
ASAR				pmax	pmax		
	comp=Z,391nm,0.9s						
ASAR				pmax	pmax		
	comp=Z,44nm,0.7s						
ASAR				smax			
	comp=N,69nm,0.9s						
ASAR				pmax	pmax		
	comp=N,9.0nm,0.9s						
ASAR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ASAR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ASAR	**Alice Springs**	**42.33**	**260**	P	**P**	**03 09 41.8**	**+0.4**
ASAR				PcP	PcP	03 11 22.7	+0.9
ASAR				S	**S**	**03 15 21.3**	**-1.0**
ASAR				ScS	ScS	03 18 39.6	-0.5
ASAR				*e*		03 38 48.4	
ASAR				⇑*e*		03 41 59.5	
WRAB	**Tennant Creek**	**42.66**	**266**	P	**P**	**03 09 43.0**	**-1.0**
	comp=Z,3μm,0.8s						
WRAB	**Tennant Creek**	**42.66**	**266**	*e*P	**P**	**03 09 44.6**	**+0.6**
WRAB				*e*S	**S**	**03 15 24.7**	**-2.4**
WRAB				pmax	pmax		
	comp=Z,394nm,0.8s,mb6.0						
WRAB	**Tennant Creek**	**42.66**	**266**	*e*P	**P**	**03 09 44.6**	**+0.6**
	comp=Z,394nm,0.8s,mb6.0						
WRAB				*e*S	**S**	**03 15 24.7**	**-2.4**
WRAB	**Tennant Creek**	**42.66**	**266**	P	**P**	**03 09 44.3**	**+0.3**
	comp=Z,6μmcomp=Z,658nm,1.3s,mb6.0						
WRA	**Warramunga Arr**	**42.67**	**266**	P	**P**	**03 09 43.6**	**-0.4**
	comp=Z,266nm,0.6s,mb6.0,baz=102,slow=7.9,SNR=278						
WRA				PcP	PcP	03 11 21.8	-1.2
	comp=Z,33nm,0.5s,baz=91,slow=7.8,SNR=4.2						
WRA				ScP	ScP	03 14 20.5	-0.1
	comp=Z,58nm,0.9s,baz=104,slow=4.1,SNR=8.8						
WRA				S	**S**	**03 15 23.4**	**-3.8**
	comp=Z,102nm,0.8s,baz=97,slow=14,SNR=5.5						
WRA				P3KPbc		03 38 46.9	
	comp=Z,3.5nm,1.0s,baz=295,slow=3.0,SNR=11						
WRA				PKP2bc		03 41 58.2	
	comp=Z,2.6nm,1.0s,baz=294,slow=3.4,SNR=5.2						
WRA				PKP2ab		03 42 46.3	
	comp=Z,2.8nm,1.0s,baz=289,slow=3.2,SNR=5.8						
WRA	**Warramunga Arr**	**42.67**	**266**	P	**P**	**03 09 43.7**	**-0.3**
WRA				pP		03 11 21.8	-1.9
WRA				S	**S**	**03 15 23.4**	**-3.8**
WRA				pmax	pmax		
	comp=Z,266nm,0.6s						
WRA				pmax	pmax		
	comp=Z,33nm,0.5s						
WRA				pmax	pmax		
	comp=N,58nm,0.9s						
WRA				smax			
	comp=N,102nm,0.8s						
WRA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
WRA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WRA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WRA	**Warramunga Arr**	**42.67**	**266**	P	**P**	**03 09 43.6**	**-0.4**
WRA				PcP	PcP	03 11 21.8	-1.2
WRA				ScP	ScP	03 14 20.5	-0.1
WRA				S	**S**	**03 15 23.4**	**-3.8**
WRA				*e*		03 38 46.9	
WRA				⇑*e*		03 41 58.2	
JAY	**Jayapura**	**43.58**	**293**	P	**P**	**03 09 50.2**	**-1.0**
WAKE	**Wake Island**	**44.56**	**342**	*e*P	**P**	**03 09 57.3**	**-1.3**
	comp=Z,1μm,0.9s,mb6.5						
SMPI	**Sarmi**	**45.55**	**292**	P	**P**	**03 10 04.5**	**-1.9**
	comp=Z,4μmcomp=Z,210nm,1.3s,mb5.5						
KAKA	**Kakadu**	**46.51**	**275**	⇓*i*P	**P**	**03 10 13.2**	**-0.4**
	comp=Z,446nm,0.6s,mb6.2						
KAKA				*e*SCP	ScP	03 14 38.8	+2.1
KAKA				*e*S	**S**	**03 16 14.3**	**-7.2**
KAKA	**Kakadu**	**46.51**	**275**	*e*P	**P**	**03 10 13.2**	**-0.4**
	comp=Z,204nm,0.3s,mb6.1						
KAKA				*e*ScP	ScP	03 14 37.5	+0.9
KAKA				*e*S	**S**	**03 16 18.2**	**-3.2**
KAKA	**Kakadu**	**46.51**	**275**	P	**P**	**03 10 13.4**	**-0.2**
	comp=Z,10μmcomp=Z,815nm,0.6s,mb6.4						
FORT	**Forrest**	**46.67**	**249**	⇓*i*P	**P**	**03 10 14.6**	**0.0**
	comp=Z,1μm,0.7s,mb6.6						
FORT				*e*S	**S**	**03 16 21.2**	**-2.0**
FORT	**Forrest**	**46.67**	**249**	*e*P	**P**	**03 10 14.6**	**+0.1**
	comp=Z,2μm,0.7s,mb6.7						
BAKI	**Biak**	**48.19**	**291**	P	**P**	**03 10 25.9**	**-0.3**
	comp=Z,6μmcomp=Z,419nm,0.9s,mb6.0						
KHU	**Kahuku**	**48.59**	**31**	*e*P	**P**	**03 10 27.7**	**-1.3**
KNA	**Kununurra**	**48.90**	**269**	P	**P**	**03 10 31.9**	**+0.5**
	comp=Z,3μm,0.8s						
STCH	**Steam Cracks**	**48.94**	**31**	*e*P	**P**	**03 10 30.7**	**-0.9**
TLE	**Tual**	**49.03**	**284**	P	**P**	**03 10 33.1**	**+0.7**
	comp=Z,596nm,0.8s,mb6.2						
POHA	**Pohakuloa**	**49.06**	**31**	*e*P	**P**	**03 10 31.7**	**-0.8**
	comp=Z,577nm,0.8s,mb6.2						
HON	**Honolulu**	**49.34**	**27**	*e*P	**P**	**03 10 33.6**	**-0.9**
KIP	**Kipapa**	**49.42**	**27**	*e*P	**P**	**03 10 33.9**	**-1.2**
KIP				pmax	pmax		
	comp=Z,978nm,1.3s,mb6.2						
KIP	**Kipapa**	**49.42**	**27**	*e*P	**P**	**03 10 33.9**	**-1.2**
	comp=Z,978nm,1.3s,mb6.2						
DRV	**Dumont d'Urvil**	**49.98**	**200**	PP	PP	03 12 38.0	-3.2
DRV				SS	SS	03 21 03.0	+13
GUMO	**Guam**	**50.58**	**313**	*e*P	**P**	**03 10 43.1**	**-0.6**
GUMO				pmax	pmax		
	comp=Z,1μm,0.8s,mb6.2						
GUMO	**Guam**	**50.58**	**313**	*e*P	**P**	**03 10 43.1**	**-0.6**
	comp=Z,1μm,0.8s,mb6.2						
GUMO	**Guam**	**50.58**	**313**	P	**P**	**03 10 43.0**	**-0.7**
	comp=Z,2μm,1.0s,mb6.4						
FITZ	**Fitzroy Crossi**	**51.09**	**265**	⇓*i*P	**P**	**03 10 47.6**	**+0.1**
	comp=Z,547nm,0.6s,mb6.1						
FITZ				*e*pP	pP	03 12 34.1	+1.5
FITZ				*e*S	**S**	**03 17 22.4**	**-1.5**
FITZ				*i* SCS	ScS	03 19 40.5	+1.8
FITZ				*i* sS	sS	03 20 31.0	-2.4
FITZ	**Fitzroy Crossi**	**51.09**	**265**	pP	pP	03 12 34.3	+1.7
	comp=Z,60nm,1.0s,baz=102,slow=8.4,SNR=2.0						
FITZ				S	**S**	**03 17 21.8**	**-2.1**
	comp=Z,27nm,0.9s,baz=272,slow=19,SNR=15						
FITZ	**Fitzroy Crossi**	**51.09**	**265**	*e*P	**P**	**03 10 47.8**	**+0.4**
	comp=Z,282nm,0.7s,mb5.7						
FITZ				*e*S	**S**	**03 17 22.9**	**-1.1**
FITZ	**Fitzroy

QSPA	**South Pole Qui**	66.57	180	*e*P	P	03 12 32.5	+2.4
	comp=Z,641nm,1.0s,mb6.1						
MYLDM	**Lahad Datu**	66.61	287	P	P	03 12 34.9	+3.4
	comp=Z,3μmcomp=Z,86nm,2.5s,mb4.8						
TSM	**Tawau**	66.75	286	P	P	03 12 33.1	+0.7
PWJI	**Pagerwojo**	67.12	271	P	P	03 12 34.5	-0.2
	comp=Z,4μmcomp=Z,320nm,0.7s,mb6.0						
MIR	**Mirnyy**	67.59	206⇓	*i*P	P	03 12 38.0	+1.4
MIR				*i* *SP		03 13 07.0	
MIR				*i*	pP	03 14 32.0	+1.5
MIR				*e*S	S	03 20 50.0	+0.9
MIR				*e**SS		03 21 32.0	
MIR				pmax	pmax		
	comp=Z,178nm,1.4s,mb5.4						
MIR				pmax	pmax		
	comp=Z,1μm,6.0s						
MIR				smax			
	comp=N,980nm,11.0s						
MIR				smax			
	comp=E,2μm,16.0s						
NGJI	**Ngawi**	67.68	272	P	P	03 12 40.0	+1.9
	comp=E,186nm,0.9s,mb5.6						
JHJ	**Hachijo jima 2**	68.27	324	P	P	03 12 40.2	-1.0
	comp=E,560nm,0.6s,mb6.3,baz=186,slow=9.9,SNR=42						
SMRI	**Semarang**	68.73	271	P	P	03 12 45.6	+1.1
	comp=E,220nm,1.6s,mb5.5						
KDM	**Kudat**	68.88	288	P	P	03 12 46.8	+1.4
TGY	**Tagaytay City**	69.00	297	P	P	03 12 45.8	-0.2
	comp=E,285nm,0.4s,mb6.2,baz=177,slow=7.0,SNR=5.9						
TGY	**Tagaytay City**	69.00	297	P	P	03 12 45.8	-0.2
TGY				pmax	pmax		
	comp=Z,285nm,0.4s						
KKM	**Kota Kinabalu**	69.02	287	P	P	03 12 46.5	+0.3
KKM	**Kota Kinabalu**	69.02	287	*e*P	P	03 12 46.1	-0.1
KKM				*e*pP	pP	03 14 40.1	-0.7
KKM	**Kota Kinabalu**	69.02	287	P	P	03 12 46.0	-0.2
	comp=Z,3μmcomp=Z,113nm,0.6s,mb5.6						
BTM	**Bintulu**	70.52	283	P	P	03 12 55.8	+0.6
STKI	**Sintang**	70.62	279	P	P	03 12 57.2	+1.4
	comp=Z,198nm,0.8s,mb5.7						
JCJI	**Jatiwangi**	70.94	271	P	P	03 12 58.8	+1.2
	comp=Z,413nm,0.9s,mb6.0						
SBUM	**Sibu**	70.96	281	P	P	03 12 58.3	+0.6
LEM	**Lembang**	71.41	271	P	P	03 13 00.9	+0.5
	comp=Z,5μmcomp=Z,392nm,1.1s,mb5.9						
MJAR	**Matsushiro Arr**	71.71	325	P	P	03 13 00.4	-1.2
	comp=Z,142nm,0.9s,mb5.4,baz=162,slow=5.8,SNR=269						
MJAR				pP	pP	03 14 59.2	+1.7
	comp=Z,22nm,1.0s,baz=164,slow=6.2,SNR=6.6						
MJAR				S	S	03 21 35.9	-1.1
	comp=Z,0.9nm,0.6s,baz=300,slow=25,SNR=3.0						
MJAR				PKP2bc		03 40 42.6	
	comp=Z,13nm,1.1s,baz=309,slow=3.2,SNR=20						
MJAR	**Matsushiro Arr**	71.71	325	P	P	03 13 00.4	-1.2
MJAR				S	S	03 21 35.9	-1.1
MJAR				pmax	pmax		
	comp=Z,142nm,0.9s						
MJAR				pmax	pmax		
	comp=Z,22nm,1.0s						
MJAR				smax			
	comp=N,1.0nm,0.6s						
MJAR				pmax	pmax		
	comp=Z,13nm,1.1s						
MJAR	**Matsushiro Arr**	71.71	325	P	P	03 13 00.4	-1.2
MJAR				pP	pP	03 14 59.2	+1.7
MJAR				S	S	03 21 35.9	-1.1
MJAR			⇑	*e*		03 40 42.6	
MAJO	**Matsushiro**	71.72	325	*e*P	P	03 13 00.6	-1.0
MAJO				pmax	pmax		
	comp=Z,249nm,0.9s,mb5.6						
MAJO	**Matsushiro**	71.72	325	*e*P	P	03 13 00.6	-1.0
	comp=Z,249nm,0.9s,mb5.6						
MAT	**Matsushiro**	71.72	325	P	P	03 13 00.7	-0.9
MAT				S	S	03 21 36.0	-1.0
CBJI	**Citeko**	72.27	271	P	P	03 13 05.8	+0.4
	comp=Z,598nm,0.8s,mb6.1						
KSM	**Kuching**	72.27	280	P	P	03 13 05.8	+0.4
KSM	**Kuching**	72.27	280	*e*P	P	03 13 05.4	0.0
	comp=Z,49nm,0.6s,mb5.1						
KSM				*e*pP	pP	03 15 01.5	0.0
KSM	**Kuching**	72.27	280	P	P	03 13 05.1	-0.3
	comp=Z,3μmcomp=Z,185nm,0.9s,mb5.5						
TPI	**Tanjungpandan**	72.96	274	P	P	03 13 09.6	+0.3
	comp=Z,2μmcomp=Z,73nm,1.5s,mb4.9						
RBSI	**Rajabasa**	73.50	271	P	P	03 13 13.3	+0.8
	comp=Z,4μmcomp=Z,237nm,1.1s,mb5.5						
ERM	**Erimo**	73.68	332	P	P	03 13 13.2	+0.5
	comp=Z,2μm,0.9s,mb6.5,SNR=42						
ERM	**Erimo**	73.68	332	*d i*P	P	03 13 13.1	+0.4
ERM	**Erimo**	73.68	332	*e*P	P	03 13 13.3	+0.5
	comp=Z,247nm,0.8s,mb5.7						
TWG	**Pinlang**	73.69	304	*e*P	P	03 13 10.7	-2.5
	comp=Z,72nm,0.4s,mb5.5						
YULB	**Yu-li**	73.84	305	*e*P	P	03 13 12.1	-2.0
NACB	**Ninganchiao**	74.07	306	*e*P	P	03 13 14.4	-1.0
YUK	**Yuzh-Kuril'sk**	74.25	335	⇑*i*P	P	03 13 15.5	-0.4
YUK				*i* *PP	pP	03 15 06.0	-7.0
YUK				*i* S	S	03 22 05.9	+1.3
YUK				*i*		03 22 21.4	
YUK				pmax	pmax		
	comp=N,379nm,1.3s						
YUK				pmax	pmax		
	comp=E,260nm,1.3s						
YUK				pmax	pmax		
	comp=Z,1μm,1.3s,mb6.2						
YUK				pmax	pmax		
	comp=Z,2μm,1.1s,mb6.3						
YUK				smax			
	comp=N,420nm,2.0s						
YUK				smax			
	comp=E,1μm,2.0s						
TPUB	**Ta-pu**	74.29	305	*e*P	P	03 13 14.8	-1.8
SSLB	**Suanglung**	74.33	305	*e*P	P	03 13 15.1	-1.7
YHNB	**Yeheng**	74.52	306	*e*P	P	03 13 17.4	-0.4
AMKA	**Amchitka**	74.57	359	*e*P	P	03 13 16.2	-1.3
	comp=E,404nm,1.0s,mb5.8						
PPBI	**Pangkal Pinang**	74.58	274	P	P	03 13 19.1	+0.5
	comp=E,103nm,1.8s,mb5.0						
TATO	**Taipei**	74.61	306	*e*P	P	03 13 17.6	-0.8
	comp=E,525nm,0.8s,mb6.0						
TATO	**Taipei**	74.61	306	P	P	03 13 18.1	-0.3
	SNR=6.3						
KASI	**Kota Agung**	74.77	271	P	P	03 13 18.7	-0.9
	comp=E,215nm,1.0s,mb5.5						
KLSI		74.88	271	P	P	03 13 19.0	-1.2
	comp=E,3μmcomp=E,98nm,2.4s,mb4.8						
ADK	**Adak**	75.12	2	*e*P	P	03 13 19.1	-1.5
ADK				pmax	pmax		
	comp=Z,1μm,0.6s,mb6.5						
ADK	**Adak**	75.12	2	*e*P	P	03 13 19.1	-1.5
	comp=Z,1μm,0.6s,mb6.5						
LWLI	**Liwa**	75.37	271	P	P	03 13 23.8	+0.9
	comp=Z,261nm,0.7s,mb5.8						
MDSI	**Maura Dua**	75.46	271	P	P	03 13 21.8	-1.7
	comp=Z,2μmcomp=Z,119nm,1.1s,mb5.2						
ASAJ	**Asahikawa**	75.63	333	P	P	03 13 24.1	+0.4
	comp=Z,521nm,0.8s,mb6.0,baz=214,slow=7.8,SNR=480						
ASAJ				pP	pP	03 15 23.6	+2.3
	comp=Z,48nm,1.0s,baz=218,slow=10,SNR=3.0						
ASAJ				S	S	03 22 18.2	-1.3
	comp=Z,1.0nm,0.3s,baz=68,slow=30,SNR=1.8						
ASAJ	**Asahikawa**	75.63	333	P	P	03 13 24.1	+0.5
ASAJ				*PP	pP	03 15 23.6	+2.3
ASAJ				S	S	03 22 18.2	-1.3
ASAJ				pmax	pmax		
	comp=Z,521nm,0.8s						
ASAJ				pmax	pmax		
	comp=Z,48nm,1.0s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
SMY	**Shemya**	76.11	356	*e*P	P	03 13 24.7	-1.3
SMY				pmax	pmax		
	comp=Z,992nm,0.9s,mb6.2						
SMY				MLR	MLR		
	comp=Z,1μm,20.0s						
SMY	**Shemya**	76.11	356	*e*P	P	03 13 24.7	-1.3
	comp=Z,992nm,0.9s,mb6.2						
SMY				LR	LR		
	comp=Z,1μm,20.0s						
QZH	**Quanzhou**	76.75	305	⇑*i*P	P	03 13 30.3	0.0
QZH				pP	pP	03 15 24.2	-4.1
QZH				S	S	03 22 30.2	-2.1
QZH				pmax	pmax		
	comp=Z,390nm,0.7s,mb6.0						
QZH				pmax	pmax		
	comp=Z,2μm,3.4s						
SKR	**Severo-Kuril's**	76.89	345	⇑*i*P	P	03 13 27.0	-3.4
SKR				*e*		03 13 36.0	
SKR				*e*	pP	03 15 24.0	-4.6
SKR				*e*PPP		03 16 28.0	
SKR				*i* S	S	03 22 29.0	-3.6
SKR				*e*PS		03 22 41.0	
SKR				pmax	pmax		
	comp=E,40nm,0.5s						
SKR				pmax	pmax		
	comp=Z,190nm,0.5s,mb5.8						
SKR				pmax	pmax		
	comp=N,80nm,0.9s						
SKR				pmax	pmax		
	comp=Z,2μm,8.0s						
SKR				pmax	pmax		
	comp=E,1μm,4.0s						
SKR				pmax	pmax		
	comp=N,800nm,6.0s						
SKR				pmax	pmax		
	comp=E,1μm,6.0s						
SKR				pmax	pmax		
	comp=Z,1μm,6.0s						
SKR				pmax	pmax		
	comp=N,3μm,10.0s						
SKR				pmax	pmax		
	comp=E,4μm,10.0s						
KSI	**Kapahiang**	77.24	272	P	P	03 13 33.0	-0.2
UNV	**Unalaska Valle**	77.88	8	*e*P	P	03 13 34.0	-1.7
	comp=E,293nm,0.7s,mb5.7						
YSS	**Yuzh-Sakhalins**	77.89	335	*α i*P	P	03 13 36.0	+0.1
YSS				*e**SP	sP	03 16 36.0	+4.1
YSS				*i* S	S	03 22 44.0	+0.7
YSS				*e*		03 23 06.0	
YSS				pmax	pmax		
	comp=Z,620nm,0.9s,mb5.9						
YSS				pmax	pmax		
	comp=Z,2μm,6.0s						
YSS				smax			
	comp=E,6μm,8.0s						
YSS				MLR	MLR		
	comp=E,500nm,16.0s						
YSS				MLR	MLR		
	comp=Z,500nm,16.0s						
YSS	**Yuzh-Sakhalins**	77.89	335	*e*P	P	03 13 36.2	+0.4
	comp=Z,746nm,0.9s,mb6.0						
KSRS	**Korea Array**	78.10	320	P	P	03 13 37.5	+0.2
	comp=Z,100nm,0.8s,mb5.2,baz=134,slow=5.8,SNR=280						
KSRS	**Korea Array**	78.10	320	P	P	03 13 37.5	+0.2
KSRS				pmax	pmax		
	comp=Z,100nm,0.8s,mb5.2						
MAW	**Mawson**	78.19	200	⇓*i*P	P	03 13 38.7	+1.4
	comp=Z,89nm,0.9s,mb5.1						
MAW				*i* S	S	03 22 45.9	-0.2
MAW	**Mawson**	78.19	200	P	P	03 13 38.7	+1.4
	comp=Z,137nm,1.0s,mb5.2,baz=126,slow=6.8,SNR=117						
MAW				pP	pP	03 15 40.7	+4.8
	comp=Z,46nm,1.0s,baz=97,slow=6.8,SNR=4.1						
MAW				S	S	03 22 47.2	+1.2
	comp=Z,5.6nm,0.9s,baz=22,slow=22,SNR=6.0						
MAW	**Mawson**	78.19	200	P	P	03 13 38.7	+1.4
MAW				S	S	03 22 47.2	+1.1
MAW				pmax	pmax		
	comp=Z,137nm,1.0s						
MAW				pmax	pmax		
	comp=Z,47nm,1.0s						
MAW				smax			
	comp=N,6.0nm,0.9s						
MAW	**Mawson**	78.19	200	*e*P	P	03 13 38.7	+1.4
	comp=N,10nm,0.7s,mb4.3						
AKUT	**Akutan**	78.26	8	*e*P	P	03 13 35.1	-2.6
	comp=N,1μm,2.4s,mb5.9						
AKUT				LR	LR		
	comp=Z,700nm,21.0s						
MYKOM	**Kota Tinggi**	78.27	277	P	P	03 13 39.3	+0.5
SSE	**Sheshan**	78.41	311	P	P	03 13 38.3	-0.8
SSE				pP	pP	03 15 36.4	-1.4
SSE				sP	sP	03 16 34.3	-1.0
SSE				S	S	03 22 49.3	-0.2
SSE				sS	sS	03 26 22.7	+1.5
SSE				SS	SS	03 28 09.7	+0.3
SSE				pmax	pmax		
	comp=Z,52nm,1.1s,mb4.8						
SSE				pmax	pmax		
	comp=Z,380nm,7.3s						
PET	**Petropavlovsk**	78.50	347	*i*P	P	03 13 37.8	-1.2
PET				*e**PP	pP	03 15 37.0	-0.8
PET				*e*		03 16 44.4	
PET				*i* S	S	03 22 46.0	-3.4
PET				pmax	pmax		
	comp=Z,334nm,0.7s,mb5.8						
PET				pmax	pmax		
	comp=Z,1μm,7.8s						
PET				pmax	pmax		
	comp=Z,800nm,12.9s						
PET	**Petropavlovsk**	78.50	347	*e*P	P	03 13 37.9	-1.1
	comp=Z,148nm,0.6s,mb5.5						
PEA0B	**Petropavlovsk-**	78.78	346	*e*P	P	03 13 39.7	-0.8
PETK	**Petropavlovsk-**	78.78	346	P	P	03 13 39.6	-0.8
	comp=Z,428nm,0.8s,mb5.8,baz=120,slow=7.0,SNR=414						
PETK				pP	pP	03 15 42.5	+3.1
	comp=Z,72nm,0.9s,baz=110,slow=8.7,SNR=11						
PETK				PP	PP	03 16 51.7	+2.0
	comp=Z,62nm,1.2s,baz=93,slow=12,SNR=3.7						
PETK				S	S	03 22 49.6	-2.7
	comp=Z,0.8nm,0.4s,baz=54,slow=7.5,SNR=3.0						
PETK	**Petropavlovsk-**	78.78	346	P	P	03 13 39.7	-0.8
PETK						03 16 51.7	
PETK				S	S	03 22 49.7	-2.6
PETK				pmax	pmax		
	comp=Z,428nm,0.8s,mb5.8						
PETK				pmax	pmax		
	comp=Z,72nm,0.9s,mb5.0						
PETK				pmax	pmax		
	comp=Z,62nm,1.2s,mb4.8						
PETK				smax			
	comp=N,1.0nm,0.4s						
PETK	**Petropavlovsk-**	78.78	346	P	P	03 13 39.6	-0.8
PETK				pP	pP	03 15 42.5	+3.0
PETK				PP	PP	03 16 51.7	+2.0
PETK				S	S	03 22 49.6	-2.7
KGM	**Kluang**	78.84	277	P	P	03 13 42.3	+0.5
INCN	**Inchon**	78.89	319	*e*P	P	03 13 41.7	+0.2
	comp=N,180nm,0.9s,mb5.4						
INCN	**Inchon**	78.89	319	P	P	03 13 41.9	+0.5
	SNR=10						
PMSA	**Palmer Station**	79.17	157	*e*P	P	03 13 43.8	+1.2
	comp=N,411nm,1.1s,mb5.7						
VLA	**Vladivostok**	79.84	326	*c i*P	P	03 13 46.0	-0.3
VLA				pmax	pmax		
	comp=Z,328nm,1.4s,mb5.5						
VLA	**Vladivostok**	79.84	326	⇑*i*P	P	03 13 46.1	-0.2
SDPT	**Sand Point**	80.25	11	*e*P	P	03 13 46.3	-1.9
	comp=Z,409nm,1.6s,mb5.5						
SDPT				LR	LR		
	comp=Z,400nm,20.0s						
KTGM	**Kuala Trenggan**	80.38	280	P	P	03 13 50.8	+0.9
SNCC	**San Nicolas Is**	80.47	48	⇓S	S	03 23 15.1	+4.5
	baz=81						
NJ2	**Nanjing**	80.58	311	*e*P	P	03 13 50.8	+0.3
NJ2				pP	pP	03 15 45.8	-4.3
NJ2				sP	sP	03 16 40.5	-6.8
NJ2				S	S	03 23 12.0	+0.2
NJ2				SKS		03 23 15.0	
NJ2				pmax	pmax		
	comp=Z,210nm,0.8s,mb5.6						
NJ2				pmax	pmax		
	comp=Z,850nm,3.7s						
QIZ	**Qiongzhong**	80.65	295	P	P	03 13 51.0	-0.1
QIZ				pP	pP	03 15 47.6	-3.1
QIZ				sP	sP	03 16 50.5	+2.6
QIZ				S	S	03 23 12.8	-0.1
QIZ				pmax	pmax		
	comp=Z,250nm,11.5s						
SPIA	**Saint Paul Isl**	80.77	5	*e*P	P	03 13 50.4	-0.5
BSC	**Santa Cruz Isl**	80.83	47	⇑P	P	03 13 52.3	+0.6
	baz=81						
FRIM	**Kepong**	80.89	278	P	P	03 13 52.5	0.0
SCI	**San Clemente I**	80.98	48	⇑P	P	03 13 53.1	+0.6
	baz=81						
PKM	**Peak Mountain**	81.25	46	⇑P	P	03 13 54.5	+0.7
	baz=81						
PKM				⇑S	S	03 23 20.8	+2.5
	baz=81						
BLG	**Laguna Peak**	81.28	47	⇑S	S	03 23 20.7	+1.9
	baz=81						
CIS	**Catalina Islan**	81.32	48	⇑P	P	03 13 54.8	+0.6
	baz=81						
CIS				⇑S	S	03 23 22.0	+2.8
	baz=81						
SMMC	**Simmler**	81.37	46	⇓P	P	03 13 55.4	+0.9
	baz=82						
HOPS	**Hopland**	81.70	41	*e*P	P	03 13 56.4	+0.4
KCPM	**Cahto Peak**	81.83	40	*e*P	P	03 13 57.5	+0.8
DECC	**Green Verdugo**	81.86	47	⇑P	P	03 13 57.5	+0.5
	baz=82						
PASC	**Pasadena Art C**	81.91	47	*e*P	P	03 13 57.6	+0.4
	comp=Z,91nm,0.8s,mb5.2						
109C	**Camp Elliot, M**	81.92	49	⇑P	P	03 13 57.5	+0.1
	baz=82,SNR=6.9						
IPM	**Ipoh**	81.94	278	P	P	03 13 58.3	+0.4
MWC	**Mount Wilson**	82.03	47	*e*P	P	03 13 57.7	-0.1
MWC				pmax	pmax		
	comp=Z,41nm,0.9s,mb4.9						
MWC	**Mount Wilson**	82.03	47	*e*P	P	03 13 57.6	-0.2
	comp=Z,41nm,0.9s,mb4.9						
ARVC	**Arvin**	82.04	46	⇑P	P	03 13 58.1	+0.2
	baz=82,SNR=6.6						
MDJ	**Mudanjiang**	82.08	326	P	P	03 13 58.3	+0.5
MDJ				pP	pP	03 15 59.2	+1.2
MDJ				sP	sP	03 16 55.7	+0.7
MDJ				PP	PP	03 17 15.2	-1.5
MDJ				S	S	03 23 22.7	-3.5
MDJ				sS	sS	03 26 57.2	-3.2
MDJ				pmax	pmax		
	comp=Z,340nm,0.8s,mb5.8						
MDJ				pmax	pmax		
	comp=Z,810nm,6.3s						
BAR	**Barrett**	82.10	49	*e*P	P	03 13 59.9	+1.6
MURC	**Murrieta**	82.26	48	⇓P	P	03 13 59.2	+0.2
	baz=82,SNR=15						
HABR	**Khabarovsk**	82.28	332	*c i*P	P	03 13 59.0	+0.2
HABR				*e**PP	pP	03 15 58.4	-0.6
HABR				*e*		03 17 15.1	
HABR				*e*S	S	03 23 24.6	-3.5
HABR				*e*SS	SS	03 29 01.7	-4.1
HABR				pmax	pmax		
	comp=N,65nm,0.6s						
HABR				pmax	pmax		
	comp=Z,319nm,0.7s,mb5.9						
HABR				pmax	pmax		
	comp=E,133nm,1.5s						
HABR				pmax	pmax		
	comp=Z,1μm,1.6s,mb6.1						
HABR				MLR	MLR		
	comp=Z,137nm,19.0s						
BFSC	**Mount Baldy Ra**	82.31	48	⇑P	P	03 13 59.4	+0.1
	baz=82,SNR=11						
MONP	**Monument Peak**	82.39	49	⇓P	P	03 13 59.9	+0.1
	baz=82,SNR=28						
EDW2	**Edwards Air Fo**	82.45	47	⇓P	P	03 14 00.2	+0.3
	baz=82,SNR=23						
RCTC	**Rector, Farmer**	82.46	45	⇑P	P	03 13 60.0	0.0
	baz=83						
DVTC	**Desert V Tower**	82.49	50	⇓P	P	03 14 00.6	+0.4
	baz=83,SNR=14						
KHMM	**Horse Mountain**	82.50	39	*e*P	P	03 14 01.2	+1.1
ISA	**Isabella**	82.58	46	⇓P	P	03 14 00.9	+0.3
	baz=83,SNR=40						
KULM	**Kulim**	82.61	279	P	P	03 14 02.0	+0.7
KULM	**Kulim**	82.61	279	*e*P	P	03 14 01.5	+0.2
	comp=Z,51nm,0.6s,mb5.2						
KULM				*e*pP	pP	03 16 01.5	-0.2
CMB	**Columbia Colle**	82.76	43	*e*P	P	03 14 01.5	+0.1
CMB				pmax	pmax		
	comp=Z,22nm,0.9s,mb4.7						
CMB	**Columbia Colle**	82.76	43	*e*P	P	03 14 01.5	+0.1
	comp=Z,22nm,0.9s,mb4.7						
PFO	**Pinyon Flat Ob**	82.77	49	⇓P	P	03 14 01.9	+0.3
	baz=83,SNR=8.0						
PFO	**Pinyon Flat Ob**	82.77	49	*i* P	P	03 14 03.1	+1.5
PFO	**Pinyon Flat Ob**	82.77	49	*e*P	P	03 14 02.0	+0.4
	comp=Z,41nm,1.3s,mb4.8						
BBRC	**Big Bear Solar**	82.82	48	⇑P	P	03 14 02.3	+0.4
	baz=83						
DL2	**Dalian**	82.84	318	⇑*i*P	P	03 14 01.9	+0.1
DL2				pP	pP	03 15 59.5	-2.8
DL2				sP	sP	03 16 53.5	-5.7
DL2				SKS		03 23 26.7	
DL2				S	S	03 23 34.4	+0.4
DL2				pmax	pmax		
	comp=Z,70nm,0.6s,mb5.4						
DL2				pmax	pmax		
	comp=Z,270nm,4.9s						
SWSC	**Sam W. Stewart**	82.86	50	⇑P	P	03 14 02.3	+0.2
	baz=83,SNR=16						
OHCM	**Honcut**	82.87	42	*e*P	P	03 14 02.0	+0.1
WHN	**Wuhan**	82.95	307	⇑P	P	03 14 03.0	+0.4
WHN				pP	pP	03 16 00.8	-2.3
WHN				sP	sP	03 16 55.6	-4.5
WHN				S	S	03 23 27.1	-8.4
WHN				pmax	pmax		
	comp=Z,2μm,4.6s						
LRMC	**Laurel Mountai**	83.00	47	⇑P	P	03 14 03.0	+0.3
	baz=83						
WDC	**Whiskeytown Da**	83.01	40	*e*P	P	03 14 03.0	+0.4
RRX	**Edison Barstow**	83.12	47	⇓P	P	03 14 03.6	+0.3
	baz=83						
PSI	**Prapat**	83.17	276	P	P	03 14 03.3	-0.8
	comp=Z,39nm,0.7s,mb5.0,baz=178,slow=3.8,SNR=30						
PSI				pP	pP	03 16 03.5	-1.1
	comp=Z,16nm,0.8s,baz=153,slow=4.6,SNR=4.0						
PSI				PP	PP	03 17 23.2	-2.8
	comp=Z,29nm,0.9s,baz=176,slow=6.2,SNR=4.4						
PSI	**Prapat**	83.17	276	P	P	03 14 03.3	-0.8
PSI				*PP	pP	03 16 03.5	-1.1
PSI						03 17 23.2	
PSI				pmax	pmax		
	comp=Z,39nm,0.7s,mb5.0						
PSI				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.6						
PSI				pmax	pmax		
	comp=Z,29nm,0.9s,mb4.8						
PSI	**Prapat**	83.17	276	P	P	03 14 03.3	-0.8
PSI				pP	pP	03 16 03.5	-1.1
PSI				PP	PP	03 17 23.2	-2.8
CWC	**Cottonwood Cre**	83.30	46	⇓P	P	03 14 04.4	+0.2
	baz=83,SNR=7.8						
BELC	**Belle Mtn. Jos**	83.31	49	⇓P	P	03 14 04.7	+0.4
	baz=83,SNR=22						
SNG	**Songkhla**	83.42	281	P	P	03 14 06.0	+0.7
	comp=Z,160nm,0.8s,mb5.6						
SYO	**Syowa Base**	83.44	193	⇑*i*P	P	03 14 03.0	-1.4
SYO	**Syowa Base**	83.44	193	⇓*e*P	SKSac	03 23 29.0	-4.0
KEBM	**Edson Butte**	83.44	38	*e*P	P	03 14 05.5	+0.8
OHAK	**Old Harbor**	83.45	14	*e*P	P	03 14 03.7	-0.7
MPMC	**Manual Prospec**	83.47	46	⇓P	P	03 14 05.4	+0.4
	baz=84,SNR=42						
GSC	**Goldstone**	83.49	47	⇓P	P	03 14 05.4	+0.3
	baz=84,SNR=32						
GSC	**Goldstone**	83.49	47	*e*P	P	03 14 05.4	+0.3
GSC				pmax	pmax		
	comp=Z,40nm,0.9s,mb5.0						
GSC	**Goldstone**	83.49	47	*e*P	P	03 14 05.4	+0.3
	comp=Z,40nm,0.9s,mb5.0						
GSC				*e*pP	pP	03 16 08.3	+2.4
112A	**Yuma**	83.49	50	⇓P	P	03 14 05.5	+0.3
	baz=84,SNR=8.6						
BC3	**Big Chuckawall**	83.49	49	⇓P	P	03 14 05.3	+0.1
	baz=84,SNR=17						
SNY	**Shenyang**	83.50	321	⇑P	P	03

WAKR **Walker** 83.64 43 eP P 03 14 06.4 +0.6
CN2 **Changchun** 83.72 323 ⇑P P 03 14 06.1 0.0
CN2 epP pP 03 16 05.4 -1.5
CN2 eS S 03 23 43.5 +1.1
CN2 SS SS 03 29 28.8 +1.8
CN2 pmax pmax
comp=Z,40nm,1.1s,mb4.9
CN2 pmax pmax
comp=Z,200nm,3.0s
LBCM **Butte Creek Ri** 83.88 41 P P 03 14 07.3 +0.3
WCN **Washoe City** 83.92 43 ⇓P P 03 14 07.6 +0.4
baz=84,SNR=21
GMRC **Granite Mounta** 83.97 48 ⇓P P 03 14 08.0 +0.5
baz=84,SNR=28
IRM **Iron Mountain** 83.98 49 ⇑P P 03 14 07.9 +0.3
baz=84,SNR=34
HUMO **Hull Mountain** 84.05 38 eP P 03 14 08.4 +0.7
comp=Z,113nm,1.2s,mb5.3
HUMO epP pP 03 16 13.9 +5.2
GRAC **Grapevine Rang** 84.08 45 ⇓P P 03 14 08.3 +0.3
baz=84,SNR=27
KDAK **Kodiak Island** 84.11 14 P P 03 14 06.0 -1.7
comp=Z,822nm,1.3s,mb6.1,SNR=18
KDAK **Kodiak Island** 84.11 14 PKPPKP 03 40 21.7
comp=Z,4.1nm,0.4s,baz=17,slow=22,SNR=14
KDAK **Kodiak Island** 84.11 14 eP P 03 14 06.8 -0.9
KDAK pmax pmax
comp=Z,258nm,1.3s,mb5.6
KDAK **Kodiak Island** 84.11 14 eP P 03 14 06.8 -0.9
comp=Z,258nm,1.3s,mb5.6
FURC **Furnace Creek,** 84.12 46 ⇓P P 03 14 08.6 +0.4
baz=84,SNR=18
TIA **Tai'an** 84.14 314 P P 03 14 08.7 +0.4
TIA pmax pmax
comp=Z,360nm,1.0s,mb5.9
SHOC **Shoshone** 84.18 47 ⇑P P 03 14 08.9 +0.3
baz=84,SNR=16
Y12C **Blythe** 84.19 49 ⇑P P 03 14 09.0 +0.3
baz=84,SNR=13
113A **Mohawk Valley,** 84.19 51 ⇓P P 03 14 09.0 +0.3
baz=84,SNR=31
NVAR **Mina Array Bea** 84.31 44 P P 03 14 08.7 -0.5
comp=Z,47nm,1.1s,mb4.9,baz=222,slow=7.4,SNR=88
NVAR pP pP 03 16 13.9 +3.7
comp=Z,2.0nm,0.5s,baz=288,slow=34,SNR=3.2
NVAR PP PP 03 17 32.3 -2.5
comp=Z,6.9nm,0.9s,baz=220,slow=11,SNR=2.8
NVAR PKKPbc PKKPbc 03 32 19.4 +1.0
comp=Z,2.4nm,0.9s,baz=113,slow=2.4,SNR=8.1
NVAR PKPPKP 03 40 14.6
comp=Z,1.3nm,1.0s,baz=113,slow=4.2,SNR=5.2
KLR **Kul'dur** 84.31 330 ⇓iP P 03 14 05.0 -3.8
KLR e pP 03 16 02.5 -7.4
KLR eS SKSac 03 23 31.5 -7.2
KLR pmax pmax
comp=E,140nm,1.6s
KLR pmax pmax
comp=Z,300nm,1.6s,mb5.6
KLR pmax pmax
comp=Z,1μm,8.0s
PAHR **Pah Rah Range** 84.39 42 eP P 03 14 09.6 +0.2
U10A **Ash Meadows, A** 84.44 46 ⇓P P 03 14 10.5 +0.7
baz=84,SNR=20
214A **Organ Pipe Nat** 84.45 52 ⇑P P 03 14 10.4 +0.4
baz=84,SNR=21
RNO **Roman Nose** 84.45 37 P P 03 14 10.4 +0.7
Z13A **Yuma Proving G** 84.50 50 ⇑P P 03 14 10.6 +0.4
baz=85,SNR=40
LDFC **Landfair** 84.52 48 eP P 03 14 11.3 +1.1
comp=Z,94nm,0.8s,mb5.4
LDFC epP pP 03 16 14.3 +3.0
NEE2 **Needles Airpor** 84.68 49 ⇑P P 03 14 11.3 +0.3
baz=85
Y13A **Salome** 84.71 50 ⇑P P 03 14 11.7 +0.5
baz=85,SNR=52
V11A **Goodsprings** 84.72 47 ⇓P P 03 14 11.2 0.0
baz=85,SNR=13
PDMCI **Parker Dam,Lak** 84.76 49 ⇑P P 03 14 11.7 +0.3
baz=85,SNR=30
W12A **Cal Nev Ari** 84.80 48 ⇓P P 03 14 11.8 +0.2
baz=85,SNR=7.5
114A **Black Gap (USA** 84.81 51 ⇓P P 03 14 12.0 +0.3
baz=85,SNR=36
MPOR **Mary's Peak** 84.93 37 P P 03 14 12.8 +0.8
V12A **Nelson** 85.05 48 ⇑P P 03 14 13.1 +0.3
baz=85,SNR=19
U11A **Corn Creek** 85.08 47 ⇓P P 03 14 13.2 +0.3
baz=85
Z14A **Wintersburg** 85.09 51 ⇑P P 03 14 13.2 +0.1
baz=85,SNR=20
S10A **Tonopah Range,** 85.12 45 ⇑P P 03 14 13.2 +0.1
baz=85,SNR=70
COR **Corvallis** 85.12 37 eP P 03 14 13.0 +0.1
COR pmax pmax
comp=Z,23nm,0.8s,mb4.8
COR **Corvallis** 85.12 37 eP P 03 14 13.0 +0.1
comp=Z,23nm,0.8s,mb4.8
MOD **Modoc** 85.16 40 eP P 03 14 13.3 +0.1
comp=Z,45nm,0.9s,mb5.0
115A **Sonoran Desert** 85.26 51 ⇑P P 03 14 14.1 +0.2
baz=85,SNR=16
HEBO **Mount Hebo** 85.28 36 eP P 03 14 14.3 +0.6
comp=Z,143nm,1.2s,mb5.4
K05A **Summer Lake** 85.31 39 ⇓P P 03 14 14.5 +0.6
baz=85,SNR=59
Y14A **Wickenburg** 85.36 50 ⇓P P 03 14 14.4 +0.1
baz=85,SNR=39
W13A **Hualapai Mount** 85.37 49 ⇓P P 03 14 14.7 +0.3
baz=86,SNR=31
216A **Three Points,** 85.45 52 ⇓P P 03 14 15.2 +0.3
baz=86,SNR=21
S11A **Rachel** 85.52 46 ⇓P P 03 14 15.3 +0.4
baz=86,SNR=14
R10A **Warm Springs** 85.52 45 ⇓P P 03 14 15.6 +0.6
baz=86,SNR=24
116A **Eloy** 85.56 52 ⇑P P 03 14 15.7 +0.3
baz=86,SNR=28
Z15A **Gila River Ind** 85.61 51 ⇑P P 03 14 15.7 +0.2
baz=86
MAIT **Maitri** 85.62 184 eP P 03 14 15.3 +0.3
MAIT e pP 03 16 17.1 +0.7
NVL **N'lazarevskaya** 85.62 184 ⇑iP P 03 14 12.7 -2.3
NVL eS SKSac 03 23 44.1 -2.5
NVL pmax pmax
comp=Z,209nm,0.9s,mb5.8
T11A **Corn Creek, Al** 85.64 46 ⇓P P 03 14 16.0 +0.4
baz=86,SNR=74
U12A **Valley of Fire** 85.65 47 ⇓P P 03 14 16.0 +0.3
baz=86,SNR=23
V13A **Grand Canyon W** 85.71 48 ⇓P P 03 14 16.2 +0.3
baz=86,SNR=54
X14A **Yava** 85.72 50 ⇑P P 03 14 16.1 +0.1
baz=86,SNR=31
Q10A **Clear Creek Ra** 85.76 44 ⇓P P 03 14 16.3 +0.2
baz=86,SNR=15
H04A **Detroit Lake** 85.80 37 ⇑P P 03 14 16.0 -0.2
baz=86,SNR=30
Y15A **Casa Rosa Ranc** 85.84 50 ⇑P P 03 14 16.5 -0.2
baz=86,SNR=50
F03A **Seaside** 85.85 36 ⇑P P 03 14 16.5 +0.1
baz=86,SNR=7.8
VNA1 **Neumayer--Stat** 85.90 177 eP P 03 14 16.3 0.0
VNA1 e 03 14 21.9
VNA1 e pP 03 16 21.0 +3.2
VNA1 eS S 03 24 05.5 +2.7
VNA1 e 03 26 47.0
G04A **Mulino** 85.97 37 ⇑P P 03 14 17.0 +0.1
baz=86,SNR=12
W14A **Seligman** 85.98 49 ⇓P P 03 14 17.4 +0.1
baz=86,SNR=22
R11A **Troy Canyon, C** 86.02 45 ⇓P P 03 14 17.3 -0.1
baz=86,SNR=22
U13A **Pakoon Wash** 86.03 48 ⇓P P 03 14 17.7 +0.3
baz=86,SNR=54
S12A **Delamar Landin** 86.09 46 ⇓P P 03 14 18.1 +0.4
baz=86,SNR=28
BMN **Battle Mountai** 86.16 43 eP P 03 14 18.0 0.0
BMN pmax pmax
comp=Z,10.0nm,0.8s
BMN **Battle Mountai** 86.16 43 eP P 03 14 18.0 0.0
comp=Z,10nm,0.8s
Z16A **Peralta Trail,** 86.16 51 ⇑P P 03 14 18.3 +0.1
baz=86,SNR=14
P10A **Eureka** 86.17 44 ⇓P P 03 14 18.5 +0.4
baz=86,SNR=11
X15A **Humboldt** 86.19 50 ⇑P P 03 14 18.5 +0.3
baz=86,SNR=31
V14A **Boquillas Ranc** 86.19 49 ⇓P P 03 14 18.6 +0.4
baz=86,SNR=49
318A **Bisbee** 86.24 53 ⇑P P 03 14 18.9 +0.4
baz=86,SNR=101
Q11A **Duckwater** 86.25 45 ⇓P P 03 14 18.7 +0.3
baz=86,SNR=18
117A **Oracle** 86.26 52 ⇓P P 03 14 19.4 +0.7
baz=86,SNR=25
T13A **Saint George** 86.39 47 ⇓P P 03 14 19.6 +0.5
baz=86
Y16A **Circle Bar Ran** 86.41 51 ⇓P P 03 14 19.7 +0.4
baz=86,SNR=35
F04A **Amboy** 86.46 36 ⇓P P 03 14 19.1 -0.1
baz=87,SNR=30
WVOR **Wild Horse Val** 86.47 40 eP P 03 14 19.7 +0.3
WVOR pmax pmax
comp=Z,57nm,1.1s,mb5.1
WVOR **Wild Horse Val** 86.47 40 eP P 03 14 19.7 +0.3
comp=Z,57nm,1.1s,mb5.1
218A **Dragoon** 86.47 53 ⇑P P 03 14 20.0 +0.4
baz=87,SNR=50
RSO **Redoubt South** 86.52 13 eP P 03 14 17.6 -1.5
O10A **Cortez Mining,** 86.53 43 ⇓P P 03 14 19.9 +0.2
baz=87,SNR=6.1
W15A **Williams** 86.53 49 ⇓P P 03 14 19.7 -0.1
baz=87
SVW2 **Sparrevohn** 86.55 11 eP P 03 14 17.6 -1.7
comp=Z,77nm,1.6s,mb5.1
SVW2 LR LR
comp=Z,400nm,19.0s
U14A **Mt Trumbull** 86.56 48 ⇓P P 03 14 20.1 +0.1
baz=87,SNR=43
P11A **Circle Ranch,** 86.58 44 ⇓P P 03 14 20.0 0.0
baz=87,SNR=7.1
NLWA **Neilton Lookou** 86.63 34 ⇓P P 03 14 20.4 +0.5
baz=87
NLWA **Neilton Lookou** 86.63 34 eP P 03 14 20.5 +0.5
comp=Z,107nm,1.3s,mb5.3
NLWA epP pP 03 16 26.3 +4.4
R12A **Pony Springs,** 86.64 46 ⇑P P 03 14 20.8 +0.5
baz=87,SNR=40
CROR **Criterion Ridg** 86.65 37 P P 03 14 20.3 +0.2
X16A **Lo Mia Camp, P** 86.71 50 ⇓P P 03 14 21.0 +0.3
baz=87,SNR=46
S13A **Holt Ranch, En** 86.73 47 ⇓P P 03 14 21.2 +0.5
baz=87,SNR=29
319A **Douglas** 86.73 54 ⇑P P 03 14 21.4 +0.5
baz=87,SNR=52
GYA **Guiyang** 86.75 301 ⇑iP P 03 14 21.5 +0.4
GYA pP pP 03 16 26.5 +3.4
GYA sP sP 03 17 22.0 +2.3
GYA PP PP 03 17 57.6 +3.2
GYA SKS 03 23 54.3
GYA S S 03 24 11.0 -1.3
GYA sS sS 03 27 50.6 +1.0
GYA SS SS 03 30 13.2 +1.6
GYA pmax pmax
comp=Z,50nm,1.0s,mb5.1
Y17A **Roosevelt** 86.76 51 ⇓P P 03 14 21.0 0.0
baz=87,SNR=18
N10A **Duphy** 86.77 43 ⇑P P 03 14 21.1 +0.3
baz=87
Z17A **San Carlos Hig** 86.83 52 ⇑P P 03 14 21.5 +0.2
baz=87
118A **Homack Ranch,** 86.86 52 ⇑P P 03 14 21.8 +0.3
baz=87,SNR=28
Q12A **Willow Creek R** 86.89 45 ⇓P P 03 14 21.7 +0.3
baz=87,SNR=8.7
BJI **Beijing** 86.92 316 P P 03 14 21.8 +0.3
BJI pP pP 03 16 21.2 -2.4
BJI sP sP 03 17 20.3 +0.1
BJI PP PP 03 17 54.1 -1.4
BJI sS sS 03 27 46.2 -4.4
V15A **Kaibab Nationa** 86.93 49 ⇓P P 03 14 22.1 +0.4
baz=87,SNR=30
O11A **Cowboy Ranch,** 86.97 44 ⇑P P 03 14 21.9 +0.1
baz=87,SNR=20
T14A **Hurricane** 86.97 47 ⇑P P 03 14 22.4 +0.5
baz=87,SNR=23
R13A **O'Grain Ranch,** 86.98 46 ⇓P P 03 14 22.5 +0.6
baz=87,SNR=9.5
W16A **Flagstaff** 87.00 50 ⇑P P 03 14 22.2 +0.1
baz=87,SNR=21
G06A **Carlson Farm,** 87.00 37 ⇓P P 03 14 21.9 +0.1
baz=87,SNR=30
Z18A **Geronimo** 87.03 52 ⇓P P 03 14 22.4 +0.1
baz=87
CCUT **Cedar City** 87.05 47 eP P 03 14 23.2 +1.0
219A **White Tail Can** 87.06 53 ⇑P P 03 14 22.6 +0.2
baz=87,SNR=57
P12A **McGill** 87.08 45 ⇓P P 03 14 22.6 +0.3
baz=87,SNR=6.5
MID **Middleton Isla** 87.09 16 eP P 03 14 21.2 -0.7
MID pmax pmax
comp=Z,548nm,1.5s,mb6.0
MID MLR MLR
comp=Z,500nm,17.0s
MID **Middleton Isla** 87.09 16 eP P 03 14 21.2 -0.7
comp=Z,548nm,1.5s,mb6.0
MID LR LR
comp=Z,500nm,17.0s
J08A **Circle Bar Ran** 87.11 40 ⇓P P 03 14 22.7 +0.4
baz=87,SNR=88
X17A **Forest Lakes** 87.12 51 ⇑P P 03 14 23.3 +0.7
baz=87,SNR=16
ARUT **Antelope Range** 87.12 47 eP P 03 14 23.2 +0.6
ARUT pmax pmax
comp=Z,14nm,0.9s,mb4.6
ARUT **Antelope Range** 87.12 47 eP P 03 14 23.1 +0.6
comp=Z,14nm,0.9s,mb4.6
U15A **North Rim** 87.17 48 ⇓P P 03 14 23.2 +0.4
baz=87
M10A **I.L. Ranch, Tu** 87.20 42 ⇓P P 03 14 23.3 +0.5
baz=87,SNR=31
GAMB **Gambell** 87.23 4 eP P 03 14 22.1 -0.3
comp=Z,112nm,1.0s,mb5.5
320A **Kipp Ranch, An** 87.27 54 ⇑P P 03 14 23.7 +0.3
baz=87,SNR=56
GNW **Green Mountain** 87.28 35 eP P 03 14 23.2 +0.1
comp=Z,56nm,1.2s,mb5.1
S14A **Cedar City** 87.29 47 ⇓P P 03 14 24.0 +0.7
baz=87,SNR=7.7
LON **Longmire** 87.30 36 eP P 03 14 22.8 -0.3
LON epP pP 03 16 29.3 +3.9
N11A **Elko Archery C** 87.31 43 ⇑P P 03 14 23.6 +0.3
baz=87,SNR=8.2
WUAZ **Wupatki** 87.33 49 ⇑P P 03 14 23.9 +0.3
baz=87,SNR=15
WUAZ **Wupatki** 87.33 49 eP P 03 14 24.2 +0.6
comp=Z,23nm,1.0s,mb4.8
Q13A **Wheeler Ranch,** 87.37 45 ⇓P P 03 14 23.9 +0.2
baz=88,SNR=18
Y18A **Canyon Day Jun** 87.39 51 ⇓P P 03 14 24.2 +0.3
baz=88,SNR=44
119A **Ashpeak Ranch,** 87.41 53 ⇑P P 03 14 24.4 +0.4
baz=88,SNR=12
T15A **Red Dirt Ranch** 87.42 48 ⇓P P 03 14 24.6 +0.6
baz=88,SNR=17
D05A **Enumclaw** 87.48 35 ⇑P P 03 14 24.6 +0.6
baz=88,SNR=54
220A **Playas Peak, P** 87.55 54 ⇓P P 03 14 25.2 +0.5
baz=88,SNR=42
L10A **Juniper Basin** 87.56 42 ⇓P P 03 14 25.0 +0.5
baz=88,SNR=20
W17A **Winslow** 87.57 50 ⇑P P 03 14 24.9 +0.2
baz=88
ELK **Elko** 87.58 43 eP P 03 14 25.0 +0.4
ELK e*PP pP 03 16 26.2 -0.7
ELK pmax pmax
comp=Z,23nm,1.0s
ELK **Elko** 87.58 43 eP P 03 14 25.0 +0.3
comp=Z,23nm,1.0s,mb4.9
ELK epP pP 03 16 26.2 -0.7
M11A **Holland Ranch,** 87.62 43 ⇓P P 03 14 25.3 +0.5
baz=88,SNR=33
P13A **Bates Ranch, G** 87.65 45 ⇓P P 03 14 25.4 +0.4
baz=88,SNR=15
PGC **Sidney** 87.66 34 eP P 03 14 25.0 +0.2
comp=Z,8.2nm,1.1s
R14A **James Farms, M** 87.67 46 ⇓P P 03 14 25.4 +0.3
baz=88
H08A **Prairie City** 87.68 39 ⇑P P 03 14 25.1 +0.1
baz=88,SNR=43
Z19A **T-Link Ranch,** 87.70 52 ⇓P P 03 14 25.6 +0.2
baz=88
K10A **MacKenzie Ranc** 87.72 41 ⇓P P 03 14 25.5 +0.2
baz=88,SNR=60
N12A **Clover Valley,** 87.76 43 ⇑P P 03 14 25.8 +0.3
baz=88,SNR=26
S15A **Panguitch** 87.78 47 ⇑P P 03 14 26.3 +0.6
baz=88,SNR=12
120A **U Bar Ranch, L** 87.79 53 ⇑P P 03 14 26.2 +0.4
baz=88,SNR=46
V17A **Tonalea, Kykot** 87.79 50 ⇓P P 03 14 26.0 +0.3
baz=88
F07A **Phinny Hill Vi** 87.80 37 ⇑P P 03 14 25.6 +0.1
baz=88,SNR=8.1
X18A **Snowflake** 87.83 51 ⇓P P 03 14 26.3 +0.3
baz=88,SNR=15
Q14A **Sevier Lake (B** 87.88 46 ⇑P P 03 14 26.4 +0.3
baz=88,SNR=36
I09A **Lost Marbles R** 87.90 40 ⇑P P 03 14 26.0 0.0
baz=88,SNR=32
G08A **Pilot Rock** 87.98 38 ⇑P P 03 14 26.7 +0.3
baz=88,SNR=104
T16A **Glen Canyon Da** 88.00 48 ⇓P P 03 14 27.1 +0.4
baz=88,SNR=11
Y19A **Nutrioso** 88.04 52 ⇓P P 03 14 27.3 +0.4
baz=88,SNR=41
O13A **Hicks Ranch, I** 88.04 44 ⇑P P 03 14 27.3 +0.5
baz=88
L11A **Cat Creek Ranc** 88.05 42 ⇓P P 03 14 27.2 +0.4
baz=88,SNR=59
EBG **Ellensburg** 88.07 36 P P 03 14 27.1 +0.4
Z20A **Nine Sixteen R** 88.10 53 ⇓P P 03 14 27.8 +0.6
baz=88,SNR=31
TIY **Taiyuan** 88.10 313 eP P 03 14 28.1 +0.9
TIY pP pP 03 16 28.2 -1.4
TIY SKS 03 24 00.7
TIY S S 03 24 27.2 +2.9
TIY pmax pmax
comp=Z,850nm,3.5s
R15A **Junction** 88.12 47 ⇑P P 03 14 27.7 +0.5
baz=88
M12A **Wells** 88.15 43 ⇑P P 03 14 27.7 +0.4
baz=88,SNR=28
221A **Mesquite Ranch** 88.16 54 ⇓P P 03 14 27.9 +0.3
baz=88,SNR=7.6
J10A **Berg Farm, Mel** 88.16 40 ⇑P P 03 14 27.3 0.0
baz=88,SNR=7.9
TTA **Tatalina** 88.18 11 eP P 03 14 25.6 -1.3
TBM **Table Mountain** 88.21 36 P P 03 14 27.6 +0.1
K11A **Parker Ranch,** 88.23 41 ⇑P P 03 14 28.0 +0.4
baz=88,SNR=68
E07A **Sunnyside** 88.24 37 ⇓P P 03 14 27.7 +0.1
baz=88,SNR=7.3
X19A **St. Johns** 88.25 51 ⇓P P 03 14 27.9 0.0
baz=88
W18A **Petrified Fore** 88.28 50 ⇑P P 03 14 28.0 0.0
baz=88
RSW **Rattlesnake Hi** 88.29 37 eP P 03 14 28.3 +0.5
N13A **Wendover, West** 88.29 44 ⇓P P 03 14 28.3 +0.4
baz=88,SNR=8.9
HAWA **Hanford** 88.32 37 eP P 03 14 28.2 +0.3
S16A **Weppner Ranch,** 88.32 47 ⇑P P 03 14 28.4 +0.2
baz=88,SNR=19
P14A **Drum Mountains** 88.34 45 ⇑P P 03 14 28.8 +0.6
baz=88,SNR=12
MSU **Marysvale** 88.35 47 eP P 03 14 29.2 +0.9
PLCA **Paso Flores** 88.36 134 P P 03 14 30.0 +1.5
comp=Z,136nm,1.0s,mb5.7,baz=236,slow=4.8,SNR=136
PLCA PKKPbc PKKPbc 03 32 09.8 +1.4
comp=Z,3.9nm,0.9s,baz=32,slow=2.5,SNR=5.0
PLCA SKKPbc 03 34 53.6
comp=Z,4.9nm,1.0s,baz=24,slow=4.9,SNR=5.3
PLCA **Paso Flores** 88.36 134 eP P 03 14 29.9 +1.4
comp=Z,176nm,1.0s,mb5.7
U17A **Shonto** 88.38 49 ⇑P P 03 14 28.6 +0.1
baz=88
121A **Cookes Peak, D** 88.41 53 ⇑P P 03 14 29.0 +0.3
baz=88,SNR=42
V18A **Ganado** 88.44 50 ⇑P P 03 14 29.1 +0.4
baz=88,SNR=12
Q15A **Fillmore** 88.47 46 ⇓P P 03 14 28.8 0.0
baz=89
WRW **Wenatchee Ridg** 88.49 35 P P 03 14 28.5 -0.2
T17A **Navajo Res., N** 88.49 48 ⇓P P 03 14 29.5 +0.5
baz=89,SNR=32
L12A **House Creek Ra** 88.50 42 ⇑P P 03 14 29.5 +0.7
baz=89,SNR=40
SIT **Sitka** 88.51 22 eP P 03 14 27.6 -1.0
SIT pmax pmax
comp=Z,247nm,2.5s,mb5.6
SIT MLR MLR
comp=Z,1μm,20.0s
SIT **Sitka** 88.51 22 eP P 03 14 27.6 -1.0
comp=Z,247nm,2.5s,mb5.6
SIT LR LR
comp=Z,1μm,20.0s
I10A **Payette** 88.52 40 ⇓P P 03 14 29.4 +0.5
baz=89,SNR=18
W19A **Sanders** 88.52 51 ⇓P P 03 14 29.1 -0.1
baz=89
A05A **Maple Falls** 88.57 34 ⇑P P 03 14 28.7 -0.4
baz=89,SNR=5.8
B06A **Marblemount** 88.58 34 ⇑P P 03 14 28.6 -0.5
baz=89,SNR=7.8
M13A **Montello** 88.59 43 ⇓P P 03 14 29.6 +0.2
baz=89,SNR=33
ETW **Entiat** 88.62 36 eP P 03 14 29.1 -0.2
ETW epP pP 03 16 35.8 +3.9
E08A **Dider Farm, El** 88.64 37 ⇑P P 03 14 29.4 0.0
baz=89,SNR=12
G09A **Cove** 88.64 39 ⇑P P 03 14 29.6 +0.1
baz=89,SNR=69
Y20A **Horse Springs,** 88.65 52 ⇓P P 03 14 30.2 +0.4
baz=89,SNR=36
BMO **Blue Mountains** 88.67 39 eP P 03 14 29.4 -0.2
BMO pmax pmax
comp=Z,40nm,1.3s,mb5.1
BMO **Blue Mountains** 88.67 39 eP P 03 14 29.4 -0.3
comp=Z,40nm,1.3s,mb5.1
XAN **Xi'an** 88.69 308 P P 03 14 30.8 +0.8
XAN pP pP 03 16 29.0 -3.6
XAN sP sP 03 17 23.7 -5.3
XAN PP PP 03 18 06.0 -3.6
XAN SKS 03 24 04.6
XAN S S 03 24 24.7 -5.1
XAN sS sS 03 27 59.9 -8.6
XAN pmax pmax
comp=Z,54nm,0.7s,mb5.5
XAN pmax pmax
comp=Z,94nm,6.6s
R16A **Teasdale** 88.69 47 ⇓P P 03 14 30.7 +0.8
baz=89,SNR=32
LNOR **Lincton Mounta** 88.70 38 eP P 03 14 29.3 -0.4
222A **Williams Famil** 88.70 54 ⇓P P 03 14 30.6 +0.4
baz=89,SNR=17
DIV **Divide** 88.70 16 eP P 03 14 28.3 -1.0
comp=Z,299nm,1.1s,mb6.0
MFID **Camas Ranch** 88.72 41 ⇑P P 03 14 30.1 +0.2
baz=89,SNR=43
S17A **Black Ridge (B** 88.82 48 ⇑P P 03 14 30.3 -0.2
baz=89,SNR=20
DUG **Dugway** 88.83 45 ⇑P P 03 14 30.6 +0.1
baz=89
DUG **Dugway** 88.83 45 eP P 03 14 30.5 0.0
DUG pmax pmax
comp=Z,19nm,1.1s,mb4.8
DUG **Dugway** 88.83 45 eP P 03 14 30.5 0.0
comp=Z,19nm,1.1s,mb4.8
H10A **Noah's Angus R** 88.84 40 ⇓P P 03 14 30.2 -0.2
baz=89,SNR=53
K12A **Draper Farm, C** 88.84 42 ⇓P P 03 14 30.7 +0.2
baz=89,SNR=30
U18A **Rough Rock, Ch** 88.84 49 ⇓P P 03 14 30.6 0.0
baz=89,SNR=12
P15A **Leamington** 88.84 46 ⇓P P 03 14 31.3 +0.7
baz=89
PPLA **Purkeypile** 88.85 12 eP P 03 14 27.4 -2.7
comp=Z,76nm,1.0s,mb5.5
BMRM **Bremner River** 88.86 16 eP P 03 14 29.2 -0.9
comp=Z,257nm,0.9s,mb6.1
Z21A **St. Cloud Mine** 88.87 53 ⇓P P 03 14 31.4 +0.5
baz=89,SNR=68
X20A **Quemado** 88.87 51 ⇓P P 03 14 31.1 +0.2
baz=89,SNR=23
WTV **Waterville** 88.88 36 P P 03 14 30.3 -0.2
I11A **Placerville** 88.92 40 ⇑P P 03 14 30.9 +0.1
baz=89,SNR=39
N14A **Grayback Hills** 88.94 44 ⇑P P 03 14 31.1 +0.1
baz=89,SNR=21
SEY **Seymchan** 88.94 348 c iP P 03 14 29.7 -0.7
SEY **Seymchan** 88.94 348 ⇑iP P 03 14 29.8 -0.6

G10A **Bishop Farm, J** 89.03 39 ⇑P P 03 14 31.0 -0.3
baz=89,SNR=41
BDT **Bhumibol Dam** 89.06 289 P P 03 14 33.0 +1.0
comp=Z,33nm,1.0s,mb5.1
D08A **Wollman Farm,** 89.06 37 ⇑P P 03 14 31.5 +0.2
baz=89,SNR=24
J12A **Stokes Ranch,** 89.06 41 ⇓P P 03 14 32.0 +0.5
baz=89,SNR=69
V19A **Window Rock** 89.06 50 ⇓P P 03 14 31.5 -0.2
baz=89
122A **Conniff Cattle** 89.06 54 ⇑P P 03 14 32.2 +0.4
baz=89,SNR=6.9
BGU **Big Grassy Mou** 89.08 44 *e*P P 03 14 31.4 -0.2
comp=Z,28nm,1.5s,mb4.9
O15A **The Old Anders** 89.09 45 ⇑P P 03 14 32.5 +0.7
baz=89,SNR=9.0
L13A **Double Diamond** 89.13 43 ⇓P P 03 14 32.3 +0.5
baz=89,SNR=7.8
W20A **Ramah** 89.16 51 ⇑P P 03 14 32.5 +0.4
baz=89,SNR=26
223A **Chaparral, Ant** 89.16 54 ⇑P P 03 14 32.6 +0.4
baz=89,SNR=6.1
E09A **Wood Farm, Sta** 89.16 37 ⇓P P 03 14 31.5 -0.3
baz=89,SNR=10
NLU **North Lily Min** 89.18 45 *e*P P 03 14 33.6 +1.5
M14A **Sheep Mountain** 89.19 44 ⇑P P 03 14 32.3 +0.2
baz=89,SNR=37
T18A **Mexican Hat** 89.20 49 ⇑P P 03 14 32.4 +0.1
baz=89,SNR=82
Y21A **Point of Rocks** 89.20 52 ⇑P P 03 14 33.2 +0.8
baz=89,SNR=67
Q16A **Castle Valley** 89.23 47 ⇑P P 03 14 33.4 +1.0
baz=89,SNR=20
U19A **Dine' College,** 89.24 50 ⇓P P 03 14 32.3 -0.2
baz=89,SNR=12
PNL **Peninsula** 89.24 19 *e*P P 03 14 31.4 -0.4
comp=Z,216nm,0.8s,mb6.0
TNA **Tin City** 89.25 5 *e*P P 03 14 31.0 -0.8
comp=Z,235nm,1.3s,mb5.9
TNA *e*PP PP 03 18 09.4 -3.8
R17A **Hanksville Air** 89.28 47 ⇓P P 03 14 32.5 -0.2
baz=89,SNR=12
KMI **Kunming** 89.29 298 P P 03 14 34.6 +1.6
KMI pP pP 03 16 35.2 -0.5
KMI sP sP 03 17 31.1 -1.0
KMI PP PP 03 18 13.6 -0.9
KMI SKS 03 24 09.7
KMI S S 03 24 35.8 +0.1
KMI pmax pmax
comp=Z,68nm,0.9s,mb5.5
KMI pmax pmax
comp=Z,470nm,3.1s
H11A **Donnelly** 89.33 40 ⇓P P 03 14 32.7 0.0
baz=89,SNR=97
X21A **Alamocita Cree** 89.34 52 ⇓P P 03 14 33.3 +0.3
baz=89,SNR=39
I12A **Atlanta** 89.34 41 ⇑P P 03 14 33.2 +0.4
baz=89,SNR=59
CCHI **Chillan** 89.35 130 ⇓*i*P P 03 14 34.2 +1.0
CCHI **Chillan** 89.35 130 ⇓*i*P P 03 14 34.2 +1.0
K13A **Stover Farm, H** 89.35 42 ⇓P P 03 14 33.4 +0.6
baz=89,SNR=60
Z22A **Elephant Butte** 89.36 53 ⇑P P 03 14 33.4 +0.3
baz=89,SNR=42
F10A **Beach Ranch, E** 89.36 38 ⇓P P 03 14 32.3 -0.5
baz=89,SNR=40
N15A **Stansbury Isla** 89.39 44 ⇓P P 03 14 33.2 +0.2
baz=90,SNR=33
S18A **Hurst Farm, Bl** 89.40 48 ⇓P P 03 14 33.3 +0.1
baz=90,SNR=11
TMUT **Trail Mountain** 89.40 46 *e*P P 03 14 34.4 +1.3
comp=Z,60nm,0.7s,mb5.5
MPU **Maple Canyon** 89.50 45 *e*P P 03 14 33.2 -0.4
comp=Z,25nm,1.0s,mb5.0
V20A **Brimhall** 89.51 50 ⇓P P 03 14 33.8 +0.1
baz=90,SNR=8.4
NOQ **North Oquirrh** 89.52 45 *e*P P 03 14 34.0 +0.3
L14A **Malta** 89.54 43 ⇑P P 03 14 33.9 +0.2
baz=90,SNR=29
123A **Bell Site, Whi** 89.58 54 ⇓P P 03 14 34.0 -0.1
baz=90
G11A **Walters Elk Ra** 89.58 39 ⇑P P 03 14 33.8 -0.1
baz=90
324A **Moseley Ranch,** 89.61 55 ⇑P P 03 14 34.2 -0.1
baz=90,SNR=59
CMAR **Chiang Mai Arr** 89.61 290 P P 03 14 35.8 +1.2
comp=Z,57nm,0.8s,mb5.5,baz=126,slow=3.3,SNR=132
CMAR pP pP 03 16 42.2 +4.8
comp=Z,23nm,0.9s,baz=127,slow=3.4,SNR=10
CMAR PKKPbc PKKPbc 03 32 05.3 +0.6
comp=Z,9.8nm,0.6s,baz=289,slow=4.5,SNR=26
CMAR PKPPKP 03 40 01.0
comp=Z,0.7nm,0.3s,baz=302,slow=12,SNR=5.1
CMAR **Chiang Mai Arr** 89.61 290 P P 03 14 35.8 +1.2
CMAR pmax pmax
comp=Z,57nm,0.8s
CMAR pmax pmax
comp=Z,23nm,0.9s
CMAR pmax pmax
comp=Z,10.0nm,0.6s
CMAR pmax pmax
comp=Z,1.0nm,0.4s
B08A **Colville Reser** 89.61 35 ⇑P P 03 14 33.3 -0.6
baz=90,SNR=29
HLID **Hailey** 89.65 41 ⇑P P 03 14 34.9 +0.7
baz=90
HLID **Hailey** 89.65 41 *e*P P 03 14 34.8 +0.6
comp=Z,11nm,0.7s,mb4.8
SPUT **South Promonto** 89.65 44 *e*P P 03 14 34.5 +0.2
SPUT *e*PP PP 03 18 14.7 -2.3
425A **Indio Mountain** 89.68 56 ⇓P P 03 14 35.2 +0.5
baz=90,SNR=37
O16A **Springville** 89.68 45 ⇓P P 03 14 35.1 +0.7
baz=90
Y22A **Socorro** 89.69 53 ⇓P P 03 14 34.6 0.0
baz=90,SNR=13
HVU **Hansel Valley** 89.70 43 *e*P P 03 14 34.7 +0.2
HVU *e* 03 18 15.5
J13A **Cove Ranch, Pi** 89.71 42 ⇑P P 03 14 34.9 +0.5
baz=90
TRF **Thorofare Moun** 89.73 13 *e*P P 03 14 32.3 -1.8
comp=Z,1.9nm,1.2s
M15A **Larsen Ranch,** 89.74 44 ⇑P P 03 14 34.8 +0.2
baz=90,SNR=66
U20A **Newcomb** 89.76 50 ⇓P P 03 14 34.9 0.0
baz=90
W21A **San Fidel** 89.76 51 ⇑P P 03 14 34.9 -0.1
baz=90
CHG **Chiang Mai** 89.76 291 ⇓P P 03 14 36.2 +0.9
comp=Z,126nm,0.8s,mb5.8
CHTO **Chiang Mai** 89.76 291 *e*P P 03 14 36.6 +1.3
CHTO *e**PP pP 03 16 38.8 +0.7
CHTO pmax pmax
comp=Z,82nm,0.7s,mb5.7
CHTO **Chiang Mai** 89.76 291 *e*P P 03 14 36.6 +1.3
comp=Z,82nm,0.7s,mb5.7
CHTO *e*pP pP 03 16 38.8 +0.7
CHTO **Chiang Mai** 89.76 291 P P 03 14 37.1 +1.8
SNR=34
SRU **San Rafael** 89.76 47 ⇓P P 03 14 34.8 0.0
baz=90,SNR=69
SRU **San Rafael** 89.76 47 *e*P P 03 14 35.0 +0.2
SRU pmax pmax
comp=Z,48nm,0.8s,mb5.4
SRU **San Rafael** 89.76 47 *e*P P 03 14 35.0 +0.2
comp=Z,48nm,0.8s,mb5.4
SRU *e*pP pP 03 16 42.9 +5.2
626A **Big Bend Ranch** 89.77 58 ⇑P P 03 14 35.1 0.0
baz=90,SNR=74
CTU **Camp Tracy** 89.78 45 *e*P P 03 14 35.3 +0.4
comp=Z,40nm,1.0s,mb5.2
LAZ **Ladron** 89.78 52 *e*P P 03 14 35.6 +0.6
comp=Z,13nm,0.9s,mb4.8
Y22D **IRIS PASSCAL I** 89.78 52 ⇑P P 03 14 35.1 0.0
baz=90
LENM **Lemitar** 89.79 52 *e*P P 03 14 36.0 +0.9
MNTX **Coudas Mount** 89.80 55 *e*P P 03 14 35.2 0.0
comp=Z,27nm,0.8s,mb5.1
MNTX *e*pP pP 03 16 40.1 +2.1
P17A **Butcher Ranch,** 89.81 46 ⇑P P 03 14 34.6 -0.5
baz=90,SNR=17
R18A **Canyonlands Na** 89.82 48 ⇑P P 03 14 34.7 -0.4
baz=90,SNR=42
K14A **Jones Ranch, D** 89.86 43 ⇑P P 03 14 35.5 +0.3
baz=90,SNR=27
224A **Cornudas Mount** 89.87 55 ⇑P P 03 14 35.9 +0.3
baz=90,SNR=45

Z23A **Rita Site, Whi** 89.90 53 ⇑P P 03 14 35.9 +0.3
baz=90,SNR=14
JLU **Jordanelle** 89.92 45 *e*P P 03 14 36.0 +0.5
X22A **Bernardo** 89.92 52 ⇑P P 03 14 35.2 -0.5
baz=90
F11A **Grangeville** 89.93 39 ⇓P P 03 14 33.8 -1.6
baz=90,SNR=12
H12A **Diamond D Ranc** 89.93 40 ⇑P P 03 14 35.4 -0.1
baz=90,SNR=70
DAU **Daniels Canyon** 89.95 45 *e*P P 03 14 36.6 +0.9
DAU pmax pmax
comp=Z,37nm,1.1s,mb5.1
DAU **Daniels Canyon** 89.95 45 *e*P P 03 14 36.5 +0.9
comp=Z,37nm,1.1s,mb5.1
325A **Bean Ranch, Si** 89.96 56 ⇑P P 03 14 35.6 -0.4
baz=90,SNR=44
G12A **Big Creek, Yel** 89.98 40 ⇓P P 03 14 35.4 -0.2
baz=90,SNR=32
S19A **Harvey Farm, M** 90.01 48 ⇓P P 03 14 36.0 0.0
baz=90,SNR=20
Q18A **Rafter H Ranch** 90.02 47 ⇑P P 03 14 35.9 -0.2
baz=90
I13A **Wildhorse Cree** 90.02 41 ⇓P P 03 14 36.3 +0.4
baz=90,SNR=18
TXAR **Lajitas Array** 90.03 58 P P 03 14 34.7 -1.6
comp=Z,13nm,0.8s,mb4.8,baz=53,slow=44,SNR=426
TXAR pP pP 03 16 42.5 +3.3
comp=Z,12nm,0.9s,baz=215,slow=5.8,SNR=9.3
TXAR PKKPbc PKKPbc 03 32 03.5 -0.6
comp=Z,2.7nm,0.8s,baz=79,slow=2.3,SNR=11
TXAR PKPPKP 03 40 08.5
comp=Z,0.8nm,0.9s,baz=137,slow=4.4,SNR=4.8
TXAR **Lajitas Array** 90.03 58 P P 03 14 34.7 -1.6
TXAR pmax pmax
comp=Z,13nm,0.8s
TXAR pmax pmax
comp=Z,12nm,0.9s
TXAR pmax pmax
comp=Z,3.0nm,0.9s
TXAR pmax pmax
comp=Z,1.0nm,0.9s
TXAR **Lajitas Array** 90.03 58 P P 03 14 34.7 -1.6
TXAR pP pP 03 16 42.5 +3.3
TXAR PKKPbc PKKPbc 03 32 03.5 -0.6
TXAR P'P' 03 40 08.5
526A **Mary Lane Ranc** 90.03 57 ⇓P P 03 14 36.2 -0.1
baz=90,SNR=62
BNM **Barren Site** 90.03 53 *e*P P 03 14 36.6 +0.4
comp=Z,15nm,0.9s,mb4.8
BNM *e*pP pP 03 16 44.2 +5.1
L15A **Malad City** 90.06 43 ⇓P P 03 14 35.9 -0.2
baz=90,SNR=48
J14A **Carey** 90.07 42 ⇓P P 03 14 36.9 +0.7
baz=90,SNR=55
N16A **Rees Ranch, Co** 90.08 45 ⇓P P 03 14 36.6 +0.3
baz=90,SNR=11
V21A **Milan** 90.10 51 ⇓P P 03 14 36.3 -0.2
baz=90,SNR=9.9
LPM **Los Pinos Moun** 90.11 52 *e*P P 03 14 36.9 +0.3
BPAW **Bear Paw Mtn.** 90.17 12 *e*P P 03 14 33.5 -2.6
comp=Z,8.7nm,0.8s,mb4.6
O17A **Robinson Place** 90.18 46 ⇓P P 03 14 37.2 +0.4
baz=90,SNR=144
MVCO **Mesa Verde** 90.19 49 ⇓P P 03 14 37.0 +0.1
baz=90
R19A **Curley Farm, L** 90.20 48 ⇑P P 03 14 36.6 -0.2
baz=90,SNR=25
124A **Stringfield Ra** 90.21 54 ⇑P P 03 14 37.3 +0.2
baz=90,SNR=27
P18A **Preston Nutter** 90.21 46 ⇓P P 03 14 37.1 +0.2
baz=90,SNR=24
MCK **McKinley** 90.26 13 *e*P P 03 14 34.8 -1.7
MCK pmax pmax
comp=Z,135nm,1.1s,mb5.7
MCK **McKinley** 90.26 13 *e*P P 03 14 34.8 -1.7
comp=Z,136nm,1.1s,mb5.7
MCK *e*pP pP 03 16 41.0 +1.6
627A **Terlingua Ranc** 90.30 58 ⇓P P 03 14 37.5 -0.1
baz=90,SNR=89
H13A **Challis** 90.30 41 ⇓P P 03 14 37.2 +0.1
baz=90
W22A **Albuquerque** 90.30 52 ⇑P P 03 14 37.6 +0.2
baz=90
HHC **Hu-ho-hao-te** 90.31 315 *e*P P 03 14 38.2 +0.9
HHC pP pP 03 16 39.7 -0.6
HHC sP sP 03 17 38.5 +2.0
HHC PP PP 03 18 24.6 +2.5
HHC SKS 03 24 15.2
HHC S S 03 24 44.3 +0.1
HHC sS sS 03 28 22.2 -1.7
HHC SS SS 03 31 05.2 +3.0
HHC pmax pmax
comp=Z,150nm,0.9s,mb5.8
HHC pmax pmax
comp=Z,650nm,7.5s
K15A **Arbon** 90.33 43 ⇓P P 03 14 37.6 +0.2
baz=90,SNR=28
Y23A **Lovelace Mesa,** 90.35 53 ⇑P P 03 14 37.7 0.0
baz=90,SNR=26
426A **McDonald Obser** 90.35 57 ⇑P P 03 14 37.9 +0.1
baz=90,SNR=79
SKAG **Skagway** 90.36 21 *e*P P 03 14 37.5 +0.4
comp=Z,98nm,1.5s,mb5.4
SKAG LR LR
comp=Z,800nm,22.0s
F12A **Elk City** 90.37 39 ⇑P P 03 14 37.1 -0.4
baz=90,SNR=56
HWUT **Hardware Ranch** 90.38 44 *e*P P 03 14 37.3 -0.3
comp=Z,23nm,0.7s,mb5.1
U21A **Nageezi** 90.39 50 ⇓P P 03 14 37.8 -0.1
baz=90,SNR=105
PV10 **Paradox Valley** 90.39 48 *e*P P 03 14 37.5 -0.3
comp=Z,364nm,0.9s,mb6.2
225A **Deer Hill, Car** 90.41 55 ⇓P P 03 14 38.2 +0.2
baz=90,SNR=21
I14A **Mackay** 90.43 41 ⇓P P 03 14 38.4 +0.6
baz=90,SNR=33
527A **Woodward Ranch** 90.44 57 ⇑P P 03 14 38.1 -0.1
baz=90,SNR=75
PV04 **Paradox Valley** 90.49 48 *e*P P 03 14 39.1 +0.8
N17A **Moffit Pass** 90.50 45 ⇑P P 03 14 38.7 +0.5
baz=91
Q19A **Hogan Spring (** 90.53 47 ⇓P P 03 14 38.6 +0.2
baz=91,SNR=24
ANMO **Albuquerque** 90.53 52 *i* P P 03 14 38.5 0.0
ANMO **Albuquerque** 90.53 52 *i* P P 03 14 38.5 0.0
E12A **Beaver Dam Sad** 90.56 39 ⇑P P 03 14 37.4 -0.9
baz=91,SNR=11
Z24A **Sheeppen Canyo** 90.57 54 ⇓P P 03 14 38.4 -0.3
baz=91,SNR=20
PV01 **Paradox Valley** 90.59 48 *e*P P 03 14 38.6 -0.1
comp=Z,1μm,0.8s
G13A **Cobalt** 90.60 40 ⇓P P 03 14 38.3 -0.3
baz=91,SNR=29
L16A **Fish Haven** 90.67 44 ⇓P P 03 14 39.0 +0.1
baz=91,SNR=31
V22A **San Miguel Ran** 90.67 51 ⇓P P 03 14 39.2 0.0
baz=91,SNR=9.4
326A **Caldwell Ranch** 90.69 56 ⇓P P 03 14 39.1 -0.2
baz=91,SNR=9.1
O18A **Roosevelt** 90.69 46 ⇓P P 03 14 39.2 0.0
baz=91
628A **Black Gap, Mar** 90.70 58 ⇓P P 03 14 39.5 +0.1
baz=91,SNR=84
HYT **Haines Junctio** 90.74 19 *e*P P 03 14 38.4 -0.4
NEW **Newport** 90.75 36 *e*P P 03 14 38.4 -0.8
NEW pmax pmax
comp=Z,7.0nm,0.8s
NEW **Newport** 90.75 36 *e*P P 03 14 38.4 -0.8
comp=Z,6.7nm,0.8s,mb4.6
R20A **Redvale** 90.75 48 ⇑P P 03 14 39.2 -0.3
baz=91,SNR=8.1
J15A **Blackfoot** 90.77 42 ⇓P P 03 14 40.0 +0.6
baz=91,SNR=48
125A **Gardner Draw,** 90.79 55 ⇑P P 03 14 39.8 +0.1
baz=91,SNR=27
Y24A **Capitan** 90.80 53 ⇓P P 03 14 39.8 0.0
baz=91,SNR=81
H14A **Leadore** 90.86 41 ⇑P P 03 14 40.1 +0.3
baz=91,SNR=30
W23A **Werner Place,** 90.86 52 ⇓P P 03 14 39.6 -0.5
baz=91,SNR=9.0
M17A **Scullys Gap (B** 90.88 45 ⇑P P 03 14 40.0 0.0
baz=91,SNR=27
S21A **Coal Bank Pass** 90.90 49 ⇑P P 03 14 40.4 +0.3
baz=91,SNR=18
427A **Hayter Ranch,** 90.92 57 ⇓P P 03 14 40.7 +0.3

baz=91,SNR=102
F13A **Darby** 90.93 40 ⇓P P 03 14 39.5 -0.5
baz=91,SNR=27
226A **Malaga, Loving** 90.93 55 ⇑P P 03 14 40.4 0.0
baz=91,SNR=22
U22A **Llaves** 90.93 50 ⇑P P 03 14 40.2 -0.1
baz=91,SNR=9.2
C11A **Tepee Creek (N** 90.98 37 ⇑P P 03 14 40.0 -0.3
baz=91,SNR=47
K16A **Soda Springs** 91.00 43 ⇓P P 03 14 40.8 +0.4
baz=91,SNR=17
Z25A **Roswell** 91.03 54 ⇓P P 03 14 41.2 +0.3
baz=91,SNR=24
D12A **Red Ives Fores** 91.04 38 ⇑P P 03 14 39.7 -0.8
baz=91
P19A **Cripple Cowboy** 91.06 47 ⇑P P 03 14 40.9 +0.1
baz=91,SNR=20
I15A **Monteview** 91.06 42 ⇑P P 03 14 41.3 +0.6
baz=91,SNR=9.4
CD2 **Chengdu** 91.06 303 P P 03 14 42.2 +1.1
CD2 pP pP 03 16 39.0 -5.1
CD2 sP sP 03 17 35.2 -5.1
CD2 SKS 03 24 17.2
CD2 S S 03 24 51.8 +0.5
CD2 sS sS 03 28 24.2 -7.3
CD2 SS SS 03 31 15.7 +2.5
CD2 pmax pmax
comp=Z,100nm,1.0s,mb5.7
CD2 pmax pmax
comp=Z,400nm,4.7s
L17A **Cokeville** 91.07 44 ⇑P P 03 14 41.1 +0.3
baz=91
528A **Cox Ranch, San** 91.08 58 ⇓P P 03 14 41.3 +0.1
baz=91,SNR=28
V23A **Ortiz Mt. (NFS** 91.11 51 ⇑P P 03 14 41.5 +0.4
baz=91,SNR=19
Q20A **Ridgley Place,** 91.19 48 ⇑P P 03 14 41.6 +0.1
baz=91,SNR=14
BTO **Baotou** 91.20 314 *e*P P 03 14 41.1 -0.3
J16A **Bone** 91.22 43 ⇓P P 03 14 42.1 +0.6
baz=91,SNR=22
M18A **Lyman** 91.25 45 ⇑P P 03 14 41.8 +0.2
baz=91,SNR=25
126A **Clayton Basin,** 91.26 55 ⇑P P 03 14 41.6 -0.3
baz=91,SNR=5.5
AHID **Auburn Hatcher** 91.27 43 *e*P P 03 14 42.8 +1.0
comp=Z,60nm,1.1s,mb5.4
N18A **Larsen Ranch,** 91.27 45 ⇑P P 03 14 41.6 -0.2
baz=91,SNR=19
H15A **Lima** 91.29 41 ⇑P P 03 14 42.0 +0.3
baz=91,SNR=18
O19A **Miners Draw (B** 91.30 46 ⇓P P 03 14 41.5 -0.4
baz=91,SNR=14
C12B **Naegeli Ranch,** 91.34 37 ⇓P P 03 14 41.3 -0.6
baz=91,SNR=6.3
Y25A **Mesa, Roswell** 91.34 53 ⇑P P 03 14 41.6 -0.7
baz=91,SNR=31
E13A **Victor** 91.37 39 ⇑P P 03 14 41.0 -1.1
baz=92,SNR=9.1
K17A **Gardner Place,** 91.38 43 ⇑P P 03 14 42.6 +0.4
baz=92,SNR=11
U23A **El Rito** 91.38 51 ⇑P P 03 14 42.5 +0.1
baz=92,SNR=15
P20A **De Beque** 91.39 47 ⇑P P 03 14 42.7 +0.3
baz=92,SNR=15
R21A **Cimarron** 91.41 48 ⇑P P 03 14 42.6 +0.1
baz=92,SNR=24
428A **Kincaid Ranch,** 91.41 57 ⇑P P 03 14 42.6 -0.1
baz=92,SNR=25
W24A **Lazy 6 Ranch,** 91.42 52 ⇓P P 03 14 42.3 -0.3
baz=92,SNR=23
RRI2 **Red Ridge** 91.44 43 *e*P P 03 14 43.0 +0.5
DLBC **Dease Lake** 91.44 24 *e*P P 03 14 42.0 -0.1
COLA **College** 91.49 13 ⇑*i*P P 03 14 40.2 -2.0
COLA **College** 91.49 13 *e*P P 03 14 40.2 -1.9
comp=Z,59nm,0.8s,mb5.6
F14A **Wisdom** 91.50 40 ⇓P P 03 14 42.3 -0.4
baz=92
L18A **Fontenelle, Gr** 91.52 44 ⇑P P 03 14 42.9 0.0
baz=92,SNR=10.0
227A **Bennet, Jal** 91.52 56 ⇓P P 03 14 42.5 -0.7
baz=92
N19A **John Jarvie Ra** 91.56 46 ⇑P P 03 14 42.6 -0.4
baz=92,SNR=11
D13A **Huson** 91.57 38 ⇓P P 03 14 42.7 -0.3
baz=92
Z26A **Caprock** 91.58 54 ⇑P P 03 14 43.1 -0.2
baz=92,SNR=27
S22A **4UR Ranch, Cre** 91.61 49 ⇓P P 03 14 43.5 +0.1
baz=92,SNR=40
328A **Wristen Ranch,** 91.61 56 ⇓P P 03 14 43.2 -0.4
baz=92,SNR=15
I16A **Newdale** 91.61 42 ⇑P P 03 14 43.5 +0.3
baz=92,SNR=23
Q21A **Lamborn Mesa,** 91.62 48 ⇑P P 03 14 43.4 0.0
baz=92,SNR=6.2
X25A **Clemmons Ranch** 91.64 53 ⇓P P 03 14 43.2 -0.5
baz=92,SNR=8.9
G15A **Dillon** 91.68 41 ⇓P P 03 14 43.1 -0.4
baz=92,SNR=21
DLMT **Dillon** 91.72 41 *e*P P 03 14 44.1 +0.4
MSO **Missoula** 91.72 39 *e*P P 03 14 42.5 -1.2
comp=Z,7.7nm,1.0s,mb4.7
MSO *e*PP PP 03 18 29.4 -3.6
REDW **Red Top Meadow** 91.74 43 *e*P P 03 14 43.7 -0.1
comp=Z,40nm,1.2s,mb5.3
TPAW **Teton Pass** 91.74 43 *e*P P 03 14 44.2 +0.4
comp=Z,42nm,1.3s,mb5.3
E14A **Clinton** 91.76 39 ⇑P P 03 14 43.1 -0.8
baz=92,SNR=8.1
127A **Arkansas Junct** 91.77 55 ⇑P P 03 14 43.7 -0.6
baz=92,SNR=8.3
O20A **White River Ci** 91.80 47 ⇓P P 03 14 44.3 +0.1
baz=92,SNR=18
BSMT **Bassco Peak** 91.81 38 *e*P P 03 14 43.1 -1.0
comp=Z,7.9nm,0.8s,mb4.8
T23A **Casias Ranch,** 91.82 50 ⇑P P 03 14 44.5 +0.1
baz=92,SNR=6.9
J17A **Brown Place, J** 91.83 43 ⇑P P 03 14 44.6 +0.3
baz=92,SNR=14
C13A **Hot Springs** 91.83 38 ⇑P P 03 14 43.3 -0.9
baz=92
SNOW **Snow King Moun** 91.85 43 *e*P P 03 14 44.6 +0.2
comp=Z,28nm,1.0s,mb5.2
BILL **Bilibino** 91.86 355 ⇑*i*P P 03 14 42.9 -0.9
BILL *e* 03 18 29.5
BILL *i* S SKSac 03 24 19.7 -2.6
BILL pmax pmax
comp=Z,237nm,1.2s,mb6.1
BILL **Bilibino** 91.86 355 *e*P P 03 14 43.0 -0.8
comp=Z,163nm,0.9s,mb6.1
M19A **Rock Springs** 91.88 45 ⇑P P 03 14 44.6 0.0
baz=92,SNR=8.2
K18A **Toltan Ranch,** 91.88 44 ⇑P P 03 14 44.8 +0.3
baz=92,SNR=26
R22A **Saguache, Gunn** 91.89 49 ⇓P P 03 14 44.7 0.0
baz=92,SNR=17
A12A **Yaak River Ran** 91.93 36 ⇓P P 03 14 44.3 -0.3
baz=92,SNR=5.5
LOHW **Long Hollow** 92.02 43 *e*P P 03 14 45.3 +0.2
CLCH **Cerro Calan** 92.02 128 ⇓*i*P P 03 14 46.0 +0.4
F15A **Butte** 92.04 40 ⇑P P 03 14 44.9 -0.3
baz=92,SNR=13
LMEL **Las Melosas** 92.04 128 ⇓*i*P P 03 14 46.3 +0.7
LMEL **Las Melosas** 92.04 128 ⇓*i*P P 03 14 46.3 +0.7
L19A **Farson** 92.04 45 ⇑P P 03 14 44.9 -0.4
baz=92,SNR=22
LRM **Limekiln Ridge** 92.05 40 *e*P P 03 14 44.8 -0.4
SWMT **Swartz Lake** 92.06 38 *e*P P 03 14 43.9 -1.3
comp=Z,3.4nm,0.6s,mb4.5
Q22A **Crested Butte,** 92.08 48 ⇑P P 03 14 45.4 -0.2
baz=92,SNR=18
W25A **X Bar L Ranch,** 92.11 52 ⇓P P 03 14 45.1 -0.7
baz=92,SNR=21
D14A **Greenough** 92.11 39 ⇑P P 03 14 44.2 -1.3
baz=92,SNR=12
G16A **Moss Hill, Enn** 92.12 41 ⇓P P 03 14 45.3 -0.3
baz=92
N20A **Spence Gulch,** 92.13 46 ⇓P P 03 14 45.9 +0.2
baz=92,SNR=26
CHMT **Chamberlain Mo** 92.17 39 *e*P P 03 14 45.1 -0.7
Z27A **Tatum** 92.17 55 ⇓P P 03 14 46.0 -0.1
baz=92,SNR=6.1
J18A **Kendall Valley** 92.18 43 ⇑P P 03 14 45.7 -0.2
baz=92
H16A **Russell Place,** 92.19 42 ⇑P P 03 14 46.5 +0.6
baz=92,SNR=8.8

SMCO	Snowmass	92.19	48	eP	P	03 14 46.1	+0.1
	comp=Z,24nm,0.8s,mb5.3						
SLMT	Seeley Lake	92.20	39	eP	P	03 14 44.7	-1.2
FCH	Farellones	92.23	128	⇓iP	P	03 14 46.0	-0.6
YBMT	Yellow Bay	92.25	38	eP	P	03 14 45.1	-0.9
BW06	Boulder Array	92.25	44	⇓P	P	03 14 46.2	0.0
	baz=92						
PDAR	Pinedale Array	92.25	44	P	P	03 14 45.7	-0.5
	comp=Z,12nm,0.8s,mb4.9,baz=232,slow=2.8,SNR=59						
PDAR				pP	pP	03 16 55.1	+5.8
	comp=Z,6.1nm,1.0s,baz=225,slow=3.1,SNR=4.2						
PDAR				PP	PP	03 18 35.0	-2.2
	comp=Z,9.3nm,1.0s,baz=241,slow=6.1,SNR=6.4						
PDAR				PKKPbc	PKKPbc	03 31 58.1	-1.0
	comp=Z,3.0nm,0.9s,baz=76,slow=5.2,SNR=9.6						
PDAR				PKPPKP		03 40 08.0	
	comp=Z,1.1nm,0.9s,baz=132,slow=2.2,SNR=5.7						
E15A	Deer Lodge	92.26	40	⇑P	P	03 14 45.5	-0.6
	baz=92,SNR=7.8						
B13A	Whitefish	92.27	37	⇑P	P	03 14 45.0	-1.1
	baz=92,SNR=5.2						
V25A	Rancho No Teng	92.28	52	⇑P	P	03 14 46.2	-0.4
	baz=92,SNR=22						
X26A	CR and CF Fran	92.28	53	⇑P	P	03 14 45.9	-0.7
	baz=92						
C14A	Swan Lake	92.35	38	⇓P	P	03 14 45.2	-1.3
	baz=92,SNR=6.7						
O21A	Pagoda	92.36	47	⇓P	P	03 14 46.5	-0.2
	baz=92						
BOZ	Bozeman (W)	92.45	41	⇓P	P	03 14 47.1	0.0
	baz=92						
BOZ	Bozeman (W)	92.45	41	eP	P	03 14 46.8	-0.2
BOZ				e		03 18 35.2	
BOZ				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
BOZ	Bozeman (W)	92.45	41	eP	P	03 14 46.8	-0.3
	comp=Z,12nm,0.9s,mb4.9						
BOZ				epP	pP	03 16 53.2	+3.0
BOZ				ePP	PP	03 18 35.2	-3.3
Y27A	Causey	92.46	54	⇓P	P	03 14 46.8	-0.6
	baz=92,SNR=17						
M20A	Sweetwater, Wa	92.50	46	⇑P	P	03 14 47.5	+0.1
	baz=93,SNR=9.0						
F16A	Kennard Place,	92.52	41	⇓P	P	03 14 47.4	0.0
	baz=93,SNR=7.1						
SDCO	Great Sand Dun	92.53	50	eP	P	03 14 47.8	+0.1
	comp=Z,1μm,1.8s,mb6.6						
SDCO				epP	pP	03 16 54.2	+3.4
I18A	Diamond G Ranc	92.56	43	⇓P	P	03 14 47.9	+0.3
	baz=93,SNR=6.2						
W26A	Owens Ranch, T	92.56	53	⇑P	P	03 14 47.6	-0.2
	baz=93						
CLNS	Chul'man	92.56	333	eP	P	03 14 46.7	-0.6
CLNS				e*PP	pP	03 16 48.8	-1.6
CLNS				e		03 18 35.7	
CLNS				ePPP		03 20 40.7	
CLNS				eS	SKSac	03 24 22.9	-3.7
CLNS				e		03 25 01.0	
CLNS				pmax	pmax		
	comp=Z,62nm,0.6s,mb5.8						
CLNS				pmax	pmax		
	comp=E,16nm,1.1s						
CLNS				pmax	pmax		
	comp=N,24nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,21nm,1.3s,mb5.0						
CLNS				pmax	pmax		
	comp=N,25nm,1.2s						
CLNS				pmax	pmax		
	comp=E,17nm,0.8s						
CLNS				smax			
	comp=N,624nm,12.5s						
CLNS				smax			
	comp=E,503nm,12.5s						
N21A	Black Mountain	92.59	46	⇓P	P	03 14 47.7	-0.1
	baz=93,SNR=21						
A13A	Flathead Natio	92.61	37	⇓P	P	03 14 47.3	-0.4
	baz=93						
L20A	Wamsutter	92.66	45	⇓P	P	03 14 47.9	-0.2
	baz=93,SNR=9.0						
D15A	Lincoln	92.66	39	⇑P	P	03 14 47.5	-0.5
	baz=93,SNR=8.9						
S24A	Houchin Ranch,	92.69	50	⇑P	P	03 14 48.0	-0.4
	baz=93,SNR=16						
U25A	Circle Dot Ran	92.69	51	⇑P	P	03 14 47.9	-0.4
	baz=93,SNR=10						
K19A	Absolon Red Bu	92.73	44	⇑P	P	03 14 48.1	-0.4
	baz=93,SNR=7.8						
CMCH	Combarbala	92.78	126	⇑iP	P	03 14 48.9	-0.2
CMCH	Combarbala	92.78	126	⇑iP	P	03 14 48.9	-0.2
MSTX	Muleshoe	92.79	54	⇑P	P	03 14 48.2	-0.7
	baz=93,SNR=20						
DAWY	Dawson	92.79	17	eP	P	03 14 47.5	-0.7
G17A	Pierce Place,	92.81	41	⇑P	P	03 14 48.9	+0.1
	baz=93						
X27A	F and S Farms,	92.85	53	⇑P	P	03 14 48.6	-0.6
	baz=93						
V26A	Tequesquite Ra	92.86	52	⇓P	P	03 14 48.3	-0.9
	baz=93,SNR=14						
E16A	East Helena	92.88	40	⇓P	P	03 14 48.3	-0.7
	baz=93,SNR=11						
HRY	Holter Researc	92.89	40	eP	P	03 14 48.9	-0.2
EGAK	Eagle	92.92	16	eP	P	03 14 47.8	-1.0
	comp=E,90nm,0.8s,mb5.8						
B14A	Marquette Ranc	92.93	38	⇑P	P	03 14 48.3	-0.9
	baz=93,SNR=35						
WALA	Waterton Lakes	92.96	37	eP	P	03 14 48.6	-0.7
	comp=E,0.4nm,1.1s						
WALA				ePP	PP	03 18 36.9	-5.5
C15A	Salmond Ranch,	93.00	38	⇑P	P	03 14 48.5	-1.0
	baz=93,SNR=16						
T25A	Trinidad	93.02	51	⇓P	P	03 14 49.2	-0.7
	baz=93,SNR=15						
R24A	Sanders Place,	93.03	50	⇓P	P	03 14 50.3	+0.4
	baz=93						
W27A	Bowe Ranch, En	93.06	53	⇑P	P	03 14 49.8	-0.3
	baz=93,SNR=6.6						
M21A	Separation Pea	93.10	46	⇓P	P	03 14 50.2	+0.1
	baz=93,SNR=7.9						
COLD	Coldfoot	93.13	11	eP	P	03 14 48.9	-0.7
	comp=E,31nm,1.1s,mb5.3						
F17A	Fitzpatrick Pl	93.16	41	⇑P	P	03 14 50.4	+0.1
	baz=93,SNR=10						
U26A	Atchley Ranch,	93.16	52	⇓P	P	03 14 50.0	-0.5
	baz=93,SNR=10						
A14A	Double T Ranch	93.18	37	⇑P	P	03 14 49.6	-0.8
	baz=93,SNR=24						
D16A	Dana Ranch, Ca	93.22	40	⇑P	P	03 14 50.2	-0.3
	baz=93,SNR=18						
S25A	Robets Cordova	93.25	50	⇓P	P	03 14 50.7	-0.2
	baz=93,SNR=13						
L21A	Rawlins	93.27	45	⇓P	P	03 14 50.8	-0.1
	baz=93						
B15A	Bradely Ranch,	93.31	38	⇓P	P	03 14 49.5	-1.4
	baz=93,SNR=8.1						
N22A	Wattenberg Ran	93.32	47	⇑P	P	03 14 51.0	-0.2
	baz=93,SNR=11						
LZH	Lanzhou	93.32	308	⇑P	P	03 14 52.6	+1.3
LZH				pP	pP	03 16 54.2	-0.3
LZH				sP	sP	03 17 49.7	-1.0
LZH				PP	PP	03 18 48.5	+3.0
LZH				SKS		03 24 30.5	
LZH				S	S	03 25 14.0	+3.2
LZH				sS	sS	03 28 44.0	-8.2
LZH				SS	SS	03 31 47.0	+2.0
LZH				pmax	pmax		
	comp=Z,94nm,1.0s,mb5.8						
LZH				pmax	pmax		
	comp=Z,310nm,3.8s						
TLL	Tololo Astrono	93.42	125	eP	P	03 14 52.5	+0.5
TLL	Tololo Astrono	93.42	125	eP	P	03 14 52.5	+0.5
C16A	Fuhringer Ranc	93.50	39	⇓P	P	03 14 50.8	-1.0
	baz=94,SNR=8.7						
G18A	Lazy EL Ranch,	93.53	42	⇓P	P	03 14 51.9	-0.1
	baz=94						
JCT	Junction City	93.54	58	eP	P	03 14 51.6	-0.9
JCT				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.4						
JCT	Junction City	93.54	58	eP	P	03 14 51.6	-0.8
	comp=Z,23nm,0.8s,mb5.4						
A15A	Johnson Ranch,	93.57	37	⇑P	P	03 14 51.0	-1.1
	baz=94,SNR=11						
RLMT	Red Lodge	93.61	42	⇓P	P	03 14 52.1	-0.3
	baz=94						
RLMT	Red Lodge	93.61	42	eP	P	03 14 52.4	0.0
	comp=Z,7.6nm,1.0s,mb4.8						
F18A	Big Timber	93.73	41	⇑P	P	03 14 52.8	-0.1
	baz=94						
D17A	Six Diamond Ra	93.78	40	⇑P	P	03 14 53.0	-0.1
	baz=94,SNR=23						
L22A	Ellis Ranch, M	93.91	46	⇑P	P	03 14 53.8	0.0
	baz=94,SNR=8.1						
E18A	Harlowton	93.94	40	⇑P	P	03 14 53.9	+0.1
	baz=94,SNR=9.4						
Q25A	Bedland, Calha	93.95	49	⇓P	P	03 14 53.9	-0.2
	baz=94,SNR=10						
C17A	Wharram Farm,	93.99	39	⇓P	P	03 14 53.5	-0.6
	baz=94,SNR=24						
LCO	Las Campanas	94.07	124	eP	P	03 14 55.6	+0.6
	comp=Z,222nm,0.9s,mb6.3						
LCO	Las Campanas	94.07	124	⇓iP	P	03 14 55.5	+0.5
LCO	Las Campanas	94.07	124	⇓iP	P	03 14 55.6	+0.6
PHWY	Pilot Hill	94.22	47	eP	P	03 14 55.8	+0.5
	comp=Z,3.5nm,0.8s,mb4.5						
PHWY				ePP	PP	03 18 52.5	+0.3
P25A	Willow Gulch B	94.27	49	⇑P	P	03 14 55.7	+0.2
	baz=94,SNR=12						
B17A	L&G Farms, Che	94.30	39	⇑P	P	03 14 54.6	-0.9
	baz=94,SNR=8.7						
YAK	Yakutsk	94.30	339	eP	P	03 14 53.5	-1.6
YAK				e		03 18 46.9	
YAK				e		03 25 14.7	
YAK				eSS	SS	03 31 50.9	-6.8
YAK				pmax	pmax		
	comp=Z,139nm,0.9s,mb6.1						
YAK				pmax	pmax		
	comp=E,33nm,1.4s						
YAK				pmax	pmax		
	comp=N,22nm,1.1s						
YAK				pmax	pmax		
	comp=Z,103nm,1.1s,mb5.9						
YAK				pmax	pmax		
	comp=N,55nm,1.1s						
YAK				pmax	pmax		
	comp=E,112nm,1.6s						
YAK	Yakutsk	94.30	339	eP	P	03 14 53.9	-1.2
	comp=E,203nm,0.8s,mb6.3						
D18A	Linhart Farms,	94.33	40	⇓P	P	03 14 55.5	-0.1
	baz=94						
EGMT	Eagleton	94.77	39	⇑P	P	03 14 56.9	-0.6
	baz=95						
EGMT	Eagleton	94.77	39	eP	P	03 14 57.6	0.0
	comp=E,5.5nm,0.7s,mb4.8						
EGMT				ePP	PP	03 18 52.6	-3.7
B18A	Beardsley Farm	94.94	39	⇓P	P	03 14 57.8	-0.6
	baz=95,SNR=10						
A18A	Metzger Ranch,	95.17	38	⇓P	P	03 14 58.6	-0.8
	baz=95						
TRQA	Tornquist	95.39	135	eP	P	03 15 01.0	+0.2
	comp=E,36nm,1.3s,mb5.3						
EDM	Edmonton	95.51	34	eP	P	03 14 59.5	-1.3
RSSD	Black Hills	96.43	45	eP	P	03 15 05.4	+0.2
RSSD				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb5.0						
RSSD	Black Hills	96.43	45	eP	P	03 15 05.4	+0.3
	comp=Z,8.9nm,0.9s,mb5.0						
ULN	Ulaanbaatar	96.59	320	⇑iP	P	03 15 05.1	-0.7
ULN	Ulaanbaatar	96.59	320	eP	P	03 15 05.1	-0.6
	comp=Z,21nm,0.8s,mb5.4						
ULN				epP	pP	03 17 09.0	-0.3
ULN	Ulaanbaatar	96.59	320	P	P	03 15 05.5	-0.2
	SNR=16						
NNA	Nana	96.81	106	iP	P	03 15 10.8	+3.2
SONM	Songino Array	96.96	319	P	P	03 15 06.6	-0.9
	comp=Z,6.5nm,0.6s,mb5.0,baz=119,slow=4.5,SNR=41						
SONM				pP	pP	03 17 13.4	+2.3
	comp=Z,6.3nm,1.1s,baz=132,slow=5.6,SNR=4.3						
SONM				PP	PP	03 19 10.5	-2.5
	comp=Z,13nm,1.0s,baz=128,slow=7.0,SNR=5.3						
SONM				S	SKSac	03 24 47.5	-2.8
	comp=Z,3.2nm,1.1s,baz=132,slow=2.2,SNR=5.5						
SONM				PKKPbc	PKKPbc	03 31 45.3	-1.6
	comp=Z,17nm,0.7s,baz=273,slow=2.8,SNR=38						
SONM				PKPPKP		03 39 54.4	
	comp=Z,1.0nm,0.9s,baz=266,slow=2.2,SNR=3.9						
SONM	Songino Array	96.96	319	P	P	03 15 06.6	-0.9
SONM						03 19 10.5	
SONM				S	SKSac	03 24 47.5	-2.7
SONM				pmax	pmax		
	comp=Z,7.0nm,0.6s						
SONM				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SONM				pmax	pmax		
	comp=Z,13nm,1.0s						
SONM				smax			
	comp=N,3.0nm,1.1s						
SONM				pmax	pmax		
	comp=Z,17nm,0.7s						
SONM				pmax	pmax		
	comp=Z,1.0nm,0.9s						
GTA	Gaotai	97.63	310	⇑P	Pdif	03 15 11.1	+0.5
GTA				pP	pP	03 17 13.8	-0.5
GTA				sP	sP	03 18 08.9	-1.5
GTA				PP	PP	03 19 21.4	+3.1
GTA				SKS		03 24 51.4	
GTA				S	S	03 25 44.5	-2.9
GTA				SS	SS	03 32 39.9	-5.2
GTA				pmax	pmax		
	comp=Z,21nm,0.7s,mb5.6						
GTA				pmax	pmax		
	comp=Z,84nm,3.7s						
JTS	JuntasAbangare	98.39	82	diP	Pdif	03 15 14.6	+0.6
JTS	JuntasAbangare	98.39	82	iP	Pdif	03 15 14.7	+0.7
SHL	Shillong	98.44	294	ePKP	Pdif	03 15 14.0	-0.2
SHL				ePKP		03 17 20.0	
YKA	Yellowknife Ar	99.91	25	P	Pdif	03 15 19.2	-1.5
	comp=Z,2.9nm,0.6s,baz=245,slow=4.3,SNR=13						
YKA				PP	PP	03 19 30.0	-4.8
	comp=Z,17nm,0.9s,baz=244,slow=7.5,SNR=16						
YKA				S	SKSac	03 24 58.1	-6.0
	comp=Z,1.2nm,0.8s,baz=257,slow=2.6,SNR=3.2						
YKA				PKKPbc	PKKPbc	03 31 36.9	-2.2
	comp=Z,1.5nm,0.5s,baz=38,slow=2.4,SNR=9.9						
YKA				SKKPbc		03 34 15.6	
	comp=Z,2.2nm,0.9s,baz=50,slow=4.8,SNR=4.7						
YKA				PKPPKP		03 39 54.3	
	comp=Z,1.7nm,1.1s,baz=62,slow=3.3,SNR=4.2						
YKA	Yellowknife Ar	99.91	25	P	Pdif	03 15 19.3	-1.5
YKA						03 19 30.0	
YKA	Yellowknife Ar	99.91	25	P	Pdif	03 15 19.2	-1.5
YKA				PP	PP	03 19 30.0	-4.8
YKA				S	SKSac	03 24 58.1	-6.0
YKA				PKKPbc	PKKPbc	03 31 36.9	-2.2
YKA				SKKPbc		03 34 15.7	
YKA				P'P'		03 39 54.4	
TLY	Talaya	100.26	322	eP	Pdif	03 15 17.7	-4.6
TLY				eS	Sdif	03 26 10.3	+1.0
TLY				eSPP		03 27 44.2	
TLY				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TIXI	Tiksi	101.24	345	eP	Pdif	03 15 22.9	-3.7
TIXI				eS	SKSac	03 25 06.0	-4.1
TIXI				pmax	pmax		
	comp=Z,19nm,1.4s						
LPAZ	La Paz	102.36	114	P	Pdif	03 15 34.5	+2.8
	comp=Z,6.5nm,0.8s,baz=270,slow=2.4,SNR=32						
LPAZ				PP	PP	03 19 52.9	-0.5
	comp=Z,11nm,1.0s,baz=261,slow=6.0,SNR=7.5						
LPAZ				PKKPbc	PKKPbc	03 31 28.4	-2.6
	comp=Z,2.3nm,0.6s,baz=57,slow=2.8,SNR=10						
LPAZ	La Paz	102.36	114	P	Pdif	03 15 34.5	+2.8
LPAZ						03 19 52.9	
LPAZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LPAZ				pmax	pmax		
	comp=Z,11nm,1.0s						
LPAZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ODAN	Odare	102.67	294	eP	Pdif	03 15 32.4	-0.6
	comp=Z,29nm,0.7s						
RAMN	Ramite	103.36	294	eP	Pdif	03 15 36.0	-0.1
	comp=Z,14nm,0.6s						
ULM	Lac du Bonnet	103.96	41	PKiKP	PKiKP	03 19 53.7	+1.4
	comp=Z,6.5nm,0.8s,baz=256,slow=6.0,SNR=3.5						
ULM				PP	PP	03 20 00.9	-4.0
	comp=Z,11nm,0.7s,baz=262,slow=8.2,SNR=10.0						
ULM				PKKPbc	PKKPbc	03 31 26.3	-0.8
	comp=Z,3.8nm,0.5s,baz=22,slow=2.7,SNR=3.5						
GUN	Gumba	104.28	294	eP	Pdif	03 15 42.1	+1.9
	comp=Z,22nm,0.4s						
PKI	Pulchoki	104.57	294	eP	Pdif	03 15 43.3	+1.8
	comp=Z,18nm,0.5s						
PKIN	Phulchoki	104.58	294	eP	Pdif	03 15 43.3	+1.8
	comp=Z,20nm,0.6s						
PKIN	Phulchoki	104.58	294	eP	PKiKP	03 19 53.7	-0.5
	comp=Z,25nm,0.6s						
KKN	Kakani	104.75	294	eP	Pdif	03 15 44.6	+2.3
	comp=Z,24nm,0.6s						
DMN	Daman	104.83	294	eP	Pdif	03 15 44.7	+2.1
	comp=Z,16nm,0.5s						
GKN	Gorkha	105.35	294	eP	Pdif	03 15 48.1	+3.1
	comp=Z,14nm,0.4s						
CPUP	Villa Florida	105.46	128	Pdiff	Pdif	03 15 46.6	+1.2
	comp=Z,2.1nm,0.7s,baz=244,slow=5.7,SNR=10						
CPUP				PKiKP	PKiKP	03 19 55.7	-0.3
	comp=Z,1.3nm,0.5s,baz=90,slow=3.3,SNR=4.9						
CPUP				PP	PP	03 20 11.9	-3.6
	comp=Z,5.3nm,1.0s,baz=227,slow=6.2,SNR=4.5						
CPUP				PKKPbc	PKKPbc	03 31 20.9	-1.3
	comp=Z,0.6nm,0.5s,baz=44,slow=3.2,SNR=3.2						
CPUP	Villa Florida	105.46	128	P	Pdif	03 15 46.7	+1.3
CPUP				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CPUP				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CPUP				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CPUP				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ROSC	El Rosal	106.05	92	PKKPbc	PKKPbc	03 31 21.6	+1.7
	comp=Z,4.6nm,0.4s,baz=105,slow=13,SNR=6.0						
ROSC				SKKP		03 34 12.6	
	comp=Z,8.9nm,0.4s,baz=80,slow=21,SNR=7.6						
WMQ	Urumqi	107.66	311	eP	Pdif	03 15 57.3	+2.1
SIV	San Ignacio	108.36	117	S	SKSac	03 25 42.7	-1.8
	comp=Z,0.9nm,0.8s,baz=54,slow=22,SNR=10						
SIV				PKKPbc	PKKPbc	03 31 12.7	-0.4
	comp=Z,4.1nm,0.6s,baz=77,slow=4.0,SNR=13						
SIV				PKPPKP		03 39 37.7	
	comp=Z,0.2nm,0.4s,baz=333,slow=6.6,SNR=3.7						
SDV	Santo Domingo	110.97	89	ePKPdf	PKiKP	03 20 05.5	-1.0
RES	Resolute Bay	111.13	16	ePKIKP	PKiKP	03 20 03.6	-1.5
NDI	New Delhi	111.80	293	ex	PP	03 21 06.0	+4.2
ZAA0	Zalesovo Array	111.80	321	ePKPdf	PKiKP	03 20 05.2	-1.8
ZALV	Zalesovo Beam	111.80	321	Pdiff	Pdif	03 16 12.1	-1.5
	comp=Z,0.5nm,0.3s,baz=111,slow=3.3,SNR=5.8						
ZALV				PKiKP	PKiKP	03 20 05.2	-1.7
	comp=Z,8.2nm,0.4s,baz=148,slow=1.1,SNR=22						
ZALV				PP	PP	03 20 57.8	-3.2
	comp=Z,5.7nm,0.7s,baz=105,slow=5.0,SNR=2.9						
ZALV				SKP		03 22 48.2	
	comp=Z,18nm,0.8s,baz=144,slow=1.4,SNR=9.7						
ZALV				S	SKSac	03 25 53.5	-3.2
	comp=Z,3.4nm,0.9s,baz=303,slow=30,SNR=5.2						
ZALV				PKKPbc	PKKPbc	03 31 01.9	-0.8
	comp=Z,4.6nm,0.6s,baz=282,slow=3.7,SNR=8.4						
ZALV				PKPPKP		03 39 27.6	
	comp=Z,0.8nm,0.4s,baz=316,slow=4.1,SNR=3.5						
ZALV	Zalesovo Beam	111.80	321	P	Pdif	03 16 12.1	-1.5
ZALV				i		03 20 05.2	
ZALV						03 20 57.8	
ZALV				S	SKSac	03 25 53.6	-3.1
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV				pmax	pmax		
	comp=Z,8.0nm,0.4s						
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ZALV				pmax	pmax		
	comp=N,18nm,0.8s						
ZALV				smax			
	comp=N,3.0nm,0.9s						
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MK31	Makanchi Array	112.06	313	ciPKIKP	PKiKP	03 20 06.1	-1.5
MK31				pmax	pmax		
	comp=Z,11nm,0.4s						
MK31	Makanchi Array	112.06	313	ePKPdf	PKiKP	03 20 06.3	-1.3
MKAR	Makanchi Array	112.06	313	Pdiff	Pdif	03 16 13.1	-1.7
	comp=Z,5.1nm,0.6s,baz=94,slow=6.0,SNR=27						
MKAR				PKiKP	PKiKP	03 20 06.3	-1.3
	comp=Z,14nm,0.6s,baz=176,slow=0.7,SNR=51						
MKAR				PP	PP	03 20 58.9	-4.2
	comp=Z,6.0nm,0.9s,baz=84,slow=6.2,SNR=5.1						
MKAR				SKP		03 22 49.0	
	comp=Z,16nm,0.8s,baz=70,slow=4.0,SNR=9.0						
MKAR				S	SKSac	03 25 54.3	-3.8
	comp=Z,4.2nm,0.9s,baz=120,slow=7.1,SNR=4.2						
MKAR				PKKPbc	PKKPbc	03 31 01.1	-0.6
	comp=Z,16nm,0.8s,baz=279,slow=3.7,SNR=24						
MKAR				PKPPKP		03 39 28.5	
	comp=Z,2.3nm,1.0s,baz=318,slow=1.6,SNR=7.7						
MKAR	Makanchi Array	112.06	313	P	Pdif	03 16 13.1	-1.7
MKAR				i		03 20 06.3	
MKAR						03 20 58.9	
MKAR				S	SKSac	03 25 54.3	-3.8
MKAR						03 31 01.1	
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MKAR				pmax	pmax		
	comp=Z,14nm,0.6s						
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MKAR				pmax	pmax		
	comp=N,16nm,0.8s						
MKAR				smax			
	comp=N,4.0nm,0.9s						
MKAR				pmax	pmax		
	comp=Z,16nm,0.8s						
MKAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MKAR	Makanchi Array	112.06	313	Pdif	Pdif	03 16 13.1	-1.7
MKAR				PKPdf	PKiKP	03 20 06.3	-1.3
MKAR				PP	PP	03 20 58.9	-4.2
MKAR				SKP		03 22 49.0	
MKAR				S	SKSac	03 25 54.3	-3.8
MKAR				PKKPbc	PKKPbc	03 31 01.1	-0.6
MKAR				P'P'		03 39 28.5	
NVS	Novosibirsk	112.86	321	ePKIKP	PKiKP	03 20 06.2	-2.7
NVS				pmax	pmax		
	comp=Z,15nm,0.9s						
NVS				pmax	pmax		
	comp=E,11nm,0.8s						
SSPA	Standing Stone	113.63	54	ePKPdf	PKiKP	03 20 09.0	-1.8
KURK	Kurchatov	115.08	317	Pdiff	Pdif	03 16 30.8	+2.5
	comp=E,0.6nm,0.6s,baz=100,slow=4.0,SNR=4.4						
KURK				PKP	PKPdf	03 20 11.9	-1.4
	comp=E,23nm,0.8s,baz=104,slow=1.8,SNR=38						
KURK				PP	PP	03 21 16.4	-7.6
	comp=E,23nm,1.1s,baz=94,slow=6.7,SNR=7.1						
KURK				SKP		03 22 54.6	
	comp=E,26nm,1.0s,baz=99,slow=2.1,SNR=10						
KURK				PKKPbc	PKKPbc	03 30 49.8	-2.0
	comp=E,16nm,0.9s,baz=272,slow=4.0,SNR=16						
KURK				PKPPKP		03 39 25.1	
	comp=E,0.3nm,0.4s,baz=284,slow=2.7,SNR=3.8						
KURK

KZA	Kyzart	116.22	307	P	PKPdf	03 20 15.6	-0.1
	SNR=20						
KZA	Kyzart	116.22	307	P	PKKPbc	03 30 48.3	+0.7
	SNR=8.0						
KBK	Karagaybulak	116.53	307	P	PKPdf	03 20 17.6	+1.2
	SNR=7.7						
KBK	Karagaybulak	116.53	307	P	PKKPbc	03 30 46.6	+0.1
	SNR=8.7						
CHMS	Chumysh	116.72	308	P	PKPdf	03 20 15.9	-0.8
	SNR=12						
CHMS	Chumysh	116.72	308	P	PKKPbc	03 30 46.0	+0.1
	SNR=9.1						
FRU	Bishkek	116.79	307	*e*PKIKP	PKPdf	03 20 15.5	-1.4
FRU				*e*		03 22 17.0	
AAK	Ala-Archa	116.86	307	P	PKPdf	03 20 18.1	+1.1
	SNR=8.4						
AAK	Ala-Archa	116.86	307	P	PKKPbc	03 30 45.4	0.0
	SNR=21						
AAK	Ala-Archa	116.86	307	PKP	PKPdf	03 20 15.5	-1.5
	comp=Z,9.1nm,0.6s,baz=135,slow=4.8,SNR=17						
AAK				SKP		03 22 57.7	
	comp=Z,10nm,0.9s,baz=152,slow=4.5,SNR=4.7						
AAK				PKKPbc	PKKPbc	03 30 46.0	+0.5
	comp=Z,43nm,0.8s,baz=224,slow=3.2,SNR=48						
AAK	Ala-Archa	116.86	307	PKIKP	PKPdf	03 20 15.5	-1.5
AAK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
AAK				pmax	pmax		
	comp=N,10.0nm,0.9s						
AAK				pmax	pmax		
	comp=Z,43nm,0.8s						
AAK	Ala-Archa	116.86	307	PKP	PKPdf	03 20 15.4	-1.5
AAK				SKP		03 22 57.7	
AAK				PKKPbc	PKKPbc	03 30 46.0	+0.5
NCB	Newcomb	116.86	51	*e*PKPdf	PKPdf	03 20 15.4	-1.5
USP	Ospenovka	116.94	308	P	PKPdf	03 20 15.7	-1.4
	SNR=21						
USP	Ospenovka	116.94	308	P	PKKPbc	03 30 44.7	-0.5
	SNR=11						
AML	Almayashu	117.37	307	P	PKPdf	03 20 17.9	-0.1
	SNR=44						
AML	Almayashu	117.37	307	P	PKKPbc	03 30 43.0	-0.6
	SNR=8.1						
AML	Almayashu	117.37	307	*e*PKPdf	PKPdf	03 20 17.9	-0.1
EKS2	Erkin-Say	117.38	307	P	PKPdf	03 20 17.5	-0.5
	SNR=20						
EKS2	Erkin-Say	117.38	307	P	PKKPbc	03 30 43.1	-0.5
	SNR=16						
EKS2	Erkin-Say	117.38	307	*e*PKPdf	PKPdf	03 20 17.4	-0.6
ABPO	Ambohimpanom	117.65	231	*e*PKIKP	PKPdf	03 20 19.5	+0.2
SJG	San Juan	118.16	81	*e*PKIKP	PKPdf	03 20 18.0	-2.2
CAM4	Nova Friburgo	118.25	134⇓	*i*P	PKPdf	03 20 19.7	-0.7
CAM4				*i*		03 20 21.2	
CAM4				*i*		03 20 24.8	
CAM4				*i*		03 20 44.5	
CAM4				*i*		03 21 37.7	
KK31	Karatay Array	119.82	307⇑	*e*PKIKP	PKPdf	03 20 21.3	-1.4
KBL	Kabul	119.87	297	*e*PKIKP	PKPdf	03 20 23.2	+0.1
BVAR	Borovoye Array	120.31	319	PKP	PKPdf	03 20 22.3	-1.0
	comp=Z,26nm,0.5s,baz=132,slow=1.9,SNR=50						
BVAR				PP	PP	03 21 59.1	-0.5
	comp=Z,24nm,1.0s,baz=90,slow=7.4,SNR=6.3						
BVAR				SKP		03 23 05.5	
	comp=Z,28nm,0.9s,baz=115,slow=2.5,SNR=9.7						
BVAR				PKKPbc	PKKPbc	03 30 33.1	-0.4
	comp=Z,6.4nm,0.5s,baz=272,slow=3.7,SNR=23						
BVAR	Borovoye Array	120.31	319	PKIKP	PKPdf	03 20 22.3	-1.0
BVAR						03 21 59.1	
BVAR				pmax	pmax		
	comp=Z,26nm,0.5s						
BVAR				pmax	pmax		
	comp=Z,24nm,1.0s						
BVAR				pmax	pmax		
	comp=N,28nm,0.9s						
BVAR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BRVK	Borovoye	120.37	319	*d*PKIKP	PKPdf	03 20 21.9	-1.5
BRVK				pmax	pmax		
	comp=Z,36nm,1.0s						
BRVK	Borovoye	120.37	319	*e*PKPdf	PKPdf	03 20 22.4	-1.0
PKME	Peaks-Kenny Pk	120.49	50	*e*PKPdf	PKPdf	03 20 22.7	-1.2
SUR	Sutherland	121.05	200	*e*PKPdf	PKPdf	03 20 25.8	+0.3
ZRNK	Zerenda	121.14	319	PKIKP	PKPdf	03 20 23.4	-1.5
ZRNK				pmax	pmax		
	comp=Z,33nm,0.6s						
SCHQ	Schefferville	122.03	39	PKP	PKPdf	03 20 24.9	-1.7
	comp=Z,17nm,0.8s,baz=290,slow=1.7,SNR=19						
SCHQ				PP	PP	03 22 09.0	-2.0
	comp=Z,10nm,0.9s,baz=289,slow=6.5,SNR=5.5						
SCHQ				PKKPbc	PKKPbc	03 30 26.8	-0.3
	comp=Z,4.7nm,0.5s,baz=23,slow=0.3,SNR=13						
SCHQ	Schefferville	122.03	39	*e*PKPdf	PKPdf	03 20 25.3	-1.2
BOSA	Boshof	122.85	206	PKP	PKPdf	03 20 29.1	0.0
	comp=Z,41nm,0.9s,baz=140,slow=2.0,SNR=48						
BOSA				PKKPbc	PKKPbc	03 30 22.9	-1.6
	comp=Z,4.1nm,0.6s,baz=311,slow=2.8,SNR=14						
BOSA	Boshof	122.85	206	PKIKP	PKPdf	03 20 29.1	0.0
BOSA				pmax	pmax		
	comp=Z,41nm,0.9s						
BOSA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BOSA	Boshof	122.85	206	*e*PKPdf	PKPdf	03 20 29.2	+0.1
KBS	Kingsbay	124.27	357	*e*PKPdf	PKPdf	03 20 30.0	-0.3
KBS				*e*PP	PP	03 22 22.5	-2.6
KBS	Kingsbay	124.27	357	*c i*PKIKP	PKPdf	03 20 29.4	-0.9
KBS				pmax	pmax		
	comp=Z,15nm,0.8s						
KBS	Kingsbay	124.27	357	*e*PKPdf	PKPdf	03 20 29.5	-0.7
SPITS	Spitsbergen Ar	124.75	356	PP	PP	03 22 28.8	+0.5
	comp=Z,27nm,0.9s,baz=19,slow=33,SNR=6.2						
SPITS				pPKP	pPKPdf	03 22 44.8	+2.5
	comp=Z,24nm,0.8s,baz=116,slow=13,SNR=3.7						
SPITS				SKP		03 23 12.8	
	comp=Z,44nm,1.0s,baz=51,slow=6.6,SNR=4.4						
SPITS				PKKPbc	PKKPbc	03 30 15.9	-1.1
	comp=Z,3.4nm,0.4s,baz=160,slow=5.2,SNR=37						
SVE	Sverdlovsk	125.51	324	*e*PKIKP	PKPdf	03 20 32.9	-0.2
SVE				pmax	pmax		
	comp=Z,45nm,0.9s						
LBTB	Lobatse	125.86	209	PKKPbc	PKKPbc	03 30 11.4	-1.2
	comp=Z,3.8nm,0.8s,baz=242,slow=12,SNR=4.1						
LBTB	Lobatse	125.86	209	*e*PKIKP	PKPdf	03 20 34.4	-0.5
DAG	Danmarks Havn	125.88	5⇓	*e*PKIKP	PKPdf	03 20 31.8	-1.6
DAG				pmax	pmax		
	comp=Z,9.0nm,0.7s						
DAG	Danmarks Havn	125.88	5⇓	*i*P	PKPdf	03 20 31.8	-1.6
	comp=Z,8.9nm,0.7s						
SUMG	Summit	126.45	14	*i*P	PKPdf	03 20 35.2	+0.7
	comp=Z,17nm,1.0s						
ARU	Arti	126.71	324	*i*PKIKP	PKPdf	03 20 34.9	-0.6
ARU						03 22 38.6	
ARU						03 26 45.7	
ARU				SP	SP	03 31 47.8	-2.1
ARU	Arti	126.71	324	*e*PKPdf	PKPdf	03 20 35.0	-0.5
SOKR	Solikamsk	126.81	328	*d*PKIKP	PKPdf	03 20 33.4	-2.1
SOKR				pmax	pmax		
	comp=Z,60nm,1.0s						
AB31	Akbulak array	127.10	315	*i*PKIKP	PKPpre	03 20 27.4	
AB31				pmax	pmax		
	comp=Z,8.0nm,0.5s						
AKTK	Aktyubinsk	128.18	317	PKP	PKPdf	03 20 37.8	-0.7
AKTK				pPKP	pPKPdf	03 22 48.9	-0.7
AKTK				PKKPbc		03 30 02.6	
AKTO	Aktyubinsk	128.18	317	PKP	PKPdf	03 20 37.8	-0.7
	comp=Z,28nm,0.6s,baz=92,slow=4.3,SNR=9.7						
AKTO				pPKP	pPKPdf	03 22 48.9	-0.7
	comp=Z,5.2nm,0.7s,baz=60,slow=7.1,SNR=2.8						
AKTO				PKKPbc		03 30 02.6	
	comp=Z,5.2nm,0.8s,baz=246,slow=1.7,SNR=9.4						
AKTO	Aktyubinsk	128.18	317	PKIKP	PKPdf	03 20 37.8	-0.6
AKTO						03 22 48.9	
AKTO				pmax	pmax		
	comp=Z,28nm,0.6s						
AKTO				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AKTO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LVZ	Lovozero	130.83	344	*d i*PKIKP	PKPdf	03 20 42.4	-0.6
LVZ	Lovozero	130.83	344	*i*PKP	PKPdf	03 20 42.4	-0.6
KEV	Kevo	131.09	348	*e*PKIKP	PKPdf	03 20 42.4	-1.0
KEV	Kevo	131.09	348	*e*p	PKPpre	03 20 31.2	
	comp=Z,27nm,0.8s						
SCO	Scoresbysund	131.24	10	*e*PKIKP	PKPdf	03 20 43.7	0.0
SCO				pmax	pmax		
	comp=Z,16nm,0.9s						
SCO	Scoresbysund	131.24	10	*i*P	PKPdf	03 20 43.7	0.0
	comp=Z,16nm,0.9s						
APA	Apatity	131.40	344	⇑PKHKP	PKPpre	03 20 35.0	
APA						03 23 16.6	
APA				*i*		03 27 00.0	
APA				*i* SS	SS	03 39 58.0	-2.4
APA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ARCES	ARCESS Array B	131.56	348	PKhKP	PKPpre	03 20 34.7	
	comp=Z,5.6nm,0.5s,baz=161,slow=1.5,SNR=8.9						
ARCES				PKP	PKPdf	03 20 43.3	-1.0
	comp=Z,27nm,0.5s,baz=20,slow=1.4,SNR=28						
ARCES				PP	PP	03 23 09.5	-2.7
	comp=Z,32nm,1.1s,baz=24,slow=9.3,SNR=5.3						
ARCES				SKPbc	SKPbc	03 23 16.8	-0.9
	comp=Z,155nm,0.9s,baz=15,slow=5.0,SNR=36						
ARCES	ARCESS Array B	131.56	348	PKHKP	PKPpre	03 20 34.7	
ARCES						03 20 43.3	
ARCES						03 23 16.8	
ARCES				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ARCES				pmax	pmax		
	comp=Z,27nm,0.5s						
ARCES				pmax	pmax		
	comp=Z,32nm,1.1s						
ARCES				pmax	pmax		
	comp=N,155nm,0.9s						
ARE0	ARCESS Array S	131.56	348	*e*PKPdf	PKPdf	03 20 43.2	-1.1
KTK1	Kautokeino	132.42	349	*e*	PKPdf	03 20 45.4	-0.5
KTK1				*e*PP	PP	03 23 14.7	-2.9
TRO	Tromso	132.54	351	*e*PP	PP	03 23 17.8	-0.6
TRO	Tromso	132.54	351	*e*PKHKP	PKPpre	03 20 35.6	
LSZ	Lusaka	132.75	218	SKPbc	SKPbc	03 23 22.8	-0.7
	comp=N,28nm,0.8s,baz=172,slow=3.9,SNR=9.7						
RCBR	Riachuelo	134.21	125	*e*PKPdf	PKPdf	03 20 51.0	0.0
TSUM	Tsumeb	134.30	203	SKPbc	SKPbc	03 23 29.0	+0.6
	comp=N,30nm,1.0s,baz=146,slow=4.3,SNR=9.9						
JOF	Joensuu	135.45	340	*e*PKHKP	PKPpre	03 20 36.6	
JOF				pmax	pmax		
	comp=Z,40nm,0.4s						
JOF	Joensuu	135.45	340	*e*p	PKPpre	03 20 36.6	
	comp=Z,40nm,0.4s						
KONS	Konsvik	136.25	353	*e*PKPdf	PKPdf	03 20 44.3	-8.8
KONS				*e*PP	PP	03 23 31.4	-10
FLOS	Flostrand	136.37	352	*e*PKPdf	PKPdf	03 20 47.0	-6.4
FLOS				*e*PP	PP	03 23 31.6	-11
MOR8	Moi Rana	136.39	352	*e*PKPdf	PKPpre	03 20 39.3	
MOR8				*e*PP	PP	03 23 31.0	-11
MOR8	Moi Rana	136.39	352	*e*P	PKPpre	03 20 39.3	
MOR8				*e*		03 23 31.0	
STOK	Stokkvaagen	136.42	353	*e*PKPdf	PKPpre	03 20 44.6	
STOK	Stokkvaagen	136.42	353	*e*P	PKPpre	03 20 45.5	
KMBO	Kilima Mbogo	136.49	241	PKhKP	PKPpre	03 20 43.6	
	comp=Z,7.6nm,0.8s,baz=360,slow=24,SNR=16						
KMBO				PKP	PKPdf	03 20 56.5	+1.2
	comp=Z,33nm,0.9s,baz=1.1,slow=23,SNR=15						
KMBO				SKPbc	SKPbc	03 23 35.3	0.0
	comp=Z,34nm,0.9s,baz=179,slow=23,SNR=16						
KMBO	Kilima Mbogo	136.49	241	PKHKP	PKPpre	03 20 43.7	
KMBO						03 20 56.5	
KMBO				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KMBO				pmax	pmax		
	comp=Z,33nm,0.9s						
KMBO				pmax	pmax		
	comp=N,34nm,0.9s						
KMBO	Kilima Mbogo	136.49	241	*e*PKPpre	PKPpre	03 20 45.8	
KMBO				*e*PKPdf	PKPdf	03 20 56.5	+1.3
KMBO				SKPbc	SKPbc	03 23 35.3	0.0
MAK	Makhachkala	136.62	308	*e*PKIKP	PKPdf	03 20 53.5	-1.1
MAK				*i*		03 23 45.4	
MAK				*e*PPP		03 26 45.3	
MAK				*e*		03 27 16.4	
MAK				*e*SSS		03 46 17.7	
MAK				pmax	pmax		
	comp=Z,71nm,0.6s						
RDF	Al-Radifah	137.45	288	*e*P	PKPpre	03 20 45.1	
RDF				AMb	AMB	03 21 01.4	
	comp=Z,78nm,0.3s						
KAF	Kangasniemi	137.55	342	*e*PKHKP	PKPpre	03 20 42.8	
KAF				pmax	pmax		
	comp=Z,38nm,0.5s						
KAF	Kangasniemi	137.55	342	*e*p	PKPpre	03 20 42.8	
	comp=Z,38nm,0.5s						
MOS	Moscow	137.71	329	*e*PKIKP	PKPdf	03 20 56.8	+0.6
MOS				*e*		03 27 14.6	
MOS				*i* PPS		03 35 09.6	
MOS				pmax	pmax		
	comp=Z,64nm,0.8s						
NAY	Al-Naaiem	137.74	288	*e*P	PKPpre	03 20 44.9	
NAY				AMb	AMB	03 20 59.8	
	comp=Z,26nm,1.1s						
ATD	Arta Tunnel	137.83	261	PKP	PKPdf	03 20 58.8	+1.2
	comp=Z,6.7nm,0.4s,baz=220,slow=7.0,SNR=5.3						
ATD				SKPbc	SKPbc	03 23 39.2	+0.2
	comp=Z,40nm,1.0s,baz=297,slow=2.8,SNR=9.6						
FINES	FINESS Array B	138.16	342	PKhKP	PKPpre	03 20 44.8	
	comp=Z,14nm,0.6s,baz=60,slow=3.3,SNR=33						
FINES				PKP	PKPdf	03 20 56.8	0.0
	comp=Z,17nm,0.4s,baz=77,slow=2.9,SNR=20						
FINES				SKPbc	SKPbc	03 23 37.2	-1.2
	comp=Z,196nm,1.0s,baz=64,slow=4.4,SNR=38						
FINES				SKKPbc		03 32 22.5	
	comp=Z,3.7nm,0.6s,baz=184,slow=2.1,SNR=8.4						
FINES	FINESS Array B	138.16	342	PKHKP	PKPpre	03 20 44.8	
FINES						03 20 56.8	
FINES				pmax	pmax		
	comp=Z,14nm,0.6s						
FINES				pmax	pmax		
	comp=Z,17nm,0.4s						
FINES				pmax	pmax		
	comp=N,196nm,1.0s						
FINES	FINESS Array B	138.16	342	PKP	PKPpre	03 20 44.8	
FINES				PKP	PKPdf	03 20 56.8	0.0
FINES				SKPbc	SKPbc	03 23 37.2	-1.3
FINES				SKKPbc		03 32 22.5	
NSS	Namsos	138.28	352	*e*PKPdf	PKPpre	03 20 44.5	
NSS	Namsos	138.28	352	*e*P	PKPpre	03 20 44.6	
DGRG	David-gareji	138.47	307	P	PKPdf	03 20 49.1	-9.0
DGRG				S	SKPdf	03 23 41.2	+1.4
OBN	Obninsk	138.56	329⇑	*e*PKHKP	PKPpre	03 20 47.6	
OBN				*e*		03 20 55.2	
OBN				*e*		03 22 57.1	
OBN				pmax	pmax		
	comp=Z,13nm,0.5s						
OBN				pmax	pmax		
	comp=Z,34nm,0.9s						
OBN	Obninsk	138.56	329⇑	*e*PKP	PKPdf	03 20 55.2	-2.5
MTA	Mtatsminda	138.84	307	P	PKPdf	03 20 60.0	+1.3
MTA				S	SKPdf	03 23 41.5	+1.0
TBLG	Delisi	138.88	307	*e*PKIKP	PKPdf	03 20 57.0	-1.7
TBLG	Delisi	138.88	307	P	PKPdf	03 20 57.0	-1.7
TBLG				S	SKPdf	03 23 41.7	+1.1
GNI	Garni	139.18	305	PKP	PKPdf	03 20 59.8	+0.5
	comp=Z,29nm,0.7s,baz=225,slow=1.7,SNR=10						
GNI				SKPbc	SKPbc	03 23 42.2	+0.2
	comp=Z,15nm,0.6s,baz=121,slow=5.3,SNR=5.7						
GNI	Garni	139.18	305	*d*PKIKP	PKPdf	03 20 59.2	-0.2
GNI	Garni	139.18	305	*e*PKPdf	PKPdf	03 20 59.5	+0.2
ZEI	Tsey	139.25	309	*i*PKIKP	PKPdf	03 21 00.8	+1.4
ZEI				pmax	pmax		
	comp=Z,30nm,1.0s						
VSR	Storozhevoye	139.26	323	*e*PKHKP	PKPpre	03 20 49.0	
VSR				pmax	pmax		
	comp=Z,30nm,0.5s						
VSR				pmax	pmax		
	comp=N,2.0nm,0.4s						
VSR				pmax	pmax		
	comp=E,4.0nm,0.5s						
GOR	Gori	139.28	308	P	PKPdf	03 21 01.6	+2.1
GOR				S	SKPdf	03 23 43.2	+1.9
VORD	Divnogorie	139.31	322	*e*PKHKP	PKPpre	03 20 49.3	
ONI	Oni	139.61	309	P	PKPdf	03 20 52.6	-7.5
ONI				S	SKPdf	03 23 42.7	+0.9
KIV	Kislovodsk	139.79	311	*e*PKHKP	PKPpre	03 20 54.0	
KIV				*i*		03 20 59.5	
KIV				*e**SP		03 23 54.9	
KIV				*e*		03 27 13.3	
KIV				*e*SS	SS	03 41 35.0	-6.1
KIV				*e*SSS		03 46 58.0	
KIV				pmax	pmax		
	comp=Z,14nm,0.8s						
KIV	Kislovodsk	139.79	311	*i*PKP	PKPdf	03 20 59.5	-0.8
BHD	Baghdad	140.23	294	*ex*	x	03 21 11.0	
BHD				*ex*	x	03 23 42.0	
VSU	Vasula	140.30	338⇓	*i*PKIKP	PKPdf	03 20 58.3	-2.5
VSU	Vasula	140.30	338⇓	*e*PKP	PKPdf	03 20 58.3	-2.5
TUTA	Tutak	140.78	304	*i*P	PKPdf	03 20 56.9	-5.4
ARTV	Artvin	141.06	307	*i*P	PKPdf	03 20 58.0	-4.7
DBOC	Borcka	141.21	307	*i*P	PKPpre	03 20 53.5	
DDEM	Demirkent	141.26	307	*i*P	PKPdf	03 20 57.9	-5.1
NB2	NORSAR Subarra	141.74	351	PKP	PKPpre	03 20 57.3	
	comp=Z,23nm,0.6s,baz=16,slow=3.2						
NB2	NORSAR Subarra	141.74	351	PKP	PKPpre	03 20 57.3	
	baz=16,slow=3.2						
NB2	NORSAR Subarra	141.74	351	PKHKP	PKPpre	03 20 57.3	
NB2	NORSAR Subarra	141.74	351	PKPab	PKPpre	03 20 57.3	
NOA	NORSAR Array B	141.74	351	PKhKP	PKPpre	03 20 57.5	
	comp=Z,68nm,0.7s,baz=16,slow=4.7,SNR=354						
NOA				pPKP	pPKPdf	03 23 16.2	+1.6
	comp=Z,4.3nm,0.8s,baz=21,slow=3.9,SNR=1.7						
NOA				SKPbc	SKPbc	03 23 46.9	-1.0
	comp=Z,49nm,0.9s,baz=14,slow=4.2,SNR=12						
NOA				SKKPbc		03 32 09.7	
	comp=Z,3.3nm,0.9s,baz=196,slow=4.2,SNR=6.4						
NOA	NORSAR Array B	141.74	351	PKP	PKPpre	03 20 57.5	
NOA				pPKP	pPKPdf	03 23 16.2	+1.6
NOA				SKPbc	SKPbc	03 23 46.9	-1.0
FOO	Floro	141.79	356	*e*PKPdf	PKPdf	03 20 59.6	-3.7
FOO				*e*SS	SS	03 42 04.6	+2.6
FOO	Floro	141.79	356	*e*P	PKPpre	03 20 56.7	
SOC	Sochi	141.96	311	*e*PKHKP	PKPpre	03 20 54.7	
SOC				*i*		03 21 04.8	
SOC				*e*		03 24 20.0	
SOC				*e*PPP		03 27 37.4	
SOC				MLR	MLR		
	comp=Z,597nm,22.0s						
NAO01	NORSAR Array S	141.97	352	*e*PKPdf	PKPdf	03 20 58.7	-5.0
BNGL	BINGOL	142.13	304	*i*P	PKPdf	03 21 01.5	-3.2
HYA	Hoyanger	142.15	355	*e*PKPdf	PKPdf	03 21 00.3	-3.7
HYA				AMB	AMB	03 21 08.6	
	comp=Z,76nm,2.0s						
HYA	Hoyanger	142.15	355	*e*P	PKPdf	03 21 00.3	-3.7
HFS	Hagfors	142.22	349	PKhKP	PKPpre	03 20 59.5	
	comp=Z,205nm,0.4s,baz=67,slow=3.9,SNR=2422						
HFS				SKPbc	SKPbc	03 23 47.7	-1.4
	comp=Z,59nm,0.8s,baz=349,slow=1.5,SNR=12						
HFS				SKKPbc		03 32 06.9	
	comp=Z,14nm,0.9s,baz=151,slow=3.4,SNR=14						
HFS	Hagfors	142.22	349	PKP	PKPpre	03 20 59.5	
HFS				SKPbc	SKPbc	03 23 47.7	-1.4
BEST	Besiri	142.24	302	*i*P	PKPdf	03 21 01.6	-3.3
SUE	Sulen	142.35	356	*e*PKPdf	PKPdf	03 21 00.0	-4.4
SUE	Sulen	142.35	356	*e*P	PKPdf	03 20 59.8	-4.6
KOPT	Kop Dagi	142.39	306	*i*P	PKPdf	03 21 00.8	-4.4
IZAR	Zarasai	142.54	336	*e*P	PKPdf	03 21 01.4	-3.4
IZAR				AMB	AMB	03 21 02.5	
	comp=Z,60nm,0.6s						
IDID	Didziasalis	142.67	335	*e*P	PKPdf	03 21 01.7	-3.4
IDID				AMB	AMB	03 21 03.7	
	comp=Z,58nm,0.8s						
MACK	Trabzon	142.70	307	*i*P	PKPdf	03 21 02.5	-3.2
ISAL	Salakas	142.72	336	*e*P	PKPdf	03 21 02.0	-3.2
ISAL				AMB	AMB	03 21 03.2	
	comp=Z,44nm,0.7s						
MICGM	Minsk	142.81	333	*e*P	PKPdf	03 21 00.0	-5.4
MNK	Minsk	142.83	333	*e*PKHKP	PKPpre	03 21 00.0	
MNK				pmax	pmax		
	comp=Z,1μm,1.0s						
IIGN	Ignalina	142.84	336	*e*P	PKPdf	03 21 02.2	-3.2
IIGN				AMB	AMB	03 21 03.6	
	comp=Z,66nm,0.7s						
OSL	Oslo	142.87	351	*e*PKPdf	PKPdf	03 21 01.8	-3.5
OSL				AMb	AMB	03 21 02.7	
	comp=Z,211nm,0.7s						
OSL	Oslo	142.87	351	*e*P	PKPdf	03 21 01.8	-3.5
ASK	Askoy	142.90	356	*e*PKPdf	PKPdf	03 21 01.1	-4.2
ASK	Askoy	142.90	356	*e*P	PKPdf	03 21 01.1	-4.2
RUND	Rundenannen	142.95	356	*e*PKPdf	PKPdf	03 21 01.1	-4.3
NACGM	Naroch	142.96	335	*e*PKP	PKPdf	03 21 00.0	-5.6
BER	Bergen	142.99	356	*e*PKPdf	PKPdf	03 21 01.9	-3.6
BER				AMb	AMB	03 21 03.4	
	comp=Z,302nm,0.5s						
BER	Bergen	142.99	356	*e*P	PKPdf	03 21 01.7	-3.8
ANN	Anapa	143.06	314	*c i*PKHKP	PKPpre	03 21 03.6	
ANN				*e*		03 24 20.5	
ANN				*e*		03 27 20.2	
ANN				*e*SS	SS	03 42 14.0	-4.4
ANN				pmax	pmax		
	comp=Z,496nm,0.7s						
EGD	Espegrend	143.10	356	*e*PKPdf	PKPdf	03 21 01.8	-3.9
WAL1	Walls	143.26	2	P	PKPdf	03 21 03.6	-2.4
WAL1	Walls	143.26	2	*e*P	PKPdf	03 21 03.6	-2.4
KONO	Kongsberg	143.30	352	*e*PKPdf	PKPdf	03 21 03.2	-2.8
KONO				AMb	AMB	03 21 04.3	
	comp=Z,467nm,0.9s						
ODD1	Odda	143.35	355	*e*PKPdf	PKPdf	03 21 03.6	-2.6
ODD1				AMb	AMB	03 21 04.5	
	comp=Z,220nm,0.7s						
ODD1	Odda	143.35	355⇑	*i*P	PKPdf	03 21 03.6	-2.5
LRW	Lerwick	143.39	1	P	PKPdf	03 21 03.3	-2.9
LRW				AMb	AMB	03 21 04.0	
	comp=Z,363nm,0.8s						
LRW	Lerwick	143.39	1	*e*P	PKPdf	03 21 03.3	-2.9
LRW				AMb	AMB	03 21 04.0	
	comp=Z,363nm,0.8s						
BLS5	Blasjo	143.85	355	*e*PKPdf	PKPdf	03 21 05.4	-1.7
BLS5				AMb	AMB	03 21 06.4	
	comp

MDO	Dochfour	145.94	4	P	PKPdf	03 21 10.4	-0.3
MDO	Dochfour	145.94	4	eP	PKPdf	03 21 10.4	-0.3
KSB	Sheil Bridge	146.09	6	P	PKPdf	03 21 11.5	+0.6
KSB	Sheil Bridge	146.09	6	eP	PKPdf	03 21 11.5	+0.6
MME1	Meikle Cairn	146.15	3	P	PKPdf	03 21 11.1	+0.1
MME1	Meikle Cairn	146.15	3	eP	PKPdf	03 21 11.1	+0.1
KAR1	Arisaig	146.34	6	P	PKPdf	03 21 12.1	+0.7
KAR1	Arisaig	146.34	6	eP	PKPdf	03 21 12.1	+0.7
MUD	Monsted U'grnd	146.45	351	i PKIKP	PKPdf	03 21 13.1	+1.5
MUD				i		03 23 17.5	
MUD				pmax	pmax		
	comp=Z,200nm,1.0s						
MUD	Monsted U'grnd	146.45	351	i P	PKPdf	03 21 13.1	+1.5
	comp=Z,202nm,1.0s						
MUD				i		03 23 17.5	
MUD				i		03 30 29.5	
MUD				e		03 34 00.8	
ASF	Jabal al Asfar	146.60	293	PKPbc	PKPbc	03 21 14.6	-0.7
	comp=Z,111nm,0.9s,baz=318,slow=1.9,SNR=66						
ASF				pPKP	pPKPdf	03 23 25.9	+1.8
	comp=Z,19nm,0.9s,baz=0.4,slow=5.1,SNR=4.0						
ASF				SKPbc	SKPbc	03 24 00.2	0.0
	comp=Z,13nm,0.9s,baz=220,slow=2.0,SNR=3.3						
ASF	Jabal al Asfar	146.60	293	PKIKP	PKPdf	03 21 14.6	+2.0
ASF				pmax	pmax		
	comp=Z,111nm,0.9s						
ASF				pmax	pmax		
	comp=Z,19nm,0.9s						
ASF				pmax	pmax		
	comp=N,13nm,0.9s						
BSD	Bornholm Skovb	146.61	345	⇑i PKIKP	PKPdf	03 21 13.4	+1.5
BSD				i		03 23 18.8	
BSD				pmax	pmax		
	comp=Z,240nm,0.8s						
BSD	Bornholm Skovb	146.61	345	⇑i P	PKPdf	03 21 13.4	+1.5
	comp=Z,245nm,0.8s						
BSD				i		03 23 18.8	
COP	Copenhagen	146.63	347	⇑i PKIKP	PKPdf	03 21 13.7	+1.8
COP				i		03 23 20.2	
COP				pmax	pmax		
	comp=Z,150nm,0.8s						
COP	Copenhagen	146.63	347	⇑i P	PKPdf	03 21 13.7	+1.8
	comp=Z,154nm,0.8s						
COP				i		03 23 20.2	
COP				i		03 30 22.8	
YAYL	Yayladag	146.66	300	i P	PKPdf	03 21 11.8	-0.8
FKH	Fakeheh	146.75	297	eP	PKPdf	03 21 16.1	+3.3
YURE	YUREGIR	146.86	302	i P	PKPdf	03 21 14.4	+1.5
CDAG	Cicekdag	147.03	307	i P	PKPdf	03 21 12.3	-0.7
HWQ	Hawqa	147.12	297	eP	PKPdf	03 21 16.5	+3.1
EBH	Black Hill	147.19	4	P	PKPdf	03 21 13.4	+0.6
EBH	Black Hill	147.19	4	eP	PKPdf	03 21 13.4	+0.6
EAB	Aberfoyle	147.19	5	P	PKPdf	03 21 12.4	-0.4
EAB	Aberfoyle	147.19	5	eP	PKPdf	03 21 12.4	-0.4
WAR	Warsaw	147.21	336	ePKP	PKPbc	03 21 16.2	+0.1
WAR				ePKIKP	PKPab	03 21 20.0	+0.2
WAR				epPKP	pPKPdf	03 23 25.8	+1.3
KIS	Kishinev	147.25	323	⇑i PKIKP	PKPdf	03 21 14.0	+0.8
KIS				M		03 21 15.0	
	comp=Z,400nm,2.0s						
KIS				i pPKP	pPKPdf	03 23 24.0	-0.7
KIS	Kishinev	147.25	323	ePP		03 24 20.0	
KIS				i SKKS	SKKSac	03 30 40.0	-3.0
KIS	Kishinev	147.25	323	⇑i PKIKP	PKPdf	03 21 14.0	+0.8
KIS				pmax	pmax		
	comp=Z,400nm,2.0s						
KIS				pmax	pmax		
	comp=Z,400nm,2.0s						
KIS	Kishinev	147.25	323	⇓P	PKPbc	03 21 17.9	+1.5
KIS	Kishinev	147.25	323	⇓i P	PKPbc	03 21 17.9	+1.4
RCY	Rachaya	147.34	296	eP	PKPbc	03 21 17.5	+0.3
GULE	Gulek	147.41	303	i P	PKPbc	03 21 17.7	+0.5
BHL	Bhannes	147.42	297	eP	PKPbc	03 21 17.4	0.0
KSHT	Keshet	147.42	295	Pn	PKPbc	03 21 17.9	+0.5
HRI	Mount Hermon	147.44	295	PKP2	PKPbc	03 21 18.0	+0.6
KSDI	Kefar Szold	147.52	295	Pn	PKPbc	03 21 17.9	+0.3
EDI	Edinburgh	147.53	4	P	PKPdf	03 21 13.0	-0.4
EDI				AMb	AMB	03 21 16.5	
	comp=Z,124nm,1.0s						
EDI	Edinburgh	147.53	4	eP	PKPdf	03 21 13.0	-0.4
EDI				AMb	AMB	03 21 16.5	
	comp=Z,124nm,1.0s						
BR131	Keskin Array S	147.53	308	ePKPdf	PKPdf	03 21 13.8	-0.1
BR131				ePKPbc	PKPbc	03 21 17.1	-0.4
BR131				ePKPab	PKPab	03 21 22.0	+0.4
BRTR	Keskin Array B	147.53	308	PKPbc	PKPbc	03 21 16.6	-0.8
	comp=Z,33nm,0.7s,baz=132,slow=1.8,SNR=11						
BRTR				pPKP	pPKPdf	03 23 27.1	+1.7
	comp=Z,11nm,0.8s,baz=82,slow=2.7,SNR=4.0						
BRTR				SKPbc	SKPbc	03 24 01.9	-0.1
	comp=Z,21nm,1.0s,baz=174,slow=3.5,SNR=4.2						
BRTR	Keskin Array B	147.53	308	PKIKP	PKPbc	03 21 16.6	-0.8
BRTR				pmax	pmax		
	comp=Z,33nm,0.7s						
BRTR				pmax	pmax		
	comp=Z,11nm,0.8s						
BRTR				pmax	pmax		
	comp=N,21nm,1.0s						
PGBU	Glenifferbraes	147.55	5	P	PKPdf	03 21 15.2	+1.8
PGBU				AMb	AMB	03 21 20.7	
	comp=N,223nm,1.1s						
PGBU	Glenifferbraes	147.55	5	eP	PKPdf	03 21 15.2	+1.8
PGBU				AMb	AMB	03 21 20.7	
	comp=Z,223nm,1.1s						
ESY	Stoneypath	147.57	3	P	PKPdf	03 21 12.0	-1.4
ESY	Stoneypath	147.57	3	eP	PKPdf	03 21 12.0	-1.4
EAU	Auchinoon	147.59	4	P	PKPdf	03 21 13.6	+0.1
EAU	Auchinoon	147.59	4	eP	PKPdf	03 21 13.6	+0.1
GKP	Gorka Klasztor	147.62	341	i PKP	PKPbc	03 21 16.9	-0.3
GKP				ePKIKP	PKPbc	03 21 18.4	+1.2
GKP				epPKP	pPKPdf	03 23 25.5	+0.4
PCA1	Carrot	147.68	5	P	PKPdf	03 21 15.1	+1.5
PCA1	Carrot	147.68	5	eP	PKPdf	03 21 15.1	+1.5
EBL	Broad Law	147.69	3	P	PKPdf	03 21 13.7	0.0
EBL	Broad Law	147.69	3	eP	PKPdf	03 21 13.7	0.0
HMDT	Nahal Hemdat	147.75	294	Pn	PKPbc	03 21 18.8	+0.6
MMAI	Mount Meron Ar	147.75	295	PKPbc	PKPbc	03 21 18.8	+0.5
	comp=Z,128nm,0.5s,baz=76,slow=7.8,SNR=171						
MMAI				pPKP	pPKPdf	03 23 28.6	+2.6
	comp=Z,62nm,1.0s,baz=55,slow=4.5,SNR=6.3						
MMLI	Mount Malkishu	147.81	294	⇓Pn	PKPbc	03 21 18.8	+0.4
LVV	L'vov	147.82	331	i PKIKP	PKPbc	03 21 17.2	-0.6
LVV				e		03 28 12.0	
LVV				e		03 43 09.6	
LVV				MLR	MLR		
	comp=Z,400nm,22.0s						
LVV				MLR	MLR		
	comp=N,100nm,14.0s						
LVV				MLR	MLR		
	comp=E,800nm,25.0s						
LEOM	Leova	147.88	322	⇑PKP2	PKPbc	03 21 18.0	-0.1
LEOM	Leova	147.88	322	⇑i P	PKPbc	03 21 18.0	-0.1
HNTI	Hanita	147.94	295	Pn	PKPbc	03 21 18.8	+0.1
DSI	Dead Sea	147.94	292	Pn	PKPbc	03 21 18.8	0.0
MZDA	Masada	147.99	292	Pn	PKPbc	03 21 19.2	+0.3
EKA	Eskdalemuir Ar	148.12	4	PKPbc	PKPbc	03 21 17.4	-1.1
	comp=E,42nm,0.4s,baz=343,slow=2.6,SNR=256						
EKA				pPKP	pPKPdf	03 23 27.6	+1.8
	comp=E,24nm,0.9s,baz=336,slow=2.7,SNR=9.3						
EKA				PP	PP	03 24 48.5	-3.5
	comp=E,7.2nm,0.9s,baz=339,slow=4.5,SNR=5.1						
EKA	Eskdalemuir Ar	148.12	4	PKHKP	PKPbc	03 21 17.4	-1.0
EKA						03 24 48.6	
EKA				pmax	pmax		
	comp=Z,42nm,0.4s						
EKA				pmax	pmax		
	comp=Z,24nm,0.9s						
EKA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ESK	Eskdalemuir	148.13	4	P	PKPdf	03 21 14.6	+0.3
ESK				AMb	AMB	03 21 22.9	
	comp=Z,85nm,1.2s						
ESK	Eskdalemuir	148.13	4	eP	PKPdf	03 21 14.6	+0.3
ESK				AMb	AMB	03 21 22.9	
	comp=Z,85nm,1.2s						
ESK	Eskdalemuir	148.13	4	ePKPdf	PKPdf	03 21 12.8	-1.6
ESK				ePKPbc	PKPbc	03 21 17.3	-1.1
OFRI	'Ofer	148.16	294	⇓Pn	PKPbc	03 21 18.9	-0.4
SLTI	Sal'it	148.16	294	⇓Pn	PKPbc	03 21 19.4	+0.1
YTIR	Yattir	148.19	292	Pn	PKPbc	03 21 19.6	+0.2
ZFRI	Zfri	148.21	290	Pn	PKPbc	03 21 19.8	+0.4
ECK	Cauldkaine Hil	148.27	4	P	PKPdf	03 21 15.0	+0.4
ECK	Cauldkaine Hil	148.27	4	eP	PKPdf	03 21 15.0	+0.4

TLCR		148.28	320	⇓PKHKP	PKPbc	03 21 18.8	-0.4
TLCR		148.28	320	⇓i P	PKPbc	03 21 18.8	-0.4
SGKT	Sivrigoynuk	148.35	310	i P	PKPdf	03 21 13.1	-2.1
HRFI	Mount Harif	148.36	289	Pn	PKPbc	03 21 19.7	-0.1
PRNI	Paran	148.37	290	⇓PKHKP	PKPbc	03 21 20.0	+0.1
EIL	Elat	148.46	289	PKP	PKPdf	03 21 14.8	-1.0
	comp=Z,8.2nm,0.8s,baz=306,slow=3.5,SNR=8.9						
EIL				PKPbc	PKPbc	03 21 21.2	+1.1
	comp=Z,87nm,0.7s,baz=341,slow=2.6,SNR=68						
EIL				pPKPbc	pPKPbc	03 23 34.0	+4.2
	comp=Z,39nm,1.0s,baz=79,slow=11,SNR=2.9						
EIL	Elat	148.46	289	PKP	PKPdf	03 21 14.8	-1.0
EIL				Pn	PKPbc	03 21 19.8	-0.3
EIL				PKPbc	PKPbc	03 21 21.2	+1.1
EIL				pPKPbc	pPKPbc	03 23 34.0	+4.2
GAL1	Galloway	148.47	5	P	PKPdf	03 21 15.4	+0.5
GAL1				AMb	AMB	03 21 24.3	
	comp=Z,225nm,0.9s						
GAL1	Galloway	148.47	5	eP	PKPdf	03 21 15.4	+0.5
GAL1				AMb	AMB	03 21 24.3	
	comp=Z,225nm,0.9s						
PHNC	Paralimni	148.53	299	P	PKPbc	03 21 20.2	+0.1
	comp=Z,3.1nm,0.8s						
GCD	Castle Douglas	148.53	5	P	PKPdf	03 21 15.3	+0.3
GCD	Castle Douglas	148.53	5	eP	PKPdf	03 21 15.3	+0.3
KWP	Kalwaria Pacla	148.54	332	i PKP	PKPbc	03 21 19.5	-0.1
KWP				ePKIKP	PKPab	03 21 25.3	0.0
KWP				epPKP	pPKPdf	03 23 28.8	+2.0
KWP	Kalwaria Pacla	148.54	332	⇓PKHKP	PKPbc	03 21 19.2	-0.4
KWP	Kalwaria Pacla	148.54	332	ePKPdf	PKPdf	03 21 15.1	-0.1
KWP				ePKPbc	PKPbc	03 21 19.5	-0.2
KWP	Kalwaria Pacla	148.54	332	⇓i P	PKPbc	03 21 19.2	-0.4
RTMI	Retamim	148.58	291	Pn	PKPbc	03 21 20.2	-0.2
KRMI	Paran Flat	148.63	290	Pn	PKPbc	03 21 20.1	-0.4
XAL	Allendale	148.64	3	P	PKPdf	03 21 15.0	-0.2
XAL	Allendale	148.64	3	eP	PKPdf	03 21 15.0	-0.2
CFR	Carcaliu	148.69	320	⇓PKHKP	PKPbc	03 21 19.8	-0.3
CFR	Carcaliu	148.69	320	⇓i P	PKPbc	03 21 19.8	-0.3
BSEG	Bad Segeberg	148.69	349	ePKPdf	PKPdf	03 21 16.0	+0.7
BSEG				ePKPbc	PKPbc	03 21 19.2	-0.7
BSEG				ePKPab	PKPab	03 21 24.3	-1.5
BSEG				epPKPbc	pPKPbc	03 23 29.5	-0.2
BUR01	Bucovina Ar. S	148.78	327	P	PKPbc	03 21 21.6	+1.3
BURAR	Bucovina Array	148.78	327	⇑PKHKP	PKPbc	03 21 20.4	+0.1
BURAR	Bucovina Array	148.78	327	⇑i P	PKPbc	03 21 20.4	+0.1
KZIT	Kziot	148.85	291	Pn	PKPbc	03 21 20.9	-0.1
TIRR	Tirgusor	148.92	319	⇓PKHKP	PKPbc	03 21 20.3	-0.4
TIRR	Tirgusor	148.92	319	ePKPdf	PKPdf	03 21 15.6	-0.4
TIRR				ePKPbc	PKPbc	03 21 20.3	-0.4
TIRR	Tirgusor	148.92	319	⇓i P	PKPbc	03 21 20.3	-0.4
XDE	Dent Fell	148.92	4	P	PKPdf	03 21 16.4	+0.7
XDE	Dent Fell	148.92	4	eP	PKPdf	03 21 16.4	+0.7
ERMK	Ermenek	149.02	303	i P	PKPbc	03 21 21.1	-0.1
VRI	Vrincioaia	149.09	323	⇓PKHKP	PKPdf	03 21 17.7	+1.5
VRI	Vrincioaia	149.09	323	P	PKPbc	03 21 21.1	+0.1
VRI	Vrincioaia	149.09	323	⇓i P	PKPdf	03 21 17.7	+1.5
CSS	Prodhromos	149.10	299	⇑P	PKPbc	03 21 21.2	-0.3
	comp=Z,3.5nm,0.7s						
PLOR	Plostina	149.14	323	PKHKP	PKPbc	03 21 21.0	-0.2
PLOR	Plostina	149.14	323	⇑PKP2	PKPbc	03 21 23.4	+2.2
PLOR	Plostina	149.14	323	⇑i P	PKPbc	03 21 23.4	+2.2
MAMC	Mammari	149.15	300	P	PKPbc	03 21 21.4	-0.2
GRER		149.24	322	P	PKPbc	03 21 22.4	+0.9
RUE	Ruedersdorf	149.29	344	ePKPdf	PKPdf	03 21 16.7	+0.4
RUE				ePKPbc	PKPbc	03 21 21.1	-0.2
RUE				ePKPab	PKPab	03 21 27.8	-0.5
OJC	Ojcow	149.29	335	i PKHKP	PKPbc	03 21 19.0	-2.4
OJC				i		03 21 26.2	
STHS	Stebnicka Huta	149.33	333	ePKP	PKPbc	03 21 22.0	+0.4
STHS				e		03 23 30.9	
STHS	Stebnicka Huta	149.33	333	ePKP	PKPbc	03 21 22.0	+0.4
STHS				e		03 23 30.9	
UZH	Uzhgorod	149.47	331	⇓PKHKP	PKPbc	03 21 21.0	-0.9
UZH				i		03 21 28.0	
UZH				e		03 24 57.3	
UZH				e		03 28 25.9	
UZH				MLR	MLR		
	comp=N,330nm,23.0s						
UZH				MLR	MLR		
	comp=E,460nm,23.0s						
UZH				MLR	MLR		
	comp=Z,290nm,23.0s						
AMRR	Amara	149.48	320	⇑P	PKPbc	03 21 22.2	+0.1
AMRR	Amara	149.48	320	⇑i P	PKPbc	03 21 22.2	+0.1
SZAC	Souni-Zanaja	149.51	299	P	PKPbc	03 21 22.3	-0.2
HPK	Haverah Park	149.57	2	P	PKPdf	03 21 17.5	+0.8
HPK				AMb	AMB	03 21 29.1	
	comp=Z,215nm,1.0s						
HPK	Haverah Park	149.57	2	eP	PKPdf	03 21 17.5	+0.8
HPK				AMb	AMB	03 21 29.1	
	comp=Z,215nm,1.0s						
BMR	Baia Mare	149.59	328	⇓PKHKP	PKPbc	03 21 21.8	-0.4
BMR	Baia Mare	149.59	328	⇓i P	PKPbc	03 21 21.8	-0.4
GAZI	Gazipasa	149.59	302	i P	PKPbc	03 21 21.2	-1.4
CRVS	Cervenica-Dubn	149.63	332	ePKIKP	PKPdf	03 21 17.0	0.0
CRVS				e		03 21 29.6	
CRVS	Cervenica-Dubn	149.63	332	ePKP	PKPdf	03 21 17.0	0.0
CRVS				e		03 21 22.4	
CRVS				e		03 21 29.6	
CRVS				e		03 23 31.0	
CRVS	Cervenica-Dubn	149.63	332	ePKP	PKPdf	03 21 17.0	0.0
CRVS				e		03 21 22.4	
CRVS				e		03 21 29.6	
CRVS				e		03 23 31.0	
ALFC	Alevga	149.64	300	⇑P	PKPbc	03 21 22.1	-0.7
	comp=Z,6.3nm,0.5s						
ALFC	Alevga	149.64	300	⇑eP	PKPbc	03 21 22.1	-0.7
NIE	Niedzica	149.72	334	ePKIKP	PKPdf	03 21 18.3	+1.2
NIE				ePKiKP	PKiKP	03 21 22.9	-0.3
NIE				epPKP	pPKPdf	03 23 32.4	+3.7
NIE	Niedzica	149.72	334	i PKHKP	PKPdf	03 21 18.3	+1.2
TRPA	Tarpa	149.72	330	⇓i P	PKPbc	03 21 21.7	-0.8
MLR	Muntele Rosu	149.75	323	PKP	PKPdf	03 21 16.6	-0.7
	comp=Z,6.6nm,0.9s,baz=17,slow=5.1,SNR=9.6						
MLR				PKPbc	PKPbc	03 21 22.2	-0.5
	comp=Z,30nm,0.5s,baz=307,slow=4.7,SNR=57						
MLR				pPKPbc	pPKPbc	03 23 33.8	+1.0
	comp=Z,32nm,1.1s,baz=110,slow=8.7,SNR=2.0						
MLR	Muntele Rosu	149.75	323	PKIKP	PKPdf	03 21 16.6	-0.7
MLR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MLR				pmax	pmax		
	comp=Z,30nm,0.5s						
MLR				pmax	pmax		
	comp=Z,32nm,1.1s						
MLR	Muntele Rosu	149.75	323	PKP	PKPdf	03 21 16.6	-0.7
MLR				PKPbc	PKPbc	03 21 22.2	-0.5
MLR				pPKPbc	pPKPbc	03 23 33.8	+1.0
MLR	Muntele Rosu	149.75	323	⇓i P	PKPbc	03 21 21.9	-0.8
BORA	Eskisehir	149.75	310	i P	PKPdf	03 21 16.2	-1.3
BOLV	Bolvadin	149.84	307	i P	PKPbc	03 21 22.5	-0.7
DSB	Dublin	149.89	8	ePKPdf	PKPdf	03 21 16.7	-0.5
DSB				ePKPbc	PKPbc	03 21 21.9	-0.9
DSB				ePKPab	PKPab	03 21 29.7	-1.1
PPCY	Paphos	149.91	299	P	PKPbc	03 21 22.3	-1.1
WME	Myndd Eilian	149.96	5	P	PKPdf	03 21 16.9	-0.4
WME	Myndd Eilian	149.96	5	eP	PKPdf	03 21 16.9	-0.4
RAC	Raciborz	150.00	337	ePKIKP	PKPdf	03 21 17.2	-0.3
RAC				e		03 21 30.9	
RAC	Raciborz	150.00	337	ePKPdf	PKPdf	03 21 17.2	-0.3
RAC				ePKPbc	PKPbc	03 21 23.2	+0.1
RAC				ePKPab	PKPab	03 21 30.9	-0.5
RAC				epPKPdf	pPKPdf	03 23 29.4	+0.3
KSP	Ksiaz	150.01	339	i PKP	PKPbc	03 21 23.3	+0.2
KSP				ePKIKP	PKPab	03 21 24.8	-6.6
KSP				epPKP	pPKPdf	03 23 30.9	+1.8
KSP	Ksiaz	150.01	339	ePKHKP	PKPbc	03 21 22.9	-0.2
KSP				e		03 21 30.8	
YRC	Rhoscolyn	150.08	6	P	PKPdf	03 21 18.9	+1.4
YRC	Rhoscolyn	150.08	6	eP	PKPdf	03 21 18.9	+1.4
NRDL	Niedersach Rie	150.10	348	ePKPbc	PKPbc	03 21 22.6	-0.7
NRDL				ePKPab	PKPab	03 21 30.3	-1.4
WPM1	Penmaenmawr	150.13	5	P	PKPdf	03 21 17.5	-0.1
WPM1	Penmaenmawr	150.13	5	eP	PKPdf	03 21 17.5	-0.1
MDB	Medias	150.19	325	⇓PKHKP	PKPbc	03 21 23.8	+0.1
MDB	Medias	150.19	325	⇓i P	PKPbc	03 21 23.8	+0.1
OKC	Ostrava-Krasne	150.22	336	ePKHKP	PKPbc	03 21 23.4	-0.2
OKC				e		03 21 31.6	
OKC	Ostrava-Krasne	150.22	336	⇑ePKP	PKPbc	03 21 23.4	-0.2
OKC				ePKPAB	PKPab	03 21 31.6	-0.7
OKC				epPKP	pPKPdf	03 23 33.9	+4.4

OKC				eSKKS	SKKSac	03 30 58.1	-1.0
OKC				ex	x	03 34 01.3	
YLL	Llanberis	150.23	5	P	PKPdf	03 21 18.0	+0.2
YLL	Llanberis	150.23	5	eP	PKPdf	03 21 18.0	+0.2
KBI1	Birley Grange	150.27	2	P	PKPdf	03 21 17.8	0.0
KBI1	Birley Grange	150.27	2	eP	PKPdf	03 21 17.8	0.0
VOIR		150.28	323	⇑PKIKP	PKPdf	03 21 19.7	+1.6
VOIR		150.28	323	PKIKP	PKPbc	03 21 23.5	-0.4
VOIR		150.28	323	P	PKPbc	03 21 23.5	-0.4
VOIR		150.28	323	⇑i P	PKPdf	03 21 19.7	+1.6
WIT	Witteveen	150.34	352	ePKiKP	PKiKP	03 21 23.8	-0.5
	comp=Z,627nm,0.6s						
WIT	Witteveen	150.34	352	i x	PKPbc	03 21 25.9	+2.0
WIT	Witteveen	150.34	352	ePKPpre	PKPab	03 21 32.2	-0.4
	comp=Z,635nm,0.8s						
WIT	Witteveen	150.34	352	ePKPab	PKPab	03 21 44.4	+12
	comp=Z,159nm,1.2s						
WIT	Witteveen	150.34	352	epPKP	pPKPdf	03 23 36.1	+6.5
YRE	Yr Eifl	150.36	6	P	PKPdf	03 21 17.9	-0.1
YRE	Yr Eifl	150.36	6	eP	PKPdf	03 21 17.9	-0.1
KECS	Kecovo	150.37	332	ePKIKP	PKPbc	03 21 23.6	-0.4
KECS				e		03 21 32.6	
KECS	Kecovo	150.37	332	ePKP	PKPbc	03 21 23.6	-0.4
KECS				e		03 21 32.6	
KECS				e		03 23 33.1	
KECS	Kecovo	150.37	332	ePKP	PKPbc	03 21 23.6	-0.4
KECS				e		03 21 32.6	
KECS				e		03 23 33.1	
UPC	Upice	150.39	339	ePKIKP	PKPbc	03 21 24.1	+0.1
UPC				e		03 21 33.2	
UPC				e		03 23 32.2	
UPC	Upice	150.39	339	⇑ePKP	PKPbc	03 21 24.1	+0.1
UPC				ePKPAB	PKPab	03 21 33.2	+0.2
UPC				epPKP	pPKPdf	03 23 32.2	+2.5
DPC	Dobruska-Polom	150.43	339	ePKIKP	PKPdf	03 21 19.2	+1.1
DPC				e		03 21 32.4	
DPC	Dobruska-Polom	150.43	339	ePKP	PKPdf	03 21 19.2	+1.1
DPC				e		03 21 24.3	
DPC				e		03 21 32.4	
DPC				e		03 23 28.5	
DPC				e		03 30 59.3	
DPC	Dobruska-Polom	150.43	339	ePKPDF	PKPdf	03 21 19.2	+1.1
DPC				⇑ePKP	PKPbc	03 21 24.3	+0.2
DPC				ePKPAB	PKPab	03 21 32.4	-0.7
DPC				epPKP	pPKPdf	03 23 28.5	-1.3
DPC				eSKKS	SKKSac	03 30 59.3	-0.9
ISP	Isparta	150.47	306	ePKPbc	PKPbc	03 21 23.5	-1.1
MORC	Moravsky Berou	150.49	337	PKIKP	PKPbc	03 21 24.1	-0.2
MORC	Moravsky Berou	150.49	337	ePKPdf	PKPdf	03 21 18.7	+0.5
MORC				ePKPbc	PKPbc	03 21 23.9	-0.4
MORC				ePKPab	PKPab	03 21 33.2	-0.2
LIKS	Likavka	150.49	334	ePKIKP	PKPbc	03 21 25.1	+0.8
LIKS				e		03 21 33.7	
LIKS	Likavka	150.49	334	ePKP	PKPbc	03 21 25.1	+0.8
LIKS				e		03 21 33.7	
CLL	Collm	150.55	344	ePKPdf	PKPdf	03 21 19.1	+0.8
CLL				ePKPbc	PKPbc	03 21 24.1	-0.3
CLL				ePKPab	PKPab	03 21 32.2	-1.4
CLL				epPKPbc	pPKPbc	03 23 33.3	-1.3
CLL	Collm	150.55	344	⇑ePKIKP	PKPdf	03 21 19.0	+0.7
CLL				i		03 21 33.0	
CLL				pmax	pmax		
	comp=Z,15nm,1.0s						
CLL				pmax	pmax		
	comp=Z,185nm,0.8s						
CLL				pmax	pmax		
	comp=Z,279nm,0.9s						
CLL	Collm	150.55	344	ePKPdf	PKPdf	03 21 19.0	+0.7
	comp=Z,15nm,1.0s						
CLL				⇑i PKPbc	PKPbc	03 21 24.0	-0.4
CLL				i PKiKP	PKiKP	03 21 25.4	+0.6
	comp=Z,242nm,0.6s						
CLL				⇓i PKPab	PKPab	03 21 33.0	-0.6
	comp=Z,279nm,0.9s						
CLL				epPKPbc	pPKPbc	03 23 36.0	+1.4
CLL				epPKPab	pPKPab	03 23 40.0	+1.2
CLL				e		03 23 44.0	
CLL				e		03 23 50.0	
CLL				i sPKPdf		03 24 26.3	
CLL				e		03 24 58.0	
CLL				ePP	PP	03 25 10.0	+3.9
	comp=Z,54nm,1.4s

PSZ ePKPab PKPab 03 21 35.3 -0.06
PSZ Piszkesteto 151.06 332 ⇑iP PKPbc 03 21 25.2 -0.4
SZH Strazhica 151.07 319 P PKPbc 03 21 25.2 -0.6
JMB Yambol 151.12 317 P PKPdf 03 21 19.4 -0.1
JMB Yambol 151.12 317 P PKPbc 03 21 25.9 -0.1
DEV Deva 151.12 326 ⇑PKIKP PKPbc 03 21 26.0 +0.2
DEV Deva 151.12 326 ⇑iP PKPbc 03 21 26.0 +0.2
PCED Cedros 151.13 52 ePKP PKPdf 03 21 16.2 -3.4
KOLL Kolacno 151.15 335 ePKIKP PKPdf 03 21 19.7 +0.4
KOLL e 03 21 36.4
KOLL Kolacno 151.15 335 ePKP PKPdf 03 21 19.7 +0.4
KOLL e 03 21 25.9
KOLL e 03 21 36.4
KOLL e 03 23 37.7
KOLL e 03 23 41.3
KOLL Kolacno 151.15 335 ePKP PKPdf 03 21 19.7 +0.4
KOLL e 03 21 25.9
KOLL e 03 21 36.4
KOLL e 03 23 37.7
KOLL e 03 23 41.3
WTSB Winterswijk 151.15 352 i PKiKP PKiKP 03 21 25.2 -0.8
comp=Z,211nm,0.8s
WTSB Winterswijk 151.15 352 i x PKPbc 03 21 26.4 +0.7
WTSB Winterswijk 151.15 352 ePKPpre PKPab 03 21 34.6 -1.5
comp=Z,168nm,0.8s
WTSB Winterswijk 151.15 352 ePKPab PKPab 03 21 47.1 +11
comp=Z,58nm,1.6s
WTSB Winterswijk 151.15 352 epPKP pPKPdf 03 23 36.8 +5.9
ZIMR 151.19 320 ⇑PKIKP PKPbc 03 21 26.1 0.0
ZIMR 151.19 320 ⇑iP PKPbc 03 21 26.1 0.0
VRAC Vranov 151.22 338 PKP PKPdf 03 21 20.6 +1.2
comp=Z,16nm,0.6s,baz=66,slow=0.5,SNR=5.5
VRAC PKPbc PKPbc 03 21 25.8 -0.2
comp=Z,16nm,0.6s,baz=71,slow=0.6,SNR=15
VRAC PKPab PKPab 03 21 35.4 -1.1
comp=Z,155nm,0.9s,baz=38,slow=3.9,SNR=56
VRAC pPKPbc pPKPbc 03 23 38.5 +2.2
comp=Z,34nm,1.0s,baz=76,slow=5.3,SNR=5.6
VRAC Vranov 151.22 338 PKIKP PKPdf 03 21 20.6 +1.2
VRAC 03 21 35.4
VRAC pmax pmax
comp=Z,16nm,0.6s
VRAC pmax pmax
comp=Z,16nm,0.6s
VRAC pmax pmax
comp=Z,155nm,0.9s
VRAC pmax pmax
comp=Z,34nm,1.0s
VRAC Vranov 151.22 338 ⇑PKIKP PKPbc 03 21 26.0 +0.1
VRAC Vranov 151.22 338 ⇑iP PKPbc 03 21 26.0 +0.1
DURS Dursunbey 151.26 311 i P PKPbc 03 21 25.3 -1.1
PRA Prague 151.27 341 PKPDF PKPdf 03 21 20.0 +0.6
PRA ⇑PKP PKPbc 03 21 25.0 -1.0
PRA PKPAB PKPab 03 21 36.0 -0.7
PRA pPKP pPKPdf 03 23 38.0 +6.9
PRU Pruhonice 151.31 341 ePKIKP PKPdf 03 21 20.8 +1.3
PRU e 03 21 36.8
PRU Pruhonice 151.31 341 ePKP PKPdf 03 21 20.8 +1.3
PRU e 03 21 26.2
PRU e 03 21 36.8
PRU e 03 23 30.3
PRU e 03 31 02.7
PRU e 03 34 29.6
PRU Pruhonice 151.31 341 ePKPDF PKPdf 03 21 20.8 +1.3
PRU ⇑ePKP PKPbc 03 21 26.2 +0.1
PRU ePKPAB PKPab 03 21 36.8 -0.1
PRU epPKP pPKPdf 03 23 30.3 -0.9
PRU eSKKS SKKSac 03 31 02.7 -2.3
PRU ex x 03 34 29.6
DEMI Demirci 151.32 309 i P PKPbc 03 21 25.8 -0.7
PCAN Candelaria 151.35 52 ePKP PKPdf 03 21 20.4 +0.5
HTR Trewern Hill 151.35 5 P PKPdf 03 21 19.8 +0.3
HTR Trewern Hill 151.35 5 eP PKPdf 03 21 19.8 +0.3
GOLH Golhisar 151.39 305 i P PKPbc 03 21 24.0 -2.7
MCH1 Michaelchurch 151.45 4 P PKPdf 03 21 20.1 +0.4
MCH1 Michaelchurch 151.45 4 eP PKPdf 03 21 20.1 +0.4
TANN Tannenbergstha 151.51 344 ePKPdf PKPdf 03 21 20.9 +1.1
TANN ePKPbc PKPbc 03 21 26.4 -0.2
TANN ePKPab PKPab 03 21 37.0 -0.7
MOX Moxa 151.51 345 ePKP PKPdf 03 21 20.0 +0.2
MOX e 03 21 26.0
MOX e 03 21 37.0
comp=Z,183nm,1.1s
MOX e 03 23 38.6
MOX eSS SS 03 43 53.0 +2.4
MOX Moxa 151.51 345 ePKPbc PKPbc 03 21 26.0 -0.6
MOX ePKPab PKPab 03 21 36.0 -1.7
MOX Moxa 151.51 345 ePKIKP PKPdf 03 21 20.0 +0.2
MOX e 03 21 37.0
MOX Moxa 151.51 345 ePKP PKPdf 03 21 20.0 +0.2
MOX e 03 21 26.0
MOX e 03 21 37.0
MOX e 03 23 38.6
GZR Gura Zlata 151.52 326 ⇓PKIKP PKPdf 03 21 20.3 +0.3
GZR Gura Zlata 151.52 326 ⇓iP PKPdf 03 21 20.3 +0.3
PMAN Manadas 151.57 51 ePKP PKPdf 03 21 21.4 +1.1
SMOL Smolenice 151.58 336 ePKIKP PKPdf 03 21 20.6 +0.7
SMOL e 03 21 38.6
SMOL Smolenice 151.58 336 ePKP PKPdf 03 21 20.6 +0.7
SMOL e 03 21 27.0
SMOL e 03 21 38.6
SMOL e 03 23 39.2
SMOL Smolenice 151.58 336 ePKP PKPdf 03 21 20.6 +0.7
SMOL e 03 21 26.9
SMOL e 03 21 38.6
SMOL e 03 23 39.2
BUG Bochum--Univer 151.60 351 ePKPbc PKPbc 03 21 26.0 -0.7
BUG ePKPab PKPab 03 21 36.5 -1.5
DNZL Cakiroluk 151.61 307 i P PKPbc 03 21 26.8 -0.4
TREC Trest 151.61 339 ePKIKP PKPbc 03 21 26.3 -0.5
TREC e 03 23 27.7
TREC Trest 151.61 339 ⇑ePKP PKPbc 03 21 26.3 -0.5
TREC epPKP pPKPdf 03 23 27.7 -4.0
NKC Novy Kostel 151.68 343 ePKIKP PKPdf 03 21 20.4 +0.4
NKC e 03 21 38.1
NKC e 03 23 28.6
NKC Novy Kostel 151.68 343 ePKP PKPdf 03 21 20.4 +0.4
NKC e 03 21 26.7
NKC e 03 21 38.1
NKC e 03 23 28.6
NKC e 03 34 33.2
NKC Novy Kostel 151.68 343 ePKPDF PKPdf 03 21 20.4 +0.4
NKC ⇑ePKP PKPbc 03 21 26.7 -0.2
NKC ePKPAB PKPab 03 21 38.1 -0.3
NKC epPKP pPKPdf 03 23 28.6 -3.1
NKC ex x 03 34 33.2
AKAS Kas 151.69 303 i P PKPbc 03 21 26.4 -1.1
UBBA Unterbreizbach 151.71 347 ePKPab PKPab 03 21 37.0 -1.5
UBBA epPKPbc pPKPbc 03 23 37.4 0.0
KSL Kastellorizon 151.73 303 eP PKPbc 03 21 27.0 -0.5
BUD Budapest 151.77 333 ⇑ePKP PKPbc 03 21 25.2 -2.0
HGH Gray Hill 151.82 4 P PKPdf 03 21 20.5 +0.3
HGH Gray Hill 151.82 4 eP PKPdf 03 21 20.5 +0.3
BZS Buzias 151.96 327 ⇓PKIKP PKPdf 03 21 21.2 +0.6
BZS Buzias 151.96 327 PKIKP PKPbc 03 21 27.0 -0.7
BZS Buzias 151.96 327 P PKPbc 03 21 26.9 -0.8
BZS Buzias 151.96 327 ⇓iP PKPdf 03 21 21.1 +0.5
ZST Bratislava 151.97 336 ePKIKP PKPdf 03 21 21.7 +1.2
ZST e 03 21 40.2
ZST Bratislava 151.97 336 ePKP PKPdf 03 21 21.7 +1.2
ZST e 03 21 27.8
ZST e 03 21 40.2
ZST e 03 23 38.3
ZST e 03 23 43.7
ZST Bratislava 151.97 336 ePKP PKPdf 03 21 21.7 +1.2
ZST e 03 21 27.8
ZST e 03 21 40.1
ZST e 03 23 38.2
ZST e 03 23 43.7
DIM Dimitrovgrad 152.00 317 P PKPbc 03 21 27.4 -0.5
TURN Turunc 152.23 305 i P PKPdf 03 21 22.4 +1.1
ALN Alexandroupoli 152.29 315 P PKPdf 03 21 19.9 -1.4
KDZ Kurdzhali 152.29 317 P PKPdf 03 21 21.9 +0.7
HEX Exmoor 152.32 6 P PKPdf 03 21 21.6 +0.6
HEX Exmoor 152.32 6 eP PKPdf 03 21 21.6 +0.6
KHC Kasperske Hory 152.36 341 ePKIKP PKPdf 03 21 20.9 -0.2
KHC e 03 21 41.0
KHC Kasperske Hory 152.36 341 ePKPdf PKPdf 03 21 21.0 -0.1
KHC ePKPbc PKPbc 03 21 28.1 -0.3
KHC ePKPab PKPab 03 21 40.8 -0.6
KHC Kasperske Hory 152.36 341 ePKPDF PKPdf 03 21 20.9 -0.2
KHC ⇑ePKP PKPbc 03 21 28.1 -0.4
KHC ePKPAB PKPab 03 21 41.0 -0.3
KHC epPKP pPKPdf 03 23 30.8 -2.0
KHC ex x 03 28 42.6
KHC eSKKS SKKSac 03 31 08.7 -2.0
KHC ex x 03 34 33.2
BEBN Eben Emael 152.44 353 PKPbc PKPbc 03 21 28.5 -0.1
BEBN PKPab PKPab 03 21 40.4 -1.2
BEBN APKPbc 03 23 38.8
HGN Heimansgroeve 152.44 352 ePKIKP PKiKP 03 21 27.4 -1.4
comp=Z,31nm,0.9s
HGN Heimansgroeve 152.44 352 ⇑iPKPpre PKPab 03 21 39.5 -2.1
comp=Z,24nm,1.3s
HGN Heimansgroeve 152.44 352 ePKPab PKPab 03 21 59.5 +18
HGN Heimansgroeve 152.44 352 epPKP pPKPdf 03 23 39.3 +6.5
AYDN Tasoluk 152.48 307 i P PKPdf 03 21 22.9 +1.2
PLD Plovdiv 152.48 318 P PKPdf 03 21 20.2 -1.3
PLD Plovdiv 152.48 318 P PKPab 03 21 41.5 -0.7
GRF Grafenberg Arr 152.49 344 ePKPdf PKPdf 03 21 22.9 +1.6
GRF ePKPbc PKPbc 03 21 28.4 -0.3
GRF ePKPab PKPab 03 21 41.2 -0.7
GRF epPKPbc pPKPbc 03 23 37.0 -2.3
GRF ePP PP 03 25 05.9 -11
GRF ePPP 03 28 43.5
GRF eSKKSac SKKSac 03 31 09.3 -2.1
GRF eSS SS 03 44 12.0 +11
GRF Grafenberg Arr 152.49 344 ePKIKP PKPdf 03 21 22.9 +1.6
GRF e 03 21 28.4
GRF e 03 21 41.2
PGB Panagyurishte 152.55 319 P PKPab 03 21 42.5 +0.1
WET Wettzell 152.55 342 ePKPab PKPab 03 21 41.9 -0.2
GEC2 GERESS Array S 152.57 341 ePKPab PKPab 03 21 41.6 -0.7
UCC Uccle 152.58 354 PKPab PKPab 03 21 42.8 +0.6
TNS Taunus Mts 152.58 349 ePKPdf PKPdf 03 21 21.9 +0.5
TNS ePKPbc PKPbc 03 21 28.4 -0.5
TNS ePKPab PKPab 03 21 40.9 -1.3
MEM Membach 152.59 352 PKPbc PKPbc 03 21 28.3 -0.6
MEM PKPab PKPab 03 21 41.0 -1.3
MEM APKPbc 03 23 39.8
KDAG Bornova 152.62 309 i P PKPbc 03 21 27.6 -1.8
AYVA Ayvalik 152.62 311 i P PKPdf 03 21 19.5 -2.3
CONA Conrad Observa 152.65 337 ⇑iPKPdf PKPdf 03 21 20.8 -0.7
comp=Z,6.6nm,0.9s
CONA i PKiKP PKiKP 03 21 29.0 -0.2
comp=Z,48nm,1.0s,SNR=8.6
CONA ⇑iPKPab PKPab 03 21 43.0 +0.3
comp=Z,171nm,0.8s
CSNA Conrad Observa 152.65 337 ⇑iPKPdf PKPdf 03 21 20.7 -0.8
comp=Z,5.3nm,0.7s
CSNA ⇑iPKiKP PKiKP 03 21 29.0 -0.2
comp=Z,24nm,0.6s
CSNA ⇓iPKPab PKPab 03 21 43.1 +0.5
comp=Z,161nm,0.8s
ARG Arkhangelos 152.82 304 eP PKPbc 03 21 28.5 -1.4
BCLA Clavier 152.86 353 PKPbc PKPbc 03 21 28.7 -0.8
BCLA PKPab PKPab 03 21 42.4 -1.0
BCLA APKPbc 03 23 41.1
SNF Seneffe 152.87 354 PKPbc PKPbc 03 21 29.2 -0.3
SNF PKPab PKPab 03 21 42.6 -0.9
SNF APKPbc 03 23 41.0
SNF APKPab 03 23 47.2
PKSM Moragy 152.92 331 ⇑PKIKP PKPdf 03 21 22.1 +0.1
PKSM Moragy 152.92 331 PKIKP PKPbc 03 21 28.9 -0.9
PKSM Moragy 152.92 331 P PKPbc 03 21 28.9 -0.9
PKSM Moragy 152.92 331 ⇑iP PKPdf 03 21 22.1 +0.1
PRK Paraskevi 152.94 312 eP PKPbc 03 21 28.5 -1.6
PRK Paraskevi 152.94 312 P PKPdf 03 21 20.4 -1.9
BDRM Kayabasi 153.03 306 i P PKPdf 03 21 21.3 -1.1
ABH Alteburg 153.07 350 PKP PKPdf 03 21 23.3 +1.2
VTS Vitosha 153.09 320 ⇑PKIKP PKPbc 03 21 30.6 +0.3
VTS Vitosha 153.09 320 P PKPdf 03 21 20.7 -1.7
VTS Vitosha 153.09 320 P PKPab 03 21 44.3 -0.4
VTS Vitosha 153.09 320 ⇑iP PKPbc 03 21 30.6 +0.3
TOD Tromm 153.11 348 PKP PKPdf 03 21 23.7 +1.6
SMG Samos 153.22 308 eP PKPbc 03 21 29.0 -1.7
GIVF Givet 153.22 353 ePKIKP PKPdf 03 21 21.2 -1.1
DOU Dourbes 153.25 354 PKPbc PKPbc 03 21 29.9 -0.5
DOU PKPab PKPab 03 21 43.6 -1.5
DOU APKPbc 03 23 41.4
MOA Molln 153.27 339 ⇓iPKPdf PKPdf 03 21 22.1 -0.4
comp=Z,7.9nm,1.2s
MOA ⇓iPKPab PKPab 03 21 45.4 +0.2
comp=Z,99nm,1.1s
BAIF Baives 153.32 354 ePKIKP PKPdf 03 21 21.5 -0.9
comp=Z,22nm,0.8s
ARSA Arzberg 153.34 336 ⇓iPKPdf PKPdf 03 21 22.0 -0.6
comp=Z,2.6nm,0.7s
ARSA i PKPab PKPab 03 21 45.5 -0.1
comp=Z,78nm,0.9s,SNR=9.9
LIA Limnos Island 153.36 314 eP PKPdf 03 21 23.5 +0.7
MMB Musomiste 153.37 318 P PKPab 03 21 45.6 -0.4
NVR Nevrokopi 153.43 318 eP PKPdf 03 21 23.0 +0.1
WLF Walferdange 153.49 351 PKPbc PKPbc 03 21 31.1 +0.2
WLF PKPab PKPab 03 21 45.6 -0.5
WLF APKPbc 03 23 42.9
WLF Walferdange 153.49 351 ePKPbc PKPbc 03 21 30.8 -0.1
WLF ePKPab PKPab 03 21 44.9 -1.2
WLF Walferdange 153.49 351 ePKPdf PKPdf 03 21 22.5 -0.1
WLF ePKPbc PKPbc 03 21 30.7 -0.2
KKB Krupnik 153.60 319 P PKPab 03 21 46.7 -0.2
CMLA Cha da Macela 153.77 51 ePKP PKPdf 03 21 25.4 +1.9
CMLA eSS SS 03 44 27.5 +10
KARP Karpathos 153.79 303 eP PKPbc 03 21 31.0 -1.0
STU Stuttgart 153.82 347 ePKPdf PKPdf 03 21 22.9 -0.3
STU ePKPbc PKPbc 03 21 30.9 -0.7
STU ePKPab PKPab 03 21 46.1 -1.5
STU Stuttgart 153.82 347 ePKPdf PKPdf 03 21 23.1 -0.1
STU ePKPbc PKPbc 03 21 31.4 -0.2
STU ePKPab PKPab 03 21 47.0 -0.6
RJOB Jochberg 153.84 341 ePKPdf PKPdf 03 21 22.7 -0.5
RJOB ePKPab PKPab 03 21 47.0 -0.7
DIVS Divibare 153.85 326 P PKPdf 03 21 20.9 -2.5
FUR Furstenfeldbru 153.88 343 ePKPdf PKPdf 03 21 23.0 -0.3
FUR ePKPab PKPab 03 21 46.8 -1.1
LANF Langenberg 153.89 349 PKP PKPdf 03 21 23.1 -0.2
SOKA Soboth 154.01 336 ⇑iPKPdf PKPdf 03 21 22.3 -1.2
comp=Z,8.1nm,0.9s
SOKA ⇓iPKPab PKPab 03 21 48.1 -0.3
comp=Z,142nm,1.1s
SOKA ⇑iPKiKP 03 23 47.7
comp=Z,41nm,1.5s
SOKA ⇑iPP PP 03 25 21.1 -4.4
comp=Z,27nm,1.2s
PERS Pernice 154.01 336 i PKPdf PKPdf 03 21 22.7 -0.8
PERS i PKPbc PKPbc 03 21 31.0 -1.1
PERS i PKPab PKPab 03 21 47.5 -0.9
PERS epPKPdf pPKPdf 03 23 33.5 -1.9
PERS ePP PP 03 25 24.6 -1.0
PERS e 03 34 46.0
PERS e 03 37 45.6
SOH Sokhos 154.04 317 P PKPdf 03 21 21.0 -2.8
VAY Valandovo 154.24 319 i PKP PKPbc 03 21 30.9 -1.9
VAY i PKP PKPab 03 21 49.1 -0.6
comp=Z,211nm,1.0s
VAY i SKS SKKSac 03 31 15.0 -6.3
VAY Valandovo 154.24 319 P PKPdf 03 21 21.0 -3.0
PLG Polygyros 154.24 316 eP PKPbc 03 21 32.0 -0.8
KBA Koelnbreinsper 154.25 339 ⇓iPKPdf PKPdf 03 21 23.1 -0.8
comp=Z,13nm,1.0s,SNR=12
KBA ⇑iPKPab PKPab 03 21 50.1 +0.7
comp=Z,45nm,0.6s
OBKA Obir 154.33 337 ⇑ePKPdf PKPdf 03 21 23.4 -0.6
comp=Z,2.8nm,0.6s
OBKA ⇑iPKiKP PKiKP 03 21 32.8 0.0
comp=Z,13nm,1.0s
OBKA ⇓iPKPab PKPab 03 21 49.2 -0.6
comp=Z,70nm,0.8s,SNR=10
HORT Hortiatis 154.33 317 P PKPdf 03 21 21.0 -3.2
BFO Black Forest 154.42 347 ePKPdf PKPdf 03 21 23.2 -0.8
BFO ePKPab PKPab 03 21 48.6 -1.5
BFO Black Forest 154.42 347 ePKPdf PKPdf 03 21 22.5 -1.5
BFO ePKPbc PKPbc 03 21 32.0 -0.9
BFO ePKPab PKPab 03 21 49.4 -0.7
APE Apeiranthos 154.43 308 ⇑PKP2 PKPab 03 21 48.1 -2.6
APE Apeiranthos 154.43 308 eP PKPbc 03 21 31.5 -1.8
APE Apeiranthos 154.43 308 ⇑iP PKPab 03 21 48.1 -2.6
SKO Skopje 154.50 321 ePKP PKPbc 03 21 33.8 +0.6
SKO i PKP PKPab 03 21 51.9 +1.1
comp=Z,264nm,1.1s
CDF Champ du Feu 154.53 349 ePKIKP PKPdf 03 21 23.4 -0.8
MYKA Terra Mystica 154.54 338 ⇓iPKPdf PKPdf 03 21 23.5 -0.7
comp=Z,9.6nm,1.2s
MYKA ⇓iPKPab PKPab 03 21 49.8 -0.9
comp=Z,48nm,0.6s
SPAK Spaichingen-Ko 154.54 347 PKP PKPdf 03 21 24.4 +0.2
WATA Walderalm 154.56 342 ⇓iPKPab PKPab 03 21 50.8 0.0
comp=Z,48nm,0.5s,SNR=7.6
AOS Alonnisos 154.60 313 P PKPdf 03 21 21.1 -3.5
WTTA Wattenberg 154.61 342 ⇑iPKPdf PKPdf 03 21 23.8 -0.5
comp=Z,26nm,0.9s
WTTA ⇑iPKPab PKPab 03 21 51.0 0.0
comp=Z,127nm,0.5s
RETA Reutte 154.64 343 ⇑iPKPdf PKPdf 03 21 25.2 +0.9
RETA i PKPab PKPab 03 21 50.7 -0.4
SNR=22
MOTA Moosalm 154.68 343 i PKPdf PKPdf 03 21 24.3 -0.1
comp=Z,18nm,0.8s,SNR=12
MOTA ⇓iPKPab PKPab 03 21 51.1 -0.2
comp=Z,239nm,1.1s
PLE Pljevlja 154.70 326 ⇓iPKP PKPdf 03 21 26.1 +1.5
PLE Pljevlja 154.70 326 ⇓iPKP PKPdf 03 21 26.1 +1.6
LJU Ljubljana 154.73 336 i PKIKP PKPdf 03 21 23.5 -1.0
LJU e 03 21 32.8
LJU i 03 21 50.4
LJU e 03 25 29.2
LJU eSS SS 03 44 30.3 +4.7
LJU e 03 50 32.6
LJU Ljubljana 154.73 336 i PKPdf PKPdf 03 21 23.5 -1.0
LJU ePKPbc PKPdf 03 21 32.8 +8.3
LJU i PKPab PKPab 03 21 50.4 -1.2
LJU epPKPdf pPKPdf 03 23 36.4 0.0
LJU i pPKPbc pPKPbc 03 23 43.4 -1.0
LJU ePP PP 03 25 29.1 -0.4
LJU eSKKSac SKKSac 03 31 19.7 -3.9
LJU e 03 34 52.0
LJU e 03 37 54.1
LJU e 03 39 40.3
LJU eSS SS 03 44 30.3 +4.7
LJU e 03 50 32.6
ECH Echery 154.75 349 PKP PKPdf 03 21 23.7 -0.8
ECH Echery 154.75 349 PKP PKPdf 03 21 25.2 +0.7
IVA Berane 154.76 325 ⇓iPKP PKPdf 03 21 24.8 +0.1
IVA Berane 154.76 325 ⇓iPKP PKPdf 03 21 24.8 +0.2
MEZF Maizieres J'vi 154.77 353 ePKIKP PKPdf 03 21 23.4 -1.1
comp=Z,62nm,1.1s
ABTA Abfaltersbach 154.81 340 i PKPdf PKPdf 03 21 23.3 -1.3
SNR=33
ABTA ⇓iPKPab PKPab 03 21 51.0 -0.9
comp=Z,65nm,0.7s
BOJS Bojanci 154.91 335 ePKPdf PKPdf 03 21 23.4 -1.4
BOJS i PKPbc PKPdf 03 21 33.6 +8.8
BOJS ePKPab PKPab 03 21 51.2 -1.1
BOJS epPKPdf pPKPdf 03 23 36.1 -0.6
PVY Plav 154.91 324 ⇓iPKP PKPdf 03 21 24.9 0.0
PVY Plav 154.91 324 ⇓iPKP PKPdf 03 21 24.9 0.0
FELD Feldberg im Sc 154.92 348 PKP PKPdf 03 21 23.7 -1.0
XOR Xorichti 154.95 314 P PKPdf 03 21 21.5 -3.5
NEO Neokhori 154.96 314 eP PKPdf 03 21 32.0 +6.9
VOY Vojsko 154.97 337 ePKPdf PKPdf 03 21 23.7 -1.1
VOY ePKPbc PKPdf 03 21 32.8 +8.0
VOY ePKPab PKPab 03 21 51.2 -1.4
VOY epPKPbc pPKPbc 03 23 46.0 +1.1
KRUS Krusevo 154.99 320 i PKP PKPdf 03 21 25.0 -0.1
KRUS i PKP PKPab 03 21 52.5 -0.4
comp=Z,154nm,0.7s
KRUS i SKS SKKSac 03 31 19.7 -5.6
BCI Bajram Curri 155.01 324 ePN PKPdf 03 21 25.7 +0.7
BST Brest 155.03 7 PKP PKPdf 03 21 21.1 -3.7
BST Brest 155.03 7 PKP PKPdf 03 21 27.6 +2.8
UPM Unac-Piva 155.04 326 ⇓iPKP PKPdf 03 21 26.2 +1.2
UPM Unac-Piva 155.04 326 ⇓iPKP PKPdf 03 21 26.3 +1.2
DAVA Damuels 155.06 344 ⇑iPKPdf PKPdf 03 21 24.3 -0.6
comp=Z,19nm,0.9s
DAVA ⇓iPKPab PKPab 03 21 52.8 -0.1
comp=Z,220nm,0.8s,SNR=22
NPS Neapolis 155.07 304 eP PKPdf 03 21 34.5 +9.2
FETA Feichten 155.08 343 i PKPdf PKPdf 03 21 24.3 -0.7
comp=Z,37nm,0.9s,SNR=36
FETA ⇑iPKPab PKPab 03 21 52.7 -0.3
comp=Z,105nm,1.1s
FETA ⇑iPKiKP 03 23 52.0
comp=Z,45nm,1.5s
HAU Haudompre 155.08 350 ePKIKP PKPdf 03 21 24.6 -0.3
comp=Z,32nm,1.0s
HAU eMLR MLR
comp=Z,229nm,22.0s
HAU Haudompre 155.08 350 ePKPdf PKPdf 03 21 24.6 -0.3
HAU LR LR
comp=Z,230nm,22.0s
MOF Molkenrain 155.10 349 PKP PKPdf 03 21 24.2 -0.8
MOF Molkenrain 155.10 349 PKP PKPdf 03 21 26.1 +1.1
BIA Bitola 155.17 320 i PKP PKPdf 03 21 35.5 +10
BIA i PKP PKPab 03 21 52.7 -1.0
comp=Z,19nm,0.9s
PTL Penteli 155.17 311 eP PKPdf 03 21 33.0 +7.6
HINF Hinteralfeld 155.18 349 ePKIKP PKPdf 03 21 24.5 -0.6
comp=Z,43nm,1.1s
NKY Niksic 155.27 326 ⇓iPKP PKPdf 03 21 24.8 -0.6
NKY Niksic 155.27 326 ⇓iPKP PKPdf 03 21 24.8 -0.5
FNA Florina 155.28 319 P PKPdf 03 21 21.6 -3.8
PUK Puka 155.32 323 ePN PKPdf 03 21 28.0 +2.6
KZN Kozani 155.33 318 eP PKPdf 03 21 34.0 +8.5
KZN Kozani 155.33 318 P PKPdf 03 21 21.5 -4.0
SKDS Skadanscina 155.34 336 i PKPab PKPab 03 21 52.4 -1.8
SKDS e 03 29 03.1
TTG Podgorica 155.40 325 ⇓iPKP PKPdf 03 21 25.6 +0.1
BBS Basel-Blauen 155.41 348 PKIKP PKPdf 03 21 25.9 +0.5
OHR Ohrid 155.42 320 i PKP PKPdf 03 21 37.6 +12
OHR i PKP PKPab 03 21 54.1 -0.7
comp=Z,425nm,0.8s
OHR i SKS SKKSac 03 31 22.0 -5.7
OHR Ohrid 155.42 320 P PKPdf 03 21 21.6 -4.0
ATAL Atalanti 155.42 313 P PKPdf 03 21 21.5 -4.2
BRY Bratogost 155.44 326 ⇓iPKP PKPdf 03 21 26.8 +1.2
BRY Bratogost 155.44 326 ⇓iPKP PKPdf 03 21 26.9 +1.3
LKR Lokris 155.46 313 eP PKPdf 03 21 33.0 +7.3
DAVOX Davos/Dischmat 155.53 344 PKP PKPdf 03 21 26.2 +0.7
comp=Z,14nm,0.8s,baz=4.2,slow=1.9,SNR=17
DAVOX PKPbc PKPdf 03 21 38.8 +13
comp=Z,39nm,0.6s,baz=288,slow=2.6,SNR=18
DAVOX PKPab PKPab 03 21 55.1 +0.1
comp=Z,147nm,0.6s,baz=9.2,slow=3.4,SNR=36
DAVOX SKP 03 24 04.3
comp=Z,23nm,0.9s,baz=307,slow=3.8,SNR=4.4
DAVOX Davos/Dischmat 155.53 344 PKIKP PKPdf 03 21 26.2 +0.6
DAVOX 03 21 55.1
NAIG Nisos Aigina 155.57 311 eP PKPdf 03 21 33.0 +7.1
THL Klokotos Trika 155.60 316 eP PKPdf 03 21 33.0 +7.1
IDI Anoyia 155.61 304 PKP PKPdf 03 21 26.2 +0.1
comp=Z,19nm,1.0s,baz=138,slow=7.4,SNR=4.4
IDI PKPab PKPab 03 21 55.1 -0.7
comp=Z,25nm,0.6s,baz=52,slow=7.2,SNR=8.5
BUM Brajici-Budva 155.68 325 ⇓iPKP PKPdf 03 21 25.4 -0.5
BUM Brajici-Budva 155.68 325 ⇓iPKP PKPdf 03 21 25.5 -0.4
AGG Agios Georgios 155.70 315 P PKPdf 03 21 21.6 -4.5
NEST Nestorio 155.70 319 P PKPdf 03 21 22.0 -4.0
KBN Korca 155.73 319 ePN PKPdf 03 21 27.4 +1.4
ULC Ulcinj 155.73 324 ⇓iPKP PKPdf 03 21 25.9 -0.1
ULC Ulcinj 155.73 324 ⇓iPKP PKPdf 03 21 25.9 -0.1
HCY Herceg Novi 155.79 326 ⇓iPKP PKPdf 03 21 26.5 +0.4
HCY Herceg Novi 155.79 326 ⇓iPKP PKPdf 03 21 26.5 +0.5
NVLJ Novalja 155.84 334 ePn PKPdf 03 21 32.0 +6.0
NVLJ Sn 03 21 54.8
DID Didima 155.87 311 P PKPdf 03 21 21.6 -4.7
TUE Stuetta 155.95 344 ePKPdf PKPdf 03 21 25.1 -1.0
VAM Vamos 156.09 305 eP PKPdf 03 21 36.5 +10
EVR Evrytania 156.10 315 eP PKPdf 03 21 36.5 +10
LOR Lormes 156.12 354 ePKIKP PKPdf 03 21 24.9 -1.4
comp=Z,42nm,1.0s
LOR eMLR MLR
comp=Z,134nm,18.5s
LOR Lormes 156.12 354 ePKPdf PKPdf 03 21 24.9 -1.4
LOR LR LR
comp=Z,130nm,18.5s
HYF Humbligny 156.22 356 ePKIKP PKPdf 03 21 25.4 -1.0
JAN Janina 156.28 318 eP PKPdf 03 21 36.5 +10
SSF Saint Saulge 156.36 354 ePKIKP PKPdf 03 21 25.3 -1.3
comp=Z,53nm,0.9s
VLI Veliai 156.45 309 eP PKPdf 03 21 38.0 +11
CABF La Chapelle 156.48 350 ePKIKP PKPdf 03 21 25.9 -0.9
comp=Z,49nm,0.9s
KYTH Kithira 156.58 308 eP PKPdf 03 21 36.5 +9.2
AVF Avril sur Loir 156.64 355 ePKIKP PKPdf 03 21 25.2 -1.8
comp=Z,17nm,1.0s

SRN	Sarande	156.66	319		*e*PN	PKPdf	03 21 42.9	+16
SMF	Signal de Mont	156.74	354		*e*PKIKP	PKPdf	03 21 25.4	-1.7
	comp=Z,34nm,1.1s							
RLS	Riolos of Patr	156.79	314		*e*P	PKPdf	03 21 43.0	+16
KEK	Kerkira	156.89	319		*e*P	PKPdf	03 21 42.5	+15
LKD2	Lefkada island	156.91	316		P	PKPdf	03 21 26.2	-1.4
BGF	Bois d'Agland	156.91	355		*e*PKIKP	PKPdf	03 21 26.0	-1.4
	comp=Z,68nm,1.0s							
ITM	Ithomi	156.94	311		*e*P	PKPdf	03 21 36.5	+8.8
ITM	Ithomi	156.94	311		P	PKPdf	03 21 27.0	-0.7
MFF	Saint Martin d	156.96	1		*e*PKIKP	PKPdf	03 21 25.9	-1.5
	comp=Z,40nm,1.1s							
TCF	Toulx Ste Croi	157.22	356		*e*PKIKP	PKPdf	03 21 26.3	-1.4
	comp=Z,71nm,1.0s							
VLS	Valsamata	157.30	315		*e*P	PKPdf	03 21 38.5	+10
AGO	Saint Agoulin	157.39	355		PKP	PKPdf	03 21 28.3	+0.3
LPL	La Plagne	157.43	348		*e*PKIKP	PKPdf	03 21 27.0	-1.0
	comp=Z,22nm,1.1s							
PLDF	La Plantade	157.43	354		PKP	PKPdf	03 21 28.5	+0.5
LPG	La Plagne	157.44	348		*e*PKIKP	PKPdf	03 21 27.1	-0.9
	comp=Z,28nm,1.1s							
PYM	Petit Puy Mans	157.70	355		PKP	PKPdf	03 21 28.0	-0.4
BNI	Bardonecchia	157.88	348		*e*PKIKP	PKPdf	03 21 28.1	-0.5
SSB	Saint Sauveur	158.01	352		*e*PKIKP	PKPdf	03 21 28.8	+0.1
ORIF	Oris-en-Rattie	158.16	349		*e*PKIKP	PKPdf	03 21 27.6	-1.3
	comp=Z,18nm,0.8s							
ORIF					*e*MLR	MLR		
	comp=Z,226nm,22.2s							
MBDF	Montbardon	158.18	347		*e*PKIKP	PKPdf	03 21 27.7	-1.3
	comp=Z,26nm,1.0s							
LBL	Lubilhac	158.20	354		PKP	PKPdf	03 21 30.1	+1.1
RJF	Les Rejaudoux	158.24	358		*e*PKIKP	PKPdf	03 21 27.6	-1.4
	comp=Z,45nm,1.1s							
RJF					*e*MLR	MLR		
	comp=Z,518nm,23.0s							
RJF	Les Rejaudoux	158.24	358		*e*PKPdf	PKPdf	03 21 27.6	-1.4
RJF					LR	LR		
	comp=Z,520nm,23.0s							
AQU	L'Aquila	158.26	333		⇑PKP2	PKPab	03 22 06.4	-0.6
AQU	L'Aquila	158.26	333		⇑*i*P	PKPab	03 22 06.4	-0.6
VIVF	Saint-Julien-l	158.41	351		*e*PKIKP	PKPdf	03 21 28.1	-1.1
	comp=Z,34nm,1.0s							
CAF	Calviac	158.59	356		*e*PKIKP	PKPdf	03 21 28.3	-1.1
	comp=Z,30nm,1.1s							
SAOF	Saorge	158.72	345		PKP	PKPdf	03 21 31.1	+1.5
AUTN	L'Aution	158.74	346		PKP	PKPdf	03 21 30.6	+1.0
TOUF	Mont Tournerai	158.76	346		PKP	PKPdf	03 21 31.4	+1.7
LUCF	Luceram	158.85	346		PKP	PKPdf	03 21 31.9	+2.1
SBF	Sospel	158.86	345		*e*PKIKP	PKPdf	03 21 27.8	-2.0
	comp=Z,35nm,0.9s							
CUC	Castrocucco	158.96	325		*e*PKPdf	PKPdf	03 21 28.2	-1.8
SMRF	Simiane la Rot	159.13	349		*e*PKIKP	PKPdf	03 21 29.0	-1.1
	comp=Z,135nm,1.6s							
EMAZ	Mazaricos	159.16	19		PKP	PKPdf	03 21 29.7	-0.5
LASF	Ste Croix	159.28	353		*e*PKIKP	PKPdf	03 21 29.1	-1.2
	comp=Z,73nm,1.3s							
EPON	Pontenova	159.31	15		PKP	PKPdf	03 21 29.8	-0.5
FRF	La Foret Royal	159.32	347		*e*PKIKP	PKPdf	03 21 28.5	-1.8
	comp=Z,30nm,1.3s							
STS	Santiago	159.35	19		PKIKP	PKPdf	03 21 30.0	-0.4
LMR	La Mourre	159.57	347		*e*PKIKP	PKPdf	03 21 28.7	-1.9
	comp=Z,27nm,1.2s							
EARI	Arriondas	159.75	12		PKP	PKPdf	03 21 30.5	-0.3
EZAM	Zamans	159.97	20		PKIKP	PKPdf	03 21 31.3	+0.2
ELAN	Lanestosa	160.10	8		PKP	PKPdf	03 21 31.8	+0.6
CEL	Celeste	160.14	321		*e*PKPdf	PKPdf	03 21 30.8	-0.7
MTLF	Montolieu	160.16	356		*e*PKIKP	PKPdf	03 21 29.8	-1.5
	comp=Z,27nm,1.1s							
ERUA	La Rua	160.19	16		PKIKP	PKPdf	03 21 32.8	+1.5
EALK	Alkurruntz	160.29	4		PKP	PKPdf	03 21 32.0	+0.6
ELIZ	Elizondo	160.35	4		PKIKP	PKPdf	03 21 32.0	+0.5
SJPF	Ste Jean	160.41	3		*e*PKIKP	PKPdf	03 21 30.6	-1.0
	comp=Z,53nm,1.1s							
ELOB	Lobios	160.43	19		PKP	PKPdf	03 21 31.0	-0.6
EPF	Esparros	160.53	360		*e*PKIKP	PKPdf	03 21 29.7	-2.0
	comp=Z,26nm,0.9s							
PCAB	Cabril	160.58	19		*e*PKPdf	PKPdf	03 21 32.2	+0.4
PCAB	Cabril	160.58	19		*i*PKPab	PKPab	03 22 16.5	-0.6
ETSF	Etsaut	160.66	2		*e*PKIKP	PKPdf	03 21 31.0	-0.8
	comp=Z,36nm,1.0s							
ECAL	Calabor	160.72	16		PKP	PKPdf	03 21 33.0	+1.0
ECRI	Cripan	160.82	6		PKIKP	PKPdf	03 21 32.3	+0.3
PBRG	Braganca	160.85	16		*e*PKPdf	PKPdf	03 21 31.8	-0.3
PBRG	Braganca	160.85	16		*i*PKPab	PKPab	03 22 17.7	-0.6
EBIE	Bielsa	160.88	0		PKP	PKPdf	03 21 33.6	+1.6
PTO	Porto	160.92	21		*i*PKPab	PKPab	03 22 17.5	-1.1
CLLI	Llivia	161.03	356		PKP	PKPdf	03 21 33.3	+1.0
PVRL	Vila Real	161.07	19		*i*PKPab	PKPab	03 22 18.4	-0.9
CSOR	Sort	161.18	358		PKP	PKPdf	03 21 33.2	+0.8
MVO	Moncorvo	161.37	17		*e*PKPdf	PKPdf	03 21 32.3	-0.3
MVO	Moncorvo	161.37	17		*i*PKPab	PKPab	03 22 18.7	-1.9
MVO					*i*P		03 38 48.3	
MVO					*e*SS	SS	03 45 35.2	+0.2
MVO	Moncorvo	161.37	17		PKP	PKPdf	03 21 32.6	0.0
VAE	Valguarnera	161.53	322		PKP	PKPdf	03 21 35.8	+2.9
	comp=Z,8.0nm,0.8s,baz=358,slow=20,SNR=4.3							
VAE					PKPab	PKPab	03 22 28.9	+7.5
	comp=Z,32nm,0.9s,baz=60,slow=4.1,SNR=8.1							
VAE	Valguarnera	161.53	322		PKP	PKPdf	03 21 35.8	+2.9
VAE					PKPab	PKPab	03 22 28.9	+7.5
PVIS	Viseu	161.53	20		*e*PKPdf	PKPdf	03 21 31.8	-1.0
PVIS	Viseu	161.53	20		*i*PKPab	PKPab	03 22 20.1	-1.2
CFON	Fontmartina	161.71	355		PKP	PKPdf	03 21 33.1	+0.1
ESAC	San Caprasio	161.83	2		PKP	PKPdf	03 21 33.2	+0.2
MTE	Manteigas	161.93	20		*e*PKPdf	PKPdf	03 21 33.2	0.0
MTE	Manteigas	161.93	20		*i*PKPab	PKPab	03 22 22.0	-1.0
MTE					*i*P		03 38 51.3	
MTE					*e*SS	SS	03 45 42.5	+1.7
MTE	Manteigas	161.93	20		*e*PKPdf	PKPdf	03 21 33.1	-0.1
LIC	Lamto	162.07	163		*e*PKIKP	PKPdf	03 21 32.5	-1.7
	comp=Z,625nm,0.9s							
LIC	Lamto	162.07	163		⇓*i*PKIKP	PKPdf	03 21 33.2	-1.0
	comp=Z,242nm,1.0s							
LIC					*e*MLR	MLR		
	comp=Z,489nm,22.8s							
LIC	Lamto	162.07	163		⇓*i*PKPdf	PKPdf	03 21 33.2	-1.0
LIC					LR	LR		
	comp=Z,240nm,22.8s							
EPOB	Poblet	162.20	358		PKP	PKPdf	03 21 33.3	-0.1
KIC	Kosan Boka	162.28	163		*e*PKIKP	PKPdf	03 21 32.7	-1.7
	comp=Z,360nm,0.8s							
VSL	Villasalto	162.29	336		*e*PKPdf	PKPdf	03 21 32.6	-1.1
PTOM	Tomar	162.34	23		*e*PKPdf	PKPdf	03 21 34.1	+0.4
PTOM	Tomar	162.34	23		*i*PKPab	PKPab	03 22 23.6	-1.3
PCBR	Castelo Branco	162.46	20		*e*PKPdf	PKPdf	03 21 34.0	+0.2
PCBR	Castelo Branco	162.46	20		*i*PKPab	PKPab	03 22 23.2	-2.2
TIC	Toumodi	162.48	162		*e*PKIKP	PKPdf	03 21 33.1	-1.5
	comp=Z,324nm,0.8s							
DBIC	Dimbokro	162.55	163		PKP	PKPdf	03 21 33.7	-0.9
	comp=Z,72nm,1.0s,baz=139,slow=1.0,SNR=49							
DBIC					PKPab	PKPab	03 22 26.9	+0.6
	comp=Z,128nm,0.9s,baz=193,slow=5.2,SNR=20							
DBIC					PP	PP	03 26 14.8	+3.6
	comp=Z,15nm,1.1s,baz=195,slow=7.0,SNR=3.3							
DBIC					PKKP		03 29 47.0	
	comp=Z,4.8nm,0.9s,baz=309,slow=8.4,SNR=3.6							
DBIC	Dimbokro	162.55	163		PKIKP	PKPdf	03 21 33.7	-0.9
DBIC							03 22 27.0	
DBIC							03 26 14.8	
DBIC					pmax	pmax		
	comp=Z,72nm,1.0s							
DBIC					pmax	pmax		
	comp=Z,128nm,0.9s							
DBIC					pmax	pmax		
	comp=Z,15nm,1.1s							
DBIC					pmax	pmax		
	comp=Z,5.0nm,0.9s							
DBIC	Dimbokro	162.55	163		*e*PKPdf	PKPdf	03 21 33.6	-1.0
PMAFR	Mafra	162.60	26		*e*PKPdf	PKPdf	03 21 33.1	-0.8
PMAFR	Mafra	162.60	26		*i*PKPab	PKPab	03 22 25.3	-0.8
PMAFR					*i*P		03 38 56.4	
PMAFR					*e*SS	SS	03 45 50.0	+2.0
ERTA	Horta de San J	162.61	360		PKP	PKPdf	03 21 33.7	-0.1
ETOR	Torete	162.64	6		PKIKP	PKPdf	03 21 34.1	+0.2
EPLA	Plasencia	162.65	17		PKIKP	PKPdf	03 21 33.9	0.0
ALMR	Almeirim	162.69	24		*e*PKIKP	PKPdf	03 21 33.9	-0.1
ALMR					*e*SS	SS	03 45 50.8	+2.0
LIS	Lisbon	162.86	26		*e*P	PKPdf	03 21 34.2	0.0
LIS					*e*SS	SS	03 45 50.9	+0.3
LIS					*e*SS	SS	03 45 51.1	+0.5
LIS					AMS	AMS	03 52 01.2	
	comp=E,1μm,20.9s							
LIS	Lisbon	162.86	26		*e*P	PKPdf	03 21 34.2	0.0
LIS					*e*SS	SS	03 45 50.9	+0.3
PMRV	Marv??o	162.86	20		*e*PKPdf	PKPdf	03 21 33.8	-0.4
PMRV	Marv??o	162.86	20		*i*PKPab	PKPab	03 22 26.0	-1.2
PMRV					*i*P		03 38 57.3	
PMRV					*e*SS	SS	03 45 51.5	+1.1
EMOS	Mosqueruela	163.19	2		PKP	PKPdf	03 21 35.3	+0.8
PESTR	Estremoz	163.30	22		*e*PKPdf	PKPdf	03 21 34.0	-0.6
PESTR	Estremoz	163.30	22		*i*PKPab	PKPab	03 22 27.9	-1.2
PESTR					*i*P		03 39 01.0	
PESTR					*e*SS	SS	03 45 55.8	+0.9
EVOP	Sao Brissos	163.41	24		*e*P	PKPdf	03 21 34.1	-0.6
EVOP					*e*PP	PP	03 26 16.5	+0.5
EVOP					*e*SS	SS	03 45 57.5	+1.4
EVOP					*e*SS	SS	03 45 58.3	+2.1
EVOP					AMS	AMS	03 57 23.0	
	comp=N,1μm,23.1s							
EVOP	Sao Brissos	163.41	24		*e*PKIKP	PKPdf	03 21 34.0	-0.7
EVOP					*e*		03 26 16.5	
EVO	Evora	163.45	23		⇓*i*PKIKP	PKPdf	03 21 34.2	-0.5
	comp=N,104nm,1.0s							
EVO					*e*MLR	MLR		
	comp=Z,820nm,23.0s							
EVO	Evora	163.45	23		*e*PKPdf	PKPdf	03 21 34.8	+0.1
EVO	Evora	163.45	23		*i*PKPab	PKPab	03 22 28.3	-1.5
ESDC	Sonseca Array	163.50	12		PKP	PKPdf	03 21 34.0	-0.7
	comp=Z,2.7nm,0.8s,baz=346,slow=3.5,SNR=7.8							
ESDC					PKPab	PKPab	03 22 29.1	-0.9
	comp=Z,36nm,0.9s,baz=347,slow=4.3,SNR=53							
ESDC					PP	PP	03 26 14.8	-1.3
	comp=Z,3.6nm,0.9s,baz=345,slow=2.3,SNR=5.2							
ESDC	Sonseca Array	163.50	12		PKP	PKPdf	03 21 35.0	+0.3
PAB	San Pablo	163.55	13		*e*PKIKP	PKPdf	03 21 35.5	+0.7
ETOS	Mallorca	163.65	353		PKP	PKPdf	03 21 34.4	-0.5
PBEJ	Beja	163.95	24		*e*PKPdf	PKPdf	03 21 35.4	+0.2
PBEJ	Beja	163.95	24		*i*PKPab	PKPab	03 22 31.1	-0.9
MESJ	Messejana	163.98	25		*e*P	PKPdf	03 21 34.2	-1.0
MESJ					*e*SS	SS	03 46 02.4	+0.5
MESJ					*e*SS	SS	03 46 02.4	+0.5
MESJ					AMS	AMS	03 53 57.8	
	comp=N,852nm,23.6s							
MESJ	Messejana	163.98	25		*e*P	PKPdf	03 21 34.2	-1.0
MESJ					*e*SS	SS	03 46 02.4	+0.4
PTEO	Sao Teotonio	164.03	27		*e*PKPdf	PKPdf	03 21 34.7	-0.6
PBAR	Barrancos	164.11	21		*e*PKPdf	PKPdf	03 21 35.0	-0.4
PBAR	Barrancos	164.11	21		*i*PKPab	PKPab	03 22 32.1	-0.6
PBAR					*i*P		03 39 05.1	
PBAR					*e*SS	SS	03 46 06.0	+2.9
PCVE	Castro Verde	164.23	25		*e*PKPdf	PKPdf	03 21 35.4	-0.1
PCVE	Castro Verde	164.23	25		*i*PKPab	PKPab	03 22 32.2	-1.1
PCVE					*i*P		03 39 07.1	
PCVE					*e*SS	SS	03 46 04.4	-0.1
MORF	Marmelete	164.26	27		*e*PKPdf	PKPdf	03 21 36.0	+0.5
MORF					*i*P		03 39 08.3	
MORF					*e*SS	SS	03 46 07.4	+2.4
MORF	Marmelete	164.26	27		*e*PKIKP	PKPdf	03 21 35.9	+0.4
MORF					*e*		03 26 20.7	
PFVI	Vila Bisbo	164.34	28		*e*PKPdf	PKPdf	03 21 36.9	+1.3
PFVI					*i*P		03 39 08.1	
PFVI					*e*SS	SS	03 46 07.8	+2.0
PFVI	Vila Bisbo	164.34	28		PKP	PKPdf	03 21 35.5	-0.1
EIBI	Ibiza	164.51	357		PKP	PKPdf	03 21 35.9	+0.3
EGRO	El Granado	164.53	24		PKP	PKPdf	03 21 35.8	+0.1
PVAQ	Vaqueiros	164.55	25		*e*PKPdf	PKPdf	03 21 35.2	-0.6
PVAQ	Vaqueiros	164.55	25		*i*PKPab	PKPab	03 22 34.0	-0.7
PVAQ					*i*P		03 39 10.6	
PVAQ					*e*SS	SS	03 46 08.6	+0.8
EMIN	Mina Concepcio	164.60	21		PKP	PKPdf	03 21 35.6	-0.2
PBDV	Barranco-do-Ve	164.61	25		*e*PKPdf	PKPdf	03 21 36.3	+0.5
PBDV					*i*P		03 39 10.6	
PBDV					*e*SS	SS	03 46 08.5	+0.1
ECAB	El Cabril	164.69	17		PKP	PKPdf	03 21 36.8	+0.9
EVIA	Vianos	164.74	8		PKIKP	PKPdf	03 21 36.3	+0.4
EADA	Adamuz	164.82	15		PKP	PKPdf	03 21 36.4	+0.5
ETOB	Tobarra	164.84	5		PKP	PKPdf	03 21 36.7	+0.7
EBEN	Beniarda	164.85	1		PKP	PKPdf	03 21 36.6	+0.7
EBAN	Banos Encina	164.99	12		PKIKP	PKPdf	03 21 36.7	+0.6
ELUQ	Luque	165.47	14		PKIKP	PKPdf	03 21 37.1	+0.6
EQES	Quesada	165.47	11		PKP	PKPdf	03 21 36.5	0.0
KEST	Kesra	165.50	329		PKP	PKPdf	03 21 36.3	-0.3
	comp=N,1.9nm,0.8s,baz=301,slow=4.9,SNR=8.9							
KEST					PKPab	PKPab	03 22 38.6	-0.3
	comp=N,40nm,0.8s,baz=312,slow=0.9,SNR=42							
KEST					PP	PP	03 26 27.6	+0.7
	comp=N,4.4nm,0.9s,baz=174,slow=3.5,SNR=3.7							
KEST	Kesra	165.50	329		*e*PKPdf	PKPdf	03 21 36.1	-0.5
EHUE	Huescar	165.54	9		PKIKP	PKPdf	03 21 37.0	+0.4
CMAH	Djebel Manchou	165.54	336		P	PKPab	03 22 38.0	-1.1
ESPR	Espera	165.69	20		PKP	PKPdf	03 21 37.1	+0.4
ELOJ	Sierra Loja	165.89	15		PKIKP	PKPdf	03 21 37.0	+0.1
ECOG	Cogollos-Vega	165.89	13		PKIKP	PKPdf	03 21 37.2	+0.3
CKFL	Kef-Lekhel	166.00	338		P	PKPab	03 22 40.0	-1.1
ERON	Agron	166.09	14		PKP	PKPdf	03 21 36.4	-0.7
DFRA	Djebel Bou Aff	166.14	341		P	PKPab	03 22 41.1	-0.6
EJIF	Jímena Fronter	166.19	20		PKIKP	PKPdf	03 21 38.7	+1.6
CASM	Ain Smara	166.20	338		P	PKPab	03 22 41.0	-1.0
EMIJ	Mijas	166.29	17		PKP	PKPdf	03 21 37.9	+0.7
EGUA	Guajares	166.32	13		PKIKP	PKPdf	03 21 36.6	-0.6
EBER	Berja	166.39	11		PKP	PKPdf	03 21 37.0	-0.2
ENIJ	Nijar	166.42	8		PKIKP	PKPdf	03 21 38.0	+0.7
CKHR	Kef el Ahmar	166.74	341		P	PKPab	03 22 44.0	-0.4
EMHD	Djebel Mahouad	167.14	350		P	PKPab	03 22 46.0	-0.1
EBNR	Beni Rached	167.22	355		P	PKPab	03 22 46.5	0.0
ECHA	Ech Chlef	167.37	356		P	PKPab	03 22 47.5	+0.4
EANR	'Ain N'Sour	167.59	357		P	PKPab	03 22 48.0	-0.1
ETRT	Tiaret	168.13	356		P	PKPab	03 22 50.0	-0.5
MDT	Midelt	169.79	24		PKP	PKPdf	03 21 39.6	-0.1
	comp=N,27nm,0.9s,baz=48,slow=1.8,SNR=27							
MDT					PKPab	PKPab	03 22 56.5	-1.5
	comp=N,25nm,0.9s,baz=354,slow=5.1,SNR=11							
TAM	Tamanrasset	175.10	263		*e*PKIKP	PKPdf	03 21 42.4	+0.2

TAP ***03*** *03:09:36.4, 24°.51N×121°.00E, h6km, ML3.5, C*
ISCJB ***03*** *03:09:37.6±0.3, 24°.51N±0°.01×121°.02E±0°.02, h4km±2km, Error ellipse: s-maj=3.1km s-min=1.9km az=35.4*
NEIC ***03*** *03:09:37.3±1.5, 24°.50N×121°.00E, h10km, Error ellipse: s-maj=21.5km s-min=7.7km az=122.0*
ISC 03 03:09:37.9±0.3, 24°.51N±0°.01×121°.02E±0°.02, h9km±2km, n54, σ0=85/95, 9C-6D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NSTT	Nanjuang	0.12	353	⇑*i*P	Pg	03 09 39.6	-1.2
	baz=2.0						
NSTT				*i*S	Sg	03 09 41.7	-1.0
	baz=2.0						
NSY	Sanyi	0.25	248	⇓*i*P	Pg	03 09 42.6	-0.4
	baz=246						
NSY				*i*S	Sg	03 09 47.1	+0.8
	baz=246						
TWQ1	Liyutan	0.27	234	⇓*i*P	Pg	03 09 42.9	-0.5
	baz=231						
TWQ1				S	Sg	03 09 47.2	+0.2
	baz=231						
TWT	Tachien	0.29	150	⇑*i*P	Pg	03 09 43.4	-0.4
	baz=151						
TWT				*e*S	Sg	03 09 47.3	-0.3
	baz=151						
HSN	Hsinchu	0.29	352	*e*P	Pg	03 09 44.1	+0.3
	baz=1.0						
NNS	Nan Shan	0.33	102	⇓*i*P	Pg	03 09 44.5	0.0
	baz=102						
NNS				*e*S	Sg	03 09 49.1	+0.2
	baz=102						
NSK	Sanguang	0.35	62	⇓*i*P	Pg	03 09 44.3	-0.5
	baz=64						
NSK				S	Sg	03 09 49.2	-0.3
	baz=64						
YHNB	Yeheng	0.36	64	*e*Pg	Pg	03 09 44.2	-0.9
WHF	Hehuan Shan	0.43	148	⇑*i*P	Pg	03 09 46.6	+0.4
	baz=145						
WHF				S	Sg	03 09 52.7	+0.8
	baz=145						
TCU	Taichung	0.47	221	P	Pg	03 09 47.1	0.0
	baz=218						
TCU				*e*S	Sg	03 09 54.2	+0.8
	baz=218						
NCU	National Centr	0.48	19	*e*P	Pg	03 09 47.7	+0.4
	baz=21						
NCU				*e*S	Sg	03 09 55.1	+1.3
	baz=21						
ENTT	Nioudou	0.52	75	⇓*i*P	Pg	03 09 47.5	-0.4
	baz=76						
ENTT				*e*S	Sg	03 09 54.0	-0.8
	baz=76						
TYC	Yuchr	0.62	194	⇑*i*P	Pg	03 09 49.5	-0.4
	baz=181						
TYC				*e*S	Sg	03 09 58.3	+0.3
	baz=181						
NACB	Ninganchiao	0.62	122	*e*Pg	Pg	03 09 49.7	-0.3
NACB				*e*Sg	Sg	03 09 58.3	+0.2
TWE	Neicheng	0.63	70	P	Pg	03 09 49.3	-0.7
	baz=81						
SMLT	Sun Moon Lake	0.63	190	*e*P	Pg	03 09 49.6	-0.5
	baz=187						
SMLT				*e*S	Sg	03 09 59.1	+0.7
	baz=187						
TATO	Taipei	0.63	43	*e*Pg	Pg	03 09 50.0	-0.1
ENA	Nanau	0.67	97	P	Pg	03 09 50.5	-0.2
	baz=97						
ENA				*e*S	Sg	03 09 58.9	-0.6
	baz=97						
TWD	Chiawan	0.68	129	⇑*i*P	Pg	03 09 51.1	0.0
	baz=128						
TWD				S	Sg	03 09 59.3	-0.6
	baz=128						
TWS1	Kuangyinshan	0.69	32	*e*P	Pg	03 09 51.7	+0.4
	baz=34						
TWS1				*e*S	Sg	03 10 02.2	+1.8
	baz=34						
TWA	Mucha	0.70	48	⇑P	Pg	03 09 51.5	+0.2
	baz=62						
TWA				*e*S	Sg	03 10 02.3	+1.8
	baz=62						
WNT	Mingjian	0.70	206	*e*P	Pg	03 09 51.5	+0.1
	baz=203						
WNT				*e*S	Sg	03 10 01.9	+1.4
	baz=203						
TAP1	Taipei	0.70	41	P	Pg	03 09 51.3	-0.2
	baz=51						
TAP1				*e*S	Sg	03 10 02.0	+1.4
	baz=51						
SSLB	Suanglung	0.72	185	*e*Pg	Pg	03 09 50.5	-1.3
SSLB				*e*Sg	Sg	03 10 02.5	+1.3
HWA	Hwalien	0.75	134	P	Pg	03 09 52.6	+0.2
	baz=134						
TWC	Suao	0.77	82	*e*P	Pg	03 09 51.7	-1.0
	baz=83						
TWC				*e*S	Sg	03 10 01.9	-0.7
	baz=83						
ESL	Shilin	0.79	151	⇑P	Pg	03 09 52.9	-0.2
	baz=150						
NWF	Wu-fen Shan	0.89	51	*i*P	Pg	03 09 55.0	-0.1
	baz=52						
NWF				*e*S	Sg	03 10 08.4	+1.6
	baz=52						
TWY	Chenhua	0.93	35	*e*P	Pg	03 09 55.0	-0.8
	baz=36						
TWY				*e*S	Sg	03 10 09.0	+1.1
	baz=36						
WTCT	Ta-ch'eng	0.93	226	P	Pg	03 09 54.9	-0.9
	baz=225						
WTCT				S	Sg	03 10 08.4	+0.6
	baz=225						
CHN5	Tsauling	0.96	199	*e*P	Pg	03 09 56.0	-0.4
	baz=213						
CHN5				*e*S	Sg	03 10 09.2	+0.4
	baz=213						
ALS	Alishan	1.01	191	⇑*i*P	Pg	03 09 57.3	-0.1
	baz=189						
ALS				*e*S	Sg	03 10 11.5	+0.9
	baz=189						
TWB1	Santiao Chiao	1.01	60	*e*P	Pg	03 09 56.5	-1.0
	baz=70						
TWB1				*e*S	Sg	03 10 11.3	+0.7
	baz=70						
YULB	Yu-li	1.14	167	*e*Pn	Pn	03 09 58.3	-1.8
YULB				*e*S	Sg	03 10 15.6	+1.0
CHY	Chiayi	1.14	208	*e*P	Pb	03 09 58.1	-1.7
	baz=206						
CHY				*e*S	Sg	03 10 14.0	-0.7
	baz=206						
TWF1	Yuli	1.18	167	⇑P	Pb	03 09 59.5	-1.0
	baz=157						
TWF1				*e*S	Sb	03 10 16.8	+1.0
	baz=157						
CHN4	Tsaushan	1.

RUN5	Runtun	1.09 228	⇓P	Pb	03 14 57.3	+0.1
ULBA	Ulba	1.10 227	S	Sb	03 15 11.8	+0.2
ULBA	Ulba	1.10 227	P	Pb	03 14 57.3	-0.1
JUA2	San Juan 2	1.10 295	⇓P	Pb	03 14 57.9	+0.5
JUA2	San Juan 2	1.10 295	⇓S	Sb	03 15 12.8	+1.1
GGP	Refugio Guagua	1.11 297	⇓P	Pb	03 14 58.3	+0.8
YANA	Yana	1.12 300	P	Pb	03 14 58.2	+0.6
YANA	Yana	1.12 300	S	Sb	03 15 13.4	+1.4
TERV	Terraza Guagua	1.12 297	P	Pb	03 14 58.6	+0.9
TERV	Terraza Guagua	1.12 297	S	Sb	03 15 13.7	+1.5
PINO	Pino	1.13 298	⇓P	Pb	03 14 58.6	+0.8
JUI6	Juive	1.13 230	⇑S	Sb	03 15 12.7	+0.2
JUI6	Juive	1.13 230	⇑P	Pb	03 14 57.8	-0.1
RETU	Refugio	1.13 228	S	Sb	03 15 13.6	+1.1
RETU	Refugio	1.13 228	P	Pb	03 14 58.1	+0.2
ARRY	Arrayan	1.18 226	⇓S	Sb	03 15 13.7	-0.1
ARRY	Arrayan	1.18 226	⇓P	Pn	03 14 58.5	-0.1
BIL2	Estacion Bilba	1.18 230	P	Pn	03 14 59.4	+0.9
BMAS	Trigal station	1.19 227	⇓S	Sb	03 15 14.9	+0.7
BMAS	Trigal station	1.19 227	⇓P	Pn	03 14 58.8	0.0
OTAV	Otavalo	1.25 317	P	Pn	03 14 59.8	+0.2
COTA	Cotacachi	1.25 324	⇓S	Sb	03 15 16.8	+0.9
COTA	Cotacachi	1.25 324	⇓P	Pn	03 15 00.7	+1.1
IGUA	Igualata	1.30 232	S	Sb	03 15 17.5	0.0
IGUA	Igualata	1.30 232	P	Pn	03 15 01.6	+1.2
RIOE	Riobamba	1.47 224	S	Sn	03 15 22.8	+1.0
RIOE	Riobamba	1.47 224	P	Pn	03 15 03.6	+1.0
MACE	Macas	1.67 201	P	Pn	03 15 07.3	+2.0
MAG1	Magdalena	2.25 286	P	Pn	03 15 18.5	+5.1

*ISCJB **03** 03:35:00.8±0.5, 37°.89N±0°.03×21°.46E±0°.04, h27km±4km, Error ellipse: s-maj=5.4km s-min=4.7km az=7.2*
*CSEM **03** 03:35:00.7±0.2, 37°.91N×21°.43E, h26km±1km, MD3.2, Error ellipse: s-maj=4.9km s-min=3.8km az=1.0*
*ATH **03** 03:35:00.2, 37°.91N×21°.44E, h25km±1km, MD3.2/9*
*NEIC **03** 03:35:00.2, 37°.91N×21°.44E, h25km, MD3.2(ATH), After ATH.*
*THE **03** 03:35:00.9, 37°.89N×21°.46E, h13km±1km, ML3.0/7, Error ellipse: s-maj=1.4km s-min=0.8km az=16.0*
ISC 03 03:35:00.8±0.5, **37°.88N**±0°.03×**21°.46E**±0°.04, **h25**km±4km, **n54**, σ0**98**/77, **3C, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.18**	**2**	⇑*i*Pb	**Pb**	**03 35 05.6**	**-0.5**
RLS				*e*Sb	**Sb**	03 35 09.5	-0.2
RLS	**Riolos of Patr**	**0.18**	**2**	⇑*i*PB	**Pb**	**03 35 05.6**	**-0.5**
RLS				*e*SB	**Sb**	03 35 09.5	-0.2
RLS	**Riolos of Patr**	**0.18**	**2**	⇑*i*Pb	**Pb**	**03 35 05.6**	**-0.5**
RLS				*e*Sb	**Sb**	03 35 09.5	-0.2
UPR	**University Cam**	**0.48**	**33**	*e*PB	**Pb**	**03 35 10.1**	**-0.5**
UPR				*e*SB	**Sb**	03 35 17.7	+0.4
UPR	**University Cam**	**0.48**	**33**	P	**Pb**	**03 35 10.5**	**-0.1**
UPR				S	**Sb**	03 35 17.3	0.0
UPR	**University Cam**	**0.48**	**33**	*e*Pb	**Pb**	**03 35 10.1**	**-0.5**
UPR	**University Cam**	**0.48**	**33**	P	**Pb**	**03 35 10.5**	**-0.1**
UPR				S	**Sb**	03 35 17.3	0.0
UPR				*e*Sb	**Sb**	03 35 17.7	+0.4
KFL	**Anninata**	**0.57 293**		P	**Pb**	**03 35 11.8**	**-0.4**
KFL	**Anninata**	**0.57 293**		P	**Pb**	**03 35 11.8**	**-0.4**
EFP	**Efpalio**	**0.65**	**33**	*e*PN	**Pn**	03 35 12.7	-1.7
EFP				*e*SN	**Sn**	03 35 22.5	-1.4
EFP	**Efpalio**	**0.65**	**33**	P	**Pb**	03 35 12.6	-0.9
EFP				S	**Sb**	03 35 22.0	-0.1
EFP	**Efpalio**	**0.65**	**33**	P	**Pb**	03 35 12.6	-0.9
EFP				S	**Sb**	03 35 22.0	-0.1
EFP				*e*Sn	**Sn**	03 35 22.5	-1.4
GUR	**Goura**	**0.70**	**85**	*e*PN	**Pb**	03 35 13.7	-0.7
GUR				*e*SN	**Sn**	03 35 24.3	-0.9
GUR	**Goura**	**0.70**	**85**	P	**Pb**	03 35 13.7	-0.7
GUR				S	**Sb**	03 35 24.8	+1.2
GUR	**Goura**	**0.70**	**85**	P	**Pb**	03 35 13.7	-0.7
GUR				*e*Sn	**Sn**	03 35 24.3	-0.9
GUR				S	**Sb**	03 35 24.8	+1.2
KALE	**Kalithea**	**0.74**	**46**	P	**Pb**	**03 35 14.4**	**-0.6**
KALE				S	**Sb**	03 35 25.6	+0.9
KALE	**Kalithea**	**0.74**	**46**	P	**Pb**	**03 35 14.4**	**-0.6**
KALE				S	**Sb**	03 35 25.6	+0.9
VLS	**Valsamata**	**0.75 294**		*e*Pn	**Pn**	03 35 14.7	-1.1
VLS	**Valsamata**	**0.75 294**		*e*PN	**Pn**	03 35 14.7	-1.1
VLS	**Valsamata**	**0.75 294**		P	**Pb**	03 35 14.3	-0.8
VLS				S	**Sb**	03 35 26.6	+1.7
VLS	**Valsamata**	**0.75 294**		P	**Pb**	03 35 14.3	-0.8
VLS	**Valsamata**	**0.75 294**		*e*Pn	**Pn**	03 35 14.7	-1.1
VLS				S	**Sb**	03 35 26.6	+1.7
ITM	**Ithomi**	**0.79 152**		*e*Pn	**Pn**	03 35 16.6	+0.2
ITM	**Ithomi**	**0.79 152**		*e*PN	**Pn**	03 35 16.6	+0.2
ITM	**Ithomi**	**0.79 152**		P	**Pb**	03 35 16.5	+0.6
ITM	**Ithomi**	**0.79 152**		*e*Pn	**Pn**	03 35 16.6	+0.2
VLX	**Vlachokerasia**	**0.89 125**		*e*PN	**Pn**	03 35 18.1	+0.3
VLX	**Vlachokerasia**	**0.89 125**		*e*Pn	**Pn**	03 35 18.1	+0.3
DSF	**Desfina**	**1.00**	**58**	P	**Pn**	03 35 18.7	-0.5
DSF				S	**Sb**	03 35 33.9	+1.9
DSF	**Desfina**	**1.00**	**58**	P	**Pn**	03 35 18.7	-0.5
DSF				S	**Sb**	03 35 33.9	+1.9
PYL	**PYLOS**	**1.01 167**		*e*PN	**Pn**	03 35 19.9	+0.5
PYL	**PYLOS**	**1.01 167**		P	**Pn**	03 35 19.9	+0.5
PYL	**PYLOS**	**1.01 167**		P	**Pn**	03 35 19.9	+0.5
LKD2	**Lefkada island**	**1.10 325**		P	**Pn**	03 35 20.6	-0.1
LKD2				S	**Sn**	03 35 37.4	+2.3
LKD2	**Lefkada island**	**1.10 325**		P	**Pn**	03 35 20.6	-0.1
LKD2				S	**Sn**	03 35 37.4	+2.3
LTK	**Loutraki**	**1.20**	**83**	*e*PN	**Pn**	03 35 22.7	+0.7
LTK	**Loutraki**	**1.20**	**83**	P	**Pn**	03 35 22.6	+0.6
LTK	**Loutraki**	**1.20**	**83**	P	**Pn**	03 35 22.6	+0.6
AGG	**Agios Georgios**	**1.33**	**31**	P	**Pn**	03 35 24.8	+1.0
AGG	**Agios Georgios**	**1.33**	**31**	P	**Pn**	03 35 24.8	+1.0
LKR	**Lokris**	**1.44**	**57**	P	**Pn**	03 35 25.1	-0.2
LKR	**Lokris**	**1.44**	**57**	P	**Pn**	03 35 25.1	-0.2
DID	**Didima**	**1.46 104**		*e*PN	**Pn**	03 35 27.3	+1.7
DID	**Didima**	**1.46 104**		P	**Pn**	03 35 25.7	+0.1
DID	**Didima**	**1.46 104**		P	**Pn**	03 35 25.7	+0.1
DID	**Didima**	**1.46 104**		*e*Pn	**Pn**	03 35 27.3	+1.7
VLI	**Veliai**	**1.66 134**		*e*Pb	**Pb**	03 35 29.3	-1.3
VLI	**Veliai**	**1.66 134**		*e*PB	**Pb**	03 35 29.3	-1.3
VLY	**Voula,Athens**	**1.85**	**90**	*e*Pn	**Pn**	03 35 34.3	+3.4
VLY	**Voula,Athens**	**1.85**	**90**	*e*PN	**Pn**	03 35 34.3	+3.4
VLY	**Voula,Athens**	**1.85**	**90**	*e*Pn	**Pn**	03 35 34.3	+3.4
KYTH	**Kithira**	**2.04 141**		*e*Pb	**Pb**	03 35 36.9	-0.2
KYTH	**Kithira**	**2.04 141**		*e*PB	**Pb**	03 35 36.9	-0.2
KYTH	**Kithira**	**2.04 141**		*e*Pb	**Pb**	03 35 36.9	-0.2

*ISCJB **03** 03:38:50.4±0.7, 51°.39N±0°.03×16°.13E±0°.03, h0km, Error ellipse: s-maj=5.2km s-min=2.8km az=17.8*
*CSEM **03** 03:38:51.5±0.2, 51°.43N×16°.13E, h2km, ML2.9/8, Error ellipse: s-maj=4.5km s-min=2.5km az=13.0*
*IPEC **03** 03:38:51.9±0.3, 51°.48N×16°.18E, h8km±1km, ML1.8/3, Error ellipse: s-maj=2.0km s-min=0.8km az=33.0*
*PRU **03** 03:38:52.1, 51°.42N×16°.12E, h0km*
*WAR **03** 03:38:53, 51°.46N×16°.10E, ML2.4, Mining Induced*
ISC 03 03:38:51.3±0.7, **51°.44N**±0°.03×**16°.13E**±0°.03, **h0**km, **n35**, σ0**71**/66, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.61 170**		*e*Pg	**Pg**	**03 39 04.2**	**+1.2**
KSP				*e*Sg	**Sg**	03 39 12.7	+1.9
KSP	**Ksiaz**	**0.61 170**		*i* Pg	**Pg**	03 39 04.2	+1.3
KSP				i		03 39 05.5	
KSP				*e*Sg	**Sg**	03 39 12.6	+1.8
KSP	**Ksiaz**	**0.61 170**		*e*Pg	**Pg**	**03 39 04.1**	**+1.2**
KSP	baz=354			*e*Sg	**Sg**	03 39 12.4	+1.6
KSP	baz=354						
UPC	**Upice**	**0.94 185**		*e*PG	**Pg**	**03 39 10.1**	**+0.8**
UPC	**Upice**	**0.94 185**		*e*Pg	**Pg**	**03 39 10.0**	**+0.7**
UPC	baz=6.3						
DPC	**Dobruska-Polom**	**1.10 174**		*e*PG	**Pg**	**03 39 13.0**	**+0.6**
DPC				*e*SG	**Sg**	03 39 26.8	+0.2
DPC	**Dobruska-Polom**	**1.10 174**		*e*Pg	**Pg**	**03 39 12.8**	**+0.4**
DPC	comp=Z,10nm,0.4s baz=356			Sg	**Sg**	03 39 26.8	+0.2
PVCC	**Panska Ves**	**1.35 228**		*e*PG	**Pg**	**03 39 17.3**	**+0.2**
PVCC				*e*SG	**Sg**	**03 39 35.4**	**+0.8**
	comp=Z,55nm,0.3s						
PVCC	**Panska Ves**	**1.35 228**		Pg	**Pg**	**03 39 17.3**	**+0.2**
PVCC				Sg	**Sg**	**03 39 35.4**	**+0.8**
	comp=Z,55nm,0.3s						
BRG	**Berggiesshubel**	**1.49 248**		PG	**Pg**	**03 39 19.9**	**0.0**
BRG				SG	**Sg**	**03 39 30.3**	**-8.9**
	comp=Z,13nm,0.5s						
BRG	**Berggiesshubel**	**1.49 248**		*e*Pn	**Pn**	**03 39 19.8**	**+0.5**
BRG	baz=66			*e*Sg	**Sg**	**03 39 39.3**	**+0.1**
	baz=66						
PRU	**Pruhonice**	**1.77 215**		*e*PG	**Pg**	**03 39 25.1**	**-0.2**
PRU				*e*SG	**Sg**	**03 39 48.1**	**-0.1**
	comp=Z,8.0nm,0.4s						
PRU	**Pruhonice**	**1.77 215**		*e*Pn	**Pn**	**03 39 23.4**	**+0.2**
	baz=34						
PRU	**Pruhonice**	**1.77 215**		Pg	**Pg**	**03 39 25.1**	**-0.2**
PRU				Sg	**Sg**	**03 39 48.1**	**-0.1**
	comp=Z,8.0nm,0.4s						
MORC	**Moravsky Berou**	**1.89 151**		*e*Pn	**Pn**	**03 39 25.0**	**+0.2**
	baz=334						
MORC				*e*Sg	**Sg**	**03 39 51.8**	**-0.3**
	comp=Z,5.4nm,0.3s,baz=334						
CLL	**Collm**	**1.97 267**		*e*Pn	**Pn**	**03 39 25.0**	**-0.9**
CLL				*e*Pg	**Pg**	**03 39 29.0**	**0.0**
CLL				*e*		03 39 32.0	
CLL				*e*Sg	**Sg**	**03 39 54.0**	**-0.5**
	comp=Z,6.0nm,0.6s						
CLL	**Collm**	**1.97 267**		*e*Pn	**Pn**	**03 39 25.1**	**-0.8**
	baz=84						
OKC	**Ostrava-Krasne**	**2.06 141**		*e*PG	**Pg**	**03 39 30.3**	**-0.4**
OKC				*e*SG	**Sg**	**03 39 56.2**	**-1.1**
OKC	**Ostrava-Krasne**	**2.06 141**		Pg	**Pg**	**03 39 30.3**	**-0.4**
OKC				Sg	**Sg**	**03 39 56.2**	**-1.1**
VRAC	**Vranov**	**2.16 172**		*e*Pn	**Pn**	**03 39 28.4**	**-0.1**
	baz=353						
VRAC				*e*Sg	**Sg**	**03 39 59.9**	**-0.6**
	comp=Z,8.2nm,0.4s,baz=353						
TREC	**Trest**	**2.19 191**		*e*PN	**Pn**	**03 39 29.8**	**+0.9**
TREC	**Trest**	**2.19 191**		Pn	**Pn**	**03 39 29.8**	**+0.9**
TREC				*e*Sg	**Sg**	**03 40 01.8**	**+0.2**
	baz=11						
KRUC	**Moravsky**	**2.39 176**		*e*Pg	**Pg**	**03 39 35.3**	**-1.8**
	baz=357						
KRUC				*e*Sg	**Sg**	**03 40 07.3**	**-0.7**
	comp=Z,4.0nm,0.3s,baz=357						
OJC	**Ojcow**	**2.63 116**		*e*Pg	**Pg**	**03 39 41.0**	**-0.6**
OJC				*e*Sg	**Sg**	**03 40 15.8**	**+0.2**
NKC	**Novy Kostel**	**2.63 244**		*e*PN	**Pn**	**03 39 35.6**	**+0.6**
NKC				*e*PG	**Pg**	**03 39 41.6**	**-0.1**
NKC				*e*SG	**Sg**	**03 40 16.8**	**+1.0**
	comp=Z,11nm,0.3s						
NKC	**Novy Kostel**	**2.63 244**		Pn	**Pn**	**03 39 35.6**	**+0.6**
KHC	**Kasperske Hory**	**2.83 216**		*e*PN	**Pn**	**03 39 38.1**	**+0.3**
KHC				*e*PG	**Pg**	**03 39 43.9**	**-1.7**
KHC				*e*SN	**Sn**	**03 40 12.5**	**-0.1**
KHC				*e*SG	**Sg**	**03 40 21.6**	**-0.8**
	comp=Z,4.1nm,0.4s						
KHC	**Kasperske Hory**	**2.83 216**		Pn	**Pn**	**03 39 38.1**	**+0.3**
KHC	**Kasperske Hory**	**2.83 216**		*e*Pg	**Pg**	**03 39 44.1**	**-1.5**
	baz=34						
KHC				Sn	**Sn**	**03 40 12.5**	**-0.1**
KHC				Sg	**Sg**	**03 40 21.6**	**-0.8**
	comp=Z,4.1nm,0.4s						
MOX	**Moxa**	**2.96 256**		*e*PG	**Pg**	**03 39 47.7**	**-0.3**
MOX				*e*SG	**Sg**	**03 40 26.5**	**+0.1**
MOX	**Moxa**	**2.96 256**		*e*Pg	**Pg**	**03 39 47.6**	**-0.4**
	baz=72						
MOX				*e*Sg	**Sg**	**03 40 25.1**	**-1.3**
	baz=72						
VYHS	**Vyhne**	**3.43 148**		*e*PN	**Pn**	**03 39 46.4**	**+0.5**
VYHS				*e*SG	**Sg**	**03 40 41.2**	**-0.2**
VYHS	**Vyhne**	**3.43 148**		*e*Pn	**Pn**	**03 39 46.4**	**+0.5**
VYHS				*e*Sg	**Sg**	**03 40 41.2**	**-0.2**
STHS	**Stebnicka Huta**	**3.84 120**		*e*PN	**Pn**	**03 39 52.5**	**+0.8**
STHS				*e*		03 40 05.8	
STHS	**Stebnicka Huta**	**3.84 120**		*e*Pn	**Pn**	**03 39 52.5**	**+0.8**

*ISCJB **03** 03:49:59.9±0.3, 32°.66N±0°.03×105°.15E±0°.05, h10km, mb4.1/16, Error ellipse: s-maj=6.3km s-min=4.1km az=17.3*
*IDC **03** 03:50:00.1±0.8, 32°.64N×105°.02E, h0km, mb4.0/9, mb1 4.1/12, mb1mx3.9/26, mbtmp3.9/12, ML4.0/3, Error ellipse: s-maj=31.3km s-min=16.7km az=53.0*
*BJI **03** 03:50:01.4, 32°.70N×105°.19E, h16km, mB4.9/2, mb4.5/9, ML3.9/17, Ms3.6/2, Ms7 3.6/2*
*NEIC **03** 03:50:01.6±0.4, 32°.64N×105°.11E, h10km, mb4.2/8, Error ellipse: s-maj=11.2km s-min=6.5km az=81.0*
ISC 03 03:50:02.0±0.3, **32°.68N**±0°.03×**105°.14E**±0°.05, **h10**km, **n37**, σ0**96**/48, **mb4.1**/16, **Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.12 214**		Pn	**Pn**	**03 50 38.5**	**+1.0**
CD2				Pg	**Pg**	**03 50 40.8**	**-1.9**
CD2				Sn	**Sn**	**03 51 06.3**	**+2.4**
CD2				Sg	**Sg**	**03 51 09.5**	**-0.7**
CD2				smax			
	comp=N,2μm,0.8s						
CD2				smax			
	comp=E,2μm,0.7s						
XAN	**Xi'an**	**3.44**	**66**	Pn	**Pn**	**03 50 57.2**	**+1.5**
XAN				Sn	**Sn**	**03 51 34.8**	**-1.8**
XAN				Sg	**Sg**	**03 51 49.0**	**-3.7**
XAN				smax			
	comp=N,450nm,0.9s						
XAN				smax			
	comp=E,220nm,0.9s						
LZH	**Lanzhou**	**3.56 343**		Pn	**Pn**	**03 50 59.2**	**+1.8**
LZH				Sn	**Sn**	**03 51 40.6**	**+1.1**
LZH				Sg	**Sg**	**03 51 51.2**	**-5.3**
LZH				smax			
	comp=N,570nm,0.9s						
LZH				smax			
	comp=E,760nm,0.8s						
LZH				LR	LR		
	comp=E,2μm,6.4s						
LZH				LR	LR		
	comp=Z,2μm,7.5s						
GYA	**Guiyang**	**6.34 168**		Pn	**Pn**	**03 51 36.5**	**+1.0**
GYA				Pg	**Pg**	**03 51 57.3**	**-6.2**
GYA				Sn	**Sn**	**03 52 48.9**	**+0.9**
GYA				Sg	**Sg**	**03 53 19.8**	**-5.8**
GYA				smax			
	comp=N,140nm,1.0s						
GYA				smax			
	comp=E,90nm,0.8s						
GTA	**Gaotai**	**7.98 329**		*e*P	**Pn**	**03 51 57.6**	**-0.4**
GTA				pP		03 52 01.0	
GTA				sP		03 52 03.7	
GTA				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC	**Hu-ho-hao-te**	**9.64**	**30**	*e*P	**Pn**	**03 52 19.3**	**-1.5**
HHC				S	**Sn**	**03 54 09.6**	**+0.4**
HHC				pmax	pmax		
	comp=Z,13nm,0.5s						
HHC				pmax	pmax		
	comp=Z,480nm,4.7s						
BJI	**Beijing**	**11.53**	**47**	P	**Pn**	**03 52 57.7**	**+11**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
SONM	**Songino Array**	**15.17**	**3**	Pn	**Pn**	**03 53 36.0**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=177,slow=12,SNR=5.8						
CMAR	**Chiang Mai Arr**	**15.22 203**		Pn	**Pn**	**03 53 35.0**	**-2.0**
	comp=Z,0.7nm,0.3s,baz=329,slow=18,SNR=5.3						
ULN	**Ulaanbaatar**	**15.24**	**5**	*e*Pn	**Pn**	**03 53 37.1**	**0.0**
	comp=Z,1.3nm,0.8s						
KSRS	**Korea Array**	**19.23**	**69**	P	**Pn**	**03 54 27.9**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=251,slow=12,SNR=6.8						
CN2	**Changchun**	**19.38**	**49**	*e*P	**Pn**	**03 54 30.5**	**+1.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MK31	**Makanchi Array**	**22.42 316**		*e*P	**P**	**03 55 00.6**	**-0.1**
MKAR	**Makanchi Array**	**22.42 316**		P	**P**	**03 55 00.6**	**-0.1**
	comp=Z,4.1nm,0.8s,mb3.9,baz=115,slow=12,SNR=32						
TKM2	**Tokmak 2**	**25.37 302**		*e*P	**P**	**03 55 29.2**	**0.0**
	comp=Z,2.5nm,0.7s,mb3.9						
ZALV	**Zalesovo Beam**	**25.72 332**		P	**P**	**03 55 31.8**	**-0.5**
	comp=Z,3.8nm,0.6s,mb4.1,baz=132,slow=10,SNR=18						
KURK	**Kurchatov**	**26.55 321**		P	**P**	**03 55 39.5**	**-0.4**
	comp=Z,3.7nm,0.8s,mb4.0,baz=125,slow=11,SNR=20						
KURK				PcP	PcP	03 59 03.0	-1.2
	comp=Z,0.4nm,0.5s,baz=112,slow=2.1,SNR=4.3						
KURK	**Kurchatov**	**26.55 321**		*e*P	**P**	**03 55 40.5**	**+0.6**
	comp=Z,3.2nm,0.6s,mb4.0						
KURK				PcP	PcP	03 59 03.0	-1.2
ABKAR	**Akbulak array**	**37.31 310**		*e*P	**P**	**03 57 14.4**	**+0.2**
	comp=Z,1.2nm,0.7s,mb3.8						
ARCES	**ARCESS Array B**	**56.19 335**		P	**P**	**03 59 41.7**	**0.0**
	comp=Z,3.0nm,0.8s,mb4.4,baz=45,slow=14,SNR=3.3						
BRTR	**Keskin Array B**	**56.74 299**		P	**P**	**03 59 45.5**	**-0.5**
	comp=Z,1.2nm,0.8s,mb4.0,baz=108,slow=7.9,SNR=6.7						
AKASG	**Malin Array Be**	**56.96 313**		P	**P**	**03 59 46.6**	**-0.8**
	comp=Z,0.6nm,0.4s,mb4.0,baz=70,slow=6.5,SNR=3.7						
WRA	**Warramunga Arr**	**59.31 148**		P	**P**	**04 00 03.9**	**-0.3**
	comp=Z,1.2nm,0.6s,mb4.1,baz=341,slow=7.3,SNR=8.5						
ASAR	**Alice Springs**	**62.40 150**		P	**P**	**04 00 25.5**	**+0.4**
	comp=Z,0.4nm,0.7s,mb3.6,baz=338,slow=5.9,SNR=4.1						
NB2	**NORSAR Subarra**	**63.81 327**		P	**P**	**04 00 32.5**	**-1.6**
	comp=Z,2.4nm,0.8s,mb4.3,baz=73,slow=6.5						
NOA	**NORSAR Array B**	**63.81 327**		P	**P**	**04 00 33.5**	**-0.6**
	comp=Z,1.6nm,0.8s,mb4.1,baz=71,slow=6.7,SNR=6.1						
CDF	**Champ du Feu**	**71.11 316**		*e*P	**P**	**04 01 20.2**	**-0.2**
LPG	**La Plagne**	**72.81 313**		*e*P	**P**	**04 01 31.3**	**+0.5**
	comp=Z,14nm,0.8s,mb4.7						
LPG	**La Plagne**	**72.81 313**		*e*P	**P**	**04 01 31.3**	**+0.5**
	comp=Z,6.9nm,0.8s,mb4.6						
LPL	**La Plagne**	**72.82 313**		*e*P	**P**	**04 01 31.3**	**+0.5**
	comp=Z,9.6nm,0.7s,mb4.5						
LPL	**La Plagne**	**72.82 313**		*e*P	**P**	**04 01 31.3**	**+0.5**
	comp=Z,4.8nm,0.7s,mb4.5						
ORIF	**Oris-en-Rattie**	**73.54 313**		*e*P	**P**	**04 01 35.7**	**+0.1**
	comp=Z,4.3nm,0.6s,mb4.2						
ORIF	**Oris-en-Rattie**	**73.54 313**		*e*P	**P**	**04 01 35.7**	**+0.1**
	comp=Z,2.2nm,0.6s,mb4.3						
SMF	**Signal de Mont**	**74.00 315**		*e*P	**P**	**04 01 37.2**	**-0.5**
	comp=Z,6.3nm,0.8s,mb4.3						
SMF	**Signal de Mont**	**74.00 315**		*e*P	**P**	**04 01 37.2**	**-0.5**
	comp=Z,3.2nm,0.8s,mb4.3						
AVF	**Avril sur Loir**	**74.21 316**		*e*P	**P**	**04 01 39.1**	**+0.1**
YKA	**Yellowknife Ar**	**79.93 18**		P	**P**	**04 02 10.3**	**-0.5**
	comp=Z,1.5nm,0.7s,mb4.1,baz=329,slow=5.1,SNR=6.3						

DJA 03 03:52:34, 8°.32S×108°.18E, h34km, MLv4.3/12, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLJI	**Cilicap**	**1.02**	**54**	P	Pn	03 52 51.7	-0.2
LEM	**Lembang**	**1.58**	**339**	P	Pn	03 52 59.9	+0.2
SKJI	**Sukabumi**	**2.07**	**309**	P	Pn	03 53 08.7	+2.3
YOGI	**Yogyakarta**	**2.15**	**77**	P	Pn	03 53 07.9	+0.4
UGM	**Wanagama**	**2.35**	**80**	P	Pn	03 53 09.4	-0.9
UGM				P		03 53 09.7	
UGM				S	Sn	03 53 37.1	-0.9
SMRI	**Semarang**	**2.57**	**61**	P	Pn	03 53 14.1	+0.8
PCJI	**Pacitan**	**2.97**	**88**	P	Pn	03 53 18.5	-0.2
CGJI	**Cibinong**	**2.99**	**304**	P	Pn	03 53 17.6	-1.5
SJI	**Sawahan**	**3.60**	**81**	P	Pn	03 53 28.7	+1.3
PWJI	**Pagerwojo**	**3.60**	**86**	P	Pn	03 53 27.2	-0.2
GMJI	**Gumukmas**	**5.21**	**90**	P	Pn	03 53 50.6	+1.0

*ISCJB **03** 04:07:17.6±0.3, 37°.25N±0°.02×22°.11E±0°.03, h10km, Error ellipse: s-maj=3.3km s-min=2.8km az=145.4*
*CSEM **03** 04:07:17.3±0.1, 37°.26N×22°.11E, h0km, ML3.4, Error ellipse: s-maj=3.3km s-min=2.6km az=149.0*
*ATH **03** 04:07:17.7, 37°.25N×22°.10E, h9km±1km, MD3.4/20, ML3.4*
*NEIC **03** 04:07:17.7, 37°.25N×22°.10E, h9km, ML3.4(ATH), After ATH.*
*THE **03** 04:07:17.8, 37°.25N×22°.12E, h1km±1km, ML3.7/12, Error ellipse: s-maj=1.5km s-min=0.6km az=163.0*
ISC 03 04:07:17.8±0.4, **37°.25N**±0°.02×**22°.11E**±0°.02, **h4**km±3km, **n91**, σ0**88**/128, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITM	**Ithomi**	**0.17 245**		*e*Pg	**Pg**	**04 07 21.0**	**-0.1**
ITM				*e*Sg	**Sg**	**04 07 24.0**	**+0.7**
ITM	**Ithomi**	**0.17 245**		*e*PG	**Pg**	**04 07 21.0**	**-0.1**
ITM				*e*SG	**Sg**	**04 07 24.0**	**+0.7**
ITM	**Ithomi**	**0.17 245**		P	**Pg**	**04 07 20.9**	**-0.2**
ITM				S	**Sg**	**04 07 23.4**	**+0.1**
ITM	**Ithomi**	**0.17 245**		P	**Pg**	**04 07 20.9**	**-0.2**
ITM				S	**Sg**	**04 07 23.4**	**+0.1**
ITM				*e*Sg	**Sg**	**04 07 24.0**	**+0.7**
VLX	**Vlachokerasia**	**0.24**	**61**	*e*PG	**Pg**	**04 07 22.7**	**+0.1**
VLX				*e*SG	**Sg**	**04 07 27.0**	**+1.3**

LKR	Lokris	1.56	26	*e*Pg	Pg	04 07 46.6	-1.2
LKR	Lokris	1.56	26	*e*PG	Pg	04 07 46.6	-1.2
LKR	Lokris	1.56	26	P	Pn	04 07 46.3	-0.1
LKR				S	Sn	04 08 06.8	-0.3
LKR	Lokris	1.56	26	P	Pn	04 07 46.3	-0.1
LKR	Lokris	1.56	26	*e*Pg	Pg	04 07 46.6	-1.2
LKR				S	Sn	04 08 06.8	-0.3
PTL	Penteli	1.60	60	*e*Pb	Pb	04 07 46.6	-1.4
PTL	Penteli	1.60	60	*e*PB	Pb	04 07 46.6	-1.4
PTL	Penteli	1.60	60	*e*Pb	Pb	04 07 46.6	-1.4
ATAL	Atalanti	1.61	26	P	Pn	04 07 46.3	-0.7
ATAL	Atalanti	1.61	26	P	Pn	04 07 46.3	-0.7
EVR	Evrytania	1.68	352	*e*Pb	Pb	04 07 49.3	0.0
EVR	Evrytania	1.68	352	*e*PB	Pb	04 07 49.3	0.0
EVR	Evrytania	1.68	352	*e*Pb	Pb	04 07 49.3	0.0
AGG	Agios Georgios	1.78	5	*e*Pn	Pn	04 07 50.6	+1.3
AGG	Agios Georgios	1.78	5	*e*PN	Pn	04 07 50.6	+1.3
AGG	Agios Georgios	1.78	5	P	Pn	04 07 48.7	-0.6
AGG	Agios Georgios	1.78	5	P	Pn	04 07 48.7	-0.6
AGG	Agios Georgios	1.78	5	*e*Pn	Pn	04 07 50.6	+1.3
NEO	Neokhori	2.23	23	*e*Pn	Pn	04 07 57.0	+1.4
NEO	Neokhori	2.23	23	*e*PN	Pn	04 07 57.0	+1.4
NEO	Neokhori	2.23	23	*e*Pn	Pn	04 07 57.0	+1.4
XOR	Xorichti	2.27	22	P	Pn	04 07 56.0	-0.2
XOR	Xorichti	2.27	22	P	Pn	04 07 56.0	-0.2
THL	Klokotos Trika	2.31	358	*e*PN	Pn	04 07 58.9	+2.2
THL	Klokotos Trika	2.31	358	P	Pn	04 07 56.5	-0.2
THL	Klokotos Trika	2.31	358	P	Pn	04 07 56.5	-0.2
AOS	Alonnisos	2.37	35	P	Pn	04 07 57.4	-0.1
AOS				S	Sn	04 08 27.0	+0.1
AOS	Alonnisos	2.37	35	P	Pn	04 07 57.4	-0.1
AOS				S	Sn	04 08 27.0	+0.1
IDI	Anoyia	2.98	130	*e*Pn	Pn	04 08 07.5	+1.7
IDI	Anoyia	2.98	130	*e*Pn	Pn	04 08 07.5	+1.7
CHOS	Chios island	3.32	69	P	Pn	04 08 10.7	+0.2
CHOS	Chios island	3.32	69	P	Pn	04 08 10.7	+0.2
TIP	Timpagrande	4.64	296	*e*Pn	Pn	04 08 29.7	+1.1
TIP	Timpagrande	4.64	296	*e*Pn	Pn	04 08 29.7	+1.1
CUC	Castrocucco	5.64	301	*e*Pn	Pn	04 08 40.9	-1.6
CUC	Castrocucco	5.64	301	*e*Pn	Pn	04 08 40.9	-1.5

*IDC **03** 04:08:09.8±0.8, 31°.13N×103°.52E, h0km, mb3.8/10, mb1 4.0/12, mb1mx3.8/24, mbtmp3.8/12, ML3.9/2, Error ellipse: s-maj=31.1km s-min=16.7km az=55.0*
*ISCJB **03** 04:08:11.1±0.8, 31°.26N±0°.03×103°.54E±0°.07, h14km±5km, mb4.0/16, Error ellipse: s-maj=10.0km s-min=4.2km az=169.5*
*NEIC **03** 04:08:11.5±0.3, 31°.13N×103°.59E, h10km, mb4.4/7, Error ellipse: s-maj=10.9km s-min=6.8km az=85.0*
*BJI **03** 04:08:12.4, 31°.19N×103°.68E, h14km, mB4.7/7, mb4.3/8, ML4.1/21, Ms3.9/7, Ms7 3.6/7*
ISC 03 04:08:12.7±0.9, **31°.19N**±0°.03×**103°.46E**±0°.06, **h13**km±5km, **n36**, σ0:**93**/44, **mb4.0**/16, **Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.38**	**137**	Pg	**Pg**	**04 08 20.1**	**-0.2**
CD2				Sg	**Sg**	**04 08 25.7**	**+0.3**
CD2				smax			
	comp=N,30μm,0.5s						
CD2				smax			
	comp=E,40μm,0.6s						
LZH	**Lanzhou**	**4.90**	**4**	Pg	**Pg**	**04 09 46.3**	**-0.2**
LZH				Sg	**Sg**	**04 10 50.1**	**+0.1**
LZH				smax			
	comp=N,220nm,1.1s						
LZH				smax			
	comp=E,310nm,1.2s						
LZH				LR	LR		
	comp=N,1μm,5.4s						
LZH				LR	LR		
	comp=Z,2μm,8.4s						
XAN	**Xi'an**	**5.42**	**57**	Pn	**Pn**	**04 09 31.5**	**-1.6**
XAN				Sn	**Sn**	**04 10 23.9**	**-11**
XAN				Sg	**Sb**	**04 10 53.0**	**+0.9**
XAN				smax			
	comp=N,400nm,0.8s						
XAN				smax			
	comp=E,210nm,0.8s						
GYA	**Guiyang**	**5.49**	**148**	Pn	**Pn**	**04 09 36.9**	**+2.8**
GYA				Pg	**Pg**	**04 09 52.0**	**-5.8**
GYA				Sn	**Sn**	**04 10 37.3**	**+0.3**
GYA				Sg	**Sb**	**04 10 53.8**	**-0.3**
GYA				smax			
	comp=N,240nm,0.8s						
GYA				smax			
	comp=E,200nm,0.8s						
KMI	**Kunming**	**6.07**	**186**	Pn	**Pn**	**04 09 43.5**	**+1.3**
KMI				Sn	**Sn**	**04 10 55.0**	**+3.5**
KMI				smax			
	comp=N,29nm,0.8s						
KMI				smax			
	comp=E,47nm,0.7s						
KMI				LR	LR		
	comp=N,520nm,9.1s						
KMI				LR	LR		
	comp=E,420nm,8.6s						
KMI				LR	LR		
	comp=Z,590nm,12.0s						
HHC	**Hu-ho-hao-te**	**11.66**	**32**	*e*P	**Pn**	**04 10 59.3**	**+0.6**
HHC				PP		04 11 08.3	
HHC				S	**Sn**	**04 13 10.0**	**+1.4**
HHC				SS		04 13 23.5	
HHC				PcS	PcS	04 20 21.7	-0.7
HHC				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,74nm,4.9s						
HHC				LR	LR		
	comp=N,340nm,8.3s						
HHC				LR	LR		
	comp=E,170nm,8.4s						
HHC				LR	LR		
	comp=Z,240nm,8.4s						
CMAR	**Chiang Mai Arr**	**13.32**	**199**	Pn	**Pn**	**04 11 20.2**	**-1.3**
	comp=Z,0.5nm,0.3s,baz=16,slow=11,SNR=3.2						
SONM	**Songino Array**	**16.78**	**7**	Pn	**Pn**	**04 12 06.5**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=189,slow=13,SNR=8.7						
ULN	**Ulaanbaatar**	**16.88**	**8**	*e*Pn	**Pn**	**04 12 09.1**	**+0.5**
TLY	**Talaya**	**20.48**	**0**	P	**P**	**04 12 49.1**	**-0.9**
	comp=Z,5.1nm,1.3s						
KSRS	**Korea Array**	**21.12**	**66**	P	**P**	**04 12 56.4**	**-0.7**
	comp=Z,3.5nm,0.6s,mb3.9,baz=261,slow=10,SNR=13						
MK31	**Makanchi Array**	**22.56**	**320**	*e*P	**P**	**04 13 12.9**	**+0.6**
MKAR	**Makanchi Array**	**22.56**	**320**	P	**P**	**04 13 13.5**	**+1.1**
	comp=Z,0.4nm,0.6s,mb3.0,baz=111,slow=13,SNR=6.3						
ZALV	**Zalesovo Beam**	**26.41**	**335**	P	**P**	**04 13 49.5**	**+0.7**
	comp=Z,2.0nm,0.8s,mb3.7,baz=134,slow=8.3,SNR=6.9						
KURK	**Kurchatov**	**26.85**	**324**	P	**P**	**04 13 53.0**	**+0.2**
	comp=Z,2.1nm,0.7s,mb3.8,baz=130,slow=9.1,SNR=12						
KURK	**Kurchatov**	**26.85**	**324**	*e*P	**P**	**04 13 53.9**	**+1.1**
	comp=Z,2.4nm,0.9s,mb3.7						
AKASG	**Malin Array Be**	**56.92**	**313**	P	**P**	**04 17 57.0**	**-0.3**
	comp=Z,0.6nm,0.5s,mb3.9,baz=68,slow=7.1,SNR=3.2						
AKASG	**Malin Array Be**	**56.92**	**313**	P	**P**	**04 17 57.0**	**-0.3**
FINES	**FINESS Array B**	**57.19**	**326**	P	**P**	**04 17 58.6**	**-0.5**
	comp=Z,0.6nm,0.4s,mb4.0,baz=102,slow=12,SNR=2.9						
WRA	**Warramunga Arr**	**58.85**	**146**	P	**P**	**04 18 09.9**	**-1.2**
	comp=Z,0.9nm,0.5s,mb4.0,baz=340,slow=7.8,SNR=11						
ASAR	**Alice Springs**	**61.85**	**148**	P	**P**	**04 18 30.3**	**-1.3**
	comp=Z,0.3nm,0.7s,mb3.5,baz=336,slow=7.1,SNR=2.2						
NOA	**NORSAR Array B**	**64.29**	**327**	P	**P**	**04 18 46.0**	**-1.4**
	comp=Z,0.6nm,0.8s,mb3.6,baz=75,slow=5.2,SNR=2.6						
BPAW	**Bear Paw Mtn.**	**68.78**	**27**	*e*P	**P**	**04 19 16.1**	**+0.1**
	comp=Z,4.3nm,0.7s,mb4.5						
PMR	**Palmer**	**70.74**	**29**	P	**P**	**04 19 27.5**	**-0.6**
	comp=Z,5.8nm,0.8s,mb4.6						
LPG	**La Plagne**	**72.79**	**313**	*e*P	**P**	**04 19 41.6**	**+0.8**
	comp=Z,2.9nm,0.5s,mb4.2						
LPG	**La Plagne**	**72.79**	**313**	*e*P	**P**	**04 19 41.6**	**+0.8**
	comp=Z,1.5nm,0.5s,mb4.2						
LPL	**La Plagne**	**72.79**	**313**	*e*P	**P**	**04 19 41.6**	**+0.8**
	comp=Z,5.3nm,0.5s,mb4.4						
LPL	**La Plagne**	**72.79**	**313**	*e*P	**P**	**04 19 41.6**	**+0.8**
	comp=Z,2.7nm,0.5s,mb4.4						
BMRM	**Bremner River**	**72.93**	**28**	*e*P	**P**	**04 19 41.4**	**+0.1**
	comp=Z,5.8nm,0.5s,mb4.8						
DAWY	**Dawson**	**73.09**	**24**	*e*P	**P**	**04 19 41.6**	**-0.7**
SMF	**Signal de Mont**	**74.05**	**315**	*e*P	**P**	**04 19 48.0**	**-0.2**
	comp=Z,4.1nm,0.6s,mb4.2						
SMF	**Signal de Mont**	**74.05**	**315**	*e*P	**P**	**04 19 48.0**	**-0.2**
	comp=Z,2.0nm,0.6s,mb4.2						
TCF	**Toulx Ste Croi**	**75.21**	**315**	*e*P	**P**	**04 19 55.4**	**+0.5**
YKA	**Yellowknife Ar**	**81.78**	**17**	P	**P**	**04 20 29.4**	**-1.4**
	comp=Z,1.2nm,0.7s,mb3.9,baz=328,slow=5.1,SNR=5.8						
YKA	**Yellowknife Ar**	**81.78**	**17**	P	**P**	**04 20 29.4**	**-1.4**
ROSC	**El Rosal**	**144.10**	**356**	PKP	PKPdf	04 27 49.1	+0.3
	comp=Z,4.4nm,0.7s,baz=282,slow=12,SNR=2.4						

*ISCJB **03** 04:19:35.8±0.7, 38°.43N±0°.03×39°.43E±0°.03, h0km±7km, Error ellipse: s-maj=5.7km s-min=4.1km az=170.3*
*ISK **03** 04:19:35.9, 38°.47N×39°.34E, h4km, MD3.3, ML3.4*
*DDA **03** 04:19:35.5, 38°.38N×39°.43E, h7km±8km, Md3.5*
*CSEM **03** 04:19:36.5±0.2, 38°.46N×39°.38E, h2km, MD3.3, Error ellipse: s-maj=5.4km s-min=1.8km az=111.0*
ISC 03 04:19:36.2±0.6, **38°.42N**±0°.03×**39°.44E**±0°.03, **h2**km±5km, **n41**, σ0:**92**/49, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVRC	**Sivrice-ELAZID**	**0.11**	**247**	PG	**Pg**	**04 19 38.5**	**+0.2**
SVRC	**Sivrice-ELAZID**	**0.11**	**247**	*i* Pg	**Pg**	**04 19 38.5**	**+0.2**
ELZG	**Elazig**	**0.36**	**282**	*i* P	**Pg**	**04 19 42.8**	**-0.4**
ELZG				*i* S	**Sg**	**04 19 49.1**	**+1.2**
ELZG	**Elazig**	**0.36**	**282**	*i* P	**Pg**	**04 19 42.8**	**-0.4**
ELZG				*i* S	**Sg**	**04 19 49.1**	**+1.2**
PTK	**Pertek**	**0.47**	**356**	*e*PG	**Pg**	**04 19 44.3**	**-1.0**
PTK				*e*SG	**Sg**	**04 19 51.3**	**0.0**
PTK	**Pertek**	**0.47**	**356**	*e*Pg	**Pg**	**04 19 44.3**	**-0.9**
PTK				*e*Sg	**Sg**	**04 19 51.3**	**-0.1**
DIYA	**Diyarbakir**	**0.73**	**132**	*i* P	**Pg**	**04 19 50.6**	**+0.4**
DIYA	**Diyarbakir**	**0.73**	**132**	*i* P	**Pg**	**04 19 50.6**	**+0.4**
MYA	**Malataya**	**0.80**	**263**	*e*PG	**Pg**	**04 19 50.9**	**-0.6**
MYA	**Malataya**	**0.80**	**263**	*e*Pg	**Pg**	**04 19 50.9**	**-0.6**
BINT	**Bingol**	**0.94**	**61**	*e*PG	**Pg**	**04 19 55.7**	**+1.5**
BINT	**Bingol**	**0.94**	**61**	*e*Pg	**Pg**	**04 19 55.7**	**+1.5**
URFA	**Urfa**	**1.09**	**207**	*e*PN	**Pn**	**04 19 57.6**	**-0.9**
URFA	**Urfa**	**1.09**	**207**	*e*Pn	**Pn**	**04 19 57.6**	**-0.9**
KEMA	**Kemaliye**	**1.12**	**319**	*i* P	**Pg**	**04 19 55.6**	**-2.1**
KEMA	**Kemaliye**	**1.12**	**319**	*i* P	**Pg**	**04 19 55.6**	**-2.1**
AKCD	**Akcadag**	**1.20**	**264**	*i* P	**Pg**	**04 19 57.6**	**-1.5**
AKCD				*i* S	**Sg**	**04 20 16.0**	**+1.4**
AKCD	**Akcadag**	**1.20**	**264**	*i* P	**Pg**	**04 19 57.6**	**-1.5**
AKCD				*i* S	**Sg**	**04 20 16.0**	**+1.4**
ATAB	**Bozova**	**1.31**	**224**	*i* P	**Pg**	**04 20 01.5**	**+0.2**
ATAB	**Bozova**	**1.31**	**224**	*i* P	**Pg**	**04 20 01.5**	**+0.2**
EZC	**Erzincan**	**1.33**	**357**	*e*PN	**Pn**	**04 20 00.8**	**-1.0**
DARE	**Darende-Malaty**	**1.38**	**293**	*e*PN	**Pn**	**04 20 03.8**	**+1.3**
DARE	**Darende-Malaty**	**1.38**	**293**	*e*Pn	**Pn**	**04 20 03.8**	**+1.3**
BNGL	**BINGOL**	**1.44**	**68**	*i* P	**Pn**	**04 20 03.9**	**+0.6**
BNGL				*i* S	**Sg**	**04 20 23.2**	**+0.7**
MARD	**Mardin**	**1.53**	**136**	*i* P	**Pn**	**04 20 03.7**	**-0.9**
BEST	**Besiri**	**1.54**	**110**	*i* P	**Pn**	**04 20 03.7**	**-1.0**
BEST				*i* S	**Sn**	**04 20 25.5**	**+0.3**
BTMT	**Batman**	**1.63**	**97**	*e*PN	**Pn**	**04 20 05.4**	**-0.5**
GZT	**Gaziantep**	**1.82**	**235**	*i* P	**Pn**	**04 20 08.0**	**-0.6**
GUMT	**Gumushane**	**2.04**	**1**	*e*PN	**Pn**	**04 20 11.4**	**-0.1**
GUMT	**Gumushane**	**2.04**	**1**	*e*Pn	**Pn**	**04 20 11.4**	**-0.1**
EZM	**Erzurum**	**2.11**	**45**	*e*PN	**Pn**	**04 20 13.3**	**+0.8**
GAZ	**Gaziantep**	**2.16**	**235**	*e*PN	**Pn**	**04 20 13.4**	**+0.3**
GAZ	**Gaziantep**	**2.16**	**235**	*e*Pn	**Pn**	**04 20 13.5**	**+0.3**
SARI	**SarD1z-Kayseri**	**2.16**	**278**	*e*PN	**Pn**	**04 20 15.9**	**+2.7**
KMRS	**Kahramanmaras**	**2.20**	**246**	*e*PN	**Pn**	**04 20 13.8**	**0.0**
KMRS	**Kahramanmaras**	**2.20**	**246**	*e*Pn	**Pn**	**04 20 13.8**	**0.0**
SVSK	**Karacayir**	**2.41**	**309**	*e*PN	**Pn**	**04 20 16.5**	**-0.2**
SVSK	**Karacayir**	**2.41**	**309**	*e*Pn	**Pn**	**04 20 16.5**	**-0.2**
ESPY	**Espiye-Giresun**	**2.55**	**348**	*e*PN	**Pn**	**04 20 18.4**	**-0.2**
ESPY	**Espiye-Giresun**	**2.55**	**348**	*e*Pn	**Pn**	**04 20 18.4**	**-0.2**
KOZT	**Kozan**	**3.00**	**253**	*e*PN	**Pn**	**04 20 25.1**	**+0.2**

*ISCJB **03** 04:21:38.9±0.6, 21°.99N±0°.03×121°.43E±0°.03, h17km±4km, Error ellipse: s-maj=5.2km s-min=4.1km az=172.1*
*TAP **03** 04:21:39.3, 22°.07N×121°.35E, h14km, ML3.8, C*
*JMA **03** 04:21:42.2±0.5, 22°.13N×121°.68E, h95km, M3.1*
ISC 03 04:21:39.1±0.6, **22°.04N**±0°.03×**121°.41E**±0°.03, **h6**km±3km, **n52**, σ0:**95**/95, **2C**, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.13**	**92⇑**	*i* P	**Pg**	**04 21 44.2**	**+2.3**
LAY				*e*S	**Sg**	**04 21 47.8**	**+4.1**
	baz=91						
TSEB	**Hengchuen, Pin**	**0.49**	**253**	*i* P	**Pg**	**04 21 50.1**	**+1.5**
TSEB				*i* S	**Sg**	**04 21 57.5**	**+2.5**
	baz=263						
TAW	**Tawu**	**0.57**	**303**	*i* P	**Pg**	**04 21 49.7**	**-0.4**
TAW				S	**Sg**	**04 21 57.2**	**-0.3**
	baz=306						
TWK1	**Hengchun**	**0.57**	**260**	P	**Pg**	**04 21 50.2**	**+0.1**
TWK1				S	**Sg**	**04 21 57.9**	**+0.4**
	baz=269						
EAST	**Anshuo**	**0.62**	**303⇑**	*i* P	**Pg**	**04 21 50.5**	**-0.6**
EAST				*e*S	**Sg**	**04 21 58.4**	**-0.8**
	baz=305						
HEN	**Hengchun**	**0.62**	**267**	P	**Pg**	**04 21 51.4**	**+0.3**
HEN				S	**Sg**	**04 21 59.8**	**+0.6**
	baz=275						
ECL	**Taimali**	**0.69**	**323**	P	**Pg**	**04 21 51.4**	**-1.1**
ECL				*e*S	**Sg**	**04 22 00.8**	**-0.7**
	baz=313						
TTN	**Taitung**	**0.75**	**341**	*e*P	**Pg**	**04 21 53.9**	**+0.4**
TTN				*e*S	**Sg**	**04 22 05.2**	**+1.9**
	baz=327						
SCZT	**Fangliau**	**0.80**	**294**	*i* P	**Pg**	**04 21 53.6**	**-0.9**
TWG	**Pinlang**	**0.83**	**338**	*e*P	**Pg**	**04 21 54.1**	**-1.1**
TWG				*e*S	**Sg**	**04 22 04.8**	**-1.2**
SSD	**Sandimen**	**1.00**	**314**	*e*P	**Pg**	**04 21 57.9**	**-0.5**
TWP	**Hsiaoliuchiu**	**1.02**	**287**	*e*P	**Pg**	**04 21 58.9**	**+0.3**
KAU	**Kaohsiung**	**1.15**	**297**	*e*P	**Pg**	**04 21 59.6**	**-1.5**
KAU				*e*S	**Sg**	**04 22 15.5**	**-0.5**
ELDTW	**Lidau**	**1.20**	**342**	*e*P	**Pg**	**04 21 58.4**	**-3.7**
TWM1	**Shoushan**	**1.20**	**311**	*e*P	**Pg**	**04 22 02.5**	**+0.4**
TWM1				*e*S	**Sg**	**04 22 18.8**	**+1.1**
STYT	**Tauyuan**	**1.27**	**332**	*e*P	**Pn**	**04 22 02.4**	**-0.9**
SGST	**Jiashian**	**1.29**	**324**	P	**Pn**	**04 22 03.7**	**+0.1**
SGST				*e*S	**Sb**	**04 22 21.1**	**+0.6**
TWF1	**Yuli**	**1.31**	**355**	*e*P	**Pn**	**04 22 01.9**	**-2.0**
TWF1				*e*S	**Sb**	**04 22 20.6**	**-0.5**
CHN1	**Nanshi**	**1.40**	**325**	*e*P	**Pn**	**04 22 04.8**	**-0.3**
CHN1				*e*S	**Sb**	**04 22 24.0**	**+0.3**
WTP	**Ta-pu**	**1.41**	**329**	P	**Pn**	**04 22 04.8**	**-0.3**
WTP				*e*S	**Sb**	**04 22 23.2**	**-0.7**
CHN3	**Shinhua**	**1.41**	**317**	*e*P	**Pn**	**04 22 04.7**	**-0.5**
CHN3				*e*S	**Sb**	**04 22 24.6**	**+0.5**
EHY	**Hungye**	**1.46**	**357**	*e*P	**Pn**	**04 22 04.7**	**-1.2**
TWK	**Hsinying**	**1.49**	**325**	*e*P	**Pn**	**04 22 06.1**	**-0.2**
TWK				*e*S	**Sn**	**04 22 25.6**	**-0.4**
CHN4	**Tsaushan**	**1.50**	**330**	P	**Pn**	**04 22 06.4**	**-0.2**
CHN4				*e*S	**Sn**	**04 22 26.8**	**+0.3**
ALS	**Alishan**	**1.56**	**339**	*e*P	**Pn**	**04 22 07.5**	**+0.2**
ALS				*e*S	**Sn**	**04 22 28.5**	**+0.6**
SCLT	**Jiali**	**1.59**	**315**	*e*P	**Pn**	**04 22 07.6**	**-0.1**
SCLT				*e*S	**Sn**	**04 22 27.6**	**-0.9**
CHN5	**Tsauling**	**1.69**	**337**	*e*P	**Pn**	**04 22 09.2**	**+0.1**
CHN5				*e*S	**Sn**	**04 22 31.4**	**+0.5**
CHY	**Chiayi**	**1.71**	**328**	*e*P	**Pn**	**04 22 08.6**	**-0.8**
CHY				*e*S	**Sn**	**04 22 30.7**	**-0.8**
ESL	**Shilin**	**1.76**	**1**	*e*P	**Pn**	**04 22 09.5**	**-0.6**
ESL				*e*S	**Sn**	**04 22 32.2**	**-0.7**
SMLT	**Sun Moon Lake**	**1.89**	**346**	P	**Pn**	**04 22 12.1**	**+0.2**
SMLT				*e*S	**Sn**	**04 22 35.5**	**-0.5**
TYC	**Yuchr**	**1.92**	**345**	P	**Pn**	**04 22 12.3**	**0.0**
TYC				*e*S	**Sn**	**04 22 37.3**	**+0.6**
WNT	**Mingjian**	**1.94**	**340**	*e*S	**Sn**	**04 22 37.2**	**-0.2**
TWD	**Chiawan**	**2.04**	**5**	*e*P	**Pn**	**04 22 14.1**	**+0.3**
TWD				*e*S	**Sn**	**04 22 39.9**	**+0.3**
WHF	**Hehuan Shan**	**2.10**	**356**	*e*P	**Pn**	**04 22 15.4**	**+0.7**
WHF				*e*S	**Sn**	**04 22 41.1**	**0.0**
TCU	**Taichung**	**2.20**	**342**	*e*P	**Pn**	**04 22 16.5**	**+0.4**
TCU				*e*S	**Sn**	**04 22 43.3**	**-0.3**
TWT	**Tachien**	**2.21**	**354**	*e*P	**Pn**	**04 22 16.6**	**+0.3**
TWT				*e*S	**Sn**	**04 22 43.9**	**0.0**
PNG	**Penghu**	**2.29**	**312**	*e*P	**Pn**	**04 22 15.2**	**-2.2**
PNG				*e*S	**Sn**	**04 22 41.7**	**-4.1**
TWQ1	**Liyutan**	**2.37**	**346**	*e*P	**Pn**	**04 22 19.2**	**+0.7**
TWQ1				*e*S	**Sn**	**04 22 48.7**	**+0.9**
NNS	**Nan Shan**	**2.39**	**359**	*e*P	**Pn**	**04 22 20.7**	**+2.0**
NNS				*e*S	**Sn**	**04 22 48.6**	**+0.3**
ENA	**Nanau**	**2.39**	**7**	*e*P	**Pn**	**04 22 19.9**	**+1.1**
ENA				*e*S	**Sn**	**04 22 49.0**	**+0.6**
NSY	**Sanyi**	**2.44**	**346**	*e*P	**Pn**	**04 22 20.0**	**+0.6**
NSY				*e*S	**Sn**	**04 22 49.9**	**+0.4**
TWC	**Suao**	**2.59**	**9**	P	**Pn**	**04 22 21.6**	**+0.2**
TWC				*e*S	**Sn**	**04 22 53.2**	**0.0**
ENTT	**Nioudou**	**2.59**	**3**	*e*P	**Pn**	**04 22 23.0**	**+1.5**
ENTT				*e*S	**Sn**	**04 22 54.6**	**+1.3**
NSTT	**Nanjuang**	**2.60**	**352**	*e*P	**Pn**	**04 22 22.2**	**+0.5**
NSTT				*e*S	**Sn**	**04 22 54.5**	**+0.9**
NSK	**Sanguang**	**2.62**	**359**	*e*P	**Pn**	**04 22 22.5**	**+0.6**
NSK				*e*S	**Sn**	**04 22 55.3**	**+1.3**
TWE	**Neicheng**	**2.68**	**5**	*e*P	**Pn**	**04 22 21.1**	**-1.6**
YOJ	**Yonaguni jima**	**2.82**	**31**	*e*S	**Sn**	**04 22 54.8**	**-4.2**
HATJ	**Hateruma jima**	**2.98**	**47**	P	**Pn**	**04 22 25.0**	**-1.9**
HATJ				*e*S	**Sn**	**04 22 58.3**	**-4.6**
NWF	**Wu-fen Shan**	**3.03**	**6**	*e*P	**Pn**	**04 22 28.5**	**+0.9**
NWF				*e*S	**Sn**	**04 23 05.6**	**+1.4**
JKRS	**Kuro-shima**	**3.24**	**47**	P	**Pn**	**04 22 29.0**	**-1.4**
JKRS				S	**Sn**	**04 23 03.6**	**-5.7**
JIJ	**Ishigaki jima**	**3.41**	**47**	P	**Pn**	**04 22 30.7**	**-2.1**
JIJ				S	**Sn**	**04 23 08.0**	**-5.6**
JTJ	**Tarama**	**3.98**	**49**	P	**Pn**	**04 22 38.7**	**-1.9**
JTJ				*e*S	**Sn**	**04 23 22.7**	**-4.9**

*ISCJB **03** 04:51:13.5±0.8, 13°.94N±0°.06×92°.13W±0°.04, h33km, Error ellipse: s-maj=9.8km s-min=3.8km az=19.8*
*MEX **03** 04:51:15.5±0.5, 13°.94N×92°.08W, h17km±33km, MD4.0*
*CASC **03** 04:51:17.5±2.0, 13°.99N×91°.78W, h20km, MD3.6*
ISC 03 04:51:15.3±0.7, **14°.01N**±0°.07×**92°.07W**±0°.04, **h35**km, **n16**, σ0:**85**/24, **1C**, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.52**	**53**	*e*P	**Pn**	**04 51 27.5**	**+1.3**
THIG		**0.91**	**348**	*i* P	**Pn**	**04 51 30.6**	**-1.0**
THIG				*i* S	**Sn**	**04 51 42.8**	**-0.8**
FUG	**Fuego 3**	**1.26**	**70**	*e*P	**Pn**	**04 51 35.6**	**-0.8**
FG6		**1.27**	**64**	*e*P	**Pn**	**04 51 36.1**	**-0.4**
TP2	**Tecpan 2**	**1.27**	**53**	*e*P	**Pn**	**04 51 36.6**	**+0.1**
PCG	**Pacaya**	**1.47**	**75⇑**	*e*P	**Pn**	**04 51 39.5**	**+0.4**
PCG				*e*S	**Sn**	**04 51 55.5**	**-1.7**
NBG	**Las Nubes**	**1.76**	**71**	*e*P	**Pn**	**04 51 44.4**	**+1.1**
NBG				*e*S	**Sn**	**04 52 05.6**	**+1.1**
PCIG		**2.02**	**327**	*e*P	**Pn**	**04 51 46.8**	**-0.1**
PCIG				*i* S	**Sn**	**04 52 10.5**	**-0.4**
RBDL	**Robledal**	**2.31**	**87**	*e*P	**Pn**	**04 51 50.8**	**0.0**
RTR	**El Retiro**	**2.35**	**92**	*e*P	**Pn**	**04 51 51.4**	**0.0**
SBLS	**San Blas**	**2.38**	**94**	*e*P	**Pn**	**04 51 51.8**	**+0.1**
SBLS				*e*S	**Sn**	**04 52 18.9**	**-0.8**
SNJE	**San Jose**	**2.39**	**93**	*e*P	**Pn**	**04 51 52.2**	**+0.2**
TGIG		**2.94**	**340**	*i* P	**Pn**	**04 51 59.1**	**-0.3**
TGIG				*i* S	**Sn**	**04 52 35.6**	**+2.1**
LFRS	**El Faro**	**2.94**	**97**	*e*P	**Pn**	**04 51 59.8**	**+0.3**
HUIG	**Huatulco**	**4.28**	**295**	*e*P	**Pn**	**04 52 18.0**	**0.0**
HUIG				*i* S	**Sn**	**04 53 05.3**	**-1.4**
PNIG	**Pinotepa**	**6.31**	**293**	*i* P	**Pn**	**04 52 47.0**	**+1.2**
PNIG				*i* S	**Sn**	**04 53 57.1**	**+0.3**

*ISCJB **03** 04:59:57.2±2.2, 5°.50S±0°.07×149°.76E±0°.09, h128km±21km, mb4.2/15, Error ellipse: s-maj=16.2km s-min=8.7km az=29.4*
*BJI **03** 04:59:58.3, 5°.50S×149°.70E, h136km, mB4.6/3, mb4.8/5*
*NEIC **03** 04:59:59.6±0.

WRA			pP			05 04 55.4	
	4.2nm,0.6s,baz=50,slow=11,SNR=5.3						
WRA			S		**S**	**05 08 10.4**	**+0.3**
	7.3nm,0.8s,baz=38,slow=20,SNR=10						
WRA			ScP	ScP		05 11 56.6	+3.3
	1.8nm,0.8s,baz=52,slow=2.9,SNR=9.3						
RMQ	**Roma**	**20.78 182**	*e*P		**P**	**05 04 31.5**	**+0.3**
	15nm,0.7s						
ASAR	**Alice Springs**	**23.49 219**	P		**P**	**05 04 58.5**	**+0.6**
	2.7nm,0.6s,mb3.9,baz=54,slow=8.6,SNR=35						
ASAR			pP			05 05 25.2	
	2.0nm,0.6s,baz=54,slow=9.8,SNR=3.8						
ASAR			S		**S**	**05 09 00.4**	**+1.7**
	1.5nm,0.9s,baz=43,slow=15,SNR=6.7						
ASAR			ScP	ScP		05 12 04.2	+3.5
	1.2nm,0.8s,baz=47,slow=3.6,SNR=6.8						
ARMA	**Armidale**	**24.75 176**	*e*P		**P**	**05 05 09.8**	**+0.6**
FITZ	**Fitzroy Crossi**	**26.52 240**	*e*P		**P**	**05 05 24.9**	**-0.5**
	11nm,0.3s,mb5.0						
FITZ	**Fitzroy Crossi**	**26.52 240**	P		**P**	**05 05 25.0**	**-0.3**
	7.1nm,0.5s,mb4.6,baz=68,slow=8.7,SNR=52						
FITZ			pP		pP	05 05 53.6	-7.5
	4.9nm,0.6s,baz=96,slow=9.9,SNR=3.6						
STKA	**Stephens Creek**	**27.20 195**	P		**P**	**05 05 30.9**	**-0.3**
	1.8nm,0.6s,mb3.9,baz=13,slow=13,SNR=4.6						
STKA			pP		pP	05 05 59.9	-7.2
	3.6nm,0.9s,baz=323,slow=11,SNR=3.2						
MBWA	**Marble Bar**	**32.85 239**	*e*P		**P**	**05 06 20.4**	**-0.7**
	50nm,2.1s,mb4.9						
MJAR	**Matsushiro Arr**	**43.28 347**	P		**P**	**05 07 48.6**	**+0.5**
	3.8nm,0.8s,mb4.1,baz=171,slow=8.4,SNR=8.4						
KSRS	**Korea Array**	**47.39 336**	P		**P**	**05 08 21.2**	**+0.8**
	5.1nm,0.8s,mb4.2,baz=155,slow=7.9,SNR=19						
MDJ	**Mudanjiang**	**53.15 342**	P		**P**	**05 09 04.8**	**+1.3**
MDJ			pmax	pmax			
	comp=Z,14nm,1.0s,mb4.7						
MDJ			pmax	pmax			
	comp=Z,37nm,4.1s						
PETK	**Petropavlovsk-**	**58.89 6**	P		**P**	**05 09 44.5**	**+0.4**
	comp=Z,8.1nm,0.7s,mb4.7,baz=161,slow=7.1,SNR=15						
PETK	**Petropavlovsk-**	**58.89 6**	P		**P**	**05 09 44.5**	**+0.4**
SONM	**Songino Array**	**65.38 329**	P		**P**	**05 10 28.8**	**+1.5**
	comp=Z,1.8nm,0.6s,mb4.1,baz=144,slow=5.2,SNR=11						
MKAR	**Makanchi Array**	**78.89 320**	P		**P**	**05 11 47.2**	**-0.4**
	comp=Z,0.3nm,0.4s,mb3.2,baz=99,slow=6.7,SNR=5.1						
ZALV	**Zalesovo Beam**	**80.10 327**	P		**P**	**05 11 53.4**	**-0.6**
	comp=Z,2.0nm,0.6s,mb3.9,baz=110,slow=5.5,SNR=8.1						
MCK	**McKinley**	**82.83 23**	*e*P		**P**	**05 12 06.5**	**-1.6**
	comp=Z,10nm,0.8s,mb4.6						
MAW	**Mawson**	**83.62 203**	P		**P**	**05 12 11.8**	**-0.4**
	comp=Z,1.5nm,0.7s,mb3.8,baz=84,slow=9.2,SNR=2.7						
EGAK	**Eagle**	**86.35 24**	*e*P		**P**	**05 12 25.3**	**-0.5**
	comp=Z,2.7nm,0.8s,mb4.0						
NVAR	**Mina Array Bea**	**95.06 52**	P		**P**	**05 13 05.9**	**-1.1**
	comp=Z,0.1nm,0.3s,mb3.5,baz=247,slow=6.4,SNR=4.0						
PDAR	**Pinedale Array**	**101.71 48**	P		Pdif	05 13 35.6	-0.9
	comp=Z,0.5nm,0.8s,baz=258,slow=4.3,SNR=4.0						
LPAZ	**La Paz**	**136.76 121**	PKP		PKPdf	05 19 07.7	+1.3
	comp=Z,0.9nm,0.7s,baz=274,slow=5.8,SNR=7.2						

*NEIC **03** 05:06:16.4, 45.°16S×166.°84E, h23km, ML4.2(WEL), After WEL.*
WEL 03 05:06:16.6±0.4, 45.°18S×166.°85E, h12km, ML4.2/16, 1C-2D, Error ellipse: s-maj=4.0km s-min=2.0km az=90.0, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.36**	**144**	⇑P*	Pg	05 06 24.7	+0.8
DCZ				S*	Sg	05 06 28.9	0.0
DCZ	**Deep Cove**	**0.36**	**144**	P	Pg	05 06 24.7	+0.8
DCZ				S	Sg	05 06 28.9	+0.1
MSZ	**Milford Sound**	**0.92**	**57**	P*	Pb	05 06 33.0	-1.4
MSZ	**Milford Sound**	**0.92**	**57**	P	Pg	05 06 33.0	-1.3
MLZ	**Mavora Lakes**	**0.95**	**101**	⇓P*	Pb	05 06 33.7	-1.3
MLZ				S*	Sb	05 06 44.9	-2.6
MLZ	**Mavora Lakes**	**0.95**	**101**	P	Pg	05 06 33.7	-1.2
MLZ				S	Sg	05 06 44.9	-2.3
PYZ	**Puysegur Point**	**0.99**	**187**	P*	Pb	05 06 34.5	-1.3
WHZ	**Wether Hill Ro**	**1.05**	**133**	⇓P*	Pb	05 06 35.8	-0.9
WHZ				S*	Sb	05 06 48.5	-1.9
WHZ	**Wether Hill Ro**	**1.05**	**133**	P	Pb	05 06 35.8	-0.9
EAZ	**Earnscleugh**	**1.74**	**93**	PN	Pn	05 06 46.8	+0.2
SYZ	**Scrubby Hill**	**2.10**	**131**	PN	Pn	05 06 51.1	-0.5
LBZ	**Lake Benmore**	**2.50**	**73**	*e*PN	Pn	05 06 56.9	-0.2
ODZ	**Otahua Downs**	**2.69**	**88**	*e*Pn	Pn	05 06 59.0	-0.7
ODZ				*e*Sn	Sn	05 07 33.6	+1.5
RPZ	**Rata Peaks**	**3.35**	**66**	*e*Pn	Pn	05 07 09.4	+0.7

*DDA **03** 05:06:30.7, 38.°49N×39.°44E, h8km±3km, Md3.1*
*ISCJB **03** 05:06:31.5±0.5, 38.°47N±0.°04×39.°42E±0.°04, h10km, Error ellipse: s-maj=5.7km s-min=3.6km az=25.0*
*ISK **03** 05:06:31.9, 38.°45N×39.°33E, h5km, MD3.0*
*CSEM **03** 05:06:32.0±0.1, 38.°44N×39.°37E, h2km, MD3.0, Error ellipse: s-maj=3.6km s-min=2.7km az=29.0*
ISC 03 05:06:31.6±0.8, 38.°47N±0.°04×39.°44E±0.°05, h3km±8km, n24, σ0.°87/37, 1C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVRC	**Sivrice-ELAZID**	**0.14**	**227**	PG	**Pg**	**05 06 33.9**	**-0.3**
SVRC				*e*SG	**Sg**	**05 06 35.6**	**-0.4**
SVRC	**Sivrice-ELAZID**	**0.14**	**227**	*i* Pg	**Pg**	**05 06 33.9**	**-0.4**
SVRC				*e*Sg	**Sg**	**05 06 35.6**	**-0.5**
ELZG	**Elazig**	**0.35**	**274**	⇑*i*P	**Pg**	**05 06 38.4**	**0.0**
ELZG				*i* S	**Sg**	**05 06 44.0**	**+1.0**
ELZG	**Elazig**	**0.35**	**274**	*i* P	**Pg**	**05 06 38.4**	**0.0**
ELZG				*i* S	**Sg**	**05 06 44.0**	**+1.0**
DIYA	**Diyarbakir**	**0.77**	**135**	*e*P	**Pg**	**05 06 46.7**	**+0.3**
DIYA				*e*S	**Sg**	**05 06 57.3**	**+1.0**
DIYA	**Diyarbakir**	**0.77**	**135**	*e*P	**Pg**	**05 06 46.7**	**+0.4**
DIYA				*e*S	**Sg**	**05 06 57.3**	**+1.0**
MYA	**Malataya**	**0.81**	**260**	*e*PG	**Pg**	**05 06 46.1**	**-0.9**
MYA	**Malataya**	**0.81**	**260**	*e*Pg	**Pg**	**05 06 46.1**	**-1.0**
KEMA	**Kemaliye**	**1.08**	**318**	*e*P	**Pg**	**05 06 51.2**	**-1.2**
KEMA				*e*S	**Sg**	**05 07 06.3**	**-0.1**
KEMA	**Kemaliye**	**1.08**	**318**	*e*P	**Pg**	**05 06 51.2**	**-1.2**
KEMA				*e*S	**Sg**	**05 07 06.3**	**-0.1**
URFA	**Urfa**	**1.14**	**205**	*e*PN	**Pg**	**05 06 53.1**	**-0.3**
URFA	**Urfa**	**1.14**	**205**	*e*Pn	**Pg**	**05 06 53.1**	**-0.3**
AKCD	**Akcadag**	**1.20**	**262**	⇓*i*P	**Pg**	**05 06 53.3**	**-1.3**
AKCD				*i* S	**Sg**	**05 07 11.5**	**+1.3**
AKCD	**Akcadag**	**1.20**	**262**	*i* P	**Pg**	**05 06 53.3**	**-1.3**
AKCD				*i* S	**Sg**	**05 07 11.5**	**+1.3**
EZC	**Erzincan**	**1.28**	**357**	*e*PN	**Pn**	**05 06 57.3**	**+0.9**
ATAB	**Bozova**	**1.35**	**222**	*e*P	**Pn**	**05 06 56.5**	**-0.7**
ATAB				*e*S	**Sg**	**05 07 15.5**	**+0.7**
ATAB	**Bozova**	**1.35**	**222**	*e*P	**Pn**	**05 06 56.5**	**-0.7**
ATAB				*e*S	**Sg**	**05 07 15.5**	**+0.7**
DARE	**Darende-Malaty**	**1.36**	**291**	*e*PN	**Pg**	**05 06 59.6**	**+1.9**
DARE	**Darende-Malaty**	**1.36**	**291**	*e*Pn	**Pg**	**05 06 59.6**	**+1.9**
BEST	**Besiri**	**1.56**	**111**	*e*P	**Pn**	**05 06 59.6**	**-0.6**
BEST				*e*S	**Sn**	**05 07 20.6**	**-0.2**
BTMT	**Batman**	**1.64**	**99**	*e*PN	**Pn**	**05 07 01.2**	**0.0**
SARI	**SarD1z-Kayseri**	**2.16**	**276**	*e*PN	**Pg**	**05 07 11.5**	**-1.4**
SVSK	**Karacayir**	**2.38**	**308**	*e*PN	**Pn**	**05 07 12.2**	**+0.7**
SVSK	**Karacayir**	**2.38**	**308**	*e*Pn	**Pn**	**05 07 12.2**	**+0.7**

*UPP **03** 05:07:09.2, 55.°77N×18.°45E, h0km, ML1.9, Suspected Mining explosion.*
*HEL **03** 05:07:09.5±0.3, 55.°88N×18.°44E, h0km, ML2.4, ML1.9(UPP), ML2.6(NAO), Explosion*
*ISCJB **03** 05:07:10.3±0.6, 56.°19N±0.°05×18.°40E±0.°07, h0km, Error ellipse: s-maj=7.8km s-min=4.3km az=148.1*
*IDC **03** 05:07:11.3±1.3, 56.°00N×18.°39E, h0km, mb1 3.5/4, mb1mx3.2/24, mbtmp3.5/4, ML3.5/4, Error ellipse: s-maj=16.0km s-min=10.1km az=44.0*
*BER **03** 05:07:11.5±5.5, 55.°94N×18.°36E, h0km±46km, ML2.6(NAO)*
*CSEM **03** 05:07:12.3±0.3, 56.°16N×18.°39E, h2km, ML2.3, Error ellipse: s-maj=6.8km s-min=4.6km az=174.0, Mining explosion.*
*NAO **03** 05:07:13.1±3.3, 56.°14N×18.°52E, ML2.6*
ISC 03 05:07:11.8±0.6, 56.°13N±0.°04×18.°33E±0.°06, h0km, n43, σ1.°06/65, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSD	**Bornholm Skovb**	**2.19**	**244**	*i* P	**Pn**	**05 07 47.2**	**-2.2**
BSD				*e*S	**Sn**	**05 08 17.3**	**+0.2**
BSD				*i* LG		05 08 18.3	
BSD	**Bornholm Skovb**	**2.19**	**244**	*i* P	**Pn**	**05 07 47.2**	**-2.2**
BSD				*e*S	**Sn**	**05 08 17.3**	**+0.2**
EKSU	**Eksjoe**	**2.20**	**312**	*e*P	**Pn**	**05 07 51.2**	**+1.6**
EKSU	**Eksjoe**	**2.20**	**312**	P	**Pn**	**05 07 51.1**	**+1.6**
DEL	**Delary**	**2.51**	**280**	*e*P	**Pn**	**05 07 53.1**	**-0.6**
SLIT	**Slitere, Latvi**	**2.64**	**54**	*e*P	**Pn**	**05 07 55.0**	**-0.6**
	SNR=50						
SLIT				*e*S	**Sn**	**05 08 30.4**	**+2.1**
	235nm,0.3s,SNR=50						
FABU	**Falkenberg**	**3.22**	**288**	*e*P	**Pn**	**05 08 02.9**	**-0.7**
FABU	**Falkenberg**	**3.22**	**288**	P	**Pn**	**05 08 02.8**	**-0.8**
BORU	**Boraas**	**3.40**	**299**	*e*P	**Pn**	**05 08 07.7**	**+1.7**
BORU	**Boraas**	**3.40**	**299**	P	**Pn**	**05 08 07.7**	**+1.7**
SUW	**Suwalki**	**3.51**	**125**	*e*P	**Pn**	**05 08 07.8**	**+0.3**
	SNR=50						
NASU	**Vaermlandsnaes**	**3.94**	**317**	*e*P	**Pn**	**05 08 14.4**	**+1.0**
NASU	**Vaermlandsnaes**	**3.94**	**317**	P	**Pn**	**05 08 14.4**	**+1.0**
UDD	**Uddeholm**	**4.69**	**330**	*e*P	**Pn**	**05 08 25.1**	**+1.3**
HFS	**Hagfors**	**4.70**	**330**	Pn	**Pn**	**05 08 25.0**	**+1.1**
	baz=151,slow=14						
HFS				Sn	**Sn**	**05 09 19.0**	**-0.1**
	baz=180,slow=18						
HFS				Lg		05 09 41.9	
	baz=146,slow=28						
HFS	**Hagfors**	**4.70**	**330**	Pn	**Pn**	**05 08 24.7**	**+0.8**
	1.6nm,0.3s,baz=145,slow=14,SNR=59						
HFS				Sn	**Sn**	**05 09 23.8**	**+4.8**
	1.4nm,0.3s,baz=163,slow=31,SNR=5.3						
HFS				Lg		05 09 40.5	
	3.8nm,0.3s,baz=146,slow=31,SNR=10						
HFS	**Hagfors**	**4.70**	**330**	*e*P	**Pn**	**05 08 25.0**	**+1.1**
HFS				*e*S	**Sn**	**05 09 19.0**	**-0.1**
HFS				*e*SG	**Sg**	**05 09 41.9**	**-0.9**
HFS	**Hagfors**	**4.70**	**330**	P	**Pn**	**05 08 24.9**	**+1.0**
HFS				Sn	**Sn**	**05 09 19.0**	**-0.1**
	baz=180,slow=18						
HFS				Sg	**Sg**	**05 09 41.8**	**-0.9**
HFS				Lg		05 09 41.9	
	baz=146,slow=28,SNR=7.8						
VSU	**Vasula**	**5.12**	**59**	Pn	**Pn**	**05 08 30.1**	**+0.5**
VSU				Lg		05 09 51.9	
VSU	**Vasula**	**5.12**	**59**	*e*P	**Pn**	**05 08 30.1**	**+0.5**
VSU				*e*SG	**Sg**	**05 09 51.9**	**-4.3**
VSU	**Vasula**	**5.12**	**59**	P	**Pn**	**05 08 30.1**	**+0.5**
VSU				Sg	**Sg**	**05 09 51.8**	**-4.4**
VSU				Lg		05 09 51.9	
MEF	**Metsahovi**	**5.20**	**36**	*e*P	**Pn**	**05 08 30.6**	**-0.2**
MEF				*e*S	**Sn**	**05 09 31.5**	**+0.1**
MEF	**Metsahovi**	**5.20**	**36**	P	**Pn**	**05 08 30.6**	**-0.2**
MEF				S	**Sn**	**05 09 31.4**	**0.0**
RAF	**Rauma**	**5.22**	**19**	*e*P	**Pn**	**05 08 31.9**	**+0.9**
RAF				*e*S	**Sn**	**05 09 32.8**	**+0.9**
RAF				MSG		05 09 36.5	
	comp=Z,3.5nm,0.3s						
RAF	**Rauma**	**5.22**	**19**	*e*P	**Pn**	**05 08 30.5**	**-0.5**
	SNR=49						
RAF				S	**Sn**	**05 09 32.7**	**+0.8**
	comp=Z,3.5nm,0.3s						
PVF	**Pernaja**	**5.94**	**39**	*e*P	**Pn**	**05 08 40.4**	**-0.5**
PVF				*e*S	**Sn**	**05 09 48.6**	**-0.9**
PVF				MSG		05 09 54.5	
	comp=Z,3.3nm,0.2s						
PVF	**Pernaja**	**5.94**	**39**	P	**Pn**	**05 08 40.4**	**-0.5**
PVF				S	**Sn**	**05 09 48.5**	**-1.0**
	comp=Z,3.3nm,0.2s						
NB2	**NORSAR Subarra**	**6.17**	**326**	Pn	**Pn**	**05 08 43.0**	**-0.9**
	baz=146,slow=14						
NB2	**NORSAR Subarra**	**6.17**	**326**	*e*P	**Pn**	**05 08 43.0**	**-0.9**
NB2	**NORSAR Subarra**	**6.17**	**326**	P	**Pn**	**05 08 43.0**	**-1.0**
NOA	**NORSAR Array B**	**6.17**	**326**	Pn	**Pn**	**05 08 42.5**	**-1.5**
	comp=Z,1.3nm,0.3s,baz=143,slow=12,SNR=29						
NOA				Lg		05 10 29.6	
	comp=Z,1.6nm,0.3s,baz=130,slow=22,SNR=5.2						
FIA0	**FINESS Array S**	**6.67**	**34**	Pn	**Pn**	**05 08 50.4**	**-0.5**
	baz=203,slow=14						
FIA0	**FINESS Array S**	**6.67**	**34**	*e*P	**Pn**	**05 08 49.6**	**-1.3**
FIA0				*e*S	**Sn**	**05 10 06.2**	**-1.4**
FIA0	**FINESS Array S**	**6.67**	**34**	P	**Pn**	**05 08 49.5**	**-1.4**
FIA0	**FINESS Array S**	**6.67**	**34**	Pn	**Pn**	**05 08 50.4**	**-0.5**
	baz=203,slow=12,SNR=1.3						
FIA0				S	**Sn**	**05 10 06.1**	**-1.5**
FINES	**FINESS Array B**	**6.67**	**34**	Pn	**Pn**	**05 08 50.3**	**-0.6**
	comp=Z,2.4nm,0.3s,baz=213,slow=12,SNR=30						
FINES				Sn	**Sn**	**05 10 07.8**	**+0.3**
	comp=Z,1.3nm,0.3s,baz=204,slow=21,SNR=6.1						
FINES				Lg		05 10 42.6	
	comp=Z,1.0nm,0.3s,baz=201,slow=24,SNR=2.1						
KEF	**Keuruu**	**6.92**	**26**	*e*P	**Pn**	**05 08 54.8**	**+0.5**
KEF				*e*S	**Sn**	**05 10 12.7**	**-0.9**
KEF				MSG		05 10 20.1	
	comp=Z,1.7nm,0.3s						
KEF	**Keuruu**	**6.92**	**26**	P	**Pn**	**05 08 54.8**	**+0.5**
KEF				S	**Sn**	**05 10 12.7**	**-0.9**
	comp=Z,1.7nm,0.3s						
AKASG	**Malin Array Be**	**8.48**	**125**	Pn	**Pn**	**05 09 09.7**	**-6.0**
	comp=Z,2.6nm,0.3s,baz=319,slow=12,SNR=7.5						
EKA	**Eskdalemuir Ar**	**12.13**	**275**	Pn	**Pn**	**05 10 01.8**	**-3.9**
	comp=Z,0.2nm,0.3s,baz=87,slow=14,SNR=7.0						
ARA0	**ARCESS Array S**	**13.83**	**11**	Pn	**Pn**	**05 10 24.7**	**-4.1**
	baz=191,slow=14						
ARA0	**ARCESS Array S**	**13.83**	**11**	*e*P	**Pn**	**05 10 24.7**	**-4.1**
ARCES	**ARCESS Array B**	**13.83**	**11**	Pn	**Pn**	**05 10 24.7**	**-4.1**
	comp=Z,0.2nm,0.3s,baz=194,slow=18,SNR=2.2						

*ISCJB **03** 05:10:27.5±1.0, 55.°73N±0.°09×18.°4E±0.°1, h0km, Error ellipse: s-maj=12.9km s-min=9.1km az=18.1*
*CSEM **03** 05:10:31.4±0.4, 55.°92N×18.°38E, h1km, ML2.5, Error ellipse: s-maj=10.6km s-min=5.5km az=153.0, Mining explosion.*
*UPP **03** 05:10:32.8, 56.°02N×18.°24E, h0km, ML2.5, Mining explosion.*
*IDC **03** 05:10:33.0±1.3, 56.°02N×18.°43E, h0km, mb1 3.7/3, mb1mx3.2/23, mbtmp3.7/3, ML3.5/4, Error ellipse: s-maj=16.8km s-min=10.5km az=46.0*
ISC 03 05:10:30.1±1.0, 55.°82N±0.°09×18.°4E±0.°1, h0km, n30, σ0.°62/34, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BYXU	**Byxelkrok**	**1.65**	**333**	P	**Pn**	**05 10 59.6**	**-0.7**
OSKU	**Oskarshamn**	**1.87**	**318**	P	**Pn**	**05 11 03.6**	**+0.4**
GOTU	**Gotland**	**1.87**	**3**	P	**Pn**	**05 11 02.9**	**-0.4**
ASPU	**Aespoe**	**1.88**	**329**	P	**Pn**	**05 11 03.4**	**0.0**
SLIT	**Slitere, Latvi**	**2.82**	**48**	*e*P	**Pn**	**05 11 16.5**	**+0.2**
	SNR=50						
ESKU	**Eskilstuna**	**3.58**	**343**	P	**Pn**	**05 11 27.4**	**+0.6**
NRTU	**Norrtaelje**	**3.87**	**2**	P	**Pn**	**05 11 31.8**	**+1.1**
NASU	**Vaermlandsnaes**	**4.19**	**320**	P	**Pn**	**05 11 35.5**	**+0.3**
OSTU	**Oestervaala**	**4.47**	**352**	P	**Pn**	**05 11 39.5**	**+0.5**
GRAU	**Graesoe**	**4.53**	**1**	P	**Pn**	**05 11 39.1**	**-0.6**
HFS	**Hagfors**	**4.99**	**332**	Pn	**Pn**	**05 11 46.6**	**+0.5**
	baz=144,slow=16						
HFS				Lg		05 12 44.2	
	baz=138,slow=28						
HFS	**Hagfors**	**4.99**	**332**	Pn	**Pn**	**05 11 46.6**	**+0.5**
	baz=144,slow=16						
HFS				Lg		05 12 44.2	
	baz=138,slow=28						
HFS	**Hagfors**	**4.99**	**332**	Pn	**Pn**	**05 11 46.4**	**+0.3**
	1.4nm,0.3s,baz=143,slow=14,SNR=10						
HFS				Lg		05 13 03.1	
	3.1nm,0.3s,baz=160,slow=26,SNR=7.3						
HFS	**Hagfors**	**4.99**	**332**	Pn	**Pn**	**05 11 46.6**	**+0.5**
	baz=144,slow=14,SNR=50						
MEF	**Metsahovi**	**5.44**	**34**	*e*P	**Pn**	**05 11 52.9**	**+0.5**
	SNR=49						
RAF	**Rauma**	**5.51**	**17**	*e*P	**Pn**	**05 11 53.3**	**0.0**
	SNR=49						
NB2	**NORSAR Subarra**	**6.44**	**327**	Pn	**Pn**	**05 12 04.8**	**-1.2**
	baz=127,slow=18						
NB2	**NORSAR Subarra**	**6.44**	**327**	Pn	**Pn**	**05 12 04.8**	**-1.2**
	baz=127,slow=18						
NB2	**NORSAR Subarra**	**6.44**	**327**	Pn	**Pn**	**05 12 04.8**	**-1.2**
	baz=127,slow=18,SNR=50						
NOA	**NORSAR Array B**	**6.44**	**327**	Pn	**Pn**	**05 12 04.7**	**-1.3**
	0.9nm,0.3s,baz=143,slow=12,SNR=6.4						
NOA				Lg		05 13 48.4	
	1.5nm,0.3s,baz=106,slow=6.5,SNR=4.4						
FIA0	**FINESS Array S**	**6.92**	**32**	Pn	**Pn**	**05 12 12.2**	**-0.4**
	baz=215,slow=12						
FIA0				Sn	**Sn**	**05 13 15.5**	**-16**
	baz=218,slow=28						
FIA0	**FINESS Array S**	**6.92**	**32**	Pn	**Pn**	**05 12 12.2**	**-0.4**
	baz=215,slow=12						
FIA0				Sn	**Sn**	**05 13 15.5**	**-16**
	baz=218,slow=28						
FIA0	**FINESS Array S**	**6.92**	**32**	Pn	**Pn**	**05 12 12.2**	**-0.4**
	baz=215,slow=12,SNR=50						
FIA0				Sn	**Sn**	**05 13 15.5**	**-16**
FINES	**FINESS Array B**	**6.92**	**32**	Pn	**Pn**	**05 12 11.8**	**-0.8**
	3.1nm,0.3s,baz=217,slow=12,SNR=21						
FINES				Sn	**Sn**	**05 13 29.4**	**-2.5**
	1.4nm,0.3s,baz=221,slow=20,SNR=3.6						
FINES				Lg		05 14 02.9	
	1.2nm,0.3s,baz=216,slow=23,SNR=3.5						
AKASG	**Malin Array Be**	**8.28**	**124**	Pn	**Pn**	**05 12 31.2**	**-0.1**
	2.2nm,0.3s,baz=316,slow=12,SNR=6.8						
EKA	**Eskdalemuir Ar**	**12.19**	**277**	Pn	**Pn**	**05 13 24.5**	**-0.3**
	0.2nm,0.3s,baz=85,slow=13,SNR=8.0						
ARA0	**ARCESS Array S**	**14.13**	**10**	Pn	**Pn**	**05 13 45.1**	**-6.0**
	baz=191,slow=14						
ARA0	**ARCESS Array S**	**14.13**	**10**	P	**Pn**	**05 13 45.1**	**-6.0**
	baz=191,slow=14						
ARCES	**ARCESS Array B**	**14.13**	**10**	Pn	**Pn**	**05 13 45.2**	**-5.9**
	0.3nm,0.3s,baz=191,slow=19,SNR=2.5						
ARCES	**ARCESS Array B**	**14.13**	**10**	Pn	**Pn**	**05 13 45.2**	**-5.9**

*CSEM **03** 05:10:45.9, 37.°45N×21.°68E, h11km, ML2.6/4, After THE*
THE 03 05:10:45.9, 37.°45N×21.°68E, h11km±2km, ML2.6/4, Error ellipse: s-maj=2.2km s-min=0.5km az=146.0, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITM	**Ithomi**	**0.33**	**144**	P	Pg	05 10 52.6	+0.1
ITM				S	Sg	05 10 57.6	+0.7
ITM	**Ithomi**	**0.33**	**144**	P	Pg	05 10 52.6	+0.1
ITM				S	Sg	05 10 57.6	+0.7
PYL	**PYLOS**	**0.55**	**175**	P	Pg	05 10 55.8	-0.9
PYL				S	Sg	05 11 04.7	+0.8
PYL	**PYLOS**	**0.55**	**175**	P	Pg	05 10 55.8	-0.9
PYL				S	Sg	05 11 04.7	+0.8
VLX	**Vlachokerasia**	**0.56**	**98**	P	Pg	05 10 56.9	+0.1
VLX				S	Sg	05 11 04.9	+0.8
VLX	**Vlachokerasia**	**0.56**	**98**	P	Pg	05 10 56.9	+0.1
VLX				S	Sg	05 11 04.9	+0.8
GUR	**Goura**	**0.71**	**47**	P	Pg	05 10 59.2	-0.5
GUR				S	Sg	05 11 09.6	+0.5
GUR	**Goura**	**0.71**	**47**	P	Pg	05 10 59.2	-0.5
GUR				S	Sg	05 11 09.6	+0.5
KFL	**Anninata**	**0.97**	**313**	P	Pg	05 11 04.3	-0.3
KFL	**Anninata**	**0.97**	**313**	P	Pg	05 11 04.3	-0.3
EFP	**Efpalio**	**0.99**	**10**	P	Pg	05 11 04.8	-0.2
EFP				S	Sg	05 11 19.0	+1.0
EFP	**Efpalio**	**0.99**	**10**	P	Pg	05 11 04.8	-0.2
EFP				S	Sg	05 11 19.0	+1.0
KALE	**Kalithea**	**1.01**	**21**	P	Pg	05 11 04.8	-0.5
KALE				S	Sg	05 11 19.5	+1.1
KALE	**Kalithea**	**1.01**	**21**	P	Pg	05 11 04.8	-0.5
KALE				S	Sg	05 11 19.5	+1.1

*BER **03** 05:10:48.6±3.1, 57.°25N×18.°30E, h7km±20km, ML2.5(NAO)*
*NAO **03** 05:10:49.6±2.6, 57.°50N×18.°54E, ML2.5*
IDC 03 05:10:49.1±1.5, 56.°03N×18.°45E, h0km, mb1 3.5/4, mb1mx3.2/24, mbtmp3.5/4, ML3.6/4, Error ellipse: s-maj=19.7km s-min=11.1km az=44.0, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HFS	**Hagfors**	**4.83**	**330**	Pn	Pn	05 12 02.3	-0.6
	1.5nm,0.3s,baz=140,slow=15,SNR=6.7						
HFS				Lg		05 13 18.9	
	3.5nm,0.3s,baz=149,slow=28,SNR=5.3						
VSU	**Vasula**	**5.11**	**58**	Pn	Pn	05 11 58.0	-8.8
VSU				Lg		05 13 12.8	
VSU	**Vasula**	**5.11**	**58**	Pn	Pn	05 11 58.0	-8.8
VSU				Lg		05 13 12.8	
VSU	**Vasula**	**5.11**	**58**	Pn	Pn	05 11 58.0	-8.8
VSU				Lg		05 13 12.8	
NOA	**NORSAR Array B**	**6.29**	**326**	Pn	Pn	05 12 20.8	-2.1
	0.9nm,0.3s,baz=142,slow=12,SNR=5.3	

YLYR				*e*		05 25 39.2	
YLYR				max		05 25 44.0	
	comp=N,34nm,0.8s						
YLYR				*e*		05 26 01.7	
YLYR				*i* Sg	Sg	05 26 15.9	-4.3
YLYR				Smax		05 26 27.1	
	comp=N,270nm,1.4s						
NIZ	**Nizh Angarsk**	**3.86 265**		*e*PN	Pg	05 25 46.4	-2.8
NIZ				*e*		05 26 34.5	
NIZ				pmax	pmax		
	comp=Z,28nm,1.1s						
NIZ				smax			
	comp=N,168nm,1.1s						
NIZ	**Nizh Angarsk**	**3.86 265**		*e*Pn	Pn	05 25 33.2	-2.6
NIZ				*e*		05 25 37.7	
NIZ				*e*Pg	Pg	05 25 44.3	-4.9
NIZ				Pmax		05 25 47.1	
	comp=N,28nm,1.0s						
NIZ				*e*		05 26 20.0	
NIZ				*i* Sg	Sg	05 26 34.5	-4.7
NIZ				Smax		05 26 53.7	
	comp=N,169nm,0.9s						
SYVR	**Suvo**	**4.51 237**		*e*Pg	Pg	05 25 55.6	-6.0
SYVR			⇓	*e*Pg	Pg	05 26 02.5	+0.9
SYVR				max		05 26 03.3	
	comp=N,28nm,0.8s						
SYVR				*e*		05 26 43.5	
SYVR				*i* Sg	Sg	05 26 53.6	-6.4
SYVR				Smax		05 26 59.3	
	comp=N,262nm,1.0s						
SYVR				*e*		05 27 03.7	
CIT	**Chita**	**4.58 202**		*e*	Pg	05 26 10.2	+7.3
CIT				*i* Sg	Sg	05 26 56.7	-5.5
CIT				Smax		05 27 00.5	
	comp=N,896nm,1.5s						
CLNS	**Chul'man**	**4.75**	**80**	*e*PN	Pg	05 25 58.2	-8.1
CLNS				*e*		05 27 02.1	
CLNS				pmax	pmax		
	comp=Z,6.0nm,0.3s						
CLNS				pmax	pmax		
	comp=N,2.0nm,0.2s						
CLNS				pmax	pmax		
	comp=E,5.0nm,0.4s						
CLNS				smax			
	comp=Z,69nm,0.8s						
CLNS				smax			
	comp=N,216nm,0.7s						
CLNS				smax			
	comp=E,152nm,0.9s						
CLNS	**Chul'man**	**4.75**	**80**	*e*Pg	Pg	05 26 01.6	-4.7
CLNS				*e*		05 26 47.3	
CLNS				*e*Sg	Sg	05 27 03.0	-4.9
TNDR	**Tynda**	**4.86 100**		*e*Pg	Pg	05 26 02.8	-5.6
TNDR				*e*Sg	Sg	05 27 07.3	-4.1
OGRR	**Ongureny**	**5.70 246**		*e*PN	Pn	05 25 59.9	-1.2
OGRR				*e*		05 26 16.8	
OGRR				*e*		05 27 29.6	
OGRR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
OGRR				smax			
	comp=N,57nm,0.7s						
OGRR	**Ongureny**	**5.70 246**	⇑	*i*Pn	Pn	05 26 00.6	-0.5
OGRR				*e*		05 26 03.6	
OGRR				*e*		05 26 07.2	
OGRR				max		05 26 21.9	
	comp=N,9.0nm,1.0s						
OGRR				*e*		05 27 02.7	
OGRR				*e*Sg	Sg	05 27 30.6	-7.6
OGRR				Smax		05 27 35.6	
	comp=N,105nm,1.2s						
ZRHB	**Zarechye**	**6.54 239**		*e*	Pg	05 27 12.2	+32
ZRHB				*e*Sg	Sg	05 27 59.3	-5.9
ZRHB				Smax		05 28 10.5	
	comp=N,439nm,1.3s						
UUDB	**Ulan-Yde**	**6.76 233**		*e*Pg	Pg	05 26 37.5	-7.2
UUDB				Pmax		05 26 57.9	
	comp=N,12nm,0.9s						
UUDB				*i* Sg	Sg	05 28 04.1	-8.2
UUDB				Smax		05 28 07.1	
	comp=N,302nm,2.0s						
ZEA	**Zeya**	**6.76 108**		*e*	Pg	05 27 00.5	+16
ZEA				*e*		05 27 42.3	
ZEA				*e*Sg	Sg	05 28 05.2	-7.1
TRG	**Tyrgan**	**6.81 243**		*e*Pg	Pg	05 26 37.2	-8.5
TRG				Pmax		05 26 40.6	
	comp=N,12nm,1.2s						
TRG				*e*Sg	Sg	05 28 06.0	-7.8
TRG				Smax		05 28 17.6	
	comp=N,50nm,1.5s						
KPC	**Khapcheranga**	**7.01 202**	⇑	*i*Pn	Pn	05 26 15.3	-3.8
KPC				*e*		05 26 26.1	
KPC				*e*Pg	Pg	05 26 41.5	-8.0
KPC				Pmax		05 26 45.5	
	comp=N,8.0nm,0.9s						
KPC				*e*Sn	Sn	05 27 30.0	-9.4
KPC				*e*Sg	Sg	05 28 13.0	-7.3
KPC				Smax		05 28 18.4	
	comp=N,167nm,1.1s						
FFNB	**Fofonovo**	**7.05 237**		*e*Pn	Pg	05 27 08.8	+19
FFNB				*e*Sg	Sg	05 28 13.3	-8.2
FFNB				Smax		05 28 21.4	
	comp=N,262nm,1.1s						
KAB	**Kabansk**	**7.10 237**		*e*	Pg	05 27 00.8	+10
KAB				*e*		05 27 40.8	
KAB				*e*Sg	Sg	05 28 15.0	-8.1
KAB				Smax		05 28 43.4	
	comp=N,677nm,1.4s						
HRMR	**Khuramsha**	**7.24 234**		*e*Pg	Pg	05 26 44.5	-9.5
HRMR				*e*		05 26 52.8	
HRMR				max		05 27 01.5	
	comp=N,16nm,0.7s						
HRMR				*e*		05 27 22.0	
HRMR				*e*Sg	Sg	05 28 20.0	-7.7
HRMR				Smax		05 28 27.0	
	comp=N,460nm,1.0s						
LSTR	**Listvyanka**	**8.09 242**		*e*	Pg	05 28 09.2	+59
LSTR				*e*Sg	Sg	05 28 46.8	-8.0
LSTR				Smax		05 28 54.6	
	comp=N,132nm,1.6s						
TLY	**Talaya**	**8.79 244**		*e*		05 28 49.7	
TLY				*e*Sg	Sg	05 29 07.8	-10
TLY				Smax		05 29 31.1	
	comp=N,53nm,1.6s						
ARS	**Arshan**	**9.28 248**		*e*		05 28 48.6	
ARS				*e*Sg	Sn	05 29 23.6	+49
ARS				Smax		05 29 41.5	
	comp=N,123nm,0.9s						
MOY	**Mondy**	**10.16 249**		*e*		05 28 45.4	
MOY				*e*Sg	Sn	05 29 50.2	+54
MOY				*e*		05 29 52.3	
MOY				max		05 29 58.7	
	comp=N,51nm,1.3s						
ULN	**Ulaanbaatar**	**10.18 218**		*e*Pn	Pn	05 27 00.3	-2.2
ULN				*e*		05 28 11.2	
ULN				*e*		05 29 00.2	
ULN				*e*Sg	Sn	05 29 51.3	+54
ORL	**Orlik**	**10.34 256**		*e*	Pn	05 27 27.2	+22
ORL				*e*		05 27 35.7	
ORL				*e*		05 29 16.2	
ORL				*e*Sg	Sn	05 29 56.5	+55
ORL				Smax		05 30 10.6	
	comp=N,51nm,1.4s						

*IDC **03** 05:26:34.1±1.4, 2.°35N×96.°10E, h0km, mb4.1/7, mb1 4.1/9, mb1mx3.8/22, mbtmp4.0/9, ML3.0/1, Error ellipse: s-maj=47.0km s-min=18.3km az=54.0*
*ISCJB **03** 05:26:39.6±2.0, 2.°6N±0.°1×96.°3E±0.°1, h47km±15km, mb4.2/13, Error ellipse: s-maj=23.8km s-min=11.9km az=138.6*
*BJI **03** 05:26:39.4, 2.°96N×96.°59E, h15km, mB4.4/3, mb4.6/6*
*NEIC **03** 05:26:39.7±0.6, 2.°42N×96.°21E, h35km, mb4.1/2, Error ellipse: s-maj=13.9km s-min=8.2km az=45.0*
*DJA **03** 05:26:44, 2.°94N×96.°42E, h37km, MLv3.9/3*
ISC 03 05:26:40.7±2.1, 2.°5N±0.°1×96.°3E±0.°1, h38km±15km, h13km±5.1km: pP-P, n24, σ0.°75/25, mb4.2/13, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**1.13**	**50**	P	**Pn**	**05 27 00.1**	**+0.1**
TPTI				S	**Sn**	**05 27 11.4**	**-2.9**

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TSI	**Tuntungan**	**2.45**	**67**	P	**Pn**	**05 27 19.1**	**+0.9**
PSI	**Prapat**	**2.62**	**84**	Pn	**Pn**	**05 27 21.2**	**+0.7**
	2.5nm,0.3s,baz=284,slow=3.6,SNR=16						
BSI	**Banda Aceh**	**3.12**	**341**	P	**Pn**	**05 27 26.4**	**-1.0**
MNSI	**Mandailing Nat**	**3.69**	**118**	P	**Pn**	**05 27 40.6**	**+5.3**
IPM	**Ipoh**	**5.09**	**68**	P	**Pn**	**05 27 54.6**	**+0.1**
KULM	**Kulim**	**5.12**	**58**	*e*Pn	**Pn**	**05 27 56.2**	**+1.3**
	44nm,0.8s						
KULM	**Kulim**	**5.12**	**58**	P	**Pn**	**05 27 54.7**	**-0.3**
CMAR	**Chiang Mai Arr**	**16.04**	**9**	Pn	**Pn**	**05 30 23.7**	**+0.2**
	baz=200,slow=11,SNR=14						
XAN	**Xi'an**	**33.48**	**19**	P	**P**	**05 33 15.8**	**-0.6**
XAN				pP	pP	05 33 21.9	-5.3
XAN				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
XAN				pmax	pmax		
	comp=Z,10.0nm,5.2s						
LZH	**Lanzhou**	**34.11**	**11**	*e*P	**P**	**05 33 22.0**	**+0.2**
LZH				pP	pP	05 33 26.5	-6.1
LZH				sP	sP	05 33 28.0	-9.2
LZH				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.8						
GTA	**Gaotai**	**36.84**	**5**	*e*P	**P**	**05 33 45.9**	**+0.6**
GTA				pP	pP	05 33 50.8	-5.3
GTA				sP	sP	05 33 53.7	-7.0
GTA				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.6						
BJI	**Beijing**	**41.45**	**23**	P	**P**	**05 34 24.6**	**+0.8**
BJI				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.8						
WRA	**Warramunga Arr**	**43.49**	**123**	P	**P**	**05 34 39.4**	**-1.3**
	comp=Z,0.7nm,0.6s,mb3.6,baz=300,slow=9.0,SNR=4.1						
ASAR	**Alice Springs**	**44.90**	**128**	P	**P**	**05 34 50.8**	**-1.1**
	comp=Z,0.3nm,0.5s,mb3.4,baz=303,slow=8.0,SNR=5.8						
MK31	**Makanchi Array**	**45.75**	**347**	*e*P	**P**	**05 34 58.3**	**+0.1**
MKAR	**Makanchi Array**	**45.75**	**347**	P	**P**	**05 34 58.4**	**+0.2**
	comp=Z,4.4nm,0.7s,mb4.5,baz=163,slow=7.9,SNR=60						
SONM	**Songino Array**	**45.96**	**9**	P	**P**	**05 35 00.5**	**+0.6**
	comp=Z,2.5nm,0.5s,mb4.4,baz=190,slow=9.4,SNR=11						
KURK	**Kurchatov**	**50.29**	**345**	*e*P	**P**	**05 35 33.6**	**+0.3**
	comp=Z,4.4nm,1.1s,mb4.4						
ZAA0	**Zalesovo Array**	**52.11**	**351**	*e*P	**P**	**05 35 47.0**	**+0.1**
ZALV	**Zalesovo Beam**	**52.11**	**351**	P	**P**	**05 35 47.0**	**+0.1**
	comp=Z,4.8nm,0.5s,mb4.7,baz=180,slow=6.9,SNR=26						
STKA	**Stephens Creek**	**54.90**	**132**	P	**P**	**05 36 08.5**	**+0.7**
	comp=Z,0.6nm,0.4s,mb4.0,baz=324,slow=19,SNR=2.8						
ABKAR	**Akbulak array**	**55.93**	**332**	*e*P	**P**	**05 36 14.5**	**-0.4**
	comp=Z,0.8nm,0.7s,mb3.9						
FINES	**FINESS Array B**	**78.42**	**333**	P	**P**	**05 38 36.6**	**-0.6**
	comp=Z,1.5nm,0.8s,mb4.0,baz=111,slow=11,SNR=3.6						

*CSEM **03** 05:38:51.8±0.3, 35.°56N×35.°52E, h30km, Mc2.1, Error ellipse: s-maj=7.0km s-min=6.3km az=177.0*
*DDA **03** 05:38:52.4, 35.°85N×35.°37E, h4km±7km, Md3.1*
*ISK **03** 05:38:53.0, 35.°80N×35.°29E, h9km, MD3.4*
*NSSC **03** 05:38:54, 35.°59N×35.°70E, h19km±3km*
ISC 03 05:38:51.2±0.6, 35.°57N±0.°03×35.°51E±0.°05, h19km±6km, n47, σ1°31/65, 8D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARNB	**Al Arnab**	**0.47**	**52**	⇓P	**Pg**	**05 39 01.0**	**+0.2**
ARNB				⇓S	**Sg**	**05 39 08.0**	**+0.8**
SLNF	**Slenfeh**	**0.58**	**88**	⇑P	**Pg**	**05 39 03.0**	**+0.3**
SLNF				⇑S	**Sg**	**05 39 09.0**	**-1.5**
SLNF	**Slenfeh**	**0.58**	**88**	⇑*i*P	**Pg**	**05 39 03.8**	**+1.1**
SLNF				⇑*i*S	**Sg**	**05 39 10.5**	**0.0**
YAYL	**Yayladag**	**0.67**	**46**	⇓*i*P	**Pg**	**05 39 04.6**	**+0.3**
YAYL				*i* S	**Sg**	**05 39 14.5**	**+1.3**
YAYL	**Yayladag**	**0.67**	**46**	*i* P	**Pg**	**05 39 04.6**	**+0.3**
YAYL				*i* S	**Sg**	**05 39 14.5**	**+1.2**
WRDH	**Warideh**	**0.74**	**95**	⇑P	**Pg**	**05 39 06.0**	**+0.4**
WRDH				⇑S	**Sg**	**05 39 14.0**	**-1.4**
WRDH	**Warideh**	**0.74**	**95**	⇑*i*P	**Pg**	**05 39 06.2**	**+0.6**
WRDH				⇑*i*S	**Sg**	**05 39 13.2**	**-2.2**
HTY	**Hatay**	**0.75**	**43**	*e*PG	**Pg**	**05 39 07.9**	**+2.1**
HTY				*e*SG	**Sg**	**05 39 19.0**	**+3.2**
HTY	**Hatay**	**0.75**	**43**	*e*Pg	**Pg**	**05 39 07.9**	**+2.1**
HTY				*e*Sg	**Sg**	**05 39 19.0**	**+3.2**
BIDA	**Albida**	**0.86**	**130**	⇑P	**Pg**	**05 39 08.0**	**-0.1**
BIDA				⇓S	**Sg**	**05 39 20.0**	**+0.5**
BIDA	**Albida**	**0.86**	**130**	⇑*i*P	**Pg**	**05 39 08.2**	**+0.1**
BIDA				⇑*i*S	**Sg**	**05 39 17.2**	**-2.3**
BTCH	**Batrach**	**0.90**	**59**	⇓P	**Pg**	**05 39 08.0**	**-0.7**
BTCH				⇓S	**Sg**	**05 39 21.0**	**+0.4**
BTCH	**Batrach**	**0.90**	**59**	⇓*i*P	**Pg**	**05 39 08.5**	**-0.2**
BTCH				⇓*i*S	**Sg**	**05 39 17.6**	**-3.0**
KRTS	**Karatas**	**1.00**	**354**	*e*PG	**Pg**	**05 39 08.3**	**-2.4**
KRTS	**Karatas**	**1.00**	**354**	*e*Pg	**Pg**	**05 39 08.3**	**-2.4**
EREN	**Erenkoy**	**1.10**	**268**	*e*PG	**Pg**	**05 39 11.7**	**-0.7**
EREN	**Erenkoy**	**1.10**	**268**	*e*Pg	**Pg**	**05 39 11.7**	**-0.7**
COBT	**Iskenderun**	**1.12**	**32**	*e*P	**Pg**	**05 39 11.9**	**-0.9**
COBT				*e*S	**Sg**	**05 39 23.8**	**-3.8**
COBT	**Iskenderun**	**1.12**	**32**	*e*P	**Pg**	**05 39 11.9**	**-1.0**
COBT				*e*S	**Sg**	**05 39 23.8**	**-3.8**
HWQ	**Hawqa**	**1.34**	**164**	*e*P	**Pn**	**05 39 14.3**	**-0.5**
HWQ	**Hawqa**	**1.34**	**164**	*e*P	**Pn**	**05 39 14.3**	**-0.5**
DRWC	**Darouich**	**1.40**	**41**	⇑*i*P	**Pn**	**05 39 16.5**	**+0.8**
DRWC				⇑*i*S	**Sn**	**05 39 30.6**	**-3.0**
CEYT	**Ceyhan**	**1.45**	**7**	*e*PN	**Pn**	**05 39 17.3**	**+1.0**
CEYT	**Ceyhan**	**1.45**	**7**	*e*Pn	**Pn**	**05 39 17.3**	**+1.0**
MERS	**Mersin**	**1.52**	**328**	*e*PN	**Pn**	**05 39 16.9**	**-0.3**
MERS	**Mersin**	**1.52**	**328**	*e*Pn	**Pn**	**05 39 16.9**	**-0.4**
IKL	**Isikli**	**1.62**	**295**	*e*PN	**Pn**	**05 39 18.0**	**-0.7**
IKL	**Isikli**	**1.62**	**295**	*e*Pn	**Pn**	**05 39 18.0**	**-0.7**
LFK	**Lefkose**	**1.64**	**260**	*e*PN	**Pn**	**05 39 21.0**	**+2.0**
LFK	**Lefkose**	**1.64**	**260**	*e*Pn	**Pn**	**05 39 21.0**	**+2.0**
BHL	**Bhannes**	**1.67**	**176**	*e*P	**Pn**	**05 39 19.3**	**0.0**
BHL	**Bhannes**	**1.67**	**176**	*e*P	**Pn**	**05 39 19.3**	**0.0**
KARA	**Karaisali**	**1.72**	**348**	*e*PN	**Pn**	**05 39 20.1**	**+0.1**
KARA	**Karaisali**	**1.72**	**348**	*e*Pn	**Pn**	**05 39 20.1**	**0.0**
GULE	**Gulek**	**1.81**	**341**	*e*P	**Pn**	**05 39 20.6**	**-0.7**
GULE				*e*S	**Sn**	**05 39 42.0**	**-1.6**
GULE	**Gulek**	**1.81**	**341**	*e*P	**Pn**	**05 39 20.5**	**-0.7**
GULE				*e*S	**Sn**	**05 39 42.0**	**-1.6**
KOZT	**Kozan**	**1.92**	**7**	*e*PN	**Pn**	**05 39 24.1**	**+1.3**
GAZ	**Gaziantep**	**2.10**	**40**	*e*PN	**Pn**	**05 39 28.8**	**+3.5**
GAZ	**Gaziantep**	**2.10**	**40**	*e*Pn	**Pn**	**05 39 28.8**	**+3.5**
LEF	**Lefka**	**2.19**	**259**	*e*PN	**Pn**	**05 39 29.4**	**+2.9**
LEF	**Lefka**	**2.19**	**259**	*e*Pn	**Pn**	**05 39 29.4**	**+2.9**
HDMB	**Hadim**	**2.81**	**300**	*e*PN	**Pn**	**05 39 35.1**	**+0.1**
HDMB	**Hadim**	**2.81**	**300**	*e*Pn	**Pn**	**05 39 35.1**	**+0.1**
SARI	**SarD1z-Kayseri**	**3.24**	**17**	*e*PN	**Pn**	**05 39 38.5**	**-2.4**
SARI	**SarD1z-Kayseri**	**3.24**	**17**	*e*Pn	**Pn**	**05 39 38.5**	**-2.4**
URFA	**Urfa**	**3.25**	**54**	*e*PN	**Pn**	**05 39 46.2**	**+5.1**
SVRC	**Sivrice-ELAZID**	**4.13**	**46**	*e*PN	**Pn**	**05 39 57.9**	**+4.8**

IDC 03 05:46:09.4±5.6, 10.°61N×91.°71E, h28km±7km, mb3.3/3, mb1 3.5/3, mb1mx3.2/21, mbtmp3.3/3, Error ellipse: s-maj=283.7km s-min=20.4km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.94**	**349**	P	P	05 53 15.8	-0.3
	0.5nm,0.5s,baz=166,slow=9.0,SNR=7.1						
MKAR				pP	pP	05 53 24.6	+0.3
	0.4nm,0.5s,baz=172,slow=8.3,SNR=5.2						
WRA	**Warramunga Arr**	**51.79**	**126**	P	P	05 55 15.4	+0.3
	0.3nm,0.5s,baz=307,slow=8.3,SNR=7.2						
WRA				pP	pP	05 55 23.4	-0.2
	0.4nm,0.4s,baz=306,slow=8.4,SNR=2.8						
ASAR	**Alice Springs**	**53.50**	**130**	P	P	05 55 27.4	-0.3
	0.4nm,0.7s,baz=305,slow=6.5,SNR=4.1						
ASAR				pP	pP	05 55 36.1	-0.1
	0.4nm,0.7s,baz=301,slow=7.0,SNR=2.9						

*HEL **03** 05:48:24.4±0.4, 55.°81N×18.°33E, h0km, ML2.3, ML2.6(UPP), ML2.6(NAO), Explosion*
*ISCJB **03** 05:48:25.2±0.8, 56.°10N±0.°06×18.°53E±0.°07, h0km, Error ellipse: s-maj=8.8km s-min=4.9km az=151.5*
*BER **03** 05:48:26.0±4.1, 55.°86N×18.°33E, h0km±21km, ML2.6(NAO)*
*CSEM **03** 05:48:26.8±0.5, 56.°02N×18.°38E, h1km, ML2.6, Error ellipse: s-maj=11.3km s-min=6.7km az=159.0, Mining explosion.*
*NAO **03** 05:48:27.0±2.8, 56.°01N×18.°47E, ML2.6*
*IDC **03** 05:48:28.2±1.3, 56.°06N×18.°50E, h0km, mb1 3.6/4, mb1mx3.2/24, mbtmp3.5/4, ML3.5/4, Error ellipse: s-maj=17.2km s-min=9.6km az=39.0*
*UPP **03** 05:48:28.5, 56.°03N×18.°00E, h0km, ML2.6, Mining explosion.*
ISC 03 05:48:26.2±0.6, 56.°03N±0.°04×18.°45E±0.°05, h0km, n45, σ1°28/65, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BYXU	**Byxelkrok**	**1.50**	**328**	*e*P	**Pn**	**05 48 53.8**	**-0.5**
BYXU				*e*S	**Sg**	**05 49 14.9**	**+0.7**
BYXU	**Byxelkrok**	**1.50**	**328**	P	**Pn**	**05 48 53.8**	**-0.4**
BYXU				S	**Sg**	**05 49 14.8**	**+0.6**
ASPU	**Aespoe**	**1.73**	**325**	*e*P	**Pn**	**05 48 57.7**	**+0.3**
ASPU	**Aespoe**	**1.73**	**325**	P	**Pn**	**05 48 57.7**	**+0.3**
OSKU	**Oskarshamn**	**1.75**	**313**	*e*P	**Pn**	**05 48 57.6**	**-0.1**
OSKU	**Oskarshamn**	**1.75**	**313**	P	**Pn**	**05 48 57.6**	**-0.1**
BSD	**Bornholm Skovb**	**2.21**	**247**	*i* P	**Pn**	**05 49 03.2**	**-0.8**
BSD				*i* S	**Sn**	**05 49 32.8**	**+0.8**
BSD	**Bornholm Skovb**	**2.21**	**247**	*i* P	**Pn**	**05 49 03.2**	**-0.8**
BSD				*i* S	**Sn**	**05 49 32.8**	**+0.8**
SLIT	**Slitere, Latvi**	**2.65**	**51**	*e*P	**Pn**	**05 49 11.1**	**+1.0**
	SNR=50						
ESKU	**Eskilstuna**	**3.40**	**342**	*e*P	**Pn**	**05 49 21.6**	**+1.3**
ESKU	**Eskilstuna**	**3.40**	**342**	P	**Pn**	**05 49 21.6**	**+1.2**
NRTU	**Norrtaelje**	**3.66**	**1**	*e*P	**Pn**	**05 49 26.3**	**+2.3**
NRTU	**Norrtaelje**	**3.66**	**1**	P	**Pn**	**05 49 26.3**	**+2.3**
NASU	**Vaermlandsnaes**	**4.07**	**318**	*e*P	**Pn**	**05 49 29.7**	**+0.1**
NASU	**Vaermlandsnaes**	**4.07**	**318**	P	**Pn**	**05 49 29.7**	**+0.2**
FLYU	**Flymyra**	**4.12**	**356**	*e*P	**Pn**	**05 49 32.5**	**+2.2**
FLYU	**Flymyra**	**4.12**	**356**	P	**Pn**	**05 49 32.5**	**+2.2**
OSTU	**Oestervaala**	**4.27**	**351**	*e*P	**Pn**	**05 49 33.9**	**+1.5**
OSTU	**Oestervaala**	**4.27**	**351**	P	**Pn**	**05 49 33.8**	**+1.4**
HFS	**Hagfors**	**4.83**	**330**	Pn	**Pn**	**05 49 40.7**	**+0.7**
	baz=151,slow=11						
HFS				Sn	**Sn**	**05 50 34.1**	**-2.5**
	baz=162,slow=37						
HFS				Lg		05 50 56.8	
	baz=156,slow=37						
HFS	**Hagfors**	**4.83**	**330**	Pn	**Pn**	**05 49 40.5**	**+0.5**
	2.0nm,0.3s,baz=143,slow=15,SNR=61						
HFS				Sn	**Sn**	**05 50 37.3**	**+0.8**
	1.2nm,0.3s,baz=132,slow=24,SNR=5.1						
HFS				Lg		05 50 56.2	
	3.5nm,0.3s,baz=155,slow=29,SNR=8.2						
HFS	**Hagfors**	**4.83**	**330**	*e*P	**Pn**	**05 49 40.7**	**+0.7**
HFS				*e*S	**Sn**	**05 50 34.1**	**-2.5**
HFS				*e*SG	**Sg**	**05 50 56.8**	**-4.4**
HFS	**Hagfors**	**4.83**	**330**	P	**Pn**	**05 49 40.7**	**+0.7**
HFS				S	**Sn**	**05 50 34.1**	**-2.5**
VSU	**Vasula**	**5.12**	**58**	Pn	**Pn**	**05 49 44.3**	**+0.3**
VSU				Lg		05 51 08.2	
VSU	**Vasula**	**5.12**	**58**	*e*P	**Pn**	**05 49 44.3**	**+0.3**
VSU				*e*SG	**Sg**	**05 51 08.2**	**-2.2**
VSU	**Vasula**	**5.12**	**58**	Pn	**Pn**	**05 49 44.3**	**+0.3**
MEF	**Metsahovi**	**5.25**	**34**	*e*P	**Pn**	**05 49 47.4**	**+1.6**
	SNR=49						
RAF	**Rauma**	**5.30**	**18**	*e*P	**Pn**	**05 49 48.7**	**+2.2**
	SNR=49						
NB2	**NORSAR Subarra**	**6.29**	**326**	Pn	**Pn**	**05 49 58.8**	**-1.3**
	baz=142,slow=14						
NB2				Lg		05 51 45.2	
	baz=127,slow=28						
NB2	**NORSAR Subarra**	**6.29**	**326**	*e*P	**Pn**	**05 49 58.8**	**-1.3**
NB2				*e*SG	**Sg**	**05 51 45.2**	**-2.8**
NB2	**NORSAR Subarra**	**6.29**	**326**	Pn	**Pn**	**05 49 58.8**	**-1.3**
	baz=142,slow=13,SNR=50						
NOA	**NORSAR Array B**	**6.29**	**326**	Pn	**Pn**	**05 49 58.9**	**-1.2**
	1.2nm,0.3s,baz=142,slow=12,SNR=29						
NOA				Sn	**Sn**	**05 51 11.8**	**-0.7**
	0.7nm,0.3s,baz=135,slow=24,SNR=3.7						
NOA				Lg		05 51 43.9	
	1.7nm,0.3s,baz=137,slow=26,SNR=5.2						
FIA0	**FINESS Array S**	**6.72**	**33**	Pn	**Pn**	**05 50 06.5**	**+0.5**
	baz=208,slow=12						
FIA0				Sn	**Sn**	**05 51 21.7**	**-1.4**
	baz=205,slow=28						
FIA0	**FINESS Array S**	**6.72**	**33**	*e*P	**Pn**	**05 50 06.4**	**+0.4**
FIA0				*e*S	**Sn**	**05 51 21.4**	**-1.8**
FIA0				MSG		05 51 25.1	
	comp=Z,3.6nm,0.2s						
FIA0	**FINESS Array S**	**6.72**	**33**	Pn	**Pn**	**05 50 06.4**	**+0.4**
	baz=208,slow=12,SNR=50						
FIA0				Sn	**Sn**	**05 51 21.7**	**-1.5**
	baz=205,slow=24,SNR=6.8						
FINES	**FINESS Array B**	**6.72**	**33**	Pn	**Pn**	**05 50 06.2**	**+0.2**
	comp=Z,3.4nm,0.3s,baz=213,slow=12,SNR=69						
FINES				Sn	**Sn**	**05 51 23.4**	**+0.2**
	comp=Z,1.4nm,0.3s,baz=213,slow=23,SNR=7.8						
KEF	**Keuruu**	**6.99**	**26**	*e*P	**Pn**	**05 50 10.3**	**+0.7**
KEF				*e*S	**Sn**	**05 51 29.1**	**-0.5**
KAF	**Kangasniemi**	**7.32**	**30**	*e*P	**Pn**	**05 50 14.1**	**0.0**
KAF				*e*S	**Sn**	**05 51 38.2**	**+0.4**
SUF	**Sumiainen**	**7.77**	**27**	*e*P	**Pn**	**05 50 20.0**	**-0.4**
SUF				*e*S	**Sn**	**05 51 49.2**	**+0.2**
SUF				MSG		05 51 54.3	
	comp=Z,1.1nm,0.2s						
AKASG	**Malin Array Be**	**8.36**	**125**	Pn	**Pn**	**05 50 26.9**	**-1.6**
	comp=Z,2.3nm,0.3s,baz=316,slow=12,SNR=4.8						
JOF	**Joensuu**	**9.50**	**38**	*e*P	**Pn**	**05 50 41.9**	**-2.1**
JOF				*e*S	**Sn**	**05 52 26.0**	**-5.4**
JOF

SNR=49
RAF Rauma 5.11 18 *e*P **Pn 05 53 24.1 +1.3**
SNR=49
PVF Pernaja 5.81 39 *e*P **Pn 05 53 32.8 +0.2**
PVF MSG 05 54 54.5
comp=Z,3.9nm,0.3s
PVF Pernaja 5.81 39 P **Pn 05 53 32.7 +0.2**
NB2 NORSAR Subarra 6.13 325 Pn **Pn 05 53 35.5 -1.4**
baz=146,slow=14
NB2 Lg 05 55 21.0
baz=148,slow=37
NB2 NORSAR Subarra 6.13 325 *e*P **Pn 05 53 35.5 -1.4**
NB2 *e*SG **Sg 05 55 21.0 -0.8**
NB2 NORSAR Subarra 6.13 325 Pn **Pn 05 53 35.5 -1.3**
baz=146,slow=13,SNR=7.4
NB2 Sg **Sg 05 55 21.0 -0.8**
NOA NORSAR Array B 6.13 325 Pn **Pn 05 53 35.4 -1.5**
comp=Z,0.8nm,0.3s,baz=142,slow=12,SNR=6.7
NOA Lg 05 55 19.9
comp=Z,1.5nm,0.3s,baz=74,slow=13,SNR=4.6
FIA0 FINESS Array S 6.55 34 Pn **Pn 05 53 43.0 +0.4**
baz=208,slow=12
FIA0 Sn **Sn 05 54 57.0 -0.9**
baz=216,slow=28
FIA0 FINESS Array S 6.55 34 *e*P **Pn 05 53 42.8 +0.2**
FIA0 *e*S **Sn 05 54 56.1 -1.8**
FIA0 MSG 05 54 59.1
comp=Z,2.0nm,0.2s
FIA0 FINESS Array S 6.55 34 P **Pn 05 53 42.7 +0.1**
FIA0 FINESS Array S 6.55 34 Pn **Pn 05 53 43.0 +0.4**
baz=208,slow=12,SNR=9.7
FIA0 S **Sn 05 54 56.0 -1.9**
comp=Z,2.0nm,0.2s
FIA0 Sn **Sn 05 54 57.0 -0.9**
baz=216,slow=24,SNR=4.5
FINES FINESS Array B 6.55 34 Pn **Pn 05 53 42.9 +0.3**
comp=Z,2.9nm,0.3s,baz=215,slow=12,SNR=22
KEF Keuruu 6.80 26 *e*P **Pn 05 53 47.3 +1.3**
KEF *e*S **Sn 05 55 04.7 +0.7**
KEF MSG 05 55 08.1
comp=Z,1.2nm,0.2s
KEF Keuruu 6.80 26 P **Pn 05 53 47.3 +1.3**
KEF S **Sn 05 55 04.6 +0.6**
comp=Z,1.2nm,0.2s
KAF Kangasniemi 7.14 31 *e*P **Pn 05 53 50.0 -0.7**
KAF Kangasniemi 7.14 31 P **Pn 05 53 49.9 -0.8**
AKASG Malin Array Be 8.47 126 Pn **Pn 05 54 02.0 -6.9**
comp=Z,1.9nm,0.3s,baz=316,slow=12,SNR=5.6
EKA Eskdalemuir Ar 12.20 275 Pn **Pn 05 54 54.9 -5.1**
comp=Z,0.2nm,0.3s,baz=85,slow=13,SNR=7.0
ARA0 ARCESS Array S 13.72 10 Pn **Pn 05 55 15.8 -4.9**
baz=192,slow=14
ARA0 ARCESS Array S 13.72 10 *e*P **Pn 05 55 15.8 -4.9**
ARCES ARCESS Array B 13.72 10 Pn **Pn 05 55 15.8 -4.8**
comp=Z,0.3nm,0.3s,baz=191,slow=9.2,SNR=2.2

IDC 03 05:52:15.0±1.6, 56°.11N×18°.59E, h0km, mb1 3.7/3, mb1mx3.3/23, mbtmp3.7/3, ML3.5/4, Error ellipse: s-maj=25.4km s-min=11.9km az=45.0, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HFS	**Hagfors**	**4.80**	**329**	Pn	Pn	05 53 26.9	-1.4
	1.4nm,0.3s,baz=142,slow=14,SNR=8.4						
HFS				Lg		05 54 44.6	
	3.2nm,0.3s,baz=156,slow=29,SNR=5.8						
NOA	**NORSAR Array B**	**6.27**	**325**	Pn	Pn	05 53 46.7	-1.8
	1.0nm,0.3s,baz=142,slow=12,SNR=5.1						
FINES	**FINESS Array B**	**6.62**	**33**	Pn	Pn	05 53 52.6	-0.7
	3.1nm,0.3s,baz=213,slow=12,SNR=17						
AKASG	**Malin Array Be**	**8.35**	**126**	Pn	Pn	05 54 13.0	-4.0
	2.1nm,0.3s,baz=317,slow=12,SNR=4.4						
EKA	**Eskdalemuir Ar**	**12.28**	**275**	Pn	Pn	05 55 06.2	-4.7
	0.2nm,0.3s,baz=85,slow=13,SNR=5.8						
ARCES	**ARCESS Array B**	**13.83**	**10**	Pn	Pn	05 55 26.2	-5.7
	0.3nm,0.3s,baz=200,slow=13,SNR=2.7						

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*ISCJB **03** 05:56:53.3±0.4, 33°.35N±0°.04×100°.58E±0°.05, h10km, mb4.0/7, MS3.3/6, Error ellipse: s-maj=5.8km s-min=5.5km az=24.8*
*IDC **03** 05:56:54.5±1.4, 33°.54N×100°.74E, h0km, mb3.7/4, mb1 3.8/7, mb1mx3.6/27, mbtmp3.7/7, ML3.7/3, MS3.5/9, Ms1 3.5/9, ms1mx3.2/42, Error ellipse: s-maj=37.2km s-min=22.0km az=50.0*
*NEIC **03** 05:56:56.6±0.9, 33°.57N×100°.70E, h10km, mb4.4/3, Error ellipse: s-maj=20.1km s-min=10.4km az=100.0*
*BJI **03** 05:56:56.9, 33°.50N×100°.53E, h14km, mB4.5/2, mb4.3/5, ML4.1/13, Ms4.1/9, Ms7 3.7/8*
ISC 03 05:56:55.2±0.4, 33°.47N±0°.04×100°.57E±0°.04, h10km, n30, σ1§21/34, mb4.0/7, MS3.3/6, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**3.71**	**132**	Pg	**Pg**	**05 58 07.2**	**+0.8**
CD2				Sg	**Sg**	**05 58 53.7**	**-0.8**
CD2				smax			
	comp=N,760nm,1.0s						
CD2				smax			
	comp=E,680nm,1.0s						
LZH	**Lanzhou**	**3.76**	**45**	Pn	**Pn**	**05 57 56.2**	**+3.0**
LZH				Pg	**Pg**	**05 58 06.0**	**-1.1**
LZH				Sn	**Sn**	**05 58 42.6**	**+5.2**
LZH				Sg	**Sg**	**05 58 55.6**	**-0.2**
LZH				smax			
	comp=N,1μm,1.0s						
LZH				smax			
	comp=E,770nm,0.8s						
LZH				LR	LR		
	comp=N,3μm,6.2s						
LZH				LR	LR		
	comp=Z,5μm,7.4s						
GTA	**Gaotai**	**5.96**	**354**	Pn	**Pn**	**05 58 30.3**	**+6.8**
GTA				Pg	**Pg**	**05 58 47.4**	**-2.0**
GTA				Sn	**Sn**	**05 59 35.5**	**+3.6**
GTA				Sg	**Sg**	**06 00 02.6**	**-4.0**
GTA				smax			
	comp=N,29nm,1.1s						
GTA				smax			
	comp=E,40nm,1.3s						
GTA				LR	LR		
	comp=N,940nm,9.8s						
GTA				LR	LR		
	comp=E,410nm,8.0s						
GTA				LR	LR		
	comp=Z,890nm,11.3s						
LSA	**Lhasa**	**8.87**	**247**	P	**Pn**	**05 59 07.0**	**+3.6**
LSA				LR	LR		
	comp=N,350nm,12.6s						
LSA				LR	LR		
	comp=Z,390nm,10.8s						
TAPN	**Taplejung**	**12.66**	**245**	*e*P	**Pn**	**05 59 55.8**	**+0.5**
ODAN	**Odare**	**13.16**	**243**	*e*P	**Pn**	**06 00 02.5**	**+0.4**
	comp=Z,49nm,0.5s						
JIRN	**Jiri**	**13.67**	**249**	*e*P	**Pn**	**06 00 08.6**	**-0.5**
RAMN	**Ramite**	**13.71**	**245**	*e*P	**Pn**	**06 00 10.1**	**+0.5**
	comp=Z,28nm,0.6s						
GUN	**Gumba**	**13.79**	**250**	*e*P	**Pn**	**06 00 10.4**	**-0.4**
	comp=Z,23nm,0.5s						
PKI	**Pulchoki**	**14.32**	**250**	*e*P	**Pn**	**06 00 17.3**	**-0.7**
	comp=Z,18nm,0.5s						
PKIN	**Phulchoki**	**14.33**	**250**	*e*P	**Pn**	**06 00 17.6**	**-0.5**
	comp=Z,16nm,0.5s						
DMN	**Daman**	**14.54**	**250**	*e*P	**Pn**	**06 00 20.3**	**-0.7**
	comp=Z,14nm,0.7s						
GKN	**Gorkha**	**14.74**	**253**	*e*P	**Pn**	**06 00 21.7**	**-2.0**
	comp=Z,39nm,0.7s						
SONM	**Songino Array**	**15.01**	**15**	Pn	**Pn**	**06 00 27.3**	**0.0**
	comp=Z,0.3nm,0.3s,baz=197,slow=11,SNR=9.1						
SONM				LR	LR	06 06 40.1	
	comp=Z,172nm,19.2s,baz=30,slow=39						
CMAR	**Chiang Mai Arr**	**15.02**	**186**	Pn	**Pn**	**06 00 30.6**	**+3.0**
	comp=Z,0.1nm,0.3s,baz=355,slow=10,0,SNR=4.0						
CMAR				LR	LR	06 06 36.6	
	comp=Z,260nm,18.6s,baz=355,slow=38						
ULN	**Ulaanbaatar**	**15.19**	**17**	*e*Pn	**Pn**	**06 00 29.8**	**+0.1**
	comp=Z,3.0nm,0.6s						
KOLN	**Koldanda**	**15.67**	**253**	*e*P	**Pn**	**06 00 34.3**	**-1.7**
	comp=Z,23nm,0.8s						
MKAR	**Makanchi Array**	**19.24**	**319**	P	**Pn**	**06 01 21.7**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=127,slow=14,SNR=14						
MKAR				LR	LR	06 09 26.5	
	comp=Z,240nm,18.8s,baz=310,slow=39						
MKAR	**Makanchi Array**	**19.24**	**319**	P	**Pn**	**06 01 21.7**	**+1.2**
MKAR				LR	LR	06 09 26.5	
CN2	**Changchun**	**21.93**	**55**	*e*P	**P**	**06 01 53.5**	**+4.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.3						
AAK	**Ala-Archa**	**22.41**	**302**	LR	LR	06 11 58.6	
	comp=Z,168nm,18.2s,MS3.5,baz=87,slow=40						
KSRS	**Korea Array**	**22.60**	**72**	P	**P**	**06 01 54.8**	**-1.1**
	comp=Z,0.5nm,0.4s,mb3.3,baz=259,slow=8.4,SNR=4.1						
KSRS				LR	LR	06 11 34.8	
	comp=Z,85nm,18.5s,MS3.2,baz=322,slow=39						
ZAA0	**Zalesovo Array**	**23.33**	**336**	*e*P	**P**	**06 02 05.0**	**+1.7**
ZALV	**Zalesovo Beam**	**23.33**	**336**	P	**P**	**06 02 03.4**	**0.0**
	comp=Z,1.9nm,0.6s,mb3.7,baz=153,slow=11,SNR=9.4						
ZALV				LR	LR	06 12 39.3	
	comp=Z,30nm,19.6s,MS2.8,baz=236,slow=40						
KURK	**Kurchatov**	**23.57**	**324**	P	**P**	**06 02 06.3**	**+0.4**
	comp=Z,3.0nm,0.8s,mb3.8,baz=130,slow=10,SNR=22						
KURK				LR	LR	06 11 49.1	
	comp=Z,159nm,19.6s,MS3.5,baz=120,slow=38						
KBL	**Kabul**	**26.11**	**281**	*e*P	**P**	**06 02 31.9**	**+2.7**
	comp=Z,5.4nm,0.6s,mb4.2						
ASF	**Jabal al Asfar**	**52.75**	**287**	LR	LR	06 32 34.9	
	comp=Z,34nm,18.5s,MS3.4,baz=330,slow=40						
EIL	**Elat**	**55.21**	**285**	LR	LR	06 35 04.7	
	comp=Z,53nm,18.7s,MS3.6,baz=102,slow=41						
WRA	**Warramunga Arr**	**62.12**	**144**	P	**P**	**06 07 16.8**	**+0.4**
	comp=Z,0.7nm,0.7s,mb3.9,baz=339,slow=7.0,SNR=2.7						
ECH	**Echery**	**67.99**	**314**	*e*P	**P**	**06 07 49.8**	**-4.6**
	comp=Z,6.5nm,0.8s,mb4.7						

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*ISCJB **03** 05:59:26.0±0.6, 11°.35S±0°.05×115°.91E±0°.07, h33km, mb3.8/6, Error ellipse: s-maj=10.9km s-min=5.7km az=151.3*
*DJA **03** 05:59:27, 11°.30S×115°.68E, h20km, MLv4.5/10*
*IDC **03** 05:59:29.8±1.0, 11°.12S×116°.12E, h43km±8km, mb3.6/6, mb1 3.7/8, mb1mx3.6/21, mbtmp3.7/8, ML3.8/2, Error ellipse: s-maj=26.3km s-min=15.7km az=71.0*
ISC 03 05:59:28.2±0.6, 11°.32S±0°.05×115°.92E±0°.07, h35km, n24, σ1§13/32, mb3.8/6, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DNP	**Denpasar**	**2.71**	**345**	P	**Pn**	**06 00 09.6**	**+0.2**
DNP				S	**Sn**	**06 00 41.0**	**0.0**
KHKI	**Kahang-Kahang**	**2.95**	**354**	P	**Pn**	**06 00 13.0**	**+0.4**
KHKI				S	**Sn**	**06 00 46.1**	**-0.7**
NBBI	**Negara**	**3.19**	**336**	P	**Pn**	**06 00 15.3**	**-0.7**
NBBI				S	**Sn**	**06 00 51.8**	**-1.1**
SRBI	**Singaraja**	**3.29**	**348**	P	**Pn**	**06 00 18.0**	**+0.8**
SRBI				S	**Sn**	**06 00 55.8**	**+0.7**
BYJI	**Banyuwangi**	**3.45**	**333**	P	**Pn**	**06 00 20.2**	**+0.7**
BYJI				S	**Sn**	**06 01 00.7**	**+1.6**
ABJI	**Asem Bagus**	**3.87**	**334**	P	**Pn**	**06 00 28.9**	**+3.6**
GMJI	**Gumukmas**	**3.89**	**321**	P	**Pn**	**06 00 24.4**	**-1.1**
GMJI				S	**Sn**	**06 01 06.3**	**-3.6**
WSI	**Waingapu**	**4.60**	**70**	P	**Pn**	**06 00 42.2**	**+6.8**
KRKI	**Karangkates**	**4.64**	**312**	P	**Pn**	**06 00 36.5**	**+0.6**
PWJI	**Pagerwojo**	**5.21**	**309**	P	**Pn**	**06 00 41.7**	**-2.1**
	0.3nm2μm54nm,0.9s						
PCJI	**Pacitan**	**5.61**	**303**	P	**Pn**	**06 00 49.1**	**-0.1**
UGM	**Wanagama**	**6.31**	**302**	P	**Pn**	**06 00 58.9**	**+0.1**
	0.8nm118nm,1.6s						
BKSI	**Bulukumba**	**7.26**	**35**	P	**Pn**	**06 01 13.7**	**+1.8**
	0.1nm24nm,0.6s						
KAPI	**Kappang**	**7.32**	**31**	P	**Pn**	**06 01 11.3**	**-1.4**
	6.0nm,0.3s,baz=205,slow=8.0,SNR=8.8						
KAPI				S	**Sn**	**06 02 28.8**	**-5.8**
	baz=80,slow=22,SNR=1.4						
TTSI	**Tana Toraja**	**9.08**	**25**	P	**Pn**	**06 01 41.7**	**+4.8**
	23nm,1.1s						
MBWA	**Marble Bar**	**10.45**	**160**	P	**Pn**	**06 01 50.7**	**-4.9**
FITZ	**Fitzroy Crossi**	**11.57**	**127**	P	**Pn**	**06 02 08.5**	**-2.4**
	0.4nm,0.3s,baz=287,slow=15,SNR=18						
FITZ				S	**Sn**	**06 04 07.4**	**-12**
	0.5nm,0.3s,baz=206,slow=16,SNR=2.7						
WRA	**Warramunga Arr**	**19.69**	**118**	P	**Pn**	**06 03 55.3**	**-0.9**
	0.2nm,0.3s,baz=293,slow=15,SNR=3.9						
ASAR	**Alice Springs**	**21.06**	**128**	P	**P**	**06 04 10.9**	**+1.5**
	1.0nm,0.5s,mb3.4,baz=302,slow=10,SNR=17						
ASAR				sP	sP	06 04 25.4	+2.3
	4.0nm,0.7s,baz=308,slow=10,SNR=16						
NWAO	**Narrogin (SRO)**	**21.54**	**177**	P	**P**	**06 04 16.9**	**+2.3**
	2.6nm,0.5s,mb3.9,baz=348,slow=14,SNR=4.3						
SONM	**Songino Array**	**59.49**	**353**	P	**P**	**06 09 27.9**	**+0.2**
	0.3nm,0.5s,mb3.6,baz=170,slow=8.8,SNR=3.1						
SONM				pP	pP	06 09 40.6	+2.2
	0.8nm,0.6s,baz=177,slow=8.8,SNR=5.4						
MKAR	**Makanchi Array**	**65.20**	**335**	P	**P**	**06 10 06.1**	**+0.2**
	0.7nm,0.3s,mb4.1,baz=145,slow=6.9,SNR=14						
KURK	**Kurchatov**	**69.79**	**336**	P	**P**	**06 10 34.8**	**-0.1**
	0.7nm,0.7s,mb3.7,baz=146,slow=4.7,SNR=4.2						
ZALV	**Zalesovo Beam**	**70.17**	**341**	P	**P**	**06 10 36.5**	**-0.6**
	2.2nm,0.7s,mb4.2,baz=156,slow=5.5,SNR=8.0						
ZALV				pP	pP	06 10 49.8	+1.8
	1.1nm,0.6s,baz=152,slow=6.6,SNR=2.9						

BJI 03 06:01:51.6, 33°.57N×100°.50E, h15km, ML3.6/9, Ms3.8/3, Ms7 3.3/2, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**3.72**	**47**	*e*Pn	Pn	06 02 50.9	+2.4
LZH				Pg	Pg	06 02 59.8	-3.1
LZH				Sn	Sn	06 03 36.6	+4.5
LZH				Sg	Sg	06 03 47.9	-3.3
LZH				smax			
	comp=N,320nm,0.9s						
LZH				smax			
	comp=E,370nm,1.1s						
CD2	**Chengdu**	**3.83**	**133**	Pg	Pg	06 03 00.9	-4.0
CD2				Sg	Sg	06 03 47.4	-7.1
CD2				smax			
	comp=N,370nm,1.0s						
CD2				smax			
	comp=E,370nm,1.1s						
GTA	**Gaotai**	**5.86**	**355**	*e*P	Pg	06 03 41.9	-1.8
GTA				pP		06 03 46.1	
GTA				sP		06 03 48.3	
GTA				S	Sg	06 04 58.7	-0.8
GTA				pmax	pmax		
	comp=Z,11nm,1.0s						
GTA				pmax	pmax		
	comp=Z,86nm,3.6s						
GTA				LR	LR		
	comp=N,230nm,8.7s						
GTA				LR	LR		
	comp=E,200nm,7.8s						
GTA				LR	LR		
	comp=Z,300nm,8.7s						

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*NEIC **03** 06:04:32.4, 35°.44S×178°.65E, h176km, MG4.4(WEL), After WEL.*
WEL 03 06:04:32.4±0.8, 35°.44S×178°.65E, h176km±10km, ML4.4/12, Error ellipse: s-maj=17.5km s-min=12.3km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.14**	**187**	PN	Pn	06 05 11.0	+0.3
MXZ				SN	Sn	06 05 39.0	-1.5
MXZ	**Matakaoa Point**	**2.14**	**187**	P	Pn	06 05 11.0	+0.3
MXZ				S	Sn	06 05 39.0	-1.5
PUZ	**Puketiti**	**2.65**	**187**	PN	Pn	06 05 16.7	+0.2
PUZ				SN	Sn	06 05 50.9	-0.1
PUZ	**Puketiti**	**2.65**	**187**	P	Pn	06 05 16.7	+0.2
PUZ				S	Sn	06 05 50.9	-0.1
MWZ	**Matawai**	**3.03**	**197**	PN	Pn	06 05 22.1	+1.0
MWZ				SN	Sn	06 05 59.1	-0.1
MWZ	**Matawai**	**3.03**	**197**	P	Pn	06 05 22.1	+1.0
CNGZ	**Carnagh Statio**	**3.07**	**187**	PN	Pn	06 05 21.9	+0.3
URZ	**Urewera**	**3.08**	**203**	PN	Pn	06 05 22.4	+0.7
URZ				SN	Sn	06 05 59.8	-0.4
URZ	**Urewera**	**3.08**	**203**	P	Pn	06 05 22.4	+0.7
KNZ	**Kokohu**	**3.66**	**192**	PN	Pn	06 05 28.8	-0.2
KNZ	**Kokohu**	**3.66**	**192**	P	Pn	06 05 28.8	-0.2
RAHZ	**Arahi**	**3.69**	**199**	PN	Pn	06 05 30.2	+0.8
MHGZ	**Mahia Peninsul**	**3.76**	**189**	PN	Pn	06 05 30.1	0.0
NMHZ	**Naumai**	**3.94**	**201**	PN	Pn	06 05 33.2	+0.7
BKZ	**Black Stump Fm**	**4.11**	**204**	P	Pn	06 05 35.0	+0.4
MCHZ	**McNeill Hill**	**4.29**	**201**	PN	Pn	06 05 37.1	+0.1
KAHZ	**Kahuranaki**	**4.58**	**197**	PN	Pn	06 05 40.1	-0.5
MOVZ	**Moawhango**	**4.59**	**209**	PN	Pn	06 05 40.7	-0.1
MOVZ	**Moawhango**	**4.59**	**209**	P	Pn	06 05 40.7	-0.1
PXZ	**Pawanui**	**4.80**	**197**	PN	Pn	06 05 42.2	-1.4
PNHZ	**Pukenui**	**4.88**	**203**	PN	Pn	06 05 43.2	-1.4
PRHZ	**Porangahau**	**5.08**	**198**	PN	Pn	06 05 46.1	-1.1
PRHZ	**Porangahau**	**5.08**	**198**	P	Pn	06 05 46.1	-1.1
TSZ	**Takapari Road**	**5.09**	**204**	PN	Pn	06 05 45.8	-1.4
WAZ	**Wanganui**	**5.20**	**213**	PN	Pn	06 05 49.4	+0.6
WAZ	**Wanganui**	**5.20**	**213**	P	Pn	06 05 49.4	+0.6
BFZ	**Birch Farm**	**5.57**	**199**	PN	Pn	06 05 51.9	-1.6
BFZ	**Birch Farm**	**5.57**	**199**	P	Pn	06 05 51.9	-1.7
MRZ	**Mangatainoka R**	**5.75**	**204**	PN	Pn	06 05 53.8	-2.2
MRZ	**Mangatainoka R**	**5.75**	**204**	P	Pn	06 05 53.8	-2.2
TIWZ	**Tintock**	**5.76**	**201**	PN	Pn	06 05 54.9	-1.1
TIWZ	**Tintock**	**5.76**	**201**	P	Pn	06 05 54.9	-1.2
OGWZ	**Otaki Gorge**	**6.04**	**206**	PN	Pn	06 05 57.7	-2.0
TMWZ	**Te Maipa**	**6.07**	**200**	PN	Pn	06 05 57.3	-2.7
KIW	**Kapiti Island**	**6.17**	**207**	PN	Pn	06 05 59.2	-2.2
KIW	**Kapiti Island**	**6.17**	**207**	P	Pn	06 05 59.2	-2.2
CAW	**Cannon Point**	**6.33**	**205**	PN	Pn	06 06 00.7	-2.8
CAW	**Cannon Point**	**6.33**	**205**	P	Pn	06 06 00.7	-2.8
TRWZ	**Traveller**	**6.39**	**200**	PN	Pn	06 06 02.1	-2.2
MSWZ	**Moikau Station**	**6.54**	**203**	P	Pn	06 06 03.6	-2.7
SNZO	**South Karori**	**6.63**	**207**	PN	Pn	06 06 04.4	-3.2
SNZO	**South Karori**	**6.63**	**207**	P	Pn	06 06 04.4	-3.1
PLWZ	**Palliser**	**6.68**	**202**	PN	Pn	06 06 05.0	-3.1
TCW	**Tory Channel**	**6.72**	**209**	PN	Pn	06 06 05.8	-2.8
TCW	**Tory Channel**	**6.72**	**209**	P	Pn	06 06 05.8	-2.8
TUWZ	**Tuamarina**	**7.04**	**210**	PN	Pn	06 06 09.9	-2.9
NNZ	**Nelson**	**7.11**	**214**	PN	Pn	06 06 11.2	-2.6
NNZ	**Nelson**	**7.11**	**214**	P	Pn	06 06 11.2	-2.5
QRZ	**Quartz Range**	**7.23**	**220**	PN	Pn	06 06 13.2	-2.2
QRZ	**Quartz Range**	**7.23**	**220**	P	Pn	06 06 13.2	-2.1
BSWZ	**Blackbirch Sta**	**7.30**	**209**	PN	Pn	06 06 14.0	-2.2
BSWZ	**Blackbirch Sta**	**7.30**	**209**	P	Pn	06 06 14.0	-2.3
THZ	**Tophouse**	**7.76**	**214**	PN	Pn	06 06 19.7	-2.6
THZ	**Tophouse**	**7.76**	**214**	P	Pn	06 06 19.7	-2.6
KHZ	**Kahutara**	**8.03**	**208**	PN	Pn	06 06 22.8	-3.1
KHZ	**Kahutara**	**8.03**	**208**	P	Pn	06 06 22.8	-3.1
LTZ	**Lake Taylor**	**8.86**	**212**	P	Pn	06 06 33.2	-3.5
MQZ	**McQueen's Vall**	**9.47**	**207**	PN	Pn	06 06 40.5	-4.3
MQZ	**McQueen's Vall**	**9.47**	**207**	P	Pn	06 06 40.5	-4.3
ODZ	**Otahua Downs**	**11.38**	**210**	PN	Pn	06 07 06.5	-3.1
ODZ	**Otahua Downs**	**11.38**	**210**	P	Pn	06 07 06.5	-3.2

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*ISCJB **03** 06:06:09.7±0.8, 55°.9S±0°.2×26°.0W±0°.3, h10km, mb4.2/8, MS4.2/4, Error ellipse: s-maj=28.5km s-min=14.5km az=39.4*
*IDC **03** 06:06:10.2±0.8, 55°.95S×26°.05W, h0km, mb4.3/7, mb1 4.4/7, mb1mx4.1/16, mbtmp4.3/7, MS4.3/4, Ms1 4.3/4, ms1mx3.8/22, Error ellipse: s-maj=35.2km s-min=18.3km az=43.0*
*NEIC **03** 06:06:11.5±0.5, 55°.97S×26°.06W, h10km, mb4.6/3, Error ellipse: s-maj=23.3km s-min=12.2km az=219.0*
ISC 03 06:06:11.5±0.8, 55°.9S±0°.2×26°.0W±0°.3, h10km, n21, σ0§67/12, mb4.2/8, MS4.2/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**20.48**	**229**	LR	LR	06 17 30.2	
	comp=Z,566nm,20.2s,MS3.9,baz=218,slow=33						
USHA	**Ushuaia**	**23.86**	**255**	LR	LR	06 18 42.0	
	comp=Z,379nm,21.2s,MS3.8,baz=81,slow=32						
TRQA	**Tornquist**	**29.89**	**291**	*e*P	**P**	**06 12 19.0**	**0.0**
	2.8nm,0.5s,mb4.2						
QSPA	**South Pole Qui**	**34.33**	**180**	P	**P**	**06 12 58.0**	**+0.5**
	17nm,0.6s,mb5.1,baz=193,slow=2.4,SNR=161						
QSPA	**South Pole Qui**	**34.33**	**180**	*e*P	**P**	**06 12 57.6**	**+0.1**
	17nm,0.6s,mb5.2						
CPUP	**Villa Florida**	**37.23**	**310**	P	**P**	**06 13 23.2**	**+0.2**
	2.0nm,0.6s,mb4.2,baz=138,slow=8.0,SNR=16						
CPUP	**Villa Florida**	**37.23**	**310**	P	**P**	**06 13 23.2**	**+0.2**
CFAA	**Coronel Fontan**	**38.12**	**292**	P	**P**	**06 13 29.2**	**-1.3**
	0.6nm,0.5s,mb3.6,baz=145,slow=8.2,SNR=38						
CFAA	**Coronel Fontan**	**38.12**	**292**	P	**P**	**06 13 29.2**	**-1.3**
MAW	**Mawson**	**39.86**	**143**	P	**P**	**06 13 44.7**	**+0.2**
	1.2nm,0.5s,mb3.9,baz=233,slow=10,SNR=6.0						
BOSA	**Boshof**	**45.30**	**75**	LR	LR	06 30 17.7	
	comp=Z,408nm,18.1s,MS4.4,baz=162,slow=32						
LBTB	**Lobatse**	**48.34**	**72**	P	**P**	**06 14 52.9**	**-0.2**
	2.5nm,0.7s,mb4.4,baz=220,slow=5.3,SNR=4.0						
LPAZ	**La Paz**	**50.85**	**304**	P	**P**	**06 15 13.8**	**+1.5**
	4.6nm,0.6s,mb4.6,baz=152,slow=5.2,SNR=41						
LPAZ	**La Paz**	**50.85**	**304**	*e*P	**P**	**06 15 13.2**	**+1.0**
	4.3nm,0.5s,mb4.6						
STKA	**Stephens Creek**	**91.91**	**169**	LR	LR	06 55 08.7	
	comp=Z,392nm,21.8s,MS4.8,baz=298,slow=32						
ASAR	**Alice Springs**	**98.91**	**161**	P	**P**	**06 19 51.5**	**-0.4**
	0.3nm,0.6s,mb4.0,baz=187,slow=2.9,SNR=2.8						
JCW	**Jim Creek**	**130.77**	**298**	*e*PKPdf	PKPdf	06 25 18.0	-3.7
INK	**Inuvik**	**146.12**	**320**	PKPbc	PKPbc	06 25 51.9	+1.8
	4.0nm,0.9s,baz=83,slow=2.0,SNR=3.8						
INK	**Inuvik**	**146.12**	**320**	PKPbc	PKPbc	06 25 51.9	+1.8
SONM	**Songino Array**	**150.06**	**85**	PKPbc	PKPbc	06 26 01.1	-0.1
	0.5nm,0.8s,baz=225,slow=1.8,SNR=3.9						
BPAW	**Bear Paw Mtn.**	**152.16**	**310**	*e*PKPbc	PKPbc	06 26 06.5	+0.9

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*SKO **03** 06:07:52.6, 41°.95N×22°.90E, h15km, M1.6, ML1.9*
*ISCJB **03** 06:07:53.2±0.4, 41°.90N±0°.02×22°.86E±0°.04, h10km, Error ellipse: s-maj=4.8km s-min=2.8km az=177.2*
*CSEM **03** 06:07:53.2±0.1, 41°.89N×22°.96E, h2km, ML2.7/1, Error ellipse: s-maj=3.7km s-min=1.7km az=83.0*
*THE **03** 06:07:53.4, 41°.87N×22°.97E, h3km±2km, ML2.7/1, Error ellipse

*DDA **03** 06:08:31.7, 40°.84N×28°.78E, $h7^{km}$±1km, Md2.7*
*ISCJB **03** 06:08:32.7±0.4, 40°.87N±0°.03×28°.82E±0°.04, $h10^{km}$, Error ellipse: s-maj=4.6km s-min=3.8km az=6.7*
*CSEM **03** 06:08:32.6±0.1, 40°.86N×28°.79E, $h5^{km}$, MD2.7, Error ellipse: s-maj=2.9km s-min=2.0km az=50.0*
*ISK **03** 06:08:32.7, 40°.88N×28°.83E, $h8^{km}$, MD2.7*
ISC 03 06:08:32.9±0.4, 40°.86N±0°.03×28°.81E±0°.04, h10km, n32, σ0§79/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISK	**Istanbul-Kandi**	**0.28**	**42**	*e*PG	**Pg**	**06 08 38.3**	**-0.2**
ISK				*e*SG	**Sg**	**06 08 42.5**	**+0.2**
ISK	**Istanbul-Kandi**	**0.28**	**42**	*e*Pg	**Pg**	**06 08 38.3**	**-0.2**
ISK				*e*Sg	**Sg**	**06 08 42.5**	**+0.2**
BGKT	**Bogazkoy**	**0.32**	**355**	*e*PG	**Pg**	**06 08 38.6**	**-0.8**
BGKT				*e*SG	**Sg**	**06 08 43.6**	**-0.1**
BGKT	**Bogazkoy**	**0.32**	**355**	*e*Pg	**Pg**	**06 08 38.6**	**-0.7**
BGKT				*e*Sg	**Sg**	**06 08 43.6**	**-0.1**
ELBA	**Catalca**	**0.41**	**315**	*i* P	**Pg**	**06 08 39.6**	**-1.3**
ELBA				*i* S	**Sg**	**06 08 46.0**	**-0.4**
ELBA	**Catalca**	**0.41**	**315**	*i* P	**Pg**	**06 08 39.7**	**-1.2**
ELBA				*i* S	**Sg**	**06 08 46.0**	**-0.4**
KLYT	**Kilyos**	**0.43**	**24**	*e*PG	**Pg**	**06 08 41.2**	**-0.1**
KLYT				*e*SG	**Sg**	**06 08 47.8**	**+0.7**
KLYT	**Kilyos**	**0.43**	**24**	*e*Pg	**Pg**	**06 08 41.2**	**-0.1**
KLYT				*e*Sg	**Sg**	**06 08 47.8**	**+0.7**
CTKS	**Kestanelik-??a**	**0.44**	**329**	*e*PG	**Pg**	**06 08 40.9**	**-0.7**
CTKS	**Kestanelik-??a**	**0.44**	**329**	*e*Pg	**Pg**	**06 08 40.9**	**-0.7**
GEMT	**Gemlik**	**0.51**	**146**	*e*PG	**Pg**	**06 08 43.2**	**+0.3**
GEMT	**Gemlik**	**0.51**	**146**	*e*Pg	**Pg**	**06 08 43.2**	**+0.4**
YLV	**Yalova**	**0.52**	**124**	*e*PG	**Pg**	**06 08 43.3**	**+0.4**
YLV	**Yalova**	**0.52**	**124**	*e*Pg	**Pg**	**06 08 43.3**	**+0.4**
SLVT	**Silivri**	**0.59**	**309**	*e*PG	**Pg**	**06 08 45.1**	**+0.8**
SLVT	**Silivri**	**0.59**	**309**	*e*Pg	**Pg**	**06 08 45.1**	**+0.8**
HRT	**Hereke**	**0.65**	**93**	*e*PG	**Pg**	**06 08 45.3**	**-0.2**
HRT	**Hereke**	**0.65**	**93**	*e*Pg	**Pg**	**06 08 45.3**	**-0.2**
SILT	**Sile**	**0.69**	**65**	*e*PG	**Pg**	**06 08 45.9**	**-0.4**
SILT	**Sile**	**0.69**	**65**	*e*Pg	**Pg**	**06 08 45.9**	**-0.4**
MFT	**Murefte**	**1.17**	**267**	*e*PN	**Pn**	**06 08 55.3**	**+0.1**
MFT	**Murefte**	**1.17**	**267**	*e*Pn	**Pn**	**06 08 55.3**	**+0.1**
GONE	**Gonen-Balikesi**	**1.18**	**227**	*e*PN	**Pn**	**06 08 56.5**	**+1.0**
GONE	**Gonen-Balikesi**	**1.18**	**227**	*e*Pn	**Pn**	**06 08 56.5**	**+1.0**
KRBG	**Karabiga-Canak**	**1.24**	**249**	*e*PN	**Pn**	**06 08 57.7**	**+1.4**
KRBG	**Karabiga-Canak**	**1.24**	**249**	*e*Pn	**Pn**	**06 08 57.7**	**+1.4**
RKY	**Sarkoy-Tekirda**	**1.25**	**263**	*e*PN	**Pn**	**06 08 57.9**	**+1.4**
RKY	**Sarkoy-Tekirda**	**1.25**	**263**	*e*Pn	**Pn**	**06 08 57.9**	**+1.4**
DURS	**Dursunbey**	**1.28**	**192**	*i* P	**Pn**	**06 08 55.5**	**-1.3**
DURS				*i* S	**Sb**	**06 09 12.2**	**-1.4**
DURS	**Dursunbey**	**1.28**	**192**	*i* P	**Pn**	**06 08 55.5**	**-1.3**
DURS				*i* S	**Sb**	**06 09 12.2**	**-1.4**
GULT	**Gulveren**	**1.36**	**108**	*e*PN	**Pn**	**06 08 58.3**	**+0.4**
GULT	**Gulveren**	**1.36**	**108**	*e*Pn	**Pn**	**06 08 58.3**	**+0.4**

IDC 03 06:21:48.4±35.0, 5°.81N×125°.55E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.6/22, mbtmp3.7/5, ML3.8/1, Error ellipse: s-maj=587.2km s-min=68.4km az=157.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**12.21**	**208**	Pn	Pn	06 24 44.5	+0.8
	0.6nm,0.3s,baz=63,slow=18,SNR=3.0						
FITZ	**Fitzroy Crossi**	**23.75**	**180**	P	P	06 27 02.5	-0.2
	1.1nm,0.6s,baz=353,slow=8.1,SNR=3.9						
WRA	**Warramunga Arr**	**27.00**	**162**	P	P	06 27 32.6	+0.4
	0.4nm,0.3s,baz=339,slow=10,SNR=8.8						
ASAR	**Alice Springs**	**30.40**	**165**	P	P	06 28 02.6	+0.2
	0.3nm,0.5s,baz=346,slow=7.4,SNR=4.7						
STKA	**Stephens Creek**	**40.47**	**159**	P	P	06 29 28.2	-0.8
	1.5nm,0.7s,baz=0.0,slow=7.1,SNR=2.5						

*HEL **03** 06:31:09.0±0.7, 55°.72N×18°.56E, $h0^{km}$, ML2.3, ML2.5(NAO), Explosion*
*CSEM **03** 06:31:12.8±0.6, 56°.02N×18°.27E, $h2^{km}$, ML2.3, Error ellipse: s-maj=14.7km s-min=10.2km az=156.0, Mining explosion.*
*ISCJB **03** 06:31:12.0±1.0, 56°.13N±0°.07×18°.4E±0°.1, $h0^{km}$, Error ellipse: s-maj=12.5km s-min=5.8km az=139.3*
*BER **03** 06:31:13.2±4.6, 55°.91N×18°.43E, $h0^{km}$±27^{km}, ML2.5(NAO)*
*NAO **03** 06:31:13.5±2.7, 56°.01N×18°.55E, ML2.5*
*IDC **03** 06:31:14.0±1.2, 56°.04N×18°.40E, $h0^{km}$, mb1 3.5/4, mb1mx3.2/24, mbtmp3.4/4, ML3.4/4, Error ellipse: s-maj=15.8km s-min=9.4km az=42.0*
ISC 03 06:31:12.1±0.8, 56°.01N±0°.05×18°.32E±0°.08, h0km, n29, σ1§45/46, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSD	**Bornholm Skovb**	**2.13**	**246**	*i* P	**Pn**	**06 31 48.5**	**-0.4**
BSD				*i* S	**Sn**	**06 32 19.9**	**+3.8**
BSD	**Bornholm Skovb**	**2.13**	**246**	*i* P	**Pn**	**06 31 48.5**	**-0.4**
	SNR=49						
BSD				*i* S	**Sn**	**06 32 19.9**	**+3.8**
SLIT	**Slitere, Latvi**	**2.72**	**52**	*e*P	**Pn**	**06 31 58.7**	**+1.8**
	SNR=50						
SLIT				*e*S	**Sn**	**06 32 36.3**	**+5.9**
	174nm,0.3s,SNR=50						
AAL	**Aland**	**4.27**	**11**	*e*P	**Pn**	**06 32 19.2**	**+1.0**
AAL	**Aland**	**4.27**	**11**	P	**Pn**	**06 32 19.2**	**+1.0**
HFS	**Hagfors**	**4.81**	**331**	Pn	**Pn**	**06 32 27.3**	**+1.7**
	baz=154,slow=14						
HFS				Sn	**Sn**	**06 33 23.7**	**+1.8**
	baz=155,slow=22						
HFS				Lg		06 33 41.3	
	baz=151,slow=37						
HFS	**Hagfors**	**4.81**	**331**	Pn	**Pn**	**06 32 27.0**	**+1.4**
	1.5nm,0.3s,baz=145,slow=15,SNR=35						
HFS				Lg		06 33 43.8	
	3.0nm,0.3s,baz=150,slow=32,SNR=8.2						
HFS	**Hagfors**	**4.81**	**331**	*e*P	**Pn**	**06 32 27.3**	**+1.7**
HFS				*e*S	**Sn**	**06 33 23.7**	**+1.8**
HFS				*e*SB	**Sb**	**06 33 41.3**	**+5.9**
HFS	**Hagfors**	**4.81**	**331**	P	**Pn**	**06 32 27.3**	**+1.7**
HFS				S	**Sn**	**06 33 23.7**	**+1.8**
MEF	**Metsahovi**	**5.30**	**35**	*e*P	**Pn**	**06 32 32.4**	**0.0**
MEF	**Metsahovi**	**5.30**	**35**	*e*P	**Pn**	**06 32 34.1**	**+1.7**
	SNR=49						
RAF	**Rauma**	**5.34**	**18**	*e*P	**Pn**	**06 32 33.9**	**+1.0**
RAF				*e*S	**Sn**	**06 33 34.0**	**-1.0**
RAF				MSG		06 33 44.3	
	comp=Z,3.2nm,0.3s						
RAF	**Rauma**	**5.34**	**18**	P	**Pn**	**06 32 33.8**	**+0.9**
RAF				S	**Sn**	**06 33 33.9**	**-1.1**
	comp=Z,3.2nm,0.3s						
NB2	**NORSAR Subarra**	**6.26**	**326**	Pn	**Pn**	**06 32 45.3**	**-0.3**
	baz=142,slow=16						
NB2				Lg		06 34 32.2	
	baz=133,slow=37						
NB2	**NORSAR Subarra**	**6.26**	**326**	*e*P	**Pn**	**06 32 45.3**	**-0.3**
NB2				*e*SG	**Sg**	**06 34 32.2**	**-0.8**
NB2	**NORSAR Subarra**	**6.26**	**326**	Pn	**Pn**	**06 32 45.3**	**-0.3**
	baz=142,slow=14,SNR=2.3						
NB2				Sg	**Sg**	**06 34 32.2**	**-0.9**
NOA	**NORSAR Array B**	**6.26**	**326**	Pn	**Pn**	**06 32 45.5**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=143,slow=12,SNR=19						
NOA				Sn	**Sn**	**06 33 54.8**	**-3.0**
	comp=Z,0.3nm,0.3s,baz=131,slow=24,SNR=2.1						
NOA				Lg		06 34 30.6	
	comp=Z,1.5nm,0.3s,baz=174,slow=8.5,SNR=5.6						
FIA0	**FINESS Array S**	**6.78**	**33**	Pn	**Pn**	**06 32 52.6**	**0.0**
	baz=205,slow=12						
FIA0				Sn	**Sn**	**06 34 07.7**	**-2.7**
	baz=209,slow=22						
FIA0				Lg		06 34 43.3	
	baz=221,slow=28						
FIA0	**FINESS Array S**	**6.78**	**33**	*e*P	**Pn**	**06 32 51.2**	**-1.4**
FIA0				*e*S	**Sn**	**06 34 07.3**	**-3.1**
FIA0				MSG		06 34 10.9	
	comp=Z,2.1nm,0.3s						
FIA0	**FINESS Array S**	**6.78**	**33**	P	**Pn**	**06 32 51.2**	**-1.4**
FIA0	**FINESS Array S**	**6.78**	**33**	Pn	**Pn**	**06 32 52.7**	**+0.1**
	baz=205,slow=12,SNR=6.1						
FINES	**FINESS Array B**	**6.78**	**33**	Pn	**Pn**	**06 32 52.4**	**-0.2**
	comp=Z,2.0nm,0.3s,baz=214,slow=12,SNR=39						
FINES				Sn	**Sn**	**06 34 10.4**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=225,slow=21,SNR=5.7						
FINES				Lg		06 34 45.0	
	comp=Z,1.1nm,0.3s,baz=237,slow=26,SNR=3.5						
KEF	**Keuruu**	**7.03**	**26**	*e*P	**Pn**	**06 32 58.0**	**+1.9**
KEF				*e*S	**Sn**	**06 34 15.5**	**-1.2**
KEF				MSG		06 34 22.0	
	comp=Z,1.8nm,0.3s						
KEF	**Keuruu**	**7.03**	**26**	P	**Pn**	**06 32 58.0**	**+1.9**
KEF				S	**Sn**	**06 34 15.4**	**-1.2**
	comp=Z,1.8nm,0.3s						
AKASG	**Malin Array Be**	**8.41**	**125**	Pn	**Pn**	**06 33 12.9**	**-2.2**
	comp=Z,2.4nm,0.3s,baz=311,slow=12,SNR=7.7						
EKA	**Eskdalemuir Ar**	**12.14**	**276**	Pn	**Pn**	**06 34 04.6**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=85,slow=13,SNR=3.8						
ARA0	**ARCESS Array S**	**13.95**	**11**	Pn	**Pn**	**06 34 26.1**	**-4.5**
	baz=190,slow=16						
ARA0	**ARCESS Array S**	**13.95**	**11**	*e*P	**Pn**	**06 34 26.1**	**-4.5**
ARCES	**ARCESS Array B**	**13.95**	**11**	Pn	**Pn**	**06 34 25.3**	**-5.4**
	comp=Z,0.3nm,0.3s,baz=194,slow=11,SNR=2.6						

*BGS **03** 06:34:37.8±1.4, 8°.68N×62°.27W, $h33^{km}$, mb5.4, MS5.4*
*CASC **03** 06:34:46.2±4.0, 9°.89N×59°.59W, $h35^{km}$±999^{km}, mb5.7(NEIC)*
*MOS **03** 06:34:51.8±0.8, 10°.34N×60°.44W, $h33^{km}$, mb5.7/138, MS5.3/75, Error ellipse: s-maj=4.8km s-min=3.5km az=55.1*
*LDG **03** 06:34:52.3±0.3, 10°.38N×60°.68W, $h46^{km}$, Mb5.6/39, Ms5.1/8, Error ellipse: s-maj=18.3km s-min=10.1km az=79.0*
*ISCJB **03** 06:34:53.1±0.1, 10°.37N±0°.01×60°.492W±0°.010, $h43^{km}$, mb5.6/375, MS5.4/265, Error ellipse: s-maj=2.0km s-min=1.4km az=7.1*
*FUNV **03** 06:34:53.1, 10°.34N×60°.20W, $h42^{km}$, MW5.3*
*NEIC **03** 06:34:53.7±0.8, 10°.28N×60°.44W, $h34^{km}$±5^{km}, mb5.7/265, ME5.6, MS5.5/188, MW5.8, MW5.5, MD5.6(TRN), Error ellipse: s-maj=3.4km s-min=2.0km az=176.0 Broadband fault plane solution: P waves. NP1:φ0215.00000°, δ70.00000°, λ-90.00000°. NP2:φ0035.00000°, δ20.00000°, λ-90.00000°. Principal axes: T Plg25.0000°, Azm305.0000°; N Plg0.0000°, Azm0.0000°; P Plg65.0000°, Azm125.0000°; Moment Tensor Solution. s97 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.77; $M_{\theta\theta}$1.17; $M_{\phi\phi}$0.60; $M_{r\theta}$0.91; $M_{r\phi}$0.82; $M_{\theta\phi}$0.84; Best double couple: $M_0$2.10000×10^{17} NP1:φ0230.00000°, δ63.00000°, λ-94.00000°. NP2:φ0059.00000°, δ28.00000°, λ-83.00000°. Principal axes: T 2.1400, Plg17.0000°, Azm323.0000°; N 0.0200, Plg3.0000°, Azm232.0000°; P -2.1700, Plg72.0000°, Azm131.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt at Arouca and Galeota. Also felt on offshore platforms east of Trinidad.
*IDC **03** 06:34:54.9±0.3, 10°.27N×60°.53W, $h42^{km}$±2^{km}, mb5.0/35, mb1 5.1/38, mb1mx5.1/39, mbtmp5.0/38, MS5.3/16, Ms1 5.3/16, ms1mx5.1/26 Error ellipse: s-maj=10.5km s-min=8.8km az=139.0*
*BJI **03** 06:34:54.0, 11°.26N×60°.69W, $h33^{km}$, mB5.5/24, Ms5.7/32, Ms7 5.5/30*
*TRN **03** 06:34:54.6, 10°.50N×60°.34W, $h26^{km}$, MD5.6*
TRN Felt offshore East Trinidad, IV.
*GCMT **03** 06:34:56.6±0.2, 10°.26N×60°.28W, $h13^{km}$, MW5.7, Moment Tensor Solution. s97,c166; s43,c53; Moment tensor: Scale 10^{17}Nm; M_{rr}-3.55±.07; $M_{\theta\theta}$3.10±.06; $M_{\phi\phi}$0.45±.07; $M_{r\theta}$-0.84±.14; $M_{\theta\phi}$1.97±.05; $M_{\phi r}$1.79±.16; Best double couple: $M_0$4.40000×10^{17} NP1:φ086.00000°, δ50.00000°, λ-54.00000°. NP2:φ0218.00000°, δ52.00000°, λ-125.00000°. Principal axes: T 4.1500, Plg1.0000°, Azm332.0000°; N 0.3900, Plg27.0000°, Azm241.0000°; P -4.5400, Plg63.0000°, Azm63.0000°; Data Used: II IU CN IC G. Surface waves: sta= 91, comp=184, per= 50.*
*SZGRF **03** 06:34:58.4, 10°.47N×59°.65W, $h43^{km}$, mb6.0, MS5.5, North Atlantic Ocean*
ISC 03 06:34:55.4±0.1, 10°.37N±0°.01×60°.472W±0°.009, h45km, h45km±.4km:pP-P, n1857, σ0§81/1774, mb5.6/375, MS5.4/265, 269C-313D, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBH	**Brigand Hill**	**0.60**	**281**	↑*i*P	**Pn**	**06 35 10.1**	**+2.5**
TBH				*e*S	**Sn**	**06 35 19.2**	**+2.9**
TBH	**Brigand Hill**	**0.60**	**281**	↑*e*P	**Pn**	**06 35 08.7**	**+1.1**
TBH				*e*S	**Sn**	**06 35 19.2**	**+2.9**
BOT	**Bacolet**	**0.82**	**343**	↑*e*P	**Pn**	**06 35 11.1**	**+0.4**
BOT				*e*S	**Sn**	**06 35 20.0**	**-1.8**
BOT	**Bacolet**	**0.82**	**343**	↑*e*P	**Pn**	**06 35 10.2**	**-0.4**
BOT				*e*S	**Sn**	**06 35 20.0**	**-1.8**
TPR	**Prospect**	**0.86**	**340**	↑*i*P	**Pn**	**06 35 11.7**	**+0.6**
TPR				*e*S	**Sn**	**06 35 20.2**	**-2.4**
TPR	**Prospect**	**0.86**	**340**	↑*i*P	**Pn**	**06 35 10.6**	**-0.5**
TOSP	**Speyside**	**0.92**	**356**	↑*i*P	**Pn**	**06 35 11.2**	**-0.7**
TOSP				*e*S	**Sn**	**06 35 21.7**	**-2.4**
TRN	**Trinidad (W)**	**0.96**	**287**	*e*P	**Pn**	**06 35 13.8**	**+1.4**
TRN				*e*S	**Sn**	**06 35 25.3**	**+0.4**
TRN	**Trinidad (W)**	**0.96**	**287**	*e*P	**Pn**	**06 35 13.8**	**+1.4**
TRN				*e*S	**Sn**	**06 35 27.6**	**+2.8**
TPP	**Pointe-a-Pierr**	**0.96**	**267**	↑*e*P	**Pn**	**06 35 15.1**	**+2.6**
TPP				*e*S	**Sn**	**06 35 26.8**	**+1.7**
TPP	**Pointe-a-Pierr**	**0.96**	**267**	↑*e*P	**Pn**	**06 35 15.1**	**+2.6**
TPP				*e*S	**Sn**	**06 35 29.0**	**+3.9**
ALNG	**Atlantic LNG**	**1.21**	**261**	*e*P	**Pn**	**06 35 19.2**	**+3.3**
ALNG	**Atlantic LNG**	**1.21**	**261**	*e*P	**Pn**	**06 35 19.2**	**+3.3**
BUAY	**Buenos Aires**	**1.22**	**258**	*e*P	**Pn**	**06 35 20.1**	**+4.0**
BUAY	**Buenos Aires**	**1.22**	**258**	*e*P	**Pn**	**06 35 19.1**	**+3.0**
TCE	**Chacachacare**	**1.30**	**284**	*e*P	**Pn**	**06 35 18.8**	**+1.7**
TCE	**Chacachacare**	**1.30**	**284**	*e*P	**Pn**	**06 35 18.8**	**+1.7**
GUIV	**Guiria**	**1.74**	**279**	↑*e*P	**Pn**	**06 35 23.4**	**+0.3**
GUIV				*e*S	**Sn**	**06 35 45.8**	**+1.6**
GRGR	**Grenville**	**2.10**	**327**	*i* P	**Pn**	**06 35 27.1**	**-0.9**
GRGR	**Grenville**	**2.10**	**327**	*i* P	**Pn**	**06 35 27.1**	**-0.9**
GRW	**Mount Saint Ca**	**2.12**	**327**	*e*P	**Pn**	**06 35 29.7**	**+1.3**
GRW	**Mount Saint Ca**	**2.12**	**327**	*e*P	**Pn**	**06 35 29.3**	**+0.9**
GRHS	**Sauteurs**	**2.17**	**328**	*e*P	**Pn**	**06 35 28.3**	**-0.7**
GRHS				*e*S	**Sn**	**06 35 54.8**	**+0.1**
GRHS	**Sauteurs**	**2.17**	**328**	*e*P	**Pn**	**06 35 28.3**	**-0.7**
GRHS				*e*S	**Sn**	**06 35 54.8**	**+0.1**
GUNV	**Guanoco**	**2.44**	**265**	*e*P	**Pn**	**06 35 33.9**	**+1.1**
GUNV				*e*S	**Sn**	**06 36 03.2**	**+1.8**
RIOV	**Rio Grande**	**2.65**	**210**	*e*P	**Pn**	**06 35 34.4**	**-1.2**
RIOV				*e*S	**Sn**	**06 36 04.3**	**-2.2**
CRUV	**Carupano**	**2.73**	**277**	↑*e*P	**Pn**	**06 35 36.0**	**-0.8**
ITEV	**Isla Los Testi**	**2.79**	**291**	*e*P	**Pn**	**06 35 37.1**	**-0.4**
ITEV				*e*S	**Sn**	**06 36 11.0**	**+1.0**
FCV	**Fort Charlotte**	**2.87**	**345**	*e*P	**Pn**	**06 35 42.9**	**+4.3**
FCV				*e*S	**Sn**	**06 36 19.2**	**+7.3**
FCV	**Fort Charlotte**	**2.87**	**345**	*e*P	**Pn**	**06 35 42.9**	**+4.3**
FCV				*e*S	**Sn**	**06 36 11.0**	**-0.9**
BBGH	**Gun Hill**	**2.89**	**18**	*i* P	**Pn**	**06 35 39.0**	**0.0**
BBGH	**Gun Hill**	**2.89**	**18**	*i* P	**Pn**	**06 35 39.0**	**0.0**
BHS	**Barnard House**	**2.97**	**348**	*e*P	**Pn**	**06 35 43.8**	**+3.7**
BHS				*e*S	**Sn**	**06 36 20.2**	**+5.7**
BHS	**Barnard House**	**2.97**	**348**	*e*P	**Pn**	**06 35 39.8**	**-0.3**
BHS				*e*S	**Sn**	**06 36 12.8**	**-1.7**
SVB	**Belmont**	**2.98**	**345**	↑*i*P	**Pn**	**06 35 39.0**	**-1.2**
SVB				*e*S	**Sn**	**06 36 13.7**	**-1.0**
SVB	**Belmont**	**2.98**	**345**	↑*i*P	**Pn**	**06 35 39.0**	**-1.2**
SVB				*e*S	**Sn**	**06 36 11.8**	**-2.8**
SVV	**Soufriere Volc**	**3.02**	**346**	*e*P	**Pn**	**06 35 41.0**	**+0.4**
SVV				*e*S	**Sn**	**06 36 17.1**	**+1.6**
SVV	**Soufriere Volc**	**3.02**	**346**	*e*P	**Pn**	**06 35 41.0**	**+0.4**
SVV				*e*S	**Sn**	**06 36 13.5**	**-2.1**
SSV	**Crater Summit**	**3.02**	**347**	*e*P	**Pn**	**06 35 40.9**	**+0.2**
SSV	**Crater Summit**	**3.02**	**347**	*e*P	**Pn**	**06 35 40.9**	**+0.2**
ORIV	**Oritupano**	**3.17**	**246**	‖*i*P	**Pn**	**06 35 43.0**	**+0.3**
MCLT	**Moule a Chique**	**3.35**	**352**	↑*e*P	**Pn**	**06 35 43.6**	**-1.6**
MCLT				*e*S	**Sn**	**06 36 20.5**	**-3.2**
MCLT	**Moule a Chique**	**3.35**	**352**	↑*e*P	**Pn**	**06 35 43.6**	**-1.6**
MCLT				*e*S	**Sn**	**06 36 20.5**	**-3.2**
SLDE	**Delcer**	**3.46**	**351**	*e*P	**Pn**	**06 35 46.5**	**-0.2**
SLDE				*e*S	**Sn**	**06 36 28.1**	**+1.7**
SLDE	**Delcer**	**3.46**	**351**	*e*P	**Pn**	**06 35 46.5**	**-0.2**
SLDE				*e*S	**Sn**	**06 36 23.1**	**-3.3**
SLB	**Belfond**	**3.48**	**351**	*e*P	**Pn**	**06 35 46.7**	**-0.3**
SLB	**Belfond**	**3.48**	**351**	*e*P	**Pn**	**06 35 46.7**	**-0.3**
SLPE	**Piton Saint Es**	**3.49**	**352**	*e*P	**Pn**	**06 35 47.0**	**-0.1**
SLPE				*e*S	**Sn**	**06 36 28.2**	**+1.1**
SLPE	**Piton Saint Es**	**3.49**	**352**	*e*P	**Pn**	**06 35 47.0**	**-0.1**
SLPE				*e*S	**Sn**	**06 36 24.6**	**-2.6**
SLW	**Petit Monier**	**3.65**	**353**	*e*P	**Pn**	**06 35 49.3**	**-0.1**
SLW				*e*S	**Sn**	**06 36 30.6**	**-0.6**
SLW	**Petit Monier**	**3.65**	**353**	*e*P	**Pn**	**06 35 47.9**	**-1.5**
SLW	**Petit Monier**	**3.65**	**353**	*e*P	**Pn**	**06 35 49.3**	**-0.1**
SLW				*e*S	**Sn**	**06 36 28.6**	**-2.7**
GURV	**El Guri**	**3.66**	**225**	‖*e*P	**Pn**	**06 35 48.1**	**-1.4**
PCRV	**Puerto La Cruz**	**4.10**	**268**	P	**Pn**	**06 35 53.2**	**-2.4**
	68nm,0.3s,baz=97,slow=4.5,SNR=193						
PCRV				S	**Sn**	**06 36 34.8**	**-7.6**
	138nm,0.3s,baz=18,slow=14,SNR=4.9						
PCRV	**Puerto La Cruz**	**4.10**	**268**	‖*i*P	**Pn**	**06 35 55.0**	**-0.6**
BIM	**Bigot**	**4.16**	**352**	*e*P	**Pn**	**06 35 55.1**	**-1.2**
BIM				*e*S	**Sn**	**06 36 44.0**	**+0.3**
MVM	**Montagne Vaucl**	**4.18**	**354**	*e*P	**Pn**	**06 35 55.0**	**-1.5**
FDF	**Fort de France**	**4.38**	**351**	*i* P	**Pn**	**06 35 58.1**	**-1.3**
FDF	**Fort de France**	**4.38**	**351**	*i* P	**Pn**	**06 35 58.0**	**-1.4**
FDF	**Fort de France**	**4.38**	**351**	*e*P	**Pn**	**06 35 58.6**	**-0.9**
FDF				*e*S	**Sn**	**06 36 46.5**	**-2.8**
PRGV	**PARIAGUAN**	**4.42**	**249**	‖*i*P	**Pn**	**06 35 59.0**	**-0.9**
LUEV	**Luepa**	**4.61**	**192**	*e*P	**Pn**	**06 35 58.5**	**-4.0**
DSHT	**Scott's Head**	**4.89**	**350**	*e*P	**Pn**	**06 36 07.8**	**+1.4**
DSHT				*e*S	**Sn**	**06 37 02.7**	**+0.9**
DSHT	**Scott's Head**	**4.89**	**350**	*e*P	**Pn**	**06 36 07.3**	**+0.9**
DSHT				*e*S	**Sn**	**06 36 58.2**	**-3.5**
DSTT	**Stowe**	**4.91**	**351**	*e*P	**Pn**	**06 36 08.0**	**+1.3**
DSTT				*e*S	**Sn**	**06 37 01.6**	**-0.7**
DSTT	**Stowe**	**4.91**	**351**	*e*P	**Pn**	**06 36 06.9**	**+0.2**
DSTT				*e*S	**Sn**	**06 36 59.9**	**-2.4**
DFBT	**Forest Bistro**	**4.91**	**350**	*e*P	**Pn**	**06 36 08.2**	**+1.5**
DFBT				*e*S	**Sn**	**06 37 03.2**	**+0.9**
DFBT	**Forest Bistro**	**4.91**	**350**	*e*P	**Pn**	**06 36 07.2**	**+0.5**
DFBT				*e*S	**Sn**	**06 36 58.3**	**-4.0**
DPMT	**Pointe Michel**	**4.94**	**350**	*e*P	**Pn**	**06 36 08.1**	**+1.1**
DPMT				*e*S	**Sn**	**06 37 05.1**	**+2.2**
DPMT	**Pointe Michel**	**4.94**	**350**	*e*P	**Pn**	**06 36 07.2**	**+0.1**
DPMT				*e*S	**Sn**	**06 37 00.3**	**-2.6**
DLPL	**La Plaine**	**4.99**	**351**	↑*e*P	**Pn**	**06 36 06.6**	**-1.1**
DLPL				*e*S	**Sn**	**06 37 01.1**	**-3.0**
MDN	**Morne-Daniel**	**5.00**	**350**	*e*S	**Sn**	**06 37 01.8**	**-2.6**
CUPV	**Cœpira**	**5.24**	**267**	*e*P	**Pn**	**06 36 11.2**	**-0.1**
CUPV				*e*S	**Sn**	**06 37 08.8**	**-1.6**
TBG	**Guadaloupe-3**	**5.56**	**348**	*e*P	**Pn**	**06 36 14.7**	**-1.0**
MGG	**Marie-Galante**	**5.57**	**352**	*e*P	**Pn**	**06 36 15.1**	**-0.7**
HMG	**Houelmont**	**5.70**	**348**	*e*P	**Pn**	**06 36 17.0**	**-0.5**
BIRV	**Birongo**	**5.70**	**272**	*e*P	**Pn**	**06 36 17.7**	**+0.1**
PHG	**Guadaloupe-2**	**5.72**	**349**	*e*P	**Pn**	**06 36 17.3**	**-0.5**
SCG	**Saint Claude**	**5.74**	**348**	*e*P	**Pn**	**06 36 17.6**	**-0.5**
BCG	**Bois Riant Cap**	**5.79**	**349**	*e*P	**Pn**	**06 36 18.3**	**-0.4**
ORCV	**Isla La Orchil**	**5.79**	**285**	↑*i*P	**Pn**	**06 36 17.5**	**-1.3**
MERV	**Las Mercedes**	**5.85**	**260**	*e*P	**Pn**	**06 36 18.4**	**-1.2**
LZG	**Guadaloupe-1**	**5.87**	**348**	*e*P	**Pn**	**06 36 19.0**	**-0.9**
DEG	**La Desirade**	**5.93**	**355**	*e*P	**Pn**	**06 36 19.3**	**-1.4**
SEG	**Port Louis**	**6.08**	**351**	*e*P	**Pn**	**06 36 22.0**	**-0.7**
FUNV	**FUNVISIS**	**6.24**	**271**	*e*P	**Pn**	**06 36 24.5**	**-0.4**
CAOV	**Caicara del Or**	**6.53**	**243**	*e*P	**Pn**	**06 36 26.9**	**-2.0**
BPA	**Boggy Peak**	**6.77**	**349**	*e*P	**Pn**	**06 36 31.4**	**-0.7**
BPA	**Boggy Peak**	**6.77**	**349**	*e*P	**Pn**	**06 36 31.4**	**-

JTS eS S 06 44 24.6 +3.1
JTS pmax pmax
comp=Z,108nm,1.1s
JTS MLR MLR
comp=Z,9µm,21.0s
JTS JuntasAbangare 24.08 272 eP P 06 40 07.3 +0.5
comp=Z,108nm,1.1s,mb5.2
JTS eS S 06 44 24.6 +3.1
JTS LR LR
comp=Z,9µm,21.0s,MS5.2
JCR Jicaral 24.26 271 eP P 06 40 08.9 +0.4
BOAB BOACO BROADBAND 24.78 277 eP P 06 40 13.9 +0.7
ATAH Atahualpa 24.92 226 P P 06 40 16.5 +2.0
comp=Z,390nm,1.1s,mb5.9,baz=63,slow=6.1,SNR=114
ATAH S S 06 44 46.9 +12
comp=Z,9.1nm,0.9s,baz=353,slow=8.4,SNR=5.7
SSN San Juan del S 24.94 274 eP P 06 40 13.1 -1.6
CSAN 25.51 277 eP P 06 40 20.7 +0.8
MOMN Momotombo 25.63 277 eP P 06 40 21.9 +1.0
COPN Copaltepe 25.68 277 eP P 06 40 22.2 +0.9
CNGN Cerro Negro 25.79 277 eP P 06 40 23.1 +0.7
LEON Leon 25.98 277 eP P 06 40 22.6 -1.5
SIV San Ignacio 26.20 181 P P 06 40 25.3 -0.7
comp=Z,40nm,1.1s,mb4.9,baz=16,slow=9.7,SNR=92
DWPF Disney 26.43 315 eP P 06 40 27.6 -0.4
comp=Z,240nm,1.1s,mb5.6
DWPF LR LR
comp=Z,7µm,21.0s,MS5.2
TGUH Tegucigalpa,Un 26.44 281 eP P 06 40 29.6 +1.4
comp=Z,305nm,1.1s,mb5.7
TGUH ePcP PcP 06 43 54.7 +1.8
TGUH LR LR
comp=Z,8µm,21.0s,MS5.2
NNA Nana 27.53 217 P P 06 40 38.0 0.0
comp=Z,294nm,0.9s,mb5.9,SNR=5.2
NNA Nana 27.53 217 P P 06 40 37.2 -0.8
comp=Z,26nm,1.0s,mb4.8,baz=33,slow=8.8,SNR=10.0
NNA S S 06 45 22.2 +6.1
comp=Z,1.6nm,0.3s,baz=150,slow=12,SNR=1.6
NNA LR LR 06 53 19.3
comp=Z,11µm,18.6s,MS5.5,baz=45,slow=40
NNA Nana 27.53 217 eP P 06 40 38.2 +0.2
comp=Z,60nm,0.8s,mb5.3
NNA LR LR
comp=Z,6µm,19.0s,MS5.2
LPAZ La Paz 27.55 196 P P 06 40 38.6 +0.5
comp=Z,23nm,0.8s,mb4.9,baz=13,slow=9.5,SNR=77
LPAZ S S 06 45 23.6 +7.2
comp=Z,7.0nm,0.9s,baz=303,slow=19,SNR=2.0
LPAZ LR LR 06 52 47.6
comp=Z,24µm,18.3s,MS5.8,baz=189,slow=39
LPAZ La Paz 27.55 196 eP P 06 40 38.4 +0.3
LPAZ eS S 06 45 17.9 +1.5
LPAZ LR LR
comp=Z,24µm,19.0s,MS5.8
TEIG Tepich 28.51 293 eP P 06 40 46.9 +0.1
comp=Z,44nm,0.9s,mb5.2
TEIG LR LR
comp=Z,8µm,21.0s,MS5.3
NHSC New Hope 28.99 324 eP P 06 40 52.7 +1.8
comp=Z,217nm,1.3s,mb5.7
NHSC LR LR
comp=Z,10µm,20.0s,MS5.4
RCBR Riachuelo 29.29 122 eP P 06 40 51.8 -1.9
comp=Z,119nm,1.0s,mb5.6
RCBR epP pP 06 41 05.3 -0.5
RCBR LR LR
comp=Z,6µm,21.0s,MS5.2
CNNC Cliffs of the 29.40 330 eP P 06 40 54.8 +0.3
comp=Z,81nm,1.4s,mb5.3
CNNC eS S 06 45 51.3 +6.0
CNNC LR LR
comp=Z,8µm,20.0s,MS5.3
COW Cow Castle Cre 29.49 324 eP P 06 40 55.6 +0.3
COW ePcP PcP 06 44 01.4 +1.4
APG El Apazote 29.60 282 P P 06 40 57.5 +1.0
comp=Z,29nm,0.9s,mb5.0,baz=126,slow=6.4,SNR=22
APG S S 06 45 54.0 +5.1
comp=Z,5.7nm,1.1s,baz=90,slow=23,SNR=3.4
JSC Jenkinsville 30.46 325 eP P 06 41 03.3 -0.6
GOGA Godfrey 31.17 321 eP P 06 41 10.0 -0.2
GOGA pmax pmax
comp=Z,53nm,1.1s,mb5.3
GOGA MLR MLR
comp=Z,6µm,20.0s,MS5.3
GOGA Godfrey 31.17 321 eP P 06 41 10.0 -0.1
comp=Z,53nm,1.1s,mb5.3
GOGA LR LR
comp=Z,6µm,20.0s,MS5.3
JSRW J. Sargeant Re 31.39 333 eP P 06 41 12.2 +0.2
CBN Corbin 31.59 334 eP P 06 41 14.4 +0.7
comp=Z,47nm,0.8s,mb5.4
CBN LR LR
comp=Z,9µm,21.0s,MS5.4
VWCC Virginia Weste 32.02 330 eP P 06 41 20.0 +2.5
BRAL Brewton 32.10 314 eP P 06 41 19.0 +0.7
comp=Z,109nm,0.7s,mb5.8
BRAL LR LR
comp=Z,11µm,19.0s,MS5.6
BLA Blacksburg 32.21 329 eP P 06 41 20.1 +0.9
BLA pmax pmax
comp=Z,121nm,1.4s,mb5.5
BLA MLR MLR
comp=Z,8µm,20.0s,MS5.4
BLA Blacksburg 32.21 329 eP P 06 41 20.1 +0.8
comp=Z,121nm,1.4s,mb5.5
BLA LR LR
comp=Z,8µm,20.0s,MS5.4
SDMD Soldier's Deli 32.39 336 eP P 06 41 21.7 +0.9
comp=Z,94nm,1.2s,mb5.5
ELN Prospectdale 32.39 329 eP P 06 41 21.5 +0.7
PB01 Plate Boundary 32.45 196 ⇓iP P 06 41 19.0 -2.5
MVL Millersville 32.70 337 eP P 06 41 24.5 +1.0
comp=Z,91nm,0.8s,mb5.8
YLE Yale 32.72 342 eP P 06 41 26.9 +3.3
YLE epP pP 06 41 37.6 +1.8
PAL Palisades 32.74 341 eP P 06 41 26.8 +3.0
PAL pmax pmax
comp=Z,59nm,1.1s,mb5.4
PAL Palisades 32.74 341 eP P 06 41 26.8 +3.1
comp=Z,59nm,1.1s,mb5.4
TKL Tuckaleechee C 32.89 324 eP P 06 41 25.0 -0.2
CPCT Cooper Cave 33.19 323 eP P 06 41 27.8 -0.1
CPCT ePcP PcP 06 44 10.9 +1.1
LRAL Lakeview Retre 33.23 317 eP P 06 41 28.0 -0.2
comp=Z,41nm,0.8s,mb5.4
LRAL ePP PP 06 42 41.7 -2.2
LRAL eS S 06 46 46.1 +1.0
LRAL LR LR
comp=Z,4µm,20.0s,MS5.1
SSPA Standing Stone 33.85 336 eP P 06 41 34.3 +0.8
comp=Z,84nm,0.9s,mb5.7
SSPA LR LR
comp=Z,7µm,20.0s,MS5.4
MCWV Mont Chateau 33.88 333 eP P 06 41 35.2 +1.5
comp=Z,119nm,1.1s,mb5.7
MCWV LR LR
comp=Z,8µm,20.0s,MS5.5
SWET Sewanee 33.90 321 eP P 06 41 34.2 +0.2
SWET ePcP PcP 06 44 12.8 +0.9
TRY Troy 34.23 343 eP P 06 41 38.4 +1.6
BINY Binghamton 34.50 339 eP P 06 41 40.4 +1.3
comp=Z,213nm,1.3s,mb5.9
BINY ePcP PcP 06 44 13.7 +0.2
BINY LR LR
comp=Z,7µm,20.0s,MS5.4
HNH Hanover 34.76 345 eP P 06 41 43.0 +1.8
ACCN Adirondack Com 34.83 343 eP P 06 41 43.6 +1.7
comp=Z,161nm,1.4s,mb5.8
LBNH Lisbon 35.17 346 eP P 06 41 46.1 +1.3
LBNH pmax pmax
comp=Z,119nm,1.2s,mb5.7
LBNH MLR MLR
comp=Z,6µm,20.0s,MS5.3
LBNH Lisbon 35.17 346 eP P 06 41 46.1 +1.3
comp=Z,119nm,1.2s,mb5.7
LBNH LR LR
comp=Z,6µm,20.0s,MS5.3
VBMS Vicksburg 35.23 313 eP P 06 41 45.8 +0.2
comp=Z,119nm,0.9s,mb5.8
VBMS LR LR
comp=Z,15µm,20.0s,MS5.8
MDV Middlebury 35.27 344 eP P 06 41 47.2 +1.6
NCB Newcomb 35.53 343 eP P 06 41 49.3 +1.3
comp=Z,117nm,1.1s,mb5.7
NCB LR LR
comp=Z,4µm,20.0s,MS5.2
PKME Peaks-Kenny Pk 35.58 349 P P 06 41 50.0 +1.7
comp=Z,72nm,1.4s,mb5.4
PKME LR LR
comp=Z,7µm,21.0s,MS5.4
ALLY Alegheny Colle 35.63 334 eP P 06 41 50.0 +1.1
comp=Z,168nm,1.1s,mb5.9
WVT Waverly 35.66 320 eP P 06 41 48.5 -0.7
WVT e 06 44 17.4
WVT eS S 06 47 23.7 +1.0
WVT pmax pmax
comp=Z,60nm,0.8s,mb5.6
WVT MLR MLR
comp=Z,6µm,21.0s,MS5.3
WVT Waverly 35.66 320 eP P 06 41 48.5 -0.8
comp=Z,60nm,0.8s,mb5.6
WVT ePcP PcP 06 44 17.4 +0.4
WVT eS S 06 47 23.7 +1.1
WVT LR LR
comp=Z,6µm,21.0s,MS5.3
OXF Oxford 35.72 317 eP P 06 41 48.9 -0.8
OXF eS S 06 47 24.2 +0.7
OXF pmax pmax
comp=Z,131nm,0.9s,mb5.9
OXF MLR MLR
comp=Z,4µm,20.0s,MS5.2
OXF Oxford 35.72 317 eP P 06 41 48.9 -0.8
comp=Z,131nm,0.9s,mb5.9
OXF eS S 06 47 24.2 +0.7
OXF LR LR
comp=Z,4µm,20.0s,MS5.2
ACSO Alum Creek Sta 35.81 330 eP P 06 41 50.8 +0.3
comp=Z,42nm,0.9s,mb5.4
ACSO LR LR
comp=Z,7µm,20.0s,MS5.4
ERPA Erie 35.95 335 P P 06 41 51.1 -0.5
comp=Z,62nm,0.8s,mb5.6
ERPA LR LR
comp=Z,7µm,20.0s,MS5.4
SPB Sao Paulo 36.09 159 eP P 06 41 52.6 -0.3
comp=Z,16nm,0.3s,mb5.4
SPB LR LR
comp=Z,14µm,21.0s,MS5.7
WCI Wyandotte Cave 36.12 324 eP P 06 41 52.9 -0.2
WCI e 06 43 19.2
WCI pmax pmax
comp=Z,70nm,1.2s,mb5.5
WCI MLR MLR
comp=Z,5µm,20.0s,MS5.3
WCI Wyandotte Cave 36.12 324 eP P 06 41 52.9 -0.2
comp=Z,70nm,1.2s,mb5.5
WCI ePP PP 06 43 19.2 +3.2
WCI LR LR
comp=Z,5µm,20.0s,MS5.3
FRNY Flat Rock 36.15 344 eP P 06 41 54.5 +1.2
comp=Z,44nm,0.9s,mb5.4
SACV Santiago Islan 36.22 79 PFAKE 06 42 10.0 +16
SACV LR LR
comp=Z,3µm,21.0s,MS5.1
LONY Lake Ozonia 36.23 343 eP P 06 41 54.8 +0.9
comp=Z,38nm,1.0s,mb5.3
LONY LR LR
comp=Z,4µm,19.0s,MS5.2
UTMT University of 36.45 320 eP P 06 41 55.9 -0.1
comp=Z,408nm,1.0s,mb6.3
HALT Halls 36.49 319 eP P 06 41 55.1 -1.2
CPUP Villa Florida 36.61 175 P P 06 41 55.6 -1.7
comp=Z,71nm,1.2s,mb5.4,baz=344,slow=7.9,SNR=43
CPUP LR LR 06 58 16.3
comp=Z,9µm,19.7s,MS5.5,baz=341,slow=38
CPUP Villa Florida 36.61 175 P P 06 41 55.6 -1.7
CPUP pmax pmax
comp=Z,71nm,1.2s
CPUP MLR MLR
comp=Z,9µm,19.7s
GLAT Glass 36.68 319 eP P 06 41 57.9 0.0
BLO Bloomington 36.90 325 eP P 06 42 00.2 +0.4
BLO pmax pmax
comp=Z,150nm,1.4s,mb5.6
BLO Bloomington 36.90 325 eP P 06 42 00.2 +0.4
comp=Z,150nm,1.4s,mb5.6
CAM4 Nova Friburgo 36.96 152 ⇑iP P 06 41 58.8 -1.6
CAM4 i 06 41 59.7
CAM4 i pP 06 42 09.5 -3.2
CAM4 i pP 06 42 11.4 -1.3
CAM4 i 06 42 16.6
CAM4 i 06 42 28.2
CAM4 i 06 42 30.0
CAM4 i 06 42 41.4
GNAR Gosnell 36.97 318 eP P 06 42 00.2 -0.2
comp=Z,1µm,0.9s,mb6.7
PARMO Parma 37.21 319 eP P 06 42 02.0 -0.4
OLIL Olney 37.51 323 eP P 06 42 05.1 +0.2
comp=Z,203nm,1.2s,mb5.7
SIUC Southern Illin 37.53 321 eP P 06 42 05.2 +0.1
comp=Z,204nm,1.0s,mb5.8
AAM Ann Arbor 37.73 331 eP P 06 42 07.6 +0.9
AAM pmax pmax
comp=Z,98nm,0.7s,mb5.7
AAM MLR MLR
comp=Z,7µm,20.0s,MS5.4
AAM Ann Arbor 37.73 331 eP P 06 42 07.5 +0.8
comp=Z,98nm,0.7s,mb5.7
AAM LR LR
comp=Z,7µm,20.0s,MS5.4
UALR University of 37.87 315 eP P 06 42 07.8 -0.3
comp=Z,29nm,0.8s,mb5.1
NATX Nacogdoches 38.10 309 eP P 06 42 08.9 -1.1
comp=Z,463nm,1.9s,mb5.9
NATX LR LR
comp=Z,9µm,20.0s,MS5.6
FVM French Village 38.44 321 eP P 06 42 12.1 -0.7
MIAR Mount Ida 38.62 314 eP P 06 42 12.8 -1.5
MIAR pmax pmax
comp=Z,64nm,1.6s,mb5.1
MIAR MLR MLR
comp=Z,10µm,20.0s,MS5.6
MIAR Mount Ida 38.62 314 eP P 06 42 12.8 -1.5
comp=Z,64nm,1.6s,mb5.1
MIAR LR LR
comp=Z,10µm,20.0s,MS5.6
SLM Saint Louis 38.73 322 eP P 06 42 16.2 +1.0
SLM pmax pmax
comp=Z,50nm,0.8s,mb5.3
SLM Saint Louis 38.73 322 eP P 06 42 16.1 +1.0
comp=Z,50nm,0.8s,mb5.3
KVTX Kingsville 39.10 301 PFAKE 06 42 30.0 +12
KVTX LR LR
comp=Z,5µm,22.0s,MS5.3
HDIL Hopedale 39.41 325 eP P 06 42 21.1 +0.2
comp=Z,166nm,1.5s,mb5.5
HDIL LR LR
comp=Z,7µm,20.0s,MS5.5
LCO Las Campanas 40.38 194 eP P 06 42 26.3 -2.7
comp=Z,141nm,1.1s,mb5.6
LCO ePcP PcP 06 44 31.7 +0.1
LCO LR LR
comp=Z,9µm,20.0s,MS5.6
TLL Tololo Astrono 41.51 194 eP P 06 42 37.5 -0.8
TLL Tololo Astrono 41.51 194 eP P 06 42 37.5 -0.8
JFWS Jewell Farm 41.52 327 eP P 06 42 38.4 +0.2
JFWS pmax pmax
comp=Z,108nm,1.3s,mb5.3
JFWS MLR MLR
comp=Z,9µm,20.0s,MS5.7
JFWS Jewell Farm 41.52 327 eP P 06 42 38.4 +0.1
comp=Z,108nm,1.3s,mb5.3
JFWS LR LR
comp=Z,9µm,20.0s,MS5.7
CMLA Cha da Macela 41.56 43 PFAKE 06 42 50.0 +11
CMLA LR LR
comp=Z,2µm,19.0s,MS5.0
JCT Junction City 41.65 305 eP P 06 42 38.4 -1.1
JCT pmax pmax
comp=Z,92nm,0.8s,mb5.5
JCT MLR MLR
comp=Z,5µm,22.0s,MS5.3
JCT Junction City 41.65 305 eP P 06 42 38.4 -1.1
comp=Z,92nm,0.8s,mb5.5
JCT LR LR
comp=Z,5µm,22.0s,MS5.3
WMOK Wichita Mounta 42.50 311 eP P 06 42 44.3 -2.1
WMOK pmax pmax
comp=Z,14nm,0.9s,mb4.6
WMOK MLR MLR
comp=Z,10µm,20.0s,MS5.7
WMOK Wichita Mounta 42.50 311 eP P 06 42 44.3 -2.1
comp=Z,14nm,0.9s,mb4.6
WMOK LR LR
comp=Z,10µm,20.0s,MS5.7
SCIA State Center 42.54 323 eP P 06 42 47.1 +0.5
comp=Z,359nm,1.4s,mb5.9
SCIA LR LR
comp=Z,5µm,20.0s,MS5.4
KSU1 Kansas State U 43.06 318 eP P 06 42 49.3 -1.6
comp=Z,67nm,0.8s,mb5.4
KSU1 ePcP PcP 06 44 41.5 +1.2
KSU1 LR LR
comp=Z,4µm,21.0s,MS5.3
COWI Conover 43.18 331 eP P 06 42 52.1 +0.4
comp=Z,40nm,0.9s,mb5.2
COWI LR LR
comp=Z,6µm,21.0s,MS5.5
CHIE El Hierro 43.47 61 P P 06 42 54.3 0.0
comp=Z,49nm,0.8s,mb5.3
628A Black Gap, Mar 43.87 302 ⇑P P 06 42 57.0 -0.6
baz=44,SNR=62
628A ⇑S S 06 49 24.8 -1.0
baz=44
528A Cox Ranch, San 43.99 303 ⇑P P 06 42 58.1 -0.4
baz=44,SNR=101
528A ⇑S S 06 49 25.9 -1.5
baz=44
428A Kincaid Ranch, 44.07 304 ⇑P P 06 42 58.8 -0.3
baz=44,SNR=76
428A ⇓S S 06 49 27.1 -1.6
baz=44
627A Terlingua Ranc 44.28 302 ⇓P P 06 43 00.6 -0.2
baz=44,SNR=38
328A Wristen Ranch, 44.38 305 ⇑P P 06 43 00.3 -1.3
baz=44,SNR=48
FCH Farellones 44.45 192 ⇓iP P 06 43 01.0 -1.1
TXAR Lajitas Array 44.48 301 P P 06 43 00.1 -2.3
comp=Z,0.9nm,0.3s,baz=308,slow=17,SNR=37
TXAR PcP PcP 06 44 47.0 +1.6
comp=Z,12nm,0.8s,baz=120,slow=5.5,SNR=6.7
TXAR pPcP 06 45 00.8
comp=Z,26nm,1.0s,baz=126,slow=6.4,SNR=5.7
TXAR Lajitas Array 44.48 301 P P 06 43 00.1 -2.3
TXAR 06 44 47.0
TXAR pmax pmax
comp=Z,1.0nm,0.3s
TXAR pmax pmax
comp=Z,12nm,0.8s
TXAR pmax pmax
comp=Z,26nm,1.0s
TXAR Lajitas Array 44.48 301 P P 06 43 00.1 -2.3
TXAR PcP PcP 06 44 47.0 +1.6
TXAR pPcP 06 45 00.8
CLCH Cerro Calan 44.57 192 ⇓iP P 06 43 01.7 -1.2
SCHQ Schefferville 44.63 355 P P 06 43 04.3 +1.1
comp=Z,19nm,0.5s,mb5.2,baz=160,slow=5.3,SNR=31
SCHQ LR LR 07 01 07.9
comp=Z,4µm,21.5s,MS5.3,baz=176,slow=35
SCHQ Schefferville 44.63 355 eP P 06 43 04.2 +1.0
comp=Z,147nm,1.2s,mb5.7
SCHQ LR LR
comp=Z,5µm,21.0s,MS5.4
527A Woodward Ranch 44.66 303 ⇑P P 06 43 03.1 -0.8
baz=45,SNR=33
427A Hayter Ranch, 44.70 304 ⇓P P 06 43 03.3 -0.8
baz=45,SNR=96
AMTX Amarillo 44.74 310 eP P 06 43 02.0 -2.4
comp=Z,29nm,0.8s,mb5.2
AMTX LR LR
comp=Z,10µm,20.0s,MS5.7
327A Balmorhea Ranc 44.93 304 ⇑P P 06 43 05.4 -0.6
baz=45,SNR=17
626A Big Bend Ranch 44.93 302 ⇓P P 06 43 05.4 -0.6
baz=45,SNR=24
LMEL Las Melosas 44.94 191 ⇓iP P 06 43 04.0 -1.8
LMEL Las Melosas 44.94 191 ⇓iP P 06 43 04.0 -1.8
227A Bennet, Jal 44.97 305 ⇓P P 06 43 05.8 -0.5
baz=45,SNR=18
CBKS Cedar Bluff 45.03 316 eP P 06 43 05.5 -1.1
CBKS pmax pmax
comp=Z,63nm,0.8s,mb5.5
CBKS MLR MLR
comp=Z,5µm,22.0s,MS5.4
CBKS Cedar Bluff 45.03 316 eP P 06 43 05.5 -1.2
comp=Z,63nm,0.8s,mb5.5
CBKS LR LR
comp=Z,5µm,22.0s,MS5.4
526A Mary Lane Ranc 45.03 302 ⇓P P 06 43 06.5 -0.3
baz=45,SNR=56
426A McDonald Obser 45.16 303 ⇑P P 06 43 07.4 -0.4
baz=45,SNR=57
MSTX Muleshoe 45.23 308 ⇑P P 06 43 07.2 -1.1
baz=45,SNR=47
127A Arkansas Junct 45.24 306 ⇓P P 06 43 07.3 -1.2
baz=45,SNR=94
326A Caldwell Ranch 45.31 304 ⇑P P 06 43 08.0 -1.0
baz=45,SNR=26
Z27A Tatum 45.34 307 ⇓P P 06 43 07.6 -1.7
baz=45,SNR=71
Y27A Causey 45.50 308 ⇓P P 06 43 09.1 -1.4
baz=46,SNR=48
CLNB Carlsbad 45.52 305 eP P 06 43 10.3 -0.4
comp=Z,26nm,1.1s,mb5.1
EYMN Ely 45.63 331 eP P 06 43 10.5 -0.7
EYMN LR LR
comp=Z,6µm,20.0s,MS5.5
ECSD EROS Data Cent 45.64 323 eP P 06 43 10.5 -0.9
ECSD ePcP PcP 06 44 50.2 +1.2
ECSD eS S 06 49 42.2 -8.7
ECSD LR LR
comp=Z,5µm,20.0s,MS5.5
226A Malaga, Loving 45.64 305 ⇑P P 06 43 10.4 -1.2
baz=46,SNR=17
X27A F and S Farms, 45.73 309 ⇑P P 06 43 11.2 -1.1
baz=46,SNR=31
126A Clayton Basin, 45.76 306 ⇑P P 06 43 11.4 -1.1
baz=46,SNR=40
CPRX Cap Rock 45.76 306 eP P 06 43 11.8 -0.8
comp=Z,150nm,1.1s,mb5.8
PMAR Madeira 45.79 54 eP P 06 43 12.9 +0.1
W27A Bowe Ranch, En 45.85 309 ⇑P P 06 43 12.3 -1.0
baz=46,SNR=75
GDL2 Guadalupe Moun 45.90 305 eP P 06 43 13.2 -0.4
Z26A Caprock 45.93 307 ⇓P P 06 43 12.6 -1.3
baz=46,SNR=64
425A Indio Mountain 45.98 303 ⇓P P 06 43 14.0 -0.4
baz=46,SNR=38
325A Bean Ranch, Si 46.14 304 ⇓P P 06 43 15.2 -0.3
baz=46,SNR=93
225A Deer Hill, Car 46.24 305 ⇑P P 06 43 16.0 -0.3
baz=46,SNR=137
X26A CR and CF Fran 46.24 308 ⇓P P 06 43 15.5 -0.8
baz=46,SNR=19
125A Gardner Draw, 46.27 306 ⇓P P 06 43 15.6 -1.0
baz=46,SNR=52
W26A Owens Ranch, T 46.40 309 ⇑P P 06 43 16.7 -0.8
baz=46,SNR=48
Z25A Roswell 46.52 306 ⇑P P 06 43 17.9 -0.6
baz=47,SNR=92
MNTX Cornudas Mount 46.57 304 eP P 06 43 18.9 -0.1
comp=Z,135nm,1.3s,mb5.7
MNTX eS S 06 50 04.2 -0.5
MNTX LR LR
comp=Z,3µm,22.0s,MS5.2
324A Moseley Ranch, 46.58 304 ⇑P P 06 43 18.5 -0.5
baz=47,SNR=54
V26A Tequesquite Ra 46.67 310 ⇓P P 06 43 18.8 -0.9
baz=47,SNR=78
Y25A Mesa, Roswell 46.71 307 ⇓P P 06 43 19.8 -0.2
baz=47,SNR=60
224A Cornudas Mount 46.79 304 ⇓P P 06 43 20.2 -0.4
baz=47,SNR=62
U26A Atchley Ranch, 46.87 311 ⇑P P 06 43 20.0 -1.2
baz=47,SNR=58
X25A Clemmons Ranch 46.89 308 ⇑P P 06 43 20.5 -0.9
baz=47,SNR=54
124A Stringfield Ra 46.92 305 ⇓P P 06 43 21.3 -0.4
baz=47,SNR=63
W25A X Bar L Ranch, 46.98 309 ⇓P P 06 43 21.5 -0.6
baz=47,SNR=29
Z24A Sheeppen Canyo 47.05 306 ⇓P P 06 43 22.5 -0.2
baz=47,SNR=147
Y24A Capitan 47.30 307 ⇑P P 06 43 24.6 0.0
baz=47,SNR=81
V25A Rancho No Teng 47.32 310 ⇓P P 06 43 24.3 -0.4
baz=47,SNR=90
U25A Circle Dot Ran 47.37 310 ⇑P P 06 43 24.3 -0.8

baz=47,SNR=75
X24A Lazy VL Ranch, 47.50 308 ⇑P **P 06 43 25.9 -0.2**
baz=48,SNR=41
223A Chaparral, Ant 47.51 304 ⇑P **P 06 43 26.0 -0.2**
baz=48
123A Bell Site, Whi 47.56 305 ⇓P **P 06 43 26.2 -0.4**
baz=48
OGNE Ogallala 47.59 317 *e*P **P 06 43 25.5 -1.2**
OGNE *e*PcP PcP 06 44 57.9 +1.9
OGNE LR LR
comp=Z,4μm,21.0s,MS5.3
T25A Trinidad 47.65 311 ⇑P **P 06 43 26.3 -0.9**
baz=48,SNR=20
W24A Lazy 6 Ranch, 47.70 309 ⇓P **P 06 43 27.6 -0.1**
baz=48,SNR=64
Z23A Rita Site, Whi 47.72 306 ⇓P **P 06 43 27.8 -0.1**
baz=48,SNR=14
Y23A Lovelace Mesa, 47.78 307 ⇓P **P 06 43 28.5 +0.1**
baz=48,SNR=92
S25A Robets Cordova 47.87 312 ⇓P **P 06 43 27.9 -1.0**
baz=48,SNR=40
U24A Moreno Valley 48.02 310 ⇑P **P 06 43 29.8 -0.3**
baz=48,SNR=14
AGMN Agassiz Nation 48.03 329 *e*P **P 06 43 29.2 -0.8**
comp=Z,102nm,0.9s,mb5.8
AGMN LR LR
comp=Z,7μm,20.0s,MS5.6
222A Williams Famil 48.09 304 ⇑P **P 06 43 30.6 -0.1**
baz=48,SNR=11
X23A Hourglass Bar 48.10 307 ⇑P **P 06 43 30.7 0.0**
baz=48
122A Conniff Cattle 48.17 305 ⇑P **P 06 43 31.7 +0.3**
baz=48,SNR=13
TRQA Tornquist 48.20 182 *e*P **P 06 43 29.3 -2.0**
comp=Z,49nm,1.2s,mb5.4
TRQA LR LR
comp=Z,17μm,19.0s,MS6.0
Q25A Bedland, Calha 48.23 314 ⇓P **P 06 43 31.9 +0.2**
baz=48
W23A Werner Place, 48.26 308 ⇑P **P 06 43 32.1 +0.1**
baz=48,SNR=51
Z22A Elephant Butte 48.30 306 ⇓P **P 06 43 32.5 +0.1**
baz=48,SNR=52
BNM Barren Site 48.30 307 *e*P **P 06 43 33.0 +0.6**
comp=Z,295nm,1.4s,mb6.1
LPM Los Pinos Moun 48.36 307 *e*P **P 06 43 33.5 +0.7**
P25A Willow Gulch B 48.42 314 ⇑P **P 06 43 33.1 0.0**
baz=48,SNR=11
ANMO Albuquerque 48.43 308 ⇑*e*P **P 06 43 33.7 +0.4**
S24A Houchin Ranch, 48.43 312 ⇓P **P 06 43 32.9 -0.4**
baz=48,SNR=36
V23A Ortiz Mt. (NFS 48.48 309 ⇓P **P 06 43 34.2 +0.5**
baz=48,SNR=64
Y22A Socorro 48.51 306 ⇓P **P 06 43 33.9 0.0**
baz=48,SNR=45
Y22D IRIS PASSCAL I 48.51 307 ⇑P **P 06 43 33.9 0.0**
baz=49
R24A Sanders Place, 48.58 312 ⇓P **P 06 43 34.3 -0.1**
baz=49,SNR=7.8
LENM Lemitar 48.58 307 *e*P **P 06 43 34.6 +0.1**
221A Mesquite Ranch 48.61 304 ⇓P **P 06 43 35.0 +0.2**
baz=49
SDCO Great Sand Dun 48.68 312 *e*P **P 06 43 34.6 -0.6**
comp=Z,43nm,1.1s,mb5.4
SDCO *e*PcP PcP 06 45 01.9 +1.9
SDCO LR LR
comp=Z,11μm,20.0s,MS5.8
U23A El Rito 48.68 310 ⇓P **P 06 43 35.6 +0.3**
baz=49,SNR=32
X22A Bernardo 48.72 307 ⇓P **P 06 43 35.8 +0.2**
baz=49
121A Cookes Peak, D 48.76 304 ⇓P **P 06 43 36.4 +0.5**
baz=49,SNR=29
W22A Albuquerque 48.78 308 ⇓P **P 06 43 36.3 +0.2**
baz=49,SNR=13
LAZ Ladron 48.78 307 *e*P **P 06 43 36.7 +0.6**
comp=Z,36nm,1.0s,mb5.3
T23A Casias Ranch, 48.82 311 ⇓P **P 06 43 36.0 -0.3**
baz=49,SNR=28
Z21A St. Cloud Mine 48.88 305 ⇑P **P 06 43 37.1 +0.3**
baz=49,SNR=73
320A Kipp Ranch, An 49.06 303 ⇓P **P 06 43 38.6 +0.4**
baz=49,SNR=12
V22A San Miguel Ran 49.09 309 ⇑P **P 06 43 38.8 +0.4**
baz=49,SNR=117
Y21A Point of Rocks 49.09 306 ⇑P **P 06 43 38.9 +0.5**
baz=49,SNR=79
220A Playas Peak, P 49.20 303 ⇓P **P 06 43 39.5 +0.2**
baz=49,SNR=21
U22A Llaves 49.20 309 ⇑P **P 06 43 39.4 +0.2**
baz=49,SNR=43
ULM Lac du Bonnet 49.31 331 P **P 06 43 38.6 -1.1**
comp=Z,59nm,0.8s,mb5.7,baz=131,slow=8.1,SNR=47
ULM LR LR 07 05 17.6
comp=Z,5μm,20.3s,MS5.5,baz=138,slow=37
ULM Lac du Bonnet 49.31 331 *e*P **P 06 43 38.5 -1.2**
comp=Z,83nm,0.9s,mb5.8
ULM LR LR
comp=Z,6μm,20.0s,MS5.6
X21A Alamocita Cree 49.31 307 ⇑P **P 06 43 40.3 +0.2**
baz=49,SNR=52
W21A San Fidel 49.40 308 ⇑P **P 06 43 41.1 +0.3**
baz=49
120A U Bar Ranch, L 49.45 304 ⇑P **P 06 43 41.8 +0.6**
baz=50,SNR=24
T22A Edith 49.46 310 ⇓P **P 06 43 41.2 +0.1**
baz=50,SNR=28
ISCO Idaho Springs 49.56 314 *e*P **P 06 43 41.6 -0.3**
ISCO pmax pmax
comp=Z,34nm,1.0s,mb5.3
ISCO MLR MLR
comp=Z,5μm,20.0s,MS5.5
ISCO Idaho Springs 49.56 314 *e*P **P 06 43 41.6 -0.3**
comp=Z,34nm,1.0s,mb5.3
ISCO LR LR
comp=Z,5μm,20.0s,MS5.5
Z20A Nine Sixteen R 49.57 305 ⇓P **P 06 43 42.9 +0.8**
baz=50,SNR=31
V21A Milan 49.61 309 ⇑P **P 06 43 42.9 +0.5**
baz=50,SNR=33
Y20A Horse Springs, 49.62 306 ⇓P **P 06 43 43.1 +0.7**
baz=50,SNR=26
S22A 4UR Ranch, Cre 49.66 311 ⇓P **P 06 43 42.3 -0.4**
baz=50,SNR=44
319A Douglas 49.69 302 ⇓P **P 06 43 43.4 +0.4**
baz=50,SNR=23
R22A Saguache, Gunn 49.78 312 ⇑P **P 06 43 43.4 -0.2**
baz=50,SNR=12
219A White Tail Can 49.83 303 ⇓P **P 06 43 44.5 +0.5**
baz=50,SNR=23
U21A Nageezi 49.83 309 ⇓P **P 06 43 44.6 +0.6**
baz=50,SNR=46
X20A Quemado 49.90 307 ⇑P **P 06 43 45.2 +0.6**
baz=50,SNR=46
T21A Navajo Lake 49.92 310 ⇓P **P 06 43 45.1 +0.4**
baz=50
119A Ashpeak Ranch, 50.06 304 ⇑P **P 06 43 46.3 +0.6**
baz=50,SNR=14
PHWY Pilot Hill 50.06 316 *e*P **P 06 43 45.0 -0.7**
PHWY *e*PcP PcP 06 45 06.5 +1.5
W20A Ramah 50.07 307 ⇓P **P 06 43 45.9 0.0**
baz=50,SNR=26
Q22A Crested Butte, 50.12 313 ⇑P **P 06 43 46.0 -0.2**
baz=50,SNR=23
Z19A T-Link Ranch, 50.16 305 ⇓P **P 06 43 47.0 +0.4**
baz=50
V20A Brimhall 50.25 308 ⇓P **P 06 43 47.5 +0.3**
baz=50,SNR=37
SMCO Snowmass 50.29 313 *e*P **P 06 43 47.5 +0.1**
comp=Z,19nm,0.9s,mb5.1
318A Bisbee 50.30 302 ⇑P **P 06 43 47.9 +0.3**
baz=50,SNR=28
Y19A Nutrioso 50.33 306 ⇑P **P 06 43 48.6 +0.7**
baz=50,SNR=62
S21A Coal Bank Pass 50.34 311 ⇑P **P 06 43 48.0 +0.1**
baz=50,SNR=7.9
RSSD Black Hills 50.39 320 *e*P **P 06 43 47.6 -0.5**
RSSD *e* 06 45 06.9
RSSD pmax pmax
comp=Z,12nm,0.7s,mb5.0
RSSD MLR MLR
comp=Z,4μm,21.0s,MS5.5
RSSD Black Hills 50.39 320 *e*P **P 06 43 47.6 -0.6**
comp=Z,12nm,0.7s,mb5.0
RSSD *e*PcP PcP 06 45 06.9 +0.8
RSSD LR LR
comp=Z,4μm,21.0s,MS5.5
R21A Cimarron 50.41 312 ⇑P **P 06 43 48.4 0.0**
baz=50,SNR=29
218A Dragoon 50.47 303 ⇓P **P 06 43 49.6 +0.6**
baz=50,SNR=20
U20A Newcomb 50.47 309 ⇑P **P 06 43 49.0 +0.1**
baz=50
N22A Wattenberg Ran 50.55 315 ⇓P **P 06 43 49.2 -0.2**
baz=51,SNR=10
118A Homack Ranch, 50.57 304 ⇑P **P 06 43 50.1 +0.4**
baz=51,SNR=32
Q21A Lamborn Mesa, 50.60 312 ⇑P **P 06 43 49.8 0.0**
baz=51
V19A Window Rock 50.67 308 ⇓P **P 06 43 50.6 +0.2**
baz=51,SNR=27
MVCO Mesa Verde 50.72 310 ⇓P **P 06 43 51.0 +0.2**
baz=51,SNR=12
MVCO Mesa Verde 50.72 310 *e*P **P 06 43 50.7 -0.1**
comp=Z,32nm,1.0s,mb5.2
MVCO LR LR
comp=Z,8μm,20.0s,MS5.7
P21A Newcastle 50.76 313 ⇑P **P 06 43 51.5 +0.5**
baz=51,SNR=16
W19A Sanders 50.76 307 ⇓P **P 06 43 51.3 +0.2**
baz=51,SNR=22
Y18A Canyon Day Jun 50.91 305 ⇑P **P 06 43 52.6 +0.4**
baz=51,SNR=30
R20A Redvale 50.96 311 ⇑P **P 06 43 52.8 +0.3**
baz=51,SNR=52
U19A Dine' College, 50.97 309 ⇓P **P 06 43 52.4 -0.2**
baz=51,SNR=30
T19A Beclabito 51.00 309 ⇑P **P 06 43 52.8 0.0**
baz=51,SNR=46
O21A Pagoda 51.03 314 ⇑P **P 06 43 53.6 +0.6**
baz=51,SNR=13
L22A Ellis Ranch, M 51.03 316 ⇑P **P 06 43 52.9 -0.1**
baz=51
W18A Petrified Fore 51.04 307 ⇑P **P 06 43 53.3 +0.1**
baz=51,SNR=7.2
X18A Snowflake 51.04 306 ⇑P **P 06 43 53.9 +0.7**
baz=51,SNR=64
PV01 Paradox Valley 51.09 311 *e*P **P 06 43 54.0 +0.5**
comp=Z,9μm,1.2s
Z17A San Carlos Hig 51.14 305 ⇑P **P 06 43 53.8 -0.1**
baz=51,SNR=10.0
Q20A Ridgley Place, 51.16 312 ⇓P **P 06 43 53.9 -0.2**
baz=51,SNR=31
117A Oracle 51.18 304 ⇓P **P 06 43 54.4 +0.1**
baz=51,SNR=29
N21A Black Mountain 51.27 315 ⇓P **P 06 43 54.7 -0.2**
baz=51,SNR=24
V18A Ganado 51.36 308 ⇑P **P 06 43 55.3 -0.3**
baz=51,SNR=14
S19A Harvey Farm, M 51.38 310 ⇑P **P 06 43 55.6 0.0**
baz=51,SNR=54
PV04 Paradox Valley 51.42 311 *e*P **P 06 43 56.4 +0.4**
RWWY Rawlins 51.42 316 *e*P **P 06 43 55.9 0.0**
comp=Z,68nm,1.3s,mb5.4
P20A De Beque 51.43 313 ⇑P **P 06 43 56.6 +0.6**
baz=52,SNR=16
M21A Separation Pea 51.50 316 ⇓P **P 06 43 56.5 0.0**
baz=52
U18A Rough Rock, Ch 51.52 309 ⇑P **P 06 43 56.7 0.0**
baz=52,SNR=16
Y17A Roosevelt 51.54 305 ⇑P **P 06 43 57.4 +0.4**
baz=52,SNR=24
O20A White River Ci 51.55 314 ⇑P **P 06 43 56.9 0.0**
baz=52,SNR=14
216A Three Points, 51.64 303 ⇓P **P 06 43 57.8 +0.1**
baz=52,SNR=9.7
L21A Rawlins 51.64 316 ⇓P **P 06 43 57.5 -0.1**
baz=52,SNR=22
R19A Curley Farm, L 51.65 311 ⇑P **P 06 43 57.7 0.0**
baz=52,SNR=11
X17A Forest Lakes 51.67 306 ⇓P **P 06 43 58.5 +0.6**
baz=52,SNR=23
PLCA Paso Flores 51.70 190 P **P 06 43 56.4 -1.5**
comp=Z,50nm,0.9s,mb5.4,baz=12,slow=9.1,SNR=54
PLCA LR LR 07 08 06.6
comp=Z,2μm,21.5s,MS5.1,baz=11,slow=39
PLCA Paso Flores 51.70 190 *e*P **P 06 43 57.0 -0.8**
PLCA pmax pmax
comp=Z,83nm,1.1s
PLCA MLR MLR
comp=Z,2μm,21.0s
PLCA Paso Flores 51.70 190 *e*P **P 06 43 57.0 -0.8**
comp=Z,82nm,1.1s,mb5.6
PLCA LR LR
comp=Z,2μm,21.0s,MS5.2
T18A Mexican Hat 51.74 309 ⇓P **P 06 43 58.3 -0.1**
baz=52,SNR=66
N20A Spence Gulch, 51.82 314 ⇓P **P 06 43 58.7 -0.2**
baz=52,SNR=21
Q19A Hogan Spring (51.87 312 ⇑P **P 06 43 59.0 -0.3**
baz=52,SNR=38
P19A Cripple Cowboy 51.90 313 ⇑P **P 06 43 59.3 -0.2**
baz=52
Z16A Peralta Trail, 51.93 304 ⇓P **P 06 43 60.0 +0.2**
baz=52,SNR=26
116A Eloy 51.97 303 ⇓P **P 06 44 00.3 +0.2**
baz=52
S18A Hurst Farm, Bl 52.01 310 ⇓P **P 06 44 00.3 -0.1**
baz=52,SNR=33
V17A Tonalea, Kykot 52.01 307 ⇓P **P 06 44 00.7 +0.3**
baz=52,SNR=72
M20A Sweetwater, Wa 52.02 315 ⇓P **P 06 44 00.4 0.0**
baz=52,SNR=21
Y16A Circle Bar Ran 52.10 305 ⇑P **P 06 44 01.4 +0.3**
baz=52,SNR=37
R18A Canyonlands Na 52.15 311 ⇑P **P 06 44 01.0 -0.4**
baz=52,SNR=42
U17A Shonto 52.19 309 ⇑P **P 06 44 01.8 +0.1**
baz=52,SNR=9.7
X16A Lo Mia Camp, P 52.20 306 ⇑P **P 06 44 02.2 +0.3**
baz=52,SNR=15
O19A Miners Draw (B 52.24 313 ⇑P **P 06 44 01.4 -0.7**
baz=52,SNR=26
L20A Wamsutter 52.33 316 ⇓P **P 06 44 02.5 -0.1**
baz=52,SNR=25
T17A Navajo Res., N 52.41 309 ⇑P **P 06 44 04.0 +0.6**
baz=52,SNR=42
115A Sonoran Desert 52.43 303 ⇑P **P 06 44 04.1 +0.5**
baz=52,SNR=7.4
WUAZ Wupatki 52.44 307 ⇑P **P 06 44 04.1 +0.6**
baz=52,SNR=67
WUAZ Wupatki 52.44 307 *e*P **P 06 44 04.4 +0.8**
comp=Z,190nm,1.2s,mb5.9
WUAZ LR LR
comp=Z,6μm,20.0s,MS5.6
W16A Flagstaff 52.45 306 ⇓P **P 06 44 03.9 +0.2**
baz=52,SNR=44
N19A John Jarvie Ra 52.49 314 ⇑P **P 06 44 03.0 -0.9**
baz=52,SNR=26
Z15A Gila River Ind 52.51 304 ⇑P **P 06 44 04.6 +0.4**
baz=52
Q18A Rafter H Ranch 52.56 312 ⇑P **P 06 44 04.3 -0.2**
baz=53
K20A Yellowstone Ra 52.58 316 ⇓P **P 06 44 04.1 -0.5**
baz=53,SNR=53
S17A Black Ridge (B 52.60 310 ⇓P **P 06 44 05.1 +0.4**
baz=53,SNR=58
DGMT Dagmar 52.65 325 ⇑P **P 06 44 05.3 +0.4**
baz=53,SNR=23
DGMT Dagmar 52.65 325 *e*P **P 06 44 05.3 +0.4**
comp=Z,45nm,0.7s,mb5.5
DGMT LR LR
comp=Z,7μm,20.0s,MS5.7
M19A Rock Springs 52.70 315 ⇓P **P 06 44 05.3 -0.1**
baz=53
214A Organ Pipe Nat 52.76 302 ⇓P **P 06 44 05.9 -0.1**
baz=53
R17A Hanksville Air 52.77 311 ⇑P **P 06 44 06.0 0.0**
baz=53,SNR=31
Y15A Casa Rosa Ranc 52.81 305 ⇓P **P 06 44 06.5 +0.1**
baz=53,SNR=22
P18A Preston Nutter 52.82 312 ⇑P **P 06 44 06.4 +0.1**
baz=53,SNR=75
SRU San Rafael 52.85 312 ⇑P **P 06 44 06.5 -0.1**
baz=53,SNR=73
SRU San Rafael 52.85 312 *e*P **P 06 44 06.8 +0.2**
SRU pmax pmax
comp=Z,87nm,1.0s,mb5.6
SRU San Rafael 52.85 312 *e*P **P 06 44 06.8 +0.2**
comp=Z,86nm,1.0s,mb5.6
X15A Humboldt 52.86 306 ⇓P **P 06 44 07.1 +0.4**
baz=53,SNR=24
O18A Roosevelt 52.86 313 ⇑P **P 06 44 06.3 -0.4**
baz=53,SNR=18
N18A Larsen Ranch, 52.87 314 ⇑P **P 06 44 05.8 -0.9**
baz=53,SNR=12
T16A Glen Canyon Da 52.94 309 ⇑P **P 06 44 07.4 +0.1**
baz=53
LAO LASA Array 52.96 322 *e*P **P 06 44 07.3 +0.1**
comp=Z,169nm,1.4s,mb5.8
LAO LR LR
comp=Z,5μm,21.0s,MS5.5
114A Black Gap (USA 52.98 303 ⇓P **P 06 44 07.7 0.0**
baz=53,SNR=10
K19A Absolon Red Bu 52.99 316 ⇑P **P 06 44 06.8 -0.8**
baz=53,SNR=39
L19A Farson 53.06 315 ⇓P **P 06 44 07.7 -0.4**
baz=53,SNR=47
V15A Kaibab Nationa 53.14 307 ⇑P **P 06 44 09.3 +0.5**
baz=53,SNR=44
Z14A Wintersburg 53.17 304 ⇓P **P 06 44 09.5 +0.5**
baz=53
S16A Weppner Ranch, 53.23 310 ⇑P **P 06 44 09.6 +0.3**
baz=53,SNR=24
Q16A Castle Valley 53.27 311 ⇓P **P 06 44 10.0 +0.3**
baz=53,SNR=8.3
R16A Teasdale 53.31 310 ⇑P **P 06 44 10.2 +0.2**
baz=53,SNR=57
M18A Lyman 53.31 314 ⇑P **P 06 44 09.7 -0.2**
baz=53,SNR=21
Y14A Wickenburg 53.35 305 ⇑P **P 06 44 10.4 +0.1**
baz=53,SNR=17
O17A Robinson Place 53.36 313 ⇑P **P 06 44 10.3 0.0**
baz=53,SNR=46
X14A Yava 53.38 305 ⇓P **P 06 44 10.9 +0.3**
baz=53,SNR=22
U15A North Rim 53.40 308 ⇑P **P 06 44 10.9 +0.3**
baz=53,SNR=48
TMUT Trail Mountain 53.41 312 *e*P **P 06 44 10.9 +0.2**
comp=Z,55nm,0.8s,mb5.5
BW06 Boulder Array 53.45 316 ⇓P **P 06 44 10.4 -0.5**
baz=54,SNR=111
BW06 Boulder Array 53.45 316 *e*P **P 06 44 10.3 -0.6**
comp=Z,47nm,1.2s,mb5.3
BW06 LR LR
comp=Z,6μm,22.0s,MS5.6
PDAR Pinedale Array 53.45 316 P **P 06 44 10.4 -0.5**
comp=Z,20nm,0.6s,mb5.2,baz=117,slow=9.0,SNR=226
PDAR pP pP 06 44 23.1 -0.5
comp=Z,33nm,0.8s,baz=113,slow=8.4,SNR=9.5
PDAR PcP PcP 06 45 18.8 +1.2
comp=Z,13nm,0.9s,baz=120,slow=8.8,SNR=1.6
PDAR pPcP 06 45 32.5
comp=Z,17nm,1.0s,baz=116,slow=1.3,SNR=2.3
PDAR LR LR 07 09 45.1
comp=Z,3μm,21.0s,MS5.4,baz=132,slow=39
PFVI Vila Bisbo 53.45 51 *e*S **S 06 51 42.2 +1.7**
PFVI *e*LR LR 06 59 53.8
comp=Z,3μm,20.0s
L18A Fontenelle, Gr 53.47 315 ⇑P **P 06 44 11.2 +0.1**
baz=54,SNR=28
T15A Red Dirt Ranch 53.63 309 ⇑P **P 06 44 12.6 +0.3**
baz=54,SNR=75
MORF Marmelete 53.64 51 *e*P **P 06 44 13.7 +1.3**
comp=Z,175nm,1.3s,mb5.8
MORF *e*sP sP 06 44 26.0 -4.4
MORF *e*LR LR 07 01 07.3
comp=Z,4μm,19.4s
MORF Marmelete 53.64 51 *e*P **P 06 44 12.0 -0.4**
MORF *e*S **S 06 51 43.2 +0.2**
PMAFR Mafra 53.64 49 *e*S **S 06 51 46.5 +3.5**
PMAFR *e*LR LR 07 00 47.7
comp=Z,5μm,19.6s
LIS Lisbon 53.67 49 *e*P **P 06 44 12.3 -0.3**
LIS *e*S **S 06 51 43.7 +0.3**
LIS *e*S **S 06 51 43.7 +0.3**
LIS AMS AMS 07 05 40.9
comp=Z,4μm,25.4s,MS5.4
LIS Lisbon 53.67 49 *e*P **P 06 44 12.2 -0.4**
LIS *e*S **S 06 51 43.6 +0.2**
N17A Moffit Pass 53.68 314 ⇑P **P 06 44 12.9 +0.2**
baz=54
W14A Seligman 53.71 306 ⇓P **P 06 44 13.4 +0.4**
baz=54,SNR=26
113A Mohawk Valley, 53.71 303 ⇑P **P 06 44 13.4 +0.3**
baz=54
Z13A Yuma Proving G 53.71 304 ⇑P **P 06 44 13.3 +0.2**
baz=54,SNR=22
K18A Toltan Ranch, 53.73 316 ⇑P **P 06 44 12.9 -0.1**
baz=54,SNR=55
M17A Scullys Gap (B 53.75 314 ⇓P **P 06 44 13.0 -0.2**
baz=54,SNR=14
S15A Panguitch 53.80 309 ⇓P **P 06 44 13.7 +0.1**
baz=54,SNR=21
DAU Daniels Canyon 53.81 313 *e*P **P 06 44 14.3 +0.7**
V14A Boquillas Ranc 53.83 307 ⇑P **P 06 44 14.1 +0.3**
baz=54,SNR=20
P16A Fountain Green 53.84 312 ⇓P **P 06 44 14.1 +0.2**
baz=54,SNR=13
R15A Junction 53.88 310 ⇓P **P 06 44 14.7 +0.5**
baz=54,SNR=20
MSU Marysvale 53.90 310 *e*P **P 06 44 14.8 +0.5**
O16A Springville 53.92 313 ⇑P **P 06 44 14.3 -0.2**
baz=54,SNR=13
J18A Kendall Valley 53.93 317 ⇑P **P 06 44 14.5 +0.1**
baz=54,SNR=20
MPU Maple Canyon 53.95 312 *e*P **P 06 44 15.7 +1.0**
I18A Diamond G Ranc 53.98 317 ⇓P **P 06 44 14.8 0.0**
baz=54,SNR=50
Y13A Salome 53.99 304 ⇑P **P 06 44 15.1 +0.1**
baz=54,SNR=24
JLU Jordanelle 54.01 313 *e*P **P 06 44 15.4 +0.3**
U14A Mt Trumbull 54.09 308 ⇓P **P 06 44 16.1 +0.4**
baz=54,SNR=53
N16A Rees Ranch, Co 54.09 313 ⇑P **P 06 44 15.4 -0.3**
baz=54,SNR=24
L17A Cokeville 54.11 315 ⇑P **P 06 44 15.2 -0.6**
baz=54,SNR=22
MESJ Messejana 54.12 51 *e*P **P 06 44 15.4 -0.5**
MESJ *e*S **S 06 51 49.6 +0.2**
MESJ AMS AMS 07 05 30.5
comp=Z,3μm,19.5s,MS5.4
MESJ Messejana 54.12 51 *e*P **P 06 44 15.4 -0.5**
MESJ *e*S **S 06 51 49.6 +0.2**
PBDV Barranco-do-Ve 54.17 51 *e*P **P 06 44 16.5 +0.2**
PBDV *e*sP sP 06 44 30.4 -4.0
PBDV *e*LR LR 07 01 02.9
comp=Z,5μm,21.9s
T14A Hurricane 54.18 308 ⇓P **P 06 44 16.7 +0.3**
baz=54,SNR=25
RLMT Red Lodge 54.18 319 ⇓P **P 06 44 16.3 0.0**
baz=54,SNR=47
RLMT Red Lodge 54.18 319 *e*P **P 06 44 16.5 +0.2**
RLMT LR LR
comp=Z,4μm,22.0s,MS5.5
Q15A Fillmore 54.19 311 ⇓P **P 06 44 16.8 +0.4**
baz=54,SNR=20
PCVE Castro Verde 54.20 51 *e*P **P 06 44 16.7 +0.2**
PCVE *e*sP sP 06 44 30.3 -4.2
PCVE *e*S **S 06 51 55.5 +5.0**
PCVE *e*LR LR 07 00 56.5
comp=Z,3μm,23.0s
CTU Camp Tracy 54.26 313 *e*P **P 06 44 17.3 +0.4**
NLU North Lily Min 54.26 312 *e*P **P 06 44 17.1 +0.2**
P15A Leamington 54.29 312 ⇓P **P 06 44 17.7 +0.6**
baz=54,SNR=6.7
W13A Hualapai Mount 54.32 306 ⇓P **P 06 44 18.1 +0.6**
baz=54,SNR=34
112A Yuma 54.34 303 ⇑P **P 06 44 17.9 +0.2**
baz=54
PDMCI Parker Dam,Lak 54.34 305 ⇓P **P 06 44 17.7 +0.1**
baz=54
K17A Gardner Place, 54.38 316 ⇓P **P 06 44 17.4 -0.3**
baz=54,SNR=16
PVAQ Vaqueiros 54.38 51 *e*P **P 06 44 16.7 -1.1**
PVAQ *e*sP sP 06 44 31.7 -4.2
PVAQ *e*S **S 06 52 04.3 +11**
PVAQ *e*LR LR 07 01 20.3
comp=Z,4μm,20.7s
EVOP Sao Brissos 54.38 50 *e*P **P 06 44 17.5 -0.3**
EVOP *e*S **S 06 51 53.9 +0.9**
EVOP *e*S **S 06 51 53.9 +0.9**
EVOP AMS AMS 07 06 01.0
comp=Z,5μm,16.8s,MS5.6
EVOP Sao Brissos 54.38 50 *e*P **P 06 44 17.5 -0.3**
EVOP *e*S **S 06 51 53.8 +0.8**
HWUT Hardware Ranch 54.43 314 *e*P **P 06 44 17.4 -0.6**
HWUT LR LR
comp=Z,5μm,20.0s,MS5.5
S14A Cedar City 54.43 309 ⇑P **P 06 44 17.9 -0.3**
baz=54,SNR=25
PBEJ Beja 54.44 50 *e*P **P 06 44 18.9 +0.7**

G18A **Lazy EL Ranch,** 54.45 319 ⇓P P 06 44 17.9 -0.3
baz=54,SNR=27
J17A **Brown Place, J** 54.46 316 ⇑P P 06 44 18.1 -0.1
baz=54,SNR=31
EVO **Evora** 54.47 50 ⇑*i*P P 06 44 18.6 +0.2
comp=Z,244nm,1.9s,mb5.5
EVO *e*pP pP 06 44 32.2 +1.0
EVO *e*MLR MLR
comp=Z,7μm,21.0s,MS5.4
EVO **Evora** 54.47 50 *e*P P 06 44 17.3 -1.1
EVO *es*P sP 06 44 32.0 -4.5
L16A **Fish Haven** 54.47 315 ⇓P P 06 44 18.1 -0.3
baz=54,SNR=32
LOHW **Long Hollow** 54.48 317 *e*P P 06 44 18.2 -0.2
AHID **Auburn Hatcher** 54.51 316 *e*P P 06 44 18.4 -0.3
comp=Z,128nm,1.2s,mb5.8
AHID *e*PcP PcP 06 45 22.6 +0.9
AHID LR LR
comp=Z,5μm,21.0s,MS5.6
NOQ **North Oquirrh** 54.51 313 *e*P P 06 44 19.0 +0.3
SNOW **Snow King Moun** 54.52 317 *e*P P 06 44 19.1 +0.3
CCUT **Cedar City** 54.52 309 *e*P P 06 44 19.7 +0.8
Y12C **Blythe** 54.54 304 ⇓P P 06 44 19.3 +0.2
baz=55
REDW **Red Top Meadow** 54.55 316 *e*P P 06 44 18.7 -0.2
FCC **Fort Churchill** 54.57 339 *e*P P 06 44 18.7 -0.1
I17A **Pilgrim Ck.** 54.57 317 ⇓P P 06 44 19.6 +0.5
baz=55
V13A **Grand Canyon W** 54.58 307 ⇑P P 06 44 20.0 +0.7
baz=55,SNR=48
EGRO **El Granado** 54.59 51 P P 06 44 19.5 +0.1
comp=Z,132nm,1.5s,mb5.7
GLA **Glamis** 54.65 303 ⇓P P 06 44 19.9 0.0
baz=55
GLA **Glamis** 54.65 303 *e*P P 06 44 21.1 +1.3
ARUT **Antelope Range** 54.65 309 *e*P P 06 44 20.3 +0.5
ARUT pmax pmax
comp=Z,136nm,1.3s,mb5.8
ARUT **Antelope Range** 54.65 309 *e*P P 06 44 20.3 +0.5
comp=Z,136nm,1.3s,mb5.8
TPAW **Teton Pass** 54.66 317 *e*P P 06 44 19.8 0.0
U13A **Pakoon Wash** 54.70 307 ⇑P P 06 44 20.9 +0.7
baz=55,SNR=41
LKWY **Lake** 54.70 318 *e*P P 06 44 23.1 +3.1
LKWY MLR MLR
comp=Z,7μm,22.0s,MS5.7
F18A **Big Timber** 54.79 320 ⇑P P 06 44 20.7 0.0
baz=55,SNR=68
T13A **Saint George** 54.80 308 ⇑P P 06 44 21.6 +0.7
baz=55
IMW **Indian Meadow** 54.81 317 *e*P P 06 44 21.0 +0.2
Q14A **Sevier Lake (B** 54.86 311 ⇑P P 06 44 21.2 -0.1
baz=55,SNR=52
DCID1 **Drake Creek** 54.86 317 *e*P P 06 44 21.8 +0.6
comp=Z,232nm,1.0s,mb6.2
K16A **Soda Springs** 54.86 316 ⇓P P 06 44 21.1 -0.1
baz=55,SNR=19
RRI2 **Red Ridge** 54.86 316 *e*P P 06 44 21.4 +0.2
DUG **Dugway** 54.87 312 ⇑P P 06 44 21.2 -0.1
baz=55,SNR=67
DUG **Dugway** 54.87 312 *e*P P 06 44 21.5 +0.1
DUG LR LR
comp=Z,7μm,21.0s,MS5.7
N15A **Stansbury Isla** 54.87 313 ⇑P P 06 44 21.1 -0.3
baz=55,SNR=33
P14A **Drum Mountains** 54.88 311 ⇓P P 06 44 21.5 +0.1
baz=55,SNR=34
PESTR **Estremoz** 54.88 50 *e*P P 06 44 21.9 +0.5
comp=Z,112nm,2.0s,mb5.5
PESTR *es*P sP 06 44 35.4 -4.1
PESTR *e*S **S** 06 52 00.3 +0.6
PESTR *e*LR LR 07 01 23.8
comp=Z,5μm,19.6s
S13A **Holt Ranch, En** 54.91 309 ⇓P P 06 44 21.6 -0.1
baz=55,SNR=58
TIC **Toumodi** 54.91 89 *e*P P 06 44 19.7 -2.4
comp=Z,484nm,1.9s,mb6.2
TIC **Toumodi** 54.91 89 *e*P P 06 44 19.7 -2.4
TIC pmax pmax
comp=Z,484nm,1.9s,mb6.2
YFT **Old Faithful** 54.95 318 *e*P P 06 44 24.6 +2.8
SPUT **South Promonto** 54.96 314 *e*P P 06 44 21.9 -0.1
LIC **Lamto** 54.97 90 *e*P P 06 44 20.3 -2.1
comp=Z,274nm,1.3s,mb6.1
LIC **Lamto** 54.97 90 ⇓*i*P P 06 44 20.5 -1.9
comp=Z,279nm,1.3s,mb5.8,baz=271
LIC *e*pP pP 06 44 33.1 -2.1
LIC *e*MLR MLR
comp=Z,2μm,20.0s,MS4.9
LIC **Lamto** 54.97 90 ⇓*i*P P 06 44 20.5 -1.9
comp=Z,140nm,1.3s,mb5.8
LIC *e*pP pP 06 44 33.1 -2.1
LIC LR LR
comp=Z,940nm,20.0s,MS4.9
M15A **Larsen Ranch,** 55.00 314 ⇓P P 06 44 21.5 -0.8
baz=55,SNR=38
FFC **Flin Flon** 55.03 332 P P 06 44 21.3 -0.9
comp=Z,353nm,0.7s,mb6.5,SNR=15
FFC **Flin Flon** 55.03 332 *c*eP P 06 44 22.4 +0.2
FFC **Flin Flon** 55.03 332 *e*P P 06 44 21.7 -0.5
comp=Z,50nm,0.8s,mb5.6
FFC LR LR
comp=Z,10μm,20.0s,MS5.9
J16A **Bone** 55.04 316 ⇓P P 06 44 22.3 -0.1
baz=55,SNR=26
DBIC **Dimbokro** 55.07 89 P P 06 44 21.6 -1.6
comp=Z,46nm,0.8s,mb5.6,baz=261,slow=7.9,SNR=57
DBIC LR LR 07 03 57.7
comp=Z,1μm,20.5s,MS5.0,baz=256,slow=32
DBIC **Dimbokro** 55.07 89 *e*P P 06 44 21.5 -1.7
DBIC *e**PP pP 06 44 34.3 -1.7
DBIC pmax pmax
comp=Z,95nm,1.1s
DBIC MLR MLR
comp=Z,2μm,22.0s
DBIC **Dimbokro** 55.07 89 *e*P P 06 44 21.5 -1.7
comp=Z,96nm,1.1s,mb5.7
DBIC *e*pP pP 06 44 34.3 -1.7
DBIC LR LR
comp=Z,2μm,22.0s,MS5.1
DBIC **Dimbokro** 55.07 89 ⇓*i*P P 06 44 21.4 -1.8
PBAR **Barrancos** 55.10 51 *e*P P 06 44 23.2 +0.1
PBAR *es*P sP 06 44 36.9 -4.2
PBAR *e*S **S** 06 52 09.2 +6.5
PBAR *e*LR LR 07 01 30.8
comp=Z,3μm,19.9s
YMR **Madison River** 55.11 318 *e*P P 06 44 24.3 +1.3
comp=Z,99nm,0.9s,mb5.8
IRM **Iron Mountain** 55.13 304 ⇑P P 06 44 23.9 +0.5
baz=55,SNR=27
L15A **Malad City** 55.14 314 ⇓P P 06 44 22.7 -0.6
baz=55,SNR=119
U12A **Valley of Fire** 55.15 307 ⇓P P 06 44 23.9 +0.4
baz=55,SNR=12
W12A **Cal Nev Ari** 55.15 306 ⇓P P 06 44 24.1 +0.6
baz=55
R13A **O'Grain Ranch,** 55.16 309 ⇓P P 06 44 24.2 +0.7
baz=55,SNR=29
EMAZ **Mazaricos** 55.17 44 P P 06 44 25.0 +1.6
comp=Z,186nm,1.8s,mb5.8
I16A **Newdale** 55.17 317 ⇓P P 06 44 23.6 +0.2
baz=55,SNR=62
PMRV **Marv??o** 55.19 49 *e*P P 06 44 23.6 0.0
comp=Z,80nm,2.2s,mb5.4
PMRV *es*P sP 06 44 37.4 -4.3
PMRV *e*S **S** 06 52 08.4 +4.6
PMRV *e*LR LR 07 01 30.2
comp=Z,3μm,20.3s
PMRV **Marv??o** 55.19 49 ⇓*e*P P 06 44 24.1 +0.5
E18A **Harlowton** 55.19 320 ⇓P P 06 44 23.7 +0.2
baz=55,SNR=30
PVIS **Viseu** 55.20 47 *e*P P 06 44 24.0 +0.3
comp=Z,77nm,1.1s,mb5.7
PVIS *es*P sP 06 44 37.0 -4.8
G17A **Pierce Place,** 55.22 319 ⇑P P 06 44 24.4 +0.7
baz=55,SNR=11
KIC **Kosan Boka** 55.23 89 *e*P P 06 44 22.3 -2.0
comp=Z,266nm,1.3s,mb6.1
V12A **Nelson** 55.23 306 ⇓P P 06 44 23.5 -0.5
baz=55,SNR=38
PCBR **Castelo Branco** 55.24 48 *e*P P 06 44 23.7 -0.3
comp=Z,105nm,1.7s,mb5.6
PCBR *es*P sP 06 44 36.8 -5.3
BGU **Big Grassy Mou** 55.25 313 *e*P P 06 44 23.9 -0.1
comp=Z,183nm,1.2s,mb6.0
BC3 **Big Chuckawall** 55.28 304 ⇓P P 06 44 24.7 +0.3
baz=55,SNR=14
EMIN **Mina Concepcio** 55.28 51 P P 06 44 25.2 +0.9
comp=Z,167nm,1.9s,mb5.7
LDFC **Landfair** 55.29 306 *e*P P 06 44 26.7 +2.2
H16A **Russell Place,** 55.31 318 ⇑P P 06 44 25.2 +0.7
baz=55,SNR=39
SFS **San Fernando** 55.31 53 PFAKE 06 44 40.0 +15
SFS LR LR
comp=Z,6μm,22.0s,MS5.6
HVU **Hansel Valley** 55.34 314 *e*P P 06 44 24.6 -0.1
N14A **Grayback Hills** 55.34 313 ⇑P P 06 44 24.6 -0.1
baz=55,SNR=45
MTE **Manteigas** 55.36 48 *e*P P 06 44 25.3 +0.4
comp=Z,113nm,1.7s,mb5.6
MTE *e*S **S** 06 52 07.6 +1.5
MTE *e*LR LR 07 01 36.5
comp=Z,4μm,18.9s
MTE **Manteigas** 55.36 48 *e*P P 06 44 24.8 0.0
comp=Z,56nm,0.9s,mb5.6
MTE LR LR
comp=Z,4μm,20.0s,MS5.5
D18A **Linhart Farms,** 55.38 321 ⇓P P 06 44 25.2 +0.4
baz=55,SNR=30
F17A **Fitzpatrick Pl** 55.39 319 ⇑P P 06 44 25.3 +0.3
baz=56,SNR=57
Q13A **Wheeler Ranch,** 55.40 310 ⇓P P 06 44 25.6 +0.4
baz=55,SNR=52
PCAB **Cabril** 55.42 46 *e*P P 06 44 25.4 +0.2
comp=Z,79nm,1.6s,mb5.5
PCAB *es*P sP 06 44 38.1 -5.2
STS **Santiago** 55.44 45 P P 06 44 25.4 0.0
STS pmax pmax
comp=Z,43nm,0.7s,mb5.6
STS **Santiago** 55.44 45 P P 06 44 25.4 0.0
comp=Z,43nm,0.7s,mb5.6
ELOB **Lobios** 55.44 46 P P 06 44 27.2 +1.8
comp=Z,186nm,2.6s,mb5.7
K15A **Arbon** 55.47 315 ⇑P P 06 44 25.9 +0.3
baz=56,SNR=54
PVRL **Vila Real** 55.50 47 *e*P P 06 44 26.5 +0.6
comp=Z,64nm,1.6s,mb5.4
PVRL *es*P sP 06 44 39.1 -4.8
P13A **Bates Ranch, G** 55.54 311 ⇑P P 06 44 26.5 +0.3
baz=56,SNR=53
J15A **Blackfoot** 55.64 316 ⇓P P 06 44 27.1 +0.3
baz=56
M14A **Sheep Mountain** 55.66 314 ⇑P P 06 44 26.6 -0.4
baz=56,SNR=47
GMRC **Granite Mounta** 55.67 305 ⇓P P 06 44 27.3 +0.1
baz=56,SNR=14
R12A **Pony Springs,** 55.68 309 ⇓P P 06 44 28.0 +0.8
baz=56,SNR=40
S12A **Delamar Landin** 55.68 309 ⇓P P 06 44 27.6 +0.4
baz=56
ESPR **Espera** 55.68 52 P P 06 44 27.0 -0.3
comp=Z,274nm,2.3s,mb5.9
O13A **Hicks Ranch, I** 55.70 312 ⇓P P 06 44 27.5 +0.2
baz=56
EGMT **Eagleton** 55.71 322 ⇑P P 06 44 27.5 +0.3
baz=56,SNR=22
EGMT **Eagleton** 55.71 322 *e*P P 06 44 27.4 +0.2
EGMT LR LR
comp=Z,5μm,21.0s,MS5.6
V11A **Goodsprings** 55.72 306 ⇓P P 06 44 28.0 +0.5
baz=56,SNR=6.6
E17A **Martinsdale** 55.74 320 ⇓P P 06 44 28.0 +0.5
baz=56,SNR=15
L14A **Malta** 55.75 314 ⇑P P 06 44 27.2 -0.4
baz=56,SNR=42
MDT **Midelt** 55.84 57 P P 06 44 28.2 -0.2
comp=Z,19nm,0.9s,mb5.1,baz=272,slow=7.1,SNR=19
MDT LR LR 07 04 38.2
comp=Z,2μm,21.9s,MS5.2,baz=337,slow=32
K14A **Jones Ranch, D** 55.87 315 ⇓P P 06 44 28.3 -0.1
baz=56,SNR=168
G16A **Moss Hill, Enn** 55.88 318 ⇓P P 06 44 28.7 +0.2
baz=56,SNR=24
T11A **Corn Creek, Al** 55.88 308 ⇑P P 06 44 28.9 +0.3
baz=56,SNR=27
B18A **Beardsley Farm** 55.88 322 ⇓P P 06 44 28.8 +0.4
baz=56,SNR=6.9
I15A **Monteview** 55.88 317 ⇑P P 06 44 28.9 +0.4
baz=56,SNR=20
EJIF **Jimena Fronter** 55.89 53 P P 06 44 28.4 -0.3
EJIF pmax pmax
comp=Z,27nm,0.6s,mb5.5
EJIF **Jimena Fronter** 55.89 53 P P 06 44 28.4 -0.3
comp=Z,26nm,0.6s,mb5.5
D17A **Six Diamond Ra** 55.91 321 ⇑P P 06 44 28.8 +0.1
baz=56,SNR=35
BOZ **Bozeman (W)** 55.92 319 ⇓P P 06 44 28.9 +0.1
baz=56,SNR=53
BOZ **Bozeman (W)** 55.92 319 *e*P P 06 44 29.0 +0.2
BOZ pmax pmax
comp=Z,121nm,1.2s,mb5.8
BOZ MLR MLR
comp=Z,3μm,22.0s,MS5.4
BOZ **Bozeman (W)** 55.92 319 *e*P P 06 44 29.0 +0.2
comp=Z,121nm,1.2s,mb5.8
BOZ LR LR
comp=Z,3μm,22.0s,MS5.4
MONP **Monument Peak** 55.93 303 ⇑P P 06 44 29.1 0.0
baz=56,SNR=13
MVO **Moncorvo** 55.96 47 *e*P P 06 44 28.6 -0.6
comp=Z,172nm,2.1s,mb5.7
MVO *es*P sP 06 44 43.1 -4.1
MVO *e*S **S** 06 52 18.3 +4.2
MVO *e*LR LR 07 01 50.9
comp=Z,3μm,19.2s
MVO **Moncorvo** 55.96 47 P P 06 44 29.2 0.0
F16A **Kennard Place,** 55.97 319 ⇓P P 06 44 29.3 +0.2
baz=56,SNR=46
Q12A **Willow Creek R** 56.03 310 ⇑P P 06 44 30.0 +0.2
baz=56,SNR=15
N13A **Wendover, West** 56.08 313 ⇓P P 06 44 30.0 0.0
baz=56
PFO **Pinyon Flat Ob** 56.09 304 ⇓P P 06 44 29.9 -0.3
baz=56
PFO **Pinyon Flat Ob** 56.09 304 P P 06 44 32.3 +2.1
PFO pmax pmax
comp=Z,35nm,1.3s,mb5.2
PFO MLR MLR
comp=Z,2μm,22.0s,MS5.2
PFO **Pinyon Flat Ob** 56.09 304 P P 06 44 32.3 +2.1
comp=Z,35nm,1.3s,mb5.2
PFO LR LR
comp=Z,2μm,22.0s,MS5.2
BAR **Barrett** 56.10 302 *e*P P 06 44 29.1 -1.2
A18A **Metzger Ranch,** 56.15 323 ⇓P P 06 44 30.5 +0.1
baz=56,SNR=8.9
C17A **Wharram Farm,** 56.16 321 ⇓P P 06 44 30.5 +0.1
baz=56
M13A **Montello** 56.20 313 ⇑P P 06 44 30.7 -0.1
baz=56,SNR=62
P12A **McGill** 56.21 311 ⇓P P 06 44 31.2 +0.2
baz=56,SNR=15
H15A **Lima** 56.21 317 ⇓P P 06 44 31.4 +0.5
baz=56
HEC **Hector,Ludlow** 56.22 305 ⇑P P 06 44 31.5 +0.4
baz=56,SNR=11
ERUA **La Rua** 56.26 46 P P 06 44 31.9 +0.6
ERUA pmax pmax
comp=Z,47nm,1.0s,mb5.5
ERUA **La Rua** 56.26 46 P P 06 44 31.9 +0.6
comp=Z,47nm,1.0s,mb5.5
L13A **Double Diamond** 56.26 314 ⇑P P 06 44 31.6 +0.3
baz=56,SNR=50
E16A **East Helena** 56.29 320 ⇓P P 06 44 31.3 -0.1
baz=56,SNR=24
G15A **Dillon** 56.30 318 ⇓P P 06 44 31.8 +0.2
baz=56,SNR=30
O12A **Currie** 56.30 312 ⇓P P 06 44 31.8 +0.2
baz=56,SNR=41
ECAB **El Cabril** 56.31 51 P P 06 44 32.1 +0.4
comp=Z,131nm,2.3s,mb5.6
EPLA **Plasencia** 56.34 49 P P 06 44 30.5 -1.4
EPLA pmax pmax
comp=Z,367nm,2.5s,mb6.0
EPLA **Plasencia** 56.34 49 P P 06 44 30.5 -1.3
comp=Z,367nm,2.5s,mb6.0
PBRG **Braganca** 56.36 46 *e*P P 06 44 32.4 +0.4
comp=Z,60nm,2.6s,mb5.2
PBRG *es*P sP 06 44 45.0 -5.1
J14A **Carey** 56.36 316 ⇑P P 06 44 32.3 +0.4
baz=56,SNR=45
SHOC **Shoshone** 56.40 306 ⇓P P 06 44 32.8 +0.4
baz=56,SNR=22
D16A **Dana Ranch, Ca** 56.40 320 ⇓P P 06 44 32.2 0.0
baz=56,SNR=57
ECAL **Calabor** 56.41 46 P P 06 44 33.7 +1.4
comp=Z,184nm,2.4s,mb5.7
R11A **Troy Canyon, C** 56.43 309 ⇑P P 06 44 32.8 +0.2
baz=56,SNR=39
DLMT **Dillon** 56.45 318 *e*P P 06 44 33.0 +0.5
B17A **L&G Farms, Che** 56.45 322 ⇑P P 06 44 32.6 0.0
baz=56,SNR=8.2
EMIJ **Mijas** 56.46 53 P P 06 44 33.6 +0.8
comp=Z,64nm,2.7s,mb5.2
109C **Camp Elliot, M** 56.50 303 ⇓P P 06 44 32.5 -0.7
baz=56,SNR=6.4
I14A **Mackay** 56.52 316 ⇑P P 06 44 33.5 +0.4
baz=57,SNR=36
K13A **Stover Farm, H** 56.54 315 ⇓P P 06 44 33.2 -0.1
baz=57,SNR=31
EPON **Pontenova** 56.55 45 P P 06 44 33.6 +0.3
comp=Z,204nm,2.2s,mb5.8
F15A **Butte** 56.55 319 ⇑P P 06 44 33.7 +0.4
baz=57,SNR=27
U10A **Ash Meadows, A** 56.55 307 ⇑P P 06 44 33.8 +0.3
baz=57,SNR=19
Q11A **Duckwater** 56.60 310 ⇓P P 06 44 33.8 +0.1
baz=57,SNR=42
N12A **Clover Valley,** 56.68 312 ⇓P P 06 44 34.3 0.0
baz=57,SNR=26
H14A **Leadore** 56.69 317 ⇓P P 06 44 34.6 +0.3
baz=57,SNR=44
GSC **Goldstone** 56.70 305 ⇓P P 06 44 34.4 -0.1
baz=57
GSC **Goldstone** 56.70 305 *e*P P 06 44 35.9 +1.3
MURC **Murrieta** 56.70 303 ⇑P P 06 44 34.5 0.0
baz=57,SNR=7.7
M12A **Wells** 56.76 313 ⇓P P 06 44 34.8 0.0
baz=57,SNR=40
ELK **Elko** 56.80 312 *e*P P 06 44 35.5 +0.4
ELK pmax pmax
comp=Z,68nm,1.3s
ELK MLR MLR
comp=Z,7μm,20.0s
ELK **Elko** 56.80 312 *e*P P 06 44 35.5 +0.4
comp=Z,68nm,1.3s,mb5.5
ELK LR LR
comp=Z,7μm,20.0s,MS5.8
C16A **Fuhringer Ranc** 56.83 321 ⇓P P 06 44 35.2 0.0
baz=57,SNR=28
J13A **Cove Ranch, Pi** 56.84 315 ⇓P P 06 44 35.6 +0.2
baz=57
P11A **Circle Ranch,** 56.86 311 ⇑P P 06 44 36.1 +0.5
baz=57
E15A **Deer Lodge** 56.87 319 ⇓P P 06 44 35.6 +0.1
baz=57,SNR=13
O11A **Cowboy Ranch,** 56.94 311 ⇑P P 06 44 36.3 +0.2
baz=57,SNR=24
R10A **Warm Springs** 56.96 309 ⇑P P 06 44 36.4 +0.1
baz=57,SNR=46
I13A **Wildhorse Cree** 56.97 316 ⇓P P 06 44 36.5 +0.3
baz=57,SNR=70
EADA **Adamuz** 56.98 51 P P 06 44 36.9 +0.4
comp=Z,92nm,2.4s,mb5.4
FURC **Furnace Creek,** 56.98 307 ⇑P P 06 44 36.8 +0.3
baz=57,SNR=27
D15A **Lincoln** 57.02 320 ⇑P P 06 44 36.8 +0.2
baz=57,SNR=27
L12A **House Creek Ra** 57.04 314 ⇑P P 06 44 36.8 -0.1
baz=57,SNR=17
B16A **M & M Farms, S** 57.05 322 ⇓P P 06 44 37.3 +0.5
baz=57
HLID **Hailey** 57.06 316 ⇑P P 06 44 37.1 +0.2
baz=57,SNR=99
HLID **Hailey** 57.06 316 *e*P P 06 44 37.3 +0.4
comp=Z,197nm,1.4s,mb6.0
HLID LR LR
comp=Z,4μm,20.0s,MS5.5
ELOJ **Sierra Loja** 57.08 52 P P 06 44 38.1 +0.9
ELOJ pmax pmax
comp=Z,11nm,0.6s,mb5.1
ELOJ **Sierra Loja** 57.08 52 P P 06 44 38.1 +0.9
comp=Z,11nm,0.6s,mb5.1
S10A **Tonopah Range,** 57.10 309 ⇑P P 06 44 37.1 -0.2
baz=57,SNR=50
K12A **Draper Farm, C** 57.11 314 ⇑P P 06 44 37.3 0.0
baz=57,SNR=18
F14A **Wisdom** 57.11 318 ⇓P P 06 44 37.6 +0.3
baz=57,SNR=25
Q10A **Clear Creek Ra** 57.16 310 ⇓P P 06 44 37.9 +0.1
baz=57,SNR=28
H13A **Challis** 57.27 317 ⇑P P 06 44 38.2 -0.2
baz=57,SNR=38
ERON **Agron** 57.32 53 P P 06 44 39.3 +0.4
comp=Z,12nm,0.5s,mb5.2
C15A **Salmond Ranch,** 57.36 321 ⇑P P 06 44 39.3 +0.4
baz=57,SNR=48
M11A **Holland Ranch,** 57.39 313 ⇓P P 06 44 39.7 +0.4
baz=57,SNR=52
MPMC **Manual Prospec** 57.40 306 ⇓P P 06 44 39.4 0.0
baz=57,SNR=38
P10A **Eureka** 57.41 311 ⇑P P 06 44 39.6 +0.1
baz=57,SNR=14
E14A **Clinton** 57.41 319 ⇓P P 06 44 39.6 +0.2
baz=58,SNR=32
J12A **Stokes Ranch,** 57.43 315 ⇑P P 06 44 39.5 0.0
baz=58,SNR=33
G13A **Cobalt** 57.44 317 ⇓P P 06 44 39.7 +0.2
baz=58,SNR=17
EGUA **Guajares** 57.47 53 P P 06 44 42.5 +2.6
EGUA pmax pmax
comp=Z,70nm,0.7s,mb5.8
EGUA **Guajares** 57.47 53 P P 06 44 42.5 +2.6
comp=Z,70nm,0.7s,mb5.8
PAB **San Pablo** 57.49 50 *e*P P 06 44 39.9 -0.1
PAB pmax pmax
comp=Z,63nm,0.9s,mb5.7
PAB MLR MLR
comp=Z,4μm,20.0s,MS5.5
PAB **San Pablo** 57.49 50 *e*P P 06 44 39.9 -0.1
comp=Z,63nm,0.9s,mb5.6
PAB LR LR
comp=Z,4μm,20.0s,MS5.5
GRAC **Grapevine Rang** 57.49 307 ⇓P P 06 44 40.4 +0.3
baz=58,SNR=61
DAC **Darwin (Calif)** 57.52 306 PFAKE 06 44 50.0 +10
DAC LR LR
comp=Z,4μm,20.0s,MS5.5
B15A **Bradely Ranch,** 57.54 321 ⇓P P 06 44 40.1 -0.1
baz=58,SNR=18
ECOG **Cogollos-Vega** 57.56 52 P P 06 44 41.6 +1.0
ECOG pmax pmax
comp=Z,16nm,0.6s,mb5.2
ECOG **Cogollos-Vega** 57.56 52 P P 06 44 41.6 +1.0
comp=Z,16nm,0.6s,mb5.2
EDW2 **Edwards Air Fo** 57.57 305 ⇑P P 06 44 40.9 +0.1
baz=58,SNR=13
L11A **Cat Creek Ranc** 57.57 314 ⇓P P 06 44 40.5 -0.1
baz=58,SNR=40
EBAN **Banos Encina** 57.59 51 P P 06 44 41.5 +0.8
EBAN pmax pmax
comp=Z,13nm,1.1s,mb4.9
EBAN **Banos Encina** 57.59 51 P P 06 44 41.5 +0.7
comp=Z,13nm,1.1s,mb4.9
O10A **Cortez Mining,** 57.60 311 ⇑P P 06 44 40.7 -0.1
baz=58,SNR=11
TPH **Tonopah** 57.62 309 PFAKE 06 44 50.0 +9.0
TPH LR LR
comp=Z,4μm,22.0s,MS5.5
I12A **Atlanta** 57.62 316 ⇓P P 06 44 41.2 +0.3
baz=58,SNR=51
CIS **Catalina Islan** 57.66 303 ⇓P P 06 44 41.3 0.0
baz=58,SNR=6.5
D14A **Greenough** 57.66 320 ⇑P P 06 44 41.5 +0.4
baz=58,SNR=31
H12A **Diamond D Ranc** 57.67 317 ⇓P P 06 44 41.1 -0.1
baz=58,SNR=26
F13A **Darby** 57.74 318 ⇑P P 06 44 41.5 -0.1
baz=58,SNR=22
ESDC **Sonseca Array** 57.81 50 P P 06 44 42.4 +0.1
comp=Z,23nm,0.7s,mb5.3,baz=262,slow=7.5,SNR=44
ESDC pP pP 06 44 55.6 +0.5
comp=Z,43nm,0.8s,baz=266,slow=7.2,SNR=16
ESDC **Sonseca Array** 57.81 50 P P 06 44 42.3 +0.1
comp=Z,78nm,1.1s,mb5.7
ESLA **Sonseca Array** 57.81 50 *e*P P 06 44 42.2 -0.1
comp=Z,20nm,1.0s,mb5.1
ESLA LR LR
comp=Z,22μm,21.0s,MS6.2
MSO **Missoula** 57.85 319 *e*P P 06 44 42.4 0.0
comp=Z,30nm,1.4s,mb5.1

MSO LR LR
comp=Z,2µm,20.0s,MS5.3
E13A Victor 57.87 319 ⇑P P 06 44 42.8 +0.2
baz=58,SNR=37
EARI Arriondas 57.89 45 P P 06 44 42.9 +0.2
comp=Z,388nm,3.0s
A15A Johnson Ranch, 57.90 322 ⇓P P 06 44 42.7 -0.1
baz=58,SNR=24
CWC Cottonwood Cre 57.94 307 ⇑P P 06 44 43.4 +0.1
baz=58
K11A Parker Ranch, 57.94 314 ⇓P P 06 44 43.1 -0.1
baz=58,SNR=18
M10A I.L. Ranch, Tu 57.96 313 ⇓P P 06 44 43.3 0.0
baz=58,SNR=16
MFID Camas Ranch 57.99 315 ⇓P P 06 44 43.5 0.0
baz=58,SNR=28
B14A Marquette Ranc 57.99 321 ⇑P P 06 44 43.9 +0.5
baz=58
EBER Berja 58.01 53 P P 06 44 44.4 +0.6
comp=Z,260nm,2.0s,mb5.9
EQES Quesada 58.06 52 P P 06 44 44.7 +0.6
comp=Z,181nm,1.9s,mb5.8
L10A Juniper Basin 58.06 313 ⇓P P 06 44 44.3 +0.3
baz=58,SNR=36
C14A Swan Lake 58.07 320 ⇓P P 06 44 44.2 +0.3
baz=58
ISA Isabella 58.10 306 ⇓P P 06 44 44.8 +0.3
baz=58,SNR=6.3
ISA Isabella 58.10 306 *e*P **P 06 44 46.0 +1.5**
OSI Osito Adit 58.12 304 *e*P **P 06 44 46.4 +1.8**
BMN Battle Mountai 58.17 311 *e*P **P 06 44 45.4 +0.6**
BMN MLR MLR
comp=Z,6µm,20.0s,MS5.7
I11A Placerville 58.23 316 ⇑P P 06 44 45.1 0.0
baz=58,SNR=109
D13A Huson 58.27 319 ⇓P P 06 44 45.4 0.0
baz=58,SNR=32
ARVC Arvin 58.29 305 ⇓P P 06 44 45.6 -0.1
baz=58
A14A Double T Ranch 58.32 322 ⇓P P 06 44 45.7 0.0
baz=58,SNR=11
F12A Elk City 58.33 318 ⇓P P 06 44 45.7 -0.1
baz=58,SNR=38
EHUE Huescar 58.43 52 P P 06 44 48.1 +1.4
EHUE pmax pmax
comp=Z,52nm,1.2s,mb5.4
EHUE Huescar 58.43 52 P P 06 44 48.1 +1.4
comp=Z,52nm,1.2s,mb5.4
MTUM Tungsten Hills 58.50 307 *e*P **P 06 44 48.9 +1.7**
H11A Donnelly 58.51 316 ⇓P P 06 44 47.0 -0.1
baz=58,SNR=9.7
NVAR Mina Array Bea 58.52 309 P P 06 44 47.7 +0.4
comp=Z,5.8nm,0.6s,mb4.8,baz=99,slow=6.9,SNR=54
NVAR pP pP 06 45 00.4 +0.2
comp=Z,9.1nm,0.7s,baz=24,slow=26,SNR=14
NVAR PKP2bc 07 14 33.0
comp=Z,0.7nm,0.9s,baz=207,slow=3.0,SNR=4.9
NVAR Mina Array Bea 58.52 309 P P 06 44 47.7 +0.4
NVAR pP pP 06 45 00.4 +0.2
NVAR ⇑*e* 07 14 33.0
K10A MacKenzie Ranc 58.54 314 ⇑P P 06 44 47.3 0.0
baz=59,SNR=52
C13A Hot Springs 58.55 320 ⇑P P 06 44 47.5 +0.2
baz=59
ENIJ Nijar 58.56 53 P P 06 44 48.3 +0.7
ENIJ pmax pmax
comp=Z,14nm,0.7s,mb5.1
ENIJ Nijar 58.56 53 P P 06 44 48.3 +0.7
comp=Z,14nm,0.7s,mb5.1
J10A Berg Farm, Mel 58.65 315 ⇓P P 06 44 47.9 -0.2
baz=59,SNR=19
WALA Waterton Lakes 58.65 322 *e*P **P 06 44 52.0 +4.0**
EVIA Vianos 58.67 51 P P 06 44 49.8 +1.4
EVIA pmax pmax
comp=Z,20nm,0.8s,mb5.2
EVIA Vianos 58.67 51 P P 06 44 49.8 +1.4
comp=Z,20nm,0.8s,mb5.2
B13A Whitefish 58.74 321 ⇓P P 06 44 48.8 +0.2
baz=59
E12A Beaver Dam Sad 58.76 318 ⇓P P 06 44 48.9 +0.1
baz=59
MLAC Mammoth Lakes 58.77 308 ⇑P P 06 44 49.2 +0.2
baz=59
D12A Red Ives Fores 58.83 319 ⇓P P 06 44 49.1 -0.1
baz=59
I10A Payette 58.86 316 ⇑P P 06 44 49.1 -0.4
baz=59,SNR=16
G11A Walters Elk Ra 58.89 317 ⇓P P 06 44 49.7 0.0
baz=59,SNR=30
A13A Flathead Natio 58.91 321 ⇑P P 06 44 49.9 +0.1
baz=59
F11A Grangeville 58.97 318 ⇑P P 06 44 49.9 -0.4
baz=59,SNR=38
H10A Noah's Angus R 58.97 316 ⇓P P 06 44 49.7 -0.6
baz=59,SNR=37
ELAN Lanestosa 59.11 46 P P 06 44 51.5 +0.2
comp=Z,43nm,0.9s,mb5.5
C12B Naegeli Ranch, 59.13 320 ⇓P P 06 44 52.1 +0.7
baz=59
ETOB Tobarra 59.41 51 P P 06 44 54.7 +1.2
comp=Z,1µm,3.0s
WAKR Walker 59.41 309 *e*P **P 06 44 55.1 +1.7**
BMO Blue Mountains 59.43 316 *e*P **P 06 44 52.9 -0.6**
BMO pmax pmax
comp=Z,124nm,1.3s,mb5.8
BMO Blue Mountains 59.43 316 *e*P **P 06 44 52.9 -0.6**
comp=Z,124nm,1.3s,mb5.8
G10A Bishop Farm, J 59.43 317 ⇑P P 06 44 53.1 -0.4
baz=60,SNR=23
B12A Libby 59.47 321 ⇑P P 06 44 53.7 +0.1
baz=60,SNR=5.6
I09A Lost Marbles R 59.48 315 ⇓P P 06 44 53.7 -0.2
baz=60
ETOR Torete 59.50 49 P P 06 44 55.1 +1.1
ETOR pmax pmax
comp=Z,53nm,1.8s,mb5.3
ETOR Torete 59.50 49 P P 06 44 55.1 +1.1
comp=Z,53nm,1.8s,mb5.3
ECRI Cripan 59.60 47 P P 06 44 55.7 +1.0
ECRI pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
ECRI Cripan 59.60 47 P P 06 44 55.7 +1.0
comp=Z,9.5nm,0.8s,mb4.9
PAHR Pah Rah Range 59.62 310 *e*P **P 06 44 56.5 +1.6**
PAHR epP pP 06 45 06.3 -1.5
A12A Yaak River Ran 59.67 321 ⇑P P 06 44 55.9 +0.9
baz=60,SNR=5.3
C11A Tepee Creek (N 59.67 320 ⇑P P 06 44 55.1 0.0
baz=60
WVOR Wild Horse Val 59.70 313 *e*P **P 06 44 55.4 0.0**
WVOR pmax pmax
comp=Z,150nm,1.3s,mb5.9
WVOR Wild Horse Val 59.70 313 *e*P **P 06 44 55.4 0.0**
comp=Z,150nm,1.3s,mb5.9
WVOR LR LR
comp=Z,4µm,20.0s,MS5.5
WCN Washoe City 59.82 309 ⇓P P 06 44 56.1 -0.2
baz=60
J08A Circle Bar Ran 59.83 314 ⇓P P 06 44 56.0 -0.2
baz=60,SNR=24
G09A Cove 59.88 317 ⇑P P 06 44 56.5 -0.1
baz=60,SNR=31
EDM Edmonton 60.00 326 *e*P **P 06 44 56.6 -0.6**
CMB Columbia Colle 60.05 308 *e*P **P 06 44 58.4 +0.5**
CMB pmax pmax
comp=Z,47nm,1.2s,mb5.4
CMB MLR MLR
comp=Z,4µm,20.0s,MS5.5
CMB Columbia Colle 60.05 308 *e*P **P 06 44 58.4 +0.5**
comp=Z,47nm,1.2s,mb5.4
CMB LR LR
comp=Z,4µm,20.0s,MS5.5
SHEL Horse Pasture 60.15 115 PFAKE 06 45 10.0 +11
SHEL LR LR
comp=Z,2µm,20.0s,MS5.2
CCA1 Carnmenellis 60.16 38 P P 06 44 59.1 +0.7
CCA1 AMb AMB 06 44 59.6
comp=Z,136nm,3.0s,mb5.5
CCA1 AMS AMS 07 07 04.1
comp=Z,2µm,17.8s
CCA1 Carnmenellis 60.16 38⇑*e*P **P 06 44 59.1 +0.7**
CCA1 AMb AMB 06 44 59.6
comp=Z,136nm,3.0s,mb5.5
CCA1 AMS AMS 07 07 04.1
comp=Z,2µm,17.8s,MS5.3

H08A Prairie City 60.27 316 ⇓P P 06 44 59.2 0.0
baz=60,SNR=49
RPN Rapa Nui 60.28 231 PFAKE 06 45 10.0 +10
RPN LR LR
comp=Z,3µm,19.0s,MS5.5
NEW Newport 60.36 320 *e*P **P 06 44 59.0 -0.8**
NEW pmax pmax
comp=Z,78nm,1.1s
NEW MLR MLR
comp=Z,3µm,20.0s
NEW Newport 60.36 320 *e*P **P 06 44 59.0 -0.8**
comp=Z,78nm,1.1s,mb5.7
NEW LR LR
comp=Z,3µm,20.0s,MS5.5
LNOR Lincton Mounta 60.38 317 P **P 06 45 00.2 +0.2**
EBEN Beniarda 60.43 51 P **P 06 45 00.9 +0.4**
comp=Z,86nm,1.7s,mb5.5
EALK Alkurruntz 60.47 46 P **P 06 45 01.1 +0.4**
comp=Z,181nm,1.7s,mb5.8
SJPF Ste Jean 60.64 46 *e*P **P 06 45 01.9 +0.1**
comp=Z,133nm,1.0s,mb5.7
SJPF *e*pP pP 06 45 14.7 -0.1
SJPF Ste Jean 60.64 46 *e*P **P 06 45 01.9 +0.1**
SJPF *e**PP pP 06 45 14.7 -0.1
SJPF pmax pmax
comp=Z,67nm,1.0s,mb5.7
SJPF Ste Jean 60.64 46 *e*P **P 06 45 01.9 +0.1**
comp=Z,66nm,1.0s,mb5.7
SJPF *e*pP pP 06 45 14.7 -0.1
SAO San Andreas Ge 60.66 306 *e*P **P 06 45 02.6 +0.5**
SAO pmax pmax
comp=Z,96nm,1.3s,mb5.8
SAO MLR MLR
comp=Z,4µm,20.0s,MS5.5
SAO San Andreas Ge 60.66 306 *e*P **P 06 45 02.6 +0.5**
comp=Z,96nm,1.3s,mb5.8
SAO LR LR
comp=Z,4µm,20.0s,MS5.5
QUIF Quistinic 60.67 40 *e*P **P 06 45 01.7 -0.2**
comp=Z,487nm,1.6s,mb6.1
QUIF Quistinic 60.67 40 *e*P **P 06 45 01.7 -0.2**
QUIF pmax pmax
comp=Z,244nm,1.6s,mb6.1
QUIF Quistinic 60.67 40 *e*P **P 06 45 01.7 -0.2**
comp=Z,244nm,1.6s,mb6.1
DSB Dublin 60.68 34 *e*P **P 06 45 02.2 +0.3**
comp=Z,75nm,1.4s,mb5.6
G08A Pilot Rock 60.68 316 ⇑P P 06 45 02.3 +0.3
baz=61,SNR=30
BORG Borgarnes 60.73 18 P **P 06 45 02.7 +0.7**
comp=Z,51nm,1.0s,mb5.6,baz=208,slow=4.2,SNR=5.7
BORG pP pP 06 45 16.3 +1.3
comp=Z,153nm,0.9s,baz=212,slow=4.5,SNR=14
BORG Borgarnes 60.73 18 P **P 06 45 02.7 +0.7**
BORG *PP pP 06 45 16.3 +1.3
BORG pmax pmax
comp=Z,51nm,1.0s
BORG pmax pmax
comp=Z,153nm,0.9s
BORG Borgarnes 60.73 18 *e*P **P 06 45 02.8 +0.8**
comp=Z,751nm,1.8s,mb6.5
BORG LR LR
comp=Z,2µm,20.0s,MS5.3
ROSF Rostrenen 60.73 40 *e*P **P 06 45 02.2 -0.1**
comp=Z,127nm,1.1s,mb5.7
ROSF Rostrenen 60.73 40 *e*P **P 06 45 02.2 -0.1**
ROSF pmax pmax
comp=Z,64nm,1.1s,mb5.7
ROSF Rostrenen 60.73 40 *e*P **P 06 45 02.2 -0.1**
comp=Z,64nm,1.1s,mb5.7
MOD Modoc 60.78 312 *e*P **P 06 45 02.2 -0.5**
comp=Z,37nm,0.9s,mb5.5
MOD LR LR
comp=Z,5µm,20.0s,MS5.7
LARF Larrau 60.79 46 *e*P **P 06 45 00.4 -2.5**
ESAC San Caprasio 60.87 48 P **P 06 45 03.8 +0.4**
comp=Z,48nm,0.6s,mb5.8
HTL Hartland 60.89 37 AMS AMS 07 07 34.1
comp=Z,2µm,20.3s,MS5.3
ATE Arette 61.01 46 *e*P **P 06 45 04.3 0.0**
EANR 'Ain N'Sour 61.01 55 P **P 06 45 05.0 +0.5**
DYA Yadsworthy 61.02 38 P **P 06 45 04.3 +0.1**
DYA AMb AMB 06 45 06.8
comp=Z,102nm,1.8s,mb5.7
DYA AMS AMS 07 07 05.8
comp=Z,2µm,22.1s
DYA Yadsworthy 61.02 38 *e*P **P 06 45 04.3 +0.1**
DYA AMb AMB 06 45 06.8
comp=Z,102nm,1.8s,mb5.7
DYA AMS AMS 07 07 05.8
comp=Z,2µm,22.1s,MS5.1
ETSF Etsaut 61.07 47 *e*P **P 06 45 04.8 +0.1**
comp=Z,22nm,0.6s,mb5.2
ETSF Etsaut 61.07 47 *e*P **P 06 45 04.8 +0.1**
ETSF pmax pmax
comp=Z,11nm,0.6s,mb5.2
ETSF Etsaut 61.07 47 *e*P **P 06 45 04.8 +0.1**
comp=Z,11nm,0.6s,mb5.2
ETRT Tiaret 61.09 55 P **P 06 45 05.5 +0.5**
OD2 Odessa Site #2 61.11 319 *e*P **P 06 45 04.9 0.0**
OHCM Honcut 61.14 309 *e*P **P 06 45 07.4 +2.2**
SGMF Saint Gilles 61.16 40 *e*P **P 06 45 05.2 0.0**
comp=Z,300nm,1.5s,mb5.9
SGMF *e*pP pP 06 45 17.9 -0.3
SGMF Saint Gilles 61.16 40 *e*P **P 06 45 05.2 0.0**
SGMF *e**PP pP 06 45 17.9 -0.3
SGMF pmax pmax
comp=Z,150nm,1.5s,mb5.9
SGMF Saint Gilles 61.16 40 *e*P **P 06 45 05.2 0.0**
comp=Z,150nm,1.5s,mb5.9
SGMF *e*pP pP 06 45 17.9 -0.3
REYF Montagne du Re 61.23 46 *e*P **P 06 45 06.4 +0.6**
ECHA Ech Chlef 61.26 54 P **P 06 45 06.5 +0.4**
ERTA Horta de San J 61.30 49 P **P 06 45 06.2 -0.1**
comp=Z,13nm,0.8s,mb5.1
LBCM Butte Creek Ri 61.33 311 P **P 06 45 07.3 +0.8**
HAWA Hanford 61.37 317 *e*P **P 06 45 06.5 -0.2**
comp=Z,82nm,1.1s,mb5.8
HAWA LR LR
comp=Z,5µm,21.0s,MS5.6
K05A Summer Lake 61.39 313 ⇓P P 06 45 07.6 +0.7
baz=61,SNR=64
RSW Rattlesnake Hi 61.40 317 *e*P **P 06 45 07.9 +1.0**
EBNR Beni Rached 61.41 54 P **P 06 45 07.8 +0.7**
F07A Phinny Hill Vi 61.49 317 ⇓P P 06 45 07.7 +0.1
baz=62
EBIE Bielsa 61.52 47 P **P 06 45 09.1 +1.3**
comp=Z,292nm,2.7s,mb5.9
LABF Labassere 61.55 47 *e*P **P 06 45 08.5 +0.5**
YRE Yr Eifl 61.66 35 P **P 06 45 08.8 +0.3**
YRE Yr Eifl 61.66 35⇑*e*P **P 06 45 08.8 +0.3**
YRC Rhoscolyn 61.67 34 P **P 06 45 08.8 +0.1**
YRC Rhoscolyn 61.67 34⇑*e*P **P 06 45 08.8 +0.1**
RESF Ens 61.69 47 *e*P **P 06 45 09.7 +0.8**
JSA Saint Aubin 61.69 39 AMS AMS 07 09 41.3
comp=Z,2µm,19.0s,MS5.2
EIBI Ibiza 61.70 51 P **P 06 45 08.8 -0.2**
comp=Z,110nm,1.3s,mb5.8
EPF Esparros 61.74 47 *e*P **P 06 45 09.5 +0.3**
comp=Z,90nm,1.0s,mb5.5
EPF *e*pP pP 06 45 22.2 0.0
EPF Esparros 61.74 47 *e*P **P 06 45 09.5 +0.3**
EPF *e**PP pP 06 45 22.2 0.0
EPF pmax pmax
comp=Z,45nm,1.0s,mb5.5
EPF Esparros 61.74 47 *e*P **P 06 45 09.5 +0.3**
comp=Z,45nm,1.0s,mb5.5
EPF *e*pP pP 06 45 22.2 0.0
VTHM Trough 61.74 316 P **P 06 45 10.7 +1.5**
WLF1 Llynfaes 61.79 34 P **P 06 45 08.8 -0.6**
WLF1 AMb AMB 06 45 11.4
comp=Z,292nm,1.8s,mb6.1
WLF1 AMS AMS 07 06 51.5
comp=Z,6µm,23.8s
WLF1 Llynfaes 61.79 34⇑*e*P **P 06 45 08.8 -0.6**
WLF1 AMb AMB 06 45 11.4
comp=Z,292nm,1.8s,mb6.1
WLF1 AMS AMS 07 06 51.5
comp=Z,6µm,23.8s,MS5.7
B08A Colville Reser 61.80 320 ⇓P P 06 45 09.9 +0.4
baz=62
G06A Carlson Farm, 61.80 316 ⇑P P 06 45 10.3 +0.7
baz=62,SNR=17
YLL Llanberis 61.86 35 P **P 06 45 10.4 +0.5**
YLL Llanberis 61.86 35⇑*e*P **P 06 45 10.4 +0.5**
WME Myndd Eilian 61.88 34 P **P 06 45 09.9 0.0**

WME Myndd Eilian 61.88 34⇑*e*P **P 06 45 09.9 0.0**
EPOB Poblet 61.93 49 P **P 06 45 13.3 +2.8**
comp=Z,20nm,1.2s,mb5.1
HTR Trewern Hill 61.99 36 P **P 06 45 10.7 0.0**
HTR Trewern Hill 61.99 36⇑*e*P **P 06 45 10.7 0.0**
MELF Melles 62.01 47 *e*P **P 06 45 11.6 +0.6**
MCCM Marconi Confer 62.01 308 PFAKE 06 45 20.0 +8.8
MCCM LR LR
comp=Z,2µm,19.0s,MS5.4
WPM1 Penmaenmawr 62.05 35 P **P 06 45 10.3 -0.8**
WPM1 Penmaenmawr 62.05 35⇑*e*P **P 06 45 10.3 -0.8**
HGH Gray Hill 62.10 37 P **P 06 45 12.0 +0.4**
HGH Gray Hill 62.10 37⇑*e*P **P 06 45 12.0 +0.4**
MCH1 Michaelchurch 62.12 36 P **P 06 45 10.6 -1.0**
MCH1 AMb AMB 06 45 13.6
comp=Z,126nm,1.9s,mb5.7
MCH1 Michaelchurch 62.12 36 *e*P **P 06 45 10.6 -1.0**
MCH1 AMb AMB 06 45 13.6
comp=Z,126nm,1.9s,mb5.7
WDC Whiskeytown Da 62.16 310 *e*P **P 06 45 10.0 -2.2**
WDC pmax pmax
comp=Z,22nm,1.0s,mb5.2
WDC MLR MLR
comp=Z,6µm,22.0s,MS5.7
WDC Whiskeytown Da 62.16 310 *e*P **P 06 45 10.0 -2.1**
comp=Z,22nm,1.0s,mb5.2
WDC LR LR
comp=Z,6µm,22.0s,MS5.7
CSOR Sort 62.17 47 P **P 06 45 13.4 +1.2**
comp=Z,450nm,2.0s,mb6.2
ETW Entiat 62.22 319 P **P 06 45 10.4 -2.0**
comp=Z,97nm,1.5s,mb5.7
GAL1 Galloway 62.23 33 P **P 06 45 11.4 -0.9**
GAL1 AMb AMB 06 45 14.2
comp=Z,101nm,2.1s,mb5.6
GAL1 AMS AMS 07 11 47.0
comp=Z,3µm,19.8s
GAL1 Galloway 62.23 33⇑*e*P **P 06 45 11.4 -0.9**
GAL1 AMb AMB 06 45 14.2
comp=Z,101nm,2.1s,mb5.6
GAL1 AMS AMS 07 11 47.0
comp=Z,3µm,19.8s,MS5.4
MFF Saint Martin d 62.26 43 *e*P **P 06 45 12.4 -0.3**
comp=Z,322nm,1.7s,mb5.9
MFF Saint Martin d 62.26 43 *e*P **P 06 45 12.4 -0.3**
MFF pmax pmax
comp=Z,161nm,1.7s,mb5.9
MFF Saint Martin d 62.26 43 *e*P **P 06 45 12.4 -0.3**
comp=Z,161nm,1.7s,mb5.9
MLS Moulis 62.27 47 *e*P **P 06 45 12.3 -0.5**
TBM Table Mountain 62.28 318 P **P 06 45 13.4 +0.6**
GRR Gorron 62.28 41 *e*P **P 06 45 12.3 -0.5**
comp=Z,241nm,1.5s,mb5.8
GRR *e*pP pP 06 45 25.1 -0.7
GRR Gorron 62.28 41 *e*P **P 06 45 12.3 -0.5**
GRR *e**PP pP 06 45 25.1 -0.7
GRR pmax pmax
comp=Z,121nm,1.5s,mb5.8
GRR Gorron 62.28 41 *e*P **P 06 45 12.3 -0.5**
comp=Z,121nm,1.5s,mb5.8
GRR *e*pP pP 06 45 25.1 -0.7
SALF Salau 62.29 47 *e*P **P 06 45 13.9 +0.9**
HOPS Hopland 62.29 309 *e*P **P 06 45 15.0 +2.0**
comp=Z,190nm,1.3s,mb6.1
HOPS LR LR
comp=Z,5µm,20.0s,MS5.7
HLM1 Long Mynd 62.37 36 P **P 06 45 13.2 0.0**
HLM1 Long Mynd 62.37 36⇑*e*P **P 06 45 13.2 0.0**
LFF La Frestale 62.45 45 *e*P **P 06 45 13.6 -0.4**
comp=Z,253nm,1.3s,mb5.9
LFF La Frestale 62.45 45 *e*P **P 06 45 13.6 -0.4**
LFF pmax pmax
comp=Z,126nm,1.3s,mb5.9
LFF La Frestale 62.45 45 *e*P **P 06 45 13.6 -0.4**
comp=Z,126nm,1.3s,mb5.9
KAR1 Arisaig 62.49 30 P **P 06 45 14.2 +0.1**
KAR1 Arisaig 62.49 30⇑*e*P **P 06 45 14.2 +0.1**
YBH Yreka Blue Hor 62.51 312 *e*P **P 06 45 13.4 -1.0**
YBH pmax pmax
comp=Z,42nm,0.9s
YBH MLR MLR
comp=Z,5µm,21.0s
YBH Yreka Blue Hor 62.51 312 *e*P **P 06 45 13.4 -1.0**
comp=Z,42nm,0.9s,mb5.6
YBH LR LR
comp=Z,5µm,21.0s,MS5.6
HOOD Mount Hood Mea 62.52 316 *e*P **P 06 45 16.1 +1.6**
comp=Z,344nm,0.9s,mb6.5
EMHD Djebel Mahouad 62.53 55 P **P 06 45 15.0 +0.3**
GCD Castle Douglas 62.63 33 P **P 06 45 15.1 +0.1**
GCD Castle Douglas 62.63 33 *e*P **P 06 45 15.1 +0.1**
SWN1 Swindon 62.66 37 AMS AMS 07 08 29.9
comp=Z,2µm,18.7s,MS5.3
PGBU Glenifferbraes 62.72 32 P **P 06 45 15.6 +0.1**
PGBU AMb AMB 06 45 17.6
comp=Z,136nm,2.0s,mb5.7
PGBU AMS AMS 07 09 15.8
comp=Z,2µm,23.9s
PGBU Glenifferbraes 62.72 32⇑*e*P **P 06 45 15.6 +0.1**
PGBU AMb AMB 06 45 17.6
comp=Z,136nm,2.0s,mb5.7
PGBU AMS AMS 07 09 15.8
comp=Z,2µm,23.9s,MS5.2
XDE Dent Fell 62.74 33 P **P 06 45 15.4 -0.3**
XDE Dent Fell 62.74 33⇑*e*P **P 06 45 15.4 -0.3**
H04A Detroit Lake 62.74 315 ⇓P P 06 45 16.2 +0.3
baz=63,SNR=26
KPL Plockton 62.76 30 P **P 06 45 14.9 -0.9**
KPL AMb AMB 06 45 17.3
comp=Z,76nm,2.9s,mb5.3
KPL Plockton 62.76 30⇑*e*P **P 06 45 14.9 -0.9**
KPL AMb AMB 06 45 17.3
comp=Z,76nm,2.9s,mb5.3
CLLI Llivia 62.80 48 P **P 06 45 17.3 +0.9**
LDF La Druitiere 62.81 40 *e*P **P 06 45 15.7 -0.6**
comp=Z,168nm,1.5s,mb5.7
LDF La Druitiere 62.81 40 *e*P **P 06 45 15.7 -0.6**
LDF pmax pmax
comp=Z,84nm,1.5s,mb5.7
LDF La Druitiere 62.81 40 *e*P **P 06 45 15.7 -0.6**
comp=Z,84nm,1.5s,mb5.7
VALF Valcebollere 62.82 48 *e*P **P 06 45 16.5 0.0**
KSB Sheil Bridge 62.82 30 P **P 06 45 15.5 -0.7**
KSB Sheil Bridge 62.82 30 *e*P **P 06 45 15.5 -0.7**
HUMO Hull Mountain 62.85 313 *e*P **P 06 45 15.8 -1.0**
comp=Z,50nm,1.2s,mb5.5
HUMO LR LR
comp=Z,3µm,21.0s,MS5.4
ETOS Mallorca 62.94 51 P **P 06 45 17.2 -0.1**
comp=Z,30nm,1.4s,mb5.2
EAB Aberfoyle 62.94 31 P **P 06 45 16.8 -0.2**
EAB Aberfoyle 62.94 31⇑*e*P **P 06 45 16.8 -0.2**
LON Longmire 62.98 317 *e*P **P 06 45 17.7 +0.3**
LON pmax pmax
comp=Z,41nm,1.0s,mb5.5
LON Longmire 62.98 317 *e*P **P 06 45 17.7 +0.3**
comp=Z,41nm,1.0s,mb5.5
CFON Fontmartina 63.00 48 P **P 06 45 18.0 +0.3**
comp=Z,14nm,1.1s,mb5.0
KAC Achnashellach 63.00 30 P **P 06 45 16.8 -0.7**
KAC Achnashellach 63.00 30⇑*e*P **P 06 45 16.8 -0.7**
G04A Mulino 63.06 316 ⇑P P 06 45 18.6 +0.5
baz=63,SNR=7.4
RJF Les Rejaudoux 63.07 44 *e*P **P 06 45 17.5 -0.6**
comp=Z,284nm,1.7s,mb5.8
RJF *e*MLR MLR
comp=Z,2µm,22.8s,MS5.0
RJF Les Rejaudoux 63.07 44 *e*P **P 06 45 17.5 -0.6**
RJF pmax pmax
comp=Z,142nm,1.7s,mb5.8
RJF MLR MLR
comp=Z,2µm,22.8s,MS5.3
RJF Les Rejaudoux 63.07 44 *e*P **P 06 45 17.5 -0.6**
comp=Z,142nm,1.7s,mb5.8
RJF LR LR
comp=Z,2µm,22.8s,MS5.3
MTLF Montolieu 63.15 47 *e*P **P 06 45 17.9 -0.7**
comp=Z,140nm,1.4s,mb5.6
MTLF *e*pP pP 06 45 30.8 -0.9
MTLF Montolieu 63.15 47 *e*P **P 06 45 17.9 -0.7**
MTLF *e**PP pP 06 45 30.8 -0.9
MTLF pmax pmax
comp=Z,70nm,1.4s,mb5.6
MTLF Montolieu 63.15 47 *e*P **P 06 45 17.9 -0.7**
comp=Z,70nm,1.4s,mb5.6

MTLF *e*pP pP 06 45 30.8 -0.9
ECK Cauldkaine Hil 63.19 33 P **P 06 45 18.2 -0.4**
ECK Cauldkaine Hil 63.19 33⇑ *e*P **P 06 45 18.2 -0.4**
F04A Amboy 63.19 316 ⇑P **P 06 45 19.0 +0.1**
baz=63
ESK Eskdalemuir 63.20 33 P **P 06 45 18.3 -0.4**
ESK AMb AMB 06 45 20.6
comp=Z,61nm,2.2s,mb5.3
ESK AMS AMS 07 12 26.4
comp=Z,3µm,18.1s
ESK Eskdalemuir 63.20 33⇑ *e*P **P 06 45 18.3 -0.4**
ESK AMb AMB 06 45 20.6
comp=Z,61nm,2.2s,mb5.3
ESK AMS AMS 07 12 26.4
comp=Z,3µm,18.1s,MS5.5
ESK Eskdalemuir 63.20 33 *i* P **P 06 45 19.9 +1.2**
ESK Eskdalemuir 63.20 33 *e*P **P 06 45 18.5 -0.2**
comp=Z,95nm,1.4s,mb5.7
ESK LR LR
comp=Z,3µm,20.0s,MS5.5
D05A Enumclaw 63.20 318 ⇓P **P 06 45 19.3 +0.3**
baz=63
RPW Rockport 63.22 319 *e*P **P 06 45 19.3 +0.3**
EKA Eskdalemuir Ar 63.23 33 P **P 06 45 18.7 -0.2**
comp=Z,8.3nm,0.8s,mb4.9,baz=247,slow=6.1,SNR=31
EKA pP pP 06 45 30.9 -1.1
comp=Z,16nm,0.8s,baz=268,slow=5.7,SNR=14
EKA Eskdalemuir Ar 63.23 33 P **P 06 45 18.7 -0.2**
EKA *PP pP 06 45 30.9 -1.1
EKA pmax pmax
comp=Z,8.0nm,0.8s
EKA pmax pmax
comp=Z,16nm,0.8s
FILF Fillols 63.24 48 *e*P **P 06 45 18.8 -0.5**
EAU Auchinoon 63.27 32 P **P 06 45 19.2 -0.1**
EAU Auchinoon 63.27 32⇑ *e*P **P 06 45 19.2 -0.1**
CWF Charnwood Fore 63.34 36 P **P 06 45 19.6 -0.1**
CWF AMb AMB 06 45 21.6
comp=Z,97nm,1.9s,mb5.6
CWF AMS AMS 07 09 12.1
comp=Z,2µm,21.2s
CWF Charnwood Fore 63.34 36⇑ *e*P **P 06 45 19.6 -0.1**
CWF AMb AMB 06 45 21.6
comp=Z,97nm,1.9s,mb5.6
CWF AMS AMS 07 09 12.1
comp=Z,2µm,21.2s,MS5.3
CAF Calviac 63.37 45 *e*P **P 06 45 19.5 -0.6**
comp=Z,104nm,0.9s,mb5.7
CAF *e*pP pP 06 45 32.4 -0.7
CAF Calviac 63.37 45 *e*P **P 06 45 19.5 -0.6**
CAF *e**PP pP 06 45 32.4 -0.7
CAF pmax pmax
comp=Z,52nm,0.9s,mb5.7
CAF Calviac 63.37 45 *e*P **P 06 45 19.5 -0.6**
comp=Z,52nm,0.9s,mb5.7
CAF *e*pP pP 06 45 32.4 -0.7
KBI1 Birley Grange 63.39 35 P **P 06 45 19.1 -0.9**
KBI1 Birley Grange 63.39 35 *e*P **P 06 45 19.1 -0.9**
EBH Black Hill 63.40 32 P **P 06 45 19.2 -0.8**
EBH Black Hill 63.40 32⇑ *e*P **P 06 45 19.2 -0.8**
JCW Jim Creek 63.42 319 *e*P **P 06 45 19.6 -0.7**
EDI Edinburgh 63.44 32 P **P 06 45 19.4 -1.0**
EDI AMb AMB 06 45 22.1
comp=Z,72nm,2.8s,mb5.3
EDI AMS AMS 07 13 17.0
comp=Z,2µm,19.2s
EDI Edinburgh 63.44 32 *e*P **P 06 45 19.4 -1.0**
EDI AMb AMB 06 45 22.1
comp=Z,72nm,2.8s,mb5.3
EDI AMS AMS 07 13 17.0
comp=Z,2µm,19.2s,MS5.3
MDO Dochfour 63.44 30 P **P 06 45 20.0 -0.3**
MDO Dochfour 63.44 30⇑ *e*P **P 06 45 20.0 -0.3**
EBL Broad Law 63.45 32 P **P 06 45 20.3 -0.2**
EBL Broad Law 63.45 32⇑ *e*P **P 06 45 20.3 -0.2**
EJON La Jonquera 63.46 48 P **P 06 45 20.7 -0.1**
comp=Z,15nm,0.8s,mb5.2
COR Corvallis 63.50 315 *e*P **P 06 45 21.1 +0.1**
COR pmax pmax
comp=Z,145nm,1.3s,mb5.8
COR MLR MLR
comp=Z,4µm,22.0s,MS5.5
COR Corvallis 63.50 315 *e*P **P 06 45 21.1 +0.2**
comp=Z,146nm,1.3s,mb5.8
COR LR LR
comp=Z,4µm,22.0s,MS5.5
SUMG Summit 63.55 7 *e*P **P 06 45 22.6 +1.8**
comp=Z,451nm,1.3s,mb6.3
SUMG Summit 63.55 7 *i* P **P 06 45 22.5 +1.7**
comp=Z,35nm,0.9s,mb5.4
SUMG *i* pP 06 45 35.2 +1.4
XAL Allendale 63.56 33 P **P 06 45 20.9 -0.3**
XAL Allendale 63.56 33⇑ *e*P **P 06 45 20.9 -0.3**
HPK Haverah Park 63.57 34 AMS AMS 07 07 56.8
comp=Z,2µm,21.1s,MS5.3
RNO Roman Nose 63.67 314 P **P 06 45 22.7 +0.6**
A05A Maple Falls 63.73 320 ⇑P **P 06 45 22.4 +0.1**
baz=64
ESY Stoneypath 63.73 32 P **P 06 45 22.1 -0.1**
ESY Stoneypath 63.73 32⇑ *e*P **P 06 45 22.1 -0.1**
TCF Toulx Ste Croi 63.77 43 *e*P **P 06 45 22.2 -0.5**
comp=Z,52nm,0.9s,mb5.2
TCF *e*pP pP 06 45 34.9 -0.8
TCF Toulx Ste Croi 63.77 43 *e*P **P 06 45 22.2 -0.5**
TCF *e**PP pP 06 45 34.9 -0.8
TCF pmax pmax
comp=Z,26nm,0.9s,mb5.3
TCF Toulx Ste Croi 63.77 43 *e*P **P 06 45 22.2 -0.5**
comp=Z,26nm,0.9s,mb5.3
TCF *e*pP pP 06 45 34.9 -0.8
FRNF Fournols 63.81 44 *e*P **P 06 45 23.1 +0.1**
GNW Green Mountain 63.84 318 *e*P **P 06 45 22.8 -0.4**
comp=Z,24nm,1.3s,mb5.1
HEBO Mount Hebo 63.95 315 *e*P **P 06 45 25.2 +1.3**
comp=Z,385nm,1.2s,mb6.3
F03A Seaside 63.96 316 ⇓P **P 06 45 24.6 +0.6**
baz=64,SNR=21
TAM Tamanrasset 64.01 70 *e*P **P 06 45 25.1 +0.4**
TAM pmax pmax
comp=Z,70nm,0.9s,mb5.7
TAM MLR MLR
comp=Z,2µm,20.0s,MS5.4
TAM Tamanrasset 64.01 70 *e*P **P 06 45 25.1 +0.4**
comp=Z,70nm,0.9s,mb5.7
TAM LR LR
comp=Z,2µm,20.0s,MS5.4
MCD Coleburn Disti 64.04 30 P **P 06 45 23.8 -0.5**
MCD Coleburn Disti 64.04 30⇑ *e*P **P 06 45 23.8 -0.5**
MME1 Meikle Cairn 64.08 31 P **P 06 45 23.9 -0.7**
MME1 Meikle Cairn 64.08 31⇑ *e*P **P 06 45 23.9 -0.7**
PYM Petit Puy Mans 64.19 44 *e*P **P 06 45 25.7 +0.2**
LBL Lubilhac 64.25 45 *e*P **P 06 45 26.4 +0.5**
BGF Bois d'Agland 64.26 43 *e*P **P 06 45 25.2 -0.7**
comp=Z,312nm,1.5s,mb5.8
BGF *e*pP pP 06 45 38.2 -0.7
BGF Bois d'Agland 64.26 43 *e*P **P 06 45 25.2 -0.7**
BGF *e**PP pP 06 45 38.2 -0.7
BGF pmax pmax
comp=Z,156nm,1.5s,mb5.8
BGF Bois d'Agland 64.26 43 *e*P **P 06 45 25.2 -0.7**
comp=Z,156nm,1.5s,mb5.8
BGF *e*pP pP 06 45 38.2 -0.7
HYF Humbligny 64.28 42 *e*P **P 06 45 25.7 -0.3**
AGO Saint Agoulin 64.34 44 *e*P **P 06 45 26.4 -0.1**
LASF Ste Croix 64.46 46 *e*P **P 06 45 27.2 0.0**
comp=Z,290nm,1.6s,mb5.8
NLWA Neilton Lookou 64.49 318 ⇓P **P 06 45 28.3 +0.9**
baz=64,SNR=26
NLWA Neilton Lookou 64.49 318 *e*P **P 06 45 28.6 +1.2**
comp=Z,208nm,1.2s,mb6.0
NLWA LR LR
comp=Z,4µm,20.0s,MS5.6
PGC Sidney 64.51 319 *e*P **P 06 45 28.9 +1.4**
comp=Z,7.6nm,1.2s,mb4.6
AVF Avril sur Loir 64.65 43 *e*P **P 06 45 27.6 -0.8**
comp=Z,154nm,1.3s,mb5.6
AVF *e*pP pP 06 45 40.4 -1.1
AVF Avril sur Loir 64.65 43 *e*P **P 06 45 27.6 -0.8**
AVF *e**PP pP 06 45 40.4 -1.1
AVF pmax pmax
comp=Z,77nm,1.3s,mb5.6
AVF Avril sur Loir 64.65 43 *e*P **P 06 45 27.6 -0.8**
comp=Z,77nm,1.3s,mb5.6
AVF *e*pP pP 06 45 40.4 -1.1
PLDF La Plantade 64.66 44 *e*P **P 06 45 28.7 +0.2**

SCO Scoresbysund 64.71 13 *i* P pP 06 45 42.4 +0.9
SCO pmax pmax
comp=Z,47nm,1.1s,mb5.4
SCO Scoresbysund 64.71 13 *i* P pP 06 45 42.4 +0.9
comp=Z,47nm,1.1s
AEU East Anglia Un 64.78 36 P **P 06 45 29.1 -0.1**
AEU East Anglia Un 64.78 36 *e*P **P 06 45 29.1 -0.1**
YKA Yellowknife Ar 64.78 335 P **P 06 45 28.6 -0.3**
comp=Z,33nm,0.9s,mb5.4,baz=110,slow=7.4,SNR=57
YKA pP pP 06 45 40.7 -1.4
comp=Z,78nm,0.9s,baz=109,slow=7.2,SNR=11
YKA Yellowknife Ar 64.78 335 P **P 06 45 28.6 -0.3**
YKA pP pP 06 45 40.7 -1.4
OOW Octopus West 64.78 318 P **P 06 45 31.7 +2.4**
ABA1 Baconsthorpe 64.80 36 P **P 06 45 28.7 -0.6**
ABA1 Baconsthorpe 64.80 36 *e*P **P 06 45 28.7 -0.6**
SSF Saint Saulge 64.81 43 *e*P **P 06 45 28.6 -0.9**
comp=Z,53nm,0.8s,mb5.3
SSF Saint Saulge 64.81 43 *e*P **P 06 45 28.6 -0.9**
SSF pmax pmax
comp=Z,26nm,0.8s,mb5.3
SSF Saint Saulge 64.81 43 *e*P **P 06 45 28.6 -0.9**
comp=Z,26nm,0.8s,mb5.3
SMF Signal de Mont 64.94 43 *e*P **P 06 45 29.7 -0.7**
comp=Z,355nm,1.4s,mb5.9
SMF Signal de Mont 64.94 43 *e*P **P 06 45 29.7 -0.7**
SMF pmax pmax
comp=Z,177nm,1.4s,mb5.9
SMF Signal de Mont 64.94 43 *e*P **P 06 45 29.7 -0.7**
comp=Z,177nm,1.4s,mb5.9
LOR Lormes 65.09 43 *e*P **P 06 45 30.4 -0.9**
comp=Z,271nm,1.5s,mb5.8
LOR *e*pP pP 06 45 43.2 -1.2
LOR *e*MLR MLR
comp=Z,2µm,22.2s,MS5.0
LOR Lormes 65.09 43 *e*P **P 06 45 30.4 -0.9**
LOR *e**PP pP 06 45 43.2 -1.2
LOR pmax pmax
comp=Z,136nm,1.5s,mb5.8
LOR MLR MLR
comp=Z,2µm,22.3s,MS5.3
LOR Lormes 65.09 43 *e*P **P 06 45 30.4 -0.9**
comp=Z,136nm,1.5s,mb5.8
LOR *e*pP pP 06 45 43.2 -1.2
LOR LR LR
comp=Z,2µm,22.3s,MS5.3
SSB Saint Sauveur 65.16 45 *e*P **P 06 45 31.9 +0.1**
SSB Saint Sauveur 65.16 45 *e*P **P 06 45 32.1 +0.3**
SSB *e**PP pP 06 45 45.1 +0.2
SSB pmax pmax
comp=Z,102nm,1.4s,mb5.7
SSB MLR MLR
comp=Z,2µm,22.0s,MS5.2
SSB Saint Sauveur 65.16 45 *e*P **P 06 45 32.1 +0.3**
comp=Z,102nm,1.4s,mb5.7
SSB *e*pP pP 06 45 45.1 +0.2
SSB LR LR
comp=Z,2µm,22.0s,MS5.2
VIVF Saint-Julien-l 65.17 45 *e*P **P 06 45 32.0 +0.1**
comp=Z,89nm,1.1s,mb5.4
VIVF *e*pP pP 06 45 44.9 -0.1
VIVF Saint-Julien-l 65.17 45 *e*P **P 06 45 32.0 +0.1**
VIVF *e**PP pP 06 45 44.9 -0.1
VIVF pmax pmax
comp=Z,45nm,1.1s,mb5.4
VIVF Saint-Julien-l 65.17 45 *e*P **P 06 45 32.0 +0.1**
comp=Z,45nm,1.1s,mb5.4
VIVF *e*pP pP 06 45 44.9 -0.1
USHA Ushuaia 65.30 185 LR LR 07 15 26.5
comp=Z,3µm,21.4s,MS5.5,baz=357,slow=37
OCF Saint Nazaire 65.56 46 *e*P **P 06 45 35.3 +0.9**
OG26 St.-Nazaire-De 65.56 46 *e*P **P 06 45 35.3 +0.9**
SMRF Simiane la Rot 65.66 46 *e*P **P 06 45 35.2 +0.1**
BAIF Baives 65.92 40 *e*P **P 06 45 35.8 -0.8**
comp=Z,59nm,0.9s,mb5.3
BAIF Baives 65.92 40 *e*P **P 06 45 35.8 -0.8**
BAIF pmax pmax
comp=Z,29nm,0.9s,mb5.3
BAIF Baives 65.92 40 *e*P **P 06 45 35.8 -0.8**
comp=Z,29nm,0.9s,mb5.3
LRW Lerwick 66.03 28 AMS AMS 07 09 22.6
comp=Z,2µm,24.0s,MS5.2
ORIF Oris-en-Rattie 66.03 45 *e*P **P 06 45 37.7 +0.3**
comp=Z,149nm,1.4s,mb5.5
ORIF *e*MLR MLR
comp=Z,3µm,22.8s,MS5.2
ORIF Oris-en-Rattie 66.03 45 *e*P **P 06 45 37.7 +0.3**
ORIF pmax pmax
comp=Z,75nm,1.4s,mb5.5
ORIF Oris-en-Rattie 66.03 45 *e*P **P 06 45 37.7 +0.3**
comp=Z,74nm,1.4s,mb5.5
SNF Seneffe 66.07 39 P **P 06 45 37.5 0.0**
comp=Z,64nm,2.4s,mb5.2
SNF AP pP 06 45 50.0 -0.7
MEZF Maizieres J'vi 66.13 41 *e*P **P 06 45 37.2 -0.8**
comp=Z,177nm,0.8s,mb5.9
MEZF Maizieres J'vi 66.13 41 *e*P **P 06 45 37.2 -0.8**
comp=Z,177nm,0.8s,mb6.1
DOU Dourbes 66.17 40 P **P 06 45 37.8 -0.4**
comp=Z,38nm,1.6s,mb5.2
DOU AP pP 06 45 51.1 -0.2
LMR La Mourre 66.23 47 *e*P **P 06 45 38.0 -0.8**
comp=Z,50nm,1.0s,mb5.2
LMR *e*pP pP 06 45 50.8 -1.0
LMR La Mourre 66.23 47 *e*P **P 06 45 38.0 -0.8**
LMR *e**PP pP 06 45 50.8 -1.0
LMR pmax pmax
comp=Z,25nm,1.0s,mb5.2
LMR La Mourre 66.23 47 *e*P **P 06 45 38.0 -0.8**
comp=Z,25nm,1.0s,mb5.2
LMR *e*pP pP 06 45 50.8 -1.0
GIVF Givet 66.32 40 *e*P **P 06 45 38.4 -0.8**
comp=Z,104nm,1.0s,mb5.5
GIVF *e*pP pP 06 45 51.2 -1.1
GIVF Givet 66.32 40 *e*P **P 06 45 38.4 -0.8**
GIVF *e**PP pP 06 45 51.2 -1.1
GIVF pmax pmax
comp=Z,52nm,1.0s,mb5.5
GIVF Givet 66.32 40 *e*P **P 06 45 38.4 -0.8**
comp=Z,52nm,1.0s,mb5.5
GIVF *e*pP pP 06 45 51.2 -1.1
FRF La Foret Royal 66.36 47 *e*P **P 06 45 38.8 -0.8**
comp=Z,37nm,0.7s,mb5.2
FRF La Foret Royal 66.36 47 *e*P **P 06 45 38.8 -0.8**
FRF pmax pmax
comp=Z,18nm,0.7s,mb5.2
FRF La Foret Royal 66.36 47 *e*P **P 06 45 38.8 -0.8**
comp=Z,18nm,0.7s,mb5.2
CABF La Chapelle 66.46 44 *e*P **P 06 45 39.7 -0.4**
comp=Z,266nm,1.5s,mb5.8
CABF *e*pP pP 06 45 52.5 -0.7
CABF La Chapelle 66.46 44 *e*P **P 06 45 39.7 -0.4**
CABF *e**PP pP 06 45 52.5 -0.7
CABF pmax pmax
comp=Z,133nm,1.5s,mb5.8
CABF La Chapelle 66.46 44 *e*P **P 06 45 39.7 -0.4**
comp=Z,133nm,1.5s,mb5.8
CABF *e*pP pP 06 45 52.5 -0.7
CALN Calern 66.56 47 *e*P **P 06 45 41.0 +0.1**
BNI Bardonecchia 66.61 45 *e*P **P 06 45 41.5 +0.4**
BNI pmax pmax
comp=Z,43nm,1.1s,mb5.4
BNI MLR MLR
comp=Z,3µm,22.0s,MS5.4
BNI Bardonecchia 66.61 45 *e*P **P 06 45 41.5 +0.4**
comp=Z,43nm,1.1s,mb5.4
BNI LR LR
comp=Z,3µm,22.0s,MS5.4
MBDF Montbardon 66.62 46 *e*P **P 06 45 41.3 +0.1**
comp=Z,173nm,1.4s,mb5.6
MBDF Montbardon 66.62 46 *e*P **P 06 45 41.3 +0.1**
MBDF pmax pmax
comp=Z,87nm,1.4s,mb5.6
MBDF Montbardon 66.62 46 *e*P **P 06 45 41.3 +0.1**
comp=Z,87nm,1.4s,mb5.6
BCLA Clavier 66.69 39 P **P 06 45 41.6 +0.1**
comp=Z,78nm,2.3s,mb5.3
BCLA AP pP 06 45 43.7 -11
LPL La Plagne 66.72 45 *e*P **P 06 45 42.1 +0.3**
comp=Z,178nm,1.5s,mb5.6
LPL *e*pP pP 06 45 55.0 +0.1
LPL La Plagne 66.72 45 *e*P **P 06 45 42.1 +0.3**
LPL *e**PP pP 06 45 55.0 +0.1
LPL pmax pmax
comp=Z,89nm,1.5s,mb5.6
LPL La Plagne 66.72 45 *e*P **P 06 45 42.1 +0.3**

comp=Z,89nm,1.5s,mb5.6
LPL *e*pP pP 06 45 55.0 +0.1
LPG La Plagne 66.73 45 *e*P **P 06 45 42.4 +0.5**
comp=Z,228nm,1.6s,mb5.7
LPG La Plagne 66.73 45 *e*P **P 06 45 42.4 +0.5**
LPG pmax pmax
comp=Z,114nm,1.6s,mb5.7
LPG La Plagne 66.73 45 *e*P **P 06 45 42.4 +0.5**
comp=Z,114nm,1.6s,mb5.7
MVIF Mont Vial 66.77 47 *e*P **P 06 45 42.0 -0.2**
TOUF Mont Tournerai 66.86 47 *e*P **P 06 45 43.0 +0.3**
HAU Haudompre 66.88 42 *e*P **P 06 45 41.7 -1.1**
comp=Z,71nm,0.9s,mb5.4
HAU *e*pP pP 06 45 54.5 -1.4
HAU *e*MLR MLR
comp=Z,2µm,21.2s,MS4.9
HAU Haudompre 66.88 42 *e*P **P 06 45 41.7 -1.1**
HAU *e**PP pP 06 45 54.5 -1.4
HAU pmax pmax
comp=Z,36nm,0.9s,mb5.4
HAU MLR MLR
comp=Z,2µm,21.3s,MS5.2
HAU Haudompre 66.88 42 *e*P **P 06 45 41.7 -1.1**
comp=Z,36nm,0.9s,mb5.4
HAU *e*pP pP 06 45 54.5 -1.4
HAU LR LR
comp=Z,2µm,21.3s,MS5.2
REVF Revere 66.91 47 *e*P **P 06 45 43.0 -0.1**
LUCF Luceram 66.91 47 *e*P **P 06 45 42.7 -0.4**
SBF Sospel 66.97 47 *e*P **P 06 45 42.9 -0.6**
BEBN Eben Emael 67.00 39 P **P 06 45 43.4 -0.1**
comp=Z,50nm,1.6s,mb5.3
BEBN AP pP 06 45 56.2 -0.4
WLF Walferdange 67.07 40 P **P 06 45 44.0 0.0**
comp=Z,162nm,1.5s,mb5.8
WLF AP pP 06 45 56.5 -0.5
WLF Walferdange 67.07 40 *e*P **P 06 45 43.3 -0.7**
comp=Z,225nm,1.7s,mb5.9
WLF *e*pP pP 06 45 56.2 -0.9
WLF Walferdange 67.07 40 *e*P **P 06 45 43.5 -0.5**
WLF pmax pmax
comp=Z,44nm,0.8s,mb5.5
WLF MLR MLR
comp=Z,2µm,21.0s,MS5.3
WLF Walferdange 67.07 40 *e*P **P 06 45 43.5 -0.5**
comp=Z,44nm,0.8s,mb5.5
WLF LR LR
comp=Z,2µm,21.0s,MS5.3
SAOF Saorge 67.07 47 *e*P **P 06 45 44.1 0.0**
LOMF Lomont 67.09 43 *e*P **P 06 45 43.9 -0.2**
HGN Heimansgroeve 67.15 39 ⇓*i*P **P 06 45 43.4 -1.1**
comp=Z,115nm,1.7s,mb5.6
HGN Heimansgroeve 67.15 39 *e*pP pP 06 45 55.7 -1.9
comp=Z,158nm,1.4s
HGN Heimansgroeve 67.15 39 *e*sP PcP 06 46 14.8 +2.5
HGN Heimansgroeve 67.15 39 *i* S S 06 54 41.6 +6.1
RES Resolute Bay 67.16 351 *e*P **P 06 45 44.5 +0.4**
RES pmax pmax
comp=Z,205nm,1.4s,mb6.0
RES Resolute Bay 67.16 351 *e*P **P 06 45 44.5 +0.4**
comp=Z,205nm,1.4s,mb6.0
MEM Membach 67.17 39 P **P 06 45 44.8 +0.2**
comp=Z,78nm,1.5s,mb5.5
MEM AP pP 06 45 57.6 -0.1
HINF Hinteralfeld 67.18 42 *e*P **P 06 45 43.5 -1.2**
comp=Z,44nm,0.8s,mb5.2
HINF Hinteralfeld 67.18 42 *e*P **P 06 45 43.5 -1.2**
HINF pmax pmax
comp=Z,22nm,0.8s,mb5.2
HINF Hinteralfeld 67.18 42 *e*P **P 06 45 43.5 -1.2**
comp=Z,22nm,0.8s,mb5.2
IMI Imperia 67.31 47 P **P 06 45 45.4 -0.2**
MOF Molkenrain 67.38 42 *e*P **P 06 45 45.1 -0.8**
ECH Echery 67.45 42 *e*P **P 06 45 46.0 -0.4**
ECH Echery 67.45 42 *e*P **P 06 45 45.8 -0.7**
ECH *e*pP pP 06 45 58.5 -1.0
ECH LR LR
comp=Z,1µm,21.0s,MS5.2
BBS Basel-Blauen 67.56 43 *e*P **P 06 45 46.7 -0.4**
CDF Champ du Feu 67.56 42 *e*P **P 06 45 46.3 -0.8**
comp=Z,88nm,0.8s,mb5.5
CDF Champ du Feu 67.56 42 *e*P **P 06 45 46.3 -0.8**
CDF pmax pmax
comp=Z,44nm,0.8s,mb5.5
CDF Champ du Feu 67.56 42 *e*P **P 06 45 46.3 -0.8**
comp=Z,44nm,0.8s,mb5.5
KEST Kesra 67.66 56 P **P 06 45 47.9 -0.1**
comp=Z,12nm,0.8s,mb5.0,baz=201,slow=2.3,SNR=48
KEST pP pP 06 46 01.4 +0.3
comp=Z,14nm,0.8s,baz=257,slow=6.1,SNR=12
KEST PKP2ab 07 14 17.2
comp=Z,0.9nm,0.8s,baz=282,slow=1.9,SNR=4.9
KEST Kesra 67.66 56 *e*P **P 06 45 47.7 -0.2**
QLNO Quiliano 67.68 46 P **P 06 45 47.4 -0.6**
LIBD Limburg 67.74 42 *e*P **P 06 45 48.0 -0.2**
KIZ Kirchzarten 67.91 42 P **P 06 45 49.1 -0.2**
WTSB Winterswijk 67.93 38 ⇓*i*P **P 06 45 49.1 -0.2**
comp=Z,170nm,2.0s,mb5.7
WTSB Winterswijk 67.93 38 *e*pP pP 06 46 01.0 -1.5
comp=Z,223nm,1.4s
WTSB Winterswijk 67.93 38 *e*sP PcP 06 46 18.1 +2.6
VSL Villasalto 67.94 52 *e*P **P 06 45 49.5 -0.2**
comp=Z,106nm,1.0s,mb5.8
VSL LR LR
comp=Z,2µm,20.0s,MS5.4
FELD Feldberg im Sc 67.96 43 *e*P **P 06 45 49.0 -0.6**
ABH Alteburg 68.00 40 *e*P **P 06 45 49.9 +0.1**
LANF Langenberg 68.01 41 *e*P **P 06 45 49.7 -0.2**
WIT Witteveen 68.03 37 *e*P **P 06 45 50.7 +0.8**
comp=Z,550nm,1.3s,mb6.4
WIT Witteveen 68.03 37 *e*pP pP 06 46 03.1 0.0
BUG Bochum--Univer 68.11 39 *e*P **P 06 45 50.3 -0.2**
comp=Z,191nm,1.6s,mb5.9
BUG *e*pP pP 06 46 02.6 -1.1
DGI Dorgali Grotta 68.18 51 P **P 06 45 51.0 -0.2**
BFO Black Forest 68.24 42 P **P 06 45 50.8 -0.6**
comp=Z,201nm,1.8s,mb5.8,SNR=6.6
BFO Black Forest 68.24 42 *e*P **P 06 45 50.8 -0.6**
BFO Black Forest 68.24 42 *e*P **P 06 45 51.0 -0.4**
BFO pmax pmax
comp=Z,91nm,1.4s,mb5.6
BFO MLR MLR
comp=Z,1µm,21.0s,MS5.2
BFO Black Forest 68.24 42 *e*P **P 06 45 51.0 -0.4**
comp=Z,91nm,1.4s,mb5.6
BFO LR LR
comp=Z,1µm,21.0s,MS5.2
KTD Kalmit 68.24 41 *e*P **P 06 45 51.2 -0.2**
JMIC Jan Mayen 68.42 16 *e*P **P 06 45 52.5 +0.4**
SPAK Spaichingen-Ko 68.51 42 *e*P **P 06 45 52.5 -0.6**
SISB Singen-Schiene 68.57 43 P **P 06 45 53.8 +0.4**
IBBN Ibbenburen 68.58 38 *e*P **P 06 45 53.3 -0.1**
comp=Z,271nm,1.5s,mb6.0
IBBN *e*pP pP 06 46 05.5 -1.0
LBG Lerchenberg 68.60 42 P **P 06 45 53.7 +0.1**
TNS Taunus Mts 68.63 40 *e*P **P 06 45 53.5 -0.3**
comp=Z,486nm,1.8s,mb6.1
TUE Stuetta 68.66 44 *e*P **P 06 45 54.0 -0.1**
comp=Z,46nm,1.0s,mb5.4
TUE LR LR
comp=Z,3µm,21.0s,MS5.5
SWS Schriesheim-Wi 68.67 41 P **P 06 45 54.1 +0.1**
GUT Gutenstein 68.72 42 P **P 06 45 54.6 +0.2**
TOD Tromm 68.75 41 *e*P **P 06 45 53.8 -0.8**
STU Stuttgart 68.88 42 *e*P **P 06 45 54.8 -0.6**
comp=Z,86nm,1.1s,mb5.6
STU Stuttgart 68.88 42 *e*P **P 06 45 55.0 -0.4**
STU *e**PP pP 06 46 07.6 -0.9
STU pmax pmax
comp=Z,171nm,1.0s,mb5.9
STU Stuttgart 68.88 42 *e*P **P 06 45 55.0 -0.4**
comp=Z,171nm,1.0s,mb5.9
STU *e*pP pP 06 46 07.6 -0.9
STAV Stavanger 68.96 31 *e*P **P 06 45 54.3 -1.4**
STAV *e*pP pP 06 46 07.5 -1.3
STAV AMb AMB 06 46 09.7
comp=Z,225nm,1.5s,mb5.9
STAV Stavanger 68.96 31 *e*P **P 06 45 54.3 -1.4**
comp=Z,225nm,1.5s,mb5.9
DAVOX Davos/Dischmat 69.06 44 P **P 06 45 57.0 +0.5**
comp=Z,50nm,0.8s,mb5.5,baz=259,slow=5.9,SNR=54
DAVOX pP pP 06 46 09.8 0.0
comp=Z,90nm,0.9s,baz=260,slow=4.9,SNR=18
SUE Sulen 69.10 28 *e*P **P 06 45 57.4 +0.9**
SUE *e*pP pP 06 46 08.7 -0.9

VLC Villacollemand 69.12 47 *e*P **P 06 45 56.1 -0.9**
comp=Z,80nm,1.1s,mb5.6
VLC LR LR
comp=Z,2µm,20.0s,MS5.4
DAVA Damuels 69.13 43 P **P 06 45 57.1 +0.2**
DAVA Damuels 69.13 43 *i* P **P 06 45 57.2 +0.2**
comp=Z,79nm,0.9s,mb5.6,SNR=26
DAVA ⇑*i*sP sP 06 46 10.4 -4.8
comp=Z,241nm,1.1s
ASK Askoy 69.13 29 *e*P **P 06 45 56.1 -0.6**
ERBM Eremo 69.17 46 P **P 06 45 57.3 +0.1**
BER Bergen 69.17 29 *e*P **P 06 45 48.5 -8.4**
BER *e*S S 06 55 01.9 +2.7
SIND Sindeldorf 69.23 41 P **P 06 45 57.4 -0.1**
BRMO Bormio 69.36 44 P **P 06 45 58.6 +0.2**
FOO Floro 69.39 28 *e*P **P 06 45 57.7 -0.6**
FOO *e*S S 06 55 02.8 +1.1
FOO Floro 69.39 28 *e*P **P 06 45 57.7 -0.6**
FOO *e* 06 55 02.1
MABI Malga Bissina 69.41 45 P **P 06 45 57.6 -1.1**
BLS5 Blasjo 69.46 30 *e*P **P 06 45 58.8 +0.1**
BLS5 AMb AMB 06 46 13.4
comp=Z,68nm,1.2s,mb5.4
BLS5 Blasjo 69.46 30 *e*P **P 06 45 58.8 +0.1**
comp=Z,68nm,1.2s,mb5.5
MAGA Magasa 69.46 45 P **P 06 45 57.3 -1.7**
FNVD Fontana Vidola 69.65 47 P **P 06 46 00.0 -0.2**
ODD1 Odda 69.67 30 *e*P **P 06 46 00.9 +0.8**
ODD1 AMb AMB 06 46 15.0
comp=Z,130nm,1.5s,mb5.6
ODD1 Odda 69.67 30 *e*P **P 06 46 00.9 +0.8**
comp=Z,130nm,1.5s,mb5.6
FETA Feichten 69.67 44⇓*i*P **P 06 46 00.3 0.0**
comp=Z,112nm,1.5s,mb5.6,SNR=34
FETA ⇓*i*sP sP 06 46 14.1 -4.6
comp=Z,167nm,1.1s
UBBA Unterbreizbach 69.70 40 *e*P **P 06 46 00.0 -0.4**
comp=Z,448nm,2.9s,mb5.9
RETA Reutte 69.75 43 *i* P **P 06 46 00.7 -0.1**
comp=Z,48nm,0.9s,mb5.4,SNR=20
HYA Hoyanger 69.79 28 *e*P **P 06 46 02.0 +1.2**
HYA *e*sP sP 06 46 15.4 -3.7
HYA AMb AMB 06 46 17.0
comp=Z,143nm,1.1s,mb5.8
HYA Hoyanger 69.79 28 *e*P **P 06 46 02.0 +1.2**
comp=Z,143nm,1.1s,mb5.8
DAG Danmarks Havn 69.94 9⇑*e*P **P 06 46 01.5 +0.1**
DAG *i* pP 06 46 14.3 -0.3
DAG pmax pmax
comp=Z,18nm,1.0s,mb5.0
DAG MLR MLR
comp=E,1µm,22.0s
DAG MLR MLR
comp=Z,2µm,22.0s,MS5.3
DAG Danmarks Havn 69.94 9⇑*i*P **P 06 46 01.5 +0.1**
comp=Z,18nm,1.0s,mb5.0
DAG *i* pP 06 46 14.3 -0.3
DAG
comp=Z,2µm,22.0s
MOTA Moosalm 69.96 43⇓*i*P **P 06 46 01.7 -0.4**
comp=Z,38nm,0.8s,mb5.4,SNR=21
LATE Laterza 70.01 48 P **P 06 46 02.5 0.0**
SQTA Sankt Quirin 70.02 44⇑*i*P **P 06 46 02.6 +0.2**
SQTA ⇓*i*sP sP 06 46 15.8 -5.0
NRDL Niedersach Rie 70.03 38 *e*P **P 06 46 02.2 -0.2**
comp=Z,220nm,1.7s,mb5.8
CLZ Clausthal 70.09 39 *e*P **P 06 46 02.6 -0.1**
comp=Z,135nm,1.4s,mb5.7
TOLF Tolfa 70.12 49 P **P 06 46 03.0 -0.2**
FUR Furstenfeldbru 70.17 43 *e*P **P 06 46 03.0 -0.4**
comp=Z,394nm,1.9s,mb6.0
MUD Monsted U'grnd 70.20 34⇓*i*P **P 06 46 03.6 +0.3**
MUD *e* pP 06 46 14.7 -1.8
MUD pmax pmax
comp=Z,41nm,1.1s,mb5.3
MUD MLR MLR
comp=Z,2µm,22.0s,MS5.2
MUD Monsted U'grnd 70.20 34⇓*i*P **P 06 46 03.6 +0.3**
comp=Z,41nm,1.1s,mb5.3
MUD *e* pP 06 46 14.7 -1.8
MUD
comp=Z,2µm,22.0s
MGAB Montegabbione 70.26 48 P **P 06 46 03.6 -0.4**
WATA Walderalm 70.28 43⇑*e*P **P 06 46 04.3 +0.3**
comp=Z,18nm,0.7s,mb5.1
WTTA Wattenberg 70.31 44⇓*i*P **P 06 46 04.3 0.0**
comp=Z,40nm,1.1s,mb5.2,SNR=14
WTTA ⇓*i*sP sP 06 46 17.8 -4.8
comp=Z,149nm,1.4s
GRF Grafenberg Arr 70.32 41 *e*P **P 06 46 04.2 0.0**
comp=Z,234nm,1.7s,mb5.8
GRF *e*pP pP 06 46 15.9 -1.5
GRF *e*S S 06 55 12.3 -0.8
GRF *e*L 07 13 27.3
comp=Z,3µm,21.6s
GRF Grafenberg Arr 70.32 41 *e*P **P 06 46 04.2 0.0**
GRF *e**PP pP 06 46 15.9 -1.5
GRF *e*S S 06 55 12.3 -0.8
GRF pmax pmax
comp=Z,234nm,1.7s,mb5.8
GRF MLR MLR
comp=Z,3µm,21.6s,MS5.5
BSEG Bad Segeberg 70.39 36 *e*P **P 06 46 04.5 0.0**
comp=Z,193nm,1.5s,mb5.8
BSEG *e*pP pP 06 46 16.2 -1.5
BADI Badiali 70.40 48 P **P 06 46 03.5 -1.4**
ROM9 Roma 70.49 49 P **P 06 46 06.1 +0.7**
DLBC Dease Lake 70.55 328 *e*P **P 06 46 04.9 -0.6**
MURB Monte Urbino 70.59 48 P **P 06 46 04.9 -1.1**
MTCE Montecelio 70.67 49 P **P 06 46 06.0 -0.5**
MOX Moxa 70.69 40 *e*P **P 06 46 06.1 -0.4**
comp=Z,184nm,2.4s,mb5.6
MOX *e* pP 06 46 18.2 -1.5
MOX *e* 06 46 37.6
MOX *e*S S 06 55 20.0 +2.6
MOX
comp=Z,2µm,22.0s
MOX Moxa 70.69 40 *e*P **P 06 46 06.0 -0.5**
comp=Z,198nm,2.3s,mb5.6
MOX Moxa 70.69 40 P **P 06 46 06.2 -0.3**
FSSB Fossombrone 70.80 47 P **P 06 46 06.5 -0.8**
CERT Cerreto 70.84 49 P **P 06 46 07.7 +0.1**
USI Ustica 70.85 53 P **P 06 46 07.1 -0.6**
ABTA Abfaltersbach 70.86 44⇓*i*P **P 06 46 07.1 -0.5**
comp=Z,42nm,0.9s,mb5.4,SNR=22
SNTG Esanatoglia 70.89 48 P **P 06 46 06.8 -1.0**
FIAM Fiamignano 70.96 49 P **P 06 46 08.4 +0.1**
NRCA Norcia 70.99 48 P **P 06 46 07.9 -0.6**
KONO Kongsberg 71.07 30 *e*P **P 06 46 08.8 +0.2**
KONO *e*S S 06 55 23.8 +2.3
KONO AMS AMS 07 12 23.2
comp=Z,1µm,19.2s,MS5.1
KONO Kongsberg 71.07 30 *e*P **P 06 46 08.7 +0.1**
KONO pmax pmax
comp=Z,98nm,1.5s,mb5.5
KONO MLR MLR
comp=Z,1µm,20.0s,MS5.2
KONO Kongsberg 71.07 30 *e*P **P 06 46 08.7 +0.1**
comp=Z,98nm,1.5s,mb5.5
KONO LR LR
comp=Z,1µm,20.0s,MS5.2
GUAR Guarcino 71.08 49 P **P 06 46 09.0 0.0**
CING Cingoli 71.08 48 P **P 06 46 07.7 -1.3**
RJOB Jochberg 71.14 43 *e*P **P 06 46 08.7 -0.6**
comp=Z,145nm,1.7s,mb5.6
NKC Novy Kostel 71.17 40⇓*i*P **P 06 46 09.3 -0.1**
NKC *e* pP 06 46 21.5 -1.1
NKC *e*S S 06 55 24.1 +1.1
NKC MLR MLR
comp=Z,2µm,19.8s,MS5.4
NKC Novy Kostel 71.17 40 P **P 06 46 09.5 +0.1**
NKC Novy Kostel 71.17 40 P **P 06 46 09.5 +0.1**
NKC Novy Kostel 71.17 40⇓*i*P **P 06 46 09.3 -0.1**
NKC *e*pP pP 06 46 21.5 -1.1
NKC *e*S S 06 55 24.1 +1.1
NKC AMS AMS 07 13 20.0
comp=Z,2µm,19.8s
AQU L'Aquila 71.18 49 PFAKE 06 46 20.0 +10
AQU LR LR
comp=Z,3µm,21.0s,MS5.5
AQU L'Aquila 71.18 49⇓*i*P **P 06 46 09.5 -0.1**
TANN Tannenbergstha 71.20 40 *e*P **P 06 46 09.3 -0.3**
comp=Z,144nm,1.8s,mb5.6
WET Wettzell 71.33 42 *e*P **P 06 46 10.0 -0.4**
comp=Z,92nm,1.3s,mb5.5

TERO Teramo 71.34 49 P **P 06 46 10.1 -0.5**
PTCC Patocco-Chiusa 71.41 45 P **P 06 46 10.2 -0.7**
KBA Koelnbreinsper 71.46 44⇓*i*P **P 06 46 10.8 -0.4**
comp=Z,76nm,1.2s,mb5.5,SNR=11
KBA ⇑*i*sP sP 06 46 24.2 -5.3
comp=Z,169nm,1.1s
RFI Roccamonfina 71.56 50 P **P 06 46 12.3 +0.4**
MYKA Terra Mystica 71.62 44⇓*i*P **P 06 46 12.0 -0.2**
comp=Z,24nm,0.7s,mb5.2
MYKA ⇑*i*sP sP 06 46 25.0 -5.6
comp=Z,116nm,1.5s
CLL Collm 71.64 39 *e*P **P 06 46 12.0 -0.2**
comp=Z,123nm,1.3s,mb5.7
CLL Collm 71.64 39⇓*i*P **P 06 46 12.0 -0.2**
CLL *i* *PP pP 06 46 24.6 -0.8
CLL *e**SP sP 06 46 30.0 -0.6
CLL *e*S S 06 55 24.0 -4.4
CLL pmax pmax
comp=Z,123nm,1.3s,mb5.7
CLL MLR MLR
comp=Z,2µm,21.1s,MS5.4
CLL Collm 71.64 39⇓*i*P **P 06 46 12.0 -0.2**
comp=Z,123nm,1.3s,mb5.7
CLL *i* sP sP 06 46 24.6 -6.0
comp=Z,196nm,1.1s
CLL *e* 06 46 30.0
CLL *e*PP PP 06 48 48.0 -3.5
CLL *e*S S 06 55 32.0 +3.6
CLL *e*(PPS) 06 56 23.0
CLL *e* 06 57 24.0
CLL *e* 06 59 00.0
CLL *e*(SS) 06 59 42.0
CLL *e*SSS 07 03 18.0
CLL Lm 07 14 00.0
comp=N,400nm,21.0s
CLL Lm 07 14 00.0
comp=E,2µm,20.9s
CLL Lm 07 14 00.0
comp=Z,2µm,21.1s
TRI Trieste 71.64 45 *e*P **P 06 46 11.9 -0.4**
TRI pmax pmax
comp=Z,56nm,1.0s,mb5.5
TRI MLR MLR
comp=Z,2µm,20.0s,MS5.3
TRI Trieste 71.64 45 *e*P **P 06 46 11.9 -0.4**
comp=Z,56nm,1.0s,mb5.5
TRI LR LR
comp=Z,2µm,20.0s,MS5.3
CADS Cadrg 71.66 45 *i* P **P 06 46 11.8 -0.6**
CADS *e* pP 06 46 25.8 +0.1
CADS *e*S S 06 55 30.2 +1.4
CRAG Craig 71.69 325 P **P 06 46 12.6 +0.2**
comp=Z,56nm,1.3s,mb5.3
RNI2 Rionero Sannit 71.70 50 P **P 06 46 13.6 +0.8**
RAFF Raffo Rosso 71.75 54 P **P 06 46 13.6 +0.5**
VOY Vojsko 71.76 45 *e*P **P 06 46 12.5 -0.5**
VOY *e* pP 06 46 26.3 +0.1
MIDA Miranda 71.78 50 P **P 06 46 13.7 +0.5**
VAE Valguarnera 71.79 54 P **P 06 46 14.2 +0.8**
comp=Z,16nm,0.5s,mb5.2,baz=84,slow=5.6,SNR=9.6
KHC Kasperske Hory 71.79 42 *e*P **P 06 46 12.9 -0.2**
KHC *e* pP 06 46 25.2 -1.2
KHC *e*S S 06 55 30.5 +0.3
KHC MLR MLR
comp=Z,2µm,18.9s,MS5.3
KHC Kasperske Hory 71.79 42 *e*P **P 06 46 12.5 -0.7**
comp=Z,177nm,1.4s,mb5.8
KHC Kasperske Hory 71.79 42⇓*e*P **P 06 46 12.9 -0.2**
KHC *e*pP pP 06 46 25.2 -1.2
KHC *e*S S 06 55 30.5 +0.3
KHC AMS AMS 07 18 00.0
comp=Z,2µm,18.9s
GEC2 GERESS Array S 71.85 42 *e*P **P 06 46 13.0 -0.5**
comp=Z,142nm,1.5s,mb5.7
WDD Wield Dalam 71.86 56 *e*P **P 06 46 14.1 +0.2**
comp=Z,173nm,1.3s,mb5.8
WDD LR LR
comp=Z,3µm,20.0s,MS5.5
COP Copenhagen 71.87 35⇑*i*P **P 06 46 15.0 +1.5**
COP *i* pP 06 46 27.3 +0.6
COP pmax pmax
comp=Z,21nm,0.8s,mb5.1
COP MLR MLR
comp=Z,730nm,24.0s,MS4.9
COP Copenhagen 71.87 35⇑*i*P **P 06 46 15.0 +1.5**
comp=Z,21nm,0.8s,mb5.1
COP *i* pP 06 46 27.3 +0.6
COP
comp=Z,730nm,24.0s
NAO01 NORSAR Array S 71.94 29 *e*P **P 06 46 14.2 +0.4**
comp=Z,229nm,1.1s,mb6.0
NAO01 LR LR
comp=Z,944nm,19.0s,MS5.1
HVZN Vizzini 72.03 54 P **P 06 46 15.2 +0.4**
CEY Cerknica 72.11 45 P **P 06 46 15.2 +0.1**
NB2 NORSAR Subarra 72.14 29 P **P 06 46 15.7 +0.7**
comp=Z,445nm,2.0s,mb6.0,baz=259,slow=6.5
NB2 NORSAR Subarra 72.14 29 P **P 06 46 15.0 0.0**
NOA NORSAR Array B 72.14 29 P **P 06 46 15.8 +0.8**
comp=Z,33nm,0.8s,mb5.3,baz=258,slow=5.9,SNR=95
NOA pP pP 06 46 28.4 +0.2
comp=Z,139nm,1.0s,baz=257,slow=5.9,SNR=29
NOA NORSAR Array B 72.14 29 P **P 06 46 15.8 +0.8**
NOA *PP pP 06 46 28.4 +0.2
NOA pmax pmax
comp=Z,33nm,0.8s
NOA pmax pmax
comp=Z,139nm,1.0s
MOA Molln 72.14 43 P **P 06 46 15.1 -0.2**
MOA Molln 72.14 43⇓*i*P **P 06 46 14.8 -0.5**
comp=Z,46nm,0.8s,mb5.4,SNR=24
MOA ⇑*i*sP sP 06 46 28.0 -5.6
comp=Z,223nm,1.4s
ALE Alert 72.15 360 P **P 06 46 14.0 -0.8**
comp=Z,987nm,1.4s,mb6.5,SNR=14
PSB1 Pescosannita 72.18 50 P **P 06 46 16.0 +0.3**
BRG Berggiesshubel 72.19 40 *e*P **P 06 46 15.4 -0.1**
comp=Z,113nm,1.8s,mb5.5
BRG Berggiesshubel 72.19 40 *i* P **P 06 46 15.4 -0.1**
comp=Z,30nm,0.9s,mb5.2
BRG *i* pP 06 46 27.9 -0.8
comp=Z,83nm,1.1s
BRG
comp=N,1µm,20.9s
BRG
comp=E,2µm,19.7s
BRG
comp=Z,2µm,20.4s
BRG Berggiesshubel 72.19 40 *i* P **P 06 46 15.4 -0.1**
BRG *i* pP 06 46 27.9 -0.8
BRG pmax pmax
comp=Z,18nm,1.0s,mb5.0
BRG pmax pmax
comp=Z,50nm,1.1s,mb5.4
BRG MLR MLR
comp=N,838nm,20.9s,MS5.2
BRG MLR MLR
comp=E,968nm,19.7s,MS5.2
BRG MLR MLR
comp=Z,1µm,20.4s,MS5.1
LJU Ljubljana 72.20 45 *e*P **P 06 46 15.6 -0.1**
LJU *e* pP 06 46 27.8 -1.1
LJU *e* 06 46 46.1
RGN Rugen 72.22 36 *e*P **P 06 46 15.7 +0.1**
comp=Z,137nm,0.9s,mb5.9
OBKA Obir 72.24 44 P **P 06 46 15.9 0.0**
OBKA Obir 72.24 44⇓*i*P **P 06 46 15.7 -0.2**
comp=Z,52nm,0.7s,mb5.6,SNR=38
RUE Ruedersdorf 72.25 38 *e*P **P 06 46 15.7 -0.1**
comp=Z,232nm,1.3s,mb6.0
CIGN Sant'Elia a Pi 72.27 50 P **P 06 46 16.0 -0.2**
MRB1 Monte Rocchett 72.30 50 P **P 06 46 16.8 +0.4**
SSY Sortino 72.31 54 P **P 06 46 17.1 +0.6**
CSSN Cassano Irpino 72.33 50 P **P 06 46 17.2 +0.6**
PRA Prague 72.43 41 ⇓P **P 06 46 17.0 +0.1**
PRA pP pP 06 46 29.0 -1.2
PRU Pruhonice 72.49 41⇓*i*P **P 06 46 17.9 +0.6**
PRU *e* pP 06 46 30.4 -0.2
PRU *e*S S 06 55 39.1 +0.9
PRU MLR MLR
comp=Z,2µm,20.6s,MS5.4
PRU Pruhonice 72.49 41 P **P 06 46 18.0 +0.7**
PRU Pruhonice 72.49 41⇓*i*P **P 06 46 17.9 +0.6**
PRU *e*pP pP 06 46 30.4 -0.2
PRU *e*S S 06 55 39.1 +0.9

PRU AMS AMS 07 14 30.0
comp=Z,2µm,20.6s
PVCC Panska Ves 72.55 40 *e*P **P 06 46 17.9 +0.2**
PVCC *e* pP 06 46 30.8 -0.1
PVCC MLR MLR
comp=Z,2µm,21.7s,MS5.4
PVCC Panska Ves 72.55 40 P **P 06 46 18.2 +0.5**
PVCC Panska Ves 72.55 40⇓*e*P **P 06 46 17.9 +0.2**
PVCC *e*pP pP 06 46 30.8 -0.1
PVCC AMS AMS 07 13 50.0
comp=Z,2µm,21.7s
SOKA Soboth 72.58 44⇓*i*P **P 06 46 17.0 -0.9**
comp=Z,16nm,0.8s,mb5.0
PERS Pernice 72.64 44 *i* P **P 06 46 17.2 -1.0**
BOJS Bojanci 72.67 46 *e*P **P 06 46 18.2 -0.3**
BOJS *e* pP 06 46 32.4 +0.6
BOJS *e*S S 06 55 41.4 +0.9
MRLC Muro Lucano 72.68 51 P **P 06 46 18.2 -0.5**
CRES Cresnjev 72.83 45 P **P 06 46 19.3 -0.1**
CUC Castrocucco 72.92 51 *e*P **P 06 46 19.1 -1.0**
comp=Z,96nm,1.4s,mb5.5
CUC LR LR
comp=Z,2µm,21.0s,MS5.3
ARSA Arzberg 72.95 44 P **P 06 46 19.3 -0.8**
ARSA Arzberg 72.95 44⇓*i*P **P 06 46 19.4 -0.7**
comp=Z,31nm,0.8s,mb5.3,SNR=20
ARSA ⇑*i*sP sP 06 46 32.8 -5.7
comp=Z,68nm,0.9s
CEL Celeste 72.97 53 PFAKE 06 46 30.0 +10
CEL LR LR
comp=Z,2µm,21.0s,MS5.4
TREC Trest 73.05 42⇓*i*P **P 06 46 20.4 -0.3**
TREC *e* pP 06 46 32.9 -1.0
TREC MLR MLR
comp=Z,2µm,20.6s,MS5.3
TREC Trest 73.05 42⇓*i*P **P 06 46 20.4 -0.3**
TREC *e*pP pP 06 46 32.9 -1.0
TREC AMS AMS 07 17 50.0
comp=Z,2µm,20.6s
SIT Sitka 73.12 327 *e*P **P 06 46 22.8 +1.9**
SIT pmax pmax
comp=Z,78nm,1.2s,mb5.5
SIT Sitka 73.12 327 *e*P **P 06 46 22.8 +1.8**
comp=Z,78nm,1.2s,mb5.5
HFA0 Hagfors New Ar 73.18 30 P **P 06 46 20.0 -1.2**
BSD Bornholm Skovb 73.20 36⇓*i*P **P 06 46 20.7 -0.7**
BSD *i* pP 06 46 34.9 +0.2
BSD pmax pmax
comp=Z,24nm,0.9s,mb5.1
BSD MLR MLR
comp=Z,1µm,24.0s,MS5.1
BSD Bornholm Skovb 73.20 36⇓*i*P **P 06 46 20.7 -0.7**
comp=Z,24nm,0.9s,mb5.1
BSD *i* pP 06 46 34.9 +0.2
BSD *e* 06 46 52.2
BSD
comp=Z,1µm,24.0s
CSNA Conrad Observa 73.22 43⇓*i*P **P 06 46 21.4 -0.3**
comp=Z,24nm,1.2s,mb5.0
CONA Conrad Observa 73.22 43⇓*i*P **P 06 46 21.4 -0.3**
comp=Z,26nm,1.2s,mb5.0,SNR=8.5
CONA ⇓*i*sP sP 06 46 34.2 -5.9
comp=Z,83nm,1.3s
KOGS Kog 73.41 45 *e*P **P 06 46 22.4 -0.5**
KOGS *e* pP 06 46 36.5 +0.4
SKAG Skagway 73.44 329 *e*P **P 06 46 24.1 +1.4**
comp=Z,94nm,1.6s,mb5.5
UPC Upice 73.47 40⇓*i*P **P 06 46 23.1 0.0**
UPC *e* pP 06 46 35.2 -1.2
UPC Upice 73.47 40 P **P 06 46 23.2 +0.1**
UPC Upice 73.47 40⇓*i*P **P 06 46 23.1 0.0**
UPC *e*pP pP 06 46 35.2 -1.2
TIP Timpagrande 73.64 52 *e*P **P 06 46 22.4 -2.0**
comp=Z,50nm,1.2s,mb5.3
TIP *e*pP pP 06 46 36.0 -1.7
TIP LR LR
comp=Z,2µm,21.0s,MS5.3
DPC Dobruska-Polom 73.66 41⇓*i*P **P 06 46 24.2 0.0**
DPC *e*S S 06 55 51.3 -0.1
DPC MLR MLR
comp=Z,2µm,20.8s,MS5.3
DPC Dobruska-Polom 73.66 41 P **P 06 46 24.3 +0.1**
DPC Dobruska-Polom 73.66 41⇓*i*P **P 06 46 24.2 0.0**
DPC *e*S S 06 55 51.3 -0.1
DPC AMS AMS 07 14 30.0
comp=Z,2µm,20.8s
KSP Ksiaz 73.67 40 *e*P **P 06 46 24.4 +0.2**
KSP *e*PcP PcP 06 46 37.6 -2.3
KSP LMZ 07 14 53.5
comp=Z,4µm,21.5s
KSP Ksiaz 73.67 40⇓*i*P **P 06 46 24.2 -0.1**
KSP *e**PP pP 06 46 36.4 -1.1
KSP *e*S S 06 55 52.0 +0.5
KSP Ksiaz 73.67 40 P **P 06 46 24.4 +0.1**
VRAC Vranov 73.78 42 ⇓P **P 06 46 24.8 -0.1**
VRAC Vranov 73.78 42⇓*i*P **P 06 46 24.8 -0.1**
BLY Banja Luka 74.01 46 P **P 06 46 27.0 +0.6**
KONS Konsvik 74.02 24 *e*P **P 06 46 27.1 +1.1**
KONS *e*sP sP 06 46 40.4 -4.0
ZST Bratislava 74.06 43 *e*P **P 06 46 27.2 +0.6**
ZST *e* pP 06 46 39.8 -0.1
ZST *e*S S 06 55 56.5 +0.4
ZST pmax pmax
comp=Z,34nm,1.0s,mb5.2
ZST MLR MLR
comp=Z,800nm,20.2s,MS5.0
ZST Bratislava 74.06 43 *e*P **P 06 46 27.2 +0.6**
comp=Z,34nm,1.0s,mb5.2
ZST *e* pP 06 46 39.8 -0.1
ZST *e*S S 06 55 56.5 +0.4
ZST LR LR
comp=Z,800nm,20.2s,MS5.0
ZST Bratislava 74.06 43 *e*P **P 06 46 27.2 +0.6**
ZST *e*pP pP 06 46 39.8 -0.1
ZST *e*S S 06 55 56.5 +0.4
FLOS Flostrand 74.08 24 *e*P **P 06 46 27.5 +1.1**
INK Inuvik 74.17 338 *e*P **P 06 46 26.9 0.0**
INK pmax pmax
comp=Z,395nm,1.4s
INK Inuvik 74.17 338 *e*P **P 06 46 26.9 0.0**
comp=Z,395nm,1.4s,mb6.2
SMOL Smolenice 74.29 42 *e*P **P 06 46 28.3 +0.4**
SMOL *e* pP 06 46 41.1 -0.1
SMOL Smolenice 74.29 42 *e*P **P 06 46 28.3 +0.4**
SMOL *e*pP pP 06 46 41.1 -0.1
GKP Gorka Klasztor 74.41 38 *e*P **P 06 46 28.7 +0.2**
GKP *e*PcP PcP 06 46 41.8 -1.1
GKP LMZ 07 16 00.1
comp=Z,2µm,21.9s
GKP Gorka Klasztor 74.41 38⇓*e*P **P 06 46 28.7 +0.2**
GKP *e* pP 06 46 41.8 0.0
MORC Moravsky Berou 74.42 41 ⇓P **P 06 46 28.7 +0.1**
MORC Moravsky Berou 74.42 41 *e*P **P 06 46 28.5 -0.2**
comp=Z,79nm,1.0s,mb5.6
MORC Moravsky Berou 74.42 41⇓*i*P **P 06 46 28.7 +0.1**
MOR8 Moi Rana 74.48 24⇑*i*P **P 06 46 30.3 +1.6**
MOR8 *e*pP pP 06 46 40.4 -1.6
LOF Lofoten 74.49 22 *e*P PcP 06 46 43.7 +0.7
LOF AMb AMB 06 46 58.1
comp=Z,155nm,1.1s,mb5.8
OKC Ostrava-Krasne 74.81 41 *e*P **P 06 46 30.8 -0.1**
OKC *e* pP 06 46 43.2 -1.0
OKC *e*S S 06 56 05.7 +1.4
OKC MLR MLR
comp=Z,1µm,19.0s,MS5.1
OKC Ostrava-Krasne 74.81 41 P **P 06 46 31.8 +0.9**
OKC Ostrava-Krasne 74.81 41⇓*e*P **P 06 46 30.8 -0.1**
OKC *e*pP pP 06 46 43.2 -1.0
OKC *e*S S 06 56 05.7 +1.4
OKC AMS AMS 07 15 50.0
comp=Z,1µm,19.0s
RAC Raciborz 74.85 41 *e*P **P 06 46 31.8 +0.7**
RAC *e* pP 06 46 44.1 -0.3
KOLL Kolacno 74.94 42 *e*P **P 06 46 32.1 +0.4**
KOLL *e* pP 06 46 44.7 -0.3
KOLL Kolacno 74.94 42 *e*P **P 06 46 32.1 +0.4**
KOLL *e*pP pP 06 46 44.7 -0.3
HCY Herceg Novi 74.95 49⇓*i*P **P 06 46 33.4 +1.5**
HCY Herceg Novi 74.95 49⇓*i*P **P 06 46 33.5 +1.6**
HCY Herceg Novi 74.95 49⇓*i*P **P 06 46 33.5 +1.6**
PMSA Palmer Station 74.98 182 LR LR 07 20 53.4
comp=Z,5µm,21.1s,MS5.8,baz=17,slow=37
PMSA Palmer Station 74.98 182 PFAKE 06 46 40.0 +8.5

PMSA LR LR
comp=Z,6µm,20.0s,MS5.8
BRY Bratogost 74.98 48⇓iP P 06 46 31.8 -0.3
BRY Bratogost 74.98 48 P P 06 46 32.0 -0.1
BRY Bratogost 74.98 48 P P 06 46 32.0 -0.1
PKSM Moragy 75.06 45 ⇓P P 06 46 32.1 -0.3
PKSM Moragy 75.06 45⇓iP P 06 46 32.2 -0.3
VYHS Vyhne 75.23 43 eP P 06 46 33.3 -0.1
VYHS e pP 06 46 45.9 -0.8
VYHS eS S 06 56 07.2 -1.8
VYHS pmax pmax
comp=Z,112nm,1.9s,mb5.5
VYHS MLR MLR
comp=Z,700nm,20.8s,MS4.9
VYHS Vyhne 75.23 43 eP P 06 46 33.3 -0.1
comp=Z,112nm,1.9s,mb5.5
VYHS e pP 06 46 45.9 -0.8
VYHS eS S 06 56 07.2 -1.8
VYHS eSS SS 07 00 49.1 -10
VYHS LR LR
comp=Z,700nm,20.8s,MS4.9
VYHS Vyhne 75.23 43 eP P 06 46 33.2 -0.2
VYHS epP pP 06 46 45.9 -0.8
VYHS eS S 06 56 07.2 -1.8
VYHS eSS SS 07 00 49.1 -10
BUM Brajici-Budva 75.25 49⇓iP P 06 46 33.8 +0.2
BUM Brajici-Budva 75.25 49⇓iP P 06 46 33.8 +0.2
UPM Unac-Piva 75.25 48⇓iP P 06 46 34.0 +0.4
UPM Unac-Piva 75.25 48 P P 06 46 34.0 +0.4
NKY Niksic 75.32 48⇓iP P 06 46 33.6 -0.4
NKY Niksic 75.32 48⇓iP P 06 46 33.7 -0.3
NKY Niksic 75.32 48⇓iP P 06 46 33.7 -0.4
BUD Budapest 75.34 44⇓eP P 06 46 37.4 +3.4
ULC Ulcinj 75.52 49⇓iP P 06 46 33.7 -1.5
ULC Ulcinj 75.52 49⇓iP P 06 46 33.8 -1.4
ULC Ulcinj 75.52 49⇓iP P 06 46 33.8 -1.4
TTG Podgorica 75.52 49⇓iP P 06 46 35.0 -0.2
TTG Podgorica 75.52 49⇓iP P 06 46 35.1 -0.1
TTG Podgorica 75.52 49⇓iP P 06 46 35.0 -0.1
PNL Peninsula 75.52 329 eP P 06 46 36.2 +1.4
comp=Z,68nm,1.3s,mb5.4
PLE Pljevlja 75.60 48⇓iP P 06 46 36.0 +0.4
PLE Pljevlja 75.60 48 P P 06 46 36.0 +0.4
PLE Pljevlja 75.60 48 P P 06 46 36.0 +0.4
BBLS Lazići 75.60 47 P P 06 46 36.3 +0.7
OJC Ojcow 75.88 41⇓iP P 06 46 35.4 -1.7
OJC e pP 06 46 47.2 -3.2
OJC eS S 06 56 16.0 -0.2
DAWY Dawson 75.89 334 eP P 06 46 37.9 +1.1
PSZ Piszkesteto 75.93 43 eP P 06 46 37.3 -0.1
PSZ pmax pmax
comp=Z,234nm,1.6s,mb5.9
PSZ MLR MLR
comp=Z,1µm,22.0s,MS5.2
PSZ Piszkesteto 75.93 43 eP P 06 46 37.3 -0.1
comp=Z,234nm,1.6s,mb5.9
PSZ LR LR
comp=Z,1µm,22.0s,MS5.2
IVA Berane 75.98 48⇓iP P 06 46 38.0 +0.2
IVA Berane 75.98 48⇓iP P 06 46 38.0 +0.2
KEK Kerkira 75.99 52 eP P 06 46 38.5 +0.6
KEK Kerkira 75.99 52 P P 06 46 37.7 -0.2
TIR Tirane 75.99 50 eP P 06 46 39.0 +1.1
TIR pmax pmax
comp=Z,444nm,2.1s,mb6.0
TIR MLR MLR
comp=Z,2µm,21.0s,MS5.3
TIR Tirane 75.99 50 eP P 06 46 39.0 +1.1
comp=Z,444nm,2.1s,mb6.0
TIR LR LR
comp=Z,2µm,21.0s,MS5.3
TIR Tirane 75.99 50 P P 06 46 38.6 +0.7
DIVS Divibare 76.03 47 P P 06 46 38.0 0.0
PVY Plav 76.04 49⇓iP P 06 46 38.7 +0.5
PVY Plav 76.04 49 P P 06 46 39.0 +0.8
NIE Niedzica 76.21 42 eP P 06 46 39.9 +0.9
NIE Niedzica 76.21 42 P P 06 46 40.1 +1.1
KECS Kecovo 76.32 43 eP P 06 46 40.1 +0.5
KECS e pP 06 46 53.1 +0.1
KECS pmax pmax
comp=Z,26nm,1.2s,mb5.0
KECS Kecovo 76.32 43 eP P 06 46 40.1 +0.5
comp=Z,26nm,1.2s,mb5.0
KECS e pP 06 46 53.1 +0.1
KECS Kecovo 76.32 43 eP P 06 46 40.1 +0.5
KECS epP pP 06 46 53.0 0.0
KBS Kingsbay 76.53 11 eP P 06 46 41.8 +1.5
KBS ePP PP 06 49 33.2 +0.8
KBS eS S 06 56 24.7 +2.3
KBS Kingsbay 76.53 11d iP P 06 46 41.2 +0.9
KBS Kingsbay 76.53 11 eP P 06 46 41.0 +0.7
comp=Z,129nm,1.4s,mb5.7
KBS LR LR
comp=Z,980nm,21.0s,MS5.1
GRUS Gruza 76.55 47 P P 06 46 41.8 +0.8
TRO Tromso 76.65 21 eP P 06 46 40.7 -0.3
TRO eS S 06 56 25.8 +1.8
TRO Tromso 76.65 21 eP P 06 46 40.7 -0.3
TRO e pP 06 46 56.0 +1.6
VLS Valsamata 76.67 53 eP P 06 46 41.5 -0.3
VLS Valsamata 76.67 53 P P 06 46 41.4 -0.4
WAR Warsaw 76.67 39 eP P 06 46 42.6 +1.1
WAR ePcP PcP 06 46 55.0 +2.2
WAR LMZ 07 18 47.2
comp=Z,2µm,20.9s
WAR Warsaw 76.67 39 eP P 06 46 42.6 +1.1
WAR e pP 06 46 55.0 +0.2
LKD2 Lefkada island 76.69 53 P P 06 46 42.1 +0.2
OHR Ohrid 76.70 50 iP P 06 46 42.6 +0.7
OHR Ohrid 76.70 50 P P 06 46 41.5 -0.4
EGAK Eagle 76.71 334 eP P 06 46 42.3 +0.8
comp=Z,308nm,1.4s,mb6.0
EGAK LR LR
comp=Z,4µm,19.0s,MS5.7
JAN Janina 76.80 52 eP P 06 46 44.0 +1.5
STHS Stebnicka Huta 76.82 42 eP P 06 46 43.6 +1.2
STHS e pP 06 46 56.7 +1.0
STHS pmax pmax
comp=Z,18nm,0.8s,mb5.0
STHS Stebnicka Huta 76.82 42 eP P 06 46 43.6 +1.2
comp=Z,18nm,0.8s,mb5.1
STHS e pP 06 46 56.7 +1.0
STHS Stebnicka Huta 76.82 42 eP P 06 46 43.6 +1.2
STHS epP pP 06 46 56.7 +1.0
NEST Nestorio 76.92 51 P P 06 46 44.0 +0.8
CRVS Cervenica-Dubn 76.97 42 eP P 06 46 43.9 +0.7
comp=Z,86nm,1.3s,mb5.5
CRVS e pP 06 46 57.3 +0.7
CRVS eS S 06 56 26.6 -1.6
CRVS LR LR
comp=Z,500nm,21.8s,MS4.8
CRVS Cervenica-Dubn 76.97 42 eP P 06 46 43.9 +0.7
CRVS epP pP 06 46 57.3 +0.7
CRVS eS S 06 56 26.6 -1.6
KRUS Krusevo 77.03 50 iP P 06 46 43.7 -0.1
BIA Bitola 77.10 50 P P 06 46 44.7 +0.5
BIA Bitola 77.10 50 iP P 06 46 44.3 +0.1
BZS Buzias 77.14 45 ⇓P P 06 46 44.8 +0.4
BZS Buzias 77.14 45⇓iP P 06 46 44.8 +0.5
SKO Skopje 77.15 49 iP P 06 46 45.1 +0.7
SKO Skopje 77.15 49 P P 06 46 45.1 +0.7
FNA Florina 77.15 50 P P 06 46 44.7 +0.2
SPITS Spitsbergen Ar 77.22 12 P P 06 46 45.2 +1.1
comp=Z,14nm,1.0s,mb4.8,baz=222,slow=1.1,SNR=7.1
SPITS pP pP 06 46 58.6 +1.1
comp=Z,80nm,1.1s,baz=353,slow=5.9,SNR=13
SPITS Spitsbergen Ar 77.22 12 P P 06 46 45.2 +1.0
SPITS *PP pP 06 46 58.6 +1.1
SPITS pmax pmax
comp=Z,14nm,1.0s
SPITS pmax pmax
comp=Z,80nm,1.1s
RLS Riolos of Patr 77.36 53 eP P 06 46 46.0 +0.3
BARS Barje 77.39 48 P P 06 46 46.4 +0.6
KZN Kozani 77.48 51 eP P 06 46 46.5 +0.2
KZN Kozani 77.48 51 P P 06 46 46.7 +0.4
UZH Uzhgorod 77.52 42⇑iP P 06 46 46.3 -0.1
UZH e pP 06 46 56.3 -3.4
UZH i pP 06 47 00.0 +0.3
UZH i 06 49 46.5
UZH e 06 51 26.1
UZH eS S 06 56 32.5 -1.7
UZH e 06 56 45.4
UZH e 06 57 15.3
UZH MLR MLR
comp=N,470nm,21.0s,MS4.9
UZH MLR MLR
comp=E,480nm,21.0s,MS4.9
UZH MLR MLR
comp=Z,300nm,21.0s,MS4.6
EVR Evrytania 77.58 52 eP P 06 46 49.5 +2.6
PYL PYLOS 77.66 54 eP P 06 46 47.5 +0.1
PYL PYLOS 77.66 54 P P 06 46 47.4 0.0
EFP Efpalio 77.69 53 eP P 06 46 48.5 +1.0
EFP Efpalio 77.69 53 P P 06 46 48.3 +0.8
TRPA Tarpa 77.70 43⇑iP P 06 46 47.5 +0.1
THL Klokotos Trika 77.70 52 eP P 06 46 48.0 +0.4
THL Klokotos Trika 77.70 52 P P 06 46 47.4 -0.2
MENT Mentasta 77.76 332 eP P 06 46 48.7 +1.3
KWP Kalwaria Pacla 77.77 41 eP P 06 46 48.7 +1.0
KWP ePcP PcP 06 47 01.7 +4.1
KWP LMZ 07 17 55.0
comp=Z,2µm,24.1s
KWP Kalwaria Pacla 77.77 41⇓eP P 06 46 48.7 +1.0
KWP e pP 06 47 01.7 +0.6
KWP Kalwaria Pacla 77.77 41 eP P 06 46 48.7 +1.0
comp=Z,434nm,1.0s,mb6.3
KWP LR LR
comp=Z,1µm,22.0s,MS5.3
KWP Kalwaria Pacla 77.77 41⇓iP P 06 46 48.5 +0.8
ITM Ithomi 77.78 54 eP P 06 46 48.5 +0.4
ITM Ithomi 77.78 54 P P 06 46 47.7 -0.4
DRGR 77.86 44 ⇑P P 06 46 48.7 +0.3
DRGR 77.86 44⇑iP P 06 46 48.7 +0.4
KALE Kalithea 77.87 53 P P 06 46 49.2 +0.6
SUW Suwalki 77.96 37 eP P 06 46 48.8 +0.1
SUW ePcP PcP 06 47 01.6 +3.3
SUW LMZ 07 18 31.6
comp=Z,3µm,22.0s
SUW Suwalki 77.96 37⇓eP P 06 46 48.8 +0.1
SUW e pP 06 47 01.6 -0.4
SUW Suwalki 77.96 37 eP P 06 46 48.4 -0.3
comp=Z,136nm,1.3s,mb5.7
GZR Gura Zlata 77.97 46 ⇓P P 06 46 49.5 +0.6
GZR Gura Zlata 77.97 46⇓iP P 06 46 49.5 +0.6
AGG Agios Georgios 77.98 52 eP P 06 46 50.0 +0.8
AGG Agios Georgios 77.98 52 P P 06 46 49.4 +0.2
VAY Valandovo 78.03 50 iP P 06 46 49.2 -0.1
VAY Valandovo 78.03 50 P P 06 46 49.0 -0.3
GUR Goura 78.06 53 eP P 06 46 50.5 +0.9
GUR Goura 78.06 53 P P 06 46 49.7 +0.1
VLX Vlachokerasia 78.13 54 eP P 06 46 51.5 +1.5
VLX Vlachokerasia 78.13 54 P P 06 46 51.1 +1.1
BMRM Bremner River 78.16 330 eP P 06 46 51.1 +1.5
comp=Z,105nm,0.9s,mb5.8
DSF Desfina 78.18 53 P P 06 46 50.2 0.0
THE Thessaloniki 78.37 51 P P 06 46 51.0 -0.2
KKB Krupnik 78.38 49 P P 06 46 51.8 +0.5
VTS Vitosha 78.43 49 ⇓P P 06 46 51.9 +0.3
VTS Vitosha 78.43 49 P P 06 46 51.8 +0.3
VTS Vitosha 78.43 49 P P 06 46 51.8 +0.3
VTS Vitosha 78.43 49⇓iP P 06 46 51.9 +0.4
HORT Hortiatis 78.47 51 P P 06 46 52.0 +0.2
LKR Lokris 78.53 53 eP P 06 46 52.5 +0.3
LKR Lokris 78.53 53 P P 06 46 52.1 -0.1
ATAL Atalanti 78.54 52 P P 06 46 52.2 -0.1
LTK Loutraki 78.55 53 eP P 06 46 52.5 +0.2
LTK Loutraki 78.55 53 P P 06 46 52.0 -0.3
LVV L'vov 78.62 41 eP P 06 46 52.0 -0.4
LVV e pP 06 47 04.8 -1.0
LVV e 06 49 51.4
LVV e 06 51 39.8
LVV eS S 06 56 42.6 -3.4
LVV e 06 57 13.8
LVV MLR MLR
comp=Z,500nm,18.0s,MS4.9
LVV MLR MLR
comp=E,600nm,19.0s,MS5.0
LVV MLR MLR
comp=N,100nm,17.0s,MS5.0
VLI Veliai 78.62 55 eP P 06 46 53.5 +0.8
XOR Xorichti 78.63 52 P P 06 46 52.1 -0.6
SOH Sokhos 78.65 50 eP P 06 46 53.5 +0.7
SOH Sokhos 78.65 50 P P 06 46 53.3 +0.5
DIV Divide 78.72 330 eP P 06 46 54.0 +1.2
comp=N,47nm,1.2s,mb5.3
PLG Polygyros 78.75 51 eP P 06 46 54.0 +0.6
PLG Polygyros 78.75 51 P P 06 46 53.7 +0.3
DID Didima 78.80 54 eP P 06 46 53.5 -0.2
DID Didima 78.80 54 P P 06 46 53.3 -0.4
MMB Musomiste 78.88 50 P P 06 46 53.9 -0.1
ARCES ARCESS Array B 78.95 21 P P 06 46 54.2 +0.4
comp=N,26nm,0.8s,mb5.2,baz=282,slow=5.7,SNR=37
ARCES pP pP 06 47 07.1 -0.1
comp=N,72nm,0.9s,baz=284,slow=4.9,SNR=22
ARCES ARCESS Array B 78.95 21 P P 06 46 54.3 +0.5
ARCES *PP pP 06 47 07.1 -0.1
ARCES pmax pmax
comp=Z,26nm,0.8s
ARCES pmax pmax
comp=Z,72nm,0.9s
ARE0 ARCESS Array S 78.95 21 eP P 06 46 54.0 +0.2
PAIG Paliouri 78.96 51 P P 06 46 54.5 0.0
NVR Nevrokopi 79.00 50 eP P 06 46 55.5 +0.8
MID Middleton Isla 79.05 329 eP P 06 46 55.2 +0.6
MID pmax pmax
comp=Z,17nm,0.7s,mb5.1
MID Middleton Isla 79.05 329 eP P 06 46 55.2 +0.6
comp=Z,17nm,0.7s,mb5.1
ATH Athens Observa 79.14 53 eP P 06 46 56.5 +0.9
OUR Ouranopolis 79.16 51 P P 06 46 55.6 0.0
AOS Alonnisos 79.17 52 P P 06 46 55.5 -0.2
ATHU Athens Univers 79.20 53 P P 06 46 56.1 +0.2
VLY Voula,Athens 79.22 53 eP P 06 46 56.5 +0.5
PTL Penteli 79.25 53 eP P 06 46 57.0 +0.8
FINES FINESS Array B 79.32 29 P P 06 46 55.9 -0.1
comp=Z,19nm,0.7s,mb5.1,baz=264,slow=3.5,SNR=45
FINES pP pP 06 47 08.6 -0.8
comp=Z,82nm,0.9s,baz=270,slow=3.2,SNR=26
FINES LR LR 07 18 08.2
comp=Z,639nm,21.7s,MS4.9,baz=280,slow=33
FINES FINESS Array B 79.32 29 P P 06 46 55.9 -0.1
FINES *PP pP 06 47 08.6 -0.8
FINES pmax pmax
comp=Z,19nm,0.7s
FINES pmax pmax
comp=Z,82nm,0.9s
FINES FINESS Array B 79.32 29 P P 06 46 55.9 -0.1
FINES pP pP 06 47 08.6 -0.8
FINES LR LR 07 18 08.2
KAF Kangasniemi 79.40 29 eP P 06 46 55.7 -0.8
KAF pmax pmax
comp=Z,19nm,0.8s,mb5.1
KAF Kangasniemi 79.40 29 ep P 06 46 55.7 -0.8
comp=Z,19nm,0.8s,mb5.1
KEV Kevo 79.47 21 eP P 06 46 56.9 +0.2
KEV e*PP pP 06 47 09.9 -0.2
KEV pmax pmax
comp=Z,124nm,1.3s,mb5.7
KEV MLR MLR
comp=Z,597nm,22.0s,MS4.9
KEV Kevo 79.47 21 eP P 06 46 56.9 +0.2
comp=Z,124nm,1.3s,mb5.7
KEV epP pP 06 47 09.9 -0.2
KEV LR LR
comp=Z,597nm,22.0s,MS4.9
BUR08 Bucovina Ar. S 79.51 43 eP P 06 46 58.3 +0.9
KAVA Kavala 79.51 50 P P 06 46 56.6 -0.9
BUR01 Bucovina Ar. S 79.53 43 P P 06 46 58.7 +1.2
BURAR Bucovina Array 79.53 43⇑iP P 06 46 58.6 +1.2
KARN Karanos 79.53 56 eP P 06 46 57.5 -0.2
KARN Karanos 79.53 56 P P 06 46 57.3 -0.4
VOIR 79.56 46 ⇑P P 06 46 58.1 +0.4
VOIR 79.56 46⇑iP P 06 46 58.1 +0.4
PLD Plovdiv 79.57 49 P P 06 46 58.0 +0.2
PLD Plovdiv 79.57 49 P P 06 46 58.2 +0.4
COLA College 79.57 334 eP P 06 46 57.9 +0.6
COLA pmax pmax
comp=Z,103nm,1.3s,mb5.6
COLA MLR MLR
comp=Z,3µm,20.0s,MS5.6
COLA College 79.57 334 eP P 06 46 57.9 +0.5
comp=Z,104nm,1.3s,mb5.6
COLA LR LR
comp=Z,3µm,20.0s,MS5.6
ISAL Salakas 79.61 35 eP P 06 46 58.6 +0.9
ISAL AMB AMB 06 47 00.3
comp=Z,26nm,1.2s,mb5.0
RZN Rozhen 79.61 49 P P 06 46 58.2 +0.2
IZAR Zarasai 79.67 35 eP P 06 46 59.0 +0.9
IZAR AMB AMB 06 46 59.8
comp=Z,27nm,0.9s,mb5.2
IIGN Ignalina 79.67 35 eP P 06 46 59.0 +1.0
IIGN AMB AMB 06 46 59.9
comp=Z,33nm,1.0s,mb5.2
VAM Vamos 79.76 56 eP P 06 47 00.5 +1.5
VSU Vasula 79.78 32d iP P 06 46 58.1 -0.5
VSU pmax pmax
comp=Z,126nm,1.0s,mb5.8
VSU Vasula 79.78 32 iP P 06 46 58.1 -0.5
IDID Didziasalis 79.97 35 eP P 06 47 00.7 +1.0
IDID AMB AMB 06 47 02.3
comp=Z,46nm,0.9s,mb5.4
NACGM Naroch 80.02 36 eP P 06 46 57.0 -3.0
RKT Rikitea 80.08 244 eS S 06 57 01.5 -0.9
comp=Z,445nm,40.8s
RKT eLR LR 07 11 59.2
comp=Z,2µm,25.0s
MCK McKinley 80.10 333 eP P 06 47 01.1 +0.9
MCK pmax pmax
comp=Z,86nm,1.2s,mb5.6
MCK McKinley 80.10 333 eP P 06 47 01.1 +0.9
comp=Z,86nm,1.2s,mb5.6
LIA Limnos Island 80.12 51 eP P 06 47 01.5 +0.7
LIA Limnos Island 80.12 51 P P 06 47 00.9 +0.1
MLR Muntele Rosu 80.19 45 P P 06 47 01.4 +0.3
comp=Z,61nm,0.7s,mb5.6,baz=295,slow=2.9,SNR=88
MLR pP pP 06 47 14.2 -0.3
comp=Z,164nm,0.9s,baz=348,slow=3.4,SNR=22
MLR Muntele Rosu 80.19 45 ⇓P P 06 47 01.4 +0.3
MLR Muntele Rosu 80.19 45⇓iP P 06 47 01.4 +0.3
SIVA Sivas 80.29 56 eP P 06 47 07.5 +5.6
PMR Palmer 80.32 331 eP P 06 47 02.4 +1.0
PMR pmax pmax
comp=Z,53nm,1.2s,mb5.3
PMR Palmer 80.32 331 eP P 06 47 02.4 +0.9
comp=Z,53nm,1.2s,mb5.3
IDI Anoyia 80.33 56 P P 06 47 02.8 +0.7
comp=Z,100nm,0.8s,mb5.8,baz=297,slow=6.2,SNR=39
IDI pP pP 06 47 15.3 -0.1
comp=Z,164nm,0.9s,baz=319,slow=6.6,SNR=12
IDI Anoyia 80.33 56 eP P 06 47 02.5 +0.4
COLD Coldfoot 80.41 337 eP P 06 47 03.1 +1.3
comp=Z,125nm,1.4s,mb5.7
TESR 80.59 44 P P 06 47 03.4 +0.2
GADA Gvkgeada 80.64 51 eP P 06 47 03.5 -0.1
RC01 Rabbit Creek A 80.65 330 eP P 06 47 02.9 -0.3
comp=Z,196nm,1.6s,mb5.8
MNK Minsk 80.66 36⇑iP P 06 47 02.0 -1.4
MNK e pP 06 47 15.0 -1.8
MNK e 06 50 04.0
MNK eS S 06 57 08.0 +0.6
MNK e 06 58 00.0
MNK pmax pmax
comp=Z,2µm,2.0s,mb6.8
MNK pmax pmax
comp=Z,250nm,1.5s,mb5.9
MNK pmax pmax
comp=E,620nm,2.0s
MNK MLR MLR
comp=Z,5µm,14.0s,MS6.0
MNK MLR MLR
comp=E,2µm,12.0s
APE Apeiranthos 80.66 54 eP P 06 47 03.5 -0.3
ALN Alexandroupoli 80.68 50 eP P 06 47 04.0 +0.2
ALN Alexandroupoli 80.68 50 P P 06 47 03.7 -0.1
MICGM Minsk 80.69 36⇑iP P 06 47 02.0 -1.6
TRF Thorofare Moun 80.72 333 eP P 06 47 05.0 +1.5
comp=E,130nm,0.9s,mb5.9
LAST Lasithi 80.82 56 eP P 06 47 05.0 +0.3
GRER 80.92 45 P P 06 47 05.4 +0.4
NPS Neapolis 80.92 56 eP P 06 47 05.5 +0.3
JMB Yambol 80.92 48 P P 06 47 05.3 +0.2
JMB Yambol 80.92 48 P P 06 47 05.1 0.0
CHOS Chios island 80.94 53 eP P 06 47 05.5 +0.2
CHOS Chios island 80.94 53 P P 06 47 05.1 -0.2
BPAW Bear Paw Mtn. 80.98 334 eP P 06 47 05.4 +0.5
comp=E,200nm,1.3s,mb5.9
EZN Ezine 81.00 51 eP P 06 47 04.9 -0.7
PRK Paraskevi 81.02 52 P P 06 47 04.3 -1.4
ERIK Erikli-Kesan 81.05 50 eP P 06 47 05.5 -0.3
ZKR Zakros 81.43 56 eP P 06 47 08.5 +0.6
SMG Samos 81.63 53 eP P 06 47 08.5 -0.4
PPLA Purkeypile 81.63 332 eP P 06 47 08.4 0.0
comp=E,431nm,1.6s,mb6.1
JOF Joensuu 81.66 28 eP P 06 47 08.0 -0.5
JOF pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
JOF Joensuu 81.66 28 ep P 06 47 08.0 -0.5
comp=Z,1.0nm,0.4s,mb4.1
LEOM Leova 81.69 44 P P 06 47 08.3 -0.8
BLCB Balcova 81.71 53 P P 06 47 09.2 -0.1
KIEV Kiev 81.86 40 eP P 06 47 09.1 -0.8
KIEV pmax pmax
comp=Z,88nm,1.3s,mb5.5
KIEV MLR MLR
comp=Z,2µm,22.0s,MS5.5
KIEV Kiev 81.86 40 eP P 06 47 09.1 -0.8
comp=Z,88nm,1.3s,mb5.5
KIEV LR LR
comp=Z,2µm,22.0s,MS5.5
AKASG Malin Array Be 81.87 40 P P 06 47 09.2 -0.8
comp=Z,16nm,0.8s,mb5.0,baz=267,slow=4.6,SNR=12
AKASG pP pP 06 47 21.8 -1.5
comp=Z,46nm,0.9s,baz=266,slow=4.7,SNR=18
AKASG LR LR 07 20 26.3
comp=Z,2µm,21.8s,MS5.5,baz=300,slow=33
AKASG Malin Array Be 81.87 40 P P 06 47 09.2 -0.7
AKASG *PP pP 06 47 21.8 -1.6
AKASG pmax pmax
comp=Z,16nm,0.8s
AKASG pmax pmax
comp=Z,46nm,0.9s
AKBB Malin Array Si 81.87 40 eP P 06 47 09.0 -0.9
AKBB e*PP pP 06 47 22.5 -0.9
PSN Preselentsi 81.96 47 P P 06 47 09.5 -1.0
APA Apatity 81.97 23⇓iP P 06 47 10.8 +0.7
APA i S S 06 57 24.0 +3.5
APA i SS SS 07 02 42.0 +2.6
APA pmax pmax
comp=Z,28nm,1.2s,mb5.1
APA MLR MLR
comp=Z,600nm,19.0s,MS5.0
GONE Gonen-Balikesi 82.01 51 eP P 06 47 09.5 -1.4
KIS Kishinev 82.02 44 iP P 06 47 08.0 -2.8
comp=Z,300nm,2.0s,mb5.9
KIS Kishinev 82.02 44 ePP PP 06 50 13.0 -5.8
KIS eS S 06 57 18.0 -3.8
KIS eL 07 16 40.0
KIS LRM 07 21 42.0
comp=Z,500nm,20.0s
KIS Kishinev 82.02 44κ iP P 06 47 08.0 -2.8
KIS i pP 06 47 22.0 -2.2
KIS e 06 50 13.0
KIS eS S 06 57 18.0 -3.8
TIRR Tirgusor 82.03 46 ⇓P P 06 47 11.1 +0.2
TIRR Tirgusor 82.03 46 eP P 06 47 10.1 -0.8
comp=Z,86nm,1.3s,mb5.5
TIRR Tirgusor 82.03 46⇓iP P 06 47 11.1 +0.2
KARP Karpathos 82.14 55 eP P 06 47 11.5 -0.2
RSO Redoubt South 82.19 330 eP P 06 47 13.0 +1.7
BALB Balikesir 82.21 51 eP P 06 47 11.3 -0.6
TSUM Tsumeb 82.30 111 PFAKE 06 47 20.0 +7.2
TSUM LR LR
comp=Z,2µm,20.0s,MS5.4
DAT Datca 82.33 54 eP P 06 47 10.6 -2.1
LVZ Lovozero 82.39 22ceP P 06 47 13.2 +0.9
LVZ pmax pmax
comp=Z,37nm,1.7s,mb5.0
KDAK Kodiak Island 82.44 327 P P 06 47 14.2 +1.5
comp=Z,213nm,0.7s,mb6.2,SNR=6.4
KDAK Kodiak Island 82.44 327ceP P 06 47 14.3 +1.6
KDAK Kodiak Island 82.44 327⇑eP P 06 47 14.3 +1.6
KDAK LR LR
comp=Z,4µm,20.0s,MS5.8
ARG Arkhangelos 82.84 55 P P 06 47 14.5 -0.8
ARMT Armutlu 82.84 50 eP P 06 47 13.5 -1.7
OHAK Old Harbor 82.89 327 eP P 06 47 16.2 +1.1
comp=Z,137nm,1.4s,mb5.8

ISK Istanbul-Kandi 82.92 50 *e*P **P 06 47 14.9 -0.8**
GEMT Gemlik 83.11 50 *e*P **P 06 47 15.6 -1.0**
TTA Tatalina 83.36 333 *e*P **P 06 47 18.3 +0.9**
TTA pmax pmax
comp=Z,140nm,1.3s,mb5.8
TTA Tatalina 83.36 333 *e*P **P 06 47 18.3 +0.9**
comp=Z,140nm,1.3s,mb5.8
ADVT Abdulvahap 83.52 50 *e*P **P 06 47 18.3 -0.4**
CAVI Cavuskoy 83.63 50 *e*P **P 06 47 18.4 -0.9**
GLHS Glhisar (BURDU 83.80 53 *e*P **P 06 47 18.8 -1.4**
ALT Altintas 84.00 52 *e*P **P 06 47 21.7 +0.5**
GUL Gulveren 84.11 50 *e*P **P 06 47 20.9 -0.9**
ELL Elmali 84.18 54 *e*P **P 06 47 22.5 +0.3**
SHUT Suhut-Afyon 84.42 52 *e*P **P 06 47 23.2 -0.1**
ISP Isparta 84.51 53 *e*P **P 06 47 23.2 -0.6**
ISP Isparta 84.51 53 PFAKE 06 47 40.0 +16
ISP LR LR
comp=Z,733nm,21.0s,MS5.0
ISP Isparta 84.51 53 P **P 06 47 23.8 0.0**
MDU Mudurnu 84.63 50 *e*P **P 06 47 24.0 -0.4**
KOMG Komaggas 84.84 121 *e*P **P 06 47 24.9 -0.6**
KOMG AMS AMS 07 21 39.8
comp=Z,2μm,21.7s,MS5.3
SUTC Sutluce-Ispart 84.94 53 *e*P **P 06 47 23.5 -2.5**
SVRH Sivrihisar-ESK 85.03 51 *e*P **P 06 47 26.3 -0.1**
KIZT Kizilcal 85.39 51 *e*P **P 06 47 28.2 -0.1**
OBN Obninsk 85.58 35 P **P 06 47 29.4 +0.6**
comp=Z,1μm,0.9s,SNR=9.2
OBN Obninsk 85.58 35 *de*P **P 06 47 28.7 -0.1**
OBN *e**PP pP 06 47 41.9 -0.4
OBN *i* S S 06 57 56.7 -0.5
OBN *e*SS SS 07 03 41.8 +8.6
OBN pmax pmax
comp=Z,128nm,1.1s,mb6.1
OBN MLR MLR
comp=Z,2μm,21.0s,MS5.4
OBN Obninsk 85.58 35 *e*P **P 06 47 28.7 -0.1**
comp=Z,215nm,1.0s,mb6.3
OBN *e*pP pP 06 47 41.7 -0.6
OBN LR LR
comp=Z,2μm,20.0s,MS5.4
LADK Ladik-KONYA 85.88 52 *e*P **P 06 47 30.0 -0.7**
LOD Lodumlu 85.90 50 *e*P **P 06 47 30.8 0.0**
KONT Konya--Tatoy 85.92 52 *e*P **P 06 47 30.3 -0.6**
SIM Simferopol' 85.98 45 *e*P **P 06 47 33.3 +2.3**
SIM *i* pP 06 47 46.0 +1.5
SIM *e*S S 06 58 07.3 +5.7
SIM pmax pmax
comp=Z,35nm,0.7s,mb5.7
SIM MLR MLR
comp=Z,760nm,18.7s,MS5.1
MOS Moscow 86.03 34 *e*P **P 06 47 30.9 -0.1**
MOS *i* pP 06 47 43.7 -0.9
MOS *e* 06 50 50.3
MOS *i* S S 06 58 02.7 +1.0
MOS pmax pmax
comp=Z,169nm,1.6s,mb6.0
MOS pmax pmax
comp=Z,900nm,3.0s
MOS MLR MLR
comp=E,2μm,18.0s
MOS MLR MLR
comp=E,2μm,19.0s
MOS Moscow 86.03 34 *e*P **P 06 47 31.3 +0.3**
HDMB Hadim 86.19 53 *e*P **P 06 47 31.9 -0.4**
CANT Cankiri 86.41 50 *e*P **P 06 47 33.1 -0.1**
BR131 Keskin Array S 86.59 50 *e*P **P 06 47 34.1 0.0**
comp=E,34nm,0.9s,mb5.6
BR131 *e*pP pP 06 47 47.4 -0.2
BR131 LR LR
comp=Z,486nm,20.0s,MS4.9
BRTR Keskin Array B 86.59 50 P **P 06 47 33.8 -0.3**
comp=Z,13nm,0.9s,mb5.2,baz=264,slow=3.7,SNR=44
BRTR pP pP 06 47 47.1 -0.6
comp=Z,48nm,1.0s,baz=299,slow=2.6,SNR=23
BRTR Keskin Array B 86.59 50 P **P 06 47 33.8 -0.3**
BRTR *PP pP 06 47 47.1 -0.6
BRTR pmax pmax
comp=Z,13nm,0.9s
BRTR pmax pmax
comp=Z,48nm,1.0s
SULT Sultanhani-AKS 86.78 52 *e*P **P 06 47 34.7 -0.4**
LEF Lefka 86.84 55 *e*P **P 06 47 34.7 -0.7**
SDPT Sand Point 87.18 326 *e*P **P 06 47 36.6 0.0**
comp=Z,205nm,1.4s,mb6.2
CSS Prodhromos 87.22 55 *e*P **P 06 47 36.1 -1.2**
comp=Z,119nm,1.0s,mb6.1
CSS *e*pP pP 06 47 50.6 -0.3
CSS LR LR
comp=Z,2μm,22.0s,MS5.4
CSS Prodhromos 87.22 55 P **P 06 47 36.6 -0.7**
UPI Upington 87.69 119 ⇓*i*P **P 06 47 39.3 -0.3**
TNA Tin City 87.71 337 *e*P **P 06 47 41.0 +2.0**
comp=Z,332nm,1.3s,mb6.4
EREN Erenkoy 87.79 54 *e*P **P 06 47 40.3 +0.3**
MERS Mersin 87.81 53 *e*P **P 06 47 40.2 +0.1**
VOR Voronezh 87.86 38 P **P 06 47 39.0 -1.0**
VOR pmax pmax
comp=Z,160nm,2.0s,mb5.9
VSR Storozhevoye 87.97 38 *e*P **P 06 47 39.9 -0.6**
VSR *e**SP sP 06 47 53.2 -6.0
VSR *e* 06 51 03.1
VSR *e*S S 06 58 19.3 -1.2
VSR pmax pmax
comp=Z,80nm,1.4s,mb5.8
VSR pmax pmax
comp=N,10.0nm,1.2s
VSR pmax pmax
comp=E,60nm,1.3s
VSR pmax pmax
comp=Z,200nm,3.4s
VSR pmax pmax
comp=N,130nm,4.5s
VSR pmax pmax
comp=E,100nm,4.8s
VSR smax
comp=N,110nm,6.2s
VSR smax
comp=Z,10.0nm,7.9s
VSR smax
comp=E,10.0nm,7.4s
VORD Divnogorie 88.11 39 *e*P **P 06 47 40.9 -0.3**
VORD *e**SP sP 06 47 53.5 -6.3
VORD pmax pmax
comp=Z,1.0nm,1.1s
VORD pmax pmax
comp=N,1.0nm,0.5s
VORD pmax pmax
comp=E,1.0nm,0.5s
VNA1 Neumayer--Stat 88.15 165 *e*P **P 06 47 40.7 -0.1**
VNA1 *e* 06 51 13.7
KARA Karaisali 88.15 53 *e*P **P 06 47 41.3 -0.4**
SUR Sutherland 88.23 123 PFAKE 06 47 50.0 +7.9
SUR LR LR
comp=Z,2μm,19.0s,MS5.5
SUR Sutherland 88.23 123 *e*P **P 06 47 39.6 -2.5**
SUR AMS AMS 07 27 03.1
comp=Z,1μm,18.9s,MS5.3
ANN Anapa 88.32 45 *d*iP **P 06 47 41.1 -1.2**
ANN *e* 06 51 13.6
ANN *e*S SKSac 06 58 05.9 -1.8
ANN *e*SS SS 07 04 11.1 -2.8
ANN pmax pmax
comp=Z,100nm,1.3s,mb5.9
ANN MLR MLR
comp=Z,1μm,22.0s,MS5.2
KOZT Kozan 88.71 52 *e*P **P 06 47 43.8 -0.5**
CEYT Ceyhan 88.75 53 *e*P **P 06 47 44.3 -0.2**
SVSK Karacayir 89.08 50 *e*P **P 06 47 46.0 -0.1**
SARI SarD1z-Kayseri 89.13 51 *e*P **P 06 47 46.1 -0.2**
PKA Prieska 89.26 120 ⇑*i*P **P 06 47 46.8 -0.3**
PKA AMS AMS 07 25 08.1
comp=Z,472nm,20.7s,MS4.9
MMAI Mount Meron Ar 89.29 57 P **P 06 47 48.8 +1.6**
comp=Z,17nm,0.8s,mb5.4,baz=328,slow=3.0,SNR=15
MMAI pP pP 06 48 01.7 +1.0
comp=Z,63nm,1.0s,baz=316,slow=4.7,SNR=14
BHL Bhannes 89.31 56 *e*P **P 06 47 47.8 +0.6**
HWQ Hawqa 89.47 55 *e*P **P 06 47 48.4 +0.4**
KMRS Kahramanmaras 89.54 52 *e*P **P 06 47 46.7 -1.5**
EIL Elat 89.59 60 P **P 06 47 49.4 +0.8**
comp=Z,21nm,1.1s,mb5.4,baz=335,slow=1.5,SNR=15
EIL pP pP 06 48 03.0 +0.8
comp=Z,58nm,1.1s,baz=304,slow=2.1,SNR=11

GAMB Gambell 89.89 336 *e*P **P 06 47 50.9 +1.6**
comp=Z,66nm,1.2s,mb5.8
SOC Sochi 90.20 46 *c i*P **P 06 47 50.2 -1.0**
SOC *e**PP pP 06 48 00.2 -4.6
SOC *e**SP sP 06 48 04.4 -5.5
SOC *e* 06 51 20.9
SOC *e*S SKSac 06 58 17.0 -1.8
SOC *e**SS S 06 58 40.3 -1.5
SOC *e*SS SS 07 04 47.9 +6.6
SOC *e*SSS 07 08 20.0
SOC pmax pmax
comp=Z,58nm,1.0s,mb5.9
SOC MLR MLR
comp=Z,767nm,22.0s,MS5.1
ASF Jabal al Asfar 90.70 57 P **P 06 47 55.4 +1.6**
comp=Z,12nm,0.9s,mb5.2,baz=145,slow=3.0,SNR=15
ASF pP pP 06 48 08.1 +0.8
comp=Z,42nm,1.1s,baz=126,slow=0.7,SNR=16
ASF Jabal al Asfar 90.70 57 P **P 06 47 55.4 +1.6**
ASF *PP pP 06 48 08.1 +0.7
ASF pmax pmax
comp=Z,13nm,0.9s
ASF pmax pmax
comp=Z,42nm,1.1s
LBTB Lobatse 90.80 115 *e*P **P 06 47 54.6 +0.3**
LBTB *e**PP pP 06 48 07.9 0.0
LBTB pmax pmax
comp=Z,79nm,1.3s,mb5.9
LBTB MLR MLR
comp=Z,2μm,20.0s,MS5.5
LBTB Lobatse 90.80 115 *e*P **P 06 47 54.6 +0.3**
comp=Z,79nm,1.3s,mb5.9
LBTB *e*pP pP 06 48 07.9 0.0
LBTB LR LR
comp=Z,2μm,20.0s,MS5.5
LBTB Lobatse 90.80 115 ⇑*i*P **P 06 47 54.5 +0.2**
LBTB AMS AMS 07 25 54.6
comp=Z,1μm,20.5s,MS5.4
SWZ Schweizer 90.98 117 *e*P **P 06 47 55.2 +0.1**
SWZ AML AML 07 27 38.4
comp=Z,961nm,19.9s
URFA Urfa 91.04 52 *e*P **P 06 47 55.7 +0.4**
PTK Pertek 91.13 50 *e*P **P 06 47 55.8 +0.2**
SVRC Sivrice-ELAZID 91.19 51 *e*P **P 06 47 56.5 +0.6**
BOSA Boshof 91.19 119 P **P 06 47 55.6 -0.4**
comp=Z,51nm,0.9s,mb5.9,baz=278,slow=4.6,SNR=50
BOSA pP pP 06 48 08.9 -0.8
comp=Z,38nm,0.9s,baz=302,slow=4.8,SNR=8.4
BOSA LR LR 07 24 58.7
comp=Z,1μm,19.9s,MS5.3,baz=278,slow=33
BOSA Boshof 91.19 119 P **P 06 47 55.6 -0.5**
BOSA *PP pP 06 48 08.9 -0.8
BOSA pmax pmax
comp=Z,51nm,0.9s,mb5.8
BOSA pmax pmax
comp=Z,38nm,0.9s,mb5.7
BOSA Boshof 91.19 119 *e*P **P 06 47 55.9 -0.2**
comp=Z,56nm,0.9s,mb5.9
BOSA LR LR
comp=Z,1μm,20.0s,MS5.4
BOSA Boshof 91.19 119 *e*P **P 06 47 55.7 -0.3**
BOSA AMS AMS 07 24 58.8
comp=Z,1μm,20.3s,MS5.2
POHA Pohakuloa 91.24 290 PFAKE 06 48 10.0 +14
POHA LR LR
comp=Z,1μm,19.0s,MS5.4
LSZ Lusaka 91.41 105 *e*P **P 06 47 57.3 0.0**
LSZ pmax pmax
comp=Z,95nm,1.3s,mb6.0
LSZ MLR MLR
comp=Z,2μm,22.0s,MS5.4
LSZ Lusaka 91.41 105 *e*P **P 06 47 57.3 0.0**
comp=Z,95nm,1.3s,mb6.0
LSZ LR LR
comp=Z,2μm,22.0s,MS5.4
LSZ Lusaka 91.41 105 *e*P **P 06 47 58.2 +0.9**
HVD Gariep Dam 91.78 121 *e*P **P 06 47 59.1 +0.4**
HVD AMS AMS 07 27 46.1
comp=Z,1μm,20.5s,MS5.4
GOF Gofitskoye 92.10 44 *e*P **P 06 48 07.4 +7.4**
GOF pmax pmax
comp=Z,50nm,1.2s,mb5.7
KIV Kislovodsk 92.18 45 *e*P **P 06 48 00.8 +0.4**
KIV *e* 06 58 30.6
KIV pmax pmax
comp=Z,18nm,1.1s,mb5.3
KIV pmax pmax
comp=Z,92nm,3.6s
KIV MLR MLR
comp=Z,613nm,19.0s,MS5.1
KIV Kislovodsk 92.18 45 *e*P **P 06 48 00.8 +0.4**
KIV LR LR
comp=Z,779nm,22.0s,MS5.1
SOE Somerset East 92.23 123 *e*P **P 06 48 00.5 -0.3**
SOE AMS AMS 07 23 26.4
comp=Z,16μm,20.4s,MS6.5
PPT Papeete 92.23 253 *e*LR LR 07 17 42.7
comp=Z,3μm,22.2s
PPT Papeete 92.23 253 LR LR 07 23 42.0
comp=Z,2μm,21.6s,MS5.4,baz=77,slow=32
PAE Paea 92.25 253 *e*P **P 06 48 03.4 +2.2**
comp=Z,19nm,1.3s,mb5.2
PAE Paea 92.25 253 *e*P **P 06 48 03.4 +2.2**
PAE pmax pmax
comp=Z,19nm,1.3s,mb5.3
PRYS Parys 92.71 117 ⇑*i*P **P 06 48 03.3 +0.2**
PRYS AMS AMS 07 28 49.8
comp=Z,1μm,20.0s,MS5.3
KLOF Kloof 92.83 116 *e*P **P 06 48 10.8 +7.1**
KLOF AMS AMS 07 27 32.1
comp=Z,1μm,21.3s,MS5.3
ONI Oni 93.11 46 P **P 06 48 05.0 +0.3**
GRM Grahamstown 93.12 123 *e*P **P 06 48 03.3 -1.5**
GRM AMS AMS 07 28 42.8
comp=Z,4μm,18.4s,MS5.9
TBI Tubuai 93.13 247 *e*S S 06 59 06.9 -2.0
comp=Z,457nm,26.5s
TBI *e*LR LR 07 17 59.9
comp=Z,1μm,22.2s
SEK Senekal 93.19 118 *e*P **P 06 48 05.7 +0.4**
SEK AML AML 07 23 31.5
comp=Z,945nm,23.0s
SLR Silverton 93.32 115 *e*P **P 06 48 06.3 +0.3**
SLR AMS AMS 07 28 01.9
comp=Z,2μm,20.5s,MS5.6
ZEI Tsey 93.37 46 *e*P **P 06 48 06.1 +0.2**
ZEI *e* pP 06 48 18.8 -0.7
ZEI pmax pmax
comp=Z,6.0nm,0.4s,mb5.4
ERPM east rand prop 93.39 116 *e*P **P 06 48 07.1 +0.9**
ERPM AMS AMS 07 27 36.0
comp=Z,1μm,21.6s,MS5.4
MAIT Maitri 93.97 162 *e*P **P 06 48 07.7 -0.2**
MAIT *e* pP 06 48 19.1 -2.4
NVL N'lazarevskaya 94.00 162 ⇑*i*P **P 06 48 05.0 -3.0**
NVL *e**PP pP 06 48 20.0 -1.6
NVL *e* 07 05 39.6
NVL pmax pmax
comp=Z,46nm,1.2s,mb5.8
SOKR Solikamsk 94.33 27 *d i*P **P 06 48 09.7 -0.2**
SOKR SS SS 07 05 53.9 +15
SOKR pmax pmax
comp=Z,10.0nm,1.3s,mb5.1
SOKR MLR MLR
comp=Z,960nm,21.0s,MS5.2
MSNA Messina 94.33 112 *e*P **P 06 48 10.7 0.0**
MSNA AMS AMS 07 25 06.2
comp=Z,2μm,22.2s,MS5.4
GNI Garni 94.76 48 P **P 06 48 12.3 0.0**
comp=Z,3.5nm,0.4s,mb5.1,baz=8.3,slow=15,SNR=7.0
GNI pP pP 06 48 25.8 -0.2
comp=Z,18nm,0.7s,baz=338,slow=7.4,SNR=3.9
GNI Garni 94.76 48 *de*P **P 06 48 12.2 -0.1**
GNI pmax pmax
comp=Z,17nm,1.1s
GNI Garni 94.76 48 *e*P **P 06 48 13.3 +1.0**
comp=Z,49nm,1.1s,mb5.8
GNI LR LR
comp=Z,409nm,22.0s,MS4.8
BILL Bilibino 95.04 344 *de*P **P 06 48 13.1 +0.1**
BILL *e**PP pP 06 48 27.2 +0.6
BILL *e* 06 52 08.4
BILL *i* S SKSac 06 58 50.3 +5.5
BILL *e*PS PS 07 00 50.7 +4.5
BILL *e*SS SS 07 05 46.6 -2.5

BILL pmax pmax
comp=Z,21nm,1.2s,mb5.4
BILL MLR MLR
comp=Z,3μm,23.0s,MS5.7
BILL Bilibino 95.04 344 *e*P **P 06 48 13.3 +0.3**
comp=Z,88nm,1.3s,mb6.0
BILL *e*pP pP 06 48 27.1 +0.5
BILL LR LR
comp=Z,3μm,21.0s,MS5.7
MOPA Mopani 95.77 113 *e*P **P 06 48 17.9 +0.7**
MOPA AMS AMS 07 25 52.5
comp=Z,1μm,21.2s,MS5.4
MAK Makhachkala 95.82 45 *e*P **P 06 48 15.1 -2.0**
MAK *e* 06 52 06.1
MAK *e*PPP 06 54 17.8
MAK *i* S SKSac 06 58 49.7 -0.2
MAK *i* 06 59 35.1
MAK *e*SS SS 07 06 05.7 +4.0
MAK pmax pmax
comp=Z,25nm,0.3s,mb6.1
MAK MLR MLR
comp=Z,1μm,22.0s,MS5.4
XMAS Kiritimati 96.49 273 PFAKE 06 48 30.0 +9.2
XMAS LR LR
comp=Z,2μm,21.0s,MS5.5
ARU Arti 96.69 29 *d i*P **P 06 48 22.3 +1.6**
ARU 06 52 13.1
ARU PPP 06 54 16.6
ARU S SKSac 06 58 56.4 +2.5
ARU SP PS 07 01 11.3 +6.7
ARU SS SS 07 06 21.2 +8.1
ARU pmax pmax
comp=Z,15nm,1.7s,mb5.2
ARU Arti 96.69 29 *e*P **P 06 48 22.7 +2.0**
ARU LR LR
comp=Z,2μm,22.0s,MS5.4
KMBO Kilima Mbogo 97.80 90 P **P 06 48 26.9 +0.2**
comp=Z,1.9nm,0.8s,mb4.7,baz=180,slow=24,SNR=3.3
KMBO LR LR 07 32 07.3
comp=Z,2μm,20.8s,MS5.5,baz=270,slow=35
KMBO Kilima Mbogo 97.80 90 P **P 06 48 26.9 +0.2**
KMBO pmax pmax
comp=Z,2.0nm,0.8s
KMBO MLR MLR
comp=Z,2μm,20.8s
KMBO Kilima Mbogo 97.80 90 P **P 06 48 26.9 +0.2**
KMBO LR LR 07 32 07.3
TIXI Tiksi 97.92 357 *e*P **P 06 48 24.4 -1.6**
TIXI *e* 06 52 22.4
TIXI *e*PS PS 07 01 22.8 +5.4
TIXI pmax pmax
comp=Z,14nm,1.4s,mb5.3
TIXI Tiksi 97.92 357 *e*P **P 06 48 26.2 +0.2**
comp=Z,14nm,1.2s,mb5.4
TIXI LR LR
comp=Z,1μm,20.0s,MS5.4
AKTK Aktyubinsk 99.36 35 P **P 06 48 33.2 +0.3**
AKTO Aktyubinsk 99.36 35 P **P 06 48 33.2 +0.3**
comp=Z,0.4nm,0.3s,mb4.4,baz=318,slow=12,SNR=4.3
QSPA South Pole Qui 100.37 180 PFAKE 06 48 50.0 +13
QSPA LR LR
comp=Z,3μm,22.0s,MS5.7
SYO Syowa Base 103.23 159 ⇑*e*P PKiKP 06 53 00.0 -8.7
SYO Syowa Base 103.23 159 ⇑*e*P PKiKP 06 53 06.8 -1.9
BRVK Borovoye 104.19 28 PFAKE 06 49 10.0 +16
BRVK LR LR
comp=Z,840nm,20.0s,MS5.3
YAK Yakutsk 107.39 355 PFAKE 06 53 30.0 +13
YAK LR LR
comp=Z,2μm,22.0s,MS5.5
MIDW Midway 107.98 304 PFAKE 06 53 30.0 +11
MIDW LR LR
comp=Z,2μm,21.0s,MS5.5
SBA Scott Base 108.44 189 PFAKE 06 53 30.0 +12
SBA LR LR
comp=Z,2μm,20.0s,MS5.6
PET Petropavlovsk 108.57 336 PFAKE 06 53 30.0 +11
PET LR LR
comp=Z,2μm,21.0s,MS5.7
ZALV Zalesovo Beam 109.50 21 PKiKP PKiKP 06 53 20.6 -0.2
comp=Z,1.9nm,0.7s,baz=247,slow=3.1,SNR=6.3
ZALV pPKiKP 06 53 34.6
comp=Z,2.8nm,0.8s,baz=270,slow=1.5,SNR=4.3
KURK Kurchatov 109.55 26 PFAKE 06 53 30.0 +9.0
KURK LR LR
comp=Z,1μm,21.0s,MS5.4
ABPO Ambohimpanom 109.93 107 PFAKE 06 53 30.0 +7.4
ABPO LR LR
comp=Z,1μm,21.0s,MS5.5
SKR Severo-Kuril's 111.38 336 *e*PKIKP PKiKP 06 53 34.0 +9.5
SKR *e* 07 00 08.0
MAW Mawson 111.87 160 PFAKE 06 53 40.0 +15
MAW LR LR
comp=Z,4μm,21.0s,MS6.0
EKS2 Erkin-Say 112.68 35 PFAKE 06 53 40.0 +13
EKS2 LR LR
comp=Z,1μm,22.0s,MS5.4
AFI Afiamalu 112.95 259 PFAKE 06 53 40.0 +12
AFI LR LR
comp=Z,1μm,19.0s,MS5.5
UCH Uchtor 113.38 35 PFAKE 06 53 40.0 +11
UCH LR LR
comp=Z,38nm,19.0s,MS4.0
TKM2 Tokmak 2 113.52 34 PFAKE 06 53 40.0 +11
TKM2 LR LR
comp=Z,1μm,19.0s,MS5.5
MKAR Makanchi Array 114.09 27 PKP PKiKP 06 53 29.2 -0.5
comp=Z,0.7nm,0.7s,baz=359,slow=1.4,SNR=5.0
MKAR pPKP 06 53 42.8
comp=Z,1.2nm,0.8s,baz=5.7,slow=3.7,SNR=5.3
MKAR PKKPbc PKKPbc 07 04 10.1 -2.2
comp=Z,1.6nm,0.9s,baz=197,slow=3.8,SNR=5.4
MKAR Makanchi Array 114.09 27 PKIKP PKiKP 06 53 29.3 -0.5
MKAR 06 53 42.8
MKAR pmax pmax
comp=Z,1.0nm,0.7s
MKAR pmax pmax
comp=Z,1.0nm,0.8s
MKAR pmax pmax
comp=Z,2.0nm,0.9s
MSEY Mahe Island 116.33 90 PFAKE 06 53 50.0 +15
MSEY LR LR
comp=Z,2μm,22.0s,MS5.6
TLY Talaya 116.69 11 PFAKE 06 53 50.0 +15
TLY LR LR
comp=Z,1μm,21.0s,MS5.4
WMQ Urumqi 118.79 26 PKP PKPdf 06 53 38.2 -0.7
WMQ sPKP 06 53 52.6
WMQ PP PP 06 55 02.3 +5.6
WMQ SKKS SKKSac 07 01 50.3 -3.9
WMQ AMB AMB
comp=Z,240nm,5.4s
WMQ LR LR
comp=N,890nm,22.4s,MS5.5
WMQ LR LR
comp=E,940nm,24.0s,MS5.5
WMQ LR LR
comp=Z,950nm,22.4s,MS5.4
RAO Raoul Island 118.90 242 PFAKE 06 53 50.0 +10
RAO LR LR
comp=Z,896nm,19.0s,MS5.4
YSS Yuzh-Sakhalins 119.28 342 PFAKE 06 53 50.0 +10
YSS LR LR
comp=Z,466nm,21.0s,MS5.1
KLR Kul'dur 119.69 351 *e*PKIKP PKPdf 06 53 33.4 -7.1
HABR Khabarovsk 119.82 348 *e*P Pdif 06 50 01.2 -2.5
HABR *e* 06 55 02.1
HABR *e*PPP 06 57 35.0
HABR *e* 07 00 47.7
HABR PS PS 07 04 51.6 -2.2
HABR SS SS 07 11 25.7 +1.3
HABR *e*SSS 07 15 51.1
HABR pmax pmax
comp=Z,96nm,2.9s
HABR pmax pmax
comp=E,91nm,2.5s
HABR pmax pmax
comp=N,9.0nm,0.7s
HABR MLR MLR
comp=Z,827nm,23.0s,MS5.3
SONM Songino Array 120.89 10 PKP PKPdf 06 53 43.2 +0.4
comp=Z,2.0nm,0.6s,baz=268,slow=0.7,SNR=15
SONM pPKP pPKPdf 06 53 56.3 -0.6
comp=Z,4.0nm,0.8s,baz=305,slow=1.0,SNR=10
SONM Songino Array 120.89 10 PKIKP PKPdf 06 53 43.2 +0.4

SONM 06 53 56.3
SONM pmax pmax
comp=Z,2.0nm,0.6s
SONM pmax pmax
comp=Z,4.0nm,0.8s
ULN Ulaanbaatar 120.97 10⇑ *e*PKIKP PKPdf 06 53 43.0 0.0
ULN Ulaanbaatar 120.97 10 *e*PKPdf PKPdf 06 53 43.3 +0.3
ULN LR LR
comp=Z,1μm,20.0s,MS5.5
FUNA Funafuti 121.18 266 PFAKE 06 54 00.0 +16
FUNA LR LR
comp=Z,6μm,19.0s,MS6.2
ASAJ Asahikawa 121.86 341 PKP PKPdf 06 53 44.4 -0.4
comp=Z,8.4nm,0.8s,baz=250,slow=32,SNR=7.0
ASAJ Asahikawa 121.86 341 PKIKP PKPdf 06 53 44.4 -0.4
ASAJ pmax pmax
comp=Z,8.0nm,0.8s
SNZO South Karori 122.75 227 PFAKE 06 54 00.0 +13
SNZO LR LR
comp=Z,2μm,22.0s,MS5.6
MSVF Nonsavu 122.94 256 PFAKE 06 54 00.0 +12
MSVF LR LR
comp=Z,1μm,21.0s,MS5.5
ERM Erimo 123.53 339 PFAKE 06 54 00.0 +12
ERM LR LR
comp=Z,596nm,20.0s,MS5.2
PAF Port-aux-Franc 123.69 143 PFAKE 06 54 00.0 +12
PAF LR LR
comp=Z,5μm,21.0s,MS6.2
CASY Casey 123.83 176 *e*PKP PKPdf 06 53 47.9 0.0
CASY Casey 123.83 176 *e*PKP pPKPdf 06 54 02.1 +0.2
CASY Casey 123.83 176 *e*PKPdf PKPdf 06 53 47.4 -0.5
CASY LR LR
comp=Z,2μm,20.0s,MS5.8
MDJ Mudanjiang 124.52 351 PKP PKPdf 06 53 49.2 -0.7
MDJ sPKP 06 54 06.6
MDJ PP PP 06 55 35.0 -0.2
MDJ PKS 06 57 24.1
MDJ SKS SKSdf 07 00 57.7 -0.6
MDJ AMB AMB
comp=Z,140nm,5.4s
MDJ LR LR
comp=N,470nm,18.4s,MS5.6
MDJ LR LR
comp=E,1μm,19.3s,MS5.6
MDJ LR LR
comp=Z,2μm,19.3s,MS5.7
WAKE Wake Island 125.00 302 PFAKE 06 54 00.0 +8.5
WAKE LR LR
comp=Z,1μm,21.0s,MS5.5
CN2 Changchun 125.82 355 *e*PKP PKPdf 06 53 52.8 +0.4
CN2 *es*PKP 06 54 07.0
CN2 PP PP 06 55 48.8 +4.9
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,900nm,21.0s,MS5.6
CN2 LR LR
comp=E,900nm,21.0s,MS5.6
CN2 LR LR
comp=Z,1μm,22.0s,MS5.6
GTA Gaotai 127.19 19 PKP PKPdf 06 53 55.5 +0.3
GTA sPKP 06 54 08.5
GTA PP PP 06 55 55.8 +2.6
GTA PKS 06 57 31.3
GTA SKS SKSdf 07 01 03.2 -0.3
GTA AMB AMB
comp=Z,210nm,5.4s
GTA LR LR
comp=N,750nm,21.1s,MS5.4
GTA LR LR
comp=E,420nm,20.8s,MS5.4
GTA LR LR
comp=Z,1μm,23.2s,MS5.5
HHC Hu-ho-hao-te 128.51 8 *e*PKP PKPdf 06 53 55.3 -2.4
HHC sPKP 06 54 12.7
HHC PP PP 06 56 03.6 +1.9
HHC PKS 06 57 30.9
HHC SKS SKSdf 07 01 01.3 -4.6
HHC SKKS SKKSac 07 02 51.4 -5.3
HHC AMB AMB
comp=Z,110nm,9.1s
HHC LR LR
comp=N,640nm,20.6s,MS5.5
HHC LR LR
comp=E,740nm,21.9s,MS5.5
HHC LR LR
comp=Z,960nm,20.0s,MS5.5
GKN Gorkha 129.05 41 *e*P PKPdf 06 53 58.7 -0.4
KKN Kakani 129.61 40 *e*P PKPdf 06 53 59.6 -0.5
DMN Daman 129.62 41 *e*P PKPdf 06 53 59.7 -0.5
BJI Beijing 129.75 3 PKP PKPdf 06 54 00.5 +0.4
BJI PP PP 06 56 09.9 +0.1
BJI SKS SKSdf 07 01 04.4 -3.8
BJI AMB AMB
comp=Z,140nm,7.1s
BJI LR LR
comp=N,820nm,20.7s,MS5.4
BJI LR LR
comp=E,220nm,20.7s,MS5.4
BJI LR LR
comp=Z,630nm,21.6s,MS5.3
PKIN Phulchoki 129.83 40 *e*P PKPdf 06 54 00.3 -0.3
PKI Pulchoki 129.84 40 *e*P PKPdf 06 53 59.9 -0.7
GUN Gumba 129.91 40 *e*P PKPdf 06 54 00.7 0.0
MAJO Matsushiro 130.13 340 *e*PKIKP PKPdf 06 54 00.9 0.0
MAJO MLR MLR
comp=Z,1μm,22.0s,MS5.5
MAT Matsushiro 130.13 340 PKP PKPdf 06 54 00.6 -0.3
MJAR Matsushiro Arr 130.13 340 PKP PKPdf 06 54 00.8 -0.1
comp=Z,6.1nm,0.8s,baz=46,slow=1.1,SNR=12
MJAR pPKP pPKPdf 06 54 13.7 -1.2
comp=Z,5.7nm,0.8s,baz=14,slow=1.0,SNR=6.4
MJAR Matsushiro Arr 130.13 340 PKIKP PKPdf 06 54 00.8 -0.1
MJAR 06 54 13.7
MJAR pmax pmax
comp=Z,6.0nm,0.8s
MJAR pmax pmax
comp=Z,6.0nm,0.8s
JIRN Jiri 130.28 40 *e*P PKPdf 06 54 01.0 -0.4
DL2 Dalian 130.94 358 PKP PKPdf 06 53 58.3 -4.0
DL2 PP PP 06 56 15.4 -2.1
DL2 SS SS 07 13 41.6 -2.2
DL2 AMB AMB
comp=Z,220nm,8.8s
DL2 LR LR
comp=N,470nm,19.4s,MS5.3
DL2 LR LR
comp=E,300nm,18.0s,MS5.3
DL2 LR LR
comp=Z,540nm,19.0s,MS5.3
RAMN Ramite 131.03 40 *e*P PKPdf 06 54 02.6 -0.3
TAPN Taplejung 131.44 39 *e*P PKPdf 06 54 03.5 -0.1
LZH Lanzhou 131.48 17 PKP PKPdf 06 54 04.9 +1.4
LZH PP PP 06 56 27.0 +5.8
LZH PKS 06 57 33.0
LZH AMB AMB
comp=Z,200nm,6.2s
LZH LR LR
comp=N,730nm,18.9s
LZH LR LR
comp=Z,1μm,21.0s,MS5.5
ODAN Odare 131.59 39 *e*P PKPdf 06 54 03.4 -0.5
LSA Lhasa 131.68 34 PKP PKPdf 06 54 04.9 +0.9
KSRS Korea Array 131.78 351 PKP PKPdf 06 54 03.8 -0.2
comp=Z,4.1nm,0.8s,baz=50,slow=1.6,SNR=15
KSRS pPKP pPKPdf 06 54 17.1 -0.9
comp=Z,1.2nm,0.4s,baz=94,slow=15,SNR=1.5
KSRS Korea Array 131.78 351 PKIKP PKPdf 06 54 03.8 -0.2
KSRS 06 54 17.1
KSRS pmax pmax
comp=Z,4.0nm,0.8s
KSRS pmax pmax
comp=Z,1.0nm,0.4s
INCN Inchon 131.93 352 PFAKE 06 54 20.0 +16
INCN LR LR
comp=Z,1μm,21.0s,MS5.6
DGAR Diego Garcia 133.43 90 PFAKE 06 54 20.0 +12
DGAR LR LR
comp=Z,2μm,20.0s,MS5.8
DZM Mont Dzumac 133.65 249 *e*LR LR 07 36 53.0
comp=Z,1μm,22.9s
SHL Shillong 135.27 37 *ex* PKPdf 06 54 11.0 +0.1
CD2 Chengdu 136.25 20 PKP PKPdf 06 54 11.2 -1.4
CD2 sPKP 06 54 25.6
CD2 PP PP 06 56 55.2 +3.6
CD2 PKS 06 57 46.2
CD2 SKS SKSdf 07 01 16.7 -3.4
CD2 SKKS SKKSac 07 03 42.2 -2.2
CD2 AMB AMB
comp=Z,140nm,7.1s
CD2 LR LR
comp=N,390nm,25.0s
CD2 LR LR
comp=Z,670nm,20.2s,MS5.4
PALK Pallekele 137.55 67 *i* PKIKP PKPdf 06 54 16.9 +1.5
NJ2 Nanjing 137.81 1 *e*PKP PKPdf 06 54 14.5 -0.9
NJ2 sPKP 06 54 27.9
NJ2 PKS 06 57 49.0
NJ2 SKS SKSdf 07 01 21.0 -1.8
NJ2 LR LR
comp=N,770nm,20.5s,MS5.6
NJ2 LR LR
comp=E,740nm,19.1s,MS5.6
SSE Sheshan 138.74 358 PKP PKPdf 06 54 17.2 +0.1
SSE PP PP 06 57 05.7 -1.2
SSE AMB AMB
comp=Z,150nm,7.3s
SSE LR LR
comp=N,500nm,23.0s,MS5.4
SSE LR LR
comp=E,600nm,23.0s,MS5.4
SSE LR LR
comp=Z,650nm,21.5s,MS5.3
WHN Wuhan 139.02 7 PKP PKPdf 06 54 17.8 +0.1
WHN sPKP 06 54 31.8
WHN PP PP 06 57 06.8 -1.8
WHN LR LR
comp=N,2μm,20.0s
WHN LR LR
comp=E,490nm,13.2s
WHN LR LR
comp=Z,2μm,23.0s,MS5.8
HNR Honiara 140.19 268 PFAKE 06 54 30.0 +10
HNR LR LR
comp=Z,408nm,20.0s,MS5.2
KMI Kunming 141.11 25 PKP PKPdf 06 54 20.1 -1.5
KMI sPKP 06 54 35.5
KMI PP PP 06 57 25.0 +3.1
KMI AMB AMB
comp=Z,140nm,6.0s
KMI LR LR
comp=N,670nm,22.4s
KMI LR LR
comp=E,330nm,29.1s
KMI LR LR
comp=Z,870nm,24.6s,MS5.4
GYA Guiyang 141.31 19 *i* PKP PKPdf 06 54 21.0 -0.9
GYA sPKP 06 54 35.5
GYA PKS 06 57 55.0
GYA SKKS SKKSac 07 04 13.0 -1.3
GYA LR LR
comp=N,3μm,24.8s,MS6.0
GYA LR LR
comp=E,2μm,25.2s,MS6.0
GYA LR LR
comp=Z,3μm,24.8s,MS5.9
CNB Canberra Magne 143.22 223 *e*PKP PKPdf 06 54 22.6 -2.4
CNB *ep*PKP pPKPdf 06 54 37.2 -1.9
CAN Canberra 143.46 223 PFAKE 06 54 40.0 +15
CAN LR LR
comp=Z,809nm,20.0s,MS5.5
ARMA Armidale 144.10 232 *e*PKP PKPdf 06 54 25.6 -1.1
ARMA Armidale 144.10 232 *e*PKP pPKPdf 06 54 35.1 -5.7
ARMA Armidale 144.10 232 *e*PKPdf PKPdf 06 54 26.1 -0.7
CHRT Chiangrai 144.21 33 ⇓P PKPdf 06 54 24.5 -2.7
comp=Z,187nm,1.1s
TOO Toolangi 144.24 217 *e*PKP PKPdf 06 54 25.5 -1.2
TOO *ep*PKP pPKPdf 06 54 40.1 -0.7
CHG Chiang Mai 144.60 35 ⇓P PKPdf 06 54 25.8 -2.1
comp=Z,42nm,1.1s
CHTO Chiang Mai 144.60 35 *e*PKIKP PKPdf 06 54 26.1 -1.8
CHTO MLR MLR
comp=Z,953nm,22.0s,MS5.5
TATO Taipei 144.81 357 PFAKE 06 54 40.0 +12
TATO LR LR
comp=Z,857nm,20.0s,MS5.5
CM31 Chiang Mai Arr 144.88 35 *e*PKPdf PKPdf 06 54 27.6 -0.9
CM31 LR LR
comp=Z,567nm,20.0s,MS5.3
CMAR Chiang Mai Arr 144.88 35 PKPbc PKPdf 06 54 27.0 -1.4
comp=Z,30nm,0.8s,baz=319,slow=5.1,SNR=114
CMAR pPKPbc 06 54 40.0
comp=Z,99nm,1.1s,baz=342,slow=2.2,SNR=16
CMAR Chiang Mai Arr 144.88 35 PKIKP PKPdf 06 54 27.0 -1.4
CMAR 06 54 40.0
CMAR pmax pmax
comp=Z,30nm,0.8s
CMAR pmax pmax
comp=Z,99nm,1.1s
QZH Quanzhou 144.89 1 *i* PKP PKPdf 06 54 27.0 -1.3
QZH sPKP 06 54 38.8
QZH LR LR
comp=N,2μm,26.4s
QZH LR LR
comp=E,1μm,17.3s
QZH LR LR
comp=Z,1μm,21.7s,MS5.6
YHNB Yeheng 145.12 357 *e*PKPbc PKPbc 06 54 27.8 -0.4
YHNB LR LR
comp=Z,984nm,21.0s,MS5.6
GUMO Guam 145.37 313 PKPbc PKPbc 06 54 27.9 -1.3
comp=Z,69nm,0.4s
GUMO Guam 145.37 313 PKIKP PKPdf 06 54 27.9 -1.4
GUMO pmax pmax
comp=Z,69nm,0.4s
GUMO Guam 145.37 313 *e*PKPdf PKPdf 06 54 28.1 -1.2
GUMO LR LR
comp=Z,739nm,20.0s,MS5.5
NACB Ninganchiao 145.60 357 *e*PKPdf PKPdf 06 54 29.5 0.0
BDT Bhumibol Dam 145.87 37 P PKPdf 06 54 30.0 -0.1
comp=Z,71nm,1.0s
SSLB Suanglung 146.02 358 *e*PKPdf PKPdf 06 54 31.4 +1.1
YULB Yu-li 146.40 357 *e*PKPdf PKPdf 06 54 30.6 -0.3
TPUB Ta-pu 146.52 358 *e*PKPdf PKPdf 06 54 31.7 +0.6
EIDS Eidsvold 146.59 239 *e*PKPbc PKPbc 06 54 33.1 +0.4
TWG Pinlang 146.98 357 *e*PKPbc PKPbc 06 54 33.2 -0.7
QIZ Qiongzhong 149.26 18 PKPbc PKPbc 06 54 37.5 -2.5
QIZ PP PP 06 58 11.1 +0.9
QIZ LR LR
comp=N,540nm,20.9s
QIZ LR LR
comp=Z,1μm,22.6s,MS5.6
NNT Nongplab 149.88 41 P PKPdf 06 54 38.0 +1.2
STKA Stephens Creek 150.43 220 *e*P PKPdf 06 54 37.6 +0.4
comp=Z,9.9nm,0.9s
STKA Stephens Creek 150.43 220 *e*PKP PKPdf 06 54 42.9 +5.7
STKA Stephens Creek 150.43 220 PKP PKPdf 06 54 36.9 -0.3
comp=Z,17nm,1.1s,baz=109,slow=2.5,SNR=14
STKA PKPbc PKPbc 06 54 42.9 +0.4
comp=Z,37nm,0.9s,baz=110,slow=1.9,SNR=31
STKA Stephens Creek 150.43 220 *e*PKPdf PKPdf 06 54 37.5 +0.3
STKA *e*PKPbc PKPbc 06 54 42.9 +0.4
CTA Charters Tower 152.50 246 *e*PKP PKPdf 06 54 41.4 +0.7
comp=Z,11nm,1.3s
CTA Charters Tower 152.50 246 *e*PKP PKPbc 06 54 48.4 +0.8
CTA *es*PKP 06 55 02.6
CTAO Charters Tower 152.50 246 *e*PKIKP PKPdf 06 54 41.3 +0.6
CTAO *e* 06 54 48.4
CTAO MLR MLR
comp=Z,1μm,21.0s,MS5.7
CTAO Charters Tower 152.50 246 *e*PKPdf PKPdf 06 54 41.3 +0.6
CTAO *e*PKPbc PKPbc 06 54 48.4 +0.8
CTAO *e*PKPab PKPab 06 54 59.5 +1.4
CTAO LR LR
comp=Z,1μm,21.0s,MS5.7
KULM Kulim 155.59 51 PFAKE 06 55 00.0 +15
KULM LR LR
comp=Z,835nm,20.0s,MS5.6
NWAO Narrogin (SRO) 157.46 175 PFAKE 06 55 00.0 +13
NWAO LR LR
comp=Z,1μm,22.0s,MS5.8
COCO West Island 157.67 97 PFAKE 06 55 00.0 +12
COCO LR LR
comp=Z,1μm,22.0s,MS5.6
FORT Forrest 158.20 200 *e*PKP PKPdf 06 54 47.4 -0.7
comp=Z,16nm,0.7s
FORT Forrest 158.20 200 *e*PKP PKPab 06 55 21.9 0.0
KLBR Kellerberrin 158.82 176 *e*PKP PKPdf 06 54 48.3 -0.5
comp=Z,16nm,1.0s
KLBR Kellerberrin 158.82 176 *e*PKP PKPab 06 55 23.9 -0.6
ASAR Alice Springs 160.95 224 PKP PKPdf 06 54 50.9 -0.5
comp=Z,8.4nm,0.9s,baz=121,slow=1.2,SNR=54
ASAR pPKP pPKPdf 06 55 05.0 -0.5
comp=Z,9.8nm,1.0s,baz=130,slow=1.2,SNR=12
ASAR PKPab PKPab 06 55 33.5 -0.7
comp=Z,11nm,1.0s,baz=156,slow=2.3,SNR=4.3
ASAR pPKPab pPKPab 06 55 46.9 -0.9
comp=Z,3.5nm,0.7s,baz=132,slow=4.0,SNR=2.2
ASAR Alice Springs 160.95 224 PKIKP PKPdf 06 54 50.9 -0.5
ASAR 06 55 05.0
ASAR 06 55 33.5
ASAR pmax pmax
comp=Z,8.0nm,0.9s
ASAR pmax pmax
comp=Z,10.0nm,1.0s
ASAR pmax pmax
comp=Z,11nm,1.0s
ASAR pmax pmax
comp=Z,4.0nm,0.7s
DAV Davao City (W) 161.65 341 PFAKE 06 55 00.0 +7.5
DAV LR LR
comp=Z,1μm,21.0s
WRAB Tennant Creek 162.84 235 *e*PKPdf PKPdf 06 54 53.1 -0.3
WRAB *e*PKPab PKPab 06 55 43.5 +0.9
WRAB LR LR
comp=Z,2μm,21.0s
WRA Warramunga Arr 162.84 235 PKP PKPdf 06 54 52.8 -0.7
comp=Z,17nm,1.1s,baz=80,slow=0.6,SNR=50
WRA pPKP pPKPdf 06 55 05.9 -1.7
comp=Z,20nm,1.0s,baz=89,slow=0.4,SNR=15
WRA PKPab PKPab 06 55 43.1 +0.5
comp=Z,18nm,1.0s,baz=123,slow=4.3,SNR=25
WRA pPKPab pPKPab 06 55 57.1 +0.8
comp=Z,15nm,1.1s,baz=122,slow=4.1,SNR=4.8
WRA Warramunga Arr 162.84 235 PKIKP PKPdf 06 54 52.8 -0.6
WRA 06 55 05.9
WRA 06 55 43.1
WRA pmax pmax
comp=Z,17nm,1.1s
WRA pmax pmax
comp=Z,20nm,1.0s
WRA pmax pmax
comp=Z,18nm,1.0s
WRA pmax pmax
comp=Z,15nm,1.1s
KKM Kota Kinabalu 163.36 12 *e*PKPdf PKPdf 06 54 54.4 +0.2
KKM LR LR
comp=Z,1μm,22.0s
KSM Kuching 165.08 38 PFAKE 06 55 10.0 +14
KSM LR LR
comp=Z,935nm,22.0s
MBWA Marble Bar 169.28 181 PFAKE 06 55 10.0 +11
MBWA LR LR
comp=Z,1μm,19.0s
FITZ Fitzroy Crossi 170.30 217 *e*PKP PKPdf 06 54 58.8 -0.4
comp=Z,18nm,1.0s
FITZ *es*PKP 06 55 12.5
KAPI Kappang 174.67 358 PFAKE 06 55 10.0 +8.7
KAPI LR LR
comp=Z,2μm,22.0s

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*ISCJB **03** 06:34:55.6±0.9, 56°.08N±0°.07×18°.5E±0°.1, h0km, Error ellipse: s-maj=11.8km s-min=6.3km az=148.5*
*HEL **03** 06:34:56.1±0.7, 55°.95N×18°.61E, h0km, ML2.4, ML2.7(NAO), Explosion*
*BER **03** 06:34:56.8±3.4, 55°.86N×18°.40E, h0km±25km, ML2.7(NAO)*
*CSEM **03** 06:34:56.3±0.6, 55°.95N×18°.51E, h1km, ML2.4, Error ellipse: s-maj=21.1km s-min=9.3km az=153.0, Mining explosion.*
*IDC **03** 06:34:58.5±1.5, 56°.08N×18°.52E, h0km, mb1 3.6/3, mb1mx3.3/23, mbtmp3.6/3, ML3.4/4, Error ellipse: s-maj=24.5km s-min=10.5km az=46.0*
*NAO **03** 06:34:58.2±2.9, 56°.01N×18°.57E, ML2.7*

ISC 03 06:34:56.3±0.7, 55°.98N±0°.06×18°.58E±0°.09, h0km, n33, σ1§40/43, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSD	**Bornholm Skovb**	**2.26**	**249**	*i* P	**Pn**	**06 35 33.6**	**-1.2**
BSD				*i* S	**Sn**	**06 36 04.3**	**+1.1**
BSD	**Bornholm Skovb**	**2.26**	**249**	*i* P	**Pn**	**06 35 33.6**	**-1.2**
BSD				*i* S	**Sn**	**06 36 04.3**	**+1.1**
SLIT	**Slitere, Latvi**	**2.63**	**50**	*e*P	**Pn**	**06 35 41.8**	**+2.0**
SLIT	SNR=50			*e*S	**Sn**	**06 36 20.9**	**+8.5**
	186nm,0.3s,SNR=50						
AAL	**Aland**	**4.27**	**10**	*e*P	**Pn**	**06 36 03.1**	**+0.6**
AAL	**Aland**	**4.27**	**10**	P	**Pn**	**06 36 03.0**	**+0.5**
HFS	**Hagfors**	**4.90**	**330**	Pn	**Pn**	**06 36 12.0**	**+0.9**
	baz=151,slow=11						
HFS				Sn	**Sn**	**06 37 07.6**	**-0.8**
	baz=144,slow=22						
HFS				Lg		06 37 27.2	
	baz=149,slow=37						
HFS	**Hagfors**	**4.90**	**330**	Pn	**Pn**	**06 36 11.8**	**+0.7**
	1.2nm,0.3s,baz=144,slow=14,SNR=12						
HFS				Lg		06 37 25.5	
	2.4nm,0.3s,baz=141,slow=25,SNR=5.5						
HFS	**Hagfors**	**4.90**	**330**	*e*P	**Pn**	**06 36 12.0**	**+0.9**
HFS				*e*S	**Sn**	**06 37 07.6**	**-0.8**
HFS				*e*SG	**Sg**	**06 37 27.2**	**-6.4**
HFS	**Hagfors**	**4.90**	**330**	P	**Pn**	**06 36 12.0**	**+0.9**
VSU	**Vasula**	**5.08**	**57**	Pn	**Pn**	**06 36 12.5**	**-1.0**
VSU	**Vasula**	**5.08**	**57**	*e*P	**Pn**	**06 36 12.5**	**-1.0**
VSU	**Vasula**	**5.08**	**57**	P	**Pn**	**06 36 12.5**	**-1.1**
MEF	**Metsahovi**	**5.25**	**34**	*e*P	**Pn**	**06 36 18.0**	**+2.1**
MEF	**Metsahovi**	**5.25**	**34**	P	**Pn**	**06 36 17.9**	**+2.1**
RAF	**Rauma**	**5.32**	**17**	*e*P	**Pn**	**06 36 16.7**	**-0.2**
RAF	**Rauma**	**5.32**	**17**	P	**Pn**	**06 36 16.6**	**-0.3**
PVF	**Pernaja**	**5.97**	**37**	*e*P	**Pn**	**06 36 25.7**	**-0.1**
PVF				*e*S	**Sn**	**06 37 31.1**	**-3.7**
PVF				MSG		06 37 38.1	
	comp=Z,3.3nm,0.3s						
PVF	**Pernaja**	**5.97**	**37**	P	**Pn**	**06 36 25.7**	**-0.1**
NB2	**NORSAR Subarra**	**6.37**	**326**	Pn	**Pn**	**06 36 30.2**	**-1.0**
	baz=146,slow=14						
NB2	**NORSAR Subarra**	**6.37**	**326**	*e*P	**Pn**	**06 36 30.2**	**-1.0**
NB2	**NORSAR Subarra**	**6.37**	**326**	Pn	**Pn**	**06 36 30.2**	**-1.0**
	baz=146,slow=14,SNR=7.1						
NOA	**NORSAR Array B**	**6.37**	**326**	Pn	**Pn**	**06 36 30.1**	**-1.1**
	comp=Z,0.7nm,0.3s,baz=142,slow=12,SNR=6.2						
NOA				Lg		06 38 12.8	
	comp=Z,1.4nm,0.3s,baz=111,slow=5.2,SNR=4.6						
FIA0	**FINESS Array S**	**6.72**	**32**	Pn	**Pn**	**06 36 37.7**	**+1.6**
	baz=209,slow=12						
FIA0				Sn	**Sn**	**06 37 52.2**	**-1.1**
	baz=220,slow=22						
FIA0	**FINESS Array S**	**6.72**	**32**	*e*P	**Pn**	**06 36 36.7**	**+0.7**
FIA0				*e*S	**Sn**	**06 37 50.5**	**-2.7**
FIA0				MSG		06 37 55.4	
	comp=Z,2.6nm,0.3s						
FIA0	**FINESS Array S**	**6.72**	**32**	P	**Pn**	**06 36 36.7**	**+0.6**
FIA0	**FINESS Array S**	**6.72**	**32**	Pn	**Pn**	**06 36 37.7**	**+1.6**
	baz=209,slow=12,SNR=1.4						
FINES	**FINESS Array B**	**6.72**	**32**	Pn	**Pn**	**06 36 37.0**	**+0.9**
	comp=Z,2.6nm,0.3s,baz=217,slow=11,SNR=24						
KEF	**Keuruu**	**7.00**	**25**	*e*P	**Pn**	**06 36 42.1**	**+2.3**
KEF				*e*S	**Sn**	**06 37 56.4**	**-3.5**
KEF				MSG		06 38 05.8	
	comp=Z,2.1nm,0.3s						
AKASG	**Malin Array Be**	**8.28**	**125**	Pn	**Pn**	**06 36 56.0**	**-1.4**
	comp=Z,2.3nm,0.3s,baz=311,slow=12,SNR=6.7						
EKA	**Eskdalemuir Ar**	**12.29**	**276**	Pn	**Pn**	**06 37 48.5**	**-3.7**
	comp=Z,0.2nm,0.3s,baz=86,slow=13,SNR=5.3						
ARA0	**ARCESS Array S**	**13.95**	**10**	Pn	**Pn**	**06 38 10.6**	**-4.3**
	baz=197,slow=12						
ARA0	**ARCESS Array S**	**13.95**	**10**	*e*P	**Pn**	**06 38 10.6**	**-4.3**
ARCES	**ARCESS Array B**	**13.95**	**10**	Pn	**Pn**	**06 38 10.3**	**-4.6**
	comp=Z,0.3nm,0.3s,baz=192,slow=16,SNR=2.5						

IDC 03 06:35:13.4±1.6, 56°.13N×18°.62E, h0km, mb1 3.5/4, mb1mx3.3/24, mbtmp3.4/4, ML3.4/3, Error ellipse: s-maj=26.2km s-min=11.2km az=44.0, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HFS	**Hagfors**	**4.79**	**329**	Pn	Pn	06 36 26.4	-0.3
	1.5nm,0.3s,baz=146,slow=15,SNR=7.4						
HFS				Lg		06 37 40.2	
	3.0nm,0.3s,baz=157,slow=27,SNR=3.6						

NOA	NORSAR Array B	6.26	325	Pn	Pn	06 36 44.6	-2.3
	0.9nm,0.3s,baz=143,slow=12,SNR=5.6						
NOA				Lg		06 38 29.0	
	1.6nm,0.3s,baz=133,slow=21,SNR=4.3						
FINES	FINESS Array B	6.59	33	Pn	Pn	06 36 51.1	-0.4
	2.7nm,0.3s,baz=214,slow=11,SNR=13						
AKASG	Malin Array Be	8.34	126	Pn	Pn	06 37 10.7	-4.8
	2.1nm,0.3s,baz=316,slow=12,SNR=4.6						
EKA	Eskdalemuir Ar	12.29	275	Pn	Pn	06 38 04.2	-5.3
	0.2nm,0.3s,baz=87,slow=13,SNR=4.7						

DJA 03 07:01:09,7.88S×106.70E,h24km,MLv3.8/5,Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	Sukabumi	0.88	351	P	Pb	07 01 26.5	+0.9
SKJI				S	Sb	07 01 34.8	-2.2
LEM	Lembang	1.39	41	P	Pn	07 01 33.2	+0.3
LEM				S	Sn	07 01 52.3	+1.9
CGJI	Cibinong	1.61	321	P	Pn	07 01 36.5	+0.6
RBSI	Rajabasa	2.23	335	P	Pn	07 01 46.5	+2.0
UGM	Wanagama	3.79	91	P	Pn	07 02 06.1	+0.2
MDSI	Maura Dua	4.20	323	P	Pn	07 02 12.4	+0.8
PCJI	Pacitan	4.45	94	P	Pn	07 02 14.9	-0.1
PWJI	Pagerwojo	5.06	92	P	Pn	07 02 23.6	+0.2

*ISCJB **03** 07:12:22.0±1.5,36.55N±0.08×28.12E±0.07,h4km±10km, Error ellipse: s-maj=12.8km s-min=9.1km az=179.5*
*CSEM **03** 07:12:21.9±0.7,36.54N×28.17E,h2km,MD2.8,Error ellipse: s-maj=12.9km s-min=6.9km az=178.0*
*ISK **03** 07:12:23.6,36.64N×28.05E,h21km,MD2.8*
*DDA **03** 07:12:25.6,36.70N×28.02E,h7km±2km,Md2.8*
ISC 03 07:12:22.0±1.8,36.53N±0.09×28.15E±0.07,h0km±20km, n17,σ0°82/26,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TURN	Turunc	0.50	47	*i* P	Pg	07 12 29.8	-1.7
TURN				*i* S	Sg	07 12 33.5	-4.5
TURN	Turunc	0.50	47	*i* P	Pg	07 12 29.8	-1.7
TURN				*i* S	Sg	07 12 33.5	-4.5
DAT	Datca	0.50	293	*e*PG	Pg	07 12 32.3	+0.7
DAT	Datca	0.50	293	*e*Pg	Pg	07 12 32.3	+0.7
YER	Yerkesik	0.61	10	*e*PG	Pg	07 12 34.7	+1.0
YER				*e*SG	Sg	07 12 42.8	+1.2
YER	Yerkesik	0.61	10	*e*Pg	Pg	07 12 34.7	+1.0
YER				*e*Sg	Sg	07 12 42.8	+1.2
BDRM	Kayabasi	0.78	313	*i* P	Pg	07 12 36.9	0.0
BDRM				*i* S	Sg	07 12 46.2	-0.7
BDRM	Kayabasi	0.78	313	*i* P	Pg	07 12 36.9	0.0
BDRM				*i* S	Sg	07 12 46.2	-0.7
MLSB	Milas	0.82	339	*e*PG	Pg	07 12 37.5	-0.1
MLSB	Milas	0.82	339	*e*Pg	Pg	07 12 37.6	-0.1
BODT	Bodrum	0.85	308	*e*PG	Pg	07 12 38.4	0.0
BODT	Bodrum	0.85	308	*e*Pg	Pg	07 12 38.4	0.0
AYDN	Tasoluk	1.15	349	*i* P	Pg	07 12 44.0	+0.1
AYDN				*i* S	Sg	07 12 57.9	-0.9
AYDN	Tasoluk	1.15	349	*i* P	Pg	07 12 44.0	0.0
AYDN				*i* S	Sg	07 12 57.9	-0.9
GLHS	Glhisar (BURDU	1.25	60	*e*PN	Pn	07 12 46.8	+0.1
GLHS	Glhisar (BURDU	1.25	60	*e*Pn	Pn	07 12 46.8	+0.2
GOLH	Golhisar	1.33	58	*i* P	Pg	07 12 52.7	+5.2
GOLH				*i* S	Sg	07 13 12.8	+8.0

*FUNV **03** 07:16:22.8,10.41N×60.10W,h46km,MW3.6*
*NEIC **03** 07:16:24.7,10.35N×60.20W,h78km,MD3.7(TRN),After TRN.*
TRN 03 07:16:24.9,10.36N×60.20W,h75km,MD3.7,5C, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBH	Brigand Hill	0.86	279	↑*i*P	Pn	07 16 41.5	-0.4
TBH				*e*S	Sn	07 16 56.5	+1.9
TBH	Brigand Hill	0.86	279	↑*i*P	Pn	07 16 41.5	-0.4
TBH				*e*S	Sn	07 16 55.0	+0.4
TOSP	Speyside	0.99	341	*e*P	Pn	07 16 42.8	-0.7
TOSP				*e*S	Sn	07 16 58.5	+1.0
TPR	Prospect	1.00	326	*e*P	Pn	07 16 43.0	-0.7
TPR	Prospect	1.00	326	*e*P	Pn	07 16 43.0	-0.7
TRN	Trinidad (W)	1.22	284	*e*P	Pn	07 16 45.6	-0.7
TRN				*e*S	Sn	07 17 01.0	-1.4
TRN	Trinidad (W)	1.22	284	*e*P	Pn	07 16 45.6	-0.7
TRN				*e*S	Sn	07 17 02.8	+0.4
TCE	Chacachacare	1.56	283	*e*P	Pn	07 16 51.1	+0.3
TCE				*e*S	Sn	07 17 10.1	-0.3
TCE	Chacachacare	1.56	283	*e*P	Pn	07 16 51.1	+0.3
TCE				*e*S	Sn	07 17 10.1	-0.3
GUIV	Guiria	2.01	278	↑*e*P	Pn	07 16 54.9	-1.9
GUIV				*e*S	Sn	07 17 18.3	-2.7
GRW	Mount Saint Ca	2.29	322	*e*P	Pn	07 17 01.8	+1.2
GRW				*e*S	Sn	07 17 20.5	-7.5
GRW	Mount Saint Ca	2.29	322	*e*P	Pn	07 17 01.8	+1.2
GRW				*e*S	Sn	07 17 26.1	-1.9
GRHS	Sauteurs	2.33	323	*e*P	Pn	07 17 02.8	+1.7
GRHS				*e*S	Sn	07 17 22.6	-6.3
GRHS	Sauteurs	2.33	323	*e*P	Pn	07 17 01.9	+0.7
GRHS				*e*S	Sn	07 17 29.0	+0.1
GRSS	Sisters	2.37	325	*e*P	Pn	07 17 02.8	+1.1
GRSS				*e*S	Sn	07 17 21.2	-8.6
GRSS	Sisters	2.37	325	*e*P	Pn	07 17 02.8	+1.1
GRSS				*e*S	Sn	07 17 27.2	-2.7
GUNV	Guanoco	2.70	266	↑*i*P	Pn	07 17 05.2	-1.0
GUNV				*e*S	Sn	07 17 35.5	-2.4
RIOV	Rio Grande	2.77	215	*e*P	Pn	07 17 05.8	-1.3
RIOV				*e*S	Sn	07 17 35.9	-3.6
CRUV	Carupano	3.00	276	↑*e*P	Pn	07 17 07.2	-3.0
CRUV				*e*S	Sn	07 17 40.8	-4.3
ITEV	Isla Los Testi	3.04	289	*e*P	Pn	07 17 08.2	-2.6
ITEV				*e*S	Sn	07 17 41.8	-4.3
SVB	Belmont	3.08	341	*e*P	Pn	07 17 12.7	+1.5
SVB				*e*S	Sn	07 17 45.6	-1.3
SVB	Belmont	3.08	341	*e*P	Pn	07 17 12.2	+1.0
SVB				*e*S	Sn	07 17 45.6	-1.3
SVV	Soufriere Volc	3.11	342	*e*P	Pn	07 17 11.5	-0.2
SVV	Soufriere Volc	3.11	342	*e*P	Pn	07 17 11.5	-0.2
SSV	Crater Summit	3.11	342	*e*P	Pn	07 17 13.1	+1.5
SSV				*e*S	Sn	07 17 46.3	-1.4
SSV	Crater Summit	3.11	342	*e*P	Pn	07 17 13.1	+1.5
SSV				*e*S	Sn	07 17 46.3	-1.4
ORIV	Oritupano	3.41	248	*e*P	Pn	07 17 14.3	-1.4
MCLT	Moule a Chique	3.41	348	*e*P	Pn	07 17 14.4	-1.3
MCLT				*e*S	Sn	07 17 53.0	-2.1
MCLT	Moule a Chique	3.41	348	*e*P	Pn	07 17 16.4	+0.6
MCLT				*e*S	Sn	07 17 53.0	-2.1
GURV	El Guri	3.84	228	*e*P	Pn	07 17 20.1	-1.5
PCRV	Puerto La Cruz	4.37	268	*e*P	Pn	07 17 25.2	-3.6
LUEV	Luepa	4.65	196	*e*P	Pn	07 17 29.8	-3.0
CUPV	Cepira	5.50	267	*e*P	Pn	07 17 42.1	-2.3
BIRV	Birongo	5.97	272	*e*P	Pn	07 17 48.2	-2.5
CAOV	Caicara del Or	6.75	244	*e*P	Pn	07 17 59.7	-1.7
TURV	Turiamo	7.51	271	*e*P	Pn	07 18 08.1	-3.7
BAUV	El Baul	7.85	260	*e*P	Pn	07 18 12.9	-3.6
TEPV	Terepaima	8.86	268	*e*P	Pn	07 18 26.9	-3.3

*DDA **03** 07:17:39.8,39.96N×38.84E,h7km±1km,Md2.8*
*ISCJB **03** 07:17:40.4±0.7,39.94N±0.04×38.82E±0.07,h10km,Error ellipse: s-maj=8.5km s-min=4.7km az=36.9*
*ISK **03** 07:17:40.5,39.98N×38.87E,h6km,MD2.7*
*CSEM **03** 07:17:40.4±0.1,39.94N×38.84E,h2km,MD2.8,Error ellipse: s-maj=3.7km s-min=1.8km az=125.0*
ISC 03 07:17:40.6±0.7,39.94N±0.04×38.84E±0.07,h5km±9km, n13,σ0°41/21,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZC	Erzincan	0.44	116	*e*PG	Pg	07 17 49.5	+0.4
GUMT	Gumushane	0.71	43	*e*PG	Pg	07 17 54.2	0.0
GUMT				*e*SG	Sg	07 18 03.8	+0.2
GUMT	Gumushane	0.71	43	*e*Pg	Pg	07 17 54.2	-0.1
GUMT				*e*Sg	Sg	07 18 03.8	+0.3
KEMA	Kemaliye	0.72	202	*i* P	Pg	07 17 54.1	-0.3
KEMA				*i* S	Sg	07 18 03.9	0.0
KEMA	Kemaliye	0.72	202	*i* P	Pg	07 17 54.1	-0.4
KEMA				*i* S	Sg	07 18 03.9	0.0
ESPY	Espiye-Giresun	0.98	355	*e*Pg	Pg	07 17 59.0	-0.3
ESPY	Espiye-Giresun	0.98	355	*e*Pg	Pg	07 17 59.0	-0.3
MACK	Trabzon	1.23	35	*e*P	Pg	07 18 04.0	-0.1
MACK				*i* S	Sg	07 18 20.1	+0.1
MACK	Trabzon	1.23	35	*e*P	Pg	07 18 04.0	-0.1
MACK				*i* S	Sg	07 18 20.0	0.0
KOPT	Kop Dagi	1.28	86	*e*P	Pn	07 18 04.1	-0.9
KOPT				*e*S	Sb	07 18 22.1	+0.3
KOPT	Kop Dagi	1.28	86	*e*P	Pn	07 18 04.1	-0.9
KOPT				*e*S	Sb	07 18 22.0	+0.2
SVSK	Karacayir	1.42	270	*e*PN	Pn	07 18 07.6	+0.7
SVSK	Karacayir	1.42	270	*e*Pn	Pn	07 18 07.6	+0.7

IDC 03 07:30:29.9±3.2,9.00S×107.70E,h0km,mb3.7/5, mb1 3.9/5,mb1mx3.6/19,mbtmp3.7/5,Error ellipse: s-maj=155.0km s-min=22.2km az=52.0,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	27.95	116	P	P	07 36 21.3	-1.0
	0.5nm,0.8s,baz=286,slow=12,SNR=3.3						
ASAR	Alice Springs	28.99	123	P	P	07 36 33.4	+1.9
	0.7nm,1.0s,baz=300,slow=10,SNR=4.4						
STKA	Stephens Creek	38.80	131	P	P	07 37 55.8	-0.8
	1.8nm,0.7s,baz=315,slow=8.6,SNR=2.7						
SONM	Songino Array	56.60	359	P	P	07 40 14.6	+0.2
	0.5nm,0.6s,baz=189,slow=7.3,SNR=3.7						
MKAR	Makanchi Array	59.99	340	P	P	07 40 38.4	+0.2
	1.4nm,0.5s,baz=143,slow=7.9,SNR=23						
TXAR	Lajitas Array	144.32	51	PKP	PKPdf	07 50 07.7	-1.1
	0.1nm,0.5s,baz=206,slow=6.0,SNR=4.8						

*ISCJB **03** 07:43:55.3±0.2,36.55N±0.02×26.60E±0.03,h148km±3km, mb3.5/5,Error ellipse: s-maj=4.0km s-min=3.4km az=167.6*
*DDA **03** 07:43:55.1,36.43N×26.43E,h25km±5km,Md3.1*
*IDC **03** 07:43:55.5±0.9,36.57N×26.64E,h129km±17km,mb3.3/5, mb1 3.3/11,mb1mx3.2/30,mbtmp3.3/11,MS3.1/1, Ms1 3.1/1,ms1mx2.8/29,Error ellipse: s-maj=20.8km s-min=13.4km az=168.0*
*ATH **03** 07:43:56.0,36.61N×26.58E,h138km±1km*
*CSEM **03** 07:43:56.0±0.1,36.56N×26.59E,h143km±2km,MD3.4, Error ellipse: s-maj=3.7km s-min=3.1km az=4.0*
*HLW **03** 07:43:56.2,36.54N×26.99E,h32km±63km*
*NEIC **03** 07:43:56.0,36.61N×26.58E,h138km,MG3.9(THE),After ATH.*
*THE **03** 07:43:58.5,36.58N×26.59E,h153km±3km,ML3.9/2,Error ellipse: s-maj=3.5km s-min=1.0km az=157.0*
*ISK **03** 07:44:04.9,37.04N×27.16E,h82km,MD3.4*
ISC 03 07:43:56.2±0.2,36.56N±0.02×26.60E±0.03,h143km±3km, n188,σ1°00/228,mb3.5/5,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BODT	Bodrum	0.76	48	*e*PG	Pn	07 44 17.5	-0.9
BODT				*e*SG	Sn	07 44 26.1	-9.1
BODT	Bodrum	0.76	48	*e*Pg	Pn	07 44 17.5	-0.8
BODT				*e*Sg	Sn	07 44 26.1	-9.1
DAT	Datca	0.80	77	*e*PG	Pn	07 44 18.9	+0.2
DAT	Datca	0.80	77	*e*Pg	Pn	07 44 18.9	+0.2
BDRM	Kayabasi	0.84	53	*i* P	Pn	07 44 18.9	0.0
BDRM	Kayabasi	0.84	53	*i* P	Pn	07 44 18.9	-0.1
THR1	Thera Island	0.94	259	P	Pn	07 44 20.0	+0.3
THR1	Thera Island	0.94	259	P	Pn	07 44 20.0	+0.3
THR2	Thira island,	0.95	264	P	Pn	07 44 20.1	+0.3
THR2	Thira island,	0.95	264	P	Pn	07 44 20.1	+0.3
THR3	Thira Island,	0.98	262	P	Pn	07 44 20.4	+0.3
THR3	Thira Island,	0.98	262	P	Pn	07 44 20.4	+0.3
THR6	Thira Island,	0.99	259	P	Pn	07 44 20.7	+0.5
THR6	Thira Island,	0.99	259	P	Pn	07 44 20.7	+0.5
APE	Apeiranthos	1.00	301	*e*P	Pn	07 44 20.4	+0.2
APE				*e*S	Sn	07 44 37.4	-1.2
APE	Apeiranthos	1.00	301	*e*P	Pn	07 44 20.4	+0.2
APE				*e*S	Sn	07 44 37.4	-1.2
APE	Apeiranthos	1.00	301	P	Pn	07 44 19.5	-0.7
APE				S	Sn	07 44 37.4	-1.2
APE	Apeiranthos	1.00	301	*e*P	Pn	07 44 20.4	+0.2
APE				S	Sn	07 44 37.4	-1.2
THR5	Thira Island,	1.02	262	P	Pn	07 44 20.8	+0.4
THR5	Thira Island,	1.02	262	P	Pn	07 44 20.8	+0.4
KARP	Karpathos	1.11	156	*e*P	Pn	07 44 21.8	+0.5
KARP				*e*S	Sn	07 44 40.2	-0.1
KARP	Karpathos	1.11	156	*e*P	Pn	07 44 21.8	+0.5
KARP				*e*S	Sn	07 44 40.2	-0.1
KARP	Karpathos	1.11	156	*e*P	Pn	07 44 21.8	+0.5
KARP				*e*S	Sn	07 44 40.2	-0.1
SMG	Samos	1.16	9	*e*P	Pn	07 44 21.5	-0.3
SMG	Samos	1.16	9	*e*P	Pn	07 44 21.5	-0.3
SMG	Samos	1.16	9	*e*P	Pn	07 44 21.5	-0.3
MLSB	Milas	1.20	52	*e*PG	Pn	07 44 20.0	-2.1
MLSB	Milas	1.20	52	*e*Pg	Pn	07 44 20.0	-2.1
GCAM	G?zelcaml?	1.25	24	*i* P	Pn	07 44 22.3	-0.3
GCAM				*i* S	Sn	07 44 41.4	-1.3
GCAM	G?zelcaml?	1.25	24	*i* P	Pn	07 44 22.3	-0.3
GCAM				*i* S	Sn	07 44 41.4	-1.4
ARG	Arkhangelos	1.28	105	*e*P	Pn	07 44 23.6	+0.7
ARG	Arkhangelos	1.28	105	*e*P	Pn	07 44 23.6	+0.7
ARG	Arkhangelos	1.28	105	P	Pn	07 44 23.5	+0.6
ARG				S	Sn	07 44 43.2	0.0
ARG	Arkhangelos	1.28	105	P	Pn	07 44 23.5	+0.6
ARG				S	Sn	07 44 43.2	0.0
YER	Yerkesik	1.47	66	*e*PG	Pn	07 44 23.8	-1.0
YER	Yerkesik	1.47	66	*e*Pg	Pn	07 44 23.8	-1.0
ZKR	Zakros	1.47	192	*e*P	Pn	07 44 26.4	+1.4
ZKR				*e*S	Sn	07 44 47.6	+0.7
ZKR	Zakros	1.47	192	*e*P	Pn	07 44 26.4	+1.4
ZKR				*e*S	Sn	07 44 47.6	+0.7
ZKR	Zakros	1.47	192	P	Pn	07 44 25.9	+0.9
ZKR				S	Sn	07 44 47.3	+0.4
ZKR	Zakros	1.47	192	P	Pn	07 44 25.9	+0.9
ZKR				S	Sn	07 44 47.3	+0.4
AYDN	Tasoluk	1.50	43	*i* P	Pn	07 44 25.6	+0.4
AYDN	Tasoluk	1.50	43	*i* P	Pn	07 44 25.5	+0.3
NPS	Neapolis	1.52	212	*e*P	Pn	07 44 25.9	+0.4
NPS				*e*S	Sn	07 44 47.3	-0.5
NPS	Neapolis	1.52	212	*e*P	Pn	07 44 25.9	+0.4
NPS				*e*S	Sn	07 44 47.3	-0.5
NPS	Neapolis	1.52	212	*e*P	Pn	07 44 25.9	+0.4
NPS				*e*S	Sn	07 44 47.3	-0.5
TURN	Turunc	1.64	78	*i* P	Pn	07 44 23.7	-3.0
TURN				*i* S	Sn	07 44 43.3	-6.8
TURN	Turunc	1.64	78	*i* P	Pn	07 44 23.7	-3.0
LAST	Lasithi	1.67	214	*e*P	Pn	07 44 27.5	+0.5
LAST				*e*S	Sn	07 44 50.8	+0.2
LAST	Lasithi	1.67	214	*e*P	Pn	07 44 27.5	+0.5
LAST				*e*S	Sn	07 44 50.8	+0.2
LAST	Lasithi	1.67	214	P	Pn	07 44 27.1	+0.1
LAST				S	Sn	07 44 50.5	-0.1
LAST	Lasithi	1.67	214	P	Pn	07 44 27.1	+0.1
LAST				S	Sn	07 44 50.5	-0.1
XRY	Khrisi	1.83	204	*e*P	Pn	07 44 30.1	+1.1
XRY	Khrisi	1.83	204	*e*P	Pn	07 44 30.1	+1.1
XRY	Khrisi	1.83	204	*e*P	Pn	07 44 30.1	+1.1
BLCB	Balcova	1.86	11	*e*PN	Pn	07 44 29.0	-0.1
BLCB	Balcova	1.86	11	P	Pn	07 44 29.0	-0.2
BLCB	Balcova	1.86	11	*e*Pn	Pn	07 44 29.0	-0.2
CHOS	Chios island	1.88	347	*e*P	Pn	07 44 29.1	-0.3
CHOS	Chios island	1.88	347	P	Pn	07 44 29.1	-0.3
CHOS	Chios island	1.88	347	P	Pn	07 44 29.1	-0.3
IDI	Anoyia	1.88	228	P	Pn	07 44 29.7	+0.2
	53nm,0.3s,baz=6.9,slow=6.4,SNR=588						
IDI				S	Sn	07 44 53.8	-1.2
	51nm,0.3s,baz=22,slow=19,SNR=15						
IDI	Anoyia	1.88	228	P	Pn	07 44 29.7	+0.2
IDI				S	Sn	07 44 53.8	-1.2
SIVA	Sivas	2.12	224	*e*P	Pn	07 44 33.5	+1.2
SIVA	Sivas	2.12	224	*e*P	Pn	07 44 33.5	+1.2
SIVA	Sivas	2.12	224	P	Pn	07 44 33.0	+0.7
SIVA				S	Sn	07 44 59.6	-0.4
SIVA	Sivas	2.12	224	P	Pn	07 44 33.0	+0.7
SIVA				S	Sn	07 44 59.6	-0.4
DNZL	Cakiroluk	2.26	59	*i* P	Pn	07 44 34.9	+1.0
DNZL	Cakiroluk	2.26	59	*i* P	Pn	07 44 34.9	+1.0
VAM	Vamos	2.26	240	*e*P	Pn	07 44 34.3	+0.3
VAM	Vamos	2.26	240	*e*P	Pn	07 44 34.3	+0.3
VAM	Vamos	2.26	240	*e*P	Pn	07 44 34.3	+0.3
DENT	Denizli	2.28	58	*e*PN	Pn	07 44 33.5	-0.7
DENT	Denizli	2.28	58	*e*Pn	Pn	07 44 33.5	-0.7
GLHS	Glhisar (BURDU	2.40	75	*e*PN	Pn	07 44 36.6	+0.9
GLHS	Glhisar (BURDU	2.40	75	*e*Pn	Pn	07 44 36.6	+0.9
KSL	Kastellorizon	2.44	99	*e*P	Pn	07 44 37.1	+0.9
KSL	Kastellorizon	2.44	99	*e*P	Pn	07 44 37.1	+0.9
KSL	Kastellorizon	2.44	99	*e*P	Pn	07 44 37.1	+0.9
AKAS	Kas	2.45	97	*i* P	Pn	07 44 37.3	+1.0
AKAS	Kas	2.45	97	*i* P	Pn	07 44 37.3	+1.0
KARN	Karanos	2.46	243	*e*P	Pn	07 44 37.0	+0.5
KARN	Karanos	2.46	243	P	Pn	07 44 36.8	+0.3
KARN				S	Sn	07 45 07.4	-0.1
KARN	Karanos	2.46	243	P	Pn	07 44 36.8	+0.3
KARN				S	Sn	07 45 07.4	-0.1
KULA	Kula-Manisa	2.55	39	*e*PN	Pn	07 44 36.7	-0.8
KULA	Kula-Manisa	2.55	39	*e*Pn	Pn	07 44 36.7	-0.8
ATHU	Athens Univers	2.65	303	P	Pn	07 44 39.7	+0.9
ATHU	Athens Univers	2.65	303	P	Pn	07 44 39.7	+0.9
ELL	Elmali	2.67	85	*e*PN	Pn	07 44 40.9	+1.9
ELL	Elmali	2.67	85	*e*Pn	Pn	07 44 40.9	+1.9
DID	Didima	2.85	290	*e*P	Pn	07 44 42.0	+0.7
DID	Didima	2.85	290	P	Pn	07 44 41.9	+0.6
DID	Didima	2.85	290	P	Pn	07 44 41.9	+0.6
KYTH	Kithira	2.89	266	*e*P	Pn	07 44 42.3	+0.5
KYTH	Kithira	2.89	266	*e*P	Pn	07 44 42.3	+0.5
KYTH	Kithira	2.89	266	*e*P	Pn	07 44 42.3	+0.5
KHL	Karahalli	2.92	52	*e*PN	Pn	07 44 42.0	-0.2
KHL	Karahalli	2.92	52	*e*Pn	Pn	07 44 42.0	-0.2
KHAL	Karahalli	2.93	51	*i* P	Pn	07 44 42.8	+0.6
KHAL	Karahalli	2.93	51	*i* P	Pn	07 44 42.8	+0.5
VLI	Veliai	2.95	274	*e*P	Pn	07 44 42.5	-0.1
VLI	Veliai	2.95	274	*e*P	Pn	07 44 42.5	-0.1
VLI	Veliai	2.95	274	*e*P	Pn	07 44 42.5	-0.1
LTK	Loutraki	3.25	298	*e*P	Pn	07 44 46.7	+0.3
LTK	Loutraki	3.25	298	P	Pn	07 44 47.0	+0.6
LTK	Loutraki	3.25	298	P	Pn	07 44 47.0	+0.6
BCK	Bucak	3.32	73	*e*PN	Pn	07 44 48.8	+1.5
BCK	Bucak	3.32	73	*e*Pn	Pn	07 44 48.8	+1.5
ISP	Isparta	3.38	67	P	Pn	07 44 48.8	+0.7
ISP	Isparta	3.38	67	P	Pn	07 44 48.8	+0.7
AOS	Alonnisos	3.38	321	P	Pn	07 44 48.1	0.0
AOS	Alonnisos	3.38	321	P	Pn	07 44 48.1	0.0
LKR	Lokris	3.54	307	P	Pn	07 44 50.6	+0.4
LKR	Lokris	3.54	307	P	Pn	07 44 50.6	+0.4
ATAL	Atalanti	3.55	308	P	Pn	07 44 50.3	0.0
ATAL	Atalanti	3.55	308	P	Pn	07 44 50.3	0.0
SUTC	Sutluce-Ispart	3.64	74	*e*PN	Pn	07 44 53.1	+1.7
SUTC	Sutluce-Ispart	3.64	74	*e*Pn	Pn	07 44 53.1	+1.6
SHUT	Suhut-Afyon	3.72	56	*e*PN	Pn	07 44 53.2	+0.7
SHUT	Suhut-Afyon	3.72	56	*e*Pn	Pn	07 44 53.2	+0.7
DSF	Desfina	3.73	301	P	Pn	07 44 53.0	+0.3
DSF	Desfina	3.73	301	P	Pn	07 44 53.0	+0.3
ALT	Altintas	3.73	47	*e*PN	Pn	07 44 53.0	+0.3
ALT	Altintas	3.73	47	*e*Pn	Pn	07 44 53.0	+0.3
ITM	Ithomi	3.80	281	*e*P	Pn	07 44 54.8	+1.2
ITM	Ithomi	3.80	281	*e*P	Pn	07 44 54.8	+1.2
ITM	Ithomi	3.80	281	P	Pn	07 44 54.5	+0.9
ITM	Ithomi	3.80	281	P	Pn	07 44 54.5	+0.9
PYL	PYLOS	3.92	276	*e*P	Pn	07 44 55.8	+0.7
PYL	PYLOS	3.92	276	P	Pn	07 44 54.5	-0.6
PYL	PYLOS	3.92	276	*e*P	Pn	07 44 54.8	-0.3
AGG	Agios Georgios	4.18	307	*e*P	Pn	07 44 59.8	+1.2
AGG	Agios Georgios	4.18	307	*e*P	Pn	07 44 59.8	+1.2
AGG	Agios Georgios	4.18	307	*e*P	Pn	07 44 59.8	+1.2
KIZT	Kizilcal	4.78	59	*e*PN	Pn	07 45 07.7	+1.2
KIZT	Kizilcal	4.78	59	*e*Pn	Pn	07 45 07.7	+1.2
SLUM		5.18	193	P	Pn	07 45 11.9	-0.1
	baz=197						
SLUM		5.18	193	P	Pn	07 45 11.9	0.0
HMAT	Matruh	5.47	176	P	Pn	07 45 16.3	+0.6
	baz=179						
HMAT	Matruh	5.47	176	P	Pn	07 45 16.3	+0.6
CSS	Prodhromos	5.70	104	P	Pn	07 45 18.1	-0.7
CSS	Prodhromos	5.70	104	P	Pn	07 45 18.1	-0.7
BR131	Keskin Array S	6.38	58	*e*Pn	Pn	07 45 29.2	+1.3
BR131				*e*Sn	Sn	07 46 44.2	+4.6
BR131	Keskin Array S	6.38	58	*e*Pn	Pn	07 45 29.2	+1.3
BRTR	Keskin Array B	6.38	58	P	Pn	07 45 28.1	+0.3
	0.3nm,0.3s,baz=235,slow=13,SNR=19						
BRTR				S

*CSEM **03** 07:49:51.8±0.1, 39°.09N×27°.29E, h10km, MD2.6, Error ellipse: s-maj=3.3km s-min=2.7km az=84.0*
ISC 03 07:49:52.0±0.4, 39°.10N±0°.02×27°.30E±0°.03, h10km±4km, n44, σ0§73/61, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKS	**Akhisar**	**0.46**	**119**	**eP**	**Pg**	**07 50 00.7**	**-0.3**
AKS	**Akhisar**	**0.46**	**119**	**ePg**	**Pg**	**07 50 00.7**	**-0.3**
AKHS	**Akhisar**	**0.46**	**119**	*i P*	**Pg**	**07 50 00.3**	**-0.7**
AKHS				*i S*	**Sg**	**07 50 07.4**	**+0.4**
AKHS	**Akhisar**	**0.46**	**119**	*i P*	**Pg**	**07 50 00.3**	**-0.7**
AKHS				*i S*	**Sg**	**07 50 07.4**	**+0.4**
AYVA	**Ayvalik**	**0.52**	**294**	*i P*	**Pg**	**07 50 02.0**	**-0.1**
AYVA				*i S*	**Sg**	**07 50 09.3**	**+0.5**
AYVA	**Ayvalik**	**0.52**	**294**	*i P*	**Pg**	**07 50 02.0**	**-0.1**
AYVA				*i S*	**Sg**	**07 50 09.4**	**+0.5**
BALY	**Balya**	**0.68**	**21**	*i P*	**Pg**	**07 50 05.1**	**-0.2**
BALY				*i S*	**Sg**	**07 50 14.8**	**+0.6**
BALY	**Balya**	**0.68**	**21**	*i P*	**Pg**	**07 50 05.1**	**-0.2**
BALY				*i S*	**Sg**	**07 50 14.8**	**+0.6**
KDAG	**Bornova**	**0.70**	**182**	*i P*	**Pg**	**07 50 04.7**	**-0.8**
KDAG				*i S*	**Sg**	**07 50 14.5**	**-0.2**
KDAG	**Bornova**	**0.70**	**182**	*i P*	**Pg**	**07 50 04.7**	**-0.8**
KDAG				*i S*	**Sg**	**07 50 14.5**	**-0.1**
BALB	**Balikesir**	**0.70**	**40**	*ePG*	**Pg**	**07 50 06.0**	**+0.5**
BALB	**Balikesir**	**0.70**	**40**	*ePg*	**Pg**	**07 50 06.0**	**+0.4**
IZM	**Izmir**	**0.70**	**182**	*ePG*	**Pg**	**07 50 05.5**	**-0.1**
IZM	**Izmir**	**0.70**	**182**	*ePg*	**Pg**	**07 50 05.6**	**0.0**
BLCB	**Balcova**	**0.74**	**196**	*ePG*	**Pg**	**07 50 05.8**	**-0.6**
BLCB				*eSG*	**Sg**	**07 50 16.5**	**+0.5**
BLCB	**Balcova**	**0.74**	**196**	*ePg*	**Pg**	**07 50 05.8**	**-0.6**
BLCB				*eSg*	**Sg**	**07 50 16.5**	**+0.4**
URLA	**Izmir**	**0.92**	**217**	*i P*	**Pg**	**07 50 09.7**	**-0.1**
URLA				*i S*	**Sg**	**07 50 23.1**	**+1.3**
URLA	**Izmir**	**0.92**	**217**	*i P*	**Pg**	**07 50 09.7**	**-0.1**
GONE	**Gonen-Balikesi**	**0.99**	**17**	*ePG*	**Pg**	**07 50 11.2**	**+0.2**
GONE	**Gonen-Balikesi**	**0.99**	**17**	*ePg*	**Pg**	**07 50 11.2**	**+0.1**
DURS	**Dursunbey**	**1.04**	**61**	*i P*	**Pg**	**07 50 11.6**	**-0.4**
DURS				*i S*	**Sg**	**07 50 25.4**	**0.0**
DURS	**Dursunbey**	**1.04**	**61**	*i P*	**Pg**	**07 50 11.6**	**-0.4**
DURS				*i S*	**Sg**	**07 50 25.4**	**-0.1**
EZN	**Ezine**	**1.04**	**314**	*ePG*	**Pg**	**07 50 12.0**	**-0.2**
EZN	**Ezine**	**1.04**	**314**	*ePg*	**Pg**	**07 50 12.0**	**-0.1**
DEMI	**Demirci**	**1.10**	**93**	*i P*	**Pb**	**07 50 12.4**	**-0.8**
DEMI				*i S*	**Sb**	**07 50 26.7**	**-0.9**
DEMI	**Demirci**	**1.10**	**93**	*i P*	**Pb**	**07 50 12.4**	**-0.8**
KULA	**Kula-Manisa**	**1.21**	**118**	*ePN*	**Pn**	**07 50 14.3**	**-0.8**
KULA	**Kula-Manisa**	**1.21**	**118**	*ePn*	**Pn**	**07 50 14.3**	**-0.7**
KRBG	**Karabiga-Canak**	**1.29**	**360**	*ePN*	**Pn**	**07 50 15.6**	**-0.5**
KRBG	**Karabiga-Canak**	**1.29**	**360**	*ePn*	**Pn**	**07 50 15.6**	**-0.5**
LPK	**Lapseki**	**1.34**	**342**	*ePN*	**Pn**	**07 50 16.1**	**-0.6**
LPK	**Lapseki**	**1.34**	**342**	*ePn*	**Pn**	**07 50 16.1**	**-0.6**
AYDN	**Tasoluk**	**1.51**	**162**	*eP*	**Pn**	**07 50 19.4**	**+0.3**
AYDN				*i S*	**Sn**	**07 50 38.5**	**-0.3**
AYDN	**Tasoluk**	**1.51**	**162**	*eP*	**Pn**	**07 50 19.4**	**+0.3**
GADA	**Gvkgeada**	**1.53**	**316**	*ePN*	**Pn**	**07 50 18.9**	**-0.6**
GADA	**Gvkgeada**	**1.53**	**316**	*ePn*	**Pn**	**07 50 18.9**	**-0.6**
RKY	**Sarkoy-Tekirda**	**1.59**	**357**	*ePN*	**Pn**	**07 50 19.8**	**-0.4**
RKY	**Sarkoy-Tekirda**	**1.59**	**357**	*ePn*	**Pn**	**07 50 19.8**	**-0.4**
ERIK	**Erikli-Kesan**	**1.68**	**339**	*ePN*	**Pn**	**07 50 21.1**	**-0.3**
ERIK	**Erikli-Kesan**	**1.68**	**339**	*ePn*	**Pn**	**07 50 21.1**	**-0.4**
GDZ	**Gediz**	**1.70**	**90**	*eP*	**Pn**	**07 50 23.6**	**+1.9**
GDZ				*i S*	**Sn**	**07 50 45.3**	**+1.8**
GDZ	**Gediz**	**1.70**	**90**	*eP*	**Pn**	**07 50 23.6**	**+1.9**
ULDT	**Uludag**	**1.76**	**53**	*i P*	**Pn**	**07 50 24.4**	**+1.9**
ULDT				*i S*	**Sn**	**07 50 44.5**	**-0.5**
ULDT	**Uludag**	**1.76**	**53**	*i P*	**Pn**	**07 50 24.4**	**+1.9**

*IDC **03** 07:50:53.6±0.8, 26°.98N×142°.90E, h0km, mb3.9/12, mb1 4.1/14, mb1mx4.0/26, mbtmp3.9/14, ML3.9/1, MS3.6/1, Ms1 3.6/1, ms1mx2.8/36, Error ellipse: s-maj=20.4km s-min=14.8km az=20.0*
*ISCJB **03** 07:50:55.8±1.4, 27°.20N±0°.05×143°.00E±0°.08, h24km±9km, mb4.0/12, Error ellipse: s-maj=13.1km s-min=7.8km az=21.9*
*JMA **03** 07:50:57.3±0.1, 27°.14N×142°.66E, h83km, M3.6*
*BJI **03** 07:50:58.4, 27°.00N×142°.80E, h40km, mB4.6/4, mb4.4/6*
*NEIC **03** 07:50:59.5±0.6, 27°.02N×142°.83E, h40km, MG3.6(JMA), Error ellipse: s-maj=18.2km s-min=10.7km az=73.0*
ISC 03 07:50:57.5±1.4, 27°.08N±0°.05×142°.96E±0°.08, h26km±9km, n28, σ0§71/30, mb4.0/12, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**0.69**	**272**	**Pn**	**Pn**	**07 51 10.8**	**-0.9**
	404nm,0.3s,baz=92,slow=9.3,SNR=374						
CBIJ				Sn	**Sn**	**07 51 21.4**	**0.0**
	723nm,0.3s,baz=268,slow=22,SNR=8.5						
CBIJ	**Chichi jima**	**0.69**	**272**	P	**Pb**	**07 51 10.9**	**0.0**
CBIJ				S	**Sb**	**07 51 20.3**	**+0.3**
JHHJ	**Haha-jima-NKT**	**0.83**	**237**	P	**Pb**	**07 51 12.9**	**-0.3**
JHHJ				S	**Sb**	**07 51 24.6**	**+0.6**
JHJ	**Hachijo jima 2**	**6.62**	**336**	LR	LR	07 54 45.0	
	comp=Z,501nm,20.9s,baz=249,slow=35						
BSO1	**Boso 1**	**7.74**	**348**	P	**Pn**	**07 52 49.2**	**+0.7**
BSO3	**Boso 3**	**7.98**	**345**	P	**Pn**	**07 52 51.7**	**-0.1**
JHU	**Hanno**	**9.29**	**341**	P	**Pn**	**07 53 09.2**	**-0.6**
JRY	**Ryogami san**	**9.56**	**340**	P	**Pn**	**07 53 13.1**	**-0.3**
JAG	**Ashikaga**	**9.78**	**343**	P	**Pn**	**07 53 15.5**	**-1.0**
JAG				*eS*	**Sn**	**07 55 04.8**	**-0.7**
MJAR	**Matsushiro Arr**	**10.26**	**338**	**Pn**	**Pn**	**07 53 22.8**	**-0.3**
	1.0nm,0.3s,baz=146,slow=12,SNR=13						
MAJO	**Matsushiro**	**10.26**	**338**	Pn	**Pn**	**07 53 23.6**	**+0.5**
	8.3nm,0.6s						
MAT	**Matsushiro**	**10.26**	**338**	P	**Pn**	**07 53 22.5**	**-0.6**
KSRS	**Korea Array**	**16.37**	**313**	Pn	**Pn**	**07 54 46.5**	**+0.9**
	0.2nm,0.3s,baz=118,slow=11,SNR=4.2						
SONM	**Songino Array**	**35.20**	**316**	P	**P**	**07 57 51.0**	**+1.5**
	0.4nm,0.3s,mb3.8,baz=100,slow=7.9,SNR=3.7						
CMAR	**Chiang Mai Arr**	**41.31**	**268**	P	**P**	**07 58 41.1**	**-0.2**
	1.6nm,0.3s,mb4.1,baz=113,slow=6.1,SNR=1.9						
WRA	**Warramunga Arr**	**47.48**	**191**	P	**P**	**07 59 29.4**	**-1.0**
	2.6nm,0.5s,mb4.4,baz=12,slow=8.7,SNR=28						
WRA	**Warramunga Arr**	**47.48**	**191**	P	**P**	**07 59 29.4**	**-1.0**
ZALV	**Zalesovo Beam**	**49.95**	**319**	P	**P**	**07 59 49.4**	**+0.3**
	1.2nm,0.5s,mb4.2,baz=86,slow=7.6,SNR=5.3						
MKAR	**Makanchi Array**	**51.02**	**310**	P	**P**	**07 59 56.6**	**-0.6**
	0.4nm,0.6s,mb3.5,baz=87,slow=10.0,SNR=5.6						
MKAR				PcP	PcP	08 01 13.4	+0.4
	1.5nm,0.9s,baz=90,slow=4.3,SNR=5.4						
ASAR	**Alice Springs**	**51.20**	**191**	P	**P**	**07 59 57.3**	**-1.5**
	0.5nm,0.7s,mb3.5,baz=14,slow=9.5,SNR=4.4						
KURK	**Kurchatov**	**53.49**	**315**	P	**P**	**08 00 15.9**	**+0.4**
	2.1nm,0.5s,mb4.3,baz=91,slow=7.7,SNR=11						
AKTK	**Aktyubinsk**	**66.52**	**316**	P	**P**	**08 01 45.5**	**+0.5**
AKTO	**Aktyubinsk**	**66.52**	**316**	P	**P**	**08 01 45.5**	**+0.5**
	2.2nm,0.7s,mb4.3,baz=82,slow=13,SNR=9.1						
FINES	**FINESS Array B**	**78.27**	**334**	P	**P**	**08 02 54.4**	**-0.4**
	3.2nm,1.1s,mb4.2,baz=97,slow=3.2,SNR=7.5						
NVAR	**Mina Array Bea**	**79.99**	**52**	P	**P**	**08 03 05.8**	**+1.1**
	0.8nm,0.9s,mb3.6,baz=269,slow=5.7,SNR=5.1						
HFS	**Hagfors**	**83.71**	**337**	P	**P**	**08 03 24.0**	**+0.2**
	0.7nm,0.5s,mb4.0,baz=101,slow=2.9,SNR=3.5						
PDAR	**Pinedale Array**	**83.74**	**45**	P	**P**	**08 03 25.6**	**+1.2**
	0.3nm,0.7s,mb3.5,baz=302,slow=7.2,SNR=3.2						
LPAZ	**La Paz**	**149.26**	**76**	PKPbc	PKPbc	08 10 46.8	+2.2
	1.9nm,0.9s,baz=298,slow=2.4,SNR=10						

NNC 03 08:19:36.3±15.0, 38°.88N×71°.66E, h0km, mb3.4, mpv3.1, 3C-1D, Error ellipse: s-maj=117.7km s-min=80.0km az=6.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**4.31**	**349**	Pn	Pn	08 20 44.2	+1.2
	1.5nm,0.4s,baz=162,slow=11,SNR=18						
KK31				⇑Sn	Sn	08 21 40.2	+6.3
	1.4nm,0.3s,baz=156,slow=29,SNR=5.6						
TKM2	**Tokmak 2**	**5.02**	**35**	⇑Pn	Pn	08 20 53.5	+0.7
	1.6nm,0.6s						
TKM2				⇑Sn	Sn	08 21 57.4	+5.9
	2.9nm,0.5s						
AB31	**Akbulak array**	**13.35**	**325**	⇓Pn	Pn	08 22 48.0	+1.1
	0.3nm,0.5s,baz=130,slow=14,SNR=5.4						

*NEIC **03** 08:25:59.6±3.8, 20°.66S×178°.05W, h565km±22km, mb4.1/1, Error ellipse: s-maj=91.1km s-min=25.4km az=139.0*
*IDC **03** 08:26:00.7±28.0, 20°.47S×178°.24W, h563km±268km, mb3.2/5, mb1 3.4/5, mb1mx3.0/16, mbtmp3.2/5, Error ellipse: s-maj=192.1km s-min=104.6km az=73.0*
ISC 03 08:26:00.4±7.4, 20°.6S±0°.7×178°.1W±0°.9, h567km±32km, n9, σ0§41/8, mb3.8/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.60**	**308**	*eP*	**P**	**08 27 28.0**	**-0.1**
DZM	**Mont Dzumac**	**14.44**	**261**	*eP*	**P**	**08 29 04.4**	**+0.4**
	9.0nm,1.2s						
CTA	**Charters Tower**	**33.35**	**265**	P	**P**	**08 31 52.6**	**0.0**
	2.6nm,0.5s,mb4.0,baz=81,slow=12,SNR=7.6						
STKA	**Stephens Creek**	**37.62**	**244**	P	**P**	**08 32 27.9**	**0.0**
	1.3nm,0.7s,mb3.6,baz=97,slow=14,SNR=3.7						
ASAR	**Alice Springs**	**44.36**	**257**	P	**P**	**08 33 21.2**	**-0.1**
	1.9nm,0.8s,mb3.7,baz=87,slow=8.3,SNR=10						
WRA	**Warramunga Arr**	**44.45**	**262**	P	**P**	**08 33 21.5**	**-0.6**
	1.3nm,0.7s,mb3.6,baz=95,slow=8.4,SNR=7.1						
WRA	**Warramunga Arr**	**44.45**	**262**	P	**P**	**08 33 21.5**	**-0.6**
CMAR	**Chiang Mai Arr**	**90.03**	**290**	P	**P**	**08 38 01.0**	**+0.3**
	1.0nm,0.3s,mb4.1,baz=144,slow=4.5,SNR=4.5						
AKASG	**Malin Array Be**	**143.05**	**331**	PKP	PKPdf	08 44 29.4	-0.6
	1.7nm,0.5s,baz=39,slow=3.9,SNR=7.3						

*IDC **03** 08:26:25.9±1.6, 1°.62N×126°.55E, h0km, mb4.0/4, mb1 4.1/5, mb1mx3.7/19, mbtmp3.9/5, ML3.4/1, Error ellipse: s-maj=104.4km s-min=21.4km az=67.0*
*NEIC **03** 08:26:27.2±1.2, 1°.61N×126°.61E, h10km, mb4.2/1, Error ellipse: s-maj=67.6km s-min=16.4km az=68.0*
*DJA **03** 08:26:32, 1°.55N×126°.66E, h17km, MLv4.2/6*
*ISCJB **03** 08:26:33.2±0.6, 1°.54N±0°.06×126°.70E±0°.05, h73km±7km, mb4.0/5, Error ellipse: s-maj=10.8km s-min=6.2km az=37.3*
ISC 03 08:26:34.3±0.6, 1°.53N±0°.06×126°.70E±0°.05, h66km±8km, n15, σ1§14/20, mb4.0/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.00**	**138**	P	**Pn**	**08 26 51.3**	**-1.3**
TNTI				S	**Sn**	**08 27 05.5**	**-0.8**
MNI	**Manado**	**1.86**	**267**	P	**Pn**	**08 27 03.3**	**-0.7**
MNI				S	**Sn**	**08 27 24.9**	**-1.7**
LBMI	**Labuha**	**2.30**	**160**	P	**Pn**	**08 27 10.1**	**+0.2**
LBMI				S	**Sn**	**08 27 39.5**	**+2.4**
SGSI	**Sangihe**	**2.44**	**331**	P	**Pn**	**08 27 12.0**	**+0.1**
SGSI				S	**Sn**	**08 27 41.7**	**+1.1**
KMSI	**Cibinong**	**2.88**	**251**	P	**Pn**	**08 27 17.9**	**+0.1**
KMSI				S	**Sn**	**08 27 53.4**	**+2.1**
LUWI	**Luwuk**	**4.69**	**237**	P	**Pn**	**08 27 42.7**	**+0.2**
MRSI	**Marisa**	**4.87**	**258**	P	**Pn**	**08 27 45.0**	**-0.1**
SWI	**Sorong**	**5.14**	**118**	P	**Pn**	**08 27 49.6**	**+0.9**
FITZ	**Fitzroy Crossi**	**19.54**	**183**	P	**Pn**	**08 30 55.9**	**-2.5**
	0.1nm,0.3s,baz=89,slow=18,SNR=3.1						
WRAB	**Tennant Creek**	**22.61**	**161**	*eP*	**P**	**08 31 28.9**	**-0.6**
	5.8nm,0.6s,mb4.1						
WRA	**Warramunga Arr**	**22.61**	**161**	P	**P**	**08 31 28.9**	**-0.7**
	5.9nm,0.6s,mb4.1,baz=339,slow=11,SNR=67						
WRA	**Warramunga Arr**	**22.61**	**161**	P	**P**	**08 31 28.9**	**-0.7**
ASAR	**Alice Springs**	**26.00**	**165**	P	**P**	**08 32 02.5**	**+1.4**
	2.5nm,0.3s,mb4.0,baz=348,slow=13,SNR=45						
STKA	**Stephens Creek**	**36.10**	**158**	P	**P**	**08 33 30.8**	**+0.9**
	1.0nm,0.6s,mb3.9,baz=352,slow=7.1,SNR=2.9						
MKAR	**Makanchi Array**	**59.34**	**326**	P	**P**	**08 36 28.7**	**-0.8**
	0.4nm,0.4s,mb3.8,baz=125,slow=7.2,SNR=12						

*IDC **03** 08:45:05.8±1.1, 37°.39N×70°.33E, h0km, mb3.8/6, mb1 4.1/11, mb1mx3.9/26, mbtmp4.0/11, ML3.9/5, MS3.9/1, Ms1 3.9/1, ms1mx2.9/31, Error ellipse: s-maj=18.9km s-min=16.8km az=127.0*
*BJI **03** 08:45:08.0, 38°.08N×69°.90E, h9km, mB4.8/10, mb4.6/12, ML3.9/3, Ms4.0/9, Ms7 3.8/8*
*NEIC **03** 08:45:09.5±0.7, 37°.69N×70°.10E, h10km, mb4.1/2, Error ellipse: s-maj=12.6km s-min=9.9km az=113.0*
*ISCJB **03** 08:45:10.2±1.5, 37°.87N±0°.05×69°.93E±0°.07, h15km±9km, mb4.2/12, MS3.8/3, Error ellipse: s-maj=9.3km s-min=7.1km az=150.2*
*NNC **03** 08:45:12.6±1.8, 37°.84N×69°.77E, h30km±14km, mb4.3, mpv4.0, Error ellipse: s-maj=19.8km s-min=15.4km az=93.0*
ISC 03 08:45:10.6±1.6, 37°.90N±0°.04×69°.97E±0°.06, h3km±9km, n54, σ1§46/65, mb4.2/12, MS3.8/3, 5C-6D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**3.44**	**193**	*ePn*	**Pn**	**08 46 02.3**	**-2.8**
KBL				*eSg*	**Sn**	**08 46 47.6**	**+1.3**
KSH	**Kashi**	**4.96**	**69**	Pn	**Pn**	**08 46 21.6**	**-4.5**
KSH				Sn	**Sn**	**08 47 15.3**	**-8.7**
KSH				smax			
	comp=N,140nm,1.0s						
KSH				smax			
	comp=E,170nm,1.0s						
AML	**Almayashu**	**5.10**	**33**	P	**Pn**	**08 46 30.2**	**+2.2**
	SNR=34						
AML	**Almayashu**	**5.10**	**33**	*ePn*	**Pn**	**08 46 29.9**	**+1.9**
	comp=E,68nm,0.5s						
KK31	**Karatay Array**	**5.21**	**4**	Pn	**Pn**	**08 46 32.5**	**+3.0**
	comp=E,3.7nm,0.5s,baz=194,slow=14,SNR=51						
KK31				Pg	**Pg**	**08 46 48.2**	**-2.3**
	comp=E,12nm,0.5s,baz=175,slow=11,SNR=7.6						
KK31				⇑Sn	**Sn**	**08 47 35.2**	**+5.0**
	comp=E,17nm,0.5s						
KK31				⇓Lg		08 48 03.5	
	comp=E,81nm,0.7s,baz=181,slow=28,SNR=8.9						
EKS2	**Erkin-Say**	**5.58**	**30**	P	**Pn**	**08 46 37.4**	**+2.9**
	SNR=18						
EKS2	**Erkin-Say**	**5.58**	**30**	Pn	**Pn**	**08 46 34.9**	**+0.4**
	comp=E,26nm,0.6s						
KZA	**Kyzart**	**5.82**	**43**	P	**Pn**	**08 46 39.4**	**+1.6**
	SNR=23						
AAK	**Ala-Archa**	**5.86**	**35**	P	**Pn**	**08 46 40.7**	**+2.4**
	SNR=24						
AAK	**Ala-Archa**	**5.86**	**35**	Pn	**Pn**	**08 46 40.1**	**+1.7**
	comp=E,12nm,0.3s,baz=220,slow=4.4,SNR=30						
AAK				Lg		08 48 19.6	
	comp=E,1.6nm,0.3s,baz=265,slow=22,SNR=3.8						
KBK	**Karagaybulak**	**6.09**	**37**	P	**Pn**	**08 46 45.8**	**+4.2**
	SNR=9.9						
CHMS	**Chumysh**	**6.26**	**34**	P	**Pn**	**08 46 45.8**	**+1.9**
	SNR=9.9						
USP	**Ospenovka**	**6.37**	**31**	P	**Pn**	**08 46 47.5**	**+2.1**
	SNR=42						
TKM2	**Tokmak 2**	**6.60**	**39**	⇑Pn	**Pn**	**08 46 49.9**	**+1.3**
	comp=E,12nm,0.5s						
TKM2				⇓Lg		08 48 46.1	
	comp=E,24nm,0.8s						
TKM2	**Tokmak 2**	**6.60**	**39**	P	**Pn**	**08 46 50.3**	**+1.7**
	SNR=27						
TKM2	**Tokmak 2**	**6.60**	**39**	*ePn*	**Pn**	**08 46 50.2**	**+1.6**
	comp=E,33nm,0.9s						
THN	**Thein Dam**	**7.20**	**138**	*ePKP*	**Pb**	**08 47 10.8**	**-5.5**
MK31	**Makanchi Array**	**12.71**	**42**	⇑P	**Pn**	**08 48 11.7**	**-0.7**
	comp=E,6.8nm,0.8s,baz=227,slow=13,SNR=42						
MK31	**Makanchi Array**	**12.71**	**42**	*ePn*	**Pn**	**08 48 11.1**	**-1.2**
MKAR	**Makanchi Array**	**12.71**	**42**	Pn	**Pn**	**08 48 11.8**	**-0.5**
	comp=E,0.2nm,0.3s,baz=231,slow=14,SNR=40						
MKAR	**Makanchi Array**	**12.71**	**42**	Pn	**Pn**	**08 48 11.8**	**-0.5**
AB31	**Akbulak array**	**13.46**	**331**	Pn	**Pn**	**08 48 21.4**	**-1.1**
	comp=E,0.4nm,0.3s,baz=166,slow=11,SNR=43						
AB31				⇓Sn	**Sn**	**08 50 47.2**	**-5.5**
	comp=E,1.4nm,0.5s,baz=153,slow=24,SNR=3.8						
ABKAR	**Akbulak array**	**13.46**	**331**	*ePn*	**Pn**	**08 48 22.5**	**0.0**
	comp=E,1.8nm,0.4s						
ABKAR				*eSn*	**Sn**	**08 50 46.2**	**-6.4**
KURK	**Kurchatov**	**14.22**	**23**	Pn	**Pn**	**08 48 28.8**	**-4.0**
	comp=E,0.2nm,0.3s,baz=211,slow=12,SNR=26						
KURK				Lg		08 52 45.1	
	comp=E,0.1nm,0.3s,baz=204,slow=31,SNR=4.4						
KURK	**Kurchatov**	**14.22**	**23**	Pn	**Pn**	**08 48 29.8**	**-3.0**
	comp=E,2.5nm,0.7s						
WMQ	**Urumqi**	**14.65**	**61**	*eP*	**Pn**	**08 48 39.7**	**+1.0**
WMQ				pP	pP	08 48 43.1	-2.8
WMQ				sP	sP	08 48 46.7	+0.4
WMQ				PP		08 48 51.7	
WMQ				LR	LR		
	comp=N,170nm,10.3s						
WMQ				LR	LR		
	comp=Z,160nm,11.0s						
VOSK	**Vostochnaya**	**14.84**	**2**	⇓P	**Pn**	**08 48 39.9**	**-1.4**
	comp=Z,6.6nm,1.0s						
VOSK				⇓S	**Sn**	**08 51 25.4**	**-0.7**
	comp=Z,2.9nm,0.8s						
ZRNK	**Zerenda**	**15.07**	**358**	⇓P	**Pn**	**08 48 46.0**	**+1.6**
	comp=Z,4.9nm,0.8s						
ZRNK				⇑S	**Sn**	**08 51 31.9**	**+0.2**
	comp=Z,3.1nm,0.9s						
AKTK	**Aktyubinsk**	**15.16**	**330**	Pn	**Pn**	**08 48 46.5**	**+0.8**
AKTO	**Aktyubinsk**	**15.16**	**330**	Pn	**Pn**	**08 48 46.5**	**+0.8**
	comp=Z,0.9nm,0.3s,baz=133,slow=12,SNR=14						
BRVK	**Borovoye**	**15.16**	**1**	⇑P	**Pn**	**08 48 43.8**	**-1.8**
	comp=Z,9.2nm,0.7s						
BRVK	**Borovoye**	**15.16**	**1**	*ePn*	**Pn**	**08 48 44.8**	**-0.8**
	comp=Z,5.2nm,0.6s						
BRVK				*e*		08 48 50.8	
ZAA0	**Zalesovo Array**	**19.02**	**28**	*eP*	**Pn**	**08 49 31.2**	**-2.9**
ZALV	**Zalesovo Beam**	**19.02**	**28**	P	**Pn**	**08 49 31.4**	**-2.8**
	comp=Z,1.1nm,0.3s,baz=214,slow=10,SNR=42						
ARU	**Arti**	**20.05**	**341**	*eP*	**P**	**08 49 45.8**	**+1.1**
	comp=Z,9.8nm,0.8s						
HYB	**Hyderabad**	**21.75**	**157**	*eP*	**P**	**08 49 57.0**	**-6.4**
HYB	**Hyderabad**	**21.75**	**157**	*i P*	**P**	**08 49 57.0**	**-6.4**
GTA	**Gaotai**	**23.31**	**77**	*eP*	**P**	**08 50 17.9**	**-1.9**
GTA				pP		08 50 22.2	
GTA				sP	sP	08 50 24.7	+3.8
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb3.9						
LZH	**Lanzhou**	**27.03**	**83**	*eP*	**P**	**08 50 48.9**	**-5.2**
LZH				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.5						
SONM	**Songino Array**	**28.25**	**58**	P	**P**	**08 51 02.4**	**-2.5**
	comp=Z,0.4nm,0.4s,mb3.4,baz=261,slow=8.6,SNR=2.8						
SONM	**Songino Array**	**28.25**	**58**	P	**P**	**08 51 02.4**	**-2.5**
CD2	**Chengdu**	**28.62**	**94**	P	**P**	**08 51 09.2**	**+0.8**
CD2				pP	pP	08 51 13.2	+4.1
CD2				sP	sP	08 51 15.3	+5.8
CD2				PP	PP	08 52 01.4	-11
CD2				S	**S**	**08 55 56.9**	**-0.7**
CD2				sS	sS	08 56 03.6	+4.7
CD2				SS	SS	08 57 22.9	-35
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.8						
CD2				pmax	pmax		
	comp=Z,120nm,10.6s						
CD2				LR	LR		
	comp=N,170nm,5.3s						
CD2				LR	LR		
	comp=Z,160nm,6.5s						
KMI	**Kunming**	**30.54**	**105**	P	**P**	**08 51 26.5**	**+1.1**
KMI				pP	pP	08 51 29.4	+3.2
KMI				sP	sP	08 51 30.7	+4.2
KMI				S	**S**	**08 56 27.5**	**-0.3**
KMI				sS	sS	08 56 32.4	+3.3
KMI				SS	SS	08 58 08.4	-29
KMI				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.7						
KMI				pmax	pmax		
	comp=Z,62nm,3.9s						
KMI				LR	LR		
	comp=N,84nm,12.2s,MS3.9						
KMI				LR	LR		
	comp=E,110nm,10.4s,MS3.9						
KMI				LR	LR		
	comp=Z,66nm,18.9s						
AKASG	**Malin Array Be**	**31.44**	**307**	P	**P**	**08 51 33.9**	**+0.8**
	comp=Z,0.4nm,0.4s,mb3.6,baz=79,slow=7.4,SNR=4.1						
HHC	**Hu-ho-hao-te**	**32.07**	**72**	*eP*	**P**	**08 51 36.8**	**-2.0**
HHC				sP	sP	08 51 42.4	+2.6
HHC				PP	PP	08 52 43.6	-7.4
HHC				PcP	PcP	08 54 26.0	-2.2
HHC				S	**S**	**08 56 47.6**	**-3.9**
HHC				ScP	ScP	08 58 07.8	-4.8
HHC				PcS	PcS	08 58 09.3	-3.5
HHC				SS	SS	08 58 40.8	-28
HHC				ScS	ScS	09 02 05.0	-6.2
HHC				pmax	pmax		
	comp=Z,110nm,5.3s						
HHC				LR	LR		
	comp=N,100nm,14.0s,MS3.8						
HHC				LR	LR		
	comp=E,81nm,13.7s,MS3.8						
H

TBH				*e*S	**Sn**	**08 53 30.0**	**-0.2**
TPR	**Prospect**	**0.55**	**349**	*e*P	**Pn**	**08 53 23.6**	**+0.7**
TPR				*e*S	**Sn**	**08 53 32.4**	**-0.1**
TPR	**Prospect**	**0.55**	**349**	*e*P	**Pn**	**08 53 23.6**	**+0.7**
TPR				*e*S	**Sn**	**08 53 32.4**	**-0.1**
TOSP	**Speyside**	**0.67**	**12**	*e*P	**Pn**	**08 53 23.3**	**-0.8**
TOSP				*e*S	**Sn**	**08 53 34.9**	**+0.2**
TRN	**Trinidad (W)**	**0.72**	**271**	*e*P	**Pn**	**08 53 25.5**	**+0.9**
TRN				*e*S	**Sn**	**08 53 35.6**	**-0.1**
TRN	**Trinidad (W)**	**0.72**	**271**	*e*P	**Pn**	**08 53 25.5**	**+0.9**
TRN				*e*S	**Sn**	**08 53 35.6**	**-0.1**
TCE	**Chacachacare**	**1.06**	**273**	*e*P	**Pn**	**08 53 28.0**	**-0.8**
TCE				*e*S	**Sn**	**08 53 43.2**	**0.0**
TCE	**Chacachacare**	**1.06**	**273**	*e*P	**Pn**	**08 53 28.0**	**-0.8**
TCE				*e*S	**Sn**	**08 53 43.2**	**0.0**

*ISCJB **03** 09:02:14.9±0.3, 38°.44N±0°.02×21°.83E±0°.02, h6km±3km, Error ellipse: s-maj=3.1km s-min=2.8km az=164.5*
*CSEM **03** 09:02:14.9±0.1, 38°.43N×21°.82E, h8km, ML2.8, Error ellipse: s-maj=3.2km s-min=3.0km az=122.0*
*ATH **03** 09:02:15.0, 38°.40N×21°.84E, h15km±1km, MD3.5/16, ML2.8*
*NEIC **03** 09:02:15.0, 38°.40N×21°.84E, h15km, ML2.8(ATH), After ATH.*
*THE **03** 09:02:15.4, 38°.43N×21°.84E, h9km, ML3.5/11, Error ellipse: s-maj=0.7km s-min=0.5km az=134.0*

ISC 03 09:02:15.5±0.3, 38°.43N±0°.02×21°.83E±0°.02, h8km±3km, n92, σ0s84/140, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	**Efpalio**	**0.06**	**96**	*e*PB	**Pg**	**09 02 17.6**	**+0.2**
EFP				*e*SB	**Sg**	**09 02 19.8**	**+1.1**
EFP	**Efpalio**	**0.06**	**96**	P	**Pg**	**09 02 17.5**	**+0.1**
EFP				S	**Sg**	**09 02 19.2**	**+0.5**
EFP	**Efpalio**	**0.06**	**96**	P	**Pg**	**09 02 17.5**	**+0.1**
EFP				S	**Sg**	**09 02 19.2**	**+0.5**
EFP				*e*Sb	**Sg**	**09 02 19.8**	**+1.1**
UPR	**University Cam**	**0.15**	**193**	*e*PB	**Pg**	**09 02 18.6**	**-0.2**
UPR				*e*SB	**Sg**	**09 02 21.5**	**+0.5**
UPR	**University Cam**	**0.15**	**193**	P	**Pg**	**09 02 18.6**	**-0.2**
UPR				S	**Sg**	**09 02 20.8**	**-0.2**
UPR	**University Cam**	**0.15**	**193**	P	**Pg**	**09 02 18.6**	**-0.2**
UPR				S	**Sg**	**09 02 20.8**	**-0.2**
UPR				*e*Sb	**Sg**	**09 02 21.5**	**+0.5**
KALE	**Kalithea**	**0.25**	**100**	P	**Pg**	**09 02 20.5**	**+0.1**
KALE				S	**Sg**	**09 02 24.4**	**+0.6**
KALE	**Kalithea**	**0.25**	**100**	P	**Pg**	**09 02 20.5**	**+0.1**
KALE				S	**Sg**	**09 02 24.4**	**+0.6**
RLS	**Riolos of Patr**	**0.47**	**218**	*e*Pb	**Pg**	**09 02 24.2**	**-0.5**
RLS	**Riolos of Patr**	**0.47**	**218**	*e*PB	**Pg**	**09 02 24.2**	**-0.5**
RLS	**Riolos of Patr**	**0.47**	**218**	*e*Pb	**Pg**	**09 02 24.2**	**-0.5**
EVR	**Evrytania**	**0.48**	**358**	P	**Pg**	**09 02 24.3**	**-0.6**
EVR	**Evrytania**	**0.48**	**358**	P	**Pg**	**09 02 24.3**	**-0.6**
DSF	**Desfina**	**0.55**	**92**	P	**Pg**	**09 02 25.5**	**-0.6**
DSF				S	**Sg**	**09 02 34.0**	**+0.7**
DSF	**Desfina**	**0.55**	**92**	P	**Pg**	**09 02 25.5**	**-0.6**
DSF				S	**Sg**	**09 02 34.0**	**+0.7**
GUR	**Goura**	**0.64**	**141**	*e*PN	**Pg**	**09 02 26.9**	**-0.9**
GUR	**Goura**	**0.64**	**141**	P	**Pg**	**09 02 26.8**	**-1.0**
GUR				S	**Sg**	**09 02 36.5**	**+0.3**
GUR	**Goura**	**0.64**	**141**	P	**Pg**	**09 02 26.8**	**-1.0**
GUR				S	**Sg**	**09 02 36.5**	**+0.3**
AGG	**Agios Georgios**	**0.71**	**33**	*e*Pb	**Pg**	**09 02 28.4**	**-0.7**
AGG				*e*Sn	**Sg**	**09 02 40.1**	**+1.8**
AGG	**Agios Georgios**	**0.71**	**33**	*e*PB	**Pg**	**09 02 28.4**	**-0.7**
AGG				*e*SN	**Sg**	**09 02 40.1**	**+1.8**
AGG	**Agios Georgios**	**0.71**	**33**	P	**Pg**	**09 02 28.3**	**-0.8**
AGG				S	**Sg**	**09 02 39.0**	**+0.7**
AGG	**Agios Georgios**	**0.71**	**33**	*e*Pb	**Pg**	**09 02 28.4**	**-0.7**
AGG				S	**Sg**	**09 02 39.0**	**+0.7**
KFL	**Anninata**	**0.88**	**249**	P	**Pg**	**09 02 31.4**	**-1.1**
KFL				S	**Sg**	**09 02 45.4**	**+1.5**
KFL	**Anninata**	**0.88**	**249**	P	**Pg**	**09 02 31.4**	**-1.1**
KFL				S	**Sg**	**09 02 45.4**	**+1.5**
LKR	**Lokris**	**0.94**	**76**	*e*Pn	**Pg**	**09 02 32.9**	**-0.7**
LKR	**Lokris**	**0.94**	**76**	*e*PN	**Pg**	**09 02 32.9**	**-0.7**
LKR	**Lokris**	**0.94**	**76**	P	**Pg**	**09 02 32.6**	**-1.0**
LKR				S	**Sg**	**09 02 46.4**	**+0.6**
LKR	**Lokris**	**0.94**	**76**	P	**Pg**	**09 02 32.6**	**-1.0**
LKR	**Lokris**	**0.94**	**76**	*e*Pn	**Pg**	**09 02 32.9**	**-0.7**
LKR				S	**Sg**	**09 02 46.4**	**+0.6**
ATAL	**Atalanti**	**0.97**	**74**	P	**Pg**	**09 02 33.8**	**-0.3**
ATAL				S	**Sg**	**09 02 47.1**	**+0.4**
ATAL	**Atalanti**	**0.97**	**74**	P	**Pg**	**09 02 33.8**	**-0.3**
ATAL				S	**Sg**	**09 02 47.1**	**+0.4**
LTK	**Loutraki**	**0.98**	**114**	*e*PN	**Pg**	**09 02 33.8**	**-0.6**
LTK				*e*SN	**Sg**	**09 02 47.4**	**+0.2**
LTK	**Loutraki**	**0.98**	**114**	P	**Pg**	**09 02 33.8**	**-0.6**
LTK				S	**Sg**	**09 02 48.2**	**+1.0**
LTK	**Loutraki**	**0.98**	**114**	P	**Pg**	**09 02 33.8**	**-0.6**
LTK				S	**Sg**	**09 02 48.2**	**+1.0**
LKD2	**Lefkada island**	**0.98**	**291**	P	**Pg**	**09 02 33.2**	**-1.2**
LKD2				S	**Sg**	**09 02 48.8**	**+1.5**
LKD2	**Lefkada island**	**0.98**	**291**	P	**Pg**	**09 02 33.2**	**-1.2**
LKD2				S	**Sg**	**09 02 48.8**	**+1.5**
VLS	**Valsamata**	**1.01**	**256**	*e*Pb	**Pg**	**09 02 33.2**	**-1.7**
VLS				*e*Sn	**Sg**	**09 02 48.6**	**+0.6**
VLS	**Valsamata**	**1.01**	**256**	*e*PB	**Pg**	**09 02 33.2**	**-1.7**
VLS				*e*SN	**Sg**	**09 02 48.6**	**+0.6**
VLS	**Valsamata**	**1.01**	**256**	*e*Pb	**Pg**	**09 02 33.2**	**-1.7**
VLS				*e*Sn	**Sg**	**09 02 48.6**	**+0.6**
THL	**Klokotos Trika**	**1.14**	**7**	P	**Pg**	**09 02 36.9**	**-0.5**
THL				S	**Sg**	**09 02 52.6**	**+0.4**
THL	**Klokotos Trika**	**1.14**	**7**	P	**Pg**	**09 02 36.9**	**-0.5**
THL				S	**Sg**	**09 02 52.6**	**+0.4**
VLX	**Vlachokerasia**	**1.15**	**158**	*e*PN	**Pg**	**09 02 36.1**	**-1.4**
VLX				*e*SN	**Sg**	**09 02 52.0**	**-0.4**
VLX	**Vlachokerasia**	**1.15**	**158**	P	**Pg**	**09 02 35.9**	**-1.6**
VLX				S	**Sg**	**09 02 52.9**	**+0.5**
VLX	**Vlachokerasia**	**1.15**	**158**	P	**Pg**	**09 02 35.9**	**-1.6**
VLX				*e*Sn	**Sg**	**09 02 52.0**	**-0.4**
VLX				S	**Sg**	**09 02 52.9**	**+0.5**
ITM	**Ithomi**	**1.25**	**177**	*e*Pn	**Pn**	**09 02 38.4**	**-0.9**
ITM	**Ithomi**	**1.25**	**177**	*e*PN	**Pn**	**09 02 38.4**	**-0.9**
ITM	**Ithomi**	**1.25**	**177**	P	**Pn**	**09 02 38.2**	**-1.1**
ITM				S	**Sb**	**09 02 56.2**	**+0.6**
ITM	**Ithomi**	**1.25**	**177**	P	**Pn**	**09 02 38.2**	**-1.1**
ITM				S	**Sb**	**09 02 56.2**	**+0.6**
NEO	**Neokhori**	**1.39**	**51**	*e*Pb	**Pb**	**09 02 40.3**	**-1.5**
NEO	**Neokhori**	**1.39**	**51**	*e*PB	**Pb**	**09 02 40.3**	**-1.5**
NEO	**Neokhori**	**1.39**	**51**	*e*Pb	**Pb**	**09 02 40.3**	**-1.5**
XOR	**Xorichti**	**1.41**	**48**	P	**Pn**	**09 02 41.5**	**0.0**
XOR	**Xorichti**	**1.41**	**48**	P	**Pn**	**09 02 40.8**	**-0.7**
XOR				S	**Sb**	**09 03 00.3**	**+0.1**
XOR	**Xorichti**	**1.41**	**48**	P	**Pn**	**09 02 41.5**	**0.0**
XOR				S	**Sb**	**09 03 00.3**	**+0.1**
JAN	**Janina**	**1.44**	**328**	*e*Pn	**Pn**	**09 02 43.1**	**+1.3**
JAN	**Janina**	**1.44**	**328**	*e*PN	**Pn**	**09 02 43.1**	**+1.3**
JAN	**Janina**	**1.44**	**328**	*e*Pn	**Pn**	**09 02 43.1**	**+1.3**
DID	**Didima**	**1.45**	**129**	*e*PN	**Pn**	**09 02 41.9**	**0.0**
DID				*e*SN	**Sn**	**09 03 02.0**	**+1.0**
DID	**Didima**	**1.45**	**129**	P	**Pn**	**09 02 41.4**	**-0.5**
DID				S	**Sn**	**09 03 00.2**	**-0.8**
DID	**Didima**	**1.45**	**129**	P	**Pn**	**09 02 41.4**	**-0.5**
DID	**Didima**	**1.45**	**129**	*e*Pn	**Pn**	**09 02 41.9**	**0.0**
DID				S	**Sn**	**09 03 00.2**	**-0.8**
DID				*e*Sn	**Sn**	**09 03 02.0**	**+1.0**
NAIG	**Nisos Aigina**	**1.47**	**117**	*e*Pn	**Pn**	**09 02 42.2**	**-0.1**
NAIG	**Nisos Aigina**	**1.47**	**117**	*e*PN	**Pn**	**09 02 42.2**	**-0.1**
NAIG	**Nisos Aigina**	**1.47**	**117**	*e*Pn	**Pn**	**09 02 42.2**	**-0.1**
PYL	**PYLOS**	**1.54**	**183**	*e*PN	**Pn**	**09 02 42.8**	**-0.4**
PYL				*e*SN	**Sn**	**09 03 04.1**	**+0.8**
PYL	**PYLOS**	**1.54**	**183**	P	**Pn**	**09 02 42.5**	**-0.7**
PYL	**PYLOS**	**1.54**	**183**	P	**Pn**	**09 02 42.5**	**-0.7**
PYL	**PYLOS**	**1.54**	**183**	*e*Pn	**Pn**	**09 02 42.8**	**-0.4**
PYL				*e*Sn	**Sn**	**09 03 04.1**	**+0.8**
ATH	**Athens Observa**	**1.56**	**107**	*e*Pn	**Pn**	**09 02 43.8**	**+0.4**
ATH	**Athens Observa**	**1.56**	**107**	*e*PN	**Pn**	**09 02 43.8**	**+0.4**
ATH	**Athens Observa**	**1.56**	**107**	*e*Pn	**Pn**	**09 02 43.8**	**+0.4**
PTL	**Penteli**	**1.65**	**103**	*e*Pn	**Pn**	**09 02 45.1**	**+0.4**
PTL	**Penteli**	**1.65**	**103**	*e*PN	**Pn**	**09 02 45.1**	**+0.4**
PTL	**Penteli**	**1.65**	**103**	*e*Pn	**Pn**	**09 02 45.1**	**+0.4**
VLY	**Voula,Athens**	**1.65**	**110**	*e*Pn	**Pn**	**09 02 44.8**	**0.0**
VLY	**Voula,Athens**	**1.65**	**110**	*e*PN	**Pn**	**09 02 44.8**	**0.0**
VLY	**Voula,Athens**	**1.65**	**110**	*e*Pn	**Pn**	**09 02 44.8**	**0.0**
AOS	**Alonnisos**	**1.76**	**65**	P	**Pn**	**09 02 45.6**	**-0.7**
AOS	**Alonnisos**	**1.76**	**65**	P	**Pn**	**09 02 45.6**	**-0.7**
VLI	**Veliai**	**1.92**	**152**	*e*Pn	**Pn**	**09 02 49.2**	**+0.7**
VLI	**Veliai**	**1.92**	**152**	*e*PN	**Pn**	**09 02 49.2**	**+0.7**
VLI	**Veliai**	**1.92**	**152**	*e*Pn	**Pn**	**09 02 49.2**	**+0.7**
KEK	**Kerkira**	**2.03**	**310**	*e*Pn	**Pn**	**09 02 51.1**	**+1.1**
KEK	**Kerkira**	**2.03**	**310**	*e*PN	**Pn**	**09 02 51.1**	**+1.1**
KEK	**Kerkira**	**2.03**	**310**	*e*Pn	**Pn**	**09 02 51.1**	**+1.1**
PAIG	**Paliouri**	**2.07**	**43**	P	**Pn**	**09 02 49.9**	**-0.6**
PAIG	**Paliouri**	**2.07**	**43**	P	**Pn**	**09 02 49.9**	**-0.6**
KYTH	**Kithira**	**2.35**	**156**	*e*Pn	**Pn**	**09 02 57.0**	**+2.6**
KYTH	**Kithira**	**2.35**	**156**	*e*PN	**Pn**	**09 02 54.8**	**+0.4**
MLSB	**Milas**	**4.84**	**102**	*e*PG	**Pg**	**09 03 48.4**	**+0.2**
MLSB	**Milas**	**4.84**	**102**	*e*Pg	**Pg**	**09 03 48.4**	**+0.2**
YER	**Yerkesik**	**5.27**	**102**	PG	**Pb**	**09 03 44.4**	**-3.5**

*ISCJB **03** 09:10:26.5±0.5, 23°.98S±0°.09×69°.66E±0°.10, h10km, mb4.2/22, MS4.4/25, Error ellipse: s-maj=14.4km s-min=11.7km az=37.1*
*IDC **03** 09:10:26.6±0.6, 23°.98S×69°.61E, h0km, mb4.2/16, mb1 4.3/16, mb1mx4.2/24, mbtmp4.2/16, MS4.3/23, Ms1 4.3/23, ms1mx4.2/30, Error ellipse: s-maj=20.3km s-min=15.5km az=43.0*
*NEIC **03** 09:10:28.3±0.3, 23°.97S×69°.60E, h10km, mb4.5/6, Error ellipse: s-maj=11.4km s-min=8.8km az=45.0*
*GCMT **03** 09:10:31.1±0.2, 23°.68S×69°.48E, h12km, MW5.1, Moment Tensor Solution. s25,c29; s91,c151; Moment tensor: Scale 10^{16}Nm; M_{rr}=4.57±.12; $M_{\theta\theta}$=1.38±.11; $M_{\phi\phi}$=3.19±.10; $M_{r\theta}$=1.47±.43; $M_{\theta\phi}$=-2.32±.10; $M_{\phi r}$=3.32±.39; Best double couple: M_0=5.80000×10^{16} NP1:ϕ_s=305.00000°, δ38.00000°, λ-131.00000°. NP2:ϕ_s=173.00000°, δ62.00000°, λ-63.00000°. Principal axes: T 5.2300, Plg13.0000°, Azm243.0000°; N 1.2000, Plg24.0000°, Azm339.0000°; P -6.4300, Plg62.0000°, Azm127.0000°; Data Used: IU IC II G CN.*

ISC 03 09:10:28.4±0.5, 23°.98S±0°.09×69°.62E±0°.09, h10km, n50, σ0s69/36, mb4.2/22, MS4.4/25, 2C, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo**	**38.71**	**301**	P	**P**	**09 17 52.6**	**-0.3**
	2.6nm,0.8s,mb4.0,baz=359,slow=24,SNR=6.3						
KMBO				LR	LR	09 30 24.1	
	comp=Z,332nm,20.7s,MS4.1,baz=270,slow=31						
PSI	**Prapat**	**39.01**	**51**	LR	LR	09 29 53.8	
	comp=Z,646nm,21.6s,MS4.4,baz=136,slow=30						
LSZ	**Lusaka**	**39.85**	**275**	P	**P**	**09 18 02.7**	**+0.3**
	2.2nm,0.7s,mb4.0,baz=118,slow=9.1,SNR=4.7						
LSZ				LR	LR	09 32 15.3	
	comp=Z,580nm,20.0s,MS4.4,baz=116,slow=33						
LSZ	**Lusaka**	**39.85**	**275**	P	**P**	**09 18 02.7**	**+0.3**
LSZ				LR	LR	09 32 15.3	
BOSA	**Boshof**	**39.87**	**254**	LR	LR	09 32 09.6	
	comp=Z,1μm,18.6s,MS4.7,baz=92,slow=33						
LBTB	**Lobatse**	**39.94**	**259**	LR	LR	09 32 08.3	
	comp=Z,872nm,19.2s,MS4.6,baz=117,slow=33						
NWAO	**Narrogin (SRO)**	**42.51**	**113**	LR	LR	09 32 30.6	
	comp=Z,4.9nm,20.8s,baz=88,slow=31						
MAW	**Mawson**	**43.83**	**184**	P	**P**	**09 18 35.0**	**+0.6**
	2.1nm,0.8s,mb3.9,baz=3.0,slow=6.9,SNR=4.2						
MAW				LR	LR	09 32 20.3	
	comp=Z,460nm,18.6s,MS4.4,baz=1.8,slow=30						
MAW	**Mawson**	**43.83**	**184**	*e*P	**P**	**09 18 35.1**	**+0.8**
MAW				LR	LR	09 32 20.2	
CMAR	**Chiang Mai Arr**	**50.96**	**37**	P	**P**	**09 19 31.4**	**+1.0**
	0.9nm,0.4s,mb4.1,baz=243,slow=6.9,SNR=4.5						
CMAR				LR	LR	09 38 53.1	
	comp=Z,396nm,18.5s,MS4.5,baz=208,slow=34						
QIZ	**Qiongzhong**	**58.01**	**46**	P	**P**	**09 20 20.5**	**-1.2**
QIZ				S	**S**	**09 28 23.6**	**+1.1**
QIZ				LR	LR		
	comp=N,390nm,19.6s						
QIZ				LR	LR		
	comp=Z,580nm,18.8s,MS4.7						
ASAR	**Alice Springs**	**58.32**	**104**	P	**P**	**09 20 23.9**	**0.0**
	comp=Z,3.0nm,0.7s,mb4.4,baz=254,slow=6.1,SNR=36						
ASAR				PcP	PcP	09 21 14.9	-0.1
	comp=Z,1.8nm,0.8s,baz=260,slow=3.5,SNR=7.8						
WRA	**Warramunga Arr**	**59.70**	**100**	P	**P**	**09 20 33.9**	**+0.3**
	comp=Z,3.2nm,0.7s,mb4.4,baz=255,slow=6.8,SNR=19						
WRAB	**Tennant Creek**	**59.72**	**100**	*e*P	**P**	**09 20 34.1**	**+0.4**
	comp=Z,3.7nm,0.8s,mb4.5						
STKA	**Stephens Creek**	**63.05**	**115**	P	**P**	**09 20 55.1**	**-1.0**
	comp=Z,3.3nm,0.9s,mb4.5,baz=282,slow=7.9,SNR=3.9						
STKA				LR	LR	09 44 48.6	
	comp=Z,559nm,20.0s,MS4.7,baz=212,slow=33						
STKA	**Stephens Creek**	**63.05**	**115**	*e*P	**P**	**09 20 55.1**	**-1.0**
	comp=Z,1.4nm,1.0s,mb4.0						
STKA				LR	LR	09 44 48.6	
MMAI	**Mount Meron Ar**	**65.39**	**329**	P	**P**	**09 21 12.0**	**+0.8**
	comp=Z,0.6nm,0.3s,mb4.1,baz=130,slow=4.5,SNR=2.5						
MMAI				LR	LR	09 47 42.5	
	comp=Z,50nm,18.9s,MS3.7,baz=130,slow=34						
QSPA	**South Pole Qui**	**66.15**	**180**	P	**P**	**09 21 15.4**	**-0.1**
	comp=Z,2.7nm,0.8s,mb4.3,baz=290,slow=2.0,SNR=9.8						
TKM2	**Tokmak 2**	**66.79**	**5**	*e*P	**P**	**09 21 20.1**	**+0.2**
	comp=Z,3.5nm,0.8s,mb4.4						
GTA	**Gaotai**	**69.09**	**25**	*e*P	**P**	**09 21 35.2**	**+0.7**
GTA				pP	pP	09 21 39.5	+1.7
GTA				sP	sP	09 21 42.0	+3.0
GTA				S	S	09 30 41.7	+1.9
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
GTA				LR	LR		
	comp=N,510nm,20.8s,MS5.0						
GTA				LR	LR		
	comp=E,690nm,17.2s,MS5.0						
GTA				LR	LR		
	comp=Z,300nm,21.4s,MS4.5						
MK31	**Makanchi Array**	**71.36**	**9**	*e*P	**P**	**09 21 47.9**	**-0.4**
MKAR	**Makanchi Array**	**71.36**	**9**	P	**P**	**09 21 47.8**	**-0.5**
	comp=Z,3.4nm,0.7s,mb4.4,baz=192,slow=6.4,SNR=36						
MKAR				LR	LR	09 51 49.5	
	comp=Z,179nm,19.9s,MS4.3,baz=177,slow=35						
BRTR	**Keskin Array B**	**71.72**	**331**	P	**P**	**09 21 50.7**	**+0.1**
	comp=Z,2.0nm,0.8s,mb4.1,baz=142,slow=6.3,SNR=7.5						
BRTR				LR	LR	09 52 41.5	
	comp=Z,88nm,18.6s,MS4.1,baz=337,slow=35						
ABKAR	**Akbulak array**	**73.41**	**353**	*e*P	**P**	**09 21 60.0**	**-0.5**
	comp=Z,4.1nm,0.8s,mb4.4						
KURK	**Kurchatov**	**74.79**	**6**	*e*P	**P**	**09 22 08.5**	**0.0**
	comp=Z,4.2nm,1.0s,mb4.3						
TORD	**Torodi Ar. Bea**	**75.90**	**291**	P	**P**	**09 22 14.9**	**-0.8**
	comp=Z,0.3nm,0.8s,mb3.3,baz=97,slow=3.6,SNR=4.8						
TIRR	**Tirgusor**	**77.83**	**331**	∥*i*P	**P**	**09 22 25.8**	**-0.1**
DBIC	**Dimbokro**	**78.66**	**283**	LR	LR	09 56 05.7	
	comp=Z,423nm,18.4s,MS4.8,baz=105,slow=35						
ZALV	**Zalesovo Beam**	**78.71**	**9**	P	**P**	**09 22 30.1**	**-0.5**
	comp=Z,3.9nm,0.8s,mb4.4,baz=207,slow=4.4,SNR=15						
ZALV				LR	LR	09 54 40.1	
	comp=Z,85nm,21.9s,MS4.0,baz=69,slow=34						
ZALV	**Zalesovo Beam**	**78.71**	**9**	P	**P**	**09 22 30.1**	**-0.5**
ZALV				LR	LR	09 54 40.1	
SONM	**Songino Array**	**78.75**	**24**	P	**P**	**09 22 31.3**	**+0.3**
	comp=Z,1.2nm,0.8s,mb3.9,baz=234,slow=5.2,SNR=6.8						
SONM				LR	LR	09 55 44.5	
	comp=Z,396nm,21.8s,MS4.7,baz=239,slow=34						
MLR	**Muntele Rosu**	**79.74**	**330**	∥*i*P	**P**	**09 22 37.7**	**+1.3**
KSRS	**Korea Array**	**82.08**	**43**	P	**P**	**09 22 48.6**	**-0.5**
	comp=Z,1.5nm,0.7s,mb4.0,baz=223,slow=5.8,SNR=7.7						
KSRS				LR	LR	09 58 49.6	
	comp=Z,99nm,19.1s,MS4.2,baz=37,slow=35						
KEST	**Kesra**	**82.29**	**315**	LR	LR	09 58 40.2	
	comp=Z,92nm,20.4s,MS4.1,baz=146,slow=35						
AKASG	**Malin Array Be**	**82.47**	**335**	P	**P**	**09 22 50.2**	**-0.6**
	comp=Z,2.8nm,0.7s,mb4.3,baz=147,slow=4.7,SNR=13						
AKBB	**Malin Array Si**	**82.47**	**335**	*e*P	**P**	**09 22 50.0**	**-0.7**
KIEV	**Kiev**	**82.47**	**335**	*e*P	**P**	**09 22 49.9**	**-0.9**
	comp=Z,4.5nm,0.8s,mb4.5						
CRVS	**Cervenica-Dubn**	**84.32**	**330**	*e*P	**P**	**09 23 02.1**	**+1.7**
CRVS	**Cervenica-Dubn**	**84.32**	**330**	*e*P	**P**	**09 23 02.1**	**+1.7**
PMSA	**Palmer Station**	**84.58**	**198**	LR	LR	09 53 06.9	
	comp=Z,369nm,20.6s,MS4.8,baz=138,slow=30						
VYHS	**Vyhne**	**85.24**	**329**	*e*P	**P**	**09 23 05.2**	**+0.2**
VYHS	**Vyhne**	**85.24**	**329**	*e*P	**P**	**09 23 05.1**	**+0.1**
CBIJ	**Chichi jima**	**86.49**	**58**	LR	LR	09 57 41.4	
	comp=Z,116nm,18.7s,MS4.3,baz=104,slow=33						
HNR	**Honiara**	**86.53**	**99**	LR	LR	10 00 22.6	
	comp=Z,139nm,19.0s,MS4.4,baz=181,slow=35						
JHJ	**Hachijo jima 2**	**87.67**	**52**	LR	LR	10 00 27.1	
	comp=Z,42nm,19.1s,MS3.9,baz=338,slow=34						
MJAR	**Matsushiro Arr**	**88.32**	**49**	LR	LR	10 03 15.9	
	comp=Z,183nm,19.2s,MS4.5,baz=250,slow=36						
MDT	**Midelt**	**90.50**	**306**	LR	LR	10 01 54.4	
	comp=Z,69nm,19.0s,MS4.1,baz=0.0,slow=34						
ESDC	**Sonseca Array**	**93.29**	**312**	LR	LR	10 05 55.7	
	comp=Z,111nm,19.3s,MS4.3,baz=50,slow=36						
EDM	**Edmonton**	**150.71**	**4**	*e*PKPdf	PKPdf	09 30 14.9	-0.1
EDM				*e*PKPbc	PKPbc	09 30 20.7	+0.2
EDM				*e*PKPab	PKPab	09 30 27.3	-0.2
EYMN	**Ely**	**151.76**	**333**	*e*PKPdf	PKPdf	09 30 17.8	+1.0
EYMN				*e*PKPbc	PKPbc	09 30 22.6	-0.6
EYMN				*e*PKPab	PKPab	09 30 31.6	-0.4

IDC 03 09:13:55.3±5.5, 24°.25S×69°.24E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.6/22, mbtmp3.7/4, Error ellipse: s-maj=180.7km s-min=34.2km az=55.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**58.59**	**104**	P	P	09 23 54.5	+0.2
	0.7nm,0.6s,baz=252,slow=6.2,SNR=12						
ASAR				PcP	PcP	09 24 44.8	+0.2
	0.5nm,0.7s,baz=253,slow=3.5,SNR=5.2						
WRA	**Warramunga Arr**	**60.00**	**100**	P	P	09 24 03.6	-0.5
	0.6nm,0.7s,baz=257,slow=6.5,SNR=6.1						
MKAR	**Makanchi Array**	**71.69**	**9**	P	P	09 25 18.4	-0.4
	0.8nm,0.6s,baz=199,slow=6.3,SNR=6.6						
SONM	**Songino Array**	**79.14**	**24**	P	P	09 26 02.5	+0.9
	0.2nm,0.4s,baz=204,slow=3.2,SNR=2.8						

IDC 03 09:26:47.1±56.0, 22°.39S×177°.89W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/15, mbtmp3.7/3, MS3.5/1, Ms1 3.5/1, ms1mx2.6/22, Error ellipse: s-maj=1015.0km s-min=158.3km az=86.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**23.16**	**201**	LR	LR	09 39 21.4	
	comp=Z,98nm,18.3s,baz=304,slow=33						
STKA	**Stephens Creek**	**37.10**	**246**	P	P	09 33 57.7	-1.7
	2.2nm,1.0s,baz=90,slow=8.1,SNR=3.6						
ASAR	**Alice Springs**	**44.22**	**259**	P	P	09 34 58.3	-0.1
	0.2nm,0.3s,baz=82,slow=7.6,SNR=9.8						
WRA	**Warramunga Arr**	**44.47**	**264**	P	P	09 35 01.4	+1.0
	0.4nm,0.3s,baz=99,slow=8.2,SNR=32						

IDC 03 09:28:01.9±19.0, 24°.14S×69°.50E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.5/22, mbtmp3.7/4, MS3.9/1, Ms1 3.8/1, ms1mx2.9/25, Error ellipse: s-maj=653.7km s-min=36.2km az=50.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**39.72**	**254**	LR	LR	09 49 53.6	
	comp=Z,157nm,18.4s,baz=280,slow=33						
ASAR	**Alice Springs**	**58.38**	**104**	P	P	09 37 59.1	-0.3
	0.5nm,0.8s,baz=254,slow=6.1,SNR=6.1						
WRA	**Warramunga Arr**	**59.78**	**100**	P	P	09 38 09.6	+0.4
	0.7nm,0.9s,baz=258,slow=6.1,SNR=3.3						
MKAR	**Makanchi Array**	**71.54**	**9**	P	P	09 39 24.1	-

MAJO	**Matsushiro**	**14.94 232**	P	**Pn**	**09 44 57.3**	**-0.1**
MJAR	**Matsushiro Arr**	**14.94 232**	Pn	**Pn**	**09 44 57.8**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=40,slow=9.6,SNR=3.3					
KSRS	**Korea Array**	**20.60 252**	P	**P**	**09 46 05.4**	**+1.4**
	comp=Z,2.0nm,0.8s,baz=55,slow=11,SNR=7.6					
KSRS	**Korea Array**	**20.60 252**	*e*P	**P**	**09 46 07.8**	**+3.8**
KSRS			pmax	pmax		
	comp=Z,2.0nm,0.8s					
BILL	**Bilibino**	**22.38 13⇑**	*e*P	**P**	**09 46 14.4**	**-8.3**
BILL			*e*PP		09 46 47.8	
BILL			*e*S	**S**	**09 50 13.2**	**-12**
BILL			pmax	pmax		
	comp=Z,5.0nm,1.3s,mb3.8					
NJ2	**Nanjing**	**29.80 253**	*e*P	**P**	**09 47 31.5**	**+0.4**
NJ2			pP	pP	09 47 40.5	-4.7
NJ2			sP	sP	09 47 46.0	-5.8
NJ2			PP	PP	09 48 30.0	-9.1
NJ2			S	**S**	**09 52 27.0**	**+3.3**
NJ2			sS	sS	09 52 43.0	-4.6
NJ2			pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.5					
NJ2			pmax	pmax		
	comp=Z,40nm,4.2s					
NJ2			LR	LR		
	comp=N,190nm,17.9s					
NJ2			LR	LR		
	comp=E,540nm,20.2s					
NJ2			LR	LR		
	comp=Z,3μm,19.6s					
SONM	**Songino Array**	**31.10 289**	P	**P**	**09 47 43.7**	**+1.3**
	comp=Z,0.4nm,0.6s,mb3.4,baz=69,slow=7.9,SNR=3.2					
ZALV	**Zalesovo Beam**	**42.39 306**	PcP	PcP	09 51 10.7	+0.3
	comp=Z,0.6nm,0.3s,baz=31,slow=3.4,SNR=3.8					
MK31	**Makanchi Array**	**46.71 297**	*e*P	**P**	**09 49 52.1**	**-0.6**
MKAR	**Makanchi Array**	**46.71 297**	P	**P**	**09 49 51.9**	**-0.8**
	comp=Z,0.4nm,0.5s,mb3.6,baz=71,slow=7.9,SNR=6.6					
MKAR			PcP	PcP	09 51 25.7	+0.3
	comp=Z,0.1nm,0.5s,baz=74,slow=3.5,SNR=4.4					
MKAR	**Makanchi Array**	**46.71 297**	*e*P	**P**	**09 49 51.9**	**-0.8**
KURK	**Kurchatov**	**47.14 303**	*e*P	**P**	**09 49 54.8**	**-1.2**
KURK			pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9					
KURK	**Kurchatov**	**47.14 303**	*e*P	**P**	**09 49 54.8**	**-1.2**
	comp=Z,1.0nm,0.6s,mb3.9					
CMAR	**Chiang Mai Arr**	**52.17 256**	P	**P**	**09 50 34.9**	**+0.2**
	comp=Z,1.0nm,0.4s,mb4.1,baz=32,slow=8.6,SNR=5.4					
CMAR	**Chiang Mai Arr**	**52.17 256**	P	**P**	**09 50 34.9**	**+0.3**
CMAR			pmax	pmax		
	comp=Z,1.0nm,0.4s					
CMAR	**Chiang Mai Arr**	**52.17 256**	P	**P**	**09 50 34.9**	**+0.2**
ABKAR	**Akbulak array**	**58.21 310**	*e*P	**P**	**09 51 16.9**	**-0.8**
	comp=Z,0.8nm,0.5s,mb4.0					
NVAR	**Mina Array Bea**	**62.60 62**	P	**P**	**09 51 48.8**	**+1.0**
	comp=Z,0.1nm,0.5s,mb3.2,baz=288,slow=9.3,SNR=3.6					
NVAR			pP	pP	09 51 58.2	-4.9
	comp=Z,0.5nm,0.8s,baz=292,slow=4.8,SNR=3.5					
NVAR	**Mina Array Bea**	**62.60 62**	P	**P**	**09 51 48.8**	**+1.0**
NVAR			pP	pP	09 51 58.2	-4.9
FINES	**FINESS Array B**	**63.88 335**	P	**P**	**09 51 55.5**	**-0.5**
	comp=Z,2.2nm,0.4s,mb4.5,baz=31,slow=6.6,SNR=13					
FINES	**FINESS Array B**	**63.88 335**	P	**P**	**09 51 55.5**	**-0.5**
FINES			pmax	pmax		
	comp=Z,2.0nm,0.4s					
PDAR	**Pinedale Array**	**64.89 54**	P	**P**	**09 52 02.2**	**-0.6**
	comp=Z,0.5nm,0.7s,mb3.7,baz=277,slow=1.2,SNR=5.7					
PDAR			pP	pP	09 52 13.8	-4.5
	comp=Z,0.5nm,0.7s,baz=48,slow=2.2,SNR=4.0					
NB2	**NORSAR Subarra**	**68.09 341**	P	**P**	**09 52 22.4**	**-0.6**
	comp=Z,1.5nm,0.6s,mb4.2,baz=27,slow=6.5					
NOA	**NORSAR Array B**	**68.09 341**	P	**P**	**09 52 22.8**	**-0.1**
	comp=Z,2.9nm,0.8s,mb4.4,baz=28,slow=6.4,SNR=11					
NOA	**NORSAR Array B**	**68.09 341**	P	**P**	**09 52 22.8**	**-0.2**
NOA			pmax	pmax		
	comp=Z,3.0nm,0.8s					
WRA	**Warramunga Arr**	**68.50 199**	P	**P**	**09 52 25.5**	**-0.4**
	comp=Z,0.3nm,0.5s,mb3.5,baz=18,slow=7.1,SNR=4.5					
AKASG	**Malin Array Be**	**71.37 326**	P	**P**	**09 52 42.5**	**-0.7**
	comp=Z,1.6nm,0.3s,mb4.4,baz=32,slow=6.2,SNR=5.2					
AKASG	**Malin Array Be**	**71.37 326**	*e*P	**P**	**09 52 42.5**	**-0.8**
AKASG			pmax	pmax		
	comp=Z,2.0nm,0.3s					
BUR08	**Bucovina Ar. S**	**75.39 326**	*e*P	**P**	**09 53 07.2**	**+0.2**
BURAR	**Bucovina Array**	**75.41 326**	‖*i*P	**P**	**09 53 07.1**	**0.0**
MLR	**Muntele Rosu**	**76.88 325**	⇑*i*P	**P**	**09 53 16.6**	**+1.1**
VOIR		**77.28 325**	‖*i*P	**P**	**09 53 18.4**	**+0.7**
TXAR	**Lajitas Array**	**77.66 60**	P	**P**	**09 53 20.4**	**+0.3**
	comp=Z,0.2nm,0.5s,mb3.4,baz=300,slow=4.5,SNR=7.4					
TXAR			pP	pP	09 53 30.1	-5.8
	comp=Z,0.6nm,0.5s,baz=297,slow=3.5,SNR=9.6					
TXAR	**Lajitas Array**	**77.66 60**	P	**P**	**09 53 20.5**	**+0.4**
TXAR			*PP	pP	09 53 30.1	-5.8
TXAR			pmax	pmax		
	comp=Z,1.0nm,0.5s					
BRTR	**Keskin Array B**	**78.19 317**	P	**P**	**09 53 22.1**	**-0.8**
	comp=Z,0.5nm,0.3s,mb3.9,baz=79,slow=2.6,SNR=3.5					
BRTR	**Keskin Array B**	**78.19 317**	*e*P	**P**	**09 53 23.3**	**+0.4**
BRTR			pmax	pmax		
	comp=Z,1.0nm,0.3s					
CPUP	**Villa Florida**	**148.63 60**	PKPbc	PKPbc	10 01 10.0	-0.3
	comp=Z,0.6nm,0.5s,baz=16,slow=7.4,SNR=4.5					

*NEIC **03** 09:44:27.8±4.3, 22°.31N×143°.23E, h125km±70km, mb4.2/1, Error ellipse: s-maj=167.2km s-min=17.1km az=76.0*
*ISCJB **03** 09:44:28.4±2.1, 22°.4N±0°.3×14°3E±°, h153km±38km, mb3.8/6, Error ellipse: s-maj=163.3km s-min=18.2km az=166.6*
*IDC **03** 09:44:28.7±2.5, 22°.36N×143°.32E, h138km±30km, mb3.5/5, mb1 3.6/7, mb1mx3.3/24, mbtmp3.5/7, Error ellipse: s-maj=110.3km s-min=16.0km az=77.0*

ISC 03 09:44:29.2±2.1, 22°.4N±0°.3×14°3E±°, h142km±38km, n11, σ1s00/12, mb3.8/6, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**4.81**	**348**	P	**Pn**	**09 45 41.5**	**+1.6**
	4.4nm,0.3s,baz=288,slow=20,SNR=4.1						
CBIJ				S	**Sn**	**09 46 33.9**	**-1.2**
	16nm,0.3s,baz=264,slow=23,SNR=11						
MJAR	**Matsushiro Arr**	**14.79**	**344**	P	**Pn**	**09 47 52.9**	**+1.5**
	0.4nm,0.3s,baz=166,slow=6.9,SNR=5.2						
MAJO	**Matsushiro**	**14.80**	**344**	*e*Pn	**Pn**	**09 47 49.5**	**-1.8**
WRAB	**Tennant Creek**	**42.94**	**192**	*e*P	**P**	**09 52 14.1**	**-0.1**
	2.1nm,0.4s,mb4.1						
WRA	**Warramunga Arr**	**42.95**	**192**	P	**P**	**09 52 13.6**	**-0.7**
	1.4nm,0.3s,mb4.1,baz=17,slow=9.2,SNR=102						
WRA				PcP	PcP	09 54 01.8	-0.5
	0.3nm,0.4s,baz=6.0,slow=3.7,SNR=5.1						
WRA	**Warramunga Arr**	**42.95**	**192**	P	**P**	**09 52 13.6**	**-0.7**
WRA				PcP	PcP	09 54 01.8	-0.5
ASAR	**Alice Springs**	**46.66**	**192**	P	**P**	**09 52 43.5**	**-0.1**
	1.0nm,0.6s,mb3.6,baz=16,slow=10.0,SNR=26						
ZALV	**Zalesovo Beam**	**53.75**	**321**	P	**P**	**09 53 36.8**	**+0.2**
	0.5nm,0.4s,mb3.6,baz=108,slow=4.7,SNR=2.3						
STKA	**Stephens Creek**	**53.96**	**182**	P	**P**	**09 53 38.3**	**0.0**
	1.8nm,0.6s,mb4.0,baz=349,slow=8.6,SNR=11						
STKA	**Stephens Creek**	**53.96**	**182**	P	**P**	**09 53 38.3**	**0.0**
STKA				*e*P		09 53 38.8	
MKAR	**Makanchi Array**	**54.32**	**312**	P	**P**	**09 53 41.4**	**+0.5**
	0.2nm,0.5s,mb3.1,baz=88,slow=7.3,SNR=3.0						
MKAR				PcP	PcP	09 54 42.4	-0.7
	0.5nm,0.7s,baz=90,slow=3.6,SNR=3.5						

*FUNV **03** 10:13:30.4, 10°.48N×60°.12W, h31km, MW3.6*
*NEIC **03** 10:13:35.3, 10°.49N×60°.32W, h41km, MD3.3(TRN), After TRN.*

TRN 03 10:13:36.0, 10°.50N×60°.39W, h55km, MD3.4, 5C-2D, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBH	**Brigand Hill**	**0.67**	**268**	⇑*i*P	Pn	10 13 49.2	-0.4
TBH				*e*S	Sn	10 14 00.6	+1.1
TBH	**Brigand Hill**	**0.67**	**268**	⇑*i*P	Pn	10 13 49.2	-0.4
TBH				*e*S	Sn	10 14 00.6	+1.1
TPR	**Prospect**	**0.78**	**330**	*e*P	Pn	10 13 50.8	-0.2
TPR				*e*S	Sn	10 14 01.5	-0.4
TPR	**Prospect**	**0.78**	**330**	*e*P	Pn	10 13 50.8	-0.2
TPR				*e*S	Sn	10 14 01.5	-0.4
TOSP	**Speyside**	**0.80**	**349**	*e*P	Pn	10 13 51.6	+0.3
TOSP				*e*S	Sn	10 14 03.0	+0.6
TRN	**Trinidad (W)**	**1.01**	**278**	‖*e*P	Pn	10 13 53.5	-0.5
TRN				*e*S	Sn	10 14 07.8	+0.5
TRN	**Trinidad (W)**	**1.01**	**278**	‖*e*P	Pn	10 13 53.5	-0.5
TRN				*e*S	Sn	10 14 07.8	+0.5
TCE	**Chacachacare**	**1.36**	**278**	*e*P	Pn	10 13 58.8	+0.2
TCE	**Chacachacare**	**1.36**	**278**	*e*P	Pn	10 13 58.8	+0.2
GUIV	**Guiria**	**1.81**	**275**	‖*e*P	Pn	10 14 02.4	-2.4
GUIV				*e*S	Sn	10 14 26.1	-0.6
GRW	**Mount Saint Ca**	**2.07**	**323**	*e*P	Pn	10 14 09.6	+1.3
GRW				*e*S	Sn	10 14 24.1	-8.9
GRW	**Mount Saint Ca**	**2.07**	**323**	*e*P	Pn	10 14 09.6	+1.3
GRW				*e*S	Sn	10 14 32.1	-0.9
GUNV	**Guanoco**	**2.54**	**263**	⇑*i*P	Pn	10 14 12.9	-1.8
GUNV				*e*S	Sn	10 14 43.1	-1.4
CRUV	**Carupano**	**2.81**	**274**	*e*P	Pn	10 14 14.7	-3.8
CRUV				*e*S	Sn	10 14 48.1	-3.0
ITEV	**Isla Los Testi**	**2.83**	**288**	*e*P	Pn	10 14 16.3	-2.4
ITEV				*e*S	Sn	10 14 49.4	-2.1
SVB	**Belmont**	**2.88**	**343**	*e*P	Pn	10 14 19.9	+0.5
SVB				*e*S	Sn	10 14 52.4	-0.5
SVB	**Belmont**	**2.88**	**343**	*e*P	Pn	10 14 19.9	+0.5
SVB				*e*S	Sn	10 14 52.4	-0.5
ORIV	**Oritupano**	**3.30**	**245**	⇑*e*P	Pn	10 14 22.4	-2.8
ORIV				*e*S	Sn	10 15 00.1	-3.2
GURV	**El Guri**	**3.81**	**225**	*e*P	Pn	10 14 28.7	-3.5
PCRV	**Puerto La Cruz**	**4.20**	**266**	*e*P	Pn	10 14 33.4	-4.0
PRGV	**PARIAGUAN**	**4.54**	**248**	*e*P	Pn	10 14 38.5	-3.8
LUEV	**Luepa**	**4.75**	**193**	*e*P	Pn	10 14 38.9	-6.2
CUPV	**Cepira**	**5.34**	**266**	*e*P	Pn	10 14 49.7	-3.4
BIRV	**Birongo**	**5.79**	**270**	*e*P	Pn	10 14 56.1	-3.2
CAOV	**Caicara del Or**	**6.66**	**242**	*e*P	Pn	10 15 06.2	-5.1
TURV	**Turiamo**	**7.33**	**270**	*e*P	Pn	10 15 16.3	-4.2
BAUV	**El Baul**	**7.71**	**259**	*e*P	Pn	10 15 20.6	-5.0
MAPV	**Macapo**	**7.97**	**266**	*e*P	Pn	10 15 24.9	-4.4

*ISCJB **03** 10:19:22.3±0.3, 38°.43N±0°.02×21°.91E±0°.02, h7km±3km, Error ellipse: s-maj=3.2km s-min=2.8km az=26.6*
*ATH **03** 10:19:22.4, 38°.42N×21°.91E, h13km±1km, MD3.3/22, ML2.8*
*THE **03** 10:19:22.9, 38°.41N×21°.91E, h8km, ML3.5/12, Error ellipse: s-maj=0.7km s-min=0.5km az=151.0*
*NEIC **03** 10:19:22.4, 38°.42N×21°.91E, h13km, ML2.8(ATH), After ATH.*
*CSEM **03** 10:19:22.4±0.2, 38°.42N×21°.91E, h14km, ML2.8, Error ellipse: s-maj=4.2km s-min=3.7km az=86.0*

ISC 03 10:19:22.8±0.3, 38°.42N±0°.02×21°.90E±0°.02, h9km±3km, n87, σ0s89/130, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	**Efpalio**	**0.00**	**19**	*e*PG	**Pg**	**10 19 24.4**	**+0.1**
EFP				*e*SG	**Sg**	**10 19 25.5**	**+0.1**
EFP	**Efpalio**	**0.00**	**19**	P	**Pg**	**10 19 24.2**	**-0.1**
EFP				S	**Sg**	**10 19 25.3**	**-0.1**
EFP	**Efpalio**	**0.00**	**19**	P	**Pg**	**10 19 24.2**	**-0.1**
EFP				S	**Sg**	**10 19 25.3**	**-0.1**
UPR	**University Cam**	**0.17**	**214**	*e*PG	**Pg**	**10 19 26.6**	**+0.3**
UPR				*e*SG	**Sg**	**10 19 29.5**	**+0.8**
UPR	**University Cam**	**0.17**	**214**	P	**Pg**	**10 19 26.6**	**+0.3**
UPR				S	**Sg**	**10 19 29.4**	**+0.7**
UPR	**University Cam**	**0.17**	**214**	P	**Pg**	**10 19 26.6**	**+0.3**
UPR				S	**Sg**	**10 19 29.4**	**+0.7**
KALE	**Kalithea**	**0.19**	**100**	P	**Pg**	**10 19 26.9**	**+0.2**
KALE				S	**Sg**	**10 19 30.1**	**+0.8**
KALE	**Kalithea**	**0.19**	**100**	P	**Pg**	**10 19 26.9**	**+0.2**
KALE				S	**Sg**	**10 19 30.1**	**+0.8**
LAKA	**Lakka**	**0.19**	**162**	P	**Pg**	**10 19 26.9**	**+0.1**
LAKA				S	**Sg**	**10 19 29.4**	**0.0**
LAKA	**Lakka**	**0.19**	**162**	P	**Pg**	**10 19 26.9**	**+0.1**
LAKA				S	**Sg**	**10 19 29.4**	**0.0**
DSF	**Desfina**	**0.49**	**91**	P	**Pg**	**10 19 31.9**	**-0.4**
DSF				S	**Sg**	**10 19 39.3**	**+0.6**
DSF	**Desfina**	**0.49**	**91**	P	**Pg**	**10 19 31.9**	**-0.4**
DSF				S	**Sg**	**10 19 39.3**	**+0.6**
EVR	**Evrytania**	**0.50**	**351**	*e*Pb	**Pg**	**10 19 32.9**	**+0.4**
EVR				*e*Sb	**Sg**	**10 19 39.6**	**+0.5**
EVR	**Evrytania**	**0.50**	**351**	*e*PB	**Pg**	**10 19 32.9**	**+0.4**
EVR				*e*SB	**Sg**	**10 19 39.6**	**+0.5**
EVR	**Evrytania**	**0.50**	**351**	*e*Pb	**Pg**	**10 19 32.9**	**+0.4**
EVR				*e*Sb	**Sg**	**10 19 39.6**	**+0.5**
RLS	**Riolos of Patr**	**0.50**	**224**	*e*Pb	**Pg**	**10 19 32.7**	**+0.2**
RLS				*e*Sb	**Sg**	**10 19 39.9**	**+0.8**
RLS	**Riolos of Patr**	**0.50**	**224**	*e*PB	**Pg**	**10 19 32.7**	**+0.2**
RLS				*e*SB	**Sg**	**10 19 39.9**	**+0.8**
RLS	**Riolos of Patr**	**0.50**	**224**	*e*Pb	**Pg**	**10 19 32.7**	**+0.2**
RLS				*e*Sb	**Sg**	**10 19 39.9**	**+0.8**
GUR	**Goura**	**0.60**	**144**	*e*PB	**Pg**	**10 19 33.9**	**-0.4**
GUR				*e*SB	**Sg**	**10 19 42.5**	**+0.4**
GUR	**Goura**	**0.60**	**144**	P	**Pg**	**10 19 33.8**	**-0.5**
GUR				S	**Sg**	**10 19 42.5**	**+0.4**
GUR	**Goura**	**0.60**	**144**	*e*Pb	**Pg**	**10 19 33.9**	**-0.4**
GUR				S	**Sg**	**10 19 42.5**	**+0.4**
AGG	**Agios Georgios**	**0.69**	**29**	*e*Pg	**Pg**	**10 19 35.4**	**-0.6**
AGG				*e*Sb	**Sg**	**10 19 45.8**	**+0.8**
AGG	**Agios Georgios**	**0.69**	**29**	*e*PG	**Pg**	**10 19 35.4**	**-0.6**
AGG				*e*SB	**Sg**	**10 19 45.8**	**+0.8**
AGG	**Agios Georgios**	**0.69**	**29**	P	**Pg**	**10 19 35.4**	**-0.6**
AGG				S	**Sg**	**10 19 46.2**	**+1.2**
AGG	**Agios Georgios**	**0.69**	**29**	P	**Pg**	**10 19 35.4**	**-0.6**
AGG				*e*Sb	**Sg**	**10 19 45.8**	**+0.8**
AGG				S	**Sg**	**10 19 46.2**	**+1.2**
LKR	**Lokris**	**0.89**	**75**	*e*Pb	**Pg**	**10 19 39.8**	**-0.1**
LKR				*e*Sb	**Sg**	**10 19 51.8**	**+0.3**
LKR	**Lokris**	**0.89**	**75**	*e*PB	**Pg**	**10 19 39.8**	**-0.1**
LKR				*e*SB	**Sg**	**10 19 51.8**	**+0.3**
LKR	**Lokris**	**0.89**	**75**	P	**Pg**	**10 19 39.6**	**-0.3**
LKR	**Lokris**	**0.89**	**75**	P	**Pg**	**10 19 39.6**	**-0.3**
LKR				*e*Sb	**Sg**	**10 19 51.8**	**+0.3**
ATAL	**Atalanti**	**0.92**	**73**	P	**Pg**	**10 19 40.2**	**-0.2**
ATAL				S	**Sg**	**10 19 52.9**	**+0.5**
ATAL	**Atalanti**	**0.92**	**73**	P	**Pg**	**10 19 40.2**	**-0.2**
ATAL				S	**Sg**	**10 19 52.9**	**+0.5**
LTK	**Loutraki**	**0.93**	**115**	*e*PN	**Pg**	**10 19 40.4**	**-0.2**
LTK	**Loutraki**	**0.93**	**115**	P	**Pg**	**10 19 40.1**	**-0.5**
LTK				S	**Sg**	**10 19 54.1**	**+1.4**
LTK	**Loutraki**	**0.93**	**115**	*e*Pn	**Pg**	**10 19 40.4**	**-0.2**
LTK				S	**Sg**	**10 19 54.1**	**+1.4**
KFL	**Anninata**	**0.93**	**251**	P	**Pg**	**10 19 40.5**	**-0.2**
KFL				S	**Sg**	**10 19 54.0**	**+1.1**
LKD2	**Lefkada island**	**1.04**	**291**	P	**Pg**	**10 19 42.8**	**0.0**
LKD2	**Lefkada island**	**1.04**	**291**	P	**Pg**	**10 19 42.8**	**0.0**
VLS	**Valsamata**	**1.06**	**257**	*e*Pg	**Pg**	**10 19 42.4**	**-0.8**
VLS	**Valsamata**	**1.06**	**257**	*e*PG	**Pg**	**10 19 42.4**	**-0.8**
VLS	**Valsamata**	**1.06**	**257**	P	**Pg**	**10 19 42.3**	**-0.9**
VLS	**Valsamata**	**1.06**	**257**	*e*Pg	**Pg**	**10 19 42.4**	**-0.8**
VLX	**Vlachokerasia**	**1.12**	**160**	*e*PG	**Pg**	**10 19 43.3**	**-0.9**
VLX	**Vlachokerasia**	**1.12**	**160**	P	**Pg**	**10 19 43.2**	**-1.0**
VLX				S	**Sg**	**10 19 59.6**	**+0.9**
VLX	**Vlachokerasia**	**1.12**	**160**	*e*Pg	**Pg**	**10 19 43.3**	**-0.9**
VLX				S	**Sg**	**10 19 59.6**	**+0.9**
THL	**Klokotos Trika**	**1.14**	**4**	*e*PB	**Pg**	**10 19 44.5**	**-0.3**
THL	**Klokotos Trika**	**1.14**	**4**	P	**Pg**	**10 19 43.7**	**-1.1**
THL				S	**Sg**	**10 20 01.4**	**+1.8**
THL	**Klokotos Trika**	**1.14**	**4**	P	**Pg**	**10 19 43.7**	**-1.1**
THL	**Klokotos Trika**	**1.14**	**4**	*e*Pb	**Pg**	**10 19 44.5**	**-0.3**
THL				S	**Sg**	**10 20 01.4**	**+1.8**
ITM	**Ithomi**	**1.24**	**179**	*e*Pb	**Pb**	**10 19 45.8**	**-0.6**
ITM	**Ithomi**	**1.24**	**179**	*e*PB	**Pb**	**10 19 45.8**	**-0.6**
ITM	**Ithomi**	**1.24**	**179**	P	**Pn**	**10 19 45.7**	**-0.7**
ITM				S	**Sb**	**10 20 02.7**	**+0.2**
ITM	**Ithomi**	**1.24**	**179**	*e*Pb	**Pb**	**10 19 45.8**	**-0.6**
ITM				S	**Sb**	**10 20 02.7**	**+0.2**
NEO	**Neokhori**	**1.36**	**49**	*e*Pg	**Pg**	**10 19 47.7**	**-1.1**
NEO	**Neokhori**	**1.36**	**49**	*e*PG	**Pg**	**10 19 47.7**	**-1.1**
NEO	**Neokhori**	**1.36**	**49**	*e*Pg	**Pg**	**10 19 47.7**	**-1.1**
DID	**Didima**	**1.40**	**131**	*e*PB	**Pb**	**10 19 49.0**	**-0.1**
DID	**Didima**	**1.40**	**131**	P	**Pn**	**10 19 48.8**	**+0.3**
DID	**Didima**	**1.40**	**131**	*e*Pb	**Pb**	**10 19 49.0**	**-0.1**
NAIG	**Nisos Aigina**	**1.42**	**117**	*e*Pg	**Pg**	**10 19 48.7**	**-1.3**
NAIG	**Nisos Aigina**	**1.42**	**117**	*e*PG	**Pg**	**10 19 48.7**	**-1.3**
NAIG	**Nisos Aigina**	**1.42**	**117**	*e*Pg	**Pg**	**10 19 48.7**	**-1.3**
JAN	**Janina**	**1.48**	**327**	*e*Pg	**Pg**	**10 19 49.4**	**-1.8**
JAN	**Janina**	**1.48**	**327**	*e*PG	**Pg**	**10 19 49.4**	**-1.8**
JAN	**Janina**	**1.48**	**327**	*e*Pg	**Pg**	**10 19 49.4**	**-1.8**
ATH	**Athens Observa**	**1.50**	**107**	*e*Pg	**Pg**	**10 19 49.7**	**-1.8**
ATH				*e*Sb	**Sb**	**10 20 10.6**	**+0.7**
ATH	**Athens Observa**	**1.50**	**107**	*e*PG	**Pg**	**10 19 49.7**	**-1.8**
ATH				*e*SB	**Sb**	**10 20 10.6**	**+0.7**
ATH	**Athens Observa**	**1.50**	**107**	*e*Pg	**Pg**	**10 19 49.7**	**-1.8**
ATH				*e*Sb	**Sb**	**10 20 10.6**	**+0.7**
PYL	**PYLOS**	**1.53**	**185**	*e*PG	**Pg**	**10 19 50.5**	**-1.7**
PYL	**PYLOS**	**1.53**	**185**	P	**Pn**	**10 19 50.3**	**0.0**
PYL	**PYLOS**	**1.53**	**185**	*e*Pg	**Pg**	**10 19 50.5**	**-1.7**
VLY	**Voula,Athens**	**1.60**	**110**	*e*Pg	**Pg**	**10 19 51.7**	**-1.7**
VLY	**Voula,Athens**	**1.60**	**110**	*e*PG	**Pg**	**10 19 51.7**	**-1.7**
VLY	**Voula,Athens**	**1.60**	**110**	*e*Pg	**Pg**	**10 19 51.7**	**-1.7**
KZN	**Kozani**	**1.88**	**357**	*e*Pn	**Pn**	**10 19 56.2**	**+1.0**
KZN	**Kozani**	**1.88**	**357**	*e*PN	**Pn**	**10 19 56.2**	**+1.0**
KZN	**Kozani**	**1.88**	**357**	*e*Pn	**Pn**	**10 19 56.2**	**+1.0**
VLI	**Veliai**	**1.89**	**154**	*e*Pn	**Pn**	**10 19 56.5**	**+1.2**
VLI	**Veliai**	**1.89**	**154**	*e*PN	**Pn**	**10 19 56.5**	**+1.2**
VLI	**Veliai**	**1.89**	**154**	*e*Pn	**Pn**	**10 19 56.5**	**+1.2**
PAIG	**Paliouri**	**2.04**	**42**	P	**Pn**	**10 19 57.1**	**-0.2**
PAIG	**Paliouri**	**2.04**	**42**	P	**Pn**	**10 19 57.1**	**-0.2**
PLG	**Polygyros**	**2.29**	**31**	*e*Pb	**Pb**	**10 20 01.2**	**-3.0**
PLG	**Polygyros**	**2.29**	**31**	*e*PB	**Pb**	**10 20 01.2**	**-3.0**
KYTH	**Kithira**	**2.32**	**157**	*e*Pn	**Pn**	**10 20 02.4**	**+1.2**
KYTH	**Kithira**	**2.32**	**157**	*e*PN	**Pn**	**10 20 02.4**	**+1.2**
KYTH	**Kithira**	**2.32**	**157**	*e*Pn	**Pn**	**10 20 02.4**	**+1.2**
KRUS	**Krusevo**	**2.98**	**350**	*e*Pn	**Pn**	**10 20 13.9**	**+3.6**

*IDC **03** 10:42:27.4±11.0, 54°.59N×164°.87E, h0km, mb3.4/2, mb1 3.6/3, mb1mx3.2/25, mbtmp3.3/3, ML2.8/1, Error ellipse: s-maj=324.5km s-min=63.3km az=5.0*
*ISCJB **03** 10:42:50.9±0.7, 55°.36N±0°.04×160°.39E±0°.09, h167km±5km, mb3.0/2, Error ellipse: s-maj=8.9km s-min=6.4km az=22.4*
*KRSC **03** 10:42:51.1±0.6, 55°.34N×160°.41E, h162km±28km, ML3.6*

ISC 03 10:42:51.6±0.7, 55°.36N±0°.04×160°.38E±0°.09, h166km±5km, n20, σ0s83/32, mb3.0/2, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMNR	**Kamenistaya**	**0.41**	**349**	*i*P	**Pn**	**10 43 15.3**	**+1.0**
KMNR				*i*S	**Sn**	**10 43 32.5**	**+0.7**
BZGR	**Bezymyannyi-Gr**	**0.61**	**17**	P	**Pn**	**10 43 15.2**	**0.0**
KPT	**Kopyto**	**0.61**	**352**	*i*P	**Pn**	**10 43 15.2**	**0.0**
KPT				*i*S	**Sn**	**10 43 32.3**	**-1.2**
ZLN	**Zelenaya**	**0.70**	**20**	*i*P	**Pn**	**10 43 16.8**	**+1.1**
KOZ	**Kozyrevsk**	**0.76**	**338**	P	**Pn**	**10 43 16.8**	**+0.8**
KOZ				*i*S	**Sn**	**10 43 35.3**	**+0.4**
KRSR	**Krestovskiy**	**0.87**	**7**	*e*P	**Pn**	**10 43 16.9**	**+0.1**
KRSR				*i*S	**Sn**	**10 43 35.3**	**-0.9**
KLY	**Klyuchi**	**0.97**	**9**	*i*P	**Pn**	**10 43 18.2**	**+0.7**
KLY				*i*S	**Sn**	**10 43 37.5**	**-0.1**
SRDR	**Sredinnyy**	**1.03**	**339**	*i*P	**Pn**	**10 43 17.8**	**-0.2**
SRDR				*i*S	**Sn**	**10 43 37.0**	**-1.4**
MKZ	**Mys Kozlova**	**1.12**	**135**	*i*P	**Pn**	**10 43 19.3**	**+0.5**
MKZ				*i*S	**Sn**	**10 43 39.5**	**-0.2**
SRKR	**Sorokina**	**1.37**	**19**	*i*P	**Pn**	**10 43 21.3**	**+0.3**
SRKR				*i*S	**Sn**	**10 43 43.0**	**-0.8**
KII	**Karymskiy**	**1.43**	**202**	*e*P	**Pn**	**10 43 23.2**	**+1.5**
KBTR	**Krutoberegovo**	**1.62**	**57**	*i*P	**P

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HORT				S	**Sb**	**10 49 54.9**	**+0.6**
BARS	**Barje**	**1.27**	**324**	*e*Pg	**Pg**	**10 49 39.7**	**-0.2**
BARS				*e*Sg	**Sg**	**10 49 56.8**	**+0.5**
BARS	**Barje**	**1.27**	**324**	*e*Pg	**Pg**	**10 49 39.7**	**-0.2**
BARS				*e*Sg	**Sg**	**10 49 56.8**	**+0.5**
PLD	**Plovdiv**	**1.43**	**77**	*e*Pg	**Pg**	**10 49 41.8**	**-1.2**
PLD				*e*Sg	**Sg**	**10 50 01.9**	**+0.4**
PLD	**Plovdiv**	**1.43**	**77**	*e*Pg	**Pg**	**10 49 41.8**	**-1.2**
PLD				*e*Sg	**Sg**	**10 50 01.9**	**+0.4**
KAVA	**Kavala**	**1.50**	**122**	P	**Pn**	**10 49 42.5**	**+0.1**
KAVA	**Kavala**	**1.50**	**122**	P	**Pn**	**10 49 42.5**	**+0.1**

IDC 03 10:55:11.7±5.3, 11°.14N×92°.45E, h28km±7km, mb3.4/3, mb1 3.6/3, mb1mx3.2/22, mbtmp3.4/3, Error ellipse: s-maj=275.5km s-min=19.4km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.57**	**348**	P	P	11 02 15.2	+0.1
	0.6nm,0.6s,baz=167,slow=7.6,SNR=8.4						
MKAR				pP	pP	11 02 23.3	-0.1
	1.1nm,0.6s,baz=168,slow=8.0,SNR=12						
WRA	**Warramunga Arr**	**51.52**	**127**	P	P	11 04 15.0	-0.3
	0.7nm,0.6s,baz=306,slow=8.4,SNR=14						
WRA				pP	pP	11 04 24.1	+0.2
	0.2nm,0.3s,baz=306,slow=8.4,SNR=2.8						
ASAR	**Alice Springs**	**53.28**	**131**	P	P	11 04 28.4	0.0
	0.4nm,0.8s,baz=312,slow=7.1,SNR=3.9						
ASAR				pP	pP	11 04 37.0	+0.1
	0.2nm,0.5s,baz=310,slow=7.1,SNR=2.1						

IDC 03 10:55:26.1±5.3, 11°.06N×92°.33E, h28km±7km, mb3.6/3, mb1 3.7/3, mb1mx3.3/22, mbtmp3.6/3, Error ellipse: s-maj=274.4km s-min=19.4km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.62**	**348**	P	P	11 02 30.0	+0.1
	1.2nm,0.7s,baz=172,slow=8.0,SNR=8.8						
MKAR				pP	pP	11 02 38.1	-0.1
	1.4nm,0.6s,baz=172,slow=8.6,SNR=8.9						
WRA	**Warramunga Arr**	**51.57**	**127**	P	P	11 04 29.8	-0.2
	1.1nm,0.7s,baz=305,slow=8.5,SNR=8.7						
WRA				pP	pP	11 04 38.9	+0.3
	0.6nm,0.5s,baz=307,slow=8.3,SNR=4.1						
ASAR	**Alice Springs**	**53.33**	**131**	P	P	11 04 43.0	0.0
	0.5nm,0.7s,baz=313,slow=8.3,SNR=5.2						
ASAR				pP	pP	11 04 51.7	0.0
	0.5nm,0.6s,baz=310,slow=7.4,SNR=2.5						

NIED ***03*** *11:04:00, 27°.30N×130°.30E, h5km, Mw4.3 Best double couple: M0=2.73000×10^15 NP1:φ=223.00000°, δ=50.00000°, λ=-92.00000°. NP2:φ=46.00000°, δ=40.00000°, λ=-87.00000°.*
BJI ***03*** *11:04:51.1, 27°.22N×130°.50E, h26km, mB4.4/13, mb4.4/19, Ms3.9/14, Ms7 3.8/12*
IDC ***03*** *11:04:52.3±0.8, 27°.41N×130°.26E, h0km, mb4.3/13, mb1 4.4/14, mb1mx4.2/25, mbtmp4.3/14, ML3.6/2, MS3.6/20, Ms1 3.6/20, ms1mx3.5/38, Error ellipse: s-maj=24.6km s-min=16.7km az=73.0*
ISCJB ***03*** *11:04:53.9±0.9, 27°.30N±0°.03×130°.29E±0°.03, h24km±6km, mb4.5/37, MS3.8/23, Error ellipse: s-maj=5.5km s-min=4.1km az=144.1*
JMA ***03*** *11:04:54.0±0.1, 27°.31N×130°.34E, h77km±4km, M4.1*
MOS ***03*** *11:04:55.6±0.9, 27°.36N×130°.33E, h33km, mb4.6/23, Error ellipse: s-maj=16.1km s-min=9.2km az=111.4*
NEIC ***03*** *11:04:57.8±0.5, 27°.31N×130°.19E, h35km, mb4.7/14, MW4.2(NIED), Error ellipse: s-maj=13.5km s-min=9.9km az=144.0*
ISC 03 11:04:54.2±1.2, 27°.32N±0°.04×130°.23E±0°.03, h12km±7km, h20km±6.9km: pP-P, n106, σ0.96/110, mb4.5/37, MS3.8/23, 3C-3D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JZK	**Kikaishima**	**1.02**	**347**	P	**Pg**	**11 05 14.0**	**+0.2**
JZK				*e*S	**Sg**	**11 05 28.7**	**+1.6**
JAM	**Amami Oshima**	**1.22**	**333**	P	**Pn**	**11 05 16.3**	**-0.8**
JAM				S	**Sb**	**11 05 32.2**	**-0.8**
JTK	**Tokunoshima**	**1.23**	**293**	P	**Pn**	**11 05 17.2**	**0.0**
JTK				*e*S	**Sb**	**11 05 34.5**	**+1.3**
JMZ	**Minamidaito 2**	**1.73**	**149**	P	**Pn**	**11 05 21.9**	**-2.2**
JMZ				*e*S	**Sn**	**11 05 42.2**	**-4.0**
JOW	**Kunigami**	**1.81**	**255**	P	**Pn**	**11 05 25.1**	**-0.1**
JOW				*e*S	**Sn**	**11 05 48.8**	**+0.7**
JIH	**Iheya**	**2.04**	**263**	P	**Pn**	**11 05 28.3**	**0.0**
JIH				*e*S	**Sn**	**11 05 53.4**	**-0.3**
JJT2	**Tamagusuku 2**	**2.51**	**243**	P	**Pn**	**11 05 35.1**	**+0.3**
JJT2				*e*S	**Sn**	**11 06 05.7**	**+0.3**
NAH1	**Naha**	**2.53**	**245**	P	**Pn**	**11 05 35.4**	**+0.3**
NAH1				*e*S	**Sn**	**11 06 05.9**	**+0.1**
JNN	**Nakanoshima**	**2.53**	**353**	P	**Pn**	**11 05 34.2**	**-0.9**
JAGN	**Aguni-jima**	**2.77**	**255**	P	**Pn**	**11 05 38.1**	**-0.2**
JAGN				*e*S	**Sn**	**11 06 11.0**	**-0.7**
JKC	**Kuchinoerabu**	**3.13**	**359**	P	**Pn**	**11 05 42.2**	**-1.2**
JKE	**Kume jima 2**	**3.23**	**253**	P	**Pn**	**11 05 44.1**	**-0.7**
JKE				*e*S	**Sn**	**11 06 22.4**	**-0.8**
JTN	**Tanegashima 3**	**3.39**	**11**	P	**Pn**	**11 05 45.4**	**-1.5**
JTN				*e*S	**Sn**	**11 06 23.4**	**-3.6**
SSLB	**Suanglung**	**9.09**	**249**	*e*Pn	**Pn**	**11 07 03.3**	**-1.9**
JHJ	**Hachijo jima 2**	**10.08**	**53**	Pn	**Pn**	**11 07 18.5**	**-0.2**
	4.9nm,0.3s,baz=15,slow=12,SNR=3.3						
JHJ				LR	LR	11 10 39.6	
	comp=Z,186nm,21.6s,baz=42,slow=35						
KSRS	**Korea Array**	**10.29**	**350**	Pn	**Pn**	**11 07 18.8**	**-2.8**
	0.2nm,0.3s,baz=166,slow=13,SNR=5.8						
KSRS				LR	LR	11 11 51.4	
	comp=Z,225nm,19.0s,baz=167,slow=41						
CBIJ	**Chichi jima**	**10.64**	**88**	LR	LR	11 11 06.6	
	comp=Z,81nm,18.5s,baz=110,slow=35						
NJ2	**Nanjing**	**10.96**	**298**	*e*P	**Pn**	**11 07 30.9**	**+0.1**
NJ2				pP		11 07 37.3	
NJ2				sP		11 07 42.5	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,120nm,3.6s						
NJ2				LR	LR		
	comp=N,240nm,16.2s						
NJ2				LR	LR		
	comp=E,300nm,20.8s						
NJ2				LR	LR		
	comp=Z,5μm,19.4s						
GUMO	**Guam**	**19.33**	**132**	LR	LR	11 15 08.7	
	comp=Z,100nm,21.6s,baz=90,slow=32						
XAN	**Xi'an**	**19.50**	**295**	P	**Pn**	**11 09 21.4**	**-1.0**
XAN				pP	pP	11 09 28.4	+3.8
XAN				PP		11 09 38.4	
XAN				S	**Sn**	**11 12 54.7**	**-6.5**
XAN				pmax	pmax		
	comp=Z,24nm,0.8s						
XAN				pmax	pmax		
	comp=Z,21nm,8.1s						
XAN				LR	LR		
	comp=N,170nm,16.4s						
XAN				LR	LR		
	comp=E,92nm,18.4s						
XAN				LR	LR		
	comp=Z,79nm,19.3s						
QIZ	**Qiongzhong**	**20.46**	**251**	P	**P**	**11 09 31.7**	**-0.1**
QIZ				S	**S**	**11 13 19.5**	**-1.2**
QIZ				LR	LR		
	comp=N,120nm,18.8s						
QIZ				LR	LR		
	comp=Z,150nm,16.9s,MS3.4						
HHC	**Hu-ho-hao-te**	**20.47**	**316**	*e*P	**P**	**11 09 31.4**	**-0.3**
HHC				PP		11 09 50.2	
HHC				S	**S**	**11 13 09.4**	**-11**
HHC				pmax	pmax		
	comp=Z,24nm,0.5s						
HHC				pmax	pmax		
	comp=Z,90nm,5.1s						
HHC				LR	LR		
	comp=N,190nm,12.6s,MS3.9						
HHC				LR	LR		
	comp=E,240nm,12.3s,MS3.9						
HHC				LR	LR		
	comp=Z,240nm,12.4s,MS3.8						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HABR	**Khabarovsk**	**21.45**	**9**	*e*P	pP	11 09 52.6	+7.0
HABR				*e*S	**S**	**11 13 32.5**	**-7.3**
HABR				*e**SS	sS	11 13 47.1	+1.8
HABR				*e*		11 21 02.6	
HABR				pmax	pmax		
	comp=E,49nm,2.0s						
HABR				pmax	pmax		
	comp=Z,40nm,2.4s,mb4.3						
HABR				pmax	pmax		
	comp=N,24nm,2.0s						
HABR				MLR	MLR		
	comp=Z,119nm,19.0s,MS3.3						
KLR	**Kul'dur**	**21.91**	**3**	*e*P	**P**	**11 09 41.6**	**-5.5**
YSS	**Yuzh-Sakhalins**	**21.94**	**23**	*e*P	**P**	**11 09 47.0**	**-0.5**
YSS				*e*		11 10 24.0	
YSS				pmax	pmax		
	comp=Z,40nm,1.0s,mb4.8						
YSS	**Yuzh-Sakhalins**	**21.94**	**23**	*e*P	**P**	**11 09 47.1**	**-0.4**
	comp=Z,18nm,0.9s,mb4.5						
LZH	**Lanzhou**	**24.04**	**298**	*e*P	**P**	**11 10 18.8**	**+10**
LZH				pP		11 10 26.1	
LZH				sP	sP	11 10 30.4	+16
LZH				pmax	pmax		
	comp=Z,32nm,1.1s,mb4.7						
LZH				pmax	pmax		
	comp=Z,160nm,5.0s						
KMI	**Kunming**	**24.74**	**271**	P	**P**	**11 10 11.0**	**-4.6**
KMI				pmax	pmax		
	comp=Z,9.0nm,1.6s,mb4.0						
ULN	**Ulaanbaatar**	**27.35**	**325**	*e*P	**P**	**11 10 39.0**	**+0.1**
ULN				*e**PP	pP	11 10 50.0	+7.4
ULN				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.1						
ULN	**Ulaanbaatar**	**27.35**	**325**	*e*P	**P**	**11 10 39.0**	**0.0**
	comp=Z,6.0nm,1.0s,mb4.1						
ULN				*e*pP	pP	11 10 50.0	+7.4
SONM	**Songino Array**	**27.67**	**324**	P	**P**	**11 10 43.1**	**+1.3**
	comp=Z,3.4nm,0.9s,mb4.0,baz=126,slow=8.9,SNR=15						
SONM				LR	LR	11 23 05.3	
	comp=Z,185nm,18.4s,MS3.7,baz=91,slow=40						
SONM	**Songino Array**	**27.67**	**324**	P	**P**	**11 10 43.1**	**+1.3**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SONM				MLR	MLR		
	comp=Z,185nm,18.4s						
GTA	**Gaotai**	**27.99**	**303**	*e*P	**P**	**11 10 44.1**	**-0.7**
GTA				pP	pP	11 10 49.2	+0.7
GTA				sP	sP	11 10 52.3	+2.3
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
GTA				pmax	pmax		
	comp=Z,27nm,3.5s						
GTA				LR	LR		
	comp=N,320nm,15.2s,MS4.2						
GTA				LR	LR		
	comp=E,330nm,17.3s,MS4.2						
GTA				LR	LR		
	comp=Z,300nm,17.8s,MS3.9						
CHTO	**Chiang Mai**	**29.94**	**260**	*e*P	**P**	**11 11 03.5**	**+1.1**
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
CHTO	**Chiang Mai**	**29.94**	**260**	*e*P	**P**	**11 11 03.5**	**+1.2**
	comp=Z,10nm,0.9s,mb4.6						
CMAR	**Chiang Mai Arr**	**30.08**	**260**	P	**P**	**11 11 05.3**	**+1.7**
	comp=Z,2.2nm,0.9s,mb3.9,baz=52,slow=7.5,SNR=12						
CMAR	**Chiang Mai Arr**	**30.08**	**260**	P	**P**	**11 11 05.3**	**+1.7**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
PETK	**Petropavlovsk-**	**32.84**	**31**	LR	LR	11 23 04.9	
	comp=Z,37nm,21.1s,MS3.1,baz=356,slow=33						
YAK	**Yakutsk**	**34.71**	**360**	*e*P	**P**	**11 11 41.8**	**-1.8**
YAK				*e*		11 11 52.5	
YAK				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.2						
YAK				pmax	pmax		
	comp=N,11nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK	**Yakutsk**	**34.71**	**360**	*e*P	**P**	**11 11 42.5**	**-1.1**
	comp=E,31nm,0.8s,mb5.3						
SEY	**Seymchan**	**38.47**	**16**	*ce*P	**P**	**11 12 16.4**	**+0.7**
MK31	**Makanchi Array**	**42.17**	**311**	*e*P	**P**	**11 12 47.8**	**+1.3**
MKAR	**Makanchi Array**	**42.17**	**311**	P	**P**	**11 12 45.6**	**-0.9**
	comp=E,3.0nm,0.6s,mb4.1,baz=97,slow=9.5,SNR=25						
MKAR				PcP	PcP	11 14 40.9	+0.2
	comp=E,1.2nm,0.7s,baz=68,slow=4.6,SNR=5.8						
MKAR	**Makanchi Array**	**42.17**	**311**	P	**P**	**11 12 45.6**	**-0.9**
MKAR						11 14 40.9	
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZAA0	**Zalesovo Array**	**42.49**	**321**	*e*P	**P**	**11 12 49.1**	**0.0**
ZALV	**Zalesovo Beam**	**42.49**	**321**	P	**P**	**11 12 48.5**	**-0.5**
	comp=Z,2.6nm,0.7s,mb4.0,baz=122,slow=11,SNR=12						
ZALV				PcP	PcP	11 14 41.0	-0.6
	comp=Z,1.3nm,0.6s,baz=98,slow=3.0,SNR=5.1						
ZALV				LR	LR	11 32 20.6	
	comp=Z,64nm,19.0s,MS3.5,baz=74,slow=39						
ZALV	**Zalesovo Beam**	**42.49**	**321**	P	**P**	**11 12 48.6**	**-0.5**
ZALV						11 14 41.0	
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.0						
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.6						
ZALV				MLR	MLR		
	comp=Z,65nm,19.0s,MS3.5						
TIXI	**Tiksi**	**44.38**	**359**	P	**P**	**11 13 07.1**	**+3.0**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.3						
TIXI	**Tiksi**	**44.38**	**359**	P	**P**	**11 13 07.1**	**+3.0**
	comp=Z,3.1nm,0.5s,mb4.3						
KURK	**Kurchatov**	**45.28**	**315**	P	**P**	**11 13 09.6**	**-1.9**
	comp=Z,3.2nm,0.6s,mb4.3,baz=103,slow=8.7,SNR=6.2						
KURK				LR	LR	11 33 36.9	
	comp=Z,147nm,21.0s,MS3.9,baz=130,slow=38						
KURK	**Kurchatov**	**45.28**	**315**	*ce*P	**P**	**11 13 11.4**	**-0.1**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.3						
BILL	**Bilibino**	**46.09**	**18**	*e*P	**P**	**11 13 17.3**	**-0.3**
BILL				*e*		11 15 06.2	
BILL				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
BILL				MLR	MLR		
	comp=Z,100nm,19.0s,MS3.8						
HNR	**Honiara**	**46.52**	**138**	LR	LR	11 30 15.2	
	comp=Z,84nm,18.8s,MS3.7,baz=139,slow=33						
TKM2	**Tokmak 2**	**46.53**	**304**	*e*P	**P**	**11 13 23.5**	**+2.0**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
TKM2	**Tokmak 2**	**46.53**	**304**	*e*P	**P**	**11 13 23.5**	**+2.0**
	comp=Z,3.1nm,0.6s,mb4.4						
WRA	**Warramunga Arr**	**47.15**	**175**	P	**P**	**11 13 26.4**	**-0.1**
	comp=Z,1.3nm,0.5s,mb4.1,baz=354,slow=8.5,SNR=23						
WRA	**Warramunga Arr**	**47.15**	**175**	P	**P**	**11 13 26.4**	**-0.1**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AAK	**Ala-Archa**	**47.34**	**304**	LR	LR	11 34 35.7	
	comp=Z,96nm,18.8s,MS3.8,baz=202,slow=38						
BRVK	**Borovoye**	**50.74**	**318**	*ce*P	**P**	**11 13 55.1**	**+1.4**
BRVK				pmax	pmax		
	comp=Z,35nm,1.4s,mb5.1						
BRVK	**Borovoye**	**50.74**	**318**	*e*P	**P**	**11 13 55.2**	**+1.5**
	comp=Z,22nm,0.9s,mb5.1						
ASAR	**Alice Springs**	**50.81**	**176**	P	**P**	**11 13 55.4**	**+0.9**
	comp=Z,1.3nm,0.5s,mb4.1,baz=4.9,slow=15,SNR=32						
ASAR	**Alice Springs**	**50.81**	**176**	P	**P**	**11 13 55.4**	**+0.9**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SVE	**Sverdlovsk**	**56.51**	**322**	*e*P	**P**	**11 14 36.9**	**+0.9**
SVE				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.0						
ABKAR	**Akbulak array**	**57.22**	**313**	*e*P	**P**	**11 14 41.9**	**+0.8**
	comp=Z,9.8nm,0.9s,mb4.8						
ARU	**Arti**	**57.66**	**321**	*d i*P	**P**	**11 14 44.3**	**+0.2**
ARU				S	**S**	**11 22 40.0**	**-2.1**
ARU				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
ARU	**Arti**	**57.66**	**321**	*e*P	**P**	**11 14 44.5**	**+0.4**
	comp=Z,10nm,0.9s,mb4.8						
AKTO	**Aktyubinsk**	**58.35**	**314**	LR	LR	11 41 53.3	
	comp=Z,68nm,18.5s,MS3.8,baz=257,slow=38						
IMA2	**Indian Mountai**	**59.73**	**27**	*e*P	**P**	**11 15 00.2**	**+1.8**
MCK	**McKinley**	**61.84**	**30**	*e*P	**P**	**11 15 12.4**	**-0.4**
MCK				pmax	pmax		
	comp=Z,11nm,0.9s,mb5.0						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCK	**McKinley**	**61.84**	**30**	*e*P	**P**	**11 15 12.4**	**-0.4**
	comp=Z,11nm,0.9s,mb5.0						
BMRM	**Bremner River**	**64.21**	**33**	*e*P	**P**	**11 15 28.7**	**+0.1**
	comp=Z,12nm,1.2s,mb4.8						
MENT	**Mentasta**	**64.28**	**30**	*e*P	**P**	**11 15 29.3**	**+0.3**
EGAK	**Eagle**	**65.06**	**28**	*e*P	**P**	**11 15 34.1**	**0.0**
	comp=Z,31nm,2.3s,mb4.9						
DAWY	**Dawson**	**65.96**	**29**	*e*P	**P**	**11 15 40.5**	**+0.6**
INK	**Inuvik**	**67.18**	**24**	P	**P**	**11 15 47.5**	**-0.2**
	comp=Z,3.6nm,0.9s,mb4.4,baz=207,slow=2.4,SNR=4.1						
INK	**Inuvik**	**67.18**	**24**	P	**P**	**11 15 47.5**	**-0.2**
INK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HYT	**Haines Junctio**	**67.62**	**32**	*e*P	**P**	**11 15 51.8**	**+1.3**
SPITS	**Spitsbergen Ar**	**68.13**	**348**	LR	LR	11 48 50.4	
	comp=Z,42nm,18.5s,MS3.7,baz=145,slow=39						
ZEI	**Tsey**	**69.47**	**308**	*e*P	**P**	**11 16 02.0**	**-0.4**
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
GNI	**Garni**	**69.71**	**305**	LR	LR	11 50 58.9	
	comp=Z,50nm,21.8s,MS3.7,baz=310,slow=40						
KIV	**Kislovodsk**	**69.93**	**310**	*e*P	**P**	**11 16 05.1**	**-0.1**
KIV				pmax	pmax		
	comp=Z,23nm,1.2s,mb5.0						
KIV				MLR	MLR		
	comp=Z,48nm,19.0s,MS3.8						
OBN	**Obninsk**	**70.06**	**322**	*e*P	**P**	**11 16 05.0**	**-0.9**
OBN				*e*S	S	11 25 10.7	-5.6
OBN				pmax	pmax		
	comp=Z,19nm,1.2s,mb4.9						
OBN				MLR	MLR		
	comp=Z,100nm,20.0s,MS4.1						
SOC	**Sochi**	**72.08**	**310**	*e*P	**P**	**11 16 22.7**	**+4.4**
SOC				*e*S	S	11 25 38.6	-1.4
SOC				*e*		11 26 24.3	
SOC				pmax	pmax		
	comp=Z,53nm,1.6s,mb5.2						
FINES	**FINESS Array B**	**72.80**	**331**	P	**P**	**11 16 22.1**	**-0.2**
	comp=Z,2.1nm,0.5s,mb4.3,baz=64,slow=5.5,SNR=12						
FINES				LR	LR	11 51 34.8	
	comp=Z,72nm,19.2s,MS4.0,baz=10,slow=38						
FINES	**FINESS Array B**	**72.80**	**331**	P	**P**	**11 16 22.1**	**-0.1**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FINES				MLR	MLR		
	comp=Z,72nm,19.2s						
RES	**Resolute Bay**	**74.14**	**11**	*e*P	**P**	**11 16 30.2**	**+0.2**
AKASG	**Malin Array Be**	**75.86**	**320**	P	**P**	**11 16 39.1**	**-1.2**
	comp=Z,1.6nm,0.5s,mb4.2,baz=54,slow=6.6,SNR=6.9						
AKASG				LR	LR	11 52 60.0	
	comp=Z,110nm,18.1s,MS4.2,baz=45,slow=38						
AKASG	**Malin Array Be**	**75.86**	**320**	*i* P	**P**	**11 16 40.0**	**-0.3**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BR131	**Keskin Array S**	**77.77**	**308**	*e*P	**P**	**11 16 51.3**	**0.0**
	comp=Z,2.0nm,0.6s,mb4.2						
BRTR	**Keskin Array B**	**77.77**	**308**	P	**P**	**11 16 52.2**	**+0.9**
	comp=Z,3.5nm,0.8s,mb4.3,baz=91,slow=5.3,SNR=13						
BRTR				LR	LR	11 56 23.6	
	comp=Z,36nm,19.9s,MS3.7,baz=101,slow=40						
BRTR	**Keskin Array B**	**77.77**	**308**	*i* P	**P**	**11 16 52.2**	**+0.9**
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HFS	**Hagfors**	**78.68**	**333**	LR	LR	11 54 50.9	
	comp=Z,57nm,18.6s,MS3.9,baz=76,slow=38						
NB2	**NORSAR Subarra**	**79.12**	**334**	P	**P**	**11 16 57.9**	**-0.4**
	comp=Z,6.3nm,1.0s,mb4.5,baz=50,slow=5.9						
NOA	**NORSAR Array B**	**79.12**	**334**	P	**P**	**11 16 57.9**	**-0.5**
	comp=Z,1.7nm,0.7s,mb4.1,baz=51,slow=5.6,SNR=10.0						
NOA				LR	LR	11 55 34.1	
	comp=Z,41nm,19.1s,MS3.8,baz=275,slow=38						
NOA	**NORSAR Array B**	**79.12**	**334**	P	**P**	**11 16 57.9**	**-0.4**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NOA				MLR	MLR		
	comp=Z,41nm,19.1s						
MMAI	**Mount Meron Ar**	**79.36**	**302**	LR	LR	11 55 06.0	
	comp=Z,41nm,18.1s,MS3.8,baz=125,slow=38						
VYHS	**Vyhne**	**82.82**	**321**	*e*P	**P**	**11 17 19.7**	**+1.4**
VYHS				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
VYHS	**Vyhne**	**82.82**	**321**	*e*P	**P**	**11 17 19.7**	**+1.4**
	comp=Z,2.2nm,0.8s,mb4.2						
VYHS	**Vyhne**	**82.82**	**321**	*e*P	**P**	**11 17 19.7**	**+1.4**
VRAC	**Vranov**	**83.59**	**323**	LR	LR	11 56 50.0	
	comp=Z,50nm,21.8s,MS3.9,baz=312,slow=37						
BRG	**Berggiesshubel**	**84.06**	**325**	*e*P	**P**	**11 17 25.2**	**+0.5**
	comp=Z,2.8nm,0.7s,mb4.5						
BRG	**Berggiesshubel**	**84.06**	**325**	*e*P	**P**	**11 17 25.2**	**+0.6**
BRG				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.4						
CLL	**Collm**	**84.27**	**326**	*e*P	**P**	**11 17 25.0**	**-0.7**
CLL				*e*	pP	11 17 30.0	+0.3
CLL	**Collm**	**84.27**	**326**	*e*P	**P**	**11 17 25.0**	**-0.7**
CLL				*e*PcP	PcP	11 17 30.0	+0.5
FFC	**Flin Flon**	**86.81**	**27**	*i* P	**P**	**11 17 39.0**	**+0.7**
PDAR	**Pinedale Array**	**91.19**	**40**	P	**P**	**11 17 59.9**	**+0.7**
	comp=Z,1.0nm,0.8s,mb4.2,baz=354,slow=3.0,SNR=8.4						

IDC 03 11:11:27.4±59.0, 14°.19S×178°.84W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.6/16, mbtmp3.9/3, Error ellipse: s-maj=1086.0km s-min=173.9km az=74.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.17**	**237**	P	P	11 19 05.8	+0.2
	3.0nm,0.8s,baz=63,slow=9.0,SNR=4.2						
WRA	**Warramunga Arr**	**45.02**	**256**	P	P	11 19 44.7	-0.4
	0.3nm,0.5s,baz=93,slow=8.5,SNR=6.0						
ASAR	**Alice Springs**	**45.51**	**251**	P	P	11 19 49.0	0.0
	1.1nm,0.5s,baz=82,slow=8.2,SNR=29						

NOU 03 11:14:15.0±0.8, 20°.36S×167°.26E, h10km, ML2.1, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**1.81**	**191**	*e*P	Pn	11

CELP	**Cerrillos**	**1.76**	**96**	*e*S	Sn	11 35 36.5	-1.0
CBYP	**Canovanas**	**2.43**	**90⇑**	*e*P	Pn	11 35 24.7	-0.5
CBYP				*e*S	Sn	11 35 53.1	-0.7
MTP	**Monte Pirata**	**2.73**	**93⇑**	*e*P	Pn	11 35 29.0	-0.2
MTP				*e*S	Sn	11 36 00.6	-0.4

CASC 03 11:35:48.4±1.2, 13°36N×90°08W, h33km±2km, MD3.7, 3C-1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.65**	**43⇑**	*e*P	Pn	11 36 01.6	+0.3
SBLS				*e*S	Sb	11 36 11.7	+1.4
RTR	**El Retiro**	**0.68**	**38⇓**	*e*P	Pn	11 36 02.0	+0.3
RTR				*e*S	Sb	11 36 12.4	+1.2
SNJE	**San Jose**	**0.68**	**42**	*e*P	Pn	11 36 02.0	+0.2
SNJE				*e*S	Sb	11 36 12.1	+0.9
RBDL	**Robledal**	**0.84**	**27⇑**	*e*P	Pn	11 36 04.1	+0.2
RBDL				*e*S	Sn	11 36 16.1	+0.9
BOQS	**Boqueron**	**0.86**	**64**	*e*P	Pn	11 36 04.1	-0.1
BOQS				*e*S	Sn	11 36 17.3	+1.6
LFRS	**El Faro**	**1.02**	**75**	*e*P	Pn	11 36 06.1	-0.4
LFRS				*e*S	Sn	11 36 20.2	+0.5
LBRS	**Las Brisas**	**1.07**	**69**	*e*P	Pn	11 36 07.3	+0.1
LBRS				*e*S	Sn	11 36 22.4	+1.5
PCG	**Pacaya**	**1.15**	**334**	*e*P	Pn	11 36 08.8	+0.5
PCG				*e*S	Sn	11 36 25.1	+2.3
SNVI	**San Vicente**	**1.23**	**78⇑**	*e*P	Pn	11 36 09.5	+0.2
MTO2	**Montecristo 2**	**1.25**	**34**	*e*P	Pn	11 36 09.3	-0.3
NBG	**Las Nubes**	**1.25**	**348**	*e*P	Pn	11 36 10.9	+1.4
NBG				*e*S	Sn	11 36 27.1	+1.9
FUG	**Fuego 3**	**1.31**	**326**	*e*P	Pn	11 36 10.1	-0.3
FG6		**1.43**	**327**	*e*P	Pn	11 36 12.0	-0.1
FG6				*e*S	Sn	11 36 29.9	+0.2
TP2	**Tecpan 2**	**1.69**	**327**	*e*P	Pn	11 36 16.5	+0.9
TP2				*e*S	Sn	11 36 38.1	+2.0
MRL	**Marmol**	**1.74**	**12**	*e*P	Pn	11 36 17.4	+1.1
BLLM	**Bellamira**	**1.79**	**87**	*e*P	Pn	11 36 17.5	+0.4

*ISCJB **03** 11:57:48.4±0.6, 38°01N±0°02×21°52E±0°03, h10km±4km, Error ellipse: s-maj=3.9km s-min=3.4km az=167.9*
*NEIC **03** 11:57:48.0, 38°04N×21°49E, h28km, MD3.3(ATH), After ATH.*
*ATH **03** 11:57:48.0, 38°04N×21°49E, h28km±1km, MD3.3/17*
*THE **03** 11:57:48.7, 38°00N×21°55E, h0km±1km, ML3.5/12, Error ellipse: s-maj=1.8km s-min=0.6km az=254.0*
*CSEM **03** 11:57:48.8±0.2, 38°04N×21°52E, h20km, MD3.3, Error ellipse: s-maj=4.2km s-min=3.9km az=34.0*

ISC 03 11:57:48.8±0.4, 38°00N±0°02×21°51E±0°03, h14km±3km, n71, σ1.9°12/114, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.07**	**329**	*e*Pb	**Pg**	**11 57 52.3**	**+0.7**
RLS	**Riolos of Patr**	**0.07**	**329**	*e*PB	**Pg**	**11 57 52.2**	**+0.6**
RLS	**Riolos of Patr**	**0.07**	**329**	*e*Pb	**Pg**	**11 57 52.3**	**+0.7**
UPR	**University Cam**	**0.36**	**37**	*e*PB	**Pg**	**11 57 56.2**	**+0.1**
UPR				*e*SB	**Sg**	**11 58 01.9**	**+0.9**
UPR	**University Cam**	**0.36**	**37**	P	**Pg**	**11 57 55.3**	**-0.8**
UPR				S	**Sg**	**11 58 01.1**	**+0.1**
UPR	**University Cam**	**0.36**	**37**	P	**Pg**	**11 57 55.3**	**-0.8**
UPR	**University Cam**	**0.36**	**37**	*e*Pb	**Pg**	**11 57 56.2**	**+0.1**
UPR				S	**Sg**	**11 58 01.1**	**+0.1**
UPR				*e*Sb	**Sg**	**11 58 01.9**	**+0.9**
LAKA	**Lakka**	**0.44**	**56**	P	**Pg**	**11 57 56.8**	**-0.7**
LAKA				S	**Sg**	**11 58 03.6**	**+0.1**
LAKA	**Lakka**	**0.44**	**56**	P	**Pg**	**11 57 56.8**	**-0.7**
LAKA				S	**Sg**	**11 58 03.6**	**+0.1**
EFP	**Efpalio**	**0.53**	**36**	*e*PN	**Pg**	**11 57 58.7**	**-0.5**
EFP				*e*SN	**Sg**	**11 58 06.9**	**+0.6**
EFP	**Efpalio**	**0.53**	**36**	P	**Pg**	**11 57 58.5**	**-0.7**
EFP				S	**Sg**	**11 58 06.5**	**+0.2**
EFP	**Efpalio**	**0.53**	**36**	*e*Pn	**Pg**	**11 57 58.7**	**-0.5**
EFP				S	**Sg**	**11 58 06.5**	**+0.2**
KFL	**Anninata**	**0.58**	**281**	P	**Pg**	**11 58 00.8**	**+0.6**
KFL				S	**Sg**	**11 58 09.4**	**+1.4**
KFL	**Anninata**	**0.58**	**281**	P	**Pg**	**11 58 00.8**	**+0.6**
KFL				S	**Sg**	**11 58 09.4**	**+1.4**
KALE	**Kalithea**	**0.63**	**51**	P	**Pg**	**11 58 00.2**	**-0.9**
KALE				S	**Sg**	**11 58 09.6**	**+0.1**
KALE	**Kalithea**	**0.63**	**51**	P	**Pg**	**11 58 00.2**	**-0.9**
KALE				S	**Sg**	**11 58 09.6**	**+0.1**
GUR	**Goura**	**0.66**	**95**	*e*PN	**Pn**	**11 58 01.1**	**-2.6**
GUR				*e*SN	**Sg**	**11 58 12.2**	**+1.9**
GUR	**Goura**	**0.66**	**95**	P	**Pg**	**11 58 00.7**	**-0.9**
GUR				S	**Sg**	**11 58 10.5**	**+0.2**
GUR	**Goura**	**0.66**	**95**	P	**Pg**	**11 58 00.7**	**-0.9**
GUR	**Goura**	**0.66**	**95**	*e*Pn	**Pn**	**11 58 01.1**	**-2.6**
GUR				S	**Sg**	**11 58 10.5**	**+0.2**
GUR				*e*Sn	**Sg**	**11 58 12.2**	**+1.9**
VLS	**Valsamata**	**0.75**	**284**	*e*Pn	**Pn**	**11 58 03.1**	**-1.9**
VLS	**Valsamata**	**0.75**	**284**	*e*PN	**Pn**	**11 58 03.1**	**-1.9**
VLS	**Valsamata**	**0.75**	**284**	P	**Pg**	**11 58 02.9**	**-0.5**
VLS				S	**Sg**	**11 58 15.3**	**+2.0**
VLS	**Valsamata**	**0.75**	**284**	P	**Pg**	**11 58 02.9**	**-0.5**
VLS				S	**Sg**	**11 58 15.3**	**+2.0**
ITM	**Ithomi**	**0.88**	**158**	*e*Pn	**Pn**	**11 58 06.4**	**-0.3**
ITM				*e*Sn	**Sn**	**11 58 19.5**	**+0.2**
ITM	**Ithomi**	**0.88**	**158**	*e*PN	**Pn**	**11 58 06.4**	**-0.3**
ITM				*e*SN	**Sn**	**11 58 19.5**	**+0.2**
ITM	**Ithomi**	**0.88**	**158**	P	**Pg**	**11 58 05.5**	**-0.3**
ITM				S	**Sg**	**11 58 17.9**	**+0.6**
ITM	**Ithomi**	**0.88**	**158**	P	**Pg**	**11 58 05.5**	**-0.3**
ITM	**Ithomi**	**0.88**	**158**	*e*Pn	**Pn**	**11 58 06.4**	**-0.3**
ITM				S	**Sg**	**11 58 17.9**	**+0.6**
ITM				*e*Sn	**Sn**	**11 58 19.5**	**+0.2**
DSF	**Desfina**	**0.90**	**62**	P	**Pb**	**11 58 04.6**	**-1.6**
DSF				S	**Sg**	**11 58 18.0**	**0.0**
DSF	**Desfina**	**0.90**	**62**	P	**Pb**	**11 58 04.6**	**-1.6**
DSF				S	**Sg**	**11 58 18.0**	**0.0**
VLX	**Vlachokerasia**	**0.93**	**132**	*e*PB	**Pb**	**11 58 06.2**	**-0.5**
VLX				*e*SN	**Sn**	**11 58 20.6**	**+0.1**
VLX	**Vlachokerasia**	**0.93**	**132**	P	**Pb**	**11 58 05.9**	**-0.8**
VLX				S	**Sb**	**11 58 19.8**	**+1.0**
VLX	**Vlachokerasia**	**0.93**	**132**	P	**Pb**	**11 58 05.9**	**-0.8**
VLX	**Vlachokerasia**	**0.93**	**132**	*e*Pb	**Pb**	**11 58 06.3**	**-0.4**
VLX				S	**Sb**	**11 58 19.8**	**+1.0**
VLX				*e*Sn	**Sn**	**11 58 20.6**	**+0.1**
EVR	**Evrytania**	**0.95**	**14**	*e*Pn	**Pn**	**11 58 06.2**	**-1.5**
EVR	**Evrytania**	**0.95**	**14**	*e*PN	**Pn**	**11 58 06.2**	**-1.5**
EVR	**Evrytania**	**0.95**	**14**	*e*Pn	**Pn**	**11 58 06.2**	**-1.5**
LKD2	**Lefkada island**	**1.04**	**320**	P	**Pb**	**11 58 07.7**	**-0.8**
LKD2	**Lefkada island**	**1.04**	**320**	P	**Pb**	**11 58 07.7**	**-0.8**
PYL	**PYLOS**	**1.11**	**171**	*e*PN	**Pn**	**11 58 09.9**	**-0.1**
PYL	**PYLOS**	**1.11**	**171**	P	**Pb**	**11 58 09.7**	**-0.1**
PYL	**PYLOS**	**1.11**	**171**	P	**Pb**	**11 58 09.7**	**-0.1**
LTK	**Loutraki**	**1.15**	**88**	*e*PN	**Pn**	**11 58 09.5**	**-0.9**
LTK				*e*SN	**Sn**	**11 58 25.6**	**-0.3**
LTK	**Loutraki**	**1.15**	**88**	P	**Pb**	**11 58 09.4**	**-1.0**
LTK				S	**Sn**	**11 58 25.6**	**-0.3**
LTK	**Loutraki**	**1.15**	**88**	*e*Pn	**Pn**	**11 58 09.5**	**-0.9**
LTK				S	**Sn**	**11 58 25.6**	**-0.3**
AGG	**Agios Georgios**	**1.21**	**32**	P	**Pn**	**11 58 11.9**	**+0.6**
AGG				S	**Sb**	**11 58 28.8**	**+1.9**
AGG	**Agios Georgios**	**1.21**	**32**	P	**Pn**	**11 58 11.9**	**+0.6**
AGG				S	**Sb**	**11 58 28.8**	**+1.9**
LKR	**Lokris**	**1.34**	**60**	*e*Pn	**Pn**	**11 58 12.3**	**-0.7**
LKR	**Lokris**	**1.34**	**60**	*e*PN	**Pn**	**11 58 12.3**	**-0.7**
LKR	**Lokris**	**1.34**	**60**	P	**Pn**	**11 58 12.5**	**-0.5**
LKR				S	**Sn**	**11 58 32.4**	**+1.8**
LKR	**Lokris**	**1.34**	**60**	*e*Pn	**Pn**	**11 58 12.3**	**-0.7**
LKR				S	**Sn**	**11 58 32.4**	**+1.8**
ATAL	**Atalanti**	**1.37**	**59**	P	**Pn**	**11 58 13.2**	**-0.3**
ATAL				S	**Sn**	**11 58 33.7**	**+2.2**
ATAL	**Atalanti**	**1.37**	**59**	P	**Pn**	**11 58 13.2**	**-0.3**
ATAL				S	**Sn**	**11 58 33.7**	**+2.2**
DID	**Didima**	**1.45**	**109**	*e*PN	**Pn**	**11 58 15.6**	**+1.0**
DID				*e*SN	**Sn**	**11 58 34.9**	**+1.5**
DID	**Didima**	**1.45**	**109**	P	**Pn**	**11 58 15.6**	**+1.0**
DID				S	**Sn**	**11 58 35.7**	**+2.3**
DID	**Didima**	**1.45**	**109**	P	**Pn**	**11 58 15.6**	**+1.0**
DID				*e*Sn	**Sn**	**11 58 34.9**	**+1.5**
DID				S	**Sn**	**11 58 35.7**	**+2.3**
NAIG	**Nisos Aigina**	**1.58**	**98**	*e*Pb	**Pb**	**11 58 15.6**	**-2.2**
NAIG	**Nisos Aigina**	**1.58**	**98**	*e*PB	**Pb**	**11 58 15.6**	**-2.2**
THL	**Klokotos Trika**	**1.61**	**14**	*e*PB	**Pb**	**11 58 15.3**	**-3.1**
THL	**Klokotos Trika**	**1.61**	**14**	P	**Pn**	**11 58 18.6**	**+1.8**
THL	**Klokotos Trika**	**1.61**	**14**	P	**Pn**	**11 58 18.6**	**+1.8**
VLI	**Veliai**	**1.71**	**138**	*e*Pn	**Pn**	**11 58 19.2**	**+1.1**
VLI	**Veliai**	**1.71**	**138**	*e*PN	**Pn**	**11 58 19.2**	**+1.1**
VLI	**Veliai**	**1.71**	**138**	*e*Pn	**Pn**	**11 58 19.2**	**+1.1**
VLY	**Voula,Athens**	**1.81**	**94**	*e*Pn	**Pn**	**11 58 19.8**	**+0.3**
VLY	**Voula,Athens**	**1.81**	**94**	*e*PN	**Pn**	**11 58 19.8**	**+0.3**
VLY	**Voula,Athens**	**1.81**	**94**	*e*Pn	**Pn**	**11 58 19.8**	**+0.3**
KEK	**Kerkira**	**2.17**	**323**	*e*Pn	**Pn**	**11 58 23.4**	**-1.1**
KEK	**Kerkira**	**2.17**	**323**	*e*PN	**Pn**	**11 58 23.4**	**-1.1**
KEK	**Kerkira**	**2.17**	**323**	*e*Pn	**Pn**	**11 58 23.4**	**-1.1**

ISC 03 11:59:53.4±0.7, 46°05N±0°03×13°66E±0°05, h0km, n6, σ0.9°79/12, 2C-2D, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SABO	**M.te Sabotino**	**0.08**	**211⇑**	*i*Pg	**Pg**	**11 59 54.3**	**-0.6**
SABO				*i* Sg	**Sg**	**11 59 55.9**	**0.0**
DRE	**Drenchia**	**0.13**	**356⇑**	*i*Pg	**Pg**	**11 59 54.9**	**-0.9**
DRE				*i* Sg	**Sg**	**11 59 57.6**	**+0.1**
VOJS	**Vojsko**	**0.16**	**95**	*i* Pg	**Pg**	**11 59 56.3**	**-0.1**
VOJS				*i* Sg	**Sg**	**11 59 59.9**	**+1.4**
VOJS							
	comp=Z,9.0nm,0.1s						
CADS	**Cadrg**	**0.19**	**17**	*i* Pg	**Pg**	**11 59 56.3**	**-0.7**
CADS				*i* Sg	**Sg**	**11 59 59.5**	**-0.1**
CADS							
	comp=Z,9.0nm,0.1s						
COLI	**Coloredo**	**0.21**	**294⇓**	*e*Pg	**Pg**	**11 59 56.6**	**-0.8**
COLI				*e*Sg	**Sg**	**12 00 01.6**	**+1.3**
VINO	**Villanova**	**0.34**	**309⇓**	*e*Pg	**Pg**	**11 59 59.3**	**-0.5**
VINO				*e*Sg	**Sg**	**12 00 05.3**	**+1.1**

*ISCJB **03** 12:08:41.4±0.5, 36°13N±0°02×25°43E±0°05, h12km±4km, Error ellipse: s-maj=6.3km s-min=3.5km az=177.6*
*THE **03** 12:08:41.8, 36°13N×25°49E, h8km±1km, Error ellipse: s-maj=1.4km s-min=0.4km az=318.0*
*ATH **03** 12:08:41.5, 36°13N×25°44E, h36km±1km, MD3.4/13*
*NEIC **03** 12:08:41.5, 36°13N×25°44E, h36km, MD3.4(ATH), After ATH.*
*CSEM **03** 12:08:41.3±0.1, 36°13N×25°45E, h15km, MD3.4, Error ellipse: s-maj=3.2km s-min=2.0km az=91.0*

ISC 03 12:08:41.7±0.5, 36°14N±0°02×25°44E±0°05, h15km±4km, n58, σ0.9°54/85, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THR1	**Thera Island**	**0.23**	**3**	P	**Pg**	**12 08 46.7**	**-0.2**
THR1	840nm,0.1s						
THR1				S	**Sg**	**12 08 50.6**	**+0.2**
THR1	**Thera Island**	**0.23**	**3**	P	**Pg**	**12 08 46.7**	**-0.2**
THR1	840nm,0.1s						
THR1				S	**Sg**	**12 08 50.6**	**+0.2**
THR3	**Thira Island,**	**0.28**	**353**	P	**Pg**	**12 08 47.6**	**+0.1**
THR3	**Thira Island,**	**0.28**	**353**	P	**Pg**	**12 08 47.6**	**+0.1**
THR5	**Thira Island,**	**0.29**	**345**	P	**Pg**	**12 08 48.0**	**+0.2**
THR5	**Thira Island,**	**0.29**	**345**	P	**Pg**	**12 08 48.0**	**+0.2**
THR2	**Thira island,**	**0.31**	**359**	P	**Pg**	**12 08 48.4**	**+0.2**
THR2	**Thira island,**	**0.31**	**359**	P	**Pg**	**12 08 48.4**	**+0.2**
NPS	**Neapolis**	**0.88**	**171**	*e*Pn	**Pg**	**12 08 58.3**	**-0.5**
NPS				*e*Sn	**Sg**	**12 09 10.8**	**+0.5**
NPS	**Neapolis**	**0.88**	**171**	*e*PN	**Pg**	**12 08 58.3**	**-0.5**
NPS				*e*SN	**Sg**	**12 09 10.8**	**+0.5**
NPS	**Neapolis**	**0.88**	**171**	*e*Pn	**Pg**	**12 08 58.3**	**-0.5**
NPS				*e*Sn	**Sg**	**12 09 10.8**	**+0.5**
APE	**Apeiranthos**	**0.93**	**4**	*e*Pn	**Pg**	**12 08 59.5**	**-0.3**
APE				*e*Sn	**Sn**	**12 09 13.3**	**0.0**
APE	**Apeiranthos**	**0.93**	**4**	*e*PN	**Pg**	**12 08 59.5**	**-0.3**
APE				*e*SN	**Sn**	**12 09 13.3**	**0.0**
APE	**Apeiranthos**	**0.93**	**4**	P	**Pb**	**12 08 59.4**	**-0.2**
APE				S	**Sb**	**12 09 12.9**	**+1.1**
APE	**Apeiranthos**	**0.93**	**4**	P	**Pb**	**12 08 59.4**	**-0.2**
APE				S	**Sb**	**12 09 12.9**	**+1.1**
APE				*e*Sn	**Sn**	**12 09 13.3**	**0.0**
IDI	**Anoyia**	**0.96**	**208**	*e*Pn	**Pn**	**12 08 59.6**	**-0.9**
IDI				*e*Sn	**Sn**	**12 09 13.4**	**-0.5**
IDI	**Anoyia**	**0.96**	**208**	*e*PN	**Pn**	**12 08 59.6**	**-0.9**
IDI				*e*SN	**Sn**	**12 09 13.4**	**-0.5**
IDI	**Anoyia**	**0.96**	**208**	*e*Pn	**Pn**	**12 08 59.6**	**-0.9**
IDI				*e*Sn	**Sn**	**12 09 13.4**	**-0.5**
LAST	**Lasithi**	**0.97**	**178**	*e*Pn	**Pb**	**12 08 59.7**	**-0.5**
LAST	**Lasithi**	**0.97**	**178**	*e*PN	**Pb**	**12 08 59.7**	**-0.5**
LAST	**Lasithi**	**0.97**	**178**	P	**Pb**	**12 08 59.7**	**-0.5**
LAST				S	**Sb**	**12 09 13.7**	**+0.9**
LAST	**Lasithi**	**0.97**	**178**	P	**Pb**	**12 08 59.7**	**-0.5**
LAST				S	**Sb**	**12 09 13.7**	**+0.9**
ZKR	**Zakros**	**1.20**	**148**	*e*Pn	**Pn**	**12 09 03.6**	**-0.2**
ZKR				*e*Sn	**Sn**	**12 09 19.9**	**+0.1**
ZKR	**Zakros**	**1.20**	**148**	*e*PN	**Pn**	**12 09 03.6**	**-0.2**
ZKR				*e*SN	**Sn**	**12 09 19.9**	**+0.1**
ZKR	**Zakros**	**1.20**	**148**	P	**Pn**	**12 09 04.0**	**+0.2**
ZKR				S	**Sb**	**12 09 19.7**	**+0.4**
ZKR	**Zakros**	**1.20**	**148**	*e*Pn	**Pn**	**12 09 03.6**	**-0.2**
ZKR	**Zakros**	**1.20**	**148**	P	**Pn**	**12 09 04.0**	**+0.2**
ZKR				*e*Sn	**Sn**	**12 09 19.9**	**+0.1**
SIVA	**Sivas**	**1.23**	**205**	*e*Pn	**Pn**	**12 09 04.4**	**+0.1**
SIVA				*e*Sn	**Sn**	**12 09 20.2**	**-0.4**
SIVA	**Sivas**	**1.23**	**205**	*e*PN	**Pn**	**12 09 04.4**	**+0.1**
SIVA				*e*SN	**Sn**	**12 09 20.2**	**-0.4**
SIVA	**Sivas**	**1.23**	**205**	P	**Pn**	**12 09 04.0**	**-0.3**
SIVA				S	**Sb**	**12 09 21.7**	**+1.5**
SIVA	**Sivas**	**1.23**	**205**	P	**Pn**	**12 09 04.0**	**-0.3**
SIVA	**Sivas**	**1.23**	**205**	*e*Pn	**Pn**	**12 09 04.4**	**+0.1**
SIVA				*e*Sn	**Sn**	**12 09 20.2**	**-0.4**
SIVA				S	**Sb**	**12 09 21.7**	**+1.5**
VAM	**Vamos**	**1.25**	**235**	*e*Pn	**Pn**	**12 09 04.2**	**-0.3**
VAM				*e*Sn	**Sn**	**12 09 21.7**	**+0.7**
VAM	**Vamos**	**1.25**	**235**	*e*PN	**Pn**	**12 09 04.2**	**-0.3**
VAM				*e*SN	**Sn**	**12 09 21.7**	**+0.7**
VAM	**Vamos**	**1.25**	**235**	*e*Pn	**Pn**	**12 09 04.2**	**-0.3**
VAM				*e*Sn	**Sn**	**12 09 21.7**	**+0.7**
XRY	**Khrisi**	**1.27**	**171**	*e*Pb	**Pb**	**12 09 04.3**	**-1.0**
XRY	**Khrisi**	**1.27**	**171**	*e*PB	**Pb**	**12 09 04.3**	**-1.0**
XRY	**Khrisi**	**1.27**	**171**	*e*Pb	**Pb**	**12 09 04.3**	**-1.0**
KARN	**Karanos**	**1.44**	**240**	*e*PN	**Pn**	**12 09 07.1**	**-0.1**
KARN	**Karanos**	**1.44**	**240**	P	**Pn**	**12 09 07.6**	**+0.4**
KARN	**Karanos**	**1.44**	**240**	*e*Pn	**Pn**	**12 09 07.1**	**-0.1**
KARN	**Karanos**	**1.44**	**240**	P	**Pn**	**12 09 07.6**	**+0.4**
KARP	**Karpathos**	**1.51**	**112**	*e*Pn	**Pn**	**12 09 08.0**	**-0.2**
KARP	**Karpathos**	**1.51**	**112**	*e*PN	**Pn**	**12 09 08.0**	**-0.2**
KARP	**Karpathos**	**1.51**	**112**	*e*Pn	**Pn**	**12 09 08.0**	**-0.2**
KYTH	**Kithira**	**1.95**	**275**	*e*Pn	**Pn**	**12 09 13.8**	**-0.4**
KYTH	**Kithira**	**1.95**	**275**	*e*PN	**Pn**	**12 09 13.8**	**-0.4**
KYTH	**Kithira**	**1.95**	**275**	*e*Pn	**Pn**	**12 09 13.8**	**-0.4**
VLI	**Veliai**	**2.10**	**287**	*e*Pn	**Pn**	**12 09 15.9**	**-0.4**
VLI	**Veliai**	**2.10**	**287**	*e*PN	**Pn**	**12 09 15.9**	**-0.4**
VLI	**Veliai**	**2.10**	**287**	*e*Pn	**Pn**	**12 09 15.9**	**-0.4**
ARG	**Arkhangelos**	**2.17**	**87**	*e*Pn	**Pn**	**12 09 17.4**	**+0.2**
ARG	**Arkhangelos**	**2.17**	**87**	*e*PN	**Pn**	**12 09 17.4**	**+0.2**
ARG	**Arkhangelos**	**2.17**	**87**	*e*Pn	**Pn**	**12 09 17.4**	**+0.2**
DID	**Didima**	**2.24**	**308**	P	**Pn**	**12 09 18.4**	**+0.2**
DID	**Didima**	**2.24**	**308**	P	**Pn**	**12 09 18.4**	**+0.2**
CHOS	**Chios island**	**2.30**	**12**	P	**Pn**	**12 09 18.6**	**-0.4**
CHOS	**Chios island**	**2.30**	**12**	P	**Pn**	**12 09 18.6**	**-0.4**

*NEIC **03** 12:10:13.5, 10°52N×86°71W, h30km, mb4.3/1, MD4.1(HDC), After HDC.*
*IDC **03** 12:10:17.9±2.8, 11°50N×84°69W, h0km, mb3.8/4, mb1 4.2/4, mb1mx3.8/19, mbtmp3.8/4, MS3.4/1, Ms1 3.3/1, ms1mx2.8/15, Error ellipse: s-maj=65.2km s-min=50.0km az=8.0*
*ISCJB **03** 12:10:19.4±1.3, 10°36N±0°04×86°26W±0°03, h15km±10km, mb3.7/4, Error ellipse: s-maj=7.4km s-min=4.2km az=26.7*
*CASC **03** 12:10:20.9±1.9, 10°42N×86°21W, h12km±11km, MD3.7, mb4.3(NEIC)*

ISC 03 12:10:20.5±1.0, 10°40N±0°04×86°21W±0°03, h17km±6km, n41, σ0.9°99/54, mb3.7/4, 1C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VCR	**Vista de Mar**	**0.63**	**115⇑**	*e*P	**Pg**	**12 10 33.2**	**+0.3**
NY14	**Universidad de**	**0.71**	**69**	*i* P	**Pg**	**12 10 34.6**	**+0.2**
NY14				*i* S	**Sg**	**12 10 45.6**	**+1.7**
LAPC	**Finca la Perla**	**0.85**	**64**	*i* P	**Pb**	**12 10 36.1**	**-0.7**
LAPC				*i* S	**Sb**	**12 10 47.8**	**-0.1**
GB1A	**Borinquen Arri**	**0.90**	**62**	*i* P	**Pb**	**12 10 37.1**	**-0.6**
GB1A				*i* S	**Sb**	**12 10 49.9**	**+0.5**
GPS3	**Bodega del ICE**	**0.90**	**67**	*i* P	**Pb**	**12 10 37.3**	**-0.4**
GPS3				*i* S	**Sb**	**12 10 50.1**	**+0.6**
GPS2	**Hotel Rinc^‡n**	**0.91**	**67**	*i* P	**Pb**	**12 10 37.5**	**-0.4**
GPS2				*i* S	**Sb**	**12 10 50.5**	**+0.8**
GPS1	**Guardaparques**	**0.92**	**66**	*i* P	**Pb**	**12 10 37.6**	**-0.5**
SSN	**San Juan del S**	**0.96**	**21**	*e*P	**Pb**	**12 10 37.8**	**-1.0**
SSN				*e*S	**Sb**	**12 10 49.9**	**-1.4**
LIM1	**Limonal**	**0.99**	**72**	*i* P	**Pb**	**12 10 38.6**	**-0.5**
LIM1				*i* S	**Sb**	**12 10 52.5**	**+0.6**
GUAB	**Guayabo de Bag**	**1.01**	**72**	*i* P	**Pb**	**12 10 38.9**	**-0.7**
COLC	**Colonia**	**1.02**	**75**	*i* P	**Pb**	**12 10 39.1**	**-0.7**
MESS	**Mesas**	**1.05**	**71**	*i* P	**Pb**	**12 10 39.6**	**-0.8**
CUI	**Cuipilapa**	**1.06**	**76**	*i* P	**Pb**	**12 10 39.8**	**-0.7**
CUI				*i* S	**Sb**	**12 10 54.5**	**+0.6**
JCR	**Jicaral**	**1.21**	**117**	*e*P	**Pn**	**12 10 41.8**	**-0.8**
JTS	**JuntasAbangare**	**1.24**	**95**	*e*Pn	**Pn**	**12 10 42.0**	**-1.0**
JTS				*e*Sn	**Sn**	**12 10 57.6**	**-1.8**
JTS	**JuntasAbangare**	**1.24**	**95**	*e*P	**Pn**	**12 10 42.2**	**-0.9**
CONN	**Concepcion**	**1.29**	**26**	*e*P	**Pn**	**12 10 43.7**	**-0.1**
APON	**Apoyo**	**1.52**	**5**	*e*P	**Pn**	**12 10 48.1**	**+1.2**
CRUN	**El Crucero**	**1.58**	**357**	*e*P	**Pn**	**12 10 49.6**	**+1.8**
TICN	**Ticuantepe**	**1.63**	**359**	*e*P	**Pn**	**12 10 49.1**	**+0.7**
CGA2	**Cerro Gallo 2**	**1.76**	**102**	*e*P	**Pn**	**12 10 50.3**	**+0.1**
CSAN		**1.79**	**353**	*e*P	**Pn**	**12 10 49.9**	**-0.7**
COPN	**Copaltepe**	**1.81**	**348**	*e*P	**Pn**	**12 10 52.4**	**+1.4**
PRS1	**Puriscal**	**1.91**	**102**	*e*P	**Pn**	**12 10 51.9**	**-0.4**
HUEN		**1.93**	**1**	*e*P	**Pn**	**12 10 52.1**	**-0.4**
MOMN	**Momotombo**	**2.02**	**351**	*e*P	**Pn**	**12 10 54.0**	**+0.1**
BOAB	**BOACO BROADBAN**	**2.11**	**15**	*e*P	**Pn**	**12 10 54.5**	**-0.6**
LEON	**Leon**	**2.12**	**342**	*e*P	**Pn**	**12 10 54.7**	**-0.4**
LAJ	**Bijagual**	**2.12**	**104**	*e*P	**Pn**	**12 10 51.7**	**-3.5**
LAJ				*e*S	**Sn**	**12 11 22.1**	**+0.8**
CNGN	**Cerro Negro**	**2.14**	**347**	*e*P	**Pn**	**12 10 54.8**	**-0.7**
QCR	**Quepos**	**2.23**	**115**	*e*P	**Pn**	**12 10 57.3**	**+0.5**
QCR				*e*S	**Sn**	**12 11 32.7**	**+8.8**
CRIN	**San Cristobal**	**2.43**	**340**	*e*P	**Pn**	**12 10 59.4**	**-0.1**
CRIN				*e*S	**Sn**	**12 11 30.4**	**+1.5**
URSC	**Urasca**	**2.46**	**103**	*e*P	**Pn**	**12 11 01.2**	**+1.3**
URSC				*e*S	**Sn**	**12 11 41.7**	**+12**
BUS	**Buena Vista**	**2.55**	**109**	*e*P	**Pn**	**12 11 03.1**	**+1.9**
BAR1		**3.08**	**112**	*e*P	**Pn**	**12 11 08.8**	**+0.4**
TGUH	**Tegucigalpa,Un**	**3.78**	**344**	Pn	**Pn**	**12 11 10.1**	**-8.0**
TXAR	**Lajitas Array**	**24.93**	**322**	P	**P**	**12 15 43.6**	**+0.7**
TXAR	1.2nm,0.6s,mb3.6,baz=139,slow=9.3,SNR=21			PcP	PcP	12 19 19.7	+1.2
TXAR	0.2nm,0.7s,baz=131,slow=5.7,SNR=3.4						
TXAR	**Lajitas Array**	**24.93**	**322**	P	**P**	**12

GZR				S	Sn	12 13 40.2	-0.2
DIVS	**Divibare**	**2.86**	**302**	⇓iPn	Pn	12 13 07.2	-0.4
DIVS	**Divibare**	**2.86**	**302**	P	Pn	12 13 07.3	-0.3
DIVS	**Divibare**	**2.86**	**302**	iPn	Pn	12 13 07.2	-0.4
VOIR		**3.04**	**23**	⇓iP	Pn	12 13 11.2	+1.2
VOIR		**3.04**	**23**	⇓iP	Pn	12 13 11.2	+1.2
VOIR				S	Sn	12 13 48.4	+1.5
BBLS	**Lazići**	**3.14**	**294**	ePn	Pn	12 13 11.3	-0.2
BBLS	**Lazići**	**3.14**	**294**	ePn	Pn	12 13 11.3	-0.2
BZS	**Buzias**	**3.22**	**338**	⇓iPn	Pn	12 13 11.7	-0.9
BZS	**Buzias**	**3.22**	**338**	⇓iP	Pn	12 13 11.8	-0.8
BZS	**Buzias**	**3.22**	**338**	⇓iPn	Pn	12 13 11.7	-0.9
BZS				S	Sn	12 13 49.3	-2.2
XOR	**Xorichti**	**3.29**	**182**	P	Pn	12 13 13.5	0.0
XOR	**Xorichti**	**3.29**	**182**	P	Pn	12 13 13.5	0.0
NEO	**Neokhori**	**3.34**	**182**	eP	Pn	12 13 14.5	+0.2
MLR	**Muntele Rosu**	**3.39**	**32**	⇑iP	Pn	12 13 17.8	+2.9
MLR	**Muntele Rosu**	**3.39**	**32**	S	Sn	12 13 59.3	+3.7
MLR	**Muntele Rosu**	**3.39**	**32**	⇑iP	Pn	12 13 17.8	+2.9
AGG	**Agios Georgios**	**3.71**	**193**	eP	Pn	12 13 18.5	-0.8

*ISK **03** 12:17:43.2, 36°.91N×27°.55E, h2km, MD3.3*
*NEIC **03** 12:17:43.2, 36°.94N×27°.54E, h23km, MD3.4(ATH), After ATH.*
*DDA **03** 12:17:43.8, 36°.95N×27°.53E, h16km±2km, Md3.2*
*ATH **03** 12:17:43.2, 36°.94N×27°.54E, h23km±2km, MD3.4/4*
*THE **03** 12:17:43.4, 36°.94N×27°.57E, h0km±1km, ML3.7/1, Error ellipse: s-maj=2.3km s-min=0.8km az=12.0*
*CSEM **03** 12:17:44.1±0.2, 36°.92N×27°.49E, h8km, MD3.2, Error ellipse: s-maj=3.9km s-min=3.2km az=63.0*
*ISCJB **03** 12:17:44.1±0.4, 36°.92N±0°.02×27°.51E±0°.04, h6km±4km, Error ellipse: s-maj=5.1km s-min=3.7km az=153.0*

ISC 03 12:17:44.5±0.4, 36°.92N±0°.02×27°.51E±0°.04, h7km±4km, n63, σ0°88/88, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.16**	**340**	*i* P	**Pg**	**12 17 47.6**	**-0.2**
BDRM	**Kayabasi**	**0.16**	**340**	*i* P	**Pg**	**12 17 47.6**	**-0.2**
BDRM				*i* S	**Sg**	**12 17 50.7**	**+0.7**
BDRM	**Kayabasi**	**0.16**	**340**	*i* P	**Pg**	**12 17 47.6**	**-0.2**
BDRM				*i* S	**Sg**	**12 17 50.7**	**+0.7**
DAT	**Datca**	**0.20**	**164**	*e*PG	**Pg**	**12 17 47.8**	**-0.7**
DAT	**Datca**	**0.20**	**164**	*e*Pg	**Pg**	**12 17 47.8**	**-0.7**
BODT	**Bodrum**	**0.22**	**312**	*e*PG	**Pg**	**12 17 49.0**	**+0.1**
BODT				*e*SG	**Sg**	**12 17 53.3**	**+1.5**
BODT	**Bodrum**	**0.22**	**312**	*e*Pg	**Pg**	**12 17 49.0**	**+0.2**
BODT				*e*Sg	**Sg**	**12 17 53.3**	**+1.5**
NIS1	**Nisyros Isl.**	**0.41**	**220**	P	**Pg**	**12 17 52.8**	**+0.3**
NIS1				S	**Sg**	**12 18 00.6**	**+2.6**
NIS1	**Nisyros Isl.**	**0.41**	**220**	P	**Pg**	**12 17 52.8**	**+0.3**
NIS1				S	**Sg**	**12 18 00.6**	**+2.6**
MLSB	**Milas**	**0.43**	**29**	*e*PG	**Pg**	**12 17 52.5**	**-0.4**
MLSB	**Milas**	**0.43**	**29**	*e*Pg	**Pg**	**12 17 52.5**	**-0.4**
YER	**Yerkesik**	**0.65**	**70**	*e*PG	**Pg**	**12 17 55.7**	**-1.4**
YER	**Yerkesik**	**0.65**	**70**	*e*Pg	**Pg**	**12 17 55.7**	**-1.4**
AYDN	**Tasoluk**	**0.80**	**21**	*i* P	**Pg**	**12 17 58.7**	**-1.1**
AYDN	**Tasoluk**	**0.80**	**21**	*i* P	**Pg**	**12 17 58.8**	**-1.1**
AYDN				*i* S	**Sg**	**12 18 10.1**	**-0.1**
AYDN	**Tasoluk**	**0.80**	**21**	*i* P	**Pg**	**12 17 58.8**	**-1.1**
AYDN				*i* S	**Sg**	**12 18 10.1**	**-0.1**
GCAM	**G?zelcaml?**	**0.81**	**344**	*i* P	**Pg**	**12 18 01.2**	**+1.0**
GCAM	**G?zelcaml?**	**0.81**	**344**	*i* P	**Pg**	**12 17 59.4**	**-0.7**
GCAM				*i* S	**Sg**	**12 18 11.9**	**+1.2**
GCAM	**G?zelcaml?**	**0.81**	**344**	*i* P	**Pg**	**12 17 59.4**	**-0.7**
GCAM				*i* S	**Sg**	**12 18 11.9**	**+1.2**
ARG	**Arkhangelos**	**0.86**	**145**	*e*Pn	**Pg**	**12 17 59.7**	**-1.3**
ARG				*e*Sn	**Sg**	**12 18 12.2**	**+0.1**
ARG	**Arkhangelos**	**0.86**	**145**	*e*PN	**Pg**	**12 17 59.7**	**-1.3**
ARG				*e*SN	**Sg**	**12 18 12.2**	**+0.1**
ARG	**Arkhangelos**	**0.86**	**145**	P	**Pg**	**12 17 59.8**	**-1.2**
ARG				S	**Sg**	**12 18 13.4**	**+1.3**
ARG	**Arkhangelos**	**0.86**	**145**	P	**Pg**	**12 17 59.8**	**-1.2**
ARG				*e*Sn	**Sg**	**12 18 12.2**	**+0.1**
ARG				S	**Sg**	**12 18 13.4**	**+1.3**
TURN	**Turunc**	**0.88**	**93**	*i* P	**Pg**	**12 17 55.0**	**-6.4**
TURN	**Turunc**	**0.88**	**93**	*i* P	**Pg**	**12 17 55.0**	**-6.4**
TURN				*i* S	**Sg**	**12 18 02.7**	**-10**
SMG	**Samos**	**0.95**	**326**	*e*Pn	**Pg**	**12 18 02.2**	**-0.7**
SMG				*e*Sn	**Sg**	**12 18 14.5**	**-0.8**
SMG	**Samos**	**0.95**	**326**	*e*PN	**Pg**	**12 18 02.2**	**-0.7**
SMG				*e*SN	**Sg**	**12 18 14.5**	**-0.8**
SMG	**Samos**	**0.95**	**326**	*e*Pn	**Pg**	**12 18 02.2**	**-0.7**
SMG				*e*Sn	**Sg**	**12 18 14.5**	**-0.8**
KARP	**Karpathos**	**1.40**	**192**	*e*Pn	**Pn**	**12 18 09.7**	**-0.7**
KARP	**Karpathos**	**1.40**	**192**	*e*PN	**Pn**	**12 18 09.7**	**-0.7**
KARP	**Karpathos**	**1.40**	**192**	*e*Pn	**Pn**	**12 18 09.7**	**-0.7**
DNZL	**Cakiroluk**	**1.45**	**57**	*i* P	**Pn**	**12 18 11.2**	**+0.1**
DNZL	**Cakiroluk**	**1.45**	**57**	*i* P	**Pn**	**12 18 11.0**	**0.0**
DNZL				*i* S	**Sn**	**12 18 30.9**	**+0.6**
DNZL	**Cakiroluk**	**1.45**	**57**	*i* P	**Pn**	**12 18 11.0**	**-0.1**
DNZL				*i* S	**Sn**	**12 18 30.9**	**+0.6**
DENT	**Denizli**	**1.47**	**55**	*e*PN	**Pn**	**12 18 11.3**	**-0.1**
DENT	**Denizli**	**1.47**	**55**	*e*Pn	**Pn**	**12 18 11.3**	**-0.1**
IZM	**Izmir**	**1.49**	**352**	*e*PN	**Pn**	**12 18 11.8**	**+0.2**
IZM	**Izmir**	**1.49**	**352**	*e*Pn	**Pn**	**12 18 11.9**	**+0.2**
BLCB	**Balcova**	**1.51**	**346**	*e*PN	**Pn**	**12 18 12.3**	**+0.3**
BLCB	**Balcova**	**1.51**	**346**	*e*Pn	**Pn**	**12 18 12.3**	**+0.3**
APE	**Apeiranthos**	**1.59**	**276**	P	**Pn**	**12 18 11.9**	**-1.2**
APE	**Apeiranthos**	**1.59**	**276**	P	**Pn**	**12 18 11.9**	**-1.2**
APE	**Apeiranthos**	**1.59**	**276**	P	**Pn**	**12 18 11.9**	**-1.2**
GLHS	**Glhisar (BURDU**	**1.61**	**81**	*e*PN	**Pn**	**12 18 13.1**	**-0.2**
GLHS	**Glhisar (BURDU**	**1.61**	**81**	*e*Pn	**Pn**	**12 18 13.1**	**-0.2**
GOLH	**Golhisar**	**1.67**	**78**	*i* P	**Pn**	**12 18 15.8**	**+1.6**
GOLH	**Golhisar**	**1.67**	**78**	*i* P	**Pn**	**12 18 14.1**	**0.0**
GOLH				*i* S	**Sn**	**12 18 38.8**	**+3.0**
GOLH	**Golhisar**	**1.67**	**78**	*i* P	**Pn**	**12 18 14.1**	**0.0**
AKAS	**Kas**	**1.82**	**111**	*i* P	**Pn**	**12 18 16.0**	**-0.2**
AKAS				*i* S	**Sn**	**12 18 43.8**	**+4.3**
AKAS	**Kas**	**1.82**	**111**	*i* P	**Pn**	**12 18 16.0**	**-0.2**
KULA	**Kula-Manisa**	**1.84**	**29**	*e*PN	**Pn**	**12 18 16.6**	**+0.2**
KULA	**Kula-Manisa**	**1.84**	**29**	*e*Pn	**Pn**	**12 18 16.6**	**+0.2**
CHOS	**Chios island**	**1.87**	**322**	*e*PN	**Pn**	**12 18 16.1**	**-0.8**
CHOS				*e*SN	**Sn**	**12 18 39.7**	**-1.0**
CHOS	**Chios island**	**1.87**	**322**	P	**Pn**	**12 18 15.9**	**-1.0**
CHOS	**Chios island**	**1.87**	**322**	*e*Pn	**Pn**	**12 18 16.1**	**-0.8**
CHOS				*e*Sn	**Sn**	**12 18 39.7**	**-1.0**
ELL	**Elmali**	**1.93**	**94**	*e*PN	**Pn**	**12 18 17.7**	**-0.1**
ELL	**Elmali**	**1.93**	**94**	*e*Pn	**Pn**	**12 18 17.7**	**0.0**
KHL	**Karahalli**	**2.13**	**48**	*e*PN	**Pn**	**12 18 20.7**	**+0.3**
KHL	**Karahalli**	**2.13**	**48**	*e*Pn	**Pn**	**12 18 20.7**	**+0.3**
SUTC	**Sutluce-Ispart**	**2.84**	**78**	*e*PN	**Pn**	**12 18 30.7**	**+0.5**
SUTC	**Sutluce-Ispart**	**2.84**	**78**	*e*Pn	**Pn**	**12 18 30.7**	**+0.5**
HDMB	**Hadim**	**3.98**	**88**	*e*PN	**Pn**	**12 18 46.9**	**+0.9**
HDMB	**Hadim**	**3.98**	**88**	*e*Pn	**Pn**	**12 18 46.9**	**+0.9**

IDC 03 12:21:52.0±6.1, 11°.08N×92°.50E, h24km±6km, mb3.4/3, mb1 3.6/3, mb1mx3.2/22, mbtmp3.4/3, Error ellipse: s-maj=324.8km s-min=19.7km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.64**	**348**	P	P	12 28 56.2	-0.3
	0.9nm,0.6s,baz=169,slow=8.0,SNR=8.1						
MKAR				pP	pP	12 29 04.0	+0.4
	0.6nm,0.6s,baz=168,slow=7.0,SNR=5.8						
WRA	**Warramunga Arr**	**51.45**	**127**	P	P	12 30 55.8	+0.2
	0.3nm,0.3s,baz=307,slow=8.4,SNR=24						
WRA				pP	pP	12 31 02.9	-0.1
	0.3nm,0.5s,baz=307,slow=8.4,SNR=2.6						
ASAR	**Alice Springs**	**53.21**	**131**	P	P	12 31 08.7	0.0
	0.4nm,0.7s,baz=308,slow=7.8,SNR=4.1						
ASAR				pP	pP	12 31 15.8	-0.3
	0.4nm,0.7s,baz=308,slow=7.2,SNR=1.9						

*ISCJB **03** 12:22:04.7±0.4, 39°.24N±0°.03×22°.92E±0°.03, h12km±4km, Error ellipse: s-maj=5.0km s-min=3.5km az=140.8*
*ATH **03** 12:22:04.5, 39°.24N×22°.95E, h21km±1km, MD3.4/12*
*THE **03** 12:22:04.8, 39°.20N×22°.94E, h17km, ML3.5/1, Error ellipse: s-maj=0.6km s-min=0.3km az=130.0*
*CSEM **03** 12:22:04.9±0.2, 39°.23N×22°.92E, h10km, MD3.4, Error ellipse: s-maj=7.0km s-min=4.7km az=134.0*
*NEIC **03** 12:22:06.6, 39°.18N×23°.07E, h5km, ML2.5(ATH), After ATH.*

ISC 03 12:22:05.2±0.4, 39°.24N±0°.03×22°.94E±0°.03, h14km±4km, n43, σ0°63/61, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEO	**Neokhori**	**0.23**	**72**	P	**Pg**	**12 22 09.8**	**-0.5**
NEO	**Neokhori**	**0.23**	**72**	*e*PB	**Pg**	**12 22 10.3**	**0.0**
NEO				*e*SB	**Sg**	**12 22 14.2**	**+0.5**
NEO	**Neokhori**	**0.23**	**72**	P	**Pg**	**12 22 09.8**	**-0.5**
NEO	**Neokhori**	**0.23**	**72**	*e*Pb	**Pg**	**12 22 10.3**	**0.0**
NEO				*e*Sb	**Sg**	**12 22 14.2**	**+0.5**
XOR	**Xorichti**	**0.23**	**57**	P	**Pg**	**12 22 10.1**	**-0.2**
XOR	**Xorichti**	**0.23**	**57**	P	**Pg**	**12 22 10.6**	**+0.3**
XOR				S	**Sg**	**12 22 14.5**	**+0.7**
XOR	**Xorichti**	**0.23**	**57**	P	**Pg**	**12 22 10.6**	**+0.3**
XOR				S	**Sg**	**12 22 14.5**	**+0.7**
AGG	**Agios Georgios**	**0.52**	**246**	*e*Pn	**Pg**	**12 22 14.7**	**-0.8**
AGG				*e*Sn	**Sg**	**12 22 22.8**	**+0.3**
AGG	**Agios Georgios**	**0.52**	**246**	*e*PN	**Pg**	**12 22 14.7**	**-0.8**
AGG				*e*SN	**Sg**	**12 22 22.8**	**+0.3**
AGG	**Agios Georgios**	**0.52**	**246**	*e*Pn	**Pg**	**12 22 14.7**	**-0.8**
AGG				*e*Sn	**Sg**	**12 22 22.8**	**+0.3**
LKR	**Lokris**	**0.59**	**176**	P	**Pg**	**12 22 15.9**	**-0.9**
LKR	**Lokris**	**0.59**	**176**	*e*PN	**Pg**	**12 22 16.4**	**-0.4**
LKR				*e*SN	**Sg**	**12 22 24.6**	**+0.1**
LKR	**Lokris**	**0.59**	**176**	P	**Pg**	**12 22 15.9**	**-0.9**
LKR	**Lokris**	**0.59**	**176**	*e*Pn	**Pg**	**12 22 16.4**	**-0.4**
AOS	**Alonnisos**	**0.73**	**95**	P	**Pg**	**12 22 19.0**	**-0.5**
AOS	**Alonnisos**	**0.73**	**95**	P	**Pg**	**12 22 19.0**	**-0.5**
THL	**Klokotos Trika**	**0.79**	**295**	*e*PN	**Pg**	**12 22 19.8**	**-0.7**
THL				*e*SN	**Sg**	**12 22 31.2**	**+0.3**
THL	**Klokotos Trika**	**0.79**	**295**	*e*Pn	**Pg**	**12 22 19.8**	**-0.7**
THL				*e*Sn	**Sg**	**12 22 31.2**	**+0.3**
PAIG	**Paliouri**	**0.90**	**39**	P	**Pg**	**12 22 22.9**	**+0.3**
PAIG	**Paliouri**	**0.90**	**39**	P	**Pg**	**12 22 22.9**	**+0.3**
EVR	**Evrytania**	**0.94**	**250**	P	**Pg**	**12 22 24.5**	**+1.1**
EVR	**Evrytania**	**0.94**	**250**	*e*PN	**Pg**	**12 22 22.8**	**-0.6**
EVR				*e*SN	**Sg**	**12 22 36.6**	**+1.0**
EVR	**Evrytania**	**0.94**	**250**	*e*Pn	**Pg**	**12 22 22.8**	**-0.6**
EVR	**Evrytania**	**0.94**	**250**	P	**Pg**	**12 22 24.5**	**+1.1**
EVR				*e*Sn	**Sg**	**12 22 36.6**	**+1.0**
EFP	**Efpalio**	**1.14**	**225**	*e*PN	**Pg**	**12 22 26.7**	**-0.6**
EFP				*e*SN	**Sg**	**12 22 41.4**	**-0.8**
EFP	**Efpalio**	**1.14**	**225**	*e*Pn	**Pg**	**12 22 26.7**	**-0.6**
EFP				*e*Sn	**Sg**	**12 22 41.4**	**-0.8**
PLG	**Polygyros**	**1.20**	**19**	*e*Pn	**Pn**	**12 22 27.2**	**-0.4**
PLG				*e*Sn	**Sn**	**12 22 43.0**	**-0.6**
PLG	**Polygyros**	**1.20**	**19**	*e*PN	**Pn**	**12 22 27.2**	**-0.4**
PLG				*e*SN	**Sn**	**12 22 43.0**	**-0.6**
PLG	**Polygyros**	**1.20**	**19**	*e*Pn	**Pn**	**12 22 27.2**	**-0.4**
PLG				*e*Sn	**Sn**	**12 22 43.0**	**-0.6**
LTK	**Loutraki**	**1.21**	**179**	*e*PN	**Pn**	**12 22 27.3**	**-0.4**
LTK				*e*SN	**Sn**	**12 22 45.0**	**+1.1**
LTK	**Loutraki**	**1.21**	**179**	*e*Pn	**Pn**	**12 22 27.3**	**-0.4**
LTK				*e*Sn	**Sn**	**12 22 45.0**	**+1.1**
GUR	**Goura**	**1.38**	**200**	*e*PN	**Pn**	**12 22 30.0**	**-0.1**
GUR	**Goura**	**1.38**	**200**	*e*Pn	**Pn**	**12 22 30.0**	**-0.1**
SOH	**Sokhos**	**1.61**	**11**	P	**Pg**	**12 22 35.9**	**-0.3**
SOH	**Sokhos**	**1.61**	**11**	*e*PN	**Pn**	**12 22 33.9**	**+0.6**
SOH	**Sokhos**	**1.61**	**11**	*e*Pn	**Pn**	**12 22 33.9**	**+0.6**
SOH	**Sokhos**	**1.61**	**11**	P	**Pg**	**12 22 35.9**	**-0.3**
RLS	**Riolos of Patr**	**1.65**	**225**	*e*Pn	**Pn**	**12 22 35.2**	**+1.5**
RLS	**Riolos of Patr**	**1.65**	**225**	*e*PN	**Pn**	**12 22 35.2**	**+1.5**
RLS	**Riolos of Patr**	**1.65**	**225**	*e*Pn	**Pn**	**12 22 35.2**	**+1.5**
DID	**Didima**	**1.74**	**172**	*e*PB	**Pn**	**12 22 34.5**	**-0.6**
DID	**Didima**	**1.74**	**172**	*e*Pb	**Pn**	**12 22 34.5**	**-0.6**
FNA	**Florina**	**1.96**	**323**	P	**Pg**	**12 22 42.8**	**0.0**

*NEIC **03** 12:24:02.5, 17°.37N×94°.78W, h169km, MD4.3(MEX), After MEX.*

MEX 03 12:24:03.5±1.6, 17°.48N×94°.80W, h152km±18km, MD4.3, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUIG	**Tuzandepetl**	**0.65**	**33**	*i* P	Pn	12 24 24.6	-1.3
TUIG				*i* S	Sn	12 24 40.2	-2.8
TGIG		**1.75**	**113**	*e*P	Pn	12 24 35.2	-0.7
TGIG				*i* S	Sn	12 24 58.4	-2.4
VHO	**Vista Hermosa**	**1.89**	**258**	*e*P	Pn	12 24 37.2	-0.3
VHO				*e*S	Sn	12 25 03.3	-0.3
VHO	**Vista Hermosa**	**1.89**	**258**	*i* P	Pn	12 24 37.1	-0.4
VHO				*e*S	Sn	12 25 03.1	-0.5
HUIG	**Huatulco**	**2.12**	**217**	*e*P	Pn	12 24 37.3	-2.8
HUIG				*e*S	Sn	12 25 06.1	-2.1
HUIG	**Huatulco**	**2.12**	**217**	*e*P	Pn	12 24 37.2	-2.9
HUIG				*e*S	Sn	12 25 06.1	-2.1
PCIG		**2.33**	**139**	*e*P	Pn	12 24 42.2	-0.5
PCIG				*i* S	Sn	12 25 11.1	-1.7
TPIG	**Tehuac#an**	**2.61**	**291**	*e*P	Pn	12 24 46.1	+0.1
TPIG				*i* S	Sn	12 25 17.4	-1.5
PNIG	**Pinotepa**	**3.36**	**252**	*e*P	Pn	12 24 52.9	-2.7
PNIG				*e*S	Sn	12 25 33.7	-2.2
PNIG	**Pinotepa**	**3.36**	**252**	*e*P	Pn	12 24 52.7	-2.9
PNIG				*e*S	Sn	12 25 33.7	-2.2
TEIG	**Tepich**	**6.75**	**65**	*e*Pn	Pn	12 25 37.8	-2.5
TEIG				*e*Sn	Sn	12 26 56.0	-0.1

*CSEM **03** 12:26:39.4, 38°.89N×29°.46W, h5km, ML2.8, After PDA*

PDA 03 12:26:39.4±0.8, 38°.89N×29°.46W, h5km±400km, MD3.6, ML2.8, Error ellipse: s-maj=380.3km s-min=10.1km az=106.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCED	**Cedros**	**0.65**	**114**	*e*P	Pg	12 26 50.2	-1.6
PCED				*e*S	Sg	12 26 58.3	-1.9
PCED				A		12 27 00.1	
	123nm,0.1s						
PCED	**Cedros**	**0.65**	**114**	*e*P	Pg	12 26 50.2	-1.6
PCED				*e*S	Sg	12 26 58.3	-1.9
CALA	**Caldeira**	**0.67**	**118**	*e*S	Sg	12 26 58.7	-2.1
CALA	**Caldeira**	**0.67**	**118**	*e*S	Sg	12 26 58.7	-2.1
HOR	**Horta**	**0.74**	**119**	*e*S	Sg	12 27 00.9	-2.4
HOR	**Horta**	**0.74**	**119**	*e*S	Sg	12 27 00.9	-2.4
PCAN	**Candelaria**	**0.87**	**119**	*e*P	Pg	12 26 53.3	-2.8
PCAN				*e*S	Sg	12 27 04.0	-3.4
PCAN				A		12 27 05.2	
	127nm,0.1s						
PCAN	**Candelaria**	**0.87**	**119**	*e*P	Pg	12 26 53.3	-2.8
PCAN				*e*S	Sg	12 27 04.0	-3.4
ROSA	**Rosais**	**0.96**	**100**	*e*P	Pg	12 26 54.5	-3.4
ROSA				*e*S	Sg	12 27 05.9	-4.5
ROSA	**Rosais**	**0.96**	**100**	*e*P	Pg	12 26 54.5	-3.4
ROSA				*e*S	Sg	12 27 05.9	-4.5
PMAN	**Manadas**	**1.10**	**103**	*e*P	Pg	12 26 56.8	-3.7
PMAN				*e*S	Sg	12 27 09.5	-5.2
PMAN				A		12 27 11.0	
	51nm,0.2s						
PMAN	**Manadas**	**1.10**	**103**	*e*P	Pg	12 26 56.8	-3.7
PMAN				*e*S	Sg	12 27 09.5	-5.2

*IDC **03** 12:30:22.2±1.5, 38°.96N×141°.04E, h0km, mb3.4/3, mb1 3.4/6, mb1mx3.3/25, mbtmp3.3/6, ML2.8/3, Error ellipse: s-maj=33.7km s-min=24.0km az=98.0*
*ISCJB **03** 12:30:23.3±0.5, 39°.04N±0°.03×140°.90E±0°.04, h10km±5km, mb3.5/3, Error ellipse: s-maj=5.1km s-min=4.7km az=7.3*
*JMA **03** 12:30:23.5, 39°.04N×140°.86E, h10km±1km, M3.3*
Broadband fault plane solution: P waves. NP1: ϕ_s=231.00000°, δ45.00000°, λ111.00000°. NP2: ϕ_s=22.00000°, δ49.00000°, λ70.00000°. Principal axes: T Plg75.0000°, Azm222.0000°; N Plg15.0000°, Azm35.0000°; P Plg2.0000°, Azm126.0000°;
JMA Felt I J1.

ISC 03 12:30:23.9±0.5, 39°.03N±0°.03×140°.89E±0°.04, h4km±5km, n15, σ0°88/24, mb3.5/3, 3C-5D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.27**	**107**	⇓P	**Pg**	**12 30 29.2**	**0.0**
JMK				S	**Sg**	**12 30 33.4**	**+0.7**
JRG	**Rokugo**	**0.41**	**332**	⇓P	**Pg**	**12 30 31.4**	**-0.4**
JRG				S	**Sg**	**12 30 37.4**	**+0.3**
JYK	**Kaneyama**	**0.43**	**254**	⇓P	**Pg**	**12 30 31.8**	**-0.3**
JYK				S	**Sg**	**12 30 37.5**	**-0.1**
JOM	**Ohasama**	**0.54**	**36**	⇑P	**Pg**	**12 30 34.0**	**-0.3**
JOM				S	**Sg**	**12 30 41.5**	**+0.2**
JIO	**Ouri**	**0.68**	**148**	⇓P	**Pg**	**12 30 36.6**	**-0.4**
JIO				S	**Sg**	**12 30 45.8**	**0.0**
JOU	**Okura**	**0.69**	**195**	⇓P	**Pg**	**12 30 36.9**	**-0.2**
JOU				*i* S	**Sg**	**12 30 46.1**	**+0.1**
JYA	**Atsumi**	**1.02**	**245**	⇑P	**Pg**	**12 30 42.5**	**-0.8**
JYS	**Shiratake**	**1.03**	**219**	⇑P	**Pg**	**12 30 43.2**	**-0.5**
JYS				S	**Sg**	**12 30 57.9**	**+0.8**
MAT	**Matsushiro**	**3.27**	**221**	P	**Pn**	**12 31 16.7**	**+0.8**
MAT				S	**Sn**	**12 31 56.2**	**+1.0**
MJAR	**Matsushiro Arr**	**3.27**	**221**	Pn	**Pn**	**12 31 16.5**	**+0.6**
	0.6nm,0.3s,baz=43,slow=16,SNR=6.5						
MJAR				Pg	**Pg**	**12 31 22.0**	**-4.5**
	0.8nm,0.3s,baz=53,slow=26,SNR=14						
ASAJ	**Asahikawa**	**5.24**	**14**	Pn	**Pn**	**12 31 44.4**	**+1.5**
	0.2nm,0.3s,baz=249,slow=16,SNR=3.3						
KSRS	**Korea Array**	**10.32**	**265**	Pn	**Pn**	**12 32 55.5**	**+2.8**
	0.3nm,0.3s,baz=74,slow=14,SNR=3.0						
MKAR	**Makanchi Array**	**42.73**	**300**	P	**P**	**12 38 20.4**	**-1.6**
	0.4nm,0.9s,mb3.2,baz=88,slow=11,SNR=3.8						
WRA	**Warramunga Arr**	**58.98**	**187**	P	**P**	**12 40 23.1**	**-1.5**
	0.6nm,0.8s,mb3.7,baz=4.8,slow=7.3,SNR=16						
ASAR	**Alice Springs**	**62.71**	**187**	P	**P**	**12 40 48.4**	**-1.5**
	0.5nm,0.8s,mb3.7,baz=17,slow=7.9,SNR=3.0						

IDC 03 12:47:35.2±5.8, 11°.44N×92°.57E, h26km±6km, mb3.7/4, mb1 3.9/4, mb1mx3.4/23, mbtmp3.7/4, Error ellipse: s-maj=310.2km s-min=20.1km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.30**	**348**	P	P	12 54 36.8	+0.2
	0.5nm,0.8s,baz=171,slow=8.6,SNR=4.8						
MKAR				pP	pP	12 54 44.0	-0.3
	0.5nm,0.8s,baz=145,slow=8.6,SNR=3.4						
FITZ	**Fitzroy Crossi**	**43.90**	**132**	P	P	12 55 39.7	-0.3
	2.7nm,0.5s,baz=315,slow=14,SNR=14						
WRA	**Warramunga Arr**	**51.61**	**127**	P	P	12 56 39.8	0.0
	0.6nm,0.4s,baz=307,slow=8.3,SNR=28						
WRA				pP	pP	12 56 48.3	+0.5
	0.6nm,0.5s,baz=301,slow=10,SNR=3.9						
ASAR	**Alice Springs**	**53.40**	**131**	P	P	12 56 53.0	-0.1
	0.6nm,0.4s,baz=308,slow=6.9,SNR=17						
ASAR				pP	pP	12 57 00.8	-0.2
	0.4nm,0.7s,baz=309,slow=7.5,SNR=3.4						

*ISCJB **03** 13:44:05.4±0.6, 45°.63N±0°.03×26°.54E±0°.04, h145km±5km, Error ellipse: s-maj=5.2km s-min=4.9km az=155.7*
*CSEM **03** 13:44:05.5±0.3, 45°.62N×26°.52E, h147km±2km, MD4.3/2, Error ellipse: s-maj=4.8km s-min=4.4km az=77.0*
*BUC **03** 13:44:05.3±1.3, 45°.68N×26°.51E, h151km±11km, MD4.3/2, Error ellipse: s-maj=9.0km s-min=7.7km az=336.0*
*NEIC **03** 13:44:06.7, 45°.63N×26°.55E, h138km, MD3.7(BUC), After BUC.*

ISC 03 13:44:06.0±0.6, 45°.63N±0°.03×26°.55E±0°.04, h146km±4km, n101, σ0°78/149, 47C-29D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLOR	**Plostina**	**0.23**	**17**	⇑iP	**Pn**	**13 44 25.6**	**-0.2**
PLOR				*i* S	**Sn**	**13 44 40.2**	**-0.7**
PLOR	**Plostina**	**0.23**	**17**	⇑iP	**Pn**	**13 44 25.6**	**-0.2**
PLOR	**Plostina**	**0.23**	**17**	⇑iP	**Pn**	**13 44 25.6**	**-0.2**
PLOR				*i* S	**Sn**	**13 44 40.2**	**-0.7**
VRI	**Vrincioaia**	**0.27**	**27**	⇑iP	**Pn**	**13 44 25

TIRR	**Tirgusor**	**1.76**	**131**	⇓*i*P	**Pn**	**13 44 38.4 +0.3**
TIRR				*i* S	**Sn**	**13 45 02.0 -0.7**
TIRR	**Tirgusor**	**1.76**	**131**	⇓*i*P	**Pn**	**13 44 38.4 +0.3**
TIRR	**Tirgusor**	**1.76**	**131**	⇓*i*P	**Pn**	**13 44 38.4 +0.3**
TIRR				*i* S	**Sn**	**13 45 02.0 -0.7**
KIS	**Kishinev**	**2.09**	**48**	*e*S	**Sn**	**13 45 06.5 -2.9**
	350nm,0.6s					
KIS	**Kishinev**	**2.09**	**48**	*i* S	**Sn**	**13 45 08.0 -1.4**
KIS	**Kishinev**	**2.09**	**48**	S	**Sn**	**13 45 08.0 -1.4**
KIS	**Kishinev**	**2.09**	**48**	*i* S	**Sn**	**13 45 08.0 -1.4**
ZIMR		**2.14**	**204**	⇑P	**Pn**	**13 44 42.8 +0.2**
ZIMR				S	**Sn**	**13 45 09.8 -0.7**
ZIMR		**2.14**	**204**	⇑*i*P	**Pn**	**13 44 42.8 +0.3**
ZIMR				*i* S	**Sn**	**13 45 11.2 +0.6**
ZIMR		**2.14**	**204**	⇑*i*P	**Pn**	**13 44 42.8 +0.3**
BUR01	**Bucovina Ar. S**	**2.19**	**336**	P	**Pn**	**13 44 43.9 +0.9**
BUR01	**Bucovina Ar. S**	**2.19**	**336**	P	**Pn**	**13 44 43.9 +0.9**
BURAR	**Bucovina Array**	**2.19**	**336**	⇓P	**Pn**	**13 44 44.0 +0.9**
BURAR	**Bucovina Array**	**2.19**	**336**	⇓P	**Pn**	**13 44 44.0 +1.0**
BUR08	**Bucovina Ar. S**	**2.22**	**336**	*i* Pn	**Pn**	**13 44 43.9 +0.5**
BUR08				*e*S	**Sn**	**13 45 13.8 +1.5**
BUR08	**Bucovina Ar. S**	**2.22**	**336**	*i* Pn	**Pn**	**13 44 43.9 +0.5**
BUR08				*e*S	**Sn**	**13 45 13.8 +1.5**
GZR	**Gura Zlata**	**2.66**	**266**	⇑P	**Pn**	**13 44 49.9 +1.0**
GZR				S	**Sn**	**13 45 22.1 +0.2**
GZR	**Gura Zlata**	**2.66**	**266**	⇑P	**Pn**	**13 44 49.8 +0.9**
GZR				S	**Sn**	**13 45 22.1 +0.2**
DRGR		**2.91**	**295**	⇑*i*P	**Pn**	**13 44 51.1 -0.8**
DRGR		**2.91**	**295**	⇑*i*P	**Pn**	**13 44 51.1 -0.8**
DRGR		**2.91**	**295**	⇑*i*P	**Pn**	**13 44 51.1 -0.8**
BZS	**Buzias**	**3.46**	**272**	⇓P	**Pn**	**13 44 59.1 +0.1**
BZS	**Buzias**	**3.46**	**272**	⇓*i*P	**Pn**	**13 44 59.1 +0.1**
BZS	**Buzias**	**3.46**	**272**	⇓*i*P	**Pn**	**13 44 59.1 +0.1**
BZS	**Buzias**	**3.46**	**272**	*e*Pn	**Pn**	**13 44 58.7 -0.3**
BZS	**Buzias**	**3.46**	**272**	⇓*i*P	**Pn**	**13 44 59.1 +0.1**
ZAPS	**Zavoj**	**3.66**	**231**	⇓*i*Pn	**Pn**	**13 45 01.6 0.0**
BOLS	**Boljevac**	**3.74**	**243**	*e*Pn	**Pn**	**13 45 01.2 -1.4**
BARS	**Barje**	**4.41**	**232**	*e*Pn	**Pn**	**13 45 10.5 -1.0**
GRUS	**Gruza**	**4.50**	**249**	*e*Pn	**Pn**	**13 45 11.2 -1.5**
TRUS	**Trudelj**	**4.58**	**254**	*e*Pn	**Pn**	**13 45 11.3 -2.4**
CRVS	**Cervenica-Dubn**	**4.77**	**315**	*e*Pn	**Pn**	**13 45 16.4 +0.3**
CRVS	**Cervenica-Dubn**	**4.77**	**315**	*e*PN	**Pn**	**13 45 16.4 +0.3**
CRVS	**Cervenica-Dubn**	**4.77**	**315**	*e*Pn	**Pn**	**13 45 16.4 +0.3**
DIVS	**Divibare**	**4.91**	**254**	*e*Pn	**Pn**	**13 45 17.7 -0.3**
KECS	**Kecovo**	**5.03**	**307**	*e*Pn	**Pn**	**13 45 19.4 -0.2**
KECS	**Kecovo**	**5.03**	**307**	*e*PN	**Pn**	**13 45 19.4 -0.2**
STHS	**Stebnicka Huta**	**5.22**	**318**	*e*Pn	**Pn**	**13 45 23.1 +0.9**
STHS	**Stebnicka Huta**	**5.22**	**318**	*e*PN	**Pn**	**13 45 23.0 +0.8**
STHS	**Stebnicka Huta**	**5.22**	**318**	*e*Pn	**Pn**	**13 45 23.1 +0.9**

*CSEM **03** 13:44:46.0, 35.77N×22.21E, h4km, MD3.5, After ATH*
*NEIC **03** 13:44:46.0, 35.77N×22.21E, h4km, MD3.5(ATH), After ATH.*

ATH 03 13:44:46.0, 35.77N×22.21E, h4km±4km, MD3.5/9, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.84**	**52**	*e*Pb	Pb	13 45 02.3	-0.9
KYTH	**Kithira**	**0.84**	**52**	*e*PB	Pb	13 45 02.3	-0.9
KYTH	**Kithira**	**0.84**	**52**	*e*Pb	Pb	13 45 02.3	-0.9
VLI	**Veliai**	**1.11**	**32**	*e*Pb	Pb	13 45 07.3	-0.5
VLI				*e*Sb	Sb	13 45 22.3	-0.4
VLI	**Veliai**	**1.11**	**32**	*e*PB	Pb	13 45 07.3	-0.5
VLI				*e*SB	Sb	13 45 22.3	-0.4
VLI	**Veliai**	**1.11**	**32**	*e*Pb	Pb	13 45 07.3	-0.5
VLI				*e*Sb	Sb	13 45 22.3	-0.4
PYL	**PYLOS**	**1.19**	**342**	*e*PB	Pb	13 45 08.8	-0.2
PYL				*e*SB	Sb	13 45 24.5	-0.2
PYL	**PYLOS**	**1.19**	**342**	*e*Pb	Pb	13 45 08.8	-0.2
PYL				*e*Sb	Sb	13 45 24.5	-0.2
ITM	**Ithomi**	**1.43**	**351**	*e*Pn	Pn	13 45 13.0	+0.3
ITM				*e*Sb	Sb	13 45 31.8	+0.2
ITM	**Ithomi**	**1.43**	**351**	*e*PN	Pn	13 45 13.0	+0.3
ITM				*e*SB	Sb	13 45 31.8	+0.2
ITM	**Ithomi**	**1.43**	**351**	*e*Pn	Pn	13 45 13.0	+0.3
ITM				*e*Sb	Sb	13 45 31.8	+0.2
KARN	**Karanos**	**1.44**	**104**	*e*PG	Pg	13 45 12.4	-1.2
KARN	**Karanos**	**1.44**	**104**	*e*Pg	Pg	13 45 12.4	-1.2
VLX	**Vlachokerasia**	**1.60**	**5**	*e*PN	Pn	13 45 15.6	+0.5
VLX	**Vlachokerasia**	**1.60**	**5**	*e*Pn	Pn	13 45 15.6	+0.5
VAM	**Vamos**	**1.66**	**102**	*e*Pb	Pb	13 45 17.7	+0.5
VAM	**Vamos**	**1.66**	**102**	*e*PB	Pb	13 45 17.7	+0.5
VAM	**Vamos**	**1.66**	**102**	*e*Pb	Pb	13 45 17.7	+0.5
DID	**Didima**	**1.92**	**25**	*e*PN	Pn	13 45 21.6	+2.2
DID	**Didima**	**1.92**	**25**	*e*Pn	Pn	13 45 21.6	+2.2
GUR	**Goura**	**2.17**	**3**	*e*PN	Pn	13 45 25.2	+2.4
GUR	**Goura**	**2.17**	**3**	*e*Pn	Pn	13 45 25.2	+2.4

*DJA **03** 14:08:10, 9.86S×108.34E, h139km, MLv4.4/6*
*ISCJB **03** 14:08:18.6±0.7, 5.54S±0.06×109.16E±0.06, h33km, mb3.6/5, Error ellipse: s-maj=10.7km s-min=6.7km az=40.3*
*IDC **03** 14:08:20.4±2.4, 6.13S×108.45E, h46km±9km, mb3.6/5, mb1 3.7/5, mb1mx3.4/21, mbtmp3.6/5, Error ellipse: s-maj=119.8km s-min=23.4km az=54.0*

ISC 03 14:08:21.2±0.7, 5.57S±0.07×109.13E±0.06, h35km, (h47km±2.6km:pP-P), n18, σ1s09/20, mb3.6/5, Java Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	**Lembang**	**1.96**	**230**	P	**Pn**	**14 09 00.8**	**+8.8**
UGM	**Wanagama**	**2.71**	**149**	P	**Pn**	**14 08 57.3**	**-5.0**
UGM				S	**Sn**	**14 09 33.8**	**-0.1**
SKJI	**Sukabumi**	**2.93**	**241**	S	**Sn**	**14 09 40.2**	**+0.8**
PCJI	**Pacitan**	**3.31**	**142**	P	**Pn**	**14 09 01.1**	**-9.5**
PCJI				S	**Sn**	**14 09 39.6**	**-9.1**
SJI	**Sawahan**	**3.39**	**130**	P	**Pn**	**14 09 12.8**	**+1.1**
CGJI	**Cibinong**	**3.57**	**253**	P	**Pn**	**14 09 09.5**	**-4.7**
PWJI	**Pagerwojo**	**3.60**	**133**	P	**Pn**	**14 09 09.8**	**-4.8**
PWJI				S	**Sn**	**14 09 55.3**	**-0.7**
KLSI		**4.47**	**281**	P	Px	14 09 38.7	
KASI	**Kota Agung**	**4.61**	**270**	P	**Pn**	**14 09 34.2**	**+5.7**
KASI	**Kota Agung**	**4.61**	**270**	P	**Pn**	**14 09 33.7**	**+5.2**
MDSI	**Maura Dua**	**5.05**	**282**	P	**Pn**	**14 09 32.2**	**-2.3**
MDSI	**Maura Dua**	**5.05**	**282**	P	**Pn**	**14 09 31.9**	**-2.6**
GMJI	**Gumukmas**	**5.05**	**122**	P	**Pn**	**14 09 28.2**	**-6.4**
	0.2nm34nm,1.5s						
CMAR	**Chiang Mai Arr**	**25.90**	**337**	P	**P**	**14 13 49.2**	**-0.9**
	0.9nm,0.3s,mb3.8,baz=176,slow=7.7,SNR=10						
ASAR	**Alice Springs**	**29.88**	**130**	P	**P**	**14 14 25.2**	**-0.5**
	0.2nm,0.6s,mb3.0,baz=299,slow=12,SNR=3.9						
SONM	**Songino Array**	**53.23**	**358**	P	**P**	**14 17 38.0**	**+2.0**
	0.5nm,0.5s,mb3.7,baz=157,slow=9.7,SNR=2.5						
SONM				pP	pP	14 17 51.4	+4.8
	0.5nm,0.4s,baz=185,slow=7.4,SNR=1.8						
MKAR	**Makanchi Array**	**57.30**	**338**	P	**P**	**14 18 05.4**	**-0.1**
	0.9nm,0.8s,mb3.9,baz=140,slow=9.6,SNR=6.8						
MKAR				pP	pP	14 18 18.8	+2.6
	0.9nm,0.6s,baz=139,slow=8.3,SNR=6.0						
KURK	**Kurchatov**	**61.92**	**339**	P	**P**	**14 18 37.6**	**+0.4**
	0.2nm,0.3s,mb3.7,baz=153,slow=6.2,SNR=3.2						
KURK				pP	pP	14 18 49.2	+1.3
	0.5nm,0.5s,baz=154,slow=5.3,SNR=3.2						

*NNC **03** 14:13:59.0±15.0, 37.42N×71.93E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=146.3km s-min=87.7km az=37.0*

ISC 03 14:14:06.4±3.9, 37.4N±0.3×72.3E±0.2, h130km±47km, n4, σ1s02/7, 4C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**3.59**	**52**	⇑*i*Pn	**Pn**	**14 15 00.3**	**-0.4**
KSH				Sn	**Sn**	**14 15 42.6**	**-0.1**
KSH				smax			
	comp=N,89nm,0.5s						
KSH				smax			
	comp=E,47nm,0.4s						
KK31	**Karatay Array**	**5.90**	**347**	⇑Pn	**Pn**	**14 15 31.2**	**-0.4**
	comp=E,1.1nm,0.5s,baz=162,slow=13,SNR=13						
KK31				⇓Sn	**Sn**	**14 16 37.8**	**-0.2**
	comp=E,11nm,0.7s,baz=173,slow=23,SNR=16						
TKM2	**Tokmak 2**	**6.10**	**23**	⇑Pn	**Pn**	**14 15 35.8**	**+1.7**
	comp=E,4.1nm,0.6s						
TKM2				⇓Sn	**Sn**	**14 16 49.0**	**+6.4**
	comp=E,1.2nm,0.4s						
MK31	**Makanchi Array**	**11.98**	**35**	⇑Pn	**Pn**	**14 16 52.4**	**-0.4**
	comp=E,1.2nm,0.7s,baz=209,slow=9.5,SNR=12						

DJA 03 14:27:59, 9.39S×115.92E, h80km, MLv3.7/6, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DNP	**Denpasar**	**1.00**	**315**	P	Pn	14 28 19.5	+1.5
KHKI	**Kahang-Kahang**	**1.06**	**343**	P	Pn	14 28 20.2	+1.3
KHKI				S	Sn	14 28 34.8	+1.1
SRBI	**Singaraja**	**1.47**	**332**	P	Pn	14 28 26.4	+2.4
SRBI				S	Sn	14 28 44.0	+1.2
NBBI	**Negara**	**1.64**	**308**	P	Pn	14 28 23.7	-2.4
GMJI	**Gumukmas**	**2.69**	**294**	P	Pn	14 28 42.1	+2.0
WSI	**Waingapu**	**4.33**	**94**	P	Pn	14 29 02.3	-0.1

*IDC **03** 14:28:56.0±1.8, 19.88S×177.51W, h494km±28km, mb3.5/6, mb1 3.7/8, mb1mx3.3/20, mbtmp3.5/8, Error ellipse: s-maj=36.0km s-min=19.9km az=136.0*
*ISCJB **03** 14:28:57.1±0.9, 19.8S±0.2×177.4W±0.1, h540km±17km, mb3.9/12, Error ellipse: s-maj=24.6km s-min=15.5km az=159.5*
*NEIC **03** 14:28:58.1±0.9, 19.88S×177.50W, h528km±12km, mb4.1/7, Error ellipse: s-maj=20.0km s-min=16.3km az=174.0*

ISC 03 14:28:57.8±0.9, 19.8S±0.2×177.4W±0.1, h533km±16km, n17, σ1s31/17, mb3.9/12, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.78**	**294**	*e*Pn	**P**	**14 30 25.8**	**+1.0**
AFI	**Afiamalu**	**7.91**	**44**	P	**P**	**14 30 55.2**	**+1.0**
	3.9nm,0.3s,baz=292,slow=16,SNR=15						
AFI				S	**S**	**14 32 27.4**	**-2.2**
	4.4nm,0.3s,baz=60,slow=20,SNR=6.6						
URZ	**Urewera**	**19.05**	**193**	P	**P**	**14 32 44.1**	**-1.8**
	1.2nm,0.3s,baz=152,slow=22,SNR=8.1						
EIDS	**Eidsvold**	**29.62**	**253**	*e*P	**P**	**14 34 22.4**	**+2.4**
	9.5nm,0.6s,mb4.5						
CTA	**Charters Tower**	**34.16**	**263**	P	**P**	**14 34 57.9**	**-0.8**
	9.8nm,1.0s,mb4.3,baz=80,slow=8.7,SNR=5.2						
CTAO	**Charters Tower**	**34.16**	**263**	*e*P	**P**	**14 34 58.0**	**-0.7**
	6.1nm,0.6s,mb4.3						
STKA	**Stephens Creek**	**38.64**	**243**	P	**P**	**14 35 35.4**	**-0.2**
	6.8nm,1.0s,mb4.1,baz=65,slow=9.7,SNR=7.3						
ASAR	**Alice Springs**	**45.26**	**256**	P	**P**	**14 36 27.6**	**-0.3**
	5.8nm,0.6s,mb4.3,baz=99,slow=7.7,SNR=130						
ASAR				PcP	PcP	14 37 57.9	+1.3
	0.8nm,0.5s,baz=106,slow=3.9,SNR=8.3						
WRAB	**Tennant Creek**	**45.28**	**261**	*e*P	**P**	**14 36 26.7**	**-1.4**
	4.1nm,0.6s,mb4.1						
WRA	**Warramunga Arr**	**45.29**	**261**	P	**P**	**14 36 27.2**	**-0.9**
	2.5nm,0.3s,mb4.2,baz=96,slow=7.6,SNR=214						
FITZ	**Fitzroy Crossi**	**53.71**	**262**	P	**P**	**14 37 30.4**	**+0.2**
	1.6nm,0.5s,mb3.6,baz=86,slow=5.7,SNR=12						
MBWA	**Marble Bar**	**58.59**	**257**	*e*P	**P**	**14 38 02.4**	**-1.5**
	1.2nm,0.5s,mb3.4						
SBA	**Scott Base**	**58.65**	**184**	*e*P	**P**	**14 38 04.5**	**+1.2**
	1.4nm,0.6s,mb3.4						
CASY	**Casey**	**64.88**	**205**	*e*P	**P**	**14 38 37.8**	**-6.3**
	3.1nm,0.4s,mb4.1						
QSPA	**South Pole Qui**	**70.31**	**180**	*e*P	**P**	**14 39 18.1**	**+1.1**
	2.5nm,0.6s,mb3.9						
CMAR	**Chiang Mai Arr**	**90.42**	**289**	P	**P**	**14 41 04.8**	**+2.0**
	0.3nm,0.7s,mb3.3,baz=108,slow=4.4,SNR=4.4						
BRTR	**Keskin Array B**	**146.77**	**314**	PKPbc	PKPbc	14 47 41.6	+1.4
	0.7nm,0.5s,baz=47,slow=8.5,SNR=3.6						

KRSC 03 14:31:17.4±0.9, 52.98N×160.28E, h44km±15km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.20**	**307**	*i* P	Pn	14 31 25.5	+0.5
SPN				*i* S	Sn	14 31 31.2	+0.8
NLC	**Nalytchevo**	**0.60**	**289**	*i* P	Pn	14 31 29.6	+0.1
NLC				*i* S	Sn	14 31 38.4	+0.2
AVH	**Avacha**	**0.97**	**288**	*e*P	Pn	14 31 35.5	+0.9
AVH				*i* S	Sn	14 31 48.6	+1.4
PET	**Petropavlovsk**	**0.98**	**273**	*i* P	Pn	14 31 34.7	0.0
PET				*i* S	Sn	14 31 47.4	-0.1
KII	**Karymskiy**	**1.17**	**335**	*e*P	Pn	14 31 38.3	+1.0
KII				*i* S	Sn	14 31 53.8	+1.8
GNL	**Ganaly**	**1.57**	**298**	*e*P	Pn	14 31 44.2	+1.4
GNL				*i* S	Sn	14 32 03.8	+1.9
MKZ	**Mys Kozlova**	**1.80**	**28**	*e*P	Pn	14 31 46.0	+0.1
MKZ				*i* S	Sn	14 32 07.1	-0.3
MIPR	**Malaya Ipel'ka**	**2.26**	**253**	P	Pn	14 31 53.7	+1.5
KMNR	**Kamenistaya**	**2.78**	**359**	P	Pn	14 32 00.7	+1.3
KBTR	**Krutoberegovo**	**3.56**	**24**	P	Pn	14 32 12.4	+2.4

IDC 03 14:33:24.1±3.8, 4.20S×149.72E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.5/15, mbtmp3.6/3, Error ellipse: s-maj=130.9km s-min=48.6km az=116.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.67**	**223**	P	P	14 38 17.2	+0.8
	1.1nm,1.0s,baz=46,slow=10,SNR=4.8						
ASAR	**Alice Springs**	**24.65**	**217**	P	P	14 38 45.9	-0.6
	0.7nm,0.9s,baz=51,slow=8.0,SNR=5.3						
FITZ	**Fitzroy Crossi**	**27.32**	**238**	P	P	14 39 11.0	+0.2
	2.3nm,0.8s,baz=64,slow=12,SNR=5.2						
TORD	**Torodi Ar. Bea**	**147.21**	**288**	PKPbc	PKPbc	14 53 09.7	-0.7
	0.9nm,1.1s,baz=78,slow=2.9,SNR=2.3						

*ASRS **03** 14:37:04.4±1.7, 50.08N×91.59E, h15km, Ms2.9/4*

ISC 03 14:37:03.0±1.7, 50.15N±0.06×91.4E±0.1, h10km, n6, σ1s21/12, 1D, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CERR	**Cheremushki**	**2.71**	**360**	*e*Pg	**Pg**	**14 37 54.7**	**-0.2**
CERR				*e*Sg	**Sg**	**14 38 31.4**	**+1.4**
TASR	**Tashtagol**	**3.43**	**321**	*e*Pg	**Pg**	**14 38 08.3**	**-0.5**
TASR				*e*Sg	**Sg**	**14 38 54.4**	**+1.2**
UKR	**Ust'-Kan**	**4.32**	**283**	*e*Pg	**Pg**	**14 38 24.5**	**-1.2**
UKR				*e*Sg	**Sg**	**14 39 22.8**	**+1.1**
ELT	**Yel'tsovka**	**4.49**	**316**	*e*Pg	**Pg**	**14 38 27.2**	**-1.8**
ELT				*e*Sg	**Sg**	**14 39 25.6**	**-1.5**
NVS	**Novosibirsk**	**6.87**	**316**	*e*Pg	**Pg**	**14 39 13.3**	**-1.1**
NVS				*e*Sg	**Sg**	**14 40 43.9**	**+0.7**
MK31	**Makanchi Array**	**6.94**	**245**	Pn	**Pn**	**14 38 46.5**	**+1.8**
	1.2nm,0.3s,baz=77,slow=12,SNR=26						
MK31				⇓Sn	**Sn**	**14 40 14.8**	**+11**
	3.4nm,0.5s,baz=66,slow=23,SNR=3.8						
MK31				Lg		14 40 46.3	
	23nm,0.7s,baz=71,slow=34,SNR=5.5						

IDC 03 14:42:48.5±71.0, 18.65S×168.96E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/14, mbtmp3.7/3, MS3.6/2, Ms1 3.6/2, ms1mx2.8/20, Error ellipse: s-maj=1198.0km s-min=116.9km az=73.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**27.94**	**237**	P	P	14 48 40.8	+0.1
	1.3nm,0.8s,baz=60,slow=13,SNR=2.5						
WRA	**Warramunga Arr**	**32.67**	**262**	P	P	14 49 22.8	+0.1
	0.6nm,0.9s,baz=95,slow=7.9,SNR=3.7						
ASAR	**Alice Springs**	**33.02**	**255**	P	P	14 49 25.6	-0.1
	1.6nm,1.0s,baz=82,slow=9.2,SNR=11						
CBIJ	**Chichi jima**	**52.36**	**330**	LR	LR	15 09 20.6	
	comp=Z,92nm,21.6s,baz=95,slow=30						
KSRS	**Korea Array**	**67.87**	**326**	LR	LR	15 20 25.6	
	comp=Z,33nm,18.8s,baz=160,slow=33						

*IDC **03** 14:50:07.3±0.6, 27.31N×140.67E, h468km±15km, mb3.1/6, mb1 3.3/7, mb1mx2.9/22, mbtmp3.2/7, Error ellipse: s-maj=59.8km s-min=13.3km az=81.0*
*JMA **03** 14:50:07.8±0.3, 27.36N×140.28E, h458km, M3.7*

ISC 03 14:50:07.8±0.6, 27.28N±0.09×140.6E±0.5, h472km±15km, n17, σ0s79/23, mb3.4/6, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.39**	**97**	P	**P**	**14 51 08.1**	**+0.5**
	6.3nm,0.3s,baz=121,slow=24,SNR=17						
CBIJ				S	**S**	**14 51 54.7**	**-1.3**
	26nm,0.3s,baz=122,slow=23,SNR=14						
CBIJ	**Chichi jima**	**1.39**	**97**	P	**P**	**14 51 08.0**	**+0.4**
CBIJ				*e*S	**S**	**14 51 54.9**	**-1.1**
JHHJ	**Haha-jima-NKT**	**1.52**	**115**	P	**P**	**14 51 08.5**	**+0.4**
JHHJ				*e*S	**S**	**14 51 57.1**	**+0.1**
JHJ	**Hachijo jima 2**	**5.87**	**353**	P	**P**	**14 51 41.4**	**-0.2**
	3.8nm,0.3s,baz=252,slow=20,SNR=6.2						
BSO1	**Boso 1**	**7.36**	**2**	P	**P**	**14 51 57.2**	**+0.5**
BSO1				*e*S	**S**	**14 53 25.6**	**-0.5**
BSO3	**Boso 3**	**7.50**	**359**	P	**P**	**14 51 59.2**	**+1.0**
BSO3				*e*S	**S**	**14 53 25.1**	**-3.7**
BSO4	**Boso 4**	**7.69**	**358**	P	**P**	**14 52 03.1**	**+2.9**
JHU	**Hanno**	**8.63**	**353**	P	**P**	**14 52 09.1**	**-1.0**
JHU				*e*S	**S**	**14 53 46.1**	**-4.5**
JRY	**Ryogami san**	**8.84**	**351**	P	**P**	**14 52 13.0**	**+0.6**
JAG	**Ashikaga**	**9.18**	**354**	P	**P**	**14 52 16.0**	**0.0**
JHO	**Hitachi**	**9.31**	**360**	P	**P**	**14 52 18.0**	**+0.6**
WRA	**Warramunga Arr**	**47.33**	**188**	P	**P**	**14 57 57.9**	**0.0**
	0.7nm,0.3s,mb3.6,baz=6.7,slow=7.7,SNR=48						
MKAR	**Makanchi Array**	**49.30**	**310**	P	**P**	**14 58 11.8**	**-0.5**
	0.3nm,0.4s,mb3.0,baz=90,slow=10,SNR=7.7						
ASAR	**Alice Springs**	**51.06**	**188**	P	**P**	**14 58 25.6**	**+0.1**
	0.3nm,0.3s,mb3.1,baz=0.4,slow=5.0,SNR=21						
ARCES	**ARCESS Array B**	**72.92**	**341**	P	**P**	**15 00 47.0**	**-0.6**
	1.8nm,1.0s,mb3.6,baz=83,slow=9.9,SNR=4.3						
FINES	**FINESS Array B**	**77.17**	**333**	P	**P**	**15 01 11.9**	**+0.2**
	1.7nm,0.4s,mb3.9,baz=71,slow=5.0,SNR=15						
NOA	**NORSAR Array B**	**82.93**	**338**	P	**P**	**15 01 41.4**	**-0.5**
	0.4nm,0.5s,mb3.2,baz=43,slow=4.7,SNR=2.8						

IDC 03 14:59:57.3±4.2, 3.56S×149.98E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.6/15, mbtmp3.8/3, Error ellipse: s-maj=161.7km s-min=46.8km az=115.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.32**	**222**	P	P	15 04 56.8	+0.1
	1.4nm,0.8s,baz=41,slow=10,SNR=11						
ASAR	**Alice Springs**	**25.32**	**216**	P	P	15 05 25.7	-0.2
	1.0nm,0.8s,baz=49,slow=7.9,SNR=7.9						
FITZ	**Fitzroy Crossi**	**27.88**	**237**	P	P	15 05 49.1	0.0
	3.2nm,0.8s,baz=84,slow=9.2,SNR=3.9						
TORD	**Torodi Ar. Bea**	**147.25**	**289**	PKPbc	PKPbc	15 19 43.2	-0.6
	0.7nm,0.8s,baz=62,slow=2.6,SNR=3.2						

*ISCJB **03** 15:00:13.5±0.4, 63.96N±0.02×27.93E±0.09, h0km, Error ellipse: s-maj=5.5km s-min=3.2km az=8.5*
*CSEM **03** 15:00:14.4±0.2, 63.89N×27.89E, h2km, ML1.6, Error ellipse: s-maj=5.1km s-min=3.2km az=96.0, Mining explosion.*
*HEL **03** 15:00:14.9±0.1, 63.97N×28.00E, h0km, ML1.6, ML1.6(UPP), Explosion*
*IDC **03** 15:00:14.3±1.7, 63.93N×28.37E, h0km, mb1 2.8/3, mb1mx2.7/24, mbtmp2.7/3, ML2.4/3, Error ellipse: s-maj=30.2km s-min=9.3km az=98.0*
*UPP **03** 15:00:17.1, 63.94N×27.44E, h0km, ML1.6, Suspected Mining explosion.*

ISC 03 15:00:14.4±0.4, 63.92N±0.02×27.93E±0.09, h0km, n39, σ0s92/56, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUF	**Sumiainen**	**1.45**	**215**	*e*P	**Pn**	**15 00 41.6**	**-0.1**
SUF				*e*SB	**Sb**	**15 01 01.9**	**+0.9**
SUF				MSG		15 01 01.9	
	comp=Z,1.4nm,0.4s						
SUF	**Sumiainen**	**1.45**	**215**	P	**Pn**	**15 00 41.5**	**-0.2**
JOF	**Joensuu**	**1.82**	**122**	*e*P	**Pn**	**15 00 46.7**	**-0.2**
JOF				*e*S	**Sn**	**15 01 10.6**	**-0.1**
JOF				MSG		15 01 10.6	
	comp=Z,5.4nm,0.1s						
JOF	**Joensuu**	**1.82**	**122**	P	**Pn**	**15 00 46.7**	**-0.2**
JOF				S	**Sn**	**15 01 10.5**	**-0.1**
	comp=Z,5.4nm,0.1s						
KAF	**Kangasniemi**	**1.96**	**203**	*e*PB	**Pb**	**15 00 50.5**	**-0.3**
KAF				MSG		15 01 17.5	
	comp=Z,5.1nm,0.2s						
KAF				*e*SG	**Sg**	**15 01 17.5**	**+0.4**
KAF	**Kangasniemi**	**1.96**	**203**	Pb	**Pb**	**15 00 50.4**	**-0.4**
KEF	**Keuruu**	**2.24**	**220**	*e*PB	**Pb**	**15 00 55.0**	**-0.7**
KEF				*e*SG	**Sg**	**15 01 25.4**	**-0.9**
KEF				MSG		15 01 25.4	
	comp=Z,4.5nm,0.2s					

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHA				*i* S	Sb	15 19 56.4	0.0
IHA	**Instituto Hidr**	**0.48**	**196**	⇑*i*P	Pb	15 19 49.3	-0.1
IHA				*i* S	Sb	15 19 56.4	0.0
ROCH	**El Roble**	**0.57**	**136**	⇑*e*P	Pb	15 19 51.0	+0.3
ROCH				*i* S	Sb	15 19 59.8	+1.2
ROCH	**El Roble**	**0.57**	**136**	⇑*e*P	Pb	15 19 51.0	+0.3
ROCH				*i* S	Sb	15 19 59.8	+1.2
JACH	**Jahuel**	**0.76**	**100**	⇑*i*P	Pn	15 19 53.6	-0.2
JACH	**Jahuel**	**0.76**	**100**	⇑*i*P	Pn	15 19 53.6	-0.2
PEL	**Peldehue**	**0.89**	**131**	*e*P	Pn	15 19 55.7	+0.1
PEL				*i* S	Sn	15 20 07.9	+0.4
PEL				AML	AML	15 20 09.1	
	comp=N,7μm,0.1s						
RCDM	**Rinconada Maip**	**1.09**	**149**	*e*P	Pn	15 19 58.6	+0.3
RCDM				*i* S	Sn	15 20 13.1	+0.8
RCDM	**Rinconada Maip**	**1.09**	**149**	*e*P	Pn	15 19 58.6	+0.3
RCDM				*i* S	Sn	15 20 13.1	+0.8
RCDM				AML	AML	15 20 14.0	
	comp=E,3μm,0.1s						
CLCH	**Cerro Calan**	**1.15**	**137**	*e*P	Pn	15 19 59.6	+0.4
CLCH				*i* S	Sn	15 20 14.7	+0.8
TACH	**Talagante**	**1.18**	**158**	⇓*e*P	Pn	15 20 00.1	+0.4
TACH	**Talagante**	**1.18**	**158**	⇓*e*P	Pn	15 20 00.1	+0.4
ANTU	**Antumapu**	**1.23**	**145**	*e*P	Pn	15 20 00.9	+0.5
ANTU				*e*S	Sn	15 20 17.1	+1.1
ANTU	**Antumapu**	**1.23**	**145**	*e*P	Pn	15 20 00.9	+0.5
ANTU				*e*S	Sn	15 20 17.1	+1.1
FCH	**Farellones**	**1.26**	**128**	⇓*i*P	Pn	15 19 56.0	-4.8
FCH				*i* S	Sn	15 20 11.1	-5.5
FCH				AML	AML	15 20 12.6	
	comp=E,955nm,0.1s						
PCH	**Pirque**	**1.33**	**143**	*e*P	Pn	15 20 02.3	+0.6
PCH	**Pirque**	**1.33**	**143**	*e*P	Pn	15 20 02.3	+0.6
CHCH	**Chadas Angostu**	**1.54**	**153**	*e*P	Pn	15 20 05.5	+0.9
CHCH	**Chadas Angostu**	**1.54**	**153**	*e*P	Pn	15 20 05.5	+0.9
LMEL	**Las Melosas**	**1.67**	**141**	*e*P	Pn	15 20 07.8	+1.4
LMEL	**Las Melosas**	**1.67**	**141**	*e*P	Pn	15 20 07.8	+1.4
CACH	**El Canelo**	**1.72**	**155**	*e*P	Pn	15 20 09.5	+2.4
CACH	**El Canelo**	**1.72**	**155**	*e*P	Pn	15 20 09.5	+2.4
TLL	**Tololo Astrono**	**2.45**	**14**	*e*P	Pn	15 20 18.9	+1.8
TLL	**Tololo Astrono**	**2.45**	**14**	*e*P	Pn	15 20 18.9	+1.8
TLL				AML	AML	15 21 03.1	
	comp=N,348nm,0.4s						
LCO	**Las Campanas**	**3.60**	**11**	*e*Pn	Pn	15 20 33.3	+0.4
LCO				*e*Sn	Sn	15 21 16.5	+2.1

*ATH **03** 15:24:25.2, 38.°11N×21.°46E, h25km±1km, MD3.3/10*
*NEIC **03** 15:24:25.2, 38.°11N×21.°46E, h25km, MD3.3(ATH), After ATH.*
*ISCJB **03** 15:24:26.2±0.4, 38.°12N±0.°04×21.°53E±0.°03, h21km±4km, Error ellipse: s-maj=6.2km s-min=4.3km az=161.7*
*CSEM **03** 15:24:26.1±0.2, 38.°15N×21.°52E, h20km, MD3.3, Error ellipse: s-maj=4.2km s-min=3.3km az=159.0*
*THE **03** 15:24:26.2, 38.°12N×21.°55E, h24km, ML3.0/5, Error ellipse: s-maj=0.9km s-min=0.4km az=356.0*

ISC 03 15:24:26.2±0.4, 38.°13N±0.°04×21.°53E±0.°03, h21km±4km, n48, σ0°82/69, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.08**	**217**	*e*Pb	Pb	15 24 29.9	-0.2
RLS				*e*Sb	Sb	15 24 32.7	0.0
RLS	**Riolos of Patr**	**0.08**	**217**	*e*PB	Pb	15 24 29.9	-0.2
RLS				*e*SB	Sb	15 24 32.7	0.0
RLS	**Riolos of Patr**	**0.08**	**217**	*e*Pb	Pb	15 24 29.9	-0.2
RLS				*e*Sb	Sb	15 24 32.7	0.0
UPR	**University Cam**	**0.26**	**52**	*e*PB	Pb	15 24 32.7	+0.5
UPR				*e*SB	Sb	15 24 37.7	+1.4
UPR	**University Cam**	**0.26**	**52**	P	Pb	15 24 32.1	-0.1
UPR				S	Sb	15 24 37.0	+0.7
UPR	**University Cam**	**0.26**	**52**	P	Pb	15 24 32.1	-0.1
UPR	**University Cam**	**0.26**	**52**	*e*Pb	Pb	15 24 32.7	+0.5
UPR				S	Sb	15 24 37.0	+0.7
UPR				*e*Sb	Sb	15 24 37.7	+1.4
LAKA	**Lakka**	**0.37**	**72**	P	Pb	15 24 33.6	-0.5
LAKA				S	Sb	15 24 39.7	+0.2
LAKA	**Lakka**	**0.37**	**72**	P	Pb	15 24 33.6	-0.5
LAKA				S	Sb	15 24 39.7	+0.2
EFP	**Efpalio**	**0.42**	**44**	*e*PB	Pb	15 24 34.7	-0.3
EFP				*e*SB	Sb	15 24 41.9	+1.0
EFP	**Efpalio**	**0.42**	**44**	P	Pb	15 24 34.6	-0.4
EFP				S	Sb	15 24 41.6	+0.7
EFP	**Efpalio**	**0.42**	**44**	P	Pb	15 24 34.6	-0.4
EFP				S	Sb	15 24 41.6	+0.7
EFP				*e*Sb	Sb	15 24 41.9	+1.0
KALE	**Kalithea**	**0.55**	**61**	P	Pb	15 24 36.5	-0.6
KALE				S	Sb	15 24 45.2	+0.6
KALE	**Kalithea**	**0.55**	**61**	P	Pb	15 24 36.5	-0.6
KALE				S	Sb	15 24 45.2	+0.6
KFL	**Anninata**	**0.58**	**269**	P	Pb	15 24 37.6	-0.1
KFL	**Anninata**	**0.58**	**269**	P	Pb	15 24 37.6	-0.1
GUR	**Goura**	**0.67**	**106**	P	Pb	15 24 38.4	-0.8
GUR				S	Sb	15 24 48.2	+0.2
GUR	**Goura**	**0.67**	**106**	P	Pb	15 24 38.4	-0.8
GUR				S	Sb	15 24 48.2	+0.2
VLS	**Valsamata**	**0.74**	**274**	P	Pb	15 24 40.0	-0.4
VLS				S	Sb	15 24 51.8	+1.7
VLS	**Valsamata**	**0.74**	**274**	P	Pb	15 24 40.0	-0.4
VLS				S	Sb	15 24 51.8	+1.7
EVR	**Evrytania**	**0.82**	**15**	*e*Pn	Pn	15 24 41.8	-0.8
EVR	**Evrytania**	**0.82**	**15**	*e*PN	Pn	15 24 41.8	-0.8
EVR	**Evrytania**	**0.82**	**15**	*e*Pn	Pn	15 24 41.8	-0.8
DSF	**Desfina**	**0.84**	**70**	P	Pb	15 24 41.2	-0.8
DSF				S	Sb	15 24 53.0	+0.2
DSF	**Desfina**	**0.84**	**70**	P	Pb	15 24 41.2	-0.8
DSF				S	Sb	15 24 53.0	+0.2
LKD2	**Lefkada island**	**0.95**	**314**	P	Pb	15 24 43.9	-0.1
LKD2	**Lefkada island**	**0.95**	**314**	P	Pb	15 24 43.9	-0.1
ITM	**Ithomi**	**0.99**	**161**	*e*Pn	Pb	15 24 44.1	-0.6
ITM	**Ithomi**	**0.99**	**161**	*e*PN	Pb	15 24 44.1	-0.6
ITM	**Ithomi**	**0.99**	**161**	P	Pb	15 24 44.1	-0.6
ITM	**Ithomi**	**0.99**	**161**	P	Pb	15 24 44.1	-0.6
VLX	**Vlachokerasia**	**1.01**	**138**	*e*PN	Pn	15 24 45.4	+0.2
VLX	**Vlachokerasia**	**1.01**	**138**	*e*Pn	Pn	15 24 45.4	+0.2
AGG	**Agios Georgios**	**1.09**	**35**	P	Pn	15 24 45.2	-1.1
AGG	**Agios Georgios**	**1.09**	**35**	P	Pn	15 24 45.2	-1.1
LTK	**Loutraki**	**1.14**	**95**	*e*PN	Pn	15 24 48.2	+1.3
LTK	**Loutraki**	**1.14**	**95**	*e*Pn	Pn	15 24 48.2	+1.3
PYL	**PYLOS**	**1.24**	**172**	*e*PN	Pn	15 24 48.9	+0.6
PYL	**PYLOS**	**1.24**	**172**	*e*Pn	Pn	15 24 48.9	+0.6
DID	**Didima**	**1.49**	**114**	*e*PN	Pn	15 24 53.3	+1.6
DID	**Didima**	**1.49**	**114**	*e*Pn	Pn	15 24 53.3	+1.6
THL	**Klokotos Trika**	**1.49**	**15**	P	Pn	15 24 50.7	-1.0
THL	**Klokotos Trika**	**1.49**	**15**	P	Pn	15 24 50.7	-1.0
VLI	**Veliai**	**1.80**	**141**	*e*Pb	Pb	15 24 56.5	-1.9
VLI	**Veliai**	**1.80**	**141**	*e*PB	Pb	15 24 56.5	-1.9
KYTH	**Kithira**	**2.20**	**146**	*e*Pn	Pn	15 25 02.3	+0.8
KYTH	**Kithira**	**2.20**	**146**	*e*PN	Pn	15 25 02.3	+0.8
KYTH	**Kithira**	**2.20**	**146**	*e*Pn	Pn	15 25 02.3	+0.8

IDC 03 15:30:30.2±2.3, 56.°75S×151.°14W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.9/13, mbtmp3.9/3, Error ellipse: s-maj=78.7km s-min=39.6km az=57.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QSPA	**South Pole Qui**	**33.40**	**180**	P	P	15 37 10.0	+0.3
	2.2nm,1.0s,baz=73,slow=5.1,SNR=5.2						
ASAR	**Alice Springs**	**62.34**	**269**	P	P	15 40 54.8	+0.4
	4.1nm,1.2s,baz=141,slow=5.8,SNR=7.0						
WRA	**Warramunga Arr**	**65.09**	**271**	P	P	15 41 11.9	-0.5
	0.5nm,0.6s,baz=145,slow=5.8,SNR=7.6						
MKAR	**Makanchi Array**	**146.30**	**276**	PKPbc	PKPbc	15 50 11.8	+0.1
	2.0nm,0.7s,baz=117,slow=3.5,SNR=18						
ZALV	**Zalesovo Beam**	**148.81**	**289**	PKPbc	PKPbc	15 50 16.8	-1.5
	0.6nm,0.4s,baz=119,slow=5.2,SNR=4.0						
KURK	**Kurchatov**	**150.51**	**280**	PKPbc	PKPbc	15 50 22.5	-0.1
	1.7nm,0.7s,baz=117,slow=2.0,SNR=8.0						

*IDC **03** 15:43:12.0±1.4, 35.°50N×58.°59E, h0km, mb3.6/9, mb1 3.7/10, mb1mx3.6/25, mbtmp3.7/10, ML3.2/1, MS2.7/1, Ms1 2.7/1, ms1mx2.2/30, Error ellipse: s-maj=32.4km s-min=17.6km az=174.0*
*ISCJB **03** 15:43:12.4±0.6, 35.°54N±0.°03×58.°72E±0.°04, h12km±5km, mb3.7/6, Error ellipse: s-maj=5.9km s-min=4.0km az=20.3*
*CSEM **03** 15:43:13.1±0.1, 35.°56N×58.°75E, h5km, ML3.7, Error ellipse: s-maj=3.8km s-min=2.4km az=125.0*
*TEH **03** 15:43:14.8, 35.°57N×58.°81E, h19km*
*NEIC **03** 15:43:14.0, 35.°54N×58.°80E, h13km, mb4.0/1, MN3.7(TEH), After TEH.*

ISC 03 15:43:13.9±0.7, 35.°55N±0.°03×58.°74E±0.°04, h10km±5km, n103, σ0°74/111, mb3.7/6, 1C, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMOG	**Moghan**	**0.74**	**41**	Pg	Pg	15 43 27.3	-0.9
IMOG	**Moghan**	**0.74**	**41**	*e*Pg	Pg	15 43 27.4	-0.8
IMOG				*e*		15 43 52.7	
	comp=Z,19μm,0.4s						
IMOG	**Moghan**	**0.74**	**41**	*e*Pg	Pg	15 43 27.4	-0.8
IPAY	**Payeh**	**0.92**	**13**	Pg	Pg	15 43 31.1	-0.5
IPAY	**Payeh**	**0.92**	**13**	*e*Pg	Pg	15 43 31.2	-0.4
IPAY				*e*Sg	Sg	15 43 44.8	+1.2
IPAY				*e*		15 43 46.0	
	comp=Z,27μm,0.4s						
IPAY	**Payeh**	**0.92**	**13**	*e*Pg	Pg	15 43 31.2	-0.4
IPAY				*e*Sg	Sg	15 43 44.8	+1.2
ISRO	**Mashad**	**0.96**	**38**	⇑*e*Pg	Pg	15 43 31.7	-0.7
ISRO				*e*		15 43 50.9	
	comp=Z,17μm,0.3s						
IAKL	**Akhelmad**	**1.05**	**1**	Pg	Pg	15 43 32.5	-1.6
IAKL	**Akhelmad**	**1.05**	**1**	*e*Pg	Pg	15 43 32.5	-1.6
IAKL				*e*Sg	Sg	15 43 48.4	+0.7
IAKL				*e*		15 43 50.3	
	comp=Z,17μm,0.2s						
IKRD	**Kardeh**	**1.24**	**352**	Pg	Pg	15 43 39.1	+1.5
IKRD	**Kardeh**	**1.24**	**352**	*e*Pg	Pg	15 43 39.0	+1.4
IKRD				*e*		15 44 01.7	
	comp=Z,14μm,0.3s						
IMYA	**Miami**	**1.36**	**54**	Pg	Pn	15 43 38.4	-0.5
IMYA	**Miami**	**1.36**	**54**	*e*Pg	Pn	15 43 38.4	-0.5
IMYA				*e*		15 43 45.1	
	comp=Z,6μm,0.2s						
IMYA	**Miami**	**1.36**	**54**	*e*Pg	Pn	15 43 38.4	-0.5
IQHU	**Qucahn**	**1.53**	**354**	Pn	Pn	15 43 41.5	+0.2
IQHU	**Qucahn**	**1.53**	**354**	*e*Pn	Pn	15 43 41.6	+0.3
IQHU				*e*		15 44 25.8	
	comp=Z,12μm,0.2s						
IQHU	**Qucahn**	**1.53**	**354**	*e*Pn	Pn	15 43 41.6	+0.3
ISFR	**Sfrayin**	**1.61**	**339**	Pn	Pn	15 43 42.8	+0.3
ISFR	**Sfrayin**	**1.61**	**339**	*e*Pn	Pn	15 43 42.9	+0.4
ISFR				*e*Sg	Sg	15 44 04.8	-1.0
ISFR				*e*		15 44 13.7	
	comp=Z,9μm,0.2s						
ISFR	**Sfrayin**	**1.61**	**339**	*e*Pn	Pn	15 43 42.9	+0.4
ISFR				*e*Sg	Sg	15 44 04.8	-1.0
IEMG	**Emamgholi**	**1.86**	**358**	Pn	Pn	15 43 46.0	+0.1
IEMG	**Emamgholi**	**1.86**	**358**	*e*Pn	Pn	15 43 46.0	+0.1
IEMG				*e*		15 44 19.1	
	comp=Z,5μm,0.3s						
IEMG	**Emamgholi**	**1.86**	**358**	*e*Pn	Pn	15 43 46.0	+0.1
ISHV	**Shirvan**	**2.15**	**337**	*e*Pn	Pn	15 43 50.2	+0.4
ISHV				*e*		15 44 30.4	
	comp=Z,6μm,0.3s						
ISHV	**Shirvan**	**2.15**	**337**	*e*Pn	Pn	15 43 50.2	+0.4
ITEG	**Tejag**	**2.65**	**180**	*e*Pn	Pn	15 43 56.6	-0.1
ITEG				*e*Sg	Sg	15 44 39.1	+0.2
ITEG				*e*		15 44 42.5	
	comp=Z,3μm,0.4s						
ITEG	**Tejag**	**2.65**	**180**	*e*Pn	Pn	15 43 56.6	-0.1
ITEG				*e*Sg	Sg	15 44 39.1	+0.2
IDAH	**Dahanechah**	**2.96**	**161**	*e*Pn	Pn	15 44 00.9	0.0
IDAH				*e*		15 44 50.2	
	comp=Z,2μm,0.4s						
IDAH	**Dahanechah**	**2.96**	**161**	*e*Pn	Pn	15 44 00.9	0.0
IKOO	**Kooshah**	**3.13**	**176**	*e*Pn	Pn	15 44 03.5	+0.2
IKOO				*e*		15 45 07.8	
	comp=Z,2μm,0.5s						
IKOO	**Kooshah**	**3.13**	**176**	*e*Pn	Pn	15 44 03.5	+0.2
IANJ	**Anjilo**	**3.94**	**270**	Pn	Pn	15 44 15.0	+0.6
IANJ	**Anjilo**	**3.94**	**270**	*e*Pn	Pn	15 44 14.9	+0.5
IANJ				*e*		15 44 29.9	
	comp=Z,670nm,0.2s						
IANJ	**Anjilo**	**3.94**	**270**	*e*Pn	Pn	15 44 14.9	+0.5
ISHM	**Shahmirzad**	**4.44**	**275**	Pn	Pn	15 44 21.9	+0.6
ISHM	**Shahmirzad**	**4.44**	**275**	*e*Pn	Pn	15 44 22.0	+0.7
ISHM	**Shahmirzad**	**4.44**	**275**	Pn	Pn	15 44 21.9	+0.6
ILAS	**Lasjerd**	**4.72**	**270**	Pn	Pn	15 44 25.5	+0.3
ILAS	**Lasjerd**	**4.72**	**270**	*e*Pn	Pn	15 44 25.5	+0.3
ILAS				*e*		15 45 53.7	
	comp=Z,594nm,0.3s						
ILAS	**Lasjerd**	**4.72**	**270**	*e*Pn	Pn	15 44 25.5	+0.3
IBAF	**Bafgh**	**4.75**	**215**	Pn	Pn	15 44 25.5	-0.2
IBAF	**Bafgh**	**4.75**	**215**	*e*Pn	Pn	15 44 25.6	-0.1
IBAF				*e*		15 46 06.8	
	comp=Z,1μm,0.4s						
IBAF	**Bafgh**	**4.75**	**215**	*e*Pn	Pn	15 44 25.6	-0.1
IFIR	**Firoozkooh**	**4.88**	**273**	Pn	Pn	15 44 28.3	+1.0
IFIR	**Firoozkooh**	**4.88**	**273**	*e*Pn	Pn	15 44 27.8	+0.5
IFIR				*e*		15 44 35.3	
	comp=Z,307nm,0.2s						
IFIR	**Firoozkooh**	**4.88**	**273**	*e*Pn	Pn	15 44 27.8	+0.5
ICHK	**Chekchek**	**4.88**	**229**	Pn	Pn	15 44 27.5	+0.1
ICHK	**Chekchek**	**4.88**	**229**	*e*Pn	Pn	15 44 27.6	+0.2
ICHK				*e*		15 45 59.9	
	comp=Z,1μm,0.3s						
ICHK	**Chekchek**	**4.88**	**229**	*e*Pn	Pn	15 44 27.6	+0.2
IMEH	**Mehriz**	**5.39**	**221**	Pn	Pn	15 44 33.9	-0.5
IMEH	**Mehriz**	**5.39**	**221**	*e*Pn	Pn	15 44 34.0	-0.4
IMEH				*e*		15 46 23.4	
	comp=Z,1μm,0.4s						
IMEH	**Mehriz**	**5.39**	**221**	*e*Pn	Pn	15 44 34.0	-0.4
IDMV	**Damavand**	**5.47**	**272**	Pn	Pn	15 44 35.7	+0.3
IDMV	**Damavand**	**5.47**	**272**	*e*Pn	Pn	15 44 35.7	+0.3
IDMV				*e*		15 46 43.6	
	comp=Z,804nm,0.7s						
IDMV	**Damavand**	**5.47**	**272**	*e*Pn	Pn	15 44 35.7	+0.3
ISFB	**Sefidab**	**5.47**	**259**	Pn	Pn	15 44 35.5	0.0
ISFB	**Sefidab**	**5.47**	**259**	*e*Pn	Pn	15 44 35.5	0.0
ISFB				*e*		15 46 33.0	
	comp=Z,370nm,0.3s						
ISFB	**Sefidab**	**5.47**	**259**	*e*Pn	Pn	15 44 35.5	0.0
ISAD	**Sadrabad**	**5.56**	**231**	*e*Pn	Pn	15 44 36.9	+0.2
ISAD	**Sadrabad**	**5.56**	**231**	*e*Pn	Pn	15 44 36.9	+0.2
IVRN	**Varamin**	**5.76**	**267**	*e*Pn	Pn	15 44 39.2	-0.3
IVRN				*e*Pn	Pn	15 44 39.6	+0.1
IVRN	**Varamin**	**5.76**	**267**	*e*Pn	Pn	15 44 39.2	-0.3
IGAR	**Gharneh**	**6.39**	**242**	*e*Pn	Pn	15 44 48.2	+0.1
IPIR	**Pirpir**	**7.11**	**249**	*e*Pn	Pn	15 44 58.2	+0.2
IPIR	**Pirpir**	**7.11**	**249**	*e*Pn	Pn	15 44 58.2	+0.2
IRAZ	**Razeghan**	**7.19**	**271**	*e*Pn	Pn	15 44 59.1	0.0
IRAZ	**Razeghan**	**7.19**	**271**	*e*Pn	Pn	15 44 59.1	0.0
EKS2	**Erkin-Say**	**13.66**	**54**	*e*Pn	Pn	15 46 26.5	-1.1
	comp=Z,6.2nm,1.0s						
EKS2	**Erkin-Say**	**13.66**	**54**	*e*Pn	Pn	15 46 26.5	-1.1
	comp=Z,6.2nm,1.0s						
ABKAR	**Akbulak array**	**13.72**	**3**	*e*P	Pn	15 46 28.1	-0.4
	comp=Z,0.6nm,0.5s						
ABKAR	**Akbulak array**	**13.72**	**3**	*e*P	Pn	15 46 28.0	-0.5
	comp=Z,0.6nm,0.5s						
AAK	**Ala-Archa**	**14.12**	**55**	Pn	Pn	15 46 33.8	-0.2
	comp=Z,0.6nm,0.3s,baz=252,slow=7.6,SNR=4.1						
AAK				LR	LR	15 52 19.9	
	comp=Z,31nm,18.5s,baz=55,slow=38						
AAK	**Ala-Archa**	**14.12**	**55**	Pn	Pn	15 46 33.8	-0.2
AAK				LR	LR	15 52 19.9	
AAK	**Ala-Archa**	**14.12**	**55**	Pn	Pn	15 46 33.8	-0.1
AKTK	**Aktyubinsk**	**14.89**	**358**	Pn	Pn	15 46 48.2	+3.9
AKTK	**Aktyubinsk**	**14.89**	**358**	Pn	Pn	15 46 48.2	+3.9
AKTO	**Aktyubinsk**	**14.89**	**358**	Pn	Pn	15 46 48.2	+3.9
	comp=Z,0.1nm,0.3s,baz=166,slow=15,SNR=3.6						
TKM2	**Tokmak 2**	**14.98**	**56**	*e*Pn	Pn	15 46 48.1	+2.5
	comp=Z,1.5nm,0.6s						
TKM2	**Tokmak 2**	**14.98**	**56**	*e*Pn	Pn	15 46 48.1	+2.5
	comp=Z,1.5nm,0.6s						
BRTR	**Keskin Array B**	**20.29**	**289**	P	P	15 47 49.0	-0.7
	comp=Z,0.4nm,0.5s,baz=110,slow=13,SNR=2.8						
BRTR	**Keskin Array B**	**20.29**	**289**	P	P	15 47 49.0	-0.7
KURK	**Kurchatov**	**20.88**	**37**	P	P	15 47 56.5	+0.5
	comp=Z,1.9nm,0.8s,baz=235,slow=11,SNR=9.6						
KURK	**Kurchatov**	**20.88**	**37**	P	P	15 47 56.5	+0.5
KURK				*e*P		15 47 57.8	
KURK	**Kurchatov**	**20.88**	**37**	P	P	15 47 56.5	+0.4
ARU	**Arti**	**20.88**	**360**	*e*P	P	15 47 56.4	+0.4
	comp=Z,8.2nm,1.1s						
ARU	**Arti**	**20.88**	**360**	*e*P	P	15 47 56.4	+0.4
	comp=Z,8.2nm,1.1s						
MK31	**Makanchi Array**	**20.91**	**50**	*e*P	P	15 47 56.9	+0.5
MK31	**Makanchi Array**	**20.91**	**50**	*e*P	P	15 47 56.9	+0.5
MKAR	**Makanchi Array**	**20.91**	**50**	P	P	15 47 57.1	+0.7
	comp=Z,1.4nm,0.8s,baz=236,slow=8.6,SNR=8.5						
MKAR	**Makanchi Array**	**20.91**	**50**	P	P	15 47 57.1	+0.7
ZAA0	**Zalesovo Array**	**25.86**	**37**	P	P	15 48 44.7	-0.8
ZAA0	**Zalesovo Array**	**25.86**	**37**	P	P	15 48 44.7	-0.8
ZALV	**Zalesovo Beam**	**25.86**	**37**	P	P	15 48 45.7	+0.2
	comp=Z,0.5nm,0.5s,mb3.3,baz=236,slow=16,SNR=3.4						
AKASG	**Malin Array Be**	**26.11**	**315**	P	P	15 48 47.2	-0.6
	comp=Z,0.5nm,0.4s,mb3.4,baz=107,slow=8.4,SNR=3.0						
AKASG	**Malin Array Be**	**26.11**	**315**	P	P	15 48 47.2	-0.6
FINES	**FINESS Array B**	**33.12**	**332**	P	P	15 49 49.0	-0.9
	comp=Z,1.8nm,0.7s,mb4.1,baz=122,slow=18,SNR=5.7						
FINES	**FINESS Array B**	**33.12**	**332**	P	P	15 49 49.0	-0.9
NB2	**NORSAR Subarra**	**39.32**	**325**	P	P	15 50 41.9	-0.9
	comp=Z,0.6nm,0.6s,mb3.5,baz=111,slow=8.6						
NOA	**NORSAR Array B**	**39.32**	**325**	P	P	15 50 41.5	-1.3
	comp=Z,1.3nm,0.9s,mb3.7,baz=110,slow=8.1,SNR=3.6						
NOA	**NORSAR Array B**	**39.32**	**325**	P	P	15 50 41.5	-1.3
CMAR	**Chiang Mai Arr**	**39.35**	**105**	P	P	15 50 44.0	+0.4
	comp=Z,0.7nm,0.6s,mb3.5,baz=295,slow=8.7,SNR=4.6						
CMAR	**Chiang Mai Arr**	**39.35**	**105**	P	P	15 50 44.0	+0.4
TORD	**Torodi Ar. Bea**	**55.74**	**261**	P	P	15 52 49.6	-1.4
	comp=Z,1.6nm,0.9s,mb4.0,baz=49,slow=6.6,SNR=8.6						

*NEIC **03** 15:51:14.9±2.5, 23.°57N×121.°69E, h10km, Error ellipse: s-maj=28.5km s-min=8.9km az=111.0*
*ISCJB **03** 15:51:17.5±0.3, 23.°61N±0.°01×121.°56E±0.°02, h24km±2km, Error ellipse: s-maj=3.1km s-min=1.9km az=35.2*
*TAP **03** 15:51:18.1, 23.°64N×121.°46E, h27km, ML3.3, B*
*JMA **03** 15:51:19.1±0.4, 23.°64N×121.°59E, h70km, M2.6*

ISC 03 15:51:17.7±0.3, 23.°61N±0.°01×121.°54E±0.°02, h22km±2km, n62, σ0°85/116, 6C-11D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	**0.10**	**358**	*e*P	Pb	15 51 23.5	+1.6
	baz=54						
TEGC				*e*S	Sb	15 51 27.9	+3.2
	baz=54						
ESL	**Shilin**	**0.23**	**333**	⇑*i*P	Pb	15 51 23.7	+0.4
	baz=353						
ESL				*i* S	Sb	15 51 27.6	+0.4
	baz=353						
EHY	**Hungye**	**0.23**	**242**	⇑*i*P	Pb	15 51 23.8	+0.3
	baz=231						
EHY				*i* S	Sb	15 51 27.5	+0.2
	baz=231						
ESF	**Shoufeng Towns**	**0.26**	**353**	*e*P	Pb	15 51 24.3	+0.4
	baz=5.0						
YULB	**Yu-li**	**0.32**	**226**	*e*Pg	Pb	15 51 24.6	-0.1
YULB				*e*Sg	Sb	15 51 29.1	-0.4
TWF1	**Yuli**	**0.34**	**221**	⇓*i*P	Pb	15 51 25.4	+0.2
	baz=215						
TWF1				S	Sb	15 51 30.4	+0.2
	baz=215						
HWA	**Hwalien**	**0.37**	**9**	⇓*i*P	Pb	15 51 26.5	+0.9
	baz=15						
HWA				S	Sb	15 51 32.6	+1.6
	baz=15						
TWD	**Chiawan**	**0.47**	**6**	⇓*i*P	Pb	15 51 27.2	-0.1
	baz=5.0						
TWD				*e*S	Sb	15 51 35.0	+1.2
	baz=5.0						
NACB	**Ninganchiao**	**0.56**	**5**	*e*Pg	Pb	15 51 27.8	-1.1
NACB				*e*Sg	Sb	15 51 34.8	-1.6
SSLB	**Suanglung**	**0.57**	**288**	*e*Pg	Pb	15 51 27.9	-1.1
SSLB				*e*Sg	Sb	15

	baz=7.0						
NSY	**Sanyi**	**1.07**	**318**	*e*P	**Pn**	**15 51 38.0**	**+0.5**
	baz=321						
NSY				*e*S	**Sb**	**15 51 52.0**	**+0.8**
	baz=321						
TWE	**Neicheng**	**1.11**	**6**	*e*P	**Pn**	**15 51 36.9**	**-1.1**
	baz=10.0						
TWE				*e*S	**Sb**	**15 51 52.9**	**+0.7**
	baz=10.0						
NSTT	**Nanjuang**	**1.13**	**334**	*i* P	**Pn**	**15 51 38.4**	**+0.2**
	baz=343						
NSTT				*e*S	**Sb**	**15 51 51.7**	**-1.1**
	baz=343						
ECL	**Taimali**	**1.15**	**208**	*e*P	**Pn**	**15 51 35.9**	**-2.6**
	baz=191						
ECL				*e*S	**Sb**	**15 51 53.4**	**+0.1**
	baz=191						
WTCT	**Ta-ch'eng**	**1.18**	**282**	*e*P	**Pn**	**15 51 38.7**	**-0.3**
	baz=273						
WTCT				*e*S	**Sb**	**15 51 54.7**	**+0.3**
	baz=273						
SSD	**Sandimen**	**1.20**	**224**	*e*P	**Pn**	**15 51 38.7**	**-0.6**
	baz=219						
SSD				*e*S	**Sn**	**15 51 55.3**	**+0.3**
	baz=219						
CHN3	**Shinhua**	**1.21**	**244**	*e*P	**Pn**	**15 51 39.9**	**+0.6**
	baz=240						
CHN3				*e*S	**Sn**	**15 51 56.4**	**+1.4**
	baz=240						
WSF	**Szhu**	**1.21**	**271**	*e*P	**Pn**	**15 51 39.6**	**+0.2**
	baz=270						
WSF				*e*S	**Sn**	**15 51 55.1**	**0.0**
	baz=270						
CHN8	**Yiju**	**1.25**	**258**	*e*P	**Pn**	**15 51 41.3**	**+1.4**
	baz=255						
CHN8				*e*S	**Sn**	**15 51 56.4**	**+0.3**
	baz=255						
TWM1	**Shoushan**	**1.30**	**233**	*e*P	**Pn**	**15 51 41.9**	**+1.3**
	baz=244						
SCLT	**Jiali**	**1.31**	**251**	*e*P	**Pn**	**15 51 42.8**	**+2.0**
	baz=248						
TWA	**Mucha**	**1.36**	**2**	*e*P	**Pn**	**15 51 41.4**	**-0.1**
	baz=14						
EAST	**Anshuo**	**1.38**	**208**	*e*P	**Pn**	**15 51 40.4**	**-1.3**
	baz=195						
NWF	**Wu-fen Shan**	**1.47**	**8**	*e*P	**Pn**	**15 51 42.7**	**-0.2**
	baz=12						
NWF				*e*S	**Sn**	**15 52 02.8**	**+1.4**
	baz=12						
TWS1	**Kuangyinshan**	**1.49**	**356**	*e*P	**Pn**	**15 51 42.6**	**-0.6**
	baz=14						
TWS1				*e*S	**Sn**	**15 52 03.7**	**+1.8**
	baz=14						
SCZT	**Fangliau**	**1.50**	**215**	*e*P	**Pn**	**15 51 44.0**	**+0.7**
	baz=194						
SCZT				*e*S	**Sn**	**15 52 02.5**	**+0.2**
	baz=194						
LAY	**Lan-yu**	**1.57**	**180**	*e*P	**Pn**	**15 51 42.6**	**-1.7**
	baz=169						
LAY				*e*S	**Sn**	**15 52 04.3**	**+0.4**
	baz=169						
YOJ	**Yonaguni jima**	**1.59**	**57**	P	**Pn**	**15 51 45.1**	**+0.6**
YOJ				S	**Sn**	**15 52 03.8**	**-0.6**
TWK1	**Hengchun**	**1.80**	**202**	*e*P	**Pn**	**15 51 48.3**	**+0.9**
	baz=188						
TWK1				*e*S	**Sn**	**15 52 10.1**	**+0.5**
	baz=188						
PNG	**Penghu**	**1.82**	**269**	*e*P	**Pn**	**15 51 48.1**	**+0.3**
	baz=268						
PNG				*e*S	**Sn**	**15 52 10.1**	**-0.1**
	baz=268						
HATJ	**Hateruma jima**	**2.12**	**77**	P	**Pn**	**15 51 52.1**	**+0.3**
HATJ				S	**Sn**	**15 52 17.6**	**+0.1**
IRIF	**Iriomote-Funau**	**2.12**	**70**	P	**Pn**	**15 51 52.6**	**+0.7**
IRIF				*e*S	**Sn**	**15 52 18.2**	**+0.5**
JKRS	**Kuro-shima**	**2.34**	**74**	P	**Pn**	**15 51 55.8**	**+0.9**
JKRS				S	**Sn**	**15 52 23.7**	**+0.7**
JIJ	**Ishigaki jima**	**2.49**	**72**	P	**Pn**	**15 51 57.0**	**0.0**
JIJ				S	**Sn**	**15 52 26.0**	**-0.8**
JTJ	**Tarama**	**3.06**	**70**	S	**Sn**	**15 52 40.2**	**-0.6**

IDC 03 15:51:20.2±12.0, 10°.73N×92°.60E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/22, mbtmp3.3/3, Error ellipse: s-maj=656.0km s-min=27.4km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**37.00**	**348**	P	P	15 58 31.4	0.0
	0.2nm,0.5s,baz=160,slow=8.2,SNR=3.8						
WRA	**Warramunga Arr**	**51.16**	**126**	P	P	16 00 25.1	-0.3
	0.1nm,0.4s,baz=300,slow=10,SNR=7.3						
WRA				pP		16 00 32.7	
	0.3nm,0.5s,baz=307,slow=8.2,SNR=6.4						
ASAR	**Alice Springs**	**52.91**	**131**	P	P	16 00 38.7	+0.3
	0.4nm,0.7s,baz=304,slow=7.2,SNR=7.1						
ASAR				pP		16 00 45.6	
	0.3nm,0.6s,baz=307,slow=7.1,SNR=7.3						

NIED ***03*** *16:14:00, 22°.90N×121°.60E, h38km, Mw4.1 Best double couple: M0 1.35000×10^15 NP1:φs=29.00000°, δ84.00000°, λ-163.00000°. NP2:φs=297.00000°, δ73.00000°, λ-6.00000°.*
IDC ***03*** *16:14:27.8±0.9, 22°.83N×121°.42E, h0km, mb3.7/8, mb1 3.8/10, mb1mx3.7/25, mbtmp3.7/10, ML3.3/2, MS3.3/2, Ms1 3.4/2, ms1mx2.5/37, Error ellipse: s-maj=26.3km s-min=19.5km az=72.0*
BJI ***03*** *16:14:30.6, 22°.78N×121°.40E, h19km, mB4.3/7, mb4.3/7, ML3.9/5, Ms3.8/7, Ms7 3.6/6*
NEIC ***03*** *16:14:33.0±1.0, 22°.83N×121°.45E, h35km±9km, mb4.2/4, ML4.7(TAP), Error ellipse: s-maj=11.8km s-min=8.5km az=129.0*
NEIC Recorded [3 TAP] in T'ai-tung and [2 TAP] in Hua-lien.
ISCJB ***03*** *16:14:33.2±0.2, 22°.86N±0°.02×121°.53E±0°.02, h47km±3km, mb3.8/11, MS3.4/2, Error ellipse: s-maj=3.0km s-min=2.3km az=43.8*
TAP ***03*** *16:14:33.7, 22°.91N×121°.45E, h39km, ML4.5, B*
JMA ***03*** *16:14:35.0±0.2, 22°.91N×121°.60E, h89km, M4.0*

ISC 03 16:14:34.1±0.2, 22°.86N±0°.02×121°.50E±0°.02, h40km±4km, n101, σ1§02/164, mb3.8/11, MS3.4/2, 18C-13D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.27**	**332**	⇓P	**Pn**	**16 14 41.0**	**-1.0**
	baz=342						
TTN	**Taitung**	**0.34**	**252**	⇑*i*P	**Pn**	**16 14 42.6**	**-0.3**
	baz=251						
TTN				*i* S	**Sn**	**16 14 49.2**	**+0.2**
	baz=251						
TWG	**Pinlang**	**0.40**	**264**	*e*Pg	**Pn**	**16 14 41.8**	**-1.8**
TWG				*e*Sg	**Sn**	**16 14 48.6**	**-1.5**
TWG	**Pinlang**	**0.40**	**264**	⇑*i*P	**Pn**	**16 14 42.2**	**-1.3**
	baz=265						
TWG				*e*S	**Sn**	**16 14 48.0**	**-2.1**
	baz=265						
TWF1	**Yuli**	**0.52**	**339**	⇓*i*P	**Pn**	**16 14 43.7**	**-1.5**
	baz=329						
TWF1				*e*S	**Sn**	**16 14 52.0**	**-1.0**
	baz=329						
ELDTW	**Lidau**	**0.55**	**306**	⇑P	**Pn**	**16 14 43.8**	**-1.7**
	baz=299						
ELDTW				S	**Sn**	**16 14 50.5**	**-3.1**
	baz=299						
YULB	**Yu-li**	**0.56**	**340**	*e*Pg	**Pn**	**16 14 43.5**	**-2.2**
YULB				*e*Sg	**Sn**	**16 14 50.5**	**-3.3**
ECL	**Taimali**	**0.57**	**243**	⇑P	**Pn**	**16 14 44.2**	**-1.5**
	baz=243						
EHY	**Hungye**	**0.66**	**346**	⇓*i*P	**Pn**	**16 14 45.5**	**-1.6**
	baz=336						
EHY				*e*S	**Sn**	**16 14 53.6**	**-2.7**
	baz=336						
TAW	**Tawu**	**0.75**	**228**	⇑P	**Pn**	**16 14 47.3**	**-0.9**
	baz=230						
TAW				*e*S	**Sn**	**16 14 56.5**	**-1.9**
	baz=230						
EAST	**Anshuo**	**0.77**	**232**	⇑*i*P	**Pn**	**16 14 47.5**	**-0.9**
	baz=231						
SSD	**Sandimen**	**0.81**	**262**	⇑*i*P	**Pn**	**16 14 48.1**	**-0.9**
	baz=261						
LAY	**Lan-yu**	**0.82**	**177**	⇓*i*P	**Pn**	**16 14 49.2**	**+0.1**
	baz=169						
LAY				*e*S	**Sn**	**16 15 00.5**	**+0.4**
	baz=169						
TEGC	**Jichi Village**	**0.84**	**2**	*e*P	**Pn**	**16 14 49.1**	**-0.4**
	baz=10.0						
TEGC				*e*S	**Sn**	**16 15 00.4**	**-0.3**
	baz=10.0						
SGST	**Jiashian**	**0.88**	**285**	⇑*i*P	**Pn**	**16 14 50.2**	**+0.3**
	baz=288						
SGST				S	**Sn**	**16 15 01.5**	**0.0**
	baz=288						
WTP	**Ta-pu**	**0.90**	**295**	⇑*i*P	**Pn**	**16 14 50.5**	**+0.2**
	baz=297						
WTP				*e*S	**Sn**	**16 15 02.1**	**0.0**
	baz=297						
ALS	**Alishan**	**0.91**	**315**	⇓*i*P	**Pn**	**16 14 50.5**	**+0.1**
	baz=320						
ALS				*e*S	**Sn**	**16 15 01.4**	**-0.9**
	baz=320						
TPUB	**Ta-pu**	**0.92**	**299**	*e*Pg	**Pn**	**16 14 50.0**	**-0.5**
TPUB				*e*Sg	**Sn**	**16 15 01.9**	**-0.6**
SCZT	**Fangliau**	**0.95**	**239**	⇑P	**Pn**	**16 14 50.7**	**-0.2**
	baz=236						
SCZT				*e*S	**Sn**	**16 15 03.2**	**0.0**
	baz=236						
ESL	**Shilin**	**0.95**	**356**	*e*P	**Pn**	**16 14 49.3**	**-1.6**
	baz=349						
CHN1	**Nanshi**	**0.95**	**290**	⇑*i*P	**Pn**	**16 14 51.6**	**+0.6**
	baz=288						
CHN1				*e*S	**Sn**	**16 15 04.0**	**+0.6**
	baz=288						
CHN4	**Tsaushan**	**0.97**	**300**	⇑*i*P	**Pn**	**16 14 51.6**	**+0.4**
	baz=299						
CHN4				S	**Sn**	**16 15 04.2**	**+0.5**
	baz=299						
TWM1	**Shoushan**	**1.00**	**268**	⇑*i*P	**Pn**	**16 14 53.2**	**+1.7**
	baz=265						
TWM1				*e*S	**Sn**	**16 15 08.8**	**+4.4**
	baz=265						
ESF	**Shoufeng Towns**	**1.00**	**0**	*e*P	**Pn**	**16 14 50.8**	**-0.9**
	baz=351						
TWK	**Hsinying**	**1.02**	**294**	⇑*i*P	**Pn**	**16 14 52.5**	**+0.6**
	baz=292						
TWK				*e*S	**Sn**	**16 15 05.2**	**+0.2**
	baz=292						
SSLB	**Suanglung**	**1.05**	**331**	*e*Pg	**Pn**	**16 14 51.6**	**-0.7**
SSLB				*e*Sg	**Sn**	**16 15 03.3**	**-2.4**
CHN5	**Tsauling**	**1.05**	**314**	⇓P	**Pn**	**16 14 53.0**	**+0.7**
	baz=314						
CHN5				*e*S	**Sn**	**16 15 06.2**	**+0.4**
	baz=314						
CHN3	**Shinhua**	**1.07**	**282**	*e*P	**Pn**	**16 14 54.4**	**+1.8**
	baz=280						
CHN3				*e*S	**Sn**	**16 15 09.6**	**+3.4**
	baz=280						
HEN	**Hengchun**	**1.11**	**220**	*e*P	**Pn**	**16 14 53.3**	**+0.2**
	baz=209						
HEN				*e*S	**Sn**	**16 15 06.9**	**-0.2**
	baz=209						
TSEB	**Hengchuen, Pin**	**1.11**	**210**	P	**Pn**	**16 14 53.2**	**+0.1**
	baz=211						
TSEB				S	**Sn**	**16 15 08.0**	**+0.9**
	baz=211						
HWA	**Hwalien**	**1.11**	**5**	P	**Pn**	**16 14 52.5**	**-0.7**
	baz=16						
HWA				*e*S	**Sn**	**16 15 07.0**	**-0.3**
	baz=16						
TWK1	**Hengchun**	**1.12**	**215**	⇑P	**Pn**	**16 14 52.8**	**-0.4**
	baz=205						
TWK1				*e*S	**Sn**	**16 15 06.4**	**-1.0**
	baz=205						
KAU	**Kaohsiung**	**1.14**	**255**	*e*P	**Pn**	**16 14 55.4**	**+1.9**
	baz=252						
KAU				*e*S	**Sn**	**16 15 11.7**	**+3.7**
	baz=252						
SMLT	**Sun Moon Lake**	**1.16**	**332**	⇓*i*P	**Pn**	**16 14 54.0**	**+0.3**
	baz=339						
SMLT				*e*S	**Sn**	**16 15 07.2**	**-1.2**
	baz=339						
TWP	**Hsiaoliuchiu**	**1.17**	**244**	*e*P	**Pn**	**16 14 56.5**	**+2.6**
	baz=258						
TWP				*e*S	**Sn**	**16 15 13.4**	**+4.7**
	baz=258						
CHY	**Chiayi**	**1.18**	**303**	*e*P	**Pn**	**16 14 55.0**	**+0.9**
	baz=302						
CHY				*e*S	**Sn**	**16 15 10.0**	**+1.2**
	baz=302						
TAI1	**Yung-k'ang**	**1.19**	**279**	*e*P	**Pn**	**16 14 55.1**	**+0.9**
	baz=277						
WGK	**Gukeng**	**1.19**	**314**	*e*P	**Pn**	**16 14 55.1**	**+0.9**
	baz=314						
WGK				*e*S	**Sn**	**16 15 10.6**	**+1.3**
	baz=314						
TYC	**Yuchr**	**1.20**	**330**	⇓*i*P	**Pn**	**16 14 54.7**	**+0.4**
	baz=331						
TYC				*e*S	**Sn**	**16 15 09.6**	**+0.3**
	baz=331						
TWD	**Chiawan**	**1.22**	**4**	*e*P	**Pn**	**16 14 53.6**	**-1.0**
	baz=353						
TWD				*e*S	**Sn**	**16 15 10.3**	**+0.4**
	baz=353						
SCLT	**Jiali**	**1.25**	**285**	*e*P	**Pn**	**16 14 56.1**	**+1.1**
	baz=284						
SCLT				*e*S	**Sn**	**16 15 11.9**	**+1.3**
	baz=284						
WNT	**Mingjian**	**1.26**	**324**	⇓*i*P	**Pn**	**16 14 56.2**	**+1.0**
	baz=324						
WNT				*e*S	**Sn**	**16 15 12.6**	**+1.7**
	baz=324						
CHN8	**Yiju**	**1.28**	**292**	⇑P	**Pn**	**16 14 56.2**	**+0.7**
	baz=291						
CHN8				S	**Sn**	**16 15 12.7**	**+1.2**
	baz=291						
WHF	**Hehuan Shan**	**1.30**	**350**	P	**Pn**	**16 14 54.7**	**-1.0**
	baz=351						
WHF				*e*S	**Sn**	**16 15 11.4**	**-0.4**
	baz=351						
NACB	**Ninganchiao**	**1.31**	**4**	*e*Pg	**Pn**	**16 14 54.3**	**-1.6**
WSF	**Szhu**	**1.41**	**304**	*e*P	**Pn**	**16 14 57.2**	**-0.1**
	baz=303						
WSF				*e*S	**Sn**	**16 15 14.8**	**+0.2**
	baz=303						
TWT	**Tachien**	**1.42**	**348**	⇓P	**Pn**	**16 14 57.6**	**+0.2**
	baz=355						
TWT				*e*S	**Sn**	**16 15 13.9**	**-0.9**
	baz=355						
TCU	**Taichung**	**1.49**	**330**	⇑P	**Pn**	**16 14 59.1**	**+0.8**
	baz=330						
TCU				*e*S	**Sn**	**16 15 16.9**	**+0.3**
	baz=330						
WTCT	**Ta-ch'eng**	**1.50**	**312**	*e*P	**Pn**	**16 14 58.4**	**-0.2**
	baz=312						
WTCT				*e*S	**Sn**	**16 15 17.7**	**+0.8**
	baz=312						
ENA	**Nanau**	**1.57**	**8**	*e*P	**Pn**	**16 14 58.8**	**-0.7**
	baz=357						
ENA				*e*S	**Sn**	**16 15 18.0**	**-0.7**
	baz=357						
NNS	**Nan Shan**	**1.58**	**356**	*e*P	**Pn**	**16 14 59.4**	**-0.2**
	baz=5.0						
TWQ1	**Liyutan**	**1.62**	**336**	⇓*i*P	**Pn**	**16 15 01.4**	**+1.2**
	baz=323						
TWQ1				*e*S	**Sn**	**16 15 21.8**	**+1.9**
	baz=323						
NSY	**Sanyi**	**1.69**	**336**	*e*P	**Pn**	**16 15 02.3**	**+1.1**
	baz=337						
NSY				*e*S	**Sn**	**16 15 24.6**	**+3.0**
	baz=337						
TWC	**Suao**	**1.77**	**10**	P	**Pn**	**16 15 02.6**	**+0.4**
	baz=358						
TWC				*e*S	**Sn**	**16 15 23.8**	**+0.3**
	baz=358						
ENTT	**Nioudou**	**1.77**	**2**	*e*P	**Pn**	**16 15 01.9**	**-0.4**
	baz=3.0						
YHNB	**Yeheng**	**1.80**	**356**	*e*Pn	**Pn**	**16 15 02.5**	**-0.2**
YHNB				*e*Sg	**Sn**	**16 15 23.1**	**-1.2**
NSK	**Sanguang**	**1.81**	**356**	⇓P	**Pn**	**16 15 03.0**	**+0.2**
	baz=6.0						
NSK				*e*S	**Sn**	**16 15 23.1**	**-1.5**
	baz=6.0						
NSTT	**Nanjuang**	**1.82**	**346**	⇓P	**Pn**	**16 15 03.5**	**+0.6**
	baz=346						
NSTT				*e*S	**Sn**	**16 15 25.6**	**+0.9**
	baz=346						
TWE	**Neicheng**	**1.86**	**5**	*e*P	**Pn**	**16 15 03.6**	**+0.2**
	baz=5.0						
ILA	**Ilan**	**1.91**	**7**	*e*P	**Pn**	**16 15 04.6**	**+0.5**
	baz=359						
PNG	**Penghu**	**1.92**	**292**	P	**Pn**	**16 15 04.1**	**-0.2**
	baz=280						
PNG				*e*S	**Sn**	**16 15 25.6**	**-1.7**
	baz=280						
TATO	**Taipei**	**2.10**	**360**	*e*Pn	**Pn**	**16 15 06.9**	**+0.1**
YOJ	**Yonaguni jima**	**2.11**	**41**	P	**Pn**	**16 15 07.9**	**+1.0**
YOJ				S	**Sn**	**16 15 32.3**	**+0.4**
YOJ	**Yonaguni jima**	**2.11**	**41**	*e*P	**Pn**	**16 15 06.8**	**-0.1**
	baz=49						
YOJ				*e*S	**Sn**	**16 15 32.2**	**+0.3**
	baz=49						
TWA	**Mucha**	**2.11**	**2**	*e*P	**Pn**	**16 15 07.4**	**+0.5**
	baz=1.0						
TWA				*e*S	**Sn**	**16 15 32.1**	**+0.2**
	baz=1.0						
NCU	**National Centr**	**2.12**	**352**	*e*P	**Pn**	**16 15 08.0**	**+1.0**
	baz=340						
TAP1	**Taipei**	**2.17**	**1**	*e*P	**Pn**	**16 15 08.3**	**+0.7**
	baz=9.0						
TWB1	**Santiao Chiao**	**2.18**	**12**	*e*P	**Pn**	**16 15 09.0**	**+1.1**
	baz=2.0						
NWF	**Wu-fen Shan**	**2.21**	**7**	*e*P	**Pn**	**16 15 08.9**	**+0.6**
	baz=5.0						
NWF				*e*S	**Sn**	**16 15 35.9**	**+1.4**
	baz=5.0						
TWS1	**Kuangyinshan**	**2.23**	**358**	*e*P	**Pn**	**16 15 09.3**	**+0.7**
	baz=10.0						
TWY	**Chenhua**	**2.41**	**2**	*e*P	**Pn**	**16 15 11.7**	**+0.8**
	baz=3.0						
HATJ	**Hateruma jima**	**2.43**	**60**	P	**Pn**	**16 15 11.9**	**+0.7**
HATJ				S	**Sn**	**16 15 39.8**	**+0.1**
IRIF	**Iriomote-Funau**	**2.52**	**54**	P	**Pn**	**16 15 13.4**	**+1.0**
IRIF				S	**Sn**	**16 15 42.6**	**+0.7**
JKRS	**Kuro-shima**	**2.68**	**59**	P	**Pn**	**16 15 15.7**	**+1.0**
JKRS				S	**Sn**	**16 15 46.1**	**+0.2**
JIJ	**Ishigaki jima**	**2.85**	**58**	P	**Pn**	**16 15 17.4**	**+0.4**
JIJ				S	**Sn**	**16 15 50.1**	**0.0**
KNM	**Kinmen**	**3.21**	**299**	*e*P	**Pn**	**16 15 23.2**	**+1.1**
	baz=298						
QZH	**Quanzhou**	**3.38**	**308**	⇑*i*Pn	**Pn**	**16 15 23.3**	**-1.0**
QZH				Sn	**Sn**	**16 15 59.0**	**-4.1**
QZH				smax			
	comp=N,800nm,0.3s						
QZH				smax			
	comp=E,590nm,0.5s						
JTJ	**Tarama**	**3.43**	**58**	P	**Pn**	**16 15 25.6**	**+0.6**
JTJ				S	**Sn**	**16 16 04.8**	**+0.5**
JMJ	**Miyako jima 2**	**3.98**	**60**	P	**Pn**	**16 15 33.4**	**+0.8**
JMJ				*e*S	**Sn**	**16 16 18.4**	**+0.4**
JMJ	**Miyako jima 2**	**3.98**	**60**	*e*P	**Pn**	**16 15 31.9**	**-0.7**
	baz=65						
JOGS	**Gusukube**	**4.04**	**61**	P	**Pn**	**16 15 34.5**	**+1.0**
JOGS				S	**Sn**	**16 16 20.2**	**+0.6**
JKE	**Kume jima 2**	**5.92**	**53**	P	**Pn**	**16 15 59.1**	**-0.1**
JKE				*e*S	**Sn**	**16 17 02.7**	**-3.1**
GZH	**Guangzhou**	**7.52**	**273**	P	**Pn**	**16 16 17.6**	**-3.6**
GZH				smax			
	comp=N,55nm,1.1s						
GZH				smax			
	comp=E,30nm,0.8s						
QIZ	**Qiongzhong**	**11.54**	**253**	P	**Pn**	**16 17 14.8**	**-1.5**
QIZ				S	**Sn**	**16 19 26.1**	**+2.2**
QIZ				LR	LR		
	comp=N,180nm,21.0s						
QIZ				LR	LR		
	comp=Z,110nm,16.2s						
KSRS	**Korea Array**	**15.56**	**19**	Pn	**Pn**	**16 18 10.0**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=200,slow=13,SNR=3.9						
HHC	**Hu-ho-hao-te**	**19.80**	**337**	*e*P	**Pn**	**16 19 03.2**	**+0.5**
HHC				PP		16 19 21.9	
HHC				S	**S**	**16 22 40.3**	**-1.5**
HHC				SS		16 23 07.8	
HHC				PcP	PcP	16 23 20.7	+2.9
HHC				ScS	ScS	16 30 35.7	+2.6
HHC				pmax	pmax		
	comp=Z,12nm,0.5s						
HHC				pmax	pmax		
	comp=Z,67nm,5.0s						
HHC				LR	LR		
	comp=N,120nm,11.0s						
HHC				LR	LR		
	comp=E,120nm,11.0s						
HHC				LR	LR		
	comp=Z,120nm,10.7s						
MJAR	**Matsushiro Arr**	**19.87**	**43**	P	**Pn**	**16 19 02.0**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=234,slow=9.2,SNR=7.4						
CMAR	**Chiang Mai Arr**	**21.55**	**262**	P	**P**	**16 19 18.2**	**-2.0**
	comp=Z,0.4nm,0.4s,mb3.2,baz=75,slow=8.5,SNR=3.6						
ULN	**Ulaanbaatar**	**27.50**	**339**	*e*P	**P**	**16 20 16.2**	**-0.3**
	comp=Z,1.0nm,0.6s,mb3.5						
YSS	**Yuzh-Sakhalins**	**29.51**	**30**	P	**P**	**16 20 35.7**	**+1.3**
	comp=Z,9.5nm,1.0s,mb4.5						
MKAR	**Makanchi Array**	**39.49**	**317**	P	**P**	**16 21 59.6**	**-1.0**
	comp=Z,1.3nm,0.8s,mb3.7,baz=102,slow=10,SNR=9.0						
PETK	**Petropavlovsk-**	**40.80**	**33**	P	**P**	**16 22 10.9**	**-0.5**
	comp=Z,1.6nm,0.7s,mb3.7,baz=198,slow=7.0,SNR=4.9						
ZALV	**Zalesovo Beam**	**41.51**	**328**	P	**P**	**16 22 17.1**	**-0.1**
	comp=Z,5.9nm,0.6s,mb4.4,baz=113,slow=7.9,SNR=26						
KURK	**Kurchatov**	**43.29**	**321**	P	**P**	**16 22 31.7**	**0.0**
	comp=Z,1.1nm,0.7s,mb3.7,baz=84,slow=5.7,SNR=5.6						
KURK	**Kurchatov**	**43.29**	**321**	P	**P**	**16 22 32.3**	**+0.6**
	comp=Z,1.8nm,0.7s,mb3.9						
WRA	**Warramunga Arr**	**44.35**	**163**	P	**P**	**16 22 39.4**	**-1.1**
	comp=Z,0.3nm,0.6s,mb3.2,baz=344,slow=8.8,SNR=4.4						
ASAR	**Alice Springs**	**47.79**	**165**	P	**P**	**16 23 07.7**	**+0.2**
	comp=Z,0.2nm,0.6s,mb3.3,baz=352,slow=12,SNR=6.5						
AKTO	**Aktyubinsk**	**55.92**	**316**	LR	LR	16 49 15.2	
	comp=Z,25nm,19.1s,MS3.3,baz=272,slow=37						
ARU	**Arti**	**56.34**	**324**	*e*P	**P**	**16 24 10.2**	**-0.5**
	comp=Z,3.2nm,0.7s,mb4.5						
NB2	**NORSAR Subarra**	**79.53**	**332**	P	**P**	**16 26 34.8**	**-1.6**
	comp=Z,1.2nm,0.8s,mb3.9,baz=64,slow=5.3						
NOA	**NORSAR Array B**	**79.53**	**332**	P	**P**	**16 26 34.9**	**-1.5**
	comp=Z,0.7nm,0.7s,mb3.7,baz=61,slow=5.4,SNR=4.8						
NOA				LR	LR	17 05 35.1	
	comp=Z,17nm,18.3s,MS3.4,baz=95,slow=39						

MOS ***03*** *16:28:17.5±0.8, 6°.79S×106°.13E, h74km, mb5.2/22, Error ellipse: s-maj=13.5km s-min=7.3km az=117.3*
BJI ***03*** *16:28:20.8, 6°.90S×106°.00E, h100km, mB4.8/18, mb4.8/31*
IDC ***03*** *16:28:21.8±0.7, 6°.87S×106°.06E, h94km±5km, mb4.1/20, mb1 4.2/21, mb1mx4.1/23, mbtmp4.1/21, MS3.6/10, Ms1 3.6/10, ms1mx3.1/35, Error ellipse: s-maj=14.2km s-min=11.4km az=59.0*
NEIC ***03*** *16:28:21.8±0.3, 6°.85S×106°.04E, mb4.8/25, Error ellipse: s-maj=9.0km s-min=7.3km az=48.0*
DJA ***03*** *16:28:22, 7°.12S×105°.82E, h86km, Mw5.3/23*
ISCJB ***03*** *16:28:22.4±0.3, 6°.93S±0°.04×105°.95E±0°.03, h117km±2km, mb4.7/71, Error ellipse: s-maj=7.2km s-min=3.5km az=27.8*

ISC 03 16:28:23.1±0.3, 6°.97S±0°.04×105°.93E±0°.03, h108km±2km, h98km±1.5km: pP-P, n211, σ1§15/208, mb4.7/71, 8C-9D, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGJI	**Cibinong**	**0.42**	**326**	P	**Pn**	**16 28 39.2**	**-0.1**
CGJI				S	**Sn**	**16 28 49.9**	**-1.5**
SKJI	**Sukabumi**	**0.62**	**93**	P	**Pn**	**16 28 38.7**	**-1.9**
SKJI				S	**Sn**	**16 28 51.7**	**-2.1**
SBJI	**Serang**	**0.86**	**13**	P

NGJI Ngawi 5.50 94 P **Pn 16 29 43.6 +0.8**
1.1nm323nm,0.9s
SJI Sawahan 5.84 98 P **Pn 16 29 48.1 +0.8**
1.3nm6µm195nm,0.7s
PWJI Pagerwojo 5.92 101 P **Pn 16 29 48.3 -0.1**
1.7nm6µm369nm,0.8s
SDSI Sungai Dareh 7.49 323 P **Pn 16 30 09.1 -0.7**
34nm,1.1s
GMJI Gumukmas 7.56 100 P **Pn 16 30 10.8 +0.1**
0.6nm2µm224nm,0.8s
KMMI Kalianget 7.98 91 P **Pn 16 30 17.0 +0.6**
0.5nm114nm,1.5s
ABJI Asem Bagus 8.28 96 P **Pn 16 30 22.2 +1.8**
1µm,0.7s
BYJI Banyuwangi 8.44 99 P **Pn 16 30 23.2 +0.5**
255nm,0.8s
NBBI Negara 8.72 100 P **Pn 16 30 27.5 +1.0**
4µm244nm,0.8s
BKNI Bangkinang 8.74 326 P **Pn 16 30 26.1 -0.6**
1µm91nm,1.2s
SISI Saibi 8.83 309 P **Pn 16 30 25.7 -2.3**
153nm,0.8s
STKI Sintang 8.91 39 P **Pn 16 30 31.2 +2.1**
6µm83nm,0.9s
SRBI Singaraja 9.27 97 P **Pn 16 30 33.0 -0.9**
3µm174nm,0.7s
DNP Denpasar 9.35 101 P **Pn 16 30 33.7 -1.3**
10µm369nm,0.8s
KSM Kuching 9.46 28 P **Pn 16 30 37.4 +0.9**
32nm,1.3s
KHKI Kahang-Kahang 9.69 99 P **Pn 16 30 37.3 -2.4**
2µm135nm,0.7s
MNSI Mandailing Nat 9.98 320 P **Pn 16 30 39.8 -3.8**
32nm,0.6s
COCO West Island 10.36 239 *e*P **Pn 16 30 46.0 -2.8**
SBUM Sibu 11.27 34 P **Pn 16 31 03.5 +2.6**
798nm54nm,1.5s
GSI Gunungsitoli 11.71 314 P **Pn 16 31 02.9 -3.9**
79nm,0.6s
PSI Prapat 11.96 324 P **Pn 16 31 04.8 -5.4**
0.5nm,0.3s,baz=175,slow=10.0,SNR=3.8
KAPI Kappang 13.88 83 P **Pn 16 31 32.9 -2.5**
0.7nm,0.3s,baz=256,slow=11,SNR=5.9
KAPI LR LR 16 37 10.0
comp=Z,222nm,21.2s,baz=274,slow=38
BKSI Bulukumba 14.20 84 P **Pn 16 31 40.2 +0.7**
649nm68nm,0.8s
BNSI Bone 14.33 81 P **Pn 16 31 43.2 +2.0**
1µm116nm,1.3s
TTSI Tana Toraja 14.37 75 P **Pn 16 31 47.5 +5.9**
31nm,1.6s
WSI Waingapu 14.47 102 P **Pn 16 31 43.4 +0.6**
263nm,0.6s
PCI Palu 15.12 67 P **Pn 16 31 51.5 +0.4**
2µm134nm,1.1s
MMRI Maumere 16.24 97 P **Pn 16 32 01.9 -3.2**
1µm119nm,1.0s
KKM Kota Kinabalu 16.50 39 *e*Pn **Pn 16 32 08.0 -0.4**
42nm,1.0s
KKM Kota Kinabalu 16.50 39 P **Pn 16 32 10.5 +2.2**
654nm42nm,1.1s
APSI Ampana 16.79 70 P **Pn 16 32 12.5 +0.6**
5µm101nm,1.2s
KDI Kendari 16.88 81 P **Pn 16 32 12.9 -0.1**
51nm,1.5s
MYLDM Lahad Datu 17.41 46 P **Pn 16 32 23.2 +3.8**
1µm46nm,1.4s
MRSI Marisa 17.60 66 P **Pn 16 32 21.4 -0.4**
760nm60nm,1.3s
LUWI Luwuk 17.79 71 P **Pn 16 32 24.9 +0.8**
1µm135nm,1.2s
MBWA Marble Bar 19.42 138 *e*P **P 16 32 45.4 +4.3**
MBWA *e*S **S 16 36 01.3 -14**
MBWA Marble Bar 19.42 138 *e*P **P 16 32 43.3 +2.2**
18nm,1.0s
FITZ Fitzroy Crossi 22.16 122 P **P 16 33 10.2 -0.2**
2.9nm,0.6s,mb3.8,baz=290,slow=11,SNR=4.3
FITZ S **S 16 37 09.7 +2.1**
2.4nm,0.4s,baz=270,slow=18,SNR=2.4
FITZ LR LR 16 40 26.3
comp=Z,57nm,21.1s,baz=56,slow=33
FITZ Fitzroy Crossi 22.16 122 P **P 16 33 10.2 -0.2**
FITZ S **S 16 37 09.7 +2.1**
FITZ LR LR 16 40 26.3
FITZ Fitzroy Crossi 22.16 122 P **P 16 33 15.1 +4.6**
33nm,0.8s,mb4.7
TNTI Ternate 22.73 71 P **P 16 33 14.4 -2.0**
2µm103nm,1.4s,mb5.0
MEEK Meekatharra 22.98 150 *e*P pP 16 33 33.4 -6.5
MEEK *e*S **S 16 37 29.5 +8.7**
KNA Kununurra 24.01 113 P **P 16 33 22.3 -5.8**
QIZ Qiongzhong 26.12 8 P **P 16 33 46.3 -0.8**
QIZ pP pP 16 34 07.5 -3.3
QIZ S **S 16 38 14.4 +3.5**
QIZ pmax pmax
comp=Z,15nm,1.9s,mb4.1
CM31 Chiang Mai Arr 26.19 345 *e*P **P 16 33 47.1 -0.6**
comp=Z,1.5nm,0.5s,mb3.7
CMAR Chiang Mai Arr 26.19 345 P **P 16 33 46.7 -1.1**
comp=Z,3.1nm,0.6s,mb3.9,baz=181,slow=8.2,SNR=33
CMAR pP pP 16 34 09.7 -1.7
comp=Z,1.8nm,0.8s,baz=184,slow=8.8,SNR=4.2
CMAR PcP PcP 16 37 13.6 +1.3
comp=Z,1.9nm,0.8s,baz=197,slow=2.8,SNR=8.4
CHTO Chiang Mai 26.53 345 *e*P **P 16 33 49.7 -1.1**
CHTO pmax pmax
comp=Z,3.0nm,0.8s,mb3.9
CHTO Chiang Mai 26.53 345 *e*P **P 16 33 49.7 -1.2**
comp=Z,3.2nm,0.8s,mb3.9
CHTO Chiang Mai 26.53 345 P **P 16 33 50.1 -0.7**
comp=Z,6.3nm,1.1s,mb4.0
WRA Warramunga Arr 30.42 118 P **P 16 34 24.9 -0.7**
comp=Z,2.8nm,0.8s,mb4.0,baz=292,slow=9.9,SNR=5.6
WRAB Tennant Creek 30.43 118 P **P 16 34 25.3 -0.2**
WRAB *e* 16 34 34.2
ASAR Alice Springs 31.57 125 P **P 16 34 34.8 -0.9**
comp=Z,0.6nm,0.7s,baz=300,slow=7.8,SNR=4.7
ASAR PcP PcP 16 37 25.6 -0.2
comp=Z,1.6nm,0.7s,baz=317,slow=2.1,SNR=4.7
ASAR S **S 16 39 43.5 +6.8**
comp=Z,1.6nm,1.0s,baz=298,slow=16,SNR=4.0
ASAR Alice Springs 31.57 125 P **P 16 34 34.8 -0.9**
ASAR PcP PcP 16 37 25.6 -0.2
ASAR S **S 16 39 43.5 +6.8**
KMI Kunming 32.05 355 P **P 16 34 43.7 +4.0**
KMI pP pP 16 35 03.1 -0.6
KMI sP sP 16 35 13.8 -2.4
KMI PP PP 16 35 52.5 -1.7
KMI S **S 16 39 48.0 +4.2**
KMI sS sS 16 40 23.7 -1.9
KMI SS SS 16 41 47.4 -19
KMI pmax pmax
comp=Z,8.0nm,1.3s,mb4.3
KMI pmax pmax
comp=Z,23nm,3.1s
KMI LR LR
comp=N,100nm,15.8s
KMI LR LR
comp=E,120nm,14.4s
KMI LR LR
comp=Z,92nm,15.8s
DGAR Diego Garcia 33.21 267 P **P 16 34 52.5 +2.4**
DGAR pmax pmax
comp=Z,199nm,1.1s
DGAR Diego Garcia 33.21 267 P **P 16 34 52.5 +2.4**
comp=Z,199nm,1.1s
GYA Guiyang 33.23 1 P **P 16 34 51.4 +1.4**
GYA pP pP 16 35 13.0 -1.1
GYA sP sP 16 35 24.5 -2.1
GYA PP PP 16 36 07.8 +0.4
GYA PcP PcP 16 37 33.2 +2.9
GYA sS sS 16 40 41.0 -3.1
GYA ScP ScP 16 41 07.4 +2.5
GYA PcS PcS 16 41 17.4 +1.4
GYA pmax pmax
comp=Z,20nm,0.8s,mb5.0
GYA pmax pmax
comp=Z,110nm,4.7s
GYA LR LR
comp=N,580nm,14.8s
GYA LR LR
comp=E,540nm,15.2s
GYA LR LR
comp=Z,690nm,14.8s
HYB Hyderabad 36.32 312 *e*P **P 16 35 17.0 +0.3**
HYB Hyderabad 36.32 312 *i* P **P 16 35 17.0 +0.3**

COEN Coen 37.24 104 *e*P **P 16 35 28.0 +3.4**
CD2 Chengdu 37.72 357 P **P 16 35 29.3 +0.9**
CD2 pP pP 16 35 51.9 -1.0
CD2 sP sP 16 36 03.5 -1.7
CD2 PP PP 16 37 01.8 +5.1
CD2 S **S 16 41 13.2 +2.4**
CD2 sS sS 16 41 52.3 -0.9
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.9
CD2 pmax pmax
comp=Z,70nm,7.8s
CD2 LR LR
comp=N,150nm,8.3s
CD2 LR LR
comp=Z,160nm,5.4s
ODAN Odare 38.13 333 *e*P **P 16 35 31.4 -0.5**
comp=Z,19nm,0.6s,mb5.1
TAPN Taplejung 38.41 333 *e*P **P 16 35 34.0 -0.2**
comp=Z,35nm,0.7s,mb5.3
RAMN Ramite 38.57 332 *e*P **P 16 35 35.5 -0.1**
comp=Z,13nm,0.6s,mb4.9
LSA Lhasa 39.13 339 P **P 16 35 40.4 +0.2**
JIRN Jiri 39.36 332 *e*P **P 16 35 42.2 0.0**
comp=Z,28nm,0.8s,mb5.2
PKI Pulchoki 39.66 331 *e*P **P 16 35 44.3 -0.4**
GUN Gumba 39.72 332 *e*P **P 16 35 44.5 -0.7**
comp=Z,32nm,0.6s,mb5.3
DMN Daman 39.84 330 *e*P **P 16 35 45.7 -0.4**
comp=Z,23nm,0.7s,mb5.1
KKN Kakani 39.91 331 *e*P **P 16 35 46.1 -0.6**
comp=Z,21nm,0.8s,mb5.0
GKN Gorkha 40.40 330 *e*P **P 16 35 50.3 -0.4**
comp=Z,18nm,0.3s,mb5.5
KOLN Koldanda 40.73 329 *e*P **P 16 35 53.3 -0.2**
comp=Z,65nm,0.7s,mb5.6
CTA Charters Tower 41.19 113 LR LR 16 53 44.9
comp=Z,75nm,21.5s,baz=83,slow=37
STKA Stephens Creek 41.45 131 *e*P **P 16 35 59.2 -0.2**
comp=Z,13nm,0.6s,mb4.9
STKA Stephens Creek 41.45 131 P **P 16 35 59.4 0.0**
comp=Z,4.2nm,0.7s,mb4.4,baz=308,slow=8.3,SNR=11
STKA LR LR 16 51 52.0
comp=Z,126nm,19.4s,baz=205,slow=34
STKA Stephens Creek 41.45 131 *e*P **P 16 35 58.8 -0.6**
STKA pmax pmax
comp=Z,4.0nm,0.7s
STKA Stephens Creek 41.45 131 *e*P **P 16 35 58.8 -0.6**
comp=Z,3.6nm,0.7s,mb4.3
STKA *e* 16 36 10.4
LZH Lanzhou 42.87 358 *e*P **P 16 36 10.3 -0.5**
LZH pmax pmax
comp=Z,15nm,1.3s,mb4.6
CMSA Cobar Meteorol 44.41 129 *e*P **P 16 36 24.0 +0.7**
NDI New Delhi 44.97 323 *e*PKP **P 16 36 26.0 -1.7**
GTA Gaotai 46.49 353 ⇑P **P 16 36 39.8 +0.3**
GTA pP pP 16 37 02.7 -2.1
GTA sP sP 16 37 12.1 -4.8
GTA PcP PcP 16 38 13.2 +0.9
GTA S **S 16 43 21.6 +2.0**
GTA sS sS 16 44 01.5 -1.7
GTA ScS ScS 16 46 22.0 -1.6
GTA SS SS 16 46 41.6 -5.5
GTA pmax pmax
comp=Z,10.0nm,1.1s,mb4.5
GTA pmax pmax
comp=Z,59nm,4.8s
EIDS Eidsvold 46.79 118 *e*P **P 16 36 34.6 -7.5**
BJI Beijing 47.72 11 P **P 16 36 48.2 -0.8**
BJI pmax pmax
comp=Z,8.0nm,0.7s,mb4.7
HHC Hu-ho-hao-te 47.86 6 *e*P **P 16 36 51.2 +1.1**
HHC pP pP 16 37 13.4 -2.1
HHC sP sP 16 37 23.1 -4.5
HHC PcP PcP 16 38 18.4 +1.3
HHC PP PP 16 38 46.9 +3.8
HHC ScP ScP 16 42 03.1 +1.4
HHC PcS PcS 16 42 13.1 +0.3
HHC S **S 16 43 40.7 +1.7**
HHC sS sS 16 44 18.3 -4.5
HHC ScS ScS 16 46 32.4 -0.2
HHC SS SS 16 47 05.8 -3.5
HHC pmax pmax
comp=Z,12nm,0.6s,mb4.9
HHC pmax pmax
comp=Z,72nm,6.1s
HHC LR LR
comp=N,250nm,15.2s
HHC LR LR
comp=E,250nm,16.9s
HHC LR LR
comp=Z,270nm,15.6s
THN Thein Dam 48.62 325 *e*PKP **P 16 36 53.6 -2.5**
KSRS Korea Array 48.73 23 P **P 16 36 57.0 +0.1**
comp=Z,3.8nm,0.8s,mb4.4,baz=213,slow=8.3,SNR=14
MJAR Matsushiro Arr 52.81 33 P **P 16 37 25.1 -2.4**
comp=Z,0.6nm,0.6s,mb3.8,baz=213,slow=9.5,SNR=6.1
WMQ Urumqi 53.18 344 *e*P **P 16 37 29.7 -0.3**
WMQ pP pP 16 37 53.2 -2.7
WMQ sP sP 16 38 04.4 -3.5
WMQ PcP PcP 16 38 37.0 +0.3
WMQ pmax pmax
comp=Z,13nm,0.6s,mb5.1
WMQ pmax pmax
comp=Z,130nm,4.4s
WMQ LR LR
comp=N,30nm,17.0s
WMQ LR LR
comp=Z,22nm,16.0s
CN2 Changchun 53.53 18 *e*P **P 16 37 31.2 -1.4**
CN2 *e*pP pP 16 37 55.0 -3.5
CN2 *e*S **S 16 44 59.9 +2.6**
CN2 SS SS 16 48 37.5 -1.9
CN2 pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,18.0s
CN2 LR LR
comp=E,200nm,18.0s
CN2 LR LR
comp=Z,200nm,19.0s
KSH Kashi 53.92 331 P **P 16 37 34.1 -1.4**
KSH pP pP 16 37 57.6 -3.9
KSH sP sP 16 38 08.8 -4.7
KSH PcP PcP 16 38 39.3 -0.3
KSH PP PP 16 39 37.5 -0.5
KSH ScP ScP 16 42 26.9 -1.0
KSH PcS PcS 16 42 36.5 -2.5
KSH S **S 16 44 58.4 -4.3**
KSH sS sS 16 45 39.5 -7.8
KSH ScS ScS 16 47 10.6 -3.8
KSH SS SS 16 48 39.9 -5.8
KSH pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
KSH pmax pmax
comp=Z,60nm,4.2s
KSH LR LR
comp=N,130nm,7.8s
KSH LR LR
comp=E,76nm,6.6s
KSH LR LR
comp=Z,110nm,5.1s
KBL Kabul 54.03 322 *e*P **P 16 37 36.0 -0.4**
KBL pmax pmax
comp=Z,19nm,1.1s,mb5.0
KBL Kabul 54.03 322 *e*P **P 16 37 36.0 -0.4**
comp=Z,19nm,1.1s,mb5.0
SONM Songino Array 54.57 0 P **P 16 37 40.4 +0.4**
comp=Z,4.6nm,0.7s,mb4.6,baz=172,slow=8.4,SNR=12
SONM PcP PcP 16 38 42.0 +0.1
comp=Z,2.6nm,0.6s,baz=160,slow=3.6,SNR=4.6
ULN Ulaanbaatar 54.60 1 *e*P **P 16 37 40.2 -0.1**
ULN pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
ULN Ulaanbaatar 54.60 1 *e*P **P 16 37 40.2 -0.1**
comp=Z,6.0nm,0.8s,mb4.7
ULN Ulaanbaatar 54.60 1 P **P 16 37 40.6 +0.3**
comp=Z,6.3nm,1.4s,mb4.5
TKM2 Tokmak 2 56.80 334⇓*i*P **P 16 37 55.9 -0.2**
TKM2 *e**PP pP 16 38 22.6 +0.3
TKM2 pmax pmax
comp=Z,14nm,0.6s,mb5.2
TKM2 Tokmak 2 56.80 334⇓*i*P **P 16 37 55.9 -0.2**
comp=Z,14nm,0.6s,mb5.2

TKM2 *e*pP pP 16 38 22.6 +0.3
TKM2 *e*sP sP 16 38 31.2 -3.0
AAK Ala-Archa 57.06 333 LR LR 17 05 01.3
comp=Z,23nm,20.1s,baz=52,slow=39
EKS2 Erkin-Say 57.41 332 *e*P **P 16 38 00.1 -0.4**
EKS2 pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
EKS2 Erkin-Say 57.41 332 *e*P **P 16 38 00.1 -0.4**
comp=Z,7.3nm,0.7s,mb4.8
EKS2 *e* 16 38 35.4
MK31 Makanchi Array 57.50 341 *e*P **P 16 38 00.3 -0.7**
MK31 *e* 16 38 39.3
MKAR Makanchi Array 57.50 341 P **P 16 38 00.4 -0.6**
comp=Z,8.9nm,0.6s,mb5.0,baz=146,slow=7.9,SNR=104
MKAR Makanchi Array 57.50 341 *i* P **P 16 38 00.6 -0.4**
MKAR pmax pmax
comp=Z,9.0nm,0.6s
OPO Ambohidratompo 58.21 253 P **P 16 38 08.3 +1.8**
comp=Z,6.1nm,0.8s,mb4.7,baz=77,slow=5.6,SNR=14
KK31 Karatay Array 59.30 330 *i* P **P 16 38 12.2 -1.4**
KK31 pmax pmax
comp=Z,1.0nm,0.2s,mb4.5
KURK Kurchatov 62.11 341 *de*P **P 16 38 32.3 -0.2**
KURK pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
KURK Kurchatov 62.11 341 *e*P **P 16 38 31.8 -0.7**
comp=Z,6.8nm,0.6s,mb4.8
KURK *e* 16 39 08.1
YSS Yuzh-Sakhalins 62.83 27 *e*P **P 16 38 35.0 -2.4**
YSS pmax pmax
comp=Z,40nm,1.0s,mb5.3
YSS Yuzh-Sakhalins 62.83 27 *e*P **P 16 38 34.7 -2.7**
comp=Z,31nm,1.1s,mb5.2
ZAA0 Zalesovo Array 63.24 346 *e*P **P 16 38 38.1 -1.9**
ZAA0 *e* 16 39 16.4
ZALV Zalesovo Beam 63.24 346 P **P 16 38 39.0 -1.0**
comp=Z,2.9nm,0.4s,mb4.6,baz=162,slow=5.5,SNR=17
ZALV PcP PcP 16 39 16.9 +0.6
comp=Z,2.0nm,0.4s,baz=138,slow=5.4,SNR=6.2
ZALV LR LR 17 09 02.8
comp=Z,20nm,19.9s,baz=242,slow=39
ZALV Zalesovo Beam 63.24 346 P **P 16 38 39.0 -0.9**
ZALV 16 39 16.9
RDF Al-Radifah 66.53 306 *e*P **P 16 39 02.6 +0.8**
RDF AMb AMB 16 39 04.0
comp=Z,48nm,1.2s,mb5.2
NAY Al-Naaiem 66.91 306 *e*P **P 16 39 04.0 -0.2**
NAY AMb AMB 16 39 05.0
comp=Z,19nm,0.7s,mb5.0
BRVK Borovoye 66.99 338 *de*P **P 16 39 03.9 -0.3**
BRVK pmax pmax
comp=Z,14nm,0.8s,mb4.8
BRVK Borovoye 66.99 338 *e*P **P 16 39 03.8 -0.4**
comp=Z,13nm,0.6s,mb4.9
MAW Mawson 67.09 197 P **P 16 39 04.7 +0.1**
comp=Z,5.0nm,0.8s,mb4.4,baz=52,slow=7.6,SNR=11
MAW LR LR 17 02 27.5
comp=Z,125nm,18.6s,baz=133,slow=30
MAW Mawson 67.09 197 *e*P **P 16 39 04.4 -0.2**
MAW pmax pmax
comp=Z,1.0nm,0.7s
MAW Mawson 67.09 197 *e*P **P 16 39 04.4 -0.3**
comp=Z,1.0nm,0.7s,mb3.8
ZRNK Zerenda 67.40 337 *i* P **P 16 39 05.9 -0.9**
ZRNK pmax pmax
comp=Z,14nm,0.6s,mb5.0
KMBO Kilima Mbogo 68.70 272 P **P 16 39 17.4 +1.7**
comp=Z,4.4nm,0.9s,mb4.3,baz=360,slow=24,SNR=7.3
KMBO Kilima Mbogo 68.70 272 *e*P **P 16 39 17.5 +1.7**
KMBO pmax pmax
comp=Z,8.0nm,1.4s
KMBO Kilima Mbogo 68.70 272 *e*P **P 16 39 17.5 +1.7**
comp=Z,8.2nm,1.4s,mb4.4
AB31 Akbulak array 68.85 330 *i* P **P 16 39 15.3 -0.6**
AB31 pmax pmax
comp=Z,20nm,0.6s,mb5.1
ABKAR Akbulak array 68.85 330 *e*P **P 16 39 15.4 -0.5**
comp=Z,39nm,0.9s,mb5.2
YAK Yakutsk 71.21 12 *e*P **P 16 39 28.3 -1.8**
YAK pmax pmax
comp=Z,21nm,0.9s,mb5.0
YAK pmax pmax
comp=N,7.0nm,1.1s
YAK pmax pmax
comp=E,3.0nm,1.0s
YAK Yakutsk 71.21 12 *e*P **P 16 39 28.7 -1.3**
comp=E,29nm,0.8s,mb5.2
SVE Sverdlovsk 73.55 336⇓*e*P **P 16 39 44.9 +0.8**
SVE *e*S S 16 48 56.2 -9.0
SVE *e*SS SS 16 53 47.1 -3.3
SVE pmax pmax
comp=Z,33nm,1.0s,mb5.0
PETK Petropavlovsk- 74.08 30 P **P 16 39 45.9 -1.4**
comp=Z,1.7nm,0.9s,mb3.8,baz=343,slow=4.6,SNR=3.9
PETK LR LR 17 12 45.9
comp=Z,18nm,19.0s,baz=349,slow=36
ARU Arti 74.14 335 *d i* P **P 16 39 47.4 -0.1**
ARU 16 42 35.7
ARU S S 16 49 03.3 -8.5
ARU pmax pmax
comp=Z,23nm,1.0s,mb4.9
ARU Arti 74.14 335 *e*P **P 16 39 47.2 -0.4**
comp=Z,28nm,1.1s,mb4.9
ARU *e* pP 16 40 10.6 -4.3
ZEI Tsey 74.85 318 *e*P **P 16 39 52.2 +0.2**
ZEI pmax pmax
comp=Z,15nm,0.5s,mb5.0
KIV Kislovodsk 76.15 318 *e*P **P 16 39 59.4 0.0**
KIV pmax pmax
comp=Z,11nm,1.1s,mb4.5
KIV Kislovodsk 76.15 318 P **P 16 39 59.7 +0.3**
comp=Z,9.8nm,0.7s,mb4.7
LSZ Lusaka 76.41 256 LR LR 17 07 59.9
comp=Z,48nm,18.9s,baz=84,slow=31
LSZ Lusaka 76.41 256 *e*P **P 16 40 02.7 +1.3**
LSZ *e* pP 16 40 28.9 0.0
LSZ pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
LSZ Lusaka 76.41 256 *e*P **P 16 40 02.6 +1.2**
comp=Z,8.2nm,0.8s,mb4.5
LSZ *e* pP 16 40 28.9 -0.1
SOKR Solikamsk 76.89 337 *c i* P **P 16 40 03.8 +0.6**
SOKR pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
SBA Scott Base 77.27 169 *e*P **P 16 40 06.4 +1.3**
MMAI Mount Meron Ar 77.72 306 P **P 16 40 10.4 +2.0**
comp=Z,8.5nm,0.6s,mb4.7,baz=96,slow=8.5,SNR=14
SEY Seymchan 78.13 20 *c e*P **P 16 40 08.8 -1.2**
LBTB Lobatse 78.35 246 *e*P **P 16 40 13.0 +0.9**
LBTB pmax pmax
comp=Z,9.0nm,0.7s,mb4.6
LBTB Lobatse 78.35 246 *e*P **P 16 40 13.0 +0.8**
comp=Z,9.3nm,0.7s,mb4.6
BOSA Boshof 78.53 242 P **P 16 40 14.0 +1.0**
comp=Z,8.3nm,1.0s,mb4.5,baz=98,slow=7.9,SNR=10
BOSA LR LR 17 09 48.9
comp=Z,79nm,18.4s,baz=330,slow=32
BOSA Boshof 78.53 242 *e*P **P 16 40 13.9 +0.8**
BOSA pmax pmax
comp=Z,21nm,1.2s,mb4.8
BOSA Boshof 78.53 242 *e*P **P 16 40 13.8 +0.8**
comp=Z,21nm,1.2s,mb4.8
TIXI Tiksi 79.91 7 *e*P **P 16 40 17.8 -1.7**
TIXI pmax pmax
comp=Z,12nm,0.8s,mb4.8
TIXI Tiksi 79.91 7 *e*P **P 16 40 17.9 -1.6**
comp=Z,11nm,0.7s,mb4.8
BR131 Keskin Array S 81.02 312 *e*P **P 16 40 26.1 0.0**
comp=Z,8.1nm,0.7s,mb4.7
BRTR Keskin Array B 81.02 312 P **P 16 40 26.3 +0.1**
comp=Z,9.4nm,0.7s,mb4.8,baz=135,slow=7.1,SNR=42
BRTR pP pP 16 40 51.5 -2.4
comp=Z,3.1nm,0.8s,baz=111,slow=6.8,SNR=3.9
VSR Storozhevoye 81.22 324 *e*P **P 16 40 26.5 -0.5**
VSR pmax pmax
comp=Z,20nm,0.6s,mb5.1
VSR pmax pmax
comp=N,4.0nm,0.5s
VSR pmax pmax
comp=E,4.0nm,0.4s
SUR Sutherland 82.20 238 *e*P **P 16 40 34.3 +1.7**
comp=E,24nm,1.1s,mb4.9
QSPA South Pole Qui 83.02 180 *e*P **P 16 40 36.4 +0.5**
comp=E,24nm,1.3s,mb4.9
OBN Obninsk 84.12 327 *de*P **P 16 40 41.9 0.0**
OBN *e**PP pP 16 41 07.1 -2.8

OBN				*e*SS	SS	16 56 26.5	-2.6
OBN				pmax	pmax		
comp=Z,12nm,0.6s,mb4.9							
BILL	**Bilibino**	**85.81**	**19⇑**	*e*P	**P**	**16 40 47.6**	**-2.5**
BILL				*e**PP	pP	16 41 13.5	-4.6
BILL				*e*		16 44 06.6	
BILL				pmax	pmax		
comp=Z,1.0nm,0.8s,mb3.8							
BILL	**Bilibino**	**85.81**	**19**	*e*P	**P**	**16 40 46.1**	**-4.0**
comp=Z,8.8nm,1.4s,mb4.5							
TIRR	**Tirgusor**	**86.01 316⇑**		*i*P	**P**	**16 40 52.5**	**+0.9**
AKASG	**Malin Array Be**	**87.01 322**		P	**P**	**16 40 55.8**	**-0.6**
comp=Z,2.9nm,0.7s,mb4.3,baz=86,slow=5.0,SNR=11							
AKASG				pP	pP	16 41 21.4	-3.1
comp=Z,2.4nm,0.7s,baz=95,slow=4.1,SNR=2.7							
MLR	**Muntele Rosu**	**87.95 316⇓**		*i*P	**P**	**16 41 01.9**	**+0.9**
VOIR		**88.56 316⇑**		*i*P	**P**	**16 41 04.3**	**+0.5**
BURAR	**Bucovina Array**	**88.88 318⇓**		*i*P	**P**	**16 41 06.9**	**+1.6**
BUR08	**Bucovina Ar. S**	**88.89 318**		*e*P	**P**	**16 41 06.6**	**+1.2**
BUR08				*e*	pP	16 41 31.7	-1.8
JOF	**Joensuu**	**89.23 334**		*e*P	**P**	**16 41 05.9**	**-0.7**
JOF	**Joensuu**	**89.23 334**		*e*p	**P**	**16 41 05.9**	**-0.7**
comp=Z,6.7nm,0.7s,mb4.8							
VTS	**Vitosha**	**89.34 313⇑**		*i*P	pP	16 41 34.0	-1.8
APA	**Apatity**	**89.82 339⇑**		*e*P	**P**	**16 41 15.4**	**+6.1**
APA				MLR	MLR		
comp=Z,100nm,19.0s							
FINES	**FINESS Array B**	**91.24 332**		P	**P**	**16 41 15.8**	**-0.2**
comp=Z,1.8nm,0.7s,mb4.3,baz=120,slow=11,SNR=8.2							
FINES				pP	pP	16 41 41.2	-3.1
comp=Z,2.1nm,0.9s,baz=91,slow=9.5,SNR=2.9							
FINES	**FINESS Array B**	**91.24 332**		P	**P**	**16 41 15.8**	**-0.2**
FINES				pP	pP	16 41 41.2	-3.1
VNA1	**Neumayer--Stat**	**91.26 198**		*e*P	**P**	**16 41 17.5**	**+1.5**
KAF	**Kangasniemi**	**91.28 332**		*e*P	**P**	**16 41 15.6**	**-0.5**
KAF	**Kangasniemi**	**91.28 332**		*e*p	**P**	**16 41 15.6**	**-0.5**
comp=Z,5.5nm,0.8s,mb4.7							
ARCES	**ARCESS Array B**	**93.14 340**		P	**P**	**16 41 22.9**	**-1.7**
comp=Z,1.5nm,0.7s,mb4.5,baz=111,slow=6.6,SNR=4.5							
VYHS	**Vyhne**	**93.24 318**		*e*P	**P**	**16 41 30.3**	**+4.8**
VYHS	**Vyhne**	**93.24 318**		*e*P	**P**	**16 41 30.3**	**+4.8**
NVAR	**Mina Array Bea**	**129.29**	**45**	PKP	PKPdf	16 47 20.9	+1.6
comp=Z,0.1nm,0.3s,baz=212,slow=2.9,SNR=3.7							
PLCA	**Paso Flores**	**132.43 184**		SKPbc	SKPbc	16 50 45.2	+2.8
comp=Z,1.4nm,0.3s,baz=114,slow=9.3,SNR=6.8							
PDAR	**Pinedale Array**	**132.59**	**36**	PKP	PKPdf	16 47 25.9	+0.5
comp=Z,0.4nm,0.7s,baz=198,slow=0.9,SNR=4.0							
PDAR				SKPbc	SKPbc	16 50 44.2	+1.4
comp=Z,0.8nm,0.9s,baz=329,slow=2.6,SNR=7.0							
PDAR				SKP		16 50 53.2	
comp=Z,0.9nm,0.9s,baz=352,slow=3.1,SNR=5.2							
CPUP	**Villa Florida**	**143.13 206**		PKhKP		16 47 42.7	
comp=Z,1.2nm,0.5s,baz=246,slow=2.4,SNR=7.1							
WMOK	**Wichita Mounta**	**144.20**	**36**	*e*PKIKP	PKPdf	16 47 44.1	-2.8
TXAR	**Lajitas Array**	**144.34**	**48**	PKP	PKPdf	16 47 45.7	-1.6
comp=Z,2.5nm,0.8s,baz=287,slow=1.5,SNR=29							
TXAR				pPKP	pPKPdf	16 48 13.4	-3.4
comp=Z,1.8nm,0.7s,baz=277,slow=0.3,SNR=6.9							
BINY	**Binghamton**	**144.87**	**2**	*e*PKPbc	PKPdf	16 47 46.2	-1.5
BINY				*e*		16 47 55.8	
OLIL	**Olney**	**145.93**	**20**	*e*PKPdf	PKPdf	16 47 49.8	+0.1
JCT	**Junction City**	**146.39**	**43**	*e*PKP2	PKPbc	16 47 50.8	-1.4
MIAR	**Mount Ida**	**147.19**	**31**	*e*PKP2	PKPbc	16 47 53.9	-0.4
WVT	**Waverly**	**148.36**	**22**	*e*PKP2	PKPbc	16 47 56.5	-0.9
SWET	**Sewanee**	**149.84**	**20**	*e*PKPbc	PKPbc	16 48 00.1	-1.1
LRAL	**Lakeview Retre**	**151.42**	**23**	*e*PKPdf	PKPdf	16 48 01.1	+2.3
LPAZ	**La Paz**	**156.16 194**		PKP	PKPdf	16 48 05.8	-0.1
comp=Z,0.7nm,0.6s,baz=194,slow=4.2,SNR=2.8							
LPAZ				PKPab	PKPab	16 48 36.4	+2.6
comp=Z,1.3nm,0.7s,baz=142,slow=4.7,SNR=6.0							
LPAZ	**La Paz**	**156.16 194**		PKP	PKPdf	16 48 05.8	-0.1
LPAZ				PKPab	PKPab	16 48 36.4	+2.6

*IDC **03** 16:29:32.5±2.4, 6°.57S×130°.40E, h0km, mb4.4/1, mb1 4.1/4, mb1mx3.8/16, mbtmp4.0/4, ML4.0/3, Error ellipse: s-maj=105.1km s-min=27.6km az=78.0*
*ISCJB **03** 16:29:50.1±2.7, 7°.4S±0°.1×129°.8E±0°.1, h180km±32km, Error ellipse: s-maj=19.3km s-min=17.8km az=135.1*

ISC 03 16:29:50.4±2.3, 7°.5S±0°.1×129°.8E±0°.1, h163km±27km, n8, σ1§42/13, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNA	**Kununurra**	**8.31**	**187**	*e*P	**Pn**	**16 31 49.2**	**+1.3**
KNA				*e*S	**Sn**	**16 33 21.3**	**+0.6**
FITZ	**Fitzroy Crossi**	**11.34**	**201**	*e*P	**Pn**	**16 32 28.0**	**+0.2**
5.2nm,0.8s							
FITZ				*e*S	**Sn**	**16 34 31.3**	**-2.1**
FITZ	**Fitzroy Crossi**	**11.34**	**201**	Pn	**Pn**	**16 32 28.8**	**+1.0**
0.3nm,0.3s,baz=26,slow=8.0,SNR=23							
FITZ				Sn	**Sn**	**16 34 31.0**	**-2.4**
1.9nm,0.3s,baz=350,slow=6.1,SNR=6.6							
WRA	**Warramunga Arr**	**13.18**	**161**	Pn	**Pn**	**16 32 51.0**	**-0.5**
1.1nm,0.3s,baz=350,slow=14,SNR=46							
WRA				Sn	**Sn**	**16 35 14.5**	**-3.2**
1.6nm,0.3s,baz=334,slow=23,SNR=7.5							
COEN	**Coen**	**14.65**	**117**	*e*P	**Pn**	**16 33 08.2**	**-1.8**
ASAR	**Alice Springs**	**16.60**	**167**	P	**Pn**	**16 33 36.4**	**+2.5**
0.5nm,0.3s,baz=353,slow=11,SNR=57							
ASAR				S	**S**	**16 36 38.7**	**+0.3**
0.4nm,0.3s,baz=356,slow=29,SNR=5.4							
MTSU	**Mount Surprise**	**17.69**	**128**	*e*P	**Pn**	**16 33 48.2**	**+1.3**
29nm,1.0s							
MKAR	**Makanchi Array**	**68.49**	**327**	P	**P**	**16 40 34.2**	**-0.8**
1.7nm,0.4s,baz=129,slow=7.4,SNR=9.1							

*CSEM **03** 16:38:32.6, 46°.26N×7°.22E, h-2km, ML1.0, After ZUR*

ZUR 03 16:38:32.6, 46°.26N×7°.22E, h-2km±2km, ML1.0/4, 2C-6D, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRYON	**Gryon**	**0.08**	**263⇓**	*i*Pg		16 38 34.4	
85nm,0.2s							
GRYON				*i* Sg		16 38 35.7	
85nm,0.2s							
GRYON	**Gryon**	**0.08**	**263⇓**	*i*Pg		16 38 34.4	
85nm,0.2s							
GRYON				*i* Sg		16 38 35.7	
85nm,0.2s							
SENIN	**Lac Senin/Sane**	**0.12**	**27⇓**	*i*Pg		16 38 35.2	
129nm,0.6s							
SENIN	**Lac Senin/Sane**	**0.12**	**27⇓**	*i*Pg		16 38 35.2	
129nm,0.6s							
AIGLE	**Aigle**	**0.20**	**294⇑**	*i*Pg		16 38 36.9	
71nm,1.1s							
AIGLE				*e*Sg		16 38 40.2	
71nm,1.1s							
AIGLE	**Aigle**	**0.20**	**294⇑**	*i*Pg		16 38 36.9	
71nm,1.1s							
AIGLE				*e*Sg		16 38 40.2	
71nm,1.1s							
SALAN	**Lac Salanfe**	**0.21**	**236⇓**	*i*Pg		16 38 37.1	
13nm,0.3s							
SALAN				*e*Sg		16 38 40.3	
13nm,0.3s							
SALAN	**Lac Salanfe**	**0.21**	**236⇓**	*i*Pg		16 38 37.1	
13nm,0.3s							
SALAN				*e*Sg		16 38 40.3	
13nm,0.3s							
LKBD2	**Leukerbad 2**	**0.31**	**68**	*e*Pg		16 38 39.1	
LKBD2	**Leukerbad 2**	**0.31**	**68**	*e*Pg		16 38 39.1	

IDC 03 16:45:24.5±55.0, 18°.75S×174°.23W, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.6/17, mbtmp3.8/3, Error ellipse: s-maj=1041.0km s-min=173.5km az=82.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.74**	**243**	P	P	16 53 15.6	0.0
1.0nm,0.4s,baz=88,slow=14,SNR=4.5							
WRA	**Warramunga Arr**	**48.38**	**260**	P	P	16 54 08.6	0.0
0.3nm,0.3s,baz=97,slow=7.2,SNR=28							
ASAR	**Alice Springs**	**48.39**	**255**	P	P	16 54 08.4	-0.1
0.4nm,0.4s,baz=97,slow=7.6,SNR=22							

*ISCJB **03** 16:54:49.7±1.3, 17°.8S±0°.2×178°.8W±0°.2, h615km±15km, mb3.6/9, Error ellipse: s-maj=35.7km s-min=16.6km az=140.9*

*NEIC **03** 16:54:50.5±1.0, 17°.74S×178°.78W, h610km±11km, mb4.0/5, Error ellipse: s-maj=25.9km s-min=12.2km az=143.0*
*IDC **03** 16:54:52.5±6.1, 17°.74S×178°.79W, h632km±75km, mb3.0/7, mb1 3.3/7, mb1mx3.1/17, mbtmp3.0/7, Error ellipse: s-maj=97.1km s-min=28.5km az=152.0*

ISC 03 16:54:50.6±1.3, 17°.8S±0°.2×178°.8W±0°.2, h608km±14km, n15, σ0§57/14, mb3.6/9, 1C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.03**	**270⇑**	*i*P	**P**	**16 56 10.8**	**+0.2**
FUNA	**Funafuti**	**9.39**	**348**	P	**P**	**16 57 03.2**	**-0.4**
131nm,1.1s							
EIDS	**Eidsvold**	**29.00**	**250**	*e*P	**P**	**17 00 03.6**	**+0.2**
2.8nm,0.6s,mb4.1							
CTA	**Charters Tower**	**33.13**	**260**	P	**P**	**17 00 39.4**	**+0.8**
1.3nm,0.4s,mb4.0,baz=81,slow=16,SNR=4.0							
CTAO	**Charters Tower**	**33.13**	**260**	*e*P	**P**	**17 00 36.1**	**-2.5**
9.8nm,1.2s,mb4.3							
STKA	**Stephens Creek**	**38.40**	**241**	P	**P**	**17 01 22.1**	**+0.3**
2.8nm,0.7s,mb3.9,baz=81,slow=11,SNR=7.8							
STKA	**Stephens Creek**	**38.40**	**241**	*e*P	**P**	**17 01 21.9**	**+0.1**
0.6nm,0.5s,mb3.4							
WRAB	**Tennant Creek**	**44.31**	**259**	*e*P	**P**	**17 02 08.2**	**-0.2**
1.2nm,0.5s,mb3.7							
WRA	**Warramunga Arr**	**44.32**	**259**	P	**P**	**17 02 08.8**	**+0.3**
0.8nm,0.5s,mb3.5,baz=96,slow=7.5,SNR=24							
ASAR	**Alice Springs**	**44.50**	**254**	P	**P**	**17 02 10.1**	**+0.2**
3.9nm,0.6s,mb4.1,baz=93,slow=6.4,SNR=64							
ASAR				PcP	PcP	17 03 39.1	-0.5
0.2nm,0.5s,baz=107,slow=4.0,SNR=4.5							
SBA	**Scott Base**	**60.55**	**183**	*e*P	**P**	**17 04 02.4**	**-0.6**
NVAR	**Mina Array Bea**	**79.55**	**44**	P	**P**	**17 05 56.1**	**+0.4**
0.3nm,0.6s,mb2.8,baz=222,slow=9.4,SNR=3.9							
TXAR	**Lajitas Array**	**86.20**	**58**	P	**P**	**17 06 29.6**	**+0.5**
0.6nm,0.7s,mb3.3,baz=224,slow=6.3,SNR=6.3							
PDAR	**Pinedale Array**	**87.48**	**44**	P	**P**	**17 06 34.3**	**-0.4**
0.5nm,0.6s,mb3.4,baz=267,slow=2.4,SNR=5.4							
ARCES	**ARCESS Array B**	**126.11**	**350**	PKP	PKPdf	17 12 43.6	-0.5
1.2nm,0.7s,baz=35,slow=2.2,SNR=3.6							

IDC 03 16:56:38.0±2.0, 0°.68N×127°.11E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/18, mbtmp3.4/3, Error ellipse: s-maj=172.3km s-min=24.6km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.68**	**161**	P	P	17 01 31.5	+0.9
0.4nm,0.5s,baz=340,slow=11,SNR=9.3							
ASAR	**Alice Springs**	**25.08**	**165**	P	P	17 02 04.0	-0.5
0.5nm,0.4s,baz=344,slow=11,SNR=17							
MKAR	**Makanchi Array**	**60.27**	**326**	P	P	17 06 48.4	+0.1
0.3nm,0.4s,baz=112,slow=7.7,SNR=8.5							

*NNC **03** 17:04:26.0±3.8, 39°.24N×72°.90E, h0km, mb3.7, mpv3.2, Error ellipse: s-maj=31.4km s-min=18.6km az=1.0*

ISC 03 17:04:16.6±2.5, 38°.4N±0°.1×73°.2E±0°.1, h35km, n4, σ0§99/8, 4C-1D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**2.44**	**61⇑**	*i*Pg	**Pn**	**17 04 53.5**	**-0.5**
KSH				Sg	**Sn**	**17 05 16.3**	**-6.3**
KSH				smax			
comp=N,710nm,0.6s							
KSH				smax			
comp=E,430nm,0.4s							
TKM2	**Tokmak 2**	**4.90**	**21⇑**	Pn	**Pn**	**17 05 30.7**	**+3.0**
comp=E,1.7nm,0.7s							
TKM2				⇑Sn	**Sn**	**17 06 22.8**	**-0.3**
comp=E,9.7nm,0.8s							
KK31	**Karatay Array**	**5.16**	**337**	Pn	**Pn**	**17 05 35.6**	**+4.4**
comp=E,6.4nm,0.6s,baz=149,slow=16,SNR=72							
KK31				⇓Sn	**Sn**	**17 06 29.4**	**-0.1**
comp=E,7.0nm,0.6s,baz=151,slow=21,SNR=9.6							
AB31	**Akbulak array**	**14.47**	**323**	Pn	**Pn**	**17 07 38.5**	**-0.3**
comp=E,1.2nm,0.5s,baz=126,slow=13,SNR=29							
AB31				⇑Sn	**Sn**	**17 10 09.6**	**-8.3**
comp=E,0.8nm,0.6s,baz=158,slow=22,SNR=3.4							

*ISK **03** 17:16:18.7, 36°.99N×29°.19E, h2km, MD3.2*
*NEIC **03** 17:16:18.0, 37°.01N×29°.18E, h5km, MD3.6(ATH), MD3.2(ISK), After ISK.*
*CSEM **03** 17:16:19.8±0.1, 36°.98N×29°.21E, h2km, MD3.2, Error ellipse: s-maj=3.8km s-min=2.9km az=162.0*
*IDC **03** 17:16:19.2±1.4, 36°.90N×29°.26E, h0km, mb3.7/1, mb1 3.6/6, mb1mx3.4/26, mbtmp3.5/6, ML3.6/5, Error ellipse: s-maj=22.2km s-min=20.2km az=158.0*
*DDA **03** 17:16:20.8, 37°.01N×29°.26E, h12km±1km, Md3.2*
*ISCJB **03** 17:16:20.2±0.4, 37°.01N±0°.02×29°.19E±0°.02, h6km±4km, Error ellipse: s-maj=3.9km s-min=3.0km az=145.4*
*ATH **03** 17:16:20.8, 37°.04N×29°.14E, h20km±1km, MD3.6/11*

ISC 03 17:16:20.8±0.4, 37°.02N±0°.02×29°.19E±0°.02, h6km±3km, n92, σ1§01/119, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.28**	**61**	*e*PG	**Pg**	**17 16 25.5**	**-0.8**
GLHS				*e*SG	**Sg**	**17 16 30.7**	**+0.6**
GLHS	**Glhisar (BURDU**	**0.28**	**61**	*e*Pg	**Pg**	**17 16 25.5**	**-0.8**
GLHS				*e*Sg	**Sg**	**17 16 30.7**	**+0.6**
GOLH	**Golhisar**	**0.37**	**54**	*i* P	**Pg**	**17 16 27.4**	**-0.5**
GOLH				*i* S	**Sg**	**17 16 34.3**	**+1.5**
GOLH	**Golhisar**	**0.37**	**54**	*i* P	**Pg**	**17 16 27.4**	**-0.6**
GOLH				*i* S	**Sg**	**17 16 34.3**	**+1.5**
ELL	**Elmali**	**0.64**	**115**	*e*PG	**Pg**	**17 16 31.5**	**-1.6**
ELL	**Elmali**	**0.64**	**115**	*e*Pg	**Pg**	**17 16 31.5**	**-1.5**
DNZL	**Cakiroluk**	**0.68**	**350**	*i* P	**Pg**	**17 16 33.0**	**-0.9**
DNZL				*i* S	**Sg**	**17 16 44.8**	**+2.1**
DNZL	**Cakiroluk**	**0.68**	**350**	*i* P	**Pg**	**17 16 33.0**	**-0.9**
DNZL				*i* S	**Sg**	**17 16 44.8**	**+2.1**
YER	**Yerkesik**	**0.73**	**279**	*e*PG	**Pg**	**17 16 34.0**	**-0.9**
YER	**Yerkesik**	**0.73**	**279**	*e*Pg	**Pg**	**17 16 34.0**	**-0.9**
DENT	**Denizli**	**0.75**	**351**	*e*PG	**Pg**	**17 16 34.4**	**-0.7**
DENT	**Denizli**	**0.75**	**351**	*e*Pg	**Pg**	**17 16 34.4**	**-0.7**
AKAS	**Kas**	**0.85**	**157**	*i* P	**Pg**	**17 16 35.7**	**-1.4**
AKAS				*i* S	**Sg**	**17 16 50.4**	**+2.2**
AKAS	**Kas**	**0.85**	**157**	*i* P	**Pg**	**17 16 35.7**	**-1.4**
AKAS				*i* S	**Sg**	**17 16 50.4**	**+2.3**
KSL	**Kastellorizon**	**0.92**	**160**	*e*Pn	**Pg**	**17 16 39.1**	**+0.6**
KSL				*e*Sn	**Sg**	**17 16 52.4**	**+2.0**
KSL	**Kastellorizon**	**0.92**	**160**	*e*PN	**Pg**	**17 16 39.1**	**+0.6**
KSL				*e*SN	**Sg**	**17 16 52.4**	**+2.0**
MLSB	**Milas**	**1.16**	**284**	*e*PN	**Pn**	**17 16 42.0**	**-1.5**
MLSB	**Milas**	**1.16**	**284**	*e*Pn	**Pn**	**17 16 42.0**	**-1.6**
ARG	**Arkhangelos**	**1.17**	**227**	*e*Pn	**Pg**	**17 16 42.6**	**-0.6**
ARG				*e*Sn	**Sg**	**17 16 58.9**	**+0.5**
ARG	**Arkhangelos**	**1.17**	**227**	*e*PN	**Pg**	**17 16 42.6**	**-0.6**
ARG				*e*SN	**Sg**	**17 16 58.9**	**+0.5**
ARG	**Arkhangelos**	**1.17**	**227**	*e*Pn	**Pg**	**17 16 42.6**	**-0.6**
ARG				*e*Sn	**Sg**	**17 16 58.9**	**+0.5**
ANTB	**Antalya**	**1.18**	**95**	*e*PN	**Pn**	**17 16 42.4**	**-1.5**
ANTB	**Antalya**	**1.18**	**95**	*e*Pn	**Pn**	**17 16 42.4**	**-1.4**
BCK	**Bucak**	**1.20**	**68**	*e*PN	**Pn**	**17 16 42.8**	**-1.3**
BCK	**Bucak**	**1.20**	**68**	*e*Pn	**Pn**	**17 16 42.8**	**-1.3**
AYDN	**Tasoluk**	**1.23**	**302**	*i* P	**Pg**	**17 16 43.4**	**-0.8**
AYDN				*i* S	**Sg**	**17 17 01.1**	**+0.9**
AYDN	**Tasoluk**	**1.23**	**302**	*i* P	**Pg**	**17 16 43.4**	**-0.9**
AYDN				*i* S	**Sg**	**17 17 01.0**	**+0.8**
DAT	**Datca**	**1.32**	**258**	*e*PN	**Pn**	**17 16 44.9**	**-0.9**
DAT	**Datca**	**1.32**	**258**	*e*Pn	**Pn**	**17 16 44.9**	**-0.9**
KHL	**Karahalli**	**1.33**	**11**	*e*PN	**Pn**	**17 16 45.4**	**-0.5**
KHL	**Karahalli**	**1.33**	**11**	*e*Pn	**Pn**	**17 16 45.4**	**-0.5**
ISP	**Isparta**	**1.33**	**52**	*e*PN	**Pn**	**17 16 45.6**	**-0.4**
ISP	**Isparta**	**1.33**	**52**	*e*Pn	**Pn**	**17 16 46.3**	**+0.4**
ISP				*e*Sn	**Sn**	**17 17 05.3**	**+1.3**
ISP	**Isparta**	**1.33**	**52**	*e*PN	**Pn**	**17 16 46.3**	**+0.4**
ISP				*e*SN	**Sn**	**17 17 05.3**	**+1.3**
ISP	**Isparta**	**1.33**	**52**	*e*Pn	**Pn**	**17 16 45.6**	**-0.3**
ISP				*e*Sn	**Sn**	**17 17 05.3**	**+1.3**
BDRM	**Kayabasi**	**1.40**	**272**	*i* P	**Pn**	**17 16 46.4**	**-0.5**
BDRM				*i* S	**Sb**	**17 17 05.7**	**+0.3**
BDRM	**Kayabasi**	**1.40**	**272**	*i* P	**Pn**	**17 16 46.3**	**-0.5**
BDRM				*i* S	**Sb**	**17 17 05.7**	**+0.4**
BODT	**Bodrum**	**1.50**	**272**	*e*PN	**Pn**	**17 16 47.6**	**-0.7**
BODT	**Bodrum**	**1.50**	**272**	*e*Pn	**Pn**	**17 16 47.6**	**-0.7**
SUTC	**Sutluce-Ispart**	**1.52**	**72**	*e*PN	**Pn**	**17 16 48.0**	**-0.4**
SUTC	**Sutluce-Ispart**	**1.52**	**72**	*e*Pn	**Pn**	**17 16 48.0**	**-0.5**
KULA	**Kula-Manisa**	**1.55**	**345**	*e*PN	**Pn**	**17 16 48.5**	**-0.5**
KULA	**Kula-Manisa**	**1.55**	**345**	*e*Pn	**Pn**	**17 16 48.5**	**-0.5**
SHUT	**Suhut-Afyon**	**1.88**	**35**	*e*PN	**Pn**	**17 16 53.1**	**-0.3**
SHUT	**Suhut-Afyon**	**1.88**	**35**	*e*Pn	**Pn**	**17 16 53.1**	**-0.3**
SMG	**Samos**	**2.00**	**291**	*e*Pn	**Pn**	**17 16 54.7**	**-0.4**
SMG	**Samos**	**2.00**	**291**	*e*PB	**Pn**	**17 16 54.7**	**-0.4**
SMG	**Samos**	**2.00**	**291**	*e*Pn	**Pn**	**17 16 54.7**	**-0.4**
IZM	**Izmir**	**2.06**	**313**	*e*PN	**Pn**	**17 16 55.7**	**-0.2**
AKS	**Akhisar**	**2.15**	**330**	*e*PN	**Pn**	**17 16 56.6**	**-0.6**
AKS	**Akhisar**	**2.15**	**330**	*e*Pn	**Pn**	**17 16 56.6**	**-0.6**
ALT	**Altintas**	**2.16**	**19**	*e*PN	**Pn**	**17 16 57.0**	**-0.3**
ALT	**Altintas**	**2.16**	**19**	*e*Pn	**Pn**	**17 16 57.0**	**-0.3**
BLCB	**Balcova**	**2.18**	**309**	*e*PN	**Pn**	**17 16 57.4**	**-0.2**
BLCB	**Balcova**	**2.18**	**309**	*e*Pn	**Pn**	**17 16 57.4**	**-0.2**
KARP	**Karpathos**	**2.20**	**229**	*e*Pn	**Pn**	**17 16 58.8**	**+1.0**
KARP				*e*Sn	**Sn**	**17 17 25.8**	**+0.4**
KARP	**Karpathos**	**2.20**	**229**	*e*PN	**Pn**	**17 16 58.8**	**+1.0**
KARP				*e*SN	**Sn**	**17 17 25.8**	**+0.4**
KARP	**Karpathos**	**2.20**	**229**	*e*Pn	**Pn**	**17 16 58.8**	**+1.0**
KARP				*e*Sn	**Sn**	**17 17 25.8**	**+0.4**
HDMB	**Hadim**	**2.64**	**90**	*e*PN	**Pn**	**17 17 04.0**	**+0.1**
HDMB	**Hadim**	**2.64**	**90**	*e*Pn	**Pn**	**17 17 04.1**	**+0.2**
KONT	**Konya--Tatoy**	**2.69**	**69**	*e*PN	**Pn**	**17 17 04.7**	**+0.1**
KONT	**Konya--Tatoy**	**2.69**	**69**	*e*Pn	**Pn**	**17 17 04.7**	**+0.1**
LADK	**Ladik-KONYA**	**2.79**	**64**	*e*PN	**Pn**	**17 17 06.1**	**+0.2**
LADK	**Ladik-KONYA**	**2.79**	**64**	*e*Pn	**Pn**	**17 17 06.1**	**+0.2**
KIZT	**Kizilcal**	**2.83**	**48**	*e*PN	**Pn**	**17 17 06.8**	**+0.3**
KIZT	**Kizilcal**	**2.83**	**48**	*e*Pn	**Pn**	**17 17 06.8**	**+0.3**
CHOS	**Chios island**	**2.84**	**300**	*e*PN	**Pn**	**17 17 07.0**	**+0.4**
CHOS	**Chios island**	**2.84**	**300**	*e*Pn	**Pn**	**17 17 07.0**	**+0.4**
APE	**Apeiranthos**	**2.93**	**272**	*e*PN	**Pn**	**17 17 08.7**	**+0.8**
APE	**Apeiranthos**	**2.93**	**272**	*e*PN	**Pn**	**17 17 08.7**	**+0.8**
APE	**Apeiranthos**	**2.93**	**272**	*e*Pn	**Pn**	**17 17 08.7**	**+0.8**
ZKR	**Zakros**	**3.07**	**233**	*e*PN	**Pn**	**17 17 11.1**	**+1.3**
ZKR	**Zakros**	**3.07**	**233**	*e*PN	**Pn**	**17 17 11.1**	**+1.3**
ZKR	**Zakros**	**3.07**	**233**	*e*Pn	**Pn**	**17 17 11.1**	**+1.3**
NPS	**Neapolis**	**3.38**	**240**	*e*PN	**Pn**	**17 17 14.6**	**+0.5**
NPS	**Neapolis**	**3.38**	**240**	*e*PN	**Pn**	**17 17 14.6**	**+0.5**
NPS	**Neapolis**	**3.38**	**240**	*e*Pn	**Pn**	**17 17 14.6**	**+0.5**
LAST	**Lasithi**	**3.53**	**239**	*e*Pn	**Pn**	**17 17 17.1**	**+1.0**
LAST	**Lasithi**	**3.53**	**239**	*e*PN	**Pn**	**17 17 17.1**	**+1.0**
LAST	**Lasithi**	**3.53**	**239**	*e*Pn	**Pn**	**17 17 17.1**	**+1.0**
IDI	**Anoyia**	**3.88**	**245**	Pn	**Pn**	**17 17 22.1**	**+1.1**
1.8nm,0.3s,baz=65,slow=14,SNR=9.9							
IDI				Sn	**Sn**	**17 18 07.5**	**+0.6**
3.4nm,0.3s,baz=78,slow=1.4,SNR=6.1							
IDI	**Anoyia**	**3.88**	**245**	*e*Pn	**Pn**	**17 17 22.1**	**+1.1**
IDI	**Anoyia**	**3.88**	**245**	*e*PN	**Pn**	**17 17 22.1**	**+1.1**
IDI	**Anoyia**	**3.88**	**245**	*e*Pn	**Pn**	**17 17 22.1**	**+1.1**
BRTR	**Keskin Array B**	**4.42**	**51**	Pn	**Pn**	**17 17 29.5**	**+1.1**
0.3nm,0.3s,baz=230,slow=13,SNR=6.3							
BRTR				Sn	**Sn**	**17 18 21.6**	**+1.4**
0.2nm,0.3s,baz=224,slow=27,SNR=5.5							
BRTR	**Keskin Array B**	**4.42**	**51**	Pn	**Pn**	**17 17 29.5**	**+1.1**
BRTR				Sn	**Sn**	**17 18 21.6**	**+1.4**
MMAI	**Mount Meron Ar**	**6.47**	**126**	Pn	**Pn**	**17 17 55.7**	**-0.9**
2.2nm,0.3s,baz=305,slow=12,SNR=10							
MMAI			

KORT *i* S **Sg** 17 37 36.0 +2.2
KSL Kastellorizon 0.91 162 *e*P **Pg** 17 37 20.0 -2.5
ANTB Antalya 1.14 96 *e*Pn **Pn** 17 37 26.0 -0.5
ANTB Antalya 1.14 96 *e*Pn **Pn** 17 37 26.0 -0.5
BCK Bucak 1.17 67 *e*PN **Pn** 17 37 25.3 -1.5
BCK Bucak 1.17 67 *e*Pn **Pn** 17 37 25.3 -1.5
MLSB Milas 1.20 284 *e*PN **Pn** 17 37 24.0 -3.2
ARG Arkhangelos 1.20 228 P **Pn** 17 37 23.9 -3.4
ARG Arkhangelos 1.20 228 *e*P **Pn** 17 37 23.5 -3.8
ARG Arkhangelos 1.20 228 P **Pn** 17 37 23.9 -3.4
AYDN Tasoluk 1.25 301 ⇑*i*P **Pn** 17 37 25.9 -2.2
AYDN *i* S **Sb** 17 37 44.1 -0.3
AYDN Tasoluk 1.25 301 *i* P **Pn** 17 37 25.9 -2.1
AYDN *i* S **Sb** 17 37 44.1 -0.3
ISP Isparta 1.30 52 *e*PN **Pn** 17 37 29.1 +0.5
ISP Isparta 1.30 52 P **Pn** 17 37 28.6 -0.1
ISP S **Sb** 17 37 47.4 +1.7
ISP Isparta 1.30 52 *e*P **Pn** 17 37 28.5 -0.2
ISP Isparta 1.30 52 P **Pn** 17 37 28.6 -0.1
ISP S **Sb** 17 37 47.4 +1.7
ISP Isparta 1.30 52 P **Pn** 17 37 28.6 -0.1
ISP Isparta 1.30 52 *e*Pn **Pn** 17 37 29.1 +0.4
ISP S **Sb** 17 37 47.4 +1.7
KHL Karahalli 1.32 10 *e*PN **Pn** 17 37 27.9 -1.0
KHL Karahalli 1.32 10 *e*Pn **Pn** 17 37 28.0 -1.0
DAT Datca 1.36 258 *e*PN **Pn** 17 37 27.3 -2.2
DAT Datca 1.36 258 *e*Pn **Pn** 17 37 27.3 -2.2
KHAL Karahalli 1.36 9 ⇑*i*P **Pn** 17 37 27.7 -1.9
KHAL *i* S **Sn** 17 37 49.6 +2.1
KHAL Karahalli 1.36 9 *i* P **Pn** 17 37 27.7 -1.9
KHAL *i* S **Sn** 17 37 49.6 +2.1
BDRM Kayabasi 1.43 272 ⇓*i*P **Pn** 17 37 29.1 -1.4
BDRM *i* S **Sn** 17 37 47.8 -1.4
BDRM Kayabasi 1.43 272 *i* P **Pn** 17 37 29.0 -1.5
BDRM *i* S **Sn** 17 37 47.8 -1.4
SUTC Sutluce-Ispart 1.48 72 *e*PN **Pn** 17 37 30.9 -0.3
SUTC Sutluce-Ispart 1.48 72 *e*Pn **Pn** 17 37 30.9 -0.3
BODT Bodrum 1.54 272 *e*PN **Pn** 17 37 30.0 -1.9
BODT Bodrum 1.54 272 *e*Pn **Pn** 17 37 30.0 -2.0
KULA Kula-Manisa 1.56 343 *e*PN **Pn** 17 37 31.0 -1.3
KULA Kula-Manisa 1.56 343 *e*Pn **Pn** 17 37 31.0 -1.2
NIS1 Nisyros Isl. 1.70 256 P **Pn** 17 37 33.7 -0.5
NIS1 S **Sn** 17 37 56.8 +1.0
NIS1 Nisyros Isl. 1.70 256 P **Pn** 17 37 33.7 -0.5
NIS1 S **Sn** 17 37 56.8 +1.0
SHUT Suhut-Afyon 1.85 34 *e*PN **Pn** 17 37 36.1 -0.2
SHUT Suhut-Afyon 1.85 34 *e*Pn **Pn** 17 37 36.1 -0.2
SMG Samos 2.03 291 *e*P **Pn** 17 37 37.5 -1.2
DEMI Demirci 2.06 349 ⇑*i*P **Pn** 17 37 38.4 -0.7
DEMI *i* S **Sg** 17 38 13.3 +2.2
DEMI Demirci 2.06 349 *i* P **Pn** 17 37 38.4 -0.7
GDZ Gediz 2.08 5 ⇑*i*P **Pn** 17 37 38.9 -0.4
GDZ *i* S **Sg** 17 38 15.3 +3.8
GDZ Gediz 2.08 5 *i* P **Pn** 17 37 38.9 -0.4
IZM Izmir 2.08 312 *e*PN **Pn** 17 37 38.0 -1.4
IZM Izmir 2.08 312 *e*Pn **Pn** 17 37 38.0 -1.4
KDAG Bornova 2.08 312 ⇑*i*P **Pn** 17 37 38.5 -0.9
KDAG *i* S **Sn** 17 38 00.2 -5.0
KDAG Bornova 2.08 312 *i* P **Pn** 17 37 38.5 -0.9
KDAG *i* S **Sn** 17 38 00.2 -5.0
ALT Altintas 2.15 19 *e*PN **Pn** 17 37 39.8 -0.5
ALT Altintas 2.15 19 *e*Pn **Pn** 17 37 39.8 -0.5
AKHS Akhisar 2.17 329 ⇑*i*P **Pn** 17 37 39.4 -1.2
AKHS *i* S **Sn** 17 38 09.1 +1.8
AKHS Akhisar 2.17 329 *i* P **Pn** 17 37 39.4 -1.2
AKHS *i* S **Sn** 17 38 09.1 +1.8
AKS Akhisar 2.17 329 *e*PN **Pn** 17 37 39.4 -1.3
AKS Akhisar 2.17 329 *e*Pn **Pn** 17 37 39.4 -1.2
BOLV Bolvadin 2.17 38 ⇑*i*P **Pn** 17 37 41.7 +1.1
BOLV *i* S **Sn** 17 38 09.8 +2.3
BOLV Bolvadin 2.17 38 *i* P **Pn** 17 37 41.7 +1.0
BOLV *i* S **Sn** 17 38 09.8 +2.4
BLCB Balcova 2.21 309 *e*PN **Pn** 17 37 39.8 -1.4
BLCB Balcova 2.21 309 P **Pn** 17 37 40.2 -1.0
BLCB Balcova 2.21 309 P **Pn** 17 37 40.2 -1.0
BLCB Balcova 2.21 309 *e*Pn **Pn** 17 37 39.8 -1.4
BLCB Balcova 2.21 309 P **Pn** 17 37 40.2 -1.0
KARP Karpathos 2.23 229 P **Pn** 17 37 41.6 +0.2
KARP Karpathos 2.23 229 *e*P **Pn** 17 37 41.0 -0.4
KARP Karpathos 2.23 229 P **Pn** 17 37 41.6 +0.2
GAZI Gazipasa 2.60 107 ⇓*i*P **Pn** 17 37 47.4 +0.9
GAZI *i* S **Sn** 17 38 20.8 +2.8
GAZI Gazipasa 2.60 107 *i* P **Pn** 17 37 47.4 +0.9
GAZI *i* S **Sn** 17 38 20.8 +2.8
HDMB Hadim 2.60 90 *e*PN **Pn** 17 37 47.5 +0.9
HDMB Hadim 2.60 90 *e*Pn **Pn** 17 37 47.5 +0.9
DURS Dursunbey 2.65 347 ⇑*i*P **Pn** 17 37 46.4 -0.7
DURS *i* S **Sn** 17 38 18.2 -0.9
DURS Dursunbey 2.65 347 *i* P **Pn** 17 37 46.4 -0.8
DURS *i* S **Sn** 17 38 18.2 -0.9
KONT Konya--Tatoy 2.65 69 *e*PN **Pn** 17 37 47.9 +0.6
KONT Konya--Tatoy 2.65 69 *e*Pn **Pn** 17 37 47.9 +0.6
KIZT Kizilcal 2.80 48 *e*PN **Pn** 17 37 49.8 +0.6
KIZT Kizilcal 2.80 48 *e*Pn **Pn** 17 37 49.8 +0.5
ESKT Eskisehir 2.80 27 *e*PN **Pn** 17 37 49.4 +0.1
ESKT Eskisehir 2.80 27 ⇓*i*P **Pn** 17 37 49.7 +0.4
ESKT *i* S **Sn** 17 38 24.3 +1.4
ESKT Eskisehir 2.80 27 *e*Pn **Pn** 17 37 49.4 +0.1
SEYT Eskypehyr 2.80 27 *i* P **Pn** 17 37 49.7 +0.4
SEYT *i* S **Sn** 17 38 24.3 +1.4
BALB Balikesir 2.83 338 *e*PN **Pn** 17 37 48.9 -0.7
BALB Balikesir 2.83 338 *e*Pn **Pn** 17 37 48.9 -0.7
CHOS Chios island 2.87 299 *e*P **Pn** 17 37 49.5 -0.7
CHOS Chios island 2.87 299 P **Pn** 17 37 49.7 -0.5
CHOS S **Sn** 17 38 24.7 +0.2
CHOS Chios island 2.87 299 P **Pn** 17 37 49.7 -0.5
CHOS S **Sn** 17 38 24.7 +0.2
APE Apeiranthos 2.96 272 P **Pn** 17 37 51.0 -0.5
APE S **Sn** 17 38 26.8 -0.1
APE Apeiranthos 2.96 272 *e*P **Pn** 17 37 51.0 -0.5
APE Apeiranthos 2.96 272 P **Pn** 17 37 51.0 -0.5
APE S **Sn** 17 38 26.8 -0.1
APE Apeiranthos 2.96 272 ⇓*i*P **Pn** 17 37 51.8 +0.3
APE Apeiranthos 2.96 272 P **Pn** 17 37 51.0 -0.5
APE S **Sn** 17 38 26.8 -0.1
BALY Balya 3.00 335 ⇑*i*P **Pn** 17 37 51.1 -1.0
BALY *i* S **Sn** 17 38 28.9 +1.1
BALY Balya 3.00 335 *i* P **Pn** 17 37 51.1 -0.9
BALY *i* S **Sn** 17 38 28.9 +1.1
BORA Eskisehir 3.01 18 ⇑*i*P **Pn** 17 37 52.0 -0.2
BORA *i* S **Sg** 17 38 42.6 +1.1
BORA Eskisehir 3.01 18 *i* P **Pn** 17 37 52.0 -0.2
SVRH Sivrihisar-ESK 3.02 36 *e*PN **Pn** 17 37 52.4 0.0
SVRH Sivrihisar-ESK 3.02 36 *e*Pn **Pn** 17 37 52.4 +0.1
ZKR Zakros 3.10 233 P **Pn** 17 37 53.9 +0.5
ZKR Zakros 3.10 233 *e*P **Pn** 17 37 54.0 +0.6
ZKR Zakros 3.10 233 P **Pn** 17 37 53.9 +0.5
ZKR Zakros 3.10 233 P **Pn** 17 37 53.9 +0.5
THR1 Thera Island 3.10 259 P **Pn** 17 37 53.1 -0.3
THR1 Thera Island 3.10 259 P **Pn** 17 37 53.1 -0.3
CAVI Cavuskoy 3.21 8 *e*PN **Pn** 17 37 54.4 -0.6
CAVI Cavuskoy 3.21 8 *e*Pn **Pn** 17 37 54.4 -0.6
PRK Paraskevi 3.22 314 P **Pn** 17 37 54.5 -0.6
PRK S **Sn** 17 38 32.8 -0.6
PRK Paraskevi 3.22 314 *e*P **Pn** 17 37 54.5 -0.6
PRK Paraskevi 3.22 314 P **Pn** 17 37 54.5 -0.6
PRK S **Sn** 17 38 32.8 -0.6
PRK Paraskevi 3.22 314 P **Pn** 17 37 54.5 -0.6
PRK S **Sn** 17 38 32.8 -0.6
GONE Gonen-Balikesi 3.26 339 *e*PN **Pn** 17 37 54.9 -0.6
GONE Gonen-Balikesi 3.26 339 *e*Pn **Pn** 17 37 54.9 -0.7
ALFC Alevga 3.30 123 P **Pn** 17 37 57.0 +0.8
8.6nm,0.5s
ALFC S **Sn** 17 38 38.5 +3.3
ALFC Alevga 3.30 123 P **Pn** 17 37 57.0 +0.8
8.6nm,0.5s
ALFC S **Sn** 17 38 38.5 +3.3
PPCY Paphos 3.30 129 P **Pn** 17 37 56.8 +0.6
PPCY Paphos 3.30 129 P **Pn** 17 37 56.8 +0.6
GEMT Gemlik 3.41 359 *e*PN **Pn** 17 37 57.6 -0.1
GEMT Gemlik 3.41 359 *e*Pn **Pn** 17 37 57.6 -0.1
NPS Neapolis 3.42 240 P **Pn** 17 37 57.8 0.0
NPS Neapolis 3.42 240 *e*P **Pn** 17 37 57.5 -0.3
NPS Neapolis 3.42 240 P **Pn** 17 37 57.8 0.0
ADVT Abdulvahap 3.43 6 *e*PN **Pn** 17 37 58.2 +0.2
ADVT Abdulvahap 3.43 6 *e*Pn **Pn** 17 37 58.2 +0.2
SIGR SIGRI 3.45 310 P **Pn** 17 37 57.5 -0.7
SIGR SIGRI 3.45 310 P **Pn** 17 37 57.5 -0.7
SIGR SIGRI 3.45 310 P **Pn** 17 37 57.5 -0.7

BNT Bandirma 3.49 343 *e*PN **Pn** 17 37 58.4 -0.3
BNT Bandirma 3.49 343 *e*Pn **Pn** 17 37 58.4 -0.3
LEF Lefka 3.52 122 *e*PN **Pn** 17 38 00.0 +0.9
LEF Lefka 3.52 122 *e*Pn **Pn** 17 38 00.0 +0.8
YLV Yalova 3.54 2 *e*PN **Pn** 17 37 59.2 -0.3
YLV Yalova 3.54 2 *e*Pn **Pn** 17 37 59.2 -0.3
GULT Gulveren 3.55 16 *e*PN **Pn** 17 37 59.9 +0.2
GULT Gulveren 3.55 16 *e*Pn **Pn** 17 37 59.9 +0.3
ARMT Armutlu 3.55 355 *e*PN **Pn** 17 37 58.8 -0.8
ARMT Armutlu 3.55 355 *e*Pn **Pn** 17 37 58.8 -0.8
LAST Lasithi 3.56 240 P **Pn** 17 37 59.7 -0.1
LAST Lasithi 3.56 240 *e*P **Pn** 17 38 00.5 +0.7
LAST Lasithi 3.56 240 P **Pn** 17 37 59.7 -0.1
LAST Lasithi 3.56 240 P **Pn** 17 37 59.7 -0.1
SULT Sultanhani-AKS 3.60 70 *e*PN **Pn** 17 38 01.4 +1.2
SULT Sultanhani-AKS 3.60 70 *e*Pn **Pn** 17 38 01.4 +1.1
EZN Ezine 3.62 322 *e*PN **Pn** 17 37 59.2 -1.3
EZN Ezine 3.62 322 *e*Pn **Pn** 17 37 59.2 -1.3
IKL Isikli 3.66 101 *e*PN **Pn** 17 38 02.6 +1.4
IKL Isikli 3.66 101 *e*Pn **Pn** 17 38 02.6 +1.4
KRBG Karabiga-Canak 3.69 336 *e*PN **Pn** 17 38 00.3 -1.3
KRBG Karabiga-Canak 3.69 336 *e*Pn **Pn** 17 38 00.3 -1.3
MAMC Mammari 3.72 119 P **Pn** 17 38 02.8 +0.9
MAMC Mammari 3.72 119 P **Pn** 17 38 02.8 +0.9
SZAC Souni-Zanaja 3.73 126 P **Pn** 17 38 02.5 +0.5
SZAC S **Sn** 17 38 49.5 +3.8
SZAC Souni-Zanaja 3.73 126 P **Pn** 17 38 02.5 +0.5
SZAC S **Sn** 17 38 49.5 +3.8
SPNC Sapanca-Adapaz 3.76 13 *e*PN **Pn** 17 38 02.7 +0.3
SPNC Sapanca-Adapaz 3.76 13 *e*Pn **Pn** 17 38 02.7 +0.3
MDU Mudurnu 3.77 24 *e*PN **Pn** 17 38 03.1 +0.5
MDU Mudurnu 3.77 24 *e*Pn **Pn** 17 38 03.1 +0.4
HRT Hereke 3.81 5 *e*PN **Pn** 17 38 03.4 +0.2
HRT Hereke 3.81 5 *e*Pn **Pn** 17 38 03.4 +0.2
LPK Lapseki 3.87 331 *e*PN **Pn** 17 38 03.0 -0.9
LPK Lapseki 3.87 331 *e*Pn **Pn** 17 38 03.0 -1.0
LFK Lefkose 3.89 115 *e*PN **Pn** 17 38 05.4 +1.2
LFK Lefkose 3.89 115 *e*Pn **Pn** 17 38 05.4 +1.1
CSS Prodhromos 3.91 121 P **Pn** 17 38 05.5 +1.0
6.8nm,1.0s
CSS S **Sn** 17 38 54.3 +4.1
CSS Prodhromos 3.91 121 *e*PN **Pn** 17 38 05.3 +0.8
CSS Prodhromos 3.91 121 P **Pn** 17 38 04.2 -0.3
CSS Prodhromos 3.91 121 *e*P **Pn** 17 38 04.0 -0.5
CSS Prodhromos 3.91 121 P **Pn** 17 38 04.2 -0.3
CSS Prodhromos 3.91 121 *e*Pn **Pn** 17 38 05.3 +0.8
CSS S **Sn** 17 38 54.3 +4.1
IDI Anoyia 3.92 245 Pn **Pn** 17 38 04.7 0.0
8.9nm,0.3s,baz=63,slow=10,SNR=62
IDI Sn **Sn** 17 38 50.6 +0.1
21nm,0.3s,baz=99,slow=17,SNR=6.7
IDI Anoyia 3.92 245 *e*P **Pn** 17 38 04.5 -0.1
IDI Anoyia 3.92 245 Pn **Pn** 17 38 04.7 +0.1
IDI Sn **Sn** 17 38 50.6 +0.1
LOD Lodumlu 3.98 43 *e*PN **Pn** 17 38 06.4 +0.8
LOD Lodumlu 3.98 43 *e*Pn **Pn** 17 38 06.4 +0.8
RKY Sarkoy-Tekirda 4.00 337 *e*PN **Pn** 17 38 05.7 -0.1
RKY Sarkoy-Tekirda 4.00 337 *e*Pn **Pn** 17 38 05.7 -0.1
ISK Istanbul-Kandi 4.04 358 *e*PN **Pn** 17 38 06.1 -0.3
ISK Istanbul-Kandi 4.04 358 *e*Pn **Pn** 17 38 06.1 -0.3
MFT Murefte 4.06 339 *e*PN **Pn** 17 38 06.9 +0.3
MFT Murefte 4.06 339 *e*Pn **Pn** 17 38 06.9 +0.3
GADA Gvkgeada 4.11 321 *e*PN **Pn** 17 38 06.4 -0.8
GADA Gvkgeada 4.11 321 *e*Pn **Pn** 17 38 06.4 -0.8
SIVA Sivas 4.11 242 P **Pn** 17 38 07.6 +0.4
SIVA Sivas 4.11 242 *e*P **Pn** 17 38 08.5 +1.3
SIVA Sivas 4.11 242 P **Pn** 17 38 07.6 +0.4
SIVA Sivas 4.11 242 P **Pn** 17 38 07.6 +0.4
SILT Sile 4.14 4 *e*PN **Pn** 17 38 08.2 +0.5
SILT Sile 4.14 4 *e*Pn **Pn** 17 38 08.2 +0.5
BGKT Bogazkoy 4.17 355 *e*PN **Pn** 17 38 08.4 +0.3
BGKT Bogazkoy 4.17 355 *e*Pn **Pn** 17 38 08.4 +0.3
ERIK Erikli-Kesan 4.22 331 *e*PN **Pn** 17 38 08.3 -0.5
ERIK Erikli-Kesan 4.22 331 *e*Pn **Pn** 17 38 08.3 -0.5
KLYT Kilyos 4.23 358 *e*PN **Pn** 17 38 09.2 +0.2
KLYT Kilyos 4.23 358 *e*Pn **Pn** 17 38 09.2 +0.3
MERS Mersin 4.24 90 *e*PN **Pn** 17 38 10.6 +1.5
MERS Mersin 4.24 90 *e*Pn **Pn** 17 38 10.6 +1.5
CTKS Kestanelik-??a 4.25 353 *e*PN **Pn** 17 38 09.5 +0.3
CTKS Kestanelik-??a 4.25 353 *e*Pn **Pn** 17 38 09.5 +0.3
EREN Erenkoy 4.26 109 *e*PN **Pn** 17 38 11.1 +1.8
EREN Erenkoy 4.26 109 *e*Pn **Pn** 17 38 11.1 +1.8
SLVT Silivri 4.28 350 *e*PN **Pn** 17 38 09.7 +0.1
SLVT Silivri 4.28 350 *e*Pn **Pn** 17 38 09.7 +0.1
LIA Limnos Island 4.29 313 P **Pn** 17 38 09.2 -0.5
LIA S **Sn** 17 38 58.6 -0.9
LIA Limnos Island 4.29 313 *e*P **Pn** 17 38 09.5 -0.2
LIA Limnos Island 4.29 313 P **Pn** 17 38 09.2 -0.5
LIA S **Sn** 17 38 58.6 -0.9
LIA Limnos Island 4.29 313 P **Pn** 17 38 09.2 -0.5
LIA S **Sn** 17 38 58.6 -0.9
VAM Vamos 4.38 250 *e*P **Pn** 17 38 12.5 +1.5
PHNC Paralimni 4.38 116 P **Pn** 17 38 12.5 +1.5
16nm,1.3s
PHNC S **Sn** 17 39 06.3 +4.5
PHNC Paralimni 4.38 116 P **Pn** 17 38 12.5 +1.5
16nm,1.3s
PHNC S **Sn** 17 39 06.3 +4.5
BRTR Keskin Array B 4.39 51 Pn **Pn** 17 38 11.7 +0.5
6.9nm,0.3s,baz=227,slow=14,SNR=111
BRTR Sn **Sn** 17 39 05.2 +3.1
4.6nm,0.3s,baz=223,slow=26,SNR=8.5
BRTR Keskin Array B 4.39 51 P **Pn** 17 38 11.7 +0.6
BRTR 17 39 05.2
BRTR pmax pmax
comp=Z,7.0nm,0.3s
BRTR smax
comp=N,5.0nm,0.3s
BRTR Keskin Array B 4.39 51 P **Pn** 17 38 11.7 +0.6
comp=N,7.0nm,0.3s
BRTR S **Sn** 17 39 05.2 +3.1
comp=N,5.0nm,0.3s
BR131 Keskin Array S 4.39 51 *e*P **Pn** 17 38 12.1 +0.9
BR131 Keskin Array S 4.39 51 *e*Pn **Pn** 17 38 12.1 +0.9
VLY Voula,Athens 4.41 283 P **Pn** 17 38 12.2 +0.8
VLY Voula,Athens 4.41 283 *e*P **Pn** 17 38 10.0 -1.4
VLY Voula,Athens 4.41 283 P **Pn** 17 38 12.2 +0.8
ENEZ Enez 4.42 328 *e*PN **Pn** 17 38 11.0 -0.5
ENEZ Enez 4.42 328 *e*Pn **Pn** 17 38 11.0 -0.6
CTYL Yal??k??y-??at 4.51 351 *e*PN **Pn** 17 38 12.1 -0.7
CTYL Yal??k??y-??at 4.51 351 *e*Pn **Pn** 17 38 12.1 -0.7
KARN Karanos 4.59 251 *e*P **Pn** 17 38 15.5 +1.6
ALN Alexandroupoli 4.60 328 P **Pn** 17 38 13.4 -0.6
ALN S **Sn** 17 39 06.6 -0.7
ALN Alexandroupoli 4.60 328 *e*P **Pn** 17 38 13.5 -0.5
ALN Alexandroupoli 4.60 328 P **Pn** 17 38 13.4 -0.6
ALN S **Sn** 17 39 06.6 -0.7
ALN Alexandroupoli 4.60 328 P **Pn** 17 38 13.4 -0.6
ALN S **Sn** 17 39 06.6 -0.7
KDZE Karadeniz Ereo 4.62 21 *e*PN **Pn** 17 38 14.8 +0.5
KDZE Karadeniz Ereo 4.62 21 *e*Pn **Pn** 17 38 14.8 +0.5
KARA Karaisali 4.66 85 *e*PN **Pn** 17 38 16.1 +1.3
KARA Karaisali 4.66 85 *e*Pn **Pn** 17 38 16.1 +1.3
AOS Alonnisos 4.74 299 P **Pn** 17 38 15.3 -0.6
AOS Alonnisos 4.74 299 P **Pn** 17 38 15.3 -0.6
AOS Alonnisos 4.74 299 P **Pn** 17 38 15.3 -0.6
DID Didima 4.81 278 *e*P **Pn** 17 38 17.0 +0.1
DID Didima 4.81 278 P **Pn** 17 38 16.8 -0.1
DID Didima 4.81 278 P **Pn** 17 38 16.8 -0.1
KRTS Karatas 4.95 93 *e*PN **Pn** 17 38 20.9 +2.1
KRTS Karatas 4.95 93 *e*Pn **Pn** 17 38 20.9 +2.1
CANT Cankiri 4.96 42 *e*PN **Pn** 17 38 20.3 +1.4
SAFT Safranbolu 5.00 31 *e*PN **Pn** 17 38 20.4 +0.9
SAFT Safranbolu 5.00 31 *e*Pn **Pn** 17 38 20.4 +0.9
RDO Rodhopi 5.03 326 P **Pn** 17 38 19.5 -0.4
RDO Rodhopi 5.03 326 *e*P **Pn** 17 38 19.5 -0.4
RDO Rodhopi 5.03 326 P **Pn** 17 38 19.5 -0.4
RDO Rodhopi 5.03 326 P **Pn** 17 38 19.5 -0.4
KYTH Kithira 5.04 263 *e*P **Pn** 17 38 21.0 +1.0
VLI Veliai 5.06 268 *e*P **Pn** 17 38 21.0 +0.7
LTK Loutraki 5.08 283 *e*P **Pn** 17 38 21.5 +0.9
EDRB Edirne 5.19 339 *e*PN **Pn** 17 38 21.6 -0.5
EDRB Edirne 5.19 339 *e*Pn **Pn** 17 38 21.6 -0.6
LKR Lokris 5.20 290 *e*P **Pn** 17 38 22.0 -0.2
CEYT Ceyhan 5.21 88 *e*PN **Pn** 17 38 24.7 +2.2
CEYT Ceyhan 5.21 88 *e*Pn **Pn** 17 38 24.7 +2.2
PAIG Paliouri 5.24 305 P **Pn** 17 38 22.8 0.0
PAIG Paliouri 5.24 305 P **Pn** 17 38 22.8 0.0
PAIG Paliouri 5.24 305 P **Pn** 17 38 22.8 0.0
CORM Corum 5.27 52 *e*PN **Pn** 17 38 24.9 +1.7

CORM Corum 5.27 52 *e*Pn **Pn** 17 38 25.0 +1.7
OUR Ouranopolis 5.28 310 P **Pn** 17 38 22.9 -0.4
OUR Ouranopolis 5.28 310 P **Pn** 17 38 22.9 -0.4
OUR Ouranopolis 5.28 310 P **Pn** 17 38 22.9 -0.4
KOZT Kozan 5.28 83 *e*PN **Pn** 17 38 24.8 +1.5
KOZT Kozan 5.28 83 *e*Pn **Pn** 17 38 24.8 +1.4
KAVA Kavala 5.41 319 P **Pn** 17 38 24.7 -0.5
KAVA Kavala 5.41 319 P **Pn** 17 38 24.7 -0.5
VLX Vlachokerasia 5.48 276 P **Pn** 17 38 26.2 0.0
VLX Vlachokerasia 5.48 276 P **Pn** 17 38 26.2 0.0
GUR Goura 5.56 282 *e*P **Pn** 17 38 28.5 +1.3
PLG Polygyros 5.63 308 P **Pn** 17 38 28.0 -0.2
PLG Polygyros 5.63 308 P **Pn** 17 38 28.0 -0.2
PLG Polygyros 5.63 308 P **Pn** 17 38 28.0 -0.2
DIM Dimitrovgrad 5.78 331 P **Pn** 17 38 29.6 -0.6
KALE Kalithea 5.79 286 P **Pn** 17 38 30.8 +0.4
KALE Kalithea 5.79 286 P **Pn** 17 38 30.8 +0.4
AGG Agios Georgios 5.81 292 P **Pn** 17 38 30.4 -0.2
AGG Agios Georgios 5.81 292 *e*P **Pn** 17 38 31.5 +0.9
AGG Agios Georgios 5.81 292 P **Pn** 17 38 30.4 -0.2
AGG Agios Georgios 5.81 292 P **Pn** 17 38 30.4 -0.2
RZN Rozhen 5.83 324 P **Pn** 17 38 30.6 -0.3
ITM Ithomi 5.84 274 *e*P **Pn** 17 38 35.5 +4.4
LAKA Lakka 5.89 284 P **Pn** 17 38 32.5 +0.8
LAKA Lakka 5.89 284 P **Pn** 17 38 32.5 +0.8
SOH Sokhos 5.95 311 P **Pn** 17 38 32.4 -0.2
SOH Sokhos 5.95 311 *e*P **Pn** 17 38 32.5 -0.1
SOH Sokhos 5.95 311 P **Pn** 17 38 32.4 -0.2
SOH Sokhos 5.95 311 P **Pn** 17 38 32.4 -0.2
HORT Hortiatis 5.97 309 P **Pn** 17 38 33.3 +0.4
HORT Hortiatis 5.97 309 P **Pn** 17 38 33.3 +0.4
HORT Hortiatis 5.97 309 P **Pn** 17 38 33.3 +0.4
EFP Efpalio 5.98 286 *e*P **Pn** 17 38 33.5 +0.6
PYL PYLOS 6.00 271 *e*P **Pn** 17 38 33.5 +0.2
NVR Nevrokopi 6.01 318 *e*P **Pn** 17 38 33.5 +0.1
BHL Bhannes 6.09 119 *e*Pn **Pn** 17 38 34.1 -0.5
HWQ Hawqa 6.11 115 *e*Pn **Pn** 17 38 35.0 +0.2
KMRS Kahramanmaras 6.13 83 *e*PN **Pn** 17 38 37.7 +2.6
KMRS Kahramanmaras 6.13 83 *e*Pn **Pn** 17 38 37.7 +2.6
SARI SarD1z-Kayseri 6.13 72 *e*PN **Pn** 17 38 33.9 -1.2
SARI SarD1z-Kayseri 6.13 72 *e*Pn **Pn** 17 38 33.9 -1.2
THL Klokotos Trika 6.22 296 *e*P **Pn** 17 38 37.5 +1.2
THL Klokotos Trika 6.22 296 P **Pn** 17 38 36.4 +0.1
THL Klokotos Trika 6.22 296 P **Pn** 17 38 36.4 +0.1
MMB Musomiste 6.25 319 P **Pn** 17 38 36.2 -0.5
RCY Rachaya 6.44 121 *e*Pn **Pn** 17 38 38.7 -0.6
MMAI Mount Meron Ar 6.45 126 Pn **Pn** 17 38 38.3 -1.2
comp=N,27nm,0.3s,baz=315,slow=13,SNR=67
MMAI Sn **Sn** 17 39 49.5 -3.4
comp=N,16nm,0.3s,baz=300,slow=27,SNR=7.0
MMAI LR LR 17 41 32.6
comp=N,626nm,20.1s,baz=250,slow=43
VAY Valandovo 6.73 312 *i* Pn **Pn** 17 38 44.1 +0.9
KKB Krupnik 6.79 317 P **Pn** 17 38 43.7 -0.4
PVL Pavlikeni 6.87 335 P **Pn** 17 38 44.5 -0.7
FNA Florina 7.19 304 P **Pn** 17 38 50.1 +0.5
FNA Florina 7.19 304 P **Pn** 17 38 50.1 +0.5
FNA Florina 7.19 304 P **Pn** 17 38 50.1 +0.5
VTS Vitosha 7.24 322 ⇑P **Pn** 17 38 51.2 +0.9
VTS Vitosha 7.24 322 *e*P **Pn** 17 38 50.0 -0.3
VTS Vitosha 7.24 322 ⇑*i*P **Pn** 17 38 51.2 +0.9
VTS Vitosha 7.24 322 P **Pn** 17 38 51.2 +0.9
TIRR Tirgusor 7.46 355 *e*P **Pn** 17 38 53.2 0.0
comp=N,14nm,0.8s
TIRR Tirgusor 7.46 355 ⇑*i*P **Pn** 17 38 53.2 0.0
TIRR Tirgusor 7.46 355 *e*P **Pn** 17 38 53.2 0.0
comp=N,14nm,0.8s
KBN Korca 7.51 301 *i* PN **Pb** 17 39 07.7 -7.2
SRN Sarande 7.79 294 *i* PN **Pn** 17 39 04.9 +7.1
KEK Kerkira 7.88 293 *e*P **Pn** 17 39 04.0 +4.9
ASF Jabal al Asfar 7.95 125 Pn **Pn** 17 39 00.5 +0.3
comp=N,1.4nm,0.3s,baz=255,slow=8.4,SNR=14
ASF Sn **Sn** 17 40 31.0 +1.1
comp=N,0.3nm,0.3s,baz=10,slow=19,SNR=2.9
ASF LR LR 17 42 39.9
comp=N,417nm,19.5s,baz=308,slow=43
ASF Jabal al Asfar 7.95 125 P **Pn** 17 39 00.5 +0.4
ASF 17 40 31.0
ASF pmax pmax
comp=Z,1.0nm,0.3s
ASF MLR MLR
comp=Z,417nm,19.5s
BARS Barje 8.12 318 ⇓*i*Pn **Pn** 17 39 03.1 +0.7
TLCR 8.16 358 ⇑P **Pn** 17 39 03.3 +0.3
TLCR 8.16 358 ⇑*i*P **Pn** 17 39 03.3 +0.3
TLCR 8.16 358 P **Pn** 17 39 03.3 +0.3
SEV Sevastopol' 8.23 23 *e*P **Pn** 17 39 03.7 -0.2
SEV pmax pmax
comp=Z,17nm,0.9s
SEV Sevastopol' 8.23 23 *e*P **Pn** 17 39 03.7 -0.2
comp=Z,17nm,0.9s
YAL Yalta 8.34 25 *e*P **Pn** 17 39 05.0 -0.4
YAL Yalta 8.34 25 *e*P **Pn** 17 39 05.0 -0.4
TIR Tirane 8.46 304 *e*P **Pn** 17 39 09.1 +2.1
TIR pmax pmax
comp=Z,59nm,0.8s
TIR Tirane 8.46 304 *e*P **Pn** 17 39 09.1 +2.1
comp=Z,60nm,0.8s
TIR Tirane 8.46 304 *e*P **Pn** 17 39 09.1 +2.1
comp=Z,60nm,0.8s
ALU Alushta 8.60 25 *e*P **Pn** 17 39 09.2 +0.3
ALU Alushta 8.60 25 *e*P **Pn** 17 39 09.2 +0.3
SIM Simferopol' 8.74 23 *e*P **Pn** 17 39 14.0 +3.2
SIM S **Sn** 17 40 50.4 +1.3
SIM pmax pmax
comp=Z,61nm,0.4s
SIM MLR MLR
comp=Z,200nm,16.5s
EIL Elat 8.75 145 Pn **Pn** 17 39 09.4 -1.6
comp=Z,8.1nm,0.3s,baz=245,slow=13,SNR=45
EIL Sn **Sn** 17 40 43.4 -6.1
comp=Z,4.0nm,0.3s,baz=47,slow=19,SNR=4.8
EIL LR LR 17 43 16.8
comp=Z,117nm,21.0s,baz=164,slow=43
EIL Elat 8.75 145 Pn **Pn** 17 39 09.4 -1.6
BOLS Boljevac 8.78 323 *i* Pn **Pn** 17 39 10.3 -1.0
PUK Puka 8.79 308 *i* PN **Pn** 17 39 14.5 +3.0
MLR Muntele Rosu 8.82 345 Pn **Pn** 17 39 12.5 +0.6
comp=Z,1.7nm,0.3s,baz=187,slow=1.4,SNR=51
MLR LR LR 17 42 54.1
comp=Z,314nm,21.7s,baz=343,slow=40
MLR Muntele Rosu 8.82 345 ⇑P **Pn** 17 39

CEL	Celeste	10.65	281	eP	Pn	17 39 37.6 +0.5
	comp=Z,50nm,1.0s					
DRGR		10.90	336	⇑P	Pn	17 39 41.5 +1.1
DRGR		10.90	336	⇑iP	Pn	17 39 41.5 +1.1
DRGR		10.90	336	P	Pn	17 39 41.5 +1.1
BURAR	Bucovina Array	10.99	346	⇑P	Pn	17 39 42.8 +1.1
BURAR	Bucovina Array	10.99	346	⇑iP	Pn	17 39 42.8 +1.1
BURAR	Bucovina Array	10.99	346	⇑P	Pn	17 39 42.8 +1.1
BUR08	Bucovina Ar. S	11.03	346	eP	Pn	17 39 41.8 -0.3
BUR08	Bucovina Ar. S	11.03	346	eP	Pn	17 39 41.8 -0.3
MRLC	Muro Lucano	11.34	293	P	Pn	17 39 50.5 +4.0
HVZN	Vizzini	11.60	275	P	Pn	17 39 50.5 +0.5
HVZN	Vizzini	11.60	275	P	Pn	17 39 50.5 +0.5
VAE	Valguarnera	11.82	277	Pn	Pn	17 39 54.5 +1.4
	comp=Z,2.3nm,0.3s,baz=105,slow=12,SNR=2.5					
VAE	Valguarnera	11.82	277	Pn	Pn	17 39 54.5 +1.4
PKSM	Moragy	12.12	323	⇓P	Pn	17 39 56.6 -0.5
PKSM	Moragy	12.12	323	⇓iP	Pn	17 39 56.6 -0.5
PKSM	Moragy	12.12	323	P	Pn	17 39 56.6 -0.5
KIV	Kislovodsk	12.36	52	eP	Pn	17 40 02.2 +1.9
KIV				eS	Sn	17 42 17.9 +0.1
KIV				pmax	pmax	
	comp=Z,5.0nm,0.8s					
KIV				MLR	MLR	
	comp=Z,63nm,11.0s					
KIV	Kislovodsk	12.36	52	eP	Pn	17 40 02.2 +1.9
	comp=Z,5.0nm,0.8s					
KIV				eS	Sn	17 42 17.9 +0.1
	comp=Z,63nm,11.0s					
GNI	Garni	12.53	71	ceP	Pn	17 40 05.2 +2.4
GNI				pmax	pmax	
	comp=Z,34nm,1.7s					
GNI	Garni	12.53	71	eP	Pn	17 40 05.2 +2.4
	comp=Z,34nm,1.7s					
ZEI	Tsey	12.64	58	eP	Pn	17 40 08.9 +4.7
ZEI				pmax	pmax	
	comp=Z,9.0nm,0.5s					
PSZ	Piszkesteto	12.88	331	⇑P	Pn	17 40 08.5 +1.1
PSZ	Piszkesteto	12.88	331	eP	Pn	17 40 08.3 +0.8
	comp=Z,39nm,1.5s					
PSZ	Piszkesteto	12.88	331	⇑iP	Pn	17 40 08.5 +1.1
PSZ	Piszkesteto	12.88	331	eP	Pn	17 40 08.3 +0.9
	comp=Z,39nm,1.5s					
BUD	Budapest	12.89	327	⇓eP	Pn	17 40 08.8 +1.2
KECS	Kecovo	13.12	334	ePn	Pn	17 40 09.9 -0.9
KECS				e		17 40 21.0
KECS	Kecovo	13.12	334	ePN	Pn	17 40 09.9 -0.9
KECS				e		17 40 21.0
GOF	Gofitskoye	13.14	48	eP	Pn	17 40 03.6 -7.4
CRVS	Cervenica-Dubn	13.16	337	ePn	Pn	17 40 13.1 +1.8
CRVS				e		17 40 25.6
CRVS	Cervenica-Dubn	13.16	337	ePN	Pn	17 40 13.1 +1.8
CRVS				e		17 40 25.6
CRVS	Cervenica-Dubn	13.16	337	eP	Pn	17 40 13.1 +1.8
BOJS	Bojanci	13.49	313	ePn	Pn	17 40 16.1 +0.3
BOJS	Bojanci	13.49	313	ePn	Pn	17 40 16.1 +0.2
KIEV	Kiev	13.67	360	eP	Pn	17 40 17.0 -1.2
KIEV				pmax	pmax	
	comp=Z,9.0nm,1.0s					
KIEV	Kiev	13.67	360	eP	Pn	17 40 17.0 -1.3
	comp=Z,8.8nm,1.0s					
KIEV	Kiev	13.67	360	eP	Pn	17 40 17.0 -1.2
	comp=Z,8.8nm,1.0s					
AKASG	Malin Array Be	13.68	360	Pn	Pn	17 40 16.6 -1.8
	comp=Z,0.3nm,0.3s,baz=183,slow=12,SNR=18					
AKASG	Malin Array Be	13.68	360	iP	Pn	17 40 18.0 -0.3
AKASG				pmax	pmax	
	comp=Z,8.0nm,1.0s					
AKASG	Malin Array Be	13.68	360	Pn	Pn	17 40 16.5 -1.8
AKASG	Malin Array Be	13.68	360	iP	Pn	17 40 18.0 -0.3
	comp=Z,8.0nm,1.0s					
AKBB	Malin Array Si	13.68	360	eP	Pn	17 40 17.1 -1.2
AKBB	Malin Array Si	13.68	360	eP	Pn	17 40 17.1 -1.2
VYHS	Vyhne	13.76	330	ePn	Pn	17 40 20.3 +0.8
VYHS				e		17 40 32.7
VYHS	Vyhne	13.76	330	ePN	Pn	17 40 20.3 +0.8
VYHS				e		17 40 32.7
VYHS	Vyhne	13.76	330	eP	Pn	17 40 20.3 +0.8
NIE	Niedzica	13.98	335	eP	Pn	17 40 24.5 +2.0
NIE	Niedzica	13.98	335	eP	Pn	17 40 24.5 +2.0
LJU	Ljubljana	14.21	314	ePn	Pn	17 40 26.6 +0.9
LJU	Ljubljana	14.21	314	eP	Pn	17 40 26.6 +0.9
JAVS	Javornik	14.40	313	ePn	Pn	17 40 27.8 -0.5
JAVS	Javornik	14.40	313	ePn	Pn	17 40 27.8 -0.5
OJC	Ojcow	14.84	336	eP	Pn	17 40 38.8 +4.6
OJC	Ojcow	14.84	336	eP	Pn	17 40 38.8 +4.6
OKC	Ostrava-Krasne	15.11	331	eP	Pn	17 40 44.5 +6.7
OKC				MLR	MLR	
	comp=Z,300nm,9.8s					
OKC	Ostrava-Krasne	15.11	331	eP	Pn	17 40 44.5 +6.7
OKC				eS	Sn	17 43 50.0 +25
OKC	Ostrava-Krasne	15.11	331	eP	Pn	17 40 44.5 +6.7
OKC				eXS	sS	17 43 50.0 +2.0
OKC				AMS	AMS	17 47 50.0
	comp=Z,300nm,9.8s					
OKC	Ostrava-Krasne	15.11	331	eP	Pn	17 40 44.5 +6.7
	comp=Z,300nm,9.8s					
VRAC	Vranov	15.33	327	Pn	Pn	17 40 40.1 -0.7
	comp=Z,0.3nm,0.3s,baz=102,slow=19,SNR=2.4					
VRAC				LR	LR	17 46 46.5
	comp=Z,131nm,20.6s,baz=144,slow=38					
VRAC	Vranov	15.33	327	Pn	Pn	17 40 40.0 -0.7
VSL	Villasalto	15.79	285	eP	Pn	17 40 48.8 +2.0
	comp=Z,37nm,0.9s					
VSL	Villasalto	15.79	285	eP	Pn	17 40 48.8 +2.0
	comp=Z,37nm,0.9s					
TREC	Trest	15.81	325	AMS	AMS	17 47 40.0
	comp=Z,400nm,12.2s					
VSR	Storozhevoye	15.86	23	eP	Pn	17 40 47.0 -0.6
VSR				pmax	pmax	
	comp=Z,4.0nm,0.5s					
VSR				pmax	pmax	
	comp=N,4.0nm,0.6s					
VSR				pmax	pmax	
	comp=E,3.0nm,0.4s					
KEST	Kesra	16.07	271	Pn	Pn	17 40 49.9 -0.5
	comp=E,0.1nm,0.3s,baz=20,slow=3.8,SNR=9.1					
KEST	Kesra	16.07	271	eP	Pn	17 40 50.0 -0.4
RJOB	Jochberg	16.16	317	eP	Pn	17 40 53.0 +1.5
	comp=Z,4.0nm,1.1s					
DPC	Dobruska-Polom	16.24	329	eP	Pn	17 40 56.6 +4.1
DPC				MLR	MLR	
	comp=Z,300nm,10.4s					
DPC	Dobruska-Polom	16.24	329	eP	Pn	17 40 56.6 +4.1
DPC				eS	Sn	17 44 08.5 +16
DPC	Dobruska-Polom	16.24	329	eP	Pn	17 40 56.6 +4.1
DPC				eS	Sn	17 44 08.5 +16
DPC				AMS	AMS	17 48 30.0
	comp=Z,300nm,10.4s					
DPC	Dobruska-Polom	16.24	329	eP	Pn	17 40 56.6 +4.1
	comp=Z,300nm,10.4s					
UPC	Upice	16.49	329	eP	Pn	17 40 59.5 +3.9
UPC	Upice	16.49	329	eP	Pn	17 40 59.5 +3.9
KHC	Kasperske Hory	16.61	322	eP	Pn	17 40 58.0 +0.7
KHC				pmax	pmax	
	comp=Z,11nm,1.2s					
KHC	Kasperske Hory	16.61	322	eP	Pn	17 40 58.2 +0.9
KHC				MLR	MLR	
	comp=Z,600nm,9.3s					
KHC	Kasperske Hory	16.61	322	eP	Pn	17 40 58.0 +0.7
	comp=Z,11nm,1.2s					
KHC	Kasperske Hory	16.61	322	eP	Pn	17 40 58.2 +0.9
KHC				epP	pP	17 41 08.6 +5.2
KHC				eS	Sn	17 44 15.2 +14
KHC				AMS	AMS	17 47 50.0
	comp=Z,600nm,9.3s					
KHC	Kasperske Hory	16.61	322	eP	Pn	17 40 58.2 +0.9
	comp=Z,600nm,9.3s					
KHC				S	Sn	17 44 15.2 +14
PRU	Pruhonice	16.74	325	eP	Pn	17 41 00.9 +2.0
PRU				MLR	MLR	
	comp=Z,400nm,10.7s					
PRU	Pruhonice	16.74	325	eP	Pn	17 41 00.9 +2.0
PRU				eS	Sn	17 44 21.0 +16
PRU	Pruhonice	16.74	325	eP	Pn	17 41 00.9 +2.0
PRU				eS	Sn	17 44 21.0 +16
PRU				AMS	AMS	17 48 10.0
	comp=Z,400nm,10.7s					
PRU	Pruhonice	16.74	325	eP	Pn	17 41 00.9 +2.0
	comp=Z,400nm,10.7s					
NAY	Al-Naaiem	16.94	112	eP	Pn	17 41 01.9 +0.3
NAY				AMb	AMB	17 41 09.0
	comp=Z,18nm,1.7s					
WET	Wettzell	16.97	321	eP	Pn	17 41 02.9 +1.1
	comp=Z,10.0nm,1.0s					
PVCC	Panska Ves	17.12	327	eP	Pn	17 41 05.1 +1.5
PVCC				MLR	MLR	
	comp=Z,300nm,14.6s					
PVCC	Panska Ves	17.12	327	eP	Pn	17 41 05.1 +1.5
PVCC				AMS	AMS	17 49 00.0
	comp=Z,300nm,14.6s					
PVCC	Panska Ves	17.12	327	eP	Pn	17 41 05.1 +1.5
	comp=Z,300nm,14.6s					
FUR	Furstenfeldbru	17.24	316	eP	Pn	17 41 05.3 +0.1
RDF	Al-Radifah	17.34	112	eP	Pn	17 41 07.6 +1.0
RDF				AMb	AMB	17 41 18.5
	comp=Z,37nm,1.3s					
DAVOX	Davos/Dischmat	17.36	310	P	Pn	17 41 07.7 +1.1
	comp=Z,0.2nm,0.3s,baz=185,slow=20,SNR=7.1					
DAVOX	Davos/Dischmat	17.36	310	P	Pn	17 41 07.8 +1.2
SUW	Suwalki	17.50	348	eP	Pn	17 41 09.9 +1.5
SUW				pmax	pmax	
	comp=Z,47nm,0.9s					
SUW	Suwalki	17.50	348	eP	Pn	17 41 09.9 +1.5
	comp=Z,47nm,0.9s					
SUW	Suwalki	17.50	348	eP	Pn	17 41 09.9 +1.5
	comp=Z,47nm,0.9s					
TUE	Stuetta	17.55	309	eP	Pn	17 41 10.6 +1.5
	comp=Z,13nm,1.3s					
TUE	Stuetta	17.55	309	eP	Pn	17 41 10.6 +1.6
	comp=Z,13nm,1.3s					
BRG	Berggiesshubel	17.64	327	eP	Pn	17 41 18.6 +8.5
	comp=Z,6.0nm,1.3s					
BRG	Berggiesshubel	17.64	327	eP	Pn	17 41 18.6 +8.5
BRG				pmax	pmax	
	comp=Z,4.0nm,1.3s					
NKC	Novy Kostel	17.89	323	AMS	AMS	17 48 50.0
SBF	Sospel	17.92	299	eP	Pn	17 41 12.9 -0.7
	comp=Z,88nm,1.0s					
SBF	Sospel	17.92	299	eP	Pn	17 41 12.9 -0.7
SBF				pmax	pmax	
	comp=Z,44nm,1.0s					
SBF	Sospel	17.92	299	eP	Pn	17 41 12.9 -0.7
	comp=Z,44nm,1.0s					
SBF	Sospel	17.92	299	eP	Pn	17 41 12.9 -0.7
	comp=Z,44nm,1.0s					
REVF	Revere	17.93	299	eP	Pn	17 41 16.0 +2.2
REVF	Revere	17.93	299	eP	Pn	17 41 16.0 +2.2
NACGM	Naroch	17.96	355	e	Pn	17 41 09.0 -5.1
LUCF	Luceram	17.99	299	eP	Pn	17 41 16.7 +2.2
LUCF	Luceram	17.99	299	eP	Pn	17 41 16.7 +2.2
TANN	Tannenbergstha	18.00	323	eP	Pn	17 41 18.1 +3.5
TOUF	Mont Tournerai	18.09	300	eP	Pn	17 41 18.6 +2.9
TOUF	Mont Tournerai	18.09	300	eP	Pn	17 41 18.6 +2.9
MVIF	Mont Vial	18.12	299	eP	Pn	17 41 18.3 +2.1
MVIF	Mont Vial	18.12	299	eP	Pn	17 41 18.3 +2.1
GRF	Grafenberg Arr	18.16	320	eP	Pn	17 41 18.2 +1.7
	comp=Z,14nm,1.0s					
GRF	Grafenberg Arr	18.16	320	eP	Pn	17 41 18.2 +1.7
GRF				pmax	pmax	
	comp=Z,14nm,1.0s					
GRF	Grafenberg Arr	18.16	320	eP	Pn	17 41 18.2 +1.7
	comp=Z,14nm,1.0s					
GRF	Grafenberg Arr	18.16	320	eP	Pn	17 41 18.2 +1.7
	comp=Z,14nm,1.0s					
CLL	Collm	18.37	326	eP	Pn	17 41 19.5 +0.4
CLL	Collm	18.37	326	eP	Pn	17 41 19.0 -0.1
CLL				eS	Sn	17 44 42.0 -1.9
CLL				pmax	pmax	
	comp=Z,26nm,1.7s					
CLL	Collm	18.37	326	eP	Pn	17 41 19.0 -0.1
CLL				eS	Sn	17 44 42.0 -1.9
CLL	Collm	18.37	326	esP	sP	17 41 19.0 -5.5
	comp=Z,26nm,1.7s					
CLL				eS	Sn	17 44 42.0 -1.9
CLL	Collm	18.37	326	eP	Pn	17 41 19.0 -0.1
	comp=Z,26nm,1.7s					
IDID	Didziasalis	18.38	355	eP	Pn	17 41 18.0 -1.2
IDID				AMB	AMB	17 41 18.8
	comp=Z,4.4nm,1.2s					
IDID	Didziasalis	18.38	355	eP	Pn	17 41 18.0 -1.2
	comp=Z,4.4nm,1.2s,SNR=40					
FRF	La Foret Royal	18.40	298	eP	Pn	17 41 21.2 +1.7
	comp=Z,69nm,1.2s					
FRF	La Foret Royal	18.40	298	eP	Pn	17 41 21.2 +1.7
FRF				pmax	pmax	
	comp=Z,35nm,1.2s					
FRF	La Foret Royal	18.40	298	eP	Pn	17 41 21.2 +1.7
	comp=Z,35nm,1.2s					
FRF	La Foret Royal	18.40	298	eP	Pn	17 41 21.2 +1.7
	comp=Z,35nm,1.2s					
LMR	La Mourre	18.45	297	eP	Pn	17 41 20.4 +0.3
	comp=Z,22nm,1.1s					
LMR	La Mourre	18.45	297	eP	Pn	17 41 20.4 +0.3
LMR				pmax	pmax	
	comp=Z,11nm,1.1s					
LMR	La Mourre	18.45	297	eP	Pn	17 41 20.4 +0.3
	comp=Z,11nm,1.1s					
LMR	La Mourre	18.45	297	eP	Pn	17 41 20.4 +0.3
	comp=Z,11nm,1.1s					
IIGN	Ignalina	18.45	355	eP	Pn	17 41 18.3 -1.7
IIGN				AMB	AMB	17 41 19.6
	comp=Z,9.1nm,1.2s					
IIGN	Ignalina	18.45	355	eP	Pn	17 41 18.3 -1.7
	comp=Z,9.1nm,1.2s,SNR=40					
MOX	Moxa	18.56	323	eP	Pn	17 41 23.0 +1.6
	comp=Z,20nm,1.4s					
MOX				eS	Sn	17 44 55.0 +6.3
MOX						
	comp=Z,200nm,14.0s					
MOX	Moxa	18.56	323	eP	Pn	17 41 22.1 +0.7
	comp=Z,13nm,1.2s					
MOX	Moxa	18.56	323	eP	Pn	17 41 23.0 +1.6
MOX				eS	Sn	17 44 55.0 +6.3
MOX	Moxa	18.56	323	eP	Pn	17 41 23.0 +1.6
MOX				eS	Sn	17 44 55.0 +6.3
MBDF	Montbardon	18.61	301	eP	Pn	17 41 21.7 -0.4
	comp=Z,68nm,1.1s					
MBDF	Montbardon	18.61	301	eP	Pn	17 41 21.7 -0.4
MBDF				pmax	pmax	
	comp=Z,34nm,1.1s					
MBDF	Montbardon	18.61	301	eP	Pn	17 41 21.7 -0.4
	comp=Z,34nm,1.1s					
MBDF	Montbardon	18.61	301	eP	Pn	17 41 21.7 -0.4
	comp=Z,34nm,1.1s					
ISAL	Salakas	18.68	354	eP	Pn	17 41 21.0 -1.8
ISAL	Salakas	18.68	354	eP	Pn	17 41 21.0 -1.8
	SNR=40					
STU	Stuttgart	18.74	315	eP	Pn	17 41 23.9 +0.3
	comp=Z,35nm,1.1s					
BNI	Bardonecchia	18.77	302	eP	Pn	17 41 23.4 -0.6
BNI				pmax	pmax	
	comp=Z,14nm,0.9s					
BNI	Bardonecchia	18.77	302	eP	Pn	17 41 23.4 -0.6
	comp=Z,14nm,0.9s					
BNI	Bardonecchia	18.77	302	eP	Pn	17 41 23.4 -0.6
	comp=Z,14nm,0.9s					
OBN	Obninsk	18.78	13	⇓eP	Pn	17 41 22.5 -1.5
OBN				eS	Sn	17 44 55.8 +2.0
OBN				pmax	pmax	
	comp=Z,22nm,1.0s					
OBN				MLR	MLR	
	comp=Z,100nm,16.0s					
OBN	Obninsk	18.78	13	eP	Pn	17 41 22.5 -1.5
	comp=Z,100nm,16.0s					
OBN				eS	Sn	17 44 55.8 +2.0
IZAR	Zarasai	18.84	355	eP	Pn	17 41 22.9 -1.9
IZAR	Zarasai	18.84	355	eP	Pn	17 41 22.9 -1.9
	SNR=35					
LPG	La Plagne	18.86	304	eP	Pn	17 41 25.9 +0.8
	comp=Z,36nm,1.0s					
LPG	La Plagne	18.86	304	eP	Pn	17 41 25.9 +0.8
LPG				pmax	pmax	
	comp=Z,18nm,1.0s					
LPG	La Plagne	18.86	304	eP	Pn	17 41 25.9 +0.8
	comp=Z,18nm,1.0s					
LPG	La Plagne	18.86	304	eP	Pn	17 41 25.9 +0.8
	comp=Z,18nm,1.0s					
LPL	La Plagne	18.88	304	eP	Pn	17 41 26.2 +0.9
	comp=Z,29nm,1.1s					
LPL	La Plagne	18.88	304	eP	Pn	17 41 26.2 +0.9
LPL				pmax	pmax	
	comp=Z,14nm,1.1s					
LPL	La Plagne	18.88	304	eP	Pn	17 41 26.2 +0.9
	comp=Z,14nm,1.1s					
LPL	La Plagne	18.88	304	eP	Pn	17 41 26.2 +0.9
	comp=Z,14nm,1.1s					
BFO	Black Forest	19.01	313	eP	Pn	17 41 27.1 +0.2
	comp=Z,16nm,1.3s					
BFO	Black Forest	19.01	313	eP	Pn	17 41 28.7 +1.8
BFO				pmax	pmax	
	comp=Z,13nm,1.1s					
BFO	Black Forest	19.01	313	eP	Pn	17 41 28.7 +1.8
	comp=Z,13nm,1.1s					
SMRF	Simiane la Rot	19.25	299	eP	Pn	17 41 28.1 -1.7
	comp=Z,66nm,1.4s					
SMRF	Simiane la Rot	19.25	299	eP	Pn	17 41 28.1 -1.7
	comp=Z,66nm,1.4s					
SMRF	Simiane la Rot	19.25	299	eP	Pn	17 41 28.1 -1.7
	comp=Z,33nm,1.4s					
ORIF	Oris-en-Rattie	19.27	301	eP	Pn	17 41 29.2 -0.9
	comp=Z,41nm,1.0s					
ORIF				eMLR	MLR	
	comp=Z,214nm,21.8s					
ORIF	Oris-en-Rattie	19.27	301	eP	Pn	17 41 29.2 -0.9
ORIF				pmax	pmax	
	comp=Z,21nm,1.0s					
ORIF	Oris-en-Rattie	19.27	301	eP	Pn	17 41 29.2 -0.9
	comp=Z,20nm,1.0s					
ORIF	Oris-en-Rattie	19.27	301	eP	Pn	17 41 29.2 -0.9
	comp=Z,20nm,1.0s					
MOS	Moscow	19.57	14	eP	Pn	17 41 31.2 -2.3
MOS	Moscow	19.57	14	eP	Pn	17 41 31.2 -2.3
LANF	Langenberg	19.63	314	eP	Pn	17 41 32.5 -1.9
LANF	Langenberg	19.63	314	eP	Pn	17 41 32.5 -1.9
ECH	Echery	19.65	312	eP	Pn	17 41 33.5 -1.1
ECH				pmax	pmax	
	comp=Z,16nm,1.3s					
ECH	Echery	19.65	312	eP	Pn	17 41 33.5 -1.1
	comp=Z,16nm,1.3s					
ECH	Echery	19.65	312	eP	Pn	17 41 33.5 -1.1
	comp=Z,16nm,1.3s					
HINF	Hinteralfeld	19.66	310	eP	Pn	17 41 35.1 +0.4
HINF	Hinteralfeld	19.66	310	eP	Pn	17 41 35.1 +0.4
CDF	Champ du Feu	19.67	312	eP	Pn	17 41 34.6 -0.2
CDF	Champ du Feu	19.67	312	eP	Pn	17 41 34.6 -0.2
CABF	La Chapelle	19.67	306	eP	Pn	17 41 35.0 +0.1
	comp=Z,41nm,1.1s					
CABF	La Chapelle	19.67	306	eP	Pn	17 41 35.0 +0.1
CABF				pmax	pmax	
	comp=Z,20nm,1.1s					
CABF	La Chapelle	19.67	306	eP	Pn	17 41 35.0 +0.1
	comp=Z,20nm,1.1s					
CABF	La Chapelle	19.67	306	eP	Pn	17 41 35.0 +0.1
	comp=Z,20nm,1.1s					
TNS	Taunus Mts	19.93	318	eP	Pn	17 41 38.4 +0.6
	comp=Z,33nm,1.1s					
HAU	Haudompre	20.05	310	eP	P	17 41 38.2 +0.7
HAU				eMLR	MLR	
	comp=Z,304nm,20.2s,MS3.3					
HAU	Haudompre	20.05	310	eP	P	17 41 38.2 +0.7
VIVF	Saint-Julien-l	20.09	301	eP	P	17 41 37.5 -0.4
	comp=Z,140nm,1.2s					
VIVF	Saint-Julien-l	20.09	301	eP	P	17 41 37.5 -0.4
VIVF				pmax	pmax	
	comp=Z,70nm,1.2s					
VIVF	Saint-Julien-l	20.09	301	eP	P	17 41 37.5 -0.4
	comp=Z,70nm,1.2s					
VIVF	Saint-Julien-l	20.09	301	eP	P	17 41 37.5 -0.4
	comp=Z,70nm,1.2s					
LASF	Ste Croix	20.48	298	eP	P	17 41 43.5 +1.2
	comp=Z,58nm,1.4s					
LASF	Ste Croix	20.48	298	eP	P	17 41 43.5 +1.2
	comp=Z,29nm,1.4s					
NRDL	Niedersach Rie	20.49	325	eP	P	17 41 44.6 +2.4
	comp=Z,28nm,1.2s					
WLF	Walferdange	20.91	314	eP	P	17 41 47.0 +0.2
	comp=Z,33nm,1.7s					
PLDF	La Plantade	21.09	303	eP	P	17 41 49.8 +1.0
PLDF	La Plantade	21.09	303	eP	P	17 41 49.8 +1.0
SMF	Signal de Mont	21.14	305	eP	P	17 41 48.9 -0.5
	comp=Z,53nm,1.2s,mb4.4					
SMF	Signal de Mont	21.14	305	eP	P	17 41 48.9 -0.5
SMF				pmax	pmax	
	comp=Z,26nm,1.2s,mb4.4					
SMF	Signal de Mont	21.14	305	eP	P	17 41 48.9 -0.5
	comp=Z,26nm,1.2s,mb4.4					
SMF	Signal de Mont	21.14	305	eP	P	17 41 48.9 -0.5
	comp=Z,26nm,1.2s,mb4.4					
LBL	Lubilhac	21.16	301	eP	P	17 41 51.2 +1.6
LBL	Lubilhac	21.16	301	eP	P	17 41 51.2 +1.6
BUG	Bochum--Univer	21.23	320	eP	P	17 41 52.6 +2.4
LOR	Lormes	21.33	307	eP	P	17 41 52.8 +1.4
	comp=Z,30nm,1.2s,mb4.2					
LOR				eMLR	MLR	
	comp=Z,152nm,17.9s,MS3.1					
LOR	Lormes	21.33	307	eP	P	17 41 52.8 +1.4
LOR				pmax	pmax	
	comp=Z,15nm,1.2s,mb4.2					
LOR				MLR	MLR	
	comp=Z,150nm,17.9s,MS3.4					
LOR	Lormes	21.33	307	eP	P	17 41 52.8 +1.4
	comp=Z,15nm,1.2s,mb4.2					
LOR				LR	LR	
	comp=Z,150nm,17.9s,MS3.4					
LOR	Lormes	21.33	307	eP	P	17 41 52.8 +1.4
	comp=Z,15nm,1.2s,mb4.2					
BSEG	Bad Segeberg	21.38	328	eP	P	17 41 53.8 +1.9
	comp=Z,30nm,1.3s,mb4.5					
SSF	Saint Saulge	21.49	306	eP	P	17 41 52.8 -0.3
	comp=Z,22nm,1.0s,mb4.1					
SSF	Saint Saulge	21.49	306	eP	P	17 41 52.8 -0.3
SSF				pmax	pmax	
	comp=Z,11nm,1.0s,mb4.1					
SSF	Saint Saulge	21.49	306	eP	P	17 41 52.8 -0.3
	comp=Z,11nm,1.0s,mb4.1					
SSF	Saint Saulge	21.49	306	eP	P	17 41 52.8 -0.3
	comp=Z,11nm,1.0s,mb4.2					
AVF	Avril sur Loir	21.51	305	eP	P	17 41 54.2 +0.9
	comp=Z,30nm,1.2s,mb4.3					
AVF	Avril sur Loir	21.51	305	eP	P	17 41 54.2 +0.9
AVF				pmax	pmax	
	comp=Z,15nm,1.2s,mb4.3					
AVF	Avril sur Loir	21.51	305	eP	P	17 41 54.2 +0.9
	comp=Z,15nm,1.2s,mb4.3					
AVF	Avril sur Loir	21.51	305	eP	P	17 41 54.2 +0.9
	comp=Z,15nm,1.2s,mb4.3					
VSU	Vasula	21.52	356	eP	P	17 41 52.0 -1.3
VSU	Vasula	21.52	356	eP	P	17 41 52.0 -1.3
MTLF	Montolieu	21.53	295	eP	P	17 41 54.1 +0.5
	comp=Z,38nm,1.3s,mb4.3					
MTLF	Montolieu	21.53	295	eP	P	17 41 54.1 +0.5
MTLF				pmax	pmax	
	comp=Z,19nm,1.3s,mb4.4					
MTLF	Montolieu	21.53	295	eP	P	17 41 54.1 +0.5
	comp=Z,19nm,1.3s,mb4.4					
MTLF	Montolieu	21.53	295	eP	P	17 41 54.1 +0.5
	comp=Z,19nm,1.3s,mb4.3					
BGF	Bois d'Agland	21.77	304	eP	P	17 41 57.0 +0.8
	comp=Z,43nm,1.2s,mb4.5					
BGF	Bois d'Agland	21.77	304	eP	P	17 41 57.0 +0.8

RJF *e*MLR MLR
comp=Z,191nm,20.8s,MS3.2
RJF Les Rejaudoux 22.37 300 *e*P **P 17 42 03.1 +0.6**
RJF LR LR
comp=Z,190nm,20.8s,MS3.5
RJF Les Rejaudoux 22.37 300 *e*P **P 17 42 03.1 +0.6**
LFF La Frestale 22.84 299 *e*P **P 17 42 07.1 -0.4**
LFF La Frestale 22.84 299 *e*P **P 17 42 07.1 -0.4**
ETSF Etsaut 23.51 294 *e*P **P 17 42 13.1 -1.5**
comp=Z,16nm,1.0s,mb4.1
ETSF Etsaut 23.51 294 *e*P **P 17 42 13.1 -1.5**
ETSF pmax pmax
comp=Z,8.0nm,1.0s,mb4.1
ETSF Etsaut 23.51 294 *e*P **P 17 42 13.1 -1.5**
comp=Z,7.9nm,1.0s,mb4.1
ETSF Etsaut 23.51 294 *e*P **P 17 42 13.1 -1.5**
comp=Z,7.9nm,1.0s,mb4.1
MFF Saint Martin d 23.78 303 *e*P **P 17 42 17.1 0.0**
comp=Z,16nm,0.9s,mb4.2
MFF Saint Martin d 23.78 303 *e*P **P 17 42 17.1 0.0**
MFF pmax pmax
comp=Z,8.0nm,0.9s,mb4.2
MFF Saint Martin d 23.78 303 *e*P **P 17 42 17.1 0.0**
comp=Z,8.2nm,0.9s,mb4.2
MFF Saint Martin d 23.78 303 *e*P **P 17 42 17.1 0.0**
comp=Z,8.2nm,0.9s,mb4.2
SJPF Ste Jean 24.01 294 *e*P **P 17 42 18.3 -0.9**
comp=Z,131nm,1.5s,mb4.8
SJPF Ste Jean 24.01 294 *e*P **P 17 42 18.3 -0.9**
SJPF pmax pmax
comp=Z,65nm,1.5s,mb4.8
SJPF Ste Jean 24.01 294 *e*P **P 17 42 18.3 -0.9**
comp=Z,65nm,1.5s,mb4.8
SJPF Ste Jean 24.01 294 *e*P **P 17 42 18.3 -0.9**
comp=Z,65nm,1.5s,mb4.8
FINES FINESS Array B 24.53 356 P **P 17 42 24.0 +0.3**
comp=Z,7.2nm,0.8s,mb4.3,baz=147,slow=11,SNR=20
FINES LR LR 17 52 44.1
comp=Z,112nm,18.9s,MS3.4,baz=8.1,slow=38
FINES FINESS Array B 24.53 356 P **P 17 42 24.0 +0.3**
FINES pmax pmax
comp=Z,7.0nm,0.8s
FINES MLR MLR
comp=Z,112nm,18.9s
FINES FINESS Array B 24.53 356 P **P 17 42 24.0 +0.3**
comp=Z,112nm,18.9s
AKTK Aktyubinsk 24.56 48 P **P 17 42 23.2 -0.9**
AKTK LR LR 17 56 19.6
AKTK Aktyubinsk 24.56 48 P **P 17 42 23.3 -0.9**
comp=Z,70nm,18.8s
AKTO Aktyubinsk 24.56 48 P **P 17 42 23.2 -0.9**
comp=Z,9.0nm,0.8s,mb4.4,baz=248,slow=6.7,SNR=14
AKTO LR LR 17 56 19.6
comp=Z,70nm,18.8s,MS3.2,baz=47,slow=47
AKTO Aktyubinsk 24.56 48 P **P 17 42 23.3 -0.9**
AKTO pmax pmax
comp=Z,9.0nm,0.8s,mb4.3
AKTO MLR MLR
comp=Z,70nm,18.8s,MS3.2
GRR Gorron 24.70 307 *e*P **P 17 42 25.3 -0.1**
comp=Z,15nm,0.8s,mb4.3
GRR Gorron 24.70 307 *e*P **P 17 42 25.3 -0.1**
GRR pmax pmax
comp=Z,8.0nm,0.8s,mb4.3
GRR Gorron 24.70 307 *e*P **P 17 42 25.3 -0.1**
comp=Z,7.7nm,0.8s,mb4.3
GRR Gorron 24.70 307 *e*P **P 17 42 25.3 -0.1**
comp=Z,7.7nm,0.8s,mb4.3
TAM Tamanrasset 24.88 242 *e*P **P 17 42 26.8 -0.5**
TAM pmax pmax
comp=Z,6.0nm,0.8s,mb4.2
TAM Tamanrasset 24.88 242 *e*P **P 17 42 26.8 -0.5**
comp=Z,5.6nm,0.8s,mb4.2
TAM Tamanrasset 24.88 242 *e*P **P 17 42 26.8 -0.5**
comp=Z,5.6nm,0.8s,mb4.2
HFS Hagfors 25.18 342 P **P 17 42 29.1 -0.5**
comp=Z,7.4nm,0.7s,mb4.3,baz=146,slow=11,SNR=17
HFS LR LR 17 53 46.8
comp=Z,199nm,19.1s,MS3.6,baz=153,slow=40
HFS Hagfors 25.18 342 P **P 17 42 29.2 -0.5**
ABKAR Akbulak array 25.34 51 *e*P **P 17 42 29.2 -2.0**
SGMF Saint Gilles 25.76 306 *e*P **P 17 42 35.3 +0.2**
comp=Z,84nm,1.4s,mb4.8
SGMF Saint Gilles 25.76 306 *e*P **P 17 42 35.3 +0.2**
SGMF pmax pmax
comp=Z,42nm,1.4s,mb4.8
SGMF Saint Gilles 25.76 306 *e*P **P 17 42 35.3 +0.2**
comp=Z,42nm,1.4s,mb4.8
SGMF Saint Gilles 25.76 306 *e*P **P 17 42 35.3 +0.2**
comp=Z,42nm,1.4s,mb4.8
QUIF Quistinic 26.08 305 *e*P **P 17 42 38.2 +0.2**
QUIF Quistinic 26.08 305 *e*P **P 17 42 38.2 +0.2**
ESDC Sonseca Array 26.09 286 P **P 17 42 37.5 -0.6**
comp=Z,9.6nm,0.8s,mb4.4,baz=79,slow=9.9,SNR=21
ESDC Sonseca Array 26.09 286 P **P 17 42 37.5 -0.6**
ESLA Sonseca Array 26.09 286 *e*P **P 17 42 38.2 +0.1**
comp=Z,4.1nm,0.9s,mb4.0
ESLA Sonseca Array 26.09 286 *e*P **P 17 42 38.2 +0.1**
comp=Z,4.1nm,0.9s,mb4.0
ROSF Rostrenen 26.25 306 *e*P **P 17 42 39.0 -0.5**
comp=Z,35nm,1.1s,mb4.5
ROSF Rostrenen 26.25 306 *e*P **P 17 42 39.0 -0.5**
ROSF pmax pmax
comp=Z,18nm,1.1s,mb4.5
ROSF Rostrenen 26.25 306 *e*P **P 17 42 39.0 -0.5**
comp=Z,18nm,1.1s,mb4.5
ROSF Rostrenen 26.25 306 *e*P **P 17 42 39.0 -0.5**
comp=Z,18nm,1.1s,mb4.5
PAB San Pablo 26.40 286 *e*P **P 17 42 42.5 +1.6**
PAB pmax pmax
comp=Z,13nm,0.9s,mb4.5
PAB San Pablo 26.40 286 *e*P **P 17 42 42.5 +1.5**
comp=Z,14nm,0.9s,mb4.5
PAB San Pablo 26.40 286 *e*P **P 17 42 42.5 +1.6**
comp=Z,14nm,0.9s,mb4.5
NB2 NORSAR Subarra 26.60 340 P **P 17 42 42.1 -0.4**
comp=Z,3.4nm,0.9s,mb3.9,baz=145,slow=10
NB2 NORSAR Subarra 26.60 340 P **P 17 42 42.1 -0.4**
comp=Z,3.4nm,0.9s,mb3.9,SNR=1.5
NOA NORSAR Array B 26.60 340 P **P 17 42 42.0 -0.6**
comp=Z,2.1nm,0.8s,mb3.8,baz=146,slow=9.0,SNR=11
NOA LR LR 17 54 07.0
comp=Z,88nm,20.1s,MS3.3,baz=140,slow=38
NOA NORSAR Array B 26.60 340 P **P 17 42 42.0 -0.5**
NOA pmax pmax
comp=Z,2.0nm,0.8s
NOA MLR MLR
comp=Z,88nm,20.1s
NOA NORSAR Array B 26.60 340 P **P 17 42 42.0 -0.5**
comp=Z,88nm,20.1s
ARU Arti 27.61 36 *d i*P **P 17 42 50.2 -1.4**
ARU *e* 17 43 35.4
ARU S **S 17 47 29.7 -3.0**
ARU pmax pmax
comp=Z,8.0nm,1.2s,mb4.2
ARU Arti 27.61 36 *e*P **P 17 42 49.9 -1.7**
comp=Z,4.4nm,0.8s,mb4.1
ARU Arti 27.61 36 *i*P **P 17 42 50.2 -1.4**
comp=Z,8.0nm,1.2s,mb4.2
ATD Arta Tunnel 28.18 151 LR LR 17 56 17.2
comp=Z,42nm,19.1s,MS3.0,baz=305,slow=41
EKA Eskdalemuir Ar 28.58 320 P **P 17 43 00.5 +0.2**
comp=Z,1.8nm,1.0s,mb3.8,baz=126,slow=12,SNR=4.5
EKA Eskdalemuir Ar 28.58 320 P **P 17 43 00.5 +0.2**
EKA pmax pmax
comp=Z,2.0nm,1.0s
EKA Eskdalemuir Ar 28.58 320 P **P 17 43 00.5 +0.2**
comp=Z,2.0nm,1.0s,mb3.8
SVE Sverdlovsk 28.80 36 *e*P **P 17 43 02.1 -0.1**
SVE pmax pmax
comp=Z,12nm,0.9s,mb4.6
SVE Sverdlovsk 28.80 36 *e*P **P 17 43 02.1 -0.1**
comp=Z,12nm,0.9s,mb4.6
ARCES ARCESS Array B 32.64 358 P **P 17 43 35.2 -0.7**
comp=Z,4.8nm,0.8s,mb4.5,baz=163,slow=6.6,SNR=10
ARCES ARCESS Array B 32.64 358 P **P 17 43 35.2 -0.7**
ARCES pmax pmax
comp=Z,5.0nm,0.9s
ARCES ARCESS Array B 32.64 358 P **P 17 43 35.2 -0.7**
ARCES ARCESS Array B 32.64 358 P **P 17 43 35.2 -0.7**
comp=Z,5.0nm,0.9s,mb4.4
TORD Torodi Ar. Bea 34.23 233 P **P 17 43 48.4 -1.9**
comp=Z,22nm,0.8s,mb5.1,baz=35,slow=9.0,SNR=52
TORD LR LR 17 59 51.6
comp=Z,74nm,19.9s,MS3.4,baz=95,slow=40
TORD Torodi Ar. Bea 34.23 233 P **P 17 43 48.4 -1.9**
TORD LR LR 17 59 51.6

AAK Ala-Archa 34.88 66 P **P 17 43 55.1 -0.7**
comp=Z,1.6nm,0.4s,mb4.3,baz=197,slow=7.0,SNR=4.7
AAK Ala-Archa 34.88 66 P **P 17 43 55.1 -0.7**
AAK pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
AAK Ala-Archa 34.88 66 P **P 17 43 55.1 -0.7**
comp=Z,2.0nm,0.4s,mb4.4
KURK Kurchatov 37.44 53 P **P 17 44 15.8 -1.8**
comp=Z,7.4nm,1.0s,mb4.5,baz=276,slow=8.8,SNR=12
KURK Kurchatov 37.44 53 *c e*P **P 17 44 16.5 -1.1**
KURK pmax pmax
comp=Z,12nm,1.2s,mb4.6
KURK Kurchatov 37.44 53 *e*P **P 17 44 16.5 -1.1**
comp=Z,12nm,1.2s,mb4.6
MK31 Makanchi Array 39.99 59 *e*P **P 17 44 37.8 -1.3**
MK31 Makanchi Array 39.99 59 *e*P **P 17 44 37.8 -1.3**
MKAR Makanchi Array 39.99 59 P **P 17 44 37.8 -1.3**
comp=Z,6.5nm,0.9s,mb4.3,baz=279,slow=6.4,SNR=26
MKAR LR LR 18 05 24.0
comp=Z,36nm,19.4s,MS3.2,baz=75,slow=43
MKAR Makanchi Array 39.99 59 P **P 17 44 37.8 -1.3**
MKAR pmax pmax
comp=Z,7.0nm,0.9s
MKAR MLR MLR
comp=Z,36nm,19.4s
NVS Novosibirsk 40.43 46 *i*P **P 17 44 41.1 -1.5**
NVS Novosibirsk 40.43 46 *i*P **P 17 44 41.1 -1.5**
ZALV Zalesovo Beam 41.33 48 P **P 17 44 48.5 -1.4**
comp=Z,0.8nm,0.5s,mb3.6,baz=263,slow=10,SNR=5.2
ZALV LR LR 18 04 57.6
comp=Z,28nm,18.2s,MS3.2,baz=40,slow=40
ZALV Zalesovo Beam 41.33 48 P **P 17 44 48.5 -1.5**
ZALV pmax pmax
comp=Z,1.0nm,0.5s,mb3.7
ZALV MLR MLR
comp=Z,28nm,18.2s,MS3.2
ZALV Zalesovo Beam 41.33 48 P **P 17 44 48.5 -1.5**
comp=Z,28nm,18.2s
DBIC Dimbokro 43.32 234 P **P 17 45 04.6 -2.0**
comp=Z,7.8nm,0.9s,mb4.4,baz=50,slow=6.5,SNR=4.6
DBIC Dimbokro 43.32 234 P **P 17 45 04.6 -2.0**
DBIC pmax pmax
comp=Z,8.0nm,0.9s
DBIC Dimbokro 43.32 234 P **P 17 45 04.6 -2.0**
comp=Z,8.0nm,0.9s,mb4.5
LIC Lamto 43.76 234 *e*P **P 17 45 10.8 +0.6**
comp=Z,18nm,0.9s,mb4.5
LIC Lamto 43.76 234 *e*P **P 17 45 10.8 +0.6**
comp=Z,9.1nm,0.9s,mb4.5
LIC Lamto 43.76 234 *e*P **P 17 45 10.8 +0.6**
comp=Z,9.1nm,0.9s,mb4.5
KOLN Koldanda 46.29 85 *e*P **P 17 45 28.5 -1.7**
GKN Gorkha 47.01 84 *e*P **P 17 45 33.9 -2.0**
comp=Z,37nm,0.8s,mb5.3
DMN Daman 47.56 85 *e*P **P 17 45 38.5 -1.6**
comp=Z,48nm,0.9s,mb5.5
KKN Kakani 47.62 84 *e*P **P 17 45 38.6 -2.0**
comp=Z,17nm,0.6s,mb5.2
PKIN Phulchiki 47.80 84 *e*P **P 17 45 40.6 -1.4**
PKI Pulchoki 47.82 84 *e*P **P 17 45 40.3 -1.8**
comp=Z,43nm,0.9s,mb5.5
GUN Gumba 48.04 84 *e*P **P 17 45 43.1 -0.8**
comp=Z,33nm,0.6s,mb5.5
JIRN Jiri 48.40 84 *e*P **P 17 45 44.8 -1.8**
RAMN Ramite 49.04 85 *e*P **P 17 45 49.3 -2.3**
comp=Z,49nm,1.0s,mb5.5
ODAN Odare 49.71 84 *e*P **P 17 45 54.3 -2.4**
comp=Z,12nm,0.8s,mb5.0
TAPN Taplejung 49.74 83 *e*P **P 17 45 56.4 -0.6**
GTA Gaotai 54.18 64 *e*P **P 17 46 28.7 -1.2**
GTA pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
SONM Songino Array 55.75 53 P **P 17 46 39.8 -1.3**
comp=Z,1.1nm,0.6s,mb4.1,baz=271,slow=6.9,SNR=2.4
SONM Songino Array 55.75 53 P **P 17 46 39.8 -1.3**
SONM pmax pmax
comp=Z,1.0nm,0.6s
SONM Songino Array 55.75 53 P **P 17 46 39.8 -1.3**
comp=Z,1.0nm,0.6s,mb4.0
ULN Ulaanbaatar 56.16 52 *e*P **P 17 46 42.7 -1.3**
ULN pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
ULN Ulaanbaatar 56.16 52 *e*P **P 17 46 42.7 -1.3**
comp=Z,1.9nm,0.8s,mb4.2
ULN Ulaanbaatar 56.16 52 *e*P **P 17 46 42.7 -1.3**
comp=Z,1.9nm,0.8s,mb4.2
FRB Frobisher Bay 60.74 330 LR LR 18 11 49.8
comp=Z,69nm,18.9s,MS3.8,baz=34,slow=34
HHC Hu-ho-hao-te 61.86 58 *e*P **P 17 47 22.2 -1.5**
HHC S **S 17 55 42.7 -4.2**
HHC pmax pmax
comp=Z,13nm,0.7s,mb5.2
HHC pmax pmax
comp=Z,36nm,7.3s
RES Resolute Bay 62.70 346 LR LR 18 18 19.8
comp=Z,44nm,18.5s,MS3.7,baz=342,slow=40
CMAR Chiang Mai Arr 63.12 86 P **P 17 47 29.8 -2.7**
comp=Z,1.9nm,0.8s,mb4.3,baz=296,slow=7.7,SNR=12
CMAR Chiang Mai Arr 63.12 86 P **P 17 47 29.8 -2.6**
CMAR pmax pmax
comp=Z,2.0nm,0.8s
SCHQ Schefferville 63.90 320 P **P 17 47 36.7 -0.3**
comp=Z,4.3nm,0.8s,mb4.5,baz=45,slow=9.1,SNR=3.8
SCHQ LR LR 18 12 59.6
comp=Z,66nm,21.4s,MS3.8,baz=41,slow=34
SCHQ Schefferville 63.90 320 P **P 17 47 36.7 -0.3**
SCHQ LR LR 18 12 59.6
SCHQ Schefferville 63.90 320 P **P 17 47 36.7 -0.3**
BOSA Boshof 65.39 184 LR LR 18 20 35.6
comp=Z,55nm,18.9s,MS3.8,baz=44,slow=40
BILL Bilibino 70.42 16 *i*P **P 17 48 17.7 -0.5**
BILL *e* 17 50 51.6
BILL *e*S S 17 57 22.9 -7.2
BILL pmax pmax
comp=Z,11nm,1.2s,mb4.7
BILL Bilibino 70.42 16 *i*P **P 17 48 17.7 -0.5**
comp=Z,11nm,1.2s,mb4.7
INK Inuvik 74.20 353 LR LR 18 25 10.2
comp=Z,46nm,18.6s,MS3.8,baz=26,slow=39
KSRS Korea Array 74.53 55 P **P 17 48 41.5 -1.7**
comp=Z,1.2nm,0.7s,mb3.9,baz=311,slow=4.2,SNR=4.2
KSRS LR LR 18 24 21.2
comp=Z,35nm,19.5s,MS3.7,baz=261,slow=38
KSRS Korea Array 74.53 55 P **P 17 48 41.5 -1.7**
KSRS pmax pmax
comp=Z,1.0nm,0.7s,mb3.9
KSRS MLR MLR
comp=Z,35nm,19.5s,MS3.7
KSRS Korea Array 74.53 55 P **P 17 48 41.5 -1.7**
comp=Z,35nm,19.5s
YKA Yellowknife Ar 76.65 344 P **P 17 48 54.2 -0.6**
comp=Z,4.1nm,1.0s,mb4.3,baz=30,slow=5.9,SNR=8.7
YKA Yellowknife Ar 76.65 344 P **P 17 48 54.2 -0.7**
YKA pmax pmax
comp=Z,4.0nm,1.0s
YKA Yellowknife Ar 76.65 344 P **P 17 48 54.2 -0.7**
comp=Z,4.0nm,1.0s,mb4.3
FFC Flin Flon 79.49 334 *i*P **P 17 49 10.7 -0.1**
FFC Flin Flon 79.49 334 *i*P **P 17 49 10.7 -0.1**
PETK Petropavlovsk- 79.74 29 LR LR 18 30 05.4
comp=Z,30nm,18.6s,MS3.7,baz=171,slow=40
TGY Tagaytay City 82.99 78 LR LR 18 27 49.9
comp=Z,1.1nm,19.9s,MS2.2,baz=154,slow=37
ASAR Alice Springs 115.16 101 PKP PKiKP 17 55 44.7 -1.4
comp=Z,0.3nm,0.7s,baz=324,slow=1.7,SNR=4.7

*ISCJB **03** 17:38:45.5±1.7,20°.2S±0°.2×178°.1W±0°.2, h477km±21km, mb3.5/7, Error ellipse: s-maj=35.3km s-min=16.6km az=142.6*
*NEIC **03** 17:38:46.9±1.2,20°.31S×177°.97W, h490km±14km, mb3.6/1, Error ellipse: s-maj=26.0km s-min=12.1km az=144.0*
*IDC **03** 17:38:47.1±2.3,20°.33S×177°.97W, h490km±26km, mb3.2/6, mb1 3.6/8, mb1mx3.3/17, mbtmp3.3/8, Error ellipse: s-maj=35.0km s-min=15.1km az=151.0*

ISC 03 17:38:46.5±1.6, 20°.3S±0°.2×178°.0W±0°.2, h479km±21km, **n16,** σ0°31/9, **mb3.5/7, 1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.73**	**44**	P	**P**	**17 40 50.3**	**0.0**
	3.4nm,0.3s,baz=197,slow=19.3,SNR=4.3						
URZ	**Urewera**	**18.36**	**192**	P	**P**	**17 42 31.1**	**0.0**
	2.0nm,0.3s,baz=306,slow=0.9,SNR=11						
ASAR	**Alice Springs**	**44.56**	**257**	P	**P**	**17 46 15.3**	**+0.3**
	1.4nm,0.6s,mb3.5,baz=91,slow=8.2,SNR=33						
ASAR				PcP	PcP	17 47 47.1	-1.0
	0.6nm,0.6s,baz=104,slow=4.2,SNR=9.2						
WRAB	**Tennant Creek**	**44.62**	**262**	*e*P	**P**	**17 46 15.2**	**-0.3**
	0.8nm,0.4s,mb3.5						
WRA	**Warramunga Arr**	**44.63**	**262**	P	**P**	**17 46 15.4**	**-0.2**
	0.5nm,0.3s,mb3.4,baz=96,slow=7.6,SNR=29						
NVAR	**Mina Array Bea**	**80.90**	**43**	P	**P**	**17 50 10.2**	**+0.1**
	1.0nm,0.8s,mb3.4,baz=225,slow=9.5,SNR=7.3						
TXAR	**Lajitas Array**	**86.97**	**57**	P	**P**	**17 50 40.6**	**+0.3**
	0.7nm,0.6s,mb3.5,baz=217,slow=7.0,SNR=13						
PDAR	**Pinedale Array**	**88.84**	**43**	P	**P**	**17 50 48.1**	**-0.6**
	1.0nm,0.6s,mb3.8,baz=217,slow=2.9,SNR=4.6						
CMAR	**Chiang Mai Arr**	**90.06**	**290**	P	**P**	**17 50 55.4**	**+0.4**
	0.5nm,0.7s,mb3.5,baz=90,slow=3.9,SNR=3.5						
ARCES	**ARCESS Array B**	**128.76**	**350**	PKP	PKPdf	17 56 56.6	-1.5
	1.3nm,0.8s,baz=64,slow=2.8,SNR=4.5						
AKASG	**Malin Array Be**	**142.88**	**331**	PKhKP		17 57 19.6	
	0.7nm,0.3s,baz=43,slow=4.8,SNR=12						
EKA	**Eskdalemuir Ar**	**144.84**	**5**	PKP	PKPdf	17 57 26.4	-1.5
	1.2nm,0.7s,baz=344,slow=2.8,SNR=6.2						
BRTR	**Keskin Array B**	**146.73**	**312**	PKPbc	PKPbc	17 57 32.7	-1.6
	1.1nm,0.6s,baz=129,slow=4.1,SNR=5.7						
MMAI	**Mount Meron Ar**	**147.74**	**300**	PKPbc	PKPbc	17 57 36.1	-1.0
	1.2nm,0.4s,baz=70,slow=4.7,SNR=4.5						
CLL	**Collm**	**147.91**	**347**	‖ *i*PKPbc	PKPbc	17 57 35.4	-1.6
	comp=Z,7.0nm,0.8s						
BRG	**Berggiesshubel**	**148.11**	**346**	*e*P	PKPdf	17 57 35.8	+2.2
	comp=Z,2.8nm,0.9s						

IDC 03 17:56:34.7±17.0, 5°.38S×151°.12E, h125km±144km, **mb3.6/3, mb1 3.8/3, mb1mx3.3/15, mbtmp3.6/3, Error ellipse: s-maj=99.9km s-min=82.5km az=125.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.81**	**227**	P	P	18 01 16.9	-0.1
	1.7nm,0.7s,baz=52,slow=10,SNR=14						
ASAR	**Alice Springs**	**24.60**	**221**	P	P	18 01 43.5	+0.1
	3.4nm,0.8s,baz=59,slow=8.6,SNR=33						
FITZ	**Fitzroy Crossi**	**27.91**	**241**	P	P	18 02 13.4	+0.1
	5.5nm,1.2s,baz=65,slow=14,SNR=3.5						
TORD	**Torodi Ar. Bea**	**148.88**	**287**	PKPbc	PKPbc	18 16 08.3	-0.5
	0.5nm,0.7s,baz=69,slow=2.0,SNR=3.5						

*IDC **03** 18:01:42.7±1.9, 36°.81N×29°.25E, h0km, mb3.6/1, mb1 3.3/4, mb1mx3.2/24, mbtmp3.3/4, ML3.1/3, Error ellipse: s-maj=38.1km s-min=20.8km az=161.0*
*CSEM **03** 18:01:43.8±0.1, 36°.98N×29°.14E, h2km, MD3.2, Error ellipse: s-maj=3.4km s-min=2.3km az=165.0*
*NEIC **03** 18:01:43.0, 37°.05N×29°.15E, h5km, MD3.6(ATH), MD3.2(ISK), After ISK.*
*ISCJB **03** 18:01:43.5±0.4, 36°.96N±0°.02×29°.15E±0°.02, h2km±4km, Error ellipse: s-maj=3.9km s-min=3.0km az=156.4*
*DDA **03** 18:01:43.7, 36°.99N×29°.17E, h13km±3km, Md3.3*
*ISK **03** 18:01:43.6, 37°.05N×29°.15E, h2km, MD3.2*
*ATH **03** 18:01:43.7, 36°.96N×29°.28E, h35km, MD3.6/6*

ISC 03 18:01:44.2±0.4, 36°.97N±0°.02×29°.16E±0°.02, h4km±3km, **n89,** σ0°85/118, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.33**	**56**	*e*PG	**Pg**	**18 01 50.0**	**-0.6**
GLHS				*e*SG	**Sg**	**18 01 55.3**	**+0.5**
GLHS	**Glhisar (BURDU**	**0.33**	**56**	*e*Pg	**Pg**	**18 01 50.0**	**-0.5**
GLHS				*e*Sg	**Sg**	**18 01 55.3**	**+0.5**
GOLH	**Golhisar**	**0.42**	**51**	*i*P	**Pg**	**18 01 51.3**	**-0.9**
GOLH				*i*S	**Sg**	**18 01 58.6**	**+1.0**
GOLH	**Golhisar**	**0.42**	**51**	*i*P	**Pg**	**18 01 51.3**	**-0.9**
GOLH				*i*S	**Sg**	**18 01 58.6**	**+1.0**
TURN	**Turunc**	**0.46**	**257**	*i*P	**Pg**	**18 01 58.4**	**+5.4**
TURN				*i*S	**Sg**	**18 02 10.5**	**+12**
ELL	**Elmali**	**0.64**	**110**	*e*PG	**Pg**	**18 01 57.4**	**+0.8**
ELL	**Elmali**	**0.64**	**110**	*e*Pg	**Pg**	**18 01 57.4**	**+0.8**
YER	**Yerkesik**	**0.72**	**283**	*e*PG	**Pg**	**18 01 57.9**	**-0.1**
YER	**Yerkesik**	**0.72**	**283**	*e*Pg	**Pg**	**18 01 57.9**	**-0.1**
DNZL	**Cakiroluk**	**0.72**	**353**	*i*P	**Pg**	**18 01 57.0**	**-1.0**
DNZL				*i*S	**Sg**	**18 02 08.6**	**+1.2**
DNZL	**Cakiroluk**	**0.72**	**353**	*i*P	**Pg**	**18 01 57.0**	**-1.0**
DNZL				*i*S	**Sg**	**18 02 08.6**	**+1.2**
DENT	**Denizli**	**0.79**	**353**	*e*PG	**Pg**	**18 01 58.0**	**-1.3**
DENT	**Denizli**	**0.79**	**353**	*e*Pg	**Pg**	**18 01 58.0**	**-1.3**
AKAS	**Kas**	**0.82**	**154**	*i*P	**Pg**	**18 01 59.8**	**-0.1**
AKAS	**Kas**	**0.82**	**154**	*i*P	**Pg**	**18 01 59.8**	**-0.2**
KSL	**Kastellorizon**	**0.89**	**157**	*e*Pn	**Pg**	**18 02 00.7**	**-0.6**
KSL				*e*Sn	**Sg**	**18 02 11.9**	**-0.9**
KSL	**Kastellorizon**	**0.89**	**157**	*e*PN	**Pg**	**18 02 00.7**	**-0.6**
KSL				*e*SN	**Sg**	**18 02 11.9**	**-0.9**
KORT	**Korkueli**	**0.96**	**88**	*i*P	**Pg**	**18 02 01.8**	**-0.8**
KORT				*i*S	**Sg**	**18 02 18.4**	**+3.5**
KORT	**Korkueli**	**0.96**	**88**	*i*P	**Pg**	**18 02 01.8**	**-0.7**
KORT				*i*S	**Sg**	**18 02 18.4**	**+3.5**
ARG	**Arkhangelos**	**1.12**	**228**	*e*Pn	**Pg**	**18 02 05.6**	**-0.1**
ARG				*e*Sn	**Sg**	**18 02 22.3**	**+2.0**
ARG	**Arkhangelos**	**1.12**	**228**	*e*PN	**Pg**	**18 02 05.6**	**-0.1**
ARG				*e*SN	**Sg**	**18 02 22.3**	**+2.0**
ARG	**Arkhangelos**	**1.12**	**228**	*e*Pn	**Pg**	**18 02 05.6**	**-0.1**
ARG				*e*Sn	**Sg**	**18 02 22.3**	**+2.0**
MLSB	**Milas**	**1.15**	**287**	*e*PN	**Pg**	**18 02 06.0**	**-0.2**
MLSB	**Milas**	**1.15**	**287**	*e*Pn	**Pg**	**18 02 06.0**	**-0.2**
ANTB	**Antalya**	**1.20**	**93**	*e*PN	**Pn**	**18 02 07.7**	**-0.1**
ANTB	**Antalya**	**1.20**	**93**	*e*Pn	**Pn**	**18 02 07.7**	**-0.1**
AYDN	**Tasoluk**	**1.23**	**304**	*i*P	**Pg**	**18 02 07.3**	**-0.5**
AYDN				*i*S	**Sg**	**18 02 24.4**	**+0.7**
AYDN	**Tasoluk**	**1.23**	**304**	*i*P	**Pg**	**18 02 07.3**	**-0.4**
AYDN				*i*S	**Sg**	**18 02 24.4**	**+0.7**
BCK	**Bucak**	**1.24**	**67**	*e*PN	**Pn**	**18 02 07.8**	**-0.6**
BCK	**Bucak**	**1.24**	**67**	*e*Pn	**Pn**	**18 02 07.8**	**-0.6**
DAT	**Datca**	**1.29**	**260**	*e*PN	**Pn**	**18 02 09.3**	**+0.3**
DAT	**Datca**	**1.29**	**260**	*e*Pn	**Pn**	**18 02 09.3**	**+0.3**
BDRM	**Kayabasi**	**1.37**	**274**	*i*P	**Pn**	**18 02 10.1**	**0.0**
BDRM				*i*S	**Sg**	**18 02 29.5**	**+1.2**
BDRM	**Kayabasi**	**1.37**	**274**	*i*P	**Pn**	**18 02 10.1**	**-0.1**
BDRM				*i*S	**Sg**	**18 02 29.5**	**+1.2**
KHL	**Karahalli**	**1.38**	**12**	*e*PN	**Pn**	**18 02 09.4**	**-0.8**
KHL	**Karahalli**	**1.38**	**12**	*e*Pn	**Pn**	**18 02 09.5**	**-0.7**
ISP	**Isparta**	**1.38**	**52**	*e*PN	**Pn**	**18 02 10.2**	**-0.1**
ISP	**Isparta**	**1.38**	**52**	*e*P	**Pn**	**18 02 10.7**	**+0.5**
ISP	**Isparta**	**1.38**	**52**	*e*Pn	**Pn**	**18 02 10.2**	**0.0**
ISP	**Isparta**	**1.38**	**52**	*e*P	**Pn**	**18 02 10.7**	**+0.5**
KHAL	**Karahalli**	**1.42**	**11**	*i*P	**Pn**	**18 02 10.1**	**-0.7**
KHAL				*i*S	**Sb**	**18 02 30.6**	**+0.9**
KHAL	**Karahalli**	**1.42**	**11**	*i*P	**Pn**	**18 02 10.1**	**-0.7**
KHAL				*i*S	**Sb**	**18 02 30.6**	**+0.9**
BODT	**Bodrum**	**1.48**	**274**	*e*PN	**Pn**	**18 02 11.9**	**+0.3**
BODT	**Bodrum**	**1.48**	**274**	*e*Pn	**Pn**	**18 02 12.0**	**+0.4**
SUTC	**Sutluce-Ispart**	**1.55**	**71**	*e*PN	**Pn**	**18 02 12.9**	**+0.2**
SUTC	**Sutluce-Ispart**	**1.55**	**71**	*e*Pn	**Pn**	**18 02 12.9**	**+0.2**
KULA	**Kula-Manisa**	**1.59**	**346**	*e*PN	**Pn**	**18 02 12.3**	**-0.8**
KULA	**Kula-Manisa**	**1.59**	**346**	*e*Pn	**Pn**	**18 02 12.3**	**-0.8**
SHUT	**Suhut-Afyon**	**1.93**	**35**	*e*PN	**Pn**	**18 02 17.7**	**-0.1**
SHUT	**Suhut-Afyon**	**1.93**	**35**	*e*Pn	**Pn**	**18 02 17.7**	**-0.1**
SMG	**Samos**	**1.99**	**292**	*e*Pn	**Pn**	**18 02 17.6**	**-1.0**
SMG				*e*Sn	**Sn**	**18 02 43.0**	**-1.0**
SMG	**Samos**	**1.99**	**292**	*e*PN	**Pn**	**18 02 17.6**	**-1.0**
SMG				*e*SN	**Sn**	**18 02 43.0**	**-1.0**
SMG	**Samos**	**1.99**	**292**	*e*Pn	**Pn**	**18 02 17.6**	**-1.0**
SMG				*e*Sn	**Sn**	**18 02 43.0**	**-1.0**
IZM	**Izmir**	**2.07**	**314**	*e*PN	**Pn**	**18 02 19.6**	**-0.1**
IZM	**Izmir**	**2.07**	**314**	*e*Pn	**Pn**	**18 02 19.6**	**-0.1**
KARP	**Karpathos**	**2.15**	**229**	*e*Pn	**Pn**	**18 02

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	Zakros	3.02	233	ePn	Pn	18 02 33.1	+0.3
ZKR	Zakros	3.02	233	ePN	Pn	18 02 33.1	+0.3
ZKR	Zakros	3.02	233	ePn	Pn	18 02 33.1	+0.3
NPS	Neapolis	3.34	240	ePn	Pn	18 02 36.7	-0.5
NPS	Neapolis	3.34	240	ePN	Pn	18 02 36.7	-0.5
NPS	Neapolis	3.34	240	ePn	Pn	18 02 36.7	-0.5
LAST	Lasithi	3.49	240	ePn	Pn	18 02 40.1	+0.9
LAST	Lasithi	3.49	240	ePN	Pn	18 02 40.1	+0.9
LAST	Lasithi	3.49	240	ePn	Pn	18 02 40.1	+0.9
IDI	Anoyia	3.84	245	Pn	Pn	18 02 43.7	-0.4
	0.4nm,0.3s,baz=70,slow=15,SNR=6.5						
IDI				Sn	Sn	18 03 31.5	+1.8
	1.4nm,0.3s,baz=60,slow=20,SNR=3.4						
IDI	Anoyia	3.84	245	ePn	Pn	18 02 43.6	-0.5
IDI	Anoyia	3.84	245	ePN	Pn	18 02 43.6	-0.5
IDI	Anoyia	3.84	245	ePn	Pn	18 02 43.6	-0.5
BRTR	Keskin Array B	4.47	51	Pn	Pn	18 02 52.3	-0.4
	0.5nm,0.3s,baz=225,slow=16,SNR=7.7						
BRTR				Sn	Sn	18 03 45.9	+0.8
	0.4nm,0.3s,baz=224,slow=25,SNR=6.5						
BRTR	Keskin Array B	4.47	51	Pn	Pn	18 02 52.3	-0.4
BRTR				Sn	Sn	18 03 45.9	+0.8
MMAI	Mount Meron Ar	6.47	126	Pn	Pn	18 03 19.2	-1.0
	2.0nm,0.3s,baz=303,slow=13,SNR=9.5						
MMAI				Sn	Sn	18 04 29.7	-4.8
	1.2nm,0.3s,baz=314,slow=26,SNR=3.5						
TORD	Torodi Ar. Bea	34.15	233	P	P	18 08 28.4	-2.0
	0.4nm,0.5s,baz=33,slow=8.8,SNR=5.0						

ISCJB **03** *18:04:03.6±0.5, 43°.74N±0°.04×105°.27W±0°.05, h0km, Error ellipse: s-maj=5.9km s-min=5.5km az=44.1*
IDC **03** *18:04:03.2±1.9, 43°.50N×105°.35W, h0km, mb4.5/1, mb1 4.2/4, mb1mx3.7/25, mbtmp4.1/4, ML3.7/3, Error ellipse: s-maj=49.9km s-min=8.3km az=152.0*
NEIC **03** *18:04:05.3±0.3, 43°.72N×105°.26W, h0km, ML3.2, Error ellipse: s-maj=4.4km s-min=4.1km az=138.0, Suspected Mining explosion.*
NEIC 65 km [40 miles] SSE of Gillette.

ISC 03 18:04:05.3±0.4, 43°.73N±0°.04×105°.25W±0°.05, h0km, n37, σ0°81/37, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.96	66	ePg	Pg	18 04 24.0	+0.4
PHWY	Pilot Hill	2.43	184	ePn	Pn	18 04 45.7	-0.5
RWWY	Rawlins	2.50	216	ePn	Pn	18 04 47.6	+0.5
LAO	LASA Array	3.04	347	ePn	Pn	18 04 54.9	+0.3
RLMT	Red Lodge	3.20	297	ePn	Pn	18 04 56.5	-0.2
BW06	Boulder Array	3.29	254	ePn	Pn	18 04 57.6	-0.4
PDAR	Pinedale Array	3.29	254	Pn	Pn	18 04 57.8	-0.2
PDAR				Lg		18 05 41.7	
PDAR	Pinedale Array	3.29	254	Pn	Pn	18 04 57.8	-0.2
	5.4nm,0.3s,baz=83,slow=15,SNR=89						
PDAR				Lg		18 05 41.7	
	20nm,0.3s,baz=80,slow=30,SNR=12						
OGNE	Ogallala	3.67	138	ePn	Pn	18 05 03.5	+0.4
GCMT	Greycliff	3.76	305	ePn	Pn	18 05 04.5	0.0
LOHW	Long Hollow	3.89	270	ePn	Pn	18 05 07.7	+1.5
ISCO	Idaho Springs	3.94	184	ePn	Pn	18 05 07.2	+0.3
SNOW	Snow King Moun	4.01	268	ePn	Pn	18 05 10.2	+2.3
IMW	Indian Meadow	4.12	274	ePn	Pn	18 05 09.5	+0.1
TPAW	Teton Pass	4.15	269	ePn	Pn	18 05 10.1	+0.3
RRI2	Red Ridge	4.43	267	ePn	Pn	18 05 13.7	0.0
DGMT	Dagmar	4.80	8	ePn	Pn	18 05 20.0	+1.3
BOZ	Bozeman (W)	4.94	295	ePn	Pn	18 05 19.6	-1.0
HWUT	Hardware Ranch	5.12	248	ePn	Pn	18 05 22.4	-0.7
	12nm,0.3s						
EGMT	Eagleton	5.32	325	ePn	Pn	18 05 25.7	-0.3
	17nm,0.4s						
DLMT	Dillon	5.50	290	ePn	Pn	18 05 27.6	-0.7
	3.0nm,0.3s						
DAU	Daniels Canyon	5.56	235	ePn	Pn	18 05 29.7	+0.5
	8.1nm,0.4s						
MCMT	McKenzie Canyo	5.56	284	ePn	Pn	18 05 32.8	+3.5
	2.0nm,0.3s						
PV04	Paradox Valley	6.00	209	ePn	Pn	18 05 35.8	+0.5
SRU	San Rafael	6.08	222	ePn	Pn	18 05 35.4	-0.9
ECSD	EROS Data Cent	6.26	87	ePn	Pn	18 05 39.1	+0.3
	6.5nm,0.3s						
TMUT	Trail Mountain	6.29	227	ePn	Pn	18 05 40.0	+0.7
	7.1nm,0.5s						
CHMT	Chamberlain Mo	6.48	302	ePn	Pn	18 05 41.6	-0.2
	1.8nm,0.3s						
DUG	Dugway	6.65	241	ePn	Pn	18 05 43.1	-1.1
	4.5nm,0.4s						
MSO	Missoula	6.87	300	ePn	Pn	18 05 46.8	-0.4
	1.7nm,0.3s						
SWMT	Swartz Lake	7.20	305	ePn	Pn	18 05 51.7	0.0
	3.8nm,0.3s						
MSU	Marysvale	7.38	227	ePn	Pn	18 05 54.2	0.0
	7.2nm,0.3s						
YBMT	Yellow Bay	7.39	307	ePn	Pn	18 05 55.3	+1.1
	6.6nm,0.3s						
ELK	Elko	7.99	251	Pn	Pn	18 06 01.6	-1.0
	0.3nm,0.3s,baz=51,slow=13,SNR=4.3						
ULM	Lac du Bonnet	9.14	41	Pn	Pn	18 06 17.1	-1.1
ULM				Lg		18 08 52.9	
ULM	Lac du Bonnet	9.14	41	Pn	Pn	18 06 17.1	-1.1
	5.2nm,0.3s,baz=232,slow=11,SNR=15						
ULM				Lg		18 08 52.9	
	0.4nm,0.3s,baz=256,slow=6.2,SNR=3.4						
ARCES	ARCESS Array B	61.42	18	P	P	18 14 21.1	-1.6
	7.1nm,1.2s,baz=330,slow=7.0,SNR=5.9						

IDC **03** *18:11:34.6±3.5, 35°.68N×70°.52E, h0km, mb3.6/2, mb1 3.6/4, mb1mx3.3/26, mbtmp3.6/4, ML2.9/2, Error ellipse: s-maj=88.9km s-min=29.3km az=139.0*
NNC **03** *18:11:51.9±4.0, 37°.05N×70°.06E, h0km, mb4.1, mpv3.7, Error ellipse: s-maj=35.7km s-min=31.1km az=95.0*

ISC 03 18:11:49.0±3.5, 36°.4N±0°.2×70°.4E±0°.2, h102km±33km, n7, σ0°90/10, 2C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.75	1	Pn	Pn	18 13 25.8	+0.5
	2.7nm,0.4s,baz=179,slow=12,SNR=85						
KK31				⇑Sn	Sn	18 14 39.2	-1.4
	0.6nm,0.3s,baz=190,slow=24,SNR=4.4						
TKM2	Tokmak 2	7.68	30	⇓Pn	Pn	18 13 37.2	-0.8
	2.2nm,0.5s						
TKM2				⇑Sn	Sn	18 15 03.8	+0.5
	1.4nm,0.6s						
MKAR	Makanchi Array	13.69	37	Pn	Pn	18 14 58.9	+0.3
	0.0nm,0.3s,baz=224,slow=10.0,SNR=3.4						
AB31	Akbulak array	15.00	333	Pn	Pn	18 15 15.8	+0.4
	1.8nm,0.4s,baz=158,slow=12,SNR=67						
AB31				⇓Sn	Sn	18 17 51.8	-9.0
	0.3nm,0.4s,baz=160,slow=22,SNR=3.2						
AKTO	Aktyubinsk	16.68	331	P	Pn	18 15 38.0	+1.6
	0.1nm,0.3s,baz=148,slow=16,SNR=7.5						
ZALV	Zalesovo Beam	20.25	25	P	P	18 16 16.1	+0.1
	1.7nm,0.5s,baz=216,slow=12,SNR=10						
TORD	Torodi Ar. Bea	65.25	268	P	P	18 22 18.9	-1.2
	0.2nm,0.6s,baz=54,slow=6.2,SNR=5.3						

IDC 03 18:21:09.9±14.0, 14°.21S×167°.88E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.8/17, mbtmp4.0/4, Error ellipse: s-maj=243.0km s-min=110.3km az=58.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	21.46	251	P	P	18 26 00.3	+0.2
	6.8nm,0.8s,baz=77,slow=10.0,SNR=6.0						
STKA	Stephens Creek	29.78	229	P	P	18 27 18.0	-0.4
	1.2nm,0.5s,baz=67,slow=9.3,SNR=4.4						
WRA	Warramunga Arr	32.52	255	P	P	18 27 43.1	+0.3
	0.4nm,0.5s,baz=85,slow=9.2,SNR=9.5						
ASAR	Alice Springs	33.41	249	P	P	18 27 50.5	0.0
	1.0nm,0.5s,baz=78,slow=9.0,SNR=24						

MOS **03** *18:21:15.1±1.0, 15°.84N×94°.23W, h33km, mb5.3/64, MS4.0/4, Error ellipse: s-maj=8.7km s-min=4.8km az=77.5*
NEIC **03** *18:21:17.6±0.8, 15°.82N×94°.13W, h42km±6km, mb5.0/153, MD4.5(MEX), Error ellipse: s-maj=6.3km s-min=4.3km az=212.0*
CASC **03** *18:21:20.3±1.4, 15°.56N×94°.41W, h160km±25km, MD4.6, mb5.0(NEIC)*

MEX **03** *18:21:20.9±0.8, 15°.72N×94°.49W, h58km±20km, MD4.5*
IDC **03** *18:21:20.1±0.7, 15°.82N×94°.34W, h71km±5km, mb4.3/23, mb1 4.5/26, mb1mx4.4/29, mbtmp4.3/26, MS3.6/11, Ms1 3.6/11, ms1mx3.4/22, Error ellipse: s-maj=15.9km s-min=6.1km az=55.0*
ISCJB **03** *18:21:22.8±0.3, 16°.09N±0°.04×94°.12W±0°.03, h87km±2km, mb4.8/193, Error ellipse: s-maj=7.3km s-min=1.9km az=35.3*
SZGRF **03** *18:21:23.8, 17°.02N×93°.56W, h33km, mb5.4, Chiapas, Mexico*
BGS **03** *18:21:29.7±1.6, 18°.05N×93°.19W, h40km, mb5.0*

ISC 03 18:21:24.4±0.3, 16°.13N±0°.04×94°.05W±0°.03, h86km±2km, h72km±2.1km: pP-P, n801, σ0°79/812, mb4.8/193, 158C-168D, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		0.91	118	eP	Pn	18 21 40.4	-2.3
PCIG				eS	Sn	18 21 56.0	-0.4
TGIG		1.10	54	eP	Pn	18 21 46.5	+1.6
TGIG				eS	Sn	18 22 06.0	+5.6
CMIG	Matias Romero	1.25	320	P	Pn	18 21 43.0	-3.7
	310nm,0.3s,baz=160,slow=9.2,SNR=2637						
CMIG				S	Sn	18 22 00.7	-2.8
	3μm,0.3s,baz=168,slow=20,SNR=97						
TUIG	Tuzandepetl	1.93	349	eP	Pn	18 21 55.4	0.0
TUIG				i S	Sn	18 22 21.8	+2.7
HUIG	Huatulco	2.01	260	eP	Pn	18 21 44.5	-12
HUIG				eS	Sn	18 22 02.2	-19
HUIG	Huatulco	2.01	260	eP	Pn	18 21 44.5	-12
HUIG				i S	Sn	18 22 02.8	-18
THIG		2.11	125	eP	Pn	18 21 54.8	-3.0
THIG				eS	Sn	18 22 22.3	-1.1
VHO	Vista Hermosa	2.74	290	eP	Pn	18 21 59.4	-6.9
VHO				eS	Sn	18 22 28.4	-10
VHO	Vista Hermosa	2.74	290	eP	Pn	18 21 59.1	-7.1
VHO				eS	Sn	18 22 28.4	-10
JAT	Jato	2.95	127	⇓eP	Pn	18 22 07.9	-1.1
TP2	Tecpan 2	3.21	114	eP	Pn	18 22 13.7	+1.0
FG6		3.43	117	eP	Pn	18 22 17.0	+1.4
FUG	Fuego 3	3.52	118	eP	Pn	18 22 17.4	+0.6
APG	El Apazote	3.63	108	P	Pn	18 22 17.9	-0.5
	30nm,0.3s,baz=287,slow=7.3,SNR=120						
APG				S	Sn	18 23 01.8	+1.6
	92nm,0.3s,baz=288,slow=20,SNR=5.4						
PCG	Pacaya	3.74	117	eP	Pn	18 22 21.1	+1.3
NBG	Las Nubes	3.89	113	eP	Pn	18 22 24.0	+2.2
TPIG	Tehuac#an	3.90	306	eP	Pn	18 22 17.6	-4.3
TPIG				i S	Sn	18 23 01.1	-5.5
PNIG	Pinotepa	3.92	274	i P	Pn	18 22 12.7	-10
PNIG				i S	Sn	18 22 50.2	-17
PNIG	Pinotepa	3.92	274	i P	Pn	18 22 12.7	-10
PNIG				i S	Sn	18 22 53.0	-14
SCIG	Sabancuy	3.93	44	eP	Pn	18 22 24.9	+2.6
SCIG				i S	Sn	18 23 16.0	+8.7
IXG	Ixpaco	3.98	119	eP	Pn	18 22 23.8	+0.7
MRL	Marmol	4.33	104	eP	Pn	18 22 28.5	+0.6
MRL				eS	Sn	18 23 17.5	+0.3
RBDL	Robledal	4.67	115	eP	Pn	18 22 33.1	+0.7
RBDL				eS	Sn	18 23 29.6	+4.2
MTO2	Montecristo 2	4.84	110	eP	Pn	18 22 36.6	+1.8
SBLS	San Blas	4.85	117	eP	Pn	18 22 35.5	+0.6
SBLS				eS	Sn	18 23 33.5	+3.7
SNJE	San Jose	4.85	117	eP	Pn	18 22 35.4	+0.5
SNJE				eS	Sn	18 23 33.2	+3.5
BOQS	Boqueron	5.19	117	eP	Pn	18 22 40.5	+0.9
BOQS				eS	Sn	18 23 41.8	+3.7
LFRS	El Faro	5.43	117	eP	Pn	18 22 42.2	-0.6
LFRS				eS	Sn	18 23 47.8	+3.8
YAIG	Yautepec	5.50	300	i P	Pn	18 22 39.6	-4.2
YAIG				i S	Sn	18 23 37.5	-8.2
SNVI	San Vicente	5.63	116	eP	Pn	18 22 45.4	-0.1
SNVI				eS	Sn	18 23 52.2	+3.4
BLLM	Bellamira	6.22	115	eP	Pn	18 22 53.3	-0.3
BLLM				eS	Sn	18 24 06.5	+3.1
CNCH	Conchagua	6.65	114	eP	Pn	18 23 00.4	+0.9
CNCH				eS	Sn	18 24 17.2	+3.3
TEIG	Tepich	6.83	53	ePn	Pn	18 23 03.0	+1.1
TGUH	Tegucigalpa,Un	6.86	107	ePn	Pn	18 23 03.0	+0.6
TGUH	Tegucigalpa,Un	6.86	107	eP	Pn	18 23 03.0	+0.6
TGUH				eS	Sn	18 24 23.4	+4.4
VCR	Vista de Mar	10.14	125	⇓eP	Pn	18 23 45.8	-1.3
JTS	JuntasAbangare	10.59	122	P	Pn	18 23 51.4	-1.8
	7.7nm,0.3s,baz=326,slow=12,SNR=20						
JTS				S	Sn	18 25 52.2	+2.2
	0.8nm,0.3s,baz=330,slow=20,SNR=1.6						
JTS				LR	LR	18 28 24.9	
	comp=Z,155nm,18.8s,baz=260,slow=40						
JTS	JuntasAbangare	10.59	122	c iP	Pn	18 23 54.3	+1.1
JTS	JuntasAbangare	10.59	122	ePn	Pn	18 23 51.5	-1.7
JCR	Jicaral	10.71	125	eP	Pn	18 23 53.3	-1.6
PRS1	Puriscal	11.28	122	eP	Pn	18 24 01.6	-1.0
LAJ	Bijagual	11.50	122	eP	Pn	18 24 00.7	-5.0
URSC	Urasca	11.80	121	⇑eP	Pn	18 24 08.1	-1.7
BUS	Buena Vista	11.97	122	eP	Pn	18 24 10.8	-1.2
BAR1		12.51	122	eP	Pn	18 24 17.9	-1.4
ACR	Cerro Adams	12.96	124	eP	Pn	18 24 24.3	-1.0
JCT	Junction City	15.22	341	eP	Pn	18 24 55.8	+1.3
JCT				pmax	pmax		
	comp=Z,51nm,0.9s						
JCT	Junction City	15.22	341	ePn	Pn	18 24 55.8	+1.2
	comp=Z,51nm,0.9s						
NATX	Nacogdoches	15.57	358	ePn	Pn	18 24 58.6	-0.3
	comp=Z,127nm,1.3s						
628A	Black Gap, Mar	15.58	330	⇓P	Pn	18 24 59.0	0.0
	baz=16,SNR=12						
627A	Terlingua Ranc	15.80	329	⇑P	Pn	18 25 01.6	-0.2
	baz=16,SNR=22						
TXAR	Lajitas Array	15.84	328	P	Pn	18 24 59.2	-3.1
	comp=Z,0.2nm,0.3s,baz=308,slow=6.2,SNR=32						
TXAR				LR	LR	18 32 09.5	
	comp=Z,89nm,20.1s,baz=185,slow=41						
TXAR	Lajitas Array	15.84	328	P	Pn	18 24 59.2	-3.1
TXAR				LR	LR	18 32 09.5	
528A	Cox Ranch, San	16.10	332	⇑P	Pn	18 25 05.1	-0.5
	baz=16						
BRAL	Brewton	16.13	22	ePn	Pn	18 25 04.7	-1.3
	comp=Z,100nm,0.8s						
626A	Big Bend Ranch	16.26	327	⇑P	Pn	18 25 07.3	-0.2
	baz=16,SNR=27						
527A	Woodward Ranch	16.48	330	⇑P	Pn	18 25 10.2	0.0
	baz=17,SNR=19						
428A	Kincaid Ranch,	16.54	333	⇑P	Pn	18 25 10.9	-0.1
	baz=17,SNR=15						
526A	Mary Lane Ranc	16.64	328	⇑P	Pn	18 25 12.2	-0.1
	baz=17,SNR=21						
DWPF	Disney	16.68	42	ePn	Pn	18 25 12.4	-0.3
	comp=Z,66nm,0.8s						
427A	Hayter Ranch,	16.96	331	⇑P	Pn	18 25 16.3	0.0
	baz=17,SNR=6.3						
426A	McDonald Obser	17.11	329	⇓P	Pn	18 25 18.0	0.0
	baz=17,SNR=20						
328A	Wristen Ranch,	17.15	334	⇓P	Pn	18 25 18.2	-0.4
	baz=17						
326A	Caldwell Ranch	17.62	331	⇓P	Pn	18 25 24.0	-0.3
	baz=18,SNR=5.3						
425A	Indio Mountain	17.68	327	⇓P	Pn	18 25 24.6	-0.5
	baz=18						
227A	Bennet, Jal	17.90	334	⇑P	Pn	18 25 26.8	-1.0
	baz=18						
LRAL	Lakeview Retre	18.00	19	ePn	Pn	18 25 30.5	+1.7
	comp=Z,11nm,0.6s						
325A	Bean Ranch, Si	18.15	329	⇑P	Pn	18 25 29.5	-1.1
	baz=18,SNR=9.9						
MIAR	Mount Ida	18.34	1	eP	Pn	18 25 32.2	-0.7
MIAR				pmax	pmax		
	comp=Z,37nm,0.8s						
MIAR	Mount Ida	18.34	1	ePn	Pn	18 25 32.2	-0.7
	comp=Z,37nm,0.8s						
CLNB	Carlsbad	18.38	333	eP	Pn	18 25 32.8	-0.6
	comp=Z,36nm,0.8s						
324A	Moseley Ranch,	18.46	328	⇑P	Pn	18 25 32.8	-1.6
	baz=19,SNR=22						
127A	Arkansas Junct	18.51	335	⇑P	Pn	18 25 33.6	-1.4
	baz=19,SNR=6.8						
MNTX	Cornudas Mount	18.62	328	eP	Pn	18 25 34.0	-2.3
	comp=Z,9.6nm,1.1s						
UALR	University of	18.63	4	ePn	Pn	18 25 35.8	-0.6
	comp=Z,50nm,0.8s						
225A	Deer Hill, Car	18.68	330	⇑P	Pn	18 25 35.4	-1.6
	baz=19,SNR=11						
126A	Clayton Basin,	18.76	333	⇓P	Pn	18 25 36.2	-1.8
	baz=19,SNR=11						
OXF	Oxford	18.77	12	eP	Pn	18 25 37.2	-0.9
OXF				pmax	pmax		
	comp=Z,65nm,1.0s						
OXF	Oxford	18.77	12	eP	Pn	18 25 37.2	-0.9
	comp=Z,65nm,1.0s						
224A	Cornudas Mount	18.99	329	⇑P	Pn	18 25 38.8	-1.9
	baz=19,SNR=29						
WMOK	Wichita Mounta	19.01	348	eP	Pn	18 25 39.0	-1.9
WMOK				pmax	pmax		
	comp=Z,18nm,0.8s						
WMOK	Wichita Mounta	19.01	348	ePn	Pn	18 25 39.0	-1.9
	comp=Z,18nm,0.8s						
Z27A	Tatum	19.01	336	⇑P	Pn	18 25 39.1	-1.8
	baz=19,SNR=120						
CPRX	Cap Rock	19.03	334	eP	Pn	18 25 39.5	-1.6
	comp=Z,26nm,0.7s						
125A	Gardner Draw,	19.06	332	⇓P	Pn	18 25 39.6	-1.9
	baz=19,SNR=24						
Z26A	Caprock	19.28	334	⇑P	Pn	18 25 41.9	-2.2
	baz=20,SNR=27						
MSTX	Muleshoe	19.42	338	⇓P	Pn	18 25 43.4	-2.4
	baz=20,SNR=30						
124A	Stringfield Ra	19.47	330	⇓P	Pn	18 25 44.5	-1.8
	baz=20,SNR=15						
Y27A	Causey	19.49	337	⇑P	Pn	18 25 44.2	-2.4
	baz=20,SNR=44						
Z25A	Roswell	19.61	332	⇓P	Pn	18 25 45.5	-2.5
	baz=20,SNR=12						
GOGA	Godfrey	19.68	27	eP	Pn	18 25 46.6	-2.2
GOGA				pmax	pmax		
	comp=Z,52nm,1.0s						
GOGA	Godfrey	19.68	27	ePn	Pn	18 25 46.6	-2.2
	comp=Z,52nm,1.0s						
123A	Bell Site, Whi	19.81	328	⇑P	Pn	18 25 48.0	-2.4
	baz=20						
222A	Williams Famil	19.84	326	⇓P	Pn	18 25 47.9	-2.7
	baz=20						
AMTX	Amarillo	19.89	341	ePn	Pn	18 25 49.1	-2.1
	comp=Z,149nm,1.1s						
Z24A	Sheeppen Canyo	19.94	331	⇓P	Pn	18 25 49.9	-2.0
	baz=20,SNR=18						
320A	Kipp Ranch, An	20.09	321	⇓P	P	18 25 51.1	+0.1
	baz=20						
221A	Mesquite Ranch	20.14	324	⇓P	P	18 25 52.0	+0.4
	baz=20						
Y25A	Mesa, Roswell	20.14	334	⇓P	P	18 25 52.2	+0.6
	baz=20,SNR=34						
X27A	F and S Farms,	20.15	338	⇓P	P	18 25 51.5	-0.2
	baz=20,SNR=26						
122A	Conniff Cattle	20.24	327	⇑P	P	18 25 52.6	-0.1
	baz=20						
Z23A	Rita Site, Whi	20.30	329	⇓P	P	18 25 53.8	+0.5
	baz=20,SNR=6.6						
X26A	CR and CF Fran	20.33	336	⇓P	P	18 25 53.6	0.0
	baz=20,SNR=23						
SWET	Sewanee	20.35	19	eP	P	18 25 48.2	-5.6
Y24A	Capitan	20.47	332	⇓P	P	18 25 55.6	+0.5
	baz=21,SNR=28						
220A	Playas Peak, P	20.49	323	⇑P	P	18 25 55.6	+0.2
	baz=21,SNR=26						
W27A	Bowe Ranch, En	20.51	338	⇓P	P	18 25 55.2	-0.4
	baz=21,SNR=54						
121A	Cookes Peak, D	20.54	325	⇓P	P	18 25 56.4	+0.6
	baz=21,SNR=31						
319A	Douglas	20.57	320	⇓P	P	18 25 56.4	+0.1
	baz=21,SNR=6.3						
X25A	Clemmons Ranch	20.65	334	⇑P	P	18 25 57.1	0.0
	baz=21						
Z22A	Elephant Butte	20.66	328	⇓P	P	18 25 57.3	+0.1
	baz=21,SNR=24						
WVT	Waverly	20.67	14	eP	P	18 25 55.7	-1.6
WVT				pmax	pmax		
	comp=Z,21nm,1.0s						
WVT	Waverly	20.67	14	eP	P	18 25 55.7	-1.6
	comp=Z,21nm,1.0s						
Y23A	Lovelace Mesa,	20.76	331	⇓P	P	18 25 58.7	+0.4
	baz=21,SNR=36						
W26A	Owens Ranch, T	20.79	337	⇓P	P	18 25 58.2	-0.3
	baz=21,SNR=14						
219A	White Tail Can	20.99	322	⇓P	P	18 26 01.0	+0.2
	baz=21,SNR=16						
X24A	Lazy VL Ranch,	21.01	333	⇓P	P	18 26 01.4	+0.5
	baz=21,SNR=28						
120A	U Bar Ranch, L	21.02	324	⇓P	P	18 26 01.5	+0.3
	baz=21,SNR=16						
CPCT	Cooper Cave	21.04	22	eP	P	18 26 01.3	0.0
NHSC	New Hope	21.05	34	eP	P	18 26 04.8	+3.5
	comp=Z,219nm,1.2s,mb5.4						
Z21A	St. Cloud Mine	21.07	327	⇓P	P	18 26 02.2	+0.6
	baz=21,SNR=13						
W25A	X Bar L Ranch,	21.17	336	⇓P	P	18 26 02.9	+0.3
	baz=21,SNR=53						
Y22A	Socorro	21.20	329	⇓P	P	18 26 03.3	+0.2
	baz=21,SNR=16						
BNM	Barren Site	21.21	330	eP	P	18 26 03.7	+0.6
	comp=Z,30nm,1.2s,mb4.5						
LPM	Los Pinos Moun	21.35	330	eP	P	18 26 05.4	+0.8
X23A	Hourglass Bar	21.36	332	⇓P	P	18 26 05.4	+0.7
	baz=22,SNR=14						
LENM	Lemitar	21.39	329	eP	P	18 26 05.7	+0.7
Z20A	Nine Sixteen R	21.42	325	⇑P	P	18 26 05.7	+0.3
	baz=22,SNR=14						
JSC	Jenkinsville	21.42	30	P	P	18 26 07.9	+2.5
V26A	Tequesquite Ra	21.43	338	⇓P	P	18 26 05.3	-0.1
	baz=22,SNR=24						
218A	Dragoon	21.45	320	⇓P	P	18 26 05.6	-0.1
	baz=22						
TKL	Tuckaleechee C	21.50	23	P	P	18 26 06.2	0.0
	comp=Z,18nm,1.1s,mb4.3,baz=195,slow=14,SNR=7.1						

U23A **El Rito** 22.83 334 ⇓P P 18 26 20.6 +0.4
baz=23,SNR=17
T25A **Trinidad** 22.85 338 ⇑P P 18 26 21.2 +0.8
baz=23,SNR=16
116A **Eloy** 22.88 319 ⇑P P 18 26 20.2 -0.7
baz=23
W20A **Ramah** 22.92 328 ⇓P P 18 26 21.7 +0.5
baz=23,SNR=16
KSU1 **Kansas State U** 22.99 355 eP P 18 26 20.3 -1.5
comp=Z,32nm,0.8s,mb4.7
V21A **Milan** 23.04 331 ⇓P P 18 26 22.5 +0.2
baz=23,SNR=12
WCI **Wyandotte Cave** 23.05 16 eP P 18 26 20.3 -2.0
WCI pmax pmax
comp=Z,50nm,0.8s,mb4.9
WCI **Wyandotte Cave** 23.05 16 eP P 18 26 20.3 -2.0
comp=Z,50nm,0.8s,mb4.9
OLIL **Olney** 23.11 12 eP P 18 26 21.3 -1.7
comp=Z,44nm,0.8s,mb4.8
Y17A **Roosevelt** 23.13 322 ⇓P P 18 26 23.0 -0.2
baz=23
CBKS **Cedar Bluff** 23.14 349 eP P 18 26 22.7 -0.5
CBKS pmax pmax
comp=Z,186nm,1.3s,mb5.3
CBKS **Cedar Bluff** 23.14 349 eP P 18 26 22.7 -0.5
comp=Z,186nm,1.3s,mb5.3
U22A **Llaves** 23.16 333 ⇓P P 18 26 23.9 +0.6
baz=23,SNR=22
214A **Organ Pipe Nat** 23.22 316 ⇓P P 18 26 23.3 -0.7
baz=23
X18A **Snowflake** 23.23 325 ⇑P P 18 26 24.3 +0.3
baz=23,SNR=6.3
Z16A **Peralta Trail,** 23.24 321 ⇓P P 18 26 23.6 -0.5
baz=23
115A **Sonoran Desert** 23.31 318 ⇓P P 18 26 24.6 -0.2
baz=24
S25A **Robets Cordova** 23.32 339 ⇓P P 18 26 25.5 +0.7
baz=24,SNR=24
W19A **Sanders** 23.36 327 ⇓P P 18 26 25.5 +0.2
baz=24,SNR=7.6
T23A **Casias Ranch,** 23.38 335 ⇓P P 18 26 25.9 +0.5
baz=24,SNR=14
V20A **Brimhall** 23.43 329 ⇑P P 18 26 26.4 +0.5
baz=24,SNR=11
W18A **Petrified Fore** 23.55 326 ⇑P P 18 26 27.1 +0.2
baz=24
U21A **Nageezi** 23.56 332 ⇑P P 18 26 27.8 +0.8
baz=24,SNR=14
S24A **Houchin Ranch,** 23.59 337 ⇓P P 18 26 28.2 +0.9
baz=24,SNR=13
Y16A **Circle Bar Ran** 23.64 322 ⇑P P 18 26 27.9 +0.1
baz=24
V19A **Window Rock** 23.65 328 ⇓P P 18 26 28.4 +0.5
baz=24
T22A **Edith** 23.71 334 ⇑P P 18 26 29.2 +0.8
baz=24,SNR=32
114A **Black Gap (USA** 23.76 318 ⇓P P 18 26 29.1 +0.1
baz=24
SDCO **Great Sand Dun** 23.79 337 eP P 18 26 29.8 +0.7
comp=Z,24nm,1.2s,mb4.4
BLO **Bloomington** 23.88 15 eP P 18 26 29.2 -0.7
BLO pmax pmax
comp=Z,36nm,0.8s,mb4.8
BLO **Bloomington** 23.88 15 eP P 18 26 29.2 -0.8
comp=Z,36nm,0.8s,mb4.8
U20A **Newcomb** 23.92 330 ⇓P P 18 26 30.5 +0.2
baz=24
S23A **Nye Farm, Mont** 23.94 336 ⇓P P 18 26 31.4 +0.9
baz=24
SDV **Santo Domingo** 23.95 105 eP P 18 26 29.0 -1.8
comp=Z,17nm,0.8s,mb4.4
X16A **Lo Mia Camp, P** 23.99 323 ⇑P P 18 26 31.1 +0.1
baz=24,SNR=12
W17A **Winslow** 24.05 325 ⇑P P 18 26 32.2 +0.6
baz=24
R24A **Sanders Place,** 24.07 338 ⇑P P 18 26 32.3 +0.6
baz=24,SNR=8.9
V18A **Ganado** 24.11 327 ⇓P P 18 26 32.7 +0.6
baz=24,SNR=5.7
U19A **Dine' College,** 24.19 329 ⇑P P 18 26 32.5 -0.3
baz=24,SNR=13
Z14A **Wintersburg** 24.20 319 ⇑P P 18 26 33.4 +0.5
baz=24
Y15A **Casa Rosa Ranc** 24.20 321 ⇓P P 18 26 33.4 +0.5
baz=24,SNR=15
S22A **4UR Ranch, Cre** 24.31 335 ⇑P P 18 26 34.4 +0.5
baz=24,SNR=9.5
113A **Mohawk Valley,** 24.35 316 ⇓P P 18 26 34.7 +0.4
baz=24,SNR=5.2
Q25A **Bedland, Calha** 24.40 340 ⇓P P 18 26 34.8 +0.1
baz=25,SNR=9.6
V17A **Tonalea, Kykot** 24.50 326 ⇓P P 18 26 35.7 +0.1
baz=25,SNR=15
X15A **Humboldt** 24.51 322 ⇓P P 18 26 35.7 0.0
baz=25
T19A **Beclabito** 24.53 330 ⇑P P 18 26 35.9 0.0
baz=25
Z13A **Yuma Proving G** 24.55 317 ⇑P P 18 26 36.6 +0.5
baz=25,SNR=10
MVCO **Mesa Verde** 24.59 331 ⇑P P 18 26 36.7 +0.3
baz=25,SNR=7.0
MVCO **Mesa Verde** 24.59 331 eP P 18 26 36.5 +0.1
comp=Z,16nm,0.9s,mb4.4
Y14A **Wickenburg** 24.61 320 ⇓P P 18 26 37.5 +0.9
baz=25,SNR=12
U18A **Rough Rock, Ch** 24.62 328 ⇓P P 18 26 36.4 -0.3
baz=25
S21A **Coal Bank Pass** 24.64 333 ⇑P P 18 26 37.2 +0.3
baz=25,SNR=9.4
R22A **Saguache, Gunn** 24.69 336 ⇑P P 18 26 37.9 +0.6
baz=25,SNR=8.8
WUAZ **Wupatki** 24.74 325 ⇓P P 18 26 38.2 +0.4
baz=25,SNR=12
WUAZ **Wupatki** 24.74 325 eP P 18 26 38.4 +0.5
comp=Z,29nm,0.9s,mb4.7
X14A **Yava** 24.89 321 ⇓P P 18 26 39.7 +0.5
baz=25
P25A **Willow Gulch B** 24.92 341 ⇑P P 18 26 39.7 +0.3
baz=25,SNR=6.8
W15A **Williams** 25.01 323 ⇑P P 18 26 40.2 -0.1
baz=25
R21A **Cimarron** 25.13 334 ⇑P P 18 26 41.4 +0.1
baz=25
U17A **Shonto** 25.16 327 ⇓P P 18 26 41.6 -0.1
baz=25
T18A **Mexican Hat** 25.18 329 ⇓P P 18 26 42.0 +0.2
baz=25,SNR=8.8
GLA **Glamis** 25.23 316 ⇓P P 18 26 42.4 +0.1
baz=25
Q22A **Crested Butte,** 25.30 336 ⇑P P 18 26 43.0 +0.1
baz=26
S19A **Harvey Farm, M** 25.32 331 ⇓P P 18 26 43.1 +0.1
baz=26
R20A **Redvale** 25.34 333 ⇑P P 18 26 43.9 +0.7
baz=26,SNR=6.4
PV01 **Paradox Valley** 25.38 333 eP P 18 26 44.9 +1.3
comp=Z,2um,1.3s
V15A **Kaibab Nationa** 25.41 324 ⇓P P 18 26 44.1 +0.3
baz=26,SNR=5.9
W14A **Seligman** 25.51 322 ⇓P P 18 26 45.1 +0.3
baz=26
Q21A **Lamborn Mesa,** 25.54 335 ⇑P P 18 26 45.3 +0.3
baz=26
T17A **Navajo Res., N** 25.54 328 ⇓P P 18 26 45.2 +0.1
baz=26
SMCO **Snowmass** 25.60 336 eP P 18 26 46.7 +1.2
comp=Z,25nm,1.2s,mb4.5
ISCO **Idaho Springs** 25.65 339 eP P 18 26 46.3 +0.3
ISCO pmax pmax
comp=Z,10.0nm,0.9s,mb4.2
ISCO **Idaho Springs** 25.65 339 eP P 18 26 46.3 +0.3
comp=Z,10.0nm,0.9s,mb4.2
OGNE **Ogallala** 25.67 346 eP P 18 26 47.2 +1.0
comp=Z,67nm,0.8s,mb5.1
S18A **Hurst Farm, Bl** 25.68 330 ⇑P P 18 26 46.2 -0.1
baz=26
SCIA **State Center** 25.70 1 eP P 18 26 45.6 -0.8
comp=Z,49nm,0.4s,mb5.3
PV04 **Paradox Valley** 25.74 332 eP P 18 26 47.1 +0.3
JSRW **J. Sargeant Re** 25.79 31 eP P 18 26 47.2 -0.1
R19A **Curley Farm, L** 25.82 332 ⇓P P 18 26 47.6 +0.1
baz=26
V14A **Boquillas Ranc** 25.82 322 ⇑P P 18 26 47.7 +0.1
baz=26
U15A **North Rim** 25.91 325 ⇓P P 18 26 49.0 +0.6
baz=26
W13A **Hualapai Mount** 25.92 320 ⇓P P 18 26 48.5 0.0
baz=26

BC3 **Big Chuckawall** 26.01 316 ⇓P P 18 26 49.4 0.0
baz=26
S17A **Black Ridge (B** 26.03 329 ⇓P P 18 26 49.6 +0.1
baz=26
IRM **Iron Mountain** 26.12 317 ⇑P P 18 26 50.1 -0.2
baz=26
R18A **Canyonlands Na** 26.18 331 ⇑P P 18 26 50.9 0.0
baz=26
Q19A **Hogan Spring (** 26.36 333 ⇓P P 18 26 52.5 0.0
baz=26,SNR=5.5
T15A **Red Dirt Ranch** 26.39 326 ⇓P P 18 26 52.8 +0.1
baz=27,SNR=6.7
U14A **Mt Trumbull** 26.41 324 ⇑P P 18 26 53.2 +0.3
baz=27
P20A **De Beque** 26.44 335 ⇑P P 18 26 53.2 +0.1
baz=27
V13A **Grand Canyon W** 26.49 322 ⇓P P 18 26 53.8 +0.2
baz=27
S16A **Weppner Ranch,** 26.50 328 ⇑P P 18 26 53.7 -0.1
baz=27
R17A **Hanksville Air** 26.60 330 ⇓P P 18 26 54.6 0.0
baz=27,SNR=7.9
P19A **Cripple Cowboy** 26.80 334 ⇓P P 18 26 56.8 +0.4
baz=27
T14A **Hurricane** 26.81 325 ⇑P P 18 26 57.1 +0.6
baz=27
N22A **Wattenberg Ran** 26.83 339 ⇓P P 18 26 57.2 +0.6
baz=27,SNR=6.6
GMRC **Granite Mounta** 26.83 318 ⇑P P 18 26 56.9 +0.2
baz=27
U13A **Pakoon Wash** 26.86 323 ⇑P P 18 26 57.0 0.0
baz=27,SNR=6.6
S15A **Panguitch** 26.87 327 ⇓P P 18 26 57.5 +0.5
baz=27
Q18A **Rafter H Ranch** 26.87 332 ⇓P P 18 26 57.0 0.0
baz=27,SNR=6.2
R16A **Teasdale** 26.87 329 ⇑P P 18 26 57.5 +0.4
baz=27
JFWS **Jewell Farm** 26.89 6 eP P 18 26 55.9 -1.2
JFWS pmax pmax
comp=Z,29nm,0.8s,mb4.9
JFWS **Jewell Farm** 26.89 6 eP P 18 26 55.9 -1.3
comp=Z,30nm,0.8s,mb4.9
O20A **White River Ci** 26.92 335 ⇓P P 18 26 58.0 +0.6
baz=27
SRU **San Rafael** 27.06 331 ⇓P P 18 26 59.0 +0.3
baz=27
N21A **Black Mountain** 27.18 337 ⇑P P 18 27 00.3 +0.5
baz=27,SNR=6.2
U12A **Valley of Fire** 27.21 322 ⇓P P 18 27 00.3 +0.3
baz=27
Q16A **Castle Valley** 27.21 330 ⇓P P 18 27 00.0 -0.1
baz=27,SNR=5.1
CCUT **Cedar City** 27.32 325 eP P 18 27 01.7 +0.6
comp=Z,11nm,1.2s,mb4.2
P18A **Preston Nutter** 27.35 332 ⇓P P 18 27 01.8 +0.5
baz=28
S14A **Cedar City** 27.36 326 ⇑P P 18 27 01.9 +0.4
baz=28
MSU **Marysvale** 27.40 328 eP P 18 27 01.9 +0.1
P17A **Butcher Ranch,** 27.45 331 ⇑P P 18 27 02.4 +0.2
baz=28
TMUT **Trail Mountain** 27.53 330 eP P 18 27 03.4 +0.4
comp=Z,8.3nm,1.0s,mb4.2
ECSD **EROS Data Cent** 27.60 356 eP P 18 27 02.4 -1.0
comp=Z,18nm,0.8s,mb4.7
S13A **Holt Ranch, En** 27.61 324 ⇑P P 18 27 04.0 +0.3
baz=28,SNR=5.5
ATAH **Atahualpa** 27.83 145 P P 18 27 04.2 -1.7
comp=Z,11nm,0.7s,mb4.5,baz=38,slow=4.4,SNR=7.4
ATAH LR LR 18 36 26.7
comp=Z,96nm,18.0s,baz=313,slow=33
M21A **Separation Pea** 27.86 338 ⇓P P 18 27 06.8 +0.9
baz=28,SNR=11
RWWY **Rawlins** 27.88 339 eP P 18 27 06.6 +0.6
comp=Z,27nm,1.0s,mb4.7
L22A **Ellis Ranch, M** 27.92 340 ⇑P P 18 27 07.0 +0.6
baz=28
N19A **John Jarvie Ra** 27.94 335 ⇑P P 18 27 06.3 -0.2
baz=28
O17A **Robinson Place** 28.03 332 ⇑P P 18 27 07.8 +0.5
baz=28,SNR=5.4
R13A **O'Grain Ranch,** 28.10 325 ⇓P P 18 27 08.8 +0.7
baz=28,SNR=6.8
T11A **Corn Creek, Al** 28.16 322 ⇓P P 18 27 08.8 +0.3
baz=28
L21A **Rawlins** 28.18 339 ⇓P P 18 27 08.9 +0.2
baz=28,SNR=8.2
S12A **Delamar Landin** 28.19 323 ⇑P P 18 27 09.0 +0.2
baz=28
N18A **Larsen Ranch,** 28.21 334 ⇑P P 18 27 09.0 +0.1
baz=28,SNR=5.6
Q14A **Sevier Lake (B** 28.32 327 ⇑P P 18 27 10.5 +0.5
baz=28,SNR=7.8
DAU **Daniels Canyon** 28.44 332 eP P 18 27 12.0 +1.0
L20A **Wamsutter** 28.57 337 ⇑P P 18 27 12.2 +0.1
baz=29
P14A **Drum Mountains** 28.67 328 ⇓P P 18 27 13.6 +0.6
baz=29,SNR=5.8
Q13A **Wheeler Ranch,** 28.69 326 ⇑P P 18 27 13.8 +0.5
baz=29,SNR=10.0
S11A **Rachel** 28.74 322 ⇓P P 18 27 14.2 +0.5
baz=29
M18A **Lyman** 28.75 334 ⇓P P 18 27 14.0 +0.3
baz=29
DUG **Dugway** 29.00 329 ⇓P P 18 27 16.3 +0.3
baz=29
DUG **Dugway** 29.00 329 eP P 18 27 16.5 +0.5
DUG pmax pmax
comp=Z,12nm,1.5s,mb4.3
DUG **Dugway** 29.00 329 eP P 18 27 16.5 +0.5
comp=Z,12nm,1.5s,mb4.3
P13A **Bates Ranch, G** 29.05 327 ⇑P P 18 27 17.1 +0.6
baz=29,SNR=6.6
R11A **Troy Canyon, C** 29.12 324 ⇑P P 18 27 17.5 +0.4
baz=29,SNR=6.1
L18A **Fontenelle, Gr** 29.15 335 ⇓P P 18 27 17.3 -0.1
baz=29
Q12A **Willow Creek R** 29.19 325 ⇓P P 18 27 18.0 +0.3
baz=29
S10A **Tonopah Range,** 29.43 322 ⇑P P 18 27 19.8 0.0
baz=30
K19A **Absolon Red Bu** 29.46 338 ⇓P P 18 27 19.4 -0.6
baz=30
Q11A **Duckwater** 29.51 324 ⇓P P 18 27 20.7 +0.2
baz=30,SNR=6.4
HWUT **Hardware Ranch** 29.54 333 eP P 18 27 20.4 -0.4
comp=Z,6.3nm,0.9s,mb4.2
P12A **McGill** 29.54 326 ⇓P P 18 27 21.1 +0.3
baz=30
L17A **Cokeville** 29.64 334 ⇑P P 18 27 21.5 -0.1
baz=30
BGU **Big Grassy Mou** 29.67 330 eP P 18 27 22.0 +0.1
comp=Z,3.2nm,1.0s,mb3.9
BW06 **Boulder Array** 29.68 337 ⇓P P 18 27 21.8 -0.1
baz=30,SNR=5.8
BW06 **Boulder Array** 29.68 337 eP P 18 27 21.4 -0.6
comp=Z,3.8nm,1.0s,mb4.0
PDAR **Pinedale Array** 29.68 337 P P 18 27 21.6 -0.3
comp=Z,3.0nm,0.9s,mb3.9,baz=140,slow=7.5,SNR=17
N14A **Grayback Hills** 29.69 330 ⇑P P 18 27 22.4 +0.3
baz=30,SNR=5.5
PKM **Peak Mountain** 29.69 314 ⇓P P 18 27 21.7 -0.4
baz=30
SPUT **South Promonto** 29.70 331 eP P 18 27 22.1 -0.1
comp=Z,6.6nm,1.0s,mb4.2
K18A **Toltan Ranch,** 29.76 336 ⇓P P 18 27 22.8 +0.2
baz=30,SNR=6.4
L16A **Fish Haven** 29.81 333 ⇑P P 18 27 23.2 +0.1
baz=30
M15A **Larsen Ranch,** 29.82 332 ⇑P P 18 27 23.5 +0.3
baz=30
Q10A **Clear Creek Ra** 29.91 323 ⇑P P 18 27 24.7 +0.6
baz=30
O12A **Currie** 30.03 327 ⇑P P 18 27 25.4 +0.3
baz=30,SNR=11
N13A **Wendover, West** 30.19 329 ⇑P P 18 27 27.0 +0.5
baz=30,SNR=5.6
K17A **Gardner Place,** 30.20 335 ⇑P P 18 27 27.0 +0.4
baz=30
HVU **Hansel Valley** 30.22 332 eP P 18 27 27.3 +0.5
HVU pmax pmax
comp=Z,11nm,0.8s,mb4.5
HVU **Hansel Valley** 30.22 332 eP P 18 27 27.3 +0.5
comp=Z,11nm,0.8s,mb4.5
L15A **Malad City** 30.22 332 ⇓P P 18 27 27.2 +0.4
baz=30,SNR=6.2
J18A **Kendall Valley** 30.23 336 ⇓P P 18 27 26.9 +0.1
baz=30

M14A **Sheep Mountain** 30.27 330 ⇑P P 18 27 27.5 +0.3
baz=30,SNR=8.2
O11A **Cowboy Ranch,** 30.41 326 ⇑P P 18 27 28.9 +0.4
baz=31,SNR=5.6
P10A **Eureka** 30.50 325 ⇓P P 18 27 29.9 +0.6
baz=31
K16A **Soda Springs** 30.55 334 ⇓P P 18 27 30.1 +0.5
baz=31
M13A **Montello** 30.55 329 ⇓P P 18 27 30.1 +0.4
baz=31,SNR=5.2
I18A **Diamond G Ranc** 30.58 337 ⇑P P 18 27 30.3 +0.4
baz=31
N12A **Clover Valley,** 30.61 328 ⇓P P 18 27 30.4 +0.2
baz=31,SNR=6.0
L14A **Malta** 30.64 331 ⇓P P 18 27 30.8 +0.4
baz=31
REDW **Red Top Meadow** 30.69 336 eP P 18 27 31.8 +0.9
comp=Z,38nm,1.3s,mb5.0
SNOW **Snow King Moun** 30.73 336 eP P 18 27 32.4 +1.1
comp=Z,35nm,0.8s,mb5.1
NVAR **Mina Array Bea** 30.78 321 P P 18 27 31.3 -0.4
comp=Z,2.4nm,0.8s,mb4.0,baz=138,slow=8.5,SNR=25
LOHW **Long Hollow** 30.80 336 eP P 18 27 32.4 +0.5
comp=Z,14nm,0.9s,mb4.7
K15A **Arbon** 30.83 333 ⇑P P 18 27 32.0 -0.1
baz=31,SNR=11
TPAW **Teton Pass** 30.83 336 eP P 18 27 33.0 +0.9
comp=Z,16nm,1.0s,mb4.7
RRI2 **Red Ridge** 30.86 335 eP P 18 27 34.1 +1.7
comp=Z,16nm,0.9s,mb4.7
J16A **Bone** 30.92 335 ⇓P P 18 27 33.6 +0.7
baz=31
N11A **Elko Archery C** 30.95 327 ⇓P P 18 27 33.6 +0.4
baz=31
M12A **Wells** 30.97 329 ⇑P P 18 27 33.6 +0.3
baz=31,SNR=14
O10A **Cortez Mining,** 30.98 325 ⇓P P 18 27 34.1 +0.6
baz=31
L13A **Double Diamond** 31.01 331 ⇑P P 18 27 34.2 +0.5
baz=31
K14A **Jones Ranch, D** 31.01 332 ⇑P P 18 27 34.2 +0.5
baz=31
I17A **Pilgrim Ck.** 31.05 337 ⇑P P 18 27 34.5 +0.4
baz=31
IMW **Indian Meadow** 31.17 336 eP P 18 27 35.8 +0.7
comp=Z,8.2nm,0.8s,mb4.5
SADO **Sadowa** 31.20 21 P P 18 27 34.5 -0.9
comp=Z,16nm,0.9s,mb4.7,baz=243,slow=9.9,SNR=5.8
I16A **Newdale** 31.37 335 ⇓P P 18 27 37.3 +0.4
baz=32
M11A **Holland Ranch,** 31.42 328 ⇓P P 18 27 37.7 +0.3
baz=32,SNR=9.0
K13A **Stover Farm, H** 31.51 331 ⇓P P 18 27 38.4 +0.3
baz=32
L12A **House Creek Ra** 31.57 329 ⇓P P 18 27 38.9 +0.3
baz=32
RLMT **Red Lodge** 31.61 339 ⇑P P 18 27 39.1 +0.1
baz=32,SNR=9.0
RLMT **Red Lodge** 31.61 339 eP P 18 27 38.6 -0.4
comp=Z,34nm,1.4s,mb4.9
J14A **Carey** 31.78 332 ⇓P P 18 27 40.6 +0.1
baz=32,SNR=5.1
EYMN **Ely** 31.80 3 eP P 18 27 39.0 -1.5
comp=Z,18nm,0.6s,mb5.0
M10A **I.L. Ranch, Tu** 31.88 327 ⇓P P 18 27 41.6 +0.2
baz=32,SNR=5.7
I15A **Monteview** 31.88 334 ⇓P P 18 27 42.0 +0.6
baz=32
K12A **Draper Farm, C** 31.88 330 ⇑P P 18 27 41.6 +0.3
baz=32
G18A **Lazy EL Ranch,** 31.89 339 ⇓P P 18 27 41.2 -0.1
baz=32,SNR=11
L11A **Cat Creek Ranc** 31.95 329 ⇑P P 18 27 42.0 +0.1
baz=32,SNR=28
H16A **Russell Place,** 31.97 337 ⇓P P 18 27 42.3 +0.2
baz=32
LAO **LASA Array** 32.11 344 eP P 18 27 42.8 -0.5
comp=Z,5.9nm,0.8s,mb4.4
AGMN **Agassiz Nation** 32.11 358 eP P 18 27 41.8 -1.5
comp=Z,49nm,1.0s,mb5.2
J13A **Cove Ranch, Pi** 32.13 332 ⇓P P 18 27 43.3 -0.2
baz=32,SNR=7.4
QLMT **Earthquake Lak** 32.15 336 eP P 18 27 45.5 +1.9
comp=Z,1.5nm,0.2s,mb4.4
I14A **Mackay** 32.23 333 ⇑P P 18 27 44.6 +0.1
baz=32,SNR=7.7
PAHR **Pah Rah Range** 32.24 322 eP P 18 27 44.2 -0.4
comp=Z,5.4nm,0.8s,mb4.3
L10A **Juniper Basin** 32.24 328 ⇑P P 18 27 44.6 +0.1
baz=32,SNR=12
G17A **Pierce Place,** 32.30 338 ⇑P P 18 27 46.0 +1.0
baz=32
GCMT **Greycliff** 32.34 339 eP P 18 27 45.2 -0.1
comp=Z,13nm,0.9s,mb4.7
HLID **Hailey** 32.37 332 ⇑P P 18 27 45.8 +0.1
baz=32
F18A **Big Timber** 32.45 339 ⇑P P 18 27 46.4 +0.1
baz=33,SNR=22
I13A **Wildhorse Cree** 32.51 333 ⇓P P 18 27 47.3 +0.5
baz=33,SNR=5.8
K11A **Parker Ranch,** 32.53 329 ⇑P P 18 27 47.2 +0.2
baz=33
G16A **Moss Hill, Enn** 32.62 336 ⇑P P 18 27 48.7 +0.8
baz=33,SNR=5.5
MCMT **McKenzie Canyo** 32.71 335 eP P 18 27 49.9 +1.3
comp=Z,18nm,1.2s,mb4.8
H14A **Leadore** 32.75 334 ⇓P P 18 27 50.0 +1.0
baz=33,SNR=8.6
F17A **Fitzpatrick Pl** 32.78 338 ⇓P P 18 27 50.0 +0.9
baz=33,SNR=35
G15A **Dillon** 32.84 336 ⇑P P 18 27 50.7 +0.9
baz=33,SNR=11
I12A **Atlanta** 32.88 331 ⇓P P 18 27 50.4 +0.3
baz=33,SNR=7.3
BOZ **Bozeman (W)** 32.91 337 ⇓P P 18 27 50.5 +0.2
baz=33
BOZ **Bozeman (W)** 32.91 337 eP P 18 27 50.8 +0.5
BOZ pmax pmax
comp=Z,5.0nm,0.9s,mb4.3
BOZ **Bozeman (W)** 32.91 337 eP P 18 27 50.8 +0.5
comp=Z,4.7nm,0.9s,mb4.3
MFID **Camas Ranch** 32.91 330 ⇑P P 18 27 50.6 +0.2
baz=33
K10A **MacKenzie Ranc** 32.95 328 ⇓P P 18 27 51.0 +0.3
baz=33
F16A **Kennard Place,** 33.03 337 ⇓P P 18 27 51.9 +0.5
baz=33
DLMT **Dillon** 33.05 336 eP P 18 27 52.4 +0.9
comp=Z,26nm,1.0s,mb5.0
H13A **Challis** 33.09 333 ⇓P P 18 27 52.4 +0.5
baz=33,SNR=19
E18A **Harlowton** 33.10 340 ⇑P P 18 27 52.3 +0.4
baz=33,SNR=26
DGMT **Dagmar** 33.31 348 ⇓P P 18 27 53.9 +0.1
baz=34
DGMT **Dagmar** 33.31 348 eP P 18 27 53.8 0.0
comp=Z,38nm,1.4s,mb5.0
E17A **Martinsdale** 33.33 339 ⇓P P 18 27 54.3 +0.3
baz=34,SNR=13
H12A **Diamond D Ranc** 33.34 332 ⇑P P 18 27 54.5 +0.5
baz=34,SNR=28
I11A **Placerville** 33.35 331 ⇓P P 18 27 54.5 +0.3
baz=34,SNR=12
LRM **Limekiln Ridge** 33.37 336 eP P 18 27 55.0 +0.7
F15A **Butte** 33.40 336 ⇓P P 18 27 55.1 +0.5
baz=34,SNR=12
G13A **Cobalt** 33.50 334 ⇑P P 18 27 55.6 +0.2
baz=34,SNR=8.8
D18A **Linhart Farms,** 33.61 340 ⇑P P 18 27 56.9 +0.4
baz=34,SNR=12
WVOR **Wild Horse Val** 33.63 326 eP P 18 27 56.1 -0.5
WVOR pmax pmax
comp=Z,25nm,1.3s,mb4.9
WVOR **Wild Horse Val** 33.63 326 eP P 18 27 56.1 -0.5
comp=Z,25nm,1.3s,mb4.9
E16A **East Helena** 33.68 338 ⇑P P 18 27 57.3 +0.3
baz=34,SNR=10
F14A **Wisdom** 33.72 335 ⇓P P 18 27 57.7 +0.3
baz=34
D17A **Six Diamond Ra** 33.87 339 ⇑P P 18 27 59.0 +0.4
baz=34,SNR=25
I10A **Payette** 33.88 330 ⇑P P 18 27 59.1 +0.3
baz=34
HRY **Holter Researc** 33.89 338 eP P 18 27 59.6 +0.8
E15A **Deer Lodge** 33.95 337 ⇑P P 18 27 59.3 0.0
baz=34,SNR=6.1
H11A **Donnelly** 33.98 331 ⇑P P 18 27 59.7 0.0

baz=34,SNR=12
D16A Dana Ranch, Ca 34.06 338 ⇓P **P 18 28 00.3 0.0**
baz=34,SNR=6.3
ULM Lac du Bonnet 34.06 358 P **P 18 27 58.7 -1.6**
comp=Z,12nm,0.7s,mb4.8,baz=176,slow=9.1,SNR=10.0
ULM LR LR 18 45 31.5
comp=Z,67nm,20.4s,baz=86,slow=42
ULM Lac du Bonnet 34.06 358 *eP* **P 18 27 58.8 -1.5**
comp=Z,34nm,1.2s,mb5.0
F13A Darby 34.10 334 ⇑P **P 18 28 00.6 -0.1**
baz=34,SNR=9.5
MOD Modoc 34.19 324 *eP* **P 18 28 00.6 -0.9**
comp=Z,17nm,1.4s,mb4.7
J08A Circle Bar Ran 34.19 328 ⇑P **P 18 28 01.5 0.0**
baz=34,SNR=24
H10A Noah's Angus R 34.23 331 ⇓P **P 18 28 01.1 -0.7**
baz=34,SNR=6.0
I09A Lost Marbles R 34.26 329 ⇓P **P 18 28 02.0 -0.1**
baz=34,SNR=31
E14A Clinton 34.27 336 ⇓P **P 18 28 01.9 -0.2**
baz=34
EGMT Eagleton 34.33 341 ⇑P **P 18 28 02.8 +0.2**
baz=34,SNR=12
EGMT Eagleton 34.33 341 *eP* **P 18 28 02.4 -0.3**
comp=Z,40nm,1.4s,mb5.0
D15A Lincoln 34.42 337 ⇑P **P 18 28 03.5 +0.1**
baz=35,SNR=6.9
F12A Elk City 34.46 333 ⇑P **P 18 28 03.7 -0.1**
baz=35,SNR=29
E13A Victor 34.57 335 ⇓P **P 18 28 04.5 -0.2**
baz=35,SNR=12
CHMT Chamberlain Mo 34.59 337 *eP* **P 18 28 04.8 -0.1**
G11A Walters Elk Ra 34.63 332 ⇑P **P 18 28 04.8 -0.5**
baz=35,SNR=13
B18A Beardsley Farm 34.67 341 ⇑P **P 18 28 05.6 +0.1**
baz=35
BMO Blue Mountains 34.70 330 *eP* **P 18 28 04.6 -1.2**
comp=Z,5.0nm,1.1s,mb4.3
H09A Durkee 34.73 330 ⇑P **P 18 28 05.9 -0.2**
baz=35
MSO Missoula 34.78 336 *eP* **P 18 28 06.8 +0.2**
comp=Z,8.9nm,1.1s,mb4.5
C16A Fuhringer Ranc 34.79 339 ⇑P **P 18 28 06.6 0.0**
baz=35,SNR=24
D14A Greenough 34.82 337 ⇓P **P 18 28 06.4 -0.5**
baz=35,SNR=6.8
B17A L&G Farms, Che 34.90 340 ⇓P **P 18 28 07.5 0.0**
baz=35
G10A Bishop Farm, J 34.94 331 ⇑P **P 18 28 07.2 -0.7**
baz=35,SNR=5.6
SLMT Seeley Lake 34.95 337 *eP* **P 18 28 07.0 -1.0**
K05A Summer Lake 35.06 325 ⇓P **P 18 28 08.7 -0.2**
baz=35
C15A Salmond Ranch, 35.07 338 ⇑P **P 18 28 08.9 -0.1**
baz=35,SNR=12
H08A Prairie City 35.12 329 ⇑P **P 18 28 09.0 -0.5**
baz=35,SNR=11
A18A Metzger Ranch, 35.16 342 ⇓P **P 18 28 09.4 -0.4**
baz=35,SNR=14
D13A Huson 35.21 336 ⇑P **P 18 28 09.8 -0.4**
baz=35,SNR=12
G09A Cove 35.24 330 ⇓P **P 18 28 09.5 -0.9**
baz=35,SNR=11
B16A M & M Farms, S 35.30 340 ⇓P **P 18 28 10.6 -0.4**
baz=36,SNR=12
SWMT Swartz Lake 35.37 336 *eP* **P 18 28 11.0 -0.5**
YBH Yreka Blue Hor 35.48 322 P **P 18 28 10.2 -2.3**
comp=Z,1.0nm,0.5s,mb3.9,baz=145,slow=15,SNR=3.3
F10A Beach Ranch, E 35.50 332 ⇑P **P 18 28 12.3 -0.4**
baz=36
B15A Bradely Ranch, 35.51 339 ⇑P **P 18 28 12.4 -0.4**
baz=36,SNR=7.1
D12A Red Ives Fores 35.53 335 ⇓P **P 18 28 12.1 -0.9**
baz=36
KHMM Horse Mountain 35.59 320 *eP* **P 18 28 13.3 -0.2**
comp=Z,23nm,1.6s,mb4.8
YBMT Yellow Bay 35.66 337 *eP* **P 18 28 14.5 +0.5**
JTMT Jette 35.67 336 *eP* **P 18 28 14.2 0.0**
C13A Hot Springs 35.73 336 ⇑P **P 18 28 14.1 -0.5**
baz=36
B14A Marquette Ranc 35.80 338 ⇑P **P 18 28 15.0 -0.2**
baz=36
G08A Pilot Rock 35.81 329 ⇓P **P 18 28 15.0 -0.5**
baz=36
BSMT Bassoo Peak 35.95 336 *eP* **P 18 28 14.0 -2.5**
C12B Naegeli Ranch, 36.11 335 ⇓P **P 18 28 17.4 -0.5**
baz=36
A15A Johnson Ranch, 36.14 339 ⇑P **P 18 28 17.8 -0.3**
baz=36,SNR=8.2
B13A Whitefish 36.26 337 ⇑P **P 18 28 19.1 0.0**
baz=36,SNR=15
A14A Double T Ranch 36.37 338 ⇓P **P 18 28 20.1 -0.1**
baz=37,SNR=15
WALA Waterton Lakes 36.62 338 *eP* **P 18 28 22.9 +0.7**
comp=Z,0.3nm,1.0s
H04A Detroit Lake 37.05 326 ⇓P **P 18 28 24.9 -1.0**
baz=37
KEBM Edson Butte 37.12 322 *eP* **P 18 28 26.8 +0.2**
comp=Z,112nm,1.3s,mb5.6
HOOD Mount Hood Mea 37.19 327 *eP* **P 18 28 28.0 +0.8**
comp=Z,88nm,1.1s,mb5.6
NEW Newport 37.22 334 *eP* **P 18 28 26.7 -0.7**
NEW pmax pmax
comp=Z,5.0nm,0.8s
NEW Newport 37.22 334 *eP* **P 18 28 26.7 -0.7**
comp=Z,5.3nm,0.8s,mb4.5
OD2 Odessa Site #2 37.24 332 *eP* **P 18 28 27.1 -0.4**
ASR Mount Adams--S 37.73 328 P **P 18 28 32.6 +0.9**
EBG Ellensburg 37.76 330 P **P 18 28 32.3 +0.5**
ETW Entiat 38.14 331 *eP* **P 18 28 35.2 +0.1**
LON Longmire 38.25 329 *eP* **P 18 28 35.4 -0.6**
LON pmax pmax
comp=Z,6.0nm,1.0s,mb4.4
LON Longmire 38.25 329 *eP* **P 18 28 35.4 -0.7**
comp=Z,5.6nm,1.0s,mb4.3
D05A Enumclaw 38.64 329 ⇑P **P 18 28 38.9 -0.4**
baz=39
FFC Flin Flon 39.00 353 *i* P **P 18 28 42.1 -0.1**
FFC Flin Flon 39.00 353 *eP* **P 18 28 42.0 -0.2**
comp=Z,32nm,0.6s,mb5.3
NLWA Neilton Lookou 39.72 328 ⇓P **P 18 28 48.0 -0.3**
baz=40
NLWA Neilton Lookou 39.72 328 *eP* **P 18 28 48.1 -0.2**
comp=Z,13nm,1.1s,mb4.7
EDM Edmonton 40.00 342 *eP* **P 18 28 49.8 -0.7**
LPAZ La Paz 41.13 140 P **P 18 28 57.4 -2.8**
comp=Z,4.3nm,0.7s,mb4.4,baz=328,slow=7.2,SNR=11
LPAZ La Paz 41.13 140 *eP* **P 18 28 57.4 -2.9**
FCC Fort Churchill 42.56 360 *eP* **P 18 29 09.5 -1.9**
comp=Z,0.9nm,0.8s,mb3.5
SCHQ Schefferville 43.97 22 P **P 18 29 22.1 -0.7**
comp=Z,7.6nm,0.8s,mb4.5,baz=216,slow=5.2,SNR=6.9
SCHQ LR LR 18 50 33.2
comp=Z,186nm,19.2s,baz=262,slow=40
YKA Yellowknife Ar 48.52 347 P **P 18 29 57.6 -0.7**
comp=Z,11nm,0.9s,mb4.8,baz=154,slow=7.4,SNR=21
DLBC Dease Lake 49.91 336 *eP* **P 18 30 10.4 +1.4**
LCO Las Campanas 50.23 153 *eP* **P 18 30 08.1 -3.8**
comp=Z,23nm,0.8s,mb5.2
FRB Frobisher Bay 50.72 14 P **P 18 30 14.3 -0.7**
comp=Z,18nm,0.9s,mb5.1,baz=216,slow=7.3,SNR=6.4
CPUP Villa Florida 55.28 139 P **P 18 30 44.9 -4.2**
comp=Z,6.5nm,0.8s,mb4.7,baz=309,slow=7.6,SNR=22
INK Inuvik 57.85 344 P **P 18 31 05.2 -1.5**
comp=Z,6.3nm,0.6s,mb4.8,baz=121,slow=3.2,SNR=14
INK pP pP 18 31 23.1 -5.1
comp=Z,6.3nm,0.7s,baz=115,slow=7.1,SNR=5.8
INK Inuvik 57.85 344 *eP* **P 18 31 06.0 -0.7**
INK pmax pmax
comp=Z,7.0nm,0.8s
INK Inuvik 57.85 344 *eP* **P 18 31 06.0 -0.6**
comp=Z,7.1nm,0.8s,mb4.8
EGAK Eagle 58.01 338 *eP* **P 18 31 06.9 -1.0**
MCK McKinley 60.44 335 *eP* **P 18 31 23.6 -1.1**
MCK pmax pmax
comp=Z,19nm,1.5s,mb4.9
MCK McKinley 60.44 335 *eP* **P 18 31 23.6 -1.0**
comp=Z,19nm,1.5s,mb4.9
PLCA Paso Flores 60.64 160 P **P 18 31 21.6 -4.6**
comp=Z,14nm,0.9s,mb5.0,baz=333,slow=8.3,SNR=18
PLCA pP pP 18 31 41.0 -7.0
comp=Z,8.5nm,1.0s,baz=331,slow=7.4,SNR=4.7
TRF Thorofare Moun 60.88 335 *eP* **P 18 31 26.7 -0.9**
comp=Z,13nm,1.0s,mb4.9
TRQA Tornquist 61.74 152 *eP* **P 18 31 29.9 -3.9**
comp=Z,49nm,1.8s,mb5.2
SUMG Summit 64.73 16 *eP* **P 18 31 52.6 -0.5**

comp=Z,125nm,2.5s,mb5.3
PMAR Madeira 70.80 60 *eP* PcP 18 32 46.0 -6.2
DAG Danmarks Havn 71.06 14⇓*eP* **P 18 32 31.7 -1.0**
DAG pmax pmax
comp=Z,9.0nm,0.6s,mb4.8
DAG Danmarks Havn 71.06 14 *i* P **P 18 32 31.7 -1.0**
comp=Z,9.3nm,0.6s,mb4.8
PMPS Porto Santo 71.24 60 *eP* pP 18 32 48.9 -7.9
KPL Plockton 75.72 34 P **P 18 32 58.6 -1.8**
KPL AMb AMB 18 33 01.1
comp=Z,62nm,5.8s
KPL Plockton 75.72 34 *eP* **P 18 32 58.6 -1.8**
KPL AMb AMB 18 33 01.1
comp=Z,62nm,5.8s
KSB Sheil Bridge 75.86 34 P **P 18 33 00.3 -1.0**
KSB Sheil Bridge 75.86 34 *eP* **P 18 33 00.3 -1.0**
MDO Dochfour 76.40 34 P **P 18 33 03.4 -0.8**
MDO Dochfour 76.40 34⇓*eP* **P 18 33 03.4 -0.8**
PGBU Glenifferbraes 76.58 35 P **P 18 33 04.4 -0.9**
PGBU AMb AMB 18 33 05.5
comp=Z,40nm,1.1s,mb5.1
PGBU Glenifferbraes 76.58 35 *eP* **P 18 33 04.4 -0.9**
PGBU AMb AMB 18 33 05.5
comp=Z,40nm,1.1s,mb5.1
GAL1 Galloway 76.60 36 P **P 18 33 04.4 -1.0**
GAL1 AMb AMB 18 33 06.1
comp=Z,42nm,2.5s,mb4.7
GAL1 Galloway 76.60 36 *eP* **P 18 33 04.4 -1.0**
GAL1 AMb AMB 18 33 06.1
comp=Z,42nm,2.5s,mb4.7
EAB Aberfoyle 76.60 35 P **P 18 33 05.0 -0.4**
EAB Aberfoyle 76.60 35 *eP* **P 18 33 05.0 -0.4**
PVIS Viseu 76.80 51 *eP* **P 18 33 06.8 0.0**
YRC Rhoscolyn 76.94 38 P **P 18 33 06.9 -0.5**
YRC Rhoscolyn 76.94 38⇑*eP* **P 18 33 06.9 -0.5**
MCD Coleburn Disti 76.97 34 P **P 18 33 07.0 -0.4**
MCD Coleburn Disti 76.97 34⇑*eP* **P 18 33 07.0 -0.4**
EBH Black Hill 77.05 35 P **P 18 33 07.9 0.0**
EBH Black Hill 77.05 35 *eP* **P 18 33 07.9 0.0**
EVO Evora 77.09 53 *eP* **P 18 33 07.8 -0.7**
comp=Z,12nm,0.7s,mb4.4
EVO *e*MLR MLR
comp=Z,83nm,20.8s
MTE Manteigas 77.11 51 *eP* **P 18 33 08.0 -0.6**
comp=Z,24nm,1.7s,mb4.7
EAU Auchinoon 77.16 35 P **P 18 33 07.6 -0.9**
EAU Auchinoon 77.16 35 *eP* **P 18 33 07.6 -0.9**
MME1 Meikle Cairn 77.17 34 P **P 18 33 07.7 -0.9**
MME1 Meikle Cairn 77.17 34⇑*eP* **P 18 33 07.7 -0.9**
PCBR Castelo Branco 77.27 52 *eP* **P 18 33 09.3 -0.2**
comp=Z,20nm,1.6s,mb4.6
EDI Edinburgh 77.29 35 P **P 18 33 08.5 -0.7**
EDI AMb AMB 18 33 10.0
comp=Z,40nm,0.9s,mb5.1
EDI Edinburgh 77.29 35 *eP* **P 18 33 08.5 -0.7**
EDI AMb AMB 18 33 10.0
comp=Z,40nm,0.9s,mb5.1
WPM1 Penmaenmawr 77.33 38 P **P 18 33 08.7 -0.9**
WPM1 Penmaenmawr 77.33 38 *eP* **P 18 33 08.7 -0.9**
PESTR Estremoz 77.36 53 *eP* **P 18 33 09.6 -0.4**
comp=Z,19nm,1.8s,mb4.5
MVO Moncorvo 77.36 51 *eP* **P 18 33 09.5 -0.5**
comp=Z,17nm,1.6s,mb4.5
HTL Hartland 77.37 40 P **P 18 33 09.8 0.0**
HTL AMb AMB 18 33 15.7
comp=Z,40nm,2.1s,mb4.8
HTL Hartland 77.37 40 *eP* **P 18 33 09.8 0.0**
HTL AMb AMB 18 33 15.7
comp=Z,40nm,2.1s,mb4.8
ESK Eskdalemuir 77.38 36 P **P 18 33 09.2 -0.6**
ESK AMb AMB 18 33 10.9
comp=Z,34nm,0.9s,mb5.1
ESK Eskdalemuir 77.38 36⇑*eP* **P 18 33 09.2 -0.6**
ESK AMb AMB 18 33 10.9
comp=Z,34nm,0.9s,mb5.1
ESK Eskdalemuir 77.38 36 *i* P **P 18 33 09.8 0.0**
ESK Eskdalemuir 77.38 36 *eP* **P 18 33 09.5 -0.3**
comp=Z,30nm,0.8s,mb5.1
EBL Broad Law 77.39 35 P **P 18 33 09.4 -0.4**
EBL Broad Law 77.39 35 *eP* **P 18 33 09.4 -0.4**
PMRV Marv??o 77.40 52 *eP* **P 18 33 09.7 -0.6**
ECK Cauldkaine Hil 77.45 36 P **P 18 33 09.4 -0.8**
ECK Cauldkaine Hil 77.45 36 *eP* **P 18 33 09.4 -0.8**
ESY Stoneypath 77.60 35 P **P 18 33 09.8 -1.3**
ESY Stoneypath 77.60 35 *eP* **P 18 33 09.8 -1.3**
PBAR Barrancos 77.91 54 *eP* **P 18 33 12.9 -0.2**
comp=Z,11nm,2.0s,mb4.2
HTR Trewern Hill 77.92 39 P **P 18 33 12.6 -0.3**
HTR Trewern Hill 77.92 39⇑*eP* **P 18 33 12.6 -0.3**
MCH1 Michaelchurch 78.11 39 P **P 18 33 12.7 -1.2**
MCH1 AMb AMB 18 33 13.7
comp=Z,36nm,1.4s,mb4.9
MCH1 Michaelchurch 78.11 39 *eP* **P 18 33 12.7 -1.2**
MCH1 AMb AMB 18 33 13.7
comp=Z,36nm,1.4s,mb4.9
BST Brest 78.13 43 *eP* **P 18 33 13.3 -0.8**
EMIN Mina Concepcio 78.27 54 P **P 18 33 14.4 -0.8**
comp=Z,28nm,1.5s,mb4.8
EPLA Plasencia 78.28 52 P **P 18 33 13.9 -1.2**
EPLA pmax pmax
comp=Z,54nm,1.9s,mb5.0
EPLA Plasencia 78.28 52 P **P 18 33 13.9 -1.2**
comp=Z,54nm,1.9s,mb5.0
EARI Arriondas 78.29 48 P **P 18 33 14.6 -0.5**
comp=Z,249nm,2.4s,mb5.5
HPK Haverah Park 78.54 37 P **P 18 33 16.2 0.0**
HPK AMb AMB 18 33 19.6
comp=Z,38nm,1.9s,mb4.9
HPK Haverah Park 78.54 37 *eP* **P 18 33 16.2 0.0**
HPK AMb AMB 18 33 19.6
comp=Z,38nm,1.9s,mb4.9
ROSF Rostrenen 78.64 43 *eP* **P 18 33 16.4 -0.5**
comp=Z,17nm,0.7s,mb4.7
ROSF Rostrenen 78.64 43 *eP* **P 18 33 16.4 -0.5**
ROSF pmax pmax
comp=Z,9.0nm,0.7s,mb4.7
ROSF Rostrenen 78.64 43 *eP* **P 18 33 16.4 -0.5**
comp=Z,8.7nm,0.7s,mb4.7
KBI1 Birley Grange 78.74 38 P **P 18 33 16.5 -0.8**
KBI1 Birley Grange 78.74 38 *eP* **P 18 33 16.5 -0.8**
BILL Bilibino 78.75 338⇑*eP* **P 18 33 16.2 -1.0**
BILL *e* 18 36 16.3
BILL pmax pmax
comp=Z,8.0nm,1.2s,mb4.4
BILL MLR MLR
comp=Z,100nm,22.0s
QUIF Quistinic 78.79 43 *eP* **P 18 33 17.3 -0.5**
comp=Z,36nm,0.9s,mb4.9
QUIF Quistinic 78.79 43 *eP* **P 18 33 17.3 -0.5**
QUIF pmax pmax
comp=Z,18nm,0.9s,mb4.9
QUIF Quistinic 78.79 43 *eP* **P 18 33 17.3 -0.5**
comp=Z,18nm,0.9s,mb4.9
CWF Charnwood Fore 78.97 38 P **P 18 33 18.4 -0.3**
CWF Charnwood Fore 78.97 38 *eP* **P 18 33 18.4 -0.3**
SGMF Saint Gilles 79.12 43 *eP* **P 18 33 18.8 -0.8**
comp=Z,48nm,1.1s,mb5.0
SGMF Saint Gilles 79.12 43 *eP* **P 18 33 18.8 -0.8**
SGMF pmax pmax
comp=Z,24nm,1.1s,mb4.9
SGMF Saint Gilles 79.12 43 *eP* **P 18 33 18.8 -0.8**
comp=Z,24nm,1.1s,mb4.9
ELAN Lanestosa 79.58 48 P **P 18 33 22.1 0.0**
comp=Z,109nm,2.0s,mb5.3
GUD Guadarrama 79.60 51 P **P 18 33 22.7 +0.4**
GUD pmax pmax
comp=Z,24nm,0.6s,mb5.2
GUD Guadarrama 79.60 51 P **P 18 33 22.7 +0.3**
comp=Z,24nm,0.6s,mb5.2
ESDC Sonseca Array 79.95 52 P **P 18 33 24.2 -0.1**
comp=Z,4.1nm,0.7s,mb4.4,baz=289,slow=5.4,SNR=19
ESDC Sonseca Array 79.95 52 P **P 18 33 24.5 +0.2**
comp=Z,2.8nm,0.8s,mb4.1
ESLA Sonseca Array 79.95 52 *eP* **P 18 33 23.4 -0.9**
GRR Gorron 80.20 42 *eP* **P 18 33 25.1 -0.3**
comp=Z,67nm,0.8s,mb5.2
GRR Gorron 80.20 42 *eP* **P 18 33 25.1 -0.3**
GRR pmax pmax
comp=Z,34nm,0.8s,mb5.2
GRR Gorron 80.20 42 *eP* **P 18 33 25.1 -0.3**
comp=Z,34nm,0.8s,mb5.2
ECRI Cripan 80.38 48 P **P 18 33 27.2 +0.7**
ECRI pmax pmax
comp=Z,26nm,0.7s,mb5.2
ECRI Cripan 80.38 48 P **P 18 33 27.2 +0.7**

comp=Z,26nm,0.7s,mb5.2
EBAN Banos Encina 80.42 53 P **P 18 33 27.0 +0.2**
EBAN pmax pmax
comp=Z,4.0nm,0.6s,mb4.4
EBAN Banos Encina 80.42 53 P **P 18 33 27.0 +0.2**
comp=Z,3.5nm,0.6s,mb4.4
LDF La Druitiere 80.63 42 *eP* **P 18 33 27.3 -0.4**
comp=Z,20nm,0.7s,mb4.8
LDF La Druitiere 80.63 42 *eP* **P 18 33 27.3 -0.4**
LDF pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
LDF La Druitiere 80.63 42 *eP* **P 18 33 27.3 -0.4**
comp=Z,10.0nm,0.7s,mb4.8
ECOG Cogollos-Vega 80.79 54 P **P 18 33 29.6 +0.8**
ECOG pmax pmax
comp=Z,11nm,0.4s,mb5.0
ECOG Cogollos-Vega 80.79 54 P **P 18 33 29.6 +0.8**
comp=Z,11nm,0.4s,mb5.0
ELIZ Elizondo 80.95 48 P **P 18 33 29.4 -0.1**
ELIZ pmax pmax
comp=Z,8.0nm,1.0s,mb4.5
ELIZ Elizondo 80.95 48 P **P 18 33 29.4 -0.2**
comp=Z,7.8nm,1.0s,mb4.5
EQES Quesada 81.05 53 P **P 18 33 30.2 0.0**
comp=Z,4.8nm,0.7s,mb4.4
MFF Saint Martin d 81.09 44 *eP* **P 18 33 29.6 -0.6**
comp=Z,33nm,1.0s,mb4.8
MFF Saint Martin d 81.09 44 *eP* **P 18 33 29.6 -0.6**
MFF pmax pmax
comp=Z,17nm,1.0s,mb4.8
MFF Saint Martin d 81.09 44 *eP* **P 18 33 29.6 -0.6**
comp=Z,16nm,1.0s,mb4.8
ETOR Torete 81.12 50 P **P 18 33 29.7 -0.8**
ETOR pmax pmax
comp=Z,15nm,0.8s,mb4.9
ETOR Torete 81.12 50 P **P 18 33 29.7 -0.7**
comp=Z,15nm,0.8s,mb4.9
SJPF Ste Jean 81.18 48 *eP* **P 18 33 30.6 -0.1**
comp=Z,44nm,1.2s,mb4.9
SJPF Ste Jean 81.18 48 *eP* **P 18 33 30.6 -0.1**
SJPF pmax pmax
comp=Z,22nm,1.2s,mb4.9
SJPF Ste Jean 81.18 48 *eP* **P 18 33 30.6 -0.1**
comp=Z,22nm,1.2s,mb4.9
EVIA Vianos 81.29 52 P **P 18 33 31.6 +0.2**
EVIA pmax pmax
comp=Z,14nm,0.7s,mb4.9
EVIA Vianos 81.29 52 P **P 18 33 31.6 +0.1**
comp=Z,14nm,0.7s,mb4.9
EBER Berja 81.40 54 P **P 18 33 32.2 +0.1**
comp=Z,23nm,0.5s,mb5.3
EHUE Huescar 81.42 53 P **P 18 33 32.7 +0.6**
EHUE pmax pmax
comp=Z,4.0nm,0.5s,mb4.5
EHUE Huescar 81.42 53 P **P 18 33 32.7 +0.6**
comp=Z,4.2nm,0.5s,mb4.5
ETSF Etsaut 81.70 48 *eP* **P 18 33 33.4 -0.1**
comp=Z,33nm,0.9s,mb4.9
ETSF Etsaut 81.70 48 *eP* **P 18 33 33.4 -0.1**
ETSF pmax pmax
comp=Z,17nm,0.9s,mb4.9
ETSF Etsaut 81.70 48 *eP* **P 18 33 33.4 -0.1**
comp=Z,17nm,0.9s,mb4.9
ETOB Tobarra 82.02 52 P **P 18 33 35.7 +0.5**
comp=Z,9.3nm,0.8s,mb4.7
ESAC San Caprasio 82.06 49 P **P 18 33 36.1 +0.7**
comp=Z,5.7nm,0.3s,mb4.9
LFF La Frestale 82.10 46 *eP* **P 18 33 35.1 -0.5**
comp=Z,51nm,1.0s,mb5.0
LFF La Frestale 82.10 46 *eP* **P 18 33 35.1 -0.5**
LFF pmax pmax
comp=Z,25nm,1.0s,mb5.0
LFF La Frestale 82.10 46 *eP* **P 18 33 35.1 -0.5**
comp=Z,25nm,1.0s,mb5.0
EBIE Bielsa 82.26 48 P **P 18 33 36.0 -0.5**
comp=Z,11nm,0.7s,mb4.8
EPF Esparros 82.31 48 *eP* **P 18 33 36.3 -0.4**
comp=Z,23nm,0.9s,mb4.7
EPF Esparros 82.31 48 *eP* **P 18 33 36.3 -0.4**
EPF pmax pmax
comp=Z,12nm,0.9s,mb4.7
EPF Esparros 82.31 48 *eP* **P 18 33 36.3 -0.4**
comp=Z,12nm,0.9s,mb4.7
EMOS Mosqueruela 82.40 50 P **P 18 33 38.0 +0.8**
comp=Z,24nm,0.7s,mb5.1
RJF Les Rejaudoux 82.54 45 *eP* **P 18 33 37.3 -0.5**
comp=Z,46nm,0.9s,mb5.0
RJF *e*MLR MLR
comp=Z,71nm,21.8s
RJF Les Rejaudoux 82.54 45 *eP* **P 18 33 37.3 -0.5**
RJF pmax pmax
comp=Z,23nm,0.9s,mb5.0
RJF MLR MLR
comp=Z,70nm,21.8s
RJF Les Rejaudoux 82.54 45 *eP* **P 18 33 37.3 -0.5**
comp=Z,23nm,0.9s,mb5.0
RJF LR LR
comp=Z,70nm,21.8s
TCF Toulx Ste Croi 82.75 44 *eP* **P 18 33 38.2 -0.7**
comp=Z,16nm,0.6s,mb4.7
TCF Toulx Ste Croi 82.75 44 *eP* **P 18 33 38.2 -0.7**
TCF pmax pmax
comp=Z,8.0nm,0.6s,mb4.7
TCF Toulx Ste Croi 82.75 44 *eP* **P 18 33 38.2 -0.7**
comp=Z,8.2nm,0.6s,mb4.7
HYF Humbligny 82.76 43 *eP* **P 18 33 38.8 -0.2**
ERTA Horta de San J 82.84 50 P **P 18 33 39.4 -0.1**
comp=Z,13nm,0.8s,mb4.8
SNF Seneffe 82.90 40 P **P 18 33 40.4 +0.8**
comp=Z,18nm,1.7s,mb4.6
BAIF Baives 82.98 40 *eP* **P 18 33 39.9 -0.1**
comp=Z,33nm,1.0s,mb4.8
BAIF Baives 82.98 40 *eP* **P 18 33 39.9 -0.1**
BAIF pmax pmax
comp=Z,16nm,1.0s,mb4.8
BAIF Baives 82.98 40 *eP* **P 18 33 39.9 -0.1**
comp=Z,16nm,1.0s,mb4.8
EBEN Beniarda 83.00 52 P **P 18 33 40.3 -0.1**
comp=Z,8.2nm,0.9s,mb4.6
CAF Calviac 83.01 45 *eP* **P 18 33 39.7 -0.6**
comp=Z,17nm,0.8s,mb4.6
CAF Calviac 83.01 45 *eP* **P 18 33 39.7 -0.6**
CAF pmax pmax
comp=Z,8.0nm,0.8s,mb4.6
CAF Calviac 83.01 45 *eP* **P 18 33 39.7 -0.6**
comp=Z,8.4nm,0.8s,mb4.6
CSOR Sort 83.05 48 P **P 18 33 40.7 +0.2**
comp=Z,12nm,0.6s,mb4.9
VERF Verneugheol 83.08 44 *eP* **P 18 33 40.6 0.0**
BGF Bois d'Agland 83.09 44 *eP* **P 18 33 40.1 -0.6**
comp=Z,59nm,0.8s,mb5.1
BGF Bois d'Agland 83.09 44 *eP* **P 18 33 40.1 -0.6**
BGF pmax pmax
comp=Z,29nm,0.8s,mb5.2
BGF Bois d'Agland 83.09 44 *eP* **P 18 33 40.1 -0.6**
comp=Z,30nm,0.8s,mb5.2
DOU Dourbes 83.21 40 P **P 18 33 41.6 +0.4**
comp=Z,10nm,1.1s,mb4.6
NB2 NORSAR Subarra 83.22 28 P **P 18 33 41.5 +0.5**
comp=Z,7.9nm,0.9s,mb4.5,baz=291,slow=5.1
NOA NORSAR Array B 83.22 28 P **P 18 33 41.6 +0.6**
comp=Z,5.8nm,0.8s,mb4.4,baz=290,slow=5.1,SNR=17
NOA pP pP 18 34 00.4 -3.4
comp=Z,2.4nm,1.0s,baz=299,slow=4.6,SNR=4.1
NOA LR LR 19 09 04.5
comp=Z,31nm,19.2s,baz=275,slow=34
NOA NORSAR Array B 83.22 28 P **P 18 33 41.7 +0.7**
NOA *PP pP 18 34 00.4 -3.4
EPOB Poblet 83.28 49 P **P 18 33 40.8 -0.9**
comp=Z,25nm,1.0s,mb5.0
GIVF Givet 83.35 40 *eP* **P 18 33 41.9 0.0**
comp=Z,61nm,1.3s,mb5.0
GIVF Givet 83.35 40 *eP* **P 18 33 41.9 0.0**
GIVF pmax pmax
comp=Z,31nm,1.3s,mb5.0
GIVF Givet 83.35 40 *eP* **P 18 33 41.9 0.0**
comp=Z,30nm,1.3s,mb5.0
AVF Avril sur Loir 83.36 43 *eP* **P 18 33 41.1 -1.0**
comp=Z,31nm,0.9s,mb4.8
AVF Avril sur Loir 83.36 43 *eP* **P 18 33 41.1 -1.0**
AVF pmax pmax
comp=Z,15nm,0.9s,mb4.8
AVF Avril sur Loir 83.36 43 *eP* **P 18 33 41.1 -1.0**
comp=Z,15nm,0.9s,mb4.8
SSF Saint Saulge 83.39 43 *eP* **P 18 33 41.5 -0.7**
comp=Z,38nm,0.9s,mb4.9
SSF Saint Saulge 83.39 43 *eP* **P 18 33 41.5 -0.7**

SSF pmax pmax
comp=Z,19nm,0.9s,mb4.9
SSF Saint Saulge 83.39 43 *eP* **P 18 33 41.5 -0.7**
comp=Z,19nm,0.9s,mb4.9
PYM Petit Puy Mans 83.43 44 *eP* **P 18 33 42.3 -0.1**
BCLA Clavier 83.55 39 P **P 18 33 43.6 +0.7**
comp=Z,19nm,1.4s,mb4.7
MTLF Montolieu 83.55 47 *eP* **P 18 33 42.6 -0.5**
comp=Z,35nm,0.9s,mb4.9
MTLF Montolieu 83.55 47 *eP* **P 18 33 42.6 -0.5**
MTLF pmax pmax
comp=Z,17nm,0.9s,mb4.9
MTLF Montolieu 83.55 47 *eP* **P 18 33 42.6 -0.5**
comp=Z,17nm,0.9s,mb4.9
LOR Lormes 83.56 43 *eP* **P 18 33 42.6 -0.5**
comp=Z,38nm,1.0s,mb4.9
LOR *e*MLR MLR
comp=Z,64nm,18.2s
LOR Lormes 83.56 43 *eP* **P 18 33 42.6 -0.5**
LOR pmax pmax
comp=Z,19nm,1.0s,mb4.9
LOR MLR MLR
comp=Z,60nm,18.3s
LOR Lormes 83.56 43 *eP* **P 18 33 42.6 -0.5**
comp=Z,19nm,1.0s,mb4.9
LOR LR LR
comp=Z,60nm,18.3s
BEBN Eben Emael 83.67 39 P **P 18 33 44.2 +0.7**
SMF Signal de Mont 83.73 43 *eP* **P 18 33 43.0 -0.9**
comp=Z,26nm,0.8s,mb4.8
SMF Signal de Mont 83.73 43 *eP* **P 18 33 43.0 -0.9**
SMF pmax pmax
comp=Z,13nm,0.8s,mb4.8
SMF Signal de Mont 83.73 43 *eP* **P 18 33 43.0 -0.9**
comp=Z,13nm,0.8s,mb4.8
LBL Lubilhac 83.73 45 *eP* **P 18 33 44.2 +0.2**
PLDF La Plantade 83.78 44 *eP* **P 18 33 43.7 -0.5**
HGN Heimansgroeve 83.83 39⇑ *eP* **P 18 33 43.8 -0.5**
comp=Z,31nm,1.0s,mb5.1
MEM Membach 83.92 39 P **P 18 33 45.2 +0.4**
comp=Z,14nm,1.4s,mb4.6
MEZF Maizieres J'vi 83.97 41 *eP* **P 18 33 45.1 0.0**
comp=Z,76nm,1.0s,mb5.2
MEZF Maizieres J'vi 83.97 41 *eP* **P 18 33 45.1 0.0**
comp=Z,76nm,1.0s,mb5.5
WTSB Winterswijk 83.97 38 *eP* **P 18 33 46.0 +0.9**
comp=Z,42nm,1.4s,mb5.1
EJON La Jonquera 84.28 48 P **P 18 33 46.7 -0.1**
comp=Z,7.1nm,0.5s,mb4.8
WLF Walferdange 84.30 40 P **P 18 33 47.9 +1.1**
WLF Walferdange 84.30 40 *eP* **P 18 33 47.6 +0.8**
comp=Z,28nm,0.8s,mb5.1
WLF Walferdange 84.30 40 *eP* **P 18 33 47.7 +0.9**
WLF pmax pmax
comp=Z,23nm,0.8s,mb5.1
WLF Walferdange 84.30 40 *eP* **P 18 33 47.7 +0.9**
comp=Z,23nm,0.8s,mb5.1
BUG Bochum--Univer 84.42 38 *eP* **P 18 33 47.6 +0.3**
comp=Z,54nm,1.8s,mb5.1
IBBN Ibbenburen 84.42 37 *eP* **P 18 33 47.7 +0.4**
comp=Z,30nm,1.2s,mb5.0
LASF Ste Croix 84.48 46 *eP* **P 18 33 48.0 +0.2**
comp=Z,16nm,0.9s,mb4.6
THEF They Montfort 84.64 41 *eP* **P 18 33 48.8 +0.3**
ARCES ARCESS Array B 84.74 18 P **P 18 33 49.6 +1.1**
comp=Z,14nm,0.9s,mb4.9,baz=292,slow=4.1,SNR=27
VIVF Saint-Julien-I 84.81 45 *eP* **P 18 33 49.6 +0.1**
comp=Z,37nm,1.0s,mb5.0
VIVF Saint-Julien-I 84.81 45 *eP* **P 18 33 49.6 +0.1**
VIVF pmax pmax
comp=Z,19nm,1.0s,mb5.0
VIVF Saint-Julien-I 84.81 45 *eP* **P 18 33 49.6 +0.1**
comp=Z,19nm,1.0s,mb5.0
HAU Haudompre 84.94 42 *eP* **P 18 33 49.8 -0.3**
comp=Z,40nm,0.9s,mb5.0
HAU *e*MLR MLR
comp=Z,58nm,21.0s
HAU Haudompre 84.94 42 *eP* **P 18 33 49.8 -0.3**
HAU pmax pmax
comp=Z,20nm,0.9s,mb5.0
HAU MLR MLR
comp=Z,60nm,21.0s
HAU Haudompre 84.94 42 *eP* **P 18 33 49.8 -0.3**
comp=Z,20nm,0.9s,mb5.0
HAU LR LR
comp=Z,60nm,21.0s
ETOS Mallorca 84.99 50 P **P 18 33 49.8 -0.7**
comp=Z,48nm,0.9s,mb5.4
CABF La Chapelle 85.22 43 *eP* **P 18 33 51.4 0.0**
comp=Z,31nm,1.1s,mb4.8
CABF La Chapelle 85.22 43 *eP* **P 18 33 51.4 0.0**
CABF pmax pmax
comp=Z,15nm,1.1s,mb4.8
CABF La Chapelle 85.22 43 *eP* **P 18 33 51.4 0.0**
comp=Z,15nm,1.1s,mb4.8
BSEG Bad Segeberg 85.31 35 *eP* **P 18 33 52.2 +0.4**
comp=Z,26nm,1.0s,mb5.1
HINF Hinteralfeld 85.33 42 *eP* **P 18 33 51.7 -0.3**
comp=Z,34nm,1.2s,mb4.9
HINF Hinteralfeld 85.33 42 *eP* **P 18 33 51.7 -0.3**
HINF pmax pmax
comp=Z,17nm,1.2s,mb4.8
HINF Hinteralfeld 85.33 42 *eP* **P 18 33 51.7 -0.3**
comp=Z,17nm,1.2s,mb4.9
ECH Echery 85.39 41 *eP* **P 18 33 52.7 +0.4**
ECH Echery 85.39 41 *eP* **P 18 33 51.5 -0.8**
ECH pmax pmax
comp=Z,21nm,1.1s,mb5.0
ECH Echery 85.39 41 *eP* **P 18 33 51.5 -0.8**
comp=Z,21nm,1.1s,mb5.0
CDF Champ du Feu 85.40 41 *eP* **P 18 33 52.3 0.0**
comp=Z,60nm,1.3s,mb5.1
CDF Champ du Feu 85.40 41 *eP* **P 18 33 52.3 0.0**
CDF pmax pmax
comp=Z,30nm,1.3s,mb5.1
CDF Champ du Feu 85.40 41 *eP* **P 18 33 52.3 0.0**
comp=Z,30nm,1.3s,mb5.1
LOMF Lomont 85.46 42 *eP* **P 18 33 53.6 +1.0**
MOF Molkenrain 85.49 42 *eP* **P 18 33 52.7 -0.1**
TNS Taunus Mts 85.52 39 *eP* **P 18 33 53.1 +0.2**
comp=Z,57nm,0.9s,mb5.5
LANF Langenberg 85.55 40 *eP* **P 18 33 53.6 +0.6**
ORIF Oris-en-Rattie 85.61 45 *eP* **P 18 33 53.7 +0.3**
comp=Z,19nm,0.9s,mb4.7
ORIF *e*MLR MLR
comp=Z,37nm,20.5s
ORIF Oris-en-Rattie 85.61 45 *eP* **P 18 33 53.7 +0.3**
ORIF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
ORIF Oris-en-Rattie 85.61 45 *eP* **P 18 33 53.7 +0.3**
comp=Z,9.4nm,0.9s,mb4.7
SMRF Simiane la Rot 85.70 46 *eP* **P 18 33 54.4 +0.5**
comp=Z,36nm,1.0s,mb4.9
SMRF Simiane la Rot 85.70 46 *eP* **P 18 33 54.4 +0.5**
comp=Z,36nm,1.0s,mb5.3
TOD Tromm 85.95 39 *eP* **P 18 33 55.3 +0.3**
LPL La Plagne 85.99 44 *eP* **P 18 33 56.0 +0.7**
comp=Z,23nm,1.1s,mb4.7
LPL La Plagne 85.99 44 *eP* **P 18 33 56.0 +0.7**
LPL pmax pmax
comp=Z,11nm,1.1s,mb4.7
LPL La Plagne 85.99 44 *eP* **P 18 33 56.0 +0.7**
comp=Z,11nm,1.1s,mb4.7
LPG La Plagne 86.01 44 *eP* **P 18 33 56.1 +0.7**
comp=Z,59nm,1.4s,mb5.0
LPG La Plagne 86.01 44 *eP* **P 18 33 56.1 +0.7**
LPG pmax pmax
comp=Z,29nm,1.4s,mb5.0
LPG La Plagne 86.01 44 *eP* **P 18 33 56.1 +0.7**
comp=Z,29nm,1.4s,mb5.0
FELD Feldberg im Sc 86.04 41 *eP* **P 18 33 56.0 +0.5**
BFO Black Forest 86.09 41 *eP* **P 18 33 55.7 0.0**
comp=Z,14nm,1.1s,mb4.8
BNI Bardonecchia 86.10 44 *eP* **P 18 33 56.4 +0.5**
BNI pmax pmax
comp=Z,16nm,1.1s,mb4.9
BNI Bardonecchia 86.10 44 *eP* **P 18 33 56.4 +0.5**
comp=Z,16nm,1.1s,mb4.9
UBBA Unterbreizbach 86.25 38 *eP* **P 18 33 56.6 +0.1**
comp=Z,27nm,1.6s,mb4.9
MBDF Montbardon 86.27 45 *eP* **P 18 33 57.0 +0.3**
comp=Z,28nm,0.9s,mb4.9
MBDF Montbardon 86.27 45 *eP* **P 18 33 57.0 +0.3**
MBDF pmax pmax
comp=Z,14nm,0.9s,mb4.9
MBDF Montbardon 86.27 45 *eP* **P 18 33 57.0 +0.3**
comp=Z,14nm,0.9s,mb4.9

SPAK Spaichingen-Ko 86.46 41 *eP* **P 18 33 57.7 +0.2**
STU Stuttgart 86.48 40 *eP* **P 18 33 58.0 +0.4**
comp=Z,27nm,0.8s,mb5.2
STU Stuttgart 86.48 40 *eP* **P 18 33 58.0 +0.4**
STU pmax pmax
comp=Z,23nm,0.8s,mb5.2
STU Stuttgart 86.48 40 *eP* **P 18 33 58.0 +0.3**
comp=Z,23nm,0.8s,mb5.2
LMR La Mourre 86.54 46 *eP* **P 18 33 57.9 -0.2**
comp=Z,54nm,0.8s,mb5.2
LMR La Mourre 86.54 46 *eP* **P 18 33 57.9 -0.2**
LMR pmax pmax
comp=Z,27nm,0.8s,mb5.2
LMR La Mourre 86.54 46 *eP* **P 18 33 57.9 -0.2**
comp=Z,27nm,0.8s,mb5.2
FRF La Foret Royal 86.56 46 *eP* **P 18 33 58.0 -0.2**
comp=Z,60nm,1.0s,mb5.2
FRF La Foret Royal 86.56 46 *eP* **P 18 33 58.0 -0.2**
FRF pmax pmax
comp=Z,30nm,1.0s,mb5.2
FRF La Foret Royal 86.56 46 *eP* **P 18 33 58.0 -0.2**
comp=Z,30nm,1.0s,mb5.2
CALN Calern 86.67 45 *eP* **P 18 33 59.2 +0.5**
AUTN L'Aution 86.96 45 *eP* **P 18 34 00.3 +0.2**
SBF Sospel 87.00 45 *eP* **P 18 33 59.9 -0.4**
comp=Z,21nm,0.7s,mb4.8
SBF Sospel 87.00 45 *eP* **P 18 33 59.9 -0.4**
SBF pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
SBF Sospel 87.00 45 *eP* **P 18 33 59.9 -0.4**
comp=Z,10nm,0.7s,mb4.9
MOX Moxa 87.27 38 *e*PKP **P 18 34 01.3 -0.1**
comp=Z,18nm,1.5s,mb4.8
MOX Moxa 87.27 38 *eP* **P 18 34 01.7 +0.3**
comp=Z,15nm,1.5s,mb4.7
TUE Stuetta 87.38 42 *eP* **P 18 34 02.9 +0.9**
comp=Z,9.9nm,0.8s,mb4.8
GRF Grafenberg Arr 87.39 39 *eP* **P 18 34 02.5 +0.5**
comp=Z,44nm,1.4s,mb5.2
GRF Grafenberg Arr 87.39 39 *eP* **P 18 34 02.5 +0.5**
GRF pmax pmax
comp=Z,44nm,1.4s,mb5.2
DBIC Dimbokro 87.40 84 P **P 18 34 03.1 +0.3**
comp=Z,3.2nm,0.8s,mb4.3,baz=276,slow=3.1,SNR=3.4
DBIC LR LR 19 12 10.7
comp=Z,39nm,18.1s,baz=59,slow=35
CLL Collm 87.82 37⇑ *iP* **P 18 34 05.9 +1.8**
CLL pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
CLL Collm 87.82 37⇑ *iP* **P 18 34 05.9 +1.8**
comp=Z,8.0nm,1.2s,mb4.6
FUR Furstenfeldbru 87.99 40 *eP* **P 18 34 05.4 +0.5**
comp=Z,13nm,0.7s,mb5.1
BRG Berggiesshubel 88.54 37 *eP* **P 18 34 07.1 -0.4**
comp=Z,2.7nm,0.8s,mb4.3
BRG Berggiesshubel 88.54 37 *eP* **P 18 34 07.1 -0.4**
BRG pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
KHC Kasperske Hora 89.02 39 *eP* **P 18 34 09.5 -0.3**
FINES FINESS Array B 89.41 25 P **P 18 34 11.3 0.0**
comp=Z,1.7nm,0.6s,mb4.3,baz=323,slow=3.3,SNR=7.3
FINES LR LR 19 11 31.9
comp=Z,60nm,22.0s,baz=305,slow=34
VSL Villasalto 89.87 49 *eP* **P 18 34 13.9 -0.1**
comp=Z,14nm,0.7s,mb5.2
DPC Dobruska-Polom 90.13 37 *eP* **P 18 34 15.3 +0.4**
MORC Moravsky Berou 91.09 37 *eP* **P 18 34 19.4 0.0**
MORC pmax pmax
comp=Z,10.0nm,1.5s,mb4.7
MORC Moravsky Berou 91.09 37 *eP* **P 18 34 19.4 0.0**
comp=Z,10nm,1.5s,mb4.8
MORC Moravsky Berou 91.09 37⇓ *iP* **P 18 34 20.2 +0.8**
KEST Kesra 91.18 52 P **P 18 34 20.6 +0.4**
comp=Z,2.5nm,0.8s,mb4.4,baz=211,slow=3.5,SNR=7.8
KEST Kesra 91.18 52 *eP* **P 18 34 20.5 +0.3**
VSU Vasula 91.36 27 *eP* **P 18 34 21.7 +1.3**
VSU pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
ZST Bratislava 91.54 39 *eP* **P 18 34 23.6 +2.1**
ZST pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
ZST Bratislava 91.54 39 *eP* **P 18 34 23.6 +2.1**
comp=Z,6.4nm,0.9s,mb4.8
ZST Bratislava 91.54 39 *eP* **P 18 34 23.6 +2.1**
TORD Torodi Ar. Bea 91.79 76 P **P 18 34 21.6 -1.7**
comp=Z,0.5nm,0.7s,mb3.8,baz=284,slow=4.5,SNR=3.4
TORD LR LR 19 11 34.3
comp=Z,59nm,19.4s,baz=125,slow=33
KOLL Kolacno 92.14 38 *eP* **P 18 34 25.3 +1.0**
KOLL Kolacno 92.14 38 *eP* **P 18 34 25.3 +1.0**
VYHS Vyhne 92.43 38 *eP* **P 18 34 27.3 +1.7**
VYHS pmax pmax
comp=Z,2.0nm,1.2s,mb4.2
VYHS Vyhne 92.43 38 *eP* **P 18 34 27.3 +1.7**
comp=Z,1.9nm,1.2s,mb4.2
VYHS Vyhne 92.43 38 *eP* **P 18 34 27.3 +1.7**
NIE Niedzica 92.85 37 *eP* **P 18 34 28.7 +1.1**
STHS Stebnicka Huta 93.39 36 *eP* **P 18 34 31.2 +1.2**
STHS pmax pmax
comp=Z,2.0nm,0.8s,mb4.5
STHS Stebnicka Huta 93.39 36 *eP* **P 18 34 31.2 +1.2**
comp=Z,1.9nm,0.8s,mb4.5
STHS Stebnicka Huta 93.39 36 *eP* **P 18 34 31.2 +1.2**
KECS Kecovo 93.41 37 *eP* **P 18 34 31.6 +1.5**
KECS pmax pmax
comp=Z,2.0nm,0.9s,mb4.5
KECS Kecovo 93.41 37 *eP* **P 18 34 31.6 +1.5**
comp=Z,1.9nm,0.9s,mb4.4
KECS Kecovo 93.41 37 *eP* **P 18 34 31.6 +1.5**
CRVS Cervenica-Dubn 93.77 37 *eP* **P 18 34 32.6 +0.8**
CRVS pmax pmax
comp=Z,3.0nm,0.9s,mb4.6
CRVS Cervenica-Dubn 93.77 37 *eP* **P 18 34 32.6 +0.8**
comp=Z,3.0nm,0.9s,mb4.6
CRVS Cervenica-Dubn 93.77 37 *eP* **P 18 34 32.6 +0.8**
KWP Kalwaria Pacla 94.10 36⇑ *iP* **P 18 34 35.3 +2.0**
BZS Buzias 95.48 39⇑ *iP* **P 18 34 40.6 +0.9**
DRGR 95.55 38⇓ *iP* **P 18 34 40.2 +0.2**
GZR Gura Zlata 96.30 39⇑ *iP* **P 18 34 43.3 -0.1**
AKASG Malin Array Be 97.02 32 P **P 18 34 44.6 -2.0**
comp=Z,0.2nm,0.2s,mb4.1,baz=294,slow=3.3,SNR=2.8
AKASG LR LR 19 23 16.1
comp=Z,28nm,18.1s,baz=270,slow=38
OBN Obninsk 97.67 26⇑ *eP* **P 18 34 48.6 -0.8**
OBN *e* 18 38 48.9
OBN *e*SS SS 18 52 50.0 +1.9
OBN pmax pmax
comp=Z,3.0nm,0.7s,mb4.9
MLR Muntele Rosu 98.15 38⇓ *iP* **P 18 34 52.6 +0.8**
ZALV Zalesovo Beam 110.20 1 PP PP 18 40 18.9 -1.4
comp=Z,1.0nm,0.7s,baz=352,slow=9.1,SNR=4.6
BJI Beijing 117.43 334 Pdif Pdif 18 36 16.7 -0.6
BJI LR LR
comp=E,93nm,24.1s
BJI LR LR
comp=Z,95nm,26.0s
HHC Hu-ho-hao-te 118.53 338 *e*PKP PKPdf 18 39 55.6 -6.9
HHC AMB AMB
comp=Z,36nm,9.0s
HHC LR LR
comp=N,91nm,19.1s
HHC LR LR
comp=E,110nm,19.1s
HHC LR LR
comp=Z,110nm,19.5s
WMQ Urumqi 120.32 359 *e*PKP PKPdf 18 40 03.1 -2.7
WMQ LR LR
comp=N,54nm,24.0s
WMQ LR LR
comp=Z,84nm,26.0s
BOSA Boshof 123.04 114 PKP PKPdf 18 40 09.3 -2.0
comp=Z,4.2nm,0.7s,baz=288,slow=3.2,SNR=4.4
LZH Lanzhou 125.38 342 *e*PKP PKPdf 18 40 14.4 -1.4
MAW Mawson 126.43 169 PKP PKPdf 18 40 13.3 -3.4
comp=Z,1.9nm,0.7s,baz=243,slow=2.3,SNR=4.4
STKA Stephens Creek 127.34 242 PKP PKPdf 18 40 14.9 -4.6
comp=Z,3.7nm,1.0s,baz=45,slow=1.4,SNR=3.1
CD2 Chengdu 130.19 340 PKP PKPdf 18 40 30.0 +4.9
GYA Guiyang 133.12 334 *e*Pdif Pdif 18 37 25.0 -2.1
GYA PKP PKPdf 18 40 29.4 -1.4
GYA PP PP 18 42 59.6 +3.1
GYA PKS 18 44 03.1
GYA SKKS SKKSac 18 49 41.5 -4.4
GYA AMB AMB
comp=Z,110nm,7.8s
GYA LR LR
comp=N,120nm,20.8s
GYA LR LR
comp=E,110nm,21.2s
GYA LR LR
comp=Z,140nm,20.8s
WRA Warramunga Arr 133.95 258 PKP PKPdf 18 40 29.4 -2.9
comp=Z,0.8nm,0.6s,baz=88,slow=2.7,SNR=7.5
ASAR Alice Springs 134.46 253 PKP PKPdf 18 40 30.0 -3.3
comp=Z,1.2nm,0.7s,baz=103,slow=1.3,SNR=5.6
KMI Kunming 135.85 338 PKP PKPdf 18 40 33.8 -2.1
KMI PP PP 18 43 16.8 +3.1
KMI AMB AMB
comp=Z,38nm,6.7s
KMI LR LR
comp=N,62nm,20.3s
KMI LR LR
comp=E,130nm,14.9s
KMI LR LR
comp=Z,170nm,14.9s
CMAR Chiang Mai Arr 143.33 339 PKhKP PKPpre 18 40 44.0
comp=Z,0.4nm,0.6s,baz=316,slow=2.1,SNR=4.1

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*SZGRF **03** 18:30:20.7, 18°.33S×177°.50W, h33km, Fiji Islands region*
*IDC **03** 18:31:22.5±1.8, 17°.97S×178°.48W, h561km±22km, mb3.7/14, mb1 3.9/15, mb1mx3.9/19, mbtmp3.7/15, Error ellipse: s-maj=19.3km s-min=11.9km az=148.0*
*ISCJB **03** 18:31:25.8±0.6, 17°.9S±0°.1×178°.72W±0°.07, h612km±7km, mb4.3/32, Error ellipse: s-maj=18.6km s-min=6.7km az=152.5*
*BJI **03** 18:31:25.2, 17°.94S×178°.93W, h596km, mB4.6/8, mb4.3/13*
*NEIC **03** 18:31:25.1±0.9, 17°.99S×178°.58W, h595km±10km, mb4.3/12, Error ellipse: s-maj=17.0km s-min=8.7km az=144.0*
ISC 03 18:31:26.2±0.6,**17°.9S**±0°.1×**178°.66W**±0°.07,**h602**km±7km, **h599**km±3.4km:**pP-P**,**n262**,σ**0**s**45**/196,**mb4.3**/32,**81C-74D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.14**	**273**	*eP*	**P**	**18 32 45.6**	**-0.7**
MSVF				*eS*	**S**	**18 33 52.1**	**+0.5**
AFI	**Afiamalu**	**7.73**	**60**	P	**P**	**18 33 16.9**	**-6.3**
	12nm,0.3s,baz=285,slow=0.9,SNR=6.6						
URZ	**Urewera**	**20.59**	**190**	P	**P**	**18 35 21.7**	**-3.2**
	12nm,0.8s,baz=78,slow=10,SNR=6.4						
EIDS	**Eidsvold**	**29.04**	**250**	*eP*	**P**	**18 36 39.3**	**-0.3**
	10nm,0.7s,mb4.6						
ARMA	**Armidale**	**29.72**	**240**	*eP*	**P**	**18 36 46.4**	**+1.0**
ARMA	**Armidale**	**29.72**	**240**	*eP*	**P**	**18 36 45.7**	**+0.3**
	19nm,0.8s,mb4.8						
CTA	**Charters Tower**	**33.21**	**261**	*eP*	**P**	**18 37 15.4**	**+0.2**
	6.0nm,0.6s,mb4.4						
CTA	**Charters Tower**	**33.21**	**261**	P	**P**	**18 37 15.3**	**+0.1**
	9.2nm,0.6s,mb4.6,baz=90,slow=11,SNR=21						
CNB	**Canberra Magne**	**33.22**	**232**	*eP*	**P**	**18 37 15.8**	**+0.7**
TOO	**Toolangi**	**36.97**	**231**	*eP*	**P**	**18 37 46.3**	**+0.3**
STKA	**Stephens Creek**	**38.41**	**241**	*eP*	**P**	**18 37 58.6**	**+0.8**
	12nm,0.6s,mb4.6						
STKA	**Stephens Creek**	**38.41**	**241**	P	**P**	**18 37 58.6**	**+0.8**
	17nm,0.6s,mb4.8,baz=88,slow=9.4,SNR=59						
STKA	**Stephens Creek**	**38.41**	**241**	*eP*	**P**	**18 37 58.5**	**+0.7**
	5.0nm,0.9s,mb4.0						
WRAB	**Tennant Creek**	**44.38**	**260**	*eP*	**P**	**18 38 44.5**	**-0.4**
	7.9nm,0.6s,mb4.4						
WRA	**Warramunga Arr**	**44.39**	**260**	P	**P**	**18 38 44.6**	**-0.4**
	3.7nm,0.3s,mb4.4,baz=89,slow=8.0,SNR=119						
ASAR	**Alice Springs**	**44.56**	**254**	P	**P**	**18 38 46.5**	**+0.3**
	46nm,0.6s,mb5.2,baz=88,slow=8.5,SNR=634						
ASAR				S	**S**	**18 44 39.5**	**+0.1**
	0.4nm,0.6s,baz=85,slow=15,SNR=6.1						
KAKA	**Kakadu**	**47.35**	**269**	*eP*	**P**	**18 39 08.0**	**+0.6**
	15nm,0.5s,mb4.8						
KAKA	**Kakadu**	**47.35**	**269**	*eP*	**P**	**18 39 07.7**	**+0.3**
	38nm,0.6s,mb5.1						
FORT	**Forrest**	**49.78**	**245**	*eP*	**P**	**18 39 24.5**	**-0.7**
	14nm,0.5s,mb4.6						
FITZ	**Fitzroy Crossi**	**52.79**	**261**	*eP*	**P**	**18 39 47.5**	**+0.5**
	2.6nm,0.4s,mb3.9						
MBWA	**Marble Bar**	**57.84**	**256**	*eP*	**P**	**18 40 21.0**	**-0.9**
	4.9nm,0.4s,mb4.0						
KLBR	**Kellerberrin**	**58.60**	**244**	*eP*	**P**	**18 40 26.1**	**-0.8**
	12nm,0.7s,mb4.1						
MJAR	**Matsushiro Arr**	**67.78**	**324**	P	**P**	**18 41 25.2**	**-0.1**
	1.3nm,0.5s,mb3.6,baz=142,slow=5.7,SNR=7.4						
PETK	**Petropavlovsk-**	**73.64**	**345**	P	**P**	**18 41 59.1**	**-0.1**
	4.7nm,0.6s,mb4.2,baz=123,slow=7.7,SNR=15						
KSRS	**Korea Array**	**74.56**	**318**	P	**P**	**18 42 05.6**	**+0.8**
	0.8nm,0.7s,mb3.4,baz=134,slow=5.7,SNR=4.0						
EDW2	**Edwards Air Fo**	**77.92**	**47**	⇑P	**P**	**18 42 23.2**	**0.0**
	baz=78						
ISA	**Isabella**	**78.00**	**46**	⇓P	**P**	**18 42 23.8**	**+0.1**
	baz=78						
ISA	**Isabella**	**78.00**	**46**	*eP*	**P**	**18 42 23.3**	**-0.4**
MONP	**Monument Peak**	**78.01**	**50**	⇓P	**P**	**18 42 23.8**	**0.0**
	baz=78						
CMB	**Columbia Colle**	**78.02**	**43**	*eP*	**P**	**18 42 23.4**	**-0.3**
	1.9nm,0.8s,mb3.6						
DVTC	**Desert V Tower**	**78.13**	**50**	⇑P	**P**	**18 42 24.3**	**-0.1**
	baz=78						
YBH	**Yreka Blue Hor**	**78.69**	**39**	*eP*	**P**	**18 42 27.4**	**+0.2**
MTUM	**Tungsten Hills**	**78.85**	**45**	*eP*	**P**	**18 42 27.5**	**-0.7**
BELC	**Belle Mtn. Jos**	**78.88**	**49**	⇓P	**P**	**18 42 28.4**	**0.0**
	baz=79						
MPMC	**Manual Prospec**	**78.89**	**46**	⇓P	**P**	**18 42 28.4**	**0.0**
	baz=79						
WAKR	**Walker**	**78.90**	**43**	*eP*	**P**	**18 42 27.7**	**-0.7**
GMRC	**Granite Mounta**	**79.51**	**48**	⇑P	**P**	**18 42 31.7**	**-0.1**
	baz=80						
FURC	**Furnace Creek,**	**79.54**	**46**	⇓P	**P**	**18 42 31.9**	**+0.1**
	baz=80						
IRM	**Iron Mountain**	**79.57**	**49**	⇓P	**P**	**18 42 32.1**	**0.0**
	baz=80						
NVAR	**Mina Array Bea**	**79.61**	**44**	P	**P**	**18 42 32.2**	**+0.1**
	2.7nm,0.7s,mb3.7,baz=224,slow=8.7,SNR=21						
NVAR	**Mina Array Bea**	**79.61**	**44**	P	**P**	**18 42 32.2**	**+0.1**
U10A	**Ash Meadows, A**	**79.88**	**47**	⇓P	**P**	**18 42 33.7**	**+0.1**
	baz=80						
113A	**Mohawk Valley,**	**79.89**	**51**	⇑P	**P**	**18 42 34.2**	**+0.5**
	baz=80						
Z13A	**Yuma Proving G**	**80.18**	**50**	⇑P	**P**	**18 42 35.5**	**+0.2**
	baz=80						
MOD	**Modoc**	**80.26**	**40**	*eP*	**P**	**18 42 35.3**	**-0.1**
K05A	**Summer Lake**	**80.37**	**39**	⇓P	**P**	**18 42 36.2**	**+0.3**
	baz=80						
S10A	**Tonopah Range,**	**80.48**	**45**	⇑P	**P**	**18 42 36.6**	**-0.1**
	baz=81						
H04A	**Detroit Lake**	**80.75**	**37**	⇓P	**P**	**18 42 37.3**	**-0.6**
	baz=81						
R10A	**Warm Springs**	**80.86**	**45**	⇓P	**P**	**18 42 38.7**	**0.0**
	baz=81						
S11A	**Rachel**	**80.91**	**46**	⇓P	**P**	**18 42 39.0**	**+0.1**
	baz=81						
Y14A	**Wickenburg**	**81.01**	**50**	⇑P	**P**	**18 42 39.4**	**-0.1**
	baz=81						
T11A	**Corn Creek, Al**	**81.06**	**46**	⇑P	**P**	**18 42 39.9**	**+0.2**
	baz=81,SNR=7.8						
Q10A	**Clear Creek Ra**	**81.08**	**44**	⇑P	**P**	**18 42 40.5**	**+0.7**
	baz=81						
U12A	**Valley of Fire**	**81.13**	**47**	⇑P	**P**	**18 42 40.6**	**+0.6**
	baz=81						
V13A	**Grand Canyon W**	**81.23**	**48**	⇑P	**P**	**18 42 40.9**	**+0.3**
	baz=81						
X14A	**Yava**	**81.35**	**50**	⇑P	**P**	**18 42 41.4**	**+0.2**
	baz=81						
F04A	**Amboy**	**81.37**	**36**	⇑P	**P**	**18 42 40.8**	**-0.2**
	baz=82						
R11A	**Troy Canyon, C**	**81.38**	**45**	⇓P	**P**	**18 42 41.3**	**0.0**
	baz=82						
NLWA	**Neilton Lookou**	**81.46**	**34**	⇓P	**P**	**18 42 41.7**	**+0.2**
	baz=82						
S12A	**Delamar Landin**	**81.50**	**46**	⇑P	**P**	**18 42 42.2**	**+0.2**
	baz=82,SNR=11						
Y15A	**Casa Rosa Ranc**	**81.51**	**50**	⇓P	**P**	**18 42 42.2**	**+0.1**
	baz=82						
U13A	**Pakoon Wash**	**81.52**	**48**	⇓P	**P**	**18 42 42.1**	**+0.1**
	baz=82,SNR=8.1						
W14A	**Seligman**	**81.56**	**49**	⇓P	**P**	**18 42 42.5**	**+0.2**
	baz=82,SNR=5.6						
WVOR	**Wild Horse Val**	**81.58**	**40**	*eP*	**P**	**18 42 41.6**	**-0.6**
	5.8nm,0.8s,mb4.2						
Q11A	**Duckwater**	**81.59**	**45**	⇑P	**P**	**18 42 42.3**	**0.0**
	baz=82,SNR=5.9						
V14A	**Boquillas Ranc**	**81.75**	**49**	⇑P	**P**	**18 42 43.4**	**+0.1**
	baz=82,SNR=10						

X15A	Humboldt	81.83	50	⇓P	P	18 42 43.8	+0.1
	baz=82						
T13A	Saint George	81.86	47	⇓P	P	18 42 43.8	+0.1
	baz=82						
R12A	Pony Springs,	82.03	46	⇑P	P	18 42 44.8	+0.2
	baz=82						
117A	Oracle	82.06	52	⇓P	P	18 42 45.1	+0.3
	baz=82						
U14A	Mt Trumbull	82.08	48	⇑P	P	18 42 45.2	+0.3
	baz=82,SNR=9.7						
Y16A	Circle Bar Ran	82.10	51	⇓P	P	18 42 45.4	+0.3
	baz=82						
S13A	Holt Ranch, En	82.17	47	⇑P	P	18 42 45.6	+0.3
	baz=82						
J08A	Circle Bar Ran	82.19	40	⇑P	P	18 42 45.1	-0.1
	baz=82						
Q12A	Willow Creek R	82.24	45	⇓P	P	18 42 45.6	0.0
	baz=82						
218A	Dragoon	82.31	53	⇑P	P	18 42 46.5	+0.3
	baz=82						
X16A	Lo Mia Camp, P	82.38	50	⇑P	P	18 42 47.3	+0.8
	baz=82						
M10A	I.L. Ranch, Tu	82.40	42	⇑P	P	18 42 47.0	+0.7
	baz=82						
P12A	McGill	82.41	44	⇑P	P	18 42 46.7	+0.2
	baz=82						
T14A	Hurricane	82.46	47	⇑P	P	18 42 46.9	+0.2
	baz=82						
Y17A	Roosevelt	82.49	51	⇓P	P	18 42 47.0	0.0
	baz=83						
CCUT	Cedar City	82.50	47	eP	P	18 42 47.5	+0.5
V15A	Kaibab Nationa	82.51	49	⇓P	P	18 42 47.3	+0.3
	baz=83						
W16A	Flagstaff	82.63	50	⇑P	P	18 42 48.0	+0.4
	baz=83						
319A	Douglas	82.63	54	⇑P	P	18 42 48.2	+0.4
	baz=83						
118A	Homack Ranch,	82.67	52	⇑P	P	18 42 48.2	+0.3
	baz=83						
U15A	North Rim	82.71	48	⇑P	P	18 42 48.3	+0.2
	baz=83,SNR=8.5						
H08A	Prairie City	82.71	39	⇓P	P	18 42 47.6	-0.3
	baz=83						
Q13A	Wheeler Ranch,	82.74	45	⇓P	P	18 42 47.9	-0.2
	baz=83,SNR=5.8						
219A	White Tail Can	82.92	53	⇑P	P	18 42 49.0	-0.3
	baz=83						
WUAZ	Wupatki	82.94	49	⇓P	P	18 42 49.7	+0.5
	baz=83						
G08A	Pilot Rock	82.97	38	⇓P	P	18 42 49.0	-0.1
	baz=83						
P13A	Bates Ranch, G	82.99	45	⇓P	P	18 42 49.4	0.0
	baz=83						
N12A	Clover Valley,	83.02	43	⇓P	P	18 42 49.3	-0.2
	baz=83						
Q14A	Sevier Lake (B	83.26	46	⇓P	P	18 42 50.7	0.0
	baz=83,SNR=7.4						
H09A	Durkee	83.39	39	⇑P	P	18 42 51.3	+0.1
	baz=84						
V17A	Tonalea, Kykot	83.41	49	⇓P	P	18 42 51.6	0.0
	baz=84						
220A	Playas Peak, P	83.44	54	⇓P	P	18 42 51.8	0.0
	baz=84						
MAW	Mawson	83.76	200	P	P	18 42 51.8	-0.9
	0.7nm,0.4s,mb3.5,baz=96,slow=9.2,SNR=3.0						
H10A	Noah's Angus R	83.91	39	⇓P	P	18 42 53.1	-0.7
	baz=84,SNR=6.1						
D08A	Wollman Farm,	83.99	36	⇑P	P	18 42 54.1	0.0
	baz=84						
T17A	Navajo Res., N	84.03	48	⇓P	P	18 42 54.8	+0.2
	baz=84						
TRF	Thorofare Moun	84.09	12	eP	P	18 42 52.5	-1.7
	13nm,0.7s,mb4.6						
F10A	Beach Ranch, E	84.36	38	⇓P	P	18 42 55.5	-0.5
	baz=84						
H11A	Donnelly	84.41	40	⇓P	P	18 42 56.1	-0.2
	baz=84						
B08A	Colville Reser	84.50	35	⇑P	P	18 42 55.7	-0.8
	baz=85						
MCK	McKinley	84.62	13	eP	P	18 42 55.5	-1.3
	3.4nm,0.5s,mb4.2						
G11A	Walters Elk Ra	84.62	39	⇑P	P	18 42 56.6	-0.7
	baz=85,SNR=10						
T18A	Mexican Hat	84.76	48	⇑P	P	18 42 57.8	-0.4
	baz=85						
HLID	Hailey	84.80	41	⇓P	P	18 42 58.5	+0.3
	baz=85						
HLID	Hailey	84.80	41	eP	P	18 42 58.4	+0.2
GYA	Guiyang	84.84	300	P	P	18 42 59.0	+0.2
GYA				pP	pP	18 45 07.3	+0.3
GYA				sP	sP	18 46 05.2	-2.2
GYA				PP	PP	18 46 28.9	+1.9
GYA				SKS		18 52 25.0	
GYA				S	S	18 52 37.4	-0.8
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4						
J13A	Cove Ranch, Pi	84.87	41	⇑P	P	18 42 58.5	0.0
	baz=85						
S18A	Hurst Farm, Bl	84.92	48	⇑P	P	18 42 58.9	0.0
	baz=85						
Y21A	Point of Rocks	84.99	52	⇑P	P	18 42 59.7	+0.4
	baz=85						
H12A	Diamond D Ranc	85.03	40	⇓P	P	18 42 58.9	-0.4
	baz=85,SNR=8.1						
G12A	Big Creek, Yel	85.05	39	⇓P	P	18 42 59.3	0.0
	baz=85						
K14A	Jones Ranch, D	85.08	42	⇑P	P	18 42 59.8	+0.2
	baz=85						
X21A	Alamocita Cree	85.09	52	⇓P	P	18 42 59.7	-0.1
	baz=85						
HYT	Haines Junctio	85.16	19	eP	P	18 42 59.2	-0.3
SRU	San Rafael	85.20	46	⇓P	P	18 43 00.1	-0.1
	baz=85						
Z22A	Elephant Butte	85.21	53	⇑P	P	18 43 00.3	-0.1
	baz=85						
J14A	Carey	85.25	42	⇓P	P	18 43 00.6	+0.3
	baz=85,SNR=5.2						
R18A	Canyonlands Na	85.31	47	⇓P	P	18 43 00.4	-0.4
	baz=85						
F12A	Elk City	85.42	39	⇓P	P	18 43 00.3	-0.7
	baz=86,SNR=12						
Q18A	Rafter H Ranch	85.47	47	⇑P	P	18 43 01.1	-0.4
	baz=86						
O17A	Robinson Place	85.56	45	⇓P	P	18 43 01.9	0.0
	baz=86						
K15A	Arbon	85.56	43	⇓P	P	18 43 01.3	-0.5
	baz=86						
I14A	Mackay	85.59	41	⇑P	P	18 43 02.5	+0.6
	baz=86						
324A	Moseley Ranch,	85.60	55	⇑P	P	18 43 02.3	-0.1
	baz=86						
G13A	Cobalt	85.69	40	⇓P	P	18 43 01.9	-0.5
	baz=86						
425A	Indio Mountain	85.73	56	⇑P	P	18 43 03.2	+0.3
	baz=86						
V21A	Milan	85.79	50	⇓P	P	18 43 03.0	-0.1
	baz=86						
626A	Big Bend Ranch	85.92	57	⇓P	P	18 43 04.4	+0.5
	baz=86						
J15A	Blackfoot	85.97	42	⇑P	P	18 43 04.5	+0.7
	baz=86						
325A	Bean Ranch, Si	85.97	55	⇑P	P	18 43 04.0	-0.1
	baz=86						
H14A	Leadore	85.99	41	⇑P	P	18 43 03.8	0.0
	baz=86,SNR=5.9						
F13A	Darby	85.99	39	⇓P	P	18 43 03.1	-0.7
	baz=86,SNR=6.5						
D12A	Red Ives Fores	86.04	38	⇓P	P	18 43 03.4	-0.6
	baz=86						
U21A	Nageezi	86.04	50	⇑P	P	18 43 04.0	-0.2
	baz=86						
W22A	Albuquerque	86.05	51	⇑P	P	18 43 04.0	-0.4
	baz=86						
124A	Stringfield Ra	86.14	54	⇑P	P	18 43 04.8	0.0
	baz=86						
M17A	Scullys Gap (B	86.20	44	⇓P	P	18 43 05.5	+0.5
	baz=86						
TXAR	Lajitas Array	86.21	58	P	P	18 43 05.8	+0.5
	comp=Z,3.6nm,0.7s,mb4.1,baz=218,slow=6.0,SNR=36						
I15A	Monteview	86.23	41	⇑P	P	18 43 05.1	+0.1
	baz=86						
225A	Deer Hill, Car	86.39	55	⇓P	P	18 43 06.3	+0.3
	baz=86						
J16A	Bone	86.44	42	⇑P	P	18 43 06.0	0.0
	baz=86,SNR=6.7						
426A	McDonald Obser	86.44	56	⇑P	P	18 43 06.5	+0.1
	baz=86						
S21A	Coal Bank Pass	86.48	49	⇓P	P	18 43 06.6	+0.3
	baz=87						
627A	Terlingua Ranc	86.48	58	⇓P	P	18 43 06.7	+0.2
	baz=87						
527A	Woodward Ranch	86.57	57	⇑P	P	18 43 07.6	+0.6
	baz=87						
Y24A	Capitan	86.65	53	⇓P	P	18 43 07.1	-0.1
	baz=87						
G15A	Dillon	86.80	40	⇓P	P	18 43 07.8	+0.1
	baz=87						
I16A	Newdale	86.80	42	⇓P	P	18 43 08.2	+0.5
	baz=87						
E14A	Clinton	86.81	39	⇓P	P	18 43 07.4	-0.2
	baz=87						
DLMT	Dillon	86.83	40	eP	P	18 43 07.6	-0.1
628A	Black Gap, Mar	86.89	58	⇓P	P	18 43 08.4	0.0
	baz=87						
R21A	Cimarron	86.95	48	⇓P	P	18 43 08.7	+0.2
	baz=87						
427A	Hayter Ranch,	87.01	56	⇑P	P	18 43 09.5	+0.5
	baz=87						
HHC	Hu-ho-hao-te	87.12	315	eP	P	18 43 10.8	+1.5
HHC				S	S	18 52 59.4	+0.3
HHC				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.8						
HHC				pmax	pmax		
	comp=Z,69nm,7.0s						
K18A	Toltan Ranch,	87.16	43	⇓P	P	18 43 09.9	+0.5
	baz=87						
IMW	Indian Meadow	87.16	42	eP	P	18 43 09.5	+0.1
	comp=Z,1.5nm,0.4s,mb4.1						
S22A	4UR Ranch, Cre	87.20	49	⇓P	P	18 43 09.8	+0.1
	baz=87						
Y25A	Mesa, Roswell	87.21	53	⇑P	P	18 43 09.6	-0.3
	baz=87						
G16A	Moss Hill, Enn	87.25	41	⇑P	P	18 43 09.7	0.0
	baz=87						
E15A	Deer Lodge	87.32	39	⇓P	P	18 43 10.1	0.0
	baz=87						
H16A	Russell Place,	87.35	41	⇓P	P	18 43 10.7	+0.5
	baz=87,SNR=6.0						
J18A	Kendall Valley	87.44	43	⇑P	P	18 43 10.6	-0.1
	baz=88						
COLD	Coldfoot	87.48	11	eP	P	18 43 09.8	-0.5
	comp=Z,2.8nm,0.4s,mb4.3						
Z26A	Caprock	87.50	54	⇓P	P	18 43 10.9	-0.3
	baz=88						
BW06	Boulder Array	87.53	44	⇑P	P	18 43 10.6	-0.6
	baz=88						
PDAR	Pinedale Array	87.53	44	P	P	18 43 10.7	-0.4
	comp=Z,2.7nm,0.6s,mb4.2,baz=227,slow=2.7,SNR=28						
BOZ	Bozeman (W)	87.56	40	⇑P	P	18 43 11.1	-0.1
	baz=88						
KMI	Kunming	87.63	297	P	P	18 43 11.5	-0.5
KMI				pmax	pmax		
	comp=Z,5.0nm,1.5s,mb4.0						
I18A	Diamond G Ranc	87.79	43	⇓P	P	18 43 12.1	-0.2
	baz=88						
L20A	Wamsutter	88.00	45	⇓P	P	18 43 13.2	-0.1
	baz=88						
N21A	Black Mountain	88.01	46	⇓P	P	18 43 13.3	-0.1
	baz=88						
C15A	Salmond Ranch,	88.01	38	⇑P	P	18 43 13.0	-0.2
	baz=88						
V25A	Rancho No Teng	88.03	51	⇑P	P	18 43 13.5	-0.1
	baz=88						
A14A	Double T Ranch	88.13	37	⇑P	P	18 43 13.5	-0.3
	baz=88						
D16A	Dana Ranch, Ca	88.28	39	⇓P	P	18 43 14.7	+0.2
	baz=88						
M21A	Separation Pea	88.48	45	⇑P	P	18 43 15.2	-0.4
	baz=89						
C16A	Fuhringer Ranc	88.53	38	⇑P	P	18 43 15.3	-0.4
	baz=89						
N22A	Wattenberg Ran	88.76	46	⇑P	P	18 43 17.0	+0.1
	baz=89						
D17A	Six Diamond Ra	88.85	39	⇑P	P	18 43 17.0	-0.1
	baz=89						
F18A	Big Timber	88.87	41	⇑P	P	18 43 17.7	+0.5
	baz=89						
CD2	Chengdu	88.88	303	P	P	18 43 17.8	+0.1
CD2				pP	pP	18 45 28.0	+0.5
CD2				sP	sP	18 46 26.9	-0.6
CD2				PP	PP	18 47 00.6	+1.7
CD2				SKS		18 52 49.8	
CD2				S	S	18 53 13.6	-2.2
CD2				sS	sS	18 57 04.0	-3.1
CD2				SS	SS	18 59 28.7	+1.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.9						
CD2				pmax	pmax		
	comp=Z,160nm,6.5s						
E18A	Harlowton	89.05	40	⇑P	P	18 43 18.3	+0.2
	baz=89						
L22A	Ellis Ranch, M	89.29	45	⇑P	P	18 43 19.7	+0.4
	baz=89						
B18A	Beardsley Farm	89.97	38	⇓P	P	18 43 22.0	-0.4
	baz=90						
LZH	Lanzhou	90.72	308	eP	P	18 43 27.6	+1.5
LZH				pP	pP	18 45 36.0	-0.2
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
PLCA	Paso Flores	91.49	134	P	P	18 43 30.2	+0.5
	comp=Z,1.1nm,0.4s,mb4.2,baz=214,slow=3.6,SNR=2.9						
PLCA	Paso Flores	91.49	134	P	P	18 43 30.2	+0.5
YKA	Yellowknife Ar	94.45	25	P	P	18 43 41.3	-1.2
	comp=Z,0.9nm,0.7s,mb4.0,baz=236,slow=4.6,SNR=5.5						
ARCES	ARCESS Array B	126.30	350	PKP	PKPdf	18 49 19.8	-0.9
	comp=Z,2.6nm,0.8s,baz=46,slow=3.5,SNR=5.5						
FINES	FINESS Array B	133.15	344	PKP	PKPdf	18 49 32.4	-1.5
	comp=Z,0.7nm,0.5s,baz=340,slow=2.3,SNR=5.2						
NOA	NORSAR Array B	136.37	353	PKhKP	PKPpre	18 49 36.8	
	comp=Z,0.4nm,0.6s,baz=14,slow=5.8,SNR=3.3						
AKASG	Malin Array Be	140.47	332	PKP	PKPdf	18 49 47.6	-0.2
	comp=Z,0.5nm,0.4s,baz=38,slow=3.5,SNR=3.6						
BSEG	Bad Segeberg	143.40	351	ePKPbc	PKPdf	18 49 51.0	-1.8
BURAR	Bucovina Array	144.52	332	⇑P	PKPdf	18 49 56.2	+1.2
BR131	Keskin Array S	144.63	315	ePKPdf	PKPdf	18 49 56.0	+0.5
BRTR	Keskin Array B	144.63	315	PKP	PKPdf	18 49 56.0	+0.6
	comp=Z,1.5nm,0.4s,baz=122,slow=4.3,SNR=10						
STHS	Stebnicka Huta	144.72	337	ePKP	PKPdf	18 49 56.6	+1.3
STHS	Stebnicka Huta	144.72	337	ePKP	PKPdf	18 49 56.6	+1.3
NIE	Niedzica	145.06	338	ePX	PKPbc	18 49 57.2	+0.4
CRVS	Cervenica-Dubn	145.07	337	ePKP	PKPbc	18 49 57.1	+0.3
CRVS	Cervenica-Dubn	145.07	337	ePKP	PKPbc	18 49 57.1	+0.3
TIRR	Tirgusor	145.15	325	⇑P	PKPdf	18 49 55.0	-1.2
IBBN	Ibbenburen	145.33	353	ePKPbc	PKPbc	18 49 57.1	-0.4
OKC	Ostrava-Krasne	145.42	341	ePKP	PKPdf	18 49 57.3	+0.9
OKC				ex	x	18 50 00.3	
CLL	Collm	145.44	347	ePKPbc	PKPbc	18 49 57.7	-0.1
CLL	Collm	145.44	347	⇑PKPbc	PKPbc	18 49 57.5	-0.3
	comp=Z,14nm,0.9s						
DPC	Dobruska-Polom	145.50	343	ePKP	PKPbc	18 49 58.5	+0.4
DPC				ex	x	18 50 00.5	
BRG	Berggiesshubel	145.63	346	ePKPbc	PKPbc	18 49 58.4	0.0
MLR	Muntele Rosu	145.73	329	⇓P	PKPbc	18 49 59.7	+0.8
KECS	Kecovo	145.78	337	ePKP	PKPbc	18 49 59.1	+0.2
KECS	Kecovo	145.78	337	ePKP	PKPbc	18 49 59.1	+0.2
PVCC	Panska Ves	145.80	345	ePKP	PKPbc	18 49 59.1	+0.2
PVCC				ex	x	18 50 01.3	
MMAI	Mount Meron Ar	145.96	303	PKPbc	PKPbc	18 50 00.2	+0.3
	comp=Z,3.2nm,0.5s,baz=69,slow=5.7,SNR=8.4						
VOIR		146.21	329	⇓P	PKPbc	18 50 00.7	+0.5
DRGR		146.25	333	⇑P	PKPbc	18 50 00.5	+0.2
PRU	Pruhonice	146.31	345	ePKP	PKPbc	18 50 00.5	+0.2
PRU				ex	x	18 50 03.4	
MOX	Moxa	146.35	348	ePKP	PKPdf	18 50 00.0	+2.0
MOX	Moxa	146.35	348	ePKPbc	PKPbc	18 49 59.6	-0.8
VYHS	Vyhne	146.36	339	ePKP	PKPbc	18 50 00.7	+0.2
VYHS	Vyhne	146.36	339	ePKP	PKPbc	18 50 00.7	+0.2
TANN	Tannenbergstha	146.39	347	ePKPbc	PKPbc	18 50 00.5	0.0
KOLL	Kolacno	146.43	339	ePKP	PKPbc	18 50 01.5	+0.8
KOLL	Kolacno	146.43	339	ePKP	PKPbc	18 50 01.5	+0.8
TREC	Trest	146.69	343	ePKP	PKPbc	18 50 01.3	-0.1
ZST	Bratislava	147.19	340	ePKP	PKPbc	18 50 03.3	+0.6
ZST	Bratislava	147.19	340	ePKP	PKPbc	18 50 03.3	+0.6
TNS	Taunus Mts	147.29	352	ePKPbc	PKPbc	18 50 02.9	0.0
GRF	Grafenberg Arr	147.33	348	ePKPbc	PKPbc	18 50 03.0	-0.1
GRF	Grafenberg Arr	147.33	348	ePKP	PKPbc	18 50 03.0	-0.1
KHC	Kasperske Hory	147.34	345	ePKPbc	PKPbc	18 50 02.9	-0.2
KHC	Kasperske Hory	147.34	345	ePKP	PKPbc	18 50 02.9	-0.2
KHC				ex	x	18 50 07.7	
BZS	Buzias	147.65	333	⇓P	PKPbc	18 50 03.6	-0.4
GIVF	Givet	147.79	356	ePKP1	PKPbc	18 50 03.8	-0.4
	comp=Z,11nm,0.6s						
DOU	Dourbes	147.81	356	PKPbc	PKPbc	18 50 04.0	-0.3
BAIF	Baives	147.87	357	⇑iPKP1	PKPbc	18 50 04.2	-0.2
	comp=Z,10nm,0.7s						
WLF	Walferdange	148.11	354	PKPbc	PKPbc	18 50 05.6	+0.6
WLF	Walferdange	148.11	354	ePKPbc	PKPbc	18 50 05.4	+0.4
FUR	Furstenfeldbru	148.77	347	ePKPbc	PKPbc	18 50 06.7	0.0
RJOB	Jochberg	148.83	345	ePKPbc	PKPbc	18 50 06.7	-0.2
BFO	Black Forest	149.15	351	ePKPbc	PKPbc	18 50 07.1	-0.5
VTS	Vitosha	149.18	328	⇑iP	PKPbc	18 50 07.9	0.0
CDF	Champ du Feu	149.22	352	ePKP1	PKPbc	18 50 07.5	-0.3
	comp=Z,12nm,0.8s						
MEZF	Maizieres J'vi	149.36	355	ePKP1	PKPbc	18 50 07.6	-0.5
	comp=Z,5.1nm,0.4s						
LDF	La Druitiere	149.40	2	⇑iPKP1	PKPbc	18 50 07.3	-0.9
	comp=Z,5.7nm,0.5s						
GRR	Gorron	149.57	3	⇑iPKP1	PKPbc	18 50 08.0	-0.6
	comp=Z,8.3nm,0.5s						
SGMF	Saint Gilles	149.59	5	ePKP1	PKPbc	18 50 07.7	-1.0
HAU	Haudompre	149.73	353	ePKP1	PKPbc	18 50 08.6	-0.4
HINF	Hinteralfeld	149.86	353	ePKP1	PKPbc	18 50 08.7	-0.6
	comp=Z,6.4nm,0.8s						
QUIF	Quistinic	149.87	6	ePKP1	PKPbc	18 50 08.4	-0.9
LOR	Lormes	150.67	356	⇑iPKP1	PKPbc	18 50 10.8	-0.4
	comp=Z,8.0nm,0.6s						
SSF	Saint Saulge	150.90	357	⇑iPKP1	PKPbc	18 50 11.4	-0.3
	comp=Z,6.4nm,0.6s						
CABF	La Chapelle	151.13	353	ePKP1	PKPbc	18 50 12.4	+0.1
AVF	Avril sur Loir	151.18	357	ePKP1	PKPbc	18 50 11.5	-0.9
	comp=Z,2.5nm,0.6s						
MFF	Saint Martin d	151.38	2	⇑iPKP1	PKPbc	18 50 12.1	-0.7
TCF	Toulx Ste Croi	151.72	359	ePKP1	PKPbc	18 50 12.9	-0.7
	comp=Z,7.6nm,0.8s						
RJF	Les Rejaudoux	152.71	360	ePKP1	PKPbc	18 50 15.2	-0.6

*ISCJB **03** 18:38:00.3±0.7, 38°.12N±0°.03×21°.56E±0°.03, h11km±5km,*
Error ellipse: s-maj=5.5km s-min=4.5km az=163.3
*CSEM **03** 18:38:00.3±0.2, 38°.14N×21°.56E, h20km, MD2.7, Error*
ellipse: s-maj=4.1km s-min=3.5km az=142.0
*THE **03** 18:38:00.2, 38°.12N×21°.54E, h7km±2km, ML2.8/5, Error*
ellipse: s-maj=2.9km s-min=0.7km az=36.0
*ATH **03** 18:38:00.1, 38°.13N×21°.57E, h25km±2km, MD2.7/5*
ISC 03 18:38:00.6±0.5, 38°.15N±0°.03×21°.55E±0°.04, h19km±3km,
n36, σ0°69/58, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.11	215	ePB	Pg	18 38 04.4	-0.1
RLS				eSB	Sg	18 38 07.6	+0.4
RLS	Riolos of Patr	0.11	215	ePb	Pg	18 38 04.4	-0.1
RLS				eSb	Sg	18 38 07.6	+0.4
UPR	University Cam	0.23	54	ePB	Pg	18 38 06.6	+0.5
UPR				eSB	Sg	18 38 11.2	+1.3
UPR	University Cam	0.23	54	P	Pg	18 38 05.0	-1.1
UPR	University Cam	0.23	54	P	Pg	18 38 05.0	-1.1
UPR	University Cam	0.23	54	ePb	Pg	18 38 06.6	+0.5
UPR				eSb	Sg	18 38 11.2	+1.3
LAKA	Lakka	0.35	75	P	Pg	18 38 07.5	-0.6
LAKA				S	Sg	18 38 13.0	-0.2
LAKA	Lakka	0.35	75	P	Pg	18 38 07.5	-0.6
LAKA				S	Sg	18 38 13.0	-0.2
EFP	Efpalio	0.40	45	ePB	Pg	18 38 08.6	-0.3
EFP				eSB	Sb	18 38 15.5	+0.9
EFP	Efpalio	0.40	45	P	Pg	18 38 08.6	-0.3
EFP				S	Sg	18 38 14.8	+0.3
EFP	Efpalio	0.40	45	P	Pg	18 38 08.6	-0.3
EFP				S	Sg	18 38 14.8	+0.3
EFP				eSb	Sb	18 38 15.5	+0.9
KALE	Kalithea	0.53	62	P	Pb	18 38 10.6	-0.5
KALE				S	Sg	18 38 18.6	+0.3
KALE	Kalithea	0.53	62	P	Pb	18 38 10.6	-0.5
KALE				S	Sg	18 38 18.6	+0.3
GUR	Goura	0.66	108	ePB	Pb	18 38 12.3	-1.1
GUR				eSN	Sb	18 38 22.3	+0.1
GUR	Goura	0.66	108	P	Pb	18 38 12.3	-1.1
GUR				S	Sb	18 38 22.1	-0.1
GUR	Goura	0.66	108	P	Pb	18 38 12.3	-1.1
GUR				S	Sb	18 38 22.1	-0.1
VLS	Valsamata	0.76	273	ePN	Pb	18 38 14.7	-0.3
VLS				eSN	Sn	18 38 27.7	+0.7
VLS	Valsamata	0.76	273	P	Pb	18 38 14.7	-0.3
VLS	Valsamata	0.76	273	P	Pb	18 38 14.7	-0.3
VLS				eSn	Sn	18 38 27.7	+0.7
DSF	Desfina	0.81	71	P	Pb	18 38 15.0	-1.1
DSF	Desfina	0.81	71	P	Pb	18 38 15.0	-1.1
LKD2	Lefkada island	0.95	313	P	Pb	18 38 18.3	0.0
LKD2	Lefkada island	0.95	313	P	Pb	18 38 18.3	0.0
ITM	Ithomi	1.01	163	ePN	Pb	18 38 18.7	-0.7
ITM				eSN	Sn	18 38 33.7	+0.4
ITM	Ithomi	1.01	163	P	Pb	18 38 18.7	-0.7
ITM	Ithomi	1.01	163	P	Pb	18 38 18.7	-0.7
ITM				eSn	Sn	18 38 33.7	+0.4
VLX	Vlachokerasia	1.02	139	ePN	Pn	18 38 19.0	-0.7
VLX				eSN	Sn	18 38 34.1	+0.6
VLX	Vlachokerasia	1.02	139	P	Pb	18 38 18.5	-1.0
VLX				S	Sb	18 38 34.0	+1.5
VLX	Vlachokerasia	1.02	139	P	Pb	18 38 18.5	-1.0
VLX	Vlachokerasia	1.02	139	ePn	Pn	18 38 19.0	-0.7
VLX				eSn	Sn	18 38 34.1	+0.6
AGG	Agios Georgios	1.07	35	P	Pb	18 38 20.3	-0.1
AGG	Agios Georgios	1.07	35	P	Pb	18 38 20.3	-0.1
PYL	PYLOS	1.26	173	ePN	Pn	18 38 23.3	+0.3
PYL	PYLOS	1.26	173	ePn	Pn	18 38 23.3	+0.3
DID	Didima	1.48	115	P	Pn	18 38 26.6	+0.5
DID	Did

BODT	**Bodrum**	**1.55 273**	*e*Pn	**Pn**	**18 50 54.8**	**-0.5**
KULA	**Kula-Manisa**	**1.57 343**	*e*PN	**Pn**	**18 50 55.0**	**-0.6**
KULA	**Kula-Manisa**	**1.57 343**	*e*Pn	**Pn**	**18 50 55.1**	**-0.5**

*BJI **03** 19:11:57.7, 35°.66N×141°.47E, h34km, mB4.7/2, mb4.3/4, Ms4.2/3*
*IDC **03** 19:11:57.1±0.5, 35°.47N×140°.78E, h0km, mb4.1/18, mb1 4.3/21, mb1mx4.2/29, mbtmp4.1/21, ML4.2/4, MS3.5/9, Ms1 3.5/9, ms1mx3.2/30, Error ellipse: s-maj=16.8km s-min=12.1km az=92.0*
*ISCJB **03** 19:11:59.6±0.3, 35°.50N±0°.03×141°.13E±0°.05, h33km, mb4.2/33, MS3.6/10, Error ellipse: s-maj=5.8km s-min=4.7km az=15.1*
*MOS **03** 19:11:59.8±1.9, 35°.62N×140°.99E, h33km, mb4.4/21, Error ellipse: s-maj=12.5km s-min=7.3km az=98.9*
*NIED **03** 19:12:00, 35°.50N×140°.90E, h47km, Mw4.4 Best double couple: M0=5.10000×10^15 NP1:φs=135.00000°, δ75.00000°, λ-84.00000°. NP2:φs=292.00000°, δ16.00000°, λ-112.00000°.*
*NEIC **03** 19:12:02.3±3.8, 35°.47N×140°.72E, h35km±26km, mb4.5/8, MW4.4(NIED), Error ellipse: s-maj=9.1km s-min=7.3km az=101.0*
*JMA **03** 19:12:02.2±0.1, 35°.52N×140°.94E, h41km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φs=274.00000°, δ13.00000°, λ-145.00000°. NP2: φs=150.00000°, δ83.00000°, λ-80.00000°. Principal axes: T Plg37.0000°, Azm231.0000°; N Plg10.0000°, Azm329.0000°; P Plg51.0000°, Azm72.0000°;*
JMA Felt II J1.

ISC 03 19:12:01.9±0.3, 35°.50N±0°.03×140°.97E±0°.05, h35km, n87, σ1°31/91, mb4.2/33, MS3.6/10, 3C-7D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.22**	**335**	⇓P	**Pn**	**19 12 09.5**	**+0.6**
CHOJ				S	**Sn**	**19 12 14.7**	**+1.0**
JCN	**Nagara**	**0.64**	**263**	⇓P	**Pn**	**19 12 15.4**	**+1.0**
JCN				*e*S	**Sn**	**19 12 23.7**	**+0.4**
KTR	**Katsuura**	**0.64**	**237**	⇓P	**Pn**	**19 12 14.7**	**+0.2**
BSO4	**Boso 4**	**0.73**	**226**	⇓P	**Pn**	**19 12 16.0**	**+0.3**
BSO3	**Boso 3**	**0.80**	**209**	⇓P	**Pn**	**19 12 16.8**	**+0.2**
BSO1	**Boso 1**	**0.85**	**180**	P	**Pn**	**19 12 17.4**	**+0.1**
JYT	**Yasato**	**0.96**	**319**	⇓P	**Pn**	**19 12 18.7**	**-0.2**
MJAR	**Matsushiro Arr**	**2.47**	**296**	Pn	**Pn**	**19 12 38.4**	**-1.2**
	9.9nm,0.3s,baz=95,slow=14,SNR=59						
MJAR				LR	LR	19 13 39.1	
	comp=Z,572nm,18.4s,baz=120,slow=44						
MJAR	**Matsushiro Arr**	**2.47**	**296**	P	**Pn**	**19 12 38.4**	**-1.2**
MJAR				pmax	pmax		
	comp=Z,10.0nm,0.3s						
MJAR				MLR	MLR		
	comp=Z,572nm,18.4s						
MAT	**Matsushiro**	**2.47**	**296**	P	**Pn**	**19 12 41.3**	**+1.6**
MAT				S	**Sn**	**19 13 09.2**	**+0.6**
JHJ	**Hachijo jima 2**	**2.57**	**203**	Pn	**Pn**	**19 12 39.4**	**-1.7**
	comp=Z,61nm,0.3s,baz=63,slow=16,SNR=19						
JHJ				LR	LR	19 13 01.9	
	comp=Z,442nm,20.3s,baz=108,slow=26						
JHJ				Sn	**Sn**	**19 13 09.1**	**-2.0**
	comp=Z,202nm,0.3s,baz=73,slow=19,SNR=9.6						
ERM	**Erimo**	**6.72**	**14**	*e*P	**Pn**	**19 13 36.1**	**-2.0**
ERM				pmax	pmax		
	comp=Z,25nm,0.6s						
ERM	**Erimo**	**6.72**	**14**	*e*P	**Pn**	**19 13 36.1**	**-1.9**
	comp=Z,25nm,0.6s						
CBIJ	**Chichi jima**	**8.45**	**173**	Pn	**Pn**	**19 14 00.7**	**-1.1**
	comp=Z,28nm,0.3s,baz=277,slow=18,SNR=23						
CBIJ				Sn	**Sn**	**19 15 28.9**	**-6.9**
	comp=Z,15nm,0.3s,baz=288,slow=23,SNR=7.6						
ASAJ	**Asahikawa**	**8.69**	**8**	Pn	**Pn**	**19 14 03.4**	**-1.7**
	comp=Z,2.6nm,0.3s,baz=211,slow=14,SNR=20						
ASAJ				Sn	**Sn**	**19 15 40.8**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=159,slow=6.6,SNR=3.1						
ASAJ	**Asahikawa**	**8.69**	**8**	P	**Pn**	**19 14 03.4**	**-1.7**
ASAJ						19 15 40.8	
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**9.31**	**22**	*i* P	**Pn**	**19 14 11.6**	**-2.0**
YUK				*i* S	**Sn**	**19 15 50.9**	**-6.1**
YUK				pmax	pmax		
	comp=Z,118nm,0.1s						
YUK				pmax	pmax		
	comp=N,154nm,0.7s						
YUK				pmax	pmax		
	comp=E,35nm,0.7s						
YUK				smax			
	comp=N,71nm,0.4s						
YUK				smax			
	comp=E,188nm,0.8s						
YUK				MLR	MLR		
	comp=Z,300nm,19.0s						
KSRS	**Korea Array**	**10.69**	**284**	Pn	**Pn**	**19 14 37.1**	**+4.7**
	comp=Z,0.1nm,0.3s,baz=101,slow=13,SNR=6.7						
YSS	**Yuzh-Sakhalins**	**11.52**	**6**	*e*P	**Pn**	**19 14 41.0**	**-2.8**
YSS				MLR	MLR		
	comp=N,500nm,18.0s						
YSS				MLR	MLR		
	comp=Z,500nm,18.0s						
YSS				MLR	MLR		
	comp=E,500nm,16.0s						
HABR	**Khabarovsk**	**13.68**	**343**	*e*P	**Pn**	**19 15 08.9**	**-4.4**
HABR				pmax	pmax		
	comp=N,13nm,1.7s						
HABR				pmax	pmax		
	comp=Z,15nm,1.4s						
HABR				pmax	pmax		
	comp=E,25nm,1.7s						
HABR				MLR	MLR		
	comp=Z,130nm,18.0s						
NJ2	**Nanjing**	**18.70**	**266**	*e*P	**Pn**	**19 16 21.2**	**+3.4**
NJ2				PP		19 16 40.0	
NJ2				sS	sS	19 20 00.0	-2.9
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,40nm,3.6s						
NJ2				LR	LR		
	comp=N,1μm,23.9s						
NJ2				LR	LR		
	comp=E,230nm,20.7s						
PETK	**Petropavlovsk-**	**21.19**	**29**	P	**P**	**19 16 45.0**	**+0.8**
	comp=E,4.3nm,0.7s,mb3.9,baz=215,slow=4.9,SNR=8.0						
PETK				LR	LR	19 24 35.5	
	comp=E,98nm,21.7s,MS3.2,baz=234,slow=36						
PETK	**Petropavlovsk-**	**21.19**	**29**	P	**P**	**19 16 45.0**	**+0.8**
PETK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb3.9						
PETK				MLR	MLR		
	comp=Z,98nm,21.7s,MS3.2						
PET	**Petropavlovsk**	**21.51**	**30**	*e*P	**P**	**19 16 52.7**	**+5.1**
PET				MLR	MLR		
	comp=Z,200nm,20.0s,MS3.5						
YAK	**Yakutsk**	**27.49**	**348**	*e*P	**P**	**19 17 44.6**	**0.0**
YAK				*e*	pP	19 17 51.1	-3.5
YAK				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.4						
YAK				pmax	pmax		
	comp=E,2.0nm,1.3s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.1s						
SONM	**Songino Array**	**28.37**	**306**	P	**P**	**19 17 51.2**	**-1.4**
	comp=N,0.6nm,0.3s,mb3.7,baz=106,slow=11,SNR=2.2						
SONM				LR	LR	19 29 35.9	
	comp=N,64nm,19.6s,MS3.2,baz=263,slow=38						
SONM	**Songino Array**	**28.37**	**306**	P	**P**	**19 17 51.2**	**-1.4**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM				MLR	MLR		
	comp=Z,64nm,19.6s						
QIZ	**Qiongzhong**	**31.99**	**247**	P	**P**	**19 18 27.9**	**+3.0**
QIZ				S	**S**	**19 23 34.0**	**-0.2**
QIZ				pmax	pmax		
	comp=Z,9.0nm,1.5s,mb4.4						
QIZ				LR	LR		
	comp=N,110nm,22.0s						
BILL	**Bilibino**	**35.59**	**16**	⇑*e*P	**P**	**19 18 55.8**	**+0.2**
BILL				*e*		19 20 17.6	
BILL				*e*S	**S**	**19 24 25.7**	**-3.3**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.7s,mb4.2						
BILL				MLR	MLR		
	comp=Z,100nm,20.0s,MS3.6						
CMAR	**Chiang Mai Arr**	**40.78**	**257**	P	**P**	**19 19 39.4**	**-0.5**
	comp=Z,1.0nm,0.9s,mb3.5,baz=50,slow=6.9,SNR=6.2						
CMAR				LR	LR	19 38 12.3	
	comp=Z,100nm,19.7s,MS3.7,baz=86,slow=39						
CMAR	**Chiang Mai Arr**	**40.78**	**257**	P	**P**	**19 19 39.4**	**-0.5**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CMAR				MLR	MLR		
	comp=Z,100nm,19.7s						
LSA	**Lhasa**	**42.01**	**277**	P	**P**	**19 19 51.2**	**+1.3**
ZAA0	**Zalesovo Array**	**42.70**	**314**	*e*P	**P**	**19 19 54.7**	**-0.5**
ZALV	**Zalesovo Beam**	**42.70**	**314**	P	**P**	**19 19 55.2**	**+0.1**
	comp=Z,1.6nm,0.6s,mb3.9,baz=90,slow=6.3,SNR=8.1						
ZALV	**Zalesovo Beam**	**42.70**	**314**	P	**P**	**19 19 55.2**	**+0.1**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
MK31	**Makanchi Array**	**44.65**	**303**	*e*P	**P**	**19 20 09.6**	**-1.3**
MKAR	**Makanchi Array**	**44.65**	**303**	P	**P**	**19 20 10.5**	**-0.4**
	comp=Z,0.7nm,0.5s,mb3.8,baz=80,slow=10,SNR=12						
MKAR				LR	LR	19 39 28.4	
	comp=Z,54nm,18.5s,MS3.5,baz=243,slow=37						
MKAR	**Makanchi Array**	**44.65**	**303**	P	**P**	**19 20 10.5**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR				MLR	MLR		
	comp=Z,54nm,18.5s						
KURK	**Kurchatov**	**46.61**	**309**	P	**P**	**19 20 26.6**	**+0.2**
	comp=Z,6.3nm,0.8s,mb4.6,baz=85,slow=8.2,SNR=14						
KURK	**Kurchatov**	**46.61**	**309**	*e*P	**P**	**19 20 26.1**	**-0.3**
KURK				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.7						
TKM2	**Tokmak 2**	**50.06**	**299**	*e*P	**P**	**19 20 55.9**	**+2.8**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
TKM2	**Tokmak 2**	**50.06**	**299**	*e*P	**P**	**19 20 55.9**	**+2.8**
	comp=Z,4.0nm,0.7s,mb4.6						
BRVK	**Borovoye**	**51.41**	**313**	*e*P	**P**	**19 21 01.7**	**-1.4**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
FITZ	**Fitzroy Crossi**	**55.26**	**198**	P	**P**	**19 21 31.8**	**+0.1**
	comp=Z,1.5nm,0.4s,mb4.3,baz=29,slow=8.7,SNR=9.4						
WRAB	**Tennant Creek**	**55.49**	**188**	*e*P	**P**	**19 21 32.5**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
WRAB	**Tennant Creek**	**55.49**	**188**	*e*P	**P**	**19 21 32.5**	**-0.8**
	comp=Z,5.4nm,0.8s,mb4.6						
WRA	**Warramunga Arr**	**55.50**	**188**	P	**P**	**19 21 32.9**	**-0.5**
	comp=Z,3.1nm,0.6s,mb4.5,baz=1.2,slow=7.8,SNR=37						
WRA	**Warramunga Arr**	**55.50**	**188**	P	**P**	**19 21 32.9**	**-0.5**
WRA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
INK	**Inuvik**	**55.91**	**27**	P	**P**	**19 21 37.0**	**+1.2**
	comp=Z,1.7nm,0.6s,mb4.2,baz=317,slow=11,SNR=4.2						
INK				LR	LR	19 45 18.2	
	comp=Z,54nm,19.9s,MS3.6,baz=242,slow=36						
INK	**Inuvik**	**55.91**	**27**	P	**P**	**19 21 37.0**	**+1.2**
INK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
INK				MLR	MLR		
	comp=Z,54nm,19.9s						
ARU	**Arti**	**57.28**	**319**	*d* *i* P	**P**	**19 21 45.5**	**-0.2**
ARU				*e*		19 23 50.9	
ARU				S	**S**	**19 29 30.7**	**-8.4**
ARU				SS	SS	19 33 23.2	-4.9
ARU				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
ARU	**Arti**	**57.28**	**319**	*e*P	**P**	**19 21 43.9**	**-1.8**
	comp=Z,3.1nm,0.8s,mb4.4						
ABKAR	**Akbulak array**	**58.66**	**311**	*e*P	**P**	**19 21 55.0**	**-0.5**
	comp=Z,2.8nm,0.8s,mb4.3						
ASAR	**Alice Springs**	**59.23**	**188**	P	**P**	**19 21 59.2**	**-0.4**
	comp=Z,1.2nm,0.6s,mb4.1,baz=18,slow=11,SNR=14						
ASAR	**Alice Springs**	**59.23**	**188**	P	**P**	**19 21 59.2**	**-0.4**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MBWA	**Marble Bar**	**59.84**	**203**	*e*P	**P**	**19 22 03.6**	**-0.3**
	comp=Z,4.4nm,0.6s,mb4.7						
DZM	**Mont Dzumac**	**62.14**	**153**	*e*LR	LR	19 40 55.5	
	comp=Z,125nm,28.9s						
BBB	**Bella Bella**	**63.41**	**44**	LR	LR	19 46 57.5	
	comp=Z,64nm,20.2s,MS3.8,baz=267,slow=33						
STKA	**Stephens Creek**	**67.03**	**179**	P	**P**	**19 22 51.7**	**+0.5**
	comp=Z,1.3nm,0.6s,mb4.2,baz=326,slow=13,SNR=2.9						
STKA	**Stephens Creek**	**67.03**	**179**	P	**P**	**19 22 51.7**	**+0.5**
JOF	**Joensuu**	**67.14**	**332**	*e*P	**P**	**19 22 49.1**	**-2.6**
JOF	**Joensuu**	**67.14**	**332**	*e*p	**P**	**19 22 49.1**	**-2.6**
OBN	**Obninsk**	**69.11**	**323**	⇑*e*P	**P**	**19 23 06.9**	**+2.7**
OBN				*e*S	S	19 31 56.4	-10
OBN				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
OBN				MLR	MLR		
	comp=Z,100nm,14.0s,MS4.2						
KAF	**Kangasniemi**	**69.50**	**333**	*e*P	**P**	**19 23 03.4**	**-3.1**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
KAF	**Kangasniemi**	**69.50**	**333**	*e*p	**P**	**19 23 03.4**	**-3.1**
	comp=Z,2.2nm,0.7s,mb4.2						
FINES	**FINESS Array B**	**70.00**	**332**	P	**P**	**19 23 09.3**	**-0.3**
	comp=Z,1.7nm,0.8s,mb4.0,baz=72,slow=6.2,SNR=6.1						
FINES	**FINESS Array B**	**70.00**	**332**	P	**P**	**19 23 09.3**	**-0.2**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KIV	**Kislovodsk**	**71.64**	**311**	*e*P	**P**	**19 23 20.6**	**+0.8**
KIV				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
FFC	**Flin Flon**	**75.19**	**32**	*ce*P	**P**	**19 23 42.4**	**+1.9**
AKASG	**Malin Array Be**	**75.29**	**322**	P	**P**	**19 23 40.3**	**-0.8**
	comp=Z,1.2nm,0.6s,mb4.0,baz=48,slow=4.5,SNR=4.5						
AKASG	**Malin Array Be**	**75.29**	**322**	P	**P**	**19 23 40.3**	**-0.9**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NB2	**NORSAR Subarra**	**75.46**	**337**	P	**P**	**19 23 42.1**	**+0.2**
	comp=Z,1.5nm,0.7s,mb4.0,baz=42,slow=5.9						
NOA	**NORSAR Array B**	**75.46**	**337**	P	**P**	**19 23 42.2**	**+0.3**
	comp=Z,2.1nm,0.8s,mb4.1,baz=39,slow=5.7,SNR=9.7						
NOA				LR	LR	19 59 21.8	
	comp=Z,39nm,21.0s,MS3.7,baz=10.0,slow=38						
NOA	**NORSAR Array B**	**75.46**	**337**	P	**P**	**19 23 42.3**	**+0.4**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NOA				MLR	MLR		
	comp=Z,39nm,21.0s						
LRM	**Limekiln Ridge**	**75.49**	**44**	*e*P	**P**	**19 23 44.6**	**+2.1**
	comp=Z,32nm,1.0s,mb5.2						
DLMT	**Dillon**	**75.68**	**44**	*e*P	**P**	**19 23 45.9**	**+2.4**
	comp=Z,3.4nm,0.9s,mb4.3						
BOZ	**Bozeman (W)**	**76.06**	**44**	*e*P	**P**	**19 23 48.0**	**+2.3**
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
BOZ	**Bozeman (W)**	**76.06**	**44**	*e*P	**P**	**19 23 48.0**	**+2.3**
	comp=Z,1.7nm,0.9s,mb4.0						
NVAR	**Mina Array Bea**	**76.19**	**53**	P	**P**	**19 23 49.4**	**+2.8**
	comp=Z,1.7nm,0.8s,mb4.0,baz=280,slow=6.6,SNR=11						
PDAR	**Pinedale Array**	**79.00**	**45**	P	**P**	**19 24 04.0**	**+1.8**
	comp=Z,1.5nm,0.6s,mb4.1,baz=277,slow=2.8,SNR=15						
BRTR	**Keskin Array B**	**79.60**	**312**	P	**P**	**19 24 05.6**	**+0.1**
	comp=Z,0.4nm,0.6s,mb3.5,baz=41,slow=4.6,SNR=4.1						
CLL	**Colln**	**82.24**	**330**	*e*pP	pP	19 24 30.0	-0.4
PMOR	**Pomariorio Rele**	**83.90**	**113**	*e*T		20 56 53.7	
	comp=Z,5.0nm,0.2s						
PPT	**Papeete**	**84.28**	**116**	*e*LR	LR	19 51 11.0	
	comp=Z,53nm,24.0s						
TXAR	**Lajitas Array**	**91.34**	**52**	P	**P**	**19 25 05.7**	**+1.4**
	comp=Z,0.8nm,0.8s,mb4.1,baz=300,slow=3.5,SNR=8.4						
TXAR	**Lajitas Array**	**91.34**	**52**	P	**P**	**19 25 05.7**	**+1.5**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
LPAZ	**La Paz**	**147.76**	**61**	PKPbc	PKPbc	19 31 45.1	+1.7
	comp=Z,1.7nm,0.8s,baz=356,slow=9.3,SNR=8.2						

*ISCJB **03** 19:23:25.4±0.6, 37°.23N±0°.04×29°.41E±0°.05, h10km, Error ellipse: s-maj=7.2km s-min=4.1km az=39.3*
*ISK **03** 19:23:25.3, 37°.14N×29°.31E, h5km, MD2.9*
*CSEM **03** 19:23:26.0±0.3, 37°.20N×29°.33E, h2km, MD2.9, Error ellipse: s-maj=8.5km s-min=5.2km az=32.0*

ISC 03 19:23:26.0±0.6, 37°.23N±0°.04×29°.37E±0°.05, h8km±9km, n26, σ1°01/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.12**	**124**	*e*Pg	**Pg**	**19 23 29.1**	**+0.3**
GLHS	**Glhisar (BURDU**	**0.12**	**124**	*e*Pg	**Pg**	**19 23 29.1**	**+0.3**
GOLH	**Golhisar**	**0.15**	**85**	*i* P	**Pg**	**19 23 25.5**	**-3.8**
GOLH	**Golhisar**	**0.15**	**85**	*i* P	**Pg**	**19 23 25.5**	**-3.8**
DNZL	**Cakiroluk**	**0.53**	**331**	*i* P	**Pg**	**19 23 35.4**	**-0.9**
DNZL	**Cakiroluk**	**0.53**	**331**	*i* P	**Pg**	**19 23 35.4**	**-0.9**
ELL	**Elmali**	**0.64**	**138**	*e*PG	**Pg**	**19 23 38.5**	**+0.1**
ELL				*e*SG	**Sg**	**19 23 48.0**	**+1.3**
ELL	**Elmali**	**0.64**	**138**	*e*Pg	**Pg**	**19 23 38.5**	**+0.1**
ELL				*e*Sg	**Sg**	**19 23 48.0**	**+1.2**
TURN	**Turunc**	**0.71**	**240**	*i* P	**Pg**	**19 23 40.4**	**+0.8**
TURN	**Turunc**	**0.71**	**240**	*i* P	**Pg**	**19 23 40.4**	**+0.8**
KORT	**Korkueli**	**0.81**	**106**	*i* P	**Pg**	**19 23 39.3**	**-2.4**
KORT	**Korkueli**	**0.81**	**106**	*i* P	**Pg**	**19 23 39.3**	**-2.4**
YER	**Yerkesik**	**0.87**	**264**	*e*PG	**Pg**	**19 23 42.1**	**-0.6**
YER	**Yerkesik**	**0.87**	**264**	*e*Pg	**Pg**	**19 23 42.1**	**-0.7**
AKAS	**Kas**	**1.01**	**169**	*i* P	**Pg**	**19 23 43.5**	**-1.9**
AKAS	**Kas**	**1.01**	**169**	*i* P	**Pg**	**19 23 43.5**	**-1.8**
AKAS				*i* S	**Sg**	**19 23 58.7**	**+0.3**
AYDN	**Tasoluk**	**1.26**	**291**	*e*P	**Pn**	**19 23 49.9**	**+0.1**
AYDN	**Tasoluk**	**1.26**	**291**	*e*P	**Pn**	**19 23 49.9**	**0.0**
AYDN				*i* S	**Sg**	**19 24 07.1**	**+0.5**
MLSB	**Milas**	**1.27**	**274**	*e*PN	**Pn**	**19 23 50.0**	**0.0**
MLSB	**Milas**	**1.27**	**274**	*e*Pn	**Pn**	**19 23 50.0**	**0.0**
SUTC	**Sutluce-Ispart**	**1.32**	**79**	*e*PN	**Pg**	**19 23 52.8**	**+1.4**
SUTC	**Sutluce-Ispart**	**1.32**	**79**	*e*Pn	**Pg**	**19 23 52.8**	**+1.4**
KULA	**Kula-Manisa**	**1.40**	**337**	*e*PN	**Pg**	**19 23 53.8**	**+0.8**
KULA	**Kula-Manisa**	**1.40**	**337**	*e*Pn	**Pg**	**19 23 53.8**	**+0.8**
DAT	**Datca**	**1.52**	**252**	*e*PN	**Pn**	**19 23 53.4**	**0.0**
DAT	**Datca**	**1.52**	**252**	*e*Pn	**Pn**	**19 23 53.4**	**0.0**

*NEIC **03** 19:35:17.3, 35°.07S×71°.19W, h97km, MG4.2(GUC), After GUC.*

GUC 03 19:35:17.0±0.4, 35°.08S×71°.19W, h99km±2km, ML4.2, 10C-9D, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NICH	**Los Niches**	**0.09**	**339**	⇑*i*P	Pn	19 35 30.9	+0.1
NICH				*i* S	Sn	19 35 41.5	+0.4
TALC	**Talca**	**0.48**	**229**	⇑*i*P	Pn	19 35 32.7	+0.2
TALC				*i* S	Sn	19 35 44.5	+0.4
TALC	**Talca**	**0.48**	**229**	⇑*i*P	Pn	19 35 32.7	+0.2
TALC				*i* S	Sn	19 35 44.5	+0.4
TALC				AML	AML	19 35 45.2	
	comp=N,45μm,0.2s						
LNCH	**Linares**	**0.83**	**203**	⇑*e*P	Pn	19 35 35.7	+0.1
LNCH				*e*S	Sn	19 35 49.9	+0.3
CACH	**El Canelo**	**1.08**	**27**	⇓*i*P	Pn	19 35 38.9	+0.7
CACH				*i* S	Sn	19 35 55.2	+1.0
CACH	**El Canelo**	**1.08**	**27**	⇓*i*P	Pn	19 35 38.9	+0.7
CACH				*i* S	Sn	19 35 55.2	+1.0
LNV	**Longovilo**	**1.14**	**351**	⇑*i*P	Pn	19 35 39.5	+0.6
LNV				*i* S	Sn	19 35 55.8	+0.4
LNV	**Longovilo**	**1.14**	**351**	⇑*i*P	Pn	19 35 39.5	+0.6
LNV				*i* S	Sn	19 35 55.8	+0.4
CHCH	**Chadas Angostu**	**1.23**	**21**	*i* P	Pn	19 35 40.4	+0.4
CHCH				*i* S	Sn	19 35 57.9	+0.6
CHCH	**Chadas Angostu**	**1.23**	**21**	*i* P	Pn	19 35 40.4	+0.4
CHCH				*i* S	Sn	19 35 57.9	+0.6
TACH	**Talagante**	**1.44**	**9**	⇓*i*P	Pn	19 35 42.8	+0.3
TACH				*i* S	Sn	19 36 02.3	+0.5
TACH	**Talagante**	**1.44**	**9**	⇓*i*P	Pn	19 35 42.8	+0.3
TACH				*i* S	Sn	19 36 02.3	+0.5
LMEL	**Las Melosas**	**1.48**	**34**	⇓*i*P	Pn	19 35 43.8	+0.8
LMEL				*e*S	Sn	19 36 03.9	+1.3
LMEL	**Las Melosas**	**1.48**	**34**	⇓*i*P	Pn	19 35 43.7	+0.8
LMEL				*e*S	Sn	19 36 03.8	+1.2
LMEL				AML	AML	19 36 06.8	
	comp=N,3μm,0.2s						
PCH	**Pirque**	**1.56**	**21**	⇑*i*P	Pn	19 35 44.5	+0.5
PCH				*i* S	Sn	19 36 05.3	+0.9
PCH	**Pirque**	**1.56**	**21**	⇑*i*P	Pn	19 35 44.5	+0.5
PCH				*i* S	Sn	19 36 05.3	+0.9
ANTU	**Antumapu**	**1.58**	**17**	*e*P	Pn	19 35 44.4	+0.3
ANTU				*e*S	Sn	19 36 05.6	+0.8
RCDM	**Rinconada Maip**	**1.62**	**12**	⇑*i*P	Pn	19 35 45.0	+0.3
RCDM				*i* S	Sn	19 36 06.1	+0.3
RCDM	**Rinconada Maip**	**1.62**	**12**	⇑*i*P	Pn	19 35 45.0	+0.2
RCDM				*i* S	Sn	19 36 06.1	+0.3
RCDM				AML	AML	19 36 06.5	
	comp=E,2μm,0.2s						
LCCH	**Las Cruces**	**1.63**	**349**	⇓*i*P	Pn	19 35 45.2	+0.3
LCCH				*i* S	Sn	19 36 06.3	+0.3
LCCH	**Las Cruces**	**1.63**	**349**	⇓*i*P	Pn	19 35 45.2	+0.3
LCCH				*i* S	Sn	19 36 06.3	+0.3
COCH	**Cobquecura**	**1.67**	**231**	*e*P	Pn	19 35 46.2	+1.0
COCH				*e*S	Sn	19 36 05.8	-1.0
CCHI	**Chillan**	**1.68**	**205**	*e*P	Pn	19 35 45.4	0.0
CCHI				*e*S	Sn	19 36 07.3	+0.3
CLCH	**Cerro Calan**	**1.77**	**18**	⇓*i*P	Pn	19 35 47.0	+0.5
CLCH				*i* S	Sn	19 36 09.6	+0.6
CLCH				AML	AML	19 36 11.1	
	comp=E,2μm,0.2s						
FCH	**Farellones**	**1.90**	**23**	AML	AML	19 36 17.0	
	comp=N,2μm,0.3s						
PEL	**Peldehue**	**1.98**	**12**	*e*P	Pn	19 35 49.7	+0.4
PEL				*i* S	Sn	19 36 14.4	+0.6
PEL				AML	AML	19

ITM	**Ithomi**	**0.94 160**	*e*Pn	**Pn**	**19 38 35.4**	**+0.7**
ITM			*e*Sn	**Sn**	**19 38 48.0**	**+0.7**
VLX	**Vlachokerasia**	**0.96 136**	*e*PN	**Pn**	**19 38 35.9**	**+0.8**
VLX	**Vlachokerasia**	**0.96 136**	*e*Pn	**Pn**	**19 38 35.9**	**+0.8**
PYL	**PYLOS**	**1.18 172**	*e*PN	**Pn**	**19 38 39.7**	**+1.6**
PYL	**PYLOS**	**1.18 172**	*e*Pn	**Pn**	**19 38 39.7**	**+1.6**
DID	**Didima**	**1.46 112**	*e*PN	**Pn**	**19 38 43.3**	**+1.4**
DID	**Didima**	**1.46 112**	*e*Pn	**Pn**	**19 38 43.3**	**+1.4**
VLI	**Veliai**	**1.75 140**	*e*Pb	**Pb**	**19 38 47.4**	**-1.1**
VLI	**Veliai**	**1.75 140**	*e*PB	**Pb**	**19 38 47.4**	**-1.1**
KYTH	**Kithira**	**2.15 146**	*e*Pb	**Pb**	**19 38 53.7**	**-1.6**
KYTH	**Kithira**	**2.15 146**	*e*PB	**Pb**	**19 38 53.7**	**-1.6**

IDC 03 19:40:42.9±56.0, 16°90S×178°29W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.8/16, mbtmp3.9/3, Error ellipse: s-maj=1024.0km s-min=160.7km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.22**	**240**	P	P	19 48 13.8	+0.8
	0.9nm,0.5s,baz=95,slow=12,SNR=3.8						
WRA	**Warramunga Arr**	**44.93**	**259**	P	P	19 48 59.3	-0.5
	0.2nm,0.2s,baz=96,slow=7.6,SNR=11						
ASAR	**Alice Springs**	**45.18**	**253**	P	P	19 49 01.6	-0.1
	3.3nm,0.6s,baz=89,slow=7.8,SNR=89						

IDC 03 20:07:46.2±2.0, 7°56S×127°28E, h0km, mb3.6/1, mb1 3.9/3, mb1mx3.6/16, mbtmp3.7/3, ML3.8/2, Error ellipse: s-maj=216.0km s-min=31.1km az=63.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.09**	**152**	Pn	Pn	20 11 06.2	-0.9
	0.5nm,0.3s,baz=325,slow=13,SNR=37						
WRA				Sn	Sn	20 13 28.8	-15
	1.0nm,0.3s,baz=331,slow=22,SNR=4.6						
ASAR	**Alice Springs**	**17.23**	**159**	P	Pn	20 11 49.2	+0.8
	0.4nm,0.3s,baz=340,slow=11,SNR=45						
ASAR				S	Sn	20 14 47.0	-14
	0.5nm,0.3s,baz=338,slow=25,SNR=4.7						
MKAR	**Makanchi Array**	**67.24**	**328**	P	P	20 18 42.5	+0.1
	0.3nm,0.5s,baz=116,slow=8.1,SNR=8.1						

*ISK **03** 20:18:25.4, 37°02N×29°22E, h5km, MD3.1*
*IDC **03** 20:18:25.7±2.1, 36°89N×29°15E, h0km, mb3.6/1, mb1 3.4/4, mb1mx3.2/24, mbtmp3.4/4, ML3.1/2, MS2.8/1, Ms1 2.8/1, ms1mx1.9/36, Error ellipse: s-maj=35.5km s-min=25.5km az=157.0*
*NEIC **03** 20:18:25.0, 37°02N×29°22E, h5km, MD3.1(ISK), After ISK.*
*ISCJB **03** 20:18:26.8±0.5, 36°95N±0°03×29°27E±0°03, h17km±5km, Error ellipse: s-maj=5.0km s-min=3.9km az=18.5*
*DDA **03** 20:18:26.2, 36°99N×29°19E, h21km±2km, Md3.5*
*CSEM **03** 20:18:26.3±0.1, 36°98N×29°22E, h5km, MD3.1, Error ellipse: s-maj=3.6km s-min=2.7km az=7.0*

IDC 03 20:18:26.5±0.6, 36°96N±0°03×29°22E±0°03, h7km±4km, n76, σ0°81/98, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**49**	PG	**Pg**	**20 18 31.8**	**-0.5**
GLHS				*e*SG	**Sg**	**20 18 36.5**	**+0.2**
GLHS	**Glhisar (BURDU**	**0.30**	**49**	*i* Pg	**Pg**	**20 18 31.8**	**-0.5**
GLHS				*e*Sg	**Sg**	**20 18 36.5**	**+0.3**
GOLH	**Golhisar**	**0.39**	**45**	*i* P	**Pg**	**20 18 33.8**	**-0.3**
GOLH				*i* S	**Sg**	**20 18 40.8**	**+1.7**
GOLH	**Golhisar**	**0.39**	**45**	*i* P	**Pg**	**20 18 33.8**	**-0.2**
GOLH				*i* S	**Sg**	**20 18 40.8**	**+1.7**
TURN	**Turunc**	**0.50**	**260**	*i* P	**Pg**	**20 18 41.1**	**+4.9**
TURN				*i* S	**Sg**	**20 18 52.6**	**+10**
TURN	**Turunc**	**0.50**	**260**	*i* P	**Pg**	**20 18 41.1**	**+5.0**
ELL	**Elmali**	**0.59**	**111**	*e*PG	**Pg**	**20 18 38.2**	**+0.3**
ELL	**Elmali**	**0.59**	**111**	*e*Pg	**Pg**	**20 18 38.2**	**+0.3**
DNZL	**Cakiroluk**	**0.74**	**349**	*i* P	**Pg**	**20 18 39.5**	**-1.2**
DNZL				*i* S	**Sg**	**20 18 49.3**	**-1.0**
DNZL	**Cakiroluk**	**0.74**	**349**	*i* P	**Pg**	**20 18 39.5**	**-1.2**
DNZL				*i* S	**Sg**	**20 18 49.3**	**-1.0**
YER	**Yerkesik**	**0.77**	**283**	*e*PG	**Pg**	**20 18 41.0**	**-0.2**
YER	**Yerkesik**	**0.77**	**283**	*e*Pg	**Pg**	**20 18 41.0**	**-0.2**
AKAS	**Kas**	**0.79**	**157**	*i* P	**Pg**	**20 18 42.1**	**+0.4**
AKAS				*i* S	**Sg**	**20 18 57.4**	**+5.4**
AKAS	**Kas**	**0.79**	**157**	*i* P	**Pg**	**20 18 42.1**	**+0.4**
AKAS				*i* S	**Sg**	**20 18 57.4**	**+5.4**
DENT	**Denizli**	**0.80**	**350**	*e*PG	**Pg**	**20 18 40.7**	**-1.2**
DENT	**Denizli**	**0.80**	**350**	*e*Pg	**Pg**	**20 18 40.7**	**-1.2**
KORT	**Korkueli**	**0.91**	**87**	*i* P	**Pg**	**20 18 42.6**	**-1.3**
KORT				*i* S	**Sg**	**20 18 59.1**	**+3.4**
KORT	**Korkueli**	**0.91**	**87**	*i* P	**Pg**	**20 18 42.6**	**-1.3**
KORT				*i* S	**Sg**	**20 18 59.1**	**+3.4**
ARG	**Arkhangelos**	**1.15**	**230**	*e*Pn	**Pn**	**20 18 47.5**	**-1.5**
ARG	**Arkhangelos**	**1.15**	**230**	*e*PN	**Pn**	**20 18 47.5**	**-1.5**
ARG	**Arkhangelos**	**1.15**	**230**	*e*Pn	**Pn**	**20 18 47.5**	**-1.5**
ANTB	**Antalya**	**1.15**	**93**	*e*PN	**Pn**	**20 18 48.5**	**-0.6**
ANTB	**Antalya**	**1.15**	**93**	*e*Pn	**Pn**	**20 18 48.5**	**-0.5**
MLSB	**Milas**	**1.20**	**286**	*e*PN	**Pn**	**20 18 49.0**	**-0.7**
MLSB	**Milas**	**1.20**	**286**	*e*Pn	**Pn**	**20 18 49.0**	**-0.7**
BCK	**Bucak**	**1.20**	**65**	*e*PN	**Pn**	**20 18 48.9**	**-0.8**
BCK	**Bucak**	**1.20**	**65**	*e*Pn	**Pn**	**20 18 48.9**	**-0.8**
AYDN	**Tasoluk**	**1.27**	**304**	*i* P	**Pn**	**20 18 50.3**	**-0.4**
AYDN				*i* S	**Sg**	**20 19 08.8**	**+1.3**
AYDN	**Tasoluk**	**1.27**	**304**	*i* P	**Pn**	**20 18 50.3**	**-0.4**
AYDN				*i* S	**Sg**	**20 19 08.8**	**+1.3**
DAT	**Datca**	**1.33**	**260**	*e*PN	**Pn**	**20 18 52.1**	**+0.5**
DAT	**Datca**	**1.33**	**260**	*e*Pn	**Pn**	**20 18 52.1**	**+0.5**
ISP	**Isparta**	**1.35**	**50**	*e*PN	**Pn**	**20 18 51.4**	**-0.4**
ISP	**Isparta**	**1.35**	**50**	*e*P	**Pn**	**20 18 51.7**	**-0.1**
ISP	**Isparta**	**1.35**	**50**	*e*Pn	**Pn**	**20 18 51.4**	**-0.3**
ISP	**Isparta**	**1.35**	**50**	*e*P	**Pn**	**20 18 51.7**	**0.0**
KHL	**Karahalli**	**1.38**	**10**	*e*PN	**Pn**	**20 18 51.6**	**-0.5**
KHL	**Karahalli**	**1.38**	**10**	*e*Pn	**Pn**	**20 18 51.6**	**-0.6**
KHAL	**Karahalli**	**1.42**	**9**	*i* P	**Pn**	**20 18 52.5**	**-0.2**
KHAL				*i* S	**Sb**	**20 19 13.1**	**+1.4**
KHAL	**Karahalli**	**1.42**	**9**	*i* P	**Pn**	**20 18 52.5**	**-0.2**
KHAL				*i* S	**Sb**	**20 19 13.1**	**+1.5**
BDRM	**Kayabasi**	**1.42**	**275**	*i* P	**Pn**	**20 18 53.6**	**+0.8**
BDRM				*i* S	**Sb**	**20 19 13.3**	**+1.6**
BDRM	**Kayabasi**	**1.42**	**275**	*i* P	**Pn**	**20 18 53.6**	**+0.8**
BDRM				*i* S	**Sb**	**20 19 13.3**	**+1.6**
SUTC	**Sutluce-Ispart**	**1.51**	**70**	*e*PN	**Pn**	**20 18 54.3**	**+0.4**
SUTC	**Sutluce-Ispart**	**1.51**	**70**	*e*Pn	**Pn**	**20 18 54.3**	**+0.3**
BODT	**Bodrum**	**1.53**	**274**	*e*PN	**Pn**	**20 18 54.7**	**+0.4**
BODT	**Bodrum**	**1.53**	**274**	*e*Pn	**Pn**	**20 18 54.7**	**+0.5**
KULA	**Kula-Manisa**	**1.61**	**344**	*e*PN	**Pn**	**20 18 55.0**	**-0.3**
KULA	**Kula-Manisa**	**1.61**	**344**	*e*Pn	**Pn**	**20 18 55.0**	**-0.3**
SHUT	**Suhut-Afyon**	**1.91**	**33**	*e*PN	**Pn**	**20 18 59.4**	**0.0**
SHUT	**Suhut-Afyon**	**1.91**	**33**	*e*Pn	**Pn**	**20 18 59.4**	**0.0**
SMG	**Samos**	**2.04**	**292**	*e*Pn	**Pn**	**20 19 01.4**	**+0.2**
SMG	**Samos**	**2.04**	**292**	*e*PN	**Pn**	**20 19 01.4**	**+0.2**
SMG	**Samos**	**2.04**	**292**	*e*Pn	**Pn**	**20 19 01.4**	**+0.2**
IZM	**Izmir**	**2.11**	**313**	*e*PN	**Pn**	**20 19 02.4**	**+0.2**
IZM	**Izmir**	**2.11**	**313**	*e*Pn	**Pn**	**20 19 02.4**	**+0.2**
DEMI	**Demirci**	**2.11**	**349**	*i* P	**Pn**	**20 19 02.3**	**0.0**
DEMI				*i* S	**Sn**	**20 19 28.7**	**-0.1**
DEMI	**Demirci**	**2.11**	**349**	*i* P	**Pn**	**20 19 02.3**	**0.0**
DEMI				*i* S	**Sn**	**20 19 28.7**	**-0.1**
ALT	**Altintas**	**2.20**	**18**	*e*PN	**Pn**	**20 19 03.4**	**-0.1**
ALT	**Altintas**	**2.20**	**18**	*e*Pn	**Pn**	**20 19 03.4**	**-0.1**
AKHS	**Akhisar**	**2.21**	**330**	*e*P	**Pn**	**20 19 03.4**	**-0.2**
AKHS				*e*S	**Sn**	**20 19 30.1**	**-1.1**
AKHS	**Akhisar**	**2.21**	**330**	*e*P	**Pn**	**20 19 03.4**	**-0.2**
AKHS				*e*S	**Sn**	**20 19 30.1**	**-1.1**
AKS	**Akhisar**	**2.21**	**330**	*e*PN	**Pn**	**20 19 03.8**	**+0.2**
AKS	**Akhisar**	**2.21**	**330**	*e*Pn	**Pn**	**20 19 03.8**	**+0.2**
BLCB	**Balcova**	**2.23**	**310**	*e*PN	**Pn**	**20 19 04.3**	**+0.4**
BLCB	**Balcova**	**2.23**	**310**	*e*Pn	**Pn**	**20 19 04.3**	**+0.4**
KONT	**Konya--Tatoy**	**2.69**	**68**	*e*PN	**Pn**	**20 19 10.9**	**+0.8**
KONT	**Konya--Tatoy**	**2.69**	**68**	*e*Pn	**Pn**	**20 19 11.0**	**+0.9**
BR131	**Keskin Array S**	**4.44**	**50**	*e*P	**Pn**	**20 19 35.7**	**+1.5**
BR131	**Keskin Array S**	**4.44**	**50**	*e*P	**Pn**	**20 19 35.7**	**+1.5**
BRTR	**Keskin Array B**	**4.44**	**50**	Pn	**Pn**	**20 19 35.5**	**+1.3**
	0.5nm,0.3s,baz=238,slow=16,SNR=11						
BRTR				Sn	**Sn**	**20 20 30.9**	**+4.9**
	0.3nm,0.3s,baz=216,slow=25,SNR=5.6						
BRTR	**Keskin Array B**	**4.44**	**50**	Pn	**Pn**	**20 19 35.5**	**+1.3**
MMAI	**Mount Meron Ar**	**6.42**	**126**	Pn	**Pn**	**20 20 02.1**	**+0.5**
	1.4nm,0.3s,baz=307,slow=12,SNR=6.1						
MMAI				Sn	**Sn**	**20 21 14.5**	**-0.6**
	0.6nm,0.3s,baz=309,slow=15,SNR=2.3						
EIL	**Elat**	**8.71**	**145**	Pn	**Pn**	**20 20 33.0**	**+0.1**
	0.4nm,0.3s,baz=353,slow=8.1,SNR=3.6						
EIL	**Elat**	**8.71**	**145**	Pn	**Pn**	**20 20 33.0**	**+0.1**
TORD	**Torodi Ar. Bea**	**34.18**	**233**	P	**P**	**20 25 12.1**	**-0.5**
	0.5nm,0.6s,baz=34,slow=8.7,SNR=5.7						
TORD	**Torodi Ar. Bea**	**34.18**	**233**	P	**P**	**20 25 12.1**	**-0.5**
ZALV	**Zalesovo Beam**	**41.38**	**48**	LR	LR	20 47 22.8	
	comp=Z,12nm,18.1s,baz=266,slow=42						

*NEIC **03** 20:18:30.1, 36°02N×27°03E, h16km, MD3.3(ATH), After ATH.*
*ATH **03** 20:18:30.1, 36°02N×27°03E, h16km±1km, MD3.3/6*
*ISCJB **03** 20:18:51.9±1.9, 34°8N±0°2×25°16E±0°05, h25km±8km, Error ellipse: s-maj=26.8km s-min=6.6km az=0.4*
*THE **03** 20:18:52.1, 34°83N×25°16E, h11km±1km, Error ellipse: s-maj=3.0km s-min=0.8km az=1.0*
*CSEM **03** 20:18:52.1, 34°83N×25°16E, h11km, After THE*

ISC 03 20:18:51.0±2.1, 34°8N±0°1×25°16E±0°05, h16km±11km, n19, σ0°62/27, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.39**	**312**	P	**Pg**	**20 18 59.2**	**+0.2**
SIVA				S	**Sg**	**20 19 04.5**	**+0.2**
SIVA	**Sivas**	**0.39**	**312**	P	**Pg**	**20 18 59.2**	**+0.2**
SIVA				S	**Sg**	**20 19 04.5**	**+0.2**
LAST	**Lasithi**	**0.48**	**33**	*e*Pn	**Pg**	**20 18 59.5**	**-1.2**
LAST	**Lasithi**	**0.48**	**33**	*e*PN	**Pg**	**20 18 59.5**	**-1.2**
LAST	**Lasithi**	**0.48**	**33**	P	**Pg**	**20 19 00.3**	**-0.4**
LAST				S	**Sg**	**20 19 06.8**	**-0.4**
LAST	**Lasithi**	**0.48**	**33**	*e*Pn	**Pg**	**20 18 59.5**	**-1.2**
LAST	**Lasithi**	**0.48**	**33**	P	**Pg**	**20 19 00.3**	**-0.4**
LAST				S	**Sg**	**20 19 06.8**	**-0.4**
IDI	**Anoyia**	**0.58**	**337**	*e*Pb	**Pb**	**20 19 02.6**	**-0.1**
IDI	**Anoyia**	**0.58**	**337**	*e*PB	**Pb**	**20 19 02.6**	**-0.1**
IDI	**Anoyia**	**0.58**	**337**	*e*Pb	**Pb**	**20 19 02.6**	**-0.1**
ZKR	**Zakros**	**0.94**	**67**	P	**Pg**	**20 19 08.4**	**-0.8**
ZKR				S	**Sg**	**20 19 23.0**	**+1.4**
ZKR	**Zakros**	**0.94**	**67**	P	**Pg**	**20 19 08.4**	**-0.8**
ZKR				S	**Sg**	**20 19 23.0**	**+1.4**
VAM	**Vamos**	**1.02**	**310**	*e*Pb	**Pb**	**20 19 10.1**	**-0.2**
VAM	**Vamos**	**1.02**	**310**	*e*PB	**Pb**	**20 19 10.1**	**-0.2**
VAM	**Vamos**	**1.02**	**310**	*e*Pb	**Pb**	**20 19 10.1**	**-0.2**
KARN	**Karanos**	**1.21**	**303**	*e*PN	**Pn**	**20 19 13.3**	**+0.2**
KARN	**Karanos**	**1.21**	**303**	P	**Pn**	**20 19 13.0**	**-0.1**
KARN				S	**Sb**	**20 19 29.0**	**+0.3**
KARN	**Karanos**	**1.21**	**303**	*e*Pn	**Pn**	**20 19 13.3**	**+0.2**
KARN	**Karanos**	**1.21**	**303**	P	**Pn**	**20 19 13.0**	**-0.1**
KARN				S	**Sb**	**20 19 29.0**	**+0.3**

IDC 03 20:27:38.6±2.0, 10°55N×91°49E, h0km, mb3.6/4, mb1 3.6/5, mb1mx3.4/23, mbtmp3.4/5, ML3.2/1, Error ellipse: s-maj=69.4km s-min=23.1km az=64.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.67**	**42**	Pn	Pn	20 30 11.5	-1.3
	0.1nm,0.3s,baz=239,slow=15,SNR=2.5						
MKAR	**Makanchi Array**	**36.96**	**349**	P	P	20 34 49.6	+0.2
	0.7nm,0.6s,baz=164,slow=8.5,SNR=8.4						
ZALV	**Zalesovo Beam**	**43.61**	**354**	P	P	20 35 44.7	+0.2
	0.5nm,0.4s,baz=179,slow=8.2,SNR=4.2						
WRA	**Warramunga Arr**	**51.94**	**126**	P	P	20 36 49.3	-0.3
	0.2nm,0.4s,baz=300,slow=9.9,SNR=5.7						
ASAR	**Alice Springs**	**53.63**	**130**	P	P	20 37 02.2	+0.2
	0.2nm,0.5s,baz=305,slow=6.4,SNR=3.3						

IDC 03 20:34:02.6±52.0, 19°31S×178°03W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/16, mbtmp3.8/3, Error ellipse: s-maj=950.2km s-min=148.7km az=81.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.29**	**243**	P	P	20 41 25.1	+0.1
	0.5nm,0.4s,baz=86,slow=15,SNR=2.8						
WRA	**Warramunga Arr**	**44.75**	**261**	P	P	20 42 18.0	-0.2
	0.2nm,0.3s,baz=96,slow=7.6,SNR=15						
ASAR	**Alice Springs**	**44.77**	**256**	P	P	20 42 18.3	0.0
	1.4nm,0.6s,baz=98,slow=8.4,SNR=34						

IDC 03 20:40:18.2±3.7, 24°32S×176°67W, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.8/18, mbtmp4.0/4, Error ellipse: s-maj=222.2km s-min=54.8km az=163.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**34.52**	**270**	P	P	20 47 09.5	+1.1
	2.1nm,0.4s,baz=86,slow=9.5,SNR=5.5						
ASAR	**Alice Springs**	**44.97**	**260**	P	P	20 48 36.0	+0.6
	1.0nm,0.7s,baz=102,slow=8.7,SNR=14						
WRA	**Warramunga Arr**	**45.41**	**265**	P	P	20 48 37.8	-1.2
	0.4nm,0.3s,baz=104,slow=8.3,SNR=45						
FITZ	**Fitzroy Crossi**	**53.83**	**265**	P	P	20 49 42.6	-0.6
	0.8nm,0.4s,baz=86,slow=5.6,SNR=8.9						
HFS	**Hagfors**	**143.48**	**351**	PKP	PKPdf	20 59 53.2	-1.1
	0.7nm,0.3s,baz=38,slow=5.4,SNR=11						
MMAI	**Mount Meron Ar**	**150.64**	**294**	PKPbc	PKPbc	21 00 12.7	+0.2
	0.5nm,0.4s,baz=64,slow=6.7,SNR=4.4						

*NEIC **03** 20:48:54.9±1.1, 23°62S×177°81W, h35km, mb4.3/3, Error ellipse: s-maj=45.1km s-min=25.6km az=168.0*

IDC 03 20:48:50.0±1.6, 23°67S×177°90W, h0km, mb4.3/6, mb1 4.4/6, mb1mx4.1/16, mbtmp4.3/6, MS2.7/1, Ms1 2.7/1, ms1mx2.3/20, Error ellipse: s-maj=53.6km s-min=37.0km az=171.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**11.31**	**32**	LR	LR	20 54 51.5	
	comp=Z,41nm,19.1s,baz=72,slow=32						
CTA	**Charters Tower**	**33.40**	**269**	P	P	20 55 32.3	+1.8
	6.0nm,0.4s,baz=100,slow=9.2,SNR=11						
CTAO	**Charters Tower**	**33.40**	**269**	*e*P	P	20 55 33.5	+3.0
	5.6nm,0.5s						
STKA	**Stephens Creek**	**36.59**	**248**	P	P	20 55 57.1	-0.8
	0.7nm,0.3s,baz=104,slow=23,SNR=8.7						
STKA	**Stephens Creek**	**36.59**	**248**	*e*P	P	20 55 58.3	+0.4
	0.3nm,0.6s						
ASAR	**Alice Springs**	**43.97**	**260**	P	P	20 56 58.9	-0.3
	0.6nm,0.3s,baz=95,slow=6.5,SNR=38						
WRAB	**Tennant Creek**	**44.33**	**265**	*e*P	P	20 57 01.6	-0.5
	2.9nm,0.4s						
WRA	**Warramunga Arr**	**44.34**	**265**	P	P	20 57 01.7	-0.5
	2.8nm,0.4s,baz=98,slow=8.3,SNR=82						
WRA	**Warramunga Arr**	**44.34**	**265**	P	P	20 57 01.7	-0.5
FITZ	**Fitzroy Crossi**	**52.77**	**265**	P	P	20 58 06.7	-0.5
	4.2nm,0.8s,baz=135,slow=8.6,SNR=11						
MAW	**Mawson**	**78.63**	**200**	P	P	21 00 53.8	+0.5
	0.7nm,0.5s,baz=117,slow=9.0,SNR=5.7						
TXAR	**Lajitas Array**	**88.69**	**57**	P	Px	21 01 00.9	
	0.7nm,0.8s,baz=205,slow=5.5,SNR=3.9						
MKAR	**Makanchi Array**	**113.42**	**312**	PKiKP	PKiKP	21 07 29.1	-0.7
	0.1nm,0.4s,baz=87,slow=0.5,SNR=4.2						
FINES	**FINESS Array B**	**138.82**	**343**	PKhKP	PKPpre	21 08 11.5	
	0.4nm,0.5s,baz=73,slow=6.6,SNR=3.6						
HFS	**Hagfors**	**142.67**	**350**	PKP	PKPdf	21 08 24.0	-0.6
	1.6nm,0.3s,baz=60,slow=3.6,SNR=27						
BRTR	**Keskin Array B**	**148.96**	**309**	PKPbc	PKPbc	21 08 39.2	-0.8
	0.4nm,0.5s,baz=80,slow=3.4,SNR=3.5						
MMAI	**Mount Meron Ar**	**149.35**	**295**	PKPbc	PKPbc	21 08 41.3	+0.1
	1.4nm,0.3s,baz=72,slow=8.0,SNR=11						

*CSEM **03** 20:56:50.6±0.3, 38°53N×13°75E, h2km, mb4.2/1, Error ellipse: s-maj=7.5km s-min=5.0km az=36.0*
*ROM **03** 20:56:52.8±0.1, 38°44N×13°67E, h21km±3km, Ml3.4/42, Error ellipse: s-maj=2.9km s-min=2.1km az=37.0*
*ISCJB **03** 20:56:52.7±0.4, 38°45N±0°02×13°60E±0°03, h25km±4km, mb3.8/9, MS3.0/4, Error ellipse: s-maj=4.1km s-min=3.4km az=35.4*
*IDC **03** 20:56:52.8±0.9, 38°58N×13°80E, h0km, mb3.8/8, mb1 3.7/12, mb1mx3.6/29, mbtmp3.7/12, ML3.2/3, MS3.0/6, Ms1 3.0/6, ms1mx2.6/35, Error ellipse: s-maj=21.4km s-min=14.0km az=93.0*
*NEIC **03** 20:56:53.4±0.4, 38°53N×13°70E, h10km, mb4.2/1, ML3.8(ROM), Error ellipse: s-maj=8.6km s-min=5.8km az=220.0*
*LDG **03** 20:56:55.3±0.2, 38°31N×13°63E, h20km, Ml3.1/4, Error ellipse: s-maj=5.1km s-min=3.6km az=46.0*

ISC 03 20:56:53.1±0.4, 38°42N±0°02×13°67E±0°03, h14km±3km, n161, σ1°06/174, mb3.8/9, MS3.0/4, 22C-21D, Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USI	**Ustica**	**0.48**	**307**	⇓*e*Pg	**Pg**	**20 57 02.1**	**-0.5**
USI				Sg	**Sg**	**20 57 10.1**	**+1.0**
	26μm,0.4s						
USI	**Ustica**	**0.48**	**307**	⇓*e*Pg	**Pg**	**20 57 02.1**	**-0.5**
USI				Sg	**Sg**	**20 57 10.1**	**+1.0**
	26μm,0.4s						
GIB	**Gibilmanna**	**0.51**	**146**	Pg	**Pg**	**20 57 03.2**	**+0.1**
GIB				Sg	**Sg**	**20 57 12.1**	**+2.2**
	33μm,0.9s						
GIB	**Gibilmanna**	**0.51**	**146**	Pg	**Pg**	**20 57 03.2**	**+0.1**
GIB				Sg	**Sg**	**20 57 12.1**	**+2.2**
	33μm,0.9s						
ACL	**Alicudi**	**0.55**	**78**	⇑*e*Pg	**Pg**	**20 57 04.0**	**+0.1**
	8μm,0.7s						
IACL	**Alicudi**	**0.55**	**77**	⇑*e*Pg	**Pg**	**20 57 04.0**	**+0.1**
	8μm,0.7s						
CORL	**Corleone**	**0.59**	**209**	⇑*i*Pg	**Pg**	**20 57 03.8**	**-0.9**
CORL				Sg	**Sg**	**20 57 13.7**	**+1.1**
	8μm,0.7s						
CORL	**Corleone**	**0.59**	**209**	⇑*i*Pg	**Pg**	**20 57 03.8**	**-0.9**
CORL				Sg	**Sg**	**20 57 13.7**	**+1.1**
	8μm,0.7s						
IFIL	**Filicudi I Eol**	**0.72**	**78**	⇑*e*Pg	**Pg**	**20 57 06.7**	**-0.4**
	8μm,1.0s						
IFIL	**Filicudi I Eol**	**0.72**	**78**	⇑*e*Pg	**Pg**	**20 57 06.7**	**-0.4**
	8μm,1.0s						
RESU	**Resuttano**	**0.83**	**158**	⇓*i*Pg	**Pg**	**20 57 10.0**	**+0.9**
	3μm,0.6s						
RESU	**Resuttano**	**0.83**	**158**	⇓*i*Pg	**Pg**	**20 57 10.0**	**+0.9**
	3μm,0.6s						
SLNA	**Salina**	**0.93**	**80**	Pg	**Pg**	**20 57 09.7**	**-1.3**
SLNA	**Salina**	**0.93**	**80**	Pg	**Pg**	**20 57 09.7**	**-1.3**
ERC	**Erice**	**0.93**	**246**	Pg	**Pg**	**20 57 09.9**	**-1.2**
ERC	**Erice**	**0.93**	**246**	Pg	**Pg**	**20 57 09.9**	**-1.2**
GALF	**Gagliano Caste**	**1.00**	**135**	⇓*e*Pg	**Pg**	**20 57 12.2**	**-0.2**
	5μm,0.6s						
GALF	**Gagliano Caste**	**1.00**	**135**	⇓*e*Pg	**Pg**	**20 57 12.2**	**-0.2**
	5μm,0.6s						
LLI	**Lipari**	**1.00**	**88**	Pg	**Pg**	**20 57 11.1**	**-1.4**
	7μm,0.9s						
LLI	**Lipari**	**1.00**	**88**	Pg	**Pg**	**20 57 11.1**	**-1.4**
	7μm,0.9s						
VPL	**Vulcano Piano**	**1.03**	**92**	⇑*e*Pg	**Pg**	**20 57 11.2**	**-1.8**
	3μm,0.9s						
VPL	**Vulcano Piano**	**1.03**	**92**	⇑*e*Pg	**Pg**	**20 57 11.2**	**-1.8**
	3μm,0.9s						
VAE	**Valguarnera**	**1.10**	**148**	Pn	**Pg**	**20 57 16.6**	**+2.3**
	25nm,0.3s,baz=106,slow=4.2,SNR=60						
VAE				Sn	**Sg**	**20 57 35.1**	**+6.3**
	46nm,0.3s,baz=0.0,slow=20,SNR=11						
VAE	**Valguarnera**	**1.10**	**148**	Pn	**Pg**	**20 57 16.6**	**+2.3**
VAE				Sn	**Sg**	**20 57 35.1**	**+6.3**
VAE	**Valguarnera**	**1.10**	**148**	Pn	**Pg**	**20 57 16.6**	**+2.2**
VAE				Sn	**Sg**	**20 57 35.1**	**+6.3**
ECNV	**Catenanuova**	**1.16**	**134**	⇓*e*Pg	**Pn**	**20 57 15.8**	**+0.9**
ECNV	**Catenanuova**	**1.16**	**134**	⇓*e*Pg	**Pn**	**20 57 15.8**	**+0.9**
MILZ	**Milazzo**	**1.24**	**96**	Pg	**Pn**	**20 57 14.1**	**-1.8**
	1μm,0.9s						
MILZ	**Milazzo**	**1.24**	**96**	Pg	**Pn**	**20 57 14.1**	**-1.8**
	1μm

223nm,0.6s
WDD Wield Dalam 2.63 165 Pg Pn 20 57 36.3 +1.2
223nm,0.6s
MRLC Muro Lucano 2.73 30 Pg Pn 20 57 37.2 +0.8
26nm,0.7s
MRLC Muro Lucano 2.73 30 Pg Pn 20 57 37.2 +0.8
26nm,0.7s
SNAL S. Angelo Dei 2.77 25 Pg Pn 20 57 38.2 +1.1
200nm,1.7s
SNAL S. Angelo Dei 2.77 25 Pg Pn 20 57 38.2 +1.1
200nm,1.7s
CAFE Carife 2.88 24 Pg Pn 20 57 39.7 +1.2
82nm,2.0s
CAFE Carife 2.88 24 Pg Pn 20 57 39.7 +1.2
82nm,2.0s
SGG Gregorio Mates 3.02 10 Pg Pn 20 57 41.8 +1.4
24nm,0.5s
SGG Gregorio Mates 3.02 10 Pg Pn 20 57 41.8 +1.4
24nm,0.5s
MIGL Miglionico 3.06 44 Pg Pn 20 57 42.1 +1.1
395nm,1.3s
MIGL Miglionico 3.06 44 Pg Pn 20 57 42.1 +1.1
395nm,1.3s
SACR S. Croce Del S 3.08 15 Pg Pn 20 57 42.7 +1.4
1µm,6.7s
SACR S. Croce Del S 3.08 15 Pg Pn 20 57 42.7 +1.4
1µm,6.7s
GIUL Giuliano Di Ro 3.15 354 Pg Pn 20 57 43.1 +0.8
246nm,2.8s
GIUL Giuliano Di Ro 3.15 354 Pg Pn 20 57 43.1 +0.8
246nm,2.8s
BSSO Busso 3.21 13 Pg Pn 20 57 44.7 +1.7
1µm,5.7s
BSSO Busso 3.21 13 Pg Pn 20 57 44.7 +1.7
1µm,5.7s
LTRZ Laterza 3.27 47 Pg Pn 20 57 44.4 +0.5
1µm,6.9s
LTRZ Laterza 3.27 47 Pg Pn 20 57 44.4 +0.5
1µm,6.9s
MRVN Minervino Murg 3.28 36 Pg Pn 20 57 44.1 +0.1
19nm,0.9s
MRVN Minervino Murg 3.28 36 Pg Pn 20 57 44.1 +0.1
19nm,0.9s
SG1 Sgolgore (BA) 3.36 43 *e*P Pn 20 57 45.3 +0.2
AMUR Altamura 3.37 41 ⇑*i*Pg Pn 20 57 45.4 +0.2
33nm,1.0s
AMUR Altamura 3.37 41 ⇑*i*Pg Pn 20 57 45.4 +0.2
33nm,1.0s
VSL Villasalto 3.52 289 *e*Pn Pn 20 57 44.5 -2.8
VSL Villasalto 3.52 289 ⇓*i*Pg Pn 20 57 44.8 -2.5
VSL Villasalto 3.52 289 *e*Pn Pn 20 57 44.5 -2.8
VSL Villasalto 3.52 289 ⇓*i*Pg Pn 20 57 44.8 -2.5
DGI Dorgali Grotta 3.68 302 ⇓*i*Pg Pn 20 57 47.3 -2.2
DGI Dorgali Grotta 3.68 302 ⇓*i*Pg Pn 20 57 47.3 -2.2
SGRT San Giovanni R 3.69 25 Pg Pn 20 57 50.3 +0.6
21nm,0.7s
SGRT San Giovanni R 3.69 25 Pg Pn 20 57 50.3 +0.6
21nm,0.7s
PE1 Pezze di Greco 3.75 49 *e*P Pn 20 57 50.5 0.0
KEST Kesra 4.37 234 Pn Pn 20 58 01.0 +1.9
0.6nm,0.3s,baz=328,slow=6.3,SNR=18
KEST Sn Sn 20 58 49.0 -0.7
0.6nm,0.3s,baz=248,slow=6.2,SNR=4.2
KEST Kesra 4.37 234 *e*Pn Pn 20 58 00.7 +1.6
KEST Kesra 4.37 234 *e*Pn Pn 20 58 00.7 +1.6
KRUS Krusevo 6.53 61 *i*Pn Pn 20 58 29.5 +0.8
SBF Sospel 7.19 321 *e*Pn Pn 20 58 37.1 -0.6
SBF *e*Sn Sn 20 59 55.0 -4.2
3.6nm,0.3s
SBF Sospel 7.19 321 *e*Pn Pn 20 58 37.1 -0.6
SBF *e*Sn Sn 20 59 55.0 -4.2
1.8nm,0.3s
LMR La Mourre 7.32 314 *e*Pn Pn 20 58 38.0 -1.5
LMR *e*Sn Sn 20 59 57.5 -4.8
0.8nm,0.3s
LMR La Mourre 7.32 314 *e*Pn Pn 20 58 38.0 -1.5
FRF La Foret Royal 7.39 316 *e*Pn Pn 20 58 39.2 -1.3
FRF *e*Sn Sn 20 59 58.6 -5.4
1.7nm,0.4s
FRF La Foret Royal 7.39 316 *e*Pn Pn 20 58 39.2 -1.3
MBDF Montbardon 8.15 323 *e*Pn Pn 20 58 52.5 +1.6
SMRF Simiane la Rot 8.25 315 *e*Pn Pn 20 58 51.2 -1.0
SMRF Simiane la Rot 8.25 315 *e*Pn Pn 20 58 51.2 -1.0
VTS Vitosha 8.38 57 ⇓*i*P Pn 20 58 55.8 +1.8
ORIF Oris-en-Rattie 8.72 321 *e*Pn Pn 20 58 59.4 +0.6
ORIF Oris-en-Rattie 8.72 321 *e*Pn Pn 20 58 59.4 +0.6
LPG La Plagne 8.75 326 *e*Pn Pn 20 59 00.1 +1.0
LPL La Plagne 8.77 326 *e*Pn Pn 20 58 59.9 +0.5
LPL La Plagne 8.77 326 *e*Pn Pn 20 58 59.9 +0.5
DAVOX Davos/Dischmat 8.81 343 Pn Pn 20 58 58.8 -1.1
0.2nm,0.3s,baz=151,slow=19,SNR=2.2
DAVOX LR LR 21 02 29.7
comp=Z,76nm,21.1s,baz=263,slow=39
DAVOX Davos/Dischmat 8.81 343 Pn Pn 20 58 58.8 -1.2
LASF Ste Croix 9.30 311 *e*Pn Pn 20 59 05.8 -0.9
LASF *e*Sn Sn 21 00 45.4 -5.7
1.6nm,0.5s
LASF Ste Croix 9.30 311 *e*Pn Pn 20 59 05.8 -0.9
BZS Buzias 9.31 37 ⇓*i*P Pn 20 59 13.4 +6.6
VIVF Saint-Julien-l 9.31 317 *e*Pn Pn 20 59 06.8 0.0
VIVF Saint-Julien-l 9.31 317 *e*Pn Pn 20 59 06.8 0.0
MTLF Montolieu 9.97 303 *e*Pn Pn 20 59 14.8 -1.0
MTLF Montolieu 9.97 303 *e*Pn Pn 20 59 14.8 -1.0
VOIR 11.00 47 ⇑*i*P Pn 20 59 33.6 +3.7
VRAC Vranov 11.09 10 LR LR 21 03 29.5
comp=Z,33nm,19.7s,baz=5.6,slow=36
LOR Lormes 11.40 324 *e*Pn Pn 20 59 35.2 -0.2
LOR Lormes 11.40 324 *e*Pn Pn 20 59 35.2 -0.2
MLR Muntele Rosu 11.55 48 Pn Pn 20 59 37.6 +0.2
0.1nm,0.3s,baz=207,slow=14,SNR=2.8
MLR Muntele Rosu 11.55 48 ⇑*i*P Pn 20 59 38.1 +0.7
BURAR Bucovina Array 12.47 39 ⇓*i*P Pn 20 59 59.2 +9.1
BRTR Keskin Array B 15.57 79 Pn Pn 21 00 33.1 +1.1
0.1nm,0.3s,baz=283,slow=13,SNR=2.2
HFS Hagfors 21.74 0 P P 21 01 43.9 +0.1
1.4nm,0.6s,mb3.5,baz=184,slow=10,SNR=3.9
NB2 NORSAR Subarra 22.70 357 P P 21 01 53.8 -0.2
comp=Z,2.1nm,0.9s,mb3.6,baz=171,slow=11
NB2 NORSAR Subarra 22.70 357 P P 21 01 53.8 -0.2
comp=Z,2.1nm,0.9s,mb3.6,SNR=4.3
NOA NORSAR Array B 22.70 357 P P 21 01 53.6 -0.3
comp=Z,0.9nm,0.7s,mb3.3,baz=172,slow=11,SNR=4.5
NOA LR LR 21 12 24.3
comp=Z,22nm,18.5s,MS2.6,baz=210,slow=41
FINES FINESS Array B 24.31 15 P P 21 02 09.9 +0.1
comp=Z,3.7nm,0.7s,mb3.9,baz=190,slow=7.7,SNR=16
TORD Torodi Ar. Bea 27.32 206 P P 21 02 41.5 +4.0
comp=Z,0.2nm,0.4s,mb3.0,baz=24,slow=7.9,SNR=3.8
TORD LR LR 21 14 05.8
comp=Z,44nm,18.1s,MS3.1,baz=215,slow=38
DBIC Dimbokro 35.78 213 LR LR 21 18 41.8
comp=Z,34nm,19.6s,MS3.1,baz=236,slow=36
KURK Kurchatov 46.44 53 *e*P P 21 05 19.1 -0.1
comp=Z,3.1nm,1.1s,mb4.2
ZALV Zalesovo Beam 49.52 47 P P 21 05 43.0 0.0
comp=Z,0.9nm,0.5s,mb4.0,baz=284,slow=7.5,SNR=5.0
ZALV LR LR 21 27 27.0
comp=Z,19nm,18.7s,MS3.1,baz=69,slow=37
MKAR Makanchi Array 49.73 57 P P 21 05 44.8 +0.1
comp=Z,0.5nm,0.5s,mb3.8,baz=286,slow=6.5,SNR=10
SONM Songino Array 64.40 48 P P 21 07 30.3 +1.8
comp=Z,1.2nm,0.7s,mb4.0,baz=270,slow=8.1,SNR=3.1
SADO Sadowa 65.99 309 P P 21 07 42.0 +3.1
comp=Z,4.7nm,0.8s,mb4.6,baz=27,slow=9.0,SNR=4.2

*IDC **03** 21:08:59.3±1.8, 0°.82N×96°.90E, h0km, mb3.8/4, mb1 3.8/6, mb1mx3.5/23, mbtmp3.6/6, ML3.5/2, Error ellipse: s-maj=52.3km s-min=22.5km az=59.0*
*ISCJB **03** 21:09:02.5±1.0, 0°.90N±0°.07×96°.92E±0°.08, h33km, mb3.7/4, Error ellipse: s-maj=12.5km s-min=9.0km az=158.6*
*DJA **03** 21:09:04, 1°.01N×97°.01E, h34km, MLv3.8/4*
ISC 03 21:09:04.9±1.0, 0°.95N±0°.07×97°.01E±0°.09, h35km, n11, σ0°52/13, mb3.7/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.67**	**58**	P	**Pn**	**21 09 18.3**	**+0.4**
GSI				S	**Sn**	**21 09 27.2**	**0.0**
TPTI		**2.31**	**4**	P	**Pn**	**21 09 39.3**	**-1.1**
TPTI				S	**Sn**	**21 10 07.2**	**-0.4**
MNSI	**Mandailing Nat**	**2.58**	**93**	P	**Pn**	**21 09 44.1**	**0.0**
PSI	**Prapat**	**2.66**	**46**	Pn	**Pn**	**21 09 44.8**	**-0.4**
	2.4nm,0.3s,baz=246,slow=8.6,SNR=7.9						
PPI	**Padang Panjang**	**3.67**	**112**	P	**Pn**	**21 09 59.0**	**-0.1**
IPM	**Ipoh**	**5.33**	**49**	P	**Pn**	**21 10 22.7**	**+0.6**
CMAR	**Chiang Mai Arr**	**17.51**	**6**	P	**Pn**	**21 13 07.3**	**+1.0**
	0.1nm,0.3s,baz=199,slow=12,SNR=5.7						
WRA	**Warramunga Arr**	**42.06**	**122**	P	**P**	**21 16 53.1**	**-0.5**
	0.7nm,0.7s,mb3.4,baz=300,slow=9.2,SNR=4.8						
ASAR	**Alice Springs**	**43.40**	**127**	P	**P**	**21 17 04.3**	**-0.1**
	0.4nm,0.9s,mb3.2,baz=297,slow=8.2,SNR=4.8						
MKAR	**Makanchi Array**	**47.44**	**346**	P	**P**	**21 17 36.5**	**+0.4**
	0.9nm,0.6s,mb3.9,baz=166,slow=8.7,SNR=13						
ZALV	**Zalesovo Beam**	**53.78**	**351**	P	**P**	**21 18 23.9**	**+0.2**
	1.9nm,0.4s,mb4.4,baz=169,slow=6.6,SNR=13						

*ISCJB **03** 21:17:19.5±0.5, 10°.32N±0°.03×62°.29W±0°.02, h21km±5km, Error ellipse: s-maj=5.3km s-min=3.4km az=162.4*
*FUNV **03** 21:17:19.5, 10°.33N×62°.24W, h11km, MW3.2*
*TRN **03** 21:17:19.8, 10°.39N×62°.24W, h10km, MD3.4*
*NEIC **03** 21:17:20.1, 10°.39N×62°.23W, h12km, MD3.4(TRN), After TRN.*
ISC 03 21:17:19.3±0.5, 10°.33N±0°.03×62°.29W±0°.02, h15km±4km, n23, σ0°79/45, 2C-4D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.32**	**11**	⇑*i*P	**Pg**	**21 17 25.8**	**-0.3**
GUIV				*e*S	**Sg**	**21 17 30.7**	**+0.2**
TCE	**Chacachacare**	**0.64**	**55**	⇓*i*P	**Pg**	**21 17 31.3**	**-0.6**
TCE				*e*S	**Sg**	**21 17 39.8**	**-0.6**
TCE	**Chacachacare**	**0.64**	**55**	⇓*i*P	**Pg**	**21 17 31.3**	**-0.6**
TCE				*e*S	**Sg**	**21 17 39.8**	**-0.6**
GUNV	**Guanoco**	**0.67**	**256**	*e*P	**Pg**	**21 17 32.2**	**-0.1**
GUNV				*e*S	**Sg**	**21 17 42.4**	**+1.2**
TPP	**Pointe-a-Pierr**	**0.82**	**91**	*e*P	**Pg**	**21 17 35.0**	**-0.3**
TPP				*e*S	**Sg**	**21 17 46.5**	**+0.4**
TPP	**Pointe-a-Pierr**	**0.82**	**91**	*e*P	**Pg**	**21 17 35.0**	**-0.3**
TPP				*e*S	**Sg**	**21 17 46.5**	**+0.4**
TRN	**Trinidad (W)**	**0.93**	**70**	⇓*e*P	**Pb**	**21 17 36.2**	**-0.9**
TRN				*e*S	**Sb**	**21 17 48.6**	**-0.6**
TRN	**Trinidad (W)**	**0.93**	**70**	⇓*e*P	**Pb**	**21 17 36.2**	**-0.9**
TRN				*e*S	**Sb**	**21 17 48.6**	**-0.6**
CRUV	**Carupano**	**0.99**	**290**	*e*P	**Pb**	**21 17 37.2**	**-1.1**
CRUV				*e*S	**Sb**	**21 17 51.2**	**0.0**
TBH	**Brigand Hill**	**1.21**	**83**	*e*P	**Pn**	**21 17 42.5**	**+0.8**
TBH				*e*S	**Sb**	**21 17 58.5**	**+1.1**
TBH	**Brigand Hill**	**1.21**	**83**	*e*P	**Pn**	**21 17 42.5**	**+0.8**
TBH				*e*S	**Sb**	**21 17 58.5**	**+1.1**
ITEV	**Isla Los Testi**	**1.32**	**321**	⇑*i*P	**Pn**	**21 17 42.9**	**-0.2**
ITEV				*e*S	**Sb**	**21 18 01.0**	**+0.5**
ORIV	**Oritupano**	**1.67**	**222**	*e*P	**Pn**	**21 17 49.2**	**+1.2**
ORIV				*e*S	**Sn**	**21 18 10.7**	**+1.5**
TPR	**Prospect**	**1.71**	**60**	*e*P	**Pn**	**21 17 49.9**	**+1.3**
TPR				*e*S	**Sn**	**21 18 10.0**	**-0.3**
TPR	**Prospect**	**1.71**	**60**	*e*P	**Pn**	**21 17 49.9**	**+1.3**
TPR				*e*S	**Sn**	**21 18 10.0**	**-0.3**
GRW	**Mount Saint Ca**	**1.92**	**19**	*e*P	**Pn**	**21 17 51.6**	**+0.1**
GRW				*e*S	**Sn**	**21 18 15.0**	**-0.4**
GRW	**Mount Saint Ca**	**1.92**	**19**	*e*P	**Pn**	**21 17 51.6**	**+0.1**
GRW				*e*S	**Sn**	**21 18 15.0**	**-0.4**
TOSP	**Speyside**	**1.97**	**61**	*e*S	**Sn**	**21 18 17.6**	**+0.9**
RIOV	**Rio Grande**	**2.29**	**168**	*e*P	**Pn**	**21 17 56.4**	**-0.2**
RIOV				*e*S	**Sn**	**21 18 24.5**	**-0.1**
PCRV	**Puerto La Cruz**	**2.32**	**266**	*e*P	**Pn**	**21 17 57.3**	**+0.3**
PCRV				*e*S	**Sn**	**21 18 25.1**	**-0.1**
GURV	**El Guri**	**2.67**	**197**	*e*P	**Pn**	**21 18 01.4**	**-0.4**
GURV				*e*S	**Sn**	**21 18 32.9**	**-1.0**
CAOV	**Caicara del Or**	**4.98**	**234**	*e*P	**Pn**	**21 18 33.5**	**-0.1**
CAOV				*e*S	**Sn**	**21 19 28.1**	**-2.9**
BAUV	**El Baul**	**5.84**	**257**	*e*P	**Pn**	**21 18 45.1**	**-0.3**
BAUV				*e*S	**Sn**	**21 19 48.2**	**-3.9**

*ISCJB **03** 21:32:14.7±0.5, 24°.07N±0°.04×122°.32E±0°.02, h21km±7km, Error ellipse: s-maj=6.2km s-min=3.2km az=169.0*
*TAP **03** 21:32:15.1, 24°.09N×122°.28E, h23km±1km, ML2.7, C*
*JMA **03** 21:32:17.5±0.3, 24°.34N×122°.39E, h43km*
ISC 03 21:32:14.2±0.8, 24°.06N±0°.04×122°.32E±0°.02, h14km±6km, n22, σ0°69/37, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.64**	**305**	P	**Pg**	**21 32 26.9**	**+0.2**
	baz=312						
ENA				*e*S	**Sg**	**21 32 35.9**	**+0.8**
	baz=312						
TWD	**Chiawan**	**0.66**	**271**	*e*P	**Pg**	**21 32 27.0**	**-0.1**
	baz=269						
TWC	**Suao**	**0.69**	**322**	P	**Pg**	**21 32 27.6**	**-0.1**
	baz=327						
TWC				*e*S	**Sg**	**21 32 36.0**	**-0.8**
	baz=327						
YOJ	**Yonaguni jima**	**0.75**	**58**	P	**Pg**	**21 32 29.4**	**+0.7**
YOJ				*e*S	**Sg**	**21 32 37.8**	**-0.7**
TWE	**Neicheng**	**0.88**	**318**	*e*P	**Pb**	**21 32 31.5**	**+0.2**
	baz=318						
TWE				*e*S	**Sg**	**21 32 43.2**	**+0.3**
	baz=318						
ENTT	**Nioudou**	**0.89**	**310**	*e*P	**Pb**	**21 32 31.8**	**+0.4**
	baz=317						
ENTT				*e*S	**Sg**	**21 32 42.9**	**-0.3**
	baz=317						
NNS	**Nan Shan**	**0.94**	**294**	*e*P	**Pb**	**21 32 32.5**	**+0.3**
	baz=283						
WHF	**Hehuan Shan**	**0.97**	**275**	*e*P	**Pb**	**21 32 32.7**	**0.0**
	baz=262						
WHF				*e*S	**Sb**	**21 32 46.1**	**+0.7**
	baz=262						
NSK	**Sanguang**	**1.07**	**305**	*e*P	**Pb**	**21 32 34.8**	**+0.4**
	baz=289						
NSK				*e*S	**Sb**	**21 32 48.2**	**0.0**
	baz=289						
EHY	**Hungye**	**1.07**	**239**	*e*P	**Pb**	**21 32 35.2**	**+0.7**
	baz=228						
EHY				*e*S	**Sb**	**21 32 47.6**	**-0.7**
	baz=228						
NWF	**Wu-fen Shan**	**1.11**	**334**	*e*P	**Pb**	**21 32 34.4**	**-0.9**
	baz=334						
TWF1	**Yuli**	**1.17**	**233**	*e*P	**Pn**	**21 32 35.2**	**-1.0**
	baz=219						
TWF1				*e*S	**Sb**	**21 32 50.3**	**-1.1**
	baz=219						
SMLT	**Sun Moon Lake**	**1.31**	**262**	*e*P	**Pn**	**21 32 36.9**	**-1.1**
	baz=252						
SMLT				*e*S	**Sb**	**21 32 54.7**	**-0.5**
	baz=252						
IRIF	**Iriomote-Funau**	**1.32**	**78**	P	**Pn**	**21 32 38.6**	**+0.4**
IRIF				*e*S	**Sb**	**21 32 55.4**	**-0.1**
TYC	**Yuchr**	**1.35**	**263**	*e*P	**Pn**	**21 32 36.7**	**-1.9**
	baz=262						
HATJ	**Hateruma jima**	**1.36**	**90**	*e*S	**Sn**	**21 32 57.1**	**+0.5**
ALS	**Alishan**	**1.49**	**249**	*e*P	**Pn**	**21 32 41.2**	**+0.7**
	baz=249						
ALS				*e*S	**Sn**	**21 32 59.8**	**-0.1**
	baz=249						
JKRS	**Kuro-shima**	**1.55**	**83**	P	**Pn**	**21 32 41.8**	**+0.4**
CHN5	**Tsauling**	**1.57**	**253**	*e*P	**Pn**	**21 32 42.4**	**+0.8**
	baz=243						
CHN5				*e*S	**Sn**	**21 33 02.1**	**+0.3**
	baz=243						
JIJ	**Ishigaki jima**	**1.69**	**79**	P	**Pn**	**21 32 43.7**	**+0.4**
JIJ				*e*S	**Sn**	**21 33 03.9**	**-0.9**
WTP	**Ta-pu**	**1.76**	**243**	*e*P	**Pn**	**21 32 43.9**	**-0.4**
	baz=242						
SGST	**Jiashian**	**1.87**	**239**	*e*P	**Pn**	**21 32 46.8**	**+1.0**
	baz=228						
SGST				*e*S	**Sn**	**21 33 10.5**	**+1.3**
	baz=228						

*DDA **03** 21:44:08.0, 40°.43N×28°.86E, h7km±3km, Md2.6*
*ISCJB **03** 21:44:08.3±0.5, 40°.42N±0°.03×28°.84E±0°.04, h4km±7km, Error ellipse: s-maj=6.2km s-min=4.5km az=34.7*
*CSEM **03** 21:44:08.5±0.1, 40°.42N×28°.85E, h8km, MD2.6, Error ellipse: s-maj=2.3km s-min=1.9km az=96.0*
*ISK **03** 21:44:08.3, 40°.42N×28°.86E, h10km, MD2.6*
ISC 03 21:44:08.8±0.5, 40°.43N±0°.03×28°.85E±0°.04, h10km±5km, n25, σ0°37/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARMT	**Armutlu**	**0.14**	**4**	*e*PG	**Pg**	**21 44 12.0**	**0.0**
ARMT	**Armutlu**	**0.14**	**4**	*e*Pg	**Pg**	**21 44 12.0**	**0.0**
GEMT	**Gemlik**	**0.26**	**88**	*e*PG	**Pg**	**21 44 13.9**	**-0.2**
GEMT				*e*SG	**Sg**	**21 44 18.0**	**+0.4**
GEMT	**Gemlik**	**0.26**	**88**	*e*Pg	**Pg**	**21 44 13.9**	**-0.1**
ULDT	**Uludag**	**0.36**	**142**	*i*P	**Pg**	**21 44 15.5**	**-0.3**
ULDT				*i*S	**Sg**	**21 44 20.1**	**-0.5**
ULDT	**Uludag**	**0.36**	**142**	*i*P	**Pg**	**21 44 15.5**	**-0.3**
ULDT				*i*S	**Sg**	**21 44 20.1**	**-0.5**
ADVT	**Abdulvahap**	**0.68**	**89**	*e*PG	**Pg**	**21 44 21.7**	**-0.2**
ADVT	**Abdulvahap**	**0.68**	**89**	*e*Pg	**Pg**	**21 44 21.7**	**-0.2**
ELBA	**Catalca**	**0.79**	**336**	*i*P	**Pg**	**21 44 24.1**	**+0.1**
ELBA				*i*S	**Sg**	**21 44 34.1**	**-0.1**
ELBA	**Catalca**	**0.79**	**336**	*i*P	**Pg**	**21 44 24.1**	**+0.2**
ELBA				*i*S	**Sg**	**21 44 34.1**	**-0.1**
KLYT	**Kilyos**	**0.84**	**10**	*e*PG	**Pg**	**21 44 24.9**	**0.0**
KLYT	**Kilyos**	**0.84**	**10**	*e*Pg	**Pg**	**21 44 24.9**	**0.0**
CTKS	**Kestanelik-??a**	**0.85**	**342**	*e*PG	**Pg**	**21 44 25.3**	**+0.2**
DURS	**Dursunbey**	**0.87**	**199**	*i*P	**Pg**	**21 44 25.4**	**-0.1**
DURS				*i*S	**Sg**	**21 44 37.9**	**+0.9**
DURS	**Dursunbey**	**0.87**	**199**	*i*P	**Pg**	**21 44 25.5**	**-0.1**
DURS				*i*S	**Sg**	**21 44 37.9**	**+1.0**
GONE	**Gonen-Balikesi**	**0.97**	**247**	*e*PG	**Pg**	**21 44 27.4**	**0.0**
BALY	**Balya**	**1.17**	**234**	*i*P	**Pb**	**21 44 30.2**	**-0.8**
BALY				*i*S	**Sb**	**21 44 46.3**	**+0.2**
BALY	**Balya**	**1.17**	**234**	*i*P	**Pb**	**21 44 30.2**	**-0.8**
BALY				*i*S	**Sb**	**21 44 46.3**	**+0.2**
KRBG	**Karabiga-Canak**	**1.18**	**269**	*e*PN	**Pn**	**21 44 31.6**	**+0.2**
GULT	**Gulveren**	**1.27**	**89**	*e*PN	**Pn**	**21 44 32.6**	**0.0**
GULT	**Gulveren**	**1.27**	**89**	*e*Pn	**Pn**	**21 44 32.6**	**0.0**
BORA	**Eskisehir**	**1.35**	**113**	*i*P	**Pn**	**21 44 33.4**	**-0.2**
BORA				*i*S	**Sb**	**21 44 52.0**	**+0.6**
BORA	**Eskisehir**	**1.35**	**113**	*i*P	**Pn**	**21 44 33.4**	**-0.2**
BORA				*i*S	**Sb**	**21 44 52.0**	**+0.7**
DEMI	**Demirci**	**1.39**	**184**	*i*P	**Pn**	**21 44 34.1**	**0.0**
DEMI				*i*S	**Sb**	**21 44 52.1**	**-0.3**
DEMI	**Demirci**	**1.39**	**184**	*i*P	**Pn**	**21 44 34.1**	**0.0**
DEMI				*i*S	**Sb**	**21 44 52.1**	**-0.3**

*LDG **03** 21:46:21.5±0.1, 15°.78S×165°.34E, h10km, Mb4.7/2, Error ellipse: s-maj=26.3km s-min=3.0km az=76.0*
*ISCJB **03** 21:46:22.3±0.4, 15°.84S±0°.04×166°.32E±0°.07, h39km, mb4.5/27, MS3.8/9, Error ellipse: s-maj=9.9km s-min=5.3km az=171.9*
*BJI **03** 21:46:22.2, 15°.17S×166°.58E, h19km, mB5.0/7, mb5.0/13*
*IDC **03** 21:46:24.5±1.1, 15°.78S×166°.29E, h41km±6km, mb4.2/13, mb1 4.2/15, mb1mx4.2/19, mbtmp4.2/15, ML4.6/2, MS3.8/12, Ms1 3.8/12, ms1mx3.6/19, Error ellipse: s-maj=23.9km s-min=17.5km az=119.0*
*NEIC **03** 21:46:24.4±1.0, 15°.79S×166°.33E, h44km±9km, mb4.6/12, Error ellipse: s-maj=7.4km s-min=6.7km az=72.0*
ISC 03 21:46:24.4±0.4, 15°.83S±0°.04×166°.31E±0°.06, h41km, h41km±3.2km: pP-P, n90, σ0°94/60, mb4.5/27, MS3.8/9, 10C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.21**	**179**	*e*Pn	**Pn**	**21 47 52.8**	**-0.8**
	76nm,0.2s						
DZM				*e*Sn	**Sn**	**21 48 58.7**	**-4.6**
	106nm,0.3s						
DZM				*e*LR	LR	21 49 22.5	
	806nm,24.3s						
DZM	**Mont Dzumac**	**6.21**	**179**	*e*Pn	**Pn**	**21 47 52.8**	**-0.7**
DZM				*e*Sn	**Sn**	**21 49 03.7**	**+0.4**
NOUC	**Port Laguerre**	**6.24**	**180**	*e*P	**Pn**	**21 47 53.6**	**-0.4**
NOUC				*e*S	**Sn**	**21 49 01.3**	**-2.7**
BAYA	**Yate Dam**	**6.31**	**175**	*e*P	**Pn**	**21 47 54.5**	**-0.5**
BAYA				*i*Sg	**Sn**	**21 49 04.9**	**-1.0**
HNR	**Honiara**	**8.88**	**315**	P	**Pn**	**21 48 29.8**	**-0.5**
	38nm,0.3s,baz=220,slow=1.5,SNR=8.8						
HNR				S	**Sn**	**21 50 07.4**	**-1.7**
	30nm,0.3s,baz=168,slow=20,SNR=5.4						
HNR				LR	LR	21 51 23.8	
	comp=Z,463nm,20.4s,baz=224,slow=34						
HNR	**Honiara**	**8.88**	**315**	*e*Pn	**Pn**	**21 48 30.5**	**+0.2**
HNR				S	**Sn**	**21 50 07.5**	**-1.7**
HNR				LR	LR	21 51 23.8	
EIDS	**Eidsvold**	**17.11**	**234**	*e*P	**Pn**	**21 50 22.3**	**+1.8**
EIDS	**Eidsvold**	**17.11**	**234**	*e*Pn	**Pn**	**21 50 22.5**	**+2.0**
	6.2nm,0.6s						
RMQ	**Roma**	**19.48**	**234**	*e*P	**Pn**	**21 50 50.7**	**+1.3**
	18nm,1.0s						
CTA	**Charters Tower**	**19.54**	**255**	*e*P	**Pn**	**21 50 50.1**	**0.0**
	8.3nm,0.6s						
CTA	**Charters Tower**	**19.54**	**255**	P	**Pn**	**21 50 49.5**	**-0.7**
	0.4nm,0.3s,baz=89,slow=12,SNR=8.1						
CTA				LR	LR	21 57 12.8	
	comp=Z,282nm,20.3s,baz=45,slow=33						
CTAO	**Charters Tower**	**19.54**	**255**	*e*P	**Pn**	**21 50 49.1**	**-1.0**
	8.3nm,0.6s						
RAO	**Raoul Island**	**19.74**	**135**	LR	LR	21 56 52.0	
	comp=Z,252nm,19.1s,baz=270,slow=32						
AFI	**Afiamalu**	**21.27**	**88**	LR	LR	21 57 22.4	
	comp=Z,122nm,18.2s,MS3.3,baz=96,slow=31						
AFI	**Afiamalu**	**21.27**	**88**	*e*P	**P**	**21 51 07.9**	**+0.5**
URZ	**Urewera**	**24.29**	**159**	P	**P**	**21 51 38.1**	**+0.3**
CMSA	**Cobar Meteorol**	**24.44**	**227**	*e*P	**P**	**21 51 40.5**	**+1.1**
CNB	**Canberra Magne**	**24.63**	**215**	*e*P	**P**	**21 51 42.7**	**+1.7**
STKA	**Stephens Creek**	**27.57**	**230**	*e*P	**P**	**21 52 08.1**	**+0.4**
	3.6nm,0.8s,mb4.0						
STKA	**Stephens Creek**	**27.57**	**230**	P	**P**	**21 52 08.2**	**+0.5**
	2.2nm,0.5s,mb4.1,baz=48,slow=9.2,SNR=15						
STKA				LR	LR	22 02 30.7	
	comp=Z,210nm,21.2s,MS3.7,baz=34,slow=35						
STKA	**Stephens Creek**	**27.57**	**230**	*e*P	**P**	**21 52 08.3**	**+0.6**
	1.4nm,0.9s,mb3.6						
STKA				LR	LR	22 02 30.7	
WRAB	**Tennant Creek**	**30.66**	**258**	*e*P	**P**	**21 52 35.2**	**0.0**
	5.6nm,1.1s,mb4.3						
WRA	**Warramunga Arr**	**30.67**	**258**	P	**P**	**21 52 34.4**	**-0.9**
	0.6nm,0.8s,mb3.5,baz=84,slow=9.4,SNR=5.7						
ASAR	**Alice Springs**	**31.42**	**250**	P	**P**	**21 52 41.6**	**-0.3**
	2.2nm,0.6s,mb4.1,baz=72,slow=9.5,SN

comp=Z,58nm,7.6s
LZH Lanzhou 78.38 313 *e*P **P 21 58 23.0 +2.3**
LZH pP pP 21 58 27.5 -5.7
LZH sP sP 21 58 30.5 -7.3
LZH pmax pmax
comp=Z,20nm,1.0s,mb5.0
LZH pmax pmax
comp=Z,110nm,5.2s
MAW Mawson 80.52 202 P **P 21 58 32.4 +0.5**
comp=Z,3.2nm,1.0s,mb4.2,baz=96,slow=5.9,SNR=4.5
MAW LR LR 22 27 56.2
comp=Z,78nm,20.9s,MS4.0,baz=127,slow=31
ULN Ulaanbaatar 82.48 324 *e*P **P 21 58 42.8 +0.4**
comp=Z,7.1nm,0.9s,mb4.6
GTA Gaotai 82.76 314 ⇑P **P 21 58 45.7 +1.5**
GTA pP pP 21 58 52.6 -4.1
GTA sP sP 21 58 55.9 -5.4
GTA pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
GTA pmax pmax
comp=Z,68nm,3.9s
SONM Songino Array 82.83 324 P **P 21 58 45.2 +0.9**
comp=Z,4.1nm,0.9s,mb4.5,baz=127,slow=6.3,SNR=7.5
SONM pP pP 21 58 57.4 +0.6
comp=Z,3.6nm,0.9s,baz=64,slow=3.4,SNR=3.3
TRF Thorofare Moun 85.87 18 *e*P **P 21 58 58.9 -0.5**
comp=Z,3.3nm,0.6s,mb4.7
MCK McKinley 86.48 18 P **P 21 59 02.1 -0.2**
comp=Z,7.3nm,1.0s,mb4.9
PDAR Pinedale Array 96.37 47 LR LR 22 36 33.9
comp=Z,36nm,18.4s,MS3.9,baz=79,slow=31
MK31 Makanchi Array 97.36 316 *e*P **P 21 59 53.2 -0.2**
MKAR Makanchi Array 97.36 316 P **P 21 59 53.5 +0.2**
comp=Z,1.5nm,0.6s,mb4.6,baz=92,slow=6.4,SNR=17
MKAR pP pP 22 00 05.9 -0.1
comp=Z,0.7nm,0.7s,baz=99,slow=6.3,SNR=5.2
TXAR Lajitas Array 97.62 62 LR LR 22 36 05.5
comp=Z,38nm,18.5s,MS3.9,baz=185,slow=30
ZALV Zalesovo Beam 97.73 324 P **P 21 59 54.2 -0.6**
comp=Z,1.6nm,0.6s,mb4.7,baz=110,slow=4.8,SNR=8.3
ZALV Zalesovo Beam 97.73 324 P **P 21 59 54.2 -0.6**
YKA Yellowknife Ar 98.95 27 P **P 21 59 59.3 -0.8**
comp=Z,0.7nm,0.6s,mb4.4,baz=263,slow=4.6,SNR=5.0
YKA pP pP 22 00 12.2 -0.6
comp=Z,1.9nm,0.7s,baz=255,slow=4.6,SNR=7.9
YKA Yellowknife Ar 98.95 27 P **P 21 59 59.3 -0.8**
YKA pP pP 22 00 12.2 -0.6
TKM2 Tokmak 2 101.11 312 Pdif Pdif 22 00 10.3 +0.2
ARCES ARCESS Array B 121.07 345 PKP PKPdf 22 05 11.5 -0.4
comp=Z,1.6nm,0.8s,baz=104,slow=3.9,SNR=5.9
ARCES ARCESS Array B 121.07 345 PKP PKPdf 22 05 11.5 -0.4
FINES FINESS Array B 126.39 338 PKP PKPdf 22 05 21.8 -0.5
comp=Z,4.0nm,1.0s,baz=151,slow=4.4,SNR=4.5
CABF La Chapelle 145.16 336 *e*PKP1 PKPbc 22 05 58.8 +1.7
LOR Lormes 145.44 339 ⇑*i*PKP1 PKPbc 22 05 58.1 +0.1
comp=Z,18nm,0.8s
LDF La Druitiere 145.48 344 ⇑*i*PKP1 PKPbc 22 05 57.6 -0.5
comp=Z,8.6nm,0.6s
SSF Saint Saulge 145.74 339 ⇑*i*PKP1 PKPbc 22 05 59.2 +0.3
LPL La Plagne 145.79 334 ⇑*i*PKP1 PKPbc 22 05 59.7 +0.6
LPG La Plagne 145.80 334 ⇑*i*PKP1 PKPbc 22 05 59.8 +0.6
comp=Z,13nm,1.0s
GRR Gorron 145.86 345 ⇑*i*PKP1 PKPbc 22 05 59.2 -0.1
comp=Z,37nm,1.0s
AVF Avril sur Loir 146.03 339 ⇑*i*PKP1 PKPbc 22 06 00.2 +0.4
comp=Z,23nm,1.2s
BGF Bois d'Agland 146.40 339 *e*PKP1 PKPbc 22 06 00.8 -0.1
MBDF Montbardon 146.40 333 *e*PKP1 PKPbc 22 06 00.7 -0.3
comp=Z,12nm,1.0s
ORIF Oris-en-Rattie 146.63 334 *e*PKP1 PKPbc 22 06 01.8 +0.1
comp=Z,18nm,0.9s
SBF Sospel 146.78 332 *e*PKP1 PKPbc 22 06 01.7 -0.5
TCF Toulx Ste Croi 146.85 340 ⇑*i*PKP1 PKPbc 22 06 01.4 -0.9
VIVF Saint-Julien-l 147.17 336 *e*PKP1 PKPbc 22 06 04.9 +1.7
MFF Saint Martin d 147.31 343 *e*PKP1 PKPbc 22 06 03.3 -0.2
FRF La Foret Royal 147.38 332 ⇑*i*PKP1 PKPbc 22 06 03.4 -0.4
comp=Z,24nm,1.1s
SMRF Simiane la Rot 147.52 334 *e*PKP1 PKPbc 22 06 04.3 +0.1
comp=Z,36nm,1.2s
LMR La Mourre 147.62 332 *e*PKP1 PKPbc 22 06 03.5 -1.0
RJF Les Rejaudoux 147.95 340 *e*PKP1 PKPbc 22 06 05.3 0.0
LFF La Frestale 148.53 340 *e*PKP1 PKPbc 22 06 06.8 -0.1
comp=Z,57nm,1.4s
MTLF Montolieu 149.40 337 *e*PKP1 PKPbc 22 06 09.1 0.0
comp=Z,14nm,0.9s
EPF Esparros 150.35 339 *e*PKP1 PKPbc 22 06 11.7 +0.3
comp=Z,11nm,1.0s
ETSF Etsaut 150.77 340 *e*PKP1 PKPbc 22 06 13.0 +0.6
comp=Z,3.5nm,0.5s
SJPF Ste Jean 150.79 341 *e*PKP1 PKPbc 22 06 12.4 -0.1
comp=Z,73nm,1.5s
KEST Kesra 151.44 318 PKPbc PKPbc 22 06 13.7 -0.5
comp=Z,1.9nm,0.9s,baz=312,slow=6.4,SNR=4.5
ESDC Sonseca Array 154.77 342 PKPab PKPab 22 06 35.8 -0.6
comp=Z,0.8nm,0.7s,baz=20,slow=2.8,SNR=4.3

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*ISCJB **03** 21:52:49.5±1.5, 22°.59S±0°.09×177°.7W±0°.2, h267km±19km, mb3.9/9, Error ellipse: s-maj=26.0km s-min=11.7km az=24.7*
*IDC **03** 21:52:50.2±3.2, 22°.63S×177°.59W, h262km±30km, mb3.5/5, mb1 3.7/7, mb1mx3.4/18, mbtmp3.6/7, Error ellipse: s-maj=42.9km s-min=18.9km az=140.0*
*NEIC **03** 21:52:53.1±1.7, 22°.73S×177°.46W, h302km±15km, mb4.2/7, Error ellipse: s-maj=22.6km s-min=13.8km az=125.0*
ISC 03 21:52:50.1±1.5, 22°.59S±0°.09×177°.7W±0°.2, h258km±19km, n30, σ0°.79/24, mb3.9/9, 1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.27**	**320**	*e*P	**Pn**	**21 54 31.6**	**+10**
	13nm,0.7s						
RAO	**Raoul Island**	**6.64**	**182**	S	**S**	**21 55 43.7**	**+0.3**
	50nm,0.3s,baz=135,slow=19,SNR=3.3						
AFI	**Afiamalu**	**10.30**	**34**	P	**Pn**	**21 55 12.1**	**-0.3**
	4.0nm,0.3s,baz=220,slow=16,SNR=2.5						
AFI				S	**S**	**21 57 00.6**	**-7.6**
	3.3nm,0.3s,baz=180,slow=20,SNR=2.9						
URZ	**Urewera**	**16.24**	**195**	P	**P**	**21 56 22.4**	**-0.6**
	1.3nm,0.3s,baz=145,slow=13,SNR=7.7						
URZ				S	**S**	**21 59 11.6**	**-8.3**
	0.5nm,0.3s,baz=344,slow=20,SNR=3.5						
URZ	**Urewera**	**16.24**	**195**	*e*P	**P**	**21 56 23.5**	**+0.5**
	4.3nm,0.4s						
URZ				S	**S**	**21 59 11.6**	**-8.3**
EIDS	**Eidsvold**	**28.63**	**258**	*e*P	**P**	**21 58 22.8**	**-0.2**
CTA	**Charters Tower**	**33.62**	**267**	P	**P**	**21 59 08.2**	**+1.5**
	2.6nm,0.5s,mb4.0,baz=67,slow=10.0,SNR=6.6						
CTAO	**Charters Tower**	**33.62**	**267**	*e*P	**P**	**21 59 07.9**	**+1.2**
	2.3nm,0.5s,mb4.0						
MCQ	**Macquarie Isla**	**36.37**	**203**	P	**P**	**21 59 29.3**	**-0.4**
STKA	**Stephens Creek**	**37.18**	**247**	P	**P**	**21 59 38.6**	**+1.9**
	2.6nm,0.9s,mb3.6,baz=86,slow=9.3,SNR=2.9						
STKA	**Stephens Creek**	**37.18**	**247**	*e*P	**P**	**21 59 36.6**	**-0.2**
ASAR	**Alice Springs**	**44.35**	**259**	P	**P**	**22 00 35.3**	**0.0**
	1.6nm,0.7s,mb3.4,baz=103,slow=7.0,SNR=16						
WRAB	**Tennant Creek**	**44.62**	**264**	*e*P	**P**	**22 00 37.0**	**-0.5**
WRA	**Warramunga Arr**	**44.63**	**264**	P	**P**	**22 00 36.9**	**-0.6**
	0.8nm,0.4s,mb3.3,baz=95,slow=8.2,SNR=42						
FITZ	**Fitzroy Crossi**	**53.06**	**264**	*e*P	**P**	**22 01 39.3**	**-2.1**
	9.6nm,1.3s,mb4.0						
CASY	**Casey**	**62.21**	**206**	*e*P	**P**	**22 02 43.8**	**-0.3**
	5.2nm,0.6s,mb4.3						
MAJO	**Matsushiro**	**72.06**	**324**	*e*P	**P**	**22 03 46.2**	**+0.1**
	1.8nm,0.4s,mb4.0						
PETK	**Petropavlovsk-**	**78.35**	**345**	P	**P**	**22 04 22.1**	**+0.5**
	1.3nm,0.5s,mb3.9,baz=148,slow=8.4,SNR=3.5						
KULM	**Kulim**	**84.34**	**278**	P	**P**	**22 04 55.1**	**+1.2**
TRF	**Thorofare Moun**	**88.42**	**12**	*e*P	**P**	**22 05 12.8**	**+0.4**
	8.2nm,0.7s,mb4.7						
MCK	**McKinley**	**88.94**	**12**	*e*P	**P**	**22 05 14.5**	**-0.3**
MKAR	**Makanchi Array**	**112.82**	**313**	PKiKP	PKiKP	22 10 54.8	-1.3
	0.1nm,0.4s,baz=270,slow=0.4,SNR=4.4						
ARCES	**ARCESS Array B**	**131.02**	**349**	PKP	PKPdf	22 11 29.8	-0.4
	1.2nm,0.5s,baz=11,slow=2.5,SNR=8.5						
ARCES	**ARCESS Array B**	**131.02**	**349**	PKP	PKPdf	22 11 29.8	-0.4
FINES	**FINESS Array B**	**137.85**	**343**	PKhKP		22 11 39.5	
	1.1nm,0.8s,baz=11,slow=1.9,SNR=3.8						
FINES				PKP	PKPdf	22 11 42.9	-0.3
	1.2nm,0.8s,baz=19,slow=5.9,SNR=3.7						
AKASG	**Malin Array Be**	**144.96**	**330**	PKPbc	PKPdf	22 11 55.0	-1.2
	1.0nm,0.4s,baz=42,slow=4.5,SNR=5.2						
BRTR	**Keskin Array B**	**148.42**	**310**	PKPbc	PKPbc	22 12 05.5	-0.8
	0.8nm,0.6s,baz=119,slow=3.9,SNR=4.5						
MMAI	**Mount Meron Ar**	**149.05**	**297**	PKPbc	PKPbc	22 12 08.3	+0.2
	1.1nm,0.4s,baz=67,slow=7.3,SNR=6.4						
CLL	**Collm**	**150.15**	**346**	⇓*i*PKPbc	PKPbc	22 12 10.3	+0.2
	comp=Z,6.0nm,0.8s						
BRG	**Berggiesshubel**	**150.34**	**345**	*i* P	PKPbc	22 12 11.0	+0.5
	comp=Z,3.8nm,0.7s						

GUC 03 21:57:01.0±0.7, 38°.77S×73°.56W, h50km, ML3.5, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TMU	**Temuco**	**0.75**	**88**	*i* P	Pn	21 57 21.8	+6.5
TMU				*e*S	Sn	21 57 33.3	+7.5
TMU				AML	AML	21 57 35.8	
	comp=N,562nm,0.2s						
CCHI	**Chillan**	**2.46**	**29**	*e*P	Pn	21 57 38.9	+0.3
CCHI				*e*S	Sn	21 58 07.8	+0.4
CCHI				AML	AML	21 58 21.0	
	comp=N,1μm,0.4s						
COCH	**Cobquecura**	**2.70**	**13**	*e*P	Pn	21 57 42.5	+0.6
COCH				*e*S	Sn	21 58 14.2	+0.8
CACH	**El Canelo**	**5.22**	**28**	*e*P	Pn	21 58 17.1	+0.7
CHCH	**Chadas Angostu**	**5.36**	**27**	*e*P	Pn	21 58 18.9	+0.5
LMEL	**Las Melosas**	**5.61**	**30**	*e*P	Pn	21 58 23.2	+1.4
LMEL				*e*S	Sn	21 59 24.5	-0.3

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*ISCJB **03** 22:00:04.2±0.7, 50°.33N±0°.04×18°.86E±0°.03, h0km, Error ellipse: s-maj=6.3km s-min=2.7km az=14.3*
*IPEC **03** 22:00:04.6±0.1, 50°.29N×19°.00E, h0km, ML1.5/3, Error ellipse: s-maj=1.6km s-min=0.7km az=175.0*
*CSEM **03** 22:00:04.6±0.5, 50°.40N×18°.92E, h2km, ML2.5/6, Error ellipse: s-maj=10.7km s-min=4.2km az=8.0*
*PRU **03** 22:00:05.5, 50°.37N×18°.90E, h0km*
ISC 03 22:00:05.2±0.6, 50°.34N±0°.04×18°.91E±0°.03, h0km, n29, σ1°.27/49, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.58**	**101**	*e*Pg	**Pg**	**22 00 13.6**	**-2.7**
	baz=278						
OJC				*e*Sg	**Sg**	**22 00 21.3**	**-2.6**
	baz=278						
OKC	**Ostrava-Krasne**	**0.70**	**225**	*e*PG	**Pg**	**22 00 19.5**	**+0.9**
OKC				*e*SG	**Sg**	**22 00 29.8**	**+2.1**
	comp=Z,27nm,1.1s						
OKC	**Ostrava-Krasne**	**0.70**	**225**	*e*Pg	**Pg**	**22 00 19.0**	**+0.4**
	baz=50						
OKC				Sg	**Sg**	**22 00 29.8**	**+2.1**
	comp=Z,27nm,1.1s						
MORC	**Moravsky Berou**	**1.04**	**238**	*e*Pg	**Pg**	**22 00 25.2**	**0.0**
	baz=61						
MORC				*e*Sg	**Sg**	**22 00 39.1**	**+0.4**
	comp=Z,7.3nm,0.3s,baz=61						
NIE	**Niedzica**	**1.29**	**135**	*e*Pg	**Pg**	**22 00 30.1**	**+0.2**
NIE				*e*Sg	**Sg**	**22 00 47.7**	**+1.1**
NIE	**Niedzica**	**1.29**	**135**	*e*PG	**Pg**	**22 00 30.1**	**+0.2**
NIE				*e*Sg	**Sg**	**22 00 47.7**	**+1.1**
DPC	**Dobruska-Polom**	**1.66**	**271**	*e*PG	**Pg**	**22 00 34.9**	**-2.1**
DPC				*e*SG	**Sg**	**22 00 57.9**	**-0.5**
	comp=Z,6.0nm,0.6s						
DPC	**Dobruska-Polom**	**1.66**	**271**	Pg	**Pg**	**22 00 34.9**	**-2.1**
DPC	**Dobruska-Polom**	**1.66**	**271**	*e*Pn	**Pn**	**22 00 35.9**	**+0.4**
	baz=91						
DPC				Sg	**Sg**	**22 00 57.9**	**-0.5**
	comp=Z,6.0nm,0.6s						
KSP	**Ksiaz**	**1.74**	**288**	*e*Pg	**Pg**	**22 00 39.7**	**+1.1**
KSP				*e*Sg	**Sg**	**22 01 01.8**	**+0.6**
STHS	**Stebnicka Huta**	**1.77**	**120**	*e*PN	**Pn**	**22 00 39.3**	**+2.3**
STHS				*e*SN	**Sn**	**22 01 00.5**	**+0.3**
STHS	**Stebnicka Huta**	**1.77**	**120**	*e*Pn	**Pn**	**22 00 39.3**	**+2.3**
STHS				*e*Sn	**Sn**	**22 01 00.5**	**+0.3**
KOLL	**Kolacno**	**1.79**	**191**	*e*PN	**Pn**	**22 00 39.1**	**+1.8**
KOLL				*e*SN	**Sn**	**22 01 01.8**	**+1.1**
KOLL	**Kolacno**	**1.79**	**191**	*e*Pn	**Pn**	**22 00 39.1**	**+1.8**
KOLL				*e*Sn	**Sn**	**22 01 01.8**	**+1.1**
VRAC	**Vranov**	**1.82**	**236**	*e*Pn	**Pn**	**22 00 38.2**	**+0.5**
	baz=57						
VRAC				*e*Sg	**Sg**	**22 01 01.9**	**-1.7**
	comp=Z,4.8nm,0.3s,baz=57						
VYHS	**Vyhne**	**1.84**	**182**	*e*PN	**Pn**	**22 00 38.0**	**-0.1**
VYHS				*e*SN	**Sn**	**22 01 00.3**	**-1.8**
VYHS	**Vyhne**	**1.84**	**182**	*e*Pn	**Pn**	**22 00 37.2**	**-0.9**
	baz=3.4						
VYHS				*e*Sn	**Sn**	**22 01 00.3**	**-1.8**
KRUC	**Moravsky**	**2.07**	**233**	*e*Pn	**Pn**	**22 00 41.6**	**+0.4**
	baz=53						
KRUC				*e*Sg	**Sg**	**22 01 10.6**	**-1.1**
	comp=Z,2.3nm,0.2s,baz=53						
KECS	**Kecovo**	**2.12**	**150**	*e*PN	**Pn**	**22 00 43.0**	**+1.1**
KECS				*e*SN	**Sn**	**22 01 07.1**	**-1.8**
CRVS	**Cervenica-Dubn**	**2.19**	**130**	*e*PN	**Pn**	**22 00 45.1**	**+2.2**
CRVS				*e*SN	**Sn**	**22 01 09.1**	**-1.6**
CRVS	**Cervenica-Dubn**	**2.19**	**130**	*e*Pn	**Pn**	**22 00 45.1**	**+2.2**
CRVS				*e*Sn	**Sn**	**22 01 09.1**	**-1.6**
PVCC	**Panska Ves**	**2.78**	**276**	*e*SG	**Sg**	**22 01 34.5**	**0.0**
PVCC	**Panska Ves**	**2.78**	**276**	Sg	**Sg**	**22 01 34.5**	**0.0**
PRU	**Pruhonice**	**2.83**	**265**	*e*SG	**Sg**	**22 01 35.1**	**-1.0**
PRU	**Pruhonice**	**2.83**	**265**	Sg	**Sg**	**22 01 35.1**	**-1.0**
KHC	**Kasperske Hory**	**3.66**	**253**	*e*SG	**Sg**	**22 02 02.8**	**0.0**
	comp=Z,2.6nm,0.4s						
KHC	**Kasperske Hory**	**3.66**	**253**	Sg	**Sg**	**22 02 02.8**	**0.0**
	comp=Z,2.6nm,0.4s						
NKC	**Novy Kostel**	**4.14**	**271**	*e*SG	**Sg**	**22 02 17.8**	**-0.5**
NKC	**Novy Kostel**	**4.14**	**271**	Sg	**Sg**	**22 02 17.8**	**-0.5**

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*ISCJB **03** 22:00:23.9±0.5, 38°.01N±0°.04×21°.61E±0°.03, h29km±4km, Error ellipse: s-maj=6.5km s-min=4.5km az=175.0*
*ATH **03** 22:00:23.1, 37°.99N×21°.59E, h26km±2km, MD3.0/5*
*CSEM **03** 22:00:23.7±0.1, 38°.01N×21°.61E, h26km±2km, MD3.0, Error ellipse: s-maj=4.0km s-min=2.6km az=172.0*
*THE **03** 22:00:24.2, 38°.02N×21°.61E, h25km±1km, ML2.7/6, Error ellipse: s-maj=1.2km s-min=0.5km az=18.0*
ISC 03 22:00:23.9±0.5, 38°.00N±0°.04×21°.61E±0°.03, h26km±6km, n27, σ0°.65/46, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.12**	**297**	*e*PB	**Pb**	**22 00 28.3**	**-0.7**
RLS				*e*SB	**Sb**	**22 00 31.7**	**-0.6**
RLS	**Riolos of Patr**	**0.12**	**297**	*e*Pb	**Pb**	**22 00 28.3**	**-0.7**
UPR	**University Cam**	**0.32**	**27**	P	**Pb**	**22 00 31.1**	**-0.2**
UPR				S	**Sb**	**22 00 36.8**	**+0.5**
UPR	**University Cam**	**0.32**	**27**	P	**Pb**	**22 00 31.1**	**-0.2**
UPR				S	**Sb**	**22 00 36.8**	**+0.5**
LAKA	**Lakka**	**0.38**	**51**	P	**Pb**	**22 00 31.9**	**-0.3**
LAKA				S	**Sb**	**22 00 38.0**	**+0.1**
LAKA	**Lakka**	**0.38**	**51**	P	**Pb**	**22 00 31.9**	**-0.3**
LAKA				S	**Sb**	**22 00 38.0**	**+0.1**
EFP	**Efpalio**	**0.49**	**29**	*e*PN	**Pb**	**22 00 33.5**	**-0.5**
EFP				*e*SN	**Sb**	**22 00 41.4**	**+0.6**
EFP	**Efpalio**	**0.49**	**29**	P	**Pb**	**22 00 33.5**	**-0.5**
EFP				S	**Sb**	**22 00 41.3**	**+0.5**
EFP	**Efpalio**	**0.49**	**29**	P	**Pb**	**22 00 33.5**	**-0.5**
EFP				S	**Sb**	**22 00 41.3**	**+0.5**
KALE	**Kalithea**	**0.57**	**47**	P	**Pb**	**22 00 35.0**	**-0.4**
KALE				S	**Sb**	**22 00 43.4**	**+0.2**
KALE	**Kalithea**	**0.57**	**47**	P	**Pb**	**22 00 35.0**	**-0.4**
KALE				S	**Sb**	**22 00 43.4**	**+0.2**
GUR	**Goura**	**0.58**	**96**	*e*PN	**Pn**	**22 00 35.0**	**-1.5**
GUR	**Goura**	**0.58**	**96**	P	**Pb**	**22 00 35.1**	**-0.5**
GUR				S	**Sb**	**22 00 44.2**	**+0.7**
GUR	**Goura**	**0.58**	**96**	P	**Pb**	**22 00 35.1**	**-0.5**
GUR				S	**Sb**	**22 00 44.2**	**+0.7**
KFL	**Anninata**	**0.66**	**280**	P	**Pb**	**22 00 36.8**	**+0.1**
KFL	**Anninata**	**0.66**	**280**	P	**Pb**	**22 00 36.8**	**+0.1**
VLS	**Valsamata**	**0.82**	**283**	*e*PN	**Pb**	**22 00 38.8**	**-0.7**
VLS				*e*SN	**Sn**	**22 00 51.7**	**+0.7**
VLS	**Valsamata**	**0.82**	**283**	P	**Pb**	**22 00 38.8**	**-0.7**
VLS				S	**Sb**	**22 00 51.6**	**+1.4**
VLS	**Valsamata**	**0.82**	**283**	P	**Pb**	**22 00 38.8**	**-0.7**
VLS				S	**Sb**	**22 00 51.6**	**+1.4**
DSF	**Desfina**	**0.83**	**60**	P	**Pb**	**22 00 39.4**	**-0.3**
DSF				S	**Sb**	**22 00 51.1**	**+0.5**
DSF	**Desfina**	**0.83**	**60**	P	**Pb**	**22 00 39.4**	**-0.3**
DSF				S	**Sb**	**22 00 51.1**	**+0.5**
ITM	**Ithomi**	**0.86**	**163**	*e*PN	**Pn**	**22 00 39.9**	**-0.3**
ITM	**Ithomi**	**0.86**	**163**	P	**Pb**	**22 00 40.3**	**+0.1**
ITM	**Ithomi**	**0.86**	**163**	*e*Pn	**Pn**	**22 00 39.9**	**-0.3**
ITM	**Ithomi**	**0.86**	**163**	P	**Pb**	**22 00 40.3**	**+0.1**
VLX	**Vlachokerasia**	**0.88**	**135**	P	**Pb**	**22 00 40.4**	**-0.1**
VLX				S	**Sb**	**22 00 53.1**	**+1.3**
VLX	**Vlachokerasia**	**0.88**	**135**	P	**Pb**	**22 00 40.4**	**-0.1**
VLX				S	**Sb**	**22 00 53.1**	**+1.3**

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*ISCJB **03** 22:31:17.9±0.5, 6°.46N±0°.07×60°.29E±0°.09, h10km, mb3.9/19, MS3.7/11, Error ellipse: s-maj=13.9km s-min=9.3km az=23.0*
*IDC **03** 22:31:18.1±0.9, 6°.46N×60°.29E, h0km, mb3.9/13, mb1 4.0/13, mb1mx3.9/23, mbtmp3.9/13, MS3.7/12, Ms1 3.7/12, ms1mx3.4/34, Error ellipse: s-maj=24.5km s-min=19.1km az=32.0*
*NEIC **03** 22:31:19.9±0.4, 6°.49N×60°.27E, h10km, mb4.1/8, Error ellipse: s-maj=11.9km s-min=8.2km az=115.0*
ISC 03 22:31:20.0±0.5, 6°.48N±0°.07×60°.28E±0°.09, h10km, n38, σ0°.89/28, mb3.9/19, MS3.7/11, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSEY	**Mahe Island**	**12.07**	**203**	*e*Pn	**Pn**	**22 34 12.9**	**+0.6**
ATD	**Arta Tunnel**	**17.93**	**287**	LR	LR	22 41 05.2	
	comp=Z,156nm,21.5s,baz=94,slow=33						
PALK	**Pallekele**	**20.29**	**87**	*e*P	**P**	**22 35 56.2**	**0.0**
	8.1nm,0.9s						
KMBO	**Kilima Mbogo**	**24.20**	**253**	P	**P**	**22 36 38.4**	**+1.4**
	1.5nm,0.7s,mb3.5,baz=180,slow=20,SNR=5.3						
KMBO				LR	LR	22 45 00.7	
	comp=Z,177nm,20.5s,MS3.5,baz=90,slow=34						
KMBO	**Kilima Mbogo**	**24.20**	**253**	*e*P	**P**	**22 36 38.3**	**+1.4**
	2.0nm,0.7s,mb3.7						
KMBO				LR	LR	22 45 00.7	
ABPO	**Ambohimpanom**	**28.42**	**207**	*e*P	**P**	**22 37 14.4**	**-0.5**
	5.0nm,0.9s,mb4.1						
KBL	**Kabul**	**29.07**	**15**	*e*P	**P**	**22 37 22.6**	**+2.0**
	1.7nm,0.7s,mb3.9						
EIL	**Elat**	**33.18**	**317**	LR	LR	22 51 18.8	
	comp=Z,77nm,18.1s,MS3.5,baz=100,slow=36						
ASF	**Jabal al Asfar**	**33.60**	**323**	LR	LR	22 51 29.6	
	comp=Z,75nm,18.3s,MS3.5,baz=69,slow=36						
MMAI	**Mount Meron Ar**	**35.09**	**322**	LR	LR	22 52 28.0	
	comp=Z,68nm,19.3s,MS3.4,baz=140,slow=36						
EKS2	**Erkin-Say**	**37.96**	**16**	*e*P	**P**	**22 38 38.0**	**+0.2**
	11nm,1.0s,mb4.5						
AAK	**Ala-Archa**	**38.13**	**17**	LR	LR	22 55 53.9	
	comp=Z,86nm,18.4s,MS3.6,baz=192,slow=39						
PSI	**Prapat**	**38.68**	**94**	LR	LR	22 51 11.3	
	comp=Z,206nm,19.1s,MS4.0,baz=18,slow=31						
TKM2	**Tokmak 2**	**38.73**	**18**	*e*P	**P**	**22 38 44.3**	**0.0**
	1.3nm,0.6s,mb3.8						
CMAR	**Chiang Mai Arr**	**39.49**	**69**	P	**P**	**22 38 52.0**	**+0.9**
	0.6nm,0.4s,mb3.7,baz=264,slow=9.9,SNR=6.2						
CMAR				LR	LR	22 53 32.3	
	comp=Z,91nm,18.2s,MS3.6,baz=331,slow=34						
BRTR	**Keskin Array B**	**40.85**	**328**	P	**P**	**22 39 03.1**	**+1.1**
	1.1nm,0.9s,mb3.5,baz=146,slow=9.0,SNR=5.8						
ABKAR	**Akbulak array**	**42.62**	**360**	*e*P	**P**	**22 39 16.6**	**+0.2**
	2.2nm,0.9s,mb3.9						
AKTK	**Aktyubinsk**	**43.85**	**358**	P	**P**	**22 39 26.6**	**+0.4**
AKTO	**Aktyubinsk**	**43.85**	**358**	P	**P**	**22 39 26.6**	**+0.4**
	0.8nm,0.4s,mb3.8,baz=199,slow=14,SNR=3.1						
MKAR	**Makanchi Array**	**44.40**	**22**	P	**P**	**22 39 31.0**	**+0.3**
	0.7nm,0.8s,mb3.4,baz=207,slow=7.6,SNR=5.5						
MKAR				LR	LR	22 58 23.0	
	comp=Z,53nm,20.5s,MS3.5,baz=194,slow=37						
MKAR	**Makanchi Array**	**44.40**	**22**	P	**P**	**22 39 31.0**	**+0.3**
MKAR				LR	LR	22 58 23.0	
KURK	**Kurchatov**	**46.67**	**16**	P	**P**	**22 39 48.3**	**-0.3**
	0.6nm,0.4s,mb3.9,baz=214,slow=8.2,SNR=4.1						
KURK	**Kurchatov**	**46.67**	**16**	*e*P	**P**	**22 39 48.7**	**0.0**
	4.6nm,1.1s,mb4.3						
BOSA	**Boshof**	**48.55**	**222**	LR	LR	22 57 42.1	
	comp=Z,157nm,18.7s,MS4.0,baz=252,slow=33						
BOSA	**Boshof**	**48.55**	**222**	P	**P**	**22 40 03.4**	**-0.2**
AKASG	**Malin Array Be**	**51.10**	**335**	P	**P**	**22 40 20.8**	**-2.0**
	0.2nm,0.3s,mb3.6,baz=139,slow=6.7,SNR=3.0						
ZALV	**Zalesovo Beam**	**51.33**	**18**	P	**P**	**22 40 23.9**	**-0.5**
	2.3nm,0.9s,mb4.1,baz=228,slow=1.8,SNR=7.8						
SONM	**Songino Array**	**56.84**	**35**	P	**P**	**22 41 04.6**	**-0.1**
	0.8nm,0.5s,mb4.0,baz=269,slow=6.7,SNR=3.8						
FINES	**FINESS Array B**	**60.44**	**342**	P	**P**	**22 41 28.8**	**-0.8**
	1.1nm,0.8s,mb3.9,baz=160,slow=8.6,SNR=3.3						
FINES	**FINESS Array B**	**60.44**	**342**	P	**P**	**22 41 28.8**	**-0.8**
DBIC	**Dimbokro**	**64.66**	**274**	LR	LR	23 11 22.6	
	comp=Z,84nm,19.1s,MS4.0,baz=95,slow=37						
NOA	**NORSAR Array B**	**65.49**	**336**	P	**P**	**22 42 00.9**	**-2.2**
	0.9nm,0.9s,mb3.8,baz=122,slow=7.0,SNR=3.2						
ESDC	**Sonseca Array**

CHCH			*e*S	Sn	22 47 14.8	+2.4
PEL	**Peldehue**	**2.10 287**	⇑*i*P	Pn	22 46 51.4	+1.4
PEL			*e*S	Sn	22 47 18.1	+2.6
PEL			AML	AML	22 47 21.3	
	comp=N,150nm,0.6s					

ISCJB ***03*** *23:04:49.5±0.4, 32°.40S±0°.03×71°.41W±0°.06, h59km±5km, mb4.1/9, Error ellipse: s-maj=8.8km s-min=4.9km az=177.5*
IDC ***03*** *23:04:49.4±0.8, 32°.37S×71°.37W, h47km±6km, mb3.8/5, mb1 3.8/7, mb1mx3.8/13, mbtmp3.6/7, Error ellipse: s-maj=37.7km s-min=21.3km az=70.0*
GUC ***03*** *23:04:50.8±0.6, 32°.48S×71°.39W, h42km±1km, MD4.0, ML4.0*
NEIC ***03*** *23:04:50.8, 32°.48S×71°.39W, h42km, mb4.3/5, MD4.0(GUC), After GUC.*
NEIC Felt [III] at La Ligua and Papudo; [II] at La Calera and Puchuncavi.
ISC 03 23:04:50.5±0.5, 32°.41S±0°.03×71°.41W±0°.06, h51km±5km, n48, σ0°85/61, mb4.1/9, 9C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHA	**Instituto Hidr**	**0.65**	**198**	⇓*i*P	**Pn**	**23 05 02.5**	**-1.1**
IHA				*i*S	**Sn**	**23 05 11.8**	**-1.2**
IHA	**Instituto Hidr**	**0.65**	**198**	⇓*i*P	**Pn**	**23 05 02.5**	**-1.1**
IHA				*i*S	**Sn**	**23 05 11.8**	**-1.2**
ROCH	**El Roble**	**0.65**	**149**	⇑*i*P	**Pn**	**23 05 03.4**	**-0.3**
ROCH				*i*S	**Sn**	**23 05 12.8**	**-0.4**
ROCH	**El Roble**	**0.65**	**149**	⇑*i*P	**Pn**	**23 05 03.4**	**-0.3**
ROCH				*i*S	**Sn**	**23 05 12.8**	**-0.4**
JACH	**Jahuel**	**0.74**	**112**	⇑*i*P	**Pn**	**23 05 04.8**	**0.0**
JACH				*i*S	**Sn**	**23 05 15.3**	**+0.2**
JACH	**Jahuel**	**0.74**	**112**	⇑*i*P	**Pn**	**23 05 04.8**	**0.0**
JACH				*i*S	**Sn**	**23 05 15.3**	**+0.2**
PEL	**Peldehue**	**0.95**	**140**	⇑*i*P	**Pn**	**23 05 07.6**	**+0.1**
PEL				*i*S	**Sn**	**23 05 19.7**	**-0.4**
PEL				AML	AML	23 05 22.2	
	comp=E,8μm,0.2s						
CLCH	**Cerro Calan**	**1.23**	**144**	AML	AML	23 05 29.4	
	comp=E,3μm,0.3s						
CMCH	**Combarbala**	**1.28**	**16**	*i*P	**Pn**	**23 05 11.5**	**-0.5**
CMCH				*i*S	**Sn**	**23 05 29.1**	**+1.0**
CMCH	**Combarbala**	**1.28**	**16**	*i*P	**Pn**	**23 05 11.5**	**-0.5**
CMCH				*i*S	**Sn**	**23 05 29.1**	**+1.0**
CMCH				AML	AML	23 05 31.8	
	comp=N,8μm,0.7s						
TACH	**Talagante**	**1.30**	**163**	*i*P	**Pn**	**23 05 12.4**	**+0.1**
TACH				*i*S	**Sn**	**23 05 29.1**	**+0.6**
TACH	**Talagante**	**1.30**	**163**	*i*P	**Pn**	**23 05 12.4**	**+0.1**
TACH				*i*S	**Sn**	**23 05 29.1**	**+0.6**
FCH	**Farellones**	**1.31**	**135**	AML	AML	23 05 28.6	
	comp=N,3μm,0.3s						
ANTU	**Antumapu**	**1.33**	**151**	AML	AML	23 05 31.2	
	comp=N,4μm,0.2s						
PCH	**Pirque**	**1.42**	**148**	⇑*i*P	**Pn**	**23 05 14.0**	**+0.1**
PCH				*i*S	**Sn**	**23 05 31.8**	**+0.3**
PCH	**Pirque**	**1.42**	**148**	⇑*i*P	**Pn**	**23 05 14.0**	**+0.1**
PCH				*i*S	**Sn**	**23 05 31.8**	**+0.3**
LMEL	**Las Melosas**	**1.75**	**145**	⇓*i*P	**Pn**	**23 05 19.2**	**+0.8**
LMEL				*i*S	**Sn**	**23 05 40.4**	**+0.8**
LMEL	**Las Melosas**	**1.75**	**145**	⇓*i*P	**Pn**	**23 05 19.2**	**+0.8**
LMEL				*i*S	**Sn**	**23 05 40.4**	**+0.8**
LMEL				AML	AML	23 05 43.3	
	comp=N,4μm,0.2s						
CACH	**El Canelo**	**1.83**	**159**	⇑*i*P	**Pn**	**23 05 20.7**	**+1.2**
CACH				*i*S	**Sn**	**23 05 43.2**	**+1.7**
CACH	**El Canelo**	**1.83**	**159**	⇑*i*P	**Pn**	**23 05 20.7**	**+1.2**
CACH				*i*S	**Sn**	**23 05 43.2**	**+1.7**
LCO	**Las Campanas**	**3.44**	**10**	*e*Pn	**Pn**	**23 05 40.4**	**-1.2**
LCO				*e*Sn	**Sn**	**23 06 21.6**	**+0.5**
PLCA	**Paso Flores**	**8.34**	**176**	P	**Pn**	**23 06 49.1**	**+0.5**
	comp=N,0.1nm,0.3s,baz=347,slow=15,SNR=2.7						
PLCA	**Paso Flores**	**8.34**	**176**	*e*Pn	**Pn**	**23 06 46.6**	**-2.0**
TRQA	**Tornquist**	**9.55**	**129**	*e*Pn	**Pn**	**23 07 04.0**	**-1.2**
TRQA				Sn	**Sn**	**23 08 41.0**	**-10**
CPUP	**Villa Florida**	**13.68**	**67**	P	**Pn**	**23 08 03.5**	**+1.7**
	comp=N,0.2nm,0.3s,baz=215,slow=16,SNR=2.0						
CPUP	**Villa Florida**	**13.68**	**67**	*e*Pn	**Pn**	**23 08 02.4**	**+0.7**
CPUP				*e*Sn	**Sn**	**23 10 30.5**	**-1.8**
LPAZ	**La Paz**	**16.32**	**11**	P	**Pn**	**23 08 36.0**	**-0.3**
	comp=N,0.1nm,0.3s,baz=201,slow=6.1,SNR=3.9						
LPAZ				sP	sP	23 08 52.9	-3.4
	comp=N,0.1nm,0.3s,baz=195,slow=5.1,SNR=6.1						
LPAZ	**La Paz**	**16.32**	**11**	*e*Pn	**Pn**	**23 08 36.7**	**+0.4**
NNA	**Nana**	**20.93**	**345**	P	**P**	**23 09 30.0**	**+1.0**
RPN	**Rapa Nui**	**33.22**	**269**	*e*P	**P**	**23 11 22.9**	**+0.2**
RCBR	**Riachuelo**	**42.36**	**59**	*e*P	**P**	**23 12 40.0**	**0.0**
	comp=N,35nm,1.3s,mb4.8						
JTS	**JuntasAbangare**	**44.39**	**341**	P	**P**	**23 12 57.5**	**+1.3**
TXAR	**Lajitas Array**	**68.62**	**330**	P	**P**	**23 15 47.9**	**-0.2**
	comp=N,0.3nm,0.5s,mb3.5,baz=154,slow=7.9,SNR=6.7						
WVT	**Waverly**	**69.90**	**346**	*e*P	**P**	**23 15 54.6**	**-1.3**
	comp=N,2.3nm,0.7s,mb4.2						
WMOK	**Wichita Mounta**	**71.58**	**336**	*e*P	**P**	**23 16 06.0**	**-0.1**
	comp=N,1.8nm,0.8s,mb4.0						
DBIC	**Dimbokro**	**74.17**	**71**	P	**P**	**23 16 20.9**	**-1.2**
	comp=N,2.7nm,0.7s,mb4.3,baz=225,slow=7.1,SNR=3.7						
MAW	**Mawson**	**74.55**	**163**	P	**P**	**23 16 23.0**	**-0.5**
	comp=N,1.3nm,0.5s,mb4.1,baz=272,slow=20,SNR=7.2						
MAW	**Mawson**	**74.55**	**163**	*e*P	**P**	**23 16 23.0**	**-0.4**
	comp=N,0.3nm,0.5s,mb3.5						
SMCO	**Snowmass**	**78.51**	**333**	*e*P	**P**	**23 16 47.1**	**+1.0**
	comp=N,4.3nm,0.7s,mb4.5						
BOSA	**Boshof**	**80.34**	**118**	P	**P**	**23 16 55.7**	**-0.8**
	comp=N,1.5nm,0.6s,mb4.1,baz=256,slow=4.2,SNR=5.9						
ISA	**Isabella**	**80.82**	**323**	P	**P**	**23 16 58.4**	**-0.3**
HWUT	**Hardware Ranch**	**82.42**	**331**	P	**P**	**23 17 07.8**	**+0.8**
NVAR	**Mina Array Bea**	**82.89**	**325**	P	**P**	**23 17 08.8**	**-0.7**
	comp=N,0.4nm,0.5s,mb3.7,baz=139,slow=16,SNR=2.7						
NVAR				pP	pP	23 17 22.2	-1.9
	comp=N,0.7nm,0.6s,baz=99,slow=7.7,SNR=2.8						
CMB	**Columbia Colle**	**83.62**	**323**	*e*P	**P**	**23 17 13.9**	**+0.7**
AAK	**Ala-Archa**	**151.26**	**59**	PKPbc	PKPbc	23 24 38.3	+0.2
	comp=N,2.1nm,0.3s,baz=198,slow=3.2,SNR=3.7						
KURK	**Kurchatov**	**151.35**	**41**	PKPbc	PKPbc	23 24 36.7	-1.3
	comp=N,1.4nm,0.6s,baz=301,slow=3.3,SNR=4.3						
KURK				pPKPbc	pPKPbc	23 24 51.7	-1.6
	comp=N,1.6nm,0.5s,baz=304,slow=2.8,SNR=4.0						
ZALV	**Zalesovo Beam**	**152.60**	**31**	PKPbc	PKPbc	23 24 39.5	-1.2
	comp=N,2.3nm,0.6s,baz=323,slow=3.8,SNR=5.6						
ZALV				pPKPbc	pPKPbc	23 24 54.2	-1.8
	comp=N,1.4nm,0.4s,baz=322,slow=2.9,SNR=4.5						
MKAR	**Makanchi Array**	**155.31**	**47**	PKPab	PKPab	23 25 01.8	-1.3
	comp=N,1.3nm,1.0s,baz=322,slow=2.3,SNR=5.7						

IDC ***03*** *23:09:59.8±0.4, 35°.51N×58°.76E, h0km, mb4.8/33, mb1 4.9/37, mb1mx4.9/38, mbtmp4.8/37, ML4.0/3, MS4.5/25, Ms1 4.4/25, ms1mx4.3/32, Error ellipse: s-maj=11.3km s-min=9.0km az=1.0*
SZGRF ***03*** *23:10:00.7, 34°.15N×58°.28E, h33km, mb4.7, MS4.3, Northern and central Iran*
TEH ***03*** *23:10:01.9, 35°.54N×58°.76E, h4km*
CSEM ***03*** *23:10:01.6±0.1, 35°.61N×58°.77E, h10km, mb5.0/99, Ms4.1, Mw5.1, Error ellipse: s-maj=3.0km s-min=2.2km az=152.0*
ISCJB ***03*** *23:10:01.7±0.4, 35°.54N±0°.02×58°.73E±0°.01, h24km±2km, mb5.0/190, MS4.6/81, Error ellipse: s-maj=2.7km s-min=1.8km az=175.9*
GCMT ***03*** *23:10:02.7±0.2, 35°.50N×58°.60E, h12km, MW5.2, Moment Tensor Solution. s61,c89; s83,c146; Moment tensor: Scale 10^16 Nm; Mrr 6.08±.17; Mθθ -4.65±.13; Mφφ -1.43±.11; Mrθ 1.07±.31; Mθφ 3.64±.10; Mφr 0.08±.32; Best double couple: M0 6.70000×10^16 NP1:φs 310.00000°, δ42.00000°, λ101.00000°. NP2:φs 116.00000°, δ49.00000°, λ81.00000°. Principal axes: T 6.2200, Plg82.0000°, Azm331.0000°; N 0.8600, Plg7.0000°, Azm122.0000°; P -7.0800, Plg4.0000°, Azm213.0000°; Data Used: II IU IC CN G.*
NEIC ***03*** *23:10:02.0, 35°.50N×58°.80E, h10km, mb4.9/71, MS4.2/4, MW5.0, ML4.8(THR), MN5.2(TEH), Moment Tensor Solution. s21 Moment tensor: Scale 10^16 Nm; Mrr 4.33; Mθθ -1.67; Mφφ -2.65; Mrθ -1.09; Mθφ 2.04; Mφr 1.12; Best double couple: M0 4.60000×10^16 NP1:φs 320.00000°, δ55.00000°, λ88.00000°. NP2:φs 144.00000°, δ35.00000°, λ93.00000°. Principal axes: T 4.6100, Plg79.0000°, Azm220.0000°; N -0.0700, Plg1.0000°, Azm321.0000°; P -4.5300, Plg9.0000°, Azm51.0000°; After TEH.*
NEIC Several houses collapsed at Katkan.
MOS ***03*** *23:10:03.2±0.9, 35°.56N×58°.70E, h33km, mb5.1/79, MS4.3/36 Error ellipse: s-maj=5.4km s-min=3.1km az=131.7*
THR ***03*** *23:10:06.2±0.4, 35°.51N×58°.51E, h46km±6km, ML4.8*
NNC ***03*** *23:10:09.4±3.1, 36°.03N×59°.75E, h0km, mb5.0, Error ellipse: s-maj=31.4km s-min=25.8km az=103.0*
BJI ***03*** *23:10:09.2, 35°.86N×59°.39E, h40km, mB5.2/36, mb4.9/53, Ms5.1/57, Ms7 4.8/49*
DJA ***03*** *23:10:11, 35°.47N×58°.82E, h75km, mb5.0/12*
ISC 03 23:10:03.0±0.4, 35°.59N±0°.01×58°.76E±0°.01, h18km±2km, h27km±2.2km: pP-P, n1246, σ1911/1323, mb5.0/190, MS4.6/81, 103C-43D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMOG	**Moghan**	**0.70**	**42**	Pg	**Pg**	**23 10 15.5**	**-1.2**
IMOG				Sg	**Sg**	**23 10 26.4**	**+0.4**
IMOG	**Moghan**	**0.70**	**42**	⇑*e*Pg	**Pg**	**23 10 15.6**	**-1.1**
IMOG				*e*Sg	**Sg**	**23 10 26.5**	**+0.5**
IMOG				*e*		23 10 32.7	
	comp=Z,44μm,0.3s						
IMOG	**Moghan**	**0.70**	**42**	⇑*e*Pg	**Pg**	**23 10 15.6**	**-1.1**
IMOG				*e*Sg	**Sg**	**23 10 26.5**	**+0.5**
IPAY	**Payeh**	**0.88**	**12**	Pg	**Pg**	**23 10 18.2**	**-1.9**
IPAY				Sg	**Sg**	**23 10 33.1**	**+1.4**
IPAY	**Payeh**	**0.88**	**12**	⇑*e*Pg	**Pg**	**23 10 18.2**	**-1.9**
IPAY				*e*Sg	**Sg**	**23 10 32.6**	**+0.9**
IPAY				*e*		23 10 33.7	
	comp=Z,73μm,0.3s						
IPAY	**Payeh**	**0.88**	**12**	⇑*e*Pg	**Pg**	**23 10 18.2**	**-1.9**
IPAY				*e*Sg	**Sg**	**23 10 32.6**	**+0.9**
MHI	**Mashad**	**0.92**	**38**	Pg	**Pb**	**23 10 19.7**	**-0.6**
MHI	**Mashad**	**0.92**	**38**	*e*Pg	**Pg**	**23 10 19.1**	**-1.7**
MHI				*e*		23 10 37.6	
	comp=Z,74μm,0.1s						
MHI	**Mashad**	**0.92**	**38**	*e*Pg	**Pg**	**23 10 19.1**	**-1.7**
MHI	**Mashad**	**0.92**	**38**	P	**Pb**	**23 10 19.7**	**-0.6**
IAKL	**Akhelmad**	**1.01**	**360**	Pg	**Pg**	**23 10 20.5**	**-2.1**
IAKL	**Akhelmad**	**1.01**	**360**	⇓*e*Pg	**Pg**	**23 10 20.7**	**-1.9**
IAKL				*e*Sg	**Sg**	**23 10 36.2**	**+0.4**
IAKL				*e*		23 10 42.5	
	comp=Z,76μm,0.2s						
IKRD	**Kardeh**	**1.20**	**350**	Pg	**Pg**	**23 10 26.8**	**+0.6**
IKRD	**Kardeh**	**1.20**	**350**	⇑*e*Pg	**Pg**	**23 10 26.6**	**+0.4**
IKRD				*e*Sg	**Sg**	**23 10 45.9**	**+4.0**
IKRD				*e*		23 10 49.9	
	comp=Z,74μm,0.4s						
IMYA	**Miami**	**1.32**	**55**	Pn	**Pn**	**23 10 26.4**	**0.0**
IMYA	**Miami**	**1.32**	**55**	⇓*e*Pg	**Pn**	**23 10 26.4**	**0.0**
IMYA				*e*		23 10 54.4	
	comp=Z,26μm,0.2s						
IMYA	**Miami**	**1.32**	**55**	⇓*e*Pg	**Pn**	**23 10 26.4**	**0.0**
IQHU	**Qucahn**	**1.49**	**353**	Pn	**Pn**	**23 10 29.3**	**+0.5**
IQHU	**Qucahn**	**1.49**	**353**	*e*Pn	**Pn**	**23 10 29.6**	**+0.8**
IQHU				*e*		23 11 19.6	
	comp=Z,4μm,0.4s						
IQHU	**Qucahn**	**1.49**	**353**	*e*Pn	**Pn**	**23 10 29.6**	**+0.8**
ISFR	**Sfrayin**	**1.58**	**337**	Pn	**Pn**	**23 10 30.5**	**+0.4**
ISFR	**Sfrayin**	**1.58**	**337**	*e*Pn	**Pn**	**23 10 30.6**	**+0.5**
ISFR				*e*Sg	**Sg**	**23 10 52.8**	**-1.3**
ISFR				*e*		23 11 04.2	
	comp=Z,92μm,0.4s						
ISFR	**Sfrayin**	**1.58**	**337**	*e*Pn	**Pn**	**23 10 30.6**	**+0.5**
ISFR				*e*Sg	**Sg**	**23 10 52.8**	**-1.3**
IEMG	**Emamgholi**	**1.82**	**357**	Pn	**Pn**	**23 10 35.1**	**+1.7**
IEMG	**Emamgholi**	**1.82**	**357**	*e*Pn	**Pn**	**23 10 34.8**	**+1.4**
IEMG				*e*		23 11 16.3	
	comp=Z,25μm,0.2s						
IEMG	**Emamgholi**	**1.82**	**357**	*e*Pn	**Pn**	**23 10 34.8**	**+1.4**
ISHV	**Shirvan**	**2.12**	**337**	Pn	**Pn**	**23 10 38.7**	**+1.3**
ISHV	**Shirvan**	**2.12**	**337**	*e*Pn	**Pn**	**23 10 38.4**	**+1.0**
ISHV				*e*Sg	**Sg**	**23 11 10.9**	**-0.3**
ISHV				*e*		23 11 25.5	
	comp=Z,27μm,0.4s						
ISHV	**Shirvan**	**2.12**	**337**	*e*Pn	**Pn**	**23 10 38.4**	**+1.0**
ISHV				*e*Sg	**Sg**	**23 11 10.9**	**-0.3**
BJRD	**Bojnurd**	**2.37**	**333**	*e*Pg	**Pg**	**23 10 48.3**	**-0.1**
BJRD	**Bojnurd**	**2.37**	**333**	*e*Pg	**Pg**	**23 10 48.3**	**-0.1**
VAN	**Vannovskaya**	**2.41**	**348**	*e*P	**Pn**	**23 10 43.8**	**+2.4**
VAN				S	**Sn**	**23 11 16.9**	**+6.4**
ITEG	**Tejag**	**2.69**	**180**	⇑*e*Pn	**Pn**	**23 10 45.0**	**-0.3**
ITEG				*e*Sg	**Sg**	**23 11 25.9**	**-3.5**
ITEG				*e*		23 11 28.7	
	comp=Z,69μm,0.4s						
ITEG	**Tejag**	**2.69**	**180**	⇑*e*Pn	**Pn**	**23 10 45.0**	**-0.3**
ITEG				*e*Sg	**Sg**	**23 11 25.9**	**-3.5**
MRVT	**Maraveh tapeh**	**2.98**	**315**	*e*P	**Pn**	**23 10 51.0**	**+1.8**
MRVT				AML	AML	23 12 04.3	
	comp=N,854nm,0.6s						
IDAH	**Dahanechah**	**2.99**	**162**	*e*Pn	**Pn**	**23 10 49.3**	**-0.1**
IDAH				*e*		23 11 45.6	
	comp=Z,66μm,0.3s						
IDAH	**Dahanechah**	**2.99**	**162**	*e*Pn	**Pn**	**23 10 49.3**	**-0.1**
IKOO	**Kooshah**	**3.17**	**176**	*e*Pn	**Pn**	**23 10 51.7**	**-0.1**
IKOO				*e*		23 11 50.5	
	comp=Z,80μm,0.4s						
IKOO	**Kooshah**	**3.17**	**176**	*e*Pn	**Pn**	**23 10 51.7**	**-0.1**
IANJ	**Anjilo**	**3.96**	**270**	Pn	**Pn**	**23 11 02.7**	**0.0**
IANJ	**Anjilo**	**3.96**	**270**	*e*Pn	**Pn**	**23 11 02.7**	**0.0**
IANJ				*e*		23 11 21.5	
	comp=Z,28μm,0.3s						
IANJ	**Anjilo**	**3.96**	**270**	*e*Pn	**Pn**	**23 11 02.7**	**0.0**
ISHM	**Shahmirzad**	**4.46**	**274**	Pn	**Pn**	**23 11 09.9**	**+0.3**
ISHM	**Shahmirzad**	**4.46**	**274**	*e*Pn	**Pn**	**23 11 09.9**	**+0.3**
ISHM				*e*		23 12 44.0	
	comp=Z,25μm,0.4s						
ISHM	**Shahmirzad**	**4.46**	**274**	*e*Pn	**Pn**	**23 11 09.9**	**+0.3**
ILAS	**Lasjerd**	**4.74**	**269**	Pn	**Pn**	**23 11 13.4**	**-0.1**
ILAS	**Lasjerd**	**4.74**	**269**	*e*Pn	**Pn**	**23 11 13.5**	**0.0**
ILAS				*e*		23 12 41.8	
	comp=Z,31μm,0.5s						
ILAS	**Lasjerd**	**4.74**	**269**	*e*Pn	**Pn**	**23 11 13.5**	**0.0**
IBAF	**Bafgh**	**4.80**	**215**	Pn	**Pn**	**23 11 13.7**	**-0.6**
IBAF	**Bafgh**	**4.80**	**215**	⇓*e*Pn	**Pn**	**23 11 13.7**	**-0.6**
IBAF				*e*		23 12 43.9	
	comp=Z,35μm,0.3s						
IBAF	**Bafgh**	**4.80**	**215**	⇓*e*Pn	**Pn**	**23 11 13.7**	**-0.6**
IFIR	**Firoozkooh**	**4.90**	**272**	*e*Pn	**Pn**	**23 11 16.1**	**+0.5**
IFIR				*e*		23 11 23.4	
	comp=Z,4μm,0.1s						
IFIR	**Firoozkooh**	**4.90**	**272**	*e*Pn	**Pn**	**23 11 16.1**	**+0.5**
ICHK	**Chekchek**	**4.92**	**229**	Pn	**Pn**	**23 11 15.5**	**-0.5**
ICHK	**Chekchek**	**4.92**	**229**	*e*Pn	**Pn**	**23 11 15.5**	**-0.5**
ICHK				*e*		23 12 42.8	
	comp=Z,42μm,0.6s						
ICHK	**Chekchek**	**4.92**	**229**	*e*Pn	**Pn**	**23 11 15.5**	**-0.5**
IMEH	**Mehriz**	**5.44**	**221**	Pn	**Pn**	**23 11 22.5**	**-0.6**
IMEH	**Mehriz**	**5.44**	**221**	*e*Pn	**Pn**	**23 11 22.5**	**-0.6**
IMEH				*e*		23 13 04.8	
	comp=Z,28μm,0.6s						
IMEH	**Mehriz**	**5.44**	**221**	*e*Pn	**Pn**	**23 11 22.5**	**-0.6**
IDMV	**Damavand**	**5.49**	**272**	*e*Pn	**Pn**	**23 11 23.8**	**+0.1**
IDMV				*e*		23 13 17.1	
	comp=Z,28μm,0.7s						
IDMV	**Damavand**	**5.49**	**272**	*e*Pn	**Pn**	**23 11 23.8**	**+0.1**
ISFB	**Sefidab**	**5.50**	**259**	Pn	**Pn**	**23 11 23.1**	**-0.8**
ISFB	**Sefidab**	**5.50**	**259**	*e*Pn	**Pn**	**23 11 23.1**	**-0.8**
ISFB				*e*		23 13 22.4	
	comp=Z,18μm,0.6s						
ISFB	**Sefidab**	**5.50**	**259**	*e*Pn	**Pn**	**23 11 23.1**	**-0.8**
DAMV	**Damavand**	**5.53**	**272**	*e*Pn	**Pn**	**23 11 24.0**	**-0.4**
DAMV				*e*Sg	**Sb**	**23 12 44.0**	**-1.0**
DAMV	**Damavand**	**5.53**	**272**	*e*Pn	**Pn**	**23 11 24.7**	**+0.4**
DAMV				AML	AML	23 13 31.6	
	comp=N,448nm,0.6s						
DAMV				AML	AML	23 13 35.8	
	comp=E,447nm,0.8s						
DAMV	**Damavand**	**5.53**	**272**	*e*Pn	**Pn**	**23 11 24.7**	**+0.3**
ISAD	**Sadrabad**	**5.60**	**231**	Pn	**Pn**	**23 11 24.3**	**-1.0**
ISAD	**Sadrabad**	**5.60**	**231**	*e*Pn	**Pn**	**23 11 24.3**	**-1.0**
ISAD				*e*		23 13 10.9	
	comp=Z,41μm,0.5s						
ISAD	**Sadrabad**	**5.60**	**231**	*e*Pn	**Pn**	**23 11 24.3**	**-1.0**
IAFJ	**Afjeh**	**5.74**	**275**	*e*Pn	**Pn**	**23 11 28.8**	**+1.6**
IAFJ	**Afjeh**	**5.74**	**275**	*e*Pn	**Pn**	**23 11 28.8**	**+1.6**
KRBR	**Kerman**	**5.84**	**197**	*e*Pn	**Pn**	**23 11 29.0**	**+0.4**
KRBR	**Kerman**	**5.84**	**197**	*e*Pn	**Pn**	**23 11 30.0**	**+1.4**
KRBR				AML	AML	23 13 22.5	
	comp=E,2μm,0.9s						
KRBR	**Kerman**	**5.84**	**197**	*e*Pn	**Pn**	**23 11 30.0**	**+1.4**
IZEF	**Zefreh**	**5.97**	**245**	Pn	**Pn**	**23 11 29.5**	**-0.8**
IZEF	**Zefreh**	**5.97**	**245**	*e*Pn	**Pn**	**23 11 29.7**	**-0.6**
IZEF				*e*		23 13 25.4	
	comp=Z,7μm,0.3s						
IZEF	**Zefreh**	**5.97**	**245**	*e*Pn	**Pn**	**23 11 29.7**	**-0.6**
ZHSF	**Zahedan**	**6.20**	**164**	*e*Pn	**Pn**	**23 11 36.7**	**+3.1**
ZHSF	**Zahedan**	**6.20**	**164**	*e*Pn	**Pn**	**23 11 36.7**	**+3.2**
CHTH	**Charan**	**6.22**	**275**	*e*Pn	**Pn**	**23 11 34.0**	**+0.2**
CHTH	**Charan**	**6.22**	**275**	*e*Pn	**Pn**	**23 11 34.7**	**+0.9**
CHTH	**Charan**	**6.22**	**275**	*e*Pn	**Pn**	**23 11 34.7**	**+0.9**
GHVR	**GHOM**	**6.23**	**262**	*e*Pn	**Pn**	**23 11 34.0**	**+0.1**
GHVR	**GHOM**	**6.23**	**262**	*e*Pn	**Pn**	**23 11 34.9**	**+1.0**
GHVR	**GHOM**	**6.23**	**262**	*e*Pn	**Pn**	**23 11 34.8**	**+0.9**
IR3	**Iran Long-Peri**	**6.31**	**271**	*e*Pn	**Pn**	**23 11 35.3**	**+0.2**
IKLH	**Kolahrood**	**6.35**	**251**	*e*Pn	**Pn**	**23 11 34.8**	**-0.8**
IKLH				*e*		23 13 45.9	
	comp=Z,21μm,0.7s						
IKLH	**Kolahrood**	**6.35**	**251**	*e*Pn	**Pn**	**23 11 34.8**	**-0.8**
THKV	**Tehran--Karaj**	**6.42**	**275**	*e*Pn	**Pn**	**23 11 38.0**	**+1.5**
THKV	**Tehran--Karaj**	**6.42**	**275**	*e*Pn	**Pn**	**23 11 38.0**	**+1.5**
IGAR	**Gharneh**	**6.42**	**242**	*e*Pn	**Pn**	**23 11 35.7**	**-0.9**
IGAR				*e*		23 13 54.0	
	comp=Z,9μm,0.6s						
IMHD	**Mahdasht**	**6.59**	**273**	Pn	**Pn**	**23 11 39.4**	**+0.5**
IMHD	**Mahdasht**	**6.59**	**273**	*e*Pn	**Pn**	**23 11 39.4**	**+0.5**
IMHD				*e*		23 11 40.7	
	comp=Z,4μm,0.3s						
IMHD	**Mahdasht**	**6.59**	**273**	*e*Pn	**Pn**	**23 11 39.4**	**+0.5**
IPIR	**Pirpir**	**7.14**	**248**	*e*Pn	**Pn**	**23 11 46.2**	**-0.3**
IPIR	**Pirpir**	**7.14**	**248**	*e*Pn	**Pn**	**23 11 46.2**	**-0.3**
IRAZ	**Razeghan**	**7.21**	**271**	Pn	**Pn**	**23 11 46.8**	**-0.6**
IRAZ	**Razeghan**	**7.21**	**271**	*e*Pn	**Pn**	**23 11 46.4**	**-1.0**
IRAZ				*e*		23 14 49.5	
	comp=Z,5μm,0.4s						
IRAZ	**Razeghan**	**7.21**	**271**	*e*Pn	**Pn**	**23 11 46.4**	**-1.0**
ASAO	**Ashtian**	**7.24**	**264**	*e*Pn	**Pn**	**23 11 48.0**	**+0.2**
ASAO	**Ashtian**	**7.24**	**264**	*e*P	**Pn**	**23 11 48.2**	**+0.4**
ASAO	**Ashtian**	**7.24**	**264**	*e*Pn	**Pn**	**23 11 48.0**	**+0.2**
IPAR	**Pars**	**7.49**	**222**	*e*Pn	**Pn**	**23 11 50.6**	**-0.6**
IPAR	**Pars**	**7.49**	**222**	*e*Pn	**Pn**	**23 11 50.6**	**-0.6**
IBND	**Bandar-abas**	**8.34**	**194**	*e*Pn	**Pn**	**23 12 00.5**	**-2.4**
IBND				*e*Pn	**Pn**	**23 12 01.5**	**-1.4**
IBND				*e*		23 15 21.8	
	comp=Z,8μm,0.6s						
IBND	**Bandar-abas**	**8.34**	**194**	*e*Pn	**Pn**	**23 12 01.5**	**-1.4**
BNDS	**Bandar-Abbas**	**8.46**	**196**	*e*Pn	**Pn**	**23 12 06.0**	**+1.4**
BNDS	**Bandar-Abbas**	**8.46**	**196**	*e*Pn	**Pn**	**23 12 06.2**	**+1.6**
BNDS	**Bandar-Abbas**	**8.46**	**196**	*e*Pn	**Pn**	**23 12 06.2**	**+1.6**
KBL	**Kabul**	**8.49**	**94**	*e*Pn	**Pn**	**23 12 07.2**	**+2.2**
KBL				Sn	**Sn**	**23 13 45.5**	**+5.1**
KBL	**Kabul**	**8.49**	**94**	*e*P	**Pn**	**23 12 07.2**	**+2.2**
NDR	**Nardaran**	**8.52**	**308**	P	**Pn**	**23 12 08.7**	**+3.3**
	SNR=5.3						
GOBA	**Gobu**	**8.59**	**307**	P	**Pn**	**23 12 09.2**	**+2.9**
	SNR=13						
QUE	**Quetta**	**8.74**	**126**	*e*P	**Pn**	**23 12 17.0**	**+8.6**
QUE				*e*S	Sx	23 14 50.0	
GHIR	**Ghir-Karzin**	**8.78**	**216**	*e*Pn	**P

GNI	**Garni**	**11.98**	**296**	*e*Pn	**Pn**	**23 12 52.9**	**+0.2**
	comp=Z,124nm,0.8s						
GNI	**Garni**	**11.98**	**296**	P	**Pn**	**23 12 58.1**	**+5.4**
	SNR=8.6						
DGRG	**David-gareji**	**12.00**	**303**	P	**Pn**	**23 12 51.9**	**-1.1**
BHD	**Baghdad**	**12.10**	**263**	*ex*	x	23 12 54.0	
BHD				*ex*	x	23 15 08.0	
BHD				*ex*	x	23 17 54.0	
CUKT	**Cukurca**	**12.32**	**282**	*e*P	**Pn**	**23 12 59.3**	**+1.9**
CUKT	**Cukurca**	**12.32**	**282**	*e*P	**Pn**	**23 12 59.3**	**+1.9**
CLDR	**Caldiran**	**12.33**	**291**	*e*P	**Pn**	**23 12 58.4**	**+0.9**
CLDR	**Caldiran**	**12.33**	**291**	*e*P	**Pn**	**23 12 58.4**	**+0.9**
ARQ	**Araqi**	**12.37**	**190**	P	**Pn**	**23 13 02.2**	**+4.1**
	SNR=6.4						
MTA	**Mtatsminda**	**12.50**	**303**	P	**Pn**	**23 12 57.8**	**-2.0**
TBLG	**Delisi**	**12.55**	**303**	*e*P	**Pn**	**23 12 58.6**	**-1.9**
TBLG	**Delisi**	**12.55**	**303**	P	**Pn**	**23 12 58.6**	**-1.9**
TBLG	**Delisi**	**12.55**	**303**	*e*P	**Pn**	**23 12 58.6**	**-1.9**
VANB	**Van**	**12.64**	**288**	*e*P	**Pn**	**23 13 02.5**	**+0.7**
VANB	**Van**	**12.64**	**288**	*e*P	**Pn**	**23 13 02.5**	**+0.8**
MSL	**Mosul**	**12.71**	**278**	*ex*	x	23 13 08.0	
MSL				*ex*	x	23 15 28.0	
AGRB	**Hanur-Agry**	**13.12**	**292**	*e*P	**Pn**	**23 13 10.3**	**+2.0**
AGRB	**Hanur-Agry**	**13.12**	**292**	*e*P	**Pn**	**23 13 10.3**	**+1.9**
KARS	**Kars**	**13.33**	**297**	*e*P	**Pn**	**23 13 11.9**	**+0.7**
KEH	**Kehvi**	**13.34**	**305**	P	**Pn**	**23 13 09.5**	**-1.8**
ZEI	**Tsey**	**13.57**	**306**	*e*P	**Pn**	**23 13 13.2**	**-1.2**
ZEI				pmax	pmax		
	comp=Z,52nm,1.0s						
ZEI	**Tsey**	**13.57**	**306**	*e*P	**Pn**	**23 13 13.2**	**-1.2**
	comp=Z,52nm,1.0s						
EKS2	**Erkin-Say**	**13.62**	**54**	P	**Pn**	**23 13 14.8**	**-0.3**
	SNR=113						
EKS2	**Erkin-Say**	**13.62**	**54**	*e*Pn	**Pn**	**23 13 14.9**	**-0.2**
	comp=Z,2.7nm,0.6s						
EKS2				*e*Sn	**Sn**	**23 15 46.3**	**+0.5**
EKS2	**Erkin-Say**	**13.62**	**54**	*e*Pn	**Pn**	**23 13 14.9**	**-0.2**
	comp=Z,2.7nm,0.6s						
EKS2				*e*Sn	**Sn**	**23 15 46.3**	**+0.5**
AB31	**Akbulak array**	**13.68**	**3**	⇓Pn	**Pn**	**23 13 13.4**	**-2.6**
	comp=Z,32nm,0.8s,baz=187,slow=14,SNR=254						
AB31				⇑Sn	**Sn**	**23 15 46.3**	**-1.0**
	comp=Z,48nm,0.9s,baz=190,slow=25,SNR=4.3						
AB31	**Akbulak array**	**13.68**	**3**	*e*P	**Pn**	**23 13 13.3**	**-2.6**
AB31				pmax	pmax		
	comp=Z,54nm,1.0s						
AB31	**Akbulak array**	**13.68**	**3**	Pn	**Pn**	**23 13 13.4**	**-2.5**
	comp=Z,32nm,0.8s,baz=187,SNR=254						
AB31				Sn	**Sn**	**23 15 46.3**	**-1.0**
	comp=Z,48nm,0.9s,baz=190,SNR=4.3						
ABKAR	**Akbulak array**	**13.68**	**3**	*e*Pn	**Pn**	**23 13 13.7**	**-2.2**
	comp=Z,26nm,0.7s						
ABKAR				*e*Sn	**Sn**	**23 15 38.7**	**-8.6**
ABKAR	**Akbulak array**	**13.68**	**3**	*e*Pn	**Pn**	**23 13 13.7**	**-2.2**
	comp=Z,26nm,0.7s						
AAK	**Ala-Archa**	**14.08**	**55**	Pn	**Pn**	**23 13 21.4**	**0.0**
	comp=Z,4.1nm,0.3s,baz=239,slow=8.2,SNR=72						
AAK				Sn	**Sn**	**23 15 58.9**	**+1.8**
	comp=Z,0.7nm,0.3s,baz=0.0,slow=20,SNR=3.2						
AAK	**Ala-Archa**	**14.08**	**55**	P	**Pn**	**23 13 21.4**	**0.0**
AAK						23 15 58.9	
AAK				pmax	pmax		
	comp=Z,4.0nm,0.3s						
AAK				smax			
	comp=N,1.0nm,0.3s						
AAK	**Ala-Archa**	**14.08**	**55**	P	**Pn**	**23 13 21.4**	**0.0**
	comp=N,4.0nm,0.3s						
AAK				S	**Sn**	**23 15 58.9**	**+1.7**
	comp=N,1.0nm,0.3s						
KSH	**Kashi**	**14.20**	**69**	*e*P	**Pn**	**23 13 16.3**	**-6.8**
KSH				pP	pP	23 13 20.2	-15
KSH				PP		23 13 27.2	
KSH				S	**Sn**	**23 15 46.1**	**-14**
KSH				sS		23 15 53.6	
KSH				SS		23 16 02.8	
KSH				PcP	PcP	23 18 42.5	+1.5
KSH				pmax	pmax		
	comp=Z,28nm,0.7s						
KSH				pmax	pmax		
	comp=Z,240nm,3.6s						
KSH				LR	LR		
	comp=N,3μm,6.9s						
KSH				LR	LR		
	comp=E,3μm,7.0s						
KSH				LR	LR		
	comp=Z,2μm,6.9s						
FRU	**Bishkek**	**14.25**	**55**	*e*P	**Pn**	**23 13 22.5**	**-1.2**
FRU				*e*S	**Sn**	**23 15 56.0**	**-5.2**
FRU				pmax	pmax		
	comp=Z,130nm,1.4s						
FRU				smax			
	comp=E,2μm,3.0s						
DAGI	**Agillar**	**14.31**	**298**	*i* P	**Pn**	**23 13 27.1**	**+2.6**
ARTV	**Artvin**	**14.33**	**298**	⇑*i*P	**Pn**	**23 13 28.0**	**+3.2**
USP	**Ospenovka**	**14.36**	**53**	P	**Pn**	**23 13 23.9**	**-1.4**
	SNR=14						
DDEM	**Demirkent**	**14.37**	**297**	⇓*i*P	**Pn**	**23 13 26.8**	**+1.4**
KZA	**Kyzart**	**14.38**	**58**	P	**Pn**	**23 13 24.4**	**-1.0**
	SNR=42						
KBK	**Karagaybulak**	**14.40**	**56**	P	**Pn**	**23 13 25.2**	**-0.5**
	SNR=69						
CHMS	**Chumysh**	**14.41**	**54**	P	**Pn**	**23 13 24.4**	**-1.5**
	SNR=15						
THN	**Thein Dam**	**14.41**	**98**	*e*PKP	**Pn**	**23 13 23.7**	**-2.3**
ERZM	**Erzurum**	**14.42**	**293**	⇑*i*P	**Pn**	**23 13 29.7**	**+3.7**
EZM	**Erzurum**	**14.42**	**293**	*e*P	**Pn**	**23 13 28.4**	**+2.4**
DBAD	**Bademkaya**	**14.45**	**297**	⇑*i*P	**Pn**	**23 13 27.3**	**+0.9**
DBOC	**Borcka**	**14.57**	**298**	⇑*i*P	**Pn**	**23 13 30.3**	**+2.3**
BCA	**Borcka**	**14.63**	**299**	*e*P	**Pn**	**23 13 25.8**	**-3.0**
AKTK	**Aktyubinsk**	**14.85**	**358**	Pn	**Pn**	**23 13 29.3**	**-2.4**
AKTK				Sn	**Sn**	**23 16 10.1**	**-5.6**
AKTK				LR	LR	23 20 12.0	
AKTK	**Aktyubinsk**	**14.85**	**358**	Pn	**Pn**	**23 13 29.3**	**-2.5**
AKTO	**Aktyubinsk**	**14.85**	**358**	Pn	**Pn**	**23 13 29.3**	**-2.5**
	comp=E,1.2nm,0.3s,baz=183,slow=12,SNR=19						
AKTO				Sn	**Sn**	**23 16 10.1**	**-5.6**
	comp=E,1.9nm,0.3s,baz=309,slow=18,SNR=7.5						
AKTO				LR	LR	23 20 12.0	
	comp=E,3μm,18.4s,baz=306,slow=41						
AKTO	**Aktyubinsk**	**14.85**	**358**	P	**Pn**	**23 13 29.3**	**-2.5**
AKTO						23 16 10.1	
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO				smax			
	comp=N,2.0nm,0.3s						
AKTO				MLR	MLR		
	comp=Z,3μm,18.4s						
KIV	**Kislovodsk**	**14.90**	**309**	*c i*P	**Pn**	**23 13 30.1**	**-2.5**
KIV				*e*S	**Sn**	**23 16 15.5**	**-1.6**
KIV				pmax	pmax		
	comp=Z,92nm,1.0s						
KIV				MLR	MLR		
	comp=Z,266nm,12.0s						
KIV	**Kislovodsk**	**14.90**	**309**	*e*Pn	**Pn**	**23 13 29.4**	**-3.1**
KIV				*e*Sn	**Sn**	**23 16 14.7**	**-2.4**
KIV				PcP	PcP	23 18 42.8	+0.9
KIV	**Kislovodsk**	**14.90**	**309**	P	**Pn**	**23 13 29.8**	**-2.7**
	SNR=15						
BINT	**Bingol**	**14.92**	**288**	*e*P	**Pn**	**23 13 36.8**	**+3.9**
BINT	**Bingol**	**14.92**	**288**	*e*P	**Pn**	**23 13 36.8**	**+3.9**
TKM2	**Tokmak 2**	**14.94**	**56**	⇓Pn	**Pn**	**23 13 30.6**	**-2.5**
	comp=Z,67nm,1.2s						
TKM2				⇓Sn	**Sn**	**23 16 08.3**	**-10**
	comp=Z,76nm,1.4s						
TKM2	**Tokmak 2**	**14.94**	**56**	P	**Pn**	**23 13 31.3**	**-1.8**
	SNR=22						
TKM2	**Tokmak 2**	**14.94**	**56**	*e*P	**Pn**	**23 13 31.0**	**-2.1**
TKM2						23 16 20.0	
TKM2				pmax	pmax		
	comp=Z,35nm,0.7s						
TKM2	**Tokmak 2**	**14.94**	**56**	*e*Pn	**Pn**	**23 13 31.0**	**-2.1**
	comp=Z,35nm,0.7s						
TKM2				Sn	**Sn**	**23 16 20.0**	**+1.9**
TKM2				*e*PcP	PcP	23 18 41.6	-0.3
TKM2	**Tokmak 2**	**14.94**	**56**	Pn	**Pn**	**23 13 30.6**	**-2.5**
	comp=Z,67nm,1.2s						
TKM2				Sn	**Sn**	**23 16 20.0**	**+1.9**
ULHL	**Ulahol**	**15.13**	**59**	P	**Pn**	**23 13 34.1**	**-1.5**
	SNR=60						
BHK	**Bhakra**	**15.30**	**101**	*ex*	**Pn**	**23 13 40.8**	**+2.8**
PTK	**Pertek**	**15.77**	**288**	*e*P	**Pn**	**23 13 43.6**	**-0.5**
SVRC	**Sivrice-ELAZID**	**15.80**	**286**	*e*P	**Pn**	**23 13 45.0**	**+0.6**
KTUT	**Trabzon**	**15.85**	**296**	*e*P	**Pn**	**23 13 45.6**	**+0.5**
EZC	**Erzincan**	**15.92**	**291**	*e*P	**Pn**	**23 13 47.2**	**+1.3**
GUMT	**Gumushane**	**15.95**	**293**	*e*P	**Pn**	**23 13 48.2**	**+1.9**
GUMT	**Gumushane**	**15.95**	**293**	*e*P	**Pn**	**23 13 48.2**	**+1.9**
KNDC	**Almaty**	**15.98**	**56**	⇓Pn	**Pn**	**23 13 44.9**	**-1.8**
	comp=Z,90nm,0.9s						
KNDC				⇑Sn	**Sn**	**23 16 31.9**	**-11**
	comp=Z,133nm,1.4s						
KNDC	**Almaty**	**15.98**	**56**	Pn	**Pn**	**23 13 44.9**	**-1.8**
	comp=Z,90nm,0.9s						
AAA	**Alma-Ata**	**15.99**	**56**	*i* P	**Pn**	**23 13 47.2**	**+0.4**
AAA				*i* S	**Sn**	**23 16 42.7**	**-0.8**
AAA				pmax	pmax		
	comp=Z,400nm,5.0s						
AAA				smax			
	comp=E,300nm,2.7s						
AAA				MLR	MLR		
	comp=Z,10μm,9.0s						
URFA	**Urfa**	**16.14**	**282**	*e*P	**Pn**	**23 13 51.0**	**+2.2**
URFA	**Urfa**	**16.14**	**282**	*e*P	**Pn**	**23 13 51.0**	**+2.2**
AJM	**Ajmer**	**16.35**	**119**	*e*PKP	**Pn**	**23 13 51.0**	**-0.5**
KEMA	**Kemaliye**	**16.51**	**289**	*i* P	**Pn**	**23 13 55.3**	**+1.8**
KEMA	**Kemaliye**	**16.51**	**289**	*i* P	**Pn**	**23 13 55.3**	**+1.8**
ESPY	**Espiye-Giresun**	**16.60**	**295**	*e*P	**Pn**	**23 13 56.0**	**+1.3**
ESPY	**Espiye-Giresun**	**16.60**	**295**	*e*P	**Pn**	**23 13 56.0**	**+1.3**
SOC	**Sochi**	**16.69**	**304**	*e*P	**Pn**	**23 13 54.7**	**-1.0**
SOC				pmax	pmax		
	comp=Z,71nm,1.1s						
AKCD	**Akcadag**	**16.88**	**285**	⇑*i*P	**Pn**	**23 13 59.3**	**+1.1**
AKCD	**Akcadag**	**16.88**	**285**	*i* P	**Pn**	**23 13 59.3**	**+1.2**
GRSN	**GIRESUNGRSN**	**16.94**	**294**	*i* P	**Pn**	**23 14 01.8**	**+2.9**
GRSN	**GIRESUNGRSN**	**16.94**	**294**	*i* P	**Pn**	**23 14 01.8**	**+2.8**
DARE	**Darende-Malaty**	**17.01**	**288**	*e*P	**Pn**	**23 14 04.9**	**+5.0**
NDI	**New Delhi**	**17.07**	**109**	*e*PKP	**Pn**	**23 13 59.0**	**-1.6**
GZT	**Gaziantep**	**17.14**	**282**	*i* P	**Pn**	**23 14 02.8**	**+1.3**
GAZ	**Gaziantep**	**17.43**	**282**	*e*P	**Pn**	**23 14 07.7**	**+2.7**
GAZ	**Gaziantep**	**17.43**	**282**	*e*P	**Pn**	**23 14 07.7**	**+2.7**
KMRS	**Kahramanmaras**	**17.67**	**283**	*e*P	**Pn**	**23 14 07.4**	**-0.6**
KMRS	**Kahramanmaras**	**17.67**	**283**	*e*P	**Pn**	**23 14 07.4**	**-0.6**
SVSK	**Karacayir**	**17.73**	**291**	*e*P	**Pn**	**23 14 09.8**	**+0.9**
SVSK	**Karacayir**	**17.73**	**291**	*e*P	**Pn**	**23 14 09.8**	**+1.0**
SARI	**SarD1z-Kayseri**	**17.86**	**286**	*e*P	**Pn**	**23 14 13.3**	**+2.9**
SARI	**SarD1z-Kayseri**	**17.86**	**286**	*e*P	**Pn**	**23 14 13.3**	**+3.0**
ERBA	**Erbaa**	**18.03**	**293**	⇑*i*P	**Pn**	**23 14 13.6**	**+1.2**
ERBA	**Erbaa**	**18.03**	**293**	*i* P	**Pn**	**23 14 13.6**	**+1.2**
PINB	**Pinarbasi**	**18.09**	**286**	*i* P	**Pn**	**23 14 15.1**	**+2.0**
PINB	**Pinarbasi**	**18.09**	**286**	*i* P	**Pn**	**23 14 15.1**	**+1.9**
YAYL	**Yayladag**	**18.38**	**278**	*i* P	**Pn**	**23 14 16.8**	**0.0**
YAYL	**Yayladag**	**18.38**	**278**	*i* P	**Pn**	**23 14 16.8**	**0.0**
ASF	**Jabal al Asfar**	**18.47**	**266**	P	**Pn**	**23 14 18.8**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=318,slow=3.0,SNR=39						
ASF				LR	LR	23 22 07.3	
	comp=Z,892nm,18.6s,baz=302,slow=39						
KOZT	**Kozan**	**18.52**	**283**	*e*P	**Pn**	**23 14 18.5**	**0.0**
KOZT	**Kozan**	**18.52**	**283**	*e*P	**Pn**	**23 14 18.5**	**0.0**
CEYT	**Ceyhan**	**18.60**	**281**	*e*P	**Pn**	**23 14 20.4**	**+1.0**
CEYT	**Ceyhan**	**18.60**	**281**	*e*P	**Pn**	**23 14 20.4**	**+0.9**
KVT	**Kavak**	**18.62**	**294**	*e*P	**Pn**	**23 14 20.6**	**+0.9**
KVT	**Kavak**	**18.62**	**294**	*e*P	**Pn**	**23 14 20.6**	**+0.9**
ANN	**Anapa**	**18.67**	**306**	⇑*i*P	**Pn**	**23 14 20.7**	**+0.5**
ANN				*e*S	**Sn**	**23 17 53.3**	**+4.9**
ANN				pmax	pmax		
	comp=Z,120nm,1.3s						
ANN				MLR	MLR		
	comp=Z,692nm,17.0s						
ANN	**Anapa**	**18.67**	**306**	*i* P	**Pn**	**23 14 20.7**	**+0.5**
	comp=Z,120nm,1.3s						
ANN				*e*S	**Sn**	**23 17 53.3**	**+4.9**
	comp=Z,692nm,17.0s						
YURE	**YUREGIR**	**18.70**	**281**	*i* P	**Pn**	**23 14 19.6**	**-1.1**
YURE	**YUREGIR**	**18.70**	**281**	*i* P	**Pn**	**23 14 19.6**	**-1.1**
HWQ	**Hawqa**	**18.75**	**273**	*e*Pn	**Pn**	**23 14 22.2**	**+0.9**
HWQ	**Hawqa**	**18.75**	**273**	*e*Pn	**Pn**	**23 14 22.2**	**+0.9**
ZRNK	**Zerenda**	**18.81**	**19**	⇑Pn	**Pn**	**23 14 21.6**	**-0.3**
	comp=Z,25nm,1.1s						
ZRNK				⇑Sn	**Sn**	**23 17 50.0**	**-1.6**
	comp=Z,32nm,1.2s						
ZRNK	**Zerenda**	**18.81**	**19**	P	**Pn**	**23 14 22.6**	**+0.8**
ZRNK				pmax	pmax		
	comp=Z,35nm,1.1s						
KRTS	**Karatas**	**18.93**	**280**	*e*P	**Pn**	**23 14 24.9**	**+1.6**
KRTS	**Karatas**	**18.93**	**280**	*e*P	**Pn**	**23 14 25.0**	**+1.6**
BHL	**Bhannes**	**19.06**	**272**	*e*Pn	**Pn**	**23 14 25.8**	**+0.7**
BHL	**Bhannes**	**19.06**	**272**	*e*Pn	**Pn**	**23 14 25.8**	**+0.7**
HRI	**Mount Hermon**	**19.13**	**270**	P	**Pn**	**23 14 27.1**	**+1.2**
HRI	**Mount Hermon**	**19.13**	**270**	P	**Pn**	**23 14 27.1**	**+1.2**
KARA	**Karaisali**	**19.14**	**282**	*e*P	**Pn**	**23 14 23.3**	**-2.7**
KARA	**Karaisali**	**19.14**	**282**	*e*P	**Pn**	**23 14 23.3**	**-2.7**
VOSK	**Vostochnaya**	**19.19**	**23**	⇓Pn	**Pn**	**23 14 26.0**	**-0.4**
	comp=Z,29nm,0.8s						
VOSK				⇑Sn	**Sn**	**23 17 53.9**	**-7.1**
	comp=Z,36nm,1.1s						
VOSK	**Vostochnaya**	**19.19**	**23**	Pn	**Pn**	**23 14 26.0**	**-0.5**
	comp=Z,29nm,0.8s						
KSDI	**Kefar Szold**	**19.21**	**270**	Pn	**Pn**	**23 14 27.4**	**+0.5**
KSDI	**Kefar Szold**	**19.21**	**270**	Pn	**Pn**	**23 14 27.4**	**+0.5**
BRVK	**Borovoye**	**19.27**	**21**	⇑P	**Pn**	**23 14 27.4**	**+0.1**
	comp=Z,134nm,1.4s						
BRVK	**Borovoye**	**19.27**	**21**	*c e*P	**Pn**	**23 14 27.1**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,83nm,1.2s						
BRVK	**Borovoye**	**19.27**	**21**	⇑*e*Pn	**Pn**	**23 14 26.4**	**-0.9**
	comp=Z,73nm,1.1s						
BRVK				*e*Sn	**Sn**	**23 18 02.2**	**-0.5**
BRVK	**Borovoye**	**19.27**	**21**	P	**Pn**	**23 14 27.4**	**+0.1**
	comp=Z,134nm,1.4s						
BRVK				*e*Sn	**Sn**	**23 18 02.2**	**-0.5**
DIKM	**Dikmen**	**19.31**	**295**	*e*P	**Pn**	**23 14 26.7**	**-1.2**
DIKM	**Dikmen**	**19.31**	**295**	*e*P	**Pn**	**23 14 26.7**	**-1.3**
GULE	**Gulek**	**19.36**	**282**	*i* P	**Pn**	**23 14 32.8**	**+4.1**
MMAI	**Mount Meron Ar**	**19.46**	**269**	P	**Pn**	**23 14 29.8**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=86,slow=13,SNR=21						
MMAI				PcP	PcP	23 18 49.5	+0.2
	comp=Z,0.3nm,0.3s,baz=125,slow=8.2,SNR=3.7						
MMAI				LR	LR	23 22 56.2	
	comp=Z,1μm,18.8s,baz=40,slow=40						
HMDT	**Nahal Hemdat**	**19.56**	**267**	Pn	**Pn**	**23 14 31.6**	**+0.5**
HMDT	**Nahal Hemdat**	**19.56**	**267**	Pn	**Pn**	**23 14 31.6**	**+0.5**
CORM	**Corum**	**19.57**	**291**	*e*P	**Pn**	**23 14 29.3**	**-1.8**
CORM	**Corum**	**19.57**	**291**	*e*P	**Pn**	**23 14 29.3**	**-1.8**
MERS	**Mersin**	**19.59**	**281**	*e*P	**Pn**	**23 14 30.9**	**-0.5**
MERS	**Mersin**	**19.59**	**281**	*e*P	**Pn**	**23 14 30.9**	**-0.5**
MMLI	**Mount Malkishu**	**19.59**	**267**	Pn	**Pn**	**23 14 31.8**	**+0.3**
MMLI	**Mount Malkishu**	**19.59**	**267**	Pn	**Pn**	**23 14 31.8**	**+0.3**
BYBT	**Boyabat**	**19.64**	**295**	*e*P	**Pn**	**23 14 31.2**	**-0.7**
BYBT	**Boyabat**	**19.64**	**295**	*e*P	**Pn**	**23 14 31.2**	**-0.7**
CDAG	**Cicekdag**	**19.72**	**289**	⇑*i*P	**Pn**	**23 14 32.0**	**-0.9**
CDAG	**Cicekdag**	**19.72**	**289**	*i* P	**Pn**	**23 14 32.0**	**-0.9**
OFRI	**'Ofer**	**19.90**	**268**	Pn	**Pn**	**23 14 35.3**	**+0.2**
OFRI	**'Ofer**	**19.90**	**268**	Pn	**Pn**	**23 14 35.3**	**+0.2**
SLTI	**Sal'it**	**19.96**	**267**	Pn	**Pn**	**23 14 35.7**	**-0.1**
SLTI	**Sal'it**	**19.96**	**267**	Pn	**Pn**	**23 14 35.7**	**-0.1**
MZDA	**Masada**	**19.97**	**264**	Pn	**Pn**	**23 14 36.4**	**+0.4**
MZDA	**Masada**	**19.97**	**264**	Pn	**Pn**	**23 14 36.4**	**+0.4**
EREN	**Erenkoy**	**20.00**	**277**	*e*P	**P**	**23 14 35.7**	**+1.2**
EREN	**Erenkoy**	**20.00**	**277**	*e*P	**P**	**23 14 35.7**	**+1.2**
TOS	**Tosya**	**20.13**	**293**	*e*P	**P**	**23 14 36.1**	**+0.3**
TOS	**Tosya**	**20.13**	**293**	*e*P	**P**	**23 14 36.1**	**+0.2**
PHNC	**Paralimni**	**20.19**	**276**	P	**P**	**23 14 38.2**	**+1.7**
	comp=Z,2.7nm,0.9s						
PHNC	**Paralimni**	**20.19**	**276**	P	**P**	**23 14 38.2**	**+1.7**
	comp=Z,2.7nm,0.9s						
BR131	**Keskin Array S**	**20.29**	**289**	⇑*e*Pn	**P**	**23 14 37.8**	**+0.2**
	comp=Z,36nm,1.0s						
BR131				*e*S	**S**	**23 18 25.9**	**+1.5**
BR131	**Keskin Array S**	**20.29**	**289**	⇑*e*Pn	**P**	**23 14 37.8**	**+0.2**
	comp=Z,36nm,1.0s						
BR131				*e*S	**S**	**23 18 25.9**	**+1.5**
BRTR	**Keskin Array B**	**20.29**	**289**	P	**P**	**23 14 37.8**	**+0.2**
	comp=Z,34nm,0.9s,baz=103,slow=11,SNR=67						
BRTR				LR	LR	23 23 23.3	
	comp=Z,1μm,18.3s,MS4.3,baz=206,slow=40						
BRTR	**Keskin Array B**	**20.29**	**289**	*c e*P	**P**	**23 14 37.7**	**+0.1**
BRTR				pmax	pmax		
	comp=Z,35nm,0.9s						
BRTR	**Keskin Array B**	**20.29**	**289**	*e*P	**P**	**23 14 37.7**	**+0.1**
	comp=Z,35nm,0.9s						
IKL	**Isikli**	**20.31**	**279**	*e*P	**P**	**23 14 37.8**	**0.0**
IKL	**Isikli**	**20.31**	**279**	*e*P	**P**	**23 14 37.8**	**-0.1**
BHPL	**Bhopal**	**20.35**	**122**	*e*PKP	**P**	**23 14 38.3**	**0.0**
ZFRI	**Zfri**	**20.38**	**262**	Pn	**P**	**23 14 40.3**	**+1.7**
ZFRI	**Zfri**	**20.38**	**262**	Pn	**P**	**23 14 40.3**	**+1.7**
CANT	**Cankiri**	**20.38**	**292**	*e*P	**P**	**23 14 41.1**	**+2.5**
PRNI	**Paran**	**20.59**	**262**	P	**P**	**23 14 42.7**	**+1.8**
PRNI	**Paran**	**20.59**	**262**	P	**P**	**23 14 42.7**	**+1.8**
RTMI	**Retamim**	**20.60**	**264**	Pn	**P**	**23 14 42.5**	**+1.5**
RTMI	**Retamim**	**20.60**	**264**	Pn	**P**	**23 14 42.5**	**+1.5**
HRFI	**Mount Harif**	**20.68**	**261**	⇓Pn	**P**	**23 14 43.3**	**+1.4**
HRFI	**Mount Harif**	**20.68**	**261**	⇓Pn	**P**	**23 14 43.3**	**+1.4**
CSS	**Prodhromos**	**20.76**	**276**	P	**P**	**23 14 43.2**	**+0.5**
	comp=Z,3.4nm,1.3s						
CSS	**Prodhromos**	**20.76**	**276**	*e*P	**P**	**23 14 42.5**	**-0.2**
CSS	**Prodhromos**	**20.76**	**276**	P	**P**	**23 14 43.2**	**+0.5**
	comp=Z,3.4nm,1.3s						
VORD	**Divnogorie**	**20.81**	**324**	*e*P	**P**	**23 14 42.3**	**-0.8**
VORD				*e*S	**S**	**23 18 32.9**	**-1.5**
VORD				pmax	pmax		
	comp=Z,2.0nm,1.0s						
VORD				pmax	pmax		
	comp=N,1.0nm,0.6s						
VORD				pmax	pmax		
	comp=E,1.0nm,0.6s						
VORD				smax			
	comp=E,5.0nm,7.0s						
VORD				smax			
	comp=Z,4.0nm,4.7s						
VORD	**Divnogorie**	**20.81**	**324**	*e*P	**P**	**23 14 42.3**	**-0.8**
	comp=Z,2.0nm,1.0s						
VORD				*e*S	**S**	**23 18 32.9**	**-1.5**
MAMC	**Mammari**	**20.82**	**276**	P	**P**	**23 14 44.1**	**+0.7**
MAMC	**Mammari**	**20.82**	**276**	P	**P**	**23 14 44.1**	**+0.7**
KURK	**Kurchatov**	**20.84**	**37**	⇑P	**P**	**23 14 45.7**	**+2.2**
	comp=Z,98nm,1.1s						
KURK	**Kurchatov**	**20.84**	**37**	P	**P**	**23 14 44.4**	**+0.9**
	comp=Z,43nm,1.0s,baz=236,slow=11,SNR=96						
KURK				LR	LR	23 23 28.6	
	comp=Z,2μm,20.6s,MS4.5,baz=235,slow=39						
KURK	**Kurchatov**	**20.84**	**37**	*c e*P	**P**	**23 14 45.6**	**+2.2**
KURK				pmax	pmax		
	comp=Z,65nm,1.0s						
KURK	**Kurchatov**	**20.84**	**37**	*e*P	**P**	**23 14 45.1**	**+1.6**
	comp=Z,86nm,1.0s						
KURK				*e*S	**S**	**23 18 37.1**	**+2.1**
KURK	**Kurchatov**	**20.84**	**37**	*e*P	**P**	**23 14 45.1**	**+1.7**
	comp=Z,86nm,1.0s						
KURK				*e*S	**S**	**23 18 37.1**	**+2.1**
ARU	**Arti**	**20.84**	**360**	*c i*P	**P**	**23 14 44.4**	**+1.0**
ARU				*e*		23 15 02.7	
ARU				*e*PPP		23 15 14.5	
ARU				S	**S**	**23 18 36.8**	**+1.8**
ARU				SS		23 18 58.8	
ARU				SSS		23 19 15.1	
ARU				pmax	pmax		
	comp=Z,107nm,0.8s						
ARU	**Arti**	**20.84**	**360**	⇑*e*P	**P**	**23 14 44.1**	**+0.7**
	comp=Z,129nm,1.0s						
ARU				*e*S	**S**	**23 18 35.2**	**+0.2**
ARU	**Arti**	**20.84**	**360**	⇑*e*P	**P**	**23 14 44.1**	**+0.7**
	comp=Z,129nm,1.0s						
ARU				*e*S	**S**	**23 18 35.2**	**+0.2**
MK31	**Makanchi Array**	**20.86**	**50**	P	**P**	**23 14 44.8**	**+1.0**
	comp=Z,21nm,0.7s,baz=240,slow=8.9,SNR=161						
MK31	**Makanchi Array**	**20.86**	**50**	*i* P	**P**	**23 14 44.7**	**+0.9**
MK31				pmax	pmax		
	comp=Z,21nm,0.7s						
MK31	**Makanchi Array**	**20.86**	**50**	*e*P	**P**	**23 14 44.7**	**+0.9**
MK31				*e*S	**S**

ISP	**Isparta**	**22.72 284**	*e*P	**P**	**23 15 03.0 -0.7**
ISP			S	**S**	**23 19 14.5 +2.8**
SPNC	**Sapanca-Adapaz**	**22.90 291**	*e*P	**P**	**23 15 06.5 +0.9**
SPNC	**Sapanca-Adapaz**	**22.90 291**	*e*P	**P**	**23 15 06.5 +0.9**
ALT	**Altintas**	**23.01 287**	*e*P	**P**	**23 15 05.9 -0.9**
ALT	**Altintas**	**23.01 287**	*e*P	**P**	**23 15 05.9 -0.8**
GKN	**Gorkha**	**23.21 102**	*e*P	**P**	**23 15 07.1 -1.9**
	comp=Z,230nm,1.2s,mb5.5				
ADVT	**Abdulvahap**	**23.32 291**	*e*P	**P**	**23 15 08.9 -1.1**
ADVT	**Abdulvahap**	**23.32 291**	*e*P	**P**	**23 15 08.9 -1.1**
HRT	**Hereke**	**23.39 292**	*e*P	**P**	**23 15 09.8 -1.0**
HRT	**Hereke**	**23.39 292**	*e*P	**P**	**23 15 09.8 -1.0**
GDZ	**Gediz**	**23.50 287**	*i* P	**P**	**23 15 11.8 -0.1**
GDZ	**Gediz**	**23.50 287**	*i* P	**P**	**23 15 11.8 0.0**
KHAL	**Karahalli**	**23.50 285**	*i* P	**P**	**23 15 11.2 -0.8**
KHAL	**Karahalli**	**23.50 285**	*i* P	**P**	**23 15 11.2 -0.8**
GLHS	**Glhisar (BURDU**	**23.58 282**	*e*P	**P**	**23 15 11.3 -1.4**
GLHS	**Glhisar (BURDU**	**23.58 282**	*e*P	**P**	**23 15 11.3 -1.3**
WMQ	**Urumqi**	**23.64 61**	P	**P**	**23 15 14.4 +1.3**
WMQ			pP		23 15 20.0
WMQ			sP	sP	23 15 23.2 +2.3
WMQ			PP		23 15 47.4
WMQ			PcP	PcP	23 19 00.1 +2.8
WMQ			S	**S**	**23 19 25.1 -1.5**
WMQ			ScS	ScS	23 26 21.2 +0.2
WMQ			pmax	pmax	
	comp=Z,66nm,1.0s,mb5.0				
WMQ			pmax	pmax	
	comp=Z,540nm,3.0s				
WMQ			LR	LR	
	comp=N,2μm,9.8s				
WMQ			LR	LR	
	comp=E,1μm,9.6s				
WMQ			LR	LR	
	comp=Z,1μm,12.6s,MS4.5				
DMN	**Daman**	**23.76 102**	*e*P	**P**	**23 15 12.8 -1.6**
	comp=Z,185nm,1.0s,mb5.5				
KKN	**Kakani**	**23.82 102**	*e*P	**P**	**23 15 13.5 -1.4**
	comp=Z,159nm,1.0s,mb5.4				
ISK	**Istanbul-Kandi**	**23.87 292**	*e*P	**P**	**23 15 14.1 -1.2**
ISK	**Istanbul-Kandi**	**23.87 292**	*e*P	**P**	**23 15 14.1 -1.2**
KLYT	**Kilyos**	**23.89 293**	*e*P	**P**	**23 15 13.9 -1.6**
KLYT	**Kilyos**	**23.89 293**	*e*P	**P**	**23 15 13.9 -1.6**
PKIN	**Phulchoki**	**24.00 102**	*e*P	**P**	**23 15 15.6 -1.0**
	comp=Z,515nm,1.7s,mb5.7				
PKI	**Pulchoki**	**24.02 102**	*e*P	**P**	**23 15 15.6 -1.1**
	comp=Z,243nm,1.2s,mb5.5				
SOKR	**Solikamsk**	**24.03 358**	*c i*P	**P**	**23 15 17.8 +1.3**
SOKR			S	**S**	**23 19 36.7 +4.2**
SOKR			pmax	pmax	
	comp=Z,80nm,1.5s,mb4.9				
SOKR			MLR	MLR	
	comp=Z,1μm,15.0s,MS4.5				
SOKR	**Solikamsk**	**24.03 358**	*i* P	**P**	**23 15 17.8 +1.3**
	comp=Z,80nm,1.5s,mb4.9				
BGKT	**Bogazkoy**	**24.09 292**	*e*P	**P**	**23 15 16.9 -0.4**
BGKT	**Bogazkoy**	**24.09 292**	*e*P	**P**	**23 15 16.9 -0.4**
GUN	**Gumba**	**24.25 101**	*e*P	**P**	**23 15 18.3 -0.5**
	comp=Z,154nm,0.9s,mb5.4				
CTKS	**Kestanelik-??a**	**24.30 293**	*e*P	**P**	**23 15 17.9 -1.3**
CTKS	**Kestanelik-??a**	**24.30 293**	*e*P	**P**	**23 15 17.9 -1.3**
CTYL	**Yal??k??y-??at**	**24.48 293**	*e*P	**P**	**23 15 19.6 -1.2**
CTYL	**Yal??k??y-??at**	**24.48 293**	*e*P	**P**	**23 15 19.6 -1.2**
SLVT	**Silivri**	**24.52 292**	*e*P	**P**	**23 15 21.9 +0.6**
SLVT	**Silivri**	**24.52 292**	*e*P	**P**	**23 15 21.9 +0.7**
JIRN	**Jiri**	**24.60 101**	*e*P	**P**	**23 15 21.9 -0.2**
	comp=Z,115nm,1.0s,mb5.4				
TLCR		**24.62 302**	⇑P	**P**	**23 15 22.8 +0.7**
TLCR		**24.62 302**	⇑*i*P	**P**	**23 15 22.8 +0.7**
TLCR		**24.62 302**	P	**P**	**23 15 22.8 +0.7**
TIRR	**Tirgusor**	**24.76 300**	*e*P	**P**	**23 15 22.6 -0.7**
TIRR			S	**S**	**23 19 43.8 -0.8**
TIRR			pmax	pmax	
	comp=Z,23nm,0.9s,mb4.7				
TIRR	**Tirgusor**	**24.76 300**	P	**P**	**23 15 24.1 +0.8**
TIRR	**Tirgusor**	**24.76 300**	*e*P	**P**	**23 15 22.6 -0.7**
	comp=Z,23nm,0.9s,mb4.7				
TIRR			S	**S**	**23 19 43.8 -0.8**
TIRR	**Tirgusor**	**24.76 300**	⇓*i*P	**P**	**23 15 23.3 0.0**
TIRR	**Tirgusor**	**24.76 300**	*e*P	**P**	**23 15 22.6 -0.7**
	comp=Z,23nm,0.9s,mb4.7				
TIRR			S	**S**	**23 19 43.8 -0.8**
ARG	**Arkhangelos**	**24.78 280**	*e*P	**P**	**23 15 22.5 -1.1**
PSN	**Preselentsi**	**24.79 298**	P	**P**	**23 15 24.2 +0.5**
PSN	**Preselentsi**	**24.79 298**	P	**P**	**23 15 24.2 +0.5**
OBN	**Obninsk**	**24.80 329**	⇑*e*P	**P**	**23 15 23.9 +0.3**
OBN			pmax	pmax	
	comp=Z,627nm,1.2s,mb6.0				
OBN			MLR	MLR	
	comp=Z,500nm,15.0s,MS4.1				
OBN	**Obninsk**	**24.80 329**	*e*P	**P**	**23 15 24.0 +0.4**
	comp=Z,421nm,0.9s,mb6.0				
OBN	**Obninsk**	**24.80 329**	*e*P	**P**	**23 15 23.9 +0.3**
	comp=Z,500nm,15.0s				
MOS	**Moscow**	**24.80 331**	*e*P	**P**	**23 15 22.5 -1.1**
MOS			*e*		23 15 55.2
MOS			*e*S	**S**	**23 19 45.0 -0.1**
MOS			*e*SSS		23 20 51.2
MOS			pmax	pmax	
	comp=Z,189nm,0.8s,mb5.7				
MOS			MLR	MLR	
	comp=Z,600nm,17.0s,MS4.2				
MOS			MLR	MLR	
	comp=N,1μm,16.0s				
MOS	**Moscow**	**24.80 331**	*e*P	**P**	**23 15 22.5 -1.1**
	comp=N,189nm,0.8s,mb5.7				
MOS			*e*S	**S**	**23 19 45.0 -0.1**
	comp=N,600nm,17.0s				
KIS	**Kishinev**	**25.07 306**	*e*P	**P**	**23 15 25.0 -1.1**
	comp=N,300nm,1.3s,mb5.7				
KIS	**Kishinev**	**25.07 306**	*e*PP		23 16 00.0
KIS			*e*S	**S**	**23 19 44.0 -5.6**
KIS			*e*SS		23 20 56.0
KIS			*e*Li		23 22 39.0
KIS			*e*Lq2		23 24 16.0
KIS			LRM		23 27 32.0
	comp=N,800nm,16.0s				
KIS	**Kishinev**	**25.07 306**	*e*P	**P**	**23 15 25.0 -1.1**
KIS			*i*		23 15 32.0
KIS			*e*		23 16 00.0
KIS			*e*S	**S**	**23 19 44.0 -5.6**
KIS			*e*SS		23 20 56.0
KIS			pmax	pmax	
	comp=Z,250nm,1.3s,mb5.6				
KIS			pmax	pmax	
	comp=Z,500nm,10.0s				
KIS			MLR	MLR	
	comp=E,600nm,15.0s				
KIS			MLR	MLR	
	comp=Z,800nm,15.0s,MS4.3				
KIS			MLR	MLR	
	comp=Z,800nm,16.0s				
KIS	**Kishinev**	**25.07 306**	P	**P**	**23 15 26.4 +0.3**
KIS	**Kishinev**	**25.07 306**	*e*P	**P**	**23 15 25.0 -1.1**
	comp=Z,500nm,10.0s				
HYB	**Hyderabad**	**25.24 131**	*e*P	**P**	**23 15 30.0 +2.1**
HYB			*e*S	**S**	**23 20 02.0 +9.3**
HYB	**Hyderabad**	**25.24 131**	*i* P	**P**	**23 15 30.0 +2.1**
HYB			*e*S	**S**	**23 20 02.0 +9.3**
HYB	**Hyderabad**	**25.24 131**	*e*P	**P**	**23 15 30.0 +2.1**
RAMN	**Ramite**	**25.24 102**	*e*P	**P**	**23 15 27.7 -0.2**
	comp=Z,319nm,1.1s,mb5.8				
PRD	**Provadia**	**25.29 297**	P	**P**	**23 15 29.4 +1.2**
PRD	**Provadia**	**25.29 297**	P	**P**	**23 15 29.4 +1.2**
LEOM	**Leova**	**25.31 305**	⇓P	**P**	**23 15 29.8 +1.5**
LEOM	**Leova**	**25.31 305**	⇓*i*P	**P**	**23 15 29.8 +1.5**
LEOM	**Leova**	**25.31 305**	P	**P**	**23 15 29.8 +1.5**
NVS	**Novosibirsk**	**25.61 34**	*e*P	**P**	**23 15 32.1 +1.1**
NVS			*e*S	**S**	**23 19 57.6 -0.4**
NVS			pmax	pmax	
	comp=N,47nm,1.7s				
NVS			pmax	pmax	
	comp=E,41nm,1.7s				
NVS			pmax	pmax	
	comp=Z,48nm,1.7s,mb4.8				
NVS			smax		
	comp=N,128nm,2.1s				
NVS			smax		
	comp=E,85nm,2.1s				
KARP	**Karpathos**	**25.65 279**	*e*P	**P**	**23 15 32.0 +0.4**
EDRB	**Edirne**	**25.65 294**	*e*P	**P**	**23 15 29.0 -2.5**
EDRB	**Edirne**	**25.65 294**	*e*P	**P**	**23 15 29.0 -2.5**
JMB	**Yambol**	**25.82 295**	P	**P**	**23 15 35.8 +2.8**
ZAA0	**Zalesovo Array**	**25.82 37**	⇑*e*P	**P**	**23 15 33.3 +0.4**
ZAA0			S	**S**	**23 20 06.0 +4.6**
ZAA0	**Zalesovo Array**	**25.82 37**	⇑*e*P	**P**	**23 15 33.3 +0.4**
ZALV	**Zalesovo Beam**	**25.82 37**	P	**P**	**23 15 33.9 +1.0**
	comp=E,29nm,1.1s,mb4.7,baz=242,slow=10,SNR=27				
ZALV			LR	LR	23 26 37.8
	comp=E,1μm,18.6s,MS4.4,baz=254,slow=38				
ZALV	**Zalesovo Beam**	**25.82 37**	P	**P**	**23 15 33.9 +1.0**
ZALV			pmax	pmax	
	comp=Z,29nm,1.1s,mb4.7				
ZALV			MLR	MLR	
	comp=Z,1μm,18.6s,MS4.4				
PETR		**25.82 303**	⇓P	**P**	**23 15 35.8 +2.7**
PETR		**25.82 303**	⇓*i*P	**P**	**23 15 35.8 +2.8**
ODAN	**Odare**	**25.91 102**	*e*P	**P**	**23 15 34.3 +0.3**
	comp=Z,286nm,0.8s,mb5.9				
GRER		**25.93 302**	P	**P**	**23 15 36.4 +2.4**
GRER		**25.93 302**	⇓*i*P	**P**	**23 15 36.4 +2.4**
GRER		**25.93 302**	⇓*i*P	**P**	**23 15 36.4 +2.4**
IAS	**Iasi**	**25.95 306**	P	**P**	**23 15 34.1 0.0**
IAS	**Iasi**	**25.95 306**	P	**P**	**23 15 34.1 0.0**
TAPN	**Taplejung**	**25.95 100**	*e*P	**P**	**23 15 34.5 +0.2**
	comp=Z,164nm,1.1s,mb5.5				
AKASG	**Malin Array Be**	**26.09 315**	P	**P**	**23 15 34.9 -0.5**
	comp=Z,38nm,0.9s,mb4.9,baz=115,slow=8.3,SNR=84				
AKASG			LR	LR	23 27 07.7
	comp=Z,418nm,18.1s,MS4.0,baz=110,slow=39				
AKASG	**Malin Array Be**	**26.09 315**	*c e*P	**P**	**23 15 34.9 -0.5**
AKASG			pmax	pmax	
	comp=Z,38nm,0.9s				
AKASG	**Malin Array Be**	**26.09 315**	P	**P**	**23 15 34.9 -0.5**
AKASG			LR	LR	23 27 07.7
AKASG	**Malin Array Be**	**26.09 315**	*e*P	**P**	**23 15 34.9 -0.5**
	comp=Z,38nm,0.9s,mb4.9				
AKBB	**Malin Array Si**	**26.09 315**	*e*P	**P**	**23 15 34.8 -0.6**
AKBB	**Malin Array Si**	**26.09 315**	*e*P	**P**	**23 15 34.8 -0.6**
KIEV	**Kiev**	**26.10 315**	⇑*e*P	**P**	**23 15 35.0 -0.4**
KIEV			pmax	pmax	
	comp=Z,59nm,0.9s,mb5.1				
KIEV	**Kiev**	**26.10 315**	⇑*e*P	**P**	**23 15 35.0 -0.4**
	comp=Z,59nm,0.9s,mb5.1				
KIEV	**Kiev**	**26.10 315**	*e*P	**P**	**23 15 35.0 -0.4**
	comp=Z,59nm,0.9s,mb5.1				
VRI	**Vrincioaia**	**26.20 303**	⇑P	**P**	**23 15 38.3 +1.9**
VRI	**Vrincioaia**	**26.20 303**	⇑*i*P	**P**	**23 15 38.3 +1.9**
VRI	**Vrincioaia**	**26.20 303**	P	**P**	**23 15 38.3 +1.9**
BOK	**Bokaro**	**26.24 109**	*e*PKP	**P**	**23 15 37.0 0.0**
PLOR	**Plostina**	**26.25 303**	⇑P	**P**	**23 15 36.9 0.0**
PLOR	**Plostina**	**26.25 303**	⇑*i*P	**P**	**23 15 36.9 0.0**
PLOR	**Plostina**	**26.25 303**	P	**P**	**23 15 36.9 0.0**
SULR		**26.32 300**	⇓P	**P**	**23 15 42.6 +5.1**
SULR		**26.32 300**	⇓*i*P	**P**	**23 15 42.6 +5.1**
SZH	**Strazhica**	**26.37 297**	P	**P**	**23 15 37.5 -0.4**
SZH	**Strazhica**	**26.37 297**	P	**P**	**23 15 37.5 -0.4**
ZKR	**Zakros**	**26.49 279**	*e*P	**P**	**23 15 42.5 +3.4**
MLR	**Muntele Rosu**	**26.67 302**	P	**P**	**23 15 42.1 +1.5**
	comp=Z,43nm,0.9s,mb5.0,baz=88,slow=3.9,SNR=51				
MLR			LR	LR	23 29 28.5
	comp=Z,534nm,18.9s,MS4.1,baz=274,slow=44				
MLR	**Muntele Rosu**	**26.67 302**	⇓P	**P**	**23 15 43.0 +2.4**
MLR	**Muntele Rosu**	**26.67 302**	⇓*i*P	**P**	**23 15 43.0 +2.4**
MLR	**Muntele Rosu**	**26.67 302**	P	**P**	**23 15 43.0 +2.4**
NPS	**Neapolis**	**26.95 279**	*e*P	**P**	**23 15 44.5 +1.2**
LAST	**Lasithi**	**27.07 279**	*e*P	**P**	**23 15 41.0 -3.4**
RZN	**Rozhen**	**27.16 293**	P	**P**	**23 15 44.3 -0.8**
RZN	**Rozhen**	**27.16 293**	P	**P**	**23 15 44.3 -0.8**
VOIR		**27.28 301**	⇓P	**P**	**23 15 46.5 +0.4**
VOIR		**27.28 301**	⇓*i*P	**P**	**23 15 46.5 +0.4**
VOIR		**27.28 301**	P	**P**	**23 15 46.5 +0.4**
IDI	**Anoyia**	**27.52 279**	P	**P**	**23 15 48.5 +0.1**
	comp=Z,9.7nm,0.9s,mb4.4,baz=62,slow=15,SNR=2.8				
IDI	**Anoyia**	**27.52 279**	*e*P	**P**	**23 15 46.5 -2.0**
IDI	**Anoyia**	**27.52 279**	P	**P**	**23 15 48.5 0.0**
BUR01	**Bucovina Ar. S**	**27.59 306**	P	**P**	**23 15 49.9 +0.9**
BUR01	**Bucovina Ar. S**	**27.59 306**	P	**P**	**23 15 49.9 +1.0**
BURAR	**Bucovina Array**	**27.59 306**	⇑P	**P**	**23 15 49.9 +1.0**
BURAR	**Bucovina Array**	**27.59 306**	⇑*i*P	**P**	**23 15 49.9 +1.0**
BURAR	**Bucovina Array**	**27.59 306**	⇑*i*P	**P**	**23 15 49.9 +1.0**
BUR08	**Bucovina Ar. S**	**27.61 306**	*e*P	**P**	**23 15 49.2 +0.1**
BUR08	**Bucovina Ar. S**	**27.61 306**	*e*P	**P**	**23 15 49.2 +0.1**
SIVA	**Sivas**	**27.64 279**	*e*P	**P**	**23 15 49.5 0.0**
LSA	**Lhasa**	**27.82 93**	P	**P**	**23 15 51.7 +0.6**
LSA			pmax	pmax	
	comp=E,2μm,14.0s				
LSA			LR	LR	
	comp=Z,2μm,12.7s,MS4.9				
MMB	**Musomiste**	**27.90 293**	P	**P**	**23 15 50.7 -1.1**
MMB	**Musomiste**	**27.90 293**	P	**P**	**23 15 50.7 -1.1**
ATD	**Arta Tunnel**	**27.96 215**	P	**P**	**23 15 52.8 +0.3**
	comp=Z,6.6nm,0.9s,mb4.3,baz=81,slow=16,SNR=3.7				
ATD			LR	LR	23 28 33.4
	comp=Z,2μm,19.3s,MS4.7,baz=203,slow=40				
ATD	**Arta Tunnel**	**27.96 215**	P	**P**	**23 15 52.8 +0.3**
VAM	**Vamos**	**28.06 280**	*e*P	**P**	**23 15 44.0 -9.2**
KARN	**Karanos**	**28.29 280**	*e*P	**P**	**23 15 53.5 -1.7**
VTS	**Vitosha**	**28.32 295**	⇑P	**P**	**23 15 55.9 +0.5**
VTS	**Vitosha**	**28.32 295**	*e*P	**P**	**23 15 55.5 +0.1**
VTS	**Vitosha**	**28.32 295**	⇑*i*P	**P**	**23 15 55.9 +0.5**
VTS	**Vitosha**	**28.32 295**	P	**P**	**23 15 55.9 +0.5**
MICGM	**Minsk**	**28.52 321**	⇓*e*P	**P**	**23 16 00.0 +2.9**
BMR	**Baia Mare**	**28.74 306**	⇓P	**P**	**23 16 00.4 +1.2**
BMR	**Baia Mare**	**28.74 306**	⇓*i*P	**P**	**23 16 00.4 +1.2**
BMR	**Baia Mare**	**28.74 306**	P	**P**	**23 16 00.4 +1.2**
GZR	**Gura Zlata**	**28.86 301**	P	**P**	**23 16 00.3 +0.1**
GZR	**Gura Zlata**	**28.86 301**	P	**P**	**23 16 00.3 +0.1**
LVV	**L'vov**	**28.92 310**	*e*P	**P**	**23 15 59.3 -1.4**
LVV	**L'vov**	**28.92 310**	*e*P	**P**	**23 15 59.3 -1.4**
DRGR		**29.10 304**	⇓P	**P**	**23 16 02.9 +0.5**
DRGR		**29.10 304**	⇓*i*P	**P**	**23 16 02.9 +0.5**
DRGR		**29.10 304**	P	**P**	**23 16 02.9 +0.5**
NACGM	**Naroch**	**29.27 321**	*e*P	**P**	**23 16 01.0 -2.8**
NACGM	**Naroch**	**29.27 321**	*e*P	**P**	**23 16 01.5 -2.3**
BARS	**Barje**	**29.35 296**	⇑*i*P	**P**	**23 16 04.3 -0.3**
TRPA	**Tarpa**	**29.47 306**	⇑*e*P	**P**	**23 16 06.1 +0.5**
IDID	**Didziasalis**	**29.49 322**	*e*P	**P**	**23 16 06.4 +0.7**
IDID			AMB	AMB	23 16 07.9
	comp=Z,36nm,0.9s,mb5.1				
IDID	**Didziasalis**	**29.49 322**	*e*P	**P**	**23 16 06.4 +0.7**
	comp=Z,36nm,0.9s,mb5.1,SNR=28				
BZS	**Buzias**	**29.69 301**	⇑P	**P**	**23 16 07.9 +0.3**
BZS	**Buzias**	**29.69 301**	⇑*i*P	**P**	**23 16 07.9 +0.3**
BZS	**Buzias**	**29.69 301**	P	**P**	**23 16 07.9 +0.3**
KWP	**Kalwaria Pacla**	**29.70 309**	*e*P	**P**	**23 16 07.8 +0.2**
KWP	**Kalwaria Pacla**	**29.70 309**	⇑*e*P	**P**	**23 16 07.6 0.0**
KWP			S	**S**	**23 21 02.5 0.0**
KWP			pmax	pmax	
	comp=Z,38nm,1.1s,mb5.0				
KWP	**Kalwaria Pacla**	**29.70 309**	⇑*e*P	**P**	**23 16 07.6 0.0**
	comp=Z,38nm,1.1s,mb5.0				
KWP			S	**S**	**23 21 02.5 0.0**
KWP	**Kalwaria Pacla**	**29.70 309**	⇓*i*P	**P**	**23 16 08.1 +0.5**
KWP	**Kalwaria Pacla**	**29.70 309**	*e*P	**P**	**23 16 07.6 0.0**
	comp=Z,38nm,1.1s,mb5.0				
KWP			S	**S**	**23 21 02.5 0.0**
UZH	**Uzhgorod**	**29.73 307**	⇓*i*P	**P**	**23 16 08.0 +0.1**
UZH			*e*S	**S**	**23 20 59.0 -4.1**
UZH			MLR	MLR	
	comp=N,590nm,14.0s,MS4.4				
UZH			MLR	MLR	
	comp=E,340nm,14.0s,MS4.4				
UZH			MLR	MLR	
	comp=Z,270nm,14.0s,MS4.0				
UZH	**Uzhgorod**	**29.73 307**	*i* P	**P**	**23 16 08.0 +0.1**
KRUS	**Krusevo**	**29.77 293**	*i* P	**P**	**23 16 07.3 -1.0**
IIGN	**Ignalina**	**29.77 322**	*e*P	**P**	**23 16 09.0 +0.8**
IIGN			AMB	AMB	23 16 10.6
	comp=Z,40nm,1.0s,mb5.1				
IIGN	**Ignalina**	**29.77 322**	*e*P	**P**	**23 16 09.0 +0.8**
	comp=Z,40nm,1.0s,mb5.1,SNR=28				
ISAL	**Salakas**	**29.92 322**	*e*P	**P**	**23 16 10.3 +0.7**
ISAL			AMB	AMB	23 16 10.9
	comp=Z,35nm,0.9s,mb5.1				
ISAL	**Salakas**	**29.92 322**	*e*P	**P**	**23 16 10.3 +0.8**
	comp=Z,35nm,0.9s,mb5.1,SNR=28				
IZAR	**Zarasai**	**29.95 322**	*e*P	**P**	**23 16 10.4 +0.7**
IZAR			AMB	AMB	23 16 11.1
	comp=Z,35nm,0.9s,mb5.1				
IZAR	**Zarasai**	**29.95 322**	*e*P	**P**	**23 16 10.4 +0.6**
	comp=Z,35nm,0.9s,mb5.1,SNR=28				
GRUS	**Gruza**	**30.19 298**	⇓*i*P	**P**	**23 16 12.4 +0.3**
CRVS	**Cervenica-Dubn**	**30.33 308**	*e*P	**P**	**23 16 13.8 +0.6**
CRVS			pmax	pmax	
	comp=Z,16nm,1.2s,mb4.6				
CRVS			MLR	MLR	
	comp=Z,300nm,16.0s,MS4.0				
CRVS	**Cervenica-Dubn**	**30.33 308**	*e*P	**P**	**23 16 13.8 +0.6**
	comp=Z,16nm,1.2s,mb4.6				
CRVS			*e*S	S	23 21 42.8 +30
CRVS			*e*		23 23 57.8
CRVS			LR	LR	
	comp=Z,300nm,16.0s,MS4.0				
CRVS	**Cervenica-Dubn**	**30.33 308**	*e*P	**P**	**23 16 13.8 +0.6**
CRVS			*e*PGS		23 21 42.8
CRVS			*e*		23 23 57.8
CRVS	**Cervenica-Dubn**	**30.33 308**	*e*P	**P**	**23 16 13.8 +0.6**
	comp=Z,16nm,1.2s,mb4.6				
PUL	**Pulkovo**	**30.41 332**	*c e*P	**P**	**23 16 14.8 +1.0**
PUL			pmax	pmax	
	comp=Z,177nm,0.7s,mb5.9				
PUL	**Pulkovo**	**30.41 332**	*e*P	**P**	**23 16 14.8 +1.0**
	comp=Z,177nm,0.7s,mb5.9				
STHS	**Stebnicka Huta**	**30.58 309**	*e*P	**P**	**23 16 15.0 -0.4**
STHS	**Stebnicka Huta**	**30.58 309**	*e*P	**P**	**23 16 15.0 -0.4**
STHS	**Stebnicka Huta**	**30.58 309**	*e*P	**P**	**23 16 15.0 -0.4**
DIVS	**Divibare**	**30.73 298**	⇑*i*P	**P**	**23 16 16.7 -0.1**
SUW	**Suwalki**	**30.80 318**	*e*P	**P**	**23 16 17.2 -0.2**
SUW	**Suwalki**	**30.80 318**	*e*P	**P**	**23 16 17.0 -0.3**
SUW			*e*		23 17 25.8
SUW			pmax	pmax	
	comp=Z,85nm,1.2s,mb5.5				
SUW	**Suwalki**	**30.80 318**	*e*P	**P**	**23 16 17.0 -0.3**
	comp=Z,85nm,1.2s,mb5.5				
SUW			*e*PP	PP	23 17 25.8 -1.0
SUW	**Suwalki**	**30.80 318**	*e*P	**P**	**23 16 17.0 -0.3**
	comp=Z,85nm,1.2s,mb5.5				
KECS	**Kecovo**	**30.88 307**	*e*P	**P**	**23 16 19.2 +1.1**
KECS			pmax	pmax	
	comp=Z,3.0nm,0.9s,mb4.1				
KECS	**Kecovo**	**30.88 307**	*e*P	**P**	**23 16 19.2 +1.1**
	comp=Z,3.1nm,0.9s,mb4.1				
KECS	**Kecovo**	**30.88 307**	*e*P	**P**	**23 16 19.2 +1.1**
FGSL	**Fruska Gora**	**30.92 300**	⇑*i*P	**P**	**23 16 18.3 -0.2**
FRGS	**Fruska Gora**	**30.92 300**	⇑*i*P	**P**	**23 16 18.3 -0.2**
VSU	**Vasula**	**31.12 327**	*e*P	**P**	**23 16 19.1 -1.0**
VSU			pmax	pmax	
	comp=Z,82nm,1.2s,mb5.4				
VSU	**Vasula**	**31.12 327**	*e*P	**P**	**23 16 19.1 -1.0**
	comp=Z,82nm,1.2s,mb5.4				
BBLS	**Lazići**	**31.14 298**	⇑*i*P	**P**	**23 16 20.6 +0.2**
NIE	**Niedzica**	**31.17 308**	*e*P	**P**	**23 16 21.4 +0.8**
NIE	**Niedzica**	**31.17 308**	*e*P	**P**	**23 16 21.4 +0.8**
PSZ	**Piszkesteto**	**31.18 305**	⇑*e*P	**P**	**23 16 20.2 -0.5**
PSZ			pmax	pmax	
	comp=Z,24nm,1.2s,mb4.9				
PSZ	**Piszkesteto**	**31.18 305**	⇑*e*P	**P**	**23 16 20.2 -0.5**
	comp=Z,24nm,1.2s,mb4.9				
PSZ	**Piszkesteto**	**31.18 305**	⇑*i*P	**P**	**23 16 22.4 +1.7**
PSZ	**Piszkesteto**	**31.18 305**	*e*P	**P**	**23 16 20.2 -0.5**
	comp=Z,24nm,1.2s,mb4.9				
PKS2	**Kecel**	**31.45 303**	*e*P	**P**	**23 16 24.2 +1.0**
PENC	**Penc**	**31.57 305**	*e*P	**P**	**23 16 25.9 +1.8**
OJC	**Ojcow**	**31.66 310**	*e*P	**P**	**23 16 22.8 -2.2**
OJC			*e*S	**S**	**23 21 35.1 +1.8**
OJC			MLR	MLR	
	comp=Z,300nm,18.0s,MS4.0				
OJC	**Ojcow**	**31.66 310**	*e*P	**P**	**23 16 22.8 -2.2**
OJC			*e*S	**S**	**23 21 35.1 +1.8**
BUD	**Budapest**	**31.70 304**	⇑*e*P	**P**	**23 16 21.5 -3.8**
PKSM	**Moragy**	**31.82 302**	⇑P	**P**	**23 16 27.8 +1.4**
PKSM	**Moragy**	**31.82 302**	⇑*i*P	**P**	**23 16 27.8 +1.4**
PKSM	**Moragy**	**31.82 302**	⇑*e*P	**P**	**23 16 26.5 +0.1**
VYHS	**Vyhne**	**31.96 306**	*e*P	**P**	**23 16 28.0 +0.4**
VYHS			pmax	pmax	
	comp=Z,13nm,1.3s,mb4.6				
VYHS	**Vyhne**	**31.96 306**	*e*P	**P**	**23 16 28.0 +0.4**
	comp=Z,13nm,1.3s,mb4.6				
VYHS			*e*S	**S**	**23 21 50.7 +13**
VYHS	**Vyhne**	**31.96 306**	*e*P	**P**	**23 16 28.0 +0.4**
VYHS			*e*S	**S**	**23 21 50.6 +13**
VYHS	**Vyhne**	**31.96 306**	*e*P	**P**	**23 16 28.0 +0.4**
	comp=Z,13nm,1.3s,mb4.6				
PKS9	**Tamasi**	**32.10 303**	*e*P	**P**	**23 16 30.2 +1.3**
PKSG		**32.11 304**	⇓*e*P	**P**	**23 16 29.7 +0.8**
JOF	**Joensuu**	**32.20 337**	*e*P	**P**	**23 16 29.6 +0.1**
JOF			pmax	pmax	
	comp=Z,50nm,1.0s,mb5.3				
JOF	**Joensuu**	**32.20 337**	*e*p	**P**	**23 16 29.6 +0.1**
	comp=Z,50nm,1.0s,mb5.3				
JOF	**Joensuu**	**32.20 337**	*e*P	**P**	**23 16 29.6 +0.1**
	comp=Z,50nm,1.0s,mb5.3				
KOLL	**Kolacno**	**32.26 306**	*e*P	**P**	**23 16 30.7 +0.5**
KOLL	**Kolacno**	**32.26 306**	*e*P	**P**	**23 16 30.7 +0.5**
KOLL	**Kolacno**	**32.26 306**	*e*P	**P**	**23 16 30.7

DPC *e*PP PP 23 17 49.4 -12
DPC AMS AMS 23 33 00.0
comp=Z,400nm,15.7s
DPC Dobruska-Polom 33.88 309 *e*P **P 23 16 45.4 +1.1**
comp=Z,400nm,15.7s
GKP Gorka Klasztor 33.93 314 *e*P **P 23 16 44.7 0.0**
GKP Gorka Klasztor 33.93 314 *e*P **P 23 16 44.7 0.0**
KSP Ksiaz 33.98 310 *e*P **P 23 16 45.7 +0.5**
KSP Ksiaz 33.98 310 *e*P **P 23 16 45.5 +0.3**
KSP *e*S **S 23 22 09.0 -0.3**
KSP Ksiaz 33.98 310 *e*P **P 23 16 45.5 +0.3**
KSP *e*S **S 23 22 09.0 -0.3**
MOY Mondy 33.99 48 *e*P **P 23 16 48.3 +3.0**
MOY pmax pmax
comp=Z,55nm,2.7s,mb5.0
ARSA Arzberg 34.04 304 *i* P **P 23 16 46.1 +0.4**
comp=Z,28nm,0.9s,mb5.2,SNR=16
ARSA Arzberg 34.04 304 P **P 23 16 46.2 +0.4**
comp=Z,28nm,0.9s,mb5.2,SNR=16
SOI Samo 34.06 287 P **P 23 16 45.0 -1.1**
SOI Samo 34.06 287 P **P 23 16 45.0 -1.1**
UPC Upice 34.10 309 *e*P **P 23 16 47.2 +0.9**
UPC *e* 23 17 18.4
UPC Upice 34.10 309 *e*P **P 23 16 47.2 +0.9**
UPC *ex* x 23 17 18.4
UPC Upice 34.10 309 *e*P **P 23 16 47.2 +0.9**
CEL Celeste 34.15 287 P **P 23 16 44.6 -2.3**
comp=Z,15nm,1.0s,mb4.9
CEL *e*PcP PcP 23 19 24.2 +0.4
CEL Celeste 34.15 287 *e*P **P 23 16 44.5 -2.4**
CEL Celeste 34.15 287 P **P 23 16 44.6 -2.3**
comp=Z,15nm,1.0s,mb4.9
TREC Trest 34.26 307 *e*P **P 23 16 48.1 +0.4**
TREC MLR MLR
comp=Z,500nm,9.7s
TREC Trest 34.26 307 *e*P **P 23 16 48.1 +0.4**
TREC AMS AMS 23 37 40.0
comp=Z,500nm,9.7s
TREC Trest 34.26 307 *e*P **P 23 16 48.1 +0.4**
comp=Z,500nm,9.7s
PERS Pernice 34.28 302 *i* P **P 23 16 47.7 -0.1**
PERS Pernice 34.28 302 *i* P **P 23 16 47.7 -0.2**
SOKA Soboth 34.34 302 ⇑*i*P **P 23 16 48.5 0.0**
comp=Z,18nm,1.2s,mb4.9
SOKA Soboth 34.34 302 P **P 23 16 48.5 +0.1**
comp=Z,18nm,1.2s,mb4.9
MRB1 Monte Rocchett 34.50 293 P **P 23 16 50.2 +0.3**
MRB1 Monte Rocchett 34.50 293 P **P 23 16 50.2 +0.3**
LJU Ljubljana 34.67 301 *e*P **P 23 16 51.2 -0.1**
LJU Ljubljana 34.67 301 *e*P **P 23 16 51.2 0.0**
OBKA Obir 34.67 302 ⇑*i*P **P 23 16 51.6 +0.4**
comp=Z,14nm,1.2s,mb4.8,SNR=6.4
OBKA Obir 34.67 302 P **P 23 16 51.6 +0.4**
comp=Z,14nm,1.2s,mb4.8,SNR=6.4
KNDS Knezji Dol 34.76 300 *e*P **P 23 16 51.8 -0.3**
KNDS Knezji Dol 34.76 300 *e*P **P 23 16 51.8 -0.2**
SGG Gregorio Mates 34.92 293 P **P 23 16 53.0 -0.5**
SGG Gregorio Mates 34.92 293 P **P 23 16 53.0 -0.5**
MOA Molln 34.93 304 ⇑*i*P **P 23 16 53.2 -0.3**
comp=Z,8.7nm,1.0s,mb4.7
MOA Molln 34.93 304 P **P 23 16 53.2 -0.3**
comp=Z,8.7nm,1.0s,mb4.7
PRU Pruhonice 34.96 308 *e*P **P 23 16 54.6 +0.9**
PRU *e* 23 18 18.6
PRU MLR MLR
comp=Z,600nm,14.8s,MS4.5
PRU Pruhonice 34.96 308 *e*P **P 23 16 54.6 +0.9**
PRU *e*PP PP 23 18 18.6 +5.6
PRU Pruhonice 34.96 308 *e*P **P 23 16 54.6 +0.9**
PRU *e*PP PP 23 18 18.6 +5.6
PRU AMS AMS 23 33 40.0
comp=Z,600nm,14.8s
PRU Pruhonice 34.96 308 *e*P **P 23 16 54.6 +0.9**
comp=Z,600nm,14.8s
MIDA Miranda 34.99 294 P **P 23 16 54.4 +0.3**
MIDA Miranda 34.99 294 P **P 23 16 54.4 +0.3**
PVCC Panska Ves 35.01 309 *e*P **P 23 16 55.1 +0.9**
PVCC MLR MLR
comp=Z,500nm,11.9s,MS4.5
PVCC Panska Ves 35.01 309 *e*P **P 23 16 55.1 +0.9**
PVCC AMS AMS 23 35 10.0
comp=Z,500nm,11.9s
PVCC Panska Ves 35.01 309 *e*P **P 23 16 55.1 +0.9**
comp=Z,500nm,11.9s
RNI2 Rionero Sannit 35.07 294 P **P 23 16 55.1 +0.4**
RNI2 Rionero Sannit 35.07 294 P **P 23 16 55.1 +0.4**
LVZ Lovozero 35.13 344 *ce*P **P 23 16 54.5 -0.5**
LVZ pmax pmax
comp=Z,62nm,1.7s,mb5.3
LVZ Lovozero 35.13 344 *e*P **P 23 16 54.5 -0.5**
comp=Z,62nm,1.7s,mb5.3
APA Apatity 35.15 343 ⇑*i*P **P 23 16 56.0 +0.9**
APA *i* 23 19 26.0
APA *e*S **S 23 22 26.0 -0.9**
APA pmax pmax
comp=Z,65nm,1.0s,mb5.5
APA MLR MLR
comp=Z,2μm,12.0s,MS5.1
APA Apatity 35.15 343 *i* P **P 23 16 56.0 +0.9**
comp=Z,65nm,1.0s,mb5.5
APA Apatity 35.15 343 *i* PcP PcP 23 19 26.0 0.0
APA *e*S **S 23 22 26.0 -0.9**
comp=Z,2μm,12.0s
CADS Cadrg 35.22 302 *e*P **P 23 16 55.6 -0.4**
CADS *e* 23 18 30.8
CADS Cadrg 35.22 302 *e*P **P 23 16 55.6 -0.4**
MYKA Terra Mystica 35.30 302 ⇑*i*P **P 23 16 56.9 +0.2**
comp=Z,9.1nm,1.0s,mb4.7
MYKA Terra Mystica 35.30 302 P **P 23 16 56.9 +0.2**
comp=Z,9.1nm,1.0s,mb4.7
VAE Valguarnera 35.44 286 P **P 23 16 58.7 +0.7**
comp=Z,4.2nm,0.6s,mb4.5,baz=76,slow=18,SNR=2.4
VAE Valguarnera 35.44 286 P **P 23 16 58.7 +0.7**
BRG Berggiesshubel 35.46 310 *e*P **P 23 16 58.6 +0.6**
comp=Z,21nm,1.2s,mb4.9
BRG Berggiesshubel 35.46 310 *i* P **P 23 16 58.2 +0.2**
comp=Z,21nm,1.2s,mb4.9
BRG
comp=N,356nm,10.8s
BRG
comp=E,324nm,9.1s
BRG
comp=Z,546nm,11.4s
BRG Berggiesshubel 35.46 310 *i* P **P 23 16 58.2 +0.2**
BRG pmax pmax
comp=Z,13nm,1.2s,mb4.7
BRG MLR MLR
comp=N,213nm,10.8s
BRG MLR MLR
comp=E,194nm,9.1s
BRG MLR MLR
comp=Z,327nm,11.4s,MS4.3
BRG Berggiesshubel 35.46 310 *i* P **P 23 16 58.2 +0.2**
comp=Z,327nm,11.4s
KHC Kasperske Hory 35.49 307 *e*P **P 23 16 57.9 -0.4**
KHC *e* 23 18 21.6
KHC MLR MLR
comp=Z,500nm,14.1s,MS4.4
KHC Kasperske Hory 35.49 307 *e*P **P 23 16 56.8 -1.5**
comp=Z,25nm,1.5s,mb4.9
KHC PP PP 23 18 17.4 -1.4
KHC Kasperske Hory 35.49 307 *e*P **P 23 16 57.9 -0.4**
KHC *e*PP PP 23 18 21.6 +2.8
KHC AMS AMS 23 37 20.0
comp=Z,500nm,14.1s
KHC Kasperske Hory 35.49 307 *e*P **P 23 16 56.8 -1.5**
comp=Z,25nm,1.5s,mb4.9
KHC Kasperske Hory 35.49 307 PP PP 23 18 17.5 -1.3
PTCC Patocco-Chiusa 35.49 302 P **P 23 16 58.3 0.0**
PTCC Patocco-Chiusa 35.49 302 P **P 23 16 58.3 0.0**
KBA Koelnbreinsper 35.52 303 ⇑*i*P **P 23 16 58.8 +0.3**
comp=Z,18nm,1.0s,mb5.0
KBA Koelnbreinsper 35.52 303 P **P 23 16 58.8 +0.3**
comp=Z,18nm,1.0s,mb5.0
AQU L'Aquila 35.57 295 *e*P **P 23 16 58.7 -0.4**
AQU L'Aquila 35.57 295 *e*P **P 23 16 58.7 -0.4**
TLY Talaya 35.61 49 *e*P **P 23 17 01.5 +2.2**
TLY *e*S **S 23 22 43.2 +8.8**
TLY *e*SSS 23 25 20.1
TLY pmax pmax
comp=Z,23nm,2.1s,mb4.7
TLY MLR MLR
comp=Z,2μm,16.0s,MS5.0
TLY Talaya 35.61 49 *e*P **P 23 17 01.6 +2.3**
TLY Talaya 35.61 49 *e*P **P 23 17 01.5 +2.2**
comp=Z,23nm,2.1s,mb4.7
BSD Bornholm Skovb 35.72 317 *i* P **P 23 16 59.1 -1.0**
BSD MLR MLR
comp=Z,380nm,10.0s,MS4.5
BSD Bornholm Skovb 35.72 317 *i* P **P 23 16 59.1 -1.0**
BSD *i* 23 18 12.0
BSD
comp=Z,370nm,10.0s
BSD Bornholm Skovb 35.72 317 *i* P **P 23 16 59.1 -1.0**
FIAM Fiamignano 35.79 295 P **P 23 17 00.4 -0.5**
FIAM Fiamignano 35.79 295 P **P 23 17 00.4 -0.5**
SNTG Esanatoglia 35.85 297 P **P 23 17 01.5 +0.1**
SNTG Esanatoglia 35.85 297 P **P 23 17 01.5 +0.1**
RJOB Jochberg 35.91 304 *e*P **P 23 17 01.8 -0.2**
comp=Z,26nm,1.5s,mb4.9
FSSB Fossombrone 35.94 297 P **P 23 17 02.6 +0.4**
FSSB Fossombrone 35.94 297 P **P 23 17 02.6 +0.4**
WET Wettzell 35.95 307 *e*P **P 23 17 01.4 -0.8**
comp=Z,8.0nm,1.5s,mb4.4
ASS Assisi 36.07 296 P **P 23 17 04.3 +1.0**
ASS Assisi 36.07 296 P **P 23 17 04.3 +1.0**
IRK Irkutsk 36.09 48 *e*P **P 23 17 05.3 +2.0**
IRK pmax pmax
comp=Z,47nm,1.6s,mb5.2
IRK Irkutsk 36.09 48 *e*P **P 23 17 05.3 +2.0**
comp=Z,47nm,1.6s,mb5.2
CLL Collm 36.10 310 *e*P **P 23 17 03.3 -0.2**
comp=Z,14nm,1.4s,mb4.7
CLL Collm 36.10 310 ⇑*i*P **P 23 17 03.1 -0.4**
CLL *i* 23 17 12.1
CLL pmax pmax
comp=Z,14nm,1.4s,mb4.7
CLL Collm 36.10 310 ⇑*i*P **P 23 17 03.1 -0.4**
CLL *i* 23 17 12.1
CLL *e*PcS PcS 23 23 15.0 -1.4
CLL Collm 36.10 310 ⇑*i*P **P 23 17 03.1 -0.4**
comp=Z,14nm,1.4s,mb4.7
CLL *i* 23 17 12.1
CLL *e*PP PP 23 18 20.0 -5.6
CLL *i* PPP 23 18 35.2
CLL *i* PPPP 23 18 44.5
CLL *e* 23 19 18.0
CLL *e*PcP PcP 23 19 28.0 -1.2
CLL *e*PcS PcS 23 23 15.0 -1.4
CLL *e*SSS 23 25 36.0
CLL L 23 34 00.0
comp=N,200nm,19.1s
CLL L 23 34 00.0
comp=E,400nm,19.7s
CLL Collm 36.10 310 *i* P **P 23 17 03.1 -0.4**
comp=E,14nm,1.4s,mb4.7
MURB Monte Urbino 36.15 297 P **P 23 17 04.8 +0.8**
MURB Monte Urbino 36.15 297 P **P 23 17 04.8 +0.8**
LZH Lanzhou 36.30 76 *e*P **P 23 17 08.5 +3.1**
LZH pP pP 23 17 16.5 +5.5
LZH sP sP 23 17 19.7 +6.4
LZH PP PP 23 18 32.0 +4.0
LZH S **S 23 22 46.0 +0.7**
LZH sS sS 23 23 02.0 +7.5
LZH pmax pmax
comp=Z,28nm,1.1s,mb5.1
LZH pmax pmax
comp=Z,140nm,4.0s
LZH LR LR
comp=E,1μm,13.7s
LZH LR LR
comp=Z,2μm,15.0s,MS5.0
NKC Novy Kostel 36.33 308 *e*P **P 23 17 05.9 +0.5**
NKC *e* 23 18 30.0
NKC MLR MLR
comp=Z,600nm,12.5s,MS4.6
NKC Novy Kostel 36.33 308 *e*P **P 23 17 05.9 +0.5**
NKC *e* 23 17 58.0
NKC *e*PP PP 23 18 30.0 +2.0
NKC Novy Kostel 36.33 308 *e*P **P 23 17 05.9 +0.5**
NKC *ex* x 23 17 58.0
NKC *e*PP PP 23 18 30.0 +2.0
NKC AMS AMS 23 38 10.0
comp=Z,600nm,12.5s
NKC Novy Kostel 36.33 308 *e*P **P 23 17 05.9 +0.5**
TANN Tannenbergstha 36.34 309 *e*P **P 23 17 05.7 +0.2**
comp=Z,17nm,1.6s,mb4.7
BADI Badiali 36.34 297 P **P 23 17 07.2 +1.6**
BADI Badiali 36.34 297 P **P 23 17 07.2 +1.6**
SFI Santa Sofia 36.60 298 P **P 23 17 08.7 +0.8**
SFI Santa Sofia 36.60 298 P **P 23 17 08.7 +0.8**
WTTA Wattenberg 36.69 303 ⇑*i*P **P 23 17 07.9 -0.6**
comp=Z,40nm,1.2s,mb5.1,SNR=11
WTTA Wattenberg 36.69 303 P **P 23 17 07.9 -0.6**
comp=Z,40nm,1.2s,mb5.1,SNR=11
MOX Moxa 36.90 309 *e*P **P 23 17 10.9 +0.6**
comp=Z,40nm,1.3s,mb5.1
MOX
comp=Z,300nm,18.0s
MOX Moxa 36.90 309 *e*P **P 23 17 10.9 +0.6**
FUR Furstenfeldbru 36.95 305 *e*P **P 23 17 10.5 -0.3**
comp=Z,27nm,1.6s,mb4.8
SONM Songino Array 37.04 56 P **P 23 17 13.6 +2.0**
comp=Z,5.7nm,1.0s,mb4.4,baz=272,slow=10,SNR=18
SONM LR LR 23 34 14.3
comp=Z,1μm,19.3s,MS4.8,baz=265,slow=39
SONM Songino Array 37.04 56 P **P 23 17 13.6 +2.0**
SONM pmax pmax
comp=Z,6.0nm,1.0s
SONM MLR MLR
comp=Z,1μm,19.3s
SONM Songino Array 37.04 56 P **P 23 17 13.6 +2.0**
comp=Z,1μm,19.3s
MOTA Moosalm 37.05 303 ⇑*i*P **P 23 17 10.6 -1.1**
comp=Z,7.3nm,0.7s,mb4.6,SNR=7.6
MOTA Moosalm 37.05 303 P **P 23 17 10.6 -1.0**
comp=Z,7.3nm,0.7s,mb4.6,SNR=7.6
GRF Grafenberg Arr 37.07 307 *e*P **P 23 17 12.2 +0.4**
comp=Z,47nm,1.7s,mb5.0
GRF *e*L 23 36 34.9
comp=Z,420nm,18.7s
GRF Grafenberg Arr 37.07 307 *e*P **P 23 17 12.2 +0.4**
GRF pmax pmax
comp=Z,47nm,1.7s,mb5.0
GRF MLR MLR
comp=Z,400nm,18.7s,MS4.2
GRF Grafenberg Arr 37.07 307 *e*P **P 23 17 12.2 +0.4**
comp=Z,400nm,18.7s
FNVD Fontana Vidola 37.11 298 P **P 23 17 13.3 +1.1**
FNVD Fontana Vidola 37.11 298 P **P 23 17 13.3 +1.1**
COP Copenhagen 37.23 317 *i* P **P 23 17 14.8 +1.8**
COP *i* 23 18 33.4
COP MLR MLR
comp=Z,200nm,12.0s,MS4.1
COP Copenhagen 37.23 317 *i* P **P 23 17 14.8 +1.8**
COP *i* 23 18 33.4
COP
comp=Z,200nm,12.0s
COP Copenhagen 37.23 317 *i* P **P 23 17 14.8 +1.8**
RETA Reutte 37.28 304 ⇑*i*P **P 23 17 12.5 -1.1**
comp=Z,11nm,0.8s,mb4.7,SNR=6.2
RETA Reutte 37.28 304 P **P 23 17 12.5 -1.1**
comp=Z,11nm,0.8s,mb4.7,SNR=6.2
FETA Feichten 37.30 303 ⇑*i*P **P 23 17 13.1 -0.7**
comp=Z,21nm,1.0s,mb4.9,SNR=13
FETA Feichten 37.30 303 P **P 23 17 13.1 -0.7**
comp=Z,21nm,1.0s,mb4.9,SNR=13
MABI Malga Bissina 37.46 301 P **P 23 17 14.8 -0.3**
MABI Malga Bissina 37.46 301 P **P 23 17 14.8 -0.3**
ULN Ulaanbaatar 37.48 56 *e*P **P 23 17 16.8 +1.5**
ULN pmax pmax
comp=Z,26nm,1.0s,mb5.0
ULN Ulaanbaatar 37.48 56 *e*P **P 23 17 16.8 +1.5**
comp=Z,26nm,1.0s,mb5.0
ULN Ulaanbaatar 37.48 56 P **P 23 17 17.2 +1.9**
comp=Z,382nmcomp=Z,29nm,1.3s,mb5.0
ULN Ulaanbaatar 37.48 56 *e*P **P 23 17 16.8 +1.5**
comp=Z,26nm,1.0s,mb5.0
CD2 Chengdu 37.67 84 P **P 23 17 18.9 +1.8**
CD2 pP pP 23 17 24.7 +2.0
CD2 PP PP 23 18 47.9 +4.8
CD2 S **S 23 23 07.8 +1.5**
CD2 sS sS 23 23 17.7 +2.2
CD2 pmax pmax
comp=Z,30nm,1.4s,mb4.8
CD2 pmax pmax
comp=Z,190nm,7.5s
CD2 LR LR
comp=N,2μm,14.9s
CD2 LR LR
comp=Z,760nm,8.9s
HFS Hagfors 37.84 325 P **P 23 17 18.2 +0.1**
comp=Z,34nm,0.7s,mb5.2,baz=108,slow=9.5,SNR=72
HFS Hagfors 37.84 325 P **P 23 17 18.2 0.0**
HFS pmax pmax
comp=Z,34nm,0.7s
HFS Hagfors 37.84 325 P **P 23 17 18.2 0.0**
comp=Z,34nm,0.7s,mb5.2
DAVA Damuels 37.88 303 *i* P **P 23 17 17.9 -0.8**
comp=Z,28nm,0.9s,mb5.0,SNR=9.5
DAVA Damuels 37.88 303 P **P 23 17 17.9 -0.8**
comp=Z,28nm,0.9s,mb5.0,SNR=9.5
UBBA Unterbreizbach 37.93 309 *e*P **P 23 17 19.3 +0.2**
comp=Z,35nm,1.9s,mb4.8
BSEG Bad Segeberg 38.10 314 *e*P **P 23 17 20.6 +0.2**
comp=Z,38nm,1.0s,mb5.1
KEV Kevo 38.34 343 *e*P **P 23 17 22.3 +0.1**
KEV Kevo 38.34 343 *e*P **P 23 17 22.3 +0.1**
STU Stuttgart 38.35 306 *e*P **P 23 17 22.4 -0.3**
comp=Z,48nm,1.4s,mb5.0
STU Stuttgart 38.35 306 *e*P **P 23 17 22.1 -0.6**
STU *e* 23 18 49.3
STU *e* 23 19 35.6
STU pmax pmax
comp=Z,55nm,1.5s,mb5.1
STU Stuttgart 38.35 306 *e*P **P 23 17 22.1 -0.6**
comp=Z,55nm,1.5s,mb5.1
STU *e*PP PP 23 18 49.3 -1.0
STU *e*PcP PcP 23 19 35.6 -0.4
STU Stuttgart 38.35 306 *e*P **P 23 17 22.1 -0.6**
comp=Z,55nm,1.5s,mb5.1
STU Stuttgart 38.35 306 *e*PP PP 23 18 49.3 -1.0
STU Stuttgart 38.35 306 *e*PcP PcP 23 19 35.6 -0.5
ARCES ARCESS Array B 38.55 342 P **P 23 17 24.4 +0.4**
comp=Z,16nm,0.9s,mb4.7,baz=144,slow=4.3,SNR=23
ARCES ARCESS Array B 38.55 342 P **P 23 17 24.5 +0.5**
ARCES pmax pmax
comp=Z,16nm,0.9s
ARCES ARCESS Array B 38.55 342 P **P 23 17 24.5 +0.5**
comp=Z,16nm,0.9s,mb4.8
ARE0 ARCESS Array S 38.55 342 *e*P **P 23 17 24.2 +0.2**
ARE0 *e*PP PP 23 18 50.9 -1.3
ARE0 ARCESS Array S 38.55 342 *e*P **P 23 17 24.2 +0.2**
TOD Tromm 38.63 307 *e*P **P 23 17 26.0 +1.0**
TOD Tromm 38.63 307 *e*P **P 23 17 26.0 +1.0**
TNS Taunus Mts 38.89 308 *e*P **P 23 17 27.4 +0.3**
comp=Z,33nm,1.5s,mb4.8
BFO Black Forest 38.92 305 *e*P **P 23 17 25.9 -1.6**
comp=Z,18nm,1.6s,mb4.5
BFO Black Forest 38.92 305 *e*P **P 23 17 26.1 -1.4**
BFO pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
BFO Black Forest 38.92 305 *e*P **P 23 17 26.1 -1.4**
comp=Z,5.7nm,0.8s,mb4.3
BFO Black Forest 38.92 305 *e*P **P 23 17 26.1 -1.4**
comp=Z,6.0nm,0.8s,mb4.4
VSL Villasalto 38.96 291 P **P 23 17 27.0 -0.8**
VSL Villasalto 38.96 291 P **P 23 17 27.0 -0.9**
KMI Kunming 39.08 93 P **P 23 17 29.7 +0.7**
KMI PP PP 23 19 05.0 +6.4
KMI S **S 23 23 31.9 +4.3**
KMI sS sS 23 23 41.5 +4.6
KMI pmax pmax
comp=Z,27nm,1.1s,mb4.9
KMI pmax pmax
comp=Z,220nm,3.5s
KMI LR LR
comp=N,690nm,17.4s,MS4.6
KMI LR LR
comp=E,520nm,17.4s,MS4.6
KMI LR LR
comp=Z,710nm,18.8s,MS4.5
KTD Kalmit 39.10 307 *e*P **P 23 17 29.7 +0.8**
KTD Kalmit 39.10 307 *e*P **P 23 17 29.7 +0.8**
CHG Chiang Mai 39.14 104 ⇑*i*P **P 23 17 29.4 -0.2**
comp=Z,46nm,1.2s,mb5.1
CHTO Chiang Mai 39.14 104 *e*P **P 23 17 29.8 +0.2**
CHTO pmax pmax
comp=Z,49nm,1.0s,mb5.2
CHTO Chiang Mai 39.14 104 *e*P **P 23 17 29.8 +0.1**
comp=Z,49nm,1.0s,mb5.2
CHTO Chiang Mai 39.14 104 P **P 23 17 29.9 +0.3**
comp=Z,698nmcomp=Z,51nm,1.0s,mb5.2
CHTO Chiang Mai 39.14 104 *e*P **P 23 17 29.8 +0.2**
comp=Z,49nm,1.0s,mb5.2
FELD Feldberg im Sc 39.15 304 *e*P **P 23 17 28.6 -0.7**
FELD Feldberg im Sc 39.15 304 *e*P **P 23 17 28.6 -0.7**
MUD Monsted U'grnd 39.17 318 *i* P **P 23 17 34.7 +5.3**
MUD *i* 23 26 18.7
MUD Monsted U'grnd 39.17 318 *i* P **P 23 17 34.7 +5.3**
MUD *i* 23 18 58.3
MUD *i* 23 26 18.7
LANF Langenberg 39.27 306 *e*P **P 23 17 30.6 +0.2**
LANF Langenberg 39.27 306 *e*P **P 23 17 30.6 +0.2**
NB2 NORSAR Subarra 39.30 325 P **P 23 17 30.0 -0.4**
comp=Z,34nm,0.8s,mb5.1,baz=109,slow=8.6
NB2 NORSAR Subarra 39.30 325 P **P 23 17 30.0 -0.4**
NOA NORSAR Array B 39.30 325 P **P 23 17 29.9 -0.5**
comp=Z,21nm,0.8s,mb4.9,baz=110,slow=8.1,SNR=106
NOA LR LR 23 37 47.4
comp=Z,140nm,19.8s,MS3.8,baz=125,slow=42
NOA NORSAR Array B 39.30 325 P **P 23 17 29.9 -0.5**
NOA pmax pmax
comp=Z,21nm,0.8s
NOA MLR MLR
comp=Z,140nm,19.8s
NOA NORSAR Array B 39.30 325 P **P 23 17 29.9 -0.5**
comp=Z,140nm,19.8s
CM31 Chiang Mai Arr 39.34 105 *e*P **P 23 17 31.6 +0.4**
comp=Z,32nm,0.8s,mb5.1
CM31 Chiang Mai Arr 39.34 105 *e*P **P 23 17 31.6 +0.4**
comp=Z,32nm,0.8s,mb5.1
CMAR Chiang Mai Arr 39.34 105 P **P 23 17 31.6 +0.3**
comp=Z,32nm,0.9s,mb5.0,baz=300,slow=8.2,SNR=122
CMAR PcP PcP 23 19 39.5 -0.2
comp=Z,4.9nm,0.9s,baz=288,slow=4.9,SNR=4.7
CMAR LR LR 23 36 33.0
comp=Z,272nm,21.4s,MS4.0,baz=308,slow=40
CMAR Chiang Mai Arr 39.34 105 P **P 23 17 31.6 +0.4**
CMAR 23 19 39.5
CMAR pmax pmax
comp=Z,32nm,0.9s
CMAR pmax pmax
comp=Z,5.0nm,0.9s
CMAR MLR MLR
comp=Z,272nm,21.5s
CMAR Chiang Mai Arr 39.34 105 P **P 23 17 31.5 +0.3**
CMAR Chiang Mai Arr 39.34 105 PcP PcP 23 19 39.5 -0.1
comp=Z,272nm,21.5s
NAO01 NORSAR Array S 39.39 325 *e*P **P 23 17 30.3 -0.8**
comp=Z,14nm,0.8s,mb4.7
NAO01 *e*PP PP 23 19 00.1 -1.3
NAO01 NORSAR Array S 39.39 325 *e*P **P 23 17 30.3 -0.8**
comp=Z,14nm,0.8s,mb4.7
IBBN Ibbenburen 39.45 311 *e*P **P 23 17 32.0 +0.2**
comp=Z,24nm,1.4s,mb4.7
ABH Alteburg 39.46 307 *e*P **P 23 17 32.7 +0.8**
ABH Alteburg 39.46 307 *e*P **P 23 17 32.7 +0.8**
CDF Champ du Feu 39.63 305 *e*P **P 23 17 32.2 -1.1**
comp=Z,19nm,0.9s,mb4.5
CDF Champ du Feu 39.63 305 *e*P **P 23 17 32.2 -1.1**
CDF pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
CDF Champ du Feu 39.63 305 *e*P **P 23 17 32.2 -1.1**
comp=Z,9.5nm,0.9s,mb4.5
CDF Champ du Feu 39.63 305 *e*P **P 23 17 32.2 -1.1**
comp=Z,9.5nm,0.9s,mb4.5
KONO Kongsberg 39.67 323 *e*P **P 23 17 33.0 -0.5**
KONO pmax pmax
comp=Z,19nm,1.0s,mb4.8
KONO Kongsberg 39.67 323 *e*P **P 23 17 33.0 -0.5**
comp=Z,19nm,1.0s,mb4.8
KONO *e*PP PP 23 18 59.1 -5.4
KONO Kongsberg 39.67 323 *e*P **P 23 17 33.0 -0.5**
comp=Z,19nm,1.0s,mb4.8
SAOF Saorge 39.69 298 *e*P **P 23 17 33.1 -0.8**
SAOF Saorge 39.69 298 *e*P **P 23 17 33.1 -0.8**
ECH Echery 39.71 305 *e*P **P 23 17 33.6 -0.4**
ECH Echery 39.71 305 *e*P **P 23 17 33.0 -1.0**
ECH *e* 23 19 05.1
ECH pmax pmax
comp=Z,14nm,1.0s,mb4.7
ECH Echery 39.71 305 *e*P **P 23 17 33.0 -1.0**
comp=Z,14nm,1.0s,mb4.7
ECH *e*PP PP 23 19 05.1 -0.1

ECH	**Echery**	**39.71**	**305**	*e*P	**P**	**23 17 33.0**	**-1.0**
	comp=Z,14nm,1.0s,mb4.7						
ECH	**Echery**	**39.71**	**305**	*e*PP	PP	23 19 05.1	-0.1
MOF	**Molkenrain**	**39.73**	**304**	*e*P	**P**	**23 17 32.7**	**-1.5**
MOF	**Molkenrain**	**39.73**	**304**	*e*P	**P**	**23 17 32.7**	**-1.5**
AUTN	**L'Aution**	**39.78**	**298**	*e*P	**P**	**23 17 34.5**	**-0.1**
AUTN	**L'Aution**	**39.78**	**298**	*e*P	**P**	**23 17 34.5**	**-0.1**
SBF	**Sospel**	**39.78**	**298**	*e*P	**P**	**23 17 34.0**	**-0.7**
	comp=Z,31nm,0.8s,mb4.8						
SBF	**Sospel**	**39.78**	**298**	*e*P	**P**	**23 17 34.0**	**-0.7**
SBF				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.8						
SBF	**Sospel**	**39.78**	**298**	*e*P	**P**	**23 17 34.0**	**-0.7**
	comp=Z,15nm,0.8s,mb4.8						
SBF	**Sospel**	**39.78**	**298**	*e*P	**P**	**23 17 34.0**	**-0.7**
	comp=Z,15nm,0.8s,mb4.8						
KEST	**Kesra**	**39.80**	**285**	P	**P**	**23 17 35.0**	**+0.1**
	comp=Z,3.4nm,1.0s,mb4.0,baz=349,slow=4.1,SNR=8.7						
KEST	**Kesra**	**39.80**	**285**	*e*P	**P**	**23 17 34.9**	**0.0**
KEST				*e*PcP	PcP	23 19 41.8	+0.9
KEST	**Kesra**	**39.80**	**285**	*e*P	**P**	**23 17 34.9**	**0.0**
KEST	**Kesra**	**39.80**	**285**	*e*PcP	PcP	23 19 41.8	+0.9
LUCF	**Luceram**	**39.84**	**298**	*e*P	**P**	**23 17 34.4**	**-0.8**
LUCF	**Luceram**	**39.84**	**298**	*e*P	**P**	**23 17 34.4**	**-0.8**
TOUF	**Mont Tournerai**	**39.90**	**298**	*e*P	**P**	**23 17 35.8**	**+0.1**
TOUF	**Mont Tournerai**	**39.90**	**298**	*e*P	**P**	**23 17 35.8**	**+0.1**
HINF	**Hinteralfeld**	**39.92**	**304**	*e*P	**P**	**23 17 34.6**	**-1.2**
HINF	**Hinteralfeld**	**39.92**	**304**	*e*P	**P**	**23 17 34.6**	**-1.2**
LOMF	**Lomont**	**39.96**	**304**	*e*P	**P**	**23 17 35.6**	**-0.5**
LOMF	**Lomont**	**39.96**	**304**	*e*P	**P**	**23 17 35.6**	**-0.5**
BDT	**Bhumibol Dam**	**40.07**	**106**	P	**P**	**23 17 38.0**	**+0.7**
	comp=Z,27nm,1.0s,mb4.9						
LPG	**La Plagne**	**40.12**	**301**	*e*P	**P**	**23 17 36.8**	**-0.6**
	comp=Z,14nm,0.8s,mb4.5						
LPG	**La Plagne**	**40.12**	**301**	*e*P	**P**	**23 17 36.8**	**-0.6**
LPG				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
LPG	**La Plagne**	**40.12**	**301**	*e*P	**P**	**23 17 36.8**	**-0.6**
	comp=Z,7.2nm,0.8s,mb4.5						
LPG	**La Plagne**	**40.12**	**301**	*e*P	**P**	**23 17 36.8**	**-0.6**
	comp=Z,7.2nm,0.8s,mb4.5						
LPL	**La Plagne**	**40.13**	**301**	*e*P	**P**	**23 17 36.9**	**-0.6**
	comp=Z,17nm,0.9s,mb4.5						
LPL	**La Plagne**	**40.13**	**301**	*e*P	**P**	**23 17 36.9**	**-0.6**
LPL				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5						
LPL	**La Plagne**	**40.13**	**301**	*e*P	**P**	**23 17 36.9**	**-0.6**
	comp=Z,8.3nm,0.9s,mb4.5						
LPL	**La Plagne**	**40.13**	**301**	*e*P	**P**	**23 17 36.9**	**-0.6**
	comp=Z,8.3nm,0.9s,mb4.5						
MBDF	**Montbardon**	**40.17**	**299**	*e*P	**P**	**23 17 37.0**	**-0.9**
	comp=Z,16nm,0.7s,mb4.5						
MBDF	**Montbardon**	**40.17**	**299**	*e*P	**P**	**23 17 37.0**	**-0.9**
MBDF				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.6						
MBDF	**Montbardon**	**40.17**	**299**	*e*P	**P**	**23 17 37.0**	**-0.9**
	comp=Z,7.8nm,0.7s,mb4.5						
MBDF	**Montbardon**	**40.17**	**299**	*e*P	**P**	**23 17 37.0**	**-0.9**
	comp=Z,7.8nm,0.7s,mb4.5						
BNI	**Bardonecchia**	**40.21**	**300**	*e*P	**P**	**23 17 37.3**	**-0.9**
BNI				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.6						
BNI	**Bardonecchia**	**40.21**	**300**	*e*P	**P**	**23 17 37.2**	**-0.9**
	comp=Z,20nm,1.4s,mb4.6						
BNI	**Bardonecchia**	**40.21**	**300**	*e*P	**P**	**23 17 37.2**	**-1.0**
	comp=Z,20nm,1.4s,mb4.6						
HAU	**Haudompre**	**40.26**	**305**	*e*P	**P**	**23 17 37.2**	**-1.3**
	comp=Z,35nm,0.9s,mb4.8						
HAU				*e*MLR	MLR		
	comp=Z,231nm,21.2s,MS3.7						
HAU	**Haudompre**	**40.26**	**305**	*e*P	**P**	**23 17 37.2**	**-1.3**
HAU				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.8						
HAU				MLR	MLR		
	comp=Z,230nm,21.3s,MS4.0						
HAU	**Haudompre**	**40.26**	**305**	*e*P	**P**	**23 17 37.2**	**-1.3**
	comp=Z,18nm,0.9s,mb4.8						
HAU				LR	LR		
	comp=Z,230nm,21.3s,MS4.0						
HAU	**Haudompre**	**40.26**	**305**	*e*P	**P**	**23 17 37.2**	**-1.3**
	comp=Z,18nm,0.9s,mb4.8						
WLF	**Walferdange**	**40.36**	**307**	P	**P**	**23 17 40.6**	**+1.2**
	comp=Z,23nm,2.1s,mb4.5						
WLF	**Walferdange**	**40.36**	**307**	*e*P	**P**	**23 17 40.0**	**+0.6**
	comp=Z,38nm,1.5s,mb4.9						
WLF	**Walferdange**	**40.36**	**307**	*e*P	**P**	**23 17 39.5**	**+0.1**
WLF				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.4						
WLF	**Walferdange**	**40.36**	**307**	*e*P	**P**	**23 17 39.5**	**+0.1**
	comp=Z,9.3nm,1.1s,mb4.4						
WLF	**Walferdange**	**40.36**	**307**	*e*P	**P**	**23 17 39.5**	**+0.1**
	comp=Z,9.0nm,1.1s,mb4.4						
FRF	**La Foret Royal**	**40.39**	**298**	*e*P	**P**	**23 17 38.0**	**-1.7**
	comp=Z,27nm,1.1s,mb4.6						
FRF	**La Foret Royal**	**40.39**	**298**	*e*P	**P**	**23 17 38.0**	**-1.7**
FRF				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.6						
FRF	**La Foret Royal**	**40.39**	**298**	*e*P	**P**	**23 17 38.0**	**-1.7**
	comp=Z,13nm,1.1s,mb4.6						
FRF	**La Foret Royal**	**40.39**	**298**	*e*P	**P**	**23 17 38.0**	**-1.7**
	comp=Z,13nm,1.1s,mb4.6						
MEM	**Membach**	**40.46**	**309**	P	**P**	**23 17 40.7**	**+0.5**
MEM	**Membach**	**40.46**	**309**	P	**P**	**23 17 40.6**	**+0.4**
CABF	**La Chapelle**	**40.50**	**302**	*e*P	**P**	**23 17 40.4**	**-0.2**
	comp=Z,40nm,0.9s,mb4.8						
CABF	**La Chapelle**	**40.50**	**302**	*e*P	**P**	**23 17 40.4**	**-0.2**
CABF				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.8						
CABF	**La Chapelle**	**40.50**	**302**	*e*P	**P**	**23 17 40.4**	**-0.2**
	comp=Z,20nm,0.9s,mb4.8						
CABF	**La Chapelle**	**40.50**	**302**	*e*P	**P**	**23 17 40.4**	**-0.2**
	comp=Z,20nm,0.9s,mb4.8						
ORIF	**Oris-en-Rattie**	**40.78**	**300**	*e*P	**P**	**23 17 42.3**	**-0.7**
ORIF				*e*MLR	MLR		
	comp=Z,248nm,19.0s,MS3.8						
ORIF	**Oris-en-Rattie**	**40.78**	**300**	*e*P	**P**	**23 17 42.3**	**-0.7**
XAN	**Xi'an**	**40.85**	**77**	P	**P**	**23 17 45.1**	**+1.5**
XAN				pP	pP	23 17 57.7	+8.4
XAN				PP	PP	23 19 18.5	+0.7
XAN				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.2						
XAN				pmax	pmax		
	comp=Z,41nm,4.8s						
XAN				LR	LR		
	comp=N,1μm,20.8s,MS4.8						
XAN				LR	LR		
	comp=E,660nm,20.8s,MS4.8						
XAN				LR	LR		
	comp=Z,420nm,19.0s,MS4.3						
MEZF	**Maizieres J'vi**	**41.10**	**305**	*e*P	**P**	**23 17 45.3**	**-0.2**
	comp=Z,18nm,0.6s,mb4.5						
MEZF	**Maizieres J'vi**	**41.10**	**305**	*e*P	**P**	**23 17 45.3**	**-0.2**
	comp=Z,18nm,0.6s,mb4.9						
MEZF	**Maizieres J'vi**	**41.10**	**305**	*e*P	**P**	**23 17 45.3**	**-0.2**
	comp=Z,8.8nm,0.6s,mb4.5						
SMRF	**Simiane la Rot**	**41.11**	**298**	*e*P	**P**	**23 17 44.6**	**-1.0**
	comp=Z,26nm,1.1s,mb4.5						
SMRF	**Simiane la Rot**	**41.11**	**298**	*e*P	**P**	**23 17 44.6**	**-1.0**
	comp=Z,26nm,1.1s,mb4.8						
SMRF	**Simiane la Rot**	**41.11**	**298**	*e*P	**P**	**23 17 44.6**	**-1.0**
	comp=Z,13nm,1.1s,mb4.5						
GIVF	**Givet**	**41.22**	**308**	*e*P	**P**	**23 17 46.7**	**+0.3**
GIVF	**Givet**	**41.22**	**308**	*e*P	**P**	**23 17 46.7**	**+0.3**
HHC	**Hu-ho-hao-te**	**41.30**	**66**	*e*P	**P**	**23 17 49.1**	**+1.9**
HHC				PP	PP	23 19 27.5	+5.0
HHC				PcP	PcP	23 19 49.0	+3.4
HHC				ScP	ScP	23 23 36.5	+1.9
HHC				PcS	PcS	23 23 38.6	+1.9
HHC				S	**S**	**23 24 01.3**	**+0.8**
HHC				sS	sS	23 24 11.2	+1.4
HHC				ScS	ScS	23 27 50.2	-0.2
HHC				pmax	pmax		
	comp=Z,15nm,0.6s,mb4.8						
HHC				pmax	pmax		
	comp=Z,220nm,6.3s						
HHC				LR	LR		
	comp=N,1μm,16.0s,MS4.9						
HHC				LR	LR		
	comp=E,670nm,15.5s,MS4.9						
HHC				LR	LR		
	comp=Z,1μm,15.0s,MS4.8						
DOU	**Dourbes**	**41.36**	**308**	P	**P**	**23 17 46.8**	**-0.9**
DOU	**Dourbes**	**41.36**	**308**	P	**P**	**23 17 46.7**	**-0.9**
BAIF	**Baives**	**41.61**	**308**	*e*P	**P**	**23 17 50.1**	**+0.4**
	comp=Z,30nm,1.2s,mb4.5						
BAIF	**Baives**	**41.61**	**308**	*e*P	**P**	**23 17 50.1**	**+0.4**
BAIF				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.5						
BAIF	**Baives**	**41.61**	**308**	*e*P	**P**	**23 17 50.1**	**+0.4**
	comp=Z,15nm,1.2s,mb4.5						
BAIF	**Baives**	**41.61**	**308**	*e*P	**P**	**23 17 50.1**	**+0.4**
	comp=Z,15nm,1.2s,mb4.5						
VIVF	**Saint-Julien-l**	**41.65**	**300**	*e*P	**P**	**23 17 49.0**	**-1.0**
VIVF	**Saint-Julien-l**	**41.65**	**300**	*e*P	**P**	**23 17 49.0**	**-1.0**
KMBO	**Kilima Mbogo**	**41.69**	**213**	P	**P**	**23 17 51.6**	**+1.0**
	comp=Z,2.2nm,0.8s,mb3.8,baz=3.8,slow=19,SNR=4.8						
KMBO				LR	LR	23 36 46.2	
	comp=Z,1μm,18.6s,MS4.7,baz=90,slow=39						
KMBO	**Kilima Mbogo**	**41.69**	**213**	*e*P	**P**	**23 17 50.1**	**-0.6**
KMBO				*e*PP	PP	23 19 27.5	+0.3
KMBO	**Kilima Mbogo**	**41.69**	**213**	*e*P	**P**	**23 17 55.4**	**+4.7**
KMBO	**Kilima Mbogo**	**41.69**	**213**	*e*P	**P**	**23 17 50.1**	**-0.5**
KMBO	**Kilima Mbogo**	**41.69**	**213**	*e*PP	PP	23 19 27.5	+0.3
SSB	**Saint Sauveur**	**41.69**	**301**	*e*P	**P**	**23 17 49.4**	**-1.0**
SSB				*e*		23 19 47.4	
SSB				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.7						
SSB	**Saint Sauveur**	**41.69**	**301**	*e*P	**P**	**23 17 49.4**	**-1.0**
	comp=Z,17nm,0.9s,mb4.7						
SSB				*e*PcP	PcP	23 19 47.4	+0.6
SSB	**Saint Sauveur**	**41.69**	**301**	*e*P	**P**	**23 17 49.4**	**-1.0**
	comp=Z,17nm,0.9s,mb4.7						
GYA	**Guiyang**	**41.70**	**89⇑**	*i*P	**P**	**23 17 52.8**	**+2.1**
GYA				pP	pP	23 18 03.0	+6.6
GYA				sP	sP	23 18 08.9	+10
GYA				PP	PP	23 19 33.1	+5.9
GYA				PcP	PcP	23 19 50.0	+2.8
GYA				ScP	ScP	23 23 36.4	-0.1
GYA				S	**S**	**23 24 07.5**	**+0.6**
GYA				sS	sS	23 24 24.9	+8.7
GYA				SS	SS	23 27 07.2	-5.3
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.8						
GYA				pmax	pmax		
	comp=Z,130nm,4.8s						
GYA				LR	LR		
	comp=N,520nm,15.8s,MS4.6						
GYA				LR	LR		
	comp=E,480nm,16.2s,MS4.6						
GYA				LR	LR		
	comp=Z,540nm,15.8s,MS4.5						
LOR	**Lormes**	**41.98**	**304**	*e*P	**P**	**23 17 51.6**	**-1.1**
	comp=Z,25nm,1.1s,mb4.5						
LOR				*e*MLR	MLR		
	comp=Z,220nm,17.8s,MS3.8						
LOR	**Lormes**	**41.98**	**304**	*e*P	**P**	**23 17 51.6**	**-1.1**
LOR				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.4						
LOR				MLR	MLR		
	comp=Z,220nm,17.8s,MS4.1						
LOR	**Lormes**	**41.98**	**304**	*e*P	**P**	**23 17 51.6**	**-1.1**
	comp=Z,12nm,1.1s,mb4.5						
LOR				LR	LR		
	comp=Z,220nm,17.8s,MS4.1						
LOR	**Lormes**	**41.98**	**304**	*e*P	**P**	**23 17 51.6**	**-1.1**
	comp=Z,12nm,1.1s,mb4.5						
SMF	**Signal de Mont**	**42.04**	**303**	*e*P	**P**	**23 17 52.7**	**-0.5**
	comp=Z,34nm,0.9s,mb4.7						
SMF	**Signal de Mont**	**42.04**	**303**	*e*P	**P**	**23 17 52.7**	**-0.5**
SMF				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.7						
SMF	**Signal de Mont**	**42.04**	**303**	*e*P	**P**	**23 17 52.7**	**-0.5**
	comp=Z,17nm,0.9s,mb4.7						
SMF	**Signal de Mont**	**42.04**	**303**	*e*P	**P**	**23 17 52.7**	**-0.5**
	comp=Z,17nm,0.9s,mb4.7						
SSF	**Saint Saulge**	**42.23**	**303**	*e*P	**P**	**23 17 54.0**	**-0.8**
	comp=Z,116nm,1.7s,mb4.9						
SSF	**Saint Saulge**	**42.23**	**303**	*e*P	**P**	**23 17 54.0**	**-0.8**
SSF				pmax	pmax		
	comp=Z,58nm,1.7s,mb4.9						
SSF	**Saint Saulge**	**42.23**	**303**	*e*P	**P**	**23 17 54.0**	**-0.8**
	comp=Z,58nm,1.7s,mb4.9						
SSF	**Saint Saulge**	**42.23**	**303**	*e*P	**P**	**23 17 54.0**	**-0.8**
	comp=Z,58nm,1.7s,mb4.9						
PLDF	**La Plantade**	**42.26**	**302**	*e*P	**P**	**23 17 54.6**	**-0.4**
PLDF	**La Plantade**	**42.26**	**302**	*e*P	**P**	**23 17 54.6**	**-0.4**
LASF	**Ste Croix**	**42.32**	**299**	*e*P	**P**	**23 17 54.7**	**-0.9**
LASF	**Ste Croix**	**42.32**	**299**	*e*P	**P**	**23 17 54.7**	**-0.9**
AVF	**Avril sur Loir**	**42.36**	**303**	*e*P	**P**	**23 17 55.3**	**-0.6**
	comp=Z,45nm,0.9s,mb4.8						
AVF	**Avril sur Loir**	**42.36**	**303**	*e*P	**P**	**23 17 55.3**	**-0.6**
AVF				pmax	pmax		
	comp=Z,22nm,0.9s,mb4.8						
AVF	**Avril sur Loir**	**42.36**	**303**	*e*P	**P**	**23 17 55.3**	**-0.6**
	comp=Z,22nm,0.9s,mb4.8						
AVF	**Avril sur Loir**	**42.36**	**303**	*e*P	**P**	**23 17 55.3**	**-0.6**
	comp=Z,22nm,0.9s,mb4.8						
AGO	**Saint Agoulin**	**42.59**	**302**	*e*P	**P**	**23 17 56.5**	**-1.2**
AGO	**Saint Agoulin**	**42.59**	**302**	*e*P	**P**	**23 17 56.5**	**-1.2**
TIY	**Taiyuan**	**42.62**	**71**	*e*P	**P**	**23 18 00.3**	**+2.2**
TIY				PP	PP	23 19 40.8	+3.9
TIY				S	**S**	**23 24 23.9**	**+3.8**
TIY				LR	LR		
	comp=N,1μm,14.4s,MS5.0						
TIY				LR	LR		
	comp=E,920nm,13.3s,MS5.0						
TIY				LR	LR		
	comp=Z,810nm,15.9s,MS4.7						
PYM	**Petit Puy Mans**	**42.71**	**301**	*e*P	**P**	**23 17 58.3**	**-0.4**
PYM	**Petit Puy Mans**	**42.71**	**301**	*e*P	**P**	**23 17 58.3**	**-0.4**
BGF	**Bois d'Agland**	**42.73**	**303**	*e*P	**P**	**23 17 59.0**	**+0.1**
	comp=Z,18nm,0.9s,mb4.5						
BGF	**Bois d'Agland**	**42.73**	**303**	*e*P	**P**	**23 17 59.0**	**+0.1**
BGF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
BGF	**Bois d'Agland**	**42.73**	**303**	*e*P	**P**	**23 17 59.0**	**+0.1**
	comp=Z,8.9nm,0.9s,mb4.5						
BGF	**Bois d'Agland**	**42.73**	**303**	*e*P	**P**	**23 17 59.0**	**+0.1**
	comp=Z,8.9nm,0.9s,mb4.5						
HYF	**Humbligny**	**42.80**	**304**	*e*P	**P**	**23 17 59.4**	**-0.1**
HYF	**Humbligny**	**42.80**	**304**	*e*P	**P**	**23 17 59.4**	**-0.1**
TCF	**Toulx Ste Croi**	**43.20**	**302**	*e*P	**P**	**23 18 02.5**	**-0.2**
	comp=Z,34nm,1.0s,mb4.7						
TCF	**Toulx Ste Croi**	**43.20**	**302**	*e*P	**P**	**23 18 02.5**	**-0.2**
TCF				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.7						
TCF	**Toulx Ste Croi**	**43.20**	**302**	*e*P	**P**	**23 18 02.5**	**-0.2**
	comp=Z,17nm,1.0s,mb4.7						
TCF	**Toulx Ste Croi**	**43.20**	**302**	*e*P	**P**	**23 18 02.5**	**-0.2**
	comp=Z,17nm,1.0s,mb4.7						
CAF	**Calviac**	**43.48**	**300**	*e*P	**P**	**23 18 04.6**	**-0.3**
	comp=Z,24nm,0.9s,mb4.6						
CAF	**Calviac**	**43.48**	**300**	*e*P	**P**	**23 18 04.6**	**-0.3**
CAF				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.6						
CAF	**Calviac**	**43.48**	**300**	*e*P	**P**	**23 18 04.6**	**-0.3**
	comp=Z,12nm,0.9s,mb4.6						
CAF	**Calviac**	**43.48**	**300**	*e*P	**P**	**23 18 04.6**	**-0.3**
	comp=Z,12nm,0.9s,mb4.6						
MTLF	**Montolieu**	**43.61**	**298**	*e*P	**P**	**23 18 05.2**	**-0.8**
MTLF	**Montolieu**	**43.61**	**298**	*e*P	**P**	**23 18 05.2**	**-0.8**
RJF	**Les Rejaudoux**	**43.81**	**301**	*e*P	**P**	**23 18 07.5**	**-0.1**
RJF				*e*MLR	MLR		
	comp=Z,315nm,19.5s,MS3.9						
RJF	**Les Rejaudoux**	**43.81**	**301**	*e*P	**P**	**23 18 07.5**	**-0.1**
RJF				LR	LR		
	comp=Z,310nm,19.5s,MS4.2						
RJF	**Les Rejaudoux**	**43.81**	**301**	*e*P	**P**	**23 18 07.5**	**-0.1**
LFF	**La Frestale**	**44.40**	**301**	*e*P	**P**	**23 18 11.7**	**-0.7**
LFF	**La Frestale**	**44.40**	**301**	*e*P	**P**	**23 18 11.7**	**-0.7**
LDF	**La Druitiere**	**44.53**	**306**	*e*P	**P**	**23 18 12.8**	**-0.5**
	comp=Z,11nm,1.1s,mb4.3						
LDF	**La Druitiere**	**44.53**	**306**	*e*P	**P**	**23 18 12.8**	**-0.5**
LDF				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.3						
LDF	**La Druitiere**	**44.53**	**306**	*e*P	**P**	**23 18 12.8**	**-0.5**
	comp=Z,5.7nm,1.1s,mb4.3						
LDF	**La Druitiere**	**44.53**	**306**	*e*P	**P**	**23 18 12.8**	**-0.5**
	comp=Z,5.7nm,1.1s,mb4.3						
MFF	**Saint Martin d**	**44.78**	**303**	*e*P	**P**	**23 18 14.2**	**-1.1**
	comp=Z,44nm,1.3s,mb4.8						
MFF	**Saint Martin d**	**44.78**	**303**	*e*P	**P**	**23 18 14.2**	**-1.1**
MFF				pmax	pmax		
	comp=Z,22nm,1.3s,mb4.8						
MFF	**Saint Martin d**	**44.78**	**303**	*e*P	**P**	**23 18 14.2**	**-1.1**
	comp=Z,22nm,1.3s,mb4.8						
MFF	**Saint Martin d**	**44.78**	**303**	*e*P	**P**	**23 18 14.2**	**-1.1**
	comp=Z,22nm,1.3s,mb4.8						
BJI	**Beijing**	**44.90**	**66**	P	**P**	**23 18 18.5**	**+2.1**
BJI				pP	pP	23 18 23.6	+1.5
BJI				sP	sP	23 18 29.7	+5.3
BJI				S	**S**	**23 24 56.7**	**+3.2**
BJI				sS	sS	23 25 08.1	+5.3
BJI				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.6						
BJI				pmax	pmax		
	comp=Z,130nm,4.1s						
BJI				LR	LR		
	comp=N,1μm,19.6s						
BJI				LR	LR		
	comp=E,970nm,12.1s						
BJI				LR	LR		
	comp=Z,1μm,24.6s,MS4.7						
EPF	**Esparros**	**45.02**	**298**	*e*P	**P**	**23 18 16.5**	**-0.8**
EPF	**Esparros**	**45.02**	**298**	*e*P	**P**	**23 18 16.5**	**-0.8**
GRR	**Gorron**	**45.04**	**306**	*e*P	**P**	**23 18 15.9**	**-1.5**
	comp=Z,38nm,1.1s,mb4.8						
GRR	**Gorron**	**45.04**	**306**	*e*P	**P**	**23 18 15.9**	**-1.5**
GRR				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.8						
GRR	**Gorron**	**45.04**	**306**	*e*P	**P**	**23 18 15.9**	**-1.5**
	comp=Z,19nm,1.1s,mb4.8						
GRR	**Gorron**	**45.04**	**306**	*e*P	**P**	**23 18 15.9**	**-1.5**
	comp=Z,19nm,1.1s,mb4.8						
ETSF	**Etsaut**	**45.69**	**298**	*e*P	**P**	**23 18 21.7**	**-0.9**
	comp=Z,17nm,0.9s,mb4.7						
ETSF	**Etsaut**	**45.69**	**298**	*e*P	**P**	**23 18 21.7**	**-0.9**
ETSF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
ETSF	**Etsaut**	**45.69**	**298**	*e*P	**P**	**23 18 21.7**	**-0.9**
	comp=Z,8.6nm,0.9s,mb4.7						
ETSF	**Etsaut**	**45.69**	**298**	*e*P	**P**	**23 18 21.7**	**-0.9**
	comp=Z,8.6nm,0.9s,mb4.7						
SJPF	**Ste Jean**	**46.12**	**298**	*e*P	**P**	**23 18 24.5**	**-1.5**
SJPF	**Ste Jean**	**46.12**	**298**	*e*P	**P**	**23 18 24.5**	**-1.5**
SPITS	**Spitsbergen Ar**	**46.28**	**349**	P	**P**	**23 18 27.7**	**+0.8**
	comp=Z,17nm,1.1s,mb4.9,baz=114,slow=8.3,SNR=5.9						
SPITS	**Spitsbergen Ar**	**46.28**	**349**	P	**P**	**23 18 27.7**	**+0.8**
SPITS				pmax	pmax		
	comp=Z,17nm,1.1s						
SPITS	**Spitsbergen Ar**	**46.28**	**349**	P	**P**	**23 18 27.7**	**+0.8**
SPITS	**Spitsbergen Ar**	**46.28**	**349**	P	**P**	**23 18 27.7**	**+0.8**
	comp=Z,17nm,1.1s,mb4.9						
WHN	**Wuhan**	**46.34**	**80**	P	**P**	**23 18 29.7**	**+1.8**
WHN				S	**S**	**23 25 11.0**	**-3.4**
WHN				pmax	pmax		
	comp=Z,66nm,1.2s,mb5.4						
WHN				pmax	pmax		
	comp=Z,530nm,3.1s						
WHN				LR	LR		
	comp=N,4μm,21.3s,MS5.4						
WHN				LR	LR		
	comp=E,1μm,17.4s,MS5.4						
WHN				LR	LR		
	comp=Z,1μm,11.8s						
QUIF	**Quistinic**	**46.63**	**305**	*e*P	**P**	**23 18 29.2**	**-0.7**
	comp=Z,124nm,1.3s,mb5.4						
QUIF	**Quistinic**	**46.63**	**305**	*e*P	**P**	**23 18 29.2**	**-0.7**
QUIF				pmax	pmax		
	comp=Z,62nm,1.3s,mb5.4						
QUIF	**Quistinic**	**46.63**	**305**	*e*P	**P**	**23 18 29.2**	**-0.7**
	comp=Z,62nm,1.3s,mb5.4						
QUIF	**Quistinic**	**46.63**	**305**	*e*P	**P**	**23 18 29.2**	**-0.7**
	comp=Z,62nm,1.3s,mb5.4						
ROSF	**Rostrenen**	**46.64**	**306**	*e*P	**P**	**23 18 29.1**	**-0.9**
	comp=Z,121nm,1.1s,mb5.4						
ROSF	**Rostrenen**	**46.64**	**306**	*e*P	**P**	**23 18 29.1**	**-0.9**
ROSF				pmax	pmax		
	comp=Z,60nm,1.1s,mb5.4						
ROSF	**Rostrenen**	**46.64**	**306**	*e*P	**P**	**23 18 29.1**	**-0.9**
	comp=Z,60nm,1.1s,mb5.4						
ROSF	**Rostrenen**	**46.64**	**306**	*e*P	**P**	**23 18 29.1**	**-0.9**
	comp=Z,60nm,1.1s,mb5.4						
TIA	**Tai'an**	**46.64**	**71**	P	**P**	**23 18 32.0**	**+1.8**
KBS	**Kingsbay**	**47.45**	**349**	*ce*P	**P**	**23 18 37.3**	**+1.4**
KBS				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.8						
KBS	**Kingsbay**	**47.45**	**349**	*e*P	**P**	**23 18 37.3**	**+1.4**
	comp=Z,17nm,1.2s,mb4.8						
TAM	**Tamanrasset**	**47.68**	**270**	*e*P	**P**	**23 18 37.8**	**-0.6**
TAM				*e*		23 20 13.1	
TAM				*e*		23 20 34.8	
TAM				pmax	pmax		
	comp=Z,36nm,1.3s,mb5.2						
TAM	**Tamanrasset**	**47.68**	**270**	*e*P	**P**	**23 18 37.8**	**-0.7**

SNY	**Shenyang**	**49.90**	**62**	⇑P	**P**	**23 18 57.1**	**+1.8**
SNY				S	**S**	**23 26 02.4**	**-2.0**
SNY				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb5.1						
SNY				pmax	pmax		
	comp=Z,90nm,7.4s						
SNY				LR	LR		
	comp=E,1μm,20.2s						
SNY				LR	LR		
	comp=Z,1μm,18.4s,MS4.9						
TIXI	**Tiksi**	**50.40**	**23**	*e*P	**P**	**23 18 58.5**	**-0.1**
TIXI				*e*		23 20 55.4	
TIXI				*e*S	**S**	**23 26 14.2**	**+3.5**
TIXI				*e*SS	SS	23 29 47.8	+3.9
TIXI				pmax	pmax		
	comp=Z,25nm,1.9s,mb4.9						
TIXI				MLR	MLR		
	comp=Z,927nm,13.0s,MS5.0						
TIXI	**Tiksi**	**50.40**	**23**	*e*P	**P**	**23 18 59.2**	**+0.6**
	comp=Z,28nm,1.4s,mb5.1						
TIXI				*e*PcP	PcP	23 20 16.5	-0.3
TIXI	**Tiksi**	**50.40**	**23**	*e*P	**P**	**23 18 58.5**	**-0.1**
	comp=Z,25nm,1.9s,mb4.9						
TIXI	**Tiksi**	**50.40**	**23**	*e*PcP	PcP	23 20 16.5	-0.3
TIXI				*e*S	**S**	**23 26 14.2**	**+3.5**
YAK	**Yakutsk**	**50.46**	**35**	*e*P	**P**	**23 18 57.2**	**-2.0**
YAK				*e**PP	pP	23 19 04.3	-0.7
YAK				*e*		23 20 13.3	
YAK				*e*S	**S**	**23 26 03.7**	**-8.0**
YAK				*e*		23 28 42.1	
YAK				*e*SS	SS	23 29 45.6	+0.4
YAK				pmax	pmax		
	comp=Z,17nm,1.0s,mb5.0						
YAK				pmax	pmax		
	comp=E,7.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.9						
YAK				smax			
	comp=E,68nm,10.1s						
YAK				smax			
	comp=N,52nm,10.6s						
YAK				MLR	MLR		
	comp=E,2μm,12.0s,MS5.3						
YAK				MLR	MLR		
	comp=Z,2μm,13.0s,MS5.3						
YAK				MLR	MLR		
	comp=N,472nm,11.0s,MS5.3						
YAK	**Yakutsk**	**50.46**	**35**	*e*P	**P**	**23 18 57.2**	**-2.0**
	comp=N,17nm,1.0s,mb5.0						
CN2	**Changchun**	**50.71**	**59**	*e*P	**P**	**23 19 03.3**	**+1.9**
CN2				*e*pP	pP	23 19 11.0	+3.8
CN2				*e*S	**S**	**23 26 14.9**	**-0.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,1μm,19.0s,MS5.0						
CN2				LR	LR		
	comp=E,1μm,19.0s,MS5.0						
CN2				LR	LR		
	comp=Z,800nm,22.0s,MS4.7						
MVO	**Moncorvo**	**50.78**	**297**	*e*P	**P**	**23 19 01.1**	**-0.9**
	comp=Z,43nm,1.8s,mb5.1						
MVO	**Moncorvo**	**50.78**	**297**	*e*P	**P**	**23 19 01.1**	**-0.9**
	comp=Z,43nm,1.8s,mb5.1						
MTE	**Manteigas**	**51.38**	**296**	*e*P	**P**	**23 19 06.3**	**-0.2**
	comp=Z,41nm,1.8s,mb5.0						
MTE	**Manteigas**	**51.38**	**296**	*e*P	**P**	**23 19 06.3**	**-0.2**
	comp=Z,41nm,1.8s,mb5.0						
PCBR	**Castelo Branco**	**51.50**	**296**	*e*P	**P**	**23 19 07.4**	**0.0**
	comp=Z,33nm,1.3s,mb5.1						
PCBR	**Castelo Branco**	**51.50**	**296**	*e*P	**P**	**23 19 07.4**	**0.0**
	comp=Z,33nm,1.3s,mb5.1						
PVIS	**Viseu**	**51.54**	**297**	*e*P	**P**	**23 19 07.7**	**0.0**
	comp=Z,24nm,1.9s,mb4.8						
PVIS	**Viseu**	**51.54**	**297**	*e*P	**P**	**23 19 07.7**	**0.0**
	comp=Z,24nm,1.9s,mb4.8						
SSE	**Sheshan**	**51.58**	**76**	P	**P**	**23 19 04.9**	**-3.2**
SSE				S	**S**	**23 26 25.0**	**-3.1**
SSE				sS	sS	23 26 40.4	+2.8
SSE				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.2						
SSE				pmax	pmax		
	comp=Z,130nm,5.4s						
SSE				LR	LR		
	comp=N,1μm,19.3s,MS4.9						
SSE				LR	LR		
	comp=E,550nm,19.3s,MS4.9						
SSE				LR	LR		
	comp=Z,400nm,17.8s,MS4.5						
SFS	**San Fernando**	**51.62**	**291**	P	**P**	**23 19 06.7**	**-1.6**
SFS	**San Fernando**	**51.62**	**291**	P	**P**	**23 19 06.7**	**-1.6**
PBAR	**Barrancos**	**51.69**	**294**	*e*P	**P**	**23 19 07.9**	**-0.9**
	comp=Z,26nm,1.5s,mb4.9						
PBAR	**Barrancos**	**51.69**	**294**	*e*P	**P**	**23 19 07.9**	**-0.9**
	comp=Z,26nm,1.5s,mb4.9						
PESTR	**Estremoz**	**51.88**	**295**	*e*P	**P**	**23 19 08.8**	**-1.4**
	comp=Z,17nm,1.8s,mb4.7						
PESTR	**Estremoz**	**51.88**	**295**	*e*P	**P**	**23 19 08.8**	**-1.4**
	comp=Z,17nm,1.8s,mb4.7						
PTOM	**Tomar**	**52.25**	**296**	*e*P	**P**	**23 19 12.9**	**-0.1**
	comp=Z,20nm,1.5s,mb4.8						
PTOM	**Tomar**	**52.25**	**296**	*e*P	**P**	**23 19 12.9**	**-0.1**
	comp=Z,20nm,1.5s,mb4.8						
EVO	**Evora**	**52.30**	**294**	*e*P	**P**	**23 19 13.1**	**-0.3**
	comp=Z,32nm,1.2s,mb4.8						
EVO				*e*MLR	MLR		
	comp=Z,210nm,18.0s,MS3.9						
EVOP	**Sao Brissos**	**52.38**	**294**	*e*P	**P**	**23 19 13.8**	**-0.2**
EVOP	**Sao Brissos**	**52.38**	**294**	*e*P	**P**	**23 19 13.1**	**-0.9**
	comp=Z,16nm,1.2s,mb4.8						
PVAQ	**Vaqueiros**	**52.45**	**293**	*e*P	**P**	**23 19 14.1**	**-0.4**
	comp=Z,22nm,1.0s,mb5.0						
PVAQ	**Vaqueiros**	**52.45**	**293**	*e*P	**P**	**23 19 14.1**	**-0.4**
	comp=Z,22nm,1.0s,mb5.0						
MESJ	**Messejana**	**52.68**	**294**	*e*P	**P**	**23 19 16.1**	**-0.1**
MESJ	**Messejana**	**52.68**	**294**	*e*P	**P**	**23 19 16.1**	**-0.1**
DAG	**Danmarks Havn**	**52.79**	**344**	⇑*i*P	**P**	**23 19 16.9**	**+0.4**
DAG				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
DAG	**Danmarks Havn**	**52.79**	**344**	⇑*i*P	**P**	**23 19 16.9**	**+0.4**
	comp=Z,5.9nm,0.9s,mb4.5						
MDJ	**Mudanjiang**	**53.37**	**57**	P	**P**	**23 19 21.5**	**+0.4**
MDJ				PcP	PcP	23 20 28.3	-0.1
MDJ				PP	PP	23 21 21.4	+0.1
MDJ				ScP	ScP	23 24 24.0	-1.2
MDJ				PcS	PcS	23 24 26.6	-0.6
MDJ				S	**S**	**23 26 52.0**	**-0.1**
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
MDJ				pmax	pmax		
	comp=Z,97nm,5.0s						
MDJ				LR	LR		
	comp=N,1μm,12.8s,MS5.2						
MDJ				LR	LR		
	comp=E,530nm,12.3s,MS5.2						
MDJ				LR	LR		
	comp=Z,1μm,12.3s,MS5.1						
KLR	**Kul'dur**	**53.57**	**51**	*e*P	**P**	**23 19 19.4**	**-3.1**
KLR				*e*S	**S**	**23 26 55.5**	**+0.8**
KLR				MLR	MLR		
	comp=E,2μm,11.0s						
KLR				MLR	MLR		
	comp=Z,3μm,11.0s,MS5.6						
KSRS	**Korea Array**	**54.44**	**66**	P	**P**	**23 19 29.9**	**+0.8**
	comp=Z,4.6nm,0.8s,mb4.5,baz=284,slow=6.7,SNR=13						
KSRS				LR	LR	23 45 58.6	
	comp=Z,428nm,18.8s,MS4.5,baz=289,slow=40						
KSRS	**Korea Array**	**54.44**	**66**	P	**P**	**23 19 29.9**	**+0.8**
KSRS				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
KSRS				MLR	MLR		
	comp=Z,428nm,18.8s,MS4.5						
YHNB	**Yeheng**	**54.44**	**83**	*e*P	**P**	**23 19 30.9**	**+1.7**
	comp=Z,23nm,0.9s,mb5.1						
YHNB	**Yeheng**	**54.44**	**83**	*e*P	**P**	**23 19 30.9**	**+1.6**
	comp=Z,23nm,0.9s,mb5.1						
SSLB	**Suanglung**	**54.50**	**84**	*e*P	**P**	**23 19 30.9**	**+1.1**
	comp=Z,45nm,1.0s,mb5.5						
SSLB	**Suanglung**	**54.50**	**84**	*e*P	**P**	**23 19 30.9**	**+1.2**
	comp=Z,45nm,1.0s,mb5.5						
NACB	**Ninganchiao**	**54.84**	**84**	*e*P	**P**	**23 19 33.1**	**+1.0**
NACB	**Ninganchiao**	**54.84**	**84**	*e*P	**P**	**23 19 33.2**	**+1.0**
YULB	**Yu-li**	**54.96**	**85**	*e*P	**P**	**23 19 34.5**	**+1.4**
	comp=Z,21nm,1.0s,mb5.1						
YULB	**Yu-li**	**54.96**	**85**	*e*P	**P**	**23 19 34.5**	**+1.4**
	comp=Z,21nm,1.0s,mb5.1						
OPO	**Ambohidratompo**	**54.97**	**193**	P	**P**	**23 19 33.2**	**+0.2**
	comp=Z,13nm,0.9s,mb5.0,baz=14,slow=7.0,SNR=20						
OPO	**Ambohidratompo**	**54.97**	**193**	P	**P**	**23 19 33.2**	**+0.2**
TWG	**Pinlang**	**55.05**	**85**	*e*P	**P**	**23 19 35.9**	**+2.2**
	comp=Z,27nm,0.9s,mb5.3						
ABPO	**Ambohimpanom**	**55.40**	**193**	*e*P	**P**	**23 19 36.1**	**0.0**
ABPO				*e*		23 20 36.1	
ABPO				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
ABPO	**Ambohimpanom**	**55.40**	**193**	*e*P	**P**	**23 19 36.1**	**0.0**
	comp=Z,7.4nm,0.8s,mb4.8						
ABPO				*e*PcP	PcP	23 20 36.1	-0.3
ABPO	**Ambohimpanom**	**55.40**	**193**	*e*P	**P**	**23 19 36.1**	**0.0**
	comp=Z,7.0nm,0.8s,mb4.7						
HABR	**Khabarovsk**	**55.87**	**51**	P	**P**	**23 19 48.8**	**+10**
HABR				*e*S	**S**	**23 27 25.8**	**+0.1**
HABR				*e**SS	sS	23 27 42.1	+6.8
HABR				pmax	pmax		
	comp=Z,38nm,1.6s,mb5.2						
HABR				MLR	MLR		
	comp=Z,2μm,24.0s,MS5.0						
LSZ	**Lusaka**	**58.30**	**215**	P	**P**	**23 19 56.8**	**+0.1**
	comp=Z,8.1nm,0.9s,mb4.7,baz=58,slow=4.4,SNR=13						
LSZ	**Lusaka**	**58.30**	**215**	*e*P	**P**	**23 19 56.3**	**-0.4**
LSZ				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.9						
LSZ	**Lusaka**	**58.30**	**215**	*e*P	**P**	**23 19 56.3**	**-0.4**
	comp=Z,13nm,1.1s,mb4.9						
LSZ	**Lusaka**	**58.30**	**215**	*e*P	**P**	**23 19 55.7**	**-1.0**
LSZ	**Lusaka**	**58.30**	**215**	*e*P	**P**	**23 19 56.3**	**-0.4**
	comp=Z,13nm,1.1s,mb4.9						
KLSI		**58.83**	**123**	P	**P**	**23 19 55.4**	**-5.2**
	comp=Z,24nm,1.3s,mb5.1						
SBUM	**Sibu**	**59.37**	**111**	P	**P**	**23 20 04.7**	**+0.3**
	comp=Z,644nmcomp=Z,16nm,1.0s,mb5.0						
SEY	**Seymchan**	**60.55**	**32**	*ce*P	**P**	**23 20 11.8**	**+0.1**
SEY	**Seymchan**	**60.55**	**32**	*e*P	**P**	**23 20 11.8**	**+0.1**
YSS	**Yuzh-Sakhalins**	**61.28**	**51**	*e*P	**P**	**23 20 17.3**	**+0.3**
YSS				MLR	MLR		
	comp=Z,500nm,12.0s,MS4.9						
YSS	**Yuzh-Sakhalins**	**61.28**	**51**	P	**P**	**23 20 16.9**	**0.0**
YSS	**Yuzh-Sakhalins**	**61.28**	**51**	P	**P**	**23 20 16.9**	**-0.1**
MAJO	**Matsushiro**	**62.37**	**63**	*e*P	**P**	**23 20 25.1**	**+0.6**
MAJO	**Matsushiro**	**62.37**	**63**	*e*P	**P**	**23 20 25.1**	**+0.6**
MJAR	**Matsushiro Arr**	**62.37**	**63**	P	**P**	**23 20 24.9**	**+0.3**
	comp=Z,1.3nm,0.7s,mb4.2,baz=293,slow=9.0,SNR=5.0						
MJAR				LR	LR	23 50 05.3	
	comp=Z,397nm,20.6s,MS4.6,baz=295,slow=38						
MJAR	**Matsushiro Arr**	**62.37**	**63**	P	**P**	**23 20 24.9**	**+0.4**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MJAR				MLR	MLR		
	comp=Z,397nm,20.6s						
MJAR	**Matsushiro Arr**	**62.37**	**63**	P	**P**	**23 20 24.9**	**+0.4**
	comp=Z,397nm,20.6s						
BILL	**Bilibino**	**63.60**	**24**	⇑*e*P	**P**	**23 20 33.1**	**+1.0**
BILL				*e*		23 22 51.1	
BILL				*e*S	**S**	**23 29 01.5**	**-3.2**
BILL				pmax	pmax		
	comp=Z,25nm,1.7s,mb5.0						
BILL				MLR	MLR		
	comp=Z,600nm,20.0s,MS4.8						
BILL	**Bilibino**	**63.60**	**24**	*e*P	**P**	**23 20 32.6**	**+0.4**
	comp=Z,27nm,1.4s,mb5.1						
BILL				*e*PcP	PcP	23 21 08.5	+0.1
BILL	**Bilibino**	**63.60**	**24**	*e*P	**P**	**23 20 32.6**	**+0.5**
	comp=Z,27nm,1.4s,mb5.1						
BILL	**Bilibino**	**63.60**	**24**	*e*PcP	PcP	23 21 08.5	+0.1
MSNA	**Messina**	**63.73**	**210**	*e*P	**P**	**23 20 31.9**	**-1.6**
MSNA				AMS	AMS	23 39 26.6	
	comp=Z,285nm,23.8s,MS4.4						
DBIC	**Dimbokro**	**64.75**	**260**	P	**P**	**23 20 39.2**	**-1.3**
	comp=Z,31nm,1.0s,mb5.3,baz=30,slow=7.7,SNR=18						
DBIC				LR	LR	23 48 44.9	
	comp=Z,467nm,18.0s,MS4.7,baz=214,slow=36						
DBIC	**Dimbokro**	**64.75**	**260**	*e*P	**P**	**23 20 39.4**	**-1.1**
DBIC				*e*		23 21 13.1	
DBIC				pmax	pmax		
	comp=Z,51nm,1.1s						
DBIC	**Dimbokro**	**64.75**	**260**	*e*P	**P**	**23 20 39.4**	**-1.1**
	comp=Z,51nm,1.1s,mb5.5						
DBIC				*e*PcP	PcP	23 21 13.1	-1.0
DBIC	**Dimbokro**	**64.75**	**260**	*e*P	**P**	**23 20 38.8**	**-1.7**
DBIC	**Dimbokro**	**64.75**	**260**	*e*P	**P**	**23 20 39.4**	**-1.1**
	comp=Z,51nm,1.1s,mb5.5						
DBIC	**Dimbokro**	**64.75**	**260**	*e*PcP	PcP	23 21 13.1	-0.9
KIC	**Kosan Boka**	**64.84**	**259**	*e*P	**P**	**23 20 39.1**	**-2.0**
	comp=Z,136nm,1.1s,mb5.9						
KIC	**Kosan Boka**	**64.84**	**259**	*e*P	**P**	**23 20 39.1**	**-2.0**
	comp=Z,136nm,1.1s,mb5.9						
TIC	**Toumodi**	**64.89**	**260**	*e*P	**P**	**23 20 39.7**	**-1.8**
	comp=Z,174nm,1.3s,mb5.9						
TIC	**Toumodi**	**64.89**	**260**	*e*P	**P**	**23 20 39.7**	**-1.8**
TIC				pmax	pmax		
	comp=Z,174nm,1.3s,mb5.9						
TIC	**Toumodi**	**64.89**	**260**	*e*P	**P**	**23 20 39.7**	**-1.8**
	comp=Z,174nm,1.3s,mb5.9						
LIC	**Lamto**	**65.15**	**259**	*e*P	**P**	**23 20 41.4**	**-1.7**
	comp=Z,179nm,1.1s,mb6.0						
LIC	**Lamto**	**65.15**	**259**	⇓*i*P	**P**	**23 20 42.1**	**-1.0**
	comp=Z,149nm,1.1s,mb5.6						
LIC				*e*MLR	MLR		
	comp=Z,830nm,18.5s,MS4.7						
LIC	**Lamto**	**65.15**	**259**	⇓*i*P	**P**	**23 20 42.1**	**-1.0**
	comp=Z,75nm,1.1s,mb5.6						
LIC				LR	LR		
	comp=Z,420nm,18.5s,MS4.7						
LIC	**Lamto**	**65.15**	**259**	⇓*i*P	**P**	**23 20 42.1**	**-1.0**
	comp=Z,75nm,1.1s,mb5.6						
KMMI	**Kalianget**	**66.98**	**118**	P	**P**	**23 20 58.0**	**+3.2**
TSUM	**Tsumeb**	**67.03**	**223**	*e*P	**P**	**23 20 54.7**	**-0.2**
	comp=Z,19nm,0.8s,mb5.2						
TSUM	**Tsumeb**	**67.03**	**223**	*e*P	**P**	**23 20 54.7**	**-0.2**
	comp=Z,19nm,0.8s,mb5.2						
PETK	**Petropavlovsk-**	**67.30**	**40**	P	**P**	**23 20 55.0**	**-1.3**
	comp=Z,1.6nm,0.4s,mb4.4,baz=242,slow=3.2,SNR=5.3						
PETK				LR	LR	23 52 35.1	
	comp=Z,336nm,20.0s,MS4.6,baz=303,slow=38						
PETK	**Petropavlovsk-**	**67.30**	**40**	P	**P**	**23 20 55.0**	**-1.3**
PETK				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
PETK				MLR	MLR		
	comp=Z,336nm,20.0s,MS4.6						
PETK	**Petropavlovsk-**	**67.30**	**40**	P	**P**	**23 20 55.0**	**-1.3**
PETK				LR	LR	23 52 35.1	
PETK	**Petropavlovsk-**	**67.30**	**40**	P	**P**	**23 20 55.0**	**-1.3**
	comp=Z,336nm,20.0s						
SLR	**Silverton**	**67.46**	**210**	*e*P	**P**	**23 20 57.8**	**+0.2**
SLR				AMS	AMS	23 53 16.0	
	comp=Z,394nm,17.1s,MS4.7						
PET	**Petropavlovsk**	**67.84**	**40**	*e*P	**P**	**23 20 57.8**	**-1.9**
PET				*e*S	S	23 29 57.4	+0.5
PET				pmax	pmax		
	comp=Z,100nm,7.0s						
PET				MLR	MLR		
	comp=Z,500nm,18.0s,MS4.8						
PET				MLR	MLR		
	comp=Z,500nm,13.0s						
PET	**Petropavlovsk**	**67.84**	**40**	*e*P	**P**	**23 20 57.8**	**-1.9**
	comp=Z,100nm,7.0s						
PET				*e*S	S	23 29 57.4	+0.5
	comp=Z,500nm,13.0s						
LBTB	**Lobatse**	**67.95**	**212**	*e*P	**P**	**23 21 00.7**	**0.0**
LBTB				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.1						
LBTB	**Lobatse**	**67.95**	**212**	*e*P	**P**	**23 21 00.7**	**0.0**
	comp=Z,18nm,0.9s,mb5.1						
LBTB	**Lobatse**	**67.95**	**212**	*e*P	**P**	**23 20 59.6**	**-1.1**
LBTB	**Lobatse**	**67.95**	**212**	*e*P	**P**	**23 21 00.7**	**0.0**
	comp=Z,18nm,0.9s,mb5.1						
ERPM	**east rand prop**	**68.02**	**209**	*e*P	**P**	**23 20 59.3**	**-1.7**
KLOF	**Kloof**	**68.28**	**210**	*e*P	**P**	**23 21 02.2**	**-0.5**
KLOF				AMS	AMS	23 33 00.3	
	comp=Z,838nm,21.5s,MS4.9						
PRYS	**Parys**	**68.89**	**210**	⇑*i*P	**P**	**23 21 05.6**	**-0.9**
KAPI	**Kappang**	**69.91**	**112**	P	**P**	**23 21 12.0**	**-1.2**
	comp=Z,13nm,1.0s,mb4.8,baz=327,slow=6.4,SNR=3.4						
KAPI	**Kappang**	**69.91**	**112**	P	**P**	**23 21 12.0**	**-1.2**
SWZ	**Schweizer**	**69.96**	**211**	*e*P	**P**	**23 21 11.9**	**-1.3**
SWZ				AMS	AMS	23 56 16.7	
	comp=Z,649nm,20.0s,MS4.9						
BOSA	**Boshof**	**71.25**	**211**	P	**P**	**23 21 20.1**	**-0.8**
	comp=Z,14nm,0.8s,mb4.9,baz=35,slow=6.8,SNR=21						
BOSA				LR	LR	23 54 56.1	
	comp=Z,254nm,18.5s,MS4.5,baz=24,slow=38						
BOSA	**Boshof**	**71.25**	**211**	*e*P	**P**	**23 21 19.9**	**-1.0**
BOSA				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
BOSA	**Boshof**	**71.25**	**211**	*e*P	**P**	**23 21 19.9**	**-1.1**
	comp=Z,15nm,0.9s,mb4.9						
BOSA	**Boshof**	**71.25**	**211**	⇑*i*P	**P**	**23 21 19.8**	**-1.2**
BOSA				AMS	AMS	23 55 07.9	
	comp=Z,188nm,16.4s,MS4.4						
BOSA	**Boshof**	**71.25**	**211**	*e*P	**P**	**23 21 19.9**	**-1.0**
	comp=Z,15nm,0.9s,mb4.9						
UPI	**Upington**	**72.78**	**214**	⇑*i*P	**P**	**23 21 29.7**	**-0.5**
UPI				AMS	AMS	23 50 47.3	
	comp=Z,8μm,23.3s,MS5.9						
HVD	**Gariep Dam**	**72.90**	**210**	*e*P	**P**	**23 21 30.4**	**-0.4**
HVD				AMS	AMS	23 54 41.1	
	comp=Z,266nm,19.4s,MS4.5						
PKA	**Prieska**	**73.23**	**212**	*e*P	**P**	**23 21 31.9**	**-0.9**
SOE	**Somerset East**	**74.73**	**209**	*e*P	**P**	**23 21 41.1**	**-0.3**
SOE				AMS	AMS	23 55 15.8	
	comp=Z,662nm,21.1s,MS4.9						
GRM	**Grahamstown**	**74.90**	**208**	*e*P	**P**	**23 21 41.2**	**-1.3**
INK	**Inuvik**	**76.01**	**5**	P	**P**	**23 21 48.6**	**+0.1**
INK	**Inuvik**	**76.01**	**5**	P	**P**	**23 21 48.6**	**+0.1**
SUR	**Sutherland**	**76.41**	**212**	P	**P**	**23 21 51.4**	**+0.3**
SUR	**Sutherland**	**76.41**	**212**	P	**P**	**23 21 51.4**	**+0.3**
COLA	**College**	**77.71**	**11**	*e*P	**P**	**23 21 58.7**	**+0.6**
COLA	**College**	**77.71**	**11**	*e*P	**P**	**23 21 58.7**	**+0.6**
SCHQ	**Schefferville**	**78.58**	**331**	P	**P**	**23 22 00.8**	**-2.3**
	comp=Z,5.2nm,0.8s,mb4.5,baz=45,slow=7.1,SNR=3.7						
SCHQ				LR	LR	23 55 19.6	
	comp=Z,173nm,21.7s,MS4.3,baz=94,slow=35						
SCHQ	**Schefferville**	**78.58**	**331**	P	**P**	**23 22 00.8**	**-2.3**
SCHQ				LR	LR	23 55 19.6	
EGAK	**Eagle**	**78.75**	**9**	*e*P	**P**	**23 22 04.3**	**+0.5**
	comp=Z,11nm,1.2s,mb4.7						
EGAK	**Eagle**	**78.75**	**9**	*e*P	**P**	**23 22 04.3**	**+0.5**
	comp=Z,11nm,1.2s,mb4.7						
DAWY	**Dawson**	**79.64**	**8**	*e*P	**P**	**23 22 09.1**	**+0.3**
DAWY				*e*PcP	PcP	23 22 16.7	+0.2
DAWY	**Dawson**	**79.64**	**8**	*e*P	**P**	**23 22 09.1**	**+0.4**
MBWA	**Marble Bar**	**80.72**	**124**	*e*P	**P**	**23 22 14.2**	**-0.9**
MBWA	**Marble Bar**	**80.72**	**124**	*e*P	**P**	**23 22 16.9**	**+1.8**
MBWA	**Marble Bar**	**80.72**	**124**	*e*P	**P**	**23 22 16.9**	**+1.8**
YKA	**Yellowknife Ar**	**82.11**	**357**	P	**P**	**23 22 21.1**	**-0.9**
	comp=Z,1.0nm,0.6s,mb3.9,baz=0.0,slow=5.5,SNR=6.7						
YKA	**Yellowknife Ar**	**82.11**	**357**	P	**P**	**23 22 21.1**	**-0.9**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA	**Yellowknife Ar**	**82.11**	**357**	P	**P**	**23 22 21.1**	**-0.9**
YKA	**Yellowknife Ar**	**82.11**	**357**	P	**P**	**23 22 21.1**	**-0.9**
	comp=Z,1.0nm,0.6s,mb3.9						
FITZ	**Fitzroy Crossi**	**82.79**	**118**	*e*P	**P**	**23 22 25.7**	**-0.4**
	comp=Z,20nm,1.1s,mb5.1						
FITZ	**Fitzroy Crossi**	**82.79**	**118**	*e*P	**P**	**23 22 25.5**	**-0.6**
	comp=Z,16nm,1.1s,mb5.0						
FITZ	**Fitzroy Crossi**	**82.79**	**118**	*e*P	**P**	**23 22 25.5**	**-0.6**
	comp=Z,16nm,1.1s,mb5.0						
FCC	**Fort Churchill**	**83.31**	**346**	*e*P	**P**	**23 22 27.9**	**-0.4**
FCC	**Fort Churchill**	**83.31**	**346**	*e*P	**P**	**23 22 27.9**	**-0.4**
KNA	**Kununurra**	**83.56**	**114**	*e*P	**P**	**23 22 30.3**	**+0.1**
	comp=Z,50nm,1.2s,mb5.5						
MEEK	**Meekatharra**	**83.80**	**129**	*e*P	**P**	**23 22 29.6**	**-1.6**
MORW	**Morawa**	**83.94**	**132**	*e*P	**P**	**23 22 31.3**	**-0.5**
KAKA	**Kakadu**	**84.44**	**110**	*e*P	**P**	**23 22 34.6**	**-0.1**
	comp=Z,32nm,0.9s,mb5.5						
KAKA	**Kakadu**	**84.44**	**110**	*e*P	**P**	**23 22 34.2**	**-0.5**
	comp=Z,72nm,0.9s,mb5.8						
FFC	**Flin Flon**	**88.53**	**349**	*i*P	**P**	**23 22 54.1**	**-0.1**
FFC	**Flin Flon**	**88.53**	**349**	*e*P	**P**	**23 22 52.8**	**-1.4**
FFC	**Flin Flon**	**88.53**	**349**	*e*P	**P**	**23 22 52.8**	**-1.4**
KMBL	**Kambalda**	**89.13**	**130**	*e*P	**P**	**23 22 56.2**	**-1.0**
	comp=Z,100nm,1.0s,mb6.1						
WRA	**Warramunga Arr**	**90.31**	**114**	P	**P**	**23 23 02.0**	**-1.0**
	comp=Z,16nm,1.0s,mb5.3,baz=322,slow=4.4,SNR=47						
WRA	**Warramunga Arr**	**90.31**	**114**	P	**P**	**23 23 02.0**	**-1.0**
WRA				pmax	pmax		
	comp=Z,16nm,1.0s						
WRA	**Warramunga Arr**	**90.31**	**114**	P	**P**	**23 23 02.0**	**-1.0**
	comp=Z,16nm,1.0s,mb5.3						
WRAB	**Tennant Creek**	**90.31**	**114**	*e*P	**P**	**23 23 02.3**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.5						
WRAB	**Tennant Creek**	**90.31**	**114**	*e*P	**P**	**23 23 02.3**	**-0.7**
	comp=Z,26nm,1.1s,mb5.5						
WRAB	**Tennant Creek**	**90.31**	**114**	*e*P	**P**	**23 23 02.3**	**-0.7**
	comp=Z,26nm,1.1s,mb5.5				

IZM	**Izmir**	**0.69**	**224**	*e*PG	**Pg**	**23**	**15**	**09.6**	**-0.2**
IZM	**Izmir**	**0.69**	**224**	*e*Pg	**Pg**	**23**	**15**	**09.6**	**-0.3**
KULA	**Kula-Manisa**	**0.72**	**122**	*e*PG	**Pg**	**23**	**15**	**10.1**	**-0.3**
KULA	**Kula-Manisa**	**0.72**	**122**	*e*Pg	**Pg**	**23**	**15**	**10.1**	**-0.3**
BALB	**Balikesir**	**0.74**	**0**	*e*PG	**Pg**	**23**	**15**	**09.8**	**-1.0**
BALB				*e*SG	**Sg**	**23**	**15**	**20.5**	**0.0**
BALB	**Balikesir**	**0.74**	**0**	*e*Pg	**Pg**	**23**	**15**	**09.8**	**-1.0**
BALB				*e*Sg	**Sg**	**23**	**15**	**20.5**	**0.0**
BLCB	**Balcova**	**0.83**	**232**	*e*PG	**Pg**	**23**	**15**	**11.6**	**-0.9**
BLCB	**Balcova**	**0.83**	**232**	P	**Pg**	**23**	**15**	**11.8**	**-0.7**
BLCB				S	**Sg**	**23**	**15**	**24.0**	**+0.7**
BLCB	**Balcova**	**0.83**	**232**	*e*Pg	**Pg**	**23**	**15**	**11.6**	**-0.9**
DURS	**Dursunbey**	**0.84**	**33**	*i* P	**Pg**	**23**	**15**	**12.6**	**-0.2**
DURS				*i* S	**Sg**	**23**	**15**	**24.7**	**+1.0**
BALY	**Balya**	**0.87**	**347**	*i* P	**Pg**	**23**	**15**	**12.9**	**-0.3**
BALY				*i* S	**Sg**	**23**	**15**	**25.1**	**+0.6**
AYVA	**Ayvalik**	**1.01**	**294**	*i* P	**Pg**	**23**	**15**	**15.3**	**-0.6**
AYVA				*i* S	**Sg**	**23**	**15**	**29.8**	**+0.6**
URLA	**Izmir**	**1.14**	**242**	*i* P	**Pg**	**23**	**15**	**20.4**	**+2.0**
GONE	**Gonen-Balikesi**	**1.16**	**353**	*e*PN	**Pn**	**23**	**15**	**17.8**	**-1.3**
GONE	**Gonen-Balikesi**	**1.16**	**353**	*e*Pn	**Pn**	**23**	**15**	**17.8**	**-1.2**
AYDN	**Tasoluk**	**1.23**	**180**	*i* P	**Pn**	**23**	**15**	**19.2**	**-0.8**
AYDN				*i* S	**Sb**	**23**	**15**	**36.3**	**+0.2**
GDZ	**Gediz**	**1.26**	**81**	*i* S	**Sb**	**23**	**15**	**36.7**	**-0.2**
PRK	**Paraskevi**	**1.30**	**286**	*e*P	**Pn**	**23**	**15**	**20.5**	**-0.4**
PRK	**Paraskevi**	**1.30**	**286**	P	**Pn**	**23**	**15**	**20.4**	**-0.5**
PRK				S	**Sb**	**23**	**15**	**38.1**	**+0.1**
KHAL	**Karahalli**	**1.37**	**112**	*i* S	**Sb**	**23**	**15**	**40.1**	**+0.1**
KHL	**Karahalli**	**1.41**	**113**	*e*PN	**Pn**	**23**	**15**	**22.3**	**-0.1**
KHL	**Karahalli**	**1.41**	**113**	*e*Pn	**Pn**	**23**	**15**	**22.3**	**-0.1**
SMG	**Samos**	**1.44**	**215**	*e*P	**Pn**	**23**	**15**	**23.5**	**+0.6**
BNT	**Bandirma**	**1.46**	**1**	*e*PN	**Pn**	**23**	**15**	**22.6**	**-0.6**
BNT	**Bandirma**	**1.46**	**1**	*e*Pn	**Pn**	**23**	**15**	**22.6**	**-0.5**
CHOS	**Chios island**	**1.52**	**251**	P	**Pn**	**23**	**15**	**24.0**	**+0.1**
CHOS				S	**Sn**	**23**	**15**	**43.9**	**+0.1**
EZN	**Ezine**	**1.52**	**308**	*e*PN	**Pn**	**23**	**15**	**23.7**	**-0.3**
EZN	**Ezine**	**1.52**	**308**	*e*Pn	**Pn**	**23**	**15**	**23.7**	**-0.3**
KRBG	**Karabiga-Canak**	**1.56**	**343**	*e*PN	**Pn**	**23**	**15**	**24.1**	**-0.4**
KRBG	**Karabiga-Canak**	**1.56**	**343**	*e*Pn	**Pn**	**23**	**15**	**24.1**	**-0.4**
ULDT	**Uludag**	**1.58**	**38**	*i* S	**Sn**	**23**	**15**	**45.8**	**+0.4**
BOZC	**Bozcaada**	**1.70**	**304**	*i* P	**Pn**	**23**	**15**	**22.0**	**-4.5**
BOZC				*i* S	**Sn**	**23**	**15**	**47.5**	**-0.9**
ARMT	**Armutlu**	**1.83**	**24**	*e*PN	**Pn**	**23**	**15**	**28.1**	**-0.1**
ARMT	**Armutlu**	**1.83**	**24**	*e*Pn	**Pn**	**23**	**15**	**28.1**	**-0.2**
GEMT	**Gemlik**	**1.84**	**33**	*e*PN	**Pn**	**23**	**15**	**28.1**	**-0.3**
GEMT	**Gemlik**	**1.84**	**33**	*e*Pn	**Pn**	**23**	**15**	**28.1**	**-0.3**
BDRM	**Kayabasi**	**1.86**	**191**	*i* P	**Pn**	**23**	**15**	**28.7**	**+0.1**
BDRM	**Kayabasi**	**1.86**	**191**	*i* P	**Pn**	**23**	**15**	**28.7**	**+0.1**
MFT	**Murefte**	**1.94**	**346**	*e*PN	**Pn**	**23**	**15**	**30.0**	**+0.2**
MFT	**Murefte**	**1.94**	**346**	*e*Pn	**Pn**	**23**	**15**	**30.0**	**+0.2**
ERIK	**Erikli-Kesan**	**2.06**	**330**	*e*PN	**Pn**	**23**	**15**	**31.3**	**-0.1**
ERIK	**Erikli-Kesan**	**2.06**	**330**	*e*Pn	**Pn**	**23**	**15**	**31.3**	**-0.1**
BORA	**Eskisehir**	**2.22**	**63**	*i* P	**Pn**	**23**	**15**	**35.4**	**+1.7**
BORA				*i* S	**Sn**	**23**	**16**	**08.3**	**+7.0**
ENEZ	**Enez**	**2.27**	**325**	*e*PN	**Pn**	**23**	**15**	**34.4**	**+0.1**
ENEZ	**Enez**	**2.27**	**325**	*e*Pn	**Pn**	**23**	**15**	**34.4**	**+0.1**
LIA	**Limnos Island**	**2.32**	**296**	P	**Pn**	**23**	**15**	**34.8**	**-0.1**
LIA				S	**Sn**	**23**	**16**	**04.1**	**+0.5**
ALN	**Alexandroupoli**	**2.45**	**325**	P	**Pn**	**23**	**15**	**36.5**	**-0.2**
ALN				S	**Sn**	**23**	**16**	**07.7**	**+0.9**
ALN	**Alexandroupoli**	**2.45**	**325**	P	**Pn**	**23**	**15**	**36.5**	**-0.2**

CSEM ***03*** *23:19:52.3, 35°.56N×58°.81E, h18km, ML3.6, After TEH*

TEH 03 23:19:52.3, 35°.56N×58°.81E, h18km, 1D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMOG	**Moghan**	**0.69**	**38**	*e*Sg	Sg	23 20 16.4	+1.2
IMOG			⇓	*e*Pg	Pg	23 20 04.9	-1.1
IMOG				*e*		23 20 22.1	
	comp=Z,14μm,0.1s						
IPAY	**Payeh**	**0.90**	**9**	*e*	Sb	23 20 29.6	+8.5
	comp=Z,17μm,0.1s						
MHI	**Mashad**	**0.92**	**35**	*e*	Pb	23 20 11.4	+1.7
	comp=Z,10μm,0.0s						
MHI				*e*Pg	Pg	23 20 09.2	-1.0
IKRD	**Kardeh**	**1.24**	**349**	*e*Pg	Pg	23 20 16.2	0.0
IKRD				*e*		23 20 42.5	
	comp=Z,9μm,0.1s						
IMYA	**Miami**	**1.30**	**53**	*e*Pg	Pg	23 20 15.7	-1.8
IMYA				*e*		23 20 43.6	
	comp=Z,5μm,0.1s						
IMYA	**Miami**	**1.30**	**53**	*e*Pg	Pg	23 20 15.7	-1.8
ITEG	**Tejag**	**2.66**	**181**	*e*Pn	Pn	23 20 34.2	0.0
ITEG				*e*		23 20 41.2	
	comp=Z,6μm,0.1s						
ITEG	**Tejag**	**2.66**	**181**	*e*Pn	Pn	23 20 34.2	0.0
IDAH	**Dahanechah**	**2.95**	**162**	*e*Pn	Pn	23 20 38.5	+0.3
IDAH				*e*		23 21 35.8	
	comp=Z,2μm,0.3s						
IDAH	**Dahanechah**	**2.95**	**162**	*e*Pn	Pn	23 20 38.5	+0.3
IKOO	**Kooshah**	**3.13**	**177**	*e*Pn	Pn	23 20 40.8	+0.1
IKOO				*e*		23 20 56.2	
	comp=Z,2μm,0.2s						
IKOO	**Kooshah**	**3.13**	**177**	*e*Pn	Pn	23 20 40.8	+0.1
ILAS	**Lasjerd**	**4.78**	**270**	*e*Pn	Pn	23 21 03.5	+0.1
ILAS				*e*		23 22 41.9	
	comp=Z,517nm,0.4s						
ILAS	**Lasjerd**	**4.78**	**270**	*e*Pn	Pn	23 21 03.5	+0.1
IBAF	**Bafgh**	**4.80**	**215**	*e*Pn	Pn	23 21 03.4	-0.2
IBAF				*e*		23 22 24.3	
	comp=Z,776nm,0.2s						
IBAF	**Bafgh**	**4.80**	**215**	*e*Pn	Pn	23 21 03.4	-0.2
ICHK	**Chekchek**	**4.94**	**229**	*e*Pn	Pn	23 21 05.0	-0.5
ICHK				*e*		23 22 29.8	
	comp=Z,1μm,0.2s						
ICHK	**Chekchek**	**4.94**	**229**	*e*Pn	Pn	23 21 05.0	-0.5
IMEH	**Mehriz**	**5.44**	**221**	*e*Pn	Pn	23 21 12.0	-0.5
IMEH				*e*		23 22 51.5	
	comp=Z,784nm,0.5s						
IMEH	**Mehriz**	**5.44**	**221**	*e*Pn	Pn	23 21 12.0	-0.5
ISAD	**Sadrabad**	**5.61**	**231**	*e*Pn	Pn	23 21 14.4	-0.4
ISAD				*e*		23 23 02.1	
	comp=Z,966nm,0.4s						
ISAD	**Sadrabad**	**5.61**	**231**	*e*Pn	Pn	23 21 14.4	-0.4

ISCJB ***03*** *23:24:37.0±0.3, 37°.50N±0°.06×135°.56E±0°.06, h361km±4km, mb3.4/10, Error ellipse: s-maj=10.0km s-min=7.4km az=165.8*
IDC ***03*** *23:24:37.8±0.8, 37°.51N×135°.50E, h349km±10km, mb3.1/8, mb1 3.3/11, mb1mx3.1/28, mbtmp3.1/11, Error ellipse: s-maj=18.2km s-min=14.9km az=17.0*
JMA ***03*** *23:24:37.6±0.2, 37°.42N×135°.63E, h364km±3km, M3.2*
NEIC ***03*** *23:24:37.7±0.4, 37°.48N×135°.45E, h350km±5km, mb3.7/3, Error ellipse: s-maj=9.1km s-min=8.0km az=222.0*

ISC 03 23:24:37.9±0.3, 37°.49N±0°.06×135°.56E±0°.06, h354km±4km, n40, σ0°.73/51, mb3.4/10, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKY	**Yasaka**	**1.89**	**191**	P	**Pn**	**23 25 29.0**	**+0.1**
JKY				S	**S**	**23 26 09.2**	**-0.7**
JKSM	**Kasumi**	**2.03**	**201**	P	**Pn**	**23 25 29.9**	**0.0**
JWT	**Wachi**	**2.21**	**183**	P	**Pn**	**23 25 31.5**	**+0.3**
JWT				S	**S**	**23 26 12.9**	**-1.0**
JNG	**Nsakai**	**2.31**	**117**	P	**Pn**	**23 25 32.1**	**+0.3**
JNG				S	**S**	**23 26 15.6**	**+0.5**
MAT	**Matsushiro**	**2.32**	**113**	P	**Pn**	**23 25 32.0**	**+0.1**
MAT				S	**S**	**23 26 15.2**	**-0.1**
MAT	**Matsushiro**	**2.32**	**113**	P	**Pn**	**23 25 31.7**	**-0.2**
MAT				S	**S**	**23 26 15.4**	**+0.1**
MAJO	**Matsushiro**	**2.32**	**113**	*e*Pn	**Pn**	**23 25 31.7**	**-0.2**
MJAR	**Matsushiro Arr**	**2.32**	**113**	P	**Pn**	**23 25 32.4**	**+0.4**
	5.3nm,0.3s,baz=295,slow=9.2,SNR=78						
MJAR				S	**S**	**23 26 15.9**	**+0.5**
	baz=279,slow=16,SNR=4.4						
JHK	**Hiroka**	**2.77**	**94**	P	**Pn**	**23 25 35.0**	**-0.5**
JRY	**Ryogami san**	**3.06**	**118**	P	**Pn**	**23 25 38.3**	**+0.2**
JYN	**Shimob**	**3.12**	**129**	P	**Pn**	**23 25 38.9**	**+0.2**
JHS	**Saijyo**	**3.17**	**219**	P	**Pn**	**23 25 39.6**	**+0.4**
JIE	**Ise**	**3.23**	**163**	P	**Pn**	**23 25 40.4**	**+0.7**
JAG	**Ashikaga**	**3.30**	**108**	P	**Pn**	**23 25 39.5**	**-0.8**
JAG				*e*S	**S**	**23 26 30.9**	**+0.4**
JGT	**Gotsu**	**3.58**	**228**	P	**Pn**	**23 25 43.8**	**+0.8**
JOD2	**Odawara 2**	**3.61**	**127**	P	**Pn**	**23 25 44.5**	**+1.2**
JFT	**Otama**	**3.80**	**88**	P	**Pn**	**23 25 45.7**	**+0.6**
JFT				S	**S**	**23 26 43.9**	**+4.6**
JMM	**Marumori**	**4.17**	**83**	P	**Pn**	**23 25 48.3**	**-0.5**
JFK	**Kawauchi**	**4.24**	**90**	P	**Pn**	**23 25 47.9**	**-1.6**
JFK				S	**S**	**23 26 42.8**	**-4.5**
KSRS	**Korea Array**	**6.07**	**272**	P	**Pn**	**23 26 10.9**	**+1.3**
	0.2nm,0.3s,baz=78,slow=12,SNR=6.0						
INCN	**Inchon**	**7.10**	**273**	*e*Pn	**Pn**	**23 26 20.4**	**-1.1**
MDJ	**Mudanjiang**	**8.42**	**330**	P	**Pn**	**23 26 37.3**	**+0.4**
MDJ				pmax	pmax		
	comp=Z,12nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,64nm,4.2s						
ASAJ	**Asahikawa**	**8.50**	**37**	P	**Pn**	**23 26 36.5**	**-1.3**
	comp=Z,5.5nm,0.3s,baz=228,slow=11,SNR=31						
ASAJ				S	**S**	**23 28 09.6**	**-6.2**
	comp=Z,1.0nm,0.3s,baz=64,slow=26,SNR=7.2						
YSS	**Yuzh-Sakhalins**	**10.85**	**27**	Pn	**Pn**	**23 27 05.6**	**-0.2**
CBIJ	**Chichi jima**	**11.78**	**150**	P	**Pn**	**23 27 14.2**	**-2.9**
	comp=Z,3.7nm,0.3s,baz=288,slow=18,SNR=4.9						
CBIJ				S	**S**	**23 29 17.4**	**-11**
	comp=Z,5.5nm,0.3s,baz=270,slow=20,SNR=4.3						
PETK	**Petropavlovsk-**	**21.92**	**37**	P	**P**	**23 29 04.3**	**+1.5**
	comp=Z,1.2nm,0.7s,mb3.2,baz=190,slow=5.7,SNR=3.1						
ULN	**Ulaanbaatar**	**23.26**	**306**	*e*P	**P**	**23 29 15.0**	**0.0**
	comp=Z,2.4nm,0.6s,mb3.6						
SONM	**Songino Array**	**23.68**	**305**	P	**P**	**23 29 19.2**	**+0.5**
	comp=Z,1.6nm,0.5s,mb3.5,baz=106,slow=9.4,SNR=4.2						
MKAR	**Makanchi Array**	**39.90**	**301**	P	**P**	**23 31 38.0**	**-0.6**
	comp=Z,0.5nm,0.5s,mb3.0,baz=86,slow=10,SNR=13						
KURK	**Kurchatov**	**41.95**	**307**	P	**P**	**23 31 54.9**	**-0.2**
	comp=Z,2.0nm,0.6s,mb3.4,baz=83,slow=7.9,SNR=11						
KURK	**Kurchatov**	**41.95**	**307**	*e*P	**P**	**23 31 54.5**	**-0.6**
	comp=Z,2.7nm,0.6s,mb3.5						
BRVK	**Borovoye**	**46.84**	**311**	P	**P**	**23 32 32.6**	**-0.7**
KBL	**Kabul**	**52.86**	**288**	P	**P**	**23 33 18.6**	**+0.2**
ARU	**Arti**	**52.89**	**317**	*e*P	**P**	**23 33 17.9**	**-0.4**
	comp=Z,1.6nm,0.3s,mb3.8						
FITZ	**Fitzroy Crossi**	**56.08**	**191**	P	**P**	**23 33 41.3**	**0.0**
WRAB	**Tennant Creek**	**57.12**	**181**	P	**P**	**23 33 48.1**	**-0.5**
WRA	**Warramunga Arr**	**57.13**	**181**	P	**P**	**23 33 49.1**	**+0.4**
	comp=Z,0.4nm,0.5s,mb3.0,baz=357,slow=7.5,SNR=2.2						
FINES	**FINESS Array B**	**66.17**	**330**	P	**P**	**23 34 47.8**	**-0.2**
	comp=Z,1.0nm,0.8s,mb3.6,baz=48,slow=5.7,SNR=3.4						
PDAR	**Pinedale Array**	**80.59**	**43**	P	**P**	**23 36 12.1**	**+0.4**
	comp=Z,0.4nm,0.6s,mb3.4,baz=276,slow=2.6,SNR=4.0						
TXAR	**Lajitas Array**	**93.44**	**49**	P	**P**	**23 37 14.9**	**+0.9**
	comp=Z,0.2nm,0.7s,mb3.3,baz=254,slow=2.8,SNR=4.0						

ISCJB ***03*** *23:31:20.1±0.8, 36°.59N±0°.03×22°.62E±0°.05, h1km±6km, Error ellipse: s-maj=7.5km s-min=4.4km az=145.4*
NEIC ***03*** *23:31:20.7, 36°.61N×22°.64E, h18km, ML2.7(ATH), After ATH.*
ATH ***03*** *23:31:20.7, 36°.61N×22°.64E, h18km, MD3.5/22, ML2.7*
CSEM ***03*** *23:31:21.5±0.2, 36°.60N×22°.61E, h10km, ML2.7, Error ellipse: s-maj=6.2km s-min=3.6km az=53.0*
THE ***03*** *23:31:21.7, 36°.64N×22°.61E, h0km±2km, ML3.4/7, Error ellipse: s-maj=2.5km s-min=1.1km az=205.0*

ISC 03 23:31:21.1±0.6, 36°.59N±0°.03×22°.62E±0°.04, h5km±4km, n81, σ0°.70/109, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLI	**Veliai**	**0.29**	**63**	*e*Pb	**Pg**	**23 31 26.8**	**+0.1**
VLI				*e*Sb	**Sg**	**23 31 31.2**	**+0.7**
VLI	**Veliai**	**0.29**	**63**	*e*PB	**Pg**	**23 31 26.8**	**+0.1**
VLI				*e*SB	**Sg**	**23 31 31.2**	**+0.7**
VLI	**Veliai**	**0.29**	**63**	*e*Pb	**Pg**	**23 31 26.8**	**+0.1**
VLI				*e*Sb	**Sg**	**23 31 31.2**	**+0.7**
KYTH	**Kithira**	**0.46**	**132**	*e*Pb	**Pg**	**23 31 30.4**	**+0.5**
KYTH	**Kithira**	**0.46**	**132**	*e*PB	**Pg**	**23 31 30.4**	**+0.5**
KYTH	**Kithira**	**0.46**	**132**	*e*Pb	**Pg**	**23 31 30.4**	**+0.5**
PYL	**PYLOS**	**0.77**	**294**	*e*PN	**Pg**	**23 31 35.4**	**-0.4**
PYL				*e*SN	**Sg**	**23 31 46.6**	**+0.8**
PYL	**PYLOS**	**0.77**	**294**	P	**Pg**	**23 31 35.4**	**-0.4**
PYL	**PYLOS**	**0.77**	**294**	P	**Pg**	**23 31 35.4**	**-0.4**
PYL				*e*Sn	**Sg**	**23 31 46.6**	**+0.8**
VLX	**Vlachokerasia**	**0.80**	**346**	*e*PN	**Pg**	**23 31 36.0**	**-0.6**
VLX				*e*SN	**Sg**	**23 31 46.7**	**-0.3**
VLX	**Vlachokerasia**	**0.80**	**346**	P	**Pg**	**23 31 36.0**	**-0.6**
VLX				S	**Sg**	**23 31 46.7**	**-0.3**
VLX	**Vlachokerasia**	**0.80**	**346**	P	**Pg**	**23 31 36.0**	**-0.6**
VLX				S	**Sg**	**23 31 46.7**	**-0.3**
ITM	**Ithomi**	**0.81**	**317**	*e*Pn	**Pg**	**23 31 36.2**	**-0.5**
ITM				*e*Sn	**Sg**	**23 31 47.7**	**+0.5**
ITM	**Ithomi**	**0.81**	**317**	*e*PN	**Pg**	**23 31 36.2**	**-0.5**
ITM				*e*SN	**Sg**	**23 31 47.7**	**+0.5**
ITM	**Ithomi**	**0.81**	**317**	P	**Pg**	**23 31 36.2**	**-0.5**
ITM	**Ithomi**	**0.81**	**317**	P	**Pg**	**23 31 36.2**	**-0.5**
ITM				*e*Sn	**Sg**	**23 31 47.7**	**+0.5**
DID	**Didima**	**1.04**	**28**	*e*PN	**Pg**	**23 31 40.2**	**-0.9**
DID				*e*SN	**Sn**	**23 31 54.2**	**-3.2**
DID	**Didima**	**1.04**	**28**	P	**Pg**	**23 31 40.2**	**-0.9**
DID				S	**Sg**	**23 31 55.2**	**+0.6**
DID	**Didima**	**1.04**	**28**	*e*Pn	**Pg**	**23 31 40.2**	**-0.9**
DID				*e*Sn	**Sn**	**23 31 54.2**	**-3.2**
DID				S	**Sg**	**23 31 55.2**	**+0.6**
NAIG	**Nisos Aigina**	**1.36**	**31**	*e*Pn	**Pn**	**23 31 46.2**	**-0.6**
NAIG	**Nisos Aigina**	**1.36**	**31**	*e*PN	**Pn**	**23 31 46.2**	**-0.6**
NAIG	**Nisos Aigina**	**1.36**	**31**	*e*Pn	**Pn**	**23 31 46.2**	**-0.6**
GUR	**Goura**	**1.36**	**351**	*e*PN	**Pn**	**23 31 45.7**	**-1.2**
GUR	**Goura**	**1.36**	**351**	P	**Pn**	**23 31 45.7**	**-1.2**
GUR				S	**Sb**	**23 32 05.7**	**+0.8**
GUR	**Goura**	**1.36**	**351**	P	**Pn**	**23 31 45.7**	**-1.2**
GUR				S	**Sb**	**23 32 05.7**	**+0.8**
LTK	**Loutraki**	**1.46**	**11**	*e*PN	**Pn**	**23 31 48.1**	**-0.1**
LTK				*e*SN	**Sn**	**23 32 07.3**	**-0.4**
LTK	**Loutraki**	**1.46**	**11**	P	**Pn**	**23 31 48.1**	**-0.1**
LTK				S	**Sb**	**23 32 08.5**	**+0.8**
LTK	**Loutraki**	**1.46**	**11**	P	**Pn**	**23 31 48.1**	**-0.1**
LTK				*e*Sn	**Sn**	**23 32 07.3**	**-0.4**
LTK				S	**Sb**	**23 32 08.5**	**+0.8**
VLY	**Voula,Athens**	**1.57**	**36**	*e*Pn	**Pn**	**23 31 49.3**	**-0.5**
VLY				*e*Sn	**Sn**	**23 32 10.9**	**+0.4**
VLY	**Voula,Athens**	**1.57**	**36**	*e*PN	**Pn**	**23 31 49.3**	**-0.6**
VLY				*e*SN	**Sn**	**23 32 10.9**	**+0.4**
VLY	**Voula,Athens**	**1.57**	**36**	*e*Pn	**Pn**	**23 31 49.3**	**-0.5**
VLY				*e*Sn	**Sn**	**23 32 10.9**	**+0.4**
KARN	**Karanos**	**1.59**	**138**	*e*PN	**Pn**	**23 31 50.3**	**+0.4**
KARN	**Karanos**	**1.59**	**138**	P	**Pn**	**23 31 50.5**	**+0.6**
KARN	**Karanos**	**1.59**	**138**	*e*Pn	**Pn**	**23 31 50.3**	**+0.4**
ATH	**Athens Observa**	**1.64**	**32**	*e*Pn	**Pn**	**23 31 49.7**	**-0.9**
ATH	**Athens Observa**	**1.64**	**32**	*e*PN	**Pn**	**23 31 49.7**	**-0.9**
ATH	**Athens Observa**	**1.64**	**32**	*e*Pn	**Pn**	**23 31 49.7**	**-0.9**
LAKA	**Lakka**	**1.73**	**343**	P	**Pn**	**23 31 51.8**	**0.0**
LAKA	**Lakka**	**1.73**	**343**	P	**Pn**	**23 31 51.8**	**0.0**
RLS	**Riolos of Patr**	**1.73**	**328**	*e*Pb	**Pn**	**23 31 51.1**	**-0.8**
RLS	**Riolos of Patr**	**1.73**	**328**	*e*PB	**Pn**	**23 31 51.1**	**-0.8**
VAM	**Vamos**	**1.74**	**132**	*e*Pn	**Pn**	**23 31 52.1**	**0.0**
VAM	**Vamos**	**1.74**	**132**	*e*PN	**Pn**	**23 31 52.1**	**0.0**
VAM	**Vamos**	**1.74**	**132**	*e*Pn	**Pn**	**23 31 52.1**	**0.0**
PTL	**Penteli**	**1.77**	**34**	*e*Pn	**Pn**	**23 31 51.7**	**-0.7**
PTL	**Penteli**	**1.77**	**34**	*e*PN	**Pn**	**23 31 51.7**	**-0.7**
PTL	**Penteli**	**1.77**	**34**	*e*Pn	**Pn**	**23 31 51.7**	**-0.7**
DSF	**Desfina**	**1.82**	**358**	P	**Pn**	**23 31 53.2**	**0.0**
DSF				S	**Sn**	**23 32 17.2**	**+0.6**
KALE	**Kalithea**	**1.84**	**348**	P	**Pn**	**23 31 54.5**	**+1.1**
KALE				S	**Sn**	**23 32 17.6**	**+0.5**
EFP	**Efpalio**	**1.92**	**343**	*e*PN	**Pn**	**23 31 54.8**	**+0.3**
EFP	**Efpalio**	**1.92**	**343**	P	**Pn**	**23 31 54.4**	**-0.1**
EFP				S	**Sn**	**23 32 19.4**	**+0.3**
EFP	**Efpalio**	**1.92**	**343**	P	**Pn**	**23 31 54.4**	**-0.1**
EFP	**Efpalio**	**1.92**	**343**	*e*Pn	**Pn**	**23 31 54.8**	**+0.3**
EFP				S	**Sn**	**23 32 19.4**	**+0.3**
LKR	**Lokris**	**2.08**	**8**	*e*Pn	**Pn**	**23 31 56.4**	**-0.3**
LKR	**Lokris**	**2.08**	**8**	*e*PN	**Pn**	**23 31 56.4**	**-0.3**
LKR	**Lokris**	**2.08**	**8**	P	**Pn**	**23 31 56.4**	**-0.3**
LKR	**Lokris**	**2.08**	**8**	P	**Pn**	**23 31 56.4**	**-0.3**
IDI	**Anoyia**	**2.26**	**124**	*e*Pb	**Pn**	**23 31 59.3**	**+0.2**
IDI	**Anoyia**	**2.26**	**124**	*e*PB	**Pn**	**23 31 59.3**	**+0.2**
APE	**Apeiranthos**	**2.39**	**78**	*e*Pn	**Pn**	**23 32 01.7**	**+0.8**
APE	**Apeiranthos**	**2.39**	**78**	*e*PN	**Pn**	**23 32 01.7**	**+0.8**
APE	**Apeiranthos**	**2.39**	**78**	*e*Pn	**Pn**	**23 32 01.7**	**+0.8**
EVR	**Evrytania**	**2.41**	**345**	*e*Pn	**Pn**	**23 32 01.3**	**0.0**
EVR	**Evrytania**	**2.41**	**345**	*e*PN	**Pn**	**23 32 01.2**	**-0.1**
EVR	**Evrytania**	**2.41**	**345**	*e*Pn	**Pn**	**23 32 01.3**	**0.0**
AGG	**Agios Georgios**	**2.44**	**355**	*e*Pb	**Pb**	**23 32 02.5**	**-3.0**
AGG	**Agios Georgios**	**2.44**	**355**	*e*PB	**Pb**	**23 32 02.5**	**-3.0**
AGG	**Agios Georgios**	**2.44**	**355**	P	**Pn**	**23 32 02.6**	**+0.9**
AGG	**Agios Georgios**	**2.44**	**355**	P	**Pn**	**23 32 02.6**	**+0.9**
LAST	**Lasithi**	**2.73**	**121**	*e*Pn	**Pn**	**23 32 05.7**	**+0.1**
LAST	**Lasithi**	**2.73**	**121**	*e*PN	**Pn**	**23 32 05.7**	**+0.1**
LAST	**Lasithi**	**2.73**	**121**	*e*Pn	**Pn**	**23 32 05.7**	**+0.1**
NEO	**Neokhori**	**2.75**	**10**	*e*Pn	**Pn**	**23 32 05.5**	**-0.5**
NEO	**Neokhori**	**2.75**	**10**	*e*PN	**Pn**	**23 32 05.5**	**-0.5**
NEO	**Neokhori**	**2.75**	**10**	*e*Pn	**Pn**	**23 32 05.5**	**-0.5**
XOR	**Xorichti**	**2.81**	**9**	P	**Pn**	**23 32 07.1**	**+0.3**
XOR	**Xorichti**	**2.81**	**9**	P	**Pn**	**23 32 07.1**	**+0.3**
THL	**Klokotos Trika**	**3.01**	**351**	*e*PN	**Pn**	**23 32 10.1**	**+0.6**
THL	**Klokotos Trika**	**3.01**	**351**	P	**Pn**	**23 32 09.4**	**-0.1**
THL	**Klokotos Trika**	**3.01**	**351**	P	**Pn**	**23 32 09.4**	**-0.1**
THL	**Klokotos Trika**	**3.01**	**351**	*e*Pn	**Pn**	**23 32 10.1**	**+0.6**

CSEM ***03*** *23:45:12.3±0.4, 36°.52N×22°.63E, h2km, ML2.8, Error ellipse: s-maj=9.6km s-min=5.8km az=38.0*
ISCJB ***03*** *23:45:13.3±0.7, 36°.61N±0°.04×22°.61E±0°.04, h4km±4km, Error ellipse: s-maj=6.2km s-min=4.5km az=23.9*
ATH ***03*** *23:45:13.1, 36°.61N×22°.64E, h21km, MD3.6/20, ML2.8*
NEIC ***03*** *23:45:13.1, 36°.61N×22°.64E, h21km, ML3.3(THE), ML2.8(ATH), After ATH.*
THE ***03*** *23:45:16.6, 36°.76N×22°.52E, h0km±2km, ML3.3/4, Error ellipse: s-maj=3.0km s-min=1.3km az=187.0*

ISC 03 23:45:13.9±0.7, 36°.61N±0°.04×22°.62E±0°.04, h5km±4km, n78, σ0°.76/101, 3C-1D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLI	**Veliai**	**0.28**	**66**	⇑ *i*Pb	**Pg**	**23 45 19.3**	**0.0**
VLI				*e*Sb	**Sg**	**23 45 23.8**	**+0.8**
VLI	**Veliai**	**0.28**	**66**	⇑ *i*PB	**Pg**	**23 45 19.3**	**0.0**
VLI				*e*SB	**Sg**	**23 45 23.8**	**+0.8**
VLI	**Veliai**	**0.28**	**66**	⇑ *i*Pb	**Pg**	**23 45 19.3**	**0.0**
VLI				*e*Sb	**Sg**	**23 45 23.8**	**+0.8**
KYTH	**Kithira**	**0.47**	**134**	*e*P

0.8nm,0.6s,baz=202,slow=7.9,SNR=5.4
LPAZ La Paz 72.61 93 P P 00 39 38.6 +1.2
1.1nm,0.7s,baz=244,slow=4.1,SNR=6.8
MKAR Makanchi Array 146.40 276 PKPbc PKPbc 00 47 50.0 0.0
2.4nm,0.7s,baz=106,slow=5.4,SNR=15
ZALV Zalesovo Beam 148.89 289 PKPbc PKPbc 00 47 56.2 -0.3
1.2nm,0.6s,baz=116,slow=3.7,SNR=7.6
KURK Kurchatov 150.61 280 PKPbc PKPbc 00 48 00.4 -0.4
2.6nm,0.8s,baz=115,slow=2.0,SNR=12

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*BJI **04** 00:44:48.1, 36°.63N×71°.86E, h123km, mB4.6/1*
*ISCJB **04** 00:44:51.2±0.6, 37°.36N±0°.05×71°.59E±0°.07, h121km±7km, mb3.6/4, Error ellipse: s-maj=10.3km s-min=6.0km az=33.1*
*NEIC **04** 00:44:52.5±0.9, 37°.34N×71°.59E, h118km±10km, mb4.2/3, Error ellipse: s-maj=12.3km s-min=9.1km az=134.0*
*IDC **04** 00:44:55.2±6.3, 37°.50N×71°.68E, h135km±41km, mb3.3/4, mb1 3.4/8, mb1mx3.2/26, mbtmp3.3/8, Error ellipse: s-maj=64.6km s-min=27.1km az=159.0*
*NNC **04** 00:44:57.4±3.5, 37°.76N×71°.66E, h190km±62km, mb2.7, mpv3.8, Error ellipse: s-maj=40.2km s-min=16.6km az=9.0*
ISC 04 00:44:52.6±0.6, 37°.36N±0°.05×71°.57E±0°.07, h118km±7km, n34, σ0s97/43, mb3.6/4, 1C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**3.48**	**217**	*e*Pn	**Pn**	**00 45 44.9**	**-0.2**
KBL				*e*Sn	**Sn**	**00 46 24.9**	**-0.8**
KSH	**Kashi**	**4.08**	**57**	P	**Pn**	**00 45 49.4**	**-3.6**
KSH				S	**Sn**	**00 46 30.8**	**-9.1**
KSH				smax			
	comp=N,340nm,0.8s						
KSH				smax			
	comp=E,230nm,0.6s						
KZA	**Kyzart**	**5.50**	**30**	P	**Pn**	**00 46 12.5**	**+0.3**
	SNR=10						
EKS2	**Erkin-Say**	**5.56**	**17**	P	**Pn**	**00 46 14.0**	**+1.1**
	SNR=11						
EKS2	**Erkin-Say**	**5.56**	**17**	*e*Pn	**Pn**	**00 46 13.9**	**+1.0**
	comp=E,7.1nm,0.4s						
EKS2				*e*Sn	**Sn**	**00 47 15.6**	**0.0**
AAK	**Ala-Archa**	**5.72**	**22**	P	**Pn**	**00 46 16.5**	**+1.3**
	SNR=9.1						
AAK	**Ala-Archa**	**5.72**	**22**	P	**Pn**	**00 46 16.0**	**+0.8**
	comp=E,5.4nm,0.3s,baz=186,slow=7.0,SNR=15						
AAK				S	**Sn**	**00 47 19.8**	**+0.2**
	comp=E,2.9nm,0.3s,baz=172,slow=23,SNR=15						
AAK	**Ala-Archa**	**5.72**	**22**	P	**Pn**	**00 46 16.0**	**+0.8**
AAK				S	**Sn**	**00 47 19.8**	**+0.2**
KK31	**Karatay Array**	**5.79**	**352**	P	**Pn**	**00 46 16.9**	**+0.8**
	comp=E,2.1nm,0.2s,baz=175,slow=12,SNR=146						
KK31				S	**Sn**	**00 47 19.8**	**-1.4**
	comp=E,5.8nm,0.4s,baz=164,slow=21,SNR=8.1						
ULHL	**Ulahol**	**6.06**	**35**	P	**Pn**	**00 46 20.5**	**+0.8**
	SNR=5.2						
CHMS	**Chumysh**	**6.14**	**22**	P	**Pn**	**00 46 21.5**	**+0.8**
	SNR=8.3						
USP	**Ospenovka**	**6.31**	**20**	P	**Pn**	**00 46 23.2**	**+0.1**
	SNR=8.6						
TKM2	**Tokmak 2**	**6.35**	**28**	⇑P	**Pn**	**00 46 24.1**	**+0.4**
	comp=E,7.1nm,0.6s						
TKM2				⇓S	**Sn**	**00 47 33.3**	**-1.5**
	comp=E,5.6nm,0.8s						
TKM2	**Tokmak 2**	**6.35**	**28**	P	**Pn**	**00 46 24.5**	**+0.8**
	SNR=22						
TKM2	**Tokmak 2**	**6.35**	**28**	*e*Pn	**Pn**	**00 46 24.1**	**+0.4**
	comp=E,16nm,0.8s						
TKM2				*e*Sn	**Sn**	**00 47 33.3**	**-1.5**
MK31	**Makanchi Array**	**12.33**	**37**	*e*P	**Pn**	**00 47 43.4**	**-0.5**
MKAR	**Makanchi Array**	**12.33**	**37**	P	**Pn**	**00 47 43.4**	**-0.5**
	comp=E,0.1nm,0.3s,baz=227,slow=14,SNR=6.4						
MKAR	**Makanchi Array**	**12.33**	**37**	P	**Pn**	**00 47 43.4**	**-0.5**
KURK	**Kurchatov**	**14.27**	**18**	P	**Pn**	**00 48 11.3**	**+2.3**
	comp=E,0.1nm,0.3s,baz=205,slow=11,SNR=5.0						
AB31	**Akbulak array**	**14.57**	**328**	P	**Pn**	**00 48 10.9**	**-1.9**
	comp=E,0.4nm,0.3s,baz=138,slow=14,SNR=33						
ABKAR	**Akbulak array**	**14.57**	**328**	*e*Pn	**Pn**	**00 48 11.0**	**-1.8**
	comp=E,1.4nm,0.3s						
BRVK	**Borovoye**	**15.72**	**357**	*e*Pn	**Pn**	**00 48 26.8**	**-0.4**
AKTK	**Aktyubinsk**	**16.28**	**328**	P	**Pn**	**00 48 34.3**	**+0.2**
AKTO	**Aktyubinsk**	**16.28**	**328**	P	**Pn**	**00 48 34.3**	**+0.2**
	comp=E,0.3nm,0.3s,baz=142,slow=12,SNR=12						
ZALV	**Zalesovo Beam**	**18.95**	**25**	P	**P**	**00 49 03.9**	**-0.2**
	comp=E,0.6nm,0.3s,baz=216,slow=9.7,SNR=10.0						
ZALV	**Zalesovo Beam**	**18.95**	**25**	P	**P**	**00 49 03.9**	**-0.2**
ULN	**Ulaanbaatar**	**27.92**	**57**	P	**P**	**00 50 30.1**	**-1.3**
BRTR	**Keskin Array B**	**29.62**	**286**	P	**P**	**00 50 48.4**	**+1.9**
	comp=E,0.3nm,0.5s,mb3.1,baz=77,slow=9.6,SNR=2.2						
CM31	**Chiang Mai Arr**	**30.48**	**121**	P	**P**	**00 50 54.6**	**+0.2**
HHC	**Hu-ho-hao-te**	**31.05**	**71**	*e*P	**P**	**00 50 59.3**	**+0.2**
HHC				S	**S**	**00 55 53.6**	**-1.8**
HHC				pmax	pmax		
	comp=Z,76nm,6.1s						
KWP	**Kalwaria Pacla**	**36.88**	**305**	*e*P	**P**	**00 51 49.8**	**+0.4**
FINES	**FINESS Array B**	**37.03**	**325**	P	**P**	**00 51 51.0**	**+0.5**
	comp=Z,3.1nm,1.1s,mb4.2,baz=113,slow=11,SNR=3.8						
NOA	**NORSAR Array B**	**43.97**	**322**	P	**P**	**00 52 47.8**	**+0.2**
	comp=Z,0.5nm,0.6s,mb3.4,baz=95,slow=7.7,SNR=4.2						
YKA	**Yellowknife Ar**	**80.37**	**3**	P	**P**	**00 56 50.2**	**0.0**
	comp=Z,0.4nm,0.5s,mb3.5,baz=350,slow=5.4,SNR=3.5						

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*ISCJB **04** 01:01:04.4±0.4, 37°.92N±0°.02×21°.46E±0°.03, h10km, Error ellipse: s-maj=3.5km s-min=2.8km az=38.8*
*NEIC **04** 01:01:04.3, 37°.91N×21°.47E, h17km, MD3.3(ATH), After ATH.*
*CSEM **04** 01:01:04.2±0.2, 37°.92N×21°.46E, h15km, MD3.3, Error ellipse: s-maj=5.3km s-min=4.1km az=31.0*
*ATH **04** 01:01:04.3, 37°.91N×21°.47E, h17km±2km, MD3.3/14*
*THE **04** 01:01:04.6, 37°.94N×21°.48E, h3km±1km, ML2.6/6, Error ellipse: s-maj=1.5km s-min=0.5km az=250.0*
ISC 04 01:01:05.0±0.4, 37°.92N±0°.02×21°.48E±0°.03, h8km±4km, n53, σ1s08/88, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.14**	**357**	*e*Pb	**Pg**	**01 01 08.8**	**+0.9**
RLS				*e*Sb	**Sg**	**01 01 11.8**	**+1.9**
RLS	**Riolos of Patr**	**0.14**	**357**	*e*PB	**Pg**	**01 01 08.8**	**+0.9**
RLS				*e*SB	**Sg**	**01 01 11.8**	**+1.9**
RLS	**Riolos of Patr**	**0.14**	**357**	*e*Pb	**Pg**	**01 01 08.8**	**+0.9**
RLS				*e*Sb	**Sg**	**01 01 11.8**	**+1.9**
UPR	**University Cam**	**0.44**	**34**	*e*PB	**Pg**	**01 01 14.1**	**+0.7**
UPR				*e*SB	**Sg**	**01 01 20.7**	**+1.5**
UPR	**University Cam**	**0.44**	**34**	P	**Pg**	**01 01 12.8**	**-0.6**
UPR				S	**Sg**	**01 01 19.0**	**-0.2**
UPR	**University Cam**	**0.44**	**34**	P	**Pg**	**01 01 12.8**	**-0.6**
UPR	**University Cam**	**0.44**	**34**	*e*Pb	**Pg**	**01 01 14.1**	**+0.7**
UPR				S	**Sg**	**01 01 19.0**	**-0.2**
UPR				*e*Sb	**Sg**	**01 01 20.7**	**+1.5**
KFL	**Anninata**	**0.57**	**289**	P	**Pg**	**01 01 15.5**	**-0.6**
KFL				S	**Sg**	**01 01 24.4**	**+0.8**
KFL	**Anninata**	**0.57**	**289**	P	**Pg**	**01 01 15.5**	**-0.6**
KFL				S	**Sg**	**01 01 24.4**	**+0.8**
EFP	**Efpalio**	**0.61**	**34**	*e*PB	**Pg**	**01 01 15.8**	**-0.9**
EFP				*e*SN	**Sg**	**01 01 25.0**	**+0.4**
EFP	**Efpalio**	**0.61**	**34**	P	**Pg**	**01 01 15.7**	**-1.0**
EFP				S	**Sg**	**01 01 24.9**	**+0.3**
EFP	**Efpalio**	**0.61**	**34**	*e*Pb	**Pg**	**01 01 15.8**	**-0.9**
EFP				S	**Sg**	**01 01 24.9**	**+0.3**
GUR	**Goura**	**0.69**	**89**	*e*PB	**Pg**	**01 01 16.8**	**-1.3**
GUR				*e*SN	**Sg**	**01 01 27.0**	**-0.1**
GUR	**Goura**	**0.69**	**89**	P	**Pg**	**01 01 16.9**	**-1.2**
GUR				S	**Sg**	**01 01 28.1**	**+1.0**
GUR	**Goura**	**0.69**	**89**	P	**Pg**	**01 01 16.9**	**-1.2**
GUR				*e*Sn	**Sg**	**01 01 27.0**	**-0.1**
GUR				S	**Sg**	**01 01 28.1**	**+1.0**
VLS	**Valsamata**	**0.74**	**290**	*e*Pb	**Pg**	**01 01 18.0**	**-1.3**
VLS				*e*Sn	**Sg**	**01 01 30.2**	**+1.2**
VLS	**Valsamata**	**0.74**	**290**	*e*PB	**Pg**	**01 01 18.0**	**-1.3**
VLS				*e*SN	**Sg**	**01 01 30.2**	**+1.2**
VLS	**Valsamata**	**0.74**	**290**	P	**Pg**	**01 01 18.0**	**-1.3**
VLS				S	**Sg**	**01 01 29.9**	**+0.9**
VLS	**Valsamata**	**0.74**	**290**	P	**Pg**	**01 01 18.0**	**-1.3**
VLS				S	**Sg**	**01 01 29.9**	**+0.9**
VLS				*e*Sn	**Sg**	**01 01 30.2**	**+1.2**
ITM	**Ithomi**	**0.82**	**154**	*e*Pn	**Pg**	**01 01 20.3**	**-0.5**
ITM	**Ithomi**	**0.82**	**154**	*e*PN	**Pg**	**01 01 20.3**	**-0.5**
ITM	**Ithomi**	**0.82**	**154**	P	**Pg**	**01 01 20.3**	**-0.5**
ITM	**Ithomi**	**0.82**	**154**	P	**Pg**	**01 01 20.3**	**-0.5**
VLX	**Vlachokerasia**	**0.90**	**127**	*e*PN	**Pg**	**01 01 21.8**	**-0.5**
VLX				*e*SN	**Sg**	**01 01 34.0**	**-0.1**
VLX	**Vlachokerasia**	**0.90**	**127**	P	**Pg**	**01 01 21.7**	**-0.6**
VLX				S	**Sg**	**01 01 35.3**	**+1.2**
VLX	**Vlachokerasia**	**0.90**	**127**	P	**Pg**	**01 01 21.7**	**-0.6**
VLX				*e*Sn	**Sg**	**01 01 34.0**	**-0.1**
VLX				S	**Sg**	**01 01 35.3**	**+1.2**
DSF	**Desfina**	**0.96**	**59**	P	**Pg**	**01 01 21.6**	**-1.8**
DSF				S	**Sg**	**01 01 36.7**	**+0.8**
DSF	**Desfina**	**0.96**	**59**	P	**Pg**	**01 01 21.6**	**-1.8**
DSF				S	**Sg**	**01 01 36.7**	**+0.8**
EVR	**Evrytania**	**1.03**	**15**	*e*Pn	**Pg**	**01 01 22.5**	**-2.2**
EVR	**Evrytania**	**1.03**	**15**	*e*PN	**Pg**	**01 01 22.5**	**-2.2**
EVR	**Evrytania**	**1.03**	**15**	*e*Pn	**Pg**	**01 01 22.5**	**-2.2**
PYL	**PYLOS**	**1.05**	**168**	*e*PN	**Pg**	**01 01 23.8**	**-1.2**
PYL	**PYLOS**	**1.05**	**168**	P	**Pg**	**01 01 23.9**	**-1.1**
PYL				S	**Sg**	**01 01 40.2**	**+1.6**
PYL	**PYLOS**	**1.05**	**168**	*e*Pn	**Pg**	**01 01 23.8**	**-1.2**
PYL				S	**Sg**	**01 01 40.2**	**+1.6**
LKD2	**Lefkada island**	**1.08**	**324**	P	**Pg**	**01 01 23.8**	**-1.9**
LKD2				S	**Sg**	**01 01 40.1**	**+0.4**
LKD2	**Lefkada island**	**1.08**	**324**	P	**Pg**	**01 01 23.8**	**-1.9**
LKD2				S	**Sg**	**01 01 40.1**	**+0.4**
LTK	**Loutraki**	**1.18**	**85**	*e*PN	**Pn**	**01 01 26.8**	**-1.0**
LTK	**Loutraki**	**1.18**	**85**	P	**Pb**	**01 01 26.9**	**-0.7**
LTK	**Loutraki**	**1.18**	**85**	*e*Pn	**Pn**	**01 01 26.8**	**-1.0**
AGG	**Agios Georgios**	**1.29**	**31**	*e*Pn	**Pn**	**01 01 29.1**	**-0.1**
AGG	**Agios Georgios**	**1.29**	**31**	*e*PN	**Pn**	**01 01 29.1**	**-0.1**
AGG	**Agios Georgios**	**1.29**	**31**	P	**Pn**	**01 01 28.4**	**-0.8**
AGG				S	**Sb**	**01 01 46.1**	**0.0**
AGG	**Agios Georgios**	**1.29**	**31**	P	**Pn**	**01 01 28.4**	**-0.8**
AGG	**Agios Georgios**	**1.29**	**31**	*e*Pn	**Pn**	**01 01 29.1**	**-0.1**
AGG				S	**Sb**	**01 01 46.1**	**0.0**
DID	**Didima**	**1.46**	**106**	*e*PN	**Pn**	**01 01 31.4**	**-0.1**
DID	**Didima**	**1.46**	**106**	P	**Pn**	**01 01 31.1**	**-0.4**
DID				S	**Sn**	**01 01 51.9**	**+1.1**
DID	**Didima**	**1.46**	**106**	P	**Pn**	**01 01 31.1**	**-0.4**
DID	**Didima**	**1.46**	**106**	*e*Pn	**Pn**	**01 01 31.4**	**-0.1**
DID				S	**Sn**	**01 01 51.9**	**+1.1**
VLI	**Veliai**	**1.67**	**135**	*e*Pn	**Pn**	**01 01 35.7**	**+1.2**
VLI	**Veliai**	**1.67**	**135**	*e*PN	**Pn**	**01 01 35.7**	**+1.2**
THL	**Klokotos Trika**	**1.69**	**14**	*e*PN	**Pn**	**01 01 35.8**	**+1.0**
VLY	**Voula,Athens**	**1.83**	**91**	*e*Pn	**Pn**	**01 01 38.0**	**+1.3**
VLY	**Voula,Athens**	**1.83**	**91**	*e*PN	**Pn**	**01 01 38.0**	**+1.3**

CASC 04 01:16:12.9±2.7, 10°.96N×86°.39W, h26km±8km, MD3.6, ML3.1, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSN	**San Juan del S**	**0.63**	**58**	*e*P	Pb	01 16 24.5	-0.7
SSN				*e*S	Sb	01 16 35.2	+1.5
NY14	**Universidad de**	**0.90**	**110**	*i* P	Pb	01 16 29.1	-0.8
NY14				*i* S	Sb	01 16 42.8	+1.3
CONN	**Concepcion**	**0.96**	**52**	*e*P	Pn	01 16 30.1	-0.6
LAPC	**Finca la Perla**	**0.96**	**102**	*i* P	Pn	01 16 29.0	-1.8
GB1A	**Borinquen Arri**	**0.99**	**98**	*i* P	Pn	01 16 30.4	-0.7
APON	**Apoyo**	**1.00**	**19**	*e*P	Pn	01 16 31.7	+0.4
TICN	**Ticuantepe**	**1.07**	**8**	*e*P	Pn	01 16 32.3	0.0
TICN				*e*S	Sn	01 16 48.1	+1.7
LIM1	**Limonal**	**1.15**	**103**	*i* P	Pn	01 16 32.4	-1.0
CSAN		**1.21**	**359**	*e*P	Pn	01 16 33.8	-0.4
COPN	**Copaltepe**	**1.22**	**351**	*e*P	Pn	01 16 33.9	-0.5
COPN				AML	AML	01 16 52.6	
	comp=Z,304nm,0.3s						
CUI	**Cuipilapa**	**1.25**	**104**	*i* P	Pn	01 16 34.1	-0.5
CUI				*i* S	Sn	01 16 51.3	+0.7
HUEN		**1.38**	**9**	*e*P	Pn	01 16 36.1	-0.5
MOMN	**Momotombo**	**1.44**	**354**	*e*P	Pn	01 16 37.0	-0.4
BOAB	**BOACO BROADBAN**	**1.64**	**26**	*e*P	Pn	01 16 39.5	-0.5
TEL3	**Telica 3**	**1.66**	**345**	*e*P	Pn	01 16 39.8	-0.5
JCR	**Jicaral**	**1.68**	**131**	*e*P	Pn	01 16 40.2	-0.4
JCR				*e*S	Sn	01 17 00.7	-0.5
CGA2	**Cerro Gallo 2**	**2.12**	**116**	*e*P	Pn	01 16 47.8	+1.1
CGA2				*e*S	Sn	01 17 13.0	+0.9
PRS1	**Puriscal**	**2.27**	**115**	*e*P	Pn	01 16 51.2	+2.5
PRS1				*e*S	Sn	01 17 17.8	+2.0
URSC	**Urasca**	**2.81**	**113**	*e*P	Pn	01 16 58.2	+2.1
BUS	**Buena Vista**	**2.95**	**118**	*e*P	Pn	01 17 01.1	+3.1
BAR1		**3.48**	**119**	*e*P	Pn	01 17 08.4	+2.9
BAR1				*e*S	Sn	01 17 45.5	-0.3

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*ISCJB **04** 01:18:54.5±0.3, 12°.44N±0°.04×87°.73W±0°.04, h77km±3km, mb4.5/67, Error ellipse: s-maj=8.0km s-min=2.9km az=43.7*
*IDC **04** 01:18:54.5±1.2, 12°.58N×87°.56W, h61km±10km, mb4.0/12, mb1 4.2/15, mb1mx4.0/24, mbtmp4.0/15, MS3.2/9, Ms1 3.3/9, ms1mx3.1/25, Error ellipse: s-maj=24.1km s-min=9.0km az=53.0*
*BJI **04** 01:18:54.5, 12°.50N×87°.60W, h83km, mB5.0/2, Ms5.0/3, Ms7 4.4/3*
*CASC **04** 01:18:55.4±2.5, 12°.45N×87°.74W, h57km±29km, MD4.2, ML4.6, mb4.6(NEIC)*
*NEIC **04** 01:18:56.5±0.7, 12°.47N×87°.64W, h83km±6km, mb4.6/59, Error ellipse: s-maj=9.0km s-min=4.6km az=53.0*
ISC 04 01:18:55.7±0.3, 12°.46N±0°.04×87°.71W±0°.04, h68km±3km, n264, σ0s77/257, mb4.5/67, 57C-53D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.69**	**70**	*e*P	**Pn**	**01 19 10.4**	**+0.1**
CRIN				*e*S	**Sn**	**01 19 22.8**	**+1.7**
CRIN				AML	AML	01 19 23.4	
	comp=N,84μm,0.3s						
CNCH	**Conchagua**	**0.82**	**351**	⇑*i*P	**Pn**	**01 19 11.2**	**-0.7**
CNGN	**Cerro Negro**	**0.99**	**88**	*e*P	**Pn**	**01 19 13.3**	**-0.7**
CNGN				*e*S	**Sn**	**01 19 27.5**	**+1.2**
CNGN				AML	AML	01 19 31.1	
	comp=E,13μm,0.4s						
BLLM	**Bellamira**	**1.10**	**332**	*e*P	**Pn**	**01 19 14.5**	**-0.9**
VSM	**San Miguel**	**1.10**	**330**	*e*P	**Pn**	**01 19 15.2**	**-0.3**
COPN	**Copaltepe**	**1.13**	**104**	*e*P	**Pn**	**01 19 15.0**	**-0.7**
MOMN	**Momotombo**	**1.14**	**93**	*e*P	**Pn**	**01 19 15.8**	**-0.1**
CSAN		**1.29**	**102**	*e*P	**Pn**	**01 19 17.8**	**0.0**
CAHU	**Cacacuatique**	**1.39**	**339**	⇑*e*P	**Pn**	**01 19 18.9**	**-0.2**
CAHU				*e*S	**Sn**	**01 19 37.5**	**+1.4**
XAVN	**Gruta Xavier**	**1.39**	**103**	*e*P	**Pn**	**01 19 18.8**	**-0.3**
MGAN	**Managua**	**1.46**	**102**	*e*P	**Pn**	**01 19 20.0**	**-0.1**
MGAN				*e*S	**Sn**	**01 19 38.3**	**+0.3**
MGAN				AML	AML	01 19 39.6	
	comp=E,6μm,0.5s						
HUEN		**1.51**	**95**	⇑*i*P	**Pn**	**01 19 20.5**	**-0.2**
TICN	**Ticuantepe**	**1.51**	**106**	*e*P	**Pn**	**01 19 20.7**	**0.0**
SNVI	**San Vicente**	**1.59**	**316**	*e*P	**Pn**	**01 19 20.9**	**-0.8**
MASN	**Masaya**	**1.59**	**107**	*e*P	**Pn**	**01 19 21.8**	**0.0**
MASN				*e*S	**Sn**	**01 19 40.7**	**-0.5**
MASN				AML	AML	01 19 46.8	
	comp=N,6μm,0.4s						
TGUH	**Tegucigalpa,Un**	**1.64**	**15**	*e*Pn	**Pn**	**01 19 22.9**	**+0.5**
TGUH	**Tegucigalpa,Un**	**1.64**	**15**	*e*P	**Pn**	**01 19 22.9**	**+0.4**
TGUH				*e*S	**Sn**	**01 19 43.7**	**+1.4**
APON	**Apoyo**	**1.70**	**109**	*e*P	**Pn**	**01 19 23.1**	**-0.1**
LFRS	**El Faro**	**1.75**	**311**	*e*P	**Pn**	**01 19 22.8**	**-1.1**
LFU	**La Fuente**	**1.87**	**313**	*e*P	**Pn**	**01 19 25.3**	**-0.3**
BOQS	**Boqueron**	**1.98**	**310**	*e*P	**Pn**	**01 19 26.5**	**-0.6**
BOAB	**BOACO BROADBAN**	**2.00**	**90**	*e*P	**Pn**	**01 19 26.9**	**-0.3**
SSN	**San Juan del S**	**2.15**	**122**	*e*P	**Pn**	**01 19 28.5**	**-0.9**
CONN	**Concepcion**	**2.23**	**113**	*e*P	**Pn**	**01 19 30.9**	**+0.5**
SBLS	**San Blas**	**2.31**	**306**	*e*P	**Pn**	**01 19 30.9**	**-0.6**
SNJE	**San Jose**	**2.31**	**307**	*e*P	**Pn**	**01 19 31.9**	**+0.3**
MTO2	**Montecristo 2**	**2.51**	**320**	*e*P	**Pn**	**01 19 34.0**	**-0.2**
RBDL	**Robledal**	**2.53**	**311**	*e*P	**Pn**	**01 19 34.2**	**-0.2**
GB1A	**Borinquen Arri**	**2.79**	**126**	*i* S	**Sn**	**01 20 10.8**	**+0.2**
NY14	**Universidad de**	**2.79**	**130**	*i* P	**Pn**	**01 19 38.8**	**+0.7**
NY14				*i* S	**Sn**	**01 20 12.6**	**+2.0**
LAPC	**Finca la Perla**	**2.80**	**127**	*i* P	**Pn**	**01 19 36.5**	**-1.6**
LAPC				*i* S	**Sn**	**01 20 11.0**	**+0.4**
MESS	**Mesas**	**3.00**	**125**	*i* P	**Pn**	**01 19 40.3**	**-0.6**
CUI	**Cuipilapa**	**3.07**	**125**	*i* P	**Pn**	**01 19 41.8**	**-0.1**
VCR	**Vista de Mar**	**3.09**	**139**	*e*P	**Pn**	**01 19 41.8**	**-0.4**
JTS	**JuntasAbangare**	**3.46**	**128**	P	**Pn**	**01 19 47.4**	**+0.2**
	comp=N,3.0nm,0.3s,baz=318,slow=19,SNR=17						
JTS				S	**Sn**	**01 20 26.5**	**-0.5**
	comp=N,32nm,0.3s,baz=291,slow=18,SNR=4.2						
JTS	**JuntasAbangare**	**3.46**	**128**	*e*Pn	**Pn**	**01 19 48.0**	**+0.8**
JCR	**Jicaral**	**3.64**	**135**	*e*P	**Pn**	**01 19 50.0**	**+0.3**
JCR				*e*S	**Sn**	**01 20 28.7**	**-2.6**
APG	**El Apazote**	**3.68**	**314**	P	**Pn**	**01 19 50.3**	**+0.2**
	comp=N,3.0nm,0.3s,baz=139,slow=12,SNR=20						
CGA2	**Cerro Gallo 2**	**4.00**	**127**	*e*P	**Pn**	**01 19 57.2**	**+2.6**
PRS1	**Puriscal**	**4.15**	**126**	*e*P	**Pn**	**01 19 60.0**	**+3.4**
PRS1				*e*S	**Sn**	**01 20 44.4**	**+0.6**
LAJ	**Bijagual**	**4.37**	**126**	*e*P	**Pn**	**01 19 57.5**	**-2.1**
QCR	**Quepos**	**4.61**	**131**	*e*P	**Pn**	**01 20 04.1**	**+1.3**
URSC	**Urasca**	**4.66**	**124**	*e*P	**Pn**	**01 20 06.7**	**+3.1**
BAR1		**5.38**	**126**	*e*P	**Pn**	**01 20 15.9**	**+2.5**
TEIG	**Tepich**	**7.74**	**356**	*e*Pn	**Pn**	**01 20 46.7**	**+1.0**
CMIG	**Matias Romero**	**8.32**	**304**	P	**Pn**	**01 20 53.6**	**-0.1**
	comp=N,2.1nm,0.3s,baz=132,slow=8.3,SNR=18						
BCIP	**Isla Barro Col**	**8.40**	**112**	*e*Pn	**Pn**	**01 20 55.0**	**+0.3**
GTBY	**Guantanamo Bay**	**14.19**	**57**	*e*Pn	**Pn**	**01 22 17.0**	**+3.7**
ROSC	**El Rosal**	**15.23**	**119**	LR	LR	01 29 32.1	
	comp=N,34nm,18.4s,baz=218,slow=42						
LRAL	**Lakeview Retre**	**20.49**	**2**	*e*P	**P**	**01 23 29.2**	**+1.2**
	comp=N,9.1nm,1.0s						
JCT	**Junction City**	**21.14**	**330**	*e*P	**P**	**01 23 36.7**	**+1.7**
	comp=N,15nm,0.6s,mb4.5						
GOGA	**Godfrey**	**21.21**	**10**	*e*P	**P**	**01 23 36.7**	**+0.9**
	comp=N,28nm,0.8s,mb4.6						
GOGA				*e*pP		01 23 54.3	
SJG	**San Juan**	**21.53**	**72**	LR	LR	01 32 26.6	
	comp=N,72nm,18.4s,baz=91,slow=38						
ATAH	**Atahualpa**	**21.56**	**154**	LR	LR	01 31 12.4	
	comp=N,36nm,20.6s,baz=214,slow=34						
628A	**Black Gap, Mar**	**22.04**	**323**	⇓P	**P**	**01 23 44.5**	**-0.2**
	baz=22,SNR=26						
627A	**Terlingua Ranc**	**22.32**	**322**	⇑P	**P**	**01 23 47.5**	**-0.2**
	baz=22,SNR=36						
TXAR	**Lajitas Array**	**22.40**	**321**	P	**P**	**01 23 48.2**	**-0.4**
	comp=N,10nm,0.6s,mb4.3,baz=139,slow=8.4,SNR=68						
TXAR				PcP	PcP	01 27 40.0	-1.3
	comp=N,0.7nm,0.6s,baz=124,slow=1.6,SNR=6.4						
TXAR				ScP	ScP	01 31 13.7	+0.7
	comp=N,0.3nm,0.5s,baz=152,slow=5.7,SNR=3.9						
TXAR				LR	LR	01 34 55.0	
	comp=N,22nm,20.6s,baz=185,slow=43						
528A	**Cox Ranch, San**	**22.48**	**324**	⇑P	**P**	**01 23 49.1**	**-0.3**
	baz=23,SNR=5.5						
JSC	**Jenkinsville**	**22.50**	**14**	*e*P	**P**	**01 23 50.2**	**+0.7**
JSC				*e*		01 24 08.3	
MIAR	**Mount Ida**	**22.62**	**347**	*e*P	**P**	**01 23 50.5**	**-0.3**
	comp=N,12nm,0.8s,mb4.3						
SWET	**Sewanee**	**22.71**	**4**	*e*P	**P**	**01 23 50.6**	**-1.1**
PCRV	**Puerto La Cruz**	**22.74**	**93**	P	**P**	**01 23 52.2**	**-0.1**
	comp=N,4.0nm,0.5s,mb4.0,baz=233,slow=5.1,SNR=3.5						
428A	**Kincaid Ranch,**	**22.85**	**325**	⇓P	**P**	**01 23 52.2**	**-1.0**
	baz=23,SNR=12						
626A	**Big Bend Ranch**	**22.85**	**321**	⇑P	**P**	**01 23 52.4**	**-0.8**
	baz=23,SNR=20						
527A	**Woodward Ranch**	**22.95**	**323**	⇓P	**P**	**01 23 53.7**	**-0.6**
	baz=23,SNR=6.7						
CPCT	**Cooper Cave**	**23.07**	**7**	*e*P	**P**	**01 23 54.9**	**-0.6**
526A	**Mary Lane Ranc**	**23.18**	**322**	⇑P	**P**	**01 23 55.4**	**-1.2**
	baz=23,SNR=9.7						
427A	**Hayter Ranch,**	**23.35**	**324**	⇓P	**P**	**01 23 57.0**	**-1.1**
	baz=24,SNR=5.7					

baz=28,SNR=5.5
ANMO Albuquerque 28.11 326 P **P 01 24 41.6 +0.5**
comp=N,1.3nm,0.7s,mb3.6,baz=150,slow=13,SNR=5.2
ANMO Albuquerque 28.11 326 P **P 01 24 41.6 +0.5**
Y21A Point of Rocks 28.12 323 ⇑P **P 01 24 41.7 +0.5**
baz=28
218A Dragoon 28.26 317 ⇑P **P 01 24 42.9 +0.4**
baz=28
119A Ashpeak Ranch, 28.27 319 ⇓P **P 01 24 43.2 +0.6**
baz=28
Y20A Horse Springs, 28.46 322 ⇓P **P 01 24 45.0 +0.7**
baz=29
V23A Ortiz Mt. (NFS 28.56 327 ⇑P **P 01 24 45.8 +0.7**
baz=29
118A Homack Ranch, 28.62 318 ⇓P **P 01 24 45.9 +0.1**
baz=29
T25A Trinidad 28.77 332 ⇑P **P 01 24 48.0 +1.0**
baz=29
TUC Tucson 28.96 317 *e*P **P 01 24 48.4 -0.4**
comp=N,2.8nm,0.9s,mb3.9
U23A El Rito 29.01 328 ⇓P **P 01 24 49.6 +0.5**
baz=29,SNR=11
V22A San Miguel Ran 29.07 327 ⇑P **P 01 24 50.1 +0.4**
baz=29
S25A Robets Cordova 29.21 332 ⇑P **P 01 24 51.3 +0.4**
baz=29
X19A St. Johns 29.37 322 ⇑P **P 01 24 52.7 +0.3**
baz=30
W20A Ramah 29.39 324 ⇓P **P 01 24 53.1 +0.6**
baz=30
V21A Milan 29.39 326 ⇓P **P 01 24 52.9 +0.4**
baz=30
T23A Casias Ranch, 29.48 329 ⇑P **P 01 24 53.9 +0.7**
baz=30
SDCO Great Sand Dun 29.78 331 *e*P **P 01 24 56.4 +0.5**
comp=N,5.1nm,0.8s,mb4.2
SDCO *e*PcP PcP 01 28 02.3 +4.2
U21A Nageezi 29.86 326 ⇓P **P 01 24 57.0 +0.4**
baz=30
T22A Edith 29.90 328 ⇓P **P 01 24 57.5 +0.5**
baz=30
R24A Sanders Place, 29.98 332 ⇑P **P 01 24 58.2 +0.5**
baz=30
T21A Navajo Lake 30.21 327 ⇑P **P 01 25 00.2 +0.5**
baz=30
S22A 4UR Ranch, Cre 30.43 329 ⇑P **P 01 25 02.2 +0.6**
baz=31,SNR=13
U19A Dine' College, 30.62 324 ⇑P **P 01 25 03.2 -0.1**
baz=31
X16A Lo Mia Camp, P 30.70 319 ⇑P **P 01 25 04.4 +0.3**
baz=31,SNR=6.9
S21A Coal Bank Pass 30.85 328 ⇓P **P 01 25 05.5 +0.1**
baz=31,SNR=6.8
MVCO Mesa Verde 30.89 326 ⇓P **P 01 25 05.9 +0.1**
baz=31,SNR=5.8
MVCO Mesa Verde 30.89 326 *e*P **P 01 25 06.3 +0.6**
comp=N,9.4nm,1.0s,mb4.5
T19A Beclabito 30.90 325 ⇓P **P 01 25 06.2 +0.3**
baz=31
V17A Tonalea, Kykot 31.09 322 ⇓P **P 01 25 08.0 +0.5**
baz=31
P23A Jefferson 31.24 332 ⇓P **P 01 25 09.8 +1.0**
baz=31
X15A Humboldt 31.25 319 ⇑P **P 01 25 09.4 +0.4**
baz=31
S20A Disappointment 31.27 327 ⇑P **P 01 25 09.3 +0.2**
baz=31
Q22A Crested Butte, 31.34 330 ⇑P **P 01 25 10.0 +0.4**
baz=32,SNR=6.3
WUAZ Wupatki 31.37 321 ⇑P **P 01 25 10.4 +0.5**
baz=32
Y14A Wickenburg 31.42 317 ⇓P **P 01 25 10.7 +0.2**
baz=32
Z13A Yuma Proving G 31.43 315 ⇓P **P 01 25 10.7 +0.2**
baz=32
R20A Redvale 31.55 328 ⇓P **P 01 25 12.2 +0.6**
baz=32
T18A Mexican Hat 31.59 325 ⇑P **P 01 25 12.0 0.0**
baz=32
PV01 Paradox Valley 31.61 328 *e*P **P 01 25 12.5 +0.4**
comp=N,174nm,0.6s
SMCO Snowmass 31.61 331 *e*P **P 01 25 12.8 +0.7**
comp=N,6.8nm,0.8s,mb4.4
S19A Harvey Farm, M 31.63 326 ⇓P **P 01 25 12.3 +0.1**
baz=32,SNR=10
X14A Yava 31.67 318 ⇓P **P 01 25 13.1 +0.5**
baz=32
U17A Shonto 31.67 323 ⇓P **P 01 25 13.1 +0.5**
baz=32
P22A Eagle 31.84 331 ⇓P **P 01 25 14.7 +0.6**
baz=32
PV04 Paradox Valley 31.98 328 *e*P **P 01 25 16.1 +0.8**
T17A Navajo Res., N 32.03 324 ⇑P **P 01 25 15.9 +0.2**
baz=32
S18A Hurst Farm, Bl 32.05 325 ⇓P **P 01 25 16.2 +0.2**
baz=32,SNR=9.7
V15A Kaibab Nationa 32.06 321 ⇓P **P 01 25 16.4 +0.4**
baz=32
ECSD EROS Data Cent 32.09 348 *e*P **P 01 25 14.1 -2.1**
comp=N,7.4nm,1.0s,mb4.4
R19A Curley Farm, L 32.09 327 ⇑P **P 01 25 16.5 +0.2**
baz=32
P21A Newcastle 32.11 331 ⇑P **P 01 25 16.7 +0.2**
baz=32,SNR=5.7
O22A Kremmling 32.20 332 ⇑P **P 01 25 17.3 +0.1**
baz=32
W14A Seligman 32.25 319 ⇑P **P 01 25 18.4 +0.6**
baz=32
R18A Canyonlands Na 32.50 326 ⇑P **P 01 25 19.6 -0.2**
baz=33,SNR=5.5
V14A Boquillas Ranc 32.53 319 ⇓P **P 01 25 20.8 +0.7**
baz=33
U15A North Rim 32.53 321 ⇑P **P 01 25 20.6 +0.5**
baz=33
Q19A Hogan Spring (32.59 328 ⇓P **P 01 25 20.6 0.0**
baz=33,SNR=6.6
O21A Pagoda 32.67 331 ⇑P **P 01 25 21.9 +0.6**
baz=33
N22A Wattenberg Ran 32.68 333 ⇑P **P 01 25 22.0 +0.6**
baz=33
W13A Hualapai Mount 32.70 318 ⇓P **P 01 25 22.3 +0.6**
baz=33
P19A Cripple Cowboy 32.95 329 ⇓P **P 01 25 24.4 +0.6**
baz=33
R17A Hanksville Air 32.97 326 ⇑P **P 01 25 24.3 +0.3**
baz=33,SNR=13
O20A White River Ci 32.97 330 ⇑P **P 01 25 24.5 +0.6**
baz=33,SNR=16
T15A Red Dirt Ranch 32.97 322 ⇓P **P 01 25 24.8 +0.8**
baz=33
S16A Weppner Ranch, 32.98 324 ⇓P **P 01 25 24.6 +0.5**
baz=33
SRU San Rafael 33.37 327 *e*P **P 01 25 27.9 +0.5**
comp=N,11nm,0.6s,mb4.8
RWWY Rawlins 33.73 333 *e*P **P 01 25 31.7 +1.2**
comp=N,8.0nm,0.8s,mb4.6
MSU Marysvale 33.86 324 *e*P **P 01 25 32.6 +0.9**
TMUT Trail Mountain 33.87 326 *e*P **P 01 25 32.2 +0.4**
comp=N,6.3nm,0.8s,mb4.5
CCUT Cedar City 33.91 322 *e*P **P 01 25 33.0 +0.8**
comp=N,10.0nm,1.8s,mb4.3
CCUT *e*PcP PcP 01 28 10.7 +1.3
LPAZ La Paz 34.51 145 P **P 01 25 37.5 -0.1**
comp=N,0.5nm,0.4s,mb3.7,baz=321,slow=9.3,SNR=3.4
LPAZ PcP PcP 01 28 09.4 -2.0
comp=N,0.5nm,0.4s,baz=27,slow=2.3,SNR=3.1
LPAZ LR LR 01 38 59.8
comp=N,53nm,20.0s,baz=214,slow=35
RSSD Black Hills 34.53 339 *e*P **P 01 25 37.5 +0.1**
comp=N,3.1nm,0.8s,mb4.2
MPU Maple Canyon 34.61 327 *e*P **P 01 25 38.8 +0.6**
comp=N,12nm,0.8s,mb4.8
DAU Daniels Canyon 34.70 328 *e*P **P 01 25 39.8 +0.9**
JLU Jordanelle 34.94 328 *e*P **P 01 25 41.0 0.0**
comp=N,6.5nm,0.7s,mb4.6
CTU Camp Tracy 35.16 327 *e*P **P 01 25 43.1 +0.2**
comp=N,8.8nm,0.7s,mb4.7
NOQ North Oquirrh 35.33 327 *e*P **P 01 25 44.6 +0.2**
comp=N,23nm,0.7s,mb5.1
DUG Dugway 35.38 326 *e*P **P 01 25 45.4 +0.6**
comp=N,3.4nm,0.8s,mb4.2
BW06 Boulder Array 35.64 332 *e*P **P 01 25 46.8 -0.2**
comp=N,4.9nm,0.6s,mb4.6
PDAR Pinedale Array 35.64 332 P **P 01 25 46.6 -0.4**
comp=N,4.8nm,0.6s,mb4.6,baz=128,slow=10,SNR=45
HWUT Hardware Ranch 35.73 329 *e*P **P 01 25 48.0 +0.2**
comp=N,20nm,0.7s,mb5.2
SPUT South Promonto 35.97 328 *e*P **P 01 25 49.3 -0.5**
comp=N,9.0nm,0.8s,mb4.8
AGMN Agassiz Nation 36.37 351 *e*P **P 01 25 51.2 -1.8**
comp=N,21nm,1.5s,mb4.8
AHID Auburn Hatcher 36.37 330 *e*P **P 01 25 53.2 0.0**
comp=N,20nm,0.6s,mb5.2
HVU Hansel Valley 36.48 328 *e*P **P 01 25 53.4 -0.8**
comp=N,7.7nm,0.7s,mb4.7
REDW Red Top Meadow 36.70 331 *e*P **P 01 25 56.0 -0.1**
comp=N,43nm,0.6s,mb5.5
SNOW Snow King Moun 36.73 332 *e*P **P 01 25 57.0 +0.6**
comp=N,45nm,0.6s,mb5.6
LOHW Long Hollow 36.78 332 *e*P **P 01 25 56.6 -0.1**
comp=N,16nm,1.2s,mb4.8
TPAW Teton Pass 36.85 331 *e*P **P 01 25 57.6 +0.3**
comp=N,20nm,0.8s,mb5.1
RRI2 Red Ridge 36.91 331 *e*P **P 01 25 58.1 +0.3**
comp=N,12nm,0.6s,mb5.0
ELK Elko 37.11 324 *e*P **P 01 25 60.0 +0.5**
comp=N,4.6nm,0.6s,mb4.6
IMW Indian Meadow 37.15 332 *e*P **P 01 25 59.9 0.0**
comp=N,9.0nm,0.5s,mb5.0
RLMT Red Lodge 37.38 335 *e*P **P 01 26 01.5 -0.3**
comp=N,6.4nm,0.8s,mb4.6
NVAR Mina Array Bea 37.53 319 P **P 01 26 03.9 +0.8**
comp=N,1.9nm,0.7s,mb4.0,baz=129,slow=7.1,SNR=15
NVAR PcP PcP 01 28 20.7 +0.6
comp=N,2.0nm,0.6s,baz=141,slow=4.6,SNR=13
NVAR ScP ScP 01 32 01.9 +0.3
comp=N,1.1nm,0.7s,baz=142,slow=4.1,SNR=8.9
NVAR Mina Array Bea 37.53 319 P **P 01 26 03.9 +0.8**
NVAR PcP PcP 01 28 20.7 +0.6
NVAR ScP ScP 01 32 01.9 +0.3
ULM Lac du Bonnet 38.27 352 P **P 01 26 06.5 -2.7**
comp=N,3.3nm,0.5s,mb4.5,baz=160,slow=11,SNR=4.2
ULM LR LR 01 41 40.2
comp=N,73nm,21.6s,baz=226,slow=36
ULM Lac du Bonnet 38.27 352 *e*P **P 01 26 06.5 -2.7**
comp=N,3.4nm,0.5s,mb4.4
DGMT Dagmar 38.43 342 *e*P **P 01 26 09.9 -0.6**
comp=N,22nm,0.9s,mb5.0
HLID Hailey 38.60 328 *e*P **P 01 26 11.9 -0.2**
comp=N,4.0nm,0.8s,mb4.3
MCMT McKenzie Canyo 38.75 331 *e*P **P 01 26 14.1 +0.8**
comp=N,12nm,0.7s,mb4.8
BOZ Bozeman (W) 38.82 333 *e*P **P 01 26 13.7 -0.2**
comp=N,6.0nm,0.7s,mb4.5
LRM Limekiln Ridge 39.32 332 *e*P **P 01 26 18.1 0.0**
EGMT Eagleton 39.94 337 *e*P **P 01 26 22.9 -0.2**
comp=N,21nm,1.6s,mb4.7
WVOR Wild Horse Val 40.14 324 *e*P **P 01 26 24.0 -0.9**
comp=N,5.9nm,0.8s,mb4.5
CHMT Chamberlain Mo 40.51 333 *e*P **P 01 26 27.4 -0.5**
MSO Missoula 40.76 332 *e*P **P 01 26 29.2 -0.7**
comp=N,7.5nm,1.1s,mb4.4
BMO Blue Mountains 40.99 328 *e*P **P 01 26 30.3 -1.6**
comp=N,3.2nm,0.8s,mb4.2
BSMT Bassoo Peak 41.90 333 *e*P **P 01 26 38.2 -1.1**
comp=N,1.9nm,0.7s,mb3.9
KHMM Horse Mountain 42.37 319 *e*P **P 01 26 43.3 +0.1**
comp=N,8.5nm,0.8s,mb4.5
WALA Waterton Lakes 42.44 335 *e*P **P 01 26 42.9 -0.8**
comp=N,1.4nm,2.3s
NEW Newport 43.28 331 *e*P **P 01 26 49.2 -1.2**
comp=N,3.4nm,0.8s,mb4.1
OD2 Odessa Site #2 43.43 329 *e*P **P 01 26 51.5 -0.2**
FFC Flin Flon 43.63 348 *e*P **P 01 26 52.1 -1.1**
comp=N,84nm,2.6s,mb5.0
HOOD Mount Hood Mea 43.64 325 *e*P **P 01 26 54.8 +1.3**
comp=N,46nm,0.7s,mb5.3
LON Longmire 44.62 327 *e*P **P 01 27 00.9 -0.3**
SCHQ Schefferville 45.34 17 P **P 01 27 04.6 -2.2**
comp=N,8.8nm,0.5s,mb4.8,baz=216,slow=7.2,SNR=24
SCHQ LR LR 01 46 04.7
comp=N,72nm,18.8s,baz=164,slow=36
JCW Jim Creek 45.59 328 *e*P **P 01 27 07.2 -1.7**
NLWA Neilton Lookou 46.12 326 *e*P **P 01 27 12.4 -0.7**
comp=N,12nm,1.1s,mb4.6
CPUP Villa Florida 48.58 143 P **P 01 27 30.5 -1.9**
comp=N,0.4nm,0.4s,mb3.7,baz=319,slow=8.3,SNR=6.5
CPUP PcP PcP 01 28 56.6 -0.7
comp=N,0.5nm,0.5s,baz=270,slow=6.1,SNR=3.3
CPUP LR LR 01 47 52.2
comp=N,70nm,18.6s,baz=179,slow=36
CPUP Villa Florida 48.58 143 *e*P **P 01 27 28.9 -3.6**
comp=N,8.0nm,0.8s,mb4.7
YKA Yellowknife Ar 53.53 345 P **P 01 28 07.1 -1.9**
comp=N,2.5nm,0.8s,mb4.3,baz=137,slow=7.7,SNR=12
YKA PcP PcP 01 29 12.6 -2.4
comp=N,1.0nm,0.6s,baz=146,slow=3.7,SNR=5.5
YKA ScP ScP 01 33 06.3 -0.7
comp=N,0.4nm,0.4s,baz=146,slow=4.2,SNR=5.1
YKA Yellowknife Ar 53.53 345 P **P 01 28 07.1 -1.9**
YKA PcP PcP 01 29 12.7 -2.4
YKA ScP ScP 01 33 06.3 -0.7
PLCA Paso Flores 55.26 164 P **P 01 28 22.1 +0.2**
comp=N,3.0nm,0.8s,mb4.4,baz=316,slow=8.4,SNR=5.9
PLCA Paso Flores 55.26 164 *e*P **P 01 28 21.5 -0.4**
comp=N,4.0nm,0.8s,mb4.5
DLBC Dease Lake 55.79 335 *e*P **P 01 28 25.3 -0.2**
NOA NORSAR Array B 83.48 29 LR LR 02 03 59.5
comp=N,16nm,21.0s,baz=320,slow=32
KSRS Korea Array 120.13 328 PKP PKPdf 01 37 38.2 -1.0
comp=N,1.0nm,0.6s,baz=46,slow=2.6,SNR=4.2
WMQ Urumqi 123.83 4 *e*PKP PKPdf 01 37 42.7 -3.4
HHC Hu-ho-hao-te 124.04 342 *e*PKP PKPdf 01 37 39.1 -7.5
HHC *s*PKP 01 38 12.7
HHC PKS 01 41 14.6
HHC SKS SKSdf 01 44 40.4 -12
HHC AMB AMB
comp=Z,63nm,9.2s
HHC LR LR
comp=N,65nm,19.2s
HHC LR LR
comp=E,140nm,19.1s
HHC LR LR
comp=Z,66nm,19.6s
NJ2 Nanjing 128.95 331 *e*PKP PKPdf 01 37 53.5 -2.7
LZH Lanzhou 130.50 348 *e*PKP PKPdf 01 37 51.9 -7.2
LZH *s*PKP 01 38 24.8
STKA Stephens Creek 130.88 239 PKP PKPdf 01 37 59.9 +0.1
comp=Z,1.0nm,0.4s,baz=333,slow=2.3,SNR=4.1
CD2 Chengdu 135.49 346 PKP PKPdf 01 38 04.5 -4.1
WRA Warramunga Arr 139.03 254 PKP PKPdf 01 38 15.3 -0.1
comp=Z,2.3nm,0.8s,baz=87,slow=1.7,SNR=13
WRA SKPbc SKPbc 01 41 46.6 +1.9
comp=Z,0.4nm,0.6s,baz=89,slow=3.0,SNR=2.9
WRA Warramunga Arr 139.03 254 PKP PKPdf 01 38 15.3 -0.1
WRA SKPbc SKPbc 01 41 46.6 +1.9
ASAR Alice Springs 139.04 248 PKP PKPdf 01 38 15.2 0.0
comp=Z,1.3nm,0.7s,baz=99,slow=1.8,SNR=12
ASAR SKPbc SKPbc 01 41 46.6 +2.1
comp=Z,1.0nm,0.7s,baz=100,slow=3.2,SNR=10
KMI Kunming 141.28 345 PKP PKPdf 01 38 16.7 -2.7
FITZ Fitzroy Crossi 147.38 256 PKPbc PKPbc 01 38 32.0 -0.6
comp=Z,4.2nm,0.8s,baz=90,slow=1.0,SNR=5.9
CMAR Chiang Mai Arr 148.58 348 PKPbc PKPbc 01 38 33.6 -2.2
comp=Z,2.4nm,0.6s,baz=347,slow=3.7,SNR=6.6
MBWA Marble Bar 152.38 248 *e*PKPbc PKPbc 01 38 43.5 -1.3

GUC 04 01:30:46.2±1.2, 22°.10S×68°.92W, h135km±16km, ML3.5, 3C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**0.55**	**253**	*e*P	Pn	01 31 12.1	+6.0
PB04				*i* S	Sn	01 31 30.9	+10
PB04				AML	AML	01 31 33.9	
	comp=N,481nm,0.8s						
PB01	**Plate Boundary**	**1.18**	**333**	⇑*i*P	Pn	01 31 12.3	+1.0
PB01				*i* S	Sn	01 31 30.9	+0.5
PB01				AML	AML	01 31 32.1	
	comp=N,512nm,0.7s						
CEN1	**Los Morros**	**1.74**	**222**	*e*P	Pn	01 31 20.6	+3.2
CEN1				*e*S	Sn	01 31 44.3	+3.0
HMBC	**Humberston**	**2.03**	**333**	⇑*e*P	Pn	01 31 21.9	+1.0
HMBC				*e*S	Sn	01 31 49.1	+1.7
HMBC				AML	AML	01 31 50.0	
	comp=E,283nm,0.3s						
ANCH	**Antofagasta**	**2.09**	**221**	*e*S	Sn	01 31 47.3	-1.3
PSGC	**Pisagua**	**2.74**	**336**	*e*P	Pn	01 31 30.1	+0.4
PSGC				*e*S	Sn	01 32 03.1	0.0
MNMC	**Miæe Miæ**	**3.02**	**348**	⇑*e*P	Pn	01 31 34.9	+1.5
MNMC				*i* S	Sn	01 32 12.0	+2.2
MNMC				AML	AML	01 32 14.2	
	comp=N,285nm,0.6s						

ISCJB ***04*** *01:54:18.6±0.5, 41°.90N±0°.03×141°.37E±0°.05, h102km±4km, mb3.9/4, Error ellipse: s-maj=7.0km s-min=4.7km az=40.2*
JMA ***04*** *01:54:19.9±0.1, 41°.91N×141°.38E, h92km±2km, M2.7*
NEIC ***04*** *01:54:22.1±1.1, 42°.01N×142°.22E, h149km±45km, mb3.8/2, Error ellipse: s-maj=105.5km s-min=20.2km az=120.0*
IDC ***04*** *01:54:22.7±2.4, 42°.19N×141°.67E, h130km±25km, mb3.6/3, mb1 3.3/5, mb1mx3.0/26, mbtmp3.3/5, Error ellipse: s-maj=85.1km s-min=19.1km az=108.0*

ISC 04 01:54:19.5±0.5, 41°.90N±0°.03×141°.37E±0°.05, h97km±4km, n24, σ0°.64/37, mb3.9/4, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKB	**Kayabe**	**0.25**	**268**	P	Pn	01 54 33.2	-0.3
JKB				*e*S	Sn	01 54 43.3	-0.7
JOT	**Ohata**	**0.57**	**205**	P	Pn	01 54 35.7	+0.2
JOT				*e*S	Sn	01 54 47.7	+0.2
JNB	**Noboribetsu**	**0.62**	**337**	P	Pn	01 54 35.4	-0.6
JYM2	**Yakumo 2**	**0.78**	**287**	P	Pn	01 54 37.5	+0.1
JSR	**Shiriuchi**	**0.80**	**243**	P	Pn	01 54 37.9	+0.3
JSR				*e*S	Sn	01 54 51.5	+0.3
JEW	**Eniwo**	**0.94**	**4**	P	Pn	01 54 39.3	+0.2
JEW				*e*S	Sn	01 54 53.7	-0.1
JNBK	**Urakawa-nobuka**	**1.10**	**69**	P	Pn	01 54 41.0	+0.2
JNBK				*e*S	Sn	01 54 56.8	0.0
JTM	**Tenmabayashi**	**1.13**	**192**	P	Pn	01 54 41.8	+0.6
JTM				*e*S	Sn	01 54 57.8	+0.3
JBT2	**Biratori 2**	**1.15**	**40**	P	Pn	01 54 41.5	+0.1
JBT2				*e*S	Sn	01 54 58.4	+0.5
ERM	**Erimo**	**1.34**	**84**	*e*Pn	Pn	01 54 44.4	+0.8
ERM				*e*Sn	Sn	01 55 01.0	-0.8
JOSM	**Okushiri--Mats**	**1.43**	**278**	P	Pn	01 54 44.4	-0.3
JOSM				*e*S	Sn	01 55 03.4	-0.3
JANG	**Nango**	**1.52**	**176**	P	Pn	01 54 45.8	-0.1
JANG				*e*S	Sn	01 55 05.3	-0.6
JFR	**Furan**	**1.56**	**35**	P	Pn	01 54 45.9	-0.4
JSK	**Shakotan**	**1.60**	**336**	P	Pn	01 54 47.0	+0.2
JCH	**Churui**	**1.64**	**63**	P	Pn	01 54 47.7	+0.3
JCH				*e*S	Sn	01 55 08.6	0.0
JHR	**Hokuryu**	**1.86**	**8**	P	Pn	01 54 51.2	+1.0
JHR				*e*S	Sn	01 55 14.6	+1.0
ASAJ	**Asahikawa**	**2.39**	**22**	P	Pn	01 54 57.4	+0.3
	2.6nm,0.3s,baz=227,slow=13,SNR=11						
ASAJ				S	Sn	01 55 24.1	-1.8
	0.9nm,0.3s,baz=228,slow=16,SNR=3.3						
MJAR	**Matsushiro Arr**	**5.88**	**206**	P	Pn	01 55 52.5	+8.3
	0.3nm,0.3s,baz=27,slow=8.2,SNR=3.1						
ZALV	**Zalesovo Beam**	**38.75**	**308**	P	P	02 01 34.5	+0.5
	1.2nm,0.5s,mb4.0,baz=97,slow=8.2,SNR=4.6						
KURK	**Kurchatov**	**43.04**	**304**	P	P	02 02 09.2	-0.1
	0.8nm,0.4s,mb3.8,baz=78,slow=9.0,SNR=4.8						
KURK	**Kurchatov**	**43.04**	**304**	*e*P	P	02 02 11.7	+2.4
	1.9nm,0.6s,mb4.0						
ABKAR	**Akbulak array**	**54.87**	**308**	*e*P	P	02 03 38.9	-0.7
	0.5nm,0.5s,mb3.8						
FINES	**FINESS Array B**	**64.52**	**331**	P	P	02 04 44.2	-1.4
	1.1nm,0.4s,mb4.0,baz=46,slow=6.0,SNR=12						
FINES	**FINESS Array B**	**64.52**	**331**	P	P	02 04 44.2	-1.4

ISCJB ***04*** *02:14:11.1±0.3, 38°.04N±0°.02×21°.57E±0°.02, h5km±3km, Error ellipse: s-maj=3.3km s-min=2.7km az=35.5*
CSEM ***04*** *02:14:11.4±0.2, 38°.01N×21°.58E, h9km, ML3.4, Error ellipse: s-maj=4.7km s-min=3.8km az=29.0*
NEIC ***04*** *02:14:11.0, 38°.03N×21°.54E, h18km, ML3.4(ATH), After ATH.*
ATH ***04*** *02:14:11.0, 38°.03N×21°.54E, h18km±1km, MD3.4/21, ML3.4*
THE ***04*** *02:14:11.2, 38°.04N×21°.58E, h0km±2km, ML3.8/12, Error ellipse: s-maj=2.0km s-min=0.7km az=228.0*

ISC 04 02:14:11.8±0.3, 38°.04N±0°.02×21°.56E±0°.02, h9km±2km, n125, σ1°.23/177, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.08**	**283**	*e*Pb	Pg	02 14 14.6	+0.7
RLS				*e*Sb	Sg	02 14 17.2	+1.7
RLS	**Riolos of Patr**	**0.08**	**283**	*e*PB	Pg	02 14 14.6	+0.7
RLS				*e*SB	Sg	02 14 17.2	+1.7
RLS	**Riolos of Patr**	**0.08**	**283**	*e*Pb	Pg	02 14 14.6	+0.7
RLS				*e*Sb	Sg	02 14 17.2	+1.7
UPR	**University Cam**	**0.30**	**36**	*e*PB	Pg	02 14 17.8	+0.1
UPR				*e*SB	Sg	02 14 23.6	+1.8
UPR	**University Cam**	**0.30**	**36**	P	Pg	02 14 17.8	+0.1
UPR				S	Sg	02 14 22.1	+0.3
UPR	**University Cam**	**0.30**	**36**	P	Pg	02 14 17.8	+0.1
UPR				S	Sg	02 14 22.1	+0.3
UPR				*e*Sb	Sg	02 14 23.6	+1.8
EFP	**Efpalio**	**0.47**	**35**	*e*PB	Pg	02 14 20.4	-0.6
EFP				*e*SB	Sg	02 14 28.3	+1.1
EFP	**Efpalio**	**0.47**	**35**	P	Pg	02 14 20.3	-0.7
EFP				S	Sg	02 14 26.7	-0.5
EFP	**Efpalio**	**0.47**	**35**	*e*Pb	Pg	02 14 20.4	-0.6
EFP				S	Sg	02 14 26.7	-0.5
EFP				*e*Sb	Sg	02 14 28.3	+1.1
KFL	**Anninata**	**0.61**	**277**	P	Pg	02 14 22.8	-0.9
KFL				S	Sg	02 14 32.5	+0.8
KFL	**Anninata**	**0.61**	**277**	P	Pg	02 14 22.8	-0.9
KFL				S	Sg	02 14 32.5	+0.8
GUR	**Goura**	**0.62**	**99**	*e*PB	Pg	02 14 23.0	-0.9
GUR				*e*SN	Sg	02 14 32.8	+0.8
GUR	**Goura**	**0.62**	**99**	P	Pg	02 14 22.9	-1.0
GUR				S	Sg	02 14 32.5	+0.5
GUR	**Goura**	**0.62**	**99**	*e*Pb	Pg	02 14 23.0	-0.9
GUR				S	Sg	02 14 32.5	+0.5
VLS	**Valsamata**	**0.78**	**280**	*e*Pn	Pg	02 14 25.2	-1.6
VLS				*e*Sn	Sg	02 14 37.2	+0.3
VLS	**Valsamata**	**0.78**	**280**	*e*PN	Pg	02 14 25.2	-1.6
VLS				*e*SN	Sg	02 14 37.2	+0.3
VLS	**Valsamata**	**0.78**	**280**	P	Pg	02 14 25.2	-1.6
VLS				S	Sg	02 14 37.8	+0.9
VLS	**Valsamata**	**0.78**	**280**	P	Pg	02 14 25.2	-1.6
VLS				*e*Sn	Sg	02 14 37.2	+0.3
VLS				S	Sg	02 14 37.8	+0.9
DSF	**Desfina**	**0.84**	**64**	P	Pg	02 14 26.4	-1.7
DSF				S	Sg	02 14 40.1	+1.0
DSF	**Desfina**	**0.84**	**64**	P	Pg	02 14 26.4	-1.7
DSF				S	Sg	02 14 40.1	+1.0
EVR	**Evrytania**	**0.90**	**12**	*e*Pn	Pg	02 14 28.4	-0.6
EVR	**Evrytania**	**0.90**	**12**	*e*PN	Pg	02 14 28.4	-0.6
ITM	**Ithomi**	**0.91**	**161**	*e*Pn	Pg	02 14 28.3	-0.9
ITM	**Ithomi**	**0.91**	**161**	*e*PN	Pg	02 14 28.3	-0.9
ITM	**Ithomi**	**0.91**	**161**	P	Pg	02 14 28.1	-1.1
ITM				S	Sg	02 14 42.5	+1.5
ITM	**Ithomi**	**0.91**	**161**	P	Pg	02 14 28.1	-1.1
ITM				S	Sg	02 14 42.5	+1.5
VLX	**Vlachokerasia**	**0.93**	**136**	*e*PN	Pg	02 14 28.7	-1.0
VLX				*e*SN	Sg	02 14 42.0	+0.2
VLX	**Vlachokerasia**	**0.93**	**136**	P	Pg	02 14 28.3	-1.4
VLX				S	Sg	02 14 42.8	+1.0
VLX	**Vlachokerasia**	**0.93**	**136**	P	Pg	02 14 28.3	-1.4
VLX	**Vlachokerasia**	**0.93**	**136**	*e*Pn	Pg	02 14 28.7	-1.0
VLX				*e*Sn	Sg	02 14 42.0	+0.2
VLX				S	Sg	02 14 42.8	+1.0
LKD2	**Lefkada island**	**1.03**	**317**	P	Pg	02 14 29.8	-1.8
LKD2				S	Sg	02 14 46.6	+1.6
LKD2	**Lefkada island**	**1.03**	**317**	P	Pg	02 14 29.8	-1.8
LKD2				S	Sg	02 14 46.6	+1.6
LTK	**Loutraki**	**1.11**	**90**	*e*PN	Pg	02 14 31.9	-1.2
LTK	**Loutraki**	**1.11**	**90**	P	Pg	02 14 31.5	-1.6
LTK				S	Sg	02 14 47.3	-0.2
LTK	**Loutraki**	**1.11**	**90**	P	Pg	02 14 31.5	-1.6
LTK	**Loutraki**	**1.11**	**90**	*e*Pn	Pg	02 14 31.9	-1.2
LTK				S	Sg	02 14 47.3	-0.2
AGG	**Agios Georgios**	**1.15**	**31**	*e*Pn	Pn	02 14 32.7	-1.4
AGG	**Agios Georgios**	**1.15**	**31**	*e*PN	Pn	02 14 32.7	-1.4
AGG	**Agios Georgios**	**1.15**	**31**	P	Pb	02 14 31.8	-2.0
AGG				S	Sg	02 14 50.1	+1.3
AGG	**Agios Georgios**	**1.15**	**31**	P	Pb	02 14 31.8	-2.0
AGG	**Agios Georgios**	**1.15**	**31**	*e*Pn	Pn	02 14 32.7	-1.4
AGG				S	Sg	02 14 50.1	+1.3
PYL	**PYLOS**	**1.15**	**173**	*e*PN	Pg	02 14 32.6	-1.3
PYL	**PYLOS**	**1.15**	**173**	P	Pg	02 14 32.4	-1.5
PYL				S	Sg	02 14 50.2	+1.4
PYL	**PYLOS**	**1.15**	**173**	P	Pg	02 14 32.4	-1.5
PYL				S	Sg	02 14 50.2	+1.4
LKR	**Lokris**	**1.28**	**61**	*e*Pb	Pb	02 14 34.4	-1.7

LKR	Lokris	1.28	61	*e*PB	Pb	02 14 34.4	-1.7
LKR	Lokris	1.28	61	P	Pn	02 14 34.1	-1.8
LKR				S	Sb	02 14 53.4	+0.7
LKR	Lokris	1.28	61	P	Pn	02 14 34.1	-1.8
LKR	Lokris	1.28	61	*e*Pb	Pb	02 14 34.4	-1.7
LKR				S	Sb	02 14 53.4	+0.7
DID	Didima	1.43	111	*e*PN	Pn	02 14 37.5	-0.4
DID				*e*SN	Sn	02 14 58.7	+1.9
DID	Didima	1.43	111	P	Pn	02 14 37.1	-0.8
DID				S	Sn	02 14 57.8	+1.0
DID	Didima	1.43	111	P	Pn	02 14 37.1	-0.8
DID	Didima	1.43	111	*e*Pn	Pn	02 14 37.5	-0.4
DID				S	Sn	02 14 57.8	+1.0
NAIG	Nisos Aigina	1.55	100	*e*Pb	Pb	02 14 39.0	-1.6
NAIG	Nisos Aigina	1.55	100	*e*PB	Pb	02 14 39.0	-1.6
NAIG	Nisos Aigina	1.55	100	*e*Pb	Pb	02 14 39.0	-1.6
THL	Klokotos Trika	1.56	13	P	Pn	02 14 38.7	-1.0
THL				S	Sn	02 15 00.0	-0.1
THL	Klokotos Trika	1.56	13	P	Pn	02 14 38.7	-1.0
THL				S	Sn	02 15 00.0	-0.1
ATH	Athens Observa	1.70	92	*e*Pn	Pn	02 14 42.6	+0.9
ATH	Athens Observa	1.70	92	*e*PN	Pn	02 14 42.6	+0.9
ATH	Athens Observa	1.70	92	*e*Pn	Pn	02 14 42.6	+0.9
JAN	Janina	1.71	341	*e*Pn	Pn	02 14 42.7	+1.0
JAN	Janina	1.71	341	*e*PN	Pn	02 14 42.7	+1.0
JAN	Janina	1.71	341	*e*Pn	Pn	02 14 42.7	+1.0
VLI	Veliai	1.71	140	*e*Pn	Pn	02 14 43.0	+1.2
VLI	Veliai	1.71	140	*e*PN	Pn	02 14 43.0	+1.2
VLI	Veliai	1.71	140	*e*Pn	Pn	02 14 43.0	+1.2
VLY	Voula,Athens	1.77	95	*e*Pb	Pb	02 14 42.2	-2.3
VLY	Voula,Athens	1.77	95	*e*PB	Pb	02 14 42.2	-2.3
NEO	Neokhori	1.81	45	*e*Pb	Pn	02 14 42.6	-0.6
NEO	Neokhori	1.81	45	*e*PB	Pn	02 14 42.6	-0.6
PTL	Penteli	1.82	89	*e*Pn	Pn	02 14 44.2	+1.0
PTL	Penteli	1.82	89	*e*PN	Pn	02 14 44.2	+1.0
PTL	Penteli	1.82	89	*e*Pn	Pn	02 14 44.2	+1.0
XOR	Xorichti	1.84	43	P	Pn	02 14 43.0	-0.5
XOR	Xorichti	1.84	43	P	Pn	02 14 42.9	-0.6
XOR				S	Sn	02 15 08.4	+1.5
XOR	Xorichti	1.84	43	P	Pn	02 14 43.0	-0.5
XOR				S	Sn	02 15 08.4	+1.5
AOS	Alonnisos	2.14	57	P	Pn	02 14 46.9	-0.7
AOS	Alonnisos	2.14	57	P	Pn	02 14 46.3	-1.3
AOS				S	Sn	02 15 14.3	0.0
AOS	Alonnisos	2.14	57	P	Pn	02 14 46.9	-0.7
AOS				S	Sn	02 15 14.3	0.0
KEK	Kerkira	2.16	321	*e*Pn	Pn	02 14 48.2	+0.2
KEK	Kerkira	2.16	321	*e*PN	Pn	02 14 48.2	+0.2
KEK	Kerkira	2.16	321	P	Pn	02 14 48.0	0.0
KEK	Kerkira	2.16	321	*e*Pn	Pn	02 14 48.2	+0.2
SRN	Sarande	2.20	327	*i* PN	Pn	02 14 49.0	+0.5
SRN	Sarande	2.20	327	*i* Pn	Pn	02 14 49.0	+0.5
KZN	Kozani	2.27	4	*e*Pn	Pn	02 14 51.1	+1.7
KZN	Kozani	2.27	4	*e*PN	Pn	02 14 51.1	+1.7
KZN	Kozani	2.27	4	P	Pn	02 14 50.1	+0.7
KZN	Kozani	2.27	4	P	Pn	02 14 50.1	+0.7
KZN	Kozani	2.27	4	*e*Pn	Pn	02 14 51.1	+1.7
NEST	Nestorio	2.40	351	P	Pn	02 14 52.7	+1.4
NEST	Nestorio	2.40	351	P	Pn	02 14 52.7	+1.4
PAIG	Paliouri	2.50	41	P	Pn	02 14 54.1	+1.4
PAIG	Paliouri	2.50	41	P	Pn	02 14 54.1	+1.4
KBN	Korca	2.65	347	*i* PN	Pb	02 14 58.7	-0.7
KBN	Korca	2.65	347	*i* Pn	Pb	02 14 58.7	-0.7
FNA	Florina	2.74	357	P	Pn	02 14 57.5	+1.5
FNA	Florina	2.74	357	P	Pn	02 14 56.8	+0.8
FNA	Florina	2.74	357	P	Pn	02 14 56.8	+0.8
PLG	Polygyros	2.75	32	P	Pn	02 14 58.3	+2.2
PLG	Polygyros	2.75	32	P	Pn	02 14 55.7	-0.4
PLG	Polygyros	2.75	32	P	Pn	02 14 55.7	-0.4
OUR	Ouranopolis	2.96	39	P	Pn	02 14 59.7	+0.7
OUR	Ouranopolis	2.96	39	P	Pn	02 14 59.4	+0.4
OUR	Ouranopolis	2.96	39	P	Pn	02 14 59.4	+0.4
BIA	Bitola	2.98	357	*i* Pn	Pb	02 15 04.4	-0.7
SOH	Sokhos	3.10	26	P	Pn	02 15 03.3	+2.4
SOH	Sokhos	3.10	26	P	Pn	02 15 01.7	+0.8
SOH				S	Sn	02 15 39.5	+1.4
SOH	Sokhos	3.10	26	P	Pn	02 15 01.7	+0.8
SOH				S	Sn	02 15 39.5	+1.4
KARN	Karanos	3.24	144	P	Pn	02 15 03.3	+0.5
KARN	Karanos	3.24	144	P	Pn	02 15 03.3	+0.5
KRUS	Krusevo	3.33	356	*i* Pn	Pn	02 15 05.9	+1.9
VAY	Valandovo	3.37	13	*e*Pn	Pn	02 15 05.2	+0.7
LIA	Limnos Island	3.38	56	P	Pn	02 15 06.3	+1.6
LIA	Limnos Island	3.38	56	P	Pn	02 15 06.3	+1.6
BCI	Bajram Curri	4.47	346	*i* PN	Pn	02 15 16.8	-2.9
BCI	Bajram Curri	4.47	346	*i* Pn	Pn	02 15 16.8	-2.9
VTS	Vitosha	4.72	15	*e*Pn	Pn	02 15 19.1	-4.0
STON	Ston	5.65	330	*e*Pn	Pn	02 15 34.0	-1.9
STON				Sn	Sn	02 16 37.9	-3.1
WDD	Wield Dalam	6.04	251	P	Pn	02 15 42.5	+1.2
WDD	Wield Dalam	6.04	251	P	Pn	02 15 42.5	+1.2
DIVS	Divibare	6.17	349	*e*Pn	Pn	02 15 41.7	-1.3
NVLJ	Novalja	8.23	324	*e*Pn	Pn	02 16 10.2	-1.1
NVLJ				Sn	Sn	02 17 40.2	-4.2
NVLJ	Novalja	8.23	324	*e*Pn	Pn	02 16 10.2	-1.1

IDC 04 02:15:21.2±1.8, 9°21S×124°41E, h0km, mb3.8/1, mb1 3.9/4, mb1mx3.6/18, mbtmp3.7/4, ML3.6/3, Error ellipse: s-maj=112.4km s-min=27.5km az=64.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	8.92	172	Pn	Pn	02 17 31.1	-0.3
	0.6nm,0.3s,baz=359,slow=9.9,SNR=42						
FITZ				Sn	Sn	02 19 00.0	-13
	4.2nm,0.3s,baz=140,slow=5.5,SNR=16						
WRA	Warramunga Arr	14.35	139	Pn	Pn	02 18 44.1	-1.6
	0.3nm,0.3s,baz=317,slow=15,SNR=9.2						
WRA				Sn	Sn	02 21 14.4	-11
	0.4nm,0.3s,baz=307,slow=24,SNR=4.3						
ASAR	Alice Springs	17.00	149	Pn	Pn	02 19 22.2	+1.7
	0.2nm,0.3s,baz=318,slow=12,SNR=16						
ASAR				Sn	Sn	02 22 19.1	-11
	0.2nm,0.3s,baz=314,slow=20,SNR=6.7						
MKAR	Makanchi Array	67.20	330	P	P	02 26 17.2	+0.1
	0.6nm,0.6s,baz=134,slow=6.9,SNR=4.9						

*BJI **04** 02:15:47.2, 18°.11N×100°.43W, h29km, mB5.4/2, mb5.3/1, Ms4.5/1, Ms7 4.2/1*
*MEX **04** 02:15:55.2±0.5, 18°.04N×100°.75W, h56km±17km, MD4.2*
*ISCJB **04** 02:15:56.1±0.5, 17°.97N±0°.05×100°.46W±0°.04, h91km±5km, mb3.8/17, Error ellipse: s-maj=8.7km s-min=5.6km az=31.9*
*NEIC **04** 02:15:56.2, 18°.04N×100°.68W, h52km, mb3.9/17, MD4.3(MEX), After MEX.*
*IDC **04** 02:16:06.2±3.7, 18°.78N×99°.69W, h154km±41km, mb3.5/4, mb1 3.6/8, mb1mx3.4/22, mbtmp3.3/8, MS3.0/2, Ms1 3.0/2, ms1mx2.6/20, Error ellipse: s-maj=69.7km s-min=26.6km az=38.0*

ISC 04 02:15:58.3±0.6, 18°.12N±0°.05×100°.40W±0°.05, h88km±5km, n181, σ0°99/196, mb3.8/17, 59C-67D, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEIG	Mezcala	0.76	104	*e*P	Pn	02 16 12.7	-2.6
MEIG				*i* S	Sn	02 16 26.4	-1.6
PLIG	Platanillo	0.89	72	*e*P	Pn	02 16 15.1	-1.6
PLIG				*e*S	Sn	02 16 30.8	+0.3
PLIG	Platanillo	0.89	72	*e*P	Pn	02 16 15.1	-1.6
PLIG				*e*S	Sn	02 16 30.8	+0.3
CAIG	El Cayaco	1.07	173	*e*P	Pn	02 16 12.7	-6.0
CAIG				*e*S	Sn	02 16 26.4	-7.7
CAIG	El Cayaco	1.07	173	*e*P	Pn	02 16 12.7	-6.0
CAIG				*e*S	Sn	02 16 26.4	-7.7
YAIG	Yautepec	1.46	59	*e*P	Pn	02 16 22.8	-0.8
YAIG				*e*S	Sn	02 16 41.2	-1.4
YAIG	Yautepec	1.46	59	*e*P	Pn	02 16 22.8	-0.8
YAIG				*i* S	Sn	02 16 42.3	-0.3
PPM	Popocatepetl	1.93	60	*e*P	Pn	02 16 29.8	+0.3
PPM				*e*S	Sn	02 16 54.2	+0.9
PPM	Popocatepetl	1.93	60	*e*P	Pn	02 16 29.8	+0.3
PPM				*e*S	Sn	02 16 54.2	+0.9
DEIG	Demacu	2.53	30	*i* P	Pn	02 16 35.5	-1.9
DEIG				*i* S	Sn	02 17 06.3	-1.3
PNIG	Pinotepa	2.76	128	*e*P	Pn	02 16 39.6	-1.0
PNIG				*e*S	Sn	02 17 13.9	+0.6
PNIG	Pinotepa	2.76	128	*e*P	Pn	02 16 39.6	-1.0
PNIG				*e*S	Sn	02 17 13.9	+0.6
MMIG	Aquila	2.81	274	*e*P	Pn	02 16 32.0	-9.3
MMIG				*i* S	Sn	02 16 59.6	-15
TPIG	Tehuac#an	2.90	84	*e*P	Pn	02 16 43.4	+0.9
TPIG				*e*S	Sn	02 17 18.9	+2.5
VHO	Vista Hermosa	3.64	106	*e*P	Pn	02 16 53.1	+0.5
VHO				*e*S	Sn	02 17 35.8	+1.3
VHO	Vista Hermosa	3.64	106	*e*P	Pn	02 16 53.1	+0.5
VHO				*e*S	Sn	02 17 35.8	+1.3
CMIG	Matias Romero	5.36	100	P	Pn	02 17 16.8	+1.0
	3.3nm,0.3s,baz=268,slow=11,SNR=33						
CMIG				S	Sn	02 18 15.3	-0.9
	2.9nm,0.3s,baz=313,slow=21,SNR=6.5						
CMIG				LR	LR	02 19 45.6	
	comp=Z,84nm,19.9s,baz=278,slow=45						
CMIG	Matias Romero	5.36	100	P	Pn	02 17 16.8	+1.0
CMIG				S	Sn	02 18 15.3	-0.9
CMIG				LR	LR	02 19 45.6	
CMIG	Matias Romero	5.36	100	*e*P	Pn	02 17 17.1	+1.3
CMIG				*e*S	Sn	02 18 18.7	+2.5
APG	El Apazote	10.01	107	P	Pn	02 18 20.8	+1.5
	2.6nm,0.3s,baz=307,slow=7.5,SNR=27						
TXAR	Lajitas Array	11.56	346	P	Pn	02 18 40.7	+0.4
	0.0nm,0.3s,baz=186,slow=7.3,SNR=2.0						
TXAR	Lajitas Array	11.56	346	P	Pn	02 18 40.7	+0.4
526A	Mary Lane Ranc	12.36	345	⇑P	Pn	02 18 56.8	+5.7
	baz=13						
428A	Kincaid Ranch,	12.73	351	⇓P	Pn	02 19 02.1	+6.1
	baz=13						
426A	McDonald Obser	12.93	346	⇓P	Pn	02 19 04.1	+5.5
	baz=14						
427A	Hayter Ranch,	12.97	348	⇑P	Pn	02 19 05.4	+6.2
	baz=14						
326A	Caldwell Ranch	13.54	347	⇑P	Pn	02 19 12.2	+5.5
	baz=14						
325A	Bean Ranch, Si	13.83	343	⇓P	Pn	02 19 15.9	+5.3
	baz=14						
324A	Moseley Ranch,	14.05	342	⇑P	Pn	02 19 17.5	+4.2
	baz=15,SNR=7.1						
MNTX	Cornudas Mount	14.26	342	*e*Pn	Pn	02 19 19.2	+3.2
	1.3nm,0.8s						
226A	Malaga, Loving	14.28	347	⇓P	Pn	02 19 21.0	+4.6
	baz=15						
225A	Deer Hill, Car	14.50	345	⇓P	Pn	02 19 23.7	+4.6
	baz=15						
224A	Cornudas Mount	14.65	343	⇑P	Pn	02 19 24.7	+3.6
	baz=15						
124A	Stringfield Ra	15.22	344	⇑P	Pn	02 19 30.7	+2.3
	baz=16						
319A	Douglas	15.46	330	⇓P	Pn	02 19 33.6	+2.1
	baz=16						
220A	Playas Peak, P	15.57	333	⇑P	Pn	02 19 34.9	+2.1
	baz=16						
Z24A	Sheeppen Canyo	15.79	345	⇓P	Pn	02 19 37.8	+2.2
	baz=16						
121A	Cookes Peak, D	15.82	337	⇑P	Pn	02 19 38.1	+2.2
	baz=16						
318A	Bisbee	15.86	329	⇑P	Pn	02 19 38.0	+1.6
	baz=16						
219A	White Tail Can	15.97	332	⇓P	Pn	02 19 39.3	+1.5
	baz=16						
120A	U Bar Ranch, L	16.17	334	⇓P	Pn	02 19 42.2	+1.9
	baz=17						
Z22A	Elephant Butte	16.19	340	⇑P	Pn	02 19 42.4	+1.9
	baz=17,SNR=5.2						
218A	Dragoon	16.32	330	⇓P	Pn	02 19 43.4	+1.3
	baz=17						
Z21A	St. Cloud Mine	16.48	338	⇓P	Pn	02 19 46.0	+1.9
	baz=17,SNR=5.2						
Y23A	Lovelace Mesa,	16.55	343	⇑P	Pn	02 19 46.3	+1.4
	baz=17						
WMOK	Wichita Mounta	16.62	5	*e*Pn	Pn	02 19 45.5	-0.4
	1.0nm,0.5s						
119A	Ashpeak Ranch,	16.65	333	⇓P	Pn	02 19 47.2	+1.0
	baz=17						
Z20A	Nine Sixteen R	16.65	335	⇑P	Pn	02 19 47.4	+1.1
	baz=17						
AMTX	Amarillo	16.74	356	*e*Pn	Pn	02 19 45.7	-1.6
	3.8nm,0.4s						
118A	Hondack Ranch,	16.84	331	⇑P	Pn	02 19 49.8	+1.3
	baz=17						
TUC	Tucson	16.96	328	*e*Pn	Pn	02 19 51.2	+1.2
LPM	Los Pinos Moun	17.07	342	*e*Pn	Pn	02 19 54.6	+3.2
117A	Oracle	17.15	329	⇑P	Pn	02 19 53.5	+1.2
	baz=18						
X23A	Hourglass Bar	17.19	344	⇑P	Pn	02 19 54.0	+1.1
	baz=18						
Y20A	Horse Springs,	17.27	337	⇓P	Pn	02 19 54.5	+0.7
	baz=18						
W25A	X Bar L Ranch,	17.41	349	⇓P	Pn	02 19 55.4	-0.2
	baz=18						
X21A	Alamocita Cree	17.55	339	⇓P	Pn	02 19 58.0	+0.7
	baz=18,SNR=7.5						
ANMO	Albuquerque	17.61	343	P	Pn	02 19 57.6	-0.4
	0.1nm,0.3s,baz=149,slow=13,SNR=6.1						
ANMO				LR	LR	02 27 24.4	
	comp=Z,77nm,18.6s,baz=118,slow=40						
Y19A	Nutrioso	17.66	335	⇓P	Pn	02 19 59.5	+1.0
	baz=18,SNR=5.3						
V26A	Tequesquite Ra	17.87	351	⇑P	Pn	02 20 00.5	-0.5
	baz=18						
X20A	Quemado	17.89	338	⇓P	Pn	02 20 01.1	-0.2
	baz=18,SNR=5.2						
115A	Sonoran Desert	18.01	326	⇑P	Pn	02 20 01.8	-1.0
	baz=18						
X19A	St. Johns	18.08	336	⇓P	Pn	02 20 03.4	-0.3
	baz=19						
Y17A	Roosevelt	18.12	331	⇓P	Pn	02 20 03.7	-0.4
	baz=19						
W20A	Ramah	18.41	339	⇑P	Pn	02 20 07.2	-0.4
	baz=19						
X18A	Snowflake	18.44	334	⇑P	Pn	02 20 07.0	-0.9
	baz=19						
U26A	Atchley Ranch,	18.45	351	⇓P	Pn	02 20 07.5	-0.5
	baz=19						
Y16A	Circle Bar Ran	18.57	330	⇓P	Pn	02 20 08.2	-1.3
	baz=19						
W19A	Sanders	18.72	336	⇑P	Pn	02 20 10.4	-0.9
	baz=19						
U23A	El Rito	18.85	345	⇑P	Pn	02 20 12.1	-0.7
	baz=19						
V20A	Brimhall	19.01	339	⇑P	Pn	02 20 13.3	-1.5
	baz=20						
T25A	Trinidad	19.28	350	⇑P	Pn	02 20 17.7	-0.1
	baz=20						
U21A	Nagezi	19.34	342	⇓P	Pn	02 20 17.1	-1.4
	baz=20,SNR=6.8						
X15A	Humboldt	19.43	329	⇓P	Pn	02 20 18.1	-1.6
	baz=20						
V18A	Ganado	19.46	336	⇓P	Pn	02 20 18.7	-1.4
	baz=20						
W16A	Flagstaff	19.60	332	⇑P	Pn	02 20 19.9	-1.8
	baz=20						
U19A	Dine' College,	19.71	338	⇑P	Pn	02 20 21.1	-1.9
	baz=20						
V17A	Tonalea, Kykot	19.73	334	⇓P	Pn	02 20 21.5	-1.7
	baz=20,SNR=12						
S25A	Robets Cordova	19.79	350	⇑P	Pn	02 20 22.4	-1.6
	baz=20						
T21A	Navajo Lake	19.83	343	⇑P	Pn	02 20 23.0	-1.4
	baz=20						
WUAZ	Wupatki	19.88	333	⇓P	Pn	02 20 23.3	-1.7
	baz=20,SNR=15						
WUAZ	Wupatki	19.88	333	*e*P	Pn	02 20 23.5	-1.5
	16nm,0.9s						
S24A	Houchin Ranch,	19.91	349	⇑P	Pn	02 20 23.4	-1.9
	baz=20						
Y12C	Blythe	20.06	324	⇓P	P	02 20 24.5	0.0
	baz=20						
U18A	Rough Rock, Ch	20.06	337	⇓P	P	02 20 24.9	+0.4
	baz=21						
SDCO	Great Sand Dun	20.06	348	*e*P	P	02 20 24.2	-0.3
	2.0nm,0.9s						
T19A	Beclabito	20.13	340	⇓P	P	02 20 25.4	+0.2
	baz=21						
MVCO	Mesa Verde	20.31	341	⇑P	P	02 20 27.2	0.0
	baz=21						
MVCO	Mesa Verde	20.31	341	*e*P	P	02 20 26.8	-0.5
	3.5nm,0.7s						
S22A	4UR Ranch, Cre	20.36	345	⇑P	P	02 20 28.4	+0.7
	baz=21						
W14A	Seligman	20.42	329	⇑P	P	02 20 28.8	+0.4
	baz=21						
V15A	Kaibab Nationa	20.49	332	⇓P	P	02 20 29.7	+0.5
	baz=21,SNR=6.0						
U17A	Shonto	20.52	336	⇑P	P	02 20 30.0	+0.5
	baz=21						
S21A	Coal Bank Pass	20.53	343	⇓P	P	02 20 29.5	0.0
	baz=21,SNR=6.8						
MONP	Monument Peak	20.59	319	⇑P	P	02 20 29.6	-0.6
	baz=21						
T18A	Mexican Hat	20.70	338	⇑P	P	02 20 31.0	-0.4
	baz=21,SNR=5.8						
IRM	Iron Mountain	20.71	323	⇑P	P	02 20 31.3	-0.2
	baz=21						
W13A	Hualapai Mount	20.74	327	⇓P	P	02 20 31.9	+0.1
	baz=21						
V14A	Boquillas Ranc	20.77	330	⇓P	P	02 20 32.5	+0.3
	baz=21						
R22A	Saguache, Gunn	20.80	346	⇓P	P	02 20 32.9	+0.5
	baz=21						
S20A	Disappointment	20.84	342	⇓P	P	02 20 33.1	+0.2
	baz=21						
T17A	Navajo Res., N	20.92	336	⇓P	P	02 20 33.4	-0.3
	baz=22						
S19A	Harvey Farm, M	21.00	340	⇓P	P	02 20 34.1	-0.5
	baz=22,SNR=7.4						
U15A	North Rim	21.05	332	⇓P	P	02 20 35.5	+0.4
	baz=22						
WVT	Waverly	21.11	29	*e*P	P	02 20 36.2	+0.5
	6.6nm,0.5s,mb4.2						
R21A	Cimarron	21.12	344	⇓P	P	02 20 36.6	+0.7
	baz=22						
R20A	Redvale	21.18	342	⇑P	P	02 20 36.6	0.0
	baz=22,SNR=7.1						
S18A	Hurst Farm, Bl	21.24	339	⇑P	P	02 20 37.4	+0.3
	baz=22						
V13A	Grand Canyon W	21.38	328	⇓P	P	02 20 39.3	+0.6
	baz=22						
Q21A	Lamborn Mesa,	21.57	345	⇓P	P	02 20 41.5	+0.8
	baz=22						
P23A	Jefferson	21.70	349	⇓P	P	02 20 42.8	+0.7
	baz=22						
U13A	Pakoon Wash	21.81	329	⇑P	P	02 20 43.1	-0.2
	baz=22						
R18A	Canyonlands Na	21.83	340	⇓P	P	02 20 42.8	-0.7
	baz=22,SNR=6.0						
ISCO	Idaho Springs	22.08	349	*e*P	P	02 20 45.6	-0.4
	4.8nm,0.6s,mb4.0						
Q19A	Hogan Spring (	22.15	341	⇓P	P	02 20 46.4	-0.5
	baz=23						
P21A	Newcastle	22.19	345	⇓P	P	02 20 47.5	+0.2
	baz=23						
T13A	Saint George	22.27	330	⇑P	P	02 20 47.7	-0.5
	baz=23						
R16A	Teasdale	22.31	337	⇓P	P	02 20 48.5	0.0
	baz=23						
P20A	De Beque	22.41	344	⇓P	P	02 20 49.5	0.0
	baz=23						
SHOC	Shoshone	22.62	325	⇑P	P	02 20 50.4	-1.4
	baz=23						
P19A	Cripple Cowboy	22.70	343	⇑P	P	02 20 52.0	-0.6
	baz=23						
SRU	San Rafael	22.70	339	⇑P	P	02 20 52.1	-0.5
	baz=23						
Q16A	Castle Valley	22.75	338	⇓P	P	02 20 53.1	-0.1
	baz=23						
TKL	Tuckaleechee C	22.86	37	P	P	02 20 53.7	-0.6
	1.7nm,0.6s,mb3.5,baz=186,slow=12,SNR=4.2						
TKL	Tuckaleechee C	22.86	37	P	P	02 20 53.7	-0.6
O20A	White River Ci	22.97	344	⇑P	P	02 20 55.3	0.0
	baz=24						
P18A	Preston Nutter	23.07	340	⇑P	P	02 20 56.2	-0.1
	baz=24						
T11A	Corn Creek, Al	23.08	329	⇓P	P	02 20 56.0	-0.4
	baz=24						
TMUT	Trail Mountain	23.10	338	*e*P	P	02 20 56.2	-0.4
	5.0nm,0.6s,mb4.0						
FURC	Furnace Creek,	23.35	325	⇑P	P	02 20 58.6	-0.3
	baz=24						
O19A	Miners Draw (B	23.36	343	⇓P	P	02 20 59.4	+0.5
	baz=24						
N21A	Black Mountain	23.39	346	⇑P	P	02 20 59.8	+0.6
	baz=24,SNR=8.0						
MPMC	Manual Prospec	23.41	323	⇑P	P	02 20 59.0	-0.4
	baz=24						
Q14A	Sevier Lake (B	23.62	334	⇓P	P	02 21 01.7	+0.3
	baz=24						
N20A	Spence Gulch,	23.63	345	⇑P	P	02 21 01.8	+0.4
	baz=24						
O17A	Robinson Place	23.75	340	⇓P	P	02 21 02.3	-0.1
	baz=24						
LHS	Liberty Hill	23.89	43	*e*P	P	02 21 02.1	-1.7
N19A	John Jarvie Ra	23.93	343	⇓P	P	02 21 04.2	+0.1
	baz=24						
P14A	Drum Mountains	24.05	335	⇓P	P	02 21 05.8	+0.5
	baz=25						
R11A	Troy Canyon, C	24.13	330	⇑P	P	02 21 06.2	+0.2
	baz=25						
M21A	Separation Pea	24.16	347	⇑P	P	02 21 06.8	+0.6
	baz=25						
RWWY	Rawlins	24.21	347	*e*P	P	02 21 07.2	+0.5
	6.5nm,1.0s,mb3.9						
S10A	Tonopah Range,	24.30	328	⇓P	P	02 21 07.9	+0.4
	baz=25						
L22A	Ellis Ranch, M	24.39	349	⇑P	P	02 21 08.8	+0.6
	baz=25						
DUG	Dugway	24.48	337	⇓P	P	02 21 08.8	-0.3
	baz=25						
DUG	Dugway	24.48	337	*e*P	P	02 21 08.3	-0.8
	2.3nm,0.8s,mb3.6						
SCIA	State Center	24.50	13	*e*P	P	02 21 10.0	+0.8
	13nm,0.6s,mb4.4						
Q11A	Duckwater	24.56	330	⇓P	P	02 21 10.6	+0.8
	baz=25						
L19A	Farson	25.10	344	⇓P	P	02 21 15.3	+0.5
	baz=26						
N14A	Grayback Hills	25.19	337	⇓P	P	02 21 15.7	+0.2

comp=Z,8.0nm,1.6s
MDJ pmax pmax
comp=Z,64nm,4.2s
HHC Hu-ho-hao-te 114.25 334 *e*PKP PKiKP 02 34 20.5 -7.4
HHC PP PP 02 35 22.2 -1.1
HHC SS SS 02 51 09.1 +1.8
HHC AMB AMB
comp=Z,52nm,9.1s
WMQ Urumqi 117.93 353 *e*PKP PKPdf 02 34 32.3 -2.6
CD2 Chengdu 126.01 334 PKP PKPdf 02 34 39.3 -11

*ISCJB **04** 02:28:28.0±1.1, 23°.4S±0°.2×179°.9W±0°.2, h500km, mb4.1/11, Error ellipse: s-maj=33.3km s-min=19.0km az=1.7*
*IDC **04** 02:28:30.6±3.4, 23°.41S×179°.87W, h519km±33km, mb3.6/7, mb1 3.8/7, mb1mx3.5/17, mbtmp3.6/7, Error ellipse: s-maj=29.2km s-min=23.7km az=16.0*
*NEIC **04** 02:28:37.8±4.7, 23°.43S×179°.84E, h604km±54km, mb4.1/2, Error ellipse: s-maj=28.4km s-min=23.6km az=73.0*

ISC 04 02:28:29.1±1.1, 23°.4S±0°.2×179°.9W±0°.2, h500km, n21, σ0°73/19, mb4.1/11, 3D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EIDS	**Eidsvold**	**26.50**	**260**	*e*P	**P**	**02 33 27.2**	**+1.3**
CMSA	**Cobar Meteorol**	**31.50**	**247**	‖ *i*P	**P**	**02 34 10.0**	**+0.6**
CTA	**Charters Tower**	**31.59**	**269**	‖ *i*P	**P**	**02 34 11.3**	**+1.0**
17nm,0.4s,mb4.8							
CTA	**Charters Tower**	**31.59**	**269**	P	**P**	**02 34 11.4**	**+1.1**
27nm,0.6s,mb4.9,baz=97,slow=10,SNR=54							
CTAO	**Charters Tower**	**31.59**	**269**	*e*P	**P**	**02 34 11.1**	**+0.8**
23nm,0.5s,mb4.9							
STKA	**Stephens Creek**	**35.01**	**247**	‖ *i*P	**P**	**02 34 39.6**	**+0.5**
3.7nm,0.4s,mb4.2							
STKA	**Stephens Creek**	**35.01**	**247**	P	**P**	**02 34 39.7**	**+0.6**
4.8nm,0.5s,mb4.2,baz=92,slow=9.9,SNR=19							
STKA	**Stephens Creek**	**35.01**	**247**	P	**P**	**02 34 39.7**	**+0.6**
ASAR	**Alice Springs**	**42.23**	**260**	P	**P**	**02 35 38.0**	**+0.1**
7.2nm,0.6s,mb4.3,baz=95,slow=7.3,SNR=89							
ASAR				ScP	ScP	02 40 21.8	-1.6
0.7nm,0.8s,baz=108,slow=3.0,SNR=4.5							
WRAB	**Tennant Creek**	**42.55**	**266**	*e*P	**P**	**02 35 39.5**	**-0.9**
6.7nm,0.6s,mb4.2							
WRA	**Warramunga Arr**	**42.55**	**266**	P	**P**	**02 35 40.0**	**-0.4**
8.2nm,0.5s,mb4.4,baz=94,slow=8.5,SNR=67							
FORT	**Forrest**	**46.59**	**249**	*e*P	**P**	**02 36 10.8**	**-0.7**
25nm,0.6s,mb4.8							
FORT	**Forrest**	**46.59**	**249**	*e*P	**P**	**02 36 10.8**	**-0.8**
26nm,0.6s,mb4.8							
FITZ	**Fitzroy Crossi**	**50.98**	**265**	*e*P	**P**	**02 36 43.9**	**-0.4**
8.0nm,0.7s,mb4.2							
MBWA	**Marble Bar**	**55.57**	**260**	*e*P	**P**	**02 37 15.9**	**-1.1**
4.2nm,0.6s,mb4.0							
QSPA	**South Pole Qui**	**66.68**	**180**	P	**P**	**02 38 29.5**	**+0.4**
1.4nm,0.9s,mb3.6,baz=25,slow=3.0,SNR=6.1							
QSPA	**South Pole Qui**	**66.68**	**180**	P	**P**	**02 38 29.5**	**+0.4**
MAW	**Mawson**	**78.25**	**200**	P	**P**	**02 39 35.6**	**-0.6**
1.5nm,0.6s,mb3.6,baz=188,slow=7.1,SNR=2.8							
TXAR	**Lajitas Array**	**90.07**	**58**	P	**P**	**02 40 35.7**	**+0.3**
0.2nm,0.5s,mb3.2,baz=201,slow=6.7,SNR=5.7							
BRTR	**Keskin Array B**	**147.37**	**308**	PKPbc	PKPbc	02 47 14.9	-1.4
0.5nm,0.9s,baz=46,slow=10,SNR=2.8							
BRTR				PKPab	PKPab	02 47 18.9	-1.1
0.7nm,0.6s,baz=84,slow=3.7,SNR=3.9							
MMAI	**Mount Meron Ar**	**147.60**	**295**	PKPbc	PKPbc	02 47 17.0	-0.2
1.8nm,0.5s,baz=63,slow=6.6,SNR=4.5							

*ISCJB **04** 02:32:40.0±0.5, 38°.18N±0°.02×27°.77E±0°.03, h3km±5km, Error ellipse: s-maj=4.1km s-min=3.3km az=175.5*
*DDA **04** 02:32:39.6, 38°.21N×27°.76E, h7km±5km, Md2.7*
*ISK **04** 02:32:39.8, 38°.16N×27°.77E, h11km, MD3.0*
*CSEM **04** 02:32:40.3±0.1, 38°.17N×27°.77E, h8km, MD2.7, Error ellipse: s-maj=2.9km s-min=2.4km az=91.0*
*ATH **04** 02:32:41.7, 37°.98N×27°.75E, h43km±9km, MD3.3/3*

ISC 04 02:32:40.6±0.4, 38°.18N±0°.02×27°.77E±0°.03, h8km±4km, n50, σ0°76/74, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAG	**Bornova**	**0.45**	**300**	*i* P	**Pg**	**02 32 48.6**	**-0.7**
KDAG				*i* S	**Sg**	**02 32 54.7**	**-0.6**
KDAG	**Bornova**	**0.45**	**300**	*i* P	**Pg**	**02 32 48.7**	**-0.7**
KDAG				*i* S	**Sg**	**02 32 54.7**	**-0.6**
IZM	**Izmir**	**0.45**	**299**	*e*PG	**Pg**	**02 32 49.7**	**+0.3**
IZM				*e*SG	**Sg**	**02 32 56.4**	**+1.1**
IZM	**Izmir**	**0.45**	**299**	*e*Pg	**Pg**	**02 32 49.7**	**+0.3**
IZM				*e*Sg	**Sg**	**02 32 56.4**	**+1.1**
AYDN	**Tasoluk**	**0.53**	**170**	*i* P	**Pg**	**02 32 50.9**	**+0.2**
AYDN				*i* S	**Sg**	**02 32 58.2**	**+0.7**
AYDN	**Tasoluk**	**0.53**	**170**	*i* P	**Pg**	**02 32 50.9**	**+0.2**
AYDN				*i* S	**Sg**	**02 32 58.2**	**+0.6**
BLCB	**Balcova**	**0.61**	**290**	*e*PG	**Pg**	**02 32 51.9**	**-0.4**
BLCB	**Balcova**	**0.61**	**290**	*e*Pg	**Pg**	**02 32 51.9**	**-0.4**
AKHS	**Akhisar**	**0.70**	**3**	*i* P	**Pg**	**02 32 53.5**	**-0.5**
AKHS				*i* S	**Sg**	**02 33 03.6**	**+0.4**
AKHS	**Akhisar**	**0.70**	**3**	*i* P	**Pg**	**02 32 53.5**	**-0.5**
AKHS				*i* S	**Sg**	**02 33 03.6**	**+0.5**
AKS	**Akhisar**	**0.70**	**3**	*e*PG	**Pg**	**02 32 53.8**	**-0.2**
AKS	**Akhisar**	**0.70**	**3**	*e*Pg	**Pg**	**02 32 53.8**	**-0.2**
KULA	**Kula-Manisa**	**0.78**	**64**	*e*PG	**Pg**	**02 32 55.6**	**+0.1**
KULA	**Kula-Manisa**	**0.78**	**64**	*e*Pg	**Pg**	**02 32 55.6**	**+0.1**
SMG	**Samos**	**0.87**	**238**	*e*P	**Pg**	**02 32 57.1**	**-0.2**
SMG				*e*S	**Sg**	**02 33 08.7**	**0.0**
SMG	**Samos**	**0.87**	**238**	*e*P	**Pg**	**02 32 57.1**	**-0.2**
SMG				*e*S	**Sg**	**02 33 08.7**	**0.0**
MLSB	**Milas**	**0.88**	**180**	*e*PG	**Pg**	**02 32 57.1**	**-0.4**
MLSB	**Milas**	**0.88**	**180**	*e*Pg	**Pg**	**02 32 57.1**	**-0.4**
YER	**Yerkesik**	**1.12**	**158**	*e*PN	**Pn**	**02 33 01.4**	**-1.2**
YER	**Yerkesik**	**1.12**	**158**	*e*Pn	**Pn**	**02 33 01.4**	**-1.2**
DNZL	**Cakiroluk**	**1.12**	**115**	*i* P	**Pg**	**02 33 03.0**	**+0.9**
DNZL				*i* S	**Sg**	**02 33 17.9**	**+1.3**
DNZL	**Cakiroluk**	**1.12**	**115**	*i* P	**Pg**	**02 33 03.0**	**+0.9**
DNZL				*i* S	**Sg**	**02 33 17.9**	**+1.2**
DEMI	**Demirci**	**1.14**	**40**	*i* P	**Pg**	**02 33 02.2**	**-0.2**
DEMI				*i* S	**Sg**	**02 33 16.0**	**-1.1**
DEMI	**Demirci**	**1.14**	**40**	*i* P	**Pg**	**02 33 02.2**	**-0.2**
DEMI				*i* S	**Sg**	**02 33 16.0**	**-1.2**
BDRM	**Kayabasi**	**1.14**	**193**	*i* P	**Pg**	**02 33 01.6**	**-0.9**
BDRM				*i* S	**Sg**	**02 33 18.2**	**+1.0**
BDRM	**Kayabasi**	**1.14**	**193**	*i* P	**Pg**	**02 33 01.6**	**-0.9**
BDRM				*i* S	**Sg**	**02 33 18.2**	**+0.9**
BODT	**Bodrum**	**1.17**	**198**	*e*PN	**Pn**	**02 33 02.3**	**-1.0**
BODT	**Bodrum**	**1.17**	**198**	*e*Pn	**Pn**	**02 33 02.3**	**-1.0**
CHOS	**Chios island**	**1.36**	**279**	*e*P	**Pn**	**02 33 06.0**	**+0.1**
CHOS				*e*S	**Sb**	**02 33 23.4**	**-0.6**
CHOS	**Chios island**	**1.36**	**279**	*e*P	**Pn**	**02 33 06.0**	**+0.1**
CHOS				*e*S	**Sb**	**02 33 23.4**	**-0.6**
KHL	**Karahalli**	**1.39**	**84**	*e*PN	**Pn**	**02 33 05.9**	**-0.4**
KHL	**Karahalli**	**1.39**	**84**	*e*Pn	**Pn**	**02 33 05.9**	**-0.4**
DAT	**Datca**	**1.46**	**186**	*e*PN	**Pn**	**02 33 06.3**	**-0.9**
DAT	**Datca**	**1.46**	**186**	*e*Pn	**Pn**	**02 33 06.3**	**-0.9**
BALB	**Balikesir**	**1.46**	**3**	*e*PN	**Pn**	**02 33 07.0**	**-0.2**
BALB	**Balikesir**	**1.46**	**3**	*e*Pn	**Pn**	**02 33 07.0**	**-0.3**
DURS	**Dursunbey**	**1.52**	**21**	*i* P	**Pn**	**02 33 07.3**	**-0.8**
DURS				*i* S	**Sn**	**02 33 28.4**	**+0.3**
DURS	**Dursunbey**	**1.52**	**21**	*i* P	**Pn**	**02 33 07.3**	**-0.8**
DURS				*i* S	**Sn**	**02 33 28.4**	**+0.3**
BALY	**Balya**	**1.56**	**356**	*i* P	**Pn**	**02 33 08.0**	**-0.7**
BALY				*i* S	**Sn**	**02 33 29.0**	**-0.1**
BALY	**Balya**	**1.56**	**356**	*i* P	**Pn**	**02 33 08.0**	**-0.7**
BALY				*i* S	**Sn**	**02 33 29.0**	**-0.1**
PRK	**Paraskevi**	**1.58**	**313**	*e*P	**Pn**	**02 33 10.6**	**+1.7**
PRK				*e*S	**Sn**	**02 33 32.0**	**+2.4**
PRK	**Paraskevi**	**1.58**	**313**	*e*P	**Pn**	**02 33 10.6**	**+1.7**
PRK				*e*S	**Sn**	**02 33 32.0**	**+2.4**
GONE	**Gonen-Balikesi**	**1.86**	**358**	*e*PN	**Pn**	**02 33 12.8**	**-0.1**
GONE	**Gonen-Balikesi**	**1.86**	**358**	*e*Pn	**Pn**	**02 33 12.8**	**0.0**
ARMT	**Armutlu**	**2.53**	**19**	*e*PN	**Pn**	**02 33 22.4**	**+0.4**
ARMT	**Armutlu**	**2.53**	**19**	*e*Pn	**Pn**	**02 33 22.4**	**+0.5**
ERIK	**Erikli-Kesan**	**2.67**	**339**	*e*PN	**Pn**	**02 33 24.1**	**+0.2**
ERIK	**Erikli-Kesan**	**2.67**	**339**	*e*Pn	**Pn**	**02 33 24.1**	**+0.2**
YLV	**Yalova**	**2.69**	**27**	*e*PN	**Pn**	**02 33 25.0**	**+0.8**
YLV	**Yalova**	**2.69**	**27**	*e*Pn	**Pn**	**02 33 25.0**	**+0.9**

IGQ 04 02:51:34.7, 2°.45S×78°.18W, h129km±2km, Mb4.2, Ms4.0, 3C-23D, Error ellipse: s-maj=3.2km s-min=3.0km az=165.3, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACE	**Macas**	**0.20**	**355**	‖ S	**Sn**	**02 52 05.3**	**-0.5**
MACE	**Macas**	**0.20**	**355**	‖ P	**Pn**	**02 51 52.7**	**+0.3**
RIOE	**Riobamba**	**0.83**	**327**	‖ S	**Sn**	**02 52 13.1**	**+1.0**
RIOE	**Riobamba**	**0.83**	**327**	‖ P	**Pn**	**02 51 56.6**	**+0.7**
ARRY	**Arrayan**	**0.98**	**344**	‖ S	**Sn**	**02 52 14.0**	**-0.5**
ARRY	**Arrayan**	**0.98**	**344**	‖ P	**Pn**	**02 51 57.6**	**+0.2**
BMAS	**Trigal station**	**0.99**	**342**	‖ P	**Pn**	**02 51 57.8**	**+0.3**
ULBA	**Ulba**	**1.02**	**347**	‖ S	**Sn**	**02 52 14.9**	**-0.3**
ULBA	**Ulba**	**1.02**	**347**	‖ P	**Pn**	**02 51 58.3**	**+0.6**
RETU	**Refugio**	**1.03**	**345**	P	**Pn**	**02 51 58.4**	**+0.6**
BIL2	**Estacion Bilba**	**1.04**	**342**	P	**Pn**	**02 51 58.6**	**+0.7**
BRUN	**Tungurahua Vol**	**1.05**	**347**	‖ P	**Pn**	**02 51 58.5**	**+0.5**
RUN5	**Runtun**	**1.06**	**347**	‖ P	**Pn**	**02 51 58.5**	**+0.5**
IGUA	**Igualata**	**1.06**	**334**	↑ P	**Pn**	**02 51 59.3**	**+1.2**
JUI6	**Juive**	**1.06**	**344**	‖ P	**Pn**	**02 51 58.6**	**+0.5**
PISA	**Pisayambo**	**1.40**	**352**	‖ P	**Pn**	**02 52 02.8**	**+1.1**
BMOR	**Cotopaxi Volca**	**1.73**	**351**	‖ P	**Pn**	**02 52 07.0**	**+1.5**
MOV1	**Cotopaxi Vol s**	**1.75**	**351**	P	**Pn**	**02 52 07.2**	**+1.5**
TAMB	**Tambo**	**1.76**	**354**	‖ P	**Pn**	**02 52 07.3**	**+1.6**
BTAM	**Cotopaxi Volca**	**1.78**	**353**	‖ P	**Pn**	**02 52 07.6**	**+1.6**
COV1	**Cotopaxi Volc**	**1.79**	**355**	‖ P	**Pn**	**02 52 08.0**	**+2.0**
CAMI	**Rancho Maria**	**1.79**	**350**	P	**Pn**	**02 52 08.0**	**+1.9**
BNAS	**Cotopaxi Volca**	**1.80**	**350**	‖ P	**Pn**	**02 52 07.7**	**+1.5**
BVC2	**Cotopaxi Volca**	**1.80**	**353**	‖ P	**Pn**	**02 52 07.8**	**+1.6**
VC1	**Cotopaxi 1**	**1.81**	**353**	‖ P	**Pn**	**02 52 08.1**	**+1.7**
NAS2	**Nasa**	**1.82**	**351**	P	**Pn**	**02 52 08.5**	**+2.0**
PITA	**Cotopaxi Volc**	**1.90**	**352**	P	**Pn**	**02 52 09.1**	**+1.7**
ANTI	**Antisana**	**1.99**	**1**	‖ P	**Pn**	**02 52 09.8**	**+1.2**
JUA2	**San Juan 2**	**2.27**	**349**	P	**Pn**	**02 52 13.4**	**+1.5**
GGP	**Refugio Guagua**	**2.30**	**350**	P	**Pn**	**02 52 13.8**	**+1.4**
TERV	**Terraza Guagua**	**2.30**	**349**	P	**Pn**	**02 52 13.9**	**+1.5**
PINO	**Pino**	**2.32**	**349**	↑ P	**Pn**	**02 52 14.2**	**+1.6**
LAV3	**Lava3-Reventad**	**2.40**	**13**	↑ P	**Pn**	**02 52 14.3**	**+0.7**
CHAR	**Charly**	**2.41**	**12**	‖ P	**Pn**	**02 52 14.5**	**+0.8**
CONE	**Cono NE Rev Vo**	**2.43**	**13**	P	**Pn**	**02 52 14.7**	**+0.7**
CAYA	**Cayambe**	**2.52**	**4**	P	**Pn**	**02 52 16.6**	**+1.5**
OTAV	**Otavalo**	**2.69**	**354**	‖ P	**Pn**	**02 52 19.2**	**+1.9**
MAG1	**Magdalena**	**2.85**	**326**	P	**Pn**	**02 52 20.8**	**+1.4**
JAMA	**Jama**	**2.97**	**317**	P	**Pn**	**02 52 20.6**	**-0.4**
JAMA	**Jama**	**2.97**	**317**	S	**Sn**	**02 52 53.4**	**-3.2**

*ISCJB **04** 02:51:45.0±0.4, 35°.14N±0°.03×81°.05E±0°.06, h10km, mb4.0/17, MS3.0/3, Error ellipse: s-maj=7.2km s-min=4.0km az=13.5*
*IDC **04** 02:51:44.2±0.8, 35°.04N×81°.06E, h0km, mb3.8/11, mb1 4.0/15, mb1mx3.8/27, mbtmp3.8/15, ML3.7/4, MS2.9/6, Ms1 3.0/6, ms1mx2.7/24, Error ellipse: s-maj=24.5km s-min=15.3km az=52.0*
*NEIC **04** 02:51:46.0±0.5, 35°.02N×81°.06E, h10km, mb3.8/5, Error ellipse: s-maj=10.4km s-min=7.4km az=51.0*
*BJI **04** 02:51:48.4, 35°.18N×81°.20E, h13km, mB4.4/2, mb4.3/3, ML4.0/6, Ms3.8/3, Ms7 3.6/3*
*MOS **04** 02:51:48.2±1.8, 35°.05N×80°.97E, h35km, mb4.2/10, Error ellipse: s-maj=15.4km s-min=8.4km az=110.0*

ISC 04 02:51:46.6±0.4, 35°.13N±0°.03×81°.14E±0°.07, h10km, n63, σ1°16/65, mb4.0/18, MS3.0/3, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLP	**Kalpa**	**4.33**	**215**	*e*PKP	**Pn**	**02 52 53.5**	**+1.1**
KLP				*ex*	**Sn**	**02 53 44.0**	**+1.1**
JOSI	**Joshimath**	**4.75**	**197**	*e*PKP	**Pn**	**02 52 59.2**	**+1.0**
JOSI				*e*S	**Sn**	**02 53 52.7**	**-0.7**
JOSI				AML	AML	02 54 11.1	
comp=E,108nm,0.8s							
JOSI				AML	AML	02 54 12.7	
comp=N,136nm,0.7s							
SDNR	**Sundarnagar**	**5.03**	**225**	*e*PKP	**Pn**	**02 53 02.5**	**+0.5**
THN	**Thein Dam**	**5.25**	**241**	*e*PKP	**Pn**	**02 53 04.1**	**-1.1**
DDI	**Dehra Dun**	**5.45**	**209**	*e*PKP	**Pn**	**02 53 10.0**	**+2.1**
DDI				*ex*	**Sg**	**02 54 45.0**	**+3.3**
KSH	**Kashi**	**6.01**	**318**	Pn	**Pn**	**02 53 18.1**	**+2.6**
KSH				Sn	**Sn**	**02 54 33.9**	**+10**
KSH				smax			
comp=N,130nm,1.4s							
KSH				smax			
comp=E,64nm,0.9s							
NDI	**New Delhi**	**7.24**	**208**	*e*PKP	**Pn**	**02 53 33.0**	**+0.6**
AGRA	**Agra**	**8.34**	**200**	*e*S	**Sn**	**02 55 14.4**	**-7.3**
AGRA				AML	AML	02 55 46.5	
comp=E,52nm,0.0s							
AGRA				AML	AML	02 55 46.6	
comp=N,53nm,0.2s							
KHET	**Khetri**	**8.38**	**214**	*e*PKP	**Pn**	**02 53 46.2**	**-1.8**
KHET				*e*S	**Sn**	**02 55 13.4**	**-9.3**
TKM2	**Tokmak 2**	**8.89**	**333**	*e*P	**Pn**	**02 53 57.2**	**+2.2**
TKM2				pmax	pmax		
comp=Z,7.0nm,0.6s							
TKM2	**Tokmak 2**	**8.89**	**333**	*e*Pn	**Pn**	**02 53 57.2**	**+2.2**
comp=Z,7.1nm,0.6s							
AAK	**Ala-Archa**	**9.10**	**327**	Pn	**Pn**	**02 54 06.1**	**+8.2**
comp=Z,0.6nm,0.3s,baz=11,slow=20,SNR=4.2							
AAK				Lg		02 56 35.2	
comp=Z,0.6nm,0.3s,baz=45,slow=22,SNR=3.6							
AAK				LR	LR	02 57 42.9	
comp=Z,80nm,19.0s,baz=177,slow=39							
FRU	**Bishkek**	**9.21**	**329**	*e*P	**Pn**	**02 54 06.0**	**+6.6**
FRU				pmax	pmax		
comp=Z,50nm,1.8s							
FRU				pmax	pmax		
comp=E,110nm,2.0s							
EKS2	**Erkin-Say**	**9.45**	**325**	*e*Pn	**Pn**	**02 54 03.8**	**+1.0**
comp=E,7.9nm,0.8s							
KBL	**Kabul**	**9.96**	**270**	*e*P	**Pn**	**02 54 08.8**	**-0.9**
KBL				pmax	pmax		
comp=Z,17nm,0.5s							
KBL	**Kabul**	**9.96**	**270**	*e*Pn	**Pn**	**02 54 08.8**	**-0.9**
comp=Z,17nm,0.5s							
LSA	**Lhasa**	**10.04**	**120**	P	**Pn**	**02 54 15.1**	**+4.2**
MKAR	**Makanchi Array**	**11.68**	**4**	Pn	**Pn**	**02 54 34.0**	**+0.8**
comp=Z,0.5nm,0.3s,baz=179,slow=12,SNR=11							
MKAR	**Makanchi Array**	**11.68**	**4**	P	**Pn**	**02 54 34.1**	**+0.9**
MKAR				pmax	pmax		
comp=Z,1.0nm,0.3s							
GTA	**Gaotai**	**15.47**	**68**	*e*P	**Pn**	**02 55 31.9**	**+7.2**
GTA				pP	pP	02 55 36.1	+4.0
GTA				sP	sP	02 55 39.2	+5.8
GTA				pmax	pmax		
comp=Z,12nm,0.9s							
GTA				pmax	pmax		
comp=Z,71nm,3.9s							
GTA				LR	LR		
comp=N,140nm,12.8s							
GTA				LR	LR		
comp=E,240nm,16.4s							
GTA				LR	LR		
comp=Z,180nm,13.4s							
KURK	**Kurchatov**	**15.68**	**354**	Pn	**Pn**	**02 55 23.8**	**-3.6**
comp=Z,0.2nm,0.3s,baz=175,slow=12,SNR=2.3							
KURK				LR	LR	03 01 20.4	
comp=Z,28nm,18.3s,baz=150,slow=37							
KURK	**Kurchatov**	**15.68**	**354**	*e*P	**Pn**	**02 55 28.6**	**+1.1**
comp=Z,2.3nm,0.7s							
KURK				LR	LR	03 01 20.4	
ZAA0	**Zalesovo Array**	**18.99**	**7**	*e*P	**Pn**	**02 56 08.1**	**-0.6**
ZALV	**Zalesovo Beam**	**18.99**	**7**	P	**Pn**	**02 56 07.1**	**-1.7**
comp=Z,0.1nm,0.3s,baz=183,slow=12,SNR=5.8							
ZALV				LR	LR	03 03 30.8	
comp=Z,16nm,19.1s,baz=51,slow=37							
BVAR	**Borovoye Array**	**19.44**	**340**	P	**Pn**	**02 56 14.2**	**-0.1**
comp=Z,0.2nm,0.3s,baz=245,slow=42,SNR=3.5							
BRVK	**Borovoye**	**19.50**	**340**	*e*P	**Pn**	**02 56 15.6**	**+0.7**
BRVK				pmax	pmax		
comp=Z,4.0nm,0.6s							
BRVK	**Borovoye**	**19.50**	**340**	*e*P	**Pn**	**02 56 15.6**	**+0.7**
comp=Z,4.2nm,0.6s							
ABKAR	**Akbulak array**	**21.02**	**319**	*e*P	**P**	**02 56 30.1**	**-0.1**
comp=Z,2.1nm,0.5s,mb3.7							
CHTO	**Chiang Mai**	**22.66**	**131**	*e*P	**P**	**02 56 48.1**	**+0.2**
CHTO				pmax	pmax		
comp=Z,3.0nm,0.7s,mb3.8							
CHTO	**Chiang Mai**	**22.66**	**131**	*e*P	**P**	**02 56 48.1**	**+0.2**
comp=Z,3.0nm,0.7s,mb3.8							
SONM	**Songino Array**	**22.67**	**48**	P	**P**	**02 56 46.9**	**-0.9**
comp=Z,1.8nm,0.8s,mb3.5,baz=235,slow=5.1,SNR=3.3							
SONM	**Songino Array**	**22.67**	**48**	P	**P**	**02 56 46.9**	**-0.9**
SONM				pmax	pmax		
comp=Z,2.0nm,0.8s							
SONM	**Songino Array**	**22.67**	**48**	P	**P**	**02 56 46.9**	**-0.9**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKTK	**Aktyubinsk**	**22.71**	**319**	P	**P**	**02 56 47.7**	**-0.5**
AKTO	**Aktyubinsk**	**22.71**	**319**	P	**P**	**02 56 47.7**	**-0.5**
comp=Z,1.4nm,0.6s,mb3.6,baz=123,slow=9.0,SNR=6.5							
AKTO	**Aktyubinsk**	**22.71**	**319**	P	**P**	**02 56 47.7**	**-0.6**
AKTO				pmax	pmax		
comp=Z,1.0nm,0.6s,mb3.4							
CMAR	**Chiang Mai Arr**	**22.93**	**132**	P	**P**	**02 56 51.0**	**+0.1**
comp=Z,5.7nm,1.0s,mb4.0,baz=318,slow=7.6,SNR=20							
CMAR	**Chiang Mai Arr**	**22.93**	**132**	P	**P**	**02 56 51.0**	**+0.2**
CMAR				pmax	pmax		
comp=Z,6.0nm,1.0s							
ULN	**Ulaanbaatar**	**23.08**	**49**	*e*P	**P**	**02 56 54.4**	**+2.2**
ULN				pmax	pmax		
comp=Z,6.0nm,1.1s,mb3.9							
ULN	**Ulaanbaatar**	**23.08**	**49**	*e*P	**P**	**02 56 54.4**	**+2.2**
comp=Z,6.1nm,1.1s,mb3.9							
RDF	**Al-Radifah**	**29.05**	**267**	*e*P	**P**	**02 57 46.5**	**-0.4**
RDF				AMb	AMB	02 57 50.4	
comp=Z,21nm,1.1s,mb4.8							
GNI	**Garni**	**29.12**	**291**	LR	LR	03 12 16.9	
comp=Z,32nm,21.0s,MS2.9,baz=318,slow=42							
NAY	**Al-Naaiem**	**29.19**	**268**	*e*P	**P**	**02 57 47.0**	**-1.2**
NAY				AMb	AMB	02 57 51.6	
comp=Z,9.2nm,1.0s,mb4.5							
CLNS	**Chul'man**	**36.49**	**40**	*e*P	**P**	**02 58 56.6**	**+5.0**
CLNS				pmax	pmax		
comp=Z,23nm,0.7s,mb5.2							
CLNS				pmax	pmax		
comp=E,7.0nm,0.5s							
CLNS				pmax	pmax		
comp=N,13nm,0.5s							
KSRS	**Korea Array**	**37.48**	**72**	LR	LR	03 15 47.7	
comp=N,24nm,19.2s,MS3.0,baz=231,slow=38							
BRTR	**Keskin Array B**	**37.65**	**291**	P	**P**	**02 59 00.9**	**-0.8**
comp=N,0.6nm,0.5s,mb3.6,baz=79,slow=6.4,SNR=4.8							
BRTR	**Keskin Array B**	**37.65**	**291**	P	**P**	**02 59 01.0**	**-0.7**
BRTR				pmax	pmax		
comp=Z,1.0nm,0.5s							
AKASG	**Malin Array Be**	**40.21**	**309**	P	**P**	**02 59 21.5**	**-1.6**
comp=Z,0.3nm,0.3s,mb3.5,baz=76,slow=8.4,SNR=5.0							
JOF	**Joensuu**	**41.29**	**328**	*e*P	**P**	**02 59 31.9**	**+0.1**
JOF				pmax	pmax		
comp=Z,3.0nm,0.7s,mb4.0							
JOF	**Joensuu**	**41.29**	**328**	*e*p	**P**	**02 59 31.9**	**+0.1**
comp=Z,3.2nm,0.7s,mb4.1							
FINES	**FINESS Array B**	**43.28**	**325**	P	**P**	**02 59 47.9**	**-0.1**
comp=Z,3.5nm,0.6s,mb4.3,baz=99,slow=9.8,SNR=12							
FINES	**FINESS Array B**	**43.28**	**325**	P	**P**	**02 59 47.9**	**-0.1**
FINES				pmax	pmax		
comp=Z,4.0nm,0.6s							
FINES	**FINESS Array B**	**43.28**	**325**	P	**P**	**02 59 47.9**	**-0.1**
NB2	**NORSAR Subarra**	**50.40**	**324**	P	**P**	**03 00 43.1**	**-0.6**
comp=Z,1.0nm,0.6s,mb4.0,baz=86,slow=7.4							
NOA	**NORSAR Array B**	**50.40**	**324**	P	**P**	**03 00 43.4**	**-0.3**
comp=Z,1.6nm,0.7s,mb4.2,baz=88,slow=7.5,SNR=10							
NOA				LR	LR	03 23 19.9	
comp=Z,27nm,21.0s,MS3.2,baz=60,slow=38							
NOA	**NORSAR Array B**	**50.40**	**324**	P	**P**	**03 00 43.4**	**-0.3**
NOA				pmax	pmax		
comp=Z,2.0nm,0.7s							
NOA				MLR	MLR		
comp=Z,27nm,21.0s							
WRA	**Warramunga Arr**	**74.47**	**129**	P	**P**	**03 03 24.4**	**-0.9**
comp=Z,0.3nm,0.3s,mb3.7,baz=317,slow=6.5,SNR=6.7							
ASAR	**Alice Springs**	**76.93**	**131**	P	**P**	**03 03 38.4**	**-0.9**
comp=Z,0.1nm,0.4s,mb3.1,baz=311,sl

ATAH Atahualpa 54.78 262 LR LR 03 58 46.8
comp=Z,43nm,19.5s,baz=181,slow=35
PLCA Paso Flores 57.82 221 LR LR 03 58 52.9
comp=Z,60nm,19.3s,baz=90,slow=33
BRTR Keskin Array B 66.21 45 P P 03 37 43.5 +0.1
0.6nm,0.7s,baz=244,slow=9.5,SNR=3.8
BRTR LR LR 04 08 50.7
comp=Z,30nm,18.8s,baz=25,slow=38
NOA NORSAR Array B 67.53 18 LR LR 04 05 27.8
comp=Z,17nm,18.2s,baz=210,slow=34
FINES FINESS Array B 72.95 23 LR LR 04 10 01.9
comp=Z,44nm,19.9s,baz=296,slow=36
ULM Lac du Bonnet 79.48 322 LR LR 04 10 34.2
comp=Z,48nm,18.3s,baz=250,slow=33
PDAR Pinedale Array 87.64 313 LR LR 04 12 41.2
comp=Z,62nm,18.4s,baz=340,slow=31
YBH Yreka Blue Hor 97.41 312 LR LR 04 18 39.0
comp=Z,51nm,20.8s,baz=150,slow=32
ASAR Alice Springs 147.18 140 PKPbc PKPbc 03 46 39.5 -0.1
0.8nm,0.6s,baz=212,slow=1.9,SNR=12
WRA Warramunga Arr 150.03 135 PKPbc PKPbc 03 46 46.9 -0.3
0.4nm,0.6s,baz=226,slow=2.8,SNR=3.3

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*ISCJB **04** 03:44:18.6±0.7,31°.80N±0°.06×104°.30E±0°.07,h10km, mb3.7/10, Error ellipse: s-maj=8.8km s-min=8.0km az=174.2*
*IDC **04** 03:44:19.1±0.9,31°.44N×103°.60E,h0km,mb3.6/8, mb1 3.8/8,mb1mx3.6/23,mbtmp3.6/8, Error ellipse: s-maj=46.2km s-min=17.2km az=53.0*
*NEIC **04** 03:44:20.3±0.7,32°.22N×104°.92E,h10km,mb3.8/3, Error ellipse: s-maj=58.3km s-min=11.7km az=53.0*
*BJI **04** 03:44:23.4,31°.74N×104°.36E,h17km,ML3.6/13, Ms7 3.5/3*
ISC 04 03:44:20.6±0.7,31°.74N±0°.05×104°.33E±0°.06,h10km,n13, σ1°38/19,mb3.7/10,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.36**	**355**	Pn	**Pn**	**03 45 29.3**	**+2.5**
LZH				Pg	**Pg**	**03 45 40.8**	**-3.2**
LZH				Sn	**Sn**	**03 46 19.2**	**+1.6**
LZH				Sg	**Sg**	**03 46 40.7**	**+0.3**
LZH	comp=N,88nm,1.0s			smax			
LZH	comp=E,98nm,0.6s			smax			
LZH	comp=Z,370nm,6.7s			LR	LR		
XAN	**Xi'an**	**4.49**	**58**	Pn	**Pn**	**03 45 30.1**	**+1.4**
XAN				Pg	**Pg**	**03 45 45.6**	**-1.0**
XAN				Sn	**Sn**	**03 46 21.7**	**+0.7**
XAN				Sg	**Sg**	**03 46 41.9**	**-3.0**
XAN	comp=N,120nm,0.8s			smax			
XAN	comp=E,47nm,0.9s			smax			
KSRS	**Korea Array**	**20.22**	**67**	P	**P**	**03 49 03.4**	**+7.8**
	comp=E,1.2nm,0.7s,baz=261,slow=11,SNR=5.2						
MKAR	**Makanchi Array**	**22.63**	**318**	P	**P**	**03 49 21.6**	**+0.1**
	comp=E,0.7nm,0.7s,baz=116,slow=14,SNR=6.9						
ZALV	**Zalesovo Beam**	**26.24**	**333**	P	**P**	**03 49 54.2**	**-1.3**
	comp=E,0.8nm,0.4s,mb3.6,baz=136,slow=10.0,SNR=4.1						
EKS2	**Erkin-Say**	**26.53**	**303**	*e*P	**P**	**03 50 00.6**	**+2.2**
	comp=E,1.3nm,0.7s,mb3.6						
KURK	**Kurchatov**	**26.86**	**322**	P	**P**	**03 50 00.4**	**-0.8**
	comp=E,0.3nm,0.3s,mb3.3,baz=127,slow=7.2,SNR=3.1						
BRVK	**Borovoye**	**32.49**	**321**	*e*P	**P**	**03 50 49.1**	**-2.0**
	comp=E,4.2nm,0.8s,mb4.3						
ABKAR	**Akbulak array**	**37.40**	**311**	*e*P	**P**	**03 51 33.3**	**-0.2**
	comp=E,0.3nm,0.5s,mb3.4						
FINES	**FINESS Array B**	**57.15**	**326**	P	**P**	**03 54 06.7**	**-0.4**
	comp=E,0.9nm,0.4s,mb4.1,baz=76,slow=8.0,SNR=7.1						
WRA	**Warramunga Arr**	**58.89**	**147**	P	**P**	**03 54 20.4**	**+0.6**
	comp=E,1.2nm,0.6s,mb4.1,baz=339,slow=7.6,SNR=12						
ASAR	**Alice Springs**	**61.93**	**149**	P	**P**	**03 54 41.5**	**+1.0**
	comp=E,0.4nm,0.5s,mb3.8,baz=334,slow=6.6,SNR=14						
NOA	**NORSAR Array B**	**64.23**	**327**	P	**P**	**03 54 54.1**	**-1.3**
	comp=E,0.3nm,0.7s,mb3.5,baz=60,slow=17,SNR=2.4						

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*IDC **04** 04:05:09.8±1.0,19°.57N×109°.39W,h0km,mb3.3/3, mb1 3.8/6,mb1mx3.6/19,mbtmp3.5/6,ML3.1/3,MS3.4/4, Ms1 3.3/4,ms1mx2.9/15, Error ellipse: s-maj=26.0km s-min=15.0km az=142.0*
*NEIC **04** 04:05:11.2±0.7,19°.50N×109°.35W,h10km,mb3.7/6, Error ellipse: s-maj=15.0km s-min=9.2km az=66.0*
*ISCJB **04** 04:05:14.4±1.4,19°.7N±0°.1×109°.1W±0°.2,h33km,mb3.5/5, MS3.4/3, Error ellipse: s-maj=25.7km s-min=12.3km az=143.2*
ISC 04 04:05:16.1±1.4,19°.7N±0°.1×109°.2W±0°.2,h35km,n21, σ0°70/16,mb3.5/5,MS3.4/3,Revilla Gigedo Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**10.86**	**26**	Pn	**Pn**	**04 07 49.8**	**+0.8**
	0.0nm,0.3s,baz=200,slow=12,SNR=9.0						
MNTX	**Cornudas Mount**	**12.46**	**15**	*e*Pn	**Pn**	**04 08 11.4**	**+0.4**
TUC	**Tucson**	**12.68**	**354**	*e*Pn	**Pn**	**04 08 14.8**	**+0.8**
	24nm,2.0s						
CMIG	**Matias Romero**	**13.80**	**98**	Pn	**Pn**	**04 08 28.4**	**-0.9**
	0.1nm,0.3s,baz=250,slow=14,SNR=3.6						
CMIG				LR	LR	04 13 34.5	
	comp=Z,93nm,21.7s,baz=121,slow=36						
CMIG	**Matias Romero**	**13.80**	**98**	Pn	**Pn**	**04 08 28.4**	**-0.9**
CMIG				LR	LR	04 13 34.5	
ANMO	**Albuquerque**	**15.42**	**8**	Pn	**Pn**	**04 08 50.9**	**-0.1**
	0.0nm,0.3s,baz=187,slow=12,SNR=2.2						
ANMO	**Albuquerque**	**15.42**	**8**	*e*Pn	**Pn**	**04 08 52.0**	**+1.0**
SMCO	**Snowmass**	**19.55**	**5**	*e*P	**Pn**	**04 09 41.8**	**-0.4**
	6.9nm,1.3s						
NVAR	**Mina Array Bea**	**20.32**	**339**	P	**P**	**04 09 49.5**	**+0.4**
	1.5nm,0.8s,baz=162,slow=13,SNR=8.1						
DUG	**Dugway**	**20.71**	**352**	*e*P	**P**	**04 09 53.4**	**+0.1**
	6.0nm,1.1s						
HWUT	**Hardware Ranch**	**21.97**	**355**	*e*P	**P**	**04 10 06.7**	**-0.2**
	1.8nm,0.8s,mb3.5						
BW06	**Boulder Array**	**23.04**	**359**	*e*P	**P**	**04 10 17.6**	**-0.6**
	0.8nm,0.6s,mb3.3						
PDAR	**Pinedale Array**	**23.04**	**359**	P	**P**	**04 10 17.0**	**-1.2**
	0.5nm,0.8s,baz=157,slow=8.0,SNR=5.1						
WVOR	**Wild Horse Val**	**24.08**	**343**	*e*P	**P**	**04 10 27.6**	**-0.6**
	0.9nm,0.3s,mb3.7						
HLID	**Hailey**	**24.24**	**351**	*e*P	**P**	**04 10 29.5**	**-0.1**
	1.0nm,0.8s,mb3.3						
TKL	**Tuckaleechee C**	**27.45**	**49**	LR	LR	04 23 06.5	
	comp=Z,30nm,20.8s,MS2.8,baz=345,slow=39						
SCHQ	**Schefferville**	**47.48**	**32**	LR	LR	04 35 05.5	
	comp=Z,48nm,21.2s,MS3.4,baz=69,slow=38						
LPAZ	**La Paz**	**53.88**	**129**	P	**P**	**04 14 37.5**	**+1.2**
	0.9nm,0.9s,mb3.7,baz=281,slow=3.8,SNR=4.1						
PPT	**Papeete**	**54.25**	**230**	LR	LR	04 32 29.4	
	comp=Z,97nm,18.1s,MS3.9,baz=126,slow=30						
WRA	**Warramunga Arr**	**120.59**	**258**	PKP	PKPdf	04 24 03.5	-1.4
	0.2nm,0.7s,baz=350,slow=0.6,SNR=4.1						
ASAR	**Alice Springs**	**121.65**	**254**	PKP	PKPdf	04 24 05.0	-1.8
	0.1nm,0.6s,baz=86,slow=2.2,SNR=3.1						

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*IDC **04** 04:32:37.2±1.7,5°.88N×125°.86E,h0km,mb4.1/6, mb1 4.3/6,mb1mx3.8/23,mbtmp4.1/6,MS3.5/2,Ms1 3.5/2, ms1mx2.4/27, Error ellipse: s-maj=78.6km s-min=23.6km az=68.0*
*ISCJB **04** 04:32:49.6±0.9,5°.5N±0°.1×125°.9E±0°.1,h99km±20km, mb4.2/8, Error ellipse: s-maj=26.2km s-min=18.2km az=139.3*
*MAN **04** 04:32:52,5°.92N×125°.87E,h100km,mb4.6,ML3.5,MS3.4*
ISC 04 04:32:51.1±0.7,5°.68N±0°.09×125°.8E±0°.1,h112km±11km, n20,σ0°93/23,mb4.2/8,1C-3D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.91**	**297**	||*e*P	**Pn**	**04 33 11.1**	**-0.5**
GSPH				*e*S	**Sn**	**04 33 26.0**	**-1.0**
MATI	**Mati**	**1.35**	**21**	*e*P	**Pn**	**04 33 15.4**	**-1.0**
MATI				*e*S	**Sn**	**04 33 30.6**	**-5.0**
DMPH	**Davao City--Mi**	**1.42**	**350**	⇑*e*P	**Pn**	**04 33 17.0**	**-0.2**
DMPH				*e*S	**Sn**	**04 33 37.1**	**+0.2**
KCP	**Kidapawan**	**1.48**	**333**	||*i*P	**Pn**	**04 33 20.9**	**+3.0**
KCP				*i* S	**Sn**	**04 33 42.2**	**+4.0**
BUKP	**Musuan**	**2.30**	**342**	*e*P	**Pn**	**04 33 29.1**	**+1.1**
BUKP				*e*S	**Sn**	**04 33 53.0**	**-3.3**
CGP	**Cagayan de Oro**	**2.96**	**339**	||*e*P	Px	04 34 01.6
CGP				*e*S	**Sn**	**04 34 19.8**	**+8.0**
PAGZ	**Pagadian**	**3.20**	**313**	*e*P	**Pn**	**04 33 40.8**	**+0.9**
KAKA	**Kakadu**	**19.43**	**160**	*e*P	**P**	**04 37 09.5**	**+0.6**
	70nm,1.9s						
FITZ	**Fitzroy Crossi**	**23.63**	**180**	*e*P	**P**	**04 37 52.4**	**+0.2**
	14nm,0.4s,mb4.6						
FITZ	**Fitzroy Crossi**	**23.63**	**180**	P	**P**	**04 37 52.7**	**+0.5**
	9.3nm,0.6s,mb4.3,baz=359,slow=4.1,SNR=92						
CBIJ	**Chichi jima**	**26.43**	**34**	LR	LR	04 47 22.8	
	comp=Z,68nm,19.1s,baz=105,slow=34						
WRA	**Warramunga Arr**	**26.82**	**162**	P	**P**	**04 38 20.5**	**-0.6**
	1.4nm,0.5s,mb3.8,baz=342,slow=10,SNR=8.1						
ASAR	**Alice Springs**	**30.23**	**165**	P	**P**	**04 38 50.9**	**-0.4**
	0.4nm,0.4s,mb3.4,baz=342,slow=7.8,SNR=10						
FORT	**Forrest**	**36.31**	**177**	*e*P	**P**	**04 39 44.2**	**+0.1**
	14nm,0.9s,mb4.9						
KLBR	**Kellerberrin**	**37.84**	**191**	*e*P	**P**	**04 39 56.8**	**-0.2**
	2.5nm,0.4s,mb4.4						
NWAO	**Narrogin (SRO)**	**39.23**	**191**	P	**P**	**04 40 08.9**	**+0.3**
	4.2nm,0.4s,mb4.7,baz=47,slow=8.9,SNR=8.9						
STKA	**Stephens Creek**	**40.28**	**159**	*e*P	**P**	**04 40 17.7**	**+0.4**
	2.9nm,0.4s,mb4.5						
STKA	**Stephens Creek**	**40.28**	**159**	P	**P**	**04 40 17.7**	**+0.4**
	6.0nm,0.6s,mb4.6,baz=338,slow=6.7,SNR=13						
MKAR	**Makanchi Array**	**55.42**	**325**	P	**P**	**04 42 12.6**	**-1.3**
	0.2nm,0.3s,mb3.6,baz=117,slow=8.0,SNR=6.5						
BVAR	**Borovoye Array**	**65.17**	**327**	LR	LR	05 15 57.2	
	comp=Z,52nm,21.3s,baz=302,slow=40						

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*IDC **04** 04:55:03.3±0.4,75°.39N×134°.07E,h0km,mb4.6/31, mb1 4.7/31,mb1mx4.7/35,mbtmp4.6/31,MS4.3/22, Ms1 4.3/22,ms1mx4.1/37, Error ellipse: s-maj=11.9km s-min=10.1km az=134.0*
*ISCJB **04** 04:55:03.5±0.1,75°.41N±0°.02×134°.09E±0°.05,h10km, mb5.0/292,MS4.5/74, Error ellipse: s-maj=2.9km s-min=1.7km az=166.7*
*MOS **04** 04:55:03.4±0.9,75°.41N×134°.08E,h11km,mb5.1/109, MS4.4/50, Error ellipse: s-maj=14.7km s-min=4.0km az=93.6*
*NEIC **04** 04:55:05.3±0.1,75°.40N×133°.95E,h10km,mb5.0/193, Error ellipse: s-maj=4.0km s-min=2.4km az=177.0*
*TEH **04** 04:55:06.0,75°.45N×133°.87E,h10km*
*BJI **04** 04:55:06.3,74°.92N×133°.41E,h7km,mB4.9/25,mb4.8/37, Ms5.1/41,Ms7 5.0/39*
*GCMT **04** 04:55:07.7±0.2,75°.25N×134°.16E,h14km,MW5.0, Moment Tensor Solution. s52,c69; s83,c137; Moment tensor: Scale 10^{16}Nm; M_{rr}-3.40±.14; $M_{\theta\theta}$-0.37±.09; $M_{\phi\phi}$3.77±.11; $M_{r\theta}$-2.37±.26; $M_{\theta\phi}$-1.49±.07; $M_{\phi r}$-0.89±.20; Best double couple: $M_0$4.60000×10^{16} NP1:$\phi_0$135.00000°, δ52.00000°,λ-132.00000°. NP2:$\phi_0$10.00000°,δ54.00000°, λ-50.00000°; Principal axes: T 4.2500, Plg1.0000°, Azm73.0000°; N 0.7100, Plg32.0000°, Azm163.0000°; P -4.9600, Plg58.0000°, Azm341.0000°; Data Used: II IU IC G CN.*
*SZGRF **04** 04:55:16.4,76°.15N×131°.35E,h23km,mb5.0,MS4.5, Laptev Sea*
ISC 04 04:55:05.6±0.1,75°.40N±0°.02×134°.04E±0°.05,h10km, (h19km±1.0km:pP-P),n1012,σ0°80/1025,mb5.0/292, MS4.5/74,212C-202D,Laptev Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIXI	**Tiksi**	**4.04**	**204**	*e*P	**Pn**	**04 56 05.8**	**-1.6**
TIXI				*e*S	**Sn**	**04 56 49.6**	**-5.1**
TIXI	comp=Z,134nm,0.5s			pmax	pmax		
TIXI	comp=Z,11μm,13.0s			MLR	MLR		
TIXI	**Tiksi**	**4.04**	**204**	*e*Pn	**Pn**	**04 56 05.5**	**-1.9**
TIXI				*e*Sn	**Sn**	**04 56 50.5**	**-4.2**
BILL	**Bilibino**	**12.32**	**110**	*c e*P	**Pn**	**04 58 04.8**	**+4.1**
BILL				*e*S	**Sn**	**05 00 27.4**	**+10**
BILL	comp=Z,61nm,1.6s			pmax	pmax		
BILL	comp=Z,4μm,15.0s			MLR	MLR		
BILL	**Bilibino**	**12.32**	**110**	*e*Pn	**Pn**	**04 58 02.5**	**+1.8**
YAK	**Yakutsk**	**13.52**	**189**	*e*P	**Pn**	**04 58 18.9**	**+1.9**
YAK				*e*S	**Sn**	**05 00 54.1**	**+7.1**
YAK	comp=Z,20nm,1.0s			pmax	pmax		
YAK	comp=N,15nm,1.3s			pmax	pmax		
YAK	comp=E,9.0nm,1.2s			pmax	pmax		
YAK	comp=Z,61nm,0.9s			pmax	pmax		
YAK	comp=N,36nm,0.8s			smax			
YAK	comp=E,101nm,1.3s			smax			
YAK				MLR	MLR		
YAK	comp=E,940nm,13.0s			MLR	MLR		
YAK	comp=Z,2μm,13.0s			MLR	MLR		
YAK	comp=N,2μm,13.0s			MLR	MLR		
SEY	**Seymchan**	**14.00**	**143**	*c e*P	**Pn**	**04 58 24.6**	**+1.0**
CLNS	**Chul'man**	**18.96**	**196**	*e*P	**Pn**	**04 59 25.7**	**-1.4**
CLNS				*e*S	**Sn**	**05 02 50.8**	**-8.2**
CLNS	comp=E,17nm,1.0s			pmax	pmax		
CLNS	comp=N,17nm,1.2s			pmax	pmax		
CLNS	comp=Z,17nm,0.7s			pmax	pmax		
CLNS	comp=E,176nm,14.2s			smax			
CLNS	comp=N,136nm,11.7s			smax			
CLNS	comp=N,2μm,12.0s			MLR	MLR		
CLNS	comp=Z,3μm,13.0s			MLR	MLR		
CLNS	comp=E,1μm,13.0s			MLR	MLR		
TNA	**Tin City**	**20.70**	**87**	*e*P	**P**	**04 59 46.8**	**+1.5**
	comp=E,38nm,0.7s						
GAMB	**Gambell**	**21.18**	**94**	*e*P	**P**	**04 59 51.0**	**+0.5**
ALE	**Alert**	**22.04**	**6**	P	**P**	**04 59 59.0**	**-0.6**
	comp=E,196nm,1.0s,mb5.5,SNR=9.9						
KBS	**Kingsbay**	**22.64**	**335**	*de*P	**P**	**05 00 07.3**	**+1.3**
KBS				pmax	pmax		
	comp=Z,85nm,1.2s,mb5.0						
KBS	**Kingsbay**	**22.64**	**335**	*e*P	**P**	**05 00 07.3**	**+1.3**
	comp=Z,59nm,1.0s,mb5.0						
KBS				LR	LR		
	comp=Z,730nm,17.2s,MS4.2						
SPITS	**Spitsbergen Ar**	**22.75**	**332**	P	**P**	**05 00 07.5**	**+0.3**
	comp=Z,95nm,0.9s,mb5.2,baz=98,slow=17,SNR=46						
SPITS				PcP	PcP	05 03 57.9	-0.4
	comp=Z,4.1nm,0.7s,baz=132,slow=4.8,SNR=3.3						
SPITS				LR	LR	05 08 14.4	
	comp=Z,478nm,18.4s,MS4.0,baz=45,slow=35						
SPITS	**Spitsbergen Ar**	**22.75**	**332**	P	**P**	**05 00 07.5**	**+0.3**
SPITS						05 03 57.9	
SPITS	comp=Z,95nm,0.9s			pmax	pmax		
SPITS	comp=Z,478nm,18.4s			MLR	MLR		
SPITS	**Spitsbergen Ar**	**22.75**	**332**	P	**P**	**05 00 07.5**	**+0.3**
SPITS				PcP	PcP	05 03 57.9	-0.4
SPITS				LR	LR	05 08 14.3	
COLD	**Coldfoot**	**23.76**	**70**	*e*P	**P**	**05 00 17.6**	**0.0**
	comp=Z,64nm,0.9s,mb5.0						
HSP	**Hornsund**	**23.82**	**331**	*e*P	**P**	**05 00 18.2**	**+0.1**
PEA0B	**Petropavlovsk-**	**24.24**	**144**	*e*P	**P**	**05 00 22.4**	**+0.3**
PETK	**Petropavlovsk-**	**24.24**	**144**	P	**P**	**05 00 23.0**	**+0.9**
	comp=Z,11nm,0.8s,mb4.3,baz=25,slow=6.8,SNR=19						
PETK				LR	LR	05 10 59.1	
	comp=Z,757nm,18.6s,MS4.2,baz=343,slow=39						
PETK	**Petropavlovsk-**	**24.24**	**144**	P	**P**	**05 00 23.0**	**+0.9**
PETK	comp=Z,11nm,0.8s,mb4.3			pmax	pmax		
PETK	comp=Z,757nm,18.6s,MS4.2			MLR	MLR		
PET	**Petropavlovsk**	**24.47**	**143**	*e*P	**P**	**05 00 23.4**	**-0.8**
PET				*e*S	**S**	**05 04 37.2**	**-6.7**
PET	comp=Z,100nm,9.9s			pmax	pmax		
PET				MLR	MLR		
	comp=Z,2μm,17.0s,MS4.8						
PET				MLR	MLR		
	comp=Z,2μm,16.0s						
KRAR	**Krasnoyarsk**	**24.82**	**242**	*e*P	**P**	**05 00 26.5**	**-0.9**
KRAR				pmax	pmax		
	comp=Z,24nm,0.9s,mb4.7						
KRAR				MLR	MLR		
	comp=Z,808nm,23.0s,MS4.2						
TTA	**Tatalina**	**25.85**	**80**	*e*P	**P**	**05 00 37.4**	**+0.7**
IRK	**Irkutsk**	**26.07**	**224**	*e*P	**P**	**05 00 37.8**	**-0.9**
IRK				pmax	pmax		
	comp=Z,144nm,0.8s,mb5.6						
COLA	**College**	**26.23**	**71**	*e*P	**P**	**05 00 40.9**	**+0.8**
COLA				pmax	pmax		
	comp=Z,49nm,0.8s,mb5.1						
COLA	**College**	**26.23**	**71**	*e*P	**P**	**05 00 40.9**	**+0.8**
	comp=Z,49nm,0.8s,mb5.1						
KLR	**Kul'dur**	**26.28**	**183**	*e*P	**P**	**05 00 39.0**	**-1.6**
KLR				*e*S	**S**	**05 05 11.5**	**-1.3**
KLR				MLR	MLR		
	comp=Z,3μm,12.5s,MS5.0						
INK	**Inuvik**	**26.63**	**56**	P	**P**	**05 00 43.8**	**+0.1**
	comp=Z,6.6nm,1.0s,mb4.1,baz=338,slow=9.1,SNR=5.6						
INK	**Inuvik**	**26.63**	**56**	P	**P**	**05 00 43.8**	**+0.2**
INK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
INK	**Inuvik**	**26.63**	**56**	*e*P	**P**	**05 00 44.2**	**+0.6**
	comp=Z,63nm,1.8s,mb4.8						
TLY	**Talaya**	**26.73**	**224**	*e*P	**P**	**05 00 47.3**	**+2.7**
TLY				*e*		05 01 27.1	
TLY				*e*PPP		05 01 38.9	
TLY				*e*S	**S**	**05 05 18.5**	**-1.2**
TLY				*e*SSS		05 06 31.5	
TLY	comp=Z,51nm,1.3s,mb4.9			pmax	pmax		
TLY	comp=Z,1μm,13.0s,MS4.6			MLR	MLR		
TRF	**Thorofare Moun**	**26.83**	**75**	*e*P	**P**	**05 00 46.1**	**+0.6**
	comp=Z,42nm,0.8s,mb5.0						
PPLA	**Purkeypile**	**26.83**	**77**	*e*P	**P**	**05 00 46.5**	**+1.0**
	comp=Z,104nm,1.5s,mb5.1						
MCK	**McKinley**	**26.93**	**73**	*e*P	**P**	**05 00 47.4**	**+1.1**
MCK				pmax	pmax		
	comp=Z,397nm,2.6s,mb5.5						
MCK	**McKinley**	**26.93**	**73**	*e*P	**P**	**05 00 47.4**	**+1.1**
	comp=Z,397nm,2.6s,mb5.5						
HABR	**Khabarovsk**	**27.02**	**179**	*e*P	**P**	**05 00 45.9**	**-1.4**
HABR				*e*PP	pP	05 00 54.8	+4.4
HABR				*e*PPP		05 01 37.1	
HABR				*e*		05 04 06.4	
HABR				*e*		05 11 34.9	
HABR				MLR	MLR		
	comp=Z,495nm,14.0s,MS4.2						
DAG	**Danmarks Havn**	**27.21**	**347**	⇑*e*P	**P**	**05 00 47.4**	**-1.4**
DAG				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.2						
DAG	**Danmarks Havn**	**27.21**	**347**	⇑*i*P	**P**	**05 00 47.4**	**-1.4**
	comp=Z,6.7nm,0.9s,mb4.2						
MOY	**Mondy**	**27.22**	**228**	*e*P	**P**	**05 00 50.0**	**+0.9**
MOY				pmax	pmax		
	comp=Z,29nm,1.3s,mb4.7						
RES	**Resolute Bay**	**27.35**	**26**	P	**P**	**05 00 50.2**	**+0.2**
	comp=Z,10nm,1.0s,mb4.3,baz=346,slow=8.3,SNR=11						
RES				LR	LR	05 12 36.2	
	comp=Z,746nm,18.4s,MS4.3,baz=313,slow=38						
RES	**Resolute Bay**	**27.35**	**26**	*e*P	**P**	**05 00 50.1**	**0.0**
RES				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.5						
RES	**Resolute Bay**	**27.35**	**26**	*e*P	**P**	**05 00 50.1**	**0.0**
	comp=Z,17nm,1.0s,mb4.5						
EGAK	**Eagle**	**27.89**	**66**	*e*P	**P**	**05 00 55.8**	**+0.9**
	comp=Z,27nm,1.0s,mb4.8						
KEV	**Kevo**	**28.25**	**315**	*e*P	**P**	**05 00 56.9**	**-1.2**
KEV				pmax	pmax		
	comp=Z,25nm,0.9s,mb4.8						
KEV	**Kevo**	**28.25**	**315**	*e*P	**P**	**05 00 56.9**	**-1.2**
	comp=Z,25nm,0.9s,mb4.8						
LVZ	**Lovozero**	**28.40**	**308**	*de*P	**P**	**05 00 58.1**	**-1.3**
LVZ				pmax	pmax		
	comp=Z,109nm,1.7s,mb5.2						
LVZ				MLR	MLR		
	comp=Z,948nm,26.0s,MS4.3						
ZAA0	**Zalesovo Array**	**28.58**	**249**	*e*P	**P**	**05 01 00.2**	**-0.9**
ZALV	**Zalesovo Beam**	**28.58**	**249**	P	**P**	**05 01 01.0**	**-0.2**
	comp=Z,2.5nm,0.5s,mb4.2,baz=15,slow=8.7,SNR=12						
ZALV				LR	LR	05 14 04.5	
	comp=Z,576nm,20.2s,MS4.2,baz=110,slow=40						
ZALV	**Zalesovo Beam**	**28.58**	**249**	P	**P**	**05 01 01.0**	**-0.2**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.3						
ZALV				MLR	MLR		
	comp=Z,576nm,20.2s,MS4.2						
PMR	**Palmer**	**28.70**	**76**	*e*P	**P**	**05 01 01.8**	**-0.4**
PMR				pmax	pmax		
	comp=Z,26nm,1.1s,mb4.9						
PMR	**Palmer**	**28.70**	**76**	*e*P	**P**	**05 01 01.8**	**-0.4**
	comp=Z,26nm,1.1s,mb4.9						
ARCES	**ARCESS Array B**	**28.70**	**316**	P	**P**	**05 01 01.1**	**-1.1**
	comp=Z,9.9nm,0.9s,mb4.6,baz=22,slow=7.8,SNR=13						
ARCES				PcP	PcP	05 04 11.5	-0.4
	comp=Z,5.8nm,0.8s,baz=48,slow=1.8,SNR=7.3						
ARCES	**ARCESS Array B**	**28.70**	**316**	P	**P**	**05 01 01.1**	**-1.1**
ARCES						05 04 11.5	
ARCES				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ARCES	**ARCESS Array B**	**28.70**	**316**	P	**P**	**05 01 01.1**	**-1.1**
ARCES				PcP	PcP	05 04 11.5	-0.4
RSO	**Redoubt South**	**28.78**	**80**	*e*P	**P**	**05 01 04.0**	**+1.1**
YSS	**Yuzh-Sakhalins**	**28.78**	**168**	⇑*i*P	**P**	**05 01 03.7**	**+0.7**
YSS				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.1						
YSS				MLR	MLR		
	comp=N,600nm,15.0s,MS4.5						
YSS				MLR	MLR		
	comp=E,700nm,15.0s,MS4.5						
YSS				MLR	MLR		
	comp=Z,1μm,15.0s,MS4.5						
YSS	**Yuzh-Sakhalins**	**28.78**	**168**	*e*P	**P**	**05 01 03.8**	**+0.7**
	comp=Z,24nm,0.8s,mb5.0						
MENT	**Mentasta**	**28.86**	**70**	*e*P	**P**	**05 01 03.3**	**-0.2**
DAWY	**Dawson**	**28.91**	**65**	*e*P	**P**	**05 01 04.6**	**+0.6**
APA	**Apatity**	**28.93**	**309**	⇑*e*P	**P**	**05 01 02.4**	**-1.7**
APA				*e*		05 01 58.0	
APA				*e*S	**S**	**05 05 44.0**	**-10**
APA				pmax	pmax		
	comp=Z,47nm,1.2s,mb5.1						
APA				MLR	MLR		
	comp=Z,100nm,18.0s,MS3.5						
ULN	**Ulaanbaatar**	**29.85**	**218**	*e*P	**P**	**05 01 12.5**	**0.0**
ULN				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.6						
ULN	**Ulaanbaatar**	**29.85**	**218**	*e*P	**P**	**05 01 12.5**	**0.0**
	comp=Z,13nm,1.0s,mb4.6						
SONM	**Songino Array**	**29.98**	**219**	P	**P**	**05 01 14.2**	**+0.6**
	comp=Z,11nm,0.8s,mb4.6,baz=10,slow=9.7,SNR=18						
SONM				LR	LR	05

SDPT Sand Point 31.34 92 *e*P **P 05 01 25.3 -0.3**
comp=Z,859nm,3.0s
CN2 Changchun 31.92 192 *e*P **P 05 01 30.4 -0.4**
CN2 *e*pP pP 05 01 34.8 +1.0
CN2 PcP PcP 05 04 21.4 +0.7
CN2 *e*S **S 05 06 39.1 -2.3**
CN2 pmax pmax
comp=Z,10.0nm,1.2s,mb4.5
CN2 LR LR
comp=N,2μm,11.0s,MS5.1
CN2 LR LR
comp=E,1μm,11.0s,MS5.1
CN2 LR LR
comp=Z,2μm,12.0s,MS5.0
SVE Sverdlovsk 32.02 276 *e*P **P 05 01 32.5 +0.9**
SVE *e* 05 02 44.7
SVE pmax pmax
comp=Z,42nm,0.9s,mb5.3
SVE MLR MLR
comp=Z,2μm,19.0s,MS4.8
HYT Haines Junctio 32.16 67 *e*P **P 05 01 34.1 +1.4**
PNL Peninsula 32.74 70 *e*P **P 05 01 39.1 +1.3**
comp=Z,35nm,1.1s,mb5.2
BRVK Borovoye 32.97 264 *ce*P **P 05 01 39.2 -0.7**
BRVK pmax pmax
comp=Z,16nm,1.2s,mb4.8
BRVK MLR MLR
comp=Z,1μm,19.0s,MS4.6
BRVK Borovoye 32.97 264 *e*P **P 05 01 40.4 +0.5**
comp=Z,18nm,0.8s,mb5.1
BRVK *e*PcP PcP 05 04 23.2 -0.3
KURK Kurchatov 33.05 254 P **P 05 01 40.5 -0.1**
comp=Z,316nm,0.8s,mb6.3,SNR=11
KURK Kurchatov 33.05 254 P **P 05 01 39.2 -1.4**
comp=Z,15nm,0.8s,mb5.0,baz=21,slow=8.3,SNR=32
KURK PcP PcP 05 04 23.1 -0.6
comp=Z,4.2nm,0.8s,baz=29,slow=2.3,SNR=4.6
KURK LR LR 05 16 34.5
comp=Z,606nm,18.6s,MS4.3,baz=30,slow=39
KURK Kurchatov 33.05 254 *ce*P **P 05 01 40.2 -0.4**
KURK pmax pmax
comp=Z,24nm,0.8s,mb5.2
KURK Kurchatov 33.05 254 *e*P **P 05 01 40.1 -0.5**
comp=Z,42nm,0.8s,mb5.4
ZRNK Zerenda 33.39 265 P **P 05 01 43.5 -0.1**
SKAG Skagway 33.88 66 *e*P **P 05 01 49.1 +1.3**
comp=Z,36nm,1.0s,mb5.3
SNY Shenyang 33.99 194 ⇑P **P 05 01 53.5 +4.6**
SNY S **S 05 07 07.1 -6.5**
SNY pmax pmax
comp=Z,14nm,1.2s,mb4.8
SNY LR LR
comp=N,2μm,12.3s,MS5.0
SNY LR LR
comp=E,540nm,11.7s,MS5.0
SNY LR LR
comp=Z,2μm,12.9s,MS5.0
KAF Kangasniemi 35.18 309 *e*P **P 05 01 55.1 -3.9**
KAF pmax pmax
comp=Z,20nm,1.1s,mb5.0
KAF Kangasniemi 35.18 309 *e*P **P 05 01 55.1 -3.9**
comp=Z,20nm,1.1s,mb5.0
KAF Kangasniemi 35.18 309 *e*p **P 05 01 55.1 -3.9**
comp=Z,20nm,1.1s,mb5.0
YKA Yellowknife Ar 35.53 48 P **P 05 02 01.0 -0.9**
comp=Z,5.2nm,0.9s,mb4.4,baz=339,slow=8.4,SNR=12
YKA PcP PcP 05 04 28.4 -2.2
comp=Z,1.5nm,0.8s,baz=334,slow=3.8,SNR=4.6
YKA Yellowknife Ar 35.53 48 P **P 05 02 01.0 -1.0**
YKA 05 04 28.4
YKA pmax pmax
comp=Z,5.0nm,0.9s
YKA Yellowknife Ar 35.53 48 P **P 05 02 01.0 -0.9**
YKA PcP PcP 05 04 28.4 -2.2
MK31 Makanchi Array 35.83 247 *e*P **P 05 02 04.3 -0.4**
MKAR Makanchi Array 35.83 247 P **P 05 02 03.5 -1.2**
comp=Z,1.5nm,0.5s,mb4.1,baz=30,slow=6.1,SNR=22
MKAR LR LR 05 17 24.6
comp=Z,313nm,20.8s,MS4.1,baz=12,slow=37
MKAR Makanchi Array 35.83 247 P **P 05 02 03.6 -1.1**
MKAR pmax pmax
comp=Z,2.0nm,0.5s
MKAR MLR MLR
comp=Z,313nm,20.8s
FINES FINESS Array B 35.84 309 P **P 05 02 04.7 0.0**
comp=Z,15nm,1.0s,mb4.9,baz=38,slow=7.7,SNR=21
FINES PcP PcP 05 04 30.8 -0.8
comp=Z,6.5nm,0.8s,baz=35,slow=4.7,SNR=8.0
FINES LR LR 05 19 16.1
comp=Z,727nm,20.8s,MS4.4,baz=29,slow=40
FINES FINESS Array B 35.84 309 P **P 05 02 04.7 +0.1**
FINES 05 04 30.8
FINES pmax pmax
comp=Z,15nm,1.0s
FINES MLR MLR
comp=Z,727nm,20.8s
FINES FINESS Array B 35.84 309 P **P 05 02 04.7 0.0**
FINES PcP PcP 05 04 30.8 -0.8
FINES LR LR 05 19 16.1
DLBC Dease Lake 36.02 63 *e*P **P 05 02 07.3 +1.1**
HHC Hu-ho-hao-te 36.09 209 *e*P **P 05 02 06.4 -0.6**
HHC sP pP 05 02 11.8 +1.7
HHC PP PP 05 03 27.7 -1.1
HHC PcP PcP 05 04 33.5 +0.8
HHC S **S 05 07 43.8 -2.1**
HHC sS sS 05 07 49.5 -1.5
HHC ScP ScP 05 08 17.5 -0.9
HHC PcS PcS 05 08 24.5 +4.4
HHC SS SS 05 10 06.0 -17
HHC ScS ScS 05 12 22.3 -1.7
HHC pmax pmax
comp=Z,13nm,0.6s,mb5.0
HHC pmax pmax
comp=Z,130nm,6.5s
HHC LR LR
comp=N,1μm,13.5s,MS5.0
HHC LR LR
comp=E,800nm,13.8s,MS5.0
HHC LR LR
comp=Z,2μm,13.6s,MS5.0
BJI Beijing 36.37 203 P **P 05 02 08.5 -0.9**
BJI PP PP 05 03 31.0 -0.9
BJI S **S 05 07 48.2 -2.0**
BJI pmax pmax
comp=Z,11nm,1.4s,mb4.6
BJI LR LR
comp=N,1μm,17.2s,MS5.2
BJI LR LR
comp=E,4μm,18.4s,MS5.2
BJI LR LR
comp=Z,570nm,15.2s,MS4.5
WMQ Urumqi 37.42 240 P **P 05 02 19.2 +0.9**
WMQ pP pP 05 02 23.7 +2.3
WMQ sP sP 05 02 26.2 +3.6
WMQ PP PP 05 03 47.0 +3.6
WMQ PcP PcP 05 04 38.4 +1.8
WMQ S **S 05 08 06.5 +0.4**
WMQ ScS ScS 05 12 30.5 -0.8
WMQ pmax pmax
comp=Z,33nm,1.1s,mb5.1
WMQ pmax pmax
comp=Z,150nm,4.0s
WMQ LR LR
comp=N,630nm,16.6s,MS4.8
WMQ LR LR
comp=E,910nm,15.0s,MS4.8
WMQ LR LR
comp=Z,960nm,16.0s,MS4.7
KSRS Korea Array 38.14 188 P **P 05 02 23.6 -0.8**
comp=Z,1.6nm,0.9s,mb3.7,baz=357,slow=7.5,SNR=5.3
KSRS LR LR 05 20 11.3
comp=Z,394nm,19.0s,MS4.2,baz=8.3,slow=40
KSRS Korea Array 38.14 188 P **P 05 02 23.7 -0.7**
KSRS pmax pmax
comp=Z,2.0nm,0.9s,mb3.9
KSRS MLR MLR
comp=Z,394nm,19.0s,MS4.2
VSU Vasula 38.44 306 *d i*P **P 05 02 26.3 -0.5**
VSU pmax pmax
comp=Z,36nm,1.1s,mb5.0
MOS Moscow 38.59 296 *e*P **P 05 02 27.4 -0.6**
MOS *e* 05 03 59.1
MOS *e* 05 04 39.0
MOS MLR MLR
comp=Z,1μm,15.0s,MS4.8

NB2 NORSAR Subarra 38.92 319 P **P 05 02 30.1 -0.6**
comp=Z,40nm,1.2s,mb5.0,baz=20,slow=8.6
NOA NORSAR Array B 38.92 319 P **P 05 02 30.3 -0.4**
comp=Z,8.5nm,0.8s,mb4.5,baz=20,slow=8.2,SNR=18
NOA PcP PcP 05 04 40.2 -0.8
comp=Z,3.7nm,0.8s,baz=16,slow=4.6,SNR=7.2
NOA LR LR 05 20 43.3
comp=Z,278nm,18.6s,MS4.1,baz=355,slow=40
NOA NORSAR Array B 38.92 319 P **P 05 02 30.3 -0.4**
NOA 05 04 40.2
NOA pmax pmax
comp=Z,9.0nm,0.8s
NOA MLR MLR
comp=Z,278nm,18.6s
NOA NORSAR Array B 38.92 319 P **P 05 02 30.3 -0.4**
NOA PcP PcP 05 04 40.2 -0.8
NOA LR LR 05 20 43.3
MAJO Matsushiro 38.99 175 *e*P **P 05 02 32.0 +0.4**
MJAR Matsushiro Arr 38.99 175 P **P 05 02 32.8 +1.2**
comp=Z,0.5nm,0.4s,mb3.6,baz=204,slow=20,SNR=5.3
MJAR PcP PcP 05 04 40.3 -1.4
comp=Z,0.7nm,0.4s,baz=302,slow=7.2,SNR=4.2
MJAR Matsushiro Arr 38.99 175 P **P 05 02 32.8 +1.2**
MJAR 05 04 40.3
MJAR pmax pmax
comp=Z,1.0nm,0.4s
AB31 Akbulak array 39.08 272 *i* P **P 05 02 31.8 -0.4**
AB31 pmax pmax
comp=Z,21nm,0.7s,mb5.0
ABKAR Akbulak array 39.08 272 *e*P **P 05 02 31.6 -0.6**
comp=Z,24nm,0.8s,mb5.0
NAO01 NORSAR Array S 39.16 320 *e*P **P 05 02 32.5 -0.2**
comp=Z,33nm,1.2s,mb4.9
GTA Gaotai 39.27 223 *e*P **P 05 02 35.4 +1.5**
GTA pP pP 05 02 39.1 +2.1
GTA sP sP 05 02 41.7 +3.5
GTA PP PP 05 04 09.2 +5.4
GTA S **S 05 08 36.4 +2.2**
GTA sS sS 05 08 41.5 +2.2
GTA pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
GTA pmax pmax
comp=Z,140nm,4.8s
GTA LR LR
comp=N,1μm,13.1s,MS5.0
GTA LR LR
comp=E,810nm,11.9s,MS5.0
GTA LR LR
comp=Z,1μm,13.7s,MS4.9
OBN Obninsk 39.40 296 *e*P **P 05 02 34.9 +0.1**
OBN *i* 05 02 40.8
OBN *i* 05 04 38.5
OBN *e*S **S 05 08 31.9 -3.9**
OBN *e*SS SS 05 11 25.6 -3.5
OBN pmax pmax
comp=Z,40nm,1.0s,mb5.1
OBN MLR MLR
comp=Z,600nm,14.0s,MS4.6
IZAR Zarasai 41.06 305 *e*P **P 05 02 49.5 +0.9**
IZAR AMB AMB 05 02 55.2
comp=Z,8.2nm,1.4s,mb4.2
TKM2 Tokmak 2 41.08 252 *e*P **P 05 02 49.5 +0.7**
TKM2 pmax pmax
comp=Z,17nm,1.0s,mb4.6
TKM2 Tokmak 2 41.08 252 *e*P **P 05 02 49.5 +0.7**
comp=Z,17nm,1.0s,mb4.6
ISAL Salakas 41.25 305 *e*P **P 05 02 51.1 +1.0**
ISAL AMB AMB 05 02 58.0
comp=Z,16nm,1.1s,mb4.6
IDID Didziasalis 41.37 304 *e*P **P 05 02 52.0 +0.9**
IDID AMB AMB 05 02 58.8
comp=Z,13nm,1.1s,mb4.5
FRU Bishkek 41.40 253 *e*P **P 05 02 58.0 +6.6**
FRU pmax pmax
comp=Z,66nm,2.4s,mb4.8
IIGN Ignalina 41.44 305 *e*P **P 05 02 52.6 +0.9**
IIGN AMB AMB 05 02 59.5
comp=Z,15nm,1.0s,mb4.6
AAK Ala-Archa 41.61 253 P **P 05 02 54.0 +0.8**
comp=Z,6.3nm,0.6s,mb4.4,baz=168,slow=1.9,SNR=15
AAK LR LR 05 21 55.2
comp=Z,552nm,18.4s,MS4.5,baz=11,slow=39
AAK Ala-Archa 41.61 253 P **P 05 02 54.0 +0.8**
AAK pmax pmax
comp=Z,6.0nm,0.6s,mb4.4
AAK MLR MLR
comp=Z,552nm,18.5s,MS4.5
EKS2 Erkin-Say 41.76 254 *e*P **P 05 02 54.8 +0.4**
comp=Z,8.7nm,0.8s,mb4.4
LZH Lanzhou 41.85 218 *e*P **P 05 02 56.4 +1.1**
LZH pP pP 05 03 00.8 +2.4
LZH sP sP 05 03 02.4 +2.8
LZH PP PP 05 04 36.1 +4.3
LZH S **S 05 09 15.0 +2.3**
LZH sS sS 05 09 21.0 +3.2
LZH pmax pmax
comp=Z,56nm,1.2s,mb5.1
LZH pmax pmax
comp=Z,190nm,4.4s
LZH LR LR
comp=E,2μm,15.4s
LZH LR LR
comp=Z,2μm,16.9s,MS5.1
KK31 Karatay Array 42.15 258 *i* P **P 05 02 57.4 -0.2**
KK31 pmax pmax
comp=Z,18nm,0.9s,mb4.7
VSR Storozhevoye 42.40 292 *e*P **P 05 02 59.2 -0.3**
VSR *e* 05 03 04.8
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.6
VSR pmax pmax
comp=N,50nm,1.1s
VSR pmax pmax
comp=E,30nm,1.1s
VSR MLR MLR
comp=N,1μm,18.0s,MS4.8
VSR MLR MLR
comp=E,480nm,18.0s,MS4.8
VSR MLR MLR
comp=Z,1μm,18.0s,MS4.9
FCC Fort Churchill 42.50 35 *e*P **P 05 02 59.7 -0.6**
comp=Z,0.7nm,1.0s
VORD Divnogorie 42.60 291 *e*P **P 05 03 00.5 -0.7**
VORD *e* 05 03 06.5
SUW Suwalki 43.32 306 *e*P **P 05 03 06.7 -0.3**
SUW *e*pP pP 05 03 12.3 +2.2
SUW *e*PcP PcP 05 04 55.2 -0.2
SUW *e*S **S 05 09 30.2 -3.7**
SUW LMZ 05 21 57.6
comp=Z,500nm,23.6s
SUW Suwalki 43.32 306 *e*P **P 05 03 06.5 -0.5**
comp=Z,78nm,1.1s,mb5.3
NJ2 Nanjing 44.05 199 *e*P **P 05 03 11.0 -2.1**
NJ2 pP pP 05 03 14.8 -1.4
NJ2 sP sP 05 03 16.9 -0.5
NJ2 PP PP 05 04 54.1 -1.4
NJ2 S **S 05 09 38.5 -6.5**
NJ2 pmax pmax
comp=Z,30nm,1.0s,mb5.0
NJ2 pmax pmax
comp=Z,70nm,6.4s
NJ2 LR LR
comp=N,2μm,15.0s,MS5.3
NJ2 LR LR
comp=E,1μm,13.8s,MS5.3
NJ2 LR LR
comp=Z,2μm,14.0s,MS5.2
KSH Kashi 44.21 250 *e*P **P 05 03 23.8 +10**
KSH pP pP 05 03 28.6 +11
KSH sP sP 05 03 31.1 +12
KSH PcP PcP 05 05 04.7 +6.0
KSH PcS PcS 05 08 57.2 +5.4
KSH S **S 05 10 02.7 +16**
KSH pmax pmax
comp=Z,8.0nm,1.2s,mb4.3
KSH pmax pmax
comp=Z,84nm,4.4s
KSH LR LR
comp=N,1μm,14.5s,MS5.0
KSH LR LR
comp=E,850nm,13.4s,MS5.0
KSH LR LR
comp=Z,1μm,14.2s,MS5.0
EDM Edmonton 44.42 52 *e*P **P 05 03 15.8 0.0**
EDM *e* 05 04 58.8

FFC Flin Flon 45.12 43 *i* P **P 05 03 20.7 -0.7**
FFC Flin Flon 45.12 43 *e*P **P 05 03 19.9 -1.5**
comp=Z,43nm,1.8s,mb5.0
AKASG Malin Array Be 45.15 300 P **P 05 03 21.1 -0.6**
comp=Z,2.5nm,0.5s,mb4.3,baz=22,slow=9.0,SNR=13
AKASG PcP PcP 05 05 00.9 -0.8
comp=Z,1.6nm,0.4s,baz=28,slow=3.8,SNR=8.7
AKASG Malin Array Be 45.15 300 P **P 05 03 21.1 -0.6**
AKASG 05 05 01.0
AKASG pmax pmax
comp=Z,3.0nm,0.5s
AKBB Malin Array Si 45.15 300 *e*P **P 05 03 20.7 -1.0**
KIEV Kiev 45.16 300 *e*P **P 05 03 20.7 -1.0**
KIEV pmax pmax
comp=Z,16nm,1.2s,mb4.7
KIEV Kiev 45.16 300 *e*P **P 05 03 20.7 -1.0**
comp=Z,16nm,1.2s,mb4.7
BSEG Bad Segeberg 45.83 317 *e*P **P 05 03 27.5 +0.5**
comp=Z,35nm,1.3s,mb5.1
A05A Maple Falls 46.54 62 ⇑P **P 05 03 32.3 -0.4**
baz=46
ESK Eskdalemuir 46.59 328 *e*P **P 05 03 32.1 -0.9**
ESK pmax pmax
comp=Z,12nm,1.0s,mb4.8
ESK Eskdalemuir 46.59 328 *e*P **P 05 03 32.1 -0.8**
comp=Z,12nm,1.0s,mb4.8
CD2 Chengdu 46.94 216 P **P 05 03 37.4 +1.4**
CD2 pP pP 05 03 41.9 +2.8
CD2 sP sP 05 03 43.3 +2.9
CD2 PP PP 05 05 27.7 +1.6
CD2 S **S 05 10 27.4 +0.6**
CD2 sS sS 05 10 35.2 +3.3
CD2 pmax pmax
comp=Z,30nm,0.8s,mb5.3
CD2 pmax pmax
comp=Z,60nm,3.7s
CD2 LR LR
comp=N,3μm,16.7s
CD2 LR LR
comp=Z,820nm,18.4s,MS4.7
LVV L'vov 47.10 304 *e*P **P 05 03 40.7 +3.7**
B06A Marblemount 47.13 61 ⇓P **P 05 03 36.5 -0.8**
baz=47
JCW Jim Creek 47.34 62 *e*P **P 05 03 38.3 -0.6**
KWP Kalwaria Pacla 47.56 305 *e*P **P 05 03 41.1 +0.6**
KWP *e*pP pP 05 03 47.7 +4.0
KWP *e*PP PP 05 05 32.6 +1.0
KWP LMZ 05 26 14.9
comp=Z,800nm,19.2s
KWP Kalwaria Pacla 47.56 305 *e*P **P 05 03 41.1 +0.5**
KWP *e**PP pP 05 03 47.7 +4.0
KWP *e* 05 05 32.6
KWP MLR MLR
comp=Z,800nm,19.0s,MS4.7
KWP Kalwaria Pacla 47.56 305 *e*P **P 05 03 41.1 +0.5**
comp=Z,70nm,1.2s,mb5.6
KWP Kalwaria Pacla 47.56 305 ⇑*i*P **P 05 03 41.6 +1.0**
OJC Ojcow 47.59 308 *e*P **P 05 03 39.1 -1.7**
OJC *e**PP pP 05 03 45.4 +1.4
OJC *e*S **S 05 10 30.8 -4.8**
OJC MLR MLR
comp=Z,500nm,22.8s,MS4.4
NLWA Neilton Lookou 47.65 64 ⇓P **P 05 03 41.5 +0.2**
baz=48
NLWA Neilton Lookou 47.65 64 *e*P **P 05 03 42.3 +1.0**
comp=Z,10nm,0.8s,mb4.9
KSP Ksiaz 47.69 311 *e*P **P 05 03 41.9 +0.4**
KSP *e*pP pP 05 03 47.7 +3.0
KSP *e*PP PP 05 05 35.0 +2.2
KSP LMZ 05 25 47.9
comp=Z,600nm,20.9s
KSP Ksiaz 47.69 311 ⇓*e*P **P 05 03 41.9 +0.3**
KSP *e**PP pP 05 03 47.1 +2.4
B08A Colville Reser 47.76 60 ⇓P **P 05 03 41.8 -0.3**
baz=48
IBBN Ibbenburen 47.83 318 *e*P **P 05 03 43.1 +0.4**
comp=Z,19nm,1.2s,mb5.0
CLL Collm 47.87 314 *e*P **P 05 03 42.7 -0.2**
comp=Z,16nm,0.9s,mb5.0
CLL Collm 47.87 314 ⇓*i*P **P 05 03 42.7 -0.2**
CLL *i* 05 03 48.4
CLL *e* 05 05 10.0
CLL pmax pmax
comp=Z,16nm,1.0s,mb5.0
CLL MLR MLR
comp=Z,500nm,19.8s,MS4.5
CLL Collm 47.87 314 ⇓*i*P **P 05 03 42.7 -0.2**
CLL *i* 05 03 48.4
CLL *e*PcP PcP 05 05 10.0 -1.3
STHS Stebnicka Huta 48.06 306 *e*P **P 05 03 45.7 +1.2**
STHS *e* 05 03 51.1
STHS pmax pmax
comp=Z,12nm,1.0s,mb4.9
STHS Stebnicka Huta 48.06 306 *e*P **P 05 03 45.7 +1.2**
comp=Z,12nm,1.0s,mb4.9
STHS *e* 05 03 51.1
STHS Stebnicka Huta 48.06 306 *e*P **P 05 03 45.7 +1.2**
STHS *e*pP pP 05 03 51.1 +3.5
UPC Upice 48.06 311 *e*P **P 05 03 44.6 +0.1**
MAK Makhachkala 48.08 280 *e*P **P 05 03 44.8 +0.1**
MAK *e* 05 05 37.7
MAK *e*S **S 05 10 38.9 -3.8**
MAK *e* 05 13 33.6
MAK *e*SSS 05 15 20.7
MAK pmax pmax
comp=Z,116nm,1.2s,mb5.8
BRG Berggiesshubel 48.11 313 *e*P **P 05 03 44.7 -0.1**
comp=Z,6.0nm,1.0s,mb4.6
BRG Berggiesshubel 48.11 313 *e*P **P 05 03 44.9 +0.1**
comp=Z,6.5nm,1.0s,mb4.6
BRG *i* 05 03 50.5
comp=Z,10.0nm,1.1s
BRG
comp=N,354nm,13.8s
BRG
comp=E,391nm,15.6s
BRG
comp=Z,454nm,21.0s
BRG Berggiesshubel 48.11 313 *e*P **P 05 03 44.9 +0.1**
BRG *i* 05 03 50.5
BRG pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
BRG MLR MLR
comp=N,212nm,13.8s,MS4.4
BRG MLR MLR
comp=E,234nm,15.6s,MS4.4
BRG MLR MLR
comp=Z,272nm,21.0s
DPC Dobruska-Polom 48.16 310 *e*P **P 05 03 45.8 +0.6**
DPC *e**PP pP 05 03 51.4 +3.1
DPC MLR MLR
comp=Z,400nm,15.2s,MS4.5
DPC Dobruska-Polom 48.16 310 *e*P **P 05 03 45.8 +0.6**
DPC *e*pP pP 05 03 51.4 +3.1
DPC *e* 05 14 24.0
DPC Dobruska-Polom 48.16 310 *e*P **P 05 03 45.8 +0.6**
DPC *e*pP pP 05 03 51.4 +3.1
DPC *e*SS SS 05 14 24.0 +12
DPC AMS AMS 05 28 00.0
comp=Z,400nm,15.2s
WALA Waterton Lakes 48.25 55 *e*P **P 05 03 46.1 +0.2**
comp=Z,0.5nm,0.9s,mb3.5
NIE Niedzica 48.25 307 *e*P **P 05 03 47.1 +1.2**
A13A Flathead Natio 48.26 55 ⇑P **P 05 03 45.8 -0.2**
baz=48
D05A Emumclaw 48.27 62 ⇑P **P 05 03 46.5 +0.4**
baz=48,SNR=7.2
OKC Ostrava-Krasne 48.29 309 *e*P **P 05 03 47.0 +0.8**
OKC *e**PP pP 05 03 51.8 +2.4
OKC MLR MLR
comp=Z,600nm,15.4s,MS4.7
OKC Ostrava-Krasne 48.29 309 *e*P **P 05 03 47.0 +0.8**
OKC *e*pP pP 05 03 51.8 +2.4
OKC *e* 05 14 32.6
OKC Ostrava-Krasne 48.29 309 *e*P **P 05 03 47.0 +0.8**
OKC *e*pP pP 05 03 51.8 +2.4
OKC *e*SS SS 05 14 32.6 +18
OKC AMS AMS 05 27 00.0
comp=Z,600nm,15.4s
PVCC Panska Ves 48.32 312 *e*P **P 05 03 47.0 +0.5**
PVCC *e**PP pP 05 03 52.2 +2.6
PVCC MLR MLR
comp=Z,600nm,18.3s,MS4.6
PVCC Panska Ves 48.32 312 *e*P **P 05 03 47.0 +0.5**

PVCC *e*pP pP 05 03 52.2 +2.6
PVCC Panska Ves 48.32 312 *e*P **P 05 03 47.0 +0.5**
PVCC *e*pP pP 05 03 52.2 +2.6
PVCC AMS AMS 05 27 50.0
comp=Z,600nm,18.3s
NEW Newport 48.33 58 *e*P **P 05 03 46.8 +0.3**
NEW pmax pmax
comp=Z,18nm,1.4s
NEW Newport 48.33 58 *e*P **P 05 03 46.8 +0.2**
comp=Z,18nm,1.4s,mb4.9
KIV Kislovodsk 48.34 285 *de*P **P 05 03 47.4 +0.7**
KIV *i* 05 03 53.6
KIV pmax pmax
comp=Z,37nm,0.8s,mb5.5
KIV MLR MLR
comp=Z,300nm,15.0s,MS4.4
KIV Kislovodsk 48.34 285 *e*P **P 05 03 48.0 +1.3**
comp=Z,100nm,1.0s,mb5.8
A14A Double T Ranch 48.43 54 ⇑P **P 05 03 47.0 -0.4**
baz=48,SNR=16
B12A Libby 48.46 56 ⇑P **P 05 03 47.3 -0.2**
baz=48
MORC Moravsky Berou 48.46 309 ⇑P **P 05 03 48.2 +0.6**
MORC Moravsky Berou 48.46 309 *e*P **P 05 03 47.8 +0.2**
comp=Z,22nm,1.2s,mb5.1
MORC *e*PP PP 05 05 38.7 -1.1
MORC Moravsky Berou 48.46 309 ⇑*i*P **P 05 03 48.2 +0.6**
CRVS Cervenica-Dubn 48.51 306 *e*P **P 05 03 48.9 +1.0**
CRVS *e* 05 03 54.1
CRVS *e* 05 05 43.1
CRVS pmax pmax
comp=Z,12nm,1.4s,mb4.7
CRVS MLR MLR
comp=Z,400nm,18.9s,MS4.4
CRVS Cervenica-Dubn 48.51 306 *e*P **P 05 03 48.9 +1.0**
comp=Z,12nm,1.4s,mb4.7
CRVS *e* 05 03 54.1
CRVS *e*PP PP 05 05 43.1 +2.8
CRVS *e* 05 14 43.5
CRVS LR LR
comp=Z,400nm,18.9s,MS4.4
CRVS Cervenica-Dubn 48.51 306 *e*P **P 05 03 48.9 +1.0**
CRVS *e*pP pP 05 03 54.1 +3.0
CRVS *e*PP PP 05 05 43.1 +2.8
CRVS *e*SS SS 05 14 43.5 +26
E03A Lebam 48.52 64 ⇑P **P 05 03 48.2 +0.2**
baz=48
A15A Johnson Ranch, 48.57 54 ⇑P **P 05 03 47.8 -0.6**
baz=48,SNR=15
UZH Uzhgorod 48.59 305 *e*P **P 05 03 48.8 +0.2**
UZH *e* 05 05 07.7
UZH *e* 05 05 48.0
UZH *e*S **S 05 10 49.0 -0.8**
UZH *e* 05 11 10.0
UZH *e* 05 14 20.7
UZH MLR MLR
comp=N,700nm,15.0s,MS4.9
UZH MLR MLR
comp=E,600nm,15.0s,MS4.9
UZH MLR MLR
comp=Z,200nm,15.0s,MS4.2
LON Longmire 48.73 63 *e*P **P 05 03 50.4 +0.8**
LON pmax pmax
comp=Z,30nm,0.9s,mb5.3
LON Longmire 48.73 63 *e*P **P 05 03 50.4 +0.7**
comp=Z,30nm,0.9s,mb5.3
BUG Bochum-Univer 48.75 318 *e*P **P 05 03 50.3 +0.5**
comp=Z,20nm,1.0s,mb5.1
MOX Moxa 48.76 314 *e*P **P 05 03 50.1 +0.3**
comp=Z,36nm,1.6s,mb5.2
MOX *e* 05 03 56.0
MOX
comp=Z,300nm,21.0s
MOX Moxa 48.76 314 *e*P **P 05 03 50.2 +0.4**
comp=Z,17nm,1.0s,mb5.0
MOX Moxa 48.76 314 *e*P **P 05 03 50.1 +0.3**
MOX *e* 05 03 56.0
B13A Whitefish 48.78 56 ⇓P **P 05 03 49.8 -0.2**
baz=49,SNR=5.6
OD2 Odessa Site #2 48.81 60 *e*P **P 05 03 50.0 -0.2**
ANN Anapa 48.82 290 *e*P **P 05 03 51.7 +1.4**
ANN MLR MLR
comp=Z,576nm,17.0s,MS4.6
TANN Tannenbergstha 48.82 314 *e*P **P 05 03 50.7 +0.4**
comp=Z,21nm,1.2s,mb5.0
A16A West Butte Ran 48.83 53 ⇓P **P 05 03 50.0 -0.4**
baz=49
PRU Pruhonice 48.84 312 *e*P **P 05 03 50.9 +0.4**
PRU *e**PP pP 05 03 57.7 +4.1
PRU MLR MLR
comp=Z,500nm,18.7s,MS4.5
PRU Pruhonice 48.84 312 *e*P **P 05 03 50.9 +0.4**
PRU *e*pP pP 05 03 57.7 +4.1
PRU *e* 05 14 42.2
PRU Pruhonice 48.84 312 *e*P **P 05 03 50.9 +0.4**
PRU *e*pP pP 05 03 57.7 +4.1
PRU *e*SS SS 05 14 42.2 +19
PRU AMS AMS 05 28 00.0
comp=Z,500nm,18.7s
UBBA Unterbreizbach 48.88 316 *e*P **P 05 03 50.4 -0.3**
comp=Z,7.0nm,0.9s,mb4.7
BUR08 Bucovina Ar. S 48.91 302 *e*P **P 05 03 50.2 -0.8**
C11A Tepee Creek (N 48.91 57 ⇑P **P 05 03 50.9 -0.2**
baz=49
BURAR Bucovina Array 48.94 302 ⇓P **P 05 03 50.2 -1.0**
BURAR Bucovina Array 48.94 302 ⇓*i*P **P 05 03 50.2 -1.0**
NKC Novy Kostel 49.00 314 *e*P **P 05 03 52.1 +0.4**
NKC *e*pP pP 05 03 58.2 +3.4
D08A Wollman Farm, 49.08 60 ⇓P **P 05 03 51.9 -0.4**
baz=49
VRAC Vranov 49.10 310 ⇓P **P 05 03 53.3 +0.9**
VRAC Vranov 49.10 310 ⇓*i*P **P 05 03 53.3 +0.9**
F03A Seaside 49.10 64 ⇑P **P 05 03 52.6 +0.1**
baz=49
KECS Kecovo 49.11 306 *e*P **P 05 03 53.1 +0.6**
KECS *e* 05 03 58.1
KECS pmax pmax
comp=Z,5.0nm,1.3s,mb4.4
KECS Kecovo 49.11 306 *e*P **P 05 03 53.1 +0.6**
comp=Z,5.3nm,1.3s,mb4.4
KECS *e* 05 03 58.1
KECS Kecovo 49.11 306 *e*P **P 05 03 53.1 +0.6**
KECS *e*pP pP 05 03 58.1 +2.4
ZEI Tsey 49.16 283 *e*P **P 05 03 52.2 -0.8**
ZEI pmax pmax
comp=Z,31nm,1.1s,mb5.2
C12B Naegeli Ranch, 49.20 57 ⇓P **P 05 03 53.3 0.0**
baz=49
A18A Metzger Ranch, 49.21 51 ⇓P **P 05 03 52.6 -0.7**
baz=49
BSMT Bassoo Peak 49.21 56 *e*P **P 05 03 53.5 +0.1**
B15A Bradely Ranch, 49.24 54 ⇓P **P 05 03 52.7 -0.9**
baz=49
B16A M & M Farms, S 49.32 53 ⇑P **P 05 03 53.9 -0.3**
baz=49
SCHQ Schefferville 49.32 16 P **P 05 03 52.4 -1.7**
comp=Z,19nm,0.7s,mb5.2,baz=15,slow=8.7,SNR=20
SCHQ LR LR 05 24 52.4
comp=Z,338nm,20.2s,MS4.3,baz=359,slow=36
SCHQ Schefferville 49.32 16 *e*P **P 05 03 52.8 -1.4**
comp=Z,28nm,0.9s,mb5.3
TREC Trest 49.32 311 *e*P **P 05 03 54.7 +0.5**
TREC MLR MLR
comp=Z,600nm,17.4s,MS4.7
TREC Trest 49.32 311 *e*P **P 05 03 54.7 +0.5**
TREC AMS AMS 05 28 50.0
comp=Z,600nm,17.4s
E07A Sunnyside 49.34 61 ⇑P **P 05 03 54.1 -0.3**
baz=49
F04A Amboy 49.36 63 ⇓P **P 05 03 54.7 +0.2**
baz=49
YBMT Yellow Bay 49.37 55 *e*P **P 05 03 54.6 +0.1**
SOC Sochi 49.41 287 *e*P **P 05 04 00.1 +5.2**
SOC *e**PP pP 05 04 04.9 +6.8
SOC *e* 05 05 49.7
SOC *e*S **S 05 11 19.1 +18**
SOC *e*SS SS 05 14 36.5 +4.0
SOC pmax pmax
comp=Z,50nm,1.0s,mb5.5
SOC MLR MLR
comp=Z,1μm,18.0s,MS4.9
JTMT Jette 49.42 56 *e*P **P 05 03 55.7 +0.7**
C13A Hot Springs 49.42 56 ⇓P **P 05 03 55.1 +0.2**
baz=49
VYHS Vyhne 49.43 308 *e*P **P 05 03 55.5 +0.5**
VYHS *e* 05 04 01.3
VYHS *e* 05 05 53.1
VYHS *e*S **S 05 11 16.0 +14**
VYHS pmax pmax
comp=Z,7.0nm,1.3s,mb4.5
VYHS Vyhne 49.43 308 *e*P **P 05 03 55.5 +0.5**
comp=Z,6.5nm,1.3s,mb4.5
VYHS *e* 05 04 01.3
VYHS *e*PP PP 05 05 53.1 +4.4
VYHS *e*S **S 05 11 16.0 +14**
VYHS *e*SS SS 05 14 46.1 +14
VYHS LR LR
comp=Z,200nm,27.7s,MS4.0
VYHS Vyhne 49.43 308 *e*P **P 05 03 55.5 +0.5**
VYHS *e*pP pP 05 04 01.3 +3.1
VYHS *e*PP PP 05 05 53.1 +4.4
VYHS *e*S **S 05 11 16.0 +14**
VYHS *e*SS SS 05 14 46.1 +14
ONI Oni 49.44 284 P **P 05 03 55.4 +0.2**
SIM Simferopol' 49.46 293 P **P 05 03 59.4 +4.1**
SIM 05 05 52.7
SIM S **S 05 10 58.8 -3.2**
SIM pmax pmax
comp=Z,26nm,9.7s
SIM MLR MLR
comp=Z,830nm,15.0s,MS4.9
C14A Swan Lake 49.51 55 ⇑P **P 05 03 55.8 +0.1**
baz=49
KEH Kehvi 49.58 283 P **P 05 03 55.7 -0.5**
E08A Dider Farm, El 49.58 60 ⇑P **P 05 03 56.1 -0.1**
baz=49
B17A L&G Farms, Che 49.62 53 ⇑P **P 05 03 55.8 -0.6**
baz=49,SNR=14
TESR 49.67 300 ⇓P **P 05 03 56.4 -0.5**
TESR 49.67 300 ⇓*i*P **P 05 03 56.4 -0.5**
SWMT Swartz Lake 49.70 56 *e*P **P 05 03 57.6 +0.5**
B18A Beardsley Farm 49.72 52 ⇓P **P 05 03 56.8 -0.4**
baz=50,SNR=14
TNS Taunus Mts 49.72 317 *e*P **P 05 03 57.1 -0.1**
comp=Z,15nm,0.9s,mb5.0
C15A Salmond Ranch, 49.74 54 ⇑P **P 05 03 57.1 -0.2**
baz=50,SNR=18
GRF Grafenberg Arr 49.74 314 *e*P **P 05 03 57.5 +0.1**
comp=Z,18nm,0.9s,mb5.1
GRF *e*pP pP 05 04 03.6 +3.1
GRF *e*L 05 26 51.3
comp=Z,454nm,20.1s
GRF Grafenberg Arr 49.74 314 *e*P **P 05 03 57.5 +0.1**
GRF *e**PP pP 05 04 03.6 +3.1
GRF pmax pmax
comp=Z,18nm,0.9s,mb5.1
GRF MLR MLR
comp=Z,500nm,20.1s,MS4.5
E09A Wood Farm, Sta 49.76 59 ⇑P **P 05 03 57.7 +0.1**
baz=50
PSZ Piszkesteto 49.77 306 *e*P **P 05 03 58.6 +1.0**
comp=Z,34nm,1.2s,mb5.2
PSZ Piszkesteto 49.77 306 ⇓*i*P **P 05 03 58.6 +1.0**
KHC Kasperske Hory 49.84 312 *e*P **P 05 03 58.7 +0.6**
KHC *e**PP pP 05 04 04.1 +2.8
KHC MLR MLR
comp=Z,600nm,15.5s,MS4.7
KHC Kasperske Hory 49.84 312 *e*P **P 05 03 58.1 -0.1**
comp=Z,13nm,1.3s,mb4.8
KHC Kasperske Hory 49.84 312 *e*P **P 05 03 58.7 +0.6**
KHC *e*pP pP 05 04 04.1 +2.8
KHC AMS AMS 05 28 50.0
comp=Z,600nm,15.5s
D12A Red Ives Fores 49.85 57 ⇓P **P 05 03 57.8 -0.4**
baz=50
C16A Fuhringer Ranc 49.89 54 ⇑P **P 05 03 58.1 -0.4**
baz=50,SNR=10
TBLG Delisi 49.93 282 *e*P **P 05 04 00.1 +1.2**
TBLG Delisi 49.93 282 P **P 05 04 00.2 +1.3**
MTA Mtatsminda 49.95 282 P **P 05 03 59.7 +0.6**
F07A Phinny Hill Vi 49.96 61 ⇑P **P 05 03 58.9 -0.1**
baz=50
WET Wettzell 49.96 313 *e*P **P 05 03 59.9 +0.9**
comp=Z,11nm,1.0s,mb4.8
D13A Huson 50.00 56 ⇑P **P 05 03 59.2 -0.2**
baz=50,SNR=6.7
DGRG David-gareji 50.03 281 P **P 05 04 00.1 +0.4**
G04A Mulino 50.04 64 ⇑P **P 05 03 60.0 +0.3**
baz=50
ZST Bratislava 50.06 309 *e*P **P 05 04 00.8 +1.0**
ZST *e* 05 04 07.2
ZST pmax pmax
comp=Z,33nm,1.8s,mb5.1
ZST MLR MLR
comp=Z,400nm,17.8s,MS4.5
ZST Bratislava 50.06 309 *e*P **P 05 04 00.8 +1.0**
comp=Z,33nm,1.8s,mb5.1
ZST *e* 05 04 07.2
ZST *e* 05 15 20.4
ZST LR LR
comp=Z,400nm,17.8s,MS4.5
ZST Bratislava 50.06 309 *e*P **P 05 04 00.8 +1.0**
ZST *e*pP pP 05 04 07.2 +4.2
ZST *e* 05 15 20.3
SLMT Seeley Lake 50.06 55 *e*P **P 05 03 59.9 +0.1**
BCLA Clavier 50.07 319 P **P 05 04 00.4 +0.6**
comp=Z,11nm,1.3s,mb4.7
EGMT Eagleton 50.08 52 ⇓P **P 05 03 59.4 -0.5**
baz=50,SNR=5.9
EGMT Eagleton 50.08 52 *e*P **P 05 03 59.6 -0.3**
comp=Z,11nm,0.9s,mb4.9
HOOD Mount Hood Mea 50.11 63 *e*pP pP 05 04 06.5 +3.0
D14A Greenough 50.21 55 ⇓P **P 05 04 00.9 -0.1**
baz=50,SNR=8.9
C17A Wharram Farm, 50.25 53 ⇑P **P 05 04 00.6 -0.6**
baz=50,SNR=5.9
DRGR 50.25 304 ⇑P **P 05 04 01.8 +0.5**
DRGR 50.25 304 ⇑*i*P **P 05 04 01.8 +0.5**
VRI Vrincioaia 50.27 300 ⇓P **P 05 04 01.6 +0.2**
VRI Vrincioaia 50.27 300 ⇓*i*P **P 05 04 01.6 +0.2**
LSA Lhasa 50.32 230 P **P 05 04 03.4 +1.4**
BUD Budapest 50.36 307 ⇓*e*P **P 05 03 58.4 -3.7**
MSO Missoula 50.36 56 *e*P **P 05 04 01.9 -0.2**
comp=Z,67nm,2.1s,mb5.3
E12A Beaver Dam Sad 50.41 57 ⇓P **P 05 04 02.6 +0.1**
baz=50
ULM Lac du Bonnet 50.45 40 P **P 05 04 00.3 -2.4**
comp=Z,11nm,0.8s,mb4.9,baz=339,slow=5.0,SNR=7.5
ULM LR LR 05 28 15.3
comp=Z,370nm,18.3s,MS4.4,baz=14,slow=40
ULM Lac du Bonnet 50.45 40 *e*P **P 05 04 01.6 -1.1**
comp=Z,11nm,0.9s,mb4.9
GIVF Givet 50.45 320 *e*P **P 05 04 02.5 -0.2**
D15A Lincoln 50.46 54 ⇑P **P 05 04 02.8 0.0**
baz=50,SNR=14
IEMG Emamgholi 50.49 267 *e*P **P 05 04 04.1 +0.9**
DOU Dourbes 50.49 320 P **P 05 04 03.8 +0.7**
comp=Z,11nm,1.7s,mb4.6
CONA Conrad Observa 50.56 310 ⇑*i*pP **P 05 04 04.7 +1.2**
comp=Z,13nm,1.3s,mb4.7
BAIF Baives 50.59 320 *e*P **P 05 04 03.8 0.0**
comp=Z,43nm,1.1s,mb5.0
BAIF Baives 50.59 320 *e*P **P 05 04 03.8 0.0**
BAIF pmax pmax
comp=Z,22nm,1.1s,mb5.0
BAIF Baives 50.59 320 *e*P **P 05 04 03.8 0.0**
comp=Z,22nm,1.1s,mb5.0
H04A Detroit Lake 50.60 64 ⇑P **P 05 04 03.8 -0.1**
baz=50,SNR=5.5
KBL Kabul 50.62 255 *e*P **P 05 04 03.8 -0.4**
KBL pmax pmax
comp=Z,16nm,1.0s,mb4.9
KBL Kabul 50.62 255 *e*P **P 05 04 03.8 -0.4**
comp=Z,16nm,1.0s,mb4.9
WLF Walferdange 50.65 318 *e*P **P 05 04 04.4 +0.1**
comp=Z,14nm,1.1s,mb4.8
D16A Dana Ranch, Ca 50.67 54 ⇑P **P 05 04 03.9 -0.5**
baz=50,SNR=15
E13A Victor 50.68 56 ⇓P **P 05 04 04.2 -0.3**
baz=50,SNR=7.7
DGMT Dagmar 50.72 47 ⇓P **P 05 04 04.6 -0.2**
baz=50,SNR=15
DGMT Dagmar 50.72 47 *e*P **P 05 04 04.8 0.0**
comp=Z,44nm,0.8s,mb5.5
D17A Six Diamond Ra 50.73 53 ⇓P **P 05 04 04.7 -0.1**
baz=50,SNR=10.0
G08A Pilot Rock 50.75 61 ⇓P **P 05 04 05.5 +0.5**
baz=51,SNR=5.3
F11A Grangeville 50.79 58 ⇑P **P 05 04 05.4 +0.1**
baz=51,SNR=11
MLR Muntele Rosu 50.80 300 ⇑P **P 05 04 06.4 +1.0**
MLR Muntele Rosu 50.80 300 ⇑*i*P **P 05 04 06.3 +0.9**
E14A Clinton 50.85 56 ⇑P **P 05 04 05.8 0.0**
baz=51,SNR=10
D18A Linhart Farms, 50.86 52 ⇑P **P 05 04 05.6 -0.3**
baz=51,SNR=18
GYA Guiyang 50.91 212 ⇑*i*P **P 05 04 06.9 +0.5**
GYA PP PP 05 06 03.5 +1.0
GYA ScP ScP 05 09 18.9 +0.4
GYA S **S 05 11 22.0 -0.5**
GYA SS SS 05 14 53.9 -3.0
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.0
GYA pmax pmax
comp=Z,120nm,5.0s
GYA LR LR
comp=N,560nm,18.8s,MS4.7
GYA LR LR
comp=E,490nm,19.2s,MS4.7
GYA LR LR
comp=Z,590nm,18.6s,MS4.6
MOA Molln 50.94 311 ⇑*i*pP **P 05 04 07.1 +0.6**
comp=Z,14nm,1.1s,mb4.8
STU Stuttgart 50.99 316 *e*P **P 05 04 07.6 +0.8**
comp=Z,17nm,0.7s,mb5.1
ISFR Sfrayin 51.00 267 *e*P **P 05 04 06.7 -0.3**
G09A Cove 51.02 60 ⇓P **P 05 04 07.3 +0.2**
baz=51
E15A Deer Lodge 51.02 55 ⇑P **P 05 04 07.1 0.0**
baz=51
VOIR 51.04 301 ⇑P **P 05 04 08.0 +0.8**
VOIR 51.04 301 ⇑*i*P **P 05 04 08.0 +0.8**
F12A Elk City 51.11 57 ⇑P **P 05 04 07.8 +0.1**
baz=51,SNR=14
E16A East Helena 51.12 54 ⇑P **P 05 04 07.8 0.0**
baz=51
IKRD Kardeh 51.13 267 *e*P **P 05 04 07.0 -1.0**
IMYA Miami 51.14 265 *e*P **P 05 04 08.5 +0.4**
G10A Bishop Farm, J 51.15 59 ⇓P **P 05 04 08.5 +0.5**
baz=51,SNR=7.5
FUR Furstenfeldbru 51.20 314 *e*P **P 05 04 09.0 +0.6**
comp=Z,28nm,0.7s,mb5.3
G11A Walters Elk Ra 51.23 58 ⇓P **P 05 04 09.0 +0.3**
baz=51,SNR=11
TIRR Tirgusor 51.23 298 ⇑P **P 05 04 08.5 -0.2**
TIRR Tirgusor 51.23 298 *e*P **P 05 04 08.2 -0.5**
comp=Z,18nm,1.1s,mb4.9
TIRR Tirgusor 51.23 298 ⇑*i*P **P 05 04 08.5 -0.2**
IAKL Akhelmad 51.24 267 *e*P **P 05 04 10.3 +1.5**
F13A Darby 51.27 56 ⇓P **P 05 04 09.0 +0.1**
baz=51,SNR=12
RJOB Jochberg 51.33 312 *e*P **P 05 04 10.2 +0.8**
comp=Z,13nm,1.2s,mb4.7
ISRO Mashad 51.33 266 *e*P **P 05 04 10.3 +0.7**
E17A Martinsdale 51.35 53 ⇑P **P 05 04 09.8 +0.2**
baz=51,SNR=13
GNI Garni 51.42 281 P **P 05 04 08.8 -1.3**
comp=Z,2.1nm,0.4s,mb4.4,baz=30,slow=20,SNR=1.9
GNI Garni 51.42 281 *e*P **P 05 04 10.3 +0.2**
GNI Garni 51.42 281 *e*P **P 05 04 07.9 -2.2**
comp=Z,58nm,1.4s,mb5.3
E18A Harlowton 51.44 52 ⇓P **P 05 04 10.5 +0.2**
baz=51
BMO Blue Mountains 51.52 59 *e*P **P 05 04 11.8 +0.9**
comp=Z,6.0nm,0.9s,mb4.5
H08A Prairie City 51.54 61 ⇑P **P 05 04 11.5 +0.5**
baz=51,SNR=8.1
IMOG Moghan 51.56 266 *e*P **P 05 04 12.5 +1.3**
BFO Black Forest 51.57 316 *e*P **P 05 04 11.5 +0.3**
comp=Z,18nm,1.2s,mb4.9
BFO Black Forest 51.57 316 *e*P **P 05 04 11.0 -0.2**
BFO pmax pmax
comp=Z,19nm,1.3s,mb4.9
BFO Black Forest 51.57 316 *e*P **P 05 04 11.0 -0.1**
comp=Z,19nm,1.3s,mb4.9
GZR Gura Zlata 51.57 303 ⇑P **P 05 04 11.8 +0.6**
GZR Gura Zlata 51.57 303 ⇑*i*P **P 05 04 11.8 +0.6**
F15A Butte 51.61 55 ⇓P **P 05 04 11.6 +0.2**
baz=51
H09A Durkee 51.62 60 ⇑P **P 05 04 12.1 +0.5**
baz=51
LRM Limekiln Ridge 51.63 55 *e*P **P 05 04 11.7 +0.1**
CDF Champ du Feu 51.67 317 *e*P **P 05 04 12.0 +0.1**
comp=Z,66nm,1.3s,mb5.1
CDF Champ du Feu 51.67 317 *e*P **P 05 04 12.0 +0.1**
CDF pmax pmax
comp=Z,33nm,1.3s,mb5.1
CDF Champ du Feu 51.67 317 *e*P **P 05 04 12.0 +0.1**
comp=Z,33nm,1.3s,mb5.1
I07A Izee 51.77 62 ⇓P **P 05 04 13.3 +0.5**
baz=52
F16A Kennard Place, 51.84 54 ⇑P **P 05 04 13.0 -0.2**
baz=52
ECH Echery 51.88 317 *e*P **P 05 04 13.5 0.0**
ECH pmax pmax
comp=Z,15nm,1.2s,mb4.8
ECH Echery 51.88 317 *e*P **P 05 04 13.5 0.0**
comp=Z,15nm,1.2s,mb4.8
H10A Noah's Angus R 51.90 59 ⇓P **P 05 04 13.6 0.0**
baz=52,SNR=15
F17A Fitzpatrick Pl 51.92 53 ⇑P **P 05 04 14.1 +0.3**
baz=52
H11A Donnelly 51.95 58 ⇓P **P 05 04 14.3 +0.2**
baz=52,SNR=16
G13A Cobalt 51.96 57 ⇓P **P 05 04 14.4 +0.3**
baz=52,SNR=7.7
MEZF Maizieres J'vi 51.96 319 *e*P **P 05 04 14.3 +0.2**
BOZ Bozeman (W) 51.97 54 ⇓P **P 05 04 14.6 +0.4**
baz=52,SNR=8.2
BOZ Bozeman (W) 51.97 54 *e*P **P 05 04 14.8 +0.6**
BOZ pmax pmax
comp=Z,20nm,1.8s,mb4.8
BOZ Bozeman (W) 51.97 54 *e*P **P 05 04 14.8 +0.6**
comp=Z,20nm,1.8s,mb4.7
WTTA Wattenberg 52.00 313 ⇓*i*pP **P 05 04 15.5 +1.1**
comp=Z,19nm,1.1s,mb5.0
MOTA Moosalm 52.02 314 ⇓*i*pP **P 05 04 14.9 +0.3**
comp=Z,6.1nm,0.9s,mb4.5
DLMT Dillon 52.04 55 *e*P **P 05 04 14.7 -0.1**
comp=Z,7.5nm,0.9s,mb4.6
LAO LASA Array 52.05 49 *e*P **P 05 04 14.9 +0.1**
comp=Z,25nm,1.0s,mb5.1
F18A Big Timber 52.12 53 ⇓P **P 05 04 15.5 +0.2**
baz=52,SNR=7.3
OBKA Obir 52.18 310 ⇓*i*pP **P 05 04 17.0 +1.3**
comp=Z,9.7nm,0.9s,mb4.7
HAU Haudompre 52.23 318 *e*P **P 05 04 15.8 -0.3**
comp=Z,25nm,1.1s,mb4.8
HAU *e*MLR MLR
comp=Z,400nm,19.2s,MS4.2
HAU Haudompre 52.23 318 *e*P **P 05 04 15.8 -0.3**
HAU pmax pmax
comp=Z,13nm,1.1s,mb4.8
HAU MLR MLR
comp=Z,400nm,19.3s,MS4.5
HAU Haudompre 52.23 318 *e*P **P 05 04 15.8 -0.3**
comp=Z,13nm,1.1s,mb4.8
HAU LR LR
comp=Z,400nm,19.3s,MS4.5
GCMT Greycliff 52.23 53 *e*P **P 05 04 16.4 +0.2**
comp=Z,17nm,1.2s,mb4.8
G15A Dillon 52.25 55 ⇓P **P 05 04 16.6 +0.3**
baz=52,SNR=9.2
I09A Lost Marbles R 52.27 60 ⇓P **P 05 04 16.7 +0.3**
baz=52
HINF Hinteralfeld 52.32 317 *e*P **P 05 04 16.3 -0.5**
comp=Z,43nm,1.3s,mb4.9
HINF Hinteralfeld 52.32 317 *e*P **P 05 04 16.3 -0.5**
HINF pmax pmax
comp=Z,22nm,1.3s,mb4.9
HINF Hinteralfeld 52.32 317 *e*P **P 05 04 16.3 -0.5**
comp=Z,22nm,1.3s,mb4.9
G16A Moss Hill, Enn 52.34 55 ⇓P **P 05 04 16.9 0.0**
baz=52,SNR=7.3
H12A Diamond D Ranc 52.34 57 ⇓P **P 05 04 17.2 +0.2**
baz=52
AGMN Agassiz Nation 52.34 40 *e*P **P 05 04 15.7 -1.2**
comp=Z,25nm,1.0s,mb5.1
I10A Payette 52.37 59 ⇓P **P 05 04 17.4 +0.2**
baz=52
HUMO Hull Mountain 52.39 65 *e*P **P 05 04 18.0 +0.7**
comp=Z,13nm,1.1s,mb4.8
FETA Feichten 52.40 314 ⇓*i*pP **P 05 04 18.1 +0.7**
comp=Z,9.1nm,1.0s,mb4.6
H13A Challis 52.46 57 ⇓P **P 05 04 17.2 -0.7**
baz=52
G17A Pierce Place, 52.47 54 ⇑P **P 05 04 18.3 +0.4**

baz=52
MCMT McKenzie Canyo 52.50 56 eP P 05 04 19.2 +1.0
comp=Z,5.1nm,0.8s,mb4.5
IHRS Heris 52.58 278 eP P 05 04 19.9 +1.1
H14A Leadore 52.59 56 ⇑P P 05 04 19.4 +0.6
baz=52,SNR=11
TPUB Ta-pu 52.60 196 eP P 05 04 17.2 -1.9
comp=Z,11nm,0.8s,mb4.8
J08A Circle Bar Ran 52.69 61 ⇑P P 05 04 20.1 +0.5
baz=52,SNR=9.4
LDF La Druitiere 52.70 323 eP P 05 04 18.4 -1.2
G18A Lazy EL Ranch, 52.71 53 ⇓P P 05 04 19.7 0.0
baz=52
I11A Placerville 52.72 59 ⇓P P 05 04 19.8 +0.1
baz=52
H15A Lima 52.75 55 ⇓P P 05 04 20.5 +0.6
baz=52,SNR=5.9
K05A Summer Lake 52.75 63 ⇓P P 05 04 21.1 +1.1
baz=53,SNR=9.1
KMI Kunming 52.78 216 ⇑P P 05 04 20.1 -0.3
KMI pP pP 05 04 23.3 -0.3
KMI sP sP 05 04 24.7 -0.1
KMI PP PP 05 06 20.5 +1.0
KMI S S 05 11 46.0 -2.3
KMI sS sS 05 11 51.5 -2.0
KMI SS SS 05 15 23.0 -3.5
KMI pmax pmax
comp=Z,13nm,1.3s,mb4.7
KMI pmax pmax
comp=Z,100nm,5.2s
KMI LR LR
comp=N,450nm,17.1s,MS5.2
KMI LR LR
comp=E,2µm,15.8s,MS5.2
KMI LR LR
comp=Z,890nm,17.1s,MS4.9
VISS Visnje 52.80 310 i P P 05 04 25.5 +5.2
JAVS Javornik 52.86 311 i P P 05 04 20.6 -0.2
JAVS i 05 04 26.3
H16A Russell Place, 52.95 54 ⇑P P 05 04 21.9 +0.4
baz=53,SNR=16
RLMT Red Lodge 52.96 52 ⇑P P 05 04 22.0 +0.5
baz=53,SNR=12
RLMT Red Lodge 52.96 52 eP P 05 04 22.6 +1.1
comp=Z,29nm,1.2s,mb5.1
BOJS Bojanci 53.01 309 i P P 05 04 21.9 0.0
I12A Atlanta 53.01 58 ⇑P P 05 04 21.6 -0.3
baz=53,SNR=5.4
GRR Gorron 53.01 324 eP P 05 04 20.8 -1.1
comp=Z,84nm,1.5s,mb5.2
GRR Gorron 53.01 324 eP P 05 04 20.8 -1.1
GRR pmax pmax
comp=Z,42nm,1.5s,mb5.2
GRR Gorron 53.01 324 eP P 05 04 20.8 -1.1
comp=Z,42nm,1.5s,mb5.2
I13A Wildhorse Cree 53.11 57 ⇓P P 05 04 22.0 -0.7
baz=53,SNR=6.6
GUN Gumba 53.12 236 eP P 05 04 23.3 +0.4
comp=Z,159nm,0.9s,mb6.0
TUE Stuetta 53.18 315 eP P 05 04 24.0 +0.9
comp=Z,23nm,0.9s,mb5.1
SKDS Skadanscina 53.20 311 i P P 05 04 25.2 +1.9
MFID Camas Ranch 53.22 59 ⇓P P 05 04 23.4 0.0
baz=53
I14A Mackay 53.23 56 ⇑P P 05 04 23.6 +0.1
baz=53
LKWY Lake 53.26 54 eP P 05 04 26.6 +2.9
LKWY pmax pmax
comp=Z,14nm,0.9s,mb4.9
LKWY Lake 53.26 54 eP P 05 04 26.6 +2.9
comp=Z,14nm,0.9s,mb4.9
YBH Yreka Blue Hor 53.28 65 eP P 05 04 24.7 +0.8
YBH pmax pmax
comp=Z,4.0nm,0.9s
YBH Yreka Blue Hor 53.28 65 eP P 05 04 24.7 +0.8
comp=Z,4.4nm,0.9s,mb4.4
YFT Old Faithful 53.28 54 eP P 05 04 25.9 +2.0
comp=Z,16nm,1.1s,mb4.9
TAPN Taplejung 53.28 233 eP P 05 04 24.0 -0.1
comp=Z,191nm,1.1s,mb5.9
GKN Gorkha 53.29 237 eP P 05 04 24.2 0.0
comp=Z,296nm,1.1s,mb6.2
LOR Lormes 53.36 320 eP P 05 04 23.8 -0.6
comp=Z,59nm,1.2s,mb5.1
LOR eMLR MLR
comp=Z,430nm,19.0s,MS4.2
LOR Lormes 53.36 320 eP P 05 04 23.8 -0.6
LOR pmax pmax
comp=Z,29nm,1.2s,mb5.1
LOR MLR MLR
comp=Z,430nm,19.0s,MS4.5
LOR Lormes 53.36 320 eP P 05 04 23.8 -0.6
comp=Z,29nm,1.2s,mb5.1
LOR LR LR
comp=Z,430nm,19.0s,MS4.5
KKN Kakani 53.36 236 eP P 05 04 24.8 +0.1
comp=Z,126nm,0.8s,mb5.9
I15A Monteview 53.37 56 ⇑P P 05 04 25.9 +1.3
baz=53
EYMN Ely 53.38 37 eP P 05 04 23.2 -1.3
comp=Z,20nm,1.1s,mb5.0
HLID Hailey 53.38 57 ⇓P P 05 04 24.7 +0.1
baz=53
HLID Hailey 53.38 57 eP P 05 04 24.9 +0.3
comp=Z,4.8nm,0.9s,mb4.4
H17A Grant Village 53.39 54 ⇓P P 05 04 26.3 +1.6
baz=53,SNR=5.5
ROSF Rostrenen 53.41 326 eP P 05 04 24.1 -0.7
comp=Z,259nm,1.8s,mb5.5
ROSF Rostrenen 53.41 326 eP P 05 04 24.1 -0.7
ROSF pmax pmax
comp=Z,130nm,1.8s,mb5.6
ROSF Rostrenen 53.41 326 eP P 05 04 24.1 -0.7
comp=Z,130nm,1.8s,mb5.6
J12A Stokes Ranch, 53.53 58 ⇓P P 05 04 26.4 +0.6
baz=53,SNR=5.1
IANJ Anjilo 53.54 271 eP P 05 04 28.6 +2.7
PKIN Phulchoki 53.54 236 eP P 05 04 26.2 +0.2
comp=Z,92nm,1.2s,mb5.6
PKI Pulchoki 53.55 236 eP P 05 04 26.2 +0.2
comp=Z,128nm,1.2s,mb5.7
DMN Daman 53.57 236 eP P 05 04 26.5 +0.3
comp=Z,151nm,1.1s,mb5.8
K10A MacKenzie Ranc 53.60 60 ⇓P P 05 04 27.1 +0.9
baz=53,SNR=19
SSF Saint Saulge 53.62 320 eP P 05 04 25.7 -0.6
comp=Z,59nm,1.4s,mb5.0
SSF Saint Saulge 53.62 320 eP P 05 04 25.7 -0.6
SSF pmax pmax
comp=Z,30nm,1.4s,mb5.0
SSF Saint Saulge 53.62 320 eP P 05 04 25.7 -0.6
comp=Z,30nm,1.4s,mb5.0
CABF La Chapelle 53.62 318 eP P 05 04 26.3 -0.1
comp=Z,20nm,0.9s,mb4.8
CABF La Chapelle 53.62 318 eP P 05 04 26.3 -0.1
CABF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
CABF La Chapelle 53.62 318 eP P 05 04 26.3 -0.1
comp=Z,10.0nm,0.9s,mb4.8
MOD Modoc 53.67 63 eP P 05 04 27.6 +0.9
comp=Z,16nm,1.1s,mb4.9
I16A Newdale 53.70 55 ⇑P P 05 04 27.8 +0.8
baz=54,SNR=8.8
KOLN Koldanda 53.74 238 eP P 05 04 27.2 -0.2
comp=Z,61nm,1.0s,mb5.5
K11A Parker Ranch, 53.79 59 ⇓P P 05 04 28.5 +0.9
baz=54,SNR=14
IMW Indian Meadow 53.79 54 eP P 05 04 29.0 +1.4
comp=Z,15nm,1.0s,mb4.9
J14A Carey 53.80 57 ⇑P P 05 04 28.3 +0.6
baz=54,SNR=6.1
QUIF Quistinic 53.81 326 eP P 05 04 27.2 -0.5
ODAN Odare 53.82 234 eP P 05 04 27.8 -0.3
comp=Z,347nm,1.1s,mb6.2
I17A Pilgrim Ck. 53.84 54 ⇑P P 05 04 29.2 +1.2
baz=54
KHMM Horse Mountain 53.86 67 eP P 05 04 29.6 +1.4
comp=Z,16nm,1.0s,mb4.9
RAMN Ramite 53.90 234 eP P 05 04 28.5 -0.1
comp=Z,128nm,1.2s,mb5.7
AVF Avril sur Loir 53.91 320 eP P 05 04 27.8 -0.6
comp=Z,46nm,1.2s,mb5.0
AVF Avril sur Loir 53.91 320 eP P 05 04 27.8 -0.6
AVF pmax pmax
comp=Z,23nm,1.2s,mb5.0
AVF Avril sur Loir 53.91 320 eP P 05 04 27.8 -0.6
comp=Z,23nm,1.2s,mb5.0

IDMV Damavand 53.91 273 eP P 05 04 29.5 +0.9
J15A Blackfoot 53.95 56 ⇓P P 05 04 30.1 +1.2
baz=54
SMF Signal de Mont 53.97 319 eP P 05 04 28.1 -0.8
comp=Z,55nm,1.3s,mb5.0
SMF Signal de Mont 53.97 319 eP P 05 04 28.1 -0.8
SMF pmax pmax
comp=Z,28nm,1.3s,mb5.0
SMF Signal de Mont 53.97 319 eP P 05 04 28.1 -0.8
comp=Z,28nm,1.3s,mb5.0
LOHW Long Hollow 54.13 54 eP P 05 04 31.4 +1.3
comp=Z,9.9nm,1.1s,mb4.7
K12A Draper Farm, C 54.16 58 ⇑P P 05 04 31.1 +0.7
baz=54,SNR=5.4
TPAW Teton Pass 54.18 54 eP P 05 04 32.0 +1.5
comp=Z,30nm,1.4s,mb5.0
BGF Bois d'Agland 54.21 320 eP P 05 04 30.2 -0.5
comp=Z,40nm,0.9s,mb5.0
BGF Bois d'Agland 54.21 320 eP P 05 04 30.2 -0.5
BGF pmax pmax
comp=Z,20nm,0.9s,mb5.0
BGF Bois d'Agland 54.21 320 eP P 05 04 30.2 -0.5
comp=Z,20nm,0.9s,mb5.0
RRI2 Red Ridge 54.24 55 eP P 05 04 32.3 +1.4
comp=Z,7.5nm,0.9s,mb4.6
SNOW Snow King Moun 54.24 54 eP P 05 04 31.8 +0.8
J16A Bone 54.25 55 ⇓P P 05 04 31.6 +0.6
baz=54,SNR=5.9
REDW Red Top Meadow 54.32 54 eP P 05 04 32.8 +1.3
comp=Z,25nm,1.5s,mb4.9
K13A Stover Farm, H 54.32 57 ⇓P P 05 04 32.5 +1.0
baz=54,SNR=8.0
J17A Brown Place, J 54.35 54 ⇑P P 05 04 32.6 +0.9
baz=54
L10A Juniper Basin 54.35 60 ⇓P P 05 04 32.9 +1.1
baz=54,SNR=13
WDC Whiskeytown Da 54.41 66 eP P 05 04 32.8 +0.6
WDC pmax pmax
comp=Z,15nm,1.0s,mb4.9
WDC Whiskeytown Da 54.41 66 eP P 05 04 32.8 +0.5
comp=Z,15nm,1.0s,mb4.9
L11A Cat Creek Ranc 54.42 59 ⇑P P 05 04 33.2 +0.9
baz=54,SNR=7.3
BR131 Keskin Array S 54.52 291 eP P 05 04 33.7 +0.7
comp=Z,4.9nm,0.9s,mb4.5
BRTR Keskin Array B 54.52 291 P P 05 04 33.7 +0.7
comp=Z,2.7nm,0.9s,mb4.3,baz=20,slow=3.6,SNR=11
BRTR PcP PcP 05 05 35.8 -0.5
comp=Z,4.4nm,1.1s,baz=36,slow=2.7,SNR=4.3
BRTR LR LR 05 32 22.9
comp=Z,131nm,18.9s,MS4.0,baz=7.4,slow=41
BRTR Keskin Array B 54.52 291 P P 05 04 33.7 +0.7
BRTR 05 05 35.8
BRTR pmax pmax
comp=Z,3.0nm,0.9s
BRTR MLR MLR
comp=Z,131nm,18.9s
LPL La Plagne 54.57 317 eP P 05 04 33.7 +0.4
comp=Z,26nm,1.1s,mb4.9
LPL La Plagne 54.57 317 eP P 05 04 33.7 +0.4
LPL pmax pmax
comp=Z,13nm,1.1s,mb4.9
LPL La Plagne 54.57 317 eP P 05 04 33.7 +0.4
comp=Z,13nm,1.1s,mb4.9
TCF Toulx Ste Croi 54.58 321 eP P 05 04 32.8 -0.6
comp=Z,37nm,1.2s,mb5.0
TCF Toulx Ste Croi 54.58 321 eP P 05 04 32.8 -0.6
TCF pmax pmax
comp=Z,18nm,1.2s,mb5.0
TCF Toulx Ste Croi 54.58 321 eP P 05 04 32.8 -0.6
comp=Z,18nm,1.2s,mb5.0
LPG La Plagne 54.59 317 eP P 05 04 33.9 +0.5
L12A House Creek Ra 54.60 58 ⇓P P 05 04 34.6 +1.0
baz=54,SNR=7.1
IRAZ Razeghan 54.61 275 eP P 05 04 40.3 +6.6
K14A Jones Ranch, D 54.62 57 ⇑P P 05 04 34.2 +0.5
baz=54
K15A Arbon 54.62 56 ⇑P P 05 04 34.3 +0.6
baz=54
IDAH Dahanechah 54.62 264 eP P 05 04 35.2 +1.3
J18A Kendall Valley 54.64 54 ⇑P P 05 04 34.2 +0.4
baz=54,SNR=8.7
MFF Saint Martin d 54.64 323 eP P 05 04 33.6 -0.2
comp=Z,29nm,1.1s,mb4.9
MFF Saint Martin d 54.64 323 eP P 05 04 33.6 -0.2
MFF pmax pmax
comp=Z,14nm,1.1s,mb4.9
MFF Saint Martin d 54.64 323 eP P 05 04 33.6 -0.2
comp=Z,14nm,1.1s,mb4.9
K16A Soda Springs 54.68 55 ⇑P P 05 04 35.1 +0.9
baz=54
M10A I.L. Ranch, Tu 54.87 60 ⇓P P 05 04 36.4 +0.9
baz=55,SNR=9.6
L13A Double Diamond 54.89 58 ⇑P P 05 04 36.5 +0.9
baz=55,SNR=7.5
K17A Gardner Place, 54.89 55 ⇓P P 05 04 36.4 +0.7
baz=55
RSSD Black Hills 54.94 48 eP P 05 04 35.2 -0.8
RSSD e 05 05 37.7
RSSD pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
RSSD Black Hills 54.94 48 eP P 05 04 35.2 -0.8
comp=Z,6.6nm,0.7s,mb4.8
RSSD ePcP PcP 05 05 37.7 -0.1
KCPM Cahto Peak 55.02 67 eP P 05 04 37.9 +1.3
comp=Z,10nm,1.1s,mb4.8
BNI Bardonecchia 55.03 317 eP P 05 04 37.8 +1.2
BNI pmax pmax
comp=Z,21nm,1.2s,mb5.0
BNI Bardonecchia 55.03 317 eP P 05 04 37.8 +1.2
comp=Z,21nm,1.2s,mb5.0
L14A Malta 55.09 57 ⇑P P 05 04 38.2 +1.1
baz=55,SNR=5.5
M11A Holland Ranch, 55.12 59 ⇓P P 05 04 38.9 +1.5
baz=55,SNR=12
BW06 Boulder Array 55.16 53 ⇑P P 05 04 37.1 -0.4
baz=55,SNR=6.9
BW06 Boulder Array 55.16 53 eP P 05 04 37.4 -0.2
comp=Z,4.8nm,0.9s,mb4.5
PDAR Pinedale Array 55.16 53 P P 05 04 37.3 -0.3
comp=Z,1.4nm,0.5s,mb4.2,baz=8.5,slow=3.0,SNR=20
PDAR LR LR 05 31 20.3
comp=Z,180nm,18.3s,MS4.2,baz=333,slow=40
K18A Toltan Ranch, 55.18 54 ⇓P P 05 04 38.1 +0.3
baz=55,SNR=10
K19A Absolon Red Bu 55.25 53 ⇑P P 05 04 38.0 -0.2
baz=55
ORIF Oris-en-Rattie 55.30 317 eP P 05 04 38.7 +0.1
comp=Z,24nm,1.0s,mb4.9
ORIF eMLR MLR
comp=Z,343nm,18.2s,MS4.2
ORIF Oris-en-Rattie 55.30 317 eP P 05 04 38.7 +0.1
ORIF pmax pmax
comp=Z,12nm,1.0s,mb4.9
ORIF Oris-en-Rattie 55.30 317 eP P 05 04 38.7 +0.1
comp=Z,12nm,1.0s,mb4.9
L15A Malad City 55.30 56 ⇓P P 05 04 38.8 +0.1
baz=55,SNR=15
M12A Wells 55.33 59 ⇑P P 05 04 40.0 +1.1
baz=55,SNR=9.1
MBDF Montbardon 55.33 316 eP P 05 04 38.9 +0.1
comp=Z,32nm,1.0s,mb5.0
MBDF Montbardon 55.33 316 eP P 05 04 38.9 +0.1
MBDF pmax pmax
comp=Z,16nm,1.0s,mb5.0
MBDF Montbardon 55.33 316 eP P 05 04 38.9 +0.1
comp=Z,16nm,1.0s,mb5.0
HVU Hansel Valley 55.44 57 eP P 05 04 38.5 -1.1
HVU pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
HVU Hansel Valley 55.44 57 eP P 05 04 38.5 -1.1
comp=Z,5.2nm,0.9s,mb4.6
L16A Fish Haven 55.49 55 ⇑P P 05 04 40.0 0.0
baz=55,SNR=12
K20A Yellowstone Ra 55.51 52 ⇓P P 05 04 39.5 -0.6
baz=55,SNR=7.2
L17A Cokeville 55.53 55 ⇑P P 05 04 40.3 +0.1
baz=55
COWI Conover 55.53 35 eP P 05 04 37.9 -2.3
comp=Z,6.7nm,0.8s,mb4.7
M13A Montello 55.54 58 ⇑P P 05 04 41.4 +1.0
baz=55,SNR=14
M13A Montello 55.54 58 eP P 05 04 41.8 +1.5
comp=Z,11nm,1.0s,mb4.8
VIVF Saint-Julien-l 55.56 318 eP P 05 04 40.1 -0.4
M14A Sheep Mountain 55.58 57 ⇓P P 05 04 41.4 +0.7
baz=55,SNR=8.9

SNTG Esanatoglia 55.62 311 P P 05 04 40.8 -0.1
RJF Les Rejaudoux 55.65 321 eP P 05 04 40.7 -0.4
RJF eMLR MLR
comp=Z,412nm,18.8s,MS4.2
RJF Les Rejaudoux 55.65 321 eP P 05 04 40.7 -0.4
RJF LR LR
comp=Z,410nm,18.8s,MS4.5
N11A Elko Archery C 55.72 60 ⇓P P 05 04 42.5 +0.8
baz=56
BMN Battle Mountai 55.76 61 eP P 05 04 43.7 +1.7
BMN e*PP pP 05 04 52.1 +6.9
BMN pmax pmax
comp=Z,12nm,0.8s,mb5.0
BMN Battle Mountai 55.76 61 eP P 05 04 43.7 +1.7
comp=Z,12nm,0.8s,mb5.0
BMN epP pP 05 04 52.1 +7.0
HOPS Hopland 55.80 67 eP P 05 04 43.2 +1.0
comp=Z,27nm,1.1s,mb5.2
M15A Larsen Ranch, 55.81 56 ⇓P P 05 04 42.3 0.0
baz=56,SNR=7.4
L19A Farson 55.84 54 ⇓P P 05 04 42.1 -0.4
baz=56
N12A Clover Valley, 55.84 59 ⇑P P 05 04 43.3 +0.8
baz=56,SNR=6.4
N12A Clover Valley, 55.84 59 eP P 05 04 43.5 +1.0
comp=Z,16nm,1.0s,mb5.0
HWUT Hardware Ranch 55.86 56 eP P 05 04 43.3 +0.7
comp=Z,10nm,1.1s,mb4.8
L18A Fontenelle, Gr 55.87 54 ⇓P P 05 04 42.0 -0.7
baz=56,SNR=8.1
ELK Elko 55.90 59 eP P 05 04 43.5 +0.6
CAF Calviac 55.93 320 eP P 05 04 43.3 +0.2
comp=Z,28nm,1.1s,mb4.9
CAF Calviac 55.93 320 eP P 05 04 43.3 +0.2
CAF pmax pmax
comp=Z,14nm,1.1s,mb4.9
CAF Calviac 55.93 320 eP P 05 04 43.3 +0.2
comp=Z,14nm,1.1s,mb4.9
PAHR Pah Rah Range 55.97 63 eP P 05 04 44.3 +0.8
comp=Z,18nm,1.1s,mb5.0
NRCA Norcia 55.99 310 P P 05 04 43.6 0.0
SBF Sospel 56.05 316 eP P 05 04 44.0 0.0
O10A Cortez Mining, 56.05 60 ⇑P P 05 04 44.9 +0.8
baz=56,SNR=5.1
TIR Tirane 56.06 304 eP P 05 04 40.8 -3.3
LFF La Frestale 56.13 321 eP P 05 04 44.6 +0.1
L20A Wamsutter 56.13 53 ⇑P P 05 04 44.3 -0.3
baz=56
IKLH Kolahrood 56.17 272 eP P 05 04 46.1 +1.1
M17A Scullys Gap (B 56.17 55 ⇑P P 05 04 45.1 +0.2
baz=56
N14A Grayback Hills 56.24 57 ⇓P P 05 04 45.8 +0.4
baz=56
SMRF Simiane la Rot 56.27 317 eP P 05 04 45.7 +0.2
comp=Z,87nm,1.3s,mb5.3
SMRF Simiane la Rot 56.27 317 eP P 05 04 45.7 +0.2
comp=Z,87nm,1.3s,mb5.6
WCN Washoe City 56.27 64 ⇑P P 05 04 46.6 +1.0
baz=56
M18A Lyman 56.34 54 ⇓P P 05 04 46.1 0.0
baz=56
L21A Rawlins 56.37 52 ⇑P P 05 04 46.3 0.0
baz=56,SNR=9.2
O11A Cowboy Ranch, 56.39 60 ⇑P P 05 04 47.3 +0.8
baz=56,SNR=11
AQU L'Aquila 56.40 310 eP P 05 04 46.3 -0.2
AQU pmax pmax
comp=Z,34nm,0.9s,mb5.4
AQU L'Aquila 56.40 310 eP P 05 04 46.3 -0.2
comp=Z,34nm,0.9s,mb5.4
LASF Ste Croix 56.46 319 eP P 05 04 47.3 +0.4
comp=Z,80nm,1.2s,mb5.3
O12A Currie 56.46 59 ⇓P P 05 04 47.5 +0.5
baz=56,SNR=5.7
ICHK Chekchek 56.48 269 eP P 05 04 48.4 +1.2
IGHG Ghaleghazi 56.48 277 eP P 05 04 46.8 -0.4
FRF La Foret Royal 56.48 316 eP P 05 04 46.1 -1.0
comp=Z,34nm,0.9s,mb5.1
FRF La Foret Royal 56.48 316 eP P 05 04 46.1 -1.0
FRF pmax pmax
comp=Z,17nm,0.9s,mb5.1
FRF La Foret Royal 56.48 316 eP P 05 04 46.1 -1.0
comp=Z,17nm,0.9s,mb5.1
L22A Ellis Ranch, M 56.49 51 ⇑P P 05 04 46.9 -0.2
baz=56,SNR=15
N16A Rees Ranch, Co 56.57 56 ⇑P P 05 04 47.8 0.0
baz=56
N17A Moffit Pass 56.65 55 ⇑P P 05 04 48.4 +0.1
baz=56
ECSD EROS Data Cent 56.65 42 eP P 05 04 47.0 -1.3
comp=Z,18nm,1.1s,mb5.0
M20A Sweetwater, Wa 56.66 53 ⇓P P 05 04 48.6 +0.2
baz=56
RWWY Rawlins 56.67 52 eP P 05 04 48.4 0.0
comp=Z,13nm,1.0s,mb4.9
P10A Eureka 56.70 61 ⇓P P 05 04 50.2 +1.5
baz=56,SNR=6.9
M21A Separation Pea 56.72 52 ⇑P P 05 04 48.7 -0.1
baz=56
LMR La Mourre 56.73 316 eP P 05 04 47.9 -0.9
comp=Z,35nm,1.2s,mb5.0
LMR La Mourre 56.73 316 eP P 05 04 47.9 -0.9
LMR pmax pmax
comp=Z,17nm,1.2s,mb5.0
LMR La Mourre 56.73 316 eP P 05 04 47.9 -0.9
comp=Z,17nm,1.2s,mb5.0
O13A Hicks Ranch, I 56.76 58 ⇑P P 05 04 50.0 +0.9
baz=57
IBAF Bafgh 56.80 268 eP P 05 04 51.8 +2.3
JLU Jordanelle 56.84 56 eP P 05 04 50.4 +0.7
comp=Z,17nm,1.4s,mb4.9
N18A Larsen Ranch, 56.85 54 ⇑P P 05 04 49.2 -0.5
baz=57
P11A Circle Ranch, 56.92 60 ⇓P P 05 04 51.1 +0.8
baz=57
O15A The Old Anders 56.94 57 ⇓P P 05 04 50.5 +0.1
baz=57
DUG Dugway 56.95 57 ⇑P P 05 04 50.7 +0.3
baz=57,SNR=15
DUG Dugway 56.95 57 eP P 05 04 51.1 +0.7
DUG pmax pmax
comp=Z,16nm,1.1s,mb5.0
DUG Dugway 56.95 57 eP P 05 04 51.1 +0.6
comp=Z,16nm,1.1s,mb5.0
IPIR Pirpir 56.95 273 eP P 05 04 51.4 +0.9
DAU Daniels Canyon 57.07 56 eP P 05 04 52.2 +0.9
WAKR Walker 57.10 64 eP P 05 04 52.7 +1.1
P12A McGill 57.19 59 ⇑P P 05 04 52.5 +0.3
baz=57,SNR=6.6
O16A Springville 57.21 56 ⇑P P 05 04 52.6 +0.3
baz=57
IMEH Mehriz 57.24 269 eP P 05 04 52.7 +0.1
N20A Spence Gulch, 57.28 53 ⇓P P 05 04 52.7 0.0
baz=57
RFI Roccamonfina 57.30 309 P P 05 04 53.9 +1.0
NLU North Lily Min 57.33 57 eP P 05 04 54.0 +0.8
comp=Z,15nm,1.4s,mb4.8
CMB Columbia Colle 57.34 65 eP P 05 04 52.7 -0.5
CMB pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
CMB Columbia Colle 57.34 65 eP P 05 04 52.7 -0.5
comp=Z,5.5nm,1.0s,mb4.5
O17A Robinson Place 57.38 55 ⇓P P 05 04 54.0 +0.5
baz=57,SNR=16
PHWY Pilot Hill 57.39 50 eP P 05 04 53.4 -0.1
comp=Z,5.0nm,0.8s,mb4.6
P13A Bates Ranch, G 57.40 58 ⇑P P 05 04 54.1 +0.4
baz=57,SNR=15
NVAR Mina Array Bea 57.43 63 P P 05 04 55.1 +1.2
comp=Z,7.6nm,0.9s,mb4.7,baz=330,slow=4.2,SNR=48
MTLF Montolieu 57.45 320 eP P 05 04 54.1 +0.2
comp=Z,45nm,1.3s,mb5.0
MTLF Montolieu 57.45 320 eP P 05 04 54.1 +0.2
MTLF pmax pmax
comp=Z,22nm,1.3s,mb5.0
MTLF Montolieu 57.45 320 eP P 05 04 54.1 +0.2
comp=Z,22nm,1.3s,mb5.0
O18A Roosevelt 57.47 55 ⇓P P 05 04 53.8 -0.3
baz=57
P14A Drum Mountains 57.47 58 ⇓P P 05 04 54.8 +0.7
baz=57,SNR=23
Q10A Clear Creek Ra 57.48 61 ⇑P P 05 04 55.1 +0.9
baz=57,SNR=18
N21A Black Mountain 57.50 52 ⇑P P 05 04 53.9 -0.4
baz=57
O19A Miners Draw (B 57.62 54 ⇑P P 05 04 55.0 -0.1
baz=57

Q12A **Willow Creek R** 57.62 59 ⇓P P 05 04 56.3 +1.1
baz=57
Q11A **Duckwater** 57.62 60 ⇑P P 05 04 55.9 +0.7
baz=57,SNR=18
P15A **Leamington** 57.66 57 ⇓P P 05 04 55.7 +0.3
baz=58
N22A **Wattenberg Ran** 57.67 51 ⇑P P 05 04 55.2 -0.3
baz=58
QIZ **Qiongzhong** 57.83 207 P P 05 04 55.5 -1.4
QIZ pP pP 05 05 03.5 +3.4
QIZ sP sP 05 05 07.2 +5.9
QIZ PP PP 05 07 02.2 -2.7
QIZ S S 05 12 57.1 +1.1
QIZ SS SS 05 16 47.9 +1.6
QIZ pmax pmax
comp=Z,88nm,4.2s
QIZ LR LR
comp=N,670nm,15.1s,MS4.9
QIZ LR LR
comp=E,210nm,15.3s,MS4.9
QIZ LR LR
comp=Z,830nm,14.2s,MS5.0
Q13A **Wheeler Ranch,** 57.88 59 ⇑P P 05 04 57.4 +0.4
baz=58,SNR=16
O20A **White River Ci** 57.96 53 ⇓P P 05 04 57.1 -0.4
baz=58
Q14A **Sevier Lake (B** 58.01 58 ⇓P P 05 04 58.2 +0.3
baz=58,SNR=9.1
R10A **Warm Springs** 58.02 61 ⇓P P 05 04 58.3 +0.4
baz=58,SNR=11
O21A **Pagoda** 58.03 52 ⇑P P 05 04 58.2 +0.1
baz=58
EPF **Esparros** 58.05 321 eP P 05 04 57.7 -0.5
comp=Z,29nm,1.2s,mb4.9
EPF **Esparros** 58.05 321 eP P 05 04 57.7 -0.5
EPF pmax pmax
comp=Z,14nm,1.2s,mb4.9
EPF **Esparros** 58.05 321 eP P 05 04 57.7 -0.5
comp=Z,14nm,1.2s,mb4.9
P17A **Butcher Ranch,** 58.08 56 ⇑P P 05 04 58.4 0.0
baz=58,SNR=8.1
R11A **Troy Canyon, C** 58.12 60 ⇓P P 05 04 59.3 +0.6
baz=58,SNR=59
TMUT **Trail Mountain** 58.15 56 eP P 05 04 59.2 +0.3
comp=Z,10nm,1.2s,mb4.7
Q15A **Fillmore** 58.19 57 ⇓P P 05 04 59.6 +0.4
baz=58,SNR=7.5
SJPF **Ste Jean** 58.22 323 eP P 05 05 00.0 +0.7
comp=Z,50nm,1.5s,mb5.0
SJPF **Ste Jean** 58.22 323 eP P 05 05 00.0 +0.7
SJPF pmax pmax
comp=Z,25nm,1.5s,mb5.0
SJPF **Ste Jean** 58.22 323 eP P 05 05 00.0 +0.7
comp=Z,25nm,1.5s,mb5.0
O22A **Kremmling** 58.27 52 ⇑P P 05 04 59.8 +0.1
baz=58,SNR=15
P19A **Cripple Cowboy** 58.29 54 ⇓P P 05 04 59.5 -0.4
baz=58,SNR=13
S10A **Tonopah Range,** 58.30 61 ⇓P P 05 05 00.6 +0.6
baz=58,SNR=34
SAO **San Andreas Ge** 58.31 66 eP P 05 05 00.6 +0.6
SAO pmax pmax
comp=Z,18nm,1.1s,mb5.0
SAO **San Andreas Ge** 58.31 66 eP P 05 05 00.6 +0.6
comp=Z,18nm,1.1s,mb5.0
ETSF **Etsaut** 58.32 322 eP P 05 05 00.4 +0.3
R12A **Pony Springs,** 58.35 59 ⇓P P 05 05 00.7 +0.3
baz=58,SNR=8.6
OGNE **Ogallala** 58.39 48 eP P 05 05 00.3 -0.2
comp=Z,23nm,1.0s,mb5.2
MTUM **Tungsten Hills** 58.40 63 eP P 05 05 02.5 +1.8
EBIE **Bielsa** 58.42 321 P P 05 05 01.7 +0.9
comp=Z,7.9nm,1.0s,mb4.7
SRU **San Rafael** 58.47 56 ⇓P P 05 05 01.2 0.0
baz=58,SNR=12
SRU **San Rafael** 58.47 56 eP P 05 05 01.4 +0.2
SRU pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
SRU **San Rafael** 58.47 56 eP P 05 05 01.4 +0.3
comp=Z,9.0nm,0.9s,mb4.8
JFWS **Jewell Farm** 58.48 37 eP P 05 04 59.6 -1.6
JFWS pmax pmax
comp=Z,24nm,0.9s,mb5.2
JFWS **Jewell Farm** 58.48 37 eP P 05 04 59.6 -1.5
comp=Z,24nm,0.9s,mb5.2
Q16A **Castle Valley** 58.52 56 ⇓P P 05 05 01.8 +0.3
baz=58,SNR=23
P20A **De Beque** 58.54 54 ⇑P P 05 05 01.1 -0.5
baz=58
Q18A **Rafter H Ranch** 58.56 55 ⇓P P 05 05 01.3 -0.5
baz=58,SNR=6.0
CSOR **Sort** 58.56 320 P P 05 05 03.4 +1.6
comp=Z,20nm,1.1s,mb5.1
R13A **O'Grain Ranch,** 58.63 59 ⇑P P 05 05 02.9 +0.6
baz=58,SNR=8.7
FRNY **Flat Rock** 58.69 23 eP P 05 05 02.0 -0.6
comp=Z,27nm,1.3s,mb5.1
MSU **Marysvale** 58.70 57 eP P 05 05 03.8 +1.1
P21A **Newcastle** 58.70 53 ⇓P P 05 05 02.8 0.0
baz=58
S11A **Rachel** 58.76 61 ⇑P P 05 05 03.5 +0.4
baz=59,SNR=7.8
P22A **Eagle** 58.77 52 ⇓P P 05 05 03.1 -0.2
baz=59
LONY **Lake Ozonia** 58.80 24 eP P 05 05 02.7 -0.7
comp=Z,31nm,1.3s,mb5.2
ISCO **Idaho Springs** 58.81 51 eP P 05 05 03.7 +0.2
ISCO pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
ISCO **Idaho Springs** 58.81 51 eP P 05 05 03.7 +0.2
comp=Z,10nm,1.2s,mb4.7
Q19A **Hogan Spring (** 58.88 54 ⇓P P 05 05 03.8 -0.2
baz=59
R15A **Junction** 58.97 57 ⇓P P 05 05 05.5 +0.9
baz=59,SNR=12
S12A **Delamar Landin** 58.99 60 ⇑P P 05 05 05.5 +0.7
baz=59,SNR=18
SCIA **State Center** 58.99 40 eP P 05 05 03.6 -1.1
comp=Z,26nm,0.8s,mb5.3
GRAC **Grapevine Rang** 59.01 62 ⇓P P 05 05 05.6 +0.7
baz=59
R16A **Teasdale** 59.06 57 ⇓P P 05 05 06.2 +0.9
baz=59,SNR=17
Q20A **Ridgley Place,** 59.08 54 ⇑P P 05 05 04.7 -0.7
baz=59
R17A **Hanksville Air** 59.10 56 ⇓P P 05 05 04.9 -0.6
baz=59,SNR=8.7
ARUT **Antelope Range** 59.12 59 eP P 05 05 05.9 +0.2
ARUT pmax pmax
comp=Z,25nm,1.3s,mb5.1
ARUT **Antelope Range** 59.12 59 eP P 05 05 05.9 +0.2
comp=Z,25nm,1.3s,mb5.1
SMCO **Snowmass** 59.13 52 eP P 05 05 05.9 +0.2
comp=Z,8.8nm,0.9s,mb4.8
P23A **Jefferson** 59.17 51 ⇑P P 05 05 06.2 +0.2
baz=59,SNR=6.5
S14A **Cedar City** 59.21 58 ⇑P P 05 05 06.3 0.0
baz=59
S13A **Holt Ranch, En** 59.23 59 ⇑P P 05 05 06.9 +0.5
baz=59,SNR=16
RCTC **Rector, Farmer** 59.25 64 ⇓P P 05 05 07.1 +0.5
baz=59,SNR=5.2
T11A **Corn Creek, Al** 59.26 60 ⇓P P 05 05 07.0 +0.4
baz=59
R18A **Canyonlands Na** 59.30 55 ⇓P P 05 05 06.6 -0.3
baz=59,SNR=8.7
Q21A **Lamborn Mesa,** 59.34 53 ⇑P P 05 05 07.0 -0.2
baz=59
P25A **Willow Gulch B** 59.37 50 ⇓P P 05 05 07.7 +0.3
baz=59,SNR=22
CCUT **Cedar City** 59.37 59 eP P 05 05 08.0 +0.6
comp=Z,9.6nm,1.0s,mb4.8
CWC **Cottonwood Cre** 59.39 63 ⇑P P 05 05 08.5 +0.9
baz=59
LBNH **Lisbon** 59.43 21 eP P 05 05 07.5 -0.2
LBNH pmax pmax
comp=Z,172nm,1.9s,mb5.8
LBNH **Lisbon** 59.43 21 eP P 05 05 07.5 -0.3
comp=Z,172nm,1.9s,mb5.8
Q22A **Crested Butte,** 59.45 52 ⇑P P 05 05 08.0 0.0
baz=59,SNR=6.3
S15A **Panguitch** 59.46 58 ⇓P P 05 05 08.9 +0.8
baz=59
NCB **Newcomb** 59.48 23 eP P 05 05 08.0 -0.1
comp=Z,17nm,0.9s,mb5.1
R19A **Curley Farm, L** 59.52 55 ⇑P P 05 05 08.1 -0.3
baz=59,SNR=7.4

MDV **Middlebury** 59.55 23 eP P 05 05 08.5 -0.1
CHTO **Chiang Mai** 59.56 219 eP P 05 05 07.9 -1.0
CHTO pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
CHTO **Chiang Mai** 59.56 219 eP P 05 05 07.9 -1.0
comp=Z,5.3nm,0.9s,mb4.6
EPOB **Poblet** 59.57 320 P P 05 05 08.7 0.0
comp=Z,58nm,2.0s,mb5.3
S16A **Weppner Ranch,** 59.58 57 ⇓P P 05 05 09.4 +0.6
baz=59,SNR=32
FURC **Furnace Creek,** 59.63 62 ⇑P P 05 05 09.7 +0.4
baz=60,SNR=5.5
Q24A **Divide** 59.70 51 ⇑P P 05 05 09.7 0.0
baz=60,SNR=7.2
T13A **Saint George** 59.76 59 ⇑P P 05 05 10.7 +0.6
baz=60,SNR=17
R21A **Cimarron** 59.80 53 ⇓P P 05 05 09.8 -0.6
baz=60
U10A **Ash Meadows, A** 59.80 62 ⇑P P 05 05 10.8 +0.4
baz=60
R20A **Redvale** 59.80 54 ⇓P P 05 05 10.2 -0.2
baz=60,SNR=9.4
PV01 **Paradox Valley** 59.82 54 eP P 05 05 10.4 -0.1
comp=Z,934nm,0.9s
S17A **Black Ridge (B** 59.83 56 ⇑P P 05 05 10.4 -0.2
baz=60,SNR=24
MPMC **Manual Prospec** 59.88 63 ⇓P P 05 05 11.7 +0.7
baz=60,SNR=22
T14A **Hurricane** 59.90 58 ⇑P P 05 05 11.3 +0.2
baz=60,SNR=18
CMAR **Chiang Mai Arr** 59.91 219 P P 05 05 10.6 -0.7
comp=Z,1.7nm,0.5s,mb4.4,baz=356,slow=8.3,SNR=11
CMAR **Chiang Mai Arr** 59.91 219 P P 05 05 10.6 -0.7
CMAR pmax pmax
comp=Z,2.0nm,0.5s
Q25A **Bedland, Calha** 59.93 50 ⇑P P 05 05 11.0 -0.3
baz=60,SNR=8.0
S18A **Hurst Farm, Bl** 59.95 55 ⇑P P 05 05 11.3 -0.1
baz=60,SNR=15
ISA **Isabella** 60.04 64 ⇓P P 05 05 12.2 +0.1
baz=60
ISA **Isabella** 60.04 64 eP P 05 05 12.5 +0.4
ISA pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
ISA **Isabella** 60.04 64 eP P 05 05 12.5 +0.4
comp=Z,10nm,1.1s,mb4.8
S19A **Harvey Farm, M** 60.07 55 ⇑P P 05 05 12.1 -0.2
baz=60,SNR=18
T15A **Red Dirt Ranch** 60.09 58 ⇑P P 05 05 12.4 0.0
baz=60
R22A **Saguache, Gunn** 60.09 52 ⇓P P 05 05 12.4 0.0
baz=60,SNR=8.1
ACCN **Adirondack Com** 60.11 23 eP P 05 05 12.3 -0.1
comp=Z,32nm,1.3s,mb5.2
S20A **Disappointment** 60.15 54 ⇑P P 05 05 12.6 -0.2
baz=60,SNR=8.3
U12A **Valley of Fire** 60.19 60 ⇑P P 05 05 13.7 +0.6
baz=60
SHOC **Shoshone** 60.31 62 ⇑P P 05 05 14.5 +0.6
baz=60,SNR=7.2
T16A **Glen Canyon Da** 60.31 57 ⇑P P 05 05 13.9 0.0
baz=60
U13A **Pakoon Wash** 60.33 59 ⇓P P 05 05 14.3 +0.3
baz=60,SNR=19
LRMC **Laurel Mountai** 60.40 63 ⇓P P 05 05 15.2 +0.7
baz=60
R24A **Sanders Place,** 60.42 51 ⇓P P 05 05 14.2 -0.4
baz=60,SNR=8.9
S21A **Coal Bank Pass** 60.43 54 ⇓P P 05 05 14.9 +0.2
baz=60,SNR=7.0
T17A **Navajo Res., N** 60.45 56 ⇑P P 05 05 14.4 -0.4
baz=60,SNR=13
PKM **Peak Mountain** 60.47 65 ⇑P P 05 05 16.1 +1.1
baz=60
MMAI **Mount Meron Ar** 60.49 287 LR LR 05 32 51.3
comp=Z,158nm,21.0s,MS4.1,baz=30,slow=38
U14A **Mt Trumbull** 60.49 59 ⇑P P 05 05 15.2 0.0
baz=60,SNR=13
T18A **Mexican Hat** 60.51 56 ⇓P P 05 05 15.2 0.0
baz=60,SNR=13
S22A **4UR Ranch, Cre** 60.55 53 ⇓P P 05 05 15.9 +0.4
baz=60,SNR=8.5
V11A **Goodsprings** 60.56 61 ⇓P P 05 05 16.4 +0.8
baz=60,SNR=6.9
ETOR **Torete** 60.59 323 P P 05 05 16.4 +0.7
ETOR pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
ETOR **Torete** 60.59 323 P P 05 05 16.4 +0.7
comp=Z,5.6nm,0.8s,mb4.8
U15A **North Rim** 60.68 58 ⇑P P 05 05 16.4 0.0
baz=60,SNR=7.8
MVCO **Mesa Verde** 60.72 54 ⇓P P 05 05 16.9 +0.2
baz=60,SNR=6.0
MVCO **Mesa Verde** 60.72 54 eP P 05 05 17.2 +0.6
comp=Z,12nm,1.1s,mb4.9
GSC **Goldstone** 60.77 62 ⇑P P 05 05 17.5 +0.5
baz=61
GSC **Goldstone** 60.77 62 eP P 05 05 18.1 +1.1
GSC pmax pmax
comp=Z,11nm,1.0s,mb4.9
GSC **Goldstone** 60.77 62 eP P 05 05 18.1 +1.1
comp=Z,11nm,1.0s,mb5.0
V12A **Nelson** 60.79 60 ⇓P P 05 05 17.7 +0.5
baz=61,SNR=10.0
SDCO **Great Sand Dun** 60.81 52 eP P 05 05 17.2 -0.1
comp=Z,20nm,1.2s,mb5.1
U17A **Shonto** 60.86 56 ⇓P P 05 05 17.4 -0.3
baz=61
V13A **Grand Canyon W** 60.86 60 ⇓P P 05 05 17.7 0.0
baz=61
CBKS **Cedar Bluff** 60.88 46 eP P 05 05 16.8 -0.9
CBKS pmax pmax
comp=Z,29nm,1.1s,mb5.3
CBKS **Cedar Bluff** 60.88 46 eP P 05 05 16.8 -0.9
comp=Z,30nm,1.1s,mb5.3
EDW2 **Edwards Air Fo** 60.90 64 ⇓P P 05 05 17.8 -0.1
baz=61,SNR=7.8
HDIL **Hopedale** 60.93 37 eP P 05 05 16.6 -1.5
comp=Z,24nm,0.9s,mb5.3
ASF **Jabal al Asfar** 60.94 286 P P 05 05 17.8 -0.4
comp=Z,1.5nm,0.4s,mb4.5,baz=240,slow=2.8,SNR=3.9
ASF **Jabal al Asfar** 60.94 286 P P 05 05 17.8 -0.4
ASF pmax pmax
comp=Z,2.0nm,0.4s
S24A **Houchin Ranch,** 60.97 51 ⇑P P 05 05 18.3 -0.1
baz=61,SNR=6.6
MVO **Moncorvo** 60.97 327 P P 05 05 18.4 +0.1
T19A **Beclabito** 60.98 55 ⇑P P 05 05 18.5 +0.1
baz=61
BINY **Binghamton** 61.05 25 eP P 05 05 18.1 -0.8
comp=Z,44nm,1.3s,mb5.4
GUD **Guadarrama** 61.07 325 P P 05 05 19.5 +0.5
GUD pmax pmax
comp=Z,9.0nm,0.9s,mb4.9
GUD **Guadarrama** 61.07 325 P P 05 05 19.5 +0.5
comp=Z,9.3nm,0.9s,mb4.9
S25A **Robets Cordova** 61.10 51 ⇓P P 05 05 18.4 -0.9
baz=61,SNR=5.0
T21A **Navajo Lake** 61.13 54 ⇓P P 05 05 19.7 +0.2
baz=61
KSU1 **Kansas State U** 61.16 43 eP P 05 05 18.5 -1.1
comp=Z,29nm,0.8s,mb5.5
W12A **Cal Nev Ari** 61.20 61 ⇑P P 05 05 20.3 +0.3
baz=61
U18A **Rough Rock, Ch** 61.20 56 ⇓P P 05 05 20.0 +0.1
baz=61
T22A **Edith** 61.24 53 ⇓P P 05 05 20.0 -0.2
baz=61,SNR=13
V14A **Boquillas Ranc** 61.27 59 ⇑P P 05 05 20.7 +0.3
baz=61,SNR=24
V15A **Kaibab Nation** 61.29 58 ⇑P P 05 05 20.7 +0.1
baz=61,SNR=18
HEC **Hector,Ludlow** 61.33 62 ⇓P P 05 05 21.5 +0.7
baz=61
T23A **Casias Ranch,** 61.39 52 ⇑P P 05 05 21.1 -0.1
baz=61
U19A **Dine' College,** 61.46 55 ⇑P P 05 05 21.6 -0.2
baz=61,SNR=11
MWC **Mount Wilson** 61.52 64 eP P 05 05 23.4 +1.3
MWC pmax pmax
comp=Z,38nm,1.2s,mb5.4
MWC **Mount Wilson** 61.52 64 eP P 05 05 23.4 +1.3
comp=Z,38nm,1.2s,mb5.4
U20A **Newcomb** 61.52 55 ⇓P P 05 05 22.0 -0.2
baz=61,SNR=39
GMRC **Granite Mounta** 61.52 61 ⇑P P 05 05 22.5 +0.3
baz=61,SNR=8.8
BFSC **Mount Baldy Ra** 61.59 63 ⇑P P 05 05 22.9 +0.3

baz=61,SNR=8.1
W13A **Hualapai Mount** 61.61 60 ⇓P P 05 05 23.2 +0.4
baz=61,SNR=7.1
T25A **Trinidad** 61.61 51 ⇓P P 05 05 22.0 -0.7
baz=61
U21A **Nageezi** 61.65 54 ⇓P P 05 05 22.7 -0.3
baz=61
W14A **Seligman** 61.67 59 ⇓P P 05 05 23.5 +0.3
baz=62,SNR=14
WUAZ **Wupatki** 61.75 57 ⇓P P 05 05 23.8 +0.1
baz=62,SNR=5.1
WUAZ **Wupatki** 61.75 57 eP P 05 05 24.3 +0.6
comp=Z,14nm,1.3s,mb4.9
V17A **Tonalea, Kykot** 61.77 57 ⇓P P 05 05 23.7 -0.1
baz=62,SNR=13
MTE **Manteigas** 61.79 327 eP P 05 05 24.1 +0.2
comp=Z,35nm,2.0s,mb5.2
U22A **Llaves** 61.86 53 ⇑P P 05 05 24.4 -0.1
baz=62,SNR=24
V18A **Ganado** 61.87 56 ⇑P P 05 05 24.3 -0.1
baz=62,SNR=11
W15A **Williams** 61.88 58 ⇓P P 05 05 25.1 +0.5
baz=62,SNR=5.2
ESDC **Sonseca Array** 61.99 324 P P 05 05 25.6 +0.4
comp=Z,11nm,1.0s,mb4.9,baz=11,slow=6.7,SNR=17
ESDC **Sonseca Array** 61.99 324 P P 05 05 25.6 +0.3
comp=Z,16nm,1.0s,mb5.1
ESLA **Sonseca Array** 61.99 324 eP P 05 05 25.8 +0.5
U23A **El Rito** 62.04 53 ⇑P P 05 05 25.4 -0.2
baz=62,SNR=16
V20A **Brimhall** 62.09 55 ⇓P P 05 05 25.7 -0.3
baz=62
W16A **Flagstaff** 62.12 58 ⇑P P 05 05 26.5 +0.3
baz=62
ACSO **Alum Creek Sta** 62.15 31 eP P 05 05 24.4 -1.9
comp=Z,26nm,0.7s,mb5.5
U24A **Moreno Valley** 62.15 52 ⇓P P 05 05 26.0 -0.3
baz=62
IRM **Iron Mountain** 62.23 61 ⇑P P 05 05 27.1 +0.1
baz=62
V21A **Milan** 62.26 54 ⇑P P 05 05 26.8 -0.3
baz=62,SNR=7.3
V22A **San Miguel Ran** 62.30 53 ⇓P P 05 05 27.3 0.0
baz=62,SNR=7.3
W17A **Winslow** 62.31 57 ⇑P P 05 05 27.2 -0.2
baz=62
PDMCI **Parker Dam,Lak** 62.32 60 ⇓P P 05 05 27.5 -0.1
baz=62
U25A **Circle Dot Ran** 62.33 51 ⇑P P 05 05 27.0 -0.6
baz=62,SNR=30
PCBR **Castelo Branco** 62.33 327 eP P 05 05 27.8 +0.3
comp=Z,21nm,1.6s,mb5.0
SSPA **Standing Stone** 62.38 27 eP P 05 05 25.7 -2.1
X14A **Yava** 62.43 59 ⇑P P 05 05 28.8 +0.6
baz=62,SNR=15
U26A **Atchley Ranch,** 62.47 50 ⇑P P 05 05 27.4 -1.1
baz=62
PFO **Pinyon Flat Ob** 62.47 63 ⇓P P 05 05 28.5 0.0
baz=62
W18A **Petrified Fore** 62.48 56 ⇑P P 05 05 29.1 +0.5
baz=62
X15A **Humboldt** 62.56 58 ⇓P P 05 05 29.5 +0.4
baz=62,SNR=11
W19A **Sanders** 62.56 56 ⇑P P 05 05 29.3 +0.1
baz=62,SNR=12
V23A **Ortiz Mt. (NFS** 62.61 53 ⇓P P 05 05 29.5 +0.1
baz=62,SNR=9.6
BC3 **Big Chuckawall** 62.65 62 ⇑P P 05 05 29.6 -0.1
baz=62,SNR=6.1
BLO **Bloomington** 62.70 35 eP P 05 05 27.9 -2.1
BLO pmax pmax
comp=Z,22nm,0.7s,mb5.4
BLO **Bloomington** 62.70 35 eP P 05 05 27.9 -2.1
comp=Z,22nm,0.7s,mb5.4
W20A **Ramah** 62.73 55 ⇑P P 05 05 29.6 -0.6
baz=62
Y12C **Blythe** 62.77 61 ⇓P P 05 05 30.5 0.0
baz=63
EVIA **Vianos** 62.79 323 P P 05 05 31.9 +1.3
EVIA pmax pmax
comp=Z,22nm,0.9s,mb5.3
EVIA **Vianos** 62.79 323 P P 05 05 31.9 +1.3
comp=Z,22nm,0.9s,mb5.3
X16A **Lo Mia Camp, P** 62.80 58 ⇓P P 05 05 30.9 +0.2
baz=63,SNR=6.7
V24A **Rampart Ranch,** 62.81 52 ⇓P P 05 05 30.6 -0.2
baz=63
V25A **Rancho No Teng** 62.83 51 ⇓P P 05 05 30.4 -0.6
baz=63,SNR=10
Y13A **Salome** 62.86 60 ⇑P P 05 05 31.1 0.0
baz=63,SNR=6.5
OLIL **Olney** 62.90 36 eP P 05 05 29.4 -1.9
comp=Z,18nm,0.9s,mb5.2
W21A **San Fidel** 62.92 54 ⇑P P 05 05 31.1 -0.4
baz=63
Y14A **Wickenburg** 62.92 59 ⇓P P 05 05 31.5 0.0
baz=63,SNR=5.8
X18A **Snowflake** 63.01 56 ⇓P P 05 05 32.0 -0.1
baz=63,SNR=7.4
X17A **Forest Lakes** 63.01 57 ⇑P P 05 05 32.3 +0.2
baz=63,SNR=7.2
V26A **Tequesquite Ra** 63.04 51 ⇓P P 05 05 30.8 -1.4
baz=63,SNR=18
MONP **Monument Peak** 63.17 63 ⇓P P 05 05 33.3 +0.1
baz=63
W23A **Werner Place,** 63.18 53 ⇓P P 05 05 33.1 -0.2
baz=63,SNR=10
X19A **St. Johns** 63.24 56 ⇑P P 05 05 33.4 -0.2
baz=63,SNR=11
SWSC **Sam W. Stewart** 63.26 62 ⇑P P 05 05 33.6 -0.2
baz=63
FVM **French Village** 63.27 38 eP P 05 05 31.8 -2.0
FVM pmax pmax
comp=Z,12nm,0.9s,mb5.0
FVM **French Village** 63.27 38 eP P 05 05 31.8 -2.0
comp=Z,12nm,0.9s,mb5.0
W24A **Lazy 6 Ranch,** 63.28 52 ⇑P P 05 05 33.0 -0.9
baz=63,SNR=7.4
X20A **Quemado** 63.30 55 ⇑P P 05 05 34.2 +0.1
baz=63,SNR=6.0
Y16A **Circle Bar Ran** 63.30 58 ⇑P P 05 05 34.3 +0.2
baz=63,SNR=8.8
PESTR **Estremoz** 63.31 327 eP P 05 05 34.0 0.0
comp=Z,26nm,1.4s,mb5.2
GLA **Glamis** 63.37 61 ⇓P P 05 05 34.5 0.0
baz=63
GLA **Glamis** 63.37 61 eP P 05 05 35.1 +0.6
GLA pmax pmax
comp=Z,16nm,1.0s,mb5.1
GLA **Glamis** 63.37 61 eP P 05 05 35.1 +0.6
comp=Z,16nm,1.0s,mb5.1
DVTC **Desert V Tower** 63.46 62 ⇓P P 05 05 35.6 +0.4
baz=63
W25A **X Bar L Ranch,** 63.46 51 ⇑P P 05 05 34.2 -0.9
baz=63
Z14A **Wintersburg** 63.48 59 ⇑P P 05 05 35.3 0.0
baz=63
Z13A **Yuma Proving G** 63.49 60 ⇑P P 05 05 35.0 -0.3
baz=63,SNR=8.2
X21A **Alamocita Cree** 63.54 54 ⇑P P 05 05 35.5 -0.1
baz=63,SNR=12
EADA **Adamuz** 63.56 324 P P 05 05 36.4 +0.7
comp=Z,4.9nm,0.8s,mb4.6
CART **Cartagena** 63.58 321 eP P 05 05 35.9 0.0
comp=Z,26nm,0.8s,mb5.3
KEST **Kesra** 63.58 312 P P 05 05 34.5 -1.4
comp=Z,4.2nm,1.1s,mb4.4,baz=339,slow=7.0,SNR=4.3
KEST LR LR 05 38 24.0
comp=Z,119nm,18.3s,MS4.1,baz=316,slow=41
KEST **Kesra** 63.58 312 P P 05 05 34.5 -1.4
KEST LR LR 05 38 23.9
EHUE **Huescar** 63.61 323 P P 05 05 36.8 +0.8
EHUE pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
EHUE **Huescar** 63.61 323 P P 05 05 36.8 +0.7
comp=Z,3.7nm,0.6s,mb4.6
Y17A **Roosevelt** 63.62 57 ⇓P P 05 05 36.2 +0.1
baz=63,SNR=5.9
X22A **Bernardo** 63.64 54 ⇑P P 05 05 36.4 +0.1
baz=63
WCI **Wyandotte Cave** 63.66 35 eP P 05 05 34.5 -1.8
EVO **Evora** 63.69 327 eP P 05 05 36.2 -0.4
comp=Z,38nm,1.1s,mb5.0
EVO eMLR MLR
comp=Z,141nm,18.8s,MS3.9
EVO **Evora** 63.69 327 eP P 05 05 36.8 +0.2
comp=Z,44nm,1.2s,mb5.4
EQES **Quesada** 63.70 323 P P 05 05 38.7 +2.1

comp=Z,10nm,0.9s,mb4.9
Y19A Nutrioso 63.70 56 ⇑P P 05 05 36.9 +0.2
baz=64,SNR=11
Y18A Canyon Day Jun 63.71 57 ⇑P P 05 05 36.3 -0.4
baz=64,SNR=11
LAZ Ladron 63.71 54 *eP* **P 05 05 36.4 -0.3**
comp=Z,3.5nm,1.2s,mb4.3
SIUC Southern Illin 63.73 37 *eP* **P 05 05 35.4 -1.4**
comp=Z,27nm,0.8s,mb5.3
W26A Owens Ranch, T 63.73 51 ⇓P P 05 05 35.9 -0.9
baz=64
ECAB El Cabril 63.78 325 P **P 05 05 37.2 0.0**
comp=Z,12nm,1.0s,mb4.9
113A Mohawk Valley, 63.88 60 ⇑P P 05 05 37.5 -0.4
baz=64
W27A Bowe Ranch, En 63.89 50 ⇓P P 05 05 36.6 -1.3
baz=64
PBAR Barrancos 63.91 327 *eP* **P 05 05 38.1 +0.1**
Y20A Horse Springs, 63.93 55 ⇑P P 05 05 38.1 -0.1
baz=64,SNR=8.3
BNM Barren Site 64.06 54 *eP* **P 05 05 38.5 -0.6**
comp=Z,5.0nm,0.9s,mb4.5
Z17A San Carlos Hig 64.08 57 ⇓P P 05 05 39.3 +0.1
baz=64
114A Black Gap (USA 64.09 60 ⇑P P 05 05 38.9 -0.4
baz=64
Y22A Socorro 64.20 54 ⇑P P 05 05 39.1 -0.8
baz=64,SNR=7.5
X26A CR and CF Fran 64.24 51 ⇓P P 05 05 39.3 -0.9
baz=64
EMIN Mina Concepcio 64.26 326 P **P 05 05 40.2 -0.1**
comp=Z,12nm,1.0s,mb4.9
X27A F and S Farms, 64.28 50 ⇑P P 05 05 39.9 -0.7
baz=64
AMTX Amarillo 64.33 49 *eP* **P 05 05 39.7 -1.1**
comp=Z,18nm,0.9s,mb5.1
Z19A T-Link Ranch, 64.34 56 ⇑P P 05 05 40.5 -0.4
baz=64
Y23A Lovelace Mesa, 64.39 53 ⇓P P 05 05 40.7 -0.5
baz=64,SNR=5.4
Y24A Capitan 64.52 53 ⇑P P 05 05 41.3 -0.7
baz=64,SNR=11
116A Eloy 64.53 59 ⇓P P 05 05 41.4 -0.7
baz=64
ERON Agron 64.58 324 P **P 05 05 43.2 +0.8**
comp=Z,17nm,0.8s,mb5.1
PCVE Castro Verde 64.58 327 *eP* **P 05 05 43.0 +0.6**
comp=Z,32nm,1.7s,mb5.1
Z20A Nine Sixteen R 64.66 56 ⇑P P 05 05 42.9 -0.1
baz=64,SNR=15
Z21A St. Cloud Mine 64.66 55 ⇓P P 05 05 42.4 -0.6
baz=64
PARMO Parma 64.67 38 *eP* **P 05 05 41.8 -1.2**
Y25A Mesa, Roswell 64.67 52 ⇑P P 05 05 42.1 -1.0
baz=64
117A Oracle 64.72 58 ⇑P P 05 05 43.0 -0.4
baz=64
PVAQ Vaqueiros 64.76 327 *eP* **P 05 05 43.7 +0.1**
comp=Z,56nm,1.9s,mb5.3
118A Homack Ranch, 64.82 57 ⇑P P 05 05 43.8 -0.3
baz=65,SNR=9.8
CBN Corbin 64.84 27 *eP* **P 05 05 42.1 -2.0**
comp=Z,19nm,0.6s,mb5.3
119A Ashpeak Ranch, 64.84 56 ⇑P P 05 05 43.8 -0.4
baz=65
HYB Hyderabad 64.85 240 *eP* **P 05 05 44.0 -0.4**
HYB Hyderabad 64.85 240 *i P* **P 05 05 44.0 -0.4**
Z22A Elephant Butte 64.86 54 ⇑P P 05 05 44.1 -0.2
baz=65,SNR=5.7
214A Organ Pipe Nat 64.87 60 ⇓P P 05 05 43.9 -0.5
baz=65
TUC Tucson 64.97 58 *eP* **P 05 05 44.1 -0.9**
TUC pmax pmax
comp=Z,11nm,1.5s,mb4.7
TUC Tucson 64.97 58 *eP* **P 05 05 44.1 -0.9**
comp=Z,11nm,1.5s,mb4.7
MORF Marmelete 64.99 328 *eP* **P 05 05 46.0 +0.9**
Z23A Rita Site, Whi 65.00 53 ⇑P P 05 05 44.5 -0.7
baz=65
MSTX Muleshoe 65.00 50 ⇓P P 05 05 43.6 -1.6
baz=65
Y27A Causey 65.01 50 ⇓P P 05 05 43.9 -1.4
baz=65,SNR=5.9
WMOK Wichita Mounta 65.01 46 *eP* **P 05 05 44.3 -1.0**
WMOK pmax pmax
comp=Z,16nm,1.0s,mb5.0
WMOK Wichita Mounta 65.01 46 *eP* **P 05 05 44.3 -1.0**
comp=Z,16nm,1.0s,mb5.0
Z24A Sheeppen Canyo 65.11 53 ⇓P P 05 05 45.2 -0.7
baz=65,SNR=8.0
120A U Bar Ranch, L 65.20 56 ⇑P P 05 05 45.7 -0.8
baz=65,SNR=6.2
JSRW J. Sargeant Re 65.28 27 *eP* **P 05 05 45.5 -1.5**
Z25A Roswell 65.29 52 ⇓P P 05 05 46.0 -1.1
baz=65,SNR=7.0
121A Cookes Peak, D 65.39 55 ⇑P P 05 05 47.4 -0.3
baz=65,SNR=6.4
Z26A Caprock 65.44 51 ⇑P P 05 05 47.1 -1.0
baz=65,SNR=10
218A Dragoon 65.45 57 ⇑P P 05 05 47.8 -0.4
baz=65,SNR=6.5
BLA Blacksburg 65.45 30 *eP* **P 05 05 45.9 -2.2**
BLA pmax pmax
comp=Z,18nm,1.2s,mb5.0
BLA Blacksburg 65.45 30 *eP* **P 05 05 45.9 -2.2**
comp=Z,18nm,1.2s,mb5.0
HALT Halls 65.47 38 *eP* **P 05 05 47.1 -1.2**
WVT Waverly 65.49 36 *eP* **P 05 05 46.9 -1.4**
WVT pmax pmax
comp=Z,22nm,0.9s,mb5.2
WVT Waverly 65.49 36 *eP* **P 05 05 46.9 -1.5**
comp=Z,22nm,0.9s,mb5.2
Z27A Tatum 65.55 51 ⇑P P 05 05 47.8 -1.0
baz=65
219A White Tail Can 65.59 56 ⇑P P 05 05 48.4 -0.6
baz=65,SNR=5.9
CPRX Cap Rock 65.70 51 *eP* **P 05 05 48.6 -1.1**
comp=Z,7.5nm,0.8s,mb4.8
124A Stringfield Ra 65.70 53 ⇓P P 05 05 49.6 -0.2
baz=66,SNR=12
220A Playas Peak, P 65.84 56 ⇓P P 05 05 50.5 -0.1
baz=66,SNR=6.8
125A Gardner Draw, 65.90 52 ⇓P P 05 05 50.2 -0.8
baz=66,SNR=8.0
318A Bisbee 65.98 57 ⇓P P 05 05 50.8 -0.7
baz=66,SNR=8.9
126A Clayton Basin, 66.04 52 ⇑P P 05 05 50.9 -1.1
baz=66
MIAR Mount Ida 66.12 42 *eP* **P 05 05 50.9 -1.5**
MIAR pmax pmax
comp=Z,17nm,1.3s,mb4.9
MIAR Mount Ida 66.12 42 *eP* **P 05 05 50.9 -1.5**
comp=Z,17nm,1.3s,mb4.9
127A Arkansas Junct 66.14 51 ⇑P P 05 05 51.6 -1.0
baz=66,SNR=5.1
319A Douglas 66.19 57 ⇓P P 05 05 52.8 -0.1
baz=66,SNR=15
224A Cornudas Mount 66.29 53 ⇓P P 05 05 53.4 -0.2
baz=66,SNR=14
320A Kipp Ranch, An 66.39 56 ⇓P P 05 05 54.1 -0.1
baz=66,SNR=6.9
225A Deer Hill, Car 66.40 52 ⇑P P 05 05 53.9 -0.3
baz=66,SNR=6.5
GDL2 Guadalupe Moun 66.41 52 *eP* **P 05 05 53.2 -1.1**
TKL Tuckaleechee C 66.54 33 *eP* **P 05 05 53.3 -1.8**
CPCT Cooper Cave 66.64 34 *eP* **P 05 05 53.9 -1.8**
SWET Sewanee 66.67 35 *eP* **P 05 05 54.2 -1.8**
MNTX Cornudas Mount 66.69 53 *eP* **P 05 05 55.1 -1.0**
comp=Z,12nm,1.0s,mb4.9
227A Bennet, Jal 66.80 51 ⇓P P 05 05 56.0 -0.8
baz=67
OXF Oxford 66.83 38 *eP* **P 05 05 55.6 -1.4**
OXF pmax pmax
comp=Z,75nm,1.4s,mb5.5
OXF Oxford 66.83 38 *eP* **P 05 05 55.6 -1.4**
comp=Z,75nm,1.4s,mb5.5
324A Moseley Ranch, 66.91 53 ⇑P P 05 05 56.6 -0.9
baz=67
325A Bean Ranch, Si 67.09 53 ⇓P P 05 05 58.0 -0.7
baz=67
326A Caldwell Ranch 67.34 52 ⇓P P 05 05 59.1 -1.2
baz=67,SNR=8.1
328A Wristen Ranch, 67.51 51 ⇓P P 05 06 00.1 -1.2
baz=67,SNR=12
425A Indio Mountain 67.65 53 ⇑P P 05 06 01.5 -0.8
baz=68,SNR=19
CNNC Cliffs of the 67.71 28 *eP* **P 05 06 01.5 -1.1**

427A Hayter Ranch, 67.91 51 ⇓P P 05 06 02.4 -1.4
baz=68
426A McDonald Obser 67.96 52 ⇓P P 05 06 03.4 -0.8
baz=68,SNR=12
428A Kincaid Ranch, 68.17 51 ⇓P P 05 06 04.7 -0.8
baz=68,SNR=16
JSC Jenkinsville 68.23 31 *eP* **P 05 06 04.1 -1.7**
526A Mary Lane Ranc 68.53 52 ⇑P P 05 06 07.0 -0.8
baz=68,SNR=9.8
527A Woodward Ranch 68.55 52 ⇑P P 05 06 06.9 -1.0
baz=68,SNR=8.4
LRAL Lakeview Retre 68.65 36 *eP* **P 05 06 06.8 -1.7**
comp=Z,5.3nm,0.5s,mb4.7
528A Cox Ranch, San 68.70 51 ⇓P P 05 06 07.8 -1.0
baz=68,SNR=10
GOGA Godfrey 68.79 33 *eP* **P 05 06 08.1 -1.2**
GOGA pmax pmax
comp=Z,28nm,1.2s,mb5.1
GOGA Godfrey 68.79 33 *eP* **P 05 06 08.1 -1.2**
comp=Z,28nm,1.2s,mb5.1
JCT Junction City 68.96 48 *eP* **P 05 06 09.4 -1.1**
JCT pmax pmax
comp=Z,24nm,0.9s,mb5.1
JCT Junction City 68.96 48 *eP* **P 05 06 09.4 -1.1**
comp=Z,24nm,0.9s,mb5.1
626A Big Bend Ranch 69.02 52 ⇓P P 05 06 09.9 -0.9
baz=69,SNR=6.0
COW Cow Castle Cre 69.19 31 *eP* **P 05 06 10.6 -1.3**
627A Terlingua Ranc 69.26 52 ⇑P P 05 06 11.1 -1.2
baz=69,SNR=17
TXAR Lajitas Array 69.32 52 P **P 05 06 11.2 -1.6**
comp=Z,11nm,0.8s,mb4.8,baz=359,slow=3.3,SNR=78
TXAR LR LR 05 40 50.6
comp=Z,159nm,19.7s,MS4.3,baz=185,slow=40
TXAR Lajitas Array 69.32 52 P **P 05 06 11.2 -1.5**
TXAR pmax pmax
comp=Z,11nm,0.8s
TXAR MLR MLR
comp=Z,159nm,19.7s
628A Black Gap, Mar 69.33 51 ⇑P P 05 06 11.4 -1.4
baz=69,SNR=11
NHSC New Hope 69.53 30 *eP* **P 05 06 12.9 -1.0**
comp=Z,108nm,1.2s,mb5.7
KKM Kota Kinabalu 70.04 199 *eP* **P 05 06 16.8 -0.4**
comp=Z,12nm,0.8s,mb4.9
HKT Hockley 70.21 45 *eP* **P 05 06 17.2 -1.0**
HKT pmax pmax
comp=Z,12nm,1.4s,mb4.6
HKT Hockley 70.21 45 *eP* **P 05 06 17.2 -0.9**
comp=Z,12nm,1.4s,mb4.7
BRAL Brewton 70.63 37 *eP* **P 05 06 18.4 -2.3**
BBSR BB Station 71.82 17 *eP* **P 05 06 27.6 -0.3**
comp=Z,34nm,1.1s,mb5.2
PALK Pallekele 74.22 236 *eP* **P 05 06 41.4 -0.9**
PALK pmax pmax
comp=Z,26nm,1.1s,mb5.1
PALK Pallekele 74.22 236 *eP* **P 05 06 41.4 -0.9**
comp=Z,26nm,1.1s,mb5.1
KSM Kuching 75.11 205 *eP* **P 05 06 47.2 -0.2**
PSI Prapat 75.27 216 P **P 05 06 46.8 -1.5**
comp=Z,6.4nm,1.0s,mb4.5,baz=46,slow=9.2,SNR=3.8
PSI Prapat 75.27 216 P **P 05 06 46.8 -1.5**
PSI pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
TAM Tamanrasset 76.89 312 *eP* **P 05 06 56.9 -0.6**
ATD Arta Tunnel 79.23 274 LR LR 05 45 54.7
comp=Z,92nm,18.5s,MS4.2,baz=326,slow=38
KAPI Kappang 80.74 194 P **P 05 07 16.6 -2.1**
comp=Z,21nm,0.9s,mb5.0,baz=307,slow=5.0,SNR=7.4
SDDR Presa de Saban 84.51 24 *eP* **P 05 07 39.0 +0.7**
comp=Z,76nm,1.1s,mb5.7
HNR Honiara 86.12 154 LR LR 05 44 34.1
comp=Z,284nm,19.1s,MS4.7,baz=357,slow=34
KMBO Kilima Mbogo 92.80 276 LR LR 05 58 24.3
comp=Z,176nm,18.6s,MS4.5,baz=270,slow=41
KMBO Kilima Mbogo 92.80 276 *eP* **P 05 08 17.7 -0.2**
KMBO pmax pmax
comp=Z,2.0nm,0.6s
KMBO Kilima Mbogo 92.80 276 *eP* **P 05 08 17.6 -0.3**
comp=Z,1.6nm,0.6s,mb4.6
DBIC Dimbokro 94.49 319 P **P 05 08 24.6 -1.2**
comp=Z,9.1nm,1.1s,mb5.1,baz=53,slow=7.2,SNR=3.4
DBIC LR LR 05 54 18.9
comp=Z,103nm,20.6s,MS4.3,baz=7.5,slow=38
DBIC Dimbokro 94.49 319 P **P 05 08 24.6 -1.1**
DBIC pmax pmax
comp=Z,9.0nm,1.1s
DBIC MLR MLR
comp=Z,103nm,20.6s
WRAB Tennant Creek 95.11 180 P **P 05 08 26.6 -1.7**
comp=Z,178nm,0.9s,SNR=6.3
WRAB Tennant Creek 95.11 180 *eP* **P 05 08 26.6 -1.7**
WRAB pmax pmax
comp=Z,27nm,0.9s,mb5.7
WRAB Tennant Creek 95.11 180 *eP* **P 05 08 26.6 -1.7**
comp=Z,27nm,0.9s,mb5.7
WRA Warramunga Arr 95.12 180 P **P 05 08 26.9 -1.4**
comp=Z,18nm,0.8s,mb5.5,baz=358,slow=5.2,SNR=85
WRA Warramunga Arr 95.12 180 P **P 05 08 26.9 -1.4**
WRA pmax pmax
comp=Z,18nm,0.9s
WRA Warramunga Arr 95.12 180 P **P 05 08 26.9 -1.4**
MBWA Marble Bar 96.76 193 *eP* **P 05 08 33.3 -2.4**
comp=Z,9.8nm,1.0s,mb5.2
TAOE Nuku Hiva Isla 97.45 96 *e*LR LR 05 40 17.1
comp=Z,152nm,23.4s
ASAR Alice Springs 98.83 180 P **P 05 08 43.6 -1.3**
comp=Z,2.5nm,0.9s,mb4.7,baz=6.5,slow=4.2,SNR=15
ASAR Alice Springs 98.83 180 P **P 05 08 43.7 -1.3**
ASAR pmax pmax
comp=Z,3.0nm,0.9s
DZM Mont Dzumac 99.36 150 *e*LR LR 05 40 59.5
comp=Z,215nm,23.9s
PPT Papeete 103.49 108 *e*LR LR 05 43 01.4
comp=Z,71nm,21.2s
LBTB Lobatse 118.66 281 *e*PKIKP PKPdf 05 13 52.2 -0.7
BOSA Boshof 122.19 280 PKP PKPdf 05 13 57.8 -1.8
comp=Z,4.5nm,0.9s,baz=346,slow=10,SNR=4.1
BOSA Boshof 122.19 280 PKIKP PKPdf 05 13 57.8 -1.8
BOSA pmax pmax
comp=Z,5.0nm,1.0s
CPUP Villa Florida 130.54 13 PKP PKPdf 05 14 14.0 -1.6
comp=Z,0.4nm,0.5s,baz=269,slow=20,SNR=2.5
CPUP Villa Florida 130.54 13 PKP PKPdf 05 14 14.0 -1.6
PLCA Paso Flores 143.52 32 PKhKP PKPpre 05 14 35.5
comp=Z,1.8nm,0.8s,baz=14,slow=7.7,SNR=5.8
MAW Mawson 149.55 226 PKPbc PKPbc 05 14 52.3 -0.7
comp=Z,9.9nm,0.6s,baz=8.4,slow=3.5,SNR=35
MAW Mawson 149.55 226 *e*PKPbc PKPbc 05 14 52.2 -0.7
MAW *e*PKPab PKPab 05 14 58.0 -0.2
SBA Scott Base 154.17 165 *e*PKPbc PKPbc 05 15 03.1 -0.2
SBA *e*PKPab PKPab 05 15 17.1 -0.2
SYO Syowa Base 155.42 240‖ *e*PP PKPdf 05 15 02.0 +5.0
SYO Syowa Base 155.42 240‖ *e*PP PKPdf 05 15 09.8 +13
QSPA South Pole Qui 165.23 180 PKPab PKPab 05 16 03.8 -1.5
comp=Z,5.7nm,0.9s,baz=348,slow=2.2,SNR=11

IDC ***04*** *04:59:33.7±1.0, 31°.14N×103°.62E, h0km, mb4.0/6, mb1 4.2/6, mb1mx3.8/22, mbtmp4.1/6, Error ellipse: s-maj=43.8km s-min=20.2km az=57.0*
ISCJB ***04*** *04:59:35.6±1.0, 31°.19N±0°.07×103°.9E±0°.1, h26km±7km, mb4.1/5, Error ellipse: s-maj=17.6km s-min=8.4km az=28.6*
BJI ***04*** *04:59:36.7, 31°.18N×103°.84E, h16km, ML3.6/17, Ms3.6/2, Ms7 3.5/2*
ISC 04 04:59:35.7±0.8, 31°.24N±0°.03×103°.78E±0°.10, h13km±6km, n10, σ0°.75/15, mb4.1/5, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.33**	**182**	⇑*i*Pg	**Pg**	**04 59 42.5**	**0.0**
CD2				Sg	**Sg**	**04 59 47.1**	**+0.1**
CD2				smax			
	comp=N,22μm,0.5s						
CD2				smax			
	comp=E,28μm,0.7s						
LZH	**Lanzhou**	**4.83**	**1**	*e*Pg	**Pg**	**05 01 06.6**	**-1.7**
LZH				Sg	**Sg**	**05 02 11.4**	**+0.6**
LZH				smax			
	comp=N,70nm,0.8s						
LZH				smax			
	comp=E,98nm,0.8s						
LZH				LR	LR		
	comp=N,630nm,7.6s						
LZH				LR	LR		
	comp=Z,710nm,9.4s						
XAN	**Xi'an**	**5.16**	**56**	Pn	**Pn**	**05 00 53.1**	**+0.4**
XAN				Sn	**Sn**	**05 01 51.2**	**-0.9**
XAN				Sg	**Sg**	**05 02 13.8**	**-7.6**
XAN				smax			
	comp=N,120nm,0.5s						
XAN				smax			
	comp=E,71nm,0.7s						
KMI	**Kunming**	**6.17**	**189**	Pn	**Pn**	**05 01 07.5**	**+1.0**
KMI				Sn	**Sn**	**05 02 15.8**	**-1.1**
KMI				smax			
	comp=N,19nm,0.9s						
KMI				smax			
	comp=E,23nm,0.9s						
KMI				LR	LR		
	comp=N,210nm,5.0s						
KMI				LR	LR		
	comp=E,290nm,6.2s						
KMI				LR	LR		
	comp=Z,240nm,9.2s						
KSRS	**Korea Array**	**20.85**	**66**	P	**P**	**05 04 18.6**	**+1.3**
	comp=Z,3.3nm,0.7s,baz=262,slow=11,SNR=11						
MKAR	**Makanchi Array**	**22.69**	**319**	P	**P**	**05 04 37.1**	**+0.3**
	comp=Z,1.5nm,0.8s,mb3.5,baz=116,slow=14,SNR=2.5						
ARCES	**ARCESS Array B**	**57.02**	**336**	P	**P**	**05 09 20.8**	**0.0**
	comp=Z,2.4nm,1.0s,mb4.2,baz=89,slow=8.4,SNR=3.1						
WRA	**Warramunga Arr**	**58.75**	**146**	P	**P**	**05 09 33.5**	**0.0**
	comp=Z,4.0nm,0.6s,mb4.6,baz=338,slow=7.6,SNR=24						
ASAR	**Alice Springs**	**61.76**	**149**	P	**P**	**05 09 54.2**	**+0.2**
	comp=Z,1.3nm,0.6s,mb4.2,baz=338,slow=6.8,SNR=14						
STKA	**Stephens Creek**	**72.28**	**147**	P	**P**	**05 11 00.6**	**-0.3**
	comp=Z,1.3nm,0.5s,mb4.2,baz=342,slow=9.6,SNR=4.7						

DDA ***04*** *05:10:16.2, 37°.12N×29°.14E, h7km±5km, Md2.8*
ISCJB ***04*** *05:10:17.8±0.5, 37°.16N±0°.04×29°.25E±0°.04, h10km, Error ellipse: s-maj=5.8km s-min=4.3km az=13.2*
CSEM ***04*** *05:10:17.6±0.3, 37°.16N×29°.25E, h2km, MD2.7, Error ellipse: s-maj=9.0km s-min=6.2km az=12.0*
ISK ***04*** *05:10:17.5, 37°.12N×29°.29E, h2km, MD2.7*
ISC 04 05:10:17.8±0.6, 37°.14N±0°.04×29°.22E±0°.04, h3km±9km, n20, σ1°.11/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.22**	**87**	*e*PG	**Pg**	**05 10 21.7**	**-0.4**
GLHS				*e*SG	**Sg**	**05 10 24.8**	**-0.1**
GLHS	**Glhisar (BURDU**	**0.22**	**87**	*e*Pg	**Pg**	**05 10 21.7**	**-0.4**
GLHS				*e*Sg	**Sg**	**05 10 24.8**	**-0.2**
GOLH	**Golhisar**	**0.29**	**71**	*i* P	**Pg**	**05 10 22.7**	**-0.6**
GOLH				*i* S	**Sg**	**05 10 29.6**	**+2.5**
GOLH	**Golhisar**	**0.29**	**71**	*i* P	**Pg**	**05 10 22.7**	**-0.6**
GOLH				*i* S	**Sg**	**05 10 29.6**	**+2.5**
DNZL	**Cakiroluk**	**0.56**	**346**	*i* P	**Pg**	**05 10 28.1**	**-0.5**
DNZL				*i* S	**Sg**	**05 10 35.1**	**-0.8**
DNZL	**Cakiroluk**	**0.56**	**346**	*i* P	**Pg**	**05 10 28.1**	**-0.5**
DNZL				*i* S	**Sg**	**05 10 35.1**	**-0.8**
ELL	**Elmali**	**0.68**	**125**	*e*PG	**Pg**	**05 10 30.5**	**-0.2**
ELL	**Elmali**	**0.68**	**125**	*e*Pg	**Pg**	**05 10 30.5**	**-0.3**
YER	**Yerkesik**	**0.75**	**270**	*e*PG	**Pg**	**05 10 33.9**	**+1.7**
YER	**Yerkesik**	**0.75**	**270**	*e*Pg	**Pg**	**05 10 33.9**	**+1.8**
AKAS	**Kas**	**0.96**	**161**	*i* P	**Pg**	**05 10 32.5**	**-3.6**
AKAS				*i* S	**Sg**	**05 10 48.3**	**-0.3**
AKAS	**Kas**	**0.96**	**161**	*i* P	**Pg**	**05 10 32.5**	**-3.6**
AKAS				*i* S	**Sg**	**05 10 48.3**	**-0.3**
KHL	**Karahalli**	**1.20**	**11**	*e*PN	**Pn**	**05 10 41.7**	**+0.2**
KHL	**Karahalli**	**1.20**	**11**	*e*Pn	**Pn**	**05 10 41.7**	**+0.2**
DAT	**Datca**	**1.38**	**253**	*e*PN	**Pn**	**05 10 45.4**	**+1.4**
DAT	**Datca**	**1.38**	**253**	*e*Pn	**Pn**	**05 10 45.4**	**+1.5**
BDRM	**Kayabasi**	**1.42**	**267**	*i* P	**Pn**	**05 10 42.2**	**-2.3**
BDRM				*i* S	**Sg**	**05 11 03.6**	**+0.1**
BDRM	**Kayabasi**	**1.42**	**267**	*i* P	**Pn**	**05 10 42.2**	**-2.3**
BDRM				*i* S	**Sg**	**05 11 03.6**	**+0.1**
SUTC	**Sutluce-Ispart**	**1.46**	**76**	*e*PN	**Pn**	**05 10 45.2**	**+0.2**
SUTC	**Sutluce-Ispart**	**1.46**	**76**	*e*Pn	**Pn**	**05 10 45.2**	**+0.2**

ISCJB ***04*** *05:15:29.8±0.5, 50°.11N±0°.03×18°.44E±0°.03, h0km, Error ellipse: s-maj=5.1km s-min=2.7km az=8.6*
IPEC ***04*** *05:15:30.3±0.2, 50°.09N×18°.54E, h3km±2km, ML1.7/3, Error ellipse: s-maj=2.1km s-min=1.1km az=161.0*
CSEM ***04*** *05:15:30.2±0.3, 50°.14N×18°.44E, h1km, ML2.5/6, Error ellipse: s-maj=8.0km s-min=3.7km az=1.0*
PRU ***04*** *05:15:31.9, 50°.09N×18°.41E, h0km*
WAR ***04*** *05:15:31.7, 50°.06N×18°.45E*
ISC 04 05:15:31.0±0.5, 50°.08N±0°.04×18°.44E±0°.03, h0km, n27, σ1°.25/45, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.16**	**271**	*e*Pg	**Pg**	**05 15 35.8**	**+1.7**
RAC				*e*Sg	**Sg**	**05 15 38.9**	**+2.8**
OKC	**Ostrava-Krasne**	**0.31**	**218**	*e*PG	**Pg**	**05 15 37.7**	**+0.8**
OKC				*e*SG	**Sg**	**05 15 41.4**	**+0.5**
	comp=Z,61nm,0.7s						
OKC	**Ostrava-Krasne**	**0.31**	**218**	*e*Pg	**Pg**	**05 15 37.2**	**+0.3**
	baz=45						
OKC				Sg	**Sg**	**05 15 41.4**	**+0.5**
	comp=Z,61nm,0.7s						
MORC	**Moravsky Berou**	**0.66**	**243**	*e*Pg	**Pg**	**05 15 44.1**	**+0.5**
MORC				*e*Sg	**Sg**	**05 15 52.8**	**+0.8**
	comp=Z,16nm,0.2s,baz=64						
OJC	**Ojcow**	**0.88**	**80**	*e*Pg	**Pg**	**05 15 46.0**	**-1.9**
	baz=261						
OJC				*e*Sg	**Sg**	**05 15 58.1**	**-1.3**
NIE	**Niedzica**	**1.38**	**118**	*e*Pg	**Pg**	**05 15 58.1**	**+0.6**
NIE				*e*Sg	**Sg**	**05 16 17.7**	**+2.3**
NIE	**Niedzica**	**1.38**	**118**	*e*Pg	**Pg**	**05 15 58.1**	**+0.6**
NIE				*e*Sg	**Sg**	**05 16 17.7**	**+2.3**
DPC	**Dobruska-Polom**	**1.39**	**282**	*e*PG	**Pg**	**05 15 57.5**	**-0.1**
DPC				*e*SG	**Sg**	**05 16 15.8**	**+0.2**
	comp=Z,18nm,0.4s						
DPC	**Dobruska-Polom**	**1.39**	**282**	Pg	**Pg**	**05 15 57.5**	**-0.1**
DPC				*e*Sg	**Sg**	**05 16 15.4**	**-0.2**
	baz=100						
VRAC	**Vranov**	**1.43**	**238**	*e*Pg	**Pg**	**05 15 57.6**	**-0.7**
VRAC				*e*Sg	**Sg**	**05 16 16.8**	**0.0**
	comp=Z,11nm,0.4s,baz=58						
KSP	**Ksiaz**	**1.57**	**300**	*e*Pg	**Pg**	**05 16 02.0**	**+0.9**
KSP				*e*Sg	**Sg**	**05 16 22.2**	**+0.7**
VYHS	**Vyhne**	**1.61**	**171**	*e*PN	**Pn**	**05 16 00.9**	**+0.3**
VYHS				*e*SN	**Sn**	**05 16 22.4**	**+0.4**
VYHS	**Vyhne**	**1.61**	**171**	*e*Pn	**Pn**	**05 16 00.9**	**+0.3**
VYHS				*e*Sn	**Sn**	**05 16 22.4**	**+0.4**
UPC	**Upice**	**1.62**	**286**	*e*SG	**Sg**	**05 16 23.4**	**+0.5**
UPC	**Upice**	**1.62**	**286**	Sg	**Sg**	**05 16 23.4**	**+0.5**
KRUC	**Moravsky**	**1.68**	**233**	*e*Pn	**Pn**	**05 16 01.3**	**-0.3**
	baz=53						
KRUC				*e*Sg	**Sg**	**05 16 24.3**	**-0.6**
	comp=Z,4.5nm,0.2s,baz=53						
STHS	**Stebnicka Huta**	**1.94**	**109**	*e*PN	**Pn**	**05 16 08.6**	**+3.5**
STHS				*e*SN	**Sn**	**05 16 32.9**	**+2.8**
STHS	**Stebnicka Huta**	**1.94**	**109**	*e*Pn	**Pn**	**05 16 08.7**	**+3.6**
STHS				*e*Sn	**Sn**	**05 16 32.9**	**+2.8**
KECS	**Kecovo**	**2.08**	**139**	*e*SN	**Sn**	**05 16 32.4**	**-1.4**
KECS	**Kecovo**	**2.08**	**139**	*e*Sn	**Sn**	**05 16 32.4**	**-1.4**
CRVS	**Cervenica-Dubn**	**2.29**	**120**	*e*SN	**Sn**	**05 16 38.4**	**-0.6**
CRVS	**Cervenica-Dubn**	**2.29**	**120**	*e*Sn	**Sn**	**05 16 38.4**	**-0.6**
CRVS	**Cervenica-Dubn**	**2.29**	**120**	*e*Sn	**Sn**	**05 16 38.4**	**-0.6**
PRU	**Pruhonice**	**2.52**	**269**	*e*SG	**Sg**	**05 16 50.7**	**-1.1**
	comp=Z,3.1nm,0.2s						
PRU	**Pruhonice**	**2.52**	**269**	Sg	**Sg**	**05 16 50.7**	**-1.1**
	comp=Z,3.1nm,0.2s						
KHC	**Kasperske Hory**	**3.30**	**255**	*e*PN	**Pn**	**05 16 22.0**	**-1.9**
KHC				*e*PG	**Pg**	**05 16 32.0**	**-2.3**
KHC				*e*SG	**Sg**	**05 17 15.0**	**-2.1**
	comp=Z,2.9nm,0.5s						
KHC	**Kasperske Hory**	**3.30**	**255**	Pn	**Pn**	**05 16 22.0**	**-1.9**

ISCJB ***04*** *05:36:02.3±0.7, 36°.97N±0°.03×29°.19E±0°.03, h7km±5km, Error ellipse: s-maj=5.1km s-min=4.1km az=171.3*
DDA ***04*** *05:36:02.2, 36°.97N×29°.14E, h7km±3km, Md3.1*
ISK ***04*** *05:36:02.6, 37°.08N×29°.20E, h9km, MD3.2*
CSEM ***04*** *05:36:02.7±0.2, 37°.00N×29°.21E, h8km, MD3.2, Error ellipse: s-maj=4.0km s-min=2.7km az=1.0*
ISC 04 05:36:02.8±0.5, 36°.98N±0°.03×29°.20E±0°.03, h8km±4km, n55, σ0°.74/73, Turkey

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

GLHS	**Glhisar (BURDU**	**0.30**	**54**	PG	**Pg**	**05 36 07.9**	**-0.8**
GLHS	**Glhisar (BURDU**	**0.30**	**54**	*i* Pg	**Pg**	**05 36 07.9**	**-0.8**
GOLH	**Golhisar**	**0.39**	**48**	*i* P	**Pg**	**05 36 10.3**	**-0.1**
GOLH				*i* S	**Sg**	**05 36 17.4**	**+1.9**
GOLH	**Golhisar**	**0.39**	**48**	*i* P	**Pg**	**05 36 10.3**	**-0.1**
GOLH				*i* S	**Sg**	**05 36 17.4**	**+1.9**
TURN	**Turunc**	**0.49**	**258**	*i* P	**Pg**	**05 36 16.5**	**+4.3**
TURN				*i* S	**Sg**	**05 36 27.4**	**+8.7**
TURN	**Turunc**	**0.49**	**258**	*i* P	**Pg**	**05 36 16.5**	**+4.2**
DNZL	**Cakiroluk**	**0.72**	**350**	*i* P	**Pg**	**05 36 15.6**	**-1.0**
DNZL				*i* S	**Sg**	**05 36 27.0**	**+0.9**
DNZL	**Cakiroluk**	**0.72**	**350**	*i* P	**Pg**	**05 36 15.6**	**-1.1**
DNZL				*i* S	**Sg**	**05 36 27.0**	**+0.9**
YER	**Yerkesik**	**0.75**	**282**	*e*PG	**Pg**	**05 36 17.1**	**-0.1**
YER				*e*SG	**Sg**	**05 36 27.7**	**+0.7**
YER	**Yerkesik**	**0.75**	**282**	*e*Pg	**Pg**	**05 36 17.1**	**-0.1**
YER				*e*Sg	**Sg**	**05 36 27.7**	**+0.7**
DENT	**Denizli**	**0.79**	**350**	*e*PG	**Pg**	**05 36 16.4**	**-1.5**
DENT	**Denizli**	**0.79**	**350**	*e*Pg	**Pg**	**05 36 16.4**	**-1.5**
AKAS	**Kas**	**0.81**	**156**	*i* P	**Pg**	**05 36 18.7**	**+0.3**
AKAS				*i* S	**Sg**	**05 36 35.5**	**+6.5**
AKAS	**Kas**	**0.81**	**156**	*i* P	**Pg**	**05 36 18.7**	**+0.3**
KSL	**Kastellorizon**	**0.88**	**159**	*e*P	**Pg**	**05 36 19.5**	**-0.3**
KORT	**Korkueli**	**0.92**	**88**	*i* P	**Pg**	**05 36 20.2**	**-0.3**
KORT				*i* S	**Sg**	**05 36 36.6**	**+4.1**
KORT	**Korkueli**	**0.92**	**88**	*i* P	**Pg**	**05 36 20.2**	**-0.3**
KORT				*i* S	**Sg**	**05 36 36.6**	**+4.1**
ARG	**Arkhangelos**	**1.15**	**229**	*e*P	**Pb**	**05 36 24.0**	**-0.9**
ANTB	**Antalya**	**1.17**	**93**	*e*PN	**Pn**	**05 36 25.8**	**+0.3**
ANTB	**Antalya**	**1.17**	**93**	*e*Pn	**Pn**	**05 36 25.8**	**+0.4**
MLSB	**Milas**	**1.18**	**286**	*e*PN	**Pn**	**05 36 25.1**	**-0.5**
MLSB	**Milas**	**1.18**	**286**	*e*Pn	**Pn**	**05 36 25.1**	**-0.5**
BCK	**Bucak**	**1.21**	**66**	*e*PN	**Pn**	**05 36 25.6**	**-0.4**
BCK	**Bucak**	**1.21**	**66**	*e*Pn	**Pn**	**05 36 25.6**	**-0.4**
AYDN	**Tasoluk**	**1.25**	**303**	*i* P	**Pn**	**05 36 26.6**	**0.0**
AYDN				*i* S	**Sb**	**05 36 44.4**	**+1.4**
AYDN	**Tasoluk**	**1.25**	**303**	*i* P	**Pn**	**05 36 26.6**	**0.0**
AYDN				*i* S	**Sb**	**05 36 44.3**	**+1.3**
DAT	**Datca**	**1.32**	**260**	*e*PN	**Pn**	**05 36 28.2**	**+0.6**
DAT	**Datca**	**1.32**	**260**	*e*Pn	**Pn**	**05 36 28.2**	**+0.6**
KHL	**Karahalli**	**1.37**	**11**	*e*PN	**Pn**	**05 36 27.2**	**-1.0**
KHL	**Karahalli**	**1.37**	**11**	*e*Pn	**Pn**	**05 36 27.2**	**-1.0**
BDRM	**Kayabasi**	**1.41**	**274**	*i* P	**Pn**	**05 36 29.0**	**+0.3**
BDRM				*i* S	**Sb**	**05 36 46.5**	**-0.9**
BDRM	**Kayabasi**	**1.41**	**274**	*i* P	**Pn**	**05 36 29.0**	**+0.3**
BDRM				*i* S	**Sb**	**05 36 46.5**	**-0.9**
KHAL	**Karahalli**	**1.41**	**9**	*i* P	**Pn**	**05 36 29.3**	**+0.6**
KHAL				*i* S	**Sb**	**05 36 48.1**	**+0.7**
KHAL	**Karahalli**	**1.41**	**9**	*i* P	**Pn**	**05 36 29.3**	**+0.5**
KHAL				*i* S	**Sb**	**05 36 48.1**	**+0.6**
BODT	**Bodrum**	**1.51**	**274**	*e*PN	**Pn**	**05 36 30.4**	**+0.3**
BODT	**Bodrum**	**1.51**	**274**	*e*Pn	**Pn**	**05 36 30.4**	**+0.2**
KULA	**Kula-Manisa**	**1.59**	**345**	*e*PN	**Pn**	**05 36 30.3**	**-1.0**
KULA	**Kula-Manisa**	**1.59**	**345**	*e*Pn	**Pn**	**05 36 30.3**	**-1.0**
SHUT	**Suhut-Afyon**	**1.90**	**34**	*e*PN	**Pn**	**05 36 35.1**	**-0.5**
SHUT	**Suhut-Afyon**	**1.90**	**34**	*e*Pn	**Pn**	**05 36 35.1**	**-0.4**
SMG	**Samos**	**2.02**	**292**	*e*P	**Pn**	**05 36 36.5**	**-0.6**
IZM	**Izmir**	**2.09**	**313**	*e*PN	**Pn**	**05 36 37.8**	**-0.4**
IZM	**Izmir**	**2.09**	**313**	*e*Pn	**Pn**	**05 36 37.8**	**-0.3**
KDAG	**Bornova**	**2.09**	**313**	*i* P	**Pn**	**05 36 38.0**	**-0.1**
KDAG				*i* S	**Sn**	**05 37 04.4**	**0.0**
KDAG	**Bornova**	**2.09**	**313**	*i* P	**Pn**	**05 36 38.0**	**-0.1**
KDAG				*i* S	**Sn**	**05 37 04.4**	**+0.1**
KARP	**Karpathos**	**2.18**	**230**	*e*P	**Pn**	**05 36 40.0**	**+0.7**
AKS	**Akhisar**	**2.19**	**330**	*e*PN	**Pn**	**05 36 38.9**	**-0.6**
AKS	**Akhisar**	**2.19**	**330**	*e*Pn	**Pn**	**05 36 38.9**	**-0.6**
BLCB	**Balcova**	**2.21**	**310**	*e*PN	**Pn**	**05 36 39.6**	**-0.2**
BLCB	**Balcova**	**2.21**	**310**	*e*Pn	**Pn**	**05 36 39.6**	**-0.2**
KONT	**Konya--Tatoy**	**2.69**	**68**	*e*PN	**Pn**	**05 36 47.0**	**+0.5**
KONT	**Konya--Tatoy**	**2.69**	**68**	*e*Pn	**Pn**	**05 36 47.0**	**+0.6**
LAST	**Lasithi**	**3.52**	**240**	*e*P	**Pn**	**05 36 58.5**	**+0.8**
XRY	**Khrisi**	**3.54**	**235**	*e*P	**Pn**	**05 36 59.0**	**+1.0**
VLI	**Veliai**	**5.03**	**269**	*e*P	**Pn**	**05 37 18.5**	**0.0**

*CSEM **04** 05:53:46.9±0.1, 38°.08N×21°.56E, h20km, MD3.0, Error ellipse: s-maj=4.0km s-min=2.6km az=12.0*
*ISCJB **04** 05:53:47.4±0.4, 38°.09N±0°.04×21°.57E±0°.03, h20km±5km, Error ellipse: s-maj=6.1km s-min=3.8km az=1.7*
*NEIC **04** 05:53:47.2, 38°.12N×21°.54E, h20km, MD3.0(ATH), After ATH.*
*ATH **04** 05:53:47.2, 38°.12N×21°.54E, h20km±1km, MD3.0/9*
*THE **04** 05:53:47.0, 38°.06N×21°.58E, h16km±1km, ML2.6/5, Error ellipse: s-maj=1.3km s-min=0.5km az=3.0*
ISC 04 05:53:47.4±0.4, 38°.09N±0°.04×21°.57E±0°.03, h20km±4km, n39, σ0°90/65, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.09**	**246**	*e*Pb	**Pb**	**05 53 50.7**	**-0.5**
RLS				*e*Sb	**Sb**	**05 53 53.6**	**-0.2**
RLS	**Riolos of Patr**	**0.09**	**246**	*e*PB	**Pb**	**05 53 50.7**	**-0.5**
RLS				*e*SB	**Sb**	**05 53 53.6**	**-0.2**
RLS	**Riolos of Patr**	**0.09**	**246**	*e*Pb	**Pb**	**05 53 50.7**	**-0.5**
RLS				*e*Sb	**Sb**	**05 53 53.6**	**-0.2**
UPR	**University Cam**	**0.26**	**42**	*e*PB	**Pb**	**05 53 53.0**	**-0.3**
UPR				*e*SB	**Sb**	**05 53 57.7**	**+0.3**
UPR	**University Cam**	**0.26**	**42**	P	**Pb**	**05 53 53.2**	**-0.1**
UPR				S	**Sb**	**05 53 57.8**	**+0.4**
UPR	**University Cam**	**0.26**	**42**	*e*Pb	**Pb**	**05 53 53.0**	**-0.3**
UPR				*e*Sb	**Sb**	**05 53 57.7**	**+0.3**
EFP	**Efpalio**	**0.43**	**39**	*e*PB	**Pb**	**05 53 55.7**	**-0.5**
EFP				*e*SB	**Sb**	**05 54 02.6**	**+0.4**
EFP	**Efpalio**	**0.43**	**39**	P	**Pb**	**05 53 55.7**	**-0.5**
EFP				S	**Sb**	**05 54 03.0**	**+0.8**
EFP	**Efpalio**	**0.43**	**39**	P	**Pb**	**05 53 55.7**	**-0.5**
EFP				*e*Sb	**Sb**	**05 54 02.6**	**+0.4**
EFP				S	**Sb**	**05 54 03.0**	**+0.8**
KFL	**Anninata**	**0.61**	**272**	P	**Pb**	**05 53 58.8**	**-0.6**
KFL				S	**Sb**	**05 54 09.2**	**+1.6**
KFL	**Anninata**	**0.61**	**272**	P	**Pb**	**05 53 58.8**	**-0.6**
KFL				S	**Sb**	**05 54 09.2**	**+1.6**
GUR	**Goura**	**0.63**	**104**	*e*PB	**Pb**	**05 53 59.7**	**0.0**
GUR				*e*SN	**Sb**	**05 54 10.1**	**+2.0**
GUR	**Goura**	**0.63**	**104**	P	**Pb**	**05 53 59.3**	**-0.4**
GUR				S	**Sb**	**05 54 08.6**	**+0.5**
GUR	**Goura**	**0.63**	**104**	P	**Pb**	**05 53 59.3**	**-0.4**
GUR	**Goura**	**0.63**	**104**	*e*Pb	**Pb**	**05 53 59.7**	**0.0**
GUR				S	**Sb**	**05 54 08.6**	**+0.5**
GUR				*e*Sn	**Sb**	**05 54 10.1**	**+2.0**
VLS	**Valsamata**	**0.78**	**276**	*e*Pb	**Pb**	**05 54 01.1**	**-1.0**
VLS				*e*Sn	**Sn**	**05 54 13.5**	**-0.7**
VLS	**Valsamata**	**0.78**	**276**	*e*PB	**Pb**	**05 54 01.1**	**-1.0**
VLS				*e*SN	**Sn**	**05 54 13.5**	**-0.7**
VLS	**Valsamata**	**0.78**	**276**	P	**Pb**	**05 54 01.2**	**-0.9**
VLS				S	**Sb**	**05 54 13.7**	**+1.5**
VLS	**Valsamata**	**0.78**	**276**	P	**Pb**	**05 54 01.2**	**-0.9**
VLS				*e*Sn	**Sn**	**05 54 13.5**	**-0.7**
DSF	**Desfina**	**0.82**	**67**	P	**Pb**	**05 54 02.1**	**-0.8**
DSF				S	**Sb**	**05 54 14.8**	**+1.3**
DSF	**Desfina**	**0.82**	**67**	P	**Pb**	**05 54 02.1**	**-0.8**
DSF				S	**Sb**	**05 54 14.8**	**+1.3**
VLX	**Vlachokerasia**	**0.97**	**138**	*e*PN	**Pn**	**05 54 06.1**	**+0.4**
VLX	**Vlachokerasia**	**0.97**	**138**	P	**Pb**	**05 54 04.2**	**-1.2**
VLX				S	**Sb**	**05 54 17.7**	**0.0**
VLX	**Vlachokerasia**	**0.97**	**138**	P	**Pb**	**05 54 04.2**	**-1.2**
VLX	**Vlachokerasia**	**0.97**	**138**	*e*Pn	**Pn**	**05 54 06.1**	**+0.4**
VLX				S	**Sb**	**05 54 17.7**	**0.0**
LKD2	**Lefkada island**	**1.00**	**314**	P	**Pb**	**05 54 05.6**	**-0.3**
LKD2	**Lefkada island**	**1.00**	**314**	P	**Pb**	**05 54 05.6**	**-0.3**
AGG	**Agios Georgios**	**1.10**	**33**	P	**Pn**	**05 54 07.1**	**-0.5**
AGG	**Agios Georgios**	**1.10**	**33**	P	**Pn**	**05 54 07.1**	**-0.5**
LTK	**Loutraki**	**1.11**	**93**	P	**Pn**	**05 54 07.0**	**-0.7**
LTK	**Loutraki**	**1.11**	**93**	P	**Pn**	**05 54 07.0**	**-0.7**
PYL	**PYLOS**	**1.21**	**173**	*e*PN	**Pn**	**05 54 10.8**	**+1.8**
DID	**Didima**	**1.45**	**113**	P	**Pn**	**05 54 11.1**	**-1.2**
DID				S	**Sn**	**05 54 30.9**	**+0.2**
DID	**Didima**	**1.45**	**113**	P	**Pn**	**05 54 11.1**	**-1.2**
DID				S	**Sn**	**05 54 30.9**	**+0.2**
VLI	**Veliai**	**1.75**	**141**	*e*Pb	**Pb**	**05 54 18.6**	**-0.2**
VLI	**Veliai**	**1.75**	**141**	*e*PB	**Pb**	**05 54 18.6**	**-0.2**
VLI	**Veliai**	**1.75**	**141**	*e*Pb	**Pb**	**05 54 18.6**	**-0.2**
KYTH	**Kithira**	**2.16**	**147**	*e*Pn	**Pn**	**05 54 25.7**	**+3.6**
KYTH	**Kithira**	**2.16**	**147**	*e*PN	**Pn**	**05 54 25.7**	**+3.6**

*MOS **04** 06:02:46.7±0.9, 1°.32S×77°.59W, h174km, mb5.0/52, Error ellipse: s-maj=12.3km s-min=5.3km az=111.9*
*IGQ **04** 06:02:46.3, 1°.48S×77°.84W, h211km±2km, Mb4.8, Ms4.7, Error ellipse: s-maj=2.7km s-min=1.5km az=10.3*
*ISCJB **04** 06:02:47.9±0.2, 1°.48S±0°.03×77°.61W±0°.03, h190km, mb4.9/173, Error ellipse: s-maj=4.3km s-min=3.4km az=153.5*
*IDC **04** 06:02:48.9±0.6, 1°.43S×77°.67W, h183km±5km, mb4.4/16, mb1 4.5/22, mb1mx4.4/26, mbtmp4.4/22, MS3.9/8, Ms1 3.9/8, ms1mx3.5/29, Error ellipse: s-maj=14.2km s-min=6.9km az=71.0*
*NEIC **04** 06:02:49.5±0.2, 1°.42S×77°.58W, mb4.9/158, MD4.7(IGQ), Error ellipse: s-maj=5.3km s-min=3.5km az=58.0*
NEIC Felt at Bahia de Caraquez and Cuenca.
*GCMT **04** 06:02:50.6±0.2, 1°.58S×77°.91W, h193km±1km, MW5.2, Moment Tensor Solution. s62,c86; s85,c134; Moment tensor: Scale 10^16 Nm; Mrr-6.16±.14; Mθθ2.28±.17; Mφφ3.88±.21; Mrθ1.33±.14; Mrφ-4.78±.17; Mθφ-4.35±.18; Best double couple: Mo8.50000×10^16 NP1:φs122.00000°, δ32.00000°, λ-119.00000°. NP2:φs335.00000°, δ62.00000°, λ-73.00000°. Principal axes: T 9.0900, Plg16.0000°, Azm52.0000°; N -1.2900, Plg15.0000°, Azm147.0000°; P -7.8000, Plg68.0000°, Azm278.0000°; Data Used: II IU IC CN G.*
ISC 04 06:02:49.8±0.2, 1°.49S±0°.03×77°.59W±0°.03, h192km, h192km±1.0km; pP-P, n831, σ0°77/783, mb4.8/173, 221C-254D, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULBA	**Ulba**	**0.82**	**273**	⇑P	**Pn**	**06 03 15.7**	**-1.9**
BRUN	**Tungurahua Vol**	**0.83**	**274**	⇑P	**Pn**	**06 03 15.7**	**-1.8**
BRUN	**Tungurahua Vol**	**0.83**	**274**	⇑S	**Sn**	**06 03 36.4**	**-2.6**
RETU	**Refugio**	**0.86**	**272**	⇑P	**Pn**	**06 03 16.0**	**-1.8**
ARRY	**Arrayan**	**0.87**	**269**	⇑P	**Pn**	**06 03 15.3**	**-2.5**
JUI6	**Juive**	**0.88**	**274**	⇑S	**Sn**	**06 03 36.3**	**-3.3**
JUI6	**Juive**	**0.88**	**274**	⇑P	**Pn**	**06 03 15.8**	**-2.2**
BMAS	**Trigal station**	**0.89**	**269**	⇑S	**Sn**	**06 03 36.9**	**-2.8**
BMAS	**Trigal station**	**0.89**	**269**	⇑P	**Pn**	**06 03 15.8**	**-2.2**
PISA	**Pisayambo**	**0.90**	**298**	⇓P	**Pn**	**06 03 16.5**	**-1.5**
BIL2	**Estacion Bilba**	**0.91**	**272**	⇑P	**Pn**	**06 03 16.1**	**-2.1**
MACE	**Macas**	**0.98**	**219**	⇑S	**Sn**	**06 03 37.6**	**-3.3**
MACE	**Macas**	**0.98**	**219**	⇑P	**Pn**	**06 03 16.9**	**-1.7**
IGUA	**Igualata**	**1.05**	**270**	⇑P	**Pn**	**06 03 17.0**	**-2.1**
RIOE	**Riobamba**	**1.07**	**256**	⇑S	**Sn**	**06 03 39.1**	**-2.9**
RIOE	**Riobamba**	**1.07**	**256**	⇑P	**Pn**	**06 03 17.1**	**-2.2**
TAMB	**Tambo**	**1.11**	**315**	⇓P	**Pn**	**06 03 18.0**	**-1.5**
COV1	**Cotopaxi Volc**	**1.11**	**317**	⇓P	**Pn**	**06 03 18.9**	**-0.7**
BTAM	**Cotopaxi Volca**	**1.14**	**315**	⇓P	**Pn**	**06 03 18.3**	**-1.5**
MOV1	**Cotopaxi Vol s**	**1.15**	**312**	⇓P	**Pn**	**06 03 18.3**	**-1.5**
BMOR	**Cotopaxi Volca**	**1.15**	**311**	⇓S	**Sn**	**06 03 40.5**	**-2.5**
BMOR	**Cotopaxi Volca**	**1.15**	**311**	⇓P	**Pn**	**06 03 18.3**	**-1.5**
BVC2	**Cotopaxi Volca**	**1.16**	**315**	⇓P	**Pn**	**06 03 18.5**	**-1.4**
VC1	**Cotopaxi 1**	**1.17**	**316**	⇓P	**Pn**	**06 03 18.5**	**-1.5**
BREF	**Cotopaxi Volca**	**1.18**	**314**	⇓S	**Sn**	**06 03 41.9**	**-1.6**
BREF	**Cotopaxi Volca**	**1.18**	**314**	⇓P	**Pn**	**06 03 18.8**	**-1.2**
ANTI	**Antisana**	**1.18**	**331**	⇓P	**Pn**	**06 03 18.9**	**-1.2**
BNAS	**Cotopaxi Volca**	**1.20**	**312**	⇓S	**Sn**	**06 03 41.4**	**-2.4**
BNAS	**Cotopaxi Volca**	**1.20**	**312**	⇓P	**Pn**	**06 03 19.1**	**-1.2**
NAS2	**Nasa**	**1.21**	**313**	⇓P	**Pn**	**06 03 19.3**	**-1.1**
CAMI	**Rancho Maria**	**1.22**	**311**	P	**Pn**	**06 03 19.1**	**-1.3**
PITA	**Cotopaxi Volc**	**1.25**	**317**	⇓P	**Pn**	**06 03 19.0**	**-1.6**
LAV3	**Lava3-Reventad**	**1.38**	**358**	⇓P	**Pn**	**06 03 20.6**	**-1.2**
CHAR	**Charly**	**1.39**	**357**	⇓P	**Pn**	**06 03 21.0**	**-0.8**
CONE	**Cono NE Rev Vo**	**1.41**	**358**	⇓P	**Pn**	**06 03 21.0**	**-1.0**
CAYA	**Cayambe**	**1.60**	**345**	⇓P	**Pn**	**06 03 23.0**	**-0.7**
JUA2	**San Juan 2**	**1.62**	**321**	⇓P	**Pn**	**06 03 21.9**	**-2.0**
GGP	**Refugio Guagua**	**1.65**	**322**	⇓P	**Pn**	**06 03 22.3**	**-1.8**
TERV	**Terraza Guagua**	**1.65**	**322**	⇓P	**Pn**	**06 03 22.5**	**-1.7**
PINO	**Pino**	**1.67**	**322**	⇓P	**Pn**	**06 03 22.6**	**-1.8**
YANA	**Yana**	**1.68**	**324**	⇓P	**Pn**	**06 03 22.6**	**-1.9**
OTAV	**Otavalo**	**1.92**	**333**	⇓P	**Pn**	**06 03 24.8**	**-2.1**
OTAV	**Otavalo**	**1.92**	**333**	⇓S	**Sn**	**06 03 52.2**	**-3.5**
OTAV	**Otavalo**	**1.92**	**333**	*e*Pn	**Pn**	**06 03 24.5**	**-2.3**
OTAV				*e*Sn	**Sn**	**06 03 52.5**	**-3.2**
COTA	**Cotacachi**	**1.96**	**337**	⇓P	**Pn**	**06 03 26.0**	**-1.3**
MAG1	**Magdalena**	**2.60**	**303**	P	**Pn**	**06 03 30.6**	**-3.8**
JAMA	**Jama**	**2.89**	**295**	P	**Pn**	**06 03 32.6**	**-5.0**
CHIS	**Cerro-Chispas-**	**3.17**	**278**	P	**Pn**	**06 03 36.0**	**-5.1**
ATAH	**Atahualpa**	**5.67**	**188**	P	**Pn**	**06 04 12.7**	**0.0**
	67nm,0.3s,baz=14,slow=7.6,SNR=406						
ATAH				S	**Sn**	**06 05 14.3**	**-3.8**
	112nm,0.3s,baz=9.6,slow=8.6,SNR=12						
ROSC	**El Rosal**	**7.09**	**27**	P	**Pn**	**06 04 32.1**	**+0.9**
	3.1nm,0.3s,baz=271,slow=1.8,SNR=17						
ROSC	**El Rosal**	**7.09**	**27**	*e*Pn	**Pn**	**06 04 30.9**	**-0.3**
NNA	**Nana**	**10.46**	**176**	P	**Pn**	**06 05 15.2**	**0.0**
	8.8nm,0.3s,baz=339,slow=11,SNR=25						
NNA				S	**Sn**	**06 07 03.4**	**-8.5**
	45nm,0.3s,baz=278,slow=20,SNR=8,3						
NNA	**Nana**	**10.46**	**176**	*e*Pn	**Pn**	**06 05 14.8**	**-0.3**
NNA				*e*Sn	**Sn**	**06 07 02.2**	**-10**
BCIP	**Isla Barro Col**	**10.82**	**348**	*e*Pn	**Pn**	**06 05 18.6**	**-1.1**
BCIP				*e*Sn	**Sn**	**06 07 18.7**	**-1.7**
SDV	**Santo Domingo**	**12.42**	**34**	*e*Pn	**Pn**	**06 05 39.3**	**-1.0**
JTS	**JuntasAbangare**	**13.80**	**328**	P	**Pn**	**06 05 57.3**	**-0.4**
	2.4nm,0.3s,baz=143,slow=6.7,SNR=20						
JTS				S	**Sn**	**06 08 33.5**	**+1.7**
	0.8nm,0.3s,baz=323,slow=21,SNR=6.0						
JTS				LR	LR	06 10 25.9	
	comp=Z,475nm,19.0s,baz=21,slow=33						
JTS	**JuntasAbangare**	**13.80**	**328**	*de*P	**Pn**	**06 05 57.6**	**-0.1**
JTS	**JuntasAbangare**	**13.80**	**328**	*e*Pn	**Pn**	**06 05 57.8**	**0.0**
PCRV	**Puerto La Cruz**	**17.33**	**48**	P	**Pn**	**06 06 40.6**	**+0.1**
	3.3nm,0.3s,baz=229,slow=4.5,SNR=20						
LPAZ	**La Paz**	**17.41**	**148**	P	**Pn**	**06 06 42.4**	**+1.0**
	1.7nm,0.3s,baz=336,slow=13,SNR=78						
LPAZ	**La Paz**	**17.41**	**148**	*e*P	**Pn**	**06 06 42.7**	**+1.3**
LPAZ				pmax	pmax		
	comp=Z,65nm,1.6s						
LPAZ	**La Paz**	**17.41**	**148**	*e*P	**Pn**	**06 06 42.7**	**+1.3**
	comp=Z,65nm,1.6s						
TGUH	**Tegucigalpa,Un**	**18.18**	**328**	*e*P	**P**	**06 06 48.3**	**0.0**
	comp=Z,151nm,1.4s						
MCJ	**Malvern**	**19.29**	**360**	⇑*e*P	**P**	**06 07 01.0**	**+0.8**
HOJ	**Hope**	**19.39**	**2**	*i* P	**P**	**06 07 06.1**	**+4.9**
STH	**Stony Hill**	**19.45**	**2**	⇑*e*P	**P**	**06 07 00.6**	**-1.4**
STH	**Stony Hill**	**19.45**	**2**	*i* P	**P**	**06 07 06.1**	**+4.2**
GWJ	**Greenwich**	**19.45**	**2**	⇑*i*P	**P**	**06 07 03.7**	**+1.7**
MTDJ	**Mount Denham**	**19.59**	**0**	*e*P	**P**	**06 07 04.6**	**+1.2**
	comp=Z,267nm,1.2s						
NEJ	**Negril**	**19.63**	**358**	⇓*e*P	**P**	**06 07 03.5**	**-0.3**
BBJ	**Bamboo Saint A**	**19.75**	**1**	⇑*i*P	**P**	**06 07 06.5**	**+1.4**
APG	**El Apazote**	**20.75**	**323**	P	**P**	**06 07 15.7**	**-0.2**
	comp=Z,31nm,0.9s,baz=151,slow=6.8,SNR=22						
SDDR	**Presa de Saban**	**21.26**	**17**	*e*P	**P**	**06 07 23.1**	**+1.9**
	comp=Z,269nm,1.1s,mb5.7						
GTBY	**Guantanamo Bay**	**21.42**	**6**	*e*P	**P**	**06 07 23.7**	**+0.8**
	comp=Z,276nm,1.3s,mb5.6						
SIV	**San Ignacio**	**21.74**	**132**	P	**P**	**06 07 27.6**	**+1.3**
	comp=Z,18nm,0.7s,mb4.8,baz=313,slow=10,SNR=76						
CRPR	**Cabo Rojo, PR**	**21.95**	**28**	*e*P	**P**	**06 07 31.0**	**+2.7**
	comp=Z,48nm,1.3s,mb4.9						
CELP	**Cerrillos**	**22.25**	**29**	*e*P	**P**	**06 07 30.1**	**-1.0**
LRS	**Lares**	**22.32**	**28**	*e*P	**P**	**06 07 31.4**	**-0.3**
AOPR	**Arecibo Observ**	**22.41**	**28**	*e*P	**P**	**06 07 32.5**	**0.0**
	comp=Z,39nm,0.6s,mb5.1						
SJG	**San Juan**	**22.50**	**30**	P	**P**	**06 07 32.8**	**-0.5**
	comp=Z,36nm,0.2s,mb5.5,baz=346,slow=15,SNR=8.2						
SJG	**San Juan**	**22.50**	**30**	*e*P	**P**	**06 07 32.4**	**-0.9**
SJG				pmax	pmax		
	comp=Z,38nm,1.0s						
SJG	**San Juan**	**22.50**	**30**	*e*P	**P**	**06 07 32.4**	**-1.0**
	comp=Z,38nm,1.0s,mb4.9						
CBYP	**Canovanas**	**22.78**	**30**	*e*P	**P**	**06 07 34.7**	**-1.2**
	comp=Z,49nm,1.1s,mb5.0						
TEIG	**Tepich**	**23.99**	**335**	*e*P	**P**	**06 07 46.0**	**-0.9**
	comp=Z,19nm,0.5s,mb5.0						
CMIG	**Matias Romero**	**25.13**	**318**	P	**P**	**06 07 57.0**	**-0.3**
	comp=Z,26nm,0.6s,mb5.0,baz=110,slow=6.4,SNR=54						
CMIG				PcP	PcP	06 11 26.4	0.0
	comp=Z,2.8nm,0.8s,baz=81,slow=7.1,SNR=4.5						
CFAA	**Coronel Fontan**	**31.23**	**164**	P	**P**	**06 08 52.1**	**+0.8**
	comp=Z,0.9nm,0.6s,mb3.6,baz=344,slow=7.5,SNR=29						
CPUP	**Villa Florida**	**31.46**	**143**	P	**P**	**06 08 54.0**	**+0.5**
	comp=Z,2.8nm,0.7s,mb4.0,baz=298,slow=8.9,SNR=11						
CPUP				pP	pP	06 09 32.4	-0.6
	comp=Z,3.5nm,0.8s,baz=323,slow=9.0,SNR=3.9						
CPUP				PcP	PcP	06 11 42.9	+0.9
	comp=Z,1.5nm,0.5s,baz=138,slow=1.2,SNR=4.2						
CPUP	**Villa Florida**	**31.46**	**143**	*e*P	**P**	**06 08 53.6**	**+0.2**
CPUP				pmax	pmax		
	comp=Z,17nm,0.8s						
CPUP	**Villa Florida**	**31.46**	**143**	*e*P	**P**	**06 08 53.6**	**+0.2**
	comp=Z,17nm,0.8s,mb4.7						
NHSC	**New Hope**	**34.49**	**356**	*e*P	**P**	**06 09 20.1**	**+0.5**
	comp=Z,153nm,1.3s,mb5.4						
COW	**Cow Castle Cre**	**34.80**	**355**	*e*P	**P**	**06 09 22.6**	**+0.3**
LRAL	**Lakeview Retre**	**35.47**	**346**	*e*P	**P**	**06 09 27.1**	**-0.8**
	comp=Z,13nm,0.8s,mb4.5						
LRAL				*e*pP	pP	06 10 06.8	-1.3
JSC	**Jenkinsville**	**35.74**	**355**	*e*P	**P**	**06 09 30.0**	**-0.3**
JSC				*e*		06 11 53.7	
HKT	**Hockley**	**35.78**	**332**	*e*P	**P**	**06 09 29.3**	**-1.4**
HKT				pmax	pmax		
	comp=Z,35nm,1.9s,mb4.6						
HKT	**Hockley**	**35.78**	**332**	*e*P	**P**	**06 09 29.3**	**-1.4**
	comp=Z,36nm,1.9s,mb4.6						
CPCT	**Cooper Cave**	**37.31**	**351**	*e*P	**P**	**06 09 42.6**	**-0.9**
CPCT				*e*pP	pP	06 10 22.9	-1.0
SWET	**Sewanee**	**37.34**	**349**	*e*P	**P**	**06 09 42.5**	**-1.3**
SWET				*e*pP	pP	06 10 23.2	-1.0
SWET				*e*PcP	PcP	06 11 58.3	-0.4
TKL	**Tuckaleechee C**	**37.40**	**352**	*e*P	**P**	**06 09 43.8**	**-0.5**
OXF	**Oxford**	**37.49**	**344**	*e*P	**P**	**06 09 43.8**	**-1.2**
OXF				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.6						
OXF	**Oxford**	**37.49**	**344**	*e*P	**P**	**06 09 43.8**	**-1.2**
	comp=Z,11nm,0.6s,mb4.6						
JCT	**Junction City**	**38.19**	**328**	*e*P	**P**	**06 09 51.0**	**0.0**
JCT				*e*		06 12 01.1	
JCT				pmax	pmax		
	comp=Z,28nm,0.7s,mb4.9						
JCT	**Junction City**	**38.19**	**328**	*e*P	**P**	**06 09 51.0**	**0.0**
	comp=Z,28nm,0.7s,mb4.9						

SSPA	Standing Stone	41.92	360	eP	P	06 10 21.0 -0.4
	comp=Z,23nm,1.1s,mb4.5					
SSPA				epP	pP	06 11 02.8 +0.1
GDL2	Guadalupe Moun	42.01	325	eP	P	06 10 23.0 +0.6
	comp=Z,28nm,1.0s,mb4.7					
324A	Moseley Ranch,	42.12	323	⇓P	P	06 10 23.0 -0.2
	baz=42,SNR=91					
126A	Clayton Basin,	42.15	326	⇓P	P	06 10 23.7 +0.2
	baz=42,SNR=23					
225A	Deer Hill, Car	42.21	325	⇑P	P	06 10 24.6 +0.6
	baz=42,SNR=40					
Z27A	Tatum	42.21	327	⇑P	P	06 10 23.6 -0.4
	baz=42,SNR=54					
MNTX	Cornudas Mount	42.24	324	eP	P	06 10 23.8 -0.4
	comp=Z,45nm,1.1s,mb4.8					
CPRX	Cap Rock	42.35	326	eP	P	06 10 25.7 +0.6
	comp=Z,42nm,1.0s,mb4.8					
CPRX				epP	pP	06 11 07.3 +0.9
CPRX				ePcP	PcP	06 12 14.5 -0.4
MSTX	Muleshoe	42.48	328	⇑P	P	06 10 25.9 -0.3
	baz=43,SNR=36					
125A	Gardner Draw,	42.52	325	⇓P	P	06 10 27.0 +0.5
	baz=43,SNR=77					
224A	Cornudas Mount	42.59	324	⇓P	P	06 10 27.0 -0.1
	baz=43,SNR=60					
Z26A	Caprock	42.60	327	⇑P	P	06 10 27.4 +0.3
	baz=43,SNR=76					
Y27A	Causey	42.62	328	⇓P	P	06 10 27.1 -0.2
	baz=43,SNR=38					
AMTX	Amarillo	42.64	330	eP	P	06 10 27.2 -0.2
	comp=Z,57nm,0.8s,mb5.0					
124A	Stringfield Ra	43.01	325	⇓P	P	06 10 31.1 +0.7
	baz=43,SNR=34					
Z25A	Roswell	43.01	326	⇓P	P	06 10 30.8 +0.4
	baz=43,SNR=84					
X27A	F and S Farms,	43.17	329	⇑P	P	06 10 31.8 +0.1
	baz=43,SNR=33					
HDIL	Hopedale	43.18	347	eP	P	06 10 29.1 -2.6
	comp=Z,64nm,0.4s,mb5.4					
HDIL				epP	pP	06 11 09.3 -3.8
HDIL				ePcP	PcP	06 12 17.7 +0.2
Z24A	Sheeppen Canyo	43.41	325	⇓P	P	06 10 34.3 +0.7
	baz=44,SNR=86					
123A	Bell Site, Whi	43.43	324	⇑P	P	06 10 34.6 +0.8
	baz=44,SNR=16					
X26A	CR and CF Fran	43.48	328	⇓P	P	06 10 34.2 +0.1
	baz=44,SNR=22					
Y25A	Mesa, Roswell	43.48	327	⇓P	P	06 10 34.3 +0.2
	baz=44,SNR=34					
W27A	Bowe Ranch, En	43.48	329	⇓P	P	06 10 34.2 0.0
	baz=44,SNR=39					
BINY	Binghamton	43.51	2	eP	P	06 10 34.4 +0.2
	comp=Z,72nm,1.3s,mb4.8					
BINY				epP	pP	06 11 15.8 0.0
BINY				esP	sP	06 11 34.7 -2.6
222A	Williams Famil	43.56	323	⇑P	P	06 10 35.4 +0.6
	baz=44,SNR=27					
Z23A	Rita Site, Whi	43.86	325	⇑P	P	06 10 37.9 +0.7
	baz=44,SNR=28					
W26A	Owens Ranch, T	43.86	329	⇑P	P	06 10 37.4 +0.2
	baz=44,SNR=14					
Y24A	Capitan	43.89	326	⇑P	P	06 10 37.6 +0.2
	baz=44,SNR=33					
221A	Mesquite Ranch	43.90	322	⇑P	P	06 10 38.7 +1.2
	baz=44,SNR=10					
122A	Conniff Cattle	43.91	323	⇑P	P	06 10 38.6 +1.0
	baz=44					
X25A	Clemmons Ranch	43.91	327	⇑P	P	06 10 37.7 +0.1
	baz=44					
320A	Kipp Ranch, An	43.92	321	⇓P	P	06 10 38.5 +0.9
	baz=44,SNR=29					
KSU1	Kansas State U	44.01	339	eP	P	06 10 36.8 -1.5
	comp=Z,35nm,0.5s,mb4.9					
Y23A	Lovelace Mesa,	44.24	325	⇓P	P	06 10 40.7 +0.4
	baz=44,SNR=54					
121A	Cookes Peak, D	44.27	323	⇓P	P	06 10 41.5 +1.1
	baz=44,SNR=44					
Z22A	Elephant Butte	44.28	324	⇑P	P	06 10 41.3 +0.7
	baz=44,SNR=8.2					
220A	Playas Peak, P	44.30	321	⇓P	P	06 10 41.4 +0.7
	baz=44,SNR=40					
W25A	X Bar L Ranch,	44.33	328	⇑P	P	06 10 41.1 +0.2
	baz=44,SNR=30					
X24A	Lazy VL Ranch,	44.36	327	⇓P	P	06 10 41.4 +0.2
	baz=44					
V26A	Tequesquite Ra	44.42	329	⇓P	P	06 10 42.0 +0.4
	baz=44,SNR=118					
319A	Douglas	44.42	320	⇓P	P	06 10 42.4 +0.7
	baz=44,SNR=31					
BNM	Barren Site	44.73	325	eP	P	06 10 44.3 +0.3
	comp=Z,14nm,0.6s,mb4.5					
BNM				ePcP	PcP	06 12 23.8 +0.8
Z21A	St. Cloud Mine	44.74	323	⇓P	P	06 10 45.1 +0.9
	baz=45,SNR=34					
Y22A	Socorro	44.77	325	⇓P	P	06 10 44.9 +0.5
	baz=45,SNR=26					
X23A	Hourglass Bar	44.79	326	⇓P	P	06 10 45.0 +0.4
	baz=45					
120A	U Bar Ranch, L	44.80	322	⇓P	P	06 10 45.3 +0.7
	baz=45,SNR=20					
219A	White Tail Can	44.82	321	⇓P	P	06 10 45.4 +0.6
	baz=45,SNR=53					
W24A	Lazy 6 Ranch,	44.83	327	⇑P	P	06 10 45.1 +0.3
	baz=45,SNR=19					
Y22D	IRIS PASSCAL I	44.84	325	⇑P	P	06 10 45.6 +0.6
	baz=45					
U26A	Atchley Ranch,	44.86	330	⇓P	P	06 10 45.5 +0.4
	baz=45,SNR=37					
V25A	Rancho No Teng	44.88	328	⇓P	P	06 10 45.8 +0.6
	baz=45,SNR=80					
318A	Bisbee	44.92	320	⇑P	P	06 10 46.2 +0.6
	baz=45,SNR=42					
LENM	Lemitar	44.94	325	eP	P	06 10 46.0 +0.2
	comp=Z,26nm,1.1s,mb4.5					
CBKS	Cedar Bluff	44.99	335	eP	P	06 10 45.9 -0.1
CBKS				e*PP	pP	06 11 26.0 -1.8
CBKS				pmax	pmax	
	comp=Z,96nm,0.6s,mb5.3					
CBKS	Cedar Bluff	44.99	335	eP	P	06 10 45.9 -0.1
	comp=Z,96nm,0.6s,mb5.3					
CBKS				epP	pP	06 11 26.0 -1.8
V24A	Rampart Ranch,	45.14	328	⇓P	P	06 10 47.8 +0.5
	baz=45,SNR=81					
Z20A	Nine Sixteen R	45.16	322	⇑P	P	06 10 48.5 +1.0
	baz=45,SNR=36					
W23A	Werner Place,	45.20	326	⇓P	P	06 10 48.3 +0.6
	baz=45,SNR=36					
LAZ	Ladron	45.20	325	eP	P	06 10 48.3 +0.5
	comp=Z,17nm,1.0s,mb4.3					
X22A	Bernardo	45.20	325	⇓P	P	06 10 48.9 +1.1
	baz=45,SNR=13					
U25A	Circle Dot Ran	45.21	329	⇓P	P	06 10 48.3 +0.5
	baz=45,SNR=39					
Y21A	Point of Rocks	45.23	324	⇓P	P	06 10 49.4 +1.3
	baz=45,SNR=12					
218A	Dragoon	45.31	320	⇓P	P	06 10 49.2 +0.5
	baz=45,SNR=37					
NCB	Newcomb	45.35	3	eP	P	06 10 48.7 -0.1
	comp=Z,9.7nm,0.7s,mb4.2					
NCB				epP	pP	06 11 30.1 -0.5
119A	Ashpeak Ranch,	45.36	322	⇓P	P	06 10 49.8 +0.7
	baz=45,SNR=24					
SCIA	State Center	45.45	344	eP	P	06 10 47.4 -2.2
	comp=Z,28nm,0.8s,mb4.7					
W22A	Albuquerque	45.53	326	⇑P	P	06 10 51.2 +0.8
	baz=46,SNR=7.4					
Y20A	Horse Springs,	45.58	323	⇓P	P	06 10 51.8 +1.1
	baz=46,SNR=61					
X21A	Alamocita Cree	45.61	324	⇑P	P	06 10 52.1 +1.1
	baz=46,SNR=77					
JFWS	Jewell Farm	45.65	347	eP	P	06 10 48.8 -2.3
JFWS				e*PP	pP	06 11 30.2 -2.8
JFWS				e		06 12 26.3
JFWS				pmax	pmax	
	comp=Z,23nm,0.6s,mb4.7					
JFWS	Jewell Farm	45.65	347	eP	P	06 10 48.8 -2.3
	comp=Z,23nm,0.6s,mb4.7					
JFWS				epP	pP	06 11 30.1 -2.8
JFWS				ePcP	PcP	06 12 26.3 +0.3
V23A	Ortiz Mt. (NFS	45.65	327	⇑P	P	06 10 51.9 +0.7
	baz=46,SNR=34					
U24A	Moreno Valley	45.66	328	⇑P	P	06 10 52.6 +1.2
	baz=46					
Z19A	T-Link Ranch,	45.69	322	⇓P	P	06 10 52.4 +0.7
	baz=46,SNR=5.4					
118A	Homack Ranch,	45.70	321	⇑P	P	06 10 52.2 +0.5
	baz=46,SNR=36					
T25A	Trinidad	45.78	330	⇑P	P	06 10 53.1 +0.8
	baz=46,SNR=46					
LONY	Lake Ozonia	45.98	3	eP	P	06 10 53.1 -0.6
	comp=Z,38nm,1.3s,mb4.6					
TUC	Tucson	46.00	320	eP	P	06 10 54.4 +0.3
TUC				pmax	pmax	
	comp=Z,52nm,1.0s,mb4.8					
TUC	Tucson	46.00	320	eP	P	06 10 54.4 +0.4
	comp=Z,52nm,1.0s,mb4.8					
W21A	San Fidel	46.01	325	⇓P	P	06 10 55.0 +0.9
	baz=46,SNR=5.1					
Z18A	Geronimo	46.03	321	⇓P	P	06 10 54.8 +0.5
	baz=46,SNR=6.6					
U23A	El Rito	46.09	328	⇓P	P	06 10 55.4 +0.7
	baz=46,SNR=92					
X20A	Quemado	46.09	324	⇓P	P	06 10 55.9 +1.1
	baz=46,SNR=26					
117A	Oracle	46.14	320	⇓P	P	06 10 55.5 +0.3
	baz=46,SNR=52					
Y19A	Nutrioso	46.14	323	⇑P	P	06 10 56.0 +0.9
	baz=46,SNR=24					
V22A	San Miguel Ran	46.17	327	⇓P	P	06 10 55.9 +0.5
	baz=46,SNR=34					
S25A	Robets Cordova	46.20	330	⇑P	P	06 10 56.2 +0.6
	baz=46,SNR=70					
216A	Three Points,	46.24	319	⇑P	P	06 10 56.2 +0.3
	baz=46,SNR=23					
Z17A	San Carlos Hig	46.45	321	⇑P	P	06 10 57.8 +0.2
	baz=46					
U22A	Llaves	46.48	327	⇓P	P	06 10 58.7 +0.9
	baz=47,SNR=27					
Y18A	Canyon Day Jun	46.49	322	⇓P	P	06 10 58.3 +0.4
	baz=47,SNR=29					
V21A	Milan	46.50	326	⇓P	P	06 10 58.9 +1.0
	baz=47,SNR=90					
W20A	Ramah	46.51	325	⇓P	P	06 10 58.8 +0.8
	baz=47,SNR=37					
T23A	Casias Ranch,	46.54	328	⇑P	P	06 10 58.8 +0.6
	baz=47,SNR=29					
S24A	Houchin Ranch,	46.57	330	⇑P	P	06 10 59.3 +0.8
	baz=47,SNR=23					
116A	Eloy	46.76	319	⇑P	P	06 11 00.1 +0.1
	baz=47,SNR=37					
SDCO	Great Sand Dun	46.80	329	eP	P	06 11 00.8 +0.6
	comp=Z,84nm,1.1s,mb5.0					
SDCO				epP	pP	06 11 42.9 +0.6
SDCO				ePcP	PcP	06 12 30.8 +0.7
Y17A	Roosevelt	46.94	321	⇑P	P	06 11 01.5 +0.1
	baz=47,SNR=8.3					
X18A	Snowflake	46.95	323	⇑P	P	06 11 01.9 +0.5
	baz=47,SNR=11					
U21A	Nageezi	46.96	326	⇑P	P	06 11 02.1 +0.6
	baz=47,SNR=27					
V20A	Brimhall	46.96	325	⇑P	P	06 11 02.0 +0.5
	baz=47,SNR=13					
R24A	Sanders Place,	46.97	330	⇓P	P	06 11 02.1 +0.6
	baz=47,SNR=16					
T22A	Edith	46.98	328	⇑P	P	06 11 02.0 +0.4
	baz=47,SNR=13					
W19A	Sanders	47.02	324	⇓P	P	06 11 02.6 +0.6
	baz=47,SNR=28					
S23A	Nye Farm, Mont	47.02	329	⇑P	P	06 11 02.7 +0.8
	baz=47,SNR=5.2					
Z16A	Peralta Trail,	47.08	320	⇓P	P	06 11 02.5 0.0
	baz=47,SNR=14					
Q25A	Bedland, Calha	47.09	331	⇓P	P	06 11 02.4 0.0
	baz=47,SNR=7.3					
214A	Organ Pipe Nat	47.11	318	⇑P	P	06 11 03.1 +0.4
	baz=47,SNR=29					
PKME	Peaks-Kenny Pk	47.13	8	eP	P	06 11 02.6 0.0
	comp=Z,14nm,0.7s,mb4.4					
115A	Sonoran Desert	47.19	319	⇓P	P	06 11 03.6 +0.3
	baz=47,SNR=11					
W18A	Petrified Fore	47.23	324	⇓P	P	06 11 04.3 +0.8
	baz=47,SNR=27					
V19A	Window Rock	47.23	325	⇓P	P	06 11 04.2 +0.6
	baz=47,SNR=10					
T21A	Navajo Lake	47.30	327	⇑P	P	06 11 04.7 +0.6
	baz=47,SNR=6.2					
X17A	Forest Lakes	47.34	322	⇓P	P	06 11 05.3 +0.9
	baz=47,SNR=18					
U20A	Newcomb	47.40	326	⇓P	P	06 11 05.3 +0.4
	baz=48,SNR=86					
Y16A	Circle Bar Ran	47.46	321	⇓P	P	06 11 06.1 +0.7
	baz=48,SNR=43					
S22A	4UR Ranch, Cre	47.48	328	⇑P	P	06 11 06.1 +0.6
	baz=48,SNR=48					
Z15A	Gila River Ind	47.51	320	⇓P	P	06 11 06.0 +0.2
	baz=48					
P25A	Willow Gulch B	47.52	332	⇓P	P	06 11 06.2 +0.4
	baz=48,SNR=22					
Q24A	Divide	47.56	331	⇑P	P	06 11 06.4 +0.3
	baz=48,SNR=14					
114A	Black Gap (USA	47.65	319	⇑P	P	06 11 07.2 +0.3
	baz=48,SNR=24					
OGNE	Ogallala	47.73	335	eP	P	06 11 07.3 -0.1
	comp=Z,34nm,0.5s,mb4.9					
U19A	Dine' College,	47.73	325	⇑P	P	06 11 07.2 -0.3
	baz=48,SNR=16					
V18A	Ganado	47.75	324	⇓P	P	06 11 07.7 +0.1
	baz=48,SNR=14					
W17A	Winslow	47.78	323	⇑P	P	06 11 08.1 +0.3
	baz=48,SNR=6.6					
X16A	Lo Mia Camp, P	47.79	322	⇓P	P	06 11 08.5 +0.6
	baz=48,SNR=46					
R22A	Saguache, Gunn	47.81	329	⇑P	P	06 11 08.7 +0.7
	baz=48,SNR=33					
Q23A	Hartsel	47.85	330	⇓P	P	06 11 08.7 +0.4
	baz=48					
P24A	Kohler Place,	47.88	331	⇓P	P	06 11 08.7 +0.2
	baz=48,SNR=7.3					
S21A	Coal Bank Pass	47.93	327	⇓P	P	06 11 09.1 +0.1
	baz=48,SNR=16					
MVCO	Mesa Verde	47.99	326	⇓P	P	06 11 09.6 +0.2
	baz=48,SNR=20					
MVCO	Mesa Verde	47.99	326	eP	P	06 11 09.3 0.0
	comp=Z,163nm,1.9s,mb5.0					
T19A	Beclabito	48.01	326	⇑P	P	06 11 09.5 0.0
	baz=48					
Y15A	Casa Rosa Ranc	48.05	320	⇓P	P	06 11 10.2 +0.3
	baz=48,SNR=24					
Z14A	Wintersburg	48.07	319	⇑P	P	06 11 10.2 +0.1
	baz=48,SNR=9.1					
ECSD	EROS Data Cent	48.14	342	eP	P	06 11 07.7 -2.7
	comp=Z,8.0nm,0.7s,mb4.2					
ECSD				epP	pP	06 11 50.6 -2.1
ECSD				ePcP	PcP	06 12 33.7 -1.1
V17A	Tonalea, Kykot	48.20	323	⇓P	P	06 11 11.7 +0.6
	baz=48,SNR=119					
U18A	Rough Rock, Ch	48.20	325	⇑P	P	06 11 11.3 +0.2
	baz=48,SNR=24					
P23A	Jefferson	48.22	331	⇓P	P	06 11 12.0 +0.9
	baz=48,SNR=34					
113A	Mohawk Valley,	48.24	318	⇑P	P	06 11 11.3 -0.1
	baz=48,SNR=5.9					
W16A	Flagstaff	48.29	322	⇓P	P	06 11 12.6 +0.9
	baz=48,SNR=11					
R21A	Cimarron	48.33	328	⇓P	P	06 11 12.3 +0.3
	baz=48,SNR=25					
X15A	Humboldt	48.33	321	⇓P	P	06 11 12.6 +0.5
	baz=48,SNR=52					
S20A	Disappointment	48.36	327	⇓P	P	06 11 12.8 +0.6
	baz=48,SNR=26					
Q22A	Crested Butte,	48.37	329	⇓P	P	06 11 12.9 +0.7
	baz=48,SNR=42					
Z13A	Yuma Proving G	48.44	319	⇑P	P	06 11 13.0 +0.1
	baz=48,SNR=12					
ISCO	Idaho Springs	48.44	331	eP	P	06 11 12.7 -0.1
ISCO				e		06 12 37.0
ISCO				pmax	pmax	
	comp=Z,10.0nm,0.8s,mb4.2					
ISCO	Idaho Springs	48.44	331	eP	P	06 11 12.7 -0.1
	comp=Z,10nm,0.8s,mb4.2					
ISCO				ePcP	PcP	06 12 37.0 +1.0
COWI	Conover	48.47	349	eP	P	06 11 10.8 -2.1
	comp=Z,4.7nm,0.5s,mb4.1					
COWI				epP	pP	06 11 53.2 -2.1
COWI				ePcP	PcP	06 12 35.4 -0.5
Y14A	Wickenburg	48.47	320	⇑P	P	06 11 13.5 +0.4
	baz=48,SNR=31					
WUAZ	Wupatki	48.48	323	⇓P	P	06 11 13.9 +0.7
	baz=49,SNR=61					
WUAZ	Wupatki	48.48	323	eP	P	06 11 13.8 +0.6
	comp=Z,116nm,1.1s,mb5.1					
R20A	Redvale	48.64	327	⇓P	P	06 11 14.9 +0.6
	baz=49,SNR=21					
SMCO	Snowmass	48.64	329	eP	P	06 11 14.8 +0.5
	comp=Z,50nm,1.5s,mb4.6					
112A	Yuma	48.65	317	⇓P	P	06 11 14.4 -0.1
	baz=49					
Q21A	Lamborn Mesa,	48.69	329	⇑P	P	06 11 15.0 +0.3
	baz=49,SNR=9.6					
PV01	Paradox Valley	48.70	327	eP	P	06 11 15.2 +0.5
	comp=Z,5μm,1.3s					
T18A	Mexican Hat	48.71	325	⇑P	P	06 11 14.7 -0.2
	baz=49,SNR=50					
S19A	Harvey Farm, M	48.73	327	⇑P	P	06 11 15.1 +0.1
	baz=49,SNR=46					
X14A	Yava	48.73	321	⇓P	P	06 11 15.8 +0.7
	baz=49,SNR=42					
U17A	Shonto	48.79	324	⇑P	P	06 11 15.8 +0.3
	baz=49,SNR=32					
W15A	Williams	48.80	322	⇓P	P	06 11 16.6 +0.9
	baz=49,SNR=15					
P22A	Eagle	48.84	330	⇓P	P	06 11 16.2 +0.3
	baz=49					
Y13A	Salome	48.93	319	⇓P	P	06 11 16.9 +0.2
	baz=49,SNR=20					
PV04	Paradox Valley	49.07	327	eP	P	06 11 17.6 0.0
GLA	Glamis	49.12	318	⇑P	P	06 11 18.4 +0.2
	baz=49,SNR=7.9					
GLA	Glamis	49.12	318	eP	P	06 11 18.2 +0.1
GLA				pmax	pmax	
	comp=Z,67nm,1.5s,mb4.8					
GLA	Glamis	49.12	318	eP	P	06 11 18.2 +0.1
	comp=Z,67nm,1.5s,mb4.8					
PV10	Paradox Valley	49.13	327	eP	P	06 11 17.6 -0.5
	comp=Z,693nm,1.1s,mb5.9					
P21A	Newcastle	49.14	329	⇑P	P	06 11 18.8 +0.7
	baz=49,SNR=22					
T17A	Navajo Res., N	49.15	325	⇑P	P	06 11 18.9 +0.7
	baz=49,SNR=54					
Q20A	Ridgley Place,	49.15	328	⇑P	P	06 11 18.1 -0.2
	baz=49,SNR=10					
V15A	Kaibab Nationa	49.16	322	⇑P	P	06 11 19.4 +1.0
	baz=49,SNR=37					
S18A	Hurst Farm, Bl	49.17	326	⇑P	P	06 11 18.6 +0.2
	baz=49,SNR=42					
O22A	Kremmling	49.17	331	⇑P	P	06 11 18.4 0.0
	baz=49,SNR=49					
R19A	Curley Farm, L	49.19	327	⇑P	P	06 11 18.5 0.0
	baz=49,SNR=46					
W14A	Seligman	49.33	321	⇓P	P	06 11 20.3 +0.6
	baz=49,SNR=19					
Y12C	Blythe	49.34	319	⇑P	P	06 11 20.0 +0.2
	baz=49					
PDMCI	Parker Dam,Lak	49.43	320	⇓P	P	06 11 20.2 -0.2
	baz=50,SNR=6.7					
PHWY	Pilot Hill	49.54	332	eP	P	06 11 21.2 +0.1
	comp=Z,15nm,0.6s,mb4.5					
PHWY				epP	pP	06 12 04.0 +0.3
PHWY				ePcP	PcP	06 12 40.1 +0.2
T16A	Glen Canyon Da	49.55	324	⇑P	P	06 11 21.7 +0.5
	baz=50,SNR=9.5					
S17A	Black Ridge (B	49.59	325	⇑P	P	06 11 21.8 +0.3
	baz=50,SNR=38					
R18A	Canyonlands Na	49.60	327	⇓P	P	06 11 21.4 -0.2
	baz=50,SNR=35					
P20A	De Beque	49.61	329	⇑P	P	06 11 21.8 +0.1
	baz=50,SNR=11					
V14A	Boquillas Ranc	49.62	322	⇑P	P	06 11 22.5 +0.7
	baz=50,SNR=34					
N22A	Wattenberg Ran	49.62	331	⇓P	P	06 11 22.1 +0.4
	baz=50,SNR=11					
U15A	North Rim	49.64	323	⇑P	P	06 11 22.8 +0.9
	baz=50,SNR=32					
Q19A	Hogan Spring (	49.67	328	⇑P	P	06 11 22.1 0.0
	baz=50,SNR=5.4					
O21A	Pagoda	49.67	330	⇑P	P	06 11 22.6 +0.5
	baz=50,SNR=10					
SWSC	Sam W. Stewart	49.71	317	⇓P	P	06 11 22.8 +0.2
	baz=50,SNR=9.8					
DVTC	Desert V Tower	49.76	317	⇓P	P	06 11 23.5 +0.6
	baz=50,SNR=5.4					
W13A	Hualapai Mount	49.77	321	⇓P	P	06 11 23.7 +0.8
	baz=50,SNR=22					
BC3	Big Chuckawall	49.90	318	⇓P	P	06 11 24.2 +0.2
	baz=50,SNR=16					
O20A	White River Ci	50.00	329	⇓P	P	06 11 24.8 +0.2
	baz=50,SNR=10					
IRM	Iron Mountain	50.01	319	⇓P	P	06 11 25.1 +0.3
	baz=50,SNR=27					
P19A	Cripple Cowboy	50.01	328	⇓P	P	06 11 24.6 -0.1
	baz=50,SNR=15					
NEE2	Needles Airpor	50.03	320	⇑P	P	06 11 25.1 +0.2
	baz=50,SNR=5.7					
R17A	Hanksville Air	50.08	326	⇑P	P	06 11 25.5 +0.2
	baz=50,SNR=38					
T15A	Red Dirt Ranch	50.09	323	⇓P	P	06 11 25.9 +0.6
	baz=50,SNR=12					
S16A	Weppner Ranch,	50.10	325	⇑P	P	06 11 25.6 +0.2
	baz=50,SNR=56					
N21A	Black Mountain	50.11	330	⇑P	P	06 11 26.1 +0.7
	baz=50,SNR=22					
MONP	Monument Peak	50.11	317	⇓P	P	06 11 25.9 +0.4
	baz=50,SNR=14					
BAR	Barrett	50.17	316	eP	P	06 11 26.2 +0.2
	comp=Z,39nm,1.3s,mb4.6					
U14A	Mt Trumbull	50.17	322	⇓P	P	06 11 26.6 +0.6
	baz=50,SNR=24					
Q18A	Rafter H Ranch	50.24	327	⇓P	P	06 11 26.7 +0.3
	baz=50,SNR=44					
V13A	Grand Canyon W	50.30	321	⇓P	P	06 11 27.4 +0.4
	baz=50,SNR=19					
R16A	Teasdale	50.42	325	⇑P	P	06 11 28.3 +0.5
	baz=50,SNR=41					
SRU	San Rafael	50.46	327	⇓P	P	06 11 28.3 +0.2
	baz=50,SNR=50					
SRU	San Rafael	50.46	327	eP	P	06 11 27.9 -0.2
SRU				e*PP	pP	06 12 10.4 -0.4
SRU				e		06 12 43.7
SRU				pmax	pmax	
	comp=Z,68nm,1.2s,mb4.8					
SRU	San Rafael	50.46	327	eP	P	06 11 27.9 -0.2
	comp=Z,68nm,1.2s,mb4.9					
SRU				epP	pP	06 12 10.4 -0.4
SRU				ePcP	PcP	06 12 43.6 +0.2
BELC	Belle Mtn. Jos	50.47	318	⇓P	P	06 11 28.7 +0.4
	baz=50,SNR=15					
S15A	Panguitch	50.52	324	⇓P	P	06 11 29.1 +0.6
	baz=51,SNR=6.8					
W12A	Cal Nev Ari	50.52	320	⇓P	P	06 11 28.8 +0.2
	baz=51					
N20A	Spence Gulch,	50.53	330	⇑P	P	06 11 28.9 +0.3
	baz=51					
T14A	Hurricane	50.53	323	⇓P	P	06 11 29.4 +0.7
	baz=51,SNR=37					
LDFC	Landfair	50.54	320	eP	P	06 11 30.2 +1.5
	comp=Z,19nm,0.7s,mb4.6					
PFO	Pinyon Flat Ob	50.55	317	⇑P	P	06 11 29.3 +0.4
	baz=51,SNR=10					
L22A	Ellis Ranch, M	50.57	332	⇓P	P	06 11 29.4 +0.6
	baz=51,SNR=9.8					
O19A	Miners Draw (B	50.57	329	⇑P	P	06 11 28.9 0.0
	baz=51,

comp=Z,32nm,1.1s,mb4.7
MSU *e*PcP PcP 06 12 45.7 +0.3
MSU *e*ScP ScP 06 16 24.7 +1.3
M20A Sweetwater, Wa 50.99 331 ⇓P **P 06 11 32.2 +0.2**
baz=51,SNR=16
T13A Saint George 51.01 322 ⇑P **P 06 11 33.0 +0.8**
baz=51,SNR=25
O18A Roosevelt 51.01 328 ⇓P **P 06 11 32.5 +0.3**
baz=51,SNR=21
U12A Valley of Fire 51.02 321 ⇑P **P 06 11 32.7 +0.4**
baz=51,SNR=8.9
CCUT Cedar City 51.02 323 *e*P **P 06 11 33.0 +0.6**
comp=Z,30nm,1.2s,mb4.6
CCUT *e*PcP PcP 06 12 46.6 +1.0
N19A John Jarvie Ra 51.04 329 ⇓P **P 06 11 32.1 -0.3**
baz=51,SNR=12
S14A Cedar City 51.05 324 ⇑P **P 06 11 33.0 +0.5**
baz=51,SNR=15
MURC Murrieta 51.05 317 ⇑P **P 06 11 33.0 +0.4**
baz=51,SNR=14
HEC Hector,Ludlow 51.19 319 ⇑P **P 06 11 34.2 +0.6**
baz=51,SNR=6.1
RSSD Black Hills 51.19 336 *e*P **P 06 11 33.7 +0.3**
RSSD *e**PP pP 06 12 16.5 +0.3
RSSD *e* 06 12 45.6
RSSD pmax pmax
comp=Z,8.0nm,0.5s,mb4.4
RSSD Black Hills 51.19 336 *e*P **P 06 11 33.7 +0.3**
comp=Z,8.1nm,0.5s,mb4.4
RSSD *e*pP pP 06 12 16.5 +0.3
RSSD *e*PcP PcP 06 12 45.6 -0.4
V11A Goodsprings 51.21 320 ⇑P **P 06 11 34.0 +0.3**
baz=51,SNR=16
ARUT Antelope Range 51.23 323 *e*P **P 06 11 34.3 +0.5**
ARUT pmax pmax
comp=Z,38nm,1.2s,mb4.7
ARUT Antelope Range 51.23 323 *e*P **P 06 11 34.3 +0.5**
comp=Z,38nm,1.2s,mb4.7
BBRC Big Bear Solar 51.25 318 ⇑P **P 06 11 35.1 +1.0**
baz=51,SNR=11
T12A Moapa 51.31 322 ⇑P **P 06 11 35.0 +0.5**
baz=51
R14A James Farms, M 51.32 324 ⇑P **P 06 11 34.7 +0.2**
baz=51
S13A Holt Ranch, En 51.34 323 ⇑P **P 06 11 35.8 +1.1**
baz=51,SNR=29
O17A Robinson Place 51.35 328 ⇑P **P 06 11 35.3 +0.6**
baz=51,SNR=25
N18A Larsen Ranch, 51.36 329 ⇓P **P 06 11 34.8 +0.1**
baz=51
Q15A Fillmore 51.42 325 ⇑P **P 06 11 35.5 +0.2**
baz=52,SNR=14
P16A Fountain Green 51.44 326 ⇑P **P 06 11 35.8 +0.5**
baz=52,SNR=7.2
L20A Wamsutter 51.46 331 ⇑P **P 06 11 35.4 -0.1**
baz=52,SNR=7.3
M19A Rock Springs 51.48 330 ⇓P **P 06 11 35.3 -0.3**
baz=52
U11A Corn Creek 51.54 321 ⇑P **P 06 11 36.6 +0.4**
baz=52
SCI San Clemente I 51.64 315 ⇑P **P 06 11 37.0 0.0**
baz=52
RRX Edison Barstow 51.66 318 ⇑P **P 06 11 37.7 +0.6**
baz=52
MPU Maple Canyon 51.71 327 *e*P **P 06 11 37.6 +0.2**
comp=Z,24nm,0.9s,mb4.6
BFSC Mount Baldy Ra 51.73 317 ⇓P **P 06 11 37.8 +0.2**
baz=52,SNR=10
P15A Leamington 51.76 326 ⇓P **P 06 11 37.9 +0.2**
baz=52,SNR=7.1
O16A Springville 51.77 327 ⇓P **P 06 11 38.0 +0.1**
baz=52,SNR=13
CIS Catalina Islan 51.77 316 ⇓P **P 06 11 38.1 +0.1**
baz=52,SNR=5.2
GSC Goldstone 51.78 319 ⇑P **P 06 11 38.5 +0.5**
baz=52,SNR=24
GSC Goldstone 51.78 319 *e*P **P 06 11 38.7 +0.7**
GSC pmax pmax
comp=Z,134nm,1.7s,mb5.1
GSC Goldstone 51.78 319 *e*P **P 06 11 38.7 +0.7**
comp=Z,134nm,1.7s,mb5.1
DAU Daniels Canyon 51.78 327 *e*P **P 06 11 38.6 +0.7**
DAU pmax pmax
comp=Z,65nm,1.0s,mb5.0
DAU Daniels Canyon 51.78 327 *e*P **P 06 11 38.5 +0.7**
comp=Z,65nm,1.0s,mb5.0
SHOC Shoshone 51.80 320 ⇓P **P 06 11 38.3 +0.2**
baz=52,SNR=17
R13A O'Grain Ranch, 51.80 323 ⇓P **P 06 11 38.9 +0.9**
baz=52,SNR=28
FMP Fort Macarthur 51.87 316 ⇑P **P 06 11 39.2 +0.5**
baz=52
M18A Lyman 51.89 329 ⇑P **P 06 11 38.2 -0.4**
baz=52,SNR=14
NLU North Lily Min 51.91 326 *e*P **P 06 11 38.7 -0.1**
comp=Z,64nm,1.6s,mb4.8
NLU *e*pP pP 06 12 24.5 +2.7
Q14A Sevier Lake (B 51.93 325 ⇓P **P 06 11 39.8 +0.7**
baz=52,SNR=58
N17A Moffit Pass 51.94 328 ⇑P **P 06 11 39.5 +0.5**
baz=52
K20A Yellowstone Ra 51.95 331 ⇓P **P 06 11 38.5 -0.6**
baz=52,SNR=27
T11A Corn Creek, Al 51.95 322 ⇑P **P 06 11 39.8 +0.6**
baz=52
S12A Delamar Landin 51.96 322 ⇑P **P 06 11 39.9 +0.7**
baz=52,SNR=8.8
MWC Mount Wilson 51.99 317 *e*P **P 06 11 40.0 +0.4**
MWC pmax pmax
comp=Z,111nm,1.5s,mb5.1
MWC Mount Wilson 51.99 317 *e*P **P 06 11 40.0 +0.4**
comp=Z,111nm,1.5s,mb5.1
JLU Jordanelle 52.02 327 *e*P **P 06 11 39.9 +0.2**
comp=Z,75nm,1.2s,mb5.0
JLU *e*pP pP 06 12 24.6 +2.1
JLU *e*PcP PcP 06 12 49.8 +0.5
L19A Farson 52.03 330 ⇑P **P 06 11 39.5 -0.2**
baz=52,SNR=15
PASC Pasadena Art C 52.05 317 *e*P **P 06 11 40.2 +0.2**
comp=Z,570nm,1.5s,mb5.8
AGMN Agassiz Nation 52.07 345 *e*P **P 06 11 38.0 -1.8**
comp=Z,19nm,0.6s,mb4.7
U10A Ash Meadows, A 52.14 320 ⇑P **P 06 11 41.1 +0.5**
baz=52,SNR=18
DECC Green Verdugo 52.20 317 ⇑P **P 06 11 41.4 +0.4**
baz=52,SNR=7.2
P14A Drum Mountains 52.22 325 ⇓P **P 06 11 41.8 +0.7**
baz=52,SNR=40
N16A Rees Ranch, Co 52.22 328 ⇑P **P 06 11 41.6 +0.5**
baz=52,SNR=12
M17A Scullys Gap (B 52.23 329 ⇓P **P 06 11 40.8 -0.4**
baz=52,SNR=11
L18A Fontenelle, Gr 52.24 330 ⇓P **P 06 11 41.0 -0.2**
baz=52,SNR=13
R12A Pony Springs, 52.28 323 ⇑P **P 06 11 42.5 +0.9**
baz=52,SNR=44
K19A Absolon Red Bu 52.32 331 ⇓P **P 06 11 41.2 -0.6**
baz=52,SNR=21
EDW2 Edwards Air Fo 52.32 318 ⇑P **P 06 11 42.1 +0.1**
baz=52,SNR=27
Q13A Wheeler Ranch, 52.34 324 ⇓P **P 06 11 42.6 +0.6**
baz=52,SNR=64
O15A The Old Anders 52.35 326 ⇓P **P 06 11 42.6 +0.5**
baz=52
NOQ North Oquirrh 52.42 327 *e*P **P 06 11 43.0 +0.4**
comp=Z,37nm,1.0s,mb4.8
LRMC Laurel Mountai 52.47 318 ⇓P **P 06 11 43.4 +0.4**
baz=52,SNR=7.5
DUG Dugway 52.48 326 ⇓P **P 06 11 43.6 +0.6**
baz=53,SNR=50
DUG Dugway 52.48 326 *e*P **P 06 11 43.3 +0.2**
DUG pmax pmax
comp=Z,88nm,1.2s,mb5.1
DUG Dugway 52.48 326 *e*P **P 06 11 43.3 +0.3**
comp=Z,88nm,1.2s,mb5.1
FURC Furnace Creek, 52.51 320 ⇑P **P 06 11 43.8 +0.4**
baz=53,SNR=30
S11A Rachel 52.53 322 ⇓P **P 06 11 44.4 +0.9**
baz=53,SNR=18
BW06 Boulder Array 52.62 331 ⇓P **P 06 11 43.4 -0.6**
baz=53,SNR=24
PDAR Pinedale Array 52.62 331 P **P 06 11 43.4 -0.7**
comp=Z,5.6nm,0.7s,mb4.1,baz=124,slow=8.5,SNR=59
PDAR PcP PcP 06 12 51.2 -0.2
comp=Z,3.1nm,0.6s,baz=130,slow=6.3,SNR=12
PDAR LR LR 06 36 36.0
comp=Z,74nm,19.4s,baz=2.3,slow=39
BLG Laguna Peak 52.62 316 ⇓P **P 06 11 44.4 +0.2**
baz=53
P13A Bates Ranch, G 52.67 325 ⇓P **P 06 11 45.3 +0.9**
baz=53,SNR=46
OSI Osito Adit 52.67 317 ⇑P **P 06 11 44.5 -0.1**
baz=53
MPMC Manual Prospec 52.68 319 ⇓P **P 06 11 44.5 0.0**
baz=53,SNR=14
K18A Toltan Ranch, 52.76 330 ⇓P **P 06 11 45.3 +0.2**
baz=53,SNR=44
L17A Cokeville 52.79 329 ⇓P **P 06 11 44.8 -0.5**
baz=53,SNR=30
HWUT Hardware Ranch 52.80 328 *e*P **P 06 11 44.9 -0.5**
comp=Z,33nm,0.8s,mb4.8
HWUT *e*pP pP 06 12 27.9 -0.5
HWUT *e*PcP PcP 06 12 52.1 0.0
N15A Stansbury Isla 52.80 327 ⇓P **P 06 11 45.4 0.0**
baz=53,SNR=9.5
Q12A Willow Creek R 52.87 324 ⇓P **P 06 11 46.3 +0.3**
baz=53,SNR=16
R11A Troy Canyon, C 52.88 323 ⇑P **P 06 11 46.5 +0.5**
baz=53,SNR=42
L16A Fish Haven 53.02 329 ⇓P **P 06 11 46.3 -0.6**
baz=53,SNR=38
ARVC Arvin 53.03 317 ⇓P **P 06 11 47.4 +0.3**
baz=53,SNR=13
SPUT South Promonto 53.06 327 *e*P **P 06 11 47.1 -0.1**
comp=Z,97nm,1.1s,mb5.2
ISA Isabella 53.09 318 ⇓P **P 06 11 47.9 +0.3**
baz=53,SNR=12
ISA Isabella 53.09 318 *e*P **P 06 11 47.8 +0.2**
ISA pmax pmax
comp=Z,59nm,1.6s,mb4.8
ISA Isabella 53.09 318 *e*P **P 06 11 47.8 +0.2**
comp=Z,59nm,1.6s,mb4.8
O13A Hicks Ranch, I 53.10 325 ⇓P **P 06 11 48.2 +0.7**
baz=53,SNR=19
BGU Big Grassy Mou 53.11 327 *e*P **P 06 11 47.6 0.0**
comp=Z,51nm,1.1s,mb4.9
N14A Grayback Hills 53.14 327 ⇑P **P 06 11 47.9 0.0**
baz=53,SNR=22
GRAC Grapevine Rang 53.16 320 ⇑P **P 06 11 48.6 +0.5**
baz=53,SNR=11
M15A Larsen Ranch, 53.16 328 ⇑P **P 06 11 47.8 -0.2**
baz=53,SNR=31
J18A Kendall Valley 53.18 331 ⇑P **P 06 11 47.7 -0.4**
baz=53,SNR=5.2
P12A McGill 53.20 324 ⇑P **P 06 11 48.8 +0.5**
baz=53,SNR=28
S10A Tonopah Range, 53.23 322 ⇑P **P 06 11 49.4 +0.8**
baz=53,SNR=74
Q11A Duckwater 53.24 323 ⇑P **P 06 11 49.1 +0.5**
baz=53,SNR=65
SBC Santa Barbara 53.25 316 ⇑P **P 06 11 48.9 +0.1**
baz=53
R10A Warm Springs 53.28 322 ⇑P **P 06 11 49.9 +1.0**
baz=53,SNR=15
CWC Cottonwood Cre 53.29 319 ⇓P **P 06 11 49.5 +0.5**
baz=53
K17A Gardner Place, 53.29 330 ⇑P **P 06 11 48.3 -0.6**
baz=53,SNR=17
AHID Auburn Hatcher 53.39 330 *e*P **P 06 11 49.3 -0.4**
comp=Z,98nm,1.6s,mb5.0
I18A Diamond G Ranc 53.45 331 ⇓P **P 06 11 49.9 -0.1**
baz=54
L15A Malad City 53.51 328 ⇓P **P 06 11 50.2 -0.4**
baz=54,SNR=26
HVU Hansel Valley 53.56 328 *e*P **P 06 11 50.6 -0.3**
HVU pmax pmax
comp=Z,121nm,1.8s,mb5.1
HVU Hansel Valley 53.56 328 *e*P **P 06 11 50.6 -0.3**
comp=Z,121nm,1.8s,mb5.1
PKM Peak Mountain 53.58 317 ⇓P **P 06 11 51.4 +0.2**
baz=54,SNR=8.2
O12A Currie 53.63 325 ⇓P **P 06 11 52.0 +0.6**
baz=54,SNR=44
J17A Brown Place, J 53.63 330 ⇓P **P 06 11 51.3 -0.1**
baz=54,SNR=23
Q10A Clear Creek Ra 53.67 323 ⇓P **P 06 11 52.6 +0.9**
baz=54,SNR=29
M14A Sheep Mountain 53.68 327 ⇑P **P 06 11 51.5 -0.2**
baz=54,SNR=50
K16A Soda Springs 53.69 329 ⇑P **P 06 11 51.8 0.0**
baz=54,SNR=12
REDW Red Top Meadow 53.70 330 *e*P **P 06 11 51.4 -0.5**
comp=Z,65nm,1.4s,mb5.0
USHA Ushuaia 53.70 173 P **P 06 11 52.5 +0.9**
comp=Z,10nm,0.6s,mb4.5,baz=334,slow=6.6,SNR=6.1
N13A Wendover, West 53.71 326 ⇓P **P 06 11 52.2 +0.2**
baz=54
N13A Wendover, West 53.71 326 *e*P **P 06 11 52.1 +0.1**
comp=Z,39nm,1.0s,mb4.9
SNOW Snow King Moun 53.73 330 *e*P **P 06 11 51.8 -0.3**
comp=Z,16nm,0.6s,mb4.7
TIN Tinemaha 53.74 320 ⇓P **P 06 11 53.0 +0.7**
baz=54
P11A Circle Ranch, 53.75 324 ⇑P **P 06 11 52.7 +0.4**
baz=54
LOHW Long Hollow 53.76 331 *e*P **P 06 11 52.1 -0.2**
comp=Z,36nm,1.2s,mb4.8
TPAW Teton Pass 53.84 330 *e*P **P 06 11 52.6 -0.3**
comp=Z,8.3nm,0.6s,mb4.4
ULM Lac du Bonnet 53.87 346 P **P 06 11 51.1 -1.9**
comp=Z,14nm,0.5s,mb4.8,baz=160,slow=7.5,SNR=16
ULM pP pP 06 12 33.8 -2.4
comp=Z,7.1nm,0.9s,baz=149,slow=8.3,SNR=1.9
ULM Lac du Bonnet 53.87 346 *e*P **P 06 11 50.9 -2.1**
ULM pmax pmax
comp=Z,13nm,0.6s
ULM Lac du Bonnet 53.87 346 *e*P **P 06 11 50.9 -2.1**
comp=Z,13nm,0.6s,mb4.6
RRI2 Red Ridge 53.92 330 *e*P **P 06 11 53.4 -0.1**
comp=Z,57nm,1.3s,mb4.9
SMMC Simmler 53.93 317 ⇑P **P 06 11 53.9 +0.2**
baz=54,SNR=8.6
RCTC Rector, Farmer 53.97 318 ⇓P **P 06 11 53.5 -0.5**
baz=54,SNR=5.7
I17A Pilgrim Ck. 53.98 331 ⇓P **P 06 11 54.2 +0.3**
baz=54,SNR=7.1
L14A Malta 53.99 328 ⇓P **P 06 11 53.5 -0.4**
baz=54,SNR=34
J16A Bone 54.02 330 ⇑P **P 06 11 54.2 0.0**
baz=54,SNR=19
M13A Montello 54.03 326 ⇓P **P 06 11 54.1 -0.3**
baz=54,SNR=20
M13A Montello 54.03 326 *e*P **P 06 11 53.9 -0.4**
comp=Z,10nm,0.6s,mb4.5
DCID1 Drake Creek 54.03 330 *e*P **P 06 11 54.5 +0.2**
comp=Z,14nm,0.9s,mb4.5
O11A Cowboy Ranch, 54.06 324 ⇑P **P 06 11 55.0 +0.4**
baz=54,SNR=20
K15A Arbon 54.07 329 ⇓P **P 06 11 54.3 -0.3**
baz=54,SNR=27
IMW Indian Meadow 54.13 331 *e*P **P 06 11 54.8 -0.3**
comp=Z,12nm,0.6s,mb4.6
IMW *e*pP pP 06 12 38.7 +0.4
IMW *e*PcP PcP 06 12 57.6 +0.4
LAO LASA Array 54.17 336 *e*P **P 06 11 54.6 -0.7**
comp=Z,11nm,0.8s,mb4.4
N12A Clover Valley, 54.18 325 ⇓P **P 06 11 55.1 -0.3**
baz=54,SNR=8.6
N12A Clover Valley, 54.18 325 *e*P **P 06 11 55.3 -0.1**
comp=Z,5.1nm,0.6s,mb4.2
P10A Eureka 54.21 323 ⇓P **P 06 11 56.3 +0.6**
baz=54,SNR=13
ELK Elko 54.22 325 *e*P **P 06 11 56.0 +0.3**
ELK pmax pmax
comp=Z,5.0nm,0.8s
ELK Elko 54.22 325 *e*P **P 06 11 56.0 +0.3**
comp=Z,5.4nm,0.8s,mb4.1
RLMT Red Lodge 54.26 333 ⇓P **P 06 11 55.4 -0.5**
baz=54,SNR=10
RLMT Red Lodge 54.26 333 *e*P **P 06 11 55.5 -0.4**
comp=Z,9.4nm,0.8s,mb4.4
K14A Jones Ranch, D 54.31 328 ⇑P **P 06 11 55.7 -0.6**
baz=54,SNR=33
LKWY Lake 54.37 332 *e*P **P 06 11 57.6 +0.9**
I16A Newdale 54.39 330 ⇑P **P 06 11 57.1 +0.2**
baz=54,SNR=15
L13A Double Diamond 54.40 327 ⇑P **P 06 11 56.7 -0.3**
baz=54,SNR=22
MLAC Mammoth Lakes 54.47 320 ⇑P **P 06 11 58.0 +0.5**
baz=54
M12A Wells 54.48 326 ⇑P **P 06 11 57.2 -0.4**
baz=55,SNR=36
YFT Old Faithful 54.49 331 *e*P **P 06 11 58.7 +1.1**
comp=Z,30nm,1.0s,mb4.8
J15A Blackfoot 54.52 329 ⇓P **P 06 11 57.9 +0.1**
baz=55
G18A Lazy EL Ranch, 54.54 333 ⇓P **P 06 11 57.4 -0.5**
baz=55,SNR=12
N11A Elko Archery C 54.56 325 ⇓P **P 06 11 58.3 +0.2**
baz=55,SNR=18
NVAR Mina Array Bea 54.61 321 P **P 06 11 59.0 +0.5**
comp=Z,8.6nm,0.6s,mb4.4,baz=132,slow=7.1,SNR=80
NVAR pP pP 06 12 41.0 -0.8
comp=Z,5.1nm,1.0s,baz=142,slow=7.7,SNR=2.4
NVAR PcP PcP 06 12 59.6 +0.5
comp=Z,2.3nm,0.6s,baz=132,slow=5.1,SNR=5.7
O10A Cortez Mining, 54.66 324 ⇓P **P 06 11 59.4 +0.5**
baz=55,SNR=22
YMR Madison River 54.72 331 *e*P **P 06 12 00.1 +0.9**
comp=Z,71nm,1.3s,mb5.0
DGMT Dagmar 54.86 339 ⇓P **P 06 11 60.0 -0.2**
baz=55
DGMT Dagmar 54.86 339 *e*P **P 06 11 59.9 -0.2**
comp=Z,9.5nm,0.6s,mb4.5
K13A Stover Farm, H 54.86 328 ⇑P **P 06 11 59.9 -0.4**
baz=55,SNR=18
H16A Russell Place, 54.88 331 ⇑P **P 06 12 00.8 +0.5**
baz=55,SNR=28
N10A Dunphy 54.94 324 ⇑P **P 06 12 00.8 -0.1**
baz=55
GCMT Greycliff 54.95 333 *e*P **P 06 12 00.8 0.0**
comp=Z,25nm,0.6s,mb4.9
I15A Monteview 54.98 330 ⇑P **P 06 12 01.5 +0.4**
baz=55,SNR=6.1
M11A Holland Ranch, 54.99 325 ⇓P **P 06 12 00.9 -0.3**
baz=55,SNR=14
L12A House Creek Ra 55.03 327 ⇑P **P 06 12 01.6 +0.1**
baz=55,SNR=32
J14A Carey 55.03 328 ⇑P **P 06 12 01.9 +0.4**
baz=55,SNR=77
F18A Big Timber 55.06 333 ⇓P **P 06 12 01.6 -0.1**
baz=55,SNR=80
G17A Pierce Place, 55.09 332 ⇓P **P 06 12 02.8 +0.9**
baz=55,SNR=13
BMN Battle Mountai 55.18 324 *e*P **P 06 12 02.7 +0.1**
BMN pmax pmax
comp=Z,19nm,0.8s,mb4.7
BMN Battle Mountai 55.18 324 *e*P **P 06 12 02.7 +0.1**
comp=Z,19nm,0.8s,mb4.7
K12A Draper Farm, C 55.30 327 ⇑P **P 06 12 03.5 +0.1**
baz=55,SNR=28
I14A Mackay 55.42 329 ⇑P **P 06 12 04.6 +0.3**
baz=56,SNR=18
J13A Cove Ranch, Pi 55.43 328 ⇓P **P 06 12 04.3 0.0**
baz=56,SNR=18
L11A Cat Creek Ranc 55.45 326 ⇑P **P 06 12 04.4 -0.1**
baz=56,SNR=21
M10A I.L. Ranch, Tu 55.48 325 ⇓P **P 06 12 04.6 -0.1**
baz=56,SNR=7.7
F17A Fitzpatrick Pl 55.49 332 ⇓P **P 06 12 04.9 +0.2**
baz=56,SNR=11
H15A Lima 55.50 330 ⇑P **P 06 12 05.5 +0.7**
baz=56,SNR=11
G16A Moss Hill, Enn 55.53 331 ⇑P **P 06 12 05.2 +0.2**
baz=56,SNR=28
E18A Harlowton 55.65 333 ⇓P **P 06 12 05.9 +0.1**
baz=56
HLID Hailey 55.67 328 ⇑P **P 06 12 06.1 +0.1**
baz=56,SNR=36
HLID Hailey 55.67 328 *e*P **P 06 12 06.0 0.0**
comp=Z,26nm,1.1s,mb4.7
SAO San Andreas Ge 55.70 318 *e*P **P 06 12 05.6 -0.8**
SAO pmax pmax
comp=Z,15nm,1.0s,mb4.5
SAO San Andreas Ge 55.70 318 *e*P **P 06 12 05.6 -0.8**
comp=Z,16nm,1.0s,mb4.5
CMB Columbia Colle 55.71 320 *e*P **P 06 12 06.2 -0.2**
CMB pmax pmax
comp=Z,17nm,1.3s,mb4.4
CMB Columbia Colle 55.71 320 *e*P **P 06 12 06.2 -0.2**
comp=Z,17nm,1.3s,mb4.4
MCMT McKenzie Canyo 55.75 330 *e*P **P 06 12 07.2 +0.6**
comp=Z,19nm,1.3s,mb4.5
I13A Wildhorse Cree 55.75 329 ⇓P **P 06 12 07.1 +0.5**
baz=56,SNR=31
BOZ Bozeman (W) 55.76 332 ⇑P **P 06 12 06.4 -0.2**
baz=56,SNR=40
BOZ Bozeman (W) 55.76 332 *e*P **P 06 12 06.0 -0.6**
BOZ *e**PP pP 06 12 49.5 -0.6
BOZ pmax pmax
comp=Z,39nm,1.2s,mb4.8
BOZ Bozeman (W) 55.76 332 *e*P **P 06 12 06.0 -0.6**
comp=Z,39nm,1.2s,mb4.8
BOZ *e*pP pP 06 12 49.5 -0.6
L10A Juniper Basin 55.80 326 ⇓P **P 06 12 07.0 0.0**
baz=56,SNR=28
J12A Stokes Ranch, 55.82 327 ⇓P **P 06 12 07.0 0.0**
baz=56,SNR=9.4
G15A Dillon 55.82 331 ⇓P **P 06 12 07.1 0.0**
baz=56,SNR=14
F16A Kennard Place, 55.85 332 ⇓P **P 06 12 07.3 0.0**
baz=56,SNR=15
H14A Leadore 55.86 330 ⇓P **P 06 12 07.8 +0.4**
baz=56,SNR=38
E17A Martinsdale 56.00 333 ⇑P **P 06 12 08.3 -0.1**
baz=56,SNR=13
K11A Parker Ranch, 56.01 326 ⇓P **P 06 12 08.5 0.0**
baz=56,SNR=50
DLMT Dillon 56.01 331 *e*P **P 06 12 08.3 -0.2**
comp=Z,72nm,1.8s,mb4.9
DLMT *e*pP pP 06 12 51.0 -1.0
WCN Washoe City 56.04 321 ⇑P **P 06 12 09.3 +0.5**
baz=56,SNR=7.9
D18A Linhart Farms, 56.09 334 ⇓P **P 06 12 08.9 0.0**
baz=56,SNR=16
I12A Atlanta 56.20 328 ⇓P **P 06 12 09.9 +0.1**
baz=56,SNR=26
LRM Limekiln Ridge 56.28 331 *e*P **P 06 12 10.1 -0.2**
comp=Z,138nm,1.5s,mb5.3
H13A Challis 56.28 329 ⇓P **P 06 12 10.1 -0.2**
baz=56,SNR=29
F15A Butte 56.31 331 ⇑P **P 06 12 10.3 -0.2**
baz=56,SNR=11
MFID Camas Ranch 56.32 327 ⇑P **P 06 12 10.9 +0.2**
baz=56,SNR=57
E16A East Helena 56.43 332 ⇑P **P 06 12 11.3 -0.1**
baz=56
D17A Six Diamond Ra 56.44 333 ⇓P **P 06 12 11.2 -0.3**
baz=56,SNR=14
K10A MacKenzie Ranc 56.48 326 ⇑P **P 06 12 12.0 +0.2**
baz=57,SNR=72
H12A Diamond D Ranc 56.58 329 ⇑P **P 06 12 12.3 -0.1**
baz=57,SNR=32
G13A Cobalt 56.63 330 ⇑P **P 06 12 12.7 -0.2**
baz=57,SNR=5.5
HRY Holter Researc 56.63 332 *e*P **P 06 12 12.6 -0.2**
comp=Z,13nm,0.5s,mb4.8
EGMT Eagleton 56.70 335 ⇑P **P 06 12 12.9 -0.4**
baz=57,SNR=13
EGMT Eagleton 56.70 335 *e*P **P 06 12 12.8 -0.4**
comp=Z,40nm,1.2s,mb4.9
F14A Wisdom 56.71 331 ⇑P **P 06 12 13.4 0.0**
baz=57,SNR=8.7
I11A Placerville 56.73 328 ⇑P **P 06 12 13.2 -0.3**
baz=57,SNR=42
D16A Dana Ranch, Ca 56.74 333 ⇑P **P 06 12 13.4 -0.2**
baz=57,SNR=14
E15A Deer Lodge 56.80 332 ⇑P **P 06 12 13.7 -0.3**
baz=57,SNR=10
SCHQ Schefferville 56.82 7 P **P 06 12 13.4 -0.5**
comp=Z,8.5nm,0.8s,mb4.5,baz=176,slow=6.2,SNR=5.6
SCHQ Schefferville 56.82 7 *e*P **P 06 12 12.9 -1.1**
C17A Wharram Farm, 56.84 334 ⇓P **P 06 12 13.7 -0.5**
baz=57,SNR=18
J10A Berg Farm, Mel 56.84 327 ⇓P **P 06 12 13.9 -0.5**
baz=57,SNR=5.5
B18A Beardsley Farm 57.00 335 ⇑P **P 06 12 15.1 -0.2**
baz=57,SNR=17
F13A Darby 57.17 330 ⇓P **P 06 12 16.2 -0.4**
baz=57,SNR=16
D15A Lincoln 57.20 332 ⇓P **P 06 12 16.6 -0.1**
baz=57,SNR=8.1
E14A Clinton 57.21 331 ⇑P **P 06 12 16.4 -0.4**
baz=57,SNR=18
WVOR Wild Horse Val 57.26 325 *e*P **P 06 12 17.3 0.0**
WVOR pmax pmax
comp=Z,170nm,1.6s,mb5.4
WVOR Wild Horse Val 57.26 325 *e*P **P 06 12 17.3 0.0**
comp=Z,170nm,1.6s,mb5.4
H11A Donnelly 57.29 328 ⇓P **P 06 12 16.8 -0.6**
baz=57,SNR=16
I10A Payette 57.30 327 ⇑P **P 06 12 17.4 -0.1**
baz=57
B17A L&G Farms, Che 57.36 334 ⇑P **P 06 12 16.9 -0.9**

baz=57,SNR=5.5
C16A **Fuhringer Ranc** 57.41 333 ⇓P P 06 12 17.9 -0.3
baz=58,SNR=13
A18A **Metzger Ranch,** 57.43 335 ⇓P P 06 12 17.9 -0.5
baz=58,SNR=15
E13A **Victor** 57.56 331 ⇑P P 06 12 19.1 -0.2
baz=58,SNR=15
H10A **Noah's Angus R** 57.60 328 ⇓P P 06 12 18.6 -1.0
baz=58,SNR=14
F12A **Elk City** 57.61 330 ⇑P P 06 12 19.4 -0.3
baz=58,SNR=39
D14A **Greenough** 57.69 332 ⇑P P 06 12 19.8 -0.4
baz=58
MSO **Missoula** 57.72 331 *e*P P 06 12 20.3 -0.1
comp=Z,46nm,1.6s,mb4.9
I09A **Lost Marbles R** 57.73 327 ⇓P P 06 12 20.2 -0.3
baz=58,SNR=35
J08A **Circle Bar Ran** 57.75 326 ⇓P P 06 12 20.4 -0.3
baz=58,SNR=49
C15A **Salmond Ranch,** 57.78 333 ⇓P P 06 12 20.8 0.0
baz=58,SNR=18
B16A **M & M Farms, S** 57.85 334 ⇑P P 06 12 20.4 -0.9
baz=58,SNR=14
G11A **Walters Elk Ra** 57.89 329 ⇑P P 06 12 20.8 -0.8
baz=58,SNR=18
MOD **Modoc** 57.91 323 *e*P P 06 12 21.1 -0.7
comp=Z,78nm,1.5s,mb5.1
HOPS **Hopland** 57.99 319 *e*P P 06 12 22.5 0.0
BMO **Blue Mountains** 58.07 328 *e*P P 06 12 21.8 -1.1
BMO pmax pmax
comp=Z,13nm,1.3s,mb4.4
BMO **Blue Mountains** 58.07 328 *e*P P 06 12 21.8 -1.1
comp=Z,13nm,1.3s,mb4.4
H09A **Durkee** 58.14 327 ⇑P P 06 12 22.5 -0.9
baz=58,SNR=5.6
B15A **Bradely Ranch,** 58.15 333 ⇓P P 06 12 22.8 -0.6
baz=58,SNR=17
D13A **Huson** 58.16 331 ⇑P P 06 12 23.4 -0.1
baz=58
F11A **Grangeville** 58.16 329 ⇑P P 06 12 22.8 -0.7
baz=58,SNR=25
A16A **West Butte Ran** 58.20 334 ⇓P P 06 12 23.4 -0.3
baz=58
E12A **Beaver Dam Sad** 58.23 330 ⇓P P 06 12 23.6 -0.3
baz=58
SWMT **Swartz Lake** 58.23 332 *e*P P 06 12 23.8 -0.2
comp=Z,5.3nm,0.7s,mb4.3
SWMT *e*PcP PcP 06 13 12.9 -0.2
G10A **Bishop Farm, J** 58.26 328 ⇑P P 06 12 23.9 -0.3
baz=58,SNR=10.0
C14A **Swan Lake** 58.30 332 ⇓P P 06 12 24.7 +0.2
baz=58
YBMT **Yellow Bay** 58.49 332 *e*P P 06 12 26.1 +0.4
comp=Z,6.6nm,0.5s,mb4.5
B14A **Marquette Ranc** 58.51 333 ⇓P P 06 12 25.8 0.0
baz=59,SNR=44
WDC **Whiskeytown Da** 58.52 321 *e*P P 06 12 23.9 -2.2
WDC pmax pmax
comp=Z,12nm,0.6s,mb4.7
WDC **Whiskeytown Da** 58.52 321 *e*P P 06 12 23.9 -2.3
comp=Z,12nm,0.6s,mb4.7
JTMT **Jette** 58.54 332 *e*P P 06 12 26.3 +0.2
comp=Z,69nm,1.7s,mb5.0
JTMT *e*PcP PcP 06 13 14.5 +0.2
D12A **Red Ives Fores** 58.56 331 ⇓P P 06 12 25.9 -0.3
baz=59
H08A **Prairie City** 58.60 327 ⇓P P 06 12 26.2 -0.3
baz=59,SNR=63
G09A **Cove** 58.60 328 ⇓P P 06 12 26.2 -0.4
baz=59,SNR=24
C13A **Hot Springs** 58.63 332 ⇑P P 06 12 26.8 +0.1
baz=59
A15A **Johnson Ranch,** 58.72 334 ⇑P P 06 12 26.7 -0.5
baz=59,SNR=9.5
K05A **Summer Lake** 58.76 324 ⇓P P 06 12 27.9 +0.2
baz=59,SNR=34
F10A **Beach Ranch, E** 58.77 329 ⇓P P 06 12 27.5 -0.2
baz=59,SNR=12
I07A **Izee** 58.78 326 ⇑P P 06 12 27.8 0.0
baz=59,SNR=66
BSMT **Bassoo Peak** 58.85 332 *e*P P 06 12 28.3 +0.1
comp=Z,30nm,1.3s,mb4.8
A14A **Double T Ranch** 59.02 333 ⇓P P 06 12 28.9 -0.5
baz=59,SNR=8.2
B13A **Whitefish** 59.07 332 ⇓P P 06 12 29.6 -0.1
baz=59,SNR=11
C12B **Naegeli Ranch,** 59.08 331 ⇓P P 06 12 30.2 +0.4
baz=59
G08A **Pilot Rock** 59.25 327 ⇓P P 06 12 31.1 +0.1
baz=59,SNR=39
LNOR **Lincton Mounta** 59.26 328 P P 06 12 31.1 0.0
YBH **Yreka Blue Hor** 59.28 322 *e*P P 06 12 29.5 -1.8
YBH pmax pmax
comp=Z,23nm,1.2s
YBH **Yreka Blue Hor** 59.28 322 *e*P P 06 12 29.5 -1.7
comp=Z,23nm,1.2s,mb4.7
WALA **Waterton Lakes** 59.31 333 *e*P P 06 12 30.8 -0.6
comp=Z,1.1nm,1.5s
WALA *e*PcP PcP 06 13 17.6 +0.3
A13A **Flathead Natio** 59.45 333 ⇓P P 06 12 32.3 0.0
baz=60
FFC **Flin Flon** 59.52 344 *i*P P 06 12 33.2 +0.5
C11A **Tepee Creek (N** 59.55 331 ⇓P P 06 12 32.9 -0.1
baz=60
E09A **Wood Farm, Sta** 59.61 329 ⇑P P 06 12 33.0 -0.5
baz=60
B12A **Libby** 59.67 332 ⇑P P 06 12 33.9 +0.1
baz=60
HUMO **Hull Mountain** 59.92 323 *e*P P 06 12 34.2 -1.5
comp=Z,3.4nm,0.6s,mb4.2
A12A **Yaak River Ran** 60.02 332 ⇑P P 06 12 36.6 +0.4
baz=60
VTHM **Trough** 60.06 326 P P 06 12 37.4 +0.9
E08A **Dider Farm, El** 60.07 328 ⇓P P 06 12 36.2 -0.4
baz=60
F07A **Phinny Hill Vi** 60.16 327 ⇓P P 06 12 37.4 +0.2
baz=60
BKCOR **Black Crater** 60.17 325 P P 06 12 37.8 +0.5
HAWA **Hanford** 60.26 328 *e*P P 06 12 37.7 -0.2
comp=Z,8.3nm,0.7s,mb4.5
NEW **Newport** 60.26 331 *e*P P 06 12 37.1 -0.8
NEW pmax pmax
comp=Z,16nm,0.7s
NEW **Newport** 60.26 331 *e*P P 06 12 37.1 -0.8
comp=Z,16nm,0.7s,mb4.8
RSW **Rattlesnake Hi** 60.29 328 *e*P P 06 12 38.2 +0.1
comp=Z,24nm,1.0s,mb4.8
D08A **Wollman Farm,** 60.37 329 ⇑P P 06 12 38.5 -0.1
baz=60,SNR=5.2
OD2 **Odessa Site #2** 60.48 329 *e*P P 06 12 39.6 +0.3
comp=Z,86nm,1.4s,mb5.2
E07A **Sunnyside** 60.54 328 ⇓P P 06 12 39.9 +0.1
baz=61
H04A **Detroit Lake** 60.68 325 ⇓P P 06 12 40.3 -0.4
baz=61,SNR=13
HOOD **Mount Hood Mea** 60.76 326 *e*P P 06 12 42.1 +0.9
comp=Z,100nm,1.0s,mb5.4
MXC **Moxie City** 60.78 328 P P 06 12 42.4 +1.0
RNO **Roman Nose** 61.14 323 P P 06 12 44.1 +0.3
G04A **Mulino** 61.15 325 ⇓P P 06 12 43.8 -0.2
baz=61,SNR=6.5
NAC **Naches** 61.17 327 P P 06 12 44.8 +0.8
COR **Corvallis** 61.27 324 *e*P P 06 12 45.1 +0.4
COR pmax pmax
comp=Z,104nm,1.4s,mb5.3
COR **Corvallis** 61.27 324 *e*P P 06 12 45.1 +0.4
comp=Z,104nm,1.4s,mb5.3
B08A **Colville Reser** 61.43 330 ⇑P P 06 12 45.3 -0.4
baz=62,SNR=12
ETW **Entiat** 61.45 328 *e*P P 06 12 47.2 +1.3
comp=Z,39nm,1.1s,mb5.0
FCC **Fort Churchill** 61.47 350 *e*P P 06 12 44.2 -1.6
F04A **Amboy** 61.55 326 ⇓P P 06 12 46.3 -0.3
baz=62,SNR=9.7
LON **Longmire** 61.71 327 *e*P P 06 12 47.2 -0.4
LON pmax pmax
comp=Z,15nm,1.0s,mb4.6
LON **Longmire** 61.71 327 *e*P P 06 12 47.2 -0.5
comp=Z,15nm,1.0s,mb4.6
HEBO **Mount Hebo** 61.89 325 *e*P P 06 12 49.8 +1.0
comp=Z,97nm,1.4s,mb5.2
D05A **Enumclaw** 62.08 327 ⇑P P 06 12 50.0 -0.1
baz=62,SNR=12
EDM **Edmonton** 62.15 337 *e*PcP PcP 06 13 27.5 -1.2
F03A **Seaside** 62.19 325 ⇓P P 06 12 51.3 +0.5
baz=62
RPW **Rockport** 62.60 329 *e*P P 06 12 53.1 -0.5
comp=Z,2.7nm,0.5s,mb4.1
B06A **Marblemount** 62.63 329 ⇓P P 06 12 53.2 -0.5
baz=63
JCW **Jim Creek** 62.66 328 *e*P P 06 12 52.8 -1.1
comp=Z,80nm,1.4s,mb5.2
JCW *e*PcP PcP 06 13 30.6 -0.3
GNW **Green Mountain** 62.76 327 *e*P P 06 12 53.9 -0.7
comp=Z,24nm,1.3s,mb4.7
NLWA **Neilton Lookou** 63.22 327 ⇑P P 06 12 58.2 +0.5
baz=63,SNR=12
NLWA **Neilton Lookou** 63.22 327 *e*P P 06 12 58.0 +0.4
comp=Z,45nm,1.1s,mb5.0
A05A **Maple Falls** 63.24 329 ⇓P P 06 12 57.4 -0.3
baz=63,SNR=13
YKA **Yellowknife Ar** 69.65 343 P P 06 13 36.7 -1.3
comp=Z,5.9nm,0.5s,mb4.5,baz=140,slow=6.0,SNR=83
YKA pP pP 06 14 20.9 -2.6
comp=Z,0.9nm,0.8s,baz=135,slow=6.5,SNR=1.3
YKA **Yellowknife Ar** 69.65 343 P P 06 13 36.7 -1.3
YKA pP pP 06 14 20.9 -2.6
PPT **Papeete** 72.39 252 LR LR 06 38 20.3
comp=Z,167nm,19.0s,baz=104,slow=30
PPT **Papeete** 72.39 252 *e*S S 06 23 06.3 +2.5
comp=Z,551nm,29.8s
PPT *e*LR LR 06 36 19.0
comp=Z,100nm,23.8s
LIC **Lamto** 72.84 83 ⇑*i*P P 06 13 58.0 -0.2
comp=Z,66nm,0.9s,mb5.0
LIC **Lamto** 72.84 83 *e*P P 06 13 57.9 -0.3
comp=Z,110nm,1.1s,mb5.4
LIC **Lamto** 72.84 83 ⇑*i*P P 06 13 58.0 -0.2
comp=Z,33nm,0.9s,mb5.0
TIC **Toumodi** 72.87 83 *e*P P 06 13 58.1 -0.3
comp=Z,70nm,0.9s,mb5.3
TIC **Toumodi** 72.87 83 *e*P P 06 13 58.1 -0.3
TIC pmax pmax
comp=Z,70nm,0.9s,mb5.3
DBIC **Dimbokro** 73.03 83 P P 06 13 58.8 -0.6
comp=Z,21nm,0.5s,mb5.0,baz=252,slow=5.0,SNR=36
DBIC pP pP 06 14 45.2 0.0
comp=Z,16nm,1.0s,baz=260,slow=6.0,SNR=3.2
DBIC **Dimbokro** 73.03 83 *e*P P 06 13 58.9 -0.5
DBIC *e**PP pP 06 14 45.3 +0.1
DBIC pmax pmax
comp=Z,63nm,1.2s
DBIC **Dimbokro** 73.03 83 *e*P P 06 13 58.9 -0.5
comp=Z,63nm,1.2s,mb5.1
DBIC *e*pP pP 06 14 45.3 +0.1
KIC **Kosan Boka** 73.13 83 *e*P P 06 13 59.8 -0.2
comp=Z,103nm,0.7s,mb5.6
PNL **Peninsula** 77.44 333 *e*P P 06 14 23.6 +0.1
comp=Z,49nm,1.2s,mb5.0
SUMG **Summit** 77.93 11 *e*P P 06 14 26.5 +0.5
SUMG *e**PP pP 06 15 09.2 -3.3
SUMG pmax pmax
comp=Z,15nm,0.8s
SUMG **Summit** 77.93 11 *e*P P 06 14 26.5 +0.4
comp=Z,15nm,0.8s,mb4.7
SUMG *e*pP pP 06 15 09.2 -3.2
ESDC **Sonseca Array** 78.40 49 pP pP 06 15 15.6 -0.1
comp=Z,4.8nm,0.9s,baz=251,slow=5.3,SNR=14
DAWY **Dawson** 79.36 337 *e*P P 06 14 33.5 -0.5
DAWY *e*pP pP 06 15 19.2 -1.4
INK **Inuvik** 79.38 342 LR LR 06 50 21.3
comp=Z,68nm,18.1s,baz=76,slow=36
INK **Inuvik** 79.38 342 *e*P P 06 14 34.1 +0.1
INK *e**PP pP 06 15 18.2 -2.4
INK pmax pmax
comp=Z,75nm,1.2s
INK **Inuvik** 79.38 342 *e*P P 06 14 34.1 +0.1
comp=Z,75nm,1.2s,mb5.2
INK *e*pP pP 06 15 18.2 -2.3
BMRM **Bremner River** 80.33 333 *e*P P 06 14 39.1 -0.1
comp=Z,50nm,1.3s,mb5.0
EGAK **Eagle** 80.36 337 *e*P P 06 14 39.2 -0.1
comp=Z,57nm,1.0s,mb5.2
MENT **Mentasta** 80.67 335 *e*P P 06 14 40.6 -0.4
VNA1 **Neumayer--Stat** 81.84 162 *e*P P 06 14 47.9 +0.8
MFF **Saint Martin d** 82.46 43 *e*P P 06 14 50.0 -0.8
PMR **Palmer** 82.60 333 *e*P P 06 14 50.3 -0.9
PMR pmax pmax
comp=Z,8.0nm,0.7s,mb4.6
PMR **Palmer** 82.60 333 *e*P P 06 14 50.3 -0.9
comp=Z,8.1nm,0.7s,mb4.6
COLA **College** 83.06 336 *e*P P 06 14 53.0 -0.4
COLA pmax pmax
comp=Z,15nm,0.9s,mb4.7
COLA **College** 83.06 336 *e*P P 06 14 53.0 -0.4
comp=Z,15nm,0.9s,mb4.7
MCK **McKinley** 83.15 335 *e*P P 06 14 53.7 -0.2
MCK pmax pmax
comp=Z,21nm,0.8s,mb4.9
MCK **McKinley** 83.15 335 *e*P P 06 14 53.7 -0.3
comp=Z,21nm,0.8s,mb4.9
KDAK **Kodiak Island** 83.29 329 *i*P P 06 14 55.2 +0.4
TRF **Thorofare Moun** 83.65 334 *e*P P 06 14 56.0 -0.5
comp=Z,145nm,1.8s,mb5.4
CAF **Calviac** 83.72 45 *e*P P 06 14 56.6 -0.7
CAF *e*pP pP 06 15 43.7 -0.6
RSO **Redoubt South** 84.00 331 *e*P P 06 14 58.2 -0.1
TCF **Toulx Ste Croi** 84.02 43 *e*pP pP 06 15 45.1 -0.7
TCF **Toulx Ste Croi** 84.02 43 *e*P P 06 14 57.9 -0.8
comp=Z,11nm,0.9s,mb4.3
TCF **Toulx Ste Croi** 84.02 43 *e*P P 06 14 57.9 -0.8
TCF *e**PP pP 06 15 45.1 -0.7
TCF pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
TCF **Toulx Ste Croi** 84.02 43 *e*P P 06 14 57.9 -0.8
comp=Z,5.5nm,0.9s,mb4.3
TCF *e*pP pP 06 15 45.1 -0.7
TAM **Tamanrasset** 84.22 67 *e*P P 06 15 00.9 +0.6
TAM *e**PP pP 06 15 47.4 +0.1
TAM pmax pmax
comp=Z,51nm,1.3s,mb5.1
TAM **Tamanrasset** 84.22 67 *e*P P 06 15 00.9 +0.6
comp=Z,51nm,1.3s,mb5.1
TAM *e*pP pP 06 15 47.4 +0.1
PPLA **Purkeypile** 84.33 334 *e*P P 06 14 59.4 -0.5
comp=Z,37nm,0.7s,mb5.2
BGF **Bois d'Agland** 84.49 43 *e*pP pP 06 15 47.9 -0.3
BGF **Bois d'Agland** 84.49 43 *e*P P 06 15 00.4 -0.7
comp=Z,80nm,1.5s,mb4.9
BGF **Bois d'Agland** 84.49 43 *e*P P 06 15 00.4 -0.7
BGF *e**PP pP 06 15 47.9 -0.3
BGF pmax pmax
comp=Z,40nm,1.5s,mb4.9
BGF **Bois d'Agland** 84.49 43 *e*P P 06 15 00.4 -0.7
comp=Z,40nm,1.5s,mb4.9
BGF *e*pP pP 06 15 47.9 -0.3
COLD **Coldfoot** 84.69 338 *e*P P 06 15 02.1 +0.5
comp=Z,26nm,1.1s,mb4.9
AVF **Avril sur Loir** 84.87 43 *e*pP pP 06 15 49.4 -0.7
AVF **Avril sur Loir** 84.87 43 *e*P P 06 15 01.9 -1.1
comp=Z,15nm,0.9s,mb4.4
AVF **Avril sur Loir** 84.87 43 *e*P P 06 15 01.9 -1.1
AVF *e**PP pP 06 15 49.4 -0.7
AVF pmax pmax
comp=Z,7.0nm,0.9s,mb4.4
AVF **Avril sur Loir** 84.87 43 *e*P P 06 15 01.9 -1.1
comp=Z,7.3nm,0.9s,mb4.4
AVF *e*pP pP 06 15 49.4 -0.7
SSF **Saint Saulge** 85.01 43 *e*P P 06 15 02.5 -1.2
SSF *e*pP pP 06 15 49.9 -0.9
SMF **Signal de Mont** 85.18 43 *e*pP pP 06 15 51.0 -0.7
SMF **Signal de Mont** 85.18 43 *e*P P 06 15 03.5 -1.1
SMF **Signal de Mont** 85.18 43 *e*P P 06 15 03.5 -1.1
SMF *e**PP pP 06 15 51.0 -0.7
LOR **Lormes** 85.27 43 *e*P P 06 15 03.9 -1.1
SVW2 **Sparrevohn** 85.50 332 *e*P P 06 15 04.5 -1.3
comp=Z,42nm,1.6s,mb4.9
TTA **Tatalina** 86.05 333 *e*P P 06 15 07.8 -0.7
DOU **Dourbes** 86.11 40 P P 06 15 09.4 +0.4
comp=Z,13nm,1.9s,mb4.3
MEZF **Maizieres J'vi** 86.22 41 *e*P P 06 15 08.8 -0.8
GIVF **Givet** 86.26 40 *e*P P 06 15 09.3 -0.5
comp=Z,64nm,1.1s,mb5.0
GIVF **Givet** 86.26 40 *e*P P 06 15 09.3 -0.5
GIVF pmax pmax
comp=Z,32nm,1.1s,mb5.0
GIVF **Givet** 86.26 40 *e*P P 06 15 09.3 -0.5
comp=Z,32nm,1.1s,mb5.0
BCLA **Clavier** 86.60 39 P P 06 15 12.3 +0.8
comp=Z,13nm,1.7s,mb4.4
SDPT **Sand Point** 87.16 325 *e*P P 06 15 13.3 -0.7
CDF **Champ du Feu** 87.68 42 *e*P P 06 15 15.8 -0.9
comp=Z,9.0nm,0.7s,mb4.4
CDF **Champ du Feu** 87.68 42 *e*P P 06 15 15.8 -0.9
CDF pmax pmax
comp=Z,5.0nm,0.6s,mb4.5
CDF **Champ du Feu** 87.68 42 *e*P P 06 15 15.8 -0.9
comp=Z,4.5nm,0.6s,mb4.5
QSPA **South Pole Qui** 88.58 180 *e*P P 06 15 21.7 +1.5
comp=Z,64nm,1.3s,mb5.3
QSPA *e*pP pP 06 16 09.8 +1.9
FETA **Feichten** 89.93 43 ⇑*i*P P 06 15 26.9 -0.3
comp=Z,11nm,1.1s,mb4.6
NB2 **NORSAR Subarra** 90.71 29 P P 06 15 30.4 -0.1
comp=Z,5.9nm,1.1s,mb4.4,baz=267,slow=4.6
NOA **NORSAR Array B** 90.71 29 P P 06 15 29.9 -0.7
comp=Z,1.5nm,0.8s,mb4.0,baz=267,slow=4.6,SNR=4.8
NOA LR LR 06 52 45.2
comp=Z,38nm,18.9s,baz=275,slow=33
ABTA **Abfaltersbach** 91.14 43 ⇓*i*PcP PcP 06 15 33.2 -0.5
comp=Z,8.6nm,1.0s
KBS **Kingsbay** 91.36 11 ⇑*i*P P 06 15 34.6 +1.4
KBS pmax pmax
comp=Z,22nm,1.6s,mb4.8
CLL **Collm** 91.52 39 *e*P P 06 15 34.0 -0.5
CLL **Collm** 91.52 39 *e*P P 06 15 34.0 -0.5
BRG **Berggiesshubel** 92.11 39 *e*P P 06 15 37.9 +0.7
comp=Z,11nm,1.7s,mb4.5
BRG **Berggiesshubel** 92.11 39 *e*P P 06 15 37.9 +0.6
BRG pmax pmax
comp=Z,7.0nm,1.7s,mb4.3
AFI **Afiamalu** 93.71 256 LR LR 06 51 32.9
comp=Z,65nm,18.9s,baz=84,slow=31
SBA **Scott Base** 93.81 191 *e*P P 06 15 45.7 +1.1
SBA pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
SBA **Scott Base** 93.81 191 *e*P P 06 15 45.7 +1.1
comp=Z,5.8nm,1.1s,mb4.5
TSUM **Tsumeb** 94.40 109 *e*P P 06 15 50.6 +2.1
comp=Z,6.9nm,0.8s,mb4.7
ARCES **ARCESS Array B** 95.96 20 P P 06 15 53.8 -0.6
comp=Z,3.3nm,0.8s,mb4.6,baz=264,slow=3.7,SNR=6.3
FINES **FINESS Array B** 97.82 28 LR LR 06 53 11.7
comp=Z,47nm,19.9s,baz=337,slow=31
BRVK **Borovoye** 122.11 22 ⇑*i*PKIKP PKPdf 06 21 19.8 -1.7
ZALV **Zalesovo Beam** 125.74 13 PKP PKPdf 06 21 28.3 -0.1
comp=Z,3.3nm,0.5s,baz=245,slow=3.9,SNR=12
KURK **Kurchatov** 126.97 19 *i*PKIKP PKPdf 06 21 30.2 -0.7
STKA **Stephens Creek** 130.22 225 *e*P PKPdf 06 21 37.9 +0.2
comp=Z,5.8nm,0.9s
STKA **Stephens Creek** 130.22 225 PKP PKPdf 06 21 38.0 +0.4
comp=Z,6.0nm,0.8s,baz=78,slow=2.6,SNR=7.9
MDJ **Mudanjiang** 130.78 334 PKP PKPdf 06 21 38.0 -0.4
MK31 **Makanchi Array** 131.58 18 *e*PKIKP PKPdf 06 21 39.5 -0.3
MKAR **Makanchi Array** 131.58 18 PKP PKPdf 06 21 39.7 -0.1
comp=Z,0.8nm,0.6s,baz=345,slow=2.3,SNR=10
MKAR SKPbc SKPbc 06 24 48.4 +1.0
comp=Z,1.4nm,1.0s,baz=352,slow=2.5,SNR=6.4
MJAR **Matsushiro Arr** 131.93 321 PKP PKPdf 06 21 40.4 -0.4
comp=Z,2.0nm,0.5s,baz=70,slow=1.3,SNR=5.7
CTA **Charters Tower** 131.98 241 *e*P PKPdf 06 21 41.2 -0.1
comp=Z,5.8nm,0.6s
SONM **Songino Array** 133.70 356 PKP PKPdf 06 21 43.7 0.0
comp=Z,1.7nm,0.6s,baz=341,slow=1.4,SNR=8.4
SONM SKPbc SKPbc 06 24 56.2 +1.6
comp=Z,1.6nm,0.7s,baz=326,slow=2.1,SNR=6.9
WMQ **Urumqi** 135.86 15 *e*PKP PKPdf 06 21 50.6 +2.7
WMQ LR LR
comp=N,93nm,30.0s
WMQ LR LR
comp=Z,36nm,22.0s
KSRS **Korea Array** 137.19 330 PKP PKPdf 06 21 50.8 +0.2
comp=Z,4.4nm,0.7s,baz=42,slow=1.0,SNR=14
FORT **Forrest** 139.68 215 *e*P PKPdf 06 21 51.0 -4.4
comp=Z,12nm,0.6s
HHC **Hu-ho-hao-te** 139.95 349 *e*PKP PKPdf 06 21 51.6 -4.0
HHC PP PP 06 24 53.4 +0.7
HHC PKS 06 25 26.0
HHC SKS SKSdf 06 28 41.3 -6.5
HHC SKKS SKKSac 06 31 23.5 -5.1
HHC SS SS 06 42 56.0 -1.9
HHC AMB AMB
comp=Z,58nm,9.1s
HHC LR LR
comp=N,87nm,20.1s
HHC LR LR
comp=E,87nm,20.3s
HHC LR LR
comp=Z,96nm,20.3s
ASAR **Alice Springs** 140.47 229 PKhKP PKPpre 06 21 48.7
comp=Z,3.1nm,0.6s,baz=122,slow=3.7,SNR=73
ASAR SKPbc SKPbc 06 25 14.1 -1.3
comp=Z,0.9nm,0.7s,baz=133,slow=2.6,SNR=4.5
WRAB **Tennant Creek** 142.13 234 *e*PKHKP PKPpre 06 21 54.6
WRA **Warramunga Arr** 142.13 234 PKhKP PKPpre 06 21 54.8
comp=Z,6.2nm,0.6s,baz=119,slow=2.8,SNR=81
WRA SKPbc SKPbc 06 25 19.2 -0.5
comp=Z,3.3nm,1.0s,baz=122,slow=2.4,SNR=6.6
GTA **Gaotai** 142.18 3 PKP PKPdf 06 21 57.7 -1.9
GTA sPKP 06 23 04.1
GTA AMB AMB
comp=Z,80nm,5.6s
KLBR **Kellerberrin** 144.02 203 *e*P PKPdf 06 22 01.1 -2.0
comp=Z,25nm,0.5s
LZH **Lanzhou** 145.55 358 ⇓PKPbc PKPbc 06 22 06.7 +0.6
LZH pPKP pPKPdf 06 22 52.3 -3.3
LZH sPKP 06 23 10.7
LZH PP PP 06 25 31.9 +5.6
LZH SKKS SKKSac 06 32 04.4 +3.5
LZH SS SS 06 44 00.2 -2.0
LZH AMB AMB
comp=Z,74nm,4.8s
KAKA **Kakadu** 147.03 244 *e*P PKPdf 06 22 08.7 +0.1
comp=Z,47nm,0.6s
KAKA **Kakadu** 147.03 244 *e*PKPdf PKPdf 06 22 09.0 +0.4
KAKA *e*PKPbc PKPbc 06 22 11.0 0.0
XAN **Xi'an** 147.05 350 PKPbc PKPbc 06 22 08.6 -1.9
KOLN **Koldanda** 148.26 33 *e*P PKPbc 06 22 14.2 +0.3
comp=Z,20nm,0.8s
GKN **Gorkha** 148.62 31 *e*P PKPbc 06 22 14.7 -0.2
comp=Z,33nm,0.7s
WHN **Wuhan** 148.96 340 PKPbc PKPdf 06 22 11.7 +0.3
KKN **Kakani** 149.13 31 *e*P PKPbc 06 22 14.7 -1.4
comp=Z,46nm,0.6s
DMN **Daman** 149.19 31 *e*P PKPbc 06 22 14.6 -1.7
comp=Z,19nm,0.4s
GUN **Gumba** 149.33 30 *e*P PKPbc 06 22 15.1 -1.5
comp=Z,51nm,0.9s
PKIN **Phulchoki** 149.36 31 *e*P PKPbc 06 22 14.5 -2.2
comp=Z,27nm,0.3s
PKI **Pulchoki** 149.37 31 *e*P PKPbc 06 22 14.8 -1.9
comp=Z,34nm,0.8s
LSA **Lhasa** 149.97 20 PKPbc PKPdf 06 22 07.0 -6.0
FITZ **Fitzroy Crossi** 149.97 229 *e*P PKPdf 06 22 13.4 +0.1
comp=Z,14nm,1.8s
FITZ *e* 06 22 18.3
FITZ **Fitzroy Crossi** 149.97 229 *e*PKPdf PKPdf 06 22 13.4 +0.1
FITZ *e*PKPbc PKPbc 06 22 17.8 -0.6
FITZ *e*PKPab PKPab 06 22 24.7 0.0
RAMN **Ramite** 150.48 30 *e*P PKPdf 06 22 13.9 0.0
comp=Z,30nm,0.6s
TAPN **Taplejung** 150.67 27 *e*P PKPdf 06 22 14.5 +0.3
comp=Z,37nm,0.6s
CD2 **Chengdu** 150.71 358 PKPbc PKPbc 06 22 16.0 -3.8
CD2 PKPab PKPab 06 22 31.0 +3.7
CD2 pPKP pPKPdf 06 22 58.6 -5.7
CD2 PKS 06 25 49.4
CD2 PP PP 06 26 02.6 +6.2
CD2 SKKS SKKSac 06 32 33.0 +3.2
CD2 SS SS 06 45 05.0 +5.0
CD2 AMB AMB
comp=Z,80nm,7.1s
ODAN **Odare** 150.94 28 *e*P PKPdf 06 22 14.0 -0.6
comp=Z,32nm,0.6s
SSLB **Suanglung** 151.47 322 *e*PKPbc PKPbc 06 22 20.9 -0.9
MBWA **Marble Bar** 151.83 216 *e*PKPbc PKPbc 06 22 21.6 -1.1
TPUB **Ta-pu** 152.03 322 *e*PKPdf PKPdf 06 22 16.3 0.0
TPUB *e*PKPbc PKPbc 06 22 22.1 -1.0
TPUB *e*PKPab PKPab 06 22 31.7 -1.4
TWG **Pinlang** 152.10 321 *e*PKPbc PKPbc 06 22 21.1 -2.2
GYA **Guiyang** 154.84 351 PKPbc PKPdf 06 22 19.0 -1.3
GYA PKPab PKPab 06 22 45.4 +0.6
GYA pPKP pPKPdf 06 23 08.7 -1.8
GYA sPKP 06 23 28.3
GYA PKS 06 25 51.2
GYA PP PP 06 26 23.6 +3.9
GYA AMB AMB
comp=Z,120nm,8.0s

KMI	Kunming	156.50	359	PKP	PKPdf	06 22 21.5	-1.1
KMI				PKPab	PKPab	06 22 52.7	+0.8
KMI				pPKP	pPKPdf	06 23 10.9	-1.8
KMI				sPKP		06 23 30.5	
KMI				PP	PP	06 26 32.0	+3.1
KMI				SS	SS	06 46 03.0	0.0
KMI				AMB	AMB		
	comp=Z,55nm,5.5s						
KMI				LR	LR		
	comp=N,44nm,17.4s						
KMI				LR	LR		
	comp=E,63nm,14.4s						
CMAR	Chiang Mai Arr	162.79	11	PKP	PKPdf	06 22 29.6	-0.3
	comp=E,0.7nm,0.3s,baz=315,slow=1.8,SNR=6.6						
CMAR				PKPab	PKPab	06 23 18.6	-0.8
	comp=E,3.1nm,0.8s,baz=323,slow=5.5,SNR=12						

ISK ***04*** *06:13:44.7, 34°.72N×33°.71E, h28km, ML3.4*
DDA ***04*** *06:13:45.2, 35°.11N×33°.72E, h7km±5km, Md3.5*
ISCJB ***04*** *06:13:47.5±0.6, 34°.90N±0°.05×33°.63E±0°.03, h47km±7km, Error ellipse: s-maj=7.9km s-min=4.7km az=4.2*
NEIC ***04*** *06:13:48.6, 34°.99N×33°.57E, h41km, MG3.4(NIC), After NIC.*
NIC ***04*** *06:13:48.6±0.3, 34°.99N×33°.57E, h41km, ML3.4, MW3.3*
GRAL ***04*** *06:13:48.4±1.3, 34°.97N×33°.62E, h48km±13km, MD3.4*
CSEM ***04*** *06:13:48.4±0.1, 34°.95N×33°.63E, h30km, Mw3.3, Error ellipse: s-maj=3.9km s-min=3.3km az=46.0*

ISC 04 06:13:48.3±0.5, 34°.89N±0°.05×33°.62E±0°.03, h39km±9km, n63, σ0s75/79, 6C, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSS	**Prodhromos**	**0.25**	**287**	P	**Pn**	**06 13 55.7**	**-0.2**
	31nm,0.2s						
CSS				S	**Sn**	**06 14 01.6**	**+0.4**
CSS	**Prodhromos**	**0.25**	**287**	*e*PG	**Pn**	**06 13 54.2**	**-1.7**
CSS				*e*SG	**Sn**	**06 14 00.9**	**-0.3**
CSS	**Prodhromos**	**0.25**	**287**	*e*Pg	**Pn**	**06 13 54.3**	**-1.6**
CSS	**Prodhromos**	**0.25**	**287**	P	**Pn**	**06 13 55.7**	**-0.2**
	31nm,0.2s						
CSS				*e*Sg	**Sn**	**06 14 00.9**	**-0.3**
CSS				S	**Sn**	**06 14 01.6**	**+0.4**
PHNC	**Paralimni**	**0.36**	**71**	P	**Pn**	**06 13 57.9**	**+0.8**
PHNC				S	**Sn**	**06 14 04.3**	**+1.0**
PHNC	**Paralimni**	**0.36**	**71**	P	**Pn**	**06 13 57.9**	**+0.8**
LFK	**Lefkose**	**0.40**	**350**	*e*PG	**Pn**	**06 13 56.9**	**-0.7**
LFK	**Lefkose**	**0.40**	**350**	*e*Pg	**Pn**	**06 13 56.9**	**-0.7**
MAMC	**Mammari**	**0.43**	**311**	⇑P	**Pn**	**06 13 57.5**	**-0.6**
MAMC	**Mammari**	**0.43**	**311**	⇑*i*P	**Pn**	**06 13 57.5**	**-0.6**
MAMC	**Mammari**	**0.43**	**311**	⇑*i*P	**Pn**	**06 13 57.5**	**-0.6**
SZAC	**Souni-Zanaja**	**0.62**	**258**	P	**Pn**	**06 14 01.0**	**+0.4**
SZAC				S	**Sn**	**06 14 09.7**	**+0.3**
SZAC	**Souni-Zanaja**	**0.62**	**258**	P	**Pn**	**06 14 01.0**	**+0.4**
SZAC				S	**Sn**	**06 14 09.7**	**+0.3**
LEF	**Lefka**	**0.64**	**291**	*e*PG	**Pn**	**06 14 00.3**	**-0.6**
LEF	**Lefka**	**0.64**	**291**	*e*Pg	**Pn**	**06 14 00.3**	**-0.6**
EREN	**Erenkoy**	**0.78**	**35**	*e*PG	**Pn**	**06 14 02.1**	**-0.7**
EREN	**Erenkoy**	**0.78**	**35**	*e*Pg	**Pn**	**06 14 02.1**	**-0.7**
ALFC	**Alevga**	**0.88**	**288**	⇑P	**Pn**	**06 14 03.1**	**-1.0**
ALFC				S	**Sn**	**06 14 15.2**	**-0.5**
ALFC	**Alevga**	**0.88**	**288**	⇑*e*P	**Pn**	**06 14 03.1**	**-1.0**
ALFC				S	**Sn**	**06 14 15.2**	**-0.5**
ALFC	**Alevga**	**0.88**	**288**	⇑*e*P	**Pn**	**06 14 03.1**	**-1.0**
ALFC				S	**Sn**	**06 14 15.2**	**-0.5**
PPCY	**Paphos**	**1.05**	**270**	P	**Pn**	**06 14 06.8**	**+0.3**
PPCY	**Paphos**	**1.05**	**270**	P	**Pn**	**06 14 06.8**	**+0.3**
IKL	**Isikli**	**1.35**	**2**	*e*PN	**Pn**	**06 14 09.9**	**-0.7**
IKL	**Isikli**	**1.35**	**2**	*e*Pn	**Pn**	**06 14 09.9**	**-0.7**
GAZI	**Gazipasa**	**1.71**	**322**	*i* P	**Pn**	**06 14 14.3**	**-1.3**
GAZI				*i* S	**Sn**	**06 14 35.2**	**-1.0**
GAZI	**Gazipasa**	**1.71**	**322**	*i* P	**Pn**	**06 14 14.3**	**-1.3**
GAZI				*i* S	**Sn**	**06 14 35.2**	**-1.1**
ERMK	**Ermenek**	**1.84**	**342**	*i* P	**Pn**	**06 14 18.0**	**+0.6**
ERMK				*i* S	**Sn**	**06 14 39.9**	**+0.4**
ERMK	**Ermenek**	**1.84**	**342**	*i* P	**Pn**	**06 14 18.0**	**+0.6**
ERMK				*i* S	**Sn**	**06 14 39.9**	**+0.5**
BHL	**Bhannes**	**1.95**	**120**	*e*P	**Pn**	**06 14 18.3**	**-0.5**
BHL	**Bhannes**	**1.95**	**120**	*e*P	**Pn**	**06 14 18.3**	**-0.5**
HWQ	**Hawqa**	**2.01**	**107**	*e*P	**Pn**	**06 14 19.9**	**+0.2**
HWQ	**Hawqa**	**2.01**	**107**	*e*P	**Pn**	**06 14 19.9**	**+0.2**
MERS	**Mersin**	**2.11**	**20**	*e*PN	**Pn**	**06 14 20.9**	**-0.1**
MERS	**Mersin**	**2.11**	**20**	*e*Pn	**Pn**	**06 14 20.9**	**-0.1**
KRTS	**Karatas**	**2.21**	**40**	*e*PN	**Pn**	**06 14 21.8**	**-0.6**
KRTS	**Karatas**	**2.21**	**40**	*e*Pn	**Pn**	**06 14 21.8**	**-0.6**
HDMB	**Hadim**	**2.27**	**336**	*e*PN	**Pn**	**06 14 23.8**	**+0.5**
HDMB	**Hadim**	**2.27**	**336**	*e*Pn	**Pn**	**06 14 23.8**	**+0.6**
RCY	**Rachaya**	**2.30**	**127**	*e*P	**Pn**	**06 14 23.8**	**+0.2**
RCY	**Rachaya**	**2.30**	**127**	*e*P	**Pn**	**06 14 23.8**	**+0.2**
YAYL	**Yayladag**	**2.33**	**60**	*i* P	**Pn**	**06 14 23.5**	**-0.6**
YAYL				*i* S	**Sn**	**06 14 50.1**	**-1.4**
YAYL	**Yayladag**	**2.33**	**60**	*i* P	**Pn**	**06 14 23.5**	**-0.6**
YAYL				*i* S	**Sn**	**06 14 50.1**	**-1.4**
YURE	**YUREGIR**	**2.53**	**40**	*i* P	**Pn**	**06 14 26.6**	**-0.2**
YURE	**YUREGIR**	**2.53**	**40**	*i* P	**Pn**	**06 14 26.6**	**-0.2**
GULE	**Gulek**	**2.57**	**21**	*i* P	**Pn**	**06 14 28.2**	**+0.9**
GULE	**Gulek**	**2.57**	**21**	*i* P	**Pn**	**06 14 28.2**	**+0.9**
KARA	**Karaisali**	**2.64**	**26**	*e*PN	**Pn**	**06 14 28.3**	**0.0**
KARA	**Karaisali**	**2.64**	**26**	*e*Pn	**Pn**	**06 14 28.3**	**0.0**
COBT	**Iskenderun**	**2.69**	**52**	*i* P	**Pn**	**06 14 29.1**	**+0.1**
COBT	**Iskenderun**	**2.69**	**52**	*i* P	**Pn**	**06 14 29.1**	**+0.1**
KOZT	**Kozan**	**3.14**	**34**	*e*PN	**Pn**	**06 14 35.2**	**0.0**
KONT	**Konya--Tatoy**	**3.22**	**342**	*e*PN	**Pn**	**06 14 37.3**	**+1.0**
KONT	**Konya--Tatoy**	**3.22**	**342**	*e*Pn	**Pn**	**06 14 37.3**	**+1.1**
SULT	**Sultanhani-AKS**	**3.31**	**359**	*e*PN	**Pn**	**06 14 38.5**	**+1.0**
SULT	**Sultanhani-AKS**	**3.31**	**359**	*e*Pn	**Pn**	**06 14 38.5**	**+1.0**
SUTC	**Sutluce-Ispart**	**3.34**	**321**	*e*PN	**Pn**	**06 14 39.2**	**+1.2**
SUTC	**Sutluce-Ispart**	**3.34**	**321**	*e*Pn	**Pn**	**06 14 39.2**	**+1.2**
KUZU	**Kuzuini**	**3.38**	**55**	*i* P	**Pn**	**06 14 38.5**	**0.0**
KUZU	**Kuzuini**	**3.38**	**55**	*i* P	**Pn**	**06 14 38.5**	**0.0**
LADK	**Ladik-KONYA**	**3.46**	**343**	*e*PN	**Pn**	**06 14 40.9**	**+1.3**
LADK	**Ladik-KONYA**	**3.46**	**343**	*e*Pn	**Pn**	**06 14 40.9**	**+1.4**
ELL	**Elmali**	**3.54**	**303**	*e*PN	**Pn**	**06 14 41.8**	**+1.0**
ELL	**Elmali**	**3.54**	**303**	*e*Pn	**Pn**	**06 14 41.8**	**+1.1**

ISCJB ***04*** *06:18:44.7±0.6, 14°.60N±0°.05×92°.76W±0°.04, h58km±6km, mb4.0/9, Error ellipse: s-maj=9.5km s-min=3.7km az=31.5*
IDC ***04*** *06:18:44.6±3.5, 14°.62N×92°.45W, h52km±31km, mb3.7/6, mb1 4.0/8, mb1mx3.6/24, mbtmp3.7/8, ML4.0/2, MS2.9/1, Ms1 2.9/1, ms1mx2.5/24, Error ellipse: s-maj=49.2km s-min=19.8km az=50.0*
MEX ***04*** *06:18:45.4±0.8, 14°.51N×92°.75W, h53km±28km, MD4.3*
NEIC ***04*** *06:18:46.6, 14°.55N×92°.79W, h30km, mb3.9/9, MD4.4(MEX), After MEX.*
CASC ***04*** *06:18:47.2±2.2, 14°.58N×92°.59W, h28km±594km, MD4.0, mb3.9(NEIC)*

ISC 04 06:18:46.3±0.5, 14°.64N±0°.05×92°.73W±0°.04, h50km±6km, n44, σ1s03/61, mb4.0/9, 1C-2D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.53**	**59**	*e*P	**Pn**	**06 18 56.4**	**-1.5**
THIG				*i* S	**Sn**	**06 19 06.0**	**-0.2**
THIG				⇑*e*S	**Sn**	**06 19 06.0**	**-0.2**
JAT	**Jato**	**1.11**	**107**	⇓*e*P	**Pn**	**06 19 05.1**	**-0.4**
PCIG		**1.16**	**336**	*e*P	**Pn**	**06 19 05.2**	**-1.0**
PCIG				*e*S	**Sn**	**06 19 19.7**	**-1.3**
TP2	**Tecpan 2**	**1.66**	**85**	*e*P	**Pn**	**06 19 13.4**	**+0.4**
TP2				*e*S	**Sn**	**06 19 34.3**	**+1.1**
FG6		**1.79**	**92**	*e*P	**Pn**	**06 19 14.8**	**+0.1**
FG6				*e*S	**Sn**	**06 19 34.1**	**-2.3**
FUG	**Fuego 3**	**1.84**	**96**	*e*P	**Pn**	**06 19 14.6**	**-0.9**
PCG	**Pacaya**	**2.07**	**96**	*e*P	**Pn**	**06 19 18.5**	**-0.1**
PCG				*e*S	**Sn**	**06 19 45.0**	**+1.8**
SCX	**San Cristobal**	**2.09**	**3**	*e*P	**Pn**	**06 19 20.7**	**+1.8**
TGIG		**2.16**	**350**	*e*P	**Pn**	**06 19 19.7**	**-0.2**
TGIG				*e*S	**Sn**	**06 19 46.3**	**+0.8**
APG	**El Apazote**	**2.22**	**80**	P	**Pn**	**06 19 20.4**	**-0.3**
	75nm,0.3s,baz=268,slow=8.3,SNR=453						
APG				Lg		06 19 50.7	
	61nm,0.3s,baz=335,slow=21,SNR=35						
NBG	**Las Nubes**	**2.31**	**91**	*e*P	**Pn**	**06 19 23.1**	**+1.2**
MRL	**Marmol**	**2.97**	**81**	⇓*e*P	**Pn**	**06 19 31.4**	**+0.4**
RBDL	**Robledal**	**3.00**	**100**	*e*P	**Pn**	**06 19 31.2**	**-0.1**
CMIG	**Matias Romero**	**3.20**	**320**	P	**Pn**	**06 19 33.7**	**-0.4**
	25nm,0.3s,baz=148,slow=12,SNR=138						
CMIG				S	**Sn**	**06 20 15.2**	**+4.1**
	62nm,0.3s,baz=240,slow=23,SNR=6.8						
CMIG				LR	LR	06 21 02.3	
	comp=Z,182nm,21.6s,baz=128,slow=41						
CMIG	**Matias Romero**	**3.20**	**320**	P	**Pn**	**06 19 33.7**	**-0.4**
CMIG				S	**Sn**	**06 20 15.2**	**+4.1**
CMIG				LR	LR	06 21 02.3	
BOQS	**Boqueron**	**3.47**	**105**	*e*P	**Pn**	**06 19 38.0**	**+0.3**
BOQS				*e*S	**Sn**	**06 20 18.3**	**+0.7**
LFRS	**El Faro**	**3.70**	**105**	*e*P	**Pn**	**06 19 41.0**	**0.0**
LFRS				*e*S	**Sn**	**06 20 22.0**	**-1.4**
VHO	**Vista Hermosa**	**4.55**	**303**	*e*P	**Pn**	**06 19 52.9**	**+0.3**
VHO				*e*S	**Sn**	**06 20 44.9**	**+0.7**
VHO	**Vista Hermosa**	**4.55**	**303**	*e*P	**Pn**	**06 19 52.9**	**+0.3**
VHO				*e*S	**Sn**	**06 20 44.9**	**+0.7**
SCIG	**Sabancuy**	**4.55**	**19**	*e*P	**Pn**	**06 19 53.0**	**+0.3**
SCIG				*e*S	**Sn**	**06 20 44.5**	**+0.2**
CNCH	**Conchagua**	**4.95**	**105**	*e*P	**Pn**	**06 19 58.1**	**0.0**
TGUH	**Tegucigalpa,Un**	**5.32**	**96**	*e*Pn	**Pn**	**06 20 01.5**	**-1.7**
	37nm,0.8s						
PNIG	**Pinotepa**	**5.49**	**289**	*e*P	**Pn**	**06 20 06.0**	**+0.5**
PNIG				*e*S	**Sn**	**06 21 07.0**	**-0.3**
PNIG	**Pinotepa**	**5.49**	**289**	*e*P	**Pn**	**06 20 06.0**	**+0.5**
PNIG				*e*S	**Sn**	**06 21 07.0**	**-0.3**
JTS	**JuntasAbangare**	**8.74**	**119**	P	**Pn**	**06 20 41.3**	**-8.8**
	0.2nm,0.3s,baz=228,slow=14,SNR=3.5						
JTS				S	**Sn**	**06 22 28.8**	**+1.5**
	0.1nm,0.3s,baz=287,slow=17,SNR=2.8						
JTS	**JuntasAbangare**	**8.74**	**119**	*e*Pn	**Pn**	**06 20 51.7**	**+1.6**
	15nm,0.3s						
JTS				S	**Sn**	**06 22 28.8**	**+1.5**
TXAR	**Lajitas Array**	**17.78**	**327**	P	**Pn**	**06 22 48.9**	**-1.3**
	0.1nm,0.3s,baz=148,slow=14,SNR=8.2						
LRAL	**Lakeview Retre**	**19.04**	**15**	*e*P	**Pn**	**06 23 05.3**	**-0.1**
	2.9nm,0.5s						
MIAR	**Mount Ida**	**19.84**	**358**	*e*P	**Pn**	**06 23 16.6**	**+1.8**
	9.1nm,0.9s						
GDL2	**Guadalupe Moun**	**20.45**	**331**	*e*P	**P**	**06 23 20.4**	**+0.7**
	2.7nm,0.4s						
MNTX	**Cornudas Mount**	**20.55**	**328**	*e*P	**P**	**06 23 21.0**	**+0.3**
	1.8nm,0.6s						
TKL	**Tuckaleechee C**	**22.42**	**19**	P	**P**	**06 23 39.1**	**-1.7**
	1.6nm,0.6s,mb3.6,baz=193,slow=13,SNR=3.7						
BNM	**Barren Site**	**23.14**	**330**	*e*P	**P**	**06 23 49.2**	**+1.0**
	2.0nm,0.7s,mb3.7						
ANMO	**Albuquerque**	**23.71**	**331**	P	**P**	**06 23 53.2**	**-0.4**
	1.7nm,0.5s,mb3.7,baz=140,slow=12,SNR=12						
ANMO	**Albuquerque**	**23.71**	**331**	*e*P	**P**	**06 23 53.8**	**+0.1**
	1.7nm,0.8s,mb3.5						
MVCO	**Mesa Verde**	**26.50**	**331**	*e*P	**P**	**06 24 20.0**	**+1.0**
	4.1nm,0.6s,mb4.1						
NVAR	**Mina Array Bea**	**32.73**	**321**	P	**P**	**06 25 15.1**	**+0.9**
	1.3nm,0.7s,mb4.0,baz=135,slow=8.5,SNR=11						
HLID	**Hailey**	**34.28**	**332**	*e*P	**P**	**06 25 27.9**	**+0.3**
	1.6nm,0.7s,mb4.1						
SIV	**San Ignacio**	**43.64**	**133**	P	**P**	**06 26 42.9**	**-3.2**
	1.1nm,0.6s,mb3.8,baz=304,slow=7.2,SNR=11						
YKA	**Yellowknife Ar**	**50.25**	**347**	P	**P**	**06 27 35.3**	**-1.8**
	1.8nm,0.6s,mb4.3,baz=151,slow=7.3,SNR=15						
YKA	**Yellowknife Ar**	**50.25**	**347**	P	**P**	**06 27 35.3**	**-1.8**
INK	**Inuvik**	**59.63**	**344**	P	**P**	**06 28 43.6**	**-1.2**
	2.5nm,0.6s,mb4.4,baz=138,slow=9.0,SNR=9.9						
INK	**Inuvik**	**59.63**	**344**	*e*P	**P**	**06 28 42.6**	**-2.2**
	2.9nm,0.7s,mb4.4						
CMAR	**Chiang Mai Arr**	**145.16**	**340**	PKPbc	PKPbc	06 38 15.9	-2.8
	1.1nm,0.3s,baz=342,slow=4.8,SNR=4.8						

IDC 04 06:20:20.7±50.0, 18°.31S×177°.11W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.8/16, mbtmp4.0/3, Error ellipse: s-maj=922.2km s-min=160.2km az=80.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.53**	**242**	P	P	06 27 53.4	-0.1
	1.1nm,0.6s,baz=29,slow=10,SNR=3.6						
WRA	**Warramunga Arr**	**45.78**	**260**	P	P	06 28 44.6	+0.1
	0.7nm,0.3s,baz=97,slow=7.6,SNR=27						
ASAR	**Alice Springs**	**45.88**	**255**	P	P	06 28 45.0	-0.2
	1.7nm,0.7s,baz=85,slow=8.1,SNR=24						

NIED ***04*** *06:21:00, 40°.40N×142°.10E, h59km, Mw3.6 Best double couple: M0=2.79000×10^14 NP1:φs=270.00000°, δ83.00000°, λ-151.00000°. NP2:φs=176.00000°, δ61.00000°, λ-8.00000°.*
ISCJB ***04*** *06:21:51.4±0.8, 40°.37N±0°.04×142°.03E±0°.10, h57km±6km, mb3.8/4, Error ellipse: s-maj=12.8km s-min=7.3km az=8.1*
JMA ***04*** *06:21:51.9±0.1, 40°.36N×142°.08E, h50km±1km, M3.6*
JMA Felt I J1.
IDC ***04*** *06:21:52.4±1.6, 40°.79N×140°.94E, h0km, mb3.8/5, mb1 3.8/7, mb1mx3.5/27, mbtmp3.7/7, ML3.4/2, Error ellipse: s-maj=33.8km s-min=24.8km az=143.0*

ISC 04 06:21:52.5±0.8, 40°.36N±0°.04×142°.01E±0°.10, h52km±6km, n14, σ0s74/20, mb3.8/4, 1C-6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JANG	**Nango**	**0.38**	**273**	⇓P	**Pn**	**06 22 02.3**	**-0.2**
JANG				S	**Sn**	**06 22 09.6**	**-0.1**
JTH	**Tanohata**	**0.43**	**195**	⇑P	**Pn**	**06 22 02.5**	**-0.6**
JTH				S	**Sn**	**06 22 10.1**	**-0.6**
JKZ	**Kuzumaki**	**0.64**	**234**	⇓P	**Pn**	**06 22 05.7**	**+0.2**
JKZ				S	**Sn**	**06 22 15.3**	**+0.3**
JTM	**Tenmabayashi**	**0.83**	**301**	⇓P	**Pn**	**06 22 07.6**	**-0.5**
JTM				S	**Sn**	**06 22 19.0**	**-0.4**
JOM	**Ohasama**	**1.04**	**212**	⇓P	**Pn**	**06 22 10.9**	**+0.1**
JOM				S	**Sn**	**06 22 24.3**	**0.0**
JAH	**Hinai**	**1.06**	**261**	⇓P	**Pn**	**06 22 11.3**	**+0.2**
JAH				S	**Sn**	**06 22 25.5**	**+0.7**
JOT	**Ohata**	**1.25**	**325**	⇓P	**Pn**	**06 22 13.1**	**-0.6**
ASAJ	**Asahikawa**	**3.78**	**6**	Pn	**Pn**	**06 22 48.9**	**+0.6**
	4.5nm,0.3s,baz=208,slow=8.2,SNR=15						
ASAJ				Sn	**Sn**	**06 23 32.3**	**+0.9**
	1.4nm,0.3s,baz=270,slow=20,SNR=4.3						
MJAR	**Matsushiro Art**	**4.84**	**219**	Pn	**Pn**	**06 23 05.5**	**+2.8**
	0.5nm,0.3s,baz=28,slow=12,SNR=8.2						
ZALV	**Zalesovo Beam**	**40.09**	**310**	P	**P**	**06 29 21.4**	**-1.3**
	0.9nm,0.5s,mb3.8,baz=90,slow=8.9,SNR=4.1						
MKAR	**Makanchi Array**	**42.82**	**299**	P	**P**	**06 29 44.4**	**-0.8**
	0.4nm,0.4s,mb3.5,baz=83,slow=9.3,SNR=5.1						
KURK	**Kurchatov**	**44.31**	**306**	P	**P**	**06 29 56.6**	**-0.4**
	1.9nm,0.6s,mb4.0,baz=80,slow=8.6,SNR=4.7						
AKTO	**Aktyubinsk**	**56.84**	**311**	P	**P**	**06 31 32.4**	**+1.0**
	0.7nm,0.5s,mb4.0,baz=105,slow=12,SNR=4.5						
NVAR	**Mina Array Bea**	**72.65**	**54**	P	pP	06 33 24.5	-4.8
	0.1nm,0.3s,baz=308,slow=14,SNR=3.2						

ISCJB ***04*** *06:30:39.9±1.2, 14°.54N±0°.06×92°.82W±0°.04, h29km±8km, Error ellipse: s-maj=11.2km s-min=3.8km az=30.5*
MEX ***04*** *06:30:40.7±0.7, 14°.49N×92°.75W, h55km±28km, MD4.2*
CASC ***04*** *06:30:41.5±1.6, 14°.62N×92°.71W, h26km±539km, MD3.8*

ISC 04 06:30:39.7±1.6, 14°.58N±0°.05×92°.81W±0°.04, h16km±10km, n21, σ0s77/33, 1C, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.62**	**58**	*e*P	**Pb**	**06 30 52.3**	**0.0**
THIG				*e*S	**Sb**	**06 31 01.8**	**+1.1**
JAT	**Jato**	**1.17**	**103**	*e*P	**Pn**	**06 31 01.1**	**-0.3**
PCIG		**1.19**	**341**	*e*P	**Pn**	**06 31 00.6**	**-1.1**
PCIG				*e*S	**Sb**	**06 31 16.1**	**-1.0**
TP2	**Tecpan 2**	**1.74**	**83**	*e*P	**Pn**	**06 31 09.3**	**0.0**
FG6		**1.87**	**90**	*e*P	**Pn**	**06 31 10.7**	**-0.3**
FG6				*e*S	**Sn**	**06 31 34.4**	**0.0**
FUG	**Fuego 3**	**1.91**	**94**	⇓*e*P	**Pn**	**06 31 10.7**	**-1.0**
PCG	**Pacaya**	**2.14**	**95**	*e*S	**Sn**	**06 31 39.9**	**-1.3**
SCX	**San Cristobal**	**2.15**	**4**	*i* P	**Pn**	**06 31 16.8**	**+1.8**
TGIG		**2.21**	**352**	*e*P	**Pn**	**06 31 15.4**	**-0.4**
TGIG				*e*S	**Sn**	**06 31 42.1**	**-0.7**
NBG	**Las Nubes**	**2.38**	**89**	*e*P	**Pn**	**06 31 19.1**	**+0.9**
MRL	**Marmol**	**3.06**	**80**	*e*P	**Pn**	**06 31 27.3**	**-0.1**
RBDL	**Robledal**	**3.06**	**98**	*e*P	**Pn**	**06 31 27.1**	**-0.5**
RBDL				*e*S	**Sn**	**06 32 04.3**	**+0.5**
RTR	**El Retiro**	**3.14**	**102**	*e*P	**Pn**	**06 31 27.8**	**-0.8**
SBLS	**San Blas**	**3.18**	**103**	*e*P	**Pn**	**06 31 28.9**	**-0.2**
SBLS				*e*S	**Sn**	**06 32 07.5**	**+0.8**
SNJE	**San Jose**	**3.19**	**102**	*e*P	**Pn**	**06 31 28.9**	**-0.3**
SNJE				*e*S	**Sn**	**06 32 07.6**	**+0.7**
CMIG	**Matias Romero**	**3.20**	**322**	*e*P	**Pn**	**06 31 29.1**	**-0.4**
CMIG				*i* S	**Sn**	**06 32 08.5**	**+1.2**
HUIG	**Huatulco**	**3.40**	**291**	*e*P	**Pn**	**06 31 32.3**	**+0.1**
HUIG				*e*S	**Sn**	**06 32 12.5**	**+0.3**
BOQS	**Boqueron**	**3.52**	**103**	*e*P	**Pn**	**06 31 35.1**	**+1.2**
BOQS				*e*S	**Sn**	**06 32 15.1**	**-0.2**
LBRS	**Las Brisas**	**3.75**	**102**	*e*P	**Pn**	**06 31 36.7**	**-0.3**
LFRS	**El Faro**	**3.76**	**104**	*e*P	**Pn**	**06 31 37.9**	**+0.8**
LFRS				*e*S	**Sn**	**06 32 19.5**	**-1.6**
SNVI	**San Vicente**	**3.97**	**103**	*e*P	**Pn**	**06 31 40.9**	**+0.8**
SNVI				*e*S	**Sn**	**06 32 26.5**	**+0.2**

NEIC ***04*** *06:34:30.3±0.7, 5°.68S×133°.65E, h35km, mb4.5/5, Error ellipse: s-maj=22.9km s-min=10.1km az=76.0*
IDC ***04*** *06:34:32.5±1.0, 5°.85S×133°.38E, h55km±6km, mb3.8/5, mb1 4.2/9, mb1mx4.0/16, mbtmp4.0/9, MS3.2/4, Ms1 3.2/4, ms1mx2.9/26, Error ellipse: s-maj=39.1km s-min=17.2km az=71.0*

ISC 04 06:34:30.7±1.4, 5°.83S±0°.08×133°.8E±0°.1, h47km±14km, h59km±1.1km: pP-P, n36, σ1s36/41, mb4.2/9, MS3.0/2, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**1.11**	**280**	P	**Pn**	**06 34 51.2**	**+1.3**
TLE				S	**Sn**	**06 35 09.1**	**+5.0**
BAKI	**Biak**	**5.14**	**26**	P	**Pn**	**06 35 38.7**	**-6.4**
SMPI	**Sarmi**	**6.18**	**52**	P	**Pn**	**06 35 54.4**	**-5.1**
	1μm68nm,0.7s						
KAKA	**Kakadu**	**6.97**	**191**	*e*P	**Pn**	**06 36 14.6**	**+4.2**
	19nm,0.2s						
KAKA				*e*S	**Sn**	**06 37 32.6**	**+4.2**
KAKA	**Kakadu**	**6.97**	**191**	*e*Pn	**Pn**	**06 36 14.5**	**+4.1**
	106nm,0.4s						
KAKA				*e*Sn	**Sn**	**06 37 32.2**	**+3.8**
KAKA	**Kakadu**	**6.97**	**191**	P	**Pn**	**06 36 15.6**	**+5.2**
COEN	**Coen**	**12.23**	**132**	*e*Pn	**Pn**	**06 37 20.8**	**-1.6**
	58nm,0.4s						
COEN				*e*Sn	**Sn**	**06 39 29.2**	**-8.2**
WRAB	**Tennant Creek**	**14.03**	**178**	*e*Pn	**Pn**	**06 37 46.8**	**0.0**
	20nm,0.6s						
WRA	**Warramunga Arr**	**14.04**	**178**	P	**Pn**	**06 37 47.0**	**0.0**
	0.9nm,0.3s,baz=359,slow=13,SNR=63						
WRA				S	**Sn**	**06 40 19.3**	**-2.0**
	1.7nm,0.3s,baz=359,slow=23,SNR=4.6						
KAPI	**Kappang**	**14.05**	**273**	LR	LR	06 44 02.7	
	comp=Z,57nm,20.0s,baz=344,slow=42						
FITZ	**Fitzroy Crossi**	**14.59**	**213**	*e*P	**Pn**	**06 37 54.1**	**-0.3**
	18nm,0.4s						
FITZ				*e*S	**Sn**	**06 40 30.3**	**-4.5**
FITZ	**Fitzroy Crossi**	**14.59**	**213**	P	**Pn**	**06 37 53.0**	**-1.3**
	3.5nm,0.3s,baz=44,slow=11,SNR=90						
FITZ				S	**Sn**	**06 40 30.1**	**-4.7**
	7.2nm,0.3s,baz=184,slow=16,SNR=18						
FITZ	**Fitzroy Crossi**	**14.59**	**213**	*e*Pn	**Pn**	**06 37 54.2**	**-0.2**
FITZ				*e*Sn	**Sn**	**06 40 30.1**	**-4.7**
ASAR	**Alice Springs**	**17.73**	**180**	P	**Pn**	**06 38 35.4**	**+1.1**
	0.9nm,0.3s,baz=354,slow=14,SNR=39						
ASAR				S	**S**	**06 41 46.3**	**-10**
	0.4nm,0.3s,baz=359,slow=24,SNR=3.6						
CTA	**Charters Tower**	**18.61**	**141**	P	**Pn**	**06 38 47.2**	**+2.2**
	0.2nm,0.3s,baz=332,slow=12,SNR=5.

WRA	**Warramunga Arr**	**51.55**	**126**	P	P	06 59 33.0	-0.9
	0.4nm,0.7s,baz=306,slow=8.1,SNR=5.1						
ASAR	**Alice Springs**	**53.30**	**131**	P	P	06 59 47.6	+0.8
	0.2nm,0.6s,baz=302,slow=7.3,SNR=4.6						

*BYKL **04** 06:56:30.2±0.2, 54°.93N×109°.85E*

MOS 04 06:56:30.9±0.4, 54°.85N×109°.84E, h12km, mb4.2/1, 4C-4D, Error ellipse: s-maj=61.4km s-min=22.0km az=66.9, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YLYR	**Ulyunkhan**	**0.77**	**87**	⇑*i*Pg	Pg	06 56 42.7	-3.0
YLYR				⇑*i*Pb	Pb	06 56 44.3	-1.8
YLYR				*i* Sg	Sg	06 56 52.9	-2.8
YLYR				max			
	64nm,0.7s						
YLYR				Smax			
	208nm,0.2s						
NIZ	**Nizh Angarsk**	**0.94**	**350**	⇓*i*Pg	Pg	06 56 45.9	-3.2
NIZ				*i* Sg	Sg	06 56 57.8	-3.6
NIZ				Pmax			
	26nm,0.2s						
NIZ				Smax			
	111nm,0.3s						
SYVR	**Suvo**	**1.20**	**175**	*e*PG	Pg	06 56 53.1	-0.8
SYVR				*e*		06 57 10.6	
SYVR				pmax	pmax		
	comp=Z,70nm,0.2s						
SYVR				smax			
	comp=N,834nm,0.6s						
SYVR	**Suvo**	**1.20**	**175**	*e*Pg	Pg	06 56 52.8	-1.1
SYVR				*i* Sg	Sg	06 57 10.5	+1.1
SYVR				*i* Sg	Sg	06 57 14.8	+5.4
SYVR				Pmax			
	comp=N,68nm,0.2s						
SYVR				max			
	comp=N,815nm,0.4s						
KMO	**Kumora**	**1.30**	**36**	⇓*i*Pg	Pg	06 56 51.8	-4.0
KMO				⇑Pmax		06 56 55.3	
KMO				*e*Sg	Sg	06 57 08.7	-4.0
KMO				Pmax			
	comp=N,58nm,0.4s						
KMO				Smax			
	comp=N,171nm,0.7s						
YOA	**Uoyan**	**1.68**	**39**	*e*PN	Pn	06 57 00.6	+0.6
YOA				*e*		06 57 23.1	
YOA				pmax	pmax		
	comp=Z,162nm,0.3s						
YOA				smax			
	comp=N,522nm,0.6s						
YOA	**Uoyan**	**1.68**	**39**	*e*Sg	Sg	06 57 21.5	-3.2
YOA				*e*		06 57 51.1	
YOA				Smax			
	comp=N,518nm,0.5s						
MXMB	**Maximikha**	**1.71**	**203**	*e*Pg	Pg	06 57 02.6	-1.2
MXMB				*e*		06 57 23.9	
MXMB				*e*Sg	Sg	06 57 27.7	+1.7
MXMB				Pmax			
	comp=N,45nm,0.4s						
MXMB				Smax			
	comp=N,226nm,1.1s						
OGRR	**Ongureny**	**1.79**	**228**	*e*PN	Pn	06 57 02.7	+1.2
OGRR				*e*		06 57 04.0	
OGRR				*e*		06 57 28.5	
OGRR				pmax	pmax		
	comp=Z,97nm,0.5s						
OGRR				smax			
	comp=N,256nm,0.7s						
OGRR	**Ongureny**	**1.79**	**228**	⇑*i*Pn	Pn	06 57 02.8	+1.3
OGRR				⇓*i*Pg	Pg	06 57 04.1	-1.1
OGRR				*i* Sg	Sg	06 57 28.4	+0.1
OGRR				*e*		06 57 31.0	
OGRR				Pmax			
	comp=N,97nm,0.4s						
OGRR				Smax			
	comp=N,250nm,0.4s						
SVKR	**Severomuysk**	**2.47**	**58**	*e*Pg	Pg	06 57 14.0	-4.2
SVKR				*i* Sg	Sg	06 57 46.7	-3.4
TRG	**Tyrgan**	**2.94**	**226**	*e*Pn	Pn	06 57 19.8	+2.4
TRG				*e*Pg	Pg	06 57 24.2	-3.1
TRG				*e*		06 57 34.5	
TRG				*e*Sg	Sg	06 58 02.6	-2.8
TRG				max			
	comp=N,15nm,0.2s						
TRG				Smax			
	comp=N,62nm,0.3s						
UUDB	**Ulan-Yde**	**3.26**	**204**	*e*Pn	Pn	06 57 24.1	+2.3
UUDB				Pg	Pg	06 57 30.5	-2.8
UUDB				*e*Sg	Sg	06 58 14.4	-1.1
UUDB				Pmax			
	comp=N,12nm,0.4s						
UUDB				Smax			
	comp=N,37nm,1.5s						
KAB	**Kabansk**	**3.39**	**215**	*e*Sg	Sg	06 58 16.1	-3.6
KAB				Smax			
	comp=N,285nm,0.8s						
CIT	**Chita**	**3.60**	**140**	*e*Sg	Sg	06 58 23.1	-3.3
CIT				Smax			
	comp=N,146nm,0.3s						
NLYR	**Nelyaty**	**3.71**	**61**	*e*Pn	Pn	06 57 28.4	+0.5
NLYR				*e*Pg	Pg	06 57 35.4	-6.4
NLYR				*i* Sg	Sg	06 58 23.6	-6.2
NLYR				Pmax			
	comp=N,24nm,1.4s						
NLYR				Smax			
	comp=N,73nm,1.7s						
LSTR	**Listvyanka**	**4.23**	**227**	*e*	Sn	06 58 13.9	-10
LSTR				*e*Sg	Sg	06 58 43.5	-3.2
LSTR				Smax			
	comp=N,110nm,1.7s						
TLY	**Talaya**	**4.89**	**232**	*e*PN	Pn	06 57 45.6	+1.5
TLY				*e*		06 57 58.6	
TLY				*e*S	Sn	06 58 40.4	-0.2
TLY	**Talaya**	**4.89**	**232**	*e*Pn	Pn	06 57 45.9	+1.8
TLY				*e*Pg	Pg	06 57 58.8	-5.7
TLY				*e*		06 58 31.7	
TLY				*e*Sg	Sg	06 59 02.6	-5.1
TLY				Pmax			
	comp=N,5.0nm,0.8s						
TLY				Smax			
	comp=N,49nm,0.1s						
ARS	**Arshan**	**5.32**	**240**	*e*Pn	Pn	06 57 51.7	+1.7
ARS				*e*		06 58 00.9	
ARS				*e*Pg	Pg	06 58 06.6	-6.1
ARS				*e*		06 58 49.4	
ARS				*i* Sg	Sg	06 59 15.1	-6.4
ARS				Pmax			
	comp=N,12nm,0.7s						
ARS				Smax			
	comp=N,109nm,0.8s						
KPC	**Khapcheranga**	**5.38**	**162**	⇓*i*Pn	Pn	06 57 51.7	+0.8
KPC				*e*		06 57 56.0	
KPC				*e*Pg	Pg	06 58 08.5	-5.4
KPC				*e*Sn	Sn	06 58 30.1	-23
KPC				*e*Sg	Sg	06 59 19.0	-4.6
KPC				Pmax			
	comp=N,3.0nm,1.0s						
KPC				Smax			
	comp=N,31nm,2.3s						
TUP	**Tupik**	**5.89**	**90**	*e*Pn	Pn	06 57 57.6	-0.3
TUP				*e*		06 58 07.7	
TUP				*e*Pg	Pg	06 58 16.2	-7.4
TUP				*e*Sn	Sn	06 59 01.9	-3.3
TUP				*e*		06 59 18.1	
TUP				*e*Sg	Sg	06 59 31.9	-7.9
TUP				Pmax			
	comp=N,3.0nm,0.7s						
TUP				Smax			
	comp=N,38nm,2.0s						
MOY	**Mondy**	**6.19**	**243**	*e*	Sn	06 59 17.4	+4.8
MOY				*e*Sg	Sg	06 59 42.9	-6.6
MOY				Smax			
	comp=N,34nm,1.2s						
ORL	**Orlik**	**6.39**	**253**	*e*PN	Pn	06 58 07.3	+2.6
ORL				*e*		06 58 26.5	
ORL				*e*		06 59 47.8	
ORL				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ORL				smax			
	comp=N,27nm,1.0s						
ORL	**Orlik**	**6.39**	**253**	*e*Pn	Pn	06 58 07.1	+2.4
ORL				*e*		06 58 17.6	
ORL				*e*Pg	Pg	06 58 25.4	-7.8
ORL				*e*Sn	Sn	06 59 19.1	+1.6
ORL				*e*Sg	Sg	06 59 48.1	-7.7
ORL				Pmax			
	comp=N,2.0nm,1.0s						
ORL				Smax			
	comp=N,35nm,0.9s						
TDJR	**Todzha**	**8.53**	**259**	*e*	Sn	07 00 20.9	+11
TDJR				*e*Sg	Sn	07 00 52.7	+43

*ISCJB **04** 07:24:11.4±1.0, 50°.06N±0°.06×78°.7E±0°.2, h10km, Error ellipse: s-maj=18.3km s-min=7.6km az=162.7*
*IDC **04** 07:24:11.9±0.9, 50°.04N×78°.80E, h0km, mb1 3.0/3, mb1mx3.0/26, mbtmp3.0/3, ML3.1/3, Error ellipse: s-maj=17.4km s-min=6.4km az=62.0*

ISC 04 07:24:13.2±1.0, 50°.08N±0°.06×78°.7E±0°.2, h10km, n6, σ1♀06/9, 3C-1D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**0.64**	**355**	⇑P	**Pg**	**07 24 23.9**	**-1.8**
	12nm,0.3s						
KURK				⇑S	**Sg**	**07 24 34.1**	**+0.1**
	31nm,0.8s						
KURK	**Kurchatov**	**0.64**	**355**	Pg	**Pg**	**07 24 22.9**	**-2.8**
	8.0nm,0.3s,baz=167,slow=18,SNR=107						
KURK				Lg		07 24 32.4	
	4.0nm,0.3s,baz=103,slow=18,SNR=31						
MK31	**Makanchi Array**	**4.06**	**143**	⇑Pn	**Pn**	**07 25 15.1**	**-0.3**
	0.2nm,0.2s,baz=330,slow=11,SNR=36						
MK31				⇓Pg	**Pg**	**07 25 23.5**	**-7.5**
	2.1nm,0.5s,baz=317,slow=14,SNR=21						
MK31				Lg		07 26 16.1	
	3.9nm,0.5s,baz=339,slow=24,SNR=19						
MKAR	**Makanchi Array**	**4.06**	**143**	Pn	**Pn**	**07 25 15.0**	**-0.4**
	0.5nm,0.3s,baz=333,slow=11,SNR=49						
MKAR				Pg	**Pg**	**07 25 21.3**	**-10**
	1.0nm,0.3s,baz=318,slow=15,SNR=20						
MKAR				Lg		07 26 17.1	
	1.9nm,0.3s,baz=324,slow=29,SNR=13						
ZALV	**Zalesovo Beam**	**5.41**	**42**	Pn	**Pn**	**07 25 35.4**	**+1.5**
	1.4nm,0.3s,baz=230,slow=14,SNR=5.0						
BVAR	**Borovoye Array**	**5.97**	**303**	Pn	**Pn**	**07 25 42.3**	**+0.8**
	0.3nm,0.3s,baz=91,slow=15,SNR=6.6						

*MAN **04** 09:00:55, 10°.94N×122°.09E, h1km, mb4.6, ML3.4, MS3.3*
MAN INTENSITY II - ILOILO CITY.
*ISCJB **04** 09:00:56.4±0.8, 10°.91N±0°.05×122°.10E±0°.04, h16km±9km, mb3.5/5, Error ellipse: s-maj=8.6km s-min=5.8km az=31.5*
*IDC **04** 09:01:01.0±3.9, 10°.49N×121°.90E, h59km±38km, mb3.3/5, mb1 3.5/5, mb1mx3.3/21, mbtmp3.3/5, ML4.4/1, MS3.5/1, Ms1 3.5/1, ms1mx2.7/15, Error ellipse: s-maj=58.5km s-min=18.1km az=62.0*

ISC 04 09:00:55.7±0.9, 10°.95N±0°.04×122°.08E±0°.04, h0km±7km, n17, σ0♀91/23, mb3.5/5, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**0.60**	**123**	*e*P	**Pg**	**09 01 06.6**	**-0.6**
GUIM				*e*S	**Sg**	**09 01 14.3**	**-0.6**
CUYO	**Cuyo Island**	**1.04**	**265**	*e*P	**Pg**	**09 01 16.1**	**+0.3**
CUYO				*e*S	**Sg**	**09 01 29.6**	**+0.3**
OTRP	**Odiongan**	**1.40**	**358**	*e*P	**Pn**	**09 01 21.8**	**-0.7**
OTRP				*e*S	**Sg**	**09 01 41.1**	**+0.3**
SJMP	**San Jose**	**1.77**	**328**	*e*P	**Pn**	**09 01 30.4**	**+2.8**
SJMP				*e*S	**Sn**	**09 01 49.7**	**-1.0**
BUSP	**Coron**	**2.12**	**300**	*e*P	**Pn**	**09 01 31.9**	**-0.4**
BUSP				*e*S	**Sn**	**09 02 00.0**	**+0.7**
BOAC	**Boac**	**2.50**	**355**	*e*P	**Pn**	**09 01 37.3**	**-0.3**
BOAC				*e*S	**Sn**	**09 02 01.8**	**-7.1**
ENPP	**El Nido**	**2.62**	**276**	*e*P	**Pn**	**09 01 38.2**	**-1.0**
MSLP	**Maasin**	**2.85**	**106**	*e*P	**Pn**	**09 01 44.5**	**+2.0**
GQP	**Guinayangan**	**2.96**	**7**	*e*P	**Pn**	**09 01 44.0**	**0.0**
TGY	**Tagaytay City**	**3.32**	**341**	P	**Pn**	**09 01 56.0**	**+7.0**
	27nm,0.3s,baz=157,slow=13,SNR=3.3						
PAGZ	**Pagadian**	**3.34**	**157**	*e*P	**Pn**	**09 01 49.5**	**+0.3**
BUKP	**Musuan**	**4.24**	**136**	*e*P	**Pn**	**09 02 06.3**	**+4.7**
CMAR	**Chiang Mai Arr**	**23.57**	**291**	P	**P**	**09 06 07.3**	**-1.0**
	1.2nm,0.8s,mb3.5,baz=109,slow=8.5,SNR=6.6						
WRA	**Warramunga Arr**	**32.99**	**158**	P	**P**	**09 07 26.4**	**-6.1**
	0.3nm,0.5s,mb3.5,baz=331,slow=11,SNR=7.2						
ASAR	**Alice Springs**	**36.30**	**161**	P	**P**	**09 07 56.5**	**-4.6**
	0.5nm,0.6s,mb3.5,baz=344,slow=7.5,SNR=7.9						
ASAR				PcP	PcP	09 10 21.8	-4.5
	0.6nm,0.8s,baz=347,slow=2.9,SNR=5.2						
SONM	**Songino Array**	**39.06**	**343**	P	**P**	**09 08 25.2**	**+1.0**
	0.4nm,0.5s,mb3.3,baz=143,slow=9.9,SNR=2.1						
MKAR	**Makanchi Array**	**49.03**	**324**	P	**P**	**09 09 43.9**	**-0.5**
	1.0nm,0.9s,mb3.9,baz=116,slow=8.2,SNR=6.7						
MKAR				PcP	PcP	09 11 05.6	-2.7
	0.6nm,0.8s,baz=115,slow=4.3,SNR=4.4						

CSEM 04 09:08:45.8±0.5, 26°.60N×54°.87E, h2km, ML3.9, Error ellipse: s-maj=17.8km s-min=3.2km az=165.0, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**1.41**	**55**	*e*Pg	Pg	09 09 12.9	0.0
BNDS				*e*Sg	Sg	09 09 31.2	0.0
KRBR	**Kerman**	**3.76**	**26**	*e*Pn	Pn	09 09 45.7	+0.8
NASN	**Na'in**	**6.44**	**344**	*e*Pn	Pn	09 10 21.8	+0.2
KBD	**Kabd**	**6.85**	**294**	*e*P	Pn	09 10 27.4	+0.1
MIB	**Mutribah**	**7.37**	**297**	*e*P	Pn	09 10 34.3	-0.2

IDC 04 09:52:14.5±2.2, 6°.50S×130°.57E, h0km, mb3.3/1, mb1 3.4/4, mb1mx3.3/17, mbtmp3.3/4, ML3.3/3, MS4.0/1, Ms1 4.0/1, ms1mx2.6/19, Error ellipse: s-maj=89.4km s-min=28.4km az=78.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.49**	**202**	Pn	Pn	09 55 11.6	-2.0
	0.1nm,0.3s,baz=9.5,slow=12,SNR=4.4						
FITZ				Sn	Sn	09 57 19.0	-15
	0.4nm,0.3s,baz=268,slow=15,SNR=5.4						
WRA	**Warramunga Arr**	**13.85**	**165**	Pn	Pn	09 55 31.9	-0.4
	0.2nm,0.3s,baz=350,slow=13,SNR=10						
WRA				Sn	Sn	09 57 56.9	-10
	0.4nm,0.3s,baz=356,slow=23,SNR=8.0						
ASAR	**Alice Springs**	**17.36**	**170**	P	Pn	09 56 20.4	+2.0
	0.1nm,0.3s,baz=2.8,slow=11,SNR=5.0						
ASAR				S	Sn	09 59 20.0	-12
	0.1nm,0.3s,baz=350,slow=25,SNR=5.4						
JHJ	**Hachijo jima 2**	**40.37**	**12**	LR	LR	10 14 01.1	
	comp=Z,175nm,19.1s,baz=275,slow=32						
MKAR	**Makanchi Array**	**68.12**	**326**	P	P	10 03 16.5	+0.2
	0.2nm,0.5s,baz=109,slow=8.6,SNR=2.6						

MAN 04 09:59:24, 7°.05N×126°.27E, h57km, mb4.7, ML3.6, MS3.6, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.10**	**185**	*e*P	Pn	09 59 33.3	+0.6
MATI				*e*S	Sn	09 59 41.4	+2.5
DMPH	**Davao City--Mi**	**0.75**	**273**	⇑*e*P	Pn	09 59 41.7	+3.0
BUKP	**Musuan**	**1.45**	**305**	*e*P	Pn	09 59 50.0	+2.0
BUKP				*e*S	Sn	10 00 07.6	+1.6
PAGZ	**Pagadian**	**2.97**	**286**	*e*P	Pn	10 00 10.7	+2.1
PAGZ				*e*S	Px	10 00 22.2	

*DDA **04** 10:04:36.8, 36°.99N×29°.20E, h7km±5km, Md3.0*
*ISK **04** 10:04:36.8, 37°.11N×29°.22E, h2km, MD3.1*
*ISCJB **04** 10:04:37.5±0.6, 37°.02N±0°.03×29°.21E±0°.03, h5km±6km, Error ellipse: s-maj=5.3km s-min=4.5km az=15.5*
*CSEM **04** 10:04:37.5±0.1, 37°.03N×29°.22E, h2km, MD3.1, Error ellipse: s-maj=4.0km s-min=1.2km az=166.0*

ISC 04 10:04:37.9±0.6, 37°.02N±0°.03×29°.20E±0°.03, h7km±5km, n42, σ1♀04/55, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.27**	**61**	*e*PG	**Pg**	**10 04 42.4**	**-0.8**
GLHS				*e*SG	**Sg**	**10 04 46.6**	**-0.2**
GLHS	**Glhisar (BURDU**	**0.27**	**61**	*e*Pg	**Pg**	**10 04 42.4**	**-0.8**
GLHS				*e*Sg	**Sg**	**10 04 46.6**	**-0.2**
GOLH	**Golhisar**	**0.36**	**53**	*i* P	**Pg**	**10 04 44.2**	**-0.6**
GOLH				*i* S	**Sg**	**10 04 51.1**	**+1.5**
GOLH	**Golhisar**	**0.36**	**53**	*i* P	**Pg**	**10 04 44.2**	**-0.6**
GOLH				*i* S	**Sg**	**10 04 51.1**	**+1.6**
ELL	**Elmali**	**0.63**	**116**	*e*PG	**Pg**	**10 04 50.5**	**+0.5**
ELL	**Elmali**	**0.63**	**116**	*e*Pg	**Pg**	**10 04 50.5**	**+0.5**
DNZL	**Cakiroluk**	**0.68**	**350**	*i* P	**Pg**	**10 04 49.3**	**-1.6**
DNZL				*i* S	**Sg**	**10 05 01.6**	**+1.9**
DNZL	**Cakiroluk**	**0.68**	**350**	*i* P	**Pg**	**10 04 49.3**	**-1.6**
DNZL				*i* S	**Sg**	**10 05 01.6**	**+1.9**
DENT	**Denizli**	**0.74**	**350**	*e*PG	**Pg**	**10 04 50.6**	**-1.5**
DENT	**Denizli**	**0.74**	**350**	*e*Pg	**Pg**	**10 04 50.6**	**-1.5**
YER	**Yerkesik**	**0.74**	**279**	*e*PG	**Pg**	**10 04 52.2**	**0.0**
YER	**Yerkesik**	**0.74**	**279**	*e*Pg	**Pg**	**10 04 52.2**	**+0.1**
AKAS	**Kas**	**0.85**	**157**	*i* P	**Pg**	**10 04 52.4**	**-1.8**
AKAS				*i* S	**Sg**	**10 05 07.9**	**+2.6**
AKAS	**Kas**	**0.85**	**157**	*i* P	**Pg**	**10 04 52.4**	**-1.8**
ANTB	**Antalya**	**1.17**	**96**	*e*PN	**Pn**	**10 05 00.1**	**-0.6**
ANTB	**Antalya**	**1.17**	**96**	*e*Pn	**Pn**	**10 05 00.1**	**-0.6**
MLSB	**Milas**	**1.17**	**284**	*e*PN	**Pn**	**10 05 00.1**	**-0.6**
MLSB	**Milas**	**1.17**	**284**	*e*Pn	**Pn**	**10 05 00.1**	**-0.6**
BCK	**Bucak**	**1.19**	**68**	*e*PN	**Pn**	**10 04 59.5**	**-1.5**
BCK	**Bucak**	**1.19**	**68**	*e*Pn	**Pn**	**10 04 59.5**	**-1.5**
AYDN	**Tasoluk**	**1.23**	**301**	*i* P	**Pb**	**10 05 01.9**	**+0.4**
AYDN				*i* S	**Sg**	**10 05 17.7**	**+0.3**
AYDN	**Tasoluk**	**1.23**	**301**	*i* P	**Pb**	**10 05 01.9**	**+0.4**
AYDN				*i* S	**Sg**	**10 05 17.7**	**+0.3**
KHL	**Karahalli**	**1.32**	**11**	*e*PN	**Pn**	**10 05 01.4**	**-1.3**
KHL	**Karahalli**	**1.32**	**11**	*e*Pn	**Pn**	**10 05 01.4**	**-1.4**
DAT	**Datca**	**1.33**	**258**	*e*PN	**Pn**	**10 05 03.8**	**+0.8**
DAT	**Datca**	**1.33**	**258**	*e*Pn	**Pn**	**10 05 03.8**	**+0.8**
KHAL	**Karahalli**	**1.36**	**10**	*i* P	**Pn**	**10 05 03.2**	**-0.2**
KHAL				*i* S	**Sb**	**10 05 23.3**	**+1.9**
KHAL	**Karahalli**	**1.36**	**10**	*i* P	**Pn**	**10 05 03.2**	**-0.2**
KHAL				*i* S	**Sb**	**10 05 23.3**	**+1.9**
BDRM	**Kayabasi**	**1.41**	**272**	*i* P	**Pn**	**10 05 03.9**	**0.0**
BDRM				*i* S	**Sb**	**10 05 22.7**	**+0.1**
BDRM	**Kayabasi**	**1.41**	**272**	*i* P	**Pn**	**10 05 03.9**	**0.0**
BDRM				*i* S	**Sb**	**10 05 22.7**	**+0.1**
SUTC	**Sutluce-Ispart**	**1.50**	**72**	*e*PN	**Pn**	**10 05 05.2**	**-0.1**
SUTC	**Sutluce-Ispart**	**1.50**	**72**	*e*Pn	**Pn**	**10 05 05.2**	**-0.1**
BODT	**Bodrum**	**1.51**	**272**	*e*PN	**Pn**	**10 05 06.0**	**+0.6**
BODT	**Bodrum**	**1.51**	**272**	*e*Pn	**Pn**	**10 05 06.0**	**+0.6**
KULA	**Kula-Manisa**	**1.55**	**344**	*e*PN	**Pn**	**10 05 05.3**	**-0.6**
KULA	**Kula-Manisa**	**1.55**	**344**	*e*Pn	**Pn**	**10 05 05.3**	**-0.6**
HDMB	**Hadim**	**2.63**	**90**	*e*PN	**Pn**	**10 05 21.6**	**+0.9**
HDMB	**Hadim**	**2.63**	**90**	*e*Pn	**Pn**	**10 05 21.6**	**+0.8**
KONT	**Konya--Tatoy**	**2.68**	**69**	*e*PN	**Pn**	**10 05 21.8**	**+0.4**
KONT	**Konya--Tatoy**	**2.68**	**69**	*e*Pn	**Pn**	**10 05 21.8**	**+0.4**
KIZT	**Kizilcal**	**2.81**	**48**	*e*PN	**Pn**	**10 05 23.6**	**+0.3**
KIZT	**Kizilcal**	**2.81**	**48**	*e*Pn	**Pn**	**10 05 23.6**	**+0.3**

*NEIC **04** 10:09:57.0, 37°.00N×29°.23E, h8km, MD3.2(ISK), After ISK.*
*ISK **04** 10:09:57.1, 37°.02N×29°.23E, h6km, MD3.3*
*DDA **04** 10:09:57.4, 36°.99N×29°.19E, h7km±4km, Md3.4*
*ISCJB **04** 10:09:58.3±0.6, 37°.07N±0°.03×29°.25E±0°.03, h9km±5km, Error ellipse: s-maj=5.6km s-min=3.8km az=163.2*
*CSEM **04** 10:09:58.0±0.1, 37°.06N×29°.25E, h5km, MD3.3, Error ellipse: s-maj=4.0km s-min=2.7km az=166.0*
*THE **04** 10:10:00.1, 37°.13N×29°.17E, h1km±5km, ML4.5/1, Error ellipse: s-maj=12.9km s-min=1.6km az=83.0*

ISC 04 10:09:58.7±0.5, 37°.08N±0°.03×29°.24E±0°.03, h8km±4km, n79, σ0♀98/108, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.22**	**71**	*e*PG	**Pg**	**10 10 02.5**	**-0.6**
GLHS				*e*SG	**Sg**	**10 10 06.8**	**+0.6**
GLHS	**Glhisar (BURDU**	**0.22**	**71**	*e*Pg	**Pg**	**10 10 02.5**	**-0.6**
GLHS				*e*Sg	**Sg**	**10 10 06.8**	**+0.7**
GOLH	**Golhisar**	**0.30**	**59**	*i* P	**Pg**	**10 10 04.9**	**+0.3**
GOLH				*i* S	**Sg**	**10 10 11.9**	**+3.3**
GOLH	**Golhisar**	**0.30**	**59**	*i* P	**Pg**	**10 10 04.9**	**+0.3**
GOLH				*i* S	**Sg**	**10 10 11.9**	**+3.3**
TURN	**Turunc**	**0.55**	**248**	*i* P	**Pg**	**10 10 12.2**	**+2.9**
TURN				*i* S	**Sg**	**10 10 24.9**	**+8.4**
TURN	**Turunc**	**0.55**	**248**	*i* P	**Pg**	**10 10 12.2**	**+2.9**
DNZL	**Cakiroluk**	**0.62**	**346**	*i* P	**Pg**	**10 10 10.8**	**+0.1**
DNZL				*i* S	**Sg**	**10 10 25.0**	**+6.1**
DNZL	**Cakiroluk**	**0.62**	**346**	*i* P	**Pg**	**10 10 10.8**	**+0.1**
ELL	**Elmali**	**0.63**	**122**	*e*PG	**Pg**	**10 10 09.1**	**-1.8**
ELL	**Elmali**	**0.63**	**122**	*e*Pg	**Pg**	**10 10 09.1**	**-1.8**
DENT	**Denizli**	**0.69**	**346**	*e*PG	**Pg**	**10 10 11.6**	**-0.4**
DENT	**Denizli**	**0.69**	**346**	*e*Pg	**Pg**	**10 10 11.6**	**-0.4**
YER	**Yerkesik**	**0.77**	**274**	*e*PG	**Pg**	**10 10 12.4**	**-1.0**
YER	**Yerkesik**	**0.77**	**274**	*e*Pg	**Pg**	**10 10 12.4**	**-1.0**
KORT	**Korkueli**	**0.89**	**95**	*i* P	**Pg**	**10 10 15.5**	**-0.3**
KORT				*i* S	**Sg**	**10 10 30.8**	**+3.3**
KORT	**Korkueli**	**0.89**	**95**	*i* P	**Pg**	**10 10 15.5**	**-0.3**
KORT				*i* S	**Sg**	**10 10 30.8**	**+3.3**
AKAS	**Kas**	**0.90**	**161**	*i* P	**Pg**	**10 10 13.2**	**-2.7**
AKAS	**Kas**	**0.90**	**161**	*i* P	**Pg**	**10 10 13.2**	**-2.7**
BCK	**Bucak**	**1.14**	**70**	*e*PN	**Pn**	**10 10 20.0**	**-0.9**
BCK	**Bucak**	**1.14**	**70**	*e*Pn	**Pn**	**10 10 20.0**	**-0.9**
ANTB	**Antalya**	**1.15**	**99**	*e*PN	**Pn**	**10 10 19.6**	**-1.5**
ANTB	**Antalya**	**1.15**	**99**	*e*Pn	**Pn**	**10 10 19.6**	**-1.4**
MLSB	**Milas**	**1.19**	**281**	*e*PN	**Pn**	**10 10 20.5**	**-1.1**
MLSB	**Milas**	**1.19**	**281**	*e*Pn	**Pn**	**10 10 20.5**	**-1.0**
AYDN	**Tasoluk**	**1.23**	**298**	*i* P	**Pn**	**10 10 21.3**	**-0.8**
AYDN				*i* S	**Sb**	**10 10 38.4**	**+0.3**
AYDN	**Tasoluk**	**1.23**	**298**	*i* P	**Pn**	**10 10 21.3**	**-0.8**
ARG	**Arkhangelos**	**1.24**	**226**	P	**Pn**	**10 10 21.8**	**-0.5**
ARG				S	**Sb**	**10 10 39.8**	**+1.2**
ARG	**Arkhangelos**	**1.24**	**226**	P	**Pn**	**10 10 21.8**	**-0.5**
ARG				S	**Sb**	**10 10 39.8**	**+1.2**
ARG	**Arkhangelos**	**1.24**	**226**	P	**Pn**	**10 10 21.8**	**-0.5**
ARG				S	**Sb**	**10 10 39.8**	**+1.2**
KHL	**Karahalli**	**1.26**	**10**	*e

APE	**Apeiranthos**	**2.96 271**	P	**Pn**	**10 10 45.8**	**-0.2**
APE			S	**Sn**	**10 11 21.3**	**-0.5**
ZKR	**Zakros**	**3.14 232**	P	**Pn**	**10 10 49.0**	**+0.6**
ZKR			S	**Sn**	**10 11 27.7**	**+1.7**
ZKR	**Zakros**	**3.14 232**	P	**Pn**	**10 10 49.0**	**+0.6**
ZKR			S	**Sn**	**10 11 27.7**	**+1.7**
ZKR	**Zakros**	**3.14 232**	P	**Pn**	**10 10 49.0**	**+0.6**
ZKR			S	**Sn**	**10 11 27.7**	**+1.7**
LAST	**Lasithi**	**3.60 239**	P	**Pn**	**10 10 55.2**	**+0.5**
LAST	**Lasithi**	**3.60 239**	P	**Pn**	**10 10 55.2**	**+0.5**
LAST	**Lasithi**	**3.60 239**	P	**Pn**	**10 10 55.2**	**+0.5**
BR131	**Keskin Array S**	**4.35 51**	*e*Pn	**Pn**	**10 11 07.0**	**+2.0**
BR131			*e*Sn	**Sn**	**10 11 51.8**	**-4.1**
BR131	**Keskin Array S**	**4.35 51**	*e*Pn	**Pn**	**10 11 07.0**	**+2.0**
BR131			*e*Sn	**Sn**	**10 11 51.8**	**-4.1**
KARN	**Karanos**	**4.62 250**	P	**Pn**	**10 11 10.2**	**+1.5**
KARN	**Karanos**	**4.62 250**	P	**Pn**	**10 11 10.2**	**+1.5**

ISCJB ***04*** *10:17:56.1±1.4, 3.°50S±0.°04×145.°41E±0.°06, h1km±8km, mb4.7/41, MS4.3/25, Error ellipse: s-maj=10.8km s-min=6.6km az=6.1*

IDC ***04*** *10:18:01.5±4.2, 3.°54S×145.°43E, h33km±29km, mb4.3/15, mb1 4.5/16, mb1mx4.4/20, mbtmp4.3/16, ML4.8/1, MS4.3/17, Ms1 4.3/17, ms1mx4.1/23, Error ellipse: s-maj=32.5km s-min=10.6km az=107.0*

GCMT ***04*** *10:18:02.1±0.1, 3.°37S×145.°44E, h12km, MW5.1, Moment Tensor Solution. s54,c73; s89,c147; Moment tensor: Scale 10^16^Nm; Mrr0.05±.10; Mθθ-0.27±.09; Mφφ0.22±.11; Mrθ0.25±.25; Mθφ5.18±.07; Mφr0.14±.25; Best double couple: M=5.20000×10^16^ NP1:φs359.00000°, δ87.00000°, λ178.00000°. NP2:φs89.00000°, δ88.00000°, λ3.00000°. Principal axes: T 5.1800, Plg3.0000°, Azm314.0000°; N 0.0300, Plg87.0000°, Azm117.0000°; P -5.2100, Plg1.0000°, Azm224.0000°; Data Used: II IU IC G CN.*

NEIC ***04*** *10:18:02.7±0.4, 3.°51S×145.°38E, h35km, mb4.7/16 Error ellipse: s-maj=13.0km s-min=7.0km az=97.0*

BJI ***04*** *10:18:03.8, 3.°03S×145.°52E, h36km, mB5.0/25, mb4.8/31, Ms4.6/26, Ms7 4.5/26*

ISC 04 10:18:01.3±1.5, 3.°58S±0.°04×145.°38E±0.°06, h23km±10km, h36km±1.6km:pP-P,n75,σ1§39/72, mb4.7/41, MS4.3/25, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.05 163**		*e*Pn	**Pn**	**10 19 30.5**	**+1.0**
	68nm,0.8s						
HNR	**Honiara**	**15.60 113**		LR	LR	10 26 36.9	
	comp=Z,1μm,21.2s,baz=278,slow=33						
KAKA	**Kakadu**	**15.68 234**		*e*P	**Pn**	**10 21 40.3**	**-0.6**
	34nm,0.4s						
KAKA	**Kakadu**	**15.68 234**		*e*Pn	**Pn**	**10 21 42.1**	**+1.2**
	100nm,0.5s						
CTA	**Charters Tower**	**16.43 177**		*e*P	**Pn**	**10 21 55.4**	**+4.9**
	9.6nm,1.0s						
CTA	**Charters Tower**	**16.43 177**		Pn	**Pn**	**10 21 53.3**	**+2.8**
	0.3nm,0.3s,baz=5.8,slow=14,SNR=7.0						
CTAO	**Charters Tower**	**16.43 177**		*e*Pn	**Pn**	**10 21 51.7**	**+1.2**
	20nm,1.1s						
GUMO	**Guam**	**17.07 358**		LR	LR	10 26 34.7	
	comp=Z,495nm,21.8s,baz=177,slow=30						
WRAB	**Tennant Creek**	**19.49 213**		*e*P	**Pn**	**10 22 27.1**	**-1.0**
	63nm,1.0s						
WRA	**Warramunga Arr**	**19.50 213**		P	**Pn**	**10 22 27.1**	**-1.2**
	3.1nm,0.3s,baz=34,slow=11,SNR=199						
WRA				S	**Sn**	**10 26 05.3**	**-1.4**
	baz=37,slow=23,SNR=7.9						
WRA				LR	LR	10 30 30.3	
	comp=Z,2μm,21.8s,baz=40,slow=38						
ASAR	**Alice Springs**	**22.84 208**		P	**P**	**10 23 03.2**	**+0.4**
	21nm,0.9s,mb4.5,baz=38,slow=8.6,SNR=187						
ASAR				S	**S**	**10 27 12.2**	**+0.9**
	2.7nm,1.1s,baz=25,slow=20,SNR=5.7						
FITZ	**Fitzroy Crossi**	**24.12 232**		*e*P	**P**	**10 23 14.3**	**-1.3**
	66nm,0.9s,mb5.1						
FITZ				*e*S	**S**	**10 27 33.6**	**+1.3**
FITZ	**Fitzroy Crossi**	**24.12 232**		P	**P**	**10 23 14.7**	**-0.9**
	24nm,0.6s,mb4.8,baz=50,slow=10,SNR=34						
FITZ				LR	LR	10 34 12.0	
	comp=Z,781nm,18.5s,MS4.2,baz=49,slow=40						
KAPI	**Kappang**	**25.59 266**		P	**P**	**10 23 28.2**	**-0.8**
	9.8nm,0.6s,mb4.5,baz=70,slow=5.5,SNR=5.0						
DZM	**Mont Dzumac**	**27.49 134**		*e*P	**P**	**10 23 47.0**	**+0.9**
	62nm,1.4s,mb4.9						
DZM				*e*S	**S**	**10 28 27.7**	**+1.9**
	440nm,25.9s						
DZM				*e*LR	LR	10 30 50.6	
	2μm,25.9s						
STKA	**Stephens Creek**	**28.37 187**		*e*P	**P**	**10 23 53.6**	**-0.2**
	4.3nm,0.8s,mb4.1						
STKA	**Stephens Creek**	**28.37 187**		P	**P**	**10 23 53.6**	**-0.2**
	1.9nm,0.7s,mb3.8,baz=36,slow=9.3,SNR=3.1						
STKA				LR	LR	10 35 56.0	
	comp=Z,646nm,18.6s,MS4.2,baz=5.5,slow=38						
STKA	**Stephens Creek**	**28.37 187**		*e*P	**P**	**10 23 55.0**	**+1.2**
	1.4nm,0.8s,mb3.6						
MBWA	**Marble Bar**	**30.45 233**		*e*P	**P**	**10 24 13.6**	**+1.2**
	3.6nm,0.5s,mb4.4						
CBIJ	**Chichi jima**	**30.65 354**		LR	LR	10 34 30.7	
	comp=Z,268nm,20.5s,MS3.9,baz=147,slow=32						
FORT	**Forrest**	**31.61 209**		*e*P	**P**	**10 24 22.7**	**+0.2**
	20nm,0.5s,mb5.2						
FORT	**Forrest**	**31.61 209**		*e*P	**P**	**10 24 22.9**	**+0.4**
	536nm,2.7s						
KLBR	**Kellerberrin**	**38.09 220**		*e*P	**P**	**10 25 17.3**	**-1.2**
	35nm,1.6s,mb4.8						
MJAR	**Matsushiro Arr**	**40.47 351**		LR	LR	10 40 28.0	
	comp=Z,298nm,20.0s,MS4.1,baz=200,slow=33						
QIZ	**Qiongzhong**	**41.56 304**		P	**P**	**10 25 49.4**	**+1.9**
QIZ				pP	pP	10 25 58.4	+3.8
QIZ				sP	sP	10 26 01.8	+4.4
QIZ				S	**S**	**10 32 03.6**	**+1.2**
QIZ				sS	sS	10 32 18.0	+3.9
QIZ				LR	LR		
	comp=N,190nm,23.6s,MS3.9						
QIZ				LR	LR		
	comp=E,100nm,27.8s,MS3.9						
QIZ				LR	LR		
	comp=Z,480nm,32.1s,MS4.2						
NJ2	**Nanjing**	**43.48 327**		*e*P	**P**	**10 26 04.7**	**+1.7**
NJ2				pP	pP	10 26 12.7	+2.6
NJ2				sP	sP	10 26 16.2	+3.3
NJ2				PP	PP	10 27 45.7	+1.3
NJ2				S	**S**	**10 32 30.5**	**+0.1**
NJ2				sS	sS	10 32 49.0	+6.9
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
NJ2				pmax	pmax		
	comp=Z,60nm,5.9s						
NJ2				LR	LR		
	comp=N,660nm,21.6s						
NJ2				LR	LR		
	comp=E,460nm,30.4s						
NJ2				LR	LR		
	comp=Z,650nm,21.1s,MS4.5						
AFI	**Afiamalu**	**43.50 106**		LR	LR	10 41 57.0	
	comp=Z,203nm,20.3s,MS4.0,baz=344,slow=33						
KSRS	**Korea Array**	**43.94 340**		P	**P**	**10 26 04.5**	**-2.0**
	comp=Z,4.1nm,0.7s,mb4.3,baz=157,slow=9.1,SNR=15						
KSRS				LR	LR	10 41 50.0	
	comp=Z,499nm,19.8s,MS4.4,baz=159,slow=32						
KS15	**Wonju Array Si**	**43.94 340**		P	**P**	**10 26 04.7**	**-1.8**
URZ	**Urewera**	**45.05 144**		LR	LR	10 43 18.5	
	comp=Z,451nm,20.4s,MS4.4,baz=320,slow=34						
RPZ	**Rata Peaks**	**45.98 154**		LR	LR	10 43 32.3	
	comp=Z,938nm,19.8s,MS4.7,baz=250,slow=33						
PSI	**Prapat**	**46.86 277**		P	**P**	**10 26 31.1**	**+1.0**
	comp=Z,11nm,0.8s,mb4.8,baz=69,slow=2.1,SNR=7.6						
GYA	**Guiyang**	**47.88 311**		P	**P**	**10 26 40.0**	**+2.1**
GYA				pP	pP	10 26 49.6	+4.6
GYA				sP	sP	10 26 56.5	+8.7
GYA				PcP	PcP	10 28 08.4	+2.1
GYA				PP	PP	10 28 31.2	+1.2
GYA				ScP	ScP	10 31 59.0	-0.5
GYA				S	**S**	**10 33 33.2**	**-0.8**
GYA				sS	sS	10 33 51.8	+6.0
GYA				SS	SS	10 36 57.4	-5.7
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
GYA				pmax	pmax		
	comp=Z,90nm,4.9s						
GYA				LR	LR		
	comp=N,460nm,17.8s,MS4.6						
GYA				LR	LR		
	comp=E,390nm,18.2s,MS4.6						
GYA				LR	LR		
	comp=Z,490nm,17.6s,MS4.5						
MDJ	**Mudanjiang**	**50.02 345**		P	**P**	**10 26 55.4**	**+1.5**
MDJ				sP	sP	10 27 06.8	+2.9
MDJ				PP	PP	10 28 50.2	+1.0
MDJ				S	**S**	**10 33 59.6**	**-3.9**
MDJ				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
MDJ				pmax	pmax		
	comp=Z,54nm,3.6s						
MDJ				LR	LR		
	comp=E,260nm,27.5s						
MDJ				LR	LR		
	comp=Z,160nm,32.3s,MS3.8						
KMI	**Kunming**	**50.25 307**		P	**P**	**10 26 59.1**	**+3.0**
KMI				pP	pP	10 27 09.4	+6.1
KMI				sP	sP	10 27 13.5	+7.4
KMI				PP	PP	10 28 55.2	+3.6
KMI				S	**S**	**10 34 07.1**	**-0.3**
KMI				sS	sS	10 34 24.7	+5.4
KMI				SS	SS	10 37 37.6	-3.7
KMI				pmax	pmax		
	comp=Z,14nm,1.4s,mb4.8						
KMI				pmax	pmax		
	comp=Z,86nm,4.0s						
KMI				LR	LR		
	comp=N,210nm,18.6s,MS4.3						
KMI				LR	LR		
	comp=E,230nm,23.2s,MS4.3						
KMI				LR	LR		
	comp=Z,360nm,23.2s,MS4.3						
YSS	**Yuzh-Sakhalins**	**50.37 358**		*e*P	**P**	**10 26 54.1**	**-2.4**
	comp=Z,4.5nm,0.3s,mb5.0						
CMAR	**Chiang Mai Arr**	**50.70 297**		P	**P**	**10 26 58.8**	**-0.8**
	comp=Z,5.8nm,0.7s,mb4.6,baz=117,slow=6.0,SNR=16						
CMAR				LR	LR	10 48 32.3	
	comp=Z,126nm,18.7s,MS4.0,baz=275,slow=36						
CHTO	**Chiang Mai**	**50.83 298**		*e*P	**P**	**10 27 00.5**	**0.0**
	comp=Z,12nm,1.2s,mb4.7						
BJI	**Beijing**	**51.02 331**		P	**P**	**10 27 03.5**	**+2.0**
BJI				PP	PP	10 28 59.5	+1.2
BJI				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
BJI				pmax	pmax		
	comp=Z,75nm,4.1s						
BJI				LR	LR		
	comp=N,300nm,22.0s,MS4.5						
BJI				LR	LR		
	comp=E,390nm,22.6s,MS4.5						
BJI				LR	LR		
	comp=Z,500nm,25.6s,MS4.4						
CD2	**Chengdu**	**52.44 314**		P	**P**	**10 27 15.0**	**+2.6**
CD2				pP	pP	10 27 25.0	+5.4
CD2				sP	sP	10 27 29.0	+6.6
CD2				PP	PP	10 29 15.6	+4.2
CD2				S	**S**	**10 34 37.7**	**+0.3**
CD2				sS	sS	10 34 56.2	+6.8
CD2				pmax	pmax		
	comp=Z,40nm,0.5s,mb5.6						
CD2				pmax	pmax		
	comp=Z,220nm,7.1s						
CD2				LR	LR		
	comp=N,220nm,17.2s						
CD2				LR	LR		
	comp=Z,310nm,16.6s,MS4.4						
HHC	**Hu-ho-hao-te**	**53.94 329**		*e*P	**P**	**10 27 25.8**	**+2.6**
HHC				sP	sP	10 27 40.3	+7.1
HHC				PcP	PcP	10 28 30.3	+1.9
HHC				PP	PP	10 29 28.6	+3.9
HHC				ScP	ScP	10 32 24.4	-0.8
HHC				PcS	PcS	10 32 28.6	+1.0
HHC				S	**S**	**10 34 57.8**	**+0.3**
HHC				sS	sS	10 35 14.3	+4.9
HHC				ScS	ScS	10 37 09.2	-2.1
HHC				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.2						
HHC				pmax	pmax		
	comp=Z,95nm,7.5s						
HHC				LR	LR		
	comp=N,330nm,17.2s,MS4.6						
HHC				LR	LR		
	comp=E,350nm,16.9s,MS4.6						
HHC				LR	LR		
	comp=Z,490nm,16.6s,MS4.7						
LZH	**Lanzhou**	**55.33 319**		*e*P	**P**	**10 27 33.4**	**0.0**
LZH				pP	pP	10 27 46.2	+5.5
LZH				sP	sP	10 27 50.6	+7.1
LZH				pmax	pmax		
	comp=Z,22nm,1.0s,mb5.1						
LZH				pmax	pmax		
	comp=Z,76nm,4.0s						
LZH				LR	LR		
	comp=N,260nm,14.8s						
LZH				LR	LR		
	comp=Z,540nm,15.9s,MS4.7						
PETK	**Petropavlovsk-**	**57.43 9**		P	**P**	**10 27 48.0**	**0.0**
	comp=Z,2.1nm,0.8s,mb4.2,baz=134,slow=6.4,SNR=4.2						
PETK				LR	LR	10 49 30.0	
	comp=Z,103nm,21.8s,MS3.9,baz=356,slow=33						
PETK	**Petropavlovsk-**	**57.43 9**		P	**P**	**10 27 48.0**	**0.0**
PETK				LR	LR	10 49 29.9	
GTA	**Gaotai**	**59.86 320**		*e*P	**P**	**10 28 04.8**	**-0.4**
GTA				pP	pP	10 28 17.1	+4.5
GTA				sP	sP	10 28 20.4	+5.1
GTA				PP	PP	10 30 18.1	+0.5
GTA				S	**S**	**10 36 12.4**	**-3.3**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
GTA				pmax	pmax		
	comp=Z,51nm,6.5s						
GTA				LR	LR		
	comp=N,290nm,16.3s,MS4.5						
GTA				LR	LR		
	comp=E,200nm,20.5s,MS4.5						
GTA				LR	LR		
	comp=Z,240nm,22.0s,MS4.3						
SONM	**Songino Array**	**61.52 331**		P	**P**	**10 28 16.0**	**-0.4**
	comp=Z,1.2nm,0.7s,mb4.1,baz=143,slow=7.1,SNR=6.3						
SONM				LR	LR	10 54 17.9	
	comp=Z,469nm,19.5s,MS4.7,baz=97,slow=35						
PPT	**Papeete**	**65.15 108**		*e*S	S	10 37 24.9	+1.9
	comp=Z,279nm,26.2s						
PPT				*e*LR	LR	10 48 24.6	
	comp=Z,230nm,29.8s						
TLY	**Talaya**	**65.47 333**		*e*P	**P**	**10 28 44.1**	**+1.7**
	comp=Z,38nm,1.0s,mb5.4						
WMQ	**Urumqi**	**69.92 319**		*e*P	**P**	**10 29 12.0**	**+1.4**
WMQ				pP	pP	10 29 22.3	+4.2
WMQ				sP	sP	10 29 26.0	+5.2
WMQ				pmax	pmax		
	comp=Z,18nm,0.6s,mb5.2						
WMQ				pmax	pmax		
	comp=Z,170nm,4.8s						
WMQ				LR	LR		
	comp=N,180nm,21.8s						
WMQ				LR	LR		
	comp=Z,93nm,21.0s,MS4.0						
TAOE	**Nuku Hiva Isla**	**74.13 98**		*e*LR	LR	10 52 30.3	
	comp=Z,266nm,26.0s						
MK31	**Makanchi Array**	**74.61 321**		*e*P	**P**	**10 29 39.8**	**+1.2**
MKAR	**Makanchi Array**	**74.61 321**		P	**P**	**10 29 38.1**	**-0.5**
	comp=Z,2.2nm,0.8s,mb4.1,baz=103,slow=5.4,SNR=11						
MKAR				LR	LR	11 00 25.3	
	comp=Z,113nm,20.1s,MS4.2,baz=260,slow=34						
ZALV	**Zalesovo Beam**	**76.12 328**		P	**P**	**10 29 45.3**	**-1.9**
	comp=Z,2.0nm,0.8s,mb4.1,baz=76,slow=6.3,SNR=5.2						
ZALV				LR	LR	11 01 53.6	
	comp=Z,425nm,21.2s,MS4.7,baz=133,slow=35						
KSH	**Kashi**	**76.57 312**		*e*P	**P**	**10 29 53.4**	**+3.4**
KSH				pP	pP	10 30 03.6	+6.0
KSH				PcP	PcP	10 30 04.6	+3.1
KSH				sP	sP	10 30 07.0	+6.7
KSH				sS	sS	10 39 52.8	+5.3
KSH				SKS		10 39 57.5	
KSH				ScS	ScS	10 40 03.1	-1.8
KSH				SS	SS	10 44 34.5	+3.9
KSH				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.5						
KSH				pmax	pmax		
	comp=Z,150nm,4.6s						
KSH				LR	LR		
	comp=N,630nm,15.0s						
KSH				LR	LR		
	comp=E,110nm,6.9s						
KSH				LR	LR		
	comp=Z,130nm,6.2s						
KURK	**Kurchatov**	**78.32 323**		P	**P**	**10 29 57.2**	**-2.3**
	comp=Z,3.0nm,0.9s,mb4.2,baz=108,slow=5.0,SNR=9.9						
KURK	**Kurchatov**	**78.32 323**		*e*P	**P**	**10 30 00.5**	**+0.9**
	comp=Z,12nm,1.2s,mb4.7						
RKT	**Rikitea**	**79.09 113**		*e*LR	LR	10 54 54.7	
	comp=Z,404nm,32.5s						
TTA	**Tatalina**	**79.48 23**		*e*P	**P**	**10 30 06.7**	**+1.0**
	comp=Z,4.5nm,1.1s,mb4.3						
MCK	**McKinley**	**82.69 24**		*e*P	**P**	**10 30 23.0**	**+0.2**
	comp=Z,13nm,1.1s,mb4.9						
COLA	**College**	**83.57 23**		*e*P	**P**	**10 30 25.6**	**-1.7**
	comp=Z,7.0nm,0.9s,mb4.8						
COLD	**Coldfoot**	**83.65 21**		*e*P	**P**	**10 30 26.6**	**-1.1**
	comp=Z,5.1nm,1.0s,mb4.6						
MAW	**Mawson**	**83.84 202**		LR	LR	11 07 26.2	
	comp=Z,185nm,19.8s,MS4.5,baz=81,slow=35						
BVAR	**Borovoye Array**	**83.88 324**		P	**P**	**10 30 27.5**	**-1.6**
	comp=Z,9.1nm,0.8s,mb5.0,baz=96,slow=7.4,SNR=15						
BRVK	**Borovoye**	**83.94 324**		*e*P	**P**	**10 30 30.5**	**+1.1**
	comp=Z,7.2nm,0.9s,mb4.8						
EGAK	**Eagle**	**86.24 24**		*e*P	**P**	**10 30 40.2**	**-0.5**
	comp=Z,8.4nm,0.9s,mb5.0						
QSPA	**South Pole Qui**	**86.37 180**		*e*P	**P**	**10 30 40.4**	**-0.7**
	comp=Z,1.3nm,0.5s,mb4.4						
DAWY	**Dawson**	**86.78 25**		*e*P	**P**	**10 30 43.3**	**-0.1**
ABKAR	**Akbulak array**	**89.70 319**		*e*P	**P**	**10 30 55.3**	**-2.3**
	comp=Z,2.4nm,0.7s,mb4.6						
AKTK	**Aktyubinsk**	**91.05 320**		P	**P**	**10 31 01.9**	**-2.0**
AKTO	**Aktyubinsk**	**91.05 320**		P	**P**	**10 31 01.9**	**-2.0**
	comp=Z,1.5nm,0.8s,mb4.4,baz=98,slow=6.6,SNR=4.3						
YKA	**Yellowknife Ar**	**97.79 27**		P	**P**	**10 31 31.5**	**-3.0**
	comp=Z,0.9nm,0.8s,mb4.3,baz=270,slow=4.3,SNR=4.2						
LPAZ	**La Paz**	**141.44 122**		PKhKP	PKPpre	10 37 26.2	
	comp=Z,0.3nm,0.4s,baz=79,slow=5.4,SNR=2.7						
LPAZ	**La Paz**	**141.44 122**		PKP	PKPpre	10 37 26.2	
TORD	**Torodi Ar. Bea**	**142.88 287**		PKP	PKPdf	10 37 30.4	-3.7
	comp=Z,0.9nm,1.0s,baz=64,slow=2.8						
DBIC	**Dimbokro**	**150.20 277**		PKPbc	PKPbc	10 37 50.6	-1.0
	baz=90,slow=3.0						

IDC ***04*** *10:22:12.6±2.7, 54.°11N×87.°36E, h0km, mb1 3.3/3, mb1mx3.2/28, mbtmp3.3/3, ML3.1/3, Error ellipse: s-maj=24.7km s-min=14.4km az=52.0*

NNC ***04*** *10:22:15.2±3.2, 54.°07N×87.°16E, h0km, mb3.6, mpv3.1, Error ellipse: s-maj=26.0km s-min=21.8km az=77.0*

ISC 04 10:22:18.3±2.6, 54.°1N±0.°1×86.°8E±0.°3, h10km, n7, σ1§03/11, 4C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.15 263**		Pg	**Pg**	**10 22 38.2**	**-2.1**
	2.3nm,0.3s,baz=76,slow=17,SNR=14						
ZALV				Lg		10 23 00.5	
	2.5nm,0.3s,baz=82,slow=32,SNR=8.9						
KURK	**Kurchatov**	**6.02 239**		⇓Pn	**Pn**	**10 23 47.5**	**+0.2**
	2.3nm,0.7s						
KURK				⇑Sn	**Sn**	**10 25 01.3**	**+5.1**
	2.7nm,1.0s						
KURK				⇑Lg		10 25 33.4	
	8.3nm,0.9s						
KURK	**Kurchatov**	**6.02 239**		Pn	**Pn**	**10 23 49.4**	**+2.1**
	0.1nm,0.3s,baz=55,slow=14,SNR=18						
KURK				Lg		10 25 37.6	
	0.1nm,0.3s,baz=59,slow=32,SNR=7.5						
MK31	**Makanchi Array**	**7.85 203**		⇓Pn	**Pn**	**10 24 13.1**	**+0.7**
	0.4nm,0.6s,baz=31,slow=13,SNR=12						
MK31				⇑Sn	**Sn**	**10 25 41.8**	**+0.6**
	1.3nm,0.7s,baz=26,slow=27,SNR=6.9						
MK31				⇓Lg		10 26 26.3	
	5.7nm,1.0s,baz=29,slow=30,SNR=3.9						
MKAR	**Makanchi Array**	**7.85 203**		Pn	**Pn**	**10 24 11.5**	**-0.9**
	0.3nm,0.3s,baz=26,slow=13,SNR=14						
MKAR				Sn	**Sn**	**10 25 40.5**	**-0.7**
	0.2nm,0.3s,baz=23,slow=29,SNR=11						
MKAR				Lg		10 26 27.4	
	0.1nm,0.3s,baz=32,slow=31,SNR=3.6						
VOSK	**Vostochnaya**	**9.52 268**		⇑Pn	**Pn**	**10 24 35.9**	**+0.7**
	1.3nm,0.5s						
BVAR	**Borovoye Array**	**9.80 270**		Pn	**Pn**	**10 24 38.3**	**-0.7**
	0.1nm,0.3s,baz=78,slow=13,SNR=3.6						
BVAR				Sn	**Sn**	**10 26 29.8**	**+0.8**
	0.3nm,0.3s,baz=66,slow=24,SNR=5.1						

IDC 04 10:35:56.8±64.0, 20.°77S×179.°37E, h650km±383km, mb3.1/5, mb1 3.2/5, mb1mx2.9/17, mbtmp3.1/5, Error ellipse: s-maj=739.5km s-min=106.1km az=76.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**31.01 265**		P	P	10 41 25.7	+1.1
	2.0nm,0.4s,baz=66,slow=10,SNR=3.6						
STKA	**Stephens Creek**	**35.45 244**		P	P	10 42 01.6	0.0
	1.2nm,0.6s,baz=94,slow=14,SNR=3.8						
ASAR	**Alice Springs**	**42.05 257**		P	P	10 42 54.7	+0.2
	4.3nm,0.5s,baz=96,slow=7.6,SNR=102						
WRA	**Warramunga Arr**	**42.12 263**		P	P	10 42 54.9	-0.1
	2.3nm,0.6s,baz=98,slow=7.9,SNR=56						
FITZ	**Fitzroy Crossi**	**50.55 263**		P	P	10 43 58.2	-0.1
	0.8nm,0.4s,baz=85,slow=11,SNR=7.7						

DJA ***04*** *11:07:03, 0.°55N×121.°98E, h190km, MLv4.5/11*

ISCJB ***04*** *11:07:04.4±0.5, 0.°35N±0.°06×122.°04E±0.°04, h191km±5km, mb3.8/7, Error ellipse: s-maj=10.0km s-min=6.7km az=161.8*

IDC ***04*** *11:07:04.7±7.3, 0.°34N×122.°11E, h176km±76km, mb3.4/5, mb1 3.4/7, mb1mx3.3/23, mbtmp3.4/7, Error ellipse: s-maj=97.4km s-min=15.7km az=60.0*

NEIC ***04*** *11:07:05.4±0.5, 0.°33N×122.°05E, mb4.1/2, Error ellipse: s-maj=22.8km s-min=8.0km az=73.0*

ISC 04 11:07:05.6±0.5, 0.°33N±0.°06×122.°05E±0.°04, h184km±5km, n28, σ0§81/32, mb3.8/7, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.18 324**		P	**Pn**	**11 07 29.1**	**-0.8**
APSI	**Ampana**	**1.29 198**		P	**Pn**	**11 07 36.7**	**+0.7**
LUWI	**Luwuk**	**1.54 152**		P	**Pn**	**11 07 38.4**	**+0.1**
LUWI				S	**Sn**	**11 08 04.0**	**+0.4**
PCI	**Palu**	**2.53 241**		P	**Pn**	**11 07 47.4**	**-1.4**
MNI	**Manado**	**3.00 68**		P	**Pn**	**11 07 56.6**	**+2.2**
MNI				S	**Sn**	**11 08 33.4**	**+0.9**
TTSI	**Tana Toraja**	**4.03 214**		P	**Pn**	**11 08 07.4**	**+0.2**
KDI	**Kendari**	**4.30 172**		P	**Pn**	**11 08 11.5**	**+0.9**
SPSI	**Sidrap Palu**	**4.83 208**		P	**Pn**	**11 08 11.6**	**-5.9**
SMKI	**Samarinda**	**4.90 261**		P	**Pn**	**11 08 17.4**	**-1.0**

MKAR	**Makanchi Array**	**57.84**	**329**	P		**P**	**11 16 38.2**	**+0.3**
	1.0nm,0.3s,mb4.1,baz=127,slow=8.9,SNR=16							
MKAR	**Makanchi Array**	**57.84**	**329**	P		**P**	**11 16 38.2**	**+0.3**
ZALV	**Zalesovo Beam**	**61.62**	**336**	P		**P**	**11 17 02.8**	**-0.8**
	0.5nm,0.3s,mb3.8,baz=126,slow=7.5,SNR=4.8							
KURK	**Kurchatov**	**62.22**	**330**	*e*P		**P**	**11 17 07.8**	**+0.2**
	1.6nm,0.7s,mb4.0							

ISCJB ***04*** *11:07:44.6±1.4, 8°.33S±0°.04×105°.33E±0°.04, h14km±9km, mb4.6/34, MS4.0/8, Error ellipse: s-maj=7.3km s-min=5.0km az=44.0*
IDC ***04*** *11:07:45.0±0.9, 8°.12S×105°.52E, h0km, mb4.3/13, mb1 4.4/13, mb1mx4.2/23, mbtmp4.3/13, MS3.6/3, Ms1 3.7/3, ms1mx2.8/34, Error ellipse: s-maj=35.2km s-min=14.9km az=57.0*
BJI ***04*** *11:07:47.6, 8°.30S×105°.30E, h35km, mB4.9/12, mb4.9/19, Ms4.4/9, Ms7 4.0/7*
DJA ***04*** *11:07:48, 8°.22S×105°.30E, h30km, MLv4.6/17*
NEIC ***04*** *11:07:49.7±0.4, 8°.28S×105°.32E, h35km, mb4.4/10, Error ellipse: s-maj=13.7km s-min=7.9km az=51.0*
ISC 04 11:07:46.6±1.6, **8°.26S**±0°.04×**105°.35E**±0°.04, **h11**km±10km, **h29**km±5.5km:**pP-P, n79,** σ**0**s**94/79, mb4.6**/34, **MS4.0**/8, **2C, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGJI	**Cibinong**	**1.67**	**12**	P	**Pn**	**11 08 15.2**	**-0.6**
SKJI	**Sukabumi**	**1.72**	**44**	P	**Pn**	**11 08 15.6**	**-1.0**
SKJI				S	**Sn**	**11 08 38.3**	**-0.3**
SBJI	**Serang**	**2.26**	**20**	P	**Pn**	**11 08 25.6**	**+1.7**
CBJI	**Citeko**	**2.35**	**39**	P	**Pn**	**11 08 23.6**	**-1.6**
RBSI	**Rajabasa**	**2.43**	**9**	P	**Pn**	**11 08 26.1**	**-0.1**
RBSI				S	**Sn**	**11 08 54.4**	**-1.6**
TNG	**Tangerang**	**2.44**	**32**	P	**Pn**	**11 08 27.4**	**+1.0**
TNG				P	**Pn**	**11 08 27.6**	**+1.2**
LEM	**Lembang**	**2.66**	**58**	P	**Pn**	**11 08 31.0**	**+1.6**
KASI	**Kota Agung**	**2.84**	**343**	P	**Pn**	**11 08 31.0**	**-1.0**
KASI				S	**Sn**	**11 09 07.0**	**+0.8**
KLI	**Kotabumi**	**3.41**	**352**	P	**Pn**	**11 08 39.9**	**+0.2**
LWLI	**Liwa**	**3.46**	**338**	P	**Pn**	**11 08 41.0**	**+0.5**
LWLI				S	**Sn**	**11 09 20.9**	**-0.7**
MDSI	**Maura Dua**	**3.92**	**343**	P	**Pn**	**11 08 46.6**	**-0.2**
MNAI	**Manna**	**4.54**	**328**	P	**Pn**	**11 08 54.1**	**-1.2**
LHSI	**Lahat**	**4.76**	**337**	P	**Pn**	**11 08 58.6**	**+0.3**
UGM	**Wanagama**	**5.13**	**87**	P	**Pn**	**11 09 02.1**	**-1.4**
	0.8nm141nm,1.5s						
SMRI	**Semarang**	**5.19**	**77**	P	**Pn**	**11 09 06.2**	**+2.0**
	0.7nm127nm,1.1s						
KSI	**Kapahiang**	**5.33**	**329**	P	**Pn**	**11 09 07.9**	**+1.7**
PCJI	**Pacitan**	**5.77**	**90**	P	**Pn**	**11 09 10.7**	**-1.5**
TPI	**Tanjungpandan**	**5.92**	**23**	P	**Pn**	**11 09 13.7**	**-0.7**
	0.1nm42nm,0.9s						
PPBI	**Pangkal Pinang**	**6.10**	**7**	P	**Pn**	**11 09 16.6**	**-0.2**
	0.2nm22nm,1.4s						
NGJI	**Ngawi**	**6.12**	**82**	P	**Pn**	**11 09 22.3**	**+5.2**
	0.3nm79nm,0.9s						
SJI	**Sawahan**	**6.38**	**86**	P	**Pn**	**11 09 21.6**	**+1.0**
	0.3nm53nm,0.9s						
PWJI	**Pagerwojo**	**6.39**	**88**	P	**Pn**	**11 09 22.5**	**+1.7**
	0.3nm113nm,0.9s						
GMJI	**Gumukmas**	**8.01**	**91**	P	**Pn**	**11 09 43.5**	**+0.4**
	48nm,1.4s						
ABJI	**Asem Bagus**	**8.81**	**88**	P	**Pn**	**11 09 55.4**	**+1.4**
BYJI	**Banyuwangi**	**8.91**	**90**	P	**Pn**	**11 09 56.6**	**+1.1**
COCO	**West Island**	**9.25**	**244**	*e*Pn	**Pn**	**11 09 58.1**	**-1.9**
	243nm,1.1s						
COCO	**West Island**	**9.25**	**244**	P	**Pn**	**11 09 58.4**	**-1.6**
	281nm,1.3s						
IGBI	**Denpasar**	**9.71**	**94**	P	**Pn**	**11 10 06.0**	**-0.3**
	267nm,1.0s						
SRBI	**Singaraja**	**9.77**	**90**	P	**Pn**	**11 10 06.8**	**-0.3**
	88nm,1.1s						
KHKI	**Kahang-Kahang**	**10.15**	**91**	P	**Pn**	**11 10 11.3**	**-1.1**
MBWA	**Marble Bar**	**18.90**	**134**	*e*P	**Pn**	**11 12 06.8**	**-1.2**
	14nm,0.7s						
FITZ	**Fitzroy Crossi**	**22.02**	**118**	P	**P**	**11 12 41.8**	**+0.5**
	5.1nm,0.9s,mb4.0,baz=286,slow=4.9,SNR=4.5						
FITZ	**Fitzroy Crossi**	**22.02**	**118**	*e*P	**P**	**11 12 42.0**	**+0.7**
	4.5nm,0.8s,mb4.0						
CMAR	**Chiang Mai Arr**	**27.28**	**347**	P	**P**	**11 13 30.7**	**-0.7**
	6.1nm,0.8s,mb4.2,baz=180,slow=8.6,SNR=28						
CHTO	**Chiang Mai**	**27.63**	**347**	*e*P	**P**	**11 13 34.2**	**-0.2**
	4.9nm,0.8s,mb4.2						
WRA	**Warramunga Arr**	**30.36**	**116**	P	**P**	**11 13 58.1**	**-0.7**
	1.8nm,0.8s,mb3.9,baz=286,slow=10,SNR=4.1						
WRAB	**Tennant Creek**	**30.37**	**116**	*e*P	**P**	**11 13 58.7**	**-0.1**
	4.8nm,0.9s,mb4.2						
ASAR	**Alice Springs**	**31.34**	**123**	P	**P**	**11 14 06.1**	**-1.3**
	2.0nm,1.0s,mb3.9,baz=293,slow=7.4,SNR=5.1						
ODAN	**Odare**	**39.01**	**334**	*e*P	**P**	**11 15 13.7**	**+0.3**
	26nm,0.7s,mb5.1						
TAPN	**Taplejung**	**39.30**	**335**	*e*P	**P**	**11 15 16.8**	**+1.0**
	51nm,0.8s,mb5.3						
RAMN	**Ramite**	**39.44**	**333**	*e*P	**P**	**11 15 16.9**	**0.0**
	48nm,1.2s,mb5.1						
LSA	**Lhasa**	**40.13**	**341**	P	**P**	**11 15 23.6**	**+0.9**
GUN	**Gumba**	**40.59**	**333**	*e*P	**P**	**11 15 27.2**	**+0.7**
	33nm,0.7s,mb5.0						
DMN	**Daman**	**40.68**	**332**	*e*P	**P**	**11 15 27.7**	**+0.4**
	36nm,1.1s,mb4.9						
KKN	**Kakani**	**40.76**	**332**	*e*P	**P**	**11 15 28.3**	**+0.4**
	7.5nm,0.3s,mb4.9						
STKA	**Stephens Creek**	**41.05**	**130**	P	**P**	**11 15 30.2**	**-0.1**
	5.2nm,0.7s,mb4.3,baz=336,slow=9.2,SNR=6.0						
STKA				LR	LR	11 33 46.0	
	comp=Z,108nm,20.0s,MS3.7,baz=25,slow=38						
STKA	**Stephens Creek**	**41.05**	**130**	*e*P	**P**	**11 15 30.7**	**+0.4**
	0.9nm,0.6s,mb3.6						
STKA				LR	LR	11 33 46.0	
KOLN	**Koldanda**	**41.54**	**330**	*e*P	**P**	**11 15 34.6**	**+0.3**
	16nm,0.6s,mb4.8						
XAN	**Xi'an**	**42.20**	**4**	P	**P**	**11 15 38.5**	**-1.1**
XAN				sP	sP	11 15 54.4	+10
XAN				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.1						
LZH	**Lanzhou**	**44.13**	**358**	⇑P	**P**	**11 15 56.1**	**+0.9**
LZH				pP	pP	11 16 05.5	+7.0
LZH				sP	sP	11 16 09.9	+10
LZH				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.8						
LZH				pmax	pmax		
	comp=Z,78nm,4.8s						
LZH				LR	LR		
	comp=E,230nm,11.4s						
LZH				LR	LR		
	comp=Z,480nm,14.0s,MS4.6						
GTA	**Gaotai**	**47.70**	**354**	⇑P	**P**	**11 16 24.4**	**+1.1**
GTA				pP	pP	11 16 28.6	+1.9
GTA				S	**S**	**11 23 24.1**	**+4.8**
GTA				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.0						
GTA				pmax	pmax		
	comp=Z,93nm,6.5s						
GTA				LR	LR		
	comp=N,170nm,15.8s,MS4.3						
GTA				LR	LR		
	comp=E,190nm,15.5s,MS4.3						
GTA				LR	LR		
	comp=Z,160nm,18.1s,MS4.0						
BJI	**Beijing**	**49.08**	**11**	P	**P**	**11 16 33.6**	**-0.4**
BJI				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.1						
BJI				LR	LR		
	comp=N,180nm,17.4s,MS4.2						
BJI				LR	LR		
	comp=E,91nm,16.0s,MS4.2						
BJI				LR	LR		
	comp=Z,84nm,16.1s,MS3.8						
HHC	**Hu-ho-hao-te**	**49.19**	**6**	*e*P	**P**	**11 16 35.1**	**+0.3**
HHC				S	**S**	**11 23 41.5**	**+1.1**
HHC				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.2						
HHC				pmax	pmax		
	comp=Z,79nm,6.0s						
KSRS	**Korea Array**	**50.14**	**23**	P	**P**	**11 16 40.8**	**-1.3**
	comp=Z,4.5nm,0.8s,mb4.6,baz=214,slow=8.5,SNR=21						
MJAR	**Matsushiro Arr**	**54.20**	**33**	P	**P**	**11 17 09.5**	**-2.8**
	comp=Z,0.7nm,0.7s,mb3.7,baz=218,slow=6.6,SNR=4.6						
WMQ	**Urumqi**	**54.25**	**344**	P	**P**	**11 17 13.0**	**+0.5**
WMQ				pP	pP	11 17 23.0	+7.1
WMQ				sP	sP	11 17 27.0	+10
WMQ				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.0						
WMQ				pmax	pmax		
	comp=Z,160nm,5.0s						
WMQ				LR	LR		
	comp=N,62nm,20.0s						
WMQ				LR	LR		
	comp=Z,56nm,19.0s,MS3.6						
CN2	**Changchun**	**54.92**	**18**	*e*P	**P**	**11 17 16.6**	**-0.9**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
CN2				LR	LR		
	comp=N,200nm,15.0s,MS4.5						
CN2				LR	LR		
	comp=E,200nm,15.0s,MS4.5						
SONM	**Songino Array**	**55.85**	**1**	P	**P**	**11 17 23.9**	**-0.1**
	comp=E,5.7nm,0.8s,mb4.7,baz=169,slow=7.2,SNR=23						
ULN	**Ulaanbaatar**	**55.89**	**1**	*e*P	**P**	**11 17 24.8**	**+0.4**
	comp=E,5.5nm,0.7s,mb4.7						
TKM2	**Tokmak 2**	**57.69**	**334**	*e*P	**P**	**11 17 37.3**	**+0.1**
	comp=E,3.8nm,0.6s,mb4.6						
MK31	**Makanchi Array**	**58.53**	**342**	*e*P	**P**	**11 17 43.1**	**+0.1**
MKAR	**Makanchi Array**	**58.53**	**342**	P	**P**	**11 17 43.1**	**+0.1**
	comp=E,5.8nm,0.6s,mb4.8,baz=146,slow=7.3,SNR=33						
KURK	**Kurchatov**	**63.13**	**341**	*e*P	**P**	**11 18 14.5**	**+0.2**
	comp=E,8.1nm,0.9s,mb4.8						
ZAA0	**Zalesovo Array**	**64.35**	**347**	*e*P	**P**	**11 18 22.0**	**-0.3**
ZALV	**Zalesovo Beam**	**64.35**	**347**	P	**P**	**11 18 21.8**	**-0.5**
	comp=E,4.0nm,0.5s,mb4.8,baz=145,slow=3.8,SNR=23						
ZALV				LR	LR	11 50 44.2	
	comp=E,49nm,18.5s,MS3.7,baz=131,slow=40						
ZALV	**Zalesovo Beam**	**64.35**	**347**	P	**P**	**11 18 21.8**	**-0.5**
ZALV				LR	LR	11 50 44.2	
BVAR	**Borovoye Array**	**67.89**	**338**	P	**P**	**11 18 44.7**	**-0.3**
	comp=E,2.4nm,0.6s,mb4.4,baz=152,slow=6.5,SNR=9.5						
ABKAR	**Akbulak array**	**69.66**	**330**	*e*P	**P**	**11 18 56.2**	**0.0**
	comp=E,8.6nm,0.7s,mb4.8						
ARU	**Arti**	**75.05**	**335**	*e*P	**P**	**11 19 32.6**	**+4.4**
	comp=E,5.4nm,0.9s,mb4.5						
BRTR	**Keskin Array B**	**81.44**	**312**	P	**P**	**11 20 04.1**	**+0.1**
	comp=E,0.3nm,0.3s,mb3.7,baz=38,slow=6.3,SNR=3.5						
QSPA	**South Pole Qui**	**81.74**	**180**	P	**P**	**11 20 06.2**	**+1.4**
	comp=E,2.1nm,0.9s,mb4.1,baz=308,slow=3.8,SNR=6.8						
QSPA	**South Pole Qui**	**81.74**	**180**	*e*P	**P**	**11 20 07.2**	**+2.4**
NOA	**NORSAR Array B**	**99.17**	**331**	LR	LR	12 11 17.3	
	comp=E,23nm,20.2s,MS3.7,baz=95,slow=38						
PPT	**Papeete**	**101.70**	**110**	*e*LR	LR	11 26 10.4	
	comp=E,74nm,29.0s						
WMOK	**Wichita Mounta**	**145.57**	**37**	*e*PKPbc	PKPbc	11 27 25.3	-0.4
TXAR	**Lajitas Array**	**145.62**	**49**	PKPbc	PKPbc	11 27 24.6	-1.4
	comp=E,1.6nm,0.9s,baz=264,slow=12,SNR=25						
MIAR	**Mount Ida**	**148.58**	**31**	*e*PKPdf	PKPdf	11 27 30.2	-0.4
MIAR				*e*PKPbc	PKPbc	11 27 34.6	+0.4
MIAR				*e*PKPab	PKPab	11 27 37.6	-0.1
WVT	**Waverly**	**149.76**	**21**	*e*PKPdf	PKPdf	11 27 32.1	-0.4
WVT				*e*PKPbc	PKPbc	11 27 37.0	-0.2
WVT				*e*PKPab	PKPab	11 27 41.0	-1.3
OXF	**Oxford**	**150.55**	**25**	*e*PKPbc	PKPbc	11 27 38.9	-0.2

IDC ***04*** *11:11:08.7±0.7, 52°.55N×162°.53E, h0km, mb3.7/9, mb1 4.0/10, mb1mx3.8/26, mbtmp3.7/10, ML3.8/1, Error ellipse: s-maj=24.9km s-min=16.5km az=156.0*
NEIC ***04*** *11:11:10.5±0.6, 52°.49N×162°.55E, h10km, Error ellipse: s-maj=18.0km s-min=10.7km az=177.0*
ISCJB ***04*** *11:11:12.4±0.9, 52°.67N±0°.04×162°.52E±0°.06, h37km±9km, mb3.7/9, Error ellipse: s-maj=7.5km s-min=5.0km az=43.0*
KRSC ***04*** *11:11:12.2±0.8, 52°.72N×162°.55E, h41km±41km, ML4.4*
MOS ***04*** *11:11:12.9±0.9, 52°.69N×162°.39E, h47km, mb4.0/7, Error ellipse: s-maj=16.0km s-min=10.0km az=103.9*
ISC 04 11:11:13.0±1.5, **52°.64N**±0°.03×**162°.49E**±0°.06, **h28**km±12km, **n39,** σ**1**s**05/59, mb3.7**/9, **Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.57**	**288**	*e*P	**Pn**	**11 11 37.7**	**-1.3**
SPN				*i* S	**Sn**	**11 11 56.6**	**-1.7**
MKZ	**Mys Kozlova**	**1.97**	**347**	*i* P	**Pn**	**11 11 43.2**	**-1.4**
MKZ				*i* S	**Sn**	**11 12 06.1**	**-2.3**
NLC	**Nalytchevo**	**1.98**	**287**	*i* P	**Pn**	**11 11 44.2**	**-0.4**
NLC				*i* S	**Sn**	**11 12 07.7**	**-0.8**
KII	**Karymskiy**	**2.30**	**309**	*e*P	**Pn**	**11 11 48.4**	**-0.7**
KII				*i* S	**Sn**	**11 12 15.0**	**-1.4**
AVH	**Avacha**	**2.36**	**287**	*i* P	**Pn**	**11 11 50.1**	**+0.3**
AVH				*i* S	**Sn**	**11 12 17.3**	**-0.5**
PET	**Petropavlovsk**	**2.36**	**281**	*e*P	**Pn**	**11 11 49.5**	**-0.4**
PET				*i* S	**Sn**	**11 12 17.0**	**-0.9**
PET	**Petropavlovsk**	**2.36**	**281**	*e*Pn	**Pn**	**11 11 49.5**	**-0.4**
PET				*e*Sn	**Sn**	**11 12 15.8**	**-2.1**
GNL	**Ganaly**	**2.94**	**293**	*i* P	**Pn**	**11 11 58.5**	**+0.7**
GNL				*i* S	**Sn**	**11 12 32.4**	**+0.3**
PEA0B	**Petropavlovsk-**	**2.94**	**281**	*e*Pn	**Pn**	**11 11 58.3**	**+0.4**
PEA0B				*e*Sn	**Sn**	**11 12 34.2**	**+1.9**
PETK	**Petropavlovsk-**	**2.94**	**281**	Pn	**Pn**	**11 11 58.3**	**+0.4**
	13nm,0.3s,baz=91,slow=19,SNR=224						
PETK				Sn	**Sn**	**11 12 33.0**	**+0.7**
	28nm,0.3s,baz=269,slow=21,SNR=26						
PETK	**Petropavlovsk-**	**2.94**	**281**	PN	**Pn**	**11 11 58.3**	**+0.4**
PETK						11 12 33.0	
PETK				pmax	pmax		
	comp=Z,13nm,0.3s						
PETK				smax			
	comp=N,28nm,0.3s						
BKI	**Bering**	**3.29**	**37**	*e*P	**Pn**	**11 12 00.0**	**-2.7**
BKI				*i* S	**Sn**	**11 12 33.9**	**-7.0**
KMNR	**Kamenistaya**	**3.39**	**338**	*i* P	**Pn**	**11 12 05.5**	**+1.4**
KMNR				*i* S	**Sn**	**11 12 44.3**	**+1.0**
BZGR	**Bezymyannyi-Gr**	**3.47**	**343**	*e*P	**Pn**	**11 12 05.5**	**+0.4**
BZGR				*i* S	**Sn**	**11 12 44.0**	**-1.3**
MIPR	**Malaya Ipel'ka**	**3.53**	**266**	P	**Pn**	**11 12 07.5**	**+1.6**
MIPR				*i* S	**Sn**	**11 12 47.9**	**+1.2**
ZLN	**Zelenaya**	**3.53**	**344**	*e*P	**Pn**	**11 12 06.7**	**+0.8**
ZLN				*i* S	**Sn**	**11 12 47.3**	**+0.7**
KBTR	**Krutoberegovo**	**3.58**	**3**	*e*P	**Pn**	**11 12 04.9**	**-1.8**
KBTR				*i* S	**Sn**	**11 12 43.3**	**-4.7**
KPT	**Kopyto**	**3.59**	**339**	*i* P	**Pn**	**11 12 07.7**	**+0.9**
KPT				*i* S	**Sn**	**11 12 48.8**	**+0.6**
KOZ	**Kozyrevsk**	**3.75**	**337**	*i* P	**Pn**	**11 12 10.0**	**+1.0**
KOZ				*i* S	**Sn**	**11 12 53.3**	**+1.1**
KOZR	**Kozyr**	**3.75**	**337**	PN	**Pn**	**11 12 10.0**	**+1.0**
KOZR				S	**Sn**	**11 12 53.3**	**+1.0**
KRSR	**Krestovskiy**	**3.76**	**343**	*e*P	**Pn**	**11 12 09.5**	**+0.4**
KRSR				*i* S	**Sn**	**11 12 52.3**	**0.0**
KLY	**Klyuchi**	**3.83**	**344**	*e*P	**Pn**	**11 12 10.1**	**0.0**
KLY				*i* S	**Sn**	**11 12 53.4**	**-0.8**
SKR	**Severo-Kuril's**	**4.43**	**246**	*e*PN	**Pn**	**11 12 16.0**	**-2.3**
SKR				pmax	pmax		
	comp=Z,20nm,0.4s						
MJAR	**Matsushiro Arr**	**23.45**	**236**	P	**P**	**11 16 20.2**	**+0.1**
	comp=Z,1.7nm,0.7s,mb3.6,baz=38,slow=7.6,SNR=5.1						
MJAR	**Matsushiro Arr**	**23.45**	**236**	P	**P**	**11 16 20.3**	**+0.1**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KSRS	**Korea Array**	**28.42**	**252**	P	**P**	**11 17 05.5**	**+0.4**
	comp=Z,0.9nm,0.6s,mb3.6,baz=41,slow=11,SNR=4.3						
KSRS	**Korea Array**	**28.42**	**252**	P	**P**	**11 17 05.5**	**+0.4**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.6						
NVAR	**Mina Array Bea**	**54.52**	**71**	P	**P**	**11 20 38.9**	**+0.7**
	comp=Z,0.3nm,0.6s,mb3.5,baz=298,slow=7.7,SNR=3.4						
PDAR	**Pinedale Array**	**56.47**	**62**	P	**P**	**11 20 52.8**	**+0.7**
	comp=Z,0.5nm,0.5s,mb3.8,baz=289,slow=4.5,SNR=5.4						
FINES	**FINESS Array B**	**61.11**	**338**	P	**P**	**11 21 23.9**	**-0.2**
	comp=Z,1.1nm,0.7s,mb4.1,baz=65,slow=19,SNR=2.3						
FINES	**FINESS Array B**	**61.11**	**338**	P	**P**	**11 21 23.9**	**-0.1**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	**NORSAR Array B**	**64.38**	**345**	P	**P**	**11 21 46.5**	**+0.8**
	comp=Z,0.3nm,0.5s,mb3.5,baz=22,slow=6.5,SNR=2.6						
NACGM	**Naroch**	**66.72**	**334**	*e*LR	LR	11 22 44.0	
TXAR	**Lajitas Array**	**69.47**	**68**	P	**P**	**11 22 18.8**	**+0.1**
	comp=Z,0.5nm,0.5s,mb3.7,baz=301,slow=4.5,SNR=12						
TXAR	**Lajitas Array**	**69.47**	**68**	P	**P**	**11 22 18.8**	**+0.1**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRA	**Warramunga Arr**	**76.31**	**207**	P	**P**	**11 22 57.9**	**-1.2**
	comp=Z,0.5nm,0.8s,mb3.5,baz=21,slow=6.1,SNR=9.0						
WRA	**Warramunga Arr**	**76.31**	**207**	P	**P**	**11 22 57.9**	**-1.2**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ASAR	**Alice Springs**	**79.97**	**206**	P	**P**	**11 23 19.2**	**-0.1**
	comp=Z,0.6nm,0.5s,mb3.8,baz=18,slow=5.0,SNR=13						
ASAR	**Alice Springs**	**79.97**	**206**	P	**P**	**11 23 19.2**	**-0.1**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						

CSEM ***04*** *11:19:47.7±1.0, 67°.38N×33°.92E, h1km, ML2.0, Error ellipse: s-maj=20.5km s-min=9.1km az=79.0, Mining explosion.*
NAO ***04*** *11:19:47.6±1.6, 67°.51N×34°.03E, ML2.0*
HEL ***04*** *11:19:48.9±0.3, 67°.65N×34°.05E, h0km, ML2.0, ML2.0(NAO), Explosion*
ISC 04 11:19:48.1±1.8, **67°.33N**±0°.04×**33°.8E**±0°.3, **h0**km, **n19,** σ**0**s**91**/33, **Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA0	**Apatity Array**	**0.41**	**312**	Pg	**Pg**	**11 19 56.2**	**+0.2**
	baz=103,slow=16						
APA0				Lg		11 20 01.6	
	baz=103,slow=37						
APA0	**Apatity Array**	**0.41**	**312**	*i* P	**Pg**	**11 19 56.2**	**+0.2**
APA0				*i* S	**Sg**	**11 20 01.6**	**+0.3**
APA0	**Apatity Array**	**0.41**	**312**	P	**Pg**	**11 19 56.1**	**+0.1**
APA0				S	**Sg**	**11 20 01.6**	**+0.3**
APA0				Lg		11 20 01.6	
	baz=103,slow=34,SNR=1.2						
VRF	**Varrio**	**1.66**	**286**	*e*PG	**Pg**	**11 20 19.4**	**-0.5**
	baz=90						
VRF				*e*SG	**Sg**	**11 20 41.0**	**-0.3**
VRF				MSG		11 20 41.0	
	comp=Z,11nm,0.2s						
VRF	**Varrio**	**1.66**	**286**	Pg	**Pg**	**11 20 19.4**	**-0.5**
VRF				Sg	**Sg**	**11 20 41.0**	**-0.3**
	comp=Z,11nm,0.2s						
KU6	**Riekki**	**2.03**	**232**	*e*PB	**Pb**	**11 20 29.6**	**+3.8**
	baz=38						
KU6				*e*SG	**Sg**	**11 20 59.7**	**+6.4**
KU6				MSG		11 20 59.7	
	comp=Z,4.6nm,0.2s						
KU6	**Riekki**	**2.03**	**232**	Pb	**Pb**	**11 20 29.5**	**+3.7**
ARA0	**ARCESS Array S**	**3.77**	**310**	Pn	**Pn**	**11 20 46.9**	**-0.5**
	baz=124,slow=16						
ARA0				Pg	**Pg**	**11 20 55.4**	**-5.0**
	baz=116,slow=14						
ARA0				Sn	**Sn**	**11 21 28.5**	**-4.0**
	baz=123,slow=28						
ARA0				Lg		11 21 40.4	
	baz=118,slow=37						
ARA0	**ARCESS Array S**	**3.77**	**310**	*e*P	**Pn**	**11 20 46.5**	**-0.9**
ARA0				*e*		11 21 33.6	
ARA0				MSG		11 21 33.6	
	comp=Z,3.8nm,0.2s						
ARA0	**ARCESS Array S**	**3.77**	**310**	P	**Pn**	**11 20 46.5**	**-0.9**
ARA0	**ARCESS Array S**	**3.77**	**310**	Pn	**Pn**	**11 20 46.9**	**-0.5**
	baz=124,slow=15,SNR=50						
ARA0	**ARCESS Array S**	**3.77**	**310**	Pg	**Pg**	**11 20 55.4**	**-4.9**
	baz=116,slow=14,SNR=5.6						
ARA0				Sn	**Sn**	**11 21 28.5**	**-3.9**
	baz=123,slow=25,SNR=50						
HEF	**Hetta**	**3.98**	**290**	*e*P	**Pn**	**11 20 51.7**	**+1.4**
HEF	**Hetta**	**3.98**	**290**	P	**Pn**	**11 20 51.7**	**+1.4**
FIA0	**FINESS Array S**	**6.79**	**213**	Pn	**Pn**	**11 21 27.7**	**-1.0**
	baz=40,slow=11						
FIA0				Sn	**Sn**	**11 22 47.6**	**+1.1**
FIA0				Lg		11 23 25.3	
	baz=40,slow=22						
FIA0	**FINESS Array S**	**6.79**	**213**	P	**Pn**	**11 21 27.7**	**-1.1**
FIA0	**FINESS Array S**	**6.79**	**213**	Pn	**Pn**	**11 21 27.7**	**-1.0**
FIA0				Sn	**Sn**	**11 22 47.6**	**+1.1**
FIA0				Lg		11 23 25.3	
FIA0	**FINESS Array S**	**6.79**	**213**	*e*	**Pn**	**11 21 27.7**	**-1.0**
FIA0				*e*S	**Sn**	**11 22 47.6**	**+1.1**
FIA0				*e*SG	**Sg**	**11 23 25.3**	**-0.5**
FIA0	**FINESS Array S**	**6.79**	**213**	Pn	**Pn**	**11 21 27.7**	**-1.1**
	baz=40,slow=11,SNR=50						
FIA0				S	**Sn**	**11 22 47.6**	**+1.0**
FIA0				Sg	**Sg**	**11 23 25.3**	**-0.5**

ISCJB ***04*** *11:27:59.4±0.4, 41°.69N±0°.02×22°.56E±0°.03, h10km, Error ellipse: s-maj=3.4km s-min=3.0km az=146.3*
CSEM ***04*** *11:27:59.1±0.1, 41°.68N×22°.61E, h2km, ML3.1/4, Error ellipse: s-maj=3.2km s-min=2.6km az=66.0*
THE ***04*** *11:28:00.2, 41°.64N×22°.62E, h4km±1km, ML3.1/4, Error ellipse: s-maj=1.7km s-min=0.7km az=271.0*
BEO ***04*** *11:28:00.0±0.4, 41°.65N×22°.57E, h8km±5km, ML2.1/5*
SKO ***04*** *11:28:00.4, 41°.58N×22°.60E, h15km, M2.1, ML2.2*
ISC 04 11:27:59.8±0.4, **41°.67N**±0°.02×**22°.59E**±0°.04, **h6**km±5km, **n34,** σ**0**s**84/55, 3C, Northwestern Balkan Peninsula**

| Code

*ISCJB **04** 11:28:39.9±0.5, 50.°10N±0.°03×18.°42E±0.°03, h0km, Error ellipse: s-maj=4.7km s-min=3.2km az=8.3*
*IPEC **04** 11:28:40.8±0.2, 50.°09N×18.°50E, h2km±1km, ML1.9/3, Error ellipse: s-maj=2.0km s-min=1.1km az=160.0*
*CSEM **04** 11:28:40.8±0.3, 50.°09N×18.°46E, h1km, ML2.7/5, Error ellipse: s-maj=7.3km s-min=4.2km az=2.0*
*PRU **04** 11:28:41.8, 50.°03N×18.°43E, h0km*
*WAR **04** 11:28:42.2, 50.°06N×18.°43E*

ISC 04 11:28:40.8±0.6, 50.°10N±0.°03×18.°44E±0.°04, h0km, n23, σ1§15/40, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.16**	**265**	*e*Pg	**Pg**	**11 28 45.9**	**+2.1**
RAC				*e*Sg	**Sg**	**11 28 49.0**	**+3.1**
OKC	**Ostrava-Krasne**	**0.32**	**216**	*e*PG	**Pg**	**11 28 48.1**	**+1.1**
OKC				*e*SG	**Sg**	**11 28 52.0**	**+0.9**
	comp=Z,92nm,0.6s						
OKC	**Ostrava-Krasne**	**0.32**	**216**	*e*Pg	**Pg**	**11 28 47.7**	**+0.7**
	baz=42						
OKC				Sg	**Sg**	**11 28 52.0**	**+0.9**
	comp=Z,92nm,0.6s						
MORC	**Moravsky Berou**	**0.66**	**241**	*e*Pg	**Pg**	**11 28 54.2**	**+0.7**
MORC				*e*Sg	**Sg**	**11 29 02.4**	**+0.3**
	comp=Z,32nm,0.3s,baz=63						
OJC	**Ojcow**	**0.88**	**82**	*e*Pg	**Pg**	**11 28 56.7**	**-1.1**
OJC				*e*Sg	**Sg**	**11 29 08.6**	**-0.6**
DPC	**Dobruska-Polom**	**1.38**	**281**	*e*PG	**Pg**	**11 29 07.2**	**-0.1**
DPC				*e*SG	**Sg**	**11 29 24.9**	**-0.3**
	comp=Z,28nm,0.5s						
DPC	**Dobruska-Polom**	**1.38**	**281**	Pg	**Pg**	**11 29 07.2**	**-0.1**
DPC				*e*Sg	**Sg**	**11 29 25.4**	**+0.2**
	baz=100						
NIE	**Niedzica**	**1.39**	**118**	*e*Pg	**Pg**	**11 29 08.7**	**+1.2**
NIE				*e*Sg	**Sg**	**11 29 28.7**	**+3.1**
NIE	**Niedzica**	**1.39**	**118**	*e*Pg	**Pg**	**11 29 08.7**	**+1.2**
NIE				*e*Sg	**Sg**	**11 29 28.7**	**+3.1**
VRAC	**Vranov**	**1.43**	**237**	*e*Pg	**Pg**	**11 29 07.8**	**-0.5**
	baz=57						
VRAC				*e*Sg	**Sg**	**11 29 26.4**	**-0.5**
	comp=Z,13nm,0.2s,baz=57						
KOLL	**Kolacno**	**1.52**	**181**	*e*PG	**Pg**	**11 29 11.0**	**+1.0**
KOLL				*e*SG	**Sg**	**11 29 29.3**	**-0.4**
KOLL	**Kolacno**	**1.52**	**181**	*e*Pg	**Pg**	**11 29 11.1**	**+1.1**
KOLL				*e*Sg	**Sg**	**11 29 29.3**	**-0.4**
KSP	**Ksiaz**	**1.56**	**299**	*e*Pn	**Pn**	**11 29 09.9**	**+0.1**
KSP				*e*Sg	**Sg**	**11 29 32.4**	**+1.4**
KSP	**Ksiaz**	**1.56**	**299**	*e*Pg	**Pg**	**11 29 09.8**	**-0.9**
KSP				*e*Sg	**Sg**	**11 29 31.9**	**+1.0**
UPC	**Upice**	**1.61**	**286**	*e*SG	**Sg**	**11 29 32.4**	**-0.1**
UPC	**Upice**	**1.61**	**286**	Sg	**Sg**	**11 29 32.4**	**-0.1**
VYHS	**Vyhne**	**1.63**	**171**	*e*PG	**Pg**	**11 29 09.9**	**-2.1**
VYHS				*e*SG	**Sg**	**11 29 28.7**	**-4.4**
VYHS	**Vyhne**	**1.63**	**171**	*e*Pg	**Pg**	**11 29 09.9**	**-2.1**
VYHS				*e*Sg	**Sg**	**11 29 28.7**	**-4.4**
KRUC	**Moravsky**	**1.69**	**233**	*e*Pn	**Pn**	**11 29 11.8**	**+0.3**
	baz=52						
KRUC				*e*Sg	**Sg**	**11 29 34.2**	**-0.8**
	comp=Z,8.4nm,0.2s,baz=52						
KECS	**Kecovo**	**2.10**	**140**	*e*SG	**Sg**	**11 29 43.5**	**-4.8**
PRU	**Pruhonice**	**2.51**	**269**	*e*SG	**Sg**	**11 29 59.8**	**-1.8**
	comp=Z,7.1nm,0.5s						
PRU	**Pruhonice**	**2.51**	**269**	Sg	**Sg**	**11 29 59.8**	**-1.8**
	comp=Z,7.1nm,0.5s						
KHC	**Kasperske Hory**	**3.31**	**255**	*e*SG	**Sg**	**11 30 24.9**	**-2.1**
	comp=Z,5.0nm,0.4s						

CASC 04 11:28:50.6±1.9, 12.°59N×87.°68W, h83km±23km, MD3.6, ML3.8, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.62**	**80**	*e*P	Pn	11 29 06.5	+0.7
CRIN				*e*S	Sn	11 29 18.3	+1.2
CNCH	**Conchagua**	**0.70**	**348**	*e*P	Pn	11 29 07.2	+0.7
CNCH				*e*S	Sn	11 29 18.6	+0.1
LEON	**Leon**	**0.79**	**102**	*e*P	Pn	11 29 06.7	-0.8
LEON				AML	AML	11 29 19.8	
	comp=Z,798nm,0.2s						
TELN	**Telica**	**0.83**	**89**	*e*P	Pn	11 29 08.4	+0.5
TELN				*e*S	Sn	11 29 21.0	+0.2
CNGN	**Cerro Negro**	**0.96**	**95**	*e*P	Pn	11 29 09.5	+0.1
CNGN				*e*S	Sn	11 29 24.1	+0.6
BLLM	**Bellamira**	**1.01**	**327**	*e*P	Pn	11 29 10.4	+0.4
BLLM				*e*S	Sn	11 29 25.2	+0.7
MOMN	**Momotombo**	**1.13**	**99**	*e*P	Pn	11 29 12.0	+0.6
MOMN				*e*S	Sn	11 29 28.3	+1.4
COPN	**Copaltepe**	**1.14**	**111**	*e*P	Pn	11 29 11.0	-0.5
COPN				*e*S	Sn	11 29 26.3	-0.9
CSAN		**1.29**	**108**	*e*P	Pn	11 29 13.8	+0.4
CSAN				*e*S	Sn	11 29 30.2	-0.4
CSAN				AML	AML	11 29 33.4	
	comp=Z,5μm,0.3s						
LFRS	**El Faro**	**1.69**	**308**	*e*P	Pn	11 29 19.1	+0.5
LFRS				*e*S	Sn	11 29 40.8	+0.9

*CSEM **04** 11:48:57.7±0.4, 36.°19N×21.°51E, h2km, MD3.1, Error ellipse: s-maj=8.4km s-min=5.6km az=58.0*
*ISCJB **04** 11:48:58.7±1.3, 36.°23N±0.°06×21.°55E±0.°09, h11km±13km, Error ellipse: s-maj=14.1km s-min=8.3km az=143.0*
*THE **04** 11:48:59.8, 36.°24N×21.°53E, h8km±1km, ML3.7/4, Error ellipse: s-maj=2.0km s-min=1.0km az=277.0*
*NEIC **04** 11:49:00.9, 36.°31N×21.°59E, h38km, MD3.1(ATH), After ATH.*
*ATH **04** 11:49:00.9, 36.°31N×21.°59E, h38km±3km, MD3.1/9*

ISC 04 11:48:58.9±1.2, 36.°22N±0.°05×21.°54E±0.°08, h11km±7km, n50, σ1§14/70, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.70**	**13**	*e*PN	**Pn**	**11 49 12.5**	**-2.1**
PYL				*e*SN	**Sg**	**11 49 23.1**	**+1.5**
PYL	**PYLOS**	**0.70**	**13**	P	**Pg**	**11 49 12.8**	**+0.4**
PYL				S	**Sg**	**11 49 22.6**	**+1.0**
PYL	**PYLOS**	**0.70**	**13**	*e*Pn	**Pn**	**11 49 12.5**	**-2.1**
PYL	**PYLOS**	**0.70**	**13**	P	**Pg**	**11 49 12.8**	**+0.4**
PYL				S	**Sg**	**11 49 22.6**	**+1.0**
ITM	**Ithomi**	**1.01**	**18**	*e*Pn	**Pb**	**11 49 18.0**	**-0.4**
ITM				*e*Sn	**Sn**	**11 49 31.8**	**-1.3**
ITM	**Ithomi**	**1.01**	**18**	*e*PN	**Pb**	**11 49 18.0**	**-0.4**
ITM				*e*SN	**Sn**	**11 49 31.8**	**-1.3**
ITM	**Ithomi**	**1.01**	**18**	P	**Pb**	**11 49 18.0**	**-0.4**
ITM				S	**Sb**	**11 49 32.5**	**+0.9**
ITM	**Ithomi**	**1.01**	**18**	P	**Pb**	**11 49 18.0**	**-0.4**
ITM				S	**Sb**	**11 49 32.5**	**+0.9**
KYTH	**Kithira**	**1.21**	**86**	*e*Pn	**Pn**	**11 49 22.6**	**+0.9**
KYTH	**Kithira**	**1.21**	**86**	*e*PN	**Pn**	**11 49 22.6**	**+0.9**
KYTH	**Kithira**	**1.21**	**86**	*e*Pn	**Pn**	**11 49 22.6**	**+0.9**
VLI	**Veliai**	**1.23**	**66**	*e*Pn	**Pn**	**11 49 22.4**	**+0.4**
VLI				*e*Sn	**Sn**	**11 49 37.7**	**-0.8**
VLI	**Veliai**	**1.23**	**66**	*e*PN	**Pn**	**11 49 22.4**	**+0.4**
VLI				*e*SN	**Sn**	**11 49 37.7**	**-0.8**
VLI	**Veliai**	**1.23**	**66**	*e*Pn	**Pn**	**11 49 22.4**	**+0.4**
VLI				*e*Sn	**Sn**	**11 49 37.7**	**-0.8**
VLX	**Vlachokerasia**	**1.33**	**30**	*e*PN	**Pn**	**11 49 23.1**	**-0.3**
VLX				*e*SN	**Sn**	**11 49 39.3**	**-1.8**
VLX	**Vlachokerasia**	**1.33**	**30**	P	**Pn**	**11 49 23.4**	**0.0**
VLX				S	**Sb**	**11 49 42.2**	**+1.3**
VLX	**Vlachokerasia**	**1.33**	**30**	*e*Pn	**Pn**	**11 49 23.1**	**-0.3**
VLX	**Vlachokerasia**	**1.33**	**30**	P	**Pn**	**11 49 23.4**	**0.0**
VLX				S	**Sb**	**11 49 42.2**	**+1.3**
GUR	**Goura**	**1.83**	**20**	*e*PB	**Pb**	**11 49 31.0**	**-1.4**
GUR	**Goura**	**1.83**	**20**	P	**Pn**	**11 49 31.1**	**+0.9**
GUR				S	**Sn**	**11 49 54.3**	**+0.9**
GUR	**Goura**	**1.83**	**20**	P	**Pn**	**11 49 31.1**	**+0.9**
GUR				S	**Sn**	**11 49 54.3**	**+0.9**
RLS	**Riolos of Patr**	**1.84**	**358**	*e*Pb	**Pb**	**11 49 31.4**	**-1.1**
RLS	**Riolos of Patr**	**1.84**	**358**	*e*PB	**Pb**	**11 49 31.4**	**-1.1**
RLS	**Riolos of Patr**	**1.84**	**358**	*e*Pb	**Pb**	**11 49 31.4**	**-1.1**
DID	**Didima**	**1.87**	**46**	*e*PN	**Pn**	**11 49 30.9**	**+0.1**
DID				*e*SB	**Sb**	**11 49 53.1**	**-3.3**
DID	**Didima**	**1.87**	**46**	P	**Pn**	**11 49 31.0**	**+0.2**
DID				S	**Sn**	**11 49 56.3**	**+1.9**
DID	**Didima**	**1.87**	**46**	P	**Pn**	**11 49 31.0**	**+0.2**
DID				S	**Sn**	**11 49 56.3**	**+1.9**
LAKA	**Lakka**	**2.05**	**10**	P	**Pn**	**11 49 34.0**	**+0.8**
LAKA				S	**Sn**	**11 49 59.7**	**+0.9**
LAKA	**Lakka**	**2.05**	**10**	P	**Pn**	**11 49 34.0**	**+0.8**
LAKA				S	**Sn**	**11 49 59.7**	**+0.9**
KARN	**Karanos**	**2.09**	**112**	P	**Pn**	**11 49 34.9**	**+1.1**
KARN	**Karanos**	**2.09**	**112**	P	**Pn**	**11 49 34.9**	**+1.1**
VLS	**Valsamata**	**2.10**	**339**	*e*Pn	**Pn**	**11 49 34.2**	**+0.3**
VLS	**Valsamata**	**2.10**	**339**	*e*PN	**Pn**	**11 49 34.2**	**+0.3**
VLS	**Valsamata**	**2.10**	**339**	P	**Pn**	**11 49 34.6**	**+0.7**
VLS	**Valsamata**	**2.10**	**339**	*e*Pn	**Pn**	**11 49 34.2**	**+0.3**
VLS	**Valsamata**	**2.10**	**339**	P	**Pn**	**11 49 34.6**	**+0.7**
LTK	**Loutraki**	**2.13**	**32**	*e*PB	**Pb**	**11 49 35.2**	**-2.3**
LTK	**Loutraki**	**2.13**	**32**	P	**Pn**	**11 49 35.3**	**+0.9**
LTK	**Loutraki**	**2.13**	**32**	P	**Pn**	**11 49 35.3**	**+0.9**
NAIG	**Nisos Aigina**	**2.19**	**45**	*e*Pb	**Pb**	**11 49 36.3**	**-2.2**
NAIG	**Nisos Aigina**	**2.19**	**45**	*e*PB	**Pb**	**11 49 36.3**	**-2.2**
KALE	**Kalithea**	**2.22**	**12**	P	**Pn**	**11 49 36.1**	**+0.5**
KALE	**Kalithea**	**2.22**	**12**	P	**Pn**	**11 49 36.1**	**+0.5**
EFP	**Efpalio**	**2.23**	**7**	P	**Pn**	**11 49 36.0**	**+0.3**
EFP	**Efpalio**	**2.23**	**7**	P	**Pn**	**11 49 36.0**	**+0.3**
DSF	**Desfina**	**2.33**	**19**	P	**Pn**	**11 49 36.9**	**-0.2**
DSF	**Desfina**	**2.33**	**19**	P	**Pn**	**11 49 36.9**	**-0.2**
LKR	**Lokris**	**2.69**	**25**	*e*Pn	**Pn**	**11 49 41.5**	**-0.6**
LKR	**Lokris**	**2.69**	**25**	*e*PN	**Pn**	**11 49 41.5**	**-0.6**
LKR	**Lokris**	**2.69**	**25**	*e*Pn	**Pn**	**11 49 41.5**	**-0.6**

*ISK **04** 11:54:52.5, 37.°12N×27.°95E, h27km, MD2.6*
*ISCJB **04** 11:54:54.3±0.6, 37.°07N±0.°04×27.°91E±0.°03, h10km, Error ellipse: s-maj=6.2km s-min=3.7km az=173.3*
*CSEM **04** 11:54:54.0±0.3, 37.°07N×27.°93E, h10km, MD2.6, Error ellipse: s-maj=6.5km s-min=4.1km az=157.0*
*DDA **04** 11:54:54.1, 37.°07N×27.°91E, h7km±4km, Md2.8*

ISC 04 11:54:54.7±1.1, 37.°08N±0.°05×27.°89E±0.°04, h14km±15km, n18, σ1§04/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSB	**Milas**	**0.23**	**338**	*e*PG	**Pg**	**11 54 59.3**	**-0.5**
MLSB				*e*SG	**Sg**	**11 55 03.9**	**+0.6**
MLSB	**Milas**	**0.23**	**338**	*e*Pg	**Pg**	**11 54 59.3**	**-0.5**
MLSB				*e*Sg	**Sg**	**11 55 03.9**	**+0.6**
YER	**Yerkesik**	**0.32**	**80**	*e*PG	**Pg**	**11 54 59.6**	**-1.7**
YER				*e*SG	**Sg**	**11 55 05.0**	**-0.7**
YER	**Yerkesik**	**0.32**	**80**	*e*Pg	**Pg**	**11 54 59.6**	**-1.7**
YER				*e*Sg	**Sg**	**11 55 05.1**	**-0.7**
BDRM	**Kayabasi**	**0.36**	**268**	*i* P	**Pg**	**11 55 01.8**	**-0.1**
BDRM				*i* S	**Sg**	**11 55 07.9**	**+1.1**
BDRM	**Kayabasi**	**0.36**	**268**	*i* P	**Pg**	**11 55 01.8**	**-0.1**
BDRM				*i* S	**Sg**	**11 55 07.9**	**+1.1**
DAT	**Datca**	**0.43**	**216**	*e*PG	**Pg**	**11 55 03.3**	**0.0**
DAT	**Datca**	**0.43**	**216**	*e*Pg	**Pg**	**11 55 03.3**	**0.0**
BODT	**Bodrum**	**0.46**	**268**	*e*PG	**Pg**	**11 55 03.5**	**-0.4**
BODT	**Bodrum**	**0.46**	**268**	*e*Pg	**Pg**	**11 55 03.5**	**-0.4**
AYDN	**Tasoluk**	**0.58**	**359**	*i* P	**Pg**	**11 55 05.5**	**-0.6**
AYDN				*i* S	**Sg**	**11 55 14.0**	**+0.1**
AYDN	**Tasoluk**	**0.58**	**359**	*i* P	**Pg**	**11 55 05.5**	**-0.6**
AYDN				*i* S	**Sg**	**11 55 14.0**	**+0.1**
TURN	**Turunc**	**0.61**	**110**	*i* P	**Pg**	**11 55 01.5**	**-5.1**
TURN				*i* S	**Sg**	**11 55 08.6**	**-6.1**
TURN	**Turunc**	**0.61**	**110**	*i* P	**Pg**	**11 55 01.5**	**-5.1**
TURN				*i* S	**Sg**	**11 55 08.6**	**-6.1**
DNZL	**Cakiroluk**	**1.11**	**56**	*i* P	**Pg**	**11 55 14.2**	**-1.9**
DNZL				*i* S	**Sg**	**11 55 31.6**	**+1.1**
DNZL	**Cakiroluk**	**1.11**	**56**	*i* P	**Pg**	**11 55 14.2**	**-1.8**
DNZL				*i* S	**Sg**	**11 55 31.6**	**+1.1**
GOLH	**Golhisar**	**1.35**	**83**	*i* P	**Pg**	**11 55 21.8**	**+1.2**
GOLH				*i* S	**Sg**	**11 55 40.1**	**+2.0**
GOLH	**Golhisar**	**1.35**	**83**	*i* P	**Pg**	**11 55 21.8**	**+1.2**
GOLH				*i* S	**Sg**	**11 55 40.1**	**+2.0**

*NNC **04** 12:02:11.9±15.0, 36.°76N×70.°31E, h90km±401km, mb3.2, mpv3.7, Error ellipse: s-maj=224.2km s-min=100.0km az=69.0*

ISC 04 12:02:11.0±2.8, 36.°7N±0.°2×70.°1E±0.°2, h35km, n8, σ0§58/9, 3C, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.39**	**3**	P	**Pn**	**12 03 43.0**	**+0.4**
	1.1nm,0.3s,baz=199,slow=12,SNR=35						
KK31				⇑S	**Sn**	**12 04 54.1**	**-0.2**
	2.3nm,0.6s,baz=191,slow=19,SNR=5.2						
EKS2	**Erkin-Say**	**6.60**	**25**	P	**Pn**	**12 03 46.2**	**+0.8**
	SNR=8.9						
KZA	**Kyzart**	**6.70**	**35**	P	**Pn**	**12 03 46.9**	**+0.2**
	SNR=28						
AAK	**Ala-Archa**	**6.83**	**29**	P	**Pn**	**12 03 49.1**	**+0.5**
	SNR=7.2						
ULHL	**Ulahol**	**7.31**	**39**	P	**Pn**	**12 03 54.7**	**-0.5**
	SNR=7.7						
TKM2	**Tokmak 2**	**7.52**	**33**	⇑P	**Pn**	**12 03 56.6**	**-1.5**
	5.5nm,0.6s						
TKM2	**Tokmak 2**	**7.52**	**33**	P	**Pn**	**12 03 57.6**	**-0.5**
	SNR=8.7						
AB31	**Akbulak array**	**14.54**	**333**	⇑P	**Pn**	**12 05 33.7**	**-0.3**
	0.2nm,0.3s,baz=157,slow=13,SNR=8.3						

DJA 04 12:34:24, 0.°30S×124.°58E, h105km, MLv3.9/8, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**1.05**	**325**	P	Pn	12 34 46.0	+0.6
KMSI				S	Sn	12 35 02.2	+0.7
MNI	**Manado**	**1.75**	**9**	P	Pn	12 34 53.7	0.0
LUWI	**Luwuk**	**1.95**	**248**	P	Pn	12 34 56.5	+0.3
LUWI				S	Sn	12 35 20.2	-0.5
MRSI	**Marisa**	**2.75**	**286**	P	Pn	12 35 06.2	-0.4
APSI	**Ampana**	**2.99**	**258**	P	Pn	12 35 08.9	-0.9
NLAI	**Namlea**	**3.85**	**139**	P	Pn	12 35 20.9	-0.5
TTSI	**Tana Toraja**	**5.48**	**240**	P	Pn	12 35 42.7	-0.7
	0.1nm15nm,1.3s						
SPSI	**Sidrap Palu**	**6.03**	**233**	P	Pn	12 35 50.6	-0.2
	15nm,1.1s						
BKSI	**Bulukumba**	**6.69**	**222**	P	Pn	12 35 59.4	-0.3

*ISCJB **04** 12:37:58.5±2.2, 17.°8S±0.°2×174.°7W±0.°2, h67km±20km, mb4.1/12, Error ellipse: s-maj=34.6km s-min=13.7km az=137.6*
*IDC **04** 12:38:00.7±3.3, 17.°88S×174.°63W, h74km±30km, mb3.8/9, mb1 4.0/10, mb1mx3.8/19, mbtmp3.8/10, Error ellipse: s-maj=36.1km s-min=14.6km az=142.0*
*NEIC **04** 12:38:01.0±1.3, 17.°90S×174.°60W, h80km±12km, mb4.4/2, Error ellipse: s-maj=20.3km s-min=8.8km az=137.0*

ISC 04 12:38:00.2±1.9, 17.°9S±0.°2×174.°6W±0.°2, h68km±18km, n20, σ0§61/19, mb4.1/12, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.79**	**36**	P	**Pn**	**12 39 10.3**	**+0.5**
	1.4nm,0.3s,baz=4.2,slow=22,SNR=6.5						
AFI				S	**Sn**	**12 39 59.5**	**-4.6**
	10nm,0.3s,baz=31,slow=22,SNR=11						
AFI	**Afiamalu**	**4.79**	**36**	*e*Pn	**Pn**	**12 39 10.8**	**+0.9**
AFI				S	**Sn**	**12 39 59.5**	**-4.6**
AFI				*e*Sn	**Sn**	**12 40 02.0**	**-2.1**
URZ	**Urewera**	**21.58**	**198**	P	**P**	**12 42 44.0**	**-0.2**
	6.0nm,0.3s,mb4.3,baz=230,slow=7.2,SNR=9.8						
CTA	**Charters Tower**	**36.99**	**260**	P	**P**	**12 45 04.4**	**+1.0**
	2.1nm,0.5s,mb4.3,baz=92,slow=13,SNR=4.6						
STKA	**Stephens Creek**	**41.81**	**242**	P	**P**	**12 45 42.9**	**-0.5**
	1.3nm,0.5s,mb3.9,baz=119,slow=12,SNR=6.7						
WRAB	**Tennant Creek**	**48.16**	**259**	*e*P	**P**	**12 46 33.9**	**0.0**
	2.9nm,0.3s,mb4.6						
WRA	**Warramunga Arr**	**48.17**	**259**	P	**P**	**12 46 33.5**	**-0.5**
	3.7nm,0.6s,mb4.4,baz=98,slow=6.8,SNR=176						
ASAR	**Alice Springs**	**48.26**	**254**	P	**P**	**12 46 34.4**	**-0.3**
	25nm,0.7s,mb5.2,baz=90,slow=8.4,SNR=362						
FITZ	**Fitzroy Crossi**	**56.57**	**260**	P	**P**	**12 47 36.3**	**0.0**
	1.0nm,0.3s,mb4.3,baz=76,slow=14,SNR=20						
PETK	**Petropavlovsk-**	**74.60**	**343**	P	**P**	**12 49 31.9**	**+0.3**
	0.8nm,0.5s,mb3.7,baz=115,slow=8.1,SNR=7.7						
PETK	**Petropavlovsk-**	**74.60**	**343**	P	**P**	**12 49 31.9**	**+0.3**
NVAR	**Mina Array Bea**	**76.93**	**42**	P	**P**	**12 49 46.0**	**+0.6**
	2.0nm,0.8s,mb3.9,baz=226,slow=8.7,SNR=14						
NVAR	**Mina Array Bea**	**76.93**	**42**	P	**P**	**12 49 46.0**	**+0.6**
TXAR	**Lajitas Array**	**82.96**	**56**	P	**P**	**12 50 18.7**	**+0.6**
	0.2nm,0.8s,mb3.0,baz=223,slow=6.8,SNR=3.8						
PDAR	**Pinedale Array**	**84.87**	**42**	P	**P**	**12 50 26.9**	**-0.6**
	0.4nm,0.7s,mb3.4,baz=222,slow=2.0,SNR=3.8						
COLA	**College**	**84.98**	**11**	*e*P	**P**	**12 50 27.0**	**-0.5**
	1.6nm,0.8s,mb4.0						
LBTB	**Lobatse**	**133.06**	**205**	*e*PKPdf	PKPdf	12 57 07.3	-1.3
CLL	**Collm**	**146.07**	**351**	*i* PKPbc	PKPbc	12 57 31.4	-0.9
BRTR	**Keskin Array B**	**147.23**	**318**	PKPbc	PKPbc	12 57 35.0	-1.0
	0.8nm,0.6s,baz=81,slow=3.6,SNR=3.2						
MMAI	**Mount Meron Ar**	**149.09**	**305**	PKPbc	PKPbc	12 57 40.2	-0.9
	0.4nm,0.3s,baz=42,slow=2.3,SNR=2.9						

*NEIC **04** 12:44:32.4, 19.°21N×67.°66W, h10km, MD3.0(RSPR), After RSPR.*

RSPR 04 12:44:32.4, 19.°21N×67.°66W, h10km±31km, MD3.0/8, MD3.0/8, 3C-7D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**0.97**	**225**	⇓*e*P	Pg	12 44 45.6	-5.5
LSP	**Las Mesas**	**1.17**	**152**	⇓*e*P	Pb	12 44 51.2	-3.5
LSP				*e*S	Sb	12 45 06.1	-3.7
LRS	**Lares**	**1.20**	**140**	⇓*e*P	Pb	12 44 51.2	-4.0
LRS				*e*S	Sb	12 45 07.8	-2.9
AOPR	**Arecibo Observ**	**1.22**	**135**	⇑*e*P	Pn	12 44 51.9	-3.5
CRPR	**Cabo Rojo, PR**	**1.31**	**156**	⇓*e*P	Pn	12 44 53.0	-3.7
CRPR				*e*S	Sb	12 45 10.8	-3.1
GBPR	**Guanica, Bosqu**	**1.44**	**149**	⇓*e*P	Pn	12 44 55.6	-2.8
GBPR				*e*S	Sn	12 45 13.4	-4.0
CELP	**Cerrillos**	**1.53**	**138**	⇑*e*P	Pn	12 44 56.8	-2.9
CELP				*e*S	Sn	12 45 15.4	-4.2
OBIP	**Obispado Ponce**	**1.53**	**139**	⇓*e*P	Pn	12 44 57.1	-2.7
SJG	**San Juan**	**1.80**	**127**	⇓*e*P	Pn	12 45 01.1	-2.4
SJG				*e*S	Sn	12 45 22.9	-3.5
MTP	**Monte Pirata**	**2.29**	**119**	⇓*e*P	Pn	12 45 07.6	-2.6
SDDR	**Presa de Saban**	**3.44**	**267**	*e*Pn	Pn	12 45 26.0	0.0
SDDR				*e*Sn	Sn	12 46 07.6	+0.8

*BJI **04** 12:49:06.8, 52.°84N×171.°66E, h21km, mB4.6/7, mb4.6/9, Ms4.8/1, Ms7 4.4/1*
*MOS **04** 12:49:07.5±0.9, 52.°89N×171.°41E, h13km, mb4.4/19, Error ellipse: s-maj=12.8km s-min=9.2km az=123.3*
*IDC **04** 12:49:07.2±0.8, 52.°86N×171.°52E, h0km, mb4.0/17, mb1 4.2/18, mb1mx4.1/28, mbtmp4.1/18, ML3.9/1, MS3.1/5, Ms1 3.1/5, ms1mx2.8/40, Error ellipse: s-maj=22.9km s-min=15.2km az=159.0*
*KRSC **04** 12:49:08.1±1.5, 52.°48N×170.°83E, h10km±10km, ML4.6*
*NEIC **04** 12:49:08.9±0.4, 52.°80N×171.°43E, h10km, mb4.1/8, Error ellipse: s-maj=12.5km s-min=5.2km az=172.0*
*ISCJB **04** 12:49:09.8±1.5, 52.°87N±0.°06×171.°30E±0.°04, h28km±11km, mb4.1/30, MS3.2/4, Error ellipse: s-maj=10.4km s-min=3.7km az=13.4*

ISC 04 12:49:11.9±1.5, 52.°87N±0.°06×171.°41E±0.°04, h29km±12km, n88, σ1§06/101, mb4.1/30, MS3.2/4, 2C-3D, Near Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMY	**Shemya**	**1.64**	**94**	*e*Pn	**Pn**	**12 49 36.6**	**-2.1**
SMY				*e*Sn	**Sn**	**12 50 00.1**	**+1.2**
BKI	**Bering**	**3.97**	**308**	P	**Pn**	**12 50 10.1**	**-0.6**
BKI				*e*S	**Sn**	**12 50 54.6**	**-1.6**
MKZ	**Mys Kozlova**	**5.99**	**290**	*e*P	**Pn**	**12 50 36.9**	**-1.6**
MKZ				*e*S	**Sn**	**12 51 42.9**	**-3.2**
KBTR	**Krutoberegovo**	**6.01**	**307**	*e*P	**Pn**	**12 50 38.5**	**-0.3**
KBTR				*e*S	**Sn**	**12 51 44.7**	**-1.9**
SPN	**Mys Shipunski**	**6.88**	**276**	P	**Pn**	**12 50 46.4**	**-4.3**
SPN				*e*S	**Sn**	**12 51 59.9**	**-8.1**
SRKR	**Sorokina**	**7.03**	**307**	S	**Sn**	**12 52 12.5**	**+0.8**
KLY	**Klyuchi**	**7.14**	**303**	P	**Pn**	**12 50 53.8**	**-0.4**
KLY				*e*S	**Sn**	**12 52 13.0**	**-1.3**
KRSR	**Krestovskiy**	**7.14**	**302**	P	**Pn**	**12 50 55.6**	**+1.3**
KRSR				S	**Sn**	**12 52 15.8**	**+1.4**
KMNR	**Kamenistaya**	**7.15**	**298**	*e*P	**Pn**	**12 50 54.7**	**+0.3**
KMNR				*e*S	**Sn**	**12 52 14.0**	**-0.5**
KPT	**Kopyto**	**7.23**	**300**	P	**Pn**	**12 50 56.0**	**+0.6**
KPT				S	**Sn**	**12 52 16.1**	**-0.3**
KOZR	**Kozyr**	**7.43**	**300**	P	**Pn**	**12 50

comp=Z,0.5nm,0.3s,mb4.0,baz=12,slow=13,SNR=5.8
SPITS Spitsbergen Ar 48.33 353 P **P** 12 57 49.7 -0.3
SPITS pmax pmax
comp=Z,1.0nm,0.3s
RLMT Red Lodge 50.12 65 P **P** 12 58 05.6 +1.5
comp=Z,1.1nm,0.4s,mb4.2
PDAR Pinedale Array 51.47 68 P **P** 12 58 14.1 -0.2
comp=Z,0.5nm,0.8s,mb3.5,baz=337,slow=3.4,SNR=4.3
KURK Kurchatov 53.48 308↓*e*P **P** 12 58 28.1 -1.0
KURK pmax pmax
comp=Z,7.0nm,1.6s,mb4.3
ULM Lac du Bonnet 53.75 53 LR LR 13 20 00.8
comp=Z,15nm,21.7s,MS3.0,baz=276,slow=34
MKAR Makanchi Array 54.25 302 LR LR 13 22 32.5
comp=Z,54nm,19.3s,MS3.6,baz=0.4,slow=37
ARCES ARCESS Array B 55.39 346 P **P** 12 58 42.7 -0.1
comp=Z,1.4nm,0.6s,mb4.1,baz=34,slow=8.9,SNR=4.7
ARCES ARCESS Array B 55.39 346 P **P** 12 58 42.7 0.0
ARCES pmax pmax
comp=Z,1.0nm,0.6s
ARCES ARCESS Array B 55.39 346 P **P** 12 58 42.7 -0.1
BVAR Borovoye Array 55.68 314 P **P** 12 58 44.8 -0.3
comp=Z,3.4nm,0.8s,mb4.5,baz=54,slow=7.3,SNR=13
BVAR Borovoye Array 55.68 314 P **P** 12 58 44.8 -0.2
BVAR pmax pmax
comp=Z,3.0nm,0.8s
BRVK Borovoye 55.70 314*de*P **P** 12 58 44.4 -0.8
BRVK pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
JOF Joensuu 60.38 340 *e*P **P** 12 59 17.3 -0.5
JOF pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
JOF Joensuu 60.38 340 *e*p **P** 12 59 17.3 -0.5
comp=Z,5.5nm,0.8s,mb4.6
SCHQ Schefferville 62.35 34 P **P** 12 59 30.3 -0.9
comp=Z,5.0nm,0.8s,mb4.7,baz=357,slow=4.9,SNR=3.6
SCHQ Schefferville 62.35 34 P **P** 12 59 30.3 -0.9
FINES FINESS Array B 62.75 342 P **P** 12 59 32.9 -0.8
comp=Z,3.1nm,0.8s,mb4.5,baz=54,slow=10.0,SNR=7.8
FINES FINESS Array B 62.75 342 P **P** 12 59 32.9 -0.9
FINES pmax pmax
comp=Z,3.0nm,0.8s
FINES FINESS Array B 62.75 342 P **P** 12 59 32.9 -0.8
ABKAR Akbulak array 62.91 317 *e*P **P** 12 59 34.7 -0.3
comp=Z,1.5nm,0.6s,mb4.3
TXAR Lajitas Array 64.25 75 P **P** 12 59 43.9 -0.3
comp=Z,0.6nm,0.5s,mb3.9,baz=305,slow=6.6,SNR=9.5
TXAR Lajitas Array 64.25 75 P **P** 12 59 43.9 -0.3
TXAR pmax pmax
comp=Z,1.0nm,0.5s
CMAR Chiang Mai Arr 64.94 268 P **P** 12 59 49.2 +0.5
comp=Z,1.7nm,0.6s,mb4.3,baz=23,slow=7.2,SNR=7.4
CMAR Chiang Mai Arr 64.94 268 P **P** 12 59 49.3 +0.5
CMAR pmax pmax
comp=Z,2.0nm,0.6s
NB2 NORSAR Subarra 65.34 350 P **P** 12 59 50.5 -0.3
comp=Z,3.4nm,0.6s,mb4.5,baz=14,slow=6.5
NOA NORSAR Array B 65.34 350 P **P** 12 59 50.5 -0.3
comp=Z,3.7nm,0.7s,mb4.5,baz=15,slow=6.5,SNR=16
NOA LR LR 13 30 19.9
comp=Z,9.5nm,19.3s,MS3.0,baz=310,slow=38
NOA NORSAR Array B 65.34 350 P **P** 12 59 50.6 -0.2
NOA pmax pmax
comp=Z,4.0nm,0.7s
NOA MLR MLR
comp=Z,10.0nm,19.3s
OBN Obninsk 66.09 334↑*i*P **P** 12 59 56.5 +0.8
OBN pmax pmax
comp=Z,8.0nm,1.3s,mb4.6
VSR Storozhevoye 68.78 330 *e*P **P** 13 00 12.3 -0.5
VSR pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
VSR pmax pmax
comp=N,1.0nm,0.3s
VSR pmax pmax
comp=E,9.0nm,0.6s
AKASG Malin Array Be 71.99 336 P **P** 13 00 32.3 -0.1
comp=E,1.2nm,0.4s,mb4.2,baz=23,slow=5.7,SNR=6.2
AKASG Malin Array Be 71.99 336*ce*P **P** 13 00 32.2 -0.2
AKASG pmax pmax
comp=Z,1.0nm,0.4s
ZEI Tsey 74.56 323 *e*P **P** 13 00 47.4 -0.3
ZEI pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
CLL Collm 74.61 346 *e*P **P** 13 00 48.0 +0.1
CLL Collm 74.61 346 *e*P **P** 13 00 48.0 +0.1
BUR08 Bucovina Ar. S 75.80 337 *e*P **P** 13 00 55.6 +0.8
WRA Warramunga Arr 79.32 215 P **P** 13 01 13.8 -0.8
comp=Z,0.8nm,0.9s,mb3.6,baz=31,slow=6.1,SNR=4.4
WRA Warramunga Arr 79.32 215 P **P** 13 01 13.8 -0.8
WRA pmax pmax
comp=Z,1.0nm,1.0s
BRTR Keskin Array B 80.79 328 P **P** 13 01 23.2 +0.8
comp=Z,1.8nm,0.7s,mb4.1,baz=62,slow=3.5,SNR=9.4
BRTR Keskin Array B 80.79 328 P **P** 13 01 23.3 +0.8
BRTR pmax pmax
comp=Z,2.0nm,0.7s
ASAR Alice Springs 82.91 214 P **P** 13 01 33.5 -0.1
comp=Z,0.6nm,0.8s,mb3.7,baz=16,slow=5.0,SNR=10.0
ASAR Alice Springs 82.91 214 P **P** 13 01 33.5 -0.1
ASAR pmax pmax
comp=Z,1.0nm,0.8s
BOSA Boshof 145.24 301 PKPbc PKPbc 13 08 45.8 -0.3
comp=Z,2.4nm,0.6s,baz=354,slow=4.0,SNR=4.3

KRSC 04 12:52:44.1±0.9, 53°.40N×160°.50E, h42km±31km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.42**	**224**	*i* P	Pn	12 52 53.6	-0.2
SPN				*i* S	Sn	12 53 00.3	-0.4
NLC	**Nalytchevo**	**0.73**	**252**	S	Sn	12 53 08.6	+0.7
KII	**Karymskiy**	**0.89**	**316**	*e*P	Pn	12 53 00.6	+0.4
KII				*e*S	Sn	12 53 12.6	+0.7
AVH	**Avacha**	**1.06**	**263**	*i* P	Pn	12 53 03.4	+0.9
AVH				*e*S	Sn	12 53 16.9	+0.8
PET	**Petropavlovsk**	**1.17**	**252**	*i* P	Pn	12 53 04.3	+0.3
PET				*e*S	Sn	12 53 18.7	0.0
MKZ	**Mys Kozlova**	**1.37**	**32**	*i* P	Pn	12 53 05.9	-0.8
MKZ				*e*S	Sn	12 53 22.0	-1.5
GNL	**Ganaly**	**1.56**	**282**	*i* P	Pn	12 53 10.8	+1.6
GNL				*e*S	Sn	12 53 30.1	+2.0
MIPR	**Malaya Ipel'ka**	**2.53**	**245**	P	Pn	12 53 23.7	+1.1
KBTR	**Krutoberegovo**	**3.12**	**25**	P	Pn	12 53 31.6	+0.9

*ISCJB **04** 13:02:42.3±0.4, 66°.12N±0°.04×142°.42W±0°.08, h10km, mb3.0/3, Error ellipse: s-maj=5.8km s-min=4.7km az=160.5*
*NEIC **04** 13:02:43.9, 66°.07N×142°.85W, h5km, ML3.7(AEIC), After AEIC.*
*IDC **04** 13:02:47.6±3.0, 66°.19N×142°.36W, h0km, mb3.3/3, mb1 3.8/6, mb1mx3.5/28, mbtmp3.5/6, ML3.6/3, Error ellipse: s-maj=44.0km s-min=21.1km az=129.0*
*PGC **04** 13:02:50.8±1.0, 65°.90N×140°.92W, h1km, ML3.8/3, 216km northwest of Dawson, Yt Northern Yukon Territory, Canada*
ISC 04 13:02:44.2±0.4, 66°.14N±0°.04×142°.57W±0°.08, h10km, n45, σ1§10/64, mb3.0/3, 3C-10D, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGAK	**Eagle**	**1.49**	**156**	P	**Pn**	**13 03 10.6**	**-0.4**
EGAK				S	**Sn**	**13 03 31.0**	**+0.6**
BM3	**Burnt Mountain**	**1.52**	**329**	P	**Pn**	**13 03 11.7**	**+0.3**
DAWY	**Dawson**	**2.48**	**146**	P	**Pn**	**13 03 25.1**	**+0.6**
DAWY	**Dawson**	**2.48**	**146**	⇑Pn	**Pn**	**13 03 25.1**	**+0.6**
DAWY				⇑Sg	**Sg**	**13 04 00.5**	**-3.2**
COLA	**College**	**2.54**	**242**	P	**Pn**	**13 03 24.2**	**-1.2**
DOT	**Dot Lake**	**2.58**	**195**	P	**Pn**	**13 03 25.6**	**-0.3**
BCA3	**Beaver Creek A**	**3.10**	**173**	P	**Pn**	**13 03 33.0**	**-0.1**
COLD	**Coldfoot**	**3.23**	**293**	P	**Pn**	**13 03 34.9**	**+0.1**
MENT	**Mentasta**	**3.25**	**189**	*e*P	**Pn**	**13 03 35.3**	**+0.1**
MCK	**McKinley**	**3.63**	**231**	P	**Pn**	**13 03 39.5**	**-0.9**
RND	**Reindeer**	**3.84**	**227**	P	**Pn**	**13 03 42.6**	**-0.6**
INK	**Inuvik**	**4.13**	**54**	Pn	**Pn**	**13 03 48.8**	**+1.6**
	4.6nm,0.3s,baz=239,slow=11,SNR=93						
INK				Sn	**Sn**	**13 04 35.6**	**0.0**
	12nm,0.3s,baz=301,slow=30,SNR=9.0						
INK				Lg		13 04 58.5	
	6.7nm,0.3s,baz=125,slow=29,SNR=5.1						
INK	**Inuvik**	**4.13**	**54**	*e*Pn	**Pn**	**13 03 49.0**	**+1.7**
INK	**Inuvik**	**4.13**	**54**	⇑Pn	**Pn**	**13 03 49.4**	**+2.1**
INK				⇓Sn	**Sn**	**13 04 35.6**	**0.0**
TRF	**Thorofare Moun**	**4.26**	**234**	P	**Pn**	**13 03 48.4**	**-0.7**
IM3	**Indian Mountai**	**4.56**	**273**	P	**Pn**	**13 03 51.9**	**-1.2**
SML	**Sawmill**	**5.03**	**213**	P	**Pn**	**13 04 00.5**	**+0.9**
DIV	**Divide**	**5.23**	**197**	P	**Pn**	**13 04 03.7**	**+1.4**
BMRM	**Bremner River**	**5.27**	**191**	P	**Pn**	**13 04 03.4**	**+0.6**
PPLA	**Purkeypile**	**5.28**	**236**	*e*Pn	**Pn**	**13 04 01.8**	**-1.1**
PMR	**Palmer**	**5.41**	**215**	*e*P	**Pn**	**13 04 06.4**	**+1.7**
EYAK	**Cordova Ski Ar**	**5.79**	**196**	P	**Pn**	**13 04 10.6**	**+0.5**
HYT	**Haines Junctio**	**5.79**	**155**	⇑Pn	**Pn**	**13 04 11.0**	**+1.0**
HYT				Sg	**Sg**	**13 05 43.6**	**-6.4**
HYT	**Haines Junctio**	**5.79**	**155**	⇑Pn	**Pn**	**13 04 11.0**	**+1.0**
HYT				⇓Sg	**Sg**	**13 05 43.6**	**-6.4**
WHY	**Whitehorse**	**6.49**	**144**	⇑Pn	**Pn**	**13 04 19.9**	**+0.3**
WHY				Sg	**Sg**	**13 06 05.2**	**-7.0**
WHY	**Whitehorse**	**6.49**	**144**	⇑Pn	**Pn**	**13 04 19.9**	**+0.3**
WHY				⇓Sg	**Sg**	**13 06 05.2**	**-7.0**
TTA	**Tatalina**	**6.63**	**247**	*e*Pg	**Pg**	**13 04 43.8**	**-7.1**
TTA				*e*Sg	**Sg**	**13 06 13.2**	**-3.5**
PLBC	**Pleasant Camp**	**7.28**	**154**	Pn	**Pn**	**13 04 33.6**	**+3.2**
PLBC				Sg	**Sg**	**13 06 30.2**	**-7.4**
PLBC	**Pleasant Camp**	**7.28**	**154**	⇓Pn	**Pn**	**13 04 33.6**	**+3.2**
PLBC				⇑Sg	**Sg**	**13 06 30.2**	**-7.4**
SVW2	**Sparrevohn**	**7.68**	**235**	*e*P	**Pn**	**13 04 37.0**	**+1.0**
DLBC	**Dease Lake**	**9.66**	**137**	*e*Pn	**Pn**	**13 05 04.1**	**+1.0**
DLBC				*e*Lg		13 07 40.9	
DLBC	**Dease Lake**	**9.66**	**137**	⇑Pn	**Pn**	**13 05 03.0**	**0.0**
DLBC				⇑Sg	Sn	13 07 48.9	+57
ROMN	**Roman Lake**	**10.43**	**89**	⇑Pn	**Pn**	**13 05 13.0**	**-0.6**
ROMN				Sn	**Sn**	**13 07 04.0**	**-6.3**
ROMN	**Roman Lake**	**10.43**	**89**	⇑Pn	**Pn**	**13 05 13.0**	**-0.6**
ROMN				⇓Sn	**Sn**	**13 07 04.0**	**-6.3**
CTLN	**Castor Lake**	**11.21**	**87**	⇓Pn	**Pn**	**13 05 23.2**	**-0.9**
CTLN				Sn	**Sn**	**13 07 21.8**	**-7.5**
CTLN	**Castor Lake**	**11.21**	**87**	⇓Pn	**Pn**	**13 05 23.2**	**-0.9**
CTLN				⇑Sn	**Sn**	**13 07 21.8**	**-7.5**
YKW3	**Yellowknife Ar**	**12.56**	**94**	⇓Pn	**Pn**	**13 05 41.1**	**-1.5**
YKW3				Sn	**Sn**	**13 07 53.0**	**-9.5**
YKW3	**Yellowknife Ar**	**12.56**	**94**	⇓Pn	**Pn**	**13 05 41.1**	**-1.5**
YKW3				⇓Sn	**Sn**	**13 07 53.0**	**-9.5**
YKA	**Yellowknife Ar**	**12.60**	**94**	Pn	**Pn**	**13 05 41.5**	**-1.7**
	0.4nm,0.3s,baz=296,slow=13,SNR=14						
YKA				Sn	**Sn**	**13 07 56.1**	**-7.2**
	0.4nm,0.3s,baz=296,slow=21,SNR=5.2						
YKA	**Yellowknife Ar**	**12.60**	**94**	Pn	**Pn**	**13 05 41.5**	**-1.7**
YKA				Sn	**Sn**	**13 07 56.1**	**-7.2**
RES	**Resolute Bay**	**17.55**	**41**	P	**Pn**	**13 06 51.6**	**+3.2**
	0.1nm,0.3s,baz=241,slow=13,SNR=3.9						
RES	**Resolute Bay**	**17.55**	**41**	⇑Pn	**Pn**	**13 06 49.6**	**+1.2**
PDAR	**Pinedale Array**	**29.63**	**126**	P	**P**	**13 08 52.8**	**+3.6**
	0.3nm,0.6s,mb3.2,baz=352,slow=5.6,SNR=3.1						
NVAR	**Mina Array Bea**	**31.05**	**141**	P	**P**	**13 09 07.2**	**+5.3**
	0.1nm,0.4s,mb3.0,baz=321,slow=7.0,SNR=3.1						
TXAR	**Lajitas Array**	**43.81**	**128**	P	**P**	**13 10 56.1**	**+6.3**
	0.2nm,0.7s,mb2.9,baz=350,slow=10,SNR=3.2						

*ISCJB **04** 13:12:41.5±0.6, 23°.84N±0°.03×119°.12E±0°.04, h20km±4km, Error ellipse: s-maj=6.1km s-min=4.3km az=141.5*
*TAP **04** 13:12:41.9, 23°.86N×119°.22E, h21km, ML3.5, C*
ISC 04 13:12:40.9±0.6, 23°.85N±0°.03×119°.14E±0°.04, h10km±3km, n41, σ0§62/74, 3C-1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNG	**Penghu**	**0.48**	**126**	↑*i*P	**Pg**	**13 12 50.6**	**+0.3**
	baz=132						
PNG				*e*S	**Sg**	**13 12 56.7**	**+0.2**
	baz=132						
WDGT	**Dungji**	**0.76**	**141**	*e*P	**Pg**	**13 12 55.7**	**+0.1**
	baz=145						
KNM	**Kinmen**	**0.85**	**311**	↑*i*P	**Pg**	**13 13 00.6**	**+3.3**
	baz=303						
KNM				*e*S	**Sg**	**13 13 13.8**	**+5.3**
	baz=303						
WSF	**Szhu**	**1.02**	**102**	*e*P	**Pg**	**13 12 60.0**	**-0.5**
	baz=103						
WSF				*e*S	**Sg**	**13 13 14.1**	**+0.4**
	baz=103						
WTCT	**Ta-ch'eng**	**1.05**	**89**	P	**Pg**	**13 13 00.2**	**-0.8**
	baz=90						
WTCT				*e*S	**Sg**	**13 13 14.5**	**-0.2**
	baz=90						
CHN8	**Yiju**	**1.11**	**117**	*e*P	**Pb**	**13 13 01.6**	**-0.5**
	baz=119						
CHN8				*e*S	**Sg**	**13 13 17.0**	**+0.3**
	baz=119						
SCLT	**Jiali**	**1.18**	**125**	*e*P	**Pb**	**13 13 02.9**	**-0.5**
	baz=127						
SCLT				*e*S	**Sb**	**13 13 19.3**	**+0.6**
	baz=127						
QZH	**Quanzhou**	**1.19**	**336**	↓*i*Pg	**Pg**	**13 13 03.9**	**0.0**
QZH				Sg	**Sg**	**13 13 19.5**	**+0.1**
QZH				smax			
	comp=N,800nm,0.2s						
QZH				smax			
	comp=E,2μm,0.2s						
CHY	**Chiayi**	**1.23**	**106**	P	**Pn**	**13 13 03.3**	**-0.8**
	baz=108						
CHY				*e*S	**Sb**	**13 13 20.5**	**+0.3**
	baz=108						
TAI1	**Yung-k'ang**	**1.29**	**129**	*e*P	**Pn**	**13 13 04.2**	**-0.7**
	baz=131						
TAI1				*e*S	**Sb**	**13 13 22.2**	**+0.4**
	baz=131						
WGK	**Gukeng**	**1.32**	**97**	P	**Pn**	**13 13 05.1**	**-0.2**
	baz=98						
WGK				*e*S	**Sb**	**13 13 22.8**	**+0.2**
	baz=98						
CHN3	**Shinhua**	**1.37**	**124**	*e*P	**Pn**	**13 13 05.6**	**-0.4**
	baz=127						
CHN3				*e*S	**Sb**	**13 13 24.6**	**+0.5**
	baz=127						
TWK	**Hsinying**	**1.37**	**115**	*e*P	**Pn**	**13 13 05.4**	**-0.6**
	baz=117						
TWK				*e*S	**Sb**	**13 13 24.4**	**+0.2**
	baz=117						
WNT	**Mingjian**	**1.42**	**89**	*e*P	**Pn**	**13 13 06.5**	**-0.1**
	baz=89						
WNT				*e*S	**Sn**	**13 13 24.6**	**-0.7**
	baz=89						
CHN5	**Tsauling**	**1.44**	**100**	↑*i*P	**Pn**	**13 13 05.9**	**-1.1**
	baz=101						
CHN5				S	**Sn**	**13 13 25.4**	**-0.5**
	baz=101						
TCU	**Taichung**	**1.44**	**78**	P	**Pn**	**13 13 06.9**	**-0.1**
	baz=78						
TCU				S	**Sn**	**13 13 25.8**	**-0.1**
	baz=78						
CHN1	**Nanshi**	**1.44**	**117**	*e*P	**Pn**	**13 13 06.1**	**-0.9**
	baz=119						
CHN1				*e*S	**Sn**	**13 13 26.0**	**0.0**
	baz=119						
WTP	**Ta-pu**	**1.48**	**114**	*e*P	**Pn**	**13 13 06.8**	**-0.8**
	baz=116						
WTP				*e*S	**Sn**	**13 13 26.4**	**-0.7**
	baz=116						
SGST	**Jiashian**	**1.53**	**120**	*e*P	**Pn**	**13 13 07.8**	**-0.5**
	baz=122						
SGST				*e*S	**Sn**	**13 13 28.2**	**-0.1**
	baz=122						
TWM1	**Shoushan**	**1.56**	**131**	*e*P	**Pn**	**13 13 10.3**	**+1.6**
	baz=133						
TWQ1	**Liyutan**	**1.57**	**71**	*e*P	**Pn**	**13 13 09.5**	**+0.6**
	baz=71						
TWQ1				*e*S	**Sn**	**13 13 29.4**	**+0.1**
	baz=71						
TYC	**Yuchr**	**1.58**	**88**	*e*P	**Pn**	**13 13 07.9**	**-1.0**
	baz=99						
TYC				*e*S	**Sn**	**13 13 29.4**	**0.0**
	baz=99						
NSY	**Sanyi**	**1.59**	**69**	*e*P	**Pn**	**13 13 09.2**	**+0.1**
	baz=69						
NSY				*e*S	**Sn**	**13 13 29.8**	**+0.3**
	baz=69						
SMLT	**Sun Moon Lake**	**1.61**	**89**	P	**Pn**	**13 13 08.6**	**-0.8**
	baz=89						
SMLT				*e*S	**Sn**	**13 13 30.7**	**+0.4**
	baz=89						
STYT	**Tauyuan**	**1.64**	**114**	P	**Pn**	**13 13 08.8**	**-0.9**
	baz=130						
STYT				*e*S	**Sn**	**13 13 31.2**	**+0.3**
	baz=130						
SSD	**Sandimen**	**1.76**	**128**	*e*P	**Pn**	**13 13 11.7**	**+0.3**
	baz=116						
SSD				*e*S	**Sn**	**13 13 34.5**	**+0.6**
	baz=116						
ELDTW	**Lidau**	**1.85**	**111**	*e*P	**Pn**	**13 13 12.1**	**-0.5**
	baz=112						
NSTT	**Nanjuang**	**1.87**	**65**	*e*P	**Pn**	**13 13 12.6**	**-0.3**
	baz=65						
NSTT				*e*S	**Sn**	**13 13 36.4**	**-0.2**
	baz=65						
TWT	**Tachien**	**1.91**	**78**	*e*P	**Pn**	**13 13 13.9**	**+0.5**
	baz=78						
TWT				*e*S	**Sn**	**13 13 37.7**	**+0.2**
	baz=78						
WHF	**Hehuan Shan**	**1.97**	**81**	*e*P	**Pn**	**13 13 14.8**	**+0.6**
	baz=81						
WHF				*e*S	**Sn**	**13 13 40.2**	**+1.2**
	baz=81						
SCZT	**Fangliau**	**2.01**	**137**	*e*P	**Pn**	**13 13 15.5**	**+0.6**
	baz=139						
EHY	**Hungye**	**2.03**	**99**	*e*P	**Pn**	**13 13 15.0**	**-0.2**
	baz=101						
EHY				*e*S	**Sn**	**13 13 40.5**	**-0.1**
	baz=101						
TWF1	**Yuli**	**2.04**	**104**	P	**Pn**	**13 13 15.2**	**-0.1**
	baz=105						
TWF1				*e*S	**Sn**	**13 13 40.9**	**0.0**
	baz=105						
TWG	**Pinlang**	**2.06**	**120**	*e*P	**Pn**	**13 13 18.0**	**+2.6**
	baz=122						
TWG				*e*S	**Sn**	**13 13 41.3**	**+0.2**
	baz=122						
ECL	**Taimali**	**2.09**	**126**	*e*P	**Pn**	**13 13 16.1**	**+0.2**
	baz=128						
ESL	**Shilin**	**2.10**	**91**	P	**Pn**	**13 13 16.0**	**-0.1**
	baz=91						
ESL				*e*S	**Sn**	**13 13 42.3**	**0.0**
	baz=91						
TTN	**Taitung**	**2.15**	**120**	*e*P	**Pn**	**13 13 17.1**	**+0.4**
	baz=122						
EAST	**Anshuo**	**2.15**	**133**	*e*P	**Pn**	**13 13 16.7**	**-0.1**
	baz=135						
EAST				*e*S	**Sn**	**13 13 43.3**	**-0.2**
	baz=135						
ENTT	**Nioudou**	**2.35**	**70**	*e*P	**Pn**	**13 13 18.6**	**-1.0**
	baz=70						
ENA	**Nanau**	**2.45**	**76**	*e*P	**Pn**	**13 13 21.7**	**+0.8**
	baz=76						
TWE	**Neicheng**	**2.47**	**69**	*e*P	**Pn**	**13 13 21.9**	**+0.8**
	baz=56						
TWE				*e*S	**Sn**	**13 13 51.9**	**+0.6**
	baz=56						

*ISCJB **04** 13:25:39.7±1.7, 27°.1S±0°.2×178°.5W±0°.3, h249km±14km, mb3.8/8, Error ellipse: s-maj=41.2km s-min=26.4km az=144.5*
*IDC **04** 13:25:40.9±1.4, 27°.13S×178°.45W, h243km±11km, mb3.6/6, mb1 3.8/7, mb1mx3.5/17, mbtmp3.7/7, Error ellipse: s-maj=27.2km s-min=17.6km az=43.0*
*NEIC **04** 13:25:41.0±1.2, 27°.08S×178°.40W, h248km±11km, mb3.9/3, Error ellipse: s-maj=21.3km s-min=16.3km az=208.0*
ISC 04 13:25:40.7±1.6, 27°.1S±0°.2×178°.5W±0°.3, h243km±14km, n18, σ0§65/12, mb3.8/8, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.21**	**167**	P	**Pn**	**13 26 25.1**	**+0.6**
	113nm,0.3s,baz=274,slow=23,SNR=9.0						
RAO				S	**S**	**13 26 58.7**	**-0.5**
	166nm,0.3s,baz=260,slow=24,SNR=7.4						
CTA	**Charters Tower**	**32.99**	**275**	P	**P**	**13 31 54.9**	**+1.7**
	1.5nm,0.5s,mb3.8,baz=100,slow=8.6,SNR=6.6						
CTAO	**Charters Tower**	**32.99**	**275**	*e*P	**P**	**13 31 54.3**	**+1.1**
	1.5nm,0.4s,mb3.9						
ASAR	**Alice Springs**	**42.97**	**264**	P	**P**	**13 33 16.2**	**-0.1**
	0.5nm,0.3s,mb3.4,baz=97,slow=7.5,SNR=18						
WRAB	**Tennant Creek**	**43.64**	**269**	*e*P	**P**	**13 33 20.7**	**-1.0**
	1.6nm,0.6s,mb3.5						
WRA	**Warramunga Arr**	**43.65**	**269**	P	**P**	**13 33 21.6**	**-0.2**
	2.0nm,0.7s,mb3.6,baz=108,slow=7.6,SNR=23						
QSPA	**South Pole Qui**	**63.01**	**180**	P	**P**	**13 35 42.0**	**+0.7**
	3.4nm,0.8s,mb4.0,baz=40,slow=1.9,SNR=21						
QSPA	**South Pole Qui**	**63.01**	**180**	P	**P**	**13 35 42.0**	**+0.7**
MAW	**Mawson**	**75.26**	**200**	P	**P**	**13 36 56.0**	**-0.5**
	1.4nm,0.5s,mb3.8,baz=142,slow=8.5,SNR=4.3						
MJAR	**Matsushiro Arr**	**75.29**	**325**	P	**P**	**13 36 56.9**	**-0.2**
	1.5nm,0.6s,mb3.8,baz=150,slow=5.5,SNR=5.5						
MAJO	**Matsushiro**	**75.29**	**325**	*e*P	**P**	**13 36 56.9**	**-0.2**
	2.2nm,0.6s,mb4.0						
ARCES	**ARCESS Array B**	**135.27**	**348**	PKP	PKPdf	13 44 30.4	-0.1
	1.4nm,0.7s,baz=13,slow=1.9,SNR=3.8						
NOA	**NORSAR Array B**	**145.42**	**352**	PKPbc	PKPbc	13 44 49.2	-0.4
	0.4nm,0.4s,baz=16,slow=2.6,SNR=3.6						
NOA	**NORSAR Array B**	**145.42**	**352**	PKPbc	PKPbc	13 44 49.2	-0.4
ASF	**Jabal al Asfar**	**148.93**	**288**	PKPbc	PKPbc	13 45 00.3	+0.2
	0.6nm,0.6s,baz=114,slow=22,SNR=3.8						
MMAI	**Mount Meron Ar**	**150.17**	**290**	PKPbc	PKPbc	13 45 03.8	+0.7
	3.3nm,0.4s,baz=76,slow=7.0,SNR=12						
BRTR	**Keskin Array B**	**150.54**	**304**	PKPbc	PKPbc	13 45 03.0	-0.7
	0.6nm,0.6s,baz=135,slow=4.5,SNR=3.3						
TORD	**Torodi Ar. Bea**	**166.13**	**181**	PKPab	PKPab	13 46 18.1	-1.0
	0.2nm,0.5s,baz=185,slow=3.7,SNR=3.6						

*CSEM **04** 13:32:26.0, 12°.42N×44°.24E, h9km, ML3.7, After DHMR*
DHMR 04 13:32:26.0±1.0, 12°.42N×44°.24E, h9km±13km, ML3.7, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UDYN	**Al 'Udayn**	**1.56**	**350**	*i* P	Pn	13 32 55.0	+1.0
UDYN				*i* S	Sn	13 33 16.2	+1.9
UDYN				AML	AML	13 33 22.5	
	comp=E,1μm,0.4s						
UDYN	**Al 'Udayn**	**1.56**	**350**	*i* P	Pn	13 32 55.0	+1.0
UDYN				*i* S	Sn	13 33 16.2	+1.8
	comp=E,518nm,0.4s						
BDHA	**Al Bayda'**	**2.02**	**40**	*i* P	Pn	13 33 01.2	+1.0
BDHA				*i* S	Sn	13 33 29.8	+4.3
BDHA				AML	AML	13 33 41.9	
	comp=E,643nm,0.5s						
BDHA	**Al Bayda'**	**2.02**	**40**	*i* P	Pn	13 33 01.2	+1.0
BDHA				*i* S	Sn	13 33 29.8	+4.2
	comp=E,321nm,0.5s						
DHBB	**Dhamar BB**	**2.15**	**4**	*i* P	Pn	13 33 03.7	+1.7
DHBB				*i* S	Sn	13 33 33.2	+4.4
DHBB	**Dhamar BB**	**2.15**	**4**	*i* P	Pn	13 33 03.7	+1.7
DHBB				*i* S	Sn	13 33 33.2	+4.4
HAJJ	**Hajjah**	**3.32**	**349**	*i* P	Pn	13 33 20.8	+2.6
HAJJ				*i* S	Sn	13 34 03.9	+6.1
HAJJ				AML	AML	13 34 21.2	
	comp=Z,419nm,0.6s						
HAJJ	**Hajjah**	**3.32**	**349**	*i* P	Pn	13 33 20.8	+2.6
HA

610nm661nm,0.8s
KAKA Kakadu 8.14 128 *e*P **Pn 13 50 16.2 -1.7**
14nm,0.6s
KAKA *e*S **Sn 13 51 50.5 +1.9**
KAKA Kakadu 8.14 128 *e*Pn **Pn 13 50 16.1 -1.8**
94nm,1.0s
KAKA *e*Sn **Sn 13 51 49.8 +1.2**
KAKA Kakadu 8.14 128 P **Pn 13 50 18.1 +0.2**
393nm35nm,0.7s
KNA Kununurra 8.46 161 P **Pn 13 50 22.5 +0.1**
728nm66nm,0.9s
MRSI Marisa 9.05 334 P **Pn 13 50 25.3 -5.1**
11nm,1.2s
PCI Palu 9.07 318 P **Pn 13 50 31.7 +1.0**
860nm73nm,1.2s
FITZ Fitzroy Crossi 10.32 181 *e*P **Pn 13 50 48.5 +0.7**
19nm,0.6s
FITZ *e*S **Sn 13 52 38.5 -3.7**
FITZ Fitzroy Crossi 10.32 181 Pn **Pn 13 50 49.0 +1.2**
1.3nm,0.3s,baz=7.2,slow=8.3,SNR=57
FITZ Sn **Sn 13 52 40.0 -2.1**
2.4nm,0.3s,baz=97,slow=14,SNR=7.8
FITZ Fitzroy Crossi 10.32 181 P **Pn 13 50 49.4 +1.6**
MBWA Marble Bar 14.62 203 *e*Pn **Pn 13 51 44.7 -1.8**
6.6nm,0.8s
WRAB Tennant Creek 14.65 147 *e*Pn **Pn 13 51 46.4 -0.5**
16nm,0.9s
WRAB Tennant Creek 14.65 147 P **Pn 13 51 51.8 +4.9**
WRA Warramunga Arr 14.65 147 Pn **Pn 13 51 43.0 -4.0**
0.4nm,0.3s,baz=315,slow=14,SNR=22
WRA Sn **Sn 13 54 21.1 -6.9**
0.6nm,0.3s,baz=319,slow=26,SNR=6.1
WRA LR LR 13 58 09.7
comp=Z,99nm,18.6s,baz=315,slow=40
KKM Kota Kinabalu 16.73 325 *e*Pn **Pn 13 52 14.5 +0.7**
50nm,1.1s
ASAR Alice Springs 17.62 155 P **Pn 13 52 25.0 +0.3**
0.4nm,0.3s,baz=333,slow=12,SNR=47
ASAR S **S 13 55 34.8 -11**
0.2nm,0.3s,baz=321,slow=19,SNR=4.9
PMG Port Moresby 21.11 96 *e*P **P 13 53 02.7 -0.7**
40nm,1.1s,mb4.7
CTA Charters Tower 23.25 124 *e*P **P 13 53 25.2 -0.9**
5.8nm,0.8s,mb4.1
CTA Charters Tower 23.25 124 P **P 13 53 25.7 -0.5**
3.5nm,0.6s,mb4.0,baz=296,slow=12,SNR=4.1
CTA LR LR 14 02 52.7
comp=Z,128nm,19.2s,MS3.4,baz=338,slow=38
CTA Charters Tower 23.25 124 P **P 13 53 25.7 -0.5**
CTA LR LR 14 02 52.7
NWAO Narrogin (SRO) 26.33 197 *e*P **P 13 53 54.1 0.0**
14nm,1.1s,mb4.4
STKA Stephens Creek 28.14 151 *e*P **P 13 54 12.0 +1.6**
4.6nm,1.5s,mb3.9
STKA Stephens Creek 28.14 151 P **P 13 54 12.5 +2.1**
2.0nm,0.7s,mb3.8,baz=323,slow=9.1,SNR=5.9
STKA LR LR 14 06 54.8
comp=Z,135nm,18.7s,MS3.6,baz=207,slow=40
STKA Stephens Creek 28.14 151 *e*P **P 13 54 11.7 +1.3**
0.2nm,0.5s
STKA LR LR 14 06 54.8
PSI Prapat 28.86 290 LR LR 14 07 37.0
comp=Z,119nm,20.0s,MS3.5,baz=175,slow=40
COCO West Island 28.94 259 *e*P **P 13 54 18.7 +0.9**
33nm,0.5s,mb5.3
HNR Honiara 33.72 95 LR LR 14 06 58.8
comp=Z,87nm,22.0s,MS3.4,baz=44,slow=33
CMAR Chiang Mai Arr 37.19 315 P **P 13 55 30.0 +0.4**
1.4nm,0.7s,mb3.9,baz=140,slow=7.0,SNR=6.2
KSRS Korea Array 44.98 2 P **P 13 56 36.4 +3.0**
1.0nm,0.9s,mb3.7,baz=181,slow=7.4,SNR=4.6
KSRS LR LR 14 13 37.8
comp=Z,15nm,19.1s,MS3.0,baz=185,slow=34
MJAR Matsushiro Arr 45.53 14 LR LR 14 12 50.7
comp=Z,43nm,21.5s,MS3.4,baz=185,slow=33
SONM Songino Array 57.94 345 P **P 13 58 09.5 -0.6**
0.3nm,0.3s,mb3.8,baz=160,slow=9.1,SNR=4.5
PETK Petropavlovsk- 66.35 20 P **P 13 59 05.2 -1.1**
1.9nm,1.0s,mb4.1,baz=226,slow=7.7,SNR=2.8
PETK Petropavlovsk- 66.35 20 P **P 13 59 05.2 -1.1**
MK31 Makanchi Array 66.66 329 *e*P **P 13 59 07.3 -1.2**
MKAR Makanchi Array 66.66 329 P **P 13 59 08.3 -0.2**
0.9nm,0.7s,mb3.9,baz=120,slow=7.2,SNR=7.6
MKAR Makanchi Array 66.66 329 P **P 13 59 08.3 -0.2**
ZALV Zalesovo Beam 70.49 336 P **P 13 59 30.7 -1.5**
0.4nm,0.3s,mb3.8,baz=116,slow=3.4,SNR=4.0
KURK Kurchatov 71.06 330 P **P 13 59 34.2 -1.6**
1.3nm,1.0s,mb3.8,baz=126,slow=6.2,SNR=6.7
BVAR Borovoye Array 76.54 329 P **P 14 00 08.6 +0.7**
0.3nm,0.3s,mb3.7,baz=120,slow=5.7,SNR=3.5
AKTK Aktyubinsk 82.17 323 P **P 14 00 39.0 +0.4**
AKTO Aktyubinsk 82.17 323 P **P 14 00 39.0 +0.4**
1.4nm,0.8s,mb3.9,baz=106,slow=6.3,SNR=3.8
QSPA South Pole Qui 82.26 180 P **P 14 00 40.7 +2.2**
1.1nm,0.8s,mb3.9,baz=325,slow=3.7,SNR=7.5
KMBO Kilima Mbogo 88.49 269 LR LR 14 37 54.8
comp=Z,53nm,19.6s,MS4.0,baz=74,slow=34
KDAK Kodiak Island 91.98 32 LR LR 14 39 25.4
comp=Z,122nm,20.7s,MS4.3,baz=257,slow=34

*IDC **04** 14:01:24.8±2.2,8°.33S×105°.43E, h0km, mb3.8/8, mb1 3.9/8, mb1mx3.7/21, mbtmp3.8/8, Error ellipse: s-maj=88.1km s-min=17.8km az=55.0*
*ISCJB **04** 14:01:27.0±1.5, 8°.37S±0°.08×105°.31E±0°.08, h34km±12km, mb3.9/11, Error ellipse: s-maj=16.0km s-min=11.5km az=135.4*
*NEIC **04** 14:01:27.4±1.2, 8°.83S×104°.90E, h35km, mb4.0/4, Error ellipse: s-maj=55.5km s-min=12.2km az=57.0*
*DJA **04** 14:01:30, 8°.13S×105°.14E, h29km, MLv3.9/11*
ISC 04 14:01:28.3±2.8, 8°.29S±0°.06×105°.39E±0°.08, h24km±21km, n28, σ1°33/32, mb3.9/11, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGJI	**Cibinong**	**1.69**	**10**	P	**Pn**	**14 01 56.4**	**0.0**
CGJI				S	**Sn**	**14 02 17.2**	**-0.2**
SKJI	**Sukabumi**	**1.73**	**42**	P	**Pn**	**14 02 01.6**	**+4.7**
SKJI				S	**Sn**	**14 02 17.1**	**-1.1**
SBJI	**Serang**	**2.28**	**19**	P	**Pn**	**14 02 06.0**	**+1.5**
CBJI	**Citeko**	**2.36**	**38**	P	**Pn**	**14 02 03.8**	**-1.8**
CBJI				S	**Sn**	**14 02 43.8**	**+10**
TNG	**Tangerang**	**2.45**	**31**	P	**Pn**	**14 02 09.4**	**+2.6**
TNG				P	**Pn**	**14 02 10.9**	**+4.1**
RBSI	**Rajabasa**	**2.46**	**8**	P	**Pn**	**14 02 10.0**	**+3.1**
RBSI				S	**Sn**	**14 02 27.8**	**-8.4**
LEM	**Lembang**	**2.65**	**57**	P	**Pn**	**14 02 12.7**	**+3.1**
KASI	**Kota Agung**	**2.89**	**342**	P	**Pn**	**14 02 12.5**	**-0.4**
BLSI	**Bandar Lampung**	**2.91**	**357**	P	**Pn**	**14 02 10.7**	**-2.4**
KLI	**Kotabumi**	**3.45**	**351**	P	**Pn**	**14 02 20.7**	**+0.1**
LWLI	**Liwa**	**3.51**	**338**	P	**Pn**	**14 02 19.4**	**-2.0**
KLSI		**3.64**	**350**	P	**Pn**	**14 02 22.8**	**-0.4**
MBWA	**Marble Bar**	**18.85**	**134**	*e*P	**Pn**	**14 05 41.4**	**-6.1**
	9.6nm,1.1s						
NWAO	**Narrogin (SRO)**	**26.86**	**158**	*e*P	**P**	**14 07 02.8**	**-4.4**
	6.8nm,0.9s,mb4.2						
CMAR	**Chiang Mai Arr**	**27.33**	**347**	P	**P**	**14 07 12.8**	**+1.3**
	0.6nm,0.4s,mb3.5,baz=176,slow=7.7,SNR=4.2						
WRA	**Warramunga Arr**	**30.32**	**116**	P	**P**	**14 07 38.9**	**+0.7**
	0.2nm,0.5s,mb3.1,baz=289,slow=10,SNR=3.7						
WRAB	**Tennant Creek**	**30.32**	**116**	*e*P	**P**	**14 07 37.9**	**-0.4**
	2.9nm,0.9s,mb4.0						
ASAR	**Alice Springs**	**31.30**	**123**	P	**P**	**14 07 47.0**	**+0.2**
	0.3nm,0.7s,mb3.2,baz=305,slow=8.4,SNR=3.0						
STKA	**Stephens Creek**	**41.01**	**130**	P	**P**	**14 09 07.4**	**-2.3**
	2.9nm,1.0s,mb3.9,baz=329,slow=17,SNR=2.5						
STKA	**Stephens Creek**	**41.01**	**130**	*e*P	**P**	**14 09 07.3**	**-2.4**
	1.4nm,1.2s,mb3.5						
GTA	**Gaotai**	**47.74**	**354**	*e*P	**P**	**14 10 05.6**	**+2.2**
GTA				pP	pP	14 10 09.5	-1.2
GTA				sP	sP	14 10 12.1	-1.5
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.2						
KSRS	**Korea Array**	**50.16**	**23**	P	**P**	**14 10 20.7**	**-1.2**
	comp=Z,1.3nm,0.8s,mb4.0,baz=213,slow=8.8,SNR=4.8						
SONM	**Songino Array**	**55.89**	**1**	P	**P**	**14 11 04.6**	**+0.6**
	comp=Z,0.9nm,0.5s,mb4.1,baz=173,slow=9.2,SNR=5.7						
MK31	**Makanchi Array**	**58.57**	**342**	*e*P	**P**	**14 11 22.4**	**-0.6**
MK31				*e*		14 11 34.6	
MKAR	**Makanchi Array**	**58.57**	**342**	P	**P**	**14 11 23.4**	**+0.4**
	comp=Z,1.2nm,0.7s,mb4.1,baz=150,slow=8.3,SNR=8.1						
ZALV	**Zalesovo Beam**	**64.39**	**347**	P	**P**	**14 12 02.7**	**+0.5**
	comp=Z,1.2nm,0.3s,mb4.3,baz=134,slow=4.3,SNR=5.8						
ZALV	**Zalesovo Beam**	**64.39**	**347**	P	**P**	**14 12 02.7**	**+0.5**
TXAR	**Lajitas Array**	**145.62**	**49**	PKPbc	PKPbc	14 21 06.6	+1.0
	comp=Z,0.3nm,0.8s,baz=262,slow=2.5,SNR=3.8						

*IDC **04** 14:24:29.9±0.6, 51°.75N×175°.72E, h0km, mb4.2/22, mb1 4.4/24, mb1mx4.3/33, mbtmp4.2/24, ML4.4/2, MS3.4/16, Ms1 3.4/16, ms1mx3.2/43, Error ellipse: s-maj=18.7km s-min=11.8km az=162.0*
*MOS **04** 14:24:32.4±1.3, 51°.76N×175°.76E, h29km, mb4.6/32, Error ellipse: s-maj=11.6km s-min=7.8km az=104.4*
*ISCJB **04** 14:24:35.5±0.8, 51°.85N±0°.07×175°.81E±0°.04, h51km±6km, mb4.5/60, MS3.4/21, Error ellipse: s-maj=11.1km s-min=4.3km az=177.9*
*BJI **04** 14:24:36.0, 51°.95N×174°.99E, h26km, mB4.8/17, mb4.7/24, Ms4.2/11, Ms7 3.9/12*
*NEIC **04** 14:24:36.9±0.8, 51°.84N×175°.70E, h51km±6km, mb4.4/18, ML4.3(PMR), ML4.2(AEIC), Error ellipse: s-maj=12.8km s-min=4.9km az=176.0*
ISC 04 14:24:36.7±0.7, 51°.84N±0°.06×175°.78E±0°.04, h45km±6km, h35km±1.4km: pP-P, n136, σ1°07/130, mb4.5/60, MS3.4/21, 4C-1D, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMY	**Shemya**	**1.36**	**311**	*e*P	**Pn**	**14 24 58.6**	**-0.6**
SMY				S	**Sn**	**14 25 16.0**	**-0.1**
FX1	**Attu Island--F**	**1.91**	**304**	P	**Pn**	**14 25 05.9**	**-0.8**
FX1				S	**Sn**	**14 25 30.8**	**+1.2**
AMKA	**Amchitka**	**2.25**	**101**	P	**Pn**	**14 25 11.1**	**-0.2**
SPIA	**Saint Paul Isl**	**9.72**	**51**	P	**Pn**	**14 26 56.0**	**+2.2**
PET	**Petropavlovsk**	**10.53**	**283**	*e*P	**Pn**	**14 27 02.0**	**-2.8**
PET				*e*S	**Sn**	**14 28 53.5**	**-7.6**
PET				smax			
	comp=E,48nm,0.5s						
PET				smax			
	comp=N,26nm,0.5s						
PET				MLR	MLR		
	comp=Z,100nm,15.0s						
PET	**Petropavlovsk**	**10.53**	**283**	*e*Pn	**Pn**	**14 27 03.1**	**-1.6**
UNV	**Unalaska Valle**	**10.91**	**72**	*e*Pn	**Pn**	**14 27 12.2**	**+2.3**
PEA0B	**Petropavlovsk-**	**11.10**	**284**	*e*Pn	**Pn**	**14 27 14.8**	**+2.2**
PEA0B				*e*Sn	**Sn**	**14 29 08.2**	**-7.0**
PETK	**Petropavlovsk-**	**11.10**	**284**	Pn	**Pn**	**14 27 10.0**	**-2.6**
	comp=Z,0.6nm,0.3s,baz=92,slow=20,SNR=21						
PETK				Sn	**Sn**	**14 29 07.2**	**-8.0**
	comp=Z,0.9nm,0.3s,baz=87,slow=31,SNR=4.7						
PETK				LR	LR	14 30 51.7	
	comp=Z,88nm,21.7s,baz=128,slow=34						
PETK	**Petropavlovsk-**	**11.10**	**284**	P	**Pn**	**14 27 10.0**	**-2.6**
PETK						14 29 07.2	
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK				smax			
	comp=N,1.0nm,0.3s						
PETK				MLR	MLR		
	comp=Z,88nm,21.7s						
AKUT	**Akutan**	**11.36**	**71**	*e*P	**Pn**	**14 27 18.6**	**+2.5**
	comp=Z,40nm,0.3s						
SDPT	**Sand Point**	**14.51**	**67**	*e*P	**Pn**	**14 27 58.4**	**-0.6**
	comp=Z,7.3nm,0.3s						
SEY	**Seymchan**	**16.69**	**321**	*e*P	**Pn**	**14 28 26.0**	**-1.0**
BILL	**Bilibino**	**16.89**	**348**	*e*P	**Pn**	**14 28 31.2**	**+1.7**
BILL				pmax	pmax		
	comp=Z,15nm,1.7s						
BILL				MLR	MLR		
	comp=Z,100nm,15.0s						
BILL	**Bilibino**	**16.89**	**348**	*e*P	**Pn**	**14 28 33.4**	**+3.9**
	comp=Z,4.0nm,0.9s						
SVW2	**Sparrevohn**	**18.19**	**48**	*e*P	**Pn**	**14 28 46.4**	**+0.9**
	comp=Z,20nm,1.8s						
OHAK	**Old Harbor**	**18.64**	**61**	*e*P	**Pn**	**14 28 49.1**	**-1.8**
	comp=Z,12nm,0.3s						
TTA	**Tatalina**	**18.65**	**43**	*e*P	**Pn**	**14 28 51.8**	**+0.8**
KDAK	**Kodiak Island**	**19.06**	**59**	P	**Pn**	**14 28 54.0**	**-1.9**
	comp=Z,4.9nm,0.3s,baz=254,slow=5.7,SNR=26						
KDAK	**Kodiak Island**	**19.06**	**59**	*i* P	**Pn**	**14 28 53.6**	**-2.4**
KDAK	**Kodiak Island**	**19.06**	**59**	*e*P	**Pn**	**14 28 53.8**	**-2.2**
RSO	**Redoubt South**	**19.36**	**51**	*e*P	**Pn**	**14 28 59.7**	**0.0**
PPLA	**Purkeypile**	**20.27**	**45**	*e*P	**P**	**14 29 08.6**	**+0.5**
	comp=Z,9.4nm,0.4s						
RC01	**Rabbit Creek A**	**20.94**	**50**	*e*P	**P**	**14 29 13.6**	**-1.7**
	comp=Z,25nm,1.0s						
TRF	**Thorofare Moun**	**21.26**	**44**	*e*P	**P**	**14 29 18.5**	**-0.2**
	comp=Z,21nm,1.0s,mb4.4						
PMR	**Palmer**	**21.32**	**49**	*e*P	**P**	**14 29 18.9**	**-0.5**
PMR				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.6						
PMR	**Palmer**	**21.32**	**49**	*e*P	**P**	**14 29 18.9**	**-0.5**
	comp=Z,2.4nm,0.6s,mb3.7						
YSS	**Yuzh-Sakhalins**	**21.92**	**270**	⇑*i*P	**P**	**14 29 28.9**	**+3.0**
MCK	**McKinley**	**21.92**	**44**	*e*P	**P**	**14 29 24.9**	**-0.9**
MCK				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.3						
MCK	**McKinley**	**21.92**	**44**	*e*P	**P**	**14 29 24.9**	**-0.9**
	comp=Z,14nm,1.0s,mb4.3						
COLD	**Coldfoot**	**22.69**	**34**	*e*P	**P**	**14 29 35.0**	**+1.1**
	comp=Z,2.5nm,0.5s,mb3.9						
COLA	**College**	**22.71**	**41**	*e*P	**P**	**14 29 33.8**	**-0.3**
COLA				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.2						
COLA	**College**	**22.71**	**41**	*e*P	**P**	**14 29 33.8**	**-0.3**
	comp=Z,9.3nm,0.9s,mb4.2						
ASAJ	**Asahikawa**	**23.36**	**264**	P	**P**	**14 29 40.4**	**-0.7**
	comp=Z,11nm,0.8s,mb4.4,baz=22,slow=4.1,SNR=9.3						
ASAJ	**Asahikawa**	**23.36**	**264**	P	**P**	**14 29 40.4**	**-0.6**
ASAJ				pmax	pmax		
	comp=Z,11nm,0.8s						
BMRM	**Bremner River**	**23.40**	**52**	*e*P	**P**	**14 29 40.8**	**-0.5**
	comp=Z,13nm,0.8s,mb4.4						
MENT	**Contasta**	**24.05**	**47**	*e*P	**P**	**14 29 46.5**	**-0.7**
ERM	**Erimo**	**24.16**	**259**	*e*P	**P**	**14 29 49.5**	**+1.1**
ERM				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.4						
ERM	**Erimo**	**24.16**	**259**	*e*P	**P**	**14 29 49.5**	**+1.1**
	comp=Z,10nm,0.6s,mb4.4						
EGAK	**Eagle**	**25.47**	**43**	*e*P	**P**	**14 29 59.2**	**-0.8**
	comp=Z,41nm,1.6s,mb4.7						
PNL	**Peninsula**	**25.96**	**55**	*e*P	**P**	**14 30 03.8**	**-0.7**
	comp=Z,30nm,0.8s,mb4.9						
HABR	**Khabarovsk**	**26.07**	**279**	*e*P	pP	14 30 16.2	-1.3
HABR				S	**S**	**14 34 32.9**	**-0.5**
HABR				*e**SS	sS	14 34 48.6	-4.8
HABR				SS		14 35 33.4	
HABR				*e*		14 40 56.1	
HABR				pmax	pmax		
	comp=Z,46nm,2.7s,mb4.5						
HABR				MLR	MLR		
	comp=Z,36nm,16.0s,MS3.0						
DAWY	**Dawson**	**26.12**	**45**	*e*P	**P**	**14 30 06.4**	**+0.4**
YAK	**Yakutsk**	**26.56**	**311**	*e*P	**P**	**14 30 07.9**	**-2.0**
YAK				pmax	pmax		
	comp=Z,24nm,0.9s,mb4.7						
YAK	**Yakutsk**	**26.56**	**311**	*e*P	**P**	**14 30 09.0**	**-0.9**
	comp=Z,28nm,0.8s,mb4.8						
HYT	**Haines Junctio**	**26.86**	**52**	*e*P	**P**	**14 30 12.9**	**+0.2**
INK	**Inuvik**	**29.06**	**36**	P	**P**	**14 30 31.9**	**-0.3**
	comp=Z,0.8nm,0.3s,mb3.9,baz=285,slow=7.3,SNR=4.5						
INK				LR	LR	14 42 35.3	
	comp=Z,67nm,21.4s,MS3.2,baz=250,slow=37						
INK	**Inuvik**	**29.06**	**36**	P	**P**	**14 30 31.9**	**-0.3**
INK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
INK				MLR	MLR		
	comp=Z,67nm,21.4s						
MJAR	**Matsushiro Arr**	**30.57**	**255**	LR	LR	14 41 10.4	
	comp=Z,79nm,21.0s,MS3.3,baz=90,slow=33						
DLBC	**Dease Lake**	**30.92**	**56**	P	**P**	**14 30 49.9**	**+1.2**
	comp=Z,3.4nm,0.3s,mb4.6,baz=291,slow=14,SNR=6.7						
DLBC				LR	LR	14 43 17.6	
	comp=Z,106nm,19.0s,MS3.5,baz=80,slow=36						
MDJ	**Mudanjiang**	**31.16**	**275**	P	**P**	**14 30 50.2**	**-0.8**
MDJ				sP	sP	14 31 00.3	-8.0
MDJ				S	**S**	**14 35 55.5**	**+1.9**
MDJ				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.5						
MDJ				pmax	pmax		
	comp=Z,67nm,8.8s						
MDJ				LR	LR		
	comp=Z,39nm,26.1s,MS3.0						
BBB	**Bella Bella**	**33.80**	**67**	LR	LR	14 42 44.3	
	comp=Z,51nm,21.1s,MS3.2,baz=161,slow=32						
CBIJ	**Chichi jima**	**35.31**	**239**	LR	LR	14 46 21.4	
	comp=Z,27nm,18.5s,MS3.0,baz=112,slow=37						
KSRS	**Korea Array**	**36.27**	**266**	P	**P**	**14 31 34.8**	**-0.7**
	comp=Z,3.0nm,0.8s,mb4.3,baz=58,slow=8.2,SNR=13						
KSRS				LR	LR	14 44 23.0	
	comp=Z,31nm,21.1s,MS3.1,baz=336,slow=33						
YKA	**Yellowknife Ar**	**37.35**	**46**	P	**P**	**14 31 44.4**	**+0.1**
	comp=Z,0.9nm,0.5s,mb3.9,baz=286,slow=7.4,SNR=8.2						
YKA	**Yellowknife Ar**	**37.35**	**46**	P	**P**	**14 31 44.4**	**+0.1**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
RES	**Resolute Bay**	**40.71**	**24**	P	**P**	**14 32 14.2**	**+1.9**
	comp=Z,1.7nm,0.6s,mb3.9,baz=263,slow=9.4,SNR=4.5						
RES				LR	LR	14 50 13.3	
	comp=Z,40nm,21.3s,MS3.2,baz=233,slow=38						
RES	**Resolute Bay**	**40.71**	**24**	P	**P**	**14 32 14.2**	**+1.9**
RES				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
RES				MLR	MLR		
	comp=Z,40nm,21.3s,MS3.2						
TLY	**Talaya**	**42.93**	**300**	*e*P	**P**	**14 32 31.1**	**+0.5**
TLY				*e*S	**S**	**14 38 59.8**	**+7.7**
TLY				*e*SS	SS	14 42 06.2	+1.8
TLY				pmax	pmax		
	comp=Z,4.0nm,1.4s,mb4.0						
TLY				MLR	MLR		
	comp=Z,32nm,15.0s,MS3.3						
SONM	**Songino Array**	**43.39**	**293**	P	**P**	**14 32 35.0**	**+0.6**
	comp=Z,3.4nm,0.6s,mb4.2,baz=62,slow=8.3,SNR=22						
SONM				PcP	PcP	14 34 22.5	+0.4
	comp=Z,1.4nm,0.7s,baz=32,slow=2.9,SNR=4.3						
SONM				LR	LR	14 51 05.5	
	comp=Z,54nm,18.5s,MS3.5,baz=3.7,slow=37						
SONM	**Songino Array**	**43.39**	**293**	P	**P**	**14 32 35.0**	**+0.6**
SONM						14 34 22.5	
SONM				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM				MLR	MLR		
	comp=Z,54nm,18.5s						
BSMT	**Bassoo Peak**	**43.41**	**67**	*e*P	**P**	**14 32 35.2**	**+0.7**
	comp=Z,3.1nm,0.8s,mb4.1						
HHC	**Hu-ho-hao-te**	**44.30**	**282**	*e*P	**P**	**14 32 43.0**	**+1.2**
HHC				sP	sP	14 32 56.5	-2.9
HHC				PP	PP	14 34 27.0	+1.6
HHC				PcP	PcP	14 34 28.1	+2.8
HHC				ScP	ScP	14 38 16.3	+2.9
HHC				PcS	PcS	14 38 20.2	+1.7
HHC				S	**S**	**14 39 13.1**	**+0.8**
HHC				sS	sS	14 39 29.8	-3.1
HHC				SS	SS	14 42 22.9	-8.6
HHC				ScS	ScS	14 42 36.1	+0.3
HHC				pmax	pmax		
	comp=Z,17nm,0.7s,mb4.9						
HHC				pmax	pmax		
	comp=Z,57nm,6.8s						
HHC				LR	LR		
	comp=N,110nm,15.5s,MS4.0						
HHC				LR	LR		
	comp=E,98nm,15.3s,MS4.0						
HHC				LR	LR		
	comp=Z,110nm,15.4s,MS3.9						
GUMO	**Guam**	**45.52**	**224**	LR	LR	14 49 19.5	
	comp=Z,42nm,19.1s,MS3.4,baz=88,slow=33						
WAKR	**Walker**	**46.08**	**80**	*e*P	**P**	**14 32 57.4**	**+1.5**
NVAR	**Mina Array Bea**	**46.82**	**80**	P	**P**	**14 33 02.5**	**+0.8**
	comp=Z,0.4nm,0.4s,mb3.7,baz=359,slow=30,SNR=6.8						
PDAR	**Pinedale Array**	**49.35**	**69**	P	**P**	**14 33 20.5**	**-0.7**
	comp=Z,0.5nm,0.3s,mb4.0,baz=310,slow=3.7,SNR=6.1						
GSC	**Goldstone**	**49.76**	**82**	*e*P	**P**	**14 33 23.9**	**-0.5**
GSC				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
GSC	**Goldstone**	**49.76**	**82**	*e*P	**P**	**14 33 23.9**	**-0.5**
	comp=Z,3.3nm,0.6s,mb4.5						
ZALV	**Zalesovo Beam**	**51.21**	**311**	P	**P**	**14 33 33.6**	**-1.5**
	comp=Z,0.4nm,0.3s,mb3.8,baz=40,slow=7.7,SNR=3.0						
ZALV				PcP	PcP	14 34 48.7	-1.1
	comp=Z,1.4nm,0.6s,baz=92,slow=1.5,SNR=5.1						
ZALV	**Zalesovo Beam**	**51.21**	**311**	P	**P**	**14 33 33.6**	**-1.5**
ZALV						14 34 48.7	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
ZALV	**Zalesovo Beam**	**51.21**	**311**	P	**P**	**14 33 33.6**	**-1.5**
ZALV				PcP	PcP	14 34 48.7	-1.1
LZH	**Lanzhou**	**51.99**	**282**	*e*P	**P**	**14 33 42.4**	**+1.2**
LZH				pP	pP	14 33 50.9	-2.9
LZH				sP	sP	14 33 54.9	-4.1
LZH				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
LZH				pmax	pmax		
	comp=Z,110nm,4.0s						
ULM	**Lac du Bonnet**	**52.21**	**54**	LR	LR	14 57 39.3	
	comp=Z,48nm,18.1s,MS3.6,baz=191,slow=38						
GTA	**Gaotai**	**52.23**	**288**	*e*P	**P**	**14 33 43.9**	**+1.0**
GTA				pP	pP	14 33 54.7	-0.8
GTA				sP	sP	14 33 57.9	-2.8
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
CD2	**Chengdu**	**55.56**	**278**	P	**P**	**14 34 09.3**	**+1.9**
CD2				pP	pP	14 34 19.4	-0.7
CD2				sP	sP	14 34 23.3	-2.0
CD2				PP	PP	14 36 14.6	+3.1
CD2				S	**S**	**14 41 49.9**	**+0.3**
CD2				sS	sS	14 42 06.6	-4.1
CD2				SS	SS	14 45 34.4	-0.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.1						
CD2				pmax	pmax		
	comp=Z,80nm,5.9s						
CD2				LR	LR		
	comp=N,150nm,7.7s						
CD2				LR	LR		
	comp=Z,140nm,4.8s						
EYMN	**Ely**	**55.90**	**54**	*e*P	**P**	**14 34 08.9**	**-0.6**
	comp=Z,3.7nm,0.7s,mb4.5						
KURK	**Kurchatov**	**56.20**	**311**	*c e*P	**P**	**14 34 11.2**	**-0.5**
KURK				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8						
WMQ	**Urumqi**	**56.21**	**299**	*e*P	**P**	**14 34 14.3**	**+2.5**
WMQ				pP	pP	14 34 24.4	-0.1
WMQ				sP	sP	14 34 28.4	-1.3
WMQ				PcP	PcP	14 35 13.0	+4.0
WMQ				pmax	pmax		

comp=Z,9.0nm,0.5s,mb5.1
WMQ pmax pmax
comp=Z,130nm,4.6s
WMQ LR LR
comp=N,73nm,22.6s,MS3.9
WMQ LR LR
comp=E,59nm,20.1s,MS3.9
WMQ LR LR
comp=Z,45nm,18.6s,MS3.6
GYA Guiyang 56.92 272 *e*P **P 14 34 18.0 +0.9**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
ARCES ARCESS Array B 57.00 348 P **P 14 34 16.4 -0.7**
comp=Z,0.6nm,0.4s,mb4.0,baz=26,slow=7.7,SNR=8.3
ARCES ARCESS Array B 57.00 348 P **P 14 34 16.4 -0.6**
ARCES pmax pmax
comp=Z,1.0nm,0.4s
MK31 Makanchi Array 57.05 305 *i* P **P 14 34 16.8 -0.9**
MK31 pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
MKAR Makanchi Array 57.05 305 P **P 14 34 16.9 -0.8**
comp=Z,2.4nm,0.4s,mb4.6,baz=53,slow=5.8,SNR=20
MKAR Makanchi Array 57.05 305 P **P 14 34 17.0 -0.7**
MKAR pmax pmax
comp=Z,2.0nm,0.4s
BVAR Borovoye Array 58.29 317 P **P 14 34 26.1 -0.3**
comp=Z,4.4nm,0.5s,mb4.7,baz=57,slow=6.6,SNR=26
BVAR Borovoye Array 58.29 317 P **P 14 34 26.1 -0.3**
BVAR pmax pmax
comp=Z,4.0nm,0.5s
BRVK Borovoye 58.31 317 *ce*P **P 14 34 26.3 -0.2**
BRVK pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
ZRNK Zerenda 58.93 317 P **P 14 34 30.3 -0.5**
KMI Kunming 60.31 274 P **P 14 34 43.0 +2.3**
KMI pP pP 14 34 52.5 -1.1
KMI sP sP 14 34 56.9 -1.8
KMI PP PP 14 36 57.1 +3.3
KMI S **S 14 42 52.5 +0.7**
KMI sS sS 14 43 07.3 -5.9
KMI SS SS 14 46 49.9 +0.4
KMI pmax pmax
comp=Z,5.0nm,1.4s,mb4.3
KMI pmax pmax
comp=Z,62nm,3.9s
KMI LR LR
comp=N,76nm,8.7s
KMI LR LR
comp=E,81nm,9.7s
KMI LR LR
comp=Z,63nm,15.9s,MS3.9
SCHQ Schefferville 61.67 36 LR LR 15 04 31.7
comp=Z,57nm,19.9s,MS3.7,baz=46,slow=39
TXAR Lajitas Array 61.89 78 P **P 14 34 51.1 -0.2**
comp=Z,0.5nm,0.3s,mb4.1,baz=308,slow=5.9,SNR=17
TXAR Lajitas Array 61.89 78 P **P 14 34 51.2 -0.2**
TXAR pmax pmax
comp=Z,1.0nm,0.3s
JOF Joensuu 62.21 342 *e*P **P 14 34 52.2 -0.8**
JOF pmax pmax
comp=Z,3.0nm,0.6s,mb4.6
JOF Joensuu 62.21 342 *ep* **P 14 34 52.2 -0.8**
comp=Z,3.0nm,0.6s,mb4.6
FINES FINESS Array B 64.51 344 P **P 14 35 07.5 -0.7**
comp=Z,0.9nm,0.4s,mb4.1,baz=16,slow=9.9,SNR=4.7
FINES FINESS Array B 64.51 344 P **P 14 35 07.5 -0.7**
FINES pmax pmax
comp=Z,1.0nm,0.4s
FINES FINESS Array B 64.51 344 P **P 14 35 07.5 -0.7**
AB31 Akbulak array 65.46 320 *e*P **P 14 35 14.8 +0.2**
AB31 pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
KSH Kashi 65.46 303 *e*P **P 14 35 18.6 +3.9**
KSH pP pP 14 35 29.0 +1.3
KSH sP sP 14 35 32.7 -0.1
KSH PP PP 14 37 45.9 +7.2
KSH ScP 14 39 49.4
KSH PcS 14 39 52.8
KSH S S 14 44 00.3 +4.4
KSH sS sS 14 44 17.4 -0.1
KSH ScS ScS 14 45 07.1 +0.8
KSH SS SS 14 48 15.8 +6.7
KSH pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
KSH pmax pmax
comp=Z,32nm,3.1s
KSH LR LR
comp=N,76nm,4.4s
KSH LR LR
comp=E,64nm,5.1s
KSH LR LR
comp=Z,130nm,6.3s
NB2 NORSAR Subarra 66.79 352 P **P 14 35 23.0 +0.1**
comp=Z,3.6nm,0.7s,mb4.5,baz=12,slow=6.5
NOA NORSAR Array B 66.79 352 P **P 14 35 23.2 +0.3**
comp=Z,1.8nm,0.7s,mb4.2,baz=12,slow=6.4,SNR=11
NOA LR LR 15 05 12.2
comp=Z,20nm,18.2s,MS3.4,baz=0.0,slow=36
NOA NORSAR Array B 66.79 352 P **P 14 35 23.2 +0.3**
NOA pmax pmax
comp=Z,2.0nm,0.7s
NOA MLR MLR
comp=Z,20nm,18.2s
NOA NORSAR Array B 66.79 352 P **P 14 35 23.2 +0.2**
NOA LR LR 15 05 12.2
CMAR Chiang Mai Arr 67.61 272 P **P 14 35 28.1 -0.7**
comp=Z,1.4nm,0.7s,mb4.1,baz=20,slow=6.9,SNR=6.6
CMAR LR LR 15 06 34.0
comp=Z,16nm,18.9s,MS3.3,baz=215,slow=37
CMAR Chiang Mai Arr 67.61 272 P **P 14 35 28.1 -0.6**
CMAR pmax pmax
comp=Z,1.0nm,0.7s
CMAR MLR MLR
comp=Z,17nm,18.9s
SSPA Standing Stone 67.92 52 *e*P **P 14 35 29.5 -0.9**
comp=Z,278nm,1.6s
OBN Obninsk 68.16 336 *e*P **P 14 35 31.0 -0.6**
OBN *i* pP 14 35 42.1 -2.5
OBN *e* 14 35 57.2
OBN pmax pmax
comp=Z,18nm,1.6s,mb4.8
ODAN Odare 68.41 286 *e*P **P 14 35 33.2 -0.4**
comp=Z,5.1nm,0.5s,mb4.8
GUN Gumba 68.52 288 *e*P **P 14 35 34.0 -0.3**
comp=Z,28nm,0.6s,mb5.4
RAMN Ramite 68.81 287 *e*P **P 14 35 35.6 -0.5**
comp=Z,30nm,0.5s,mb5.5
KKN Kakani 68.96 288 *e*P **P 14 35 36.7 -0.4**
comp=Z,18nm,0.5s,mb5.3
PKI Pulchoki 69.05 288 *e*P **P 14 35 37.3 -0.3**
comp=Z,16nm,0.5s,mb5.2
PKIN Phulchoki 69.05 288 *e*P **P 14 35 37.1 -0.6**
comp=Z,16nm,0.6s,mb5.2
DMN Daman 69.20 288 *e*P **P 14 35 38.3 -0.3**
comp=Z,12nm,0.6s,mb5.0
PMOR Pomariorio Ree 73.66 143 *e*T 15 56 38.7
comp=Z,62nm,0.2s
AKASG Malin Array Be 73.97 339 P **P 14 36 07.0 +0.1**
comp=Z,1.1nm,0.4s,mb4.1,baz=22,slow=6.2,SNR=4.9
AKASG Malin Array Be 73.97 339 P **P 14 36 07.0 +0.1**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
DZM Mont Dzumac 74.04 189 *e*LR LR 14 59 00.3
comp=Z,111nm,23.6s
DZM *e*LR LR 14 59 00.3
comp=Z,111nm,23.6s
PPT Papeete 75.43 146 *e*LR LR 14 59 35.5
comp=Z,56nm,23.8s
PPT *e*T 15 58 51.5
comp=Z,5.6nm,0.2s
PPT Papeete 75.43 146 LR LR 15 02 43.7
comp=Z,94nm,19.3s,MS4.1,baz=78,slow=30
CTA Charters Tower 76.13 208 P **P 14 36 18.6 -1.0**
comp=Z,4.2nm,0.8s,mb4.4,baz=358,slow=6.6,SNR=4.1
CTA LR LR 15 03 59.4
comp=Z,39nm,21.6s,MS3.7,baz=221,slow=31
CTA Charters Tower 76.13 208 P **P 14 36 18.6 -1.0**
CTA LR LR 15 03 59.4
ZEI Tsey 76.96 326 *e*P **P 14 36 25.6 +1.4**
ZEI pmax pmax
comp=Z,8.0nm,0.5s,mb4.9
WRA Warramunga Arr 80.12 219 P **P 14 36 40.9 -0.8**
comp=Z,2.8nm,0.7s,mb4.3,baz=30,slow=5.8,SNR=30
WRA Warramunga Arr 80.12 219 P **P 14 36 40.9 -0.8**
WRA pmax pmax
comp=Z,3.0nm,0.7s

BRTR Keskin Array B 83.02 332 P **P 14 36 58.0 +1.1**
comp=Z,1.2nm,0.5s,mb4.2,baz=50,slow=3.7,SNR=6.0
BRTR Keskin Array B 83.02 332 *ce*P **P 14 36 58.0 +1.0**
BRTR pmax pmax
comp=Z,1.0nm,0.5s
ASAR Alice Springs 83.65 218 P **P 14 37 00.1 -0.1**
comp=Z,2.3nm,0.7s,mb4.4,baz=24,slow=5.2,SNR=38
ASAR Alice Springs 83.65 218 P **P 14 37 00.1 -0.1**
ASAR pmax pmax
comp=Z,2.0nm,0.7s
PLCA Paso Flores 134.35 103 PKP PKPdf 14 43 48.0 -0.9
comp=Z,2.5nm,1.0s,baz=218,slow=14,SNR=3.2
PLCA Paso Flores 134.35 103 PKIKP PKPdf 14 43 48.0 -0.9
PLCA pmax pmax
comp=Z,3.0nm,1.0s
MAW Mawson 144.78 218 PKP PKPdf 14 44 05.6 -1.3
comp=Z,8.3nm,0.7s,baz=72,slow=4.5,SNR=26
MAW Mawson 144.78 218 PKIKP PKPdf 14 44 05.6 -1.3
MAW pmax pmax
comp=Z,8.0nm,0.7s
BOSA Boshof 148.05 305 PKPbc PKPbc 14 44 16.2 -0.7
comp=Z,1.9nm,0.4s,baz=227,slow=3.4,SNR=7.2
BOSA Boshof 148.05 305 PKP2 PKPbc 14 44 16.2 -0.7
BOSA pmax pmax
comp=Z,2.0nm,0.4s

MAN 04 14:29:21, 7°.52N×122°.14E, h21km, mb4.4, ML3.3, MS3.2, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPIL	**Ipil**	**0.50**	**58**	*e*P	Pb	14 29 31.6	+0.4
IPIL				*e*S	Sb	14 29 38.0	-0.1
ZMPH	**Zamboanga City**	**0.57**	**188**	⇑*i*P	Pb	14 29 33.3	+1.0
ZMPH				*i* S	Sb	14 29 44.0	+4.0
PAGZ	**Pagadian**	**1.27**	**75**	*e*P	Pn	14 29 44.3	+0.7
PAGZ				*e*S	Sn	14 30 01.1	+1.0

*FUNV **04** 14:34:19.8, 10°.42N×60°.00W, h40km, MW3.4*
*ISCJB **04** 14:34:20.0±1.1, 10°.34N±0°.06×60°.28W±0°.07, h108km±11km, Error ellipse: s-maj=11.2km s-min=9.7km az=32.9*
*TRN **04** 14:34:23.9, 10°.30N×60°.43W, h67km, MD3.3*
*NEIC **04** 14:34:23.9, 10°.30N×60°.43W, h67km, MD3.3(TRN), After TRN.*

ISC 04 14:34:22.3±1.1, 10°.30N±0°.06×60°.31W±0°.06, h79km±14km, n25, σ0s98/33, 3C, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBH	**Brigand Hill**	**0.77**	**284**	*e*P	**Pn**	**14 34 38.6**	**0.0**
TBH				*e*S	**Sn**	**14 34 48.6**	**-2.1**
TBH	**Brigand Hill**	**0.77**	**284**	*e*P	**Pn**	**14 34 38.6**	**0.0**
TBH				*e*S	**Sn**	**14 34 48.6**	**-2.1**
BOT	**Bacolet**	**0.95**	**335**	*e*P	**Pn**	**14 34 40.8**	**+0.1**
BOT	**Bacolet**	**0.95**	**335**	*e*P	**Pn**	**14 34 40.8**	**+0.1**
TPR	**Prospect**	**0.99**	**333**	*e*P	**Pn**	**14 34 41.7**	**+0.4**
TPR	**Prospect**	**0.99**	**333**	*e*P	**Pn**	**14 34 41.7**	**+0.4**
TOSP	**Speyside**	**1.02**	**347**	*e*P	**Pn**	**14 34 42.5**	**+1.0**
TOSP				*e*S	**Sn**	**14 34 56.2**	**+0.3**
TRN	**Trinidad (W)**	**1.13**	**288**	*e*P	**Pn**	**14 34 42.0**	**-0.8**
TRN	**Trinidad (W)**	**1.13**	**288**	*e*P	**Pn**	**14 34 42.0**	**-0.8**
TCE	**Chacachacare**	**1.47**	**286**	*e*P	**Pn**	**14 34 47.6**	**+0.4**
TCE	**Chacachacare**	**1.47**	**286**	*e*P	**Pn**	**14 34 47.6**	**+0.4**
GUIV	**Guiria**	**1.91**	**281**	⇑*e*P	**Pn**	**14 34 52.9**	**-0.1**
GUIV				*e*S	**Sn**	**14 35 17.8**	**+1.4**
GUNV	**Guanoco**	**2.59**	**267**	⇑*i*P	**Pn**	**14 35 03.4**	**+1.2**
GUNV				*e*S	**Sn**	**14 35 34.7**	**+2.0**
RIOV	**Rio Grande**	**2.67**	**214**	*e*S	**Sn**	**14 35 35.0**	**+0.6**
CRUV	**Carupano**	**2.90**	**278**	⇑*e*P	**Pn**	**14 35 05.3**	**-1.0**
CRUV				*e*S	**Sn**	**14 35 40.1**	**-0.1**
ITEV	**Isla Los Testi**	**2.96**	**291**	*e*P	**Pn**	**14 35 06.6**	**-0.6**
ITEV				*e*S	**Sn**	**14 35 40.9**	**-0.8**
ORIV	**Oritupano**	**3.29**	**249**	*e*P	**Pn**	**14 35 11.4**	**-0.2**
ORIV				*e*S	**Sn**	**14 35 51.1**	**+1.4**
GURV	**El Guri**	**3.72**	**228**	*e*P	**Pn**	**14 35 18.6**	**+1.1**
LUEV	**Luepa**	**4.57**	**195**	*e*P	**Pn**	**14 35 27.3**	**-1.7**
CUPV	**Ccepira**	**5.40**	**268**	*e*P	**Pn**	**14 35 40.5**	**+0.2**
BIRV	**Birongo**	**5.87**	**272**	*e*P	**Pn**	**14 35 46.2**	**-0.5**
MERV	**Las Mercedes**	**5.99**	**261**	*e*S	**Sn**	**14 36 53.2**	**-2.4**
CAOV	**Caicara del Or**	**6.63**	**244**	*e*P	**Pn**	**14 35 57.4**	**+0.2**
TURV	**Turiamo**	**7.41**	**272**	*e*P	**Pn**	**14 36 07.5**	**-0.3**
BAUV	**El Baul**	**7.74**	**261**	*e*P	**Pn**	**14 36 12.0**	**-0.4**

*IDC **04** 14:35:44.9±0.7, 63°.36N×150°.85W, h82km±6km, mb4.3/26, mb1 4.3/31, mb1mx4.3/34, mbtmp4.3/31, Error ellipse: s-maj=10.9km s-min=9.3km az=40.0*
*BJI **04** 14:35:46.2, 63°.20N×150°.50W, h133km, mB4.8/19, mb4.9/31*
*MOS **04** 14:35:46.4±0.8, 63°.42N×150°.68W, h113km, mb4.8/41, Error ellipse: s-maj=12.7km s-min=5.3km az=104.7*
*ISCJB **04** 14:35:48.1±0.1, 63°.35N±0°.02×150°.77W±0°.04, h129km, mb4.6/148, Error ellipse: s-maj=3.5km s-min=2.0km az=36.8*
*NEIC **04** 14:35:49.3, 63°.23N×150°.52W, h134km, mb4.6/97, After AEIC.*

ISC 04 14:35:50.0±0.1, 63°.39N±0°.02×150°.73W±0°.04, h131km, h131km±1.7km: pP-P, n654, σ0s74/668, mb4.6/148, 166C-200D, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRF	**Thorofare Moun**	**0.21**	**72**	P	**Pn**	**14 36 07.0**	**-1.0**
TRF				S	**Sn**	**14 36 21.4**	**-0.1**
PPLA	**Purkeypile**	**0.82**	**234**	P	**Pn**	**14 36 11.0**	**-0.4**
PPLA				*e*S	**Sn**	**14 36 23.5**	**-4.2**
PPLA				S	**Sn**	**14 36 27.4**	**-0.2**
RND	**Reindeer**	**0.85**	**88**	P	**Pn**	**14 36 10.5**	**-1.1**
RND				S	**Sn**	**14 36 26.6**	**-1.4**
CHUM	**Lake Minchumin**	**0.87**	**306**	P	**Pn**	**14 36 12.5**	**+0.7**
CHUM				S	**Sn**	**14 36 29.6**	**+1.3**
MCK	**McKinley**	**0.88**	**66**	P	**Pn**	**14 36 11.4**	**-0.5**
MCK				*e*Sn	**Sn**	**14 36 27.1**	**-1.3**
MCK				S	**Sn**	**14 36 27.4**	**-1.0**
SML	**Sawmill**	**1.93**	**144**	P	**Pn**	**14 36 20.2**	**-3.0**
SML				S	**Sn**	**14 36 44.7**	**-3.8**
PMR	**Palmer**	**1.95**	**157**	P	**Pn**	**14 36 20.2**	**-3.1**
PMR				S	**Sn**	**14 36 44.7**	**-4.1**
COLA	**College**	**1.96**	**39**	P	**Pn**	**14 36 23.3**	**-0.1**
COLA				S	**Sn**	**14 36 48.6**	**-0.4**
COLA				*e*S	**Sn**	**14 36 48.8**	**-0.2**
FIB	**Fire Island**	**2.24**	**173**	P	**Pn**	**14 36 24.6**	**-2.4**
FIB				S	**Sn**	**14 36 51.6**	**-3.7**
KNK	**Knik Glacier**	**2.25**	**151**	P	**Pn**	**14 36 24.1**	**-2.9**
RC01	**Rabbit Creek A**	**2.35**	**168**	P	**Pn**	**14 36 25.0**	**-3.3**
RC01				S	**Sn**	**14 36 52.7**	**-5.0**
TTA	**Tatalina**	**2.44**	**262**	*e*P	**Pn**	**14 36 28.9**	**-0.5**
TT01	**Tatalina**	**2.45**	**261**	P	**Pn**	**14 36 29.3**	**-0.2**
SLKM	**Skilak Lake**	**2.90**	**175**	P	**Pn**	**14 36 32.6**	**-2.7**
IM3	**Indian Mountai**	**2.91**	**335**	P	**Pn**	**14 36 36.6**	**+1.2**
DOT	**Dot Lake**	**3.00**	**82**	P	**Pn**	**14 36 34.9**	**-1.6**
RSO	**Redoubt South**	**3.09**	**199**	*e*Pn	**Pn**	**14 36 35.7**	**-2.0**
MENT	**Mentasta**	**3.21**	**95**	*e*P	**Pn**	**14 36 37.4**	**-1.9**
SVW2	**Sparrevohn**	**3.23**	**227**	*e*P	**Pn**	**14 36 37.9**	**-1.6**
DIV	**Divide**	**3.24**	**132**	P	**Pn**	**14 36 35.8**	**-3.9**
DIV				*e*Sn	**Sn**	**14 37 11.1**	**-7.0**
EYAK	**Cordova Ski Ar**	**3.69**	**138**	P	**Pn**	**14 36 42.4**	**-3.2**
BMRM	**Bremner River**	**3.76**	**127**	P	**Pn**	**14 36 42.6**	**-3.9**
COLD	**Coldfoot**	**3.87**	**3**	P	**Pn**	**14 36 49.0**	**+1.1**
BCA3	**Beaver Creek A**	**4.06**	**91**	P	**Pn**	**14 36 48.1**	**-2.4**
EGAK	**Eagle**	**4.43**	**67**	P	**Pn**	**14 36 54.0**	**-1.3**
MID	**Middleton Isla**	**4.50**	**150**	*e*P	**Pn**	**14 36 53.3**	**-3.0**
BM3	**Burnt Mountain**	**4.79**	**30**	P	**Pn**	**14 37 00.5**	**+0.3**
DAWV	**Dawson**	**5.09**	**77**	P	**Pn**	**14 37 02.5**	**-1.7**
KDAK	**Kodiak Island**	**5.70**	**190**	P	**Pn**	**14 37 08.2**	**-4.2**
KDAK	13nm,0.3s,baz=22,slow=9.4,SNR=94			S	**Sn**	**14 38 07.4**	**-9.1**
	36nm,0.3s,baz=26,slow=15,SNR=17						
KDAK	**Kodiak Island**	**5.70**	**190**	P	**Pn**	**14 37 08.5**	**-3.8**
OHAK	**Old Harbor**	**6.31**	**193**	*e*P	**Pn**	**14 37 17.5**	**-3.1**
PNL	**Peninsula**	**6.58**	**119**	P	**Pn**	**14 37 21.5**	**-2.6**
TNA	**Tin City**	**7.74**	**294**	*e*P	**Pn**	**14 37 40.1**	**+0.5**
CHGN	**Chignik**	**8.09**	**212**	*e*P	**Pn**	**14 37 41.9**	**-2.6**
SKAG	**Skagway**	**8.36**	**111**	*e*P	**Pn**	**14 37 45.3**	**-2.8**
INK	**Inuvik**	**8.59**	**47**	P	**Pn**	**14 37 48.2**	**-3.0**
	0.6nm,0.3s,baz=240,slow=18,SNR=18						
INK	**Inuvik**	**8.59**	**47**	*e*P	**Pn**	**14 37 48.5**	**-2.7**

INK pmax pmax
comp=Z,12nm,0.6s
INK Inuvik 8.59 47 *e*P **Pn 14 37 48.5 -2.6**
comp=Z,12nm,0.6s
SDPT Sand Point 9.46 216 *e*Pn **Pn 14 38 01.9 -1.0**
SIT Sitka 9.93 123 *e*P **Pn 14 38 07.0 -2.2**
SIT pmax pmax
comp=Z,22nm,0.5s
SIT Sitka 9.93 123 *e*P **Pn 14 38 07.0 -2.2**
comp=Z,22nm,0.5s
DLBC Dease Lake 11.20 107 P **Pn 14 38 24.0 -2.0**
comp=Z,0.5nm,0.3s,baz=309,slow=11,SNR=11
DLBC Dease Lake 11.20 107 *e*Pn **Pn 14 38 25.6 -0.5**
CRAG Craig 11.93 124 *e*P **Pn 14 38 34.1 -1.6**
comp=Z,41nm,1.2s
YKA Yellowknife Ar 16.33 77 P **Pn 14 39 29.5 -1.8**
comp=Z,1.5nm,0.3s,baz=282,slow=9.5,SNR=26
YKA PcP PcP 14 44 18.2 +2.5
comp=Z,0.1nm,0.3s,baz=295,slow=1.7,SNR=5.3
YKA Yellowknife Ar 16.33 77 P **Pn 14 39 29.5 -1.8**
YKA PcP PcP 14 44 18.2 +2.5
BBB Bella Bella 16.36 123 P **Pn 14 39 31.3 -0.5**
comp=Z,0.9nm,0.3s,baz=137,slow=9.4,SNR=9.4
BBB Bella Bella 16.36 123 P **Pn 14 39 31.3 -0.5**
BILL Bilibino 17.98 304 ⇑*i*P **Pn 14 39 50.9 -0.2**
BILL pmax pmax
comp=Z,7.0nm,1.3s
BILL Bilibino 17.98 304 *e*P **Pn 14 39 51.1 -0.1**
comp=Z,8.4nm,0.8s
PGC Sidney 20.98 122 *e*P **P 14 40 22.4 0.0**
comp=Z,1.3nm,0.8s
A05A Maple Falls 21.22 119 ⇓P **P 14 40 24.7 -0.4**
baz=21,SNR=6.8
EDM Edmonton 21.78 100 *e*P **P 14 40 30.3 -0.6**
B06A Marblemount 21.85 119 ⇓P **P 14 40 30.7 -1.0**
baz=22
NLWA Neilton Lookou 21.86 124 ⇓P **P 14 40 32.5 +0.7**
baz=22,SNR=5.3
NLWA Neilton Lookou 21.86 124 *e*P **P 14 40 32.8 +1.0**
comp=Z,18nm,0.9s,mb4.5
RES Resolute Bay 21.88 36 P **P 14 40 31.7 -0.1**
comp=Z,5.9nm,0.5s,mb4.2,baz=256,slow=11,SNR=30
RES PcP PcP 14 44 28.1 +2.8
comp=Z,4.6nm,0.8s,baz=34,slow=22,SNR=5.0
RES Resolute Bay 21.88 36 *e*P **P 14 40 31.1 -0.7**
RES pmax pmax
comp=Z,9.0nm,0.8s,mb4.2
RES Resolute Bay 21.88 36 *e*P **P 14 40 31.1 -0.7**
comp=Z,9.5nm,0.8s,mb4.3
RPW Rockport 21.89 119 *e*P **P 14 40 31.7 -0.4**
JCW Jim Creek 21.94 120 *e*P **P 14 40 32.0 -0.5**
PNT Penticton 21.96 115 P **P 14 40 32.6 -0.2**
D05A Enumclaw 22.74 122 ⇓P **P 14 40 40.9 +0.2**
baz=23,SNR=7.2
B08A Colville Reser 22.83 116 ⇑P **P 14 40 41.1 -0.4**
baz=23,SNR=13
ETW Entiat 23.04 119 *e*P **P 14 40 43.3 -0.1**
ETW *ep*P 14 41 08.3
LON Longmire 23.17 122 *e*P **P 14 40 43.9 -0.7**
LON *e**PP 14 41 11.1
LON pmax pmax
comp=Z,9.0nm,1.0s,mb4.2
LON Longmire 23.17 122 *e*P **P 14 40 43.9 -0.8**
comp=Z,9.3nm,1.0s,mb4.2
LON *ep*P 14 41 11.1
F03A Seaside 23.21 126 ⇑P **P 14 40 44.9 -0.1**
baz=23
TBM Table Mountain 23.29 120 P **P 14 40 45.2 -0.5**
NAC Naches 23.56 121 P **P 14 40 48.2 +0.1**
F04A Amboy 23.63 124 ⇑P **P 14 40 48.4 -0.3**
baz=24,SNR=5.7
NEW Newport 23.81 114 *e*P **P 14 40 49.7 -0.7**
NEW pmax pmax
comp=Z,18nm,0.9s
NEW Newport 23.81 114 *e*P **P 14 40 49.7 -0.7**
comp=Z,18nm,0.9s,mb4.6
OD2 Odessa Site #2 23.86 117 *e*P **P 14 40 50.0 -0.9**
OD2 *ep*P 14 41 17.8
D08A Wollman Farm, 24.05 118 ⇓P **P 14 40 51.7 -0.9**
baz=24,SNR=12
E07A Sunnyside 24.09 120 ⇑P **P 14 40 52.8 -0.1**
baz=24
G04A Mulino 24.23 125 ⇓P **P 14 40 53.8 -0.4**
baz=24,SNR=5.1
B12A Libby 24.29 111 ⇓P **P 14 40 54.8 0.0**
baz=24,SNR=5.1
H2OWA Water 24.39 119 P **P 14 40 54.9 -0.7**
A13A Flathead Natio 24.43 109 ⇓P **P 14 40 55.6 -0.4**
baz=24
HOOD Mount Hood Mea 24.43 124 *e*P **P 14 40 55.6 -0.5**
comp=Z,60nm,0.8s,mb5.2
HOOD *ep*P 14 41 22.7
C11A Tepee Creek (N 24.50 113 ⇑P **P 14 40 56.1 -0.6**
baz=24,SNR=5.9
WALA Waterton Lakes 24.54 108 *e*P **P 14 40 57.1 0.0**
comp=Z,0.9nm,0.8s
F07A Phinny Hill Vi 24.61 121 ⇓P **P 14 40 57.5 -0.2**
baz=24,SNR=5.1
H04A Detroit Lake 24.78 126 ⇑P **P 14 40 58.5 -0.7**
baz=25
E09A Wood Farm, Sta 24.80 118 ⇓P **P 14 40 58.2 -1.2**
baz=25
A14A Double T Ranch 24.82 108 ⇓P **P 14 40 59.2 -0.3**
baz=25,SNR=16
B13A Whitefish 24.83 110 ⇓P **P 14 40 59.6 -0.1**
baz=25,SNR=23
VTHM Trough 24.96 123 P **P 14 41 00.5 -0.4**
CROR Criterion Ridg 24.97 123 P **P 14 41 00.8 -0.2**
SEY Seymchan 24.98 295 *de*P **P 14 41 00.9 +0.1**
SEY *i* *PP 14 41 29.3
BSMT Bassoo Peak 25.11 111 *e*P **P 14 41 02.2 0.0**
A15A Johnson Ranch, 25.11 107 ⇓P **P 14 41 01.2 -1.0**
baz=25,SNR=10
C13A Hot Springs 25.33 111 ⇓P **P 14 41 03.8 -0.4**
baz=25,SNR=21
B14A Marquette Ranc 25.35 109 ⇓P **P 14 41 04.0 -0.3**
baz=25,SNR=7.0
JTMT Jette 25.40 111 *e*P **P 14 41 05.0 +0.2**
YBMT Yellow Bay 25.42 110 *e*P **P 14 41 04.7 -0.3**
G08A Pilot Rock 25.49 120 ⇑P **P 14 41 04.9 -0.7**
baz=25,SNR=6.4
D12A Red Ives Fores 25.50 113 ⇓P **P 14 41 04.9 -0.8**
baz=25
KEBM Edson Butte 25.60 131 *e*P **P 14 41 07.3 +0.6**
comp=Z,81nm,1.1s,mb5.3
F10A Beach Ranch, E 25.61 117 ⇑P **P 14 41 05.9 -0.8**
baz=26
C14A Swan Lake 25.61 110 ⇓P **P 14 41 06.3 -0.4**
baz=26,SNR=13
A16A West Butte Ran 25.62 106 ⇑P **P 14 41 05.6 -1.2**
baz=26
B15A Bradely Ranch, 25.69 108 ⇓P **P 14 41 06.6 -0.9**
baz=26,SNR=9.9
SWMT Swartz Lake 25.70 111 *e*P **P 14 41 07.1 -0.5**
D13A Huson 25.84 112 ⇓P **P 14 41 08.1 -0.7**
baz=26,SNR=16
FFC Flin Flon 25.91 87 *i* P **P 14 41 09.4 +0.1**
FFC Flin Flon 25.91 87 *e*P **P 14 41 09.0 -0.3**
comp=Z,18nm,1.2s,mb4.6
E12A Beaver Dam Sad 25.92 114 ⇓P **P 14 41 08.5 -1.1**
baz=26,SNR=15
G09A Cove 25.96 119 ⇑P **P 14 41 09.1 -0.8**
baz=26
B16A M & M Farms, S 25.98 107 ⇓P **P 14 41 08.6 -1.5**
baz=26
C15A Salmond Ranch, 26.09 109 ⇑P **P 14 41 10.8 -0.2**
baz=26,SNR=18
F11A Grangeville 26.11 116 ⇓P **P 14 41 11.3 +0.1**
baz=26,SNR=9.7
SLMT Seeley Lake 26.13 111 *e*P **P 14 41 11.7 +0.3**
G10A Bishop Farm, J 26.21 118 ⇑P **P 14 41 11.2 -0.9**
baz=26
H08A Prairie City 26.24 121 ⇓P **P 14 41 12.2 -0.2**
baz=26,SNR=15
D14A Greenough 26.25 111 ⇑P **P 14 41 11.9 -0.6**
baz=26,SNR=12
MSO Missoula 26.27 112 *e*P **P 14 41 12.1 -0.5**
comp=Z,7.3nm,0.6s,mb4.5
I07A Izee 26.29 122 ⇓P **P 14 41 12.5 -0.4**
baz=26,SNR=6.7
HUMO Hull Mountain 26.31 129 *e*P **P 14 41 13.7 +0.6**
comp=Z,9.0nm,0.8s,mb4.5
A18A Metzger Ranch, 26.41 104 ⇓P **P 14 41 13.0 -0.9**
baz=26
C16A Fuhringer Ranc 26.43 108 ⇑P **P 14 41 13.7 -0.5**
baz=26

G11A **Walters Elk Ra** 26.46 117 ⇓P P 14 41 13.7 -0.7
baz=26,SNR=12
B17A **L&G Farms, Che** 26.47 106 ⇓P P 14 41 13.8 -0.6
baz=26,SNR=15
E13A **Victor** 26.47 113 ⇓P P 14 41 13.6 -0.8
baz=26,SNR=7.9
CHMT **Chamberlain Mo** 26.49 111 eP P 14 41 14.0 -0.6
BMO **Blue Mountains** 26.50 119 eP P 14 41 13.9 -0.8
comp=Z,3.1nm,0.8s,mb4.0
H09A **Durkee** 26.51 119 ⇑P P 14 41 14.7 -0.2
baz=26
F12A **Elk City** 26.58 115 ⇑P P 14 41 15.2 -0.3
baz=26,SNR=12
D15A **Lincoln** 26.70 110 ⇓P P 14 41 16.0 -0.5
baz=27,SNR=7.2
E14A **Clinton** 26.78 112 ⇓P P 14 41 16.6 -0.6
baz=27,SNR=12
B18A **Beardsley Farm** 26.83 105 ⇓P P 14 41 17.1 -0.6
baz=27,SNR=5.1
F13A **Darby** 26.93 114 ⇓P P 14 41 18.1 -0.5
baz=27,SNR=16
H10A **Noah's Angus R** 26.94 118 ⇓P P 14 41 18.0 -0.7
baz=27,SNR=7.7
K05A **Summer Lake** 26.94 126 ⇓P P 14 41 18.3 -0.4
baz=27
C17A **Wharram Farm,** 26.99 107 ⇓P P 14 41 18.2 -0.9
baz=27,SNR=16
I09A **Lost Marbles R** 27.06 120 ⇑P P 14 41 19.2 -0.7
baz=27
D16A **Dana Ranch, Ca** 27.12 109 ⇓P P 14 41 19.7 -0.6
baz=27,SNR=12
EGMT **Eagleton** 27.12 105 ⇑P P 14 41 19.7 -0.6
baz=27,SNR=12
EGMT **Eagleton** 27.12 105 eP P 14 41 19.8 -0.5
comp=Z,21nm,1.0s,mb4.7
E15A **Deer Lodge** 27.13 111 ⇓P P 14 41 19.8 -0.6
baz=27
H11A **Donnelly** 27.14 117 ⇓P P 14 41 19.8 -0.6
baz=27
YBH **Yreka Blue Hor** 27.17 130 P P 14 41 21.6 +0.8
comp=Z,11nm,0.9s,mb4.5,baz=356,slow=4.8,SNR=9.3
YBH **Yreka Blue Hor** 27.17 130 eP P 14 41 21.1 +0.4
YBH pmax pmax
comp=Z,9.0nm,0.9s
YBH **Yreka Blue Hor** 27.17 130 eP P 14 41 21.1 +0.4
comp=Z,9.0nm,0.9s,mb4.4
J08A **Circle Bar Ran** 27.30 122 ⇑P P 14 41 21.9 0.0
baz=27,SNR=10
F14A **Wisdom** 27.32 112 ⇓P P 14 41 22.1 +0.1
baz=27,SNR=7.8
D17A **Six Diamond Ra** 27.39 107 ⇑P P 14 41 22.2 -0.5
baz=27,SNR=9.3
E16A **East Helena** 27.45 109 ⇓P P 14 41 23.0 -0.2
baz=27
G13A **Cobalt** 27.54 114 ⇓P P 14 41 23.7 -0.3
baz=27,SNR=13
KHMM **Horse Mountain** 27.58 132 eP P 14 41 24.8 +0.3
comp=Z,14nm,1.1s,mb4.6
F15A **Butte** 27.66 111 ⇑P P 14 41 24.9 -0.2
baz=28,SNR=5.8
LRM **Limekiln Ridge** 27.69 111 eP P 14 41 25.6 +0.3
H12A **Diamond D Ranc** 27.73 116 ⇑P P 14 41 25.6 -0.2
baz=28,SNR=5.3
D18A **Linhart Farms,** 27.74 106 ⇑P P 14 41 25.5 -0.3
baz=28
I11A **Placerville** 27.82 118 ⇓P P 14 41 26.0 -0.5
baz=28,SNR=5.1
E17A **Martinsdale** 27.86 108 ⇓P P 14 41 26.7 -0.1
baz=28,SNR=6.5
MOD **Modoc** 27.87 126 eP P 14 41 26.3 -0.7
comp=Z,4.4nm,1.0s,mb4.1
MOD epP pP 14 41 55.0 -0.1
J10A **Berg Farm, Mel** 27.90 120 ⇑P P 14 41 26.7 -0.6
baz=28
H13A **Challis** 27.96 115 ⇑P P 14 41 27.4 -0.4
baz=28
WVOR **Wild Horse Val** 28.03 123 eP P 14 41 28.6 +0.2
WVOR pmax pmax
comp=Z,12nm,1.1s,mb4.5
WVOR **Wild Horse Val** 28.03 123 eP P 14 41 28.6 +0.2
comp=Z,12nm,1.1s,mb4.5
F16A **Kennard Place,** 28.07 110 ⇓P P 14 41 28.9 +0.2
baz=28
BOZ **Bozeman (W)** 28.18 110 ⇓P P 14 41 30.0 +0.3
baz=28,SNR=8.7
BOZ **Bozeman (W)** 28.18 110 eP P 14 41 30.0 +0.3
BOZ pmax pmax
comp=Z,6.0nm,1.1s,mb4.2
BOZ **Bozeman (W)** 28.18 110 eP P 14 41 30.0 +0.4
comp=Z,6.5nm,1.1s,mb4.3
E18A **Harlowton** 28.18 107 ⇑P P 14 41 29.7 -0.1
baz=28
G15A **Dillon** 28.20 112 ⇑P P 14 41 29.8 -0.1
baz=28,SNR=8.7
PETK **Petropavlovsk-** 28.23 273 P P 14 41 29.6 -0.4
comp=Z,3.7nm,0.7s,mb4.2,baz=72,slow=13,SNR=13
I12A **Atlanta** 28.25 117 ⇑P P 14 41 29.8 -0.5
baz=28,SNR=6.1
WDC **Whiskeytown Da** 28.25 131 eP P 14 41 29.4 -1.0
WDC e*PP pP 14 41 57.4 -1.1
WDC pmax pmax
comp=Z,29nm,1.4s,mb4.8
WDC **Whiskeytown Da** 28.25 131 eP P 14 41 29.4 -1.0
comp=Z,29nm,1.4s,mb4.8
WDC epP pP 14 41 57.4 -1.1
H14A **Leadore** 28.29 114 ⇓P P 14 41 30.3 -0.3
baz=28,SNR=10
MFID **Camas Ranch** 28.29 118 ⇑P P 14 41 30.1 -0.6
baz=28,SNR=12
MCMT **McKenzie Canyo** 28.33 113 eP P 14 41 31.4 +0.4
comp=Z,1.4nm,0.5s,mb4.0
F17A **Fitzpatrick Pl** 28.38 109 ⇓P P 14 41 31.4 -0.1
baz=28
K10A **MacKenzie Ranc** 28.41 120 ⇑P P 14 41 31.9 0.0
baz=28,SNR=10
G16A **Moss Hill, Enn** 28.44 111 ⇑P P 14 41 32.1 +0.1
baz=28,SNR=21
I13A **Wildhorse Cree** 28.55 116 ⇑P P 14 41 32.8 -0.2
baz=28,SNR=24
H15A **Lima** 28.58 113 ⇑P P 14 41 33.3 0.0
baz=28,SNR=5.9
KCPM **Cahto Peak** 28.70 133 eP P 14 41 35.2 +0.8
comp=Z,5.6nm,0.9s,mb4.3
HLID **Hailey** 28.73 116 ⇓P P 14 41 34.2 -0.3
baz=29,SNR=9.5
HLID **Hailey** 28.73 116 eP P 14 41 34.5 0.0
comp=Z,4.8nm,0.9s,mb4.2
K11A **Parker Ranch,** 28.75 119 ⇑P P 14 41 34.9 +0.1
baz=29,SNR=20
F18A **Big Timber** 28.79 108 ⇑P P 14 41 35.0 -0.1
baz=29,SNR=5.1
I14A **Mackay** 28.82 115 ⇑P P 14 41 35.0 -0.3
baz=29,SNR=8.1
QLMT **Earthquake Lak** 28.92 111 eP P 14 41 37.0 +0.8
comp=Z,2.1nm,0.3s,mb4.3
J13A **Cove Ranch, Pi** 28.96 116 ⇑P P 14 41 36.6 -0.1
baz=29,SNR=5.8
H16A **Russell Place,** 29.10 111 ⇑P P 14 41 38.5 +0.6
baz=29,SNR=15
L10A **Juniper Basin** 29.16 121 ⇑P P 14 41 38.6 +0.2
baz=29,SNR=7.8
YMR **Madison River** 29.24 111 eP P 14 41 40.4 +1.2
comp=Z,21nm,0.8s,mb4.9
J14A **Carey** 29.29 116 ⇑P P 14 41 39.6 +0.1
baz=29,SNR=5.5
K12A **Draper Farm, C** 29.31 118 ⇓P P 14 41 39.9 +0.1
baz=29,SNR=5.4
G18A **Lazy EL Ranch,** 29.32 108 ⇑P P 14 41 39.7 -0.1
baz=29,SNR=6.6
L11A **Cat Creek Ranc** 29.37 120 ⇓P P 14 41 40.5 +0.2
baz=29,SNR=7.7
TIXI **Tiksi** 29.47 321 eP P 14 41 40.2 -0.6
TIXI pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
TIXI **Tiksi** 29.47 321 eP P 14 41 40.6 -0.3
comp=Z,3.0nm,0.8s,mb4.1
HOPS **Hopland** 29.50 133 eP P 14 41 41.6 +0.2
comp=Z,26nm,1.4s,mb4.8
RLMT **Red Lodge** 29.60 108 ⇑P P 14 41 42.9 +0.6
baz=30,SNR=11
RLMT **Red Lodge** 29.60 108 eP P 14 41 42.9 +0.6
comp=Z,20nm,1.0s,mb4.8
M10A **I.L. Ranch, Tu** 29.61 121 ⇑P P 14 41 42.8 +0.4
baz=30,SNR=8.3
K13A **Stover Farm, H** 29.62 117 ⇑P P 14 41 43.5 +1.0
baz=30
H17A **Grant Village** 29.63 111 ⇓P P 14 41 44.2 +1.7
baz=30
I16A **Newdale** 29.67 112 ⇓P P 14 41 43.6 +0.7
baz=30,SNR=11
L12A **House Creek Ra** 29.68 119 ⇑P P 14 41 43.5 +0.5
baz=30,SNR=9.5
LAO **LASA Array** 29.69 103 eP P 14 41 42.8 -0.3
comp=Z,18nm,0.9s,mb4.8
OHCM **Honcut** 29.73 130 eP P 14 41 40.4 -3.0
OHCM epP pP 14 42 14.4 +2.7
M11A **Holland Ranch,** 29.98 120 ⇓P P 14 41 46.2 +0.5
baz=30
I17A **Pilgrim Ck.** 30.01 111 ⇑P P 14 41 47.1 +1.2
baz=30
K14A **Jones Ranch, D** 30.07 116 ⇓P P 14 41 47.0 +0.5
baz=30,SNR=5.7
J16A **Bone** 30.11 113 ⇓P P 14 41 47.3 +0.5
baz=30,SNR=9.2
PAHR **Pah Rah Range** 30.14 127 eP P 14 41 46.0 -1.1
comp=Z,6.4nm,0.9s,mb4.3
L13A **Double Diamond** 30.15 117 ⇓P P 14 41 48.8 +1.6
baz=30
RRI2 **Red Ridge** 30.17 113 eP P 14 41 48.1 +0.8
comp=Z,21nm,0.7s,mb5.0
TPAW **Teton Pass** 30.21 112 eP P 14 41 48.7 +1.1
comp=Z,39nm,1.6s,mb4.9
K15A **Arbon** 30.22 115 ⇑P P 14 41 48.2 +0.4
baz=30
SNOW **Snow King Moun** 30.31 112 eP P 14 41 50.0 +1.4
comp=Z,9.5nm,0.7s,mb4.6
M12A **Wells** 30.34 119 ⇓P P 14 41 49.4 +0.6
baz=30,SNR=11
REDW **Red Top Meadow** 30.35 112 eP P 14 41 50.2 +1.2
comp=Z,5.1nm,0.8s,mb4.3
WCN **Washoe City** 30.36 128 ⇓P P 14 41 49.3 +0.3
baz=30
J17A **Brown Place, J** 30.41 112 ⇓P P 14 41 50.2 +0.8
baz=30
L14A **Malta** 30.48 117 ⇓P P 14 41 50.7 +0.6
baz=30
K16A **Soda Springs** 30.49 114 ⇓P P 14 41 50.0 -0.1
baz=30
I18A **Diamond G Ranc** 30.51 111 ⇓P P 14 41 51.3 +1.0
baz=30,SNR=5.5
N11A **Elko Archery C** 30.53 121 ⇑P P 14 41 51.2 +0.7
baz=30,SNR=5.1
O10A **Cortez Mining,** 30.69 123 ⇑P P 14 41 52.7 +0.8
baz=31
N12A **Clover Valley,** 30.77 120 ⇓P P 14 41 53.2 +0.6
baz=31,SNR=7.2
N12A **Clover Valley,** 30.77 120 eP P 14 41 53.4 +0.7
comp=Z,14nm,1.2s,mb4.6
J18A **Kendall Valley** 30.82 111 ⇑P P 14 41 53.7 +0.6
baz=31,SNR=10
K17A **Gardner Place,** 30.83 113 ⇓P P 14 41 53.5 +0.4
baz=31
L15A **Malad City** 30.85 116 ⇑P P 14 41 53.7 +0.3
baz=31,SNR=5.9
HVU **Hansel Valley** 30.88 116 eP P 14 41 53.6 0.0
HVU pmax pmax
comp=Z,7.0nm,0.7s,mb4.5
HVU **Hansel Valley** 30.88 116 eP P 14 41 53.6 0.0
comp=Z,7.4nm,0.7s,mb4.5
M14A **Sheep Mountain** 30.88 117 ⇑P P 14 41 54.2 +0.6
baz=31,SNR=22
N13A **Wendover, West** 31.09 119 ⇓P P 14 41 55.8 +0.3
baz=31,SNR=6.2
N13A **Wendover, West** 31.09 119 eP P 14 41 55.9 +0.4
comp=Z,15nm,0.9s,mb4.7
O11A **Cowboy Ranch,** 31.15 122 ⇑P P 14 41 56.5 +0.5
baz=31,SNR=13
WAKR **Walker** 31.18 128 eP P 14 41 56.6 +0.3
L16A **Fish Haven** 31.23 114 ⇑P P 14 41 56.8 +0.1
baz=31,SNR=7.1
CMB **Columbia Colle** 31.27 130 eP P 14 41 56.6 -0.4
CMB pmax pmax
comp=Z,41nm,2.5s,mb4.7
CMB **Columbia Colle** 31.27 130 eP P 14 41 56.6 -0.5
comp=Z,40nm,2.5s,mb4.7
P10A **Eureka** 31.29 123 ⇓P P 14 41 57.6 +0.4
baz=31
K18A **Toltan Ranch,** 31.29 112 ⇓P P 14 41 57.8 +0.6
baz=31,SNR=13
BW06 **Boulder Array** 31.38 111 ⇓P P 14 41 58.3 +0.3
baz=31,SNR=24
BW06 **Boulder Array** 31.38 111 eP P 14 41 58.5 +0.5
comp=Z,19nm,1.0s,mb4.8
PDAR **Pinedale Array** 31.38 111 P P 14 41 58.4 +0.4
comp=Z,13nm,0.9s,mb4.7,baz=319,slow=4.6,SNR=79
PDAR pP pP 14 42 17.3 -9.0
comp=Z,0.6nm,0.4s,baz=353,slow=6.3,SNR=2.1
PDAR sP sP 14 42 26.4 -15
comp=Z,2.0nm,0.8s,baz=322,slow=9.4,SNR=2.5
PDAR PcP PcP 14 44 47.7 -0.5
comp=Z,0.7nm,0.7s,baz=318,slow=1.2,SNR=4.4
O12A **Currie** 31.39 120 ⇓P P 14 41 58.2 +0.2
baz=31,SNR=8.8
L17A **Cokeville** 31.39 114 ⇓P P 14 41 58.5 +0.4
baz=31
BGU **Big Grassy Mou** 31.50 118 eP P 14 41 59.4 +0.3
comp=Z,2.6nm,0.7s,mb4.1
N14A **Grayback Hills** 31.50 118 ⇓P P 14 41 59.3 +0.3
baz=31,SNR=9.4
HWUT **Hardware Ranch** 31.52 115 eP P 14 41 59.4 +0.2
comp=Z,4.4nm,0.9s,mb4.2
P11A **Circle Ranch,** 31.61 122 ⇓P P 14 42 00.5 +0.4
baz=32
K19A **Absolon Red Bu** 31.64 111 ⇓P P 14 42 00.2 0.0
baz=32,SNR=6.3
NVAR **Mina Array Bea** 31.65 127 P P 14 42 00.8 +0.4
comp=Z,5.3nm,0.7s,mb4.4,baz=314,slow=7.8,SNR=55
NVAR pP pP 14 42 20.4 -8.4
comp=Z,1.5nm,0.7s,baz=313,slow=8.7,SNR=4.4
NVAR sP sP 14 42 28.8 -15
comp=Z,1.3nm,0.6s,baz=316,slow=7.6,SNR=3.3
NVAR PcP PcP 14 44 49.6 +0.6
comp=Z,0.3nm,0.5s,baz=291,slow=2.5,SNR=3.3
NVAR **Mina Array Bea** 31.65 127 P P 14 42 00.8 +0.4
NVAR pP pP 14 42 20.4 -8.4
NVAR sP sP 14 42 28.8 -15
NVAR PcP PcP 14 44 49.6 +0.6
ULM **Lac du Bonnet** 31.68 88 P P 14 42 00.1 -0.5
comp=Z,10nm,0.8s,mb4.6,baz=300,slow=7.4,SNR=7.6
ULM **Lac du Bonnet** 31.68 88 eP P 14 42 00.2 -0.3
ULM pmax pmax
comp=Z,9.0nm,0.7s
ULM **Lac du Bonnet** 31.68 88 eP P 14 42 00.2 -0.3
comp=Z,8.9nm,0.7s,mb4.6
O13A **Hicks Ranch, I** 31.80 119 ⇓P P 14 42 01.7 0.0
baz=32
L18A **Fontenelle, Gr** 31.88 113 ⇓P P 14 42 02.0 -0.3
baz=32,SNR=6.5
K20A **Yellowstone Ra** 31.98 110 ⇑P P 14 42 02.8 -0.5
baz=32,SNR=10
M17A **Scullys Gap (B** 32.00 114 ⇓P P 14 42 03.7 +0.3
baz=32
Q10A **Clear Creek Ra** 32.01 124 ⇓P P 14 42 03.8 +0.3
baz=32,SNR=7.7
L19A **Farson** 32.02 112 ⇓P P 14 42 03.4 -0.2
baz=32,SNR=16
DUG **Dugway** 32.21 118 ⇑P P 14 42 05.3 +0.1
baz=32,SNR=10
DUG **Dugway** 32.21 118 eP P 14 42 05.2 0.0
DUG pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
DUG **Dugway** 32.21 118 eP P 14 42 05.2 0.0
comp=Z,6.7nm,0.8s,mb4.4
Q11A **Duckwater** 32.27 123 ⇓P P 14 42 06.2 +0.4
baz=32,SNR=23
O15A **The Old Anders** 32.27 117 ⇓P P 14 42 06.7 +0.9
baz=32
M18A **Lyman** 32.28 113 ⇑P P 14 42 05.7 -0.2
baz=32
P13A **Bates Ranch, G** 32.37 120 ⇓P P 14 42 06.6 -0.1
baz=32,SNR=16
Q12A **Willow Creek R** 32.41 122 ⇑P P 14 42 07.5 +0.4
baz=32
R10A **Warm Springs** 32.51 124 ⇑P P 14 42 08.1 +0.2
baz=32,SNR=6.5
MTUM **Tungsten Hills** 32.52 128 eP P 14 42 08.6 +0.6
L20A **Wamsutter** 32.52 111 ⇓P P 14 42 07.6 -0.4
baz=32,SNR=7.2
M19A **Rock Springs** 32.59 112 ⇑P P 14 42 08.6 0.0
baz=32
P14A **Drum Mountains** 32.62 119 ⇓P P 14 42 08.9 0.0
baz=32
RSSD **Black Hills** 32.66 104 eP P 14 42 09.0 -0.1
RSSD pmax pmax
comp=Z,15nm,0.6s,mb4.9
RSSD **Black Hills** 32.66 104 eP P 14 42 09.0 -0.1
comp=Z,15nm,0.6s,mb4.9
NLU **North Lily Min** 32.71 117 eP P 14 42 09.5 -0.1
comp=Z,7.3nm,1.0s,mb4.4
O16A **Springville** 32.72 116 ⇓P P 14 42 09.8 +0.1
baz=33,SNR=6.6
S10A **Tonopah Range,** 32.73 125 ⇓P P 14 42 09.7 -0.1
baz=33,SNR=12
R11A **Troy Canyon, C** 32.73 123 ⇓P P 14 42 09.7 -0.1
baz=33,SNR=5.6
Q13A **Wheeler Ranch,** 32.80 121 ⇓P P 14 42 10.4 0.0
baz=33
N18A **Larsen Ranch,** 32.82 113 ⇑P P 14 42 10.4 -0.2
baz=33,SNR=11
P15A **Leamington** 32.95 118 ⇑P P 14 42 12.1 +0.4
baz=33
L21A **Rawlins** 32.97 110 ⇑P P 14 42 12.0 +0.2
baz=33
M20A **Sweetwater, Wa** 33.01 111 ⇓P P 14 42 12.4 +0.2
baz=33,SNR=12
O17A **Robinson Place** 33.04 115 ⇓P P 14 42 13.3 +0.8
baz=33,SNR=31
Q14A **Sevier Lake (B** 33.06 120 ⇓P P 14 42 12.8 +0.1
baz=33,SNR=20
N19A **John Jarvie Ra** 33.10 113 ⇓P P 14 42 12.7 -0.2
baz=33,SNR=22
AGMN **Agassiz Nation** 33.10 91 eP P 14 42 12.0 -1.0
comp=Z,7.6nm,0.8s,mb4.5
R12A **Pony Springs,** 33.12 122 ⇓P P 14 42 13.0 -0.2
baz=33,SNR=6.5
RCTC **Rector, Farmer** 33.22 130 ⇑P P 14 42 14.0 0.0
baz=33
RWWY **Rawlins** 33.26 110 eP P 14 42 14.6 +0.2
comp=Z,14nm,0.6s,mb4.9
GRAC **Grapevine Rang** 33.26 127 ⇑P P 14 42 15.2 +0.7
baz=33
M21A **Separation Pea** 33.26 110 ⇓P P 14 42 14.2 -0.2
baz=33,SNR=7.3
O18A **Roosevelt** 33.28 115 ⇑P P 14 42 15.1 +0.5
baz=33,SNR=6.7
L22A **Ellis Ranch, M** 33.31 109 ⇓P P 14 42 15.6 +0.8
baz=33,SNR=35
Q15A **Fillmore** 33.40 119 ⇑P P 14 42 15.8 +0.2
baz=33
R13A **O'Grain Ranch,** 33.49 121 ⇓P P 14 42 16.8 +0.4
baz=33,SNR=8.0
CWC **Cottonwood Cre** 33.51 128 ⇑P P 14 42 17.0 +0.5
baz=33
N20A **Spence Gulch,** 33.53 112 ⇑P P 14 42 17.6 +0.9
baz=33,SNR=90
O19A **Miners Draw (B** 33.62 113 ⇓P P 14 42 17.6 +0.1
baz=34,SNR=15
P17A **Butcher Ranch,** 33.65 116 ⇓P P 14 42 18.1 +0.3
baz=34
S12A **Delamar Landin** 33.66 123 ⇓P P 14 42 18.2 +0.3
baz=34,SNR=6.8
T11A **Corn Creek, Al** 33.84 124 ⇓P P 14 42 19.4 0.0
baz=34,SNR=10
SMMC **Simmler** 33.86 131 ⇓P P 14 42 19.9 +0.2
baz=34
N21A **Black Mountain** 33.90 111 ⇑P P 14 42 20.0 +0.1
baz=34,SNR=8.1
MSU **Marysvale** 33.90 119 eP P 14 42 21.0 +1.0
Q16A **Castle Valley** 33.95 117 ⇓P P 14 42 21.1 +0.6
baz=34,SNR=15
ARUT **Antelope Range** 34.04 121 eP P 14 42 20.3 -0.9
ARUT pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
ARUT **Antelope Range** 34.04 121 eP P 14 42 20.3 -0.8
comp=Z,10nm,1.0s,mb4.5
SRU **San Rafael** 34.05 116 ⇑P P 14 42 21.6 +0.3
baz=34,SNR=18
SRU **San Rafael** 34.05 116 eP P 14 42 21.8 +0.6
SRU pmax pmax
comp=Z,24nm,0.9s,mb4.9
SRU **San Rafael** 34.05 116 eP P 14 42 21.8 +0.5
comp=Z,24nm,0.9s,mb4.9
MPMC **Manual Prospec** 34.06 128 ⇑P P 14 42 21.7 +0.4
baz=34,SNR=8.5
S13A **Holt Ranch, En** 34.06 122 ⇓P P 14 42 21.7 +0.4
baz=34,SNR=29
ISA **Isabella** 34.07 129 ⇑P P 14 42 21.1 -0.4
baz=34,SNR=5.5
ISA **Isabella** 34.07 129 eP P 14 42 20.9 -0.5
ISA pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
ISA **Isabella** 34.07 129 eP P 14 42 20.9 -0.5
comp=Z,7.5nm,0.8s,mb4.5
O20A **White River Ci** 34.12 113 ⇑P P 14 42 21.8 -0.1
baz=34
R15A **Junction** 34.12 119 ⇓P P 14 42 22.7 +0.8
baz=34,SNR=6.4
Q18A **Rafter H Ranch** 34.22 116 ⇓P P 14 42 22.6 -0.1
baz=34,SNR=6.2
P19A **Cripple Cowboy** 34.24 114 ⇓P P 14 42 22.8 0.0
baz=34,SNR=12
CCUT **Cedar City** 34.28 121 eP P 14 42 24.0 +0.8
comp=Z,8.8nm,0.8s,mb4.5
CCUT epP pP 14 42 52.8 +1.0
PKM **Peak Mountain** 34.30 131 ⇓P P 14 42 24.1 +0.6
baz=34,SNR=7.1
N22A **Wattenberg Ran** 34.31 110 ⇓P P 14 42 23.6 +0.1
baz=34,SNR=8.6
PHWY **Pilot Hill** 34.33 108 eP P 14 42 23.4 -0.2
comp=Z,5.3nm,0.6s,mb4.5
O21A **Pagoda** 34.37 112 ⇓P P 14 42 24.7 +0.7
baz=34
R16A **Teasdale** 34.38 118 ⇑P P 14 42 24.6 +0.5
baz=34,SNR=19
LRMC **Laurel Mountai** 34.51 128 ⇑P P 14 42 25.4 +0.2
baz=34,SNR=6.0
T13A **Saint George** 34.53 122 ⇓P P 14 42 25.7 +0.3
baz=34,SNR=16
R17A **Hanksville Air** 34.57 117 ⇑P P 14 42 25.7 0.0
baz=34,SNR=7.1
Q19A **Hogan Spring (** 34.70 115 ⇓P P 14 42 26.3 -0.5
baz=35,SNR=15
O22A **Kremmling** 34.81 111 ⇓P P 14 42 28.2 +0.4
baz=35
T14A **Hurricane** 34.81 121 ⇑P P 14 42 28.2 +0.3
baz=35,SNR=10
U12A **Valley of Fire** 34.81 123 ⇑P P 14 42 28.6 +0.8
baz=35
S16A **Weppner Ranch,** 34.82 119 ⇑P P 14 42 28.5 +0.7
baz=35,SNR=8.0
R18A **Canyonlands Na** 34.92 116 ⇓P P 14 42 28.1 -0.7
baz=35,SNR=14
EDW2 **Edwards Air Fo** 34.94 129 ⇓P P 14 42 29.2 +0.2
baz=35
P21A **Newcastle** 34.96 112 ⇓P P 14 42 30.1 +1.1
baz=35
GSC **Goldstone** 34.98 127 ⇓P P 14 42 29.5 +0.2
baz=35,SNR=11
V11A **Goodsprings** 35.00 125 ⇓P P 14 42 29.8 +0.3
baz=35
U13A **Pakoon Wash** 35.04 123 ⇑P P 14 42 30.0 +0.2
baz=35,SNR=5.2
Q20A **Ridgley Place,** 35.09 114 ⇓P P 14 42 29.6 -0.6
baz=35,SNR=9.3
T15A **Red Dirt Ranch** 35.12 120 ⇑P P 14 42 31.3 +0.8
baz=35
TUQ **Turquoise Moun** 35.18 126 ⇓P P 14 42 31.5 +0.5
baz=35,SNR=5.7
P22A **Eagle** 35.19 111 ⇑P P 14 42 31.2 +0.2
baz=35
S17A **Black Ridge (B** 35.21 118 ⇑P P 14 42 31.4 +0.2
baz=35,SNR=9.1
R19A **Curley Farm, L** 35.26 115 ⇑P P 14 42 31.5 -0.2
baz=35,SNR=14
V12A **Nelson** 35.32 124 ⇑P P 14 42 32.8 +0.7
baz=35,SNR=6.3
PV04 **Paradox Valley** 35.32 115 eP P 14 42 32.1 0.0
U14A **Mt Trumbull** 35.34 122 ⇓P P 14 42 32.9 +0.6
baz=35,SNR=16
S18A **Hurst Farm, Bl** 35.48 117 ⇓P P 14 42 33.1 -0.5
baz=35,SNR=12
Q21A **Lamborn Mesa,** 35.49 113 ⇓P P 14 42 33.5 -0.2
baz=35,SNR=7.5
ISCO **Idaho Springs** 35.50 110 eP P 14 42 34.2 +0.5
ISCO pmax pmax
comp=Z,65nm,2.5s,mb4.8
ISCO **Idaho Springs** 35.50 110 eP P 14 42 34.2 +0.5
comp=Z,65nm,2.5s,mb4.8
V13A **Grand Canyon W** 35.53 123 ⇑P P 14 42 34.4 +0.4
baz=35,SNR=8.5
HEC **Hector,Ludlow** 35.58 127 ⇓P P 14 42 34.6 +0.2
baz=36
BFSC **Mount Baldy Ra** 35.64 129 ⇓P P 14 42 35.1 +0.2
baz=36,SNR=5.5

U15A **North Rim** 35.67 121 ⇑P P 14 42 35.5 +0.3
baz=36,SNR=13
PV01 **Paradox Valley** 35.68 115 eP P 14 42 35.3 +0.1
comp=Z,1μm,1.0s
R20A **Redvale** 35.71 115 ⇓P P 14 42 35.5 0.0
baz=36,SNR=16
Q22A **Crested Butte,** 35.74 112 ⇑P P 14 42 36.5 +0.7
baz=36
T17A **Navajo Res., N** 35.76 118 ⇑P P 14 42 35.5 -0.5
baz=36,SNR=10
P23A **Jefferson** 35.76 111 ⇑P P 14 42 36.8 +0.8
baz=36,SNR=7.8
S19A **Harvey Farm, M** 35.78 116 ⇓P P 14 42 35.9 -0.2
baz=36,SNR=7.2
GMRC **Granite Mounta** 35.86 126 ⇓P P 14 42 37.1 +0.3
baz=36,SNR=5.1
R21A **Cimarron** 35.90 113 ⇓P P 14 42 37.2 +0.2
baz=36,SNR=12
T18A **Mexican Hat** 36.01 117 ⇓P P 14 42 37.5 -0.5
baz=36,SNR=28
S20A **Disappointment** 36.02 115 ⇓P P 14 42 38.2 0.0
baz=36,SNR=10
P24A **Kohler Place,** 36.04 109 ⇑P P 14 42 39.0 +0.7
baz=36
V14A **Boquillas Ranc** 36.06 122 ⇓P P 14 42 39.0 +0.5
baz=36,SNR=10
U17A **Shonto** 36.16 119 ⇓P P 14 42 39.2 -0.2
baz=36,SNR=6.6
W13A **Hualapai Mount** 36.23 124 ⇓P P 14 42 40.4 +0.4
baz=36,SNR=11
V15A **Kaibab Nationa** 36.25 121 ⇓P P 14 42 40.8 +0.7
baz=36,SNR=33
ECSD **EROS Data Cent** 36.25 97 eP P 14 42 39.0 -1.1
comp=Z,12nm,1.1s,mb4.4
R22A **Saguache, Gunn** 36.34 113 ⇓P P 14 42 41.5 +0.6
baz=36,SNR=16
P25A **Willow Gulch B** 36.36 109 ⇑P P 14 42 41.6 +0.6
baz=36
Q24A **Divide** 36.40 110 ⇓P P 14 42 41.7 +0.3
baz=36
S21A **Coal Bank Pass** 36.40 114 ⇓P P 14 42 41.9 +0.6
baz=36,SNR=11
W14A **Seligman** 36.44 123 ⇓P P 14 42 42.3 +0.6
baz=36,SNR=8.6
BELC **Belle Mtn. Jos** 36.44 127 ⇓P P 14 42 41.7 -0.1
baz=36,SNR=9.4
SCI **San Clemente I** 36.48 131 ⇓P P 14 42 42.4 +0.3
baz=36
MVCO **Mesa Verde** 36.50 116 ⇓P P 14 42 42.0 -0.2
baz=36,SNR=5.2
MVCO **Mesa Verde** 36.50 116 eP P 14 42 41.8 -0.4
comp=Z,6.6nm,0.8s,mb4.3
IRM **Iron Mountain** 36.60 126 ⇓P P 14 42 43.6 +0.4
baz=36,SNR=7.6
T19A **Beclabito** 36.61 116 ⇑P P 14 42 42.8 -0.4
baz=36,SNR=13
U18A **Rough Rock, Ch** 36.63 118 ⇓P P 14 42 43.4 +0.1
baz=36
PFO **Pinyon Flat Ob** 36.63 128 ⇓P P 14 42 43.5 +0.1
baz=36
PFO **Pinyon Flat Ob** 36.63 128 eP P 14 42 43.2 -0.2
PFO pmax pmax
comp=Z,16nm,1.2s,mb4.5
PFO **Pinyon Flat Ob** 36.63 128 eP P 14 42 43.2 -0.2
comp=Z,16nm,1.2s,mb4.5
S22A **4UR Ranch, Cre** 36.73 113 ⇓P P 14 42 44.8 +0.7
baz=37,SNR=15
W15A **Williams** 36.78 122 ⇓P P 14 42 45.6 +1.0
baz=37
Q25A **Bedland, Calha** 36.82 109 ⇑P P 14 42 45.9 +1.0
baz=37
WUAZ **Wupatki** 36.83 120 ⇓P P 14 42 45.5 +0.5
baz=37,SNR=21
WUAZ **Wupatki** 36.83 120 eP P 14 42 45.5 +0.5
comp=Z,24nm,0.9s,mb4.8
WUAZ epP pP 14 43 13.7 -0.1
PDMCI **Parker Dam,Lak** 36.85 125 ⇑P P 14 42 46.0 +0.7
baz=37
V17A **Tonalea, Kykot** 36.96 120 ⇓P P 14 42 46.7 +0.6
baz=37,SNR=49
U19A **Dine' College,** 37.01 117 ⇑P P 14 42 46.6 +0.1
baz=37
R24A **Sanders Place,** 37.03 111 ⇑P P 14 42 47.1 +0.4
baz=37,SNR=6.6
109C **Camp Elliot, M** 37.05 129 ⇑P P 14 42 47.7 +0.7
baz=37
T21A **Navajo Lake** 37.08 115 ⇓P P 14 42 48.0 +0.9
baz=37
W16A **Flagstaff** 37.13 121 ⇓P P 14 42 48.6 +1.0
baz=37
X14A **Yava** 37.17 123 ⇑P P 14 42 48.5 +0.6
baz=37,SNR=11
Y12C **Blythe** 37.20 126 ⇓P P 14 42 48.7 +0.5
baz=37
U20A **Newcomb** 37.21 116 ⇑P P 14 42 48.5 +0.3
baz=37,SNR=14
V18A **Ganado** 37.22 118 ⇑P P 14 42 48.7 +0.3
baz=37,SNR=21
SDCO **Great Sand Dun** 37.28 112 eP P 14 42 49.4 +0.6
comp=Z,9.1nm,1.0s,mb4.4
MONP **Monument Peak** 37.29 128 ⇓P P 14 42 49.3 +0.3
baz=37,SNR=11
T22A **Edith** 37.32 114 ⇑P P 14 42 50.2 +1.1
baz=37,SNR=9.6
Y13A **Salome** 37.40 125 ⇑P P 14 42 50.0 +0.2
baz=37,SNR=6.0
X15A **Humboldt** 37.40 122 ⇑P P 14 42 50.4 +0.5
baz=37
SWSC **Sam W. Stewart** 37.47 128 ⇑P P 14 42 50.8 +0.3
baz=37
S24A **Houchin Ranch,** 37.49 111 ⇑P P 14 42 51.3 +0.7
baz=37,SNR=12
U21A **Nageezi** 37.51 115 ⇓P P 14 42 51.0 +0.2
baz=37,SNR=8.0
KBS **Kingsbay** 37.55 5⇓eP P 14 42 52.0 +1.4
KBS pmax pmax
comp=Z,8.0nm,0.8s,mb4.4
KBS **Kingsbay** 37.55 5 eP P 14 42 52.0 +1.4
comp=Z,8.7nm,0.9s,mb4.4
KBS epP pP 14 43 21.5 +2.0
Y14A **Wickenburg** 37.60 124 ⇓P P 14 42 51.8 +0.3
baz=38,SNR=8.5
DVTC **Desert V Tower** 37.62 128 ⇑P P 14 42 52.3 +0.6
baz=38
T23A **Casias Ranch,** 37.66 113 ⇑P P 14 42 52.5 +0.5
baz=38
GLA **Glamis** 37.72 126 ⇑P P 14 42 52.9 +0.3
baz=38
GLA **Glamis** 37.72 126 eP P 14 42 52.9 +0.4
GLA pmax pmax
comp=Z,11nm,0.8s,mb4.5
GLA **Glamis** 37.72 126 eP P 14 42 52.9 +0.4
comp=Z,11nm,0.8s,mb4.5
V20A **Brimhall** 37.73 117 ⇓P P 14 42 52.8 +0.2
baz=38,SNR=12
X16A **Lo Mia Camp, P** 37.77 121 ⇑P P 14 42 53.6 +0.7
baz=38,SNR=5.7
S25A **Robets Cordova** 37.80 111 ⇑P P 14 42 53.4 +0.2
baz=38,SNR=10
W18A **Petrified Fore** 37.82 119 ⇓P P 14 42 54.0 +0.6
baz=38
Y15A **Casa Rosa Ranc** 37.84 123 ⇑P P 14 42 54.1 +0.6
baz=38,SNR=8.7
U22A **Llaves** 37.89 114 ⇑P P 14 42 54.5 +0.6
baz=38
W19A **Sanders** 37.96 118 ⇓P P 14 42 55.2 +0.6
baz=38,SNR=9.3
Z13A **Yuma Proving G** 38.01 125 ⇑P P 14 42 55.2 +0.2
baz=38,SNR=7.6
V21A **Milan** 38.06 116 ⇓P P 14 42 55.9 +0.5
baz=38,SNR=14
X17A **Forest Lakes** 38.08 121 ⇑P P 14 42 56.8 +1.2
baz=38
Z14A **Wintersburg** 38.13 124 ⇑P P 14 42 56.8 +0.8
baz=38
U23A **El Rito** 38.20 114 ⇓P P 14 42 57.4 +0.8
baz=38,SNR=8.4
Y16A **Circle Bar Ran** 38.23 122 ⇓P P 14 42 57.6 +0.8
baz=38
X18A **Snowflake** 38.25 119 ⇑P P 14 42 57.6 +0.6
baz=38,SNR=9.6
T25A **Trinidad** 38.25 111 ⇑P P 14 42 57.5 +0.5
baz=38
V22A **San Miguel Ran** 38.26 115 ⇑P P 14 42 57.5 +0.4
baz=38,SNR=7.9
W20A **Ramah** 38.30 117 ⇑P P 14 42 57.6 +0.2
baz=38,SNR=18
113A **Mohawk Valley,** 38.36 125 ⇓P P 14 42 58.3 +0.3
baz=38
SPITS **Spitsbergen Ar** 38.45 4 P P 14 42 57.9 -0.4
comp=Z,13nm,0.5s,mb4.8,baz=2.9,slow=5.0,SNR=57
W21A **San Fidel** 38.65 116 ⇑P P 14 43 00.9 +0.5
baz=38
114A **Black Gap (USA** 38.70 124 ⇓P P 14 43 01.2 +0.5
baz=39
V23A **Ortiz Mt. (NFS** 38.70 114 ⇓P P 14 43 02.2 +1.4
baz=39
X20A **Quemado** 38.81 118 ⇓P P 14 43 02.1 +0.4
baz=39
Y18A **Canyon Day Jun** 38.88 120 ⇑P P 14 43 03.0 +0.8
baz=39,SNR=11
U25A **Circle Dot Ran** 38.88 112 ⇑P P 14 43 02.9 +0.7
baz=39,SNR=33
115A **Sonoran Desert** 38.99 123 ⇓P P 14 43 03.8 +0.6
baz=39
Y19A **Nutrioso** 39.02 119 ⇑P P 14 43 04.6 +1.1
baz=39,SNR=17
V24A **Rampart Ranch,** 39.10 113 ⇑P P 14 43 05.0 +0.9
baz=39,SNR=20
Z17A **San Carlos Hig** 39.13 121 ⇑P P 14 43 05.2 +0.8
baz=39
U26A **Atchley Ranch,** 39.16 111 ⇓P P 14 43 05.0 +0.4
baz=39,SNR=12
X21A **Alamocita Cree** 39.18 117 ⇓P P 14 43 05.5 +0.7
baz=39,SNR=15
W23A **Werner Place,** 39.22 115 ⇑P P 14 43 05.8 +0.7
baz=39,SNR=8.1
V25A **Rancho No Teng** 39.27 112 ⇓P P 14 43 06.1 +0.6
baz=39,SNR=20
ANMO **Albuquerque** 39.28 115 eP P 14 43 06.0 +0.4
ANMO pmax pmax
comp=Z,7.0nm,0.8s
ANMO **Albuquerque** 39.28 115 eP P 14 43 06.0 +0.4
comp=Z,6.9nm,0.8s,mb4.3
116A **Eloy** 39.31 123 ⇓P P 14 43 06.7 +0.9
baz=39
YSS **Yuzh-Sakhalins** 39.34 278 eP P 14 43 06.0 +0.1
YSS e 14 43 46.0
YSS **Yuzh-Sakhalins** 39.34 278 eP P 14 43 06.3 +0.3
comp=Z,34nm,1.3s,mb4.8
Y20A **Horse Springs,** 39.41 118 ⇑P P 14 43 07.5 +0.8
baz=39,SNR=5.3
214A **Organ Pipe Nat** 39.44 125 ⇓P P 14 43 07.5 +0.6
baz=39
X22A **Bernardo** 39.44 116 ⇑P P 14 43 08.0 +1.1
baz=39
LAZ **Ladron** 39.48 116 eP P 14 43 08.0 +0.8
comp=Z,4.0nm,1.1s,mb4.0
W24A **Lazy 6 Ranch,** 39.48 114 ⇑P P 14 43 08.0 +0.7
baz=39,SNR=9.2
Y21A **Point of Rocks** 39.61 117 ⇑P P 14 43 09.2 +0.9
baz=40,SNR=8.7
V26A **Tequesquite Ra** 39.66 111 ⇓P P 14 43 08.9 +0.3
baz=40,SNR=23
117A **Oracle** 39.67 122 ⇓P P 14 43 09.6 +0.8
baz=40,SNR=11
LENM **Lemitar** 39.75 116 eP P 14 43 09.8 +0.3
JFWS **Jewell Farm** 39.76 92 eP P 14 43 08.8 -0.6
JFWS pmax pmax
comp=Z,14nm,0.7s,mb4.7
JFWS **Jewell Farm** 39.76 92 eP P 14 43 08.8 -0.7
comp=Z,14nm,0.7s,mb4.7
W25A **X Bar L Ranch,** 39.87 113 ⇓P P 14 43 10.9 +0.4
baz=40,SNR=12
TUC **Tucson** 39.89 122 eP P 14 43 10.7 +0.1
TUC pmax pmax
comp=Z,9.0nm,1.3s,mb4.2
TUC **Tucson** 39.89 122 eP P 14 43 10.7 0.0
comp=Z,9.2nm,1.3s,mb4.2
216A **Three Points,** 39.91 123 ⇓P P 14 43 11.4 +0.6
baz=40
118A **Homack Ranch,** 39.91 121 ⇓P P 14 43 11.3 +0.5
baz=40
Y22A **Socorro** 39.95 116 ⇓P P 14 43 11.9 +0.7
baz=40,SNR=14
KSU1 **Kansas State U** 39.99 101 eP P 14 43 10.8 -0.6
comp=Z,40nm,0.6s,mb5.2
Z20A **Nine Sixteen R** 40.03 119 ⇓P P 14 43 12.5 +0.7
baz=40
X24A **Lazy VL Ranch,** 40.03 114 ⇑P P 14 43 12.6 +0.8
baz=40
119A **Ashpeak Ranch,** 40.05 120 ⇑P P 14 43 12.7 +0.7
baz=40,SNR=6.0
W26A **Owens Ranch, T** 40.27 112 ⇓P P 14 43 14.5 +0.7
baz=40
Y23A **Lovelace Mesa,** 40.33 115 ⇑P P 14 43 14.9 +0.7
baz=40,SNR=12
218A **Dragoon** 40.47 121 ⇓P P 14 43 16.1 +0.7
baz=40,SNR=6.8
120A **U Bar Ranch, L** 40.51 119 ⇑P P 14 43 16.5 +0.8
baz=40
Z22A **Elephant Butte** 40.55 117 ⇑P P 14 43 16.8 +0.7
baz=40,SNR=15
Y24A **Capitan** 40.59 115 ⇓P P 14 43 16.9 +0.5
baz=40,SNR=24
W27A **Bowe Ranch, En** 40.59 111 ⇓P P 14 43 16.4 +0.1
baz=40
X26A **CR and CF Fran** 40.72 112 ⇑P P 14 43 17.6 +0.2
baz=41,SNR=14
219A **White Tail Can** 40.75 120 ⇑P P 14 43 18.4 +0.7
baz=41,SNR=8.8
Z23A **Rita Site, Whi** 40.84 116 ⇑P P 14 43 19.2 +0.8
baz=41,SNR=9.3
121A **Cookes Peak, D** 40.86 118 ⇓P P 14 43 19.3 +0.7
baz=41,SNR=5.6
Y25A **Mesa, Roswell** 40.89 114 ⇓P P 14 43 19.2 +0.4
baz=41
SCHQ **Schefferville** 40.89 61 P P 14 43 18.6 0.0
comp=Z,1.8nm,0.4s,mb4.0,baz=0.0,slow=2.0,SNR=3.6
X27A **F and S Farms,** 40.93 112 ⇑P P 14 43 19.1 0.0
baz=41,SNR=5.3
318A **Bisbee** 40.97 122 ⇑P P 14 43 20.1 +0.6
baz=41,SNR=8.3
122A **Conniff Cattle** 41.02 117 ⇑P P 14 43 20.9 +1.0
baz=41
220A **Playas Peak, P** 41.12 120 ⇑P P 14 43 21.3 +0.5
baz=41,SNR=10
Z24A **Sheeppen Canyo** 41.13 115 ⇓P P 14 43 21.4 +0.5
baz=41,SNR=14
319A **Douglas** 41.30 121 ⇑P P 14 43 22.8 +0.6
baz=41,SNR=5.4
AMTX **Amarillo** 41.32 110 eP P 14 43 22.6 +0.2
comp=Z,18nm,0.8s,mb4.7
Z25A **Roswell** 41.44 114 ⇑P P 14 43 23.4 0.0
baz=41,SNR=7.0
Y27A **Causey** 41.56 112 ⇑P P 14 43 24.4 +0.1
baz=42,SNR=13
HABR **Khabarovsk** 41.59 285 eP P 14 43 22.6 -1.8
HABR e*PP pP 14 43 51.7 -2.0
HABR S S 14 49 29.3 -0.9
HABR eSS SS 14 52 40.6 +0.8
HABR e 14 53 11.9
HABR pmax pmax
comp=E,18nm,1.8s
HABR pmax pmax
comp=N,19nm,1.8s
HABR pmax pmax
comp=Z,12nm,1.5s,mb4.3
HABR MLR MLR
comp=Z,25nm,15.0s
ASAJ **Asahikawa** 41.60 275 P P 14 43 23.9 -0.6
comp=Z,4.6nm,0.9s,mb4.1,baz=40,slow=7.9,SNR=2.5
320A **Kipp Ranch, An** 41.62 120 ⇑P P 14 43 25.8 +0.9
baz=42
124A **Stringfield Ra** 41.65 116 ⇓P P 14 43 25.3 +0.3
baz=42,SNR=7.9
MSTX **Muleshoe** 41.65 112 ⇑P P 14 43 24.8 -0.2
baz=42,SNR=23
Z26A **Caprock** 41.75 114 ⇑P P 14 43 25.8 -0.1
baz=42,SNR=23
125A **Gardner Draw,** 42.01 115 ⇑P P 14 43 28.0 +0.1
baz=42,SNR=9.9
CPRX **Cap Rock** 42.01 114 eP P 14 43 28.1 +0.2
comp=Z,2.9nm,0.7s,mb4.0
Z27A **Tatum** 42.03 113 ⇓P P 14 43 27.8 -0.3
baz=42,SNR=6.9
HDIL **Hopedale** 42.07 93 eP P 14 43 27.8 -0.6
comp=Z,21nm,0.6s,mb4.9
224A **Cornudas Mount** 42.16 116 ⇑P P 14 43 29.3 +0.1
baz=42,SNR=5.6
126A **Clayton Basin,** 42.28 114 ⇑P P 14 43 30.0 -0.2
baz=42
225A **Deer Hill, Car** 42.42 115 ⇓P P 14 43 31.7 +0.4
baz=42,SNR=16
KLR **Kul'dur** 42.44 288 eP P 14 43 26.8 -4.4
GDL2 **Guadalupe Moun** 42.53 115 eP P 14 43 32.7 +0.5
MNTX **Cornudas Mount** 42.55 116 eP P 14 43 32.4 0.0
comp=Z,4.8nm,1.0s,mb4.1
CLNB **Carlsbad** 42.67 114 eP P 14 43 33.5 +0.2
comp=Z,6.0nm,1.1s,mb4.1
WMOK **Wichita Mounta** 42.69 107 eP P 14 43 32.9 -0.5
WMOK pmax pmax
comp=Z,18nm,0.9s,mb4.7
WMOK **Wichita Mounta** 42.69 107 eP P 14 43 32.9 -0.5
comp=Z,18nm,0.9s,mb4.7
324A **Moseley Ranch,** 42.74 117 ⇓P P 14 43 33.9 0.0
baz=43,SNR=9.7
226A **Malaga, Loving** 42.76 115 ⇓P P 14 43 33.5 -0.6
baz=43
325A **Bean Ranch, Si** 43.01 116 ⇓P P 14 43 36.1 0.0
baz=43,SNR=10
227A **Bennet, Jal** 43.13 114 ⇓P P 14 43 37.6 +0.6
baz=43
326A **Caldwell Ranch** 43.46 115 ⇓P P 14 43 39.5 -0.2
baz=43,SNR=12
425A **Indio Mountain** 43.51 116 ⇓P P 14 43 40.8 +0.6
baz=43,SNR=16
FVM **French Village** 43.66 96 eP P 14 43 39.8 -1.4
FVM pmax pmax
comp=Z,9.0nm,0.5s,mb4.7
FVM **French Village** 43.66 96 eP P 14 43 39.8 -1.4
comp=Z,8.9nm,0.5s,mb4.7
328A **Wristen Ranch,** 43.88 114 ⇑P P 14 43 43.0 0.0
baz=44
426A **McDonald Obser** 44.01 115 ⇑P P 14 43 44.0 0.0
baz=44,SNR=13
OLIL **Olney** 44.09 93 eP P 14 43 43.6 -1.0
comp=Z,16nm,0.6s,mb4.8
427A **Hayter Ranch,** 44.10 115 ⇓P P 14 43 44.7 -0.2
baz=44,SNR=11
SIUC **Southern Illin** 44.42 95 eP P 14 43 44.9 -2.3
comp=Z,27nm,0.8s,mb4.9
428A **Kincaid Ranch,** 44.50 114 ⇓P P 14 43 48.2 +0.2
baz=44,SNR=11
526A **Mary Lane Ranc** 44.52 116 ⇑P P 14 43 48.4 +0.3
baz=44,SNR=16
527A **Woodward Ranch** 44.63 115 ⇑P P 14 43 49.0 0.0
baz=44,SNR=24
626A **Big Bend Ranch** 44.95 116 ⇑P P 14 43 51.6 +0.1
baz=45,SNR=12
528A **Cox Ranch, San** 44.96 114 ⇑P P 14 43 51.9 +0.3
baz=45,SNR=41
MIAR **Mount Ida** 45.12 102 eP P 14 43 52.0 -0.9
MIAR pmax pmax
comp=Z,16nm,0.8s,mb4.7
MIAR **Mount Ida** 45.12 102 eP P 14 43 52.0 -0.9
comp=Z,16nm,0.8s,mb4.7
ACSO **Alum Creek Sta** 45.17 88 eP P 14 43 52.8 -0.4
comp=Z,15nm,0.7s,mb4.7
ALLY **Alegheny Colle** 45.31 84 eP P 14 43 54.2 0.0
comp=Z,40nm,1.0s,mb5.0
WCI **Wyandotte Cave** 45.31 92 eP P 14 43 53.3 -1.0
WCI pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
WCI **Wyandotte Cave** 45.31 92 eP P 14 43 53.3 -1.0
comp=Z,10nm,0.7s,mb4.6
TXAR **Lajitas Array** 45.33 116 P P 14 43 54.4 -0.2
comp=Z,5.1nm,0.6s,mb4.3,baz=328,slow=8.5,SNR=60
627A **Terlingua Ranc** 45.34 116 ⇓P P 14 43 54.6 0.0
baz=45,SNR=16
UALR **University of** 45.47 100 eP P 14 43 54.2 -1.4
comp=Z,12nm,0.8s,mb4.6
628A **Black Gap, Mar** 45.51 115 ⇑P P 14 43 56.0 0.0
baz=45,SNR=12
FRNY **Flat Rock** 45.68 76 eP P 14 43 55.9 -1.2
comp=Z,9.5nm,0.8s,mb4.5
JCT **Junction City** 45.92 111 eP P 14 43 58.8 -0.4
JCT pmax pmax
comp=Z,24nm,0.9s,mb4.8
JCT **Junction City** 45.92 111 eP P 14 43 58.8 -0.4
comp=Z,24nm,0.9s,mb4.8
WVT **Waverly** 46.35 95 eP P 14 44 01.8 -0.7
WVT pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
WVT **Waverly** 46.35 95 eP P 14 44 01.8 -0.7
comp=Z,9.7nm,0.8s,mb4.5
MDJ **Mudanjiang** 46.95 286 P P 14 44 05.9 -1.2
MDJ pmax pmax
comp=Z,4.0nm,1.1s,mb4.0
MDJ pmax pmax
comp=Z,31nm,3.3s
OXF **Oxford** 47.00 98 eP P 14 44 06.9 -0.6
OXF pmax pmax
comp=Z,108nm,1.0s,mb5.4
OXF **Oxford** 47.00 98 eP P 14 44 06.9 -0.6
comp=Z,108nm,1.0s,mb5.4
MCWV **Mont Chateau** 47.05 85 eP P 14 44 06.9 -1.0
comp=Z,24nm,1.3s,mb4.7
PKME **Peaks-Kenny Pk** 47.20 72 eP P 14 44 07.4 -1.6
comp=Z,24nm,0.9s,mb4.8
ARCES **ARCESS Array B** 47.34 2 P P 14 44 10.0 +0.3
comp=Z,8.3nm,0.6s,mb4.6,baz=15,slow=7.7,SNR=50
SWET **Sewanee** 47.97 94 eP P 14 44 13.7 -1.3
HKT **Hockley** 48.07 107 eP P 14 44 15.6 -0.2
HKT pmax pmax
comp=Z,17nm,1.4s,mb4.5
HKT **Hockley** 48.07 107 eP P 14 44 15.6 -0.3
comp=Z,17nm,1.4s,mb4.5
CPCT **Cooper Cave** 48.41 93 eP P 14 44 17.2 -1.2
ELN **Prospectdale** 48.63 88 eP P 14 44 18.5 -1.6
LRAL **Lakeview Retre** 49.32 97 eP P 14 44 23.9 -1.4
comp=Z,3.6nm,0.8s,mb4.0
MAT **Matsushiro** 49.68 273 P P 14 44 28.2 +0.1
MJAR **Matsushiro Arr** 49.68 273 P P 14 44 28.3 +0.2
comp=Z,2.2nm,0.6s,mb3.9,baz=7.7,slow=8.4,SNR=8.1
KRAR **Krasnoyarsk** 51.23 320c iP P 14 44 39.1 -0.3
KRAR pmax pmax
comp=Z,39nm,0.5s,mb5.3
TLY **Talaya** 51.45 310 eP P 14 44 41.9 +0.7
TLY pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
TLY **Talaya** 51.45 310 eP P 14 44 42.4 +1.2
comp=Z,4.9nm,0.7s,mb4.2
CNNC **Cliffs of the** 51.57 87 eP P 14 44 40.4 -1.8
comp=Z,92nm,0.3s
MOY **Mondy** 52.37 312 eP P 14 44 49.9 +2.0
ULN **Ulaanbaatar** 53.42 305 eP P 14 44 56.5 +0.8
ULN pmax pmax
comp=Z,12nm,0.5s,mb4.9
ULN **Ulaanbaatar** 53.42 305 eP P 14 44 56.5 +0.8
comp=Z,12nm,0.5s,mb4.9
KSRS **Korea Array** 53.52 282 P P 14 44 57.3 +0.7
comp=Z,3.1nm,0.6s,mb4.2,baz=27,slow=6.8,SNR=15
SONM **Songino Array** 53.69 305 P P 14 44 59.3 +1.6
comp=Z,11nm,0.8s,mb4.7,baz=21,slow=6.5,SNR=63
JOF **Joensuu** 54.00 359 eP P 14 44 58.9 -0.8
JOF **Joensuu** 54.00 359 ep P 14 44 58.9 -0.8
comp=Z,5.7nm,0.6s,mb4.5
KAF **Kangasniemi** 54.80 2 eP P 14 45 05.6 +0.1
KAF pmax pmax
comp=Z,2.0nm,0.4s,mb4.2
KAF **Kangasniemi** 54.80 2 ep P 14 45 05.6 +0.1
comp=Z,2.3nm,0.4s,mb4.3
NVS **Novosibirsk** 54.90 325 eP P 14 45 04.7 -1.6
NVS pmax pmax
comp=N,7.0nm,0.6s
NVS pmax pmax
comp=E,7.0nm,0.6s
NVS pmax pmax
comp=Z,23nm,0.6s,mb5.1
NB2 **NORSAR Subarra** 55.14 11 P P 14 45 07.3 -0.7
comp=Z,4.2nm,0.6s,mb4.3,baz=351,slow=7.4
NOA **NORSAR Array B** 55.14 11 P P 14 45 07.7 -0.2
comp=Z,3.9nm,0.6s,mb4.3,baz=350,slow=7.2,SNR=31
NOA **NORSAR Array B** 55.14 11 P P 14 45 07.7 -0.2
ZAA0 **Zalesovo Array** 55.28 324 eP P 14 45 08.7 -0.4
ZALV **Zalesovo Beam** 55.28 324 P P 14 45 08.9 -0.2
comp=Z,15nm,0.5s,mb5.0,baz=24,slow=6.8,SNR=74
FINES **FINESS Array B** 55.47 2 P P 14 45 10.0 -0.3
comp=Z,3.3nm,0.5s,mb4.3,baz=3.1,slow=8.7,SNR=14
SOKR **Solikamsk** 55.59 343c iP P 14 45 11.3 +0.2
SOKR pmax pmax
comp=Z,20nm,0.9s,mb5.0
HHC **Hu-ho-hao-te** 57.59 297 eP P 14 45 23.8 -1.8
HHC pP pP 14 45 53.2 -3.5
HHC PcP PcP 14 46 15.8 -1.6
HHC PP PP 14 47 33.7 -0.6
HHC ScP ScP 14 50 02.7 -1.8
HHC PcS PcS 14 50 15.4 -3.2
HHC S S 14 53 08.8 -4.2
HHC ScS ScS 14 54 57.0 -4.7
HHC SS SS 14 57 01.7 -2.6
HHC pmax pmax

comp=Z,12nm,0.6s,mb4.9
HHC pmax pmax
comp=Z,72nm,6.7s
HHC LR LR
comp=N,100nm,17.1s
HHC LR LR
comp=E,70nm,16.5s
HHC LR LR
comp=Z,80nm,16.4s
SVE Sverdlovsk 57.70 340⇓ *eP* **P 14 45 26.8 +0.7**
SVE pmax pmax
comp=Z,33nm,0.8s,mb5.2
ARU Arti 58.39 341 *eP* **P 14 45 30.8 -0.1**
ARU pmax pmax
comp=Z,33nm,0.6s,mb5.3
ARU Arti 58.39 341 *eP* **P 14 45 30.8 -0.1**
comp=Z,33nm,0.6s,mb5.3
VSU Vasula 58.46 2⇓ *eP* **P 14 45 32.4 +1.0**
VSU pmax pmax
comp=Z,39nm,2.5s,mb4.8
BRVK Borovoye 59.55 333 *ceP* **P 14 45 38.7 -0.3**
BRVK pmax pmax
comp=Z,11nm,0.7s,mb4.8
BRVK Borovoye 59.55 333 *eP* **P 14 45 38.1 -0.9**
comp=Z,12nm,0.9s,mb4.7
BVAR Borovoye Array 59.56 333 P **P 14 45 38.4 -0.7**
comp=Z,12nm,0.6s,mb4.9,baz=44,slow=6.4,SNR=70
VOSK Vostochnaya 59.72 332 P **P 14 45 39.1 -1.1**
VOSK pmax pmax
comp=Z,5.0nm,0.6s,mb4.5
KURK Kurchatov 59.82 326 P **P 14 45 41.2 +0.3**
comp=Z,8.4nm,0.6s,mb4.8,baz=28,slow=7.2,SNR=38
KURK PcP PcP 14 46 27.1 +1.1
comp=Z,2.4nm,0.5s,baz=30,slow=4.1,SNR=4.0
KURK Kurchatov 59.82 326 *c iP* **P 14 45 40.4 -0.5**
KURK pmax pmax
comp=Z,23nm,1.7s,mb4.7
KURK Kurchatov 59.82 326 *eP* **P 14 45 39.7 -1.2**
comp=Z,13nm,1.0s,mb4.7
ZRNK Zerenda 59.92 333 P **P 14 45 40.6 -0.9**
OBN Obninsk 61.70 355⇓ *iP* **P 14 45 54.0 +0.5**
OBN pmax pmax
comp=Z,16nm,0.9s,mb4.8
OBN Obninsk 61.70 355 *eP* **P 14 45 54.0 +0.5**
comp=Z,63nm,0.4s,mb5.8
MK31 Makanchi Array 62.45 322 *eP* **P 14 45 58.0 -0.6**
MKAR Makanchi Array 62.45 322 P **P 14 45 58.0 -0.7**
comp=Z,8.1nm,0.5s,mb4.8,baz=46,slow=7.2,SNR=74
GTA Gaotai 63.36 305 ⇑P **P 14 46 05.7 +0.9**
GTA pP pP 14 46 38.7 +2.4
GTA sP sP 14 46 51.8 +1.2
GTA pmax pmax
comp=Z,18nm,0.7s,mb5.0
WMQ Urumqi 63.56 316 P **P 14 46 07.7 +1.7**
WMQ pP pP 14 46 38.2 +0.6
WMQ sP sP 14 46 52.2 +0.4
WMQ pmax pmax
comp=Z,14nm,0.6s,mb5.0
WMQ pmax pmax
comp=Z,110nm,4.1s
WMQ LR LR
comp=N,67nm,22.0s
WMQ LR LR
comp=E,66nm,20.0s
WMQ LR LR
comp=Z,51nm,19.0s
LZH Lanzhou 64.75 300 P **P 14 46 14.4 +0.5**
LZH pP pP 14 46 47.4 +1.8
LZH sP sP 14 46 59.3 -0.5
LZH pmax pmax
comp=Z,25nm,1.1s,mb5.0
LZH pmax pmax
comp=Z,100nm,4.8s
AB31 Akbulak array 65.12 338 *i P* **P 14 46 15.9 -0.2**
AB31 pmax pmax
comp=Z,4.0nm,0.4s,mb4.6
ABKAR Akbulak array 65.12 338 *eP* **P 14 46 16.0 -0.1**
comp=Z,14nm,0.8s,mb4.8
WHN Wuhan 65.28 289 P **P 14 46 08.0 -9.4**
VSR Storozhevoye 65.48 353 *eP* **P 14 46 17.9 -0.4**
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
VSR pmax pmax
comp=E,3.0nm,0.4s
AKASG Malin Array Be 66.26 0 P **P 14 46 22.9 -0.5**
comp=E,6.5nm,0.5s,mb4.7,baz=1.1,slow=6.4,SNR=40
AKBB Malin Array Si 66.26 0 *eP* **P 14 46 22.8 -0.5**
KIEV Kiev 66.27 0 *eP* **P 14 46 22.8 -0.6**
KIEV pmax pmax
comp=Z,77nm,0.6s,mb5.7
KIEV Kiev 66.27 0 *eP* **P 14 46 22.8 -0.6**
comp=Z,77nm,0.6s,mb5.7
TKM2 Tokmak 2 67.83 325 *eP* **P 14 46 33.8 +0.4**
TKM2 pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
TKM2 Tokmak 2 67.83 325 *eP* **P 14 46 33.8 +0.4**
comp=Z,10.0nm,0.9s,mb4.5
AAK Ala-Archa 68.38 326 P **P 14 46 37.8 +0.9**
comp=Z,4.3nm,0.7s,mb4.3,baz=127,slow=2.5,SNR=12
EKS2 Erkin-Say 68.54 326 *eP* **P 14 46 38.2 +0.4**
EKS2 pmax pmax
comp=Z,17nm,0.9s,mb4.8
EKS2 Erkin-Say 68.54 326 *eP* **P 14 46 38.2 +0.4**
comp=Z,17nm,0.9s,mb4.8
KK31 Karatay Array 68.91 329 *i P* **P 14 46 39.6 -0.5**
KK31 pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
BUR08 Bucovina Ar. S 69.27 3 *eP* **P 14 46 42.2 0.0**
CD2 Chengdu 69.34 298 P **P 14 46 42.4 -0.6**
CD2 pP pP 14 47 13.4 -1.6
CD2 sP sP 14 47 27.2 -2.0
CD2 PP PP 14 49 19.2 +1.9
CD2 S S 14 55 36.1 -2.7
CD2 SS SS 15 00 07.4 0.0
CD2 pmax pmax
comp=Z,20nm,0.6s,mb5.0
CD2 pmax pmax
comp=Z,80nm,6.5s
CD2 LR LR
comp=N,120nm,7.1s
CD2 LR LR
comp=Z,170nm,6.5s
KSH Kashi 70.92 323 P **P 14 46 55.9 +3.5**
KSH PcP PcP 14 47 13.9 +1.7
KSH pP pP 14 47 26.3 +1.7
KSH sP sP 14 47 40.1 +1.3
KSH PP PP 14 49 36.4 +5.8
KSH S S 14 55 59.6 +2.6
KSH SKS 14 56 41.7
KSH ScS ScS 14 56 43.6 -0.1
KSH SS SS 15 00 37.5 +6.4
KSH pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
KSH pmax pmax
comp=Z,45nm,5.7s
KSH LR LR
comp=N,60nm,4.1s
KSH LR LR
comp=E,50nm,5.4s
KSH LR LR
comp=Z,88nm,5.6s
GYA Guiyang 72.09 293 *eP* **P 14 47 01.2 +1.6**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
KIV Kislovodsk 72.47 350 *eP* **P 14 47 02.1 +0.4**
KIV *e* 14 47 18.6
KIV pmax pmax
comp=Z,17nm,1.0s,mb4.7
ZEI Tsey 73.55 349 *eP* **P 14 47 08.4 +0.4**
ZEI pmax pmax
comp=Z,8.0nm,0.5s,mb4.7
ESDC Sonseca Array 73.92 26 P **P 14 47 10.3 +0.1**
comp=Z,0.3nm,0.2s,mb3.6,baz=339,slow=6.3,SNR=3.9
ESDC Sonseca Array 73.92 26 P **P 14 47 10.3 +0.1**
KMI Kunming 74.88 296 P **P 14 47 17.5 +1.5**
KMI pP pP 14 47 50.5 +2.0
KMI sP sP 14 48 04.5 +1.9
KMI PP PP 14 50 08.4 +3.7
KMI S S 14 56 42.5 +0.3
KMI sS sS 14 57 35.4 -2.8
KMI SS SS 15 01 35.4 +3.2
KMI pmax pmax
comp=Z,8.0nm,1.1s,mb4.3
KMI pmax pmax
comp=Z,72nm,5.7s
KMI LR LR
comp=N,56nm,13.0s
KMI LR LR
comp=E,77nm,10.5s
KMI LR LR
comp=Z,76nm,14.2s
LSA Lhasa 75.20 307 P **P 14 47 18.4 +0.6**
BR131 Keskin Array S 77.17 357 *eP* **P 14 47 29.0 +0.2**
BRTR Keskin Array B 77.17 357 P **P 14 47 28.8 0.0**
comp=Z,1.7nm,0.5s,mb3.9,baz=345,slow=2.7,SNR=11
BRTR Keskin Array B 77.17 357 *i P* **P 14 47 29.7 +0.9**
BRTR pmax pmax
comp=Z,2.0nm,0.5s
TAPN Taplejung 78.56 309 *eP* **P 14 47 36.2 -0.4**
comp=Z,22nm,0.6s,mb4.9
KKN Kakani 78.99 312 *eP* **P 14 47 38.4 -0.6**
comp=Z,17nm,0.6s,mb4.9
GKN Gorkha 79.01 312 *eP* **P 14 47 38.1 -1.0**
comp=Z,25nm,0.8s,mb4.9
ODAN Odare 79.12 309 *eP* **P 14 47 39.6 -0.1**
comp=Z,13nm,0.7s,mb4.6
PKIN Phulchoki 79.15 311 *eP* **P 14 47 39.4 -0.4**
comp=Z,13nm,0.7s,mb4.7
PKI Pulchoki 79.15 311 *eP* **P 14 47 39.6 -0.2**
DMN Daman 79.22 312 *eP* **P 14 47 39.7 -0.5**
comp=Z,14nm,0.5s,mb4.8
RAMN Ramite 79.31 310 *eP* **P 14 47 40.5 -0.2**
comp=Z,13nm,0.6s,mb4.7
KOLN Koldanda 79.57 313 *eP* **P 14 47 41.5 -0.6**
comp=Z,14nm,0.7s,mb4.7
CMAR Chiang Mai Arr 82.39 296 P **P 14 47 56.9 -0.3**
comp=Z,2.8nm,0.6s,mb4.1,baz=7.9,slow=6.0,SNR=14
MMAI Mount Meron Ar 83.81 355 P **P 14 48 04.2 -0.1**
comp=Z,0.8nm,0.5s,mb3.8,baz=344,slow=3.7,SNR=2.5
TSUM Tsumeb 135.13 16 PKP PKPdf 14 54 56.2 +2.9
comp=Z,2.4nm,0.8s,baz=0.0,slow=11,SNR=3.5
BOSA Boshof 145.12 6 PKPbc PKPbc 14 55 12.2 +1.3
comp=Z,7.0nm,0.8s,baz=356,slow=7.0,SNR=5.8
QSPA South Pole Qui 153.20 180 PKPbc PKPbc 14 55 29.0 -1.0
comp=Z,1.5nm,0.6s,baz=240,slow=2.8,SNR=6.5

IDC 04 14:39:14.7±56.0, 14°.85S×166°.29E, h0km, mb4.0/3, mb1 4.1/3, mb1mx3.7/16, mbtmp4.0/3, Error ellipse: s-maj=948.9km s-min=107.1km az=66.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**28.20**	**229**	P	P	14 45 08.7	-0.4
	1.6nm,0.8s,baz=49,slow=9.5,SNR=4.2						
WRA	**Warramunga Arr**	**30.88**	**256**	P	P	14 45 33.3	+0.3
	0.7nm,0.6s,baz=86,slow=9.3,SNR=23						
ASAR	**Alice Springs**	**31.75**	**249**	P	P	14 45 40.8	+0.1
	0.7nm,0.3s,baz=78,slow=9.2,SNR=33						

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*NEIC **04** 14:45:57.4, 14°.18N×93°.54W, h16km, MD3.9(MEX), After MEX.*

MEX 04 14:45:57.4±0.9, 14°.18N×93°.54W, h16km±178km, MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.43**	**60**	*i P*	Pn	14 46 18.7	-4.0
THIG				*i S*	Sn	14 46 36.6	-4.6
PCIG		**1.54**	**12**	*i P*	Pn	14 46 20.9	-3.4
PCIG				*i S*	Sn	14 46 38.8	-5.2
TGIG		**2.61**	**9**	*i P*	Pn	14 46 36.5	-2.4
TGIG				*i S*	Sn	14 47 05.8	-4.5
SCX	**San Cristobal**	**2.68**	**19**	*i P*	Pn	14 46 37.8	-2.2
SCX				*i S*	Sn	14 47 08.6	-3.6
SCX	**San Cristobal**	**2.68**	**19**	*i P*	Pn	14 46 37.8	-2.2
SCX				*i S*	Sn	14 47 08.6	-3.6
VHO	**Vista Hermosa**	**4.21**	**313**	*i P*	Pn	14 47 08.2	+7.3
VHO				*i S*	Sn	14 47 47.8	-2.0
VHO	**Vista Hermosa**	**4.21**	**313**	*i P*	Pn	14 47 08.2	+7.3
VHO				*i S*	Sn	14 47 47.8	-2.0
PNIG	**Pinotepa**	**4.94**	**297**	*i P*	Pn	14 47 10.6	-0.4
PNIG				*i S*	Sn	14 48 03.4	-4.4
PNIG	**Pinotepa**	**4.94**	**297**	*i P*	Pn	14 47 10.6	-0.4
PNIG				*i S*	Sn	14 48 03.4	-4.4
PPM	**Popocatepetl**	**6.88**	**316**	*eP*	Pn	14 47 38.7	+1.1
PPM				*i S*	Sn	14 48 56.2	+0.6
PPM	**Popocatepetl**	**6.88**	**316**	*eP*	Pn	14 47 38.7	+1.1
PPM				*i S*	Sn	14 48 56.2	+0.6

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*ISK **04** 14:56:32.7, 37°.01N×29°.23E, h4km, MD3.0*
*ISCJB **04** 14:56:33.8±0.5, 37°.00N±0°.04×29°.24E±0°.03, h10km, Error ellipse: s-maj=5.9km s-min=3.8km az=165.5*
*DDA **04** 14:56:33.2, 36°.99N×29°.16E, h7km±3km, MD3.0*
*CSEM **04** 14:56:33.3±0.1, 37°.00N×29°.22E, h5km, MD3.0*

ISC 04 14:56:33.6±0.7, 36°.98N±0°.04×29°.21E±0°.04, h4km±7km, n32, σ0°71/44, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.29**	**53**	*ePG*	**Pg**	**14 56 38.8**	**-0.4**
GLHS				*eSG*	**Sg**	**14 56 42.8**	**-0.1**
GLHS	**Glhisar (BURDU**	**0.29**	**53**	*ePg*	**Pg**	**14 56 38.8**	**-0.4**
GLHS				*eSg*	**Sg**	**14 56 42.8**	**-0.2**
GOLH	**Golhisar**	**0.38**	**48**	*eP*	**Pg**	**14 56 41.0**	**+0.1**
GOLH				*eS*	**Sg**	**14 56 47.6**	**+1.8**
GOLH	**Golhisar**	**0.38**	**48**	*eP*	**Pg**	**14 56 41.0**	**+0.1**
GOLH				*eS*	**Sg**	**14 56 47.6**	**+1.8**
ELL	**Elmali**	**0.61**	**113**	*ePG*	**Pg**	**14 56 44.7**	**-0.5**
ELL	**Elmali**	**0.61**	**113**	*ePg*	**Pg**	**14 56 44.7**	**-0.6**
DNZL	**Cakiroluk**	**0.72**	**349**	*eP*	**Pg**	**14 56 46.6**	**-0.8**
DNZL				*eS*	**Sg**	**14 56 57.4**	**+0.6**
DNZL	**Cakiroluk**	**0.72**	**349**	*eP*	**Pg**	**14 56 46.7**	**-0.7**
DNZL				*eS*	**Sg**	**14 56 57.4**	**+0.7**
YER	**Yerkesik**	**0.76**	**282**	*ePG*	**Pg**	**14 56 48.0**	**-0.2**
YER	**Yerkesik**	**0.76**	**282**	*ePg*	**Pg**	**14 56 48.0**	**-0.2**
DENT	**Denizli**	**0.78**	**350**	*ePG*	**Pg**	**14 56 47.8**	**-0.9**
DENT	**Denizli**	**0.78**	**350**	*ePg*	**Pg**	**14 56 47.8**	**-0.9**
AKAS	**Kas**	**0.81**	**157**	⇑*iP*	**Pg**	**14 56 49.1**	**-0.1**
AKAS				*i S*	**Sg**	**14 57 06.5**	**+6.7**
AKAS	**Kas**	**0.81**	**157**	*i P*	**Pg**	**14 56 49.1**	**-0.1**
KORT	**Korkueli**	**0.91**	**89**	*eP*	**Pg**	**14 56 52.0**	**+0.9**
KORT				*eS*	**Sg**	**14 57 07.5**	**+4.6**
KORT	**Korkueli**	**0.91**	**89**	*eP*	**Pg**	**14 56 52.0**	**+0.9**
MLSB	**Milas**	**1.19**	**286**	*ePN*	**Pn**	**14 56 56.1**	**-0.9**
MLSB	**Milas**	**1.19**	**286**	*ePn*	**Pn**	**14 56 56.1**	**-0.9**
DAT	**Datca**	**1.33**	**260**	*ePN*	**Pn**	**14 56 59.2**	**+0.2**
DAT				*eSN*	**Sn**	**14 57 18.0**	**+0.8**
DAT	**Datca**	**1.33**	**260**	*ePn*	**Pn**	**14 56 59.2**	**+0.2**
DAT				*eSn*	**Sn**	**14 57 18.0**	**+0.9**
KHL	**Karahalli**	**1.36**	**10**	*ePN*	**Pn**	**14 56 58.8**	**-0.6**
KHL	**Karahalli**	**1.36**	**10**	*ePn*	**Pn**	**14 56 58.8**	**-0.5**
BDRM	**Kayabasi**	**1.42**	**274**	*eP*	**Pn**	**14 56 59.7**	**-0.4**
BDRM				*eS*	**Sb**	**14 57 20.3**	**+1.3**
BDRM	**Kayabasi**	**1.42**	**274**	*eP*	**Pn**	**14 56 59.7**	**-0.4**
BDRM				*eS*	**Sb**	**14 57 20.3**	**+1.3**
SUTC	**Sutluce-Ispart**	**1.51**	**70**	*ePN*	**Pn**	**14 57 00.9**	**-0.4**
SUTC	**Sutluce-Ispart**	**1.51**	**70**	*ePn*	**Pn**	**14 57 01.0**	**-0.4**
BODT	**Bodrum**	**1.52**	**274**	*ePN*	**Pn**	**14 57 01.6**	**0.0**
BODT	**Bodrum**	**1.52**	**274**	*ePn*	**Pn**	**14 57 01.6**	**0.0**
KULA	**Kula-Manisa**	**1.59**	**344**	*ePN*	**Pn**	**14 57 01.8**	**-0.7**
KULA	**Kula-Manisa**	**1.59**	**344**	*ePn*	**Pn**	**14 57 01.8**	**-0.7**
HDMB	**Hadim**	**2.62**	**89**	*ePN*	**Pn**	**14 57 17.0**	**+0.3**
HDMB	**Hadim**	**2.62**	**89**	*ePn*	**Pn**	**14 57 17.0**	**+0.3**

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*ISK **04** 15:01:02.6, 37°.25N×28°.23E, h7km, MD2.8*
*DDA **04** 15:01:02.8, 37°.22N×28°.19E, h7km±4km, Md3.0*
*ISCJB **04** 15:01:03.1±0.5, 37°.21N±0°.04×28°.20E±0°.04, h7km±9km, Error ellipse: s-maj=7.9km s-min=4.9km az=33.4*
*CSEM **04** 15:01:03.0±0.1, 37°.24N×28°.24E, h8km, MD2.8, Error ellipse: s-maj=2.3km s-min=1.8km az=20.0*

ISC 04 15:01:03.4±0.6, 37°.21N±0°.04×28°.20E±0°.04, h11km±8km, n20, σ0°70/31, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.10**	**139**	*ePG*	**Pg**	**15 01 05.6**	**-0.5**
YER	**Yerkesik**	**0.10**	**139**	*ePg*	**Pg**	**15 01 05.6**	**-0.5**
MLSB	**Milas**	**0.35**	**284**	*ePG*	**Pg**	**15 01 10.2**	**-0.2**
MLSB				*eSG*	**Sg**	**15 01 15.9**	**+0.8**
MLSB	**Milas**	**0.35**	**284**	*ePg*	**Pg**	**15 01 10.2**	**-0.2**
MLSB				*eSg*	**Sg**	**15 01 15.9**	**+0.8**
TURN	**Turunc**	**0.47**	**136**	⇑*iP*	**Pg**	**15 01 11.9**	**-0.6**
TURN				*i S*	**Sg**	**15 01 19.0**	**+0.4**
TURN	**Turunc**	**0.47**	**136**	*i P*	**Pg**	**15 01 11.9**	**-0.6**
TURN				*i S*	**Sg**	**15 01 19.0**	**+0.3**
AYDN	**Tasoluk**	**0.52**	**330**	*eP*	**Pg**	**15 01 13.0**	**-0.6**
AYDN				*eS*	**Sg**	**15 01 20.2**	**-0.2**
AYDN	**Tasoluk**	**0.52**	**330**	*eP*	**Pg**	**15 01 13.0**	**-0.6**
AYDN				*eS*	**Sg**	**15 01 20.2**	**-0.2**
BDRM	**Kayabasi**	**0.62**	**257**	*eP*	**Pg**	**15 01 15.6**	**+0.1**
BDRM				*eS*	**Sg**	**15 01 23.4**	**-0.2**
BDRM	**Kayabasi**	**0.62**	**257**	*eP*	**Pg**	**15 01 15.6**	**+0.1**
BDRM				*eS*	**Sg**	**15 01 23.4**	**-0.3**
DAT	**Datca**	**0.69**	**226**	*ePG*	**Pg**	**15 01 17.1**	**+0.3**
DAT	**Datca**	**0.69**	**226**	*ePg*	**Pg**	**15 01 17.1**	**+0.3**
BODT	**Bodrum**	**0.73**	**259**	*ePG*	**Pg**	**15 01 17.9**	**+0.4**
BODT	**Bodrum**	**0.73**	**259**	*ePg*	**Pg**	**15 01 17.9**	**+0.4**
DNZL	**Cakiroluk**	**0.83**	**54**	*eP*	**Pg**	**15 01 18.0**	**-1.4**
DNZL				*eS*	**Sg**	**15 01 32.0**	**+1.8**
DNZL	**Cakiroluk**	**0.83**	**54**	*eP*	**Pg**	**15 01 18.0**	**-1.4**
DNZL				*eS*	**Sg**	**15 01 32.0**	**+1.8**
KULA	**Kula-Manisa**	**1.35**	**15**	*ePN*	**Pn**	**15 01 27.9**	**-0.4**
KULA	**Kula-Manisa**	**1.35**	**15**	*ePn*	**Pn**	**15 01 27.9**	**-0.4**
AKAS	**Kas**	**1.49**	**130**	*eP*	**Pn**	**15 01 30.5**	**+0.3**
AKAS				*eS*	**Sn**	**15 01 58.8**	**+9.2**
AKAS	**Kas**	**1.49**	**130**	*eP*	**Pn**	**15 01 30.5**	**+0.4**

GUC 04 15:02:12.0±0.5, 22°.71S×67°.08W, h250km, ML4.0, 6C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**2.27**	**281**	⇑*iP*	Pn	15 03 05.5	+8.5
PB04				*i S*	S	15 03 46.2	+14
PB04				AML	AML	15 03 49.9	
	comp=N,242nm,0.4s						
MACH	**Maria Elena**	**2.53**	**281**	⇑*eP*	Pn	15 03 01.9	+2.3
MACH				*eS*	S	15 03 40.1	+3.0
PB01	**Plate Boundary**	**2.78**	**306**	⇑*eP*	Pn	15 03 04.2	+2.0
PB01				*eS*	S	15 03 44.3	+2.4
PB01				AML	AML	15 03 46.7	
	comp=E,158nm,0.3s						
CEN1	**Los Morros**	**2.96**	**256**	⇑*iP*	Pn	15 03 09.5	+5.5
CEN1				*i S*	S	15 03 52.0	+6.9
CEN1				AML	AML	15 03 53.7	
	comp=E,127nm,0.6s						
ANCH	**Antofagasta**	**3.21**	**252**	*i S4*		15 03 52.1	
HMBC	**Humberston**	**3.56**	**312**	⇑*eP*	Pn	15 03 12.1	+1.4
HMBC				*eS*	S	15 03 58.9	+1.6
PSGC	**Pisagua**	**4.20**	**317**	⇓*eP*	Pn	15 03 19.3	+1.0
PSGC				*eS*	S	15 04 11.2	+0.3
MNMC	**Miæe Miæ**	**4.27**	**326**	⇑*eP*	Pn	15 03 20.8	+1.8
MNMC				*eS*	S	15 04 13.8	+1.6

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*MAN **04** 15:41:19, 13°.30N×120°.42E, h1km, mb4.6, ML3.5, MS3.5*
*IDC **04** 15:41:20.5±1.4, 13°.20N×120°.75E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.5/22, mbtmp3.8/3, Error ellipse: s-maj=58.1km s-min=10.5km az=93.0*
*NEIC **04** 15:41:21.8±0.7, 13°.26N×120°.96E, h10km, mb3.7/1, Error ellipse: s-maj=47.2km s-min=9.2km az=78.0*

ISC 04 15:41:20.3±1.0, 13°.29N±0°.05×120°.45E±0°.06, h3km±8km, n16, σ1°24/17, mb3.9/4, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.49**	**336**	*eP*	**Pg**	**15 41 28.1**	**-1.5**
PGP	**Puerto Galera**	**0.53**	**66**	⇑*iP*	**Pg**	**15 41 30.5**	**0.0**
PGP				*i S*	**Sg**	**15 41 37.4**	**-0.1**
TGY	**Tagaytay City**	**0.94**	**30**	Pg	**Pg**	**15 41 37.9**	**-0.4**
	96nm,0.3s,baz=200,slow=5.6,SNR=11						
TGY				Lg		15 41 50.8	
	104nm,0.3s,baz=285,slow=15,SNR=7.3						
SJMP	**San Jose**	**1.05**	**142**	*eP*	**Pg**	**15 41 43.1**	**+2.7**
BUSP	**Coron**	**1.30**	**191**	*eP*	**Pg**	**15 41 45.4**	**+0.2**
BOAC	**Boac**	**1.37**	**83**	*eP*	**Pn**	**15 41 45.8**	**-0.5**
OTRP	**Odiongan**	**1.79**	**121**	*eP*	**Pn**	**15 41 56.0**	**+3.9**
AUQP	**San Andres**	**2.17**	**89**	*eP*	**Pn**	**15 41 56.9**	**-0.4**
ENPP	**El Nido**	**2.30**	**206**	*eP*	**Pn**	**15 41 59.1**	**-0.1**
CUYO	**Cuyo Island**	**2.49**	**167**	*eP*	**Pn**	**15 42 01.8**	**0.0**
BALP	**Baler**	**2.67**	**24**	*eP*	**Pn**	**15 42 05.3**	**+1.0**
WRAB	**Tennant Creek**	**35.73**	**157**	*eP*	**P**	**15 48 18.5**	**-2.0**
	0.7nm,0.5s,mb3.9						
WRA	**Warramunga Arr**	**35.74**	**157**	P	**P**	**15 48 19.1**	**-1.5**
	1.0nm,0.6s,mb4.0,baz=335,slow=9.7,SNR=13						
SONM	**Songino Array**	**36.38**	**344**	P	**P**	**15 48 28.0**	**+2.1**
	0.3nm,0.3s,mb3.7,baz=170,slow=8.6,SNR=3.6						
ASAR	**Alice Springs**	**39.01**	**160**	P	**P**	**15 48 47.9**	**-0.5**
	1.4nm,0.5s,mb4.0,baz=337,slow=6.8,SNR=64						
MK31	**Makanchi Array**	**46.22**	**324**	*eP*	**P**	**15 49 49.5**	**+2.8**

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*IDC **04** 15:58:54.6±2.9, 14°.21N×93°.34W, h0km, mb3.8/3, mb1 4.1/6, mb1mx3.8/22, mbtmp3.7/6, ML3.3/1, MS3.5/2, Ms1 3.5/2, ms1mx2.8/28, Error ellipse: s-maj=58.5km s-min=24.8km az=18.0*
*ISCJB **04** 15:58:56.8±0.6, 14°.18N±0°.05×93°.37W±0°.03, h33km, mb3.8/5, MS3.6/2, Error ellipse: s-maj=7.5km s-min=3.5km az=18.6*
*MEX **04** 15:58:57.7±1.5, 14°.14N×93°.39W, h18km±130km, MD4.2*
*NEIC **04** 15:58:57.7, 14°.14N×93°.39W, h18km, mb3.8/4, MD4.2(MEX), After MEX.*
*CASC **04** 15:58:58.6±1.9, 13°.77N×93°.21W, h45km±459km, MD4.1, mb3.8(NEIC)*

ISC 04 15:58:58.6±0.6, 14°.20N±0°.05×93°.30W±0°.03, h35km, n40, σ1°21/55, mb3.8/5, MS3.6/2, 1C, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.22**	**55**	*i P*	**Pn**	**15 59 18.1**	**-1.2**
THIG				*i S*	**Sn**	**15 59 33.6**	**-1.0**
PCIG		**1.50**	**3**	*i P*	**Pn**	**15 59 20.6**	**-2.5**
PCIG				*i S*	**Sn**	**15 59 39.1**	**-2.2**
JAT	**Jato**	**1.62**	**86**	⇑*eP*	**Pn**	**15 59 25.2**	**+0.5**
TP2	**Tecpan 2**	**2.28**	**75**	*eP*	**Pn**	**15 59 35.4**	**+1.5**
TP2				*eS*	**Sn**	**16 00 04.7**	**+4.0**
FG6		**2.37**	**81**	*eP*	**Pn**	**15 59 36.7**	**+1.6**
FUG	**Fuego 3**	**2.40**	**84**	*eP*	**Pn**	**15 59 35.0**	**-0.4**
TGIG		**2.57**	**4**	*i P*	**Pn**	**15 59 38.7**	**+1.0**
TGIG				*i S*	**Sn**	**16 00 09.0**	**+1.2**
SCX	**San Cristobal**	**2.60**	**14**	*i P*	**Pn**	**15 59 38.0**	**-0.2**
SCX				*i S*	**Sn**	**16 00 09.2**	**+0.6**
SCX	**San Cristobal**	**2.60**	**14**	*i P*	**Pn**	**15 59 38.0**	**-0.2**
SCX				*i S*	**Sn**	**16 00 09.2**	**+0.6**
IXG	**Ixpaco**	**2.76**	**90**	*eP*	**Pn**	**15 59 40.3**	**-0.1**
APG	**El Apazote**	**2.86**	**73**	Pn	**Pn**	**15 59 42.2**	**+0.4**
	baz=225,slow=0.0						
APG				Sn	**Sn**	**16 00 20.6**	**+5.6**
	baz=311,slow=20						
NBG	**Las Nubes**	**2.89**	**82**	*eP*	**Pn**	**15 59 43.6**	**+1.4**
HUIG	**Huatulco**	**3.13**	**300**	*eP*	**Pn**	**15 59 43.2**	**-2.2**
HUIG				*i S*	**Sn**	**16 00 17.0**	**-4.7**
HUIG	**Huatulco**	**3.13**	**300**	*eP*	**Pn**	**15 59 43.2**	**-2.2**
HUIG				*i S*	**Sn**	**16 00 17.0**	**-4.7**
CMIG	**Matias Romero**	**3.25**	**332**	Pn	**Pn**	**15 59 47.2**	**0.0**
	baz=180,slow=0.0						
CMIG				Sn	**Sn**	**16 00 28.6**	**+3.9**
	baz=86,slow=15						
CMIG	**Matias Romero**	**3.25**	**332**	Pn	**Pn**	**15 59 47.2**	**0.0**
CMIG				Sn	**Sn**	**16 00 28.6**	**+3.9**
RBDL	**Robledal**	**3.51**	**91**	*eP*	**Pn**	**15 59 50.2**	**-0.5**
RTR	**El Retiro**	**3.56**	**94**	*eP*	**Pn**	**15 59 50.9**	**-0.6**
SNJE	**San Jose**	**3.60**	**95**	*eP*	**Pn**	**15 59 51.8**	**-0.2**
BOQS	**Boqueron**	**3.93**	**96**	*eP*	**Pn**	**15 59 55.4**	**-1.2**
VHO	**Vista Hermosa**	**4.37**	**311**	*eP*	**Pn**	**16 00 01.4**	**-1.1**
VHO				*i S*	**Sn**	**16 00 52.3**	**0.0**
VHO	**Vista Hermosa**	**4.37**	**311**	*eP*	**Pn**	**16 00 01.4**	**-1.1**
VHO				*i S*	**Sn**	**16 00 52.3**	**0.0**
PNIG	**Pinotepa**	**5.14**	**296**	*i P*	**Pn**	**16 00 12.6**	**-0.6**
PNIG				*i S*	**Sn**	**16 01 12.2**	**+1.0**
PNIG	**Pinotepa**	**5.14**	**296**	*i P*	**Pn**	**16 00 12.6**	**

45nm,0.3s
TXAR Lajitas Array 17.85 329 P **Pn 16 03 04.2 -0.2**
0.0nm,0.3s,baz=142,slow=9.0,SNR=5.3
GDL2 Guadalupe Moun 20.57 332 *eP* **P 16 03 37.4 +2.9**
8.1nm,1.0s
MNTX Cornudas Mount 20.63 330 *eP* **P 16 03 37.1 +2.0**
2.1nm,0.8s
CPRX Cap Rock 21.07 335 *eP* **P 16 03 40.4 +0.6**
2.6nm,0.9s,mb3.6
AMTX Amarillo 21.94 341 *eP* **P 16 03 48.9 -0.2**
9.2nm,0.7s,mb4.3
ANMO Albuquerque 23.82 332 P **P 16 04 07.7 -0.9**
0.7nm,0.6s,mb3.3,baz=135,slow=10.0,SNR=2.9
NVAR Mina Array Bea 32.73 322 P **P 16 05 30.6 +2.6**
0.8nm,0.8s,mb3.7,baz=148,slow=9.1,SNR=6.6
SCHQ Schefferville 45.48 21 LR LR 16 27 33.5
comp=Z,58nm,21.1s,MS3.5,baz=130,slow=38
YKA Yellowknife Ar 50.55 347 P **P 16 07 53.9 +0.6**
3.0nm,0.8s,mb4.3,baz=151,slow=7.5,SNR=13
YKA Yellowknife Ar 50.55 347 P **P 16 07 53.9 +0.6**
SPITS Spitsbergen Ar 80.14 11 LR LR 16 48 07.2
comp=Z,29nm,19.2s,MS3.6,baz=310,slow=37
CMAR Chiang Mai Arr 145.38 339 PKPbc PKPbc 16 18 34.5 +0.9
0.9nm,0.4s,baz=350,slow=5.4,SNR=4.4

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*ATH **04** 16:02:17.9, 36°.49N×28°.17E, h85km*
*ISCJB **04** 16:02:19.4±0.9, 36°.46N±0°.04×28°.12E±0°.05, h79km±9km,*
Error ellipse: s-maj=6.5km s-min=6.2km az=147.8
*CSEM **04** 16:02:19.9±0.4, 36°.45N×28°.11E, h70km±5km, MD2.8,*
Error ellipse: s-maj=5.4km s-min=4.9km az=7.0
*DDA **04** 16:02:19.9, 36°.56N×28°.26E, h8km±7km, Md2.8*
*ISK **04** 16:02:19.9, 36°.33N×28°.17E, h27km, MD2.8*
ISC 04 16:02:19.9±0.9, 36°.46N±0°.04×28°.11E±0°.05, h77km±9km,
n30, σ0°91/50, 1D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.24**	**177**	*eP*	**Pn**	**16 02 31.3**	**-0.3**
ARG				*eS*	**Sn**	**16 02 41.0**	**+0.9**
ARG	**Arkhangelos**	**0.24**	**177**	*eP*	**Pn**	**16 02 31.3**	**-0.3**
ARG				*eS*	**Sn**	**16 02 41.0**	**+0.9**
DAT	**Datca**	**0.51**	**302**	*ePG*	**Pn**	**16 02 32.9**	**-0.5**
DAT	**Datca**	**0.51**	**302**	*ePg*	**Pn**	**16 02 32.9**	**-0.5**
TURN	**Turunc**	**0.57**	**44**	⇓*iP*	**Pn**	**16 02 32.0**	**-2.0**
TURN				*i S*	**Sn**	**16 02 40.3**	**-4.2**
TURN	**Turunc**	**0.57**	**44**	*i P*	**Pn**	**16 02 32.0**	**-2.0**
TURN				*i S*	**Sn**	**16 02 40.3**	**-4.2**
YER	**Yerkesik**	**0.69**	**11**	*ePG*	**Pn**	**16 02 36.1**	**+0.9**
YER				*eSG*	**Sn**	**16 02 47.3**	**+0.8**
YER	**Yerkesik**	**0.69**	**11**	*ePg*	**Pn**	**16 02 36.1**	**+0.9**
YER				*eSg*	**Sn**	**16 02 47.3**	**+0.7**
BDRM	**Kayabasi**	**0.81**	**319**	*eP*	**Pn**	**16 02 36.3**	**-0.2**
BDRM				*eS*	**Sn**	**16 02 47.5**	**-1.4**
BDRM	**Kayabasi**	**0.81**	**319**	*eP*	**Pn**	**16 02 36.3**	**-0.2**
BDRM				*eS*	**Sn**	**16 02 47.5**	**-1.4**
BODT	**Bodrum**	**0.88**	**313**	*ePG*	**Pn**	**16 02 38.6**	**+1.3**
BODT	**Bodrum**	**0.88**	**313**	*ePg*	**Pn**	**16 02 38.6**	**+1.2**
KARP	**Karpathos**	**1.19**	**221**	*eP*	**Pn**	**16 02 41.2**	**0.0**
KARP				*eS*	**Sn**	**16 02 57.9**	**+0.8**
KARP	**Karpathos**	**1.19**	**221**	*eP*	**Pn**	**16 02 41.2**	**0.0**
KARP				*eS*	**Sn**	**16 02 57.9**	**+0.8**
AYDN	**Tasoluk**	**1.21**	**351**	*eP*	**Pn**	**16 02 41.9**	**+0.5**
AYDN				*eS*	**Sn**	**16 02 57.0**	**-0.5**
AYDN	**Tasoluk**	**1.21**	**351**	*eP*	**Pn**	**16 02 41.9**	**+0.5**
AYDN				*eS*	**Sn**	**16 02 57.0**	**-0.5**
AKAS	**Kas**	**1.23**	**100**	*eP*	**Pn**	**16 02 41.4**	**-0.2**
AKAS				*eS*	**Sn**	**16 02 56.5**	**-1.4**
AKAS	**Kas**	**1.23**	**100**	*eP*	**Pn**	**16 02 41.4**	**-0.2**
AKAS				*eS*	**Sn**	**16 02 56.5**	**-1.3**
KSL	**Kastellorizon**	**1.23**	**104**	*eP*	**Pn**	**16 02 40.4**	**-1.2**
KSL	**Kastellorizon**	**1.23**	**104**	*eP*	**Pn**	**16 02 40.4**	**-1.2**
GOLH	**Golhisar**	**1.40**	**56**	*eP*	**Pn**	**16 02 45.2**	**+1.4**
GOLH				*eS*	**Sn**	**16 03 02.9**	**+1.1**
GOLH	**Golhisar**	**1.40**	**56**	*eP*	**Pn**	**16 02 45.2**	**+1.5**
GOLH				*eS*	**Sn**	**16 03 02.9**	**+1.2**
DNZL	**Cakiroluk**	**1.44**	**31**	*eP*	**Pn**	**16 02 48.2**	**+3.9**
DNZL				*eS*	**Sn**	**16 03 02.9**	**+0.2**
DNZL	**Cakiroluk**	**1.44**	**31**	*eP*	**Pn**	**16 02 48.2**	**+3.9**
DNZL				*eS*	**Sn**	**16 03 02.9**	**+0.3**
ELL	**Elmali**	**1.47**	**78**	*ePN*	**Pn**	**16 02 44.9**	**+0.2**
ELL	**Elmali**	**1.47**	**78**	*ePn*	**Pn**	**16 02 44.9**	**+0.2**
SMG	**Samos**	**1.61**	**321**	*eP*	**Pn**	**16 02 46.0**	**-0.5**
SMG				*eS*	**Sn**	**16 03 06.4**	**-0.3**
SMG	**Samos**	**1.61**	**321**	*eP*	**Pn**	**16 02 46.0**	**-0.5**
SMG				*eS*	**Sn**	**16 03 06.4**	**-0.3**
NPS	**Neapolis**	**2.36**	**240**	*eP*	**Pn**	**16 02 56.5**	**0.0**
NPS	**Neapolis**	**2.36**	**240**	*eP*	**Pn**	**16 02 56.5**	**0.0**

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*ISCJB **04** 16:03:26.6±0.7, 15°.09N±0°.05×94°.80W±0°.03, h33km,*
mb3.5/5, Error ellipse: s-maj=7.9km s-min=3.9km az=9.0
*IDC **04** 16:03:26.3±3.7, 15°.41N×94°.30W, h0km, mb3.5/4,*
mb1 3.9/5, mb1mx3.7/20, mbtmp3.5/5, ML3.7/1, MS2.8/1,
Ms1 2.8/1, ms1mx2.4/20, Error ellipse: s-maj=74.4km
s-min=49.8km az=73.0
*MEX **04** 16:03:27.7±1.3, 15°.00N×94°.83W, h20km±45km, MD4.2*
*NEIC **04** 16:03:27.7, 15°.00N×94°.83W, h20km, mb4.4/1,*
MD4.2(MEX), After MEX.
ISC 04 16:03:27.8±0.7, 15°.06N±0°.06×94°.79W±0°.03, h35km, n26,
σ1°20/43, mb3.5/5, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.45**	**299**	*i P*	**Pn**	**16 03 50.3**	**-1.3**
HUIG				*i S*	**Sn**	**16 04 06.5**	**-2.8**
HUIG	**Huatulco**	**1.45**	**299**	*i P*	**Pn**	**16 03 50.3**	**-1.3**
HUIG				*i S*	**Sn**	**16 04 06.5**	**-2.8**
PCIG		**1.65**	**67**	*i P*	**Pn**	**16 03 53.6**	**-0.7**
PCIG				*i S*	**Sn**	**16 04 11.9**	**-2.3**
CMIG	**Matias Romero**	**2.02**	**358**	Pn	**Pn**	**16 03 58.8**	**-0.7**
	86nm,0.3s,baz=164,slow=12,SNR=135						
CMIG				Sn	**Sn**	**16 04 22.1**	**-1.4**
	73nm,0.3s,baz=234,slow=20,SNR=15						
TGIG		**2.35**	**43**	*i P*	**Pn**	**16 04 04.6**	**+0.8**
TGIG				*i S*	**Sn**	**16 04 31.0**	**-0.5**
THIG		**2.45**	**93**	*eP*	**Pn**	**16 04 03.6**	**-1.6**
THIG				*i S*	**Sn**	**16 04 33.6**	**-0.3**
SCX	**San Cristobal**	**2.67**	**51**	*i P*	**Pn**	**16 04 08.3**	**+0.1**
SCX				*i S*	**Sn**	**16 04 40.3**	**+1.0**
SCX	**San Cristobal**	**2.67**	**51**	*i P*	**Pn**	**16 04 08.3**	**+0.1**
SCX				*i S*	**Sn**	**16 04 40.3**	**+1.0**
VHO	**Vista Hermosa**	**2.74**	**317**	*i P*	**Pn**	**16 04 08.6**	**-0.6**
VHO				*i S*	**Sn**	**16 04 40.5**	**-0.6**
VHO	**Vista Hermosa**	**2.74**	**317**	*i P*	**Pn**	**16 04 08.6**	**-0.6**
VHO				*i S*	**Sn**	**16 04 40.5**	**-0.6**
TUIG	**Tuzandepetl**	**2.98**	**7**	*i P*	**Pn**	**16 04 12.7**	**+0.1**
TUIG				*i S*	**Sn**	**16 04 47.4**	**+0.3**
TUIG	**Tuzandepetl**	**2.98**	**7**	*i P*	**Pn**	**16 04 12.7**	**+0.1**
TUIG				*i S*	**Sn**	**16 04 47.4**	**+0.3**
PNIG	**Pinotepa**	**3.48**	**293**	*eP*	**Pn**	**16 04 18.9**	**-0.5**
PNIG				*i S*	**Sn**	**16 04 54.8**	**-4.5**
PNIG	**Pinotepa**	**3.48**	**293**	*eP*	**Pn**	**16 04 18.9**	**-0.5**
PNIG				*i S*	**Sn**	**16 04 54.8**	**-4.5**
UTMO	**Huajuapan**	**3.99**	**314**	*i P*	**Pn**	**16 04 26.3**	**-0.2**
UTMO				*i S*	**Sn**	**16 05 12.3**	**+0.2**
SCIG	**Sabancuy**	**5.20**	**41**	*eP*	**Pn**	**16 04 43.7**	**+0.6**
SCIG				*i S*	**Sn**	**16 05 42.6**	**+0.7**
PPM	**Popocatepetl**	**5.42**	**318**	*eP*	**Pn**	**16 04 45.6**	**-0.4**
PPM				*i S*	**Sn**	**16 05 48.1**	**+0.9**
PPM	**Popocatepetl**	**5.42**	**318**	*eP*	**Pn**	**16 04 45.6**	**-0.4**
PPM				*i S*	**Sn**	**16 05 48.1**	**+0.9**
TEIG	**Tepich**	**8.06**	**49**	*ePn*	**Pn**	**16 05 19.1**	**-3.3**
	43nm,0.4s						
JTS	**JuntasAbangare**	**10.71**	**115**	LR	LR	16 09 38.4	
	comp=Z,44nm,18.8s,baz=64,slow=36						
TXAR	**Lajitas Array**	**16.40**	**332**	Pn	**Pn**	**16 07 17.0**	**+1.7**
	0.1nm,0.3s,baz=152,slow=14,SNR=5.8						
ANMO	**Albuquerque**	**22.42**	**334**	P	**P**	**16 08 25.6**	**+2.3**
	0.8nm,0.6s,mb3.3,baz=153,slow=15,SNR=3.3						
SDV	**Santo Domingo**	**24.40**	**102**	*eP*	**P**	**16 08 44.5**	**+1.4**
	8.6nm,0.8s,mb4.2						
PDAR	**Pinedale Array**	**30.39**	**338**	P	**P**	**16 09 39.0**	**+2.5**
	0.4nm,0.8s,mb3.2,baz=151,slow=7.8,SNR=3.2						
NVAR	**Mina Array Bea**	**31.18**	**323**	P	**P**	**16 09 48.0**	**+4.5**
	0.2nm,0.6s,mb3.1,baz=138,slow=8.3,SNR=3.9						
YKA	**Yellowknife Ar**	**49.41**	**348**	P	**P**	**16 12 15.5**	**+1.7**
	0.7nm,0.6s,mb3.8,baz=149,slow=7.0,SNR=3.0						

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*ISK **04** 16:19:57.3, 36°.99N×29°.27E, h5km, MD3.0*

*DDA **04** 16:19:57.5, 36°.99N×29°.18E, h7km±5km, Md3.0*
*ISCJB **04** 16:19:58.0±0.7, 36°.99N±0°.04×29°.22E±0°.04, h3km±7km,*
Error ellipse: s-maj=6.3km s-min=5.4km az=167.7
*CSEM **04** 16:19:58.4±0.1, 37°.00N×29°.26E, h2km, MD3.0, Error*
ellipse: s-maj=1.5km s-min=1.4km az=25.0
ISC 04 16:19:58.4±0.7, 36°.99N±0°.04×29°.22E±0°.04, h5km±7km,
n30, σ0°70/43, 1C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.28**	**54**	*ePG*	**Pg**	**16 20 03.2**	**-0.6**
GLHS				*eSG*	**Sg**	**16 20 08.0**	**+0.5**
GLHS	**Glhisar (BURDU**	**0.28**	**54**	*ePg*	**Pg**	**16 20 03.3**	**-0.5**
GLHS				*eSg*	**Sg**	**16 20 08.0**	**+0.5**
GOLH	**Golhisar**	**0.37**	**48**	⇑*iP*	**Pg**	**16 20 05.3**	**-0.3**
GOLH				*i S*	**Sg**	**16 20 11.7**	**+1.4**
GOLH	**Golhisar**	**0.37**	**48**	*i P*	**Pg**	**16 20 05.3**	**-0.2**
GOLH				*i S*	**Sg**	**16 20 11.7**	**+1.3**
TURN	**Turunc**	**0.51**	**257**	*eP*	**Pg**	**16 20 13.2**	**+5.1**
TURN				*eS*	**Sg**	**16 20 23.0**	**+8.3**
TURN	**Turunc**	**0.51**	**257**	*eP*	**Pg**	**16 20 13.2**	**+5.1**
ELL	**Elmali**	**0.61**	**113**	*ePG*	**Pg**	**16 20 09.4**	**-0.6**
ELL	**Elmali**	**0.61**	**113**	*ePg*	**Pg**	**16 20 09.4**	**-0.7**
DNZL	**Cakiroluk**	**0.71**	**349**	*eP*	**Pg**	**16 20 11.1**	**-1.0**
DNZL				*eS*	**Sg**	**16 20 21.4**	**+0.1**
DNZL	**Cakiroluk**	**0.71**	**349**	*eP*	**Pg**	**16 20 11.1**	**-1.0**
DNZL				*eS*	**Sg**	**16 20 21.4**	**+0.1**
YER	**Yerkesik**	**0.76**	**281**	*ePG*	**Pg**	**16 20 13.8**	**+0.8**
YER	**Yerkesik**	**0.76**	**281**	*ePg*	**Pg**	**16 20 13.8**	**+0.8**
DENT	**Denizli**	**0.78**	**349**	*ePG*	**Pg**	**16 20 13.6**	**+0.3**
DENT	**Denizli**	**0.78**	**349**	*ePg*	**Pg**	**16 20 13.6**	**+0.3**
AKAS	**Kas**	**0.82**	**157**	⇓*iP*	**Pg**	**16 20 14.1**	**0.0**
AKAS				*i S*	**Sg**	**16 20 29.9**	**+5.2**
AKAS	**Kas**	**0.82**	**157**	*i P*	**Pg**	**16 20 14.1**	**0.0**
KORT	**Korkueli**	**0.91**	**89**	*eP*	**Pg**	**16 20 14.8**	**-1.1**
KORT				*eS*	**Sg**	**16 20 32.2**	**+4.6**
KORT	**Korkueli**	**0.91**	**89**	*eP*	**Pg**	**16 20 14.8**	**-1.0**
DAT	**Datca**	**1.34**	**259**	*ePN*	**Pn**	**16 20 24.7**	**+0.9**
DAT	**Datca**	**1.34**	**259**	*ePn*	**Pn**	**16 20 24.7**	**+0.9**
KHAL	**Karahalli**	**1.39**	**9**	*eP*	**Pn**	**16 20 24.5**	**-0.1**
KHAL				*eS*	**Sb**	**16 20 42.3**	**-0.7**
KHAL	**Karahalli**	**1.39**	**9**	*eP*	**Pn**	**16 20 24.5**	**-0.1**
KHAL				*eS*	**Sb**	**16 20 42.3**	**-0.8**
BDRM	**Kayabasi**	**1.42**	**273**	*eP*	**Pn**	**16 20 24.7**	**-0.3**
BDRM				*eS*	**Sb**	**16 20 42.9**	**-1.0**
BDRM	**Kayabasi**	**1.42**	**273**	*eP*	**Pn**	**16 20 24.7**	**-0.2**
BDRM				*eS*	**Sb**	**16 20 42.8**	**-1.0**
SUTC	**Sutluce-Ispart**	**1.50**	**71**	*ePN*	**Pn**	**16 20 26.1**	**+0.1**
SUTC	**Sutluce-Ispart**	**1.50**	**71**	*ePn*	**Pn**	**16 20 26.1**	**0.0**
BODT	**Bodrum**	**1.53**	**273**	*ePN*	**Pn**	**16 20 27.4**	**+1.0**
BODT	**Bodrum**	**1.53**	**273**	*ePn*	**Pn**	**16 20 27.4**	**+1.0**
HDMB	**Hadim**	**2.62**	**90**	*ePN*	**Pn**	**16 20 42.0**	**+0.6**
HDMB	**Hadim**	**2.62**	**90**	*ePn*	**Pn**	**16 20 42.0**	**+0.6**

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*IDC **04** 16:31:24.0±9.9, 35°.61N×20°.95E, h0km, mb3.2/2,*
mb1 3.4/3, mb1mx3.1/25, mbtmp3.3/3, ML2.6/1, Error
ellipse: s-maj=192.7km s-min=45.9km az=21.0
*CSEM **04** 16:31:39.3±0.2, 37°.28N×22°.12E, h2km, ML3.3, Error*
ellipse: s-maj=3.9km s-min=3.5km az=79.0
*THE **04** 16:31:39.3, 37°.23N×22°.14E, h0km±3km, ML3.8/8, Error*
ellipse: s-maj=3.2km s-min=1.0km az=159.0
*ISCJB **04** 16:31:39.4±0.3, 37°.24N±0°.02×22°.13E±0°.02, h10km,*
mb3.2/2, Error ellipse: s-maj=2.8km s-min=2.6km
az=164.9
*ATH **04** 16:31:39.1, 37°.26N×22°.13E, h4km±1km, MD3.5/23, ML3.3*
*NEIC **04** 16:31:39.1, 37°.26N×22°.13E, h4km, ML3.3(ATH), After*
ATH.
ISC 04 16:31:39.5±0.4, 37°.25N±0°.02×22°.14E±0°.03, h3km±3km,
n95, σ1°12/155, mb3.2/2, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITM	**Ithomi**	**0.18**	**248**	*ePg*	**Pg**	**16 31 42.4**	**-0.6**
ITM				*eSg*	**Sg**	**16 31 45.4**	**0.0**
ITM	**Ithomi**	**0.18**	**248**	*ePG*	**Pg**	**16 31 42.4**	**-0.6**
ITM				*eSG*	**Sg**	**16 31 45.4**	**0.0**
ITM	**Ithomi**	**0.18**	**248**	P	**Pg**	**16 31 42.4**	**-0.6**
ITM				S	**Sg**	**16 31 45.4**	**0.0**
ITM	**Ithomi**	**0.18**	**248**	P	**Pg**	**16 31 42.4**	**-0.6**
ITM				S	**Sg**	**16 31 45.4**	**0.0**
VLX	**Vlachokerasia**	**0.23**	**58**	*ePG*	**Pg**	**16 31 44.2**	**+0.2**
VLX				*eSG*	**Sg**	**16 31 47.4**	**+0.4**
VLX	**Vlachokerasia**	**0.23**	**58**	P	**Pg**	**16 31 44.1**	**+0.1**
VLX				S	**Sg**	**16 31 48.1**	**+1.1**
VLX	**Vlachokerasia**	**0.23**	**58**	P	**Pg**	**16 31 44.1**	**+0.1**
VLX				*eSg*	**Sg**	**16 31 47.4**	**+0.4**
VLX				S	**Sg**	**16 31 48.1**	**+1.1**
PYL	**PYLOS**	**0.47**	**222**	*ePG*	**Pg**	**16 31 48.5**	**-0.1**
PYL				*eSG*	**Sg**	**16 31 55.8**	**+1.1**
PYL	**PYLOS**	**0.47**	**222**	P	**Pg**	**16 31 48.5**	**-0.1**
PYL				S	**Sg**	**16 31 55.5**	**+0.8**
PYL	**PYLOS**	**0.47**	**222**	P	**Pg**	**16 31 48.5**	**-0.1**
PYL				S	**Sg**	**16 31 55.5**	**+0.8**
PYL				*eSg*	**Sg**	**16 31 55.8**	**+1.1**
GUR	**Goura**	**0.71**	**13**	*ePG*	**Pg**	**16 31 51.9**	**-1.2**
GUR				*eSG*	**Sg**	**16 32 01.7**	**-0.6**
GUR	**Goura**	**0.71**	**13**	P	**Pg**	**16 31 52.0**	**-1.1**
GUR				S	**Sg**	**16 32 03.1**	**+0.8**
GUR	**Goura**	**0.71**	**13**	P	**Pg**	**16 31 52.0**	**-1.1**
GUR				*eSg*	**Sg**	**16 32 01.7**	**-0.6**
GUR				S	**Sg**	**16 32 03.1**	**+0.8**
VLI	**Veliai**	**0.83**	**129**	*ePg*	**Pg**	**16 31 55.0**	**-0.5**
VLI				*eSg*	**Sg**	**16 32 06.9**	**+0.7**
VLI	**Veliai**	**0.83**	**129**	*ePG*	**Pg**	**16 31 55.0**	**-0.5**
VLI				*eSG*	**Sg**	**16 32 06.9**	**+0.7**
VLI	**Veliai**	**0.83**	**129**	*ePg*	**Pg**	**16 31 55.0**	**-0.5**
VLI				*eSg*	**Sg**	**16 32 06.9**	**+0.7**
DID	**Didima**	**0.91**	**73**	*ePG*	**Pg**	**16 31 56.5**	**-0.6**
DID				*eSG*	**Sg**	**16 32 09.0**	**+0.1**
DID	**Didima**	**0.91**	**73**	P	**Pg**	**16 31 56.8**	**-0.3**
DID				S	**Sg**	**16 32 09.7**	**+0.8**
DID	**Didima**	**0.91**	**73**	*ePg*	**Pg**	**16 31 56.5**	**-0.6**
DID	**Didima**	**0.91**	**73**	P	**Pg**	**16 31 56.8**	**-0.3**
DID				*eSg*	**Sg**	**16 32 09.0**	**+0.1**
DID				S	**Sg**	**16 32 09.7**	**+0.8**
RLS	**Riolos of Patr**	**0.97**	**327**	*ePg*	**Pg**	**16 31 56.6**	**-1.5**
RLS				*eSg*	**Sg**	**16 32 10.5**	**-0.2**
RLS	**Riolos of Patr**	**0.97**	**327**	*ePG*	**Pg**	**16 31 56.6**	**-1.5**
RLS				*eSG*	**Sg**	**16 32 10.5**	**-0.2**
RLS	**Riolos of Patr**	**0.97**	**327**	*ePg*	**Pg**	**16 31 56.6**	**-1.5**
RLS				*eSg*	**Sg**	**16 32 10.5**	**-0.2**
LAKA	**Lakka**	**1.00**	**353**	P	**Pg**	**16 31 57.3**	**-1.4**
LAKA				S	**Sg**	**16 32 12.8**	**+1.1**
LAKA	**Lakka**	**1.00**	**353**	P	**Pg**	**16 31 57.3**	**-1.4**
LAKA				S	**Sg**	**16 32 12.8**	**+1.1**
LTK	**Loutraki**	**1.02**	**40**	*ePG*	**Pg**	**16 31 58.2**	**-0.9**
LTK				*eSG*	**Sg**	**16 32 11.7**	**-0.6**
LTK	**Loutraki**	**1.02**	**40**	P	**Pg**	**16 31 58.6**	**-0.5**
LTK				S	**Sg**	**16 32 13.5**	**+1.2**
LTK	**Loutraki**	**1.02**	**40**	*ePg*	**Pg**	**16 31 58.2**	**-0.9**
LTK	**Loutraki**	**1.02**	**40**	P	**Pg**	**16 31 58.6**	**-0.5**
LTK				*eSg*	**Sg**	**16 32 11.7**	**-0.6**
LTK				S	**Sg**	**16 32 13.5**	**+1.2**
UPR	**University Cam**	**1.07**	**345**	*ePG*	**Pg**	**16 31 58.9**	**-1.2**
UPR				*eSG*	**Sg**	**16 32 14.6**	**+0.6**
UPR	**University Cam**	**1.07**	**345**	*ePg*	**Pg**	**16 31 58.9**	**-1.2**
KALE	**Kalithea**	**1.14**	**0**	P	**Pg**	**16 32 00.1**	**-1.3**
KALE				S	**Sg**	**16 32 18.1**	**+1.8**
KALE	**Kalithea**	**1.14**	**0**	P	**Pg**	**16 32 00.1**	**-1.3**
KALE				S	**Sg**	**16 32 18.1**	**+1.8**
NAIG	**Nisos Aigina**	**1.19**	**64**	*ePb*	**Pb**	**16 32 01.7**	**-1.0**
NAIG	**Nisos Aigina**	**1.19**	**64**	*ePB*	**Pb**	**16 32 01.7**	**-1.0**
NAIG	**Nisos Aigina**	**1.19**	**64**	*ePb*	**Pb**	**16 32 01.7**	**-1.0**
EFP	**Efpalio**	**1.19**	**351**	*ePB*	**Pn**	**16 32 00.8**	**-2.3**
EFP				*eSB*	**Sb**	**16 32 17.5**	**-1.1**
EFP	**Efpalio**	**1.19**	**351**	P	**Pn**	**16 32 01.1**	**-2.0**
EFP				S	**Sg**	**16 32 20.8**	**+2.9**
EFP	**Efpalio**	**1.19**	**351**	*ePb*	**Pn**	**16 32 00.8**	**-2.3**
EFP	**Efpalio**	**1.19**	**351**	P	**Pn**	**16 32 01.1**	**-2.0**
EFP				*eSb*	**Sb**	**16 32 17.5**	**-1.1**
EFP				S	**Sg**	**16 32 20.8**	**+2.9**
DSF	**Desfina**	**1.20**	**15**	P	**Pg**	**16 32 02.9**	**+0.3**
DSF				S	**Sg**	**16 32 21.8**	**+3.6**
DSF	**Desfina**	**1.20**	**15**	P	**Pg**	**16 32 02.9**	**+0.3**
KYTH	**Kithira**	**1.21**	**143**	*ePb*	**Pn**	**16 32 01.4**	**-1.9**
KYTH	**Kithira**	**1.21**	**143**	*ePB*	**Pn**	**16 32 01.4**	**-1.9**
KYTH	**Kithira**	**1.21**	**143**	*ePb*	**Pn**	**16 32 01.4**	**-1.9**
ATH	**Athens Observa**	**1.45**	**60**	*ePn*	**Pn**	**16 32 06.3**	**-0.3**
ATH				*eSb*	**Sb**	**16 32 26.3**	**+0.3**
ATH	**Athens Observa**	**1.45**	**60**	*ePN*	**Pn**	**16 32 06.3**	**-0.3**
ATH				*eSB*	**Sb**	**16 32 26.3**	**+0.3**
ATH	**Athens Observa**	**1.45**	**60**	*ePn*	**Pn**	**16 32 06.3**	**-0.3**
ATH				*eSb*	**Sb**	**16 32 26.3**	**+0.3**
VLY	**Voula,Athens**	**1.45**	**65**	*ePn*	**Pn**	**16 32 06.9**	**+0.3**
VLY				*eSb*	**Sb**	**16 32 25.6**	**-0.4**
VLY	**Voula,Athens**	**1.45**	**65**	*ePN*	**Pn**	**16 32 06.9**	**+0.3**
VLY				*eSB*	**Sb**	**16 32 25.6**	**-0.4**
VLY	**Voula,Athens**	**1.45**	**65**	*ePn*	**Pn**	**16 32 06.9**	**+0.3**
VLY				*eSb*	**Sb**	**16 32 25.6**	**-0.4**
VLS	**Valsamata**	**1.54**	**308**	*ePb*	**Pb**	**16 32 08.6**	**-0.1**
VLS	**Valsamata**	**1.54**	**308**	*ePB*	**Pb**	**16 32 08.6**	**-0.1**
VLS	**Valsamata**	**1.54**	**308**	*ePb*	**Pb**	**16 32 08.6**	**-0.1**
LKR	**Lokris**	**1.56**	**26**	*ePn*	**Pn**	**16 32 07.7**	**-0.4**
LKR				*eSb*	**Sb**	**16 32 29.1**	**0.0**
LKR	**Lokris**	**1.56**	**26**	*ePN*	**Pn**	**16 32 07.7**	**-0.4**
LKR				*eSB*	**Sb**	**16 32 29.1**	**0.0**
LKR	**Lokris**	**1.56**	**26**	P	**Pn**	**16 32 07.3**	**-0.8**
LKR				S	**Sn**	**16 32 29.6**	**+0.7**
LKR	**Lokris**	**1.56**	**26**	P	**Pn**	**16 32 07.3**	**-0.8**
LKR	**Lokris**	**1.56**	**26**	*ePn*	**Pn**	**16 32 07.7**	**-0.4**
LKR				*eSb*	**Sb**	**16 32 29.1**	**0.0**
LKR				S	**Sn**	**16 32 29.6**	**+0.7**
PTL	**Penteli**	**1.59**	**59**	*ePg*	**Pg**	**16 32 09.1**	**-0.9**
PTL				*eSb*	**Sb**	**16 32 29.9**	**-0.1**
PTL	**Penteli**	**1.59**	**59**	*ePG*	**Pg**	**16 32 09.1**	**-0.9**
PTL				*eSB*	**Sb**	**16 32 29.9**	**-0.1**
PTL	**Penteli**	**1.59**	**59**	*ePg*	**Pg**	**16 32 09.1**	**-0.9**
PTL				*eSb*	**Sb**	**16 32 29.9**	**-0.1**
EVR	**Evrytania**	**1.69**	**351**	*ePb*	**Pb**	**16 32 10.7**	**-0.5**
EVR				*eSb*	**Sb**	**16 32 33.3**	**+0.5**
EVR	**Evrytania**	**1.69**	**351**	*ePB*	**Pb**	**16 32 10.7**	**-0.5**
EVR				*eSB*	**Sb**	**16 32 33.3**	**+0.5**
EVR	**Evrytania**	**1.69**	**351**	*ePb*	**Pb**	**16 32 10.7**	**-0.5**
EVR				*eSb*	**Sb**	**16 32 33.3**	**+0.5**
AGG	**Agios Georgios**	**1.78**	**5**	*ePb*	**Pb**	**16 32 12.2**	**-0.6**
AGG	**Agios Georgios**	**1.78**	**5**	*ePB*	**Pb**	**16 32 12.2**	**-0.6**
AGG	**Agios Georgios**	**1.78**	**5**	P	**Pn**	**16 32 11.6**	**+0.4**
AGG				S	**Sn**	**16 32 34.8**	**+0.5**
AGG	**Agios Georgios**	**1.78**	**5**	P	**Pn**	**16 32 11.6**	**+0.4**
AGG	**Agios Georgios**	**1.78**	**5**	*ePb*	**Pb**	**16 32 12.2**	**-0.6**
AGG				S	**Sn**	**16 32 34.8**	**+0.5**
LKD2	**Lefkada island**	**1.93**	**323**	P	**Pn**	**16 32 14.9**	**+1.6**
LKD2	**Lefkada island**	**1.93**	**323**	P	**Pn**	**16 32 14.9**	**+1.6**
XOR	**Xorichti**	**2.27**	**21**	P	**Pn**	**16 32 18.4**	**+0.4**
XOR	**Xorichti**	**2.27**	**21**	P	**Pn**	**16 32 17.7**	**-0.3**
XOR	**Xorichti**	**2.27**	**21**	P	**Pn**	**16 32 17.7**	**-0.3**
THL	**Klokotos Trika**	**2.32**	**358**	*ePN*	**Pn**	**16 32 19.9**	**+1.3**
THL	**Klokotos Trika**	**

CFR	**Carcaliu**	**2.10 268**	⇓*i*P		**Pn**	**16 40 58.9**	**+0.4**
CFR	**Carcaliu**	**2.10 268**	⇓P		**Pn**	**16 40 58.9**	**+0.4**
CFR			S		**Sn**	**16 41 25.9**	**+1.1**
SIM	**Simferopol'**	**2.15 98**	P		**Pg**	**16 41 10.9**	**+6.7**
SIM			S		**Sn**	**16 41 31.3**	**+5.1**
SIM			pmax	pmax			
	comp=Z,24nm,0.8s						
LEOM	**Leova**	**2.33 302**	⇓P		**Pn**	**16 41 04.2**	**+2.6**
LEOM			S		**Sn**	**16 41 31.5**	**+1.0**
LEOM	**Leova**	**2.33 302**	⇓*i*P		**Pn**	**16 41 04.2**	**+2.6**
LEOM	**Leova**	**2.33 302**	P		**Pn**	**16 41 04.2**	**+2.6**
LEOM			S		**Sn**	**16 41 31.5**	**+1.0**
KIS	**Kishinev**	**2.35 318**	*e*P		**Pn**	**16 41 07.0**	**+5.1**
	comp=Z,100nm,0.7s						
KIS			*i* S		**Sn**	**16 41 31.6**	**+0.7**
	comp=Z,1μm,0.6s						
KIS	**Kishinev**	**2.35 318**	*e*P		**Pn**	**16 41 07.0**	**+5.1**
KIS			*i* S		**Sn**	**16 41 31.6**	**+0.7**
KIS			pmax	pmax			
	comp=Z,120nm,0.7s						
KIS			smax				
	comp=N,880nm,0.8s						
KIS			smax				
	comp=E,1μm,0.6s						
KIS	**Kishinev**	**2.35 318**	⇑P		**Pn**	**16 41 03.5**	**+1.6**
KIS			S		**Sn**	**16 41 32.5**	**+1.6**
KIS	**Kishinev**	**2.35 318**	⇑*i*P		**Pn**	**16 41 03.5**	**+1.6**
KIS	**Kishinev**	**2.35 318**	S		**Sn**	**16 41 32.5**	**+1.6**
KIS	**Kishinev**	**2.35 318**	⇑P		**Pn**	**16 41 03.5**	**+1.6**
KIS			*i* S		**Sn**	**16 41 31.6**	**+0.7**
	comp=E,880nm,0.8s						
CVD	**Cernavoda**	**2.39 247**	⇑P		**Pn**	**16 41 03.5**	**+1.1**
CVD			S		**Sn**	**16 41 31.9**	**0.0**
CVD	**Cernavoda**	**2.39 247**	⇑*i*P		**Pn**	**16 41 03.5**	**+1.1**
CVD	**Cernavoda**	**2.39 247**	⇑P		**Pn**	**16 41 03.5**	**+1.1**
CVD			S		**Sn**	**16 41 31.9**	**0.0**
AMRR	**Amara**	**2.76 257**	S		**Sn**	**16 41 41.7**	**+0.6**
AMRR	**Amara**	**2.76 257**	S		**Sn**	**16 41 41.7**	**+0.6**
PETR		**2.76 281**	⇑P		**Pn**	**16 41 09.4**	**+1.9**
PETR		**2.76 281**	⇑*i*P		**Pn**	**16 41 09.4**	**+1.8**
PETR		**2.76 281**	S		**Sg**	**16 41 49.2**	**-2.4**
PETR		**2.76 281**	⇑P		**Pn**	**16 41 09.4**	**+1.8**
SUDU	**Sudak**	**2.78 97**	⇑*i*P		**Pn**	**16 41 11.3**	**+3.4**
SUDU			*e*			16 41 45.3	
SUDU	**Sudak**	**2.78 97**	*i* P		**Pn**	**16 41 11.3**	**+3.4**
IAS	**Iasi**	**3.12 309**	S		**Sn**	**16 41 48.1**	**-1.9**
IAS	**Iasi**	**3.12 309**	S		**Sn**	**16 41 48.1**	**-1.9**
VRI	**Vrincioaia**	**3.13 282**	⇓P		**Pn**	**16 41 14.1**	**+1.4**
VRI	**Vrincioaia**	**3.13 282**	⇓*i*P		**Pn**	**16 41 14.1**	**+1.4**
VRI	**Vrincioaia**	**3.13 282**	S		**Sg**	**16 41 58.5**	**-5.0**
VRI	**Vrincioaia**	**3.13 282**	⇓P		**Pn**	**16 41 14.1**	**+1.4**
PLOR	**Plostina**	**3.18 282**	⇑*i*P		**Pg**	**16 41 24.5**	**+0.6**
PLOR	**Plostina**	**3.18 282**	S		**Sg**	**16 42 03.5**	**-1.6**
TESR		**3.35 293**	P		**Pn**	**16 41 16.5**	**+0.9**
TESR			S		**Pg**	**16 41 25.7**	**-1.4**
TESR		**3.35 293**	⇑*i*P		**Pg**	**16 41 26.5**	**-0.6**
TESR		**3.35 293**	P		**Pn**	**16 41 16.5**	**+0.8**
TESR			S		**Sn**	**16 41 56.3**	**+0.6**
SULR		**3.49 262**	S		**Sn**	**16 41 58.3**	**-0.9**
SULR		**3.49 262**	S		**Sn**	**16 41 58.3**	**-0.9**
MLR	**Muntele Rosu**	**3.64 275**	Pn		**Pn**	**16 41 21.4**	**+1.7**
	comp=E,2.4nm,0.3s,baz=113,slow=15,SNR=12						
MLR			Sn		**Sn**	**16 42 04.0**	**+1.1**
	comp=E,6.0nm,0.3s,baz=165,slow=11,SNR=6.6						
MLR	**Muntele Rosu**	**3.64 275**	⇓P		**Pn**	**16 41 21.5**	**+1.8**
MLR			S		**Sn**	**16 42 03.6**	**+0.7**
MLR	**Muntele Rosu**	**3.64 275**	⇓*i*P		**Pn**	**16 41 21.5**	**+1.8**
MLR	**Muntele Rosu**	**3.64 275**	⇓P		**Pn**	**16 41 21.5**	**+1.8**
MLR			S		**Sn**	**16 42 03.6**	**+0.7**
BUC1	**Bucharest**	**3.73 257**	S		**Sg**	**16 42 22.2**	**-0.5**
SILT	**Sile**	**4.25 195**	*e*PN		**Pn**	**16 41 29.1**	**+1.0**
SILT			*e*SN		**Sn**	**16 42 10.1**	**-7.8**
SILT	**Sile**	**4.25 195**	Pn		**Pn**	**16 41 29.2**	**+1.1**
SILT	**Sile**	**4.25 195**	Pn		**Pn**	**16 41 29.2**	**+1.1**
VOIR		**4.27 274**	⇑P		**Pn**	**16 41 29.2**	**+0.9**
VOIR			S		**Sn**	**16 42 19.4**	**+1.0**
VOIR		**4.27 274**	⇑*i*P		**Pn**	**16 41 29.2**	**+0.9**
VOIR		**4.27 274**	⇑P		**Pn**	**16 41 29.2**	**+0.9**
VOIR			S		**Sn**	**16 42 19.4**	**+1.0**
ANN	**Anapa**	**4.51 94**	⇓*e*P		**Pn**	**16 41 30.1**	**-1.5**
ANN	**Anapa**	**4.51 94**	⇓*e*P		**Pn**	**16 41 30.1**	**-1.5**
HRT	**Hereke**	**4.57 194**	*e*PN		**Pn**	**16 41 33.8**	**+1.3**
HRT	**Hereke**	**4.57 194**	Pn		**Pn**	**16 41 34.1**	**+1.7**
HRT			Sg		**Sn**	**16 42 23.1**	**-2.7**
HRT	**Hereke**	**4.57 194**	P		**Pn**	**16 41 34.1**	**+1.7**
HRT			S		**Sn**	**16 42 23.1**	**-2.7**
EDRB	**Edirne**	**4.67 224**	*e*PN		**Pn**	**16 41 33.1**	**-0.6**
EDRB	**Edirne**	**4.67 224**	Pn		**Pn**	**16 41 33.3**	**-0.4**
EDRB	**Edirne**	**4.67 224**	Pn		**Pn**	**16 41 33.3**	**-0.4**
BURAR	**Bucovina Array**	**4.70 302**	⇑P		**Pn**	**16 41 34.5**	**+0.4**
BURAR			S		**Sn**	**16 42 26.8**	**-2.0**
BURAR	**Bucovina Array**	**4.70 302**	⇑*i*P		**Pn**	**16 41 34.5**	**+0.4**
BURAR	**Bucovina Array**	**4.70 302**	⇑P		**Pn**	**16 41 34.5**	**+0.4**
BURAR			S		**Sn**	**16 42 26.8**	**-2.0**
BUR08	**Bucovina Ar. S**	**4.72 302**	*e*Pn		**Pn**	**16 41 34.3**	**-0.2**
BUR08	**Bucovina Ar. S**	**4.72 302**	*e*Pn		**Pn**	**16 41 34.3**	**-0.2**
GULT	**Gulveren**	**4.86 185**	*e*PN		**Pn**	**16 41 39.3**	**+2.9**
GULT	**Gulveren**	**4.86 185**	Pn		**Pn**	**16 41 39.3**	**+2.9**
GULT			Sg		**Sn**	**16 42 31.3**	**-1.5**
GULT	**Gulveren**	**4.86 185**	Pn		**Pn**	**16 41 39.3**	**+2.9**
YLV	**Yalova**	**4.87 196**	*e*PN		**Pn**	**16 41 37.9**	**+1.3**
YLV	**Yalova**	**4.87 196**	Pn		**Pn**	**16 41 37.9**	**+1.4**
YLV			Sg		**Sn**	**16 42 30.9**	**-2.3**
YLV	**Yalova**	**4.87 196**	P		**Pn**	**16 41 37.9**	**+1.3**
YLV			S		**Sn**	**16 42 30.9**	**-2.3**
ADVT	**Abdulvahap**	**4.94 192**	*e*PN		**Pn**	**16 41 39.3**	**+1.8**
ADVT	**Abdulvahap**	**4.94 192**	Pn		**Pn**	**16 41 39.3**	**+1.8**
ADVT			Sg		**Sn**	**16 42 33.3**	**-1.6**
ADVT	**Abdulvahap**	**4.94 192**	Pn		**Pn**	**16 41 39.3**	**+1.8**
ARMT	**Armutlu**	**4.98 200**	*e*PN		**Pn**	**16 41 38.4**	**+0.3**
ARMT	**Armutlu**	**4.98 200**	Pn		**Pn**	**16 41 38.4**	**+0.3**
MFT	**Murefte**	**5.29 213**	*e*PN		**Pn**	**16 41 41.9**	**-0.3**
MFT	**Murefte**	**5.29 213**	Pn		**Pn**	**16 41 41.7**	**-0.6**
MFT	**Murefte**	**5.29 213**	Pn		**Pn**	**16 41 41.7**	**-0.6**
RKY	**Sarkoy-Tekirda**	**5.41 214**	*e*PN		**Pn**	**16 41 43.3**	**-0.7**
RKY	**Sarkoy-Tekirda**	**5.41 214**	*e*Pn		**Pn**	**16 41 43.3**	**-0.7**
KIEV	**Kiev**	**5.57 347**	*e*Pn		**Pn**	**16 41 45.3**	**-0.8**
KIEV			*e*Pg		**Pg**	**16 42 05.3**	**-4.3**
KIEV			*e*Sg		**Sg**	**16 43 08.7**	**-13**
KIEV	**Kiev**	**5.57 347**	*e*P		**Pn**	**16 41 45.3**	**-0.9**
AKASG	**Malin Array Be**	**5.58 348**	Pn		**Pn**	**16 41 45.7**	**-0.5**
	comp=E,3.1nm,0.3s,baz=165,slow=13,SNR=7.6						
AKASG			Pg		**Pg**	**16 42 04.2**	**-5.4**
	comp=E,5.9nm,0.3s,baz=168,slow=16,SNR=6.4						
AKASG			Sn		**Sn**	**16 42 47.2**	**-3.3**
	comp=E,8.0nm,0.3s,baz=167,slow=9.9,SNR=5.5						
AKASG			Lg			16 43 08.2	
	comp=E,27nm,0.3s,baz=166,slow=29,SNR=9.8						
AKASG	**Malin Array Be**	**5.58 348**	P		**Pn**	**16 41 45.7**	**-0.5**
AKASG						16 42 47.2	
AKASG			pmax	pmax			
	comp=Z,3.0nm,0.3s						
AKASG			pmax	pmax			
	comp=Z,6.0nm,0.3s						
AKASG			smax				
	comp=N,8.0nm,0.3s						
AKASG	**Malin Array Be**	**5.58 348**	Pn		**Pn**	**16 41 45.7**	**-0.5**
AKASG			Pg		**Pg**	**16 42 04.2**	**-5.4**
AKASG			Sn		**Sn**	**16 42 47.2**	**-3.3**
AKASG			Lg			16 43 08.2	
AKASG	**Malin Array Be**	**5.58 348**	P		**Pn**	**16 41 45.7**	**-0.5**
	comp=N,6.0nm,0.3s						
AKASG			S		**Sn**	**16 42 47.2**	**-3.3**
BMR	**Baia Mare**	**5.78 297**	S		**Sn**	**16 42 55.0**	**-0.5**
BMR	**Baia Mare**	**5.78 297**	S		**Sn**	**16 42 55.0**	**-0.5**
BR131	**Keskin Array S**	**5.85 160**	Pn		**Pn**	**16 41 53.4**	**+3.4**
BRTR	**Keskin Array B**	**5.85 160**	Pn		**Pn**	**16 41 53.8**	**+3.8**
	comp=N,0.4nm,0.3s,baz=356,slow=12,SNR=7.7						
BRTR			Sn		**Sn**	**16 42 55.9**	**-1.4**
	comp=N,0.1nm,0.3s,baz=322,slow=20,SNR=2.7						
BRTR	**Keskin Array B**	**5.85 160**	S		**Sn**	**16 42 55.9**	**-1.4**
GZR	**Gura Zlata**	**5.88 274**	⇓P		**Pn**	**16 41 51.1**	**+0.7**
GZR			S		**Sn**	**16 42 57.3**	**-0.5**
GZR	**Gura Zlata**	**5.88 274**	⇓*i*P		**Pn**	**16 41 51.1**	**+0.8**
GZR	**Gura Zlata**	**5.88 274**	⇓P		**Pn**	**16 41 51.1**	**+0.8**
GZR			S		**Sn**	**16 42 57.3**	**-0.6**
DRGR		**6.04 288**	⇓P		**Pn**	**16 41 53.8**	**+1.2**
DRGR			S		**Sn**	**16 43 01.1**	**-0.8**
DRGR		**6.04 288**	⇓*i*P		**Pn**	**16 41 53.8**	**+1.2**
DRGR		**6.04 288**	⇓P		**Pn**	**16 41 53.8**	**+1.2**
DRGR			S		**Sn**	**16 43 01.1**	**-0.8**
TRUS	**Trudelj**	**7.69 266**	*e*Pn		**Pn**	**16 42 13.6**	**-1.7**
DIVS	**Divibare**	**8.01 266**	*e*Pn		**Pn**	**16 42 18.8**	**-0.8**
VSR	**Storozhevoye**	**8.02 39**	*e*P		**Pn**	**16 42 20.0**	**+0.3**
VSR	**Storozhevoye**	**8.02 39**	*e*P		**Pn**	**16 42 20.0**	**+0.3**
KIV	**Kislovodsk**	**8.37 95**	⇑*e*P		**Pn**	**16 42 23.8**	**-0.7**
KIV	**Kislovodsk**	**8.37 95**	⇑*e*P		**Pn**	**16 42 23.8**	**-0.7**
BBLS	**Lazići**	**8.47 265**	*e*Pn		**Pn**	**16 42 25.5**	**-0.5**
PYA	**Pyatigorsk**	**8.61 94**	⇓*e*P		**Pn**	**16 42 27.6**	**-0.3**
PYA	**Pyatigorsk**	**8.61 94**	⇓*e*P		**Pn**	**16 42 27.6**	**-0.3**
OBN	**Obninsk**	**10.45 18**	*e*P		**Pn**	**16 42 51.2**	**-1.8**
OBN			pmax	pmax			
	comp=Z,5.0nm,0.9s						
OBN	**Obninsk**	**10.45 18**	*e*P		**Pn**	**16 42 51.2**	**-1.8**
	comp=Z,5.0nm,0.9s						
GNI	**Garni**	**11.26 112**	⇓*e*P		**Pn**	**16 43 03.3**	**-0.8**
GNI	**Garni**	**11.26 112**	⇓*e*P		**Pn**	**16 43 03.3**	**-0.8**
FINES	**FINESS Array B**	**16.47 351**	Pn		**Pn**	**16 44 09.0**	**-5.2**
	comp=Z,0.2nm,0.3s,baz=158,slow=15,SNR=6.3						
HFS	**Hagfors**	**18.15 331**	Pn		**Pn**	**16 44 29.0**	**-6.2**
	comp=Z,0.2nm,0.3s,baz=136,slow=15,SNR=6.3						
NOA	**NORSAR Array B**	**19.66 331**	Pn		**Pn**	**16 44 47.6**	**-5.8**
	comp=Z,0.2nm,0.3s,baz=132,slow=10,SNR=3.7						
ABKAR	**Akbulak array**	**19.91 68**	*e*P		**Pn**	**16 44 57.6**	**+1.1**
	comp=Z,0.9nm,0.5s						
ARCES	**ARCESS Array B**	**24.49 355**	P		**P**	**16 45 42.1**	**-0.1**
	comp=Z,2.3nm,0.8s,mb3.7,baz=166,slow=11,SNR=8.5						
ARCES	**ARCESS Array B**	**24.49 355**	P		**P**	**16 45 42.1**	**-0.2**
ARCES			pmax	pmax			
	comp=Z,2.0nm,0.8s						
ARCES	**ARCESS Array B**	**24.49 355**	P		**P**	**16 45 42.1**	**-0.1**
ARCES	**ARCESS Array B**	**24.49 355**	P		**P**	**16 45 42.1**	**-0.2**
	comp=Z,2.0nm,0.8s,mb3.6						
MKAR	**Makanchi Array**	**35.05 69**	P		**P**	**16 47 17.6**	**+1.4**
	comp=Z,0.1nm,0.4s,mb3.1,baz=281,slow=7.3,SNR=3.4						
KRAR	**Krasnoyarsk**	**39.33 51**	⇓*e*P		**P**	**16 47 50.4**	**-2.0**
KRAR	**Krasnoyarsk**	**39.33 51**	*e*P		**P**	**16 47 50.4**	**-2.0**

NEIC ***04*** *16:41:18.5, 53°.37N×165°.69W, h13km, ML3.8(AEIC), After AEIC.*
ISCJB ***04*** *16:41:20.4±1.2, 53°.6N±0°.1×165°.74W±0°.08, h61km±6km, mb3.8/17, Error ellipse: s-maj=20.8km s-min=7.9km az=171.5*
IDC ***04*** *16:41:23.4±3.8, 53°.78N×165°.75W, h65km±33km, mb3.5/18, mb1 3.7/19, mb1mx3.6/34, mbtmp3.5/19, ML3.5/1, MS3.0/3, Ms1 3.0/3, ms1mx2.7/24, Error ellipse: s-maj=28.3km s-min=15.4km az=1.0*
ISC 04 16:41:21.6±1.2, 53°.6N±0°.1×165°.81W±0°.08, h53km±7km, n28, σ0°96/33, mb3.8/17, MS3.0/3, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UNV	**Unalaska Valle**	**0.50**	**305**	P	**Pn**	**16 41 31.7**	**-1.4**
UNV				S	**Sn**	**16 41 40.7**	**-0.6**
AKUT	**Akutan**	**0.57**	**2**	P	**Pn**	**16 41 32.9**	**-1.0**
AKUT				S	**Sn**	**16 41 44.0**	**+1.3**
AKA	**Akutan**	**0.58**	**2**	P	**Pn**	**16 41 32.9**	**-1.0**
AKA				S	**Sn**	**16 41 44.1**	**+1.3**
SDPT	**Sand Point**	**3.59**	**58**	P	**Pn**	**16 42 14.2**	**-0.4**
SPIA	**Saint Paul Isl**	**4.42**	**327**	P	**Pn**	**16 42 28.0**	**+2.0**
CHGN	**Chignik**	**5.07**	**54**	*e*Pn	**Pn**	**16 42 34.7**	**-0.2**
CHGN				*e*Sn	**Sn**	**16 43 31.3**	**-0.7**
KDAK	**Kodiak Island**	**8.58**	**55**	P	**Pn**	**16 43 22.9**	**0.0**
	0.6nm,0.3s,baz=254,slow=7.9,SNR=4.5						
KDAK				S	**Sn**	**16 44 53.0**	**-5.3**
	0.3nm,0.3s,baz=168,slow=20,SNR=2.4						
KDAK	**Kodiak Island**	**8.58**	**55**	P	**Pn**	**16 43 22.9**	**-0.1**
KDAK				S	**Sn**	**16 44 53.0**	**-5.3**
DLBC	**Dease Lake**	**20.42**	**62**	P	**P**	**16 45 55.4**	**+1.4**
	1.1nm,0.3s,baz=241,slow=13,SNR=2.9						
INK	**Inuvik**	**21.16**	**33**	P	**P**	**16 46 01.1**	**-0.7**
	1.6nm,0.6s,mb3.5,baz=226,slow=13,SNR=4.0						
PETK	**Petropavlovsk-**	**21.65**	**284**	P	**P**	**16 46 08.9**	**+1.6**
	1.7nm,0.6s,mb3.7,baz=84,slow=13,SNR=11						
PETK				LR	LR	16 53 47.7	
	comp=Z,26nm,19.1s,MS2.7,baz=66,slow=34						
NVAR	**Mina Array Bea**	**35.58**	**96**	P	**P**	**16 48 15.4**	**+1.8**
	0.2nm,0.5s,mb3.3,baz=279,slow=8.1,SNR=3.3						
KSRS	**Korea Array**	**47.39**	**278**	P	**P**	**16 49 50.3**	**+0.1**
	0.9nm,0.8s,mb3.8,baz=53,slow=7.6,SNR=4.4						
KSRS				LR	LR	17 08 20.5	
	comp=Z,22nm,19.3s,MS3.1,baz=358,slow=34						
TXAR	**Lajitas Array**	**50.61**	**93**	P	**P**	**16 50 15.5**	**+0.6**
	0.4nm,0.7s,mb3.5,baz=329,slow=12,SNR=5.9						
TXAR	**Lajitas Array**	**50.61**	**93**	P	**P**	**16 50 15.5**	**+0.6**
SONM	**Songino Array**	**52.52**	**302**	P	**P**	**16 50 29.0**	**+0.1**
	0.3nm,0.6s,mb3.4,baz=68,slow=4.6,SNR=3.1						
ZALV	**Zalesovo Beam**	**57.97**	**319**	P	**P**	**16 51 08.0**	**0.0**
	0.5nm,0.4s,mb3.9,baz=30,slow=8.9,SNR=3.3						
KURK	**Kurchatov**	**62.88**	**320**	P	**P**	**16 51 42.5**	**+0.9**
	0.3nm,0.4s,mb3.8,baz=48,slow=7.9,SNR=3.8						
MKAR	**Makanchi Array**	**64.52**	**315**	P	**P**	**16 51 51.6**	**-0.9**
	0.4nm,0.3s,mb4.0,baz=54,slow=7.2,SNR=13						
FINES	**FINESS Array B**	**64.95**	**354**	P	**P**	**16 51 54.1**	**-1.0**
	0.7nm,0.3s,mb4.2,baz=6.6,slow=8.7,SNR=9.0						
NOA	**NORSAR Array B**	**65.72**	**2**	P	**P**	**16 51 58.7**	**-1.4**
	0.3nm,0.6s,mb3.5,baz=8.7,slow=7.4,SNR=2.8						
NOA				LR	LR	17 20 44.5	
	comp=Z,11nm,19.3s,MS3.1,baz=290,slow=36						
HFS	**Hagfors**	**66.66**	**0**	P	**P**	**16 52 05.3**	**-0.7**
	1.4nm,0.3s,mb4.4,baz=15,slow=6.3,SNR=15						
AKTO	**Aktyubinsk**	**70.02**	**332**	P	**P**	**16 52 27.3**	**+0.1**
	0.9nm,0.6s,mb3.9,baz=34,slow=12,SNR=4.5						
EKA	**Eskdalemuir Ar**	**70.53**	**10**	P	**P**	**16 52 30.1**	**-0.1**
	1.0nm,0.8s,mb3.8,baz=354,slow=5.7,SNR=4.3						
AKASG	**Malin Array Be**	**75.34**	**350**	P	**P**	**16 52 57.7**	**-1.1**
	1.2nm,0.5s,mb4.0,baz=14,slow=5.4,SNR=4.1						
CMAR	**Chiang Mai Arr**	**78.42**	**285**	P	**P**	**16 53 16.5**	**-0.1**
	0.9nm,0.5s,mb4.0,baz=22,slow=5.8,SNR=6.9						
BRTR	**Keskin Array B**	**85.58**	**345**	P	**P**	**16 53 54.5**	**+0.7**
	1.3nm,0.9s,mb4.1,baz=20,slow=4.7,SNR=5.0						
PLCA	**Paso Flores**	**124.28**	**114**	PKP	PKPdf	17 00 12.5	-1.1
	3.6nm,0.9s,baz=304,slow=3.6,SNR=3.2						

IDC 04 16:54:47.1±2.2, 7°.38S×130°.42E, h0km, mb3.3/1, mb1 3.3/3, mb1mx3.2/17, mbtmp3.1/3, ML3.0/1, Error ellipse: s-maj=122.1km s-min=31.9km az=69.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.05**	**163**	Pn	Pn	16 57 53.9	-0.1
	0.1nm,0.3s,baz=346,slow=14,SNR=6.8						
WRA				Sn	Sn	17 00 16.6	-3.4
	0.1nm,0.3s,baz=347,slow=21,SNR=4.3						
ASAR	**Alice Springs**	**16.54**	**169**	Pn	Pn	16 58 40.9	+0.3
	0.1nm,0.3s,baz=356,slow=7.6,SNR=11						
MKAR	**Makanchi Array**	**68.77**	**327**	P	P	17 05 53.1	+0.1
	0.2nm,0.7s,baz=126,slow=7.3,SNR=2.9						

NIED ***04*** *16:58:00, 31°.00N×141°.20E, h89km, Mw4.1 Best double couple: M0 1.35000×10^15 NP1:φs 340.00000°, δ77.00000°, λ39.00000°. NP2:φs 240.00000°, δ52.00000°, λ164.00000°.*
BJI ***04*** *16:58:13.5, 30°.70N×141°.64E, h83km, mB4.2/5, mb4.2/6, Ms3.7/1, Ms7 3.4/1*
ISCJB ***04*** *16:58:19.1±0.5, 30°.88N±0°.03×141°.06E±0°.08, h98km±4km, mb4.1/24, Error ellipse: s-maj=12.0km s-min=4.1km az=162.3*
IDC ***04*** *16:58:19.1±1.0, 30°.81N×140°.75E, h73km±9km, mb3.8/18, mb1 3.9/22, mb1mx3.8/30, mbtmp3.8/22, MS2.7/1, Ms1 2.7/1, ms1mx1.9/27, Error ellipse: s-maj=15.7km s-min=6.9km az=75.0*
NEIC ***04*** *16:58:19.9±1.2, 30°.74N×140°.73E, h84km±10km, mb4.8/3, MW4.0(NIED), Error ellipse: s-maj=12.1km s-min=7.9km az=84.0*
JMA ***04*** *16:58:20.5±0.1, 30°.96N×141°.18E, h90km, M4.6*
ISC 04 16:58:20.6±0.4, 30°.88N±0°.03×141°.09E±0°.08, h96km±4km, n52, σ1°05/64, mb4.1/24, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.47**	**334**	P	**Pn**	**16 58 59.2**	**0.0**
JHJ2				*e*S	**Sn**	**16 59 27.5**	**-1.3**
JHJ	**Hachijo jima 2**	**2.49**	**334**	P	**Pn**	**16 58 57.9**	**-1.5**
	48nm,0.3s,baz=222,slow=21,SNR=76						
JHJ				S	**Sn**	**16 59 25.8**	**-3.4**
	236nm,0.3s,baz=52,slow=19,SNR=12						
JMY	**Miyakejima3**	**3.45**	**338**	P	**Pn**	**16 59 13.0**	**+0.8**
JMY				*e*S	**Sn**	**16 59 52.0**	**-0.1**
JKO	**Kozu shima**	**3.69**	**334**	P	**Pn**	**16 59 16.3**	**+0.9**
JKO				*e*S	**Sn**	**16 59 59.0**	**+1.2**
BSO1	**Boso 1**	**3.76**	**359**	P	**Pn**	**16 59 17.0**	**+0.6**
BSO1				*e*S	**Sn**	**16 59 58.1**	**-1.6**
CBIJ	**Chichi jima**	**3.89**	**165**	P	**Pn**	**16 59 18.6**	**+0.4**
	24nm,0.3s,baz=107,slow=18,SNR=48						
CBIJ				S	**Sn**	**17 00 01.8**	**-1.1**
	51nm,0.3s,baz=287,slow=19,SNR=5.3						
CBIJ	**Chichi jima**	**3.89**	**165**	P	**Pn**	**16 59 18.8**	**+0.6**
CBIJ				S	**Sn**	**17 00 02.1**	**-0.8**
JHHJ	**Haha-jima-NKT**	**4.34**	**167**	P	**Pn**	**16 59 26.1**	**+1.8**
JHHJ				*e*S	**Sn**	**17 00 14.0**	**+0.2**
JOD2	**Odawara 2**	**4.68**	**339**	P	**Pn**	**16 59 29.5**	**+0.6**
JOD2				*e*S	**Sn**	**17 00 19.9**	**-2.1**
JYN	**Shimob**	**5.07**	**336**	P	**Pn**	**16 59 35.4**	**+1.2**
JIE	**Ise**	**5.09**	**315**	P	**Pn**	**16 59 34.9**	**+0.5**
JWZ	**Kozaga**	**5.27**	**301**	P	**Pn**	**16 59 36.7**	**-0.1**
JAG	**Ashikaga**	**5.69**	**347**	P	**Pn**	**16 59 41.9**	**-0.7**
MJAR	**Matsushiro Arr**	**6.13**	**338**	P	**Pn**	**16 59 48.1**	**-0.5**
	2.2nm,0.3s,baz=170,slow=33,SNR=30						
MJAR				S	**Sn**	**17 00 56.9**	**-0.4**
	1.5nm,0.3s,baz=306,slow=22,SNR=4.5						
MAJO	**Matsushiro**	**6.13**	**338**	*e*Pn	**Pn**	**16 59 48.2**	**-0.4**
	16nm,0.5s						
MAT	**Matsushiro**	**6.13**	**338**	P	**Pn**	**16 59 49.3**	**+0.7**
MAT				S	**Sn**	**17 00 57.0**	**-0.3**
MAT	**Matsushiro**	**6.13**	**338**	P	**Pn**	**16 59 49.4**	**+0.8**
JWT	**Wachi**	**6.48**	**314**	P	**Pn**	**16 59 54.5**	**+1.2**
JWT				*e*S	**Sn**	**17 01 06.6**	**+0.8**
JHS	**Saijyo**	**7.86**	**304**	P	**Pn**	**17 00 14.2**	**+2.1**
JMK	**Ichinoseki**	**8.05**	**1**	P	**Pn**	**17 00 14.0**	**-0.7**
JMK				*e*S	**Sn**	**17 01 37.6**	**-6.4**
KSRS	**Korea Array**	**12.72**	**305**	P	**Pn**	**17 01 19.1**	**+1.3**
	0.2nm,0.3s,baz=116,slow=13,SNR=6.6						
ASAJ	**Asahikawa**	**13.27**	**5**	P	**Pn**	**17 01 24.1**	**-0.8**
	0.8nm,0.3s,baz=197,slow=9.2,SNR=7.8						
ASAJ				S	**Sn**	**17 03 42.1**	**-8.5**
	0.4nm,0.3s,baz=299,slow=19,SNR=3.3						
GUMO	**Guam**	**17.56**	**168**	*e*P	**Pn**	**17 02 19.0**	**-0.2**
	179nm,1.4s						
TGY	**Tagaytay City**	**24.94**	**232**	P	**P**	**17 03 32.8**	**-2.2**
	62nm,0.4s,mb5.4,baz=305,slow=12,SNR=4.9						
PETK	**Petropavlovsk-**	**25.29**	**24**	LR	LR	17 12 06.4	
	comp=Z,18nm,21.8s,baz=9.6,slow=32						
SONM	**Songino Array**	**31.39**	**313**	P	**P**	**17 04 31.9**	**-0.3**
	0.6nm,0.4s,mb3.6,baz=112,slow=8.4,SNR=6.7						
SONM				PcP	PcP	17 07 25.4	+1.9
	0.3nm,0.3s,baz=100,slow=1.6,SNR=4.0						
CMAR	**Chiang Mai Arr**	**40.02**	**262**	P	**P**	**17 05 44.5**	**-1.7**

	baz=331						
TWT	**Tachien**	**1.10**	**277**	*e*P	**Pn**	**17 02 01.7**	**+0.3**
	baz=266						
TWT				*e*S	**Sn**	**17 02 15.2**	**-0.5**
	baz=266						
TWA	**Mucha**	**1.12**	**320**	*e*P	**Pn**	**17 02 02.2**	**+0.7**
	baz=334						
EHY	**Hungye**	**1.15**	**238**	*e*P	**Pn**	**17 02 00.5**	**-1.5**
	baz=247						
TAP1	**Taipei**	**1.20**	**320**	*e*P	**Pn**	**17 02 04.2**	**+1.5**
	baz=334						
IRIF	**Iriomote-Funau**	**1.25**	**80**	P	**Pn**	**17 02 03.3**	**-0.1**
IRIF				S	**Sn**	**17 02 19.1**	**-0.2**
TWF1	**Yuli**	**1.25**	**232**	*e*P	**Pn**	**17 02 02.4**	**-1.1**
	baz=225						
HATJ	**Hateruma jima**	**1.31**	**93**	P	**Pn**	**17 02 04.2**	**+0.1**
HATJ				*e*S	**Sn**	**17 02 21.1**	**+0.5**
TWS1	**Kuangyinshan**	**1.31**	**318**	*e*P	**Pn**	**17 02 04.3**	**+0.1**
	baz=331						
TWS1				*e*S	**Sn**	**17 02 20.7**	**+0.1**
	baz=331						
TWY	**Chenhua**	**1.35**	**328**	*e*P	**Pn**	**17 02 04.8**	**+0.1**
	baz=341						
NSTT	**Nanjuang**	**1.35**	**292**	P	**Pn**	**17 02 05.3**	**+0.6**
	baz=292						
NSTT				S	**Sn**	**17 02 22.1**	**+0.3**
	baz=292						
SMLT	**Sun Moon Lake**	**1.37**	**260**	*e*P	**Pn**	**17 02 05.2**	**+0.1**
	baz=259						
SMLT				*e*S	**Sn**	**17 02 21.4**	**-0.9**
	baz=259						
TYC	**Yuchr**	**1.41**	**261**	*e*P	**Pn**	**17 02 05.8**	**+0.2**
	baz=261						
TYC				*e*S	**Sn**	**17 02 22.7**	**-0.4**
	baz=261						
TWQ1	**Liyutan**	**1.48**	**279**	*e*P	**Pn**	**17 02 06.7**	**+0.1**
	baz=278						
TWQ1				*e*S	**Sn**	**17 02 26.1**	**+1.2**
	baz=278						
JKRS	**Kuro-shima**	**1.49**	**85**	P	**Pn**	**17 02 07.3**	**+0.6**
JKRS				*e*S	**Sn**	**17 02 25.6**	**+0.4**
TCU	**Taichung**	**1.56**	**271**	*e*P	**Pn**	**17 02 07.9**	**+0.4**
	baz=270						
TCU				*e*S	**Sn**	**17 02 28.1**	**+1.4**
	baz=270						
ELDTW	**Lidau**	**1.56**	**233**	⇓*i*P	**Pn**	**17 02 06.3**	**-1.3**
	baz=223						
WNT	**Mingjian**	**1.57**	**261**	*e*P	**Pn**	**17 02 09.0**	**+1.3**
	baz=261						
JIJ	**Ishigaki jima**	**1.63**	**81**	P	**Pn**	**17 02 08.2**	**-0.4**
JIJ				S	**Sn**	**17 02 27.3**	**-1.3**
CHN5	**Tsauling**	**1.64**	**252**	P	**Pn**	**17 02 09.6**	**+0.8**
	baz=251						
CHN5				S	**Sn**	**17 02 29.5**	**+0.5**
	baz=251						
WGK	**Gukeng**	**1.72**	**256**	*e*P	**Pn**	**17 02 11.3**	**+1.4**
	baz=255						
WGK				*e*S	**Sn**	**17 02 33.0**	**+2.2**
	baz=255						
TWK	**Hsinying**	**1.93**	**244**	*e*P	**Pn**	**17 02 13.9**	**+1.2**
	baz=243						
JTJ	**Tarama**	**2.18**	**76**	P	**Pn**	**17 02 16.4**	**+0.2**
JTJ				*e*S	**Sn**	**17 02 41.6**	**-0.6**
JOGS	**Gusukube**	**2.83**	**77**	*e*S	**Sn**	**17 02 58.2**	**-0.1**

IDC 04 17:12:21.7±5.7, 20°.49N×120°.99E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/22, mbtmp3.3/3, Error ellipse: s-maj=479.6km s-min=28.0km az=60.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**40.93**	**319**	P	P	17 20 05.8	0.0
	0.4nm,0.6s,baz=121,slow=9.3,SNR=5.8						
WRA	**Warramunga Arr**	**42.25**	**161**	P	P	17 20 16.7	-0.3
	0.4nm,0.9s,baz=342,slow=9.1,SNR=3.0						
ASAR	**Alice Springs**	**45.66**	**163**	P	P	17 20 44.4	+0.2
	0.4nm,0.9s,baz=349,slow=8.0,SNR=4.8						

*ISCJB **04** 17:28:43.5±0.5, 10°.35N±0°.04×62°.29W±0°.02, h19km±5km, Error ellipse: s-maj=6.2km s-min=3.2km az=165.1*
*FUNV **04** 17:28:43.3, 10°.33N×62°.28W, h1km, MW3.0*
*NEIC **04** 17:28:44.5, 10°.50N×62°.18W, h5km, MD3.4(TRN), After TRN.*
*TRN **04** 17:28:44.7, 10°.42N×62°.17W, h5km, MD3.4*
ISC 04 17:28:43.0±0.5, 10°.34N±0°.03×62°.28W±0°.02, h10km±4km, n23, σ0°.89/45, 2C-6D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.31**	**10**	*e*P	**Pg**	**17 28 49.9**	**+0.8**
GUIV				*e*S	**Sg**	**17 28 54.6**	**+1.3**
TCE	**Chacachacare**	**0.62**	**56**	⇓*i*P	**Pg**	**17 28 54.7**	**-0.4**
TCE				*e*S	**Sg**	**17 28 59.5**	**-3.8**
TCE	**Chacachacare**	**0.62**	**56**	⇓*e*P	**Pg**	**17 28 54.5**	**-0.6**
TCE				*e*S	**Sg**	**17 29 01.5**	**-1.7**
GUNV	**Guanoco**	**0.68**	**255**	*e*P	**Pg**	**17 28 56.6**	**+0.4**
GUNV				*e*S	**Sg**	**17 29 06.8**	**+1.7**
TPP	**Pointe-a-Pierr**	**0.81**	**92**	⇓*e*P	**Pg**	**17 28 58.8**	**+0.1**
TPP				*e*S	**Sg**	**17 29 09.7**	**+0.4**
TPP	**Pointe-a-Pierr**	**0.81**	**92**	⇓*e*P	**Pg**	**17 28 58.8**	**+0.1**
TPP				*e*S	**Sg**	**17 29 09.7**	**+0.4**
TRN	**Trinidad (W)**	**0.91**	**70**	⇓*i*P	**Pg**	**17 28 59.5**	**-1.1**
TRN				*e*S	**Sg**	**17 29 11.4**	**-1.0**
TRN	**Trinidad (W)**	**0.91**	**70**	⇓*i*P	**Pg**	**17 28 59.5**	**-1.1**
TRN				*e*S	**Sg**	**17 29 11.4**	**-1.0**
CRUV	**Carupano**	**1.00**	**289**	*e*P	**Pg**	**17 29 01.4**	**-0.9**
CRUV				*e*S	**Sg**	**17 29 14.0**	**-1.4**
TBH	**Brigand Hill**	**1.20**	**83**	⇑*e*P	**Pb**	**17 29 05.5**	**-0.3**
TBH				*e*S	**Sb**	**17 29 21.7**	**+0.3**
TBH	**Brigand Hill**	**1.20**	**83**	⇑*e*P	**Pb**	**17 29 05.5**	**-0.3**
TBH				*e*S	**Sb**	**17 29 21.7**	**+0.3**
ITEV	**Isla Los Testi**	**1.31**	**320**	*e*P	**Pn**	**17 29 07.1**	**-0.4**
ITEV				*e*S	**Sb**	**17 29 25.6**	**+0.9**
ORIV	**Oritupano**	**1.69**	**222**	*e*P	**Pn**	**17 29 13.4**	**+0.8**
ORIV				*e*S	**Sn**	**17 29 35.8**	**+1.4**
TPR	**Prospect**	**1.69**	**60**	*e*P	**Pn**	**17 29 13.0**	**+0.3**
TPR				*e*S	**Sn**	**17 29 33.9**	**-0.5**
TPR	**Prospect**	**1.69**	**61**	*e*P	**Pn**	**17 29 13.0**	**+0.3**
TPR				*e*S	**Sn**	**17 29 33.9**	**-0.5**
TOSP	**Speyside**	**1.96**	**61**	*e*P	**Pn**	**17 29 16.6**	**+0.3**
TOSP				*e*S	**Sn**	**17 29 41.7**	**+0.8**
PCRV	**Puerto La Cruz**	**2.33**	**266**	*e*P	**Pn**	**17 29 21.4**	**-0.1**
PCRV				*e*S	**Sn**	**17 29 49.3**	**-0.9**
GURV	**El Guri**	**2.69**	**197**	*e*P	**Pn**	**17 29 26.1**	**-0.3**
PRGV	**PARIAGUAN**	**2.82**	**236**	*e*P	**Pn**	**17 29 28.9**	**+0.7**
PRGV				*e*S	**Sn**	**17 30 02.2**	**-0.1**
SVB	**Belmont**	**3.08**	**19**	*e*P	**Pn**	**17 29 34.7**	**+2.9**
SVB				*e*S	**Sn**	**17 30 08.7**	**0.0**
CUPV	**Cœpira**	**3.47**	**266**	*e*P	**Pn**	**17 29 37.2**	**0.0**
CUPV				*e*S	**Sn**	**17 30 18.0**	**-0.4**
BIRV	**Birongo**	**3.93**	**272**	*e*P	**Pn**	**17 29 43.4**	**-0.2**
BIRV				*e*S	**Sn**	**17 30 28.7**	**-1.1**
CAOV	**Caicara del Or**	**5.00**	**233**	*e*P	**Pn**	**17 29 56.8**	**-1.4**
CAOV				*e*S	**Sn**	**17 30 52.1**	**-4.0**

DJA 04 17:37:40, 9°.38S×115°.74E, h26km, MLv3.6/8, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGBI	**Denpasar**	**0.81**	**314**	P	Pb	17 37 54.4	-1.1
IGBI				S	Sb	17 38 06.5	+0.5
DNP	**Denpasar**	**0.87**	**323**	P	Pb	17 37 56.6	+0.1
DNP				S	Sb	17 38 10.5	+2.7
KHKI	**Kahang-Kahang**	**1.02**	**353**	P	Pn	17 37 56.2	-2.4
KHKI				S	Sb	17 38 11.0	-1.0
SRBI	**Singaraja**	**1.39**	**338**	P	Pn	17 38 02.2	-1.5
SRBI				S	Sn	17 38 21.1	-0.1
NBBI	**Negara**	**1.49**	**312**	S	Sn	17 38 25.9	+2.1
BYJI	**Banyuwangi**	**1.79**	**310**	P	Pn	17 38 09.6	+0.3
BYJI				S	Sn	17 38 33.1	+1.9
ABJI	**Asem Bagus**	**2.17**	**316**	P	Pn	17 38 13.6	-0.8
GMJI	**Gumukmas**	**2.52**	**296**	P	Pn	17 38 18.8	-0.5
GMJI				S	Sn	17 38 49.2	0.0
WSI	**Waingapu**	**4.50**	**94**	P	Pn	17 38 48.2	+1.6

*ISCJB **04** 18:01:13.5±1.1, 10°.24N±0°.08×60°.53W±0°.06, h94km±12km, Error ellipse: s-maj=13.4km s-min=10.1km az=161.3*
*FUNV **04** 18:01:13.9, 10°.35N×60°.31W, h43km, MW3.0*
*TRN **04** 18:01:14.2, 10°.66N×61°.27W, h107km, MD2.7*
ISC 04 18:01:14.8±1.1, 10°.26N±0°.08×60°.53W±0°.06, h87km±13km, n16, σ0°.74/23, 1C-1D, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBH	**Brigand Hill**	**0.57**	**293**	*e*P	**Pn**	**18 01 29.2**	**-0.6**
TBH				*e*S	**Sn**	**18 01 41.0**	**0.0**
TPR	**Prospect**	**0.95**	**345**	*e*P	**Pn**	**18 01 32.9**	**-0.9**
TOSP	**Speyside**	**1.03**	**360**	*e*P	**Pn**	**18 01 34.4**	**-0.2**
TOSP				*e*S	**Sn**	**18 01 50.5**	**+0.9**
TCE	**Chacachacare**	**1.28**	**290**	*e*P	**Pn**	**18 01 31.0**	**-6.5**
TCE				*e*S	**Sn**	**18 01 42.5**	**-12**
GUIV	**Guiria**	**1.71**	**283**	⇑*e*P	**Pn**	**18 01 43.4**	**+0.4**
GUIV				*e*S	**Sn**	**18 02 04.2**	**-0.3**
GUNV	**Guanoco**	**2.38**	**268**	⇓*e*P	**Pn**	**18 01 53.6**	**+1.7**
GUNV				*e*S	**Sn**	**18 02 21.3**	**+1.0**
CRUV	**Carupano**	**2.69**	**279**	*e*P	**Pn**	**18 01 55.4**	**-0.7**
CRUV				*e*S	**Sn**	**18 02 26.9**	**-1.0**
ITEV	**Isla Los Testi**	**2.78**	**293**	*e*P	**Pn**	**18 01 56.8**	**-0.4**
ITEV				*e*S	**Sn**	**18 02 29.3**	**-0.6**
ORIV	**Oritupano**	**3.07**	**248**	*e*P	**Pn**	**18 02 02.4**	**+1.2**
PCRV	**Puerto La Cruz**	**4.04**	**269**	*e*P	**Pn**	**18 02 14.6**	**+0.2**
PRGV	**PARIAGUAN**	**4.32**	**250**	*e*S	**Sn**	**18 03 06.9**	**-0.5**
LUEV	**Luepa**	**4.48**	**192**	*e*P	**Pn**	**18 02 19.5**	**-0.9**
CUPV	**Cœpira**	**5.18**	**268**	*e*P	**Pn**	**18 02 30.8**	**+1.0**
BIRV	**Birongo**	**5.65**	**273**	*e*P	**Pn**	**18 02 36.2**	**0.0**
CAOV	**Caicara del Or**	**6.42**	**243**	*e*P	**Pn**	**18 02 46.7**	**0.0**
BAUV	**El Baul**	**7.52**	**261**	*e*P	**Pn**	**18 03 01.4**	**-0.4**

*NEIC **04** 18:02:00.3, 19°.15N×69°.24W, h150km, MD3.8(RSPR), After RSPR.*
RSPR 04 18:02:00.3, 19°.15N×69°.24W, h150km±10km, MD3.8/7, MD3.8/7, 4C-4D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**1.03**	**127**	⇓*e*P	Pn	18 02 25.0	-0.4
PCDR	**Punta Cana, DR**	**1.03**	**127**	*e*S	Sn	18 02 41.6	-2.8
SDDR	**Presa de Saban**	**1.94**	**266**	⇑*e*P	Pn	18 02 36.1	+1.4
SDDR				*e*S	Sn	18 03 00.4	-0.8
AGPR	**Aguadilla, PR**	**2.13**	**108**	*e*Pn	Pn	18 02 39.2	+2.2
AGPR				*e*Sn	Sn	18 03 02.0	-3.1
LSP	**Las Mesas**	**2.26**	**115**	⇓*e*P	Pn	18 02 41.3	+2.8
LSP				*e*S	Sn	18 03 12.3	+4.3
CRPR	**Cabo Rojo, PR**	**2.32**	**119**	⇑*e*P	Pn	18 02 42.0	+2.7
CRPR				*e*S	Sn	18 03 13.2	+3.9
CELP	**Cerrillos**	**2.74**	**112**	⇓*e*P	Pn	18 02 49.1	+4.6
CELP				*e*S	Sn	18 03 22.3	+3.8
CELP	**Cerrillos**	**2.74**	**112**	⇓*e*P	Pn	18 02 49.1	+4.6
CELP				*e*S	Sn	18 03 32.3	+14
ICM	**Isla Caja Muer**	**2.87**	**115**	Pn	Pn	18 02 46.8	+0.7
GRTK	**Grand Turk**	**2.95**	**323**	⇑*e*P	Pn	18 02 51.1	+4.1
GRTK				*e*S	Sn	18 03 27.4	+4.2
MTP	**Monte Pirata**	**3.65**	**106**	⇑*e*P	Pn	18 02 59.3	+3.2

TAP 04 18:09:47.6, 21°.13N×121°.88E, h167km, ML3.7, 4C, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.96**	**342**	P	Pn	18 10 13.3	-0.3
	baz=342						
LAY				*e*S	Sn	18 10 32.6	-1.1
	baz=342						
TSEB	**Hengchuen, Pin**	**1.19**	**310**	*e*P	Pn	18 10 16.5	+1.0
	baz=305						
TSEB				*e*S	Sn	18 10 37.8	+0.8
	baz=305						
TWK1	**Hengchun**	**1.29**	**309**	⇑*i*P	Pn	18 10 16.8	+0.5
	baz=307						
TWK1				S	Sn	18 10 37.8	-0.7
	baz=307						
HEN	**Hengchun**	**1.37**	**310**	*e*P	Pn	18 10 17.9	+0.8
	baz=303						
HEN				*e*S	Sn	18 10 39.4	-0.6
	baz=303						
EAST	**Anshuo**	**1.57**	**323**	⇑*i*P	Pn	18 10 19.1	0.0
	baz=323						
EAST				*e*S	Sn	18 10 42.4	-1.2
	baz=323						
ECL	**Taimali**	**1.70**	**330**	*e*P	Pn	18 10 19.6	-0.8
	baz=330						
ECL				*e*S	Sn	18 10 43.5	-2.3
	baz=330						
SCZT	**Fangliau**	**1.70**	**317**	*e*P	Pn	18 10 20.5	0.0
	baz=322						
SCZT				*e*S	Sn	18 10 45.6	-0.3
	baz=322						
TWG	**Pinlang**	**1.84**	**336**	P	Pn	18 10 21.4	-0.6
	baz=336						
TWG				*e*S	Sn	18 10 46.6	-2.1
	baz=336						
TWP	**Hsiaoliuchiu**	**1.86**	**311**	*e*P	Pn	18 10 23.9	+1.8
	baz=311						
SSD	**Sandimen**	**1.98**	**325**	⇑*i*P	Pn	18 10 24.0	+0.5
	baz=325						
SSD				*e*S	Sn	18 10 50.1	-1.2
	baz=325						
TWM1	**Shoushan**	**2.16**	**322**	*e*P	Pn	18 10 26.3	+0.8
	baz=314						
ELDTW	**Lidau**	**2.20**	**339**	*e*P	Pn	18 10 26.8	+0.8
	baz=342						
STYT	**Tauyuan**	**2.28**	**333**	*e*P	Pn	18 10 27.5	+0.6
	baz=333						
TWF1	**Yuli**	**2.28**	**346**	*e*P	Pn	18 10 27.3	+0.4
	baz=337						
TWF1				*e*S	Sn	18 10 57.4	0.0
	baz=337						
SGST	**Jiashian**	**2.29**	**329**	P	Pn	18 10 27.6	+0.6
	baz=329						
SGST				*e*S	Sn	18 10 57.5	0.0
	baz=329						
CHN1	**Nanshi**	**2.40**	**329**	P	Pn	18 10 28.9	+0.6
	baz=335						
CHN1				*e*S	Sn	18 10 59.5	-0.4
	baz=335						
WTP	**Ta-pu**	**2.41**	**331**	⇑*i*P	Pn	18 10 29.0	+0.5
	baz=331						
WTP				*e*S	Sn	18 10 59.7	-0.4
	baz=331						
TWK	**Hsinying**	**2.49**	**329**	*e*P	Pn	18 10 29.1	-0.2
	baz=335						
CHN5	**Tsauling**	**2.70**	**336**	P	Pn	18 10 32.0	+0.1
	baz=330						
CHN5				*e*S	Sn	18 11 06.2	-0.1
	baz=330						
SMLT	**Sun Moon Lake**	**2.89**	**342**	*e*P	Pn	18 10 34.4	+0.2
	baz=335						
SMLT				*e*S	Sn	18 11 10.9	+0.4
	baz=335						
TYC	**Yuchr**	**2.92**	**341**	*e*P	Pn	18 10 33.6	-0.9
	baz=335						
TYC				*e*S	Sn	18 11 10.2	-1.0
	baz=335						
WHF	**Hehuan Shan**	**3.06**	**349**	*e*P	Pn	18 10 37.1	+0.8
	baz=356						
WHF				*e*S	Sn	18 11 15.5	+1.3
	baz=356						
PNG	**Penghu**	**3.24**	**319**	*e*P	Pn	18 10 38.8	+0.2
	baz=319						
ENTT	**Nioudou**	**3.51**	**355**	*e*P	Pn	18 10 41.6	-0.4
	baz=355						

*ISCJB **04** 18:20:14.6±0.7, 32°.41N±0°.07×105°.37E±0°.09, h10km, mb3.4/3, Error ellipse: s-maj=13.3km s-min=6.1km az=40.2*
*IDC **04** 18:20:14.5±1.5, 32°.47N×105°.48E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.3/24, mbtmp3.3/4, ML3.2/1, Error ellipse: s-maj=100.2km s-min=26.9km az=58.0*
*BJI **04** 18:20:16.1, 32°.48N×105°.47E, h16km, ML3.2/10, Ms3.1/3, Ms7 3.0/3*
ISC 04 18:20:15.3±0.6, 32°.47N±0°.06×105°.46E±0°.07, h10km, n7, σ1°.28/14, mb3.4/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.13**	**223**	Pn	**Pn**	**18 20 52.2**	**+1.3**
CD2				Pg	**Pg**	**18 20 54.8**	**-1.3**
CD2				Sg	**Sg**	**18 21 22.7**	**-1.0**
CD2				smax			
	comp=N,800nm,0.7s						
CD2				smax			
	comp=E,1μm,0.6s						
XAN	**Xi'an**	**3.29**	**61**	Pn	**Pn**	**18 21 10.7**	**+3.8**
XAN				Pg	**Pg**	**18 21 16.8**	**-1.6**
XAN				Sn	**Sn**	**18 21 50.5**	**+4.3**
XAN				Sg	**Sg**	**18 22 00.5**	**-0.6**
XAN				smax			
	comp=N,87nm,0.6s						
XAN				smax			
	comp=E,37nm,0.8s						
XAN				LR	LR		
	comp=N,99nm,8.4s						
XAN				LR	LR		
	comp=E,25nm,6.7s						
XAN				LR	LR		
	comp=Z,34nm,5.2s						
LZH	**Lanzhou**	**3.85**	**340**	Pn	**Pn**	**18 21 15.9**	**+1.3**
LZH				Pg	**Pg**	**18 21 26.2**	**-2.8**
LZH				Sg	**Sg**	**18 22 13.0**	**-5.9**
LZH				smax			
	comp=N,130nm,0.6s						
LZH				smax			
	comp=E,240nm,0.6s						
LZH				LR	LR		
	comp=E,460nm,5.4s						
LZH				LR	LR		
	comp=Z,580nm,6.2s						
SONM	**Songino Array**	**15.36**	**2**	Pn	**Pn**	**18 23 52.7**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=177,slow=12,SNR=2.4						
MKAR	**Makanchi Array**	**22.76**	**316**	P	**P**	**18 25 18.4**	**+0.8**
	comp=Z,0.2nm,0.5s,mb2.8,baz=113,slow=11,SNR=3.5						
WRA	**Warramunga Arr**	**58.99**	**148**	P	**P**	**18 30 15.9**	**+0.7**
	comp=Z,0.8nm,0.8s,mb3.8,baz=340,slow=7.5,SNR=6.7						
ASAR	**Alice Springs**	**62.08**	**150**	P	**P**	**18 30 37.2**	**+0.9**
	comp=Z,0.5nm,0.9s,mb3.6,baz=326,slow=6.7,SNR=6.2						

IDC 04 18:22:15.1±1.9, 11°.94N×91°.68E, h0km, mb3.3/4, mb1 3.6/5, mb1mx3.3/24, mbtmp3.3/5, ML3.7/1, Error ellipse: s-maj=67.5km s-min=22.7km az=62.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**9.54**	**46**	Pn	Pn	18 24 32.8	-1.1
	0.2nm,0.3s,baz=221,slow=13,SNR=2.8						
MKAR	**Makanchi Array**	**35.63**	**349**	P	P	18 29 13.7	-0.9
	0.2nm,0.6s,baz=177,slow=13,SNR=7.0						
KURK	**Kurchatov**	**40.11**	**347**	P	P	18 29 53.0	+0.6
	0.2nm,0.6s,baz=159,slow=7.0,SNR=2.9						
WRA	**Warramunga Arr**	**52.60**	**127**	P	P	18 31 31.1	+0.1
	0.6nm,0.5s,baz=300,slow=10.0,SNR=15						
ASAR	**Alice Springs**	**54.38**	**131**	P	P	18 31 44.1	+0.1
	0.2nm,0.5s,baz=309,slow=6.3,SNR=8.8						

*IDC **04** 18:34:37.2±1.1, 26°.15N×118°.37E, h0km, mb3.4/6, mb1 3.5/7, mb1mx3.4/25, mbtmp3.4/7, ML3.4/1, Error ellipse: s-maj=44.3km s-min=20.3km az=61.0*
*BJI **04** 18:34:37.4, 26°.39N×118°.56E, h16km, ML4.0/6*
*ISCJB **04** 18:34:38.3±1.9, 26°.31N±0°.07×118°.55E±0°.08, h21km±16km, mb3.4/6, Error ellipse: s-maj=15.6km s-min=7.1km az=44.1*
*NEIC **04** 18:34:38.4±0.5, 26°.15N×118°.38E, h10km, mb3.5/1, Error ellipse: s-maj=18.8km s-min=7.1km az=50.0*
ISC 04 18:34:39.5±1.8, 26°.25N±0°.07×118°.49E±0°.08, h18km±12km, n17, σ0°.87/21, mb3.4/6, 1D, Near coast of southeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QZH	**Quanzhou**	**1.30**	**176**	⇓*i*Pg	**Pg**	**18 35 04.1**	**-0.6**
QZH				Sg	**Sg**	**18 35 22.6**	**+0.9**
QZH				smax			
	comp=N,2μm,0.8s						
QZH				smax			
	comp=E,2μm,0.6s						
TATO	**Taipei**	**2.99**	**114**	*e*Pn	**Pn**	**18 35 32.4**	**+6.5**
TATO				*e*Sn	**Sn**	**18 36 05.4**	**+4.2**
YHNB	**Yeheng**	**3.04**	**120**	*e*Pn	**Pn**	**18 35 25.8**	**-0.9**
YHNB				*e*Sn	**Sn**	**18 36 01.2**	**-1.5**
SSLB	**Suanglung**	**3.31**	**137**	*e*Pn	**Pn**	**18 35 30.1**	**-0.3**
NACB	**Ninganchiao**	**3.49**	**126**	*e*Pn	**Pn**	**18 35 33.4**	**+0.6**
TPUB	**Ta-pu**	**3.52**	**146**	*e*Pn	**Pn**	**18 35 33.3**	**+0.1**
YULB	**Yu-li**	**3.82**	**138**	*e*Pn	**Pn**	**18 35 37.5**	**+0.2**
YULB				*e*Sn	**Sn**	**18 36 22.1**	**+0.4**
WHN	**Wuhan**	**5.62**	**320**	Pg	**Pn**	**18 36 00.3**	**-1.8**
GZH	**Guangzhou**	**5.64**	**237**	Pg	**Pb**	**18 36 16.9**	**-0.5**
GZH				smax			
	comp=N,430nm,0.9s						
GZH				smax			
	comp=E,310nm,0.8s						
MJAR	**Matsushiro Arr**	**19.68**	**54**	P	**Pn**	**18 39 09.8**	**+0.8**
	comp=E,0.1nm,0.3s,baz=246,slow=11,SNR=3.7						
SONM	**Songino Array**	**23.55**	**339**	P	**P**	**18 39 50.5**	**+1.7**
	comp=E,0.8nm,0.8s,mb3.2,baz=159,slow=9.7,SNR=7.5						
MKAR	**Makanchi Array**	**35.16**	**315**	P	**P**	**18 41 33.0**	**+0.9**
	comp=E,0.2nm,0.7s,mb3.2,baz=106,slow=9.0,SNR=2.8						
ZALV	**Zalesovo Beam**	**37.20**	**327**	P	**P**	**18 41 49.0**	**-0.4**
	comp=E,1.3nm,0.8s,mb3.8,baz=111,slow=8.3,SNR=7.1						
KURK	**Kurchatov**	**38.95**	**320**	P	**P**	**18 42 05.0**	**+0.9**
	comp=E,0.1nm,0.4s,mb2.9,baz=114,slow=9.5,SNR=2.4						
KURK	**Kurchatov**	**38.95**	**320**	P	**P**	**18 42 03.3**	**-0.9**
	comp=E,0.4nm,0.4s,mb3.5						
WRA	**Warramunga Arr**	**48.42**	**160**	P	**P**	**18 43 20.6**	**-0.1**
	comp=E,0.4nm,0.8s,mb3.5,baz=346,slow=8.5,SNR=3.1						
ASAR	**Alice Springs**	**51.81**	**162**	P	**P**	**18 43 46.7**	**+0.4**
	comp=E,0.4nm,0.8s,mb3.4,baz=330,slow=6.7,SNR=4.0						

*ISCJB **04** 18:52:14.0±0.3, 32°.52N±0°.03×105°.29E±0°.04, h10km, mb3.8/15, MS2.9/3, Error ellipse: s-maj=5.4km s-min=4.0km az=28.4*
*IDC **04** 18:52:14.3±0.8, 32°.44N×105°.10E, h0km, mb3.7/11, mb1 3.9/14, mb1mx3.8/27, mbtmp3.8/14, ML3.5/3, MS3.0/5, Ms1 3.0/5, ms1mx2.6/26, Error ellipse: s-maj=31.9km s-min=15.1km az=54.0*
*BJI **04** 18:52:15.3, 32°.53N×105°.27E, h15km, mB4.5/7, mb4.2/7, ML3.9/18, Ms3.8/8, Ms7 3.6/9*
*NEIC **04** 18:52:16.1±0.5, 32°.55N×105°.27E, h10km, mb4.1/6, Error ellipse: s-maj=14.6km s-min=7.7km az=81.0*
ISC 04 18:52:16.2±0.3, 32°.52N±0°.03×105°.24E±0°.04, h10km, n40, σ1°.09/48, mb3.8/15, MS2.9/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.05**	**219**	Pn	**Pn**	**18 52 50.9**	**+0.2**

comp=E,23nm,1.3s
WHN Wuhan 8.02 102 P Pn 18 54 11.3 -1.5
GTA Gaotai 8.16 329 eP Pn 18 54 14.4 -0.2
GTA pP 18 54 18.0
GTA sP 18 54 20.8
GTA S Sn 18 55 47.8 +1.0
GTA pmax pmax
comp=Z,4.0nm,0.7s
GTA pmax pmax
comp=Z,69nm,3.6s
GTA LR LR
comp=N,350nm,9.2s
GTA LR LR
comp=E,250nm,8.9s
GTA LR LR
comp=Z,380nm,11.3s
BTO Baotou 8.93 24 eP Px 18 54 45.2
BTO S Sx 18 56 40.1
BTO LR LR
comp=N,170nm,8.0s
BTO LR LR
comp=E,110nm,7.8s
HHC Hu-ho-hao-te 9.73 30 eP Pn 18 54 36.3 +0.1
HHC S Sn 18 56 26.3 +0.7
HHC PcS PcS 19 04 22.5 -1.4
HHC pmax pmax
comp=Z,10.0nm,0.5s
HHC pmax pmax
comp=Z,70nm,4.8s
HHC LR LR
comp=N,430nm,8.4s
HHC LR LR
comp=E,350nm,8.1s
HHC LR LR
comp=Z,280nm,8.2s
NJ2 Nanjing 11.53 89 eP Pn 18 55 00.3 -0.6
NJ2 pP 18 55 07.0
NJ2 PP 18 55 09.5
NJ2 sP 18 55 11.1
NJ2 S Sn 18 57 10.5 +0.8
NJ2 pmax pmax
comp=Z,150nm,3.7s
NJ2 LR LR
comp=N,160nm,9.9s
NJ2 LR LR
comp=E,150nm,12.3s
NJ2 LR LR
comp=Z,200nm,10.3s
LSA Lhasa 12.40 261 P Pn 18 55 13.5 +0.7
CHTO Chiang Mai 14.78 204 ePn Pn 18 55 46.2 +1.0
comp=Z,5.1nm,1.1s
CMAR Chiang Mai Arr 15.11 204 Pn Pn 18 55 49.1 -0.7
comp=Z,0.2nm,0.3s,baz=5.9,slow=12,SNR=6.3
SONM Songino Array 15.32 3 Pn Pn 18 55 51.6 -0.8
comp=Z,0.1nm,0.3s,baz=186,slow=12,SNR=13
SONM Lg 19 00 28.0
comp=Z,0.1nm,0.3s,baz=189,slow=28,SNR=3.6
SONM LR LR 19 02 23.4
comp=Z,72nm,19.5s,baz=351,slow=40
ULN Ulaanbaatar 15.39 5 ePn Pn 18 55 52.1 -1.1
comp=Z,5.5nm,0.9s
KSRS Korea Array 19.21 69 P Pn 18 56 41.1 -0.1
comp=Z,0.2nm,0.3s,baz=250,slow=10,SNR=15
KSRS LR LR 19 04 32.9
comp=Z,49nm,18.9s,baz=168,slow=38
CN2 Changchun 19.42 49 eP Pn 18 56 49.9 +6.2
CN2 pmax pmax
comp=Z,10.0nm,0.5s
MK31 Makanchi Array 22.59 316 eP P 18 57 16.2 -0.5
MKAR Makanchi Array 22.59 316 P P 18 57 16.6 0.0
comp=Z,1.1nm,0.6s,mb3.4,baz=106,slow=12,SNR=16
TKM2 Tokmak 2 25.52 303 eP P 18 57 45.3 +0.5
comp=Z,1.1nm,0.5s,mb3.6
ZAA0 Zalesovo Array 25.90 332 P P 18 57 47.8 -0.3
ZALV Zalesovo Beam 25.90 332 P P 18 57 48.0 -0.1
comp=Z,1.3nm,0.6s,mb3.6,baz=126,slow=10,SNR=6.3
ZALV LR LR 19 08 41.6
comp=Z,17nm,20.6s,MS2.6,baz=7.8,slow=38
AAK Ala-Archa 26.25 301 LR LR 19 08 41.6
comp=Z,60nm,20.6s,MS3.1,baz=186,slow=38
KURK Kurchatov 26.73 321 P P 18 57 55.5 -0.1
comp=Z,1.2nm,0.7s,mb3.5,baz=134,slow=8.6,SNR=10
KURK LR LR 19 08 19.5
comp=Z,31nm,18.2s,MS2.9,baz=185,slow=36
KURK Kurchatov 26.73 321 eP P 18 57 55.3 -0.3
comp=Z,1.5nm,0.6s,mb3.7
KURK LR LR 19 08 19.5
EKS2 Erkin-Say 26.77 301 P P 18 57 58.4 +2.3
BVAR Borovoye Array 32.31 320 P P 18 58 45.2 +0.1
comp=Z,0.4nm,0.7s,mb3.4,baz=123,slow=10,SNR=4.7
ABKAR Akbulak array 37.48 310 P P 18 59 28.0 -1.8
ARU Arti 39.92 321 eP P 18 59 50.4 +0.2
comp=Z,4.9nm,1.0s,mb4.2
BRTR Keskin Array B 56.89 299 P P 19 01 59.3 -1.9
comp=Z,0.5nm,0.7s,mb3.7,baz=41,slow=7.3,SNR=2.7
FINES FINESS Array B 56.94 326 P P 19 02 01.1 -0.1
comp=Z,1.1nm,0.6s,mb4.0,baz=90,slow=9.5,SNR=5.5
AKASG Malin Array Be 57.13 313 P P 19 02 02.5 -0.3
comp=Z,0.6nm,0.5s,mb3.9,baz=69,slow=7.5,SNR=3.2
WRAB Tennant Creek 59.13 148 eP P 19 02 17.5 +0.4
comp=Z,2.9nm,0.7s,mb4.4
WRA Warramunga Arr 59.13 148 P P 19 02 16.5 -0.6
comp=Z,1.8nm,0.6s,mb4.3,baz=340,slow=7.8,SNR=22
ASAR Alice Springs 62.22 150 P P 19 02 37.8 -0.2
comp=Z,0.9nm,0.7s,mb4.0,baz=331,slow=6.7,SNR=20
NOA NORSAR Array B 63.99 327 P P 19 02 48.3 -1.1
comp=Z,0.4nm,0.7s,mb3.6,baz=73,slow=6.0,SNR=3.1
LPG La Plagne 72.98 313 eP P 19 03 47.6 +1.7
comp=Z,4.1nm,0.5s,mb4.3
LPG La Plagne 72.98 313 eP P 19 03 47.6 +1.7
comp=Z,2.0nm,0.5s,mb4.3
LPL La Plagne 72.99 313 eP P 19 03 47.0 +1.0
SMF Signal de Mont 74.17 315 eP P 19 03 54.2 +1.3
YKA Yellowknife Ar 80.05 18 P P 19 04 27.0 +1.3
comp=Z,0.4nm,0.7s,mb3.5,baz=331,slow=5.0,SNR=2.7

IDC 04 18:52:25.7±3.3, 28.80N×141.73E, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.3/24, mbtmp3.4/4, ML3.4/1, Error ellipse: s-maj=140.0km s-min=18.2km az=70.0, Bonin Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CBIJ Chichi jima 1.74 167 Pn Pn 18 52 58.0 +0.8
2.0nm,0.3s,baz=300,slow=15,SNR=7.5
CBIJ Sn Sn 18 53 20.5 +0.4
16nm,0.3s,baz=108,slow=23,SNR=9.0
MJAR Matsushiro Arr 8.27 340 Pn Pn 18 54 25.4 -1.5
0.5nm,0.3s,baz=160,slow=12,SNR=5.6
WRA Warramunga Arr 48.98 189 P P 19 01 13.3 -0.7
0.8nm,0.7s,baz=9.2,slow=8.1,SNR=25
MKAR Makanchi Array 49.10 308 P P 19 01 15.5 +0.8
0.1nm,0.5s,baz=93,slow=5.8,SNR=2.8
KURK Kurchatov 51.52 314 P P 19 01 33.5 +0.5
0.5nm,0.5s,baz=91,slow=9.2,SNR=7.1

THE 04 19:03:21.9, 41.82N×22.72E, h17km±14km, ML3.2/1, Error ellipse: s-maj=30.2km s-min=0.8km az=276.0
ISCJB 04 19:03:22.1±0.6, 41.80N±0.03×22.84E±0.05, h10km, Error ellipse: s-maj=5.8km s-min=3.7km az=176.7
CSEM 04 19:03:22.1±0.2, 41.80N×22.89E, h2km, ML3.2/1, Error ellipse: s-maj=6.1km s-min=3.6km az=85.0
BEO 04 19:03:23.3±0.3, 41.79N×22.83E, h0km, ML1.9/5
SKO 04 19:03:23.3, 41.78N×22.85E, h0km, M1.4, ML2.0
ISC 04 19:03:22.8±0.6, 41.79N±0.03×22.83E±0.06, h5km±9km, n16, σ0.69/29, Northwestern Balkan Peninsula

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
VAY Valandovo 0.51 202 i Pg Pg 19 03 32.3 -0.2
VAY i Sg Sg 19 03 39.4 +0.2
VAY Valandovo 0.51 202 ePg Pg 19 03 32.2 -0.3
VAY eSg Sg 19 03 39.3 +0.2
VAY eLg 19 03 39.5
comp=N,79nm,0.5s
VAY eLg 19 03 39.6
comp=E,58nm,0.7s
VAY Valandovo 0.51 202 P Pg 19 03 32.2 -0.3
VAY S Sg 19 03 39.2 0.0
VAY Valandovo 0.51 202 P Pg 19 03 32.2 -0.3
VAY S Sg 19 03 39.2 0.0
VTS Vitosha 0.85 19 ePg Pg 19 03 38.4 -0.6
VTS eSg Sg 19 03 49.7 -0.3
VTS Vitosha 0.85 19 P Pg 19 03 38.2 -0.8
VTS S Sg 19 03 49.6 -0.4
VTS Vitosha 0.85 19 ePg Pg 19 03 38.4 -0.6
VTS S Sg 19 03 49.6 -0.4
SOH Sokhos 1.05 158 P Pg 19 03 41.7 -1.1
SOH S Sg 19 03 57.4 +1.0
SOH Sokhos 1.05 158 P Pg 19 03 41.7 -1.1
SOH S Sg 19 03 57.4 +1.0
BARS Barje 1.27 324 ePg Pn 19 03 46.4 -0.7
BARS eSg Sg 19 04 03.8 +0.2
BARS Barje 1.27 324 ePg Pn 19 03 46.4 -0.7
BARS eSg Sg 19 04 03.8 +0.2
PLD Plovdiv 1.43 77 ePg Pn 19 03 48.6 -0.8
PLD eSg Sg 19 04 09.5 +0.7
PLD Plovdiv 1.43 77 ePg Pn 19 03 48.6 -0.8
ZAPS Zavoj 1.49 354 ePg Pn 19 03 50.5 +0.4
ZAPS eSg Sg 19 04 10.9 +0.4
GRUS Gruza 2.61 324 ePn Pn 19 04 06.7 +1.2
GRUS Gruza 2.61 324 ePn Pn 19 04 06.7 +1.2

MDD 04 19:03:34.9±1.6, 36.37N×10.53W, h0km, mbLg2.2/14, Error ellipse: s-maj=15.4km s-min=13.9km az=152.0, PRIMO
NEIC 04 19:03:34.0, 36.35N×10.59W, h0km, MG3.7(MDD), After MDD.
IGIL 04 19:03:34.3, 36.35N×10.65W, h2km, ML1.9
INMG 04 19:03:35.9±0.9, 36.31N×10.56W, h10km, ML1.7, Error ellipse: s-maj=6.9km s-min=5.0km az=107.0
CSEM 04 19:03:35.5±0.3, 36.42N×10.49W, h10km, ML2.9/8, Error ellipse: s-maj=4.6km s-min=4.4km az=43.0
ISC 04 19:03:35.6±1.1, 36.41N±0.06×10.48W±0.07, h10km, n84, σ0.55/155, Azores-Cape St. Vincent Ridge

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PFVI Vila Bisbo 1.51 61 eP Pn 19 04 02.6 -0.1
PFVI eS Sn 19 04 22.6 +0.2
PFVI A 19 04 24.8
9.6nm,0.4s
PFVI Vila Bisbo 1.51 61 P Pn 19 04 02.5 -0.2
PFVI S Sn 19 04 23.1 +0.7
PFVI Vila Bisbo 1.51 61 P Pn 19 04 02.5 -0.2
2.9nm,0.1s,SNR=7.9
PFVI S Sn 19 04 23.1 +0.7
5.9nm,0.1s,SNR=7.9
PFVI Vila Bisbo 1.51 61 P Pn 19 04 02.5 -0.2
2.9nm,0.1s,SNR=7.9
PFVI S Sn 19 04 23.1 +0.7
5.9nm,0.1s,SNR=7.9
PFVI Vila Bisbo 1.51 61 eP Pn 19 04 02.6 -0.1
PFVI S Sn 19 04 23.1 +0.7
5.9nm,0.1s,SNR=7.9
MORF Marmelete 1.72 58 ePn Pn 19 04 05.8 +0.3
MORF eSn Sn 19 04 27.8 +0.3
MORF A 19 04 29.9
4.7nm,0.1s
MORF Marmelete 1.72 58 P Pn 19 04 05.8 +0.3
MORF S Sn 19 04 27.8 +0.3
4.7nm,0.1s
MORF Marmelete 1.72 58 P Pn 19 04 05.8 +0.3
MORF S Sn 19 04 27.8 +0.3
4.7nm,0.1s
MORF Marmelete 1.72 58 ePn Pn 19 04 05.8 +0.3
MORF eSn Sn 19 04 27.8 +0.3
4.7nm,0.1s
PTEO Sao Teotonio 1.80 51 ePn Pn 19 04 06.9 +0.2
PTEO eSn Sn 19 04 30.5 +0.8
PTEO A 19 04 32.0
6.6nm,0.2s
PTEO Sao Teotonio 1.80 51 P Pn 19 04 06.9 +0.2
PTEO S Sn 19 04 30.5 +0.8
3.3nm,0.2s
PTEO Sao Teotonio 1.80 51 P Pn 19 04 06.9 +0.2
PTEO S Sn 19 04 30.5 +0.8
3.3nm,0.2s
PTEO Sao Teotonio 1.80 51 ePn Pn 19 04 06.9 +0.2
PTEO eSn Sn 19 04 30.5 +0.8
6.6nm,0.2s
PBDV Barranco-do-Ve 2.21 67 ePn Pn 19 04 12.1 -0.1
PBDV eSn Sn 19 04 39.5 -0.1
PBDV A 19 04 43.9
1.7nm,0.2s
PBDV Barranco-do-Ve 2.21 67 P Pn 19 04 12.1 -0.1
PBDV S Sn 19 04 39.5 -0.1
1.7nm,0.2s
PBDV Barranco-do-Ve 2.21 67 P Pn 19 04 12.1 -0.1
PBDV S Sn 19 04 39.5 -0.1
1.7nm,0.2s
PBDV Barranco-do-Ve 2.21 67 ePn Pn 19 04 12.1 -0.1
PBDV eSn Sn 19 04 39.5 -0.1
1.7nm,0.2s
MESJ Messejana 2.30 51 eP Pn 19 04 13.6 0.0
MESJ eS Sn 19 04 42.1 +0.2
MESJ eS Sn 19 04 42.1 +0.2
MESJ Messejana 2.30 51 P Pn 19 04 13.6 +0.1
MESJ S Sn 19 04 42.1 +0.2
MESJ Messejana 2.30 51 P Pn 19 04 13.6 +0.1
MESJ S Sn 19 04 42.1 +0.2
MESJ Messejana 2.30 51 eP Pn 19 04 13.6 +0.1
MESJ eS Sn 19 04 42.1 +0.2
PCVE Castro Verde 2.30 57 ePn Pn 19 04 13.7 +0.1
PCVE eSn Sn 19 04 42.4 +0.5
PCVE A 19 04 45.4
1.6nm,0.2s
PCVE Castro Verde 2.30 57 P Pn 19 04 13.7 +0.1
PCVE S Sn 19 04 42.4 +0.5
1.6nm,0.2s
PCVE Castro Verde 2.30 57 P Pn 19 04 13.7 +0.1
PCVE S Sn 19 04 42.4 +0.5
1.6nm,0.2s
PCVE Castro Verde 2.30 57 ePn Pn 19 04 13.7 +0.1
PCVE eSn Sn 19 04 42.4 +0.5
1.6nm,0.2s
PVAQ Vaqueiros 2.42 65 ePn Pn 19 04 16.0 +0.8
PVAQ eSn Sn 19 04 44.5 -0.5
PVAQ A 19 04 48.7
2.7nm,0.1s
PVAQ Vaqueiros 2.42 65 P Pn 19 04 16.0 +0.8
PVAQ S Sn 19 04 44.5 -0.5
2.7nm,0.1s
PVAQ Vaqueiros 2.42 65 P Pn 19 04 16.0 +0.8
PVAQ S Sn 19 04 44.5 -0.5
2.7nm,0.1s
PVAQ Vaqueiros 2.42 65 ePn Pn 19 04 16.0 +0.8
PVAQ eSn Sn 19 04 44.5 -0.5
2.7nm,0.1s
PBEJ Beja 2.64 51 eSn Sn 19 04 50.2 0.0
PBEJ Beja 2.64 51 S Sn 19 04 50.2 0.0
PBEJ Beja 2.64 51 S Sn 19 04 50.2 0.0
PBEJ Beja 2.64 51 eSn Sn 19 04 50.2 0.0
EGRO El Granado 2.65 64 P Pn 19 04 18.8 +0.5
EGRO S Sn 19 04 51.3 +0.8
EGRO El Granado 2.65 64 P Pn 19 04 18.8 +0.5
0.7nm,0.1s,SNR=7.9
EGRO S Sn 19 04 51.3 +0.8
1.6nm,0.1s,SNR=7.9
EGRO El Granado 2.65 64 P Pn 19 04 18.8 +0.5
0.7nm,0.1s,SNR=7.9
EGRO S Sn 19 04 51.3 +0.8
1.6nm,0.1s,SNR=7.9
EGRO El Granado 2.65 64 P Pn 19 04 18.8 +0.5
0.7nm,0.1s,SNR=7.9
EGRO S Sn 19 04 51.3 +0.8
1.6nm,0.1s,SNR=7.9
MOE Montemor 2.70 38 eSn Sn 19 04 52.3 +0.4
MOE Montemor 2.70 38 eSn Sn 19 04 52.3 +0.4
PMAFR Mafra 2.71 20 ePn Pn 19 04 19.0 -0.2
PMAFR eSn Sn 19 04 51.8 -0.3
PMAFR Mafra 2.71 20 P Pn 19 04 18.6 -0.6
1.3nm,0.1s,SNR=7.9
PMAFR S Sn 19 04 52.2 +0.2
10.0nm,0.2s,SNR=7.9
PMAFR Mafra 2.71 20 P Pn 19 04 18.6 -0.6
1.3nm,0.1s,SNR=7.9
PMAFR S Sn 19 04 52.2 +0.2
10.0nm,0.2s,SNR=7.9
PMAFR Mafra 2.71 20 P Pn 19 04 18.6 -0.6
1.3nm,0.1s,SNR=7.9
PMAFR Mafra 2.71 20 ePn Pn 19 04 19.0 -0.2
PMAFR eSn Sn 19 04 51.8 -0.3
PMAFR S Sn 19 04 52.2 +0.1
10.0nm,0.2s,SNR=7.9
EVO Evora 2.89 42 eSn Sn 19 04 56.6 +0.2
EVO A 19 04 59.3
6.3nm,0.1s
EVO Evora 2.89 42 S Sn 19 04 56.6 +0.2
6.3nm,0.1s
EVO Evora 2.89 42 S Sn 19 04 56.6 +0.2
6.3nm,0.1s
EVO Evora 2.89 42 eSn Sn 19 04 56.6 +0.2
PBAR Barrancos 3.26 56 ePn Pn 19 04 26.9 +0.2
PBAR eSn Sn 19 05 05.7 +0.1
PBAR A 19 05 07.4
1.5nm,0.2s
PBAR Barrancos 3.26 56 P Pn 19 04 26.9 +0.2
PBAR S Sn 19 05 05.7 +0.1
1.5nm,0.2s
PBAR Barrancos 3.26 56 P Pn 19 04 26.9 +0.2
PBAR S Sn 19 05 05.7 +0.1
1.5nm,0.2s
PBAR Barrancos 3.26 56 ePn Pn 19 04 26.9 +0.2
PBAR eSn Sn 19 05 05.7 +0.1
1.5nm,0.2s
EMIN Mina Concepcio 3.33 65 P Pn 19 04 27.5 -0.2
EMIN S Sn 19 05 07.6 +0.3
EMIN Mina Concepcio 3.33 65 P Pn 19 04 27.5 -0.2
0.8nm,0.1s,SNR=7.7
EMIN S Sn 19 05 07.6 +0.3
1.6nm,0.4s,SNR=7.9
EMIN Mina Concepcio 3.33 65 P Pn 19 04 27.5 -0.2
0.8nm,0.1s,SNR=7.7
EMIN S Sn 19 05 07.6 +0.3
1.6nm,0.4s,SNR=7.9
EMIN Mina Concepcio 3.33 65 P Pn 19 04 27.5 -0.2
0.8nm,0.1s,SNR=7.7
EMIN S Sn 19 05 07.6 +0.3
1.6nm,0.4s,SNR=7.9
PESTR Estremoz 3.36 42 ePn Pn 19 04 28.0 -0.1
PESTR eSn Sn 19 05 08.4 +0.4
PESTR Estremoz 3.36 42 P Pn 19 04 28.0 -0.1
PESTR S Sn 19 05 08.4 +0.4
PESTR Estremoz 3.36 42 P Pn 19 04 28.0 -0.1
PESTR S Sn 19 05 08.4 +0.4
PESTR Estremoz 3.36 42 ePn Pn 19 04 28.0 -0.1
PESTR eSn Sn 19 05 08.4 +0.4
PTOM Tomar 3.59 26 eSn Sn 19 05 13.8 0.0
PTOM A 19 05 17.2
3.8nm,0.2s
PTOM Tomar 3.59 26 S Sn 19 05 13.8 0.0
1.9nm,0.2s
PTOM Tomar 3.59 26 S Sn 19 05 13.8 0.0
1.9nm,0.2s
PTOM Tomar 3.59 26 eSn Sn 19 05 13.8 0.0
3.8nm,0.2s
ESPR Espera 3.75 82 P Pn 19 04 32.8 -0.6
ESPR S Sn 19 05 16.1 -1.4
ESPR Espera 3.75 82 P Pn 19 04 32.8 -0.6
1.7nm,0.1s,SNR=5.0
ESPR S Sn 19 05 16.1 -1.4
8.2nm,0.2s,SNR=7.9
ESPR Espera 3.75 82 P Pn 19 04 32.8 -0.6
1.7nm,0.1s,SNR=5.0
ESPR S Sn 19 05 16.1 -1.4
8.2nm,0.2s,SNR=7.9
ESPR Espera 3.75 82 P Pn 19 04 32.8 -0.6
1.7nm,0.1s,SNR=5.0
ESPR S Sn 19 05 16.1 -1.4
8.2nm,0.2s,SNR=7.9
PMRV Marv??o 3.88 38 ePn Pn 19 04 35.5 +0.3
PMRV eSn Sn 19 05 19.9 -0.9
PMRV A 19 05 20.9
1.9nm,0.2s
PMRV Marv??o 3.88 38 P Pn 19 04 35.5 +0.3
PMRV S Sn 19 05 19.9 -0.9
1.9nm,0.2s
PMRV Marv??o 3.88 38 P Pn 19 04 35.5 +0.3
PMRV S Sn 19 05 19.9 -0.9
1.9nm,0.2s
PMRV Marv??o 3.88 38 ePn Pn 19 04 35.5 +0.3
PMRV eSn Sn 19 05 19.9 -0.9
1.9nm,0.2s
ECAB El Cabril 4.37 66 P Pn 19 04 42.1 +0.2
ECAB S Sn 19 05 31.7 -1.1
ECAB El Cabril 4.37 66 P Pn 19 04 42.1 +0.2
0.3nm,0.0s,SNR=5.3
ECAB S Sn 19 05 31.7 -1.1
0.5nm,0.2s,SNR=7.9
ECAB El Cabril 4.37 66 P Pn 19 04 42.1 +0.2
0.3nm,0.0s,SNR=5.3
ECAB S Sn 19 05 31.7 -1.1
0.5nm,0.2s,SNR=7.9
ECAB El Cabril 4.37 66 P Pn 19 04 42.1 +0.2
0.3nm,0.0s,SNR=5.3
ECAB S Sn 19 05 31.7 -1.1
0.5nm,0.2s,SNR=7.9
EADA Adamuz 5.02 68 P Pn 19 04 51.3 +0.4
EADA S Sn 19 05 48.6 -0.4
EADA Adamuz 5.02 68 P Pn 19 04 51.1 +0.2
0.5nm,0.2s,SNR=7.9
EADA S Sn 19 05 48.6 -0.4
0.7nm,0.2s,SNR=7.9
EADA Adamuz 5.02 68 P Pn 19 04 51.1 +0.2
0.5nm,0.2s,SNR=7.9
EADA S Sn 19 05 48.6 -0.4
0.7nm,0.2s,SNR=7.9
EADA Adamuz 5.02 68 P Pn 19 04 51.1 +0.2
0.5nm,0.2s,SNR=7.9
EADA S Sn 19 05 48.6 -0.4
0.7nm,0.2s,SNR=7.9
MVO Moncorvo 5.46 29 P Pn 19 04 56.7 -0.2
MVO S Sn 19 05 58.1 -1.6
MVO Moncorvo 5.46 29 P Pn 19 04 56.7 -0.2
0.4nm,0.1s,SNR=7.9
MVO S Sn 19 05 58.1 -1.6
0.8nm,0.1s,SNR=7.9
MVO Moncorvo 5.46 29 P Pn 19 04 56.7 -0.2
0.4nm,0.1s,SNR=7.9
MVO S Sn 19 05 58.1 -1.6
0.8nm,0.1s,SNR=7.9
MVO Moncorvo 5.46 29 P Pn 19 04 56.7 -0.2
0.4nm,0.1s,SNR=7.9
MVO S Sn 19 05 58.2 -1.6

IDC 04 19:05:57.1±52.0, 15.21S×171.44W, h0km, mb4.4/3, mb1 4.5/3, mb1mx3.8/18, mbtmp4.4/3, Error ellipse: s-maj=1011.0km s-min=175.1km az=79.0, Samoa Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
STKA Stephens Creek 45.78 240 P P 19 14 20.8 +0.1
1.7nm,0.4s,baz=99,slow=11,SNR=8.9
WRA Warramunga Arr 51.73 256 P P 19 15 06.3 -0.3
1.0nm,0.5s,baz=94,slow=6.9,SNR=39
ASAR Alice Springs 51.97 252 P P 19 15 08.5 +0.1
9.2nm,0.5s,baz=89,slow=7.8,SNR=404

IDC 04 19:13:21.1±1.4, 31.95N×104.75E, h0km, mb3.2/3, mb1 3.4/4, mb1mx3.2/24, mbtmp3.1/4, ML2.9/1, Error ellipse: s-maj=95.6km s-min=25.3km az=58.0, Sichuan

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SONM Songino Array 15.91 4 Pn Pn 19 17 07.1 +0.8
0.1nm,0.3s,baz=195,slow=10,SNR=3.5
MKAR Makanchi Array 22.71 317 P P 19 18 24.2 -0.1
0.2nm,0.7s,baz=121,slow=6.9,SNR=2.8
WRA Warramunga Arr 58.88 147 P P 19 23 22.1 +0.3
0.4nm,0.7s,baz=342,slow=7.3,SNR=4.3
ASAR Alice Springs 61.94 150 P P 19 23 42.4 -0.2
0.3nm,0.9s,baz=334,slow=6.7,SNR=5.2

IDC 04 19:13:55.8±7.3, 20.64S×178.67W, h518km±78km, mb2.8/4, mb1 3.2/4, mb1mx3.0/15, mbtmp2.8/4, Error ellipse: s-maj=148.1km s-min=30.6km az=159.0, Fiji Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ASAR Alice Springs 43.87 257 P P 19 21 16.5 +0.2
0.4nm,0.5s,baz=92,slow=8.0,SNR=28
ASAR PcP PcP 19 22 50.5 -0.7
0.6nm,0.7s,baz=94,slow=4.1,SNR=8.8
WRA Warramunga Arr 43.96 262 P P 19 21 16.6 -0.4
0.2nm,0.4s,baz=96,slow=7.6,SNR=11

TXAR Lajitas Array 87.66 58 P P 19 25 49.8 +0.5
0.5nm,0.9s,baz=210,slow=7.2,SNR=4.4
PDAR Pinedale Array 89.49 43 P P 19 25 57.3 -0.1
0.6nm,0.6s,baz=211,slow=4.5,SNR=6.9
AKASG Malin Array Be 142.83 330 PKhKP 19 32 26.3
2.2nm,0.4s,baz=43,slow=4.2,SNR=21
BRTR Keskin Array B 146.46 312 PKPbc PKPbc 19 32 38.1 -0.8
0.7nm,0.7s,baz=132,slow=5.4,SNR=4.2
MMAI Mount Meron Ar 147.33 299 PKPbc PKPbc 19 32 41.5 +0.1
1.0nm,0.5s,baz=67,slow=6.4,SNR=8.9

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*ISCJB **04** 19:21:14.1±0.6,50.°30N±0.°04×18.°87E±0.°03, h0km, Error ellipse: s-maj=6.1km s-min=2.6km az=12.9*
*WAR **04** 19:21:14.3,50.°26N×18.°89E*
*IPEC **04** 19:21:15.2±0.2,50.°29N×18.°91E, h0km±1km, ML1.9/3, Error ellipse: s-maj=2.5km s-min=0.8km az=171.0*
*CSEM **04** 19:21:16.7±0.3,50.°25N×18.°77E, h2km, ML2.8/6, Error ellipse: s-maj=6.7km s-min=2.9km az=15.0*
*PRU **04** 19:21:17.0,50.°28N×18.°82E, h0km*
ISC 04 19:21:15.5±0.6,**50.°27N**±0.°04×**18.°87E**±0.°03,**h0**km,**n26**, σ1$**04**/45,**Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.60**	**95**	*e*Pg	**Pg**	**19 21 26.1**	**-0.9**
OJC				*e*Sg	**Sg**	**19 21 34.2**	**-0.5**
OKC	**Ostrava-Krasne**	**0.64**	**227**	*e*PG	**Pg**	**19 21 28.6**	**+0.9**
OKC				*e*SG	**Sg**	**19 21 36.3**	**+0.4**
	comp=Z,15nm,0.2s						
OKC	**Ostrava-Krasne**	**0.64**	**227**	*e*Pg	**Pg**	**19 21 28.4**	**+0.7**
	baz=47						
OKC				Sg	**Sg**	**19 21 36.3**	**+0.4**
	comp=Z,15nm,0.2s						
MORC	**Moravsky Berou**	**0.99**	**240**	*e*Pg	**Pg**	**19 21 34.9**	**+0.5**
	baz=59						
MORC				*e*Sg	**Sg**	**19 21 47.2**	**0.0**
	comp=Z,19nm,0.2s,baz=59						
NIE	**Niedzica**	**1.27**	**132**	*e*Pg	**Pg**	**19 21 40.8**	**+1.0**
NIE				*e*Sg	**Sg**	**19 21 57.2**	**+1.0**
NIE	**Niedzica**	**1.27**	**132**	*e*Pg	**Pg**	**19 21 40.8**	**+1.0**
NIE				*e*Sg	**Sg**	**19 21 57.2**	**+1.0**
DPC	**Dobruska-Polom**	**1.64**	**274**	*e*PG	**Pg**	**19 21 45.7**	**-1.1**
DPC				*e*SG	**Sg**	**19 22 07.3**	**-0.7**
	comp=Z,16nm,0.3s						
DPC	**Dobruska-Polom**	**1.64**	**274**	Pg	**Pg**	**19 21 45.7**	**-1.1**
DPC				Sg	**Sg**	**19 22 07.3**	**-0.7**
	comp=Z,16nm,0.3s						
KSP	**Ksiaz**	**1.74**	**290**	*e*Pg	**Pg**	**19 21 49.2**	**+0.4**
KSP				*e*Sg	**Sg**	**19 22 12.5**	**+1.1**
KSP	**Ksiaz**	**1.74**	**290**	*e*Pg	**Pg**	**19 21 49.2**	**+0.4**
KSP				*e*Sg	**Sg**	**19 22 12.5**	**+1.1**
STHS	**Stebnicka Huta**	**1.76**	**118**	*e*PN	**Pg**	**19 21 49.3**	**+0.1**
STHS				*e*SN	**Sg**	**19 22 13.4**	**+1.4**
STHS	**Stebnicka Huta**	**1.76**	**118**	*e*Pn	**Pg**	**19 21 49.3**	**+0.1**
STHS				*e*Sn	**Sg**	**19 22 13.4**	**+1.4**
VRAC	**Vranov**	**1.76**	**238**	*e*Pn	**Pn**	**19 21 47.4**	**+0.2**
	baz=56						
VRAC				*e*Sg	**Sg**	**19 22 11.3**	**-0.8**
	comp=Z,8.8nm,0.2s,baz=56						
VYHS	**Vyhne**	**1.78**	**181**	*e*PN	**Pn**	**19 21 47.7**	**+0.2**
VYHS				*e*SN	**Sn**	**19 22 10.6**	**-0.2**
VYHS	**Vyhne**	**1.78**	**181**	*e*Pn	**Pn**	**19 21 47.7**	**+0.2**
VYHS				*e*Sn	**Sn**	**19 22 10.6**	**-0.2**
UPC	**Upice**	**1.84**	**278**	*e*SG	**Sg**	**19 22 14.5**	**-0.2**
UPC	**Upice**	**1.84**	**278**	Sg	**Sg**	**19 22 14.5**	**-0.2**
KRUC	**Moravsky**	**2.01**	**234**	*e*Pn	**Pn**	**19 21 50.7**	**0.0**
	baz=52						
KRUC				*e*Sn	**Sn**	**19 22 18.3**	**+1.8**
	comp=Z,6.6nm,0.3s,baz=52						
KECS	**Kecovo**	**2.08**	**149**	*e*PN	**Pn**	**19 21 54.7**	**+3.1**
KECS				*e*SN	**Sn**	**19 22 16.8**	**-1.3**
CRVS	**Cervenica-Dubn**	**2.17**	**128**	*e*PN	**Pg**	**19 21 55.8**	**-1.4**
CRVS				*e*SN	**Sg**	**19 22 24.0**	**-1.3**
CRVS	**Cervenica-Dubn**	**2.17**	**128**	*e*Pn	**Pg**	**19 21 55.8**	**-1.4**
CRVS				*e*Sn	**Sg**	**19 22 24.0**	**-1.3**
PRU	**Pruhonice**	**2.80**	**266**	*e*SG	**Sg**	**19 22 43.6**	**-1.8**
	comp=Z,4.2nm,0.6s						
PRU	**Pruhonice**	**2.80**	**266**	Sg	**Sg**	**19 22 43.6**	**-1.8**
	comp=Z,4.2nm,0.6s						
BRG	**Berggiesshubel**	**3.20**	**283**	SG	**Sg**	**19 22 59.3**	**+1.1**
	comp=Z,3.8nm,0.5s						
KHC	**Kasperske Hory**	**3.62**	**254**	*e*SG	**Sg**	**19 23 08.5**	**-3.2**
	comp=Z,3.4nm,0.4s						
KHC	**Kasperske Hory**	**3.62**	**254**	Sg	**Sg**	**19 23 08.5**	**-3.2**
	comp=Z,3.4nm,0.4s						

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*MOS **04** 19:53:46.6±1.1,42.°71N×48.°40E, h36km, mb3.8/3, Error ellipse: s-maj=8.4km s-min=7.0km az=162.4*
*ISCJB **04** 19:53:46.8±0.5,42.°79N±0.°03×48.°49E±0.°03, h34km±9km, mb3.8/9, Error ellipse: s-maj=4.6km s-min=4.0km az=27.0*
*CSEM **04** 19:53:47.0±0.2,42.°79N×48.°34E, h20km, ML3.6, Error ellipse: s-maj=4.9km s-min=4.1km az=140.0*
*NEIC **04** 19:53:47.8±1.4,42.°74N×48.°36E, h28km±11km, mb3.4/2, Error ellipse: s-maj=11.9km s-min=5.5km az=164.0*
*TEH **04** 19:53:48.2,42.°89N×48.°36E, h20km*
*IDC **04** 19:53:49.2±1.5,42.°77N×48.°27E, h40km±19km, mb3.6/8, mb1 3.7/12, mb1mx3.5/27, mbtmp3.7/12, ML3.8/3, Error ellipse: s-maj=26.1km s-min=9.8km az=138.0*
*NNC **04** 19:53:53.9±2.2,42.°75N×49.°60E, h0km, mb3.7, Error ellipse: s-maj=23.1km s-min=15.1km az=120.0*
ISC 04 19:53:48.1±0.8,**42.°81N**±0.°02×**48.°45E**±0.°03,**h34**km±7km, **n125**, σ1$**44**/179,**mb3.8**/9,**7C-6D**,**Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAK	**Makhachkala**	**0.71**	**283**	⇑*i*P	**Pn**	**19 54 00.4**	**-1.3**
MAK				*i*		19 54 11.5	
MAK				pmax	pmax		
	comp=Z,123nm,0.2s						
MAK				smax			
	comp=N,4μm,0.5s						
MAK				smax			
	comp=E,2μm,0.3s						
MAK	**Makhachkala**	**0.71**	**283**	⇑*i*P	**Pn**	**19 54 00.5**	**-1.2**
MAK	**Makhachkala**	**0.71**	**283**	*i* P	**Pn**	**19 54 00.4**	**-1.3**
	comp=E,123nm,0.2s						
URKR	**Urkarakh**	**0.88**	**224**	*e*P	**Pn**	**19 54 00.0**	**-4.1**
URKR				*e*S	**Sn**	**19 54 10.0**	**-5.7**
URKR	**Urkarakh**	**0.88**	**224**	*e*P	**Pn**	**19 54 00.0**	**-4.1**
URKR				*e*S	**Sn**	**19 54 10.0**	**-5.7**
BUJR	**Buynaksk**	**0.99**	**271**	*e*P	**Pn**	**19 54 05.0**	**-0.5**
BUJR	**Buynaksk**	**0.99**	**271**	P	**Pn**	**19 54 05.0**	**-0.5**
ARKR	**Arakani**	**1.09**	**260**	*i* P	**Pn**	**19 54 05.0**	**-2.0**
ARKR				*i* S	**Sn**	**19 54 20.0**	**-0.9**
ARKR	**Arakani**	**1.09**	**260**	*i* P	**Pn**	**19 54 05.0**	**-2.0**
ARKR				*i* S	**Sn**	**19 54 20.0**	**-0.9**
KRNR	**Karanay**	**1.14**	**271**	*i* P	**Pn**	**19 54 06.0**	**-1.6**
KRNR				*i* S	**Sn**	**19 54 21.0**	**-1.0**
KRNR	**Karanay**	**1.14**	**271**	*i* P	**Pn**	**19 54 06.0**	**-1.6**
KRNR				*i* S	**Sn**	**19 54 21.0**	**-1.0**
GNBR	**Gunib**	**1.18**	**250**	⇓*i*P	**Pn**	**19 54 04.0**	**-4.1**
GNBR				*e*S	**Sn**	**19 54 19.5**	**-3.4**
GNBR				pmax	pmax		
	comp=Z,364nm,0.3s						
GNBR	**Gunib**	**1.18**	**250**	*i* P	**Pn**	**19 54 04.0**	**-4.1**
	comp=Z,364nm,0.3s						
GNBR				*e*S	**Sn**	**19 54 19.5**	**-3.4**
KMKR	**Kumukh**	**1.21**	**236**	*i* P	**Pn**	**19 54 06.5**	**-2.1**
KMKR				*i* S	**Sn**	**19 54 22.5**	**-1.2**
KMKR	**Kumukh**	**1.21**	**236**	*i* P	**Pn**	**19 54 06.5**	**-2.1**
KMKR				*i* S	**Sn**	**19 54 22.5**	**-1.2**
DBC	**Dubki**	**1.21**	**281**	*e*P	**Pn**	**19 54 05.5**	**-3.1**
DBC				*e*S	**Sn**	**19 54 21.5**	**-2.3**
DBC	**Dubki**	**1.21**	**281**	*e*P	**Pn**	**19 54 08.9**	**+0.3**
DBC	**Dubki**	**1.21**	**281**	*e*P	**Pn**	**19 54 05.5**	**-3.1**
DBC				*e*S	**Sn**	**19 54 21.5**	**-2.3**
UNCR	**Uncukul**	**1.22**	**266**	⇓*i*P	**Pn**	**19 54 07.5**	**-1.3**
UNCR				*i* S	**Sn**	**19 54 24.5**	**+0.4**
UNCR				pmax	pmax		
	comp=Z,193nm,0.3s						
UNCR	**Uncukul**	**1.22**	**266**	*i* P	**Pn**	**19 54 07.5**	**-1.3**
	comp=Z,193nm,0.3s						
UNCR				*i* S	**Sn**	**19 54 24.5**	**+0.4**
XNZR	**Khunzakh**	**1.31**	**259**	*i* P	**Pn**	**19 54 09.2**	**-0.8**
XNZR				*e*S	**Sn**	**19 54 27.0**	**+0.6**
	comp=Z,508nm,0.3s						
XNZR	**Khunzakh**	**1.31**	**259**	*i* P	**Pn**	**19 54 09.2**	**-0.8**
	comp=Z,508nm,0.3s						
XNZR				*e*S	**Sn**	**19 54 27.0**	**+0.6**
DLMR	**Dylym**	**1.36**	**282**	*i* P	**Pn**	**19 54 11.0**	**+0.3**
DLMR				*i* S	**Sn**	**19 54 30.0**	**+2.4**
DLMR	**Dylym**	**1.36**	**282**	*i* P	**Pn**	**19 54 11.0**	**+0.3**
DLMR				*i* S	**Sn**	**19 54 30.0**	**+2.4**
AKT	**Akhty**	**1.43**	**202**	⇑*i*P	**Pn**	**19 54 10.0**	**-1.6**
AKT				*e*S	**Sn**	**19 54 27.3**	**-2.0**
AKT	**Akhty**	**1.43**	**202**	*i* P	**Pn**	**19 54 10.0**	**-1.6**
AKT				*e*S	**Sn**	**19 54 27.3**	**-2.0**
BTLR	**Botlikh**	**1.65**	**266**	⇓*i*P	**Pn**	**19 54 15.0**	**+0.4**
BTLR				*i* S	**Sn**	**19 54 37.0**	**+2.4**
BTLR	**Botlikh**	**1.65**	**266**	*i* P	**Pn**	**19 54 15.0**	**+0.4**
BTLR				*i* S	**Sn**	**19 54 37.0**	**+2.4**
SIZA	**Siyzn**	**1.76**	**169**	P	**Pn**	**19 54 17.5**	**+1.3**
	SNR=13						
SIZA				S	**Sn**	**19 54 42.7**	**+5.2**
SEKA	**Sheki**	**1.85**	**211**	P	**Pn**	**19 54 16.7**	**-0.7**
	SNR=31						
SEKA				S	**Sn**	**19 54 40.4**	**+0.8**
PQL	**Pirkuli**	**2.02**	**177**	P	**Pn**	**19 54 20.9**	**+1.1**
	SNR=131						
PQL				S	**Sn**	**19 54 49.0**	**+5.2**
IML	**Ismayilli**	**2.02**	**186**	P	**Pn**	**19 54 20.3**	**+0.5**
	SNR=9.0						
IML				S	**Sn**	**19 54 46.8**	**+2.9**
DGRG	**David-gareji**	**2.66**	**240**	P	**Pn**	**19 54 30.7**	**+2.1**
DGRG				S	**Sn**	**19 55 04.8**	**+5.2**
GANJ	**Ganja**	**2.68**	**217**	P	**Pn**	**19 54 28.9**	**0.0**
	SNR=20						
GANJ				S	**Sn**	**19 55 01.4**	**+1.2**
BRDA	**Brd**	**2.72**	**201**	P	**Pn**	**19 54 29.4**	**+0.1**
	SNR=5.8						
BRDA				S	**Sn**	**19 55 05.6**	**+4.6**
ALIB	**Äli-Bayra**	**2.88**	**171**	P	**Pn**	**19 54 33.6**	**+2.0**
	SNR=3.8						
ALIB				S	**Sn**	**19 55 11.5**	**+6.5**
MTA	**Mtatsminda**	**2.94**	**249**	P	**Pn**	**19 54 37.9**	**+5.6**
MTA				S	**Sn**	**19 55 08.8**	**+2.5**
TBLG	**Delisi**	**2.96**	**250**	*e*P	**Pn**	**19 54 38.5**	**+5.9**
TBLG				*e*S	**Sn**	**19 55 11.4**	**+4.5**
TBLG	**Delisi**	**2.96**	**250**	P	**Pn**	**19 54 38.5**	**+5.9**
TBLG				S	**Sn**	**19 55 11.5**	**+4.6**
GOR	**Gori**	**3.32**	**257**	P	**Pb**	**19 54 47.2**	**+1.0**
GOR				S	**Sb**	**19 55 26.2**	**+0.1**
ZEI	**Tsey**	**3.35**	**271**	*e*P	**Pb**	**19 54 51.1**	**+4.4**
ZEI				pmax	pmax		
	comp=Z,20nm,0.5s						
KEH	**Kehvi**	**3.37**	**263**	P	**Pn**	**19 54 42.8**	**+4.5**
KEH				S	**Sn**	**19 55 19.2**	**+2.0**
GLBA	**Ciilabad**	**3.56**	**181**	P	**Pn**	**19 54 40.7**	**-0.3**
	SNR=13						
GLBA				S	**Sn**	**19 55 20.9**	**-1.0**
ONI	**Oni**	**3.69**	**268**	P	**Pb**	**19 54 49.8**	**-2.8**
ONI				S	**Sb**	**19 55 36.9**	**+0.1**
GNI	**Garni**	**3.85**	**228**	Pn	**Pn**	**19 54 47.2**	**+2.3**
	comp=Z,3.5nm,0.3s,baz=0.0,slow=10,SNR=12						
GNI				Sn	**Sn**	**19 55 34.1**	**+5.2**
	comp=Z,11nm,0.3s,baz=43,slow=13,SNR=5.9						
GNI	**Garni**	**3.85**	**228**	*e*Pn	**Pn**	**19 54 43.4**	**-1.5**
GNI				Sn	**Sn**	**19 55 34.1**	**+5.2**
GNI	**Garni**	**3.85**	**228**	*e*P	**Pn**	**19 54 43.4**	**-1.5**
PYA	**Pyatigorsk**	**4.11**	**289**	*e*P	**Pn**	**19 54 50.0**	**+1.5**
PYA	**Pyatigorsk**	**4.11**	**289**	*e*P	**Pn**	**19 54 50.1**	**+1.6**
PYA	**Pyatigorsk**	**4.11**	**289**	*e*P	**Pn**	**19 54 50.0**	**+1.5**
KIV	**Kislovodsk**	**4.36**	**287**	*e*P	**Pn**	**19 54 52.7**	**+0.9**
KIV	**Kislovodsk**	**4.36**	**287**	*e*Pn	**Pn**	**19 54 52.7**	**+0.8**
KIV	**Kislovodsk**	**4.36**	**287**	*e*P	**Pn**	**19 54 52.7**	**+0.9**
IMRD	**Marand**	**4.59**	**208**	*e*P	**Pn**	**19 54 54.8**	**-0.3**
IMRD	**Marand**	**4.59**	**208**	*e*P	**Pn**	**19 54 54.8**	**-0.3**
IHRS	**Heris**	**4.61**	**194**	*e*P	**Pn**	**19 54 55.4**	**0.0**
ISRB	**Sarab**	**5.01**	**187**	*e*P	**Pn**	**19 55 00.7**	**-0.2**
ISRB				*e*		19 55 09.2	
	comp=Z,226nm,0.2s						
ISRB				*e*Sg	**Sn**	**19 55 55.1**	**-2.5**
ISRB	**Sarab**	**5.01**	**187**	*e*P	**Pn**	**19 55 00.7**	**-0.2**
ISRB				*e*Sg	**Sn**	**19 55 55.1**	**-2.5**
IPRN	**Peran**	**7.21**	**154**	*e*P	**Pn**	**19 55 35.5**	**+4.4**
IPRN				*e*Sg	**Sn**	**19 56 52.9**	**+1.1**
IPRN				*e*		19 57 01.9	
	comp=Z,430nm,0.1s						
IPRN	**Peran**	**7.21**	**154**	*e*P	**Pn**	**19 55 35.5**	**+4.4**
IPRN				*e*Sg	**Sn**	**19 56 52.9**	**+1.1**
IRAZ	**Razeghan**	**7.48**	**171**	*e*P	**Pn**	**19 55 33.6**	**-1.2**
IRAZ				*e*		19 55 41.8	
	comp=Z,121nm,0.1s						
IRAZ	**Razeghan**	**7.48**	**171**	*e*P	**Pn**	**19 55 33.6**	**-1.2**
IALA	**Alasht**	**7.51**	**152**	*e*P	**Pn**	**19 55 27.6**	**-7.6**
IALA	**Alasht**	**7.51**	**152**	*e*P	**Pn**	**19 55 27.6**	**-7.6**
IKIA	**Kiasar**	**7.73**	**147**	*e*P	**Pn**	**19 55 30.9**	**-7.3**
IKIA				*e*Sg	**Sn**	**19 56 52.1**	**-13**
IKIA	**Kiasar**	**7.73**	**147**	*e*P	**Pn**	**19 55 30.9**	**-7.3**
IKIA				*e*Sg	**Sn**	**19 56 52.1**	**-13**
IDMV	**Damavand**	**7.74**	**158**	*e*P	**Pn**	**19 55 38.2**	**-0.1**
IDMV				*e*Sg	**Sn**	**19 57 02.0**	**-2.7**
IDMV	**Damavand**	**7.74**	**158**	*e*P	**Pn**	**19 55 38.2**	**-0.1**
IDMV				*e*Sg	**Sn**	**19 57 02.0**	**-2.7**
ISHM	**Shahmirzad**	**7.93**	**150**	*e*Sg	**Sn**	**19 57 01.9**	**-7.7**
ISHM	**Shahmirzad**	**7.93**	**150**	*e*Sg	**Sn**	**19 57 01.9**	**-7.7**
ANN	**Anapa**	**8.21**	**288**	*e*P	**Pn**	**19 55 48.2**	**+3.4**
AKTK	**Aktyubinsk**	**10.07**	**37**	Pn	**Pn**	**19 56 11.7**	**+1.6**
AKTK				Sn	**Sn**	**19 57 58.9**	**-2.9**
AKTK	**Aktyubinsk**	**10.07**	**37**	P	**Pn**	**19 56 11.7**	**+1.6**
AKTO	**Aktyubinsk**	**10.07**	**37**	Pn	**Pn**	**19 56 11.7**	**+1.6**
	comp=Z,0.5nm,0.3s,baz=212,slow=8.6,SNR=4.3						
AKTO				Sn	**Sn**	**19 57 58.9**	**-2.9**
	comp=Z,1.1nm,0.3s,baz=14,slow=22,SNR=9.5						
AB31	**Akbulak array**	**10.26**	**47**	⇑Pn	**Pn**	**19 56 14.2**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=231,slow=12,SNR=33						
AB31				⇑Sn	**Sn**	**19 58 05.3**	**-1.3**
	comp=Z,4.1nm,0.5s,baz=240,slow=22,SNR=5.8						
AB31	**Akbulak array**	**10.26**	**47**	Pn	**Pn**	**19 56 14.2**	**+1.4**
	comp=Z,0.5nm,0.3s,SNR=33						
ABKAR	**Akbulak array**	**10.26**	**47**	*e*Pn	**Pn**	**19 56 13.6**	**+0.8**
	comp=Z,1.7nm,0.3s						
ABKAR				*e*Sn	**Sn**	**19 58 05.2**	**-1.3**
ABKAR	**Akbulak array**	**10.26**	**47**	*e*Pn	**Pn**	**19 56 13.6**	**+0.8**
	comp=Z,1.7nm,0.3s						
ARU	**Arti**	**15.10**	**22**	P	**Pn**	**19 57 18.2**	**-0.5**
ARU	**Arti**	**15.10**	**22**	Pn	**Pn**	**19 57 18.2**	**-0.5**
ARU				*e*Sn	**Sn**	**19 59 52.2**	**-12**
ARU	**Arti**	**15.10**	**22**	Pn	**Pn**	**19 57 18.2**	**-0.5**
AKASG	**Malin Array Be**	**15.33**	**308**	Pn	**Pn**	**19 57 21.8**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=98,slow=9.5,SNR=2.6						
AKASG	**Malin Array Be**	**15.33**	**308**	Pn	**Pn**	**19 57 21.8**	**+0.1**
AKASG	**Malin Array Be**	**15.33**	**308**	Pn	**Pn**	**19 57 21.8**	**+0.1**
KK31	**Karatay Array**	**16.15**	**81**	⇑Pn	**Pn**	**19 57 30.7**	**-1.7**
	comp=Z,1.5nm,0.6s,baz=278,slow=15,SNR=9.1						
KK31				⇓Sn	**Sn**	**20 00 23.5**	**-6.9**
	comp=Z,2.3nm,0.7s,baz=0.0,slow=0.1,SNR=5.5						
ZRNK	**Zerenda**	**17.06**	**46**	⇓Sn	**Sn**	**20 00 50.8**	**-1.4**
	comp=Z,2.1nm,0.8s						
BRVK	**Borovoye**	**17.79**	**47**	P	**Pn**	**19 57 54.5**	**+1.6**
BRVK	**Borovoye**	**17.79**	**47**	P	**Pn**	**19 57 54.5**	**+1.6**
BVAR	**Borovoye Array**	**17.84**	**47**	P	**Pn**	**19 57 54.6**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=240,slow=11,SNR=7.5						
BVAR	**Borovoye Array**	**17.84**	**47**	P	**Pn**	**19 57 54.6**	**+1.2**
VOSK	**Vostochnaya**	**18.03**	**49**	⇓Pn	**Pn**	**19 57 59.4**	**+3.6**
	comp=Z,1.1nm,0.8s						
VOSK				⇑Sn	**Sn**	**20 01 14.3**	**-1.5**
	comp=Z,1.5nm,1.1s						
VOSK	**Vostochnaya**	**18.03**	**49**	Pn	**Pn**	**19 57 59.4**	**+3.6**
	comp=Z,1.1nm,0.8s						
EKS2	**Erkin-Say**	**18.59**	**82**	*e*P	**Pn**	**19 58 03.8**	**+1.1**
EKS2	**Erkin-Say**	**18.59**	**82**	*e*P	**Pn**	**19 58 03.8**	**+1.1**
IDI	**Anoyia**	**19.74**	**256**	P	**Pn**	**19 58 13.2**	**-3.3**
	comp=Z,0.5nm,0.3s,baz=49,slow=9.3,SNR=3.2						
IDI	**Anoyia**	**19.74**	**256**	P	**Pn**	**19 58 13.2**	**-3.3**
TKM2	**Tokmak 2**	**19.87**	**80**	*e*P	**Pn**	**19 58 18.0**	**0.0**
TKM2				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TKM2	**Tokmak 2**	**19.87**	**80**	*e*P	**Pn**	**19 58 18.0**	**0.0**
	comp=Z,1.0nm,0.5s						
TKM2	**Tokmak 2**	**19.87**	**80**	*e*P	**Pn**	**19 58 18.0**	**0.0**
	comp=Z,1.0nm,0.5s						
KURK	**Kurchatov**	**22.01**	**58**	P	**P**	**19 58 40.8**	**+1.5**
	comp=Z,0.7nm,0.6s,mb3.3,baz=263,slow=11,SNR=5.4						
KURK	**Kurchatov**	**22.01**	**58**	*e*P	**P**	**19 58 41.8**	**+2.6**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.4						
KURK	**Kurchatov**	**22.01**	**58**	*e*P	**P**	**19 58 41.8**	**+2.6**
	comp=Z,1.0nm,0.6s,mb3.4						
KURK	**Kurchatov**	**22.01**	**58**	*e*P	**P**	**19 58 41.8**	**+2.6**
	comp=Z,1.0nm,0.6s,mb3.4						
JOF	**Joensuu**	**22.50**	**339**	*e*P	**P**	**19 58 44.4**	**+0.1**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb3.9						
JOF	**Joensuu**	**22.50**	**339**	*e*p	**P**	**19 58 44.4**	**+0.1**
	comp=Z,1.7nm,0.4s,mb3.8						
JOF	**Joensuu**	**22.50**	**339**	*e*P	**P**	**19 58 44.4**	**+0.1**
	comp=Z,1.7nm,0.4s,mb3.8						
FINES	**FINESS Array B**	**22.96**	**332**	P	**P**	**19 58 48.5**	**-0.6**
	comp=Z,1.1nm,0.5s,mb3.5,baz=135,slow=9.2,SNR=11						
FINES	**FINESS Array B**	**22.96**	**332**	P	**P**	**19 58 48.5**	**-0.7**
MK31	**Makanchi Array**	**24.23**	**69**	*e*P	**P**	**19 59 03.8**	**+2.3**
MK31	**Makanchi Array**	**24.23**	**69**	*e*P	**P**	**19 59 03.8**	**+2.3**
MKAR	**Makanchi Array**	**24.23**	**69**	P	**P**	**19 59 03.5**	**+1.9**
	comp=Z,0.9nm,0.4s,mb3.5,baz=274,slow=8.2,SNR=15						
MKAR	**Makanchi Array**	**24.23**	**69**	*i* P	**P**	**19 59 03.7**	**+2.2**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	**Makanchi Array**	**24.23**	**69**	*i* P	**P**	**19 59 03.7**	**+2.2**
	comp=Z,1.0nm,0.4s,mb3.6						
HFS	**Hagfors**	**27.28**	**321**	P	**P**	**19 59 28.6**	**-0.4**
	comp=Z,0.5nm,0.3s,mb3.5,baz=113,slow=11,SNR=5.8						
HFS	**Hagfors**	**27.28**	**321**	P	**P**	**19 59 28.6**	**-0.4**
ARCES	**ARCESS Array B**	**29.29**	**344**	P	**P**	**19 59 47.9**	**+1.1**
	comp=Z,3.2nm,0.9s,mb4.1,baz=133,slow=12,SNR=4.1						
ARCES	**ARCESS Array B**	**29.29**	**344**	P	**P**	**19 59 47.9**	**+1.1**
KEST	**Kesra**	**30.88**	**270**	P	**P**	**20 00 00.8**	**-0.4**
	comp=Z,1.2nm,0.8s,mb3.8,baz=113,slow=7.7,SNR=4.6						
KEST	**Kesra**	**30.88**	**270**	P	**P**	**20 00 00.8**	**-0.4**
KEST	**Kesra**	**30.88**	**270**	P	**P**	**20 00 00.8**	**-0.4**
SPITS	**Spitsbergen Ar**	**37.71**	**350**	P	**P**	**20 01 01.8**	**+1.9**
	comp=Z,0.6nm,0.4s,mb3.7,baz=150,slow=16,SNR=4.5						
SPITS	**Spitsbergen Ar**	**37.71**	**350**	P	**P**	**20 01 01.8**	**+1.9**
DBIC	**Dimbokro**	**59.01**	**248**	P	**P**	**20 03 43.2**	**-1.5**
	comp=Z,3.6nm,0.8s,mb4.5,baz=72,slow=7.6,SNR=6.1						
DBIC	**Dimbokro**	**59.01**	**248**	P	**P**	**20 03 43.2**	**-1.5**
DBIC	**Dimbokro**	**59.01**	**248**	P	**P**	**20 03 43.2**	**-1.4**

IDC 04 19:55:23.4±10.0,**3.°19N**×**96.°01E**,**h0**km,**mb3.6**/3, **mb1 3.5**/4,**mb1mx3.3**/22,**mbtmp3.5**/4,**ML2.8**/1,**MS3.0**/1, **Ms1 3.0**/1,**ms1mx2.5**/25,**Error ellipse: s-maj=249.6km s-min=36.6km az=33.0**,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.94**	**98**	Pn	Pn	19 56 11.7	+0.3
	1.2nm,0.3s,baz=292,slow=4.5,SNR=3.6						
KSRS	**Korea Array**	**44.93**	**37**	LR	LR	20 23 36.4	
	comp=Z,19nm,19.4s,baz=265,slow=38						
MKAR	**Makanchi Array**	**45.04**	**347**	P	P	20 03 40.9	+0.1
	0.3nm,0.4s,baz=156,slow=9.4,SNR=10						
SONM	**Songino Array**	**45.37**	**10**	P	P	20 03 43.5	+0.1
	0.3nm,0.6s,baz=194,slow=9.6,SNR=4.1						
ZALV	**Zalesovo Beam**	**51.42**	**352**	P	P	20 04 29.7	-0.3
	0.7nm,0.6s,baz=185,slow=7.2,SNR=4.3						

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*ISCJB **04** 20:08:20.1±0.4,43.°80N±0.°03×105.°22W±0.°05, h0km, mb3.9/3, Error ellipse: s-maj=5.0km s-min=4.5km az=26.1*
*IDC **04** 20:08:20.8±2.0,43.°71N×105.°33W, h0km, mb3.8/3, mb1 3.8/7, mb1mx3.6/26, mbtmp3.7/7, ML3.4/4, Error ellipse: s-maj=55.9km s-min=7.9km az=149.0*
*NEIC **04** 20:08:21.8±0.3,43.°80N

SONM Songino Array 84.59 339 P **P 20 20 57.0 +0.3**
0.2nm,0.5s,mb3.6,baz=17,slow=2.4,SNR=3.1
MKAR Makanchi Array 89.53 355 P **P 20 21 20.0 -0.8**
0.4nm,0.8s,mb3.7,baz=5.7,slow=3.7,SNR=5.3

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*ISCJB **04** 20:17:19.6±0.7,39°.77N±0°.03×26°.79E±0°.05,h8km±10km, Error ellipse: s-maj=7.0km s-min=5.5km az=174.4*
*DDA **04** 20:17:19.1,39°.78N×26°.76E,h7km±4km,Md2.8*
*CSEM **04** 20:17:20.4±0.3,39°.78N×26°.84E,h20km,MD2.6, Error ellipse: s-maj=6.2km s-min=5.8km az=105.0*
*ISK **04** 20:17:21.9,39°.90N×26°.86E,h19km,MD2.6*
ISC 04 20:17:20.0±0.8,39°.77N±0°.04×26°.80E±0°.05,h18km±10km, n23,σ0°56/33,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZN	**Ezine**	**0.37**	**279**	*e*PG	**Pg**	**20 17 31.1**	**+3.4**
EZN	**Ezine**	**0.37**	**279**	*e*Pg	**Pg**	**20 17 31.1**	**+3.4**
AYVA	**Ayvalik**	**0.46**	**190**	*e*P	**Pg**	**20 17 29.2**	**-0.2**
AYVA				*e*S	**Sg**	**20 17 35.1**	**-0.6**
AYVA	**Ayvalik**	**0.46**	**190**	*e*P	**Pg**	**20 17 29.2**	**-0.2**
AYVA				*e*S	**Sg**	**20 17 35.1**	**-0.6**
BALY	**Balya**	**0.63**	**92**	*e*P	**Pg**	**20 17 33.0**	**+0.5**
BALY				*e*S	**Sg**	**20 17 41.5**	**+0.6**
BALY	**Balya**	**0.63**	**92**	*e*P	**Pg**	**20 17 33.0**	**+0.5**
BALY				*e*S	**Sg**	**20 17 41.5**	**+0.5**
GELI	**Tayfur-Gelibol**	**0.68**	**339**	*e*PG	**Pg**	**20 17 33.8**	**+0.5**
GELI				*e*SG	**Sg**	**20 17 42.5**	**+0.1**
GELI	**Tayfur-Gelibol**	**0.68**	**339**	*e*Pg	**Pg**	**20 17 33.8**	**+0.5**
GELI				*e*Sg	**Sg**	**20 17 42.5**	**+0.1**
KRBG	**Karabiga-Canak**	**0.73**	**31**	*e*PG	**Pg**	**20 17 34.0**	**-0.4**
KRBG				*e*SG	**Sg**	**20 17 43.8**	**-0.3**
KRBG	**Karabiga-Canak**	**0.73**	**31**	*e*Pg	**Pg**	**20 17 34.0**	**-0.4**
KRBG				*e*Sg	**Sg**	**20 17 43.8**	**-0.4**
GONE	**Gonen-Balikesi**	**0.74**	**67**	*e*PG	**Pg**	**20 17 35.0**	**+0.6**
GONE	**Gonen-Balikesi**	**0.74**	**67**	*e*Pg	**Pg**	**20 17 35.0**	**+0.5**
ERIK	**Erikli-Kesan**	**0.93**	**347**	*e*PG	**Pg**	**20 17 38.1**	**+0.1**
ERIK	**Erikli-Kesan**	**0.93**	**347**	*e*Pg	**Pg**	**20 17 38.1**	**0.0**
RKY	**Sarkoy-Tekirda**	**0.97**	**17**	*e*PG	**Pg**	**20 17 38.0**	**-0.7**
RKY	**Sarkoy-Tekirda**	**0.97**	**17**	*e*Pg	**Pg**	**20 17 38.1**	**-0.6**
SART	**Tekirdag**	**0.97**	**18**	*e*P	**Pb**	**20 17 38.1**	**-0.1**
SART				*e*S	**Sb**	**20 17 50.8**	**+0.1**
SART	**Tekirdag**	**0.97**	**18**	*e*P	**Pb**	**20 17 38.1**	**-0.1**
SART				*e*S	**Sb**	**20 17 50.8**	**+0.1**
BNT	**Bandirma**	**1.04**	**55**	*e*PG	**Pg**	**20 17 39.9**	**-0.3**
MFT	**Murefte**	**1.08**	**20**	*e*PG	**Pg**	**20 17 40.4**	**-0.6**
MFT	**Murefte**	**1.08**	**20**	*e*Pg	**Pg**	**20 17 40.4**	**-0.6**
ENEZ	**Enez**	**1.09**	**333**	*e*PG	**Pg**	**20 17 41.2**	**+0.1**
ENEZ	**Enez**	**1.09**	**333**	*e*Pg	**Pg**	**20 17 41.2**	**+0.1**

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*NEIC **04** 21:23:00.8,21°.74N×104°.97W,h59km,MD4.4(MEX),After MEX.*
MEX 04 21:23:00.8±1.8,21°.74N×104°.97W,h59km±39km,MD4.4, Central Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANIG	**Ahuacatlan**	**0.80**	**148**	*i* P	Pn	21 23 13.8	-2.4
ANIG				*i* S	Sn	21 23 27.3	-0.2
MAIG	**Mazatlaan**	**1.97**	**317**	*e*P	Pn	21 23 31.4	-0.5
MAIG				*i* S	Sn	21 23 54.0	-1.5
MAIG	**Mazatlaan**	**1.97**	**317**	*e*P	Pn	21 23 31.4	-0.5
MAIG				*i* S	Sn	21 23 54.0	-1.5
SFJM	**Santa Fe**	**2.19**	**124**	*i* P	Pn	21 23 34.2	-0.7
SFJM				*i* S	Sn	21 23 59.5	-1.4
SFJM	**Santa Fe**	**2.19**	**124**	*i* P	Pn	21 23 34.2	-0.7
SFJM				*i* S	Sn	21 23 59.5	-1.4
CJM	**Chamela**	**2.23**	**182**	*i* P	Pn	21 23 34.5	-0.9
CJM				*i* S	Sn	21 23 59.7	-2.0
CJM	**Chamela**	**2.23**	**182**	*i* P	Pn	21 23 34.5	-0.9
CJM				*i* S	Sn	21 23 59.7	-2.0
MMIG	**Aquila**	**3.75**	**156**	*i* P	Pn	21 23 56.5	+0.2
MMIG				*i* S	Sn	21 24 36.8	-2.4
HPIG		**5.21**	**353**	*i* P	Pn	21 24 20.5	+4.3
HPIG				*i* S	Sn	21 25 21.2	+6.1
LNIG	**Linares**	**5.96**	**57**	*i* P	Pn	21 24 31.5	+5.0
LNIG				*i* S	Sn	21 25 39.2	+5.8
CAIG	**El Cayaco**	**6.44**	**136**	*e*P	Pn	21 24 33.8	+0.7
CAIG				*i* S	Sn	21 25 46.4	+1.3
CAIG	**El Cayaco**	**6.44**	**136**	*e*P	Pn	21 24 33.8	+0.7
CAIG				*i* S	Sn	21 25 46.4	+1.3

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*IDC **04** 21:26:40.0±0.7,32°.53S×179°.84W,h0km,mb4.3/13, mb1 4.6/15,mb1mx4.5/21,mbtmp4.4/15,ML3.4/2,MS4.3/19, Ms1 4.3/19,ms1mx4.2/25,Error ellipse: s-maj=20.7km s-min=19.4km az=10.0*
*ISCJB **04** 21:26:42.3±2.7,32°.74S±0°.08×179°.98E±0°.09,h21km±19km, mb4.8/26,MS4.3/17,Error ellipse: s-maj=14.9km s-min=11.0km az=139.9*
*GCMT **04** 21:26:44.8±0.2,32°.75S×179°.74E,h12km,MW5.1, Moment Tensor Solution. s48,c76; s77,c141; Moment tensor: Scale 10^{16}Nm; M_{rr}-3.36±.13; $M_{\theta\theta}$1.28±.12; $M_{\phi\phi}$2.07±.11; $M_{r\theta}$1.07±.36; $M_{\theta\phi}$4.35±.09; $M_{r\phi}$-0.20±.33; Best double couple: $M_0$5.10000×10^{16} NP1:ϕ_s12.00000°, δ51.00000°,λ-137.00000°. NP2:ϕ_s251.00000°, δ57.00000°,λ-48.00000°. Principal axes: T 6.0800, Plg3.0000°, Azm313.0000°; N -2.0500, Plg35.0000°, Azm45.0000°; P -4.0300, Plg55.0000°, Azm218.0000°; Data Used: II IC IU G CN.*
*NEIC **04** 21:26:46.5±1.2,32°.72S×179°.92W,h45km±11km,mb5.1/13 Error ellipse: s-maj=12.5km s-min=9.3km az=143.0*
ISC 04 21:26:43.9±2.9,32°.69S±0°.08×179°.96W±0°.09, h20km±21km,n70,σ1°20/52,mb4.8/26,MS4.3/17,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.85**	**28**	Pn	**Pn**	**21 27 43.7**	**+1.8**
23nm,0.3s,baz=233,slow=20,SNR=2.3							
RAO				LR	LR	21 28 56.8	
comp=Z,2μm,20.6s,baz=230,slow=37							
WCZ	**Waipu Caves**	**5.72**	**234**	PN	**Pn**	**21 28 05.8**	**-1.9**
OUZ	**Omahuta**	**5.92**	**243**	*e*Pn	**Pn**	**21 28 07.6**	**-2.8**
187nm,0.8s							
OUZ	**Omahuta**	**5.92**	**243**	PN	**Pn**	**21 28 07.9**	**-2.5**
MWZ	**Matawai**	**6.00**	**199**	Pn	**Pn**	**21 28 11.3**	**-0.1**
URZ	**Urewera**	**6.05**	**202**	Pn	**Pn**	**21 28 12.5**	**+0.3**
8.3nm,0.3s,baz=310,slow=19,SNR=37							
URZ	**Urewera**	**6.05**	**202**	PN	**Pn**	**21 28 12.9**	**+0.7**
RPZ	**Rata Peaks**	**13.07**	**210**	LR	LR	21 34 28.5	
comp=Z,2μm,20.9s,baz=46,slow=35							
MSVF	**Nonsavu**	**15.00**	**353**	*e*Pn	**Pn**	**21 30 20.2**	**+5.5**
85nm,0.9s							
DZM	**Mont Dzumac**	**16.04**	**308**	*e*P	pP	21 30 43.5	+6.2
125nm,1.6s							
DZM				*e*LR	LR	21 34 17.3	
8μm,25.9s							
AFI	**Afiamalu**	**20.13**	**24**	P	**P**	**21 31 13.9**	**-2.7**
0.8nm,0.3s,baz=182,slow=9.9,SNR=3.8							
RAR	**Rarotonga**	**21.27**	**63**	LR	LR	21 37 56.5	
comp=Z,321nm,18.5s,MS3.7,baz=255,slow=32							
CNB	**Canberra Magne**	**25.52**	**256**	*e*P	**P**	**21 32 14.1**	**+3.1**
EIDS	**Eidsvold**	**26.30**	**279**	*e*P	**P**	**21 32 21.4**	**+3.3**
EIDS				*e*S	**S**	**21 37 09.0**	**+19**
TOO	**Toolangi**	**28.58**	**250**	*e*P	**P**	**21 32 46.6**	**+8.2**
HNR	**Honiara**	**29.68**	**317**	LR	LR	21 42 26.9	
comp=Z,730nm,21.9s,MS4.3,baz=230,slow=32							
PPT	**Papeete**	**31.21**	**69**	*e*LQ		21 39 32.0	
1μm,24.8s							
PPT				*e*LR	LR	21 41 06.8	
416nm,25.8s,baz=235							
PPT	**Papeete**	**31.21**	**69**	LR	LR	21 43 44.0	
comp=Z,290nm,18.0s,MS4.0,baz=239,slow=33							
ARPS	**Mount Arapiles**	**31.52**	**252**	*e*P	**P**	**21 33 08.4**	**+3.9**
64nm,1.1s,mb5.4							
STKA	**Stephens Creek**	**32.40**	**261**	*e*P	**P**	**21 33 14.7**	**+2.4**
5.3nm,1.0s,mb4.3							
STKA	**Stephens Creek**	**32.40**	**261**	P	**P**	**21 33 12.9**	**+0.6**
3.1nm,1.0s,mb4.1,baz=75,slow=12,SNR=2.1							
STKA				LR	LR	21 44 18.9	
comp=Z,687nm,20.4s,MS4.3,baz=96,slow=33							
CTA	**Charters Tower**	**32.62**	**284**	P	**P**	**21 33 15.3**	**+0.9**
8.6nm,1.1s,mb4.6,baz=115,slow=15,SNR=2.6							
CTA				LR	LR	21 44 23.7	
comp=Z,747nm,19.6s,MS4.4,baz=119,slow=32							
CTA	**Charters Tower**	**32.62**	**284**	P	**P**	**21 33 15.3**	**+0.9**
CTA				LR	LR	21 44 23.7	

COEN	**Coen**	**38.39**	**290**	*e*P	**P**	**21 34 03.7**	**-0.3**
128nm,1.1s,mb5.6							
RKT	**Rikitea**	**40.62**	**88**	*e*LQ		21 43 46.2	
239nm,27.5s							
RKT				*e*LR	LR	21 45 20.9	
999nm,28.8s,baz=253							
ASAR	**Alice Springs**	**41.39**	**270**	P	**P**	**21 34 28.6**	**-0.2**
12nm,0.8s,mb4.6,baz=109,slow=7.7,SNR=53							
WRAB	**Tennant Creek**	**42.58**	**276**	*e*P	**P**	**21 34 38.1**	**-0.5**
38nm,1.2s,mb5.0							
WRA	**Warramunga Arr**	**42.59**	**276**	P	**P**	**21 34 38.0**	**-0.7**
15nm,0.9s,mb4.7,baz=115,slow=7.8,SNR=43							
WRA				LR	LR	21 52 50.0	
comp=Z,502nm,18.3s,MS4.4,baz=105,slow=37							
FORT	**Forrest**	**43.89**	**258**	*e*P	**P**	**21 34 48.5**	**-0.6**
34nm,0.7s,mb5.2							
FORT	**Forrest**	**43.89**	**258**	*e*P	**P**	**21 34 49.1**	**+0.1**
38nm,0.8s,mb5.2							
KAKA	**Kakadu**	**47.75**	**283**	*e*P	**P**	**21 35 19.5**	**-0.2**
21nm,0.9s,mb5.2							
KAKA	**Kakadu**	**47.75**	**283**	*e*P	**P**	**21 35 19.3**	**-0.5**
42nm,0.8s,mb5.5							
KNA	**Kununurra**	**49.24**	**277**	*e*P	**P**	**21 35 31.9**	**+0.7**
28nm,0.8s,mb5.3							
FITZ	**Fitzroy Crossi**	**50.74**	**273**	*e*P	**P**	**21 35 43.5**	**+0.9**
24nm,0.9s,mb5.1							
FITZ	**Fitzroy Crossi**	**50.74**	**273**	P	**P**	**21 35 42.3**	**-0.3**
14nm,0.8s,mb4.9,baz=154,slow=8.2,SNR=19							
FITZ	**Fitzroy Crossi**	**50.74**	**273**	*e*P	**P**	**21 35 43.3**	**+0.8**
28nm,1.2s,mb5.1							
MEEK	**Meekatharra**	**53.09**	**259**	*e*P	**P**	**21 35 59.2**	**-0.8**
MORW	**Morawa**	**54.31**	**256**	*e*P	**P**	**21 36 09.3**	**+0.4**
MBWA	**Marble Bar**	**54.36**	**266**	*e*P	**P**	**21 36 09.5**	**+0.1**
MBWA	**Marble Bar**	**54.36**	**266**	*e*P	**P**	**21 36 09.3**	**-0.1**
16nm,1.1s,mb4.9							
QSPA	**South Pole Qui**	**57.43**	**180**	P	**P**	**21 36 32.3**	**+1.9**
9.7nm,1.0s,mb4.8,baz=35,slow=5.2,SNR=21							
QSPA	**South Pole Qui**	**57.43**	**180**	P	**P**	**21 36 32.3**	**+1.9**
MAW	**Mawson**	**69.58**	**201**	LR	LR	22 08 13.8	
comp=Z,252nm,18.2s,MS4.5,baz=117,slow=36							
KSM	**Kuching**	**73.85**	**282**	*e*P	**P**	**21 38 17.8**	**+0.3**
19nm,1.0s,mb5.0							
MJAR	**Matsushiro Arr**	**79.20**	**327**	P	**P**	**21 38 47.3**	**0.0**
5.1nm,1.1s,mb4.3,baz=172,slow=5.8,SNR=7.8							
MJAR				LR	LR	22 08 51.8	
comp=Z,158nm,21.5s,MS4.3,baz=140,slow=32							
MAJO	**Matsushiro**	**79.20**	**327**	*e*P	**P**	**21 38 47.7**	**+0.5**
5.0nm,0.8s,mb4.5							
TPUB	**Ta-pu**	**79.45**	**306**	*e*P	**P**	**21 38 48.6**	**-0.3**
31nm,1.0s,mb5.2							
SSLB	**Suanglung**	**79.56**	**307**	*e*P	**P**	**21 38 48.5**	**-1.0**
22nm,0.8s,mb5.1							
PLCA	**Paso Flores**	**82.16**	**134**	P	**P**	**21 39 04.8**	**+1.5**
3.8nm,0.9s,mb4.3,baz=268,slow=4.1,SNR=3.4							
PLCA				LR	LR	22 11 06.0	
comp=Z,149nm,18.4s,MS4.4,baz=266,slow=32							
PLCA	**Paso Flores**	**82.16**	**134**	*e*P	**P**	**21 39 06.7**	**+3.4**
6.8nm,1.0s,mb4.5							
PLCA				LR	LR	22 11 06.0	
ASAJ	**Asahikawa**	**83.72**	**334**	LR	LR	22 09 55.2	
comp=Z,480nm,21.6s,MS4.8,baz=181,slow=31							
KSRS	**Korea Array**	**85.03**	**321**	P	**P**	**21 39 17.9**	**+0.1**
0.5nm,0.4s,mb4.0,baz=139,slow=5.6,SNR=4.0							
KSRS				LR	LR	22 17 11.7	
comp=Z,119nm,18.1s,MS4.3,baz=310,slow=36							
PETK	**Petropavlovsk-**	**87.63**	**347**	P	**P**	**21 39 28.9**	**-1.2**
2.3nm,0.6s,mb4.6,baz=169,slow=9.1,SNR=4.4							
PETK				LR	LR	22 12 23.2	
comp=Z,134nm,21.8s,MS4.3,baz=173,slow=31							
CFAA	**Coronel Fontan**	**89.19**	**128**	P	**P**	**21 39 37.0**	**-1.4**
0.3nm,0.7s,mb3.7,baz=270,slow=6.1,SNR=2.3							
CFAA	**Coronel Fontan**	**89.19**	**128**	P	**P**	**21 39 37.0**	**-1.4**
CMB	**Columbia Colle**	**89.57**	**43**	*e*P	**P**	**21 39 41.4**	**+1.7**
5.4nm,1.2s,mb4.8							
CN2	**Changchun**	**90.97**	**324**	*e*P	**P**	**21 39 46.5**	**+0.4**
CN2				pmax	pmax		
comp=Z,10.0nm,0.7s,mb5.2							
NVAR	**Mina Array Bea**	**91.04**	**44**	P	**P**	**21 39 44.5**	**-2.1**
comp=Z,0.4nm,0.3s,mb4.2,baz=168,slow=1.7,SNR=3.1							
TUC	**Tucson**	**91.83**	**52**	*e*P	**P**	**21 39 50.5**	**+0.1**
comp=Z,14nm,1.4s,mb5.1							
TXAR	**Lajitas Array**	**95.02**	**58**	P	**P**	**21 40 03.7**	**-1.4**
comp=Z,0.1nm,0.7s,baz=225,slow=8.9,SNR=2.8							
TXAR				LR	LR	22 14 19.5	
comp=Z,67nm,18.1s,MS4.2,baz=30,slow=30							
LPAZ	**La Paz**	**98.70**	**116**	LR	LR	22 16 57.0	
comp=Z,66nm,18.3s,MS4.2,baz=192,slow=31							
PDAR	**Pinedale Array**	**98.93**	**45**	LR	LR	22 20 39.3	
comp=Z,57nm,18.4s,MS4.1,baz=78,slow=33							
CPUP	**Villa Florida**	**99.84**	**130**	LR	LR	22 17 39.6	
comp=Z,201nm,20.5s,MS4.6,baz=205,slow=31							
DLBC	**Dease Lake**	**99.88**	**24**	LR	LR	22 17 36.6	
comp=Z,194nm,21.1s,MS4.6,baz=294,slow=31							
ABKAR	**Akbulak array**	**133.09**	**309**	*e*PKPdf	PKPdf	21 45 56.8	-0.7
KIV	**Kislovodsk**	**145.06**	**301**	*e*PKPdf	PKPdf	21 46 19.0	-0.4
FINES	**FINESS Array B**	**146.67**	**337**	PKPbc	PKPbc	21 46 21.2	-2.1
comp=Z,8.4nm,0.8s,baz=59,slow=9.2,SNR=6.0							
FINES	**FINESS Array B**	**146.67**	**337**	PKPbc	PKPbc	21 46 21.2	-2.1
MMAI	**Mount Meron Ar**	**150.38**	**280**	PKPbc	PKPbc	21 46 32.0	-1.9
comp=Z,1.5nm,0.6s,baz=79,slow=7.5,SNR=2.6							
TORD	**Torodi Ar. Bea**	**160.49**	**185**	PKPab	PKPab	21 47 22.0	-1.6
comp=Z,0.7nm,1.0s,baz=230,slow=3.6,SNR=2.4							

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*BJI **04** 21:35:24.9,29°.19N×96°.12E,h27km,mB4.7/23,mb4.9/43, ML4.7/9,Ms4.3/44,Ms7 4.0/35*
*MOS **04** 21:35:25.5±0.9,29°.32N×96°.40E,h33km,mb4.9/45,Error ellipse: s-maj=8.5km s-min=4.5km az=117.1*
*LDG **04** 21:35:25.9±0.3,29°.31N×96°.12E,h33km,Mb4.7/13, Ms3.4/6,Error ellipse: s-maj=16.3km s-min=9.0km az=145.0*
*ISCJB **04** 21:35:25.9±0.5,29°.29N±0°.02×96°.26E±0°.02,h35km±5km, mb4.6/114,MS3.6/18,Error ellipse: s-maj=4.2km s-min=3.0km az=173.4*
*NEIC **04** 21:35:27.8±0.2,29°.33N×96°.32E,h35km,mb4.7/56,Error ellipse: s-maj=5.6km s-min=3.7km az=52.0*
*IDC **04** 21:35:27.1±7.7,29°.28N×96°.42E,h33km±58km,mb4.2/25, mb1 4.3/25,mb1mx4.2/31,mbtmp4.2/25,MS3.6/14, Ms1 3.6/14,ms1mx3.4/40,Error ellipse: s-maj=20.1km s-min=11.7km az=34.0*
*SZGRF **04** 21:35:38.0,29°.72N×94°.06E,h33km,mb4.8,Eastern Xizang-India border region*
ISC 04 21:35:28.7±0.4,29°.27N±0°.03×96°.28E±0°.02,h45km±4km, h60km±8.3km:pP-P,n292,σ1°02/308,mb4.6/114,MS3.6/18, 17C-18D,Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**4.50**	**277**	Pg	**Pn**	**21 36 37.9**	**+3.6**
LSA				Sn	**Sn**	**21 37 30.8**	**+5.5**
LSA				smax			
comp=E,1μm,0.5s							
IMP	**Imphal**	**4.93**	**206**	*i* P	**Pn**	**21 36 42.0**	**+1.7**
IMP				*i* S	**Sn**	**21 37 35.0**	**-1.1**
SHL	**Shillong**	**5.37**	**228**	⇑*i*P	**Pn**	**21 36 46.0**	**-0.4**
SHL				*ex*	x	21 37 14.0	
CD2	**Chengdu**	**6.68**	**74**	Pn	**Pn**	**21 37 06.4**	**+2.1**
CD2				Sn	**Sn**	**21 38 22.5**	**+3.4**
CD2				LR	LR		
comp=N,5μm,6.8s							
CD2				LR	LR		
comp=Z,2μm,6.5s							
GTK	**Gangtok**	**7.03**	**256**	*e*PKP	**Pn**	**21 37 12.5**	**+3.4**
GTK				*e*S	**Sn**	**21 38 28.5**	**+0.8**
KMI	**Kunming**	**7.08**	**124**	Pn	**Pn**	**21 37 11.2**	**+1.5**
KMI				Sn	**Sn**	**21 38 31.3**	**+2.4**
KMI				smax			
comp=N,170nm,1.0s							
KMI				smax			
comp=E,180nm,1.2s							
KMI				LR	LR		
comp=N,890nm,5.4s							
KMI				LR	LR		
comp=E,690nm,3.8s							
KMI				LR	LR		
comp=Z,570nm,5.2s							
SLGI	**Shiliguri**	**7.41**	**252**	*ex*	x	21 37 33.8	
TAPN	**Taplejung**	**7.79**	**258**	*e*Pn	**Pn**	**21 37 20.4**	**+0.8**
TAPN				*e*Sn	**Sn**	**21 38 44.5**	**-2.0**
comp=Z,1μm,0.6s							
ODAN	**Odare**	**8.21**	**255**	*e*Pn	**Pn**	**21 37 25.7**	**+0.4**
ODAN				*e*Sn	**Sn**	**21 38 54.6**	**-2.2**
comp=Z,778nm,0.4s							
RAMN	**Ramite**	**8.86**	**257**	*e*Pn	**Pn**	**21 37 34.1**	**0.0**

JIRN	**Jiri**	**9.03**	**262**	*e*Pn	**Pn**	**21 37 36.3**	**-0.2**
JIRN				*e*Sn	**Sn**	**21 39 12.3**	**-4.5**
comp=Z,786nm,0.4s							
GUN	**Gumba**	**9.24**	**264**	*e*Pn	**Pn**	**21 37 39.6**	**+0.1**
LZH	**Lanzhou**	**9.32**	**41**	P	**Pn**	**21 37 41.8**	**+1.4**
LZH				pP		21 37 47.8	
LZH				sP		21 37 51.2	
LZH				*e*S	**Sn**	**21 39 23.6**	**-0.2**
LZH				pmax	pmax		
comp=Z,63nm,1.0s							
LZH				pmax	pmax		
comp=Z,280nm,4.0s							
LZH				LR	LR		
comp=E,1μm,5.2s							
LZH				LR	LR		
comp=Z,2μm,6.8s							
GYA	**Guiyang**	**9.60**	**104**	P	**Pn**	**21 37 44.8**	**+0.4**
GYA				PP		21 37 54.3	
GYA				sP		21 37 58.9	
GYA				S	**Sn**	**21 39 44.6**	**+14**
GYA				SS		21 39 46.5	
GYA				pmax	pmax		
comp=Z,20nm,0.8s							
GYA				pmax	pmax		
comp=Z,120nm,4.3s							
GYA				LR	LR		
comp=N,8μm,10.8s							
GYA				LR	LR		
comp=E,7μm,11.2s							
PKI	**Pulchoki**	**9.72**	**263**	*e*Pn	**Pn**	**21 37 45.4**	**-0.6**
PKIN	**Phulchoki**	**9.73**	**263**	*e*Pn	**Pn**	**21 37 45.7**	**-0.4**
KKN	**Kakani**	**9.79**	**264**	*e*Pn	**Pn**	**21 37 46.7**	**-0.2**
KKN				*e*Sn	**Sn**	**21 39 30.8**	**-4.7**
comp=E,786nm,0.5s							
DMN	**Daman**	**9.98**	**263**	*e*Pn	**Pn**	**21 37 48.8**	**-0.7**
GKN	**Gorkha**	**10.31**	**266**	*e*Pn	**Pn**	**21 37 52.5**	**-1.6**
GKN				*e*Sn	**Sn**	**21 39 43.2**	**-5.1**
comp=E,634nm,0.4s							
GTA	**Gaotai**	**10.53**	**15**	*e*P	**Pn**	**21 37 57.2**	**+0.2**
GTA				pP		21 38 04.9	
GTA				sP		21 38 10.7	
GTA				S	**Sn**	**21 39 53.0**	**-0.6**
GTA				pmax	pmax		
comp=Z,4.0nm,0.8s							
GTA				pmax	pmax		
comp=Z,90nm,5.1s							
GTA				LR	LR		
comp=N,650nm,10.1s							
GTA				LR	LR		
comp=E,2μm,11.3s							
GTA				LR	LR		
comp=Z,380nm,6.2s							
CHTO	**Chiang Mai**	**10.68**	**166**	*e*P	**Pn**	**21 38 01.1**	**+1.9**
CHTO				pmax	pmax		
comp=Z,33nm,1.0s							
CHTO	**Chiang Mai**	**10.68**	**166**	*e*Pn	**Pn**	**21 38 01.1**	**+1.9**
comp=Z,32nm,1.0s							
BOK	**Bokaro**	**10.78**	**242**	*e*PKP	**Pn**	**21 37 59.4**	**-1.2**
BOK				*e*S	**Sn**	**21 39 51.1**	**-8.8**
CM31	**Chiang Mai Arr**	**11.03**	**167**	*e*Pn	**Pn**	**21 38 06.4**	**+2.5**
CMAR	**Chiang Mai Arr**	**11.03**	**167**	Pn	**Pn**	**21 38 05.5**	**+1.6**
comp=Z,0.7nm,0.3s,baz=342,slow=13,SNR=81							
CMAR				Lg		21 41 14.5	
baz=355,slow=30,SNR=2.5							
CMAR				LR	LR	21 41 59.8	
comp=Z,113nm,21.0s,baz=341,slow=36							
CMAR	**Chiang Mai Arr**	**11.03**	**167**	Pn	**Pn**	**21 38 05.5**	**+1.6**
CMAR				Lg		21 41 14.5	
CMAR				LR	LR	21 41 59.8	
XAN	**Xi'an**	**11.77**	**63**	P	**Pn**	**21 38 13.0**	**-1.0**
XAN				pP		21 38 23.0	
XAN				pmax	pmax		
comp=Z,12nm,1.0s							
XAN				pmax	pmax		
comp=Z,10.0nm,6.2s							
XAN				LR	LR		
comp=N,890nm,13.5s							
XAN				LR	LR		
comp=E,200nm,11.3s							
XAN				LR	LR		
comp=Z,130nm,11.3s							
PTH	**Pithoragarh**	**14.01**	**275**	*e*PKP	**Pn**	**21 38 42.4**	**-2.2**
WHN	**Wuhan**	**15.72**	**81**	P	**Pn**	**21 39 01.1**	**-6.0**
WHN				S	**S**	**21 41 59.3**	**-14**
WHN				LR	LR		
comp=N,2μm,11.2s							
WHN				LR	LR		
comp=E,1μm,14.9s							
WHN				LR	LR		
comp=Z,570nm,10.4s							
DDI	**Dehra Dun**	**15.86**	**278**	⇓*i*P	**Pn**	**21 39 06.0**	**-2.9**
DDI				*ex*	x	21 41 55.0	
BTO	**Baotou**	**15.94**	**41**	*e*P	**Pn**	**21 39 07.2**	**-2.7**
QIZ	**Qiongzhong**	**16.02**	**126**	P	**Pn**	**21 39 10.3**	**-0.6**
QIZ				pP	pP	21 39 20.0	-4.4
QIZ				sP	sP	21 39 26.8	-3.2
QIZ				S	**S**	**21 42 09.9**	**-10**
QIZ				pmax	pmax		
comp=Z,18nm,1.4s							
QIZ				LR	LR		
comp=N,190nm,9.3s							
QIZ				LR	LR		
comp=E,110nm,11.4s							
QIZ				LR	LR		
comp=Z,300nm,14.4s							
WMQ	**Urumqi**	**16.07**	**337**	P	**

comp=Z,14nm,0.7s
BJI pmax pmax
comp=Z,120nm,5.0s
BJI LR LR
comp=N,770nm,8.5s
BJI LR LR
comp=E,670nm,9.0s
BJI LR LR
comp=Z,190nm,26.6s
KSH Kashi 19.59 307 *e*P **Pn 21 39 56.1 +1.4**
KSH pP pP 21 40 03.0 -0.8
KSH sP sP 21 40 07.9 -1.5
KSH pmax pmax
comp=Z,8.0nm,0.5s
KSH LR LR
comp=N,250nm,6.9s
KSH LR LR
comp=E,220nm,7.0s
KSH LR LR
comp=Z,230nm,14.4s
NJ2 Nanjing 19.61 76 *e*P **Pn 21 39 54.2 -0.8**
NJ2 pP pP 21 40 04.2 +0.2
NJ2 sP sP 21 40 07.2 -2.5
NJ2 PP 21 40 11.2
NJ2 S **S 21 43 28.5 -3.8**
NJ2 sS sS 21 43 46.5 -2.9
NJ2 pmax pmax
comp=Z,20nm,0.6s
NJ2 pmax pmax
comp=Z,70nm,7.0s
NJ2 LR LR
comp=N,350nm,12.0s
NJ2 LR LR
comp=E,200nm,10.9s
NJ2 LR LR
comp=Z,790nm,14.7s
HYB Hyderabad 20.07 238 *e*P **P 21 40 02.5 +4.1**
HYB Hyderabad 20.07 238 *i* P **P 21 40 02.5 +4.1**
CHCP Chirah Chowk 20.11 288 P **P 21 39 59.8 +1.1**
SONM Songino Array 20.12 20 P **P 21 39 58.5 -0.3**
comp=Z,24nm,1.0s,baz=203,slow=11,SNR=70
SONM LR LR 21 49 12.0
comp=Z,96nm,19.8s,MS3.1,baz=202,slow=41
ULN Ulaanbaatar 20.36 21 *e*P **P 21 40 00.8 -0.5**
ULN pmax pmax
comp=Z,35nm,1.0s
ULN Ulaanbaatar 20.36 21 *e*P **P 21 40 00.8 -0.5**
comp=Z,35nm,1.0s
MK31 Makanchi Array 20.63 332 *e*P **P 21 40 04.1 -0.1**
MKAR Makanchi Array 20.63 332 P **P 21 40 04.0 -0.2**
comp=Z,12nm,0.5s,baz=140,slow=13,SNR=98
MKAR LR LR 21 48 23.8
comp=Z,63nm,18.2s,MS3.0,baz=140,slow=38
MKAR Makanchi Array 20.63 332 P **P 21 40 04.0 -0.2**
MKAR LR LR 21 48 23.8
ULHL Ulahol 20.73 314 P **P 21 40 07.4 +2.0**
SNR=6.3
KZA Kyzart 21.27 313 P **P 21 40 13.7 +2.4**
SNR=8.3
TKM2 Tokmak 2 21.49 315 P **P 21 40 15.5 +1.9**
SNR=37
TKM2 Tokmak 2 21.49 315 *e*P **P 21 40 15.2 +1.6**
TKM2 pmax pmax
comp=Z,29nm,0.6s,mb4.8
TKM2 Tokmak 2 21.49 315 *e*P **P 21 40 15.2 +1.6**
comp=Z,29nm,0.6s,mb4.8
KBK Karagaybulak 21.76 314 P **P 21 40 18.7 +2.3**
SNR=25
AAK Ala-Archa 22.04 313 P **P 21 40 21.3 +1.9**
SNR=8.0
AAK Ala-Archa 22.04 313 P **P 21 40 20.6 +1.2**
comp=Z,4.0nm,0.4s,mb4.2,baz=120,slow=4.9,SNR=18
CHMS Chumysh 22.06 314 P **P 21 40 15.8 -3.8**
SNR=8.8
FRU Bishkek 22.06 314 *e*P **P 21 40 22.0 +2.4**
FRU pmax pmax
comp=Z,50nm,2.0s,mb4.6
USP Ospenovka 22.36 315 P **P 21 40 23.7 +0.9**
SNR=10.0
EKS2 Erkin-Say 22.51 312 P **P 21 40 27.4 +3.0**
SNR=7.6
EKS2 Erkin-Say 22.51 312 *e*P **P 21 40 25.5 +1.1**
comp=Z,28nm,0.8s,mb4.8
MOY Mondy 22.65 8 *e*P **P 21 40 26.2 +0.4**
YHNB Yeheng 22.81 96 *e*P **P 21 40 27.5 -0.3**
comp=Z,27nm,0.9s,mb4.7
TLY Talaya 23.06 12 *e*P **P 21 40 29.5 -0.6**
TLY *e*S **S 21 44 39.7 +2.2**
TLY *e*SS 21 45 32.9
TLY pmax pmax
comp=Z,12nm,1.3s,mb4.2
TLY MLR MLR
comp=Z,104nm,13.0s,MS3.5
TLY Talaya 23.06 12 *e*P **P 21 40 29.6 -0.4**
comp=Z,7.9nm,0.9s,mb4.1
POO Poona 23.09 247 *e*PKP **P 21 40 28.8 -1.9**
POO *i* S **S 21 44 42.0 +3.5**
TWG Pinlang 23.15 100 *e*P **P 21 40 32.5 +1.1**
comp=Z,18nm,0.3s,mb5.0
KAD Karad 23.48 244 *e*PKP **P 21 40 35.5 +0.9**
KAD AMb AMB 21 40 55.5
comp=Z,67nm,1.4s,mb4.9
KBL Kabul 23.68 290 *e*P **P 21 40 36.6 +0.3**
KBL pmax pmax
comp=Z,34nm,0.6s,mb5.0
KBL Kabul 23.68 290 *e*P **P 21 40 36.6 +0.3**
comp=Z,34nm,0.6s,mb5.0
IRK Irkutsk 23.71 12 *e*P **P 21 40 36.6 +0.2**
IRK pmax pmax
comp=Z,64nm,0.8s,mb5.1
KULM Kulim 24.20 169 *e*P **P 21 40 41.2 0.0**
comp=Z,28nm,1.2s,mb4.6
KULM *ep*P 21 40 59.4
KK31 Karatay Array 24.85 311 *i* P **P 21 40 46.9 0.0**
KK31 pmax pmax
comp=Z,13nm,0.9s,mb4.5
KURK Kurchatov 25.22 333 P **P 21 40 49.8 -0.3**
comp=Z,6.9nm,0.7s,mb4.3,baz=143,slow=10,SNR=28
KURK LR LR 21 51 10.1
comp=Z,113nm,19.0s,MS3.4,baz=165,slow=37
KURK Kurchatov 25.22 333 *ce*P **P 21 40 50.1 0.0**
KURK pmax pmax
comp=Z,9.0nm,0.7s,mb4.4
KURK Kurchatov 25.22 333 *e*P **P 21 40 50.2 +0.1**
comp=Z,20nm,0.8s,mb4.7
QUE Quetta 25.46 279 *e*P **P 21 40 58.0 +5.4**
QUE *e*S **S 21 45 25.0 +8.4**
ZAA0 Zalesovo Array 26.04 344 *e*P **P 21 40 57.5 0.0**
ZALV Zalesovo Beam 26.04 344 P **P 21 40 57.8 +0.3**
comp=Z,4.5nm,0.6s,mb4.2,baz=159,slow=11,SNR=22
ZALV LR LR 21 52 24.6
comp=Z,48nm,18.9s,MS3.1,baz=132,slow=39
KRAR Krasnoyarsk 26.84 356 *d i*P **P 21 41 05.4 +0.6**
KRAR pmax pmax
comp=Z,11nm,0.5s,mb4.6
CN2 Changchun 27.39 50 *e*P **P 21 41 09.2 -0.6**
CN2 *ep*P pP 21 41 18.6 -3.1
CN2 *e*S **S 21 45 44.2 -2.6**
CN2 pmax pmax
comp=Z,20nm,0.8s,mb4.7
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,16.0s,MS3.9
CN2 LR LR
comp=E,200nm,16.0s,MS3.9
KSRS Korea Array 27.56 64 P **P 21 41 08.8 -2.7**
comp=E,2.0nm,0.6s,mb3.9,baz=259,slow=9.1,SNR=15
KSRS LR LR 21 52 14.2
comp=E,79nm,18.5s,MS3.3,baz=292,slow=37
KSRS Korea Array 27.56 64 P **P 21 41 08.8 -2.7**
KSRS pmax pmax
comp=Z,2.0nm,0.6s,mb3.9
KSRS MLR MLR
comp=Z,79nm,18.5s,MS3.3
VOSK Vostochnaya 29.95 329 P **P 21 41 30.9 -1.5**
VOSK pmax pmax
comp=Z,7.0nm,1.0s,mb4.3
BVAR Borovoye Array 30.41 329 P **P 21 41 37.0 +0.5**
comp=Z,3.1nm,0.6s,mb4.2,baz=135,slow=10,SNR=28
MDJ Mudanjiang 30.46 51 P **P 21 41 36.0 -1.1**
MDJ sP sP 21 41 48.6 -5.8
MDJ PP PP 21 42 43.5 -2.9
MDJ PcP PcP 21 44 35.8 +0.2
MDJ S **S 21 46 31.9 -3.2**
MDJ pmax pmax
comp=Z,8.0nm,1.2s,mb4.3
MDJ pmax pmax
comp=Z,28nm,4.8s
MDJ LR LR
comp=N,95nm,23.6s,MS3.5
MDJ LR LR
comp=E,51nm,21.0s,MS3.5
MDJ LR LR
comp=Z,55nm,28.9s
BRVK Borovoye 30.48 329 *c i*P **P 21 41 37.5 +0.3**
BRVK pmax pmax
comp=Z,8.0nm,1.0s,mb4.4
BRVK Borovoye 30.48 329 *e*P **P 21 41 37.2 +0.1**
comp=Z,8.9nm,0.7s,mb4.6
KSM Kuching 30.70 152 *e*P **P 21 41 39.8 +0.3**
comp=Z,7.9nm,0.5s,mb4.8
ZRNK Zerenda 31.01 327 P **P 21 41 40.8 -1.0**
KLR Kul'dur 33.51 44 *e*P **P 21 41 58.8 -5.0**
AB31 Akbulak array 34.05 316 P **P 21 42 08.8 +0.3**
AB31 pmax pmax
comp=Z,4.0nm,0.4s,mb4.7
ABKAR Akbulak array 34.05 316 *e*P **P 21 42 09.0 +0.5**
comp=Z,5.0nm,0.6s,mb4.6
HABR Khabarovsk 35.28 46 *e*P **P 21 42 16.4 -2.7**
HABR *e**PP pP 21 42 29.2 -1.9
HABR *e* 21 43 35.2
HABR *e* 21 44 46.1
HABR *e*S **S 21 47 46.9 -2.8**
HABR *e*SS SS 21 50 08.6 -16
HABR *e* 21 52 31.4
HABR pmax pmax
comp=N,10.0nm,0.9s
HABR pmax pmax
comp=Z,30nm,1.8s,mb4.9
HABR pmax pmax
comp=E,20nm,1.4s
HABR MLR MLR
comp=Z,46nm,18.0s,MS3.3
AKTK Aktyubinsk 35.65 317 P **P 21 42 22.0 -0.2**
AKTO Aktyubinsk 35.65 317 P **P 21 42 22.0 -0.2**
comp=Z,3.7nm,0.6s,mb4.5,baz=110,slow=8.9,SNR=11
MJAR Matsushiro Arr 35.72 67 P **P 21 42 20.2 -2.9**
comp=Z,0.9nm,0.4s,mb4.1,baz=273,slow=11,SNR=6.8
SVE Sverdlovsk 37.19 328⇑ *e*P **P 21 42 36.5 +1.2**
SVE pmax pmax
comp=Z,19nm,0.7s,mb5.0
ARU Arti 37.97 326 *e*P **P 21 42 42.3 +0.4**
ARU pmax pmax
comp=Z,9.0nm,0.6s,mb4.7
ARU Arti 37.97 326 *e*P **P 21 42 42.2 +0.4**
comp=Z,9.4nm,0.6s,mb4.7
YAK Yakutsk 39.39 24 *e*P **P 21 42 52.7 -1.0**
YAK pmax pmax
comp=Z,36nm,0.9s,mb5.1
YAK pmax pmax
comp=N,8.0nm,1.0s
YAK pmax pmax
comp=E,13nm,1.2s
YAK Yakutsk 39.39 24 *e*P **P 21 42 53.1 -0.6**
comp=E,42nm,0.8s,mb5.2
ERM Erimo 39.70 58⇑ *i*P **P 21 42 55.5 -1.1**
ERM pmax pmax
comp=Z,75nm,2.5s,mb5.0
YSS Yuzh-Sakhalins 39.96 51⇑ *i*P **P 21 42 58.0 -0.7**
YSS pmax pmax
comp=Z,20nm,0.5s,mb5.1
YSS Yuzh-Sakhalins 39.96 51 *e*P **P 21 42 58.7 0.0**
comp=Z,25nm,0.8s,mb5.0
SOKR Solikamsk 40.37 330⇓ *i*P **P 21 43 03.1 +1.2**
SOKR pmax pmax
comp=Z,9.0nm,0.9s,mb4.5
KBD Kabd 42.16 282 *e*P **P 21 43 16.7 -0.3**
KBD AMb AMB 21 43 17.5
comp=Z,37nm,0.5s,mb5.2
RDF Al-Radifah 42.34 282 *e*P **P 21 43 18.9 +0.4**
RDF AMb AMB 21 43 19.9
comp=Z,81nm,0.6s,mb5.6
NAY Al-Naaiem 42.53 282 *e*P **P 21 43 19.7 -0.3**
NAY AMb AMB 21 43 20.9
comp=Z,38nm,0.8s,mb5.2
GNI Garni 43.21 299⇑ *e*P **P 21 43 25.9 +0.5**
GNI pmax pmax
comp=Z,4.0nm,1.0s
GNI Garni 43.21 299 *e*P **P 21 43 24.4 -0.9**
comp=Z,8.8nm,1.1s,mb4.4
ZEI Tsey 43.80 303 *e*P **P 21 43 30.5 +0.4**
ZEI pmax pmax
comp=Z,8.0nm,0.5s,mb4.7
KIV Kislovodsk 44.69 304⇓ *i*P **P 21 43 38.2 +1.0**
KIV pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
KIV MLR MLR
comp=Z,100nm,17.0s,MS3.8
KIV Kislovodsk 44.69 304 *e*P **P 21 43 37.5 +0.3**
comp=Z,9.6nm,0.9s,mb4.6
TIXI Tiksi 46.01 14 *e*P **P 21 43 45.5 -1.8**
TIXI pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
TIXI Tiksi 46.01 14 *e*P **P 21 43 45.5 -1.8**
comp=Z,5.1nm,0.7s,mb4.6
VSR Storozhevoye 47.43 314 *e*P **P 21 43 57.4 -1.3**
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VSR pmax pmax
comp=N,1.0nm,0.2s
VSR pmax pmax
comp=E,1.0nm,0.3s
SEY Seymchan 49.05 30 *c i*P **P 21 44 10.9 -0.1**
OBN Obninsk 49.37 319 *e*P **P 21 44 13.5 0.0**
OBN pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
PETK Petropavlovsk- 50.20 44 P **P 21 44 19.0 -0.9**
comp=Z,8.3nm,0.7s,mb4.9,baz=224,slow=4.8,SNR=12
MMAI Mount Meron Ar 51.61 291 P **P 21 44 31.0 +0.2**
comp=Z,0.3nm,0.3s,mb3.7,baz=81,slow=12,SNR=3.8
BR131 Keskin Array S 51.74 299 *e*P **P 21 44 31.8 +0.1**
comp=Z,1.9nm,0.5s,mb4.3
BR131 *ep*P pP 21 44 49.2 +5.0
BRTR Keskin Array B 51.74 299 P **P 21 44 31.7 0.0**
comp=Z,1.9nm,0.5s,mb4.2,baz=126,slow=6.3,SNR=16
BRTR LR LR 22 10 23.3
comp=Z,40nm,20.1s,MS3.4,baz=197,slow=40
JOF Joensuu 53.02 329 *e*P **P 21 44 40.4 -0.3**
JOF pmax pmax
comp=Z,3.0nm,0.4s,mb4.6
JOF Joensuu 53.02 329 *ep* **P 21 44 40.4 -0.3**
comp=Z,3.0nm,0.4s,mb4.6
AKASG Malin Array Be 53.71 313 P **P 21 44 45.5 -0.5**
comp=Z,8.7nm,0.5s,mb4.9,baz=78,slow=6.8,SNR=23
AKBB Malin Array Si 53.71 313 *e*P **P 21 44 45.4 -0.6**
KIEV Kiev 53.72 313 *e*P **P 21 44 45.6 -0.5**
KIEV pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
KIEV Kiev 53.72 313 *e*P **P 21 44 45.6 -0.5**
comp=Z,8.4nm,0.6s,mb4.8
VSU Vasula 54.95 323⇑ *i*P **P 21 44 54.9 0.0**
VSU pmax pmax
comp=Z,13nm,1.0s,mb4.9
FITZ Fitzroy Crossi 54.96 145 P **P 21 44 54.5 -0.9**
comp=Z,3.0nm,1.0s,mb4.3,baz=325,slow=14,SNR=2.8
NACGM Naroch 54.99 319 *e* **P 21 44 52.0 -3.3**
MBWA Marble Bar 54.99 153 *e*P **P 21 44 54.6 -1.0**
comp=Z,2.6nm,0.6s,mb4.4
IDID Didziasalis 55.00 319 *e*P **P 21 44 55.4 +0.1**
IDID AMB AMB 21 44 59.2
comp=Z,3.3nm,0.9s,mb4.3
KAF Kangasniemi 55.26 327 *e*P **P 21 44 56.9 -0.2**
KAF pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
KAF Kangasniemi 55.26 327 *e*P **P 21 44 56.9 -0.2**
comp=Z,4.2nm,0.8s,mb4.5
KAF Kangasniemi 55.26 327 *ep* **P 21 44 56.9 -0.2**
comp=Z,4.2nm,0.8s,mb4.5
IZAR Zarasai 55.26 320 *e*P **P 21 44 57.5 +0.2**
IZAR AMB AMB 21 45 00.3
comp=Z,2.4nm,0.9s,mb4.2
IIGN Ignalina 55.29 319 *e*P **P 21 44 57.5 +0.1**
IIGN AMB AMB 21 44 59.6
comp=Z,4.9nm,1.3s,mb4.4
ISAL Salakas 55.34 319 *e*P **P 21 44 58.0 +0.2**
ISAL AMB AMB 21 44 59.9
comp=Z,4.6nm,1.3s,mb4.3
FINES FINESS Array B 55.34 327 P **P 21 44 58.0 +0.3**
comp=Z,2.5nm,0.5s,mb4.5,baz=88,slow=7.8,SNR=31
BILL Bilibino 55.73 25 *d i*P **P 21 44 59.9 -0.5**
BILL *e* 21 45 58.8
BILL pmax pmax
comp=Z,20nm,1.2s,mb5.0
BILL Bilibino 55.73 25 *e*P **P 21 45 00.1 -0.3**
comp=Z,6.9nm,0.8s,mb4.7
VRI Vrincioaia 55.86 308 ⇓P **P 21 45 02.4 +0.7**
VRI Vrincioaia 55.86 308 ⇓*i*P **P 21 45 02.4 +0.7**
PLOR Plostina 55.92 308 ⇑P **P 21 45 03.1 +1.0**
PLOR Plostina 55.92 308 ⇑*i*P **P 21 45 03.1 +1.0**
ISR Istrita 56.10 307 ⇑P pP 21 45 16.3 +0.2
ISR Istrita 56.10 307 ⇑*i*P pP 21 45 16.3 +0.2
ARCES ARCESS Array B 56.19 336 P **P 21 45 04.0 +0.3**
comp=Z,1.4nm,0.4s,mb4.3,baz=83,slow=7.0,SNR=10
MLR Muntele Rosu 56.46 307 ⇑P **P 21 45 07.1 +1.1**
MLR Muntele Rosu 56.46 307 ⇑*i*P **P 21 45 07.1 +1.1**
BURAR Bucovina Array 56.64 310 ⇓P **P 21 45 07.2 0.0**
BURAR Bucovina Array 56.64 310 ⇓*i*P **P 21 45 07.2 0.0**
BUR08 Bucovina Ar. S 56.64 310 *e*P **P 21 45 07.0 -0.2**
VOIR 57.09 307 ⇓P **P 21 45 05.5 -5.0**
VOIR 57.09 307 ⇓*i*P **P 21 45 05.5 -5.0**
SUW Suwalki 57.15 318 *e*P **P 21 45 10.6 0.0**
SUW Suwalki 57.15 318 *e*P **P 21 45 10.1 -0.6**
comp=Z,43nm,1.1s,mb5.4
KWP Kalwaria Pacla 57.99 313 *e*P **P 21 45 17.3 +0.6**
KWP Kalwaria Pacla 57.99 313 *e*P **P 21 45 16.8 +0.1**
comp=Z,26nm,1.0s,mb5.2
CRVS Cervenica-Dubn 58.91 312 *e*P **P 21 45 24.5 +1.4**
CRVS pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
CRVS Cervenica-Dubn 58.91 312 *e*P **P 21 45 24.5 +1.4**
comp=Z,2.6nm,0.8s,mb4.3
CRVS Cervenica-Dubn 58.91 312 *e*P **P 21 45 24.5 +1.4**
VTS Vitosha 58.95 304 ⇓P **P 21 45 24.2 +0.7**
VTS Vitosha 58.95 304 ⇓*i*P **P 21 45 24.2 +0.7**
STHS Stebnicka Huta 58.96 313 *e*P **P 21 45 23.5 0.0**
STHS pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
STHS Stebnicka Huta 58.96 313 *e*P **P 21 45 23.5 0.0**
comp=Z,1.7nm,0.7s,mb4.2
STHS Stebnicka Huta 58.96 313 *e*P **P 21 45 23.5 0.0**
OJC Ojcow 59.74 314 *e*P **P 21 45 26.7 -2.1**
PSZ Piszkesteto 60.12 311 *e*P **P 21 45 31.9 +0.4**
PSZ pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
PSZ Piszkesteto 60.12 311 *e*P **P 21 45 31.9 +0.4**
comp=Z,3.1nm,0.8s,mb4.4
VYHS Vyhne 60.70 312 *e*P **P 21 45 35.7 +0.3**
VYHS pmax pmax
comp=Z,2.0nm,1.3s,mb4.1
VYHS Vyhne 60.70 312 *e*P **P 21 45 35.7 +0.3**
comp=Z,2.3nm,1.3s,mb4.2
VYHS Vyhne 60.70 312 *e*P **P 21 45 35.7 +0.3**
KOLL Kolacno 60.96 312 *e*P **P 21 45 37.9 +0.7**
KOLL Kolacno 60.96 312 *e*P **P 21 45 37.9 +0.7**
WRAB Tennant Creek 61.16 139 *e*P **P 21 45 38.2 -0.6**
WRAB pmax pmax
comp=Z,15nm,0.8s,mb5.2
WRAB Tennant Creek 61.16 139 *e*P **P 21 45 38.2 -0.6**
comp=Z,15nm,0.8s,mb5.2
WRA Warramunga Arr 61.16 139 P **P 21 45 38.6 -0.2**
comp=Z,6.5nm,0.6s,mb4.9,baz=324,slow=8.0,SNR=88
MORC Moravsky Berou 61.26 314 ⇓P **P 21 45 39.9 +0.7**
MORC Moravsky Berou 61.26 314 *e*P **P 21 45 39.2 +0.1**
comp=Z,2.8nm,0.9s,mb4.4
MORC Moravsky Berou 61.26 314 ⇓*i*P **P 21 45 39.9 +0.7**
PKSM Moragy 61.33 309 ⇓P **P 21 45 39.4 -0.3**
PKSM Moragy 61.33 309 ⇓*i*P **P 21 45 39.4 -0.3**
DPC Dobruska-Polom 61.90 314 *e*P **P 21 45 44.3 +0.8**
DPC *ex* x 21 45 49.6
UPC Upice 62.06 315 *e*P **P 21 45 45.4 +0.8**
UPC *ex* x 21 45 51.0
NB2 NORSAR Subarra 62.52 327 P **P 21 45 47.6 +0.1**
comp=Z,1.6nm,0.5s,mb4.4,baz=80,slow=6.9
NOA NORSAR Array B 62.52 327 P **P 21 45 47.3 -0.2**
comp=Z,1.6nm,0.5s,mb4.4,baz=80,slow=6.7,SNR=11
NOA LR LR 22 15 03.0
comp=Z,50nm,21.9s,MS3.6,baz=80,slow=38
TREC Trest 62.67 313 *e*P **P 21 45 49.2 +0.5**
TREC Trest 62.67 313 *e*P **P 21 45 49.2 +0.5**
CONA Conrad Observa 62.76 312 ⇑*i*P **P 21 45 49.8 +0.5**
comp=Z,8.9nm,1.0s,mb4.9
PVCC Panska Ves 62.95 315 *e*P **P 21 45 51.7 +1.2**
PRU Pruhonice 63.10 314 *e*P **P 21 45 52.9 +1.4**
PRU *e* 21 45 57.8
PRU Pruhonice 63.10 314 *e*P **P 21 45 52.9 +1.4**
PRU *ex* x 21 45 57.8
BRG Berggiesshubel 63.25 315 *e*P **P 21 45 52.6 +0.1**
comp=Z,2.0nm,0.8s,mb4.3
KONO Kongsberg 63.60 326 *e*P **P 21 45 55.4 +0.7**
KONO pmax pmax
comp=Z,12nm,1.2s,mb4.8
KONO Kongsberg 63.60 326 *e*P **P 21 45 55.4 +0.7**
comp=Z,12nm,1.2s,mb4.8
SOKA Soboth 63.63 311 ⇓*i*P **P 21 45 55.1 0.0**
comp=Z,3.6nm,0.8s,mb4.5
CLL Collm 63.72 316 *e*(sP) sP 21 46 21.0 +7.4
CLL *e*SSSS 22 02 12.0
CLL LmV 22 14 00.0
comp=Z,100nm,20.9s
ASAR Alice Springs 63.87 141 P **P 21 45 56.6 -0.2**
comp=Z,2.7nm,0.6s,mb4.5,baz=325,slow=6.8,SNR=50
KMBO Kilima Mbogo 63.89 253 *e*P **P 21 45 57.3 0.0**
KMBO *e**PP pP 21 46 15.4 +5.2
KMBO pmax pmax
comp=Z,5.0nm,0.9s
KMBO Kilima Mbogo 63.89 253 *e*P **P 21 45 57.2 -0.1**
comp=Z,4.6nm,0.9s,mb4.5
KMBO *ep*P pP 21 46 15.4 +5.2
KHC Kasperske Hory 63.92 313 *e*P **P 21 45 57.5 +0.5**
KHC *e* 21 46 02.4
KHC Kasperske Hory 63.92 313 *e*P **P 21 45 57.5 +0.5**
KHC *ex* x 21 46 02.4
TANN Tannenbergstha 64.28 315 *e*P **P 21 46 00.1 +0.8**
comp=Z,4.0nm,0.9s,mb4.5
WET Wettzell 64.36 314 *e*P **P 21 46 00.2 +0.4**
comp=Z,3.0nm,0.6s,mb4.5
WERD Werda 64.37 315 *e*P **P 21 45 59.7 -0.2**
comp=Z,4.0nm,1.0s,mb4.4
GUNZ Gunzen 64.38 315 *e*P **P 21 46 00.5 +0.6**
comp=Z,5.0nm,0.8s,mb4.6
BSEG Bad Segeberg 64.62 319 *e*P **P 21 46 02.3 +0.8**
comp=Z,4.0nm,0.8s,mb4.5
MOX Moxa 64.74 315 *e*P **P 21 46 03.2 +0.9**
MOX Moxa 64.74 315 *e*P **P 21 46 02.9 +0.6**
comp=Z,12nm,1.5s,mb4.7
RJOB Jochberg 64.80 312 *e*P **P 21 46 02.5 -0.3**
comp=Z,6.0nm,0.9s,mb4.6
GRF Grafenberg Arr 65.25 315 *e*P **P 21 46 06.5 +0.9**
comp=Z,19nm,1.2s,mb5.0
GRF Grafenberg Arr 65.25 315 *e*P **P 21 46 06.5 +0.9**
GRF pmax pmax
comp=Z,19nm,1.2s,mb5.0
CEL Celeste 65.50 301 *e*P **P 21 46 07.2 -0.2**
comp=Z,26nm,0.9s,mb5.2
FUR Furstenfeldbru 65.66 313 *e*P **P 21 46 08.9 +0.6**
comp=Z,15nm,0.6s,mb5.2
FETA Feichten 66.36 312 ⇑*i*P **P 21 46 12.6 -0.2**
comp=Z,9.1nm,0.9s,mb4.8
VAE Valguarnera 66.86 301 LR LR 22 20 55.6
comp=Z,78nm,21.0s,MS3.9,baz=310,slow=41
DAVOX Davos/Dischmat 66.99 312 LR LR 22 22 13.4
comp=Z,28nm,19.8s,MS3.5,baz=99,slow=42
BFO Black Forest 67.48 314 *e*P **P 21 46 19.8 -0.1**
comp=Z,8.0nm,1.2s,mb4.6
CDF Champ du Feu 68.11 314 *e*P **P 21 46 23.8 -0.1**
comp=Z,13nm,1.1s,mb4.5
CDF Champ du Feu 68.11 314 *e*P **P 21 46 23.8 -0.1**
CDF pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
CDF Champ du Feu 68.11 314 *e*P **P 21 46 23.8 -0.1**
comp=Z,6.3nm,1.1s,mb4.6
WLF Walferdange 68.38 316 *e*P **P 21 46 26.9 +1.3**
comp=Z,13nm,1.2s,mb4.8
CTAO Charters Tower 68.77 129 *e*P **P 21 46 29.2 +0.9**
CTAO pmax pmax
comp=Z,23nm,1.3s,mb5.0
CTAO Charters Tower 68.77 129 *e*P **P 21 46 29.2 +0.9**
comp=Z,23nm,1.3s,mb5.0
LPG La Plagne 69.47 311 *e*P **P 21 46 32.9 +0.5**
comp=Z,18nm,0.9s,mb4.7
LPG La Plagne 69.47 311 *e*P **P 21 46 32.9 +0.5**
LPG pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
LPG La Plagne 69.47 311 *e*P **P 21 46 32.9 +0.5**
comp=Z,9.0nm,0.9s,mb4.7
MEZF Maizieres J'vi 69.47 315 *e*P **P 21 46 32.5 +0.2**

LPL La Plagne 69.47 311 *eP* **P 21 46 32.8 +0.4**
comp=Z,16nm,0.8s,mb4.7
LPL La Plagne 69.47 311 *eP* **P 21 46 32.8 +0.4**
LPL pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
LPL La Plagne 69.47 311 *eP* **P 21 46 32.8 +0.4**
comp=Z,8.2nm,0.8s,mb4.7
SBF Sospel 69.60 310 *eP* **P 21 46 32.3 -0.9**
MBDF Montbardon 69.73 311 *eP* **P 21 46 34.1 +0.1**
comp=Z,34nm,1.3s,mb4.8
MBDF Montbardon 69.73 311 *eP* **P 21 46 34.1 +0.1**
MBDF pmax pmax
comp=Z,17nm,1.3s,mb4.8
MBDF Montbardon 69.73 311 *eP* **P 21 46 34.1 +0.1**
comp=Z,17nm,1.3s,mb4.8
SMF Signal de Mont 70.92 313 *eP* **P 21 46 40.9 -0.4**
comp=Z,8.2nm,0.7s,mb4.5
SMF Signal de Mont 70.92 313 *eP* **P 21 46 40.9 -0.4**
SMF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
SMF Signal de Mont 70.92 313 *eP* **P 21 46 40.9 -0.4**
comp=Z,4.1nm,0.7s,mb4.5
SSF Saint Saulge 70.97 314 *eP* **P 21 46 41.2 -0.4**
comp=Z,17nm,1.0s,mb4.6
SSF Saint Saulge 70.97 314 *eP* **P 21 46 41.2 -0.4**
SSF pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
SSF Saint Saulge 70.97 314 *eP* **P 21 46 41.2 -0.4**
comp=Z,8.4nm,1.0s,mb4.6
AVF Avril sur Loir 71.18 314 *eP* **P 21 46 42.5 -0.3**
comp=Z,10nm,1.0s,mb4.4
AVF Avril sur Loir 71.18 314 *eP* **P 21 46 42.5 -0.3**
AVF pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
AVF Avril sur Loir 71.18 314 *eP* **P 21 46 42.5 -0.3**
comp=Z,5.1nm,1.0s,mb4.4
KEST Kesra 71.29 301 P **P 21 46 44.0 +0.3**
comp=Z,1.3nm,0.6s,mb4.0,baz=229,slow=3.1,SNR=7.0
LDF La Druitiere 72.60 316 *eP* **P 21 46 50.5 -0.8**
CAF Calviac 72.75 312 *eP* **P 21 46 52.4 +0.2**
comp=Z,21nm,1.3s,mb4.6
CAF Calviac 72.75 312 *eP* **P 21 46 52.4 +0.2**
CAF pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
CAF Calviac 72.75 312 *eP* **P 21 46 52.4 +0.2**
comp=Z,10nm,1.3s,mb4.6
GRR Gorron 73.14 316 *eP* **P 21 46 54.0 -0.5**
PPLA Purkeypile 73.41 26 *eP* **P 21 46 55.9 +0.1**
comp=Z,9.8nm,0.7s,mb4.8
MFF Saint Martin d 73.45 314 *eP* **P 21 46 54.9 -1.5**
TRF Thorofare Moun 73.84 25 *eP* **P 21 46 58.8 +0.4**
comp=Z,3.0nm,0.8s,mb4.3
COLA College 73.92 24 *eP* **P 21 46 58.5 -0.3**
COLA pmax pmax
comp=Z,12nm,1.1s,mb4.7
COLA College 73.92 24 *eP* **P 21 46 58.5 -0.3**
comp=Z,12nm,1.1s,mb4.7
MCK McKinley 74.18 25 *eP* **P 21 47 00.3 0.0**
MCK pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
MCK McKinley 74.18 25 *eP* **P 21 47 00.3 0.0**
comp=Z,6.1nm,0.6s,mb4.7
STKA Stephens Creek 74.50 141 P **P 21 47 02.1 -0.5**
comp=Z,2.8nm,0.8s,mb4.2,baz=291,slow=7.7,SNR=4.2
PMR Palmer 75.33 27 *eP* **P 21 47 06.0 -1.0**
PMR pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
PMR Palmer 75.33 27 *eP* **P 21 47 06.0 -0.9**
comp=Z,6.8nm,0.8s,mb4.6
KDAK Kodiak Island 76.00 31 LR LR 22 23 50.0
comp=Z,107nm,19.5s,MS4.2,baz=280,slow=38
INK Inuvik 76.01 17 *eP* **P 21 47 10.6 -0.1**
comp=Z,9.3nm,0.8s,mb4.8,baz=345,slow=6.3,SNR=11
INK Inuvik 76.01 17 *eP* **P 21 47 10.9 +0.1**
INK pmax pmax
comp=Z,12nm,0.9s
INK Inuvik 76.01 17 *eP* **P 21 47 10.9 +0.2**
comp=Z,12nm,0.9s,mb4.8
RES Resolute Bay 76.05 3 *eP* **P 21 47 10.4 -0.5**
RES pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
RES Resolute Bay 76.05 3 *eP* **P 21 47 10.3 -0.6**
comp=Z,1.8nm,0.7s,mb4.1
EGAK Eagle 76.23 22 *eP* **P 21 47 12.1 0.0**
comp=Z,70nm,2.6s,mb5.1
DAWY Dawson 77.28 22 *eP* **P 21 47 18.0 0.0**
BMRM Bremner River 77.46 26 *eP* **P 21 47 19.1 0.0**
comp=Z,5.7nm,0.6s,mb4.7
LSZ Lusaka 79.21 246 *eP* **P 21 47 28.6 -0.8**
LSZ pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
LSZ Lusaka 79.21 246 *eP* **P 21 47 28.6 -0.8**
comp=Z,4.2nm,0.6s,mb4.5
HYT Haines Junctio 80.15 24 *eP* **P 21 47 34.7 +0.8**
SKAG Skagway 81.89 24 *eP* **P 21 47 44.1 +1.0**
comp=Z,19nm,1.2s,mb4.9
DLBC Dease Lake 84.48 22 P **P 21 47 57.2 +0.7**
comp=Z,0.8nm,0.4s,mb4.2,baz=182,slow=21,SNR=4.7
DLBC Dease Lake 84.48 22 *eP* **P 21 47 57.8 +1.3**
YKA Yellowknife Ar 85.26 14 P **P 21 47 59.5 -0.9**
comp=Z,2.1nm,0.7s,mb4.4,baz=326,slow=5.1,SNR=9.5
LBTB Lobatse 86.69 239 *eP* **P 21 48 07.7 -0.3**
LBTB pmax pmax
comp=Z,5.0nm,0.5s,mb5.0
LBTB Lobatse 86.69 239 *eP* **P 21 48 07.7 -0.3**
comp=Z,4.8nm,0.5s,mb5.0
TORD Torodi Ar. Bea 87.60 284 P **P 21 48 12.3 -0.4**
comp=Z,2.1nm,0.8s,mb4.5,baz=52,slow=4.3,SNR=8.9
BOSA Boshof 88.97 236 LR LR 22 26 26.9
comp=Z,89nm,19.4s,MS4.2,baz=341,slow=34
SCHQ Schefferville 95.00 350 LR LR 22 38 38.5
comp=Z,62nm,18.1s,MS4.1,baz=256,slow=40
MAW Mawson 99.77 192 LR LR 22 27 20.6
comp=Z,98nm,19.2s,MS4.3,baz=141,slow=31
ROSC El Rosal 144.90 344 PKP PKPdf 21 55 01.0 -0.7
comp=Z,6.8nm,0.5s,baz=79,slow=21,SNR=4.3

*ISCJB **04** 21:37:16.4±1.5, 19°.44S±0°.06×70°.66W±0°.10, h43km±12km, mb4.1/5, Error ellipse: s-maj=16.3km s-min=8.3km az=22.8*
*GUC **04** 21:37:17.3±0.6, 19°.58S×70°.67W, h41km±4km, MD4.2, ML4.0*
*IDC **04** 21:37:17.8±5.5, 19°.60S×70°.70W, h32km±37km, mb4.0/4, mb1 4.0/7, mb1mx3.7/19, mbtmp3.9/7, ML3.9/3, MS2.9/1, Ms1 2.9/1, ms1mx2.4/26, Error ellipse: s-maj=40.3km s-min=27.8km az=105.0*
*NEIC **04** 21:37:21.3±2.7, 19°.51S×70°.45W, h66km±21km, mb3.9/2, Error ellipse: s-maj=31.2km s-min=13.8km az=80.0*
ISC 04 21:37:16.3±1.7, 19°.47S±0°.05×70°.72W±0°.08, h25km±10km, n18, σ1s09/22, mb4.1/5, 1C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.58**	**103**	⇓*i*P	**Pb**	**21 37 27.9**	**0.0**
PSGC				*i* S	**Sb**	**21 37 36.0**	**+0.3**
PSGC				AML	AML	21 37 36.1	
comp=N,9μm,0.4s							
HMBC	**Humberston**	**1.13**	**136**	⇓*i*P	**Pn**	**21 37 35.9**	**-0.6**
HMBC				*i* S	**Sn**	**21 37 50.0**	**-1.2**
HMBC				AML	AML	21 37 54.8	
comp=E,9μm,0.4s							
PB01	**Plate Boundary**	**1.95**	**144**	⇑*i*P	**Pn**	**21 37 48.1**	**+0.2**
PB01				*i* S	**Sn**	**21 38 11.0**	**-0.6**
PB01				AML	AML	21 38 16.2	
comp=N,2μm,0.3s							
MACH	**Maria Elena**	**2.86**	**162**	*i* S	**Sn**	**21 38 34.3**	**+0.2**
PB04	**Plate Boundary**	**3.02**	**158**	*eP*	**Pn**	**21 38 00.1**	**-2.5**
PB04				*i* S	**Sn**	**21 38 32.4**	**-5.5**
PB04				AML	AML	21 38 49.2	
comp=N,1μm,0.4s							
CEN1	**Los Morros**	**3.94**	**173**	*i* P	**Pn**	**21 38 16.5**	**+1.4**
CEN1				*i* S	**Sn**	**21 39 02.6**	**+2.1**
LPAZ	**La Paz**	**4.01**	**38**	Pn	**Pn**	**21 38 20.4**	**+4.2**
comp=N,2.0nm,0.3s,baz=216,slow=5.8,SNR=50							
LPAZ				Pg	**Pn**	**21 38 34.9**	**+19**
comp=N,4.3nm,0.3s,baz=202,slow=9.7,SNR=19							
LPAZ				Lg		21 39 30.0	
comp=N,1.7nm,0.3s,baz=317,slow=18,SNR=1.8							
SIV	**San Ignacio**	**9.82**	**71**	Pn	**Pn**	**21 39 36.6**	**+0.6**
comp=N,0.6nm,0.3s,baz=270,slow=9.8,SNR=24							
SIV				Sn	**Sn**	**21 41 27.4**	**+1.9**
baz=241,slow=20,SNR=1.8							
CPUP	**Villa Florida**	**14.10**	**121**	Pn	**Pn**	**21 40 33.5**	**-1.0**
comp=N,0.3nm,0.3s,baz=289,slow=15,SNR=4.1							
TRQA	**Tornquist**	**20.03**	**159**	*eP*	**P**	**21 41 47.2**	**-0.2**
comp=N,2.4nm,0.6s							
ROSC	**El Rosal**	**24.43**	**351**	LR	LR	21 53 21.7	
comp=N,28nm,19.9s,baz=210,slow=39							
WVT	**Waverly**	**57.61**	**344**	*eP*	**P**	**21 47 03.5**	**-0.8**
comp=N,1.2nm,0.6s,mb4.1							
DBIC	**Dimbokro**	**69.82**	**75**	P	**P**	**21 48 24.4**	**-0.9**
comp=N,5.3nm,1.1s,mb4.4,baz=243,slow=6.8,SNR=3.1							
QSPA	**South Pole Qui**	**70.72**	**180**	P	**P**	**21 48 31.4**	**+1.8**
comp=N,0.5nm,0.5s,mb3.8,baz=330,slow=0.3,SNR=7.2							
TORD	**Torodi Ar. Bea**	**78.30**	**71**	P	**P**	**21 49 13.8**	**-1.0**
comp=N,1.9nm,0.5s,mb4.2,baz=250,slow=4.9,SNR=9.0							
YKA	**Yellowknife Ar**	**88.72**	**341**	P	**P**	**21 50 07.4**	**+0.2**
comp=N,0.5nm,0.5s,mb4.1,baz=138,slow=4.2,SNR=3.5							
MK31	**Makanchi Array**	**144.92**	**33**	*e*PKPdf	PKPdf	21 56 51.2	0.0
MKAR	**Makanchi Array**	**144.92**	**33**	PKPbc	PKPdf	21 56 51.3	0.0
comp=N,2.2nm,0.7s,baz=318,slow=3.4,SNR=25							

*ISK **04** 21:54:32.6, 40°.00N×29°.06E, h6km, MD2.7*
*ISCJB **04** 21:54:33.0±0.6, 40°.00N±0°.03×29°.08E±0°.05, h10km, Error ellipse: s-maj=5.8km s-min=4.2km az=4.4*
*DDA **04** 21:54:33.2, 39°.99N×29°.07E, h7km±3km, Md2.9*
*CSEM **04** 21:54:33.0±0.1, 39°.99N×29°.10E, h8km, MD2.7, Error ellipse: s-maj=1.3km s-min=0.9km az=99.0*
ISC 04 21:54:33.1±0.6, 39°.99N±0°.03×29°.09E±0°.06, h7km±10km, n20, σ0s25/30, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARMT	**Armutlu**	**0.60**	**343**	*e*PG	**Pg**	**21 54 44.4**	**-0.3**
ARMT				*e*SG	**Sg**	**21 54 52.9**	**+0.5**
ARMT	**Armutlu**	**0.60**	**343**	*e*Pg	**Pg**	**21 54 44.4**	**-0.3**
ARMT				*e*Sg	**Sg**	**21 54 52.9**	**+0.4**
YLV	**Yalova**	**0.61**	**20**	*e*PG	**Pg**	**21 54 44.8**	**-0.2**
YLV	**Yalova**	**0.61**	**20**	*e*Pg	**Pg**	**21 54 44.8**	**-0.1**
DURS	**Dursunbey**	**0.62**	**231**	⇑*i*P	**Pg**	**21 54 45.0**	**0.0**
DURS				*i* S	**Sg**	**21 54 53.2**	**+0.2**
DURS	**Dursunbey**	**0.62**	**231**	*i* P	**Pg**	**21 54 45.0**	**0.0**
DURS				*i* S	**Sg**	**21 54 53.2**	**+0.2**
GDZ	**Gediz**	**0.95**	**162**	*e*P	**Pg**	**21 54 51.5**	**+0.1**
GDZ				*e*S	**Sg**	**21 55 03.8**	**+0.1**
GDZ	**Gediz**	**0.95**	**162**	*e*P	**Pg**	**21 54 51.5**	**+0.1**
GDZ				*e*S	**Sg**	**21 55 03.8**	**0.0**
DEMI	**Demirci**	**0.99**	**197**	*e*P	**Pg**	**21 54 52.2**	**+0.1**
DEMI				*e*S	**Sg**	**21 55 04.9**	**-0.2**
DEMI	**Demirci**	**0.99**	**197**	*e*P	**Pg**	**21 54 52.2**	**0.0**
DEMI				*e*S	**Sg**	**21 55 04.9**	**-0.2**
GONE	**Gonen-Balikesi**	**1.08**	**273**	*e*PG	**Pg**	**21 54 53.2**	**-0.7**
GONE	**Gonen-Balikesi**	**1.08**	**273**	*e*Pg	**Pg**	**21 54 53.2**	**-0.7**
BALY	**Balya**	**1.16**	**258**	*e*P	**Pg**	**21 54 55.6**	**+0.2**
BALY				*e*S	**Sg**	**21 55 10.6**	**+0.2**
BALY	**Balya**	**1.16**	**258**	*e*P	**Pg**	**21 54 55.6**	**+0.2**
BALY				*e*S	**Sg**	**21 55 10.6**	**+0.1**
GULT	**Gulveren**	**1.17**	**68**	*e*PN	**Pn**	**21 54 55.8**	**-0.1**
GULT	**Gulveren**	**1.17**	**68**	*e*Pn	**Pn**	**21 54 55.8**	**-0.1**
ALT	**Altintas**	**1.22**	**140**	*e*PN	**Pn**	**21 54 56.7**	**+0.2**
ALT	**Altintas**	**1.22**	**140**	*e*Pn	**Pn**	**21 54 56.7**	**+0.1**
CTKS	**Kestanelik-??a**	**1.32**	**340**	*e*PN	**Pn**	**21 54 57.9**	**0.0**
CTKS	**Kestanelik-??a**	**1.32**	**340**	*e*Pn	**Pn**	**21 54 57.9**	**0.0**

*NOU **04** 22:06:44.8±0.6, 20°.58S×170°.36E, h10km, MD3.1, ML3.5*
*IDC **04** 22:06:45.8±2.4, 22°.25S×170°.21E, h0km, mb4.1/8, mb1 4.3/8, mb1mx4.2/16, mbtmp4.1/8, MS3.4/4, Ms1 3.4/4, ms1mx3.0/20, Error ellipse: s-maj=71.1km s-min=27.8km az=140.0*
*ISCJB **04** 22:06:49.6±1.7, 22°.5S±0°.2×170°.31E±0°.07, h44km±13km, mb4.2/11, MS3.3/3, Error ellipse: s-maj=33.2km s-min=9.9km az=169.8*
*NEIC **04** 22:06:53.0±1.2, 22°.27S×170°.13E, h50km±9km, mb4.5/4, Error ellipse: s-maj=27.5km s-min=7.8km az=156.0*
ISC 04 22:06:51.9±1.6, 22°.5S±0°.2×170°.28E±0°.08, h47km±12km, n37, σ1s00/20, mb4.2/11, MS3.3/3, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.17**	**276**	*e*S	**Sn**	**22 08 15.8**	**+0.1**
PLUM	**Mont Dore**	**3.38**	**273**	*e*P	**Pn**	**22 07 40.8**	**-1.3**
PLUM				*e*S	**Sn**	**22 08 22.3**	**+1.3**
LASL	**Noumea**	**3.48**	**274**	*e*S	**Sn**	**22 08 24.4**	**+1.0**
DZM	**Mont Dzumac**	**3.58**	**276**	AMP		22 07 30.2	
comp=Z,1μm,3.6s							
DZM	**Mont Dzumac**	**3.58**	**276**	*e*Pn	**Pn**	**22 07 43.8**	**-1.1**
NOUC	**Port Laguerre**	**3.71**	**276**	*e*P	**Pn**	**22 07 45.1**	**-1.5**
NOUC				*e*S	**Sn**	**22 08 29.7**	**+0.6**
NOUC				AMP		22 08 36.9	
comp=Z,54nm,0.7s							
MSVF	**Nonsavu**	**8.71**	**58**	*e*Pn	**Pn**	**22 08 56.6**	**+1.3**
comp=Z,34nm,0.9s							
URZ	**Urewera**	**16.75**	**161**	LR	LR	22 16 16.2	
comp=Z,174nm,19.7s,baz=216,slow=34							
RPZ	**Rata Peaks**	**21.15**	**178**	LR	LR	22 18 06.2	
comp=Z,35nm,18.1s,MS2.8,baz=341,slow=32							
CTA	**Charters Tower**	**22.51**	**272**	P	**P**	**22 11 45.8**	**-1.9**
comp=Z,1.5nm,0.2s,mb4.0,baz=49,slow=19,SNR=2.6							
CTAO	**Charters Tower**	**22.51**	**272**	*eP*	**P**	**22 11 48.2**	**+0.5**
comp=Z,6.8nm,0.8s,mb4.1							
STKA	**Stephens Creek**	**27.10**	**244**	P	**P**	**22 12 31.6**	**+1.3**
comp=Z,3.5nm,0.8s,mb3.9,baz=86,slow=9.1,SNR=5.7							
STKA				LR	LR	22 21 58.6	
comp=Z,126nm,19.1s,MS3.5,baz=27,slow=34							
ASAR	**Alice Springs**	**33.43**	**261**	P	**P**	**22 13 26.4**	**0.0**
comp=Z,3.9nm,0.8s,mb4.4,baz=90,slow=8.9,SNR=20							
WRA	**Warramunga Arr**	**33.55**	**268**	P	**P**	**22 13 26.7**	**-0.8**
comp=Z,1.1nm,0.7s,mb3.9,baz=102,slow=8.0,SNR=4.0							
FORT	**Forrest**	**38.45**	**248**	*eP*	**P**	**22 14 09.4**	**+0.1**
comp=Z,12nm,0.8s,mb4.7							
FITZ	**Fitzroy Crossi**	**41.99**	**268**	P	**P**	**22 14 37.9**	**-0.8**
comp=Z,5.5nm,0.9s,mb4.2,baz=138,slow=11,SNR=3.5							
MBWA	**Marble Bar**	**46.76**	**262**	*eP*	**P**	**22 15 17.0**	**+0.1**
comp=Z,5.7nm,0.7s,mb4.6							
MJAR	**Matsushiro Arr**	**66.09**	**332**	P	**P**	**22 17 32.8**	**-1.3**
comp=Z,0.9nm,0.6s,mb4.0,baz=168,slow=7.4,SNR=3.9							
KSRS	**Korea Array**	**71.75**	**326**	P	**P**	**22 18 08.9**	**-0.3**
comp=Z,1.4nm,0.7s,mb4.0,baz=142,slow=7.4,SNR=5.7							
PETK	**Petropavlovsk-**	**76.10**	**352**	LR	LR	22 46 45.9	
comp=Z,32nm,19.6s,MS3.6,baz=195,slow=32							
CMAR	**Chiang Mai Arr**	**80.74**	**294**	P	**P**	**22 19 02.2**	**+1.5**
comp=Z,0.8nm,0.4s,mb4.0,baz=116,slow=6.1,SNR=3.0							
CHTO	**Chiang Mai**	**80.90**	**295**	*eP*	**P**	**22 19 02.0**	**+0.5**
comp=Z,3.7nm,0.8s,mb4.4							
MORC	**Moravsky Berou**	**145.37**	**329**	*e*PKPbc	PKPbc	22 26 24.0	-0.4
VYHS	**Vyhne**	**145.55**	**326**	*e*PKP	PKPdf	22 26 25.3	+0.6
VYHS	**Vyhne**	**145.55**	**326**	*e*	PKPdf	22 26 25.3	+0.6
KOLL	**Kolacno**	**145.72**	**326**	*e*PKP	PKPdf	22 26 26.1	+1.1
KOLL	**Kolacno**	**145.72**	**326**	*e*	PKPdf	22 26 26.1	+1.1
EKA	**Eskdalemuir Ar**	**146.87**	**353**	PKPbc	PKPbc	22 26 27.6	-1.1
comp=Z,2.3nm,0.7s,baz=344,slow=1.9,SNR=12							
CDF	**Champ du Feu**	**150.83**	**336**	*e*PKP2	PKPab	22 26 45.5	-0.8
comp=Z,6.8nm,0.8s							
DAVOX	**Davos/Dischmat**	**151.08**	**332**	PKPbc	PKPbc	22 26 39.8	+0.2
comp=Z,2.7nm,0.6s,baz=164,slow=7.4,SNR=4.9							
HINF	**Hinteralfeld**	**151.48**	**336**	*e*PKP2	PKPab	22 26 48.7	-0.3
MEZF	**Maizieres J'vi**	**151.53**	**339**	*e*PKP2	PKPab	22 26 48.6	-0.6
comp=Z,7.2nm,0.8s							
LPL	**La Plagne**	**153.42**	**334**	*e*PKP2	PKPab	22 26 57.7	+0.5
LPG	**La Plagne**	**153.43**	**334**	*e*PKP2	PKPab	22 26 57.8	+0.6
comp=Z,6.6nm,0.7s							
MBDF	**Montbardon**	**154.04**	**332**	*e*PKP2	PKPab	22 26 58.9	-1.0
comp=Z,5.2nm,0.6s							
ORIF	**Oris-en-Rattie**	**154.26**	**334**	*e*PKP2	PKPab	22 27 00.3	-0.5
comp=Z,6.8nm,0.7s							
ETSF	**Etsaut**	**158.29**	**342**	*e*PKP2	PKPab	22 27 18.0	-0.1

DJA 04 22:07:20, 1°.46S×140°.56E, h18km, MLv3.8/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**1.06**	**172**	P	Pb	22 07 39.1	-0.7
JAY				S	Sb	22 07 54.0	+0.7
SMPI	**Sarmi**	**1.92**	**254**	P	Pn	22 07 52.7	+0.9
SMPI				S	Sn	22 08 18.1	+2.5
BAKI	**Biak**	**4.46**	**273**	P	Pn	22 08 28.8	+2.0
BAKI				S	Sn	22 09 19.7	+1.4

*ISCJB **04** 22:09:55.8±0.4, 43°.06N±0°.04×75°.28E±0°.03, h10km, mb3.8/4, Error ellipse: s-maj=5.9km s-min=3.6km az=175.0*
*IDC **04** 22:09:56.3±1.1, 42°.99N×75°.37E, h0km, mb3.8/3, mb1 3.8/8, mb1mx3.5/31, mbtmp3.8/8, ML3.8/5, Error ellipse: s-maj=20.4km s-min=6.5km az=142.0*
*NNC **04** 22:09:57.0±0.3, 42°.99N×75°.39E, h0km, mb4.2, mpv4.2, Error ellipse: s-maj=2.6km s-min=1.4km az=32.0*
*BJI **04** 22:09:57.9, 43°.24N×75°.59E, h10km, ML3.7/6*
*NEIC **04** 22:09:57.7±0.7, 42°.97N×75°.29E, h10km, mb3.7/2, Error ellipse: s-maj=11.2km s-min=6.9km az=159.0*
ISC 04 22:09:56.8±0.4, 42°.95N±0°.03×75°.33E±0°.03, h10km, n32, σ1s32/45, mb3.8/4, 9C-8D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKM2	**Tokmak 2**	**0.20**	**99**	⇑P	**Pg**	**22 10 00.5**	**-0.5**
1μm,0.5s							
TKM2				⇑S	**Sg**	**22 10 02.8**	**-1.0**
8μm,0.2s							
TKM2	**Tokmak 2**	**0.20**	**99**	*e*Pg	**Pg**	**22 10 00.4**	**-0.5**
TKM2				*e*Sg	**Sg**	**22 10 02.7**	**-1.1**
AAK	**Ala-Archa**	**0.69**	**243**	Pg	**Pg**	**22 10 10.9**	**+0.6**
46nm,0.3s,baz=102,slow=8.1,SNR=7.4							
AAK				Lg		22 10 20.7	
139nm,0.3s,baz=14,slow=21,SNR=17							
AAK	**Ala-Archa**	**0.69**	**243**	Pg	**Pg**	**22 10 10.9**	**+0.6**
AAK				Lg		22 10 20.7	
UCH	**Uchtor**	**0.94**	**220**	*e*Pg	**Pg**	**22 10 19.7**	**+4.7**
EKS2	**Erkin-Say**	**1.18**	**256**	*e*Pg	**Pg**	**22 10 20.0**	**+0.5**
EKS2				*e*Sg	**Sg**	**22 10 34.6**	**-0.3**
KNDC	**Almaty**	**1.23**	**77**	⇑P	**Pn**	**22 10 19.4**	**-0.5**
642nm,0.6s							
KNDC				⇓S	**Sb**	**22 10 35.8**	**-0.1**
1μm,0.5s							
KSH	**Kashi**	**3.47**	**172**	Pn	**Pg**	**22 11 01.9**	**-1.3**
KSH				Sn	**Sg**	**22 11 47.8**	**-0.3**
KSH				smax			
comp=N,210nm,0.9s							
KSH				smax			
comp=E,270nm,0.9s							
KK31	**Karatay Array**	**3.54**	**274**	⇑Pg	**Pg**	**22 11 03.1**	**-1.5**
comp=E,12nm,0.4s,baz=84,slow=14,SNR=8.3							
KK31				Lg		22 11 48.8	
comp=E,171nm,0.6s,baz=79,slow=29,SNR=18							
MK31	**Makanchi Array**	**6.26**	**50**	Pn	**Pn**	**22 11 30.3**	**+1.2**
comp=E,3.9nm,0.4s,baz=238,slow=13,SNR=39							
MK31				⇑Sn	**Sn**	**22 12 42.3**	**+1.7**
comp=E,2.8nm,0.4s							
MK31				⇓Lg		22 13 14.8	
comp=E,16nm,0.6s,baz=223,slow=28,SNR=4.3							
MK31	**Makanchi Array**	**6.26**	**50**	*e*Pn	**Pn**	**22 11 30.8**	**+1.6**
MK31				*e*Sg	**Sg**	**22 13 15.6**	**-2.0**
MKAR	**Makanchi Array**	**6.26**	**50**	Pn	**Pn**	**22 11 31.0**	**+1.9**
comp=E,2.6nm,0.3s,baz=237,slow=13,SNR=42							
MKAR				Sn	**Sn**	**22 12 39.9**	**-0.7**
comp=E,2.5nm,0.3s,baz=232,slow=22,SNR=6.6							
MKAR				Lg		22 13 12.0	
comp=E,5.1nm,0.3s,baz=233,slow=28,SNR=9.6							
MKAR	**Makanchi Array**	**6.26**	**50**	Pn	**Pn**	**22 11 31.0**	**+1.9**
MKAR				Sn	**Sn**	**22 12 39.9**	**-0.7**
MKAR				Lg		22 13 12.0	
KURK	**Kurchatov**	**8.09**	**15**	⇓Lg		22 14 12.0	
comp=E,92nm,0.8s							
KURK	**Kurchatov**	**8.09**	**15**	Pn	**Pn**	**22 11 52.8**	**-1.3**
comp=E,0.4nm,0.3s,baz=202,slow=12,SNR=13							
KURK				Lg		22 14 05.0	
comp=E,0.9nm,0.3s,baz=201,slow=29,SNR=6.3							
KURK	**Kurchatov**	**8.09**	**15**	*e*Pn	**Pn**	**22 11 54.8**	**+0.6**
comp=E,11nm,1.0s							
KURK				Lg		22 14 05.0	
VOSK	**Vostochnaya**	**10.20**	**345**	⇑Pn	**Pn**	**22 12 23.1**	**-0.1**
comp=E,2.4nm,0.9s							
VOSK				⇓Lg		22 15 20.6	
comp=E,34nm,0.9s							
BVAR	**Borovoye Array**	**10.61**	**344**	Pn	**Pn**	**22 12 27.7**	**-1.0**
comp=E,0.6nm,0.3s,baz=163,slow=13,SNR=10							
BVAR				Lg		22 15 31.0	
comp=E,1.4nm,0.3s,baz=160,slow=26,SNR=6.9							
BRVK	**Borovoye**	**10.66**	**343**	⇑Pn	**Pn**	**22 12 31.4**	**+1.9**
comp=E,2.2nm,0.4s							
BRVK				⇓Lg		22 15 34.4	
comp=E,56nm,0.8s							
BRVK	**Borovoye**	**10.66**	**343**	*e*Pn	**Pn**	**22 12 28.7**	**-0.8**
comp=E,2.5nm,0.4s							
BRVK				*e*Sn	**Sn**	**22 14 26.4**	**-2.3**
ZRNK	**Zerenda**	**10.86**	**339**	⇓Pn	**Pn**	**22 12 31.2**	**-1.0**
comp=E,2.8nm,0.5s							
ZRNK				⇓Lg		22 15 41.2	
comp=E,39nm,1.1s							
AB31	**Akbulak array**	**12.39**	**306**	⇓Pn	**Pn**	**22 12 53.3**	**+0.1**
comp=E,0.7nm,0.3s							
AB31				⇑Sn	**Sn**	**22 15 14.1**	**+2.9**
comp=E,1.3nm,0.5s							
AB31				⇑Lg		22 16 29.7	
comp=E,13nm,1.1s							
ABKAR	**Akbulak array**	**12.39**	**306**	*e*Pn	**Pn**	**22 12 53.5**	**+0.4**
ABKAR				*e*Sn	**Sn**	**22 15 09.1**	**-2.1**
ZAA0	**Zalesovo Array**	**12.66**	**26**	*e*Pn	**Pn**	**22 12 58.4**	**+1.6**
ZAA0				*e*Sn	**Sn**	**22 15 11.3**	**-6.4**
ZALV	**Zalesovo Beam**	**12.66**	**26**	Pn	**Pn**	**22 12 58.9**	**+2.1**
comp=E,0.5nm,0.3s,baz=218,slow=14,SNR=5.6							
ZALV				Sn	**Sn**	**22 15 13.8**	**-3.9**
comp=E,0.8nm,0.3s,baz=224,slow=23,SNR=6.8							
AKTK	**Aktyubinsk**	**14.02**	**308**	Pn	**Pn**	**22 13 14.2**	**-1.1**
AKTO	**Aktyubinsk**	**14.02**	**308**	Pn	**Pn**	**22 13 14.2**	**-1.1**
comp=E,0.5nm,0.3s,baz=133

KMI	**Kunming**	**6.74 191**	Pn	**Pn**	**22 12 36.5 +2.9**	
KMI			Sn	**Sn**	**22 13 49.1 -1.4**	
KMI			smax			
	comp=N,110nm,0.7s					
KMI			smax			
	comp=E,110nm,0.7s					
KMI			LR	LR		
	comp=N,630nm,8.0s					
KMI			LR	LR		
	comp=E,340nm,5.4s					
KMI			LR	LR		
	comp=Z,830nm,12.3s					
GTA	**Gaotai**	**8.40 336**	*e*P	**Pn**	**22 12 58.3 +2.0**	
GTA			pP		22 13 01.4	
GTA			sP		22 13 04.1	
GTA			S	**Sn**	**22 14 35.2 +4.0**	
GTA			sS		22 14 46.5	
GTA			pmax	pmax		
	comp=Z,4.0nm,0.7s					
GTA			pmax	pmax		
	comp=Z,87nm,4.5s					
GTA			LR	LR		
	comp=N,840nm,9.8s					
GTA			LR	LR		
	comp=E,730nm,11.9s					
GTA			LR	LR		
	comp=Z,640nm,10.1s					
WHN	**Wuhan**	**8.81 95**	P	**Pn**	**22 13 03.0 +1.0**	
WHN			S	**Sn**	**22 14 34.5 -6.9**	
WHN			LR	LR		
	comp=N,1μm,5.7s					
WHN			LR	LR		
	comp=E,2μm,11.3s					
WHN			LR	LR		
	comp=Z,2μm,9.9s					
BTO	**Baotou**	**10.00 27**	*e*P	**Pn**	**22 13 16.6 -1.6**	
BTO			LR	LR		
	comp=N,280nm,9.0s					
BTO			LR	LR		
	comp=E,110nm,8.5s					
HHC	**Hu-ho-hao-te**	**10.84 31**	*e*P	**Pn**	**22 13 29.4 -0.4**	
HHC			PP		22 13 38.3	
HHC			S	**Sn**	**22 15 31.1 0.0**	
HHC			SS		22 15 44.4	
HHC			PcS	PcS	22 23 02.1 -1.6	
HHC			pmax	pmax		
	comp=Z,8.0nm,0.5s					
HHC			pmax	pmax		
	comp=Z,77nm,4.8s					
HHC			LR	LR		
	comp=N,600nm,8.8s					
HHC			LR	LR		
	comp=E,370nm,8.1s					
HHC			LR	LR		
	comp=Z,370nm,8.4s					
LSA	**Lhasa**	**11.39 263**	P	**Pn**	**22 13 40.7 +3.4**	
TIA	**Tai'an**	**11.63 64**	P	**Sn**	**22 15 39.0 -11**	
GZH	**Guangzhou**	**11.88 134**	P	**Pn**	**22 13 42.8 -1.3**	
GZH			LR	LR		
	comp=N,320nm,9.3s					
GZH			LR	LR		
	comp=E,470nm,9.6s					
GZH			LR	LR		
	comp=Z,760nm,10.5s					
CHTO	**Chiang Mai**	**13.74 201**	*e*Pn	**Pn**	**22 14 13.3 +3.8**	
	comp=Z,4.9nm,0.6s					
CM31	**Chiang Mai Arr**	**14.07 201**	*e*Pn	**Pn**	**22 14 16.6 +2.6**	
CM31			*e*P		22 14 23.1	
CMAR	**Chiang Mai Arr**	**14.07 201**	Pn	**Pn**	**22 14 16.5 +2.5**	
	comp=Z,0.3nm,0.3s,baz=12,slow=12,SNR=7.8					
TAPN	**Taplejung**	**14.98 257**	*e*P	**Pn**	**22 14 25.2 -1.2**	
	comp=Z,27nm,0.8s					
ODAN	**Odare**	**15.43 256**	*e*P	**Pn**	**22 14 32.1 -0.2**	
	comp=Z,36nm,0.8s					
RAMN	**Ramite**	**16.05 257**	*e*P	**Pn**	**22 14 39.8 -0.5**	
	comp=Z,18nm,0.7s					
SONM	**Songino Array**	**16.13 5**	Pn	**Pn**	**22 14 42.6 +1.3**	
	comp=Z,0.4nm,0.3s,baz=185,slow=10,SNR=11					
ULN	**Ulaanbaatar**	**16.22 7**	*e*P	**Pn**	**22 14 42.3 -0.1**	
	comp=Z,9.6nm,1.1s					
GUN	**Gumba**	**16.33 261**	*e*P	**Pn**	**22 14 41.4 -2.5**	
	comp=Z,95nm,0.9s					
PKI	**Pulchoki**	**16.83 260**	*e*P	**Pn**	**22 14 49.0 -1.3**	
	comp=Z,60nm,0.9s					
PKIN	**Phulchoki**	**16.84 260**	*e*P	**Pn**	**22 14 48.7 -1.7**	
	comp=Z,50nm,0.7s					
SSLB	**Suanglung**	**16.84 114**	*e*P	**Pn**	**22 14 50.3 -0.1**	
	comp=Z,12nm,0.8s					
KKN	**Kakani**	**16.87 261**	*e*P	**Pn**	**22 14 48.9 -1.9**	
	comp=Z,38nm,0.9s					
DMN	**Daman**	**17.07 261**	*e*P	**Pn**	**22 14 51.8 -1.6**	
	comp=Z,48nm,1.0s					
GKN	**Gorkha**	**17.35 263**	*e*P	**Pn**	**22 14 55.6 -1.2**	
KSRS	**Korea Array**	**20.34 67**	P	**P**	**22 15 31.4 +0.5**	
	comp=Z,5.0nm,0.6s,baz=256,slow=11,SNR=22					
CN2	**Changchun**	**20.60 48**	*e*P	**P**	**22 15 35.3 +1.6**	
CN2			pmax	pmax		
	comp=Z,30nm,0.7s					
MK31	**Makanchi Array**	**22.51 318**	*e*P	**P**	**22 15 51.9 -2.4**	
MKAR	**Makanchi Array**	**22.51 318**	P	**P**	**22 15 55.7 +1.5**	
	comp=Z,4.8nm,0.7s,mb4.0,baz=112,slow=11,SNR=4.5					
MKAR			PcP	PcP	22 19 47.5 -0.5	
	comp=Z,1.8nm,0.8s,baz=175,slow=1.7,SNR=4.2					
MKAR	**Makanchi Array**	**22.51 318**	P	**P**	**22 15 55.7 +1.5**	
MKAR			PcP	PcP	22 19 47.5 -0.5	
MDJ	**Mudanjiang**	**23.63 50**	P	**P**	**22 16 05.0 -0.9**	
MDJ			pmax	pmax		
	comp=Z,10.0nm,1.5s,mb4.0					
ZAA0	**Zalesovo Array**	**26.15 334**	*e*P	**P**	**22 16 28.8 +0.1**	
ZALV	**Zalesovo Beam**	**26.15 334**	P	**P**	**22 16 29.1 +0.5**	
	comp=Z,11nm,0.8s,mb4.5,baz=134,slow=10,SNR=8.7					
KURK	**Kurchatov**	**26.75 322**	P	**P**	**22 16 34.4 +0.2**	
	comp=Z,3.4nm,0.7s,mb4.0,baz=132,slow=9.4,SNR=2.5					
KURK			PcP	PcP	22 19 56.4 -0.8	
	comp=Z,3.1nm,0.6s,baz=106,slow=1.9,SNR=5.5					
KBL	**Kabul**	**29.45 285**	*e*P	**P**	**22 17 00.1 +1.6**	
	comp=Z,8.1nm,1.3s,mb4.3					
BVAR	**Borovoye Array**	**32.30 321**	P	**P**	**22 17 24.5 +1.0**	
	comp=Z,1.5nm,0.6s,mb4.0,baz=90,slow=7.2,SNR=2.1					
BVAR			PcP	PcP	22 20 11.2 -0.1	
	comp=Z,2.5nm,0.7s,baz=128,slow=3.4,SNR=12					
BVAR	**Borovoye Array**	**32.30 321**	P	**P**	**22 17 24.4 +1.0**	
BVAR			PcP	PcP	22 20 11.2 -0.1	
ABKAR	**Akbulak array**	**37.27 311**	*e*P	**P**	**22 18 06.9 +0.5**	
	comp=Z,3.9nm,0.8s,mb4.3					
ARU	**Arti**	**39.94 322**	*e*P	**P**	**22 18 29.4 +0.7**	
	comp=Z,6.8nm,0.6s,mb4.5					
PEA0B	**Petropavlovsk-**	**43.68 45**	*e*P	**P**	**22 18 58.9 -0.5**	
PETK	**Petropavlovsk-**	**43.68 45**	P	**P**	**22 18 57.5 -1.8**	
	comp=Z,4.8nm,0.7s,mb4.3,baz=216,slow=4.6,SNR=7.1					
KIV	**Kislovodsk**	**48.99 303**	*e*P	**P**	**22 19 42.3 +1.0**	
	comp=Z,9.6nm,1.1s,mb4.7					
KNA	**Kununurra**	**52.82 150**	*e*P	**P**	**22 20 09.8 -0.4**	
	comp=Z,18nm,0.7s,mb5.1					
FITZ	**Fitzroy Crossi**	**53.70 154**	P	**P**	**22 20 15.2 -1.5**	
	comp=Z,5.5nm,1.0s,mb4.4,baz=110,slow=2.3,SNR=4.7					
JOF	**Joensuu**	**54.49 328**	*e*P	**P**	**22 20 22.0 0.0**	
JOF	**Joensuu**	**54.49 328**	*e*p	**P**	**22 20 22.0 0.0**	
	comp=Z,3.7nm,0.5s,mb4.6					
ASF	**Jabal al Asfar**	**56.17 290**	P	**P**	**22 20 35.5 +0.9**	
	comp=Z,2.3nm,0.5s,mb4.5,baz=168,slow=0.9,SNR=8.7					
BRTR	**Keskin Array B**	**56.46 299**	P	**P**	**22 20 36.8 +0.2**	
	comp=Z,2.0nm,0.9s,mb4.2,baz=101,slow=6.4,SNR=8.5					
BRTR			LR	LR	22 50 11.2	
	comp=Z,24nm,21.4s,baz=87,slow=42					
BRTR	**Keskin Array B**	**56.46 299**	P	**P**	**22 20 36.8 +0.2**	
BRTR			LR	LR	22 50 11.2	
ARCES	**ARCESS Array B**	**56.67 336**	P	**P**	**22 20 37.1 -0.5**	
	comp=Z,1.4nm,0.6s,mb4.2,baz=94,slow=8.6,SNR=11					
KAF	**Kangasniemi**	**56.86 327**	*e*P	**P**	**22 20 38.0 -1.0**	
	comp=Z,4.1nm,0.6s,mb4.6					
KAF	**Kangasniemi**	**56.86 327**	*e*p	**P**	**22 20 38.0 -1.0**	
	comp=Z,4.1nm,0.6s,mb4.6					
AKASG	**Malin Array Be**	**56.97 313**	P	**P**	**22 20 39.8 -0.2**	
	comp=Z,0.4nm,0.3s,mb3.9,baz=77,slow=8.2,SNR=4.6					
AKASG			PcP	PcP	22 21 33.7 -1.5	
	comp=Z,1.6nm,0.7s,baz=68,slow=4.6,SNR=4.3					
AKBB	**Malin Array Si**	**56.97 313**	*e*P	**P**	**22 20 39.6 -0.3**	
FINES	**FINESS Array B**	**57.04 326**	P	**P**	**22 20 40.5 +0.1**	
	comp=Z,5.8nm,0.6s,mb4.8,baz=81,slow=7.1,SNR=27					
EIL	**Elat**	**58.59 288**	P	**P**	**22 20 52.9 +1.1**	
	comp=Z,4.7nm,0.8s,mb4.6,baz=44,slow=7.0,SNR=3.7					
COEN	**Coen**	**58.87 134**	*e*P	**P**	**22 20 54.0 +0.3**	
COEN	**Coen**	**58.87 134**	*e*P	**P**	**22 20 53.6 -0.1**	
	comp=Z,71nm,0.6s					
WRA	**Warramunga Arr**	**59.00 147**	P	**P**	**22 20 54.0 -0.5**	
	comp=Z,7.4nm,0.7s,mb4.8,baz=338,slow=7.5,SNR=66					
ASAR	**Alice Springs**	**62.03 149**	P	**P**	**22 21 15.2 0.0**	
	comp=Z,2.9nm,0.7s,mb4.5,baz=336,slow=6.7,SNR=29					
CRVS	**Cervenica-Dubn**	**62.28 312**	*e*P	**P**	**22 21 16.9 +0.2**	
	comp=Z,16nm,2.3s,mb4.8					
CRVS	**Cervenica-Dubn**	**62.28 312**	*e*P	**P**	**22 21 16.9 +0.2**	
HFS	**Hagfors**	**63.25 326**	P	**P**	**22 21 22.6 -0.3**	
	comp=Z,2.2nm,0.5s,mb4.5,baz=101,slow=7.7,SNR=10					
VYHS	**Vyhne**	**64.06 313**	*e*P	**P**	**22 21 29.4 +0.9**	
	comp=Z,4.3nm,1.4s,mb4.3					
VYHS	**Vyhne**	**64.06 313**	*e*P	**P**	**22 21 29.4 +0.9**	
NB2	**NORSAR Subarra**	**64.13 327**	P	**P**	**22 21 27.9 -0.8**	
	comp=Z,0.2nm,0.6s,baz=76,slow=7.4					
NOA	**NORSAR Array B**	**64.13 327**	P	**P**	**22 21 27.9 -0.7**	
	comp=Z,2.5nm,0.8s,mb4.3,baz=72,slow=6.9,SNR=8.2					
NOA	**NORSAR Array B**	**64.13 327**	P	**P**	**22 21 27.9 -0.7**	
KOLL	**Kolacno**	**64.31 313**	*e*P	**P**	**22 21 31.1 +1.0**	
KOLL	**Kolacno**	**64.31 313**	*e*P	**P**	**22 21 31.1 +1.0**	
MORC	**Moravsky Berou**	**64.44 314**	*e*P	**P**	**22 21 31.1 +0.1**	
	comp=Z,3.9nm,1.0s,mb4.4					
CTA	**Charters Tower**	**65.47 136**	P	**P**	**22 21 37.9 0.0**	
	comp=Z,28nm,1.4s,mb5.1,baz=316,slow=7.0,SNR=4.3					
CTA	**Charters Tower**	**65.47 136**	P	**P**	**22 21 37.9 0.0**	
CTAO	**Charters Tower**	**65.47 136**	*e*P	**P**	**22 21 38.0 +0.1**	
	comp=Z,3.2nm,0.5s,mb4.6					
CLL	**Collm**	**66.61 317**	*e*P	**P**	**22 21 45.0 +0.1**	
	comp=Z,5.0nm,1.1s,mb4.5					
COLD	**Coldfoot**	**66.84 24**	*e*P	**P**	**22 21 46.4 +0.3**	
	comp=Z,4.8nm,1.0s,mb4.5					
COLA	**College**	**68.80 26**	*e*P	**P**	**22 21 58.6 0.0**	
	comp=Z,5.1nm,0.9s,mb4.5					
OHAK	**Old Harbor**	**70.18 34**	*e*P	**P**	**22 22 07.1 -0.1**	
	comp=Z,9.8nm,0.8s,mb4.8					
KDAK	**Kodiak Island**	**70.25 34**	P	**P**	**22 22 06.4 -1.2**	
	comp=Z,3.1nm,0.6s,mb4.5,baz=314,slow=6.0,SNR=4.3					
DAVOX	**Davos/Dischmat**	**70.31 313**	P	**P**	**22 22 08.4 +0.3**	
	comp=Z,2.3nm,0.6s,mb4.3,baz=5.0,slow=1.0,SNR=4.2					
DAVOX	**Davos/Dischmat**	**70.31 313**	P	**P**	**22 22 08.4 +0.3**	
KMBO	**Kilima Mbogo**	**71.11 256**	P	**P**	**22 22 14.3 +0.7**	
	comp=Z,3.1nm,0.8s,mb4.3,baz=181,slow=24,SNR=7.2					
KMBO	**Kilima Mbogo**	**71.11 256**	*e*P	**P**	**22 22 14.1 +0.5**	
	comp=Z,7.3nm,1.3s,mb4.5					
EGAK	**Eagle**	**71.27 24**	*e*P	**P**	**22 22 13.3 -0.4**	
	comp=Z,1.6nm,0.6s,mb4.1					
INK	**Inuvik**	**71.51 19**	P	**P**	**22 22 14.3 -0.8**	
	comp=Z,4.9nm,0.7s,mb4.5,baz=301,slow=5.8,SNR=7.0					
INK	**Inuvik**	**71.51 19**	*e*P	**P**	**22 22 14.7 -0.4**	
	comp=Z,5.6nm,0.8s,mb4.5					
BMRM	**Bremner River**	**72.12 29**	*e*P	**P**	**22 22 19.2 +0.3**	
	comp=Z,6.3nm,0.9s,mb4.5					
DAWY	**Dawson**	**72.31 24**	*e*P	**P**	**22 22 20.1 +0.1**	
STKA	**Stephens Creek**	**72.54 147**	*e*P	**P**	**22 22 21.3 -0.3**	
	comp=Z,2.5nm,0.6s,mb4.3					
STKA	**Stephens Creek**	**72.54 147**	P	**P**	**22 22 21.0 -0.6**	
	comp=Z,3.5nm,0.6s,mb4.5,baz=309,slow=4.0,SNR=11					
STKA	**Stephens Creek**	**72.54 147**	P	**P**	**22 22 21.0 -0.6**	
LPG	**La Plagne**	**72.83 313**	*e*P	**P**	**22 22 24.0 +0.6**	
	comp=Z,21nm,0.9s,mb4.8					
LPG	**La Plagne**	**72.83 313**	*e*P	**P**	**22 22 24.0 +0.6**	
	comp=Z,11nm,0.9s,mb4.8					
LPL	**La Plagne**	**72.83 313**	*e*P	**P**	**22 22 24.0 +0.6**	
	comp=Z,24nm,1.0s,mb4.8					
LPL	**La Plagne**	**72.83 313**	*e*P	**P**	**22 22 24.0 +0.6**	
	comp=Z,12nm,1.0s,mb4.8					
SMF	**Signal de Mont**	**74.06 315**	*e*P	**P**	**22 22 30.2 -0.4**	
	comp=Z,26nm,1.2s,mb4.8					
SMF	**Signal de Mont**	**74.06 315**	*e*P	**P**	**22 22 30.2 -0.4**	
	comp=Z,13nm,1.2s,mb4.7					
CMSA	**Cobar Meteorol**	**74.23 144**	*e*P	**P**	**22 22 32.1 +0.5**	
AVF	**Avril sur Loir**	**74.28 315**	*e*P	**P**	**22 22 31.5 -0.4**	
	comp=Z,26nm,1.2s,mb4.7					
AVF	**Avril sur Loir**	**74.28 315**	*e*P	**P**	**22 22 31.5 -0.4**	
	comp=Z,13nm,1.2s,mb4.7					
DLBC	**Dease Lake**	**79.42 26**	P	**P**	**22 23 00.6 -0.1**	
	comp=Z,1.8nm,0.8s,mb4.1,baz=114,slow=3.4,SNR=3.4					
YKA	**Yellowknife Ar**	**81.04 17**	P	**P**	**22 23 09.4 +0.1**	
	comp=Z,2.7nm,0.7s,mb4.3,baz=330,slow=5.1,SNR=11					
YKA	**Yellowknife Ar**	**81.04 17**	P	**P**	**22 23 09.4 +0.1**	
TORD	**Torodi Ar. Bea**	**93.48 288**	P	**P**	**22 24 10.3 -0.6**	
	comp=Z,1.4nm,1.0s,mb4.3,baz=54,slow=2.9,SNR=4.7					

*IDC **04** 22:15:17.9±1.3, 36°.33N×23°.31E, h0km, mb3.7/3, mb1 3.6/5, mb1mx3.3/27, mbtmp3.6/5, ML3.5/2, Error ellipse: s-maj=26.5km s-min=20.3km az=43.0*
*ISCJB **04** 22:15:24.5±0.3, 36°.12N±0°.02×23°.37E±0°.03, h81km±4km, mb3.5/3, Error ellipse: s-maj=5.2km s-min=2.4km az=138.1*
*NEIC **04** 22:15:25.1, 36°.18N×23°.44E, h55km, MG3.0(ATH), After ATH.*
*ATH **04** 22:15:25.1, 36°.18N×23°.44E, h55km±2km, MD3.6/33, ML3.0*
*HLW **04** 22:15:26.4, 35°.95N×23°.88E, h17km±37km, Md3.5, Ml3.2*
*CSEM **04** 22:15:26.5±0.1, 36°.15N×23°.39E, h40km, ML3.0, Error ellipse: s-maj=3.9km s-min=1.8km az=45.0*
*THE **04** 22:15:27.1, 36°.21N×23°.48E, h26km±3km, ML4.0/10, Error ellipse: s-maj=3.2km s-min=0.6km az=214.0*

ISC 04 22:15:25.7±0.3, 36°.13N±0°.02×23°.38E±0°.03, h69km±5km, n171, σ1$07/262, mb3.5/3, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.32**	**299**	*e*P		**Pn**	**22 15 35.8**	**-1.0**
KYTH	**Kithira**	**0.32**	**299**	*e*P		**Pn**	**22 15 35.8**	**-1.0**
KYTH	**Kithira**	**0.32**	**299**	*e*P		**Pn**	**22 15 35.8**	**-1.0**
VLI	**Veliai**	**0.69**	**329**	*e*P		**Pn**	**22 15 39.6**	**-0.8**
VLI				*e*S		**Sn**	**22 15 49.4**	**-1.8**
VLI	**Veliai**	**0.69**	**329**	*e*P		**Pn**	**22 15 39.6**	**-0.8**
VLI				*e*S		**Sn**	**22 15 49.4**	**-1.8**
VLI	**Veliai**	**0.69**	**329**	*e*P		**Pn**	**22 15 39.6**	**-0.8**
VLI				*e*S		**Sn**	**22 15 49.4**	**-1.8**
KARN	**Karanos**	**0.84**	**149**	*e*P		**Pn**	**22 15 42.6**	**+0.4**
KARN				*e*S		**Sn**	**22 15 54.6**	**+0.3**
KARN	**Karanos**	**0.84**	**149**	P		**Pn**	**22 15 42.5**	**+0.3**
KARN				S		**Sn**	**22 15 54.8**	**+0.5**
KARN	**Karanos**	**0.84**	**149**	*e*P		**Pn**	**22 15 42.6**	**+0.4**
KARN				*e*S		**Sn**	**22 15 54.6**	**+0.3**
VAM	**Vamos**	**0.98**	**137**	*e*P		**Pn**	**22 15 43.5**	**-0.3**
VAM				*e*S		**Sn**	**22 15 57.3**	**0.0**
VAM	**Vamos**	**0.98**	**137**	*e*P		**Pn**	**22 15 43.5**	**-0.3**
VAM				*e*S		**Sn**	**22 15 57.3**	**0.0**
VAM	**Vamos**	**0.98**	**137**	*e*P		**Pn**	**22 15 43.5**	**-0.3**
VAM				*e*S		**Sn**	**22 15 57.3**	**0.0**
DID	**Didima**	**1.38**	**355**	*e*P		**Pn**	**22 15 48.7**	**-0.3**
DID				*e*S		**Sn**	**22 16 05.6**	**-0.9**
DID	**Didima**	**1.38**	**355**	P		**Pn**	**22 15 48.7**	**-0.3**
DID				S		**Sn**	**22 16 05.9**	**-0.6**
DID	**Didima**	**1.38**	**355**	*e*P		**Pn**	**22 15 48.7**	**-0.3**
DID				S		**Sn**	**22 16 05.9**	**-0.6**
VLX	**Vlachokerasia**	**1.48**	**327**	*e*P		**Pn**	**22 15 50.6**	**+0.3**
VLX				*e*S		**Sn**	**22 16 08.3**	**-0.5**
VLX	**Vlachokerasia**	**1.48**	**327**	P		**Pn**	**22 15 51.3**	**+1.0**
VLX				S		**Sn**	**22 16 11.2**	**+2.4**
VLX	**Vlachokerasia**	**1.48**	**327**	*e*P		**Pn**	**22 15 50.6**	**+0.3**
VLX				*e*S		**Sn**	**22 16 08.3**	**-0.5**
IDI	**Anoyia**	**1.48**	**124**	Pn		**Pn**	**22 15 50.2**	**-0.2**
	18nm,0.3s,baz=312,slow=14,SNR=145							
IDI				Sn		**Sn**	**22 16 09.3**	**+0.3**
	55nm,0.3s,baz=288,slow=12,SNR=15							
IDI	**Anoyia**	**1.48**	**124**	*e*P		**Pn**	**22 15 50.2**	**-0.2**
IDI				*e*S		**Sn**	**22 16 08.8**	**-0.2**
IDI	**Anoyia**	**1.48**	**124**	*e*P		**Pn**	**22 15 50.2**	**-0.2**
IDI				*e*S		**Sn**	**22 16 08.8**	**-0.2**
IDI	**Anoyia**	**1.48**	**124**	*e*P		**Pn**	**22 15 50.2**	**-0.2**
IDI				*e*S		**Sn**	**22 16 08.8**	**-0.2**
PYL	**PYLOS**	**1.53**	**301**	*e*P		**Pn**	**22 15 51.0**	**+0.1**
PYL	**PYLOS**	**1.53**	**301**	P		**Pn**	**22 15 50.9**	**0.0**
PYL				S		**Sn**	**22 16 13.2**	**+3.2**
PYL	**PYLOS**	**1.53**	**301**	*e*P		**Pn**	**22 15 51.0**	**+0.1**
PYL				S		**Sn**	**22 16 13.2**	**+3.2**
ITM	**Ithomi**	**1.57**	**312**	*e*P		**Pn**	**22 15 52.4**	**+0.9**
ITM				*e*S		**Sn**	**22 16 11.1**	**0.0**
ITM	**Ithomi**	**1.57**	**312**	*e*P		**Pn**	**22 15 52.4**	**+0.9**
ITM				*e*S		**Sn**	**22 16 11.1**	**0.0**
ITM	**Ithomi**	**1.57**	**312**	P		**Pn**	**22 15 52.5**	**+1.0**
ITM				S		**Sn**	**22 16 12.9**	**+1.8**
ITM	**Ithomi**	**1.57**	**312**	*e*P		**Pn**	**22 15 52.4**	**+0.9**
ITM				*e*S		**Sn**	**22 16 11.1**	**0.0**
SIVA	**Sivas**	**1.61**	**133**	*e*P		**Pn**	**22 15 52.9**	**+0.9**
SIVA	**Sivas**	**1.61**	**133**	*e*P		**Pn**	**22 15 52.9**	**+0.9**
SIVA	**Sivas**	**1.61**	**133**	P		**Pn**	**22 15 53.8**	**+1.8**
SIVA				S		**Sn**	**22 16 14.3**	**+2.5**
SIVA	**Sivas**	**1.61**	**133**	*e*P		**Pn**	**22 15 52.9**	**+0.9**
SIVA				S		**Sn**	**22 16 14.3**	**+2.5**
THR5	**Thira Island,**	**1.61**	**79**	P		**Pn**	**22 15 52.1**	**0.0**
THR5				S		**Sn**	**22 16 11.9**	**-0.1**
THR5	**Thira Island,**	**1.61**	**79**	P		**Pn**	**22 15 52.1**	**0.0**
THR5				S		**Sn**	**22 16 11.9**	**-0.1**
NAIG	**Nisos Aigina**	**1.63**	**3**	*e*P		**Pn**	**22 15 52.0**	**-0.3**
NAIG	**Nisos Aigina**	**1.63**	**3**	*e*P		**Pn**	**22 15 52.0**	**-0.3**
NAIG	**Nisos Aigina**	**1.63**	**3**	*e*P		**Pn**	**22 15 52.0**	**-0.3**
THR3	**Thira Island,**	**1.65**	**80**	P		**Pn**	**22 15 52.8**	**+0.2**
THR3	**Thira Island,**	**1.65**	**80**	P		**Pn**	**22 15 52.8**	**+0.2**
THR2	**Thira island,**	**1.69**	**79**	P		**Pn**	**22 15 53.3**	**+0.2**
THR2	**Thira island,**	**1.69**	**79**	P		**Pn**	**22 15 53.3**	**+0.2**
THR1	**Thera Island**	**1.69**	**81**	P		**Pn**	**22 15 53.2**	**0.0**
	205nm,0.2s							
THR1				S		**Sn**	**22 16 13.9**	**-0.1**
THR1	**Thera Island**	**1.69**	**81**	P		**Pn**	**22 15 53.2**	**0.0**
	205nm,0.2s							
THR1				S		**Sn**	**22 16 13.9**	**-0.1**
VLY	**Voula,Athens**	**1.75**	**11**	*e*P		**Pn**	**22 15 53.2**	**-0.7**
VLY				*e*S		**Sn**	**22 16 13.8**	**-1.6**
VLY	**Voula,Athens**	**1.75**	**11**	*e*P		**Pn**	**22 15 53.2**	**-0.7**
VLY				*e*S		**Sn**	**22 16 13.8**	**-1.6**
VLY	**Voula,Athens**	**1.75**	**11**	*e*P		**Pn**	**22 15 53.2**	**-0.7**
VLY				*e*S		**Sn**	**22 16 13.8**	**-1.6**
ATH	**Athens Observa**	**1.86**	**8**	*e*P		**Pn**	**22 15 55.4**	**0.0**
ATH				*e*S		**Sn**	**22 16 16.6**	**-1.3**
ATH	**Athens Observa**	**1.86**	**8**	*e*P		**Pn**	**22 15 55.4**	**0.0**
ATH				*e*S		**Sn**	**22 16 16.6**	**-1.3**
ATH	**Athens Observa**	**1.86**	**8**	*e*P		**Pn**	**22 15 55.4**	**0.0**
ATH				*e*S		**Sn**	**22 16 16.6**	**-1.3**
ATHU	**Athens Univers**	**1.86**	**10**	P		**Pn**	**22 15 55.8**	**+0.4**
ATHU				S		**Sn**	**22 16 16.4**	**-1.6**
ATHU	**Athens Univers**	**1.86**	**10**	P		**Pn**	**22 15 55.8**	**+0.4**
ATHU				S		**Sn**	**22 16 16.4**	**-1.6**
LTK	**Loutraki**	**1.92**	**350**	*e*P		**Pn**	**22 15 56.5**	**+0.3**
LTK				*e*S		**Sn**	**22 16 18.3**	**-1.1**
LTK	**Loutraki**	**1.92**	**350**	P		**Pn**	**22 15 56.6**	**+0.4**
LTK				S		**Sn**	**22 16 19.7**	**+0.3**
LTK	**Loutraki**	**1.92**	**350**	*e*P		**Pn**	**22 15 56.5**	**+0.3**
LTK				S		**Sn**	**22 16 19.7**	**+0.3**
PTL	**Penteli**	**1.96**	**11**	*e*P		**Pn**	**22 15 56.4**	**-0.3**
PTL				*e*S		**Sn**	**22 16 18.3**	**-1.9**
PTL	**Penteli**	**1.96**	**11**	*e*P		**Pn**	**22 15 56.4**	**-0.3**
PTL				*e*S		**Sn**	**22 16 18.3**	**-1.9**
PTL	**Penteli**	**1.96**	**11**	*e*P		**Pn**	**22 15 56.4**	**-0.3**
PTL				*e*S		**Sn**	**22 16 18.3**	**-1.9**
LAST	**Lasithi**	**1.96**	**119**	*e*P		**Pn**	**22 15 57.0**	**+0.3**
LAST				*e*S		**Sn**	**22 16 20.2**	**-0.1**
LAST	**Lasithi**	**1.96**	**119**	*e*P		**Pn**	**22 15 57.0**	**+0.3**
LAST				*e*S		**Sn**	**22 16 20.2**	**-0.1**
LAST	**Lasithi**	**1.96**	**119**	P		**Pn**	**22 15 57.2**	**+0.5**
LAST				S		**Sn**	**22 16 20.2**	**-0.1**
LAST	**Lasithi**	**1.96**	**119**	P		**Pn**	**22 15 57.2**	**+0.5**
LAST				*e*S		**Sn**	**22 16 20.2**	**-0.1**
APE	**Apeiranthos**	**1.97**	**61**	*e*P		**Pn**	**22 15 56.6**	**-0.2**
APE				*e*S		**Sn**	**22 16 19.0**	**-1.5**
APE	**Apeiranthos**	**1.97**	**61**	*e*P		**Pn**	**22 15 56.6**	**-0.2**
APE				*e*S		**Sn**	**22 16 19.0**	**-1.5**
APE	**Apeiranthos**	**1.97**	**61**	P		**Pn**	**22 15 56.7**	**-0.1**
APE				S		**Sn**	**22 16 19.4**	**-1.1**
APE	**Apeiranthos**	**1.97**	**61**	P		**Pn**	**22 15 56.7**	**-0.1**
APE				S		**Sn**	**22 16 19.4**	**-1.1**
GUR	**Goura**	**1.99**	**336**	*e*P		**Pn**	**22 15 57.3**	**+0.2**
GUR				*e*S		**Sn**	**22 16 21.2**	**+0.2**
GUR	**Goura**	**1.99**	**336**	P		**Pn**	**22 15 57.5**	**+0.4**
GUR				S	

ARG	**Arkhangelos**	**3.84**	**87**	*eP*	**Pn**	**22 16 23.7**	**+1.5**
ARG	**Arkhangelos**	**3.84**	**87**	*eP*	**Pn**	**22 16 23.7**	**+1.5**
PRK	**Paraskevi**	**3.87**	**35**	*eP*	**Pn**	**22 16 22.3**	**-0.3**
PRK	**Paraskevi**	**3.87**	**35**	*eP*	**Pn**	**22 16 22.3**	**-0.3**
PRK	**Paraskevi**	**3.87**	**35**	*eP*	**Pn**	**22 16 22.3**	**-0.3**
OUR	**Ouranopolis**	**4.23**	**6**	P	**Pn**	**22 16 27.8**	**+0.3**
OUR	**Ouranopolis**	**4.23**	**6**	P	**Pn**	**22 16 27.8**	**+0.3**
PLG	**Polygyros**	**4.24**	**1**	P	**Pn**	**22 16 28.8**	**+1.1**
PLG	**Polygyros**	**4.24**	**1**	P	**Pn**	**22 16 28.8**	**+1.1**
SLUM		**4.87**	**161**	P	**Pn**	**22 16 35.9**	**-0.4**
	baz=165						
SLUM				AMP		22 17 00.0	
	comp=N,30μm,0.2s,logA/T=5.2,baz=165						
SLUM		**4.87**	**161**	P	**Pn**	**22 16 35.9**	**-0.5**
FNA	**Florina**	**4.91**	**342**	P	**Pn**	**22 16 38.3**	**+1.5**
FNA	**Florina**	**4.91**	**342**	P	**Pn**	**22 16 38.3**	**+1.5**
KSL	**Kastellorizon**	**5.02**	**88**	*eP*	**Pn**	**22 16 40.2**	**+1.8**
KSL	**Kastellorizon**	**5.02**	**88**	*eP*	**Pn**	**22 16 40.2**	**+1.8**
KSL	**Kastellorizon**	**5.02**	**88**	*eP*	**Pn**	**22 16 40.2**	**+1.8**
HMAT	**Matruh**	**5.90**	**147**	S	**Sn**	**22 17 50.0**	**-6.6**
	baz=150						
CEL	**Celeste**	**6.35**	**292**	P	**Pn**	**22 16 56.3**	**-0.2**
CEL	**Celeste**	**6.35**	**292**	P	**Pn**	**22 16 56.3**	**-0.2**
TAR1	**Taranto**	**6.50**	**314**	*e*Sn	**Sn**	**22 18 01.0**	**-10**
PE1	**Pezze di Greco**	**6.61**	**317**	*e*Pn	**Pn**	**22 16 59.0**	**-1.1**
HAVL	**Avola**	**6.70**	**280**	Pn	**Pn**	**22 16 58.3**	**-3.1**
LTRZ	**Laterza**	**6.82**	**313**	Pn	**Pn**	**22 17 00.9**	**-2.1**
LTRZ	**Laterza**	**6.82**	**313**	Pn	**Pn**	**22 17 00.9**	**-2.1**
HVZN	**Vizzini**	**7.05**	**281**	Pn	**Pn**	**22 17 03.9**	**-2.2**
SG1	**Sgolgore (BA)**	**7.05**	**314**	*e*Pn	**Pn**	**22 17 05.5**	**-0.7**
BAI	**Bari**	**7.12**	**316**	*e*Pn	**Pn**	**22 17 05.3**	**-1.7**
CSS	**Prodhromos**	**8.19**	**95**	*e*Pn	**Pn**	**22 17 23.9**	**+2.1**
CSS	**Prodhromos**	**8.19**	**95**	*e*Pn	**Pn**	**22 17 23.9**	**+2.1**
BBLS	**Lazići**	**8.31**	**340**	*e*Pn	**Pn**	**22 17 21.1**	**-2.2**
BRTR	**Keskin Array B**	**8.86**	**63**	Pn	**Pn**	**22 17 32.5**	**+1.6**
	comp=N,0.1nm,0.3s,baz=243,slow=11,SNR=5.6						
BRTR	**Keskin Array B**	**8.86**	**63**	Pn	**Pn**	**22 17 32.5**	**+1.6**
GLL	**Jalalah**	**9.57**	**131**	P	**Pn**	**22 17 37.6**	**-3.0**
	baz=131						
AMAG	**Maghara**	**9.87**	**121**	P	**Pn**	**22 17 42.4**	**-2.3**
	baz=121						
HFRF	**Wahat Farafira**	**9.88**	**154**	P	**Pn**	**22 17 43.4**	**-1.6**
	baz=155						
RSH		**10.05**	**118**	P	**Pn**	**22 17 45.5**	**-1.6**
MMAI	**Mount Meron Ar**	**10.38**	**104**	Pn	**Pn**	**22 17 49.5**	**-2.2**
	comp=N,0.7nm,0.3s,baz=304,slow=12,SNR=7.2						
MMAI				Sn	**Sn**	**22 19 37.1**	**-9.3**
	comp=N,1.2nm,0.3s,baz=310,slow=22,SNR=6.5						
EIL	**Elat**	**11.66**	**120**	Pn	**Pn**	**22 18 06.7**	**-2.4**
	comp=N,0.2nm,0.3s,baz=2.1,slow=21,SNR=7.3						
EIL				Sn	**Sn**	**22 20 04.5**	**-13**
	comp=N,0.2nm,0.3s,baz=333,slow=11,SNR=3.0						
EIL	**Elat**	**11.66**	**120**	Pn	**Pn**	**22 18 06.7**	**-2.4**
EIL				Sn	**Sn**	**22 20 04.5**	**-13**
HFS	**Hagfors**	**24.82**	**348**	P	**P**	**22 20 40.3**	**-0.8**
	comp=N,0.7nm,0.4s,mb3.4,baz=157,slow=9.6,SNR=9.0						
TORD	**Torodi Ar. Bea**	**30.06**	**226**	P	**P**	**22 21 29.2**	**+0.8**
	comp=N,0.6nm,0.5s,mb3.5,baz=43,slow=9.8,SNR=6.3						
TORD	**Torodi Ar. Bea**	**30.06**	**226**	P	**P**	**22 21 29.2**	**+0.8**
MK31	**Makanchi Array**	**44.46**	**57**	*eP*	**P**	**22 23 29.5**	**-0.3**
MKAR	**Makanchi Array**	**44.46**	**57**	P	**P**	**22 23 29.3**	**-0.4**
	comp=N,0.5nm,0.5s,mb3.5,baz=268,slow=7.9,SNR=11						

*ISCJB **04** 23:13:34.4±0.6, 19°.47S±0°.05×69°.3W±0°.1, h120km±7km, mb3.8/3, Error ellipse: s-maj=20.6km s-min=7.0km az=8.4*
*GUC **04** 23:13:35.2±0.9, 19°.57S×69°.49W, h122km±6km, MD3.9, ML3.6*
*IDC **04** 23:13:39.6±7.2, 19°.30S×68°.83W, h142km±46km, mb3.7/3, mb1 3.7/4, mb1mx3.3/16, mbtmp3.5/4, Error ellipse: s-maj=77.2km s-min=34.4km az=37.0*
ISC 04 23:13:35.3±0.6, 19°.47S±0°.05×69°.4W±0°.1, h118km±7km, n11, σ1°.07/18, mb3.8/3, 5C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNMC	**Miæe Miæ**	**0.40**	**327**	↑*iP*	**Pn**	**23 13 52.0**	**-0.5**
MNMC				*i* S	**Sn**	**23 14 05.8**	**+0.4**
MNMC				AML	AML	23 14 06.2	
	comp=E,6μm,0.2s						
PSGC	**Pisagua**	**0.72**	**260**	↑*iP*	**Pn**	**23 13 54.2**	**-0.4**
PSGC				*i* S	**Sn**	**23 14 08.9**	**-0.3**
PSGC				AML	AML	23 14 09.3	
	comp=N,786nm,0.2s						
HMBC	**Humberston**	**0.94**	**211**	↑*iP*	**Pn**	**23 13 56.0**	**-0.6**
HMBC				*i* S	**Sn**	**23 14 11.7**	**-0.9**
HMBC				AML	AML	23 14 14.0	
	comp=N,2μm,0.4s						
PB01	**Plate Boundary**	**1.57**	**184**	↑*iP*	**Pn**	**23 14 03.2**	**-0.2**
PB01				*i* S	**Sn**	**23 14 24.3**	**-0.5**
PB01				AML	AML	23 14 27.4	
	comp=N,969nm,0.3s						
PB04	**Plate Boundary**	**2.78**	**182**	*eP*	**Pn**	**23 14 19.6**	**+0.9**
PB04				*i* S	**Sn**	**23 14 52.9**	**+0.8**
PB04				AML	AML	23 15 15.5	
	comp=E,194nm,0.3s						
LPAZ	**La Paz**	**3.38**	**21**	P	**Pn**	**23 14 28.6**	**+2.0**
	comp=E,1.8nm,0.3s,baz=196,slow=6.0,SNR=50						
LPAZ				S	**Sn**	**23 15 06.1**	**-0.1**
	baz=171,slow=10.0,SNR=1.9						
CEN1	**Los Morros**	**3.98**	**191**	↑*iP*	**Pn**	**23 14 37.2**	**+2.7**
CEN1				*i* S	**Sn**	**23 15 25.3**	**+4.9**
SIV	**San Ignacio**	**8.63**	**68**	P	**Pn**	**23 15 33.5**	**-3.9**
	baz=266,slow=13						
DBIC	**Dimbokro**	**68.59**	**74**	P	**P**	**23 24 24.2**	**-1.8**
	comp=E,2.4nm,0.8s,mb4.1,baz=200,slow=6.5,SNR=2.4						
TORD	**Torodi Ar. Bea**	**77.09**	**71**	P	**P**	**23 25 15.2**	**-1.1**
	comp=E,0.5nm,0.4s,mb3.6,baz=252,slow=5.2,SNR=16						
YKA	**Yellowknife Ar**	**89.14**	**341**	P	**P**	**23 26 18.1**	**+1.1**
	comp=E,0.5nm,0.6s,mb3.8,baz=133,slow=4.8,SNR=4.4						

*ISCJB **04** 23:19:26.0±0.2, 45°.62N±0°.02×26°.52E±0°.03, h148km±2km, mb3.8/15, Error ellipse: s-maj=3.4km s-min=3.0km az=167.7*
*NEIC **04** 23:19:26.8, 45°.65N×26°.54E, h147km, mb4.0/9, After BUC.*
*CSEM **04** 23:19:26.8±0.1, 45°.65N×26°.47E, h146km, mb3.9/5, Error ellipse: s-maj=3.1km s-min=3.0km az=130.0*
*BUC **04** 23:19:26.7±0.8, 45°.63N×26°.53E, h151km±9km, MD4.8/2, Error ellipse: s-maj=6.5km s-min=5.5km az=42.0*
*IDC **04** 23:19:27.3±0.5, 45°.84N×26°.24E, h144km±3km, mb3.6/10, mb1 3.5/13, mb1mx3.4/26, mbtmp3.5/13, Error ellipse: s-maj=21.2km s-min=10.2km az=127.0*
*SOF **04** 23:19:27.4, 45°.67N×26°.41E, h28km, MD3.3*
ISC 04 23:19:27.0±0.2, 45°.62N±0°.02×26°.52E±0°.03, h145km±2km, n235, σ0°.96/298, mb3.8/15, 65C-44D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLOR	**Plostina**	**0.25**	**211**	↑*iP*	**Pn**	**23 19 46.9**	**+0.1**
PLOR				*i* S	**Sn**	**23 20 02.0**	**+0.1**
PLOR	**Plostina**	**0.25**	**211**	↑*iP*	**Pn**	**23 19 46.9**	**+0.1**
PLOR	**Plostina**	**0.25**	**211**	↑*iP*	**Pn**	**23 19 46.9**	**+0.1**
PLOR				*i* S	**Sn**	**23 20 02.0**	**+0.1**
VRI	**Vrincioaia**	**0.29**	**30**	↑*iP*	**Pn**	**23 19 47.2**	**+0.3**
VRI				*i* S	**Sn**	**23 20 02.2**	**+0.1**
VRI	**Vrincioaia**	**0.29**	**30**	↑*iP*	**Pn**	**23 19 47.2**	**+0.3**
VRI	**Vrincioaia**	**0.29**	**30**	↑*iP*	**Pn**	**23 19 47.2**	**+0.3**
VRI				*i* S	**Sn**	**23 20 02.2**	**+0.1**
GRER		**0.40**	**127**	⇑*iP*	**Pn**	**23 19 48.8**	**+1.5**
GRER				S	**Sn**	**23 20 06.0**	**+3.4**
GRER		**0.40**	**127**	↑*iP*	**Pn**	**23 19 48.7**	**+1.4**
GRER				*i* S	**Sn**	**23 20 02.9**	**+0.2**
GRER		**0.40**	**127**	↑*iP*	**Pn**	**23 19 48.7**	**+1.4**
GRER		**0.40**	**127**	↑*iP*	**Pn**	**23 19 48.7**	**+1.4**
GRER				*i* S	**Sn**	**23 20 02.9**	**+0.2**
ODB	**Odobesti**	**0.41**	**67**	⇑*iP*	**Pn**	**23 19 48.6**	**+1.3**
ODB				S	**Sn**	**23 20 04.6**	**+1.8**
ODB	**Odobesti**	**0.41**	**67**	⇓*iP*	**Pn**	**23 19 48.6**	**+1.3**
ODB				*i* S	**Sn**	**23 20 02.8**	**0.0**
ODB	**Odobesti**	**0.41**	**67**	⇓*iP*	**Pn**	**23 19 48.6**	**+1.3**
ODB	**Odobesti**	**0.41**	**67**	⇓*iP*	**Pn**	**23 19 48.6**	**+1.3**
ODB				*i* S	**Sn**	**23 20 02.8**	**0.0**
MLR	**Muntele Rosu**	**0.42**	**253**	P	**Pn**	**23 19 47.9**	**+0.6**
	396nm,0.3s,baz=356,slow=3.6,SNR=1416						
MLR				S	**Sn**	**23 20 04.6**	**+1.8**
	839nm,0.3s,baz=69,slow=23,SNR=36						
MLR	**Muntele Rosu**	**0.42**	**253**	⇑P	**Pn**	**23 19 48.0**	**+0.6**
MLR				S	**Sn**	**23 20 04.2**	**+1.3**
MLR	**Muntele Rosu**	**0.42**	**253**	⇑*iP*	**Pn**	**23 19 48.0**	**+0.6**
MLR				*i* S	**Sn**	**23 20 04.2**	**+1.3**
MLR	**Muntele Rosu**	**0.42**	**253**	⇑*iP*	**Pn**	**23 19 48.0**	**+0.6**
MLR	**Muntele Rosu**	**0.42**	**253**	⇑*iP*	**Pn**	**23 19 48.0**	**+0.6**
MLR				*i* S	**Sn**	**23 20 04.2**	**+1.3**
PETR		**0.51**	**78**	⇑P	**Pn**	**23 19 48.6**	**+0.9**
PETR				S	**Sn**	**23 20 04.7**	**+1.1**
PETR		**0.51**	**78**	⇑*iP*	**Pn**	**23 19 48.6**	**+0.8**
PETR				*i* S	**Sn**	**23 20 04.4**	**+0.8**
PETR		**0.51**	**78**	⇑*iP*	**Pn**	**23 19 48.6**	**+0.8**
PETR		**0.51**	**78**	⇑*iP*	**Pn**	**23 19 48.6**	**+0.8**
PETR				*i* S	**Sn**	**23 20 04.4**	**+0.8**
TESR		**0.90**	**6**	⇑P	**Pn**	**23 19 50.0**	**-0.3**
TESR				S	**Sn**	**23 20 06.9**	**-1.4**
TESR		**0.90**	**6**	⇑*iP*	**Pn**	**23 19 50.0**	**-0.4**
TESR		**0.90**	**6**	⇑*iP*	**Pn**	**23 19 50.0**	**-0.4**
TESR		**0.90**	**6**	⇑*iP*	**Pn**	**23 19 50.0**	**-0.4**
TESR				S	**Sn**	**23 20 06.9**	**-1.4**
SULR		**0.96**	**191**	P	**Pn**	**23 19 51.9**	**+1.0**
SULR				S	**Sn**	**23 20 11.0**	**+1.9**
SULR		**0.96**	**191**	⇑*iP*	**Pn**	**23 19 51.8**	**+0.9**
SULR				*i* S	**Sn**	**23 20 09.4**	**+0.3**
SULR		**0.96**	**191**	⇑*iP*	**Pn**	**23 19 51.8**	**+0.9**
SULR		**0.96**	**191**	⇑*iP*	**Pn**	**23 19 51.8**	**+0.9**
SULR				S	**Sn**	**23 20 11.0**	**+1.9**
VOIR		**1.05**	**261**	⇑P	**Pn**	**23 19 51.8**	**+0.1**
VOIR				S	**Sn**	**23 20 09.9**	**-0.6**
VOIR		**1.05**	**261**	⇑*iP*	**Pn**	**23 19 51.8**	**+0.1**
VOIR		**1.05**	**261**	⇑*iP*	**Pn**	**23 19 51.8**	**+0.1**
VOIR		**1.05**	**261**	⇑*iP*	**Pn**	**23 19 51.8**	**+0.1**
VOIR				S	**Sn**	**23 20 09.9**	**-0.6**
AMRR	**Amara**	**1.16**	**150**	⇓P	**Pn**	**23 19 53.6**	**+0.8**
AMRR				S	**Sn**	**23 20 13.2**	**+0.9**
AMRR	**Amara**	**1.16**	**150**	⇑*iP*	**Pn**	**23 19 53.6**	**+0.8**
AMRR				*i* S	**Sn**	**23 20 13.2**	**+0.8**
AMRR	**Amara**	**1.16**	**150**	⇑*iP*	**Pn**	**23 19 53.6**	**+0.8**
AMRR	**Amara**	**1.16**	**150**	⇑*iP*	**Pn**	**23 19 53.6**	**+0.8**
AMRR				*i* S	**Sn**	**23 20 13.2**	**+0.8**
CFR	**Carcaliu**	**1.22**	**111**	⇓P	**Pn**	**23 19 53.6**	**+0.3**
CFR				S	**Sn**	**23 20 12.5**	**-0.9**
CFR	**Carcaliu**	**1.22**	**111**	⇑*iP*	**Pn**	**23 19 53.6**	**+0.3**
CFR				*i* S	**Sn**	**23 20 12.5**	**-0.9**
CFR	**Carcaliu**	**1.22**	**111**	⇑*iP*	**Pn**	**23 19 53.6**	**+0.3**
CFR	**Carcaliu**	**1.22**	**111**	⇑*iP*	**Pn**	**23 19 53.6**	**+0.3**
CFR				*i* S	**Sn**	**23 20 12.5**	**-0.9**
BUC1	**Bucharest**	**1.32**	**196**	⇑P	**Pn**	**23 19 55.1**	**+0.8**
BUC1	**Bucharest**	**1.32**	**196**	⇑*iP*	**Pn**	**23 19 55.1**	**+0.8**
BUC1				*i* S	**Sn**	**23 20 16.0**	**+0.9**
BUC1	**Bucharest**	**1.32**	**196**	⇑*iP*	**Pn**	**23 19 55.1**	**+0.8**
BUC1	**Bucharest**	**1.32**	**196**	⇑*iP*	**Pn**	**23 19 55.1**	**+0.8**
BUC1				*i* S	**Sn**	**23 20 16.0**	**+0.9**
LEOM	**Leova**	**1.48**	**54**	⇑*iP*	**Pn**	**23 19 56.1**	**+0.3**
LEOM				*i* S	**Sn**	**23 20 17.3**	**-0.7**
LEOM	**Leova**	**1.48**	**54**	⇑*iP*	**Pn**	**23 19 56.1**	**+0.3**
LEOM	**Leova**	**1.48**	**54**	⇑*iP*	**Pn**	**23 19 56.1**	**+0.3**
LEOM				*i* S	**Sn**	**23 20 17.3**	**-0.7**
MDB	**Medias**	**1.58**	**290**	⇑P	**Pn**	**23 19 57.6**	**+0.6**
MDB	**Medias**	**1.58**	**290**	⇓*iP*	**Pn**	**23 19 57.6**	**+0.6**
MDB	**Medias**	**1.58**	**290**	⇓*iP*	**Pn**	**23 19 57.6**	**+0.6**
MDB	**Medias**	**1.58**	**290**	⇓*iP*	**Pn**	**23 19 57.6**	**+0.6**
TLCR		**1.67**	**104**	⇑P	**Pn**	**23 19 58.3**	**+0.2**
TLCR				S	**Sn**	**23 20 20.7**	**-1.1**
TLCR		**1.67**	**104**	⇑*iP*	**Pn**	**23 19 58.3**	**+0.3**
TLCR				*i* S	**Sn**	**23 20 21.5**	**-0.3**
TLCR		**1.67**	**104**	⇑*iP*	**Pn**	**23 19 58.3**	**+0.3**
TLCR		**1.67**	**104**	⇑*iP*	**Pn**	**23 19 58.3**	**+0.3**
TLCR				*i* S	**Sn**	**23 20 21.5**	**-0.3**
CVD	**Cernavoda**	**1.69**	**140**	⇓P	**Pn**	**23 19 58.8**	**+0.6**
CVD				S	**Sn**	**23 20 21.6**	**-0.5**
CVD	**Cernavoda**	**1.69**	**140**	⇓*iP*	**Pn**	**23 19 58.8**	**+0.6**
CVD				*i* S	**Sn**	**23 20 21.6**	**-0.5**
CVD	**Cernavoda**	**1.69**	**140**	⇓*iP*	**Pn**	**23 19 58.8**	**+0.6**
CVD	**Cernavoda**	**1.69**	**140**	⇓*iP*	**Pn**	**23 19 58.8**	**+0.6**
CVD				*i* S	**Sn**	**23 20 21.6**	**-0.5**
IAS	**Iasi**	**1.73**	**24**	⇑P	**Pn**	**23 19 58.9**	**+0.3**
IAS				S	**Sn**	**23 20 21.1**	**-1.9**
IAS	**Iasi**	**1.73**	**24**	⇑*iP*	**Pn**	**23 19 58.9**	**+0.3**
IAS				*i* S	**Sn**	**23 20 21.3**	**-1.7**
IAS	**Iasi**	**1.73**	**24**	⇑*iP*	**Pn**	**23 19 58.9**	**+0.3**
IAS	**Iasi**	**1.73**	**24**	⇑*iP*	**Pn**	**23 19 58.9**	**+0.3**
IAS				*i* S	**Sn**	**23 20 21.3**	**-1.7**
TIRR	**Tirgusor**	**1.77**	**130**	*e*Pn	**Pn**	**23 19 59.5**	**+0.3**
TIRR				*e*Sn	**Sn**	**23 20 23.1**	**-0.7**
TIRR	**Tirgusor**	**1.77**	**130**	⇑P	**Pn**	**23 19 59.7**	**+0.5**
TIRR				*i* S	**Sn**	**23 20 23.6**	**-0.2**
TIRR	**Tirgusor**	**1.77**	**130**	⇑*iP*	**Pn**	**23 19 59.7**	**+0.5**
TIRR	**Tirgusor**	**1.77**	**130**	*e*Pn	**Pn**	**23 19 59.5**	**+0.3**
TIRR	**Tirgusor**	**1.77**	**130**	⇑*iP*	**Pn**	**23 19 59.7**	**+0.5**
TIRR				*e*Sn	**Sn**	**23 20 23.1**	**-0.7**
TIRR				*i* S	**Sn**	**23 20 23.6**	**-0.2**
KIS	**Kishinev**	**2.11**	**48**	*i* P	**Pn**	**23 20 02.0**	**-1.0**
	200nm,0.6s						
KIS				*i* S	**Sn**	**23 20 28.2**	**-2.5**
	3μm,0.6s						
KIS	**Kishinev**	**2.11**	**48**	⇓P	**Pn**	**23 20 02.9**	**-0.1**
KIS				S	**Sn**	**23 20 28.9**	**-1.8**
KIS	**Kishinev**	**2.11**	**48**	⇑*iP*	**Pn**	**23 20 02.9**	**-0.1**
KIS	**Kishinev**	**2.11**	**48**	⇑*iP*	**Pn**	**23 20 02.9**	**-0.1**
KIS	**Kishinev**	**2.11**	**48**	⇑*iP*	**Pn**	**23 20 02.9**	**-0.1**
KIS				S	**Sn**	**23 20 29.0**	**-1.7**
ZIMR		**2.13**	**203**	⇑P	**Pn**	**23 20 03.7**	**+0.3**
ZIMR				S	**Sn**	**23 20 30.6**	**-0.6**
ZIMR		**2.13**	**203**	⇑*iP*	**Pn**	**23 20 03.7**	**+0.4**
ZIMR				*i* S	**Sn**	**23 20 30.9**	**-0.3**
ZIMR		**2.13**	**203**	⇑*iP*	**Pn**	**23 20 03.7**	**+0.4**
BUR01	**Bucovina Ar. S**	**2.19**	**336**	P	**Pn**	**23 20 04.8**	**+0.8**
BUR01	**Bucovina Ar. S**	**2.19**	**336**	P	**Pn**	**23 20 04.8**	**+0.8**
BURAR	**Bucovina Array**	**2.19**	**336**	⇓P	**Pn**	**23 20 05.1**	**+1.1**
BURAR				S	**Sn**	**23 20 33.6**	**+1.1**
BURAR	**Bucovina Array**	**2.19**	**336**	⇓*iP*	**Pn**	**23 20 05.1**	**+1.1**
BURAR	**Bucovina Array**	**2.19**	**336**	⇓*iP*	**Pn**	**23 20 05.1**	**+1.1**
BURAR	**Bucovina Array**	**2.19**	**336**	⇓*iP*	**Pn**	**23 20 05.1**	**+1.1**
BURAR				S	**Sn**	**23 20 33.6**	**+1.1**
BUR08	**Bucovina Ar. S**	**2.22**	**336**	*e*Pn	**Pn**	**23 20 04.7**	**+0.3**
BUR08	**Bucovina Ar. S**	**2.22**	**336**	*e*Pn	**Pn**	**23 20 04.7**	**+0.3**
PSN	**Preselentsi**	**2.27**	**148**	P	**Pn**	**23 20 06.2**	**+1.1**
PSN	**Preselentsi**	**2.27**	**148**	P	**Pn**	**23 20 06.2**	**+1.1**
CRAR	**CRAIOVA**	**2.32**	**237**	⇑*iP*	**Pn**	**23 20 05.6**	**-0.1**
CRAR				*i* S	**Sn**	**23 20 34.9**	**-0.5**
CRAR	**CRAIOVA**	**2.32**	**237**	⇑*iP*	**Pn**	**23 20 05.6**	**-0.1**
CRAR	**CRAIOVA**	**2.32**	**237**	⇑*iP*	**Pn**	**23 20 05.6**	**-0.1**
CRAR				*i* S	**Sn**	**23 20 34.9**	**-0.5**
SZH	**Strazhica**	**2.39**	**190**	P	**Pn**	**23 20 06.7**	**+0.2**
SZH	**Strazhica**	**2.39**	**190**	P	**Pn**	**23 20 06.7**	**+0.2**
PRD	**Provadia**	**2.50**	**165**	P	**Pn**	**23 20 09.0**	**+1.1**
PRD	**Provadia**	**2.50**	**165**	P	**Pn**	**23 20 09.0**	**+1.1**
DEV	**Deva**	**2.54**	**277**	⇓P	**Pn**	**23 20 09.5**	**+1.1**
DEV				S	**Sn**	**23 20 41.2**	**+0.9**
DEV	**Deva**	**2.54**	**277**	⇓*iP*	**Pn**	**23 20 09.2**	**+0.8**
DEV	**Deva**	**2.54**	**277**	⇓*iP*	**Pn**	**23 20 09.2**	**+0.8**
DEV	**Deva**	**2.54**	**277**	⇓*iP*	**Pn**	**23 20 09.2**	**+0.8**
DEV				S	**Sn**	**23 20 41.2**	**+0.9**
PVL	**Pavlikeni**	**2.55**	**200**	P	**Pn**	**23 20 10.3**	**+1.9**
PVL	**Pavlikeni**	**2.55**	**200**	P	**Pn**	**23 20 10.3**	**+1.9**
DRGR		**2.89**	**295**	⇓P	**Pn**	**23 20 12.1**	**-0.7**
DRGR		**2.89**	**295**	⇓*iP*	**Pn**	**23 20 12.1**	**-0.6**
DRGR		**2.89**	**295**	⇓*iP*	**Pn**	**23 20 12.1**	**-0.6**
DRGR		**2.89**	**295**	⇓*iP*	**Pn**	**23 20 12.1**	**-0.6**
BMR	**Baia Mare**	**2.92**	**316**	⇓P	**Pn**	**23 20 13.0**	**-0.1**
BMR	**Baia Mare**	**2.92**	**316**	⇓*iP*	**Pn**	**23 20 13.0**	**-0.1**
BMR	**Baia Mare**	**2.92**	**316**	⇓*iP*	**Pn**	**23 20 13.0**	**-0.1**
BMR	**Baia Mare**	**2.92**	**316**	⇓*iP*	**Pn**	**23 20 13.0**	**-0.1**
MPEP	**Malo Peshtene**	**3.01**	**222**	P	**Pn**	**23 20 14.6**	**+0.3**
JMB	**Yambol**	**3.15**	**179**	P	**Pn**	**23 20 16.8**	**+0.7**
JMB	**Yambol**	**3.15**	**179**	P	**Pn**	**23 20 16.8**	**+0.7**
BZS	**Buzias**	**3.44**	**272**	P	**Pn**	**23 20 19.8**	**0.0**
BZS	**Buzias**	**3.44**	**272**	⇓*iP*	**Pn**	**23 20 19.6**	**-0.1**
BZS	**Buzias**	**3.44**	**272**	⇓*iP*	**Pn**	**23 20 19.6**	**-0.1**
BZS	**Buzias**	**3.44**	**272**	P	**Pn**	**23 20 19.8**	**+0.1**
DIM	**Dimitrovgrad**	**3.64**	**192**	P	**Pn**	**23 20 22.8**	**+0.4**
DIM	**Dimitrovgrad**	**3.64**	**192**	P	**Pn**	**23 20 22.8**	**+0.4**
TRPA	**Tarpa**	**3.71**	**314**	⇓*iP*	**Pn**	**23 20 22.5**	**-0.7**
TRPA	**Tarpa**	**3.71**	**314**	⇓*iP*	**Pn**	**23 20 22.5**	**-0.7**
TRPA	**Tarpa**	**3.71**	**314**	⇓*iP*	**Pn**	**23 20 22.5**	**-0.7**
BOLS	**Boljevac**	**3.71**	**243**	*e*Pn	**Pn**	**23 20 21.5**	**-1.8**
EDRB	**Edirne**	**3.77**	**177**	*eP*	**Pn**	**23 20 22.2**	**-1.9**
VTS	**Vitosha**	**3.85**	**219**	P	**Pn**	**23 20 25.7**	**+0.5**
VTS	**Vitosha**	**3.85**	**219**	⇓*iP*	**Pn**	**23 20 25.7**	**+0.5**
VTS	**Vitosha**	**3.85**	**219**	⇓*iP*	**Pn**	**23 20 25.7**	**+0.5**
VTS	**Vitosha**	**3.85**	**219**	⇓*iP*	**Pn**	**23 20 25.7**	**+0.5**
KDZ	**Kurdzhali**	**4.05**	**192**	P	**Pn**	**23 20 28.3**	**+0.6**
KDZ	**Kurdzhali**	**4.05**	**192**	P	**Pn**	**23 20 28.3**	**+0.6**
RZN	**Rozhen**	**4.14**	**199**	P	**Pn**	**23 20 29.7**	**+0.7**
RZN	**Rozhen**	**4.14**	**199**	P	**Pn**	**23 20 29.7**	**+0.7**
CTYL	**Yal??k??y-??at**	**4.34**	**162**	*eP*	**Pn**	**23 20 30.1**	**-1.5**
BARS	**Barje**	**4.39**	**232**	⇑*i*Pn	**Pn**	**23 20 32.1**	**-0.1**
GRUS	**Gruza**	**4.48**	**249**	*e*Pn	**Pn**	**23 20 31.8**	**-1.6**
MMB	**Musomiste**	**4.51**	**208**	P	**Pn**	**23 20 34.7**	**+0.9**
MMB	**Musomiste**	**4.51**	**208**	P	**Pn**	**23 20 34.7**	**+0.9**
SLVT	**Silivri**	**4.56**	**164**	*eP*	**Pn**	**23 20 33.3**	**-1.1**
TRUS	**Trudelj**	**4.56**	**254**	⇓*i*Pn	**Pn**	**23 20 32.6**	**-1.8**
CRLT	**Corlu**	**4.58**	**168**	*eP*	**Pn**	**23 20 33.6**	**-1.1**
CTKS	**Kestanelik-??a**	**4.61**	**161**	*eP*	**Pn**	**23 20 34.2**	**-1.0**
BGKT	**Bogazkoy**	**4.73**	**159**	*eP*	**Pn**	**23 20 35.8**	**-0.9**
KLYT	**Kilyos**	**4.74**	**156**	*eP*	**Pn**	**23 20 35.7**	**-1.1**
CRVS	**Cervenica-Dubn**	**4.76**	**315**	*e*Pn	**Pn**	**23 20 36.8**	**-0.2**
CRVS	**Cervenica-Dubn**	**4.76**	**315**	*e*PN	**Pn**	**23 20 36.8**	**-0.2**
CRVS	**Cervenica-Dubn**	**4.76**	**315**	*e*Pn	**Pn**	**23 20 36.8**	**-0.2**
KWP	**Kalwaria Pacla**	**4.77**	**329**	*e*Pn	**Pn**	**23 20 37.5**	**+0.4**
KWP	**Kalwaria Pacla**	**4.77**	**329**	*e*Pn	**Pn**	**23 20 36.9**	**-0.2**
KWP	**Kalwaria Pacla**	**4.77**	**329**	*e*Pn	**Pn**	**23 20 36.9**	**-0.2**
MFT	**Murefte**	**4.86**	**173**	*eP*	**Pn**	**23 20 37.4**	**-1.0**
DIVS	**Divibare**	**4.88**	**254**	⇓*i*Pn	**Pn**	**

*VIE **04** 23:19:36.1±0.6, 51.°31N×16.°16E, h0km, mb2.1/3, ML2.6/4, Error ellipse: s-maj=4.0km s-min=3.7km az=171.0 64 km WNW of Wroclaw Suspected Mining induced.*

ISC 04 23:19:32.9±0.7, 51.°54N±0.°03×16.°13E±0.°04, h0km, n39, σ0s89/69, 4C-1D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.70**	**171**	*e*Pg	**Pg**	**23 19 47.1**	**+0.8**
KSP				*e*Sg	**Sg**	**23 19 56.5**	**+1.1**
KSP	**Ksiaz**	**0.70**	**171**	*e*Pg	**Pg**	**23 19 47.2**	**+0.9**
KSP				*e*Sg	**Sg**	**23 19 56.4**	**+1.0**
KSP	**Ksiaz**	**0.70**	**171**	*e*Pg	**Pg**	**23 19 46.6**	**+0.3**
	baz=357						
KSP				*e*Sg	**Sg**	**23 19 55.4**	**0.0**
	baz=357						
UPC	**Upice**	**1.03**	**184**	*e*PG	**Pg**	**23 19 53.1**	**+0.4**
UPC	**Upice**	**1.03**	**184**	Pg	**Pg**	**23 19 53.1**	**+0.4**
DPC	**Dobruska-Polom**	**1.19**	**174**	*e*PG	**Pg**	**23 19 55.9**	**+0.1**
DPC				*e*SG	**Sg**	**23 20 11.4**	**+0.2**
	comp=Z,19nm,0.3s						
DPC	**Dobruska-Polom**	**1.19**	**174**	*e*Pg	**Pg**	**23 19 55.9**	**+0.1**
	baz=358						
DPC				*e*Sg	**Sg**	**23 20 11.2**	**0.0**
	baz=358						
PVCC	**Panska Ves**	**1.41**	**225**	*e*PG	**Pg**	**23 19 59.7**	**-0.2**
PVCC				*e*SG	**Sg**	**23 20 19.4**	**+1.2**
	comp=Z,83nm,0.2s						
PVCC	**Panska Ves**	**1.41**	**225**	Pg	**Pg**	**23 19 59.7**	**-0.2**
PVCC	**Panska Ves**	**1.41**	**225**	*e*Pn	**Pn**	**23 20 00.0**	**+0.2**
	baz=44						
PVCC				*e*Sg	**Sg**	**23 20 19.2**	**+1.0**
	baz=44						
BRG	**Berggiesshubel**	**1.53**	**245**	PN	**Pn**	**23 20 02.0**	**+0.6**
BRG				PG	**Pg**	**23 20 02.5**	**+0.3**
BRG				SG	**Sg**	**23 20 22.5**	**+0.6**
	comp=Z,56nm,0.3s						
PRU	**Pruhonice**	**1.85**	**214**	*e*PN	**Pn**	**23 20 06.2**	**+0.4**
PRU				*e*PG	**Pg**	**23 20 07.7**	**-0.6**
PRU				*e*SG	**Sg**	**23 20 31.9**	**-0.3**
	comp=Z,34nm,0.6s						
PRU	**Pruhonice**	**1.85**	**214**	Pn	**Pn**	**23 20 06.2**	**+0.4**
PRU	**Pruhonice**	**1.85**	**214**	Pg	**Pg**	**23 20 07.7**	**-0.6**
PRU				Sg	**Sg**	**23 20 31.9**	**-0.3**
	comp=Z,34nm,0.6s						
MORC	**Moravsky Berou**	**1.98**	**152**	*e*Pn	**Pn**	**23 20 07.2**	**-0.4**
	baz=336						
MORC				*e*Sg	**Sn**	**23 20 34.9**	**+1.8**
	comp=Z,14nm,0.3s,baz=336						
OKC	**Ostrava-Krasne**	**2.13**	**142**	*e*PG	**Pn**	**23 20 13.4**	**+3.7**
OKC				*e*SG	**Sn**	**23 20 41.1**	**+4.3**
	comp=Z,11nm,0.5s						
OKC	**Ostrava-Krasne**	**2.13**	**142**	Pg	**Pn**	**23 20 13.4**	**+3.7**
OKC				Sg	**Sn**	**23 20 41.1**	**+4.3**
	comp=Z,11nm,0.5s						
VRAC	**Vranov**	**2.25**	**172**	*e*Sg	**Sg**	**23 20 44.1**	**-1.0**
	comp=Z,21nm,0.6s,baz=354						
TREC	**Trest**	**2.28**	**191**	*e*PN	**Pn**	**23 20 12.2**	**+0.4**
TREC				*e*PG	**Pg**	**23 20 15.8**	**-0.8**
TREC	**Trest**	**2.28**	**191**	Pn	**Pn**	**23 20 12.2**	**+0.4**
KRUC	**Moravsky**	**2.48**	**176**	*e*Pn	**Pn**	**23 20 14.5**	**0.0**
	baz=358						
KRUC				*e*Sg	**Sg**	**23 20 51.4**	**-1.2**
	comp=Z,9.1nm,0.6s,baz=358						
NKC	**Novy Kostel**	**2.67**	**242**	*e*PN	**Pn**	**23 20 17.7**	**+0.6**
NKC				*e*PG	**Pg**	**23 20 23.4**	**-0.7**
NKC				*e*SG	**Sg**	**23 20 59.3**	**+0.6**
	comp=Z,60nm,0.3s						
NKC	**Novy Kostel**	**2.67**	**242**	Pn	**Pn**	**23 20 17.7**	**+0.6**
OJC	**Ojcow**	**2.67**	**118**	*e*Pg	**Pn**	**23 20 22.0**	**+4.8**
OJC				*e*Sg	**Sn**	**23 20 56.7**	**+6.5**
JAVC	**Velka Javorina**	**2.86**	**159**	*e*Pn	**Pn**	**23 20 21.3**	**+1.6**
JAVC				*e*Sg	**Sg**	**23 21 04.8**	**+0.2**
	comp=Z,15nm,0.9s						
KHC	**Kasperske Hory**	**2.91**	**215**	*e*PN	**Pn**	**23 20 20.6**	**+0.2**
KHC				*e*PG	**Pg**	**23 20 26.4**	**-2.2**
KHC				*e*SN	**Sn**	**23 20 54.5**	**-1.5**
KHC				*e*SG	**Sg**	**23 21 05.7**	**-0.6**
	comp=Z,5.9nm,0.5s						
KHC	**Kasperske Hory**	**2.91**	**215**	Pn	**Pn**	**23 20 20.6**	**+0.2**
MOX	**Moxa**	**2.98**	**254**	*e*PG	**Pg**	**23 20 29.3**	**-0.7**
MOX				*e*SG	**Sg**	**23 21 09.2**	**+0.5**
KOLL	**Kolacno**	**3.30**	**153**	*e*Pn	**Pg**	**23 20 36.6**	**+0.4**
KOLL	**Kolacno**	**3.30**	**153**	*e*	**Pg**	**23 20 36.5**	**+0.3**
VYHS	**Vyhne**	**3.51**	**149**	*e*Pn	**Pg**	**23 20 38.5**	**-1.7**
VYHS	**Vyhne**	**3.51**	**149**	*e*	**Pg**	**23 20 38.5**	**-1.7**
CONA	**Conrad Observa**	**3.62**	**183**	⇑*i*Pn	**Pn**	**23 20 31.3**	**+1.2**
CONA				⇑*i*Sg	**Sg**	**23 21 29.1**	**+0.1**
	comp=Z,7.4nm,0.5s						
CONA	**Conrad Observa**	**3.62**	**183**	Pn	**Pn**	**23 20 31.3**	**+1.2**
CONA				Sg	**Sg**	**23 21 29.1**	**+0.1**
	comp=Z,7.4nm,0.5s						
BSD	**Bornholm Skovb**	**3.66**	**349**	*i* P	**Pn**	**23 20 29.5**	**-1.2**
BSD				*i* S	**Sn**	**23 21 09.4**	**-5.1**
BSD	**Bornholm Skovb**	**3.66**	**349**	*i* P	**Pn**	**23 20 29.5**	**-1.2**
MOA	**Molln**	**3.88**	**199**	⇑*i*Pn	**Pn**	**23 20 34.4**	**+0.6**
MOA				⇑*i*Sg	**Sg**	**23 21 37.6**	**0.0**
	comp=Z,5.7nm,0.4s						
MOA	**Molln**	**3.88**	**199**	Pn	**Pn**	**23 20 34.4**	**+0.6**
MOA				Sg	**Sg**	**23 21 37.6**	**0.0**
	comp=Z,5.7nm,0.4s						
BUD	**Budapest**	**4.47**	**154**	⇓*e*Pn	**Pn**	**23 20 40.7**	**-1.2**

KRSC 04 23:45:26.1±0.5, 55.°87N×162.°75E, h20km±20km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.34**	**6**	*i* P	Pb	23 45 33.1	-0.4
KBTR				*e*S	Sb	23 45 38.8	+0.3
ZLN	**Zelenaya**	**1.10**	**278**	*e*P	Pn	23 45 47.0	+0.6
ZLN				*e*S	Sb	23 46 02.1	+1.7
BZGR	**Bezymyannyi-Gr**	**1.16**	**274**	*e*P	Pn	23 45 47.5	+0.4
BZGR				*e*S	Sb	23 46 03.3	+1.3
SRKR	**Sorokina**	**1.18**	**312**	*e*P	Pn	23 45 47.6	+0.2
SRKR				*i* S	Sb	23 46 04.1	+1.5
KLY	**Klyuchi**	**1.26**	**292**	*i* P	Pn	23 45 47.0	-1.5
KLY				*e*S	Sn	23 46 02.6	-2.2
KRSR	**Krestovskiy**	**1.27**	**287**	*e*P	Pn	23 45 48.8	+0.1
KRSR				*e*S	Sn	23 46 05.4	+0.2
KMNR	**Kamenistaya**	**1.42**	**266**	*e*P	Pn	23 45 51.9	+1.1
KMNR				*e*S	Sn	23 46 10.8	+2.0
KPT	**Kopyto**	**1.43**	**275**	*i* P	Pn	23 45 51.5	+0.7
KPT				*e*S	Sn	23 46 10.4	+1.5
MKZ	**Mys Kozlova**	**1.44**	**204**	*e*P	Pn	23 45 50.3	-0.7
MKZ				S	Sn	23 46 07.9	-1.4
KOZ	**Kozyrevsk**	**1.63**	**278**	*i* P	Pn	23 45 55.4	+1.8
KOZ				*e*S	Sn	23 46 16.8	+2.9
SRDR	**Sredinnyy**	**1.76**	**286**	*i* P	Pn	23 45 56.8	+1.4
SRDR				*e*S	Sn	23 46 18.6	+1.5
BKI	**Bering**	**1.95**	**109**	*e*P	Pn	23 45 58.6	+0.6
BKI				*e*S	Sn	23 46 22.9	+1.1
NLC	**Nalytchevo**	**3.35**	**218**	P	Pn	23 46 18.8	+1.5
NLC				*e*S	Sn	23 46 56.7	+0.2
AVH	**Avacha**	**3.50**	**223**	P	Pn	23 46 19.9	+0.6
GNL	**Ganaly**	**3.54**	**234**	*e*P	Pn	23 46 21.5	+1.7
PET	**Petropavlovsk**	**3.72**	**222**	S	Sn	23 47 06.8	+1.3

*ISCJB **04** 23:45:42.8±0.7, 37.°02N±0.°03×29.°21E±0.°04, h4km±6km, Error ellipse: s-maj=5.3km s-min=5.0km az=155.1*
*DDA **04** 23:45:42.0, 36.°98N×29.°22E, h7km±3km, Md2.9*
*ISK **04** 23:45:42.4, 37.°09N×29.°25E, h2km, MD3.1*
*CSEM **04** 23:45:42.9±0.2, 37.°03N×29.°25E, h5km, MD3.1, Error ellipse: s-maj=4.7km s-min=4.0km az=19.0*

ISC 04 23:45:43.3±0.6, 37.°03N±0.°03×29.°22E±0.°04, h6km±6km, n36, σ0s95/48, 2C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.26**	**60**	*e*PG	**Pg**	**23 45 47.6**	**-0.7**
GLHS				*e*SG	**Sg**	**23 45 51.5**	**-0.3**
GLHS	**Glhisar (BURDU**	**0.26**	**60**	*e*Pg	**Pg**	**23 45 47.6**	**-0.8**
GLHS				*e*Sg	**Sg**	**23 45 51.6**	**-0.2**
GOLH	**Golhisar**	**0.35**	**52**	⇑*i*P	**Pg**	**23 45 49.6**	**-0.4**
GOLH				*i* S	**Sg**	**23 45 56.1**	**+1.5**
GOLH	**Golhisar**	**0.35**	**52**	*i* P	**Pg**	**23 45 49.6**	**-0.4**
GOLH				*i* S	**Sg**	**23 45 56.1**	**+1.5**
ELL	**Elmali**	**0.62**	**116**	*e*PG	**Pg**	**23 45 55.2**	**+0.1**
ELL	**Elmali**	**0.62**	**116**	*e*Pg	**Pg**	**23 45 55.2**	**0.0**
DNZL	**Cakiroluk**	**0.68**	**349**	⇑*i*P	**Pg**	**23 45 55.6**	**-0.7**
DNZL				*i* S	**Sg**	**23 46 05.4**	**+0.3**
DNZL	**Cakiroluk**	**0.68**	**349**	*i* P	**Pg**	**23 45 55.6**	**-0.7**
DNZL				*i* S	**Sg**	**23 46 05.4**	**+0.3**
YER	**Yerkesik**	**0.75**	**279**	*e*PG	**Pg**	**23 45 58.1**	**+0.4**
YER	**Yerkesik**	**0.75**	**279**	*e*Pg	**Pg**	**23 45 58.1**	**+0.4**
AKAS	**Kas**	**0.85**	**158**	⇓*i*P	**Pg**	**23 45 58.1**	**-1.4**
AKAS				*e*S	**Sg**	**23 46 11.6**	**+1.1**
AKAS	**Kas**	**0.85**	**158**	*i* P	**Pg**	**23 45 58.1**	**-1.4**
AKAS				*e*S	**Sg**	**23 46 11.6**	**+1.0**
KORT	**Korkueli**	**0.91**	**91**	*e*P	**Pg**	**23 45 59.0**	**-1.7**
KORT				*e*S	**Sg**	**23 46 14.8**	**+2.3**
KORT	**Korkueli**	**0.91**	**91**	*e*P	**Pg**	**23 45 59.0**	**-1.7**
KORT				*e*S	**Sg**	**23 46 14.8**	**+2.3**
ANTB	**Antalya**	**1.16**	**96**	*e*PN	**Pn**	**23 46 05.4**	**-0.6**
ANTB	**Antalya**	**1.16**	**96**	*e*Pn	**Pn**	**23 46 05.4**	**-0.6**
BCK	**Bucak**	**1.18**	**68**	*e*PN	**Pn**	**23 46 05.1**	**-1.2**
BCK	**Bucak**	**1.18**	**68**	*e*Pn	**Pn**	**23 46 05.1**	**-1.2**
MLSB	**Milas**	**1.18**	**284**	*e*PN	**Pn**	**23 46 06.1**	**-0.2**
MLSB	**Milas**	**1.18**	**284**	*e*Pn	**Pn**	**23 46 06.1**	**-0.2**
KHL	**Karahalli**	**1.32**	**11**	*e*PN	**Pn**	**23 46 07.2**	**-1.0**
KHL	**Karahalli**	**1.32**	**11**	*e*Pn	**Pn**	**23 46 07.2**	**-1.0**
DAT	**Datca**	**1.35**	**258**	*e*PN	**Pn**	**23 46 09.7**	**+1.1**
DAT	**Datca**	**1.35**	**258**	*e*Pn	**Pn**	**23 46 09.7**	**+1.1**
KHAL	**Karahalli**	**1.36**	**9**	*e*P	**Pn**	**23 46 08.6**	**-0.2**
KHAL				*e*S	**Sb**	**23 46 28.0**	**+1.2**
KHAL	**Karahalli**	**1.36**	**9**	*e*P	**Pn**	**23 46 08.6**	**-0.2**
KHAL				*e*S	**Sb**	**23 46 28.0**	**+1.2**
SUTC	**Sutluce-Ispart**	**1.49**	**72**	*e*PN	**Pn**	**23 46 10.6**	**0.0**
SUTC	**Sutluce-Ispart**	**1.49**	**72**	*e*Pn	**Pn**	**23 46 10.6**	**0.0**
BODT	**Bodrum**	**1.52**	**272**	*e*PN	**Pn**	**23 46 11.9**	**+0.9**
BODT	**Bodrum**	**1.52**	**272**	*e*Pn	**Pn**	**23 46 12.0**	**+1.0**
KULA	**Kula-Manisa**	**1.55**	**344**	*e*PN	**Pn**	**23 46 10.9**	**-0.5**
KULA	**Kula-Manisa**	**1.55**	**344**	*e*Pn	**Pn**	**23 46 10.9**	**-0.5**
SHUT	**Suhut-Afyon**	**1.86**	**34**	*e*PN	**Pn**	**23 46 15.3**	**-0.3**
SHUT	**Suhut-Afyon**	**1.86**	**34**	*e*Pn	**Pn**	**23 46 15.3**	**-0.3**
HDMB	**Hadim**	**2.62**	**90**	*e*PN	**Pn**	**23 46 27.0**	**+1.0**
HDMB	**Hadim**	**2.62**	**90**	*e*Pn	**Pn**	**23 46 27.0**	**+0.9**

*DDA **04** 23:53:26.3, 39.°42N×33.°05E, h8km, Md3.4*
*ISK **04** 23:53:26.0, 39.°43N×33.°03E, h5km, MD3.3*
*ISCJB **04** 23:53:27.1±0.4, 39.°47N±0.°03×33.°09E±0.°03, h10km, Error ellipse: s-maj=4.1km s-min=3.2km az=43.2*
*CSEM **04** 23:53:27.5±0.1, 39.°43N×33.°00E, h2km, MD3.3, Error ellipse: s-maj=1.8km s-min=1.4km az=138.0*

ISC 04 23:53:27.2±0.6, 39.°45N±0.°03×33.°07E±0.°03, h5km±5km, n51, σ0s95/64, 2C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBAL	**Bala**	**0.10**	**24**	⇑*i*Pg	**Pg**	**23 53 29.8**	**+0.5**
BBAL				*i* Sg	**Sg**	**23 53 31.9**	**+1.2**
LOD	**Lodumlu**	**0.49**	**332**	*e*PG	**Pg**	**23 53 36.8**	**0.0**
LOD				*e*SG	**Sg**	**23 53 45.0**	**+1.8**
LOD	**Lodumlu**	**0.49**	**332**	*e*Pg	**Pg**	**23 53 36.8**	**0.0**
LOD				*e*Sg	**Sg**	**23 53 45.1**	**+1.9**
CDAG	**Cicekdag**	**1.02**	**80**	⇑*i*P	**Pg**	**23 53 46.2**	**-0.6**
CDAG				*i* S	**Sg**	**23 54 00.7**	**+0.7**
CDAG	**Cicekdag**	**1.02**	**80**	*i* P	**Pg**	**23 53 46.2**	**-0.6**
CDAG				*i* S	**Sg**	**23 54 00.7**	**+0.7**
ELDT	**Eldivan**	**1.07**	**15**	*e*P	**Pg**	**23 53 47.6**	**-0.2**
ELDT				*e*S	**Sg**	**23 54 02.7**	**+1.0**
ELDT	**Eldivan**	**1.07**	**15**	*e*P	**Pg**	**23 53 47.6**	**-0.2**
ELDT				*e*S	**Sg**	**23 54 02.7**	**+1.0**
KIZT	**Kizilcal**	**1.09**	**239**	*e*PG	**Pg**	**23 53 47.1**	**-1.0**
KIZT				*e*SG	**Sg**	**23 54 03.1**	**+0.8**
KIZT	**Kizilcal**	**1.09**	**239**	*e*Pg	**Pg**	**23 53 47.1**	**-1.0**
KIZT				*e*Sg	**Sg**	**23 54 03.1**	**+0.9**
SVRH	**Sivrihisar-ESK**	**1.20**	**270**	*e*PN	**Pn**	**23 53 49.3**	**-1.4**
SVRH	**Sivrihisar-ESK**	**1.20**	**270**	*e*Pn	**Pn**	**23 53 49.3**	**-1.4**
CANT	**Cankiri**	**1.23**	**20**	*e*PN	**Pn**	**23 53 51.4**	**+0.3**
SULT	**Sultanhani-AKS**	**1.30**	**164**	*e*PN	**Pn**	**23 53 51.2**	**-0.9**
SULT	**Sultanhani-AKS**	**1.30**	**164**	*e*Pn	**Pn**	**23 53 51.2**	**-0.9**
LADK	**Ladik-KONYA**	**1.37**	**204**	*e*PN	**Pn**	**23 53 52.5**	**-0.6**
LADK	**Ladik-KONYA**	**1.37**	**204**	*e*Pn	**Pn**	**23 53 52.5**	**-0.5**
CORM	**Corum**	**1.40**	**58**	*e*PN	**Pn**	**23 53 53.6**	**+0.1**
CORM	**Corum**	**1.40**	**58**	*e*Pn	**Pn**	**23 53 53.6**	**+0.1**
KONT	**Konya--Tatoy**	**1.60**	**200**	*e*PN	**Pn**	**23 53 56.2**	**-0.1**
KONT	**Konya--Tatoy**	**1.60**	**200**	*e*Pn	**Pn**	**23 53 56.2**	**-0.1**
ESKT	**Eskisehir**	**1.72**	**273**	*e*PN	**Pn**	**23 53 57.9**	**0.0**
ESKT	**Eskisehir**	**1.72**	**273**	*e*Pn	**Pn**	**23 53 57.9**	**0.0**
TOS	**Tosya**	**1.74**	**24**	*e*PN	**Pb**	**23 53 59.2**	**-0.5**
TOS	**Tosya**	**1.74**	**24**	*e*Pn	**Pb**	**23 53 59.2**	**-0.5**
MDU	**Mudurnu**	**1.75**	**306**	*e*PN	**Pn**	**23 53 58.5**	**+0.2**
MDU	**Mudurnu**	**1.75**	**306**	*e*Pn	**Pn**	**23 53 58.5**	**+0.2**
YOZ	**Yozgat**	**1.75**	**83**	*e*PN	**Pg**	**23 53 59.5**	**-1.3**
YOZ	**Yozgat**	**1.75**	**83**	*e*Pn	**Pg**	**23 53 59.5**	**-1.3**
CTKT	**Corum**	**1.76**	**48**	*e*P	**Pg**	**23 53 59.9**	**-1.2**
CTKT				*e*S	**Sg**	**23 54 23.8**	**0.0**
CTKT	**Corum**	**1.76**	**48**	*e*P	**Pg**	**23 53 59.9**	**-1.1**
CTKT				*e*S	**Sg**	**23 54 23.8**	**-0.1**
SAFT	**Safranbolu**	**1.81**	**351**	*e*PN	**Pb**	**23 53 60.0**	**-0.9**
SAFT	**Safranbolu**	**1.81**	**351**	*e*Pn	**Pb**	**23 54 00.0**	**-0.9**
BALT	**Daday**	**2.09**	**6**	*e*P	**Pg**	**23 54 05.5**	**-1.8**
BALT				*e*S	**Sg**	**23 54 33.5**	**-0.9**
BALT	**Daday**	**2.09**	**6**	*e*P	**Pg**	**23 54 05.5**	**-1.8**
BALT				*e*S	**Sg**	**23 54 33.5**	**-1.0**
SHUT	**Suhut-Afyon**	**2.16**	**246**	*e*PN	**Pn**	**23 54 04.0**	**+0.1**
SHUT	**Suhut-Afyon**	**2.16**	**246**	*e*Pn	**Pn**	**23 54 04.0**	**+0.1**
GULT	**Gulveren**	**2.19**	**297**	*e*PN	**Pn**	**23 54 04.9**	**+0.5**
GULT	**Gulveren**	**2.19**	**297**	*e*Pn	**Pn**	**23 54 04.9**	**+0.5**
BYBT	**Boyabat**	**2.39**	**32**	*e*PN	**Pb**	**23 54 08.7**	**-2.1**
BYBT	**Boyabat**	**2.39**	**32**	*e*Pn	**Pb**	**23 54 08.7**	**-2.1**
HDMB	**Hadim**	**2.53**	**191**	*e*PN	**Pn**	**23 54 09.5**	**+0.6**
HDMB	**Hadim**	**2.53**	**191**	*e*Pn	**Pn**	**23 54 09.5**	**+0.5**
KARA	**Karaisali**	**2.69**	**144**	*e*PN	**Pn**	**23 54 12.2**	**+1.1**
KARA	**Karaisali**	**2.69**	**144**	*e*Pn	**Pn**	**23 54 12.2**	**+1.0**
KVT	**Kavak**	**2.80**	**54**	*e*PN	**Pn**	**23 54 14.4**	**+1.7**
KVT	**Kavak**	**2.80**	**54**	*e*Pn	**Pn**	**23 54 14.4**	**+1.7**
KOZT	**Kozan**	**2.93**	**131**	*e*PN	**Pn**	**23 54 15.7**	**+1.2**
SARI	**SarD1z-Kayseri**	**2.93**	**104**	*e*PN	**Pn**	**23 54 14.4**	**0.0**
SARI	**SarD1z-Kayseri**	**2.93**	**104**	*e*Pn	**Pn**	**23 54 14.4**	**-0.1**
SVSK	**Karacayir**	**3.06**	**80**	*e*PN	**Pn**	**23 54 17.6**	**+1.2**
SVSK	**Karacayir**	**3.06**	**80**	*e*Pn	**Pn**	**23 54 17.6**	**+1.2**

*ISK **05** 00:20:22.3, 37.°05N×29.°26E, h5km, MD3.0*
*DDA **05** 00:20:22.6, 37.°03N×29.°15E, h7km±4km, Md2.9*
*ISCJB **05** 00:20:23.4±0.7, 37.°04N±0.°03×29.°22E±0.°04, h4km±6km, Error ellipse: s-maj=5.7km s-min=5.0km az=150.9*
*CSEM **05** 00:20:23.3±0.2, 37.°04N×29.°23E, h5km, MD3.0, Error ellipse: s-maj=4.9km s-min=3.9km az=37.0*

ISC 05 00:20:24.1±0.6, 37.°05N±0.°03×29.°23E±0.°04, h8km±5km, n30, σ0s97/43, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.24**	**64**	*e*PG	**Pg**	**00 20 27.6**	**-1.2**
GLHS				*e*SG	**Sg**	**00 20 31.8**	**-0.2**
GLHS	**Glhisar (BURDU**	**0.24**	**64**	*e*Pg	**Pg**	**00 20 27.6**	**-1.2**
GLHS				*e*Sg	**Sg**	**00 20 31.8**	**-0.2**
GOLH	**Golhisar**	**0.32**	**55**	⇑*i*P	**Pg**	**00 20 29.9**	**-0.5**
GOLH				*i* S	**Sg**	**00 20 36.4**	**+1.7**
GOLH	**Golhisar**	**0.32**	**55**	*i* P	**Pg**	**00 20 29.9**	**-0.5**
GOLH				*i* S	**Sg**	**00 20 36.4**	**+1.7**
TURN	**Turunc**	**0.53**	**251**	*e*P	**Pg**	**00 20 36.9**	**+2.5**
TURN				*e*S	**Sg**	**00 20 48.4**	**+7.0**
TURN	**Turunc**	**0.53**	**251**	*e*P	**Pg**	**00 20 36.9**	**+2.5**
ELL	**Elmali**	**0.62**	**119**	*e*PG	**Pg**	**00 20 35.1**	**-0.9**
ELL	**Elmali**	**0.62**	**119**	*e*Pg	**Pg**	**00 20 35.1**	**-0.9**
DNZL	**Cakiroluk**	**0.66**	**347**	*e*P	**Pg**	**00 20 35.2**	**-1.5**
DNZL				*e*S	**Sg**	**00 20 45.5**	**+0.2**
DNZL	**Cakiroluk**	**0.66**	**347**	*e*P	**Pg**	**00 20 35.2**	**-1.5**
DNZL				*e*S	**Sg**	**00 20 45.5**	**+0.3**
YER	**Yerkesik**	**0.76**	**277**	*e*PG	**Pg**	**00 20 38.6**	**-0.2**
YER	**Yerkesik**	**0.76**	**277**	*e*Pg	**Pg**	**00 20 38.6**	**-0.1**
AKAS	**Kas**	**0.87**	**160**	*e*P	**Pg**	**00 20 39.8**	**-1.0**
AKAS				*e*S	**Sg**	**00 20 53.0**	**+1.0**
AKAS	**Kas**	**0.87**	**160**	*e*P	**Pg**	**00 20 39.8**	**-0.9**
AKAS				*e*S	**Sg**	**00 20 53.0**	**+1.0**
KORT	**Korkueli**	**0.90**	**93**	*i* P	**Pg**	**00 20 40.4**	**-0.9**
KORT				*e*S	**Sg**	**00 20 54.4**	**+1.5**
KORT	**Korkueli**	**0.90**	**93**	*i* P	**Pg**	**00 20 40.4**	**-0.9**
KORT				*e*S	**Sg**	**00 20 54.4**	**+1.5**
BCK	**Bucak**	**1.16**	**69**	*e*PN	**Pn**	**00 20 45.3**	**-1.2**
BCK	**Bucak**	**1.16**	**69**	*e*Pn	**Pn**	**00 20 45.3**	**-1.3**
MLSB	**Milas**	**1.19**	**282**	*e*PN	**Pn**	**00 20 46.5**	**-0.5**
MLSB	**Milas**	**1.19**	**282**	*e*Pn	**Pn**	**00 20 46.5**	**-0.5**
KHAL	**Karahalli**	**1.33**	**9**	*e*P	**Pn**	**00 20 49.3**	**+0.3**
KHAL				*e*S	**Sb**	**00 21 07.4**	**+0.8**
KHAL	**Karahalli**	**1.33**	**9**	*e*P	**Pn**	**00 20 49.3**	**+0.3**
KHAL				*e*S	**Sb**	**00 21 07.4**	**+0.8**
SUTC	**Sutluce-Ispart**	**1.47**	**73**	*e*PN	**Pn**	**00 20 50.8**	**-0.1**
SUTC	**Sutluce-Ispart**	**1.47**	**73**	*e*Pn	**Pn**	**00 20 50.8**	**-0.1**
KULA	**Kula-Manisa**	**1.53**	**343**	*e*PN	**Pn**	**00 20 51.9**	**+0.2**
KULA	**Kula-Manisa**	**1.53**	**343**	*e*Pn	**Pn**	**00 20 51.9**	**+0.2**
SHUT	**Suhut-Afyon**	**1.83**	**34**	*e*PN	**Pn**	**00 20 56.0**	**+0.2**
SHUT	**Suhut-Afyon**	**1.83**	**34**	*e*Pn	**Pn**	**00 20 56.0**	**+0.2**
HDMB	**Hadim**	**2.61**	**91**	*e*PN	**Pn**	**00 21 06.9**	**+0.4**
HDMB	**Hadim**	**2.61**	**91**	*e*Pn	**Pn**	**00 21 06.9**	**+0.4**

*TRN **05** 00:28:18.3, 19.°28N×64.°55W, h3km*
*NEIC **05** 00:28:20.1, 19.°54N×64.°38W, h7km, MD3.5(RSPR), After RSPR.*

RSPR 05 00:28:20.1, 19.°54N×64.°38W, h7km±17km, MD3.5/3, MD3.5/3, 12C-4D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**1.14**	**192**	⇑*e*P	Pg	00 28 38.5	-3.4
TBVI				*e*S	Sg	00 28 53.7	-3.0
TBVI	**Tortola**	**1.14**	**192**	⇑*e*P	Pg	00 28 38.5	-3.4
TBVI				*e*S	Sg	00 28 53.7	-3.0
STVI	**Saint Thomas**	**1.30**	**205**	⇑*e*P	Pn	00 28 41.2	-3.4
STVI				*e*S	Sb	00 28 58.6	-3.1
STVI	**Saint Thomas**	**1.30**	**205**	⇑*e*P	Pn	00 28 41.2	-3.4
STVI				*e*S	Sb	00 28 58.6	-3.1
CDVI	**St. Croix**	**1.81**	**192**	⇑*e*P	Pn	00 28 49.2	-2.5
CDVI	**St. Croix**	**1.81**	**192**	⇑*e*P	Pn	00 28 49.2	-2.5
MTP	**Monte Pirata**	**1.81**	**218**	⇑*e*P	Pn	00 28 48.8	-2.9
MTP				*e*S	Sn	00 29 11.3	-3.6
MTP	**Monte Pirata**	**1.81**	**218**	⇑*e*P	Pn	00 28 48.8	-2.9
MTP				*e*S	Sn	00 29 11.3	-3.6
CBYP	**Canovanas**	**1.88**	**228**	⇑*e*P	Pn	00 28 49.3	-3.3
CBYP				*e*S	Sn	00 29 12.2	-4.5
CBYP	**Canovanas**	**1.88**	**228**	⇑*e*P	Pn	00 28 49.3	-3.3
CBYP				*e*S	Sn	00 29 12.2	-4.5
HUMP	**Col San Antoni**	**1.97**	**225**	⇓*e*P	Pn	00 28 51.0	-2.9
HUMP				*e*S	Sn	00 29 14.9	-3.9
HUMP	**Col San Antoni**	**1.97**	**225**	⇓*e*P	Pn	00 28 51.0	-2.9
HUMP				*e*

BJI **05** *00:46:10.9,23°.90S×179°.80W,h472km,mB4.6/11, mb4.6/19*
IDC **05** *00:46:11.9±1.2,23°.86S×179°.74W,h474km±13km, mb4.1/18,mb1 4.3/21,mb1mx4.2/23,mbtmp4.2/21,Error ellipse: s-maj=12.3km s-min=11.3km az=128.0*
ISCJB **05** *00:46:11.0±0.7,23°.85S±0°.05×179°.85W±0°.04, h472km±8km,mb4.6/72,Error ellipse: s-maj=8.4km s-min=4.9km az=155.8*
NEIC **05** *00:46:13.5±0.6,23°.92S×179°.82W,h492km±7km,mb4.7/39, Error ellipse: s-maj=8.9km s-min=5.9km az=149.0*
BGS **05** *00:46:15.9±2.7,23°.92S×179°.82W,h492km,mb4.7(NEIC)*
DJA **05** *00:46:29,23°.95S×179°.37E,h650km,mb5.1/12*
ISC 05 00:46:12.2±0.8,23°.92S±0°.06×179°.79W±0°.04, h476km±9km,h463km±1.5km:pP-P,n354,σ0s70/291, mb4.6/72,93C-91D,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.56**	**163**	P	**P**	**00 47 43.7**	**+0.6**
	70nm,0.3s,baz=86,slow=24,SNR=1.6						
RAO				S	**S**	**00 48 57.5**	**+0.1**
	230nm,0.3s,baz=68,slow=11,SNR=7.1						
MSVF	**Nonsavu**	**6.48**	**341**	*e*P	**P**	**00 47 56.8**	**+4.3**
	31nm,0.8s						
AFI	**Afiamalu**	**12.51**	**39**	P	**P**	**00 48 55.7**	**-0.7**
	9.2nm,0.3s,baz=10,slow=5.5,SNR=5.7						
AFI				S	**S**	**00 51 06.9**	**-5.0**
	6.2nm,0.3s,baz=201,slow=21,SNR=7.6						
AFI	**Afiamalu**	**12.51**	**39**	*e*P	**P**	**00 48 55.2**	**-1.2**
	103nm,0.9s						
URZ	**Urewera**	**14.54**	**190**	P	**P**	**00 49 17.3**	**-0.4**
	4.7nm,0.3s,baz=298,slow=3.8,SNR=16						
URZ				S	**S**	**00 51 47.9**	**-3.0**
	3.1nm,0.3s,baz=230,slow=22,SNR=17						
CAW	**Cannon Point**	**17.67**	**193**	*e*PN	**P**	**00 49 49.9**	**-0.6**
SNZO	**South Karori**	**17.94**	**194**	*e*P	**P**	**00 49 52.7**	**-0.4**
	242nm,1.4s						
TCW	**Tory Channel**	**17.94**	**195**	*e*PN	**P**	**00 49 53.1**	**0.0**
QRZ	**Quartz Range**	**18.05**	**199**	*e*PN	**P**	**00 49 54.8**	**+0.8**
NNZ	**Nelson**	**18.17**	**197**	*e*PN	**P**	**00 49 54.7**	**-0.5**
THZ	**Tophouse**	**18.81**	**197**	*e*PN	**P**	**00 50 01.4**	**+0.4**
LTZ	**Lake Taylor**	**19.93**	**197**	*e*PN	**P**	**00 50 10.1**	**-1.1**
RPZ	**Rata Peaks**	**21.13**	**199**	P	**P**	**00 50 22.2**	**0.0**
	15nm,0.5s,mb4.8,baz=53,slow=9.4,SNR=16						
RPZ	**Rata Peaks**	**21.13**	**199**	*e*P	**P**	**00 50 22.6**	**+0.5**
HNR	**Honiara**	**24.13**	**303**	P	**P**	**00 50 47.3**	**-2.2**
	48nm,0.5s,mb5.2,baz=213,slow=6.2,SNR=2.3						
ARMA	**Armidale**	**26.20**	**249**	⇓*i*P	**P**	**00 51 09.8**	**+2.1**
ARMA	**Armidale**	**26.20**	**249**	*e*P	**P**	**00 51 09.6**	**+1.9**
	21nm,0.8s,mb4.6						
EIDS	**Eidsvold**	**26.50**	**261**	*e*P	**P**	**00 51 11.7**	**+1.3**
	41nm,0.9s,mb4.9						
CNB	**Canberra Magne**	**29.01**	**240**	*e*P	**P**	**00 51 33.1**	**+0.8**
CAN	**Canberra**	**29.30**	**240**	*e*P	**P**	**00 51 36.1**	**+1.3**
	69nm,1.1s,mb5.0						
CTA	**Charters Tower**	**31.67**	**270**	⇓*i*P	**P**	**00 51 56.7**	**+1.2**
	60nm,0.6s,mb5.2						
CTA	**Charters Tower**	**31.67**	**270**	P	**P**	**00 51 56.8**	**+1.2**
	54nm,0.5s,mb5.2,baz=97,slow=11,SNR=72						
CTAO	**Charters Tower**	**31.67**	**270**	*e*P	**P**	**00 51 56.6**	**+1.1**
	90nm,0.8s,mb5.2						
TOO	**Toolangi**	**32.60**	**237**	⇓*i*P	**P**	**00 52 04.4**	**+1.1**
STKA	**Stephens Creek**	**34.89**	**248**	*e*P	**P**	**00 52 23.4**	**+0.6**
	16nm,0.9s,mb4.5						
STKA	**Stephens Creek**	**34.89**	**248**	P	**P**	**00 52 23.7**	**+0.9**
	8.9nm,0.4s,mb4.5,baz=90,slow=9.3,SNR=34						
STKA	**Stephens Creek**	**34.89**	**248**	*e*P	**P**	**00 52 23.7**	**+1.0**
	10nm,1.3s,mb4.1						
COEN	**Coen**	**36.31**	**279**	*e*P	**P**	**00 52 35.3**	**+0.5**
	199nm,1.0s,mb5.5						
ASAR	**Alice Springs**	**42.22**	**261**	P	**P**	**00 53 22.8**	**+0.2**
	51nm,0.8s,mb5.0,baz=94,slow=8.2,SNR=259						
ASAR				ScP	ScP	00 58 09.6	-1.3
	5.9nm,0.9s,baz=112,slow=4.0,SNR=15						
WRAB	**Tennant Creek**	**42.59**	**266**	*e*P	**P**	**00 53 25.2**	**-0.4**
	64nm,0.7s,mb5.2						
WRA	**Warramunga Arr**	**42.60**	**266**	P	**P**	**00 53 25.2**	**-0.4**
	86nm,0.9s,mb5.2,baz=101,slow=8.2,SNR=193						
WRA				ScP	ScP	00 58 10.9	-1.6
	5.6nm,1.0s,baz=101,slow=4.2,SNR=10						
WRA	**Warramunga Arr**	**42.60**	**266**	P	**P**	**00 53 25.2**	**-0.4**
WRA				ScP	ScP	00 58 10.9	-1.6
FORT	**Forrest**	**46.48**	**250**	⇓*i*P	**P**	**00 53 54.8**	**-0.8**
	108nm,0.6s,mb5.5						
FORT	**Forrest**	**46.48**	**250**	*e*P	**P**	**00 53 54.9**	**-0.7**
	127nm,0.7s,mb5.5						
KAKA	**Kakadu**	**46.50**	**275**	*e*P	**P**	**00 53 55.6**	**-0.3**
	40nm,0.9s,mb4.8						
KAKA	**Kakadu**	**46.50**	**275**	*e*P	**P**	**00 53 55.5**	**-0.4**
	119nm,0.7s,mb5.4						
KAKA	**Kakadu**	**46.50**	**275**	P	**P**	**00 53 55.5**	**-0.4**
	915nm81nm,0.8s,mb5.2						
KNA	**Kununurra**	**48.85**	**270**	P	**P**	**00 54 13.8**	**+0.2**
	3μm336nm,0.9s,mb5.7						
GUMO	**Guam**	**50.83**	**313**	*e*P	**P**	**00 54 27.8**	**-0.3**
	46nm,0.9s,mb4.8						
FITZ	**Fitzroy Crossi**	**51.02**	**266**	*e*P	**P**	**00 54 29.4**	**-0.2**
	66nm,0.8s,mb5.0						
FITZ	**Fitzroy Crossi**	**51.02**	**266**	P	**P**	**00 54 29.5**	**0.0**
	52nm,1.0s,mb4.8,baz=98,slow=6.9,SNR=64						
FITZ	**Fitzroy Crossi**	**51.02**	**266**	*e*P	**P**	**00 54 29.4**	**-0.2**
	61nm,0.9s,mb4.9						
FITZ	**Fitzroy Crossi**	**51.02**	**266**	P	**P**	**00 54 29.6**	**0.0**
	138nm,1.1s,mb5.2						
SWI	**Sorong**	**52.63**	**288**	P	**P**	**00 54 40.5**	**-0.8**
	6μm162nm,0.9s,mb5.4						
SBA	**Scott Base**	**54.37**	**183**	*e*P	**P**	**00 54 55.2**	**+2.5**
	26nm,1.0s,mb4.5						
KLBR	**Kellerberrin**	**55.16**	**247**	*e*P	**P**	**00 54 58.2**	**-0.8**
	30nm,0.7s,mb4.7						
NWAO	**Narrogin (SRO)**	**55.40**	**246**	P	**P**	**00 55 00.2**	**-0.5**
	5.7nm,0.3s,mb4.3,baz=138,slow=7.5,SNR=11						
MBWA	**Marble Bar**	**55.56**	**260**	*e*P	**P**	**00 55 00.8**	**-1.2**
	45nm,0.9s,mb4.8						
MBWA	**Marble Bar**	**55.56**	**260**	P	**P**	**00 55 00.6**	**-1.3**
	69nm,1.0s,mb4.9						
BKSI	**Bulukumba**	**60.56**	**278**	P	**P**	**00 55 35.0**	**-1.1**
	59nm,0.8s,mb5.0						
QSPA	**South Pole Qui**	**66.16**	**180**	P	**P**	**00 56 12.3**	**+1.3**
	25nm,1.1s,mb4.8,baz=24,slow=1.3,SNR=32						
QSPA	**South Pole Qui**	**66.16**	**180**	*e*P	**P**	**00 56 12.0**	**+1.0**
	34nm,1.2s,mb4.8						
SJI	**Sawahan**	**67.23**	**272**	P	**P**	**00 56 18.2**	**-0.6**
	54nm,1.0s,mb5.2						
PCJI	**Pacitan**	**67.59**	**271**	P	**P**	**00 56 20.6**	**-0.4**
STKI	**Sintang**	**70.64**	**279**	P	**P**	**00 56 39.9**	**+0.4**
	8μm38nm,1.0s,mb4.9						
LEM	**Lembang**	**71.37**	**271**	P	**P**	**00 56 43.5**	**-0.3**
	129nm,1.1s,mb5.4						
MJAR	**Matsushiro Arr**	**72.03**	**325**	P	**P**	**00 56 46.0**	**-1.0**
	2.2nm,0.6s,mb3.9,baz=156,slow=6.2,SNR=6.3						
MAJO	**Matsushiro**	**72.03**	**325**	*e*P	**P**	**00 56 47.1**	**+0.1**
	8.8nm,0.9s,mb4.3						
KSM	**Kuching**	**72.30**	**280**	*e*P	**P**	**00 56 48.6**	**-0.6**
	37nm,0.8s,mb5.0						
KSM	**Kuching**	**72.30**	**280**	P	**P**	**00 56 49.1**	**-0.1**
	56nm,1.1s,mb5.0						
SSLB	**Suanglung**	**74.53**	**305**	*e*P	**P**	**00 56 59.7**	**-2.0**
	10nm,0.8s,mb4.4						
MDSI	**Maura Dua**	**75.43**	**272**	P	**P**	**00 57 04.7**	**-2.4**
	1μm30nm,1.0s,mb4.8						
MAW	**Mawson**	**77.80**	**200**	*e*P	**P**	**00 57 19.1**	**+0.1**
	7.8nm,0.8s,mb4.2						
MAW	**Mawson**	**77.80**	**200**	P	**P**	**00 57 19.7**	**+0.7**
	7.9nm,0.6s,mb4.3,baz=128,slow=7.9,SNR=16						
MAW	**Mawson**	**77.80**	**200**	*e*P	**P**	**00 57 19.4**	**+0.3**
	5.6nm,1.3s,mb3.8						
KSRS	**Korea Array**	**78.39**	**320**	P	**P**	**00 57 23.4**	**+0.7**
	3.0nm,0.7s,mb3.8,baz=136,slow=5.9,SNR=14						
PETK	**Petropavlovsk-**	**79.17**	**346**	P	**P**	**00 57 26.2**	**-0.2**
	2.5nm,0.6s,mb3.9,baz=110,slow=7.8,SNR=8.3						
NJ2	**Nanjing**	**80.82**	**311**	*e*P	**P**	**00 57 36.8**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.6						
MNSI	**Mandailing Nat**	**81.76**	**275**	P	**P**	**00 57 38.3**	**-2.7**
KCPM	**Cahto Peak**	**82.17**	**40**	*e*P	**P**	**00 57 43.5**	**+1.1**
	comp=Z,7.3nm,1.1s,mb4.1						
MONP	**Monument Peak**	**82.69**	**49**	⇓P	**P**	**00 57 45.9**	**+0.7**
	baz=83,SNR=5.3						
EDW2	**Edwards Air Fo**	**82.76**	**47**	⇑P	**P**	**00 57 46.3**	**+0.7**
	baz=83						
DVTC	**Desert V Tower**	**82.78**	**50**	⇓P	**P**	**00 57 46.3**	**+0.6**
	baz=83						
KHMM	**Horse Mountain**	**82.84**	**39**	*e*P	**P**	**00 57 47.3**	**+1.5**
	comp=Z,15nm,1.2s,mb4.4						
ISA	**Isabella**	**82.90**	**46**	⇓P	**P**	**00 57 47.1**	**+0.9**
	baz=83						
SYO	**Syowa Base**	**83.03**	**193**	⇓*e*P	**P**	**00 57 44.4**	**-2.0**
CMB	**Columbia Colle**	**83.08**	**43**	*e*P	**P**	**00 57 47.3**	**+0.2**
	comp=Z,11nm,0.9s,mb4.4						
SWSC	**Sam W. Stewart**	**83.15**	**50**	⇓P	**P**	**00 57 47.5**	**-0.1**
	baz=83						
WDC	**Whiskeytown Da**	**83.35**	**40**	*e*P	**P**	**00 57 48.8**	**+0.5**
	comp=Z,11nm,1.0s,mb4.3						
BELC	**Belle Mtn. Jos**	**83.61**	**49**	⇑P	**P**	**00 57 50.4**	**+0.6**
	baz=84,SNR=7.4						
MPMC	**Manual Prospec**	**83.78**	**46**	⇓P	**P**	**00 57 50.8**	**+0.2**
	baz=84,SNR=5.3						
BC3	**Big Chuckawall**	**83.79**	**49**	⇓P	**P**	**00 57 50.7**	**0.0**
	baz=84						
GSC	**Goldstone**	**83.80**	**47**	⇑P	**P**	**00 57 51.2**	**+0.4**
	baz=84						
GSC	**Goldstone**	**83.80**	**47**	*e*P	**P**	**00 57 51.2**	**+0.5**
	comp=Z,7.0nm,0.9s,mb4.2						
HEC	**Hector,Ludlow**	**83.85**	**48**	⇓P	**P**	**00 57 51.0**	**0.0**
	baz=84,SNR=6.3						
GLA	**Glamis**	**83.89**	**50**	⇑P	**P**	**00 57 52.1**	**+0.8**
	baz=84,SNR=8.7						
GLA	**Glamis**	**83.89**	**50**	*e*P	**P**	**00 57 52.1**	**+0.8**
	comp=Z,20nm,1.0s,mb4.6						
WAKR	**Walker**	**83.96**	**43**	*e*P	**P**	**00 57 52.2**	**+0.7**
YBH	**Yreka Blue Hor**	**83.98**	**39**	*e*P	**P**	**00 57 52.6**	**+1.2**
	comp=Z,5.6nm,0.9s,mb4.1						
YBH				*e*pP	pP	00 59 44.5	+7.6
CN2	**Changchun**	**84.02**	**324**	*e*P	**P**	**00 57 51.7**	**+0.1**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.7						
BEKR	**Beckworth**	**84.22**	**42**	⇑P	**P**	**00 57 53.2**	**+0.5**
	baz=84						
GMRC	**Granite Mounta**	**84.28**	**48**	⇓P	**P**	**00 57 53.1**	**0.0**
	baz=84						
IRM	**Iron Mountain**	**84.28**	**49**	⇓P	**P**	**00 57 53.8**	**+0.6**
	baz=84,SNR=8.5						
HUMO	**Hull Mountain**	**84.40**	**38**	*e*P	**P**	**00 57 54.1**	**+0.6**
	comp=Z,13nm,1.2s,mb4.3						
GRAC	**Grapevine Rang**	**84.40**	**45**	⇓P	**P**	**00 57 54.3**	**+0.7**
	baz=85						
FURC	**Furnace Creek,**	**84.43**	**46**	⇑P	**P**	**00 57 54.8**	**+0.9**
	baz=85						
113A	**Mohawk Valley,**	**84.48**	**51**	⇓P	**P**	**00 57 54.5**	**+0.3**
	baz=85						
Y12C	**Blythe**	**84.49**	**49**	⇓P	**P**	**00 57 53.5**	**-0.6**
	baz=85						
NVAR	**Mina Array Bea**	**84.63**	**44**	P	**P**	**00 57 55.4**	**+0.6**
	comp=Z,2.1nm,0.8s,mb3.8,baz=221,slow=8.0,SNR=13						
PAHR	**Pah Rah Range**	**84.72**	**42**	*e*P	**P**	**00 57 55.5**	**+0.4**
	comp=Z,8.3nm,1.1s,mb4.3						
214A	**Organ Pipe Nat**	**84.73**	**52**	⇓P	**P**	**00 57 55.1**	**-0.3**
	baz=85						
Z13A	**Yuma Proving G**	**84.80**	**50**	⇓P	**P**	**00 57 55.8**	**+0.1**
	baz=85						
Y13A	**Salome**	**85.01**	**50**	⇑P	**P**	**00 57 56.6**	**-0.2**
	baz=85,SNR=7.6						
V11A	**Goodsprings**	**85.02**	**47**	⇓P	**P**	**00 57 57.5**	**+0.7**
	baz=85						
114A	**Black Gap (USA**	**85.10**	**51**	⇑P	**P**	**00 57 57.4**	**+0.2**
	baz=85						
W12A	**Cal Nev Ari**	**85.11**	**48**	⇑P	**P**	**00 57 56.9**	**-0.3**
	baz=85						
X13A	**Yucca**	**85.43**	**49**	⇓P	**P**	**00 57 58.7**	**-0.1**
	baz=86,SNR=5.5						
S10A	**Tonopah Range,**	**85.44**	**45**	⇑P	**P**	**00 57 58.9**	**+0.2**
	baz=86,SNR=10						
MOD	**Modoc**	**85.49**	**40**	*e*P	**P**	**00 57 59.4**	**+0.5**
	comp=Z,12nm,1.2s,mb4.4						
Y14A	**Wickenburg**	**85.65**	**50**	⇓P	**P**	**00 57 59.7**	**-0.2**
	baz=86						
K05A	**Summer Lake**	**85.65**	**39**	⇑P	**P**	**00 58 00.4**	**+0.7**
	baz=86,SNR=6.3						
W13A	**Hualapai Mount**	**85.67**	**49**	⇓P	**P**	**00 58 00.4**	**+0.5**
	baz=86						
S11A	**Rachel**	**85.83**	**46**	⇑P	**P**	**00 58 00.0**	**-0.6**
	baz=86						
T11A	**Corn Creek, Al**	**85.95**	**46**	⇓P	**P**	**00 58 01.4**	**+0.2**
	baz=86,SNR=6.6						
V13A	**Grand Canyon W**	**86.01**	**48**	⇓P	**P**	**00 58 01.4**	**-0.1**
	baz=86,SNR=6.8						
X14A	**Yava**	**86.02**	**50**	⇓P	**P**	**00 58 01.4**	**-0.1**
	baz=86						
W14A	**Seligman**	**86.28**	**49**	⇓P	**P**	**00 58 03.7**	**+0.8**
	baz=86						
U13A	**Pakoon Wash**	**86.33**	**48**	⇓P	**P**	**00 58 03.4**	**+0.4**
	baz=86,SNR=7.6						
R11A	**Troy Canyon, C**	**86.33**	**45**	⇑P	**P**	**00 58 02.7**	**-0.3**
	baz=86						
TUC	**Tucson**	**86.38**	**52**	*e*P	**P**	**00 58 04.5**	**+1.2**
	comp=Z,14nm,1.0s,mb4.5						
S12A	**Delamar Landin**	**86.40**	**46**	⇑P	**P**	**00 58 03.2**	**-0.1**
	baz=86						
Z16A	**Peralta Trail,**	**86.45**	**51**	⇑P	**P**	**00 58 02.1**	**-1.6**
	baz=87,SNR=5.3						
V14A	**Boquillas Ranc**	**86.49**	**49**	⇑P	**P**	**00 58 03.5**	**-0.3**
	baz=87,SNR=5.7						
318A	**Bisbee**	**86.51**	**53**	⇓P	**P**	**00 58 04.2**	**+0.2**
	baz=87,SNR=12						
117A	**Oracle**	**86.55**	**52**	⇓P	**P**	**00 58 04.7**	**+0.6**
	baz=87,SNR=9.5						
Q11A	**Dugowater**	**86.57**	**45**	⇓P	**P**	**00 58 03.7**	**-0.4**
	baz=87						
T13A	**Saint George**	**86.70**	**47**	⇓P	**P**	**00 58 04.3**	**-0.5**
	baz=87						
218A	**Dragoon**	**86.74**	**53**	⇑P	**P**	**00 58 05.3**	**+0.2**
	baz=87,SNR=15						
U14A	**Mt Trumbull**	**86.86**	**48**	P	**P**	**00 58 06.5**	**+1.0**
	baz=87,SNR=6.5						
GYA	**Guiyang**	**86.92**	**301**	P	**P**	**00 58 06.8**	**+0.7**
GYA				pP	pP	00 59 51.3	-1.0
GYA				sP	sP	01 00 38.2	-2.8
GYA				PP	PP	01 01 40.6	+2.7
GYA				SKS		01 07 48.3	
GYA				S	S	01 08 05.2	+0.9
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.5						
R12A	**Pony Springs,**	**86.96**	**46**	⇑P	**P**	**00 58 05.3**	**-0.7**
	baz=87						
X16A	**Lo Mia Camp, P**	**87.00**	**50**	⇓P	**P**	**00 58 06.2**	**-0.1**
	baz=87						
319A	**Douglas**	**87.00**	**54**	⇑P	**P**	**00 58 06.5**	**+0.2**
	baz=87,SNR=5.2						
S13A	**Holt Ranch, En**	**87.04**	**47**	⇑P	**P**	**00 58 06.6**	**+0.2**
	baz=87						
118A	**Homack Ranch,**	**87.14**	**52**	⇑P	**P**	**00 58 07.4**	**+0.4**
	baz=87,SNR=8.3						
BJI	**Beijing**	**87.18**	**316**	P	**P**	**00 58 07.5**	**+0.5**
BJI				pP	pP	00 59 51.1	-2.2
BJI				sP	sP	01 00 38.6	-3.4
BJI				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.6						
V15A	**Kaibab Nationa**	**87.23**	**49**	⇓P	**P**	**00 58 07.8**	**+0.5**
	baz=87						
T14A	**Hurricane**	**87.28**	**47**	⇓P	**P**	**00 58 07.1**	**-0.4**
	baz=87						
219A	**White Tail Can**	**87.33**	**53**	⇑P	**P**	**00 58 08.6**	**+0.7**
	baz=88,SNR=7.5						
P12A	**McGill**	**87.40**	**45**	⇓P	**P**	**00 58 07.5**	**-0.5**
	baz=88						
J08A	**Circle Bar Ran**	**87.45**	**40**	⇓P	**P**	**00 58 07.7**	**-0.5**
	baz=88						
U15A	**North Rim**	**87.47**	**48**	⇑P	**P**	**00 58 08.8**	**+0.4**
	baz=88,SNR=13						
320A	**Kipp Ranch, An**	**87.54**	**54**	⇑P	**P**	**00 58 10.0**	**+1.1**
	baz=88,SNR=7.1						
GNW	**Green Mountain**	**87.64**	**35**	*e*P	**P**	**00 58 08.1**	**-0.8**
	comp=Z,16nm,1.5s,mb4.5						
Y18A	**Canyon Day Jun**	**87.67**	**51**	⇓P	**P**	**00 58 10.6**	**+1.2**
	baz=88,SNR=9.1						
T15A	**Red Dirt Ranch**	**87.73**	**48**	⇑P	**P**	**00 58 09.8**	**+0.2**
	baz=88						
220A	**Playas Peak, P**	**87.82**	**54**	⇓P	**P**	**00 58 10.5**	**+0.4**
	baz=88,SNR=6.7						
D05A	**Enumclaw**	**87.84**	**35**	⇓P	**P**	**00 58 09.4**	**-0.5**
	baz=88						
L10A	**Juniper Basin**	**87.90**	**42**	⇑P	**P**	**00 58 10.6**	**+0.4**
	baz=88,SNR=5.7						
M11A	**Holland Ranch,**	**87.94**	**43**	⇑P	**P**	**00 58 10.0**	**-0.5**
	baz=88						
O12A	**Currie**	**87.95**	**44**	⇓P	**P**	**00 58 10.2**	**-0.4**
	baz=88						
P13A	**Bates Ranch, G**	**87.96**	**45**	⇓P	**P**	**00 58 09.7**	**-0.9**
	baz=88,SNR=6.5						
H08A	**Prairie City**	**88.03**	**39**	⇓P	**P**	**00 58 10.9**	**+0.1**
	baz=88						
K10A	**MacKenzie Ranc**	**88.06**	**41**	⇑P	**P**	**00 58 11.1**	**+0.1**
	baz=88,SNR=10.0						
120A	**U Bar Ranch, L**	**88.07**	**53**	⇑P	**P**	**00 58 10.6**	**-0.7**
	baz=88						
V17A	**Tonalea, Kykot**	**88.08**	**50**	⇑P	**P**	**00 58 11.4**	**+0.1**
	baz=88,SNR=7.0						
N12A	**Clover Valley,**	**88.09**	**43**	⇓P	**P**	**00 58 11.0**	**-0.2**
	baz=88						
Q14A	**Sevier Lake (B**	**88.19**	**46**	⇑P	**P**	**00 58 12.3**	**+0.6**
	baz=88,SNR=9.9						
I09A	**Lost Marbles R**	**88.24**	**40**	⇑P	**P**	**00 58 11.3**	**-0.5**
	baz=88,SNR=5.9						
Y19A	**Nutrioso**	**88.32**	**52**	⇑P	**P**	**00 58 12.7**	**+0.2**
	baz=88,SNR=7.3						
G08A	**Pilot Rock**	**88.32**	**38**	⇓P	**P**	**00 58 12.1**	**-0.1**
	baz=88,SNR=13						
Z20A	**Nine Sixteen R**	**88.38**	**53**	⇑P	**P**	**00 58 12.9**	**+0.1**
	baz=88						
L11A	**Cat Creek Ranc**	**88.39**	**42**	⇑P	**P**	**00 58 12.8**	**+0.3**
	baz=88,SNR=12						
M12A	**Wells**	**88.48**	**43**	⇑P	**P**	**00 58 12.9**	**-0.2**
	baz=89,SNR=5.1						
K11A	**Parker Ranch,**	**88.56**	**41**	⇑P	**P**	**00 58 13.7**	**+0.4**
	baz=89,SNR=7.9						
RSW	**Rattlesnake Hi**	**88.64**	**37**	*e*P	**P**	**00 58 14.3**	**+0.7**
MSU	**Marysvale**	**88.66**	**47**	*e*P	**P**	**00 58 14.9**	**+0.9**
HAWA	**Hanford**	**88.67**	**37**	*e*P	**P**	**00 58 14.0**	**+0.2**
	comp=Z,14nm,1.1s,mb4.7						
H09A	**Durkee**	**88.69**	**39**	⇓P	**P**	**00 58 14.3**	**+0.4**
	baz=89,SNR=6.7						
L12A	**House Creek Ra**	**88.83**	**42**	⇑P	**P**	**00 58 15.4**	**+0.8**
	baz=89						
XAN	**Xi'an**	**88.91**	**308**	P	**P**	**00 58 15.6**	**+0.4**
XAN				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
XAN				pmax	pmax		
	comp=Z,19nm,5.3s						
Y20A	**Horse Springs,**	**88.93**	**52**	⇑P	**P**	**00 58 16.4**	**+1.1**
	baz=89,SNR=7.3						
G09A	**Cove**	**88.99**	**39**	⇓P	**P**	**00 58 13.7**	**-1.6**
	baz=89,SNR=7.2						
MFID	**Camas Ranch**	**89.05**	**41**	⇑P	**P**	**00 58 15.2**	**-0.4**
	baz=89,SNR=14						
Z21A	**St. Cloud Mine**	**89.14**	**53**	⇑P	**P**	**00 58 15.5**	**-0.8**
	baz=89						
X20A	**Quemado**	**89.16**	**51**	⇑P	**P**	**00 58 15.9**	**-0.5**
	baz=89,SNR=6.1						
K12A	**Draper Farm, C**	**89.17**	**42**	⇑P	**P**	**00 58 14.8**	**-1.4**
	baz=89,SNR=6.9						
H10A	**Noah's Angus R**	**89.18**	**40**	⇑P	**P**	**00 58 14.9**	**-1.3**
	baz=89,SNR=7.1						
I11A	**Placerville**	**89.25**	**40**	⇑P	**P**	**00 58 16.6**	**0.0**
	baz=89,SNR=5.0						
J12A	**Stokes Ranch,**	**89.39**	**41**	⇓P	**P**	**00 58 17.5**	**+0.3**
	baz=90,SNR=15						
D08A	**Wollman Farm,**	**89.41**	**37**	⇓P	**P**	**00 58 17.1**	**0.0**
	baz=90						
KMI	**Kunming**	**89.44**	**298**	P	**P**	**00 58 18.7**	**+0.8**
KMI				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.7						
W20A	**Ramah**	**89.44**	**51**	⇑P	**P**	**00 58 17.7**	**+0.1**
	baz=90,SNR=10.0						
Y21A	**Point of Rocks**	**89.49**	**52**	⇑P	**P**	**00 58 18.3**	**+0.4**
	baz=90,SNR=14						
T18A	**Mexican Hat**	**89.50**	**49**	⇑P	**P**	**00 58 17.7**	**-0.1**
	baz=90,SNR=9.8						
M14A	**Sheep Mountain**	**89.51**	**44**	⇑P	**P**	**00 58 17.0**	**-0.8**
	baz=90,SNR=5.2						
R17A	**Hanksville Air**	**89.59**	**47**	⇓P	**P**	**00 58 17.6**	**-0.7**
	baz=90						
X21A	**Alamocita Cree**	**89.62**	**52**	⇑P	**P**	**00 58 17.7**	**-0.8**
	baz=90,SNR=8.1						
Z22A	**Elephant Butte**	**89.64**	**53**	⇑P	**P**	**00 58 18.7**	**+0.1**
	baz=90						
H11A	**Donnelly**	**89.67**	**40**	⇑P	**P**	**00 58 18.1**	**-0.3**
	baz=90,SNR=6.7						
K13A	**Stover Farm, H**	**89.68**	**42**	⇓P	**P**	**00 58 18.8**	**+0.2**
	baz=90						
I12A	**Atlanta**	**89.68**	**41**	⇓P	**P**	**00 58 18.6**	**+0

baz=91
225A Deer Hill, Car 90.68 55 ⇓P P 00 58 23.5 0.0
baz=91
U21A Nageezi 90.68 50 ⇑P P 00 58 23.3 0.0
baz=91,SNR=13
527A Woodward Ranch 90.69 57 ⇑P P 00 58 23.3 -0.3
baz=91,SNR=5.4
HWUT Hardware Ranch 90.69 44 *eP* **P 00 58 23.0 -0.3**
comp=Z,2.7nm,0.7s,mb4.3
F12A Elk City 90.71 39 ⇑P P 00 58 22.9 -0.3
baz=91,SNR=5.6
ANMO Albuquerque 90.82 52 *eP* **P 00 58 23.9 -0.2**
comp=Z,5.8nm,1.2s,mb4.4
Q19A Hogan Spring (90.84 47 ⇓P P 00 58 23.5 -0.5
baz=91
Z24A Sheeppen Canyo 90.85 54 ⇑P P 00 58 24.1 -0.1
baz=91
G13A Cobalt 90.94 40 ⇓P P 00 58 24.1 -0.2
baz=91
628A Black Gap, Mar 90.95 58 ⇑P P 00 58 24.6 -0.2
baz=91
V22A San Miguel Ran 90.96 51 ⇑P P 00 58 24.3 -0.4
baz=91
O18A Roosevelt 91.01 46 ⇓P P 00 58 24.2 -0.5
baz=91
125A Gardner Draw, 91.06 55 ⇓P P 00 58 24.5 -0.7
baz=91
GDL2 Guadalupe Moun 91.06 55 *eP* **P 00 58 26.4 +1.1**
Y24A Capitan 91.08 53 ⇓P P 00 58 25.5 +0.2
baz=91,SNR=9.7
J15A Blackfoot 91.10 42 ⇓P P 00 58 26.0 +0.9
baz=91,SNR=8.6
427A Hayter Ranch, 91.17 57 P P 00 58 26.4 +0.7
baz=91,SNR=7.1
H14A Leadore 91.19 41 ⇑P P 00 58 24.7 -0.8
baz=91
S21A Coal Bank Pass 91.20 49 ⇑P P 00 58 25.7 0.0
baz=91
226A Malaga, Loving 91.20 55 ⇓P P 00 58 25.6 -0.3
baz=91
M17A Scullys Gap (B 91.20 45 ⇓P P 00 58 24.9 -0.7
baz=91
CD2 Chengdu 91.25 303 P P 00 58 27.2 +1.1
CD2 pP pP 01 00 12.2 -1.0
CD2 sP sP 01 00 58.3 -3.3
CD2 PP PP 01 02 14.8 +2.9
CD2 SKS 01 08 12.8
CD2 S S 01 08 44.1 +0.4
CD2 sS sS 01 11 49.9 -5.3
CD2 SS SS 01 15 05.2 +2.1
CD2 pmax pmax
comp=Z,20nm,0.8s,mb5.1
CD2 pmax pmax
comp=Z,80nm,7.1s
F13A Darby 91.27 40 ⇓P P 00 58 24.8 -1.0
baz=91
Z25A Roswell 91.30 54 ⇑P P 00 58 25.9 -0.4
baz=91
K16A Soda Springs 91.33 43 ⇓P P 00 58 26.2 0.0
baz=92
C11A Tepee Creek (N 91.33 37 ⇑P P 00 58 25.5 -0.5
baz=92
528A Cox Ranch, San 91.33 58 ⇑P P 00 58 25.0 -1.5
baz=92
P19A Cripple Cowboy 91.37 47 ⇓P P 00 58 26.2 -0.2
baz=92
V23A Ortiz Mt. (NFS 91.40 51 ⇑P P 00 58 26.4 -0.3
baz=92
T22A Edith 91.50 50 ⇓P P 00 58 27.2 +0.1
baz=92
J16A Bone 91.54 43 ⇓P P 00 58 27.4 +0.2
baz=92,SNR=5.1
M18A Lyman 91.56 45 ⇓P P 00 58 27.6 +0.3
baz=92,SNR=5.4
N18A Larsen Ranch, 91.59 45 ⇑P P 00 58 27.9 +0.5
baz=92
O19A Miners Draw (B 91.61 46 ⇑P P 00 58 27.1 -0.5
baz=92
P20A De Beque 91.69 47 ⇑P P 00 58 27.5 -0.5
baz=92
W24A Lazy 6 Ranch, 91.70 52 ⇑P P 00 58 27.5 -0.6
baz=92
R21A Cimarron 91.71 48 ⇓P P 00 58 27.4 -0.7
baz=92
RRI2 Red Ridge 91.76 43 *eP* **P 00 58 28.9 +0.7**
comp=Z,9.5nm,1.3s,mb4.6
S22A 4UR Ranch, Cre 91.90 49 ⇑P P 00 58 28.7 -0.3
baz=92
REDW Red Top Meadow 92.06 43 *eP* **P 00 58 29.5 0.0**
comp=Z,8.3nm,1.3s,mb4.5
K18A Toltan Ranch, 92.20 44 ⇑P P 00 58 28.8 -1.4
baz=92,SNR=5.3
L19A Farson 92.36 45 ⇑P P 00 58 30.6 -0.4
baz=92,SNR=5.0
F15A Butte 92.37 40 ⇓P P 00 58 30.8 -0.1
baz=92
N20A Spence Gulch, 92.44 46 ⇑P P 00 58 30.3 -1.1
baz=93
SMCO Snowmass 92.50 48 *eP* **P 00 58 31.9 +0.2**
comp=Z,2.4nm,0.8s,mb4.2
J18A Kendall Valley 92.51 43 ⇓P P 00 58 31.8 +0.2
baz=93
BW06 Boulder Array 92.57 44 ⇓P P 00 58 31.5 -0.4
baz=93
BW06 Boulder Array 92.57 44 *eP* **P 00 58 31.5 -0.4**
comp=Z,3.0nm,1.0s,mb4.3
PDAR Pinedale Array 92.57 44 P P 00 58 31.4 -0.6
comp=Z,1.9nm,0.8s,mb4.2,baz=234,slow=2.5,SNR=16
SDCO Great Sand Dun 92.83 50 *eP* **P 00 58 33.0 -0.2**
comp=Z,1.2nm,1.2s,mb3.8
N21A Black Mountain 92.90 46 ⇑P P 00 58 33.5 +0.1
baz=93
U25A Circle Dot Ran 92.97 51 ⇓P P 00 58 33.3 -0.7
baz=93
S24A Houchin Ranch, 92.98 50 ⇓P P 00 58 33.9 0.0
baz=93
P25A Willow Gulch B 94.57 49 ⇑P P 00 58 40.7 -0.5
baz=95
SONM Songino Array 97.25 319 P P 00 58 53.0 0.0
comp=Z,0.3nm,0.3s,mb4.0,baz=245,slow=13,SNR=3.9
KURK Kurchatov 115.35 316 PKP PKPdf 01 03 56.7 -2.0
comp=Z,1.0nm,0.5s,baz=96,slow=2.3,SNR=7.3
KURK Kurchatov 115.35 316 *ePKPdf* **PKPdf 01 03 57.4 -1.4**
TKM2 Tokmak 2 116.31 308 *ePKPdf* **PKPdf 01 03 58.9 -2.0**
KBL Kabul 120.03 297 *ePKPdf* **PKPdf 01 04 07.0 -1.3**
BVAR Borovoye Array 120.58 319 PKP PKPdf 01 04 07.1 -1.7
comp=Z,1.8nm,0.3s,baz=122,slow=2.3,SNR=26
ARU Arti 127.02 324 *ePKPdf* **PKPdf 01 04 19.7 -1.3**
ABKAR Akbulak array 127.36 315 *ePKPdf* **PKPdf 01 04 20.9 -0.9**
AKTK Aktyubinsk 128.45 316 PKP PKPdf 01 04 23.5 -0.4
AKTO Aktyubinsk 128.45 316 PKP PKPdf 01 04 23.5 -0.4
comp=Z,1.6nm,0.6s,baz=64,slow=4.8,SNR=5.8
ARCES ARCESS Array B 131.95 348 PKP PKPdf 01 04 28.6 -1.4
comp=Z,2.6nm,0.7s,baz=90,slow=2.0,SNR=12
LSZ Lusaka 132.41 218 *ePKPdf* **PKPdf 01 04 33.2 +0.7**
JOF Joensuu 135.82 340 *ep* **PKPdf 01 04 36.7 -0.7**
comp=Z,2.2nm,0.6s
KAF Kangasniemi 137.93 342 *ep* **PKPpre 01 04 32.8**
comp=Z,2.6nm,0.6s
FINES FINESS Array B 138.53 342 PKhKP PKPpre 01 04 32.1
comp=Z,0.6nm,0.3s,baz=65,slow=4.2,SNR=9.4
FINES PKP PKPdf 01 04 42.1 -0.4
comp=Z,1.4nm,0.5s,baz=94,slow=1.8,SNR=7.8
NB2 NORSAR Subarra 142.13 351 PKP PKPpre 01 04 43.6
comp=Z,0.5nm,0.5s,baz=6.6,slow=3.2
NOA NORSAR Array B 142.13 351 PKhKP PKPpre 01 04 44.4
comp=Z,0.2nm,0.5s,baz=23,slow=4.6,SNR=4.6
AKASG Malin Array Be 145.09 327 PKPbc PKPbc 01 04 53.2 -1.9
comp=Z,3.2nm,0.3s,baz=47,slow=4.5,SNR=21
AKASG Malin Array Be 145.09 327 PKPbc PKPbc 01 04 53.2 -1.9
AKBB Malin Array Si 145.09 327 *ePKPdf* **PKPdf 01 04 53.6 -0.8**
KAC Achnashellach 146.22 5 P PKPdf 01 04 57.0 +0.9
KAC Achnashellach 146.22 5 *eP* **PKPdf 01 04 57.0 +0.9**
MCD Coleburn Disti 146.28 3 P PKPdf 01 04 56.6 +0.4
MCD Coleburn Disti 146.28 3 *eP* **PKPdf 01 04 56.6 +0.4**
KPL Plockton 146.35 6 P PKPdf 01 04 57.0 +0.7
KPL Plockton 146.35 6 *eP* **PKPdf 01 04 57.0 +0.7**
MDO Dochfour 146.35 4 P PKPdf 01 04 57.2 +0.9
MDO Dochfour 146.35 4 *eP* **PKPdf 01 04 57.2 +0.9**
EBH Black Hill 147.60 4 P PKPbc 01 05 00.6 -1.3
EBH Black Hill 147.60 4 *eP* **PKPbc 01 05 00.6 -1.3**
EAB Aberfoyle 147.60 5 P PKPbc 01 05 00.6 -1.3
EAB Aberfoyle 147.60 5 *eP* **PKPbc 01 05 00.6 -1.3**
BR131 Keskin Array S 147.75 307 *ePKPbc* **PKPbc 01 05 01.7 -1.1**
BR131 *ePKPab* PKPab 01 05 07.1 +0.2
BRTR Keskin Array B 147.75 307 PKPbc PKPbc 01 05 01.9 -0.9
comp=Z,1.9nm,0.4s,baz=144,slow=5.3,SNR=17
BRTR PKPab PKPab 01 05 07.2 +0.3
comp=Z,5.9nm,0.8s,baz=78,slow=3.8,SNR=20
MMAI Mount Meron Ar 147.89 294 PKPbc PKPbc 01 05 03.5 +0.1
comp=Z,12nm,0.4s,baz=77,slow=7.8,SNR=146
PGBU Glenifferbraes 147.96 5 P PKPdf 01 05 00.6 +1.5
PGBU Glenifferbraes 147.96 5 *eP* **PKPdf 01 05 00.6 +1.5**
ESY Stoneypath 147.97 3 P PKPbc 01 05 01.8 -1.1
ESY Stoneypath 147.97 3 *eP* **PKPbc 01 05 01.8 -1.1**
EAU Auchinoon 148.00 4 P PKPdf 01 05 00.8 +1.7
EAU Auchinoon 148.00 4 *eP* **PKPdf 01 05 00.8 +1.7**
EBL Broad Law 148.10 3 P PKPbc 01 05 02.0 -1.2
EBL Broad Law 148.10 3 *eP* **PKPbc 01 05 02.0 -1.2**
ESK Eskdalemuir 148.54 4 P PKPbc 01 05 02.6 -1.7
ESK Eskdalemuir 148.54 4 *eP* **PKPbc 01 05 02.6 -1.7**
ECK Cauldkaine Hil 148.68 4 P PKPbc 01 05 02.8 -1.9
ECK Cauldkaine Hil 148.68 4 *eP* **PKPbc 01 05 02.8 -1.9**
KWP Kalwaria Pacla 148.88 331 *ePKPbc* **PKPbc 01 05 04.9 -0.4**
XAL Allendale 149.05 3 P PKPbc 01 05 04.1 -1.5
XAL Allendale 149.05 3 *eP* **PKPbc 01 05 04.1 -1.5**
BUR08 Bucovina Ar. S 149.09 326 *ePKPbc* **PKPbc 01 05 05.9 0.0**
CSS Prodhromos 149.26 299 *ePKPbc* **PKPbc 01 05 04.5 -2.2**
STHS Stebnicka Huta 149.68 332 *ePKP* **PKPbc 01 05 06.9 -0.4**
STHS Stebnicka Huta 149.68 332 *ePKP* **PKPbc 01 05 06.9 -0.4**
CRVS Cervenica-Dubn 149.97 331 *ePKP* **PKPbc 01 05 08.4 +0.4**
CRVS Cervenica-Dubn 149.97 331 *ePKP* **PKPbc 01 05 08.4 +0.4**
UPC Upice 150.76 339⇑ *ePKP* **PKPbc 01 05 09.1 -0.6**
UPC *ex* x 01 05 56.4
DPC Dobruska-Polom 150.79 339⇑ *ePKP* **PKPbc 01 05 09.2 -0.6**
DPC *ePKPAB* PKPab 01 05 19.2 +0.2
DPC *ex* x 01 05 56.6
MORC Moravsky Berou 150.85 337 *ePKPbc* **PKPbc 01 05 09.5 -0.5**
CLL Collm 150.93 343 *i PKPbc* **PKPbc 01 05 09.0 -1.1**
comp=Z,8.0nm,0.9s
CLL *ePKPab* PKPab 01 05 19.0 -0.6
BRG Berggiesshubel 151.07 342 *i P* **PKPbc 01 05 09.7 -0.7**
comp=Z,5.8nm,0.5s
PVCC Panska Ves 151.19 341⇑ *ePKP* **PKPbc 01 05 10.3 -0.4**
PVCC *ex* x 01 05 57.5
VYHS Vyhne 151.39 334 *ePKP* **PKPbc 01 05 09.1 -2.2**
VYHS Vyhne 151.39 334 *ePKP* **PKPbc 01 05 09.1 -2.2**
PSZ Piszkesteto 151.40 332 *ePKPbc* **PKPbc 01 05 10.9 -0.4**
PSZ *ePKPab* PKPab 01 05 21.5 -0.2
KHC Kasperske Hory 152.73 341⇑ *ePKP* **PKPbc 01 05 13.3 -0.9**
KHC *ePKPAB* PKPab 01 05 27.4 +0.1
KHC *ex* x 01 06 00.4
TAM Tamanrasset 174.99 258 *ePKPab* **PKPab 01 07 05.8 -0.1**

*ISCJB **05** 00:47:01.4±1.8,23°.85S±0°.10×179°.93W±0°.10,*
h503km±22km,mb4.4/27,Error ellipse: s-maj=17.1km
s-min=11.7km az=142.7
*IDC **05** 00:47:02.8±2.9,23°.88S×179°.84W,h511km±31km,*
mb3.9/13,mb1 4.1/14,mb1mx3.9/19,mbtmp3.9/14,Error
ellipse: s-maj=18.9km s-min=16.3km az=89.0
*NEIC **05** 00:47:03.1±1.1,23°.81S×179°.88W,h519km±12km,*
mb4.6/13,Error ellipse: s-maj=12.9km s-min=8.7km
az=148.0
ISC 05 00:47:02.4±1.6,23°.82S±0°.10×179°.91W±0°.10,
h502km±19km,n63,σ0°.79/43,mb4.4/27,1C-1D,South of
Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**12.50**	**39**	P	**P**	**00 49 46.0**	**-0.4**
	13nm,0.3s,baz=227,slow=17,SNR=2.5						
RPZ	**Rata Peaks**	**21.20**	**198**	P	**P**	**00 51 11.1**	**-0.5**
	18nm,0.7s,mb4.7,baz=332,slow=23,SNR=1.8						
ARMA	**Armidale**	**26.13**	**249**	*eP*	**P**	**00 51 57.0**	**+1.2**
EIDS	**Eidsvold**	**26.40**	**261**	*eP*	**P**	**00 51 59.0**	**+0.7**
	19nm,0.6s,mb4.7						
CNB	**Canberra Magne**	**28.96**	**240**	*eP*	**P**	**00 52 21.8**	**+1.2**
CAN	**Canberra**	**29.25**	**240**	*eP*	**P**	**00 52 23.6**	**+0.5**
	21nm,0.8s,mb4.6						
CTA	**Charters Tower**	**31.56**	**270**	*eP*	**P**	**00 52 44.1**	**+0.9**
	33nm,0.5s,mb5.0						
CTA	**Charters Tower**	**31.56**	**270**	P	**P**	**00 52 44.1**	**+0.9**
	43nm,0.5s,mb5.1,baz=95,slow=10,SNR=21						
CTAO	**Charters Tower**	**31.56**	**270**	*eP*	**P**	**00 52 44.0**	**+0.7**
	17nm,0.4s,mb4.8						
TOO	**Toolangi**	**32.56**	**237**	*eP*	**P**	**00 52 51.8**	**+0.2**
STKA	**Stephens Creek**	**34.83**	**248**	*eP*	**P**	**00 53 11.0**	**+0.2**
	4.5nm,0.7s,mb4.0						
STKA	**Stephens Creek**	**34.83**	**248**	P	**P**	**00 53 11.1**	**+0.3**
	6.0nm,0.6s,mb4.2,baz=109,slow=10,SNR=5.3						
COEN	**Coen**	**36.18**	**279**	*eP*	**P**	**00 53 22.3**	**0.0**
	22nm,0.4s,mb4.9						
ASAR	**Alice Springs**	**42.13**	**261**	P	**P**	**00 54 10.2**	**-0.1**
	16nm,0.6s,mb4.7,baz=99,slow=6.8,SNR=16						
ASAR				ScP	ScP	00 58 56.5	+0.5
	2.3nm,0.9s,baz=107,slow=4.2,SNR=5.7						
WRAB	**Tennant Creek**	**42.49**	**266**	*eP*	**P**	**00 54 11.9**	**-1.2**
	8.0nm,0.3s,mb4.6						
WRA	**Warramunga Arr**	**42.49**	**266**	P	**P**	**00 54 12.6**	**-0.6**
	28nm,0.5s,mb5.0,baz=103,slow=8.2,SNR=23						
KAKA	**Kakadu**	**46.38**	**275**	*eP*	**P**	**00 54 43.1**	**-0.3**
	11nm,0.3s,mb4.8						
KAKA	**Kakadu**	**46.38**	**275**	*eP*	**P**	**00 54 42.9**	**-0.4**
	11nm,0.3s,mb4.8						
FORT	**Forrest**	**46.42**	**249**	*eP*	**P**	**00 54 42.2**	**-1.2**
	95nm,0.6s,mb5.4						
FORT	**Forrest**	**46.42**	**249**	*eP*	**P**	**00 54 41.9**	**-1.5**
	54nm,0.5s,mb5.2						
FITZ	**Fitzroy Crossi**	**50.92**	**266**	*eP*	**P**	**00 55 17.2**	**+0.1**
	29nm,0.6s,mb4.8						
FITZ	**Fitzroy Crossi**	**50.92**	**266**	P	**P**	**00 55 16.9**	**-0.2**
	14nm,0.6s,mb4.5,baz=150,slow=6.5,SNR=10.0						
FITZ	**Fitzroy Crossi**	**50.92**	**266**	*eP*	**P**	**00 55 17.1**	**0.0**
	16nm,0.7s,mb4.5						
SBA	**Scott Base**	**54.46**	**183**	*eP*	**P**	**00 55 42.5**	**+1.0**
	14nm,1.0s,mb4.2						
KLBR	**Kellerberrin**	**55.10**	**247**	*eP*	**P**	**00 55 45.7**	**-1.1**
	14nm,0.6s,mb4.5						
MBWA	**Marble Bar**	**55.47**	**260**	*eP*	**P**	**00 55 47.9**	**-1.6**
	13nm,0.7s,mb4.4						
QSPA	**South Pole Qui**	**66.27**	**180**	P	**P**	**00 57 00.2**	**+0.5**
	9.1nm,0.7s,mb4.5,baz=34,slow=2.3,SNR=9.0						
QSPA	**South Pole Qui**	**66.27**	**180**	*eP*	**P**	**00 56 59.5**	**-0.2**
	16nm,1.0s,mb4.6						
KKM	**Kota Kinabalu**	**68.96**	**287**	*eP*	**P**	**00 57 17.1**	**-0.2**
	19nm,0.6s,mb4.8						
MJAR	**Matsushiro Arr**	**71.88**	**326**	P	**P**	**00 57 34.2**	**0.0**
	2.3nm,0.8s,mb3.8,baz=156,slow=6.5,SNR=4.9						
MJAR	**Matsushiro Arr**	**71.88**	**326**	P	**P**	**00 57 34.2**	**0.0**
KSM	**Kuching**	**72.17**	**280**	*eP**	**P**	**00 57 35.7**	**-0.7**
	18nm,0.7s,mb4.7						
MAW	**Mawson**	**77.86**	**200**	*eP*	**P**	**00 58 06.3**	**-1.0**
	4.1nm,0.6s,mb4.0						
MAW	**Mawson**	**77.86**	**200**	P	**P**	**00 58 05.6**	**-1.6**
	4.8nm,0.7s,mb4.0,baz=128,slow=6.4,SNR=8.5						
MAW	**Mawson**	**77.86**	**200**	*eP*	**P**	**00 58 06.0**	**-1.3**
	0.9nm,0.6s,mb3.4						
KSRS	**Korea Array**	**78.24**	**320**	P	**P**	**00 58 10.6**	**+0.8**
	2.2nm,0.6s,mb3.8,baz=137,slow=5.6,SNR=7.4						
PETK	**Petropavlovsk-**	**79.04**	**346**	P	**P**	**00 58 13.3**	**-0.4**
	3.1nm,0.6s,mb4.0,baz=125,slow=6.1,SNR=6.3						
PETK	**Petropavlovsk-**	**79.04**	**346**	P	**P**	**00 58 13.3**	**-0.4**
TUC	**Tucson**	**86.40**	**52**	*eP*	**P**	**00 58 51.3**	**0.0**
	1.5nm,0.7s,mb3.7						
CMAR	**Chiang Mai Arr**	**89.57**	**290**	P	**P**	**00 59 07.8**	**+1.4**
	3.7nm,0.8s,mb4.2,baz=134,slow=3.0,SNR=8.2						
CHTO	**Chiang Mai**	**89.72**	**291**	*eP*	**P**	**00 59 08.1**	**+0.9**
	3.9nm,0.9s,mb4.2						
HLID	**Hailey**	**89.98**	**41**	*eP*	**P**	**00 59 07.9**	**+0.2**
	1.6nm,1.0s,mb3.8						
TXAR	**Lajitas Array**	**90.32**	**58**	P	**P**	**00 59 09.9**	**+0.3**
	0.7nm,0.7s,mb3.6,baz=202,slow=6.7,SNR=4.6						
KURK	**Kurchatov**	**115.20**	**316**	PKP	PKPdf	01 04 44.1	-1.9
	0.8nm,0.6s,baz=104,slow=1.7,SNR=5.1						
TKM2	**Tokmak 2**	**116.16**	**308**	*ePKPdf*	PKPdf	01 04 46.6	-1.6
KBL	**Kabul**	**119.88**	**297**	*ePKPdf*	PKPdf	01 04 54.8	-0.8
BVAR	**Borovoye Array**	**120.43**	**319**	PKP	PKPdf	01 04 54.5	-1.5
	1.1nm,0.4s,baz=122,slow=1.9,SNR=7.6						
ARU	**Arti**	**126.86**	**324**	*ePKPdf*	PKPdf	01 05 07.3	-1.0
ABKAR	**Akbulak array**	**127.21**	**315**	*ePKPdf*	PKPdf	01 05 08.2	-1.0
LSZ	**Lusaka**	**132.42**	**218**	*ePKPdf*	PKPdf	01 05 19.9	-0.2
FINES	**FINESS Array B**	**138.39**	**342**	PKP	PKPdf	01 05 29.9	+0.1
	1.7nm,0.8s,baz=66,slow=2.3,SNR=2.0						
NOA	**NORSAR Array B**	**142.01**	**351**	PKhKP		01 05 31.4	
	0.8nm,0.8s,baz=16,slow=4.7,SNR=3.4						
KONO	**Kongsberg**	**143.57**	**352**	*ePKPdf*	PKPdf	01 05 36.2	-2.9
AKASG	**Malin Array Be**	**144.95**	**327**	PKPbc	PKPdf	01 05 40.5	-1.2
	1.7nm,0.4s,baz=42,slow=4.2,SNR=9.3						
AKBB	**Malin Array Si**	**144.95**	**327**	*ePKPdf*	PKPdf	01 05 40.7	-1.1
KIEV	**Kiev**	**144.96**	**327**	*ePKPdf*	PKPdf	01 05 41.0	-0.8
BR131	**Keskin Array S**	**147.59**	**307**	*ePKPbc*	PKPbc	01 05 48.8	-1.3
BR131				*ePKPab*	PKPab	01 05 53.7	-0.3
BRTR	**Keskin Array B**	**147.59**	**307**	PKPbc	PKPbc	01 05 48.8	-1.3
	2.2nm,0.7s,baz=125,slow=3.4,SNR=5.5						
MMAI	**Mount Meron Ar**	**147.74**	**294**	PKPbc	PKPbc	01 05 50.9	+0.2
	6.8nm,0.4s,baz=74,slow=6.2,SNR=15						
CSS	**Prodhromos**	**149.11**	**299**	*ePKPbc*	PKPbc	01 05 52.0	-2.0
CSS				*ePKPab*	PKPab	01 05 59.5	-0.9
MORC	**Moravsky Berou**	**150.71**	**337**	*ePKPbc*	PKPbc	01 05 56.4	-0.9
MORC				*ePKPab*	PKPab	01 06 06.0	-0.5
CLL	**Collm**	**150.80**	**343⇓**	*i PKPbc*	PKPbc	01 05 56.5	-0.9
	comp=Z,10.0nm,0.9s						
CLL				⇑*i PKPab*	PKPab	01 06 06.1	-0.7
	comp=Z,4.0nm,0.8s						
BRG	**Berggiesshubel**	**150.93**	**342**	*i PKP*	PKPbc	01 05 57.2	-0.5
	comp=Z,3.8nm,0.6s						
BRG							
	comp=N,481nm,16.7s						
BRG							
	comp=E,416nm,23.5s						
BRG							
	comp=Z,444nm,24.7s						

NNC 05 00:47:07.9±3.1,38°.83N×70°.38E,h0km,mb3.5,mpv3.1,
1C-4D,Error ellipse: s-maj=30.1km s-min=15.7km
az=175.0,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**4.28**	**1**	⇓Pn	Pn	00 48 16.9	+2.7
	0.9nm,0.3s,baz=176,slow=12,SNR=18						
KK31				Lg		00 49 23.8	
	1.9nm,0.5s,baz=183,slow=28,SNR=7.6						
TKM2	**Tokmak 2**	**5.69**	**42**	⇓Pn	Pn	00 48 35.1	+1.5
	1.4nm,0.5s						
TKM2				⇑Sn	Sn	00 49 40.5	+0.9
	0.7nm,0.5s						
AB31	**Akbulak array**	**12.83**	**328**	⇓Pn	Pn	00 50 10.5	-0.9
	0.5nm,0.7s,baz=37,slow=42,SNR=6.2						
AB31				⇓Sn	Sn	00 52 36.7	+1.7
	0.1nm,0.5s						

*NEIC **05** 00:52:11.2,58°.81N×137°.64W,h1km,ML2.7(PGC),*
ML2.6(AEIC),After PGC.
PGC 05 00:52:11.2±1.2,58°.81N×137°.64W,h1km,ML2.7/3,3D,
118km Ese of Yakutat, Ak Southeastern Alaska,
Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLBC	**Pleasant Camp**	**0.92**	**45**	P	Pg	00 52 27.7	-1.2
PLBC				S	Sg	00 52 39.8	-1.0
PLBC	**Pleasant Camp**	**0.92**	**45**	⇓P	Pg	00 52 27.7	-1.2
PLBC				⇑S	Sg	00 52 39.8	-1.0
PNL	**Peninsula**	**1.25**	**314**	P	Pg	00 52 34.3	-0.9
PNL				S	Sg	00 52 53.6	+2.2
SKAG	**Skagway**	**1.36**	**60**	P	Pg	00 52 34.7	-2.5
SKAG				S	Sg	00 52 52.0	-2.7
BESE	**Bessie Mountai**	**1.47**	**98**	P	Pn	00 52 35.6	-3.2
HYT	**Haines Junctio**	**2.02**	**2**	Pn	Pn	00 52 46.3	-0.2
HYT				Pg	Pg	00 52 47.4	-2.6
HYT	**Haines Junctio**	**2.02**	**2**	⇓Pn	Pn	00 52 46.3	-0.2
HYT				⇓Pg	Pg	00 52 47.4	-2.6
HYT				⇑Sg	Sg	00 53 14.6	-1.6
SIT	**Sitka**	**2.15**	**144**	P	Pn	00 52 46.7	-1.4
SIT				S	Sn	00 53 14.9	-0.4
WHY	**Whitehorse**	**2.32**	**36**	P	Pn	00 52 49.9	-0.7
WHY				Pg	Pg	00 52 52.5	-3.2
WHY				Sg	Sg	00 53 23.3	-2.5
WHY	**Whitehorse**	**2.32**	**36**	⇑Pn	Pn	00 52 50.4	-0.2
WHY				⇑Pg	Pg	00 52 52.5	-3.2
WHY				⇑Sg	Sg	00 53 23.3	-2.5
DAWY	**Dawson**	**5.34**	**352**	*eP*n	Pn	00 53 33.2	+1.3

*IDC **05** 01:11:27.5±0.9,74°.61N×60°.81W,h0km,mb3.5/8,*
mb1 3.8/10,mb1mx3.6/29,mbtmp3.6/10,ML3.8/1,Error
ellipse: s-maj=26.4km s-min=16.9km az=141.0
*NEIC **05** 01:11:28.6±0.7,74°.72N×61°.13W,h10km,mb3.8/1,Error*
ellipse: s-maj=15.4km s-min=9.5km az=153.0
OTT 05 01:11:23.9±0.6,74°.69N×59°.14W,h18km,ML4.5/11,
Western Greenland. 567km northeast from Clyde
River, Nu Eastern Arctic Background Seismic Zone.,
Baffin Bay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EUNU	**Eureka**	**7.93**	**325**	Pn	Pn	01 13 17.2	-0.7
EUNU				Sn	Sn	01 14 41.9	-5.2
EUNU	**Eureka**	**7.93**	**325**	PN	Pn	01 13 17.1	-0.9
EUNU				SN	Sn	01 14 41.0	-6.0
EUNU				Trac		01 14 44.0	
	comp=Z,20nm,0.3s						
GIFN	**Gifford Fjord,**	**8.25**	**247**	Pn	Pn	01 13 22.1	-0.3
GIFN				Sn	Sn	01 14 49.5	-5.5
GIFN	**Gifford Fjord,**	**8.25**	**247**	PN	Pn	01 13 22.5	0.0
GIFN				SN	Sn	01 14 49.3	-5.7
GIFN				Trac		01 14 51.9	
	comp=Z,26nm,0.4s						
ILON	**Igloolik, Nuna**	**8.75**	**244**	Pn	Pn	01 13 28.9	-0.4
ILON				Sn	Sn	01 15 01.4	-5.8
ILON	**Igloolik, Nuna**	**8.75**	**244**	PN	Pn	01 13 28.8	-0.4
ILON				SN	Sn	01 15 01.2	-6.0
ILON				Trac		01 15 15.6	
	comp=Z,12nm,0.3s						
AP3N	**Apex site 3 Nu**	**9.33**	**249**	Pn	Pn	01 13 36.5	-0.7
AP3N				Sn	Sn	01 15 13.2	-8.2
AP3N	**Apex site 3 Nu**	**9.33**	**249**	PN	Pn	01 13 36.4	-0.8
AP3N				SN	Sn	01 15 13.2	-8.2
AP3N				Trac		01 15 16.0	
	comp=Z,14nm,0.2s						
LAIN	**Lailor River,**	**9.36**	**246**	Pn	Pn	01 13 37.0	-0.6
LAIN				Sn	Sn	01 15 15.3	-6.8
LAIN	**Lailor River,**	**9.36**	**246**	PN	Pn	01 13 37.0	-0.6
LAIN				SN	Sn	01 15 14.1	-8.0
LAIN				Trac		01 15 17.4	
	comp=Z,28nm,0.6s						
RES	**Resolute Bay**	**9.36**	**287**	Pn	Pn	01 13 37.7	+0.2
	1.0nm,0.3s,baz=60,slow=12,SNR=52						
RES				Sn	Sn	01 15 13.3	-8.7
	2.8nm,0.3s,baz=202,slow=18,SNR=10						
RES	**Resolute Bay**	**9.36**	**287**	*e*Pn	Pn	01 13 37.6	+0.1
RES				*e*Sn	Sn	01 15 13.4	-8.7
RES	**Resolute Bay**	**9.36**	**287**	PN	Pn	01 13 37.2	-0.4
RES				SN	Sn	01 15 14.5	-7.6
RES	

NUNN			Trac			01 17 15.0	
	comp=Z,5.0nm,0.3s						
CB31	**Cambridge Bay**	**14.94 272**	PN	Pn		01 14 51.2	-2.5
CB31			SN	Sn		01 17 26.2	-12
CB31			Trac			01 17 37.6	
	comp=Z,5.0nm,0.3s						
AKVQ	**Akulivik**	**15.55 217**	PN	Pn		01 14 59.7	-2.1
AKVQ			SN	Sn		01 17 36.9	-17
SEDN	**First Sedna Si**	**15.93 241**	PN	Pn		01 15 03.3	-3.4
SEDN			SN	Sn		01 17 46.4	-16
JOSN	**Second Sedna S**	**16.09 241**	PN	Pn		01 15 07.4	-1.3
JOSN			SN	Sn		01 17 53.1	-13
SPITS	**Spitsbergen Ar**	**16.85 44**	P	Pn		01 15 19.6	+1.3
	baz=284,slow=7.7,SNR=1.8						
INUQ	**Inukjuak**	**17.80 214**	PN	Pn		01 15 29.4	-0.8
INUQ			SN	Sn		01 18 35.7	-12
SCHQ	**Schefferville**	**20.18 193**	P	P		01 16 01.0	+4.1
	1.5nm,0.5s,baz=38,slow=7.3,SNR=2.0						
SCHQ	**Schefferville**	**20.18 193**	*e*P	P		01 16 01.1	+4.2
	4.7nm,0.8s						
FCC	**Fort Churchill**	**20.56 238**	Pn	P		01 16 00.5	-0.7
FCC			Sn	S		01 19 39.7	-10
FCC	**Fort Churchill**	**20.56 238**	PN	P		01 16 03.2	+2.1
FCC			SN	S		01 19 38.8	-11
YKA	**Yellowknife Ar**	**22.52 267**	P	P		01 16 23.9	+1.9
	0.8nm,0.7s,baz=60,slow=12,SNR=2.9						
YKA	**Yellowknife Ar**	**22.52 267**	P	P		01 16 23.9	+1.9
ARCES	**ARCESS Array B**	**24.33 58**	P	P		01 16 48.6	+8.7
	2.4nm,0.9s,baz=334,slow=8.1,SNR=4.9						
ESDC	**Sonseca Array**	**43.11 112**	P	P		01 19 33.7	+11
	0.5nm,0.5s,baz=340,slow=7.9,SNR=5.3						
TXAR	**Lajitas Array**	**50.56 232**	P	P		01 20 24.5	+3.6
	0.4nm,0.6s,baz=39,slow=6.5,SNR=6.0						
KURK	**Kurchatov**	**51.75 33**	P	P		01 20 38.4	+8.9
	0.3nm,0.6s,baz=347,slow=6.8,SNR=2.8						
BRTR	**Keskin Array B**	**52.86 75**	P	P		01 20 47.0	+9.1
	0.4nm,0.5s,baz=0.9,slow=7.7,SNR=3.6						
MKAR	**Makanchi Array**	**56.10 31**	P	P		01 21 10.8	+9.5
	0.2nm,0.6s,baz=353,slow=8.6,SNR=2.0						

*ISCJB **05** 01:36:24.6±1.3,24°.55N×0°.04×117°.87E±0°.07,h24km±8km, mb3.7/3,MS3.5/2,Error ellipse: s-maj=11.1km s-min=5.8km az=153.1*
*BJI **05** 01:36:24.3,24°.60N×117°.77E,h11km,mB4.3/3,mb4.4/7, ML4.8/8,Ms3.9/7,Ms7 3.6/5*
*IDC **05** 01:36:25.2±1.3,24°.45N×118°.85E,h0km,mb3.7/3, mb1 3.9/5,mb1mx3.6/25,mbtmp3.7/5,ML4.0/2,MS3.1/2, Ms1 3.1/2,ms1mx2.8/29,Error ellipse: s-maj=42.2km s-min=24.3km az=73.0*
*TAP **05** 01:36:26.5,24°.59N×117°.98E,h33km,ML4.6,D*
ISC 05 01:36:24.6±1.5,24°.60N±0°.04×117°.86E±0°.07,h14km±7km, n56,σ0°66/60,mb3.7/3,MS3.5/2,3C-1D,Near coast of southeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNM	**Kinmen**	**0.55**	**109**	⇑*i*P	**Pg**	**01 36 35.1**	**-0.3**
	baz=123						
KNM				*i* S	**Sg**	**01 36 41.4**	**-1.1**
	baz=123						
QZH	**Quanzhou**	**0.75**	**62**	⇓*i*Pg	**Pg**	**01 36 39.6**	**+0.4**
QZH				Sg	**Sg**	**01 36 49.7**	**+0.9**
QZH				smax			
	comp=N,33μm,0.6s						
QZH				smax			
	comp=E,17μm,0.4s						
PNG	**Penghu**	**1.86**	**123**	*e*P	**Pn**	**01 36 54.8**	**-1.1**
	baz=125						
WTCT	**Ta-ch'eng**	**2.33**	**108**	*e*P	**Pn**	**01 37 02.0**	**-0.4**
	baz=109						
CHN8	**Yiju**	**2.48**	**120**	*e*P	**Pn**	**01 37 05.2**	**+0.6**
	baz=121						
SCLT	**Jiali**	**2.56**	**123**	*e*P	**Pn**	**01 37 04.6**	**-1.1**
	baz=124						
CHY	**Chiayi**	**2.59**	**115**	*e*P	**Pn**	**01 37 06.1**	**+0.1**
	baz=115						
TCU	**Taichung**	**2.60**	**99**	*e*P	**Pn**	**01 37 06.1**	**-0.1**
	baz=100						
NSY	**Sanyi**	**2.65**	**93**	*e*P	**Pn**	**01 37 06.4**	**-0.4**
	baz=93						
TWQ1	**Liyutan**	**2.66**	**95**	*e*P	**Pn**	**01 37 07.2**	**+0.1**
	baz=95						
WNT	**Mingjian**	**2.67**	**105**	*e*P	**Pn**	**01 37 07.0**	**-0.2**
	baz=106						
TWK	**Hsinying**	**2.74**	**118**	*e*P	**Pn**	**01 37 08.5**	**+0.3**
	baz=119						
CHN5	**Tsauling**	**2.76**	**111**	⇑*i*P	**Pn**	**01 37 08.1**	**-0.3**
	baz=111						
CHN1	**Nanshi**	**2.82**	**119**	*e*P	**Pn**	**01 37 09.0**	**-0.1**
	baz=121						
TYC	**Yuchr**	**2.82**	**104**	P	**Pn**	**01 37 09.4**	**+0.2**
	baz=104						
HSN	**Hsinchu**	**2.83**	**85**	*e*P	**Pn**	**01 37 10.0**	**+0.7**
	baz=85						
WTP	**Ta-pu**	**2.85**	**118**	*e*P	**Pn**	**01 37 09.9**	**+0.2**
	baz=119						
NSTT	**Nanjuang**	**2.86**	**89**	*e*P	**Pn**	**01 37 09.6**	**-0.1**
	baz=89						
SMLT	**Sun Moon Lake**	**2.86**	**104**	P	**Pn**	**01 37 10.3**	**+0.5**
	baz=104						
SGST	**Jiashian**	**2.91**	**121**	*e*P	**Pn**	**01 37 10.9**	**+0.4**
	baz=122						
STYT	**Tauyuan**	**3.01**	**118**	*e*P	**Pn**	**01 37 11.8**	**0.0**
	baz=119						
TWT	**Tachien**	**3.04**	**96**	*e*P	**Pn**	**01 37 11.8**	**-0.4**
	baz=96						
NCU	**National Centr**	**3.04**	**82**	*e*P	**Pn**	**01 37 12.6**	**+0.3**
	baz=82						
WHF	**Hehuan Shan**	**3.14**	**98**	*e*P	**Pn**	**01 37 13.7**	**+0.2**
	baz=98						
NSK	**Sanguang**	**3.18**	**88**	*e*P	**Pn**	**01 37 13.7**	**-0.5**
	baz=88						
NNS	**Nan Shan**	**3.20**	**92**	*e*P	**Pn**	**01 37 13.7**	**-0.8**
	baz=92						
ELDTW	**Lidau**	**3.21**	**115**	*e*P	**Pn**	**01 37 14.8**	**+0.3**
	baz=116						
TWS1	**Kuangyinshan**	**3.27**	**80**	*e*P	**Pn**	**01 37 15.6**	**+0.2**
	baz=80						
EHY	**Hungye**	**3.34**	**108**	*e*P	**Pn**	**01 37 16.7**	**+0.3**
	baz=109						
ESL	**Shilin**	**3.35**	**103**	*e*P	**Pn**	**01 37 16.8**	**+0.3**
	baz=103						
SCZT	**Fangliau**	**3.36**	**131**	*e*P	**Pn**	**01 37 17.7**	**+1.0**
	baz=132						
ENTT	**Nioudou**	**3.37**	**89**	*e*P	**Pn**	**01 37 16.7**	**-0.1**
	baz=89						
TWF1	**Yuli**	**3.38**	**111**	⇑*e*P	**Pn**	**01 37 17.3**	**+0.4**
	baz=112						
TWA	**Mucha**	**3.40**	**83**	*e*P	**Pn**	**01 37 17.3**	**+0.1**
	baz=83						
TWG	**Pinlang**	**3.43**	**120**	*e*P	**Pn**	**01 37 18.4**	**+0.7**
	baz=121						
TWY	**Chenhua**	**3.46**	**78**	*e*P	**Pn**	**01 37 18.2**	**+0.2**
	baz=78						
TWE	**Neicheng**	**3.46**	**87**	*e*P	**Pn**	**01 37 18.0**	**0.0**
	baz=87						
ECL	**Taimali**	**3.47**	**124**	*e*P	**Pn**	**01 37 18.7**	**+0.6**
	baz=126						
EAST	**Anshuo**	**3.52**	**128**	*e*P	**Pn**	**01 37 18.9**	**+0.1**
	baz=129						
ENA	**Nanau**	**3.54**	**92**	*e*P	**Pn**	**01 37 19.1**	**0.0**
	baz=92						
NWF	**Wu-fen Shan**	**3.59**	**82**	P	**Pn**	**01 37 19.8**	**0.0**
	baz=82						
TWC	**Suao**	**3.63**	**89**	*e*P	**Pn**	**01 37 20.8**	**+0.4**
	baz=89						
TWB1	**Santiao Chiao**	**3.77**	**83**	*e*P	**Pn**	**01 37 21.7**	**-0.6**
	baz=83						
TWK1	**Hengchun**	**3.78**	**134**	*e*P	**Pn**	**01 37 22.7**	**+0.3**
	baz=135						
GZH	**Guangzhou**	**4.40**	**251**	Pg	**Pn**	**01 37 38.6**	**+7.7**
GZH				smax			
	comp=N,3μm,1.0s						
GZH				smax			
	comp=E,2μm,0.7s						
WHN	**Wuhan**	**6.69**	**333**	Pn	**Pn**	**01 38 06.4**	**+4.0**
WHN				Sn	**Sn**	**01 39 18.1**	**-0.3**
WHN				smax			
	comp=N,1μm,1.0s						
WHN				smax			
	comp=E,1μm,1.0s						
WHN				LR	LR		
	comp=N,2μm,2.2s						
WHN				LR	LR		
	comp=E,4μm,3.4s						
WHN				LR	LR		
	comp=Z,2μm,2.4s						
XAN	**Xi'an**	**12.21**	**322**	P	**Pn**	**01 39 25.0**	**+6.9**
XAN				sP		01 39 30.6	
XAN				PP		01 39 34.1	
XAN				S	**Sn**	**01 41 43.1**	**+9.1**
XAN				LR	LR		
	comp=N,380nm,11.3s						
XAN				LR	LR		
	comp=E,120nm,11.8s						
KSRS	**Korea Array**	**15.43**	**31**	Pn	**Pn**	**01 39 59.2**	**-2.6**
	comp=E,0.3nm,0.3s,baz=297,slow=34,SNR=3.0						
KSRS				LR	LR	01 46 33.6	
	comp=E,52nm,18.1s,baz=188,slow=40						
LZH	**Lanzhou**	**16.64**	**317**	*e*P	**Pn**	**01 40 16.8**	**-0.5**
LZH				pP	pP	01 40 19.3	-4.5
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				pmax	pmax		
	comp=Z,72nm,4.1s						
LZH				LR	LR		
	comp=N,1μm,12.0s						
LZH				LR	LR		
	comp=Z,2μm,13.8s						
HHC	**Hu-ho-hao-te**	**17.04**	**344**	*e*P	**Pn**	**01 40 22.4**	**0.0**
HHC				S	**Sn**	**01 43 31.7**	**+0.1**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,65nm,5.2s						
CMAR	**Chiang Mai Arr**	**18.62**	**255**	P	pP	01 40 53.3	+7.4
	comp=Z,0.3nm,0.3s,baz=54,slow=10,SNR=6.9						
CN2	**Changchun**	**20.14**	**16**	*e*P	**P**	**01 41 00.5**	**+2.3**
CN2				*es*P	sP	01 41 07.5	+3.3
CN2				*e*S	**S**	**01 44 41.5**	**-2.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,600nm,18.0s,MS4.1						
CN2				LR	LR		
	comp=E,400nm,18.0s,MS4.1						
CN2				LR	LR		
	comp=Z,200nm,15.0s,MS3.6						
MJAR	**Matsushiro Arr**	**21.13**	**51**	LR	LR	01 49 48.6	
	comp=Z,80nm,20.1s,MS3.1,baz=215,slow=39						
SONM	**Songino Array**	**24.91**	**341**	P	**P**	**01 41 54.1**	**+7.2**
	comp=Z,2.1nm,0.9s,mb3.6,baz=164,slow=10,SNR=11						
WRA	**Warramunga Arr**	**47.09**	**159**	P	**P**	**01 44 55.7**	**-0.4**
	comp=Z,1.1nm,0.7s,mb3.9,baz=344,slow=9.1,SNR=5.3						
ASAR	**Alice Springs**	**50.44**	**161**	P	**P**	**01 45 21.1**	**-0.6**
	comp=Z,0.5nm,0.9s,mb3.6,baz=358,slow=7.9,SNR=4.8						

*IDC **05** 01:39:24.7±1.2,10°.15N×91°.60E,h0km,mb4.1/9, mb1 4.1/10,mb1mx3.9/24,mbtmp4.0/10,ML4.5/1,Error ellipse: s-maj=44.2km s-min=18.1km az=56.0*
*NEIC **05** 01:39:29.7±0.5,10°.18N×91°.60E,h35km,mb4.4/4,Error ellipse: s-maj=15.3km s-min=9.4km az=53.0*
ISC 05 01:39:31.9±5.8,10°.2N±0°.2×91°.7E±0°.3,h53km±49km,n14, σ0°39/14,mb4.1/12,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.77**	**40**	Pn	**Pn**	**01 42 03.4**	**0.0**
	0.9nm,0.3s,baz=44,slow=25,SNR=1.5						
MKAR	**Makanchi Array**	**37.29**	**349**	P	**P**	**01 46 39.0**	**+0.3**
	4.7nm,0.8s,mb4.4,baz=178,slow=9.2,SNR=3.0						
SONM	**Songino Array**	**39.47**	**16**	P	**P**	**01 46 56.7**	**-0.3**
	2.6nm,1.0s,mb3.9,baz=194,slow=8.4,SNR=3.6						
KURK	**Kurchatov**	**41.77**	**348**	P	**P**	**01 47 16.6**	**+0.6**
	2.7nm,0.8s,mb3.9,baz=155,slow=7.1,SNR=3.0						
KURK	**Kurchatov**	**41.77**	**348**	*e*P	**P**	**01 47 15.2**	**-0.8**
	11nm,1.1s,mb4.4						
ZALV	**Zalesovo Beam**	**43.94**	**354**	P	**P**	**01 47 33.9**	**+0.4**
	2.7nm,0.5s,mb4.2,baz=173,slow=9.0,SNR=5.9						
BVAR	**Borovoye Array**	**46.00**	**342**	P	**P**	**01 47 49.5**	**-0.3**
	0.9nm,0.7s,mb3.8,baz=141,slow=9.3,SNR=3.0						
ABKAR	**Akbulak array**	**47.01**	**332**	*e*P	**P**	**01 47 57.8**	**-0.1**
	0.8nm,0.5s,mb3.9						
WRA	**Warramunga Arr**	**51.59**	**126**	P	**P**	**01 48 33.0**	**-0.3**
	1.0nm,0.4s,mb4.1,baz=307,slow=8.1,SNR=12						
WRAB	**Tennant Creek**	**51.60**	**126**	*e*P	**P**	**01 48 33.3**	**0.0**
	1.5nm,0.4s,mb4.3						
ASAR	**Alice Springs**	**53.28**	**130**	P	**P**	**01 48 46.0**	**+0.4**
	3.5nm,0.7s,mb4.4,baz=305,slow=6.8,SNR=36						
BRTR	**Keskin Array B**	**59.06**	**310**	P	**P**	**01 49 27.0**	**+0.2**
	0.7nm,0.8s,mb3.8,baz=124,slow=7.1,SNR=3.1						
FINES	**FINESS Array B**	**69.50**	**332**	P	**P**	**01 50 35.2**	**+0.5**
	1.4nm,0.8s,mb4.0,baz=84,slow=13,SNR=3.6						
PSZ	**Piszkesteto**	**70.28**	**317**	*e*P	**P**	**01 50 39.0**	**-0.7**
	3.5nm,0.8s,mb4.3						

*SZGRF **05** 01:39:21.2,34°.35N×82°.14E,h33km,mb4.6,Xizang*
*IDC **05** 01:39:25.8±0.6,35°.17N×81°.23E,h0km,mb4.2/16, mb1 4.4/21,mb1mx4.3/28,mbtmp4.3/21,ML3.7/5,MS4.0/9, Ms1 4.0/9,ms1mx3.6/35,Error ellipse: s-maj=19.3km s-min=12.8km az=50.0*
*LDG **05** 01:39:25.8±0.6,35°.35N×80°.90E,h10km,Mb4.9/23, Ms3.9/6,Error ellipse: s-maj=23.2km s-min=6.3km az=143.0*
*ISCJB **05** 01:39:26.9±0.9,35°.23N±0°.02×81°.15E±0°.03,h18km±6km, mb4.5/73,MS4.1/24,Error ellipse: s-maj=4.6km s-min=3.0km az=140.2*
*NEIC **05** 01:39:26.9±0.3,35°.16N×81°.18E,h10km,mb4.7/32, MS4.1/2,Error ellipse: s-maj=7.2km s-min=6.1km az=214.0*
*BJI **05** 01:39:27.7,35°.31N×81°.36E,h15km,mB4.7/20,mb4.6/27, ML4.6/4,Ms4.5/31,Ms7 4.3/28*
*MOS **05** 01:39:29.3±1.3,35°.27N×81°.10E,h33km,mb4.8/31, MS4.1/13,Error ellipse: s-maj=8.6km s-min=4.2km az=116.3*
ISC 05 01:39:31.3±0.3,35°.26N±0°.02×81°.23E±0°.03,h37km±4km, n233,σ1°24/246,mb4.5/73,MS4.1/24,8C-7D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOSI	**Joshimath**	**4.89**	**197**	*ex*	**Pn**	**01 40 44.6**	**+2.2**
DLH	**Dalhousie**	**5.14**	**240**	*ex*	**Pn**	**01 40 48.0**	**+2.2**
DLH				*ex*	x	01 42 18.0	
SDNR	**Sundarnagar**	**5.17**	**225**	*e*PKP	**Pn**	**01 40 46.3**	**+0.2**
THN	**Thein Dam**	**5.38**	**240**	*e*PKP	**Pn**	**01 40 48.5**	**-0.5**
BHK	**Bhakra**	**5.56**	**228**	*e*PKP	**Pn**	**01 40 49.8**	**-1.6**
DDI	**Dehra Dun**	**5.60**	**209**	*e*PKP	**Pn**	**01 40 52.8**	**+0.8**
DDI				*ex*	x	01 43 19.5	
PTH	**Pithoragarh**	**5.75**	**189**	*ex*	**Pn**	**01 40 57.0**	**+2.8**
KSH	**Kashi**	**5.96**	**317**	*e*Pn	**Pn**	**01 40 58.7**	**+1.7**
KSH				Sn	**Sn**	**01 42 07.8**	**+3.8**
KSH				smax			
	comp=N,660nm,1.1s						
KSH				smax			
	comp=E,490nm,1.0s						
KSH				LR	LR		
	comp=Z,1μm,8.0s						
CHCP	**Chirah Chowk**	**6.77**	**259**	P	**Pn**	**01 41 08.3**	**+0.2**
NDI	**New Delhi**	**7.39**	**209**	*e*PKP	**Pn**	**01 41 15.0**	**-1.6**
NDI				*ex*	x	01 42 37.0	
BISR	**Bishrakh**	**7.40**	**207**	*ex*	**Pn**	**01 41 18.2**	**+1.4**
KOLN	**Koldanda**	**7.74**	**164**	*e*Pn	**Pn**	**01 41 22.3**	**+0.9**
KOLN				*e*Sn	**Sn**	**01 42 51.9**	**+4.2**
	comp=Z,76nm,0.8s						
GKN	**Gorkha**	**7.80**	**157**	*e*Pn	**Pn**	**01 41 22.2**	**0.0**
SONA	**Sohna**	**7.83**	**208**	*e*PKP	**Pn**	**01 41 21.1**	**-1.5**
SONA				*ex*	x	01 42 53.5	
KKN	**Kakani**	**8.21**	**154**	*e*Pn	**Pn**	**01 41 27.8**	**-0.1**
DMN	**Daman**	**8.31**	**155**	*e*Pn	**Pn**	**01 41 29.1**	**-0.2**
DMN				*e*Sn	**Sn**	**01 43 04.2**	**+2.2**
	comp=Z,222nm,1.2s						
GUN	**Gumba**	**8.33**	**150**	*e*Pn	**Pn**	**01 41 29.7**	**+0.2**
PKIN	**Phulchoki**	**8.45**	**154**	*e*Pn	**Pn**	**01 41 31.6**	**+0.5**
PKIN				*e*Sn	**Sn**	**01 43 07.1**	**+1.9**
	comp=Z,81nm,0.9s						
PKI	**Pulchoki**	**8.46**	**154**	*e*Pn	**Pn**	**01 41 31.0**	**-0.2**
PKI				*e*Sn	**Sn**	**01 43 08.6**	**+3.2**
	comp=Z,108nm,0.9s						
KHET	**Khetri**	**8.52**	**214**	*ex*	**Pn**	**01 41 28.4**	**-3.8**
KHET				AMb	AMB	01 41 34.9	
	comp=Z,27nm,0.7s						
JIRN	**Jiri**	**8.68**	**149**	*e*Pn	**Pn**	**01 41 35.0**	**+0.7**
TKM2	**Tokmak 2**	**8.81**	**332**	*e*P	**Pn**	**01 41 37.2**	**+1.2**
TKM2				pmax	pmax		
	comp=Z,60nm,1.1s						
TKM2	**Tokmak 2**	**8.81**	**332**	*e*Pn	**Pn**	**01 41 37.2**	**+1.2**
	comp=Z,60nm,1.1s						
AAK	**Ala-Archa**	**9.04**	**327**	Pn	**Pn**	**01 41 41.3**	**+2.2**
	comp=Z,0.6nm,0.3s,baz=238,slow=8.6,SNR=8.5						
AAK				Pg	Pn	01 42 13.3	+34
	comp=Z,2.6nm,0.3s,baz=149,slow=15,SNR=5.8						
AAK				Lg		01 44 16.1	
	comp=Z,1.2nm,0.3s,baz=355,slow=19,SNR=4.0						
AAK				LR	LR	01 45 22.4	
	comp=Z,974nm,20.1s,baz=306,slow=39						
FRU	**Bishkek**	**9.14**	**328**	*e*P	**Pn**	**01 41 43.0**	**+2.4**
FRU				pmax	pmax		
	comp=Z,50nm,1.8s						
EKS2	**Erkin-Say**	**9.39**	**324**	*e*Pn	**Pn**	**01 41 46.0**	**+2.0**
	comp=Z,37nm,0.9s						
RAMN	**Ramite**	**9.47**	**149**	*e*Pn	**Pn**	**01 41 43.4**	**-1.8**
TAPN	**Taplejung**	**9.64**	**143**	*e*Pn	**Pn**	**01 41 46.4**	**-1.0**
TAPN				*e*Sn	**Sn**	**01 43 33.4**	**-1.0**
	comp=Z,108nm,1.1s						
ODAN	**Odare**	**9.90**	**146**	*e*Pn	**Pn**	**01 41 49.0**	**-2.0**
WMQ	**Urumqi**	**9.90**	**28**	P	**Pn**	**01 41 45.0**	**-6.0**
WMQ				pP		01 41 48.2	
WMQ				sP		01 41 51.0	
WMQ				PP		01 41 53.3	
WMQ				S	**Sn**	**01 43 39.0**	**-1.7**
WMQ				sS		01 43 43.3	
WMQ				SS		01 43 51.4	
WMQ				PcP	PcP	01 47 55.2	-6.3
WMQ				pmax	pmax		
	comp=Z,59nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,160nm,3.6s						
WMQ				LR	LR		
	comp=N,1μm,11.2s						
WMQ				LR	LR		
	comp=E,1μm,10.5s						
WMQ				LR	LR		
	comp=Z,990nm,7.9s						
KBL	**Kabul**	**10.03**	**269**	*e*P	**Pn**	**01 41 50.7**	**-2.1**
LSA	**Lhasa**	**10.05**	**121**	P	**Pn**	**01 41 56.5**	**+3.5**
AJM	**Ajmer**	**10.41**	**215**	*e*PKP	**Pn**	**01 41 56.0**	**-2.1**
AJM				*i* x	x	01 43 51.0	
KK31	**Karatay Array**	**11.41**	**317**	*i* P	**Pn**	**01 42 11.9**	**+0.2**
KK31				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MK31	**Makanchi Array**	**11.55**	**4**	*i* P	**Pn**	**01 42 12.3**	**-1.2**
MK31				pmax	pmax		
	comp=Z,54nm,1.3s						
MK31	**Makanchi Array**	**11.55**	**4**	*e*Pn	**Pn**	**01 42 12.9**	**-0.7**
MKAR	**Makanchi Array**	**11.55**	**4**	Pn	**Pn**	**01 42 12.9**	**-0.6**
	comp=Z,1.2nm,0.3s,baz=190,slow=14,SNR=78						
MKAR				LR	LR	01 47 39.3	
	comp=Z,447nm,19.2s,baz=184,slow=42						
BOK	**Bokaro**	**12.12**	**159**	*e*PKP	**Pn**	**01 42 18.3**	**-3.2**
BOK				AMb	AMB	01 42 27.1	
	comp=Z,24nm,1.4s						
JASL	**Jaisalmer**	**12.13**	**230**	*ex*	**Pn**	**01 42 17.5**	**-4.0**
BHPL	**Bhopal**	**12.42**	**196**	*e*PKP	**Pn**	**01 42 22.0**	**-3.6**
GTA	**Gaotai**	**15.35**	**69**	*e*P	**Pn**	**01 43 06.0**	**+0.9**
GTA				pP	pP	01 43 09.3	-10
GTA				sP	sP	01 43 12.0	-12
GTA				S	**S**	**01 45 57.2**	**-12**
GTA				sS	sS	01 46 01.7	-22
GTA				SS		01 46 16.0	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,120nm,5.9s						
GTA				LR	LR		
	comp=N,1μm,13.7s						
GTA				LR	LR		
	comp=E,990nm,9.8s						
GTA				LR	LR		
	comp=Z,1μm,11.3s						
KURK	**Kurchatov**	**15.56**	**354**	Pn	**Pn**	**01 43 04.5**	**-3.3**
	comp=Z,0.0nm,0.3s,baz=176,slow=12,SNR=86						
KURK				LR	LR	01 49 42.6	
	comp=Z,584nm,19.4s,baz=185,slow=40						
KURK	**Kurchatov**	**15.56**	**354**	*d* *i* P	**Pn**	**01 43 05.0**	**-2.8**
KURK				pmax	pmax		
	comp=Z,40nm,1.2s						
KURK	**Kurchatov**	**15.56**	**354**	*e*Pn	**Pn**	**01 43 05.2**	**-2.6**
	comp=Z,64nm,1.4s						
VIS	**Vishakhapatnam**	**17.57**	**173**	*e*PKP	**Pn**	**01 43 33.4**	**+0.1**
POO	**Poona**	**17.90**	**203**	*e*PKP	**Pn**	**01 43 36.2**	**-1.2**
POO				AMb	AMB	01 43 42.1	
	comp=Z,46nm,0.7s						
HYB	**Hyderabad**	**17.93**	**188**	*e*P	**Pn**	**01 43 40.0**	**+2.3**
HYB	**Hyderabad**	**17.93**	**188**	*i* P	**Pn**	**01 43 40.0**	**+2.3**
LZH	**Lanzhou**	**18.39**	**81**	*e*P	**Pn**	**01 43 43.0**	**-0.3**
LZH				pP	pP	01 43 48.3	-4.2
LZH				sP	sP	01 43 50.1	-7.2
LZH				pmax	pmax		
	comp=Z,22nm,1.3s						
LZH				pmax	pmax		
	comp=Z,86nm,4.5s						
ZAA0	**Zalesovo Array**	**18.86**	**7**	*e*P	**Pn**	**01 43 46.9**	**-1.9**
ZALV	**Zalesovo Beam**	**18.86**	**7**	P	**Pn**	**01 43 46.8**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=195,slow=11,SNR=44						
ZALV				LR	LR	01 52 06.4	
	comp=Z,162nm,19.6s,baz=187,slow=40						
VOSK	**Vostochnaya**	**18.92**	**341**	P	**Pn**	**01 43 48.8**	**-0.7**
VOSK				pmax	pmax		
	comp=Z,15nm,0.9s						
KAD	**Karad**	**18.95**	**201**	*ex*	**Pn**	**01 43 45.4**	**-4.7**
KZLR	**Kyzyl**	**18.99**	**26**	⇓*i* P	**Pn**	**01 43 50.4**	**+0.1**
BVAR	**Borovoye Array**	**19.35**	**340**	P	**Pn**	**01 43 54.0**	**-0.7**
	comp=Z,1.5nm,0.3s,baz=153,slow=11,SNR=61						
CD2	**Chengdu**	**19.36**	**97**	P	**Pn**	**01 43 51.2**	**-3.8**
CD2				pP	pP	01 43 58.3	-4.9
CD2				sP	sP	01 44 00.7	-7.3
CD2				PP		01 44 12.1	
CD2				S	**S**	**01 47 26.8**	**-4.0**
CD2				sS	sS	01 47 32.1	-14
CD2				SS		01 47 52.6	
CD2				pmax	pmax		
	comp=Z,60nm,1.9s						
CD2				pmax	pmax		
	comp=Z,710nm,3.6s						
CD2				LR	LR		
	comp=N,1μm,13.1s						
CD2				LR	LR		
	comp=Z,1μm,8.3s						
BRVK	**Borovoye**	**19.41**	**340**	*d* *i* P	**

SONM LR LR 01 53 53.8
comp=Z,360nm,19.1s,MS3.8,baz=239,slow=38
AKTK Aktyubinsk 22.66 319 P **P** **01 44 28.6 -0.4**
AKTK LR LR 01 53 59.8
AKTO Aktyubinsk 22.66 319 P **P** **01 44 28.6 -0.4**
comp=Z,9.3nm,1.0s,mb4.2,baz=106,slow=10,SNR=7.2
AKTO LR LR 01 53 59.8
comp=Z,430nm,18.1s,MS3.9,baz=131,slow=38
CHTO Chiang Mai 22.69 132 *e*P **P** **01 44 28.3 -1.3**
CHTO pmax pmax
comp=Z,15nm,1.1s,mb4.3
CHTO Chiang Mai 22.69 132 *e*P **P** **01 44 28.3 -1.3**
comp=Z,16nm,1.1s,mb4.3
ULN Ulaanbaatar 22.95 49 *e*P **P** **01 44 33.8 +1.7**
ULN pmax pmax
comp=Z,17nm,1.1s,mb4.4
ULN Ulaanbaatar 22.95 49 *e*P **P** **01 44 33.8 +1.8**
comp=Z,17nm,1.1s,mb4.4
CMAR Chiang Mai Arr 22.96 132 P **P** **01 44 31.0 -1.4**
comp=Z,12nm,1.0s,mb4.3,baz=313,slow=10,SNR=12
TLY Talaya 22.97 37 *e*P **P** **01 44 31.0 -1.3**
TLY *e*S **S** **01 48 38.7 -1.1**
TLY pmax pmax
comp=Z,5.0nm,0.9s,mb3.9
TLY MLR MLR
comp=Z,267nm,15.0s,MS3.8
TLY Talaya 22.97 37 *e*P **P** **01 44 31.1 -1.2**
comp=Z,13nm,1.4s,mb4.2
BTO Baotou 23.28 68 *e*P **P** **01 44 39.5 +3.9**
GYA Guiyang 23.48 105 P **P** **01 44 37.6 -0.2**
GYA PP 01 45 09.4
GYA PcP PcP 01 48 25.3 +2.6
GYA S **S** **01 48 47.6 -1.1**
GYA SS 01 49 34.5
GYA ScP ScP 01 52 02.9 +5.0
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.3
GYA pmax pmax
comp=Z,80nm,4.8s
GYA LR LR
comp=N,660nm,14.8s,MS4.3
GYA LR LR
comp=E,590nm,15.2s,MS4.3
GYA LR LR
comp=Z,690nm,14.6s,MS4.2
IRK Irkutsk 23.62 37 *e*P **P** **01 44 41.4 +2.7**
IRK pmax pmax
comp=Z,22nm,1.6s,mb4.3
HHC Hu-ho-hao-te 24.46 68 *e*P **P** **01 44 45.3 -1.3**
HHC PP 01 45 21.2
HHC PcP PcP 01 48 25.5 +0.9
HHC S **S** **01 49 02.3 -1.9**
HHC SS 01 49 55.5
HHC ScP ScP 01 52 02.7 +2.4
HHC PcS PcS 01 52 03.7 -0.7
HHC pmax pmax
comp=Z,10.0nm,0.5s,mb4.5
HHC pmax pmax
comp=Z,130nm,4.7s
HHC LR LR
comp=N,320nm,10.6s,MS4.3
HHC LR LR
comp=E,410nm,10.1s,MS4.3
HHC LR LR
comp=Z,530nm,10.3s,MS4.3
SVE Sverdlovsk 25.68 334⇓ *e*P **P** **01 44 59.2 +1.7**
SVE *e*S **S** **01 49 16.2 -7.1**
SVE pmax pmax
comp=Z,50nm,1.4s,mb4.8
SVE MLR MLR
comp=Z,740nm,13.0s,MS4.4
ARU Arti 26.18 331 *d i*P **P** **01 45 02.7 +0.7**
ARU *e* 01 45 40.0
ARU S **S** **01 49 30.7 -0.6**
ARU pmax pmax
comp=Z,17nm,1.0s,mb4.5
ARU Arti 26.18 331 *e*P **P** **01 45 02.8 +0.7**
comp=Z,15nm,1.0s,mb4.5
MAK Makhachkala 27.14 297 *e*P **P** **01 45 14.3 +3.5**
MAK *e* 01 48 37.5
MAK S **S** **01 49 46.0 -0.6**
MAK *e*SSS 01 51 06.5
MAK pmax pmax
comp=Z,122nm,1.3s,mb5.3
MAK MLR MLR
comp=Z,434nm,18.0s,MS4.1
BJI Beijing 27.97 70 P **P** **01 45 15.8 -2.4**
BJI pmax pmax
comp=Z,4.0nm,0.6s,mb4.2
BJI pmax pmax
comp=Z,100nm,3.8s
BJI LR LR
comp=N,450nm,13.0s,MS4.3
BJI LR LR
comp=E,100nm,11.8s,MS4.3
BJI LR LR
comp=Z,290nm,23.9s
WHN Wuhan 28.13 90 P **P** **01 45 16.4 -3.4**
WHN LR LR
comp=N,610nm,9.3s
WHN LR LR
comp=E,670nm,15.7s
WHN LR LR
comp=Z,810nm,13.0s,MS4.5
SOKR Solikamsk 29.08 334 *c i*P **P** **01 45 29.8 +1.9**
SOKR pmax pmax
comp=Z,20nm,1.1s,mb4.8
SOKR MLR MLR
comp=Z,320nm,12.0s,MS4.2
GNI Garni 29.14 291 *de*P **P** **01 45 30.5 +1.8**
GNI pmax pmax
comp=Z,4.0nm,0.8s
GNI Garni 29.14 291 *e*P **P** **01 45 29.9 +1.2**
comp=Z,6.9nm,0.9s,mb4.4
QIZ Qiongzhong 30.02 115 P **P** **01 45 36.8 +0.2**
QIZ S **S** **01 50 35.1 +2.8**
QIZ sS sS 01 50 40.6 -9.1
QIZ LR LR
comp=N,180nm,22.9s
QIZ LR LR
comp=Z,220nm,10.9s
KIV Kislovodsk 30.71 298 *e*P **P** **01 45 45.0 +2.5**
KIV pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
KIV MLR MLR
comp=Z,100nm,12.0s,MS3.7
NJ2 Nanjing 31.36 85 *e*P **P** **01 45 51.1 +2.7**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.9
KULM Kulim 34.80 145 *e*P **P** **01 46 17.8 -0.7**
comp=Z,15nm,1.1s,mb4.8
CN2 Changchun 34.81 62 *e*P **P** **01 46 20.2 +1.8**
CN2 *es*P sP 01 46 27.2 -6.2
CN2 *e*S **S** **01 51 49.5 +3.0**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,400nm,17.0s,MS4.4
CN2 LR LR
comp=E,400nm,17.0s,MS4.4
CN2 LR LR
comp=Z,500nm,16.0s,MS4.3
PSI Prapat 36.23 149 LR LR 02 03 34.8
comp=Z,215nm,18.6s,MS4.0,baz=125,slow=40
OBN Obninsk 36.41 317⇑ *e*P **P** **01 46 32.2 +0.3**
OBN pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
OBN MLR MLR
comp=Z,200nm,13.0s,MS4.1
ASF Jabal al Asfar 36.77 278 P **P** **01 46 34.3 -1.0**
comp=Z,1.1nm,0.5s,mb4.0,baz=267,slow=4.2,SNR=3.5
KSRS Korea Array 37.38 73 LR LR 02 02 58.5
comp=Z,137nm,19.1s,MS3.8,baz=102,slow=38
BR131 Keskin Array S 37.67 291 *e*P **P** **01 46 43.3 +0.4**
comp=Z,3.4nm,0.9s,mb4.1
BRTR Keskin Array B 37.67 291 P **P** **01 46 43.5 +0.7**
comp=Z,2.0nm,0.9s,mb3.9,baz=96,slow=8.0,SNR=12
MMAI Mount Meron Ar 37.74 280 P **P** **01 46 48.4 +4.9**
comp=Z,0.4nm,0.4s,mb3.5,baz=89,slow=11,SNR=5.0
MDJ Mudanjiang 37.76 61 P **P** **01 46 43.3 -0.3**
MDJ pP pP 01 46 46.3 -7.9
MDJ PP PP 01 48 09.3 -0.8
MDJ S **S** **01 52 34.0 +2.4**
MDJ ScP ScP 01 52 47.7 +3.4
MDJ PcS PcS 01 52 49.1 +0.7
MDJ pmax pmax
comp=Z,5.0nm,1.2s,mb4.1
MDJ pmax pmax
comp=Z,52nm,3.7s
MDJ LR LR
comp=N,140nm,21.9s
MDJ LR LR
comp=E,250nm,15.1s
MDJ LR LR
comp=Z,250nm,14.7s
AKASG Malin Array Be 40.19 309 P **P** **01 47 03.0 -0.8**
comp=Z,1.4nm,0.5s,mb3.9,baz=86,slow=6.6,SNR=5.8
JOF Joensuu 41.22 328 *e*P **P** **01 47 12.6 +0.5**
JOF pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
JOF Joensuu 41.22 328 *ep* **P** **01 47 12.6 +0.5**
comp=Z,4.5nm,0.7s,mb4.2
LVZ Lovozero 41.85 336⇑ *e*P **P** **01 47 18.5 +1.3**
LVZ pmax pmax
comp=Z,20nm,1.7s,mb4.5
BUR08 Bucovina Ar. S 42.89 305 *e*P **P** **01 47 26.2 +0.2**
FINES FINESS Array B 43.22 325 P **P** **01 47 29.6 +1.1**
comp=Z,3.4nm,0.5s,mb4.3,baz=108,slow=6.2,SNR=16
FINES LR LR 02 06 20.6
comp=Z,369nm,19.8s,MS4.3,baz=104,slow=37
CRVS Cervenica-Dubn 45.27 307 *e*P **P** **01 47 44.0 -1.0**
CRVS Cervenica-Dubn 45.27 307 *e*P **P** **01 47 44.0 -1.0**
STHS Stebnicka Huta 45.37 307 *e*P **P** **01 47 46.2 +0.5**
STHS Stebnicka Huta 45.37 307 *e*P **P** **01 47 46.2 +0.5**
ARCES ARCESS Array B 45.57 336 P **P** **01 47 48.6 +1.5**
comp=Z,8.8nm,0.8s,mb4.8,baz=81,slow=7.5,SNR=14
NIE Niedzica 45.97 307 *e*P **P** **01 47 51.9 +1.4**
VYHS Vyhne 47.05 306 *e*P **P** **01 47 58.7 -0.3**
VYHS pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
VYHS Vyhne 47.05 306 *e*P **P** **01 47 58.7 -0.3**
comp=Z,2.9nm,1.2s,mb4.1
VYHS Vyhne 47.05 306 *e*P **P** **01 47 58.7 -0.3**
OKC Ostrava-Krasne 47.32 308 *e*P **P** **01 48 02.1 +1.0**
OKC MLR MLR
comp=Z,200nm,14.5s,MS4.2
OKC Ostrava-Krasne 47.32 308 *e*P **P** **01 48 02.1 +1.0**
OKC AMS AMS 02 09 50.0
comp=Z,200nm,14.5s
MORC Moravsky Berou 47.72 308 *e*P **P** **01 48 04.9 +0.7**
MORC pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
MORC Moravsky Berou 47.72 308 *e*P **P** **01 48 04.9 +0.7**
comp=Z,6.0nm,1.1s,mb4.5
DPC Dobruska-Polom 48.42 309 *e*P **P** **01 48 10.2 +0.6**
DPC MLR MLR
comp=Z,200nm,13.2s,MS4.3
DPC Dobruska-Polom 48.42 309 *e*P **P** **01 48 10.2 +0.6**
DPC Dobruska-Polom 48.42 309 *e*P **P** **01 48 10.2 +0.6**
DPC AMS AMS 02 11 00.0
comp=Z,200nm,13.2s
UPC Upice 48.60 309 *e*P **P** **01 48 11.7 +0.8**
PVCC Panska Ves 49.51 310 AMS AMS 02 11 00.0
comp=Z,200nm,12.6s
PRU Pruhonice 49.61 309 *e*P **P** **01 48 19.6 +0.9**
PRU MLR MLR
comp=Z,200nm,14.3s,MS4.3
PRU Pruhonice 49.61 309 *e*P **P** **01 48 19.6 +0.9**
PRU AMS AMS 02 11 30.0
comp=Z,200nm,14.3s
BRG Berggiesshubel 49.84 310 *e*P **P** **01 48 21.3 +0.8**
comp=Z,6.0nm,1.0s,mb4.6
BRG Berggiesshubel 49.84 310 *i* P **P** **01 48 21.2 +0.7**
comp=Z,5.8nm,1.0s,mb4.6
BRG Berggiesshubel 49.84 310 *i* P **P** **01 48 21.2 +0.7**
comp=Z,5.8nm,1.0s,mb4.6
BRG Berggiesshubel 49.84 310 *i* P **P** **01 48 21.2 +0.7**
BRG pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
NB2 NORSAR Subarra 50.34 324 P **P** **01 48 23.8 -0.3**
comp=Z,0.3nm,0.7s,mb3.4,baz=89,slow=7.9
NOA NORSAR Array B 50.34 324 P **P** **01 48 24.5 +0.4**
comp=Z,2.5nm,0.7s,mb4.3,baz=88,slow=7.5,SNR=12
CLL Collm 50.36 311 *e*P **P** **01 48 24.6 +0.2**
comp=Z,5.0nm,1.0s,mb4.5
CLL Collm 50.36 311⇑ *i*P **P** **01 48 24.7 +0.3**
CLL pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
CLL Collm 50.36 311⇑ *i*P **P** **01 48 24.7 +0.3**
comp=Z,5.0nm,1.0s,mb4.5
CLL *e* pP 01 48 34.0 -1.3
CLL *e*(SS) 01 59 36.0
KHC Kasperske Hory 50.38 308 *e*P **P** **01 48 24.4 -0.1**
KHC MLR MLR
comp=Z,200nm,10.8s,MS4.4
KHC Kasperske Hory 50.38 308 *e*P **P** **01 48 24.8 +0.3**
comp=Z,3.8nm,0.8s,mb4.5
KHC Kasperske Hory 50.38 308 *e*P **P** **01 48 24.4 -0.1**
KHC AMS AMS 02 12 00.0
comp=Z,200nm,10.8s
SEY Seymchan 50.81 34 *de*P **P** **01 48 29.8 +2.2**
WET Wettzell 50.82 308 *e*P **P** **01 48 28.5 +0.6**
comp=Z,4.0nm,0.9s,mb4.3
TANN Tannenbergstha 50.85 310 *e*P **P** **01 48 28.8 +0.7**
comp=Z,12nm,1.5s,mb4.6
NKC Novy Kostel 50.89 310 AMS AMS 02 12 00.0
comp=Z,400nm,13.9s
RJOB Jochberg 51.16 306 *e*P **P** **01 48 30.8 +0.3**
comp=Z,12nm,1.5s,mb4.6
MOX Moxa 51.34 310 *e*P **P** **01 48 32.4 +0.6**
comp=Z,10.0nm,1.4s,mb4.5
BSEG Bad Segeberg 51.56 314 *e*P **P** **01 48 34.4 +1.1**
comp=Z,8.0nm,0.9s,mb4.7
KBS Kingsbay 51.70 347 *ce*P **P** **01 48 34.3 +0.2**
KBS pmax pmax
comp=Z,20nm,2.5s,mb4.6
GRF Grafenberg Arr 51.78 309 *e*P **P** **01 48 35.9 +0.9**
comp=Z,16nm,1.4s,mb4.8
GRF Grafenberg Arr 51.78 309 *e*P **P** **01 48 35.9 +0.9**
GRF pmax pmax
comp=Z,16nm,1.4s,mb4.8
FUR Furstenfeldbru 52.07 307 *e*P **P** **01 48 38.3 +1.1**
comp=Z,24nm,1.2s,mb5.0
UBBA Unterbreizbach 52.31 311 *e*P **P** **01 48 39.2 +0.2**
comp=Z,5.0nm,1.2s,mb4.3
BFO Black Forest 53.94 308 *e*P **P** **01 48 51.0 0.0**
comp=Z,34nm,2.0s,mb4.9
CDF Camp du Feu 54.60 308 *e*P **P** **01 48 55.2 -0.6**
HINF Hinteralfeld 55.03 308 *e*P **P** **01 48 58.1 -0.8**
comp=Z,10nm,0.7s,mb4.7
HINF Hinteralfeld 55.03 308 *e*P **P** **01 48 58.1 -0.8**
HINF pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
HINF Hinteralfeld 55.03 308 *e*P **P** **01 48 58.1 -0.8**
comp=Z,5.2nm,0.7s,mb4.7
HAU Haudompre 55.31 308 *e*P **P** **01 49 00.2 -0.7**
HAU *e*MLR MLR
comp=Z,171nm,21.0s,MS3.8
HAU Haudompre 55.31 308 *e*P **P** **01 49 00.2 -0.7**
HAU LR LR
comp=Z,170nm,21.0s,MS4.1
GIVF Givet 55.70 311 *e*P **P** **01 49 03.5 -0.2**
LPG La Plagne 55.77 305 *e*P **P** **01 49 04.2 -0.1**
comp=Z,32nm,0.9s,mb5.0
LPG La Plagne 55.77 305 *e*P **P** **01 49 04.2 -0.1**
LPG pmax pmax
comp=Z,16nm,0.9s,mb5.0
LPG La Plagne 55.77 305 *e*P **P** **01 49 04.2 -0.1**
comp=Z,16nm,0.9s,mb5.0
LPL La Plagne 55.77 305 *e*P **P** **01 49 04.1 -0.2**
comp=Z,24nm,0.8s,mb5.0
LPL La Plagne 55.77 305 *e*P **P** **01 49 04.1 -0.2**
LPL pmax pmax
comp=Z,12nm,0.8s,mb5.0
LPL La Plagne 55.77 305 *e*P **P** **01 49 04.1 -0.2**
comp=Z,12nm,0.8s,mb5.0
SBF Sospel 55.80 303 *e*P **P** **01 49 03.9 -0.7**
comp=Z,61nm,1.0s,mb5.3
SBF Sospel 55.80 303 *e*P **P** **01 49 03.9 -0.7**
SBF pmax pmax
comp=Z,30nm,1.0s,mb5.3
SBF Sospel 55.80 303 *e*P **P** **01 49 03.9 -0.7**
comp=Z,30nm,1.0s,mb5.3
MBDF Montbardon 55.99 304 *e*P **P** **01 49 04.7 -1.2**
comp=Z,29nm,1.2s,mb4.9
MBDF Montbardon 55.99 304 *e*P **P** **01 49 04.7 -1.2**
MBDF pmax pmax
comp=Z,15nm,1.2s,mb4.9
MBDF Montbardon 55.99 304 *e*P **P** **01 49 04.7 -1.2**
comp=Z,15nm,1.2s,mb4.9
MEZF Maizieres J'vi 56.00 309 *e*P **P** **01 49 05.4 -0.5**
comp=Z,21nm,1.0s,mb4.8
MEZF Maizieres J'vi 56.00 309 *e*P **P** **01 49 05.4 -0.5**
comp=Z,21nm,1.0s,mb5.1
BILL Bilibino 56.01 27⇑ *i*P **P** **01 49 07.8 +2.1**
BILL pmax pmax
comp=Z,8.0nm,2.5s,mb4.3
BAIF Baives 56.09 311 *e*P **P** **01 49 06.0 -0.5**
LOR Lormes 57.13 308 *e*P **P** **01 49 12.6 -1.4**
comp=Z,12nm,0.9s,mb4.6
LOR *e*MLR MLR
comp=Z,311nm,22.8s,MS4.0
LOR Lormes 57.13 308 *e*P **P** **01 49 12.6 -1.4**
LOR pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
LOR MLR MLR
comp=Z,310nm,22.8s,MS4.3
LOR Lormes 57.13 308 *e*P **P** **01 49 12.6 -1.4**
comp=Z,5.8nm,0.9s,mb4.6
LOR LR LR
comp=Z,310nm,22.8s,MS4.3
KEST Kesra 57.23 293 P **P** **01 49 15.9 +1.0**
comp=Z,2.4nm,1.1s,mb4.1,baz=43,slow=14,SNR=3.8
SMF Signal de Mont 57.34 307 *e*P **P** **01 49 14.3 -1.1**
comp=Z,10nm,0.8s,mb4.6
SMF Signal de Mont 57.34 307 *e*P **P** **01 49 14.3 -1.1**
SMF pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
SMF Signal de Mont 57.34 307 *e*P **P** **01 49 14.3 -1.1**
comp=Z,5.3nm,0.8s,mb4.6
VIVF Saint-Julien-l 57.36 305 *e*P **P** **01 49 14.9 -0.7**
SSF Saint Saulge 57.42 308 *e*P **P** **01 49 14.9 -1.1**
comp=Z,13nm,0.8s,mb4.7
SSF Saint Saulge 57.42 308 *e*P **P** **01 49 14.9 -1.1**
SSF pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
SSF Saint Saulge 57.42 308 *e*P **P** **01 49 14.9 -1.1**
comp=Z,6.6nm,0.8s,mb4.7
AVF Avril sur Loir 57.61 307 *e*P **P** **01 49 16.3 -1.1**
comp=Z,6.8nm,0.8s,mb4.4
AVF Avril sur Loir 57.61 307 *e*P **P** **01 49 16.3 -1.1**
AVF pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
AVF Avril sur Loir 57.61 307 *e*P **P** **01 49 16.3 -1.1**
comp=Z,3.4nm,0.8s,mb4.4
BGF Bois d'Agland 58.02 307 *e*P **P** **01 49 19.0 -1.2**
LASF Ste Croix 58.17 304 *e*P **P** **01 49 20.8 -0.5**
comp=Z,17nm,1.0s,mb4.7
TCF Toulx Ste Croi 58.52 307 *e*P **P** **01 49 23.1 -0.6**
comp=Z,43nm,1.4s,mb5.0
TCF Toulx Ste Croi 58.52 307 *e*P **P** **01 49 23.1 -0.6**
TCF pmax pmax
comp=Z,22nm,1.4s,mb5.0
TCF Toulx Ste Croi 58.52 307 *e*P **P** **01 49 23.1 -0.6**
comp=Z,22nm,1.4s,mb5.0
ESK Eskdalemuir 58.87 318 *e*P **P** **01 49 26.5 +0.5**
ESK pmax pmax
comp=Z,293nm,2.5s
ESK Eskdalemuir 58.87 318 *e*P **P** **01 49 26.5 +0.4**
comp=Z,293nm,2.5s
CAF Calviac 59.08 306 *e*P **P** **01 49 27.1 -0.6**
comp=Z,16nm,0.9s,mb4.8
CAF Calviac 59.08 306 *e*P **P** **01 49 27.1 -0.6**
CAF pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
CAF Calviac 59.08 306 *e*P **P** **01 49 27.1 -0.6**
comp=Z,8.3nm,0.9s,mb4.8
LDF La Druitiere 59.24 310 *e*P **P** **01 49 27.6 -1.1**
comp=Z,7.4nm,0.5s,mb4.6
LDF La Druitiere 59.24 310 *e*P **P** **01 49 27.6 -1.1**
LDF pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
LDF La Druitiere 59.24 310 *e*P **P** **01 49 27.6 -1.1**
comp=Z,3.7nm,0.5s,mb4.7
RJF Les Rejaudoux 59.31 306 *e*P **P** **01 49 28.7 -0.6**
RJF *e*MLR MLR
comp=Z,141nm,20.2s,MS3.8
RJF Les Rejaudoux 59.31 306 *e*P **P** **01 49 28.7 -0.6**
RJF LR LR
comp=Z,140nm,20.3s,MS4.1
MTLF Montolieu 59.55 304 *e*P **P** **01 49 29.4 -1.5**
GRR Gorron 59.77 310 *e*P **P** **01 49 31.1 -1.2**
MFF Saint Martin d 59.94 308 *e*P **P** **01 49 32.2 -1.3**
LFF La Frestale 59.96 306 *e*P **P** **01 49 32.2 -1.5**
SGMF Saint Gilles 60.88 310 *e*P **P** **01 49 39.0 -0.9**
comp=Z,89nm,1.2s,mb5.5
SGMF Saint Gilles 60.88 310 *e*P **P** **01 49 39.0 -0.9**
SGMF pmax pmax
comp=Z,45nm,1.2s,mb5.5
SGMF Saint Gilles 60.88 310 *e*P **P** **01 49 39.0 -0.9**
comp=Z,45nm,1.2s,mb5.5
EPF Esparros 60.94 304 *e*P **P** **01 49 40.1 -0.3**
ROSF Rostrenen 61.29 311 *e*P **P** **01 49 41.6 -1.1**
comp=Z,48nm,1.0s,mb5.3
ROSF Rostrenen 61.29 311 *e*P **P** **01 49 41.6 -1.1**
ROSF pmax pmax
comp=Z,24nm,1.0s,mb5.3
ROSF Rostrenen 61.29 311 *e*P **P** **01 49 41.6 -1.1**
comp=Z,24nm,1.0s,mb5.3
ETSF Etsaut 61.59 304 *e*P **P** **01 49 44.3 -0.6**
comp=Z,7.1nm,0.7s,mb4.6
ETSF Etsaut 61.59 304 *e*P **P** **01 49 44.3 -0.6**
ETSF pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
ETSF Etsaut 61.59 304 *e*P **P** **01 49 44.3 -0.6**
comp=Z,3.5nm,0.7s,mb4.6
ESDC Sonseca Array 65.27 302 P **P** **01 50 09.3 +0.1**
comp=Z,1.2nm,0.8s,mb4.0,baz=54,slow=7.5,SNR=3.8
COLA College 73.10 20 *e*P **P** **01 50 57.6 +0.4**
COLA pmax pmax
comp=Z,30nm,1.7s,mb5.0
COLA College 73.10 20 *e*P **P** **01 50 57.6 +0.3**
comp=Z,30nm,1.7s,mb5.0
INK Inuvik 73.53 13 *e*P **P** **01 51 00.5 +0.7**
INK pmax pmax
comp=Z,8.0nm,1.1s
INK Inuvik 73.53 13 *e*P **P** **01 51 00.5 +0.7**
comp=Z,8.2nm,1.1s,mb4.6
WRA Warramunga Arr 74.50 129 P **P** **01 51 05.6 -0.4**
comp=Z,1.7nm,0.8s,mb4.0,baz=323,slow=6.2,SNR=7.5
ASAR Alice Springs 76.96 132 P **P** **01 51 19.6 -0.5**
comp=Z,1.7nm,0.8s,mb4.1,baz=320,slow=5.6,SNR=10
YKA Yellowknife Ar 81.75 7 P **P** **01 51 45.9 +0.3**
comp=Z,4.6nm,0.8s,mb4.5,baz=342,slow=4.9,SNR=22
YKA Yellowknife Ar 81.75 7 P **P** **01 51 45.9 +0.3**
BOSA Boshof 82.59 227 P **P** **01 51 52.7 +2.2**
comp=Z,10.0nm,0.6s,mb5.0,baz=3.4,slow=1.3,SNR=19
BOSA Boshof 82.59 227 P **P** **01 51 52.7 +2.2**
DBIC Dimbokro 83.00 273 P **P** **01 51 52.7 -0.3**
comp=Z,6.8nm,0.9s,mb4.7,baz=251,slow=14,SNR=4.6
DBIC Dimbokro 83.00 273 P **P** **01 51 52.7 -0.3**
FFC Flin Flon 90.34 2 *i* P **P** **01 52 29.6 +1.4**
LPAZ La Paz 146.76 297 PKP PKPdf 01 59 08.8 +0.8
comp=Z,2.0nm,0.8s,baz=170,slow=2.0,SNR=10
LPAZ La Paz 146.76 297 *e*PKPbc PKPbc 01 59 08.7 -1.0

FUNV 05 01:55:38.3, 8°.52N×71°.36W, h1km, MW3.5,4C-2D, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VIGV	**El Vigia**	**0.32**	**359**⇑	*i*P	Pg	01 55 43.8	-0.7
VIGV				*e*S	Sg	01 55 48.9	+0.2
CAPV	**Capacho**	**1.15**	**236**⇓	*e*P	Pg	01 55 59.8	-0.5
CAPV				*e*S	Sg	01 56 15.9	+0.7
QARV	**Quebrada Arrib**	**1.87**	**26**⇑	*i*P	Pn	01 56 11.3	-0.1
QARV				*e*S	Sn	01 56 35.4	-0.3
CURV	**Curarigua**	**2.03**	**43**	*e*P	Pn	01 56 13.9	+0.3
CURV				*e*S	Sn	01 56 38.0	-1.6
SANV	**Sanarito**	**2.05**	**61**	*e*P	Pn	01 56 13.8	-0.1
SANV				*e*S	Sn	01 56 39.2	-0.9
VIRV	**Villa del Rosa**	**2.23**	**332**	*e*P	Pn	01 56 15.4	-0.9
VIRV				*e*S	Sn	01 56 43.2	-1.3
ELOV	**Elorza**	**2.39**	**129**⇑	*e*P	Pn	01 56 17.4	-1.2
ELOV				*e*S	Sn	01 56 47.2	-1.3
DABV	**Dabajuro**	**2.49**	**17**⇓	*e*P	Pn	01 56 19.9	-0.2
DABV				*e*S	Sn	01 56 49.9	-1.2
TEPV	**Terepaima**	**2.58**	**56**	*e*P	Pn	01 56 20.7	-0.4
TEPV				*e*S	Sn	01 56 51.7	-1.4
SIQV	**Siquisique**	**2.61**	**36**	*e*P	Pn	01 56 21.6	0.0
SIQV				*e*S	Sn	01 56 52.5	-1.5
MAPV	**Macapo**	**3.15**	**65**	*e*P	Pn	01 56 28.6	-0.4
MAPV				*e*S	Sn	01 57 04.6	-2.6
BAUV	**El Baul**	**3.31**	**82**	*e*P	Pn	01 56 29.8	-1.4
BAUV				*e*S	Sn	01 57 07.7	-3.5

MONV	**Montecano**	**3.68**	**22**⇑	*i*P	Pn	01 56 35.2	-1.1
TURV	**Turiamo**	**3.97**	**61**	*e*P	Pn	01 56 39.5	-0.8
MERV	**Las Mercedes**	**5.05**	**81**	*e*P	Pn	01 56 54.0	-1.3
CAOV	**Caicara del Or**	**5.13**	**103**	*e*P	Pn	01 56 54.5	-1.7
BIRV	**Birongo**	**5.38**	**68**	*e*P	Pn	01 56 58.3	-1.5
CUPV	**Cœpira**	**5.71**	**74**	*e*P	Pn	01 57 02.4	-1.8

BGS ***05*** *02:12:00.7±1.1, 53.°52N×154.°96E, h633km, mb6.5, MS6.7*
KRSC ***05*** *02:12:01.1±0.6, 54.°12N×152.°20E, h594km±18km, ML6.4*
SZGRF ***05*** *02:12:02.3, 53.°73N×153.°93E, h635km, mb7.5, Sea of Okhotsk*
MOS ***05*** *02:12:02.3±0.9, 53.°92N×152.°90E, h615km, mb6.9/122, MS6.5/10, Error ellipse: s-maj=7.5km s-min=4.6km az=97.1 Broadband fault plane solution: P waves. NP1: φs154.00000°, δ52.00000°, λ-128.00000°. NP2: φs26.00000°, δ52.00000°, λ-52.00000°. Principal axes: T Plg0.0000°, Azm90.0000°; N Plg29.0000°, Azm180.0000°; P Plg61.0000°, Azm360.0000°;*
MOS Fault plane solution: P-wave C42, D307 . Felt (III-IV) at Petropavlovsk-Kamchatskiy, (III) at Severo-Kuril'sk, (II-III) at Yuzhno-Sakhalinsk, Kholmsk, Khabarovsk, Komsomol'sk-na-Amure, Uglegorsk, Shakhtersk, (II) at Okha.
BJI ***05*** *02:12:03.3, 53.°83N×152.°95E, h636km, mB7.4/35, mb6.7/58*
IDC ***05*** *02:12:04.0±0.8, 53.°91N×153.°03E, h627km±9km, mb5.9/27, mb1 5.9/29, mb1mx5.9/29, mbtmp5.8/29, Error ellipse: s-maj=7.2km s-min=5.9km az=136.0*
NEIC ***05*** *02:12:04.5±0.2, 53.°88N×152.°89E, h633km±3km, mb6.8/263, ME7.5, MW7.7, MW7.7, Error ellipse: s-maj=2.6km s-min=1.8km az=182.0 Broadband fault plane solution: P waves. NP1:φs23.00000°, δ60.00000°, λ-45.00000°. NP2:φs140.00000°, δ52.00000°, λ-141.00000°. Principal axes: T Plg5.0000°, Azm83.0000°; N Plg0.0000°, Azm0.0000°; P Plg52.0000°, Azm347.0000°; Moment Tensor Solution. s134 Moment tensor: Scale 10^20 Nm; Mrr-3.33; Mθθ-0.70; Mφφ4.03; Mrθ-2.13; Mθφ-0.16; Mφr-0.16; Best double couple: M0=4.30000×10^20 NP1:φs152.00000°, δ51.00000°, λ-129.00000°. NP2:φs24.00000°, δ53.00000°, λ-52.00000°. Principal axes: T 4.0400, Plg0.0000°, Azm88.0000°; N 0.4900, Plg29.0000°, Azm178.0000°; P -4.5200, Plg60.0000°, Azm356.0000°; Depth from broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt at Klyuchi, Petropavlovsk- Kamchatskiy and Yuzhno-Sakhalinsk, Russia. Recorded [2 JMA] in eastern and northern Hokkaido, Japan. Also recorded [2 JMA] in Miyagi and [1 JMA] in Akita, Aomori, Iwate and Yamagata, Honshu.
ISCJB ***05*** *02:12:04.5±0.1, 53.°91N±0.°01×152.°92E±0.°02, h644km, mb6.6/523 Error ellipse: s-maj=1.9km s-min=1.2km az=169.9*
DJA ***05*** *02:12:05, 54.°10N×153.°05E, h650km, Mw7.2/27*
GCMT ***05*** *02:12:14.2±0.1, 54.°12N×153.°37E, h611km±1km, MW7.7, Moment Tensor Solution. s121, c339; s99, c313; Moment tensor: Scale 10^20Nm; Mrr-3.26±.02; Mθθ-0.77±.02; Mφφ4.03±.02; Mrθ-2.18±.01; Mθφ-0.85±.02; Mφr-1.00±.02; Best double couple: M0=4.50000×10^20 NP1:φs143.00000°, δ48.00000°, λ-134.00000°. NP2: φs18.00000°, δ58.00000°, λ-52.00000°. Principal axes: T 4.2400, Plg5.0000°, Azm83.0000°; N 0.4800, Plg31.0000°, Azm176.0000°; P -4.7200, Plg58.0000°, Azm344.0000°; Data Used: II IU CN IC G. LP body wave period 50 sec. Mantle wave period 150 sec. Mantle waves from 119 sta.*

ISC 05 02:12:06.1±0.1, 53.°95N±0.°01×152.°86E±0.°02, h646km, h646km±1.6km: pP-P, n2582, σ0=81/2492, mb6.6/520, 293C-863D, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MIPR	**Malaya Ipel'ka**	**2.88**	**124**	*i* P		**P**	**02 13 24.1**	**-4.3**
PEA0B	**Petropavlovsk-**	**3.01**	**104**	⇓*i*P		**P**	**02 13 24.8**	**-4.1**
PETK	**Petropavlovsk-**	**3.01**	**104**	P		**P**	**02 13 24.8**	**-4.2**
	4μm,0.3s,baz=166,slow=0.5,SNR=7655							
GNL	**Ganaly**	**3.02**	**93**	*i* P		**P**	**02 13 25.2**	**-3.8**
GRL	**Gorelyy**	**3.43**	**112**	*i* P		**P**	**02 13 26.9**	**-4.4**
ALID	**Alaid**	**3.49**	**151**	*i* P		**P**	**02 13 27.7**	**-4.1**
INSR	**Institute**	**3.54**	**102**	*i* P		**P**	**02 13 27.6**	**-4.3**
INSR				*i* S		**S**	**02 14 32.0**	**-10**
AVH	**Avacha**	**3.57**	**99**	*i* P		**P**	**02 13 27.9**	**-4.2**
PET	**Petropavlovsk**	**3.58**	**103**κ	*i* P		**P**	**02 13 26.9**	**-5.3**
PET				*e*S		**S**	**02 14 33.1**	**-9.5**
PET				pmax	pmax			
	comp=Z,322μm,8.6s							
PET				pmax	pmax			
	comp=Z,541μm,14.4s							
PET				pmax	pmax			
	comp=Z,200μm,0.6s							
PET				smax				
	comp=E,2047μm,6.5s							
PET				smax				
	comp=N,1546μm,5.2s							
PET				smax				
	comp=E,3695μm,13.6s							
PET				smax				
	comp=N,2422μm,12.3s							
PET				smax				
	comp=N,274μm,1.4s							
PET				smax				
	comp=E,314μm,1.0s							
PET				MLR	MLR			
	comp=Z,487μm,20.0s							
PET	**Petropavlovsk**	**3.58**	**103**	*i* P		**P**	**02 13 27.4**	**-4.8**
PET				*i* S		**S**	**02 14 32.6**	**-10**
PET	**Petropavlovsk**	**3.58**	**103**	⇓*i*P		**P**	**02 13 27.5**	**-4.6**
PET				*e*S		**S**	**02 14 38.0**	**-4.6**
SKR	**Severo-Kuril's**	**3.83**	**147**	⇓*i*P		**P**	**02 13 27.5**	**-6.3**
SKR				*i* S		**S**	**02 14 34.0**	**-11**
SKR				pmax	pmax			
	comp=Z,821μm,8.0s							
SKR				pmax	pmax			
	comp=N,300μm,6.0s							
SKR				pmax	pmax			
	comp=E,380μm,6.0s							
SKR				pmax	pmax			
	comp=N,107μm,4.0s							
SKR				pmax	pmax			
	comp=E,86μm,4.0s							
SKR				smax				
	comp=N,109μm,4.0s							
SKR				smax				
	comp=E,74μm,4.0s							
SKR	**Severo-Kuril's**	**3.83**	**147**	⇓*i*P		**P**	**02 13 28.0**	**-5.8**
KOZ	**Kozyrevsk**	**4.56**	**60**	*i* P		**P**	**02 13 35.3**	**-3.1**
KOZR	**Kozyr**	**4.57**	**59**	P		**P**	**02 13 35.3**	**-3.2**
KMNR	**Kamenistaya**	**4.63**	**64**	*i* P		**P**	**02 13 35.5**	**-3.4**
KPT	**Kopyto**	**4.70**	**62**	*i* P		**P**	**02 13 35.9**	**-3.5**
ZLN	**Zelenaya**	**5.02**	**62**	*i* P		**P**	**02 13 38.4**	**-3.3**
KBTR	**Krutoberegovo**	**6.15**	**64**	*i* P		**P**	**02 13 45.1**	**-5.5**
BKI	**Bering**	**7.72**	**75**	*i* P		**P**	**02 14 02.3**	**-2.0**
BKI				*i* S		**S**	**02 15 31.8**	**-9.5**
UGL	**Uglegorsk**	**8.31**	**238**	⇑*i*P		**P**	**02 14 09.5**	**-0.3**
UGL				*e*S		**S**	**02 15 50.0**	**-1.1**
UGL				pmax	pmax			
	comp=N,16μm,1.0s							
UGL				pmax	pmax			
	comp=E,11μm,1.0s							
UGL				pmax	pmax			
	comp=Z,15μm,1.0s							
UGL				smax				
	comp=N,18μm,1.0s							
UGL				smax				
	comp=E,19μm,1.0s							
SEY	**Seymchan**	**9.02**	**359**	*i* P		**P**	**02 14 15.4**	**-0.6**
SEY	**Seymchan**	**9.02**	**359**	*i* P		**P**	**02 14 15.4**	**-0.6**
KUR	**Kuril'sk**	**9.30**	**202**	⇓*i*P		**P**	**02 14 13.3**	**-5.8**
KUR				*i* S		**S**	**02 16 03.0**	**-5.1**
KUR				pmax	pmax			
	comp=N,150μm,8.0s							
KUR				pmax	pmax			
	comp=E,128μm,8.0s							
KUR				pmax	pmax			
	comp=Z,209μm,8.0s							
KUR				smax				
	comp=N,3582μm,14.0s							
KUR				smax				
	comp=E,1258μm,14.0s							
KUR				MLR	MLR			
	comp=N,125μm,12.0s							
KUR				MLR	MLR			
	comp=E,112μm,12.0s							
KUR				MLR	MLR			
	comp=Z,270μm,12.0s							
YSS	**Yuzh-Sakhalins**	**9.51**	**227**α	*i*P		**P**	**02 14 20.0**	**-1.0**
YSS				*i* S		**S**	**02 16 11.0**	**-0.7**
YSS				pmax	pmax			
	comp=Z,6μm,0.7s							
YSS				smax				
	comp=E,3946μm,15.0s							
YSS	**Yuzh-Sakhalins**	**9.51**	**227**⇑	*i*P		**P**	**02 14 19.9**	**-1.1**
YUK	**Yuzh-Kuril'sk**	**10.93**	**208**	*e*P		**P**	**02 14 29.8**	**-4.9**
YUK				*i* S		**S**	**02 16 30.9**	**-5.7**
YUK				pmax	pmax			
	comp=N,6μm,0.8s							
YUK				pmax	pmax			
	comp=Z,17μm,0.8s							
YUK				pmax	pmax			
	comp=E,14μm,0.4s							
YUK				pmax	pmax			
	comp=Z,28μm,0.9s							
YUK				MLR	MLR			
	comp=Z,171μm,13.5s							
YUK				MLR	MLR			
	comp=N,175μm,12.0s							
YUK				MLR	MLR			
	comp=E,233μm,17.0s							
YUK	**Yuzh-Kuril'sk**	**10.93**	**208**	*e*P		**P**	**02 14 29.0**	**-5.7**
ASAJ	**Asahikawa**	**11.91**	**218**	P		**P**	**02 14 40.1**	**-3.9**
	comp=E,100nm,0.3s,baz=29,slow=6.0,SNR=216							
ASAJ				S		**S**	**02 16 52.4**	**-0.6**
	comp=E,93nm,0.3s,baz=348,slow=31,SNR=1.0							
ASAJ				ScP	ScP		02 22 11.7	+8.9
	comp=E,20nm,0.3s,baz=275,slow=7.2,SNR=4.6							
ASAJ				ScS	ScS		02 25 44.9	+6.2
	comp=E,2.3nm,0.3s,baz=72,slow=33,SNR=9.4							
ASAJ	**Asahikawa**	**11.91**	**218**	P		**P**	**02 14 39.7**	**-4.3**
HABR	**Khabarovsk**	**12.43**	**251**c	*i*P		**P**	**02 14 48.0**	**-0.6**
HABR				*e*S		**S**	**02 17 03.5**	**+2.0**
HABR				pmax	pmax			
	comp=N,5μm,0.9s							
SMY	**Shemya**	**12.74**	**87**⇑	*i*P		**P**	**02 14 49.1**	**-2.4**
ERM	**Erimo**	**13.58**	**212**	P		**P**	**02 14 55.7**	**-3.6**
	comp=N,55μm,0.4s							
ERM	**Erimo**	**13.58**	**212**⇓	*e*P		**P**	**02 14 54.4**	**-4.9**
ERM				*e*S		**S**	**02 17 20.2**	**-0.5**
KLR	**Kul'dur**	**13.93**	**259**	⇓*i*P		**P**	**02 14 58.0**	**-4.4**
YAK	**Yakutsk**	**14.65**	**313**c	*i*P		**P**	**02 15 08.8**	**0.0**
YAK				*i* S		**S**	**02 17 40.0**	**+2.3**
YAK				smax				
	comp=E,1157μm,3.6s							
YAK				smax				
	comp=N,435μm,2.0s							
YAK	**Yakutsk**	**14.65**	**313**	*e*P		**P**	**02 15 08.6**	**-0.1**
BILL	**Bilibino**	**15.50**	**19**d	*i*P		**P**	**02 15 16.0**	**-0.5**
BILL				*i* S		**S**	**02 17 53.3**	**+1.8**
BILL				pmax	pmax			
	comp=Z,4μm,1.2s							
BILL				pmax	pmax			
	comp=Z,64μm,3.4s							
BILL	**Bilibino**	**15.50**	**19**⇓	*i*P		**P**	**02 15 16.1**	**-0.4**
	comp=Z,8μm,0.6s							
CLNS	**Chul'man**	**16.10**	**292**	*e*P		**P**	**02 15 23.0**	**+0.8**
CLNS				*e*S		**S**	**02 18 06.8**	**+5.2**
CLNS				smax				
	comp=E,174μm,15.0s							
CLNS				smax				
	comp=N,118μm,13.9s							
AMKA	**Amchitka**	**16.21**	**88**	*e*P		**P**	**02 15 20.7**	**-2.6**
	comp=N,6μm,0.9s							
VLA	**Vladivostok**	**17.54**	**240**	*i* P		**P**	**02 15 34.0**	**-1.5**
VLA	**Vladivostok**	**17.54**	**240**	*i* P		**P**	**02 15 34.1**	**-1.4**
MDJ	**Mudanjiang**	**17.75**	**248**	P		**P**	**02 15 36.6**	**-0.8**
MDJ				S		**S**	**02 18 31.5**	**+2.9**
MDJ				ScP	ScP		02 22 13.9	+0.4
MDJ				PcS	PcS		02 23 15.5	+0.5
MDJ				ScS	ScS		02 25 56.3	+2.0
MDJ				pmax	pmax			
	comp=Z,1μm,1.1s							
MDJ				pmax	pmax			
	comp=Z,204μm,12.4s							
GSTR	**Great Sitkin T**	**18.71**	**83**	*e*P		**P**	**02 15 46.6**	**+0.7**
MAJO	**Matsushiro**	**20.16**	**216**⇑	*i*P		**P**	**02 15 58.7**	**-0.6**
	comp=Z,17μm,1.4s							
MAT	**Matsushiro**	**20.16**	**216**	P		**P**	**02 15 58.5**	**-0.7**
MAT				S		**S**	**02 19 08.8**	**+1.8**
MJAR	**Matsushiro Arr**	**20.16**	**216**	P		**P**	**02 15 58.6**	**-0.6**
	comp=Z,925nm,0.8s,baz=24,slow=7.7,SNR=1435							
MJAR				PcP	PcP		02 19 45.0	+2.2
	comp=Z,145nm,0.9s,baz=147,slow=18,SNR=1.4							
MJAR				ScP	ScP		02 22 24.9	+5.8
	comp=Z,321nm,0.8s,baz=25,slow=2.0,SNR=5.6							
MJAR	**Matsushiro Arr**	**20.16**	**216**	P		**P**	**02 15 58.6**	**-0.6**
MJAR							02 19 45.0	
GAMB	**Gambell**	**20.52**	**47**⇑	*e*P		**P**	**02 16 00.8**	**-1.1**
	comp=Z,585nm,0.9s							
CN2	**Changchun**	**20.57**	**252**	⇑P		**P**	**02 16 02.0**	**-0.7**
CN2				*es*P		sP	02 18 31.9	-11
CN2				*e*S		**S**	**02 19 15.0**	**+1.8**
TIXI	**Tiksi**	**20.59**	**339**c	*i*P		**P**	**02 16 02.9**	**+0.4**
TIXI				*e**SP		sP	02 18 35.5	-7.9
TIXI				*e*S		**S**	**02 19 12.4**	**-0.4**
TIXI				pmax	pmax			
	comp=Z,114μm,13.0s							
TIXI	**Tiksi**	**20.59**	**339**	*e*P		**P**	**02 16 02.6**	**0.0**
	comp=Z,32μm,1.2s							
SPIA	**Saint Paul Isl**	**20.94**	**66**	*e*P		**P**	**02 16 04.9**	**-1.0**
	comp=Z,45μm,1.6s							
TNA	**Tin City**	**22.48**	**43**	*e*P		**P**	**02 16 19.1**	**-0.3**
	comp=Z,3μm,0.8s,mb6.7							
JHJ2	**Mitsune**	**22.80**	**209**	P		**P**	**02 16 21.7**	**-1.0**
JHJ	**Hachijo jima 2**	**22.80**	**209**	P		**P**	**02 16 21.9**	**-0.8**
	comp=Z,1μm,0.5s,mb6.6,baz=178,slow=5.3,SNR=30							
JHJ				ScS	ScS		02 26 19.9	+7.2
	comp=Z,202nm,1.0s,baz=71,slow=21,SNR=4.1							
SNY	**Shenyang**	**22.89**	**250**	⇑P		**P**	**02 16 23.1**	**-0.3**
SNY				sP	sP		02 19 03.2	-5.5
SNY				S	**S**		**02 19 54.6**	**+4.8**
SNY				pmax	pmax			
	comp=Z,810nm,1.7s,mb5.9							
CIT	**Chita**	**23.54**	**281**	*e*P		**P**	**02 16 29.7**	**+0.7**
CIT				*e*			02 19 56.4	
CIT				*e*			02 20 10.6	
CIT				pmax	pmax			
	comp=Z,17μm,3.1s							
UNV	**Unalaska Valle**	**23.72**	**74**⇑	*i*P		**P**	**02 16 27.3**	**-3.1**
	comp=Z,9μm,1.3s,mb7.0							
KSRS	**Korea Array**	**23.80**	**236**	P		**P**	**02 16 31.9**	**+0.5**
	comp=Z,3μm,0.7s,mb6.8,baz=37,slow=8.8,SNR=2433							
KSRS				PcP	PcP		02 19 51.2	+0.9
	comp=Z,248nm,0.7s,baz=17,slow=2.2,SNR=1.8							
KSRS				ScP	ScP		02 22 35.2	+6.6
	comp=Z,382nm,0.9s,baz=57,slow=2.7,SNR=6.2							
KSRS	**Korea Array**	**23.80**	**236**	*e*P		**P**	**02 16 31.9**	**+0.5**
KSRS				pmax	pmax			
	comp=Z,3μm,0.7s,mb6.8							
AKUT	**Akutan**	**24.05**	**73**	*e*P		**P**	**02 16 30.3**	**-3.1**
	comp=Z,3μm,0.5s,mb7.0							
INCN	**Inchon**	**24.42**	**238**⇑	*e*P		**P**	**02 16 36.6**	**-0.2**
	comp=Z,7μm,1.3s,mb6.9							
INCN	**Inchon**	**24.42**	**238**	P		**P**	**02 16 36.9**	**0.0**
	SNR=264							
DL2	**Dalian**	**25.99**	**247**	P		**P**	**02 16 50.0**	**-0.7**
DL2				sP	sP		02 19 40.0	-2.2
DL2				S	**S**		**02 20 35.5**	**-2.8**
DL2				PcS	PcS		02 23 30.6	-6.4
DL2				pmax	pmax			
	comp=Z,3μm,1.1s,mb6.7							
JNU	**Nakatsue**	**26.02**	**226**	P		**P**	**02 16 50.4**	**-0.6**
SDPT	**Sand Point**	**26.65**	**68**	*e*P		**P**	**02 16 52.2**	**-3.9**
	comp=Z,1μm,0.7s,mb6.5							
CHGN	**Chignik**	**27.50**	**65**	*e*P		**P**	**02 17 00.3**	**-3.2**
TTA	**Tatalina**	**27.51**	**50**	*e*P		**P**	**02 17 03.1**	**-0.4**
SVW2	**Sparrevohn**	**27.93**	**54**	*e*P		**P**	**02 17 06.2**	**-0.9**
	comp=Z,8μm,1.2s,mb7.1							
CBIJ	**Chichi jima**	**27.96**	**201**	P		**P**	**02 17 07.2**	**-0.7**
	comp=Z,3μm,0.5s,mb7.1,baz=345,slow=4.0,SNR=96							
CBIJ				S	**S**		**02 21 11.1**	**+2.0**
	comp=Z,1μm,0.9s,baz=82,slow=22,SNR=7.7							
CBIJ				ScS	ScS		02 26 43.5	+8.3
	comp=Z,191nm,0.7s,baz=266,slow=23,SNR=4.0							
CBIJ	**Chichi jima**	**27.96**	**201**	P		**P**	**02 17 06.6**	**-1.3**
BJI	**Beijing**	**28.27**	**256**	P		**P**	**02 17 09.8**	**-0.6**
BJI				sP	sP		02 20 00.2	-3.8
BJI				PcP	PcP		02 20 01.3	+0.3
BJI				S	**S**		**02 21 12.7**	**-0.8**
BJI				pmax	pmax			
	comp=Z,390nm,1.1s,mb5.8							
BJI				pmax	pmax			
	comp=Z,89μm,12.5s							
IMA2	**Indian Mountai**	**28.36**	**44**	*e*P		**P**	**02 17 11.9**	**+1.1**
IRK	**Irkutsk**	**28.78**	**287**⇓	*i*P		**P**	**02 17 15.3**	**+0.7**
IRK				*e*S		**S**	**02 21 27.4**	**+6.4**
IRK				pmax	pmax			
	comp=Z,7μm,1.5s,mb6.9							
ULN	**Ulaanbaatar**	**29.10**	**277**⇑	*e*P		**P**	**02 17 18.5**	**+1.1**
ULN				pmax	pmax			
	comp=Z,2μm,0.7s,mb6.7							
ULN	**Ulaanbaatar**	**29.10**	**277**⇑	*e*P		**P**	**02 17 18.5**	**+1.0**
	comp=Z,2μm,0.7s,mb6.7							
ULN	**Ulaanbaatar**	**29.10**	**277**	P		**P**	**02 17 18.5**	**+1.1**
	comp=Z,3μm,0.8s,mb6.9							
ULN	**Ulaanbaatar**	**29.10**	**277**	P		**P**	**02 17 18.5**	**+1.0**
	SNR=1452							
PPLA	**Purkeypile**	**29.25**	**50**	*e*P		**P**	**02 17 18.8**	**+0.3**
	comp=Z,1μm,0.3s,mb6.9							
TLY	**Talaya**	**29.36**	**286**	P		**P**	**02 17 21.6**	**+2.0**
	comp=Z,26μm,0.9s,mb7.8							
TLY	**Talaya**	**29.36**	**286**c	*i*P		**P**	**02 17 21.1**	**+1.5**
TLY				*e*			02 20 09.2	
TLY				*e*S		**S**	**02 21 35.3**	**+5.3**
TLY				pmax	pmax			
	comp=Z,5μm,0.9s,mb7.0							
TLY				MLR	MLR			
	comp=Z,135μm,15.0s							
TLY	**Talaya**	**29.36**	**286**⇑	*i*P		**P**	**02 17 21.1**	**+1.5**
	comp=Z,5μm,1.0s,mb7.0							
TLY				*e*ScP	ScP		02 22 46.6	+1.4
TLY	**Talaya**	**29.36**	**286**	P		**P**	**02 17 21.4**	**+1.8**
	SNR=3589							
SONM	**Songino Array**	**29.50**	**277**	P		**P**	**02 17 22.0**	**+1.1**
	comp=Z,576nm,0.7s,mb6.2,baz=61,slow=7.8,SNR=788							
SONM				PcP	PcP		02 20 04.2	+0.1
	comp=Z,701nm,1.0s,baz=41,slow=4.9,SNR=3.5							
SONM				ScP	ScP		02 22 52.0	+6.2
	comp=Z,509nm,0.7s,baz=88,slow=1.6,SNR=6.4							
SONM				PKP2ab			02 53 03.2	
	comp=Z,14nm,1.1s,baz=236,slow=2.7,SNR=4.1							
SONM	**Songino Array**	**29.50**	**277**	P		**P**	**02 17 22.0**	**+1.1**
SONM							02 20 04.2	
SONM	**Songino Array**	**29.50**	**277**	P		**P**	**02 17 22.0**	**+1.1**
SONM				PcP	PcP		02 20 04.2	+0.1
SONM				ScP	ScP		02 22 52.0	+6.2
COLD	**Coldfoot**	**29.72**	**41**⇓	*e*P		**P**	**02 17 22.3**	**-0.1**
	comp=Z,2μm,0.7s,mb6.8							
OHAK	**Old Harbor**	**29.95**	**62**	*e*P		**P**	**02 17 22.5**	**-2.0**
	comp=Z,2μm,0.7s,mb6.7							
TRF	**Thorofare Moun**	**30.02**	**49**	*e*P		**P**	**02 17 24.9**	**-0.1**
	comp=Z,3μm,0.5s,mb7.0							
KDAK	**Kodiak Island**	**30.15**	**60**	P		**P**	**02 17 24.0**	**-2.2**
	comp=Z,51μm,0.5s							
KDAK	**Kodiak Island**	**30.15**	**60**	P		**P**	**02 17 24.3**	**-1.9**
	comp=Z,1μm,0.4s,mb6.9,baz=300,slow=3.8,SNR=247							
KDAK				S	**S**		**02 21 39.8**	**-2.1**
	comp=Z,1μm,0.9s,baz=76,slow=23,SNR=10							
KDAK	**Kodiak Island**	**30.15**	**60**⇑	*e*P		**P**	**02 17 24.4**	**-1.8**
KDAK				*e*S		**S**	**02 21 40.6**	**-1.3**
KDAK				pmax	pmax			
	comp=Z,4μm,0.6s,mb7.1							
KDAK	**Kodiak Island**	**30.15**	**60**⇑	*e*P		**P**	**02 17 24.4**	**-1.9**
	comp=Z,4μm,0.6s,mb7.1							
KDAK				*e*S	**S**		**02 21 40.6**	**-1.2**
KDAK				*e*ScP	ScP		02 22 50.1	+2.4
TIA	**Tai'an**	**30.41**	**249**	⇓P		**P**	**02 17 28.2**	**-0.6**
HHC	**Hu-ho-hao-te**	**30.41**	**262**⇑	*i*P		**P**	**02 17 28.8**	**+0.1**
HHC				PcP	PcP		02 20 08.3	+1.7
HHC				sP	sP		02 20 16.6	-6.8
HHC				S	**S**		**02 21 48.4**	**+2.1**
HHC				ScP	ScP		02 22 54.8	+5.9
HHC				PcS	PcS		02 23 52.4	+1.1
HHC				ScS	ScS		02 26 51.1	+4.4
HHC				pmax	pmax			
	comp=Z,440nm,0.9s,mb6.0							
HHC				pmax	pmax			
	comp=Z,64μm,4.9s							
MCK	**McKinley**	**30.58**	**48**	*e*P		**P**	**02 17 29.6**	**-0.2**
MCK				*e*S	**S**		**02 21 45.2**	**-3.1**
MCK				pmax	pmax			
	comp=Z,2μm,0.9s,mb6.7							
MCK	**McKinley**	**30.58**	**48**	*e*P		**P**	**02 17 29.6**	**-0.2**
	comp=Z,2μm,0.9s,mb6.7							
MCK				*e*S	**S**		**02 21 45.2**	**-3.1**
RC01	**Rabbit Creek A**	**30.72**	**53**	*e*P		**P**	**02 17 29.2**	**-1.8**
	comp=Z,3μm,0.7s,mb6.9							
RC01				*e*PcP	PcP		02 20 08.0	+1.0
RC01				*e*S	**S**		**02 21 49.2**	**-1.2**
RC01				*e*ScP	ScP		02 22 51.2	+1.7
MOY	**Mondy**	**30.87**	**287**⇑	*i*P		**P**	**02 17 34.4**	**+2.0**
MOY				pmax	pmax			
	comp=Z,8μm,2.2s,mb6.9							
COLA	**College**	**30.88**	**46**⇑	*i*P		**P**	**02 17 32.1**	**-0.2**
COLA	**College**	**30.88**	**46**	*e*P		**P**	**02 17 32.0**	**-0.3**
	comp=Z,8μm,0.8s,mb7.3							
PMR	**Palmer**	**30.89**	**52**	*e*P		**P**	**02 17 31.2**	**-1.3**
PMR				pmax	pmax			
	comp=Z,257nm,0.3s,mb6.2							
PMR	**Palmer**	**30.89**	**52**	*e*P		**P**	**02 17 31.2**	**-1.3**
	comp=Z,257nm,0.3s,mb6.2							
BTO	**Baotou**	**31.47**	**263**	*e*P		**P**	**02 17 38.2**	**+0.5**
BTO				pmax	pmax			
	comp=Z,2μm,1.6s,mb6.3							
TIY	**Taiyuan**	**31.99**	**256**	*e*P		**P**	**02 17 42.1**	**0.0**
TIY				S	**S**		**02 22 15.8**	**+5.4**
TIY				pmax	pmax			
	comp=Z,36μm,4.3s							
DIV	**Divide**	**32.57**	**52**	*e*P		**P**	**02 17 46.3**	**-0.3**
	comp=Z,14μm,1.5s,mb7.2							
DIV				*e*S	**S**		**02 22 19.2**	**+0.6**
JOW	**Kunigami**	**32.60**	**224**	P		**P**	**02 17 46.0**	**-1.4**
NJ2	**Nanjing**	**32.64**	**242**	*e*P		**P**	**02 17 47.3**	**-0.4**
NJ2				S	**S**		**02 22 25.5**	**+5.1**
NJ2				PcS	PcS		02 24 01.0	+1.7
NJ2				pmax	pmax			
	comp=Z,2μm,0.9s,mb6.6							
NJ2				pmax	pmax			
	comp=Z,63μm,10.6s							
MID	**Middleton Isla**	**32.79**	**

comp=Z,560nm,1.3s,mb5.9
XAN pmax pmax
comp=Z,15μm,14.7s
TATO Taipei 37.18 231 *e*P **P 02 18 25.9 +0.8**
comp=Z,3μm,1.0s,mb6.8
TATO Taipei 37.18 231 P **P 02 18 26.2 +1.1**
SNR=67
YHNB Yeheng 37.50 231 *e*P **P 02 18 26.0 -1.6**
comp=Z,2μm,1.1s,mb6.6
NACB Ninganchiao 37.82 231 *e*P **P 02 18 26.9 -3.4**
comp=Z,951nm,0.8s,mb6.3
SKAG Skagway 38.03 52 *e*P **P 02 18 31.9 +0.5**
comp=Z,2μm,1.1s,mb6.4
SKAG *e*P 02 18 32.1
LZH Lanzhou 38.09 262 ⇑P **P 02 18 33.8 +1.5**
LZH PcP PcP 02 20 33.2 +3.8
LZH sP sP 02 21 27.2 -3.7
LZH S **S 02 23 43.5 +2.3**
LZH sS sS 02 26 52.0 -3.5
LZH SS SS 02 26 59.0 -4.1
LZH pmax pmax
comp=Z,8μm,1.0s,mb7.1
LZH pmax pmax
comp=Z,56μm,4.6s
GTA Gaotai 38.25 270 ⇑P **P 02 18 35.2 +1.6**
GTA sP sP 02 21 25.5 -6.8
GTA S **S 02 23 49.3 +5.9**
GTA sS sS 02 26 52.2 -5.7
GTA SS SS 02 27 04.4 -1.1
GTA ScS ScS 02 27 34.3 +4.5
GTA pmax pmax
comp=Z,6μm,1.4s,mb6.8
GTA pmax pmax
comp=Z,47μm,7.1s
SSLB Suanglung 38.45 231⇑*e*P **P 02 18 33.5 -1.9**
comp=Z,3μm,1.0s,mb6.6
QZH Quanzhou 38.58 235⇑*i*P **P 02 18 35.5 -0.9**
QZH PP PP 02 20 20.0 -4.8
QZH sP sP 02 21 32.1 -3.0
QZH S **S 02 23 50.3 +1.8**
QZH SS SS 02 27 04.2 -7.2
QZH pmax pmax
comp=Z,6μm,1.2s,mb6.9
QZH pmax pmax
comp=Z,48μm,6.7s
ZAA0 Zalesovo Array 38.63 299 *e*P **P 02 18 35.8 -0.5**
ZALV Zalesovo Beam 38.63 299 P **P 02 18 36.0 -0.4**
comp=Z,434nm,0.6s,mb6.0,baz=58,slow=6.8,SNR=505
ZALV PcP PcP 02 20 30.9 +0.1
comp=Z,2μm,1.0s,baz=46,slow=6.4,SNR=5.3
ZALV ScP ScP 02 23 24.3 +5.8
comp=Z,954nm,1.0s,baz=35,slow=5.4,SNR=4.4
ZALV Zalesovo Beam 38.63 299 P **P 02 18 36.0 -0.3**
ZALV 02 20 31.0
ZALV Zalesovo Beam 38.63 299 P **P 02 18 36.0 -0.4**
ZALV PcP PcP 02 20 30.9 +0.1
ZALV ScP ScP 02 23 24.3 +5.8
YULB Yu-li 38.63 230⇑*e*P **P 02 18 34.6 -2.2**
comp=Z,2μm,0.8s,mb6.6
NVS Novosibirsk 39.02 301 *e*P **P 02 18 40.2 +0.8**
NVS *e**PP 02 20 31.0
NVS *e*S **S 02 23 55.2 +1.1**
NVS pmax pmax
comp=N,7μm,1.1s
TPUB Ta-pu 39.02 231⇑*e*P **P 02 18 38.9 -1.0**
comp=N,7μm,1.2s,mb7.0
TPUB *e*ScP ScP 02 23 22.7 +2.2
SIT Sitka 39.07 55 *e*P **P 02 18 40.8 +1.0**
SIT pmax pmax
comp=Z,4μm,1.0s,mb6.8
SIT Sitka 39.07 55 *e*P **P 02 18 40.8 +1.0**
comp=Z,4μm,1.0s,mb6.8
TWG Pinlang 39.23 230 *e*P **P 02 18 39.4 -2.2**
comp=Z,3μm,0.7s,mb6.8
GUMO Guam 40.75 192 *e*P **P 02 18 53.2 -0.5**
GUMO pmax pmax
comp=Z,714nm,0.8s,mb6.2
GUMO Guam 40.75 192 *e*P **P 02 18 53.2 -0.5**
comp=Z,714nm,0.8s,mb6.2
GUMO Guam 40.75 192 P **P 02 18 53.7 0.0**
comp=Z,964nm,1.0s,mb6.2
CRAG Craig 40.91 57 *e*P **P 02 18 54.8 +0.4**
comp=Z,5μm,2.0s,mb6.6
BBP Basco 40.91 227 *e*P **P 02 18 55.2 +0.3**
DLBC Dease Lake 40.95 51⇓*e*P **P 02 18 55.9 +1.3**
CD2 Chengdu 41.85 257⇑*i*P **P 02 19 02.6 +0.5**
CD2 pP pP 02 20 47.6 -3.0
CD2 PP PP 02 20 55.4 +0.9
CD2 S **S 02 24 39.2 +3.7**
CD2 sS sS 02 27 46.9 -7.0
CD2 SS SS 02 28 04.1 -0.1
CD2 pmax pmax
comp=Z,8μm,1.3s,mb7.0
CD2 pmax pmax
comp=Z,54μm,11.8s
WMQ Urumqi 42.59 284 P **P 02 19 02.0 -5.7**
WMQ PcP PcP 02 20 40.0 -4.2
WMQ pP pP 02 20 47.4 -9.4
WMQ PP PP 02 20 56.3 -4.7
WMQ sP sP 02 21 53.3 -16
WMQ ScP ScP 02 23 34.0 -0.5
WMQ PcS PcS 02 24 32.0 -5.5
WMQ S **S 02 24 43.7 -1.9**
WMQ sS sS 02 27 52.2 -13
WMQ SS SS 02 28 10.0 -5.5
WMQ pmax pmax
comp=Z,6μm,1.2s,mb6.9
WMQ pmax pmax
comp=Z,9μm,5.2s
ALE Alert 42.59 6 P **P 02 19 06.0 -1.2**
comp=Z,48μm,0.6s
GZH Guangzhou 42.74 240 P **P 02 19 03.7 -5.5**
GZH S **S 02 24 42.5 -5.8**
GZH pmax pmax
comp=Z,56μm,10.8s
SGCP Mt. Cagua 42.83 226 *e*P **P 02 19 09.4 -0.4**
HKC Hong Kong Obse 42.98 238⇑*i*P **P 02 19 10.0 -1.0**
HKC *i*S **S 02 24 50.0 -1.6**
CVP Callao Caves 43.40 226 *e*P **P 02 19 13.0 -1.3**
APYP Conner 43.51 226 *e*P **P 02 19 13.7 -1.4**
KURK Kurchatov 43.56 297 P **P 02 19 15.7 +0.7**
comp=Z,97μm,0.8s
KURK Kurchatov 43.56 297 *d*i*P **P 02 19 15.1 +0.1**
KURK *i**PP pP 02 20 51.8 -13
KURK Kurchatov 43.56 297 *e*P **P 02 19 15.4 +0.3**
comp=Z,26μm,1.2s,mb7.4
KURK Kurchatov 43.56 297 P **P 02 19 15.6 +0.6**
SNR=7237
GYA Guiyang 43.60 250⇑*i*P **P 02 19 15.6 -0.1**
GYA PcP PcP 02 20 48.9 +1.0
GYA pP pP 02 21 04.3 -1.4
GYA ScP ScP 02 23 41.2 +2.3
GYA PcS PcS 02 24 43.7 +1.5
GYA S **S 02 25 01.4 +1.1**
GYA ScS ScS 02 28 03.8 +0.6
GYA SS SS 02 28 31.0 -1.3
GYA pmax pmax
comp=Z,10μm,1.0s,mb7.1
GYA pmax pmax
comp=Z,22μm,5.3s
PALP Palanan 43.72 225 *e*P **P 02 19 16.6 -0.1**
MK31 Makanchi Array 43.85 291 *c*e*P **P 02 19 18.2 +0.9**
MK31 pmax pmax
comp=Z,3μm,0.5s,mb6.9
MK31 Makanchi Array 43.85 291 *e*P **P 02 19 17.5 +0.2**
MKAR Makanchi Array 43.85 291 P **P 02 19 17.6 +0.2**
comp=Z,703nm,0.6s,mb6.2,baz=57,slow=6.7,SNR=1030
MKAR S **S 02 25 06.8 +3.4**
comp=Z,93nm,0.7s,baz=0.0,slow=3.6,SNR=1.4
ABRA Dolores 43.92 227 *e*P **P 02 19 22.8 +4.5**
CAUP Cauayan 44.08 225 *e*P **P 02 19 20.3 +0.8**
RES Resolute Bay 44.10 21⇓*e*P **P 02 19 18.2 -0.6**
RES pmax pmax
comp=Z,8μm,1.0s,mb7.0
RES Resolute Bay 44.10 21⇓*e*P **P 02 19 18.2 -0.6**
comp=Z,8μm,1.0s,mb7.0
BCPH Baguio City Da 45.11 226⇑*i*P **P 02 19 26.4 -0.9**
BALP Baler 45.26 225 *e*P **P 02 19 28.4 0.0**
KBS Kingsbay 45.36 350⇓*i*P **P 02 19 28.4 0.0**
KBS AMb AMB 02 19 35.1
comp=Z,7μm,1.9s,mb6.7
KBS *e*sP sP 02 22 31.6 +0.3
KBS *e*S **S 02 25 26.8 +3.2**
KBS *e*SS SS 02 29 03.0 +4.6

KBS Kingsbay 45.36 350 *d*i*P **P 02 19 28.5 +0.1**
KBS pmax pmax
comp=Z,7μm,1.2s,mb6.9
KBS Kingsbay 45.36 350 *e*P **P 02 19 28.3 -0.1**
comp=Z,5μm,0.7s,mb7.0
YKA Yellowknife Ar 45.39 41 P **P 02 19 28.4 -0.4**
comp=Z,3μm,0.6s,mb6.7,baz=306,slow=7.0,SNR=1242
YKA PcP PcP 02 20 55.0 +1.4
comp=Z,172nm,0.4s,baz=313,slow=3.4,SNR=5.7
YKA ScP ScP 02 23 51.4 +5.7
comp=Z,337nm,0.8s,baz=309,slow=4.1,SNR=4.6
YKA S **S 02 25 24.7 +0.4**
comp=Z,286nm,1.1s,baz=286,slow=13,SNR=2.7
YKA Yellowknife Ar 45.39 41 P **P 02 19 28.4 -0.4**
YKA 02 20 55.0
YKA S **S 02 25 24.8 +0.4**
YKA Yellowknife Ar 45.39 41 P **P 02 19 28.4 -0.4**
YKA PcP PcP 02 20 55.0 +1.4
YKA ScP ScP 02 23 51.4 +5.7
YKA S **S 02 25 24.8 +0.4**
BOLP Bolinao 45.39 227 *e*P **P 02 19 29.0 -0.5**
PCPH Palayan 45.62 225⇑*e*P **P 02 19 30.9 -0.3**
SCZP Santa Cruz 45.93 227 *e*P **P 02 19 33.6 +0.1**
POLP Polilio Island 46.02 224 *e*P **P 02 19 34.9 +0.7**
PVCP Virac 46.17 220 *e*P **P 02 19 35.9 +0.6**
VOSK Vostochnaya 46.29 304 P **P 02 19 35.5 -0.2**
VOSK pmax pmax
comp=Z,14μm,1.6s,mb7.0
BVAR Borovoye Array 46.41 304 P **P 02 19 36.8 +0.2**
comp=Z,922nm,0.4s,mb6.5,baz=58,slow=8.3,SNR=1500
BVAR S **S 02 25 41.9 +3.3**
comp=Z,348nm,0.9s,baz=35,slow=3.6,SNR=2.8
BRVK Borovoye 46.44 304 P **P 02 19 37.8 +1.0**
comp=Z,57μm,0.9s,mb7.9
BRVK Borovoye 46.44 304 *d*i*P **P 02 19 36.8 0.0**
BRVK pmax pmax
comp=Z,4μm,1.0s,mb6.7
BRVK Borovoye 46.44 304⇓*e*P **P 02 19 37.1 +0.3**
comp=Z,8μm,0.8s,mb7.1
BRVK Borovoye 46.44 304 P **P 02 19 37.2 +0.4**
SNR=6248
GQP Guinayangan 46.56 223⇑*e*P **P 02 19 42.2 +3.9**
KWAJ Kwajalein Atol 46.56 160 *e*P **P 02 19 36.9 -1.3**
comp=Z,4μm,0.9s,mb6.8
HSP Hornsund 46.58 348 *e*P **P 02 19 37.4 -0.2**
KMI Kunming 46.83 253⇑P **P 02 19 40.9 +0.7**
KMI PcP PcP 02 21 05.1 +5.7
KMI pP pP 02 21 35.9 +3.1
KMI PP PP 02 21 44.7 +5.0
KMI sP sP 02 22 44.9 +1.3
KMI S **S 02 25 47.5 +2.2**
KMI ScS ScS 02 28 27.9 +3.4
KMI sS sS 02 29 07.5 -2.0
KMI SS SS 02 29 24.7 +1.2
KMI pmax pmax
comp=Z,4μm,0.8s,mb6.8
KMI pmax pmax
comp=Z,36μm,8.8s
CNP Catarman 46.97 219 *e*P **P 02 19 42.5 +1.1**
AUQP San Andres 46.99 222 *e*P **P 02 19 43.3 +1.8**
ZRNK Zerenda 47.12 305 *i*P **P 02 19 41.9 0.0**
ZRNK pmax pmax
comp=Z,15μm,1.3s,mb7.2
JOHN Johnston Islan 47.19 127 *e*P **P 02 19 41.1 -1.8**
comp=Z,9μm,1.4s,mb6.9
BOAC Boac 47.20 223 *e*P **P 02 19 43.9 +0.9**
PGP Puerto Galera 47.53 224⇓*e*P **P 02 19 46.7 +1.2**
QIZ Qiongzhong 47.91 240 P **P 02 19 49.3 +1.0**
QIZ pP pP 02 21 39.8 -2.0
QIZ PP PP 02 21 48.8 -0.7
QIZ sP sP 02 22 49.2 -3.0
QIZ S **S 02 26 00.6 +0.4**
QIZ sS sS 02 29 23.2 -2.4
QIZ SS SS 02 29 39.8 -1.0
QIZ pmax pmax
comp=Z,3μm,1.3s,mb6.5
QIZ pmax pmax
comp=Z,33μm,14.5s
OTRP Odiongan 48.13 222 *e*P **P 02 19 50.8 +1.0**
BJO Bjornoya 48.15 345⇓*i*P **P 02 19 48.7 -0.5**
BJO *e*sP sP 02 22 52.8 -0.8
BJO *e* 02 29 36.5
BJO1 Bjornoya 48.19 345⇓*i*P **P 02 19 48.7 -0.8**
OCLP Ormoc 48.33 218 *e*P **P 02 19 51.8 +0.4**
SJMP San Jose 48.40 223 *e*P **P 02 19 52.4 +0.6**
SOKR Solikamsk 48.52 317 *d*i*P **P 02 19 51.9 -0.2**
SOKR *PP PcP 02 21 07.7 +2.7
SOKR *SP PP 02 21 50.2 -3.7
SOKR S **S 02 26 10.5 +3.2**
SOKR pmax pmax
comp=Z,6μm,1.2s,mb6.8
SOKR MLR MLR
comp=Z,61μm,18.0s
RCP Roxas 48.57 221⇑*e*P **P 02 19 57.1 +3.9**
SVE Sverdlovsk 48.61 313⇑*e*P **P 02 19 53.5 +0.6**
SVE *e* pP 02 21 51.8 +5.0
SVE *e* 02 22 55.1
SVE *e*S **S 02 26 11.8 +3.1**
SVE *e*SS SS 02 29 33.6 -17
SVE pmax pmax
comp=Z,57μm,15.8s
AAA Alma-Ata 49.01 290 *i*P **P 02 19 58.2 +2.2**
AAA *e*S **S 02 26 20.5 +6.0**
AAA pmax pmax
comp=Z,57μm,8.5s
AAA smax
comp=E,404μm,11.0s
MSLP Maasin 49.09 218 *e*P **P 02 19 56.9 -0.1**
BUSP Coron 49.19 224 *e*P **P 02 19 57.8 +0.1**
KIP Kipapa 49.21 111 *c*i*P **P 02 19 56.5 -1.2**
KIP Kipapa 49.21 111 *e*P **P 02 19 56.9 -0.8**
comp=E,9μm,1.2s,mb7.0
LLP Lapu-Lapu 49.25 219 *e*P **P 02 19 57.5 -0.7**
LLP *e*S pP 02 21 48.6 -4.1
HON Honolulu 49.29 112 *e*P **P 02 19 57.6 -0.8**
DAG Danmarks Havn 49.44 357 *e*P **P 02 19 58.1 -0.6**
DAG Danmarks Havn 49.44 357 *i*P **P 02 19 58.1 -0.6**
GUIM Jordan 49.48 221 *e*P **P 02 20 00.5 +0.7**
PGC Sidney 49.70 60⇓*e*P **P 02 20 00.7 -0.2**
comp=E,104nm,0.7s,mb5.3
ARU Arti 49.76 313 P **P 02 20 01.3 +0.1**
comp=E,63μm,0.9s,mb7.9
ARU Arti 49.76 313 *d*i*P **P 02 20 01.2 0.0**
ARU *e* 02 21 10.2
ARU *e**PP pP 02 21 53.1 -2.9
ARU *e* 02 22 03.8
ARU *e*PPP 02 23 01.6
ARU *e*S **S 02 26 27.0 +2.8**
ARU 02 28 45.2
ARU pmax pmax
comp=Z,2μm,0.6s,mb6.5
ARU Arti 49.76 313⇓*e*P **P 02 20 01.3 +0.1**
comp=Z,8μm,0.8s,mb7.1
TBP Tagbilaran 49.86 219 *e*P **P 02 20 02.4 -0.2**
BUTP Butuan 49.90 216 *e*P **P 02 20 03.4 +0.6**
CUYO Cuyo Island 49.90 223 *e*P **P 02 20 03.3 +0.4**
TKM2 Tokmak 2 49.98 291 P **P 02 20 04.0 +0.9**
SNR=815
TKM2 Tokmak 2 49.98 291⇓*e*P **P 02 20 03.7 +0.6**
TKM2 pmax pmax
comp=Z,4μm,0.8s,mb6.8
TKM2 Tokmak 2 49.98 291⇓*e*P **P 02 20 03.7 +0.5**
comp=Z,4μm,0.8s,mb6.8
ULHL Ulahol 50.07 290 P **P 02 20 04.8 +1.1**
SNR=341
LSA Lhasa 50.11 267 P **P 02 20 02.4 -1.8**
LSA S **S 02 26 22.5 -7.2**
LVZ Lovozero 50.15 334 P **P 02 20 03.0 -0.9**
comp=Z,37μm,0.8s,mb7.8
LVZ Lovozero 50.15 334 *i*P **P 02 20 02.8 -1.1**
A05A Maple Falls 50.17 59⇓P **P 02 20 03.9 -0.4**
baz=50,SNR=175
ENPP El Nido 50.23 225 *e*P **P 02 20 05.8 +0.6**
NLWA Neilton Lookou 50.29 61 P **P 02 20 05.7 +0.4**
baz=50,SNR=567
NLWA Neilton Lookou 50.29 61 *e*P **P 02 20 05.5 +0.2**
USP Osenovka 50.36 292 P **P 02 20 06.7 +0.8**
SNR=1040
CHMS Chumysh 50.40 291 P **P 02 20 06.9 +0.8**
SNR=231
SNPH Sibulan 50.42 219 *e*P **P 02 20 08.9 +2.4**
KBK Karagaybulak 50.52 291 P **P 02 20 08.0 +1.0**
SNR=361
KEV Kevo 50.54 339⇓*e*P **P 02 20 06.1 -0.6**

KEV pmax pmax
comp=Z,4μm,0.7s,mb6.8
KEV Kevo 50.54 339⇓*e*P **P 02 20 06.1 -0.6**
comp=Z,4μm,0.7s,mb6.8
FRU Bishkek 50.58 291⇓*i*P **P 02 20 09.0 +1.6**
FRU *e* 02 21 17.0
FRU *i* 02 26 40.0
CGP Cagayan de Oro 50.70 217⇓*e*P **P 02 20 08.2 -0.5**
APA Apatity 50.71 334⇑*i*P **P 02 20 07.8 -0.1**
APA *i* 02 21 08.0
APA *i* 02 22 14.0
APA *i*S **S 02 26 37.0 +0.4**
APA *i* 02 28 52.0
APA *i**SS sS 02 29 54.0 -11
APA MLR MLR
comp=Z,51μm,19.0s
GNW Green Mountain 50.72 61⇓*e*P **P 02 20 08.4 +0.1**
comp=Z,1μm,0.9s,mb6.1
GNW *e*PcP PcP 02 21 14.0 +0.6
KZA Kyzart 50.73 290 P **P 02 20 10.2 +1.6**
SNR=273
JCW Jim Creek 50.77 59 *e*P **P 02 20 08.5 -0.2**
B06A Marblemount 50.78 59⇓P **P 02 20 08.5 -0.3**
baz=51,SNR=341
AAK Ala-Archa 50.78 291 P **P 02 20 09.6 +0.7**
comp=Z,28μm,0.8s,mb7.5
AAK Ala-Archa 50.78 291 P **P 02 20 09.8 +0.9**
SNR=469
AAK Ala-Archa 50.78 291 PKPPKP 02 50 35.0
comp=Z,17nm,0.9s,baz=42,slow=4.9,SNR=4.0
RPW Rockport 50.81 59 *e*P **P 02 20 08.6 -0.4**
ARCES ARCESS Array B 51.03 339 P **P 02 20 09.7 -0.6**
comp=Z,2μm,0.8s,mb6.4,baz=37,slow=7.1,SNR=802
ARCES S **S 02 26 45.8 +4.9**
comp=Z,130nm,0.9s,baz=192,slow=30,SNR=1.7
ARCES PKPPKP 02 50 36.4
comp=Z,24nm,0.8s,baz=202,slow=2.6,SNR=7.7
ARCES PKP2bc 02 50 52.4
comp=Z,19nm,0.7s,baz=221,slow=1.1,SNR=4.1
ARCES ARCESS Array B 51.03 339 P **P 02 20 09.7 -0.5**
ARCES S **S 02 26 45.8 +4.9**
ARCES ARCESS Array B 51.03 339 P **P 02 20 09.7 -0.6**
ARCES S **S 02 26 45.8 +4.9**
ARCES P'P'
ARCES ⇑*e* 02 50 36.4
ARE0 ARCESS Array S 51.03 339⇓*e*P **P 02 20 09.8 -0.4**
UCH Uchtor 51.04 291 *e*P **P 02 20 11.5 +0.8**
comp=Z,13nm,1.0s
BUKP Musuan 51.11 216 *e*P **P 02 20 12.4 +0.8**
EKS2 Erkin-Say 51.16 292 P **P 02 20 12.6 +1.0**
SNR=1003
EKS2 Erkin-Say 51.16 292⇓*e*P **P 02 20 12.4 +0.8**
comp=Z,724nm,1.5s,mb5.7
D05A Enumclaw 51.40 60⇓P **P 02 20 13.6 +0.4**
baz=51,SNR=357
F03A Seaside 51.41 63⇑P **P 02 20 13.3 0.0**
baz=51,SNR=149
MATI Mati 51.57 215 *e*P **P 02 20 16.0 +1.1**
EDM Edmonton 51.61 50⇓*e*P **P 02 20 14.3 -0.3**
DAV Davao City (W) 51.68 215 *e*P **P 02 20 15.3 -0.4**
comp=Z,8μm,1.4s,mb6.8
DAV Davao City (W) 51.68 215⇑*e*P **P 02 20 17.4 +1.7**
DAV Davao City (W) 51.68 215 P **P 02 20 16.2 +0.5**
comp=Z,5μm,1.6s,mb6.5
DAV Davao City (W) 51.68 215 P **P 02 20 16.1 +0.4**
SNR=119
DMPH Davao City--Mi 51.69 216⇑*e*P **P 02 20 15.8 +0.1**
PAGZ Pagadian 51.74 218 *e*P **P 02 20 15.8 -0.3**
LON Longmire 51.78 61⇓*e*P **P 02 20 15.7 -0.2**
HEBO Mount Hebo 51.78 63⇓*e*P **P 02 20 16.4 +0.4**
comp=Z,4μm,1.0s,mb6.6
PPR Puerto Princes 51.80 225⇑*e*P **P 02 20 17.9 +1.3**
KCP Kidapawan 51.91 216⇑*e*P **P 02 20 19.7 +2.4**
POHA Pohakuloa 51.91 110 *e*P **P 02 20 16.1 -1.2**
comp=Z,10μm,0.9s,mb7.0
KTK1 Kautokeino 51.93 339 *e*P **P 02 20 15.7 -1.0**
KTK1 *e*S **S 02 26 55.1 +2.2**
KTK1 *e*SS SS 02 30 36.5 -5.3
ETW Entiat 51.97 59 *e*P **P 02 20 17.2 0.0**
B08A Colville Reser 51.97 58 P **P 02 20 17.0 -0.2**
baz=52,SNR=1000
F04A Amboy 52.00 62 P **P 02 20 17.4 -0.1**
baz=52,SNR=588
CTBH Cotabato--PC H 52.01 217 *e*P **P 02 20 18.4 +0.5**
KSH Kashi 52.06 287 *e*P **P 02 20 22.7 +4.7**
KSH PcP PcP 02 21 20.5 +1.9
KSH pP pP 02 22 22.6 +8.0
KSH PP PP 02 22 34.4 +8.6
KSH ScP ScP 02 24 15.6 +0.9
KSH PcS PcS 02 25 18.6 +0.6
KSH S **S 02 27 01.0 +5.6**
KSH sS sS 02 30 35.7 +10
KSH SS SS 02 30 59.3 +14
KSH pmax pmax
comp=Z,9μm,1.5s,mb6.8
KSH pmax pmax
comp=Z,37μm,2.6s,mb7.2
IPIL Ipil 52.09 219 *e*P **P 02 20 19.6 +0.9**
IMP Imphal 52.15 260 *i*P **P 02 20 19.0 +0.1**
IMP *i*x x 02 21 35.0
IMP *i*S **S 02 26 56.0 -1.0**
TRO Tromso 52.27 341⇓*i*P **P 02 20 18.4 -0.7**
TRO AMb AMB 02 20 29.1
comp=Z,8μm,1.9s,mb6.7
TRO *e*S **S 02 27 00.5 +3.2**
TRO *e* 02 30 32.1
TRO Tromso 52.27 341⇓*i*P **P 02 20 18.4 -0.7**
TRO pmax pmax
comp=Z,8μm,1.9s,mb6.7
TRO Tromso 52.27 341⇓*i*P **P 02 20 18.4 -0.7**
comp=Z,8μm,1.9s,mb6.7
KHU Kahuku 52.28 111 *e*P **P 02 20 18.7 -1.2**
PUH Pauahi 52.40 110 *e*P **P 02 20 19.6 -1.1**
STCH Steam Cracks 52.44 110 *e*P **P 02 20 20.8 -0.2**
COR Corvallis 52.44 64⇓*e*P **P 02 20 21.3 +0.6**
COR pmax pmax
comp=Z,2μm,0.8s,mb6.3
COR Corvallis 52.44 64⇓*e*P **P 02 20 21.3 +0.6**
comp=Z,2μm,0.8s,mb6.3
G04A Mulino 52.46 63 P **P 02 20 21.1 +0.4**
baz=52,SNR=271
KK31 Karatay Array 52.64 294 *c*e*P **P 02 20 22.1 0.0**
KK31 pmax pmax
comp=Z,7μm,1.0s,mb6.9
KK31 Karatay Array 52.64 294⇑*e*P **P 02 20 22.2 +0.1**
SHL Shillong 52.76 263 *i*P **P 02 20 22.5 -0.7**
SHL *i*S **S 02 27 04.0 -1.0**
HOOD Mount Hood Mea 52.81 62 *e*P **P 02 20 23.9 +0.6**
GSPH General Santos 52.81 216⇑*e*P **P 02 20 23.7 0.0**
E07A Sunnyside 52.91 60⇓P **P 02 20 24.1 +0.2**
baz=53,SNR=93
OD2 Odessa Site #2 52.93 58 *e*P **P 02 20 23.4 -0.7**
comp=Z,935nm,0.9s,mb6.0
H04A Detroit Lake 52.96 63⇑P **P 02 20 24.2 -0.1**
baz=53,SNR=287
KEBM Edson Butte 53.04 66 *e*P **P 02 20 26.2 +1.2**
D08A Wollman Farm, 53.05 59⇓P **P 02 20 24.2 -0.7**
baz=53,SNR=264
ZMPH Zamboanga City 53.05 219⇓*i*P **P 02 20 26.1 +0.7**
ZMPH *e*S pP 02 22 07.3 -16
BATP Bataraza 53.07 225 *e*P **P 02 20 27.0 +1.4**
NEW Newport 53.13 57⇓*e*P **P 02 20 25.1 -0.4**
comp=Z,1μm,2.0s,mb5.7
RSW Rattlesnake Hi 53.15 60 *e*P **P 02 20 25.7 0.0**
comp=Z,7μm,0.7s,mb7.0
HAWA Hanford 53.18 60⇓*e*P **P 02 20 25.8 -0.1**
comp=Z,1μm,2.0s,mb5.7
F07A Phinny Hill Vi 53.32 60⇓P **P 02 20 26.2 -0.6**
baz=53,SNR=508
GTK Gangtok 53.35 267 *e*PKP **P 02 20 28.5 +1.1**
GTK *e*x x 02 27 19.5
E08A Dider Farm, El 53.36 59⇓P **P 02 20 26.9 -0.2**
baz=53,SNR=408
A12A Yaak River Ran 53.40 55 P **P 02 20 27.6 +0.3**
baz=53,SNR=110
G06A Carlson Farm, 53.40 61⇑P **P 02 20 27.4 0.0**
baz=53,SNR=181
UBT Ubonrachathani 53.58 243 P **P 02 20 30.0 +0.9**
comp=Z,1μm,0.8s,mb6.1
B12A Libby 53.74 56 P **P 02 20 29.9 +0.2**
baz=54,SNR=46
E09A Wood Farm, Sta 53.81 59⇑P **P 02 20 30.0 -0.2**
baz=54,SNR=958
C11A Tepee Creek (N 53.85 57⇑P **P 02 20 30.5 0.0**
baz=54,SNR=1000

AB31 **Akbulak array** 53.87 306*ce*P P 02 20 30.6 -0.1
AB31 pmax pmax
comp=Z,388nm,0.3s,mb6.1
AB31 **Akbulak array** 53.87 306⇑*e*P P 02 20 30.7 0.0
ABKAR **Akbulak array** 53.87 306 *e*P P 02 20 30.5 -0.1
comp=Z,36nm,1.5s
TAPN **Taplejung** 53.88 268 *e*P P 02 20 31.2 +0.2
comp=Z,1µm,0.5s,mb6.3
SLGI **Shiliguri** 53.95 267 *e*PKP P 02 20 32.2 +0.7
CHG **Chiang Mai** 53.96 251 ⇓P P 02 20 32.5 +0.8
comp=Z,5µm,0.8s,mb6.8
CHG SG 02 20 34.0
CHTO **Chiang Mai** 53.96 251⇑*e*P P 02 20 32.5 +0.8
CHTO pmax pmax
comp=Z,4µm,0.8s,mb6.7
CHTO **Chiang Mai** 53.96 251⇑*e*P P 02 20 32.5 +0.8
comp=Z,4µm,0.8s,mb6.7
HUMO **Hull Mountain** 53.97 65⇓*i*P P 02 20 32.3 +0.9
A13A **Flathead Natio** 54.00 55 ⇓P P 02 20 31.6 +0.1
baz=54
WALA **Waterton Lakes** 54.15 54 *e*P P 02 20 32.5 -0.1
LNOR **Lincton Mounta** 54.17 59 *e*P P 02 20 33.0 +0.2
G08A **Pilot Rock** 54.23 60 ⇑P P 02 20 33.3 +0.1
baz=54,SNR=735
CM31 **Chiang Mai Arr** 54.25 251 *e*P P 02 20 34.6 +0.8
comp=Z,2µm,1.0s,mb6.4
CMAR **Chiang Mai Arr** 54.25 251 S S 02 27 28.9 +4.4
comp=Z,30nm,0.9s,baz=334,slow=6.8,SNR=1.5
CMAR PKPPKP 02 50 31.1
comp=Z,40nm,0.9s,baz=251,slow=2.3,SNR=4.5
CMAR PKP2bc 02 50 50.0
comp=Z,127nm,1.1s,baz=244,slow=4.1,SNR=5.5
C12B **Naegeli Ranch,** 54.32 56 ⇑P P 02 20 34.2 +0.4
baz=54,SNR=1000
B13A **Whitefish** 54.36 55 ⇓P P 02 20 33.9 -0.1
baz=54,SNR=851
AGT **Agartala** 54.41 262 *i*P P 02 20 34.0 -0.8
AGT *i*x x 02 22 29.0
STEI **Steigen** 54.43 342 *e*P P 02 20 33.5 -0.7
STEI AMb AMB 02 20 44.6
comp=Z,4µm,1.7s,mb6.3
ODAN **Odare** 54.43 268 *e*P P 02 20 34.7 -0.2
comp=Z,1µm,0.5s,mb6.3
A14A **Double T Ranch** 54.45 54 ⇑P P 02 20 34.5 -0.1
baz=54
GUN **Gumba** 54.54 270 *e*P P 02 20 35.4 -0.3
JIRN **Jiri** 54.54 269 *e*P P 02 20 35.9 +0.2
comp=Z,2µm,0.7s,mb6.4
LOF **Lofoten** 54.56 343 *e*P P 02 20 27.3 -7.8
LOF AMB AMB 02 21 33.7
comp=Z,9µm,2.0s,mb6.7
BSMT **Bassoo Peak** 54.56 56 *e*P P 02 20 35.9 +0.5
JNW **Jan Mayen West** 54.61 353 *e*P P 02 20 36.5 +1.0
JNW AMb AMB 02 20 50.9
comp=Z,7µm,0.9s,mb6.9
JNW **Jan Mayen West** 54.61 353 *e*P P 02 20 36.5 +1.0
comp=Z,7µm,0.9s,mb6.9
F10A **Beach Ranch, E** 54.64 59 ⇓P P 02 20 36.1 +0.1
baz=54,SNR=1000
JNE **Jan Mayen East** 54.64 353 *e*P P 02 20 37.0 +1.3
JNE AMB AMB 02 20 45.9
comp=Z,10µm,1.2s,mb6.9
JMIC **Jan Mayen** 54.66 353⇓*i*P P 02 20 37.8 +2.0
JMIC *es*P sP 02 23 40.6 -2.9
JMIC *e*S S 02 27 35.3 +6.9
JMIC *e*SS SS 02 31 30.9 +6.4
YBH **Yreka Blue Hor** 54.70 66⇓*e*P P 02 20 37.7 +1.1
YBH pmax pmax
comp=Z,3µm,0.9s
YBH **Yreka Blue Hor** 54.70 66⇓*e*P P 02 20 37.7 +1.1
comp=Z,3µm,0.9s,mb6.5
JMI **Jan Mayen** 54.73 353 *e*P P 02 20 37.4 +1.1
JMI AMb AMB 02 20 45.5
comp=Z,8µm,1.3s,mb6.8
JMI **Jan Mayen** 54.73 353 *e*P P 02 20 37.4 +1.1
comp=Z,8µm,1.3s,mb6.8
A15A **Johnson Ranch,** 54.77 54 P P 02 20 36.2 -0.7
baz=55,SNR=1000
C13A **Hot Springs** 54.78 56 ⇓P P 02 20 37.4 +0.3
baz=55,SNR=1000
RAMN **Ramite** 54.83 268 *e*P P 02 20 37.6 -0.1
comp=Z,685nm,0.3s,mb6.3
RAMN **Ramite** 54.83 268 *e*P P 02 20 38.4 +0.7
comp=Z,18µm,0.6s,mb7.5
D12A **Red Ives Fores** 54.83 57 ⇑P P 02 20 36.9 -0.5
baz=55
G09A **Cove** 54.84 60 ⇓P P 02 20 37.6 +0.1
baz=55,SNR=863
SGSI **Sangihe** 54.86 214 P P 02 20 37.7 -0.3
JOF **Joensuu** 54.86 332 *e*P P 02 20 37.3 0.0
JOF pmax pmax
comp=Z,5µm,0.6s,mb6.9
JOF **Joensuu** 54.86 332 *e*p P 02 20 37.3 0.0
comp=Z,5µm,0.6s,mb6.9
JTMT **Jette** 54.88 55 *e*P P 02 20 38.0 +0.3
comp=Z,788nm,0.9s,mb5.9
H08A **Prairie City** 54.91 61 P P 02 20 38.4 +0.5
baz=55,SNR=1000
YBMT **Yellow Bay** 54.93 55 *e*P P 02 20 38.3 +0.2
B14A **Marquette Ranc** 54.94 54 ⇓P P 02 20 37.6 -0.4
baz=55,SNR=1000
K05A **Summer Lake** 54.98 64 ⇑P P 02 20 39.6 +1.1
baz=55,SNR=1000
KKN **Kakani** 54.99 270 *e*P P 02 20 38.6 -0.1
PKI **Pulchoki** 55.07 270 *e*P P 02 20 39.1 -0.2
PKIN **Phulchoki** 55.08 270 *e*P P 02 20 40.2 +0.8
comp=Z,21µm,1.1s,mb7.3
C14A **Swan Lake** 55.12 55 ⇑P P 02 20 39.6 +0.2
baz=55
G10A **Bishop Farm, J** 55.17 59 P P 02 20 39.9 +0.2
baz=55,SNR=981
E12A **Beaver Dam Sad** 55.17 57 ⇓P P 02 20 39.7 0.0
baz=55,SNR=1000
KDM **Kudat** 55.17 225 P P 02 20 41.3 +1.1
SWMT **Swartz Lake** 55.18 56 *e*P P 02 20 39.8 0.0
comp=Z,795nm,0.9s,mb6.0
GKN **Gorkha** 55.21 271 *e*P P 02 20 40.1 -0.2
DMN **Daman** 55.22 270 *e*P P 02 20 40.6 +0.2
F11A **Grangeville** 55.24 58 P P 02 20 40.0 -0.2
baz=55,SNR=1000
D13A **Huson** 55.24 56 P P 02 20 40.1 -0.1
baz=55,SNR=808
B15A **Bradely Ranch,** 55.31 54 P P 02 20 40.2 -0.5
baz=55,SNR=637
H09A **Durkee** 55.32 60 ⇑P P 02 20 41.5 +0.7
baz=55,SNR=1000
BMO **Blue Mountains** 55.38 60 *e*P P 02 20 41.1 -0.1
comp=Z,4µm,0.5s,mb6.9
FCC **Fort Churchill** 55.41 36⇓*e*P P 02 20 40.1 -1.0
comp=Z,179nm,0.8s,mb5.3
FFC **Flin Flon** 55.44 43 P P 02 20 41.1 -0.3
comp=Z,55µm,0.9s,mb7.8
FFC **Flin Flon** 55.44 43⇓*e*P P 02 20 41.1 -0.3
FFC pmax pmax
comp=Z,7µm,0.8s,mb6.9
FFC **Flin Flon** 55.44 43⇓*e*P P 02 20 41.1 -0.3
comp=Z,7µm,0.8s,mb6.9
G11A **Walters Elk Ra** 55.52 59 ⇓P P 02 20 42.3 +0.1
baz=55,SNR=846
WDC **Whiskeytown Da** 55.59 67⇓*e*P P 02 20 43.1 +0.3
comp=Z,18µm,1.1s,mb7.1
SLMT **Seeley Lake** 55.61 55 *e*P P 02 20 42.8 0.0
comp=Z,5µm,0.6s,mb6.8
B16A **M & M Farms, S** 55.65 53 ⇓P P 02 20 42.2 -0.8
baz=55,SNR=418
C15A **Salmond Ranch,** 55.67 55 ⇑P P 02 20 43.5 +0.4
baz=56
MSO **Missoula** 55.68 56⇓*e*P P 02 20 43.2 -0.1
comp=Z,1µm,0.7s,mb6.2
D14A **Greenough** 55.72 56 ⇑P P 02 20 43.5 0.0
baz=56,SNR=1000
I09A **Lost Marbles R** 55.77 61 P P 02 20 44.4 +0.6
baz=56,SNR=901
F12A **Elk City** 55.78 58 ⇓P P 02 20 44.3 +0.4
baz=56,SNR=1000
J08A **Circle Bar Ran** 55.82 62 ⇑P P 02 20 45.1 +0.8
baz=56,SNR=1000
SCO **Scoresbysund** 55.82 358⇓*i*P P 02 20 44.0 +0.2
SCO *e*S S 02 27 48.6 +5.2
SCO pmax pmax
comp=Z,2µm,0.9s,mb6.3
SCO MLR MLR
comp=Z,62µm,20.0s
SCO **Scoresbysund** 55.82 358⇓*i*P P 02 20 44.0 +0.2
comp=Z,2µm,0.9s,mb6.3
SCO *e*S S 02 27 48.6 +5.2
SCO
comp=Z,62µm,20.0s
E13A **Victor** 55.83 57 P P 02 20 44.1 -0.2
baz=56,SNR=710
H10A **Noah's Angus R** 55.85 60 ⇓P P 02 20 44.5 +0.2
baz=56,SNR=1000
NST **Nakhon Sawan** 55.85 248 P P 02 20 45.5 +0.7
MOD **Modoc** 55.87 64⇑*e*P P 02 20 45.1 +0.5
comp=Z,4µm,0.6s,mb6.8
CHMT **Chmberlain Mo** 55.96 56 *e*P P 02 20 45.1 0.0
comp=Z,46nm,0.2s,mb5.3
KOLN **Koldanda** 55.99 271 *e*P P 02 20 45.5 -0.2
MYLDM **Lahad Datu** 56.06 223 P P 02 20 47.4 +1.1
MYLDM **Lahad Datu** 56.06 223 P P 02 20 48.0 +1.7
comp=Z,3µm,1.7s,mb6.1
C16A **Fuhringer Ranc** 56.06 54 ⇑P P 02 20 45.5 -0.3
baz=56,SNR=1000
KONS **Konsvik** 56.09 342 *e*P P 02 20 44.9 -0.7
KONS AMb AMB 02 20 53.1
comp=Z,4µm,1.5s,mb6.3
MOR8 **Moi Rana** 56.13 341 *e*P P 02 20 44.1 -1.9
MOR8 AMb AMB 02 20 50.6
comp=Z,5µm,1.1s,mb6.5
MOR8 **Moi Rana** 56.13 341 *e*P P 02 20 44.1 -1.9
comp=Z,5µm,1.1s,mb6.5
H11A **Donnelly** 56.14 59 ⇑P P 02 20 46.5 +0.1
baz=56,SNR=1000
B17A **L&G Farms, Che** 56.17 53 ⇓P P 02 20 45.6 -0.9
baz=56
A18A **Metzger Ranch,** 56.17 52 P P 02 20 46.0 -0.5
baz=56,SNR=586
I10A **Payette** 56.17 60 ⇑P P 02 20 47.5 +0.8
baz=56,SNR=1000
SDKM **Sandakan** 56.17 224 P P 02 20 47.8 +0.8
FLOS **Flostrand** 56.19 342 *e*P P 02 20 46.0 -0.3
G12A **Big Creek, Yel** 56.19 58 ⇓P P 02 20 46.6 -0.1
baz=56
E14A **Clinton** 56.19 56 ⇓P P 02 20 46.8 0.0
baz=56,SNR=1000
KKM **Kota Kinabalu** 56.22 226 P P 02 20 48.9 +1.5
KKM **Kota Kinabalu** 56.22 226 *e*P P 02 20 48.3 +0.9
comp=Z,11µm,1.5s,mb6.8
KKM **Kota Kinabalu** 56.22 226 P P 02 20 48.5 +1.2
comp=Z,4µm,1.6s,mb6.2
F13A **Darby** 56.22 57 P P 02 20 46.5 -0.4
baz=56,SNR=599
D15A **Lincoln** 56.23 55 ⇓P P 02 20 46.9 -0.1
baz=56,SNR=1000
STOK **Stokkvaagen** 56.25 342 *e*P P 02 20 46.4 -0.4
STOK *es*P sP 02 23 52.3 -3.0
STOK *e*S S 02 27 51.1 +2.1
WVOR **Wild Horse Val** 56.38 63⇓*i*P P 02 20 48.8 +0.7
WVOR pmax pmax
comp=Z,6µm,1.1s,mb6.6
WVOR **Wild Horse Val** 56.38 63⇓*i*P P 02 20 48.8 +0.7
comp=Z,6µm,1.1s,mb6.6
HOPS **Hopland** 56.42 68⇓*e*P P 02 20 48.5 +0.1
comp=Z,2µm,1.2s,mb6.1
B18A **Beardsley Farm** 56.58 52 ⇓P P 02 20 48.8 -0.5
baz=56,SNR=236
E15A **Deer Lodge** 56.60 56 ⇑P P 02 20 49.3 -0.2
baz=56,SNR=1000
C17A **Wharram Farm,** 56.65 54 ⇑P P 02 20 49.1 -0.7
baz=56,SNR=994
J10A **Berg Farm, Mel** 56.65 61 ⇓P P 02 20 50.2 +0.3
baz=56,SNR=364
PTH **Pithoragarh** 56.67 276 *e*PKP P 02 20 50.2 -0.1
F14A **Wisdom** 56.68 57 P P 02 20 50.2 +0.2
baz=56,SNR=112
D16A **Dana Ranch, Ca** 56.70 55 P P 02 20 50.5 +0.3
baz=56,SNR=807
I11A **Placerville** 56.73 60 P P 02 20 50.5 +0.1
baz=56,SNR=597
G13A **Cobalt** 56.76 58 P P 02 20 50.3 -0.3
baz=56,SNR=1000
HRY **Holter Researc** 56.80 55⇓*i*P P 02 20 51.4 +0.5
comp=Z,222nm,0.7s,mb5.4
H12A **Diamond D Ranc** 56.83 59 P P 02 20 51.0 -0.1
baz=57,SNR=1000
EGMT **Eagleton** 56.85 53 ⇑P P 02 20 51.1 -0.1
baz=57,SNR=132
EGMT **Eagleton** 56.85 53⇓*i*P P 02 20 50.9 -0.2
comp=Z,3µm,1.1s,mb6.3
KAF **Kangasniemi** 56.89 333 *e*P P 02 20 50.9 -0.3
KAF pmax pmax
comp=Z,6µm,0.8s,mb6.8
KAF **Kangasniemi** 56.89 333 *e*P P 02 20 50.9 -0.3
comp=Z,6µm,0.8s,mb6.8
KAF **Kangasniemi** 56.89 333 *e*p P 02 20 50.9 -0.3
comp=Z,6µm,0.8s,mb6.8
SMPI **Sarmi** 56.97 197 P P 02 20 52.7 +0.2
comp=Z,3µm,1.8s,mb6.2
DLH **Dalhousie** 56.98 281 *ex*P pP 02 22 56.0 +3.6
DLH *ex*x x 02 28 03.0
E16A **East Helena** 57.00 55 ⇑P P 02 20 52.7 +0.5
baz=57,SNR=170
TNTI **Ternate** 57.02 211 P P 02 20 52.3 -0.5
comp=Z,6µm,1.4s,mb6.5
D17A **Six Diamond Ra** 57.03 54 P P 02 20 52.4 -0.1
baz=57,SNR=888
G14A **Jackson** 57.04 57 ⇓P P 02 20 52.2 -0.3
baz=57
K10A **MacKenzie Ranc** 57.06 61 P P 02 20 53.5 +0.8
baz=57,SNR=1000
F15A **Butte** 57.09 56 ⇓P P 02 20 53.1 +0.2
baz=57,SNR=894
TSM **Tawau** 57.12 223 P P 02 20 54.6 +1.1
H13A **Challis** 57.13 58 ⇓P P 02 20 52.8 -0.3
baz=57
LRM **Limekiln Ridge** 57.13 56⇓*e*P P 02 20 53.4 +0.3
comp=Z,222nm,0.7s,mb5.4
MCCM **Marconi Confer** 57.13 69⇓*e*P P 02 20 53.0 -0.3
comp=Z,1µm,0.9s,mb6.0
MFID **Camas Ranch** 57.14 60 P P 02 20 53.6 +0.4
baz=57,SNR=1000
SDNR **Sundarnagar** 57.15 280 *e*PKP P 02 20 52.9 -0.6
SDNR *es*S S 02 28 01.0 -0.5
CAL **Calcutta** 57.15 263 *e*PKP P 02 20 59.1 +5.5
CAL *es*S S 02 28 11.6 +10
JAY **Jayapura** 57.17 195 P P 02 20 54.1 +0.3
comp=Z,874nm,0.9s,mb5.9
MNI **Manado** 57.19 214 P P 02 20 53.1 -0.8
comp=Z,4µm,1.1s,mb6.5
THN **Thein Dam** 57.20 281 *e*PKP P 02 20 52.6 -1.2
THN *es*S S 02 28 01.6 -0.5
I12A **Atlanta** 57.23 59 ⇓P P 02 20 54.0 +0.2
baz=57,SNR=1000
BEKR **Beckworth** 57.28 66 ⇓P P 02 20 54.5 +0.3
baz=57
SMLA **Simla** 57.31 279 *i*P P 02 20 54.5 0.0
SMLA *i*S S 02 28 03.9 +0.4
SMLA *i*S S 02 28 04.9 +1.4
DDI **Dehra Dun** 57.38 278 *e*PKP P 02 20 56.0 +1.0
DDI *ex*x x 02 23 04.0
DLMT **Dillon** 57.38 57⇓*i*P P 02 20 55.2 +0.3
comp=Z,303nm,1.6s,mb5.2
D18A **Linhart Farms,** 57.42 53 ⇓P P 02 20 55.4 +0.3
baz=57,SNR=395
E17A **Martinsdale** 57.44 55 ⇑P P 02 20 56.0 +0.8
baz=57,SNR=1000
SWI **Sorong** 57.49 206 P P 02 20 56.0 +0.1
comp=Z,7µm,2.1s,mb6.4
K11A **Parker Ranch,** 57.50 61 ⇓P P 02 20 56.1 +0.4
baz=57,SNR=802
FINES **FINESS Array B** 57.50 333 P P 02 20 55.0 -0.3
comp=Z,3µm,0.6s,mb6.6,baz=37,slow=6.9,SNR=2044
FINES S S 02 28 07.9 +2.9
comp=Z,335nm,1.0s,baz=28,slow=17,SNR=4.6
FINES PKKP 02 42 04.7
comp=Z,5.8nm,0.5s,baz=108,slow=2.0,SNR=3.5
FINES PKPPKP 02 50 29.8
comp=Z,59nm,0.9s,baz=142,slow=1.4,SNR=8.4
FINES PKP2bc 02 50 43.5
comp=Z,39nm,0.8s,baz=132,slow=1.2,SNR=4.0
FINES **FINESS Array B** 57.50 333 P P 02 20 55.1 -0.2
FINES S S 02 28 07.9 +2.9
FINES **FINESS Array B** 57.50 333 P P 02 20 55.0 -0.3
FINES S S 02 28 07.9 +2.9
FINES PKKP 02 42 04.7
FINES P'P' 02 50 29.8
FINES ⇑*e* 02 50 43.5
BHK **Bhakra** 57.53 280 *e*PKP P 02 20 54.8 -1.3
BHK *ex*x x 02 23 06.2
H14A **Leadore** 57.53 58 P P 02 20 55.6 -0.2
baz=57,SNR=549
F16A **Kennard Place,** 57.56 56 P P 02 20 56.4 +0.4
baz=57,SNR=822
G15A **Dillon** 57.58 57 ⇓P P 02 20 55.6 -0.5
baz=57,SNR=1000
BOK **Bokaro** 57.63 266 *e*PKP P 02 20 57.1 +0.2
J12A **Stokes Ranch,** 57.64 60 ⇑P P 02 20 57.1 +0.5
baz=57,SNR=1000
MCMT **McKenzie Canyo** 57.64 57 *e*P P 02 20 56.4 -0.2
comp=Z,816nm,0.9s,mb5.9
BOZ **Bozeman (W)** 57.65 56 ⇓P P 02 20 57.1 +0.4
baz=57,SNR=1000
BOZ **Bozeman (W)** 57.65 56⇓*e*P P 02 20 57.2 +0.6
BOZ pmax pmax
comp=Z,2µm,0.8s,mb6.4
BOZ **Bozeman (W)** 57.65 56⇓*e*P P 02 20 57.2 +0.6
comp=Z,2µm,0.8s,mb6.4
I13A **Wildhorse Cree** 57.66 59 P P 02 20 57.5 +0.7
baz=57,SNR=1000
PUL **Pulkovo** 57.67 330*d*i*P P 02 20 56.5 0.0
PUL pmax pmax
comp=Z,7µm,0.7s,mb6.9
HLID **Hailey** 57.76 59 ⇑P P 02 20 57.8 +0.4
baz=58,SNR=798
HLID **Hailey** 57.76 59⇓*e*P P 02 20 57.7 +0.3
comp=Z,27µm,1.0s,mb7.3
L10A **Juniper Basin** 57.77 62 ⇓P P 02 20 58.3 +0.8
baz=58,SNR=660
E18A **Harlowton** 57.82 54 ⇓P P 02 20 58.3 +0.5
baz=58,SNR=1000
G16A **Moss Hill, Enn** 57.87 56 P P 02 20 58.5 +0.5
baz=58,SNR=1000
H15A **Lima** 57.89 57 P P 02 20 58.3 +0.1
baz=58,SNR=833
F17A **Fitzpatrick Pl** 57.94 55 P P 02 20 59.2 +0.6
baz=58,SNR=1000
I14A **Mackay** 57.98 58 P P 02 20 59.0 +0.1
baz=58,SNR=412
J13A **Cove Ranch, Pi** 58.00 59 P P 02 20 59.8 +0.8
baz=58,SNR=1000
WCN **Washoe City** 58.01 66 ⇑P P 02 20 59.8 +0.6
baz=58,SNR=192
NSS **Namsos** 58.07 341⇓*i*P P 02 20 57.1 -2.0
NSS AMb AMB 02 21 02.9
comp=Z,4µm,1.4s,mb6.3
NSS *es*P sP 02 24 05.5 -3.0
NSS *e*S S 02 28 13.3 +1.2
NSS *e*SS SS 02 32 19.5 +1.7
NSS **Namsos** 58.07 341⇓*i*P P 02 20 57.1 -2.0
comp=Z,4µm,1.4s,mb6.3
L11A **Cat Creek Ranc** 58.07 61 ⇓P P 02 21 00.4 +0.9
baz=58,SNR=1000
M10A **I.L. Ranch, Tu** 58.13 62 P P 02 21 01.0 +1.1
baz=58,SNR=864
K12A **Draper Farm, C** 58.17 60 P P 02 21 00.9 +0.7
baz=58,SNR=1000
LBMI **Labuha** 58.32 210 P P 02 21 02.2 +0.7
comp=Z,5µm,0.8s,mb6.7
G17A **Pierce Place,** 58.32 55 ⇑P P 02 21 02.1 +1.0
baz=58,SNR=815
QLMT **Earthquake Lak** 58.34 56 *e*P P 02 21 01.3 0.0
comp=Z,5µm,0.6s,mb6.8
J14A **Carey** 58.39 59 P P 02 21 02.8 +1.2
baz=58,SNR=1000
F18A **Big Timber** 58.40 54 P P 02 21 02.4 +0.8
baz=58,SNR=1000
I15A **Monteview** 58.42 58 ⇓P P 02 21 01.9 +0.1
baz=58,SNR=100
L12A **House Creek Ra** 58.47 61 ⇑P P 02 21 02.8 +0.7
baz=58,SNR=678
MOS **Moscow** 58.49 323κ *i*P P 02 21 02.2 +0.1
MOS *e* 02 21 45.0
MOS *e* 02 23 23.0
MOS *i* 02 24 08.5
MOS *i*S S 02 28 17.7 +0.1
MOS *i* 02 29 45.2
MOS *i*SSS 02 35 32.4
MOS pmax pmax
comp=Z,48µm,1.8s,mb7.3
MOS pmax pmax
comp=Z,20µm,1.3s,mb7.1
MOS smax
comp=N,59µm,4.7s
MOS smax
comp=E,109µm,4.7s
GCMT **Greycliff** 58.50 54 *e*P P 02 21 03.2 +0.8
comp=E,167nm,0.3s,mb5.7
H16A **Russell Place,** 58.52 56 ⇓P P 02 21 03.1 +0.6
baz=58,SNR=1000
BMN **Battle Mountai** 58.55 63⇓*i*P P 02 21 03.3 +0.5
BMN pmax pmax
comp=Z,146nm,2.3s
BMN **Battle Mountai** 58.55 63⇓*i*P P 02 21 03.3 +0.6
comp=Z,146nm,2.3s
CMB **Columbia Colle** 58.58 67⇓*i*P P 02 21 03.2 +0.2
CMB pmax pmax
comp=Z,7µm,1.0s,mb6.7
CMB **Columbia Colle** 58.58 67⇓*i*P P 02 21 03.1 +0.2
comp=Z,7µm,1.0s,mb6.7
M11A **Holland Ranch,** 58.58 62 ⇑P P 02 21 04.2 +1.2
baz=58,SNR=796
K13A **Stover Farm, H** 58.59 60 ⇓P P 02 21 03.4 +0.4
baz=58,SNR=250
YMR **Madison River** 58.69 56⇓*i*P P 02 21 04.3 +0.8
comp=Z,9µm,1.8s,mb6.6
N10A **Dunphy** 58.72 63 ⇓P P 02 21 04.8 +0.9
baz=58,SNR=81
YNR **Norris Junctio** 58.79 56⇓*e*P P 02 21 05.5 +1.3
comp=Z,2µm,0.9s,mb6.2
J15A **Blackfoot** 58.88 58 P P 02 21 05.4 +0.5
baz=59,SNR=297
G18A **Lazy EL Ranch,** 58.90 55 P P 02 21 05.1 +0.1
baz=59,SNR=758
YFT **Old Faithful** 58.91 56⇓*i*P P 02 21 07.0 +2.0
comp=Z,9µm,1.8s,mb6.6
SAO **San Andreas Ge** 58.91 69⇓*i*P P 02 21 05.2 0.0
SAO pmax pmax
comp=Z,2µm,0.5s,mb6.6
SAO **San Andreas Ge** 58.91 69⇓*i*P P 02 21 05.2 -0.1
comp=Z,2µm,0.5s,mb6.6
I16A **Newdale** 59.00 57 P P 02 21 06.9 +1.2
baz=59,SNR=1000
O10A **Cortez Mining,** 59.03 63 ⇑P P 02 21 06.6 +0.6
baz=59,SNR=1000
LKWY **Lake** 59.04 56⇓*i*P P 02 21 07.9 +2.0
LKWY pmax pmax
comp=Z,2µm,0.8s,mb6.3
LKWY **Lake** 59.04 56⇓*i*P P 02 21 07.9 +2.0
comp=Z,2µm,0.8s,mb6.3
M12A **Wells** 59.05 61 ⇓P P 02 21 06.8 +0.8
baz=59,SNR=971
N11A **Elko Archery C** 59.06 62 ⇓P P 02 21 06.9 +0.8
baz=59,SNR=264
L13A **Double Diamond** 59.06 60 ⇑P P 02 21 07.2 +1.1
baz=59,SNR=904
DGMT **Dagmar** 59.08 49 P P 02 21 06.0 -0.1
baz=59,SNR=729
DGMT **Dagmar** 59.08 49⇓*i*P P 02 21 05.8 -0.3
comp=Z,1µm,2.0s,mb5.6
H17A **Grant Village** 59.08 56 ⇓P P 02 21 08.4 +2.2
baz=59,SNR=482
NDI **New Delhi** 59.08 277 *e*PKP P 02 21 05.0 -1.4
NDI *ex*x x 02 28 16.0
K14A **Jones Ranch, D** 59.12 59 ⇓P P 02 21 07.6 +1.1
baz=59,SNR=1000
RLMT **Red Lodge** 59.18 55 P P 02 21 07.8 +1.0
baz=59,SNR=1000
RLMT **Red Lodge** 59.18 55⇓*i*P P 02 21 07.8 +1.0
comp=Z,6µm,0.8s,mb6.8
IMW **Indian Meadow** 59.26 57⇓*e*P P 02 21 08.5 +1.1
comp=Z,1µm,0.8s,mb6.0
K15A **Arbon** 59.35 59 P P 02 21 09.1 +1.1
baz=59,SNR=1000
OBN **Obninsk** 59.36 323 P P 02 21 07.9 +0.1
comp=Z,54µm,0.9s,mb7.7
OBN **Obninsk** 59.36 323*d*i*P P 02 21 07.2 -0.6
OBN *i* 02 21 49.0
OBN *i* 02 23 30.2
OBN *i* *SP sP 02 24 06.5 -11
OBN *i*S S 02 28 31.1 +2.6
OBN pmax pmax
comp=Z,41µm,1.7s,mb7.3
OBN pmax pmax
comp=Z,22µm,1.6s,mb7.0
OBN MLR MLR
comp=Z,36µm,15.0s
OBN **Obninsk** 59.36 323⇓*e*P P 02 21 07.4 -0.4
comp=Z,17µm,1.2s,mb7.0
DCID1 **Drake Creek** 59.36 57⇓*e*P P 02 21 09.2 +1.1

comp=Z,3µm,0.9s,mb6.5
ELK **Elko** 59.37 62⇓*iP* P 02 21 09.0 +0.8
ELK pmax pmax
comp=Z,172nm,0.6s
ELK **Elko** 59.37 62⇓*iP* P 02 21 09.0 +0.8
comp=Z,172nm,0.6s,mb5.4
J16A **Bone** 59.38 58 ⇓P P 02 21 09.2 +1.0
baz=59,SNR=677
N12A **Clover Valley,** 59.39 62 P P 02 21 09.5 +1.2
baz=59,SNR=1000
N12A **Clover Valley,** 59.39 62⇓*iP* P 02 21 09.5 +1.2
comp=Z,2µm,0.8s,mb6.3
I17A **Pilgrim Ck.** 59.42 56 ⇑P P 02 21 10.1 +1.6
baz=59,SNR=266
NVAR **Mina Array Bea** 59.42 66 P P 02 21 09.3 +0.7
comp=Z,701nm,0.7s,mb5.9,baz=294,slow=6.1,SNR=1128
NVAR pP pP 02 23 14.3 +4.0
comp=Z,41nm,0.5s,baz=50,slow=23,SNR=2.8
NVAR S **S** **02 28 32.6 +2.8**
comp=Z,11nm,0.6s,baz=13,slow=27,SNR=2.0
NVAR SKKS 02 48 10.1
comp=Z,0.9nm,0.6s,baz=16,slow=28,SNR=2.6
L14A **Malta** 59.46 60 ⇑P P 02 21 09.7 +1.0
baz=59,SNR=779
LAO **LASA Array** 59.47 52⇓*iP* P 02 21 09.0 +0.3
comp=Z,4µm,0.8s,mb6.6
RRI2 **Red Ridge** 59.47 57⇓*iP* P 02 21 09.8 +1.1
comp=Z,3µm,0.7s,mb6.6
M13A **Montello** 59.48 61 P P 02 21 09.6 +0.7
baz=59,SNR=282
M13A **Montello** 59.48 61⇓*iP* P 02 21 09.3 +0.5
comp=Z,54nm,0.5s
KBL **Kabul** 59.48 288⇓*eP* P 02 21 08.0 -1.0
KBL pmax pmax
comp=Z,10µm,1.0s,mb6.9
KBL **Kabul** 59.48 288⇓*eP* P 02 21 08.0 -1.0
comp=Z,26µm,1.0s,mb7.3
P10A **Eureka** 59.54 64 ⇓P P 02 21 10.3 +1.0
baz=59,SNR=300
TPAW **Teton Pass** 59.55 57⇓*iP* P 02 21 10.5 +1.2
comp=Z,95nm,0.9s
O11A **Cowboy Ranch,** 59.59 63 P P 02 21 10.5 +0.9
baz=59,SNR=415
LOHW **Long Hollow** 59.63 57⇓*iP* P 02 21 10.8 +0.9
comp=Z,2µm,1.0s,mb6.2
SNOW **Snow King Moun** 59.67 57⇓*eP* P 02 21 11.3 +1.2
comp=Z,1µm,0.7s,mb6.1
REDW **Red Top Meadow** 59.69 57⇓*iP* P 02 21 11.3 +1.0
comp=Z,315nm,0.6s,mb5.6
K16A **Soda Springs** 59.71 58 ⇓P P 02 21 11.3 +0.9
baz=60,SNR=1000
MLAC **Mammoth Lakes** 59.72 67 ⇑P P 02 21 11.8 +1.3
baz=60,SNR=33
J17A **Brown Place, J** 59.76 57 ⇑P P 02 21 11.7 +1.0
baz=60,SNR=432
M14A **Sheep Mountain** 59.79 60 P P 02 21 11.7 +0.7
baz=60,SNR=468
VSU **Vasula** 59.80 331*d iP* P 02 21 10.5 -0.2
VSU pmax pmax
comp=Z,5µm,0.6s,mb6.8
VSU **Vasula** 59.80 331 *i* P P 02 21 10.6 -0.1
N13A **Wendover, West** 59.83 61 ⇑P P 02 21 11.8 +0.7
baz=60,SNR=612
N13A **Wendover, West** 59.83 61⇓*iP* P 02 21 11.8 +0.6
comp=Z,165nm,0.6s,mb5.3
HVU **Hansel Valley** 59.88 60⇓*eP* P 02 21 12.1 +0.6
HVU pmax pmax
comp=Z,763nm,0.8s,mb5.9
HVU **Hansel Valley** 59.88 60⇓*eP* P 02 21 12.1 +0.6
comp=Z,763nm,0.8s,mb5.9
L15A **Malad City** 59.92 59 ⇓P P 02 21 12.2 +0.5
baz=60,SNR=861
I18A **Diamond G Ranc** 59.96 56 ⇓P P 02 21 13.2 +1.2
baz=60
P11A **Circle Ranch,** 59.97 63 ⇓P P 02 21 12.3 +0.2
baz=60,SNR=187
O12A **Currie** 59.97 62 ⇓P P 02 21 12.8 +0.7
baz=60,SNR=1000
AHID **Auburn Hatcher** 60.01 58⇓*iP* P 02 21 12.6 +0.3
comp=Z,3µm,0.9s,mb6.3
K17A **Gardner Place,** 60.11 58 ⇓P P 02 21 13.0 0.0
baz=60,SNR=239
BTM **Bintulu** 60.11 227 P P 02 21 14.4 +0.9
Q10A **Clear Creek Ra** 60.16 64 ⇓P P 02 21 13.9 +0.5
baz=60,SNR=598
J18A **Kendall Valley** 60.22 57 ⇑P P 02 21 14.2 +0.5
baz=60,SNR=522
M15A **Larsen Ranch,** 60.28 60 ⇓P P 02 21 14.5 +0.3
baz=60,SNR=432
N14A **Grayback Hills** 60.35 61 ⇑P P 02 21 15.1 +0.5
baz=60,SNR=412
BGU **Big Grassy Mou** 60.38 60⇓*eP* P 02 21 15.3 +0.5
comp=Z,246nm,0.8s,mb5.4
L16A **Fish Haven** 60.39 59 ⇑P P 02 21 15.4 +0.6
baz=60,SNR=402
SPUT **South Promonto** 60.40 60⇓*eP* P 02 21 15.3 +0.4
comp=Z,1µm,0.8s,mb6.0
RCTC **Rector, Farmer** 60.46 68 P P 02 21 15.2 -0.2
baz=60,SNR=141
TIN **Tinemaha** 60.47 67 ⇓P P 02 21 15.8 +0.4
baz=60,SNR=163
P12A **McGill** 60.47 63 P P 02 21 16.1 +0.7
baz=60,SNR=573
O13A **Hicks Ranch, I** 60.47 62 ⇓P P 02 21 16.3 +0.9
baz=60,SNR=288
APSI **Ampana** 60.48 217 P P 02 21 15.5 -0.3
MSAI **Masohi** 60.49 208 P P 02 21 20.4 +4.6
Q11A **Duckwater** 60.54 64 ⇑P P 02 21 16.2 +0.3
baz=60,SNR=360
R10A **Warm Springs** 60.60 65 P P 02 21 16.8 +0.5
baz=60,SNR=258
L17A **Cokeville** 60.61 58 ⇑P P 02 21 16.8 +0.5
baz=60,SNR=491
HWUT **Hardware Ranch** 60.63 59⇓*eP* P 02 21 17.0 +0.6
comp=Z,969nm,1.2s,mb5.9
K18A **Toltan Ranch,** 60.63 57 ⇑P P 02 21 17.3 +0.9
baz=60,SNR=1000
N15A **Stansbury Isla** 60.67 60 ⇑P P 02 21 17.1 +0.5
baz=60
MOL **Molde** 60.68 342⇓*iP* P 02 21 15.8 -0.6
S10A **Tonopah Range,** 60.71 65 P P 02 21 17.2 +0.2
baz=60,SNR=864
BW06 **Boulder Array** 60.77 57 P P 02 21 17.6 +0.2
baz=61,SNR=1000
BW06 **Boulder Array** 60.77 57⇓*iP* P 02 21 17.5 +0.2
comp=Z,3µm,0.8s,mb6.5
PDAR **Pinedale Array** 60.77 57 P P 02 21 17.5 +0.2
comp=Z,832nm,0.5s,mb6.2,baz=327,slow=1.5,SNR=2485
PDAR pP pP 02 23 23.9 +4.0
comp=Z,259nm,1.0s,baz=353,slow=2.2,SNR=1.4
PDAR PKPPKP 02 50 27.1
comp=Z,22nm,0.9s,baz=180,slow=3.0,SNR=5.5
PDAR PKP2bc 02 50 36.9
comp=Z,62nm,1.0s,baz=174,slow=2.8,SNR=10
PDAR **Pinedale Array** 60.77 57 P P 02 21 17.5 +0.2
PDAR pP pP 02 23 23.9 +4.0
PDAR P'P' 02 50 27.1
PDAR ⇑*e* 02 50 36.9
SMMC **Simmler** 60.77 69 ⇑P P 02 21 18.1 +0.6
baz=61,SNR=21
Q12A **Willow Creek R** 60.83 63 P P 02 21 18.6 +0.8
baz=61,SNR=236
NLAI **Namlea** 60.90 210 P P 02 21 18.9 +0.3
comp=Z,2µm,1.0s,mb6.4
R11A **Troy Canyon, C** 60.94 64 ⇑P P 02 21 18.6 +0.2
baz=61,SNR=759
P13A **Bates Ranch, G** 60.95 62 P P 02 21 19.1 +0.5
baz=61,SNR=917
GRAC **Grapevine Rang** 60.97 66 ⇑P P 02 21 19.5 +0.8
baz=61,SNR=203
CWC **Cottonwood Cre** 61.00 67 ⇑P P 02 21 19.3 +0.4
baz=61,SNR=38
AAI **Ambon** 61.02 208 P P 02 21 19.7 +0.4
comp=Z,6µm,1.9s,mb6.5
DUG **Dugway** 61.03 61 P P 02 21 19.7 +0.6
baz=61,SNR=1000
DUG **Dugway** 61.03 61⇓*iP* P 02 21 19.7 +0.6
DUG pmax pmax
comp=Z,3µm,0.8s,mb6.6
DUG **Dugway** 61.03 61⇓*iP* P 02 21 19.7 +0.6
comp=Z,3µm,0.8s,mb6.6
NOQ **North Oquirrh** 61.05 60⇓*iP* P 02 21 19.7 +0.6
comp=Z,9µm,0.6s,mb7.2
VOR **Voronezh** 61.05 319⇓*iP* P 02 21 19.0 0.0
VOR *e*S S **02 28 54.0 +4.5**
K19A **Absolon Red Bu** 61.08 56 P P 02 21 18.9 -0.4
baz=61,SNR=348
PCI **Palu** 61.12 218 P P 02 21 20.0 0.0
comp=Z,5µm,1.6s,mb6.5
O15A **The Old Anders** 61.14 61 ⇓P P 02 21 20.5 +0.7
baz=61,SNR=255
SBUM **Sibu** 61.16 228 P P 02 21 21.6 +1.3
L18A **Fontenelle, Gr** 61.16 58 ⇑P P 02 21 20.2 +0.3
baz=61,SNR=1000
M17A **Scullys Gap (B** 61.18 58 P P 02 21 20.2 +0.2
baz=61,SNR=1000
PKM **Peak Mountain** 61.18 70 ⇓P P 02 21 20.8 +0.7
baz=61,SNR=248
CTU **Camp Tracy** 61.21 60⇓*iP* P 02 21 20.3 +0.1
comp=Z,816nm,0.8s,mb6.0
N16A **Rees Ranch, Co** 61.22 59 ⇑P P 02 21 20.9 +0.6
baz=61,SNR=416
ULM **Lac du Bonnet** 61.26 43 P P 02 21 19.3 -1.1
comp=Z,536nm,0.4s,mb6.2,baz=322,slow=6.9,SNR=220
ULM pP pP 02 23 23.3 +0.1
comp=Z,244nm,0.6s,baz=43,slow=18,SNR=1.6
ULM S **S** **02 28 55.2 +3.1**
comp=Z,458nm,1.0s,baz=218,slow=20,SNR=8.8
ULM PKPPKP 02 50 23.3
comp=Z,79nm,1.0s,baz=88,slow=1.3,SNR=7.5
ULM PKP2bc 02 50 31.3
comp=Z,75nm,0.9s,baz=45,slow=2.3,SNR=4.2
ULM **Lac du Bonnet** 61.26 43⇓*eP* P 02 21 19.4 -1.0
comp=Z,11µm,1.0s,mb7.0
Q13A **Wheeler Ranch,** 61.32 63 ⇑P P 02 21 21.6 +0.7
baz=61,SNR=1000
P14A **Drum Mountains** 61.34 61 P P 02 21 21.8 +0.7
baz=61,SNR=1000
ISA **Isabella** 61.35 68 P P 02 21 20.5 -0.8
baz=61,SNR=340
ISA **Isabella** 61.35 68⇓*iP* P 02 21 20.5 -0.8
ISA pmax pmax
comp=Z,2µm,0.5s,mb6.6
ISA **Isabella** 61.35 68⇓*iP* P 02 21 20.5 -0.8
comp=Z,2µm,0.5s,mb6.6
L19A **Farson** 61.37 57 P P 02 21 21.2 0.0
baz=61,SNR=381
S11A **Rachel** 61.37 65 ⇓P P 02 21 21.8 +0.5
baz=61,SNR=778
NB2 **NORSAR Subarra** 61.38 340 P P 02 21 20.9 -0.1
comp=Z,5µm,0.8s,mb6.8,baz=27,slow=6.5
NB2 **NORSAR Subarra** 61.38 340 P P 02 21 20.9 -0.1
baz=27,slow=6.5
NB2 **NORSAR Subarra** 61.38 340 P P 02 21 20.9 -0.1
NB2 **NORSAR Subarra** 61.38 340 P P 02 21 20.9 -0.1
NOA **NORSAR Array B** 61.38 340 P P 02 21 20.6 -0.3
comp=Z,3µm,0.8s,mb6.5,baz=25,slow=6.4,SNR=2031
NOA SKKS SKKSdf 02 48 03.7 +0.7
comp=Z,16nm,1.0s,baz=202,slow=2.3,SNR=8.6
NOA PKPPKP 02 50 36.1
comp=Z,195nm,1.2s,baz=214,slow=2.5,SNR=6.9
JLU **Jordanelle** 61.43 60⇓*iP* P 02 21 22.0 +0.3
comp=Z,859nm,0.7s,mb6.1
K20A **Yellowstone Ra** 61.45 56 P P 02 21 21.0 -0.7
baz=61,SNR=593
VSR **Storozhevoye** 61.47 319*d iP* P 02 21 21.4 -0.3
VSR *e**PP pP 02 23 24.8 +0.2
VSR *e*S **S** **02 28 55.8 +1.2**
VSR *e*SS SS 02 33 13.1 +2.0
VSR pmax pmax
comp=N,11µm,1.6s
VSR pmax pmax
comp=E,9µm,1.6s
VSR pmax pmax
comp=Z,13µm,1.6s,mb6.9
VSR pmax pmax
comp=E,5µm,1.6s
VSR pmax pmax
comp=Z,11µm,1.6s,mb6.8
VSR pmax pmax
comp=N,6µm,0.8s
VSR smax
comp=E,30µm,2.8s
VSR smax
comp=Z,14µm,1.4s
VSR smax
comp=N,8µm,0.9s
R12A **Pony Springs,** 61.47 63 P P 02 21 22.2 +0.3
baz=61,SNR=547
N17A **Moffit Pass** 61.49 59 ⇑P P 02 21 22.0 0.0
baz=61,SNR=262
M18A **Lyman** 61.51 58 P P 02 21 22.4 +0.2
baz=61,SNR=326
ARVC **Arvin** 61.55 69 ⇓P P 02 21 21.9 -0.6
baz=61,SNR=67
BORG **Borgarnes** 61.55 357 P P 02 21 23.0 +1.0
comp=N,43µm,1.0s,mb7.6
BORG **Borgarnes** 61.55 357 PKPPKP 02 50 20.8
comp=N,23nm,0.9s,baz=263,slow=1.1,SNR=3.2
BORG PKP2bc 02 50 32.6
comp=N,82nm,0.9s,baz=184,slow=5.8,SNR=8.3
BORG **Borgarnes** 61.55 357 *eP* P 02 21 23.6 +1.6
BORG pmax pmax
comp=Z,9µm,1.1s
BORG **Borgarnes** 61.55 357 *eP* P 02 21 23.6 +1.6
comp=Z,9µm,1.1s,mb6.9
SBC **Santa Barbara** 61.57 70 ⇓P P 02 21 23.2 +0.5
baz=61,SNR=30
NLU **North Lily Min** 61.59 61⇓*iP* P 02 21 23.1 +0.4
comp=Z,1µm,0.8s,mb6.2
MPMC **Manual Prospec** 61.60 67 P P 02 21 23.2 +0.4
baz=61,SNR=776
NAO01 **NORSAR Array S** 61.63 340 *eP* P 02 21 21.8 -0.7
comp=Z,217nm,1.1s,mb5.3
FURC **Furnace Creek,** 61.64 66 ⇑P P 02 21 23.5 +0.4
baz=61,SNR=541
DAU **Daniels Canyon** 61.67 60 *eP* P 02 21 24.0 +0.8
DAU pmax pmax
comp=Z,3µm,1.8s,mb6.2
DAU **Daniels Canyon** 61.67 60 *eP* P 02 21 24.0 +0.8
comp=Z,3µm,1.8s,mb6.2
HFS **Hagfors** 61.68 338 SKKS SKKSdf 02 48 02.4 -0.3
comp=Z,7.2nm,0.8s,baz=134,slow=4.3,SNR=3.9
Q14A **Sevier Lake (B** 61.68 62 P P 02 21 24.0 +0.7
baz=62,SNR=1000
O16A **Springville** 61.69 60 P P 02 21 24.0 +0.7
baz=62,SNR=533
TLE **Tual** 61.73 203 P P 02 21 25.0 +1.1
comp=Z,6µm,0.9s,mb6.8
P15A **Leamington** 61.77 61 P P 02 21 24.4 +0.6
baz=62,SNR=423
MPU **Maple Canyon** 61.77 60⇓*iP* P 02 21 24.4 +0.5
comp=Z,2µm,0.8s,mb6.4
S12A **Delamar Landin** 61.88 64 ⇑P P 02 21 25.4 +0.8
baz=62,SNR=533
M19A **Rock Springs** 61.91 57 ⇓P P 02 21 24.5 -0.3
baz=62,SNR=110
R13A **O'Grain Ranch,** 61.92 63 P P 02 21 25.3 +0.5
baz=62,SNR=451
LRMC **Laurel Mountai** 61.92 68 ⇓P P 02 21 25.0 +0.1
baz=62,SNR=318
L20A **Wamsutter** 61.94 57 P P 02 21 25.0 +0.1
baz=62,SNR=1000
BSC **Santa Cruz Isl** 61.95 70 ⇓P P 02 21 25.0 -0.1
baz=62,SNR=29
T11A **Corn Creek, Al** 61.95 65 ⇓P P 02 21 25.5 +0.4
baz=62,SNR=1000
U10A **Ash Meadows, A** 61.96 66 ⇑P P 02 21 25.8 +0.6
baz=62,SNR=332
OSI **Osito Adit** 61.99 69 ⇓P P 02 21 25.7 +0.3
baz=62,SNR=7.5
OSI **Osito Adit** 61.99 69 *eP* P 02 21 25.5 +0.1
comp=Z,1µm,0.8s,mb6.2
FOO **Floro** 62.02 343⇓*iP* P 02 21 22.9 -2.2
FOO *e*S S **02 29 01.5 +0.5**
N18A **Larsen Ranch,** 62.05 58 P P 02 21 25.4 -0.2
baz=62,SNR=210
P16A **Fountain Green** 62.06 61 ⇑P P 02 21 26.4 +0.7
baz=62,SNR=169
O17A **Robinson Place** 62.09 59 ⇓P P 02 21 26.2 +0.2
baz=62,SNR=362
Q15A **Fillmore** 62.14 61 ⇓P P 02 21 26.6 +0.3
baz=62,SNR=504
BLG **Laguna Peak** 62.18 70 ⇓P P 02 21 26.4 -0.2
baz=62,SNR=91
EDW2 **Edwards Air Fo** 62.20 68 P P 02 21 26.9 +0.2
baz=62,SNR=572
HYA **Hoyanger** 62.23 342 *eP* P 02 21 26.8 +0.4
HYA AMb AMB 02 21 38.0
comp=Z,6µm,0.7s,mb6.9
HYA **Hoyanger** 62.23 342 *eP* P 02 21 26.8 +0.4
comp=Z,6µm,0.7s,mb6.9
IZAR **Zarasai** 62.23 329 *eP* P 02 21 26.9 +0.3
IZAR AMB AMB 02 21 38.0
comp=Z,3µm,1.1s,mb6.4
AJM **Ajmer** 62.23 277 *e*PKP P 02 21 26.8 -0.2
R14A **James Farms, M** 62.33 62 ⇑P P 02 21 27.9 +0.4
baz=62,SNR=119
N19A **John Jarvie Ra** 62.36 58 ⇓P P 02 21 27.4 -0.2
baz=62,SNR=1000
SHOC **Shoshone** 62.38 66 ⇑P P 02 21 27.9 +0.1
baz=62,SNR=90
M20A **Sweetwater, Wa** 62.40 57 ⇑P P 02 21 28.4 +0.5
baz=62,SNR=906
O18A **Roosevelt** 62.41 59 P P 02 21 28.7 +0.7
baz=62,SNR=917
RSSD **Black Hills** 62.41 52⇓*eP* P 02 21 27.8 -0.1
RSSD pmax pmax
comp=Z,2µm,1.8s,mb6.1
RSSD **Black Hills** 62.41 52⇓*eP* P 02 21 27.8 -0.1
comp=Z,2µm,1.8s,mb6.1
ISAL **Salakas** 62.42 329 *eP* P 02 21 28.1 +0.3
ISAL AMB AMB 02 21 36.9
comp=Z,3µm,0.8s,mb6.5
S13A **Holt Ranch, En** 62.42 63 ⇑P P 02 21 28.5 +0.4
baz=62,SNR=537
IDID **Didziasalis** 62.45 329 *eP* P 02 21 28.2 +0.3
IDID AMB AMB 02 21 39.4
comp=Z,4µm,1.1s,mb6.6
L21A **Rawlins** 62.45 56 P P 02 21 28.0 -0.2
baz=62,SNR=505
U11A **Corn Creek** 62.47 65 ⇑P P 02 21 29.0 +0.6
baz=62,SNR=139
DECC **Green Verdugo** 62.48 69 ⇑P P 02 21 28.5 0.0
baz=62,SNR=167
ARUT **Antelope Range** 62.49 63 *eP* P 02 21 28.6 +0.1
comp=Z,11µm,0.3s,mb7.6
OSL **Oslo** 62.49 340 *eP* P 02 21 28.0 -0.1
OSL AMb AMB 02 21 35.0
comp=Z,8µm,2.4s,mb6.5
OSL **Oslo** 62.49 340 *eP* P 02 21 28.0 -0.1
comp=Z,8µm,2.4s,mb6.5
TMUT **Trail Mountain** 62.52 60⇓*iP* P 02 21 29.2 +0.5
comp=Z,3µm,0.8s,mb6.5
GSC **Goldstone** 62.53 67 ⇑P P 02 21 29.0 +0.2
baz=62,SNR=634
GSC **Goldstone** 62.53 67⇑*iP* P 02 21 29.0 +0.1
GSC pmax pmax
comp=Z,2µm,1.1s,mb6.3
GSC **Goldstone** 62.53 67⇑*iP* P 02 21 28.9 +0.1
comp=Z,2µm,1.1s,mb6.3
IIGN **Ignalina** 62.58 329 *eP* P 02 21 29.2 +0.5
IIGN AMB AMB 02 21 38.0
comp=Z,6µm,0.9s,mb6.8
SUE **Sulen** 62.58 343 *eP* P 02 21 28.4 -0.3
SUE AMb AMB 02 21 39.5
comp=Z,6µm,1.2s,mb6.7
SUE **Sulen** 62.58 343 *eP* P 02 21 28.4 -0.3
comp=Z,6µm,1.2s,mb6.7
T12A **Moapa** 62.60 65 ⇑P P 02 21 29.8 +0.5
baz=62,SNR=99
MSU **Marysvale** 62.61 62 *eP* P 02 21 30.1 +0.9
comp=Z,27µm,1.2s,mb7.4
PASC **Pasadena Art C** 62.62 69⇓*iP* P 02 21 29.1 -0.3
comp=Z,4µm,0.8s,mb6.6
PASC *e*pP pP 02 23 33.0 -0.2
P17A **Butcher Ranch,** 62.63 60 P P 02 21 29.8 +0.4
baz=62,SNR=715
MWC **Mount Wilson** 62.65 69⇓*iP* P 02 21 29.6 0.0
MWC *e**PP pP 02 23 34.4 +1.1
MWC pmax pmax
comp=Z,3µm,1.3s,mb6.4
MWC **Mount Wilson** 62.65 69⇓*iP* P 02 21 29.6 0.0
comp=Z,3µm,1.3s,mb6.4
MWC *e*pP pP 02 23 34.4 +1.0
S14A **Cedar City** 62.65 63 ⇑P P 02 21 29.9 +0.3
baz=62,SNR=618
CCUT **Cedar City** 62.71 63⇓*iP* P 02 21 30.4 +0.5
comp=Z,2µm,0.6s,mb6.6
M21A **Separation Pea** 62.72 56 ⇓P P 02 21 29.6 -0.4
baz=62,SNR=464
M21A ⇓P'P'bc 02 50 30.1
baz=62
RWWY **Rawlins** 62.74 56⇓*iP* P 02 21 29.7 -0.4
comp=Z,1µm,0.8s,mb6.2
RRX **Edison Barstow** 62.74 68 ⇑P P 02 21 30.3 +0.1
baz=63,SNR=34
P18A **Preston Nutter** 62.77 60 ⇑P P 02 21 30.8 +0.6
baz=63,SNR=1000
MICGM **Minsk** 62.78 327⇓*iP* P 02 21 28.0 -2.0
R15A **Junction** 62.78 62 ⇓P P 02 21 31.3 +0.9
baz=63,SNR=268
R15A ⇑P'P'bc 02 50 29.7
baz=63
NACGM **Naroch** 62.79 328 *eP* P 02 21 27.0 -3.1
MNK **Minsk** 62.79 328*d iP* P 02 21 28.0 -2.1
MNK *e* 02 24 00.0
MNK *e*S S **02 29 12.0 +1.4**
MNK *e*SP 02 29 40.0
MNK *e*SS SS 02 33 44.0 +13
MNK *e*SSS 02 36 44.0
MNK pmax pmax
comp=Z,59µm,3.0s
MNK pmax pmax
comp=Z,2µm,1.0s,mb6.4
MNK pmax pmax
comp=N,57µm,2.0s
MNK pmax pmax
comp=E,1µm,1.1s
MNK pmax pmax
comp=N,2µm,1.0s
MNK pmax pmax
comp=E,43µm,2.0s
MNK pmax pmax
comp=Z,98µm,10.0s
MNK smax
comp=E,157µm,16.0s
MNK smax
comp=N,148µm,6.0s
AGMN **Agassiz Nation** 62.80 44⇓*eP* P 02 21 28.8 -1.5
comp=N,17µm,1.4s,mb7.1
T13A **Saint George** 62.81 64 ⇑P P 02 21 31.4 +0.8
baz=63,SNR=1000
Q16A **Castle Valley** 62.83 61 ⇑P P 02 21 31.1 +0.4
baz=63,SNR=179
O19A **Miners Draw (B** 62.83 58 ⇑P P 02 21 30.5 -0.1
baz=63,SNR=1000
L22A **Ellis Ranch, M** 62.86 55 ⇑P P 02 21 31.2 +0.4
baz=63,SNR=1000
BFSC **Mount Baldy Ra** 62.86 69 ⇑P P 02 21 30.9 -0.1
baz=63,SNR=292
BFSC ⇑P'P'bc 02 50 30.2
baz=63
N20A **Spence Gulch,** 62.86 57 P P 02 21 31.4 +0.6
baz=63,SNR=1000
KSM **Kuching** 62.88 229 P P 02 21 33.0 +1.7
KSM **Kuching** 62.88 229 P P 02 21 32.6 +1.3
comp=N,4µm,1.6s,mb6.4
V11A **Goodsprings** 62.88 66 ⇑P P 02 21 31.5 +0.4
baz=63,SNR=605
FMP **Fort Macarthur** 62.90 69 ⇓P P 02 21 31.1 -0.1
baz=63,SNR=27
TUQ **Turquoise Moun** 62.91 66 ⇓P P 02 21 31.7 +0.5
baz=63,SNR=22
U12A **Valley of Fire** 62.92 65 ⇑P P 02 21 31.8 +0.5
baz=63,SNR=212
VAN **Vannovskaya** 62.92 298 *eP* P 02 21 32.3 +1.0
ABKT **Ailbek** 62.93 298 P P 02 21 32.3 +1.0
comp=N,50µm,0.7s,mb7.8
KTGM **Kuala Trenggan** 62.94 239 P P 02 21 33.3 +1.5
KONO **Kongsberg** 62.98 340⇓*iP* P 02 21 30.9 -0.4
KONO AMb AMB 02 21 38.6
comp=Z,6µm,2.8s,mb6.3
KONO *e*S S **02 29 15.7 +2.9**
KONO **Kongsberg** 62.98 340⇓*eP* P 02 21 31.5 +0.2
KONO pmax pmax
comp=Z,7µm,1.0s,mb6.8
KONO **Kongsberg** 62.98 340⇓*eP* P 02 21 31.4 +0.2
comp=Z,7µm,1.0s,mb6.8
KDI **Kendari** 62.99 214 P P 02 21 33.1 +1.1
comp=Z,3µm,1.6s,mb6.2
SRU **San Rafael** 63.01 60 P P 02 21 32.0 +0.2
baz=63,SNR=1000
SRU **San Rafael** 63.01 60⇓*iP* P 02 21 31.9 +0.1
SRU pmax pmax
comp=Z,2µm,0.8s,mb6.4
SRU **San Rafael** 63.01 60⇓*iP* P 02 21 31.9 +0.1
comp=Z,2µm,0.8s,mb6.4
ASK **Askoy** 63.04 343 *eP* P 02 21 30.5 -1.1
BHPL **Bhopal** 63.05 273 *e*PKP P 02 21 32.5 +0.2
BHPL AMb AMB 02 21 42.5
comp=Z,8µm,0.9s,mb6.9
CIS **Catalina Islan** 63.07 70 ⇑P P 02 21 32.0 -0.3

baz=63,SNR=48
RUND Rundenannen 63.07 343 eP P 02 21 30.8 -1.1
BER Bergen 63.11 343⇓iP P 02 21 31.8 -0.3
BER AMb AMB 02 21 40.6
comp=Z,6μm,1.2s,mb6.7
BER esP sP 02 24 42.0 -1.6
BER eS S 02 29 19.3 +5.1
BER Bergen 63.11 343⇓iP P 02 21 31.8 -0.2
BER pmax pmax
comp=Z,6μm,1.2s,mb6.7
BER Bergen 63.11 343⇓iP P 02 21 31.8 -0.3
comp=Z,6μm,1.2s,mb6.7
TTSI Tana Toraja 63.11 218 P P 02 21 32.5 -0.3
comp=Z,1μm,1.0s,mb6.1
S15A Panguitch 63.14 62 ⇓P P 02 21 33.9 +1.2
baz=63,SNR=523
R16A Teasdale 63.14 61 ⇓P P 02 21 33.7 +1.0
baz=63,SNR=928
HEC Hector,Ludlow 63.15 67 P P 02 21 33.0 +0.3
baz=63,SNR=522
T14A Hurricane 63.22 63 P P 02 21 33.7 +0.5
baz=63,SNR=573
Q18A Rafter H Ranch 63.22 60 P P 02 21 32.8 -0.3
baz=63,SNR=612
U13A Pakoon Wash 63.23 64 P P 02 21 34.1 +0.8
baz=63,SNR=1000
SOFL Sornfelli, Far 63.24 350 P P 02 21 32.9 +0.1
SOFL AMb AMB 02 21 44.5
comp=Z,7μm,2.8s,mb6.4
SOFL 02 24 07.3
SOFL AMS AMS 02 37 31.1
comp=Z,66μm,31.9s
SOFL Sornfelli, Far 63.24 350⇓eP P 02 21 32.9 +0.1
SOFL AMb AMB 02 21 44.5
comp=Z,7μm,2.8s,mb6.4
SOFL e 02 24 07.3
SOFL AMS AMS 02 37 31.1
comp=Z,66μm,31.9s
BBRC Big Bear Solar 63.25 68 ⇑P P 02 21 33.7 +0.3
baz=63,SNR=26
V12A Nelson 63.28 66 P P 02 21 34.1 +0.6
baz=63,SNR=601
N21A Black Mountain 63.29 57 P P 02 21 33.6 +0.1
baz=63,SNR=600
SCI San Clemente I 63.31 70 ⇑P P 02 21 33.7 -0.2
baz=63,SNR=38
ODD1 Odda 63.31 342 eP P 02 21 33.4 +0.1
ODD1 AMb AMB 02 21 44.5
comp=Z,7μm,1.3s,mb6.7
ODD1 ePP PP 02 24 07.4 +3.7
ODD1 Odda 63.31 342 eP P 02 21 33.4 +0.1
comp=Z,7μm,1.3s,mb6.7
O20A White River Ci 63.40 58 ⇓P P 02 21 34.3 0.0
baz=63,SNR=1000
P19A Cripple Cowboy 63.41 59 ⇓P P 02 21 34.2 -0.1
baz=63,SNR=902
HNR Honiara 63.42 172 eP P 02 21 33.1 -1.5
HNR pmax pmax
comp=Z,4μm,0.9s,mb6.7
HNR Honiara 63.42 172 eP P 02 21 33.0 -1.6
comp=Z,4μm,0.9s,mb6.7
R17A Hanksville Air 63.44 61 ⇓P P 02 21 34.5 -0.1
baz=63,SNR=1000
S16A Weppner Ranch, 63.50 62 ⇑P P 02 21 35.8 +0.8
baz=63,SNR=1000
GMRC Granite Mounta 63.55 67 ⇓P P 02 21 34.4 -0.9
baz=63,SNR=1000
W12A Cal Nev Ari 63.59 66 ⇓P P 02 21 35.8 +0.3
baz=63,SNR=231
MURC Murrieta 63.59 69 ⇓P P 02 21 35.4 -0.2
baz=63,SNR=190
STKI Sintang 63.61 228 P P 02 21 37.4 +1.4
comp=Z,5μm,1.6s,mb6.4
T15A Red Dirt Ranch 63.62 63 ⇓P P 02 21 36.3 +0.6
baz=63,SNR=571
T15A ⇓P'P'bc 02 50 27.7
baz=63
LDFC Landfair 63.62 66⇓iP P 02 21 35.9 +0.1
comp=Z,740nm,1.8s,mb5.6
V13A Grand Canyon W 63.65 65 ⇑P P 02 21 36.3 +0.4
baz=63,SNR=1000
U14A Mt Trumbull 63.65 64 ⇓P P 02 21 36.5 +0.6
baz=63,SNR=703
NGP Nagpur 63.70 270 ePKP P 02 21 36.5 0.0
NGP eS S 02 29 23.9 +1.4
O21A Pagoda 63.72 57 ⇑P P 02 21 36.5 +0.2
baz=64,SNR=727
Q19A Hogan Spring (63.77 59 ⇓P P 02 21 36.3 -0.3
baz=64,SNR=1000
N22A Wattenberg Ran 63.78 56 ⇓P P 02 21 36.5 -0.2
baz=64,SNR=1000
P20A De Beque 63.80 58 ⇑P P 02 21 36.4 -0.5
baz=64,SNR=885
VIS Vishakhapatnam 63.83 264 ePKP P 02 21 37.6 +0.3
VIS i x x 02 23 44.9
R18A Canyonlands Na 63.88 60 P P 02 21 37.0 -0.4
baz=64,SNR=1000
PHWY Pilot Hill 63.89 55⇓eP P 02 21 36.8 -0.5
comp=Z,449nm,0.7s,mb5.8
QUE Quetta 63.90 286 eP P 02 21 43.0 +5.4
QUE eS S 02 29 32.0 +7.4
BELC Belle Mtn. Jos 63.95 68 ⇑P P 02 21 37.6 -0.3
baz=64,SNR=274
BELC ⇓P'P'bc 02 50 26.1
baz=64
S17A Black Ridge (B 63.98 61 ⇓P P 02 21 38.2 +0.2
baz=64,SNR=665
S17A ⇑P'P'bc 02 50 26.1
baz=64
PFO Pinyon Flat Ob 63.99 68 P P 02 21 37.0 -1.1
comp=Z,5μm,1.3s,mb6.6
PFO Pinyon Flat Ob 63.99 68 ⇓P P 02 21 37.9 -0.3
baz=64,SNR=215
PFO Pinyon Flat Ob 63.99 68⇓eP P 02 21 38.0 -0.1
PFO pmax pmax
comp=Z,1μm,1.1s,mb6.0
PFO Pinyon Flat Ob 63.99 68⇓eP P 02 21 38.0 -0.2
comp=Z,1μm,1.1s,mb6.0
T16A Glen Canyon Da 64.11 62 ⇑P P 02 21 38.3 -0.5
baz=64,SNR=129
T16A ⇑P'P'bc 02 50 26.4
baz=64
U15A North Rim 64.11 63 ⇑P P 02 21 39.4 +0.6
baz=64,SNR=1000
U15A ⇓P'P'bc 02 50 26.6
baz=64
NEE2 Needles Airpor 64.12 66 ⇑P P 02 21 38.7 -0.2
baz=64,SNR=62
109C Camp Elliot, M 64.17 69 ⇑P P 02 21 39.0 -0.3
baz=64,SNR=77
109C ⇓P'P'bc 02 50 27.3
baz=64
O22A Kremmling 64.22 57 ⇑P P 02 21 39.4 0.0
baz=64,SNR=374
KMY Karmoy 64.22 342 eP P 02 21 39.2 +0.1
KMY AMb AMB 02 21 45.9
comp=Z,5μm,2.4s,mb6.3
KMY Karmoy 64.22 342 eP P 02 21 39.2 +0.1
comp=Z,5μm,2.4s,mb6.3
KULM Kulim 64.24 241 P P 02 21 41.5 +1.6
KULM Kulim 64.24 241 eP P 02 21 40.5 +0.5
comp=Z,7μm,1.5s,mb6.7
P21A Newcastle 64.26 58 ⇓P P 02 21 39.9 +0.2
baz=64,SNR=1000
Q20A Ridgley Place, 64.27 59 P P 02 21 39.3 -0.5
baz=64,SNR=798
W13A Hualapai Mount 64.27 65 P P 02 21 40.1 +0.3
baz=64,SNR=709
W13A ⇑P'P'bc 02 50 26.3
baz=64
R19A Curley Farm, L 64.28 60 ⇑P P 02 21 39.8 -0.1
baz=64,SNR=940
V14A Boquillas Ranc 64.28 64 ⇑P P 02 21 40.7 +0.8
baz=64,SNR=1000
V14A ⇑P'P'bc 02 50 27.2
baz=64
IRM Iron Mountain 64.29 67 ⇓P P 02 21 40.3 +0.3
baz=64,SNR=599
IRM ⇓P'P'bc 02 50 26.9
baz=64
MAK Makhachkala 64.36 308diP P 02 21 40.6 +0.3
MAK ePPP 02 26 04.0
MAK eS S 02 29 31.3 +1.6
MAK pmax pmax
comp=Z,20μm,1.9s,mb7.0
MAK smax
comp=E,24μm,1.3s
MAK smax
comp=N,19μm,1.1s
MAK MLR MLR
comp=Z,81μm,23.0s
MAK MLR MLR
comp=N,114μm,19.0s
S18A Hurst Farm, Bl 64.36 61 P P 02 21 40.2 -0.2
baz=64,SNR=1000
PV04 Paradox Valley 64.38 60⇓iP P 02 21 40.6 +0.1
LRW Lerwick 64.39 346 P P 02 21 39.6 -0.5
LRW AMb AMB 02 21 46.3
comp=N,3μm,2.5s,mb6.1
LRW AMS AMS 02 38 20.2
comp=N,89μm,22.5s
LRW Lerwick 64.39 346⇓eP P 02 21 39.6 -0.5
LRW AMb AMB 02 21 46.3
comp=Z,3μm,2.5s,mb6.1
LRW AMS AMS 02 38 20.2
comp=Z,89μm,22.5s
STAV Stavanger 64.40 342⇓iP P 02 21 40.1 -0.1
STAV AMb AMB 02 21 46.9
comp=Z,5μm,2.5s,mb6.3
STAV Stavanger 64.40 342⇓iP P 02 21 40.1 -0.1
comp=Z,5μm,2.5s,mb6.3
T17A Navajo Res., N 64.46 62 ⇑P P 02 21 40.8 -0.3
baz=64,SNR=818
BC3 Big Chuckawall 64.51 67 ⇑P P 02 21 41.2 -0.2
baz=64,SNR=358
P22A Eagle 64.55 57 ⇑P P 02 21 41.9 +0.4
baz=64,SNR=447
MONP Monument Peak 64.55 69 ⇑P P 02 21 41.0 -0.6
baz=64,SNR=184
MONP ⇑P'P'bc 02 50 25.1
baz=64
BAR Barrett 64.57 69⇓iP P 02 21 41.5 -0.2
comp=Z,1μm,1.1s,mb6.2
W14A Seligman 64.61 65 ⇑P P 02 21 42.7 +0.7
baz=64,SNR=996
V15A Kaibab Nationa 64.64 64 ⇓P P 02 21 43.0 +0.8
baz=64,SNR=1000
SUW Suwalki 64.64 330 eP P 02 21 41.3 -0.5
comp=Z,18μm,1.0s,mb7.4
SUW eS S 02 29 36.9 +4.2
SUW esS sS 02 33 15.1 -0.5
SUW Suwalki 64.64 330 eP P 02 21 41.3 -0.5
SUW eS S 02 29 36.9 +4.2
SUW Suwalki 64.64 330⇓eP P 02 21 41.3 -0.5
comp=Z,23μm,1.1s,mb7.4
SNART Snartemo 64.67 341 eP P 02 21 42.3 +0.4
X13A Yucca 64.68 66 ⇑P P 02 21 42.6 +0.2
baz=64,SNR=1000
Q21A Lamborn Mesa, 64.72 58 ⇓P P 02 21 42.7 +0.1
baz=64,SNR=248
GOF Gofitskoye 64.73 312⇓iP P 02 21 51.2 +8.6
GOF pmax pmax
comp=Z,11μm,0.9s,mb7.2
PDMCI Parker Dam,Lak 64.73 66 ⇓P P 02 21 42.8 0.0
baz=64,SNR=241
PDMCI ⇑P'P'bc 02 50 25.4
baz=64
IPM Ipoh 64.74 240 P P 02 21 44.3 +1.2
PV01 Paradox Valley 64.75 60⇓iP P 02 21 43.0 +0.2
comp=Z,20μm,0.8s,mb7.5
S19A Harvey Farm, M 64.76 60 ⇓P P 02 21 42.7 -0.1
baz=64,SNR=1000
SMCO Snowmass 64.76 58⇓eP P 02 21 43.3 +0.5
comp=Z,2μm,0.7s,mb6.5
R20A Redvale 64.81 59 ⇑P P 02 21 43.3 +0.2
baz=65,SNR=1000
U17A Shonto 64.84 62 ⇑P P 02 21 43.5 +0.1
baz=65,SNR=826
T18A Mexican Hat 64.84 61 P P 02 21 43.1 -0.3
baz=65,SNR=1000
EYMN Ely 64.84 42⇓eP P 02 21 41.7 -1.5
comp=Z,264nm,1.3s,mb5.4
SWSC Sam W. Stewart 64.86 68 ⇑P P 02 21 43.1 -0.4
baz=65,SNR=86
DVTC Desert V Tower 64.90 69 ⇓P P 02 21 44.0 +0.1
baz=65,SNR=280
Y12C Blythe 64.94 67 ⇑P P 02 21 44.3 +0.3
baz=65,SNR=472
ISCO Idaho Springs 64.96 56⇓iP P 02 21 44.7 +0.6
ISCO pmax pmax
comp=Z,6μm,1.1s,mb6.8
ISCO Idaho Springs 64.96 56⇓iP P 02 21 44.7 +0.6
comp=Z,6μm,1.1s,mb6.8
KAPI Kappang 64.96 217 P P 02 21 43.3 -1.1
comp=Z,12μm,0.7s,mb7.3
KAPI Kappang 64.96 217 eP P 02 21 43.5 -0.9
comp=Z,6.7nm,1.0s
Q22A Crested Butte, 65.03 58 P P 02 21 45.0 +0.4
baz=65,SNR=428
W15A Williams 65.07 64 ⇑P P 02 21 45.8 +0.9
baz=65,SNR=106
R21A Cimarron 65.09 59 ⇑P P 02 21 45.4 +0.5
baz=65,SNR=1000
R21A ⇑P'P'bc 02 50 24.9
baz=65
S20A Disappointment 65.09 60 P P 02 21 45.0 +0.1
baz=65,SNR=617
S20A ⇓P'P'bc 02 50 25.1
baz=65
P23A Jefferson 65.17 57 ⇑P P 02 21 46.3 +0.8
baz=65,SNR=446
AKL Akola 65.24 271 iP P 02 21 46.5 +0.4
AKL ePKP 02 21 46.9
AKL AMb AMB 02 21 56.6
comp=Z,7μm,0.7s,mb7.1
AKL i x x 02 29 44.2
Y13A Salome 65.27 66 ⇑P P 02 21 46.4 +0.3
baz=65,SNR=576
Y13A ⇑P'P'bc 02 50 23.8
baz=65
X14A Yava 65.28 65 ⇑P P 02 21 46.9 +0.7
baz=65,SNR=908
X14A ⇑P'P'bc 02 50 24.3
baz=65
WUAZ Wupatki 65.29 63 ⇓P P 02 21 46.8 +0.6
baz=65,SNR=334
WUAZ Wupatki 65.29 63⇓iP P 02 21 46.9 +0.7
comp=Z,883nm,0.6s,mb6.3
GLA Glamis 65.30 67 ⇓P P 02 21 46.6 +0.3
baz=65,SNR=559
GLA Glamis 65.30 67⇓iP P 02 21 46.5 +0.2
GLA pmax pmax
comp=Z,2μm,1.4s,mb6.3
GLA Glamis 65.30 67⇓iP P 02 21 46.5 +0.1
comp=Z,2μm,1.4s,mb6.3
GLA epP pP 02 23 56.0 +4.3
U18A Rough Rock, Ch 65.39 62 P P 02 21 47.1 +0.3
baz=65,SNR=336
MVCO Mesa Verde 65.49 60 P P 02 21 47.5 +0.1
baz=65,SNR=936
MVCO Mesa Verde 65.49 60⇓eP P 02 21 47.5 0.0
comp=Z,6μm,1.1s,mb6.8
S21A Coal Bank Pass 65.51 59 P P 02 21 48.3 +0.8
baz=65,SNR=1000
T19A Beclabito 65.51 61 P P 02 21 47.9 +0.3
baz=65,SNR=770
V17A Tonalea, Kykot 65.51 63 ⇑P P 02 21 48.4 +0.8
baz=65,SNR=1000
P24A Kohler Place, 65.53 56 ⇑P P 02 21 48.2 +0.6
baz=65,SNR=500
W16A Flagstaff 65.53 64 ⇑P P 02 21 48.5 +0.8
baz=65,SNR=308
AKASG Malin Array Be 65.53 324 P P 02 21 46.8 -0.7
comp=Z,794nm,0.4s,mb6.4,baz=30,slow=6.9,SNR=669
AKASG pP pP 02 23 57.1 +4.3
comp=Z,71nm,0.4s,baz=29,slow=7.0,SNR=1.4
AKASG S S 02 29 46.4 +3.0
comp=Z,538nm,1.0s,baz=29,slow=12,SNR=8.1
AKASG SKKS SKKSdf 02 47 58.0 -0.5
comp=Z,6.9nm,0.7s,baz=225,slow=2.6,SNR=4.0
AKASG Malin Array Be 65.53 324 P P 02 21 46.8 -0.6
AKASG S S 02 29 46.4 +3.0
AKBB Malin Array Si 65.53 324⇓eP P 02 21 46.6 -0.8
Q23A Hartsel 65.54 57 ⇓P P 02 21 48.2 +0.5
baz=65,SNR=78
KIEV Kiev 65.54 324⇓eP P 02 21 46.7 -0.8
KIEV pmax pmax
comp=Z,5μm,0.9s,mb6.8
KIEV Kiev 65.54 324⇓eP P 02 21 46.7 -0.8
comp=Z,5μm,0.9s,mb6.8
R22A Saguache, Gunn 65.60 58 ⇓P P 02 21 48.9 +0.8
baz=65,SNR=807
X15A Humboldt 65.61 65 ⇓P P 02 21 48.9 +0.7
baz=65,SNR=1000
Y14A Wickenburg 65.62 66 ⇑P P 02 21 48.6 +0.3
baz=65,SNR=496
MYKOM Kota Tinggi 65.63 236 P P 02 21 50.5 +1.9
KGM Kluang 65.70 237 P P 02 21 50.6 +1.5
XMAS Kiritimati 65.75 123 eP P 02 21 48.3 -1.0
comp=Z,4μm,1.1s,mb6.6
KIV Kislovodsk 65.76 312 P P 02 21 49.7 +0.7
comp=Z,34μm,0.6s,mb7.8
KIV Kislovodsk 65.76 312diP P 02 21 49.4 +0.4
KIV i 02 22 11.1
KIV i *SP sP 02 24 55.9 -5.7
KIV i S S 02 29 49.8 +3.5
KIV i SSS 02 37 34.8
KIV pmax pmax
comp=Z,34μm,2.3s,mb7.3
KIV pmax pmax
comp=Z,12μm,1.9s,mb6.9
KIV MLR MLR
comp=Z,52μm,18.0s
KIV Kislovodsk 65.76 312⇓eP P 02 21 49.5 +0.6
comp=Z,12μm,1.3s,mb7.0
KIV epP pP 02 23 55.8 +1.3
KIV Kislovodsk 65.76 312 P P 02 21 49.8 +0.9
SNR=2932
OGNE Ogallala 65.80 53⇓iP P 02 21 49.1 -0.2
comp=Z,264nm,1.3s,mb5.4
Z13A Yuma Proving G 65.83 67 ⇓P P 02 21 49.8 +0.2
baz=66,SNR=760
112A Yuma 65.83 68 ⇑P P 02 21 49.7 +0.1
baz=66,SNR=105
U19A Dine' College, 65.83 61 ⇑P P 02 21 49.6 0.0
baz=66,SNR=834
Q24A Divide 65.83 57 ⇓P P 02 21 49.5 0.0
baz=66,SNR=593
P25A Willow Gulch B 65.89 56 ⇓P P 02 21 50.1 +0.2
baz=66,SNR=1000
V18A Ganado 65.90 62 ⇓P P 02 21 50.4 +0.4
baz=66,SNR=426
BSD Bornholm Skovb 65.92 335 iP P 02 21 49.3 -0.5
BSD i S S 02 29 49.3 +1.5
BSD pmax pmax
comp=Z,4μm,0.9s,mb6.8
BSD Bornholm Skovb 65.92 335 iP P 02 21 49.3 -0.5
comp=Z,4μm,0.9s,mb6.8
BSD i pP 02 23 57.0 +1.6
BSD i S S 02 29 49.3 +1.5
S22A 4UR Ranch, Cre 65.93 59 ⇑P P 02 21 50.6 +0.5
baz=66,SNR=1000
Y15A Casa Rosa Ranc 65.97 65 ⇑P P 02 21 51.0 +0.5
baz=66,SNR=186
Y15A ⇑P'P'bc 02 50 20.8
baz=66
W17A Winslow 65.97 63 ⇓P P 02 21 50.8 +0.3
baz=66,SNR=110
COP Copenhagen 66.00 337⇓iP P 02 21 50.3 +0.1
COP i S S 02 29 53.9 +5.2
COP pmax pmax
comp=Z,2μm,1.0s,mb6.4
COP Copenhagen 66.00 337⇓iP P 02 21 50.3 +0.1
comp=Z,2μm,1.0s,mb6.4
COP i S S 02 29 53.9 +5.2
MUD Monsted U'grnd 66.02 339⇓iP P 02 21 50.9 +0.5
MUD i 02 24 30.5
MUD i S S 02 29 57.0 +8.1
MUD Monsted U'grnd 66.02 339⇓iP P 02 21 50.9 +0.5
MUD i 02 24 30.5
MUD i S S 02 29 57.0 +8.1
ECSD EROS Data Cent 66.08 48⇓eP P 02 21 50.0 -0.9
comp=Z,31nm,0.4s
Z14A Wintersburg 66.09 66 ⇑P P 02 21 51.2 +0.1
baz=66,SNR=186
X16A Lo Mia Camp, P 66.09 64 ⇓P P 02 21 52.0 +0.8
baz=66
FUNA Funafuti 66.09 151⇓eP P 02 21 50.0 -1.4
comp=Z,2μm,1.1s,mb6.3
113A Mohawk Valley, 66.10 67 ⇓P P 02 21 51.1 -0.2
baz=66,SNR=302
U20A Newcomb 66.12 61 ⇓P P 02 21 51.3 0.0
baz=66,SNR=872
T21A Navajo Lake 66.16 60 P P 02 21 52.1 +0.5
baz=66,SNR=314
ZEI Tsey 66.16 310 eP P 02 21 51.4 0.0
ZEI e*PP pP 02 23 57.5 +0.3
ZEI e*SP sP 02 25 00.3 -3.9
ZEI ePPP 02 26 17.0
ZEI eS S 02 29 54.2 +3.2
ZEI e 02 30 49.0
ZEI eSSS 02 37 47.0
ZEI pmax pmax
comp=Z,4μm,1.1s,mb6.7
ZEI pmax pmax
comp=N,3μm,0.7s
ZEI pmax pmax
comp=E,4μm,0.9s
ZEI smax
comp=N,3μm,4.3s
ZEI smax
comp=E,20μm,8.2s
ORE Reay 66.28 347 P P 02 21 51.4 -0.5
ORE Reay 66.28 347⇓iP P 02 21 51.4 -0.5
Q25A Bedland, Calha 66.31 56 ⇑P P 02 21 52.1 -0.3
baz=66,SNR=298
VJD Vijayawada 66.35 266 ePKP P 02 21 53.0 0.0
VJD ex x 02 22 14.0
V19A Window Rock 66.36 62 ⇑P P 02 21 53.0 +0.2
baz=66,SNR=130
S23A Nye Farm, Mont 66.38 58 ⇑P P 02 21 53.7 +0.8
baz=66,SNR=354
R24A Sanders Place, 66.42 57 P P 02 21 53.5 +0.3
baz=66,SNR=1000
W18A Petrified Fore 66.45 62 ⇑P P 02 21 54.0 +0.6
baz=66,SNR=346
T22A Edith 66.46 59 P P 02 21 54.0 +0.6
baz=66,SNR=1000
Y16A Circle Bar Ran 66.48 65 ⇓P P 02 21 54.1 +0.5
baz=66,SNR=140
Y16A ⇑P'P'bc 02 50 20.3
baz=66
X17A Forest Lakes 66.49 64 P P 02 21 54.7 +1.0
baz=66,SNR=357
ONI Oni 66.50 311 P P 02 21 54.4 +0.8
ONI S S 02 29 59.2 +4.2
KEH Kehvi 66.51 310 P P 02 21 52.8 -0.8
KEH S S 02 30 05.2 +10
DGRG David-gareji 66.53 309 P P 02 21 55.7 +1.9
DGRG S S 02 30 05.4 +10
U21A Nageezi 66.53 60 P P 02 21 54.0 +0.2
baz=66,SNR=886
Z15A Gila River Ind 66.57 65 ⇓P P 02 21 54.4 +0.2
baz=66,SNR=44
114A Black Gap (USA 66.59 66 P P 02 21 54.9 +0.6
baz=66,SNR=518
V20A Brimhall 66.59 61 ⇓P P 02 21 54.1 -0.1
baz=66,SNR=334
TBLG Delisi 66.60 309 eP P 02 21 54.8 +0.6
TBLG eS S 02 29 58.2 +2.0
TBLG Delisi 66.60 309 P P 02 21 54.9 +0.7
TBLG S S 02 29 58.2 +2.0
MTA Mtatsminda 66.60 309 P P 02 21 54.8 +0.6
MTA S S 02 30 00.5 +4.2
SDCO Great Sand Dun 66.60 58⇓eP P 02 21 54.3 0.0
comp=E,1μm,0.9s,mb6.3
W19A Sanders 66.64 62 P P 02 21 55.4 +0.8
baz=66,SNR=1000
RSC Scourie 66.66 348 P P 02 21 53.7 -0.5
RSC Scourie 66.66 348⇓iP P 02 21 53.7 -0.5
GOR Gori 66.68 310 P P 02 21 56.2 +1.5
GOR S S 02 30 04.5 +7.4
SCHQ Schefferville 66.75 24 P P 02 21 54.0 -0.9
comp=E,972nm,0.4s,mb6.5
SCHQ Schefferville 66.75 24⇓eP P 02 21 53.8 -1.1
comp=E,325nm,1.1s,mb5.6
X18A Snowflake 66.79 63 ⇓P P 02 21 55.8 +0.3
baz=67,SNR=695
WAR Warsaw 66.82 330 eP P 02 21 55.5 +0.1
comp=E,28μm,1.1s,mb7.5
WAR ePcP PcP 02 22 15.5 -2.4
WAR eS S 02 30 04.2 +5.7
WAR esS sS 02 33 48.9 +5.5
WAR eSSS 02 38 09.2
WAR Warsaw 66.82 330 eP P 02 21 55.5 +0.2
WAR e 02 22 15.5
WAR eS S 02 30 04.2 +5.8
WAR pmax pmax
comp=Z,28μm,1.1s,mb7.5

S24A Houchin Ranch, 66.83 58 ⇑P P 02 21 55.9 +0.3
baz=67,SNR=1000
RGN Rugen 66.83 336 *e*P **P 02 21 55.8 +0.5**
RGN Rugen 66.83 336⇓*e*P **P 02 21 55.8 +0.4**
comp=Z,9μm,0.9s,mb7.1
T23A Casias Ranch, 66.88 59 ⇑P P 02 21 56.2 +0.2
baz=67,SNR=185
HYB Hyderabad 66.89 268 *e*P **P 02 21 55.0 -1.3**
HYB Hyderabad 66.89 268 *i* P **P 02 21 55.0 -1.3**
HYB *e*pP pP 02 24 00.0 -2.5
HYB *e*S S 02 30 04.0 +3.8
BSI Banda Aceh 66.90 246 P **P 02 21 55.1 -1.3**
comp=Z,622nm,2.0s,mb5.6
Z16A Peralta Trail, 66.92 65 ⇑P P 02 21 56.6 +0.3
baz=67,SNR=399
MVH1 Achvaich 66.94 347 P **P 02 21 55.4 -0.6**
MVH1 Achvaich 66.94 347⇓*i*P **P 02 21 55.4 -0.6**
Y17A Roosevelt 66.96 64 ⇑P P 02 21 56.9 +0.4
baz=67,SNR=279
U22A Llaves 66.97 60 P **P 02 21 57.0 +0.5**
baz=67,SNR=116
GKP Gorka Klasztor 66.98 333 *e*P **P 02 21 56.3 +0.1**
comp=Z,35μm,2.5s,mb7.2
GKP *e*PcP PcP 02 22 16.8 -1.8
GKP *e*S S 02 30 04.2 +4.0
GKP *e*sS sS 02 33 54.7 +9.3
GKP *e*SSS 02 37 59.7
GKP Gorka Klasztor 66.98 333 *e*P **P 02 21 56.3 0.0**
GKP *e* 02 22 16.8
GKP *e*S S 02 30 04.2 +4.0
GKP *e*SSS 02 37 59.7
GKP pmax pmax
comp=Z,35μm,2.5s,mb7.2
115A Sonoran Desert 66.98 66 ⇑P P 02 21 57.1 +0.5
baz=67,SNR=638
V21A Milan 67.02 61 ⇓P P 02 21 56.5 -0.4
baz=67,SNR=1000
W20A Ramah 67.09 62 ⇓P P 02 21 56.8 -0.5
baz=67,SNR=878
MCD Coleburn Disti 67.14 346 P **P 02 21 56.8 -0.4**
MCD Coleburn Disti 67.14 346⇓*i*P **P 02 21 56.8 -0.4**
S25A Robets Cordova 67.20 57 ⇑P P 02 21 57.0 -0.9
baz=67,SNR=294
RRR Rubha Reidh 67.22 348 P **P 02 21 56.9 -0.7**
RRR Rubha Reidh 67.22 348⇓*i*P **P 02 21 56.9 -0.7**
X19A St. Johns 67.22 63 ⇑P P 02 21 57.9 -0.2
baz=67,SNR=1000
214A Organ Pipe Nat 67.24 67 ⇓P P 02 21 58.3 0.0
baz=67,SNR=354
PSI Prapat 67.25 241 PKPPKP 02 50 11.1
comp=Z,147nm,1.3s,baz=196,slow=9.9,SNR=7.6
RRH Rhenigidale 67.26 348 P **P 02 21 57.4 -0.5**
RRH Rhenigidale 67.26 348⇓*i*P **P 02 21 57.4 -0.5**
COWI Conover 67.28 42⇓*i*P **P 02 21 56.7 -1.6**
comp=Z,264nm,1.3s,mb5.4
LATR Latur 67.28 270 *e*PKP **P 02 22 00.3 +1.6**
LATR *e*x x 02 30 11.6
V22A San Miguel Ran 67.31 60 ⇑P P 02 21 58.7 +0.1
baz=67,SNR=480
BHV Bhavnagar 67.31 276 *e*PKP **P 02 21 59.0 +0.2**
ANN Anapa 67.31 316 *i* P **P 02 21 57.4 -1.1**
Y18A Canyon Day Jun 67.33 64 ⇑P P 02 21 59.4 +0.7
baz=67,SNR=788
SOC Sochi 67.34 314*d i*P **P 02 21 58.7 0.0**
SOC *e* 02 22 18.7
SOC *e**PP pP 02 24 02.1 -3.0
SOC *e* 02 24 41.7
SOC *e*PPP 02 26 25.3
SOC *e*S S 02 30 09.5 +4.7
SOC *e* 02 30 55.7
SOC *e*SS SS 02 34 45.8 +4.3
SOC *e*SSS 02 38 04.8
SOC pmax pmax
comp=Z,28μm,2.2s,mb7.2
SOC pmax pmax
comp=Z,9μm,1.5s,mb6.9
SOC Sochi 67.34 314 *i* P **P 02 21 58.8 +0.1**
U23A El Rito 67.35 59 ⇑P P 02 21 59.2 +0.4
baz=67,SNR=705
MME1 Meikle Cairn 67.36 346 P **P 02 21 57.8 -0.7**
MME1 Meikle Cairn 67.36 346⇓*i*P **P 02 21 57.8 -0.7**
116A Eloy 67.37 66 ⇓P P 02 21 59.3 +0.3
baz=67,SNR=447
MDO Dochfour 67.44 347 P **P 02 21 58.6 -0.4**
MDO Dochfour 67.44 347⇓*i*P **P 02 21 58.6 -0.4**
Z17A San Carlos Hig 67.47 64 ⇑P P 02 22 00.2 +0.6
baz=67,SNR=207
KAC Achnashellach 67.50 347 P **P 02 21 58.9 -0.5**
KAC Achnashellach 67.50 347⇓*i*P **P 02 21 58.9 -0.5**
MMRI Maumere 67.50 213 P **P 02 21 59.4 -0.6**
comp=Z,7μm,1.2s,mb6.9
W21A San Fidel 67.54 61 ⇑P P 02 22 00.1 +0.1
baz=67,SNR=27
X20A Quemado 67.55 62 ⇑P P 02 22 00.9 +0.8
baz=67,SNR=1000
Y19A Nutrioso 67.60 63 ⇓P P 02 22 01.3 +0.8
baz=67,SNR=532
BHJ Bhuj 67.61 279 *e*PKP **P 02 22 01.7 +1.1**
T25A Trinidad 67.62 57 ⇑P P 02 21 60.0 -0.5
baz=67,SNR=305
KPL Plockton 67.70 348 P **P 02 22 00.2 -0.4**
KPL AMb AMB 02 22 11.1
comp=Z,5μm,1.1s,mb6.8
KPL 02 23 55.1
KPL AMS AMS 02 39 31.8
comp=Z,83μm,28.5s
KPL Plockton 67.70 348⇓*e*P **P 02 22 00.2 -0.4**
KPL AMb AMB 02 22 11.1
comp=Z,5μm,1.1s,mb6.8
KPL *e* 02 23 55.1
KPL AMS AMS 02 39 31.8
comp=Z,83μm,28.5s
KSK Scoval 67.71 348 P **P 02 22 00.4 -0.2**
KSK Scoval 67.71 348⇓*i*P **P 02 22 00.4 -0.2**
U24A Moreno Valley 67.75 59 ⇑P P 02 22 02.0 +0.7
baz=68
TPTI 67.77 243 P **P 02 22 00.3 -1.4**
comp=Z,1μm,1.3s,mb6.0
KSB Sheil Bridge 67.80 347 P **P 02 22 00.9 -0.3**
KSB Sheil Bridge 67.80 347⇓*i*P **P 02 22 00.9 -0.3**
V23A Ortiz Mt. (NFS 67.81 60 ⇑P P 02 22 02.6 +0.9
baz=68,SNR=755
TPI Tanjungpandan 67.82 230 P **P 02 22 02.9 +0.9**
comp=Z,3μm,1.6s,mb6.3
GNI Garni 67.85 308 SKKS SKKSdf 02 47 54.4 -2.0
comp=Z,2.7nm,0.4s,baz=55,slow=3.8,SNR=5.6
GNI Garni 67.85 308*d i*P **P 02 22 03.0 +1.2**
GNI pmax pmax
comp=Z,2μm,1.0s
GNI Garni 67.85 308⇓*e*P **P 02 22 03.2 +1.5**
comp=Z,28μm,1.5s,mb7.4
GNI Garni 67.85 308 P **P 02 22 03.6 +1.8**
SNR=3128
Z18A Geronimo 67.86 64 ⇓P P 02 22 02.6 +0.6
baz=68,SNR=78
117A Oracle 67.88 65 ⇓P P 02 22 02.4 +0.3
baz=68,SNR=378
216A Three Points, 67.93 66 ⇓P P 02 22 02.7 +0.2
baz=68,SNR=429
W22A Albuquerque 67.98 61 ⇑P P 02 22 03.3 +0.6
baz=68,SNR=42
X21A Alamocita Cree 67.99 62 ⇑P P 02 22 03.6 +0.9
baz=68,SNR=1000
LVV L'vov 68.01 327 *i* P **P 02 22 02.6 0.0**
LVV *i* 02 24 42.1
LVV *i* 02 26 28.1
LVV *i* S S 02 30 10.1 -2.2
LVV *i* 02 35 01.1
LVV *i* 02 38 12.3
LVV pmax pmax
comp=Z,32μm,2.0s,mb7.3
LVV L'vov 68.01 327 *e*P **P 02 22 06.0 +3.4**
TUC Tucson 68.06 65⇑*i*P **P 02 22 03.4 +0.2**
TUC pmax pmax
comp=Z,720nm,1.1s,mb5.9
TUC Tucson 68.06 65⇑*i*P **P 02 22 03.4 +0.2**
comp=Z,720nm,1.1s,mb5.9
Y20A Horse Springs, 68.10 62 ⇓P P 02 22 04.2 +0.8
baz=68,SNR=948
BSEG Bad Segeberg 68.10 337 *e*P **P 02 22 03.4 +0.3**
comp=Z,6μm,1.1s,mb6.8
BSEG *e*PP PP 02 24 48.4 +3.7
BSEG *e*S S 02 30 20.8 +7.6
BSEG *e*sS sS 02 34 17.5 +18
Z19A T-Link Ranch, 68.11 63 ⇓P P 02 22 04.2 +0.7
baz=68,SNR=458
KAR1 Arisaig 68.13 348 P **P 02 22 03.0 -0.2**
KAR1 Arisaig 68.13 348⇓*i*P **P 02 22 03.0 -0.2**
COEN Coen 68.14 190⇓*e*P **P 02 22 03.1 -0.6**
comp=Z,86nm,0.5s,mb5.3
U25A Circle Dot Ran 68.19 58 ⇑P P 02 22 03.6 -0.4
baz=68,SNR=586
KARS Kars 68.23 310 *e*P **P 02 22 05.2 +1.1**
BCA Borcka 68.23 311 *e*P **P 02 22 04.0 -0.1**
118A Homack Ranch, 68.24 64 ⇓P P 02 22 04.8 +0.5
baz=68,SNR=1000
DIGO Kars 68.27 309⇓*i*P **P 02 22 05.8 +1.5**
W23A Werner Place, 68.28 60 ⇑P P 02 22 04.7 +0.2
baz=68,SNR=234
ANMO Albuquerque 68.28 60 *i* P **P 02 22 04.6 +0.1**
ANMO Albuquerque 68.28 60 *i* P **P 02 22 04.6 +0.1**
V24A Rampart Ranch, 68.29 59 ⇓P P 02 22 04.8 +0.3
baz=68,SNR=669
ELO Logie Almond 68.29 346 P **P 02 22 03.5 -0.6**
ELO Logie Almond 68.29 346 *e*P **P 02 22 03.5 -0.6**
DBOC Borcka 68.29 311⇓*i*P **P 02 22 05.2 +0.8**
ARTV Artvin 68.31 311⇓*i*P **P 02 22 05.6 +1.1**
X22A Bernardo 68.35 61 ⇓P P 02 22 06.0 +1.1
baz=68,SNR=268
LAZ Ladron 68.36 61 *e*P **P 02 22 05.7 +0.7**
comp=Z,55μm,1.3s,mb7.7
Y21A Point of Rocks 68.39 62 ⇑P P 02 22 06.0 +0.9
baz=68,SNR=442
DAGI Agillar 68.40 311⇓*i*P **P 02 22 06.4 +1.3**
HLG Helgoland 68.41 339 *e*P **P 02 22 05.3 +0.4**
HLG *e*PP PP 02 24 51.1 +3.9
217A Green Valley 68.45 66 ⇓P P 02 22 05.8 +0.2
baz=68
EBH Black Hill 68.47 346 P **P 02 22 04.8 -0.4**
EBH Black Hill 68.47 346⇓*i*P **P 02 22 04.8 -0.4**
119A Ashpeak Ranch, 68.50 64 ⇑P P 02 22 06.2 +0.4
baz=68,SNR=372
V25A Rancho No Teng 68.53 58 ⇓P P 02 22 05.8 -0.1
baz=68,SNR=968
SIM Simferopol' 68.53 318*de*P **P 02 22 07.0 +1.2**
SIM *e* 02 22 27.0
SIM *e**PP pP 02 24 13.0 +0.1
SIM *e* 02 24 52.0
SIM *e*S S 02 30 23.0 +4.6
SIM pmax pmax
comp=Z,3μm,1.1s,mb6.5
U26A Atchley Ranch, 68.53 58 ⇑P P 02 22 05.4 -0.6
baz=68,SNR=456
CBKS Cedar Bluff 68.57 53⇓*i*P **P 02 22 04.7 -1.5**
CBKS pmax pmax
comp=Z,936nm,0.7s,mb6.2
CBKS Cedar Bluff 68.57 53⇓*i*P **P 02 22 04.7 -1.4**
comp=Z,936nm,0.7s,mb6.2
KWP Kalwaria Pacla 68.60 328 *e*P **P 02 22 06.7 +0.5**
comp=Z,46μm,1.6s,mb7.6
KWP *e*PcP PcP 02 22 27.4 +1.9
KWP *e*S S 02 30 21.5 +2.5
KWP *e*sS sS 02 34 09.2 +3.5
KWP *e*SS SS 02 35 06.7 +6.5
KWP Kalwaria Pacla 68.60 328 *e*P **P 02 22 06.7 +0.6**
KWP *e* 02 22 27.4
KWP *e*S S 02 30 21.5 +2.5
KWP *e*SS SS 02 35 06.7 +6.5
KWP pmax pmax
comp=Z,46μm,1.6s,mb7.6
KWP Kalwaria Pacla 68.60 328⇓*e*P **P 02 22 06.6 +0.5**
comp=Z,25μm,1.2s,mb7.4
KWP Kalwaria Pacla 68.60 328⇓*i*P **P 02 22 06.8 +0.7**
RUE Ruedersdorf 68.60 335 *e*P **P 02 22 06.2 +0.1**
RUE Ruedersdorf 68.60 335⇓*e*P **P 02 22 06.2 +0.1**
comp=Z,6μm,0.9s,mb7.0
Z20A Nine Sixteen R 68.60 63 ⇑P P 02 22 07.0 +0.6
baz=68,SNR=787
DDEM Demirkent 68.62 311⇓*i*P **P 02 22 07.5 +1.1**
W24A Lazy 6 Ranch, 68.62 59 ⇑P P 02 22 06.9 +0.4
baz=68,SNR=797
MNSI Mandailing Nat 68.62 239 P **P 02 22 05.9 -0.9**
LENM Lemitar 68.63 61 *e*P **P 02 22 07.0 +0.4**
comp=Z,634nm,0.9s,mb6.0
KAKA Kakadu 68.64 201⇓*i*P **P 02 22 06.5 -0.3**
KAKA Kakadu 68.64 201 *e*P **P 02 22 06.5 -0.3**
EAB Aberfoyle 68.65 347 P **P 02 22 05.9 -0.4**
EAB Aberfoyle 68.65 347⇓*i*P **P 02 22 05.9 -0.4**
ESY Stoneypath 68.66 345 P **P 02 22 06.0 -0.4**
ESY Stoneypath 68.66 345⇓*i*P **P 02 22 06.0 -0.4**
X23A Hourglass Bar 68.71 60 ⇓P P 02 22 07.6 +0.5
baz=68,SNR=52
218A Dragoon 68.71 65 ⇓P P 02 22 07.7 +0.6
baz=68,SNR=274
CRA Chernovtsy 68.71 325 P PcP 02 22 31.4 +5.4
Y22D IRIS PASSCAL I 68.73 61 ⇑P P 02 22 08.1 +0.9
baz=68,SNR=67
EDI Edinburgh 68.74 346 P **P 02 22 06.2 -0.6**
EDI AMb AMB 02 22 17.4
comp=Z,4μm,1.1s,mb6.7
EDI pP 02 24 17.0 +2.9
EDI AMS AMS 02 39 49.1
comp=Z,71μm,23.8s
EDI Edinburgh 68.74 346⇓*e*P **P 02 22 06.2 -0.6**
EDI AMb AMB 02 22 17.4
comp=Z,4μm,1.1s,mb6.7
EDI *e* pP 02 24 17.0 +2.9
EDI AMS AMS 02 39 49.1
comp=Z,71μm,23.8s
PZAR Pazar-Rize 68.77 311 *e*P **P 02 22 07.4 +0.1**
POO Poona 68.80 273 *e*PKP **P 02 22 08.5 +0.7**
KIS Kishinev 68.81 323 *i* P **P 02 22 06.0 -1.4**
comp=Z,18μm,15.0s
KIS Kishinev 68.81 323 *i* PcP PcP 02 22 29.0 +2.5
KIS *i* pP pP 02 24 08.0 -6.7
KIS Kishinev 68.81 323 *i* PP PP 02 24 52.0 +1.1
comp=Z,90μm,22.0s
KIS *e*S S 02 30 22.0 +0.5
comp=Z,150μm,15.0s
KIS *i* ScS ScS 02 31 06.0 -0.5
KIS *e*sS sS 02 33 38.0 -30
KIS *e*SS SS 02 34 56.0 -7.5
KIS *e*SSS 02 38 18.0
KIS LRM 02 50 24.0
comp=Z,74μm,23.0s
KIS Kishinev 68.81 323*j i*P **P 02 22 06.0 -1.4**
KIS *i* 02 22 29.0
KIS *i**PP pP 02 24 08.0 -6.7
KIS *i* 02 24 52.0
KIS *i* S S 02 30 22.0 +0.5
KIS *i* 02 31 06.0
KIS *e*SSS 02 38 18.0
KIS pmax pmax
comp=Z,30μm,2.0s,mb7.3
KIS pmax pmax
comp=Z,78μm,16.0s
KIS Kishinev 68.81 323 ⇑P P 02 22 06.9 -0.6
KIS Kishinev 68.81 323⇑*i*P **P 02 22 06.9 -0.5**
Y22A Socorro 68.81 61 ⇑P P 02 22 08.2 +0.5
baz=69,SNR=639
DYDN Diyadin 68.82 308⇓*i*P **P 02 22 09.5 +1.9**
BNM Barren Site 68.82 61 *e*P **P 02 22 08.2 +0.4**
comp=Z,618nm,0.8s,mb6.0
EAU Auchinoon 68.86 346 P **P 02 22 07.1 -0.4**
EAU Auchinoon 68.86 346⇓*i*P **P 02 22 07.1 -0.4**
EBL Broad Law 68.87 346 P **P 02 22 07.0 -0.6**
EBL Broad Law 68.87 346⇓*i*P **P 02 22 07.0 -0.6**
Z21A St. Cloud Mine 68.94 62 ⇓P P 02 22 09.3 +0.8
baz=69
OJC Ojcow 68.97 330 *e*P **P 02 22 06.5 -1.8**
OJC *e*S S 02 30 23.5 +0.2
OJC *e*SS SS 02 35 09.5 +3.7
V26A Tequesquite Ra 68.98 58 P **P 02 22 07.8 -0.8**
baz=69,SNR=674
120A U Bar Ranch, L 69.02 63 ⇑P P 02 22 09.5 +0.6
baz=69,SNR=1000
CLDR Caldiran 69.03 308 *e*P **P 02 22 10.4 +1.4**
PGBU Glenifferbraes 69.03 347 P **P 02 22 07.7 -0.9**
PGBU AMb AMB 02 22 20.0
comp=Z,11μm,2.6s,mb6.7
PGBU AMS AMS 02 39 43.5
comp=Z,65μm,22.5s
PGBU Glenifferbraes 69.03 347⇓*e*P **P 02 22 07.7 -0.9**
PGBU AMb AMB 02 22 20.0
comp=Z,11μm,2.6s,mb6.7
PGBU AMS AMS 02 39 43.5
comp=Z,65μm,22.5s
SCIA State Center 69.04 47⇓*i*P **P 02 22 07.8 -1.1**
comp=Z,6μm,1.1s,mb6.8
IAS Iasi 69.09 323 ⇓P P 02 22 08.7 -0.4
IAS Iasi 69.09 323⇓*i*P **P 02 22 08.7 -0.4**
W25A X Bar L Ranch, 69.09 59 ⇑P P 02 22 09.2 -0.1
baz=69,SNR=985
PCA1 Carrot 69.11 346 P **P 02 22 08.8 -0.3**
PCA1 Carrot 69.11 346⇓*i*P **P 02 22 08.8 -0.3**
X24A Lazy VL Ranch, 69.11 60 ⇑P P 02 22 10.1 +0.6
baz=69,SNR=114
219A White Tail Can 69.11 64 P **P 02 22 10.1 +0.5**
baz=69,SNR=858
AGRB Hanur-Agry 69.11 309 *e*P **P 02 22 10.9 +1.5**
318A Bisbee 69.16 65 ⇑P P 02 22 10.1 +0.3
baz=69,SNR=704
HOMI Horasan 69.23 310⇓*i*P **P 02 22 11.8 +1.7**
STHS Stebnicka Huta 69.24 329 *i* P **P 02 22 10.9 +0.9**
STHS pmax pmax
comp=Z,3μm,1.1s,mb6.5
STHS Stebnicka Huta 69.24 329 *i* P **P 02 22 10.9 +0.9**
comp=Z,3μm,1.1s,mb6.5
STHS *e*S S 02 30 30.7 +4.3
STHS Stebnicka Huta 69.24 329 *i* P **P 02 22 10.9 +0.9**
STHS *e*S S 02 30 30.7 +4.3
Y23A Lovelace Mesa, 69.29 61 ⇓P P 02 22 11.1 +0.5
baz=69,SNR=733
MDRS Chennai 69.31 264 *ex* PcP 02 22 35.5 +6.4
ESK Eskdalemuir 69.33 346 P **P 02 22 10.7 +0.3**
comp=Z,20μm,1.1s,mb7.3
ESK Eskdalemuir 69.33 346 P **P 02 22 10.0 -0.4**
ESK AMb AMB 02 22 17.6
comp=Z,4μm,1.7s,mb6.4
ESK AMS AMS 02 39 59.9
comp=Z,66μm,21.8s
ESK Eskdalemuir 69.33 346⇓*e*P **P 02 22 10.0 -0.4**
ESK AMb AMB 02 22 17.6
comp=Z,4μm,1.7s,mb6.4
ESK AMS AMS 02 39 59.9
comp=Z,66μm,21.8s
ESK Eskdalemuir 69.33 346⇓*e*P **P 02 22 10.2 -0.2**
ESK pmax pmax
comp=Z,3μm,0.9s,mb6.7
ESK Eskdalemuir 69.33 346⇓*e*P **P 02 22 10.2 -0.2**
comp=Z,3μm,0.9s,mb6.7
TUTA Tutak 69.34 309⇓*i*P **P 02 22 12.7 +2.0**
Z22A Elephant Butte 69.35 62 ⇑P P 02 22 11.4 +0.5
baz=69,SNR=364
KSP Ksiaz 69.42 332 *e*P **P 02 22 11.2 +0.2**
comp=Z,31μm,2.4s,mb7.2
KSP *e*S S 02 30 32.6 +4.3
KSP *e*SS SS 02 35 21.3 +8.8
KSP *e*SSS 02 38 29.9
KSP Ksiaz 69.42 332⇓*i*P **P 02 22 11.0 0.0**
KSP *e**PP pP 02 24 17.3 -1.2
KSP *e**SP sP 02 25 20.5 -4.6
KSP *e*S S 02 30 29.0 +0.7
KSP Ksiaz 69.42 332⇓*i*P **P 02 22 11.0 0.0**
KSP *i* 02 22 15.1
KSP *e*pP pP 02 24 17.3 -1.2
KSP *e*sP sP 02 25 20.5 -4.6
KSP *e*S S 02 30 29.0 +0.7
KSP *e*sS sS 02 34 08.5 -7.3
KTUT Trabzon 69.42 312 *e*P **P 02 22 10.1 -1.1**
ECK Cauldkaine Hil 69.45 346 P **P 02 22 10.6 -0.5**
ECK Cauldkaine Hil 69.45 346⇓*i*P **P 02 22 10.6 -0.5**
MACK Trabzon 69.46 312⇓*i*P **P 02 22 11.6 +0.2**
LEOM Leova 69.46 323 ⇑P P 02 22 11.2 -0.1
LEOM Leova 69.46 323⇑*i*P **P 02 22 11.2 -0.1**
JFWS Jewell Farm 69.46 44⇓*e*P **P 02 22 09.5 -1.9**
JFWS pmax pmax
comp=Z,264nm,1.3s,mb5.4
JFWS Jewell Farm 69.46 44⇓*e*P **P 02 22 09.5 -1.9**
comp=Z,264nm,1.3s,mb5.4
121A Cookes Peak, D 69.48 63 ⇓P P 02 22 12.5 +0.8
baz=69,SNR=726
BUR08 Bucovina Ar. S 69.52 325 *e*P **P 02 22 11.7 +0.1**
NIE Niedzica 69.53 329 *e*P **P 02 22 12.4 +0.7**
BUR01 Bucovina Ar. S 69.53 325 P **P 02 22 12.1 +0.4**
BURAR Bucovina Array 69.53 325 ⇓P **P 02 22 11.8 +0.1**
BURAR Bucovina Array 69.53 325⇓*i*P **P 02 22 11.8 +0.1**
X25A Clemmons Ranch 69.53 59 ⇓P P 02 22 12.3 +0.3
baz=69,SNR=334
W26A Owens Ranch, T 69.55 58 ⇓P P 02 22 11.8 -0.2
baz=69,SNR=338
KAD Karad 69.55 271 *e*PKP **P 02 22 12.9 +0.6**
KAD AMb AMB 02 22 22.9
comp=Z,10μm,1.1s,mb7.2
KAD *i* S S 02 30 31.8 +0.9
RAC Raciborz 69.56 331 *e*P **P 02 22 12.3 +0.4**
RAC *e*S S 02 30 33.3 +3.3
RAC *e*SS SS 02 35 19.1 +4.3
RAC Raciborz 69.56 331 *e*P **P 02 22 12.3 +0.4**
RAC *e*S S 02 30 33.3 +3.3
RAC *e*SS sS 02 34 12.7 -4.9
RAC *e*SS SS 02 35 19.1 +4.3
220A Playas Peak, P 69.58 64 ⇑P P 02 22 12.5 +0.2
baz=69,SNR=696
319A Douglas 69.59 65 ⇑P P 02 22 12.7 +0.4
baz=69,SNR=803
ERZM Erzurum 69.59 310⇓*i*P **P 02 22 14.0 +1.8**
EZM Erzurum 69.59 310 *e*P **P 02 22 13.5 +1.3**
UZH Uzhgorod 69.61 327⇓*i*P **P 02 22 10.7 -1.4**
UZH *e* 02 22 28.0
UZH *e* 02 25 21.0
UZH *i* S S 02 30 27.5 -3.0
UZH *i* 02 31 11.0
UZH Uzhgorod 69.61 327 *e*P **P 02 22 12.0 -0.1**
Y24A Capitan 69.61 60 ⇓P P 02 22 12.7 +0.3
baz=69,SNR=1000
XAL Allendale 69.62 345 P **P 02 22 11.8 -0.4**
XAL Allendale 69.62 345⇓*i*P **P 02 22 11.8 -0.4**
CRVS Cervenica-Dubn 69.63 328 *i* P **P 02 22 12.6 +0.3**
CRVS pmax pmax
comp=Z,10μm,1.8s,mb6.9
CRVS Cervenica-Dubn 69.63 328 *i* P **P 02 22 12.6 +0.3**
comp=Z,10μm,1.8s,mb6.9
CRVS *e*PP PP 02 24 57.4 -0.3
CRVS *e*SP 02 25 17.3
CRVS *e*S S 02 30 31.3 +0.5
CRVS *e*SS sS 02 34 19.1 +0.7
CRVS *e*SS SS 02 35 15.2 -0.7
CRVS Cervenica-Dubn 69.63 328 *i* P **P 02 22 12.6 +0.3**
CRVS *e*PP PP 02 24 57.4 -0.3
CRVS *e*sP sP 02 25 17.3 -9.2
CRVS *e*S S 02 30 31.3 +0.5
CRVS *e*sS sS 02 34 19.1 +0.7
CRVS *e*SS SS 02 35 15.2 -0.7
VANB Van 69.72 308 *e*P **P 02 22 14.0 +1.0**
Z23A Rita Site, Whi 69.72 61 ⇑P P 02 22 13.3 +0.2
baz=70,SNR=283
122A Conniff Cattle 69.76 62 ⇓P P 02 22 14.2 +0.9
baz=70,SNR=374
TVAN Van 69.76 308⇓*i*P **P 02 22 14.7 +1.4**
OKC Ostrava-Krasne 69.80 331⇓*i*P **P 02 22 13.7 +0.5**
OKC *e* 02 25 00.2
OKC Ostrava-Krasne 69.80 331⇓*i*P **P 02 22 13.7 +0.5**
OKC *e* 02 22 17.8
OKC *e*PP PP 02 25 00.2 +1.1
OKC *e* 02 29 47.9
OKC *e* 02 34 10.5
OKC *e*P'P' 02 49 59.8
OKC Ostrava-Krasne 69.80 331⇓*i*P **P 02 22 13.7 +0.5**
OKC *e*x x 02 22 17.8
OKC *e*PP PP 02 25 00.2 +1.1
OKC *e*x x 02 29 47.9
OKC *e*XS sS 02 34 10.5 -10
OKC *e*PKPPKP 02 49 59.8
UPC Upice 69.80 332⇓*i*P **P 02 22 13.4 +0.2**
UPC *e* 02 22 18.0
UPC *e*pP pP 02 24 34.1 +13
UPC Upice 69.80 332⇓*i*P **P 02 22 13.4 +0.2**
UPC *e*x x 02 22 18.0
UPC *e*x x 02 24 34.1
KSU1 Kansas State U 69.80 51⇓*e*P **P 02 22 11.7 -1.8**
comp=Z,467nm,0.9s,mb5.9
DPC Dobruska-Polom 69.85 332⇓*i*P **P 02 22 14.1 +0.5**
DPC *e* 02 25 02.6
DPC Dobruska-Polom 69.85 332⇓*i*P **P 02 22 14.1 +0.5**
DPC *e* 02 22 18.0
DPC *e*pP pP 02 24 30.5 +9.1
DPC *e*PP PP 02 25 02.6 +3.1
DPC *e* 02 27 58.0
DPC *e* 02 29 44.4
DPC *e* 02 34 19.7

DPC				*e*P'P'		02 50 03.2
DPC	**Dobruska-Polom**	**69.85 332**	⇓	*i*P	**P**	**02 22 14.1 +0.5**
DPC				*e*x	x	02 22 18.0
DPC				*e*x	x	02 24 30.5
DPC				*e*PP	PP	02 25 02.6 +3.1
DPC				*e*x	x	02 27 58.0
DPC				*e*x	x	02 29 44.4
DPC				*e*XS	sS	02 34 19.7 -1.4
DPC				*e*PKPPKP		02 50 03.2
CLL	**Collm**	**69.87 334**		*e*P	**P**	**02 22 13.3 -0.3**
	comp=Z,8μm,1.4s,mb7.0					
CLL				*e*pP	pP	02 24 28.7 +7.3
CLL				*e*S	S	02 30 39.3 +5.9
CLL				*es*S	sS	02 34 16.3 -4.9
CLL	**Collm**	**69.87 334**	⇓	*i*P	**P**	**02 22 13.4 -0.2**
CLL				*i* S	S	02 30 35.5 +2.1
CLL				*e*		02 31 13.0
CLL				pmax	pmax	
	comp=Z,6μm,1.1s,mb6.9					
CLL	**Collm**	**69.87 334**	⇓	*i*P	**P**	**02 22 13.4 -0.2**
CLL				*i*		02 22 17.5
CLL				*i*		02 22 23.6
CLL				*e*pP	pP	02 24 30.0 +8.6
CLL				*es*P	sP	02 25 28.0 +0.1
CLL				*i* S	S	02 30 35.5 +2.1
CLL				*e*SKS		02 31 13.0
CLL				*i* P'P'		02 50 06.2
CLL				*e*pP'P'		02 52 20.0
CLL	**Collm**	**69.87 334**	⇓	*i*P	**P**	**02 22 13.4 -0.2**
	comp=Z,768nm,0.7s,mb6.2					
CLL				*e*Pmax		02 22 14.0
CLL				*i* P(2)		02 22 17.5
	comp=Z,5μm,1.1s					
CLL				*e*Plp		02 22 19.0
	comp=Z,61μm,19.4s					
CLL				*i* Pmax		02 22 23.6
	comp=Z,6μm,1.1s					
CLL				*e*PcP	PcP	02 22 32.0 +1.1
CLL				*e*pPmax		02 24 30.0
CLL				*e*PP	PP	02 24 57.0 -2.6
CLL				*es*P	sP	02 25 28.0 +0.1
CLL				*e*pPP		02 26 48.0
CLL				*es*PP		02 27 59.0
CLL				*es*PPPmax		02 29 40.0
CLL				*i* S	S	02 30 35.5 +2.1
CLL				*e*		02 30 43.0
CLL				*e*SKSac	SKSac	02 31 13.0 +0.2
CLL				*es*S	sS	02 34 28.0 +6.8
CLL				*e*SS	SS	02 35 48.0 +29
CLL				*es*SS		02 38 42.0
CLL				*e*		02 40 18.0
CLL				*e*SSSS		02 41 54.0
CLL				*e*		02 49 15.0
CLL				*e*		02 49 55.0
CLL				*i* PKPPKPbc		02 50 06.2
	comp=Z,464nm,1.9s					
CLL				*e*		02 50 30.0
CLL				*e*SKPPKPdf		02 52 42.0
CLL				*e*		02 58 57.0
CLL				*e*3PKPdf		03 09 39.0
CLL				*e*SKP2PKP		03 12 05.0
CLL				*e*		03 12 35.0
GCD	**Castle Douglas**	**69.88 346**		P	**P**	**02 22 13.1 -0.5**
GCD	**Castle Douglas**	**69.88 346**	⇓	*i*P	**P**	**02 22 13.1 -0.5**
KOPT	**Kop Dagi**	**69.89 311**	⇓	*i*P	**P**	**02 22 16.1 +2.1**
221A	**Mesquite Ranch**	**69.89 63**	⇑	P	**P**	**02 22 14.7 +0.5**
	baz=70,SNR=232					
VANT	**Van**	**69.92 308**		*e*P	**P**	**02 22 19.6 +5.4**
W27A	**Bowe Ranch, En**	**69.92 58**		P	**P**	**02 22 13.4 -0.8**
	baz=70,SNR=224					
ESPY	**Espiye-Giresun**	**69.94 313**		*e*P	**P**	**02 22 13.4 -0.8**
X26A	**CR and CF Fran**	**69.95 59**	⇓	P	**P**	**02 22 14.1 -0.3**
	baz=70,SNR=222					
WIT	**Witteveen**	**69.95 339**	⇓	*i*P	**P**	**02 22 15.2 +1.1**
WIT	**Witteveen**	**69.95 339**		*e*x	**P**	**02 22 19.3 +5.2**
	comp=Z,30μm,2.5s,mb7.3					
TRPA	**Tarpa**	**69.97 327**	⇓	*i*P	**P**	**02 22 14.8 +0.5**
GUMT	**Gumushane**	**69.98 312**		*e*P	**P**	**02 22 14.8 +0.3**
GAL1	**Galloway**	**69.98 346**		P	**P**	**02 22 13.4 -0.8**
GAL1				AMb	AMB	02 22 24.8
	comp=Z,5μm,1.1s,mb6.9					
GAL1						02 24 05.4
GAL1				AMS	AMS	02 40 11.7
	comp=Z,52μm,25.1s					
GAL1	**Galloway**	**69.98 346**	⇓	*e*P	**P**	**02 22 13.4 -0.8**
GAL1				AMb	AMB	02 22 24.8
	comp=Z,5μm,1.1s,mb6.9					
GAL1				*e*		02 24 05.4
GAL1				AMS	AMS	02 40 11.7
	comp=Z,52μm,25.1s					
Y25A	**Mesa, Roswell**	**69.99 60**	⇓	P	**P**	**02 22 14.7 0.0**
	baz=70,SNR=18					
TESR		**70.00 324**	⇓	P	**P**	**02 22 14.3 -0.1**
TESR		**70.00 324**	⇓	*i*P	**P**	**02 22 14.3 -0.2**
320A	**Kipp Ranch, An**	**70.02 64**	⇓	P	**P**	**02 22 15.4 +0.5**
	baz=70,SNR=408					
BRG	**Berggiesshubel**	**70.02 334**		*e*P	**P**	**02 22 14.4 -0.1**
	comp=Z,4μm,1.5s,mb6.7					
BRG				*e*PP	PP	02 25 03.6 +2.7
BRG				*e*S	S	02 30 41.4 +6.3
BRG				*es*S	sS	02 34 19.0 -4.1
BRG	**Berggiesshubel**	**70.02 334**		*i*P	**P**	**02 22 14.5 0.0**
	comp=Z,596nm,1.9s,mb5.7					
BRG				*i*		02 22 18.9
	comp=Z,2μm,1.3s					
BRG				*i*		02 25 03.0
	comp=Z,4μm,1.8s					
BRG				*i*		02 26 43.4
	comp=Z,878nm,1.7s					
BRG				*i*		02 31 06.8
	comp=Z,3μm,2.2s					
BRG				*e*PKPPKP		02 52 26.7
	comp=Z,199nm,2.0s					
BRG						
	comp=N,66μm,26.9s					
BRG						
	comp=E,64μm,20.0s					
BRG						
	comp=Z,108μm,29.7s					
BRG	**Berggiesshubel**	**70.02 334**		*i*P	**P**	**02 22 14.5 0.0**
BRG				*i*		02 25 03.0
BRG				*i*		02 31 06.8
BRG				pmax	pmax	
	comp=Z,1μm,1.3s,mb6.2					
BRG				pmax	pmax	
	comp=Z,2μm,1.8s,mb6.3					
BRG				MLR	MLR	
	comp=E,38μm,20.0s					
MORC	**Moravsky Berou**	**70.03 331**	⇓	*e*P	**P**	**02 22 14.7 +0.1**
MORC				pmax	pmax	
	comp=Z,4μm,0.8s,mb6.9					
MORC	**Moravsky Berou**	**70.03 331**	⇓	*e*P	**P**	**02 22 14.7 +0.1**
	comp=Z,4μm,0.8s,mb6.9					
BMR	**Baia Mare**	**70.06 326**	⇑	*i*P	**P**	**02 22 15.2 +0.4**
Z24A	**Sheeppen Canyo**	**70.12 61**	⇑	P	**P**	**02 22 15.8 +0.4**
	baz=70					
XDE	**Dent Fell**	**70.16 346**		P	**P**	**02 22 14.9 -0.4**
XDE	**Dent Fell**	**70.16 346**	⇓	*i*P	**P**	**02 22 14.9 -0.4**
PVCC	**Panska Ves**	**70.17 333**	⇓	*i*P	**P**	**02 22 15.6 +0.2**
PVCC				*e*		02 25 07.4
PVCC				*e*		02 30 38.9
PVCC	**Panska Ves**	**70.17 333**	⇓	*i*P	**P**	**02 22 15.6 +0.2**
PVCC				*e*		02 22 20.2
PVCC				*e*PP	PP	02 25 07.4 +5.2
PVCC				*e*		02 30 38.9
PVCC				*e*		02 34 25.7
PVCC				*e*P'P'		02 49 53.3
PVCC	**Panska Ves**	**70.17 333**	⇓	*i*P	**P**	**02 22 15.6 +0.2**
PVCC				*e*x	x	02 22 20.2
PVCC				*e*PP	PP	02 25 07.4 +5.2
PVCC				*e*S	S	02 30 38.9 +2.1
PVCC				*e*XS	sS	02 34 25.7 +0.7
PVCC				*e*x	x	02 49 53.3
222A	**Williams Famil**	**70.17 63**	⇓	P	**P**	**02 22 16.1 +0.3**
	baz=70,SNR=688					
IBBN	**Ibbenburen**	**70.19 338**		*e*P	**P**	**02 22 15.5 0.0**
	comp=Z,7μm,1.3s,mb6.9					
IBBN				*e*pP	pP	02 24 31.2 +7.7
IBBN				*e*S	S	02 30 43.4 +6.4
IBBN				*es*S	sS	02 34 20.1 -5.0
123A	**Bell Site, Whi**	**70.20 62**	⇓	P	**P**	**02 22 16.3 +0.4**
	baz=70,SNR=125					
LIKS	**Likavka**	**70.22 330**		*i* P	**P**	**02 22 17.1 +1.4**
LIKS				pmax	pmax	
	comp=Z,29μm,2.8s,mb7.2					
LIKS	**Likavka**	**70.22 330**		*i* P	**P**	**02 22 17.1 +1.4**
	comp=Z,29μm,2.8s,mb7.2					
LIKS				*e*S	S	02 30 42.6 +5.2
LIKS	**Likavka**	**70.22 330**		*i* P	**P**	**02 22 17.1 +1.4**
LIKS				*e*S	S	02 30 42.6 +5.2
X27A	**F and S Farms,**	**70.23 58**		P	**P**	**02 22 16.1 +0.1**
	baz=70,SNR=587					
KECS	**Kecovo**	**70.30 329**		*i* P	**P**	**02 22 16.3 +0.1**
KECS				pmax	pmax	
	comp=Z,1μm,1.0s,mb6.2					
KECS	**Kecovo**	**70.30 329**		*i* P	**P**	**02 22 16.3 +0.1**
	comp=Z,1μm,1.0s,mb6.2					
KECS				*e*S	S	02 30 43.3 +4.9
KECS	**Kecovo**	**70.30 329**		*i* P	**P**	**02 22 16.3 +0.1**
KECS				*e*S	S	02 30 43.3 +4.9
TATV	**Tatvan**	**70.31 309**	⇓	*i*P	**P**	**02 22 18.2 +1.8**
TLCR		**70.36 322**	⇑	P	**P**	**02 22 16.5 -0.1**
TLCR		**70.36 322**	⇑	*i*P	**P**	**02 22 16.5 -0.1**
HKR	**Hakkari**	**70.37 307**		*e*P	**P**	**02 22 17.3 +0.5**
HAKT	**HAKKARI**	**70.40 307**	⇑	*i*P	**P**	**02 22 15.5 -1.5**
HPK	**Haverah Park**	**70.41 344**		P	**P**	**02 22 16.8 +0.1**
HPK				AMb	AMB	02 22 27.8
	comp=Z,11μm,1.0s,mb7.2					
HPK				*e*		02 24 19.3
HPK				AMS	AMS	02 40 18.6
	comp=Z,59μm,24.2s					
HPK	**Haverah Park**	**70.41 344**	⇓	*e*P	**P**	**02 22 16.8 +0.1**
HPK				AMb	AMB	02 22 27.8
	comp=Z,11μm,1.0s,mb7.2					
HPK				*e*		02 24 19.3
HPK				AMS	AMS	02 40 18.6
	comp=Z,59μm,24.2s					
BNGL	**BINGOL**	**70.46 310**	⇓	*i*P	**P**	**02 22 19.1 +1.7**
PETR		**70.47 323**	⇓	P	**P**	**02 22 18.3 +1.0**
PETR		**70.47 323**	⇓	*i*P	**P**	**02 22 18.3 +1.0**
Z25A	**Roswell**	**70.49 60**		P	**P**	**02 22 17.5 -0.1**
	baz=70,SNR=276					
GIM	**North Isle of**	**70.51 346**		P	**P**	**02 22 16.8 -0.6**
GIM	**North Isle of**	**70.51 346**	⇓	*i*P	**P**	**02 22 16.8 -0.6**
VRI	**Vrincioaia**	**70.52 323**	⇓	P	**P**	**02 22 17.8 +0.2**
VRI	**Vrincioaia**	**70.52 323**	⇓	*i*P	**P**	**02 22 17.8 +0.2**
VRI	**Vrincioaia**	**70.52 323**	⇓	*i*P	**P**	**02 22 17.9 +0.3**
124A	**Stringfield Ra**	**70.56 61**	⇓	P	**P**	**02 22 18.2 +0.1**
	baz=70,SNR=417					
PLOR	**Plostina**	**70.56 323**	⇓	P	**P**	**02 22 18.0 +0.2**
PLOR	**Plostina**	**70.56 323**	⇓	*i*P	**P**	**02 22 18.0 +0.2**
223A	**Chaparral, Ant**	**70.60 62**	⇓	P	**P**	**02 22 18.7 +0.4**
	baz=70,SNR=136					
CFR	**Carcaliu**	**70.61 322**	⇓	*i*P	**P**	**02 22 17.9 -0.2**
EZC	**Erzincan**	**70.61 311**		*e*P	**P**	**02 22 18.9 +0.7**
PRU	**Pruhonice**	**70.67 333**	⇓	*i*P	**P**	**02 22 19.0 +0.7**
PRU				*e*		02 25 10.0
PRU				*e*		02 30 44.8
PRU	**Pruhonice**	**70.67 333**	⇓	*i*P	**P**	**02 22 19.0 +0.7**
PRU				*e*		02 22 23.3
PRU				*e*pP	pP	02 24 35.5 +8.9
PRU				*e*PP	PP	02 25 10.0 +3.6
PRU				*e*		02 28 04.5
PRU				*e*		02 29 40.7
PRU				*e*		02 30 44.8
PRU				*e*		02 34 30.7
PRU				*e*P'P'		02 50 05.2
PRU	**Pruhonice**	**70.67 333**	⇓	*i*P	**P**	**02 22 19.0 +0.7**
PRU				*e*x	x	02 22 23.3
PRU				*e*x	x	02 24 35.5
PRU				*e*PP	PP	02 25 10.0 +3.6
PRU				*e*x	x	02 28 04.5
PRU				*e*x	x	02 29 40.7
PRU				*e*S	S	02 30 44.8 +2.4
PRU				*e*XS	sS	02 34 30.7 -0.3
PRU				*e*PKPPKP		02 50 05.2
CUKT	**Cukurca**	**70.70 307**		*e*P	**P**	**02 22 19.2 +0.4**
VRAC	**Vranov**	**70.72 331**		SKKS	SKKSdf	02 47 44.8 -7.0
	comp=Z,5.7nm,0.7s,baz=160,slow=18,SNR=3.3					
VRAC	**Vranov**	**70.72 331**	⇓	P	**P**	**02 22 19.5 +0.8**
VRAC	**Vranov**	**70.72 331**	⇓	*i*P	**P**	**02 22 19.5 +0.8**
WTSB	**Winterswijk**	**70.72 339**	⇓	*i*P	**P**	**02 22 18.5 -0.1**
WTSB	**Winterswijk**	**70.72 339**		*e*x	**P**	**02 22 23.0 +4.4**
	comp=Z,5μm,1.2s,mb6.8					
AMTX	**Amarillo**	**70.75 57**	⇓	*i*P	**P**	**02 22 18.6 -0.6**
	comp=Z,4μm,0.7s,mb6.9					
GMM	**Mts of Mourne**	**70.77 347**		P	**P**	**02 22 18.2 -0.7**
GMM	**Mts of Mourne**	**70.77 347**	⇓	*i*P	**P**	**02 22 18.2 -0.7**
VYHS	**Vyhne**	**70.80 330**		*i* P	**P**	**02 22 19.7 +0.6**
VYHS				*e*		02 25 09.3
VYHS				*e*SP		02 25 30.3
VYHS				*e*S	S	02 30 45.5 +1.6
VYHS	**Vyhne**	**70.80 330**		*i* P	**P**	**02 22 19.7 +0.6**
VYHS				*e*PP	PP	02 25 09.3 +1.8
VYHS				*e*SP		02 25 30.3
VYHS				*e*S	S	02 30 45.5 +1.6
VYHS				*e*SS	sS	02 34 31.5 -1.2
VYHS				*e*SS	SS	02 35 30.5 -3.0
VYHS	**Vyhne**	**70.80 330**		*i* P	**P**	**02 22 19.7 +0.6**
VYHS				*e*PP	PP	02 25 09.3 +1.8
VYHS				*es*P	sP	02 25 30.3 -3.5
VYHS				*e*S	S	02 30 45.5 +1.6
VYHS				*es*S	sS	02 34 31.5 -1.2
VYHS				*e*SS	SS	02 35 30.5 -3.0
Y27A	**Causey**	**70.80 59**	⇓	P	**P**	**02 22 19.0 -0.5**
	baz=71,SNR=568					
DIKM	**Dikmen**	**70.81 315**		*e*P	**P**	**02 22 19.6 +0.2**
BINT	**Bingol**	**70.82 310**		*e*P	**P**	**02 22 22.9 +3.5**
TANN	**Tannenbergstha**	**70.82 334**		*e*P	**P**	**02 22 19.4 +0.2**
	comp=Z,6μm,1.6s,mb6.8					
TANN				*e*S	S	02 30 51.0 +6.8
TANN				*es*S	sS	02 34 34.2 +1.3
MOX	**Moxa**	**70.83 335**		*e*P	**P**	**02 22 19.2 -0.1**
MOX				*e*		02 22 23.7
MOX				*e*PP	PP	02 24 35.6 -32
MOX				*e*		02 25 14.0
MOX						
	comp=Z,39μm,22.0s					
MOX	**Moxa**	**70.83 335**		*e*P	**P**	**02 22 19.4 +0.1**
	comp=Z,6μm,1.5s,mb6.8					
MOX				*e*S	S	02 30 50.9 +6.7
MOX				*es*S	sS	02 34 28.1 -4.8
MOX	**Moxa**	**70.83 335**		*e*P	**P**	**02 22 19.2 -0.1**
MOX				*e*		02 22 23.7
MOX				*e*PP	PP	02 24 35.6 -32
MOX				*e*		02 25 14.0
WERD	**Werda**	**70.83 335**		*e*P	**P**	**02 22 19.6 +0.3**
KOLL	**Kolacno**	**70.85 330**		*i* P	**P**	**02 22 20.1 +0.7**
KOLL				*e*S	S	02 30 49.1 +4.6
KOLL	**Kolacno**	**70.85 330**		*i* P	**P**	**02 22 20.1 +0.7**
KOLL				*e*S	S	02 30 49.1 +4.6
GRER		**70.86 323**	⇓	P	**P**	**02 22 21.0 +1.5**
GRER		**70.86 323**	⇓	*i*P	**P**	**02 22 21.0 +1.5**
Z26A	**Caprock**	**70.87 60**	⇑	P	**P**	**02 22 19.6 -0.2**
	baz=71,SNR=1000					
GUNZ	**Gunzen**	**70.90 334**		*e*P	**P**	**02 22 20.0 +0.3**
GUNZ				*e*pP	pP	02 24 35.6 +7.5
MSTX	**Muleshoe**	**70.93 58**	⇓	P	**P**	**02 22 19.4 -0.8**
	baz=71,SNR=818					
KVT	**Kavak**	**70.95 314**		*e*P	**P**	**02 22 21.1 +1.0**
ABA1	**Baconsthorpe**	**70.96 342**		P	**P**	**02 22 19.7 -0.3**
ABA1	**Baconsthorpe**	**70.96 342**		*e*P	**P**	**02 22 19.7 -0.3**
AWI1	**Witton**	**70.96 342**		P	**P**	**02 22 20.4 +0.4**
AWI1	**Witton**	**70.96 342**	⇓	*e*P	**P**	**02 22 20.4 +0.4**
ERBA	**Erbaa**	**70.98 314**	⇓	*i*P	**P**	**02 22 21.7 +1.4**
PSZ	**Piszkesteto**	**70.99 329**	⇓	*e*P	**P**	**02 22 20.8 +0.6**
	comp=Z,20μm,1.8s,mb7.2					
PSZ	**Piszkesteto**	**70.99 329**	⇓	*i*P	**P**	**02 22 21.1 +0.8**
NKC	**Novy Kostel**	**70.99 334**	⇓	*i*P	**P**	**02 22 20.3 +0.1**
NKC				*e*		02 25 12.0
NKC				*e*		02 30 43.8
NKC	**Novy Kostel**	**70.99 334**	⇓	*i*P	**P**	**02 22 20.3 +0.1**
NKC				*e*		02 22 24.6
NKC				*e*PP	PP	02 25 12.0 +2.9
NKC				*e*		02 29 45.2
NKC				*e*		02 30 43.8
NKC				*e*		02 34 38.2
NKC				*e*		02 49 14.4
NKC				*e*P'P'		02 50 00.7
NKC	**Novy Kostel**	**70.99 334**	⇓	*i*P	**P**	**02 22 20.3 +0.1**
NKC				*e*x	x	02 22 24.6
NKC				*e*PP	PP	02 25 12.0 +2.9
NKC				*e*x	x	02 29 45.2
NKC				*e*S	S	02 30 43.8 -2.3
NKC				*e*XS	sS	02 34 38.2 +3.2
NKC				*e*PKPPKP		02 50 00.7
125A	**Gardner Draw,**	**71.01 61**	⇓	P	**P**	**02 22 20.7 0.0**
	baz=71,SNR=1000					
224A	**Cornudas Mount**	**71.02 62**		P	**P**	**02 22 20.9 +0.1**
	baz=71,SNR=888					
TREC	**Trest**	**71.04 332**	⇓	*i*P	**P**	**02 22 20.9 +0.4**
TREC				*e*		02 25 13.5
TREC	**Trest**	**71.04 332**	⇓	*i*P	**P**	**02 22 20.9 +0.4**
TREC				*e*PP	PP	02 25 13.5 +4.0
TREC				*e*x	x	02 29 45.7
TREC				*e*XS	sS	02 34 34.0 -1.6
UBBA	**Unterbreizbach**	**71.06 336**		*e*P	**P**	**02 22 20.5 -0.1**
	comp=Z,12μm,1.9s,mb7.0					
UBBA				*e*pP	pP	02 24 37.2 +8.1
UBBA				*e*PP	PP	02 25 12.8 +3.2
UBBA				*e*S	S	02 30 53.4 +6.6
UBBA				*es*S	sS	02 34 36.8 +1.1
KBI1	**Birley Grange**	**71.07 344**		P	**P**	**02 22 20.3 -0.3**
KBI1	**Birley Grange**	**71.07 344**	⇓	*i*P	**P**	**02 22 20.3 -0.3**
DRGR		**71.09 326**	⇓	*i*P	**P**	**02 22 21.0 +0.1**
DRGR		**71.09 326**	⇓	*i*P	**P**	**02 22 21.0 +0.1**
MDB	**Medias**	**71.10 325**	⇑	P	**P**	**02 22 21.8 +0.9**
MDB	**Medias**	**71.10 325**	⇑	*i*P	**P**	**02 22 21.8 +0.9**
BUG	**Bochum--Univer**	**71.11 338**		*e*P	**P**	**02 22 20.8 -0.1**
	comp=Z,5μm,1.2s,mb6.8					
BUG				*e*S	S	02 30 54.6 +7.3
BUG				*es*S	sS	02 34 39.8 +3.5
CPRX	**Cap Rock**	**71.12 60**		*e*P	**P**	**02 22 21.1 -0.2**
	comp=Z,1μm,0.9s,mb6.3					
MLR	**Muntele Rosu**	**71.12 324**		PKPPKP		02 50 01.8
	comp=Z,231nm,1.3s,baz=335,slow=8.2,SNR=4.8					
MLR	**Muntele Rosu**	**71.12 324**	⇓	P	**P**	**02 22 21.6 +0.5**
MLR	**Muntele Rosu**	**71.12 324**	⇓	*i*P	**P**	**02 22 21.6 +0.5**
TIRR	**Tirgusor**	**71.13 321**	⇓	*e*P	**P**	**02 22 20.8 -0.3**
TIRR				pmax	pmax	
	comp=Z,3μm,0.8s,mb6.8					
TIRR	**Tirgusor**	**71.13 321**	⇓	*e*P	**P**	**02 22 20.8 -0.3**
	comp=Z,3μm,0.8s,mb6.8					
TIRR	**Tirgusor**	**71.13 321**	⇓	*i*P	**P**	**02 22 21.2 +0.1**
BOYT	**Boyabat**	**71.15 315**	⇓	*i*P	**P**	**02 22 23.0 +1.7**
BYBT	**Boyabat**	**71.16 316**		*e*P	**P**	**02 22 22.4 +1.0**
GOA	**Goa**	**71.19 271**	⇓	*i*P	**P**	**02 22 21.6 -0.3**
GOA				*i* S	S	02 30 48.8 -0.4
SMOL	**Smolenice**	**71.19 330**		*i* P	**P**	**02 22 22.2 +0.8**
SMOL				*e*S	S	02 30 53.5 +5.1
SMOL	**Smolenice**	**71.19 330**		*i* P	**P**	**02 22 22.2 +0.8**
SMOL				*e*S	S	02 30 53.5 +5.1
AEU	**East Anglia Un**	**71.20 342**		P	**P**	**02 22 21.6 +0.2**
AEU	**East Anglia Un**	**71.20 342**	⇓	*i*P	**P**	**02 22 21.6 +0.2**
Z27A	**Tatum**	**71.23 59**	⇑	P	**P**	**02 22 21.4 -0.5**
	baz=71,SNR=1000					
ISR	**Istrita**	**71.23 323**	⇓	P	**P**	**02 22 22.4 +0.7**
ISR	**Istrita**	**71.23 323**	⇓	*i*P	**P**	**02 22 22.4 +0.7**
PTK	**Pertek**	**71.30 311**		*e*P	**P**	**02 22 23.8 +1.6**
STNC	**Stoke**	**71.33 344**		P	**P**	**02 22 22.0 -0.2**
STNC	**Stoke**	**71.33 344**	⇓	*e*P	**P**	**02 22 22.0 -0.2**
126A	**Clayton Basin,**	**71.35 60**		P	**P**	**02 22 22.3 -0.3**
	baz=71,SNR=402					
KWE	**Weaver Farm**	**71.35 344**		P	**P**	**02 22 21.9 -0.3**
KWE	**Weaver Farm**	**71.35 344**	⇓	*e*P	**P**	**02 22 21.9 -0.3**
225A	**Deer Hill, Car**	**71.36 61**		P	**P**	**02 22 22.9 +0.3**
	baz=71,SNR=721					
WME	**Myndd Eilian**	**71.36 346**		P	**P**	**02 22 21.6 -0.7**
WME	**Myndd Eilian**	**71.36 346**	⇓	*i*P	**P**	**02 22 21.6 -0.7**
TOKT	**Tokat**	**71.37 314**		*e*P	**P**	**02 22 23.5 +0.9**
AMRR	**Amara**	**71.39 322**	⇓	P	**P**	**02 22 23.1 +0.5**
AMRR	**Amara**	**71.39 322**	⇓	*i*P	**P**	**02 22 23.1 +0.5**
CVD	**Cernavoda**	**71.39 322**	⇑	P	**P**	**02 22 22.7 0.0**
CVD	**Cernavoda**	**71.39 322**	⇑	*i*P	**P**	**02 22 22.7 0.0**
KEMA	**Kemaliye**	**71.39 312**	⇓	*i*P	**P**	**02 22 24.1 +1.3**
MNTX	**Cornudas Mount**	**71.39 62**	⇓	*i*P	**P**	**02 22 23.1 +0.2**
	comp=Z,2μm,0.8s,mb6.7					
TOKA	**Tokat**	**71.40 314**	⇓	*i*P	**P**	**02 22 23.9 +1.2**
WPM1	**Penmaenmawr**	**71.43 346**		P	**P**	**02 22 22.1 -0.6**
WPM1	**Penmaenmawr**	**71.43 346**	⇓	*i*P	**P**	**02 22 22.1 -0.6**
WLF1	**Llynfaes**	**71.47 346**		P	**P**	**02 22 22.0 -0.9**
WLF1				AMb	AMB	02 22 31.6
	comp=Z,10μm,2.6s,mb6.8					
WLF1						02 24 23.9
WLF1				AMS	AMS	02 40 38.1
WLF1	**Llynfaes**	**71.47 346**	⇓	*e*P	**P**	**02 22 22.0 -0.9**
WLF1				AMb	AMB	02 22 31.6
	comp=Z,10μm,2.6s,mb6.8					
WLF1				*e*		02 24 23.9
WLF1				AMS	AMS	02 40 38.1
	comp=Z,181μm,23.3s					
VOIR		**71.48 324**	⇓	P	**P**	**02 22 24.0 +0.8**
VOIR		**71.48 324**	⇓	*i*P	**P**	**02 22 24.0 +0.8**
SVSK	**Karacayir**	**71.51 313**		*e*P	**P**	**02 22 24.2 +0.8**
GDL2	**Guadalupe Moun**	**71.52 61**		*e*P	**P**	**02 22 23.4 -0.3**
	comp=Z,855nm,0.8s,mb6.2					
CWF	**Charnwood Fore**	**71.53 344**		P	**P**	**02 22 23.1 -0.2**
CWF				AMb	AMB	02 22 34.1
	comp=Z,7μm,1.5s,mb6.8					
CWF						02 24 24.2
CWF				AMS	AMS	02 40 36.6
	comp=Z,49μm,25.6s					
CWF	**Charnwood Fore**	**71.53 344**	⇓	*e*P	**P**	**02 22 23.1 -0.2**
CWF				AMb	AMB	02 22 34.1
	comp=Z,7μm,1.5s,mb6.8					
CWF				*e*		02 24 24.2
CWF				AMS	AMS	02 40 36.6
	comp=Z,49μm,25.6s					
YRC	**Rhoscolyn**	**71.54 346**		P	**P**	**02 22 22.4 -1.0**
YRC	**Rhoscolyn**	**71.54 346**	⇓	*i*P	**P**	**02 22 22.4 -1.0**
324A	**Moseley Ranch,**	**71.54 62**		P	**P**	**02 22 23.8 0.0**
	baz=71,SNR=541					
ZST	**Bratislava**	**71.57 331**		*i* P	**P**	**02 22 24.1 +0.5**
ZST				pmax	pmax	
	comp=Z,33μm,2.7s,mb7.

GRF *es*S sS 02 34 49.8 +5.1
GRFO Grafenberg 71.80 335 *e*P **P 02 22 25.6 +0.7**
GRFO *e*PP PP 02 25 19.5 +3.6
ELZG Elazig 71.81 311⇓*i*P **P 02 22 26.9 +1.8**
HDIL Hopedale 71.82 45⇓*e*P **P 02 22 23.8 -1.4**
comp=Z,922nm,1.0s,mb6.2
DEV Deva 71.82 326 ⇓P **P 02 22 25.3 +0.2**
DEV Deva 71.82 326⇓*i*P **P 02 22 25.3 +0.2**
TOS Tosya 71.83 316 *e*P **P 02 22 26.2 +0.9**
CTKT Corum 71.86 315⇓*i*P **P 02 22 26.7 +1.2**
325A Bean Ranch, Si 71.86 62 ⇓P **P 02 22 25.8 +0.1**
baz=72,SNR=959
PSN Preselentsi 71.88 321 P **P 02 22 26.3 +0.8**
WET Wettzell 71.88 334 *e*P **P 02 22 26.1 +0.7**
comp=Z,6μm,1.2s,mb6.9
WET *e*pP pP 02 24 41.3 +7.0
WET *e*S S 02 31 03.4 +7.4
WET *es*S sS 02 34 45.9 +0.2
ILGA Ilgaz 71.94 316⇓*i*P **P 02 22 27.6 +1.7**
DARE Darende-Malaty 71.95 312 *e*P **P 02 22 30.0 +4.0**
INCR INCERC-Sediu C 71.96 323⇑*i*P **P 02 22 26.1 +0.2**
MARD Mardin 71.96 309⇓*i*P **P 02 22 27.4 +1.3**
TNS Taunus Mts 71.98 337 *e*P **P 02 22 26.1 +0.2**
comp=Z,6μm,1.1s,mb6.9
TNS *e*pP pP 02 24 43.6 +8.7
TNS *e*S S 02 31 04.0 +7.0
TNS *es*S sS 02 34 46.7 -0.1
HLM1 Long Mynd 72.00 345 P **P 02 22 25.0 -1.0**
HLM1 Long Mynd 72.00 345 P **P 02 22 25.7 -0.3**
HLM1 Long Mynd 72.00 345⇓*e*P **P 02 22 25.0 -1.0**
HLM1 *e*P 02 22 25.7
HGN Heimansgroeve 72.03 339⇓*i*P **P 02 22 25.6 -0.6**
comp=Z,622nm,1.5s,mb5.8
HGN Heimansgroeve 72.03 339 *e*x **P 02 22 30.0 +3.8**
comp=Z,7μm,2.3s,mb6.7
HGN Heimansgroeve 72.03 339 pP pP 02 24 38.1 +2.9
HGN Heimansgroeve 72.03 339 *e*PP PP 02 25 18.6 +0.8
HGN Heimansgroeve 72.03 339 *e*S S 02 30 50.1 -7.6
HGN Heimansgroeve 72.03 339 *e*SS sS 02 34 48.1 +0.6
BEBN Eben Emael 72.06 339 P **P 02 22 26.5 +0.1**
comp=Z,2μm,2.0s,mb6.2
BUC1 Bucharest 72.09 323⇑P **P 02 22 26.3 -0.4**
BUC1 Bucharest 72.09 323⇑*i*P **P 02 22 26.3 -0.4**
MEM Membach 72.17 339 P **P 02 22 27.1 +0.1**
comp=Z,4μm,1.5s,mb6.6
CONA Conrad Observa 72.17 331 *i* P **P 02 22 28.0 +0.9**
comp=Z,7μm,1.3s,mb6.9,SNR=937
MYA Malataya 72.20 311 *e*P **P 02 22 28.9 +1.5**
SAFT Safranbolu 72.21 317 *e*P **P 02 22 27.9 +0.5**
227A Bennet, Jal 72.22 60 P **P 02 22 27.1 -0.5**
baz=72,SNR=166
WMOK Wichita Mounta 72.29 55⇓*i*P **P 02 22 27.3 -0.7**
WMOK pmax pmax
comp=Z,898nm,1.2s,mb6.1
WMOK Wichita Mounta 72.29 55⇓*i*P **P 02 22 27.3 -0.7**
comp=Z,898nm,1.2s,mb6.1
GZR Gura Zlata 72.30 326 ⇓P **P 02 22 27.9 0.0**
GZR Gura Zlata 72.30 326⇓*i*P **P 02 22 27.9 0.0**
CORM Corum 72.30 315 *e*P **P 02 22 29.2 +1.2**
425A Indio Mountain 72.32 62 ⇓P **P 02 22 28.5 +0.2**
baz=72,SNR=1000
UCC Uccle 72.33 340 P **P 02 22 27.9 -0.1**
CANT Cankiri 72.36 316 *e*P **P 02 22 28.9 +0.5**
326A Caldwell Ranch 72.42 61 P **P 02 22 28.9 +0.1**
baz=72,SNR=645
AKCD Akcadag 72.44 312⇓*i*P **P 02 22 30.1 +1.3**
YOZ Yozgat 72.46 314 *e*P **P 02 22 29.9 +1.0**
TOD Tromm 72.47 336 *e*P **P 02 22 28.9 +0.1**
HTR Trewern Hill 72.48 345 P **P 02 22 28.6 -0.2**
HTR Trewern Hill 72.48 345⇓*i*P **P 02 22 28.6 -0.2**
BZS Buzias 72.48 326 ⇓P **P 02 22 28.8 -0.2**
BZS Buzias 72.48 326⇓*i*P **P 02 22 28.8 -0.1**
BCLA Clavier 72.50 339 P **P 02 22 28.9 0.0**
comp=Z,2μm,1.3s,mb6.4
ABH Alteburg 72.51 337 *e*P **P 02 22 28.9 -0.1**
TIM Timisoara 72.51 327 ⇓P **P 02 22 29.4 +0.4**
TIM Timisoara 72.51 327⇓*i*P **P 02 22 29.4 +0.4**
MCH1 Michaelchurch 72.52 345 P **P 02 22 28.6 -0.4**
MCH1 AMb AMB 02 22 40.4
comp=Z,5μm,4.1s
MCH1 Michaelchurch 72.52 345⇓*e*P **P 02 22 28.6 -0.4**
MCH1 AMb AMB 02 22 40.4
comp=Z,5μm,4.1s
SIND Sindeldorf 72.52 336 P **P 02 22 29.1 +0.1**
ELDT Eldivan 72.54 316⇓*i*P **P 02 22 30.6 +1.3**
PRD Provadia 72.58 321 P **P 02 22 29.6 +0.1**
AAM Ann Arbor 72.61 40⇓*e*P **P 02 22 28.8 -0.9**
AAM pmax pmax
comp=Z,100nm,0.4s,mb5.6
AAM Ann Arbor 72.61 40⇓*e*P **P 02 22 28.8 -0.9**
comp=Z,100nm,0.4s,mb5.6
SWS Schriesheim-Wi 72.61 336 P **P 02 22 29.5 -0.1**
SNF Seneffe 72.62 340 P **P 02 22 29.5 -0.1**
comp=Z,3μm,2.1s,mb6.4
327A Balmorhea Ranc 72.63 61 ⇓P **P 02 22 30.3 +0.3**
baz=72,SNR=56
KDZE Karadeniz Ereo 72.64 318 *e*P **P 02 22 28.8 -1.1**
SARI SarD1z-Kayseri 72.67 313 *e*P **P 02 22 33.0 +2.9**
MOA Molln 72.69 332 P **P 02 22 30.1 0.0**
MOA Molln 72.69 332⇓*i*P **P 02 22 30.4 +0.4**
comp=Z,4μm,1.4s,mb6.7,SNR=472
PINB Pinarbasi 72.79 313⇓*i*P **P 02 22 32.1 +1.3**
SWN1 Swindon 72.79 344 P **P 02 22 30.7 +0.1**
SWN1 AMb AMB 02 22 36.2
comp=Z,16μm,2.6s,mb7.0
SWN1 pP 02 24 40.1 +0.1
SWN1 AMS AMS 02 41 11.8
comp=Z,48μm,27.0s
SWN1 Swindon 72.79 344⇓*e*P **P 02 22 30.7 +0.1**
SWN1 AMb AMB 02 22 36.2
comp=Z,16μm,2.6s,mb7.0
SWN1 *e* pP 02 24 40.1 +0.1
SWN1 AMS AMS 02 41 11.8
comp=Z,48μm,27.0s
HGH Gray Hill 72.84 344 P **P 02 22 30.5 -0.3**
HGH Gray Hill 72.84 344⇓*i*P **P 02 22 30.5 -0.3**
CDAG Cicekdag 72.87 315⇓*i*P **P 02 22 32.0 +0.7**
ARSA Arzberg 72.89 331 P **P 02 22 31.4 +0.2**
ARSA Arzberg 72.89 331⇓*i*P **P 02 22 32.0 +0.8**
comp=Z,7μm,2.0s,mb6.7,SNR=500
CRAR CRAIOVA 72.89 324 ⇓P **P 02 22 31.4 +0.2**
CRAR CRAIOVA 72.89 324⇓*i*P **P 02 22 31.4 +0.2**
WOL Wolverton 72.89 343 P **P 02 22 30.8 -0.3**
WOL AMb AMB 02 22 41.6
comp=Z,6μm,0.9s,mb7.0
WOL pP 02 24 38.5 -2.0
WOL AMS AMS 02 41 13.9
comp=Z,47μm,32.6s
WOL Wolverton 72.89 343⇓*e*P **P 02 22 30.8 -0.3**
WOL AMb AMB 02 22 41.6
comp=Z,6μm,0.9s,mb7.0
WOL *e* pP 02 24 38.5 -2.0
WOL AMS AMS 02 41 13.9
comp=Z,47μm,32.6s
GIVF Givet 72.90 339⇓*i*P **P 02 22 31.0 -0.2**
comp=Z,15μm,1.5s,mb6.9
GIVF Givet 72.90 339⇓*i*P **P 02 22 31.0 -0.2**
GIVF pmax pmax
comp=Z,7μm,1.5s,mb6.9
GIVF Givet 72.90 339⇓*i*P **P 02 22 31.0 -0.2**
comp=Z,7μm,1.5s,mb6.9
PKSM Moragy 72.90 329 ⇓P **P 02 22 30.8 -0.4**
PKSM Moragy 72.90 329⇓*i*P **P 02 22 30.8 -0.5**
KTD Kalmit 72.91 337 *e*P **P 02 22 31.3 0.0**
426A McDonald Obser 72.91 61 ⇓P **P 02 22 31.5 -0.1**
baz=73,SNR=1000
ZIMR 72.92 323⇑P **P 02 22 30.9 -0.6**
ZIMR 72.92 323⇑*i*P **P 02 22 30.9 -0.6**
DOU Dourbes 72.95 339 P **P 02 22 31.4 -0.1**
ATAB Bozova 72.96 311⇓*i*P **P 02 22 33.4 +1.6**
328A Wristen Ranch, 72.97 60⇑P **P 02 22 31.6 -0.4**
baz=73,SNR=1000
MENF Mencas 73.00 341 *e*P **P 02 22 32.7 +0.9**
MENF Mencas 73.00 341 *e*P **P 02 22 32.7 +0.9**
SLM Saint Louis 73.02 47⇓*e*P **P 02 22 30.5 -1.6**
SLM pmax pmax
comp=Z,3μm,0.6s,mb6.9
SLM Saint Louis 73.02 47⇓*e*P **P 02 22 30.5 -1.6**
comp=Z,3μm,0.6s,mb6.9
WLF Walferdange 73.02 338 P **P 02 22 32.1 +0.2**
comp=Z,4μm,2.2s,mb6.5
WLF Walferdange 73.02 338 *e*P **P 02 22 32.0 +0.1**
comp=Z,7μm,1.5s,mb6.9
WLF *e*S S 02 31 16.8 +8.3
WLF *es*S sS 02 34 57.0 -2.3
WLF Walferdange 73.02 338⇓*e*P **P 02 22 32.1 +0.2**
WLF pmax pmax
comp=Z,3μm,1.0s,mb6.6
WLF Walferdange 73.02 338⇓*e*P **P 02 22 32.1 +0.2**
comp=Z,3μm,1.0s,mb6.6
SZH Strazhica 73.06 322 P **P 02 22 31.7 -0.5**
CCM Cathedral Cave 73.06 48⇓*i*P **P 02 22 31.0 -1.4**
CCM *e*S S 02 31 07.5 -1.9
CCM pmax pmax
comp=Z,5μm,3.5s
CCM Cathedral Cave 73.06 48⇓*i*P **P 02 22 31.0 -1.3**
comp=Z,5μm,3.5s
CCM *e*S S 02 31 07.5 -1.9
BAIF Baives 73.07 339⇓*i*P **P 02 22 32.1 0.0**
comp=Z,8μm,1.0s,mb6.8
BAIF Baives 73.07 339⇓*i*P **P 02 22 32.1 0.0**
BAIF pmax pmax
comp=Z,4μm,1.0s,mb6.8
BAIF Baives 73.07 339⇓*i*P **P 02 22 32.1 0.0**
comp=Z,4μm,1.0s,mb6.8
BR131 Keskin Array S 73.09 315⇓*e*P **P 02 22 32.7 +0.2**
comp=Z,2μm,1.0s,mb6.6
BRTR Keskin Array B 73.09 315 P **P 02 22 32.8 +0.3**
comp=Z,1μm,0.9s,mb6.4,baz=32,slow=2.5,SNR=589
BRTR SKKS SKKSdf 02 47 34.9 -14
comp=Z,5.4nm,1.0s,baz=160,slow=3.9,SNR=3.8
BANOM Banah 73.15 291 P **P 02 22 33.2 +0.2**
SNR=677
STU Stuttgart 73.16 336 *e*P **P 02 22 32.7 0.0**
comp=Z,6μm,1.4s,mb6.8
STU *e*pP pP 02 24 51.3 +9.1
STU *e*S S 02 31 17.1 +7.1
STU *es*S sS 02 34 57.9 -3.0
STU Stuttgart 73.16 336⇓*e*P **P 02 22 32.7 0.0**
STU pmax pmax
comp=Z,5μm,1.0s,mb6.9
STU Stuttgart 73.16 336⇓*e*P **P 02 22 32.7 0.0**
comp=Z,5μm,1.0s,mb6.9
RJOB Jochberg 73.19 333 *e*P **P 02 22 33.7 +0.8**
comp=Z,4μm,1.3s,mb6.7
RJOB *e*S S 02 31 17.9 +7.4
RJOB *es*S sS 02 34 59.8 -1.6
FUR Furstenfeldbru 73.20 334 *e*P **P 02 22 33.3 +0.4**
comp=Z,7μm,1.2s,mb7.0
FUR *e*PP PP 02 25 29.5 +1.9
FUR *e*S S 02 31 17.9 +7.4
FUR *es*S sS 02 34 59.0 -2.4
HENT Hendek 73.28 318⇓*i*P **P 02 22 33.5 0.0**
LANF Langenberg 73.29 337 *e*P **P 02 22 33.6 +0.2**
LANF Langenberg 73.29 337 *e*P **P 02 22 33.6 +0.2**
LANF Langenberg 73.29 337 *e*P **P 02 22 33.6 +0.2**
DAD Ankara 73.30 316⇓*i*P **P 02 22 34.5 +0.8**
LOD Lodumlu 73.31 316 *e*P **P 02 22 33.9 +0.2**
PVL Pavlikeni 73.32 323 P **P 02 22 33.8 +0.1**
LBG Lerchenberg 73.35 336 P **P 02 22 33.8 0.0**
526A Mary Lane Ranc 73.36 62⇑P **P 02 22 34.6 +0.4**
baz=73,SNR=1000
GZT Gaziantep 73.38 311⇓*i*P **P 02 22 35.3 +1.1**
KOGS Kog 73.40 330⇓*i*P **P 02 22 34.0 -0.1**
KOGS *e* pP 02 24 43.2 -0.6
KOGS *e* 02 27 20.8
KOGS *e* 02 28 28.1
KOGS *e* 02 30 07.3
KOGS *e*S S 02 31 14.2 +1.4
KOGS *e* 02 35 08.1
KOGS *e* 02 39 28.6
BUCH Bad Urach 73.42 336 P **P 02 22 34.6 +0.4**
MDU Mudurnu 73.46 317 *e*P **P 02 22 35.0 +0.5**
BBAL Bala 73.46 316⇓*i*P **P 02 22 35.3 +0.7**
FVM French Village 73.48 47⇓*e*P **P 02 22 33.3 -1.4**
FVM *e*S S 02 31 14.6 +0.7
FVM pmax pmax
comp=Z,3μm,0.6s,mb6.9
FVM French Village 73.48 47⇓*e*P **P 02 22 33.3 -1.5**
comp=Z,3μm,0.6s,mb6.9
FVM *e*S S 02 31 14.6 +0.6
SILT Sile 73.49 319 *e*P **P 02 22 34.4 -0.3**
JMB Yambol 73.52 322 P **P 02 22 35.1 +0.3**
JMB Yambol 73.52 322 P **P 02 22 35.0 +0.2**
BHD Baghdad 73.54 304 *i* x **P 02 22 34.0 -1.1**
BHD *i* x x 02 22 46.0
BHD *i* x x 02 24 42.0
BHD *e*x x 02 25 30.0
BHD *i* x x 02 31 15.0
BHD *i* x x 02 31 45.0
527A Woodward Ranch 73.55 61 P **P 02 22 35.4 +0.1**
baz=73,SNR=1000
VAL Valentia 73.55 349 *e*P **P 02 22 34.8 0.0**
VAL *e*PP PP 02 25 39.4 +9.1
VAL *e*S S 02 31 24.0 +10
VAL Valentia 73.55 349⇓*i*SS sS 02 35 12.5 +7.2
BISS Bistriski jare 73.55 331 *i* P **P 02 22 35.3 +0.3**
HEX Exmoor 73.55 345 P **P 02 22 34.3 -0.5**
HEX Exmoor 73.55 345⇓*i*P **P 02 22 34.3 -0.5**
SOKA Soboth 73.55 331⇓*i*P **P 02 22 35.5 +0.6**
comp=Z,13μm,2.2s,mb7.1
KMRS Kahramanmaras 73.55 312 *e*P **P 02 22 35.8 +0.6**
428A Kincaid Ranch, 73.56 60⇑P **P 02 22 35.7 +0.4**
baz=73,SNR=1000
PERS Pernice 73.56 331⇓*i*P **P 02 22 35.5 +0.5**
SPNC Sapanca-Adapaz 73.63 318 *e*P **P 02 22 35.7 +0.2**
KLYT Kilyos 73.64 319 *e*P **P 02 22 35.2 -0.3**
KBA Koelnbreinsper 73.65 332⇓*i*P **P 02 22 36.7 +1.2**
comp=Z,15μm,1.1s,mb7.5,SNR=2809
PALK Pallekele 73.67 260 P **P 02 22 36.8 +0.6**
comp=Z,16μm,1.7s,mb7.3,SNR=78
PALK Pallekele 73.67 260 *e*P **P 02 22 36.4 +0.2**
PALK pmax pmax
comp=Z,6μm,1.3s,mb7.0
PALK Pallekele 73.67 260 *e*P **P 02 22 36.4 +0.2**
comp=Z,6μm,1.3s,mb7.0
GAZ Gaziantep 73.69 311 *e*P **P 02 22 36.8 +0.9**
HTL Hartland 73.72 345 P **P 02 22 35.6 -0.2**
HTL AMb AMB 02 22 46.6
comp=Z,4μm,1.0s,mb6.9
HTL pP 02 24 48.8 +3.2
HTL AMS AMS 02 42 29.0
comp=Z,41μm,65.5s
HTL Hartland 73.72 345⇓*e*P **P 02 22 35.6 -0.2**
HTL AMb AMB 02 22 46.6
comp=Z,4μm,1.0s,mb6.9
HTL *e* pP 02 24 48.8 +3.2
HTL AMS AMS 02 42 29.0
comp=Z,41μm,65.5s
CTYL Yal??k??y-??at 73.73 320 *e*P **P 02 22 35.9 -0.2**
626A Big Bend Ranch 73.75 62 ⇓P **P 02 22 36.5 +0.1**
baz=74,SNR=1000
GULT Gulveren 73.76 318 *e*P **P 02 22 36.6 +0.4**
HRT Hereke 73.76 319 *e*P **P 02 22 36.0 -0.2**
ZAVS Zavodnje 73.77 331 P **P 02 22 33.7 -2.5**
BFO Black Forest 73.78 336 P **P 02 22 36.3 +0.1**
comp=Z,17μm,0.8s,mb7.6
BFO Black Forest 73.78 336 *e*P **P 02 22 36.2 0.0**
comp=Z,3μm,1.2s,mb6.7
BFO *e*pP pP 02 24 54.1 +8.0
BFO *e*S S 02 31 23.7 +6.9
BFO *es*S sS 02 35 04.7 -3.5
BFO Black Forest 73.78 336⇓*e*P **P 02 22 36.2 0.0**
BFO pmax pmax
comp=Z,2μm,0.8s,mb6.8
ISK Istanbul-Kandi 73.79 319 *e*P **P 02 22 35.8 -0.6**
LONY Lake Ozonia 73.79 33⇓*e*P **P 02 22 35.0 -1.3**
comp=Z,19μm,1.2s,mb7.5
BGKT Bogazkoy 73.80 319 *e*P **P 02 22 36.0 -0.5**
SVIS Svilajnac 73.81 326 P **P 02 22 35.2 -1.3**
GUT Gutenstein 73.83 336 P **P 02 22 36.7 +0.2**
OBKA Obir 73.84 331 *i* P **P 02 22 37.0 +0.4**
comp=Z,5μm,1.5s,mb6.8,SNR=343
OLIL Olney 73.85 45⇓*e*P **P 02 22 35.5 -1.3**
comp=Z,3μm,0.9s,mb6.8
CTKS Kestanelik-??a 73.86 320 *e*P **P 02 22 36.4 -0.4**
SPAK Spaichingen-Ko 73.88 336 *e*P **P 02 22 37.0 +0.2**
WATA Walderalm 73.89 334⇓*i*P **P 02 22 37.5 +0.7**
comp=Z,5μm,1.2s,mb6.9,SNR=159
WTTA Wattenberg 73.94 334⇓*i*P **P 02 22 38.1 +1.0**
comp=Z,9μm,1.4s,mb7.1,SNR=610
UBR Ueberruh 73.94 335 P **P 02 22 37.3 +0.1**
CDF Champ du Feu 73.95 337⇓*i*P **P 02 22 37.2 +0.1**
comp=Z,8μm,0.9s,mb7.0
CDF Champ du Feu 73.95 337⇓*i*P **P 02 22 37.2 +0.1**
CDF pmax pmax
comp=Z,4μm,0.9s,mb7.0
CDF Champ du Feu 73.95 337⇓*i*P **P 02 22 37.2 +0.1**
comp=Z,4μm,0.9s,mb7.0
CTA Charters Tower 73.95 186 *e*P **P 02 22 36.3 -1.1**
comp=Z,1μm,1.6s,mb6.2
CTA *e*PCP PcP 02 22 44.6 -4.1
CTA *e*pP pP 02 24 45.2 -2.5
CTA *e*S S 02 31 21.6 +2.4
CTA *e*PKKP PKKPbc 02 41 41.0 -19
CTA *e*PKPPKP 02 49 49.2
CTA *e* 02 52 23.8
CTA Charters Tower 73.95 186 S S 02 31 20.4 +1.2
comp=Z,46nm,1.1s,baz=218,slow=19,SNR=18
CTAO Charters Tower 73.95 186⇓*e*P **P 02 22 36.3 -1.1**
CTAO pmax pmax
comp=Z,2μm,0.8s,mb6.6
CTAO Charters Tower 73.95 186⇓*e*P **P 02 22 36.2 -1.2**
comp=Z,2μm,0.8s,mb6.6
RETA Reutte 73.96 334⇓*i*P **P 02 22 37.5 +0.3**
comp=Z,3μm,1.4s,mb6.6,SNR=511
528A Cox Ranch, San 73.96 61 ⇓P **P 02 22 37.9 +0.3**
baz=74
ELBA Catalca 73.96 320⇓*i*P **P 02 22 37.4 +0.1**
GPA Golpazari 73.97 318 *e*P **P 02 22 37.3 -0.1**
SLVT Silivri 73.98 320 *e*P **P 02 22 37.4 -0.1**
MYKA Terra Mystica 73.98 332⇓*i*P **P 02 22 37.5 +0.1**
comp=Z,4μm,1.2s,mb6.9
EDRB Edirne 74.00 321 *e*P **P 02 22 37.2 -0.3**
MOTA Moosalm 74.00 334 *i* P **P 02 22 38.0 +0.5**
comp=Z,5μm,1.1s,mb7.0,SNR=326
AFI Afiamalu 74.01 144 *e*P **P 02 22 36.5 -1.4**
AFI pmax pmax
comp=Z,540nm,0.8s,mb6.1
AFI Afiamalu 74.01 144 *e*P **P 02 22 36.5 -1.4**
comp=Z,540nm,0.8s,mb6.1
NIG Nigde 74.04 314 *e*P **P 02 22 42.8 +4.9**
KOZT Kozan 74.04 313 *e*P **P 02 22 38.3 +0.4**
ADVT Abdulvahap 74.07 318 *e*P **P 02 22 37.8 -0.2**
KUZU Kuzuini 74.08 311⇓*i*P **P 02 22 39.2 +1.0**
YLV Yalova 74.10 319 *e*P **P 02 22 38.0 -0.1**
HATD Hatta, Dubai 74.11 290 P **P 02 22 38.5 0.0**
SNR=1593
LIBD Limburg 74.11 337 *e*P **P 02 22 38.3 +0.2**
BLO Bloomington 74.13 44⇓*e*P **P 02 22 37.0 -1.4**
BLO pmax pmax
comp=Z,10μm,1.2s,mb7.2
BLO Bloomington 74.13 44⇓*e*P **P 02 22 37.0 -1.4**
comp=Z,21μm,1.2s,mb7.5
ERPA Erie 74.14 38⇓*i*P **P 02 22 37.5 -0.9**
comp=Z,9μm,0.9s,mb7.3
ECH Echery 74.16 337 *e*P **P 02 22 38.3 0.0**
ECH Echery 74.16 337⇓*e*P **P 02 22 38.3 0.0**
ECH pmax pmax
comp=Z,4μm,1.0s,mb6.9
ECH Echery 74.16 337⇓*e*P **P 02 22 38.2 -0.1**
comp=Z,4μm,1.0s,mb6.9
TXAR Lajitas Array 74.16 62 P **P 02 22 38.4 -0.3**
comp=Z,221nm,0.9s,mb5.7,baz=162,slow=17,SNR=1519
TXAR S S 02 31 22.7 +1.1
comp=Z,7.4nm,0.7s,baz=170,slow=3.8,SNR=1.0
TXAR SKKS SKKSdf 02 47 37.6 -11
comp=Z,10nm,0.9s,baz=155,slow=4.1,SNR=8.1
TXAR Lajitas Array 74.16 62 P **P 02 22 38.4 -0.3**
TXAR S S 02 31 22.7 +1.0
DYA Yadsworthy 74.18 345 P **P 02 22 38.0 -0.4**
DYA AMb AMB 02 22 48.9
comp=Z,7μm,1.3s,mb7.0
DYA pP 02 24 45.6 -2.9
DYA AMS AMS 02 43 10.8
comp=Z,50μm,32.6s
DYA Yadsworthy 74.18 345⇓*e*P **P 02 22 38.0 -0.4**
DYA AMb AMB 02 22 48.9
comp=Z,7μm,1.3s,mb7.0
DYA *e* pP 02 24 45.6 -2.9
DYA AMS AMS 02 43 10.8
comp=Z,50μm,32.6s
ABTA Abfaltersbach 74.18 333⇓*i*P **P 02 22 38.5 0.0**
comp=Z,6μm,1.2s,mb7.0,SNR=858
FBB Freiburg im Br 74.20 336 P **P 02 22 43.3 +4.8**
SVRH Sivrihisar-ESK 74.20 317 *e*P **P 02 22 38.2 -0.5**
CRES Cresnjev 74.20 331 P **P 02 22 38.3 -0.3**
627A Terlingua Ranc 74.21 62 P **P 02 22 39.1 +0.2**
baz=74,SNR=1000
SISB Singen-Schiene 74.22 336 P **P 02 22 38.9 +0.2**
CAVI Cavuskoy 74.23 318 *e*P **P 02 22 39.0 +0.1**
SIUC Southern Illin 74.23 47⇓*e*P **P 02 22 37.8 -1.2**
comp=Z,5μm,0.8s,mb7.1
NAZ Nazwa, Dubai 74.24 291 P **P 02 22 38.7 -0.5**
SNR=510
CRLT Corlu 74.24 320 *e*P **P 02 22 39.4 +0.4**
BORA Eskisehir 74.26 318⇓*i*P **P 02 22 39.4 +0.3**
DIM Dimitrovgrad 74.26 322 P **P 02 22 39.1 +0.1**
PTCC Patocco-Chiusa 74.27 332 P **P 02 22 38.3 -0.7**
LJU Ljubljana 74.27 331⇓*i*P **P 02 22 38.7 -0.3**
LJU *e* pP 02 24 49.9 +0.8
LJU *e* 02 25 36.1
LJU *e*S S 02 31 26.3 +4.1
LJU Ljubljana 74.27 331⇓*i*P **P 02 22 38.7 -0.3**
LJU *e* pP 02 24 49.9 +0.8
LJU *e*PP PP 02 25 36.1 -0.4
LJU *e*S S 02 31 26.3 +4.1
LJU *e* 02 35 17.3
FELD Feldberg im Sc 74.28 336 *e*P **P 02 22 39.0 0.0**
GEMT Gemlik 74.28 319 *e*P **P 02 22 38.8 -0.4**
ARMT Armutlu 74.30 319 *e*P **P 02 22 38.6 -0.6**
GRUS Gruza 74.31 326 P **P 02 22 38.4 -0.9**
PGB Panagyurishte 74.32 323 P **P 02 22 39.7 +0.4**
CADS Cadrg 74.32 332⇓*i*P **P 02 22 38.5 -0.8**
CADS *e*PP PP 02 25 40.8 +3.9
CADS *e* 02 28 33.1
CADS *i* 02 30 15.9
CADS *e*S S 02 31 26.0 +3.2
CADS *e* 02 35 17.3
MEZF Maizieres J'vi 74.36 338⇓*i*P **P 02 22 39.7 +0.2**
comp=Z,14μm,1.2s,mb7.0,baz=4.9
MEZF Maizieres J'vi 74.36 338⇓*i*P **P 02 22 39.7 +0.2**
comp=Z,14μm,1.2s,mb7.3
DIVS Divibare 74.36 327 P **P 02 22 39.2 -0.4**
DAVA Damuels 74.37 335 *i* P **P 02 22 39.9 +0.4**
comp=Z,8μm,1.1s,mb7.1,SNR=409
ROBS Robic 74.37 332 *i* P **P 02 22 38.8 -0.8**
FETA Feichten 74.40 334⇓*i*P **P 02 22 40.5 +0.8**
comp=Z,5μm,1.1s,mb7.0,SNR=547
ESKT Eskisehir 74.41 317 *e*P **P 02 22 39.9 0.0**
ESKT Eskisehir 74.41 317⇓*i*P **P 02 22 39.9 0.0**
THEF They Montfort 74.42 338 *e*P **P 02 22 39.9 +0.1**
THEF They Montfort 74.42 338 *e*P **P 02 22 39.9 +0.1**
THEF They Montfort 74.42 338 *e*P **P 02 22 39.9 +0.1**
SULT Sultanhani-AKS 74.43 315 *e*P **P 02 22 40.0 0.0**
TKR Tekirdag 74.44 320 *e*P **P 02 22 40.2 +0.1**
628A Black Gap, Mar 74.45 61⇑P **P 02 22 40.3 0.0**
baz=74
VOY Vojsko 74.46 332⇓*i*P **P 02 22 39.3 -0.8**
CEYT Ceyhan 74.47 312 *e*P **P 02 22 41.0 +0.7**
NCB Newcomb 74.49 33⇓*e*P **P 02 22 39.2 -1.1**
comp=Z,10μm,0.8s,mb7.4
SOF Sofiya 74.49 324 P **P 02 22 40.9 +0.6**
MOF Molkenrain 74.51 337 *e*P **P 02 22 40.2 -0.1**
MOF Molkenrain 74.51 337 *e*P **P 02 22 40.2 -0.1**
MOF Molkenrain 74.51 337 *e*P **P 02 22 40.2 -0.1**
PLD Plovdiv 74.52 323 P **P 02 22 40.2 -0.2**
PLD Plovdiv 74.52 323 P **P 02 22 39.7 -0.7**
KIZT Kizilcal 74.53 316 *e*P **P 02 22 40.3 -0.3**
HAU Haudompre 74.54 337⇓*i*P **P 02 22 40.3 -0.2**
comp=Z,12μm,1.4s,mb6.9
HAU *e*MLR MLR
comp=Z,65μm,23.0s
HAU Haudompre 74.54 337⇓*i*P **P 02 22 40.3 -0.2**
HAU pmax pmax
comp=Z,6μm,1.4s,mb6.9
HAU MLR MLR
comp=Z,65μm,23.0s
HAU Haudompre 74.54 337⇓*i*P **P 02 22 40.3 -0.2**
comp=Z,6μm,1.4s,mb6.9
HAU LR LR
comp=Z,65μm,23.0s
BOJS Bojanci 74.55 331⇓*i*P **P 02 22 40.5 -0.1**
ULDT Uludag 74.55 319⇓*i*P **P 02 22 41.1 +0.4**
KARA Karaisali 74.56 313 *e*P **P 02 22 41.2 +0.4**
CEY Cerknica 74.58 331 P **P 02 22 40.0 -0.7**
MSVF Nonsavu 74.59 155 P **P 02 22 41.0 -0.1**
comp=Z,4μm,1.2s,mb6.8,SNR=54
MSVF Nonsavu 74.59 155 *e*P **P 02 22 40.8 -0.3**

comp=Z,2µm,1.3s,mb6.4
MSVF Nonsavu 74.59 155 P **P 02 22 41.0 -0.1**
comp=Z,4µm,1.2s,mb6.8,SNR=54
HINF Hinteralfeld 74.60 337⇓*i*P **P 02 22 40.5 -0.3**
comp=Z,7µm,1.3s,mb6.8
HINF Hinteralfeld 74.60 337⇓*i*P **P 02 22 40.5 -0.3**
HINF pmax pmax
comp=Z,4µm,1.3s,mb6.8
HINF Hinteralfeld 74.60 337⇓*i*P **P 02 22 40.5 -0.3**
comp=Z,4µm,1.3s,mb6.8
VTS Vitosha 74.62 324 ⇓P **P 02 22 41.2 +0.2**
VTS Vitosha 74.62 324 P **P 02 22 40.9 -0.1**
VTS Vitosha 74.62 324⇓*i*P **P 02 22 41.2 +0.2**
CCA1 Carnmenellis 74.62 346 P **P 02 22 40.2 -0.7**
CCA1 AMb AMB 02 22 52.1
comp=Z,5µm,4.1s
CCA1 pP 02 24 53.1 +1.9
CCA1 AMS AMS 02 42 33.6
comp=Z,37µm,32.8s
CCA1 Carnmenellis 74.62 346⇓*e*P **P 02 22 40.2 -0.7**
CCA1 AMb AMB 02 22 52.1
comp=Z,5µm,4.1s
CCA1 *e* pP 02 24 53.1 +1.9
CCA1 AMS AMS 02 42 33.6
comp=Z,37µm,32.8s
ACSO Alum Creek Sta 74.64 41⇓*e*P **P 02 22 40.1 -1.1**
comp=Z,871nm,0.4s,mb6.6
KDZ Kurdzhali 74.65 322 P **P 02 22 41.2 0.0**
COBT Iskenderun 74.66 312⇓*i*P **P 02 22 42.4 +1.1**
GÜLE Gulek 74.66 313⇓*i*P **P 02 22 42.5 +1.2**
YURE YUREGIR 74.67 312⇓*i*P **P 02 22 42.9 +1.5**
MFT Murefte 74.71 320 *e*P **P 02 22 41.4 -0.2**
APPI Appiano 74.77 334 P **P 02 22 41.6 -0.2**
BBS Basel-Blauen 74.78 336 *e*P **P 02 22 41.9 +0.1**
KNDS Knezji Dol 74.78 331⇓*i*P **P 02 22 41.6 -0.2**
TRI Trieste 74.79 332⇓*e*P **P 02 22 41.0 -0.9**
TRI pmax pmax
comp=Z,5µm,1.0s,mb7.0
TRI Trieste 74.79 332⇓*e*P **P 02 22 41.0 -0.9**
comp=Z,5µm,1.0s,mb7.0
SART Tekirdag 74.83 320⇓*i*P **P 02 22 42.6 +0.4**
RKY Sarkoy-Tekirda 74.84 320 *e*P **P 02 22 42.4 +0.1**
PKME Peaks-Kenny Pk 74.84 29⇓*e*P **P 02 22 41.3 -0.9**
comp=Z,6µm,1.5s,mb6.9
BNT Bandirma 74.84 320 *e*P **P 02 22 42.5 +0.2**
TRD Trivandrum 74.87 264⇓*i*x x 02 22 55.0
TRD *i* x x 02 25 13.0
RZN Rozhen 74.88 322 P **P 02 22 42.4 -0.1**
PARMO Parma 74.88 48⇓*e*P **P 02 22 41.8 -0.8**
LADK Ladik-KONYA 74.91 315 *e*P **P 02 22 42.6 -0.1**
MIAR Mount Ida 74.92 52⇓*e*P **P 02 22 41.8 -1.0**
MIAR pmax pmax
comp=Z,883nm,0.6s,mb6.5
MIAR Mount Ida 74.92 52⇓*e*P **P 02 22 41.8 -1.0**
comp=Z,883nm,0.6s,mb6.5
LBNH Lisbon 74.98 32⇓*e*P **P 02 22 42.6 -0.4**
LBNH pmax pmax
comp=Z,3µm,1.1s,mb6.8
LBNH Lisbon 74.98 32⇓*e*P **P 02 22 42.6 -0.4**
comp=Z,3µm,1.1s,mb6.8
BRMO Bormio 75.00 334 P **P 02 22 43.9 +0.9**
KRTS Karatas 75.00 312 *e*P **P 02 22 44.1 +0.8**
WCI Wyandotte Cave 75.03 44⇓*e*P **P 02 22 42.3 -1.1**
WCI pmax pmax
comp=Z,105nm,1.1s,mb5.3
WCI Wyandotte Cave 75.03 44⇓*e*P **P 02 22 42.3 -1.1**
comp=Z,105nm,1.1s,mb5.3
KRBG Karabiga-Canak 75.05 320 *e*P **P 02 22 43.4 0.0**
LOMF Lomont 75.05 337 *e*P **P 02 22 43.5 +0.2**
LOMF Lomont 75.05 337 *e*P **P 02 22 43.5 +0.2**
LOMF Lomont 75.05 337 *e*P **P 02 22 43.5 +0.2**
BOLV Bolvadin 75.05 317⇓*i*P **P 02 22 43.9 +0.5**
ALN Alexandroupoli 75.08 321 P **P 02 22 43.4 -0.2**
ALN Alexandroupoli 75.08 321 *e*P **P 02 22 43.5 -0.1**
ALN Alexandroupoli 75.08 321 P **P 02 22 43.4 -0.2**
ALT Altintas 75.10 317 *e*P **P 02 22 43.4 -0.3**
ERIK Erikli-Kesan 75.10 321 *e*P **P 02 22 43.6 -0.1**
JSA Saint Aubin 75.10 343 P **P 02 22 43.5 -0.1**
JSA AMb AMB 02 22 49.0
comp=Z,6µm,2.3s,mb6.7
JSA pP 02 24 59.9 +5.8
JSA AMS AMS 02 43 26.0
comp=Z,68µm,31.3s
JSA Saint Aubin 75.10 343⇓*e*P **P 02 22 43.5 -0.1**
JSA AMb AMB 02 22 49.0
comp=Z,6µm,2.3s,mb6.7
JSA *e* pP 02 24 59.9 +5.8
JSA AMS AMS 02 43 26.0
comp=Z,68µm,31.3s
PVMO Portageville 75.11 48⇓*e*P **P 02 22 43.1 -0.7**
comp=Z,3µm,0.7s,mb6.9
MERS Mersin 75.12 313 *e*P **P 02 22 43.6 -0.3**
YAYL Yayladag 75.13 312⇓*i*P **P 02 22 45.0 +1.1**
KONT Konya--Tatoy 75.13 315 *e*P **P 02 22 43.9 0.0**
KBD Kabd 75.17 299 *e*P **P 02 22 44.2 -0.1**
KBD AMb AMB 02 22 52.1
comp=Z,7µm,1.0s,mb7.1
ENEZ Enez 75.18 321 *e*P **P 02 22 44.1 -0.1**
GONE Gonen-Balikesi 75.20 320 *e*P **P 02 22 44.1 -0.2**
JCT Junction City 75.23 58⇓*e*P **P 02 22 43.8 -0.8**
comp=Z,50µm,1.1s,mb8.0
PLE Pljevlja 75.24 327⇓*i*P **P 02 22 45.0 +0.5**
PLE Pljevlja 75.24 327 P **P 02 22 44.0 -0.5**
PLE Pljevlja 75.24 327 P **P 02 22 44.0 -0.5**
TUE Stuetta 75.26 335⇓*e*P **P 02 22 45.2 +0.8**
comp=Z,6µm,0.8s,mb7.2
LPK Lapseki 75.27 320 *e*P **P 02 22 44.8 +0.1**
DURS Dursunbey 75.28 319⇓*i*P **P 02 22 45.0 +0.3**
WRAB Tennant Creek 75.28 198 P **P 02 22 44.0 -0.9**
comp=Z,27µm,0.6s,mb8.0
WRAB Tennant Creek 75.28 198⇓*e*P **P 02 22 44.0 -0.9**
WRAB pmax pmax
comp=Z,91nm,0.4s,mb5.7
WRAB Tennant Creek 75.28 198⇓*e*P **P 02 22 44.0 -0.9**
comp=Z,91nm,0.4s,mb5.7
UALR University of 75.29 51⇓*e*P **P 02 22 43.8 -1.1**
comp=Z,1µm,0.9s,mb6.5
UALR *e*S S 02 31 35.5 +1.9
WRA Warramunga Arr 75.30 198 P **P 02 22 44.4 -0.6**
comp=Z,649nm,0.8s,mb6.2,baz=12,slow=5.7,SNR=463
WRA pP pP 02 24 55.6 -0.2
comp=Z,467nm,1.1s,baz=14,slow=6.5,SNR=3.9
WRA S S 02 31 35.4 +1.7
comp=Z,91nm,0.9s,baz=8.4,slow=9.2,SNR=2.1
KKB Krupnik 75.30 324 P **P 02 22 44.8 0.0**
LDF La Druitiere 75.31 342⇓*i*P **P 02 22 44.5 -0.2**
comp=Z,8µm,0.9s,mb6.9
LDF La Druitiere 75.31 342⇓*i*P **P 02 22 44.5 -0.2**
LDF pmax pmax
comp=Z,4µm,0.9s,mb6.9
LDF La Druitiere 75.31 342⇓*i*P **P 02 22 44.5 -0.2**
comp=Z,4µm,0.9s,mb6.9
GDZ Gediz 75.32 318⇓*i*P **P 02 22 45.3 +0.3**
GNAR Gosnell 75.34 48⇓*i*P **P 02 22 44.6 -0.5**
comp=Z,87µm,0.9s
NAY Al-Naaiem 75.35 300 *e*P **P 02 22 45.3 0.0**
NAY AMb AMB 02 22 51.4
comp=Z,6µm,0.9s,mb7.1
MABI Malga Bissina 75.35 334 P **P 02 22 45.0 0.0**
SHUT Suhut-Afyon 75.35 317 *e*P **P 02 22 45.7 +0.5**
GELI Tayfur-Gelibol 75.35 321 *e*P **P 02 22 44.9 -0.3**
HBAR Harrisburg 75.41 49⇓*e*P **P 02 22 45.1 -0.4**
GLAT Glass 75.41 48⇓*i*P **P 02 22 45.1 -0.5**
RDF Al-Radifah 75.45 299 *e*P **P 02 22 45.8 -0.1**
RDF AMb AMB 02 22 56.2
comp=Z,20µm,1.2s,mb7.5
FITZ Fitzroy Crossi 75.47 207⇓*i*P **P 02 22 45.1 -0.8**
comp=Z,4µm,0.6s,mb7.2
FITZ *e*pP pP 02 24 58.4 +1.5
FITZ *e*S S 02 31 40.2 +4.5
FITZ *e*PKKP PKKPbc 02 41 48.0 -8.5
FITZ *e*PKPPKP 02 49 40.6
FITZ *e* 02 52 13.4
FITZ Fitzroy Crossi 75.47 207 S S 02 31 40.7 +5.1
comp=Z,121nm,1.0s,baz=212,slow=20,SNR=15
FITZ Fitzroy Crossi 75.47 207⇓*e*P **P 02 22 45.3 -0.6**
comp=Z,7µm,1.0s,mb7.1
BALB Balikesir 75.48 319 *e*P **P 02 22 45.6 -0.2**
BINY Binghamton 75.48 35⇓*e*P **P 02 22 44.3 -1.5**
comp=Z,847nm,1.3s,mb6.1
BALY Balya 75.49 319⇓*i*P **P 02 22 46.1 +0.2**
IVA Berane 75.49 326⇓*i*P **P 02 22 45.9 +0.1**
IVA Berane 75.49 326 P **P 02 22 46.0 +0.2**
UPM Unac-Piva 75.51 327⇓*i*P **P 02 22 45.3 -0.7**
UPM Unac-Piva 75.51 327 P **P 02 22 45.0 -1.0**
KAVA Kavala 75.55 322 P **P 02 22 46.1 -0.1**
MAGA Magasa 75.58 334 P **P 02 22 46.0 -0.3**
GRR Gorron 75.64 342⇓*i*P **P 02 22 46.5 -0.1**
comp=Z,19µm,1.0s,mb7.3
GRR Gorron 75.64 342⇓*i*P **P 02 22 46.5 -0.1**
GRR pmax pmax
comp=Z,9µm,1.0s,mb7.3
GRR Gorron 75.64 342⇓*i*P **P 02 22 46.5 -0.1**
comp=Z,9µm,1.0s,mb7.3
DEMI Demirci 75.67 318⇓*i*P **P 02 22 46.9 0.0**
HALT Halls 75.69 48⇓*i*P **P 02 22 46.1 -0.9**
PVY Plav 75.71 326⇓*i*P **P 02 22 46.1 -1.0**
PVY Plav 75.71 326 P **P 02 22 47.0 -0.1**
GADA Gvkgeada 75.75 321 *e*P **P 02 22 46.6 -0.7**
SKO Skopje 75.77 325⇓*i*P **P 02 22 48.0 +0.6**
SKO *i* S S 02 31 45.0 +6.5
SKO Skopje 75.77 325 P **P 02 22 48.1 +0.7**
LOR Lormes 75.79 339⇓*i*P **P 02 22 47.3 -0.1**
comp=Z,7µm,0.9s,mb6.9,baz=28
LOR *e*MLR MLR
comp=Z,32µm,20.0s
LOR Lormes 75.79 339⇓*i*P **P 02 22 47.3 -0.1**
LOR pmax pmax
comp=Z,4µm,0.9s,mb6.9
LOR MLR MLR
comp=Z,32µm,20.0s
LOR Lormes 75.79 339⇓*i*P **P 02 22 47.3 -0.1**
comp=Z,4µm,0.9s,mb6.9
LOR LR LR
comp=Z,32µm,20.0s
NKY Niksic 75.83 327⇓*i*P **P 02 22 46.2 -1.5**
NKY Niksic 75.83 327⇓*i*P **P 02 22 46.2 -1.5**
NKY Niksic 75.83 327⇓*i*P **P 02 22 46.2 -1.5**
BCI Bajram Curri 75.88 326 *e*PN **P 02 22 47.8 -0.2**
BRY Bratogost 75.90 327⇓*i*P **P 02 22 46.6 -1.5**
BRY Bratogost 75.90 327 P **P 02 22 47.0 -1.1**
BRY Bratogost 75.90 327 P **P 02 22 47.0 -1.1**
EZN Ezine 75.91 320 *e*P **P 02 22 47.6 -0.6**
HDMB Hadim 75.91 315 *e*P **P 02 22 48.3 0.0**
CABF La Chapelle 75.92 337⇓*i*P **P 02 22 48.3 +0.2**
comp=Z,14µm,1.4s,mb7.0
CABF La Chapelle 75.92 337⇓*i*P **P 02 22 48.3 +0.2**
CABF pmax pmax
comp=Z,7µm,1.4s,mb7.0
CABF La Chapelle 75.92 337⇓*i*P **P 02 22 48.3 +0.2**
comp=Z,7µm,1.4s,mb7.0
KHAL Karahalli 75.94 317⇓*i*P **P 02 22 48.5 +0.1**
VAY Valandovo 75.96 324⇓*i*P **P 02 22 48.2 -0.3**
VAY *i* S S 02 31 43.8 +3.3
VAY Valandovo 75.96 324 P **P 02 22 48.1 -0.4**
KHL Karahalli 75.96 317 *e*P **P 02 22 48.7 +0.2**
ISP Isparta 75.99 316 *e*P **P 02 22 47.7 -0.9**
ISP Isparta 75.99 316⇓*e*P **P 02 22 47.9 -0.8**
ISP pmax pmax
comp=Z,6µm,1.2s,mb7.0
ISP Isparta 75.99 316⇓*e*P **P 02 22 47.9 -0.8**
comp=Z,6µm,1.2s,mb7.0
ISP Isparta 75.99 316 P **P 02 22 48.1 -0.6**
ISP Isparta 75.99 316⇓*i*P **P 02 22 48.2 -0.5**
BOZC Bozcaada 76.00 321⇓*i*P **P 02 22 48.0 -0.7**
IKL Isikli 76.01 313 *e*P **P 02 22 48.0 -0.8**
HYF Humbligny 76.04 340⇓*i*P **P 02 22 49.1 +0.3**
SSF Saint Saulge 76.06 339⇓*i*P **P 02 22 48.7 -0.2**
comp=Z,4µm,0.9s,mb6.7
SSF Saint Saulge 76.06 339⇓*i*P **P 02 22 48.7 -0.2**
SSF pmax pmax
comp=Z,2µm,0.9s,mb6.7
SSF Saint Saulge 76.06 339⇓*i*P **P 02 22 48.7 -0.2**
comp=Z,2µm,0.9s,mb6.7
SGMF Saint Gilles 76.07 343⇓*i*P **P 02 22 49.0 +0.1**
comp=Z,17µm,1.0s,mb7.2
SGMF Saint Gilles 76.07 343⇓*i*P **P 02 22 49.0 +0.1**
SGMF pmax pmax
comp=Z,8µm,1.0s,mb7.2
SGMF Saint Gilles 76.07 343⇓*i*P **P 02 22 49.0 +0.1**
comp=Z,8µm,1.0s,mb7.2
MET Memphis--Engin 76.09 49⇓*i*P **P 02 22 48.2 -1.0**
comp=Z,12µm,1.4s,mb7.2
SUTC Sutluce-Ispart 76.09 316 *e*P **P 02 22 49.0 -0.3**
TTG Podgorica 76.09 326⇓*i*P **P 02 22 47.5 -1.7**
TTG Podgorica 76.09 326 P **P 02 22 48.0 -1.2**
TTG Podgorica 76.09 326 P **P 02 22 48.0 -1.2**
ROSF Rostrenen 76.11 344⇓*i*P **P 02 22 49.2 +0.1**
comp=Z,15µm,0.9s,mb7.2
ROSF Rostrenen 76.11 344⇓*i*P **P 02 22 49.2 +0.1**
ROSF pmax pmax
comp=Z,7µm,0.9s,mb7.2
ROSF Rostrenen 76.11 344⇓*i*P **P 02 22 49.2 +0.1**
comp=Z,7µm,0.9s,mb7.2
SOH Sokhos 76.12 323 P **P 02 22 48.7 -0.7**
SOH Sokhos 76.12 323 *e*P **P 02 22 49.0 -0.4**
SOH Sokhos 76.12 323 P **P 02 22 48.7 -0.7**
TREB Trebinje 76.13 327 P **P 02 22 48.0 -1.3**
KULA Kula-Manisa 76.14 318 *e*P **P 02 22 49.4 -0.1**
AKHS Akhisar 76.16 319⇓*i*P **P 02 22 49.6 0.0**
AKS Akhisar 76.16 319 *e*P **P 02 22 47.5 -2.1**
WVT Waverly 76.16 47⇓*e*P **P 02 22 48.7 -1.0**
comp=Z,118nm,1.1s,mb5.3
SSPA Standing Stone 76.20 37⇓*e*P **P 02 22 48.6 -1.2**
comp=Z,4µm,3.3s
AYVA Ayvalik 76.22 320⇓*i*P **P 02 22 49.3 -0.6**
PUK Puka 76.23 326 *e*PN **P 02 22 49.8 -0.1**
BCK Bucak 76.27 316 *e*P **P 02 22 49.1 -1.1**
LIA Limnos Island 76.27 321 P **P 02 22 49.9 -0.3**
LIA Limnos Island 76.27 321 *e*P **P 02 22 50.0 -0.2**
LIA Limnos Island 76.27 321 P **P 02 22 49.9 -0.3**
BST Brest 76.27 344 *e*P **P 02 22 50.1 +0.1**
BST Brest 76.27 344 *e*P **P 02 22 50.1 +0.1**
HCY Herceg Novi 76.32 327⇓*i*P **P 02 22 49.2 -1.2**
HCY Herceg Novi 76.32 327 P **P 02 22 49.0 -1.4**
HCY Herceg Novi 76.32 327 P **P 02 22 49.0 -1.4**
BUM Brajici-Budva 76.33 327⇓*i*P **P 02 22 49.8 -0.6**
BUM Brajici-Budva 76.33 327 P **P 02 22 49.0 -1.4**
OUR Ouranopolis 76.33 322 P **P 02 22 49.5 -1.0**
OUR Ouranopolis 76.33 322 P **P 02 22 49.5 -1.0**
MCWV Mont Chateau 76.34 39⇓*i*P **P 02 22 49.7 -0.9**
comp=Z,4µm,0.6s,mb7.1
MCWV *e*pP pP 02 25 01.7 -0.1
MCWV *e*PP PP 02 25 54.1 +0.4
MCWV *e*S S 02 31 45.4 +0.8
AVF Avril sur Loir 76.35 339⇓*i*P **P 02 22 50.5 0.0**
comp=Z,7µm,0.9s,mb6.9
AVF Avril sur Loir 76.35 339⇓*i*P **P 02 22 50.5 0.0**
AVF pmax pmax
comp=Z,3µm,0.9s,mb6.9
AVF Avril sur Loir 76.35 339⇓*i*P **P 02 22 50.5 0.0**
comp=Z,3µm,0.9s,mb6.9
KRUS Krusevo 76.38 325⇓*i*P **P 02 22 50.1 -0.6**
KRUS *i* S S 02 31 47.0 +2.2
SMF Signal de Mont 76.38 339⇓*i*P **P 02 22 50.6 -0.1**
comp=Z,47µm,1.8s,mb7.4
SMF Signal de Mont 76.38 339⇓*i*P **P 02 22 50.6 -0.1**
comp=Z,23µm,1.8s,mb7.4
RAVA Ravarino 76.39 333 P **P 02 22 52.1 +1.4**
EREN Erenkoy 76.40 313 *e*P **P 02 22 51.0 0.0**
FIU Minerbio Fiu 76.40 333 P **P 02 22 52.0 +1.2**
HORT Hortiatis 76.41 323 P **P 02 22 50.2 -0.7**
HORT Hortiatis 76.41 323 P **P 02 22 50.2 -0.7**
THE Thessaloniki 76.43 323 P **P 02 22 49.9 -1.1**
THE Thessaloniki 76.43 323 P **P 02 22 49.9 -1.1**
PRK Paraskevi 76.43 320 P **P 02 22 50.5 -0.6**
PRK Paraskevi 76.43 320 *e*P **P 02 22 50.5 -0.6**
PRK Paraskevi 76.43 320 P **P 02 22 50.5 -0.6**
PLG Polygyros 76.49 323 P **P 02 22 50.8 -0.5**
PLG Polygyros 76.49 323 *e*P **P 02 22 51.0 -0.3**
PLG Polygyros 76.49 323 P **P 02 22 50.8 -0.5**
FKH Fakeheh 76.50 310 *e*P **P 02 22 51.9 +0.4**
QUIF Quistinic 76.50 344⇓*i*P **P 02 22 51.2 -0.1**
comp=Z,7µm,0.9s,mb6.9
QUIF Quistinic 76.50 344⇓*i*P **P 02 22 51.2 -0.1**
QUIF pmax pmax
comp=Z,4µm,0.9s,mb6.9
QUIF Quistinic 76.50 344⇓*i*P **P 02 22 51.2 -0.1**
comp=Z,4µm,0.9s,mb6.9
ULC Ulcinj 76.52 326⇓*i*P **P 02 22 50.7 -0.8**
ULC Ulcinj 76.52 326 P **P 02 22 50.0 -1.5**
ULC Ulcinj 76.52 326 P **P 02 22 50.0 -1.5**
BRSN Barisano 76.57 332 P **P 02 22 53.2 +1.5**
DZM Mont Dzumac 76.60 167 *e*P **P 02 22 52.4 +0.4**
comp=Z,3µm,1.1s,mb6.7
DZM Mont Dzumac 76.60 167 *e*P **P 02 22 50.3 -1.8**
DZM *e*S pP 02 25 09.7 +6.1
NOUC Port Laguerre 76.61 167 *e*P **P 02 22 50.8 -1.3**
NOUC *e*S pP 02 25 09.5 +5.8
SIGR SIGRI 76.62 320 P **P 02 22 51.5 -0.6**
SIGR SIGRI 76.62 320 P **P 02 22 51.5 -0.6**
DENT Denizli 76.65 317 *e*P **P 02 22 52.2 -0.1**
BIA Bitola 76.66 324 P **P 02 22 51.0 -1.3**
BIA Bitola 76.66 324⇓*i*P **P 02 22 51.1 -1.2**
BIA *i* S S 02 31 49.4 +1.5
BIA Bitola 76.66 324 P **P 02 22 51.0 -1.3**
HWQ Hawqa 76.67 311 *e*P **P 02 22 52.4 -0.1**
BGF Bois d'Agland 76.68 339⇓*i*P **P 02 22 52.4 +0.1**
comp=Z,3µm,0.6s,mb6.7
BGF Bois d'Agland 76.68 339⇓*i*P **P 02 22 52.4 +0.1**
BGF pmax pmax
comp=Z,1µm,0.6s,mb6.6
BGF Bois d'Agland 76.68 339⇓*i*P **P 02 22 52.4 +0.1**
comp=Z,1µm,0.6s,mb6.6
DNZL Cakiroluk 76.70 317⇓*i*P **P 02 22 53.2 +0.7**
NATX Nacogdoches 76.70 54⇓*i*P **P 02 22 52.5 -0.2**
comp=Z,8µm,1.0s,mb7.2
ANTB Antalya 76.73 316 *e*P **P 02 22 51.0 -1.7**
OHR Ohrid 76.76 325⇓*i*P **P 02 22 51.9 -0.9**
OHR *i* S S 02 31 50.6 +1.7
OHR Ohrid 76.76 325 P **P 02 22 51.8 -1.0**
KORT Korkueli 76.76 316⇓*i*P **P 02 22 52.5 -0.4**
NORM Noumea 76.76 167 *e*P **P 02 22 51.8 -1.1**
KDAG Bornova 76.78 319⇓*i*P **P 02 22 52.6 -0.4**
IZM Izmir 76.79 319 *e*P **P 02 22 54.3 +1.2**
LPL La Plagne 76.80 336⇓*i*P **P 02 22 53.9 +1.0**
comp=Z,33µm,1.4s,mb7.4
LPL La Plagne 76.80 336⇓*i*P **P 02 22 53.9 +1.0**
comp=Z,16µm,1.4s,mb7.4
PAIG Paliouri 76.80 322 P **P 02 22 52.1 -0.9**
PAIG Paliouri 76.80 322 P **P 02 22 52.1 -0.9**
LPG La Plagne 76.81 336⇓*i*P **P 02 22 54.2 +1.2**
comp=Z,13µm,0.9s,mb7.2
LPG La Plagne 76.81 336⇓*i*P **P 02 22 54.2 +1.2**
LPG pmax pmax
comp=Z,7µm,0.9s,mb7.2
LPG La Plagne 76.81 336⇓*i*P **P 02 22 54.2 +1.2**
comp=Z,7µm,0.9s,mb7.2
AOI Ancona 76.82 331 P **P 02 22 53.3 +0.2**
PLUM Mont Dore 76.83 167 *e*P **P 02 22 53.2 -0.1**
OXF Oxford 76.83 49⇓*i*P **P 02 22 52.2 -1.1**
OXF *e**PP pP 02 25 04.4 -0.4
OXF pmax pmax
comp=Z,5µm,0.9s,mb7.1
OXF Oxford 76.83 49⇓*i*P **P 02 22 52.2 -1.1**
comp=Z,5µm,0.9s,mb7.1
OXF *e*pP pP 02 25 04.4 -0.4
FNA Florina 76.85 324 P **P 02 22 52.6 -0.7**
FNA Florina 76.85 324 P **P 02 22 52.6 -0.7**
TIR Tirane 76.86 326⇓*e*P **P 02 22 53.1 -0.2**
comp=Z,11µm,0.8s,mb7.4
TIR *e*S S 02 31 49.1 -0.9
TIR Tirane 76.86 326 *e*P **P 02 22 53.5 +0.1**
TIR Tirane 76.86 326 P **P 02 22 53.1 -0.3**
GOLH Golhisar 76.88 317⇓*i*P **P 02 22 53.8 +0.2**
BLCB Balcova 76.89 319 *e*P **P 02 22 52.9 -0.7**
BLCB Balcova 76.89 319 P **P 02 22 52.8 -0.7**
BLCB Balcova 76.89 319 P **P 02 22 52.8 -0.7**
LFK Lefkose 76.89 313 *e*P **P 02 22 53.4 -0.2**
ERBM Eremo 76.90 333 P **P 02 22 54.7 +1.2**
PHNC Paralinni 76.91 312 P **P 02 22 55.6 +1.9**
comp=Z,64nm,0.7s,mb5.3
FSSB Fossombrone 76.92 331 P **P 02 22 54.1 +0.5**
FNVD Fontana Vidola 76.94 333 P **P 02 22 54.8 +1.1**
GLHS Glhisar (BURDU 76.98 317 *e*P **P 02 22 53.8 -0.3**
SEI Scarperia 76.98 333 P **P 02 22 55.2 +1.3**
TCF Toulx Ste Croi 77.07 340⇓*i*P **P 02 22 54.6 +0.2**
comp=Z,4µm,0.9s,mb6.7
TCF Toulx Ste Croi 77.07 340⇓*i*P **P 02 22 54.6 +0.2**
TCF pmax pmax
comp=Z,2µm,0.9s,mb6.7
TCF Toulx Ste Croi 77.07 340⇓*i*P **P 02 22 54.6 +0.2**
comp=Z,2µm,0.9s,mb6.7
PLDF La Plantade 77.07 339 *e*P **P 02 22 55.1 +0.7**
PLDF La Plantade 77.07 339 *e*P **P 02 22 55.1 +0.7**
PLDF La Plantade 77.07 339 *e*P **P 02 22 55.1 +0.7**
URLA Izmir 77.08 319⇓*i*P **P 02 22 54.4 -0.2**
AGO Saint Agoulin 77.10 339 *e*P **P 02 22 55.3 +0.8**
AGO Saint Agoulin 77.10 339 *e*P **P 02 22 55.3 +0.8**
BHL Bhannes 77.11 311 *e*P **P 02 22 55.0 +0.1**
MAMC Mammari 77.12 313 P **P 02 22 54.3 -0.5**
KZN Kozani 77.14 324 P **P 02 22 53.9 -1.0**
KZN Kozani 77.14 324 *e*P **P 02 22 54.5 -0.4**
KZN Kozani 77.14 324 P **P 02 22 53.9 -1.0**
VLC Villacollemand 77.14 333⇓*e*P **P 02 22 54.9 +0.1**
comp=Z,15µm,1.4s,mb7.3
VLC *e*S S 02 31 54.2 +1.3
ELL Elmali 77.16 316 *e*P **P 02 22 54.7 -0.4**
AYDN Tasoluk 77.19 318⇓*i*P **P 02 22 55.7 +0.5**
KBN Korca 77.20 325 *e*PN **P 02 22 55.0 -0.2**
MFF Saint Martin d 77.23 341⇓*i*P **P 02 22 55.6 +0.4**
comp=Z,10µm,1.0s,mb7.0
MFF Saint Martin d 77.23 341⇓*i*P **P 02 22 55.6 +0.4**
MFF pmax pmax
comp=Z,5µm,1.0s,mb7.0
MFF Saint Martin d 77.23 341⇓*i*P **P 02 22 55.6 +0.4**
comp=Z,5µm,1.0s,mb7.0
GDM Grand'Maison 77.23 337 *e*P **P 02 22 56.3 +1.0**
GDM Grand'Maison 77.23 337 *e*P **P 02 22 56.3 +1.0**
BADI Badiali 77.24 332 P **P 02 22 56.2 +0.9**
BNI Bardonecchia 77.25 336⇓*e*P **P 02 22 56.0 +0.7**
BNI *e*S S 02 32 04.5 +11
BNI pmax pmax
comp=Z,3µm,0.8s,mb6.9
BNI Bardonecchia 77.25 336⇓*e*P **P 02 22 56.0 +0.6**
comp=Z,3µm,0.8s,mb6.9
BNI *e*S S 02 32 04.5 +11
CSS Prodhromos 77.25 313 P **P 02 22 55.4 -0.1**
comp=Z,0.5nm,1.0s
CSS Prodhromos 77.25 313 P **P 02 22 54.5 -1.0**
CHOS Chios island 77.27 320 *e*P **P 02 22 55.5 -0.1**
CHOS Chios island 77.27 320 P **P 02 22 55.0 -0.6**
GRN Grenoble 77.29 337 *e*P **P 02 22 55.9 +0.3**
GRN Grenoble 77.29 337 *e*P **P 02 22 55.9 +0.3**
GRN Grenoble 77.29 337 *e*P **P 02 22 55.9 +0.3**
CDCA Citt' di Caste 77.29 332 P **P 02 22 56.2 +0.6**
NEST Nestorio 77.29 324 P **P 02 22 55.3 -0.4**
LEF Lefka 77.30 313 *e*P **P 02 22 55.0 -0.9**
OFFI Offida 77.36 331 P **P 02 22 56.9 +0.9**
MNCY Minicoy 77.38 267 *e*PKP **P 02 22 57.0 +0.4**
MNCY *e*x x 02 34 51.0
CFF Clermont-Ferra 77.38 339 *e*P **P 02 22 57.6 +1.5**
CFF Clermont-Ferra 77.38 339 *e*P **P 02 22 57.6 +1.5**
CFF Clermont-Ferra 77.38 339 *e*P **P 02 22 57.6 +1.5**
MURB Monte Urbino 77.39 331 P **P 02 22 56.8 +0.7**
AOS Alonnisos 77.39 322 P **P 02 22 55.6 -0.6**
AOS Alonnisos 77.39 322 P **P 02 22 55.6 -0.6**
RCY Rachaya 77.39 310 *e*P **P 02 22 56.2 -0.1**
ALFC Alevga 77.39 314 P **P 02 22 56.2 -0.1**
comp=Z,55nm,0.5s,mb5.3
ALFC Alevga 77.39 314 P **P 02 22 56.2 -0.1**
ALFC P 02 31 55.2
GCAM G?zelcaml? 77.41 319⇓*i*P **P 02 22 56.1 -0.2**
PYM Petit Puy Mans 77.41 339 *e*P **P 02 22 56.8 +0.6**
PYM Petit Puy Mans 77.41 339 *e*P **P 02 22 56.8 +0.6**
PYM Petit Puy Mans 77.41 339 *e*P **P 02 22 56.8 +0.6**
XOR Xorichti 77.47 322 P **P 02 22 55.4 -1.3**
XOR Xorichti 77.47 322 P **P 02 22 55.4 -1.3**
YER Yerkesik 77.48 318 *e*P **P 02 22 56.9 +0.1**
NEO Neokhori 77.51 322 *e*P **P 02 22 56.5 -0.4**
SSB Saint Sauveur 77.53 338⇓*e*P **P 02 22 57.2 +0.4**
SSB pmax pmax
comp=Z,3µm,0.9s,mb6.8
SSB Saint Sauveur 77.53 338⇓*e*P **P 02 22 57.2 +0.4**
comp=Z,3µm,0.9s,mb6.8
MBDF Montbardon 77.53 336⇓*i*P **P 02 22 57.3 +0.4**
comp=Z,7µm,0.7s,mb7.0
MBDF Montbardon 77.53 336⇓*i*P **P 02 22 57.3 +0.4**
MBDF pmax pmax
comp=Z,3µm,0.7s,mb7.0
MBDF Montbardon 77.53 336⇓*i*P **P 02 22 57.3 +0.4**
comp=Z,3µm,0.7s,mb7.0
MLSB Milas 77.55 318 *e*P **P 02 22 57.3 +0.1**
SMG Samos 77.56 319 *e*P **P 02 22 56.5 -0.7**
ORIF Oris-en-Rattie 77.56 337⇓*i*P **P 02 22 57.9 +0.9**
comp=Z,15µm,1.1s,mb7.1
ORIF *e*MLR MLR
comp=Z,48µm,20.8s
ORIF Oris-en-Rattie 77.56 337⇓*i*P **P 02 22 57.9 +0.9**
ORIF pmax pmax

comp=Z,7μm,1.1s,mb7.1
ORIF **Oris-en-Rattie** 77.56 337⇓*i*P P 02 22 57.9 +0.9
comp=Z,7μm,1.1s,mb7.1
TURN **Turunc** 77.58 317⇓*i*P P 02 22 58.9 +1.6
MAIG **Mazatlaan** 77.60 68 *i* P P 02 22 57.9 +0.3
NRCA **Norcia** 77.61 331 P P 02 22 58.0 +0.6
HKT **Hockley** 77.63 56⇓*e*P P 02 22 57.2 -0.5
TERO **Teramo** 77.67 330 P P 02 22 58.3 +0.6
KSDI **Kefar Szold** 77.71 310 Pn P 02 22 58.0 -0.1
THL **Klokotos Trika** 77.71 323 *e*P P 02 22 56.5 -1.5
THL **Klokotos Trika** 77.71 323 P P 02 22 56.0 -2.0
AKAS **Kas** 77.73 316⇓*i*P P 02 22 57.5 -0.7
PPCY **Paphos** 77.74 314 P P 02 22 57.4 -0.8
SWET **Sewanee** 77.75 46⇓*i*P P 02 22 56.7 -1.5
SURF **Saint Ours** 77.75 336 *e*P P 02 22 58.9 +0.8
SURF **Saint Ours** 77.75 336 *e*P P 02 22 58.9 +0.8
SGRT **San Giovanni R** 77.82 329 P P 02 22 57.0 -1.5
MGAB **Montegabbione** 77.83 332 P P 02 22 58.5 0.0
LBL **Lubilhac** 77.86 339 *e*P P 02 22 59.3 +0.7
LBL **Lubilhac** 77.86 339 *e*P P 02 22 59.3 +0.7
LBL **Lubilhac** 77.86 339 *e*P P 02 22 59.3 +0.7
BDRM **Kayabasi** 77.88 318⇓*i*P P 02 22 58.4 -0.5
VIVF **Saint-Julien-I** 77.90 337⇓*i*P P 02 22 59.5 +0.7
comp=Z,8μm,1.1s,mb6.9
VIVF **Saint-Julien-I** 77.90 337⇓*i*P P 02 22 59.5 +0.7
VIVF pmax pmax
comp=Z,4μm,1.1s,mb6.9
VIVF **Saint-Julien-I** 77.90 337⇓*i*P P 02 22 59.5 +0.7
comp=Z,4μm,1.1s,mb6.9
BODT **Bodrum** 77.93 318 *e*P P 02 22 58.3 -0.9
RGNG **Rignano Grg** 77.94 329 P P 02 22 58.4 -0.7
FG2 **Serracapriola** 77.95 329 P P 02 22 58.8 -0.4
AQU **L'Aquila** 77.97 330⇓*e*P P 02 22 59.5 +0.2
comp=Z,12μm,1.1s,mb7.3
AQU **L'Aquila** 77.97 330⇓*i*P P 02 22 59.9 +0.6
MMAI **Mount Meron Ar** 77.97 310 P P 02 22 60.0 +0.5
comp=Z,824nm,0.4s,mb6.6,baz=48,slow=6.8,SNR=1660
MMAI pP pP 02 25 14.1 +2.6
comp=Z,2μm,1.2s,baz=50,slow=7.8,SNR=5.1
HNTI **Hanita** 78.02 311 Pn P 02 23 00.7 +1.0
IMI **Imperia** 78.02 335 P P 02 22 59.4 -0.1
SAOF **Saorge** 78.03 335 *e*P P 02 22 59.5 -0.1
SAOF **Saorge** 78.03 335 *e*P P 02 22 59.5 -0.1
SAOF **Saorge** 78.03 335 *e*P P 02 22 59.5 -0.1
JAN **Janina** 78.04 324 *e*P P 02 23 00.5 +0.8
AUTN **L'Aution** 78.06 335 *e*P P 02 22 59.8 +0.1
AUTN **L'Aution** 78.06 335 *e*P P 02 22 59.8 +0.1
AUTN **L'Aution** 78.06 335 *e*P P 02 22 59.8 +0.1
AGG **Agios Georgios** 78.08 323 P P 02 22 58.1 -1.8
AGG **Agios Georgios** 78.08 323 *e*P P 02 22 58.5 -1.4
AGG **Agios Georgios** 78.08 323 P P 02 22 58.1 -1.8
TOUF **Mont Tournerai** 78.08 335 *e*P P 02 23 00.1 +0.2
TOUF **Mont Tournerai** 78.08 335 *e*P P 02 23 00.1 +0.2
TOUF **Mont Tournerai** 78.08 335 *e*P P 02 23 00.1 +0.2
ELN **Prospectdale** 78.11 41 *e*P P 02 22 58.7 -1.4
DAT **Datca** 78.12 318 *e*P P 02 22 58.8 -1.4
ATAL **Atalanti** 78.12 322 P P 02 22 58.7 -1.5
SRN **Sarande** 78.13 325 *e*PN P 02 22 59.0 -1.2
FIAM **Fiamignano** 78.13 331 P P 02 23 00.5 +0.3
CPCT **Cooper Cave** 78.14 45⇓*e*P P 02 22 59.2 -1.1
RJF **Les Rejaudoux** 78.15 340⇓*i*P P 02 23 00.5 +0.3
comp=Z,12μm,1.1s,mb7.0
RJF *e*MLR MLR
comp=Z,40μm,20.8s
RJF **Les Rejaudoux** 78.15 340⇓*i*P P 02 23 00.5 +0.3
RJF pmax pmax
comp=Z,6μm,1.1s,mb7.0
RJF MLR MLR
comp=Z,40μm,20.8s
RJF **Les Rejaudoux** 78.15 340⇓*i*P P 02 23 00.5 +0.3
comp=Z,6μm,1.1s,mb7.0
RJF LR LR
comp=Z,40μm,20.8s
CIGN **Sant'Elia a Pi** 78.17 329 P P 02 23 00.5 +0.2
LKR **Lokris** 78.17 322 P P 02 22 58.8 -1.6
LKR **Lokris** 78.17 322 *e*P P 02 22 59.5 -0.9
LKR **Lokris** 78.17 322 P P 02 22 58.8 -1.6
LUCF **Luceram** 78.17 335 *e*P P 02 23 00.4 +0.1
SBF **Sospel** 78.18 335⇓*i*P P 02 23 00.3 -0.1
comp=Z,6μm,0.8s,mb6.9
SBF **Sospel** 78.18 335⇓*i*P P 02 23 00.3 -0.1
SBF pmax pmax
comp=Z,3μm,0.8s,mb6.9
SBF **Sospel** 78.18 335⇓*i*P P 02 23 00.3 -0.1
comp=Z,3μm,0.8s,mb6.9
LATE **Laterza** 78.19 332 P P 02 23 01.0 +0.6
MVIF **Mont Vial** 78.22 335 *e*P P 02 23 00.7 +0.1
MVIF **Mont Vial** 78.22 335 *e*P P 02 23 00.7 +0.1
MVIF **Mont Vial** 78.22 335 *e*P P 02 23 00.7 +0.1
BLA **Blacksburg** 78.26 41⇓*e*P P 02 22 59.9 -1.0
BLA pmax pmax
comp=Z,506nm,0.6s,mb6.2
BLA **Blacksburg** 78.26 41⇓*e*P P 02 22 59.9 -1.0
comp=Z,506nm,0.6s,mb6.2
VBMS **Vicksburg** 78.26 51⇓*i*P P 02 23 00.8 -0.3
comp=Z,4μm,0.9s,mb6.9
TKL **Tuckaleechee C** 78.27 44⇓*i*P P 02 22 59.9 -1.1
MON **Monaco** 78.31 335 P P 02 23 00.0 -1.0
REVF **Revere** 78.31 335 *e*P P 02 23 01.2 +0.1
REVF **Revere** 78.31 335 *e*P P 02 23 01.2 +0.1
REVF **Revere** 78.31 335 *e*P P 02 23 01.2 +0.1
ARG **Arkhangelos** 78.34 317 P P 02 23 00.8 -0.6
ARG **Arkhangelos** 78.34 317 *e*P P 02 23 01.5 +0.1
ARG **Arkhangelos** 78.34 317 P P 02 23 00.8 -0.6
RNI2 **Rionero Sannit** 78.35 330 P P 02 23 01.7 +0.4
KEK **Kerkira** 78.35 325 P P 02 23 00.6 -0.8
KEK **Kerkira** 78.35 325 *e*P P 02 23 01.0 -0.4
KEK **Kerkira** 78.35 325 P P 02 23 00.6 -0.8
VVLD **Villa Vallelon** 78.35 330 P P 02 23 01.4 +0.1
EVR **Evrytania** 78.36 323 *e*P P 02 23 01.5 +0.1
MIDA **Miranda** 78.37 330 P P 02 23 02.0 +0.6
NIS1 **Nisyros Isl.** 78.38 318 P P 02 23 00.3 -1.3
PTL **Penteli** 78.39 321 *e*P P 02 23 00.5 -1.1
FG5 **Orsara di Pugl** 78.40 329 P P 02 23 01.7 +0.1
CAF **Calviac** 78.40 339⇓*i*P P 02 23 02.3 +0.8
comp=Z,7μm,1.0s,mb6.9
CAF **Calviac** 78.40 339⇓*i*P P 02 23 02.3 +0.8
CAF pmax pmax
comp=Z,4μm,1.0s,mb6.9
CAF **Calviac** 78.40 339⇓*i*P P 02 23 02.3 +0.8
comp=Z,4μm,1.0s,mb6.9
CALN **Calern** 78.42 336 *e*P P 02 23 01.9 +0.3
CALN **Calern** 78.42 336 *e*P P 02 23 01.9 +0.3
CALN **Calern** 78.42 336 *e*P P 02 23 01.9 +0.3
MMLI **Mount Malkishu** 78.45 310 Pn P 02 23 02.5 +0.5
CERT **Cerreto** 78.47 331 P P 02 23 01.6 -0.3
MTCE **Montecelio** 78.47 331 P P 02 23 01.5 -0.4
SCTE **Santa Cesarea** 78.47 326 *e*P P 02 23 01.5 -0.5
ATHU **Athens Univers** 78.49 321 P P 02 23 00.9 -1.2
OFRI 'Ofer 78.50 310 ⇓Pn P 02 23 02.3 0.0
ATH **Athens Observa** 78.51 321 P P 02 23 00.9 -1.3
ATH **Athens Observa** 78.51 321 *e*P P 02 23 00.5 -1.7
SMRF **Simiane la Rot** 78.52 337⇓*i*P P 02 23 03.0 +0.8
comp=Z,7μm,1.2s,mb6.8
SMRF **Simiane la Rot** 78.52 337⇓*i*P P 02 23 03.0 +0.8
comp=Z,7μm,1.2s,mb7.1
CBN **Corbin** 78.53 38⇓*e*P P 02 23 01.4 -0.9
comp=Z,5μm,0.8s,mb7.1
LTRZ **Laterza** 78.53 327 P P 02 23 01.8 -0.5
DSF **Desfina** 78.55 322 P P 02 23 00.3 -2.2
KVTX **Kingsville** 78.58 59⇓*i*P P 02 23 03.7 +0.9
comp=Z,6μm,0.9s,mb7.1
VLY **Voula,Athens** 78.58 321 *e*P P 02 23 01.5 -1.1
PSB1 **Pescosannita** 78.59 329 P P 02 23 02.9 +0.3
APE **Apeiranthos** 78.62 320 ⇓P P 02 23 00.8 -2.0
APE **Apeiranthos** 78.62 320 P P 02 23 00.8 -2.0
APE **Apeiranthos** 78.62 320⇓*i*P P 02 23 00.8 -2.0
MRB1 **Monte Rocchett** 78.63 329 P P 02 23 04.1 +1.3
TOLF **Tolfa** 78.64 331 P P 02 23 03.2 +0.3
FRF **La Foret Royal** 78.66 336⇓*i*P P 02 23 02.7 -0.2
comp=Z,3μm,0.7s,mb6.5
FRF **La Foret Royal** 78.66 336⇓*i*P P 02 23 02.7 -0.2
FRF pmax pmax
comp=Z,1μm,0.7s,mb6.6
FRF **La Foret Royal** 78.66 336⇓*i*P P 02 23 02.7 -0.2
comp=Z,1μm,0.7s,mb6.6
LFF **La Frestale** 78.66 340⇓*i*P P 02 23 03.5 +0.6
comp=Z,5μm,0.6s,mb6.9
LFF **La Frestale** 78.66 340⇓*i*P P 02 23 03.5 +0.6
LFF pmax pmax
comp=Z,2μm,0.6s,mb6.9
LFF **La Frestale** 78.66 340⇓*i*P P 02 23 03.5 +0.6
comp=Z,2μm,0.6s,mb6.9

KALE **Kalithea** 78.71 323 P P 02 23 01.6 -1.7
ROM9 **Roma** 78.71 331 P P 02 23 03.2 0.0
MA9 **Marino** 78.72 331 P P 02 23 02.9 -0.4
LTK **Loutraki** 78.74 322 *e*P P 02 23 01.5 -1.9
LTK **Loutraki** 78.74 322 P P 02 23 01.3 -2.1
EFP **Efpalio** 78.76 323 *e*P P 02 23 03.5 -0.1
EFP **Efpalio** 78.76 323 P P 02 23 02.5 -1.1
RFI **Roccamonfina** 78.77 330 P P 02 23 03.5 0.0
NAIG **Nisos Aigina** 78.78 321 *e*P P 02 23 02.0 -1.7
SLTI **Sal'it** 78.79 310 ⇓Pn P 02 23 04.1 +0.3
MRLC **Muro Lucano** 78.81 328 P P 02 23 03.5 -0.3
LASF **Ste Croix** 78.82 338⇓*i*P P 02 23 04.6 +0.8
comp=Z,4μm,1.1s,mb6.6
PTRP **Pietrapertosa** 78.84 328 P P 02 23 04.5 +0.6
CSSN **Cassano Irpino** 78.86 329 P P 02 23 03.3 -0.7
LKD2 **Lefkada island** 78.88 324 P P 02 23 03.3 -0.9
LAKA **Lakka** 78.90 323 P P 02 23 03.2 -1.1
LMR **La Mourre** 78.90 336⇓*i*P P 02 23 04.3 +0.1
comp=Z,12μm,1.0s,mb7.0
LMR **La Mourre** 78.90 336⇓*i*P P 02 23 04.3 +0.1
LMR pmax pmax
comp=Z,6μm,1.0s,mb7.1
LMR **La Mourre** 78.90 336⇓*i*P P 02 23 04.3 +0.1
comp=Z,6μm,1.0s,mb7.1
UPR **University Cam** 78.93 323 *e*P P 02 23 04.5 0.0
UPR **University Cam** 78.93 323 P P 02 23 03.7 -0.8
EIDS **Eidsvold** 79.00 182⇓*e*P P 02 23 04.2 -0.6
comp=Z,14nm,0.5s
EIDS *e*pP pP 02 25 16.5 -1.0
ASAR **Alice Springs** 79.01 198 P P 02 23 04.4 -0.5
comp=Z,476nm,0.7s,mb6.1,baz=11,slow=4.9,SNR=1988
ASAR pP pP 02 25 17.9 +0.3
comp=Z,192nm,0.8s,baz=4.6,slow=4.2,SNR=2.7
ASAR S S 02 32 13.7 +1.2
comp=Z,31nm,0.9s,baz=344,slow=2.6,SNR=3.0
ASAR PKP2bc 02 50 14.3
comp=Z,30nm,0.8s,baz=184,slow=3.1,SNR=4.1
ASAR **Alice Springs** 79.01 198 P P 02 23 04.4 -0.5
ASAR S S 02 32 13.7 +1.2
ASAR **Alice Springs** 79.01 198 P P 02 23 04.4 -0.5
ASAR pP pP 02 25 17.9 +0.3
ASAR S S 02 32 13.7 +1.2
ASAR ⇑*e* 02 50 14.3
GUR **Goura** 79.04 322 *e*P P 02 23 04.5 -0.5
GUR **Goura** 79.04 322 P P 02 23 03.5 -1.5
DID **Didima** 79.10 321 *e*P P 02 23 03.5 -1.8
DID **Didima** 79.10 321 P P 02 23 02.4 -2.9
LRAL **Lakeview Retre** 79.15 48⇓*e*P P 02 23 04.1 -1.6
comp=Z,1μm,0.6s,mb6.6
DSI **Dead Sea** 79.20 310 Pn P 02 23 06.0 0.0
THR3 **Thira Island,** 79.25 319 P P 02 23 03.4 -2.7
THR3 **Thira Island,** 79.25 319 P P 02 23 03.4 -2.7
RLS **Riolos of Patr** 79.25 323 *e*P P 02 23 06.0 -0.1
THR1 **Thera Island** 79.26 319 P P 02 23 03.1 -3.1
THR5 **Thira Island,** 79.26 319 P P 02 23 03.3 -2.9
THR5 **Thira Island,** 79.26 319 P P 02 23 03.3 -2.9
KARP **Karpathos** 79.31 318 *e*P P 02 23 05.5 -1.0
MZDA **Masada** 79.43 309 ⇓Pn P 02 23 07.4 +0.2
KFL **Anninata** 79.44 323 P P 02 23 06.3 -0.8
KFL **Anninata** 79.44 323 P P 02 23 09.1 +2.0
VLS **Valsamata** 79.45 324 P P 02 23 06.2 -1.0
VLS **Valsamata** 79.45 324 *e*P P 02 23 07.0 -0.2
VLS **Valsamata** 79.45 324 P P 02 23 06.2 -1.0
YTIR **Yattir** 79.50 310 Pn P 02 23 08.1 +0.6
VLX **Vlachokerasia** 79.53 322 *e*P P 02 23 06.5 -1.1
VLX **Vlachokerasia** 79.53 322 P P 02 23 06.0 -1.6
ITM **Ithomi** 79.86 322 P P 02 23 07.7 -1.6
ITM **Ithomi** 79.86 322 *e*P P 02 23 08.5 -0.8
ITM **Ithomi** 79.86 322 P P 02 23 07.7 -1.6
MTLF **Montolieu** 79.88 339⇓*i*P P 02 23 10.0 +0.7
comp=Z,6μm,1.0s,mb6.7
MTLF **Montolieu** 79.88 339⇓*i*P P 02 23 10.0 +0.7
MTLF pmax pmax
comp=Z,3μm,1.0s,mb6.7
MTLF **Montolieu** 79.88 339⇓*i*P P 02 23 10.0 +0.7
comp=Z,3μm,1.0s,mb6.7
VLI **Veliai** 79.90 321 *e*P P 02 23 07.5 -2.1
RTMI **Retamim** 79.95 310 Pn P 02 23 09.8 -0.1
MBWA **Marble Bar** 80.06 211⇓*e*P P 02 23 08.7 -1.7
comp=Z,1μm,0.7s,mb6.5
ZKR **Zakros** 80.06 318 P P 02 23 09.6 -0.8
ZKR **Zakros** 80.06 318 *e*P P 02 23 10.5 +0.1
ZKR **Zakros** 80.06 318 P P 02 23 09.6 -0.8
ZFRI **Zfri** 80.15 309 ⇓Pn P 02 23 11.0 0.0
NPS **Neapolis** 80.17 319 *e*P P 02 23 09.5 -1.5
PYL **PYLOS** 80.18 322 *e*P P 02 23 10.0 -1.0
PYL **PYLOS** 80.18 322 P P 02 23 09.2 -1.8
LRDF **Laroque-de-Fa** 80.20 338 *e*P P 02 23 11.9 +0.9
LRDF **Laroque-de-Fa** 80.20 338 *e*P P 02 23 11.9 +0.9
KZIT **Kziot** 80.21 310 ⇓Pn P 02 23 11.4 +0.1
KYTH **Kithira** 80.25 321 *e*P P 02 23 10.0 -1.4
LAST **Lasithi** 80.31 319 P P 02 23 10.3 -1.4
LAST **Lasithi** 80.31 319 *e*P P 02 23 11.5 -0.2
LAST **Lasithi** 80.31 319 P P 02 23 10.3 -1.4
GOGA **Godfrey** 80.33 45⇓*e*P P 02 23 10.7 -1.1
comp=Z,43nm,1.4s
PRNI **Paran** 80.40 309 P P 02 23 12.3 0.0
IDI **Anoyia** 80.43 319 *e*P P 02 23 11.0 -1.3
JSC **Jenkinsville** 80.48 43 *e*P P 02 23 11.2 -1.4
MLS **Moulis** 80.48 339 *e*P P 02 23 12.0 -0.4
MLS **Moulis** 80.48 339 *e*P P 02 23 12.0 -0.4
CARF **Carcanieres** 80.50 339 *e*P P 02 23 12.8 +0.3
CARF **Carcanieres** 80.50 339 *e*P P 02 23 12.8 +0.3
FILF **Fillols** 80.55 338 *e*P P 02 23 13.5 +0.7
FILF **Fillols** 80.55 338 *e*P P 02 23 13.5 +0.7
SJAF **Saint Jean de** 80.55 338 *e*P P 02 23 13.2 +0.4
SJAF **Saint Jean de** 80.55 338 *e*P P 02 23 13.2 +0.4
EPF **Esparros** 80.57 340⇓*i*P P 02 23 12.9 0.0
comp=Z,6μm,1.0s,mb6.7
EPF **Esparros** 80.57 340⇓*i*P P 02 23 12.9 0.0
EPF pmax pmax
comp=Z,3μm,1.0s,mb6.7
EPF **Esparros** 80.57 340⇓*i*P P 02 23 12.9 0.0
comp=Z,3μm,1.0s,mb6.7
EJON **La Jonquera** 80.59 338 P P 02 23 13.4 +0.4
comp=Z,1μm,0.9s,mb6.4
VAM **Vamos** 80.59 320 *e*P P 02 23 13.0 -0.1
LABF **Labassere** 80.61 340 *e*P P 02 23 12.6 -0.5
LABF **Labassere** 80.61 340 *e*P P 02 23 12.6 -0.5
MELF **Melles** 80.64 340 *e*P P 02 23 12.9 -0.3
MELF **Melles** 80.64 340 *e*P P 02 23 12.9 -0.3
ORDF **Ordiarp** 80.65 341 *e*P P 02 23 12.7 -0.6
ORDF **Ordiarp** 80.65 341 *e*P P 02 23 12.7 -0.6
HRFI **Mount Harif** 80.65 309 Pn P 02 23 13.3 -0.3
SALF **Salau** 80.66 339 *e*P P 02 23 13.1 -0.2
SALF **Salau** 80.66 339 *e*P P 02 23 13.1 -0.2
OSSF **Osses** 80.67 341 *e*P P 02 23 12.8 -0.6
OSSF **Osses** 80.67 341 *e*P P 02 23 12.8 -0.6
REYF **Montagne du Re** 80.68 340 *e*P P 02 23 12.8 -0.6
REYF **Montagne du Re** 80.68 340 *e*P P 02 23 12.8 -0.6
SIVA **Sivas** 80.70 319 P P 02 23 12.7 -1.0
SIVA **Sivas** 80.70 319 *e*P P 02 23 13.5 -0.2
SIVA **Sivas** 80.70 319 P P 02 23 12.7 -1.0
KARN **Karanos** 80.70 320 *e*P P 02 23 13.5 -0.2
KARN **Karanos** 80.70 320 P P 02 23 12.4 -1.3
KRMI **Paran Flat** 80.73 309 ⇓Pn P 02 23 13.6 -0.3
EALK **Alkurruntz** 80.75 341 P P 02 23 13.8 0.0
comp=Z,813nm,0.8s,mb6.2
CLLI **Llivia** 80.76 339 P P 02 23 14.5 +0.7
VIEF **Viey** 80.78 340 *e*P P 02 23 14.5 +0.6
VIEF **Viey** 80.78 340 *e*P P 02 23 14.5 +0.6
RESF **Ens** 80.78 340 *e*P P 02 23 14.9 +0.9
RESF **Ens** 80.78 340 *e*P P 02 23 14.9 +0.9
SJPF **Ste Jean** 80.80 341⇓*i*P P 02 23 14.1 0.0
comp=Z,4μm,1.0s,mb6.4
SJPF **Ste Jean** 80.80 341⇓*i*P P 02 23 14.1 0.0
SJPF pmax pmax
comp=Z,2μm,1.0s,mb6.5
SJPF **Ste Jean** 80.80 341⇓*i*P P 02 23 14.1 0.0
comp=Z,2μm,1.0s,mb6.5
ELIZ **Elizondo** 80.81 341 P P 02 23 14.6 +0.5
ELIZ pmax pmax
comp=Z,430nm,0.6s,mb6.1
ELIZ **Elizondo** 80.81 341 P P 02 23 14.6 +0.5
comp=Z,430nm,0.6s,mb6.1
VALF **Valcebollere** 80.82 339 *e*P P 02 23 14.8 +0.6
VALF **Valcebollere** 80.82 339 *e*P P 02 23 14.8 +0.6
LARF **Larrau** 80.83 341 *e*P P 02 23 13.9 -0.3
LARF **Larrau** 80.83 341 *e*P P 02 23 13.9 -0.3
BRAL **Brewton** 80.84 49⇓*i*P P 02 23 13.9 -0.6
comp=Z,13μm,1.0s,mb7.3
BRAL *e*pP pP 02 25 25.5 -2.4

ETSF **Etsaut** 80.88 341⇓*i*P P 02 23 15.2 +0.7
comp=Z,10μm,1.0s,mb6.9
ETSF **Etsaut** 80.88 341⇓*i*P P 02 23 15.2 +0.7
ETSF pmax pmax
comp=Z,5μm,1.0s,mb6.9
ETSF **Etsaut** 80.88 341⇓*i*P P 02 23 15.2 +0.7
comp=Z,5μm,1.0s,mb6.9
DGI **Dorgali Grotta** 80.93 332 P P 02 23 15.3 +0.5
EBIE **Bielsa** 80.94 340 P P 02 23 15.6 +0.8
comp=Z,571nm,0.6s,mb6.2
CEL **Celeste** 80.96 327⇓*e*P P 02 23 12.9 -2.0
comp=Z,1μm,0.8s,mb6.5
CEL **Celeste** 80.96 327 *e*P P 02 23 13.5 -1.5
CNNC **Cliffs of the** 80.96 40⇓*e*P P 02 23 14.2 -0.8
comp=Z,1μm,0.4s,mb6.7
SLNA **Salina** 81.02 328 P P 02 23 14.3 -1.0
SCLL **Scilla** 81.02 327 P P 02 23 13.7 -1.6
CSOR **Sort** 81.03 339 P P 02 23 15.8 +0.5
comp=Z,5μm,1.4s,mb6.7
ELAN **Lanestosa** 81.09 343 P P 02 23 15.4 -0.2
comp=Z,6μm,1.4s,mb6.8
COCO **West Island** 81.16 235 P P 02 23 16.9 +0.7
comp=Z,19μm,1.4s,mb7.3,SNR=22
COCO **West Island** 81.16 235 *e*P P 02 23 16.5 +0.3
COCO pmax pmax
comp=Z,6μm,1.3s,mb6.8
COCO **West Island** 81.16 235 *e*P P 02 23 16.4 +0.3
comp=Z,6μm,1.3s,mb6.8
MTTG **Motta San Giov** 81.25 327 P P 02 23 15.2 -1.3
EARI **Arriondas** 81.32 344 P P 02 23 16.5 -0.2
comp=Z,1μm,1.0s,mb6.3
CJM **Chamela** 81.33 69 *i* P P 02 23 16.4 -0.8
CFON **Fontmartina** 81.34 338 P P 02 23 17.0 +0.1
comp=Z,553nm,0.9s,mb6.0
USI **Ustica** 81.39 329 P P 02 23 16.6 -0.6
COW **Cow Castle Cre** 81.49 43 *e*P P 02 23 16.9 -0.8
ECRI **Cripan** 81.53 342 P P 02 23 18.3 +0.5
EPON **Pontenova** 81.60 345 P P 02 23 17.6 -0.5
SFJM **Santa Fe** 81.63 67 *i* P P 02 23 19.6 +0.9
VSL **Villasalto** 81.76 332⇓*e*P P 02 23 18.9 -0.1
comp=Z,6μm,1.3s,mb6.9
NHSC **New Hope** 81.94 43⇓*i*P P 02 23 19.4 -0.7
comp=Z,8μm,1.0s,mb7.2
ESAC **San Caprasio** 81.99 340 P P 02 23 20.5 +0.3
comp=Z,670nm,0.6s,mb6.3
EPOB **Poblet** 82.03 339 P P 02 23 20.1 -0.3
comp=Z,248nm,0.6s,mb5.9
AGST **Augusta-Monte** 82.09 327 P P 02 23 21.1 +0.4
ERC **Erice** 82.19 329 P P 02 23 21.1 -0.1
SSY **Sortino** 82.23 327 P P 02 23 20.9 -0.5
EMAZ **Mazaricos** 82.23 347 P P 02 23 21.1 -0.2
comp=Z,1μm,1.0s,mb6.3
STS **Santiago** 82.24 346 P P 02 23 21.0 -0.3
STS pmax pmax
comp=Z,362nm,0.5s,mb6.2
STS **Santiago** 82.24 346 P P 02 23 21.0 -0.4
comp=Z,362nm,0.5s,mb6.2
HVZN **Vizzini** 82.32 327 P P 02 23 21.2 -0.7
HAVL **Avola** 82.39 327 P P 02 23 22.0 -0.2
RAFF **Raffo Rosso** 82.39 328 P P 02 23 22.5 +0.3
ERUA **La Rua** 82.52 345 P P 02 23 22.4 -0.3
ERTA **Horta de San J** 82.56 339 P P 02 23 22.4 -0.7
comp=Z,111nm,0.7s,mb5.5
FAVR **Favara** 82.57 328 P P 02 23 23.2 +0.1
ECAL **Calabor** 82.89 345 P P 02 23 23.9 -0.7
comp=Z,191nm,0.5s,mb5.9
EZAM **Zamans** 82.98 346 P P 02 23 24.5 -0.6
PBRG **Braganca** 83.03 345 *e*P P 02 23 24.5 -0.8
PBRG *e*pP pP 02 25 44.3 +4.6
PBRG *e*sP sP 02 26 48.8 +4.4
ETOS **Mallorca** 83.16 337 P P 02 23 25.3 -0.7
comp=Z,181nm,0.5s,mb5.9
ELOB **Lobios** 83.17 346 P P 02 23 25.3 -0.7
comp=Z,762nm,1.1s,mb6.1
ETOR **Torete** 83.17 341 P P 02 23 25.5 -0.6
ETOR pmax pmax
comp=Z,437nm,0.5s,mb6.2
ETOR **Torete** 83.17 341 P P 02 23 25.5 -0.5
comp=Z,437nm,0.5s,mb6.2
MOIG **Morelia** 83.28 66 *i* P P 02 23 27.4 +0.5
EMOS **Mosqueruela** 83.30 340 P P 02 23 26.4 -0.3
comp=Z,453nm,1.1s,mb5.9
PCAB **Cabril** 83.31 346 *e*P P 02 23 25.9 -0.8
WDD **Wield Dalam** 83.58 327⇓*e*P P 02 23 27.6 -0.6
comp=Z,13μm,0.8s,mb7.5
PVRL **Vila Real** 83.69 345 *e*P P 02 23 27.9 -0.7
PVRL *e*pP pP 02 25 42.7 -0.6
MVO **Moncorvo** 83.70 345 *e*P P 02 23 27.7 -0.9
MVO *e*pP pP 02 25 43.0 -0.3
MVO *e*sP sP 02 26 40.6 -7.3
MVO *e*S S 02 33 04.9 +5.8
MVO *i* P 02 37 00.4
MVO **Moncorvo** 83.70 345 P P 02 23 27.8 -0.9
GUD **Guadarrama** 83.73 343 P P 02 23 27.8 -1.0
PTO **Porto** 83.96 346 *e*P P 02 23 28.9 -1.0
TAOE **Nuku Hiva Isla** 83.97 114 *e*P P 02 23 29.4 -0.9
comp=Z,3μm,1.1s,mb6.7
TAOE *e*pP pP 02 25 43.3 -2.0
comp=Z,7μm,2.4s
TAOE **Nuku Hiva Isla** 83.97 114 *e*P P 02 23 29.3 -1.0
comp=Z,1μm,0.9s,mb6.3
ARMA **Armidale** 84.02 181⇓*i*P P 02 23 29.8 -0.3
ARMA *e*pP pP 02 25 45.8 +0.6
ARMA *e*S S 02 32 54.5 -7.6
ARMA *e*PKKP PKKPbc 02 41 25.5 -12
ARMA *e*PKPPKP 02 49 38.5
ARMA **Armidale** 84.02 181⇓*e*P P 02 23 29.9 -0.2
comp=Z,14nm,0.5s
ARMA *e*pP pP 02 25 43.0 -2.2
EIBI **Ibiza** 84.20 338 P P 02 23 30.8 -0.3
comp=Z,3μm,1.1s,mb6.7
PVIS **Viseu** 84.27 345 *e*P P 02 23 30.4 -1.0
PVIS *e*pP pP 02 25 46.4 0.0
PVIS *e*sP sP 02 26 45.7 -5.2
PVIS **Viseu** 84.27 345 *e*P P 02 23 30.5 -0.9
PTVM **Pico Tres Padr** 84.47 64 *i* P P 02 23 33.5 +0.7
MTE **Manteigas** 84.53 345 *e*P P 02 23 31.8 -0.9
MTE *e*pP pP 02 25 43.5 -4.2
MTE *e*sP sP 02 26 43.0 -9.2
MTE *e*S S 02 33 05.0 -2.1
MTE *i* P 02 37 11.1
MTE **Manteigas** 84.53 345⇓*e*P P 02 23 31.5 -1.2
comp=Z,2μm,0.8s,mb6.7
PBVM **Pinon** 84.61 64 *i* P P 02 23 33.5 +0.1
EPLA **Plasencia** 84.62 344 P P 02 23 32.3 -0.9
EPLA pmax pmax
comp=Z,2μm,1.1s,mb6.6
EPLA **Plasencia** 84.62 344 P P 02 23 32.3 -0.9
comp=Z,2μm,1.1s,mb6.6
ESDC **Sonseca Array** 84.64 342 P P 02 23 32.1 -1.1
comp=Z,853nm,0.9s,mb6.4,baz=1.6,slow=3.7,SNR=399
ESDC pP pP 02 25 50.2 +1.9
comp=Z,28nm,0.7s,baz=63,slow=35,SNR=3.2
ESDC PKPPKP 02 49 46.6
comp=Z,26nm,0.9s,baz=214,slow=0.7,SNR=7.9
ESDC **Sonseca Array** 84.64 342 P P 02 23 32.2 -1.1
comp=Z,277nm,0.6s,mb6.1
ESLA **Sonseca Array** 84.64 342⇓*e*P P 02 23 32.2 -1.1
comp=Z,58nm,1.1s
UNM **Universidad Na** 84.65 64 *i* P P 02 23 32.9 -0.7
IIO **Organos** 84.68 64 *i* P P 02 23 34.4 +0.7
PAB **San Pablo** 84.83 342⇓*e*P P 02 23 33.1 -1.1
PAB pmax pmax
comp=Z,1μm,0.8s,mb6.6
PAB **San Pablo** 84.83 342⇓*e*P P 02 23 33.1 -1.1
comp=Z,1μm,0.8s,mb6.6
EBEN **Beniarda** 84.85 339 P P 02 23 34.2 -0.1
comp=Z,484nm,1.2s,mb6.0
CMAH **Djebel Manchou** 84.98 333 P P 02 23 34.3 -0.7
CAEH 'Ain El Ouahch 84.99 333 P P 02 23 34.5 -0.5
PCBR **Castelo Branco** 85.06 345 *e*P P 02 23 33.9 -1.4
PCBR *e*pP pP 02 25 52.8 +2.2
YAIG **Yautepec** 85.09 65 *i* P P 02 23 34.5 -1.3
PMOR **Pomariorio Ree** 85.14 124 *e*P P 02 23 36.0 +0.1
comp=Z,2μm,1.2s,mb6.6
PMOR *e*pP pP 02 25 48.9 -2.5
comp=Z,12μm,2.4s
PPM **Popocatepetl** 85.16 64 *i* P P 02 23 36.9 +0.8
ETOB **Tobarra** 85.17 340 P P 02 23 35.4 -0.4
comp=Z,570nm,1.2s,mb6.1
RAR **Rarotonga** 85.21 136 *e*P P 02 23 35.4 -0.7
RAR pmax pmax
comp=Z,658nm,1.0s
RAR **Rarotonga** 85.21 136 *e*P P 02 23 35.4 -0.7
comp=Z,658nm,1.0s,mb6.2

PLIG Platanillo 85.25 65 *i* P **P 02 23 36.6 +0.1**
KEST Kesra 85.28 331 P **P 02 23 36.2 -0.2**
comp=Z,119nm,0.4s,mb5.8,baz=311,slow=1.0,SNR=821
KEST Kesra 85.28 331⇓ *e*P **P 02 23 35.9 -0.6**
ABSA Djebel Ababsia 85.30 333 P **P 02 23 35.5 -1.0**
EVIA Vianos 85.37 341 P **P 02 23 36.3 -0.5**
EVIA pmax pmax
comp=Z,327nm,0.6s,mb6.1
EVIA Vianos 85.37 341 P **P 02 23 36.3 -0.5**
comp=Z,327nm,0.6s,mb6.1
CKFL Kef-Lekhel 85.38 333 P **P 02 23 36.1 -0.8**
PTOM Tomar 85.42 346 *e*P **P 02 23 35.5 -1.5**
PTOM *e*pP pP 02 25 56.6 +4.1
PMRV Marv??o 85.45 345 *e*P **P 02 23 35.6 -1.6**
PMRV *e*pP pP 02 25 53.7 +1.1
PMRV *e*sP sP 02 26 52.5 -4.5
PMRV *e*S SKSac 02 33 04.1 +2.4
PMRV *i* P sS 02 37 19.7 +2.5
PMRV Marv??o 85.45 345 *e*P **P 02 23 35.7 -1.5**
DFRA Djebel Bou Aff 85.47 334 P **P 02 23 36.9 -0.4**
CASM Ain Smara 85.58 333 P **P 02 23 36.9 -0.9**
AKF Akfadou 85.72 335 P **P 02 23 38.2 -0.3**
LVIG Laguna Verde 85.78 62 *i* P **P 02 23 38.7 -0.3**
CTEI Djebel Teioual 85.78 333 P **P 02 23 37.1 -1.7**
DWPF Disney 85.80 46⇓ *i* P **P 02 23 38.8 -0.2**
comp=Z,3μm,0.9s,mb6.9
ALMR Almeirim 85.90 346 *e*P **P 02 23 37.5 -1.8**
SET Setif 85.92 334 P **P 02 23 39.0 -0.4**
CAIG El Cayaco 85.93 67 *i* P **P 02 23 38.5 -1.2**
ABA Alger-Bouzarea 85.94 336 P **P 02 23 39.0 -0.5**
STKA Stephens Creek 86.02 190 *e*P **P 02 23 38.4 -1.3**
comp=Z,860nm,1.4s,mb6.2
STKA *e*pP pP 02 25 54.5 -1.2
STKA *e*S SKSac 02 33 04.1 -0.6
STKA Stephens Creek 86.02 190 P **P 02 23 38.8 -0.9**
comp=Z,143nm,0.8s,mb5.6,baz=346,slow=6.2,SNR=96
STKA pP pP 02 25 55.6 -0.1
comp=Z,173nm,0.8s,baz=0.5,slow=6.9,SNR=4.0
STKA PKPPKP 02 49 40.6
comp=Z,27nm,1.0s,baz=174,slow=2.2,SNR=4.7
STKA Stephens Creek 86.02 190 *e*P **P 02 23 38.6 -1.1**
comp=Z,519nm,1.0s,mb6.1
STKA *e*pP pP 02 25 54.1 -1.5
PESTR Estremoz 86.03 345 *e*P **P 02 23 38.4 -1.5**
PESTR *e*pP pP 02 25 54.3 -1.3
PESTR *e*sP sP 02 26 57.5 -2.5
PESTR *e*S SKSac 02 33 08.5 +3.2
PESTR *i* P sS 02 37 25.5 +2.3
CKHR Kef el Ahmar 86.06 334 P **P 02 23 40.0 -0.1**
EBAN Banos Encina 86.07 342 P **P 02 23 39.2 -0.9**
EBAN pmax pmax
comp=Z,113nm,0.6s,mb5.7
EBAN Banos Encina 86.07 342 P **P 02 23 39.2 -0.9**
comp=Z,113nm,0.6s,mb5.7
CART Cartagena 86.08 339⇓ *e*P **P 02 23 38.2 -1.9**
comp=Z,2μm,1.2s,mb6.5
CART *e*pP pP 02 25 54.3 -1.6
EHUE Huescar 86.18 341 P **P 02 23 39.9 -0.7**
PMAFR Mafra 86.20 346 *e*P **P 02 23 39.2 -1.5**
PMAFR *e*pP pP 02 25 55.5 -1.0
PMAFR *e*sP sP 02 26 52.9 -7.9
PMAFR *e*S SKSac 02 33 08.3 +2.1
PMAFR *i* P sS 02 37 29.0 +4.2
EADA Adamuz 86.21 342 P **P 02 23 39.8 -1.0**
comp=Z,419nm,1.1s,mb6.0
EQES Quesada 86.29 341 P **P 02 23 40.3 -0.8**
comp=Z,194nm,0.7s,mb5.8
ACX Acapulco 86.30 66 *i* P **P 02 23 40.5 -1.0**
MUKL Al Mukalla 86.36 290⇑ *e*P **P 02 23 41.7 -0.1**
LIS Lisbon 86.41 346 *e*P **P 02 23 40.0 -1.7**
LIS AMS AMS 02 38 13.3
comp=N,62μm,29.9s
EVO Evora 86.43 345⇓ *i* P **P 02 23 40.2 -1.6**
comp=N,2μm,1.0s,mb6.5
EVO *e*MLR MLR
comp=Z,41μm,22.5s
EVO Evora 86.43 345 *e*P **P 02 23 40.4 -1.4**
EVO *e*pP pP 02 25 56.6 -1.1
EVO *e*sP sP 02 26 59.1 -2.9
EVO Evora 86.43 345 *e*P **P 02 23 40.5 -1.3**
EVOP Sao Brissos 86.45 345 *e*P **P 02 23 40.7 -1.2**
EVOP *e*S SKSac 02 33 08.6 +0.8
EVOP AMS AMS 02 48 01.1
comp=Z,40μm,20.6s
EVOP Sao Brissos 86.45 345 *e*P **P 02 23 40.7 -1.2**
EVOP *e*S SKSac 02 33 08.5 +0.7
ECAB El Cabril 86.45 343 P **P 02 23 40.8 -1.0**
comp=Z,830nm,1.1s,mb6.3
EMHD Djebel Mahouad 86.53 336 P **P 02 23 41.7 -0.6**
PPT Papeete 86.53 126 *e*P **P 02 23 42.8 +0.4**
comp=Z,867nm,1.2s,mb6.2
PPT *e*pP pP 02 25 56.6 -2.0
comp=Z,2μm,2.1s
PPT Papeete 86.53 126 *e*P'P'df 02 49 45.6
comp=Z,683nm,2.0s
PPT Papeete 86.53 126 P **P 02 23 41.5 -0.9**
comp=Z,342nm,1.0s,mb5.9,baz=304,slow=0.5,SNR=12
PPT Papeete 86.53 126 *e*P **P 02 23 42.8 +0.4**
PPT *e**PP pP 02 25 56.6 -2.0
PPT pmax pmax
comp=Z,867nm,1.2s
PPT Papeete 86.53 126 *e*P **P 02 23 42.8 +0.4**
comp=Z,867nm,1.2s,mb6.3
PPT *e*pP pP 02 25 56.6 -2.0
PPT *e*P'P'df 02 49 45.6
PAE Paea 86.61 126 *e*P **P 02 23 43.0 +0.2**
comp=Z,485nm,1.3s,mb6.0
PAE *e*pP pP 02 25 57.1 -1.9
comp=Z,552nm,1.8s
PAE Paea 86.61 126 *e*P **P 02 23 43.0 +0.2**
PAE *e**PP pP 02 25 57.1 -1.9
PAE pmax pmax
comp=Z,485nm,1.3s,mb6.0
PBAR Barrancos 86.62 344 *e*P **P 02 23 41.3 -1.4**
PBAR *e*pP pP 02 25 57.5 -1.2
PBAR *e*sP sP 02 27 00.8 -2.2
PBAR *e*S SKSac 02 33 11.4 +2.6
PBAR *i* P sS 02 37 33.3 +4.1
TIAR Tiarei 86.63 126 *e*P **P 02 23 43.2 +0.3**
comp=Z,780nm,0.8s,mb6.4
TIAR *e*pP pP 02 25 57.7 -1.4
comp=Z,433nm,0.9s
ELUQ Luque 86.75 342 P **P 02 23 42.7 -0.6**
EBNR Beni Rached 86.78 337 P **P 02 23 42.8 -0.6**
ECOG Cogollos-Vega 86.89 341 P **P 02 23 42.6 -1.4**
ECOG pmax pmax
comp=Z,263nm,0.8s,mb5.9
ECOG Cogollos-Vega 86.89 341 P **P 02 23 42.6 -1.3**
comp=Z,263nm,0.8s,mb5.9
PBEJ Beja 86.90 345 *e*P **P 02 23 42.7 -1.3**
PBEJ *e*pP pP 02 25 58.4 -1.7
ENIJ Nijar 86.92 340 P **P 02 23 42.1 -2.0**
ENIJ pmax pmax
comp=Z,123nm,0.5s,mb5.8
ENIJ Nijar 86.92 340 P **P 02 23 42.1 -2.0**
comp=Z,122nm,0.5s,mb5.8
ECHA Ech Chlef 86.95 337 P **P 02 23 43.1 -1.1**
EMIN Mina Concepcio 86.96 344 P **P 02 23 43.1 -1.2**
comp=Z,1μm,1.2s,mb6.4
FORT Forrest 87.07 201⇓ *i* P **P 02 23 43.2 -1.4**
comp=Z,3μm,0.8s,mb7.0
FORT *e*pP pP 02 26 00.5 -0.6
FORT *e*S SKSac 02 33 08.9 -2.2
FORT *e*PKKP PKKPbc 02 41 31.5 +0.9
FORT *e*PKPPKP 02 49 29.2
FORT *e* 02 52 04.9
FORT Forrest 87.07 201⇓ *e*P **P 02 23 43.2 -1.4**
comp=Z,3μm,0.8s,mb7.0
FORT *e*pP pP 02 26 00.2 -0.9
ELOJ Sierra Loja 87.13 342 P **P 02 23 44.0 -1.1**
ELOJ pmax pmax
comp=Z,119nm,0.6s,mb5.7
ELOJ Sierra Loja 87.13 342 P **P 02 23 44.0 -1.0**
comp=Z,119nm,0.6s,mb5.7
EBER Berja 87.13 341 P **P 02 23 43.2 -1.9**
comp=Z,422nm,1.1s,mb6.0
MESJ Messejana 87.14 345 *e*P **P 02 23 43.9 -1.2**
MESJ *e*S SKSac 02 33 12.7 +0.8
MESJ AMS AMS 02 38 21.4
comp=N,64μm,12.9s
MESJ Messejana 87.14 345 *e*P **P 02 23 43.9 -1.2**
MESJ *e*S SKSac 02 33 12.7 +0.8
MESJ Messejana 87.14 345 *e*P **P 02 23 43.8 -1.3**
MESJ *e*S SKSac 02 33 12.7 +0.8

ERON Agron 87.19 341 P **P 02 23 44.2 -1.1**
EANR 'Ain N'Sour 87.20 337 P **P 02 23 44.5 -0.9**
OKGL Djebel Kef Gue 87.22 338 P **P 02 23 44.0 -1.5**
PCVE Castro Verde 87.31 345 *e*P **P 02 23 44.8 -1.1**
PCVE *e*pP pP 02 26 00.8 -1.4
PCVE *e*sP sP 02 27 03.3 -3.1
PCVE *e*S SKSac 02 33 14.5 +1.5
PCVE *i* P sS 02 37 39.5 +3.4
EGRO El Granado 87.32 344 P **P 02 23 44.7 -1.3**
comp=N,541nm,1.1s,mb6.1
EGUA Guajares 87.32 341 P **P 02 23 44.1 -1.9**
PVAQ Vaqueiros 87.48 345 *e*P **P 02 23 45.5 -1.2**
PVAQ *e*pP pP 02 26 03.6 +0.5
PVAQ *e*sP sP 02 27 03.8 -3.5
PVAQ *e*S SKSac 02 33 16.1 +2.1
PVAQ *i* P sS 02 37 39.2 +1.3
PTEO Sao Teotonio 87.50 345 *e*P **P 02 23 45.4 -1.4**
PTEO *e*pP pP 02 26 03.5 +0.3
MEH Mehetia 87.52 125 *e*P **P 02 23 47.5 +0.5**
comp=N,4μm,1.2s,mb6.9
MEH *e*pP pP 02 26 02.1 -1.5
comp=N,6μm,2.3s
PNIG Pinotepa 87.63 65 *i* P **P 02 23 44.5 -3.2**
PBDV Barranco-do-Ve 87.68 345 *e*P **P 02 23 46.8 -0.8**
PBDV *e*pP pP 02 26 03.4 -0.7
PBDV *e*sP sP 02 27 05.0 -3.2
PBDV *e*S SKSac 02 33 18.7 +3.6
PBDV *i* P sS 02 37 42.2 +2.4
ETRT Tiaret 87.69 337 P **P 02 23 46.6 -1.1**
ESPR Espera 87.70 343 P **P 02 23 46.9 -0.8**
comp=N,584nm,0.9s,mb6.2
ROSA Rosais 87.70 1 *e*P **P 02 23 47.5 -0.2**
ROSA *e*pP pP 02 26 06.5 +2.3
OJBR Djebel Berber 87.72 338 P **P 02 23 47.0 -0.9**
MORF Marmelete 87.72 345 *e*P **P 02 23 46.7 -1.1**
MORF *e*pP pP 02 26 03.1 -1.2
MORF *e*sP sP 02 27 05.5 -2.9
MORF *e*S SKSac 02 33 20.6 +5.2
MORF *i* P sS 02 37 41.8 +1.5
MORF Marmelete 87.72 345 *e*P **P 02 23 46.7 -1.1**
MORF *e*S SKSac 02 33 15.3 -0.1
MORF Marmelete 87.72 345 *e*P **P 02 23 47.1 -0.8**
USTO Oran 87.77 339 P **P 02 23 52.3 +3.9**
PCED Cedros 87.79 1 *e*P **P 02 23 48.4 +0.3**
comp=N,1μm,1.0s,mb6.5
EMIJ Mijas 87.81 342 P **P 02 23 46.2 -2.0**
comp=N,323nm,0.8s,mb6.0
OXX Oaxaca 87.81 64 *i* P **P 02 23 48.9 +0.4**
VHO Vista Hermosa 87.81 64 *i* P **P 02 23 47.7 -0.9**
CALA Caldeira 87.83 1 *e*P **P 02 23 48.9 +0.6**
CALA *e*pP pP 02 26 05.9 +1.1
HOR Horta 87.89 1 *e*P **P 02 23 50.3 +1.7**
PFVI Vila Bisbo 87.92 345 *e*P **P 02 23 47.6 -1.2**
PFVI *e*pP pP 02 26 05.9 +0.6
PFVI *e*sP sP 02 27 02.0 -7.4
PFVI *e*S SKSac 02 33 19.3 +2.7
PFVI *i* P sS 02 37 42.2 0.0
PFVI Vila Bisbo 87.92 345 P **P 02 23 47.6 -1.2**
PCAN Candelaria 87.95 1 *e*P **P 02 23 48.8 -0.1**
comp=N,9μm,1.7s,mb7.2
PCAN *e*pP pP 02 26 05.9 +0.4
PID Ribeirinha 87.98 1 *e*P **P 02 23 49.2 +0.2**
PID *e*pP pP 02 26 09.2 +3.6
EJIF Jimena Fronter 88.04 343 P **P 02 23 48.4 -0.9**
EALB Alboran 88.08 341 P **P 02 23 47.0 -2.5**
comp=N,337nm,1.0s,mb5.9
BBSR BB Station 88.10 31⇓ *i* P **P 02 23 49.2 -0.4**
comp=N,3μm,0.8s,mb6.9
SFS San Fernando 88.16 343⇓ *e*P **P 02 23 49.2 -0.7**
SFS pmax pmax
comp=Z,4μm,1.1s,mb6.9
SFS San Fernando 88.16 343⇓ *e*P **P 02 23 49.2 -0.6**
comp=Z,4μm,1.1s,mb6.9
TUIG Tuzandepetl 88.22 61 *i* P **P 02 23 50.1 -0.4**
SANA Sa'a 88.27 294⇓ *e*P **P 02 23 51.0 +0.3**
HAJJ Hajjah 88.34 295⇓ *e*P **P 02 23 51.2 +0.2**
HAJJ AMb AMB 02 23 52.8
comp=Z,6μm,1.4s,mb7.0
ODZI Dzioula 88.34 339 P **P 02 23 55.0 +4.2**
PSET Sete Cidades 88.59 359 *e*P **P 02 23 51.1 -0.8**
comp=Z,860nm,0.9s,mb6.5
BART Pico Bartolome 88.63 358 *e*P **P 02 23 51.2 -0.9**
comp=Z,3μm,1.6s,mb6.7
BART *e*pP pP 02 26 08.6 -0.2
BART *e*LR LR 02 52 04.7
CMLA Cha da Macela 88.65 359 *e*P **P 02 23 52.2 +0.1**
comp=Z,1μm,1.3s,mb6.5
CMLA *e*pP pP 02 26 10.3 +1.4
CMLA Cha da Macela 88.65 359 P **P 02 23 52.6 +0.5**
comp=Z,16μm,1.0s,mb7.7,SNR=20
CMLA Cha da Macela 88.65 359 *e*P **P 02 23 51.5 -0.6**
CMLA pmax pmax
comp=Z,3μm,0.9s,mb7.0
CMLA Cha da Macela 88.65 359 *e*P **P 02 23 51.5 -0.6**
comp=Z,3μm,0.9s,mb7.0
BDHA Al Bayda' 88.69 292⇓ *e*P **P 02 23 52.9 +0.2**
CMIG Matias Romero 88.77 62 *i* P **P 02 23 52.1 -0.9**
DHBB Dhamar BB 88.84 293⇓ *e*P **P 02 23 53.6 +0.3**
DHBB AMb AMB 02 23 55.7
comp=Z,3μm,1.5s,mb6.7
CNB Canberra Magne 88.95 183⇓ *i* P **P 02 23 52.7 -0.5**
CNB *e*pP pP 02 26 09.2 -1.2
CNB *e*S SKSac 02 33 21.9 +0.1
CNB *e*PKKP PKKPbc 02 41 28.0 +1.8
CNB *e*PKPPKP 02 49 29.8
CAN Canberra 88.96 183⇓ *e*P **P 02 23 53.1 -0.2**
CAN *e**PP pP 02 26 09.9 -0.5
CAN pmax pmax
comp=Z,937nm,1.0s,mb6.5
CAN Canberra 88.96 183⇓ *e*P **P 02 23 53.1 -0.2**
comp=Z,937nm,1.0s,mb6.5
CAN *e*pP pP 02 26 09.9 -0.5
HUIG Huatulco 89.22 64 *i* P **P 02 23 53.5 -1.6**
PSMN Pico do Norte, 89.40 358 *e*P **P 02 23 56.8 +1.2**
TEIG Tepich 89.47 55⇓ *e*P **P 02 23 55.2 -1.0**
comp=Z,655nm,0.9s,mb6.4
UDYN Al 'Udayn 89.56 293⇓ *e*P **P 02 23 56.8 0.0**
SOR Soroa 89.74 50 *e* **P 02 23 56.7 -0.7**
SCX San Cristobal 90.23 61 *i* P **P 02 23 59.7 -0.1**
DGAR Diego Garcia 90.33 258 P **P 02 23 58.9 -1.3**
comp=Z,7μm,1.1s,mb7.4,SNR=6.7
DGAR Diego Garcia 90.33 258 *d* *i* P **P 02 23 57.7 -2.5**
DGAR Diego Garcia 90.33 258 *e*P **P 02 23 58.2 -2.0**
comp=Z,5μm,1.6s,mb7.1
DGAR *e*pP pP 02 26 16.5 -1.1
KLBR Kellerberrin 90.45 209 *e*P **P 02 23 57.5 -2.8**
comp=Z,1μm,1.0s,mb6.6
KLBR *e*pP pP 02 26 16.7 -1.1
KLBR *e*S SKSac 02 33 30.6 0.0
KLBR *e*PKKP PKKPbc 02 41 18.0 -4.3
OUZ Omahuta 90.60 163 *e*P **P 02 24 01.3 +0.4**
comp=Z,300nm,1.2s,mb6.0
OUZ *e*pP pP 02 26 17.6 -0.8
TOO Toolangi 91.37 186⇓ *i* P **P 02 24 03.8 -0.6**
TOO *e*pP pP 02 26 20.6 -1.4
TOO *e*S SKSac 02 33 36.5 +1.1
TOO *e*PKKP PKKPbc 02 41 22.7 +2.5
TOO *e*PKPPKP 02 49 20.2
TOO *e* 02 52 01.0
NWAO Narrogin (SRO) 91.85 209 *e*P **P 02 24 04.8 -1.9**
NWAO pmax pmax
comp=Z,551nm,1.0s
NWAO Narrogin (SRO) 91.85 209 *e*P **P 02 24 04.8 -1.9**
comp=Z,551nm,1.0s,mb6.4
ATD Arta Tunnel 92.19 293 SP SP 02 35 37.6 +3.2
comp=Z,60nm,1.1s,baz=43,slow=12,SNR=5.4
ATD PKPPKP 02 49 30.9
comp=Z,3.0nm,0.4s,baz=294,slow=22,SNR=3.9
APG El Apazote 92.80 60 PKPPKP 02 49 31.3
comp=Z,26nm,1.1s,baz=190,slow=3.7,SNR=6.3
PMPS Porto Santo 92.85 351 *e*P **P 02 24 10.2 -1.4**
PMPS *e*pP pP 02 26 28.8 -0.3
PMPS Porto Santo 92.85 351 *e*PP PP 02 28 06.3 +1.5
PMAR Madeira 93.24 351 *e*P **P 02 24 12.4 -0.9**
PMAR *e*pP pP 02 26 32.1 +1.2
PMAR Madeira 93.24 351 *e*PP PP 02 28 11.2 +3.5
URZ Urewera 94.19 161 S SKSac 02 33 50.5 -0.1
comp=Z,36nm,1.0s,baz=72,slow=22,SNR=6.3
URZ SP SP 02 36 00.3 +4.2
comp=Z,9.3nm,0.8s,baz=182,slow=15,SNR=0.6
URZ PKKP PKKPbc 02 41 10.1 -2.9
comp=Z,21nm,0.8s,baz=295,slow=2.5,SNR=3.0
URZ PKPPKP 02 49 27.8
comp=Z,39nm,1.1s,baz=269,slow=2.9,SNR=3.5
URZ Urewera 94.19 161 *e*P **P 02 24 16.1 -1.1**
comp=Z,53nm,0.7s,mb5.7
URZ *e*pP pP 02 26 33.1 -2.0
URZ Urewera 94.19 161 *e*PN **P 02 24 21.4 +4.2**
DESE Dese 94.26 295 *e*P **P 02 24 19.2 +1.0**
MWZ Matawai 94.34 161 P **P 02 24 21.5 +3.6**
MWZ Matawai 94.34 161 PN **P 02 24 21.5 +3.6**
LMGC Las Mercedes 94.77 46 *e* **P 02 24 20.3 -0.2**
BKZ Black Stump Fm 94.95 162 P **P 02 24 24.2 +3.5**
BKZ Black Stump Fm 94.95 162 PN **P 02 24 24.2 +3.6**
TGUH Tegucigalpa,Un 95.22 56⇓ *e*P **P 02 24 22.1 -0.5**
comp=Z,694nm,1.7s,mb6.5
TGUH *e*pP pP 02 26 40.2 -0.2
RCC Rio Carpintero 95.38 45 *e* **P 02 24 21.4 -1.9**
GTBY Guantanamo Bay 95.69 45 *e*P **P 02 24 24.2 -0.4**
comp=Z,127nm,0.6s,mb6.2
NEJ Negril 95.80 48⇑ *i* P **P 02 24 28.9 +3.7**
NEJ Negril 95.80 48⇑ *i* P **P 02 24 28.9 +3.7**
NEJ *i* S pP 02 26 44.3 +1.3
MASC Masc 95.83 44 *e* **P 02 24 27.8 +2.6**
GRTK Grand Turk 95.85 41 *e*P **P 02 24 24.8 -0.6**
comp=Z,836nm,1.2s,mb6.7
BBJ Bamboo Saint A 96.14 47⇑ *e*P **P 02 24 25.2 -1.5**
BBJ Bamboo Saint A 96.14 47⇑ *i* P **P 02 24 26.4 -0.3**
MTDJ Mount Denham 96.17 47 *e*P **P 02 24 25.8 -1.0**
comp=Z,337nm,0.8s,mb6.5
MRZ Mangatainoka R 96.24 163 *e*PN PKiKP 02 28 59.0 -0.8
MCJ Malvern 96.37 48⇑ *e*P **P 02 24 28.6 +0.9**
MCJ Malvern 96.37 48 *i* P **P 02 24 31.5 +3.8**
EFAM Famara 96.44 348 P **P 02 24 28.6 +0.7**
STH Stony Hill 96.61 47⇑ *e*P **P 02 24 28.3 -0.5**
STH Stony Hill 96.61 47 *i* P **P 02 24 29.4 +0.6**
STH *i* S pP 02 26 47.1 +0.4
GWJ Greenwich 96.65 47⇑ *e*P **P 02 24 27.7 -1.3**
GWJ Greenwich 96.65 47⇑ *i* P **P 02 24 28.7 -0.2**
HOJ Hope 96.70 47⇑ *e*P **P 02 24 28.2 -1.0**
HOJ Hope 96.70 47 *i* P **P 02 24 28.2 -1.0**
CMJ Castle Mountai 96.75 46⇑ *e*P **P 02 24 31.9 +2.5**
CMJ Castle Mountai 96.75 46⇑ *i* P **P 02 24 33.0 +3.6**
PCJ Portland Cotta 96.76 47⇑ *e*P **P 02 24 24.0 -5.4**
PCJ Portland Cotta 96.76 47 *i* P **P 02 24 33.0 +3.5**
CFTV Fuerteventura 97.21 348 P Pdif 02 24 29.8 -1.5
EBAJ Bajamar 97.33 350 P Pdif 02 24 31.7 -0.1
EHIG Higuera 97.44 352 P Pdif 02 24 35.0 +2.6
CCAN Las Canadas 97.67 351 P Pdif 02 24 33.3 -0.1
EOSO Osorio 97.71 350 P Pdif 02 24 35.3 +1.7
EGOM La Gomera 97.79 351 P Pdif 02 24 35.5 +1.5
SDDR Presa de Saban 98.08 42 *e*P Pdif 02 24 35.4 +0.2
comp=Z,20μm,0.4s
MSEY Mahe Island 98.11 273 *e*P Pdif 02 24 36.5 +1.2
MSEY pmax pmax
comp=Z,444nm,1.1s,mb6.6
MSEY Mahe Island 98.11 273 *e*P Pdif 02 24 36.5 +1.2
comp=Z,444nm,1.1s
CHIE El Hierro 98.28 352 P Pdif 02 24 36.4 +0.2
RKT Rikitea 98.52 118 *e*Pdif Pdif 02 24 37.1 -0.1
RPZ Rata Peaks 98.53 167 S SKSac 02 34 13.9 +1.4
comp=Z,256nm,1.4s,baz=156,slow=22,SNR=5.7
RPZ SP SP 02 36 45.7 +3.2
comp=Z,15nm,0.8s,baz=221,slow=24,SNR=1.4
TAM Tamanrasset 98.55 330⇓ *e*P Pdif 02 24 36.5 -0.8
comp=Z,17nm,1.0s
JTS JuntasAbangare 99.60 58 Pdiff Pdif 02 24 41.0 -1.0
JTS JuntasAbangare 99.60 58 *de*P Pdif 02 24 43.0 +1.0
JTS JuntasAbangare 99.60 58 *e*Pdif Pdif 02 24 41.9 -0.1
comp=Z,70nm,0.8s
AGPR Aguadilla, PR 100.14 38 *e*Pdif Pdif 02 24 44.4 0.0
comp=Z,751nm,1.3s
CRPR Cabo Rojo, PR 100.56 38 *e*Pdif Pdif 02 24 46.9 +0.6
comp=Z,114nm,0.9s
CBYP Canovanas 100.77 37 *e*Pdif Pdif 02 24 50.0 +2.8
comp=Z,133nm,0.9s
CBYP *e*PP PP 02 29 01.3 -3.5
SJG San Juan 100.81 38 Pdiff Pdif 02 24 46.3 -1.1
SJG PP PP 02 29 06.1 +1.0
comp=Z,182nm,0.7s,baz=27,slow=4.8,SNR=7.4
SJG San Juan 100.81 38 P Pdif 02 24 46.3 -1.1
SJG 02 29 06.1
SJG pmax pmax
comp=Z,182nm,0.7s
SJG San Juan 100.81 38 *e*Pdif Pdif 02 24 47.1 -0.3
comp=Z,118nm,0.9s
ICM Isla Caja Muer 100.88 38 *e*Pdif Pdif 02 24 47.6 -0.1
MTP Monte Pirata 101.04 37 *e*Pdif Pdif 02 24 48.8 +0.4
comp=Z,326nm,0.8s
MTP *e*pP pP 02 27 07.9 +1.0
BCIP Isla Barro Col 103.06 54 *e*Pdif Pdif 02 24 56.6 -0.7
comp=Z,61nm,0.7s
BCIP *e*PP PP 02 29 23.8 +1.7
LZG Guadaloupe-1 104.16 34 *e*P Pdif 02 25 04.5 +2.2
SCG Saint Claude 104.29 34 *e*P Pdif 02 25 06.3 +3.4
PHG Guadaloupe-2 104.32 34 *e*P Pdif 02 25 05.2 +2.2
HMG Houelmont 104.33 34 *e*P Pdif 02 25 05.8 +2.8
TBG Guadaloupe-3 104.47 34 *e*P Pdif 02 25 07.1 +3.4
FDF Fort de France 105.68 34 *e*P Pdif 02 25 10.8 +1.8
FDF pmax pmax
comp=Z,121nm,0.8s
FDF Fort de France 105.68 34 *e*Pdif Pdif 02 25 10.8 +1.8
comp=Z,121nm,0.8s
FDF *e*PKP PKiKP 02 29 23.1 +5.3
KMBO Kilima Mbogo 105.74 290 Pdiff Pdif 02 25 09.2 -0.1
comp=Z,6.0nm,0.9s,baz=180,slow=24,SNR=14
KMBO Kilima Mbogo 105.74 290 P Pdif 02 25 09.2 -0.1
KMBO pmax pmax
comp=Z,6.0nm,0.9s
KMBO Kilima Mbogo 105.74 290 *e*Pdif Pdif 02 25 09.1 -0.2
comp=Z,65nm,1.1s
SDV Santo Domingo 107.46 45 *e*Pdif Pdif 02 25 17.5 +0.6
comp=Z,95nm,0.9s
SDV *e*PKP PKiKP 02 29 20.6 -0.5
GRW Mount Saint Ca 107.91 36 *e* PP 02 29 57.4 +0.7
GRGR Grenville 107.93 36 *e*Pdif Pdif 02 25 19.4 +0.4
comp=Z,310nm,0.8s
GRGR *e*PKP PKiKP 02 29 19.9 -2.1
PCRV Puerto La Cruz 108.67 39 Pdiff Pdif 02 25 21.3 -1.0
comp=Z,2.5nm,0.4s,baz=343,slow=13,SNR=1.5
PCRV PP PP 02 30 00.5 -1.7
comp=Z,107nm,0.7s,baz=46,slow=2.0,SNR=5.0
PCRV PKKP PKKPbc 02 40 41.4 +10
comp=Z,36nm,0.5s,baz=269,slow=3.2,SNR=12
TOSP Speyside 109.09 35 *e*P PKiKP 02 29 31.2 +7.0
TOSP *e*S PP 02 30 01.1 -4.0
TPR Prospect 109.11 35 *e*P PP 02 30 02.5 -2.8
TPR Prospect 109.11 35 *e* PP 02 30 02.5 -2.8
TRN Trinidad (W) 109.40 36 *e*P PP 02 30 00.9 -6.5
TRN *e*P PP 02 30 08.3 +1.0
TRN Trinidad (W) 109.40 36 *e* PP 02 30 00.9 -6.5
TRN Trinidad (W) 109.40 36 *e*P PP 02 30 08.3 +1.0
ROSC El Rosal 109.42 51 Pdiff Pdif 02 25 25.3 -0.3
comp=Z,2.5nm,0.4s,baz=76,slow=18,SNR=3.8
ROSC PP PP 02 30 08.1 +0.3
comp=Z,140nm,0.8s,baz=64,slow=1.0,SNR=6.7
ROSC El Rosal 109.42 51⇓ *e*Pdif Pdif 02 25 25.7 0.0
TBH Brigand Hill 109.67 36 *e* PP 02 30 00.5 -8.8
TPP Pointe-a-Pierr 109.69 36 *e*P PP 02 30 06.5 -2.9
TPP Pointe-a-Pierr 109.69 36 *e* PP 02 30 06.5 -2.9
RER Riviere de l'E 110.97 263 *e*PKP PKiKP 02 29 27.0 -0.5
OTAV Otavalo 111.48 57⇓ *e*Pdif Pdif 02 25 34.9 +0.1
OTAV *e*PKP PKiKP 02 29 28.5 -0.2
OPO Ambohidratompo 114.00 271 PKKP PKKPbc 02 40 31.9 +18
comp=Z,15nm,0.8s,baz=244,slow=5.7,SNR=7.0
ABPO Ambohimpanom 114.33 271 *e*P Pdif 02 25 48.1 +0.6
ABPO *e* 02 29 33.6
DBIC Dimbokro 116.76 335 PKP PKPdf 02 29 38.0 -0.9
comp=Z,132nm,0.4s,baz=358,slow=1.6,SNR=38
DBIC PP PP 02 30 54.3 -4.2
comp=Z,252nm,0.8s,baz=3.6,slow=6.5,SNR=6.9
DBIC Dimbokro 116.76 335 *e*PKPdf PKPdf 02 29 38.1 -0.8
DBIC *e*PP PP 02 30 55.5 -3.0
TIC Toumodi 116.83 335 *e*P Pdif 02 26 02.3 +3.7
comp=Z,52nm,0.8s
KIC Kosan Boka 117.03 335 *e*P Pdif 02 26 04.2 +4.7
comp=Z,51nm,0.7s
LIC Lamto 117.23 335 *e*PKIKP PKPdf 02 29 38.7 -1.1
comp=Z,449nm,0.4s
LIC *e*MLR MLR
comp=Z,35μm,22.0s
LIC Lamto 117.23 335 *e*P Pdif 02 26 05.2 +4.8
comp=Z,202nm,1.4s
LIC Lamto 117.23 335 *e*P Pdif 02 26 05.2 +4.8
LIC *e*PKPdf PKPdf 02 29 38.7 -1.1
LIC LR LR
comp=Z,18μm,22.0s

ATAH Atahualpa 117.82 61 PKP PKPdf 02 29 41.3 +0.4
comp=Z,261nm,0.9s,baz=82,slow=8.2,SNR=20
ATAH PP PP 02 31 06.4 +0.1
comp=Z,48nm,0.8s,baz=335,slow=3.7,SNR=1.3
DRV Dumont d'Urvil 120.68 186 Pdif Pdif 02 26 24.0 +8.3
DRV Dumont d'Urvil 120.68 186 PP PP 02 31 42.0 +16
DRV SP SP 02 40 39.0 +26
DRV SS SS 02 47 27.0 +19
LSZ Lusaka 122.40 290 PKhKP PKPpre 02 29 39.5
comp=Z,4.9nm,0.5s,baz=71,slow=2.4,SNR=5.7
LSZ PKP PKPdf 02 29 48.6 -0.9
comp=Z,123nm,0.7s,baz=39,slow=2.4,SNR=12
LSZ PP PP 02 31 41.0 +3.8
comp=Z,202nm,1.0s,baz=23,slow=4.4,SNR=3.4
LSZ Lusaka 122.40 290 PKP PKPpre 02 29 39.5
LSZ *e*PKPdf PKPdf 02 29 48.9 -0.7
LSZ *e*PKKP PKKPbc 02 39 47.1 +1.9
NNA Nana 122.72 63 PKhKP PKPpre 02 29 38.6
comp=Z,16nm,0.8s,baz=120,slow=3.0,SNR=4.1
NNA PKP PKPdf 02 29 49.0 -1.2
comp=Z,79nm,0.4s,baz=321,slow=4.3,SNR=11
NNA PP PP 02 31 39.7 +0.5
comp=Z,43nm,0.8s,baz=28,slow=12,SNR=1.2
NNA pPKP pPKPdf 02 32 19.2 +1.9
comp=Z,78nm,0.7s,baz=280,slow=2.7,SNR=4.0
NNA Nana 122.72 63 PKP PKPpre 02 29 38.6
NNA *e*PKPdf PKPdf 02 29 49.2 -1.0
NNA *i* PKP PKPdf 02 29 49.8 -0.4
NNA *e*PKKPab PKKPab 02 39 47.9 +0.5
PAF Port-aux-Franc 124.11 232 *e*PKIKP PKPdf 02 29 51.9 +0.1
CASY Casey 124.11 199 *e*PKP PKPdf 02 29 50.2 -1.0
CASY *e*PP PP 02 31 58.8 +10
CASY *e*pPKP pPKPdf 02 32 16.8 -1.6
CASY Casey 124.11 199 *e*PKPdf PKPdf 02 29 50.6 -0.7
MIR Mirnyy 128.34 206 *e*P Pdif 02 26 58.0 +8.2
MIR *i* 02 29 58.0
MIR *i* 02 32 20.0
MIR *e*PPP 02 35 10.0
MIR pmax pmax
comp=Z,1μm,10.0s
LPAZ La Paz 130.79 56 PKhKP PKPpre 02 29 52.7
comp=Z,21nm,0.8s,baz=348,slow=5.1,SNR=13
LPAZ PKP PKPdf 02 30 05.9 +0.4
comp=Z,220nm,0.9s,baz=23,slow=8.7,SNR=34
LPAZ pPKP pPKPdf 02 32 32.2 -0.4
comp=Z,212nm,0.8s,baz=13,slow=19,SNR=5.1
LPAZ La Paz 130.79 56 PKP PKPpre 02 29 52.7
LPAZ PKP PKPdf 02 30 05.9 +0.4
LPAZ pPKP pPKPdf 02 32 32.2 -0.4
TSUM Tsumeb 131.35 298 PKP PKPdf 02 30 06.2 -0.3
comp=Z,78nm,0.6s
TSUM pPKP pPKPdf 02 32 33.6 -0.1
comp=Z,684nm,1.2s,baz=360,slow=4.2,SNR=5.6
TSUM Tsumeb 131.35 298 *e*PKPpre PKPpre 02 29 51.0
TSUM PKP PKPdf 02 30 06.2 -0.3
TSUM *e*PKPdf PKPdf 02 30 06.3 -0.2
TSUM pPKP pPKPdf 02 32 33.5 -0.1
TSUM *e* 02 32 34.7
RCBR Riachuelo 131.50 12 *e*PKPdf PKPdf 02 30 06.0 -1.0
RCBR *e* 02 32 34.8
LBTB Lobatse 131.60 285 PKhKP PKPpre 02 29 46.1
comp=Z,10nm,0.5s,baz=70,slow=0.5,SNR=17
LBTB PKP PKPdf 02 30 06.4 -0.5
comp=Z,289nm,0.8s,baz=55,slow=2.4,SNR=20
LBTB pPKP pPKPdf 02 32 33.1 -0.9
comp=Z,447nm,0.7s,baz=62,slow=3.5,SNR=7.3
LBTB Lobatse 131.60 285 *e*PKHKP PKPpre 02 29 47.1
LBTB *e* 02 30 06.2
LBTB *e* 02 32 34.4
LBTB Lobatse 131.60 285 *e*PKPpre PKPpre 02 29 47.1
LBTB *e*PKPdf PKPdf 02 30 06.2 -0.6
LBTB PKP PKPdf 02 30 06.4 -0.5
LBTB pPKP pPKPdf 02 32 33.1 -0.9
LBTB *e* 02 32 34.4
SBA Scott Base 131.81 176 *e*PKHKP PKPpre 02 29 53.4
SBA *e* 02 30 03.5
SBA Scott Base 131.81 176 *e*PKPpre PKPpre 02 29 53.4
SBA *e*PKPdf PKPdf 02 30 03.5 -2.1
SBA *e* 02 32 32.4
BOSA Boshof 134.54 282 PKhKP PKPpre 02 29 58.8
comp=Z,17nm,0.4s,baz=25,slow=2.6,SNR=18
BOSA PKP PKPdf 02 30 11.6 -0.6
comp=Z,190nm,0.5s,baz=71,slow=2.7,SNR=17
BOSA pPKP pPKPdf 02 32 38.7 -0.7
comp=Z,232nm,1.1s,baz=40,slow=1.2,SNR=3.1
BOSA Boshof 134.54 282 *e*PKHKP PKPpre 02 29 59.8
BOSA 02 30 11.6
BOSA Boshof 134.54 282 *e*PKPpre PKPpre 02 29 59.8
BOSA *e*PKPdf PKPdf 02 30 11.3 -0.9
BOSA PKP PKPdf 02 30 11.6 -0.6
BOSA pPKP pPKPdf 02 32 38.7 -0.7
BOSA *e* 02 32 48.0
CEN1 Los Morros 135.66 64 *e*P PKPpre 02 30 01.0
CEN1 *i* 02 32 48.2
ANCH Antofagasta 135.78 64⇓ *e*P PKPpre 02 30 03.4
ANCH Antofagasta 135.78 64⇓ *e*P PKPpre 02 30 03.4
ANCH *i* 02 32 47.8
MAW Mawson 138.16 215 *e*PKP PKPpre 02 30 09.4
comp=Z,801nm,1.0s
MAW *e*pPKP pPKPdf 02 32 48.0 +3.0
MAW Mawson 138.16 215 PKhKP PKPpre 02 30 08.5
comp=Z,71nm,0.8s,baz=41,slow=2.4,SNR=40
MAW PKP PKPdf 02 30 16.3 -1.4
comp=Z,265nm,0.9s,baz=316,slow=1.4,SNR=22
MAW pPKP pPKPdf 02 32 44.2 -0.8
comp=Z,152nm,1.0s,baz=129,slow=9.6,SNR=2.1
MAW SKPab 02 33 03.8
comp=Z,442nm,1.0s,baz=84,slow=2.9,SNR=4.4
MAW Mawson 138.16 215 PKHKP PKPpre 02 30 08.5
MAW 02 30 16.3
MAW pmax pmax
comp=Z,71nm,0.8s
MAW pmax pmax
comp=Z,265nm,0.9s
MAW pmax pmax
comp=N,442nm,1.0s
MAW Mawson 138.16 215 *e*PKPpre PKPpre 02 30 09.6
MAW PKP PKPdf 02 30 16.3 -1.4
MAW *e*PKPdf PKPdf 02 30 17.1 -0.5
MAW pPKP pPKPdf 02 32 44.2 -0.8
MAW *e* 02 32 52.0
MAW SKPab 02 33 03.8
LCO Las Campanas 139.85 69 *e*P PKPpre 02 30 13.6
LCO *e*pPKPdf pPKPdf 02 32 47.0 -2.3
LCO *e* 02 33 00.0
LCO Las Campanas 139.85 69 *e*P PKPpre 02 30 13.6
SUR Sutherland 139.90 283 PKhKP PKPpre 02 30 15.3
comp=N,171nm,0.8s,baz=46,slow=3.8,SNR=42
SUR PKP PKPdf 02 30 21.2 -0.7
comp=N,504nm,0.8s,baz=88,slow=2.4,SNR=36
SUR pPKP pPKPdf 02 32 49.0 -0.3
comp=N,84nm,0.8s,baz=281,slow=16,SNR=0.9
SUR Sutherland 139.90 283 *e*PKPpre PKPpre 02 30 17.3
SUR PKP PKPdf 02 30 21.2 -0.7
SUR *e*PKPdf PKPdf 02 30 22.4 +0.4
SUR pPKP pPKPdf 02 32 49.0 -0.3
TLL Tololo Astrono 140.68 71⇓ *i*PKHKP PKPpre 02 30 16.6
TLL Tololo Astrono 140.68 71⇓ *i*P PKPpre 02 30 16.6
OVCH Ovalle 140.79 72⇑ *i*P PKPdf 02 30 17.9 -5.8
OVCH Ovalle 140.79 72⇑ *i*P PKPdf 02 30 17.9 -5.8
CMCH Combarbala 141.33 72⇑ *i*P PKPdf 02 30 18.3 -6.3
CMCH Combarbala 141.33 72⇑ *i*P PKPdf 02 30 18.3 -6.3
CHNG Los Chungos 141.58 73⇑ *i*P PKPdf 02 30 19.6 -5.4
PACH Papudo 142.10 74⇑ *i*P PKPdf 02 30 27.6 +1.7
PACH Papudo 142.10 74⇑ *i*P PKPdf 02 30 27.6 +1.7
IHA Instituto Hidr 142.34 75⇓ *i*P PKPdf 02 30 22.5 -3.8
IHA Instituto Hidr 142.34 75⇓ *i*P PKPdf 02 30 22.5 -3.8
ROCH El Roble 142.66 74⇑ *i*P PKPdf 02 30 23.7 -3.1
ROCH El Roble 142.66 74⇑ *i*P PKPdf 02 30 23.7 -3.1
ROCH *e* 02 32 54.3
JACH Jahuel 142.69 73⇑ *i*P PKPdf 02 30 24.0 -2.9
JACH Jahuel 142.69 73⇑ *i*P PKPdf 02 30 24.0 -2.9
LCCH Las Cruces 142.71 75⇑ *i*P PKPdf 02 30 23.8 -3.2
LCCH Las Cruces 142.71 75⇑ *i*P PKPdf 02 30 23.8 -3.2
LCCH *i* 02 32 56.8
PEL Peldehue 142.97 74⇑ *i*P PKPdf 02 30 24.6 -2.8
PEL *i* 02 32 49.5
LNV Longovilo 143.15 75⇓ *i*P PKPdf 02 30 24.9 -2.9
LNV Longovilo 143.15 75⇓ *i*P PKPdf 02 30 24.9 -2.9
LNV *i* 02 32 56.2
CFAA Coronel Fontan 143.20 69 PKhKP PKPpre 02 30 12.1
comp=N,0.4nm,0.8s,baz=313,slow=6.4,SNR=5.3
CFAA PKP PKPdf 02 30 25.4 -2.5
comp=N,241nm,0.8s,baz=306,slow=2.4,SNR=1103
CFAA pPKP pPKPdf 02 32 55.2 0.0
comp=N,83nm,1.2s,baz=329,slow=13,SNR=1.9
CFAA Coronel Fontan 143.20 69 PKP PKPpre 02 30 12.1
CFAA PKP PKPdf 02 30 25.4 -2.5
CFAA pPKP pPKPdf 02 32 55.2 -0.1
TACH Talagante 143.20 75⇑ *i*P PKPdf 02 30 25.3 -2.5
TACH Talagante 143.20 75⇑ *i*P PKPdf 02 30 25.3 -2.5
SAN Santiago 143.21 74⇑ *i*PKIKP PKPdf 02 30 25.4 -2.4
SAN Santiago 143.21 74⇑ *i*P PKPdf 02 30 25.4 -2.4
CLCH Cerro Calan 143.24 74⇓ *e*P PKPdf 02 30 26.0 -1.9
CLCH Cerro Calan 143.24 74⇓ *i*P PKPdf 02 30 22.1 -5.8
CLCH ⇓ *e*P 02 30 26.0
CLCH *i* 02 32 46.2
FSR Penalolen 143.31 74⇓ *e*P PKPdf 02 30 25.9 -2.1
FSR Penalolen 143.31 74⇓ *e*P PKPdf 02 30 25.9 -2.1
ANTU Antumapu 143.31 74⇓ *i*P PKPdf 02 30 25.5 -2.5
ANTU Antumapu 143.31 74⇓ *i*P PKPdf 02 30 25.5 -2.5
FCH Farellones 143.33 74⇓ *i*P PKPdf 02 30 26.5 -1.6
FCH Farellones 143.33 74⇓ *i*P PKPdf 02 30 26.5 -1.6
FCH ⇓ *i*P 02 30 31.7
PCH Pirque 143.42 74⇑ *i*P PKPdf 02 30 26.1 -2.1
PCH Pirque 143.42 74⇑ *i*P PKPdf 02 30 26.1 -2.1
PCH *i* 02 32 58.6
CHCH Chadas Angostu 143.57 75⇑ *i*P PKPdf 02 30 26.3 -2.1
CHCH Chadas Angostu 143.57 75⇑ *i*P PKPdf 02 30 26.3 -2.1
QSPA South Pole Qui 143.69 180 PKP PKPdf 02 30 25.2 -2.1
comp=N,2μm,0.9s,baz=344,slow=1.0,SNR=1091
QSPA pPKP pPKPdf 02 32 52.5 -2.2
comp=N,385nm,0.7s,baz=3.4,slow=6.0,SNR=2.2
QSPA P5KP 03 09 08.9
comp=N,5.1nm,1.1s,baz=333,slow=2.4,SNR=3.6
QSPA South Pole Qui 143.69 180 PKP PKPdf 02 30 25.2 -2.1
QSPA pPKP pPKPdf 02 32 52.5 -2.2
CACH El Canelo 143.73 75⇓ *i*P PKPdf 02 30 27.5 -1.2
CACH El Canelo 143.73 75⇓ *i*P PKPdf 02 30 27.5 -1.2
CACH *e* 02 32 56.6
LMEL Las Melosas 143.76 74⇓ *i*P PKPdf 02 30 27.3 -1.5
LMEL Las Melosas 143.76 74⇓ *i*P PKPdf 02 30 27.3 -1.5
NICH Los Niches 144.01 76⇓ *i*P PKPdf 02 30 27.7 -1.4
NICH *i* 02 32 45.8
TALC Talca 144.06 77⇑ *e*P PKPdf 02 30 28.0 -1.2
TALC Talca 144.06 77⇑ *e*P PKPdf 02 30 28.0 -1.2
CPUP Villa Florida 144.52 51 PKP PKPdf 02 30 29.9 -0.5
comp=N,1μm,0.8s,baz=326,slow=2.3,SNR=905
CPUP pPKP pPKPdf 02 32 56.0 -1.7
comp=N,350nm,1.0s,baz=159,slow=14,SNR=1.4
CCHI Chillan 144.64 79⇓ *i*P PKPdf 02 30 28.8 -1.4
CCHI Chillan 144.64 79⇓ *i*P PKPdf 02 30 28.8 -1.4
CCHI *i* 02 32 59.1
SPB Sao Paulo 146.06 35 *e*PKPdf PKPdf 02 30 32.7 -0.3
SPB *e*PKPbc PKPbc 02 30 35.5 +0.3
CAM4 Nova Friburgo 146.36 26⇓ *i*P PKPdf 02 30 33.6 +0.1
CAM4 *i* 02 30 36.2
CAM4 *i* 02 30 38.3
CAM4 *i* 02 30 40.1
CAM4 *i* 02 30 59.7
CAM4 *i* 02 31 01.2
CAM4 *i* 02 31 05.0
CAM4 *i* 02 31 10.1
CAM4 *i* 02 31 16.9
CAM4 *i* 02 31 27.6
CAM4 *i* 02 31 39.6
CAM4 *i* 02 32 58.1
CAM4 *i* 02 33 02.5
CAM4 *i* 02 33 21.9
CAM4 *i* 02 33 27.6
CAM4 *i* 02 33 40.0
CAM4 *i* 02 34 14.9
SYO Syowa Base 146.78 217⇑ *e*X PKPpre 02 30 25.0
SYO Syowa Base 146.78 217⇑ *i*X PKPdf 02 30 29.4 -3.4
ILCA Isla Las Cabra 147.93 87⇓ *i*P PKPdf 02 30 38.8 +3.3
ILCA *i* 02 32 49.0
PLCA Paso Flores 148.28 83 PKP PKPdf 02 30 34.6 -1.5
comp=N,144nm,0.9s,baz=267,slow=2.1,SNR=24
PLCA PKPbc PKPbc 02 30 38.5 -2.0
comp=N,681nm,0.9s,baz=291,slow=3.1,SNR=82
PLCA pPKPbc pPKPbc 02 33 03.5 -2.4
comp=N,933nm,1.0s,baz=300,slow=5.1,SNR=4.7
PLCA Paso Flores 148.28 83 *e*PKIKP PKPdf 02 30 35.3 -0.8
PLCA *e* 02 30 46.0
PLCA Paso Flores 148.28 83 *e*PKPdf PKPdf 02 30 35.3 -0.8
PLCA *e*PKPbc PKPbc 02 30 40.5 0.0
PLCA *e*PKPab PKPab 02 30 46.0 -0.4
PLCA *e* 02 33 07.1
TRQA Tornquist 151.42 71 *e*PKPdf PKPdf 02 30 40.0 -1.1
TRQA *e*PKPbc PKPbc 02 30 47.5 -0.4
TRQA *e*SKPdf SKPdf 02 33 15.1 +0.8
NVL N'lazarevskaya 155.97 211 *d* *i*PKIKP PKPdf 02 30 42.9 -3.5
NVL pmax pmax
comp=Z,222nm,0.5s
MAIT Maitri 155.99 211⇓ *i*PKPdif PKPdf 02 30 33.6 -13
MAIT *e*PP SKPdf 02 33 25.1 +6.1
MAIT *e* SKSdf 02 37 04.3 +12
MAIT *e*S 02 47 10.3
MAIT *e*SS SS 02 53 53.0 -3.9
USHA Ushuaia 156.18 109 PKP PKPdf 02 30 49.1 +2.0
comp=Z,61nm,0.8s,baz=158,slow=3.8,SNR=6.2
USHA PKPab PKPab 02 31 17.6 -2.0
comp=Z,79nm,0.5s,baz=295,slow=17,SNR=12
USHA pPKP pPKPdf 02 33 13.9 -1.4
comp=Z,59nm,0.9s,baz=168,slow=14,SNR=1.1
PMSA Palmer Station 158.64 135 PKP PKPdf 02 30 47.2 -2.6
comp=Z,33nm,0.8s,baz=60,slow=6.8,SNR=2.9
PMSA pPKP pPKPdf 02 33 15.8 -2.3
comp=Z,82nm,0.7s,baz=216,slow=6.3,SNR=1.9
PMSA Palmer Station 158.64 135 *e*PKPdf PKPdf 02 30 49.4 -0.5
TRIS Tristan da Cun 160.25 323 *e*PKPdf PKPdf 02 30 52.3 -0.3
TRIS *e*PKPab PKPab 02 31 37.9 +0.1
VNA1 Neumayer--Stat 161.24 200 *e*PKPdf PKPdf 02 30 50.6 -1.9
VNA1 *e* 02 30 56.4
VNA1 *e* 02 31 05.6
VNA1 *e* 02 31 25.4
VNA1 *e* 02 34 00.7
VNA1 *e* 02 34 06.0

BJI ***05*** *02:30:50.7, 53°.86N×154°.77E, h480km, mB5.7/5, mb5.4/25*
KRSC ***05*** *02:30:50.1±1.7, 53°.65N×155°.21E, h576km±45km, ML5.7*
MOS ***05*** *02:30:55.0±0.9, 54°.05N×154°.12E, h498km, mb5.1/69, Error ellipse: s-maj=8.9km s-min=4.5km az=99.4*
IDC ***05*** *02:30:55.8±0.9, 54°.12N×153°.96E, h488km±10km, mb4.5/33, mb1 4.6/35, mb1mx4.6/38, mbtmp4.5/35, Error ellipse: s-maj=9.2km s-min=7.0km az=132.0*
ISCJB ***05*** *02:30:55.1±0.2, 54°.08N±0°.03×153°.96E±0°.03, h492km±1km, mb5.0/162, Error ellipse: s-maj=4.6km s-min=2.7km az=160.9*
NEIC ***05*** *02:30:56.1±0.3, 54°.08N×153°.99E, h495km±3km, mb5.0/97, Error ellipse: s-maj=4.4km s-min=3.4km az=163.0*
ISC 05 02:30:55.8±0.2,**54°.09N**±0°.03×**153°.93E**±0°.03,**h486**km±1km, **h486**km±4.7km;**pP-P,n567,**α0**s90**/581,**mb5.0**/162,**97C-87D, Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GNL	**Ganaly**	**2.41**	**98**	*i* P	**P**	**02 32 02.4**	**+0.7**
GNL				*i* S	**S**	**02 32 55.8**	**+0.3**
PEA0B	**Petropavlovsk-**	**2.45**	**112**	⇓ *i* Pn	**P**	**02 32 02.4**	**+0.4**
PEA0B				*e*S	**S**	**02 32 58.1**	**+2.1**
PETK	**Petropavlovsk-**	**2.45**	**112**	P	**P**	**02 32 02.3**	**+0.3**
	163nm,0.3s,baz=323,slow=3.8,SNR=526						
MIPR	**Malaya Ipel'ka**	**2.49**	**136**	*i* P	**P**	**02 32 02.6**	**+0.3**
MIPR				*i* S	**S**	**02 32 56.4**	**0.0**
GRL	**Gorelyy**	**2.92**	**120**	P	**P**	**02 32 04.2**	**-0.8**
GRL				*i* S	**S**	**02 32 59.1**	**-2.4**
AVH	**Avacha**	**2.98**	**104**	*i* P	**P**	**02 32 05.8**	**+0.4**
AVH				*i* S	**S**	**02 33 01.9**	**-0.2**
PET	**Petropavlovsk**	**3.02**	**109**	⇓ *i*PN	**P**	**02 32 04.7**	**-0.9**
PET				*e*S	**S**	**02 33 00.3**	**-2.3**
PET				pmax pmax			
	comp=Z,2μm,1.2s						
PET				smax			
	comp=N,1μm,1.6s						
PET				smax			
	comp=E,3μm,0.9s						
PET	**Petropavlovsk**	**3.02**	**109**	*i* P	**P**	**02 32 05.1**	**-0.5**
PET				*i* S	**S**	**02 33 00.1**	**-2.5**
PET	**Petropavlovsk**	**3.02**	**109**	⇓ *i*P	**P**	**02 32 05.1**	**-0.6**
PET				*e*S	**S**	**02 33 02.2**	**-0.3**
KII	**Karymskiy**	**3.26**	**89**	*i* P	**P**	**02 32 08.3**	**+1.0**
KII				*i* S	**S**	**02 33 05.5**	**-0.2**
ESO	**Esso**	**3.31**	**54**	*i* P	**P**	**02 32 09.5**	**+1.9**
NLC	**Nalytchevo**	**3.35**	**104**	*i* P	**P**	**02 32 07.1**	**-1.0**
NLC				*i* S	**S**	**02 33 03.4**	**-3.6**
ALID	**Alaid**	**3.37**	**162**	*i* P	**P**	**02 32 09.2**	**+0.9**
ALID				*i* S	**S**	**02 33 07.8**	**+0.5**
SKR	**Severo-Kuril's**	**3.67**	**158**	*e*PN	**P**	**02 32 09.0**	**-1.5**
SKR				*e*S	**S**	**02 33 08.5**	**-2.9**
SKR				pmax pmax			
	comp=E,230nm,0.5s						
SKR				pmax pmax			
	comp=Z,900nm,0.5s						
SKR				pmax pmax			
	comp=N,560nm,0.3s						
SKR				smax			
	comp=N,2μm,1.0s						
SKR				smax			
	comp=E,6μm,1.0s						
SPN	**Mys Shipunski**	**3.77**	**103**	*i* P	**P**	**02 32 09.3**	**-1.9**
SPN				*i* S	**S**	**02 33 06.4**	**-6.4**
KOZ	**Kozyrevsk**	**3.95**	**58**	*i* P	**P**	**02 32 13.9**	**+1.3**
KOZ				*i* S	**S**	**02 33 15.6**	**+0.2**
KOZR	**Kozyr**	**3.96**	**58**	PN	**P**	**02 32 13.9**	**+1.2**
KOZR				S	**S**	**02 33 15.6**	**-0.1**
SRDR	**Sredinnyy**	**4.00**	**54**	*i* P	**P**	**02 32 14.7**	**+1.7**
SRDR				*i* S	**S**	**02 33 17.2**	**+1.0**
KMNR	**Kamenistaya**	**4.01**	**63**	*i* P	**P**	**02 32 14.1**	**+1.0**
KMNR				*i* S	**S**	**02 33 16.1**	**-0.2**
KPT	**Kopyto**	**4.08**	**60**	*i* P	**P**	**02 32 14.2**	**+0.5**
KPT				*i* S	**S**	**02 33 16.5**	**-1.0**
BZGR	**Bezymyannyi-Gr**	**4.32**	**62**	*i* P	**P**	**02 32 16.4**	**+0.7**
BZGR				*i* S	**S**	**02 33 20.0**	**-1.1**
KRSR	**Krestovskiy**	**4.37**	**58**	*e*P	**P**	**02 32 16.6**	**+0.5**
KRSR				*i* S	**S**	**02 33 20.5**	**-1.3**
ZLN	**Zelenaya**	**4.40**	**61**	*i* P	**P**	**02 32 17.4**	**+1.0**
ZLN				*i* S	**S**	**02 33 21.3**	**-1.1**
KLY	**Klyuchi**	**4.45**	**57**	*e*P	**P**	**02 32 18.0**	**+1.1**
KLY				*i* S	**S**	**02 33 22.6**	**-0.6**
MKZ	**Mys Kozlova**	**4.59**	**81**	*i* P	**P**	**02 32 15.4**	**-2.8**
MKZ				*i* S	**S**	**02 33 16.9**	**-8.6**
SRKR	**Sorokina**	**4.87**	**55**	*i* P	**P**	**02 32 20.6**	**+0.1**
SRKR				*i* S	**S**	**02 33 27.4**	**-2.5**
KBTR	**Krutoberegovo**	**5.53**	**64**	*e*P	**P**	**02 32 24.1**	**-2.6**
KBTR				*i* S	**S**	**02 33 33.4**	**-7.7**
SEY	**Seymchan**	**8.91**	**355**⇑	*e*PN	**P**	**02 33 02.9**	**+1.9**
YSS	**Yuzh-Sakhalins**	**10.07**	**229**⇑	*e*PN	**P**	**02 33 15.5**	**+1.8**
YSS				pmax pmax			
	comp=Z,570nm,1.2s						
YSS	**Yuzh-Sakhalins**	**10.07**	**229**	*e*P	**P**	**02 33 16.1**	**+2.4**
YSS	**Yuzh-Sakhalins**	**10.07**	**229**	*e*P	**P**	**02 33 15.5**	**+1.8**
YUK	**Yuzh-Kuril'sk**	**11.36**	**211**	*e*PN	**P**	**02 33 20.9**	**-6.6**
YUK				*i* S	**S**	**02 35 31.1**	**-1.4**
YUK				pmax pmax			
	comp=N,50nm,0.2s						
YUK				pmax pmax			
	comp=E,50nm,0.2s						
YUK				pmax pmax			
	comp=Z,360nm,0.2s						
YUK				smax			
	comp=N,160nm,0.9s						
YUK				smax			
	comp=E,340nm,0.9s						
YUK				smax			
	comp=N,1μm,1.5s						
YUK				smax			
	comp=E,780nm,0.8s						
ASAJ	**Asahikawa**	**12.42**	**221**	P	**P**	**02 33 38.6**	**-0.1**
	comp=E,6.1nm,0.3s,baz=22,slow=7.3,SNR=19						
ASAJ	**Asahikawa**	**12.42**	**221**	PN	**P**	**02 33 38.7**	**-0.1**
ASAJ				pmax pmax			
	comp=Z,6.0nm,0.3s						
HABR	**Khabarovsk**	**13.07**	**252**	*e*PN	**P**	**02 33 46.6**	**+1.0**
HABR				S	**S**	**02 36 08.5**	**+2.8**
HABR				pmax pmax			
	comp=E,352nm,1.5s						
HABR				pmax pmax			
	comp=Z,317nm,1.2s						
HABR				pmax pmax			
	comp=N,198nm,2.0s						
HABR				MLR MLR			
	comp=Z,24μm,14.0s						
ERM	**Erimo**	**14.04**	**215**⇑	*i* P	**P**	**02 33 53.1**	**-2.9**
YAK	**Yakutsk**	**15.02**	**312**	*e*P	**P**	**02 34 06.4**	**+0.4**
YAK				*e*S	**S**	**02 36 44.3**	**+1.4**
YAK				pmax pmax			
	comp=Z,398nm,1.3s						
YAK				pmax pmax			
	comp=N,154nm,1.4s						
YAK				pmax pmax			
	comp=E,207nm,1.1s						
YAK				smax			
	comp=E,1μm,1.4s						
YAK				smax			
	comp=N,2μm,1.3s						
YAK	**Yakutsk**	**15.02**	**312**	*e*P	**P**	**02 34 06.5**	**+0.5**
	comp=N,441nm,0.7s						
BILL	**Bilibino**	**15.17**	**18**⇓	*e*P	**P**	**02 34 07.8**	**+0.3**
BILL				*i* S	**S**	**02 36 46.6**	**+0.9**
BILL				pmax pmax			
	comp=Z,163nm,2.5s						
BILL	**Biiibino**	**15.17**	**18**	*e*P	**P**	**02 34 07.4**	**-0.1**
	comp=Z,56nm,0.6s						
VLA	**Vladivostok**	**18.16**	**242**⇑	*e*P	**P**	**02 34 37.5**	**-0.7**
VLA	**Vladivostok**	**18.16**	**242**⇑	*e*P	**P**	**02 34 37.6**	**-0.6**
MDJ	**Mudanjiang**	**18.38**	**249**	P	**P**	**02 34 40.1**	**-0.1**
MDJ				sP	sP	02 36 43.0	-1.8
MDJ				S	**S**	**02 37 43.6**	**+0.2**
MDJ				ScP	ScP	02 41 32.8	-1.1
MDJ				PcS	PcS	02 42 23.0	+1.1
MDJ				ScS	ScS	02 45 16.4	+1.2
MDJ				pmax pmax			
	comp=Z,120nm,1.4s						
MDJ				pmax pmax			
	comp=Z,38μm,13.6s						
MAJO	**Matsushiro**	**20.65**	**218**	*e*P	**P**	**02 35 00.4**	**-0.6**
MAJO				pmax pmax			
	comp=Z,117nm,0.7s						
MAJO	**Matsushiro**	**20.65**	**218**	*e*P	**P**	**02 35 00.4**	**-0.6**
	comp=Z,117nm,0.7s						
MAT	**Matsushiro**	**20.65**	**218**	P	**P**	**02 35 00.7**	**-0.3**
MAT				S	**S**	**02 38 19.5**	**-0.7**
MJAR	**Matsushiro Arr**	**20.65**	**218**	P	**P**	**02 35 01.0**	**0.0**
	comp=Z,77nm,0.9s,baz=16,slow=9.2,SNR=32						
MJAR				ScP	ScP	02 41 38.4	-1.0
	comp=Z,4.9nm,0.9s,baz=296,slow=1.6,SNR=4.7						
MJAR	**Matsushiro Arr**	**20.65**	**218**	P	**P**	**02 35 01.0**	**0.0**
MJAR				ScP	ScP	02 41 38.4	-1.0
TIXI	**Tiksi**	**20.70**	**338**	*e*P	**P**	**02 35 01.8**	**+0.9**
TIXI				pmax pmax			
	comp=Z,250nm,0.8s						
TIXI	**Tiksi**	**20.70**	**338**	*e*P	**P**	**02 35 01.8**	**+0.9**
	comp=Z,250nm,0.8s						
CN2	**Changchun**	**21.21**	**253**	*e*P	**P**	**02 35 05.7**	**-0.2**
CN2				*es*P	sP	02 37 14.0	-2.0
CN2				*e*S	**S**	**02 38 26.8**	**-2.0**
CN2				pmax pmax			
	comp=Z,10.0nm,0.6s,mb4.5						
CN2				pmax pmax			
	comp=Z,200nm,3.0s						
KSRS	**Korea Array**	**24.40**	**238**	P	**P**	**02 35 36.0**	**+1.4**
	comp=Z,108nm,0.8s,mb5.3,baz=30,slow=9.4,SNR=109						
KSRS				PcP	PcP	02 38 56.1	-1.1
	comp=Z,12nm,0.6s,baz=9.4,slow=2.5,SNR=15						
KSRS				ScP	ScP	02 41 48.3	-0.9
	comp=Z,8.2nm,0.6s,baz=58,slow=3.1,SNR=8.5						
CBIJ	**Chichi jima**	**28.32**	**202**	P	**P**	**02 36 09.4**	**+0.1**
	comp=Z,124nm,0.8s,mb5.4,baz=106,slow=22,SNR=7.5						
BJI	**Beijing**	**28.91**	**256**	P	**P**	**02 36 15.5**	**+1.2**
BJI				pP		02 37 36.3	
BJI				sP	sP	02 38 32.5	-1.2
BJI				pmax pmax			
	comp=Z,52nm,0.9s,mb5.0						
TRF	**Thorofare Moun**	**29.46**	**49**	*e*P	**P**	**02 36 18.6**	**-0.2**
	comp=Z,16nm,0.3s,mb4.9						
KDAK	**Kodiak Island**	**29.53**	**61**	P	**P**	**02 36 17.4**	**-2.0**
	comp=Z,19nm,0.5s,mb4.8,baz=286,slow=2.0,SNR=11						
KDAK				ScP	ScP	02 42 03.3	-1.2
	comp=Z,27nm,0.8s,baz=108,slow=1.7,SNR=5.5						
ULN	**Ulaanbaatar**	**29.70**	**277**⇓	*i* P	**P**	**02 36 22.8**	**+1.7**
ULN	**Ulaanbaatar**	**29.70**	**277**	*e*P	**P**	**02 36 22.8**	**+1.7**
	comp=Z,34nm,0.7s,mb4.9						
TLY	**Talaya**	**29.92**	**286**	*e*P	**P**	**02 36 25.5**	**+2.6**
TLY				pmax pmax			
	comp=Z,

TLY Talaya 29.92 286⇑ *i*P P 02 36 25.4 +2.5
MCK McKinley 30.02 48 *e*P P 02 36 23.1 -0.5
SONM Songino Array 30.11 278 P P 02 36 26.9 +2.4
comp=Z,48nm,0.5s,mb5.2,baz=64,slow=7.9,SNR=62
SONM PcP PcP 02 39 10.7 -0.3
comp=Z,18nm,0.6s,baz=61,slow=1.2,SNR=14
SONM ScP ScP 02 42 04.0 -2.5
comp=Z,14nm,0.8s,baz=75,slow=1.1,SNR=5.5
SONM Songino Array 30.11 278 P P 02 36 26.9 +2.4
SONM 02 39 10.7
RC01 Rabbit Creek A 30.13 54 *e*P P 02 36 23.5 -1.1
comp=Z,21nm,0.6s,mb4.8
COLA College 30.33 46⇑ *e*P P 02 36 25.5 -0.7
COLA College 30.33 46 *e*P P 02 36 25.7 -0.6
comp=Z,20nm,0.6s,mb4.7
HHC Hu-ho-hao-te 31.05 262 *e*P P 02 36 31.2 -1.6
HHC S S 02 41 00.7 -2.1
HHC pmax pmax
comp=Z,40nm,0.5s,mb5.1
KRAR Krasnoyarsk 34.03 299⇑ *e*P P 02 36 59.1 +1.1
INK Inuvik 35.34 38 P P 02 37 08.6 -0.2
comp=Z,18nm,0.4s,mb4.9,baz=307,slow=6.5,SNR=87
INK Inuvik 35.34 38 *e*P P 02 37 08.1 -0.6
INK pmax pmax
comp=Z,26nm,0.6s
INK Inuvik 35.34 38 *e*P P 02 37 08.1 -0.6
comp=Z,26nm,0.6s,mb4.8
WHN Wuhan 36.84 246 P P 02 37 16.8 -4.9
LZH Lanzhou 38.73 263 *e*P P 02 37 39.5 +2.3
LZH pP pP 02 39 11.9 +7.3
LZH sP sP 02 40 03.8 +4.0
LZH pmax pmax
comp=Z,210nm,1.0s,mb5.5
LZH pmax pmax
comp=Z,1μm,5.1s
GTA Gaotai 38.88 271 P P 02 37 41.1 +2.8
GTA pmax pmax
comp=Z,250nm,0.7s,mb5.8
ZAA0 Zalesovo Array 39.11 299 *e*P P 02 37 39.7 -0.3
ZAA0 *e*PcP PcP 02 39 37.0 -0.5
ZALV Zalesovo Beam 39.11 299 P P 02 37 39.9 -0.1
comp=Z,14nm,0.4s,mb4.8,baz=58,slow=6.9,SNR=39
ZALV PcP PcP 02 39 36.2 -1.2
comp=Z,10nm,0.5s,baz=66,slow=4.1,SNR=7.4
YULB Yu-li 39.21 232 *e*P P 02 37 39.9 -1.3
comp=Z,22nm,0.6s,mb4.8
NVS Novosibirsk 39.48 301 *e*P P 02 37 43.1 +0.2
NVS pmax pmax
comp=E,387nm,1.7s
NVS pmax pmax
comp=Z,449nm,1.7s,mb5.6
NVS pmax pmax
comp=N,296nm,1.8s
CD2 Chengdu 42.49 258 P P 02 38 08.3 +1.0
CD2 pP pP 02 39 38.0 +1.2
CD2 sP sP 02 40 30.5 -0.9
CD2 S S 02 43 55.1 +1.7
CD2 sS sS 02 46 34.8 -1.4
CD2 SS SS 02 47 14.6 -4.5
CD2 pmax pmax
comp=Z,670nm,8.3s
WMQ Urumqi 43.16 284 *e*P P 02 38 07.5 -4.9
KURK Kurchatov 44.05 298⇑ *e*P P 02 38 20.4 +1.2
KURK pmax pmax
comp=Z,744nm,2.5s,mb5.7
KURK Kurchatov 44.05 298 *e*P P 02 38 19.2 +0.1
comp=Z,171nm,0.8s,mb5.5
GYA Guiyang 44.23 251⇑ *i*P P 02 38 20.8 -0.1
GYA pP pP 02 39 52.7 +1.3
GYA sP sP 02 40 47.0 +1.3
GYA ScP ScP 02 43 01.2 +1.2
GYA PcS PcS 02 43 48.0 -1.3
GYA S S 02 44 18.3 -0.1
GYA sS sS 02 47 01.9 -0.6
GYA pmax pmax
comp=Z,20nm,1.0s,mb4.5
GYA pmax pmax
comp=Z,150nm,5.0s
MK31 Makanchi Array 44.39 291 *ce*P P 02 38 22.3 +0.5
MK31 pmax pmax
comp=Z,74nm,0.5s,mb5.4
MK31 Makanchi Array 44.39 291 *e*P P 02 38 22.2 +0.3
MKAR Makanchi Array 44.39 291 P P 02 38 22.1 +0.3
comp=Z,45nm,0.5s,mb5.2,baz=54,slow=6.6,SNR=246
YKA Yellowknife Ar 44.88 41 P P 02 38 24.6 -0.8
comp=Z,8.8nm,0.4s,mb4.5,baz=310,slow=7.3,SNR=37
YKA Yellowknife Ar 44.88 41 P P 02 38 24.6 -0.8
KBS Kingsbay 45.33 350 *e*P P 02 38 28.8 +0.1
KBS Kingsbay 45.33 350⇑ *e*P P 02 38 29.5 +0.8
KBS pmax pmax
comp=Z,47nm,1.2s,mb4.8
VOSK Vostochnaya 46.73 304 P P 02 38 39.6 -0.1
VOSK pmax pmax
comp=Z,141nm,0.9s,mb5.4
BVAR Borovoye Array 46.84 305 P P 02 38 40.8 +0.2
comp=Z,152nm,0.4s,mb5.7,baz=56,slow=7.1,SNR=471
BVAR PcP PcP 02 40 03.3 -0.6
comp=Z,24nm,0.6s,baz=61,slow=2.9,SNR=6.3
BRVK Borovoye 46.87 305 *ce*P P 02 38 41.9 +1.1
BRVK pmax pmax
comp=Z,360nm,1.7s,mb5.5
BRVK Borovoye 46.87 305 *e*P P 02 38 40.9 +0.1
comp=Z,148nm,0.5s,mb5.7
KMI Kunming 47.48 253 P P 02 38 46.5 +0.8
KMI pP pP 02 40 20.2 +2.3
KMI PP PP 02 40 44.1 +1.3
KMI sP sP 02 41 12.7 +1.0
KMI S S 02 45 03.7 -0.1
KMI sS sS 02 47 49.9 -0.5
KMI pmax pmax
comp=Z,52nm,1.7s,mb4.7
ZRNK Zerenda 47.55 305 *i*P P 02 38 45.6 -0.3
ZRNK pmax pmax
comp=Z,138nm,0.9s,mb5.3
QIZ Qiongzhong 48.53 241 P P 02 38 54.0 +0.3
SVE Sverdlovsk 48.98 313 *e*P P 02 38 58.0 +1.5
SVE pmax pmax
comp=Z,233nm,0.9s,mb5.5
NLWA Neilton Lookou 49.67 62 ⇓P P 02 39 02.0 +0.2
baz=50
ARU Arti 50.11 314 *d i*P P 02 39 05.7 +0.8
ARU 02 41 09.0
ARU S S 02 45 42.0 +2.9
ARU SS SS 02 49 22.2 +2.8
ARU pmax pmax
comp=Z,574nm,1.7s,mb5.6
ARU Arti 50.11 314 *e*P P 02 39 04.8 -0.1
comp=Z,233nm,0.5s,mb5.8
B06A Marblemount 50.17 60 ⇑P P 02 39 05.4 -0.1
baz=50
LVZ Lovozero 50.29 335⇓ *e*P P 02 39 06.5 +0.5
LVZ pmax pmax
comp=Z,146nm,2.5s,mb4.9
LVZ Lovozero 50.29 335⇓ *e*P P 02 39 06.6 +0.6
TKM2 Tokmak 2 50.52 291 *e*P P 02 39 09.2 +1.1
TKM2 *e* 02 40 16.4
TKM2 pmax pmax
comp=Z,75nm,0.9s,mb5.0
TKM2 Tokmak 2 50.52 291 *e*P P 02 39 09.2 +1.1
comp=Z,75nm,0.9s,mb5.0
TKM2 *e*PcP PcP 02 40 16.4 -1.1
ULHL Ulahol 50.61 290 P P 02 39 10.8 +2.0
SNR=6.4
LSA Lhasa 50.74 268 P P 02 39 12.1 +2.2
D05A Enumclaw 50.78 61 ⇑P P 02 39 09.9 -0.1
baz=51
F03A Seaside 50.78 63 ⇑P P 02 39 10.5 +0.5
baz=51
USP Ospenovka 50.89 292 P P 02 39 12.6 +1.8
SNR=14
CHMS Chumysh 50.93 292 P P 02 39 12.9 +1.8
SNR=6.1
ARCES ARCESS Array B 51.12 339 P P 02 39 11.2 -0.9
comp=Z,8.9nm,0.3s,mb4.5,baz=40,slow=8.0,SNR=120
AAK Ala-Archa 51.32 292 P P 02 39 15.9 +2.0
SNR=6.1
F04A Amboy 51.38 63 ⇑P P 02 39 13.6 -0.7
baz=51
EKS2 Erkin-Say 51.69 292 P P 02 39 18.6 +2.0
SNR=5.3
EKS2 Erkin-Say 51.69 292 *e*P P 02 39 17.8 +1.2
comp=Z,143nm,0.9s,mb5.3
KTK1 Kautokeino 52.02 340 *e*P P 02 39 18.2 -0.4
TRO Tromso 52.34 342 *e*P P 02 39 19.8 -1.1
H04A Detroit Lake 52.34 64 ⇓P P 02 39 21.3 +0.1
baz=52
NEW Newport 52.53 57 *e*P P 02 39 21.7 -0.9
NEW pmax pmax
comp=Z,28nm,1.0s
NEW Newport 52.53 57 *e*P P 02 39 21.7 -0.9
comp=Z,28nm,1.0s,mb4.5
KSH Kashi 52.61 288 *e*P P 02 39 28.8 +5.5
KSH PcP PcP 02 40 29.3 +3.8
KSH pP pP 02 41 02.5 +4.5
KSH PP PP 02 41 35.9 +7.3
KSH sP sP 02 41 53.8 +2.6
KSH ScP ScP 02 43 40.9 +5.4
KSH PcS PcS 02 44 27.7 +2.9
KSH S S 02 46 19.2 +5.9
KSH ScS ScS 02 48 24.9 +3.7
KSH pmax pmax
comp=Z,240nm,1.6s,mb5.3
F07A Phinny Hill Vi 52.70 61 ⇓P P 02 39 24.3 +0.5
baz=52
KK31 Karatay Array 53.16 295⇑ *e*P P 02 39 27.0 -0.1
E09A Wood Farm, Sta 53.20 60 ⇑P P 02 39 26.4 -1.0
baz=53
C11A Tepee Creek (N 53.24 57 ⇑P P 02 39 27.6 -0.1
baz=53
HUMO Hull Mountain 53.34 66 *e*P P 02 39 29.2 +0.7
comp=Z,5.0nm,0.6s,mb4.0
A13A Flathead Natio 53.40 55 ⇓P P 02 39 28.5 -0.3
baz=53
C12B Naegeli Ranch, 53.72 57 ⇓P P 02 39 30.5 -0.6
baz=54
YBH Yreka Blue Hor 54.07 67 *e*P P 02 39 33.9 +0.2
YBH pmax pmax
comp=Z,20nm,0.7s
YBH Yreka Blue Hor 54.07 67 *e*P P 02 39 33.9 +0.2
comp=Z,20nm,0.7s,mb4.6
AB31 Akbulak array 54.30 306⇑ *e*P P 02 39 35.1 0.0
ABKAR Akbulak array 54.30 306 *e*P P 02 39 35.0 -0.1
comp=Z,72nm,0.5s,mb5.3
K05A Summer Lake 54.36 65 ⇓P P 02 39 36.5 +0.8
baz=54
TAPN Taplejung 54.51 269 *e*P P 02 39 36.8 -0.2
comp=Z,312nm,0.8s,mb5.7
E12A Beaver Dam Sad 54.56 58 ⇓P P 02 39 36.7 -0.4
baz=54
CHTO Chiang Mai 54.60 252 *e*P P 02 39 38.1 +0.4
CHTO pmax pmax
comp=Z,77nm,0.8s,mb5.1
CHTO Chiang Mai 54.60 252 *e*P P 02 39 38.1 +0.4
comp=Z,77nm,0.8s,mb5.1
LOF Lofoten 54.61 343 *e*P PcP 02 40 29.5 -3.1
H09A Durkee 54.71 61 ⇑P P 02 39 38.5 +0.4
baz=54
CM31 Chiang Mai Arr 54.89 252 *e*P P 02 39 40.8 +1.1
comp=Z,47nm,0.8s,mb4.9
CMAR Chiang Mai Arr 54.89 252 P P 02 39 41.0 +1.3
comp=Z,46nm,0.8s,mb4.9,baz=22,slow=6.8,SNR=89
CMAR PcP PcP 02 40 34.6 +0.1
comp=Z,12nm,0.6s,baz=7.7,slow=3.4,SNR=8.6
CMAR ScP ScP 02 43 45.4 -0.4
comp=Z,1.2nm,0.3s,baz=14,slow=3.6,SNR=4.3
CMAR Chiang Mai Arr 54.89 252 P P 02 39 41.0 +1.3
CMAR 02 40 34.6
FFC Flin Flon 54.91 43 *e*P P 02 39 39.0 -0.3
FFC pmax pmax
comp=Z,29nm,0.6s,mb4.8
FFC Flin Flon 54.91 43 *e*P P 02 39 39.0 -0.4
comp=Z,29nm,0.6s,mb4.8
FCC Fort Churchill 54.92 36 *e*P P 02 39 38.2 -1.2
comp=Z,0.6nm,0.5s
JOF Joensuu 55.03 332 *e*P P 02 39 39.2 -0.9
JOF pmax pmax
comp=Z,44nm,0.8s,mb4.8
JOF Joensuu 55.03 332 *e*p P 02 39 39.2 -0.9
comp=Z,44nm,0.8s,mb4.8
ODAN Odare 55.06 268 *e*P P 02 39 40.4 -0.5
comp=Z,115nm,0.6s,mb5.4
C15A Salmond Ranch, 55.08 55 ⇓P P 02 39 41.0 +0.3
baz=55
MSO Missoula 55.08 57 *e*P P 02 39 40.4 -0.3
comp=Z,15nm,0.8s,mb4.4
I09A Lost Marbles R 55.15 62 ⇑P P 02 39 41.0 -0.2
baz=55
GUN Gumba 55.17 270 *e*P P 02 39 41.2 -0.4
comp=Z,108nm,0.4s,mb5.5
JIRN Jiri 55.17 270 *e*P P 02 39 41.6 0.0
comp=Z,202nm,0.9s,mb5.5
J08A Circle Bar Ran 55.20 63 ⇑P P 02 39 41.8 +0.2
baz=55
MOD Modoc 55.25 65 *e*P P 02 39 42.3 +0.4
comp=Z,38nm,1.2s,mb4.6
RAMN Ramite 55.46 269 *e*P P 02 39 43.1 -0.5
comp=Z,584nm,0.6s,mb6.1
H11A Donnelly 55.53 60 ⇓P P 02 39 44.1 +0.3
baz=55
I10A Payette 55.55 61 ⇑P P 02 39 44.1 0.0
baz=55
E14A Clinton 55.59 57 ⇓P P 02 39 43.7 -0.6
baz=55
KKN Kakani 55.61 271 *e*P P 02 39 44.5 -0.2
comp=Z,306nm,0.5s,mb5.9
PKI Pulchoki 55.70 271 *e*P P 02 39 45.3 0.0
comp=Z,361nm,0.9s,mb5.7
PKIN Phulchoki 55.70 271 *e*P P 02 39 45.6 +0.3
comp=Z,233nm,0.8s,mb5.6
WVOR Wild Horse Val 55.76 63 *e*P P 02 39 45.8 +0.3
WVOR pmax pmax
comp=Z,32nm,0.9s,mb4.7
WVOR Wild Horse Val 55.76 63 *e*P P 02 39 45.8 +0.3
comp=Z,32nm,0.9s,mb4.7
GKN Gorkha 55.83 272 *e*P P 02 39 46.2 0.0
comp=Z,395nm,0.8s,mb5.8
DMN Daman 55.85 271 *e*P P 02 39 46.2 -0.1
comp=Z,410nm,0.9s,mb5.8
J10A Berg Farm, Mel 56.04 61 ⇑P P 02 39 46.4 -1.0
baz=56
MOR8 Moi Rana 56.20 341 *e*P P 02 39 46.0 -2.1
K10A MacKenzie Ranc 56.44 62 ⇑P P 02 39 50.4 +0.2
baz=56
KOLN Koldanda 56.62 272 *e*P P 02 39 51.2 -0.5
comp=Z,241nm,0.6s,mb5.7
I12A Atlanta 56.62 60 ⇓P P 02 39 51.9 +0.5
baz=56
DLMT Dillon 56.78 57 *e*P P 02 39 53.5 +1.0
comp=Z,63nm,1.0s,mb4.9
G15A Dillon 56.97 57 ⇑P P 02 39 54.0 +0.2
baz=57
J12A Stokes Ranch, 57.02 61 ⇑P P 02 39 54.7 +0.5
baz=57,SNR=5.4
KAF Kangasniemi 57.04 334 *e*P P 02 39 52.4 -1.6
KAF pmax pmax
comp=Z,26nm,0.5s,mb4.8
KAF Kangasniemi 57.04 334 *e*P P 02 39 52.4 -1.6
comp=Z,26nm,0.5s,mb4.8
KAF Kangasniemi 57.04 334 *e*p P 02 39 52.4 -1.6
comp=Z,26nm,0.5s,mb4.8
I13A Wildhorse Cree 57.05 59 ⇓P P 02 39 55.0 +0.6
baz=57,SNR=11
BOZ Bozeman (W) 57.05 56 *e*P P 02 39 55.3 +0.9
BOZ pmax pmax
comp=Z,12nm,0.7s,mb4.3
BOZ Bozeman (W) 57.05 56 *e*P P 02 39 55.3 +0.9
comp=Z,12nm,0.7s,mb4.3
L10A Juniper Basin 57.15 62 ⇑P P 02 39 56.1 +1.1
baz=57
HLID Hailey 57.15 60 *e*P P 02 39 55.6 +0.5
comp=Z,8.4nm,0.6s,mb4.2
G16A Moss Hill, Enn 57.27 57 ⇑P P 02 39 56.2 +0.3
baz=57
WCN Washoe City 57.38 67 ⇑P P 02 39 57.5 +0.8
baz=57
J13A Cove Ranch, Pi 57.39 60 ⇑P P 02 39 57.2 +0.5
baz=57
L11A Cat Creek Ranc 57.45 62 ⇑P P 02 39 57.8 +0.6
baz=57
K12A Draper Farm, C 57.56 61 ⇓P P 02 39 58.2 +0.3
baz=57
FINES FINESS Array B 57.66 333 P P 02 39 57.5 -0.7
comp=Z,11nm,0.3s,mb4.6,baz=34,slow=6.1,SNR=45
FINES PcP PcP 02 40 43.5 -1.3
comp=Z,19nm,0.7s,baz=64,slow=4.4,SNR=5.1
J14A Carey 57.78 60 ⇓P P 02 40 00.6 +1.2
baz=58,SNR=6.1
F18A Big Timber 57.80 55 ⇑P P 02 40 00.1 +0.6
baz=58
PUL Pulkovo 57.87 330 *ce*P P 02 39 59.9 +0.2
PUL pmax pmax
comp=Z,126nm,0.6s,mb5.4
H16A Russell Place, 57.92 57 ⇑P P 02 40 01.2 +0.9
baz=58
CMB Columbia Colle 57.94 68 *e*P P 02 40 00.5 -0.1
CMB pmax pmax
comp=Z,36nm,1.2s,mb4.6
CMB Columbia Colle 57.94 68 *e*P P 02 40 00.5 -0.1
comp=Z,36nm,1.2s,mb4.6
PCL Pacheco Lake 58.16 70⇑ *e*P P 02 39 59.0 -3.1
YFT Old Faithful 58.31 57 *e*P P 02 40 05.0 +2.0
comp=Z,42nm,1.1s,mb4.7
I16A Newdale 58.40 58 ⇓P P 02 40 05.1 +1.5
baz=58
O10A Cortez Mining, 58.41 64 ⇓P P 02 40 04.5 +0.8
baz=58
L13A Double Diamond 58.45 61 ⇑P P 02 40 05.0 +1.1
baz=58,SNR=6.5
H17A Grant Village 58.48 57 ⇑P P 02 40 06.6 +2.5
baz=58
K14A Jones Ranch, D 58.51 60 ⇑P P 02 40 05.1 +0.8
baz=58
K15A Arbon 58.74 59 ⇓P P 02 40 07.6 +1.7
baz=59,SNR=5.4
J16A Bone 58.77 58 ⇓P P 02 40 07.3 +1.2
baz=59
N12A Clover Valley, 58.77 62 P P 02 40 07.4 +1.2
baz=59,SNR=6.3
NVAR Mina Array Bea 58.79 67 P P 02 40 07.0 +0.7
comp=Z,14nm,0.7s,mb4.4,baz=299,slow=6.9,SNR=25
M13A Montello 58.86 62 ⇓P P 02 40 07.5 +0.8
baz=59
TPAW Teton Pass 58.95 58 *e*P P 02 40 08.6 +1.3
comp=Z,18nm,0.8s,mb4.5
O11A Cowboy Ranch, 58.97 63 ⇑P P 02 40 07.9 +0.3
baz=59
LOHW Long Hollow 59.03 57 *e*P P 02 40 08.7 +0.9
comp=Z,20nm,1.0s,mb4.4
REDW Red Top Meadow 59.09 58 *e*P P 02 40 09.0 +0.7
comp=Z,83nm,1.6s,mb4.8
K16A Soda Springs 59.11 59 ⇑P P 02 40 09.6 +1.2
baz=59
L15A Malad City 59.31 60 ⇑P P 02 40 10.4 +0.6
baz=59
O12A Currie 59.35 63 ⇑P P 02 40 10.0 -0.1
baz=59
Q10A Clear Creek Ra 59.53 65 ⇓P P 02 40 11.3 +0.1
baz=59
OBN Obninsk 59.62 324⇓ *i*P P 02 40 11.9 +0.3
OBN *e* 02 42 29.2
OBN pmax pmax
comp=Z,423nm,1.9s,mb5.5
OBN Obninsk 59.62 324 *e*P P 02 40 10.8 -0.8
comp=Z,67nm,1.0s,mb5.0
M15A Larsen Ranch, 59.67 60 ⇑P P 02 40 12.4 +0.2
baz=60
N14A Grayback Hills 59.74 61 ⇑P P 02 40 13.3 +0.6
baz=60
TIN Tinemaha 59.83 68 ⇓P P 02 40 14.2 +0.8
baz=60
P12A McGill 59.85 64 ⇑P P 02 40 14.0 +0.7
baz=60
VSU Vasula 59.99 331⇓ *i*P P 02 40 14.3 +0.3
VSU *i* *PP pP 02 41 53.0 +0.9
VSU pmax pmax
comp=Z,100nm,1.2s,mb5.1
VSU Vasula 59.99 331⇓ *i*P P 02 40 14.4 +0.4
HWUT Hardware Ranch 60.02 60 *e*P P 02 40 14.8 +0.3
comp=Z,16nm,0.7s,mb4.5
K18A Toltan Ranch, 60.02 58 ⇓P P 02 40 13.8 -0.7
baz=60
KBL Kabul 60.04 288 *e*P P 02 40 14.3 -0.4
KBL pmax pmax
comp=Z,149nm,0.9s,mb5.4
KBL Kabul 60.04 288 *e*P P 02 40 14.3 -0.5
comp=Z,149nm,0.9s,mb5.4
S10A Tonopah Range, 60.08 66 ⇑P P 02 40 14.9 -0.1
baz=60
BW06 Boulder Array 60.17 58 ⇓P P 02 40 15.8 +0.3
baz=60
BW06 Boulder Array 60.17 58 *e*P P 02 40 15.5 0.0
comp=Z,7.5nm,0.6s,mb4.3
PDAR Pinedale Array 60.17 57 P P 02 40 16.0 +0.5
comp=Z,15nm,0.8s,mb4.5,baz=4.8,slow=2.4,SNR=16
Q12A Willow Creek R 60.20 64 ⇑P P 02 40 16.6 +0.8
baz=60
P13A Bates Ranch, G 60.33 63 ⇑P P 02 40 17.2 +0.6
baz=60
GRAC Grapevine Rang 60.34 67 ⇓P P 02 40 17.4 +0.7
baz=60
DUG Dugway 60.41 62 ⇓P P 02 40 17.9 +0.8
baz=60
DUG Dugway 60.41 62 *e*P P 02 40 17.6 +0.5
DUG pmax pmax
comp=Z,14nm,0.8s,mb4.4
DUG Dugway 60.41 62 *e*P P 02 40 17.6 +0.4
comp=Z,14nm,0.8s,mb4.4
Q13A Wheeler Ranch, 60.69 63 ⇓P P 02 40 19.8 +0.8
baz=60
ULM Lac du Bonnet 60.73 44 P P 02 40 19.1 +0.1
comp=Z,7.9nm,0.4s,mb4.5,baz=336,slow=12,SNR=6.2
ULM Lac du Bonnet 60.73 44 *e*P P 02 40 18.3 -0.8
comp=Z,216nm,1.8s,mb5.3
S11A Rachel 60.74 65 ⇓P P 02 40 19.0 -0.3
baz=61
MPMC Manual Prospec 60.97 68 ⇑P P 02 40 20.9 0.0
baz=61
FURC Furnace Creek, 61.01 67 ⇑P P 02 40 21.7 +0.6
baz=61,SNR=5.9
Q14A Sevier Lake (B 61.06 63 ⇓P P 02 40 20.9 -0.5
baz=61
O16A Springville 61.08 61 ⇑P P 02 40 22.3 +0.8
baz=61
S12A Delamar Landin 61.25 65 ⇑P P 02 40 23.4 +0.7
baz=61
LRMC Laurel Mountai 61.29 68 ⇓P P 02 40 22.3 -0.7
baz=61
T11A Corn Creek, Al 61.32 65 ⇑P P 02 40 23.7 +0.5
baz=61
BORG Borgarnes 61.44 358 *e*P P 02 40 24.5 +1.0
BORG pmax pmax
comp=Z,98nm,1.2s
BORG Borgarnes 61.44 358 *e*P P 02 40 24.5 +1.0
comp=Z,98nm,1.2s,mb5.1
NB2 NORSAR Subarra 61.46 340 P P 02 40 22.6 -1.1
comp=Z,23nm,0.4s,mb5.0,baz=24,slow=6.5
NOA NORSAR Array B 61.46 340 P P 02 40 23.0 -0.7
comp=Z,31nm,0.7s,mb4.8,baz=27,slow=6.8,SNR=77
EDW2 Edwards Air Fo 61.56 69 ⇓P P 02 40 24.5 -0.3
baz=61,SNR=5.6
NAO01 NORSAR Array S 61.71 340 *e*P P 02 40 24.4 -0.9
HFS Hagfors 61.78 339 P P 02 40 24.8 -0.9
comp=Z,9.0nm,0.3s,mb4.7,baz=27,slow=7.2,SNR=91
HFS Hagfors 61.78 339 P P 02 40 24.8 -0.9
O18A Roosevelt 61.80 60 ⇓P P 02 40 27.1 +0.8
baz=62
RSSD Black Hills 61.83 53 *e*P P 02 40 26.3 -0.1
RSSD pmax pmax
comp=Z,39nm,0.9s,mb4.8
RSSD Black Hills 61.83 53 *e*P P 02 40 26.3 -0.2
comp=Z,39nm,0.9s,mb4.8
DECC Green Verdugo 61.84 70 ⇑P P 02 40 25.9 -0.8
baz=62
GSC Goldstone 61.90 68 ⇓P P 02 40 26.7 -0.3
baz=62
T13A Saint George 62.19 65 ⇓P P 02 40 29.2 +0.4
baz=62
BFSC Mount Baldy Ra 62.22 69 ⇑P P 02 40 29.4 +0.3
baz=62
V11A Goodsprings 62.25 67 ⇓P P 02 40 30.0 +0.7
baz=62,SNR=5.7
N20A Spence Gulch, 62.26 58 ⇑P P 02 40 29.7 +0.5
baz=62
HYA Hoyanger 62.27 343 *e*P P 02 40 29.3 +0.3
HEC Hector,Ludlow 62.51 68 ⇓P P 02 40 31.1 +0.1
baz=62
S15A Panguitch 62.52 63 ⇓P P 02 40 32.4 +1.4
baz=62
R16A Teasdale 62.52 62 ⇓P P 02 40 32.4 +1.4
baz=62
U13A Pakoon Wash 62.61 65 ⇑P P 02 40 31.1 -0.5
baz=62
V12A Nelson 62.65 66 ⇑P P 02 40 32.6 +0.7
baz=62
S16A Weppner Ranch, 62.88 63 ⇑P P 02 40 33.7 +0.4
baz=63
GMRC Granite Mounta 62.91 68 ⇓P P 02 40 33.3 -0.3
baz=63
T15A Red Dirt Ranch 63.00 64 ⇑P P 02 40 34.1 -0.1
baz=63

V13A Grand Canyon W 63.02 66 ⇓P P 02 40 34.2 0.0
baz=63
KONO Kongsberg 63.06 341 eP P 02 40 34.0 -0.1
ASK Askoy 63.09 343 eP P 02 40 33.0 -1.3
Q19A Hogan Spring (63.16 60 ⇓P P 02 40 34.3 -0.8
baz=63
S17A Black Ridge (B 63.36 62 ⇓P P 02 40 37.0 +0.5
baz=63
ABKT Ailbek 63.42 298 P P 02 40 38.9 +2.1
comp=Z,1µm,0.6s,SNR=12
KSM Kuching 63.45 230 eP P 02 40 37.3 0.0
comp=Z,44nm,1.0s,mb4.9
V14A Boquillas Ranc 63.65 65 ⇓P P 02 40 39.3 +1.0
baz=64
IRM Iron Mountain 63.66 68 ⇓P P 02 40 38.7 +0.3
baz=64
BLS5 Blasjo 63.86 342 eP P 02 40 39.1 -0.1
BLS5 Blasjo 63.86 342 eP P 02 40 37.5 -1.8
BC3 Big Chuckawall 63.87 68 ⇓P P 02 40 39.9 +0.1
baz=64
V15A Kaibab Nationa 64.01 64 ⇑P P 02 40 40.6 0.0
baz=64
X13A Yucca 64.05 66 ⇓P P 02 40 39.4 -1.5
baz=64
T18A Mexican Hat 64.22 62 ⇑P P 02 40 41.5 -0.5
baz=64
DVTC Desert V Tower 64.27 69 ⇓P P 02 40 42.0 -0.3
baz=64
EYMN Ely 64.32 43 eP P 02 40 40.8 -1.5
comp=Z,38nm,0.9s,mb4.9
Y13A Salome 64.64 67 ⇓P P 02 40 43.9 -0.7
baz=64
X14A Yava 64.65 66 ⇑P P 02 40 44.5 -0.2
baz=64
WUAZ Wupatki 64.66 64 ⇑P P 02 40 45.0 +0.3
baz=64
WUAZ Wupatki 64.66 64 eP P 02 40 45.2 +0.4
comp=Z,34nm,1.3s,mb4.8
GLA Glamis 64.67 68 ⇓P P 02 40 45.0 +0.2
baz=64
GLA Glamis 64.67 68 eP P 02 40 44.5 -0.4
GLA pmax pmax
comp=Z,68nm,1.6s,mb5.0
GLA Glamis 64.67 68 eP P 02 40 44.5 -0.3
comp=Z,68nm,1.6s,mb5.0
KULM Kulim 64.86 242 eP P 02 40 46.7 +0.4
comp=Z,31nm,0.6s,mb5.1
MVCO Mesa Verde 64.88 61 ⇑P P 02 40 46.9 +0.8
baz=65
V17A Tonalea, Kykot 64.89 64 ⇑P P 02 40 47.2 +1.0
baz=65
S21A Coal Bank Pass 64.90 60 ⇓P P 02 40 47.0 +0.8
baz=65
T19A Beclabito 64.90 62 ⇑P P 02 40 45.9 -0.4
baz=65
GOF Gofitskoye 65.10 313 eP P 02 40 55.3 +7.9
KAPI Kappang 65.45 218 P P 02 40 49.4 -0.6
comp=Z,14nm,0.8s,mb4.6,baz=317,slow=12,SNR=4.3
X16A Lo Mia Camp, P 65.46 65 ⇓P P 02 40 50.6 +0.7
baz=65
U20A Newcomb 65.50 62 ⇓P P 02 40 48.6 -1.5
baz=65
T21A Navajo Lake 65.54 60 ⇓P P 02 40 50.8 +0.5
baz=65
S23A Nye Farm, Mont 65.77 59 ⇑P P 02 40 50.9 -0.8
baz=66
AKASG Malin Array Be 65.78 325 P P 02 40 50.2 -1.3
comp=Z,7.7nm,0.3s,mb4.8,baz=29,slow=6.9,SNR=39
AKASG Malin Array Be 65.78 325 P P 02 40 50.2 -1.4
AKBB Malin Array Si 65.78 325 eP P 02 40 50.9 -0.6
KIEV Kiev 65.79 325 eP P 02 40 50.2 -1.4
KIEV pmax pmax
comp=Z,61nm,1.0s,mb5.2
KIEV Kiev 65.79 325 eP P 02 40 50.2 -1.4
comp=Z,61nm,1.0s,mb5.2
114A Black Gap (USA 65.96 67 ⇓P P 02 40 52.6 -0.4
baz=66
W19A Sanders 66.02 63 ⇑P P 02 40 53.9 +0.5
baz=66
KIV Kislovodsk 66.12 313 ⇑iP P 02 40 54.9 +1.1
KIV e 02 43 26.2
KIV pmax pmax
comp=Z,105nm,2.0s,mb5.1
KIV Kislovodsk 66.12 313 eP P 02 40 54.2 +0.4
comp=Z,42nm,0.8s,mb5.1
X18A Snowflake 66.17 64 ⇓P P 02 40 54.8 +0.6
baz=66
Z16A Peralta Trail, 66.29 66 ⇑P P 02 40 55.4 +0.3
baz=66
SCHQ Schefferville 66.37 24 P P 02 40 54.3 -0.8
comp=Z,10nm,0.3s,mb4.9,baz=324,slow=8.1,SNR=15
X19A St. Johns 66.60 63 ⇑P P 02 40 57.6 +0.7
baz=66
Y18A Canyon Day Jun 66.70 64 ⇓P P 02 40 58.3 +0.7
baz=66
U23A El Rito 66.74 60 ⇑P P 02 40 58.7 +1.0
baz=67
116A Eloy 66.74 66 ⇑P P 02 40 58.0 +0.2
baz=67
117A Oracle 67.25 66 ⇓P P 02 41 01.2 +0.2
baz=67
118A Homack Ranch, 67.61 65 ⇑P P 02 41 02.9 -0.3
baz=67
SOC Sochi 67.70 314 eP P 02 41 02.1 -1.4
SOC eS S 02 49 27.3 +5.5
SOC e 02 50 15.9
SOC pmax pmax
comp=Z,126nm,1.4s,mb5.3
PSI Prapat 67.87 242 P P 02 41 05.3 +0.3
comp=Z,26nm,0.7s,mb5.0,baz=19,slow=5.6,SNR=10
GNI Garni 68.25 309 P P 02 41 09.3 +2.3
comp=Z,20nm,0.8s,mb4.8,baz=6.5,slow=4.0,SNR=6.6
GNI Garni 68.25 309⇓eP P 02 41 09.3 +2.3
GNI pmax pmax
comp=Z,89nm,1.2s
GNI Garni 68.25 309 eP P 02 41 08.0 +1.0
comp=Z,72nm,1.1s,mb5.2
COEN Coen 68.39 191 eP P 02 41 07.1 -0.9
comp=Z,187nm,0.6s,mb5.9
120A U Bar Ranch, L 68.40 64 ⇑P P 02 41 06.6 -1.5
baz=68
KWP Kalwaria Pacla 68.81 328 ⇑P P 02 41 10.1 -0.1
KWP Kalwaria Pacla 68.81 328 ⇑iP P 02 41 10.1 -0.1
KAKA Kakadu 69.00 203 eP P 02 41 11.1 -0.7
comp=Z,90nm,0.6s,mb5.5
KIS Kishinev 69.07 323 eUNK P 02 41 10.0 -1.9
KIS Kishinev 69.07 323 eP P 02 41 10.0 -1.9
KIS e 02 49 35.0
KIS e 02 50 08.0
EKA Eskdalemuir Ar 69.33 346 P P 02 41 12.3 -0.9
comp=Z,22nm,0.5s,mb4.9,baz=16,slow=5.1,SNR=57
ESK Eskdalemuir 69.35 346 eP P 02 41 12.5 -0.8
ESK pmax pmax
comp=Z,23nm,0.6s,mb4.9
ESK Eskdalemuir 69.35 346 eP P 02 41 12.5 -0.9
comp=Z,23nm,0.6s,mb4.9
STHS Stebnicka Huta 69.45 329 eP P 02 41 13.8 -0.3
STHS pmax pmax
comp=Z,65nm,1.5s,mb4.9
STHS Stebnicka Huta 69.45 329 eP P 02 41 13.8 -0.3
comp=Z,65nm,1.5s,mb4.9
STHS e 02 49 40.7
STHS Stebnicka Huta 69.45 329 eP P 02 41 13.8 -0.3
STHS e 02 49 40.7
BUR08 Bucovina Ar. S 69.75 326 eP P 02 41 15.3 -0.6
BURAR Bucovina Array 69.77 326 ⇑P P 02 41 15.6 -0.4
BURAR Bucovina Array 69.77 326 ⇑iP P 02 41 15.6 -0.4
CRVS Cervenica-Dubn 69.84 329 eP P 02 41 15.8 -0.6
CRVS pmax pmax
comp=Z,572nm,2.7s,mb5.6
CRVS Cervenica-Dubn 69.84 329 eP P 02 41 15.8 -0.6
comp=Z,572nm,2.7s,mb5.6
CRVS e 02 49 18.5
CRVS Cervenica-Dubn 69.84 329 eP P 02 41 15.4 -1.0
CRVS e 02 49 18.5
OKC Ostrava-Krasne 69.98 331 eP P 02 41 16.4 -0.8
CLL Collm 70.01 335 ⇑iP P 02 41 16.9 -0.5
CLL e*SP sP 02 43 50.0 -0.7
CLL pmax pmax
comp=Z,74nm,1.1s,mb5.1
CLL Collm 70.01 335 ⇑iP P 02 41 16.9 -0.5
CLL esP sP 02 43 50.0 -0.7
CLL Collm 70.01 335 ⇑iP P 02 41 16.9 -0.5
comp=Z,74nm,1.1s,mb5.1
CLL e(sP) sP 02 43 50.0 -0.7
CLL ePP PP 02 44 01.0 +1.4

DPC Dobruska-Polom 70.02 333 eP P 02 41 17.8 +0.3
BRG Berggiesshubel 70.17 334 eP P 02 41 16.7 -1.6
comp=Z,56nm,1.5s,mb4.9
BRG Berggiesshubel 70.17 334 eP P 02 41 16.7 -1.6
BRG pmax pmax
comp=Z,34nm,1.5s,mb4.7
TRPA Tarpa 70.19 328⇓iP P 02 41 18.8 +0.3
MORC Moravsky Berou 70.20 332 ⇓P P 02 41 18.5 -0.1
MORC Moravsky Berou 70.20 332 eP P 02 41 18.3 -0.3
comp=Z,36nm,0.9s,mb4.9
MORC Moravsky Berou 70.20 332⇓iP P 02 41 18.5 -0.1
KECS Kecovo 70.51 329 eP P 02 41 19.3 -1.1
KECS pmax pmax
comp=Z,25nm,1.5s,mb4.5
KECS Kecovo 70.51 329 eP P 02 41 19.3 -1.1
comp=Z,25nm,1.5s,mb4.5
KECS e 02 49 13.7
KECS Kecovo 70.51 329 eP P 02 41 19.3 -1.1
KECS e 02 49 13.7
TLCR 70.63 322 ⇓P P 02 41 20.8 -0.4
TLCR ⇓P 02 49 14.5
TLCR 70.63 322⇓iP P 02 41 20.8 -0.4
MNTX Cornudas Mount 70.77 63 eP P 02 41 21.9 -0.4
comp=Z,7.9nm,0.6s,mb4.4
PRU Pruhonice 70.82 334 eP P 02 41 22.9 +0.7
CFR Carcaliu 70.88 323 ⇓P P 02 41 22.1 -0.5
CFR ⇑P 02 49 14.0
CFR Carcaliu 70.88 323⇓iP P 02 41 22.1 -0.6
VRAC Vranov 70.89 332 P P 02 41 23.1 +0.5
comp=Z,18nm,0.7s,mb4.7,baz=13,slow=7.9,SNR=7.2
VRAC Vranov 70.89 332 P P 02 41 23.1 +0.5
VRAC pmax pmax
comp=Z,18nm,0.7s
VRAC Vranov 70.89 332 ⇑P P 02 41 22.8 +0.2
VRAC Vranov 70.89 332⇑iP P 02 41 22.8 +0.2
VYHS Vyhne 70.99 330 eP P 02 41 23.0 -0.2
VYHS pmax pmax
comp=Z,67nm,1.6s,mb4.9
VYHS Vyhne 70.99 330 eP P 02 41 23.0 -0.2
comp=Z,67nm,1.6s,mb4.9
VYHS e 02 49 06.3
VYHS Vyhne 70.99 330 eP P 02 41 23.0 -0.2
VYHS e 02 49 06.3
KOLL Kolacno 71.04 331 eP P 02 41 22.4 -1.1
KOLL e 02 49 09.8
KOLL Kolacno 71.04 331 eP P 02 41 22.4 -1.1
KOLL e 02 49 09.8
PSZ Piszkesteto 71.19 329 eP P 02 41 25.0 +0.6
PSZ pmax pmax
comp=Z,39nm,1.1s,mb4.8
PSZ Piszkesteto 71.19 329 eP P 02 41 25.0 +0.5
comp=Z,39nm,1.1s,mb4.8
SMOL Smolenice 71.38 331 eP P 02 41 25.6 +0.1
SMOL Smolenice 71.38 331 eP P 02 41 25.6 +0.1
MLR Muntele Rosu 71.38 324 P P 02 41 26.3 +0.7
comp=Z,18nm,0.5s,mb4.8,baz=323,slow=8.3,SNR=7.1
MLR Muntele Rosu 71.38 324 ⇓P P 02 41 24.8 -0.8
MLR ⇑P 02 49 07.4
MLR Muntele Rosu 71.38 324⇓iP P 02 41 24.8 -0.8
TIRR Tirgusor 71.40 322 ⇓P P 02 41 25.4 -0.3
TIRR ⇑P 02 49 08.7
TIRR Tirgusor 71.40 322⇓iP P 02 41 25.5 -0.3
WMOK Wichita Mounta 71.69 56 eP P 02 41 26.9 -0.7
WMOK pmax pmax
comp=Z,31nm,1.0s,mb4.8
WMOK Wichita Mounta 71.69 56 eP P 02 41 26.9 -0.8
comp=Z,31nm,1.0s,mb4.8
VOIR 71.73 325 ⇓P P 02 41 28.0 +0.3
VOIR ⇓P 02 49 09.0
VOIR 71.73 325⇓iP P 02 41 28.0 +0.3
KHC Kasperske Hory 71.86 334⇓eP P 02 41 29.2 +0.9
KHC Kasperske Hory 71.86 334 eP P 02 41 28.4 +0.1
BEBN Eben Emael 72.15 339 P P 02 41 30.1 +0.1
MEM Membach 72.26 339 P P 02 41 30.1 -0.5
comp=Z,34nm,1.2s,mb4.8
328A Wristen Ranch, 72.36 61 ⇓P P 02 41 31.6 0.0
baz=72
UCC Uccle 72.42 340 P P 02 41 31.4 -0.2
BCLA Clavier 72.58 340 P P 02 41 32.0 -0.5
comp=Z,67nm,3.1s
TOD Tromm 72.59 337 eP P 02 41 32.8 +0.2
ABH Alteburg 72.61 338 eP P 02 41 33.0 +0.3
SNF Seneffe 72.71 340 P P 02 41 32.4 -0.8
comp=Z,50nm,2.8s,mb4.6
526A Mary Lane Ranc 72.74 63 ⇓P P 02 41 33.3 -0.6
baz=73
527A Woodward Ranch 72.93 62 ⇓P P 02 41 35.0 +0.2
baz=73
428A Kincaid Ranch, 72.94 61 ⇑P P 02 41 35.1 +0.2
baz=73
GIVF Givet 72.98 340 eP P 02 41 33.8 -1.0
DOU Dourbes 73.04 340 P P 02 41 33.9 -1.2
comp=Z,54nm,2.9s,mb4.6
MENF Mencas 73.07 342 eP P 02 41 35.4 +0.1
BAIF Baives 73.15 340 eP P 02 41 34.9 -0.9
comp=Z,39nm,0.6s,mb4.8
BAIF Baives 73.15 340 eP P 02 41 34.9 -0.9
BAIF pmax pmax
comp=Z,20nm,0.6s,mb4.8
BAIF Baives 73.15 340 eP P 02 41 34.9 -0.9
comp=Z,20nm,0.6s,mb4.8
STU Stuttgart 73.28 336 eP P 02 41 36.7 +0.2
STU pmax pmax
comp=Z,48nm,1.1s,mb4.9
STU Stuttgart 73.28 336 eP P 02 41 36.7 +0.1
comp=Z,48nm,1.1s,mb4.9
528A Cox Ranch, San 73.34 62 ⇓P P 02 41 37.4 +0.2
baz=73
BR131 Keskin Array S 73.43 316 eP P 02 41 38.0 +0.4
comp=Z,34nm,1.0s,mb4.8
BRTR Keskin Array B 73.43 316 P P 02 41 37.5 -0.1
comp=Z,24nm,0.9s,mb4.7,baz=38,slow=1.5,SNR=13
TXAR Lajitas Array 73.54 63 P P 02 41 39.0 +0.6
comp=Z,19nm,0.8s,mb4.7,baz=301,slow=5.4,SNR=8.2
TXAR Lajitas Array 73.54 63 P P 02 41 39.0 +0.6
CDF Champ du Feu 74.06 338 eP P 02 41 40.1 -0.9
comp=Z,81nm,1.0s,mb4.9
CDF Champ du Feu 74.06 338 eP P 02 41 40.1 -0.9
CDF pmax pmax
comp=Z,41nm,1.0s,mb4.9
CDF Champ du Feu 74.06 338 eP P 02 41 40.1 -0.9
comp=Z,41nm,1.0s,mb4.9
CTA Charters Tower 74.16 187 P P 02 41 41.8 -0.1
comp=Z,36nm,1.0s,mb4.9,baz=360,slow=9.4,SNR=6.5
CTAO Charters Tower 74.16 187 eP P 02 41 40.4 -1.4
CTAO pmax pmax
comp=Z,66nm,1.3s,mb5.0
CTAO Charters Tower 74.16 187 eP P 02 41 40.4 -1.4
comp=Z,66nm,1.3s,mb5.0
ECH Echery 74.27 338 eP P 02 41 42.5 +0.3
PALK Pallekele 74.32 261 eP P 02 41 42.8 -0.2
PALK pmax pmax
comp=Z,50nm,1.2s,mb4.9
PALK Pallekele 74.32 261 eP P 02 41 42.8 -0.2
comp=Z,50nm,1.2s,mb4.9
FELD Feldberg im Sc 74.40 337 eP P 02 41 43.0 +0.1
MEZF Maizieres J'vi 74.46 339 eP P 02 41 42.5 -0.8
comp=Z,106nm,0.9s,mb5.1
MEZF Maizieres J'vi 74.46 339 eP P 02 41 42.5 -0.8
comp=Z,106nm,0.9s,mb5.4
THEF They Montfort 74.52 338 eP P 02 41 43.9 +0.3
HAU Haudompre 74.65 338 eP P 02 41 43.2 -1.1
comp=Z,29nm,0.6s,mb4.7
HAU Haudompre 74.65 338 eP P 02 41 43.2 -1.1
HAU pmax pmax
comp=Z,15nm,0.6s,mb4.7
HAU Haudompre 74.65 338 eP P 02 41 43.2 -1.1
comp=Z,15nm,0.6s,mb4.7
HINF Hinteralfeld 74.71 338 eP P 02 41 43.4 -1.3
VTS Vitosha 74.87 325 ⇑P P 02 41 46.2 +0.5
VTS Vitosha 74.87 325⇑iP P 02 41 46.2 +0.5
DAVOX Davos/Dischmat 74.98 335 P P 02 41 47.3 +1.1
comp=Z,20nm,0.5s,mb4.9,baz=332,slow=3.2,SNR=13
LDF La Druitiere 75.37 343 eP P 02 41 47.0 -1.4
comp=Z,23nm,0.5s,mb4.7
LDF La Druitiere 75.37 343 eP P 02 41 47.0 -1.4
LDF pmax pmax
comp=Z,12nm,0.5s,mb4.7
LDF La Druitiere 75.37 343 eP P 02 41 47.0 -1.4
comp=Z,12nm,0.5s,mb4.7
WRAB Tennant Creek 75.62 199 eP P 02 41 49.2 -0.8
WRAB pmax pmax
comp=Z,21nm,0.6s,mb4.8
WRAB Tennant Creek 75.62 199 eP P 02 41 49.2 -0.8
comp=Z,21nm,0.6s,mb4.8

WRA Warramunga Arr 75.63 199 P P 02 41 49.5 -0.6
comp=Z,27nm,0.5s,mb5.0,baz=16,slow=5.8,SNR=25
WRA Warramunga Arr 75.63 199 P P 02 41 49.5 -0.6
GRR Gorron 75.70 343 eP P 02 41 49.3 -0.9
comp=Z,208nm,1.1s,mb5.3
GRR Gorron 75.70 343 eP P 02 41 49.3 -0.9
GRR pmax pmax
comp=Z,104nm,1.1s,mb5.3
GRR Gorron 75.70 343 eP P 02 41 49.3 -0.9
comp=Z,104nm,1.1s,mb5.3
NAY Al-Naaiem 75.82 300 eP P 02 41 49.6 -1.6
NAY AMb AMB 02 41 51.8
comp=Z,108nm,1.1s,mb5.3
LOR Lormes 75.88 339 eP P 02 41 50.1 -1.1
comp=Z,107nm,0.8s,mb5.1
LOR Lormes 75.88 339 eP P 02 41 50.1 -1.1
LOR pmax pmax
comp=Z,54nm,0.8s,mb5.1
LOR Lormes 75.88 339 eP P 02 41 50.1 -1.1
comp=Z,54nm,0.8s,mb5.1
FITZ Fitzroy Crossi 75.88 208 P P 02 41 50.9 -0.6
comp=Z,18nm,0.6s,mb4.8,baz=290,slow=1.9,SNR=9.4
RDF Al-Radifah 75.92 300 eP P 02 41 51.4 -0.4
RDF AMb AMB 02 41 54.0
comp=Z,360nm,1.2s,mb5.8
CABF La Chapelle 76.03 338 eP P 02 41 51.3 -0.8
comp=Z,115nm,1.2s,mb5.0
CABF La Chapelle 76.03 338 eP P 02 41 51.3 -0.8
CABF pmax pmax
comp=Z,57nm,1.2s,mb5.0
CABF La Chapelle 76.03 338 eP P 02 41 51.3 -0.8
comp=Z,58nm,1.2s,mb5.0
SGMF Saint Gilles 76.11 344 eP P 02 41 51.5 -1.0
comp=Z,77nm,0.8s,mb5.0
SGMF Saint Gilles 76.11 344 eP P 02 41 51.5 -1.0
SGMF pmax pmax
comp=Z,39nm,0.8s,mb5.0
SGMF Saint Gilles 76.11 344 eP P 02 41 51.5 -1.0
comp=Z,39nm,0.8s,mb5.0
HYF Humbligny 76.13 340 eP P 02 41 52.0 -0.6
ROSF Rostrenen 76.15 345 eP P 02 41 51.8 -0.9
comp=Z,223nm,1.2s,mb5.2
ROSF Rostrenen 76.15 345 eP P 02 41 51.8 -0.9
ROSF pmax pmax
comp=Z,112nm,1.2s,mb5.3
ROSF Rostrenen 76.15 345 eP P 02 41 51.8 -0.9
comp=Z,112nm,1.2s,mb5.3
SSF Saint Saulge 76.15 340 eP P 02 41 51.6 -1.1
comp=Z,56nm,0.7s,mb4.9
SSF Saint Saulge 76.15 340 eP P 02 41 51.6 -1.1
SSF pmax pmax
comp=Z,28nm,0.7s,mb4.9
SSF Saint Saulge 76.15 340 eP P 02 41 51.6 -1.1
comp=Z,28nm,0.7s,mb4.9
AVF Avril sur Loir 76.44 340 eP P 02 41 53.4 -0.9
comp=Z,86nm,0.7s,mb5.1
AVF Avril sur Loir 76.44 340 eP P 02 41 53.4 -0.9
AVF pmax pmax
comp=Z,43nm,0.7s,mb5.1
AVF Avril sur Loir 76.44 340 eP P 02 41 53.4 -0.9
comp=Z,43nm,0.7s,mb5.1
SMF Signal de Mont 76.48 339 eP P 02 41 53.6 -1.0
comp=Z,121nm,1.1s,mb5.0
SMF Signal de Mont 76.48 339 eP P 02 41 53.6 -1.0
SMF pmax pmax
comp=Z,60nm,1.1s,mb5.0
SMF Signal de Mont 76.48 339 eP P 02 41 53.6 -1.0
comp=Z,60nm,1.1s,mb5.0
QUIF Quistinic 76.54 344 eP P 02 41 53.8 -1.1
comp=Z,239nm,1.2s,mb5.3
QUIF Quistinic 76.54 344 eP P 02 41 53.8 -1.1
QUIF pmax pmax
comp=Z,119nm,1.2s,mb5.3
QUIF Quistinic 76.54 344 eP P 02 41 53.8 -1.1
comp=Z,119nm,1.2s,mb5.3
BGF Bois d'Agland 76.76 340 eP P 02 41 55.2 -0.9
comp=Z,50nm,0.6s,mb4.9
BGF Bois d'Agland 76.76 340 eP P 02 41 55.2 -0.9
BGF pmax pmax
comp=Z,25nm,0.6s,mb4.9
BGF Bois d'Agland 76.76 340 eP P 02 41 55.2 -0.9
comp=Z,25nm,0.6s,mb4.9
LPL La Plagne 76.91 337 eP P 02 41 57.0 0.0
comp=Z,84nm,0.8s,mb5.0
LPL La Plagne 76.91 337 eP P 02 41 57.0 0.0
LPL pmax pmax
comp=Z,42nm,0.8s,mb5.0
LPL La Plagne 76.91 337 eP P 02 41 57.0 0.0
comp=Z,42nm,0.8s,mb5.0
LPG La Plagne 76.93 337 eP P 02 41 57.2 +0.1
comp=Z,226nm,1.1s,mb5.3
LPG La Plagne 76.93 337 eP P 02 41 57.2 +0.1
LPG pmax pmax
comp=Z,113nm,1.1s,mb5.3
LPG La Plagne 76.93 337 eP P 02 41 57.2 +0.1
comp=Z,113nm,1.1s,mb5.3
TIR Tirane 77.10 326 eP P 02 41 56.7 -1.4
TIR pmax pmax
comp=Z,60nm,0.9s,mb5.1
TIR Tirane 77.10 326 eP P 02 41 56.7 -1.4
comp=Z,60nm,0.9s,mb5.1
TCF Toulx Ste Croi 77.15 340 eP P 02 41 57.5 -0.8
comp=Z,66nm,0.7s,mb5.0
TCF Toulx Ste Croi 77.15 340 eP P 02 41 57.5 -0.8
TCF pmax pmax
comp=Z,33nm,0.7s,mb5.0
TCF Toulx Ste Croi 77.15 340 eP P 02 41 57.5 -0.8
comp=Z,33nm,0.7s,mb5.0
PLDF La Plantade 77.17 339 eP P 02 41 59.2 +0.8
AGO Saint Agoulin 77.19 340 eP P 02 41 59.6 +1.1
MFF Saint Martin d 77.30 342 eP P 02 41 58.4 -0.6
comp=Z,112nm,0.8s,mb5.1
MFF Saint Martin d 77.30 342 eP P 02 41 58.4 -0.6
MFF pmax pmax
comp=Z,56nm,0.8s,mb5.2
MFF Saint Martin d 77.30 342 eP P 02 41 58.4 -0.6
comp=Z,56nm,0.8s,mb5.2
BNI Bardonecchia 77.36 337 eP P 02 41 59.6 +0.1
BNI pmax pmax
comp=Z,30nm,0.8s,mb4.9
BNI Bardonecchia 77.36 337 eP P 02 41 59.6 +0.1
comp=Z,30nm,0.8s,mb4.9
PYM Petit Puy Mans 77.50 340 eP P 02 42 00.5 +0.3
CSS Prodhromos 77.61 314 eP P 02 41 59.2 -1.7
comp=Z,58nm,0.9s,mb5.0
MBDF Montbardon 77.65 337 eP P 02 42 00.3 -0.7
ORIF Oris-en-Rattie 77.67 337 eP P 02 41 59.9 -1.2
comp=Z,68nm,0.8s,mb4.8
ORIF Oris-en-Rattie 77.67 337 eP P 02 41 59.9 -1.2
ORIF pmax pmax
comp=Z,34nm,0.8s,mb4.8
ORIF Oris-en-Rattie 77.67 337 eP P 02 41 59.9 -1.2
comp=Z,34nm,0.8s,mb4.8
VIVF Saint-Julien-l 78.00 338 eP P 02 42 02.5 -0.4
comp=Z,186nm,1.2s,mb5.1
VIVF Saint-Julien-l 78.00 338 eP P 02 42 02.5 -0.4
VIVF pmax pmax
comp=Z,93nm,1.2s,mb5.1
VIVF Saint-Julien-l 78.00 338 eP P 02 42 02.5 -0.4
comp=Z,93nm,1.2s,mb5.1
AQU L'Aquila 78.15 331 eP P 02 42 03.3 -0.5
AQU pmax pmax
comp=Z,85nm,1.0s,mb5.1
AQU L'Aquila 78.15 331 eP P 02 42 03.3 -0.5
comp=Z,85nm,1.0s,mb5.1
SAOF Saorge 78.16 336 eP P 02 42 04.7 +0.9
AUTN L'Aution 78.19 336 eP P 02 42 03.5 -0.4
TOUF Mont Tournerai 78.21 336 eP P 02 42 04.2 +0.1
RJF Les Rejaudoux 78.23 340 eP P 02 42 03.7 -0.4
comp=Z,116nm,1.0s,mb5.0
RJF Les Rejaudoux 78.23 340 eP P 02 42 03.7 -0.4
RJF pmax pmax
comp=Z,58nm,1.0s,mb5.0
RJF Les Rejaudoux 78.23 340 eP P 02 42 03.7 -0.4
comp=Z,58nm,1.0s,mb5.0
LUCF Luceram 78.30 336 eP P 02 42 04.2 -0.3
SBF Sospel 78.31 336 eP P 02 42 03.4 -1.2
MVIF Mont Vial 78.35 336 eP P 02 42 04.9 +0.1
MMAI Mount Meron Ar 78.36 311 P P 02 42 05.0 -0.1
comp=Z,27nm,0.5s,mb4.9,baz=46,slow=7.3,SNR=30
REVF Revere 78.44 336 eP P 02 42 05.3 0.0
CAF Calviac 78.48 340 eP P 02 42 05.3 -0.2
comp=Z,116nm,0.9s,mb5.0
CAF Calviac 78.48 340 eP P 02 42 05.3 -0.2
CAF pmax pmax
comp=Z,58nm,0.9s,mb5.0

CAF Calviac 78.48 340 *eP* **P 02 42 05.3 -0.2**
comp=Z,58nm,0.9s,mb5.0
CALN Calern 78.54 336 *eP* **P 02 42 06.1 +0.3**
SMRF Simiane la Rot 78.64 337 *eP* **P 02 42 06.4 +0.1**
LFF La Frestale 78.73 341 *eP* **P 02 42 06.5 -0.3**
comp=Z,111nm,0.7s,mb5.2
LFF La Frestale 78.73 341 *eP* **P 02 42 06.5 -0.3**
LFF pmax pmax
comp=Z,56nm,0.7s,mb5.2
LFF La Frestale 78.73 341 *eP* **P 02 42 06.5 -0.3**
comp=Z,56nm,0.7s,mb5.2
FRF La Foret Royal 78.78 336 *eP* **P 02 42 06.0 -1.1**
LASF Ste Croix 78.92 339 *eP* **P 02 42 07.7 -0.2**
comp=Z,45nm,1.0s,mb4.6
LMR La Mourre 79.03 336 *eP* **P 02 42 07.5 -0.9**
comp=Z,146nm,1.2s,mb5.1
LMR La Mourre 79.03 336 *eP* **P 02 42 07.5 -0.9**
LMR pmax pmax
comp=Z,73nm,1.2s,mb5.1
LMR La Mourre 79.03 336 *eP* **P 02 42 07.5 -0.9**
comp=Z,73nm,1.2s,mb5.1
MTLF Montolieu 79.97 339 *eP* **P 02 42 13.1 -0.3**
comp=Z,166nm,1.4s,mb5.1
MTLF Montolieu 79.97 339 *eP* **P 02 42 13.1 -0.3**
MTLF pmax pmax
comp=Z,83nm,1.4s,mb5.1
MTLF Montolieu 79.97 339 *eP* **P 02 42 13.1 -0.3**
comp=Z,83nm,1.4s,mb5.1
EPF Esparros 80.65 341 *eP* **P 02 42 15.8 -1.2**
ETSF Etsaut 80.95 341 *eP* **P 02 42 18.4 -0.1**
comp=Z,143nm,1.1s,mb5.1
ETSF Etsaut 80.95 341 *eP* **P 02 42 18.4 -0.1**
ETSF pmax pmax
comp=Z,71nm,1.1s,mb5.1
ETSF Etsaut 80.95 341 *eP* **P 02 42 18.4 -0.1**
comp=Z,71nm,1.1s,mb5.1
ESDC Sonseca Array 84.69 343 P **P 02 42 36.8 -0.7**
comp=Z,20nm,0.8s,mb4.8,baz=8.0,slow=4.7,SNR=13
KEST Kesra 85.46 332 P **P 02 42 42.0 +0.7**
comp=Z,17nm,0.6s,mb4.9,baz=323,slow=4.7,SNR=13
FORT Forrest 87.43 202 *eP* **P 02 42 49.2 -1.2**
comp=Z,56nm,0.7s,mb5.4
JTS JuntasAbangare 98.99 59c*eP* Pdif 02 43 39.8 -3.8
JTS JuntasAbangare 98.99 59¶*eP* Pdif 02 43 39.9 -3.7
DBIC Dimbokro 116.89 336 PKP PKPdf 02 48 42.9 -1.9
comp=Z,4.3nm,0.6s,baz=43,slow=4.6,SNR=7.6
LSZ Lusaka 122.93 291 PKP PKPdf 02 48 56.0 -0.1
comp=Z,3.8nm,0.5s,baz=38,slow=5.0,SNR=7.5
LSZ Lusaka 122.93 291 *e*PKPdf PKPdf 02 48 54.9 -1.3
LPAZ La Paz 130.19 57 PKP PKPdf 02 49 10.4 +0.5
comp=Z,7.2nm,1.1s,baz=328,slow=23,SNR=1.8
TSUM Tsumeb 131.83 299 PKhKP 02 49 04.6
comp=Z,1.9nm,0.7s,baz=58,slow=20,SNR=1.5
TSUM Tsumeb 131.83 299 PKP 02 49 04.6
TSUM *e*PKPdf PKPdf 02 49 13.2 +0.2
LBTB Lobatse 132.17 286 PKP PKPdf 02 49 14.2 +0.7
comp=Z,10nm,0.8s,baz=178,slow=18,SNR=6.5
BOSA Boshof 135.12 283 PKhKP 02 49 11.1
comp=Z,3.4nm,0.8s,baz=29,slow=17,SNR=1.3
BOSA PKP PKPdf 02 49 19.8 +0.8
comp=Z,5.7nm,0.6s,baz=76,slow=4.8,SNR=5.2
BOSA SKP 02 52 01.6
comp=Z,6.0nm,0.7s,baz=83,slow=2.6,SNR=6.1
BOSA Boshof 135.12 283 PKP 02 49 11.1
BOSA *e*PKPdf PKPdf 02 49 19.3 +0.4
MAW Mawson 138.63 215 PKP PKPdf 02 49 22.4 -1.8
comp=Z,6.2nm,0.8s,baz=306,slow=5.9,SNR=2.4
SUR Sutherland 140.47 284 PKhKP 02 49 22.7
comp=Z,11nm,0.8s,baz=31,slow=19,SNR=2.1
SUR Sutherland 140.47 284 PKP 02 49 22.7
SUR *e*PKPdf PKPdf 02 49 27.7 -0.9
CFAA Coronel Fontan 142.56 70 PKhKP 02 49 27.6
comp=Z,3.3nm,0.8s,baz=258,slow=2.0,SNR=36
CFAA SKP 02 52 20.1
comp=Z,1.0nm,0.7s,baz=303,slow=4.0,SNR=12
QSPA South Pole Qui 143.83 180 PKhKP 02 49 29.7
comp=Z,33nm,0.7s,baz=244,slow=2.3,SNR=28
QSPA SKP 02 52 23.4
comp=Z,12nm,1.0s,baz=356,slow=4.6,SNR=6.6
QSPA South Pole Qui 143.83 180 *e*PKPdf PKPdf 02 49 29.7 -3.5
CPUP Villa Florida 143.94 52 PKP PKPdf 02 49 32.4 -2.5
comp=Z,18nm,0.5s,baz=323,slow=2.4,SNR=52
CPUP SKP 02 52 25.6
comp=Z,2.7nm,0.8s,baz=51,slow=3.7,SNR=3.1
CPUP Villa Florida 143.94 52 PKP PKPdf 02 49 32.4 -2.6
CPUP SKP 02 52 25.6
SPB Sao Paulo 145.58 36 *e*PKPbc PKPbc 02 49 37.9 -1.2
PLCA Paso Flores 147.64 84 PKP PKPdf 02 49 41.1 +0.4
comp=Z,12nm,0.9s,baz=335,slow=3.3,SNR=4.4
PLCA PKPbc PKPbc 02 49 44.7 +0.5
comp=Z,7.0nm,0.8s,baz=328,slow=4.8,SNR=7.7
PLCA Paso Flores 147.64 84 PKP PKPdf 02 49 41.1 +0.4
PLCA PKPbc PKPbc 02 49 44.7 +0.5
PMSA Palmer Station 158.29 135 *e*PKPdf PKPdf 02 49 52.5 -2.7
PMSA *e*PKPab PKPab 02 50 30.9 -1.9

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*IDC **05** 02:55:14.6±0.9, 11°.19N×143°.28E, h0km, mb4.2/11, mb1 4.3/11, mb1mx4.1/24, mbtmp4.2/11, Error ellipse: s-maj=33.9km s-min=20.4km az=90.0*
*ISCJB **05** 02:55:17.7±0.7, 11°.2N±0°.1×143°.3E±0°.1, h33km, mb4.2/11, Error ellipse: s-maj=22.3km s-min=9.4km az=34.6*
*NEIC **05** 02:55:19.7±0.6, 11°.20N×143°.32E, h35km, mb4.5/1, Error ellipse: s-maj=20.4km s-min=12.6km az=114.0*
ISC 05 02:55:17.0±6.7, 11°.2N±0°.1×143°.3E±0°.1, h15km±41km, n14, σ0s77/15, mb4.2/11, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.78**	**32**	*e*Pn	**Pn**	**02 56 01.1**	**+0.1**
GUMO				*e*Sn	**Sn**	**02 56 33.5**	**-0.7**
WRA	**Warramunga Arr**	**32.22**	**196**	P	**P**	**03 01 43.8**	**-0.9**
	2.5nm,0.6s,mb4.2,baz=19,slow=9.7,SNR=15						
ASAR	**Alice Springs**	**35.88**	**195**	P	**P**	**03 02 16.5**	**0.0**
	1.0nm,0.7s,mb3.9,baz=29,slow=11,SNR=6.6						
CMAR	**Chiang Mai Arr**	**43.43**	**285**	P	**P**	**03 03 19.2**	**-0.4**
	1.2nm,0.5s,mb3.9,baz=87,slow=5.1,SNR=2.5						
MKAR	**Makanchi Array**	**62.17**	**317**	P	**P**	**03 05 38.1**	**+0.5**
	0.8nm,0.5s,mb4.1,baz=94,slow=7.7,SNR=6.3						
ZALV	**Zalesovo Beam**	**62.69**	**325**	P	**P**	**03 05 40.8**	**-0.2**
	1.0nm,0.5s,mb4.2,baz=130,slow=5.8,SNR=3.1						
KURK	**Kurchatov**	**65.44**	**321**	P	**P**	**03 05 59.6**	**+0.4**
	2.4nm,0.5s,mb4.5,baz=107,slow=6.7,SNR=10						
KURK	**Kurchatov**	**65.44**	**321**	*e*P	**P**	**03 05 58.6**	**-0.6**
	2.6nm,0.6s,mb4.4						
BVAR	**Borovoye Array**	**70.86**	**322**	P	**P**	**03 06 32.8**	**-0.4**
	1.6nm,0.5s,mb4.2,baz=105,slow=8.3,SNR=5.6						
YKA	**Yellowknife Ar**	**85.63**	**27**	P	**P**	**03 07 53.6**	**-1.0**
	0.4nm,0.5s,mb3.9,baz=286,slow=5.1,SNR=5.4						
RES	**Resolute Bay**	**87.18**	**13**	P	**P**	**03 08 04.0**	**+1.8**
	3.4nm,0.9s,mb4.5,baz=307,slow=5.1,SNR=2.9						
ARCES	**ARCESS Array B**	**88.86**	**342**	P	**P**	**03 08 10.5**	**+0.3**
	3.3nm,0.9s,mb4.7,baz=89,slow=7.5,SNR=3.2						
ARCES	**ARCESS Array B**	**88.86**	**342**	P	**P**	**03 08 10.5**	**+0.3**
NVAR	**Mina Array Bea**	**89.56**	**51**	P	**P**	**03 08 15.3**	**+1.2**
	0.9nm,0.8s,mb4.2,baz=268,slow=5.1,SNR=4.3						

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*CRAAG **05** 03:17:58.6, 36°.31N×4°.86E, Ml3.8*
*CSEM **05** 03:18:00.9±0.2, 36°.48N×4°.87E, h5km, ML3.8, Error ellipse: s-maj=6.9km s-min=3.9km az=29.0*
*MDD **05** 03:18:00.7±0.5, 36°.37N×4°.78E, h0km, mb4.1/10, Error ellipse: s-maj=8.9km s-min=3.9km az=33.0, PRIMO*
*LDG **05** 03:18:01.5±0.1, 36°.30N×4°.96E, h10km, Ml2.9/8, Error ellipse: s-maj=2.7km s-min=1.8km az=29.0*
*ISCJB **05** 03:18:01.8±0.5, 36°.74N±0°.03×4°.86E±0°.04, h10km, Error ellipse: s-maj=4.9km s-min=4.1km az=32.2*
*NEIC **05** 03:18:04.5, 36°.61N×4°.70E, h0km, mb3.9/1, After MDD.*
ISC 05 03:18:02.9±0.5, 36°.63N±0°.03×4°.85E±0°.04, h10km, n207, σ1s07/261, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKF	**Akfadou**	**0.23**	**272**	P	**Pg**	**03 18 06.8**	**-0.9**
AKF	**Akfadou**	**0.23**	**272**	Pg	**Pg**	**03 18 06.8**	**-0.9**
AKF	**Akfadou**	**0.23**	**272**	Pg	**Pg**	**03 18 06.8**	**-0.9**
AKF	**Akfadou**	**0.23**	**272**	P	**Pg**	**03 18 06.8**	**-0.9**
SET	**Setif**	**0.61**	**134**	P	**Pg**	**03 18 10.0**	**-4.8**
SET	**Setif**	**0.61**	**134**	Pg	**Pg**	**03 18 10.0**	**-4.8**
SET	**Setif**	**0.61**	**134**	Pg	**Pg**	**03 18 10.0**	**-4.8**
SET	**Setif**	**0.61**	**134**	P	**Pg**	**03 18 10.0**	**-4.8**
CKHR	**Kef el Ahmar**	**0.81**	**139**	P	**Pg**	**03 18 13.0**	**-5.5**
CKHR	**Kef el Ahmar**	**0.81**	**139**	Pg	**Pg**	**03 18 13.0**	**-5.5**
CKHR	**Kef el Ahmar**	**0.81**	**139**	Pg	**Pg**	**03 18 13.0**	**-5.5**
CKHR	**Kef el Ahmar**	**0.81**	**139**	P	**Pg**	**03 18 13.0**	**-5.5**
DFRA	**Djebel Bou Aff**	**0.83**	**95**	P	**Pg**	**03 18 17.5**	**-1.4**
DFRA	**Djebel Bou Aff**	**0.83**	**95**	Pg	**Pg**	**03 18 17.5**	**-1.4**
DFRA	**Djebel Bou Aff**	**0.83**	**95**	Pg	**Pg**	**03 18 17.5**	**-1.4**
DFRA	**Djebel Bou Aff**	**0.83**	**95**	P	**Pg**	**03 18 17.5**	**-1.4**
CASM	**Ain Smara**	**1.37**	**105**	P	**Pn**	**03 18 25.0**	**-3.1**
CASM	**Ain Smara**	**1.37**	**105**	Pn	**Pn**	**03 18 25.0**	**-3.1**
CASM	**Ain Smara**	**1.37**	**105**	Pn	**Pn**	**03 18 25.0**	**-3.1**
CASM	**Ain Smara**	**1.37**	**105**	P	**Pn**	**03 18 25.0**	**-3.1**
CKFL	**Kef-Lekhel**	**1.52**	**98**	P	**Pn**	**03 18 30.7**	**+0.6**
CKFL	**Kef-Lekhel**	**1.52**	**98**	Pn	**Pn**	**03 18 30.7**	**+0.6**
CKFL	**Kef-Lekhel**	**1.52**	**98**	Pn	**Pn**	**03 18 30.7**	**+0.6**
CKFL	**Kef-Lekhel**	**1.52**	**98**	P	**Pn**	**03 18 30.7**	**+0.6**
EMHD	**Djebel Mahouad**	**1.59**	**255**	P	**Pn**	**03 18 26.2**	**-4.9**
EMHD	**Djebel Mahouad**	**1.59**	**255**	Pn	**Pn**	**03 18 26.2**	**-4.9**
EMHD	**Djebel Mahouad**	**1.59**	**255**	Pn	**Pn**	**03 18 26.2**	**-4.9**
EMHD	**Djebel Mahouad**	**1.59**	**255**	P	**Pn**	**03 18 26.2**	**-4.9**
CMAH	**Djebel Manchou**	**2.06**	**89**	P	**Pn**	**03 18 36.8**	**-0.8**
CMAH	**Djebel Manchou**	**2.06**	**89**	Pn	**Pn**	**03 18 36.8**	**-0.8**
CMAH	**Djebel Manchou**	**2.06**	**89**	Pn	**Pn**	**03 18 36.8**	**-0.8**
CMAH	**Djebel Manchou**	**2.06**	**89**	P	**Pn**	**03 18 36.8**	**-0.8**
ABSA	**Djebel Ababsia**	**2.15**	**99**	P	**Pn**	**03 18 37.6**	**-1.1**
ABSA	**Djebel Ababsia**	**2.15**	**99**	P	**Pn**	**03 18 37.6**	**-1.1**
CABS	**Djebel Ababsia**	**2.15**	**99**	Pn	**Pn**	**03 18 37.6**	**-1.1**
CABS	**Djebel Ababsia**	**2.15**	**99**	Pn	**Pn**	**03 18 37.6**	**-1.1**
ETOS	**Mallorca**	**3.52**	**334**	Pn	**Pn**	**03 18 58.5**	**+0.8**
ETOS				Sn	**Sn**	**03 19 38.1**	**-1.3**
ETOS	**Mallorca**	**3.52**	**334**	Pn	**Pn**	**03 18 58.5**	**+0.8**
	11nm,0.4s,SNR=22						
ETOS				Sn	**Sn**	**03 19 38.1**	**-1.3**
	5.9nm,0.4s,SNR=7.9						
ETOS	**Mallorca**	**3.52**	**334**	Pn	**Pn**	**03 18 58.5**	**+0.8**
	11nm,0.4s,SNR=22						
ETOS				Sn	**Sn**	**03 19 38.1**	**-1.3**
	5.9nm,0.4s,SNR=7.9						
ETOS	**Mallorca**	**3.52**	**334**	Pn	**Pn**	**03 18 58.5**	**+0.8**
	11nm,0.4s,SNR=22						
ETOS				Sn	**Sn**	**03 19 38.1**	**-1.3**
	SNR=7.9						
EIBI	**Ibiza**	**3.67**	**312**	Pn	**Pn**	**03 19 00.4**	**+0.7**
EIBI				Sn	**Sn**	**03 19 42.0**	**-1.0**
EIBI	**Ibiza**	**3.67**	**312**	Pn	**Pn**	**03 19 00.4**	**+0.7**
	2.9nm,0.3s,SNR=21						
EIBI				Sn	**Sn**	**03 19 42.0**	**-1.0**
	3.3nm,0.3s,SNR=7.9						
EIBI	**Ibiza**	**3.67**	**312**	Pn	**Pn**	**03 19 00.4**	**+0.7**
	2.9nm,0.3s,SNR=21						
EIBI				Sn	**Sn**	**03 19 42.0**	**-1.0**
	3.3nm,0.3s,SNR=7.9						
EIBI	**Ibiza**	**3.67**	**312**	Pn	**Pn**	**03 19 00.4**	**+0.7**
	2.9nm,0.3s,SNR=21						
EIBI				Sn	**Sn**	**03 19 42.0**	**-1.0**
	SNR=7.9						
EBEN	**Beniarda**	**4.53**	**299**	Pn	**Pn**	**03 19 10.7**	**-0.8**
EBEN	**Beniarda**	**4.53**	**299**	Pn	**Pn**	**03 19 10.7**	**-0.8**
	0.5nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**4.53**	**299**	Pn	**Pn**	**03 19 10.7**	**-0.8**
	0.5nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**4.53**	**299**	Pn	**Pn**	**03 19 10.7**	**-0.8**
	0.5nm,0.2s,SNR=7.9						
CFON	**Fontmartina**	**5.46**	**341**	Pn	**Pn**	**03 19 25.2**	**+0.9**
CFON	**Fontmartina**	**5.46**	**341**	Pn	**Pn**	**03 19 25.2**	**+0.9**
	3.2nm,0.3s,SNR=23						
CFON				Sn	**Sn**	**03 20 26.6**	**-0.5**
	3.7nm,0.2s,SNR=7.9						
CFON	**Fontmartina**	**5.46**	**341**	Pn	**Pn**	**03 19 25.2**	**+0.9**
	3.2nm,0.3s,SNR=23						
CFON				Sn	**Sn**	**03 20 26.6**	**-0.5**
	3.7nm,0.2s,SNR=7.9						
CFON	**Fontmartina**	**5.46**	**341**	Pn	**Pn**	**03 19 25.2**	**+0.9**
	3.2nm,0.3s,SNR=23						
ETOB	**Tobarra**	**5.46**	**294**	Pn	**Pn**	**03 19 24.3**	**-0.1**
ETOB				Sn	**Sn**	**03 20 25.2**	**-2.1**
ETOB	**Tobarra**	**5.46**	**294**	Pn	**Pn**	**03 19 24.3**	**-0.1**
	1.9nm,0.2s,SNR=19						
ETOB				Sn	**Sn**	**03 20 24.7**	**-2.6**
	1.6nm,0.4s,SNR=7.9						
ETOB	**Tobarra**	**5.46**	**294**	Pn	**Pn**	**03 19 24.3**	**-0.1**
	1.9nm,0.2s,SNR=19						
ETOB				Sn	**Sn**	**03 20 24.7**	**-2.6**
	1.6nm,0.4s,SNR=7.9						
ETOB	**Tobarra**	**5.46**	**294**	Pn	**Pn**	**03 19 24.3**	**-0.1**
	1.9nm,0.2s,SNR=19						
ETOB				Sn	**Sn**	**03 20 25.2**	**-2.1**
EPOB	**Poblet**	**5.56**	**329**	Pn	**Pn**	**03 19 26.3**	**+0.7**
EPOB				Sn	**Sn**	**03 20 26.4**	**-3.2**
EPOB	**Poblet**	**5.56**	**329**	Pn	**Pn**	**03 19 26.3**	**+0.7**
	1.0nm,0.3s,SNR=197						
EPOB				Sn	**Sn**	**03 20 26.4**	**-3.2**
	1.1nm,0.3s,SNR=7.9						
EPOB	**Poblet**	**5.56**	**329**	Pn	**Pn**	**03 19 26.3**	**+0.7**
	1.0nm,0.3s,SNR=197						
EPOB				Sn	**Sn**	**03 20 26.4**	**-3.2**
	1.1nm,0.3s,SNR=7.9						
EPOB	**Poblet**	**5.56**	**329**	Pn	**Pn**	**03 19 26.3**	**+0.6**
	1.0nm,0.3s,SNR=197						
EPOB				Sn	**Sn**	**03 20 26.4**	**-3.2**
ERTA	**Horta de San J**	**5.58**	**322**	Pn	**Pn**	**03 19 26.4**	**+0.5**
ERTA	**Horta de San J**	**5.58**	**322**	Pn	**Pn**	**03 19 26.4**	**+0.5**
	0.3nm,0.1s,SNR=7.9						
ERTA	**Horta de San J**	**5.58**	**322**	Pn	**Pn**	**03 19 26.4**	**+0.5**
	0.3nm,0.1s,SNR=7.9						
ERTA	**Horta de San J**	**5.58**	**322**	Pn	**Pn**	**03 19 26.4**	**+0.4**
	SNR=7.9						
EJON	**La Jonquera**	**6.01**	**346**	Pn	**Pn**	**03 19 33.5**	**+1.6**
EJON	**La Jonquera**	**6.01**	**346**	Pn	**Pn**	**03 19 33.5**	**+1.6**
	2.6nm,0.3s,SNR=7.9						
EJON	**La Jonquera**	**6.01**	**346**	Pn	**Pn**	**03 19 33.5**	**+1.6**
	2.6nm,0.3s,SNR=7.9						
EJON	**La Jonquera**	**6.01**	**346**	Pn	**Pn**	**03 19 33.5**	**+1.7**
	2.6nm,0.3s,SNR=7.9						
EVIA	**Vianos**	**6.17**	**291**	Pn	**Pn**	**03 19 33.4**	**-0.7**
EVIA	**Vianos**	**6.17**	**291**	Pn	**Pn**	**03 19 33.4**	**-0.7**
	1.9nm,0.4s,SNR=7.9						
EVIA	**Vianos**	**6.17**	**291**	Pn	**Pn**	**03 19 33.4**	**-0.7**
	1.9nm,0.4s,SNR=7.9						
EVIA	**Vianos**	**6.17**	**291**	Pn	**Pn**	**03 19 33.4**	**-0.7**
	1.9nm,0.4s,SNR=7.9						
EBER	**Berja**	**6.22**	**275**	Pn	**Pn**	**03 19 31.9**	**-2.8**
EBER	**Berja**	**6.22**	**275**	Pn	**Pn**	**03 19 31.9**	**-2.9**
	1.0nm,0.2s,SNR=10						
EBER	**Berja**	**6.22**	**275**	Pn	**Pn**	**03 19 31.9**	**-2.9**
	1.0nm,0.2s,SNR=10						
EBER	**Berja**	**6.22**	**275**	Pn	**Pn**	**03 19 31.9**	**-2.9**
CLLI	**Llivia**	**6.25**	**340**	Pn	**Pn**	**03 19 37.7**	**+2.5**
CLLI	**Llivia**	**6.25**	**340**	Pn	**Pn**	**03 19 37.7**	**+2.5**
	5.7nm,0.6s,SNR=38						
CLLI	**Llivia**	**6.25**	**340**	Pn	**Pn**	**03 19 37.7**	**+2.5**
	5.7nm,0.6s,SNR=38						
CLLI	**Llivia**	**6.25**	**340**	Pn	**Pn**	**03 19 37.7**	**+2.5**
	5.7nm,0.6s,SNR=38						
CSOR	**Sort**	**6.42**	**335**	Pn	**Pn**	**03 19 40.5**	**+3.0**
CSOR	**Sort**	**6.42**	**335**	Pn	**Pn**	**03 19 40.5**	**+3.0**
	3.5nm,0.5s,SNR=10						
CSOR				Sn	**Sn**	**03 20 50.2**	**-0.6**
	6.9nm,0.9s,SNR=7.9						
CSOR	**Sort**	**6.42**	**335**	Pn	**Pn**	**03 19 40.5**	**+3.0**
	3.5nm,0.5s,SNR=10						
CSOR				Sn	**Sn**	**03 20 50.2**	**-0.6**
	6.9nm,0.9s,SNR=7.9						
CSOR	**Sort**	**6.42**	**335**	Pn	**Pn**	**03 19 40.5**	**+3.0**
	3.5nm,0.5s,SNR=10						
EQES	**Quesada**	**6.43**	**283**	Pn	**Pn**	**03 19 38.3**	**+0.6**
EQES	**Quesada**	**6.43**	**283**	Pn	**Pn**	**03 19 38.3**	**+0.6**
	1.5nm,0.4s,SNR=7.9						
EQES				Sn	**Sn**	**03 20 49.6**	**-1.5**
	0.8nm,0.3s,SNR=7.9						
EQES	**Quesada**	**6.43**	**283**	Pn	**Pn**	**03 19 38.3**	**+0.6**
	1.5nm,0.4s,SNR=7.9						
EQES				Sn	**Sn**	**03 20 49.6**	**-1.5**
	0.8nm,0.3s,SNR=7.9						
EQES	**Quesada**	**6.43**	**283**	Pn	**Pn**	**03 19 38.3**	**+0.6**
	SNR=7.9						
ESAC	**San Caprasio**	**6.55**	**323**	Pn	**Pn**	**03 19 40.7**	**+1.3**
ESAC	**San Caprasio**	**6.55**	**323**	Pn	**Pn**	**03 19 40.7**	**+1.3**
	6.1nm,0.3s,SNR=4.7						
ESAC	**San Caprasio**	**6.55**	**323**	Pn	**Pn**	**03 19 40.7**	**+1.3**
	6.1nm,0.3s,SNR=4.7						
ESAC	**San Caprasio**	**6.55**	**323**	Pn	**Pn**	**03 19 40.7**	**+1.4**
	6.1nm,0.3s,SNR=4.7						
EQUE	**Quentar**	**6.67**	**277**	Pn	**Pn**	**03 19 39.2**	**-1.7**
	0.9nm,0.3s,SNR=4.5						
EQUE	**Quentar**	**6.67**	**277**	Pn	**Pn**	**03 19 39.2**	**-1.7**
	0.9nm,0.3s,SNR=4.5						
EQUE	**Quentar**	**6.67**	**277**	Pn	**Pn**	**03 19 41.9**	**+1.0**
	1.2nm,0.4s,SNR=4.5						
LMR	**La Mourre**	**6.82**	**10**	*e*Pn	**Pn**	**03 19 43.0**	**+0.1**
LMR				*e*Sn	**Sn**	**03 20 59.6**	**-1.0**
	0.6nm,0.2s						
LMR	**La Mourre**	**6.82**	**10**	Pn	**Pn**	**03 19 43.0**	**+0.1**
LMR				Sn	**Sn**	**03 20 59.6**	**-1.0**
	0.3nm,0.2s						
LMR	**La Mourre**	**6.82**	**10**	Pn	**Pn**	**03 19 43.0**	**+0.1**
LMR				Sn	**Sn**	**03 20 59.6**	**-1.0**
	0.3nm,0.2s						
LMR	**La Mourre**	**6.82**	**10**	*e*Pn	**Pn**	**03 19 43.0**	**+0.1**
LMR				*e*Sn	**Sn**	**03 20 59.6**	**-1.0**
ETOR	**Torete**	**6.83**	**310**	P	**Pn**	**03 19 46.3**	**+3.1**
ETOR	**Torete**	**6.83**	**310**	Pn	**Pn**	**03 19 46.3**	**+3.1**
	1.9nm,0.3s,SNR=7.9						
ETOR	**Torete**	**6.83**	**310**	Pn	**Pn**	**03 19 46.3**	**+3.1**
	1.9nm,0.3s,SNR=7.9						
ETOR	**Torete**	**6.83**	**310**	P	**Pn**	**03 19 46.3**	**+3.2**
	SNR=7.9						
MTLF	**Montolieu**	**7.00**	**344**	*e*Pn	**Pn**	**03 19 46.6**	**+1.1**
MTLF				*e*Sn	**Sn**	**03 21 04.9**	**-0.3**
	3.4nm,0.5s						
MTLF	**Montolieu**	**7.00**	**344**	Pn	**Pn**	**03 19 46.6**	**+1.1**
MTLF				Sn	**Sn**	**03 21 04.9**	**-0.3**
	1.7nm,0.5s						
MTLF	**Montolieu**	**7.00**	**344**	Pn	**Pn**	**03 19 46.6**	**+1.1**
MTLF				Sn	**Sn**	**03 21 04.9**	**-0.3**
	1.7nm,0.5s						
MTLF	**Montolieu**	**7.00**	**344**	*e*Pn	**Pn**	**03 19 46.6**	**+1.1**
MTLF				*e*Sn	**Sn**	**03 21 04.9**	**-0.3**
	1.7nm,0.5s						
FRF	**La Foret Royal**	**7.06**	**11**	*e*Pn	**Pn**	**03 19 46.4**	**+0.1**
FRF				*e*Sn	**Sn**	**03 21 04.8**	**-1.8**
	1.0nm,0.2s						
FRF	**La Foret Royal**	**7.06**	**11**	Pn	**Pn**	**03 19 46.4**	**+0.1**
FRF				Sn	**Sn**	**03 21 04.8**	**-1.8**
	0.5nm,0.2s						
FRF	**La Foret Royal**	**7.06**	**11**	Pn	**Pn**	**03 19 46.4**	**+0.1**
FRF				Sn	**Sn**	**03 21 04.8**	**-1.8**
	0.5nm,0.2s						
FRF	**La Foret Royal**	**7.06**	**11**	*e*Pn	**Pn**	**03 19 46.4**	**+0.1**
FRF				*e*Sn	**Sn**	**03 21 04.8**	**-1.8**
	0.5nm,0.2s						
EPF	**Esparros**	**7.28**	**333**	*e*Pn	**Pn**	**03 19 50.3**	**+1.1**
EPF				*e*Sn	**Sn**	**03 21 11.7**	**-0.2**
	0.8nm,0.3s						
EPF	**Esparros**	**7.28**	**333**	Pn	**Pn**	**03 19 50.3**	**+1.1**
EPF				Sn	**Sn**	**03 21 11.7**	**-0.2**
	0.4nm,0.3s						
EPF	**Esparros**	**7.28**	**333**	Pn	**Pn**	**03 19 50.3**	**+1.1**
EPF				Sn	**Sn**	**03 21 11.7**	**-0.2**
	0.4nm,0.3s						
EPF	**Esparros**	**7.28**	**333**	*e*Pn	**Pn**	**03 19 50.3**	**+1.1**
EPF				*e*Sn	**Sn**	**03 21 11.7**	**-0.2**
	0.4nm,0.3s						
SMRF	**Simiane la Rot**	**7.36**	**4**	*e*Pn	**Pn**	**03 19 50.9**	**+0.5**
SMRF	**Simiane la Rot**	**7.36**	**4**	Pn	**Pn**	**03 19 50.9**	**+0.5**
SMRF	**Simiane la Rot**	**7.36**	**4**	Pn	**Pn**	**03 19 50.9**	**+0.5**
SMRF	**Simiane la Rot**	**7.36**	**4**	*e*Pn	**Pn**	**03 19 50.9**	**+0.5**
LASF	**Ste Croix**	**7.48**	**354**	*e*Pn	**Pn**	**03 19 52.7**	**+0.7**
LASF				*e*Sn	**Sn**	**03 21 16.1**	**-0.8**
	0.9nm,0.4s						
LASF	**Ste Croix**	**7.48**	**354**	Pn	**Pn**	**03 19 52.7**	**+0.7**
LASF				Sn	**Sn**	**03 21 16.1**	**-0.8**
	0.4nm,0.4s						
LASF	**Ste Croix**	**7.48**	**354**	Pn	**Pn**	**03 19 52.7**	**+0.7**
LASF				Sn	**Sn**	**03 21 16.1**	**-0.8**
	0.4nm,0.4s						
LASF	**Ste Croix**	**7.48**	**354**	*e*Pn	**Pn**	**03 19 52.7**	**+0.7**
LASF				*e*Sn	**Sn**	**03 21 16.1**	**-0.8**
	0.4nm,0.4s						
SBF	**Sospel**	**7.49**	**14**	*e*Pn	**Pn**	**03 19 52.7**	**+0.5**
SBF	**Sospel**	**7.49**	**14**	Pn	**Pn**	**03 19 52.7**	**+0.5**
SBF	**Sospel**	**7.49**	**14**	Pn	**Pn**	**03 19 52.7**	**+0.5**
SBF	**Sospel**	**7.49**	**14**	*e*Pn	**Pn**	**03 19 52.7**	**+0.5**
ETSF	**Etsaut**	**7.52**	**328**	*e*Pn	**Pn**	**03 19 53.2**

QUIF	Quistinic	12.74	335		Pn		Pn	03 21 04.3	+0.3
QUIF	Quistinic	12.74	335		Pn		Pn	03 21 04.3	+0.3
QUIF	Quistinic	12.74	335		ePn		Pn	03 21 04.3	+0.3
SGMF	Saint Gilles	12.84	337		ePn		Pn	03 21 05.9	+0.6
SGMF	Saint Gilles	12.84	337		Pn		Pn	03 21 05.9	+0.6
SGMF	Saint Gilles	12.84	337		Pn		Pn	03 21 05.9	+0.6
SGMF	Saint Gilles	12.84	337		ePn		Pn	03 21 05.9	+0.6
ROSF	Rostrenen	13.14	335		ePn		Pn	03 21 10.5	+1.0
ROSF	Rostrenen	13.14	335		Pn		Pn	03 21 10.5	+1.0
ROSF	Rostrenen	13.14	335		Pn		Pn	03 21 10.5	+1.0
ROSF	Rostrenen	13.14	335		ePn		Pn	03 21 10.5	+1.0
KIEV	Kiev	22.41	43		eP		P	03 22 55.8	-5.6
	3.2nm,0.7s								
KIEV	Kiev	22.41	43		eP		P	03 22 55.8	-5.6
	3.2nm,0.7s								
AKBB	Malin Array Si	22.42	43		eP		P	03 22 55.4	-6.1
AKBB	Malin Array Si	22.42	43		eP		P	03 22 55.4	-6.1

*IDC **05** 04:14:34.8±0.7,39°.15N×140°.94E, h0km, mb3.8/11, mb1 4.0/12, mb1mx3.8/24, mbtmp3.7/12, ML3.2/1, Error ellipse: s-maj=21.1km s-min=14.3km az=115.0*
*ISCJB **05** 04:14:36.4±0.5,39°.13N±0°.03×140°.99E±0°.04, h19km±4km, mb3.8/13, Error ellipse: s-maj=5.7km s-min=4.5km az=19.4*
*JMA **05** 04:14:36.6,39°.11N×140°.95E, h9km±1km, M4.0 Broadband fault plane solution: P waves. NP1: φs=35.00000°, δ42.00000°, λ70.00000°. NP2:φs=241.00000°, δ51.00000°, λ107.00000°. Principal axes: T Plg76.0000°, Azm208.0000°; N Plg13.0000°, Azm50.0000°; P Plg5.0000°, Azm319.0000°;*
JMA Felt II J1.
*NEIC **05** 04:14:40.1±0.9,39°.13N×140°.92E, h36km±9km, mb4.1/2 Error ellipse: s-maj=12.2km s-min=8.4km az=120.0*
NEIC Recorded [2 JMA] in Akita and Iwate; [1 JMA] in Miyagi.

ISC 05 04:14:36.7±0.5, 39°.12N±0°.03×140°.97E±0°.04, h10km±3km, n29, σ0s90/39, mb3.8/13, 3D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	Ichinoseki	0.26	130	⇓P	Pg	04 14 41.7	-0.2
JMK				eS	Sg	04 14 45.7	+0.3
JRG	Rokugo	0.38	317	⇓P	Pg	04 14 44.1	-0.1
JRG				eS	Sg	04 14 50.0	+0.7
JOM	Ohasama	0.43	35	P	Pg	04 14 45.3	+0.1
JOM				S	Sg	04 14 51.6	+0.6
JYK	Kaneyama	0.52	247	P	Pg	04 14 46.3	-0.4
JYK				eS	Sg	04 14 52.9	-0.6
JIO	Ouri	0.73	156	⇓P	Pg	04 14 50.0	-0.7
JIO				eS	Sg	04 15 00.0	-0.2
JOU	Okura	0.79	198	P	Pg	04 14 51.4	-0.5
JOU				S	Sg	04 15 01.9	-0.3
ERM	Erimo	3.34	29	ePn	Pn	04 15 29.7	+0.7
ERM				eSn	Sn	04 16 05.9	-2.8
MAJO	Matsushiro	3.38	221	ePn	Pn	04 15 30.7	+1.3
MAT	Matsushiro	3.38	221	P	Pn	04 15 30.8	+1.4
MAT				eS	Sn	04 16 11.0	+1.5
MJAR	Matsushiro Arr	3.38	221	Pn	Pn	04 15 29.7	+0.3
	2.2nm,0.3s,baz=311,slow=30,SNR=7.8						
MJAR				Pg	Pg	04 15 36.0	-5.4
	3.3nm,0.3s,baz=29,slow=13,SNR=15						
MJAR				Lg		04 16 23.6	
	1.0nm,0.3s,baz=21,slow=28,SNR=4.2						
MJAR	Matsushiro Arr	3.38	221	Pn	Pn	04 15 29.7	+0.3
MJAR				Pg	Pg	04 15 36.0	-5.4
MJAR				Lg		04 16 23.6	
ASAJ	Asahikawa	5.14	13	Pn	Pn	04 15 56.5	+2.8
	1.6nm,0.3s,baz=252,slow=11,SNR=6.8						
KSRS	Korea Array	10.39	265	Pn	Pn	04 17 09.9	+4.2
	1.1nm,0.3s,baz=78,slow=14,SNR=26						
KSRS				Sn	Sn	04 19 08.3	+6.1
	0.6nm,0.3s,baz=76,slow=24,SNR=15						
ZALV	Zalesovo Beam	40.27	311	P	P	04 22 13.1	-0.5
	1.1nm,0.5s,mb3.8,baz=91,slow=7.4,SNR=5.4						
MK31	Makanchi Array	42.74	300	eP	P	04 22 33.4	-0.5
MKAR	Makanchi Array	42.74	300	P	P	04 22 32.7	-1.2
	0.3nm,0.3s,mb3.5,baz=88,slow=8.8,SNR=4.2						
KURK	Kurchatov	44.39	306	eP	P	04 22 46.7	-0.5
	1.3nm,0.6s,mb3.8						
BVAR	Borovoye Array	48.93	311	P	P	04 23 22.0	-0.7
	0.6nm,0.5s,mb3.9,baz=52,slow=9.7,SNR=3.4						
ARU	Arti	54.58	317	eP	P	04 24 04.9	+0.1
	1.8nm,0.5s,mb4.4						
WRA	Warramunga Arr	59.08	187	P	P	04 24 36.6	-0.5
	0.8nm,0.5s,mb4.0,baz=5.4,slow=7.3,SNR=17						
ASAR	Alice Springs	62.80	187	P	P	04 25 02.5	+0.2
	0.7nm,0.7s,mb3.9,baz=2.8,slow=5.2,SNR=7.4						
FINES	FINESS Array B	66.81	332	P	P	04 25 27.5	-0.6
	2.1nm,0.8s,mb4.2,baz=46,slow=6.3,SNR=5.6						
NOA	NORSAR Array B	72.14	337	P	P	04 26 00.9	-0.1
	1.6nm,1.0s,mb3.9,baz=38,slow=6.1,SNR=3.7						
AKASG	Malin Array Be	72.44	322	P	P	04 26 02.4	-0.6
	0.6nm,0.4s,mb3.9,baz=48,slow=5.4,SNR=3.8						
AKASG	Malin Array Be	72.44	322	P	P	04 26 02.4	-0.6
NVAR	Mina Array Bea	74.03	53	P	P	04 26 13.4	+0.8
	0.3nm,0.3s,mb3.6,baz=298,slow=5.9,SNR=3.3						
PDAR	Pinedale Array	76.46	46	P	P	04 26 28.1	+1.5
	0.4nm,0.7s,mb3.4,baz=323,slow=2.2,SNR=4.3						
TXAR	Lajitas Array	89.12	52	P	P	04 27 31.1	-1.4
	0.1nm,0.6s,mb3.3,baz=324,slow=12,SNR=2.9						
LPAZ	La Paz	145.89	56	PKPbc	PKPbc	04 34 15.6	-1.1
	0.6nm,0.8s,baz=329,slow=4.6,SNR=3.0						

*IDC **05** 04:48:40.8±0.8,31°.94N×104°.66E, h0km, mb3.9/8, mb1 3.9/11, mb1mx3.7/28, mbtmp3.8/11, ML4.0/2, Error ellipse: s-maj=32.8km s-min=16.0km az=57.0*
*NEIC **05** 04:48:42.2±0.5,31°.94N×104°.65E, h10km, mb3.9/2, Error ellipse: s-maj=14.2km s-min=7.2km az=76.0*
*BJI **05** 04:48:43.7,31°.96N×104°.42E, h12km, ML3.7/9*

ISC 05 04:48:41.1±1.0, 31°.87N±0°.06×104°.57E±0°.06, h2km±8km, n22, σ0s94/27, mb3.8/10, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.18	216	Pg	Pg	04 49 03.4	-0.4
CD2				Sg	Sg	04 49 18.6	-0.5
CD2				smax			
	comp=N,5μm,1.0s						
CD2				smax			
	comp=E,4μm,0.7s						
XAN	Xi'an	4.25	58	Pn	Pn	04 49 48.8	+2.0
XAN				Pg	Pg	04 50 02.7	+0.1
XAN				Sn	Sn	04 50 36.0	-1.0
XAN				Sg	Sg	04 50 57.6	-0.1
XAN				smax			
	comp=N,160nm,0.7s						
XAN				smax			
	comp=E,84nm,0.7s						
WHN	Wuhan	8.48	96	⇓P	Pn	04 50 53.9	+8.9
HHC	Hu-ho-hao-te	10.58	30	eP	Pn	04 51 16.0	+2.3
HHC				S	Sn	04 53 16.8	+4.0
CMAR	Chiang Mai Arr	14.29	202	Pn	Pn	04 52 05.5	+1.1
	comp=E,0.3nm,0.3s,baz=9.6,slow=7.6,SNR=3.0						
SONM	Songino Array	16.01	4	Pn	Pn	04 52 26.3	-0.9
	comp=E,0.4nm,0.3s,baz=166,slow=7.4,SNR=3.4						
KSRS	Korea Array	19.98	67	P	Pn	04 53 14.1	-2.3
	comp=E,0.2nm,0.3s,baz=258,slow=10,SNR=6.2						
MK31	Makanchi Array	22.67	317	eP	P	04 53 43.2	-0.4
MKAR	Makanchi Array	22.67	317	P	P	04 53 43.5	-0.1
	comp=E,0.6nm,0.7s,mb3.1,baz=119,slow=12,SNR=6.2						
ZAA0	Zalesovo Array	26.21	333	eP	P	04 54 16.7	-0.4
ZALV	Zalesovo Beam	26.21	333	P	P	04 54 17.0	0.0
	comp=E,1.7nm,0.5s,mb3.9,baz=134,slow=9.6,SNR=7.0						
ZALV	Zalesovo Beam	26.21	333	P	P	04 54 17.0	0.0
KURK	Kurchatov	26.88	322	P	P	04 54 22.9	-0.2
	comp=E,1.5nm,0.6s,mb3.7,baz=121,slow=9.0,SNR=6.2						
ABKAR	Akbulak array	37.47	311	eP	P	04 55 55.4	-0.5
	comp=E,0.4nm,0.4s,mb3.6						
AKTK	Aktyubinsk	38.91	312	P	P	04 56 09.1	+1.1
AKTO	Aktyubinsk	38.91	312	P	P	04 56 09.1	+1.1
	comp=E,0.4nm,0.3s,mb3.6,baz=122,slow=12,SNR=3.6						
ARU	Arti	40.08	322	eP	P	04 56 17.6	0.0
	comp=E,3.2nm,0.6s,mb4.2						
FINES	FINESS Array B	57.16	326	P	P	04 58 28.5	-0.4
	comp=E,1.9nm,0.7s,mb4.2,baz=100,slow=8.1,SNR=6.9						
FINES	FINESS Array B	57.16	326	P	P	04 58 28.5	-0.4
WRA	Warramunga Arr	58.89	147	P	P	04 58 41.8	+0.2
	comp=E,2.9nm,0.7s,mb4.4,baz=340,slow=7.9,SNR=32						
ASAR	Alice Springs	61.94	149	P	P	04 59 02.7	+0.3
	comp=E,0.9nm,0.5s,mb4.2,baz=337,slow=6.2,SNR=14						
YKA	Yellowknife Ar	80.85	17	P	P	05 00 55.2	-1.0
	comp=E,0.3nm,0.6s,mb3.4,baz=332,slow=5.6,SNR=3.2						

*IDC **05** 05:01:25.1±1.3,52°.06N×171°.12W, h0km, mb3.9/13, mb1 4.1/14, mb1mx3.9/30, mbtmp3.9/14, ML3.7/1, Error ellipse: s-maj=37.9km s-min=16.0km az=6.0*
*NEIC **05** 05:01:29.2,52°.10N×170°.96W, h12km, ML3.5(AEIC), After AEIC.*

ISC 05 05:01:25.6±3.9, 52°.0N±0°.2×171°.2W±0°.1, h4km±25km, n23, σ1s04/25, mb3.9/14, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UNV	Unalaska Valle	3.37	55	P	Pn	05 02 19.3	+0.3
UNV				S	Sn	05 02 59.4	0.0
AKUT	Akutan	3.89	55	ePn	Pn	05 02 28.1	+1.9
AKUT				eS	Sn	05 03 18.3	+6.0
SDPT	Sand Point	7.18	58	ePn	Pn	05 03 11.3	0.0
	30nm,0.5s						
CHGN	Chignik	8.63	55	ePn	Pn	05 03 31.8	+0.6
KDAK	Kodiak Island	12.14	54	Pn	Pn	05 04 16.4	-2.8
	0.9nm,0.3s,baz=249,slow=8.6,SNR=3.1						
PETK	Petropavlovsk-	18.88	286	P	Pn	05 05 45.2	-2.0
	0.2nm,0.3s,baz=98,slow=12,SNR=2.8						
PETK	Petropavlovsk-	18.88	286	P	Pn	05 05 45.2	-2.0
DLBC	Dease Lake	24.02	58	P	P	05 06 42.0	+0.8
	6.4nm,0.9s,mb4.1,baz=273,slow=9.7,SNR=13						
INK	Inuvik	24.25	34	P	P	05 06 42.6	-0.7
	5.9nm,0.6s,mb4.2,baz=242,slow=8.1,SNR=12						
YKA	Yellowknife Ar	31.31	48	P	P	05 07 46.3	-0.1
	1.6nm,0.6s,mb4.0,baz=271,slow=7.7,SNR=20						
NVAR	Mina Array Bea	38.78	89	P	P	05 08 50.9	-0.2
	0.3nm,0.7s,mb3.2,baz=284,slow=9.6,SNR=4.1						
NVAR	Mina Array Bea	38.78	89	P	P	05 08 50.9	-0.2
MDJ	Mudanjiang	39.09	283	P	P	05 08 56.6	+3.0
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.7s,mb4.0						
MDJ				pmax	pmax		
	comp=Z,670nm,15.7s						
PDAR	Pinedale Array	41.57	78	P	P	05 09 13.7	-0.5
	comp=Z,0.4nm,0.5s,mb3.3,baz=319,slow=3.4,SNR=5.6						
TXAR	Lajitas Array	53.88	87	P	P	05 10 48.9	-1.0
	comp=Z,1.0nm,0.7s,mb3.8,baz=297,slow=5.8,SNR=13						
ARCES	ARCESS Array B	58.14	353	P	P	05 11 19.4	-0.4
	comp=Z,3.2nm,0.9s,mb4.3,baz=57,slow=9.8,SNR=3.2						
KURK	Kurchatov	61.88	317	P	P	05 11 46.4	+0.7
	comp=Z,0.4nm,0.4s,mb3.9,baz=54,slow=8.0,SNR=5.7						
MKAR	Makanchi Array	63.22	312	P	P	05 11 54.8	+0.1
	comp=Z,0.2nm,0.6s,mb3.5,baz=35,slow=4.6,SNR=3.6						
BVAR	Borovoye Array	63.32	324	P	P	05 11 55.9	+0.5
	comp=Z,1.2nm,0.5s,mb4.3,baz=54,slow=7.5,SNR=7.4						
FINES	FINESS Array B	66.05	351	P	P	05 12 11.9	-1.0
	comp=Z,1.1nm,0.8s,mb3.9,baz=30,slow=12,SNR=3.8						
NB2	NORSAR Subarra	67.27	359	P	P	05 12 20.5	-0.3
	comp=Z,1.1nm,0.6s,mb4.1,baz=4.0,slow=6.9						
NOA	NORSAR Array B	67.27	359	P	P	05 12 20.7	-0.1
	comp=Z,1.4nm,0.8s,mb4.0,baz=2.4,slow=6.6,SNR=5.0						
CMAR	Chiang Mai Arr	75.60	281	P	P	05 13 13.1	+1.4
	comp=Z,1.1nm,0.8s,mb3.8,baz=13,slow=7.2,SNR=6.3						

DJA 05 05:18:31, 7°.57S×105°.95E, h13km, MLv3.5/5, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	Sukabumi	0.82	47	P	Pg	05 18 45.4	-1.6
SKJI				S	Sg	05 18 57.6	-0.1
CGJI	Cibinong	0.98	345	P	Pb	05 18 48.4	-1.5
CGJI				S	Sb	05 19 02.8	0.0
CBJI	Citeko	1.45	38	P	Pn	05 18 53.2	-3.7
RBSI	Rajabasa	1.73	353	P	Pn	05 19 00.7	0.0
LEM	Lembang	1.81	66	P	Pn	05 19 02.7	+0.8
KLSI		3.11	337	P	Pn	05 19 18.8	-1.0

*IDC **05** 05:21:44.4±1.0,39°.06N×140°.95E, h0km, mb4.0/9, mb1 4.1/10, mb1mx3.9/24, mbtmp4.0/10, ML3.4/2, Error ellipse: s-maj=29.8km s-min=16.8km az=89.0*
*ISCJB **05** 05:21:45.7±0.5,39°.08N±0°.03×141°.00E±0°.04, h19km±4km, mb4.1/12, Error ellipse: s-maj=5.9km s-min=4.8km az=9.2*
*NEIC **05** 05:21:46.0,39°.07N×140°.95E, h9km, mb4.3/2, After JMA.*
NEIC Recorded [3 JMA] in Iwate and [2 JMA] in Akita and Miyagi.
*JMA **05** 05:21:45.9,39°.07N×140°.95E, h9km±1km, M4.0 Broadband fault plane solution: P waves. NP1: φs=262.00000°, δ33.00000°, λ124.00000°. NP2: φs=44.00000°, δ63.00000°, λ70.00000°. Principal axes: T Plg66.0000°, Azm278.0000°; N Plg17.0000°, Azm53.0000°; P Plg16.0000°, Azm148.0000°;*
JMA Felt III J1.

ISC 05 05:21:46.1±0.5, 39°.07N±0°.03×140°.96E±0°.04, h8km±3km, n28, σ0s77/37, mb4.1/12, 1C-5D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	Ichinoseki	0.23	121	⇓P	Pg	05 21 50.7	-0.1
JMK				S	Sg	05 21 54.1	+0.1
JRG	Rokugo	0.41	322	⇓P	Pg	05 21 54.0	-0.1
JRG				eS	Sg	05 22 00.0	+0.4
JOM	Ohasama	0.48	33	⇓P	Pg	05 21 55.3	-0.1
JOM				S	Sg	05 22 01.9	+0.3
JYK	Kaneyama	0.49	252	⇑P	Pg	05 21 55.5	-0.2
JYK				eS	Sg	05 22 02.1	0.0
JIO	Ouri	0.69	154	⇓P	Pg	05 21 58.8	-0.5
JIO				eS	Sg	05 22 08.2	-0.1
JOU	Okura	0.74	198	⇓P	Pg	05 22 00.0	-0.4
JOU				eS	Sg	05 22 09.7	-0.3
MAJO	Matsushiro	3.34	222	ePn	Pn	05 22 39.4	+0.9
MAT	Matsushiro	3.34	222	P	Pn	05 22 39.4	+0.9
MAT				eS	Sn	05 23 20.0	+1.8
MJAR	Matsushiro Arr	3.34	222	Pn	Pn	05 22 39.5	+1.1
	1.2nm,0.3s,baz=29,slow=13,SNR=9.8						
MJAR				Pg	Pg	05 22 44.5	-5.5
	2.8nm,0.3s,baz=22,slow=14,SNR=15						
ERM	Erimo	3.38	29	ePn	Pn	05 22 41.6	+2.5
ASAJ	Asahikawa	5.19	13	Pn	Pn	05 23 05.0	+1.0
	1.9nm,0.3s,baz=247,slow=13,SNR=6.8						
KSRS	Korea Array	10.38	265	Pn	Pn	05 24 19.1	+3.9
	1.2nm,0.3s,baz=80,slow=14,SNR=30						
KSRS				Sn	Sn	05 26 16.3	+4.6
	0.4nm,0.3s,baz=75,slow=25,SNR=5.4						
HHC	Hu-ho-hao-te	22.56	284	eP	P	05 26 45.5	-1.0
HHC				S	S	05 30 47.0	-7.2
HHC				pmax	pmax		
	comp=Z,11nm,0.5s,mb4.5						
HHC				pmax	pmax		
	comp=Z,2μm,4.9s						
SONM	Songino Array	26.39	301	P	P	05 27 22.4	-0.4
	comp=Z,0.4nm,0.6s,mb3.1,baz=96,slow=10,SNR=2.5						
ZALV	Zalesovo Beam	40.30	311	P	P	05 29 22.9	-0.6
	comp=Z,2.1nm,0.6s,mb4.0,baz=75,slow=8.1,SNR=7.8						
MK31	Makanchi Array	42.76	300	eP	P	05 29 43.2	-0.6
MKAR	Makanchi Array	42.76	300	P	P	05 29 43.2	-0.5
	comp=Z,1.5nm,0.6s,mb3.9,baz=86,slow=9.9,SNR=17						
MKAR	Makanchi Array	42.76	300	P	P	05 29 43.2	-0.5
KURK	Kurchatov	44.42	306	eP	P	05 29 56.4	-0.7
	comp=Z,2.5nm,0.7s,mb4.0						
BVAR	Borovoye Array	48.95	311	P	P	05 30 32.3	-0.2
	comp=Z,1.2nm,0.6s,mb4.1,baz=67,slow=8.7,SNR=4.8						
ABKAR	Akbulak array	56.37	309	eP	P	05 31 26.7	-0.8
	comp=Z,2.4nm,0.6s,mb4.4						
WRA	Warramunga Arr	59.03	187	P	P	05 31 45.2	-1.2
	comp=Z,1.2nm,0.7s,mb4.0,baz=6.4,slow=7.3,SNR=7.1						
ASAR	Alice Springs	62.76	187	P	P	05 32 12.0	+0.3
	comp=Z,0.9nm,0.6s,mb4.0,baz=12,slow=4.6,SNR=7.2						
FINES	FINESS Array B	66.85	332	P	P	05 32 38.0	0.0
	comp=Z,3.0nm,0.7s,mb4.4,baz=30,slow=9.6,SNR=8.9						
NB2	NORSAR Subarra	72.17	337	P	P	05 33 10.5	-0.4
	comp=Z,1.0nm,0.6s,mb3.9,baz=39,slow=6.5						
NOA	NORSAR Array B	72.17	337	P	P	05 33 10.6	-0.3
	comp=Z,1.3nm,0.6s,mb4.0,baz=40,slow=6.0,SNR=7.0						
AKASG	Malin Array Be	72.47	322	P	P	05 33 12.2	-0.6
	comp=Z,1.7nm,0.6s,mb4.1,baz=45,slow=5.1,SNR=4.4						
LPAZ	La Paz	145.92	56	PKPbc	PKPbc	05 41 25.9	-0.5
	comp=Z,0.8nm,0.9s,baz=4.7,slow=3.1,SNR=3.7						

*NEIC **05** 05:37:30.9, 17°.21N×102°.17W, h16km, MD3.9(MEX), After MEX.*

MEX 05 05:37:29.8±0.6, 17°.22N×102°.17W, h7km±12km, MD3.9, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	Aquila	1.55	314	iP	Pn	05 37 53.8	-4.0
MMIG				iS	Sn	05 38 13.5	-4.6
CAIG	El Cayaco	1.82	95	iP	Pn	05 37 58.8	-2.8
CAIG				iS	Sn	05 38 19.6	-5.3
CAIG	El Cayaco	1.82	95	iP	Pn	05 37 58.8	-2.8
CAIG				iS	Sn	05 38 19.6	-5.3
ACX	Acapulco	2.23	99	eP	Pn	05 38 02.6	-4.6
ACX				iS	Sn	05 38 29.3	-5.8
ACX	Acapulco	2.23	99	eP	Pn	05 38 02.6	-4.6
ACX				iS	Sn	05 38 29.3	-5.8
MZVM		3.41	54	iP	Pn	05 38 21.0	-2.4
MZVM				iS	Sn	05 38 57.1	-7.0
PPM	Popocatepetl	3.83	61	eP	Pn	05 38 26.3	-3.0
PPM				iS	Sn	05 39 11.3	-3.3
PPM	Popocatepetl	3.83	61	eP	Pn	05 38 26.3	-3.0
PPM				iS	Sn	05 39 11.3	-3.3
PNIG	Pinotepa	3.95	101	iP	Pn	05 38 28.2	-2.7
PNIG				iS	Sn	05 39 13.3	-4.2
PNIG	Pinotepa	3.95	101	iP	Pn	05 38 28.2	-2.7
PNIG				iS	Sn	05 39 13.3	-4.2
UTMO	Huajuapan	4.21	81	eP	Pn	05 38 32.0	-2.3
UTMO				iS	Sn	05 39 20.1	-3.7

*IDC **05** 06:14:07.1±0.7, 1°.81S×138°.51E, h0km, mb4.4/10, mb1 4.7/12, mb1mx4.5/17, mbtmp4.5/12, ML5.1/2, Error ellipse: s-maj=31.2km s-min=11.3km az=87.0*
*ISCJB **05** 06:14:10.1±0.4, 1°.83S±0°.04×138°.50E±0°.07, h33km, mb4.6/20, Error ellipse: s-maj=10.5km s-min=5.4km az=179.9*
*BJI **05** 06:14:10.3, 1°.80S×138°.50E, h25km, mB5.3/2, mb4.8/4, Ms5.2/1, Ms7 4.7/1*
*NEIC **05** 06:14:12.3±0.3, 1°.80S×138°.50E, h35km, mb4.6/11, Error ellipse: s-maj=11.5km s-min=5.4km az=78.0*

ISC 05 06:14:09.0±2.9, 1°.77S±0°.04×138°.56E±0°.09, h12km±18km, n44, σ0s83/52, mb4.6/20, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	12.45	209	eP	Pn	06 17 07.0	+0.9
	31nm,0.5s						
KAKA				eS	Sn	06 19 23.4	-1.4
KAKA	Kakadu	12.45	209	ePn	Pn	06 17 05.2	-0.9
	91nm,0.5s						
KAKA				eSn	Sn	06 19 24.5	-0.3
COEN	Coen	12.95	160	ePn	Pn	06 17 12.9	0.0
COEN				eSn	Sn	06 19 37.7	+0.7
KNA	Kununurra	16.92	214	eP	Pn	06 18 07.3	+1.6
	45nm,0.8s						
KNA				eS	Sn	06 21 08.2	-5.6
WRAB	Tennant Creek	18.52	193	eP	Pn	06 18 25.3	-0.2
	38nm,0.6s						
WRA	Warramunga Arr	18.53	193	P	Pn	06 18 24.7	-1.0
	5.1nm,0.3s,baz=17,slow=12,SNR=221						
WRA				S	Sn	06 21 46.0	-6.8
	0.6nm,0.3s,baz=9.7,slow=21,SNR=6.3						
WRA	Warramunga Arr	18.53	193	P	Pn	06 18 24.7	-1.0
WRA				S	Sn	06 21 46.0	-6.8
CTA	Charters Tower	19.70	158	eP	Pn	06 18 38.8	-1.0
	19nm,0.5s						
CTA	Charters Tower	19.70	158	P	Pn	06 18 38.7	-1.1
	4.1nm,0.3s,baz=337,slow=11,SNR=43						
CTA	Charters Tower	19.70	158	P	Pn	06 18 38.7	-1.2
CTAO	Charters Tower	19.70	158	eP	Pn	06 18 38.5	-1.3
	25nm,0.6s						
FITZ	Fitzroy Crossi	20.60	217	eP	P	06 18 49.7	+1.6
	23nm,0.9s						
FITZ				eS	S	06 22 30.2	-8.2
FITZ	Fitzroy Crossi	20.60	217	P	P	06 18 48.9	+0.8
	13nm,0.9s,baz=47,slow=11,SNR=16						
FITZ				S	S	06 22 32.7	-5.7
	21nm,0.8s,baz=189,slow=12,SNR=10						
FITZ	Fitzroy Crossi	20.60	217	eP	P	06 18 48.8	+0.7
	12nm,0.7s						
FITZ				eS	S	06 22 32.9	-5.5
ASAR	Alice Springs	22.23	191	P	P	06 19 06.3	+0.7
	33nm,0.8s,mb4.8,baz=18,slow=10.0,SNR=219						
ASAR				S	S	06 23 10.1	-0.3
	5.1nm,0.9s,baz=13,slow=24,SNR=9.3						
EIDS	Eidsvold	26.39	154	eP	P	06 19 47.4	+1.9
	38nm,0.8s,mb5.0						
MBWA	Marble Bar	26.61	222	eP	P	06 19 48.0	+0.5
MBWA	Marble Bar	26.61	222	eP	P	06 19 47.5	0.0
	8.9nm,0.7s,mb4.4						
STKA	Stephens Creek	30.09	175	eP	P	06 20 17.8	-0.6
	8.6nm,0.9s,mb4.5						
STKA	Stephens Creek	30.09	175	P	P	06 20 17.2	-1.1
	11nm,0.7s,mb4.7,baz=355,slow=9.2,SNR=18						
STKA	Stephens Creek	30.09	175	eP	P	06 20 17.8	-0.6
	1.9nm,0.6s,mb4.0						
FORT	Forrest	30.52	198	eP	P	06 20 23.3	+1.1
	15nm,0.6s,mb5.0						
FORT	Forrest	30.52	198	eP	P	06 20 22.1	-0.1
	18nm,0.7s,mb5.0						
ARMA	Armidale	31.08	158	eP	P	06 20 27.2	0.0
	5.0nm,0.6s,mb4.5						
CNB	Canberra Magne

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.82**	**206**	⇑*i*Pg	**Pg**	**07 00 59.8**	**-0.2**
CD2				Sg	**Sg**	**07 01 11.2**	**+0.5**
CD2				smax			
	comp=N,22μm,0.9s						
CD2				smax			
	comp=E,16μm,0.7s						
LZH	**Lanzhou**	**4.43**	**357**	Pn	**Pn**	**07 01 56.4**	**+3.8**
LZH				Pg	**Pg**	**07 02 07.7**	**-1.4**
LZH				Sg	**Sg**	**07 03 07.5**	**+1.0**
LZH				smax			
	comp=N,890nm,0.9s						
LZH				smax			
	comp=E,580nm,0.8s						
LZH				LR	LR		
	comp=E,3μm,6.6s						
LZH				LR	LR		
	comp=Z,5μm,7.9s						
XAN	**Xi'an**	**4.65**	**58**	Pn	**Pn**	**07 01 55.7**	**0.0**
XAN				Sn	**Sn**	**07 02 47.7**	**-2.6**
XAN				Sg	**Sg**	**07 03 11.2**	**-2.4**
XAN				smax			
	comp=N,2μm,0.8s						
XAN				smax			
	comp=E,620nm,0.9s						
GYA	**Guiyang**	**5.62**	**157**	Pn	**Pn**	**07 02 09.8**	**+0.8**
GYA				Sn	**Sn**	**07 03 14.2**	**0.0**
GYA				smax			
	comp=N,50nm,0.8s						
GYA				smax			
	comp=E,60nm,0.8s						
KMI	**Kunming**	**6.63**	**191**	Pn	**Pn**	**07 02 23.7**	**+0.8**
KMI				Sn	**Sn**	**07 03 38.7**	**-0.5**
KMI				smax			
	comp=N,91nm,1.4s						
KMI				smax			
	comp=E,91nm,1.8s						
KMI				LR	LR		
	comp=N,1μm,7.3s						
KMI				LR	LR		
	comp=E,1μm,7.9s						
KMI				LR	LR		
	comp=Z,1μm,7.3s						
GTA	**Gaotai**	**8.51**	**337**	⇑P	**Pn**	**07 02 54.3**	**+5.6**
GTA				pP		07 02 58.1	
GTA				sP		07 03 00.5	
GTA				S	**Sn**	**07 04 33.1**	**+7.6**
GTA				sS		07 04 38.2	
GTA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GTA				LR	LR		
	comp=N,2μm,10.1s						
GTA				LR	LR		
	comp=E,2μm,12.2s						
GTA				LR	LR		
	comp=Z,1μm,12.8s						
WHN	**Wuhan**	**8.79**	**95**	P	**Pn**	**07 02 54.6**	**+2.0**
WHN				S	**Sn**	**07 04 24.4**	**-8.1**
WHN				LR	LR		
	comp=N,4μm,4.1s						
WHN				LR	LR		
	comp=E,4μm,9.5s						
WHN				LR	LR		
	comp=Z,3μm,9.0s						
BTO	**Baotou**	**10.10**	**26**	*e*P	Px	07 03 27.7	
BTO				S	**Sn**	**07 05 07.6**	**+3.1**
BTO				LR	LR		
	comp=N,190nm,11.0s						
BTO				LR	LR		
	comp=E,170nm,8.8s						
HHC	**Hu-ho-hao-te**	**10.94**	**31**	*e*P	**Pn**	**07 03 19.1**	**-2.8**
HHC				PP		07 03 27.7	
HHC				S	**Sn**	**07 05 22.3**	**-2.7**
HHC				sS		07 05 27.1	
HHC				SS		07 05 35.6	
HHC				PcS	PcS	07 12 50.5	-4.7
HHC				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,140nm,4.9s						
HHC				LR	LR		
	comp=N,2μm,7.9s						
HHC				LR	LR		
	comp=E,2μm,7.9s						
HHC				LR	LR		
	comp=Z,2μm,8.2s						
TIA	**Tai'an**	**11.67**	**64**	*e*P	**Pn**	**07 03 32.2**	**+0.2**
GZH	**Guangzhou**	**11.79**	**134**	P	**Pn**	**07 03 29.4**	**-4.3**
GZH				S	**Sn**	**07 05 39.4**	**-6.7**
GZH				LR	LR		
	comp=N,680nm,5.3s						
GZH				LR	LR		
	comp=E,460nm,8.1s						
NJ2	**Nanjing**	**12.49**	**84**	*e*P	**Pn**	**07 03 45.3**	**+2.1**
NJ2				pP		07 03 48.4	
NJ2				sP		07 03 51.8	
NJ2				PP		07 03 55.4	
NJ2				S	**Sn**	**07 06 04.3**	**+1.2**
NJ2				sS		07 06 09.9	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,90nm,3.9s						
NJ2				LR	LR		
	comp=N,1μm,13.4s						
NJ2				LR	LR		
	comp=E,1μm,11.8s						
NJ2				LR	LR		
	comp=Z,1μm,10.7s						
BJI	**Beijing**	**12.83**	**46**	P	**Pn**	**07 03 48.5**	**+0.7**
BJI				pmax	pmax		
	comp=Z,50nm,0.6s						
BJI				LR	LR		
	comp=N,610nm,17.9s						
BJI				LR	LR		
	comp=E,810nm,18.7s						
BJI				LR	LR		
	comp=Z,980nm,26.6s						
QIZ	**Qiongzhong**	**13.57**	**157**	P	**Pn**	**07 03 57.1**	**-0.9**
QIZ				S	**Sn**	**07 06 29.8**	**+0.2**
QIZ				LR	LR		
	comp=N,470nm,16.2s						
QIZ				LR	LR		
	comp=E,610nm,15.8s						
QIZ				LR	LR		
	comp=Z,1μm,56.2s						
CM31	**Chiang Mai Arr**	**13.96**	**201**	*e*Pn	**Pn**	**07 04 05.0**	**+1.6**
CMAR	**Chiang Mai Arr**	**13.96**	**201**	Pn	**Pn**	**07 04 04.7**	**+1.3**
	comp=Z,0.7nm,0.3s,baz=10,slow=12,SNR=8.2						
QZH	**Quanzhou**	**14.35**	**114**	*e*P	**Pn**	**07 04 10.1**	**+1.5**
QZH				S	**Sn**	**07 06 50.4**	**+1.9**
QZH				LR	LR		
	comp=N,960nm,7.6s						
QZH				LR	LR		
	comp=E,1μm,6.4s						
QZH				LR	LR		
	comp=Z,2μm,8.7s						
TAPN	**Taplejung**	**14.96**	**258**	*e*P	**Pn**	**07 04 17.6**	**+0.6**
	comp=Z,48nm,1.2s						
ODAN	**Odare**	**15.41**	**256**	*e*P	**Pn**	**07 04 23.2**	**+0.3**
	comp=Z,34nm,0.7s						
RAMN	**Ramite**	**16.03**	**257**	*e*P	**Pn**	**07 04 30.3**	**-0.7**
	comp=Z,15nm,0.6s						
JIRN	**Jiri**	**16.13**	**260**	*e*P	**Pn**	**07 04 31.4**	**-0.9**
	comp=Z,40nm,0.9s						
SONM	**Songino Array**	**16.25**	**5**	Pn	**Pn**	**07 04 34.7**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=188,slow=14,SNR=19						
GUN	**Gumba**	**16.32**	**261**	*e*P	**Pn**	**07 04 33.7**	**-1.0**
	comp=Z,76nm,0.9s						
ULN	**Ulaanbaatar**	**16.34**	**7**	*e*P	**Pn**	**07 04 35.7**	**+0.8**
ULN				pmax	pmax		
	comp=Z,28nm,1.7s						
ULN	**Ulaanbaatar**	**16.34**	**7**	*e*P	**Pn**	**07 04 35.7**	**+0.8**
	comp=Z,28nm,1.7s						
YHNB	**Yeheng**	**16.68**	**110**	*e*P	**Pn**	**07 04 40.2**	**+0.9**
	comp=Z,34nm,0.9s						
SSLB	**Suanglung**	**16.78**	**114**	*e*P	**Pn**	**07 04 44.2**	**+3.5**
	comp=Z,43nm,1.0s						
PKI	**Pulchoki**	**16.82**	**261**	*e*P	**Pn**	**07 04 39.6**	**-1.5**
	comp=Z,37nm,0.7s						
PKIN	**Phulchoki**	**16.82**	**261**	*e*P	**Pn**	**07 04 39.9**	**-1.3**
	comp=Z,61nm,0.7s						
KKN	**Kakani**	**16.86**	**262**	*e*P	**Pn**	**07 04 40.1**	**-1.5**
	comp=Z,52nm,0.9s						
DMN	**Daman**	**17.06**	**261**	*e*P	**Pn**	**07 04 42.5**	**-1.7**
	comp=Z,35nm,0.7s						
GKN	**Gorkha**	**17.34**	**263**	*e*P	**Pn**	**07 04 46.1**	**-1.5**
	comp=Z,38nm,0.7s						
WMQ	**Urumqi**	**17.78**	**318**	*e*P	**Pn**	**07 04 53.9**	**+0.9**
WMQ				pP	pP	07 04 57.5	+3.6
WMQ				sP	sP	07 05 00.9	+7.0
WMQ				PP		07 05 08.7	
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
KOLN	**Koldanda**	**18.28**	**263**	*e*P	**Pn**	**07 04 56.5**	**-2.9**
	comp=Z,21nm,0.6s						
TLY	**Talaya**	**20.01**	**359**	*e*P	**P**	**07 05 23.4**	**+5.1**
TLY				pmax	pmax		
	comp=Z,10.0nm,1.5s						
KSRS	**Korea Array**	**20.37**	**67**	P	**P**	**07 05 22.7**	**+0.3**
	comp=Z,18nm,0.7s,baz=256,slow=10,SNR=70						
KSRS	**Korea Array**	**20.37**	**67**	P	**P**	**07 05 22.7**	**+0.3**
KSRS				pmax	pmax		
	comp=Z,18nm,0.7s						
IRK	**Irkutsk**	**20.57**	**0**	*e*P	**P**	**07 05 26.8**	**+2.4**
IRK				pmax	pmax		
	comp=Z,40nm,0.7s						
CN2	**Changchun**	**20.67**	**48**	*e*P	**P**	**07 05 26.0**	**+0.4**
CN2				*es*P	sP	07 05 33.0	+7.4
CN2				*e*S	**S**	**07 09 12.1**	**-5.2**
CN2				pmax	pmax		
	comp=Z,70nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,10.0s						
CN2				LR	LR		
	comp=N,500nm,19.0s,MS4.0						
CN2				LR	LR		
	comp=E,300nm,19.0s,MS4.0						
CN2				LR	LR		
	comp=Z,2μm,16.0s,MS4.6						
MK31	**Makanchi Array**	**22.61**	**318**	*e*P	**P**	**07 05 47.7**	**+1.4**
MKAR	**Makanchi Array**	**22.61**	**318**	P	**P**	**07 05 47.6**	**+1.3**
	comp=Z,6.8nm,0.9s,mb4.2,baz=121,slow=12,SNR=48						
MDJ	**Mudanjiang**	**23.70**	**50**	P	**P**	**07 05 56.9**	**-0.8**
MDJ				pP		07 05 59.7	
MDJ				sP	sP	07 06 01.2	+3.4
MDJ				S	**S**	**07 10 11.8**	**-1.6**
MDJ				sS	sS	07 10 17.3	+3.8
MDJ				ScP	ScP	07 13 19.6	-1.7
MDJ				PcS	PcS	07 13 20.8	-0.3
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.1						
MDJ				LR	LR		
	comp=N,1μm,4.2s						
MDJ				LR	LR		
	comp=E,1μm,90.1s						
MDJ				LR	LR		
	comp=Z,1μm,81.6s						
KSH	**Kashi**	**24.17**	**297**	*e*P	**P**	**07 06 12.4**	**+10**
KSH				pP		07 06 16.1	
KSH				sP	sP	07 06 19.5	+17
KSH				PP		07 06 50.0	
KSH				PcP	PcP	07 09 46.6	+3.7
KSH				S	**S**	**07 10 34.1**	**+13**
KSH				sS	sS	07 10 41.2	+20
KSH				SS		07 11 34.3	
KSH				ScP	ScP	07 13 23.5	+0.8
KSH				PcS	PcS	07 13 25.2	+2.6
KSH				ScS	ScS	07 17 11.0	+1.1
KSH				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.1						
KSH				pmax	pmax		
	comp=Z,120nm,4.7s						
KSH				LR	LR		
	comp=N,210nm,11.4s						
KSH				LR	LR		
	comp=E,110nm,9.0s						
KSH				LR	LR		
	comp=Z,2μm,54.3s						
TKM2	**Tokmak 2**	**25.25**	**305**	*e*P	**P**	**07 06 12.4**	**+0.5**
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
TKM2	**Tokmak 2**	**25.25**	**305**	*e*P	**P**	**07 06 12.4**	**+0.5**
	comp=Z,4.6nm,0.8s,mb4.3						
AAK	**Ala-Archa**	**25.95**	**303**	P	**P**	**07 06 20.8**	**+2.5**
	comp=Z,1.5nm,0.4s,mb4.0,baz=180,slow=4.8,SNR=4.7						
ZAA0	**Zalesovo Array**	**26.25**	**334**	*e*P	**P**	**07 06 21.3**	**+0.4**
ZALV	**Zalesovo Beam**	**26.25**	**334**	P	**P**	**07 06 21.4**	**+0.5**
	comp=Z,9.8nm,0.6s,mb4.6,baz=132,slow=9.2,SNR=32						
KURK	**Kurchatov**	**26.84**	**323**	P	**P**	**07 06 27.1**	**+0.9**
	comp=Z,3.5nm,0.7s,mb4.2,baz=129,slow=8.8,SNR=28						
KURK				PcP	PcP	07 09 47.7	-1.1
	comp=Z,1.6nm,0.6s,baz=118,slow=2.0,SNR=6.2						
KURK	**Kurchatov**	**26.84**	**323**	*e*P	**P**	**07 06 26.9**	**+0.7**
KURK				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
KURK	**Kurchatov**	**26.84**	**323**	*e*P	**P**	**07 06 26.9**	**+0.7**
	comp=Z,8.9nm,0.9s,mb4.5						
KLR	**Kul'dur**	**27.14**	**42**	*e*P	**P**	**07 06 26.7**	**-2.2**
MAJO	**Matsushiro**	**28.51**	**71**	*e*P	**P**	**07 06 39.7**	**-1.6**
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.6						
MAJO	**Matsushiro**	**28.51**	**71**	*e*P	**P**	**07 06 39.7**	**-1.6**
	comp=Z,4.6nm,0.5s,mb4.6						
MJAR	**Matsushiro Arr**	**28.51**	**71**	P	**P**	**07 06 39.8**	**-1.6**
	comp=Z,2.2nm,0.6s,mb4.1,baz=275,slow=10,SNR=7.5						
HABR	**Khabarovsk**	**28.73**	**45**	P	**P**	**07 06 42.1**	**-1.0**
HABR				*e**SP	sP	07 06 54.7	+12
HABR						07 09 49.8	
HABR				*e*		07 17 22.8	
HABR				MLR	MLR		
	comp=Z,400nm,21.0s,MS4.0						
PSI	**Prapat**	**29.12**	**191**	P	**P**	**07 06 45.6**	**-1.2**
	comp=Z,6.5nm,0.8s,mb4.5,baz=355,slow=8.2,SNR=7.4						
BVAR	**Borovoye Array**	**32.40**	**321**	P	**P**	**07 07 16.6**	**+1.1**
	comp=Z,0.9nm,0.5s,mb4.0,baz=132,slow=6.2,SNR=4.6						
BVAR				PcP	PcP	07 10 02.0	-0.9
	comp=Z,2.2nm,0.6s,baz=117,slow=3.4,SNR=11						
BRVK	**Borovoye**	**32.47**	**321**	*d i*P	**P**	**07 07 16.3**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.5s,mb4.2						
YSS	**Yuzh-Sakhalins**	**33.16**	**51**	*e*P	**P**	**07 07 22.5**	**+0.3**
YSS				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.1						
YSS	**Yuzh-Sakhalins**	**33.16**	**51**	*e*P	**P**	**07 07 22.4**	**+0.2**
	comp=Z,15nm,0.6s,mb5.1						
ABKAR	**Akbulak array**	**37.35**	**311**	*e*P	**P**	**07 07 59.3**	**+1.0**
	comp=Z,4.0nm,0.8s,mb4.2						
AKTK	**Aktyubinsk**	**38.81**	**313**	P	**P**	**07 08 11.3**	**+0.8**
AKTO	**Aktyubinsk**	**38.81**	**313**	P	**P**	**07 08 11.3**	**+0.8**
	comp=Z,2.0nm,0.6s,mb3.9,baz=117,slow=12,SNR=6.4						
SVE	**Sverdlovsk**	**39.09**	**323**	⇓*e*P	**P**	**07 08 14.6**	**+1.7**
SVE				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.7						
ARU	**Arti**	**40.04**	**322**	*c i*P	**P**	**07 08 21.5**	**+0.8**
ARU				S	**S**	**07 14 28.1**	**+0.8**
ARU				SS	SS	07 17 23.3	-0.6
ARU				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.6						
ARU	**Arti**	**40.04**	**322**	*e*P	**P**	**07 08 21.7**	**+1.0**
	comp=Z,23nm,1.2s,mb4.7						
SOKR	**Solikamsk**	**41.97**	**326**	⇓*i*P	**P**	**07 08 38.1**	**+1.5**
SOKR				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.6						
SEY	**Seymchan**	**43.58**	**30**	⇓*i*P	**P**	**07 08 49.4**	**-0.3**
PETK	**Petropavlovsk-**	**43.76**	**45**	P	**P**	**07 08 52.7**	**+1.5**
	comp=Z,4.0nm,0.7s,mb4.3,baz=252,slow=6.8,SNR=3.0						
KIV	**Kislovodsk**	**49.06**	**303**	⇓*e*P	**P**	**07 09 34.0**	**+0.9**
KIV				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
BILL	**Biiibino**	**50.65**	**25**	⇑*e*P	**P**	**07 09 44.5**	**-0.3**
BILL				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.6						
VSR	**Storozhevoye**	**50.76**	**313**	*e*P	**P**	**07 09 45.1**	**-0.7**
VSR				pmax	pmax		
	comp=N,2.0nm,0.4s						
VSR				pmax	pmax		
	comp=E,4.0nm,0.4s						
VSR				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.7						
OBN	**Obninsk**	**52.11**	**318**	⇑*e*P	**P**	**07 09 56.0**	**+0.1**
OBN				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
JOF	**Joensuu**	**54.60**	**328**	*e*P	**P**	**07 10 13.1**	**-0.9**
JOF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
JOF	**Joensuu**	**54.60**	**328**	*ep*	**P**	**07 10 13.1**	**-0.9**
	comp=Z,4.0nm,0.6s,mb4.6						
BRTR	**Keskin Array B**	**56.52**	**299**	P	**P**	**07 10 28.6**	**+0.3**
	comp=Z,0.6nm,0.7s,mb3.8,baz=124,slow=12,SNR=3.2						
ARCES	**ARCESS Array B**	**56.78**	**336**	P	**P**	**07 10 29.5**	**-0.2**
	comp=Z,2.6nm,0.5s,mb4.5,baz=83,slow=8.5,SNR=21						
ARCES				PcP	PcP	07 11 24.6	-0.9
	comp=Z,1.7nm,0.7s,baz=90,slow=4.9,SNR=4.3						
KAF	**Kangasniemi**	**56.96**	**327**	*e*P	**P**	**07 10 30.1**	**-0.9**
KAF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
KAF	**Kangasniemi**	**56.96**	**327**	*ep*	**P**	**07 10 30.1**	**-0.9**
	comp=Z,5.8nm,0.9s,mb4.6						
AKASG	**Malin Array Be**	**57.05**	**313**	P	**P**	**07 10 31.4**	**-0.4**
	comp=Z,2.5nm,0.4s,mb4.6,baz=67,slow=7.5,SNR=13						
AKBB	**Malin Array Si**	**57.05**	**313**	*e*P	**P**	**07 10 31.0**	**-0.9**
FINES	**FINESS Array B**	**57.15**	**326**	P	**P**	**07 10 32.0**	**-0.3**
	comp=Z,4.6nm,0.7s,mb4.6,baz=77,slow=6.7,SNR=25						
WRAB	**Tennant Creek**	**58.89**	**146**	*e*P	**P**	**07 10 43.8**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.2						
WRAB	**Tennant Creek**	**58.89**	**146**	*e*P	**P**	**07 10 43.8**	**-1.3**
	comp=Z,17nm,0.7s,mb5.2						
WRA	**Warramunga Arr**	**58.90**	**146**	P	**P**	**07 10 44.0**	**-1.1**
	comp=Z,3.8nm,0.5s,mb4.7,baz=340,slow=7.7,SNR=37						
ASAR	**Alice Springs**	**61.93**	**149**	P	**P**	**07 11 05.2**	**-0.6**
	comp=Z,3.4nm,0.5s,mb4.9,baz=340,slow=6.2,SNR=18						
CRVS	**Cervenica-Dubn**	**62.37**	**312**	*e*P	**P**	**07 11 08.7**	**+0.2**
CRVS	**Cervenica-Dubn**	**62.37**	**312**	*e*P	**P**	**07 11 08.7**	**+0.2**
VYHS	**Vyhne**	**64.15**	**313**	*e*P	**P**	**07 11 20.9**	**+0.6**
VYHS	**Vyhne**	**64.15**	**313**	*e*P	**P**	**07 11 20.9**	**+0.6**
NB2	**NORSAR Subarra**	**64.23**	**327**	P	**P**	**07 11 19.5**	**-1.1**
	comp=Z,3.2nm,0.6s,mb4.7,baz=73,slow=6.9						
NOA	**NORSAR Array B**	**64.23**	**327**	P	**P**	**07 11 19.8**	**-0.8**
	comp=Z,2.3nm,0.5s,mb4.6,baz=73,slow=6.9,SNR=19						
NAO01	**NORSAR Array S**	**64.44**	**327**	*e*P	**P**	**07 11 21.0**	**-1.1**
	comp=Z,2.0nm,0.5s,mb4.6						
MORC	**Moravsky Berou**	**64.53**	**314**	*e*P	**P**	**07 11 23.1**	**+0.3**
MORC				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.6						
MORC	**Moravsky Berou**	**64.53**	**314**	*e*P	**P**	**07 11 23.1**	**+0.3**
	comp=Z,3.3nm,0.7s,mb4.7						
DPC	**Dobruska-Polom**	**65.07**	**315**	*e*P	**P**	**07 11 27.1**	**+0.8**
UPC	**Upice**	**65.20**	**315**	*e*P	**P**	**07 11 27.4**	**+0.2**
PRU	**Pruhonice**	**66.27**	**315**	*e*P	**P**	**07 11 35.0**	**+0.9**
BRG	**Berggiesshubel**	**66.31**	**316**	*i* P	**P**	**07 11 34.2**	**0.0**
	comp=Z,3.2nm,0.6s,mb4.7						
BRG	**Berggiesshubel**	**66.31**	**316**	*i* P	**P**	**07 11 34.2**	**-0.1**
BRG				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.5						
TTA	**Tatalina**	**66.56**	**29**	*e*P	**P**	**07 11 34.7**	**-1.0**
CLL	**Collm**	**66.70**	**317**	*e*P	**P**	**07 11 37.0**	**+0.2**
CLL	**Collm**	**66.70**	**317**	*e*P	**P**	**07 11 37.0**	**+0.2**
CLL				*e*PP	PP	07 14 07.0	+3.8
COLD	**Coldfoot**	**66.94**	**24**	*e*P	**P**	**07 11 37.7**	**-0.4**
	comp=Z,7.5nm,0.9s,mb4.9						
KHC	**Kasperske Hory**	**67.17**	**315**	*e*P	**P**	**07 11 39.9**	**0.0**
BPAW	**Bear Paw Mtn.**	**68.08**	**27**	*e*P	**P**	**07 11 44.9**	**-0.5**
	comp=Z,5.6nm,0.6s,mb5.0						
PPLA	**Purkeypile**	**68.15**	**29**	*e*P	**P**	**07 11 45.5**	**-0.3**
	comp=Z,8.9nm,0.6s,mb5.2						
COLA	**College**	**68.91**	**26**	*e*P	**P**	**07 11 49.9**	**-0.6**
COLA				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.0						
COLA	**College**	**68.91**	**26**	*e*P	**P**	**07 11 49.9**	**-0.6**
	comp=Z,10nm,0.9s,mb5.1						
PMR	**Palmer**	**70.03**	**29**	*e*P	**P**	**07 11 56.8**	**-0.7**
PMR				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.8						
PMR	**Palmer**	**70.03**	**29**	*e*P	**P**	**07 11 56.8**	**-0.7**
	comp=Z,6.5nm,0.7s,mb4.9						
KDAK	**Kodiak Island**	**70.35**	**34**	*i* P	**P**	**07 11 59.2**	**-0.3**
KMBO	**Kilima Mbogo**	**71.09**	**256**	P	**P**	**07 12 05.0**	**+0.2**
	comp=Z,1.3nm,0.4s,mb4.4,baz=180,slow=24,SNR=5.4						
KMBO	**Kilima Mbogo**	**71.09**	**256**	P	**P**	**07 12 05.0**	**+0.3**
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KMBO	**Kilima Mbogo**	**71.09**	**256**	*e*P	**P**	**07 12 05.1**	**+0.4**
	comp=Z,2.6nm,0.8s,mb4.4						
CDF	**Champ du Feu**	**71.27**	**316**	*e*P	**P**	**07 12 04.5**	**-0.8**
	comp=Z,5.6nm,0.6s,mb4.5						
CDF	**Champ du Feu**	**71.27**	**316**	*e*P	**P**	**07 12 04.5**	**-0.8**
CDF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.6						
CDF	**Champ du Feu**	**71.27**	**316**	*e*P	**P**	**07 12 04.5**	**-0.8**
	comp=Z,2.8nm,0.6s,mb4.6						
EGAK	**Eagle**	**71.38**	**24**	*e*P	**P**	**07 12 05.1**	**-0.6**
	comp=Z,3.5nm,0.7s,mb4.6						
MENT	**Mentasta**	**71.48**	**27**	*e*P	**P**	**07 12 05.9**	**-0.3**
INK	**Inuvik**	**71.62**	**19**	*e*P	**P**	**07 12 06.8**	**-0.2**
INK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
INK	**Inuvik**	**71.62**	**19**	*e*P	**P**	**07 12 06.8**	**-0.3**
	comp=Z,10nm,0.8s,mb5.0						
BMRM	**Bremner River**	**72.22**	**29**	*e*P	**P**	**07 12 10.4**	**-0.4**
	comp=Z,13nm,0.9s,mb5.1						
DAWY	**Dawson**	**72.42**	**24**	*e*P	**P**	**07 12 11.4**	**-0.5**
STKA	**Stephens Creek**	**72.44**	**147**	P	**P**	**07 12 10.7**	**-1.6**
	comp=Z,2.4nm,0.9s,mb4.3,baz=337,slow=9.1,SNR=3.0						
LPG	**La Plagne**	**72.92**	**313**	⇑*i*P	**P**	**07 12 15.9**	**+0.7**
	comp=Z,14nm,0.7s,mb4.9						
LPG	**La Plagne**	**72.92**	**313**	⇑*i*P	**P**	**07 12 15.9**	**+0.7**
LPG				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.9						
LPG	**La Plagne**	**72.92**	**313**	⇑*i*P	**P**	**07 12 15.9**	**+0.7**
	comp=Z,6.9nm,0.7s,mb4.9						
LPL	**La Plagne**	**72.92**	**313**	⇑*i*P	**P**	**07 12 15.8**	**+0.6**
	comp=Z,11nm,0.6s,mb4.8						
LPL	**La Plagne**	**72.92**	**313**	⇑*i*P	**P**	**07 12 15.8**	**+0.6**
LPL				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.8						
LPL	**La Plagne**	**72.92**	**313**	⇑*i*P	**P**	**07 12 15.8**	**+0.6**
	comp=Z,5.4nm,0.6s,mb4.8						
SMF	**Signal de Mont**	**74.15**	**315**	⇑*i*P	**P**	**07 12 22.1**	**-0.3**
AVF	**Avril sur Loir**	**74.37**	**316**	*e*P	**P**	**07 12 23.4**	**-0.3**
PNL	**Peninsula**	**75.09**	**28**	*e*P	**P**	**07 12 28.2**	**+0.6**
	comp=Z,15nm,0.8s,mb5.1						
HYT	**Haines Junctio**	**75.11**	**27**	*e*P	**P**	**07 12 28.4**	**+0.7**
TCF	**Toulx Ste Croi**	**75.31**	**315**	⇑*i*P	**P**	**07 12 29.0**	**-0.2**
SKAG	**Skagway**	**76.82**	**27**	*e*P	**P**	**07 12 38.0**	**+0.5**
	comp=Z,19nm,0.9s,mb5.2						
YKA	**Yellowknife Ar**	**81.15**	**17**	P	**P**	**07 13 00.9**	**-0.3**
	comp=Z,4.5nm,0.5s,mb4.7,baz=327,slow=5.3,SNR=43						
YKA	**Yellowknife Ar**	**81.15**	**17**	P	**P**	**07 13 00

RBDL				*e*S	Sn	07 06 12.1	+1.5
RTR	**El Retiro**	**3.00**	**109**	*e*P	Pn	07 05 37.8	-0.3
RTR				*e*S	Sn	07 06 13.9	+0.9
SBLS	**San Blas**	**3.04**	**110**	*e*P	Pn	07 05 38.3	-0.3
SBLS				*e*S	Sn	07 06 14.9	+0.9
SNJE	**San Jose**	**3.04**	**109**	*e*P	Pn	07 05 39.1	+0.4
CMIG	**Matias Romero**	**3.13**	**315**	*i* P	Pn	07 05 40.1	+0.2
CMIG				*i* S	Sn	07 06 17.6	+1.3
CMIG	**Matias Romero**	**3.13**	**315**	*i* P	Pn	07 05 40.1	+0.2
CMIG				*i* S	Sn	07 06 17.6	+1.3
HUIG	**Huatulco**	**3.53**	**285**	*e*P	Pn	07 05 44.7	-0.6
HUIG				*i* S	Sn	07 06 23.3	-2.6
HUIG	**Huatulco**	**3.53**	**285**	*e*P	Pn	07 05 44.7	-0.6
HUIG				*i* S	Sn	07 06 23.3	-2.6
LFRS	**El Faro**	**3.62**	**110**	*e*P	Pn	07 05 46.5	0.0
LFRS				*e*S	Sn	07 06 27.0	-1.3
SCIG	**Sabancuy**	**4.28**	**18**	*i* P	Pn	07 05 54.0	-1.4
SCIG				*i* S	Sn	07 06 39.2	-4.9
VHO	**Vista Hermosa**	**4.56**	**299**	*i* P	Pn	07 06 00.0	+0.7
VHO				*i* S	Sn	07 06 52.7	+1.6
VHO	**Vista Hermosa**	**4.56**	**299**	*i* P	Pn	07 06 00.0	+0.7
VHO				*i* S	Sn	07 06 52.7	+1.6
PNIG	**Pinotepa**	**5.56**	**286**	*i* P	Pn	07 06 13.9	+1.0
PNIG				*i* S	Sn	07 07 13.3	-2.2
PNIG	**Pinotepa**	**5.56**	**286**	*i* P	Pn	07 06 13.9	+1.0
PNIG				*i* S	Sn	07 07 13.3	-2.2
UTMO	**Huajuapan**	**5.82**	**301**	*e*P	Pn	07 06 17.0	+0.6
UTMO				*i* S	Sn	07 07 20.0	-1.8
PPM	**Popocatepetl**	**7.14**	**307**	*e*P	Pn	07 06 35.5	+1.1
PPM				*i* S	Sn	07 08 01.3	+7.3
PPM	**Popocatepetl**	**7.14**	**307**	*e*P	Pn	07 06 35.5	+1.1
PPM				*i* S	Sn	07 08 01.3	+7.3

*ISCJB **05** 07:14:58.6±0.6, 26°.9S±0°.1×67°.3E±0°.2, h10km, mb4.1/17, Error ellipse: s-maj=19.5km s-min=15.6km az=175.2*
*IDC **05** 07:14:58.7±0.7, 26°.84S×67°.21E, h0km, mb4.1/14, mb1 4.2/14, mb1mx4.1/24, mbtmp4.1/14, Error ellipse: s-maj=23.0km s-min=18.0km az=84.0*
*NEIC **05** 07:15:00.1±0.4, 26°.87S×67°.19E, h10km, mb4.1/4, Error ellipse: s-maj=15.8km s-min=12.3km az=82.0*

ISC 05 07:15:00.5±0.6, 26°.9S±0°.1×67°.2E±0°.2, h10km, n23, σ0s44/21, mb4.1/17, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**38.05**	**280**	P	P	**07 22 19.4**	**0.0**
	1.6nm,0.5s,mb4.0,baz=147,slow=8.8,SNR=2.9						
MAW	**Mawson**	**40.86**	**183**	P	P	**07 22 42.3**	**+0.2**
	2.9nm,0.6s,mb4.1,baz=1.7,slow=9.1,SNR=14						
MAW	**Mawson**	**40.86**	**183**	*e*P	P	**07 22 41.8**	**-0.3**
	0.5nm,0.7s,mb3.2						
CMAR	**Chiang Mai Arr**	**54.56**	**38**	P	P	**07 24 29.5**	**+0.5**
	7.2nm,0.8s,mb4.8,baz=232,slow=7.2,SNR=25						
ASAR	**Alice Springs**	**59.77**	**103**	P	P	**07 25 05.8**	**-0.2**
	1.3nm,0.7s,mb4.1,baz=260,slow=6.2,SNR=12						
WRA	**Warramunga Arr**	**61.38**	**99**	P	P	**07 25 17.0**	**0.0**
	1.0nm,0.7s,mb4.0,baz=249,slow=6.6,SNR=5.1						
QSPA	**South Pole Qui**	**63.29**	**180**	P	P	**07 25 29.1**	**+0.2**
	2.3nm,0.8s,mb4.3,baz=304,slow=3.3,SNR=7.2						
QSPA	**South Pole Qui**	**63.29**	**180**	P	P	**07 25 29.1**	**+0.2**
GTA	**Gaotai**	**72.60**	**26**	*e*P	P	**07 26 28.9**	**+1.0**
GTA				pP	pP	07 26 34.5	+3.3
GTA				sP	sP	07 26 37.4	+5.0
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
BRTR	**Keskin Array B**	**73.26**	**334**	P	P	**07 26 32.2**	**+0.5**
	comp=Z,1.4nm,0.9s,mb3.9,baz=182,slow=7.0,SNR=5.9						
MKAR	**Makanchi Array**	**74.56**	**11**	P	P	**07 26 38.7**	**-0.5**
	comp=Z,0.9nm,0.7s,mb3.8,baz=198,slow=5.6,SNR=14						
ABKAR	**Akbulak array**	**76.04**	**355**	*e*P	P	**07 26 47.5**	**-0.2**
	comp=Z,1.3nm,0.6s,mb4.0						
KURK	**Kurchatov**	**77.88**	**7**	P	P	**07 26 57.1**	**-0.8**
	comp=Z,0.7nm,0.7s,mb3.7,baz=205,slow=6.0,SNR=4.2						
KURK	**Kurchatov**	**77.88**	**7**	*e*P	P	**07 26 57.7**	**-0.3**
	comp=Z,0.7nm,0.4s,mb3.9						
BVAR	**Borovoye Array**	**79.58**	**2**	P	P	**07 27 07.5**	**+0.1**
	comp=Z,0.4nm,0.4s,mb3.7,baz=184,slow=4.5,SNR=4.1						
ZAA0	**Zalesovo Array**	**81.89**	**10**	*e*P	P	**07 27 19.3**	**-0.4**
ZALV	**Zalesovo Beam**	**81.89**	**10**	P	P	**07 27 19.6**	**0.0**
	comp=Z,4.3nm,0.7s,mb4.5,baz=191,slow=4.8,SNR=16						
SONM	**Songino Array**	**82.27**	**25**	P	P	**07 27 22.3**	**+0.5**
	comp=Z,3.5nm,0.8s,mb4.3,baz=209,slow=4.7,SNR=16						
ULN	**Ulaanbaatar**	**82.54**	**26**	*e*P	P	**07 27 23.3**	**+0.1**
	comp=Z,9.1nm,1.4s,mb4.6						
AKASG	**Malin Array Be**	**84.20**	**337**	P	P	**07 27 31.4**	**-0.3**
	comp=Z,0.3nm,0.3s,mb3.9,baz=139,slow=4.3,SNR=4.5						
KSRS	**Korea Array**	**85.65**	**44**	P	P	**07 27 38.5**	**-0.8**
	comp=Z,0.8nm,0.6s,mb4.2,baz=221,slow=5.5,SNR=4.1						
YKA	**Yellowknife Ar**	**144.34**	**1**	PKP	PKPdf	07 34 33.2	-3.0
	comp=Z,1.3nm,0.7s,baz=337,slow=3.6,SNR=8.7						
YKA	**Yellowknife Ar**	**144.34**	**1**	PKP	PKPdf	07 34 33.2	-3.0

IDC 05 07:19:52.1±2.9, 8°.16S×116°.98E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.5/20, mbtmp3.5/4, Error ellipse: s-maj=164.3km s-min=22.4km az=54.0, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.48**	**127**	P	P	07 24 31.4	-0.4
	0.6nm,0.3s,baz=301,slow=12,SNR=24						
WRA				S	S	07 28 15.2	-6.8
	0.7nm,0.8s,baz=305,slow=21,SNR=4.6						
ASAR	**Alice Springs**	**22.38**	**136**	P	P	07 24 52.5	+0.4
	0.8nm,0.5s,baz=311,slow=8.4,SNR=15						
SONM	**Songino Array**	**56.53**	**351**	P	P	07 29 36.4	+0.3
	0.6nm,0.5s,baz=167,slow=6.8,SNR=3.3						
MKAR	**Makanchi Array**	**62.81**	**334**	P	P	07 30 19.6	0.0
	0.2nm,0.3s,baz=144,slow=6.1,SNR=5.5						

*IDC **05** 07:37:28.2±0.7, 10°.39N×60°.40W, h0km, mb4.0/13, mb1 4.2/15, mb1mx4.1/27, mbtmp4.0/15, Error ellipse: s-maj=18.4km s-min=16.5km az=95.0*
*FUNV **05** 07:37:30.4, 10°.44N×60°.12W, h31km, MW4.0*
*ISCJB **05** 07:37:31.8±0.3, 10°.34N±0°.03×60°.44W±0°.03, h43km, mb4.1/23, Error ellipse: s-maj=4.8km s-min=3.6km az=28.3*
*TRN **05** 07:37:35.2, 10°.49N×60°.54W, h75km, MD4.0*
*NEIC **05** 07:37:38.4, 10°.63N×60°.70W, h66km, mb4.2/13, MD4.0(TRN), After TRN.*

ISC 05 07:37:34.3±0.3, 10°.37N±0°.03×60°.46W±0°.03, h45km, h45km±.8km: pP-P, n170, σ19s03/181, mb4.1/23, 67C-52D, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBH	**Brigand Hill**	**0.60**	**281**	⇑*i*P	Pn	**07 37 49.3**	**+2.8**
TBH				*e*S	Sn	**07 38 00.5**	**+5.1**
TBH	**Brigand Hill**	**0.60**	**281**	⇑*i*P	Pn	**07 37 49.3**	**+2.8**
TBH				*e*S	Sn	**07 37 58.1**	**+2.7**
BOT	**Bacolet**	**0.83**	**343**	⇑*i*P	Pn	**07 37 50.4**	**+0.8**
BOT				*e*S	Sn	**07 38 02.2**	**+1.4**
BOT	**Bacolet**	**0.83**	**343**	⇑*i*P	Pn	**07 37 50.4**	**+0.8**
BOT				*e*S	Sn	**07 38 02.2**	**+1.4**
TPR	**Prospect**	**0.87**	**339**	⇑*i*P	Pn	**07 37 51.0**	**+0.9**
TPR	**Prospect**	**0.87**	**339**	⇑*i*P	Pn	**07 37 51.0**	**+0.9**
TRN	**Trinidad (W)**	**0.96**	**287**	⇓*i*P	Pn	**07 37 52.8**	**+1.4**
TRN				*e*S	Sn	**07 38 04.4**	**+0.4**
TRN	**Trinidad (W)**	**0.96**	**287**	⇓*i*P	Pn	**07 37 52.8**	**+1.4**
TRN				*e*S	Sn	**07 38 05.5**	**+1.5**
TPP	**Pointe-a-Pierr**	**0.97**	**267**	⇓*i*P	Pn	**07 37 54.6**	**+3.0**
TPP				*e*S	Sn	**07 38 05.9**	**+1.7**
TPP	**Pointe-a-Pierr**	**0.97**	**267**	⇓*e*P	Pn	**07 37 53.0**	**+1.5**
TPP				*e*S	Sn	**07 38 05.9**	**+1.7**
TCE	**Chacachacare**	**1.31**	**284**	⇓*i*P	Pn	**07 37 58.1**	**+2.0**
TCE	**Chacachacare**	**1.31**	**284**	⇓*e*P	Pn	**07 37 57.8**	**+1.7**
GUIV	**Guiria**	**1.75**	**279**	⇑*i*P	Pn	**07 38 02.7**	**+0.5**
GUIV				*e*S	Sn	**07 38 26.2**	**+2.9**
GRGR	**Grenville**	**2.10**	**326**	*e*Pn	Pn	**07 38 07.5**	**+0.5**
GRW	**Mount Saint Ca**	**2.13**	**327**	⇑*i*P	Pn	**07 38 09.0**	**+1.6**
GRW				*e*S	Sn	**07 38 27.8**	**-4.8**
GRW	**Mount Saint Ca**	**2.13**	**327**	⇑*e*P	Pn	**07 38 06.4**	**-1.0**
GRW				*e*S	Sn	**07 38 30.6**	**-2.0**
GRHS	**Sauteurs**	**2.17**	**328**	⇑*i*P	Pn	**07 38 09.0**	**+1.1**
GRHS	**Sauteurs**	**2.17**	**328**	⇑*e*P	Pn	**07 38 08.0**	**0.0**
GRIC	**Isle de Caille**	**2.20**	**330**	*e*P	Pn	**07 38 08.9**	**+0.5**
GRIC				*e*S	Sn	**07 38 31.7**	**-2.6**
GRSS	**Sisters**	**2.22**	**330**	⇓*i*P	Pn	**07 38 09.3**	**+0.6**
GRSS				*e*S	Sn	**07 38 29.1**	**-5.7**
GRSS	**Sisters**	**2.22**	**330**	⇓*i*P	Pn	**07 38 09.3**	**+0.6**
GRSS				*e*S	Sn	**07 38 32.7**	**-2.2**
GUNV	**Guanoco**	**2.45**	**265**	⇑*i*P	Pn	**07 38 13.0**	**+1.2**
GUNV				*e*S	Sn	**07 38 43.4**	**+2.9**
RIOV	**Rio Grande**	**2.65**	**210**	*e*P	Pn	**07 38 13.4**	**-1.1**
CRUV	**Carupano**	**2.74**	**277**	⇑*i*P	Pn	**07 38 15.1**	**-0.7**
CRUV				*e*S	Sn	**07 38 48.1**	**+0.4**
ITEV	**Isla Los Testi**	**2.80**	**291**	*e*P	Pn	**07 38 16.2**	**-0.3**
ITEV				*e*S	Sn	**07 38 50.2**	**+1.1**
BBGH	**Gun Hill**	**2.89**	**18**	*e*Pn	Pn	**07 38 18.3**	**+0.4**
SVV	**Soufriere Volc**	**3.02**	**346**	*e*P	Pn	**07 38 20.4**	**+0.8**
SVV	**Soufriere Volc**	**3.02**	**346**	*e*P	Pn	**07 38 20.4**	**+0.8**
ORIV	**Oritupano**	**3.18**	**246**	⇑*i*P	Pn	**07 38 22.7**	**+0.9**
SLB	**Belfond**	**3.48**	**351**	*e*P	Pn	**07 38 26.1**	**+0.2**
SLB	**Belfond**	**3.48**	**351**	*e*P	Pn	**07 38 26.1**	**+0.2**
SLW	**Petit Monier**	**3.66**	**353**	*e*P	Pn	**07 38 28.2**	**-0.1**
SLW				*e*S	Sn	**07 39 10.7**	**+0.5**
GURV	**El Guri**	**3.67**	**225**	*e*P	Pn	**07 38 28.0**	**-0.5**
PCRV	**Puerto La Cruz**	**4.11**	**268**	Pn	Pn	**07 38 34.1**	**-0.5**
	2.8nm,0.3s,baz=79,slow=6.2,SNR=13						
PCRV				Sn	Sn	**07 39 20.1**	**-1.4**
	17nm,0.3s,baz=188,slow=23,SNR=8.1						
PCRV	**Puerto La Cruz**	**4.11**	**268**	⇓*i*P	Pn	**07 38 34.1**	**-0.5**
BIM	**Bigot**	**4.16**	**352**	*e*P	Pn	**07 38 34.8**	**-0.5**
BIM				*e*S	Sn	**07 39 22.1**	**-0.6**
MVM	**Montagne Vaucl**	**4.18**	**354**	*e*P	Pn	**07 38 34.5**	**-1.0**
MVM				*e*S	Sn	**07 39 20.1**	**-3.0**
FDF	**Fort de France**	**4.39**	**351**	*e*Pn	Pn	**07 38 37.4**	**-1.0**
FDF	**Fort de France**	**4.39**	**351**	⇑*e*P	Pn	**07 38 37.6**	**-0.8**
FDF				⇑*e*S	Sn	**07 39 24.6**	**-3.7**
LUEV	**Luepa**	**4.61**	**192**	*e*P	Pn	**07 38 37.9**	**-3.5**
CUPV	**Cœpira**	**5.25**	**267**	*e*P	Pn	**07 38 49.8**	**-0.4**
BIRV	**Birongo**	**5.71**	**272**	*e*P	Pn	**07 38 56.5**	**-0.1**
PHG	**Guadaloupe-2**	**5.72**	**349**	*e*P	Pn	**07 38 56.6**	**-0.2**
SCG	**Saint Claude**	**5.75**	**348**	*e*P	Pn	**07 38 56.6**	**-0.5**
BCG	**Bois Riant Cap**	**5.79**	**349**	*e*P	Pn	**07 38 59.7**	**+2.0**
ORCV	**Isla La Orchil**	**5.80**	**285**	⇓*e*P	Pn	**07 38 56.3**	**-1.5**
MERV	**Las Mercedes**	**5.86**	**260**	*e*P	Pn	**07 38 57.6**	**-0.9**
LZG	**Guadaloupe-1**	**5.88**	**348**	*e*P	Pn	**07 38 57.6**	**-1.2**
FUNV	**FUNVISIS**	**6.24**	**271**	*e*P	Pn	**07 39 03.6**	**-0.3**
CAOV	**Caicara del Or**	**6.53**	**243**	*e*P	Pn	**07 39 06.8**	**-1.1**
TURV	**Turiamo**	**7.26**	**271**	*e*P	Pn	**07 39 16.4**	**-1.4**
BAUV	**El Baul**	**7.61**	**260**	*e*P	Pn	**07 39 20.9**	**-1.7**
MAPV	**Macapo**	**7.89**	**267**	*e*P	Pn	**07 39 24.6**	**-1.9**
TEPV	**Terepaima**	**8.60**	**268**	*e*P	Pn	**07 39 33.9**	**-2.4**
SANV	**Sanarito**	**8.98**	**265**	*e*P	Pn	**07 39 39.4**	**-2.1**
MTP	**Monte Pirata**	**9.13**	**328**	*e*Pn	Pn	**07 39 42.3**	**-1.1**
CURV	**Curarigua**	**9.36**	**269**	*e*P	Pn	**07 39 45.2**	**-1.4**
MONV	**Montecano**	**9.46**	**280**	*e*P	Pn	**07 39 46.4**	**-1.6**
SJG	**San Juan**	**9.46**	**325**	Pn	Pn	**07 39 47.5**	**-0.6**
	1.2nm,0.3s,baz=126,slow=17,SNR=4.2						
SJG				Sn	Sn	**07 41 25.4**	**-7.7**
	0.5nm,0.3s,baz=285,slow=20,SNR=2.2						
SJG	**San Juan**	**9.46**	**325**	Pn	Pn	**07 39 47.5**	**-0.6**
SJG				Sn	Sn	**07 41 25.4**	**-7.7**
SOCV	**Socops**	**10.46**	**259**	*e*P	Pn	**07 39 59.1**	**-2.7**
VIGV	**El Vigia**	**10.86**	**263**	*e*P	Pn	**07 40 05.6**	**-1.6**
SDDR	**Presa de Saban**	**13.52**	**311**	*e*Pn	Pn	**07 40 45.1**	**+1.6**
ROSC	**El Rosal**	**14.79**	**249**	Pn	Pn	**07 41 02.7**	**+2.0**
	0.6nm,0.3s,baz=86,slow=19,SNR=3.1						
ROSC	**El Rosal**	**14.79**	**249**	Pn	Pn	**07 41 01.9**	**+1.2**
ROSC				*e*P		07 41 10.5	
BCIP	**Isla Barro Col**	**19.13**	**268**	*e*P	Pn	**07 41 55.9**	**+1.0**
	80nm,1.6s						
OTAV	**Otavalo**	**20.52**	**242**	*e*P	P	**07 42 09.8**	**+0.9**
	12nm,1.3s						
ATAH	**Atahualpa**	**24.92**	**226**	P	P	**07 42 55.0**	**+1.6**
	3.4nm,0.5s,mb4.1,baz=50,slow=8.9,SNR=4.2						
SIV	**San Ignacio**	**26.20**	**181**	P	P	**07 43 04.8**	**-0.1**
	1.6nm,0.7s,mb3.6,baz=14,slow=9.2,SNR=11						
LPAZ	**La Paz**	**27.55**	**196**	P	P	**07 43 17.9**	**+0.9**
	0.5nm,0.7s,mb3.3,baz=17,slow=9.8,SNR=3.5						
LPAZ	**La Paz**	**27.55**	**196**	*e*P	P	**07 43 17.3**	**+0.2**
	1.1nm,0.7s,mb3.6						
ELN	**Prospectdale**	**32.40**	**329**	*e*P	P	**07 44 00.7**	**+0.9**
ELN				*e*	pP	07 44 14.0	+2.1
WVT	**Waverly**	**35.67**	**320**	*e*P	P	**07 44 28.1**	**-0.1**
	1.1nm,0.4s,mb4.1						
OXF	**Oxford**	**35.72**	**317**	*e*P	P	**07 44 28.2**	**-0.5**
	5.6nm,0.3s,mb5.0						
SIUC	**Southern Illin**	**37.53**	**321**	*e*P	P	**07 44 44.8**	**+0.8**
	4.5nm,0.6s,mb4.4						
628A	**Black Gap, Mar**	**43.88**	**302**	⇓P	P	**07 45 36.7**	**+0.2**
	baz=42						
628A				⇑pP	pP	07 45 48.3	-0.6
	baz=42						
528A	**Cox Ranch, San**	**43.99**	**303**	⇓P	P	**07 45 37.0**	**-0.5**
	baz=42						
528A				⇓pP	pP	07 45 49.2	-0.7
	baz=42						
428A	**Kincaid Ranch,**	**44.08**	**304**	⇑P	P	**07 45 38.3**	**+0.2**
	baz=42,SNR=5.1						
428A				⇑pP	pP	07 45 50.1	-0.5
	baz=42						
627A	**Terlingua Ranc**	**44.29**	**302**	⇓P	P	**07 45 40.1**	**+0.3**
	baz=42						
627A				⇓pP	pP	07 45 51.5	-0.8
	baz=42						
TXAR	**Lajitas Array**	**44.49**	**301**	P	P	**07 45 41.5**	**+0.1**
	0.3nm,0.6s,mb3.2,baz=121,slow=12,SNR=7.4						
TXAR				PcP	PcP	07 47 26.6	+2.2
	0.3nm,0.6s,baz=108,slow=5.8,SNR=3.9						
SCHQ	**Schefferville**	**44.63**	**355**	P	P	**07 45 43.6**	**+1.4**
	2.1nm,0.7s,mb4.1,baz=163,slow=11,SNR=3.1						
427A	**Hayter Ranch,**	**44.70**	**304**	P	P	**07 45 43.0**	**-0.1**
	baz=42,SNR=12						
626A	**Big Bend Ranch**	**44.94**	**302**	⇑P	P	**07 45 44.6**	**-0.4**
	baz=43						
626A				⇑pP	pP	07 45 57.7	+0.2
	baz=43						
526A	**Mary Lane Ranc**	**45.04**	**302**	⇑P	P	**07 45 45.9**	**+0.1**
	baz=43						
526A				⇑pP	pP	07 45 58.1	-0.2
	baz=43						
426A	**McDonald Obser**	**45.17**	**303**	⇑P	P	**07 45 46.4**	**-0.4**
	baz=43						
127A	**Arkansas Junct**	**45.25**	**306**	⇓P	P	**07 45 47.1**	**-0.3**
	baz=43						
127A				⇑pP	pP	07 45 58.8	-1.1
	baz=43						
Z27A	**Tatum**	**45.35**	**307**	⇑pP	pP	07 45 58.9	-1.8
	baz=43						
Z26A	**Caprock**	**45.94**	**307**	⇑P	P	**07 45 51.7**	**-1.1**
	baz=44						
425A	**Indio Mountain**	**45.99**	**303**	⇑P	P	**07 45 54.1**	**+0.8**
	baz=44						
425A				⇓pP	pP	07 46 05.7	-0.1
	baz=44						
325A	**Bean Ranch, Si**	**46.15**	**304**	⇑P	P	**07 45 54.6**	**+0.1**
	baz=44,SNR=5.5						
325A				⇓pP	pP	07 46 07.1	+0.1
	baz=44						
225A	**Deer Hill, Car**	**46.24**	**305**	⇑P	P	**07 45 55.5**	**+0.2**
	baz=44,SNR=16						
125A	**Gardner Draw,**	**46.28**	**306**	⇑P	P	**07 45 55.2**	**-0.4**
	baz=44						
125A				⇓pP	pP	07 46 06.8	-1.3
	baz=44						
Z25A	**Roswell**	**46.53**	**306**	⇑P	P	**07 45 56.2**	**-1.3**
	baz=44						
324A	**Moseley Ranch,**	**46.59**	**304**	⇓P	P	**07 45 57.1**	**-0.8**
	baz=44						
324A				⇓pP	pP	07 46 10.2	-0.3
	baz=44						
224A	**Cornudas Mount**	**46.80**	**304**	⇑P	P	**07 45 58.5**	**-1.2**
	baz=44						
224A				⇑pP	pP	07 46 12.1	-0.1
	baz=44						
U26A	**Atchley Ranch,**	**46.88**	**311**	⇓P	P	**07 45 56.8**	**-3.3**
	baz=44						
Z24A	**Sheeppen Canyo**	**47.06**	**306**	⇓P	P	**07 46 02.2**	**+0.5**
	baz=45,SNR=6.9						
Z24A				⇑pP	pP	07 46 14.4	+0.3
	baz=45						
Y24A	**Capitan**	**47.30**	**307**	⇓P	P	**07 46 04.0**	**+0.5**
	baz=45,SNR=5.6						
Y24A				⇓pP	pP	07 46 16.4	+0.3
	baz=45						
V25A	**Rancho No Teng**	**47.32**	**310**	⇑P	P	**07 46 03.7**	**0.0**
	baz=45,SNR=5.0						
V25A				⇑pP	pP	07 46 14.7	-1.5
	baz=45						
U25A	**Circle Dot Ran**	**47.37**	**310**	⇓P	P	**07 46 02.3**	**-1.8**
	baz=45,SNR=5.3						
U25A				⇑pP	pP	07 46 15.7	-0.9
	baz=45						
W24A	**Lazy 6 Ranch,**	**47.71**	**309**	⇑P	P	**07 46 07.6**	**+0.9**
	baz=45						
Y23A	**Lovelace Mesa,**	**47.79**	**307**	⇑P	P	**07 46 07.3**	**-0.1**
	baz=46,SNR=6.8						
Y23A				⇓pP	pP	07 46 20.1	+0.3
	baz=46						
BNM	**Barren Site**	**48.31**	**307**	*e*P	P	**07 46 12.1**	**+0.7**
	5.3nm,1.2s,mb4.5						
BNM				*e*	pP	07 46 23.8	-0.2
ANMO	**Albuquerque**	**48.44**	**308**	*e*P	P	**07 46 12.8**	**+0.5**
	1.0nm,0.8s,mb3.9						
ANMO				*e*	pP	07 46 24.5	-0.4
Y22A	**Socorro**	**48.51**	**306**	⇓pP	pP	07 46 24.7	-0.8
	baz=46						
SDCO	**Great Sand Dun**	**48.69**	**312**	*e*P	P	**07 46 13.6**	**-0.6**
	1.0nm,0.6s,mb4.0						
Z21A	**St. Cloud Mine**	**48.89**	**305**	⇑P	P	**07 46 16.7**	**+0.9**
	baz=47						
V22A	**San Miguel Ran**	**49.10**	**309**	⇑P	P	**07 46 17.5**	**+0.1**
	baz=47						
Y21A	**Point of Rocks**	**49.10**	**306**	⇑P	P	**07 46 18.4**	**+1.0**
	baz=47,SNR=5.6						
ULM	**Lac du Bonnet**	**49.31**	**331**	P	P	**07 46 18.0**	**-0.7**
	4.9nm,0.6s,mb4.8,baz=134,slow=6.5,SNR=5.4						
ULM	**Lac du Bonnet**	**49.31**	**331**	P	P	**07 46 18.0**	**-0.7**
X21A	**Alamocita Cree**	**49.31**	**307**	⇓P	P	**07 46 19.3**	**+0.3**
	baz=47						
V21A	**Milan**	**49.62**	**308**	⇑P	P	**07 46 21.7**	**+0.4**
	baz=47						
X20A	**Quemado**	**49.91**	**307**	⇑P	P	**07 46 23.8**	**+0.3**
	baz=48						
X20A				⇑pP	pP	07 46 35.5	-0.7
	baz=48						
318A	**Bisbee**	**50.30**	**302**	⇑pP	pP	07 46 39.5	+0.2
	baz=48						
O22A	**Kremmling**	**50.37**	**314**	⇓pP	pP	07 46 37.7	-1.9
	baz=48						
218A	**Dragoon**	**50.48**	**303**	⇑pP	pP	07 46 41.0	+0.5
	baz=48						
X19A	**St. Johns**	**50.50**	**306**	⇓P	P	**07 46 27.9**	**-0.1**
	baz=48						
U19A	**Dine' College,**	**50.98**	**309**	⇓pP	pP	07 46 43.9	-0.4
	baz=49						
T19A	**Beclabito**	**51.01**	**309**	⇑P	P	**07 46 31.1**	**-0.7**
	baz=49						
PV01	**Paradox Valley**	**51.09**	**311**	*e*P	P	**07 46 32.5**	**+0.1**
PV01				*e*	pP	07 46 45.4	+0.3
Q20A	**Ridgley Place,**	**51.17**	**312**	⇑pP	pP	07 46 45.5	-0.1
	baz=49						
S19A	**Harvey Farm, M**	**51.39**	**310**	⇓P	P	**07 46 34.7**	**0.0**
	baz=49						
T18A	**Mexican Hat**	**51.75**	**309**	⇓P	P	**07 46 37.5**	**+0.1**
	baz=49						
S18A	**Hurst Farm, Bl**	**52.01**	**310**	⇓pP	pP	07 46 50.5	-1.5
	baz=50						
V17A	**Tonalea, Kykot**	**52.02**	**307**	⇓P	P	**07 46 40.2**	**+0.8**
	baz=50						
R18A	**Canyonlands Na**	**52.16**	**311**	⇑P	P	**07 46 40.5**	**+0.1**
	baz=50						
S17A	**Black Ridge (B**	**52.61**	**310**	⇑pP	pP	07 46 56.0	-0.4
	baz=50						
P18A	**Preston Nutter**	**52.82**	**312**	⇓P	P	**07 46 44.5**	**-0.8**
	baz=50						
SRU	**San Rafael**	**52.86**	**312**	⇓P	P	**07 46 45.3**	**-0.3**
	baz=50						
K19A	**Absolon Red Bu**	**52.99**	**316**	⇑P	P	**07 46 45.2**	**-1.3**
	baz=50						
P17A	**Butcher Ranch,**	**53.13**	**312**	⇓P	P	**07 46 47.9**	**+0.3**
	baz=51						
O17A	**Robinson Place**	**53.37**	**313**	⇑P	P	**07 46 49.1**	**-0.2**
	baz=51						
BW06	**Boulder Array**	**53.46**	**316**	⇑P	P	**07 46 47.6**	**-2.3**
	baz=51,SNR=5.8						
PDAR	**Pinedale Array**	**53.46**	**316**	P	P	**07 46 49.7**	**-0.2**
	2.3nm,0.6s,mb4.3,baz=112,slow=8.7,SNR=29						
L18A	**F

ISC 05 07:45:12.6±0.8, 8°59N±0°.05×82°.75W±0°.04, h26km±4km, n236, σ1°06/237, mb4.4/51, 71C-56D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	Volcan	0.21	16	eP	Pb	07 45 18.3	-0.1
BRU2				eS	Sb	07 45 26.9	+4.5
CTCR	Cotoan	0.30	358	⇓eP	Pb	07 45 19.1	-0.6
CNI	Changuinola	0.85	16	eP	Pb	07 45 28.7	0.0
BAR1		0.85	319	eP	Pb	07 45 25.2	-3.6
BAR1				⇓iP		07 45 25.2	
BUS	Buena Vista	1.38	314	⇑iP	Pn	07 45 33.3	-2.9
URSC	Urasca	1.60	321	⇑eP	Pn	07 45 36.9	-2.3
URSC				eS	Sn	07 46 00.3	+1.3
QCR	Quepos	1.62	301	eP	Pn	07 45 35.1	-4.5
QCR				eS	Sn	07 45 59.6	-0.1
LAJ	Bijagual	1.85	313	eP	Pn	07 45 43.5	+0.9
LAJ				eS	Sn	07 46 14.2	+9.0
SJS	Escuela Geolog	1.86	316	eP	Pn	07 45 41.9	-0.9
SJS				eS	Sn	07 46 09.1	+3.7
PRS1	Puriscal	2.07	312	eP	Pn	07 45 42.9	-2.8
CGA2	Cerro Gallo 2	2.21	310	eP	Pn	07 45 45.4	-2.2
CGA2				eS	Sn	07 46 17.9	+3.9
JCR	Jicaral	2.65	298	eP	Pn	07 45 52.4	-1.2
JTS	JuntasAbangare	2.75	308	Pn	Pn	07 45 53.2	-1.9
	39nm,0.3s,baz=151,slow=9.7,SNR=114						
JTS				Sn	Sn	07 46 28.2	+0.7
	53nm,0.3s,baz=331,slow=22,SNR=11						
BCIP	Isla Barro Col	2.93	79	ePn	Pn	07 45 58.6	+1.1
BCIP	Isla Barro Col	2.93	79	eP	Pn	07 45 58.5	+1.0
BCIP				eS	Sn	07 46 35.0	+3.0
CUI	Cuipilapa	3.14	311	iP	Pn	07 46 01.3	+0.9
UPIG		3.20	83	eP	Pn	07 46 06.5	+5.2
UPIG				eS	Sn	07 46 48.3	+10
LIM1	Limonal	3.23	310	iP	Pn	07 46 02.4	+0.6
LAPC	Finca la Perla	3.42	309	iP	Pn	07 46 04.8	+0.5
LAPC				iS	Sn	07 46 46.5	+2.6
GB1A	Borinquen Arri	3.42	310	iP	Pn	07 46 05.0	+0.7
NY14	Universidad de	3.42	307	iP	Pn	07 46 04.9	+0.6
SSN	San Juan del S	4.07	312	eP	Pn	07 46 13.7	+0.4
BOAB	BOACO BROADBAN	4.79	323	eP	Pn	07 46 23.2	+0.1
CRUN	El Crucero	4.85	314	eP	Pn	07 46 25.9	+1.9
MGAN	Managua	4.93	316	eP	Pn	07 46 22.9	-2.2
XAVN	Gruta Xavier	4.99	315	eP	Pn	07 46 27.1	+1.3
CSAN		5.08	315	eP	Pn	07 46 27.8	+0.7
COPN	Copaltepe	5.20	314	eP	Pn	07 46 29.4	+0.7
MOMN	Momotombo	5.32	316	eP	Pn	07 46 31.8	+1.5
CNGN	Cerro Negro	5.49	315	eP	Pn	07 46 31.5	-1.3
LEON	Leon	5.57	313	eP	Pn	07 46 34.2	+0.3
CRIN	San Cristobal	5.88	314	eP	Pn	07 46 38.1	+0.1
TGUH	Tegucigalpa,Un	7.01	321	ePn	Pn	07 46 55.5	+1.9
	90nm,0.9s						
ROSC	El Rosal	9.15	113	Pn	Pn	07 47 30.6	+7.6
	1.0nm,0.3s,baz=270,slow=20,SNR=3.4						
OTAV	Otavalo	9.34	152	ePn	Pn	07 47 26.0	+0.3
	4.1nm,0.9s						
APG	El Apazote	9.88	311	Pn	Pn	07 47 34.2	+1.2
	1.1nm,0.3s,baz=146,slow=18,SNR=14						
CMIG	Matias Romero	14.53	307	Pn	Pn	07 48 35.8	-0.8
	0.4nm,0.3s,baz=133,slow=9.6,SNR=4.2						
ATAH	Atahualpa	16.22	164	Pn	Pn	07 48 59.4	+0.5
	0.2nm,0.3s,baz=14,slow=19,SNR=3.3						
PCRV	Puerto La Cruz	17.94	84	P	Pn	07 49 19.5	-1.0
	0.2nm,0.3s,baz=241,slow=5.8,SNR=2.1						
SJG	San Juan	18.70	58	P	Pn	07 49 31.6	+1.9
	0.4nm,0.3s,baz=278,slow=5.4,SNR=2.9						
SJG	San Juan	18.70	58	P	Pn	07 49 31.6	+1.9
NNA	Nana	21.27	164	P	P	07 49 57.3	+0.1
	2.6nm,0.3s,mb4.0,baz=13,slow=7.0,SNR=4.4						
NNA	Nana	21.27	164	eP	P	07 49 57.0	-0.2
	19nm,1.0s,mb4.4						
BRAL	Brewton	22.66	350	eP	P	07 50 14.7	+2.8
	119nm,1.5s,mb5.1						
HKT	Hockley	24.53	332	eP	P	07 50 31.2	+1.1
	51nm,2.0s,mb4.7						
LRAL	Lakeview Retre	24.64	351	eP	P	07 50 32.9	+1.8
	29nm,1.5s,mb4.6						
GOGA	Godfrey	24.70	359	eP	P	07 50 33.5	+1.8
	19nm,0.8s,mb4.7						
SWET	Sewanee	26.66	354	eP	P	07 50 49.7	+0.3
TKL	Tuckaleechee C	26.95	358	P	P	07 50 52.6	+0.6
	4.6nm,1.0s,mb4.0,baz=171,slow=13,SNR=2.9						
UALR	University of	27.50	343	eP	P	07 50 56.7	-0.3
	16nm,1.1s,mb4.5						
MIAR	Mount Ida	27.68	341	eP	P	07 50 58.3	-0.2
	8.1nm,1.1s,mb4.3						
WVT	Waverly	27.80	351	eP	P	07 50 59.3	-0.3
	7.8nm,1.1s,mb4.2						
628A	Black Gap, Mar	28.09	320	⇑P	P	07 51 02.6	+0.3
	baz=28						
627A	Terlingua Ranc	28.39	320	⇓P	P	07 51 04.7	-0.3
	baz=28						
TXAR	Lajitas Array	28.48	319	P	P	07 51 03.9	-1.9
	0.3nm,0.8s,baz=145,slow=5.2,SNR=2.9						
TXAR				PcP	PcP	07 54 17.9	+0.5
	0.3nm,0.8s,baz=140,slow=4.1,SNR=3.8						
TXAR	Lajitas Array	28.48	319	P	P	07 51 03.9	-1.9
TXAR				PcP	PcP	07 54 17.9	+0.5
LPAZ	La Paz	28.64	150	P	P	07 51 07.6	+0.3
	0.9nm,0.7s,mb3.6,baz=350,slow=11,SNR=3.5						
428A	Kincaid Ranch,	28.83	322	⇑P	P	07 51 08.8	-0.1
	baz=29						
526A	Mary Lane Ranc	29.24	320	⇑P	P	07 51 12.5	-0.1
	baz=29						
SIUC	Southern Illin	29.58	350	eP	P	07 51 16.4	+1.1
	18nm,1.1s,mb4.7						
WCI	Wyandotte Cave	29.68	354	eP	P	07 51 16.5	+0.3
	16nm,1.1s,mb4.7						
FVM	French Village	30.07	348	eP	P	07 51 20.3	+0.5
	16nm,1.2s,mb4.6						
425A	Indio Mountain	30.30	320	⇑P	P	07 51 22.1	+0.1
	baz=30						
CCM	Cathedral Cave	30.32	347	eP	P	07 51 21.9	0.0
	20nm,1.2s,mb4.7						
OLIL	Olney	30.39	352	eP	P	07 51 22.7	+0.1
	25nm,1.0s,mb4.9						
BLO	Bloomington	30.63	354	eP	P	07 51 24.5	-0.3
	13nm,0.9s,mb4.8						
325A	Bean Ranch, Si	30.69	321	⇑P	P	07 51 25.5	+0.1
	baz=31						
324A	Moseley Ranch,	31.06	320	⇑P	P	07 51 28.1	-0.5
	baz=31						
125A	Gardner Draw,	31.39	323	⇓P	P	07 51 32.2	+0.8
	baz=32						
ACSO	Alum Creek Sta	31.50	360	eP	P	07 51 33.7	+1.3
	13nm,0.9s,mb4.8						
224A	Cornudas Mount	31.51	321	⇑P	P	07 51 31.5	-1.0
	baz=32						
Z25A	Roswell	31.86	324	⇓P	P	07 51 35.4	-0.2
	baz=32						
124A	Stringfield Ra	31.89	322	⇑P	P	07 51 36.9	+0.9
	baz=32						
Z24A	Sheeppen Canyo	32.28	323	⇑P	P	07 51 39.1	-0.2
	baz=32						
HDIL	Hopedale	32.36	351	eP	P	07 51 39.8	-0.1
	20nm,0.8s,mb5.0						
Y24A	Capitan	32.74	324	⇓P	P	07 51 43.7	+0.3
	baz=33						
320A	Kipp Ranch, An	32.99	317	⇓P	P	07 51 45.4	-0.2
	baz=33,SNR=6.5						
Y23A	Lovelace Mesa,	33.11	323	⇑P	P	07 51 46.7	+0.1
	baz=33						
Z22A	Elephant Butte	33.20	321	⇑P	P	07 51 46.9	-0.5
	baz=33						
121A	Cookes Peak, D	33.25	319	⇑P	P	07 51 48.4	+0.6
	baz=33						
220A	Playas Peak, P	33.33	318	⇓P	P	07 51 49.5	+0.9
	baz=34,SNR=8.4						
319A	Douglas	33.52	316	⇓P	P	07 51 51.3	+1.1
	baz=34,SNR=7.2						
120A	U Bar Ranch, L	33.81	318	⇑P	P	07 51 53.8	+1.1
	baz=34						
219A	White Tail Can	33.88	317	⇑P	P	07 51 54.0	+0.7
	baz=34						
318A	Bisbee	34.05	316	⇑P	P	07 51 55.0	+0.2
	baz=34						
Z20A	Nine Sixteen R	34.14	319	⇑P	P	07 51 57.1	+1.5
	baz=34						
Y21A	Point of Rocks	34.15	321	⇑P	P	07 51 57.0	+1.4
	baz=34						
119A	Ashpeak Ranch,	34.38	318	⇑P	P	07 51 58.2	+0.5
	baz=34						
218A	Dragoon	34.40	316	⇓P	P	07 51 57.9	0.0
	baz=34						
X21A	Alamocita Cree	34.51	322	⇑P	P	07 51 58.3	-0.4
	baz=35						
118A	Homack Ranch,	34.75	317	⇓P	P	07 52 00.8	0.0
	baz=35						
JFWS	Jewell Farm	34.81	350	eP	P	07 52 00.7	-0.5
	10nm,0.8s,mb4.8						
217A	Green Valley	34.81	315	⇓P	P	07 52 01.4	0.0
	baz=35						
U23A	El Rito	34.89	326	⇓P	P	07 52 02.6	+0.6
	baz=35						
TUC	Tucson	35.10	316	eP	P	07 52 05.1	+1.2
	18nm,1.8s,mb4.7						
117A	Oracle	35.23	317	⇑P	P	07 52 03.1	-1.8
	baz=35						
V21A	Milan	35.35	324	⇑P	P	07 52 06.3	+0.3
	baz=36						
116A	Eloy	35.88	316	⇑P	P	07 52 11.4	+0.8
	baz=36,SNR=7.6						
214A	Organ Pipe Nat	36.32	314	⇑P	P	07 52 14.3	0.0
	baz=36,SNR=5.3						
Y16A	Circle Bar Ran	36.50	318	⇑P	P	07 52 16.8	+0.9
	baz=37,SNR=8.3						
X16A	Lo Mia Camp, P	36.80	319	⇑P	P	07 52 19.4	+1.0
	baz=37						
ECSD	EROS Data Cent	37.04	343	eP	P	07 52 19.0	-1.3
	12nm,1.3s,mb4.6						
V17A	Tonalea, Kykot	37.14	321	⇓P	P	07 52 21.5	+0.2
	baz=37,SNR=6.5						
Z14A	Wintersburg	37.20	316	⇑P	P	07 52 23.0	+1.1
	baz=37						
X15A	Humboldt	37.37	318	⇓P	P	07 52 24.0	+0.7
	baz=38,SNR=7.8						
Y14A	Wickenburg	37.56	317	⇓P	P	07 52 25.1	+0.1
	baz=38,SNR=5.4						
Z13A	Yuma Proving G	37.60	315	⇓P	P	07 52 25.9	+0.7
	baz=38						
X14A	Yava	37.80	317	⇓P	P	07 52 27.2	+0.3
	baz=38						
PV10	Paradox Valley	37.94	326	eP	P	07 52 28.9	+0.9
	70nm,0.9s,mb5.4						
Y13A	Salome	38.06	316	⇓P	P	07 52 30.2	+1.1
	baz=38,SNR=5.8						
V15A	Kaibab Nationa	38.14	320	⇑P	P	07 52 30.9	+1.2
	baz=38,SNR=10						
GLA	Glamis	38.34	314	⇑P	P	07 52 32.7	+1.2
	baz=38,SNR=5.8						
GLA	Glamis	38.34	314	eP	P	07 52 32.9	+1.4
	11nm,1.0s,mb4.5						
X13A	Yucca	38.50	317	⇑P	P	07 52 33.8	+1.0
	baz=39						
Y12C	Blythe	38.51	315	⇓P	P	07 52 33.8	+1.0
	baz=39						
PDMCI	Parker Dam,Lak	38.54	316	⇑P	P	07 52 34.1	+0.9
	baz=39						
V14A	Boquillas Ranc	38.63	319	⇓P	P	07 52 35.7	+1.9
	baz=39,SNR=5.9						
W13A	Hualapai Mount	38.83	317	⇑P	P	07 52 37.2	+1.7
	baz=39						
S16A	Weppner Ranch,	38.98	323	⇑P	P	07 52 37.9	+1.1
	baz=39						
IRM	Iron Mountain	39.16	315	⇓P	P	07 52 38.6	+0.2
	baz=39						
BELC	Belle Mtn. Jos	39.67	314	⇑P	P	07 52 43.7	+1.0
	baz=40,SNR=5.3						
PFO	Pinyon Flat Ob	39.79	314	⇓P	P	07 52 43.7	0.0
	baz=40						
PFO	Pinyon Flat Ob	39.79	314	eP	P	07 52 45.0	+1.4
	6.9nm,1.0s,mb4.3						
O17A	Robinson Place	40.15	326	⇑P	P	07 52 47.1	+0.6
	baz=40						
S13A	Holt Ranch, En	40.29	321	⇑P	P	07 52 48.5	+0.9
	baz=40,SNR=6.6						
HEC	Hector,Ludlow	40.34	315	⇑P	P	07 52 48.7	+0.5
	baz=40						
Q14A	Sevier Lake (B	40.81	323	⇑P	P	07 52 52.2	+0.2
	baz=41						
GSC	Goldstone	40.93	316	eP	P	07 52 54.7	+1.7
	11nm,1.0s,mb4.5						
M17A	Scullys Gap (B	41.01	328	⇓P	P	07 52 53.8	+0.2
	baz=41						
AGMN	Agassiz Nation	41.09	347	eP	P	07 52 53.3	-0.9
	22nm,1.4s,mb4.6						
Q13A	Wheeler Ranch,	41.24	322	⇓P	P	07 52 55.5	0.0
	baz=41,SNR=8.9						
PDAR	Pinedale Array	41.38	330	P	P	07 52 55.7	-0.9
	0.6nm,0.7s,mb3.4,baz=138,slow=6.4,SNR=6.2						
PDAR				PcP	PcP	07 54 53.5	-1.0
	0.8nm,1.0s,baz=156,slow=6.9,SNR=4.2						
K18A	Toltan Ranch,	41.52	329	⇓P	P	07 52 57.1	-0.7
	baz=42						
EDW2	Edwards Air Fo	41.53	314	⇓P	P	07 52 58.5	+0.5
	baz=42,SNR=5.5						
L17A	Cokeville	41.56	328	⇓P	P	07 52 57.8	-0.3
	baz=42						
HWUT	Hardware Ranch	41.58	327	eP	P	07 52 58.2	0.0
	6.7nm,1.1s,mb4.2						
FURC	Furnace Creek,	41.59	317	⇓P	P	07 52 58.9	+0.4
	baz=42,SNR=6.0						
MPMC	Manual Prospec	41.80	316	⇓P	P	07 53 01.2	+1.0
	baz=42						
J18A	Kendall Valley	41.93	330	⇑P	P	07 53 00.8	-0.3
	baz=42						
Q11A	Duckwater	42.18	321	⇓P	P	07 53 03.8	+0.6
	baz=42						
S10A	Tonopah Range,	42.23	319	⇓P	P	07 53 04.5	+0.8
	baz=42,SNR=9.0						
R10A	Warm Springs	42.26	320	⇑P	P	07 53 03.4	-0.5
	baz=42						
ISA	Isabella	42.27	315	⇑P	P	07 53 02.9	-1.2
	baz=42						
ISA	Isabella	42.27	315	eP	P	07 53 05.5	+1.4
	8.3nm,1.3s,mb4.2						
L15A	Malad City	42.30	327	⇓P	P	07 53 03.6	-0.5
	baz=42						
J17A	Brown Place, J	42.39	330	⇑P	P	07 53 04.9	0.0
	baz=42						
K16A	Soda Springs	42.45	328	⇓P	P	07 53 05.6	+0.3
	baz=43						
REDW	Red Top Meadow	42.46	329	eP	P	07 53 05.7	+0.3
	8.7nm,1.3s,mb4.2						
SNOW	Snow King Moun	42.48	330	eP	P	07 53 06.5	+0.9
	68nm,2.8s,mb4.8						
M14A	Sheep Mountain	42.49	326	⇓P	P	07 53 05.3	-0.4
	baz=43						
TPAW	Teton Pass	42.60	329	eP	P	07 53 06.8	+0.3
	2.3nm,0.8s,mb4.0						
Q10A	Clear Creek Ra	42.63	320	⇑P	P	07 53 06.6	-0.3
	baz=43						
J16A	Bone	42.78	329	⇓P	P	07 53 08.2	+0.2
	baz=43						
L14A	Malta	42.79	326	⇑P	P	07 53 08.1	0.0
	baz=43						
M13A	Montello	42.86	325	eP	P	07 53 09.2	+0.5
	2.2nm,0.9s,mb3.9						
ULM	Lac du Bonnet	42.94	348	P	P	07 53 07.9	-1.2
	15nm,0.9s,mb4.7,baz=151,slow=8.3,SNR=7.9						
ULM	Lac du Bonnet	42.94	348	eP	P	07 53 07.5	-1.7
	8nm,1.1s,mb4.7						
K14A	Jones Ranch, D	43.10	327	⇑P	P	07 53 09.8	-0.8
	baz=43,SNR=7.0						
J15A	Blackfoot	43.29	328	⇓P	P	07 53 11.2	-1.0
	baz=43						
NVAR	Mina Array Bea	43.63	319	P	P	07 53 16.4	+1.4
	2.6nm,0.8s,mb4.0,baz=138,slow=7.8,SNR=21						
DGMT	Dagmar	43.67	339	⇑P	P	07 53 14.8	-0.3
	baz=44						
F18A	Big Timber	43.80	333	P	P	07 53 16.1	-0.2
	baz=44,SNR=6.1						
J14A	Carey	43.81	327	⇓P	P	07 53 15.7	-0.6
	baz=44						
K12A	Draper Farm, C	44.11	326	⇑P	P	07 53 17.3	-1.4
	baz=44						
I14A	Mackay	44.19	328	⇑P	P	07 53 18.8	-0.6
	baz=44						
J13A	Cove Ranch, Pi	44.22	327	⇑P	P	07 53 19.0	-0.6
	baz=44						
F17A	Fitzpatrick Pl	44.24	332	⇑P	P	07 53 19.2	-0.5
	baz=44						
G16A	Moss Hill, Enn	44.28	331	⇓P	P	07 53 18.8	-1.3
	baz=44						
L11A	Cat Creek Ranc	44.29	325	⇓P	P	07 53 18.5	-1.7
	baz=44						
E18A	Harlowton	44.40	333	⇑P	P	07 53 19.5	-1.5
	baz=44						
HLID	Hailey	44.45	327	⇓P	P	07 53 20.7	-0.8
	baz=45						
HLID	Hailey	44.45	327	eP	P	07 53 22.0	+0.5
	3.2nm,1.0s,mb4.0						
BOZ	Bozeman (W)	44.50	331	⇓P	P	07 53 20.5	-1.4
	baz=45,SNR=5.5						
BOZ	Bozeman (W)	44.50	331	eP	P	07 53 21.5	-0.3
	6.1nm,1.4s,mb4.2						
MCMT	McKenzie Canyo	44.51	329	eP	P	07 53 22.9	+0.9
	1.5nm,0.9s,mb3.8						
I13A	Wildhorse Cree	44.53	328	⇓P	P	07 53 20.5	-1.6
	baz=45						
H14A	Leadore	44.63	329	⇓P	P	07 53 21.9	-0.9
	baz=45						
E17A	Martinsdale	44.74	332	⇓P	P	07 53 21.6	-2.2
	baz=45						
DLMT	Dillon	44.77	330	eP	P	07 53 24.5	+0.5
	5.5nm,1.1s,mb4.3						
D18A	Linhart Farms,	44.83	334	⇑P	P	07 53 23.7	-0.8
	baz=45,SNR=5.2						
K11A	Parker Ranch,	44.83	325	⇑P	P	07 53 23.4	-1.1
	baz=45,SNR=6.7						
I12A	Atlanta	45.00	327	⇓P	P	07 53 24.5	-1.4
	baz=45						
LRM	Limekiln Ridge	45.02	331	eP	P	07 53 26.9	+0.8
F15A	Butte	45.06	331	⇑P	P	07 53 24.8	-1.5
	baz=45						
D17A	Six Diamond Ra	45.19	333	⇑P	P	07 53 26.0	-1.3
	baz=45,SNR=7.6						
K10A	MacKenzie Ranc	45.31	324	⇑P	P	07 53 25.4	-2.9
	baz=45						
H12A	Diamond D Ranc	45.35	328	⇑P	P	07 53 25.9	-2.7
	baz=46						
D16A	Dana Ranch, Ca	45.49	332	⇓P	P	07 53 27.5	-2.1
	baz=46,SNR=7.2						
E15A	Deer Lodge	45.55	331	⇓P	P	07 53 26.9	-3.2
	baz=46,SNR=5.6						
C17A	Wharram Farm,	45.59	334	⇑P	P	07 53 29.0	-1.4
	baz=46,SNR=6.0						
B18A	Beardsley Farm	45.75	335	⇓P	P	07 53 30.9	-0.9
	baz=46,SNR=7.1						
F13A	Darby	45.93	329	⇑P	P	07 53 32.3	-0.9
	baz=46						
D15A	Lincoln	45.94	332	⇓P	P	07 53 32.4	-0.8
	baz=46						
E14A	Clinton	45.95	331	⇓P	P	07 53 31.6	-1.8
	baz=46						
H11A	Donnelly	46.07	327	⇑P	P	07 53 32.3	-2.1
	baz=46						
A18A	Metzger Ranch,	46.19	335	⇑P	P	07 53 34.7	-0.5
	baz=46,SNR=7.9						
E13A	Victor	46.31	330	⇓P	P	07 53 35.0	-1.2
	baz=46,SNR=5.7						
F12A	Elk City	46.38	329	⇑P	P	07 53 35.7	-1.0
	baz=46,SNR=7.1						
H10A	Noah's Angus R	46.40	327	⇑P	P	07 53 35.0	-1.8
	baz=46						
MSO	Missoula	46.47	331	eP	P	07 53 36.9	-0.5
	3.4nm,1.2s,mb4.2						
C15A	Salmond Ranch,	46.52	332	⇑P	P	07 53 36.7	-1.0
	baz=47						
I09A	Lost Marbles R	46.56	325	⇓P	P	07 53 36.5	-1.6
	baz=47,SNR=5.4						
B16A	M & M Farms, S	46.59	334	⇑P	P	07 53 36.2	-2.1
	baz=47						
G11A	Walters Elk Ra	46.67	328	⇓P	P	07 53 37.1	-1.9
	baz=47						
B15A	Bradely Ranch,	46.90	333	⇑P	P	07 53 39.2	-1.5
	baz=47,SNR=5.4						
F11A	Grangeville	46.93	328	⇑P	P	07 53 39.9	-1.2
	baz=47						
E12A	Beaver Dam Sad	46.99	329	⇓P	P	07 53 38.4	-3.0
	baz=47						
B14A	Marquette Ranc	47.25	333	⇑P	P	07 53 42.9	-0.6
	baz=47,SNR=11						
A15A	Johnson Ranch,	47.47	333	⇑P	P	07 53 44.7	-0.4
	baz=48,SNR=10						
A14A	Double T Ranch	47.77	333	⇓P	P	07 53 46.5	-1.0
	baz=48						
B13A	Whitefish	47.81	332	⇑P	P	07 53 47.4	-0.4
	baz=48						
KHMM	Horse Mountain	48.48	318	eP	P	07 53 54.4	+1.2
	8.9nm,0.9s,mb4.8						
NEW	Newport	49.02	330	eP	P	07 53 56.3	-0.8
	6.0nm,1.3s,mb4.5						
FCC	Fort Churchill	50.80	352	eP	P	07 54 10.1	-0.5
	0.2nm,0.9s						
EDM	Edmonton	50.92	337	eP	P	07 54 10.8	-0.7
YKA	Yellowknife Ar	58.57	343	P	P	07 55 06.7	0.0
	4.1nm,0.9s,mb4.5,baz=137,slow=7.2,SNR=17						
YKA	Yellowknife Ar	58.57	343	P	P	07 55 06.7	0.0
RES	Resolute Bay	66.42	357	eP	P	07 55 58.1	-1.0
	12nm,1.1s,mb4.8						
INK	Inuvik	68.26	342	eP	P	07 56 11.4	+0.6
	16nm,1.2s,mb4.9						
EGAK	Eagle	69.14	337	eP	P	07 56 16.5	+0.2
	6.7nm,1.1s,mb4.5						
MENT	Mentasta	69.42	335	eP	P	07 56 20.1	+2.0
COLA	College	71.82	336	eP	P	07 56 32.3	-0.4
	3.5nm,1.0s,mb4.2						
MCK	McKinley	71.90	335	eP	P	07 56 35.6	+2.4
	12nm,1.2s,mb4.7						
COLD	Coldfoot	73.48	338	eP	P	07 56 44.2	+1.6
	4.1nm,1.1s,mb4.3						
CHGN	Chignik	74.95	326	eP	P	07 56 51.3	0.0
ESDC	Sonseca Array	75.95	51	P	P	07 56 58.6	+1.2
	0.3nm,0.4s,mb3.6,baz=256,slow=3.2,SNR=4.1						
TORD	Torodi Ar. Bea	82.71	78	P	P	07 57 35.0	+0.1
	1.3nm,1.0s,mb3.9,baz=265,slow=7.6,SNR=3.5						
CN2	Changchun	121.92	336	ePKP	PKPdf	08 04 06.4	+1.5
KSRS	Korea Array	125.94	330	PKP	PKPdf	08 04 12.0	-0.8
	0.6nm,0.3s,baz=87,slow=2.7,SNR=3.6						
HHC	Hu-ho-hao-te	129.06	346	ePKP	PKPdf	08 04 15.7	-3.0
HHC				PP	PP	08 06 26.3	+1.2
HHC				AMB	AMB		
	comp=Z,420nm,9.6s						
LZH	Lanzhou	135.13	352	ePKP	PKPdf	08 04 30.5	+0.3
LZH				sPKP		08 04 44.2	
CD2	Chengdu	140.23	351	PKP	PKPdf	08 04 39.3	-0.5
ASAR	Alice Springs	141.88	242	PKP	PKPdf	08 04 40

h51km$_{\pm}$1.0km:**pP-P,n1184,**$_{c}$0^{s}**78**/1201,**mb5.3**/318,
MS4.5/32,**274C-243D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.19**	**252**	⇓P			**Pn**	**07 49 11.7**	**-0.5**
JHO				S			**Sn**	**07 49 17.9**	**-0.2**
ONAJ	**Iwakimizuishiy**	**0.43**	**0**	⇓P			**Pn**	**07 49 13.2**	**-1.1**
ONAJ				S			**Sn**	**07 49 20.7**	**-1.1**
JYT	**Yasato**	**0.66**	**228**	⇓P			**Pn**	**07 49 16.5**	**-0.5**
JYT				S			**Sn**	**07 49 26.5**	**-0.1**
JFK	**Kawauchi**	**0.70**	**5**	⇓P			**Pn**	**07 49 16.1**	**-1.4**
JFK				S			**Sn**	**07 49 26.0**	**-1.5**
JSB	**Shiboa**	**0.76**	**293**	⇓P			**Pn**	**07 49 19.1**	**+0.7**
JSB				S			**Sn**	**07 49 31.4**	**+2.4**
JFT	**Otama**	**0.92**	**337**	⇓P			**Pn**	**07 49 21.1**	**+0.6**
JFT				S			**Sn**	**07 49 34.3**	**+1.6**
CHOJ	**Chosi**	**0.97**	**177**	P			**Pn**	**07 49 19.4**	**-1.7**
CHOJ				S			**Sn**	**07 49 31.4**	**-2.4**
JAG	**Ashikaga**	**1.11**	**258**	⇓P			**Pn**	**07 49 23.4**	**+0.4**
JAG				S			**Sn**	**07 49 38.4**	**+1.2**
JFY	**Yanaizu**	**1.14**	**310**	⇓P			**Pn**	**07 49 24.1**	**+0.7**
JMM	**Marumori**	**1.19**	**360**	⇑P			**Pn**	**07 49 23.3**	**-0.8**
JMM				*e*S			**Sn**	**07 49 38.7**	**-0.5**
JKT	**Katashina**	**1.25**	**275**	⇓P			**Pn**	**07 49 25.9**	**+1.1**
JKT				*e*S			**Sn**	**07 49 43.3**	**+2.8**
JCN	**Nagara**	**1.34**	**201**	⇑P			**Pn**	**07 49 26.5**	**+0.4**
JNS	**Sasagawa**	**1.64**	**315**	⇓P			**Pn**	**07 49 30.8**	**+0.6**
JRY	**Ryogami san**	**1.66**	**247**	⇓P			**Pn**	**07 49 31.1**	**+0.6**
JOU	**Okura**	**1.69**	**356**	⇓P			**Pn**	**07 49 30.7**	**-0.2**
JIO	**Ouri**	**1.83**	**14**	⇓P			**Pn**	**07 49 31.5**	**-1.3**
BSO3	**Boso 3**	**1.88**	**187**	⇓P			**Pn**	**07 49 33.1**	**-0.4**
MJAR	**Matsushiro Arr**	**2.09**	**267**	P			**Pn**	**07 49 37.8**	**+1.6**
	300nm,0.3s,baz=90,slow=15,SNR=1240								
MJAR				S			**Sn**	**07 50 05.0**	**+4.0**
	526nm,0.3s,baz=74,slow=18,SNR=15								
MAJO	**Matsushiro**	**2.09**	**267**	*e*Pn			**Pn**	**07 49 38.1**	**+1.8**
MAJO				*e*Sn			**Sn**	**07 49 51.2**	**-10**
MAT	**Matsushiro**	**2.09**	**267**	P			**Pn**	**07 49 38.2**	**+1.9**
MAT				S			**Sn**	**07 50 05.4**	**+4.3**
MAT	**Matsushiro**	**2.09**	**267**	P			**Pn**	**07 49 38.2**	**+1.9**
JYA	**Atsumi**	**2.10**	**336**	⇓P			**Pn**	**07 49 37.4**	**+0.9**
JAW	**Awa shima**	**2.17**	**326**	P			**Pn**	**07 49 37.9**	**+0.6**
JYK	**Kaneyama**	**2.27**	**351**	⇓P			**Pn**	**07 49 39.1**	**+0.3**
JSD	**Sado**	**2.44**	**305**	⇓P			**Pn**	**07 49 41.8**	**+0.7**
OFUJ	**Ofunato**	**2.50**	**16**	⇓P			**Pn**	**07 49 40.6**	**-1.4**
JTB	**Tobi-shima**	**2.70**	**339**	⇓P			**Pn**	**07 49 45.3**	**+0.6**
JNY	**Yasuok**	**2.72**	**242**	P			**Pn**	**07 49 47.4**	**+2.5**
JRG	**Rokugo**	**2.72**	**357**	⇓P			**Pn**	**07 49 45.6**	**+0.6**
JKO	**Kozu shima**	**2.83**	**209**	⇓P			**Pn**	**07 49 46.9**	**+0.5**
JGN	**Niukaw**	**2.84**	**262**	⇓P			**Pn**	**07 49 49.1**	**+2.5**
MIYJ	**Miyakonagasawa**	**3.01**	**15**	P			**Pn**	**07 49 47.4**	**-1.5**
JOG2	**Oga 2**	**3.33**	**347**	P			**Pn**	**07 49 54.0**	**+0.7**
JKZ	**Kuzumaki**	**3.33**	**7**	⇓P			**Pn**	**07 49 53.0**	**-0.4**
JTH	**Tanohata**	**3.37**	**14**	⇓P			**Pn**	**07 49 52.5**	**-1.3**
JAH	**Hinai**	**3.51**	**358**	⇓P			**Pn**	**07 49 56.9**	**+1.1**
JHJ	**Hachijo jima 2**	**3.64**	**194**	P			**Pn**	**07 49 57.2**	**-0.3**
	486nm,0.3s,baz=0.3,slow=4.7,SNR=51								
JHJ				S			**Sn**	**07 50 38.5**	**-0.8**
	645nm,0.3s,baz=87,slow=23,SNR=8.8								
JTM	**Tenmabayashi**	**4.12**	**3**	P			**Pn**	**07 50 04.7**	**+0.6**
ERM	**Erimo**	**5.64**	**18**	Pn			**Pn**	**07 50 23.0**	**-2.0**
	3μm,1.0s,SNR=66								
ERM	**Erimo**	**5.64**	**18**	*e*Pn			**Pn**	**07 50 23.0**	**-2.0**
ERM				*e*Sn			**Sn**	**07 51 28.1**	**-0.3**
ASAJ	**Asahikawa**	**7.56**	**10**	P			**Pn**	**07 50 49.3**	**-2.0**
	29nm,0.3s,baz=221,slow=13,SNR=121								
ASAJ				S			**Sn**	**07 52 15.1**	**-0.5**
	6.9nm,0.3s,baz=22,slow=32,SNR=5.0								
ASAJ	**Asahikawa**	**7.56**	**10**	P			**Pn**	**07 50 49.3**	**-2.0**
ASAJ				S			**Sn**	**07 52 15.1**	**-0.5**
ASAJ				pmax			pmax		
	comp=Z,29nm,0.3s								
ASAJ				smax					
	comp=N,7.0nm,0.3s								
YUK	**Yuzh-Kuril'sk**	**8.31**	**26**	⇑*i*P			**Pn**	**07 50 58.0**	**-3.5**
YUK				*i*S			**Sn**	**07 52 26.5**	**-7.4**
YUK				pmax			pmax		
	comp=Z,390nm,0.5s								
YUK				pmax			pmax		
	comp=N,250nm,0.5s								
YUK				pmax			pmax		
	comp=E,190nm,0.5s								
YUK				pmax			pmax		
	comp=Z,790nm,1.0s								
YUK				smax					
	comp=N,790nm,0.6s								
YUK				smax					
	comp=E,740μm,0.6s								
VLA	**Vladivostok**	**9.39**	**316**	⇑*i*P			**Pn**	**07 51 19.6**	**+3.3**
CBIJ	**Chichi jima**	**9.62**	**173**	P			**Pn**	**07 51 14.3**	**-5.2**
	comp=E,280nm,0.3s,baz=4.9,slow=5.7,SNR=134								
CBIJ				S			**Sn**	**07 52 53.6**	**-13**
	comp=E,89nm,0.3s,baz=292,slow=23,SNR=6.5								
KUR	**Kuril'sk**	**10.08**	**30**	*e*P			**Pn**	**07 51 22.0**	**-3.8**
KUR				pmax			pmax		
	comp=Z,230nm,0.5s								
KSRS	**Korea Array**	**10.32**	**278**	P			**Pn**	**07 51 33.8**	**+4.7**
	comp=Z,1.4nm,0.3s,baz=97,slow=13,SNR=47								
KSRS				LR			LR	07 55 21.3	
	comp=Z,3μm,20.3s,baz=88,slow=36								
KSRS				ScP			ScP	08 00 59.6	-1.1
	comp=Z,0.1nm,0.3s,baz=147,slow=0.5,SNR=7.9								
YSS	**Yuzh-Sakhalins**	**10.38**	**7**	*e*P			**Pn**	**07 51 27.0**	**-2.8**
YSS				*e*S			**Sn**	**07 53 19.0**	**-5.5**
YSS				pmax			pmax		
	comp=Z,140nm,0.7s								
YSS				MLR			MLR		
	comp=N,1μm,17.0s								
YSS				MLR			MLR		
	comp=Z,2μm,17.0s								
YSS				MLR			MLR		
	comp=E,900nm,20.0s								
YSS	**Yuzh-Sakhalins**	**10.38**	**7**	*e*Pn			**Pn**	**07 51 27.1**	**-2.7**
INCN	**Inchon**	**11.35**	**278**	*e*Pn			**Pn**	**07 51 44.6**	**+1.5**
MDJ	**Mudanjiang**	**11.63**	**316**	P			**Pn**	**07 51 46.1**	**-0.8**
MDJ				sP				07 52 00.6	
MDJ				S			**Sn**	**07 53 50.7**	**-4.4**
MDJ				ScP			ScP	08 01 02.4	+0.1
MDJ				PcS			PcS	08 01 08.1	+0.4
MDJ				ScS			ScS	08 04 35.0	-2.8
MDJ				pmax			pmax		
	comp=Z,4.0nm,1.1s								
MDJ				pmax			pmax		
	comp=Z,240nm,5.8s								
MDJ				LR			LR		
	comp=N,1μm,32.3s								
MDJ				LR			LR		
	comp=E,1μm,28.3s								
MDJ				LR			LR		
	comp=Z,3μm,20.3s								
HABR	**Khabarovsk**	**12.53**	**342**	*c*e*P			**Pn**	**07 52 02.9**	**+3.8**
HABR				*e*S			**Sn**	**07 54 21.6**	**+4.6**
HABR				pmax			pmax		
	comp=Z,126nm,1.3s								
HABR				pmax			pmax		
	comp=N,108nm,1.5s								
HABR				pmax			pmax		
	comp=E,68nm,1.8s								
HABR				pmax			pmax		
	comp=E,62nm,0.9s								
HABR				pmax			pmax		
	comp=Z,126nm,1.1s								
HABR				pmax			pmax		
	comp=N,104nm,1.4s								
HABR				MLR			MLR		
	comp=Z,2μm,17.0s								
CN2	**Changchun**	**13.71**	**306**	*e*P			**Pn**	**07 52 16.3**	**+1.0**
CN2				*e*pP				07 52 24.7	
CN2				*e*sP				07 52 31.4	
CN2				*e*S			**Sn**	**07 54 46.8**	**+1.0**
CN2				pmax			pmax		
	comp=Z,10.0nm,1.0s								
CN2				pmax			pmax		
	comp=Z,200nm,4.0s								
CN2				LR			LR		
	comp=N,500nm,18.0s								
CN2				LR			LR		
	comp=E,1μm,18.0s								
CN2				LR			LR		
	comp=Z,1μm,18.0s								
KLR	**Kul'dur**	**14.18**	**335**	*e*P			**Pn**	**07 52 15.0**	**-6.6**
KLR				MLR			MLR		
	comp=E,1μm,17.0s								
KLR				MLR			MLR		
	comp=Z,2μm,17.0s								
SNY	**Shenyang**	**14.30**	**296**	⇑P			**Pn**	**07 52 24.7**	**+1.5**
SNY				pmax			pmax		
	comp=Z,30nm,1.4s								
SNY				pmax			pmax		
	comp=Z,240nm,3.8s								
SNY				LR			LR		
	comp=N,1μm,15.2s								
SNY				LR			LR		
	comp=E,2μm,19.1s								
SNY				LR			LR		
	comp=Z,2μm,20.6s								
DL2	**Dalian**	**15.32**	**284**	P			**Pn**	**07 52 40.5**	**+3.9**
DL2				S			**S**	**07 55 34.3**	**-5.0**
DL2				pmax			pmax		
	comp=Z,40nm,1.1s								
DL2				pmax			pmax		
	comp=Z,280nm,6.5s								
DL2				LR			LR		
	comp=N,430nm,17.7s								
DL2				LR			LR		
	comp=E,1μm,18.4s								
DL2				LR			LR		
	comp=Z,1μm,17.1s								
NJ2	**Nanjing**	**18.68**	**262**	*e*P			**Pn**	**07 53 17.4**	**-1.1**
NJ2				pP			pP	07 53 26.7	-2.6
NJ2				sP			sP	07 53 33.1	-2.6
NJ2				PP				07 53 34.2	
NJ2				S			**S**	**07 56 46.5**	**-1.0**
NJ2				sS			sS	07 57 02.0	-4.4
NJ2				pmax			pmax		
	comp=Z,60nm,1.0s								
NJ2				pmax			pmax		
	comp=Z,190nm,9.9s								
NJ2				LR			LR		
	comp=N,1μm,19.8s								
NJ2				LR			LR		
	comp=E,1μm,23.1s								
NJ2				LR			LR		
	comp=Z,910nm,24.7s								
TIA	**Tai'an**	**19.05**	**276**	*e*P			**Pn**	**07 53 20.5**	**-2.3**
TIA				pmax			pmax		
	comp=Z,48nm,1.0s								
PEA0B	**Petropavlovsk-**	**20.25**	**30**	*e*P			**P**	**07 53 35.0**	**+0.4**
PETK	**Petropavlovsk-**	**20.25**	**30**	P			**P**	**07 53 34.3**	**-0.2**
	comp=Z,52nm,0.9s,baz=208,slow=7.9,SNR=54								
PETK				LR			LR	08 00 44.1	
	comp=Z,303nm,20.8s,MS3.6,baz=138,slow=35								
YHNB	**Yeheng**	**20.50**	**240**	*e*P			**P**	**07 53 38.2**	**+0.7**
	comp=Z,14nm,0.4s								
PET	**Petropavlovsk**	**20.58**	**32**	*e*P			**P**	**07 53 35.9**	**-2.3**
PET				*e*S			**S**	**07 57 20.0**	**-5.4**
PET				pmax			pmax		
	comp=Z,400nm,4.1s								
PET				pmax			pmax		
	comp=Z,130nm,1.2s								
PET	**Petropavlovsk**	**20.58**	**32**	*e*P			**P**	**07 53 38.4**	**+0.2**
	comp=Z,198nm,1.3s								
SSLB	**Suanglung**	**21.37**	**239**	*e*P			**P**	**07 53 45.2**	**-1.7**
	comp=Z,21nm,0.8s,mb4.5								
YULB	**Yu-li**	**21.40**	**237**	*e*P			**P**	**07 53 46.1**	**-1.0**
	comp=Z,9.1nm,0.5s,mb4.4								
TPUB	**Ta-pu**	**21.91**	**238**	*e*P			**P**	**07 53 54.5**	**+1.8**
	comp=Z,22nm,0.6s,mb4.8								
TWG	**Pinlang**	**21.94**	**236**	*e*P			**P**	**07 53 54.1**	**+1.1**
	comp=Z,53nm,0.9s,mb5.0								
QZH	**Quanzhou**	**22.31**	**245**	*e*P			**P**	**07 53 59.6**	**+2.6**
QZH				S			**S**	**07 57 51.6**	**-8.0**
QZH				LR			LR		
	comp=N,1μm,17.2s,MS4.5								
QZH				LR			LR		
	comp=E,900nm,18.6s,MS4.5								
CLNS	**Chul'man**	**22.82**	**337**	*e*P			**P**	**07 53 59.5**	**-2.5**
CLNS				*e*				07 54 24.4	
CLNS				*e*				07 57 52.0	
CLNS				pmax			pmax		
	comp=N,43nm,1.3s								
CLNS				pmax			pmax		
	comp=Z,64nm,1.2s,mb4.9								
CLNS				pmax			pmax		
	comp=E,18nm,1.2s								
CLNS				pmax			pmax		
	comp=N,57nm,1.0s								
CLNS				pmax			pmax		
	comp=E,23nm,0.9s								
CLNS				pmax			pmax		
	comp=Z,41nm,0.9s,mb4.9								
CLNS				MLR			MLR		
	comp=E,264nm,15.0s,MS4.2								
CLNS				MLR			MLR		
	comp=N,671nm,17.0s,MS4.2								
CLNS				MLR			MLR		
	comp=Z,782nm,17.0s,MS4.2								
WHN	**Wuhan**	**22.82**	**262**	⇓P			**P**	**07 54 00.6**	**-1.7**
WHN				S			**S**	**07 58 06.5**	**-1.4**
WHN				pmax			pmax		
	comp=Z,97nm,1.1s,mb5.2								
WHN				LR			LR		
	comp=N,690nm,12.6s,MS4.6								
WHN				LR			LR		
	comp=E,1μm,11.5s,MS4.6								
WHN				LR			LR		
	comp=Z,2μm,17.2s								
HHC	**Hu-ho-hao-te**	**23.12**	**289**	*e*P			**P**	**07 54 04.9**	**-0.5**
HHC				sP			sP	07 54 22.2	-1.5
HHC				PP				07 54 36.2	
HHC				PcP			PcP	07 57 55.1	+2.6
HHC				S			**S**	**07 58 07.9**	**-4.8**
HHC				sS			sS	07 58 26.9	-7.5
HHC				SS				07 58 56.6	
HHC				ScP			ScP	08 01 27.6	+1.6
HHC				PcS			PcS	08 01 33.1	+1.6
HHC				pmax			pmax		
	comp=Z,27nm,0.5s,mb4.9								
HHC				pmax			pmax		
	comp=Z,180nm,6.6s								
HHC				LR			LR		
	comp=N,1μm,11.7s,MS4.7								
HHC				LR			LR		
	comp=E,1μm,12.1s,MS4.7								
HHC				LR			LR		
	comp=Z,1μm,11.3s,MS4.5								
GUMO	**Guam**	**23.27**	**170**	P			**P**	**07 54 06.0**	**-1.1**
	comp=Z,61nm,0.9s,mb5.0,baz=317,slow=3.9,SNR=3.0								
GUMO	**Guam**	**23.27**	**170**	P			**P**	**07 54 06.0**	**-1.1**
GUMO				pmax			pmax		
	comp=Z,61nm,0.9s,mb5.0								
GUMO	**Guam**	**23.27**	**170**	P			**P**	**07 54 14.5**	**+7.4**
	comp=Z,3μmcomp=Z,444nm,1.1s,mb5.8								
XAN	**Xi'an**	**26.07**	**274**	P			**P**	**07 54 31.9**	**-0.5**
XAN				pP			pP	07 54 42.4	-3.0
XAN				pmax			pmax		
	comp=Z,4.0nm,0.8s,mb4.0								
YAK	**Yakutsk**	**26.32**	**348**	*c i*P			**P**	**07 54 33.2**	**-1.2**
YAK				*e**PP			pP	07 54 44.2	-3.2
YAK				*e*				07 55 09.9	
YAK				*e*PPP				07 55 21.9	
YAK				*e*				07 58 01.0	
YAK				*e*S			**S**	**07 59 01.7**	**-1.7**
YAK				*e**SS			sS	07 59 20.0	-5.5
YAK				*e*				08 05 19.3	
YAK				pmax			pmax		
	comp=Z,170nm,1.0s,mb5.5								
YAK				pmax			pmax		
	comp=N,84nm,1.1s								
YAK				pmax			pmax		
	comp=E,48nm,1.3s								
YAK				pmax			pmax		
	comp=Z,63nm,1.0s,mb5.1								
YAK				pmax			pmax		
	comp=N,33nm,0.8s								
YAK				pmax			pmax		
	comp=E,57nm,1.1s								
YAK				smax					
	comp=E,297nm,3.2s								
YAK				smax					
	comp=N,516nm,3.0s								
YAK				MLR			MLR		
	comp=Z,1μm,22.0s,MS4.5								
YAK				MLR			MLR		
	comp=E,279nm,20.0s,MS4.4								
YAK				MLR			MLR		
	comp=N,1μm,21.0s,MS4.4								
YAK	**Yakutsk**	**26.32**	**348**	*e*P			**P**	**07 54 33.4**	**-0.9**
	comp=N,295nm,1.2s,mb5.7								
ULN	**Ulaanbaatar**	**27.15**	**305**	⇑*i*P			**P**	**07 54 41.2**	**-0.8**
ULN	**Ulaanbaatar**	**27.15**	**305**	*e*P			**P**	**07 54 42.3**	**+0.3**
	comp=N,46nm,0.9s,mb5.0								
ULN	**Ulaanbaatar**	**27.15**	**305**	P			**P**	**07 54 42.3**	**+0.3**
	comp=N,608nmcomp=N,58nm,1.0s,mb5.0								
ULN	**Ulaanbaatar**	**27.15**	**305**	P			**P**	**07 54 41.9**	**-0.1**
	SNR=32								
SEY	**Seymchan**	**27.24**	**12**	⇑*i*P			**P**	**07 54 42.7**	**0.0**
SONM	**Songino Array**	**27.58**	**305**	P			**P**	**07 54 46.0**	**+0.1**
	comp=N,52nm,0.8s,mb5.2,baz=107,slow=6.7,SNR=70								
SONM				ScP			ScP	08 01 39.1	+0.5
	comp=N,2.2nm,1.0s,baz=113,slow=3.4,SNR=9.0								
SONM				LR			LR	08 06 06.1	
	comp=N,713nm,20.7s,MS4.2,baz=351,slow=37								
LZH	**Lanzhou**	**29.64**	**280**	*e*P			**P**	**07 55 05.5**	**+1.2**
LZH				pP			pP	07 55 19.0	+1.6
LZH				sP			sP	07 55 23.4	-0.1
LZH				PP			PP	07 56 03.0	-8.8
LZH				*e*S			**S**	**08 00 00.1**	**+3.9**
LZH				sS			sS	08 00 21.4	+3.0
LZH				SS			SS	08 01 31.2	-32
LZH				pmax			pmax		
	comp=Z,31nm,1.1s,mb5.0								
LZH				pmax			pmax		
	comp=Z,74nm,4.8s								
LZH				LR			LR		
	comp=E,2μm,14.1s								
LZH				LR			LR		
	comp=Z,2μm,15.2s,MS4.9								
IRK	**Irkutsk**	**29.98**	**313**	*e*P			pP	07 55 17.3	-2.9
IRK				pmax			pmax		
	comp=Z,24nm,0.9s,mb4.9								
TLY	**Talaya**	**30.20**	**312**	P			**P**	**07 55 09.9**	**+0.9**
	comp=Z,111nm,0.8s,mb5.6,SNR=6.7								
TLY	**Talaya**	**30.20**	**312**	*e*P			**P**	**07 55 09.1**	**+0.1**
TLY				*e*				07 56 06.3	
TLY				*e*S			**S**	**08 00 00.3**	**-4.3**
TLY				pmax			pmax		
	comp=Z,17nm,0.9s,mb4.8								
TLY				MLR			MLR		
	comp=Z,1μm,20.0s,MS4.5								
TLY	**Talaya**	**30.20**	**312**	*e*P			**P**	**07 55 08.8**	**-0.3**
	comp=Z,19nm,0.8s,mb4.9								
TLY	**Talaya**	**30.20**	**312**	P			**P**	**07 55 09.8**	**+0.7**
	SNR=9.0								
GYA	**Guiyang**	**30.67**	**260**	⇓*i*P			**P**	**07 55 14.2**	**+0.7**
GYA				pP			pP	07 55 27.5	+0.8
GYA				sP			sP	07 55 33.8	+1.1
GYA				PP			PP	07 56 16.0	-7.4
GYA				S			**S**	**08 00 11.6**	**-0.9**
GYA				sS			sS	08 00 34.5	-0.2
GYA				ScP			ScP	08 01 50.4	+1.6
GYA				SS			SS	08 01 55.8	-29
GYA				pmax			pmax		
	comp=Z,20nm,1.0s,mb4.9								
GYA				pmax			pmax		
	comp=Z,140nm,4.8s								
GYA				LR			LR		
	comp=N,760nm,16.8s,MS4.5								
GYA				LR			LR		
	comp=E,590nm,17.2s,MS4.5								
GYA				LR			LR		
	comp=Z,690nm,17.6s,MS4.4								
CD2	**Chengdu**	**31.18**	**270**	P			**P**	**07 55 17.3**	**-0.7**
CD2				pP			pP	07 55 29.2	-1.9
CD2				sP			sP	07 55 34.6	-2.6
CD2				PP			PP	07 56 21.1	-7.9
CD2				S			**S**	**08 00 18.4**	**-2.0**
CD2				sS			sS	08 00 38.6	-4.0
CD2				SS			SS	08 02 05.3	-30
CD2				pmax			pmax		
	comp=Z,40nm,0.8s,mb5.3								
CD2				pmax			pmax		
	comp=Z,210nm,4.8s								
CD2				LR			LR		
	comp=N,900nm,20.2s								
CD2				LR			LR		
	comp=Z,2μm,26.2s								
GTA	**Gaotai**	**32.20**	**288**	*e*P			**P**	**07 55 26.2**	**-0.6**
GTA				pP			pP	07 55 39.0	-1.0
GTA				sP			sP	07 55 45.3	-0.8
GTA				PcP			PcP	07 58 15.6	+1.1
GTA				S			**S**	**08 00 34.1**	**-2.1**
GTA				sS			sS	08 00 54.3	-4.1
GTA				ScP			ScP	08 01 54.7	+0.9
GTA				SS			SS	08 02 28.6	-27
GTA				ScS			ScS	08 05 51.1	-1.6
GTA				pmax			pmax		
	comp=Z,5.0nm,0.7s,mb4.5								
GTA				LR			LR		
	comp=N,470nm,16.0s,MS4.4								
GTA				LR			LR		
	comp=E,470nm,19.0s,MS4.4								
GTA				LR			LR		
	comp=Z,610nm,16.6s,MS4.4								
QIZ	**Qiongzhong**	**32.33**	**245**	P			**P**	**07 55 26.9**	**-1.2**
QIZ				S			**S**	**08 00 38.1**	**-0.4**
QIZ				pmax			pmax		
	comp=Z,5.0nm,1.5s,mb4.1								
QIZ				LR			LR		
	comp=N,310nm,23.2s								
KMI	**Kunming**	**34.42**	**261**	⇓P			**P**	**07 55 46.2**	**-0.1**
KMI				pP			pP	07 56 00.1	+0.6
KMI				sP			sP	07 56 05.9	+0.3
KMI				PP			PP	07 57 03.1	-1.8
KMI				S			**S**	**08 01 09.2**	**-1.6**
KMI				sS			sS	08 01 32.9	-0.2
KMI				SS			SS	08 03 21.6	-20
KMI				pmax			pmax		
	comp=Z,24nm,1.0s,mb5.1								
KMI				LR			LR		
	comp=N,300nm,18.6s,MS4.4								
KMI				LR			LR		
	comp=E,530nm,18.6s,MS4.4								
KMI				LR			LR		
	comp=Z,820nm,23.6s,MS4.4								
BILL	**Bilibino**	**34.52**	**17**	*c i*P			**P**	**07 55 45.7**	**-0.9**
BILL				pmax			pmax		
	comp=Z,49nm,1.0s,mb5.4								
BILL				MLR			MLR		
	comp=Z,300nm,16.0s,MS4.1								
BILL	**Bilibino**	**34.52**	**17**	*e*P			**P**	**07 55 45.6**	**-1.0**
	comp=Z,35nm,0.8s,mb5.3								
TIXI	**Tiksi**	**35.59**	**354**	⇑*i*P			**P**	**07 55 54.8**	**-1.1**
TIXI				pmax			pmax		
	comp=Z,60nm,0.8s,mb5.6								
TIXI				MLR			MLR		
	comp=Z,750nm,18.0s,MS4.5								
TIXI	**Tiksi**	**35.59**	**354**	*e*P			**P**	**07 55 55.0**	**-0.8**
	comp=Z,51nm,0.7s,mb5.6								
KRAR	**Krasnoyarsk**	**37.38**	**317**	⇑*i*P			**P**	**07 56 11.0**	**-0.3**
KRAR				pmax			pmax		
	comp=Z,88nm,0.9s,mb5.6								
TNTI	**Ternate**	**37.82**	**202**	P			**P**	**07 56 15.1**	**-0.3**
	comp=Z,111nm,0.7s

comp=Z,5.1nm,0.9s,mb4.1,baz=49,slow=5.4,SNR=6.9
APSI Ampana 41.41 210 P **P 07 56 44.9 -0.3**
comp=Z,7μmcomp=Z,123nm,1.2s,mb5.4
TNA Tin City 41.41 29 *e*P **P 07 56 45.6 +0.9**
comp=Z,70nm,1.0s,mb5.2
TNA *e*pP pP 07 56 58.1 -0.2
ZAA0 Zalesovo Array 41.80 313 *e*P **P 07 56 47.5 -0.5**
ZALV Zalesovo Beam 41.80 313 P **P 07 56 47.6 -0.4**
comp=Z,130nm,0.8s,mb5.6,baz=91,slow=6.8,SNR=328
ZALV PcP PcP 07 58 43.1 -0.1
comp=Z,14nm,0.7s,baz=91,slow=3.0,SNR=5.1
ZALV ScP ScP 08 02 29.3 +0.1
comp=Z,1.8nm,0.8s,baz=75,slow=1.6,SNR=3.2
ZALV LR LR 08 14 48.5
comp=Z,370nm,19.7s,MS4.3,baz=58,slow=37
ZALV Zalesovo Beam 41.80 313 P **P 07 56 47.6 -0.4**
ZALV 07 58 43.2
PCI Palu 42.15 212 P **P 07 56 51.5 +0.2**
comp=Z,84nm,1.1s,mb5.3
NVS Novosibirsk 42.73 314⇑*i*P **P 07 56 55.1 -0.5**
NVS pmax pmax
comp=Z,119nm,1.1s,mb5.5
NVS pmax pmax
comp=N,25nm,1.1s
NVS pmax pmax
comp=E,97nm,1.1s
SHL Shillong 42.91 269 *e*PKP **P 07 56 56.5 -0.9**
SBUM Sibu 43.06 224 P **P 07 57 04.4 +5.7**
comp=E,14nm,1.1s,mb4.6
KDI Kendari 43.84 207 P **P 07 57 05.5 +0.6**
comp=E,46nm,1.1s,mb5.1
MK31 Makanchi Array 43.89 302*ce*P **P 07 57 05.0 -0.1**
MK31 pmax pmax
comp=Z,61nm,1.0s,mb5.3
MK31 Makanchi Array 43.89 302 *e*P **P 07 57 04.8 -0.2**
MKAR Makanchi Array 43.89 302 P **P 07 57 05.0 -0.1**
comp=Z,32nm,1.0s,mb5.0,baz=80,slow=6.5,SNR=64
MKAR ScP ScP 08 02 38.3 +0.5
comp=Z,2.9nm,0.9s,baz=102,slow=4.2,SNR=5.7
MKAR LR LR 08 17 18.9
comp=Z,289nm,19.3s,MS4.2,baz=354,slow=38
SPSI Sidrap Palu 44.94 210 P **P 07 57 13.5 -0.3**
comp=Z,48nm,1.0s,mb5.3
KSM Kuching 44.94 226 *e*P **P 07 57 14.9 +1.1**
comp=Z,32nm,0.8s,mb5.2
KSM Kuching 44.94 226 P **P 07 57 14.9 +1.1**
comp=Z,37nm,0.8s,mb5.3
TAPN Taplejung 45.47 274 *e*P **P 07 57 18.4 +0.5**
comp=Z,62nm,0.8s,mb5.5
KURK Kurchatov 45.77 308 P **P 07 57 19.3 -0.6**
comp=Z,546nm,0.9s,mb6.5,SNR=67
KURK Kurchatov 45.77 308*c i*P **P 07 57 19.6 -0.3**
KURK pmax pmax
comp=Z,135nm,1.2s,mb5.8
KURK Kurchatov 45.77 308 *e*P **P 07 57 19.7 -0.2**
comp=Z,74nm,0.9s,mb5.6
KURK Kurchatov 45.77 308 P **P 07 57 20.0 0.0**
SNR=45
ODAN Odare 45.94 274 *e*P **P 07 57 21.9 +0.3**
comp=Z,107nm,0.8s,mb5.8
TTA Tatalina 46.00 35 *e*P **P 07 57 22.8 +1.2**
SVW2 Sparrevohn 46.11 37 *e*P **P 07 57 22.5 0.0**
comp=Z,88nm,1.2s,mb5.6
RAMN Ramite 46.54 274 *e*P **P 07 57 26.7 +0.4**
comp=Z,393nm,0.8s,mb6.4
JIRN Jiri 46.56 275 *e*P **P 07 57 27.4 +0.9**
comp=Z,248nm,0.9s,mb6.2
GUN Gumba 46.70 276 *e*P **P 07 57 28.3 +0.7**
comp=Z,245nm,0.9s,mb6.1
PKI Pulchoki 47.22 275 *e*P **P 07 57 31.9 +0.2**
comp=Z,123nm,0.9s,mb5.8
PKIN Phulchoki 47.23 276 *e*P **P 07 57 32.1 +0.4**
comp=Z,73nm,0.9s,mb5.6
KKN Kakani 47.23 276 *e*P **P 07 57 32.1 +0.4**
comp=Z,160nm,0.9s,mb6.0
DMN Daman 47.45 276 *e*P **P 07 57 33.8 +0.4**
comp=Z,54nm,0.8s,mb5.5
RSO Redoubt South 47.49 38 *e*P **P 07 57 33.7 +0.4**
GKN Gorkha 47.65 276 *e*P **P 07 57 35.3 +0.3**
comp=Z,343nm,0.8s,mb6.4
KDAK Kodiak Island 47.70 42 P **P 07 57 34.3 -0.6**
comp=Z,534nm,0.6s,SNR=9.2
KDAK Kodiak Island 47.70 42 *e*P **P 07 57 34.0 -0.9**
KDAK *e**PP pP 07 57 48.8 +0.1
KDAK pmax pmax
comp=Z,52nm,0.6s,mb5.7
KDAK Kodiak Island 47.70 42 *e*P **P 07 57 34.0 -0.9**
comp=Z,52nm,0.6s,mb5.7
KDAK *e*pP pP 07 57 48.8 +0.2
PPLA Purkeypile 47.75 35 *e*P **P 07 57 36.9 +1.7**
comp=Z,98nm,1.3s,mb5.7
IPM Ipoh 48.53 238 P **P 07 57 41.5 -0.4**
comp=Z,33nm,0.8s,mb5.4
KOLN Koldanda 48.58 277 *e*P **P 07 57 42.6 +0.4**
comp=Z,73nm,0.8s,mb5.8
TRF Thorofare Moun 48.61 34 *e*P **P 07 57 42.4 +0.5**
comp=Z,20nm,0.8s,mb5.2
COLD Coldfoot 48.71 29 *e*P **P 07 57 43.1 +0.5**
comp=Z,25nm,1.0s,mb5.2
COLD *e*pP pP 07 57 55.8 -0.5
RC01 Rabbit Creek A 48.95 37 *e*P **P 07 57 45.0 +0.5**
comp=Z,121nm,1.3s,mb5.8
ULHL Ulahol 49.10 297 P **P 07 57 46.6 +0.6**
SNR=5.5
MCK McKinley 49.21 34 *e*P **P 07 57 46.8 +0.3**
MCK *e**PP pP 07 57 58.8 -1.4
MCK pmax pmax
comp=Z,39nm,0.9s,mb5.4
MCK McKinley 49.21 34 *e*P **P 07 57 46.8 +0.3**
comp=Z,39nm,0.9s,mb5.4
MCK *e*pP pP 07 57 58.8 -1.5
PMR Palmer 49.21 36 *e*P **P 07 57 45.6 -0.9**
PMR pmax pmax
comp=Z,50nm,1.1s,mb5.5
PMR Palmer 49.21 36 *e*P **P 07 57 45.6 -0.9**
comp=Z,50nm,1.1s,mb5.5
TKM2 Tokmak 2 49.37 299 P **P 07 57 49.1 +1.1**
SNR=40
TKM2 Tokmak 2 49.37 299 *i* P **P 07 57 49.0 +1.0**
TKM2 pmax pmax
comp=Z,60nm,1.1s,mb5.5
TKM2 Tokmak 2 49.37 299 *e*P **P 07 57 48.6 +0.7**
comp=Z,26nm,0.5s,mb5.5
COLA College 49.65 32⇑*i*P **P 07 57 50.3 +0.5**
COLA College 49.65 32 *e*P **P 07 57 50.0 +0.2**
comp=Z,29nm,0.8s,mb5.4
KAKA Kakadu 49.74 191 *e*P **P 07 57 50.7 -0.3**
comp=Z,61nm,0.9s,mb5.6
KAKA Kakadu 49.74 191 *e*P **P 07 57 50.8 -0.2**
comp=Z,223nm,0.9s,mb6.2
KAKA *e*pP pP 07 58 04.0 -0.8
KAKA Kakadu 49.74 191 P **P 07 57 51.1 +0.1**
comp=Z,858nmcomp=Z,120nm,0.9s,mb5.9
KZA Kyzart 49.85 298 P **P 07 57 53.7 +2.0**
SNR=21
KBK Karagaybulak 49.90 298 P **P 07 57 53.1 +1.0**
SNR=8.7
USP Ospenovka 50.04 299 P **P 07 57 53.4 +0.3**
SNR=17
FRU Bishkek 50.08 299 *e*P **P 07 57 54.0 +0.6**
FRU pmax pmax
comp=Z,76nm,1.8s,mb5.4
KSH Kashi 50.10 294 P **P 07 57 57.8 +4.2**
KSH pP pP 07 58 09.6 +2.2
KSH sP sP 07 58 14.7 +1.4
KSH PcP PcP 07 59 15.0 +2.4
KSH PP PP 07 59 53.3 +4.4
KSH ScP ScP 08 03 06.2 +2.2
KSH PcS PcS 08 03 11.4 +1.8
KSH S **S 08 05 04.5 +3.2**
KSH sS sS 08 05 25.6 +1.1
KSH ScS ScS 08 07 41.6 +1.3
KSH SS SS 08 08 35.2 +0.5
KSH pmax pmax
comp=Z,24nm,1.0s,mb5.2
KSH pmax pmax
comp=Z,100nm,3.0s
KSH LR LR
comp=N,900nm,19.5s
KSH LR LR
comp=E,190nm,14.1s
KSH LR LR
comp=Z,1μm,22.9s,MS4.8
VOSK Vostochnaya 50.16 312 P **P 07 57 53.3 -0.5**
VOSK pmax pmax
comp=Z,71nm,1.0s,mb5.7
COEN Coen 50.40 177 *e*P **P 07 57 55.8 -0.2**
comp=Z,204nm,1.0s,mb6.1
COEN *e*pP pP 07 58 09.9 0.0
COEN Coen 50.40 177 P **P 07 57 56.1 +0.1**
comp=Z,183nm,1.0s,mb6.1
BVAR Borovoye Array 50.45 312 P **P 07 57 56.0 -0.1**
comp=Z,45nm,1.0s,mb5.5,baz=79,slow=7.7,SNR=91
BVAR PcP PcP 07 59 13.9 +0.3
comp=Z,17nm,0.7s,baz=79,slow=3.2,SNR=9.4
BRVK Borovoye 50.51 312 P **P 07 57 56.0 -0.5**
comp=Z,250nm,1.0s,mb6.1,SNR=25
BRVK Borovoye 50.51 312*c i*P **P 07 57 56.3 -0.2**
BRVK pmax pmax
comp=Z,49nm,1.0s,mb5.4
BRVK Borovoye 50.51 312 *e*P **P 07 57 56.1 -0.4**
comp=Z,44nm,0.9s,mb5.4
BRVK Borovoye 50.51 312 P **P 07 57 56.7 +0.3**
SNR=24
KHKI Kahang-Kahang 50.66 213 P **P 07 57 58.7 +0.7**
comp=Z,2μmcomp=Z,172nm,0.8s,mb6.0
EKS2 Erkin-Say 50.73 299 P **P 07 57 58.7 +0.4**
SNR=12
EKS2 Erkin-Say 50.73 299 *e*P **P 07 57 58.4 +0.1**
comp=Z,14nm,0.7s,mb5.0
DIV Divide 50.86 37 *e*P **P 07 58 00.5 +1.5**
comp=Z,50nm,0.9s,mb5.5
ZRNK Zerenda 51.29 313 *i* P **P 07 58 02.3 0.0**
ZRNK pmax pmax
comp=Z,92nm,1.3s,mb5.5
BMRM Bremner River 51.45 37 *e*P **P 07 58 04.5 +1.1**
comp=Z,42nm,1.0s,mb5.3
MENT Mentasta 51.61 34 *e*P **P 07 58 05.5 +0.9**
SJI Sawahan 51.89 218 P **P 07 58 07.6 +0.4**
comp=Z,5μmcomp=Z,55nm,1.7s,mb5.2
DDI Dehra Dun 51.89 282 *ex* x 07 58 07.5
KRKI Karangkates 51.92 217 P **P 07 58 07.1 -0.4**
MNSI Mandailing Nat 52.20 236 P **P 07 58 09.7 +0.1**
comp=Z,3μmcomp=Z,26nm,0.6s,mb5.3
SDSI Sungai Dareh 52.27 233 P **P 07 58 10.6 +0.4**
comp=Z,35nm,0.8s,mb5.3
EGAK Eagle 52.51 32 *e*P **P 07 58 11.1 -0.1**
comp=Z,26nm,0.7s,mb5.3
KK31 Karatay Array 52.88 300*ce*P **P 07 58 14.5 +0.2**
KK31 pmax pmax
comp=Z,65nm,1.2s,mb5.4
KK31 Karatay Array 52.88 300⇑*e*P **P 07 58 14.6 +0.3**
KLSI 53.17 227 P **P 07 58 17.1 +0.4**
comp=Z,68nm,1.3s,mb5.4
KLI Kotabumi 53.23 227 P pP 07 58 27.4 -3.7
NDI New Delhi 53.26 281 *ex* **P 07 58 15.5 -1.8**
MDSI Maura Dua 53.33 228 P **P 07 58 18.0 0.0**
comp=Z,1μmcomp=Z,40nm,0.8s,mb5.4
KNA Kununurra 53.36 194 *e*P **P 07 58 17.8 -0.2**
comp=Z,66nm,1.2s,mb5.4
KNA Kununurra 53.36 194 P **P 07 58 17.7 -0.3**
comp=Z,1μmcomp=Z,121nm,1.1s,mb5.7
DAWY Dawson 53.37 33 *e*P **P 07 58 18.1 +0.5**
PNL Peninsula 54.23 38 *e*P **P 07 58 25.2 +1.2**
comp=Z,20nm,0.8s,mb5.1
INK Inuvik 54.94 27 *e*P **P 07 58 29.0 +0.1**
INK pmax pmax
comp=Z,66nm,0.8s
INK Inuvik 54.94 27 *e*P **P 07 58 29.0 +0.1**
comp=Z,66nm,0.8s,mb5.7
SVE Sverdlovsk 55.09 319⇓*e*P **P 07 58 30.6 +0.4**
SVE *e*S **S 08 06 03.5 -5.4**
SVE pmax pmax
comp=Z,154nm,0.9s,mb6.0
SVE MLR MLR
comp=Z,727nm,17.0s,MS4.8
SKAG Skagway 56.28 38 *e*P **P 07 58 39.9 +1.2**
comp=Z,42nm,1.1s,mb5.4
ARU Arti 56.30 319 P **P 07 58 38.7 -0.2**
comp=Z,1μm,0.7s,SNR=44
ARU Arti 56.30 319*c i*P **P 07 58 38.6 -0.3**
ARU *e**PP pP 07 58 52.8 -0.1
ARU *e* 07 59 34.1
ARU *e* 08 00 43.8
ARU S **S 08 06 27.3 +2.2**
ARU SS SS 08 10 08.4 -3.4
ARU pmax pmax
comp=Z,179nm,0.8s,mb6.2
ARU Arti 56.30 319 *e*P **P 07 58 38.7 -0.2**
comp=Z,136nm,0.8s,mb6.0
SOKR Solikamsk 56.32 323*c i*P **P 07 58 38.7 -0.3**
SOKR pmax pmax
comp=Z,70nm,1.2s,mb5.6
SOKR MLR MLR
comp=Z,710nm,25.0s,MS4.7
FITZ Fitzroy Crossi 56.33 197 *e*P **P 07 58 39.2 -0.2**
comp=Z,13nm,0.5s,mb5.2
FITZ Fitzroy Crossi 56.33 197 *e*P **P 07 58 39.0 -0.5**
comp=Z,30nm,1.1s,mb5.2
FITZ Fitzroy Crossi 56.33 197 P **P 07 58 39.7 +0.3**
comp=Z,47nm,1.3s,mb5.4
WRAB Tennant Creek 56.62 187 P **P 07 58 40.0 -1.5**
comp=Z,267nm,0.7s,mb6.4,SNR=22
WRAB Tennant Creek 56.62 187 *e*P **P 07 58 40.2 -1.3**
WRAB pmax pmax
comp=Z,50nm,0.9s,mb5.5
WRAB Tennant Creek 56.62 187 *e*P **P 07 58 40.2 -1.4**
comp=Z,50nm,0.9s,mb5.5
WRAB Tennant Creek 56.62 187 P **P 07 58 40.3 -1.2**
comp=Z,61nm,1.0s,mb5.6
WRA Warramunga Arr 56.63 187 P **P 07 58 40.4 -1.2**
comp=Z,28nm,0.6s,mb5.5,baz=4.8,slow=7.4,SNR=286
CTA Charters Tower 56.69 174 *e*P **P 07 58 40.8 -1.2**
comp=Z,5.6nm,0.8s,mb4.7
CTAO Charters Tower 56.69 174 *e*P **P 07 58 40.6 -1.4**
CTAO pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
CTAO Charters Tower 56.69 174 *e*P **P 07 58 40.6 -1.3**
comp=Z,7.8nm,0.8s,mb4.8
KBL Kabul 57.08 291 *e*P **P 07 58 44.8 0.0**
KBL pmax pmax
comp=Z,44nm,1.1s,mb5.4
KBL Kabul 57.08 291 *e*P **P 07 58 44.8 -0.1**
comp=Z,44nm,1.1s,mb5.4
HYB Hyderabad 57.70 268 *e*P **P 07 58 49.5 +0.2**
HYB Hyderabad 57.70 268 *i* P **P 07 58 49.5 +0.2**
AB31 Akbulak array 57.80 310*ce*P **P 07 58 49.0 -0.6**
AB31 pmax pmax
comp=Z,56nm,0.8s,mb5.7
AB31 Akbulak array 57.80 310⇑*e*P **P 07 58 49.1 -0.5**
ABKAR Akbulak array 57.80 310 *e*P **P 07 58 49.1 -0.5**
comp=Z,33nm,0.7s,mb5.5
DLBC Dease Lake 59.22 38 *e*P **P 07 59 01.5 +2.2**
ASAR Alice Springs 60.36 187 P **P 07 59 06.7 -0.8**
comp=Z,18nm,0.9s,mb5.1,baz=18,slow=5.8,SNR=74
ASAR pP pP 07 59 20.9 -0.7
comp=Z,12nm,0.8s,baz=4.0,slow=6.8,SNR=13
ASAR PKP2bc 08 28 39.0
comp=Z,0.6nm,0.8s,baz=187,slow=1.6,SNR=4.9
ASAR Alice Springs 60.36 187 P **P 07 59 06.7 -0.8**
ASAR *PP pP 07 59 21.0 -0.7
ASAR Alice Springs 60.36 187 P **P 07 59 06.7 -0.8**
ASAR pP pP 07 59 20.9 -0.7
ASAR ⇑*e* 08 28 39.0
ALE Alert 60.50 3 P **P 07 59 07.0 -0.9**
comp=Z,222nm,0.9s,mb6.3,SNR=23
MBWA Marble Bar 60.86 203 *e*P **P 07 59 10.2 -0.8**
MBWA Marble Bar 60.86 203 *e*P **P 07 59 10.1 -0.9**
comp=Z,12nm,0.6s,mb5.2
KBS Kingsbay 60.93 350*c i*P **P 07 59 11.0 +0.2**
KBS pmax pmax
comp=Z,48nm,0.9s,mb5.6
KBS Kingsbay 60.93 350 *e*P **P 07 59 10.9 +0.1**
comp=Z,47nm,0.8s,mb5.7
PALK Pallekele 61.81 257 *e*P **P 07 59 18.1 +0.5**
PALK pmax pmax
comp=Z,24nm,0.8s,mb5.4
PALK Pallekele 61.81 257 *e*P **P 07 59 18.1 +0.4**
comp=Z,24nm,0.8s,mb5.4
EIDS Eidsvold 62.46 170 *e*P **P 07 59 21.2 -0.5**
EIDS Eidsvold 62.46 170 *e*P **P 07 59 21.0 -0.7**
comp=Z,18nm,1.0s,mb5.1
RES Resolute Bay 63.08 14 *e*P **P 07 59 24.4 -0.8**
RES pmax pmax
comp=Z,56nm,0.9s,mb5.7
RES Resolute Bay 63.08 14 *e*P **P 07 59 24.4 -0.8**
comp=Z,56nm,0.9s,mb5.7
ABKT Ailbek 63.58 299 P **P 07 59 29.3 +0.2**
comp=Z,190nm,0.9s,mb6.1,SNR=9.2
ARCES ARCESS Array B 64.16 339 P **P 07 59 32.2 -0.2**
comp=Z,20nm,0.8s,mb5.2,baz=62,slow=8.4,SNR=44
YKA Yellowknife Ar 64.37 30 P **P 07 59 33.8 0.0**
comp=Z,9.3nm,0.8s,mb4.9,baz=295,slow=6.4,SNR=38
JOF Joensuu 66.05 332 *e*P **P 07 59 43.8 -1.0**
JOF pmax pmax
comp=Z,32nm,0.5s,mb5.6
JOF Joensuu 66.05 332 *ep* **P 07 59 43.8 -1.0**
comp=Z,32nm,0.5s,mb5.6
DAG Danmarks Havn 66.09 355⇓*e*P **P 07 59 44.3 -0.6**
DAG pmax pmax
comp=Z,23nm,0.7s,mb5.3
DAG Danmarks Havn 66.09 355⇓*i*P **P 07 59 44.3 -0.6**
comp=Z,23nm,0.7s,mb5.3
PGC Sidney 66.94 46 *e*P **P 07 59 51.4 +0.7**
comp=Z,0.5nm,0.8s
MOS Moscow 67.25 323 *e*P **P 07 59 51.7 -0.8**
MOS *e* pP 08 00 10.3 +3.4
MOS pmax pmax
comp=Z,117nm,1.1s,mb5.8
NLWA Neilton Lookou 67.33 47⇓P **P 07 59 54.5 +1.4**
baz=67
NLWA Neilton Lookou 67.33 47 *e*P **P 07 59 54.6 +1.4**
comp=Z,55nm,1.4s,mb5.4
ARMA Armidale 67.51 170 *e*P **P 07 59 54.3 0.0**
ARMA Armidale 67.51 170 *e*P **P 07 59 54.5 +0.2**
comp=Z,15nm,0.8s,mb5.1
A05A Maple Falls 67.55 45⇓P **P 07 59 54.4 -0.2**
baz=67
JCW Jim Creek 68.05 46 P **P 07 59 59.1 +1.4**
OBN Obninsk 68.09 323*c i*P **P 07 59 57.3 -0.5**
OBN *e*S S 08 08 59.2 +5.8
OBN pmax pmax
comp=Z,64nm,0.6s,mb5.8
OBN MLR MLR
comp=Z,400nm,17.0s,MS4.7
OBN Obninsk 68.09 323 *e*P **P 07 59 57.7 -0.1**
comp=Z,64nm,0.8s,mb5.7
FORT Forrest 68.15 192 *e*P **P 07 59 57.7 -0.6**
comp=Z,50nm,0.8s,mb5.6
RPW Rockport 68.16 45 P **P 07 59 59.3 +0.9**
STKA Stephens Creek 68.19 179 *e*P **P 07 59 57.8 -0.8**
comp=Z,8.3nm,0.3s,mb5.2
STKA Stephens Creek 68.19 179 P **P 07 59 57.9 -0.7**
comp=Z,15nm,0.8s,mb5.0,baz=352,slow=7.4,SNR=21
STKA Stephens Creek 68.19 179 *e*P **P 07 59 57.9 -0.7**
comp=Z,2.6nm,0.8s,mb4.3
PUL Pulkovo 68.25 329⇑*e*P **P 07 59 58.8 0.0**
PUL pmax pmax
comp=Z,128nm,0.9s,mb6.0
KAF Kangasniemi 68.40 333 *e*P **P 07 59 57.6 -2.1**
KAF pmax pmax
comp=Z,68nm,0.6s,mb5.8
KAF Kangasniemi 68.40 333 *e*P **P 07 59 57.6 -2.1**
comp=Z,68nm,0.6s,mb5.9
KAF Kangasniemi 68.40 333 *ep* **P 07 59 57.6 -2.1**
comp=Z,68nm,0.6s,mb5.9
D05A Enumclaw 68.53 47⇑P **P 08 00 01.9 +1.2**
baz=68,SNR=8.9
LON Longmire 68.86 47 *e*P **P 08 00 03.8 +1.0**
LON pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
LON Longmire 68.86 47 *e*P **P 08 00 03.8 +1.0**
comp=Z,4.2nm,0.8s,mb4.4
VSR Storozhevoye 68.88 319*c i*P **P 08 00 02.4 -0.4**
VSR pmax pmax
comp=N,70nm,1.0s
VSR pmax pmax
comp=E,70nm,1.0s
VSR pmax pmax
comp=Z,110nm,1.0s,mb5.7
FINES FINESS Array B 68.90 332 P **P 08 00 02.4 -0.4**
comp=Z,78nm,0.8s,mb5.7,baz=56,slow=7.6,SNR=156
FINES LR LR 08 32 32.9
comp=Z,383nm,19.1s,MS4.7,baz=165,slow=38
F04A Amboy 68.93 48⇑P **P 08 00 03.2 -0.1**
baz=69,SNR=11
NLW Nelson Butte 69.02 45 P **P 08 00 05.0 +1.3**
G04A Mulino 69.27 49⇓P **P 08 00 05.2 -0.1**
baz=69
B08A Colville Reser 69.44 45⇓P **P 08 00 06.6 +0.2**
baz=69,SNR=12
H04A Detroit Lake 69.72 49⇑P **P 08 00 08.8 +0.6**
baz=69,SNR=13
EDM Edmonton 69.94 38 *e*P **P 08 00 09.3 0.0**
GOF Gofitskoye 69.97 312⇑*i*P **P 08 00 09.9 +0.2**
GOF pmax pmax
comp=Z,160nm,1.3s,mb5.8
IRO Indian Ridge 70.03 50 P **P 08 00 11.6 +1.5**
OD2 Odessa Site #2 70.32 45 P **P 08 00 12.5 +0.7**
G06A Carlson Farm, 70.36 48⇓P **P 08 00 12.5 +0.5**
baz=70,SNR=6.5
D08A Wollman Farm, 70.38 46⇑P **P 08 00 12.3 +0.1**
baz=70,SNR=8.7
WRD Warden 70.39 46 P **P 08 00 12.9 +0.7**
F07A Phinny Hill Vi 70.42 47⇑P **P 08 00 13.5 +1.1**
baz=70,SNR=6.9
VSU Vasula 70.52 329*c i*P **P 08 00 12.6 -0.2**
VSU pmax pmax
comp=Z,127nm,1.0s,mb5.8
VSU Vasula 70.52 329⇑*i*P **P 08 00 12.7 -0.1**
ZEI Tsey 70.66 309 *e*P **P 08 00 10.5 -3.4**
ZEI pmax pmax
comp=Z,30nm,1.0s,mb5.2
NEW Newport 70.73 44 *e*P **P 08 00 14.9 +0.6**
NEW pmax pmax
comp=Z,16nm,0.8s
NEW Newport 70.73 44 *e*P **P 08 00 14.9 +0.7**
comp=Z,16nm,0.8s,mb5.0
KIV Kislovodsk 70.77 311 P **P 08 00 15.4 +0.8**
comp=Z,881nm,1.0s,mb6.6,SNR=11
KIV Kislovodsk 70.77 311*c i*P **P 08 00 14.8 +0.2**
KIV pmax pmax
comp=Z,169nm,1.0s,mb5.9
KIV MLR MLR
comp=Z,300nm,19.0s,MS4.6
KIV Kislovodsk 70.77 311 *e*P **P 08 00 14.9 +0.3**
comp=Z,147nm,0.9s,mb5.9
KIV Kislovodsk 70.77 311 P **P 08 00 15.4 +0.8**
SNR=29
YBH Yreka Blue Hor 70.96 52 *e*P **P 08 00 17.5 +1.7**
YBH pmax pmax
comp=Z,31nm,1.6s
YBH Yreka Blue Hor 70.96 52 *e*P **P 08 00 17.5 +1.7**
comp=Z,31nm,1.6s,mb5.0
E09A Wood Farm, Sta 71.12 46⇓P **P 08 00 16.9 +0.2**
baz=71,SNR=8.8
A12A Yaak River Ran 71.17 43⇓P **P 08 00 17.4 +0.5**
baz=71
G08A Pilot Rock 71.32 47⇓P **P 08 00 18.0 +0.1**
baz=71,SNR=8.1
HOQ Hoqain 71.32 286 P **P 08 00 19.1 +0.8**
SNR=6.9
LNOR Lincton Mounta 71.40 46 *e*P **P 08 00 19.4 +1.1**
LNOR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
LNOR Lincton Mounta 71.40 46 *e*P **P 08 00 19.4 +1.0**
comp=Z,10.0nm,0.9s,mb4.8
C11A Tepee Creek (N 71.45 44⇓P **P 08 00 18.3 -0.4**
baz=71
GNI Garni 71.53 307*c i*P **P 08 00 20.0 +0.8**
GNI pmax pmax
comp=Z,66nm,1.7s
GNI Garni 71.53 307 *e*P **P 08 00 20.2 +1.0**
comp=Z,33nm,1.0s,mb5.2
GNI Garni 71.53 307 P **P 08 00 20.7 +1.5**
SNR=9.9
K05A Summer Lake 71.56 50⇑P **P 08 00 20.6 +1.2**
baz=71,SNR=13
HATD Hatta, Dubai 71.57 288 P **P 08 00 20.8 +1.1**
SNR=5.3
WDC Whiskeytown Da 71.68 53 *e*P **P 08 00 21.3 +1.1**
WDC *e**PP pP 08 00 34.1 -0.5
WDC pmax pmax
comp=Z,14nm,1.3s,mb4.7
WDC Whiskeytown Da 71.68 53 *e*P **P 08 00 21.3 +1.1**
comp=Z,14nm,1.3s,mb4.7
WDC *e*pP pP 08 00 34.1 -0.5
ASHO Ashiyiah 71.70 287 P **P 08 00 21.5 +1.0**
SNR=5.3
A13A Flathead Natio 71.84 42⇑P **P 08 00 21.8 +0.8**
baz=72
BSY Bisya 71.86 285 P **P 08 00 21.9 +0.4**
SNR=6.1
H08A Prairie City 71.92 48⇓P **P 08 00 22.5 +1.0**
baz=72,SNR=14
F10A Beach Ranch, E 71.95 46⇑P **P 08 00 22.1 +0.5**
baz=72
G09A Cove 72.02 47⇑P **P 08 00 22.8 +0.7**
baz=72,SNR=16

WALA Waterton Lakes 72.04 42 *e*P **P 08 00 22.8 +0.7**
comp=Z,0.4nm,0.7s
ARQ Araqi 72.06 286 P **P 08 00 23.8 +1.1**
SNR=6.2
B13A Whitefish 72.13 43 ⇑P **P 08 00 23.7 +1.0**
baz=72,SNR=23
BSMT Bassoo Peak 72.26 43 *e*P **P 08 00 24.7 +1.2**
comp=Z,2.5nm,0.7s,mb4.2
A14A Double T Ranch 72.35 42 ⇓P **P 08 00 24.0 0.0**
baz=72
MOD Modoc 72.38 51 *e*P **P 08 00 25.3 +1.0**
comp=Z,4.5nm,0.7s,mb4.5
MOD *e*pP pP 08 00 39.5 +0.7
G10A Bishop Farm, J 72.40 46 ⇓P **P 08 00 24.8 +0.5**
baz=72,SNR=18
D12A Red Ives Fores 72.41 44 ⇑P **P 08 00 24.3 0.0**
baz=72
SCO Scoresbysund 72.42 354 *i* P **P 08 00 24.3 +0.2**
SCO pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
SCO Scoresbysund 72.42 354 *i* P **P 08 00 24.3 +0.2**
comp=Z,8.3nm,0.8s,mb4.7
IZAR Zarasai 72.45 327 *e*P **P 08 00 24.3 -0.1**
IZAR AMB AMB 08 00 26.1
comp=Z,26nm,1.0s,mb5.1
C13A Hot Springs 72.48 43 ⇓P **P 08 00 24.9 +0.2**
baz=72
IDID Didziasalis 72.51 327 *e*P **P 08 00 24.8 0.0**
IDID AMB AMB 08 00 26.5
comp=Z,37nm,0.8s,mb5.3
MICGM Minsk 72.52 326 *e*P **P 08 00 34.0 +9.1**
BMO Blue Mountains 72.54 47 *e*P **P 08 00 26.1 +0.9**
BMO pmax pmax
comp=Z,13nm,0.9s,mb4.9
BMO Blue Mountains 72.54 47 *e*P **P 08 00 26.1 +0.8**
comp=Z,13nm,0.9s,mb4.8
MNK Minsk 72.54 326 *e*P **P 08 00 34.0 +9.0**
MNK pmax pmax
comp=Z,270nm,0.8s,mb6.2
JTMT Jette 72.60 43 *e*P **P 08 00 26.8 +1.3**
comp=Z,9.2nm,0.7s,mb4.8
ISAL Salakas 72.61 327 *e*P **P 08 00 25.5 +0.1**
ISAL AMB AMB 08 00 27.2
comp=Z,57nm,0.9s,mb5.5
F11A Grangeville 72.62 45 ⇓P **P 08 00 25.8 +0.1**
baz=72,SNR=25
E12A Beaver Dam Sad 72.65 45 ⇓P **P 08 00 26.4 +0.6**
baz=72
YBMT Yellow Bay 72.68 43 *e*P **P 08 00 27.1 +1.1**
comp=Z,14nm,1.1s,mb4.8
J08A Circle Bar Ran 72.69 49 ⇑P **P 08 00 26.8 +0.7**
baz=72,SNR=16
A15A Johnson Ranch, 72.72 41 ⇑P **P 08 00 26.2 0.0**
baz=72,SNR=25
IIGN Ignalina 72.72 327 *e*P **P 08 00 25.9 -0.2**
IIGN AMB AMB 08 00 27.8
comp=Z,41nm,0.9s,mb5.4
NACGM Naroch 72.76 326 *e* **P 08 00 24.0 -2.3**
SOC Sochi 72.77 312 *e*P **P 08 00 25.4 -1.2**
SOC *e**PP pP 08 00 39.8 -1.3
SOC *e*S S 08 09 46.0 -2.4
SOC pmax pmax
comp=Z,54nm,0.9s,mb5.5
SOC MLR MLR
comp=Z,478nm,16.0s,MS4.9
I09A Lost Marbles R 72.78 48 ⇑P **P 08 00 27.5 +0.8**
baz=72,SNR=11
B14A Marquette Ranc 72.79 42 ⇓P **P 08 00 27.4 +0.8**
baz=72,SNR=12
G11A Walters Elk Ra 72.83 46 ⇑P **P 08 00 26.8 -0.1**
baz=72,SNR=67
C14A Swan Lake 72.88 43 ⇑P **P 08 00 27.7 +0.6**
baz=73
D13A Huson 72.88 44 ⇓P **P 08 00 27.5 +0.4**
baz=73,SNR=15
SWMT Swartz Lake 72.89 43 *e*P **P 08 00 28.2 +1.0**
comp=Z,22nm,1.0s,mb5.0
H10A Noah's Angus R 73.02 47 ⇓P **P 08 00 28.1 +0.1**
baz=73,SNR=28
B15A Bradely Ranch, 73.20 42 ⇓P **P 08 00 29.4 +0.3**
baz=73,SNR=49
F12A Elk City 73.21 45 ⇑P **P 08 00 29.5 +0.3**
baz=73,SNR=41
I10A Payette 73.27 47 ⇑P **P 08 00 30.7 +1.1**
baz=73,SNR=9.3
MSO Missoula 73.32 44 *e*P **P 08 00 29.9 +0.1**
comp=Z,9.7nm,1.0s,mb4.7
SLMT Seeley Lake 73.33 43 *e*P **P 08 00 30.5 +0.7**
comp=Z,35nm,0.9s,mb5.3
H11A Donnelly 73.38 46 ⇓P **P 08 00 30.1 -0.1**
baz=73,SNR=20
E13A Victor 73.41 44 ⇑P **P 08 00 29.9 -0.5**
baz=73,SNR=8.6
D14A Greenough 73.42 43 ⇑P **P 08 00 29.7 -0.6**
baz=73,SNR=35
ANN Anapa 73.42 314 *e*P **P 08 00 27.2 -3.2**
ANN *e**PP pP 08 00 41.7 -3.3
ANN pmax pmax
comp=Z,98nm,1.6s,mb5.5
BEKR Beckworth 73.47 52 P **P 08 00 31.0 +0.2**
baz=73
C15A Salmond Ranch, 73.50 42 ⇓P **P 08 00 31.0 +0.2**
baz=73
G12A Big Creek, Yel 73.53 46 ⇓P **P 08 00 31.0 -0.1**
baz=73
B16A M & M Farms, S 73.60 41 ⇓P **P 08 00 30.9 -0.5**
baz=73,SNR=22
CHMT Chamberlain Mo 73.65 43 *e*P **P 08 00 32.3 +0.5**
comp=Z,6.6nm,1.0s,mb4.5
F13A Darby 73.71 45 ⇓P **P 08 00 31.2 -0.9**
baz=73,SNR=16
MILA Mila 73.76 173 *e*P **P 08 00 32.7 +0.5**
comp=Z,20nm,0.8s,mb5.1
E14A Clinton 73.82 44 ⇓P **P 08 00 31.8 -0.9**
baz=74,SNR=8.0
I11A Placerville 73.87 47 ⇑P **P 08 00 33.1 +0.1**
baz=74,SNR=5.5
C16A Fuhringer Ranc 73.94 42 ⇓P **P 08 00 33.2 -0.2**
baz=74,SNR=22
D15A Lincoln 73.98 43 ⇑P **P 08 00 33.2 -0.5**
baz=74,SNR=7.9
K10A MacKenzie Ranc 73.98 48 ⇑P **P 08 00 33.1 -0.6**
baz=74
H12A Diamond D Ranc 74.14 46 ⇓P **P 08 00 34.6 -0.1**
baz=74,SNR=24
B17A L&G Farms, Che 74.15 41 ⇓P **P 08 00 34.2 -0.5**
baz=74
WCN Washoe City 74.17 53 ⇓P **P 08 00 35.3 +0.3**
baz=74,SNR=8.1
G13A Cobalt 74.18 45 ⇓P **P 08 00 34.2 -0.6**
baz=74,SNR=17
HFS Hagfors 74.21 335 LR LR 08 35 53.2
comp=Z,818nm,21.3s,MS5.0,baz=338,slow=38
F14A Wisdom 74.24 44 ⇑P **P 08 00 35.2 0.0**
baz=74,SNR=6.2
A18A Metzger Ranch, 74.27 40 P **P 08 00 35.3 0.0**
baz=74,SNR=32
FFC Flin Flon 74.28 32 P **P 08 00 35.7 +0.5**
comp=Z,266nm,0.8s,mb6.2,SNR=8.4
FFC Flin Flon 74.28 32 *ce*P **P 08 00 35.5 +0.3**
FFC Flin Flon 74.28 32 *e*P **P 08 00 34.4 -0.8**
comp=Z,44nm,0.9s,mb5.4
AKASG Malin Array Be 74.28 322 P **P 08 00 34.8 -0.5**
comp=Z,45nm,0.6s,mb5.6,baz=46,slow=5.9,SNR=195
AKASG LR LR 08 36 17.4
comp=Z,738nm,18.4s,MS5.0,baz=45,slow=38
AKBB Malin Array Si 74.28 322 *e*P **P 08 00 34.4 -0.9**
E15A Deer Lodge 74.28 44 ⇓P **P 08 00 34.9 -0.5**
baz=74,SNR=38
KIEV Kiev 74.29 322 *e*P **P 08 00 34.7 -0.7**
KIEV pmax pmax
comp=Z,62nm,0.8s,mb5.6
KIEV Kiev 74.29 322 *e*P **P 08 00 34.7 -0.7**
comp=Z,62nm,0.8s,mb5.6
NB2 NORSAR Subarra 74.33 337 P **P 08 00 35.3 -0.1**
comp=Z,62nm,0.7s,mb5.7,baz=40,slow=6.2
NOA NORSAR Array B 74.33 337 P **P 08 00 35.4 0.0**
comp=Z,55nm,0.7s,mb5.6,baz=39,slow=5.7,SNR=260
NOA LR LR 08 36 20.1
comp=Z,613nm,19.4s,MS4.9,baz=40,slow=38
I12A Atlanta 74.42 47 ⇑P **P 08 00 36.2 -0.1**
baz=74,SNR=31
H13A Challis 74.48 46 ⇑P **P 08 00 36.1 -0.5**
baz=74,SNR=47
CMB Columbia Colle 74.48 54 *e*P **P 08 00 37.4 +0.6**
CMB pmax pmax
comp=Z,20nm,1.2s,mb4.9
CMB Columbia Colle 74.48 54 *e*P **P 08 00 37.4 +0.6**
comp=Z,20nm,1.2s,mb4.9
K11A Parker Ranch, 74.49 48 ⇓P **P 08 00 37.5 +0.8**
baz=74,SNR=11
D16A Dana Ranch, Ca 74.52 43 ⇑P **P 08 00 36.9 +0.1**
baz=74,SNR=26
FCC Fort Churchill 74.55 26 *e*P **P 08 00 36.0 -0.7**
comp=Z,2.2nm,1.2s,mb4.0
HRY Holter Researc 74.56 43 *e*P **P 08 00 38.1 +1.1**
comp=Z,27nm,0.7s,mb5.3
C17A Wharram Farm, 74.58 42 ⇓P **P 08 00 35.5 -1.6**
baz=74,SNR=17
NAO01 NORSAR Array S 74.58 337 *e*P **P 08 00 36.4 -0.5**
comp=Z,29nm,0.7s,mb5.3
B18A Beardsley Farm 74.63 41 ⇓P **P 08 00 37.1 -0.3**
baz=74,SNR=50
L10A Juniper Basin 74.63 49 ⇓P **P 08 00 38.6 +1.0**
baz=74,SNR=7.7
F15A Butte 74.72 44 ⇓P **P 08 00 38.1 +0.2**
baz=74,SNR=52
E16A East Helena 74.75 43 ⇑P **P 08 00 38.3 +0.1**
baz=74,SNR=15
LRM Limekiln Ridge 74.75 44 *e*P **P 08 00 38.9 +0.7**
comp=Z,282nm,0.8s,mb6.2
J12A Stokes Ranch, 74.76 47 ⇓P **P 08 00 37.7 -0.6**
baz=74
EGMT Eagleton 74.87 41 ⇓P **P 08 00 38.4 -0.4**
baz=75,SNR=27
EGMT Eagleton 74.87 41 *e*P **P 08 00 39.2 +0.4**
comp=Z,46nm,1.0s,mb5.4
D17A Six Diamond Ra 74.91 42 ⇑P **P 08 00 39.3 +0.2**
baz=75,SNR=19
M10A I.L. Ranch, Tu 74.91 49 ⇑P **P 08 00 39.0 -0.1**
baz=75,SNR=18
SUW Suwalki 74.93 327 *e*P **P 08 00 38.7 -0.3**
I13A Wildhorse Cree 74.94 46 ⇑P **P 08 00 39.2 -0.1**
baz=75,SNR=20
DLMT Dillon 74.95 44 *e*P **P 08 00 40.2 +0.9**
comp=Z,40nm,0.8s,mb5.4
H14A Leadore 74.96 45 ⇓P **P 08 00 39.4 0.0**
baz=75,SNR=11
HLID Hailey 74.98 47 ⇓P **P 08 00 40.0 +0.5**
baz=75,SNR=16
HLID Hailey 74.98 47 *e*P **P 08 00 40.2 +0.7**
comp=Z,8.7nm,1.0s,mb4.6
L11A Cat Creek Ranc 75.01 48 ⇑P **P 08 00 39.6 -0.1**
baz=75,SNR=19
BMN Battle Mountai 75.12 51 *e*P **P 08 00 41.8 +1.4**
BMN pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
BMN Battle Mountai 75.12 51 *e*P **P 08 00 41.8 +1.4**
comp=Z,7.2nm,0.9s,mb4.6
G15A Dillon 75.13 45 ⇓P **P 08 00 40.0 -0.3**
baz=75,SNR=40
MCMT McKenzie Canyo 75.13 45 *e*P **P 08 00 41.0 +0.7**
comp=Z,2.1nm,0.6s,mb4.2
J13A Cove Ranch, Pi 75.22 47 ⇓P **P 08 00 41.9 +1.0**
baz=75,SNR=15
F16A Kennard Place, 75.23 44 ⇑P **P 08 00 40.9 -0.1**
baz=75,SNR=39
SIM Simferopol' 75.24 315 *e*P **P 08 00 42.3 +1.3**
SIM *e**PP pP 08 00 57.0 +1.4
SIM pmax pmax
comp=Z,57nm,0.8s,mb5.5
SIM MLR MLR
comp=Z,380nm,20.0s,MS4.7
E17A Martinsdale 75.24 43 ⇓P **P 08 00 41.3 +0.3**
baz=75,SNR=30
K12A Draper Farm, C 75.24 48 ⇓P **P 08 00 40.7 -0.3**
baz=75,SNR=9.7
BOZ Bozeman (W) 75.32 44 ⇓P **P 08 00 42.0 +0.6**
baz=75,SNR=45
BOZ Bozeman (W) 75.32 44 *e*P **P 08 00 42.0 +0.6**
BOZ pmax pmax
comp=Z,19nm,0.8s,mb5.1
BOZ Bozeman (W) 75.32 44 *e*P **P 08 00 42.0 +0.6**
comp=Z,19nm,0.8s,mb5.1
I14A Mackay 75.32 46 ⇑P **P 08 00 41.5 0.0**
baz=75,SNR=57
D18A Linhart Farms, 75.36 42 ⇑P **P 08 00 42.0 +0.3**
baz=75,SNR=24
H15A Lima 75.37 45 ⇓P **P 08 00 41.0 -0.7**
baz=75
M11A Holland Ranch, 75.42 49 ⇓P **P 08 00 42.6 +0.6**
baz=75,SNR=21
L12A House Creek Ra 75.46 48 ⇓P **P 08 00 43.3 +1.0**
baz=75,SNR=16
G16A Moss Hill, Enn 75.47 44 ⇓P **P 08 00 42.7 +0.4**
baz=75,SNR=19
KBD Kabd 75.50 296 *e*P **P 08 00 42.5 -0.3**
KBD AMb AMB 08 00 43.7
comp=Z,84nm,1.0s,mb5.6
NVAR Mina Array Bea 75.60 53 P **P 08 00 44.1 +0.9**
comp=Z,7.7nm,0.8s,mb4.7,baz=282,slow=5.6,SNR=63
NVAR pP pP 08 00 56.9 -0.9
comp=Z,5.5nm,0.8s,baz=273,slow=5.4,SNR=8.6
J14A Carey 75.65 46 ⇑P **P 08 00 44.4 +1.0**
baz=75,SNR=30
E18A Harlowton 75.69 42 ⇓P **P 08 00 44.4 +0.9**
baz=75,SNR=21
F17A Fitzpatrick Pl 75.69 43 ⇓P **P 08 00 43.7 +0.1**
baz=75,SNR=21
K13A Stover Farm, H 75.72 47 ⇓P **P 08 00 44.0 +0.3**
baz=75,SNR=9.9
MLAC Mammoth Lakes 75.72 54 ⇑P **P 08 00 43.8 -0.1**
baz=75
RDF Al-Radifah 75.75 295 *e*P **P 08 00 44.4 +0.2**
RDF AMb AMB 08 00 45.8
comp=Z,247nm,0.9s,mb6.1
NAY Al-Naaiem 75.79 296 *e*P **P 08 00 43.9 -0.5**
NAY AMb AMB 08 00 45.1
comp=Z,79nm,1.0s,mb5.6
N11A Elko Archery C 75.81 50 ⇑P **P 08 00 44.3 -0.1**
baz=76
KONO Kongsberg 75.92 337 *e*P **P 08 00 44.2 -0.4**
KONO pmax pmax
comp=Z,23nm,0.8s,mb5.2
KONO Kongsberg 75.92 337 *e*P **P 08 00 44.2 -0.4**
comp=Z,23nm,0.8s,mb5.2
QLMT Earthquake Lak 75.93 44 *e*P **P 08 00 46.5 +1.6**
comp=Z,8.9nm,0.8s,mb4.8
M12A Wells 75.96 49 ⇑P **P 08 00 46.5 +1.3**
baz=76,SNR=30
G17A Pierce Place, 76.01 44 ⇓P **P 08 00 45.8 +0.4**
baz=76,SNR=12
P10A Eureka 76.07 51 ⇑P **P 08 00 45.1 -0.8**
baz=76
H16A Russell Place, 76.11 44 ⇑P **P 08 00 45.4 -0.5**
baz=76,SNR=20
L13A Double Diamond 76.14 48 ⇑P **P 08 00 45.2 -1.0**
baz=76,SNR=12
F18A Big Timber 76.21 43 ⇑P **P 08 00 46.7 +0.1**
baz=76,SNR=30
N12A Clover Valley, 76.22 49 ⇓P **P 08 00 45.6 -1.1**
baz=76,SNR=16
N12A Clover Valley, 76.22 49 *e*P **P 08 00 48.1 +1.5**
comp=Z,19nm,1.1s,mb4.9
J15A Blackfoot 76.23 46 ⇓P **P 08 00 46.4 -0.3**
baz=76,SNR=24
O11A Cowboy Ranch, 76.27 50 ⇓P **P 08 00 45.6 -1.4**
baz=76
YMR Madison River 76.29 44 *e*P **P 08 00 48.7 +1.7**
comp=Z,10nm,0.7s,mb4.9
GCMT Greycliff 76.31 43 *e*P **P 08 00 48.3 +1.3**
comp=Z,18nm,1.0s,mb5.0
K14A Jones Ranch, D 76.32 47 ⇓P **P 08 00 47.8 +0.6**
baz=76,SNR=22
M13A Montello 76.44 48 ⇓P **P 08 00 48.6 +0.7**
baz=76,SNR=14
M13A Montello 76.44 48 *e*P **P 08 00 49.0 +1.1**
comp=Z,8.1nm,0.8s,mb4.7
I16A Newdale 76.48 45 ⇓P **P 08 00 48.9 +0.8**
baz=76,SNR=44
YFT Old Faithful 76.50 44 *e*P **P 08 00 51.1 +3.0**
comp=Z,24nm,0.8s,mb5.2
P11A Circle Ranch, 76.55 51 ⇓P **P 08 00 49.2 +0.6**
baz=76
Q10A Clear Creek Ra 76.58 52 ⇑P **P 08 00 49.3 +0.6**
baz=76
L14A Malta 76.59 47 ⇓P **P 08 00 48.0 -0.7**
baz=76,SNR=13
K15A Arbon 76.61 47 ⇑P **P 08 00 50.0 +1.2**
baz=76,SNR=12
LKWY Lake 76.67 44 *e*P **P 08 00 51.8 +2.7**
LKWY pmax pmax
comp=Z,14nm,0.8s,mb4.9
LKWY Lake 76.67 44 *e*P **P 08 00 51.8 +2.7**
comp=Z,14nm,0.8s,mb4.9
H17A Grant Village 76.67 44 ⇓P **P 08 00 48.7 -0.5**
baz=76
O12A Currie 76.75 50 ⇑P **P 08 00 49.7 0.0**
baz=76,SNR=38
IMW Indian Meadow 76.78 45 *e*P **P 08 00 51.6 +1.8**
comp=Z,25nm,0.8s,mb5.2
J16A Bone 76.78 46 ⇑P **P 08 00 51.3 +1.5**
baz=76,SNR=15
DCID1 Drake Creek 76.83 45 *e*P **P 08 00 51.9 +1.9**
comp=Z,25nm,0.9s,mb5.1
M14A Sheep Mountain 76.85 48 ⇓P **P 08 00 50.4 +0.2**
baz=76,SNR=16
RRI2 Red Ridge 76.90 45 *e*P **P 08 00 51.9 +1.4**
comp=Z,18nm,0.9s,mb5.0
CWC Cottonwood Cre 76.90 54 ⇑P **P 08 00 51.5 +0.8**
baz=77
RLMT Red Lodge 76.95 43 ⇓P **P 08 00 50.5 -0.2**
baz=77,SNR=7.7
RLMT Red Lodge 76.95 43 *e*P **P 08 00 51.5 +0.9**
comp=Z,19nm,1.1s,mb4.9
R10A Warm Springs 76.96 52 ⇓P **P 08 00 51.8 +0.9**
baz=77,SNR=5.3
I17A Pilgrim Ck. 76.97 45 ⇑P **P 08 00 52.8 +1.9**
baz=77,SNR=6.5
S10A Tonopah Range, 76.99 52 ⇓P **P 08 00 50.7 -0.4**
baz=77,SNR=18
HVU Hansel Valley 77.02 47 *e*P **P 08 00 52.2 +1.0**
HVU pmax pmax
comp=Z,14nm,0.8s,mb4.9
HVU Hansel Valley 77.02 47 *e*P **P 08 00 52.2 +1.1**
comp=Z,14nm,0.8s,mb5.0
TPAW Teton Pass 77.03 45 *e*P **P 08 00 53.0 +1.9**
comp=Z,15nm,0.8s,mb5.0
Q11A Duckwater 77.04 51 ⇓P **P 08 00 51.0 -0.3**
baz=77,SNR=12
GRAC Grapevine Rang 77.04 54 ⇓P **P 08 00 51.6 +0.2**
baz=77,SNR=12
K16A Soda Springs 77.07 46 ⇑P **P 08 00 51.4 0.0**
baz=77,SNR=36
ISA Isabella 77.10 55 ⇑P **P 08 00 51.6 -0.2**
baz=77
ISA Isabella 77.10 55 *e*P **P 08 00 50.8 -0.9**
ISA pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
ISA Isabella 77.10 55 *e*P **P 08 00 50.8 -0.9**
comp=Z,4.0nm,0.8s,mb4.4
L15A Malad City 77.11 47 ⇓P **P 08 00 51.5 -0.2**
baz=77,SNR=12
P12A McGill 77.12 50 ⇑P **P 08 00 51.9 +0.1**
baz=77,SNR=25
LOHW Long Hollow 77.15 45 *e*P **P 08 00 53.0 +1.1**
comp=Z,8.7nm,0.9s,mb4.7
SNOW Snow King Moun 77.16 45 *e*P **P 08 00 53.4 +1.5**
comp=Z,20nm,1.0s,mb5.0
REDW Red Top Meadow 77.16 45 *e*P **P 08 00 53.4 +1.5**
comp=Z,19nm,1.1s,mb4.9
ARVC Arvin 77.18 56 ⇑P **P 08 00 52.0 -0.2**
baz=77
J17A Brown Place, J 77.24 45 ⇓P **P 08 00 52.3 0.0**
baz=77,SNR=11
O13A Hicks Ranch, I 77.30 49 ⇓P **P 08 00 53.5 +0.8**
baz=77,SNR=11
N14A Grayback Hills 77.34 48 ⇑P **P 08 00 52.9 -0.1**
baz=77,SNR=16
R11A Troy Canyon, C 77.38 52 ⇓P **P 08 00 53.0 -0.2**
baz=77,SNR=22
LVV L'vov 77.38 324 *i* P **P 08 00 52.7 -0.3**
BGU Big Grassy Mou 77.39 48 *e*P **P 08 00 54.4 +1.1**
comp=Z,4.9nm,0.8s,mb4.5
M15A Larsen Ranch, 77.41 48 ⇓P **P 08 00 53.2 -0.1**
baz=77,SNR=8.2
DGMT Dagmar 77.43 38 ⇑P **P 08 00 53.2 -0.2**
baz=77,SNR=8.1
Q12A Willow Creek R 77.43 51 ⇓P **P 08 00 53.1 -0.4**
baz=77
K17A Gardner Place, 77.50 46 ⇓P **P 08 00 52.7 -1.2**
baz=77
MPMC Manual Prospec 77.51 54 ⇑P **P 08 00 54.3 +0.2**
baz=77,SNR=7.6
BSD Bornholm Skovb 77.53 332 ⇑*i*P **P 08 00 53.2 -0.6**
BSD pmax pmax
comp=Z,81nm,0.8s,mb5.7
BSD Bornholm Skovb 77.53 332 ⇑*i*P **P 08 00 53.2 -0.6**
comp=Z,81nm,0.8s,mb5.7
FURC Furnace Creek, 77.68 54 ⇑P **P 08 00 54.9 -0.1**
baz=77,SNR=11
P13A Bates Ranch, G 77.69 50 ⇓P **P 08 00 54.8 -0.2**
baz=77,SNR=11
S11A Rachel 77.69 52 ⇑P **P 08 00 54.9 -0.2**
baz=77
N15A Stansbury Isla 77.72 48 ⇓P **P 08 00 56.4 +1.3**
baz=77,SNR=11
LRMC Laurel Mountai 77.73 55 ⇓P **P 08 00 54.4 -0.8**
baz=77
J18A Kendall Valley 77.73 45 ⇑P **P 08 00 56.0 +0.8**
baz=77,SNR=14
HWUT Hardware Ranch 77.84 47 *e*P **P 08 00 56.5 +0.7**
comp=Z,28nm,1.2s,mb5.1
EDW2 Edwards Air Fo 77.88 56 ⇑P **P 08 00 56.3 +0.2**
baz=78,SNR=5.5
L17A Cokeville 77.94 46 ⇑P **P 08 00 57.1 +0.8**
baz=78,SNR=9.5
BORG Borgarnes 77.94 352 *e*P **P 08 00 57.5 +1.6**
BORG pmax pmax
comp=Z,54nm,0.8s
BORG Borgarnes 77.94 352 *e*P **P 08 00 57.5 +1.6**
comp=Z,54nm,0.8s,mb5.5
DUG Dugway 77.97 49 ⇓P **P 08 00 57.0 +0.5**
baz=78,SNR=20
DUG Dugway 77.97 49 *e*P **P 08 00 57.2 +0.7**
DUG *e**PP pP 08 01 12.5 +1.4
DUG pmax pmax
comp=Z,16nm,0.9s,mb5.0
DUG Dugway 77.97 49 *e*P **P 08 00 57.2 +0.7**
comp=Z,16nm,0.9s,mb5.0
DUG *e*pP pP 08 01 12.5 +1.3
GKP Gorka Klasztor 77.97 329 *e*P **P 08 00 56.6 +0.4**
Q13A Wheeler Ranch, 77.99 50 ⇓P **P 08 00 57.3 +0.7**
baz=78,SNR=11
R12A Pony Springs, 78.00 51 ⇑P **P 08 00 56.2 -0.5**
baz=78,SNR=8.4
TLCR 78.02 318 ⇓P **P 08 00 56.7 0.0**
TLCR 78.02 318 ⇓*i*P **P 08 00 56.7 0.0**
COP Copenhagen 78.03 333 ⇑*i*P **P 08 00 56.6 +0.1**
COP Copenhagen 78.03 333 ⇑*i*P **P 08 00 56.6 +0.1**
U10A Ash Meadows, A 78.05 53 ⇑P **P 08 00 57.2 +0.2**
baz=78
K18A Toltan Ranch, 78.08 45 ⇓P **P 08 00 54.7 -2.4**
baz=78,SNR=20
NOQ North Oquirrh 78.10 48 *e*P **P 08 00 58.2 +1.0**
comp=Z,21nm,0.8s,mb5.1
O15A The Old Anders 78.12 48 ⇓P **P 08 00 57.2 -0.1**
baz=78
KWP Kalwaria Pacla 78.14 324 *e*P **P 08 00 57.9 +0.7**
KWP Kalwaria Pacla 78.14 324 ⇓P **P 08 00 58.2 +1.0**
KWP Kalwaria Pacla 78.14 324 *e*P **P 08 00 57.9 +0.7**
comp=Z,122nm,0.9s,mb5.8
KWP Kalwaria Pacla 78.14 324 ⇓*i*P **P 08 00 58.2 +1.0**
P14A Drum Mountains 78.18 49 ⇑P **P 08 00 57.9 +0.2**
baz=78,SNR=13
SOFL Sornfelli, Far 78.21 345 P **P 08 00 57.8 +0.4**
SOFL Sornfelli, Far 78.21 345 *e*P **P 08 00 57.8 +0.4**
T11A Corn Creek, Al 78.27 52 ⇓P **P 08 00 58.6 +0.3**
baz=78
BW06 Boulder Array 78.27 45 ⇓P **P 08 00 58.2 0.0**
baz=78,SNR=15
BW06 Boulder Array 78.27 45 *e*P **P 08 00 58.0 -0.2**
comp=Z,9.8nm,0.9s,mb4.7
PDAR Pinedale Array 78.27 45 P **P 08 00 58.2 +0.1**
comp=Z,7.6nm,0.8s,mb4.7,baz=284,slow=3.0,SNR=50
BUR08 Bucovina Ar. S 78.28 321 *e*P **P 08 00 58.0 -0.1**
BUR08 *e*pP pP 08 01 11.4 -1.3
S12A Delamar Landin 78.28 52 ⇑P **P 08 00 59.1 +0.8**
baz=78
BURAR Bucovina Array 78.29 321 ⇓P **P 08 00 58.8 +0.7**
BURAR Bucovina Array 78.29 321 ⇓*i*P **P 08 00 58.8 +0.7**
TESR 78.30 320 ⇑P **P 08 00 58.2 0.0**
TESR 78.30 320 ⇑*i*P **P 08 00 58.2 0.0**
N16A Rees Ranch, Co 78.36 47 ⇑P **P 08 00 58.7 0.0**
baz=78,SNR=5.9
FMP Fort Macarthur 78.37 57 ⇓P **P 08 00 59.2 +0.4**
baz=78
GSC Goldstone 78.41 55 ⇓P **P 08 00 58.3 -0.7**
baz=78
GSC Goldstone 78.41 55 *e*P **P 08 00 59.8 +0.8**
GSC pmax pmax
comp=Z,2.0nm,0.7s,mb4.2

GSC Goldstone 78.41 55 eP P 08 00 59.8 +0.8
comp=Z,1.9nm,0.7s,mb4.1
Q14A Sevier Lake (B 78.42 50 ⇓P P 08 00 59.6 +0.6
baz=78,SNR=26
M17A Scullys Gap (B 78.45 47 ⇑P P 08 00 59.2 +0.1
baz=78,SNR=7.5
R13A O'Grain Ranch, 78.49 51 ⇓P P 08 00 58.4 -1.1
baz=78,SNR=8.2
L18A Fontenelle, Gr 78.53 46 ⇑P P 08 00 58.4 -1.2
baz=78,SNR=8.3
JLU Jordanelle 78.53 48 eP P 08 01 00.7 +1.1
comp=Z,11nm,1.1s,mb4.7
JLU epP pP 08 01 15.1 +0.9
MUD Monsted U'grnd 78.58 335⇑iP P 08 00 59.4 -0.1
MUD pmax pmax
comp=Z,39nm,0.8s,mb5.4
MUD Monsted U'grnd 78.58 335⇑iP P 08 00 59.4 -0.1
comp=Z,39nm,0.8s,mb5.4
LRW Lerwick 78.59 342 P P 08 00 59.5 0.0
LRW AMb AMB 08 01 09.4
comp=Z,45nm,2.6s,mb4.9
LRW Lerwick 78.59 342⇑eP P 08 00 59.5 0.0
LRW AMb AMB 08 01 09.4
comp=Z,45nm,2.6s,mb4.9
K19A Absolon Red Bu 78.64 45 ⇓P P 08 00 58.1 -2.0
baz=78,SNR=7.8
P15A Leamington 78.68 49 ⇓P P 08 01 00.5 +0.1
baz=78,SNR=6.7
VRI Vrincioaia 78.68 319 ⇑P P 08 01 01.4 +1.1
VRI Vrincioaia 78.68 319⇑iP P 08 01 01.4 +1.1
TIRR Tirgusor 78.71 318 ⇓P P 08 00 59.7 -0.8
TIRR Tirgusor 78.71 318⇓iP P 08 00 59.7 -0.8
BR131 Keskin Array S 78.72 311 eP P 08 01 00.8 +0.1
comp=Z,12nm,0.8s,mb4.9
BRTR Keskin Array B 78.72 311 P P 08 01 00.8 +0.2
comp=Z,16nm,0.8s,mb5.0,baz=104,slow=4.2,SNR=56
O16A Springville 78.75 48 ⇑P P 08 01 01.0 +0.2
baz=78,SNR=15
DAU Daniels Canyon 78.77 48 eP P 08 01 02.2 +1.3
DAU pmax pmax
comp=Z,12nm,0.9s,mb4.8
DAU Daniels Canyon 78.77 48 eP P 08 01 02.2 +1.3
comp=Z,12nm,0.9s,mb4.8
MPU Maple Canyon 78.79 48 eP P 08 01 02.0 +1.0
comp=Z,20nm,1.0s,mb5.0
L19A Farson 78.81 46 ⇓P P 08 01 00.7 -0.4
baz=78,SNR=8.9
M18A Lyman 78.83 46 ⇓P P 08 01 00.7 -0.5
baz=78,SNR=7.2
GRER 78.87 319 ⇑P P 08 01 02.9 +1.5
GRER 78.87 319⇑iP P 08 01 02.9 +1.5
T12A Moapa 78.91 52 ⇑P P 08 01 01.5 -0.2
baz=79
S13A Holt Ranch, En 78.92 51 ⇓P P 08 01 02.3 +0.5
baz=79,SNR=16
Q15A Fillmore 78.97 49 ⇑P P 08 01 02.0 -0.1
baz=79,SNR=9.1
STHS Stebnicka Huta 78.97 325 eP P 08 01 02.4 +0.6
STHS pmax pmax
comp=Z,21nm,0.8s,mb5.1
STHS Stebnicka Huta 78.97 325 eP P 08 01 02.4 +0.6
comp=Z,20nm,0.8s,mb5.1
STHS Stebnicka Huta 78.97 325 eP P 08 01 02.4 +0.6
V11A Goodsprings 78.98 54 ⇓P P 08 01 02.1 -0.1
baz=79,SNR=6.4
HEC Hector,Ludlow 79.01 55 ⇑P P 08 01 03.5 +1.2
baz=79
P16A Fountain Green 79.03 49 ⇓P P 08 01 02.8 +0.5
baz=79
K20A Yellowstone Ra 79.03 45 ⇓P P 08 01 01.2 -1.1
baz=79,SNR=7.6
ARUT Antelope Range 79.06 51 eP P 08 01 03.8 +1.2
ARUT pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
ARUT Antelope Range 79.06 51 eP P 08 01 03.8 +1.3
comp=Z,7.0nm,0.9s,mb4.6
OJC Ojcow 79.06 326 eP P 08 01 00.5 -1.8
MURC Murrieta 79.17 56 ⇓P P 08 01 02.8 -0.4
baz=79
U12A Valley of Fire 79.20 53 ⇑P P 08 01 02.9 -0.4
baz=79
O17A Robinson Place 79.21 48 ⇑P P 08 01 02.4 -0.9
baz=79,SNR=18
CRVS Cervenica-Dubn 79.23 324 eP P 08 01 03.6 +0.3
CRVS pmax pmax
comp=Z,17nm,0.9s,mb5.0
CRVS Cervenica-Dubn 79.23 324 eP P 08 01 03.6 +0.3
comp=Z,17nm,0.9s,mb5.0
CRVS Cervenica-Dubn 79.23 324 eP P 08 01 03.6 +0.3
T13A Saint George 79.24 52 ⇓P P 08 01 03.7 +0.2
baz=79,SNR=15
S14A Cedar City 79.25 51 ⇓P P 08 01 03.0 -0.6
baz=79
TRPA Tarpa 79.25 323⇓iP P 08 01 04.4 +1.0
CCUT Cedar City 79.25 51 eP P 08 01 04.8 +1.1
comp=Z,33nm,1.7s,mb5.0
CCUT epP pP 08 01 19.0 +0.7
N18A Larsen Ranch, 79.34 47 ⇑P P 08 01 03.5 -0.5
baz=79,SNR=7.6
MSU Marysvale 79.39 50 eP P 08 01 05.3 +0.9
MSU e*PP pP 08 01 20.2 +1.2
MSU pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
MSU Marysvale 79.39 50 eP P 08 01 05.3 +1.0
comp=Z,7.1nm,0.8s,mb4.7
MSU epP pP 08 01 20.2 +1.2
NIE Niedzica 79.40 325 eP P 08 01 04.8 +0.6
V12A Nelson 79.43 53 ⇓P P 08 01 05.0 +0.4
baz=79,SNR=5.5
L20A Wamsutter 79.45 45 ⇑P P 08 01 04.4 -0.3
baz=79,SNR=7.5
GMRC Granite Mounta 79.47 54 ⇑P P 08 01 04.7 -0.1
baz=79,SNR=8.2
R15A Junction 79.52 50 ⇓P P 08 01 06.1 +1.0
baz=79,SNR=14
U13A Pakoon Wash 79.57 52 ⇓P P 08 01 05.3 -0.1
baz=79,SNR=19
O18A Roosevelt 79.60 47 ⇓P P 08 01 05.5 0.0
baz=79,SNR=22
109C Camp Elliot, M 79.66 57 ⇑P P 08 01 05.5 -0.4
baz=79
PFO Pinyon Flat Ob 79.66 56 ⇑P P 08 01 05.6 -0.3
baz=79
PFO Pinyon Flat Ob 79.66 56⇑eP P 08 01 07.6 +1.7
P17A Butcher Ranch, 79.67 48 ⇑P P 08 01 05.9 +0.1
baz=79,SNR=34
N19A John Jarvie Ra 79.69 46 ⇑P P 08 01 05.1 -0.8
baz=79,SNR=9.1
BELC Belle Mtn. Jos 79.72 55 ⇑P P 08 01 05.5 -0.7
baz=79
T14A Hurricane 79.73 51 ⇑P P 08 01 06.9 +0.6
baz=79,SNR=7.4
Q16A Castle Valley 79.75 49 ⇓P P 08 01 06.7 +0.3
baz=79
VOIR 79.84 320 ⇓P P 08 01 07.0 +0.3
VOIR 79.84 320⇓iP P 08 01 07.0 +0.3
P18A Preston Nutter 79.86 48 ⇑P P 08 01 06.2 -0.7
baz=80,SNR=24
M20A Sweetwater, Wa 79.87 45 ⇑P P 08 01 06.7 -0.3
baz=80
V13A Grand Canyon W 79.91 53 ⇑P P 08 01 07.5 +0.3
baz=80
RUE Ruedersdorf 79.96 330 eP P 08 01 07.5 +0.3
comp=Z,41nm,0.9s,mb5.4
R16A Teasdale 79.96 50 ⇑P P 08 01 07.9 +0.4
baz=80,SNR=21
KECS Kecovo 79.98 324 eP P 08 01 07.8 +0.4
KECS pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
KECS Kecovo 79.98 324 eP P 08 01 07.8 +0.4
comp=Z,8.3nm,0.9s,mb4.7
KECS Kecovo 79.98 324 eP P 08 01 07.8 +0.4
SRU San Rafael 80.02 48 ⇑P P 08 01 08.2 +0.4
baz=80,SNR=43
SRU San Rafael 80.02 48 eP P 08 01 08.3 +0.5
SRU e*PP pP 08 01 22.8 +0.3
SRU pmax pmax
comp=Z,24nm,0.8s,mb5.2
SRU San Rafael 80.02 48 eP P 08 01 08.3 +0.5
comp=Z,24nm,0.8s,mb5.2
SRU epP pP 08 01 22.8 +0.3
L21A Rawlins 80.03 45 ⇓P P 08 01 06.3 -1.5
baz=80,SNR=14
U14A Mt Trumbull 80.07 52 ⇑P P 08 01 07.9 -0.2
baz=80,SNR=9.9
BAR Barrett 80.07 57 eP P 08 01 08.0 -0.2
comp=Z,17nm,1.0s,mb4.9
BAR epP pP 08 01 23.2 +0.4
ULM Lac du Bonnet 80.08 33 P P 08 01 07.0 -0.8
comp=Z,16nm,0.7s,mb5.0,baz=307,slow=6.7,SNR=13
ULM Lac du Bonnet 80.08 33 eP P 08 01 07.0 -0.9
comp=Z,42nm,1.2s,mb5.2
OKC Ostrava-Krasne 80.08 326 eP P 08 01 08.0 +0.2
DRGR 80.10 322 ⇓P P 08 01 08.7 +0.7
DRGR 80.10 322⇓iP P 08 01 08.7 +0.7
O19A Miners Draw (B 80.10 47 ⇑P P 08 01 07.9 -0.2
baz=80,SNR=12
MONP Monument Peak 80.11 56 ⇑P P 08 01 08.5 +0.2
baz=80
KSP Ksiaz 80.15 328 eP P 08 01 08.7 +0.5
KSP Ksiaz 80.15 328⇑iP P 08 01 08.6 +0.4
KSP epP pP 08 01 20.7 -2.2
BSEG Bad Segeberg 80.16 333 eP P 08 01 08.3 +0.1
comp=Z,61nm,0.9s,mb5.5
T15A Red Dirt Ranch 80.20 51 ⇓P P 08 01 08.4 -0.4
baz=80,SNR=12
S16A Weppner Ranch, 80.25 50 ⇑P P 08 01 09.3 +0.3
baz=80,SNR=14
N20A Spence Gulch, 80.25 46 ⇓P P 08 01 09.1 +0.2
baz=80,SNR=22
Q18A Rafter H Ranch 80.26 48 ⇑P P 08 01 09.1 +0.1
baz=80,SNR=6.1
M21A Separation Pea 80.27 45 ⇑P P 08 01 09.0 -0.1
baz=80,SNR=9.9
BC3 Big Chuckawall 80.29 55 ⇓P P 08 01 08.9 -0.4
baz=80,SNR=5.1
RWWY Rawlins 80.30 45 eP P 08 01 09.8 +0.6
comp=Z,19nm,0.9s,mb5.0
R17A Hanksville Air 80.35 49 ⇓P P 08 01 08.6 -1.0
baz=80,SNR=15
MORC Moravsky Berou 80.39 327 ⇑P P 08 01 09.9 +0.4
MORC Moravsky Berou 80.39 327 eP P 08 01 08.8 -0.7
comp=Z,33nm,0.9s,mb5.3
MORC Moravsky Berou 80.39 327⇑iP P 08 01 09.9 +0.4
RSSD Black Hills 80.43 41 eP P 08 01 09.2 -0.7
RSSD pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
RSSD Black Hills 80.43 41 eP P 08 01 09.2 -0.6
comp=Z,6.1nm,0.8s,mb4.6
W13A Hualapai Mount 80.43 53 ⇑P P 08 01 09.8 -0.3
baz=80
DVTC Desert V Tower 80.47 56 ⇓P P 08 01 10.7 +0.4
baz=80
DPC Dobruska-Polom 80.50 328 eP P 08 01 10.8 +0.7
DPC epP pP 08 01 22.6 -2.2
SWSC Sam W. Stewart 80.50 56 ⇑P P 08 01 10.8 +0.3
baz=80
L22A Ellis Ranch, M 80.51 44 ⇑P P 08 01 10.1 -0.3
baz=80
UPC Upice 80.52 328 eP P 08 01 10.7 +0.5
UPC epP pP 08 01 25.1 +0.2
V14A Boquillas Ranc 80.60 52 ⇓P P 08 01 11.1 +0.2
baz=80,SNR=21
P19A Cripple Cowboy 80.61 47 ⇑P P 08 01 11.2 +0.3
baz=80,SNR=40
U15A North Rim 80.62 51 ⇓P P 08 01 12.0 +1.0
baz=80,SNR=17
PSZ Piszkesteto 80.66 324 ⇓P P 08 01 12.0 +1.0
PSZ Piszkesteto 80.66 324 eP P 08 01 11.1 0.0
comp=Z,40nm,0.8s,mb5.4
PSZ Piszkesteto 80.66 324⇓iP P 08 01 12.0 +1.0
O20A White River Ci 80.72 47 ⇓P P 08 01 11.3 -0.2
baz=80,SNR=14
N21A Black Mountain 80.73 46 ⇑P P 08 01 11.5 -0.1
baz=80,SNR=16
VYHS Vyhne 80.74 325 eP P 08 01 11.9 +0.5
VYHS pmax pmax
comp=Z,16nm,1.1s,mb4.9
VYHS Vyhne 80.74 325 eP P 08 01 11.9 +0.5
comp=Z,16nm,1.1s,mb4.9
VYHS Vyhne 80.74 325 eP P 08 01 11.9 +0.5
PDMCI Parker Dam,Lak 80.76 54 ⇓P P 08 01 11.7 -0.1
baz=80
T16A Glen Canyon Da 80.77 51 ⇑P P 08 01 12.1 +0.3
baz=80
X13A Yucca 80.78 54 ⇑P P 08 01 11.2 -0.7
baz=80,SNR=16
S17A Black Ridge (B 80.79 50 ⇑P P 08 01 11.5 -0.4
baz=80,SNR=11
SZH Strazhica 80.84 318 eP P 08 01 11.9 -0.2
Y12C Blythe 80.85 55 ⇑P P 08 01 12.2 -0.1
baz=80,SNR=5.8
R18A Canyonlands Na 80.86 49 ⇓P P 08 01 11.8 -0.5
baz=80,SNR=14
Q19A Hogan Spring (80.88 48 ⇑P P 08 01 12.7 +0.4
baz=81,SNR=12
W14A Seligman 80.88 53 ⇑P P 08 01 12.4 0.0
baz=81,SNR=15
KOLL Kolacno 80.88 325 eP P 08 01 12.7 +0.5
KOLL Kolacno 80.88 325 eP P 08 01 12.6 +0.4
JMB Yambol 81.03 317 P P 08 01 13.6 +0.5
JMB Yambol 81.03 317 P P 08 01 13.6 +0.5
GZR Gura Zlata 81.04 321 ⇓P P 08 01 13.4 +0.3
GZR Gura Zlata 81.04 321⇓iP P 08 01 13.4 +0.3
P20A De Beque 81.04 47 ⇑P P 08 01 12.7 -0.5
baz=81,SNR=6.2
GLA Glamis 81.08 55 ⇓P P 08 01 13.3 -0.2
baz=81,SNR=5.3
GLA Glamis 81.08 55 eP P 08 01 14.5 +1.0
GLA pmax pmax
comp=Z,15nm,0.9s,mb4.9
GLA Glamis 81.08 55 eP P 08 01 14.5 +1.0
comp=Z,15nm,0.9s,mb4.9
V15A Kaibab Nationa 81.08 52 ⇓P P 08 01 13.1 -0.4
baz=81,SNR=14
BRG Berggiesshubel 81.11 329 eP P 08 01 13.3 -0.1
comp=Z,36nm,0.9s,mb5.3
BRG epP pP 08 01 27.9 -0.2
BRG Berggiesshubel 81.11 329 iP P 08 01 13.3 -0.1
comp=Z,36nm,0.9s,mb5.3
BRG Berggiesshubel 81.11 329 iP P 08 01 13.3 -0.1
BRG pmax pmax
comp=Z,21nm,0.9s,mb5.1
PVCC Panska Ves 81.11 329 eP P 08 01 13.6 +0.2
O21A Pagoda 81.12 46 ⇓P P 08 01 13.9 +0.3
baz=81
VRAC Vranov 81.16 327 ⇓P P 08 01 14.5 +0.9
VRAC Vranov 81.16 327⇓iP P 08 01 14.5 +0.9
CLL Collm 81.16 330 eP P 08 01 13.3 -0.3
comp=Z,84nm,0.9s,mb5.7
CLL Collm 81.16 330⇑iP P 08 01 13.4 -0.2
CLL pmax pmax
comp=Z,84nm,0.9s,mb5.7
CLL Collm 81.16 330⇑iP P 08 01 13.4 -0.2
comp=Z,84nm,0.9s,mb5.7
CLL Collm 81.16 330⇑iP P 08 01 13.4 -0.2
comp=Z,84nm,0.9s,mb5.7
CLL iP pP 08 01 28.3 0.0
CLL iS P sP 08 01 32.6 -1.4
CLL esPcP 08 01 38.0
CLL ePP PP 08 04 12.0 -6.6
comp=Z,8.0nm,1.0s
T17A Navajo Res., N 81.19 50 ⇑P P 08 01 13.5 -0.5
baz=81
S18A Hurst Farm, Bl 81.25 49 ⇑P P 08 01 14.6 +0.3
baz=81,SNR=17
Y13A Salome 81.26 54 ⇓P P 08 01 14.5 0.0
baz=81,SNR=8.1
MVH1 Achvaich 81.28 342 P P 08 01 14.0 -0.1
MVH1 Achvaich 81.28 342⇑eP P 08 01 14.0 -0.1
R19A Curley Farm, L 81.31 48 ⇑P P 08 01 14.4 -0.2
baz=81,SNR=19
N22A Wattenberg Ran 81.31 45 ⇑P P 08 01 14.6 -0.1
baz=81,SNR=13
MCD Coleburn Disti 81.35 341 P P 08 01 14.0 -0.5
MCD Coleburn Disti 81.35 341⇑eP P 08 01 14.0 -0.5
SMOL Smolenice 81.37 326 eP P 08 01 15.6 +0.8
SMOL Smolenice 81.37 326 eP P 08 01 15.6 +0.8
BUD Budapest 81.39 324⇑eP P 08 01 11.6 -3.3
PV10 Paradox Valley 81.39 48 eP P 08 01 15.9 +0.8
comp=Z,853nm,0.9s,mb6.7
PV10 epP pP 08 01 32.1 +2.3
W15A Williams 81.42 52 ⇑P P 08 01 14.2 -1.1
baz=81
Q20A Ridgley Place, 81.45 47 ⇑P P 08 01 15.0 -0.4
baz=81,SNR=20
PV04 Paradox Valley 81.45 48 eP P 08 01 16.3 +0.9
BZS Buzias 81.46 322 ⇓P P 08 01 15.5 +0.2
BZS Buzias 81.46 322⇓iP P 08 01 15.5 +0.2
X14A Yava 81.47 53 ⇓P P 08 01 15.4 -0.2
baz=81,SNR=12
MME1 Meikle Cairn 81.51 341 P P 08 01 14.8 -0.5
MME1 Meikle Cairn 81.51 341⇑eP P 08 01 14.8 -0.5
AGMN Agassiz Nation 81.52 34 eP P 08 01 14.8 -0.8
comp=Z,24nm,1.1s,mb5.0
PRU Pruhonice 81.53 328 eP P 08 01 16.2 +0.6
PRU epP pP 08 01 27.6 -2.7
U17A Shonto 81.53 50 ⇑P P 08 01 16.0 +0.1
baz=81,SNR=8.8
P21A Newcastle 81.58 47 ⇑P P 08 01 15.8 -0.2
baz=81,SNR=16
TREC Trest 81.65 327 eP P 08 01 16.5 +0.3
TREC Trest 81.65 327 eP P 08 01 16.5 +0.3
T18A Mexican Hat 81.68 50 ⇓P P 08 01 16.5 -0.1
baz=81,SNR=14
O22A Kremmling 81.68 46 ⇓P P 08 01 16.6 0.0
baz=81,SNR=15
Y14A Wickenburg 81.72 54 ⇑P P 08 01 16.9 -0.1
baz=81,SNR=6.9
S19A Harvey Farm, M 81.73 49 ⇑P P 08 01 16.9 0.0
baz=81,SNR=20
ZST Bratislava 81.75 326 eP P 08 01 17.5 +0.7
ZST pmax pmax
comp=Z,16nm,0.9s,mb5.0
ZST Bratislava 81.75 326 eP P 08 01 17.5 +0.7
comp=Z,16nm,0.9s,mb4.9
ZST Bratislava 81.75 326 eP P 08 01 17.5 +0.7
MDO Dochfour 81.76 342 P P 08 01 16.3 -0.4
MDO Dochfour 81.76 342⇑eP P 08 01 16.3 -0.4
Z13A Yuma Proving G 81.76 55 ⇓P P 08 01 16.9 -0.2
baz=82,SNR=9.9
MMAI Mount Meron Ar 81.77 305 P P 08 01 18.1 +0.9
comp=Z,25nm,0.8s,mb5.2,baz=42,slow=7.9,SNR=36
MMAI LR LR 08 40 54.5
comp=Z,187nm,21.1s,MS4.4,baz=55,slow=38
WUAZ Wupatki 81.77 52 ⇑P P 08 01 17.3 +0.2
baz=82,SNR=8.2
WUAZ Wupatki 81.77 52 eP P 08 01 17.6 +0.4
comp=Z,12nm,0.9s,mb4.8
WUAZ epP pP 08 01 33.1 +1.2
PV01 Paradox Valley 81.82 48 eP P 08 01 17.8 +0.4
comp=Z,1μm,1.0s
PV01 epP pP 08 01 33.7 +1.6
X15A Humboldt 81.88 53 ⇓P P 08 01 17.8 0.0
baz=82,SNR=12
CSS Prodhromos 81.89 308 eP P 08 01 16.3 -1.5
comp=Z,23nm,0.8s,mb5.2
R20A Redvale 81.90 48 ⇓P P 08 01 17.5 -0.3
baz=82,SNR=25
P22A Eagle 81.94 46 ⇓P P 08 01 18.4 +0.4
baz=82,SNR=26
KAC Achnashellach 81.94 342 P P 08 01 17.8 +0.2
KAC Achnashellach 81.94 342⇑eP P 08 01 17.8 +0.2
W16A Flagstaff 81.94 52 ⇓P P 08 01 18.5 +0.4
baz=82
113A Mohawk Valley, 81.95 55 ⇓P P 08 01 18.0 -0.2
baz=82
Q21A Lamborn Mesa, 81.96 47 ⇓P P 08 01 18.0 -0.1
baz=82,SNR=8.2
TANN Tannenbergstha 82.07 330 eP P 08 01 17.5 -0.9
comp=Z,14nm,0.9s,mb4.9
V17A Tonalea, Kykot 82.07 51 ⇑P P 08 01 19.1 +0.4
baz=82,SNR=27
SMCO Snowmass 82.08 47 eP P 08 01 19.6 +0.9
comp=Z,11nm,1.0s,mb4.8
U18A Rough Rock, Ch 82.14 50 ⇑P P 08 01 20.1 +1.0
baz=82,SNR=9.6
S20A Disappointment 82.15 48 ⇑P P 08 01 19.2 +0.1
baz=82,SNR=9.2
Y15A Casa Rosa Ranc 82.15 53 ⇓P P 08 01 19.6 +0.5
baz=82,SNR=6.2
KPL Plockton 82.17 342 P P 08 01 18.7 -0.1
KPL AMb AMB 08 01 19.7
comp=Z,64nm,0.9s,mb5.5
KPL Plockton 82.17 342⇑eP P 08 01 18.7 -0.1
KPL AMb AMB 08 01 19.7
comp=Z,64nm,0.9s,mb5.5
NKC Novy Kostel 82.22 329 eP P 08 01 19.2 0.0
KSB Sheil Bridge 82.23 342 P P 08 01 18.8 -0.4
KSB Sheil Bridge 82.23 342⇑eP P 08 01 18.8 -0.4
MOX Moxa 82.23 330 eP P 08 01 19.1 -0.2
comp=Z,39nm,1.1s,mb5.2
MOX Moxa 82.23 330 eP P 08 01 19.2 -0.1
comp=Z,30nm,1.0s,mb5.2
MOX Moxa 82.23 330 eP P 08 01 19.1 -0.2
MOX pmax pmax
comp=Z,39nm,1.1s,mb5.2
R21A Cimarron 82.28 48 ⇓P P 08 01 20.7 +1.0
baz=82,SNR=13
Q22A Crested Butte, 82.33 47 ⇓P P 08 01 20.5 +0.5
baz=82,SNR=23
ALN Alexandroupoli 82.38 316 P P 08 01 19.8 -0.4
ALN Alexandroupoli 82.38 316 P P 08 01 19.8 -0.4
IBBN Ibbenburen 82.39 333 eP P 08 01 19.7 -0.4
comp=Z,65nm,0.8s,mb5.6
T19A Beclabito 82.39 49 ⇓P P 08 01 20.3 -0.1
baz=82,SNR=14
X16A Lo Mia Camp, P 82.43 53 ⇑P P 08 01 19.9 -0.7
baz=82,SNR=7.4
ISCO Idaho Springs 82.46 45 eP P 08 01 21.6 +0.9
ISCO pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
ISCO Idaho Springs 82.46 45 eP P 08 01 21.6 +0.9
comp=Z,5.8nm,0.8s,mb4.6
MVCO Mesa Verde 82.47 49 ⇑P P 08 01 19.8 -1.0
baz=82,SNR=11
MVCO Mesa Verde 82.47 49 eP P 08 01 21.3 +0.6
comp=Z,8.3nm,0.8s,mb4.7
PKSM Moragy 82.49 324 ⇑P P 08 01 20.7 0.0
PKSM Moragy 82.49 324⇑iP P 08 01 20.7 0.0
CONA Conrad Observa 82.51 326⇓iPcP PcP 08 01 21.4 -4.4
comp=Z,38nm,1.2s,SNR=13
114A Black Gap (USA 82.54 55 ⇑P P 08 01 21.7 +0.4
baz=82
V18A Ganado 82.55 51 ⇓P P 08 01 21.1 -0.1
baz=82,SNR=11
RZN Rozhen 82.57 317 eP P 08 01 21.7 +0.5
KAR1 Arisaig 82.59 342 P P 08 01 21.2 +0.2
KAR1 Arisaig 82.59 342⇑eP P 08 01 21.2 +0.2
KHC Kasperske Hory 82.59 328 eP P 08 01 21.3 +0.1
KHC e pP 08 01 32.6 -3.3
KHC Kasperske Hory 82.59 328 eP P 08 01 21.1 0.0
comp=Z,48nm,0.9s,mb5.5
KHC Kasperske Hory 82.59 328 eP P 08 01 21.3 +0.1
KHC epP pP 08 01 32.6 -3.3
KHC ex x 08 02 01.5
EBH Black Hill 82.59 341 P P 08 01 20.8 -0.3
EBH Black Hill 82.59 341 eP P 08 01 20.8 -0.3
S21A Coal Bank Pass 82.60 48 ⇓P P 08 01 21.8 +0.4
baz=82,SNR=13
P23A Jefferson 82.61 46 ⇑P P 08 01 21.8 +0.3
baz=82,SNR=6.8
U19A Dine' College, 82.63 50 ⇑P P 08 01 22.2 +0.6
baz=82,SNR=19
ESY Stoneypath 82.64 340 P P 08 01 21.1 -0.3
ESY Stoneypath 82.64 340⇑eP P 08 01 21.1 -0.3
Z15A Gila River Ind 82.68 54 ⇓P P 08 01 21.9 0.0
baz=82
UBBA Unterbreizbach 82.73 331 eP P 08 01 21.2 -0.7
comp=Z,11nm,0.8s,mb4.9
Y16A Circle Bar Ran 82.75 53 ⇓P P 08 01 22.0 -0.2
baz=82
VTS Vitosha 82.76 319 ⇑P P 08 01 22.5 +0.3
VTS Vitosha 82.76 319 P P 08 01 22.4 +0.2
VTS Vitosha 82.76 319 P P 08 01 22.4 +0.2
VTS Vitosha 82.76 319 eP P 08 01 22.6 +0.4
VTS Vitosha 82.76 319⇑iP P 08 01 22.5 +0.3
R22A Saguache, Gunn 82.84 47 ⇓P P 08 01 24.0 +1.3
baz=82,SNR=17
EAB Aberfoyle 82.86 341 P P 08 01 22.5 0.0
EAB Aberfoyle 82.86 341⇑eP P 08 01 22.5 0.0
WET Wettzell 82.88 329 eP P 08 01 22.9 +0.2
comp=Z,31nm,1.0s,mb5.3
X17A Forest Lakes 82.88 52 ⇓P P 08 01 24.2 +1.2
baz=83,SNR=5.7
EBL Broad Law 82.89 340 P P 08 01 22.0 -0.6
EBL Broad Law 82.89 340⇑eP P 08 01 22.0 -0.6
EAU Auchinoon 82.93 341 P P 08 01 22.6 -0.2
EAU Auchinoon 82.93 341⇑eP P 08 01 22.6 -0.2
U20A Newcomb 83.00 50 ⇓P P 08 01 24.3 +0.7
baz=83
115A Sonoran Desert 83.00 54 ⇑P P 08 01 24.5 +0.8
baz=83
P24A Kohler Place, 83.05 45 ⇓P P 08 01 24.5 +0.7
baz=83
214A Organ Pipe Nat 83.09 55 ⇓P P 08 01 22.6 -1.5
baz=83
S22A 4UR Ranch, Cre 83.12 48 ⇑P P 08 01 23.8 -0.3
baz=83,SNR=14

Z16A Peralta Trail, 83.12 53 ⇑P P 08 01 22.2 -2.1
baz=83
GRF Grafenberg Arr 83.14 330 *eP* **P 08 01 24.4 +0.4**
comp=Z,110nm,0.9s,mb5.9
GRF *es*P sP 08 01 42.9 -1.5
GRF Grafenberg Arr 83.14 330 *eP* **P 08 01 24.4 +0.4**
GRF *e**SP sP 08 01 42.9 -1.5
GRF pmax pmax
comp=Z,110nm,0.9s,mb5.9
KAVA Kavala 83.16 317 P P 08 01 24.2 -0.1
ARSA Arzberg 83.17 326⇑*iP* **P 08 01 24.3 +0.2**
comp=Z,18nm,1.0s,mb5.1,SNR=10
MMB Musomiste 83.18 318 *eP* **P 08 01 24.5 +0.1**
PGBU Glenifferbraes 83.24 341 P P 08 01 23.7 -0.7
PGBU AMb AMB 08 01 26.5
comp=Z,81nm,0.9s,mb5.7
PGBU Glenifferbraes 83.24 341⇑*eP* **P 08 01 23.7 -0.7**
PGBU AMb AMB 08 01 26.5
comp=Z,81nm,0.9s,mb5.7
Y17A Roosevelt 83.27 53 ⇓P P 08 01 24.1 -0.8
baz=83,SNR=6.0
BUG Bochum--Univer 83.27 333 *eP* **P 08 01 24.0 -0.6**
comp=Z,28nm,0.8s,mb5.3
MOA Molln 83.27 327⇓*iP* **P 08 01 24.9 +0.2**
comp=Z,22nm,0.9s,mb5.2,SNR=8.7
Q24A Divide 83.29 46 ⇑P P 08 01 25.2 +0.2
baz=83,SNR=7.4
X18A Snowflake 83.30 52 ⇑P P 08 01 25.2 +0.1
baz=83
EKA Eskdalemuir Ar 83.31 340 P P 08 01 24.6 -0.2
baz=26,slow=4.8
KKB Krupnik 83.33 318 *eP* **P 08 01 25.3 +0.1**
ESK Eskdalemuir 83.33 340 P P 08 01 24.4 -0.5
ESK AMb AMB 08 01 25.4
comp=Z,34nm,2.5s,mb4.9
ESK Eskdalemuir 83.33 340 *eP* **P 08 01 24.4 -0.5**
ESK AMb AMB 08 01 25.4
comp=Z,34nm,2.5s,mb4.9
ESK Eskdalemuir 83.33 340 *iP* **P 08 01 25.6 +0.7**
PRK Paraskevi 83.37 315 P P 08 01 25.1 -0.3
PRK Paraskevi 83.37 315 P P 08 01 25.1 -0.3
V20A Brimhall 83.41 50 ⇑P P 08 01 25.6 -0.1
baz=83,SNR=8.9
ECK Cauldkaine Hil 83.43 340 P P 08 01 25.2 -0.2
ECK Cauldkaine Hil 83.43 340⇑*eP* **P 08 01 25.2 -0.2**
116A Eloy 83.43 54 ⇑P P 08 01 25.7 -0.1
baz=83
XAL Allendale 83.46 340 P P 08 01 25.2 -0.3
XAL Allendale 83.46 340 *eP* **P 08 01 25.2 -0.3**
P25A Willow Gulch B 83.48 45 ⇑P P 08 01 25.6 -0.4
baz=83
U21A Nageezi 83.49 49 ⇓P P 08 01 26.0 -0.1
baz=83
T22A Edith 83.56 48 ⇓P P 08 01 27.3 +0.9
baz=83,SNR=18
EYMN Ely 83.71 32 *eP* **P 08 01 26.0 -1.0**
comp=Z,37nm,1.1s,mb5.4
Y18A Canyon Day Jun 83.73 52 ⇑P P 08 01 28.1 +0.8
baz=83,SNR=13
Z17A San Carlos Hig 83.76 53 ⇓P P 08 01 27.6 +0.1
baz=84,SNR=5.5
GROS Grobnik 83.77 325 *iP* **P 08 01 27.0 -0.3**
X19A St. Johns 83.78 51 ⇓P P 08 01 28.0 +0.4
baz=84,SNR=16
R24A Sanders Place, 83.80 46 ⇓P P 08 01 27.8 +0.1
baz=84
TNS Taunus Mts 83.81 331 *eP* **P 08 01 27.3 -0.1**
comp=Z,30nm,0.9s,mb5.4
SOKA Soboth 83.82 326⇑*iP* **P 08 01 27.5 0.0**
comp=Z,57nm,1.0s,mb5.7
W20A Ramah 83.82 50 ⇑P P 08 01 27.5 -0.3
baz=84,SNR=9.1
Q25A Bedland, Calha 83.84 45 ⇑P P 08 01 28.1 +0.3
baz=84,SNR=10
SDCO Great Sand Dun 83.90 47 *eP* **P 08 01 28.5 +0.4**
comp=Z,8.3nm,1.1s,mb4.8
V21A Milan 83.91 49 ⇑P P 08 01 28.6 +0.3
baz=84,SNR=23
216A Three Points, 83.95 54 ⇑P P 08 01 27.3 -1.2
baz=84
VAY Valandovo 83.99 318 P P 08 01 27.8 -0.7
VAY Valandovo 83.99 318 P P 08 01 27.8 -0.7
RJOB Jochberg 84.00 328 *eP* **P 08 01 28.7 +0.3**
comp=Z,41nm,0.9s,mb5.6
U22A Llaves 84.01 49 ⇑P P 08 01 28.6 -0.1
baz=84,SNR=10
117A Oracle 84.06 54 ⇓P P 08 01 28.7 -0.4
baz=84
T23A Casias Ranch, 84.06 48 ⇑P P 08 01 29.8 +0.8
baz=84,SNR=11
CHOS Chios island 84.07 314 P P 08 01 28.8 -0.2
Y19A Nutrioso 84.11 52 ⇓P P 08 01 29.3 0.0
baz=84,SNR=6.1
SKO Skopje 84.13 319 P P 08 01 30.4 +1.2
SKO Skopje 84.13 319 P P 08 01 30.4 +1.2
GAL1 Galloway 84.14 341 P P 08 01 28.7 -0.3
GAL1 AMb AMB 08 01 45.3
comp=Z,76nm,2.6s,mb5.4
GAL1 Galloway 84.14 341⇑*eP* **P 08 01 28.7 -0.3**
GAL1 AMb AMB 08 01 45.3
comp=Z,76nm,2.6s,mb5.4
S24A Houchin Ranch, 84.14 47 ⇓P P 08 01 29.9 +0.6
baz=84,SNR=15
TOD Tromm 84.17 331 *eP* **P 08 01 29.2 -0.1**
PLG Polygyros 84.18 317 P P 08 01 29.2 -0.3
PLG Polygyros 84.18 317 P P 08 01 29.2 -0.3
TUC Tucson 84.19 54 *eP* **P 08 01 29.9 +0.2**
TUC pmax pmax
comp=Z,16nm,1.4s,mb5.0
TUC Tucson 84.19 54 *eP* **P 08 01 29.9 +0.2**
comp=Z,16nm,1.4s,mb5.0
X20A Quemado 84.21 51 ⇑P P 08 01 29.8 +0.1
baz=84,SNR=13
PLE Pljevlja 84.21 321⇑*iP* **P 08 01 29.9 +0.3**
PLE Pljevlja 84.21 321⇑*iP* **P 08 01 29.9 +0.3**
THE Thessaloniki 84.26 317 P P 08 01 29.2 -0.7
THE Thessaloniki 84.26 317 P P 08 01 29.2 -0.7
KBA Koelnbreinsper 84.27 327⇑*iP* **P 08 01 29.5 -0.3**
comp=Z,22nm,0.9s,mb5.3,SNR=11
V22A San Miguel Ran 84.28 49 ⇓P P 08 01 30.2 0.0
baz=84,SNR=12
IVA Berane 84.28 321⇑*iP* **P 08 01 30.2 +0.2**
IVA Berane 84.28 321⇑*iP* **P 08 01 30.2 +0.2**
PDKS Podkum 84.30 325 *iP* **P 08 01 29.5 -0.6**
FUR Furstenfeldbru 84.31 329 *eP* **P 08 01 30.0 0.0**
comp=Z,97nm,0.8s,mb6.0
PAIG Paliouri 84.36 317 P P 08 01 29.8 -0.6
PAIG Paliouri 84.36 317 P P 08 01 29.8 -0.6
BEBN Eben Emael 84.38 333 P P 08 01 29.9 -0.4
comp=Z,11nm,0.9s,mb5.0
MEM Membach 84.41 333 P P 08 01 30.4 -0.1
comp=Z,21nm,1.2s,mb5.2
ABH Alteburg 84.43 332 *eP* **P 08 01 30.2 -0.4**
U23A El Rito 84.44 48 ⇑P P 08 01 31.6 +0.7
baz=84,SNR=59
PVY Plav 84.45 320⇑*iP* **P 08 01 30.1 -0.7**
PVY Plav 84.45 320⇑*iP* **P 08 01 30.1 -0.7**
MYKA Terra Mystica 84.48 327⇑*iP* **P 08 01 30.1 -0.8**
comp=Z,22nm,0.9s,mb5.3
PMOR Pomariorio Ree 84.49 113 *eT* 09 34 12.1
comp=Z,36nm,0.2s
118A Homack Ranch, 84.51 53 ⇑P P 08 01 31.6 +0.3
baz=84,SNR=11
ECSD EROS Data Cent 84.51 38 *eP* **P 08 01 30.3 -0.8**
comp=Z,23nm,1.2s,mb5.2
217A Green Valley 84.52 54 ⇑P P 08 01 31.6 +0.2
baz=84
LJU Ljubljana 84.53 326 *iP* **P 08 01 30.6 -0.6**
UPM Unac-Piva 84.55 321 *eP* **P 08 01 30.4 -0.9**
UPM Unac-Piva 84.55 321 *eP* **P 08 01 30.5 -0.8**
S25A Robets Cordova 84.58 46 ⇑P P 08 01 31.3 -0.3
baz=84
BOJS Bojanci 84.60 325 *iP* **P 08 01 31.1 -0.4**
KBI1 Birley Grange 84.67 338 P P 08 01 31.3 -0.5
KBI1 Birley Grange 84.67 338⇑*eP* **P 08 01 31.3 -0.5**
KTD Kalmit 84.68 331 *eP* **P 08 01 31.6 -0.2**
STU Stuttgart 84.68 330 *eP* **P 08 01 31.7 -0.2**
comp=Z,82nm,0.9s,mb5.9
STU Stuttgart 84.68 330 *eP* **P 08 01 32.0 +0.1**
STU pmax pmax
comp=Z,74nm,0.9s,mb5.8
STU Stuttgart 84.68 330 *eP* **P 08 01 32.0 +0.2**
comp=Z,74nm,0.9s,mb5.8
Y20A Horse Springs, 84.70 51 ⇑P P 08 01 32.8 +0.5
baz=84,SNR=19
X21A Alamocita Cree 84.71 51 ⇓P P 08 01 32.8 +0.5
baz=84,SNR=17
PTCC Patocco-Chiusa 84.78 327 P P 08 01 31.0 -1.4
comp=Z,9.9nm,0.7s,mb5.0
ŃKY Niksic 84.78 321⇓*iP* **P 08 01 31.9 -0.6**
NKY Niksic 84.78 321⇓*iP* **P 08 01 32.0 -0.5**
BCLA Clavier 84.82 333 P P 08 01 32.3 -0.2
comp=Z,17nm,1.7s,mb4.9
V23A Ortiz Mt. (NFS 84.83 49 ⇓P P 08 01 33.5 +0.6
baz=84,SNR=9.9
119A Ashpeak Ranch, 84.85 53 ⇑P P 08 01 33.6 +0.5
baz=84
218A Dragoon 84.89 54 ⇓P P 08 01 33.0 -0.3
baz=85,SNR=5.8
PPT Papeete 84.92 116 *e*LR LR 08 28 23.4
comp=Z,1µm,30.5s
PPT *e*T 09 34 45.5
comp=Z,9.2nm,0.3s
PPT Papeete 84.92 116 LR LR 08 34 28.1
comp=Z,305nm,18.3s,MS4.7,baz=242,slow=32
TTG Podgorica 84.93 321⇑*iP* **P 08 01 33.0 -0.3**
TTG Podgorica 84.93 321⇑*iP* **P 08 01 33.0 -0.2**
U24A Moreno Valley 84.93 48 ⇓P P 08 01 33.2 -0.2
baz=85
BRY Bratogost 84.95 321⇑*iP* **P 08 01 31.8 -1.6**
T25A Trinidad 84.95 47 ⇓P P 08 01 33.1 -0.4
baz=85,SNR=13
MOTA Moosalm 85.02 328⇑*iP*cP **P 08 01 33.4 -0.2**
comp=Z,13nm,0.8s,mb5.1
CWF Charnwood Fore 85.05 338 P P 08 01 33.1 -0.6
CWF AMb AMB 08 01 38.2
comp=Z,48nm,2.4s,mb5.2
CWF Charnwood Fore 85.05 338⇑*eP* **P 08 01 33.1 -0.6**
CWF AMb AMB 08 01 38.2
comp=Z,48nm,2.4s,mb5.2
RETA Reutte 85.06 329⇑*iP*cP PcP 08 01 33.7 -3.3
comp=Z,46nm,0.9s
LANF Langenberg 85.06 331 *eP* **P 08 01 33.7 -0.1**
Y21A Point of Rocks 85.07 51 ⇓P P 08 01 33.2 -0.9
baz=85,SNR=8.1
TIAR Tiarei 85.08 116 *eT* 09 34 57.3
comp=Z,16nm,0.3s
Z20A Nine Sixteen R 85.08 52 ⇑P P 08 01 33.7 -0.5
baz=85,SNR=23
OHR Ohrid 85.08 319 P P 08 01 32.9 -1.1
OHR Ohrid 85.08 319 P P 08 01 32.9 -1.1
SNF Seneffe 85.11 334 P P 08 01 33.6 -0.4
comp=Z,26nm,1.4s,mb5.2
WLF Walferdange 85.13 332 P P 08 01 33.4 -0.7
comp=Z,21nm,1.7s,mb5.0
WLF Walferdange 85.13 332 *eP* **P 08 01 33.9 -0.2**
comp=Z,28nm,1.1s,mb5.3
LAZ Ladron 85.14 50 *eP* **P 08 01 35.1 +0.6**
comp=Z,2.5nm,1.0s,mb4.3
LAZ *ep*P pP 08 01 49.2 -0.1
X22A Bernardo 85.15 50 ⇓P P 08 01 34.5 0.0
baz=85
ANMO Albuquerque 85.19 49⇑*iP* **P 08 01 35.4 +0.7**
BUM Brajici-Budva 85.21 321⇑*iP* **P 08 01 34.5 -0.2**
BUM Brajici-Budva 85.21 321⇑*iP* **P 08 01 34.6 -0.1**
W23A Werner Place, 85.24 49 ⇓P P 08 01 34.8 -0.2
baz=85,SNR=8.3
GIVF Givet 85.26 333 *eP* **P 08 01 33.9 -0.8**
comp=Z,24nm,0.7s,mb5.1
GIVF Givet 85.26 333 *eP* **P 08 01 33.9 -0.8**
GIVF pmax pmax
comp=Z,12nm,0.7s,mb5.1
GIVF Givet 85.26 333 *eP* **P 08 01 33.9 -0.8**
comp=Z,12nm,0.7s,mb5.1
318A Bisbee 85.27 54 ⇓P P 08 01 34.9 -0.3
baz=85,SNR=14
APE Apeiranthos 85.27 313 ⇑P P 08 01 34.1 -1.0
APE Apeiranthos 85.27 313⇑*iP* **P 08 01 34.1 -1.0**
ULC Ulcinj 85.27 320⇓*iP* **P 08 01 34.9 -0.1**
ULC Ulcinj 85.27 320⇓*iP* **P 08 01 35.0 0.0**
HCY Herceg Novi 85.30 321⇑*iP* **P 08 01 34.2 -0.9**
HCY Herceg Novi 85.30 321⇑*iP* **P 08 01 34.2 -0.9**
DOU Dourbes 85.35 333 P P 08 01 34.8 -0.3
WPM1 Penmaenmawr 85.35 340 P P 08 01 35.1 0.0
WPM1 Penmaenmawr 85.35 340⇑*eP* **P 08 01 35.1 0.0**
BFO Black Forest 85.38 330 *eP* **P 08 01 35.1 -0.3**
comp=Z,66nm,0.9s,mb5.8
BFO Black Forest 85.38 330 *eP* **P 08 01 34.7 -0.7**
BFO pmax pmax
comp=Z,62nm,0.9s,mb5.7
BFO Black Forest 85.38 330 *eP* **P 08 01 34.7 -0.7**
comp=Z,62nm,0.9s,mb5.7
SPAK Spaichingen-Ko 85.38 330 *eP* **P 08 01 35.2 -0.2**
219A White Tail Can 85.38 53 ⇓P P 08 01 35.3 -0.4
baz=85,SNR=13
V24A Rampart Ranch, 85.39 48 ⇓P P 08 01 36.0 +0.3
baz=85,SNR=22
TIR Tirane 85.40 320 P P 08 01 35.5 -0.1
TIR Tirane 85.40 320 P P 08 01 35.5 -0.1
120A U Bar Ranch, L 85.42 52 ⇓P P 08 01 35.8 -0.1
baz=85,SNR=5.9
FETA Feichten 85.44 328⇑*iP*cP **P 08 01 35.4 -0.3**
comp=Z,22nm,0.9s,mb5.3,SNR=16
NEST Nestorio 85.44 318 P P 08 01 35.2 -0.7
U25A Circle Dot Ran 85.45 47 ⇓P P 08 01 36.0 0.0
baz=85,SNR=13
BAIF Baives 85.52 334 *eP* **P 08 01 35.3 -0.7**
comp=Z,25nm,0.8s,mb5.2
BAIF Baives 85.52 334 *eP* **P 08 01 35.3 -0.7**
BAIF pmax pmax
comp=Z,13nm,0.8s,mb5.2
BAIF Baives 85.52 334 *eP* **P 08 01 35.3 -0.7**
comp=Z,12nm,0.8s,mb5.2
Z21A St. Cloud Mine 85.53 51 ⇑P P 08 01 35.1 -1.4
baz=85
Y22A Socorro 85.56 51 ⇓P P 08 01 36.8 +0.2
baz=85,SNR=8.4
DAVA Damuels 85.58 329⇓*iP*cP **P 08 01 36.3 -0.1**
comp=Z,53nm,0.9s,mb5.8,SNR=18
ATAL Atalanti 85.58 316 P P 08 01 35.5 -1.1
BNM Barren Site 85.62 50 *eP* **P 08 01 37.3 +0.4**
comp=Z,3.5nm,0.6s,mb4.8
LKR Lokris 85.62 316 P P 08 01 35.6 -1.2
LKR Lokris 85.62 316 P P 08 01 35.6 -1.2
W24A Lazy 6 Ranch, 85.66 49 ⇑P P 08 01 37.5 +0.4
baz=85,SNR=20
V25A Rancho No Teng 85.71 48 ⇑P P 08 01 37.3 0.0
baz=85,SNR=21
CDF Champ du Feu 85.72 331 *eP* **P 08 01 36.6 -0.5**
comp=Z,90nm,0.9s,mb5.7
CDF Champ du Feu 85.72 331 *eP* **P 08 01 36.6 -0.5**
CDF pmax pmax
comp=Z,45nm,0.9s,mb5.7
CDF Champ du Feu 85.72 331 *eP* **P 08 01 36.6 -0.5**
comp=Z,45nm,0.9s,mb5.7
YRE Yr Eifl 85.74 340 P P 08 01 36.8 -0.3
YRE Yr Eifl 85.74 340 *eP* **P 08 01 36.8 -0.3**
319A Douglas 85.77 54 ⇓P P 08 01 36.6 -1.1
baz=86
SCHQ Schefferville 85.82 16 P P 08 01 37.6 +0.1
comp=Z,23nm,0.8s,mb5.5,baz=0.9,slow=5.2,SNR=26
SCHQ Schefferville 85.82 16 *eP* **P 08 01 37.6 +0.1**
comp=Z,24nm,0.8s,mb5.5
U26A Atchley Ranch, 85.85 47 ⇑P P 08 01 37.4 -0.5
baz=86,SNR=11
FELD Feldberg im Sc 85.87 330 *eP* **P 08 01 37.5 -0.3**
220A Playas Peak, P 85.91 53 ⇓P P 08 01 38.3 -0.1
baz=86,SNR=5.6
ECH Echery 85.93 331 *eP* **P 08 01 37.3 -0.8**
ECH Echery 85.93 331 *eP* **P 08 01 37.1 -1.0**
ECH pmax pmax
comp=Z,38nm,0.9s,mb5.6
ECH Echery 85.93 331 *eP* **P 08 01 37.1 -1.0**
comp=Z,38nm,0.9s,mb5.6
121A Cookes Peak, D 85.97 52 ⇓P P 08 01 38.2 -0.5
baz=86,SNR=7.0
DAVOX Davos/Dischmat 85.98 329 P P 08 01 38.2 -0.2
comp=Z,15nm,0.9s,mb5.2,baz=12,slow=3.7,SNR=16
DAVOX Davos/Dischmat 85.98 329 P P 08 01 38.2 -0.2
Z22A Elephant Butte 86.01 51 ⇑P P 08 01 38.7 -0.1
baz=86,SNR=9.0
X24A Lazy VL Ranch, 86.08 49 ⇑P P 08 01 38.8 -0.3
baz=86,SNR=7.1
Y23A Lovelace Mesa, 86.12 50 ⇓P P 08 01 37.9 -1.5
baz=86,SNR=13
MCH1 Michaelchurch 86.20 339 P P 08 01 38.9 -0.5
MCH1 AMb AMB 08 01 53.1
comp=Z,101nm,1.9s,mb5.7
MCH1 Michaelchurch 86.20 339⇑*eP* **P 08 01 38.9 -0.5**
MCH1 AMb AMB 08 01 53.1
comp=Z,101nm,1.9s,mb5.7
MEH Mehetia 86.21 115 *eT* 09 36 21.9
comp=Z,142nm,0.2s
HTR Trewern Hill 86.21 339 P P 08 01 39.4 0.0
HTR Trewern Hill 86.21 339⇑*eP* **P 08 01 39.4 0.0**
W25A X Bar L Ranch, 86.22 48 ⇓P P 08 01 39.7 -0.2
baz=86,SNR=18
V26A Tequesquite Ra 86.23 47 ⇑P P 08 01 38.9 -0.9
baz=86,SNR=10.0
MOF Molkenrain 86.24 331 *eP* **P 08 01 39.2 -0.4**
WOL Wolverton 86.26 337 P P 08 01 39.1 -0.6
WOL AMb AMB 08 01 41.7
comp=Z,255nm,1.7s,mb6.2
WOL Wolverton 86.26 337 *eP* **P 08 01 39.1 -0.6**
WOL AMb AMB 08 01 41.7
comp=Z,255nm,1.7s,mb6.2
SWN1 Swindon 86.27 338 P P 08 01 39.6 -0.1
SWN1 AMb AMB 08 01 43.0
comp=Z,124nm,2.4s,mb5.7
SWN1 Swindon 86.27 338 *eP* **P 08 01 39.6 -0.1**
SWN1 AMb AMB 08 01 43.0
comp=Z,124nm,2.4s,mb5.7
320A Kipp Ranch, An 86.28 53 ⇑P P 08 01 39.1 -1.1
baz=86
HINF Hinteralfeld 86.37 331 *eP* **P 08 01 39.4 -0.9**
comp=Z,28nm,0.9s,mb5.2
HINF Hinteralfeld 86.37 331 *eP* **P 08 01 39.4 -0.9**
HINF pmax pmax
comp=Z,14nm,0.9s,mb5.2
HINF Hinteralfeld 86.37 331 *eP* **P 08 01 39.4 -0.9**
comp=Z,14nm,0.9s,mb5.2
THEF They Montfort 86.37 332 *eP* **P 08 01 39.8 -0.5**
HAU Haudompre 86.42 331 *eP* **P 08 01 39.6 -0.9**
comp=Z,43nm,0.8s,mb5.4
HAU Haudompre 86.42 331 *eP* **P 08 01 39.6 -0.9**
HAU pmax pmax
comp=Z,22nm,0.8s,mb5.4
HAU Haudompre 86.42 331 *eP* **P 08 01 39.6 -0.9**
comp=Z,22nm,0.8s,mb5.4
TUE Stuetta 86.45 329 *eP* **P 08 01 40.8 0.0**
comp=Z,10nm,0.8s,mb5.1
HGH Gray Hill 86.46 338 P P 08 01 40.3 -0.4
HGH Gray Hill 86.46 338⇑*eP* **P 08 01 40.3 -0.4**
Z23A Rita Site, Whi 86.46 51 ⇑P P 08 01 40.0 -1.0
baz=86
MEZF Maizieres J'vi 86.50 332 *eP* **P 08 01 40.5 -0.4**
comp=Z,72nm,1.0s,mb5.5
MEZF Maizieres J'vi 86.50 332 *eP* **P 08 01 40.5 -0.4**
comp=Z,72nm,1.0s,mb5.9
Y24A Capitan 86.51 50 ⇑P P 08 01 39.3 -2.0
baz=86
TAOE Nuku Hiva Isla 86.56 104 *e*LR LR 08 29 07.9
comp=Z,2µm,32.0s
LAST Lasithi 86.61 312 P P 08 01 40.5 -1.2
LAST Lasithi 86.61 312 P P 08 01 40.5 -1.2
LKD2 Lefkada island 86.82 317 P P 08 01 42.2 -0.5
Z24A Sheeppen Canyo 86.95 50 ⇓P P 08 01 42.6 -0.8
baz=87
Y25A Mesa, Roswell 86.97 49 ⇑P P 08 01 42.6 -0.9
baz=87
X26A CR and CF Fran 87.07 48 ⇓P P 08 01 43.7 -0.3
baz=87,SNR=5.6
FSSB Fossombrone 87.13 325 P P 08 01 44.1 0.0
comp=Z,21nm,0.6s,mb5.5
W27A Bowe Ranch, En 87.16 48 ⇑P P 08 01 44.4 0.0
baz=87,SNR=15
VAI Varese 87.18 329 P P 08 01 43.1 -1.2
124A Stringfield Ra 87.32 51 ⇑P P 08 01 44.8 -0.5
baz=87,SNR=5.5
Z25A Roswell 87.39 50 ⇓P P 08 01 45.6 0.0
baz=87,SNR=9.8
SNTG Esanatoglia 87.39 325 P P 08 01 45.1 -0.3
X27A F and S Farms, 87.43 48 ⇓P P 08 01 45.1 -0.6
baz=87
SEI Scarperia 87.49 326 P P 08 01 47.0 +1.2
comp=Z,62nm,0.6s,mb6.0
SCIA State Center 87.53 37 *eP* **P 08 01 46.2 +0.1**
comp=Z,15nm,1.0s,mb5.2
SCIA *ep*P pP 08 02 04.2 +3.2
NRCA Norcia 87.63 324 P P 08 01 46.5 0.0
CABF La Chapelle 87.66 331 *eP* **P 08 01 45.8 -0.8**
224A Cornudas Mount 87.70 51 ⇓P P 08 01 46.9 -0.2
baz=87
Z26A Caprock 87.84 49 ⇓P P 08 01 47.4 -0.3
baz=88,SNR=7.4
125A Gardner Draw, 87.84 50 ⇑P P 08 01 47.4 -0.4
baz=88,SNR=6.0
AQU L'Aquila 87.87 324 ⇑P P 08 01 48.4 +0.7
AQU L'Aquila 87.87 324 *eP* **P 08 01 47.9 +0.3**
comp=Z,37nm,0.9s,mb5.6
AQU L'Aquila 87.87 324⇑*iP* **P 08 01 48.3 +0.6**
KSU1 Kansas State U 87.91 41 *eP* **P 08 01 46.9 -1.1**
comp=Z,25nm,0.8s,mb5.5
Y27A Causey 87.92 48 ⇑P P 08 01 47.7 -0.3
baz=88
LOR Lormes 87.97 332 *eP* **P 08 01 47.4 -0.7**
comp=Z,44nm,0.9s,mb5.4
LOR Lormes 87.97 332 *eP* **P 08 01 47.4 -0.7**
LOR pmax pmax
comp=Z,22nm,0.9s,mb5.4
LOR Lormes 87.97 332 *eP* **P 08 01 47.4 -0.7**
comp=Z,22nm,0.9s,mb5.4
324A Moseley Ranch, 88.15 52 ⇑P P 08 01 48.6 -0.6
baz=88
JFWS Jewell Farm 88.16 35 *eP* **P 08 01 47.4 -1.7**
JFWS pmax pmax
comp=Z,12nm,0.9s,mb5.1
JFWS Jewell Farm 88.16 35 *eP* **P 08 01 47.4 -1.7**
comp=Z,12nm,0.9s,mb5.1
LDF La Druitiere 88.26 335 *eP* **P 08 01 48.8 -0.6**
comp=Z,10nm,0.6s,mb4.9
LDF La Druitiere 88.26 335 *eP* **P 08 01 48.8 -0.6**
LDF pmax pmax
comp=Z,5.0nm,0.6s,mb4.9
LDF La Druitiere 88.26 335 *eP* **P 08 01 48.8 -0.6**
comp=Z,5.2nm,0.6s,mb4.9
SSF Saint Saulge 88.28 332 *eP* **P 08 01 49.0 -0.5**
comp=Z,32nm,0.9s,mb5.3
SSF Saint Saulge 88.28 332 *eP* **P 08 01 49.0 -0.5**
SSF pmax pmax
comp=Z,16nm,0.9s,mb5.2
SSF Saint Saulge 88.28 332 *eP* **P 08 01 49.0 -0.5**
comp=Z,16nm,0.9s,mb5.2
LPL La Plagne 88.30 330 *eP* **P 08 01 49.2 -0.4**
comp=Z,19nm,0.7s,mb5.1
LPL La Plagne 88.30 330 *eP* **P 08 01 49.2 -0.4**
LPL pmax pmax
comp=Z,9.0nm,0.7s,mb5.1
LPL La Plagne 88.30 330 *eP* **P 08 01 49.2 -0.4**
comp=Z,9.3nm,0.7s,mb5.1
LPG La Plagne 88.31 330 *eP* **P 08 01 49.3 -0.4**
comp=Z,24nm,0.7s,mb5.3
LPG La Plagne 88.31 330 *eP* **P 08 01 49.3 -0.4**
LPG pmax pmax
comp=Z,12nm,0.7s,mb5.2
LPG La Plagne 88.31 330 *eP* **P 08 01 49.3 -0.4**
comp=Z,12nm,0.7s,mb5.2
GDL2 Guadalupe Moun 88.34 50 *eP* **P 08 01 50.3 +0.2**
comp=Z,8.7nm,1.2s,mb4.9
GDL2 *ep*P pP 08 02 05.0 0.0
SMF Signal de Mont 88.50 332 *eP* **P 08 01 50.0 -0.6**
comp=Z,41nm,1.2s,mb5.3
SMF Signal de Mont 88.50 332 *eP* **P 08 01 50.0 -0.6**
SMF pmax pmax
comp=Z,21nm,1.2s,mb5.3
SMF Signal de Mont 88.50 332 *eP* **P 08 01 50.0 -0.6**
comp=Z,21nm,1.2s,mb5.3
325A Bean Ranch, Si 88.52 51 ⇓P P 08 01 50.5 -0.5
baz=88
AVF Avril sur Loir 88.56 332 *eP* **P 08 01 50.5 -0.4**
comp=Z,73nm,1.0s,mb5.7
AVF Avril sur Loir 88.56 332 *eP* **P 08 01 50.5 -0.4**
AVF pmax pmax
comp=Z,37nm,1.0s,mb5.7
AVF Avril sur Loir 88.56 332 *eP* **P 08 01 50.5 -0.4**
comp=Z,36nm,1.0s,mb5.7
226A Malaga, Loving 88.59 50 ⇓P P 08 01 50.9 -0.4
baz=88
GRR Gorron 88.69 336 *eP* **P 08 01 51.1 -0.3**
comp=Z,28nm,0.8s,mb5.4
GRR Gorron 88.69 336 *eP* **P 08 01 51.1 -0.3**
GRR pmax pmax
comp=Z,14nm,0.8s,mb5.3
GRR Gorron 88.69 336 *eP* **P 08 01 51.1 -0.3**
comp=Z,14nm,0.8s,mb5.3
TBI Tubuai 88.77 120 *eT* 09 39 36.1
comp=Z,30nm,0.3s
MBDF Montbardon 88.93 329 *eP* **P 08 01 51.4 -1.2**
comp=Z,21nm,0.7s,mb5.3

MBDF Montbardon 88.93 329 *eP* **P 08 01 51.4 -1.2**
MBDF pmax pmax
comp=Z,11nm,0.7s,mb5.3
MBDF Montbardon 88.93 329 *eP* **P 08 01 51.4 -1.2**
comp=Z,11nm,0.7s,mb5.3
BGF Bois d'Agland 88.95 332 *eP* **P 08 01 52.1 -0.6**
comp=Z,29nm,1.1s,mb5.2
BGF Bois d'Agland 88.95 332 *eP* **P 08 01 52.1 -0.6**
BGF pmax pmax
comp=Z,14nm,1.1s,mb5.2
BGF Bois d'Agland 88.95 332 *eP* **P 08 01 52.1 -0.6**
comp=Z,14nm,1.1s,mb5.2
ORIF Oris-en-Rattie 89.13 330 *eP* **P 08 01 53.5 -0.1**
comp=Z,23nm,0.9s,mb5.2
ORIF Oris-en-Rattie 89.13 330 *eP* **P 08 01 53.5 -0.1**
ORIF pmax pmax
comp=Z,12nm,0.9s,mb5.2
ORIF Oris-en-Rattie 89.13 330 *eP* **P 08 01 53.5 -0.1**
comp=Z,12nm,0.9s,mb5.2
PLDF La Plantade 89.15 332 *eP* **P 08 01 53.7 +0.1**
326A Caldwell Ranch 89.18 51 ⇓P **P 08 01 52.7 -1.4**
baz=89
AGO Saint Agoulin 89.27 332 *eP* **P 08 01 53.7 -0.5**
SBF Sospel 89.35 328 *eP* **P 08 01 53.8 -0.8**
SGMF Saint Gilles 89.36 336 *eP* **P 08 01 54.2 -0.4**
TCF Toulx Ste Croi 89.41 333 *eP* **P 08 01 54.5 -0.4**
comp=Z,65nm,1.3s,mb5.5
TCF Toulx Ste Croi 89.41 333 *eP* **P 08 01 54.5 -0.4**
TCF pmax pmax
comp=Z,33nm,1.3s,mb5.5
TCF Toulx Ste Croi 89.41 333 *eP* **P 08 01 54.5 -0.4**
comp=Z,32nm,1.3s,mb5.5
ROSF Rostrenen 89.51 337 *eP* **P 08 01 54.9 -0.4**
comp=Z,223nm,1.6s,mb5.9
ROSF Rostrenen 89.51 337 *eP* **P 08 01 54.9 -0.4**
ROSF pmax pmax
comp=Z,111nm,1.6s,mb5.9
ROSF Rostrenen 89.51 337 *eP* **P 08 01 54.9 -0.4**
comp=Z,111nm,1.6s,mb5.9
PYM Petit Puy Mans 89.57 332 *eP* **P 08 01 54.7 -0.9**
PYM Petit Puy Mans 89.57 332 *eP* **P 08 01 55.4 -0.2**
PYM Petit Puy Mans 89.57 332 *eP* **P 08 01 55.4 -0.2**
426A McDonald Obser 89.59 51 ⇑P **P 08 01 55.5 -0.5**
baz=89
VIVF Saint-Julien-I 89.67 330 *eP* **P 08 01 55.4 -0.7**
comp=Z,19nm,1.0s,mb5.1
VIVF Saint-Julien-I 89.67 330 *eP* **P 08 01 55.4 -0.7**
VIVF pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
VIVF Saint-Julien-I 89.67 330 *eP* **P 08 01 55.4 -0.7**
comp=Z,9.3nm,1.0s,mb5.1
QUIF Quistinic 89.85 337 *eP* **P 08 01 56.2 -0.7**
328A Wristen Ranch, 89.86 50 ⇑P **P 08 01 55.8 -1.4**
baz=90
427A Hayter Ranch, 89.86 51 ⇑P **P 08 01 56.2 -1.1**
baz=90,SNR=6.3
WMOK Wichita Mounta 89.89 45 *eP* **P 08 01 56.7 -0.6**
WMOK pmax pmax
comp=Z,18nm,1.6s,mb5.2
WMOK Wichita Mounta 89.89 45 *eP* **P 08 01 56.6 -0.7**
comp=Z,18nm,1.6s,mb5.2
LBL Lubilhac 89.91 332 *eP* **P 08 01 55.1 -2.1**
FRF La Foret Royal 89.93 329 *eP* **P 08 01 56.0 -1.3**
526A Mary Lane Ranc 89.97 52 ⇓P **P 08 01 56.1 -1.7**
baz=90,SNR=7.4
MFF Saint Martin d 89.99 334 *eP* **P 08 01 57.3 -0.2**
comp=Z,41nm,0.9s,mb5.5
MFF Saint Martin d 89.99 334 *eP* **P 08 01 57.3 -0.2**
MFF pmax pmax
comp=Z,20nm,0.9s,mb5.5
MFF Saint Martin d 89.99 334 *eP* **P 08 01 57.3 -0.2**
comp=Z,20nm,0.9s,mb5.5
SMRF Simiane la Rot 90.03 329 *eP* **P 08 01 57.3 -0.5**
LMR La Mourre 90.17 329 *eP* **P 08 01 57.4 -1.1**
comp=Z,36nm,0.9s,mb5.4
LMR La Mourre 90.17 329 *eP* **P 08 01 57.4 -1.1**
LMR pmax pmax
comp=Z,18nm,0.9s,mb5.4
LMR La Mourre 90.17 329 *eP* **P 08 01 57.4 -1.1**
comp=Z,18nm,0.9s,mb5.4
527A Woodward Ranch 90.21 51 ⇑P **P 08 01 57.8 -1.1**
baz=90
626A Big Bend Ranch 90.29 52 ⇓P **P 08 01 58.4 -0.9**
baz=90
428A Kincaid Ranch, 90.39 50 ⇓P **P 08 01 57.9 -1.8**
baz=90,SNR=5.8
HDIL Hopedale 90.45 36 *eP* **P 08 01 59.6 -0.2**
comp=Z,41nm,1.3s,mb5.6
RJF Les Rejaudoux 90.50 333 *eP* **P 08 01 59.7 -0.3**
comp=Z,36nm,0.9s,mb5.4
RJF Les Rejaudoux 90.50 333 *eP* **P 08 01 59.7 -0.3**
RJF pmax pmax
comp=Z,18nm,0.9s,mb5.4
RJF Les Rejaudoux 90.50 333 *eP* **P 08 01 59.7 -0.3**
comp=Z,18nm,0.9s,mb5.4
CAF Calviac 90.62 332 *eP* **P 08 02 00.6 +0.1**
comp=Z,37nm,1.0s,mb5.4
CAF Calviac 90.62 332 *eP* **P 08 02 00.6 +0.1**
CAF pmax pmax
comp=Z,18nm,1.0s,mb5.4
CAF Calviac 90.62 332 *eP* **P 08 02 00.6 +0.1**
comp=Z,18nm,1.0s,mb5.4
LASF Ste Croix 90.64 331 *eP* **P 08 02 00.4 -0.2**
comp=Z,21nm,0.9s,mb5.2
528A Cox Ranch, San 90.72 51 ⇑P **P 08 02 00.4 -0.9**
baz=90
TXAR Lajitas Array 90.73 52 P **P 08 01 59.7 -1.7**
comp=Z,3.3nm,0.7s,mb4.8,baz=293,slow=1.0,SNR=42
TXAR pP pP 08 02 15.6 -0.7
comp=Z,4.3nm,0.8s,baz=305,slow=4.4,SNR=9.4
TXAR Lajitas Array 90.73 52 P **P 08 01 59.7 -1.7**
TXAR pP pP 08 02 15.6 -0.6
627A Terlingua Ranc 90.83 52 ⇑P **P 08 02 01.6 -0.2**
baz=90
LFF La Frestale 91.10 333 *eP* **P 08 02 02.7 -0.1**
comp=Z,29nm,0.7s,mb5.4
LFF La Frestale 91.10 333 *eP* **P 08 02 02.7 -0.1**
LFF pmax pmax
comp=Z,15nm,0.7s,mb5.4
LFF La Frestale 91.10 333 *eP* **P 08 02 02.7 -0.1**
comp=Z,14nm,0.7s,mb5.4
CCM Cathedral Cave 91.45 39 *eP* **P 08 02 03.5 -1.0**
CCM pmax pmax
comp=Z,11nm,1.3s,mb5.0
CCM Cathedral Cave 91.45 39 *eP* **P 08 02 03.5 -1.0**
comp=Z,11nm,1.3s,mb5.0
MTLF Montolieu 91.90 331 *eP* **P 08 02 06.3 -0.2**
comp=Z,17nm,0.9s,mb5.1
MTLF Montolieu 91.90 331 *eP* **P 08 02 06.3 -0.2**
MTLF pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
MTLF Montolieu 91.90 331 *eP* **P 08 02 06.3 -0.2**
comp=Z,8.4nm,0.9s,mb5.1
JCT Junction City 92.33 49 *eP* **P 08 02 08.3 -0.4**
JCT pmax pmax
comp=Z,20nm,1.5s,mb5.2
JCT Junction City 92.33 49 *eP* **P 08 02 08.3 -0.4**
comp=Z,20nm,1.5s,mb5.2
EPF Esparros 92.88 332 *eP* **P 08 02 10.3 -0.7**
comp=Z,10.0nm,1.0s,mb4.9
EPF Esparros 92.88 332 *eP* **P 08 02 10.3 -0.7**
EPF pmax pmax
comp=Z,5.0nm,1.0s,mb4.9
EPF Esparros 92.88 332 *eP* **P 08 02 10.3 -0.7**
comp=Z,5.0nm,1.0s,mb4.9
MIAR Mount Ida 92.92 42 *eP* **P 08 02 11.3 -0.1**
MIAR pmax pmax
comp=Z,18nm,1.3s,mb5.3
MIAR Mount Ida 92.92 42 *eP* **P 08 02 11.3 -0.1**
comp=Z,18nm,1.3s,mb5.3
ETSF Etsaut 93.33 333 *eP* **P 08 02 13.2 +0.1**
comp=Z,19nm,0.8s,mb5.3
ETSF Etsaut 93.33 333 *eP* **P 08 02 13.2 +0.1**
ETSF pmax pmax
comp=Z,9.0nm,0.8s,mb5.2
ETSF Etsaut 93.33 333 *eP* **P 08 02 13.2 +0.1**
comp=Z,9.4nm,0.8s,mb5.3
SJPF Ste Jean 93.39 333 *eP* **P 08 02 12.7 -0.7**
KEST Kesra 95.01 322 P **P 08 02 20.6 -0.4**
comp=Z,2.0nm,0.8s,mb4.6,baz=272,slow=18,SNR=7.7
KEST LR LR 08 50 42.7
comp=Z,126nm,20.4s,MS4.4,baz=227,slow=39
TKL Tuckaleechee C 96.97 35 P **P 08 02 29.1 -0.7**
comp=Z,2.4nm,0.7s,mb4.7,baz=131,slow=5.7,SNR=4.7
ESDC Sonseca Array 97.39 333 P **P 08 02 30.7 -1.0**
comp=Z,2.0nm,0.7s,mb4.6,baz=16,slow=5.3,SNR=7.6
ESDC PP PP 08 06 29.1 +1.0
comp=Z,1.4nm,0.8s,baz=26,slow=8.6,SNR=4.1
ESDC LR LR 08 50 22.0
comp=Z,235nm,20.5s,MS4.7,baz=30,slow=38
MAW Mawson 119.00 205 PKP PKPdf 08 07 45.4 -0.1
comp=Z,1.2nm,0.7s,baz=333,slow=4.5,SNR=5.8
DBIC Dimbokro 126.21 316 PKP PKPdf 08 08 00.8 -0.3
comp=Z,8.8nm,1.1s,baz=105,slow=3.3,SNR=3.4
DBIC Dimbokro 126.21 316 PKP PKPdf 08 08 00.8 -0.3
QSPA South Pole Qui 126.41 180 *e*PKPdf PKPdf 08 07 59.9 +0.4
MAIT Maitri 136.79 202 *e*PKPdif PKPdf 08 08 08.3
LPAZ La Paz 147.30 59 PKPbc PKPbc 08 08 42.3 +0.3
comp=Z,13nm,0.8s,baz=358,slow=4.5,SNR=44
LPAZ La Paz 147.30 59 *e*PKPdf PKPdf 08 08 40.9 +1.3
SIV San Ignacio 151.69 49 PKP PKPdf 08 08 46.8 +0.2
comp=Z,2.3nm,0.9s,baz=50,slow=3.2,SNR=13
SIV PKPbc PKPbc 08 08 52.3 -0.7
comp=Z,12nm,0.7s,baz=276,slow=1.5,SNR=51
SIV PKPab PKPab 08 09 00.6 -1.1
comp=Z,3.5nm,0.6s,baz=315,slow=7.8,SNR=4.0
CFAA Coronel Fontan 155.49 87 PKPab PKPab 08 09 16.9 -0.7
comp=Z,0.6nm,0.7s,baz=262,slow=4.0,SNR=10
CPUP Villa Florida 161.45 61 PKPab PKPab 08 09 42.9 -0.6
comp=Z,0.7nm,0.6s,baz=323,slow=2.9,SNR=3.7
CPUP Villa Florida 161.45 61 PKP2 PKPab 08 09 42.9 -0.6
CPUP pmax pmax
comp=Z,1.0nm,0.6s

*RSPR **05** 07:50:39.3, 18.′96N×64.′98W, h40km±9km*
*NEIC **05** 07:50:39.3, 18.′96N×64.′98W, h40km, MD3.3(RSPR), After RSPR.*
ISC 05 07:50:37.5±3.6, 19.′0N±0.′2×65.′1W±0.′2, h26km±23km, n8, σ0°23/14, 2C-6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STVI	**Saint Thomas**	**0.65**	**171**	⇓*eP*		**Pb**		**07 50 50.6**	**+0.3**
STVI				*eS*		**Sb**		**07 50 59.1**	**+0.2**
STVI	**Saint Thomas**	**0.65**	**171**	⇓*eP*		**Pb**		**07 50 50.6**	**+0.3**
STVI				*eS*		**Sb**		**07 50 59.1**	**+0.2**
TBVI	**Tortola**	**0.71**	**144**	⇓*eP*		**Pb**		**07 50 50.9**	**-0.4**
TBVI	**Tortola**	**0.71**	**144**	⇓*eP*		**Pb**		**07 50 50.9**	**-0.4**
MTP	**Monte Pirata**	**1.01**	**208**	⇓*eP*		**Pn**		**07 50 56.1**	**+0.1**
MTP				*eS*		**Sb**		**07 51 09.2**	**-0.1**
MTP	**Monte Pirata**	**1.01**	**208**	⇓*eP*		**Pn**		**07 50 56.1**	**+0.1**
MTP				*eS*		**Sb**		**07 51 09.2**	**-0.1**
HUMP	**Col San Antoni**	**1.14**	**222**	⇓*eP*		**Pn**		**07 50 57.9**	**+0.1**
HUMP				*eS*		**Sn**		**07 51 12.3**	**-0.2**
HUMP	**Col San Antoni**	**1.14**	**222**	⇓*eP*		**Pn**		**07 50 57.9**	**+0.1**
HUMP				*eS*		**Sn**		**07 51 12.3**	**-0.2**

IDC 05 08:08:22.0±2.1, 1.′80N×126.′84E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.5/19, mbtmp3.6/3, Error ellipse: s-maj=182.5km s-min=24.8km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.82**	**162**	P		P	P	08 13 25.6	-1.1
0.8nm,0.3s,baz=340,slow=12,SNR=22									
ASAR	**Alice Springs**	**26.23**	**165**	P		P	P	08 14 00.2	+1.4
0.3nm,0.3s,baz=347,slow=11,SNR=5.2									
MKAR	**Makanchi Array**	**59.20**	**326**	P		P	P	08 18 24.8	-0.1
0.4nm,0.4s,baz=130,slow=8.7,SNR=5.6									

*ISK **05** 08:13:11.3, 37.′09N×29.′16E, h9km, MD3.1*
*IDC **05** 08:13:11.3±2.0, 36.′83N×29.′18E, h0km, mb3.7/1, mb1 3.4/3, mb1mx3.2/24, mbtmp3.4/3, ML3.2/2, Error ellipse: s-maj=40.1km s-min=24.9km az=155.0*
*CSEM **05** 08:13:11.9±0.2, 37.′04N×29.′16E, h8km, MD3.1, Error ellipse: s-maj=4.3km s-min=2.8km az=8.0*
*ISCJB **05** 08:13:11.8±0.5, 37.′06N±0.′03×29.′15E±0.′02, h5km±4km, Error ellipse: s-maj=4.7km s-min=3.2km az=175.2*
*NEIC **05** 08:13:11.3, 37.′07N×29.′16E, h7km, MD3.0(ISK), After ISK.*
*DDA **05** 08:13:11.9, 36.′99N×29.′19E, h7km±4km, Md3.0*
ISC 05 08:13:12.6±0.5, 37.′06N±0.′03×29.′17E±0.′03, h10km±4km, n78, σ1°11/103, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.28**	**70**	*e*PG		**Pg**		**08 13 17.3**	**-0.9**
GLHS				*e*SG		**Sg**		**08 13 21.7**	**-0.3**
GLHS	**Glhisar (BURDU**	**0.28**	**70**	Pg		**Pg**		**08 13 17.4**	**-0.8**
GLHS				Sg		**Sg**		**08 13 21.4**	**-0.6**
GLHS	**Glhisar (BURDU**	**0.28**	**70**	Pg		**Pg**		**08 13 17.5**	**-0.7**
GLHS				Sg		**Sg**		**08 13 21.5**	**-0.5**
GOLH	**Golhisar**	**0.36**	**61**	*i* P		**Pg**		**08 13 19.4**	**-0.3**
GOLH				*i* S		**Sg**		**08 13 26.2**	**+1.7**
GOLH	**Golhisar**	**0.36**	**61**	*i* P		**Pg**		**08 13 19.4**	**-0.3**
GOLH				*i* S		**Sg**		**08 13 26.2**	**+1.7**
TURN	**Turunc**	**0.49**	**248**	*i* P		**Pg**		**08 13 26.3**	**+4.2**
TURN				*i* S		**Sg**		**08 13 38.5**	**+10**
DNZL	**Cakiroluk**	**0.63**	**351**	*i* P		**Pg**		**08 13 25.1**	**+0.2**
DNZL				*i* S		**Sg**		**08 13 38.2**	**+5.0**
DNZL	**Cakiroluk**	**0.63**	**351**	*i* P		**Pg**		**08 13 25.1**	**+0.2**
ELL	**Elmali**	**0.67**	**118**	*e*PG		**Pg**		**08 13 24.9**	**-0.7**
ELL				*e*SG		**Sg**		**08 13 35.0**	**+0.6**
ELL	**Elmali**	**0.67**	**118**	Pg		**Pg**		**08 13 24.9**	**-0.6**
ELL				Sg		**Sg**		**08 13 35.0**	**+0.6**
ELL	**Elmali**	**0.67**	**118**	*e*Pg		**Pg**		**08 13 24.9**	**-0.6**
ELL				*e*Sg		**Sg**		**08 13 35.0**	**+0.7**
DENT	**Denizli**	**0.70**	**351**	*e*PG		**Pg**		**08 13 24.6**	**-1.5**
DENT	**Denizli**	**0.70**	**351**	Pg		**Pg**		**08 13 24.8**	**-1.3**
DENT	**Denizli**	**0.70**	**351**	Pg		**Pg**		**08 13 24.8**	**-1.3**
YER	**Yerkesik**	**0.71**	**276**	*e*PG		**Pg**		**08 13 25.3**	**-1.0**
YER	**Yerkesik**	**0.71**	**276**	Pg		**Pg**		**08 13 25.2**	**-1.1**
YER	**Yerkesik**	**0.71**	**276**	*e*Pg		**Pg**		**08 13 25.3**	**-1.0**
AKAS	**Kas**	**0.90**	**157**	*i* P		**Pg**		**08 13 28.2**	**-1.7**
AKAS				*i* S		**Sg**		**08 13 42.9**	**+1.4**
AKAS	**Kas**	**0.90**	**157**	*i* P		**Pg**		**08 13 28.2**	**-1.7**
AKAS				*i* S		**Sg**		**08 13 42.9**	**+1.4**
KORT	**Korkueli**	**0.95**	**93**	*i* P		**Pg**		**08 13 30.5**	**-0.3**
KORT				*i* S		**Sg**		**08 13 45.5**	**+2.3**
KORT	**Korkueli**	**0.95**	**93**	*i* P		**Pg**		**08 13 30.5**	**-0.3**
KORT				*i* S		**Sg**		**08 13 45.5**	**+2.3**
KSL	**Kastellorizon**	**0.97**	**160**	*e*P		**Pg**		**08 13 30.5**	**-0.7**
MLSB	**Milas**	**1.14**	**282**	*e*PN		**Pn**		**08 13 33.3**	**-1.3**
MLSB	**Milas**	**1.14**	**282**	Pn		**Pn**		**08 13 33.3**	**-1.2**
MLSB				Sn		**Sn**		**08 13 49.3**	**-0.9**
MLSB	**Milas**	**1.14**	**282**	*e*Pn		**Pn**		**08 13 33.3**	**-1.3**
MLSB				Sn		**Sn**		**08 13 49.3**	**-0.9**
AYDN	**Tasoluk**	**1.19**	**301**	*i* P		**Pb**		**08 13 36.1**	**+0.9**
AYDN				*i* S		**Sb**		**08 13 53.4**	**+2.7**
AYDN	**Tasoluk**	**1.19**	**301**	*i* P		**Pb**		**08 13 36.1**	**+0.9**
AYDN				*i* S		**Sb**		**08 13 53.3**	**+2.6**
ARG	**Arkhangelos**	**1.19**	**225**	*e*P		**Pb**		**08 13 33.5**	**-1.7**
ANTB	**Antalya**	**1.20**	**97**	*e*PN		**Pn**		**08 13 34.9**	**-0.6**
ANTB	**Antalya**	**1.20**	**97**	*e*Pn		**Pn**		**08 13 34.9**	**-0.5**
BCK	**Bucak**	**1.20**	**70**	*e*PN		**Pn**		**08 13 34.6**	**-0.9**
BCK	**Bucak**	**1.20**	**70**	Pn		**Pn**		**08 13 34.9**	**-0.5**
BCK				Sn		**Sn**		**08 13 51.9**	**+0.1**
BCK	**Bucak**	**1.20**	**70**	Pn		**Pn**		**08 13 34.9**	**-0.6**
BCK				Sn		**Sn**		**08 13 51.9**	**+0.1**
KHL	**Karahalli**	**1.29**	**13**	*e*PN		**Pn**		**08 13 35.7**	**-1.0**
KHL	**Karahalli**	**1.29**	**13**	Pn		**Pn**		**08 13 36.5**	**-0.2**
KHL	**Karahalli**	**1.29**	**13**	Pn		**Pn**		**08 13 36.5**	**-0.2**
DAT	**Datca**	**1.32**	**256**	*e*PN		**Pn**		**08 13 36.5**	**-0.5**
DAT	**Datca**	**1.32**	**256**	*e*Pn		**Pn**		**08 13 36.5**	**-0.6**
KHAL	**Karahalli**	**1.33**	**11**	*i* P		**Pn**		**08 13 38.1**	**+0.8**
KHAL	**Karahalli**	**1.33**	**11**	*i* P		**Pn**		**08 13 38.1**	**+0.8**
BDRM	**Kayabasi**	**1.38**	**271**	*i* P		**Pn**		**08 13 38.4**	**+0.4**
BDRM				*i* S		**Sn**		**08 13 55.7**	**-0.5**
BDRM	**Kayabasi**	**1.38**	**271**	*i* P		**Pn**		**08 13 38.3**	**+0.4**
BDRM				*i* S		**Sn**		**08 13 55.7**	**-0.5**
BODT	**Bodrum**	**1.49**	**271**	*e*PN		**Pn**		**08 13 38.8**	**-0.6**
BODT	**Bodrum**	**1.49**	**271**	Pn		**Pn**		**08 13 39.0**	**-0.4**
BODT	**Bodrum**	**1.49**	**271**	*e*Pn		**Pn**		**08 13 38.8**	**-0.6**
KULA	**Kula-Manisa**	**1.50**	**345**	*e*PN		**Pn**		**08 13 38.7**	**-1.0**
KULA	**Kula-Manisa**	**1.50**	**345**	*e*Pn		**Pn**		**08 13 38.7**	**-0.9**
SUTC	**Sutluce-Ispart**	**1.52**	**74**	*e*PN		**Pn**		**08 13 39.3**	**-0.6**
SUTC	**Sutluce-Ispart**	**1.52**	**74**	*e*Pn		**Pn**		**08 13 39.3**	**-0.5**
SHUT	**Suhut-Afyon**	**1.85**	**36**	*e*PN		**Pn**		**08 13 43.7**	**-0.6**
SHUT	**Suhut-Afyon**	**1.85**	**36**	*e*Pn		**Pn**		**08 13 43.7**	**-0.7**
DEMI	**Demirci**	**2.01**	**350**	*i* P		**Pn**		**08 13 47.4**	**+0.8**
DEMI	**Demirci**	**2.01**	**350**	*i* P		**Pn**		**08 13 47.4**	**+0.8**
IZM	**Izmir**	**2.02**	**312**	*e*PN		**Pn**		**08 13 46.1**	**-0.6**
AKS	**Akhisar**	**2.11**	**330**	*e*PN		**Pn**		**08 13 47.3**	**-0.6**
AKS	**Akhisar**	**2.11**	**330**	*e*Pn		**Pn**		**08 13 47.3**	**-0.6**
BLCB	**Balcova**	**2.14**	**309**	*e*PN		**Pn**		**08 13 47.9**	**-0.5**
BLCB	**Balcova**	**2.14**	**309**	Pn		**Pn**		**08 13 48.1**	**-0.3**
BLCB	**Balcova**	**2.14**	**309**	*e*Pn		**Pn**		**08 13 47.9**	**-0.5**
KARP	**Karpathos**	**2.22**	**228**	*e*P		**Pn**		**08 13 50.0**	**+0.6**
KONT	**Konya--Tatoy**	**2.69**	**70**	*e*PN		**Pn**		**08 13 55.9**	**0.0**
KONT	**Konya--Tatoy**	**2.69**	**70**	Pn		**Pn**		**08 13 56.3**	**+0.4**
KONT	**Konya--Tatoy**	**2.69**	**70**	*e*Pn		**Pn**		**08 13 55.9**	**0.0**
LADK	**Ladik-KONYA**	**2.78**	**65**	*e*PN		**Pn**		**08 13 57.1**	**0.0**
LADK	**Ladik-KONYA**	**2.78**	**65**	*e*Pn		**Pn**		**08 13 57.2**	**0.0**
KIZT	**Kizilcal**	**2.81**	**49**	*e*PN		**Pn**		**08 13 57.5**	**0.0**
KIZT	**Kizilcal**	**2.81**	**49**	Pn		**Pn**		**08 13 58.0**	**+0.4**
KIZT	**Kizilcal**	**2.81**	**49**	*e*Pn		**Pn**		**08 13 57.5**	**-0.1**
ZKR	**Zakros**	**3.08**	**232**	*e*P		**Pn**		**08 14 02.5**	**+1.2**
NPS	**Neapolis**	**3.39**	**239**	*e*P		**Pn**		**08 14 05.5**	**-0.1**
LAST	**Lasithi**	**3.54**	**239**	*e*P		**Pn**		**08 14 09.5**	**+1.9**
XRY	**Khrisi**	**3.56**	**233**	*e*P		**Pn**		**08 14 09.5**	**+1.5**
BRTR	**Keskin Array B**	**4.41**	**52**	Pn		**Pn**		**08 14 21.4**	**+1.9**
0.4nm,0.3s,baz=231,slow=16,SNR=7.2									
BRTR				Sn		**Sn**		**08 15 15.1**	**+4.3**
0.6nm,0.3s,baz=222,slow=25,SNR=8.6									
BRTR	**Keskin Array B**	**4.41**	**52**	Pn		**Pn**		**08 14 21.4**	**+1.9**
BRTR				Sn		**Sn**		**08 15 15.1**	**+4.2**
KARN	**Karanos**	**4.56**	**250**	*e*P		**Pn**		**08 14 24.0**	**+2.4**
KYTH	**Kithira**	**4.99**	**263**	*e*P		**Pn**		**08 14 30.0**	**+2.4**
MMAI	**Mount Meron Ar**	**6.51**	**126**	Pn		**Pn**		**08 14 47.5**	**-1.0**
1.6nm,0.3s,baz=306,slow=13,SNR=8.3									
MMAI				Sn		**Sn**		**08 15 59.4**	**-3.5**
1.2nm,0.3s,baz=306,slow=29,SNR=3.9									
TORD	**Torodi Ar. Bea**	**34.21**	**233**	P		P	P	**08 19 57.5**	**-1.0**
0.6nm,0.5s,baz=34,slow=8.6,SNR=7.3									

IDC 05 08:49:05.5±2.1, 17.′79N×145.′68E, h195km±19km, mb3.5/10, mb1 3.6/11, mb1mx3.4/27, mbtmp3.4/11, Error ellipse: s-maj=29.3km s-min=14.3km az=95.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.25**	**191**	P		Pn		08 50 11.6	+1.2
1.8nm,0.3s,baz=351,slow=19,SNR=3.1									
GUMO				S		Sn		08 51 01.2	0.0
11nm,0.3s,baz=220,slow=17,SNR=4.7									
WRA	**Warramunga Arr**	**39.12**	**197**	P		P	P	08 56 13.5	-0.7
1.4nm,0.4s,baz=16,slow=8.6,SNR=43									
FITZ	**Fitzroy Crossi**	**40.75**	**210**	P		P	P	08 56 27.9	+0.2
2.8nm,0.8s,baz=20,slow=11,SNR=16									
ASAR	**Alice Springs**	**42.78**	**196**	P		P	P	08 56 43.6	-0.4
0.5nm,0.4s,baz=13,slow=8.2,SNR=11									
STKA	**Stephens Creek**	**49.54**	**185**	P		P	P	08 57 37.5	+1.0
0.8nm,0.4s,baz=338,slow=11,SNR=3.8									
MKAR	**Makanchi Array**	**59.08**	**314**	P		P	P	08 58 45.6	+0.3
0.3nm,0.5s,baz=96,slow=8.0,SNR=3.8									
KURK	**Kurchatov**	**61.94**	**318**	P		P	P	08 59 05.0	+0.5
1.3nm,0.5s,baz=93,slow=7.1,SNR=5.3									
BVAR	**Borovoye Array**	**67.16**	**321**	P		P	P	08 59 38.1	-0.2
0.9nm,0.5s,baz=84,slow=6.1,SNR=4.7									
INK	**Inuvik**	**70.21**	**23**	P		P	P	08 59 56.8	-0.1
2.0nm,0.8s,baz=300,slow=2.1,SNR=3.8									
YKA	**Yellowknife Ar**	**78.80**	**28**	P		P	P	09 00 45.8	-0.5
0.9nm,0.6s,baz=287,slow=5.4,SNR=4.2									
RES	**Resolute Bay**	**80.31**	**14**	P		P	P	09 00 54.5	+0.2
1.4nm,1.0s,baz=320,slow=7.9,SNR=4.1									
LPAZ	**La Paz**	**147.66**	**92**	PKPbc		PKPbc	PKPbc	09 08 28.5	+0.7
1.0nm,0.4s,baz=256,slow=8.3,SNR=6.9									

IDC 05 09:03:59.3±2.8, 10.′16N×91.′74E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.4/24, mbtmp3.6/5, Error ellipse: s-maj=113.9km s-min=20.6km az=63.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**37.38**	**349**	P		P	P	09 11 13.6	-0.2
0.7nm,0.6s,baz=166,slow=8.0,SNR=8.1									
SONM	**Songino Array**	**39.54**	**16**	P		P	P	09 11 32.3	+0.5
0.4nm,0.4s,baz=221,slow=11,SNR=2.8									
KURK	**Kurchatov**	**41.85**	**348**	P		P	P	09 11 50.3	-0.7
0.3nm,0.3s,baz=162,slow=9.3,SNR=3.4									
WRA	**Warramunga Arr**	**51.51**	**126**	P		P	P	09 13 06.2	-1.0
0.2nm,0.4s,baz=307,slow=8.2,SNR=16									
ASAR	**Alice Springs**	**53.19**	**130**	P		P	P	09 13 20.4	+0.9
0.9nm,0.7s,baz=308,slow=6.2,SNR=10.0									

*ISCJB **05** 09:14:56.2±0.7, 1.′45N±0.′05×127.′25E±0.′06, h164km±5km, mb3.9/11, Error ellipse: s-maj=10.7km s-min=7.5km az=153.0*
*IDC **05** 09:15:02.7±5.3, 1.′35N×127.′42E, h217km±54km, mb3.5/10, mb1 3.5/11, mb1mx3.4/22, mbtmp3.5/11, Error ellipse: s-maj=48.6km s-min=13.4km az=75.0*
*DJA **05** 09:15:03, 1.′28N×126.′87E, h101km, MLv4.4/7*
*NEIC **05** 09:15:04.7±4.8, 1.′31N×127.′38E, h238km±48km, mb4.1/1, Error ellipse: s-maj=51.0km s-min=11.8km az=66.0*
ISC 05 09:14:57.7±0.7, 1.′38N±0.′06×127.′23E±0.′06, h162km±6km, n29, σ1°02/34, mb3.9/11, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.62**	**167**	P		**Pn**		**09 15 20.0**	**-1.0**
LBMI	**Labuha**	**2.03**	**172**	P		**Pn**		**09 15 35.8**	**+1.9**
LBMI				S		**Sn**		**09 16 01.4**	**-0.4**
MNI	**Manado**	**2.39**	**271**

INMG 05 09:25:27.6±1.2, 37.01N×2.48W, h1km±2km, ML3.1, Error ellipse: s-maj=2.2km s-min=1.9km az=124.0
LDG 05 09:25:27.3±0.2, 36.93N×2.47W, h2km, Ml2.8/4, Error ellipse: s-maj=3.3km s-min=2.1km az=153.0
NEIC 05 09:25:27.3, 36.98N×2.48W, h0km, MN3.2(MDD), After MDD.
CNRM 05 09:25:35.5, 36.48N×2.59W, h30km, MD3.6
ISC 05 09:25:26.1±0.3, 37.01N±0.01×2.51W±0.02, h5km±2km, n303, σ1.44/525, 8C-8D, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENIJ	Nijar	0.25	99	Pg	Pg	09 25 31.3	+0.4
ENIJ				Lg		09 25 34.4	
ENIJ	Nijar	0.25	99	⇓Pg	Pg	09 25 31.3	+0.5
	SNR=18						
ENIJ				Lg		09 25 34.3	
	SNR=7.9						
ENIJ	Nijar	0.25	99	⇓Pg	Pg	09 25 31.3	+0.5
	SNR=18						
ENIJ				Lg		09 25 34.3	
	SNR=7.9						
ENIJ	Nijar	0.25	99	Pg	Pg	09 25 31.3	+0.4
	SNR=7.9						
ENIJ				Lg		09 25 34.3	
	SNR=7.9						
EBER	Berja	0.32	250	Pg	Pg	09 25 33.9	+1.5
EBER				Lg		09 25 38.9	
EBER	Berja	0.32	250	⇑Pg	Pg	09 25 33.9	+1.5
	333nm,0.2s,SNR=18						
EBER				Lg		09 25 38.5	
	5µm,0.4s,SNR=46						
EBER	Berja	0.32	250	⇑Pg	Pg	09 25 33.9	+1.5
	333nm,0.2s,SNR=18						
EBER				Lg		09 25 38.5	
	5µm,0.4s,SNR=46						
EBER	Berja	0.32	250	Pg	Pg	09 25 33.9	+1.6
	333nm,0.2s,SNR=18						
EBER				Lg		09 25 38.9	
EQUE	Quentar	0.77	285	⇓Pg	Pg	09 25 41.8	+1.0
	29nm,0.2s,SNR=18						
EQUE				Lg		09 25 51.2	
	1µm,0.5s,SNR=7.9						
EQUE	Quentar	0.77	285	⇓Pg	Pg	09 25 41.8	+1.0
	29nm,0.2s,SNR=18						
EQUE				Lg		09 25 51.2	
	1µm,0.5s,SNR=7.9						
EQUE	Quentar	0.77	285	Pg	Pg	09 25 41.8	+1.0
	29nm,0.2s,SNR=18						
EQUE				Lg		09 25 51.2	
	1µm,0.5s,SNR=7.9						
EHUE	Huescar	0.81	355	Pg	Pg	09 25 42.6	+1.0
EHUE				Lg		09 25 53.2	
EHUE	Huescar	0.81	355	Pg	Pg	09 25 42.3	+0.7
	2.9nm,0.2s,SNR=7.9						
EHUE				Lg		09 25 53.2	
	165nm,0.4s,SNR=7.9						
EHUE	Huescar	0.81	355	Pg	Pg	09 25 42.3	+0.7
	2.9nm,0.2s,SNR=7.9						
EHUE				Lg		09 25 53.2	
	165nm,0.4s,SNR=7.9						
EHUE	Huescar	0.81	355	Pg	Pg	09 25 42.3	+0.7
	2.9nm,0.2s,SNR=7.9						
EHUE				Lg		09 25 53.2	
	165nm,0.4s,SNR=7.9						
EGUA	Guajares	0.86	259	Pg	Pg	09 25 43.4	+0.7
EGUA				Lg		09 25 54.6	
EGUA	Guajares	0.86	259	Pg	Pg	09 25 43.4	+0.7
	57nm,0.2s,SNR=7.9						
EGUA				Lg		09 25 54.6	
	SNR=7.9						
EGUA	Guajares	0.86	259	Pg	Pg	09 25 43.4	+0.7
	57nm,0.2s,SNR=7.9						
EGUA				Lg		09 25 54.6	
	SNR=7.9						
EGUA	Guajares	0.86	259	Pg	Pg	09 25 43.4	+0.8
	57nm,0.2s,SNR=7.9						
EGUA				Lg		09 25 54.6	
	SNR=7.9						
ECOG	Cogollos-Vega	0.89	288	Pg	Pg	09 25 44.0	+0.9
ECOG				Lg		09 25 55.4	
ECOG	Cogollos-Vega	0.89	288	Pg	Pg	09 25 44.0	+0.9
	34nm,0.2s,SNR=51						
ECOG				Lg		09 25 55.4	
	459nm,0.4s,SNR=5.0						
ECOG	Cogollos-Vega	0.89	288	Pg	Pg	09 25 44.0	+0.9
	34nm,0.2s,SNR=51						
ECOG				Lg		09 25 55.4	
	459nm,0.4s,SNR=5.0						
ECOG	Cogollos-Vega	0.89	288	Pg	Pg	09 25 44.0	+0.9
	34nm,0.2s,SNR=51						
ECOG				Lg		09 25 55.4	
	459nm,0.4s,SNR=5.0						
EQES	Quesada	0.91	331	Pg	Pg	09 25 44.8	+1.3
EQES				Lg		09 25 57.2	
EQES	Quesada	0.91	331	⇓Pg	Pg	09 25 44.8	+1.3
	2.7nm,0.1s,SNR=18						
EQES				Lg		09 25 57.2	
	599nm,0.8s,SNR=7.4						
EQES	Quesada	0.91	331	⇓Pg	Pg	09 25 44.8	+1.3
	2.7nm,0.1s,SNR=18						
EQES				Lg		09 25 57.2	
	599nm,0.8s,SNR=7.4						
EQES	Quesada	0.91	331	Pg	Pg	09 25 44.8	+1.3
	2.7nm,0.1s,SNR=18						
EQES				Lg		09 25 57.2	
	599nm,0.8s,SNR=7.4						
ERON	Agron	1.04	271	Pg	Pg	09 25 46.7	+0.8
ERON				Lg		09 26 02.1	
ERON	Agron	1.04	271	Pg	Pg	09 25 46.7	+0.8
	6.2nm,0.1s,SNR=7.9						
ERON				Lg		09 26 02.1	
	162nm,0.3s,SNR=7.9						
ERON	Agron	1.04	271	Pg	Pg	09 25 46.7	+0.8
	6.2nm,0.1s,SNR=7.9						
ERON				Lg		09 26 02.1	
	162nm,0.3s,SNR=7.9						
ERON	Agron	1.04	271	Pg	Pg	09 25 46.7	+0.7
	6.2nm,0.1s,SNR=7.9						
ERON				Lg		09 26 02.1	
	162nm,0.3s,SNR=7.9						
EALB	Alboran	1.15	202	Pg	Pg	09 25 46.9	-1.2
EALB				Lg		09 26 01.2	
EALB	Alboran	1.15	202	⇑Pg	Pg	09 25 46.7	-1.4
	45nm,0.2s,SNR=18						
EALB				Lg		09 26 03.0	
	227nm,0.3s,SNR=5.5						
EALB	Alboran	1.15	202	⇑Pg	Pg	09 25 46.7	-1.4
	45nm,0.2s,SNR=18						
EALB				Lg		09 26 03.0	
	227nm,0.3s,SNR=5.5						
EALB	Alboran	1.15	202	Pg	Pg	09 25 46.7	-1.4
	45nm,0.2s,SNR=18						
EALB				Lg		09 26 01.2	
	227nm,0.3s,SNR=5.5						
ELOJ	Sierra Loja	1.32	276	Pg	Pg	09 25 53.0	+1.6
ELOJ				Lg		09 26 11.4	
ELOJ	Sierra Loja	1.32	276	Pg	Pg	09 25 50.5	-0.9
	3.7nm,0.1s,SNR=27						
ELOJ				Lg		09 26 11.4	
	218nm,0.6s,SNR=19						
ELOJ	Sierra Loja	1.32	276	Pg	Pg	09 25 50.5	-0.9
	3.7nm,0.1s,SNR=27						
ELOJ				Lg		09 26 11.4	
	218nm,0.6s,SNR=19						
ELOJ	Sierra Loja	1.32	276	Pg	Pg	09 25 53.0	+1.6
ELOJ				Lg		09 26 11.4	
	218nm,0.6s,SNR=19						
CART	Cartagena	1.33	64	ePg	Pg	09 25 48.9	-2.8
CART				eSg	Sg	09 26 06.6	-2.4
CART	Cartagena	1.33	64	ePg	Pg	09 25 48.9	-2.8
CART				eSg	Sg	09 26 06.6	-2.4
ELUQ	Luque	1.50	292	Pg	Pg	09 25 56.6	+1.7
ELUQ				Lg		09 26 16.0	
ELUQ	Luque	1.50	292	Pg	Pg	09 25 56.6	+1.7
	12nm,0.3s,SNR=7.9						
ELUQ				Lg		09 26 16.0	
	236nm,0.5s,SNR=7.9						
ELUQ	Luque	1.50	292	Pg	Pg	09 25 56.6	+1.7
	12nm,0.3s,SNR=7.9						
ELUQ				Lg		09 26 16.0	
	236nm,0.5s,SNR=7.9						
ELUQ	Luque	1.50	292	Pg	Pg	09 25 56.6	+1.7
	12nm,0.3s,SNR=7.9						
ELUQ				Lg		09 26 16.0	
	236nm,0.5s,SNR=7.9						
EBAN	Banos Encina	1.53	319	Pg	Pg	09 25 56.2	+0.7
EBAN				Lg		09 26 17.3	
EBAN	Banos Encina	1.53	319	⇓Pg	Pg	09 25 56.2	+0.7
	100nm,0.2s,SNR=18						
EBAN				Lg		09 26 17.3	
	123nm,0.2s,SNR=5.0						
EBAN	Banos Encina	1.53	319	⇓Pg	Pg	09 25 56.2	+0.7
	100nm,0.2s,SNR=18						
EBAN				Lg		09 26 17.3	
	123nm,0.2s,SNR=5.0						
EBAN	Banos Encina	1.53	319	Pg	Pg	09 25 56.2	+0.7
	100nm,0.2s,SNR=18						
EBAN				Lg		09 26 17.3	
	123nm,0.2s,SNR=5.0						
EVIA	Vianos	1.63	0	Pg	Pg	09 25 57.4	+0.1
EVIA				Lg		09 26 19.6	
EVIA	Vianos	1.63	0	⇑Pg	Pg	09 25 56.7	-0.5
	11nm,0.1s,SNR=18						
EVIA				Lg		09 26 19.6	
	SNR=7.9						
EVIA	Vianos	1.63	0	⇑Pg	Pg	09 25 56.7	-0.5
	11nm,0.1s,SNR=18						
EVIA				Lg		09 26 19.6	
	SNR=7.9						
EVIA	Vianos	1.63	0	Pg	Pg	09 25 56.7	-0.5
	11nm,0.1s,SNR=18						
EVIA				Lg		09 26 19.6	
	SNR=7.9						
EMLI	Melilla	1.74	192	Sn	Sn	09 26 15.1	-4.4
	165nm,0.2s,SNR=7.9						
EMEL	Melilla	1.74	192	Sn	Sn	09 26 15.1	-4.4
	165nm,0.2s,SNR=7.9						
EMEL	Melilla	1.74	192	Sn	Sn	09 26 15.1	-4.4
	165nm,0.2s,SNR=7.9						
ETOB	Tobarra	1.80	25	Pn	Pn	09 25 58.2	+0.5
ETOB				Sn	Sn	09 26 21.1	+0.2
ETOB	Tobarra	1.80	25	⇑Pn	Pn	09 25 58.2	+0.5
	13nm,0.2s,SNR=18						
ETOB				Sn	Sn	09 26 20.7	-0.2
	101nm,0.4s,SNR=7.9						
ETOB				Lg		09 26 24.9	
	128nm,0.3s,SNR=7.9						
ETOB	Tobarra	1.80	25	⇑Pn	Pn	09 25 58.2	+0.5
	13nm,0.2s,SNR=18						
ETOB				Sn	Sn	09 26 20.7	-0.2
	101nm,0.4s,SNR=7.9						
ETOB				Lg		09 26 24.9	
	128nm,0.3s,SNR=7.9						
ETOB	Tobarra	1.80	25	Pn	Pn	09 25 58.2	+0.5
	13nm,0.2s,SNR=18						
ETOB				Sn	Sn	09 26 21.1	+0.2
ETOB				Lg		09 26 24.9	
	128nm,0.3s,SNR=7.9						
EMIJ	Mijas	1.87	257	Pn	Pn	09 25 58.4	-0.3
EMIJ				Sn	Sn	09 26 21.9	-0.7
EMIJ	Mijas	1.87	257	Pn	Pn	09 25 58.7	0.0
	16nm,0.3s,SNR=7.9						
EMIJ				Sn	Sn	09 26 21.9	-0.7
	20nm,0.3s,SNR=7.9						
EMIJ	Mijas	1.87	257	Pn	Pn	09 25 58.7	0.0
	16nm,0.3s,SNR=7.9						
EMIJ				Sn	Sn	09 26 21.9	-0.7
	20nm,0.3s,SNR=7.9						
EMIJ	Mijas	1.87	257	Pn	Pn	09 25 58.7	0.0
	16nm,0.3s,SNR=7.9						
EMIJ				Sn	Sn	09 26 21.9	-0.7
	20nm,0.3s,SNR=7.9						
EADA	Adamuz	2.01	306	Pn	Pn	09 26 00.8	+0.3
EADA				Pg	Pg	09 26 04.3	-0.3
EADA				Lg		09 26 32.2	
EADA	Adamuz	2.01	306	Pn	Pn	09 26 01.1	+0.6
	1.1nm,0.2s,SNR=5.0						
EADA				Pg	Pg	09 26 04.4	-0.1
	24nm,0.2s,SNR=7.9						
EADA				Lg		09 26 32.2	
	69nm,0.3s,SNR=7.9						
EADA	Adamuz	2.01	306	Pn	Pn	09 26 01.1	+0.6
	1.1nm,0.2s,SNR=5.0						
EADA				Pg	Pg	09 26 04.4	-0.1
	24nm,0.2s,SNR=7.9						
EADA				Lg		09 26 32.2	
	69nm,0.3s,SNR=7.9						
EADA	Adamuz	2.01	306	Pn	Pn	09 26 01.1	+0.6
	1.1nm,0.2s,SNR=5.0						
ZAI	Zaio	2.04	185	Pg	Pg	09 26 04.0	-1.3
ZAI				Sn	Sn	09 26 23.5	-3.4
ZAI	Zaio	2.04	185	Pg	Pg	09 26 04.0	-1.3
ZAI				Sn	Sn	09 26 23.5	-3.4
ZAI	Zaio	2.04	185	iP	Pg	09 26 04.0	-1.3
MPAL	Palemas	2.12	213	Pg	Pg	09 26 06.0	-0.8
MPAL				Sn	Sn	09 26 27.0	-1.9
MPAL	Palemas	2.12	213	Pg	Pg	09 26 06.0	-0.8
MPAL				Sn	Sn	09 26 27.0	-1.9
MPAL	Palemas	2.12	213	eP	Pg	09 26 06.0	-0.8
TOU	Touzarine	2.28	207	Pg	Pg	09 26 09.0	-0.8
TOU				Sn	Sn	09 26 32.0	-0.7
TOU	Touzarine	2.28	207	Pg	Pg	09 26 09.0	-0.8
TOU				Sn	Sn	09 26 32.0	-0.7
TOU	Touzarine	2.28	207	eP	Pg	09 26 09.0	-0.8
EJIF	Jimena Fronter	2.44	258	Pn	Pn	09 26 06.5	0.0
EJIF				Pg	Pg	09 26 11.8	-1.1
EJIF	Jimena Fronter	2.44	258	Pg	Pg	09 26 12.4	-0.4
	1.4nm,0.2s,SNR=7.9						
EJIF	Jimena Fronter	2.44	258	Pg	Pg	09 26 12.4	-0.4
	1.4nm,0.2s,SNR=7.9						
EJIF	Jimena Fronter	2.44	258	Pn	Pn	09 26 06.5	0.0
EJIF	Jimena Fronter	2.44	258	Pg	Pg	09 26 12.4	-0.5
	1.4nm,0.2s,SNR=7.9						
EBEN	Beniarda	2.48	46	Pn	Pn	09 26 05.6	-1.4
EBEN				Pg	Pg	09 26 13.2	-0.4
EBEN				Sn	Sn	09 26 35.2	-2.4
EBEN	Beniarda	2.48	46	Pn	Pn	09 26 05.6	-1.4
	2.7nm,0.3s,SNR=7.9						
EBEN				Pg	Pg	09 26 13.1	-0.4
	5.4nm,0.5s,SNR=7.9						
EBEN				Sn	Sn	09 26 35.2	-2.4
	2.7nm,0.2s,SNR=7.9						
EBEN	Beniarda	2.48	46	Pn	Pn	09 26 05.6	-1.4
	2.7nm,0.3s,SNR=7.9						
EBEN				Pg	Pg	09 26 13.1	-0.4
	5.4nm,0.5s,SNR=7.9						
EBEN				Sn	Sn	09 26 35.2	-2.4
	2.7nm,0.2s,SNR=7.9						
EBEN	Beniarda	2.48	46	Pn	Pn	09 26 05.6	-1.4
	2.7nm,0.3s,SNR=7.9						
EBEN	Beniarda	2.48	46	Pg	Pg	09 26 13.1	-0.4
	5.4nm,0.5s,SNR=7.9						
EBEN				Sn	Sn	09 26 35.2	-2.4
	2.7nm,0.2s,SNR=7.9						
ECAB	El Cabril	2.54	296	Pn	Pn	09 26 08.5	+0.6
ECAB				Pg	Pg	09 26 15.3	+0.5
ECAB				Sn	Sn	09 26 39.5	+0.3
ECAB				Lg		09 26 47.1	
ECAB	El Cabril	2.54	296	Pn	Pn	09 26 08.5	+0.6
	0.7nm,0.1s,SNR=7.9						
ECAB				Pg	Pg	09 26 15.3	+0.5
	15nm,0.3s,SNR=7.9						
ECAB				Sn	Sn	09 26 39.5	+0.3
	8.1nm,0.2s,SNR=7.9						
ECAB				Lg		09 26 47.1	
	104nm,0.4s,SNR=7.9						
ECAB	El Cabril	2.54	296	Pn	Pn	09 26 08.5	+0.6
	0.7nm,0.1s,SNR=7.9						
ECAB				Pg	Pg	09 26 15.3	+0.5
	15nm,0.3s,SNR=7.9						
ECAB				Sn	Sn	09 26 39.5	+0.3
	8.1nm,0.2s,SNR=7.9						
ECAB				Lg		09 26 47.1	
	104nm,0.4s,SNR=7.9						
ECAB	El Cabril	2.54	296	Pn	Pn	09 26 08.5	+0.6
	0.7nm,0.1s,SNR=7.9						
ECAB	El Cabril	2.54	296	Pg	Pg	09 26 15.3	+0.5
	15nm,0.3s,SNR=7.9						
ECAB				Sn	Sn	09 26 39.5	+0.3
	8.1nm,0.2s,SNR=7.9						
ECAB				Lg		09 26 47.1	
	104nm,0.4s,SNR=7.9						
ESPR	Espera	2.68	268	Pg	Pg	09 26 15.1	-2.5
ESPR				Lg		09 26 54.8	
ESPR	Espera	2.68	268	Pg	Pg	09 26 15.6	-1.9
	1.6nm,0.2s,SNR=7.9						
ESPR				Lg		09 26 54.8	
	244nm,1.2s,SNR=7.9						
ESPR	Espera	2.68	268	Pg	Pg	09 26 15.6	-1.9
	1.6nm,0.2s,SNR=7.9						
ESPR				Lg		09 26 54.8	
	244nm,1.2s,SNR=7.9						
ESPR	Espera	2.68	268	Pg	Pg	09 26 15.6	-1.9
	1.6nm,0.2s,SNR=7.9						
ESPR				Lg		09 26 54.8	
	244nm,1.2s,SNR=7.9						
ESDC	Sonseca Array	2.90	337	Pn	Pn	09 26 14.3	+1.6
ESDC				Pg	Pg	09 26 20.1	-1.4
ESDC				Sn	Sn	09 26 47.4	-0.5
ESDC				Lg		09 27 00.5	
ESDC	Sonseca Array	2.90	337	Pn	Pn	09 26 14.3	+1.6
	2.0nm,0.3s,baz=155,slow=12,SNR=94						
ESDC				Pg	Pg	09 26 20.1	-1.4
	baz=158,slow=17,SNR=7.9						
ESDC				Sn	Sn	09 26 47.4	-0.5
	baz=154,slow=22,SNR=7.9						
ESDC				Lg		09 27 00.5	
	baz=150,slow=28,SNR=7.9						
ESDC	Sonseca Array	2.90	337	Pn	Pn	09 26 14.3	+1.6
	2.0nm,0.3s,baz=155,slow=12,SNR=94						
ESDC				Pg	Pg	09 26 20.1	-1.4
	baz=158,slow=17,SNR=7.9						
ESDC				Sn	Sn	09 26 47.4	-0.5
	baz=154,slow=22,SNR=7.9						
ESDC				Lg		09 27 00.5	
	baz=150,slow=28,SNR=7.9						
ESDC	Sonseca Array	2.90	337	Pn	Pn	09 26 14.3	+1.5
	2.0nm,0.3s,SNR=94						
ESDC	Sonseca Array	2.90	337	Pg	Pg	09 26 20.1	-1.4
	SNR=7.9						
ESDC				Sn	Sn	09 26 47.4	-0.5
	SNR=7.9						
ESDC				Lg		09 27 00.5	
	SNR=7.9						
ESLA	Sonseca Array	2.90	337	ePn	Pn	09 26 14.2	+1.5
ESLA				eSg	Sg	09 27 00.9	+1.9
ESLA	Sonseca Array	2.90	337	ePn	Pn	09 26 14.2	+1.4
ESLA				eSg	Sg	09 27 00.9	+1.8
PAB	San Pablo	2.92	331	ePn	Pn	09 26 14.6	+1.5
PAB				eSg	Sg	09 27 02.4	+2.7
PAB	San Pablo	2.92	331	ePn	Pn	09 26 14.6	+1.6
TZK	Tazeka	3.22	206	Pn	Pn	09 26 21.0	+3.8
TZK				Sn	Sn	09 26 55.0	-0.9
TZK	Tazeka	3.22	206	Pn	Pn	09 26 21.0	+3.8
TZK				Sn	Sn	09 26 55.0	-0.9
TZK	Tazeka	3.22	206	iP	Pn	09 26 21.0	+3.8
EMIN	Mina Concepcio	3.40	284	Pn	Pn	09 26 20.4	+0.7
EMIN				Sn	Sn	09 27 00.9	+0.5
EMIN				Lg		09 27 15.2	
EMIN	Mina Concepcio	3.40	284	Pn	Pn	09 26 20.4	+0.7
	0.9nm,0.1s,SNR=15						
EMIN				Sn	Sn	09 27 00.9	+0.5
	5.9nm,0.3s,SNR=7.9						
EMIN				Lg		09 27 15.2	
	33nm,0.6s,SNR=9.1						
EMIN	Mina Concepcio	3.40	284	Pn	Pn	09 26 20.4	+0.7
	0.9nm,0.1s,SNR=15						
EMIN				Sn	Sn	09 27 00.9	+0.5
	5.9nm,0.3s,SNR=7.9						
EMIN				Lg		09 27 15.2	
	33nm,0.6s,SNR=9.1						
EMIN	Mina Concepcio	3.40	284	Pn	Pn	09 26 20.4	+0.7
	0.9nm,0.1s,SNR=15						
EMIN				Sn	Sn	09 27 00.9	+0.5
	5.9nm,0.3s,SNR=7.9						
EMIN				Lg		09 27 15.2	
	33nm,0.6s,SNR=9.1						
RSA	Sarsar	3.43	233	Pn	Pn	09 26 23.0	+2.9
RSA				Sn	Sn	09 26 58.0	-3.1
RSA	Sarsar	3.43	233	Pn	Pn	09 26 23.0	+2.9
RSA				Sn	Sn	09 26 58.0	-3.1
RSA	Sarsar	3.43	233	eP	Pn	09 26 23.0	+2.9
EIBI	Ibiza	3.65	55	Pn	Pn	09 26 22.4	-0.8
EIBI				Sn	Sn	09 27 02.2	-4.3
EIBI	Ibiza	3.65	55	Pn	Pn	09 26 22.4	-0.8
	9.0nm,0.2s,SNR=7.9						
EIBI				Sn	Sn	09 27 02.2	-4.3
	5.7nm,0.2s,SNR=7.9						
EIBI	Ibiza	3.65	55	Pn	Pn	09 26 22.4	-0.8
	9.0nm,0.2s,SNR=7.9						
EIBI				Sn	Sn	09 27 02.2	-4.3
	5.7nm,0.2s,SNR=7.9						
EIBI	Ibiza	3.65	55	Pn	Pn	09 26 22.4	-0.7
	9.0nm,0.2s,SNR=7.9						
EIBI				Sn	Sn	09 27 02.2	-4.3
	5.7nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	3.71	25	Pn	Pn	09 26 25.2	+1.2
EMOS				Pg	Pg	09 26 36.8	-0.3
EMOS				Lg		09 27 22.7	
EMOS	Mosqueruela	3.71	25	Pn	Pn	09 26 25.2	+1.2
	1.2nm,0.3s,SNR=7.9						
EMOS				Pg	Pg	09 26 36.8	-0.3
	25nm,0.5s,SNR=7.9						
EMOS				Lg		09 27 26.8	
	70nm,1.0s,SNR=7.9						
EMOS	Mosqueruela	3.71	25	Pn	Pn	09 26 25.2	+1.2
	1.2nm,0.3s,SNR=7.9						
EMOS				Pg	Pg	09 26 36.8	-0.3
	25nm,0.5s,SNR=7.9						
EMOS				Lg		09 27 26.8	
	70nm,1.0s,SNR=7.9						
EMOS	Mosqueruela	3.71	25	Pn	Pn	09 26 25.2	+1.3
	1.2nm,0.3s,SNR=7.9						
PBAR	Barrancos	3.78	289	ePn	Pn	09 26 26.2	+1.3
PBAR				eSn	Sn	09 27 09.2	-0.5
PBAR				eSg	Sg	09 27 26.1	-1.4
PBAR				A		09 27 37.6	
	36nm,0.5s						
PBAR	Barrancos	3.78	289	Pn	Pn	09 26 26.2	+1.3
PBAR				Sn	Sn	09 27 09.2	-0.5
PBAR				Lg		09 27 26.1	
	36nm,0.5s						
PBAR	Barrancos	3.78	289	Pn	Pn	09 26 26.2	+1.3
PBAR				Sn	Sn	09 27 09.2	-0.5
PBAR				Lg		09 27 26.1	
	36nm,0.5s						
PBAR	Barrancos	3.78	289	ePn	Pn	09 26 26.2	+1.3
PBAR				eSn	Sn	09 27 09.2	-0.5
PBAR				eSg	Sg	09 27 26.1	-1.4
	36nm,0.5s						
ETOR	Torete	3.82	5	Pn	Pn	09 26 26.8	+1.4
ETOR				Pg	Pg	09 26 39.2	-0.1
ETOR				Sn	Sn	09 27 10.6	-0.2
ETOR				Lg		09 27 28.2	
ETOR	Torete	3.82	5	Pn	Pn	09 26 26.8	+1.4
	5.9nm,0.3s,SNR=7.9						
ETOR				Pg	Pg	09 26 39.2	-0.1
	20nm,0.3s,SNR=7.9						
ETOR				Sn	Sn	09 27 10.6	-0.2
	11nm,0.2s,SNR=7.9						
ETOR				Lg		09 27 28.2	
	141nm,0.8s,SNR=7.9						
ETOR	Torete	3.82	5	Pn	Pn	09 26 26.8	+1.4
	5.9nm,0.3s,SNR=7.9						
ETOR				Pg	Pg	09 26 39.2	-0.1
	20nm,0.3s,SNR=7.9						
ETOR				Sn	Sn	09 27 10.6	-0.2
	11nm,0.2s,SNR=7.9						
ETOR				Lg		09 27 28.2	
	141nm,0.8s,SNR=7.9						
ETOR	Torete	3.82	5	Pn	Pn	09 26 26.8	+1.3
	5.9nm,0.3s,SNR=7.9						
ETOR	Torete	3.82	5	Pg	Pg	09 26 39.2	-0.1
	20nm,0.3s,SNR=7.9						
ETOR				Sn	Sn	09 27 10.6	-0.1
	11nm,0.2s,SNR=7.9						
ETOR				Lg		09 27 28.2	
	141nm,0.8s,SNR=7.9						
GUD	Guadarrama	3.85	341	Pn	Pn	09 26 28.0	+2.2
GUD				Pg	Pg	09 26 39.1	-0.7
GUD				Sn	Sn	09 27 11.1	-0.3
GUD				Lg		09 27 30.4	
GUD	Guadarrama	3.85	341	Pn	Pn	09 26 28.0	+2.2
	7.2nm,0.5s,SNR=7.9						
GUD				Pg	Pg	09 26 39.1	-0.7
	3.9nm,0.2s,SNR=7.9						
GUD				Sn	Sn	09 27 11.1	-0.3
	38nm,0.4s,SNR=7.9						
GUD				Lg		09 27 30.4	
	95nm,0.5s,SNR=7.9						
GUD	Guadarrama	3.85	341	Pn	Pn	09 26 28.0	+2.2
	7.2nm,0.5s,SNR=7.9						
GUD				Pg	Pg	09 26 39.1	-0.7
	3.9nm,0.2s,SNR=7.9						
GUD				Sn	Sn	09 27 11.1	-0.3
	38nm,0.4s,SNR=7.9						
GUD				Lg		09 27 30.4	

95nm,0.5s,SNR=7.9
GUD Guadarrama 3.85 341 Pn **Pn 09 26 28.0 +2.2**
7.2nm,0.5s,SNR=7.9
EGRO El Granado 4.00 279 Pn **Pn 09 26 30.2 +2.2**
EGRO Pg **Pg 09 26 42.2 -0.6**
EGRO Sn **Sn 09 27 15.3 +0.2**
EGRO Lg 09 27 36.2
EGRO El Granado 4.00 279 Pn **Pn 09 26 30.2 +2.2**
6.8nm,0.5s,SNR=6.3
EGRO Pg **Pg 09 26 41.3 -1.4**
1.0nm,0.1s,SNR=7.9
EGRO Sn **Sn 09 27 15.3 +0.2**
2.4nm,0.2s,SNR=7.9
EGRO Lg 09 27 36.2
50nm,0.6s,SNR=7.9
EGRO El Granado 4.00 279 Pn **Pn 09 26 30.2 +2.2**
6.8nm,0.5s,SNR=6.3
EGRO Pg **Pg 09 26 41.3 -1.4**
1.0nm,0.1s,SNR=7.9
EGRO Sn **Sn 09 27 15.3 +0.2**
2.4nm,0.2s,SNR=7.9
EGRO Lg 09 27 36.2
50nm,0.6s,SNR=7.9
EGRO El Granado 4.00 279 Pn **Pn 09 26 30.2 +2.2**
6.8nm,0.5s,SNR=6.3
EPLA Plasencia 4.14 319 Pn **Pn 09 26 31.3 +1.4**
EPLA Pg **Pg 09 26 44.6 -0.8**
EPLA Sn **Sn 09 27 18.9 +0.3**
EPLA Lg 09 27 39.5
EPLA Plasencia 4.14 319 Pn **Pn 09 26 31.3 +1.4**
4.3nm,0.3s,SNR=10.0
EPLA Pg **Pg 09 26 44.6 -0.8**
5.4nm,0.4s,SNR=7.9
EPLA Sn **Sn 09 27 18.9 +0.3**
7.1nm,0.3s,SNR=7.9
EPLA Lg 09 27 39.5
232nm,1.3s,SNR=7.1
EPLA Plasencia 4.14 319 Pn **Pn 09 26 31.3 +1.4**
4.3nm,0.3s,SNR=10.0
EPLA Pg **Pg 09 26 44.6 -0.8**
5.4nm,0.4s,SNR=7.9
EPLA Sn **Sn 09 27 18.9 +0.3**
7.1nm,0.3s,SNR=7.9
EPLA Lg 09 27 39.5
232nm,1.3s,SNR=7.1
EPLA Plasencia 4.14 319 Pn **Pn 09 26 31.3 +1.5**
4.3nm,0.3s,SNR=10.0
EPLA Plasencia 4.14 319 Pg **Pg 09 26 44.6 -0.8**
5.4nm,0.4s,SNR=7.9
EPLA Sn **Sn 09 27 18.9 +0.3**
7.1nm,0.3s,SNR=7.9
EPLA Lg 09 27 39.5
232nm,1.3s,SNR=7.1
PVAQ Vaqueiros 4.17 277 *e*Pn **Pn 09 26 31.8 +1.4**
PVAQ *e*Sn **Sn 09 27 18.7 -0.8**
PVAQ *e*Sg **Sg 09 27 42.4 +2.2**
PVAQ A 09 27 52.3
17nm,0.6s
PVAQ Vaqueiros 4.17 277 Pn **Pn 09 26 31.8 +1.4**
PVAQ Sn **Sn 09 27 18.7 -0.8**
PVAQ Lg 09 27 42.4
17nm,0.6s
PVAQ Vaqueiros 4.17 277 Pn **Pn 09 26 31.8 +1.4**
PVAQ Sn **Sn 09 27 18.7 -0.8**
PVAQ Lg 09 27 42.4
17nm,0.6s
PVAQ Vaqueiros 4.17 277 *e*Pn **Pn 09 26 31.8 +1.4**
PVAQ *e*Sn **Sn 09 27 18.7 -0.8**
PVAQ *e*Sg **Sg 09 27 42.4 +2.2**
17nm,0.6s
PBDV Barranco-do-Ve 4.34 275 *e*Pn **Pn 09 26 34.6 +2.0**
PBDV *e*Sn **Sn 09 27 22.3 -1.2**
PBDV *e*Sg **Sg 09 27 44.0 -1.4**
PBDV A 09 27 56.8
35nm,0.7s
PBDV Barranco-do-Ve 4.34 275 Pn **Pn 09 26 34.6 +2.0**
PBDV Sn **Sn 09 27 22.3 -1.2**
PBDV Lg 09 27 44.0
35nm,0.7s
PBDV Barranco-do-Ve 4.34 275 Pn **Pn 09 26 34.6 +2.0**
PBDV Sn **Sn 09 27 22.3 -1.2**
PBDV Lg 09 27 44.0
35nm,0.7s
PBDV Barranco-do-Ve 4.34 275 *e*Pn **Pn 09 26 34.6 +2.0**
PBDV *e*Sn **Sn 09 27 22.3 -1.2**
PBDV *e*Sg **Sg 09 27 44.0 -1.4**
35nm,0.7s
PBEJ Beja 4.38 285 *e*Pn **Pn 09 26 35.3 +2.2**
PBEJ *e*Sg **Sg 09 27 44.3 -2.3**
PBEJ A 09 27 52.6
16nm,0.5s
PBEJ Beja 4.38 285 Pn **Pn 09 26 35.3 +2.2**
PBEJ Lg 09 27 44.3
7.9nm,0.5s
PBEJ Beja 4.38 285 Pn **Pn 09 26 35.3 +2.2**
PBEJ Lg 09 27 44.3
7.9nm,0.5s
PBEJ Beja 4.38 285 *e*Pn **Pn 09 26 35.3 +2.2**
PBEJ *e*Sg **Sg 09 27 44.3 -2.3**
16nm,0.5s
PESTR Estremoz 4.42 296 *e*Pn **Pn 09 26 35.5 +1.7**
PESTR *e*Sn **Sn 09 27 24.7 -0.9**
PESTR *e*Sg **Sg 09 27 46.1 -2.0**
PESTR A 09 27 54.7
47nm,0.5s
PESTR Estremoz 4.42 296 Pn **Pn 09 26 35.5 +1.7**
PESTR Sn **Sn 09 27 24.7 -0.9**
PESTR Lg 09 27 46.1
23nm,0.5s
PESTR Estremoz 4.42 296 Pn **Pn 09 26 35.5 +1.7**
PESTR Sn **Sn 09 27 24.7 -0.9**
PESTR Lg 09 27 46.1
23nm,0.5s
PESTR Estremoz 4.42 296 *e*Pn **Pn 09 26 35.5 +1.7**
PESTR *e*Sn **Sn 09 27 24.7 -0.9**
PESTR *e*Sg **Sg 09 27 46.1 -2.0**
47nm,0.5s
PCVE Castro Verde 4.45 280 *e*Pn **Pn 09 26 36.1 +2.0**
PCVE *e*Sn **Sn 09 27 27.9 +1.6**
PCVE *e*Sg **Sg 09 27 48.6 -0.4**
PCVE A 09 27 55.6
16nm,0.7s
PCVE Castro Verde 4.45 280 Pn **Pn 09 26 36.1 +2.0**
PCVE Sn **Sn 09 27 27.9 +1.6**
PCVE Lg 09 27 48.6
16nm,0.7s
PCVE Castro Verde 4.45 280 Pn **Pn 09 26 36.1 +2.0**
PCVE Sn **Sn 09 27 27.9 +1.6**
PCVE Lg 09 27 48.6
16nm,0.7s
PCVE Castro Verde 4.45 280 *e*Pn **Pn 09 26 36.1 +2.0**
PCVE *e*Sn **Sn 09 27 27.9 +1.6**
PCVE *e*Sg **Sg 09 27 48.6 -0.4**
16nm,0.7s
CZD Col de Zad 4.48 208 Pn **Pn 09 26 38.0 +3.5**
CZD Sn **Sn 09 27 26.0 -1.0**
CZD Col de Zad 4.48 208 Pn **Pn 09 26 38.0 +3.5**
CZD Sn **Sn 09 27 26.0 -1.0**
CZD Col de Zad 4.48 208 *e*P **Pn 09 26 38.0 +3.5**
ERTA Horta de San J 4.52 28 Pn **Pn 09 26 35.1 0.0**
ERTA Horta de San J 4.52 28 Pn **Pn 09 26 35.1 0.0**
2.7nm,0.4s,SNR=7.9
ERTA Sn **Sn 09 27 27.1 -0.8**
2.9nm,0.3s,SNR=7.9
ERTA Lg 09 27 51.4
6.1nm,0.4s,SNR=7.9
ERTA Horta de San J 4.52 28 Pn **Pn 09 26 35.1 0.0**
2.7nm,0.4s,SNR=7.9
ERTA Sn **Sn 09 27 27.1 -0.8**
2.9nm,0.3s,SNR=7.9
ERTA Lg 09 27 51.4
6.1nm,0.4s,SNR=7.9
ERTA Horta de San J 4.52 28 Pn **Pn 09 26 35.1 0.0**
2.7nm,0.4s,SNR=7.9
PMRV Marv??o 4.54 304 *e*Pn **Pn 09 26 37.8 +2.5**
PMRV Marv??o 4.54 304 *e*Pg **Pg 09 26 51.0 -2.0**
PMRV *e*Sn **Sn 09 27 28.0 -0.4**
PMRV *e*Sg **Sg 09 27 50.2 -1.6**
PMRV A 09 28 01.5
41nm,0.5s
PMRV Marv??o 4.54 304 Pn **Pn 09 26 37.8 +2.5**
PMRV Pg **Pg 09 26 51.0 -2.0**
PMRV Sn **Sn 09 27 28.0 -0.4**
PMRV Lg 09 27 50.2
41nm,0.5s
PMRV Marv??o 4.54 304 Pn **Pn 09 26 37.8 +2.5**
PMRV Marv??o 4.54 304 *e*Pg **Pg 09 26 51.0 -2.0**
PMRV *e*Sn **Sn 09 27 28.0 -0.4**
PMRV *e*Sg **Sg 09 27 50.2 -1.6**
41nm,0.5s
EVO Evora 4.62 291 *e*Pn **Pn 09 26 38.0 +1.6**
EVO Evora 4.62 291 *e*Pg **Pg 09 26 54.8 +0.3**
EVO *e*Sn **Sn 09 27 30.3 -0.1**
EVO *e*Sg **Sg 09 27 55.2 +0.9**
40nm,0.5s
EVO Evora 4.62 291 *e*Pn **Pn 09 26 35.5 -0.9**
EVO *e*Sn **Sn 09 27 28.8 -1.6**
EVO *e*Sg **Sg 09 27 52.8 -1.5**
EVO A 09 28 01.6
23nm,0.8s
EVO Evora 4.62 291 Pn **Pn 09 26 35.5 -0.9**
EVO Sn **Sn 09 27 28.8 -1.6**
EVO Lg 09 27 52.8
23nm,0.8s
EVO Evora 4.62 291 Pn **Pn 09 26 35.5 -0.9**
EVO Sn **Sn 09 27 28.8 -1.6**
EVO Lg 09 27 52.8
23nm,0.8s
EVO Evora 4.62 291 *e*Pn **Pn 09 26 35.5 -0.9**
EVO *e*Sn **Sn 09 27 28.8 -1.6**
EVO *e*Sg **Sg 09 27 52.8 -1.5**
23nm,0.8s
EVOP Sao Brissos 4.70 291 *e*Pn **Pn 09 26 38.0 +0.5**
EVOP Sao Brissos 4.70 291 *e*Pg **Pg 09 26 54.8 -1.3**
EVOP *e*Sn **Sn 09 27 30.3 -2.1**
EVOP *e*Sg **Sg 09 27 55.2 -1.7**
20nm,0.5s
PCBR Castelo Branco 4.82 307 *e*Pn **Pn 09 26 41.2 +2.0**
PCBR *e*Sn **Sn 09 27 34.5 -0.8**
PCBR *e*Sg **Sg 09 27 59.5 -1.2**
PCBR A 09 28 11.2
33nm,0.8s
PCBR Castelo Branco 4.82 307 Pn **Pn 09 26 41.2 +2.0**
PCBR Sn **Sn 09 27 34.5 -0.8**
PCBR Lg 09 27 59.5
16nm,0.8s
PCBR Castelo Branco 4.82 307 Pn **Pn 09 26 41.2 +2.0**
PCBR Sn **Sn 09 27 34.5 -0.8**
PCBR Lg 09 27 59.5
16nm,0.8s
PCBR Castelo Branco 4.82 307 *e*Pn **Pn 09 26 41.2 +2.0**
PCBR *e*Sn **Sn 09 27 34.5 -0.8**
PCBR *e*Sg **Sg 09 27 59.5 -1.2**
33nm,0.8s
MOE Montemor 4.87 290 *e*Pn **Pn 09 26 43.7 +3.8**
MOE *e*Sn **Sn 09 27 35.9 -0.6**
MOE *e*Sg **Sg 09 28 02.6 +0.2**
MOE Montemor 4.87 290 *e*Pn **Pn 09 26 43.7 +3.8**
MOE *e*Sn **Sn 09 27 35.9 -0.6**
MOE *e*Sg **Sg 09 28 02.6 +0.2**
MORF Marmelete 4.91 275 *e*Sn **Sn 09 27 38.7 +1.0**
MORF A 09 28 15.9
8.5nm,0.6s
MORF Marmelete 4.91 275 Sn **Sn 09 27 38.7 +1.0**
8.5nm,0.6s
MORF Marmelete 4.91 275 Sn **Sn 09 27 38.7 +1.0**
8.5nm,0.6s
MORF Marmelete 4.91 275 *e*Sn **Sn 09 27 38.7 +1.0**
8.5nm,0.6s
ESAC San Caprasio 4.96 18 Pn **Pn 09 26 42.1 +0.9**
ESAC Pg **Pg 09 26 59.1 -2.0**
ESAC Lg 09 28 02.5
ESAC San Caprasio 4.96 18 Pn **Pn 09 26 42.1 +0.9**
5.9nm,0.2s,SNR=7.9
ESAC Pg **Pg 09 26 59.1 -2.0**
16nm,0.3s,SNR=7.9
ESAC Sn **Sn 09 27 35.7 -3.2**
6.2nm,0.3s,SNR=7.9
ESAC Lg 09 28 02.5
98nm,0.8s,SNR=7.9
ESAC San Caprasio 4.96 18 Pn **Pn 09 26 42.1 +0.9**
5.9nm,0.2s,SNR=7.9
ESAC Pg **Pg 09 26 59.1 -2.0**
16nm,0.3s,SNR=7.9
ESAC Sn **Sn 09 27 35.7 -3.2**
6.2nm,0.3s,SNR=7.9
ESAC Lg 09 28 02.5
98nm,0.8s,SNR=7.9
ESAC San Caprasio 4.96 18 Pn **Pn 09 26 42.1 +0.9**
5.9nm,0.2s,SNR=7.9
PTEO Sao Teotonio 4.98 278 *e*Pn **Pn 09 26 44.6 +3.1**
PTEO *e*Sn **Sn 09 27 38.2 -1.2**
PTEO *e*Sg **Sg 09 28 09.0 +2.9**
PTEO A 09 28 25.6
19nm,0.6s
PTEO Sao Teotonio 4.98 278 Pn **Pn 09 26 44.6 +3.1**
PTEO Sn **Sn 09 27 38.2 -1.2**
PTEO Lg 09 28 09.0
9.6nm,0.6s
PTEO Sao Teotonio 4.98 278 Pn **Pn 09 26 44.6 +3.1**
PTEO Sn **Sn 09 27 38.2 -1.2**
PTEO Lg 09 28 09.0
9.6nm,0.6s
PTEO Sao Teotonio 4.98 278 *e*Pn **Pn 09 26 44.6 +3.1**
PTEO *e*Sn **Sn 09 27 38.2 -1.2**
PTEO *e*Sg **Sg 09 28 09.0 +2.9**
19nm,0.6s
ETOS Mallorca 5.01 55 Pn **Pn 09 26 41.5 -0.3**
ETOS Sn **Sn 09 27 34.0 -6.0**
ETOS Mallorca 5.01 55 Pn **Pn 09 26 41.5 -0.3**
5.6nm,0.4s,SNR=7.6
ETOS Sn **Sn 09 27 34.0 -6.0**
0.9nm,0.3s,SNR=7.9
ETOS Mallorca 5.01 55 Pn **Pn 09 26 41.5 -0.3**
5.6nm,0.4s,SNR=7.6
ETOS Sn **Sn 09 27 34.0 -6.0**
0.9nm,0.3s,SNR=7.9
ETOS Mallorca 5.01 55 Pn **Pn 09 26 41.5 -0.3**
5.6nm,0.4s,SNR=7.6
ETOS Sn **Sn 09 27 34.0 -6.0**
0.9nm,0.3s,SNR=7.9
PFVI Vila Bisbo 5.05 273 *e*Pn **Pn 09 26 46.3 +3.9**
PFVI *e*Sn **Sn 09 27 41.4 +0.3**
PFVI A 09 28 24.7
18nm,0.6s
PFVI Vila Bisbo 5.05 273 Pn **Pn 09 26 44.0 +1.6**
PFVI Sn **Sn 09 27 39.1 -2.0**
PFVI Vila Bisbo 5.05 273 Pn **Pn 09 26 44.0 +1.6**
3.5nm,0.2s,SNR=7.9
PFVI Sn **Sn 09 27 39.1 -2.0**
1.7nm,0.2s,SNR=7.9
PFVI Vila Bisbo 5.05 273 Pn **Pn 09 26 44.0 +1.6**
3.5nm,0.2s,SNR=7.9
PFVI Sn **Sn 09 27 39.1 -2.0**
1.7nm,0.2s,SNR=7.9
PFVI Vila Bisbo 5.05 273 Pn **Pn 09 26 44.0 +1.6**
3.5nm,0.2s,SNR=7.9
PFVI Sn **Sn 09 27 39.1 -2.0**
1.7nm,0.2s,SNR=7.9
EPOB Poblet 5.16 32 Pn **Pn 09 26 44.9 +1.1**
EPOB Poblet 5.16 32 Pn **Pn 09 26 44.9 +1.1**
MTE Manteigas 5.19 312 *e*Sg **Sg 09 28 14.2 +1.4**
MTE A 09 28 19.5
39nm,0.6s
MTE Manteigas 5.19 312 *e*Sg **Sg 09 28 14.2 +1.4**
39nm,0.6s
ZFT Errachidia 5.19 198 Pn **Pn 09 26 48.0 +3.7**
ZFT Sn **Sn 09 27 42.0 -2.6**
ZFT Errachidia 5.19 198 Pn **Pn 09 26 48.0 +3.7**
ZFT Sn **Sn 09 27 42.0 -2.6**
ZFT Errachidia 5.19 198 *e*P **Pn 09 26 48.0 +3.7**
PTOM Tomar 5.32 301 *e*Sn **Sn 09 27 46.0 -1.7**
PTOM *e*Sg **Sg 09 28 15.0 -1.9**
PTOM A 09 28 28.1
26nm,0.8s
PTOM Tomar 5.32 301 Sn **Sn 09 27 46.0 -1.7**
PTOM Lg 09 28 15.0
13nm,0.8s
PTOM Tomar 5.32 301 Sn **Sn 09 27 46.0 -1.7**
PTOM Lg 09 28 15.0
13nm,0.8s
PTOM Tomar 5.32 301 *e*Sn **Sn 09 27 46.0 -1.7**
PTOM *e*Sg **Sg 09 28 15.0 -1.9**
26nm,0.8s
MVO Moncorvo 5.44 321 *e*Pn **Pn 09 26 50.2 +2.5**
MVO *e*Sn **Sn 09 27 49.7 -0.9**
MVO *e*Sg **Sg 09 28 23.8 +3.2**
MVO A 09 28 27.1
48nm,0.6s
MVO Moncorvo 5.44 321 Pn **Pn 09 26 49.8 +2.1**
MVO Sn **Sn 09 27 49.0 -1.6**
MVO Lg 09 28 23.8
MVO Moncorvo 5.44 321 Pn **Pn 09 26 49.8 +2.1**
1.1nm,0.3s,SNR=6.7
MVO Sn **Sn 09 27 49.0 -1.6**
2.3nm,0.2s,SNR=7.9
MVO Lg 09 28 23.8
59nm,0.6s,SNR=7.9
MVO Moncorvo 5.44 321 Pn **Pn 09 26 49.8 +2.1**
1.1nm,0.3s,SNR=6.7
MVO Sn **Sn 09 27 49.0 -1.6**
2.3nm,0.2s,SNR=7.9
MVO Lg 09 28 23.8
59nm,0.6s,SNR=7.9
MVO Moncorvo 5.44 321 Pn **Pn 09 26 49.8 +2.1**
1.1nm,0.3s,SNR=6.7
MVO *e*Sn **Sn 09 27 49.7 -0.9**
MVO Lg 09 28 23.8
59nm,0.6s,SNR=7.9
ECRI Cripan 5.59 0 Pn **Pn 09 26 52.5 +2.7**
ECRI Lg 09 28 25.7
ECRI Cripan 5.59 0 Pn **Pn 09 26 52.5 +2.7**
2.1nm,0.3s,SNR=7.9
ECRI Lg 09 28 25.7
32nm,0.6s,SNR=7.9
ECRI Cripan 5.59 0 Pn **Pn 09 26 52.5 +2.7**
2.1nm,0.3s,SNR=7.9
ECRI Lg 09 28 25.7
32nm,0.6s,SNR=7.9
ECRI Cripan 5.59 0 Pn **Pn 09 26 52.5 +2.7**
2.1nm,0.3s,SNR=7.9
ECRI Lg 09 28 25.7
32nm,0.6s,SNR=7.9
PVIS Viseu 5.60 313 *e*Pn **Pn 09 26 51.9 +2.0**
PVIS *e*Sn **Sn 09 27 52.8 -1.7**
PVIS *e*Sg **Sg 09 28 27.2 +1.4**
PVIS A 09 28 42.7
12nm,0.8s
PVIS Viseu 5.60 313 Pn **Pn 09 26 51.9 +2.0**
PVIS Sn **Sn 09 27 52.8 -1.7**
PVIS Lg 09 28 27.2
6.1nm,0.8s
PVIS Viseu 5.60 313 Pn **Pn 09 26 51.9 +2.0**
PVIS Sn **Sn 09 27 52.8 -1.7**
PVIS Lg 09 28 27.2
6.1nm,0.8s
PVIS Viseu 5.60 313 *e*Pn **Pn 09 26 51.9 +2.0**
PVIS *e*Sn **Sn 09 27 52.8 -1.7**
EARA Aranguren 5.80 7 Lg 09 28 31.5
15nm,0.4s,SNR=7.9
EARA Aranguren 5.80 7 Lg 09 28 31.5
15nm,0.4s,SNR=7.9
PBRG Braganca 5.80 327 *e*Pn **Pn 09 26 54.8 +2.1**
PBRG *e*Sn **Sn 09 28 00.0 +0.5**
PBRG *e*Sg **Sg 09 28 30.0 -2.3**
PBRG A 09 28 36.0
21nm,0.6s
PBRG Braganca 5.80 327 Pn **Pn 09 26 54.8 +2.1**
PBRG Sn **Sn 09 28 00.0 +0.5**
PBRG Lg 09 28 30.0
11nm,0.6s
PBRG Braganca 5.80 327 Pn **Pn 09 26 54.8 +2.1**
PBRG Sn **Sn 09 28 00.0 +0.5**
PBRG Lg 09 28 30.0
11nm,0.6s
PBRG Braganca 5.80 327 *e*Pn **Pn 09 26 54.8 +2.1**
PBRG *e*Sn **Sn 09 28 00.0 +0.5**
PBRG *e*Sg **Sg 09 28 30.0 -2.3**
21nm,0.6s
PVRL Vila Real 5.87 318 *e*Pn **Pn 09 26 55.7 +2.0**
PVRL *e*Sn **Sn 09 28 00.8 -0.5**
PVRL *e*Sg **Sg 09 28 32.2 -2.5**
PVRL A 09 28 48.8
15nm,0.5s
PVRL Vila Real 5.87 318 Pn **Pn 09 26 55.7 +2.0**
PVRL Sn **Sn 09 28 00.8 -0.5**
PVRL Lg 09 28 32.2
7.7nm,0.5s
PVRL Vila Real 5.87 318 Pn **Pn 09 26 55.7 +2.0**
PVRL Sn **Sn 09 28 00.8 -0.5**
PVRL Lg 09 28 32.2
7.7nm,0.5s
PVRL Vila Real 5.87 318 *e*Pn **Pn 09 26 55.7 +2.0**
PVRL *e*Sn **Sn 09 28 00.8 -0.5**
PVRL *e*Sg **Sg 09 28 32.2 -2.5**
15nm,0.5s
IZUN Zunzarren 5.90 8 Lg 09 28 35.4
7.5nm,0.5s,SNR=7.9
IZUN Zunzarren 5.90 8 Lg 09 28 35.4
7.5nm,0.5s,SNR=7.9
IZUN Zunzarren 5.90 8 Lg 09 28 35.4
7.5nm,0.5s,SNR=7.9
ECAL Calabor 5.91 328 Pn **Pn 09 26 56.0 +1.8**
ECAL Lg 09 28 34.6
ECAL Calabor 5.91 328 Pn **Pn 09 26 56.0 +1.8**
5.5nm,0.3s,SNR=15
ECAL Sn **Sn 09 28 01.1 -1.1**
6.5nm,0.5s,SNR=7.9
ECAL Lg 09 28 34.6
181nm,1.7s,SNR=7.9
ECAL Calabor 5.91 328 Pn **Pn 09 26 56.0 +1.8**
5.5nm,0.3s,SNR=15
ECAL Sn **Sn 09 28 01.1 -1.1**
6.5nm,0.5s,SNR=7.9
ECAL Lg 09 28 34.6
181nm,1.7s,SNR=7.9
ECAL Calabor 5.91 328 Pn **Pn 09 26 56.0 +1.8**
5.5nm,0.3s,SNR=15
ECAL Lg 09 28 34.6
181nm,1.7s,SNR=7.9
EORO Oroz-Betelu 5.95 9 Pn **Pn 09 26 57.5 +2.8**
2.6nm,0.4s,SNR=7.9
EORO Pg **Pg 09 27 19.6 -0.4**
4.9nm,0.4s,SNR=7.9
EORO Lg 09 28 35.2
39nm,0.7s,SNR=7.9
EORO Oroz-Betelu 5.95 9 Pn **Pn 09 26 57.5 +2.8**
2.6nm,0.4s,SNR=7.9
EORO Pg **Pg 09 27 19.6 -0.4**
4.9nm,0.4s,SNR=7.9
EORO Lg 09 28 35.2
39nm,0.7s,SNR=7.9
EORO Oroz-Betelu 5.95 9 Pn **Pn 09 26 57.5 +2.8**
2.6nm,0.4s,SNR=7.9
IUSE Utxeti 5.97 7 Lg 09 28 38.7
15nm,0.8s,SNR=7.9
IUSE Utxeti 5.97 7 Lg 09 28 38.7
15nm,0.8s,SNR=7.9
IUSE Utxeti 5.97 7 Lg 09 28 38.7
15nm,0.8s,SNR=7.9
EBIE Bielsa 6.03 19 Pn **Pn 09 26 57.6 +1.8**
EBIE Pg **Pg 09 27 21.1 -0.3**
EBIE Lg 09 28 40.5
EBIE Bielsa 6.03 19 Pn **Pn 09 26 57.6 +1.8**
1.7nm,0.3s,SNR=8.3
EBIE Pg **Pg 09 27 21.1 -0.3**
1.6nm,0.4s,SNR=7.9
EBIE Sn **Sn 09 28 01.0 -4.1**
2.6nm,0.6s,SNR=7.9
EBIE Lg 09 28 40.5
5.9nm,0.6s,SNR=7.9
EBIE Bielsa 6.03 19 Pn **Pn 09 26 57.6 +1.8**
1.7nm,0.3s,SNR=8.3
EBIE Pg **Pg 09 27 21.1 -0.3**
1.6nm,0.4s,SNR=7.9
EBIE Sn **Sn 09 28 01.0 -4.1**
2.6nm,0.6s,SNR=7.9
EBIE Lg 09 28 40.5
5.9nm,0.6s,SNR=7.9
EBIE Bielsa 6.03 19 Pn **Pn 09 26 57.6 +1.8**
1.7nm,0.3s,SNR=8.3
CSOR Sort 6.05 27 Pn **Pn 09 26 57.3 +1.2**
CSOR Sort 6.05 27 Pn **Pn 09 26 57.3 +1.2**
1.8nm,0.3s,SNR=7.9
CSOR Sort 6.05 27 Pn **Pn 09 26 57.3 +1.2**
1.8nm,0.3s,SNR=7.9
CSOR Sort 6.05 27 Pn **Pn 09 26 57.3 +1.2**
1.8nm,0.3s,SNR=7.9
ETSF Etsaut 6.07 14 *e*Pn **Pn 09 26 56.7 +0.3**
ETSF *e*Sg **Sg 09 28 39.5 -1.4**

0.6nm,0.2s
ETSF Etsaut 6.07 14 Pn Pn 09 26 56.7 +0.3
ETSF Lg 09 28 39.5
0.3nm,0.2s
ETSF Etsaut 6.07 14 Pn Pn 09 26 56.7 +0.3
ETSF Lg 09 28 39.5
0.3nm,0.2s
ETSF Etsaut 6.07 14 ePn Pn 09 26 56.7 +0.3
ETSF eSg Sg 09 28 39.5 -1.4
0.3nm,0.2s
CFON Fontmartina 6.10 37 Pn Pn 09 26 55.4 -1.4
1.5nm,0.4s,SNR=7.9
CFON Sn Sn 09 28 04.8 -2.0
2.2nm,0.3s,SNR=7.9
CFON Fontmartina 6.10 37 Pn Pn 09 26 55.4 -1.4
1.5nm,0.4s,SNR=7.9
CFON Sn Sn 09 28 04.8 -2.0
2.2nm,0.3s,SNR=7.9
SJPF Ste Jean 6.17 9 ePn Pn 09 26 58.6 +0.8
SJPF eSg Sg 09 28 42.5 -1.8
1.5nm,0.3s
SJPF Ste Jean 6.17 9 Pn Pn 09 26 58.6 +0.8
SJPF Lg 09 28 42.5
0.8nm,0.3s
SJPF Ste Jean 6.17 9 Pn Pn 09 26 58.6 +0.8
SJPF Lg 09 28 42.5
0.8nm,0.3s
SJPF Ste Jean 6.17 9 ePn Pn 09 26 58.6 +0.8
SJPF eSg Sg 09 28 42.5 -1.8
0.8nm,0.3s
ELIZ Elizondo 6.19 7 Lg 09 28 45.0
SNR=7.9
ELIZ Elizondo 6.19 7 Lg 09 28 45.0
SNR=7.9
EALK Alkurruntz 6.25 7 Pn Pn 09 27 00.6 +1.8
EALK Sn Sn 09 28 08.9 -1.7
EALK Lg 09 28 43.7
EALK Alkurruntz 6.25 7 Pn Pn 09 27 00.6 +1.8
5.8nm,0.7s,SNR=7.9
EALK Sn Sn 09 28 08.9 -1.7
2.2nm,0.3s,SNR=7.9
EALK Lg 09 28 43.7
42nm,0.6s,SNR=7.9
EALK Alkurruntz 6.25 7 Pn Pn 09 27 00.6 +1.8
5.8nm,0.7s,SNR=7.9
EALK Sn Sn 09 28 08.9 -1.7
2.2nm,0.3s,SNR=7.9
EALK Lg 09 28 43.7
42nm,0.6s,SNR=7.9
EALK Alkurruntz 6.25 7 Pn Pn 09 27 00.6 +1.8
5.8nm,0.7s,SNR=7.9
EALK Sn Sn 09 28 08.9 -1.7
2.2nm,0.3s,SNR=7.9
EALK Lg 09 28 43.7
42nm,0.6s,SNR=7.9
ELAN Lanestosa 6.25 354 Pn Pn 09 27 00.2 +1.3
ELAN Pg Pg 09 27 21.3 -4.5
ELAN Sn Sn 09 28 08.8 -1.9
ELAN Lg 09 28 46.7
ELAN Lanestosa 6.25 354 Pn Pn 09 27 00.2 +1.3
4.3nm,0.7s,SNR=7.9
ELAN Pg Pg 09 27 21.3 -4.5
0.2nm,0.2s,SNR=7.9
ELAN Sn Sn 09 28 08.8 -1.9
3.5nm,0.5s,SNR=7.9
ELAN Lg 09 28 46.7
22nm,0.6s,SNR=7.9
ELAN Lanestosa 6.25 354 Pn Pn 09 27 00.2 +1.3
4.3nm,0.7s,SNR=7.9
ELAN Pg Pg 09 27 21.3 -4.5
0.2nm,0.2s,SNR=7.9
ELAN Sn Sn 09 28 08.8 -1.9
3.5nm,0.5s,SNR=7.9
ELAN Lg 09 28 46.7
22nm,0.6s,SNR=7.9
ELAN Lanestosa 6.25 354 Pn Pn 09 27 00.2 +1.3
4.3nm,0.7s,SNR=7.9
PCAB Cabril 6.35 319 ePn Pn 09 27 03.2 +3.0
PCAB eSg Sg 09 28 46.7 -3.1
PCAB A 09 28 57.3
23nm,0.5s
PCAB Cabril 6.35 319 Pn Pn 09 27 03.2 +3.0
PCAB Lg 09 28 46.7
12nm,0.5s
PCAB Cabril 6.35 319 Pn Pn 09 27 03.2 +3.0
PCAB Lg 09 28 46.7
12nm,0.5s
EPF Esparros 6.40 19 ePn Pn 09 27 02.6 +1.7
EPF eSg Sg 09 28 49.8 -1.7
0.4nm,0.3s
EPF Esparros 6.40 19 Pn Pn 09 27 02.6 +1.7
EPF Lg 09 28 49.8
0.2nm,0.3s
EPF Esparros 6.40 19 Pn Pn 09 27 02.6 +1.7
EPF Lg 09 28 49.8
0.2nm,0.3s
EPF Esparros 6.40 19 ePn Pn 09 27 02.6 +1.7
EPF eSg Sg 09 28 49.8 -1.7
0.2nm,0.3s
ELOB Lobios 6.48 320 Pn Pn 09 27 02.9 +0.9
ELOB Sn Sn 09 28 14.8 -1.4
ELOB Lg 09 28 55.1
ELOB Lobios 6.48 320 Pn Pn 09 27 02.9 +0.9
2.9nm,0.4s,SNR=6.2
ELOB Sn Sn 09 28 14.8 -1.4
1.6nm,0.2s,SNR=7.9
ELOB Lg 09 28 55.1
56nm,0.8s,SNR=7.9
ELOB Lobios 6.48 320 Pn Pn 09 27 02.9 +0.9
2.9nm,0.4s,SNR=6.2
ELOB Sn Sn 09 28 14.8 -1.4
1.6nm,0.2s,SNR=7.9
ELOB Lg 09 28 55.1
56nm,0.8s,SNR=7.9
ELOB Lobios 6.48 320 Pn Pn 09 27 02.9 +0.9
2.9nm,0.4s,SNR=6.2
ELOB Sn Sn 09 28 14.8 -1.4
1.6nm,0.2s,SNR=7.9
ELOB Lg 09 28 55.1
56nm,0.8s,SNR=7.9
EARI Arriondas 6.61 343 Pn Pn 09 27 05.3 +1.5
EARI Sn Sn 09 28 15.5 -4.0
EARI Lg 09 28 56.7
EARI Arriondas 6.61 343 Pn Pn 09 27 05.3 +1.5
8.7nm,1.0s,SNR=7.9
EARI Sn Sn 09 28 15.5 -4.0
0.9nm,0.3s,SNR=7.9
EARI Lg 09 28 56.7
27nm,0.6s,SNR=7.9
EARI Arriondas 6.61 343 Pn Pn 09 27 05.3 +1.5
8.7nm,1.0s,SNR=7.9
EARI Sn Sn 09 28 15.5 -4.0
0.9nm,0.3s,SNR=7.9
EARI Lg 09 28 56.7
27nm,0.6s,SNR=7.9
EARI Arriondas 6.61 343 Pn Pn 09 27 05.3 +1.5
8.7nm,1.0s,SNR=7.9
EARI Sn Sn 09 28 15.5 -4.1
0.9nm,0.3s,SNR=7.9
EARI Lg 09 28 56.7
27nm,0.6s,SNR=7.9

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*ISCJB **05** 09:30:05.7±0.6, 33°.04N±0°.05×92°.1E±0°.1, h10km, mb3.6/6, Error ellipse: s-maj=15.0km s-min=7.1km az=8.8*
*IDC **05** 09:30:06.8±0.9, 33°.06N×92°.01E, h0km, mb3.6/7, mb1 3.7/9, mb1mx3.5/27, mbtmp3.6/9, ML3.4/2, Error ellipse: s-maj=38.0km s-min=19.0km az=53.0*
*NEIC **05** 09:30:08.4±0.7, 33°.18N×92°.14E, h10km, mb3.5/2, Error ellipse: s-maj=14.2km s-min=12.9km az=49.0*
ISC 05 09:30:08.0±0.6, 33°.08N±0°.05×92°.1E±0°.1, h10km, n13, σ0§91/14, mb3.6/6, Qinghai

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
LSA Lhasa 3.47 194 Pg Pg 09 31 09.1 -5.3
LSA Sg Sg 09 31 58.4 -1.0
LSA smax
comp=E,90nm,1.0s
MKAR Makanchi Array 15.61 334 Pn Pn 09 33 46.4 -1.5
comp=E,0.1nm,0.3s,baz=138,slow=13,SNR=4.3
SONM Songino Array 18.27 32 P Pn 09 34 22.1 +0.7
comp=E,0.2nm,0.3s,baz=217,slow=11,SNR=5.7
ULN Ulaanbaatar 18.59 33 eP Pn 09 34 23.8 -1.6
comp=E,1.3nm,0.5s
KBL Kabul 19.21 281 eP Pn 09 34 34.4 +1.4
comp=E,2.1nm,0.6s
KURK Kurchatov 20.22 335 P P 09 34 43.2 +0.3
comp=E,1.0nm,0.6s,baz=143,slow=11,SNR=4.9
KURK Kurchatov 20.22 335 P P 09 34 43.2 +0.3
ZALV Zalesovo Beam 21.49 348 P P 09 34 56.2 -0.4
comp=E,0.5nm,0.4s,mb3.2,baz=168,slow=9.9,SNR=3.9
BRTR Keskin Array B 46.80 296 P P 09 38 38.0 +0.3
comp=E,0.3nm,0.4s,mb3.6,baz=83,slow=4.6,SNR=2.9
HFS Hagfors 56.30 324 P P 09 39 48.8 +0.3
comp=E,1.3nm,0.7s,mb4.0,baz=75,slow=17,SNR=2.7
WRA Warramunga Arr 66.39 136 P P 09 40 57.9 +0.6
comp=E,0.6nm,0.9s,mb3.6,baz=324,slow=6.1,SNR=4.1
ASAR Alice Springs 69.08 139 P P 09 41 15.3 +1.2
comp=E,1.0nm,0.8s,mb3.8,baz=329,slow=4.6,SNR=6.4
TORD Torodi Ar. Bea 83.28 281 P P 09 42 35.0 -0.3
comp=E,0.3nm,0.7s,mb3.5,baz=35,slow=5.8,SNR=3.0

CASC 05 09:38:07.8±2.0, 8°.38N×82°.94W, h5km, MD3.9, 1D, Panama-Costa Rica border region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
BRU2 Volcan 0.48 30 eP Pg 09 38 18.1 +1.1
BRU2 eS Sg 09 38 26.3 +3.0
CTCR Cotoan 0.54 19 eP Pg 09 38 18.9 +0.6
BAR1 0.94 337 ⇓iP Pg 09 38 25.1 -0.7
BAR1 eS Sg 09 38 38.6 +0.6
CNI Changuinola 1.11 22 eP Pg 09 38 28.6 -0.6
BUS Buena Vista 1.43 325 eP Pn 09 38 33.8 -0.5
QCR Quepos 1.60 311 eP Pn 09 38 36.3 -0.5
QCR eS Sn 09 38 58.9 +1.1
URSC Urasca 1.67 330 eP Pn 09 38 36.8 -1.0
URSC eS Sn 09 38 58.6 -1.0
LAJ Bijagual 1.89 322 eP Pn 09 38 43.5 +2.8
PRS1 Puriscal 2.10 320 eP Pn 09 38 43.1 -0.5
PRS1 eS Sn 09 39 12.5 +2.4
CGA2 Cerro Gallo 2 2.22 317 eP Pn 09 38 46.0 +0.7
BCIP Isla Barro Col 3.16 75 eS Sn 09 39 43.3 +7.0

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*ISCJB **05** 10:24:21.6±0.5, 33°.21N±0°.04×92°.02E±0°.07, h10km, mb4.1/12, Error ellipse: s-maj=9.5km s-min=5.3km az=22.7*
*IDC **05** 10:24:21.8±0.8, 33°.14N×91°.89E, h0km, mb4.1/12, mb1 4.2/15, mb1mx4.0/29, mbtmp4.1/15, ML4.0/3, Error ellipse: s-maj=31.5km s-min=15.4km az=54.0*
*BJI **05** 10:24:22.4, 33°.15N×91°.96E, h16km, mB4.5/3, mb4.3/6, ML4.2/4, Ms4.2/5, Ms7 4.1/5*
*NEIC **05** 10:24:23.1±0.6, 33°.14N×92°.00E, h10km, mb4.0/5, Error ellipse: s-maj=13.9km s-min=9.4km az=54.0*
*DMN **05** 10:24:57.4±4.7, 31°.13N×90°.14E, h10km, Mb5.0/7, Error ellipse: s-maj=108.6km s-min=8.6km az=44.0*
ISC 05 10:24:24.3±0.5, 33°.31N±0°.04×91°.93E±0°.08, h10km, n39, σ1§06/41, mb4.1/12, 1C, Qinghai

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
LSA Lhasa 3.66 191 Pg Pn 10 25 23.7 +2.7
LSA Sg Sb 10 26 14.4 +0.9
LSA smax
comp=N,180nm,0.9s
LSA smax
comp=E,230nm,0.8s
TAPN Taplejung 6.97 213 eP Pn 10 26 05.0 -1.5
comp=E,15nm,0.5s
GUN Gumba 7.49 226 eP Pn 10 26 13.4 -0.3
comp=E,39nm,0.6s
JIRN Jiri 7.50 223 eP Pn 10 26 13.1 -0.6
comp=E,21nm,0.5s
ODAN Odare 7.53 213 eP Pn 10 26 13.4 -0.8
comp=E,21nm,0.6s
RAMN Ramite 7.84 217 eP Pn 10 26 17.2 -1.2
comp=E,39nm,0.5s
KKN Kakani 7.95 228 eP Pn 10 26 20.2 +0.3
comp=E,29nm,0.6s
PKI Pulchoki 8.02 226 eP Pn 10 26 21.2 +0.2
comp=E,32nm,0.5s
PKIN Phulchoki 8.03 226 eP Pn 10 26 21.4 +0.4
comp=E,34nm,0.6s
DMN Daman 8.18 228 eP Pn 10 26 23.7 +0.6
comp=E,33nm,0.5s
GKN Gorkha 8.21 232 eP Pn 10 26 24.8 +1.3
comp=E,27nm,0.4s
GTA Gaotai 8.80 44 ⇑P Pn 10 26 32.8 +1.2
GTA pP 10 26 37.2
GTA sP 10 26 40.2
GTA S Sn 10 28 21.6 +11
GTA sS 10 28 26.9
GTA pmax pmax
comp=Z,9.0nm,1.0s
GTA pmax pmax
comp=Z,110nm,3.9s
GTA LR LR
comp=N,1μm,10.4s
GTA LR LR
comp=E,790nm,11.3s
GTA LR LR
comp=Z,880nm,11.6s
KOLN Koldanda 9.06 235 eP Pn 10 26 37.2 +2.0
comp=Z,27nm,0.6s
MK31 Makanchi Array 15.34 334 ePn Pn 10 28 01.2 +0.4
MKAR Makanchi Array 15.34 334 Pn Pn 10 28 00.1 -0.8
comp=Z,0.2nm,0.3s,baz=148,slow=14,SNR=9.4
TKM2 Tokmak 2 16.02 312 ePn Pn 10 28 12.0 +2.4
comp=Z,15nm,1.3s
CMAR Chiang Mai Arr 16.07 155 Pn Pn 10 28 06.0 -4.4
comp=Z,0.4nm,0.3s,baz=335,slow=12,SNR=10.0
AAK Ala-Archa 16.58 309 Pn Pn 10 28 20.4 +3.6
comp=Z,0.3nm,0.3s,baz=174,slow=10,SNR=2.5
EKS2 Erkin-Say 17.06 308 ePn Pn 10 28 28.0 +5.1
comp=Z,7.2nm,0.8s
SONM Songino Array 18.16 33 P Pn 10 28 37.0 +0.6
comp=Z,0.6nm,0.3s,baz=215,slow=13,SNR=26
ULN Ulaanbaatar 18.48 34 eP Pn 10 28 41.5 +1.1
comp=Z,11nm,1.2s
KBL Kabul 19.03 280 eP Pn 10 28 47.2 -0.1
comp=Z,7.9nm,0.9s
KURK Kurchatov 19.96 335 P Pn 10 28 57.0 -1.1
comp=Z,3.2nm,0.7s,baz=145,slow=12,SNR=14
ZALV Zalesovo Beam 21.25 348 P P 10 29 11.2 +0.8
comp=Z,3.8nm,0.8s,mb3.8,baz=164,slow=11,SNR=8.9
BVAR Borovoye Array 25.03 328 P P 10 29 49.3 +0.9
comp=Z,2.6nm,0.7s,mb3.9,baz=134,slow=10,SNR=7.1
ABKAR Akbulak array 28.57 313 eP P 10 30 19.5 -0.8
comp=Z,2.2nm,0.8s,mb3.9
AKTK Aktyubinsk 30.16 315 P P 10 30 34.0 -0.4
AKTO Aktyubinsk 30.16 315 P P 10 30 34.0 -0.4
comp=Z,2.0nm,0.7s,mb3.9,baz=106,slow=13,SNR=5.0
BRTR Keskin Array B 46.58 295 P P 10 32 51.6 -0.7
comp=Z,1.1nm,0.7s,mb3.9,baz=98,slow=7.6,SNR=4.3
EIL Elat 48.22 282 P P 10 33 05.3 0.0
comp=Z,5.8nm,0.8s,mb4.7,baz=45,slow=5.7,SNR=4.3
FINES FINESS Array B 49.92 325 P P 10 33 17.4 -0.4
comp=Z,1.9nm,0.9s,mb4.1,baz=72,slow=4.5,SNR=3.8
FINES FINESS Array B 49.92 325 P P 10 33 17.4 -0.4
comp=Z,1.9nm,0.9s,mb4.1,baz=72,slow=4.5,SNR=3.8
ARCES ARCESS Array B 50.99 335 P P 10 33 25.5 -0.4
comp=Z,1.7nm,0.8s,mb4.0,baz=83,slow=8.3,SNR=2.8
NB2 NORSAR Subarra 57.10 325 P P 10 34 09.2 -1.3
comp=Z,2.1nm,0.9s,mb4.2,baz=80,slow=7.4
NOA NORSAR Array B 57.10 325 P P 10 34 09.3 -1.3
comp=Z,1.2nm,0.9s,mb3.9,baz=80,slow=7.1,SNR=3.2
NOA NORSAR Array B 57.10 325 P P 10 34 09.3 -1.3
WRA Warramunga Arr 66.64 136 P P 10 35 18.4 -0.4
comp=Z,3.1nm,0.8s,mb4.4,baz=332,slow=7.1,SNR=6.4
ASAR Alice Springs 69.34 139 P P 10 35 30.5 -1.7
comp=Z,3.8nm,0.7s,mb4.4,baz=325,slow=6.4,SNR=12
TORD Torodi Ar. Bea 83.10 281 P P 10 36 49.1 -1.7
comp=Z,0.9nm,0.6s,mb4.0,baz=44,slow=4.4,SNR=9.2

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*IDC **05** 10:26:04.6±1.1, 2°.99S×137°.69E, h0km, mb4.2/4, mb1 4.3/6, mb1mx3.9/15, mbtmp4.2/6, ML4.1/2, Error ellipse: s-maj=49.6km s-min=13.6km az=86.0*
*NEIC **05** 10:26:06.1±0.8, 2°.94S×137°.96E, h10km, mb4.4/5, Error ellipse: s-maj=20.1km s-min=11.2km az=74.0*
*ISCJB **05** 10:26:07.7±2.9, 3°.07S±0°.07×138°.2E±0°.1, h43km±28km, mb4.3/5, Error ellipse: s-maj=17.0km s-min=12.4km az=175.7*
ISC 05 10:26:07.5±3.3, 2°.95S±0°.06×138°.15E±0°.10, h24km±24km, n20, σ1§11/24, mb4.3/5, Irian Jaya

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
KAKA Kakadu 11.22 210 eP Pn 10 28 46.6 +0.1
28nm,0.5s
KAKA Kakadu 11.22 210 ePn Pn 10 28 46.6 +0.1
72nm,0.5s
KAKA eSn Sn 10 30 51.4 +0.2
COEN Coen 12.01 156 ePn Pn 10 28 58.4 +1.1
COEN eSn Sn 10 31 09.3 -1.2
WRAB Tennant Creek 17.28 192 ePn Pn 10 30 05.5 -1.8
16nm,0.8s
WRA Warramunga Arr 17.29 192 P Pn 10 30 05.0 -2.4
0.6nm,0.3s,baz=15,slow=13,SNR=24
WRA S Sn 10 33 13.9 -5.3
0.3nm,0.3s,baz=14,slow=22,SNR=5.4
WRA Warramunga Arr 17.29 192 P Pn 10 30 05.0 -2.4
WRA S Sn 10 33 13.9 -5.3
KAPI Kappang 18.46 263 eP Pn 10 30 27.9 +5.9
7.5nm,0.7s
CTA Charters Tower 18.78 156 eP Pn 10 30 28.3 +2.6
5.8nm,0.6s
CTA Charters Tower 18.78 156 P Pn 10 30 28.1 +2.4
0.4nm,0.3s,baz=359,slow=10,SNR=5.3
CTAO Charters Tower 18.78 156 eP Pn 10 30 27.8 +2.1
8.0nm,0.7s
FITZ Fitzroy Crossi 19.41 218 eP Pn 10 30 35.1 +1.7
7.3nm,1.2s
FITZ Fitzroy Crossi 19.41 218 P Pn 10 30 32.8 -0.5
0.4nm,0.3s,baz=84,slow=10.0,SNR=10.0
FITZ S Sn 10 33 58.6 -12
0.3nm,0.3s,baz=177,slow=13,SNR=4.7
ASAR Alice Springs 21.00 191 P P 10 30 49.8 +0.5
12nm,0.7s,baz=20,slow=11,SNR=63
ASAR S S 10 34 43.4 +1.2
4.2nm,0.9s,baz=12,slow=24,SNR=9.9
MBWA Marble Bar 25.47 223 eP P 10 31 34.4 +0.5
43nm,1.7s,mb4.7
CM31 Chiang Mai Arr 44.07 300 eP P 10 34 14.1 +0.2
8.3nm,0.3s,mb4.9
MKAR Makanchi Array 69.64 323 P P 10 37 14.8 -0.1
1.6nm,0.7s,mb4.1,baz=111,slow=8.0,SNR=16
KURK Kurchatov 73.59 325 P P 10 37 38.1 -0.5
1.2nm,0.8s,mb3.9,baz=123,slow=5.1,SNR=6.6
BVAR Borovoye Array 79.19 325 P P 10 38 10.1 -0.3
1.8nm,0.7s,mb4.1,baz=109,slow=8.0,SNR=10
LPAZ La Paz 147.75 127 PKPbc PKPbc 10 45 53.2 +1.9
1.2nm,1.1s,baz=284,slow=4.2,SNR=3.0
LPAZ La Paz 147.75 127 PKPbc PKPbc 10 45 53.2 +1.9

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*BJI **05** 10:28:15.7, 32°.71N×76°.11E, h56km, mb3.6/1, ML3.5/3*
*IDC **05** 10:28:20.8±0.8, 33°.34N×75°.84E, h0km, mb3.8/11, mb1 3.9/13, mb1mx3.8/29, mbtmp3.8/13, ML3.3/2, MS3.4/1, Ms1 3.5/1, ms1mx3.0/13, Error ellipse: s-maj=25.8km s-min=15.6km az=52.0*
*NDI **05** 10:28:23.8±5.0, 33°.64N×75°.43E, h57km, ML3.6, mb3.5(NEIC)*
*ISCJB **05** 10:28:26.4±0.6, 33°.43N±0°.04×75°.94E±0°.08, h58km±7km, mb3.9/11, Error ellipse: s-maj=11.8km s-min=5.7km az=159.4*
*NEIC **05** 10:28:28.4±2.4, 33°.47N×75°.94E, h57km±20km, mb3.5/1, Error ellipse: s-maj=22.4km s-min=11.3km az=212.0*
ISC 05 10:28:27.6±5.5, 33°.42N±0°.03×75°.94E±0°.08, h51km±7km, n43, σ1§34/56, mb3.9/11, 3D, Eastern Kashmir

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
DLH Dalhousie 0.88 178 ePKP Pn 10 28 42.0 -1.6
DLH eS Sn 10 28 56.0 +0.6
THN Thein Dam 1.00 191 ex Pn 10 28 42.5 -2.8
THN eS Sn 10 28 59.4 +1.0
JMU Jammu 1.12 231 ePKP Pn 10 28 47.5 +0.6
JMU eS Sn 10 29 06.5 +5.3
BHK Bhakra 2.04 168 ePKP Pn 10 29 01.0 +1.6
BHK ex Sn 10 29 29.8 +6.1
CHCP Chirah Chowk 2.25 277 ⇓P Pn 10 29 04.7 +2.5
SMLA Simla 2.51 155 iP Pn 10 29 07.8 +1.9
SMLA iS Sn 10 29 38.9 +3.6
SMLA 10 29 47.1
comp=E,19μm,0.3s
SMLA ⇓ 10 29 47.1
comp=N,19μm,0.2s
KLP Kalpa 2.71 133 ePKP Pn 10 29 12.8 +4.2
KLP eS Sn 10 29 47.0 +6.7
KLP AML AML 10 29 52.3
comp=E,996nm,0.4s
KLP AML AML 10 29 53.5
comp=N,2μm,0.6s
CEP Cherat 3.39 278 ⇓P Pn 10 29 18.1 +0.2
DDI Dehra Dun 3.58 149 ex Pn 10 29 24.5 +4.0
DDI ex Sn 10 30 13.2 +12
JOSI Joshimath 4.20 132 ePKP Pn 10 29 32.7 +3.7
NDI New Delhi 4.85 167 ePKP Pn 10 29 38.0 +0.1
NDI ePKP 10 29 38.5
NDI eS Sn 10 30 32.0 -0.8
AYAN Aya Nagar 5.03 168 iP Pn 10 29 41.3 +0.9
AYAN eS Sn 10 30 37.4 +0.2
SONA Sohna 5.25 169 ePKP Pn 10 29 44.8 +1.4
SONA eS Sn 10 30 40.1 -2.5
SONA AML AML 10 30 44.0
comp=N,24nm,0.3s
SONA AML AML 10 30 44.3
comp=E,42nm,0.3s
KHET Khetri 5.33 181 ePKP Pn 10 29 43.9 -0.7
KHET eS Sn 10 30 40.6 -4.1
KHET AML AML 10 31 22.6
comp=N,46nm,0.3s
KHET AML AML 10 31 23.0
comp=E,64nm,0.4s
KSH Kashi 6.08 0 P Pn 10 29 52.0 -2.9
KSH smax
comp=N,24nm,0.7s
KSH smax
comp=E,26nm,0.7s
AGRA Agra 6.41 164 eS Sn 10 31 09.0 -2.1
AGRA AML AML 10 31 50.8
comp=E,71nm,0.3s
AGRA AML AML 10 31 51.3
comp=N,75nm,0.3s
AJM Ajmer 7.01 190 ePKP Pn 10 30 05.7 -1.9
AJM ex x 10 30 06.0
AJM eS Sn 10 31 19.8 -6.1
AJM AML AML 10 32 18.7
comp=E,54nm,0.4s
AJM AML AML 10 32 19.0
comp=N,30nm,0.6s
AAK Ala-Archa 9.27 353 Pn Pn 10 30 39.0 +0.5
comp=N,1.4nm,0.3s,baz=207,slow=8.8,SNR=3.9
EKS2 Erkin-Say 9.38 350 ePn Pn 10 30 42.1 +2.1
TKM2 Tokmak 2 9.49 358 ePn Pn 10 30 41.5 0.0
comp=N,2.9nm,0.4s
BHPL Bhopal 10.22 172 ePKP Pn 10 30 49.3 -2.4
BHPL eS Sn 10 32 37.9 -7.0
BHPL AML AML 10 32 44.5
comp=N,20nm,0.3s
BHPL AML AML 10 32 45.4
comp=E,19nm,0.4s
MKAR Makanchi Array 14.21 18 Pn Pn 10 31 44.5 -1.2
comp=E,0.2nm,0.3s,baz=197,slow=12,SNR=6.0
MKAR Sn Sn 10 34 13.2 -8.6
comp=E,0.2nm,0.3s,baz=200,slow=20,SNR=4.0
KURK Kurchatov 17.40 6 P Pn 10 32 21.3 -5.2
comp=E,0.1nm,0.3s,baz=192,slow=11,SNR=6.3
KURK Kurchatov 17.40 6 P Pn 10 32 21.3 -5.2
ABKAR Akbulak array 19.80 328 eP P 10 32 52.7 -2.7
comp=E,1.5nm,0.5s
BVAR Borovoye Array 20.00 350 P Pn 10 32 56.3 -1.4
comp=E,1.2nm,0.4s,baz=172,slow=12,SNR=4.5
GTA Gaotai 20.10 66 eP P 10 32 49.1 -7.8
GTA pP 10 32 57.3
GTA pmax pmax
comp=Z,2.0nm,0.7s
ZALV Zalesovo Beam 21.47 14 P P 10 33 10.0 -1.5
comp=Z,1.1nm,0.3s,mb3.6,baz=204,slow=10,SNR=5.6
AKTK Aktyubinsk 21.51 328 P P 10 33 11.6 -0.4
AKTO Aktyubinsk 21.51 328 P P 10 33 11.6 -0.4
comp=Z,3.7nm,0.6s,mb4.0,baz=126,slow=8.5,SNR=10
CMAR Chiang Mai Arr 25.41 120 P P 10 33 50.4 0.0
comp=Z,3.8nm,1.0s,mb3.9,baz=312,slow=10.0,SNR=10
SONM Songino Array 27.02 49 P P 10 34 05.9 +1.2
comp=Z,0.4nm,0.4s,mb3.3,baz=241,slow=5.9,SNR=3.6
JOF Joensuu 40.55 330 ep P 10 36 01.6 +0.1
comp=Z,2.3nm,0.5s,mb4.1
FINES FINESS Array B 42.28 327 P P 10 36 16.4 +0.7
comp=Z,3.9nm,1.0s,mb4.0,baz=79,slow=9.9,SNR=4.5
ARCES ARCESS Array B 45.53 338 P P 10 36 42.4 +0.7

comp=Z,2.5nm,0.9s,mb4.2,baz=111,slow=9.2,SNR=4.1
HFS Hagfors 47.97 323 P **P 10 37 01.3 +0.5**
comp=Z,0.9nm,0.6s,mb4.0,baz=52,slow=9.3,SNR=3.2
NOA NORSAR Array B 49.26 324 LR LR 11 01 24.2
comp=Z,42nm,20.1s,baz=85,slow=40
CDF Champ du Feu 52.30 308 *e*P **P 10 37 34.6 +0.8**
LOR Lormes 54.78 308 *e*P **P 10 37 51.5 -0.5**
TORD Torodi Ar. Bea 69.81 273 P **P 10 39 32.4 -0.6**
comp=Z,0.6nm,0.4s,mb3.8,baz=46,slow=5.4,SNR=10
WRA Warramunga Arr 76.91 125 P **P 10 40 15.6 +1.0**
comp=Z,0.6nm,0.5s,mb3.8,baz=317,slow=6.3,SNR=12
ASAR Alice Springs 79.17 128 P **P 10 40 28.0 +1.0**
comp=Z,1.1nm,0.8s,mb3.8,baz=320,slow=5.3,SNR=6.9
ASAR Alice Springs 79.17 128 P **P 10 40 28.0 +1.0**

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*IDC **05** 10:34:06.8±0.9, 38°.15N×21°.68E, h0km, mb3.9/14, mb1 3.9/19, mb1mx3.9/33, mbtmp3.9/19, ML3.6/5, Error ellipse: s-maj=18.3km s-min=14.6km az=166.0*
*THE **05** 10:34:08.5, 38°.04N×21°.55E, h6km±1km, ML4.8/6, Error ellipse: s-maj=1.2km s-min=0.6km az=259.0*
*NEIC **05** 10:34:08.8, 38°.07N×21°.55E, h17km, ML4.3(ATH), ML3.9(PDG), After ATH.*
*ATH **05** 10:34:08.8, 38°.07N×21°.55E, h17km, MD4.1/9, ML4.3*
*ISCJB **05** 10:34:09.1±0.3, 38°.09N±0°.02×21°.50E±0°.02, h20km±2km, mb3.9/15, Error ellipse: s-maj=2.8km s-min=2.0km az=32.7*
*CSEM **05** 10:34:09.2±0.1, 38°.03N×21°.56E, h15km, ML4.3, Error ellipse: s-maj=3.6km s-min=2.6km az=34.0*
*PDG **05** 10:34:09.1±1.0, 38°.06N×21°.62E, h15km±2km, ML3.9/9, Error ellipse: s-maj=1.6km s-min=2.3km az=0.0*
*HLW **05** 10:34:10.3, 37°.98N×22°.05E, h25km±43km, Md4.2, Ml3.8*
ISC 05 10:34:09.2±0.3, 38°.05N±0°.01×21°.54E±0°.02, h10km±2km, n303, σ1°28/400, mb3.9/15, 20C-21D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.06**	**274**	*e*Pb	**Pg**	**10 34 12.2**	**+1.0**
RLS				*e*Sb	**Sg**	10 34 14.9	+2.2
RLS	**Riolos of Patr**	**0.06**	**274**	*e*PB	**Pg**	10 34 12.2	+1.0
RLS				*e*SB	**Sg**	10 34 14.9	+2.2
RLS	**Riolos of Patr**	**0.06**	**274**	*e*Pb	**Pg**	10 34 12.2	+1.0
RLS				*e*Sb	**Sg**	10 34 14.9	+2.2
UPR	**University Cam**	**0.30**	**40**	*e*PB	**Pg**	10 34 15.3	+0.1
UPR				*e*SB	**Sg**	10 34 19.6	+0.3
UPR	**University Cam**	**0.30**	**40**	P	**Pg**	10 34 15.3	+0.1
UPR				S	**Sg**	10 34 19.6	+0.3
UPR	**University Cam**	**0.30**	**40**	P	**Pg**	10 34 15.3	+0.1
UPR				S	**Sg**	10 34 19.6	+0.3
LAKA	**Lakka**	**0.39**	**62**	P	**Pg**	10 34 16.5	-0.4
LAKA				S	**Sg**	10 34 22.4	+0.2
LAKA	**Lakka**	**0.39**	**62**	P	**Pg**	10 34 16.5	-0.4
LAKA				S	**Sg**	10 34 22.4	+0.2
EFP	**Efpalio**	**0.47**	**38**	*e*PB	**Pg**	10 34 18.0	-0.4
EFP				*e*SB	**Sg**	10 34 25.3	+0.7
EFP	**Efpalio**	**0.47**	**38**	P	**Pg**	10 34 17.9	-0.5
EFP				S	**Sg**	10 34 24.2	-0.4
EFP	**Efpalio**	**0.47**	**38**	*e*Pb	**Pg**	10 34 18.0	-0.4
EFP				S	**Sg**	10 34 24.2	-0.4
EFP				*e*Sb	**Sg**	10 34 25.3	+0.7
KALE	**Kalithea**	**0.58**	**54**	P	**Pg**	10 34 19.7	-0.8
KALE				S	**Sg**	10 34 28.7	+0.6
KALE	**Kalithea**	**0.58**	**54**	P	**Pg**	10 34 19.7	-0.8
KALE				S	**Sg**	10 34 28.7	+0.6
KFL	**Anninata**	**0.59**	**276**	P	**Pg**	10 34 20.7	0.0
KFL				S	**Sg**	10 34 28.8	+0.3
KFL	**Anninata**	**0.59**	**276**	P	**Pg**	10 34 20.7	0.0
KFL				S	**Sg**	10 34 28.8	+0.3
GUR	**Goura**	**0.65**	**100**	*e*PB	**Pg**	10 34 20.6	-1.1
GUR				*e*SN	**Sg**	10 34 30.3	+0.2
GUR	**Goura**	**0.65**	**100**	P	**Pg**	10 34 20.5	-1.2
GUR				S	**Sg**	10 34 30.3	+0.2
GUR	**Goura**	**0.65**	**100**	*e*Pb	**Pg**	10 34 20.6	-1.1
GUR				S	**Sg**	10 34 30.3	+0.2
VLS	**Valsamata**	**0.76**	**280**	P	**Pg**	10 34 22.7	-1.1
VLS	**Valsamata**	**0.76**	**280**	*e*PB	**Pg**	10 34 23.1	-0.7
VLS				*e*SN	**Sg**	10 34 35.3	+1.6
VLS	**Valsamata**	**0.76**	**280**	P	**Pg**	10 34 22.7	-1.1
VLS				S	**Sg**	10 34 33.8	+0.1
VLS	**Valsamata**	**0.76**	**280**	P	**Pg**	10 34 22.7	-1.1
VLS	**Valsamata**	**0.76**	**280**	*e*Pb	**Pg**	10 34 23.1	-0.7
VLS				S	**Sg**	10 34 33.8	+0.1
DSF	**Desfina**	**0.86**	**65**	P	**Pg**	10 34 24.0	-1.7
DSF	**Desfina**	**0.86**	**65**	P	**Pg**	10 34 24.0	-1.7
EVR	**Evrytania**	**0.89**	**14**	*e*Pn	**Pg**	10 34 25.5	-0.8
EVR	**Evrytania**	**0.89**	**14**	*e*PN	**Pg**	10 34 25.5	-0.8
EVR	**Evrytania**	**0.89**	**14**	*e*Pn	**Pg**	10 34 25.5	-0.8
ITM	**Ithomi**	**0.93**	**160**	P	**Pg**	10 34 25.8	-1.2
ITM	**Ithomi**	**0.93**	**160**	*e*PB	**Pg**	10 34 26.1	-0.9
ITM				*e*SN	**Sg**	10 34 40.5	+1.5
ITM	**Ithomi**	**0.93**	**160**	P	**Pg**	10 34 25.8	-1.2
ITM	**Ithomi**	**0.93**	**160**	P	**Pg**	10 34 25.8	-1.2
ITM	**Ithomi**	**0.93**	**160**	*e*Pb	**Pg**	10 34 26.1	-0.9
ITM				*e*Sn	**Sg**	10 34 40.5	+1.5
VLX	**Vlachokerasia**	**0.95**	**135**	*e*PB	**Pg**	10 34 26.3	-1.2
VLX				*e*SN	**Sn**	10 34 41.1	-1.1
VLX	**Vlachokerasia**	**0.95**	**135**	P	**Pg**	10 34 26.1	-1.4
VLX				S	**Sg**	10 34 39.6	-0.3
VLX	**Vlachokerasia**	**0.95**	**135**	*e*Pb	**Pg**	10 34 26.3	-1.2
VLX				S	**Sg**	10 34 39.6	-0.3
VLX				*e*Sn	**Sn**	10 34 41.1	-1.1
LKD2	**Lefkada island**	**1.01**	**317**	P	**Pg**	10 34 27.1	-1.5
LKD2				S	**Sg**	10 34 43.0	+1.3
LKD2	**Lefkada island**	**1.01**	**317**	P	**Pg**	10 34 27.1	-1.5
LKD2				S	**Sg**	10 34 43.0	+1.3
LTK	**Loutraki**	**1.13**	**91**	*e*PB	**Pg**	10 34 29.4	-1.5
LTK				*e*SN	**Sg**	10 34 45.9	+0.4
LTK	**Loutraki**	**1.13**	**91**	P	**Pg**	10 34 28.9	-2.0
LTK				S	**Sg**	10 34 45.2	-0.3
LTK	**Loutraki**	**1.13**	**91**	P	**Pg**	10 34 28.9	-2.0
LTK	**Loutraki**	**1.13**	**91**	*e*Pb	**Pg**	10 34 29.4	-1.5
LTK				S	**Sg**	10 34 45.2	-0.3
LTK				*e*Sn	**Sg**	10 34 45.9	+0.4
AGG	**Agios Georgios**	**1.15**	**32**	P	**Pg**	10 34 29.3	-2.0
AGG				S	**Sg**	10 34 46.1	-0.1
AGG	**Agios Georgios**	**1.15**	**32**	*e*PN	**Pg**	10 34 30.2	-1.1
AGG	**Agios Georgios**	**1.15**	**32**	P	**Pg**	10 34 29.3	-2.0
AGG				S	**Sg**	10 34 46.1	-0.1
AGG	**Agios Georgios**	**1.15**	**32**	*e*Pn	**Pg**	10 34 30.2	-1.1
AGG				S	**Sg**	10 34 46.1	-0.1
PYL	**PYLOS**	**1.17**	**172**	*e*PB	**Pb**	10 34 30.5	-0.9
PYL				*e*SN	**Sn**	10 34 48.3	+0.8
PYL	**PYLOS**	**1.17**	**172**	P	**Pb**	10 34 30.1	-1.3
PYL				S	**Sb**	10 34 47.0	+0.4
PYL	**PYLOS**	**1.17**	**172**	P	**Pb**	10 34 30.1	-1.3
PYL	**PYLOS**	**1.17**	**172**	*e*Pb	**Pb**	10 34 30.5	-0.9
PYL				S	**Sb**	10 34 47.0	+0.4
PYL				*e*Sn	**Sn**	10 34 48.3	+0.8
LKR	**Lokris**	**1.29**	**62**	P	**Pn**	10 34 31.2	-2.1
LKR	**Lokris**	**1.29**	**62**	*e*PB	**Pn**	10 34 32.1	-1.2
LKR	**Lokris**	**1.29**	**62**	P	**Pn**	10 34 31.2	-2.1
LKR	**Lokris**	**1.29**	**62**	*e*Pb	**Pn**	10 34 32.1	-1.2
DID	**Didima**	**1.45**	**112**	*e*PN	**Pn**	10 34 35.2	-0.3
DID				*e*SN	**Sn**	10 34 56.6	+2.1
DID	**Didima**	**1.45**	**112**	*e*Pn	**Pn**	10 34 35.2	-0.3
THL	**Klokotos Trika**	**1.55**	**14**	*e*PN	**Pn**	10 34 37.8	+0.9
THL				*e*SN	**Sn**	10 34 59.6	+2.5
THL	**Klokotos Trika**	**1.55**	**14**	*e*Pn	**Pn**	10 34 37.8	+0.9
THL				*e*Sn	**Sn**	10 34 59.6	+2.5
NAIG	**Nisos Aigina**	**1.57**	**100**	*e*Pn	**Pn**	10 34 38.1	+1.0
NAIG	**Nisos Aigina**	**1.57**	**100**	*e*PN	**Pn**	10 34 38.1	+1.0
NAIG	**Nisos Aigina**	**1.57**	**100**	*e*Pn	**Pn**	10 34 38.1	+1.0
JAN	**Janina**	**1.69**	**342**	*e*Pn	**Pn**	10 34 40.6	+1.9
JAN	**Janina**	**1.69**	**342**	*e*PN	**Pn**	10 34 40.6	+1.9
JAN	**Janina**	**1.69**	**342**	*e*Pn	**Pn**	10 34 40.6	+1.9
ATH	**Athens Observa**	**1.72**	**92**	P	**Pn**	10 34 40.1	+0.9
ATH	**Athens Observa**	**1.72**	**92**	*e*PN	**Pn**	10 34 40.9	+0.3
ATH				*e*SN	**Sn**	10 35 02.6	+1.4
ATH	**Athens Observa**	**1.72**	**92**	*e*Pn	**Pn**	10 34 39.5	+0.3
ATH	**Athens Observa**	**1.72**	**92**	P	**Pn**	10 34 40.1	+0.9
ATH				*e*Sn	**Sn**	10 35 02.6	+1.4
VLI	**Veliai**	**1.74**	**140**	*e*Pn	**Pn**	10 34 40.7	+1.3
VLI				*e*Sn	**Sn**	10 35 04.5	+2.9
VLI	**Veliai**	**1.74**	**140**	*e*PN	**Pn**	10 34 40.7	+1.3
VLI				*e*SN	**Sn**	10 35 04.5	+2.9
VLI	**Veliai**	**1.74**	**140**	*e*Pn	**Pn**	10 34 40.7	+1.3
VLY	**Voula,Athens**	**1.79**	**96**	*e*Pb	**Pn**	10 34 40.0	-0.2
VLY				*e*Sn	**Sn**	10 35 03.8	+0.8
VLY	**Voula,Athens**	**1.79**	**96**	*e*PB	**Pn**	10 34 40.0	-0.2
VLY				*e*SN	**Sn**	10 35 03.8	+0.8
NEO	**Neokhori**	**1.82**	**46**	*e*Pb	**Pn**	10 34 40.2	-0.3
NEO				*e*Sn	**Sn**	10 35 04.0	+0.4
NEO	**Neokhori**	**1.82**	**46**	*e*PB	**Pn**	10 34 40.2	-0.3
NEO				*e*SN	**Sn**	10 35 04.0	+0.4
PTL	**Penteli**	**1.84**	**89**	*e*Pb	**Pn**	10 34 40.6	-0.1
PTL				*e*Sn	**Sn**	10 35 04.9	+0.9
PTL	**Penteli**	**1.84**	**89**	*e*PB	**Pn**	10 34 40.6	-0.1
PTL				*e*SN	**Sn**	10 35 04.9	+0.9
XOR	**Xorichti**	**1.84**	**44**	P	**Pn**	10 34 40.1	-0.7
XOR	**Xorichti**	**1.84**	**44**	P	**Pn**	10 34 40.1	-0.7
KYTH	**Kithira**	**2.14**	**145**	*e*Pn	**Pn**	10 34 48.6	+3.7
KYTH	**Kithira**	**2.14**	**145**	*e*PN	**Pn**	10 34 46.1	+1.2
KEK	**Kerkira**	**2.14**	**321**	P	**Pn**	10 34 45.4	+0.5
KEK	**Kerkira**	**2.14**	**321**	*e*PB	**Pn**	10 34 45.5	+0.6
KEK	**Kerkira**	**2.14**	**321**	P	**Pn**	10 34 45.4	+0.5
AOS	**Alonnisos**	**2.15**	**58**	P	**Pn**	10 34 43.5	-1.5
AOS	**Alonnisos**	**2.15**	**58**	P	**Pn**	10 34 43.5	-1.5
SRN	**Sarande**	**2.18**	**327**	*e*PN	**Pn**	10 34 45.8	+0.3
SRN				*i* SN	**Sn**	10 35 13.6	+1.0
SRN	**Sarande**	**2.18**	**327**	*e*Pn	**Pn**	10 34 45.8	+0.3
SRN				*i* Sn	**Sn**	10 35 13.6	+1.0
KZN	**Kozani**	**2.26**	**5**	*e*Pn	**Pn**	10 34 47.6	+1.1
KZN	**Kozani**	**2.26**	**5**	*e*PN	**Pn**	10 34 47.6	+1.1
KZN	**Kozani**	**2.26**	**5**	*e*Pn	**Pn**	10 34 47.6	+1.1
PAIG	**Paliouri**	**2.51**	**41**	P	**Pn**	10 34 49.1	-0.9
PAIG	**Paliouri**	**2.51**	**41**	P	**Pn**	10 34 49.1	-0.9
KBN	**Korca**	**2.63**	**347**	*e*PN	**Pn**	10 34 53.7	+2.0
KBN				*i* SN	**Sg**	10 35 34.2	+0.5
KBN	**Korca**	**2.63**	**347**	*e*Pn	**Pn**	10 34 53.7	+2.0
FNA	**Florina**	**2.73**	**357**	P	**Pn**	10 34 53.4	+0.4
FNA	**Florina**	**2.73**	**357**	P	**Pn**	10 34 53.4	+0.4
PLG	**Polygyros**	**2.75**	**32**	*e*Pn	**Pn**	10 34 53.7	+0.4
PLG	**Polygyros**	**2.75**	**32**	*e*PN	**Pn**	10 34 53.7	+0.4
PLG	**Polygyros**	**2.75**	**32**	*e*Pn	**Pn**	10 34 53.7	+0.4
OUR	**Ouranopolis**	**2.96**	**39**	P	**Pn**	10 34 55.1	-1.2
OUR	**Ouranopolis**	**2.96**	**39**	P	**Pn**	10 34 55.1	-1.2
BIA	**Bitola**	**2.97**	**357**	*e*Pn	**Pn**	10 34 57.9	+1.6
SOH	**Sokhos**	**3.10**	**26**	P	**Pn**	10 34 59.1	+1.0
SOH	**Sokhos**	**3.10**	**26**	*e*PN	**Pn**	10 34 59.2	+1.1
SOH	**Sokhos**	**3.10**	**26**	P	**Pn**	10 34 59.1	+1.0
OHR	**Ohrid**	**3.11**	**350**	P	**Pn**	10 34 59.3	+1.1
OHR	**Ohrid**	**3.11**	**350**	*e*Pn	**Pn**	10 34 59.1	+0.9
OHR				*e*Sn	**Sg**	10 35 49.8	+0.9
OHR				*e*Lg		10 35 50.0	
	comp=N,474nm,1.1s						
OHR				*e*Lg		10 35 51.1	
	comp=E,500nm,1.1s						
OHR	**Ohrid**	**3.11**	**350**	P	**Pn**	10 34 59.3	+1.1
KARN	**Karanos**	**3.27**	**143**	*e*PN	**Pn**	10 35 01.5	+1.1
KARN	**Karanos**	**3.27**	**143**	*e*Pn	**Pn**	10 35 01.5	+1.1
KRUS	**Krusevo**	**3.32**	**356**	*e*Pn	**Pn**	10 35 02.2	+1.1
KRUS				*e*Sn	**Sg**	10 35 54.2	-1.5
APE	**Apeiranthos**	**3.32**	**106**	*e*Pn	**Pn**	10 35 00.8	-0.4
APE	**Apeiranthos**	**3.32**	**106**	*e*PN	**Pn**	10 35 00.8	-0.4
APE	**Apeiranthos**	**3.32**	**106**	⇑*i*P	**Pn**	10 35 00.8	-0.4
APE	**Apeiranthos**	**3.32**	**106**	⇑*i*P	**Pn**	10 35 00.8	-0.4
APE				S	**Sn**	10 35 41.7	+1.0
VAY	**Valandovo**	**3.36**	**13**	*e*Pn	**Pn**	10 35 03.6	+1.9
VAY				*e*Sn	**Sn**	10 35 50.1	+8.5
LIA	**Limnos Island**	**3.38**	**56**	P	**Pn**	10 35 00.6	-1.4
LIA	**Limnos Island**	**3.38**	**56**	*e*PN	**Pn**	10 35 02.2	+0.2
LIA	**Limnos Island**	**3.38**	**56**	P	**Pn**	10 35 00.6	-1.4
LIA	**Limnos Island**	**3.38**	**56**	*e*Pn	**Pn**	10 35 02.2	+0.2
VAM	**Vamos**	**3.40**	**140**	*e*Pn	**Pn**	10 35 04.1	+1.9
VAM	**Vamos**	**3.40**	**140**	*e*PN	**Pn**	10 35 04.1	+1.9
THR5	**Thira Island,**	**3.45**	**117**	P	**Pn**	10 35 02.2	-0.7
THR5	**Thira Island,**	**3.45**	**117**	P	**Pn**	10 35 02.2	-0.7
TIR	**Tirane**	**3.53**	**339**	*e*Pn	**Pn**	10 35 03.5	-0.6
TIR	**Tirane**	**3.53**	**339**	*e*Pn	**Pn**	10 35 03.5	-0.6
CHOS	**Chios island**	**3.57**	**83**	*e*PN	**Pn**	10 35 04.6	0.0
CHOS	**Chios island**	**3.57**	**83**	*e*Pn	**Pn**	10 35 04.6	0.0
NVR	**Nevrokopi**	**3.75**	**28**	*e*Pn	**Pn**	10 35 08.6	+1.6
NVR	**Nevrokopi**	**3.75**	**28**	*e*PN	**Pn**	10 35 08.6	+1.6
NVR	**Nevrokopi**	**3.75**	**28**	*e*Pn	**Pn**	10 35 08.6	+1.6
PRK	**Paraskevi**	**3.89**	**71**	*e*Pn	**Pn**	10 35 09.5	+0.5
PRK	**Paraskevi**	**3.89**	**71**	*e*PN	**Pn**	10 35 09.5	+0.5
PRK	**Paraskevi**	**3.89**	**71**	*e*Pn	**Pn**	10 35 09.5	+0.5
SIVA	**Sivas**	**4.01**	**138**	*e*Pn	**Pn**	10 35 14.1	+3.4
SIVA	**Sivas**	**4.01**	**138**	*e*PN	**Pn**	10 35 14.1	+3.4
TAR1	**Taranto**	**4.12**	**308**	*e*Pn	**Pn**	10 35 13.0	+0.8
TAR1				*e*Sn	**Sn**	10 35 59.3	-1.1
PUK	**Puka**	**4.18**	**343**	*e*PN	**Pn**	10 35 12.8	-0.1
PUK	**Puka**	**4.18**	**343**	*e*Pn	**Pn**	10 35 12.8	-0.1
SMG	**Samos**	**4.21**	**93**	*e*Pn	**Pn**	10 35 13.0	-0.3
SMG	**Samos**	**4.21**	**93**	*e*PN	**Pn**	10 35 14.8	+1.5
SMG	**Samos**	**4.21**	**93**	*e*Pn	**Pn**	10 35 13.0	-0.3
PE1	**Pezze di Greco**	**4.21**	**312**	*e*Pn	**Pn**	10 35 13.5	+0.2
ULC	**Ulcinj**	**4.28**	**336**	⇓*i*Pn	**Pn**	10 35 14.1	-0.2
ULC				*e*Sn	**Sn**	10 36 04.9	+0.6
ULC	**Ulcinj**	**4.28**	**336**	⇓*i*Pn	**Pn**	10 35 14.1	-0.2
ULC				*e*Sn	**Sn**	10 36 04.9	+0.6
LAST	**Lasithi**	**4.29**	**131**	*e*Pn	**Pn**	10 35 16.0	+1.6
LAST	**Lasithi**	**4.29**	**131**	*e*PN	**Pn**	10 35 16.0	+1.6
LAST	**Lasithi**	**4.29**	**131**	*e*Pn	**Pn**	10 35 16.0	+1.6
SOI	**Samo**	**4.33**	**272**	Pn	**Pn**	10 35 16.2	+1.2
SOI	**Samo**	**4.33**	**272**	Pn	**Pn**	10 35 16.2	+1.2
BCI	**Bajram Curri**	**4.45**	**346**	*e*PN	**Pn**	10 35 18.2	+1.5
BCI	**Bajram Curri**	**4.45**	**346**	*e*Pn	**Pn**	10 35 18.2	+1.5
CEL	**Celeste**	**4.45**	**274**	Pn	**Pn**	10 35 16.2	-0.5
CEL	**Celeste**	**4.45**	**274**	Pn	**Pn**	10 35 16.2	-0.5
LTRZ	**Laterza**	**4.46**	**306**	Pn	**Pn**	10 35 17.0	+0.2
LTRZ	**Laterza**	**4.46**	**306**	Pn	**Pn**	10 35 17.0	+0.2
ALN	**Alexandroupoli**	**4.50**	**49**	*e*Pn	**Pn**	10 35 18.3	+1.0
ALN	**Alexandroupoli**	**4.50**	**49**	*e*PN	**Pn**	10 35 18.3	+1.0
ALN	**Alexandroupoli**	**4.50**	**49**	*e*Pn	**Pn**	10 35 18.3	+1.0
XRY	**Khrisi**	**4.61**	**132**	*e*Pn	**Pn**	10 35 20.7	+1.8
XRY	**Khrisi**	**4.61**	**132**	*e*PN	**Pn**	10 35 20.7	+1.8
XRY	**Khrisi**	**4.61**	**132**	*e*Pn	**Pn**	10 35 20.7	+1.8
PVY	**Plav**	**4.69**	**346**	⇓*i*Pn	**Pn**	10 35 21.1	+1.1
PVY				*e*Sn	**Sn**	10 36 15.4	+1.0
PVY	**Plav**	**4.69**	**346**	⇓*i*Pn	**Pn**	10 35 21.1	+1.1
PVY				*e*Sn	**Sn**	10 36 15.4	+1.0
BUM	**Brajici-Budva**	**4.70**	**335**	⇓*i*Pn	**Pn**	10 35 19.8	-0.3
BUM				*e*Sn	**Sn**	10 36 14.7	+0.1
BUM	**Brajici-Budva**	**4.70**	**335**	⇓*i*Pn	**Pn**	10 35 19.8	-0.3
BUM				*e*Sn	**Sn**	10 36 14.7	+0.1
PDG	**Podgorica**	**4.71**	**339**	⇑*i*Pn	**Pn**	10 35 20.4	+0.2
PDG				*e*Sn	**Sn**	10 36 15.5	+0.7
TTG	**Podgorica**	**4.71**	**339**	⇑*i*Pn	**Pn**	10 35 20.4	+0.2
TTG				*e*Sn	**Sn**	10 36 15.5	+0.7
TTG	**Podgorica**	**4.71**	**339**	⇑*i*Pn	**Pn**	10 35 20.4	+0.2
TTG				*e*Sn	**Sn**	10 36 15.5	+0.7
VTS	**Vitosha**	**4.71**	**15**	⇓P	**Pn**	10 35 21.8	+1.6
VTS				S	**Sn**	10 36 19.8	+4.9
VTS	**Vitosha**	**4.71**	**15**	⇓*i*P	**Pn**	10 35 21.8	+1.6
VTS	**Vitosha**	**4.71**	**15**	⇓P	**Pn**	10 35 21.8	+1.6
VTS				S	**Sn**	10 36 19.8	+5.0
BAI	**Bari**	**4.72**	**312**	*e*Pn	**Pn**	10 35 20.6	+0.3
BARS	**Barje**	**4.76**	**2**	⇑*i*Pn	**Pn**	10 35 21.4	+0.5
ZKR	**Zakros**	**4.77**	**127**	*e*Pn	**Pn**	10 35 23.7	+2.6
ZKR	**Zakros**	**4.77**	**127**	*e*PN	**Pn**	10 35 23.7	+2.6
HCY	**Herceg Novi**	**4.97**	**333**	⇓*i*Pn	**Pn**	10 35 22.6	-1.2
HCY				*e*Sn	**Sn**	10 36 21.6	+0.4
HCY	**Herceg Novi**	**4.97**	**333**	⇓*i*Pn	**Pn**	10 35 22.6	-1.2
HCY				*e*Sn	**Sn**	10 36 21.6	+0.4
BEY	**Berane**	**4.97**	**346**	⇓*i*Pn	**Pn**	10 35 24.7	+0.9
BEY				*e*Sn	**Sn**	10 36 21.7	+0.4
IVA	**Berane**	**4.97**	**346**	⇓*i*Pn	**Pn**	10 35 24.7	+0.9
IVA				*e*Sn	**Sn**	10 36 21.7	+0.4
IVA	**Berane**	**4.97**	**346**	⇓*i*Pn	**Pn**	10 35 24.7	+0.9
IVA				*e*Sn	**Sn**	10 36 21.7	+0.4
CDT	**Castel del Mon**	**5.07**	**308**	*e*Pn	**Pn**	10 35 25.3	+0.1
KARP	**Karpathos**	**5.16**	**117**	*e*Pn	**Pn**	10 35 29.0	+2.6
KARP	**Karpathos**	**5.16**	**117**	*e*PN	**Pn**	10 35 29.0	+2.6
HAVL	**Avola**	**5.21**	**260**	Pn	**Pn**	10 35 25.2	-2.0
HAVL	**Avola**	**5.21**	**260**	Pn	**Pn**	10 35 25.2	-2.0
BRY	**Bratogost**	**5.35**	**336**	⇓*i*Pn	**Pn**	10 35 28.1	-1.0
BRY				*e*Sn	**Sn**	10 36 31.2	+0.5
BRY	**Bratogost**	**5.35**	**336**	⇓*i*Pn	**Pn**	10 35 28.1	-1.0
BRY				*e*Sn	**Sn**	10 36 31.2	+0.5
MRLC	**Muro Lucano**	**5.41**	**302**	Pn	**Pn**	10 35 31.5	+1.7
MRLC	**Muro Lucano**	**5.41**	**302**	Pn	**Pn**	10 35 31.5	+1.7
HVZN	**Vizzini**	**5.49**	**263**	Pn	**Pn**	10 35 29.0	-1.9
HVZN	**Vizzini**	**5.49**	**263**	Pn	**Pn**	10 35 29.0	-1.9
PLE	**Pljevlja**	**5.52**	**343**	⇑*i*Pn	**Pn**	10 35 32.0	+0.7
PLE				*e*Sn	**Sn**	10 36 35.1	+0.3
PLE	**Pljevlja**	**5.52**	**343**	⇑*i*Pn	**Pn**	10 35 32.0	+0.7
PLE				*e*Sn	**Sn**	10 36 35.1	+0.3
UPM	**Unac-Piva**	**5.52**	**340**	⇑*i*Pn	**Pn**	10 35 32.3	+1.0
UPM				*e*Sn	**Sn**	10 36 35.8	+1.0
UPM	**Unac-Piva**	**5.52**	**340**	⇑*i*Pn	**Pn**	10 35 32.3	+1.0
UPM				*e*Sn	**Sn**	10 36 35.8	+1.0
STON	**Ston**	**5.63**	**330**	*e*Pn	**Pn**	10 35 31.2	-1.7
STON				Sn	**Sn**	10 36 34.0	-3.7
STON	**Ston**	**5.63**	**330**	*e*Pn	**Pn**	10 35 31.2	-1.7
MS1	**Monte Sant'Ang**	**5.64**	**312**	*e*Pn	**Pn**	10 35 32.8	-0.2
VAE	**Valguarnera**	**5.68**	**266**	Pn	**Pn**	10 35 36.1	+2.6
	comp=E,1.6nm,0.3s,baz=52,slow=13,SNR=2.2						
VAE				Sn	**Sn**	10 36 38.5	-0.2
	comp=E,4.3nm,0.3s,baz=202,slow=8.9,SNR=4.8						
VAE	**Valguarnera**	**5.68**	**266**	Pn	**Pn**	10 35 36.1	+2.6
VAE				Sn	**Sn**	10 36 38.5	-0.2
VAE	**Valguarnera**	**5.68**	**266**	Sn	**Sn**	10 36 38.5	-0.2
CSSN	**Cassano Irpino**	**5.77**	**301**	Pn	**Pn**	10 35 36.8	+2.0
CSSN	**Cassano Irpino**	**5.77**	**301**	Pn	**Pn**	10 35 36.8	+2.0
FG5	**Orsara di Pugl**	**5.81**	**306**	Pn	**Pn**	10 35 36.5	+1.1
FG5	**Orsara di Pugl**	**5.81**	**306**	Pn	**Pn**	10 35 36.5	+1.1
RGNG	**Rignano Grg**	**5.83**	**310**	Pn	**Pn**	10 35 35.5	-0.2
RGNG	**Rignano Grg**	**5.83**	**310**	Pn	**Pn**	10 35 35.5	-0.2
BBLS	**Lazići**	**6.03**	**345**	*i* Pn	**Pn**	10 35 37.2	-1.1
**D

ZALV	**Zalesovo Beam**	**45.18**	**48**	P	**P**	**10 42 23.3**	**-2.5**
SCHQ	**Schefferville**	**59.09**	**318**	P	**P**	**10 44 05.8**	**-3.5**
	comp=Z,1.1nm,0.4s,mb4.2,baz=78,slow=9.3,SNR=3.0						
SONM	**Songino Array**	**59.92**	**51**	P	**P**	**10 44 13.1**	**-2.0**
	comp=Z,0.3nm,0.4s,mb3.7,baz=277,slow=12,SNR=2.4						
SONM	**Songino Array**	**59.92**	**51**	P	**P**	**10 44 13.1**	**-2.1**
KSRS	**Korea Array**	**78.79**	**51**	P	**P**	**10 46 10.4**	**-1.7**
	comp=Z,0.7nm,0.6s,mb3.8,baz=310,slow=5.6,SNR=4.2						

*ISCJB **05** 10:34:54.3±0.7, 43°.29N±0°.05×146°.92E±0°.06, h68km±5km, mb4.2/28, Error ellipse: s-maj=9.4km s-min=5.2km az=137.4*
*MOS **05** 10:34:54.0±0.9, 43°.32N×147°.03E, h69km, mb4.8/1, Error ellipse: s-maj=13.1km s-min=8.6km az=101.9*
*JMA **05** 10:34:55.8±0.2, 43°.25N×146°.84E, h59km±2km, M4.5*
JMA Felt I J1.
*SKHL **05** 10:34:55.0±0.7, 43°.25N×147°.05E, h56km±16km, mb5.5/2*
*BJI **05** 10:34:56.4, 43°.03N×146°.61E, h62km, mB5.0/5, mb4.6/4, Ms3.8/3, Ms7 3.7/2*
*NEIC **05** 10:34:57.4±0.5, 43°.33N×146°.94E, mb4.3/2, Error ellipse: s-maj=11.3km s-min=7.6km az=138.0*
NEIC Recorded [1 JMA] in eastern Hokkaido.
*IDC **05** 10:34:57.5±0.8, 43°.32N×146°.93E, h81km±8km, mb3.9/21, mb1 4.0/24, mb1mx3.9/32, mbtmp3.9/24, Error ellipse: s-maj=15.1km s-min=14.2km az=31.0*

ISC 05 10:34:55.7±0.7, 43°.32N±0°.05×146°.91E±0°.06, h61km±5km, h78km±4.8km: pP-P, n66, σ0°.82/84, mb4.3/28, 4C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.85**	**273**	P	**Pn**	**10 35 11.6**	**-0.2**
NEM2				*e*S	**Sn**	**10 35 22.9**	**-0.8**
YUK	**Yuzh-Kuril'sk**	**1.04**	**314**	⇓*i*PN	**Pn**	**10 35 14.1**	**-0.2**
YUK				*i* S	**Sn**	**10 35 27.9**	**-0.2**
YUK				pmax	pmax		
	comp=Z,2μm,0.9s						
YUK				pmax	pmax		
	comp=Z,7μm,0.3s						
YUK				pmax	pmax		
	comp=N,890nm,0.1s						
YUK				pmax	pmax		
	comp=E,890nm,0.3s						
YUK				smax			
	comp=N,3μm,0.5s						
YUK				smax			
	comp=E,7μm,0.5s						
YUK				smax			
	comp=N,3μm,0.7s						
YUK				smax			
	comp=E,2μm,0.7s						
YUK	**Yuzh-Kuril'sk**	**1.04**	**314**	⇓*i*P	**Pn**	**10 35 14.1**	**-0.2**
YUK				AMB	AMB	10 35 15.0	
	comp=E,4μm,0.4s						
YUK				AMB	AMB	10 35 15.0	
	comp=E,11μm,0.2s						
YUK				AMB	AMB	10 35 15.0	
	comp=E,2μm,0.3s						
YUK				AMB	AMB	10 35 15.0	
	comp=E,3μm,0.3s						
YUK				AMB	AMB	10 35 15.0	
	comp=E,10μm,0.3s						
YUK				*i* S	**Sn**	**10 35 27.9**	**-0.2**
YUK				A		10 35 31.0	
	comp=E,8μm,0.5s						
YUK				A		10 35 31.0	
	comp=E,5μm,0.5s						
YUK				A		10 35 33.8	
	comp=E,16μm,0.6s						
YUK				A		10 35 33.8	
	comp=E,10μm,0.6s						
JRA	**Rausu**	**1.44**	**296**	P	**Pn**	**10 35 19.9**	**+0.4**
JRA				*e*S	**Sn**	**10 35 38.1**	**+0.7**
JNK	**Nakash**	**1.62**	**280**	P	**Pn**	**10 35 21.6**	**-0.3**
JNK				*e*S	**Sn**	**10 35 40.9**	**-0.8**
JAK	**Akkeshi**	**1.65**	**259**	P	**Pn**	**10 35 22.0**	**-0.4**
JAK				*e*S	**Sn**	**10 35 41.0**	**-1.6**
KUR	**Kuril'sk**	**2.03**	**19**	*e*PN	**Pn**	**10 35 27.0**	**-0.5**
KUR				*e*S	**Sn**	**10 35 51.5**	**-0.3**
KUR				pmax	pmax		
	comp=N,80nm,0.5s						
KUR				pmax	pmax		
	comp=E,80nm,0.5s						
KUR				pmax	pmax		
	comp=Z,170nm,0.5s						
KUR				smax			
	comp=N,760nm,0.5s						
KUR				smax			
	comp=E,1μm,0.5s						
KUR	**Kuril'sk**	**2.03**	**19**	*e*P	**Pn**	**10 35 27.0**	**-0.5**
KUR				AMB	AMB	10 35 28.9	
	comp=E,80nm,0.5s						
KUR				AMB	AMB	10 35 28.9	
	comp=E,170nm,0.5s						
KUR				*e*S	**Sn**	**10 35 51.5**	**-0.3**
KUR				A		10 35 53.0	
	comp=E,760nm,0.5s						
KUR				A		10 35 53.0	
	comp=E,1μm,0.5s						
JTKR	**Abashiri--Toko**	**2.27**	**288**	P	**Pn**	**10 35 31.7**	**+0.9**
JTKR				*e*S	**Sn**	**10 35 58.7**	**+1.0**
JOB	**Onbets**	**2.29**	**261**	P	**Pn**	**10 35 31.0**	**0.0**
JOB				*e*S	**Sn**	**10 35 57.5**	**-0.6**
JAR	**Ashorobuto**	**2.29**	**270**	P	**Pn**	**10 35 31.3**	**+0.3**
JAR				*e*S	**Sn**	**10 35 58.0**	**-0.1**
JMP	**Maruseppu**	**2.67**	**286**	P	**Pn**	**10 35 37.3**	**+1.2**
JCH	**Churui**	**2.70**	**256**	P	**Pn**	**10 35 36.1**	**-0.5**
JCH				*e*S	**Sn**	**10 36 06.2**	**-1.8**
JEM	**Erimo**	**3.06**	**246**	P	**Pn**	**10 35 42.2**	**+0.7**
ERM	**Erimo**	**3.06**	**246**	*e*Pn	**Pn**	**10 35 43.0**	**+1.4**
ERM				*e*Sn	**Sn**	**10 36 16.5**	**-0.4**
ERM	**Erimo**	**3.06**	**246**	*e*P	**Pn**	**10 35 42.9**	**+1.4**
JFR	**Furan**	**3.16**	**269**	P	**Pn**	**10 35 43.8**	**+0.9**
JFR				*e*S	**Sn**	**10 36 19.7**	**+0.4**
ASAJ	**Asahikawa**	**3.23**	**286**	P	**Pn**	**10 35 45.5**	**+1.7**
	comp=E,22nm,0.3s,baz=113,slow=10,SNR=197						
ASAJ				S	**Sn**	**10 36 27.9**	**+6.9**
	comp=E,18nm,0.3s,baz=28,slow=31,SNR=7.6						
JNBK	**Urakawa-nobuka**	**3.23**	**253**	P	**Pn**	**10 35 43.7**	**-0.2**
JNBK				*e*S	**Sn**	**10 36 19.6**	**-1.5**
YSS	**Yuzh-Sakhalins**	**4.67**	**322**	⇑*e*PN	**Pn**	**10 36 04.8**	**+1.3**
YSS				*e*		10 36 55.8	
YSS	**Yuzh-Sakhalins**	**4.67**	**322**	⇑*e*P	**Pn**	**10 36 05.2**	**+1.7**
YSS	**Yuzh-Sakhalins**	**4.67**	**322**	⇑*i*P	**Pn**	**10 36 04.8**	**+1.3**
YSS				*e*rx	rx	10 36 55.8	
MJAR	**Matsushiro Arr**	**9.51**	**228**	P	**Pn**	**10 37 10.5**	**+0.7**
	comp=E,0.1nm,0.3s,baz=36,slow=13,SNR=3.6						
JHJ	**Hachijo jima 2**	**11.62**	**211**	P	**Pn**	**10 37 39.6**	**+1.0**
	comp=E,2.8nm,0.3s,baz=308,slow=20,SNR=4.4						
JHJ				S	**Sn**	**10 39 34.7**	**-12**
	comp=E,5.1nm,0.3s,baz=127,slow=20,SNR=3.5						
PETK	**Petropavlovsk-**	**12.14**	**32**	P	**Pn**	**10 37 44.2**	**-1.3**
	comp=E,0.1nm,0.3s,baz=199,slow=10,SNR=3.4						
PETK	**Petropavlovsk-**	**12.14**	**32**	P	**Pn**	**10 37 44.2**	**-1.3**
HHC	**Hu-ho-hao-te**	**26.23**	**277**	*e*P	**P**	**10 40 26.0**	**+1.3**
HHC				S	**S**	**10 44 53.1**	**+0.6**
HHC				pmax	pmax		
	comp=Z,12nm,0.5s,mb4.7						
HHC				pmax	pmax		
	comp=Z,130nm,5.4s						
SONM	**Songino Array**	**28.48**	**293**	P	**P**	**10 40 45.1**	**+0.4**
	comp=Z,3.2nm,0.6s,mb4.1,baz=91,slow=8.9,SNR=14						
SONM				pP	pP	10 41 04.9	+5.1
	comp=Z,1.6nm,0.8s,baz=80,slow=8.3,SNR=3.2						
KRAR	**Krasnoyarsk**	**36.26**	**310**	*e*P	**P**	**10 41 52.7**	**+0.1**
KRAR				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
COLD	**Coldfoot**	**40.61**	**32**	*e*P	**P**	**10 42 29.5**	**+0.6**
	comp=Z,1.9nm,0.6s,mb3.9						
MKAR	**Makanchi Array**	**44.63**	**298**	P	**P**	**10 43 01.8**	**+0.1**
	comp=Z,2.7nm,0.6s,mb4.3,baz=83,slow=9.7,SNR=18						
KURK	**Kurchatov**	**45.62**	**304**	P	**P**	**10 43 10.1**	**+0.5**
	comp=Z,1.0nm,0.3s,mb4.2,baz=312,slow=8.5,SNR=10						
INK	**Inuvik**	**46.86**	**30**	P	**P**	**10 43 19.8**	**+0.7**
	comp=Z,7.0nm,0.6s,mb4.8,baz=306,slow=6.2,SNR=18						
BVAR	**Borovoye Array**	**49.64**	**310**	P	**P**	**10 43 41.4**	**+0.8**
	comp=Z,0.4nm,0.3s,mb3.9,baz=79,slow=7.5,SNR=3.4						
SPITS	**Spitsbergen Ar**	**55.17**	**349**	P	**P**	**10 44 20.4**	**-0.9**
	comp=Z,1.9nm,0.8s,mb4.2,baz=9.5,slow=5.9,SNR=3.7						
YKA	**Yellowknife Ar**	**56.26**	**34**	P	**P**	**10 44 28.5**	**-0.7**
	comp=Z,1.1nm,0.6s,mb4.0,baz=295,slow=6.7,SNR=3.6						
ABKAR	**Akbulak array**	**57.20**	**309**	*e*P	**P**	**10 44 35.9**	**-0.2**
	comp=Z,2.0nm,0.5s,mb4.4						
ABKAR				*e*PP	pP	10 44 51.9	-0.4
AKTK	**Aktyubinsk**	**57.68**	**311**	P	**P**	**10 44 39.5**	**+0.1**
AKTO	**Aktyubinsk**	**57.68**	**311**	P	**P**	**10 44 39.5**	**+0.1**
	comp=Z,1.3nm,0.6s,mb4.2,baz=72,slow=7.5,SNR=7.1						
ARCES	**ARCESS Array B**	**59.59**	**340**	P	**P**	**10 44 52.1**	**-0.3**
	comp=Z,2.3nm,0.8s,mb4.2,baz=52,slow=5.8,SNR=4.2						
WRA	**Warramunga Arr**	**64.00**	**193**	P	**P**	**10 45 22.2**	**-0.4**
	comp=Z,0.4nm,0.5s,mb3.7,baz=8.4,slow=6.7,SNR=10.0						
WRA				pP	pP	10 45 42.6	+3.5
	comp=Z,1.3nm,0.8s,baz=15,slow=7.1,SNR=7.3						
FINES	**FINESS Array B**	**65.18**	**333**	P	**P**	**10 45 29.0**	**-0.8**
	comp=Z,2.8nm,0.5s,mb4.6,baz=46,slow=7.2,SNR=22						
ASAR	**Alice Springs**	**67.72**	**193**	P	**P**	**10 45 47.0**	**+0.5**
	comp=Z,0.8nm,0.9s,mb3.7,baz=17,slow=5.3,SNR=5.3						
ASAR				pP	pP	10 46 07.7	+4.6
	comp=Z,0.3nm,0.7s,baz=26,slow=5.1,SNR=2.7						
NVAR	**Mina Array Bea**	**67.96**	**58**	P	**P**	**10 45 48.9**	**+0.9**
	comp=Z,1.7nm,1.0s,mb4.0,baz=288,slow=6.6,SNR=8.0						
KIV	**Kislovodsk**	**69.92**	**312**	*e*P	**P**	**10 45 59.0**	**-1.0**
KIV				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
NB2	**NORSAR Subarra**	**69.94**	**339**	P	**P**	**10 45 59.1**	**-0.7**
	comp=Z,3.1nm,0.4s,mb4.6,baz=31,slow=6.5						
NOA	**NORSAR Array B**	**69.94**	**339**	P	**P**	**10 45 59.5**	**-0.4**
	comp=Z,2.8nm,0.4s,mb4.5,baz=32,slow=6.3,SNR=31						
NOA	**NORSAR Array B**	**69.94**	**339**	P	**P**	**10 45 59.5**	**-0.4**
HFS	**Hagfors**	**70.02**	**337**	P	**P**	**10 45 59.6**	**-0.7**
	comp=Z,6.2nm,0.4s,mb4.9,baz=45,slow=6.5,SNR=66						
PDAR	**Pinedale Array**	**70.32**	**49**	P	**P**	**10 46 02.9**	**+0.3**
	comp=Z,0.3nm,0.5s,mb3.4,baz=27,slow=3.6,SNR=3.8						
AKASG	**Malin Array Be**	**71.82**	**324**	P	**P**	**10 46 10.8**	**-0.7**
	comp=Z,1.2nm,0.3s,mb4.3,baz=40,slow=5.8,SNR=9.1						
AKASG	**Malin Array Be**	**71.82**	**324**	P	**P**	**10 46 10.8**	**-0.7**
BUR08	**Bucovina Ar. S**	**75.86**	**324**	*e*P	**P**	**10 46 35.4**	**+0.2**
OJC	**Ojcow**	**76.05**	**328**	*e*P	**P**	**10 46 33.8**	**-2.3**
DPC	**Dobruska-Polom**	**77.25**	**330**	*e*P	**P**	**10 46 43.6**	**+0.7**
DPC	**Dobruska-Polom**	**77.25**	**330**	*e*P	**P**	**10 46 43.6**	**+0.7**
CLL	**Collm**	**77.61**	**332**	⇑*i*P	**P**	**10 46 44.4**	**-0.5**
CLL				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
CLL	**Collm**	**77.61**	**332**	⇑*i*P	**P**	**10 46 44.4**	**-0.5**
	comp=Z,9.0nm,1.2s,mb4.6						
BRG	**Berggiesshubel**	**77.66**	**332**	*e*P	**P**	**10 46 44.8**	**-0.4**
	comp=Z,1.5nm,0.7s,mb4.0						
BRG	**Berggiesshubel**	**77.66**	**332**	*e*P	**P**	**10 46 44.8**	**-0.4**
BRG				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
BRTR	**Keskin Array B**	**77.71**	**314**	P	**P**	**10 46 46.0**	**+0.3**
	comp=Z,1.4nm,0.7s,mb4.0,baz=61,slow=3.2,SNR=6.9						
EKA	**Eskdalemuir Ar**	**78.48**	**343**	P	**P**	**10 46 49.7**	**0.0**
	comp=Z,1.8nm,0.7s,mb4.1,baz=28,slow=5.2,SNR=5.9						
KHC	**Kasperske Hory**	**79.25**	**331**	*e*P	**P**	**10 46 54.3**	**+0.3**
KHC	**Kasperske Hory**	**79.25**	**331**	*e*P	**P**	**10 46 54.3**	**+0.3**
MMAI	**Mount Meron Ar**	**81.61**	**308**	P	**P**	**10 47 07.9**	**+0.9**
	comp=Z,7.7nm,0.9s,mb4.7,baz=46,slow=7.2,SNR=5.4						
TXAR	**Lajitas Array**	**83.03**	**56**	P	**P**	**10 47 12.5**	**-1.9**
	comp=Z,1.4nm,0.7s,mb4.1,baz=316,slow=2.5,SNR=26						

*CSEM **05** 10:35:50.0, 38°.05N×21°.56E, h19km, ML3.5, After ATH*
*NEIC **05** 10:35:50.0, 38°.05N×21°.56E, h19km, MD3.5(ATH), After ATH.*

ATH 05 10:35:50.0, 38°.05N×21°.56E, h19km±1km, MD3.5/11, ML3.5, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.07**	**276**	*e*Pb	Pg	10 35 53.4	-0.2
RLS				*e*Sb	Sg	10 35 56.0	0.0
RLS	**Riolos of Patr**	**0.07**	**276**	*e*PB	Pg	10 35 53.4	-0.2
RLS				*e*SB	Sg	10 35 56.0	0.0
RLS	**Riolos of Patr**	**0.07**	**276**	*e*Pb	Pg	10 35 53.4	-0.2
RLS				*e*Sb	Sg	10 35 56.0	0.0
UPR	**University Cam**	**0.29**	**37**	*e*PB	Pg	10 35 57.0	+0.5
UPR				*e*SB	Sg	10 36 02.0	+1.1
UPR	**University Cam**	**0.29**	**37**	*e*Pb	Pg	10 35 57.0	+0.5
UPR				*e*Sb	Sg	10 36 02.0	+1.1
EFP	**Efpalio**	**0.46**	**36**	*e*PB	Pb	10 35 59.1	-0.5
EFP				*e*SB	Sb	10 36 06.8	+0.7
EFP	**Efpalio**	**0.46**	**36**	*e*Pb	Pb	10 35 59.1	-0.5
EFP				*e*Sb	Sb	10 36 06.8	+0.7
GUR	**Goura**	**0.63**	**100**	*e*PB	Pb	10 36 01.5	-0.9
GUR				*e*SN	Sb	10 36 11.4	+0.6
GUR	**Goura**	**0.63**	**100**	*e*Pb	Pb	10 36 01.5	-0.9
GUR				*e*Sn	Sb	10 36 11.4	+0.6
VLS	**Valsamata**	**0.78**	**280**	*e*Pn	Pn	10 36 05.2	-0.7
VLS				*e*Sn	Sn	10 36 16.6	-0.4
VLS	**Valsamata**	**0.78**	**280**	*e*PN	Pn	10 36 05.2	-0.7
VLS				*e*SN	Sn	10 36 16.6	-0.4
VLS	**Valsamata**	**0.78**	**280**	*e*Pn	Pn	10 36 05.2	-0.7
VLS				*e*Sn	Sn	10 36 16.6	-0.4
EVR	**Evrytania**	**0.89**	**13**	*e*Pn	Pn	10 36 07.4	0.0
EVR	**Evrytania**	**0.89**	**13**	*e*PN	Pn	10 36 07.4	0.0
EVR	**Evrytania**	**0.89**	**13**	*e*Pn	Pn	10 36 07.4	0.0
ITM	**Ithomi**	**0.92**	**161**	*e*Pn	Pn	10 36 07.7	-0.1
ITM				*e*Sn	Sn	10 36 20.8	+0.3
ITM	**Ithomi**	**0.92**	**161**	*e*PN	Pn	10 36 07.7	-0.1
ITM				*e*SN	Sn	10 36 20.8	+0.3
ITM	**Ithomi**	**0.92**	**161**	*e*Pn	Pn	10 36 07.7	-0.1
ITM				*e*Sn	Sn	10 36 20.8	+0.3
VLX	**Vlachokerasia**	**0.94**	**136**	*e*PB	Pb	10 36 07.2	-0.5
VLX	**Vlachokerasia**	**0.94**	**136**	*e*Pb	Pb	10 36 07.2	-0.5
LTK	**Loutraki**	**1.11**	**91**	*e*PN	Pn	10 36 11.6	+1.1
LTK	**Loutraki**	**1.11**	**91**	*e*Pn	Pn	10 36 11.6	+1.1
AGG	**Agios Georgios**	**1.14**	**32**	*e*Pn	Pn	10 36 11.8	+0.8
AGG	**Agios Georgios**	**1.14**	**32**	*e*PN	Pn	10 36 11.8	+0.8
AGG	**Agios Georgios**	**1.14**	**32**	*e*Pn	Pn	10 36 11.8	+0.8
PYL	**PYLOS**	**1.16**	**173**	*e*PN	Pn	10 36 12.0	+0.8
PYL	**PYLOS**	**1.16**	**173**	*e*Pn	Pn	10 36 12.0	+0.8
LKR	**Lokris**	**1.28**	**62**	*e*Pn	Pn	10 36 13.5	+0.6
LKR	**Lokris**	**1.28**	**62**	*e*PN	Pn	10 36 13.5	+0.6
LKR	**Lokris**	**1.28**	**62**	*e*Pn	Pn	10 36 13.5	+0.6
THL	**Klokotos Trika**	**1.55**	**13**	*e*PN	Pn	10 36 19.8	+3.2
THL	**Klokotos Trika**	**1.55**	**13**	*e*Pn	Pn	10 36 19.8	+3.2
ATH	**Athens Observa**	**1.71**	**92**	*e*Pb	Pb	10 36 19.9	-0.8
ATH				*e*Sn	Sn	10 36 42.7	+2.7
ATH	**Athens Observa**	**1.71**	**92**	*e*PB	Pb	10 36 19.9	-0.8
ATH				*e*SN	Sn	10 36 42.7	+2.7
ATH	**Athens Observa**	**1.71**	**92**	*e*Pb	Pb	10 36 19.9	-0.8
ATH				*e*Sn	Sn	10 36 42.7	+2.7

*ISCJB **05** 10:53:33.5±0.5, 39°.50N±0°.03×27°.99E±0°.03, h6km±4km, Error ellipse: s-maj=5.1km s-min=3.4km az=41.3*
*DDA **05** 10:53:33.2, 39°.51N×27°.99E, h20km±2km, Md3.1*
*ISK **05** 10:53:33.2, 39°.49N×27°.91E, h9km, MD2.8*
*CSEM **05** 10:53:33.6±0.1, 39°.49N×28°.01E, h5km, MD2.8, Error ellipse: s-maj=3.5km s-min=2.3km az=54.0*

ISC 05 10:53:33.9±0.4, 39°.50N±0°.03×28°.00E±0°.03, h8km±4km, n42, σ0°.67/59, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.17**	**327**	PG	**Pg**	**10 53 38.0**	**+0.6**
BALB	**Balikesir**	**0.17**	**327**	*i* Pg	**Pg**	**10 53 38.0**	**+0.6**
BALY	**Balya**	**0.38**	**309**	*i* P	**Pg**	**10 53 41.3**	**0.0**
BALY				*i* S	**Sg**	**10 53 47.1**	**+0.8**
BALY	**Balya**	**0.38**	**309**	*i* P	**Pg**	**10 53 41.3**	**0.0**
BALY				*i* S	**Sg**	**10 53 47.1**	**+0.8**
DURS	**Dursunbey**	**0.38**	**75**	*i* P	**Pg**	**10 53 41.1**	**-0.2**
DURS				*i* S	**Sg**	**10 53 46.7**	**+0.4**
DURS	**Dursunbey**	**0.38**	**75**	*i* P	**Pg**	**10 53 41.1**	**-0.2**
DURS				*i* S	**Sg**	**10 53 46.7**	**+0.3**
GONE	**Gonen-Balikesi**	**0.60**	**336**	*e*PG	**Pg**	**10 53 45.2**	**-0.2**
GONE				*e*SG	**Sg**	**10 53 53.2**	**+0.1**
GONE	**Gonen-Balikesi**	**0.60**	**336**	*e*Pg	**Pg**	**10 53 45.2**	**-0.2**
GONE				*e*Sg	**Sg**	**10 53 53.3**	**+0.1**
AKHS	**Akhisar**	**0.64**	**193**	*i* P	**Pg**	**10 53 46.0**	**-0.1**
AKHS				*i* S	**Sg**	**10 53 55.7**	**+1.2**
AKHS	**Akhisar**	**0.64**	**193**	*i* P	**Pg**	**10 53 46.0**	**-0.2**
AKHS				*i* S	**Sg**	**10 53 55.7**	**+1.2**
AKS	**Akhisar**	**0.64**	**193**	*e*PG	**Pg**	**10 53 45.4**	**-0.7**
AKS	**Akhisar**	**0.64**	**193**	*e*Pg	**Pg**	**10 53 45.4**	**-0.8**
DEMI	**Demirci**	**0.72**	**129**	*i* P	**Pg**	**10 53 47.6**	**-0.1**
DEMI				*i* S	**Sg**	**10 53 57.4**	**+0.3**
DEMI	**Demirci**	**0.72**	**129**	*i* P	**Pg**	**10 53 47.7**	**0.0**
DEMI				*i* S	**Sg**	**10 53 57.4**	**+0.3**
BNT	**Bandirma**	**0.86**	**356**	*e*PG	**Pg**	**10 53 49.9**	**-0.5**
BNT	**Bandirma**	**0.86**	**356**	*e*Pg	**Pg**	**10 53 49.9**	**-0.4**
KRBG	**Karabiga-Canak**	**1.04**	**329**	*e*PG	**Pg**	**10 53 52.9**	**-0.9**
KRBG	**Karabiga-Canak**	**1.04**	**329**	*e*Pg	**Pg**	**10 53 52.9**	**-1.0**
ULDT	**Uludag**	**1.08**	**53**	*i* P	**Pg**	**10 53 54.1**	**-0.6**
ULDT				*i* S	**Sg**	**10 54 05.4**	**-3.4**
ULDT	**Uludag**	**1.08**	**53**	*i* P	**Pg**	**10 53 54.1**	**-0.6**
ULDT				*i* S	**Sg**	**10 54 05.4**	**-3.4**
KULA	**Kula-Manisa**	**1.11**	**152**	*e*PN	**Pn**	**10 53 55.1**	**-0.6**
KULA	**Kula-Manisa**	**1.11**	**152**	*e*Pn	**Pn**	**10 53 55.1**	**-0.5**
GDZ	**Gediz**	**1.22**	**109**	*i* P	**Pb**	**10 53 56.6**	**-0.6**
GDZ				*i* S	**Sb**	**10 54 13.2**	**+0.2**
GDZ	**Gediz**	**1.22**	**109**	*i* P	**Pb**	**10 53 56.6**	**-0.6**
GDZ				*i* S	**Sb**	**10 54 13.2**	**+0.2**
ARMT	**Armutlu**	**1.25**	**32**	*e*PN	**Pn**	**10 53 58.0**	**+0.4**
ARMT	**Armutlu**	**1.25**	**32**	*e*Pn	**Pn**	**10 53 58.0**	**+0.4**
LPK	**Lapseki**	**1.29**	**313**	*e*PN	**Pn**	**10 53 57.3**	**-0.9**
GEMT	**Gemlik**	**1.31**	**44**	*e*PN	**Pn**	**10 53 58.9**	**+0.5**
GEMT	**Gemlik**	**1.31**	**44**	*e*Pn	**Pn**	**10 53 58.9**	**+0.6**
RKY	**Sarkoy-Tekirda**	**1.34**	**332**	*e*PN	**Pn**	**10 53 58.4**	**-0.4**
RKY	**Sarkoy-Tekirda**	**1.34**	**332**	*e*Pn	**Pn**	**10 53 58.4**	**-0.4**
SART	**Tekirdag**	**1.34**	**332**	*i* P	**Pn**	**10 53 59.8**	**+0.9**
SART				*i* S	**Sb**	**10 54 17.7**	**+1.2**
SART	**Tekirdag**	**1.34**	**332**	*i* P	**Pn**	**10 53 59.8**	**+1.0**
SART				*i* S	**Sb**	**10 54 17.7**	**+1.2**
MFT	**Murefte**	**1.40**	**337**	*e*PN	**Pn**	**10 53 59.7**	**+0.1**
MFT	**Murefte**	**1.40**	**337**	*e*Pn	**Pn**	**10 53 59.7**	**+0.1**
YLV	**Yalova**	**1.50**	**44**	*e*PN	**Pn**	**10 54 02.1**	**+1.1**
YLV	**Yalova**	**1.50**	**44**	*e*Pn	**Pn**	**10 54 02.1**	**+1.1**
BOZC	**Bozcaada**	**1.54**	**283**	*i* P	**Pn**	**10 54 01.4**	**-0.1**
BOZC				*i* S	**Sn**	**10 54 21.3**	**-0.4**
ERIK	**Erikli-Kesan**	**1.63**	**316**	*e*PN	**Pn**	**10 54 02.2**	**-0.6**
ALT	**Altintas**	**1.70**	**105**	*e*PN	**Pn**	**10 54 04.3**	**+0.6**
ALT	**Altintas**	**1.70**	**105**	*e*Pn	**Pn**	**10 54 04.3**	**+0.6**
GADA	**Gvkgeada**	**1.76**	**294**	*e*PN	**Pn**	**10 54 03.8**	**-0.8**

WEL 05 10:59:30.8±0.1, 38°.42S×177°.75E, h29km±1km, ML3.5/12, Error ellipse: s-maj=1.5km s-min=1.2km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MWZ	**Matawai**	**0.19**	**295**	P*	Pb	10 59 36.5	-0.3
MWZ				S*	Sb	10 59 41.3	+0.5
CNGZ	**Carnagh Statio**	**0.37**	**101**	P*	Pb	10 59 39.5	+0.4
PRGZ	**Paritu Road**	**0.52**	**168**	P*	Pb	10 59 41.7	+0.2
URZ	**Urewera**	**0.52**	**287**	P*	Pb	10 59 41.1	-0.4
URZ				S*	Sb	10 59 49.2	+0.3
PUZ	**Puketiti**	**0.53**	**50**	P*	Pb	10 59 41.2	-0.4
KNZ	**Kokohu**	**0.61**	**185**	P*	Pb	10 59 42.4	-0.5
RAHZ	**Arahi**	**0.72**	**226**	PN	Pn	10 59 44.5	-0.5
MHGZ	**Mahia Peninsul**	**0.75**	**170**	PN	Pn	10 59 44.3	-1.1
MXZ	**Matakaoa Point**	**0.96**	**28**	PN	Pn	10 59 47.9	-0.4
TARZ	**Mount Tarawera**	**0.99**	**280**	PN	Pn	10 59 48.8	0.0
NMHZ	**Naumai**	**1.00**	**227**	PN	Pn	10 59 48.7	-0.1
PRRZ	**Plateau Road**	**1.06**	**265**	*e*PN	Pn	10 59 49.4	-0.3
BKZ	**Black Stump Fm**	**1.23**	**232**	PN	Pn	10 59 52.0	-0.1

IDC 05 11:08:58.8±4.4, 5°.65S×150°.99E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.8/15, mbtmp3.9/4, Error ellipse: s-maj=139.3km s-min=29.4km az=107.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.54**	**227**	P	P	11 13 51.0	+1.2
	2.1nm,0.6s,baz=51,slow=12,SNR=30						
ASAR	**Alice Springs**	**24.32**	**221**	P	P

LZH					smax			
	comp=N,55nm,0.9s							
LZH					smax			
	comp=E,98nm,1.1s							
LZH					LR	LR		
	comp=N,300nm,7.8s							
LZH					LR	LR		
	comp=Z,310nm,8.9s							
XAN	**Xi'an**	**4.86**	**57**		Pn	**Pn**	**11 30 13.4**	**+0.1**
XAN					Pg	**Pg**	**11 30 30.8**	**-1.7**
XAN					Sg	**Sg**	**11 31 27.4**	**-8.0**
XAN					smax			
	comp=N,140nm,0.7s							
XAN					smax			
	comp=E,57nm,0.8s							
CMAR	**Chiang Mai Arr**	**13.74**	**201**		Pn	**Pn**	**11 32 15.8**	**+0.7**
	comp=E,0.2nm,0.3s,baz=227,slow=29,SNR=2.5							
SONM	**Songino Array**	**16.45**	**6**		Pn	**Pn**	**11 32 51.8**	**+0.7**
	comp=E,0.1nm,0.3s,baz=191,slow=15,SNR=5.5							
KSRS	**Korea Array**	**20.56**	**67**		P	**P**	**11 33 40.0**	**+0.8**
	comp=E,0.6nm,0.5s,baz=258,slow=11,SNR=5.3							
CN2	**Changchun**	**20.89**	**48**		*e*P	**P**	**11 33 43.5**	**+0.9**
CN2					pmax	pmax		
	comp=Z,10.0nm,0.9s							
MKAR	**Makanchi Array**	**22.67**	**319**		P	**P**	**11 34 00.9**	**-0.7**
	comp=Z,1.0nm,0.8s,mb3.3,baz=116,slow=11,SNR=8.0							
ZALV	**Zalesovo Beam**	**26.38**	**334**		P	**P**	**11 34 35.6**	**-1.0**
	comp=Z,1.1nm,0.4s,mb3.8,baz=132,slow=9.0,SNR=8.2							
KURK	**Kurchatov**	**26.93**	**323**		P	**P**	**11 34 40.5**	**-1.0**
	comp=Z,0.7nm,0.5s,mb3.4,baz=132,slow=9.2,SNR=6.3							
WRA	**Warramunga Arr**	**58.80**	**146**		P	**P**	**11 38 58.2**	**-0.8**
	comp=Z,0.9nm,0.4s,mb4.1,baz=339,slow=8.0,SNR=15							
ASAR	**Alice Springs**	**61.83**	**149**		P	**P**	**11 39 20.3**	**+0.6**
	comp=Z,0.8nm,1.1s,mb3.8,baz=218,slow=16,SNR=3.4							

IDC 05 11:38:41.9±1.5,0°.80N×123°.37E,h0km,mb3.7/4, mb1 3.8/5,mb1mx3.6/22,mbtmp3.7/5,ML4.0/1,Error ellipse: s-maj=125.9km s-min=22.6km az=64.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**18.91**	**173**	P	Pn	11 43 04.0	-0.8
	0.3nm,0.3s,baz=8.2,SNR=11						
WRA	**Warramunga Arr**	**23.25**	**153**	P	P	11 43 51.8	+0.7
	1.8nm,0.7s,baz=330,slow=11,SNR=38						
ASAR	**Alice Springs**	**26.38**	**159**	P	P	11 44 19.7	-0.4
	0.5nm,0.5s,baz=344,slow=14,SNR=11						
STKA	**Stephens Creek**	**36.80**	**154**	P	P	11 45 51.6	+0.1
	1.1nm,0.4s,baz=353,slow=10,SNR=5.3						
MKAR	**Makanchi Array**	**58.14**	**328**	P	P	11 48 37.4	0.0
	0.3nm,0.4s,baz=122,slow=8.7,SNR=6.8						

*NDI **05** 11:59:37.1±4.0,25°.76N×74°.23E,h10km±13km,ML3.6*
ISC 05 11:59:40.6±1.0,25°.77N±0°.03×74°.65E±0°.05,h17km±6km, n29,σ1°.21/47,1D,Northern India

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AJM	**Ajmer**	**0.71**	**360**	*e*PKP	**Pb**	**11 59 52.1**	**-2.5**
AJM				*e*S	**Sg**	**12 00 04.3**	**+0.2**
AJM				AML	AML	12 00 05.7	
	comp=E,3μm,0.2s						
AJM				AML	AML	12 00 05.8	
	comp=N,2μm,0.2s						
KHET	**Khetri**	**2.52**	**24**	*e*PKP	**Pn**	**12 00 21.6**	**+0.8**
KHET				*e*S	**Sn**	**12 00 52.9**	**+1.8**
KHET				AML	AML	12 01 03.9	
	comp=E,277nm,0.5s						
KHET				AML	AML	12 01 06.3	
	comp=N,209nm,0.2s						
SONA	**Sohna**	**3.29**	**41**	*e*PKP	**Pn**	**12 00 32.4**	**+1.0**
SONA				*e*S	**Sn**	**12 01 11.8**	**+1.6**
SONA				AML	AML	12 01 34.5	
	comp=E,281nm,0.7s						
SONA				AML	AML	12 01 35.6	
	comp=N,153nm,0.5s						
AGRA	**Agra**	**3.29**	**63**	*e*PKP	**Pn**	**12 00 34.5**	**+3.0**
AGRA				*e*S	**Sn**	**12 01 15.0**	**+4.8**
AGRA				AML	AML	12 01 41.2	
	comp=N,180nm,0.2s						
AGRA				AML	AML	12 01 47.0	
	comp=E,263nm,0.3s						
AYAN	**Aya Nagar**	**3.49**	**39**	*ex*	**Pg**	**12 00 44.0**	**-3.5**
AYAN				*ex*	**Sg**	**12 01 35.7**	**+2.8**
JASL	**Jaisalmer**	**3.55**	**290**	*e*PKP	**Pn**	**12 00 29.1**	**-5.8**
JASL				*e*S	**Sn**	**12 01 04.3**	**-12**
BHPL	**Bhopal**	**3.57**	**134**	*e*PKP	**Pn**	**12 00 36.0**	**+0.8**
BHPL				*e*S	**Sn**	**12 01 20.8**	**+3.9**
BHPL				AML	AML	12 01 39.9	
	comp=N,311nm,0.2s						
BHPL				AML	AML	12 01 42.7	
	comp=E,313nm,0.2s						
NDI	**New Delhi**	**3.70**	**38**	*e*PB	**Pg**	**12 00 45.0**	**-6.5**
NDI				*e*SB	**Sg**	**12 01 39.0**	**-0.5**
KKR	**Kurukshetra**	**4.60**	**24**	*ex*	**Sg**	**12 02 07.7**	**-0.7**
BHV	**Bhavnagar**	**4.61**	**210**	*ex*	**Pb**	**12 01 00.5**	**-0.5**
SMLA	**Simla**	**5.79**	**22**	*i* P	**Pn**	**12 01 04.3**	**-1.3**
SMLA				*i* S	**Sn**	**12 02 10.2**	**-1.5**
SMLA						12 02 14.9	
	comp=E,648nm,0.3s						
SMLA				⇓		12 02 15.2	
	comp=N,538nm,0.2s						
SDNR	**Sundarnagar**	**6.07**	**19**	*e*PKP	**Pn**	**12 01 08.5**	**-1.0**
SDNR				*ex*	x	12 01 50.5	
NGP	**Nagpur**	**6.12**	**138**	*e*S	**Sn**	**12 02 19.6**	**-0.3**
NGP				*ex*	x	12 02 52.5	
NGP				*ex*	x	12 02 54.5	
	comp=N,251nm,0.5s						
KLP	**Kalpa**	**6.56**	**28**	*e*S	**Sn**	**12 02 26.9**	**-3.8**
THN	**Thein Dam**	**6.71**	**8**	*ex*	x	12 01 10.0	
THN				*ex*	**Sn**	**12 02 35.2**	**+0.8**
POO	**Poona**	**7.24**	**186**	*ex*	x	12 03 01.0	
LATR	**Latur**	**7.52**	**166**	*ex*	x	12 01 15.6	
LATR				*ex*	**Sb**	**12 03 26.8**	**+6.7**
KOLN	**Koldanda**	**8.25**	**74**	*e*Pn	**Pn**	**12 01 40.8**	**+1.3**
KOLN				*e*Sn	**Sn**	**12 03 14.0**	**+1.7**
	comp=N,70nm,0.4s						
KAD	**Karad**	**8.43**	**183**	*ex*	x	12 03 48.0	
GKN	**Gorkha**	**9.19**	**74**	*e*Pn	**Pn**	**12 01 53.1**	**+0.7**
GKN				*e*Sn	**Sn**	**12 03 35.9**	**+0.4**
	comp=N,58nm,0.2s						
DMN	**Daman**	**9.53**	**77**	*e*Pn	**Pn**	**12 01 57.6**	**+0.5**
DMN				*e*Sn	**Sn**	**12 03 44.4**	**+0.5**
	comp=N,19nm,0.3s						
KKN	**Kakani**	**9.71**	**76**	*e*Pn	**Pn**	**12 01 59.8**	**+0.2**
KKN				*e*Sn	**Sn**	**12 03 48.8**	**+0.5**
	comp=N,25nm,0.2s						
PKIN	**Phulchoki**	**9.78**	**77**	*e*Pn	**Pn**	**12 02 01.0**	**+0.5**
PKIN				*e*Sn	**Sn**	**12 03 49.7**	**-0.3**
	comp=N,46nm,0.4s						
PKI	**Pulchoki**	**9.79**	**77**	*e*Pn	**Pn**	**12 02 00.3**	**-0.4**
PKI				*e*Sn	**Sn**	**12 03 50.2**	**-0.1**
	comp=N,28nm,0.3s						
GUN	**Gumba**	**10.26**	**75**	*e*Pn	**Pn**	**12 02 07.9**	**+0.9**
GUN				*e*Sn	**Sn**	**12 04 00.1**	**-1.5**
	comp=N,56nm,0.3s						
JIRN	**Jiri**	**10.49**	**77**	*e*Pn	**Pn**	**12 02 09.5**	**-0.7**
JIRN				*e*Sn	**Sn**	**12 04 06.1**	**-1.3**
	comp=N,32nm,0.2s						
RAMN	**Ramite**	**10.79**	**81**	*e*Pn	**Pn**	**12 02 14.0**	**-0.3**
RAMN				*e*Sn	**Sn**	**12 04 11.8**	**-2.8**
ODAN	**Odare**	**11.48**	**82**	*e*Pn	**Pn**	**12 02 23.7**	**-0.1**
ODAN				*e*Sn	**Sn**	**12 04 28.8**	**-3.0**
	comp=N,30nm,0.3s						
TAPN	**Taplejung**	**11.80**	**79**	*e*Pn	**Pn**	**12 02 28.8**	**+0.6**
TAPN				*e*Sn	**Sn**	**12 04 37.8**	**-1.7**
	comp=N,27nm,0.6s						

*LDG **05** 12:14:46.4±0.9,20°.47S×170°.72E,h150km,Error ellipse: s-maj=109.7km s-min=3.1km az=147.0*
*NOU **05** 12:14:50.9±1.2,18°.62S×168°.84E,h30km,MD3.5,ML3.6*
*ISCJB **05** 12:14:51.9±0.8,19°.20S±0°.06×169°.11E±0°.05,h170km±8km, mb4.6/41,Error ellipse: s-maj=10.4km s-min=7.0km az=161.3*
*IDC **05** 12:14:51.1±0.9,19°.13S×169°.06E,h148km±7km,mb4.2/13, mb1 4.4/13,mb1mx4.3/16,mbtmp4.2/13,Error ellipse: s-maj=16.4km s-min=13.8km az=133.0*
*NEIC **05** 12:14:51.5±0.3,19°.13S×169°.07E,mb4.9/22,Error ellipse: s-maj=9.8km s-min=6.6km az=146.0*

*BJI **05** 12:15:00.6,19°.23S×169°.07E,h254km,mB4.8/12, mb4.7/17*
ISC 05 12:14:52.3±0.8,19°.18S±0°.06×169°.14E±0°.05,h161km±8km, h255km±1.5km:pP-P,n240,σ0°.70/197,mb4.6/41,76C-56D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.64**	**215**	*e*P	**Pn**	**12 15 47.9**	**-0.4**
DZM	**Mont Dzumac**	**3.83**	**221**	*e*P	**Pn**	**12 15 50.4**	**-0.3**
DZM				AMP		12 16 54.0	
	comp=Z,1μm,0.0s						
DZM	**Mont Dzumac**	**3.83**	**221**	*e*Pn	**Pn**	**12 15 50.7**	**0.0**
DZM				*e*Sn	**Sn**	**12 16 36.4**	**+1.6**
NORM	**Noumea**	**3.93**	**219**	*e*P	**Pn**	**12 15 51.9**	**0.0**
NOUC	**Port Laguerre**	**3.94**	**222**	*e*P	**Pn**	**12 15 51.7**	**-0.4**
NOUC				*e*S	**Sn**	**12 16 37.7**	**+0.3**
NOUC				AMP		12 16 55.0	
	comp=Z,60nm,3.7s						
MVNO	**Noumea**	**3.98**	**219**	*e*P	**Pn**	**12 15 53.7**	**+1.1**
ONTRN	**Noumea**	**4.00**	**219**	*e*P	**Pn**	**12 15 53.6**	**+0.7**
HNR	**Honiara**	**13.15**	**316**	Pn	**Pn**	**12 17 52.4**	**-0.8**
EIDS	**Eidsvold**	**17.81**	**247**	*e*P	**Pn**	**12 18 50.1**	**-0.2**
EIDS	**Eidsvold**	**17.81**	**247**	*e*Pn	**Pn**	**12 18 49.6**	**-0.7**
	comp=Z,60nm,0.6s						
ARMA	**Armidale**	**19.42**	**231**	*e*P	**P**	**12 19 07.6**	**+1.4**
ARMA	**Armidale**	**19.42**	**231**	*e*P	**P**	**12 19 08.1**	**+1.9**
	comp=Z,43nm,1.1s						
RMQ	**Roma**	**20.13**	**245**	*e*P	**P**	**12 19 15.1**	**+1.2**
	comp=Z,21nm,0.6s						
URZ	**Urewera**	**20.24**	**162**	P	**P**	**12 19 16.3**	**+1.3**
	comp=Z,26nm,0.9s,baz=0.5,slow=6.3,SNR=8.0						
URZ	**Urewera**	**20.24**	**162**	*e*P	**P**	**12 19 16.0**	**+1.1**
	comp=Z,75nm,1.2s						
CTA	**Charters Tower**	**21.58**	**264**	*e*P	**P**	**12 19 30.1**	**+0.8**
	comp=Z,26nm,0.6s,mb4.8						
CTA	**Charters Tower**	**21.58**	**264**	P	**P**	**12 19 29.8**	**+0.4**
	comp=Z,30nm,0.6s,mb4.9,baz=92,slow=11,SNR=53						
CTAO	**Charters Tower**	**21.58**	**264**	*e*P	**P**	**12 19 29.8**	**+0.5**
	comp=Z,32nm,0.6s,mb4.9						
MTSU	**Mount Surprise**	**23.54**	**268**	*e*P	**P**	**12 19 48.4**	**+0.3**
	comp=Z,114nm,0.6s,mb5.6						
CNB	**Canberra Magne**	**23.75**	**223**	*e*P	**P**	**12 19 50.4**	**+0.5**
CAN	**Canberra**	**23.99**	**224**	*e*P	**P**	**12 19 52.5**	**+0.4**
	comp=Z,48nm,1.2s,mb4.9						
RPZ	**Rata Peaks**	**24.52**	**177**	P	**P**	**12 19 57.3**	**+0.6**
	comp=Z,20nm,0.8s,mb4.7,baz=333,slow=9.3,SNR=3.6						
COEN	**Coen**	**25.41**	**278**	*e*P	**P**	**12 20 05.3**	**+0.2**
	comp=Z,241nm,1.1s,mb5.6						
STKA	**Stephens Creek**	**27.80**	**238**	*e*P	**P**	**12 20 26.1**	**-0.3**
	comp=Z,17nm,0.6s,mb5.0						
STKA	**Stephens Creek**	**27.80**	**238**	P	**P**	**12 20 26.4**	**+0.1**
	comp=Z,19nm,0.6s,mb5.0,baz=68,slow=8.5,SNR=68						
STKA	**Stephens Creek**	**27.80**	**238**	*e*P	**P**	**12 20 26.0**	**-0.4**
	comp=Z,3.6nm,0.6s,mb4.3						
BBOO	**Buckleboo**	**32.54**	**239**	*e*P	**P**	**12 21 07.6**	**-0.5**
	comp=Z,12nm,0.6s,mb4.8						
WRAB	**Tennant Creek**	**32.76**	**263**	*e*P	**P**	**12 21 08.5**	**-1.7**
	comp=Z,31nm,1.1s,mb5.0						
WRA	**Warramunga Arr**	**32.77**	**263**	P	**P**	**12 21 07.7**	**-2.6**
	comp=Z,12nm,0.5s,mb4.9,baz=91,slow=8.3,SNR=158						
WRA				ScP	ScP	12 27 20.8	0.0
	comp=Z,1.6nm,1.0s,baz=98,slow=3.5,SNR=4.6						
ASAR	**Alice Springs**	**33.05**	**256**	P	**P**	**12 21 11.3**	**-1.3**
	comp=Z,75nm,0.6s,mb5.6,baz=79,slow=8.5,SNR=940						
ASAR				pP	pP	12 21 44.3	-2.5
	comp=Z,5.2nm,0.8s,baz=77,slow=8.0,SNR=2.1						
ASAR				ScP	ScP	12 27 23.2	+1.5
	comp=Z,0.8nm,0.8s,baz=91,slow=5.0,SNR=4.3						
KAKA	**Kakadu**	**35.82**	**275**	*e*P	**P**	**12 21 35.6**	**-0.9**
	comp=Z,31nm,0.6s,mb5.1						
FORT	**Forrest**	**38.79**	**245**	*e*P	**P**	**12 22 00.5**	**-0.9**
	comp=Z,24nm,0.6s,mb5.0						
FORT	**Forrest**	**38.79**	**245**	*e*P	**P**	**12 22 00.3**	**-1.1**
	comp=Z,36nm,0.7s,mb5.1						
FITZ	**Fitzroy Crossi**	**41.16**	**264**	*e*P	**P**	**12 22 20.7**	**-0.4**
	comp=Z,78nm,0.6s,mb5.5						
FITZ	**Fitzroy Crossi**	**41.16**	**264**	P	**P**	**12 22 20.9**	**-0.1**
	comp=Z,51nm,0.7s,mb5.2,baz=109,slow=7.5,SNR=124						
FITZ	**Fitzroy Crossi**	**41.16**	**264**	*e*P	**P**	**12 22 20.8**	**-0.3**
	comp=Z,95nm,1.1s,mb5.3						
MBWA	**Marble Bar**	**46.28**	**259**	*e*P	**P**	**12 23 01.0**	**-0.9**
MBWA	**Marble Bar**	**46.28**	**259**	*e*P	**P**	**12 23 01.0**	**-0.9**
	comp=Z,42nm,0.8s,mb5.1						
MEEK	**Meekatharra**	**46.89**	**251**	*e*P	**P**	**12 23 05.7**	**-1.0**
SBA	**Scott Base**	**58.73**	**181**	*e*P	**P**	**12 24 33.6**	**+1.0**
	comp=Z,16nm,0.9s,mb4.9						
MJAR	**Matsushiro Arr**	**62.65**	**332**	P	**P**	**12 24 58.8**	**-0.9**
	comp=Z,0.4nm,0.5s,mb3.5,baz=126,slow=15,SNR=4.0						
NJ2	**Nanjing**	**70.10**	**316**	*e*P	**P**	**12 25 47.6**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
QSPA	**South Pole Qui**	**70.88**	**180**	*e*P	**P**	**12 25 50.9**	**-0.2**
	comp=Z,24nm,0.9s,mb4.9						
PET	**Petropavlovsk**	**72.47**	**353**	*e*P	**P**	**12 26 01.7**	**+0.8**
	comp=Z,3.7nm,0.6s,mb4.3						
PETK	**Petropavlovsk-**	**72.66**	**353**	P	**P**	**12 26 02.5**	**+0.6**
	comp=Z,2.7nm,0.7s,mb4.1,baz=148,slow=5.2,SNR=10.0						
MDJ	**Mudanjiang**	**73.02**	**332**	P	**P**	**12 26 05.8**	**+1.5**
MDJ				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
MDJ				pmax	pmax		
	comp=Z,52nm,3.5s						
CN2	**Changchun**	**74.36**	**329**	*e*P	**P**	**12 26 15.0**	**+2.9**
CN2				*ep*P	pP	12 27 14.8	+23
CN2				*e*S	S	12 35 28.1	-5.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,18.0s						
CN2				LR	LR		
	comp=E,200nm,18.0s						
CN2				LR	LR		
	comp=Z,200nm,20.0s						
GYA	**Guiyang**	**75.71**	**305⇑**	*i*P	**P**	**12 26 21.2**	**+0.9**
GYA				PcP	PcP	12 26 33.2	+0.9
GYA				pP	pP	12 27 22.7	+23
GYA				sP	sP	12 27 48.0	+31
GYA				PP	PP	12 29 16.5	+3.9
GYA				S	S	12 35 41.9	-6.9
GYA				SKS		12 36 02.8	
GYA				sS	sS	12 37 26.0	+29
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.7						
GYA				pmax	pmax		
	comp=Z,120nm,5.2s						
KMI	**Kunming**	**78.16**	**302**	P	**P**	**12 26 35.1**	**+1.0**
KMI				pP	pP	12 27 34.8	+21
KMI				sP	sP	12 28 01.0	+30
KMI				PP	PP	12 29 37.3	+4.1
KMI				S	S	12 36 07.5	-8.0
KMI				sS	sS	12 37 51.9	+28
KMI				SS	SS	12 41 18.2	-3.2
KMI				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.2						
KMI				pmax	pmax		
	comp=Z,31nm,5.7s						
KMI				LR	LR		
	comp=N,61nm,20.3s						
KMI				LR	LR		
	comp=E,72nm,18.5s						
KMI				LR	LR		
	comp=Z,110nm,21.1s						
CMAR	**Chiang Mai Arr**	**78.39**	**294**	P	**P**	**12 26 36.1**	**+0.7**
	comp=Z,2.2nm,0.7s,mb3.9,baz=126,slow=4.5,SNR=9.8						
MAW	**Mawson**	**78.46**	**202**	P	**P**	**12 26 35.2**	**+0.2**
	comp=Z,5.3nm,0.9s,mb4.2,baz=114,slow=6.6,SNR=11						
HHC	**Hu-ho-hao-te**	**80.11**	**319**	*e*P	**P**	**12 26 45.6**	**+1.3**
HHC				pP	pP	12 27 45.2	+21
HHC				sP	sP	12 28 12.0	+31
HHC				PP	PP	12 29 53.7	+4.7
HHC				S	S	12 36 28.4	-7.0
HHC				SKS		12 36 33.9	
HHC				sS	sS	12 38 13.7	+29
HHC				SS	SS	12 41 48.6	-1.5
HHC				pmax	pmax		
	comp=Z,17nm,0.7s,mb4.8						
HHC				pmax	pmax		
	comp=Z,68nm,6.9s						
HHC				LR	LR		
	comp=N,210nm,17.8s						
HHC				LR	LR		
	comp=E,230nm,17.1s						
HHC				LR	LR		
	comp=Z,260nm,17.5s						
LZH	**Lanzhou**	**82.62**	**312**	*e*P	**P**	**12 26 58.3**	**+0.7**
LZH				pP	pP	12 28 00.0	+22
LZH				sP	sP	12 28 24.5	+30
LZH				PP	PP	12 30 14.0	+4.2
LZH				*e*S	S	12 36 50.8	-11
LZH				sS	sS	12 38 39.5	+29
LZH				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.7						
LZH				pmax	pmax		
	comp=Z,93nm,4.0s						
KHMM	**Horse Mountain**	**86.23**	**44**	*e*P	**P**	**12 27 16.6**	**+1.0**
GTA	**Gaotai**	**87.02**	**313**	*e*P	**P**	**12 27 20.2**	**+0.7**
GTA				pP	pP	12 28 21.4	+21
GTA				sP	sP	12 28 49.3	+32
GTA				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
SONM	**Songino Array**	**87.11**	**323**	P	**P**	**12 27 21.0**	**+1.3**
	comp=Z,0.9nm,0.7s,mb3.7,baz=141,slow=6.6,SNR=4.2						
SONM				pP	pP	12 27 58.0	-2.2
	comp=Z,0.6nm,0.5s,baz=136,slow=5.1,SNR=2.5						
SONM				sP	sP	12 28 11.6	-5.5
	comp=Z,1.1nm,0.9s,baz=149,slow=6.4,SNR=3.1						
CMB	**Columbia Colle**	**87.18**	**48**	*e*P	**P**	**12 27 20.4**	**+0.1**
	comp=Z,5.9nm,0.8s,mb4.5						
YBH	**Yreka Blue Hor**	**87.32**	**44**	*e*P	**P**	**12 27 21.8**	**+0.9**
	comp=Z,5.2nm,0.9s,mb4.4						
109C	**Camp Elliot, M**	**87.36**	**54**	⇑P	**P**	**12 27 22.4**	**+1.1**
	baz=88						
BFSC	**Mount Baldy Ra**	**87.51**	**53**	⇓P	**P**	**12 27 21.9**	**-0.1**
	baz=88						
ISA	**Isabella**	**87.51**	**51**	⇑P	**P**	**12 27 21.4**	**-0.6**
	baz=88						
ISA	**Isabella**	**87.51**	**51**	*e*P	**P**	**12 27 22.7**	**+0.8**
	comp=Z,6.0nm,0.8s,mb4.5						
EDW2	**Edwards Air Fo**	**87.53**	**52**	⇑P	**P**	**12 27 22.5**	**+0.4**
	baz=88						
MURC	**Murrieta**	**87.58**	**53**	⇓P	**P**	**12 27 21.3**	**-1.1**
	baz=88						
MONP	**Monument Peak**	**87.89**	**54**	⇑P	**P**	**12 27 23.9**	**+0.1**
	baz=88						
DVTC	**Desert V Tower**	**88.04**	**55**	⇓P	**P**	**12 27 24.3**	**-0.2**
	baz=88						
WAKR	**Walker**	**88.06**	**48**	*e*P	**P**	**12 27 25.2**	**+0.7**
MTUM	**Tungsten Hills**	**88.18**	**49**	*e*P	**P**	**12 27 26.0**	**+0.9**
WCN	**Washoe City**	**88.19**	**47**	⇑P	**P**	**12 27 25.0**	**-0.1**
	baz=89						
MPMC	**Manual Prospec**	**88.40**	**51**	⇓P	**P**	**12 27 26.5**	**+0.3**
	baz=89						
GSC	**Goldstone**	**88.59**	**52**	⇓P	**P**	**12 27 27.7**	**+0.7**
	baz=89						
BELC	**Belle Mtn. Jos**	**88.66**	**53**	⇑P	**P**	**12 27 27.8**	**+0.4**
	baz=89						
NVAR	**Mina Array Bea**	**88.83**	**49**	P	**P**	**12 27 28.8**	**+0.7**
	comp=Z,2.4nm,0.9s,mb4.1,baz=225,slow=8.4,SNR=18						
GRAC	**Grapevine Rang**	**88.89**	**50**	⇓P	**P**	**12 27 29.0**	**+0.6**
	baz=89						
BC3	**Big Chuckawall**	**88.94**	**54**	⇓P	**P**	**12 27 28.5**	**-0.3**
	baz=89						
K05A	**Summer Lake**	**88.97**	**44**	⇓P	**P**	**12 27 29.1**	**+0.4**
	baz=89						
MOD	**Modoc**	**88.99**	**45**	*e*P	**P**	**12 27 29.6**	**+0.8**
	comp=Z,11nm,1.1s,mb4.7						
FURC	**Furnace Creek,**	**89.04**	**51**	⇓P	**P**	**12 27 29.2**	**0.0**
	baz=89,SNR=6.8						
H04A	**Detroit Lake**	**89.06**	**42**	⇓P	**P**	**12 27 29.2**	**+0.1**
	baz=90						
GLA	**Glamis**	**89.17**	**55**	*e*P	**P**	**12 27 31.0**	**+1.1**
GMRC	**Granite Mounta**	**89.23**	**53**	⇑P	**P**	**12 27 29.7**	**-0.4**
	baz=90						
TUQ	**Turquoise Moun**	**89.30**	**52**	⇑P	**P**	**12 27 28.7**	**-1.7**
	baz=90						
NLWA	**Neilton Lookou**	**89.34**	**39**	⇑P	**P**	**12 27 30.4**	**+0.1**
	baz=90						
IRM	**Iron Mountain**	**89.37**	**53**	⇑P	**P**	**12 27 30.4**	**-0.3**
	baz=90						
F04A	**Amboy**	**89.51**	**40**	⇓P	**P**	**12 27 30.8**	**-0.2**
	baz=90						
Y12C	**Blythe**	**89.68**	**54**	⇑P	**P**	**12 27 32.2**	**0.0**
	baz=90						
LDFC	**Landfair**	**89.77**	**53**	*e*P	**P**	**12 27 33.7**	**+1.1**
	comp=Z,7.2nm,0.5s,mb4.9						
S10A	**Tonopah Range,**	**89.83**	**50**	⇑P	**P**	**12 27 32.7**	**-0.1**
	baz=90,SNR=12						
V11A	**Goodsprings**	**89.83**	**52**	⇓P	**P**	**12 27 32.7**	**-0.2**
	baz=90,SNR=5.3						
113A	**Mohawk Valley,**	**89.88**	**55**	⇓P	**P**	**12 27 32.9**	**-0.2**
	baz=90						
Z13A	**Yuma Proving G**	**90.14**	**55**	⇓P	**P**	**12 27 34.9**	**+0.5**
	baz=90,SNR=8.4						
PDMCI	**Parker Dam,Lak**	**90.19**	**54**	⇑P	**P**	**12 27 34.6**	**+0.1**
	baz=91						
R10A	**Warm Springs**	**90.19**	**49**	⇑P	**P**	**12 27 34.0**	**-0.5**
	baz=91,SNR=6.9						
V12A	**Nelson**	**90.22**	**52**	⇑P	**P**	**12 27 34.8**	**+0.1**
	baz=91						
Y13A	**Salome**	**90.24**	**54**	⇑P	**P**	**12 27 35.3**	**+0.5**
	baz=91						
G06A	**Carlson Farm,**	**90.29**	**42**	⇑P	**P**	**12 27 34.4**	**-0.4**
	baz=91						
S11A	**Rachel**	**90.33**	**50**	⇑P	**P**	**12 27 35.4**	**+0.2**
	baz=91						
WVOR	**Wild Horse Val**	**90.33**	**45**	*e*P	**P**	**12 27 36.0**	**+1.0**
	comp=Z,10nm,1.1s,mb4.7						
D05A	**Enumclaw**	**90.36**	**40**	⇑P	**P**	**12 27 36.0**	**+1.0**
	baz=91						
VNA1	**Neumayer--Stat**	**90.40**	**181**	*

baz=92
E08A Dider Farm, El 91.84 41 ⇑P P 12 27 43.2 +1.3
baz=92
Z16A Peralta Trail, 91.92 55 ⇑P P 12 27 42.2 -0.4
baz=92
H09A Durkee 91.93 43 ⇓P P 12 27 42.6 +0.2
baz=92
CCUT Cedar City 92.03 51 *e*P P 12 27 43.7 +0.7
TUC Tucson 92.05 57 *e*P P 12 27 44.3 +1.0
comp=Z,4.8nnm,1.0s,mb4.5
T14A Hurricane 92.05 51 ⇑P P 12 27 43.6 +0.5
baz=92,SNR=8.4
Y16A Circle Bar Ran 92.08 55 ⇑P P 12 27 44.2 +0.9
baz=92,SNR=8.9
O12A Currie 92.10 48 ⇑P P 12 27 42.4 -0.9
baz=92
Q13A Wheeler Ranch, 92.10 49 ⇑P P 12 27 42.6 -0.7
baz=92
L11A Cat Creek Ranc 92.16 46 ⇑P P 12 27 43.7 +0.2
baz=93
117A Oracle 92.18 56 ⇑P P 12 27 43.8 0.0
baz=92,SNR=7.8
K11A Parker Ranch, 92.22 45 ⇓P P 12 27 44.3 +0.5
baz=93
V15A Kaibab Nationa 92.26 53 ⇑P P 12 27 44.6 +0.5
baz=93
P13A Bates Ranch, G 92.30 49 ⇓P P 12 27 43.9 -0.3
baz=93
X16A Lo Mia Camp, P 92.30 54 ⇑P P 12 27 45.6 +1.2
baz=93,SNR=11
318A Bisbee 92.36 58 ⇑P P 12 27 45.0 +0.3
baz=93,SNR=6.7
U15A North Rim 92.40 52 ⇓P P 12 27 45.2 +0.5
baz=93,SNR=9.9
W16A Flagstaff 92.48 54 ⇑P P 12 27 45.5 +0.4
baz=93
H10A Noah's Angus R 92.49 43 ⇑P P 12 27 44.3 -0.7
baz=93
Y17A Roosevelt 92.50 55 ⇓P P 12 27 45.5 +0.2
baz=93
218A Dragoon 92.51 57 ⇑P P 12 27 44.5 -0.9
baz=93
G10A Bishop Farm, J 92.55 43 ⇓P P 12 27 45.2 0.0
baz=93
T15A Red Dirt Ranch 92.56 52 ⇓P P 12 27 45.8 +0.3
baz=93
Q14A Sevier Lake (B 92.65 50 ⇓P P 12 27 46.1 +0.3
baz=93
L12A House Creek Ra 92.66 46 ⇑P P 12 27 46.3 +0.5
baz=93
I11A Placerville 92.73 44 ⇓P P 12 27 45.6 -0.5
baz=93
WUAZ Wupatki 92.76 53 ⇑P P 12 27 46.4 0.0
baz=93
X17A Forest Lakes 92.76 55 ⇓P P 12 27 47.4 +0.9
baz=93,SNR=7.0
118A Homack Ranch, 92.81 57 ⇓P P 12 27 46.5 -0.2
baz=93,SNR=8.1
319A Douglas 92.91 58 ⇑P P 12 27 46.7 -0.6
baz=93,SNR=5.5
M13A Montello 92.93 47 ⇓P P 12 27 46.4 -0.7
baz=93
H11A Donnelly 93.02 44 ⇑P P 12 27 47.3 -0.1
baz=93
J12A Stokes Ranch, 93.04 45 ⇓P P 12 27 47.3 -0.3
baz=93
G11A Walters Elk Ra 93.14 43 ⇑P P 12 27 47.3 -0.6
baz=94
219A White Tail Can 93.14 57 ⇑P P 12 27 48.5 +0.2
baz=94,SNR=7.5
Y18A Canyon Day Jun 93.16 55 ⇓P P 12 27 47.9 -0.4
baz=94,SNR=5.6
V17A Tonalea, Kykot 93.23 53 ⇓P P 12 27 48.3 -0.3
baz=94
S16A Weppner Ranch, 93.40 51 ⇓P P 12 27 49.2 -0.1
baz=94
X18A Snowflake 93.49 55 ⇑P P 12 27 49.2 -0.6
baz=94
320A Kipp Ranch, An 93.50 58 ⇓P P 12 27 49.3 -0.6
baz=94,SNR=5.4
M14A Sheep Mountain 93.56 47 ⇓P P 12 27 49.3 -0.7
baz=94
HLID Hailey 93.62 45 ⇓P P 12 27 49.7 -0.5
baz=94
G12A Big Creek, Yel 93.64 43 ⇓P P 12 27 49.1 -1.1
baz=94
220A Playas Peak, P 93.69 58 ⇓P P 12 27 51.5 +0.6
baz=94
H12A Diamond D Ranc 93.72 44 ⇓P P 12 27 50.6 0.0
baz=94
J13A Cove Ranch, Pi 93.72 45 ⇓P P 12 27 50.0 -0.6
baz=94
T17A Navajo Res., N 93.72 52 ⇓P P 12 27 50.0 -0.9
baz=94
120A U Bar Ranch, L 93.83 57 ⇑P P 12 27 51.8 +0.4
baz=94
F12A Elk City 93.93 43 ⇑P P 12 27 50.8 -0.8
baz=94
S17A Black Ridge (B 93.95 52 ⇓P P 12 27 50.2 -1.7
baz=94
I13A Wildhorse Cree 93.96 45 ⇓P P 12 27 51.7 -0.1
baz=94
R17A Hanksville Air 94.30 51 ⇑P P 12 27 52.8 -0.7
baz=95
I14A Mackay 94.41 45 ⇑P P 12 27 53.2 -0.6
baz=95
T18A Mexican Hat 94.47 52 ⇑P P 12 27 53.8 -0.4
baz=95
U19A Dine' College, 94.68 53 ⇓P P 12 27 55.5 +0.2
baz=95
H14A Leadore 94.72 44 ⇑P P 12 27 55.3 +0.1
baz=95
W20A Ramah 94.82 55 ⇑P P 12 27 55.8 -0.1
baz=95
O17A Robinson Place 94.91 49 ⇑P P 12 27 55.7 -0.5
baz=95
U21A Nageezi 95.90 54 ⇑P P 12 27 59.9 -0.9
baz=96
425A Indio Mountain 96.18 60 ⇓P P 12 28 01.3 -1.0
baz=96
325A Bean Ranch, Si 96.38 59 ⇑P P 12 28 01.8 -1.3
baz=97
PDAR Pinedale Array 96.64 47 P P 12 28 04.1 +0.1
comp=Z,0.4nm,0.9s,mb3.8,baz=290,slow=4.3,SNR=3.8
TXAR Lajitas Array 96.82 61 P P 12 28 05.2 0.0
comp=Z,0.3nm,0.7s,mb3.7,baz=270,slow=10.0,SNR=4.6
WMQ Urumqi 97.09 314 *e*P P 12 28 06.2 +0.2
WMQ pP pP 12 29 08.2 +21
WMQ sP sP 12 29 34.5 +31
WMQ PP PP 12 32 08.2 +3.7
WMQ pmax pmax
comp=Z,9.0nm,0.8s,mb5.2
YKA Yellowknife Ar 100.65 27 P Pdif 12 28 22.1 +0.2
comp=Z,0.7nm,0.7s,baz=307,slow=19,SNR=4.4
ARCES ARCESS Array B 124.98 345 PKP PKPdf 12 33 31.0 -1.5
comp=Z,1.1nm,0.3s,baz=54,slow=1.9,SNR=17
TANN Tannenbergstha 143.73 335 *e*PKPbc PKPdf 12 34 05.4 -2.6
WERD Werda 143.77 335 *e*PKPbc PKPdf 12 34 05.7 -2.3
PLN Plauen 143.80 335 *e*PKPbc PKPdf 12 34 05.4 -2.7
GUNZ Gunzen 143.82 335 *e*PKPbc PKPdf 12 34 06.0 -2.1
NKC Novy Kostel 143.88 334 *e*PKPbc PKPdf 12 34 06.0 -2.2
MOX Moxa 143.89 336 *e*PKPbc PKPdf 12 34 05.6 -2.6
KHC Kasperske Hory 144.24 332 *e*PKPdf PKPdf 12 34 07.3 -1.6
KHC Kasperske Hory 144.24 332 *e*PKP PKPdf 12 34 07.0 -1.9
GRF Grafenberg Arr 144.79 335 *e*PKPbc PKPdf 12 34 09.1 -0.7
BEBN Eben Emael 145.83 341 PKP PKPdf 12 34 12.0 +0.4
MEM Membach 145.89 341 PKP PKPdf 12 34 12.1 +0.4
BCLA Clavier 146.28 341 PKP PKPdf 12 34 12.1 -0.2
SNF Seneffe 146.50 342 PKP PKPdf 12 34 14.3 +1.6
WLF Walferdange 146.67 340 PKP PKPbc 12 34 15.3 +0.5
GIVF Givet 146.70 342 *e*PKP1 PKPbc 12 34 14.4 -0.6
DOU Dourbes 146.77 342 PKPdf 12 34 14.9 +1.7
BAIF Baives 146.92 342 ⇑*i*PKP1 PKPbc 12 34 15.1 -0.5
comp=Z,9.0nm,0.7s
BFO Black Forest 147.02 336 *e*PKPbc PKPbc 12 34 15.5 -0.4
CDF Champ du Feu 147.35 337 ⇑*i*PKP1 PKPbc 12 34 16.3 -0.5
comp=Z,17nm,0.8s
HINF Hinteralfeld 148.00 337 *e*PKP1 PKPbc 12 34 17.6 -1.0
HAU Haudompre 148.02 338 *e*PKP1 PKPbc 12 34 17.9 -0.8
comp=Z,12nm,0.7s
MEZF Maizieres J'vi 148.04 340 *e*PKP1 PKPbc 12 34 18.5 -0.2
comp=Z,13nm,0.6s
TUE Stuetta 148.11 333 *e*PKPbc PKPbc 12 34 18.7 -0.3
TUE *e*PKPab PKPab 12 34 22.1 -0.1
CABF La Chapelle 149.30 337 ⇑*i*PKP1 PKPbc 12 34 21.8 -0.1
comp=Z,23nm,0.8s
LDF La Druitiere 149.40 346 *e*PKP1 PKPbc 12 34 21.0 -1.1
comp=Z,3.7nm,0.5s
LOR Lormes 149.50 340 ⇑*i*PKP1 PKPbc 12 34 21.8 -0.6
comp=Z,13nm,0.6s
GRR Gorron 149.75 347 *e*PKP1 PKPbc 12 34 22.1 -0.9
SSF Saint Saulge 149.80 340 *e*PKP1 PKPbc 12 34 22.5 -0.7
comp=Z,28nm,1.0s
LPL La Plagne 149.96 335 *e*PKP1 PKPbc 12 34 23.5 -0.1
comp=Z,10nm,0.8s
LPG La Plagne 149.97 335 ⇑*i*PKP1 PKPbc 12 34 23.6 0.0
comp=Z,20nm,0.9s
SMF Signal de Mont 150.06 339 *e*PKP1 PKPbc 12 34 23.0 -0.8
AVF Avril sur Loir 150.09 340 *e*PKP1 PKPbc 12 34 22.9 -1.0
BNI Bardonecchia 150.36 334 *e*PKPbc PKPbc 12 34 24.9 +0.3
BGF Bois d'Agland 150.46 341 ⇑*i*PKP1 PKPbc 12 34 24.0 -0.7
comp=Z,17nm,0.8s
MBDF Montbardon 150.59 334 *e*PKP1 PKPbc 12 34 25.0 -0.1
ORIF Oris-en-Rattie 150.79 335 ⇑*i*PKP1 PKPbc 12 34 25.0 -0.6
comp=Z,17nm,0.7s
TCF Toulx Ste Croi 150.89 341 *e*PKP1 PKPbc 12 34 24.9 -0.9
comp=Z,23nm,1.1s
MFF Saint Martin d 151.26 345 *e*PKP1 PKPbc 12 34 25.6 -1.0
VIVF Saint-Julien-l 151.31 337 *e*PKP1 PKPbc 12 34 26.1 -0.7
comp=Z,13nm,0.9s
FRF La Foret Royal 151.58 333 ⇑*i*PKP1 PKPbc 12 34 26.4 -1.1
comp=Z,26nm,0.9s
SMRF Simiane la Rot 151.69 334 *e*PKP1 PKPbc 12 34 27.4 -0.3
comp=Z,15nm,0.9s
LMR La Mourre 151.82 333 *e*PKP1 PKPbc 12 34 26.8 -1.2
comp=Z,28nm,1.0s
LASF Ste Croix 152.28 337 *e*PKP1 PKPbc 12 34 28.4 -0.6
comp=Z,25nm,1.1s

ISCJB ***05*** *12:39:17.4±0.6, 40°.32N±0°.03×40°.23E±0°.03, h3km±5km, Error ellipse: s-maj=5.3km s-min=4.0km az=164.7*
DDA ***05*** *12:39:17.3, 40°.35N×40°.27E, h7km±5km, Md3.1*
ISK ***05*** *12:39:17.4, 40°.31N×40°.18E, h16km, MD2.9*
CSEM ***05*** *12:39:17.6±0.2, 40°.30N×40°.22E, h10km, MD3.1, Error ellipse: s-maj=3.9km s-min=3.2km az=167.0*
ISC 05 12:39:18.0±0.6, 40°.32N±0°.03×40°.24E±0°.03, h8km±4km, n33, σ0°85/50, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOPT	**Kop Dagi**	**0.36**	**146**	*i* P	**Pg**	**12 39 25.1**	**+0.1**
KOPT	**Kop Dagi**	**0.36**	**146**	*i* P	**Pg**	**12 39 25.1**	**+0.1**
GUMT	**Gumushane**	**0.60**	**284**	PG	**Pg**	**12 39 29.0**	**-0.5**
GUMT	**Gumushane**	**0.60**	**284**	*i* Pg	**Pg**	**12 39 29.0**	**-0.5**
MACK	**Trabzon**	**0.72**	**330**	*i* P	**Pg**	**12 39 31.6**	**-0.3**
MACK				*i* S	**Sg**	**12 39 42.0**	**+0.8**
MACK	**Trabzon**	**0.72**	**330**	*i* P	**Pg**	**12 39 31.6**	**-0.2**
MACK				*i* S	**Sg**	**12 39 42.0**	**+0.8**
KTUT	**Trabzon**	**0.76**	**332**	*e*PG	**Pg**	**12 39 32.6**	**0.0**
KTUT				*e*SG	**Sg**	**12 39 42.9**	**+0.4**
KTUT	**Trabzon**	**0.76**	**332**	*e*Pg	**Pg**	**12 39 32.6**	**0.0**
KTUT				*e*Sg	**Sg**	**12 39 42.9**	**+0.5**
EZC	**Erzincan**	**0.88**	**230**	*e*PG	**Pg**	**12 39 33.9**	**-1.1**
EZM	**Erzurum**	**0.96**	**115**	*e*PG	**Pg**	**12 39 37.1**	**+0.7**
ERZM	**Erzurum**	**0.96**	**115**	*i* P	**Pg**	**12 39 37.0**	**+0.6**
ERZM				*i* S	**Sg**	**12 39 53.2**	**+4.4**
ERZM	**Erzurum**	**0.96**	**115**	*i* P	**Pg**	**12 39 37.0**	**+0.6**
PZAR	**Pazar-Rize**	**0.99**	**30**	*e*PG	**Pg**	**12 39 37.6**	**+0.6**
PZAR	**Pazar-Rize**	**0.99**	**30**	*e*Pg	**Pg**	**12 39 37.7**	**+0.6**
DDEM	**Demirkent**	**1.29**	**63**	*i* P	**Pn**	**12 39 41.4**	**-0.8**
DDEM				*i* S	**Sb**	**12 39 58.5**	**-0.6**
DDEM	**Demirkent**	**1.29**	**63**	*i* P	**Pn**	**12 39 41.4**	**-0.8**
DDEM				*i* S	**Sb**	**12 39 58.5**	**-0.6**
ESPY	**Espiye-Giresun**	**1.30**	**298**	*e*PN	**Pn**	**12 39 40.9**	**-1.5**
ESPY	**Espiye-Giresun**	**1.30**	**298**	*e*Pn	**Pn**	**12 39 40.9**	**-1.5**
DBAD	**Bademkaya**	**1.31**	**57**	*i* P	**Pn**	**12 39 41.9**	**-0.7**
DBAD				*i* S	**Sb**	**12 39 58.2**	**-1.6**
DBAD	**Bademkaya**	**1.31**	**57**	*i* P	**Pn**	**12 39 41.9**	**-0.7**
DBAD				*i* S	**Sb**	**12 39 58.2**	**-1.6**
DAGI	**Agillar**	**1.48**	**59**	*i* P	**Pn**	**12 39 45.1**	**+0.1**
DAGI				*i* S	**Sn**	**12 40 05.1**	**+0.6**
DBOC	**Borcka**	**1.49**	**46**	*e*P	**Pn**	**12 39 45.0**	**-0.1**
DBOC				*e*S	**Sn**	**12 40 04.8**	**+0.1**
DBOC	**Borcka**	**1.49**	**46**	*e*P	**Pn**	**12 39 45.0**	**-0.1**
DBOC				*e*S	**Sn**	**12 40 04.8**	**+0.1**
BCA	**Borcka**	**1.54**	**43**	*e*PN	**Pn**	**12 39 45.4**	**-0.4**
BCA	**Borcka**	**1.54**	**43**	*e*Pn	**Pn**	**12 39 45.4**	**-0.3**
ARTV	**Artvin**	**1.55**	**55**	*i* P	**Pn**	**12 39 46.3**	**+0.5**
ARTV				*i* S	**Sn**	**12 40 07.7**	**+1.6**
ARTV	**Artvin**	**1.55**	**55**	*i* P	**Pn**	**12 39 46.3**	**+0.4**
ARTV				*i* S	**Sn**	**12 40 07.7**	**+1.6**
PTK	**Pertek**	**1.57**	**205**	*e*PN	**Pn**	**12 39 44.9**	**-1.2**
PTK	**Pertek**	**1.57**	**205**	*e*Pn	**Pn**	**12 39 44.9**	**-1.2**
GRSN	**GIRESUNGRSN**	**1.62**	**293**	*i* P	**Pn**	**12 39 46.9**	**+0.1**
GRSN				*i* S	**Sn**	**12 40 07.7**	**-0.1**
GRSN	**GIRESUNGRSN**	**1.62**	**293**	*i* P	**Pn**	**12 39 46.9**	**+0.1**
GRSN				*i* S	**Sn**	**12 40 07.7**	**-0.1**
KEMA	**Kemaliye**	**1.71**	**233**	*i* P	**Pn**	**12 39 48.8**	**+0.8**
KEMA				*i* S	**Sn**	**12 40 12.4**	**+2.4**
KEMA	**Kemaliye**	**1.71**	**233**	*i* P	**Pn**	**12 39 48.8**	**+0.8**

IDC ***05*** *12:41:21.9±1.7, 30°.65N×141°.52E, h0km, mb3.8/5, mb1 3.8/9, mb1mx3.6/27, mbtmp3.8/9, ML3.4/4, Error ellipse: s-maj=74.6km s-min=14.5km az=74.0*
ISCJB ***05*** *12:41:23.5±0.6, 30°.78N±0°.05×141°.9E±0°.2, h33km, mb3.9/5, Error ellipse: s-maj=20.4km s-min=4.4km az=163.6*
JMA ***05*** *12:41:23.8±0.3, 30°.79N×141°.81E, h46km, M3.8*
NEIC ***05*** *12:41:23.8, 30°.79N×141°.81E, h46km, MG3.8(JMA), After JMA.*
ISC 05 12:41:24.3±2.3, 30°.76N±0°.06×141°.9E±0°.2, h22km±20km, n21, σ0°93/27, mb3.9/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.92**	**324**	P	**Pn**	**12 42 09.2**	**-0.1**
JHJ2				*e*S	**Sn**	**12 42 40.4**	**-3.3**
JHJ	**Hachijo jima 2**	**2.94**	**324**	Pn	**Pn**	**12 42 08.6**	**-1.1**
	7.5nm,0.3s,baz=224,slow=21,SNR=20						
JHJ				Sn	**Sn**	**12 42 44.1**	**-0.2**
	18nm,0.3s,baz=243,slow=23,SNR=6.5						
CBIJ	**Chichi jima**	**3.67**	**176**	Pn	**Pn**	**12 42 19.8**	**+0.2**
	3.0nm,0.3s,baz=312,slow=21,SNR=4.0						
CBIJ				Sn	**Sn**	**12 43 01.1**	**-1.0**
	15nm,0.3s,baz=242,slow=23,SNR=5.4						
CBIJ	**Chichi jima**	**3.67**	**176**	P	**Pn**	**12 42 19.6**	**0.0**
BSO1	**Boso 1**	**3.95**	**349**	P	**Pn**	**12 42 23.1**	**-0.4**
BSO2	**Boso 2**	**4.08**	**347**	*e*S	**Sn**	**12 43 10.8**	**-1.7**
BSO3	**Boso 3**	**4.18**	**345**	P	**Pn**	**12 42 26.2**	**-0.6**
JOD2	**Odawara 2**	**5.06**	**333**	P	**Pn**	**12 42 40.0**	**+1.3**
MJAR	**Matsushiro Arr**	**6.52**	**333**	Pn	**Pn**	**12 42 59.1**	**+0.3**
	1.2nm,0.3s,baz=158,slow=12,SNR=18						
MJAR				Sn	**Sn**	**12 44 13.0**	**+0.6**
	0.3nm,0.3s,baz=233,slow=11,SNR=2.7						
MJAR	**Matsushiro Arr**	**6.52**	**333**	Pn	**Pn**	**12 42 59.1**	**+0.3**
MJAR				Sn	**Sn**	**12 44 13.0**	**+0.6**
MAJO	**Matsushiro**	**6.52**	**333**	*e*Pn	**Pn**	**12 42 59.1**	**+0.3**
	4.5nm,0.5s						
MAT	**Matsushiro**	**6.52**	**333**	P	**Pn**	**12 42 59.8**	**+1.0**
MAT				S	**Sn**	**12 44 12.3**	**-0.2**
ASAJ	**Asahikawa**	**13.34**	**2**	Pn	**Pn**	**12 44 32.1**	**-0.1**
	0.4nm,0.3s,baz=19,slow=11,SNR=5.0						
MKAR	**Makanchi Array**	**47.98**	**307**	P	**P**	**12 50 00.8**	**-0.5**
	0.4nm,0.4s,mb3.8,baz=98,slow=8.1,SNR=3.1						
WRA	**Warramunga Arr**	**50.93**	**189**	P	**P**	**12 50 23.5**	**-0.4**
	0.8nm,0.4s,mb4.0,baz=5.6,slow=7.6,SNR=28						
WRA	**Warramunga Arr**	**50.93**	**189**	P	**P**	**12 50 23.5**	**-0.4**
ASAR	**Alice Springs**	**54.65**	**189**	P	**P**	**12 50 51.1**	**-0.3**
	0.3nm,0.5s,mb3.5,baz=356,slow=6.3,SNR=12						
AKTK	**Aktyubinsk**	**63.24**	**315**	P	**P**	**12 51 52.7**	**+1.9**
AKTO	**Aktyubinsk**	**63.24**	**315**	P	**P**	**12 51 52.7**	**+1.9**
	0.6nm,0.3s,mb4.2,baz=69,slow=8.5,SNR=3.9						
FINES	**FINESS Array B**	**74.55**	**333**	P	**P**	**12 53 01.4**	**+0.5**
	1.4nm,0.8s,mb4.0,baz=41,slow=7.4,SNR=4.0						
FINES	**FINESS Array B**	**74.55**	**333**	P	**P**	**12 53 01.4**	**+0.5**

FUNV 05 12:54:44.5, 6°.86N×73°.00W, h161km, MW3.6, 1C-2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.20**	**34**	⇓*i*P	Pn	12 55 11.6	-0.4
CAPV				*e*S	Sn	12 55 31.5	-1.7
VIGV	**El Vigia**	**2.54**	**39**	*e*P	Pn	12 55 26.3	-0.4
VIGV				*e*S	Sn	12 55 55.6	-3.7
SOCV	**Socops**	**2.55**	**56**	⇑*e*P	Pn	12 55 26.5	-0.3
SOCV				*e*S	Sn	12 55 56.5	-2.9
VIRV	**Villa del Rosa**	**3.66**	**9**	*e*P	Pn	12 55 39.0	-1.7
VIRV				*e*S	Sn	12 56 20.4	-4.1
QARV	**Quebrada Arrib**	**4.13**	**36**	*e*P	Pn	12 55 45.4	-1.3
SANV	**Sanarito**	**4.31**	**52**	*e*P	Pn	12 55 47.8	-1.3
CURV	**Curarigua**	**4.34**	**44**	⇓*e*P	Pn	12 55 48.5	-0.9
CURV				*e*S	Sn	12 56 35.2	-4.9
TEPV	**Terepaima**	**4.86**	**50**	*e*P	Pn	12 55 55.4	-0.9
BAUV	**El Baul**	**5.33**	**67**	*e*P	Pn	12 56 00.3	-2.1
MONV	**Montecano**	**5.87**	**30**	*e*P	Pn	12 56 07.0	-2.6
CAOV	**Caicara del Or**	**6.64**	**86**	*e*P	Pn	12 56 17.1	-2.7

SZGRF ***05*** *12:56:07.2, 51°.21N×179°.87W, h33km, mb4.5, Andreanof Islands, Aleutian Islands, United States*
MOS ***05*** *12:56:07.8±0.9, 51°.71N×179°.45E, h33km, mb5.3/66, Error ellipse: s-maj=7.3km s-min=5.8km az=81.7*
ISCJB ***05*** *12:56:12.2±0.1, 51°.65N±0°.04×179°.48E±0°.02, h75km, mb5.0/211, Error ellipse: s-maj=5.1km s-min=1.8km az=3.0*
NEIC ***05*** *12:56:13.8±0.2, 51°.66N×179°.46E, mb5.1/140, Error ellipse: s-maj=5.2km s-min=2.2km az=180.0*
IDC ***05*** *12:56:13.7±0.4, 51°.65N×179°.50E, h74km±2km, mb4.6/30, mb1 4.7/32, mb1mx4.6/37, mbtmp4.6/32, MS3.6/17, Ms1 3.6/17, ms1mx3.4/37, Error ellipse: s-maj=12.3km s-min=7.7km az=162.0*
BJI ***05*** *12:56:14.3, 51°.95N×179°.07E, h80km, mB5.1/25, mb5.2/47, Ms4.7/21, Ms7 4.4/20*
ISC 05 12:56:14.4±0.1, 51°.71N±0°.04×179°.48E±0°.02, h77km, h77km±.3km: pP-P, n852, σ0°69/852, mb5.0/211, 307C-295D, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.35**	**198**	P	**Pn**	**12 56 24.1**	**-2.5**
AMKA				S	**Sn**	**12 56 31.9**	**-3.5**
SMY	**Shemya**	**3.46**	**289**	*e*P	**Pn**	**12 57 06.7**	**+0.9**
SMY				S	**Sn**	**12 57 45.9**	**+0.3**
ATKA	**Atka Island**	**3.95**	**80**	P	**Pn**	**12 57 12.4**	**0.0**
ATKA				S	**Sn**	**12 57 57.3**	**-0.1**
FX1	**Attu Island--F**	**4.05**	**289**	P	**Pn**	**12 57 13.5**	**-0.3**
SPIA	**Saint Paul Isl**	**8.11**	**44**	P	**Pn**	**12 58 11.7**	**+2.5**
UNV	**Unalaska Valle**	**8.77**	**70**	P	**Pn**	**12 58 18.8**	**+0.7**
AKUT	**Akutan**	**9.24**	**69**	P	**Pn**	**12 58 25.2**	**+0.7**
SDPT	**Sand Point**	**12.46**	**65**	*e*P	**Pn**	**12 59 07.6**	**-0.9**
	189nm,0.8s						
PET	**Petropavlovsk**	**12.79**	**284**	*e*P	**Pn**	**12 59 12.3**	**-0.6**
PET				*e*S	**Sn**	**13 01 25.2**	**-8.0**
PET				pmax	pmax		
	comp=Z,200nm,6.1s						
PET				pmax	pmax		
	comp=Z,39nm,1.0s						
PET				MLR	MLR		
	comp=Z,100nm,21.0s						
PET				MLR	MLR		
	comp=Z,100nm,10.0s						
PET	**Petropavlovsk**	**12.79**	**284**	*e*Pn	**Pn**	**12 59 13.8**	**+0.9**
PET				*e*Sn	**Sn**	**13 01 28.0**	**-5.2**
PEA0B	**Petropavlovsk-**	**13.36**	**285**	*e*Pn	**Pn**	**12 59 21.4**	**+0.9**
PEA0B				*e*Sn	**Sn**	**13 01 43.2**	**-3.9**
PETK	**Petropavlovsk-**	**13.36**	**285**	P	**Pn**	**12 59 20.6**	**+0.1**
	comp=Z,1.2nm,0.3s,baz=96,slow=17,SNR=27						
PETK				S	**Sn**	**13 01 44.5**	**-2.6**
	comp=Z,1.8nm,0.3s,baz=194,slow=33,SNR=7.8						
PETK				LR	LR	13 04 18.6	
	comp=Z,224nm,21.5s,baz=102,slow=36						
PETK				ScP	ScP	13 08 03.1	-6.1
	comp=Z,0.1nm,0.3s,baz=310,slow=6.9,SNR=3.7						
PETK	**Petropavlovsk-**	**13.36**	**285**	P	**Pn**	**12 59 20.6**	**+0.1**
PETK				S	**Sn**	**13 01 44.6**	**-2.5**
CHGN	**Chignik**	**13.77**	**62**	*e*Pn	**Pn**	**12 59 24.5**	**-1.3**
SVW2	**Sparrevohn**	**16.60**	**46**	*e*P	**Pn**	**13 00 04.1**	**+2.2**
	comp=Z,170nm,1.6s						
OHAK	**Old Harbor**	**16.70**	**60**	*e*P	**Pn**	**13 00 02.6**	**-0.6**
	comp=Z,141nm,0.3s						
KDAK	**Kodiak Island**	**17.16**	**58**	Pn	**Pn**	**13 00 07.0**	**-1.8**
	comp=Z,673nm,0.5s,SNR=21						
KDAK	**Kodiak Island**	**17.16**	**58**	P	**Pn**	**13 00 07.7**	**-1.1**
	comp=Z,16nm,0.3s,baz=260,slow=6.9,SNR=56						
KDAK	**Kodiak Island**	**17.16**	**58**	P	**Pn**	**13 00 07.7**	**-1.1**
KDAK				pmax	pmax		
	comp=Z,16nm,0.3s						
KDAK	**Kodiak Island**	**17.16**	**58**	*e*P	**Pn**	**13 00 06.9**	**-1.9**
	comp=Z,48nm,0.7s						
TTA	**Tatalina**	**17.23**	**40**	*e*P	**Pn**	**13 00 13.3**	**+3.6**
BILL	**Bilibino**	**17.60**	**343**	⇓*i*P	**Pn**	**13 00 17.1**	**+3.0**
BILL				pmax	pmax		
	comp=Z,104nm,0.9s						
BILL	**Bilibino**	**17.60**	**343**	*e*P	**Pn**	**13 00 15.4**	**+1.3**
	comp=Z,77nm,0.8s						
RSO	**Redoubt South**	**17.68**	**49**	*e*P	**Pn**	**13 00 17.1**	**+1.9**
SEY	**Seymchan**	**18.28**	**318**	*d*P	**Pn**	**13 00 24.2**	**+1.8**
PPLA	**Purkeypile**	**18.79**	**42**	*e*P	**Pn**	**13 00 28.8**	**+0.4**
	comp=Z,184nm,0.9s						
RC01	**Rabbit Creek A**	**19.27**	**49**	*e*P	**Pn**	**13 00 32.2**	**-2.0**
	comp=Z,43nm,0.8s						
PMR	**Palmer**	**19.69**	**48**	*e*P	**Pn**	**13 00 36.6**	**-2.6**
PMR				pmax	pmax		
	comp=Z,31nm,0.8s						
PMR	**Palmer**	**19.69**	**48**	*e*P	**Pn**	**13 00 36.6**	**-2.6**
	comp=Z,31nm,0.8s						
TRF	**Thorofare Moun**	**19.80**	**42**	*e*P	**Pn**	**13 00 39.5**	**-0.8**
	comp=Z,171nm,0.9s						
MCK	**McKinley**	**20.46**	**42**	*e*P	**P**	**13 00 45.9**	**+0.6**
MCK				pmax	pmax		
	comp=Z,118nm,1.0s						
MCK	**McKinley**	**20.46**	**42**	*e*P	**P**	**13 00 45.9**	**+0.6**
	comp=Z,118nm,1.0s						
DIV	**Divide**	**21.16**	**50**	*e*P	**P**	**13 00 52.5**	**-0.3**
	comp=Z,108nm,0.8s,mb5.2						
COLA	**College**	**21.33**	**39**	*e*P	**P**	**13 00 54.8**	**+0.2**
COLA				pmax	pmax		
	comp=Z,51nm,0.8s,mb4.9						
COLA	**College**	**21.33**	**39**	*e*P	**P**	**13 00 54.8**	**+0.2**
	comp=Z,51nm,0.8s,mb4.9						
COLA				*e*ScP	ScP	13 08 23.6	-1.8
COLD	**Coldfoot**	**21.54**	**32**	*e*P	**P**	**13 00 58.0**	**+1.2**
	comp=Z,45nm,1.0s,mb4.8						
BMRM	**Bremner River**	**21.69**	**51**	*e*P	**P**	**13 00 58.2**	**-0.3**
	comp=Z,133nm,1.1s,mb5.2						
MENT	**Mentasta**	**22.48**	**46**	*e*P	**P**	**13 01 07.2**	**+0.3**
EGAK	**Eagle**	**24.01**	**42**	*e*P	**P**	**13 01 21.5**	**0.0**
	comp=Z,175nm,0.9s,mb5.4						
PNL	**Peninsula**	**24.16**	**55**	*e*P	**P**	**13 01 22.0**	**-0.9**
	comp=Z,30nm,0.8s,mb4.7						
YSS	**Yuzh-Sakhalins**	**24.22**	**273**	⇓*e*P	**P**	**13 01 24.0**	**+0.4**
YSS				pmax	pmax		
	comp=Z,140nm,0.9s,mb5.

comp=Z,49nm,1.0s,mb5.0
HABR pmax pmax
comp=N,8.0nm,1.0s
HABR MLR MLR
comp=Z,51nm,15.0s
YAK Yakutsk 28.39 311 *e*P **P 13 02 00.1 -0.9**
YAK *e* 13 02 54.0
YAK *e* 13 05 11.0
YAK *e*S **S 13 06 40.5 -1.5**
YAK *e*SS SS 13 08 05.5 -39
YAK *e* 13 12 35.2
YAK pmax pmax
comp=N,2.0nm,0.9s
YAK pmax pmax
comp=Z,34nm,0.9s,mb4.9
YAK pmax pmax
comp=E,13nm,1.0s
YAK pmax pmax
comp=Z,12nm,0.9s,mb4.4
YAK pmax pmax
comp=E,8.0nm,0.9s
YAK pmax pmax
comp=N,8.0nm,0.9s
YAK smax
comp=N,82nm,2.0s
YAK smax
comp=E,68nm,2.0s
YAK Yakutsk 28.39 311 *e*P **P 13 02 00.4 -0.6**
comp=E,49nm,0.8s,mb5.1
DLBC Dease Lake 29.07 57 P **P 13 02 08.0 +0.9**
comp=E,4.0nm,0.8s,mb4.1,baz=276,slow=8.5,SNR=7.6
DLBC pP pP 13 02 24.0 -1.0
comp=E,6.1nm,0.8s,baz=240,slow=12,SNR=5.7
DLBC ScP ScP 13 08 46.4 -1.2
comp=E,3.3nm,1.0s,baz=305,slow=2.7,SNR=6.1
DLBC LR LR 13 13 39.8
comp=E,196nm,21.5s,baz=321,slow=36
DLBC Dease Lake 29.07 57 *e*P **P 13 02 08.3 +1.2**
TIXI Tiksi 29.82 331 *e*P **P 13 02 14.3 +0.7**
TIXI pmax pmax
comp=Z,3.0nm,0.9s,mb3.9
TIXI Tiksi 29.82 331 *e*P **P 13 02 15.6 +2.0**
comp=Z,6.4nm,1.1s,mb4.2
KLR Kul'dur 30.05 284 *e*P **P 13 02 11.8 -4.1**
KLR pmax pmax
comp=E,80nm,1.0s
KLR pmax pmax
comp=Z,140nm,1.0s,mb5.5
MAJO Matsushiro 32.78 259 *e*P **P 13 02 40.2 +0.2**
MAT Matsushiro 32.78 259 P **P 13 02 39.8 -0.2**
MJAR Matsushiro Arr 32.78 259 P **P 13 02 40.1 +0.1**
comp=Z,9.1nm,0.6s,mb4.8,baz=52,slow=7.1,SNR=37
MJAR PcP PcP 13 05 22.9 -0.5
comp=Z,1.8nm,0.6s,baz=83,slow=0.6,SNR=4.3
MJAR ScP ScP 13 09 00.8 +0.5
comp=Z,4.7nm,1.0s,baz=40,slow=1.8,SNR=14
MJAR LR LR 13 14 15.1
comp=Z,114nm,21.1s,baz=65,slow=33
MJAR Matsushiro Arr 32.78 259 P **P 13 02 40.1 +0.1**
MJAR 13 05 22.9
VLA Vladivostok 32.81 274*d i*P **P 13 02 40.5 +0.4**
VLA pmax pmax
comp=Z,40nm,1.4s,mb5.1
MDJ Mudanjiang 33.46 278 P **P 13 02 44.5 -1.3**
MDJ pP pP 13 03 03.3 -0.5
MDJ sP sP 13 03 12.9 +0.2
MDJ PP PP 13 04 00.7 -1.9
MDJ S **S 13 07 58.8 -2.7**
MDJ sS sS 13 08 31.8 -0.7
MDJ ScP ScP 13 09 02.4 -0.1
MDJ PcS PcS 13 09 11.3 +0.5
MDJ pmax pmax
comp=Z,20nm,0.7s,mb5.1
MDJ pmax pmax
comp=Z,42nm,4.1s
MDJ LR LR
comp=N,210nm,40.2s
MDJ LR LR
comp=E,160nm,37.8s
MDJ LR LR
comp=Z,210nm,35.7s
JHJ Hachijo jima 2 34.16 253 LR LR 13 14 20.6
comp=Z,81nm,21.5s,baz=124,slow=32
YKA Yellowknife Ar 35.78 46 P **P 13 03 05.8 +0.2**
comp=Z,37nm,0.7s,mb5.4,baz=282,slow=8.3,SNR=78
YKA ScP ScP 13 09 09.1 -1.4
comp=Z,7.5nm,0.8s,baz=287,slow=3.2,SNR=21
YKA Yellowknife Ar 35.78 46 P **P 13 03 05.8 +0.2**
YKA ScP ScP 13 09 09.2 -1.4
PGC Sidney 35.88 72 *e*P **P 13 03 07.2 +0.6**
comp=Z,0.6nm,0.6s,mb3.7
NLWA Neilton Lookou 36.22 74 ⇓P **P 13 03 09.3 -0.2**
baz=36,SNR=7.6
NLWA ⇑pP pP 13 03 28.7 +1.0
baz=36
NLWA Neilton Lookou 36.22 74 *e*P **P 13 03 10.4 +1.0**
comp=Z,33nm,1.0s,mb5.2
NLWA *e*pP pP 13 03 28.2 +0.5
NLWA *e*sP sP 13 03 37.5 +1.0
NLWA *e*PcP PcP 13 05 34.5 +1.4
CN2 Changchun 36.43 279 *e*P **P 13 03 10.6 -0.7**
CN2 *e*pP pP 13 03 33.1 +3.6
CN2 *e*S **S 13 08 44.3 -2.9**
CN2 pmax pmax
comp=Z,20nm,0.7s,mb5.2
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,19.0s
CN2 LR LR
comp=E,200nm,19.0s
CN2 LR LR
comp=Z,200nm,16.0s
A05A Maple Falls 36.53 71 ⇓P **P 13 03 11.5 -0.6**
baz=36
A05A ⇓pP pP 13 03 30.8 +0.5
baz=36
GNW Green Mountain 36.76 73 *e*P **P 13 03 14.8 +0.8**
comp=Z,6.2nm,0.6s,mb4.7
GNW *e*pP pP 13 03 33.0 +0.7
GNW *e*PcP PcP 13 05 35.1 +0.4
JCW Jim Creek 36.99 72 P **P 13 03 16.4 +0.4**
RPW Rockport 37.12 71 *e*P **P 13 03 17.1 0.0**
F03A Seaside 37.12 76 ⇓P **P 13 03 17.8 +0.7**
baz=37
F03A ⇑ScP ScP 13 09 14.0 -1.7
baz=37
CBIJ Chichi jima 37.25 243 LR LR 13 15 41.7
comp=Z,77nm,22.0s,baz=53,slow=31
D05A Enumclaw 37.44 73 ⇓P **P 13 03 20.8 +1.0**
baz=37,SNR=11
LON Longmire 37.76 74 *e*P **P 13 03 22.9 +0.3**
LON pmax pmax
comp=Z,17nm,0.7s,mb5.0
LON Longmire 37.76 74 *e*P **P 13 03 22.9 +0.3**
comp=Z,17nm,0.7s,mb5.0
F04A Amboy 37.80 75 ⇑P **P 13 03 23.6 +0.6**
baz=38,SNR=19
F04A ⇓pP pP 13 03 41.9 +0.7
baz=38
F04A ⇓ScP ScP 13 09 16.2 -2.1
baz=38
MTMW Mount Mitchell 37.88 75 P **P 13 03 24.7 +1.1**
WPW White Pass 37.94 74 P **P 13 03 24.9 +0.8**
COR Corvallis 37.97 78 *e*P **P 13 03 25.8 +1.5**
COR *e**PP pP 13 03 44.0 +1.4
COR pmax pmax
comp=Z,31nm,0.6s,mb5.3
COR Corvallis 37.97 78 *e*P **P 13 03 25.8 +1.5**
comp=Z,31nm,0.6s,mb5.3
COR *e*pP pP 13 03 44.0 +1.4
RNO Roman Nose 38.06 79 P **P 13 03 26.7 +1.6**
G04A Mulino 38.14 76 ⇓P **P 13 03 25.1 -0.7**
baz=38,SNR=10
G04A ⇓pP pP 13 03 44.9 +0.8
baz=38
ASR Mount Adams--S 38.19 74 P **P 13 03 26.8 +0.6**
ETW Entiat 38.22 72 P **P 13 03 26.7 +0.3**
KEBM Edson Butte 38.26 81 *e*P **P 13 03 28.6 +1.8**
comp=Z,115nm,1.0s,mb5.7
TBM Table Mountain 38.27 72 P **P 13 03 27.2 +0.4**
B08A Colville Reser 38.44 70 ⇑P **P 13 03 28.1 -0.1**
baz=38,SNR=24
B08A ⇑ScP ScP 13 09 19.5 -1.2
baz=38
KSRS Korea Array 38.56 269 P **P 13 03 30.2 +0.8**
comp=Z,19nm,0.8s,mb5.0,baz=59,slow=8.1,SNR=48
KSRS pP pP 13 03 47.6 -0.1
comp=Z,3.7nm,0.9s,baz=54,slow=8.6,SNR=2.5
KSRS PcP PcP 13 05 40.9 +0.5
comp=Z,2.5nm,0.8s,baz=24,slow=3.1,SNR=5.9
KSRS Korea Array 38.56 269 P **P 13 03 30.2 +0.8**
KSRS *PP pP 13 03 47.6 -0.1
KSRS 13 05 40.9
KSRS pmax pmax
comp=Z,19nm,0.8s,mb5.0
KSRS pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
KSRS pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
HOOD Mount Hood Mea 38.58 76 *e*P **P 13 03 30.5 +1.0**
comp=Z,247nm,1.3s,mb5.9
H04A Detroit Lake 38.59 77 ⇓P **P 13 03 30.1 +0.5**
baz=38,SNR=30
H04A ⇓pP pP 13 03 48.8 +0.9
baz=38
SNY Shenyang 38.66 278 ⇓P **P 13 03 30.6 +0.4**
IRO Indian Ridge 38.91 78 P **P 13 03 33.3 +1.0**
MDW Midway 39.05 73 P **P 13 03 33.8 +0.4**
G06A Carlson Farm, 39.24 75 ⇑P **P 13 03 34.8 -0.1**
baz=39,SNR=6.2
HUMO Hull Mountain 39.25 80 *e*P **P 13 03 36.3 +1.2**
comp=Z,16nm,1.0s,mb4.8
HUMO *e*pP pP 13 03 54.2 +0.8
HUMO *e*PcP PcP 13 05 43.1 +0.6
RSW Rattlesnake Hi 39.26 73 *e*P **P 13 03 35.7 +0.5**
OD2 Odessa Site #2 39.28 71 *e*P **P 13 03 34.9 -0.4**
HAWA Hanford 39.30 73 *e*P **P 13 03 35.8 +0.4**
F07A Phinny Hill Vi 39.32 74 ⇓P **P 13 03 35.5 -0.1**
baz=39,SNR=7.2
F07A ⇓pP pP 13 03 54.4 +0.4
baz=39
F07A ⇑ScP ScP 13 09 23.4 -0.7
baz=39
D08A Wollman Farm, 39.32 72 ⇑P **P 13 03 35.1 -0.5**
baz=39,SNR=12
D08A ⇑pP pP 13 03 53.9 -0.1
baz=39
D08A ⇑ScP ScP 13 09 23.2 -1.0
baz=39
INCN Inchon 39.35 270 *e*P **P 13 03 36.5 +0.5**
comp=Z,85nm,1.0s,mb5.5
E08A Dider Farm, El 39.53 72 ⇑P **P 13 03 37.3 0.0**
baz=39,SNR=8.6
E08A ⇑pP pP 13 03 55.8 0.0
baz=39
EDM Edmonton 39.59 60 *e*P **P 13 03 37.4 -0.4**
KHMM Horse Mountain 39.76 83 *e*P **P 13 03 41.1 +1.8**
comp=Z,41nm,0.9s,mb5.3
NEW Newport 39.77 69 *e*P **P 13 03 38.9 -0.5**
NEW *e**PP pP 13 03 57.5 -0.3
NEW pmax pmax
comp=Z,27nm,0.7s
NEW Newport 39.77 69 *e*P **P 13 03 38.9 -0.4**
comp=Z,27nm,0.7s,mb5.2
NEW *e*pP pP 13 03 57.5 -0.3
NEW *e*sP sP 13 04 04.8 -1.7
RES Resolute Bay 39.89 24 P **P 13 03 40.6 +0.6**
comp=Z,6.0nm,0.9s,mb4.4,baz=283,slow=3.5,SNR=8.9
RES pP pP 13 03 58.5 +0.1
comp=Z,3.1nm,0.7s,baz=345,slow=4.8,SNR=2.9
YBH Yreka Blue Hor 39.90 81 *e*P **P 13 03 42.0 +1.5**
YBH *e**PP pP 13 03 59.6 +0.7
YBH pmax pmax
comp=Z,24nm,0.8s
YBH Yreka Blue Hor 39.90 81 *e*P **P 13 03 42.0 +1.6**
comp=Z,24nm,0.8s,mb5.1
YBH *e*pP pP 13 03 59.6 +0.8
YBH *e*sP sP 13 04 08.1 +0.4
E09A Wood Farm, Sta 40.06 72 ⇑P **P 13 03 40.7 -1.0**
baz=40,SNR=8.2
E09A ⇓pP pP 13 04 00.4 +0.2
baz=40
E09A ⇑ScP ScP 13 09 26.7 -0.3
baz=40
G08A Pilot Rock 40.21 74 ⇑P **P 13 03 42.4 -0.6**
baz=40,SNR=14
A12A Yaak River Ran 40.29 67 ⇑P **P 13 03 43.3 -0.3**
baz=40
LNOR Lincton Mounta 40.31 73 *e*P **P 13 03 44.2 +0.4**
K05A Summer Lake 40.45 79 ⇓P **P 13 03 46.7 +1.7**
baz=40,SNR=29
K05A ⇑pP pP 13 04 04.7 +1.2
baz=40
K05A ⇓ScP ScP 13 09 29.3 +0.7
baz=40
C11A Tepee Creek (N 40.49 69 ⇑P **P 13 03 44.6 -0.7**
baz=40
KCPM Cahto Peak 40.55 84 *e*P **P 13 03 47.2 +1.3**
WDC Whiskeytown Da 40.67 82 *e*P **P 13 03 47.7 +0.9**
WDC *e**PP pP 13 04 05.0 -0.3
WDC pmax pmax
comp=Z,21nm,0.8s,mb5.0
WDC Whiskeytown Da 40.67 82 *e*P **P 13 03 47.6 +0.8**
comp=Z,21nm,0.8s,mb5.0
WDC *e*pP pP 13 04 05.0 -0.3
H08A Prairie City 40.80 75 ⇑P **P 13 03 48.0 +0.1**
baz=41,SNR=16
H08A ⇑ScP ScP 13 09 28.9 -1.0
baz=41
F10A Beach Ranch, E 40.88 72 P **P 13 03 48.4 -0.1**
baz=41,SNR=8.3
F10A ⇓ScP ScP 13 09 30.0 -0.3
baz=41
G09A Cove 40.92 73 ⇓P **P 13 03 49.1 +0.2**
baz=41,SNR=23
G09A ⇑ScP ScP 13 09 29.5 -0.9
baz=41
A13A Flathead Natio 41.00 67 ⇓P **P 13 03 48.8 -0.7**
baz=41
C12B Naegeli Ranch, 41.01 69 ⇑P **P 13 03 49.0 -0.6**
baz=41,SNR=9.4
C12B ⇓pP pP 13 04 08.3 +0.2
baz=41
C12B ⇑ScP ScP 13 09 29.9 -0.8
baz=41
WALA Waterton Lakes 41.23 66 *e*P **P 13 03 51.4 0.0**
LBCM Butte Creek Ri 41.25 81 P **P 13 03 52.6 +1.0**
B13A Whitefish 41.25 68 ⇑P **P 13 03 51.1 -0.5**
baz=41,SNR=20
B13A ⇑ScP ScP 13 09 30.9 -0.7
baz=41
MOD Modoc 41.27 79 *e*P **P 13 03 52.8 +0.9**
comp=Z,26nm,0.7s,mb5.2
MOD *e*pP pP 13 04 10.6 +0.3
HOPS Hopland 41.28 85 *e*P **P 13 03 52.8 +0.8**
G10A Bishop Farm, J 41.31 73 ⇓P **P 13 03 52.1 +0.1**
baz=41,SNR=28
G10A ⇓pP pP 13 04 10.6 0.0
baz=41
G10A ⇑ScP ScP 13 09 29.9 -2.1
baz=41
H09A Durkee 41.33 74 ⇑P **P 13 03 52.3 +0.1**
baz=41
H09A ⇑ScP ScP 13 09 30.8 -1.2
baz=41
BSMT Bassoo Peak 41.34 68 *e*P **P 13 03 52.3 +0.1**
comp=Z,29nm,0.7s,mb5.2
BSMT *e*pP pP 13 04 10.7 0.0
D12A Red Ives Fores 41.42 70 ⇓P **P 13 03 52.0 -0.9**
baz=41
D12A ⇓ScP ScP 13 09 31.0 -1.3
baz=41
BMO Blue Mountains 41.44 74 *e*P **P 13 03 53.2 +0.1**
comp=Z,18nm,0.9s,mb4.9
BMO *e*pP pP 13 04 11.5 -0.1
C13A Hot Springs 41.55 68 ⇑P **P 13 03 53.1 -0.8**
baz=41,SNR=17
C13A ⇓ScP ScP 13 09 32.6 -0.3
baz=41
A14A Double T Ranch 41.55 66 ⇑P **P 13 03 53.5 -0.5**
baz=41
A14A ⇓ScP ScP 13 09 31.9 -1.0
baz=41
J08A Circle Bar Ran 41.56 76 ⇓P **P 13 03 54.5 +0.3**
baz=41,SNR=26
J08A ⇓pP pP 13 04 13.3 +0.6
baz=41
J08A ⇑ScP ScP 13 09 32.0 -1.0
baz=41
F11A Grangeville 41.56 72 ⇑P **P 13 03 52.7 -1.4**
baz=41,SNR=9.6
E12A Beaver Dam Sad 41.63 71 ⇓P **P 13 03 54.2 -0.5**
baz=42
E12A ⇑ScP ScP 13 09 31.7 -1.5
baz=42
I09A Lost Marbles R 41.66 75 ⇓P **P 13 03 55.1 +0.2**
baz=42,SNR=6.3
I09A ⇑pP pP 13 04 13.5 +0.1
baz=42
I09A ⇓ScP ScP 13 09 32.0 -1.4
baz=42
JTMT Jette 41.68 68 *e*P **P 13 03 54.8 -0.3**
G11A Walters Elk Ra 41.76 72 ⇓P **P 13 03 55.3 -0.5**
baz=42,SNR=20
G11A ⇓ScP ScP 13 09 32.6 -1.1
baz=42
YBMT Yellow Bay 41.78 68 *e*P **P 13 03 55.8 -0.1**
H10A Noah's Angus R 41.91 74 ⇑P **P 13 03 57.1 +0.1**
baz=42,SNR=32
H10A ⇑pP pP 13 04 15.5 0.0
baz=42
H10A ⇑ScP ScP 13 09 33.3 -1.1
baz=42,SNR=11
D13A Huson 41.92 69 ⇑P **P 13 03 56.3 -0.7**
baz=42,SNR=5.1
A15A Johnson Ranch, 41.94 66 ⇑P **P 13 03 56.0 -1.2**
baz=42,SNR=17
A15A ⇑ScP ScP 13 09 32.5 -1.9
baz=42
B14A Marquette Ranc 41.95 67 ⇑P **P 13 03 56.8 -0.4**
baz=42,SNR=15
B14A ⇑ScP ScP 13 09 33.3 -1.2
baz=42,SNR=9.2
SWMT Swartz Lake 41.97 68 *e*P **P 13 03 56.9 -0.5**
comp=Z,11nm,1.2s,mb4.5
C14A Swan Lake 41.98 68 ⇑P **P 13 03 57.0 -0.5**
baz=42
C14A ⇓ScP ScP 13 09 33.6 -1.0
baz=42
WVOR Wild Horse Val 41.98 77 *e*P **P 13 03 58.3 +0.7**
WVOR *e**PP pP 13 04 16.4 +0.3
WVOR pmax pmax
comp=Z,46nm,0.9s,mb5.2
WVOR Wild Horse Val 41.98 77 *e*P **P 13 03 58.2 +0.7**
comp=Z,46nm,0.9s,mb5.2
WVOR *e*pP pP 13 04 16.4 +0.3
OHCM Honcut 42.06 83 *e*P **P 13 03 58.5 +0.2**
I10A Payette 42.16 74 ⇓P **P 13 03 58.9 -0.1**
baz=42,SNR=12
I10A ⇑pP pP 13 04 17.9 +0.4
baz=42
F12A Elk City 42.16 71 P **P 13 03 58.9 -0.1**
baz=42,SNR=50
F12A ⇓pP pP 13 04 17.5 -0.1
baz=42
F12A ⇓ScP ScP 13 09 32.7 -2.6
baz=42,SNR=11
H11A Donnelly 42.29 73 P **P 13 04 00.1 0.0**
baz=42,SNR=23
H11A ⇑pP pP 13 04 17.8 -0.8
baz=42
MSO Missoula 42.36 69 *e*P **P 13 04 00.0 -0.6**
comp=Z,26nm,1.1s,mb4.9
B15A Bradely Ranch, 42.38 67 P **P 13 03 59.9 -0.8**
baz=42,SNR=33
B15A ⇓ScP ScP 13 09 34.4 -1.8
baz=42,SNR=6.9
SLMT Seeley Lake 42.40 68 *e*P **P 13 04 00.3 -0.7**
E13A Victor 42.42 70 ⇑P **P 13 04 00.3 -0.8**
baz=42,SNR=14
G12A Big Creek, Yel 42.47 72 ⇓P **P 13 04 00.7 -0.8**
baz=42
G12A ⇑ScP ScP 13 09 34.7 -1.9
baz=42
D14A Greenough 42.48 69 P **P 13 04 00.9 -0.6**
baz=42,SNR=36
J10A Berg Farm, Mel 42.55 75 ⇓P **P 13 04 02.3 +0.1**
baz=42,SNR=6.7
J10A ⇓pP pP 13 04 20.0 -0.8
baz=42
C15A Salmond Ranch, 42.63 67 ⇑P **P 13 04 02.7 -0.1**
baz=42
C15A ⇓ScP ScP 13 09 35.7 -1.5
baz=42
F13A Darby 42.69 71 P **P 13 04 02.9 -0.4**
baz=42,SNR=13
CHMT Chamberlain Mo 42.72 69 *e*P **P 13 04 02.6 -0.8**
I11A Placerville 42.76 74 P **P 13 04 04.0 +0.1**
baz=43,SNR=26
I11A ⇑pP pP 13 04 22.3 -0.2
baz=43
I11A ⇓ScP ScP 13 09 36.6 -1.2
baz=43,SNR=7.3
B16A M & M Farms, S 42.81 66 ⇑P **P 13 04 02.9 -1.3**
baz=43,SNR=9.2
B16A ⇓ScP ScP 13 09 36.6 -1.3
baz=43,SNR=6.7
E14A Clinton 42.84 70 ⇑P **P 13 04 03.5 -1.0**
baz=43,SNR=9.5
E14A ⇑ScP ScP 13 09 36.7 -1.3
baz=43
K10A MacKenzie Ranc 42.86 76 ⇑P **P 13 04 05.3 +0.6**
baz=43,SNR=78
K10A ⇑pP pP 13 04 23.4 +0.1
baz=43
K10A ⇑ScP ScP 13 09 36.6 -1.6
baz=43
H12A Diamond D Ranc 43.06 73 ⇓P **P 13 04 04.9 -1.4**
baz=43,SNR=17
H12A ⇑ScP ScP 13 09 38.2 -0.8
baz=43,SNR=7.4
D15A Lincoln 43.07 68 ⇑P **P 13 04 05.4 -1.0**
baz=43,SNR=17
C16A Fuhringer Ranc 43.11 67 ⇑P **P 13 04 05.7 -1.0**
baz=43,SNR=22
C16A ⇑ScP ScP 13 09 37.7 -1.5
baz=43,SNR=8.5
MFID Camas Ranch 43.12 75 ⇓P **P 13 04 06.8 0.0**
baz=43,SNR=20
MFID ⇓pP pP 13 04 24.9 -0.5
baz=43
MFID ⇑ScP ScP 13 09 37.4 -1.9
baz=43,SNR=7.8
G13A Cobalt 43.13 72 P **P 13 04 06.7 -0.2**
baz=43,SNR=44
G13A ⇑pP pP 13 04 25.0 -0.4
baz=43
PAHR Pah Rah Range 43.13 81 *e*P **P 13 04 07.8 +0.8**
WCN Washoe City 43.15 82 ⇓P **P 13 04 07.9 +0.9**
baz=43,SNR=32
WCN ⇓pP pP 13 04 25.4 -0.3
baz=43
F14A Wisdom 43.24 70 ⇓P **P 13 04 06.7 -1.0**
baz=43,SNR=5.7
I12A Atlanta 43.32 74 P **P 13 04 08.7 +0.3**
baz=43,SNR=59
I12A ⇓pP pP 13 04 27.1 +0.1
baz=43
I12A ⇓ScP ScP 13 09 39.6 -0.5
baz=43
E15A Deer Lodge 43.33 69 ⇑P **P 13 04 07.6 -0.8**
baz=43,SNR=24
E15A ⇓pP pP 13 04 26.4 -0.7
baz=43
E15A ⇑ScP ScP 13 09 39.6 -0.4
baz=43,SNR=10
K11A Parker Ranch, 43.37 75 ⇓P **P 13 04 09.3 +0.6**
baz=43,SNR=25
K11A ⇓ScP ScP 13 09 39.5 -0.8
baz=43
B17A L&G Farms, Che 43.39 66 ⇑P **P 13 04 07.5 -1.4**
baz=43,SNR=25
B17A ⇓ScP ScP 13 09 38.5 -1.8
baz=43,SNR=5.7
H13A Challis 43.41 72 ⇓P **P 13 04 07.8 -1.3**
baz=43,SNR=11
H13A ⇓ScP ScP 13 09 39.2 -1.2
baz=43,SNR=9.0
G14A Jackson 43.50 71 ⇓P **P 13 04 09.0 -0.8**
baz=43,SNR=5.2
L10A Juniper Basin 43.50 77 ⇓P **P 13 04 10.5 +0.7**
baz=43,SNR=12
CMB Columbia Colle 43.53 84 *e*P **P 13 04 10.5 +0.3**
CMB pmax pmax
comp=Z,29nm,1.0s,mb5.0
CMB Columbia Colle 43.53 84 *e*P **P 13 04 10.5 +0.3**
comp=Z,29nm,1.0s,mb5.0
A18A Metzger Ranch, 43.60 65 ⇑P **P 13 04 08.8 -1.8**
baz=43
A18A ⇑ScP ScP 13 09 39.2 -1.9

baz=43,SNR=6.6
D16A Dana Ranch, Ca 43.64 68 ⇓P P 13 04 10.3 -0.6
baz=44,SNR=13
D16A ⇑ScP ScP 13 09 41.0 -0.3
baz=44,SNR=12
HRY Holter Researc 43.65 68 *e*P **P 13 04 10.8 -0.2**
J12A Stokes Ranch, 43.65 74 ⇑P **P 13 04 11.1 0.0**
baz=44,SNR=34
J12A ⇓ScP ScP 13 09 41.2 -0.2
baz=44
F15A Butte 43.74 70 ⇓P **P 13 04 10.7 -1.0**
baz=44,SNR=12
F15A ⇑ScP ScP 13 09 40.9 -0.8
baz=44,SNR=5.2
C17A Wharram Farm, 43.76 67 ⇓P **P 13 04 10.5 -1.4**
baz=44,SNR=20
LRM Limekiln Ridge 43.77 70 *e*P **P 13 04 11.4 -0.6**
M10A I.L. Ranch, Tu 43.79 77 ⇓P **P 13 04 12.3 +0.1**
baz=44,SNR=24
WAKR Walker 43.83 83 *e*P **P 13 04 13.6 +1.1**
E16A East Helena 43.83 68 ⇑P **P 13 04 11.6 -0.8**
baz=44,SNR=7.8
E16A ⇑pP pP 13 04 31.0 -0.1
baz=44
E16A ⇓ScP ScP 13 09 41.1 -1.0
baz=44,SNR=5.4
I13A Wildhorse Cree 43.86 73 ⇑P **P 13 04 12.9 +0.2**
baz=44,SNR=56
I13A ⇑pP pP 13 04 31.5 +0.1
baz=44
I13A ⇑ScP ScP 13 09 41.1 -1.1
baz=44,SNR=9.1
HLID Hailey 43.88 74 P **P 13 04 13.2 +0.3**
baz=44,SNR=55
HLID ⇓pP pP 13 04 32.1 +0.5
baz=44
HLID ⇓ScP ScP 13 09 40.8 -1.6
baz=44,SNR=12
HLID Hailey 43.88 74 *e*P **P 13 04 13.0 +0.1**
comp=Z,28nm,0.9s,mb5.0
HLID *e*pP pP 13 04 31.5 -0.1
L11A Cat Creek Ranc 43.88 76 ⇓P **P 13 04 13.5 +0.6**
baz=44,SNR=91
L11A ⇓ScP ScP 13 09 40.9 -1.5
baz=44,SNR=7.3
H14A Leadore 43.91 72 P **P 13 04 13.0 -0.1**
baz=44,SNR=42
H14A ⇓pP pP 13 04 32.0 +0.3
baz=44
B18A Beardsley Farm 43.92 65 P **P 13 04 12.3 -0.8**
baz=44,SNR=25
B18A ⇑ScP ScP 13 09 40.5 -1.9
baz=44,SNR=7.6
DLMT Dillon 43.94 70 *e*P **P 13 04 13.1 -0.3**
BMN Battle Mountai 44.02 79 *e*P **P 13 04 14.5 +0.5**
BMN *e**PP pP 13 04 32.4 -0.3
BMN pmax pmax
comp=Z,36nm,0.8s,mb5.2
BMN Battle Mountai 44.02 79 *e*P **P 13 04 14.5 +0.5**
comp=Z,36nm,0.8s,mb5.2
BMN *e*pP pP 13 04 32.4 -0.3
D17A Six Diamond Ra 44.07 67 ⇑P **P 13 04 13.2 -1.2**
baz=44,SNR=15
D17A ⇑ScP ScP 13 09 41.4 -1.7
baz=44,SNR=13
MCMT McKenzie Canyo 44.09 71 *e*P **P 13 04 14.4 -0.2**
comp=Z,6.6nm,0.6s,mb4.5
MCMT *e*pP pP 13 04 33.1 -0.1
G15A Dillon 44.12 70 ⇓P **P 13 04 12.8 -1.9**
baz=44,SNR=11
G15A ⇑ScP ScP 13 09 42.1 -1.2
baz=44,SNR=11
J13A Cove Ranch, Pi 44.12 74 ⇓P **P 13 04 14.9 +0.1**
baz=44,SNR=73
J13A ⇓pP pP 13 04 33.8 +0.3
baz=44
J13A ⇓ScP ScP 13 09 43.1 -0.2
baz=44,SNR=5.9
K12A Draper Farm, C 44.12 75 P **P 13 04 15.6 +0.7**
baz=44,SNR=35
K12A ⇓pP pP 13 04 33.7 +0.1
baz=44
EGMT Eagleton 44.13 66 ⇓P **P 13 04 13.4 -1.4**
baz=44,SNR=17
EGMT ⇑ScP ScP 13 09 41.8 -1.4
baz=44
EGMT Eagleton 44.13 66 *e*P **P 13 04 13.8 -1.0**
comp=Z,18nm,0.8s,mb4.9
I14A Mackay 44.25 72 ⇑P **P 13 04 15.8 0.0**
baz=44,SNR=36
I14A ⇓ScP ScP 13 09 43.2 -0.7
baz=44,SNR=6.4
BJI Beijing 44.25 281 P **P 13 04 16.5 +0.6**
BJI pmax pmax
comp=Z,48nm,0.9s,mb5.2
BJI pmax pmax
comp=Z,170nm,5.9s
BJI LR LR
comp=Z,170nm,36.8s
F16A Kennard Place, 44.27 69 ⇑P **P 13 04 15.4 -0.7**
baz=44,SNR=11
F16A ⇑pP pP 13 04 34.9 +0.2
baz=44
N10A Dunphy 44.28 78 ⇑P **P 13 04 16.9 +0.7**
baz=44,SNR=5.1
N10A ⇓pP pP 13 04 35.2 +0.4
baz=44
M11A Holland Ranch, 44.29 77 ⇑P **P 13 04 16.2 -0.1**
baz=44,SNR=49
H15A Lima 44.33 71 ⇑P **P 13 04 15.9 -0.6**
baz=44,SNR=12
L12A House Creek Ra 44.34 76 P **P 13 04 17.6 +1.1**
baz=44,SNR=107
L12A ⇓pP pP 13 04 35.6 +0.3
baz=44
L12A ⇓ScP ScP 13 09 44.1 -0.2
baz=44
E17A Martinsdale 44.35 68 ⇓P **P 13 04 15.9 -0.6**
baz=44,SNR=18
E17A ⇓ScP ScP 13 09 42.8 -1.4
baz=44,SNR=12
BOZ Bozeman (W) 44.35 69 ⇓P **P 13 04 16.4 -0.2**
baz=44,SNR=56
BOZ ⇓ScP ScP 13 09 43.5 -0.7
baz=44,SNR=9.2
BOZ Bozeman (W) 44.35 69 *e*P **P 13 04 16.4 -0.2**
BOZ *e**PP pP 13 04 35.0 -0.3
BOZ pmax pmax
comp=Z,18nm,0.7s,mb4.9
BOZ Bozeman (W) 44.35 69 *e*P **P 13 04 16.4 -0.2**
comp=Z,18nm,0.7s,mb4.9
BOZ *e*pP pP 13 04 35.0 -0.3
BOZ *e*sP sP 13 04 43.1 -1.0
IRK Irkutsk 44.35 302 *e*P **P 13 04 15.5 -1.0**
IRK pmax pmax
comp=Z,60nm,1.0s,mb5.3
G16A Moss Hill, Enn 44.48 70 ⇑P **P 13 04 17.0 -0.7**
baz=44,SNR=25
G16A ⇑ScP ScP 13 09 44.1 -0.7
baz=44,SNR=7.1
O10A Cortez Mining, 44.54 79 ⇑P **P 13 04 19.1 +0.9**
baz=44,SNR=23
O10A ⇓pP pP 13 04 37.2 +0.3
baz=44
D18A Linhart Farms, 44.55 67 ⇓P **P 13 04 17.9 -0.3**
baz=44,SNR=7.8
D18A ⇑ScP ScP 13 09 44.3 -0.7
baz=44
J14A Carey 44.55 73 ⇓P **P 13 04 18.7 +0.4**
baz=44,SNR=31
J14A ⇑pP pP 13 04 37.5 +0.5
baz=44
J14A ⇓ScP ScP 13 09 45.4 +0.3
baz=44,SNR=6.3
NVAR Mina Array Bea 44.58 82 P **P 13 04 19.3 +0.8**
comp=Z,30nm,0.7s,mb5.1,baz=291,slow=7.3,SNR=263
NVAR pP pP 13 04 36.5 -0.7
comp=Z,3.1nm,0.6s,baz=29,slow=19,SNR=4.5
NVAR ScP ScP 13 09 44.9 -0.4
comp=Z,0.7nm,0.7s,baz=256,slow=6.0,SNR=4.9
K13A Stover Farm, H 44.61 74 ⇑P **P 13 04 19.2 +0.5**
baz=44
N11A Elko Archery C 44.69 78 ⇓P **P 13 04 20.3 +0.9**
baz=45
MLAC Mammoth Lakes 44.74 83 ⇓P **P 13 04 20.2 +0.3**
baz=45,SNR=7.7
F17A Fitzpatrick Pl 44.77 69 ⇓P **P 13 04 19.1 -0.9**
baz=45,SNR=14
F17A ⇓pP pP 13 04 38.6 0.0
baz=45
F17A ⇑ScP ScP 13 09 45.0 -0.9
baz=45,SNR=5.4
I15A Monteview 44.78 72 ⇓P **P 13 04 20.0 0.0**
baz=45
FFC Flin Flon 44.82 54 *i*P **P 13 04 19.8 -0.4**
E18A Harlowton 44.83 67 ⇑P **P 13 04 20.3 -0.1**
baz=45
E18A ⇓pP pP 13 04 39.7 +0.6
baz=45
E18A ⇑ScP ScP 13 09 45.3 -0.8
baz=45,SNR=7.4
M12A Wells 44.83 76 ⇓P **P 13 04 20.9 +0.4**
baz=45,SNR=38
M12A ⇑pP pP 13 04 40.1 +0.8
baz=45
M12A ⇑ScP ScP 13 09 45.9 -0.4
baz=45
QLMT Earthquake Lak 44.93 70 *e*P **P 13 04 19.2 -2.0**
P10A Eureka 44.97 79 ⇑P **P 13 04 21.7 0.0**
baz=45
TLY Talaya 44.98 301 P **P 13 04 22.7 +1.2**
comp=Z,331nm,0.7s,mb6.2,SNR=27
TLY Talaya 44.98 301 ⇓*i*P **P 13 04 21.9 +0.4**
TLY *e* 13 11 07.9
TLY *e* 13 15 09.9
TLY pmax pmax
comp=Z,40nm,0.8s,mb5.2
TLY Talaya 44.98 301 *e*P **P 13 04 22.3 +0.8**
comp=Z,38nm,0.8s,mb5.2
TLY *e*PcP PcP 13 06 01.8 +0.4
L13A Double Diamond 45.02 75 ⇑P **P 13 04 21.8 -0.2**
baz=45,SNR=24
ELK Elko 45.04 77 *e*P **P 13 04 23.0 +0.8**
ELK *e**PP pP 13 04 40.7 -0.2
ELK pmax pmax
comp=Z,43nm,0.8s
ELK Elko 45.04 77 *e*P **P 13 04 22.9 +0.8**
comp=Z,43nm,0.8s,mb5.2
ELK *e*pP pP 13 04 40.7 -0.1
G17A Pierce Place, 45.05 69 ⇑P **P 13 04 22.1 -0.1**
baz=45,SNR=5.3
MTUM Tungsten Hills 45.09 83 *e*P **P 13 04 23.6 +1.0**
N12A Clover Valley, 45.09 77 ⇓P **P 13 04 22.3 -0.3**
baz=45
N12A ⇑pP pP 13 04 42.4 +1.0
baz=45
N12A Clover Valley, 45.09 77 *e*P **P 13 04 23.4 +0.8**
comp=Z,58nm,0.9s,mb5.3
N12A *e*pP pP 13 04 41.8 +0.5
H16A Russell Place, 45.10 70 ⇓P **P 13 04 22.0 -0.7**
baz=45,SNR=28
H16A ⇓pP pP 13 04 41.5 +0.1
baz=45
H16A ⇑ScP ScP 13 09 46.6 -0.7
baz=45,SNR=9.4
ULN Ulaanbaatar 45.15 295 *e*P **P 13 04 23.7 +0.8**
ULN *e* 13 06 01.9
ULN pmax pmax
comp=Z,37nm,0.9s,mb5.1
ULN Ulaanbaatar 45.15 295 *e*P **P 13 04 23.7 +0.8**
comp=Z,37nm,0.9s,mb5.1
ULN *e*PcP PcP 13 06 01.9 -0.1
ULN *e*ScP ScP 13 09 48.4 +1.0
O11A Cowboy Ranch, 45.15 78 ⇓P **P 13 04 22.8 -0.3**
baz=45
O11A ⇓ScP ScP 13 09 46.3 -1.4
baz=45
J15A Blackfoot 45.16 73 ⇑P **P 13 04 22.9 -0.2**
baz=45
K14A Jones Ranch, D 45.21 74 ⇑P **P 13 04 22.7 -0.8**
baz=45
YMR Madison River 45.29 70 *e*P **P 13 04 23.8 -0.3**
comp=Z,52nm,1.3s,mb5.1
YMR *e*pP pP 13 04 42.7 -0.1
F18A Big Timber 45.31 68 ⇓P **P 13 04 23.8 -0.5**
baz=45,SNR=9.7
F18A ⇓ScP ScP 13 09 47.2 -1.0
baz=45,SNR=8.0
M13A Montello 45.32 76 ⇓P **P 13 04 24.4 0.0**
baz=45,SNR=53
M13A ⇓pP pP 13 04 43.2 +0.1
baz=45
M13A ⇓ScP ScP 13 09 46.9 -1.5
baz=45
M13A Montello 45.32 76 *e*P **P 13 04 24.9 +0.5**
comp=Z,43nm,0.9s,mb5.2
M13A *e*pP pP 13 04 43.2 +0.1
M13A *e*sP sP 13 04 52.5 +0.7
M13A *e*PcP PcP 13 06 03.2 +0.5
GCMT Greycliff 45.41 68 *e*P **P 13 04 24.6 -0.4**
comp=Z,5.5nm,0.8s,mb4.3
I16A Newdale 45.44 71 ⇑P **P 13 04 24.9 -0.4**
baz=45
P11A Circle Ranch, 45.45 79 ⇑P **P 13 04 25.6 +0.2**
baz=45,SNR=24
L14A Malta 45.48 75 ⇑P **P 13 04 25.9 +0.3**
baz=45,SNR=27
L14A ⇑pP pP 13 04 44.5 +0.2
baz=45
TIN Tinemaha 45.48 83 ⇓P **P 13 04 26.6 +0.9**
baz=45,SNR=14
YFT Old Faithful 45.49 70 *e*P **P 13 04 26.8 +1.1**
comp=Z,21nm,0.7s,mb5.0
YFT *e*pP pP 13 04 44.6 +0.1
Q10A Clear Creek Ra 45.50 80 ⇑P **P 13 04 26.3 +0.4**
baz=45
SMMC Simmler 45.50 87 ⇑P **P 13 04 26.3 +0.4**
baz=45
K15A Arbon 45.52 73 P **P 13 04 26.9 +1.1**
baz=45,SNR=40
K15A ⇑pP pP 13 04 45.1 +0.4
baz=45
SONM Songino Array 45.53 295 P **P 13 04 27.1 +1.1**
comp=Z,26nm,0.8s,mb5.0,baz=56,slow=9.9,SNR=132
SONM pP pP 13 04 44.2 -0.5
comp=Z,5.1nm,0.8s,baz=58,slow=8.0,SNR=2.6
SONM PcP PcP 13 06 03.4 0.0
comp=Z,3.4nm,0.7s,baz=73,slow=2.0,SNR=3.7
SONM ScP ScP 13 09 49.0 0.0
comp=Z,4.5nm,1.1s,baz=101,slow=2.3,SNR=8.9
SONM LR LR 13 23 34.6
comp=Z,168nm,21.9s,baz=161,slow=36
SONM Songino Array 45.53 295 P **P 13 04 27.1 +1.1**
SONM *PP pP 13 04 44.2 -0.5
SONM 13 06 03.4
N13A Wendover, West 45.60 76 ⇓P **P 13 04 27.1 +0.5**
baz=46,SNR=23
N13A ⇓pP pP 13 04 45.6 +0.2
baz=46
N13A Wendover, West 45.60 76 *e*P **P 13 04 27.0 +0.4**
comp=Z,59nm,0.9s,mb5.3
N13A *e*pP pP 13 04 45.8 +0.5
O12A Currie 45.63 77 ⇑P **P 13 04 27.5 +0.7**
baz=46,SNR=102
O12A ⇓ScP ScP 13 09 48.1 -1.5
baz=46,SNR=5.1
H17A Grant Village 45.67 70 ⇓P **P 13 04 26.3 -0.8**
baz=46,SNR=13
H17A ⇓pP pP 13 04 46.2 +0.3
baz=46
H17A ⇑ScP ScP 13 09 49.7 0.0
baz=46,SNR=6.2
J16A Bone 45.72 72 ⇑P **P 13 04 27.4 -0.1**
baz=46,SNR=11
J16A ⇓pP pP 13 04 46.5 +0.2
baz=46
M14A Sheep Mountain 45.73 75 ⇓P **P 13 04 26.9 -0.7**
baz=46,SNR=19
M14A ⇑ScP ScP 13 09 49.0 -1.0
baz=46,SNR=5.7
VES Vestal, Richgr 45.73 85 ⇑P **P 13 04 27.1 -0.6**
baz=46
G18A Lazy EL Ranch, 45.74 69 ⇓P **P 13 04 26.8 -0.8**
baz=46
IMW Indian Meadow 45.75 71 *e*P **P 13 04 28.1 +0.3**
comp=Z,20nm,1.2s,mb4.7
IMW *e*pP pP 13 04 46.7 +0.2
RRI2 Red Ridge 45.85 72 *e*P **P 13 04 28.8 +0.3**
comp=Z,15nm,0.7s,mb4.8
RRI2 *e*pP pP 13 04 47.5 +0.2
PKM Peak Mountain 45.89 87 ⇓P **P 13 04 29.6 +0.6**
baz=46,SNR=6.1
R10A Warm Springs 45.89 81 ⇓P **P 13 04 29.1 +0.1**
baz=46,SNR=30
HVU Hansel Valley 45.91 75 *e*P **P 13 04 29.3 +0.3**
HVU *e**PP pP 13 04 48.0 +0.2
HVU pmax pmax
comp=Z,38nm,0.7s,mb5.2
HVU Hansel Valley 45.91 75 *e*P **P 13 04 29.3 +0.3**
comp=Z,38nm,0.7s,mb5.2
HVU *e*pP pP 13 04 48.0 +0.2
S10A Tonopah Range, 45.94 81 P **P 13 04 29.9 +0.6**
baz=46,SNR=81
Q11A Duckwater 45.95 80 ⇑P **P 13 04 29.7 +0.4**
baz=46,SNR=17
CWC Cottonwood Cre 45.97 84 ⇑P **P 13 04 29.5 0.0**
baz=46,SNR=5.2
CWC ⇑pP pP 13 04 48.0 -0.3
baz=46
TPAW Teton Pass 45.98 72 *e*P **P 13 04 30.0 +0.5**
comp=Z,9.9nm,0.7s,mb4.7
TPAW *e*pP pP 13 04 48.1 -0.2
TPAW *e*ScP ScP 13 09 51.5 +0.5
K16A Soda Springs 45.99 73 ⇑P **P 13 04 29.9 +0.3**
baz=46,SNR=14
L15A Malad City 46.01 74 ⇓P **P 13 04 29.7 -0.1**
baz=46,SNR=12
L15A ⇑pP pP 13 04 48.5 -0.1
baz=46
P12A McGill 46.01 78 P **P 13 04 30.6 +0.8**
baz=46,SNR=53
P12A ⇓pP pP 13 04 48.9 +0.3
baz=46
P12A ⇑ScP ScP 13 09 50.7 -0.6
baz=46
RLMT Red Lodge 46.02 69 ⇓P **P 13 04 29.6 -0.2**
baz=46,SNR=12
RLMT ⇓ScP ScP 13 09 50.2 -0.9
baz=46,SNR=5.3
RLMT Red Lodge 46.02 69 *e*P **P 13 04 29.7 -0.1**
comp=Z,16nm,0.8s,mb4.8
RLMT *e*pP pP 13 04 48.4 -0.2
GRAC Grapevine Rang 46.05 83 ⇓P **P 13 04 30.9 +0.8**
baz=46,SNR=20
SNOW Snow King Moun 46.11 71 *e*P **P 13 04 31.1 +0.6**
comp=Z,6.9nm,0.6s,mb4.6
SNOW *e*pP pP 13 04 50.1 +0.7
LOHW Long Hollow 46.11 71 *e*P **P 13 04 30.7 +0.1**
comp=Z,5.4nm,0.7s,mb4.4
LOHW *e*pP pP 13 04 49.4 0.0
REDW Red Top Meadow 46.11 72 *e*P **P 13 04 30.6 0.0**
comp=Z,12nm,1.2s,mb4.5
REDW *e*pP pP 13 04 49.0 -0.4
O13A Hicks Ranch, I 46.17 77 ⇑P **P 13 04 31.3 +0.2**
baz=46,SNR=5.5
O13A ⇓pP pP 13 04 50.5 +0.6
baz=46
J17A Brown Place, J 46.20 72 ⇓P **P 13 04 30.9 -0.3**
baz=46
N14A Grayback Hills 46.22 76 ⇑P **P 13 04 31.8 +0.4**
baz=46,SNR=39
ISA Isabella 46.22 85 ⇑P **P 13 04 31.1 -0.4**
baz=46,SNR=14
ISA Isabella 46.22 85 *e*P **P 13 04 31.1 -0.5**
ISA *e**PP pP 13 04 48.8 -1.6
ISA pmax pmax
comp=Z,20nm,1.0s,mb4.8
ISA Isabella 46.22 85 *e*P **P 13 04 31.1 -0.4**
comp=Z,20nm,1.0s,mb4.8
ISA *e*pP pP 13 04 48.8 -1.5
SBC Santa Barbara 46.25 87 ⇓P **P 13 04 31.2 -0.5**
baz=46
BGU Big Grassy Mou 46.27 76 *e*P **P 13 04 32.1 +0.3**
comp=Z,15nm,0.8s,mb4.8
BGU *e*pP pP 13 04 50.5 -0.1
M15A Larsen Ranch, 46.29 75 ⇓P **P 13 04 31.8 -0.2**
baz=46,SNR=9.9
M15A ⇓pP pP 13 04 50.7 -0.1
baz=46
R11A Troy Canyon, C 46.30 80 ⇑P **P 13 04 32.4 +0.3**
baz=46,SNR=87
R11A ⇑pP pP 13 04 50.2 -0.7
baz=46
Q12A Willow Creek R 46.33 79 ⇑P **P 13 04 32.7 +0.3**
baz=46,SNR=21
ARVC Arvin 46.35 86 ⇑P **P 13 04 32.0 -0.6**
baz=46
MOY Mondy 46.38 303 *e*P **P 13 04 33.4 +0.8**
MOY pmax pmax
comp=Z,38nm,1.5s,mb4.9
K17A Gardner Place, 46.43 72 ⇓P **P 13 04 32.6 -0.5**
baz=46,SNR=6.2
FCC Fort Churchill 46.51 46 *e*P **P 13 04 33.0 -0.5**
comp=Z,0.7nm,1.1s
I18A Diamond G Ranc 46.52 71 ⇓P **P 13 04 33.9 +0.1**
baz=46
I18A ⇓ScP ScP 13 09 53.4 +0.2
baz=46
HHC Hu-ho-hao-te 46.56 285 *e*P **P 13 04 35.0 +0.8**
HHC pP pP 13 04 55.8 +2.8
HHC sP sP 13 05 08.3 +6.6
HHC PcP PcP 13 06 08.9 +1.8
HHC PP PP 13 06 25.2 +0.7
HHC ScP ScP 13 09 52.1 -1.4
HHC PcS PcS 13 10 02.0 +0.1
HHC S **S 13 11 14.3 -2.7**
HHC sS sS 13 11 52.9 +3.8
HHC ScS ScS 13 14 17.3 -4.0
HHC SS SS 13 14 34.6 -8.8
HHC pmax pmax
comp=Z,38nm,0.8s,mb5.2
HHC pmax pmax
comp=Z,150nm,6.5s
HHC LR LR
comp=N,410nm,14.4s
HHC LR LR
comp=E,410nm,14.4s
HHC LR LR
comp=Z,490nm,14.4s
L16A Fish Haven 46.57 73 ⇑P **P 13 04 34.5 +0.3**
baz=46,SNR=31
L16A ⇑pP pP 13 04 53.4 +0.4
baz=46
L16A ⇓ScP ScP 13 09 53.2 -0.3
baz=46
P13A Bates Ranch, G 46.57 78 ⇓P **P 13 04 34.6 +0.4**
baz=46,SNR=44
P13A ⇓ScP ScP 13 09 54.1 +0.5
baz=46
MPMC Manual Prospec 46.58 84 ⇑P **P 13 04 34.6 +0.3**
baz=46,SNR=32
BSC Santa Cruz Isl 46.59 88 ⇑P **P 13 04 33.9 -0.5**
baz=46
N15A Stansbury Isla 46.59 75 ⇑P **P 13 04 34.5 +0.1**
baz=46,SNR=18
N15A ⇓pP pP 13 04 53.7 +0.5
baz=46
S11A Rachel 46.64 81 ⇓P **P 13 04 34.8 +0.1**
baz=46,SNR=34
J18A Kendall Valley 46.69 71 ⇑P **P 13 04 34.9 -0.2**
baz=46,SNR=9.6
FURC Furnace Creek, 46.70 83 ⇓P **P 13 04 35.7 +0.4**
baz=47,SNR=22
HWUT Hardware Ranch 46.73 74 *e*P **P 13 04 35.6 +0.2**
comp=Z,21nm,0.9s,mb4.9
HWUT *e*pP pP 13 04 53.4 -0.9
LRMC Laurel Mountai 46.83 85 ⇑P **P 13 04 36.4 +0.1**
baz=47
DUG Dugway 46.84 76 P **P 13 04 37.1 +0.7**
baz=47,SNR=80
DUG ⇑pP pP 13 04 56.0 +0.8
baz=47
DUG ⇑ScP ScP 13 09 53.9 -0.8
baz=47
DUG Dugway 46.84 76 *e*P **P 13 04 37.0 +0.7**
DUG *e**PP pP 13 04 55.3 +0.1
DUG pmax pmax
comp=Z,72nm,0.9s,mb5.4
DUG Dugway 46.84 76 *e*P **P 13 04 37.0 +0.7**
comp=Z,72nm,0.9s,mb5.4
DUG *e*pP pP 13 04 55.3 +0.1
L17A Cokeville 46.85 73 ⇑P **P 13 04 36.1 -0.3**
baz=47
LAO LASA Array 46.87 65 *e*P **P 13 04 36.1 -0.4**
comp=Z,10nm,0.6s,mb4.7
LAO *e*pP pP 13 04 54.6 -0.6
BLG Laguna Peak 46.87 87 ⇑P **P 13 04 36.5 -0.1**
baz=47
Q13A Wheeler Ranch, 46.88 78 ⇑P **P 13 04 37.3 +0.6**
baz=47,SNR=81
R12A Pony Springs, 46.91 80 ⇓P **P 13 04 37.0 +0.1**
baz=47,SNR=31

NOQ North Oquirrh 46.98 75 *e*P **P 13 04 37.7 +0.3**
comp=Z,22nm,0.7s,mb5.0
NOQ *e*pP pP 13 04 56.4 +0.2
DGMT Dagmar 46.99 62 ⇓P **P 13 04 36.3 -1.0**
baz=47
DGMT ⇑ScP ScP 13 09 54.0 -1.1
baz=47
O15A The Old Anders 47.00 76 ⇓P **P 13 04 38.2 +0.7**
baz=47,SNR=12
K18A Toltan Ranch, 47.02 72 ⇑P **P 13 04 38.0 +0.3**
baz=47,SNR=27
K18A ⇓pP pP 13 04 57.0 +0.5
baz=47
EDW2 Edwards Air Fo 47.03 86 ⇓P **P 13 04 37.7 -0.2**
baz=47,SNR=9.8
P14A Drum Mountains 47.06 77 ⇑P **P 13 04 38.2 +0.2**
baz=47,SNR=79
P14A ⇑ScP ScP 13 09 53.9 -1.7
baz=47
U10A Ash Meadows, A 47.06 83 ⇓P **P 13 04 38.3 +0.3**
baz=47,SNR=8.0
CTU Camp Tracy 47.18 75 *e*P **P 13 04 39.1 +0.2**
comp=Z,34nm,1.1s,mb5.0
S12A Delamar Landin 47.21 80 ⇑P **P 13 04 39.9 +0.6**
baz=47,SNR=62
T11A Corn Creek, Al 47.22 81 ⇑P **P 13 04 39.7 +0.4**
baz=47,SNR=112
BW06 Boulder Array 47.23 71 P **P 13 04 39.2 -0.1**
baz=47,SNR=39
BW06 ⇑pP pP 13 04 57.9 -0.2
baz=47
BW06 ⇑ScP ScP 13 09 54.3 -1.9
baz=47
PDAR Pinedale Array 47.23 71 P **P 13 04 39.1 -0.2**
comp=Z,16nm,0.7s,mb4.9,baz=303,slow=3.3,SNR=119
PDAR pP pP 13 04 57.8 -0.4
comp=Z,27nm,0.7s,baz=300,slow=4.0,SNR=18
PDAR ScP ScP 13 09 55.4 -0.9
comp=Z,1.1nm,0.8s,baz=318,slow=4.0,SNR=5.8
PDAR LR LR 13 22 11.6
comp=Z,70nm,18.8s,baz=307,slow=33
DECC Green Verdugo 47.23 86 ⇓P **P 13 04 39.9 +0.4**
baz=47
N16A Rees Ranch, Co 47.25 75 ⇑P **P 13 04 39.8 +0.3**
baz=47,SNR=8.2
Q14A Sevier Lake (B 47.31 78 ⇓P **P 13 04 40.4 +0.4**
baz=47
Q14A ⇑ScP ScP 13 09 55.7 -0.9
baz=47
M17A Scullys Gap (B 47.35 74 P **P 13 04 40.2 -0.1**
baz=47,SNR=19
M17A ⇓ScP ScP 13 09 55.7 -1.1
baz=47
R13A O'Grain Ranch, 47.39 79 ⇓P **P 13 04 41.0 +0.4**
baz=47,SNR=23
JLU Jordanelle 47.41 75 *e*P **P 13 04 41.1 +0.4**
comp=Z,30nm,0.9s,mb5.0
JLU *e*pP pP 13 04 59.4 -0.3
MWC Mount Wilson 47.42 86 *e*P **P 13 04 41.1 +0.2**
MWC *e**PP pP 13 04 59.3 -0.5
MWC pmax pmax
comp=Z,52nm,1.1s,mb5.2
MWC Mount Wilson 47.42 86 *e*P **P 13 04 41.1 +0.2**
comp=Z,52nm,1.1s,mb5.2
MWC *e*pP pP 13 04 59.3 -0.5
SHOC Shoshone 47.43 83 ⇑P **P 13 04 40.8 -0.1**
baz=47,SNR=31
NLU North Lily Min 47.44 76 *e*P **P 13 04 41.4 +0.5**
comp=Z,28nm,0.8s,mb5.0
NLU *e*pP pP 13 04 59.8 0.0
L18A Fontenelle, Gr 47.45 73 ⇓P **P 13 04 40.5 -0.5**
baz=47,SNR=26
L18A ⇓pP pP 13 04 59.8 -0.1
baz=47
GSC Goldstone 47.49 84 ⇓P **P 13 04 41.4 -0.1**
baz=47,SNR=41
GSC ⇑pP pP 13 04 59.8 -0.6
baz=47
GSC Goldstone 47.49 84 *e*P **P 13 04 41.5 +0.1**
GSC *e**PP pP 13 04 59.5 -0.8
GSC pmax pmax
comp=Z,46nm,0.7s,mb5.3
GSC Goldstone 47.49 84 *e*P **P 13 04 41.5 +0.1**
comp=Z,46nm,0.7s,mb5.3
GSC *e*pP pP 13 04 59.5 -0.9
P15A Leamington 47.55 77 ⇑P **P 13 04 42.1 +0.3**
baz=47,SNR=15
P15A ⇑pP pP 13 05 00.3 -0.4
baz=47
K19A Absolon Red Bu 47.62 71 ⇑P **P 13 04 41.5 -0.8**
baz=48,SNR=20
K19A ⇑pP pP 13 05 00.1 -1.1
baz=48
O16A Springville 47.62 75 ⇓P **P 13 04 42.6 +0.2**
baz=48,SNR=22
O16A ⇑pP pP 13 05 01.4 +0.1
baz=48
BTO Baotou 47.64 285 *e*P **P 13 04 43.3 +0.8**
U11A Corn Creek 47.64 82 ⇓P **P 13 04 42.3 -0.3**
baz=48
DAU Daniels Canyon 47.65 75 *e*P **P 13 04 43.4 +0.8**
DAU *e**PP pP 13 05 02.2 +0.7
DAU pmax pmax
comp=Z,40nm,0.9s,mb5.2
DAU Daniels Canyon 47.65 75 *e*P **P 13 04 43.4 +0.8**
comp=Z,40nm,0.9s,mb5.2
DAU *e*pP pP 13 05 02.2 +0.7
DAU *e*ScP ScP 13 09 58.5 +0.5
BFSC Mount Baldy Ra 47.66 86 ⇑P **P 13 04 42.7 -0.1**
baz=48,SNR=12
BFSC ⇑pP pP 13 05 01.1 -0.6
baz=48
MPU Maple Canyon 47.66 76 *e*P **P 13 04 42.9 +0.2**
comp=Z,24nm,0.7s,mb5.1
MPU *e*pP pP 13 05 01.5 -0.1
NJ2 Nanjing 47.73 270 *e*P **P 13 04 43.2 -0.1**
NJ2 pmax pmax
comp=Z,30nm,0.7s,mb5.2
M18A Lyman 47.74 73 ⇑P **P 13 04 42.7 -0.6**
baz=48,SNR=18
M18A ⇓pP pP 13 05 01.8 -0.4
baz=48
L19A Farson 47.75 72 ⇓P **P 13 04 42.8 -0.6**
baz=48,SNR=8.9
L19A ⇑ScP ScP 13 09 56.8 -1.7
baz=48
CIS Catalina Islan 47.75 87 ⇑P **P 13 04 43.7 +0.2**
baz=48
S13A Holt Ranch, En 47.84 80 ⇑P **P 13 04 44.5 +0.4**
baz=48,SNR=46
Q15A Fillmore 47.84 77 ⇓P **P 13 04 44.5 +0.4**
baz=48,SNR=21
T12A Moapa 47.86 81 ⇓P **P 13 04 44.4 +0.1**
baz=48,SNR=6.3
R14A James Farms, M 47.90 78 ⇑P **P 13 04 45.0 +0.5**
baz=48
ARUT Antelope Range 47.96 79 *e*P **P 13 04 45.4 +0.3**
ARUT pmax pmax
comp=Z,15nm,0.8s,mb4.9
ARUT Antelope Range 47.96 79 *e*P **P 13 04 45.4 +0.4**
comp=Z,15nm,0.8s,mb4.9
V11A Goodsprings 47.99 83 ⇓P **P 13 04 45.6 +0.3**
baz=48,SNR=12
K20A Yellowstone Ra 48.01 71 P **P 13 04 44.5 -0.8**
baz=48,SNR=8.4
K20A ⇑pP pP 13 05 03.3 -1.0
baz=48
KRAR Krasnoyarsk 48.05 311 *c i*P **P 13 04 46.3 +0.8**
KRAR pmax pmax
comp=Z,155nm,1.2s,mb5.7
O17A Robinson Place 48.09 75 ⇓P **P 13 04 46.4 +0.4**
baz=48,SNR=9.5
O17A ⇑ScP ScP 13 09 59.5 -0.5
baz=48
HEC Hector,Ludlow 48.09 84 ⇑P **P 13 04 46.4 +0.3**
baz=48,SNR=6.5
BBRC Big Bear Solar 48.10 85 ⇓P **P 13 04 46.7 +0.5**
baz=48,SNR=6.2
S14A Cedar City 48.15 79 ⇓P **P 13 04 46.8 +0.3**
baz=48,SNR=16
S14A ⇑pP pP 13 05 05.5 +0.1
baz=48
U12A Valley of Fire 48.16 81 ⇓P **P 13 04 46.5 -0.1**
baz=48,SNR=18
CCUT Cedar City 48.16 79 *e*P **P 13 04 47.2 +0.6**
comp=Z,31nm,1.1s,mb5.0
CCUT *e*pP pP 13 05 05.4 -0.1

T13A Saint George 48.17 80 ⇑P **P 13 04 46.6 0.0**
baz=48,SNR=48
T13A ⇑ScP ScP 13 10 00.1 -0.3
baz=48
M19A Rock Springs 48.23 73 ⇑pP pP 13 05 05.1 -0.9
baz=48
N18A Larsen Ranch, 48.25 73 ⇑P **P 13 04 46.8 -0.4**
baz=48,SNR=15
N18A ⇓pP pP 13 05 05.0 -1.1
baz=48
MSU Marysvale 48.27 78 *e*P **P 13 04 48.4 +0.9**
MSU *e* 13 06 14.7
MSU pmax pmax
comp=Z,35nm,0.9s,mb5.2
MSU Marysvale 48.27 78 *e*P **P 13 04 48.4 +0.9**
comp=Z,35nm,0.9s,mb5.2
MSU *e*PcP PcP 13 06 14.7 +1.5
MURC Murrieta 48.37 86 ⇑P **P 13 04 48.0 -0.2**
baz=48,SNR=7.6
TMUT Trail Mountain 48.37 76 *e*P **P 13 04 48.9 +0.8**
comp=Z,77nm,0.8s,mb5.6
TMUT *e*pP pP 13 05 07.6 +0.5
L20A Wamsutter 48.41 72 ⇓P **P 13 04 47.9 -0.5**
baz=48
L20A ⇑pP pP 13 05 07.1 -0.3
baz=48
V12A Nelson 48.42 82 ⇓P **P 13 04 48.7 +0.1**
baz=48,SNR=15
V12A ⇑pP pP 13 05 06.8 -0.8
baz=48
O18A Roosevelt 48.49 74 ⇑P **P 13 04 49.5 +0.5**
baz=48,SNR=10
U13A Pakoon Wash 48.52 81 ⇑P **P 13 04 49.8 +0.5**
baz=48,SNR=54
GMRC Granite Mounta 48.54 84 ⇓P **P 13 04 49.5 0.0**
baz=48
P17A Butcher Ranch, 48.54 76 ⇑P **P 13 04 50.0 +0.5**
baz=48,SNR=39
P17A ⇓ScP ScP 13 10 00.8 -1.0
baz=48
N19A John Jarvie Ra 48.59 73 ⇓P **P 13 04 49.4 -0.4**
baz=48,SNR=11
N19A ⇑pP pP 13 05 07.9 -0.9
baz=48
Q16A Castle Valley 48.63 77 ⇑P **P 13 04 50.8 +0.6**
baz=48,SNR=67
T14A Hurricane 48.65 80 ⇓P **P 13 04 50.9 +0.6**
baz=48,SNR=34
T14A ⇑pP pP 13 05 09.3 +0.1
baz=48
LDFC Landfair 48.69 83 *e*P **P 13 04 50.6 -0.1**
comp=Z,66nm,0.7s,mb5.7
LDFC *e*pP pP 13 05 08.8 -0.8
W12A Cal Nev Ari 48.69 83 ⇓P **P 13 04 50.8 +0.1**
baz=49,SNR=23
S15A Panguitch 48.69 79 ⇑P **P 13 04 51.3 +0.6**
baz=49,SNR=13
P18A Preston Nutter 48.74 75 ⇓P **P 13 04 51.4 +0.4**
baz=49,SNR=39
P18A ⇓ScP ScP 13 10 01.7 -1.0
baz=49
M20A Sweetwater, Wa 48.81 72 P **P 13 04 51.4 -0.2**
baz=49,SNR=11
M20A ⇓pP pP 13 05 10.3 -0.2
baz=49
PFO Pinyon Flat Ob 48.82 86 ⇑P **P 13 04 51.3 -0.4**
baz=49,SNR=8.2
PFO Pinyon Flat Ob 48.82 86 *e*P **P 13 04 51.8 +0.1**
PFO *e**PP pP 13 05 09.1 -1.6
PFO pmax pmax
comp=Z,12nm,0.9s,mb4.8
PFO Pinyon Flat Ob 48.82 86 *e*P **P 13 04 51.8 0.0**
comp=Z,12nm,0.9s,mb4.8
PFO *e*pP pP 13 05 09.1 -1.6
R16A Teasdale 48.84 77 ⇑P **P 13 04 52.9 +1.1**
baz=49,SNR=52
BELC Belle Mtn. Jos 48.85 85 ⇓P **P 13 04 51.4 -0.5**
baz=49,SNR=13
V13A Grand Canyon W 48.87 82 ⇑P **P 13 04 52.3 +0.2**
baz=49,SNR=31
SRU San Rafael 48.90 76 ⇑P **P 13 04 52.4 +0.2**
baz=49,SNR=32
SRU San Rafael 48.90 76 *e*P **P 13 04 52.7 +0.5**
SRU *e**PP pP 13 05 11.7 +0.5
SRU pmax pmax
comp=Z,50nm,0.8s,mb5.5
SRU San Rafael 48.90 76 *e*P **P 13 04 52.7 +0.4**
comp=Z,50nm,0.8s,mb5.5
SRU *e*pP pP 13 05 11.7 +0.5
SRU *e*sP sP 13 05 20.0 +0.1
SRU *e*ScP ScP 13 10 03.6 +0.2
109C Camp Elliot, M 48.90 87 ⇑P **P 13 04 52.6 +0.3**
baz=49,SNR=6.0
109C ⇑pP pP 13 05 10.5 -0.8
baz=49
O19A Miners Draw (B 49.00 74 ⇓P **P 13 04 52.9 0.0**
baz=49,SNR=46
O19A ⇓pP pP 13 05 11.2 -0.7
baz=49
U14A Mt Trumbull 49.00 80 ⇓P **P 13 04 53.3 +0.2**
baz=49,SNR=25
L21A Rawlins 49.01 71 ⇓P **P 13 04 52.4 -0.6**
baz=49,SNR=15
L21A ⇑pP pP 13 05 10.8 -1.2
baz=49
T15A Red Dirt Ranch 49.10 79 ⇑P **P 13 04 54.4 +0.6**
baz=49,SNR=61
T15A ⇓pP pP 13 05 12.7 0.0
baz=49
S16A Weppner Ranch, 49.13 78 ⇑P **P 13 04 54.6 +0.6**
baz=49,SNR=46
Q18A Rafter H Ranch 49.14 76 ⇑P **P 13 04 54.1 +0.1**
baz=49,SNR=37
N20A Spence Gulch, 49.18 73 ⇓P **P 13 04 54.2 -0.2**
baz=49,SNR=11
NEE2 Needles Airpor 49.19 83 ⇓P **P 13 04 54.1 -0.4**
baz=49,SNR=6.7
NEE2 ⇑pP pP 13 05 12.6 -1.0
baz=49
R17A Hanksville Air 49.22 77 ⇑P **P 13 04 54.9 +0.2**
baz=49,SNR=64
R17A ⇓ScP ScP 13 10 03.8 -0.9
baz=49
M21A Separation Pea 49.23 71 ⇓P **P 13 04 54.0 -0.7**
baz=49,SNR=7.3
M21A ⇓pP pP 13 05 12.7 -1.0
baz=49
M21A ⇑ScP ScP 13 10 02.8 -2.0
baz=49
IRM Iron Mountain 49.27 84 P **P 13 04 55.0 -0.1**
baz=49,SNR=21
RWWY Rawlins 49.27 71 *e*P **P 13 04 54.3 -0.7**
RWWY *e*pP pP 13 05 13.2 -0.8
BAR Barrett 49.31 87 *e*P **P 13 04 55.5 0.0**
comp=Z,32nm,1.0s,mb5.2
BAR *e*pP pP 13 05 13.3 -1.2
MONP Monument Peak 49.33 86 ⇑P **P 13 04 55.3 -0.3**
baz=49,SNR=12
KBS Kingsbay 49.41 357 ⇑*e*P **P 13 04 54.1 -1.6**
KBS pmax pmax
comp=Z,25nm,2.5s,mb4.7
BC3 Big Chuckawall 49.41 85 ⇑P **P 13 04 55.5 -0.8**
baz=49,SNR=10
W13A Hualapai Mount 49.43 82 ⇓P **P 13 04 55.8 -0.5**
baz=49,SNR=44
P19A Cripple Cowboy 49.50 74 ⇓P **P 13 04 56.7 -0.1**
baz=49,SNR=58
P19A ⇓pP pP 13 05 16.1 +0.3
baz=49
P19A ⇑ScP ScP 13 10 04.9 -1.0
baz=49
L22A Ellis Ranch, M 49.52 70 ⇓P **P 13 04 55.8 -1.1**
baz=49
U15A North Rim 49.54 80 ⇑P **P 13 04 57.6 +0.4**
baz=49,SNR=83
U15A ⇑pP pP 13 05 16.0 -0.1
baz=49
U15A ⇑ScP ScP 13 10 05.4 -0.7
baz=49
V14A Boquillas Ranc 49.56 81 ⇑P **P 13 04 57.7 +0.4**
baz=49,SNR=41
RSSD Black Hills 49.62 67 *e*P **P 13 04 56.6 -1.1**
RSSD *e* 13 06 18.3
RSSD pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
RSSD Black Hills 49.62 67 *e*P **P 13 04 56.6 -1.0**
comp=Z,3.1nm,0.6s,mb4.4

RSSD *e*pP pP 13 05 15.6 -1.1
RSSD *e*PcP PcP 13 06 18.3 +0.3
O20A White River Ci 49.62 73 P **P 13 04 57.6 -0.2**
baz=50,SNR=32
O20A ⇓pP pP 13 05 16.4 -0.4
baz=50
T16A Glen Canyon Da 49.66 79 ⇓P **P 13 04 56.9 -1.2**
baz=50,SNR=6.3
N21A Black Mountain 49.66 72 ⇓P **P 13 04 57.2 -0.9**
baz=50,SNR=8.4
N21A ⇑pP pP 13 05 16.4 -0.7
baz=50
S17A Black Ridge (B 49.67 78 ⇑P **P 13 04 58.2 0.0**
baz=50,SNR=126
S17A ⇑pP pP 13 05 17.2 0.0
baz=50
SWSC Sam W. Stewart 49.68 86 ⇑P **P 13 04 57.7 -0.6**
baz=50
DVTC Desert V Tower 49.68 86 ⇓P **P 13 04 57.7 -0.5**
baz=50,SNR=7.1
R18A Canyonlands Na 49.74 76 P **P 13 04 58.2 -0.4**
baz=50,SNR=48
R18A ⇑pP pP 13 05 17.2 -0.4
baz=50
R18A ⇓ScP ScP 13 10 06.2 -0.8
baz=50
Q19A Hogan Spring (49.76 75 ⇓P **P 13 04 58.5 -0.3**
baz=50
X13A Yucca 49.80 83 P **P 13 04 59.0 -0.1**
baz=50,SNR=25
PDMCI Parker Dam,Lak 49.80 83 ⇓P **P 13 04 58.8 -0.3**
baz=50,SNR=15
PDMCI ⇑pP pP 13 05 17.2 -0.9
baz=50
W14A Seligman 49.85 82 ⇑P **P 13 04 59.3 -0.2**
baz=50,SNR=28
W14A ⇑pP pP 13 05 18.1 -0.4
baz=50
Y12C Blythe 49.93 84 ⇑P **P 13 04 60.0 -0.1**
baz=50,SNR=20
P20A De Beque 49.94 74 ⇓P **P 13 04 59.7 -0.4**
baz=50,SNR=23
V15A Kaibab Nationa 50.01 80 ⇓P **P 13 05 00.3 -0.4**
baz=50,SNR=81
V15A ⇓ScP ScP 13 10 07.6 -0.6
baz=50
O21A Pagoda 50.03 73 ⇑P **P 13 05 00.1 -0.7**
baz=50,SNR=9.7
O21A ⇓pP pP 13 05 19.1 -0.8
baz=50
T17A Navajo Res., N 50.08 78 ⇓P **P 13 05 00.9 -0.4**
baz=50,SNR=28
T17A ⇓pP pP 13 05 20.3 0.0
baz=50
S18A Hurst Farm, Bl 50.12 77 ⇓P **P 13 05 01.4 -0.2**
baz=50,SNR=128
R19A Curley Farm, L 50.18 76 ⇑P **P 13 05 01.5 -0.5**
baz=50,SNR=51
R19A ⇑ScP ScP 13 10 07.7 -1.2
baz=50
GLA Glamis 50.21 85 ⇑P **P 13 05 02.2 -0.1**
baz=50,SNR=14
GLA ⇓pP pP 13 05 20.5 -0.8
baz=50
GLA Glamis 50.21 85 *e*P **P 13 05 02.2 -0.1**
GLA *e**PP pP 13 05 20.4 -0.9
GLA pmax pmax
comp=Z,40nm,0.8s,mb5.4
GLA Glamis 50.21 85 *e*P **P 13 05 02.2 -0.1**
comp=Z,40nm,0.8s,mb5.4
GLA *e*pP pP 13 05 20.4 -0.9
N22A Wattenberg Ran 50.27 72 ⇓P **P 13 05 02.2 -0.4**
baz=50,SNR=12
N22A ⇑pP pP 13 05 21.2 -0.4
baz=50
Y13A Salome 50.31 84 P **P 13 05 02.9 -0.1**
baz=50,SNR=40
PV04 Paradox Valley 50.33 76 *e*P **P 13 05 03.2 0.0**
PV04 *e*pP pP 13 05 21.7 -0.5
Q20A Ridgley Place, 50.34 75 ⇑P **P 13 05 02.6 -0.6**
baz=50,SNR=22
Q20A ⇓ScP ScP 13 10 08.6 -0.9
baz=50
W15A Williams 50.37 81 ⇑P **P 13 05 04.0 +0.5**
baz=50,SNR=13
ULM Lac du Bonnet 50.40 56 P **P 13 05 03.0 -0.4**
comp=Z,5.7nm,0.4s,mb4.8,baz=302,slow=6.7,SNR=5.1
ULM LR LR 13 25 28.1
comp=Z,193nm,20.7s,baz=306,slow=35
U17A Shonto 50.42 79 ⇓P **P 13 05 03.7 -0.1**
baz=50,SNR=17
U17A ⇑ScP ScP 13 10 09.5 -0.5
baz=50
X14A Yava 50.46 82 ⇓P **P 13 05 04.3 +0.2**
baz=50,SNR=42
X14A ⇓pP pP 13 05 22.8 -0.3
baz=50
P21A Newcastle 50.48 74 ⇑P **P 13 05 04.4 +0.2**
baz=50,SNR=13
PHWY Pilot Hill 50.54 71 *e*P **P 13 05 03.7 -0.9**
comp=Z,3.3nm,0.7s,mb4.5
T18A Mexican Hat 50.55 78 ⇑P **P 13 05 04.2 -0.6**
baz=50,SNR=76
T18A ⇑pP pP 13 05 22.5 -1.4
baz=50
S19A Harvey Farm, M 50.61 76 ⇑P **P 13 05 04.6 -0.6**
baz=50,SNR=138
O22A Kremmling 50.62 72 ⇑P **P 13 05 04.9 -0.3**
baz=50,SNR=10
O22A ⇓pP pP 13 05 23.9 -0.4
baz=50
WUAZ Wupatki 50.70 80 ⇑P **P 13 05 06.4 +0.5**
baz=51,SNR=44
WUAZ ⇓pP pP 13 05 24.7 -0.3
baz=51
WUAZ Wupatki 50.70 80 *e*P **P 13 05 06.5 +0.6**
comp=Z,41nm,0.8s,mb5.5
WUAZ *e*pP pP 13 05 24.4 -0.6
WUAZ *e*sP sP 13 05 33.2 -0.4
PV01 Paradox Valley 50.70 76 *e*P **P 13 05 06.0 +0.1**
comp=Z,4μm,0.8s
PV01 *e*pP pP 13 05 24.6 -0.3
112A Yuma 50.71 85 ⇑P **P 13 05 06.6 +0.6**
baz=51
Y14A Wickenburg 50.74 83 ⇑P **P 13 05 05.9 -0.4**
baz=51,SNR=21
Y14A ⇑pP pP 13 05 24.5 -0.8
baz=51
R20A Redvale 50.78 76 ⇑P **P 13 05 06.4 -0.1**
baz=51,SNR=26
R20A ⇑ScP ScP 13 10 10.0 -1.4
baz=51
Z13A Yuma Proving G 50.83 84 ⇑P **P 13 05 06.9 -0.1**
baz=51,SNR=18
Q21A Lamborn Mesa, 50.85 74 ⇑P **P 13 05 06.9 -0.1**
baz=51,SNR=22
P22A Eagle 50.85 73 ⇑P **P 13 05 06.6 -0.4**
baz=51,SNR=6.3
X15A Humboldt 50.85 82 ⇑P **P 13 05 07.1 0.0**
baz=51,SNR=50
X15A ⇓pP pP 13 05 25.2 -0.9
baz=51
W16A Flagstaff 50.88 81 ⇓P **P 13 05 08.0 +0.7**
baz=51,SNR=14
W16A ⇑pP pP 13 05 26.5 +0.2
baz=51
V17A Tonalea, Kykot 50.98 80 ⇑P **P 13 05 08.6 +0.5**
baz=51
V17A ⇓pP pP 13 05 27.0 -0.1
baz=51
V17A ⇑ScP ScP 13 10 11.6 -0.8
baz=51
SMCO Snowmass 50.99 74 *e*P **P 13 05 08.2 +0.2**
comp=Z,16nm,1.0s,mb5.0
SMCO *e*pP pP 13 05 26.9 -0.3
S20A Disappointment 51.02 76 P **P 13 05 08.3 0.0**
baz=51,SNR=88
S20A ⇑ScP ScP 13 10 11.8 -0.8
baz=51
U18A Rough Rock, Ch 51.02 78 ⇑P **P 13 05 08.2 -0.1**
baz=51,SNR=17
113A Mohawk Valley, 51.06 84 ⇑P **P 13 05 08.2 -0.4**
baz=51,SNR=5.2
Y15A Casa Rosa Ranc 51.15 82 P **P 13 05 09.3 0.0**
baz=51,SNR=35
R21A Cimarron 51.16 75 ⇑P **P 13 05 09.4 0.0**
baz=51,SNR=16
Z14A Wintersburg 51.16 83 ⇓P **P 13 05 08.7 -0.7**

baz=51,SNR=5.0
Q22A Crested Butte, 51.23 74 ⇑P P 13 05 09.4 -0.5
baz=51,SNR=11
Q22A ⇓ScP ScP 13 10 12.5 -0.9
baz=51
T19A Beclabito 51.27 77 P P 13 05 10.4 +0.2
baz=51,SNR=154
MVCO Mesa Verde 51.34 77 P P 13 05 10.9 +0.2
baz=51,SNR=28
MVCO ⇑ScP ScP 13 10 13.8 -0.1
baz=51
MVCO Mesa Verde 51.34 77 *e*P **P 13 05 10.7 0.0**
comp=Z,38nm,1.0s,mb5.4
MVCO *e*ScP ScP 13 10 14.5 +0.6
X16A Lo Mia Camp, P 51.38 81 ⇓P P 13 05 11.5 +0.4
baz=51,SNR=42
ISCO Idaho Springs 51.40 72 *e*P **P 13 05 11.4 +0.3**
ISCO *e**PP pP 13 05 30.0 -0.2
ISCO pmax pmax
comp=Z,11nm,1.1s,mb4.8
ISCO Idaho Springs 51.40 72 *e*P **P 13 05 11.4 +0.3**
comp=Z,12nm,1.1s,mb4.8
ISCO *e*pP pP 13 05 30.0 -0.3
V18A Ganado 51.45 79 ⇑P P 13 05 11.2 -0.4
baz=51,SNR=9.6
S21A Coal Bank Pass 51.47 76 P P 13 05 12.4 +0.7
baz=51,SNR=37
S21A ⇓pP pP 13 05 31.5 +0.7
baz=51
U19A Dine' College, 51.51 78 ⇓P P 13 05 11.8 -0.2
baz=51,SNR=35
P23A Jefferson 51.54 73 ⇓P P 13 05 11.6 -0.5
baz=51,SNR=9.1
WHN Wuhan 51.56 272 ⇓P P 13 05 12.0 -0.5
WHN pmax pmax
comp=Z,66nm,0.7s,mb5.8
114A Black Gap (USA 51.61 84 ⇑P P 13 05 13.0 +0.2
baz=52,SNR=11
Z15A Gila River Ind 51.70 83 ⇓P P 13 05 13.2 -0.2
baz=52,SNR=8.4
Y16A Circle Bar Ran 51.72 82 ⇓P P 13 05 14.1 +0.5
baz=52,SNR=21
R22A Saguache, Gunn 51.73 74 ⇓P P 13 05 14.0 +0.4
baz=52,SNR=26
X17A Forest Lakes 51.83 81 ⇑P P 13 05 14.7 +0.4
baz=52,SNR=11
U20A Newcomb 51.87 77 ⇓P P 13 05 14.9 +0.2
baz=52,SNR=16
U20A ⇑ScP ScP 13 10 15.5 -0.7
baz=52
W18A Petrified Fore 51.96 79 ⇓P P 13 05 15.5 +0.1
baz=52,SNR=7.8
V19A Window Rock 51.99 78 ⇓P P 13 05 16.0 +0.4
baz=52,SNR=6.7
S22A 4UR Ranch, Cre 52.00 75 ⇑P P 13 05 16.3 +0.7
baz=52,SNR=46
115A Sonoran Desert 52.05 83 ⇑P P 13 05 16.4 +0.3
baz=52
T21A Navajo Lake 52.07 76 ⇑P P 13 05 16.5 +0.4
baz=52
Z16A Peralta Trail, 52.12 82 ⇑P P 13 05 16.4 -0.2
baz=52,SNR=10.0
214A Organ Pipe Nat 52.20 85 P P 13 05 17.1 -0.1
baz=52,SNR=8.0
Q24A Divide 52.21 73 ⇓pP pP 13 05 36.3 0.0
baz=52
X18A Snowflake 52.23 80 ⇓P P 13 05 17.9 +0.5
baz=52,SNR=15
Y17A Roosevelt 52.23 81 ⇑P P 13 05 17.8 +0.4
baz=52,SNR=45
V20A Brimhall 52.29 78 ⇓P P 13 05 18.3 +0.5
baz=52,SNR=15
SSLB Suanglung 52.29 261 *e*P **P 13 05 17.4 -0.5**
comp=Z,20nm,0.8s,mb5.2
U21A Nageezi 52.36 77 P P 13 05 19.0 +0.7
baz=52,SNR=78
YULB Yu-li 52.38 260 *e*P **P 13 05 17.6 -1.0**
comp=Z,14nm,0.6s,mb5.2
T22A Edith 52.43 76 ⇑P P 13 05 19.5 +0.7
baz=52,SNR=43
P25A Willow Gulch B 52.44 72 ⇓P P 13 05 18.8 0.0
baz=52,SNR=11
P25A ⇓pP pP 13 05 38.6 +0.5
baz=52
116A Eloy 52.47 83 P P 13 05 19.6 +0.4
baz=52,SNR=7.4
S23A Nye Farm, Mont 52.52 74 ⇓P P 13 05 19.5 +0.1
baz=52
S23A ⇓pP pP 13 05 39.5 +0.9
baz=52
XAN Xi'an 52.54 279 P P 13 05 19.2 -0.5
XAN pP pP 13 05 45.4 +6.5
XAN pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
Y18A Canyon Day Jun 52.68 81 ⇓P P 13 05 21.2 +0.5
baz=52,SNR=27
X19A St. Johns 52.70 80 P P 13 05 21.6 +0.8
baz=53,SNR=19
X19A ⇑pP pP 13 05 39.8 -0.2
baz=53
R24A Sanders Place, 52.71 73 ⇓P P 13 05 21.3 +0.4
baz=53
R24A ⇑pP pP 13 05 40.6 +0.5
baz=53
W20A Ramah 52.71 79 ⇓P P 13 05 21.3 +0.4
baz=53,SNR=14
W20A ⇓pP pP 13 05 39.8 -0.3
baz=53
Z17A San Carlos Hig 52.73 82 ⇓P P 13 05 21.7 +0.6
baz=53,SNR=10
Q25A Bedland, Calha 52.78 72 ⇓P P 13 05 21.9 +0.5
baz=53,SNR=6.4
Q25A ⇑pP pP 13 05 40.5 -0.1
baz=53
V21A Milan 52.79 77 P P 13 05 21.9 +0.4
baz=53,SNR=24
SDCO Great Sand Dun 52.80 74 *e*P **P 13 05 21.9 +0.4**
comp=Z,22nm,1.0s,mb5.1
SDCO *e*pP pP 13 05 40.3 -0.3
TPUB Ta-pu 52.85 261 *e*P **P 13 05 21.8 -0.3**
comp=Z,26nm,0.9s,mb5.3
U22A Llaves 52.88 76 ⇑P P 13 05 22.5 +0.3
baz=53,SNR=47
T23A Casias Ranch, 52.94 75 ⇑P P 13 05 23.2 +0.6
baz=53,SNR=15
216A Three Points, 53.01 83 ⇓P P 13 05 22.7 -0.5
baz=53
ZAA0 Zalesovo Array 53.02 312 *e*P **P 13 05 22.4 -0.4**
ZAA0 *e*PcP PcP 13 06 30.9 +0.4
ZALV Zalesovo Beam 53.02 312 P P 13 05 22.6 -0.3
comp=Z,9.4nm,0.6s,mb5.0,baz=49,slow=7.3,SNR=18
ZALV PcP PcP 13 06 30.9 +0.5
comp=Z,6.8nm,0.7s,baz=41,slow=4.0,SNR=5.3
ZALV ScP ScP 13 10 21.4 +0.5
comp=Z,0.5nm,0.3s,baz=15,slow=6.2,SNR=3.9
ZALV LR LR 13 28 23.3
comp=Z,29nm,21.3s,baz=116,slow=36
ZALV Zalesovo Beam 53.02 312 P P 13 05 22.6 -0.3
ZALV 13 06 31.0
S24A Houchin Ranch, 53.04 74 ⇑P P 13 05 23.7 +0.4
baz=53,SNR=23
S24A ⇓pP pP 13 05 42.9 +0.4
baz=53
Y19A Nutrioso 53.04 80 ⇑P P 13 05 23.2 -0.2
baz=53,SNR=12
117A Oracle 53.06 82 ⇑P P 13 05 23.2 -0.4
baz=53,SNR=16
X20A Quemado 53.10 79 ⇓P P 13 05 23.6 -0.2
baz=53,SNR=42
Z18A Geronimo 53.15 81 ⇓P P 13 05 24.3 +0.1
baz=53,SNR=6.7
V22A San Miguel Ran 53.16 77 ⇓P P 13 05 24.1 0.0
baz=53,SNR=14
NVS Novosibirsk 53.17 314 ⇓*i*P **P 13 05 24.1 +0.1**
NVS pmax pmax
comp=N,17nm,0.7s
NVS pmax pmax
comp=E,23nm,0.7s
NVS pmax pmax
comp=Z,34nm,0.7s,mb5.5
TUC Tucson 53.21 83 *e*P **P 13 05 24.6 0.0**
TUC *e**PP pP 13 05 42.6 -1.2
TUC pmax pmax
comp=Z,19nm,0.8s,mb5.2
TUC Tucson 53.21 83 *e*P **P 13 05 24.6 -0.1**
comp=Z,19nm,0.8s,mb5.2
TUC *e*pP pP 13 05 42.6 -1.2
W21A San Fidel 53.24 78 ⇑P P 13 05 24.6 -0.2
baz=53,SNR=6.6
U23A El Rito 53.31 76 ⇓P P 13 05 25.1 -0.2
baz=53,SNR=56
118A Homack Ranch, 53.49 82 ⇓P P 13 05 26.9 +0.2
baz=53,SNR=40
S25A Robets Cordova 53.49 73 ⇑P P 13 05 26.2 -0.4
baz=53,SNR=20
S25A ⇑pP pP 13 05 45.4 -0.5
baz=53
217A Green Valley 53.56 83 ⇑P P 13 05 26.8 -0.3
baz=53
X21A Alamocita Cree 53.60 79 ⇓P P 13 05 27.7 +0.2
baz=54,SNR=57
Y20A Horse Springs, 53.61 80 ⇑P P 13 05 27.6 +0.1
baz=54,SNR=32
Y20A ⇑pP pP 13 05 47.0 +0.3
baz=54
V23A Ortiz Mt. (NFS 53.71 76 ⇑P P 13 05 29.2 +1.0
baz=54,SNR=40
W22A Albuquerque 53.74 77 ⇓P P 13 05 29.7 +1.2
baz=54,SNR=6.0
U24A Moreno Valley 53.81 75 ⇑P P 13 05 28.7 -0.2
baz=54
119A Ashpeak Ranch, 53.81 81 ⇑P P 13 05 29.1 +0.1
baz=54,SNR=12
T25A Trinidad 53.85 74 ⇑P P 13 05 29.3 0.0
baz=54,SNR=29
218A Dragoon 53.90 82 ⇓P P 13 05 29.7 0.0
baz=54,SNR=24
Y21A Point of Rocks 53.97 79 ⇑P P 13 05 30.8 +0.7
baz=54,SNR=7.1
Z20A Nine Sixteen R 54.01 80 P P 13 05 31.1 +0.6
baz=54,SNR=21
LAZ Ladron 54.03 78 *e*P **P 13 05 31.2 +0.6**
comp=Z,16nm,0.8s,mb5.1
LAZ *e*pP pP 13 05 50.1 +0.3
X22A Bernardo 54.04 78 ⇑P P 13 05 31.6 +1.0
baz=54,SNR=14
ECSD EROS Data Cent 54.05 63 *e*P **P 13 05 28.4 -2.2**
comp=Z,4.6nm,0.8s,mb4.6
ANMO Albuquerque 54.07 77 *e*P **P 13 05 31.1 +0.2**
ANMO *e**PP pP 13 05 49.8 -0.3
ANMO pmax pmax
comp=Z,16nm,1.0s
ANMO Albuquerque 54.07 77 *e*P **P 13 05 31.1 +0.2**
comp=Z,16nm,1.0s,mb5.0
ANMO *e*pP pP 13 05 49.8 -0.3
EYMN Ely 54.09 56 *e*P **P 13 05 29.5 -1.2**
comp=Z,10nm,0.9s,mb4.9
W23A Werner Place, 54.12 77 ⇓P P 13 05 31.6 +0.4
baz=54,SNR=5.7
LZH Lanzhou 54.26 285 P P 13 05 33.2 +1.0
LZH pP pP 13 05 51.6 +0.1
LZH sP sP 13 06 03.3 +3.2
LZH PP PP 13 07 37.7 +3.3
LZH *e*S **S 13 13 01.0 -2.8**
LZH sS sS 13 13 39.5 +2.9
LZH SS SS 13 16 41.2 -4.9
LZH pmax pmax
comp=Z,29nm,1.0s,mb5.3
LZH pmax pmax
comp=Z,120nm,4.0s
V24A Rampart Ranch, 54.27 76 ⇑P P 13 05 32.7 +0.4
baz=54,SNR=60
318A Bisbee 54.30 83 ⇓P P 13 05 32.3 -0.3
baz=54,SNR=12
U25A Circle Dot Ran 54.34 75 ⇑P P 13 05 33.1 +0.2
baz=54,SNR=52
219A White Tail Can 54.37 82 ⇑P P 13 05 32.9 -0.1
baz=54,SNR=15
120A U Bar Ranch, L 54.37 81 ⇓P P 13 05 33.5 +0.4
baz=54,SNR=14
Y22D IRIS PASSCAL I 54.38 78 ⇑P P 13 05 33.2 +0.1
baz=54
GTA Gaotai 54.44 290 ⇓P P 13 05 34.2 +0.7
GTA pP pP 13 05 52.4 -0.4
GTA sP sP 13 06 00.9 -0.5
GTA PcP PcP 13 06 36.4 +0.2
GTA PP PP 13 07 39.9 +3.9
GTA ScP ScP 13 10 25.5 -1.9
GTA S **S 13 13 07.4 +1.2**
GTA sS sS 13 13 39.2 +0.2
GTA pmax pmax
comp=Z,45nm,0.8s,mb5.5
GTA pmax pmax
comp=Z,110nm,4.5s
GTA LR LR
comp=N,79nm,17.8s
GTA LR LR
comp=E,64nm,18.4s
GTA LR LR
comp=Z,170nm,15.2s
Z21A St. Cloud Mine 54.44 80 ⇑P P 13 05 34.0 +0.3
baz=54,SNR=18
Y22A Socorro 54.45 79 ⇓P P 13 05 34.3 +0.7
baz=54,SNR=38
X23A Hourglass Bar 54.49 77 ⇑P P 13 05 34.4 +0.5
baz=54,SNR=12
BNM Barren Site 54.51 78 *e*P **P 13 05 34.4 +0.4**
comp=Z,18nm,0.8s,mb5.2
BNM *e*pP pP 13 05 53.5 +0.1
W24A Lazy 6 Ranch, 54.53 76 ⇓P P 13 05 34.9 +0.7
baz=54,SNR=51
V25A Rancho No Teng 54.59 75 ⇑P P 13 05 34.9 +0.3
baz=54,SNR=38
U26A Atchley Ranch, 54.74 74 ⇓P P 13 05 35.6 -0.1
baz=55,SNR=28
319A Douglas 54.78 82 P P 13 05 36.3 +0.2
baz=55,SNR=12
220A Playas Peak, P 54.88 81 P P 13 05 37.1 +0.3
baz=55,SNR=39
121A Cookes Peak, D 54.91 80 ⇓P P 13 05 37.3 +0.4
baz=55,SNR=16
Z22A Elephant Butte 54.91 79 ⇓P P 13 05 37.5 +0.5
baz=55,SNR=20
X24A Lazy VL Ranch, 54.95 77 ⇑P P 13 05 37.9 +0.6
baz=55,SNR=9.3
Y23A Lovelace Mesa, 55.01 78 ⇓P P 13 05 38.2 +0.6
baz=55,SNR=54
W25A X Bar L Ranch, 55.10 76 ⇓P P 13 05 38.8 +0.5
baz=55,SNR=56
V26A Tequesquite Ra 55.12 75 ⇑P P 13 05 38.3 -0.2
baz=55,SNR=35
221A Mesquite Ranch 55.27 81 ⇓P P 13 05 40.0 +0.4
baz=55
122A Conniff Cattle 55.27 80 ⇓P P 13 05 39.7 +0.1
baz=55,SNR=6.6
320A Kipp Ranch, An 55.27 82 ⇑P P 13 05 39.6 0.0
baz=55,SNR=15
Z23A Rita Site, Whi 55.36 79 ⇓P P 13 05 40.6 +0.5
baz=55,SNR=7.9
Y24A Capitan 55.39 77 ⇑P P 13 05 40.6 +0.2
baz=55,SNR=122
CBKS Cedar Bluff 55.49 69 *e*P **P 13 05 40.1 -1.0**
CBKS *e* 13 06 39.9
CBKS pmax pmax
comp=Z,11nm,0.6s,mb5.1
CBKS Cedar Bluff 55.49 69 *e*P **P 13 05 40.1 -1.0**
comp=Z,11nm,0.6s,mb5.0
CBKS *e*pP pP 13 05 59.3 -1.1
CBKS *e*PcP PcP 13 06 39.9 -0.4
W26A Owens Ranch, T 55.61 75 ⇑P P 13 05 42.2 +0.2
baz=56
123A Bell Site, Whi 55.77 79 ⇓P P 13 05 42.5 -0.7
baz=56
Z24A Sheeppen Canyo 55.84 78 ⇑P P 13 05 44.0 +0.3
baz=56,SNR=28
Y25A Mesa, Roswell 55.84 77 ⇓P P 13 05 43.8 +0.2
baz=56,SNR=59
X26A CR and CF Fran 55.95 76 P P 13 05 44.7 +0.3
baz=56,SNR=28
W27A Bowe Ranch, En 56.05 75 ⇑P P 13 05 45.0 -0.1
baz=56,SNR=12
223A Chaparral, Ant 56.10 80 ⇓P P 13 05 46.0 +0.5
baz=56,SNR=5.6
124A Stringfield Ra 56.22 79 ⇑P P 13 05 46.2 -0.1
baz=56,SNR=15
Z25A Roswell 56.27 78 ⇑P P 13 05 46.9 +0.2
baz=56,SNR=17
X27A F and S Farms, 56.31 75 ⇓P P 13 05 47.3 +0.3
baz=56
COWI Conover 56.51 57 *e*P **P 13 05 47.0 -1.2**
comp=Z,6.3nm,0.6s,mb4.8
224A Cornudas Mount 56.60 79 ⇓P P 13 05 49.4 +0.2
baz=56,SNR=31
Z26A Caprock 56.72 77 P P 13 05 50.0 +0.1
baz=57,SNR=29
125A Gardner Draw, 56.73 78 P P 13 05 50.3 +0.3
baz=57,SNR=49
Y27A Causey 56.79 76 P P 13 05 50.5 +0.1
baz=57,SNR=32
MNTX Cornudas Mount 56.95 79 *e*P **P 13 05 51.7 +0.1**
comp=Z,27nm,1.0s,mb5.2
MNTX *e*pP pP 13 06 10.3 -0.7
CPRX Cap Rock 56.95 77 *e*P **P 13 05 51.7 +0.2**
comp=Z,26nm,1.1s,mb5.2
MSTX Muleshoe 56.97 76 ⇓P P 13 05 51.5 -0.2
baz=57,SNR=11
AMTX Amarillo 57.00 74 *e*P **P 13 05 51.8 -0.1**
comp=Z,22nm,0.8s,mb5.2
AMTX *e*pP pP 13 06 10.4 -0.9
225A Deer Hill, Car 57.01 79 ⇑P P 13 05 52.0 +0.1
baz=57,SNR=21
324A Moseley Ranch, 57.07 80 ⇓P P 13 05 52.2 -0.2
baz=57,SNR=9.1
126A Clayton Basin, 57.13 78 P P 13 05 52.7 -0.1
baz=57,SNR=9.3
SCIA State Center 57.13 63 *e*P **P 13 05 51.7 -1.0**
comp=Z,7.9nm,0.4s,mb5.1
Z27A Tatum 57.15 76 ⇓P P 13 05 52.4 -0.5
baz=57,SNR=16
GDL2 Guadalupe Moun 57.23 78 *e*P **P 13 05 53.3 -0.2**
comp=Z,13nm,0.9s,mb5.0
GDL2 *e*pP pP 13 06 12.2 -0.8
325A Bean Ranch, Si 57.43 79 P P 13 05 55.2 +0.3
baz=57,SNR=40
226A Malaga, Loving 57.48 78 ⇓P P 13 05 55.2 -0.1
baz=57,SNR=29
127A Arkansas Junct 57.51 77 P P 13 05 55.1 -0.3
baz=57,SNR=5.6
ARCES ARCESS Array B 57.58 349 P P 13 05 55.2 -0.2
comp=Z,6.5nm,0.8s,mb4.7,baz=20,slow=8.6,SNR=13
ARCES pP pP 13 06 13.6 -1.2
comp=Z,4.0nm,0.9s,baz=47,slow=4.1,SNR=2.1
ARCES ARCESS Array B 57.58 349 P P 13 05 55.2 -0.2
ARCES pP pP 13 06 13.6 -1.2
425A Indio Mountain 57.83 80 ⇑P P 13 05 57.8 0.0
baz=58,SNR=20
CD2 Chengdu 57.85 280 P P 13 05 57.8 -0.1
CD2 pP pP 13 06 21.8 +4.4
CD2 sP sP 13 06 32.9 +7.0
CD2 PP PP 13 08 08.5 +1.9
CD2 S **S 13 13 47.0 -4.6**
CD2 sS sS 13 14 28.5 +3.8
CD2 SS SS 13 17 39.8 -3.1
CD2 pmax pmax
comp=Z,30nm,0.8s,mb5.4
CD2 pmax pmax
comp=Z,110nm,4.8s
CD2 LR LR
comp=N,110nm,5.9s
CD2 LR LR
comp=Z,170nm,8.3s
227A Bennet, Jal 58.01 78 ⇓P P 13 05 58.8 -0.2
baz=58,SNR=5.6
KURK Kurchatov 58.01 313 P P 13 05 59.4 +0.7
comp=Z,557nm,0.9s,SNR=51
KURK Kurchatov 58.01 313 ScP ScP 13 10 43.6 +0.7
comp=Z,1.7nm,0.9s,baz=38,slow=4.4,SNR=4.6
KURK LR LR 13 32 44.9
comp=Z,55nm,19.4s,baz=295,slow=38
KURK Kurchatov 58.01 313 *d*/P **P 13 05 59.1 +0.4**
KURK pmax pmax
comp=Z,120nm,1.2s,mb5.8
JFWS Jewell Farm 58.07 60 *e*P **P 13 05 57.7 -1.6**
JFWS pmax pmax
comp=Z,18nm,0.9s,mb5.1
JFWS Jewell Farm 58.07 60 *e*P **P 13 05 57.7 -1.5**
comp=Z,18nm,0.9s,mb5.1
326A Caldwell Ranch 58.08 79 ⇑P P 13 05 59.4 -0.1
baz=58,SNR=39
WMQ Urumqi 58.26 302 P P 13 06 01.5 +1.0
WMQ pP pP 13 06 25.8 +5.8
WMQ PP PP 13 08 13.5 +3.7
WMQ pmax pmax
comp=Z,43nm,0.7s,mb5.6
WMQ LR LR
comp=N,130nm,22.0s
WMQ LR LR
comp=E,180nm,28.0s
WMQ LR LR
comp=Z,240nm,24.0s
426A McDonald Obser 58.50 79 ⇓P P 13 06 02.2 -0.2
baz=58,SNR=24
328A Wristen Ranch, 58.74 78 ⇓P P 13 06 03.8 -0.4
baz=59,SNR=48
427A Hayter Ranch, 58.76 79 ⇓P P 13 06 03.8 -0.4
baz=59,SNR=22
WMOK Wichita Mounta 58.83 72 *e*P **P 13 06 04.2 -0.4**
WMOK *e* 13 06 53.2
WMOK pmax pmax
comp=Z,16nm,0.8s,mb5.1
WMOK Wichita Mounta 58.83 72 *e*P **P 13 06 04.2 -0.4**
comp=Z,16nm,0.8s,mb5.1
WMOK *e*pP pP 13 06 23.5 -0.7
WMOK *e*PcP PcP 13 06 53.2 -0.2
526A Mary Lane Ranc 58.89 80 ⇓P P 13 06 05.2 +0.1
baz=59,SNR=34
MK31 Makanchi Array 58.98 307 *e*P **P 13 06 05.3 -0.2**
MKAR Makanchi Array 58.98 307 P P 13 06 05.3 -0.3
comp=Z,18nm,0.8s,mb5.1,baz=58,slow=7.3,SNR=60
MKAR pP pP 13 06 23.2 -1.9
comp=Z,4.7nm,0.9s,baz=40,slow=12,SNR=3.4
MKAR LR LR 13 32 33.0
comp=Z,43nm,20.4s,baz=320,slow=37
MKAR Makanchi Array 58.98 307 P P 13 06 05.3 -0.2
MKAR *PP pP 13 06 23.2 -1.9
527A Woodward Ranch 59.12 79 ⇓P P 13 06 06.4 -0.4
baz=59,SNR=18
GYA Guiyang 59.22 275 ⇑*i*/P **P 13 06 08.9 +1.4**
GYA pP pP 13 06 32.4 +5.4
GYA sP sP 13 06 42.3 +6.8
GYA PcP PcP 13 06 56.2 +1.1
GYA PP PP 13 08 24.8 +6.0
GYA ScP ScP 13 10 48.0 -0.6
GYA PcS PcS 13 10 58.4 +1.2
GYA S **S 13 14 09.3 -0.1**
GYA SS SS 13 18 03.2 -1.3
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,130nm,5.0s
GYA LR LR
comp=N,660nm,18.8s
GYA LR LR
comp=E,560nm,19.2s
GYA LR LR
comp=Z,790nm,18.6s
626A Big Bend Ranch 59.22 80 ⇓P P 13 06 07.3 -0.1
baz=59,SNR=38
428A Kincaid Ranch, 59.28 78 ⇓P P 13 06 08.1 +0.3
baz=59,SNR=50
528A Cox Ranch, San 59.61 79 ⇑P P 13 06 10.2 0.0
baz=60
TXAR Lajitas Array 59.66 80 P P 13 06 09.9 -0.6
comp=Z,6.7nm,0.5s,mb4.9,baz=305,slow=5.1,SNR=98
TXAR pP pP 13 06 28.6 -1.4
comp=Z,4.7nm,0.7s,baz=306,slow=4.5,SNR=5.0
TXAR ScP ScP 13 10 48.2 -2.4
comp=Z,0.7nm,0.8s,baz=290,slow=3.6,SNR=4.2
TXAR LR LR 13 31 07.7
comp=Z,42nm,20.3s,baz=5.0,slow=35
TXAR Lajitas Array 59.66 80 P P 13 06 09.9 -0.6
TXAR *PP pP 13 06 28.6 -1.4
TXAR Lajitas Array 59.66 80 P P 13 06 09.9 -0.6
TXAR pP pP 13 06 28.6 -1.4
TXAR ScP ScP 13 10 48.2 -2.4
TXAR LR LR 13 31 07.7
TGY Tagaytay City 59.69 253 P P 13 06 10.8 -0.1
comp=Z,60nm,0.3s,mb6.1,baz=281,slow=21,SNR=4.9
627A Terlingua Ranc 59.75 80 P P 13 06 11.1 0.0
baz=60,SNR=34
VOSK Vostochnaya 59.91 318 P P 13 06 12.2 +0.3
VOSK pmax pmax
comp=Z,19nm,1.0s,mb5.1
BVAR Borovoye Array 59.94 319 P P 13 06 12.3 +0.3
comp=Z,18nm,0.6s,mb5.3,baz=51,slow=6.9,SNR=91
BVAR pP pP 13 06 31.0 -0.6
comp=Z,5.3nm,0.7s,baz=44,slow=6.9,SNR=4.2
BVAR ScP ScP 13 10 50.0 -1.3
comp=Z,1.6nm,0.7s,baz=62,slow=4.0,SNR=4.7
BVAR Borovoye Array 59.94 319 P P 13 06 12.3 +0.3
BVAR *PP pP 13 06 31.0 -0.6

BRVK Borovoye 59.96 319 P **P** **13 06 13.6 +1.5**
comp=Z,145nm,0.8s,mb6.1,SNR=9.5
BRVK Borovoye 59.96 319 *d iP* **P** **13 06 12.4 +0.3**
BRVK pmax pmax
comp=Z,33nm,1.2s,mb5.2
BRVK Borovoye 59.96 319 *eP* **P** **13 06 11.7 -0.4**
BRVK *e*ScP ScP 13 10 51.1 -0.4
628A Black Gap, Mar 60.03 79 ⇑P **P** **13 06 12.7 -0.3**
baz=60
HDIL Hopedale 60.21 61 *eP* **P** **13 06 13.0 -1.1**
comp=Z,19nm,0.6s,mb5.3
HDIL *e*pP pP 13 06 31.9 -1.7
SCHQ Schefferville 60.41 38 P **P** **13 06 14.9 -0.2**
comp=Z,10nm,0.8s,mb4.9,baz=329,slow=7.2,SNR=9.4
ZRNK Zerenda 60.56 319 P **P** **13 06 16.2 0.0**
ZRNK pmax pmax
comp=Z,19nm,0.9s,mb5.1
SVE Sverdlovsk 60.73 326⇓ *eP* **P** **13 06 18.5 +1.1**
SVE pmax pmax
comp=Z,15nm,1.2s,mb4.9
JCT Junction City 61.20 76 *eP* **P** **13 06 20.2 -0.8**
JCT *e**PP pP 13 06 39.0 -1.6
JCT pmax pmax
comp=Z,36nm,1.0s,mb5.4
JCT Junction City 61.20 76 *eP* **P** **13 06 20.2 -0.7**
comp=Z,36nm,1.0s,mb5.4
JCT *e*pP pP 13 06 39.0 -1.7
ARU Arti 61.75 327 *d iP* **P** **13 06 24.0 -0.2**
ARU *e* 13 07 04.6
ARU *e* 13 08 38.9
ARU S **S** **13 14 42.5 +1.6**
ARU SS SS 13 18 43.3 +0.6
ARU pmax pmax
comp=Z,20nm,1.2s,mb5.0
ARU Arti 61.75 327 *eP* **P** **13 06 25.4 +1.1**
comp=Z,16nm,0.9s,mb5.0
MIAR Mount Ida 62.02 69 *eP* **P** **13 06 25.6 -0.8**
MIAR *e* 13 07 06.2
MIAR pmax pmax
comp=Z,20nm,0.9s,mb5.2
MIAR Mount Ida 62.02 69 *eP* **P** **13 06 25.6 -0.8**
comp=Z,20nm,0.9s,mb5.2
MIAR *e*pP pP 13 06 44.8 -1.3
MIAR *e*PcP PcP 13 07 06.2 0.0
OLIL Olney 62.15 62 *eP* **P** **13 06 26.1 -1.1**
comp=Z,8.9nm,0.6s,mb5.0
OLIL *e*pP pP 13 06 45.3 -1.6
KMI Kunming 62.62 276 ⇑P **P** **13 06 30.6 +0.1**
KMI pP pP 13 06 47.8 -2.4
KMI pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
BLO Bloomington 62.70 61 *eP* **P** **13 06 29.9 -0.9**
BLO pmax pmax
comp=Z,15nm,0.8s,mb5.0
BLO Bloomington 62.70 61 *eP* **P** **13 06 29.9 -0.9**
comp=Z,15nm,0.8s,mb5.0
JOF Joensuu 63.00 344 *eP* **P** **13 06 29.6 -2.8**
JOF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
JOF Joensuu 63.00 344 *ep* **P** **13 06 29.6 -2.8**
comp=Z,8.5nm,0.8s,mb4.7
WCI Wyandotte Cave 63.50 61 *eP* **P** **13 06 34.7 -1.5**
WCI pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
WCI Wyandotte Cave 63.50 61 *eP* **P** **13 06 34.6 -1.5**
comp=Z,7.2nm,0.7s,mb4.7
WCI *e*pP pP 13 06 54.3 -1.6
HKT Hockley 63.97 74 *eP* **P** **13 06 39.3 -0.1**
HKT *e**PP pP 13 06 57.7 -1.5
HKT pmax pmax
comp=Z,41nm,1.4s,mb5.1
HKT Hockley 63.97 74 *eP* **P** **13 06 39.3 -0.1**
comp=Z,40nm,1.4s,mb5.1
HKT *e*pP pP 13 06 57.7 -1.5
OXF Oxford 64.44 66 *eP* **P** **13 06 41.4 -1.0**
OXF pmax pmax
comp=Z,99nm,0.9s,mb5.6
OXF Oxford 64.44 66 *eP* **P** **13 06 41.4 -1.0**
comp=Z,99nm,0.9s,mb5.6
KAF Kangasniemi 64.55 346 *eP* **P** **13 06 41.4 -1.2**
KAF pmax pmax
comp=Z,3.0nm,0.4s,mb4.5
KAF Kangasniemi 64.55 346 *ep* **P** **13 06 41.4 -1.2**
comp=Z,2.8nm,0.4s,mb4.5
TKM2 Tokmak 2 65.07 308 P **P** **13 06 47.4 +1.0**
SNR=44
TKM2 Tokmak 2 65.07 308 *eP* **P** **13 06 47.1 +0.7**
TKM2 *e**PP pP 13 07 06.0 -0.2
TKM2 pmax pmax
comp=Z,51nm,1.0s,mb5.3
TKM2 Tokmak 2 65.07 308 *eP* **P** **13 06 47.1 +0.8**
comp=Z,51nm,1.0s,mb5.3
TKM2 *e*pP pP 13 07 06.0 -0.2
FINES FINESS Array B 65.22 346 P **P** **13 06 46.2 -0.8**
comp=Z,4.8nm,0.7s,mb4.4,baz=14,slow=8.6,SNR=10
FINES pP pP 13 07 06.3 -0.5
comp=Z,3.3nm,0.8s,baz=19,slow=6.5,SNR=2.9
ULHL Ulahol 65.25 307 P **P** **13 06 48.9 +1.3**
SNR=18
USP Ospenovka 65.34 309 P **P** **13 06 49.3 +1.2**
SNR=68
CHMS Chumysh 65.42 309 P **P** **13 06 49.7 +1.1**
SNR=15
KBK Karagaybulak 65.58 308 P **P** **13 06 51.0 +1.4**
SNR=9.9
FRU Bishkek 65.61 309⇓ *iP* **P** **13 06 51.0 +1.1**
FRU pmax pmax
comp=Z,98nm,1.8s,mb5.3
AAK Ala-Archa 65.82 309 P **P** **13 06 52.8 +1.6**
comp=Z,446nm,0.8s,mb6.3,SNR=14
AAK Ala-Archa 65.82 309 P **P** **13 06 52.4 +1.2**
SNR=24
AAK Ala-Archa 65.82 309 LR LR 13 36 15.9
comp=Z,66nm,18.7s,baz=360,slow=36
KZA Kyzart 65.87 308 P **P** **13 06 53.3 +1.7**
SNR=34
SWET Sewanee 65.88 63 *eP* **P** **13 06 50.3 -1.4**
BINY Binghamton 65.93 52 *eP* **P** **13 06 51.0 -0.9**
comp=Z,11nm,0.9s,mb4.7
UCH Uchtor 66.12 308 P **P** **13 06 54.8 +1.7**
SNR=30
EKS2 Erkin-Say 66.15 309 P **P** **13 06 54.7 +1.4**
SNR=35
EKS2 Erkin-Say 66.15 309 *eP* **P** **13 06 54.5 +1.2**
comp=Z,63nm,0.7s,mb5.5
SSPA Standing Stone 66.16 54 *eP* **P** **13 06 52.5 -0.9**
comp=Z,7.1nm,0.8s,mb4.5
SSPA *e*pP pP 13 07 11.7 -1.6
LSA Lhasa 66.32 288 P **P** **13 06 56.2 +1.6**
AKTK Aktyubinsk 66.79 324 P **P** **13 06 57.4 +0.1**
AKTK pP pP 13 07 16.9 -0.3
AKTK LR LR 13 39 11.7
AKTO Aktyubinsk 66.79 324 P **P** **13 06 57.4 +0.1**
comp=Z,14nm,0.8s,mb4.8,baz=49,slow=7.4,SNR=28
AKTO pP pP 13 07 16.9 -0.3
comp=Z,7.6nm,0.6s,baz=52,slow=6.9,SNR=6.5
AKTO LR LR 13 39 11.7
comp=Z,56nm,19.7s,baz=126,slow=39
LRAL Lakeview Retre 66.88 66 *eP* **P** **13 06 56.5 -1.7**
comp=Z,6.3nm,0.8s,mb4.5
AB31 Akbulak array 67.02 322 P **P** **13 06 59.0 +0.3**
AB31 pmax pmax
comp=Z,4.0nm,0.5s,mb4.5
ABKAR Akbulak array 67.02 322 *eP* **P** **13 06 58.9 +0.2**
comp=Z,34nm,1.2s,mb5.0
ABKAR *e*pP pP 13 07 18.7 0.0
NB2 NORSAR Subarra 67.21 354 P **P** **13 06 59.4 -0.4**
comp=Z,18nm,0.8s,mb4.9,baz=7,3,slow=6.5
NOA NORSAR Array B 67.21 354 P **P** **13 06 59.8 0.0**
comp=Z,9.7nm,0.7s,mb4.7,baz=8.8,slow=6.4,SNR=33
KSH Kashi 67.44 305 P **P** **13 07 05.7 +4.2**
KSH pP pP 13 07 29.9 +8.4
KSH PcP PcP 13 07 31.1 +2.6
KSH sP sP 13 07 40.5 +11
KSH PP PP 13 09 37.8 +7.3
KSH ScP 13 11 24.5
KSH PcS 13 11 34.3
KSH S S 13 15 54.0 +2.7
KSH sS sS 13 16 36.1 +11
KSH ScS ScS 13 16 50.1 -2.5
KSH SS SS 13 20 18.1 +6.2
KSH pmax pmax
comp=Z,72nm,1.2s,mb5.4
KSH LR LR
comp=N,130nm,9.9s
KSH LR LR
comp=E,76nm,9.8s
KSH LR LR
comp=Z,110nm,5.0s
HFS Hagfors 67.92 352 P **P** **13 07 02.8 -1.5**
comp=Z,9.5nm,0.7s,mb4.7,baz=36,slow=4.5,SNR=27
GOGA Godfrey 68.59 63 *eP* **P** **13 07 07.5 -1.4**
GOGA pmax pmax
comp=Z,12nm,1.0s,mb4.7
GOGA Godfrey 68.59 63 *eP* **P** **13 07 07.5 -1.4**
comp=Z,12nm,1.0s,mb4.7
SHL Shillong 68.92 285 *e*PKP **P** **13 07 10.5 -0.6**
OBN Obninsk 69.17 338 ⇓ *iP* **P** **13 07 11.6 -0.5**
OBN pmax pmax
comp=Z,8.0nm,1.0s,mb4.5
TAOE Nuku Hiva Isla 69.59 137 *eT* 14 22 42.1
comp=Z,28nm,0.3s
CHTO Chiang Mai 69.64 275 *eP* **P** **13 07 14.5 -1.1**
CHTO pmax pmax
comp=Z,16nm,0.9s,mb4.8
CHTO Chiang Mai 69.64 275 *eP* **P** **13 07 14.5 -1.1**
comp=Z,16nm,0.9s,mb4.9
CM31 Chiang Mai Arr 69.91 274 *eP* **P** **13 07 16.9 -0.3**
comp=Z,7.7nm,0.6s,mb4.7
CM31 *e*pP pP 13 07 36.4 -0.8
CMAR Chiang Mai Arr 69.91 274 P **P** **13 07 16.9 -0.3**
comp=Z,12nm,0.8s,mb4.8,baz=26,slow=6.9,SNR=50
CMAR pP pP 13 07 36.2 -1.0
comp=Z,4.1nm,0.7s,baz=27,slow=7.5,SNR=5.0
TAPN Taplejung 70.08 289 *eP* **P** **13 07 18.4 +0.2**
comp=Z,150nm,0.9s,mb5.8
COW Cow Castle Cre 70.13 61 *eP* **P** **13 07 18.5 +0.1**
ODAN Odare 70.64 289 *eP* **P** **13 07 21.6 0.0**
comp=Z,50nm,0.8s,mb5.4
GUN Gumba 70.73 291 *eP* **P** **13 07 22.7 +0.6**
comp=Z,247nm,0.7s,mb6.2
JIRN Jiri 70.74 290 *eP* **P** **13 07 22.8 +0.6**
comp=Z,139nm,0.7s,mb5.9
RAMN Ramite 71.03 289 *eP* **P** **13 07 24.1 +0.1**
comp=Z,204nm,0.9s,mb6.0
KKN Kakani 71.17 291 *eP* **P** **13 07 25.1 +0.3**
comp=Z,111nm,0.7s,mb5.8
PKI Pulchoki 71.26 291 *eP* **P** **13 07 25.4 +0.1**
comp=Z,142nm,1.0s,mb5.7
PKIN Phulchoki 71.27 291 *eP* **P** **13 07 25.2 -0.2**
comp=Z,62nm,0.7s,mb5.5
GKN Gorkha 71.39 292 *eP* **P** **13 07 26.1 0.0**
comp=Z,128nm,0.8s,mb5.8
DMN Daman 71.41 291 *eP* **P** **13 07 26.6 +0.4**
comp=Z,73nm,0.9s,mb5.5
KOLN Koldanda 72.16 292 *eP* **P** **13 07 30.6 -0.1**
comp=Z,44nm,0.8s,mb5.3
PMOR Pomariorio Ree 72.24 147 *eT* 14 26 01.5
comp=Z,12nm,0.3s
DDI Dehra Dun 73.34 298 *ex* x 13 07 38.5
PPT Papeete 74.08 149 *e*LR LR 13 30 12.9
comp=Z,218nm,32.8s
PPT *e*T 14 28 20.1
comp=Z,11nm,0.3s
PPT Papeete 74.08 149 LR LR 13 35 28.8
comp=Z,14nm,20.7s,baz=111,slow=32
TIAR Tiarei 74.15 149 *eT* 14 28 24.7
comp=Z,9.7nm,0.3s
KBL Kabul 74.78 307 *eP* **P** **13 07 45.9 -0.1**
KBL *e**PP pP 13 08 05.1 -1.1
KBL pmax pmax
comp=Z,74nm,1.0s,mb5.4
KBL Kabul 74.78 307 *eP* **P** **13 07 45.9 -0.1**
comp=Z,74nm,1.0s,mb5.4
KBL *e*pP pP 13 08 05.1 -1.1
AKASG Malin Array Be 74.89 341 P **P** **13 07 45.7 -0.7**
comp=Z,3.1nm,0.3s,mb4.5,baz=22,slow=5.8,SNR=12
KAKA Kakadu 75.96 227 *eP* **P** **13 07 51.9 -0.9**
comp=Z,15nm,0.6s,mb4.9
CLL Collm 76.72 351 *eP* **P** **13 07 56.0 -0.8**
CLL Collm 76.72 351 *eP* **P** **13 07 56.0 -0.8**
BRG Berggiesshubel 77.06 351 *e*(P) **P** **13 07 52.9 -5.8**
comp=Z,5.2nm,1.4s,mb4.1
BRG Berggiesshubel 77.06 351 *eP* **P** **13 07 52.9 -5.8**
BRG pmax pmax
comp=Z,3.0nm,1.4s,mb3.8
MOX Moxa 77.51 352 *eP* **P** **13 08 01.1 -0.1**
STHS Stebnicka Huta 77.56 346 *eP* **P** **13 08 02.3 +0.8**
STHS Stebnicka Huta 77.56 346 *eP* **P** **13 08 02.3 +0.8**
MEM Membach 77.91 356 P **P** **13 08 04.0 +0.5**
BCLA Clavier 78.13 356 P **P** **13 08 04.8 +0.1**
comp=Z,26nm,2.6s,mb4.5
VRAC Vranov 78.31 349 P **P** **13 08 05.6 0.0**
comp=Z,2.7nm,0.7s,mb4.1,baz=60,slow=6.0,SNR=4.2
ZEI Tsey 78.32 328 *eP* **P** **13 08 05.0 -0.8**
ZEI pmax pmax
comp=Z,15nm,0.9s,mb4.7
GRF Grafenberg Arr 78.48 352 *eP* **P** **13 08 06.3 -0.3**
comp=Z,6.0nm,1.0s,mb4.3
GRF Grafenberg Arr 78.48 352 *eP* **P** **13 08 06.3 -0.3**
GRF pmax pmax
comp=Z,6.0nm,1.0s,mb4.3
BAIF Baives 78.53 357 *eP* **P** **13 08 06.5 -0.3**
BUR08 Bucovina Ar. S 78.60 343 *eP* **P** **13 08 07.7 +0.4**
BURAR Bucovina Array 78.63 343 ⇑P **P** **13 08 07.8 +0.4**
BURAR Bucovina Array 78.63 343 ⇑ *iP* **P** **13 08 07.8 +0.4**
VYHS Vyhne 78.81 347 *eP* **P** **13 08 08.9 +0.5**
VYHS Vyhne 78.81 347 *eP* **P** **13 08 08.9 +0.5**
TBI Tubuai 79.55 151 *eT* 14 35 09.8
comp=Z,2.9nm,0.3s
DRGR 79.87 344 ⇑P **P** **13 08 14.7 +0.5**
DRGR 79.87 344 ⇑ *iP* **P** **13 08 14.6 +0.4**
LDF La Druitiere 80.08 360 *eP* **P** **13 08 14.8 -0.5**
comp=Z,11nm,0.4s,mb4.7
GRR Gorron 80.28 0 *eP* **P** **13 08 15.7 -0.7**
comp=Z,11nm,0.6s,mb4.6
GRR Gorron 80.28 0 *eP* **P** **13 08 15.7 -0.7**
GRR pmax pmax
comp=Z,6.0nm,0.6s,mb4.6
GRR Gorron 80.28 0 *eP* **P** **13 08 15.7 -0.7**
comp=Z,5.6nm,0.6s,mb4.6
SGMF Saint Gilles 80.40 1 *eP* **P** **13 08 16.6 -0.4**
comp=Z,8.4nm,0.5s,mb4.6
SGMF Saint Gilles 80.40 1 *eP* **P** **13 08 16.6 -0.4**
SGMF pmax pmax
comp=Z,4.0nm,0.5s,mb4.5
SGMF Saint Gilles 80.40 1 *eP* **P** **13 08 16.6 -0.4**
comp=Z,4.2nm,0.5s,mb4.5
MLR Muntele Rosu 80.53 341 ⇓P **P** **13 08 19.2 +1.4**
MLR Muntele Rosu 80.53 341 ⇓ *iP* **P** **13 08 19.2 +1.4**
HINF Hinteralfeld 80.65 355 *eP* **P** **13 08 18.3 -0.1**
VOIR 80.75 342 ⇑P **P** **13 08 19.8 +0.8**
VOIR 80.75 342 ⇑ *iP* **P** **13 08 19.8 +0.8**
TGUH Tegucigalpa,Un 81.10 79 *eP* **P** **13 08 22.9 +1.7**
comp=Z,66nm,1.0s,mb5.4
BZS Buzias 81.19 344 ⇑P **P** **13 08 21.5 +0.2**
BZS Buzias 81.19 344 ⇑ *iP* **P** **13 08 21.5 +0.2**
GZR Gura Zlata 81.21 344 ⇑P **P** **13 08 21.3 -0.1**
GZR Gura Zlata 81.21 344 ⇑ *iP* **P** **13 08 21.3 -0.1**
DAVOX Davos/Dischmat 81.48 353 P **P** **13 08 22.9 +0.1**
comp=Z,3.4nm,0.9s,mb4.2,baz=339,slow=16,SNR=3.7
WRAB Tennant Creek 81.50 222 P **P** **13 08 21.6 -1.5**
comp=Z,88nm,1.0s,mb5.5,SNR=6.4
WRAB Tennant Creek 81.50 222 *eP* **P** **13 08 21.3 -1.8**
WRAB *e* 13 08 28.5
WRAB pmax pmax
comp=Z,16nm,1.0s,mb4.8
WRAB Tennant Creek 81.50 222 *eP* **P** **13 08 21.3 -1.8**
comp=Z,16nm,1.0s,mb4.8
WRAB *e*PcP PcP 13 08 28.5 -0.3
WRA Warramunga Arr 81.52 222 P **P** **13 08 21.5 -1.7**
comp=Z,9.5nm,0.7s,mb4.7,baz=33,slow=6.2,SNR=67
WRA pP pP 13 08 41.0 -2.7
comp=Z,2.3nm,0.7s,baz=33,slow=6.2,SNR=5.1
WRA Warramunga Arr 81.52 222 P **P** **13 08 21.5 -1.7**
WRA pP pP 13 08 41.0 -2.7
SSF Saint Saulge 81.55 357 *eP* **P** **13 08 22.6 -0.6**
AVF Avril sur Loir 81.83 357 *eP* **P** **13 08 23.9 -0.7**
comp=Z,5.9nm,0.7s,mb4.2
AVF Avril sur Loir 81.83 357 *eP* **P** **13 08 23.9 -0.7**
AVF pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
AVF Avril sur Loir 81.83 357 *eP* **P** **13 08 23.9 -0.7**
comp=Z,3.0nm,0.7s,mb4.2
CABF La Chapelle 81.90 355 *eP* **P** **13 08 24.6 -0.4**
PSI Prapat 81.95 264 P **P** **13 08 24.9 -0.8**
comp=Z,13nm,0.8s,mb4.8,baz=74,slow=5.7,SNR=8.2
PSI Prapat 81.95 264 P **P** **13 08 24.9 -0.8**
SMF Signal de Mont 81.96 357 *eP* **P** **13 08 24.7 -0.6**
comp=Z,4.3nm,0.5s,mb4.2
SMF Signal de Mont 81.96 357 *eP* **P** **13 08 24.7 -0.6**
SMF pmax pmax
comp=Z,2.0nm,0.5s,mb4.2
SMF Signal de Mont 81.96 357 *eP* **P** **13 08 24.7 -0.6**
comp=Z,2.2nm,0.5s,mb4.2
BGF Bois d'Agland 82.07 358 *eP* **P** **13 08 24.8 -1.1**
LPL La Plagne 82.95 355 *eP* **P** **13 08 30.4 -0.1**
LPG La Plagne 82.97 355 *eP* **P** **13 08 30.3 -0.3**
ORIF Oris-en-Rattie 83.60 355 *eP* **P** **13 08 33.7 -0.1**
comp=Z,26nm,1.1s,mb4.7
ORIF Oris-en-Rattie 83.60 355 *eP* **P** **13 08 33.7 -0.1**
ORIF pmax pmax
comp=Z,13nm,1.1s,mb4.7
ORIF Oris-en-Rattie 83.60 355 *eP* **P** **13 08 33.7 -0.1**
comp=Z,13nm,1.1s,mb4.7
MBDF Montbardon 83.74 355 *eP* **P** **13 08 34.4 -0.2**
comp=Z,7.1nm,0.8s,mb4.3
MBDF Montbardon 83.74 355 *eP* **P** **13 08 34.4 -0.2**
MBDF pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
MBDF Montbardon 83.74 355 *eP* **P** **13 08 34.4 -0.2**
comp=Z,3.5nm,0.8s,mb4.2
FITZ Fitzroy Crossi 83.83 231 *eP* **P** **13 08 34.4 -0.8**
comp=Z,22nm,0.6s,mb5.2
BRTR Keskin Array B 84.19 334 P **P** **13 08 36.5 -0.4**
comp=Z,2.6nm,0.8s,mb4.1,baz=56,slow=2.5,SNR=11
BRTR pP pP 13 08 58.5 +1.0
comp=Z,1.4nm,0.8s,baz=64,slow=2.9,SNR=3.3
LASF Ste Croix 84.52 357 *eP* **P** **13 08 38.3 -0.3**
SMRF Simiane la Rot 84.55 356 *eP* **P** **13 08 38.7 0.0**
SBF Sospel 84.56 354 *eP* **P** **13 08 38.6 -0.2**
comp=Z,38nm,1.0s,mb5.0
SBF Sospel 84.56 354 *eP* **P** **13 08 38.6 -0.2**
SBF pmax pmax
comp=Z,19nm,1.0s,mb5.0
SBF Sospel 84.56 354 *eP* **P** **13 08 38.6 -0.2**
comp=Z,19nm,1.0s,mb5.0
FRF La Foret Royal 84.91 355 *eP* **P** **13 08 39.9 -0.6**
ASAR Alice Springs 85.01 221 P **P** **13 08 40.0 -1.1**
comp=Z,5.1nm,0.8s,mb4.5,baz=19,slow=5.5,SNR=36
ASAR pP pP 13 08 59.1 -2.6
comp=Z,1.4nm,0.7s,baz=27,slow=6.2,SNR=4.4
LMR La Mourre 85.14 355 *eP* **P** **13 08 41.2 -0.5**
EPF Esparros 85.64 359 *eP* **P** **13 08 43.1 -1.1**
ETSF Etsaut 85.77 0 *eP* **P** **13 08 44.7 -0.1**
comp=Z,8.8nm,0.9s,mb4.4
ETSF Etsaut 85.77 0 *eP* **P** **13 08 44.7 -0.1**
ETSF pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
ETSF Etsaut 85.77 0 *eP* **P** **13 08 44.7 -0.1**
comp=Z,4.4nm,0.9s,mb4.4
CMSA Cobar Meteorol 88.04 208 *eP* **P** **13 08 55.4 -0.3**
MBWA Marble Bar 89.33 234 *eP* **P** **13 09 00.1 -1.9**
STKA Stephens Creek 89.63 211 *eP* **P** **13 09 02.7 -0.4**
comp=Z,6.0nm,0.8s,mb4.8
STKA Stephens Creek 89.63 211 P **P** **13 09 03.0 -0.2**
comp=Z,6.5nm,0.7s,mb4.9,baz=346,slow=5.8,SNR=13
STKA pP pP 13 09 24.5 +0.6
comp=Z,3.5nm,1.0s,baz=202,slow=13,SNR=1.5
STKA Stephens Creek 89.63 211 P **P** **13 09 03.0 -0.2**
STKA pP pP 13 09 24.5 +0.6
EIL Elat 93.18 330 LR LR 13 56 34.7
comp=Z,48nm,19.2s,baz=283,slow=39
MEEK Meekatharra 94.47 232 *eP* **P** **13 09 24.2 -1.5**
MAW Mawson 146.08 218 PKPbc PKPbc 13 15 42.6 -1.4
comp=Z,4.4nm,0.5s,baz=85,slow=4.9,SNR=26
MAW pPKPbc pPKPbc 13 16 03.8 -1.7
comp=Z,3.7nm,0.9s,baz=66,slow=5.0,SNR=3.6
MAW Mawson 146.08 218 PKP2 PKPbc 13 15 42.6 -1.4
MAW pmax pmax
comp=Z,4.0nm,0.5s
MAW pmax pmax
comp=Z,4.0nm,0.9s
BOSA Boshof 149.95 310 PKPbc PKPbc 13 15 55.7 +0.2
comp=Z,9.0nm,0.7s,baz=126,slow=3.9,SNR=13
BOSA PKPab PKPab 13 16 01.4 0.0
comp=Z,14nm,0.9s,baz=94,slow=4.1,SNR=9.7
BOSA pPKPbc pPKPbc 13 16 17.8 +0.7
comp=Z,5.7nm,0.8s,baz=133,slow=7.0,SNR=2.6
BOSA Boshof 149.95 310 PKP2 PKPbc 13 15 55.7 +0.2
BOSA pmax pmax
comp=Z,9.0nm,0.7s
BOSA pmax pmax
comp=Z,14nm,0.9s
BOSA pmax pmax
comp=Z,6.0nm,0.8s

*IDC **05** 13:06:49.4±1.4,20".20N×122".57E,h0km,mb3.6/6, mb1 3.8/6,mb1mx3.6/23,mbtmp3.6/6,Error ellipse: s-maj=56.8km s-min=19.9km az=61.0*
*ISCJB **05** 13:06:53.4±1.8,20".2N±0".1×122".7E±0".2,h46km±20km, mb3.5/7,Error ellipse: s-maj=37.8km s-min=12.8km az=147.8*
*NEIC **05** 13:06:53.9±5.9,20".16N×122".53E,h32km±47km,mb3.9/1, Error ellipse: s-maj=32.3km s-min=16.2km az=63.0*
ISC 05 13:06:54.0±3.6,20".13N±0".09×122".6E±0".2,h32km±29km, n13,σ0$69/17,mb3.5/7,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**3.02**	**333**	Pn	**Pn**	**13 07 35.7**	**-4.0**
TWG				*e*Sn	**Sn**	**13 08 14.6**	**-0.1**
TPUB	**Ta-pu**	**3.64**	**331**	*e*Pn	**Pn**	**13 07 48.8**	**+0.7**
TPUB				*e*Sn	**Sn**	**13 08 30.2**	**+0.2**
SSLB	**Suanglung**	**3.94**	**338**	*e*Pn	**Pn**	**13 07 53.5**	**+1.3**
SSLB				*e*Sn	**Sn**	**13 08 38.0**	**+0.6**
NACB	**Ninganchiao**	**4.12**	**347**	*e*Pn	**Pn**	**13 07 55.0**	**+0.1**
YHNB	**Yeheng**	**4.65**	**346**	*e*Pn	**Pn**	**13 08 00.7**	**-1.4**
YHNB				*e*Sn	**Sn**	**13 08 50.3**	**-4.7**
TATO	**Taipei**	**4.92**	**348**	*e*Pn	**Pn**	**13 08 05.3**	**-0.5**
CMAR	**Chiang Mai Arr**	**22.36**	**270**	P	**P**	**13 11 49.2**	**-0.4**
	0.5nm,0.4s,mb3.3,baz=54,slow=7.4,SNR=4.9						
WRAB	**Tennant Creek**	**41.45**	**163**	P	**P**	**13 14 37.8**	**-0.2**
	2.4nm,1.0s,mb3.8						
WRA	**Warramunga Arr**	**41.46**	**163**	P	**P**	**13 14 38.3**	**+0.3**
	0.9nm,0.7s,mb3.5,baz=343,slow=9.0,SNR=7.5						
MKAR	**Makanchi Array**	**42.18**	**319**	P	**P**	**13 14 43.1**	**-0.5**
	0.4nm,0.5s,mb3.3,baz=110,slow=8.8,SNR=4.7						
ZALV	**Zalesovo Beam**	**44.35**	**329**	P	**P**	**13 15 00.5**	**-0.6**
	0.6nm,0.4s,mb3.6,baz=120,slow=8.7,SNR=3.6						
ASAR	**Alice Springs**	**44.91**	**165**	P	**P**	**13 15 06.8**	**+0.9**
	0.4nm,0.5s,mb3.5,baz=353,slow=7.7,SNR=6.6						
KURK	**Kurchatov**	**46.04**	**322**	P	**P**	**13 15 14.3**	**-0.2**
	0.2nm,0.3s,mb3.5,baz=121,slow=7.8,SNR=4.8						

*CSEM **05** 13:15:26.7±0.7,27°.23N×55".14E,h2km,ML2.8,Error ellipse: s-maj=38.2km s-min=9.3km az=177.0*
*KISR **05** 13:15:27.2±0.6,29".11N×54".98E,h34km±999km,ML2.5*
*TEH **05** 13:15:33.6,27".52N×55".58E,h3km*
ISC 05 13:15:28.7±1.1,27".36N±0".07×55".38E±0".05,h10km,n13, σ1$94/21,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.71**	**87**	*e*Pg	**Pg**	**13 15 44.5**	**+2.1**
IBND	**Bandar-abas**	**1.04**	**85**	*e*Pg	**Pg**	**13 15 48.8**	**+0.2**
IBND				*e*Pg	**Pg**	**13 15 49.0**	**+0.4**
IBND				*e*Sg	**Sg**	**13 16 00.5**	**-1.6**
IBND				*e*		13 16 13.5	
	comp=Z,12μm,0.1s						
IBND				*e*		13 16 18.2	
	comp=Z,11μm,0.1s						
GHIR	**Ghir-Karzin**	**2.31**	**294**	*e*Pn	**Pn**	**13 16 08.4**	**+1.6**
ISRV	**Sarvestan**	**2.83**	**316**	*e*Pn	**Pn**	**13 16 20.1**	**+6.1**
ISRV				*e*		13 17 41.4	
	comp=Z,508nm,0.5s						
KRBR	**Kerman**	**2.88**	**25**	*e*Pn	**Pn**	**13 16 17.0**	**+2.4**
KRBR				*e*Sg	**Sg**	**13 16 59.5**	**-1.8**
IPAR	**Pars**	**3.21**	**321**	*e*Pn	**Pn**	**13 16 24.5**	**+5.4**
IMEH	**Mehriz**	**4.07**	**351**	*e*Pn	**Pn**	**13 16 34.5**	**+3.5**
IMEH				*e*Sn	**Sn**	**13 17 19.6**	**+0.9**
IMEH				*e*		13 17 28.9	
	comp=Z,200nm,0.2s						
IBAF	**Bafgh**	**4.22**	**2**	*e*Pn	**Pn**	**13 16 36.4**	**+3.4**
IBAF				*e*		13 16 37.2	
	comp=Z,298nm,0.1s						
ISAD	**Sadrabad**	**4.77**	**342**	*e*Pn	**Pn**	**13 16 45.1**	**+4.5**
ISAD				*e*		13 17 40.9	
	comp=Z,242nm,0.1s						
RDF	**Al-Radifah**	**7.08**	**285**	*e*P	**Pn**	**13 17 09.6**	**-2.9**
RDF				*e*S	**Sn**	**13 18 26.7**	**-6.3**
RDF	**Al-Radifah**	**7.08**	**285**	*e*P	**Pn**	**13 17 09.6**	**-2.8**

RDF eS Sn 13 18 26.7 -6.3
NAY Al-Naaiem 7.41 287 eP Pn 13 17 13.6 -3.3
NAY AMb AMB 13 17 14.4
comp=Z,18nm,0.8s
NAY eS Sn 13 18 32.9 -8.2
NAY AML AML 13 18 33.1
comp=Z,0.9nm,0.5s
NAY Al-Naaiem 7.41 287 eP Pn 13 17 13.6 -3.3
comp=Z,18nm,0.8s
NAY eS Sn 13 18 32.9 -8.2

*BJI **05** 13:25:44.2, 10.36N×91.86E, h10km, mB4.0/1, mb4.1/4*
*IDC **05** 13:25:46.6±1.0, 10.59N×91.47E, h0km, mb4.1/9, mb1 4.2/10, mb1mx3.9/25, mbtmp4.0/10, ML3.6/1, MS3.3/1, Ms1 3.3/1, ms1mx2.5/21, Error ellipse: s-maj=45.9km s-min=15.9km az=60.0*
*ISCJB **05** 13:25:48.6±6.6, 11.12N±0.08×92.3E±0.1, h11km±44km, mb4.0/11, Error ellipse: s-maj=24.8km s-min=12.8km az=166.2*
*NEIC **05** 13:25:51.0±0.7, 11.06N×92.37E, h10km, mb4.0/1, Error ellipse: s-maj=18.1km s-min=13.2km az=56.0*
ISC 05 13:25:49.9±6.9, 11.18N±0.08×92.4E±0.2, h5km±45km, n30, σ0.82/26, mb4.0/11, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**9.60**	**40**	Pn	Px	13 28 21.4	
0.1nm,0.3s,baz=215,slow=29,SNR=3.3							
PSI	**Prapat**	**10.53**	**142**	LR	LR	13 31 51.2	
comp=Z,168nm,21.2s,baz=195,slow=34							
PALK	**Pallekele**	**12.19**	**252**	ePn	**Pn**	**13 28 44.4**	**+0.1**
PALK				eSn	Sx	13 30 28.9	
ODAN	**Odare**	**16.30**	**344**	eP	**Pn**	**13 29 38.3**	**-1.3**
5.4nm,0.3s							
RAMN	**Ramite**	**16.62**	**342**	eP	**Pn**	**13 29 42.9**	**-0.8**
22nm,0.5s							
TAPN	**Taplejung**	**16.69**	**345**	eP	**Pn**	**13 29 43.2**	**-1.3**
27nm,0.8s							
PKI	**Pulchoki**	**17.59**	**339**	eP	**Pn**	**13 29 56.2**	**+0.4**
26nm,0.7s							
PKIN	**Phulchoki**	**17.60**	**339**	eP	**Pn**	**13 29 56.1**	**+0.2**
16nm,0.4s							
DMN	**Daman**	**17.73**	**338**	eP	**Pn**	**13 29 58.0**	**+0.4**
27nm,0.7s							
KKN	**Kakani**	**17.83**	**339**	eP	**Pn**	**13 29 59.2**	**+0.4**
9.2nm,0.6s							
GKN	**Gorkha**	**18.26**	**338**	eP	**Pn**	**13 30 04.6**	**+0.5**
15nm,0.4s							
KOLN	**Koldanda**	**18.47**	**335**	eP	**Pn**	**13 30 07.6**	**+1.0**
17nm,0.5s							
LSA	**Lhasa**	**18.47**	**357**	P	**Pn**	**13 30 12.1**	**+5.5**
GTA	**Gaotai**	**28.88**	**12**	eP	**P**	**13 31 54.0**	**+4.5**
GTA				pmax	pmax		
comp=Z,3.0nm,1.0s,mb4.0							
MK31	**Makanchi Array**	**36.52**	**348**	eP	**P**	**13 32 56.4**	**+0.3**
MKAR	**Makanchi Array**	**36.52**	**348**	P	**P**	**13 32 57.5**	**+1.3**
comp=Z,1.4nm,0.8s,mb3.9,baz=166,slow=8.2,SNR=14							
MKAR				PcP	PcP	13 35 17.6	-2.2
comp=Z,0.5nm,0.7s,baz=203,slow=2.2,SNR=3.9							
MKAR	**Makanchi Array**	**36.52**	**348**	P	**P**	**13 32 57.5**	**+1.3**
MKAR				PcP	PcP	13 35 17.6	-2.2
SONM	**Songino Array**	**38.39**	**15**	P	**P**	**13 33 16.1**	**+4.2**
comp=Z,0.7nm,0.5s,mb3.6,baz=232,slow=8.5,SNR=5.1							
KURK	**Kurchatov**	**41.02**	**347**	P	**P**	**13 33 34.3**	**+0.4**
comp=Z,0.7nm,0.8s,mb3.3,baz=170,slow=7.5,SNR=6.2							
KURK				PcP	PcP	13 35 32.2	-1.7
comp=Z,0.1nm,0.4s,baz=164,slow=2.5,SNR=4.4							
KURK	**Kurchatov**	**41.02**	**347**	P	**P**	**13 33 34.3**	**+0.4**
KURK				PcP	PcP	13 35 32.2	-1.7
ZALV	**Zalesovo Beam**	**43.09**	**353**	P	**P**	**13 33 51.3**	**+0.6**
comp=Z,0.9nm,0.4s,mb3.8,baz=168,slow=7.6,SNR=6.7							
FITZ	**Fitzroy Crossi**	**43.84**	**131**	P	**P**	**13 33 56.8**	**-0.5**
comp=Z,3.0nm,0.8s,mb4.1,baz=283,slow=8.2,SNR=11							
WRA	**Warramunga Arr**	**51.57**	**127**	P	**P**	**13 34 57.9**	**+0.6**
comp=Z,1.6nm,0.5s,mb4.2,baz=306,slow=8.3,SNR=87							
WRA	**Warramunga Arr**	**51.57**	**127**	P	**P**	**13 34 57.9**	**+0.6**
WRAB	**Tennant Creek**	**51.57**	**127**	eP	**P**	**13 34 56.6**	**-0.7**
comp=Z,0.8nm,0.4s,mb4.0							
ASAR	**Alice Springs**	**53.34**	**131**	P	**P**	**13 35 11.1**	**+0.7**
comp=Z,5.1nm,0.8s,mb4.5,baz=310,slow=6.8,SNR=72							
FINES	**FINESS Array B**	**69.02**	**332**	P	**P**	**13 36 54.8**	**-1.3**
comp=Z,1.9nm,0.8s,mb4.1,baz=152,slow=22,SNR=3.2							
ARCES	**ARCESS Array B**	**71.60**	**340**	P	**P**	**13 37 10.7**	**-1.2**
comp=Z,4.4nm,1.1s,mb4.3,baz=69,slow=6.6,SNR=3.6							
PDAR	**Pinedale Array**	**122.67**	**19**	PKP	PKPdf	13 44 46.1	-0.9
comp=Z,0.2nm,0.6s,baz=353,slow=4.6,SNR=4.1							
NVAR	**Mina Array Bea**	**122.92**	**29**	PKP	PKPdf	13 44 48.0	+0.4
comp=Z,0.4nm,0.6s,baz=352,slow=4.5,SNR=4.6							

*ISCJB **05** 13:28:05.4±1.3, 15.53S±0.09×72.9W±0.1, h104km±12km, mb4.3/19, Error ellipse: s-maj=21.5km s-min=9.1km az=140.9*
*NEIC **05** 13:28:07.1±1.0, 15.59S×73.09W, h102km±9km, mb4.6/12, Error ellipse: s-maj=15.1km s-min=8.1km az=54.0*
NEIC Felt [II] at Caraveli and Pausa.
*IDC **05** 13:28:08.1±1.8, 15.65S×73.14W, h110km±16km, mb3.7/7, mb1 3.9/11, mb1mx3.8/18, mbtmp3.6/11, Error ellipse: s-maj=29.6km s-min=12.8km az=52.0*
*BJI **05** 13:28:11.0, 15.60S×73.10W, h102km, mB4.7/2*
ISC 05 13:28:06.7±1.1, 15.56S±0.09×72.9W±0.1, h98km±11km, n44, σ0.78/33, mb4.3/19, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**4.66**	**100**	P	**Pn**	**13 29 20.4**	**+5.6**
8.3nm,0.3s,baz=282,slow=7.9,SNR=155							
LPAZ				S	**Sn**	**13 29 58.9**	**-8.8**
2.2nm,0.3s,baz=253,slow=8.9,SNR=4.2							
LPAZ	**La Paz**	**4.66**	**100**	ePn	**Pn**	**13 29 20.6**	**+5.8**
LPAZ				eSn	**Sn**	**13 29 59.5**	**-8.2**
NNA	**Nana**	**5.21**	**312**	P	**Pn**	**13 29 23.2**	**+1.0**
11nm,0.3s,baz=142,slow=11,SNR=32							
NNA				S	**Sn**	**13 30 21.3**	**+0.2**
42nm,0.3s,baz=213,slow=18,SNR=4.8							
NNA	**Nana**	**5.21**	**312**	ePn	**Pn**	**13 29 20.8**	**-1.4**
NNA				eSn	**Sn**	**13 30 15.2**	**-6.0**
ATAH	**Atahualpa**	**9.94**	**327**	P	**Pn**	**13 30 30.3**	**+3.6**
0.9nm,0.3s,baz=156,slow=6.4,SNR=10.0							
SIV	**San Ignacio**	**11.41**	**94**	P	**Pn**	**13 30 46.8**	**+0.2**
1.2nm,0.3s,baz=279,slow=12,SNR=50							
CFAA	**Coronel Fontan**	**16.54**	**166**	P	**Pn**	**13 31 52.7**	**0.0**
0.0nm,0.3s,baz=349,slow=9.4,SNR=10							
CPUP	**Villa Florida**	**18.06**	**129**	P	**Pn**	**13 32 10.8**	**-0.5**
0.1nm,0.3s,baz=258,slow=20,SNR=1.8							
PLCA	**Paso Flores**	**25.17**	**176**	P	**P**	**13 33 22.2**	**-0.6**
7.2nm,0.8s,mb4.2,baz=332,slow=10,SNR=9.5							
TEIG	**Tepich**	**38.63**	**337**	P	**P**	**13 35 18.9**	**-1.7**
6.8nm,0.8s,mb4.5							
MIAR	**Mount Ida**	**53.56**	**339**	eP	**P**	**13 37 17.2**	**-0.3**
6.1nm,0.8s,mb4.7							
TXAR	**Lajitas Array**	**53.60**	**326**	P	**P**	**13 37 17.6**	**-0.3**
0.5nm,0.4s,mb3.9,baz=155,slow=8.0,SNR=13							
TXAR				pP	pP	13 37 42.5	+0.7
0.6nm,0.6s,baz=150,slow=8.9,SNR=6.6							
TXAR				sP	sP	13 37 53.6	+1.0
0.8nm,0.8s,baz=149,slow=7.7,SNR=5.9							
SIUC	**Southern Illin**	**55.16**	**344**	eP	**P**	**13 37 28.1**	**-0.9**
11nm,0.7s,mb5.0							
SDCO	**Great Sand Dun**	**61.23**	**331**	eP	**P**	**13 38 11.8**	**+0.5**
6.9nm,0.7s,mb4.8							
SDCO				e	pP	13 38 34.9	-0.7
ECSD	**EROS Data Cent**	**62.86**	**341**	eP	**P**	**13 38 21.4**	**-0.7**
18nm,1.6s,mb4.7							
SMCO	**Snowmass**	**63.07**	**331**	eP	**P**	**13 38 24.2**	**+0.6**
4.2nm,0.8s,mb4.4							
MSU	**Marysvale**	**65.15**	**327**	eP	**P**	**13 38 38.0**	**+0.7**
ARUT	**Antelope Range**	**65.30**	**325**	eP	**P**	**13 38 39.5**	**+1.2**
2.8nm,0.9s,mb4.1							
JLU	**Jordanelle**	**66.34**	**329**	eP	**P**	**13 38 45.7**	**+0.9**
5.8nm,0.9s,mb4.4							
DUG	**Dugway**	**66.73**	**328**	eP	**P**	**13 38 47.3**	**-0.1**
4.9nm,0.8s,mb4.4							
AGMN	**Agassiz Nation**	**66.78**	**344**	eP	**P**	**13 38 46.9**	**-0.6**
6.7nm,0.8s,mb4.5							
PDAR	**Pinedale Array**	**67.10**	**332**	P	**P**	**13 38 49.8**	**+0.1**
0.6nm,0.8s,mb3.5,baz=137,slow=5.2,SNR=4.0							
RRI2	**Red Ridge**	**68.36**	**331**	eP	**P**	**13 38 58.2**	**+0.6**
6.7nm,0.8s,mb4.5							
NVAR	**Mina Array Bea**	**68.49**	**323**	P	**P**	**13 38 58.1**	**-0.3**
0.3nm,0.7s,mb3.2,baz=137,slow=7.3,SNR=3.9							
ULM	**Lac du Bonnet**	**68.57**	**344**	P	**P**	**13 38 58.0**	**-0.6**
3.8nm,0.4s,mb4.6,baz=127,slow=7.7,SNR=3.6							

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QSPA	**South Pole Qui**	**74.60**	**180**	eP	**P**	**13 39 35.2**	**+0.6**
2.2nm,0.7s,mb4.0							
YKA	**Yellowknife Ar**	**84.37**	**342**	P	**P**	**13 40 26.9**	**-0.6**
2.9nm,0.7s,mb4.2,baz=136,slow=5.4,SNR=9.0							
YKA	**Yellowknife Ar**	**84.37**	**342**	P	**P**	**13 40 26.9**	**-0.6**
ESDC	**Sonseca Array**	**84.39**	**46**	P	**P**	**13 40 29.6**	**+1.4**
0.2nm,0.4s,mb3.3,baz=263,slow=5.0,SNR=4.3							
ASAR	**Alice Springs**	**133.02**	**214**	PKP	PKPdf	13 47 11.2	-0.3
0.4nm,0.6s,baz=108,slow=1.3,SNR=11							
WRA	**Warramunga Arr**	**135.70**	**218**	PKP	PKPdf	13 47 16.4	-0.1
1.4nm,0.6s,baz=127,slow=1.9,SNR=16							
ZALV	**Zalesovo Beam**	**137.92**	**20**	PKP	PKPdf	13 47 20.4	+0.9
0.4nm,0.4s,baz=336,slow=3.3,SNR=4.4							
MKAR	**Makanchi Array**	**142.64**	**28**	PKP	PKPdf	13 47 26.5	-1.9
0.3nm,0.5s,baz=306,slow=2.1,SNR=4.0							
MJAR	**Matsushiro Arr**	**145.33**	**313**	PKPbc	PKPbc	13 47 32.9	-0.5
4.7nm,0.9s,baz=101,slow=1.6,SNR=16							
MAJO	**Matsushiro**	**145.33**	**313**	ePKP	PKPdf	13 47 32.7	-0.7
MAT	**Matsushiro**	**145.33**	**313**	PKP	PKPdf	13 47 32.7	-0.7
WMQ	**Urumqi**	**147.35**	**26**	ePKPbc	PKPbc	13 47 38.5	-0.6
WMQ				LR	LR		
comp=N,100nm,28.0s							
WMQ				LR	LR		
comp=Z,140nm,25.0s							
CN2	**Changchun**	**147.80**	**335**	ePKPbc	PKPbc	13 47 40.5	+0.2
SONM	**Songino Array**	**147.81**	**1**	PKPbc	PKPbc	13 47 41.2	+1.0
comp=Z,6.6nm,0.7s,baz=241,slow=2.6,SNR=2.7							
KSRS	**Korea Array**	**151.43**	**324**	PKPbc	PKPbc	13 47 50.2	+0.8
comp=Z,3.1nm,0.8s,baz=3.3,slow=2.2,SNR=9.5							
HHC	**Hu-ho-hao-te**	**154.50**	**352**	ePKPbc	PKPdf	13 47 50.7	+3.0
HHC				pPKP	pPKPdf	13 48 14.1	-0.7
HHC				PKS		13 51 24.3	
HHC				SKS	SKSdf	13 54 46.9	+1.3
HHC				SKKS	SKKSac	13 58 26.5	-0.6
HHC				AMB	AMB		
comp=Z,57nm,9.8s							
HHC				LR	LR		
comp=N,120nm,21.5s							
HHC				LR	LR		
comp=E,120nm,21.1s							
HHC				LR	LR		
comp=Z,170nm,21.6s							
CD2	**Chengdu**	**164.42**	**11**	PKP	PKPdf	13 48 01.3	+2.0
GYA	**Guiyang**	**169.15**	**2**	ePKP	PKPdf	13 48 07.9	+4.9
GYA				pPKP	pPKPdf	13 48 32.8	+2.6
GYA				sPKP		13 48 41.2	
GYA				PKPab	PKPab	13 49 18.0	+3.0
GYA				PKS		13 51 40.6	
GYA				PP	PP	13 53 07.0	+3.8
GYA				AMB	AMB		
comp=Z,90nm,8.0s							
KMI	**Kunming**	**169.65**	**22**	PKP	PKPdf	13 48 08.5	+5.1

*ISCJB **05** 13:51:37.4±1.9, 16.6S±0.2×174.2W±0.2, h95km±18km, mb3.9/9, Error ellipse: s-maj=38.7km s-min=15.3km az=136.5*
*IDC **05** 13:51:39.3±2.9, 16.75S×174.11W, h100km±27km, mb3.7/8, mb1 4.0/9, mb1mx3.8/19, mbtmp3.8/9, Error ellipse: s-maj=37.4km s-min=15.2km az=139.0*
*NEIC **05** 13:51:39.5±1.5, 16.77S×174.10W, h105km±18km, mb3.8/2, Error ellipse: s-maj=29.7km s-min=14.2km az=128.0*
ISC 05 13:51:38.5±1.8, 16.75±0.2×174.1W±0.2, h92km±18km, n13, σ0.95/14, mb3.9/9, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.59**	**40**	P	**Pn**	**13 52 33.8**	**+1.7**
37nm,0.3s,baz=196,slow=1.0,SNR=74							
AFI				S	**Sn**	**13 53 10.9**	**-2.6**
293nm,0.3s,baz=89,slow=19,SNR=21							
AFI	**Afiamalu**	**3.59**	**40**	P	**Pn**	**13 52 33.8**	**+1.7**
AFI				S	**Sn**	**13 53 10.9**	**-2.6**
URZ	**Urewera**	**22.81**	**198**	P	**P**	**13 56 33.2**	**-0.5**
3.7nm,0.5s,mb4.0,baz=327,slow=15,SNR=9.1							
STKA	**Stephens Creek**	**42.78**	**241**	P	**P**	**13 59 27.9**	**+0.8**
3.1nm,0.5s,mb4.3,baz=80,slow=10,SNR=12							
STKA	**Stephens Creek**	**42.78**	**241**	eP	**P**	**13 59 27.0**	**-0.1**
1.0nm,0.8s,mb3.6							
WRAB	**Tennant Creek**	**48.86**	**258**	eP	**P**	**14 00 15.2**	**+0.1**
0.8nm,0.4s,mb4.0							
WRA	**Warramunga Arr**	**48.87**	**258**	P	**P**	**14 00 14.4**	**-0.8**
0.6nm,0.4s,mb3.9,baz=97,slow=7.0,SNR=19							
ASAR	**Alice Springs**	**49.04**	**253**	P	**P**	**14 00 16.4**	**-0.2**
5.9nm,0.6s,mb4.7,baz=85,slow=9.0,SNR=111							
PETK	**Petropavlovsk-**	**73.65**	**343**	P	**P**	**14 03 02.3**	**+0.5**
2.0nm,0.7s,mb4.0,baz=148,slow=8.7,SNR=4.3							
NVAR	**Mina Array Bea**	**75.77**	**42**	P	**P**	**14 03 14.1**	**-0.3**
0.9nm,0.8s,mb3.5,baz=215,slow=7.2,SNR=6.2							
TXAR	**Lajitas Array**	**81.92**	**56**	P	**P**	**14 03 49.2**	**+0.9**
0.4nm,0.9s,mb3.3,baz=190,slow=6.2,SNR=4.4							
PDAR	**Pinedale Array**	**83.70**	**42**	P	**P**	**14 03 56.9**	**-0.3**
0.5nm,0.6s,mb3.5,baz=204,slow=3.3,SNR=5.2							
BRTR	**Keskin Array B**	**146.69**	**319**	PKPbc	PKPbc	14 11 10.8	+0.8
1.9nm,0.8s,baz=92,slow=2.4,SNR=8.4							

*ISCJB **05** 13:57:19.5±0.4, 34.90N±0.05×72.82E±0.06, h126km±9km, mb3.6/3, Error ellipse: s-maj=10.4km s-min=4.9km az=137.2*
*NEIC **05** 13:57:26.1±1.6, 35.32N×72.28E, h119km±17km, mb3.8/2, Error ellipse: s-maj=21.3km s-min=13.6km az=132.0*
*IDC **05** 13:57:33.4±15.0, 35.56N×72.25E, h191km±148km, mb3.3/4, mb1 3.2/8, mb1mx3.0/26, mbtmp3.1/8, MS3.2/1, Ms1 3.2/1, ms1mx2.4/14, Error ellipse: s-maj=85.5km s-min=24.3km az=13.0*
ISC 05 13:57:20.7±0.4, 34.92N±0.04×72.85E±0.06, h115km±9km, n42, σ1.30/47, mb3.6/3, 2C-2D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHCP	**Chirah Chowk**	**1.31**	**165**	⇑P	**Pn**	**13 57 45.7**	**0.0**
CEP	**Cherat**	**1.34**	**216**	⇑P	**Pn**	**13 57 43.9**	**-2.2**
CEP				S	**Sn**	**13 58 05.0**	**-0.3**
JMU	**Jammu**	**2.78**	**142**	ePKP	**Pn**	**13 58 11.5**	**+7.5**
JMU				eS	**Sn**	**13 58 46.5**	**+9.2**
KBL	**Kabul**	**3.16**	**264**	ePn	**Pn**	**13 58 09.8**	**+0.9**
KBL				eSn	**Sn**	**13 58 46.3**	**+0.1**
THN	**Thein Dam**	**3.44**	**135**	ePKP	**Pn**	**13 58 14.4**	**+1.6**
THN				ex	x	13 59 08.0	
BHK	**Bhakra**	**4.60**	**138**	ex	x	13 59 40.8	
SDNR	**Sundarnagar**	**4.85**	**134**	ePKP	**Pn**	**13 58 32.9**	**+1.3**
SDNR				ex	x	13 58 49.7	
KSH	**Kashi**	**5.22**	**28**	Pn	**Pn**	**13 58 30.8**	**-5.7**
KSH				Sn	**Sn**	**13 59 15.2**	**-20**
KSH				smax			
comp=N,33nm,0.3s							
KSH				smax			
comp=E,26nm,0.2s							
SMLA	**Simla**	**5.24**	**135**	*i* P	**Pn**	**13 58 39.2**	**+2.4**
SMLA				*i* S	**Sn**	**13 59 41.3**	**+5.2**
SMLA				⇓		13 59 44.1	
comp=E,718nm,0.4s							
SMLA				⇓		13 59 44.3	
comp=N,695nm,0.3s							
KLP	**Kalpa**	**5.65**	**125**	ePKP	**Pn**	**13 58 43.9**	**+1.5**
KLP				eS	**Sn**	**13 59 50.5**	**+4.6**
KLP				AML	AML	14 00 23.3	
comp=N,227nm,0.6s							
KLP				AML	AML	14 00 24.4	
comp=E,299nm,0.4s							
DDI	**Dehra Dun**	**6.35**	**135**	ePKP	**Pn**	**13 58 52.0**	**+0.2**
RTK	**Rohtak**	**6.60**	**152**	ex	x	14 00 49.5	
NDI	**New Delhi**	**7.24**	**148**	ePKP	**Pn**	**13 59 06.0**	**+2.0**
NDI				eS	**Sn**	**14 00 24.5**	**-0.2**
KHET	**Khetri**	**7.28**	**159**	ePKP	**Pn**	**13 59 04.9**	**+0.4**
KHET				eS	**Sn**	**14 00 23.5**	**-2.0**
KHET				AML	AML	14 01 15.9	
comp=E,21nm,0.6s							
KHET				AML	AML	14 01 17.2	
comp=N,20nm,0.6s							
AYAN	**Aya Nagar**	**7.38**	**149**	eS	**Sn**	**14 00 28.2**	**+0.2**
AYAN				AML	AML	14 01 19.8	
comp=Z,20nm,0.6s							
UCH	**Uchtor**	**7.41**	**10**	ePn	**Pn**	**13 59 05.5**	**-0.6**
comp=Z,7.3nm,1.0s							
UCH				eSn	**Sn**	**14 00 26.6**	**-2.0**
SONA	**Sohna**	**7.57**	**150**	eS	**Sn**	**14 00 33.0**	**+0.5**
SONA				AML	AML	14 01 29.9	
comp=N,16nm,0.9s							
SONA				AML	AML	14 01 30.3	
comp=E,30nm,0.4s							
AGRA	**Agra**	**8.82**	**149**	ex	x	14 01 14.3	

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGRA				AML	AML	14 02 14.8	
comp=E,70nm,0.3s							
AGRA				AML	AML	14 02 15.6	
comp=N,62nm,0.3s							
KOLN	**Koldanda**	**11.62**	**125**	eP	**Pn**	**14 00 02.8**	**-0.2**
comp=N,6.0nm,0.3s							
GKN	**Gorkha**	**12.19**	**121**	eP	**Pn**	**14 00 09.3**	**-1.2**
comp=N,19nm,0.4s							
KKN	**Kakani**	**12.77**	**120**	eP	**Pn**	**14 00 16.7**	**-1.4**
comp=N,7.5nm,0.4s							
PKIN	**Phulchoki**	**12.98**	**121**	eP	**Pn**	**14 00 19.5**	**-1.4**
comp=N,12nm,0.4s							
PKI	**Pulchoki**	**13.00**	**121**	eP	**Pn**	**14 00 19.9**	**-1.2**
comp=N,11nm,0.5s							
JIRN	**Jiri**	**13.50**	**119**	eP	**Pn**	**14 00 25.8**	**-1.8**
comp=N,21nm,0.4s							
MK31	**Makanchi Array**	**13.83**	**28**	ePn	**Pn**	**14 00 37.4**	**+5.7**
MKAR	**Makanchi Array**	**13.83**	**28**	P	**Pn**	**14 00 37.4**	**+5.7**
comp=N,0.1nm,0.3s,baz=214,slow=10,SNR=6.9							
RAMN	**Ramite**	**14.21**	**120**	eP	**Pn**	**14 00 34.1**	**-2.7**
comp=N,11nm,0.5s							
TAPN	**Taplejung**	**14.78**	**117**	eP	**Pn**	**14 00 40.2**	**-3.8**
comp=N,17nm,0.7s							
ODAN	**Odare**	**14.83**	**119**	eP	**Pn**	**14 00 40.9**	**-3.7**
comp=N,9.5nm,0.6s							
KURK	**Kurchatov**	**16.33**	**13**	P	**Pn**	**14 01 03.8**	**+0.7**
comp=N,0.1nm,0.3s,baz=206,slow=11,SNR=6.2							
ABKAR	**Akbulak array**	**17.20**	**330**	eP	**Pn**	**14 01 13.2**	**-0.5**
comp=N,1.4nm,0.6s							
BVAR	**Borovoye Array**	**18.18**	**355**	P	**P**	**14 01 25.0**	**+0.8**
comp=N,0.3nm,0.3s,baz=156,slow=11,SNR=5.8							
AKTK	**Aktyubinsk**	**18.90**	**330**	P	**P**	**14 01 31.9**	**-0.1**
AKTO	**Aktyubinsk**	**18.90**	**330**	P	**P**	**14 01 31.9**	**-0.1**
comp=N,0.4nm,0.3s,baz=133,slow=10,SNR=10							
ZAA0	**Zalesovo Array**	**20.80**	**20**	eP	**P**	**14 01 54.7**	**+2.2**
ZALV	**Zalesovo Beam**	**20.80**	**20**	P	**P**	**14 01 54.7**	**+2.2**
comp=N,4.7nm,0.7s,baz=213,slow=11,SNR=20							
ZALV	**Zalesovo Beam**	**20.80**	**20**	P	**P**	**14 01 54.7**	**+2.2**
ARCES	**ARCESS Array B**	**43.17**	**338**	LR	LR	14 23 39.5	
comp=N,27nm,19.0s,baz=209,slow=37							
KEST	**Kesra**	**50.98**	**290**	P	**P**	**14 06 09.9**	**-0.7**
comp=N,0.9nm,0.5s,mb4.0,baz=38,slow=6.8,SNR=4.7							
WRA	**Warramunga Arr**	**79.87**	**123**	P	**P**	**14 09 25.0**	**+8.2**
comp=N,0.3nm,0.5s,mb3.4,baz=320,slow=5.0,SNR=5.8							
WRA	**Warramunga Arr**	**79.87**	**123**	P	**P**	**14 09 25.0**	**+8.2**
ASAR	**Alice Springs**	**82.11**	**126**	P	**P**	**14 09 37.0**	**+8.5**
comp=N,0.3nm,0.5s,mb3.4,baz=320,slow=4.9,SNR=8.5							

*NEIC **05** 14:03:22.1, 17.08N×100.14W, h41km, MD3.8(MEX), After MEX.*
MEX 05 14:03:22.1±1.0, 17.08N×100.14W, h41km±11km, MD3.8, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.13**	**257**	*i* P	Pn	14 03 27.6	-1.4
CAIG				*i* S	Sn	14 03 32.5	-1.3
CAIG	**El Cayaco**	**0.13**	**257**	*i* P	Pn	14 03 27.6	-1.4
CAIG				*i* S	Sn	14 03 32.5	-1.3
ACX	**Acapulco**	**0.34**	**128**	*i* P	Pn	14 03 28.6	-2.2
ACX				*i* S	Sn	14 03 34.1	-2.9
ACX	**Acapulco**	**0.34**	**128**	*i* P	Pn	14 03 28.6	-2.2
ACX				*i* S	Sn	14 03 34.1	-2.9
MEIG	**Mezcala**	**0.98**	**30**	*i* P	Pn	14 03 37.1	-2.3
MEIG				*i* S	Sn	14 03 49.3	-2.7
PLIG	**Platanillo**	**1.44**	**25**	*i* P	Pn	14 03 44.7	-1.0
PLIG				*i* S	Sn	14 04 02.8	-0.6
PLIG	**Platanillo**	**1.44**	**25**	*i* P	Pn	14 03 44.7	-1.0
PLIG				*i* S	Sn	14 04 02.8	-0.6
PNIG	**Pinotepa**	**2.04**	**109**	*i* P	Pn	14 03 52.7	-1.3
PNIG				*i* S	Sn	14 04 17.5	-0.7
PNIG	**Pinotepa**	**2.04**	**109**	*i* P	Pn	14 03 52.7	-1.3
PNIG				*i* S	Sn	14 04 17.5	-0.7
MZVM		**2.27**	**22**	*i* P	Pn	14 03 55.8	-1.3
MZVM				*i* S	Sn	14 04 23.5	-0.3
UTMO	**Huajuapan**	**2.35**	**71**	*i* P	Pn	14 03 57.2	-0.9
UTMO				*i* S	Sn	14 04 25.0	-0.8
PPM	**Popocatepetl**	**2.44**	**36**	*i* P	Pn	14 03 58.5	-1.0
PPM				*i* S	Sn	14 04 28.2	0.0
PPM	**Popocatepetl**	**2.44**	**36**	*i* P	Pn	14 03 58.5	-1.0
PPM				*i* S	Sn	14 04 28.2	0.0
PTVM	**Pico Tres Padr**	**2.68**	**21**	eP	Pn	14 04 01.9	-0.9
PTVM				*i* S	Sn	14 04 34.6	+0.5
PTVM	**Pico Tres Padr**	**2.68**	**21**	eP	Pn	14 04 01.9	-0.

KMBL Kambalda 34.45 188 *eP* **P** 14 20 25.9 -0.2
40nm,0.5s,mb5.5
BBOO Buckleboo 36.52 167 *eP* **P** 14 20 43.9 +0.1
7.8nm,0.4s,mb5.0
NWAO Narrogin (SRO) 36.85 194 *eP* **P** 14 20 46.5 -0.2
2.5nm,0.5s,mb4.4
STKA Stephens Creek 37.22 159 *eP* **P** 14 20 50.1 +0.3
17nm,0.6s,mb5.2
STKA Stephens Creek 37.22 159 P **P** 14 20 50.5 +0.7
25nm,0.7s,mb5.3,baz=335,slow=8.5,SNR=71
STKA Stephens Creek 37.22 159 *eP* **P** 14 20 50.2 +0.4
3.6nm,0.5s,mb4.6
CMSA Cobar Meteorol 38.54 154 *eP* **P** 14 21 02.5 +1.6
HHC Hu-ho-hao-te 40.30 342 *eP* **P** 14 21 18.2 +2.7
HHC S **S** 14 27 22.0 +3.7
HHC pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
HHC pmax pmax
comp=Z,120nm,6.4s
PALK Pallekele 46.43 277 *eP* **P** 14 22 00.3 -4.9
comp=Z,22nm,1.1s,mb4.8
ULN Ulaanbaatar 48.02 342 *eP* **P** 14 22 17.4 +0.3
comp=Z,3.5nm,1.1s,mb4.1
PETK Petropavlovsk- 56.04 22 P **P** 14 23 18.2 +1.6
comp=Z,2.1nm,0.9s,mb4.2,baz=192,slow=6.2,SNR=4.3
MKAR Makanchi Array 58.45 325 P **P** 14 23 33.4 -0.3
comp=Z,1.1nm,0.4s,mb4.2,baz=115,slow=8.0,SNR=13
ZALV Zalesovo Beam 61.50 333 P **P** 14 23 53.6 -0.8
comp=Z,0.8nm,0.5s,mb4.0,baz=129,slow=9.1,SNR=4.0
KURK Kurchatov 62.64 328 *eP* **P** 14 24 00.9 -1.2
comp=Z,3.2nm,0.7s,mb4.4
ABKAR Akbulak array 73.04 321 *eP* **P** 14 25 06.9 -0.7
comp=Z,0.3nm,0.3s,mb3.6
ARCES ARCESS Array B 91.35 340 P **P** 14 26 42.9 0.0
comp=Z,2.6nm,0.9s,mb4.4,baz=64,slow=8.2,SNR=4.6

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*NEIC **05** 14:21:11.0, 16°.08N×99°.67W, h17km, MD3.7(MEX), After MEX.*
MEX 05 14:21:11.0±0.6, 16°.08N×99°.67W, h17km±20km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.81**	**347**	*i* P	Pb	14 21 24.6	-2.0
ACX				*i* S	Sb	14 21 34.6	-2.7
ACX	**Acapulco**	**0.81**	**347**	*i* P	Pb	14 21 24.6	-2.0
ACX				*i* S	Sb	14 21 34.6	-2.7
CAIG	**El Cayaco**	**1.12**	**329**	*eP*	Pb	14 21 28.1	-3.9
CAIG				*i* S	Sb	14 21 41.0	-5.3
CAIG	**El Cayaco**	**1.12**	**329**	*eP*	Pb	14 21 28.1	-3.9
CAIG				*i* S	Sb	14 21 41.0	-5.3
PNIG	**Pinotepa**	**1.52**	**78**	*i* P	Pn	14 21 34.0	-3.3
PNIG				*i* S	Sn	14 21 52.0	-4.8
PNIG	**Pinotepa**	**1.52**	**78**	*i* P	Pn	14 21 34.0	-3.3
PNIG				*i* S	Sn	14 21 52.0	-4.8
UTMO	**Huajuapan**	**2.50**	**45**	*i* P	Pn	14 21 47.7	-3.2
UTMO				*i* S	Sn	14 22 16.7	-4.3
VHO	**Vista Hermosa**	**2.98**	**70**	*eP*	Pn	14 21 55.0	-2.6
VHO				*i* S	Sn	14 22 29.6	-3.5
VHO	**Vista Hermosa**	**2.98**	**70**	*eP*	Pn	14 21 55.0	-2.6
VHO				*i* S	Sn	14 22 29.6	-3.5
PPM	**Popocatepetl**	**3.13**	**18**	*eP*	Pn	14 21 58.0	-1.6
PPM				*i* S	Sn	14 22 33.9	-2.8
PPM	**Popocatepetl**	**3.13**	**18**	*eP*	Pn	14 21 58.0	-1.6
PPM				*i* S	Sn	14 22 33.9	-2.8

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*ISCJB **05** 14:35:30.9±0.4, 44°.13N±0°.04×105°.31W±0°.05, h0km, Error ellipse: s-maj=5.7km s-min=5.2km az=6.4*
*NEIC **05** 14:35:32.6±0.4, 44°.11N×105°.28W, h0km, ML3.1, Error ellipse: s-maj=6.1km s-min=5.2km az=164.0, Suspected Mining explosion.*
NEIC 25 km [15 miles] SE of Gillette.
*IDC **05** 14:35:32.8±1.0, 44°.47N×105°.92W, h0km, mb3.8/1, mb1 3.7/5, mb1mx3.5/26, mbtmp3.5/5, ML2.8/3, Error ellipse: s-maj=28.2km s-min=8.8km az=144.0*
ISC 05 14:35:32.7±0.4, 44°.12N±0°.04×105°.29W±0°.05, h0km, n49, σ1§16/50, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.90**	**90**	*eP*	**Pg**	14 35 50.9	+0.9
LAO	**LASA Array**	**2.65**	**346**	*ePn*	**Pn**	14 36 19.1	+2.5
RWWY	**Rawlins**	**2.81**	**211**	*ePn*	**Pn**	14 36 19.2	+0.4
PHWY	**Pilot Hill**	**2.82**	**183**	*ePn*	**Pn**	14 36 19.0	+0.1
RLMT	**Red Lodge**	**3.01**	**291**	*ePn*	**Pn**	14 36 21.5	-0.1
PDAR	**Pinedale Array**	**3.39**	**248**	Pn	**Pn**	14 36 27.4	+0.6
4.9nm,0.3s,baz=64,slow=16,SNR=75
PDAR Pg **Pg** 14 36 31.4 -6.2
6.2nm,0.3s,baz=66,slow=17,SNR=94
PDAR Lg 14 37 12.6
6.8nm,0.3s,baz=74,slow=32,SNR=11
GCMT Greycliff 3.53 300 *ePn* **Pn** 14 36 28.9 +0.2
LKWY Lake 3.69 279 *ePn* **Pn** 14 36 32.1 +1.2
LOHW Long Hollow 3.88 264 *ePn* **Pn** 14 36 34.2 +0.7
OGNE Ogallala 3.98 142 *ePn* **Pn** 14 36 35.3 +0.4
YFT Old Faithful 4.00 277 *ePn* **Pn** 14 36 27.6 -7.6
SNOW Snow King Moun 4.01 262 *ePn* **Pn** 14 36 37.2 +1.9
IMW Indian Meadow 4.08 269 *ePn* **Pn** 14 36 35.0 -1.3
REDW Red Top Meadow 4.10 261 *ePn* **Pn** 14 36 36.3 -0.3
TPAW Teton Pass 4.15 263 *ePn* **Pn** 14 36 37.0 -0.2
ISCO Idaho Springs 4.33 183 *ePn* **Pn** 14 36 40.0 +0.4
DGMT Dagmar 4.42 9 *ePn* **Pn** 14 36 42.5 +1.7
RRI2 Red Ridge 4.44 262 *ePn* **Pn** 14 36 41.0 -0.2
BOZ Bozeman (W) 4.76 291 *ePn* **Pn** 14 36 43.5 -2.1
EGMT Eagleton 4.99 323 *ePn* **Pn** 14 36 41.9 -6.8
24nm,0.6s
SMCO Snowmass 5.10 195 *ePn* **Pn** 14 36 52.5 +2.2
4.7nm,0.5s
HWUT Hardware Ranch 5.25 244 *ePn* **Pn** 14 36 51.1 -1.3
10.0nm,0.5s
HRY Holter Researc 5.28 302 *ePn* **Pn** 14 36 52.8 0.0
12nm,0.5s
DLMT Dillon 5.35 286 *ePn* **Pn** 14 36 54.1 +0.4
5.4nm,0.8s
LRM Limekiln Ridge 5.36 291 *ePn* **Pn** 14 36 53.7 -0.2
16nm,0.4s
MCMT McKenzie Canyo 5.46 280 *ePn* **Pn** 14 36 58.5 +3.3
1.6nm,0.4s
JLU Jordanelle 5.76 235 *ePn* **Pn** 14 36 57.9 -1.5
8.2nm,0.7s
DAU Daniels Canyon 5.77 232 *ePn* **Pn** 14 37 00.1 +0.6
17nm,0.7s
CTU Camp Tracy 5.88 237 *ePn* **Pn** 14 37 00.7 -0.4
4.7nm,0.3s
HVU Hansel Valley 5.97 250 *ePn* **Pn** 14 37 01.3 -1.0
6.1nm,0.7s
CHMT Chamberlain Mo 6.25 299 *ePn* **Pn** 14 37 05.2 -0.9
1.6nm,0.3s
ECSD EROS Data Cent 6.28 91 *ePn* **Pn** 14 37 04.4 -2.1
7.7nm,0.5s
PV04 Paradox Valley 6.34 207 *ePn* **Pn** 14 37 07.4 +0.2
SRU San Rafael 6.36 220 *ePn* **Pn** 14 37 05.6 -2.0
10nm,0.4s
SDCO Great Sand Dun 6.37 182 *ePn* **Pn** 14 37 07.9 +0.1
2.5nm,0.8s
PV01 Paradox Valley 6.47 204 *ePn* **Pn** 14 37 10.6 +1.4
454nm,1.0s
TMUT Trail Mountain 6.55 225 *ePn* **Pn** 14 37 10.8 +0.6
8.2nm,0.7s
HLID Hailey 6.62 268 *ePn* **Pn** 14 37 05.7 -5.5
1.1nm,0.7s
DUG Dugway 6.83 238 *ePn* **Pn** 14 37 13.2 -0.9
4.4nm,0.4s
BSMT Bassoo Peak 7.59 303 *ePn* **Pn** 14 37 24.6 +0.1
MSU Marysvale 7.63 225 *ePn* **Pn** 14 37 20.3 -4.8
4.6nm,0.7s
AGMN Agassiz Nation 7.76 54 *ePn* **Pn** 14 37 27.5 +0.7
8.4nm,0.6s
ULM Lac du Bonnet 8.87 43 Pn **Pn** 14 37 41.0 -0.9
ULM Lg 14 40 09.6
ULM Lac du Bonnet 8.87 43 Pn **Pn** 14 37 41.0 -0.9
1.2nm,0.3s,baz=229,slow=12,SNR=3.5
ULM Lg 14 40 09.6
0.5nm,0.3s,baz=298,slow=19,SNR=3.2
EYMN Ely 10.32 63 *ePn* **Pn** 14 37 59.6 -2.3
5.7nm,1.1s
NVAR Mina Array Bea 11.32 244 Pn **Pn** 14 38 14.2 -1.4
0.0nm,0.3s,baz=228,slow=20,SNR=3.0
YBH Yreka Blue Hor 12.99 265 Pn **Pn** 14 38 40.7 +2.3
0.1nm,0.3s,baz=82,slow=12,SNR=4.0
TXAR Lajitas Array 14.82 174 Pn **Pn** 14 39 10.4 +7.0
0.0nm,0.3s,baz=350,slow=10,SNR=7.8
MKAR Makanchi Array 89.22 355 P **P** 14 48 29.4 -0.8
0.5nm,0.7s,baz=16,slow=3.2,SNR=5.6

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*ISCJB **05** 14:56:29.7±0.8, 67°.45S±0°.06×112°.0E±0°.2, h10km, mb4.2/5, Error ellipse: s-maj=10.9km s-min=8.8km az=158.9*
*NEIC **05** 14:56:31.8±0.9, 67°.22S×112°.52E, h5km, mb3.6/4, Error ellipse: s-maj=18.9km s-min=13.6km az=69.0*
*IDC **05** 14:56:32.5±1.3, 67°.09S×112°.69E, h0km, mb4.2/4, mb1 4.2/5, mb1mx4.1/12, mbtmp4.1/5, ML3.7/1, MS3.8/2, Ms1 3.7/2, ms1mx3.0/16, Error ellipse: s-maj=55.4km s-min=21.8km az=117.0*
ISC 05 14:56:30.9±0.8, 67°.44S±0°.06×111°.7E±0°.2, h10km, n11, σ1§01/15, mb4.2/5, Antarctica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CASY	**Casey**	**1.25**	**338**	*eP*	**Pn**	14 56 54.2	-0.1
CASY				*eS*	**Sb**	14 57 10.6	+0.1
MAW	**Mawson**	**18.28**	**247**	P	**Pn**	15 00 53.8	+10
0.2nm,0.3s,baz=131,slow=10,SNR=6.4
MAW S **Sn** 15 04 08.1 +0.2
0.2nm,0.3s,baz=52,slow=11,SNR=3.8
MAW Lg 15 06 16.2
0.1nm,0.3s,baz=232,slow=13,SNR=2.3
MAW LR LR 15 08 08.9
comp=Z,220nm,19.6s,baz=94,slow=37
MAW Mawson 18.28 247 *e*Pn **Pn** 15 00 51.4 +7.3
1.6nm,1.1s
MAW *e*Sn **Sn** 15 04 07.8 -0.1
SBA Scott Base 18.49 147 *eP* **Pn** 15 00 46.6 0.0
6.8nm,0.8s
SBA *e*Sn **Sn** 15 04 01.4 -11
QSPA South Pole Qui 22.64 180 P **P** 15 01 38.1 +6.7
9.5nm,0.7s,mb4.3,baz=339,slow=2.7,SNR=13
QSPA South Pole Qui 22.64 180 *eP* **P** 15 01 35.9 +4.5
46nm,1.2s,mb4.8
STKA Stephens Creek 39.70 42 P **P** 15 04 03.5 +0.6
2.8nm,0.7s,mb4.1,baz=186,slow=8.3,SNR=6.9
STKA Stephens Creek 39.70 42 *eP* **P** 15 04 04.8 +1.8
0.6nm,0.8s,mb3.4
ASAR Alice Springs 45.91 29 P **P** 15 04 52.2 -1.2
1.9nm,0.6s,mb4.2,baz=196,slow=6.0,SNR=24
WRA Warramunga Arr 49.63 28 P **P** 15 05 20.5 -1.7
1.8nm,0.7s,mb4.2,baz=195,slow=6.8,SNR=12
WRAB Tennant Creek 49.64 28 *eP* **P** 15 05 23.8 +1.5
3.8nm,0.8s,mb4.5

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*ISCJB **05** 15:31:34.9±0.4, 6°.84N±0°.05×73°.02W±0°.05, h166km±5km, mb3.8/8, Error ellipse: s-maj=10.2km s-min=5.4km az=36.1*
*IDC **05** 15:31:35.9±1.2, 6°.79N×73°.06W, h160km±12km, mb3.4/6, mb1 3.8/9, mb1mx3.5/21, mbtmp3.5/9, Error ellipse: s-maj=19.4km s-min=14.9km az=102.0*
*NEIC **05** 15:31:36.0±0.6, 6°.77N×73°.04W, h165km±7km, mb4.4/7, Error ellipse: s-maj=10.1km s-min=8.2km az=123.0*
*FUNV **05** 15:31:39.5, 7°.09N×73°.01W, h164km, MW4.3*
ISC 05 15:31:35.8±0.4, 6°.84N±0°.05×73°.02W±0°.06, h159km±5km, n35, σ1§03/46, mb3.8/8, 4D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.24**	**34**	↓*eP*	**Pn**	15 32 05.0	+1.5
CAPV				*eS*	**Sn**	15 32 25.4	+0.5
ROSC	**El Rosal**	**2.36**	**214**	P	**Pn**	15 32 17.0	+1.2
97nm,0.3s,baz=85,slow=20,SNR=89
ROSC S **Sn** 15 32 46.4 -0.2
66nm,0.3s,baz=99,slow=18,SNR=9.9
VIGV El Vigia 2.58 39 ↓*iP* **Pn** 15 32 19.4 +1.0
VIGV *eS* **Sn** 15 32 48.0 -3.3
SOCV Socops 2.58 56 *eP* **Pn** 15 32 19.6 +1.2
SOCV *eS* **Sn** 15 32 48.8 -2.4
SDV Santo Domingo 3.12 49 *e*Pn **Pn** 15 32 26.4 +1.3
SDV *e*Sn **Sn** 15 33 04.9 +1.7
VIRV Villa del Rosa 3.69 9 ↓*iP* **Pn** 15 32 31.8 -0.6
VIRV *eS* **Sn** 15 33 10.1 -6.3
QARV Quebrada Arrib 4.16 36 *eP* **Pn** 15 32 37.9 -0.5
QARV *eS* **Sn** 15 33 21.8 -5.3
SANV Sanarito 4.34 52 *eP* **Pn** 15 32 41.3 +0.4
SANV *eS* **Sn** 15 33 27.2 -4.3
CURV Curarigua 4.37 44 *eP* **Pn** 15 32 40.8 -0.4
CURV *eS* **Sn** 15 33 26.5 -5.6
DABV Dabajuro 4.69 30 *eP* **Pn** 15 32 44.9 -0.5
DABV *eS* **Sn** 15 33 32.4 -7.2
TEPV Terepaima 4.90 50 *eP* **Pn** 15 32 47.7 -0.4
TEPV *eS* **Sn** 15 33 39.2 -5.3
SIQV Siquisique 4.94 40 ↓*eP* **Pn** 15 32 48.8 +0.2
SIQV *eS* **Sn** 15 33 39.8 -5.7
IMOV Isla Los Monje 5.87 21 *eP* **Pn** 15 32 59.9 -1.0
MONV Montecano 5.91 30 *eP* **Pn** 15 33 00.7 -0.7
TURV Turiamo 6.25 55 *eP* **Pn** 15 33 05.6 -0.4
OTAV Otavalo 8.51 220 *e*Pn **Pn** 15 33 34.3 -1.7
4.0nm,0.6s
OTAV *e*Sn **Sn** 15 35 10.3 -0.5
PCRV Puerto La Cruz 8.93 68 P **Pn** 15 33 43.6 +2.0
1.2nm,0.3s,baz=333,slow=6.8,SNR=4.1
MTDJ Mount Denham 12.15 339 *e*Pn **Pn** 15 34 24.3 +0.5
70nm,1.2s
MTDJ *e*Sn **Sn** 15 36 34.9 -3.5
JTS JuntasAbangare 12.29 287 *eP* **Pn** 15 34 30.1 +4.4
15nm,0.9s
SJG San Juan 13.05 30 P **Pn** 15 34 35.4 0.0
2.9nm,0.3s,baz=209,slow=17,SNR=5.2
SJG San Juan 13.05 30 *eP* **Pn** 15 34 34.7 -0.8
7.4nm,0.4s
TEIG Tepich 19.91 313 *eP* **P** 15 35 55.5 +0.2
7.0nm,0.5s
LPAZ La Paz 23.48 168 pP pP 15 37 03.8 +2.0
1.0nm,0.6s,baz=349,slow=18,SNR=2.6
SIV San Ignacio 25.58 153 P **P** 15 36 49.8 -0.5
0.2nm,0.3s,mb3.2,baz=230,slow=17,SNR=2.7
SIV pP pP 15 37 22.6 -0.6
0.8nm,0.6s,baz=345,slow=9.1,SNR=3.9
TXAR Lajitas Array 36.53 312 P **P** 15 38 26.0 -0.2
0.8nm,0.6s,mb3.5,baz=128,slow=8.5,SNR=15
TXAR PcP PcP 15 40 47.5 +1.0
0.2nm,0.5s,baz=139,slow=5.6,SNR=3.9
TXAR Lajitas Array 36.53 312 P **P** 15 38 26.0 -0.2
TXAR PcP PcP 15 40 47.5 +1.0
RCBR Riachuelo 39.11 108 *eP* **P** 15 38 47.1 -1.0
21nm,1.3s,mb4.6
WUAZ Wupatki 45.28 315 *eP* **P** 15 39 38.7 +1.0
5.0nm,1.0s,mb4.1
SCHQ Schefferville 48.12 5 P **P** 15 39 59.6 +0.2
3.8nm,0.5s,mb4.3,baz=200,slow=6.4,SNR=8.9
PDAR Pinedale Array 48.13 324 P **P** 15 39 59.2 -0.5
0.6nm,0.5s,mb3.5,baz=116,slow=6.9,SNR=4.5
NVAR Mina Array Bea 51.55 315 P **P** 15 40 26.6 +1.0
0.2nm,0.4s,mb3.1,baz=150,slow=6.3,SNR=4.2
YKA Yellowknife Ar 63.29 340 P **P** 15 41 48.0 +0.7
1.6nm,0.7s,mb4.0,baz=136,slow=7.3,SNR=5.9
YKA Yellowknife Ar 63.29 340 P **P** 15 41 48.0 +0.7
ASAR Alice Springs 149.20 234 PKPbc PKPbc 15 51 06.0 -0.5
0.7nm,0.5s,baz=106,slow=3.3,SNR=27
WRA Warramunga Arr 150.44 241 PKPbc PKPbc 15 51 08.9 -0.5
1.0nm,0.4s,baz=107,slow=2.7,SNR=56

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*IDC **05** 15:55:03.1±5.8, 15°.91N×101°.56W, h0km, mb3.8/3, mb1 4.1/4, mb1mx3.8/19, mbtmp3.6/4, ML3.4/1, MS3.2/3, Ms1 3.2/3, ms1mx2.8/20, Error ellipse: s-maj=98.1km s-min=48.4km az=9.0*
*ISCJB **05** 15:55:14.1±1.7, 17°.17N±0°.04×102°.08W±0°.03, h20km±14km, mb4.0/10, Error ellipse: s-maj=7.8km s-min=4.6km az=25.2*
*MEX **05** 15:55:17.4±1.2, 17°.16N×102°.13W, h18km±18km, MD4.2*
*NEIC **05** 15:55:17.4, 17°.16N×102°.13W, h18km, mb4.3/7, MD4.2(MEX), After MEX.*
ISC 05 15:55:15.0±1.8, 17°.17N±0°.05×102°.06W±0°.04, h14km±13km, n39, σ1§08/62, mb4.0/10, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**1.66**	**312**	*eP*	**Pn**	15 55 42.5	-1.3
MMIG				*i* S	**Sn**	15 56 00.1	-4.8
CAIG	**El Cayaco**	**1.71**	**94**	*i* P	**Pn**	15 55 43.9	-0.5
CAIG				*eS*	**Sn**	15 56 05.1	-1.0
CAIG	**El Cayaco**	**1.71**	**94**	*i* P	**Pn**	15 55 43.9	-0.5
CAIG				*eS*	**Sn**	15 56 05.1	-1.0
ACX	**Acapulco**	**2.12**	**98**	*i* P	**Pn**	15 55 50.0	-0.1
ACX				*i* S	**Sn**	15 56 14.6	-1.7
ACX	**Acapulco**	**2.12**	**98**	*i* P	**Pn**	15 55 50.0	-0.1
ACX				*i* S	**Sn**	15 56 14.6	-1.7
MEIG	**Mezcala**	**2.44**	**72**	*eP*	**Pn**	15 55 54.8	+0.3
MEIG				*i* S	**Sn**	15 56 23.7	-0.5
MOIG	**Morelia**	**2.63**	**18**	*eP*	**Pn**	15 55 56.2	-0.8
MOIG				*i* S	**Sn**	15 56 28.8	0.0
MOIG	**Morelia**	**2.63**	**18**	*eP*	**Pn**	15 55 56.2	-0.8
MOIG				*i* S	**Sn**	15 56 28.8	0.0
PLIG	**Platanillo**	**2.72**	**63**	*eP*	**Pn**	15 55 58.3	0.0
PLIG				*i* S	**Sn**	15 56 31.0	-0.1
PLIG	**Platanillo**	**2.72**	**63**	*eP*	**Pn**	15 55 58.3	0.0
PLIG				*i* S	**Sn**	15 56 31.0	-0.1
YAIG	**Yautepec**	**3.31**	**59**	*i* P	**Pn**	15 56 05.3	-1.1
YAIG				*i* S	**Sn**	15 56 44.3	-1.2
YAIG	**Yautepec**	**3.31**	**59**	*i* P	**Pn**	15 56 05.3	-1.1
YAIG				*i* S	**Sn**	15 56 44.3	-1.2
SFJM	**Santa Fe**	**3.43**	**344**	*eP*	**Pn**	15 56 08.5	+0.4
SFJM				*i* S	**Sn**	15 56 47.5	-1.0
SFJM	**Santa Fe**	**3.43**	**344**	*eP*	**Pn**	15 56 08.5	+0.4
SFJM				*i* S	**Sn**	15 56 47.5	-1.0
UNM	**Universidad Na**	**3.48**	**51**	*eP*	**Pn**	15 56 09.2	+0.4
UNM				*i* S	**Sn**	15 56 51.1	+1.3
UNM	**Universidad Na**	**3.48**	**51**	*eP*	**Pn**	15 56 09.2	+0.4
UNM				*i* S	**Sn**	15 56 51.1	+1.3
PPM	**Popocatepetl**	**3.77**	**59**	*eP*	**Pn**	15 56 13.0	+0.3
PPM				*i* S	**Sn**	15 56 58.5	+1.5
PPM	**Popocatepetl**	**3.77**	**59**	*eP*	**Pn**	15 56 13.0	+0.3
PPM				*i* S	**Sn**	15 56 58.5	+1.5
PNIG	**Pinotepa**	**3.84**	**101**	*i* P	**Pn**	15 56 13.1	-0.7
PNIG				*i* S	**Sn**	15 56 57.8	-0.9
PNIG	**Pinotepa**	**3.84**	**101**	*i* P	**Pn**	15 56 13.1	-0.7
PNIG				*i* S	**Sn**	15 56 57.8	-0.9
DEIG	**Demacu**	**4.23**	**42**	*i* P	**Pn**	15 56 20.2	+1.1
DEIG				*i* S	**Sn**	15 57 10.0	+1.7
ANIG	**Ahuacatlan**	**4.51**	**329**	*eP*	**Pn**	15 56 21.8	-1.2
ANIG				*i* S	**Sn**	15 57 14.6	-0.7
TPIG	**Tehuac#an**	**4.64**	**74**	*i* P	**Pn**	15 56 31.7	+7.0
TPIG				*i* S	**Sn**	15 57 24.2	+5.7
VHO	**Vista Hermosa**	**5.09**	**90**	*i* P	**Pn**	15 56 31.6	+0.7
VHO				*i* S	**Sn**	15 57 38.4	+8.9
VHO	**Vista Hermosa**	**5.09**	**90**	*i* P	**Pn**	15 56 31.6	+0.7
VHO				*i* S	**Sn**	15 57 38.4	+8.9
CMIG	**Matias Romero**	**6.86**	**90**	LR	LR	15 59 38.3	
comp=Z,228nm,19.6s,slow=42
TXAR Lajitas Array 12.20 353 Pn **Pn** 15 58 18.6 +10
0.0nm,0.3s,baz=186,slow=15,SNR=4.1
TXAR Pg Pn 15 59 11.2 +63
0.0nm,0.3s,baz=150,slow=16,SNR=2.8
TXAR LR LR 16 04 43.9
comp=Z,46nm,18.4s,baz=0.0,slow=43
SMCO Snowmass 22.35 350 *eP* **P** 16 00 12.1 -0.3
3.7nm,1.0s,mb3.8
MSU Marysvale 23.04 339 *eP* **P** 16 00 20.9 +1.0
3.2nm,1.1s,mb3.7
TKL Tuckaleechee C 24.57 38 P **P** 16 00 31.7 -2.8
0.7nm,0.4s,mb3.5,baz=198,slow=3.2
TKL Tuckaleechee C 24.57 38 P **P** 16 00 31.7 -2.8
NVAR Mina Array Bea 25.52 329 P **P** 16 00 46.5 +3.4
2.5nm,1.0s,mb3.7,baz=149,slow=12,SNR=13
PDAR Pinedale Array 26.31 347 P **P** 16 00 50.7 +0.5
0.7nm,0.9s,mb3.2,baz=142,slow=9.0,SNR=4.6
SJG San Juan 34.20 83 *eP* **P** 16 02 02.1 +1.8
39nm,1.8s,mb5.0
NNA Nana 38.21 138 *eP* **P** 16 02 35.8 +1.2
3.5nm,0.3s,mb4.6
LPAZ La Paz 47.15 133 *eP* **P** 16 03 49.2 +2.0
0.6nm,0.9s,mb3.5
TRF Thorofare Moun 56.76 336 *eP* **P** 16 04 59.2 +1.0
4.2nm,0.8s,mb4.5
RCBR Riachuelo 69.21 103 *eP* **P** 16 06 21.0 -0.9
31nm,1.5s,mb5.0
ARCES ARCESS Array B 86.01 16 LR LR 16 49 06.2
comp=Z,23nm,18.9s,baz=9.6,slow=37

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*BJI **05** 16:34:25.5, 36°.30S×52°.40E, h10km, mB5.0/3, mb4.6/6*
*ISCJB **05** 16:34:26.3±0.4, 36°.30S±0°.08×52°.47E±0°.09, h10km, mb4.5/28, MS4.0/19, Error ellipse: s-maj=12.6km s-min=9.0km az=38.4*
*IDC **05** 16:34:26.6±0.5, 36°.25S×52°.45E, h0km, mb4.4/17, mb1 4.5/18, mb1mx4.3/26, mbtmp4.4/18, ML4.4/1, MS4.0/19, Ms1 4.0/19, ms1mx3.9/33, Error ellipse: s-maj=20.8km s-min=14.4km az=28.0*
*NEIC **05** 16:34:28.0±0.3, 36°.28S×52°.44E, h10km, mb4.8/11, Error ellipse: s-maj=10.1km s-min=7.4km az=219.0*
ISC 05 16:34:31.9±2.5, 36°.29S±0°.07×52°.42E±0°.10, h36km±23km, n61, σ0§67/37, mb4.5/28, MS4.0/19, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABPO	**Ambohimpanom**	**17.80**	**344**	*e*Pn	**Pn**	16 38 37.6	+0.8
8.7nm,0.4s
OPO Ambohidratompo 18.24 344 P **Pn** 16 38 41.3 -0.9
1.4nm,0.3s,baz=164,slow=8.9,SNR=13
OPO S **S** 16 42 09.5 +0.4
0.7nm,0.3s,baz=240,slow=20,SNR=5.1
BOSA Boshof 24.12 281 P **P** 16 39 43.6 -0.7
11nm,1.0s,mb4.2,baz=114,slow=11,SNR=10
BOSA LR LR 16 46 40.0
comp=Z,211nm,20.4s,MS3.6,baz=119,slow=30
LBTB Lobatse 25.59 289 P **P** 16 39 56.6 -1.0
8.1nm,0.8s,mb4.3,baz=139,slow=7.6,SNR=9.3
LBTB LR LR 16 48 12.4
comp=Z,476nm,18.6s,MS4.0,baz=136,slow=32
SUR Sutherland 26.33 269 LR LR 16 48 30.3
comp=Z,394nm,19.1s,MS4.0,baz=87,slow=32
LSZ Lusaka 30.08 308 P **P** 16 40 38.0 +0.1
6.6nm,0.9s,mb4.4,baz=148,slow=8.5,SNR=11
LSZ LR LR 16 51 11.3
comp=Z,400nm,19.8s,MS4.1,baz=133,slow=33
LSZ Lusaka 30.08 308 P **P** 16 40 38.0 +0.1
LSZ LR LR 16 51 11.3
MAW Mawson 31.93 172 LR LR 16 50 19.2
comp=Z,474nm,20.5s,MS4.2,baz=339,slow=30
MAW Mawson 31.93 172 *eP* **P** 16 40 54.2 +0.5
1.5nm,1.4s
TSUM Tsumeb 34.98 290 P **P** 16 41 20.8 0.0
7.3nm,0.8s,mb4.6,baz=127,slow=7.7,SNR=9.3
TSUM LR LR 16 53 50.0
comp=Z,321nm,20.8s,MS4.0,baz=124,slow=33
KMBO Kilima Mbogo 37.70 335 P **P** 16 41 45.6 +1.6
0.5nm,0.3s,mb3.7,baz=180,slow=24,SNR=3.6
KMBO LR LR 16 55 02.2
comp=Z,397nm,21.9s,MS4.2,baz=90,slow=33
COCO West Island 46.53 71 P **P** 16 42 55.4 -0.7
597nm,1.8s
ATD Arta Tunnel 48.41 347 LR LR 17 02 12.5
comp=Z,89nm,19.9s,MS3.8,baz=111,slow=34
NWAO Narrogin (SRO) 52.56 107 *eP* **P** 16 43 42.8 +1.0
77nm,1.6s,mb5.4
QSPA South Pole Qui 53.90 180 P **P** 16 43 51.9 +0.8
11nm,0.9s,mb4.8,baz=266,slow=3.8,SNR=41
QSPA LR LR 17 04 16.5
comp=Z,271nm,20.6s,MS4.3,baz=92,slow=33
MBWA Marble Bar 59.84 95 *eP* **P** 16 44 33.8 -0.2
53nm,1.8s,mb5.3
KSM Kuching 65.52 68 *eP* **P** 16 45 11.7 -0.2
14nm,1.3s,mb4.8
DBIC Dimbokro 68.54 296 LR LR 17 12 58.1
comp=Z,127nm,20.6s,MS4.1,baz=121,slow=34
ASAR Alice Springs 69.82 105 P **P** 16 45 39.0 +0.1
4.2nm,0.9s,mb4.4,baz=238,slow=5.4,SNR=32
CM31 Chiang Mai Arr 69.98 47 *eP* **P** 16 45 39.0 -0.8
6.7nm,1.1s,mb4.5
CMAR Chiang Mai Arr 69.98 47 P **P** 16 45 39.7 -0.1
3.0nm,0.9s,mb4.2,baz=228,slow=6.9,SNR=17
CMAR LR LR 17 09 54.6
comp=Z,117nm,20.4s,MS4.1,baz=192,slow=30
MMAI Mount Meron Ar 70.75 345 LR LR 17 15 24.7
comp=Z,69nm,18.6s,MS3.9,baz=150,slow=35
STKA Stephens Creek 71.36 116 P **P** 16 45 48.5 +0.3
3.6nm,0.7s,mb4.4,baz=253,slow=5.3,SNR=5.1
STKA LR LR 17 11 42.0
comp=Z,148nm,21.7s,MS4.2,baz=207,slow=31
STKA Stephens Creek 71.36 116 *eP* **P** 16 45 47.5 -0.7
0.6nm,0.6s,mb3.7
STKA LR LR 17 11 42.0
WRA Warramunga Arr 72.14 102 P **P** 16 45 53.4 +0.4
8.0nm,1.0s,mb4.6,baz=

LSA	Lhasa	75.05	34	P		P	16 46 10.4	+0.6
BRTR	Keskin Array B	77.59	345	P		P	16 46 23.9	0.0
	0.9nm,0.6s,mb3.9,baz=161,slow=7.9,SNR=6.3							
BRTR				LR		LR	17 19 30.8	
	comp=Z,45nm,18.2s,MS3.8,baz=359,slow=35							
KIV	Kislovodsk	80.35	353	*e*P		P	16 46 39.1	+0.1
	44nm,1.6s,mb5.1							
UCH	Uchtor	80.70	16	*e*P		P	16 46 41.8	+0.9
	8.8nm,1.1s,mb4.6							
EKS2	Erkin-Say	80.95	16	*e*P		P	16 46 41.5	-0.7
	6.0nm,1.0s,mb4.5							
KEST	Kesra	82.09	326	P		P	16 46 49.8	+1.4
	1.8nm,0.9s,mb4.0,baz=143,slow=9.2,SNR=3.5							
KEST				LR		LR	17 25 06.6	
	comp=Z,72nm,18.3s,MS4.1,baz=241,slow=37							
ABKAR	Akbulak array	85.43	5	*e*P		P	16 47 04.7	-0.4
	7.5nm,1.2s,mb4.7							
LZH	Lanzhou	86.41	39	*e*P		P	16 47 10.0	-0.3
LZH				pP		pP	16 47 15.3	-6.3
LZH				sP		sP	16 47 17.8	-7.9
LZH				pmax		pmax		
	comp=Z,17nm,1.3s,mb5.1							
AKTK	Aktyubinsk	86.49	4	P		P	16 47 10.3	0.0
AKTO	Aktyubinsk	86.49	4	P		P	16 47 10.3	0.0
	comp=Z,1.1nm,0.6s,mb4.2,baz=279,slow=2.3,SNR=8.4							
MKAR	Makanchi Array	86.94	20	P		P	16 47 12.8	+0.1
	comp=Z,0.9nm,0.9s,mb4.0,baz=194,slow=4.6,SNR=7.2							
GTA	Gaotai	87.06	35	*e*P		P	16 47 13.9	+0.5
GTA				pP		pP	16 47 19.6	-5.1
GTA				sP		sP	16 47 22.8	-6.0
GTA				pmax		pmax		
	comp=Z,5.0nm,1.1s,mb4.7							
PLCA	Paso Flores	87.20	220	LR		LR	17 19 53.2	
	comp=Z,133nm,18.4s,MS4.4,baz=49,slow=31							
AKASG	Malin Array Be	89.00	345	P		P	16 47 21.7	-0.7
	comp=Z,0.5nm,0.4s,mb4.2,baz=163,slow=4.3,SNR=8.6							
AKASG				LR		LR	17 32 04.0	
	comp=Z,32nm,19.5s,MS3.8,baz=60,slow=39							
CPUP	Villa Florida	89.15	238	P		P	16 47 23.4	-0.6
	comp=Z,2.1nm,0.8s,mb4.5,baz=84,slow=5.0,SNR=5.6							
CPUP				LR		LR	17 20 25.7	
	comp=Z,56nm,18.3s,MS4.0,baz=160,slow=31							
ESDC	Sonseca Array	91.69	320	LR		LR	17 30 52.0	
	comp=Z,79nm,18.7s,MS4.2,baz=175,slow=37							
ZALV	Zalesovo Beam	94.13	19	P		P	16 47 44.8	-1.3
	comp=Z,1.2nm,0.7s,mb4.4,baz=198,slow=4.4,SNR=6.9							
WCI	Wyandotte Cave	147.28	286	*e*PKPdf		PKPdf	16 54 10.9	+1.9
INK	Inuvik	147.75	4	PKPbc		PKPbc	16 54 12.1	+0.4
	comp=Z,11nm,1.0s,baz=12,slow=6.1,SNR=8.6							
WVT	Waverly	148.08	282	*e*PKPbc		PKPbc	16 54 12.3	-1.3
BPAW	Bear Paw Mtn.	148.76	20	*e*PKPbc		PKPbc	16 54 14.3	-0.1
COLA	College	148.92	17	*e*PKPdf		PKPbc	16 54 13.1	-1.7
PPLA	Purkeypile	149.34	22	*e*PKPbc		PKPbc	16 54 16.6	+0.6
TRF	Thorofare Moun	149.46	20	*e*PKPbc		PKPbc	16 54 16.0	-0.2
EGAK	Eagle	150.33	12	*e*PKPbc		PKPbc	16 54 18.8	+0.5
JFWS	Jewell Farm	150.66	295	*e*PKPbc		PKPbc	16 54 20.1	+0.4
EYMN	Ely	151.07	305	*e*PKPbc		PKPbc	16 54 20.3	-0.3
EYMN				*e*PKPab		PKPab	16 54 30.7	+2.4
CCM	Cathedral Cave	151.11	285	*e*PKPbc		PKPbc	16 54 20.9	-0.1
DAWY	Dawson	151.28	11	*e*PKPdf		PKPdf	16 54 15.2	+0.7
DAWY				*e*PKPbc		PKPbc	16 54 21.1	+0.5
YKA	Yellowknife Ar	152.55	347	PKPbc		PKPbc	16 54 22.8	-0.6
	comp=Z,2.7nm,0.8s,baz=5.1,slow=2.2,SNR=5.7							
YKA	Yellowknife Ar	152.55	347	PKPbc		PKPbc	16 54 22.8	-0.6
TXAR	Lajitas Array	158.77	258	PKP		PKPdf	16 54 27.0	+1.1
	comp=Z,0.2nm,0.7s,baz=183,slow=5.4,SNR=4.0							
TXAR				PKPab		PKPab	16 55 03.2	+1.4
	comp=Z,1.0nm,0.9s,baz=126,slow=6.5,SNR=6.7							
TXAR	Lajitas Array	158.77	258	PKP		PKPdf	16 54 27.0	+1.1
TXAR				PKPab		PKPab	16 55 03.2	+1.4
PDAR	Pinedale Array	164.68	300	PKP		PKPdf	16 54 31.4	-0.1
	comp=Z,0.3nm,0.5s,baz=48,slow=2.7,SNR=3.5							
NVAR	Mina Array Bea	172.31	289	PKP		PKPdf	16 54 39.6	+2.9
	comp=Z,0.4nm,0.7s,baz=139,slow=4.3,SNR=3.9							

ISCJB ***05*** *16:48:18.0±0.8, 67°.42S±0°.07×112°.5E±0°.2, h10km, mb4.4/5, Error ellipse: s-maj=14.9km s-min=8.4km az=150.9*

IDC ***05*** *16:48:19.6±1.2, 67°.18S×111°.79E, h0km, mb4.4/4, mb1 4.4/5, mb1mx4.1/12, mbtmp4.3/5, ML3.7/1, Error ellipse: s-maj=53.2km s-min=21.3km az=115.0*

NEIC ***05*** *16:48:19.3±0.8, 67°.36S×112°.53E, h5km, mb3.9/3, Error ellipse: s-maj=18.3km s-min=13.4km az=87.0*

ISC 05 16:48:18.5±0.9, 67°.51S±0°.08×111°.9E±0°.4, h10km, n11, σ0.78/15, mb4.4/5, 1C, Antarctica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CASY	Casey	1.35	335	⇑*i*Pn		Pn	16 48 44.1	+0.8
CASY				*e*S		Sb	16 49 00.4	-0.8
MAW	Mawson	18.35	247	P		Pn	16 52 36.0	+3.3
	0.2nm,0.3s,baz=117,slow=15,SNR=9.1							
MAW				S		Sn	16 55 50.0	-7.2
	0.4nm,0.3s,baz=115,slow=18,SNR=5.9							
MAW	Mawson	18.35	247	*e*P		Pn	16 52 36.5	+3.8
MAW				*e*Sn		Sn	16 55 50.9	-6.3
SBA	Scott Base	18.37	147	*e*Pn		Pn	16 52 32.5	-0.4
	6.9nm,1.0s							
SBA				*e*Sn		Sn	16 55 48.2	-9.5
QSPA	South Pole Qui	22.57	180	P		P	16 53 23.9	+5.6
	24nm,1.0s,mb4.6,baz=330,slow=6.6,SNR=25							
QSPA				S		S	16 57 25.0	-0.5
	2.0nm,0.7s,baz=317,slow=16,SNR=7.1							
STKA	Stephens Creek	39.69	41	P		P	16 55 51.2	+0.8
	5.4nm,0.7s,mb4.4,baz=184,slow=6.6,SNR=13							
STKA	Stephens Creek	39.69	41	*e*P		P	16 55 49.7	-0.8
	0.9nm,0.6s,mb3.7							
ASAR	Alice Springs	45.92	29	P		P	16 56 41.6	+0.6
	3.9nm,0.7s,mb4.4,baz=194,slow=6.2,SNR=61							
WRA	Warramunga Arr	49.64	28	P		P	16 57 10.2	+0.3
	3.7nm,0.7s,mb4.5,baz=194,slow=6.7,SNR=22							
WRAB	Tennant Creek	49.65	28	*e*P		P	16 57 09.4	-0.6
	5.0nm,0.8s,mb4.6							
PDAR	Pinedale Array	146.79	117	PKPbc		PKPbc	17 08 04.1	+4.6
	0.5nm,0.7s,baz=147,slow=3.0,SNR=4.7							

IDC ***05*** *16:55:49.7±1.1, 24°.40N×88°.33E, h0km, mb3.9/10, mb1 4.0/11, mb1mx3.8/27, mbtmp3.9/11, ML3.9/1, MS3.2/1, Ms1 3.2/1, ms1mx2.5/24, Error ellipse: s-maj=39.4km s-min=16.5km az=54.0*

BJI ***05*** *16:55:49.4, 24°.25N×88°.53E, h30km, mB4.4/1, mb4.2/5*

ISCJB ***05*** *16:55:52.0±0.3, 24°.36N±0°.03×88°.43E±0°.03, h33km, mb4.0/16, Error ellipse: s-maj=4.9km s-min=3.9km az=140.2*

DMN ***05*** *16:55:52.8±0.6, 24°.39N×88°.55E, h10km, Ml4.8/1, Error ellipse: s-maj=14.5km s-min=12.0km az=99.0*

NEIC ***05*** *16:55:54.3±0.3, 24°.39N×88°.48E, h35km, mb4.2/8, Error ellipse: s-maj=10.2km s-min=5.9km az=55.0*

NEIC Felt at Chapainawabganj, Naogaon, Natore and Rajshahi, Bangladesh. Also felt at Birbhum, Burdwan, Malda and Murshidabad, India.

NDI ***05*** *16:55:55.2±5.4, 24°.41N×88°.47E, h39km±186km, ML4.1, mb4.2(NEIC)*

ISC 05 16:55:54.3±0.3, 24°.40N±0°.03×88°.47E±0°.03, h35km, n64, σ1.08/78, mb4.0/16, India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAL	Calcutta	1.86	184	*e*x		x	16 56 34.9	
CAL				*e*S		Sn	16 56 47.2	+1.3
SLGI	Shiliguri	2.29	359	*e*PKP		Pn	16 56 32.5	+2.9
SLGI				*e*S		Sn	16 56 57.3	+0.7
BOK	Bokaro	2.44	256	*e*PKP		Pn	16 56 33.7	+2.1
BOK				*e*S		Sn	16 56 59.6	-0.7
BOK				AML		AML	16 57 12.8	
	comp=E,1μm,0.1s							
BOK				AML		AML	16 57 13.0	
	comp=N,1μm,0.4s							
AGT	Agartala	2.59	101	*i* x		Pn	16 56 41.0	+7.3
AGT				*i* S		Sn	16 57 04.0	0.0
ODAN	Odare	2.64	339	*e*Pn		Pn	16 56 34.4	0.0
ODAN				*e*Sn		Sn	16 57 04.1	-1.0
GTK	Gangtok	2.92	3	*e*PKP		Pn	16 56 43.0	+4.7
GTK				*e*S		Sn	16 57 07.0	-5.2
TAPN	Taplejung	3.02	347	*e*Pn		Pn	16 56 39.5	-0.1
TAPN				*e*Sn		Sn	16 57 13.4	-1.1
RAMN	Ramite	3.05	327	*e*Pn		Pn	16 56 40.4	+0.3
SHL	Shillong	3.31	69	*i* P		Pn	16 56 42.2	-1.4
SHL				*e*S		Sn	16 57 19.3	-2.4
JIRN	Jiri	3.84	328	*e*Pn		Pn	16 56 51.1	+0.2
PKI	Pulchoki	4.19	320	*e*Pn		Pn	16 56 56.0	+0.3
PKI				*e*Sn		Sn	16 57 43.0	-0.5
	comp=N,855nm,0.8s							
GUN	Gumba	4.20	327	*e*Pn		Pn	16 56 56.0	+0.1
PKIN	Phulchoki	4.20	319	*e*Pn		Pn	16 56 56.9	+1.0
PKIN				*e*Sn		Sn	16 57 43.1	-0.7
DMN	Daman	4.40	317	*e*Pn		Pn	16 56 58.8	+0.1
KKN	Kakani	4.43	320	*e*Pn		Pn	16 56 58.7	-0.3
GKN	Gorkha	4.97	317	*e*Pn		Pn	16 57 05.9	-0.6
IMP	Imphal	4.99	84	*e*x		x	16 56 56.0	
IMP				*e*x		Sn	16 57 55.0	-8.1
KOLN	Koldanda	5.52	309	*e*Pn		Pn	16 57 13.2	-0.8
LSA	Lhasa	5.79	24	Pn		Pn	16 57 18.5	+0.7
LSA				S		Sn	16 58 21.9	-1.1
ALBI	Allahabad	6.12	280	*e*x		Pn	16 57 22.0	-0.3
VIS	Vishakhapatnam	8.20	217	*e*PKP		Pn	16 57 50.0	-0.9
VIS				*e*S		Sn	16 59 14.3	-7.9
PTH	Pithoragarh	8.97	307	*e*PKP		Pn	16 58 01.0	-0.4
NGP	Nagpur	9.27	251	*e*PKP		Pn	16 58 05.0	-0.6
NGP				*e*S		Sn	16 59 41.1	-7.6
BHPL	Bhopal	10.18	266	*e*PKP		Pn	16 58 17.0	-1.0
BHPL				AMb		AMB	16 58 19.1	
	comp=Z,18nm,0.2s							
BHPL				*e*S		Sn	16 59 59.7	-11
SONA	Sohna	10.91	293	*e*S		Sn	17 00 19.6	-9.1
NDI	New Delhi	10.94	295	*e*PKP		Pn	16 58 26.0	-2.4
NDI				*e*S		Sn	17 00 20.0	-10
DDI	Dehra Dun	10.97	305	*e*PKP		Pn	16 58 29.6	+0.8
DDI				*e*x		x	17 01 20.1	
AKL	Akola	11.21	253	*e*PKP		Pn	16 58 30.7	-1.4
AKL				*e*x		x	17 00 32.3	
AKL				AML		AML	17 01 54.3	
	comp=E,48nm,0.6s							
AKL				AML		AML	17 01 54.6	
	comp=N,79nm,0.7s							
CM31	Chiang Mai Arr	11.40	119	*e*Pn		Pn	16 58 33.6	-1.2
	comp=N,8.2nm,0.8s							
CMAR	Chiang Mai Arr	11.40	119	Pn		Pn	16 58 33.9	-0.9
	comp=N,0.2nm,0.3s,baz=305,slow=15,SNR=9.2							
KLP	Kalpa	11.49	310	*e*S		Sn	17 00 32.0	-11
KLP				AML		AML	17 01 20.8	
	comp=E,58nm,0.7s							
KLP				AML		AML	17 01 22.6	
	comp=N,44nm,0.4s							
HYB	Hyderabad	11.58	235	*e*P		Pn	16 58 37.0	-0.2
HYB				*e*S		Sn	17 00 40.0	-5.3
HYB	Hyderabad	11.58	235	*i* P		Pn	16 58 37.0	-0.2
HYB				*e*S		Sn	17 00 40.0	-5.3
KHET	Khetri	11.94	291	*e*S		Sn	17 00 42.8	-11
AJM	Ajmer	12.67	282	*e*S		Sn	17 01 00.2	-12
AJM				AML		AML	17 01 55.2	
	comp=N,26nm,0.2s							
AJM				AML		AML	17 02 02.4	
	comp=E,24nm,0.3s							
POO	Poona	14.81	250	*e*x		x	17 01 59.8	
PALK	Pallekele	18.59	205	*e*P		Pn	17 00 09.0	0.0
	comp=E,4.6nm,0.7s							
KBL	Kabul	19.67	305	*e*P		Pn	17 00 20.3	-1.6
	comp=E,18nm,1.0s							
ULHL	Ulahol	20.48	333	P		P	17 00 31.6	+2.5
	SNR=22							
KZA	Kyzart	20.77	331	P		P	17 00 34.3	+2.2
	SNR=22							
UCH	Uchtor	21.21	330	P		P	17 00 39.3	+2.3
	SNR=11							
UCH	Uchtor	21.21	330	*e*P		P	17 00 38.8	+1.9
	comp=E,12nm,0.8s,mb4.3							
TKM2	Tokmak 2	21.31	333	P		P	17 00 43.1	+5.2
	SNR=7.8							
TKM2	Tokmak 2	21.31	333	*e*P		P	17 00 37.2	-0.7
	comp=E,10nm,1.1s,mb4.1							
KBK	Karagaybulak	21.36	332	P		P	17 00 40.7	+2.2
	SNR=12							
AAK	Ala-Archa	21.55	331	P		P	17 00 41.4	+0.9
	comp=E,1.4nm,0.3s,mb3.9,baz=174,slow=7.5,SNR=8.1							
EKS2	Erkin-Say	21.89	330	P		P	17 00 45.8	+1.6
	SNR=16							
EKS2	Erkin-Say	21.89	330	*e*P		P	17 00 45.0	+0.8
	comp=E,19nm,0.9s,mb4.5							
KULM	Kulim	22.32	146	P		P	17 00 48.4	-0.6
	comp=E,7.2nm,0.8s,mb4.2							
MK31	Makanchi Array	22.89	349	*e*P		P	17 00 54.3	-0.4
MKAR	Makanchi Array	22.89	349	P		P	17 00 54.8	0.0
	comp=E,1.3nm,0.5s,mb3.6,baz=172,slow=10.0,SNR=19							
KURK	Kurchatov	27.36	346	P		P	17 01 35.9	0.0
	comp=E,4.6nm,0.7s,mb4.1,baz=166,slow=8.7,SNR=17							
KURK	Kurchatov	27.36	346	P		P	17 01 35.9	0.0
SONM	Songino Array	27.37	27	P		P	17 01 37.4	+1.3
	comp=E,1.0nm,0.5s,mb3.6,baz=213,slow=8.9,SNR=8.8							
ZALV	Zalesovo Beam	29.64	356	P		P	17 01 56.5	+0.3
	comp=E,1.7nm,0.7s,mb3.9,baz=176,slow=9.5,SNR=9.7							
ABKAR	Akbulak array	33.37	325	*e*P		P	17 02 29.4	+0.3
	comp=E,1.1nm,0.5s,mb4.0							
KSRS	Korea Array	36.00	59	LR		LR	17 20 22.6	
	comp=E,39nm,21.0s,baz=230,slow=41							
BRTR	Keskin Array B	48.20	302	P		P	17 04 31.4	-0.1
	comp=E,0.5nm,0.6s,mb3.7,baz=113,slow=12,SNR=4.3							
FINES	FINESS Array B	55.72	329	P		P	17 05 26.9	-0.1
	comp=E,3.4nm,0.8s,mb4.5,baz=108,slow=6.2,SNR=12							
WRA	Warramunga Arr	62.74	131	P		P	17 06 17.8	+1.6
	comp=E,0.3nm,0.7s,mb3.5,baz=323,slow=7.1,SNR=5.4							
WRA				pP		pP	17 06 24.7	-2.2
	comp=E,1.2nm,0.5s,baz=324,slow=6.9,SNR=9.3							
WRAB	Tennant Creek	62.75	131	*e*P		P	17 06 15.4	-0.8
	comp=E,8.2nm,1.3s,mb4.7							
NB2	NORSAR Subarra	62.82	328	P		P	17 06 15.7	-0.5
	comp=Z,2.4nm,0.8s,mb4.4,baz=88,slow=6.5							
NOA	NORSAR Array B	62.82	328	P		P	17 06 15.7	-0.5
	comp=Z,1.2nm,0.8s,mb4.1,baz=94,slow=6.2,SNR=4.2							
ASAR	Alice Springs	65.00	134	P		P	17 06 32.9	+1.9
	comp=Z,0.6nm,0.9s,mb3.6,baz=327,slow=6.8,SNR=6.6							
ASAR				pP		pP	17 06 39.4	-2.4
	comp=Z,1.2nm,0.9s,baz=314,slow=7.2,SNR=6.5							

ATH ***05*** *16:55:56.6, 37°.77N×21°.17E, h18km±3km, MD3.0/3*

ISCJB ***05*** *16:55:57.4±1.0, 37°.75N±0°.03×21°.29E±0°.05, h8km±10km, Error ellipse: s-maj=7.5km s-min=5.0km az=159.3*

CSEM ***05*** *16:55:57.9±0.3, 37°.75N×21°.26E, h20km, MD3.0, Error ellipse: s-maj=8.0km s-min=5.8km az=36.0*

THE ***05*** *16:55:58.2, 37°.79N×21°.31E, h2km±2km, ML3.0/4, Error ellipse: s-maj=2.8km s-min=0.5km az=359.0*

ISC 05 16:55:57.6±0.6, 37°.75N±0°.03×21°.28E±0°.04, h13km±4km, n38, σ1.05/58, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.34	25	*e*PB		Pg	16 56 04.0	-0.6
RLS				*e*SB		Sg	16 56 10.1	+0.8
RLS	Riolos of Patr	0.34	25	*e*Pb		Pg	16 56 04.0	-0.6
RLS				*e*Sb		Sg	16 56 10.1	+0.8
KFL	Anninata	0.53	313	P		Pg	16 56 07.9	-0.2
KFL				S		Sg	16 56 15.7	+0.5
KFL	Anninata	0.53	313	P		Pg	16 56 07.9	-0.2
KFL				S		Sg	16 56 15.7	+0.5
VLS	Valsamata	0.69	308	*e*PB		Pb	16 56 08.2	-3.4
VLS				*e*SN		Sg	16 56 18.0	-2.3
VLS	Valsamata	0.69	308	P		Pg	16 56 11.2	0.0
VLS				S		Sg	16 56 20.8	+0.5
VLS	Valsamata	0.69	308	P		Pg	16 56 11.2	0.0
VLS				S		Sg	16 56 20.8	+0.5
LAKA	Lakka	0.74	48	P		Pg	16 56 11.4	-0.6
LAKA				S		Sg	16 56 21.4	-0.3
LAKA	Lakka	0.74	48	P		Pg	16 56 11.4	-0.6
LAKA				S		Sg	16 56 21.4	-0.3
ITM	Ithomi	0.77	138	*e*PN		Pn	16 56 13.1	-1.0
ITM				*e*SN		Sn	16 56 24.7	-0.8
ITM	Ithomi	0.77	138	P		Pg	16 56 12.7	+0.2
ITM				S		Sg	16 56 25.0	+2.5
ITM	Ithomi	0.77	138	P		Pg	16 56 12.7	+0.2
ITM	Ithomi	0.77	138	*e*Pn		Pn	16 56 13.1	-1.0
ITM				S		Sg	16 56 25.0	+2.5
EFP	Efpalio	0.84	36	*e*PN		Pg	16 56 13.2	-0.7
EFP	Efpalio	0.84	36	P		Pg	16 56 13.2	-0.7
EFP	Efpalio	0.84	36	P		Pg	16 56 13.2	-0.7
GUR	Goura	0.86	77	*e*PB		Pb	16 56 13.9	-0.5
GUR				*e*SN		Sn	16 56 27.7	-0.2
GUR	Goura	0.86	77	P		Pg	16 56 13.7	-0.6
GUR				S		Sg	16 56 25.7	+0.1
GUR	Goura	0.86	77	P		Pg	16 56 13.7	-0.6
GUR				S		Sg	16 56 25.7	+0.1
GUR				*e*Sn		Sn	16 56 27.7	-0.2
PYL	PYLOS	0.93	156	*e*PN		Pn	16 56 15.4	-0.9
PYL	PYLOS	0.93	156	*e*Pn		Pn	16 56 15.4	-0.9
KALE	Kalithea	0.94	46	P		Pb	16 56 14.7	-1.0
KALE				S		Sb	16 56 27.6	-0.4
KALE	Kalithea	0.94	46	P		Pb	16 56 14.7	-1.0
KALE				S		Sb	16 56 27.6	-0.4
LKD2	Lefkada island	1.15	335	P		Pb	16 56 18.4	-0.9
LKD2				S		Sb	16 56 35.3	+1.1
LKD2	Lefkada island	1.15	335	P		Pb	16 56 18.4	-0.9
LKD2				S		Sb	16 56 35.3	+1.1
DSF	Desfina	1.19	56	P		Pn	16 56 19.5	-0.4
DSF	Desfina	1.19	56	P		Pn	16 56 19.5	-0.4
LTK	Loutraki	1.36	78	*e*PN		Pn	16 56 24.2	+1.9
LTK	Loutraki	1.36	78	P		Pn	16 56 23.9	+1.6
LTK	Loutraki	1.36	78	P		Pn	16 56 23.9	+1.6
LTK	Loutraki	1.36	78	*e*Pn		Pn	16 56 24.2	+1.9
AGG	Agios Georgios	1.52	33	P		Pn	16 56 26.3	+1.9
AGG	Agios Georgios	1.52	33	P		Pn	16 56 26.3	+1.9
DID	Didima	1.57	98	*e*PN		Pn	16 56 27.5	+2.3
DID	Didima	1.57	98	P		Pn	16 56 25.7	+0.5
DID	Didima	1.57	98	P		Pn	16 56 25.7	+0.5
THL	Klokotos Trika	1.90	17	P		Pn	16 56 32.5	+2.7
THL	Klokotos Trika	1.90	17	P		Pn	16 56 32.5	+2.7

NIED ***05*** *17:08:00, 20°.20N×121°.60E, h14km, Mw4.2 Best double couple: M0:1.93000×10^15 NP1:φs96.00000°, δ73.00000°, λ-138.00000°. NP2:φs351.00000°, δ50.00000°, λ-23.00000°.*

IDC ***05*** *17:08:24.9±0.6, 20°.15N×121°.42E, h0km, mb4.3/18, mb1 4.4/19, mb1mx4.4/25, mbtmp4.3/19, ML4.4/1, MS3.5/7, Ms1 3.6/7, ms1mx3.1/34, Error ellipse: s-maj=20.3km s-min=13.9km az=71.0*

MOS ***05*** *17:08:27.9±0.9, 20°.18N×121°.55E, h33km, mb4.8/25, Error ellipse: s-maj=12.5km s-min=6.3km az=111.7*

MAN ***05*** *17:08:28, 20°.02N×121°.26E, h1km, mb5.4, ML4.4, MS4.6*

BJI ***05*** *17:08:29.6, 20°.27N×121°.37E, h37km, mB4.4/21, mb4.4/32, ML4.1/2, Ms3.9/27, Ms7 3.7/27*

NEIC ***05*** *17:08:30.3±0.9, 20°.21N×121°.52E, h38km±7km, mb4.5/20, Error ellipse: s-maj=8.1km s-min=7.1km az=107.0*

ISCJB ***05*** *17:08:30.0±0.4, 20°.23N±0°.02×121°.52E±0°.03, h49km±4km, mb4.4/56, MS3.5/14, Error ellipse: s-maj=4.7km s-min=3.1km az=27.8*

JMA ***05*** *17:08:31.7±0.6, 20°.23N×121°.60E, h68km, M4.8*

ISC 05 17:08:31.9±0.3, 20°.21N±0°.02×121°.51E±0°.03, h51km±3km, h37km±4.0km: pP-P, n155, σ1.02/183, mb4.4/56, MS3.5/14, 3C-5D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBP	Basco	0.48	62	*e*P		Pn	17 08 43.2	+0.1
SGCP	Mt. Cagua	2.03	165	*e*P		Pn	17 09 03.9	+0.2
PIP	Pasuquin	2.06	204	⇑*i*P		Pn	17 09 00.1	-4.1
PIP				*e*S		Sn	17 09 24.1	-4.5
APYP	Conner	2.35	186	*e*P		Pn	17 09 08.1	-0.1
CVP	Callao Caves	2.52	173	*e*P		Pn	17 09 09.3	-1.0
CVP				*e*S		Sn	17 09 39.9	+0.1
TWG	Pinlang	2.63	351	*e*Pn		Pn	17 09 08.3	-3.6
ABRA	Dolores	2.66	197	*e*P		Pn	17 09 10.9	-1.4
YULB	Yu-li	3.17	356	*e*Pn		Pn	17 09 16.1	-3.2
TPUB	Ta-pu	3.18	345	*e*Pn		Pn	17 09 16.4	-3.1
PALP	Palanan	3.25	164	*e*P		Pn	17 09 22.5	+2.1
CAUP	Cauayan	3.27	175	*e*P		Pn	17 09 22.5	+1.9
SSLB	Suanglung	3.59	352	*e*Pn		Pn	17 09 23.5	-1.7
NACB	Ninganchiao	3.94	1	*e*Pn		Pn	17 09 29.1	-0.8
HATJ	Hateruma jima	4.38	29	P		Pn	17 09 36.1	+0.2
HATJ				S		Sn	17 10 25.7	+0.1
YHNB	Yeheng	4.44	358	*e*Pn		Pn	17 09 36.5	-0.2
BALP	Baler	4.45	179	*e*P		Pn	17 09 37.9	+1.0
YOJ	Yonaguni jima	4.45	18	P		Pn	17 09 37.9	+1.0
YOJ				S		Sn	17 10 28.5	+1.1
IRIF	Iriomote-Funau	4.59	26	P		Pn	17 09 40.1	+1.3
IRIF				S		Sn	17 10 32.1	+1.3
JKRS	Kuro-shima	4.62	30	P		Pn	17 09 39.7	+0.4
JKRS				S		Sn	17 10 31.8	+0.1
TATO	Taipei	4.74	360	*e*Pn		Pn	17 09 41.1	+0.2
JIJ	Ishigaki jima	4.80

KMI	**Kunming**	**17.99 289**	P	**Pn**	**17 12 39.0 +0.6**	
KMI			pP	pP	17 12 46.8 -3.2	
KMI			sP	sP	17 12 51.9 -4.6	
KMI			PP		17 12 54.8	
KMI			S	**S**	**17 15 55.7 -6.6**	
KMI			sS	sS	17 16 09.5 -11	
KMI			SS		17 16 19.4	
KMI			pmax	pmax		
	comp=Z,3.0nm,0.9s					
KMI			pmax	pmax		
	comp=Z,36nm,3.6s					
KMI			LR	LR		
	comp=N,85nm,13.1s					
KMI			LR	LR		
	comp=E,180nm,14.5s					
KMI			LR	LR		
	comp=Z,130nm,14.5s					
KSRS	**Korea Array**	**18.06 17**	P	**Pn**	**17 12 39.3 +0.1**	
	comp=Z,1.3nm,0.3s,baz=197,slow=11,SNR=49					
CD2	**Chengdu**	**19.21 307**	P	**Pn**	**17 12 51.2 -1.8**	
CD2			pP	pP	17 12 59.3 -4.0	
CD2			sP	sP	17 13 03.8 -6.0	
CD2			PP		17 13 08.4	
CD2			S	**S**	**17 16 20.4 -6.2**	
CD2			sS	sS	17 16 33.2 -12	
CD2			pmax	pmax		
	comp=Z,20nm,0.8s					
CD2			pmax	pmax		
	comp=Z,50nm,4.9s					
CD2			LR	LR		
	comp=N,270nm,17.2s					
CD2			LR	LR		
	comp=Z,280nm,15.5s					
CBIJ	**Chichi jima**	**20.12 66**	LR	LR	17 19 14.2	
	comp=Z,89nm,21.6s,MS3.1,baz=29,slow=32					
BJI	**Beijing**	**20.28 348**	P	**P**	**17 13 03.5 +0.2**	
BJI			pmax	pmax		
	comp=Z,63nm,0.9s					
BJI			LR	LR		
	comp=N,62nm,19.2s,MS3.3					
BJI			LR	LR		
	comp=E,110nm,17.1s,MS3.3					
BJI			LR	LR		
	comp=Z,100nm,21.5s,MS3.1					
JHJ	**Hachijo jima 2**	**20.74 48**	LR	LR	17 19 28.6	
	comp=Z,60nm,20.6s,MS3.0,baz=284,slow=32					
CM31	**Chiang Mai Arr**	**21.36 269**	Pn	**P**	**17 13 14.8 -0.3**	
CMAR	**Chiang Mai Arr**	**21.36 269**	P	**P**	**17 13 14.8 -0.4**	
	comp=Z,2.3nm,0.8s,mb3.6,baz=76,slow=8.3,SNR=14					
CMAR			PcP	PcP	17 17 18.5 +0.8	
	comp=Z,0.8nm,0.6s,baz=132,slow=0.5,SNR=7.0					
CMAR			LR	LR	17 21 49.0	
	comp=Z,100nm,19.2s,MS3.2,baz=235,slow=38					
CMAR	**Chiang Mai Arr**	**21.36 269**	P	**P**	**17 13 14.8 -0.4**	
CMAR					17 17 18.5	
KSM	**Kuching**	**21.61 212**	*e*Pn	**P**	**17 13 18.8 +1.0**	
MAJO	**Matsushiro**	**21.86 38**	*e*P	**P**	**17 13 20.1 -0.3**	
MAJO			pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.2					
MAJO	**Matsushiro**	**21.86 38**	*e*Pn	**P**	**17 13 20.1 -0.3**	
	comp=Z,10.0nm,1.1s,mb4.2					
MAT	**Matsushiro**	**21.86 38**	P	**P**	**17 13 20.4 0.0**	
MAT			S	**S**	**17 17 15.0 -4.1**	
MJAR	**Matsushiro Arr**	**21.86 38**	P	**P**	**17 13 21.6 +1.3**	
	comp=Z,1.0nm,0.5s,mb3.5,baz=225,slow=7.7,SNR=11					
LZH	**Lanzhou**	**22.14 319**	*e*P	**P**	**17 13 23.8 +0.5**	
LZH			PP		17 13 51.0	
LZH			*e*S	**S**	**17 17 20.0 -4.4**	
LZH			sS	sS	17 17 37.2 -6.6	
LZH			SS		17 18 00.6	
LZH			pmax	pmax		
	comp=Z,31nm,1.3s,mb4.6					
LZH			pmax	pmax		
	comp=Z,65nm,4.6s					
HHC	**Hu-ho-hao-te**	**22.25 340**	*e*P	**P**	**17 13 25.0 +0.6**	
HHC			sP	sP	17 13 40.0 -2.7	
HHC			PP		17 13 52.2	
HHC			PcP	PcP	17 17 21.1 +2.0	
HHC			S	**S**	**17 17 23.3 -3.1**	
HHC			sS	sS	17 17 40.6 -5.2	
HHC			SS		17 18 04.8	
HHC			ScP	ScP	17 20 54.2 +1.8	
HHC			PcS	PcS	17 20 58.7 +1.1	
HHC			pmax	pmax		
	comp=Z,19nm,0.5s,mb4.8					
HHC			pmax	pmax		
	comp=Z,93nm,5.3s					
HHC			LR	LR		
	comp=N,230nm,11.6s,MS4.1					
HHC			LR	LR		
	comp=E,380nm,11.4s,MS4.1					
HHC			LR	LR		
	comp=Z,390nm,11.6s,MS4.1					
CN2	**Changchun**	**23.75 7**	*e*P	**P**	**17 13 40.5 +1.0**	
CN2			*e*sP	sP	17 13 53.8 -4.8	
CN2			*e*S	**S**	**17 17 50.7 -0.4**	
CN2			pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.4					
CN2			pmax	pmax		
	comp=Z,200nm,3.0s					
CN2			LR	LR		
	comp=N,500nm,17.0s,MS4.1					
CN2			LR	LR		
	comp=E,300nm,17.0s,MS4.1					
CN2			LR	LR		
	comp=Z,200nm,18.0s,MS3.6					
KULM	**Kulim**	**25.13 237**	*e*P	**P**	**17 13 44.6 -7.8**	
MDJ	**Mudanjiang**	**25.25 14**	P	**P**	**17 13 52.4 -0.7**	
MDJ			pP	pP	17 14 00.9 -5.2	
MDJ			sP	sP	17 14 05.0 -7.2	
MDJ			S	**S**	**17 18 16.1 +1.0**	
MDJ			sS	sS	17 18 30.8 -6.3	
MDJ			ScP	ScP	17 21 02.3 +1.9	
MDJ			PcS	PcS	17 21 06.1 +0.5	
MDJ			pmax	pmax		
	comp=Z,7.0nm,1.8s,mb3.9					
MDJ			pmax	pmax		
	comp=Z,47nm,6.2s					
MDJ			LR	LR		
	comp=N,45nm,25.2s,MS3.2					
MDJ			LR	LR		
	comp=E,84nm,22.1s,MS3.2					
MDJ			LR	LR		
	comp=Z,80nm,50.4s					
GTA	**Gaotai**	**26.72 320**	P	**P**	**17 14 07.1 +0.6**	
GTA			pP	pP	17 14 17.4 -2.2	
GTA			sP	sP	17 14 21.6 -4.1	
GTA			PP		17 14 53.7	
GTA			S	**S**	**17 18 40.6 +2.1**	
GTA			sS	sS	17 18 56.4 -4.3	
GTA			pmax	pmax		
	comp=Z,5.0nm,1.2s,mb3.9					
GTA			pmax	pmax		
	comp=Z,86nm,6.2s					
GTA			LR	LR		
	comp=N,79nm,14.9s,MS3.5					
GTA			LR	LR		
	comp=E,92nm,16.7s,MS3.5					
GTA			LR	LR		
	comp=Z,120nm,13.4s,MS3.6					
LSA	**Lhasa**	**29.03 295**	P	**P**	**17 14 27.6 +0.4**	
ASAJ	**Asahikawa**	**29.61 32**	P	**P**	**17 14 32.9 +0.7**	
	comp=Z,4.4nm,0.7s,mb4.3,baz=244,slow=16,SNR=9.7					
ULN	**Ulaanbaatar**	**29.97 340**	*e*P	**P**	**17 14 35.7 +0.4**	
ULN			pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0					
ULN	**Ulaanbaatar**	**29.97 340**	*e*P	**P**	**17 14 35.7 +0.4**	
	comp=Z,2.5nm,0.6s,mb4.1					
SONM	**Songino Array**	**30.15 340**	P	**P**	**17 14 37.3 +0.3**	
	comp=Z,1.6nm,0.4s,mb4.1,baz=158,slow=10.0,SNR=19					
HABR	**Khabarovsk**	**30.23 18**	*e*P	**P**	**17 14 34.4 -3.2**	
HABR			*e**PP	pP	17 14 43.6 -7.2	
HABR			*e*S	**S**	**17 19 32.0 -1.5**	
HABR			*e**SS	sS	17 19 47.5 -8.3	
HABR			*e*		17 21 17.6	
HABR			*e*		17 25 09.9	
HABR			pmax	pmax		
	comp=E,27nm,2.9s					
HABR			pmax	pmax		
	comp=Z,25nm,2.0s,mb4.6					
HABR			pmax	pmax		
	comp=N,17nm,2.5s					
HABR			MLR	MLR		
	comp=Z,69nm,18.0s,MS3.3					
YSS	**Yuzh-Sakhalins**	**31.80 28**	*e*P	**P**	**17 14 52.0 +0.5**	
YSS	**Yuzh-Sakhalins**	**31.80 28**	*e*P	**P**	**17 14 52.2 +0.7**	
	comp=Z,27nm,1.4s,mb4.9					
TLY	**Talaya**	**34.38 340**	*e*P	**P**	**17 15 14.4 +0.5**	
IRK	**Irkutsk**	**34.67 341**	*e*P	**P**	**17 15 16.6 +0.1**	
IRK			pmax	pmax		
	comp=Z,15nm,0.7s,mb5.0					
WMQ	**Urumqi**	**36.70 318**	*e*P	**P**	**17 15 35.5 +1.6**	
WMQ			pP	pP	17 15 45.2 -2.1	
WMQ			sP	sP	17 15 49.2 -4.1	
WMQ			pmax	pmax		
	comp=Z,15nm,0.8s,mb4.9					
WMQ			pmax	pmax		
	comp=Z,110nm,6.0s					
WMQ			LR	LR		
	comp=N,67nm,20.5s,MS3.6					
WMQ			LR	LR		
	comp=E,82nm,24.0s,MS3.6					
WMQ			LR	LR		
	comp=Z,58nm,21.2s,MS3.3					
MK31	**Makanchi Array**	**41.45 319**	*e*P	**P**	**17 16 14.0 +0.4**	
MKAR	**Makanchi Array**	**41.45 319**	P	**P**	**17 16 14.2 +0.5**	
	comp=Z,8.5nm,0.6s,mb4.6,baz=116,slow=9.6,SNR=128					
MKAR			PcP	PcP	17 18 10.8 +0.1	
	comp=Z,1.3nm,0.8s,baz=107,slow=4.2,SNR=3.8					
KRAR	**Krasnoyarsk**	**41.66 336**	*e*P	**P**	**17 16 14.7 -0.5**	
KRAR			pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.2					
WRAB	**Tennant Creek**	**41.83 162**	*e*P	**P**	**17 16 15.3 -1.7**	
WRAB			pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.3					
WRAB	**Tennant Creek**	**41.83 162**	*e*P	**P**	**17 16 15.3 -1.6**	
	comp=Z,5.3nm,0.6s,mb4.3					
WRA	**Warramunga Arr**	**41.84 162**	P	**P**	**17 16 15.9 -1.1**	
	comp=Z,5.1nm,0.6s,mb4.3,baz=344,slow=9.2,SNR=51					
YAK	**Yakutsk**	**42.17 6**	*e*P	**P**	**17 16 18.2 -1.0**	
YAK			pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.6					
YAK	**Yakutsk**	**42.17 6**	*e*P	**P**	**17 16 18.2 -1.0**	
	comp=Z,8.5nm,0.6s,mb4.5					
PETK	**Petropavlovsk-**	**43.03 31**	P	**P**	**17 16 26.9 +0.5**	
	comp=Z,3.3nm,0.7s,mb4.2,baz=183,slow=3.5,SNR=12					
PET	**Petropavlovsk**	**43.45 32**	*e*P	**P**	**17 16 30.3 +0.5**	
ZAA0	**Zalesovo Array**	**43.76 329**	*e*P	**P**	**17 16 32.1 -0.1**	
ZALV	**Zalesovo Beam**	**43.76 329**	P	**P**	**17 16 32.1 -0.1**	
	comp=Z,8.9nm,0.7s,mb4.6,baz=115,slow=7.6,SNR=49					
ZALV			LR	LR	17 35 58.2	
	comp=Z,28nm,19.3s,MS3.2,baz=237,slow=38					
TKM2	**Tokmak 2**	**44.52 311**	*e*P	**P**	**17 16 39.4 +0.9**	
TKM2			*e*	pP	17 16 52.2 +0.1	
TKM2			pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.3					
TKM2	**Tokmak 2**	**44.52 311**	*e*P	**P**	**17 16 39.4 +1.0**	
	comp=Z,5.3nm,0.9s,mb4.4					
TKM2			*e*	pP	17 16 52.2 +0.1	
NVS	**Novosibirsk**	**45.04 330**	⇓*i*P	**P**	**17 16 41.9 -0.5**	
NVS			pmax	pmax		
	comp=Z,19nm,2.0s,mb4.6					
NVS			pmax	pmax		
	comp=N,11nm,1.8s					
NVS			pmax	pmax		
	comp=E,8.0nm,1.8s					
UCH	**Uchtor**	**45.11 310**	*e*P	**P**	**17 16 44.9 +1.7**	
UCH			pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5					
UCH	**Uchtor**	**45.11 310**	*e*P	**P**	**17 16 44.9 +1.7**	
	comp=Z,8.5nm,1.0s,mb4.5					
AAK	**Ala-Archa**	**45.23 310**	LR	LR	17 38 24.7	
	comp=Z,136nm,18.3s,MS3.9,baz=86,slow=40					
ASAR	**Alice Springs**	**45.26 164**	P	**P**	**17 16 44.2 -0.3**	
	comp=Z,2.5nm,0.4s,mb4.4,baz=347,slow=7.5,SNR=68					
KURK	**Kurchatov**	**45.37 323**	P	**P**	**17 16 45.1 0.0**	
	comp=Z,6.3nm,0.5s,mb4.7,baz=117,slow=7.4,SNR=19					
KURK	**Kurchatov**	**45.37 323**	*d i*P	**P**	**17 16 45.4 +0.3**	
KURK			pmax	pmax		
	comp=Z,12nm,1.2s,mb4.6					
KURK	**Kurchatov**	**45.37 323**	*e*P	**P**	**17 16 45.0 -0.1**	
	comp=Z,13nm,1.3s,mb4.6					
EKS2	**Erkin-Say**	**45.74 310**	*e*P	**P**	**17 16 49.1 +0.9**	
BVAR	**Borovoye Array**	**50.96 323**	P	**P**	**17 17 28.6 +0.3**	
	comp=Z,2.1nm,0.5s,mb4.3,baz=111,slow=7.9,SNR=15					
BVAR			PcP	PcP	17 18 43.8 -0.1	
	comp=Z,2.7nm,0.5s,baz=113,slow=3.7,SNR=7.8					
BRVK	**Borovoye**	**51.03 323**	*d i*P	**P**	**17 17 29.3 +0.5**	
BRVK			pmax	pmax		
	comp=Z,12nm,1.2s,mb4.7					
BRVK	**Borovoye**	**51.03 323**	*e*P	**P**	**17 17 29.4 +0.6**	
	comp=Z,6.8nm,0.9s,mb4.6					
TIXI	**Tiksi**	**51.62 3**	*e*P	**P**	**17 17 31.4 -1.5**	
TIXI			pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.5					
TIXI	**Tiksi**	**51.62 3**	*e*P	**P**	**17 17 31.5 -1.4**	
	comp=Z,4.2nm,0.6s,mb4.5					
ZRNK	**Zerenda**	**51.73 322**	*i* P	**P**	**17 17 34.1 +0.1**	
ZRNK			pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6					
STKA	**Stephens Creek**	**55.26 159**	P	**P**	**17 18 00.5 +0.5**	
	comp=Z,2.4nm,0.7s,mb4.3,baz=345,slow=7.0,SNR=6.0					
STKA	**Stephens Creek**	**55.26 159**	*e*P	**P**	**17 18 00.7 +0.7**	
BILL	**Bilibino**	**55.31 19**	*e*P	**P**	**17 17 59.4 -0.6**	
BILL			pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7					
BILL	**Bilibino**	**55.31 19**	*e*P	**P**	**17 17 59.4 -0.6**	
	comp=Z,3.8nm,0.5s,mb4.7					
AB31	**Akbulak array**	**56.46 316**	*i* P	**P**	**17 18 08.6 +0.1**	
AB31			pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6					
ABKAR	**Akbulak array**	**56.46 316**	*e*P	**P**	**17 18 08.7 +0.1**	
	comp=Z,1.5nm,0.4s,mb4.4					
ABKAR			*e*PcP	PcP	17 19 03.4 -1.5	
SVE	**Sverdlovsk**	**57.44 325**	⇓*e*P	**P**	**17 18 16.2 +0.9**	
SVE			pmax	pmax		
	comp=Z,18nm,1.1s,mb5.0					
ARU	**Arti**	**58.47 325**	*c i*P	**P**	**17 18 22.8 +0.3**	
ARU			*e*		17 20 31.9	
ARU			S	**S**	**17 26 27.0 +5.0**	
ARU			SS	SS	17 30 18.8 +4.1	
ARU			pmax	pmax		
	comp=Z,16nm,1.7s,mb4.8					
ARU	**Arti**	**58.47 325**	*e*P	**P**	**17 18 22.3 -0.2**	
	comp=Z,5.6nm,0.5s,mb4.8					
ZEI	**Tsey**	**67.62 309**	*e*P	**P**	**17 19 19.6 -3.9**	
ZEI			pmax	pmax		
	comp=Z,7.0nm,0.4s,mb5.0					
KIV	**Kislovodsk**	**68.34 310**	*c i*P	**P**	**17 19 27.3 -0.7**	
KIV			pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6					
PPLA	**Purkeypile**	**70.55 29**	*e*P	**P**	**17 19 42.3 +1.1**	
	comp=Z,15nm,1.2s,mb4.8					
OBN	**Obninsk**	**70.81 323**	*e*P	**P**	**17 19 42.7 -0.3**	
OBN			pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.4					
BPAW	**Bear Paw Mtn.**	**70.94 28**	*e*P	**P**	**17 19 44.4 +0.8**	
	comp=Z,8.5nm,1.2s,mb4.5					
MCK	**McKinley**	**71.89 28**	*e*P	**P**	**17 19 47.4 -1.9**	
MCK			pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5					
MCK	**McKinley**	**71.89 28**	*e*P	**P**	**17 19 47.4 -1.9**	
	comp=Z,6.6nm,1.1s,mb4.5					
PMR	**Palmer**	**72.14 30**	P	**P**	**17 19 49.6 -1.3**	
COLA	**College**	**72.17 27**	P	**P**	**17 19 56.2 +5.2**	
JOF	**Joensuu**	**72.31 331**	*e*P	**P**	**17 19 51.0 -0.9**	
JOF	**Joensuu**	**72.31 331**	*e*p	**P**	**17 19 51.0 -0.9**	
	comp=Z,4.3nm,0.5s,mb4.6					
ARCES	**ARCESS Array B**	**73.32 339**	P	**P**	**17 19 58.0 +0.3**	
	comp=Z,1.8nm,0.5s,mb4.2,baz=72,slow=6.8,SNR=14					
ARE0	**ARCESS Array S**	**73.32 339**	P	**P**	**17 19 57.7 -0.1**	
KAF	**Kangasniemi**	**74.75 331**	*e*P	**P**	**17 20 05.4 -0.8**	
KAF			pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3					
KAF	**Kangasniemi**	**74.75 331**	*e*P	**P**	**17 20 05.4 -0.8**	
	comp=Z,2.4nm,0.5s,mb4.4					
KAF	**Kangasniemi**	**74.75 331**	*e*p	**P**	**17 20 05.4 -0.8**	
	comp=Z,2.4nm,0.5s,mb4.4					
EGAK	**Eagle**	**74.99 26**	*e*P	**P**	**17 20 07.8 +0.2**	
	comp=Z,3.8nm,0.7s,mb4.4					
FINES	**FINESS Array B**	**75.02 330**	P	**P**	**17 20 08.0 +0.2**	
	comp=Z,4.0nm,0.7s,mb4.5,baz=46,slow=6.4,SNR=15					
BRTR	**Keskin Array B**	**75.79 307**	P	**P**	**17 20 12.7 0.0**	
	comp=Z,0.9nm,0.5s,mb4.0,baz=66,slow=4.2,SNR=5.2					
DAWY	**Dawson**	**75.93 27**	*e*P	**P**	**17 20 13.4 +0.5**	
AKASG	**Malin Array Be**	**76.04 319**	P	**P**	**17 20 13.0 -0.8**	
	comp=Z,4.2nm,0.7s,mb4.5,baz=62,slow=6.2,SNR=6.1					
INK	**Inuvik**	**76.78 22**	*e*P	**P**	**17 20 17.2 -0.5**	
INK			pmax	pmax		
	comp=Z,4.0nm,0.8s					
INK	**Inuvik**	**76.78 22**	*e*P	**P**	**17 20 17.2 -0.5**	
	comp=Z,4.0nm,0.8s,mb4.4					
SUW	**Suwalki**	**78.64 323**	*e*P	**P**	**17 20 27.0 -1.3**	
BUR08	**Bucovina Ar. S**	**79.44 317**	*e*P	**P**	**17 20 32.7 -0.1**	
SIT	**Sitka**	**80.17 33**	*e*P	**P**	**17 20 35.0 -1.6**	
NB2	**NORSAR Subarra**	**81.86 333**	P	**P**	**17 20 45.0 -0.5**	
	comp=Z,13nm,1.4s,mb4.7,baz=61,slow=5.3					
NOA	**NORSAR Array B**	**81.86 333**	P	**P**	**17 20 44.9 -0.6**	
	comp=Z,1.9nm,0.7s,mb4.2,baz=62,slow=5.3,SNR=5.8					
NOA			LR	LR	18 00 19.8	
	comp=Z,47nm,20.3s,MS3.8,baz=45,slow=38					
OJC	**Ojcow**	**81.91 321**	*e*P	**P**	**17 20 44.2 -1.8**	
VYHS	**Vyhne**	**83.14 319**	*e*P	**P**	**17 20 53.0 +0.6**	
VYHS			pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.2					
VYHS	**Vyhne**	**83.14 319**	*e*P	**P**	**17 20 53.0 +0.6**	
	comp=Z,3.4nm,1.3s,mb4.2					
VYHS	**Vyhne**	**83.14 319**	*e*P	**P**	**17 20 53.0 +0.6**	
MORC	**Moravsky Berou**	**83.42 321**	P	**P**	**17 20 52.5 -1.4**	
KSP	**Ksiaz**	**83.72 322**	⇓*e*P	**P**	**17 20 55.9 +0.5**	
DPC	**Dobruska-Polom**	**83.91 322**	*e*P	**P**	**17 20 56.9 +0.6**	
UPC	**Upice**	**84.03 322**	*e*P	**P**	**17 20 57.4 +0.5**	
PVCC	**Panska Ves**	**84.85 322**	*e*P	**P**	**17 21 01.2 +0.1**	
BRG	**Bergqiesshubel**	**85.06 323**	*i* P	**P**	**17 21 02.4 +0.3**	
	comp=Z,6.5nm,1.4s,mb4.6					
BRG	**Berggiesshubel**	**85.06 323**	*i* P	**P**	**17 21 02.4 +0.3**	
BRG			pmax	pmax		
	comp=Z,4.0nm,1.4s,mb4.4					
PRU	**Pruhonice**	**85.10 322**	*e*P	**P**	**17 21 03.3 +0.9**	
CLL	**Collm**	**85.40 323**	*i* P	**P**	**17 21 04.1 +0.3**	
CLL	**Collm**	**85.40 323**	*i* P	**P**	**17 21 04.1 +0.3**	
	comp=Z,7.0nm,1.3s,mb4.6					
KHC	**Kasperske Hory**	**86.04 321**	*e*P	**P**	**17 21 09.0 +1.9**	
YKA	**Yellowknife Ar**	**86.50 23**	P	**P**	**17 21 09.4 +0.4**	
	comp=Z,1.7nm,0.7s,mb4.4,baz=311,slow=4.6,SNR=5.9					
PPT	**Papeete**	**94.94 107**	LR	LR	18 00 23.8	
	comp=Z,58nm,21.3s,MS4.0,baz=353,slow=33					

*ISCJB **05** 17:25:31.4±0.7,31°.18N±0°.04×103°.94E±0°.08, h10km, mb3.3/3, Error ellipse: s-maj=10.3km s-min=5.5km az=17.1*

*IDC **05** 17:25:31.9±1.4,31°.00N×103°.75E, h0km, mb3.2/4, mb1 3.4/5, mb1mx3.3/23, mbtmp3.2/5, ML3.2/1, Error ellipse: s-maj=43.4km s-min=24.5km az=62.0*

*BJI **05** 17:25:34.3,30°.96N×103°.62E, h16km, ML3.1/12*

ISC 05 17:25:34.0±0.7,31°.13N±0°.04×103°.79E±0°.08, h10km, n9, σ1§12/13, mb3.3/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.95**	**1**	*e*Pg	**Pg**	**17 27 08.7**	**-0.1**
LZH				Sg	**Sg**	**17 28 12.7**	**-0.1**
LZH				smax			
	comp=N,23nm,0.7s						
LZH				smax			
	comp=E,23nm,0.5s						
XAN	**Xi'an**	**5.21**	**55**	Pg	**Pg**	**17 27 10.6**	**-3.3**
XAN				Sn	**Sn**	**17 27 54.3**	**+2.1**
XAN				Sg	**Sg**	**17 28 21.2**	**-0.2**
XAN				smax			
	comp=N,39nm,0.9s						
XAN				smax			
	comp=E,18nm,0.8s						
KMI	**Kunming**	**6.05**	**189**	Pn	**Pn**	**17 26 57.7**	**-5.9**
KMI				Sn	**Sn**	**17 28 13.3**	**+0.3**
KMI				smax			
	comp=N,10.0nm,0.7s						
KMI				smax			
	comp=E,11nm,1.0s						
CMAR	**Chiang Mai Arr**	**13.36**	**200**	Pn	**Pn**	**17 28 46.9**	**+3.1**
	comp=E,0.1nm,0.3s,baz=8.6,slow=9.3,SNR=2.6						
SONM	**Songino Array**	**16.80**	**6**	Pn	**Pn**	**17 29 29.2**	**-0.1**
	comp=E,0.1nm,0.3s,baz=192,slow=10,SNR=2.1						
KSRS	**Korea Array**	**20.89**	**66**	P	**P**	**17 30 16.8**	**+0.5**
	comp=E,0.7nm,0.6s,baz=266,slow=12,SNR=5.3						
MKAR	**Makanchi Array**	**22.79**	**319**	P	**P**	**17 30 37.0**	**+0.4**
	comp=E,0.4nm,0.8s,mb2.9,baz=129,slow=11,SNR=2.7						
WRA	**Warramunga Arr**	**58.64**	**146**	P	**P**	**17 35 30.6**	**-1.0**
	comp=E,0.6nm,0.6s,mb3.8,baz=338,slow=7.8,SNR=12						
ASAR	**Alice Springs**	**61.65**	**148**	P	**P**	**17 35 50.8**	**-1.4**
	comp=E,0.1nm,0.5s,mb3.2,baz=336,slow=7.3,SNR=5.2						

*CSEM **05** 17:42:23.7±0.3, 42°.07N×15°.64E, h10km, ML3.2/3, Error ellipse: s-maj=5.8km s-min=4.3km az=33.0*

*ISCJB **05** 17:42:24.9±0.5, 42°.07N±0°.03×15°.62E±0°.04, h25km±4km, Error ellipse: s-maj=5.3km s-min=3.9km az=38.6*

*ROM **05** 17:42:25.1±0.2, 42°.02N×15°.63E, h28km±1km, MI3.0/35, Error ellipse: s-maj=3.2km s-min=1.8km az=21.0*

*VIE **05** 17:42:27.0±0.9, 42°.28N×15°.48E, h10km, mb2.8/3, ML3.2/3, Error ellipse: s-maj=9.1km s-min=3.3km az=134.0 159 km SSW of Split*

ISC 05 17:42:25.5±0.5, 42°.04N±0°.03×15°.60E±0°.03, h24km±4km, n88, σ0§60/104, 1C-1D, Adriatic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGRT	**San Giovanni R**	**0.30**	**160**	Pg	**Pb**	**17 42 32.2**	**-0.3**
SGRT				Sg	**Sb**	**17 42 37.5**	**+0.3**
	1μm,0.1s						
SGRT	**San Giovanni R**	**0.30**	**160**	Pg	**Pb**	**17 42 32.2**	**-0.3**
RGNG	**Rignano Grg**	**0.36**	**182**	Pg	**Pb**	**17 42 32.8**	**-0.6**
RGNG				Sg	**Sb**	**17 42 37.8**	**-1.0**
RGNG	**Rignano Grg**	**0.36**	**182**	Pg	**Pb**	**17 42 32.8**	**-0.6**
RGNG				Sg	**Sb**	**17 42 37.8**	**-1.0**
MSAG	**Monte S. Angel**	**0.40**	**145**	Pg	**Pb**	**17 42 34.1**	**+0.1**
MSAG				Sg	**Sb**	**17 42 40.5**	**+0.8**
	2μm,0.2s						
MSAG	**Monte S. Angel**	**0.40**	**145**	Pg	**Pb**	**17 42 34.1**	**+0.1**
FG2	**Serracapriola**	**0.40**	**235**	Pg	**Pb**	**17 42 33.5**	**-0.6**
	587nm,0.2s						
FG2	**Serracapriola**	**0.40**	**235**	Pg	**Pb**	**17 42 33.5**	**-0.6**
	587nm,0.2s						
MS1	**Monte Sant'Ang**	**0.42**	**143**	*e*Pg	**Pb**	**17 42 33.8**	**-0.5**
MS1				*e*Sg	**Sb**	**17 42 41.0**	**+0.7**
MELA	**Melanico ??? S**	**0.49**	**227**	Pg	**Pb**	**17 42 35.1**	**-0.3**
MELA				Sg	**Sb**	**17 42 42.7**	**+0.5**
	815nm,0.5s						
MELA	**Melanico ??? S**	**0.49**	**227**	Pg	**Pb**	**17 42 35.1**	**-0.3**
MELA				Sg	**Sb**	**17 42 42.7**	**+0.5**
	815nm,0.5s						
CIGN	**Sant'Elia a Pi**	**0.65**	**234**	Pg	**Pb**	**17 42 38.2**	**+0.1**
	154nm,0.5s						
CIGN	**Sant'Elia a Pi**	**0.65**	**234**	Pg	**Pb**	**17 42 38.2**	**+0.1**
	154nm

108nm,0.4s
LPEL **Lama dei Pelig** 1.06 271 Pg Pn 17 42 44.6 -0.2
310nm,0.2s
LPEL **Lama dei Pelig** 1.06 271 Pg Pn 17 42 44.6 -0.2
310nm,0.2s
MRVN **Minervino Murg** 1.07 155 Pg Pn 17 42 44.3 -0.7
260nm,0.4s
MRVN **Minervino Murg** 1.07 155 Pg Pn 17 42 44.3 -0.7
260nm,0.4s
CDT **Castel del Mon** 1.08 152 *i* Pg Pn 17 42 44.5 -0.6
CDT *e*Sg Sb 17 43 02.7 +3.5
MIDA **Miranda** 1.08 249 Pg Pn 17 42 45.1 0.0
171nm,0.2s
MIDA **Miranda** 1.08 249 Pg Pn 17 42 45.1 0.0
171nm,0.2s
VULT **Monte Vulture** 1.08 179 Pg Pn 17 42 44.9 -0.2
566nm,0.2s
VULT **Monte Vulture** 1.08 179 Pg Pn 17 42 44.9 -0.2
566nm,0.2s
PALZ **Palazzo San Ge** 1.13 166 Pg Pn 17 42 45.3 -0.4
250nm,0.5s
PALZ **Palazzo San Ge** 1.13 166 Pg Pn 17 42 45.3 -0.4
250nm,0.5s
RNI2 **Rionero Sannit** 1.13 253 Pg Pn 17 42 46.4 +0.6
182nm,0.2s
RNI2 **Rionero Sannit** 1.13 253 Pg Pn 17 42 46.4 +0.6
182nm,0.2s
SNAL **S. Angelo Dei** 1.15 195 Pg Pn 17 42 45.8 -0.3
300nm,0.7s
SNAL **S. Angelo Dei** 1.15 195 Pg Pn 17 42 45.8 -0.3
300nm,0.7s
VAGA **Valle Agricola** 1.20 239 Pg Pn 17 42 47.3 +0.6
185nm,0.3s
VAGA **Valle Agricola** 1.20 239 Pg Pn 17 42 47.3 +0.6
185nm,0.3s
CSSN **Cassano Irpino** 1.25 200 Pg Pn 17 42 47.8 +0.3
39nm,0.3s
CSSN **Cassano Irpino** 1.25 200 Pg Pn 17 42 47.8 +0.3
39nm,0.3s
CERA **Filignano** 1.26 250 Pg Pn 17 42 48.2 +0.6
136nm,0.8s
CERA **Filignano** 1.26 250 Pg Pn 17 42 48.2 +0.6
136nm,0.8s
MRLC **Muro Lucano** 1.28 184 Pg Pn 17 42 47.5 -0.4
242nm,0.5s
MRLC **Muro Lucano** 1.28 184 Pg Pn 17 42 47.5 -0.4
242nm,0.5s
MCRV **Calabrutti - M** 1.30 195 Pg Pn 17 42 47.8 -0.3
317nm,0.3s
MCRV **Calabrutti - M** 1.30 195 Pg Pn 17 42 47.8 -0.3
317nm,0.3s
BAI **Bari** 1.33 134 *e*Pn Pn 17 42 48.2 -0.4
BAI *e*Sn Sn 17 43 09.8 +4.2
VCEL **Villa Celiera** 1.36 286 Pg Pn 17 42 50.5 +1.6
185nm,0.3s
VCEL **Villa Celiera** 1.36 286 Pg Pn 17 42 50.5 +1.6
185nm,0.3s
AMUR **Altamura** 1.36 146 Pg Pn 17 42 48.5 -0.4
291nm,0.2s
AMUR **Altamura** 1.36 146 Pg Pn 17 42 48.5 -0.4
291nm,0.2s
SG1 **Sgolgore (BA)** 1.45 146 *e*Pn Pn 17 42 49.6 -0.5
SG1 *e*Sn Sn 17 43 11.9 +3.6
POFI **Posta Fibreno** 1.45 258 Pg Pn 17 42 50.4 +0.2
65nm,0.6s
POFI **Posta Fibreno** 1.45 258 Pg Pn 17 42 50.4 +0.2
65nm,0.6s
VVLD **Villa Vallelon** 1.49 264 Pg Pn 17 42 50.8 +0.1
136nm,0.4s
VVLD **Villa Vallelon** 1.49 264 Pg Pn 17 42 50.8 +0.1
136nm,0.4s
CDRU **Civita di Ruta** 1.56 188 Pg Pn 17 42 51.8 0.0
69nm,0.4s
MIGL **Miglionico** 1.57 156 Pg Pn 17 42 51.6 -0.2
564nm,0.6s
MIGL **Miglionico** 1.57 156 Pg Pn 17 42 51.6 -0.2
564nm,0.6s
TERO **Teramo** 1.59 292 Pg Pn 17 42 52.5 +0.3
90nm,0.3s
TERO **Teramo** 1.59 292 Pg Pn 17 42 52.5 +0.3
90nm,0.3s
MATE **Matera** 1.62 149 Pg Pn 17 42 52.2 -0.3
211nm,0.4s
MATE **Matera** 1.62 149 Pg Pn 17 42 52.2 -0.3
211nm,0.4s
NOCI **Noci** 1.66 138 Pg Pn 17 42 52.7 -0.4
275nm,0.2s
LTRZ **Laterza** 1.70 147 Pg Pn 17 42 53.3 -0.4
205nm,0.3s
STON **Ston** 1.76 61 *e*Pn Pn 17 42 55.4 +1.0
STON Sn Sn 17 43 17.5 +1.4
STON **Ston** 1.76 61 *e*Pn Pn 17 42 55.4 +0.9
STON Sn Sn 17 43 17.5 +1.4
PE1 **Pezze di Greco** 1.84 131 *e*Pn Pn 17 42 55.3 -0.3
SIRI **Monte Sirino -** 1.86 174 Pg Pn 17 42 55.8 -0.1
75nm,0.3s
TAR1 **Taranto** 1.97 139 *e*Pn Pn 17 42 57.3 -0.1
NVLJ **Novalja** 2.58 348 *i* Pn Pn 17 43 05.4 -0.3
NVLJ Sn Sn 17 43 36.5 +0.2
NVLJ **Novalja** 2.58 348 *i* Pn Pn 17 43 05.4 -0.3
NVLJ Sn Sn 17 43 36.5 +0.2
SKDS **Skadanscina** 3.69 342 *i* Pn Pn 17 43 20.0 -1.0
OBKA **Obir** 4.53 351 ⇑*i*Pn Pn 17 43 32.5 -0.1
OBKA ⇓*i*Sn Sn 17 44 23.4 -1.0
OBKA **Obir** 4.53 351 Pn Pn 17 43 32.5 -0.1
OBKA Sn Sn 17 44 23.4 -1.1

*IDC **05** 17:42:31.8±0.9,27°.81S×70°.73W,h61km±5km,mb4.2/4, mb1 3.9/8,mb1mx3.7/19,mbtmp3.8/8, Error ellipse: s-maj=31.1km s-min=14.0km az=68.0*
*GUC **05** 17:42:33.2±0.7,28°.18S×70°.49W,h70km±7km,MD4.3, ML4.5*
*NEIC **05** 17:42:33.2,28°.18S×70°.49W,h70km,MD4.3(GUC),After GUC.*
NEIC Felt [III] at Copiapo.
ISC 05 17:42:33.7±0.6,28°.17S±0°.04×70°.5W±0°.1,h68km±9km,n24, σ0s50/31,mb4.2/4,2D,Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.86**	**191**	*e*Pn	**Pn**	**17 42 50.3**	**0.0**
LCO				⇓*i*P		17 42 51.0	
LCO				*e*Sn	**Sn**	**17 42 59.3**	**-3.3**
LCO				*i* S	**Sn**	**17 43 03.8**	**+1.2**
LCO	**Las Campanas**	**0.86**	**191**	⇓*i*P	**Pn**	**17 42 51.0**	**+0.7**
LCO				*i* S	**Sn**	**17 43 03.8**	**+1.2**
OVCH	**Ovalle**	**2.50**	**194**	*e*P	**Pn**	**17 43 11.8**	**-0.3**
OVCH				*e*S	**Sn**	**17 43 41.5**	**0.0**
OVCH	**Ovalle**	**2.50**	**194**	*e*P	**Pn**	**17 43 11.8**	**-0.3**
OVCH				*e*S	**Sn**	**17 43 41.5**	**0.0**
OVCH				AML	AML	17 44 01.8	
	comp=N,1μm,0.4s						
CMCH	**Combarbala**	**3.02**	**188**	*e*P	**Pn**	**17 43 19.5**	**+0.3**
CMCH				*i* S	**Sn**	**17 43 54.3**	**0.0**
CMCH	**Combarbala**	**3.02**	**188**	*e*P	**Pn**	**17 43 19.5**	**+0.3**
CMCH				*i* S	**Sn**	**17 43 54.3**	**0.0**
CMCH				AML	AML	17 44 16.9	
	comp=N,3μm,0.3s						
CHNG	**Los Chungos**	**3.80**	**193**	*e*P	**Pn**	**17 43 29.7**	**0.0**
CHNG				*i* S	**Sn**	**17 44 12.4**	**-0.8**
CFAA	**Coronel Fontan**	**3.96**	**151**	P	**Pn**	**17 43 36.2**	**+4.3**
	comp=N,2.8nm,0.3s,baz=332,slow=11,SNR=199						
CFAA				S	**Sn**	**17 44 26.1**	**+9.1**
	comp=N,3.2nm,0.3s,baz=17,slow=19,SNR=9.1						
ANCH	**Antofagasta**	**4.47**	**1**	*e*P	**Pn**	**17 43 38.8**	**-0.2**
ANCH				*i* S	**Sn**	**17 44 29.5**	**-0.1**
ANCH	**Antofagasta**	**4.47**	**1**	*e*P	**Pn**	**17 43 38.8**	**-0.2**
ANCH				*i* S	**Sn**	**17 44 29.5**	**-0.1**
CPUP	**Villa Florida**	**11.88**	**84**	P	**Pn**	**17 45 19.9**	**-0.2**
	comp=N,0.2nm,0.3s,baz=270,slow=20,SNR=1.9						
CPUP	**Villa Florida**	**11.88**	**84**	P	**Pn**	**17 45 19.9**	**-0.2**
LPAZ	**La Paz**	**12.03**	**11**	P	**Pn**	**17 45 15.9**	**-6.4**
	comp=N,0.2nm,0.3s,baz=187,slow=6.8,SNR=3.9						
LPAZ	**La Paz**	**12.03**	**11**	*e*Pn	**Pn**	**17 45 14.9**	**-7.3**
LPAZ				P		17 45 15.9	
TRQA	**Tornquist**	**12.18**	**146**	*e*Pn	**Pn**	**17 45 23.8**	**-0.4**
SIV	**San Ignacio**	**14.94**	**38**	P	**Pn**	**17 45 56.4**	**-4.7**
	comp=N,0.2nm,0.3s,baz=212,slow=15,SNR=4.1						
DBIC	**Dimbokro**	**72.10**	**72**	P	**P**	**17 53 51.1**	**-0.1**
	comp=N,7.8nm,1.0s,mb4.5,baz=237,slow=8.3,SNR=4.9						
TSUM	**Tsumeb**	**79.56**	**106**	P	**P**	**17 54 34.3**	**+0.5**
	comp=N,1.4nm,0.6s,mb4.0,baz=238,slow=9.5,SNR=3.8						
BOSA	**Boshof**	**81.62**	**118**	P	**P**	**17 54 44.6**	**0.0**
	comp=N,3.3nm,1.0s,mb4.1,baz=248,slow=5.4,SNR=5.6						
LBTB	**Lobatse**	**83.56**	**115**	P	**P**	**17 54 55.0**	**+0.3**
	comp=N,2.0nm,0.6s,mb4.1,baz=256,slow=8.2,SNR=5.6						
ASAR	**Alice Springs**	**123.34**	**207**	PKP	PKPdf	18 01 22.1	-1.4
	comp=N,0.3nm,0.9s,baz=151,slow=0.5,SNR=3.2						
WRA	**Warramunga Arr**	**126.47**	**209**	PKP	PKPdf	18 01 28.4	-1.1
	comp=N,0.4nm,0.6s,baz=157,slow=1.8,SNR=7.8						
WRA				pPKP	pPKPdf	18 01 45.6	-3.5
	comp=N,0.4nm,0.6s,baz=154,slow=1.7,SNR=2.9						
ZALV	**Zalesovo Beam**	**148.54**	**28**	PKPbc	PKPbc	18 02 11.4	-0.9
	comp=N,3.8nm,0.6s,baz=303,slow=3.6,SNR=21						
ZALV				pPKPbc	pPKPbc	18 02 28.6	-3.2
	comp=N,3.7nm,0.8s,baz=306,slow=3.4,SNR=7.1						
MKAR	**Makanchi Array**	**151.73**	**42**	PKPbc	PKPbc	18 02 19.2	-1.0
	comp=N,1.5nm,0.5s,baz=305,slow=2.0,SNR=26						
MKAR				pPKPbc	pPKPbc	18 02 36.4	-3.3
	comp=N,1.6nm,0.6s,baz=315,slow=1.9,SNR=11						

DJA 05 17:52:38,0°.15S×125°.10E,h30km,MLv3.8/8,Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**1.33**	**303**	P	Pn	17 52 59.8	-0.8
MNI	**Manado**	**1.60**	**351**	P	Pn	17 53 05.6	+1.3
TNTI	**Ternate**	**2.44**	**68**	P	Pn	17 53 15.7	-0.2
LUWI	**Luwuk**	**2.49**	**249**	P	Pn	17 53 21.5	+5.0
MRSI	**Marisa**	**3.22**	**281**	P	Pn	17 53 25.7	-0.9
APSI	**Ampana**	**3.53**	**258**	P	Pn	17 53 32.0	+1.1
TTSI	**Tana Toraja**	**6.01**	**241**	P	Pn	17 54 05.2	+0.2
	0.1nm15nm,1.8s						
BNSI	**Bone**	**6.54**	**230**	P	Pn	17 54 12.4	+0.2
	0.1nm29nm,1.7s						
SPSI	**Sidrap Palu**	**6.54**	**235**	P	Pn	17 54 12.5	+0.3

*BJI **05** 18:01:29.5,40°.75N×77°.45E,h20km,ML3.1/5*
*NNC **05** 18:01:43.1±12.0,40°.89N×78°.56E,h0km,mb3.9,mpv3.6, Error ellipse: s-maj=116.1km s-min=93.2km az=3.0*
ISC 05 18:01:09.1±3.7,38°.8N±0°.3×79°.7E±0°.2,h10km,n11, σ1s00/13,2C-4D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**2.96**	**285**	Pg	**Pg**	**18 02 06.7**	**+1.0**
KSH				Sg	**Sn**	**18 02 30.8**	**-0.8**
KSH				smax			
	comp=N,93nm,0.5s						
KSH				smax			
	comp=E,160nm,0.3s						
ULHL	**Ulahol**	**4.32**	**324**	P	**Pn**	**18 02 14.8**	**+0.1**
	SNR=56						
KZA	**Kyzart**	**4.70**	**316**	P	**Pn**	**18 02 19.2**	**-0.8**
	SNR=37						
KNDC	**Almaty**	**4.86**	**336**	⇓Pn	**Pb**	**18 02 29.1**	**-5.2**
	comp=E,30nm,0.5s						
KNDC				⇓Lg		18 03 10.1	
	comp=E,179nm,0.5s						
TKM2	**Tokmak 2**	**5.14**	**324**	⇓Pn	**Pn**	**18 02 26.0**	**-0.1**
	comp=E,16nm,0.8s						
TKM2				⇓Lg		18 03 10.9	
	comp=E,47nm,0.7s						
TKM2	**Tokmak 2**	**5.14**	**324**	P	**Pn**	**18 02 26.5**	**+0.4**
	SNR=5.1						
UCH	**Uchtor**	**5.21**	**313**	P	**Pn**	**18 02 25.5**	**-1.4**
	SNR=9.5						
KBK	**Karagaybulak**	**5.26**	**319**	P	**Pn**	**18 02 27.4**	**-0.3**
	SNR=13						
AAK	**Ala-Archa**	**5.48**	**316**	P	**Pn**	**18 02 33.4**	**+2.6**
	SNR=7.6						
USP	**Ospenovka**	**5.93**	**320**	P	**Pn**	**18 02 42.5**	**+5.6**
	SNR=10						
KK31	**Karatay Array**	**8.15**	**305**	⇑Pn	**Pb**	**18 03 22.7**	**-7.5**
	comp=E,2.1nm,0.8s,baz=126,slow=15,SNR=6.2						
KK31				⇑Sn	**Sn**	**18 04 39.8**	**+0.3**
	comp=E,1.7nm,0.5s,baz=121,slow=29,SNR=7.6						

*NEIC **05** 18:01:28.7,16°.86N×99°.73W,h7km,MD3.5(MEX),After MEX.*
MEX 05 18:01:28.7±0.8,16°.86N×99°.73W,h7km±5km,MD3.5,Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.13**	**272**	*i* P	Pg	18 01 32.0	+0.5
ACX				*i* S	Sg	18 01 35.4	+2.1
ACX	**Acapulco**	**0.13**	**272**	*i* P	Pg	18 01 32.0	+0.5
ACX				*i* S	Sg	18 01 35.4	+2.1
CAIG	**El Cayaco**	**0.55**	**290**	*i* P	Pg	18 01 38.3	-1.0
CAIG				*i* S	Sg	18 01 46.7	+0.2
CAIG	**El Cayaco**	**0.55**	**290**	*i* P	Pg	18 01 38.3	-1.0
CAIG				*i* S	Sg	18 01 46.7	+0.2
MEIG	**Mezcala**	**1.06**	**5**	*i* P	Pg	18 01 45.9	-3.2
MEIG				*i* S	Sg	18 02 00.8	-2.1
PNIG	**Pinotepa**	**1.60**	**107**	*i* P	Pn	18 01 54.0	-3.4
PNIG				*i* S	Sn	18 02 14.1	-4.2
PNIG	**Pinotepa**	**1.60**	**107**	*i* P	Pn	18 01 54.0	-3.4
PNIG				*i* S	Sn	18 02 14.1	-4.2
UTMO	**Huajuapan**	**2.07**	**62**	*e*P	Pn	18 02 00.8	-3.0
UTMO				*i* S	Sn	18 02 24.7	-5.3
PPM	**Popocatepetl**	**2.43**	**25**	*e*P	Pn	18 02 05.8	-2.9
PPM				*i* S	Sn	18 02 34.3	-4.4
PPM	**Popocatepetl**	**2.43**	**25**	*e*P	Pn	18 02 05.8	-2.9
PPM				*i* S	Sn	18 02 34.3	-4.4

*ISCJB **05** 18:04:26.9±0.4,43°.85N±0°.03×105°.18W±0°.05,h0km, mb4.0/3,Error ellipse: s-maj=4.8km s-min=3.5km az=20.0*
*NEIC **05** 18:04:28.7±0.3,43°.82N×105°.19W,h0km,ML3.5,Error ellipse: s-maj=4.3km s-min=4.0km az=129.0,Suspected Mining explosion.*
NEIC 60 km [35 miles] SSE of Gillette.
*IDC **05** 18:04:29.6±0.9,44°.16N×105°.74W,h0km,mb3.9/3, mb1 3.9/8,mb1mx3.7/27,mbtmp3.7/8,ML3.7/5,MS2.9/1, Ms1 2.9/1,ms1mx2.3/39,Error ellipse: s-maj=25.9km s-min=8.4km az=145.0*
ISC 05 18:04:28.9±0.3,43°.82N±0°.03×105°.20W±0°.04,h0km,n74, σ0s93/80,mb4.0/3,6C-7D,Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.89**	**70**	*e*Pg	**Pg**	**18 04 47.5**	**+1.5**
L22A	**Ellis Ranch, M**	**2.01**	**207**	⇑Pn	**Pn**	**18 05 03.5**	**-0.6**
	baz=2.0						
L22A				⇑Sn	**Sn**	**18 05 30.5**	**+0.7**
	baz=2.0						
L21A	**Rawlins**	**2.45**	**221**	⇑Pn	**Pn**	**18 05 09.7**	**-0.4**
	baz=2.5,SNR=437						
L21A				⇓Sn	**Sn**	**18 05 41.4**	**+0.6**
	baz=2.5						
PHWY	**Pilot Hill**	**2.53**	**184**	*e*Pn	**Pn**	**18 05 11.2**	**+0.1**
K20A	**Yellowstone Ra**	**2.58**	**244**	⇓Pn	**Pn**	**18 05 11.7**	**-0.2**
	baz=2.6						
K20A				⇑Sn	**Sn**	**18 05 44.3**	**+0.4**
	baz=2.6						
RWWY	**Rawlins**	**2.60**	**216**	*e*Pn	**Pn**	**18 05 12.4**	**+0.3**
M21A	**Separation Pea**	**2.73**	**217**	⇓Pn	**Pn**	**18 05 14.7**	**+0.7**
	baz=2.7,SNR=298						
M21A				⇓Sn	**Sn**	**18 05 47.0**	**-0.7**
	baz=2.7						
K19A	**Absolon Red Bu**	**2.84**	**251**	⇓Pn	**Pn**	**18 05 15.4**	**-0.2**
	baz=2.8						
L20A	**Wamsutter**	**2.94**	**233**	⇑Pn	**Pn**	**18 05 17.2**	**+0.4**
	baz=2.9,SNR=14						
L20A				⇑Sb	**Sb**	**18 05 58.3**	**-0.2**
	baz=2.9						
LAO	**LASA Array**	**2.96**	**346**	*e*Pn	**Pn**	**18 05 17.5**	**+0.4**
RLMT	**Red Lodge**	**3.19**	**295**	*e*Pn	**Pn**	**18 05 20.6**	**+0.3**
M20A	**Sweetwater, Wa**	**3.21**	**224**	⇓Pn	**Pn**	**18 05 21.0**	**+0.4**
	baz=3.2,SNR=20						
M20A				⇓Sb	**Sb**	**18 06 06.5**	**+0.1**
	baz=3.2						
BW06	**Boulder Array**	**3.35**	**253**	*e*Pn	**Pn**	**18 05 22.8**	**+0.2**
PDAR	**Pinedale Array**	**3.35**	**253**	Pn	**Pn**	**18 05 22.3**	**-0.3**
	7.2nm,0.3s,baz=72,slow=16,SNR=103						
PDAR				Lg		18 06 07.8	
	26nm,0.3s,baz=69,slow=30,SNR=10.0						
OGNE	**Ogallala**	**3.71**	**140**	*e*Pn	**Pn**	**18 05 27.6**	**+0.1**
GCMT	**Greycliff**	**3.74**	**303**	*e*Pn	**Pn**	**18 05 28.4**	**+0.5**
LKWY	**Lake**	**3.82**	**283**	*e*Pn	**Pn**	**18 05 32.7**	**+3.8**
LOHW	**Long Hollow**	**3.93**	**269**	*e*Pn	**Pn**	**18 05 31.0**	**+0.6**
ISCO	**Idaho Springs**	**4.03**	**185**	*e*Pn	**Pn**	**18 05 32.1**	**+0.2**
SNOW	**Snow King Moun**	**4.05**	**267**	*e*Pn	**Pn**	**18 05 34.1**	**+2.0**
YFT	**Old Faithful**	**4.11**	**281**	Pn	**Pn**	**18 05 31.2**	**-1.7**
REDW	**Red Top Meadow**	**4.13**	**266**	*e*Pn	**Pn**	**18 05 33.5**	**+0.2**
IMW	**Indian Meadow**	**4.16**	**273**	*e*Pn	**Pn**	**18 05 35.1**	**+1.6**
TPAW	**Teton Pass**	**4.19**	**267**	*e*Pn	**Pn**	**18 05 33.8**	**-0.2**
YMR	**Madison River**	**4.23**	**284**	Pn	**Pn**	**18 05 32.5**	**-2.1**
DCID1	**Drake Creek**	**4.35**	**269**	*e*Pn	**Pn**	**18 05 33.9**	**-2.4**
AHID	**Auburn Hatcher**	**4.44**	**258**	*e*Pn	**Pn**	**18 05 37.6**	**+0.2**
RRI2	**Red Ridge**	**4.47**	**266**	*e*Pn	**Pn**	**18 05 38.6**	**+0.6**
QLMT	**Earthquake Lak**	**4.58**	**285**	Pn	**Pn**	**18 05 43.9**	**+4.4**
DGMT	**Dagmar**	**4.70**	**8**	*e*P	**Pn**	**18 05 43.1**	**+2.1**
SMCO	**Snowmass**	**4.83**	**197**	*e*Pn	**Pn**	**18 05 43.8**	**+0.9**
BOZ	**Bozeman (W)**	**4.93**	**294**	*e*Pn	**Pn**	**18 05 43.4**	**-0.8**
HWUT	**Hardware Ranch**	**5.19**	**247**	*e*Pn	**Pn**	**18 05 46.7**	**-1.1**
	13nm,0.5s						
EGMT	**Eagleton**	**5.27**	**324**	*e*Pn	**Pn**	**18 05 48.6**	**-0.2**
	38nm,0.5s						
HRY	**Holter Researc**	**5.50**	**304**	*e*Pn	**Pn**	**18 05 52.0**	**-0.1**
	25nm,0.4s						
DLMT	**Dillon**	**5.50**	**289**	*e*Pn	**Pn**	**18 05 52.8**	**+0.7**
	8.3nm,0.5s						
LRM	**Limekiln Ridge**	**5.53**	**294**	*e*Pn	**Pn**	**18 05 52.5**	**0.0**
	28nm,0.3s						
MCMT	**McKenzie Canyo**	**5.58**	**283**	*e*Pn	**Pn**	**18 05 56.5**	**+3.3**
	5.4nm,0.6s						
DAU	**Daniels Canyon**	**5.65**	**235**	*e*Pn	**Pn**	**18 05 54.2**	**+0.1**
	14nm,0.4s						
JLU	**Jordanelle**	**5.65**	**237**	*e*Pn	**Pn**	**18 05 53.4**	**-0.7**
	13nm,0.4s						
CTU	**Camp Tracy**	**5.78**	**239**	*e*Pn	**Pn**	**18 05 55.2**	**-0.7**
	16nm,0.4s						
SPUT	**South Promonto**	**5.92**	**247**	*e*Pn	**Pn**	**18 05 58.5**	**+0.8**
	12nm,0.5s						
HVU	**Hansel Valley**	**5.94**	**252**	*e*Pn	**Pn**	**18 05 57.2**	**-0.8**
	14nm,0.6s						
SDCO	**Great Sand Dun**	**6.08**	**182**	*e*Pn	**Pn**	**18 06 00.2**	**+0.3**
	2.7nm,0.4s						
PV04	**Paradox Valley**	**6.10**	**209**	*e*Pn	**Pn**	**18 06 00.7**	**+0.4**
MPU	**Maple Canyon**	**6.13**	**234**	*e*Pn	**Pn**	**18 05 59.5**	**-1.1**
	9.2nm,0.3s						
SRU	**San Rafael**	**6.18**	**222**	*e*Pn	**Pn**	**18 06 00.3**	**-1.1**
	25nm,0.4s						
ECSD	**EROS Data Cent**	**6.21**	**88**	*e*Pn	**Pn**	**18 06 02.6**	**+0.8**
	11nm,0.4s						
PV01	**Paradox Valley**	**6.23**	**205**	*e*Pn	**Pn**	**18 06 02.4**	**+0.4**
	595nm,0.4s						
TMUT	**Trail Mountain**	**6.39**	**227**	*e*Pn	**Pn**	**18 06 04.2**	**0.0**
	19nm,0.4s						
NLU	**North Lily Min**	**6.42**	**235**	*e*Pn	**Pn**	**18 06 03.2**	**-1.5**
	3.4nm,0.3s						
CHMT	**Chamberlain Mo**	**6.46**	**301**	*e*Pn	**Pn**	**18 06 05.8**	**+0.6**
	3.7nm,0.5s						
BGU	**Big Grassy Mou**	**6.48**	**246**	*e*Pn	**Pn**	**18 06 04.5**	**-1.0**
	3.8nm,0.3s						
HLID	**Hailey**	**6.69**	**271**	*e*Pn	**Pn**	**18 06 09.8**	**+1.5**
	2.8nm,0.6s						
DUG	**Dugway**	**6.73**	**240**	*e*Pn	**Pn**	**18 06 07.9**	**-1.1**
	5.7nm,0.4s						
SLMT	**Seeley Lake**	**6.76**	**303**	*e*Pn	**Pn**	**18 06 09.4**	**+0.1**
	3.9nm,0.4s						
MSO	**Missoula**	**6.86**	**299**	*e*Pn	**Pn**	**18 06 10.6**	**0.0**
	2.3nm,0.3s						
MVCO	**Mesa Verde**	**7.07**	**202**	*e*Pn	**Pn**	**18 06 15.2**	**+1.6**
	6.7nm,0.5s						
SWMT	**Swartz Lake**	**7.18**	**304**	*e*Pn	**Pn**	**18 06 15.4**	**+0.2**
	3.5nm,0.4s						
N13A	**Wendover, West**	**7.30**	**249**	*e*Pn	**Pn**	**18 06 16.0**	**-0.8**
	14nm,0.4s						
JTMT	**Jette**	**7.46**	**305**	*e*Pn	**Pn**	**18 06 20.0**	**+1.0**
MSU	**Marysvale**	**7.47**	**227**	*e*Pn	**Pn**	**18 06 19.4**	**+0.2**
	8.2nm,0.6s						
AGMN	**Agassiz Nation**	**7.88**	**52**	*e*Pn	**Pn**	**18 06 22.2**	**-2.5**
	19nm,0.5s						
ELK	**Elko**	**8.06**	**251**	Pn	**Pn**	**18 06 27.0**	**-0.1**
	0.9nm,0.3s,baz=72,slow=10,SNR=9.6						
ELK				Lg		18 08 38.6	
	0.1nm,0.3s,baz=29,slow=16,SNR=2.7						
ELK				LR	LR	18 09 38.8	
	comp=Z,79nm,18.1s,baz=116,slow=40						
ARUT	**Antelope Range**	**8.68**	**229**	*e*Pn	**Pn**	**18 06 36.1**	**+0.3**
	34nm,1.0s						
ULM	**Lac du Bonnet**	**9.04**	**41**	Pn	**Pn**	**18 06 40.3**	**-0.3**
	2.0nm,0.3s,baz=227,slow=12,SNR=7.4						
ULM				Lg		18 09 14.0	
	0.9nm,0.3s,baz=231,slow=20,SNR=2.6						
WUAZ	**Wupatki**	**9.56**	**212**	*e*Pn	**Pn**	**18 06 47.7**	**-0.1**
	8.2nm,0.5s						
WMOK	**Wichita Mounta**	**10.34**	**149**	*e*Pn	**Pn**	**18 06 55.4**	**-3.0**
	4.7nm,0.6s						
FFC	**Flin Flon**	**11.11**	**10**	*e*Pn	**Pn**	**18 07 07.8**	**-1.1**
	4.6nm,0.5s						
NVAR	**Mina Array Bea**	**11.26**	**246**	Pn	**Pn**	**18 07 11.9**	**+1.0**
	0.3nm,0.3s,baz=54,slow=12,SNR=4.7						
TXAR	**Lajitas Array**	**14.51**	**175**	Pn	**Pn**	**18 08 02.7**	**+7.2**
	0.1nm,0.3s,baz=351,slow=10,SNR=5.5						
ARCES	**ARCESS Array B**	**61.32**	**18**	P	**P**	**18 14 43.1**	**-2.5**
	1.7nm,0.9s,mb4.2,baz=343,slow=5.8,SNR=6.1						
ZALV	**Zalesovo Beam**	**82.23**	**354**	P	**P**	**18 16 51.4**	**-0.1**
	0.6nm,0.5s,mb4.0,baz=338,slow=6.2,SNR=3.6						
MKAR	**Makanchi Array**	**89.53**	**355**	P	**P**	**18 17 27.6**	**-0.2**
	0.4nm,0.6s,mb3.8,baz=23,slow=4.2,SNR=4.7						

*NNC **05** 18:05:50.0±3.7,38°.85N×69°.56E,h0km,mb3.8,mpv3.5, Error ellipse: s-maj=36.4km s-min=19.7km az=179.0*
*ISCJB **05** 18:05:54.6±0.8,38°.88N±0°.04×69°.61E±0°.07,h86km±16km, mb3.6/2,Error ellipse: s-maj=10.1km s-min=6.6km az=22.7*
*NEIC **05** 18:05:56.3±1.1,38°.90N×69°.90E,h69km±16km,Error ellipse: s-maj=15.2km s-min=12.4km az=105.0*
*IDC **05** 18:05:59.2±7.0,38°.88N×70°.08E,h93km±60km,mb3.4/2, mb1 3.3/6,mb1mx3.0/28,mbtmp3.2/6,ML3.0/4,Error ellipse: s-maj=56.6km s-min=29.5km az=21.0*
ISC 05 18:05:56.4±0.6,38°.87N±0°.04×69°.65E±0°.07,h80km±14km, n25,σ1s45/33,mb3.6/2,2C-4D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**4.28**	**9**	⇑Pn	**Pn**	**18 06 59.5**	**+0.5**
	3.0nm,0.5s,baz=182,slow=13,SNR=35						
KK31				⇓Lg

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BVAR	**Borovoye Array**	**14.17**	**2**	P	**Pn**	**18 09 12.4**	**-0.6**
	comp=E,0.1nm,0.3s,baz=176,slow=11,SNR=6.8						
AKTK	**Aktyubinsk**	**14.20**	**328**	P	**Pn**	**18 09 16.2**	**+2.8**
AKTO	**Aktyubinsk**	**14.20**	**328**	P	**Pn**	**18 09 16.2**	**+2.8**
	comp=E,0.2nm,0.3s,baz=109,slow=15,SNR=4.2						
BRVK	**Borovoye**	**14.20**	**2**	P	**Pn**	**18 09 11.9**	**-1.5**
	comp=E,1.6nm,0.6s						
ZALV	**Zalesovo Beam**	**18.30**	**30**	P	**Pn**	**18 10 02.2**	**-2.3**
	comp=E,0.2nm,0.3s,baz=233,slow=10.0,SNR=3.9						
HFS	**Hagfors**	**40.55**	**320**	P	**P**	**18 13 31.2**	**+3.8**
	comp=E,1.9nm,0.7s,mb4.0,baz=99,slow=9.3,SNR=6.9						
WRA	**Warramunga Arr**	**84.14**	**121**	P	**P**	**18 18 18.6**	**-0.2**
	comp=E,0.3nm,0.9s,mb3.1,baz=324,slow=4.5,SNR=2.9						

IDC 05 18:24:58.1±2.0, 1°.37S×127°.68E, h0km, mb3.3/2, mb1 3.7/3, mb1mx3.4/19, mbtmp3.4/3, ML3.5/1, Error ellipse: s-maj=151.9km s-min=25.0km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.58**	**161**	P	Pn	18 29 28.9	-0.2
	0.2nm,0.3s,baz=340,slow=11,SNR=17						
ASAR	**Alice Springs**	**22.97**	**165**	P	P	18 30 03.9	-0.5
	1.0nm,0.7s,baz=348,slow=11,SNR=17						
MKAR	**Makanchi Array**	**62.28**	**326**	P	P	18 35 22.1	+0.1
	0.2nm,0.6s,baz=130,slow=6.5,SNR=2.9						

IDC 05 18:28:09.1±1.2, 7°.16S×155°.49E, h0km, mb3.7/5, mb1 3.7/6, mb1mx3.6/17, mbtmp3.7/6, ML4.0/1, MS2.9/1, Ms1 2.9/1, ms1mx2.7/21, Error ellipse: s-maj=28.7km s-min=27.1km az=37.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.95**	**117**	Pn	Pn	18 29 25.6	+0.8
	6.1nm,0.3s,baz=265,slow=11,SNR=3.4						
HNR				Sn	Sn	18 30 22.6	-0.2
	5.4nm,0.3s,baz=330,slow=20,SNR=5.3						
HNR				LR	LR	18 31 05.5	
	comp=Z,140nm,20.8s,baz=239,slow=36						
WRA	**Warramunga Arr**	**24.13**	**236**	P	P	18 33 27.6	+0.8
	0.5nm,0.6s,baz=61,slow=9.2,SNR=8.7						
ASAR	**Alice Springs**	**26.44**	**229**	P	P	18 33 46.9	-0.9
	0.3nm,0.5s,baz=50,slow=11,SNR=5.7						
SONM	**Songino Array**	**69.74**	**327**	P	P	18 39 21.9	+1.0
	0.3nm,0.4s,baz=143,slow=5.0,SNR=3.6						
MKAR	**Makanchi Array**	**83.85**	**319**	P	P	18 40 41.0	+0.4
	1.2nm,0.7s,baz=104,slow=5.6,SNR=16						
ZALV	**Zalesovo Beam**	**84.59**	**326**	P	P	18 40 43.0	-1.3
	0.6nm,0.5s,baz=129,slow=6.1,SNR=4.2						

*ISCJB **05** 18:33:39.5±0.8, 7°.3N±0°.1×34°.9W±0°.1, h10km, mb4.0/6, MS3.4/7, Error ellipse: s-maj=21.2km s-min=14.4km az=33.7*
*IDC **05** 18:33:41.0±1.5, 7°.39N×35°.22W, h0km, mb3.9/5, mb1 4.2/5, mb1mx3.8/23, mbtmp3.9/5, MS3.4/7, Ms1 3.4/7, ms1mx3.1/24, Error ellipse: s-maj=55.1km s-min=25.3km az=147.0*
*NEIC **05** 18:33:41.6±0.8, 7°.36N×35°.01W, h10km, mb4.6/1, Error ellipse: s-maj=22.2km s-min=14.9km az=127.0*
ISC 05 18:33:41.8±0.7, 7°.4N±0°.1×35°.0W±0°.1, h10km, n14, σ1§07/9, mb4.0/6, MS3.4/7, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**13.13**	**184**	*e*Pn	**Pn**	**18 36 48.3**	**-0.2**
	18nm,0.8s						
RCBR				*e*Sn	**Sn**	**18 39 03.6**	**-11**
SACV	**Santiago Islan**	**13.47**	**55**	*e*Pn	**Pn**	**18 36 51.5**	**-1.6**
	63nm,0.8s						
MDT	**Midelt**	**37.88**	**44**	LR	LR	18 54 37.6	
	comp=Z,36nm,18.5s,MS3.2,baz=353,slow=33						
ROSC	**El Rosal**	**39.19**	**269**	LR	LR	18 57 23.5	
	comp=Z,53nm,19.4s,MS3.4,baz=15,slow=36						
LPAZ	**La Paz**	**40.35**	**234**	P	**P**	**18 41 19.9**	**-0.1**
	2.8nm,0.7s,mb4.1,baz=61,slow=6.8,SNR=12						
LPAZ				LR	LR	18 56 29.1	
	comp=Z,39nm,20.8s,MS3.2,baz=273,slow=34						
KEST	**Kesra**	**49.36**	**49**	LR	LR	19 00 56.5	
	comp=Z,24nm,20.8s,MS3.2,baz=327,slow=33						
VAE	**Valguarnera**	**53.80**	**48**	LR	LR	19 08 23.0	
	comp=Z,52nm,18.4s,MS3.6,baz=189,slow=39						
DAVOX	**Davos/Dischmat**	**54.86**	**36**	LR	LR	19 02 09.6	
	comp=Z,46nm,19.8s,MS3.5,baz=275,slow=31						
WVT	**Waverly**	**55.97**	**309**	*e*P	**P**	**18 43 19.6**	**-0.9**
	7.9nm,1.1s,mb4.7						
NOA	**NORSAR Array B**	**63.56**	**23**	LR	LR	19 06 31.7	
	comp=Z,20nm,20.2s,MS3.3,baz=130,slow=31						
TXAR	**Lajitas Array**	**67.86**	**299**	P	**P**	**18 44 40.5**	**-0.2**
	0.6nm,0.7s,mb3.8,baz=107,slow=7.0,SNR=7.7						
BRTR	**Keskin Array B**	**68.91**	**50**	P	**P**	**18 44 49.5**	**+2.5**
	0.5nm,0.6s,mb3.6,baz=255,slow=5.7,SNR=3.2						
FINES	**FINESS Array B**	**69.99**	**27**	P	**P**	**18 44 54.4**	**+1.1**
	2.2nm,0.9s,mb4.1,baz=228,slow=7.3,SNR=2.1						
PDAR	**Pinedale Array**	**73.72**	**312**	P	**P**	**18 45 16.2**	**+0.1**
	0.6nm,0.6s,mb3.7,baz=95,slow=6.4,SNR=6.3						

*ISCJB **05** 18:33:42.2±1.1, 23°.4S±0°.1×179°.9W±0°.1, h634km±18km, mb3.9/8, Error ellipse: s-maj=22.0km s-min=18.1km az=141.8*
*NEIC **05** 18:33:43.0±1.1, 23°.35S×179°.84W, h631km±16km, mb3.7/3, Error ellipse: s-maj=21.5km s-min=16.7km az=154.0*
*IDC **05** 18:33:43.4±2.5, 23°.37S×179°.90W, h626km±39km, mb3.3/6, mb1 3.5/6, mb1mx3.1/16, mbtmp3.3/6, Error ellipse: s-maj=50.8km s-min=18.7km az=169.0*
ISC 05 18:33:42.9±1.2, 23°.3S±0°.1×179°.9W±0°.1, h624km±19km, n16, σ0§59/13, mb3.9/8, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**6.15**	**164**	P	**P**	**18 35 26.7**	**+0.3**
	519nm,0.3s,baz=69,slow=17,SNR=8.9						
FUNA	**Funafuti**	**14.75**	**356**	*e*P	**P**	**18 36 47.5**	**-0.5**
EIDS	**Eidsvold**	**26.52**	**260**	*e*P	**P**	**18 38 32.6**	**-0.7**
CTA	**Charters Tower**	**31.59**	**269**	P	**P**	**18 39 17.5**	**+0.4**
	7.8nm,0.4s,mb4.7,baz=96,slow=11,SNR=22						
CTA	**Charters Tower**	**31.59**	**269**	P	**P**	**18 39 17.5**	**+0.4**
STKA	**Stephens Creek**	**35.05**	**247**	P	**P**	**18 39 46.0**	**+0.3**
	3.8nm,0.5s,mb4.2,baz=95,slow=9.4,SNR=13						
STKA	**Stephens Creek**	**35.05**	**247**	*e*P	**P**	**18 39 45.7**	**-0.1**
	0.8nm,0.6s,mb3.5						
ASAR	**Alice Springs**	**42.24**	**260**	P	**P**	**18 40 44.0**	**+0.3**
	2.6nm,0.5s,mb4.0,baz=89,slow=7.1,SNR=65						
WRA	**Warramunga Arr**	**42.56**	**265**	P	**P**	**18 40 46.0**	**-0.2**
	3.8nm,0.6s,mb4.1,baz=94,slow=8.5,SNR=98						
SBA	**Scott Base**	**54.95**	**183**	*e*P	**P**	**18 42 15.8**	**-0.5**
	4.7nm,0.8s,mb3.9						
PETK	**Petropavlovsk-**	**78.58**	**346**	P	**P**	**18 44 42.0**	**+0.9**
	1.9nm,0.7s,mb3.6,baz=101,slow=6.0,SNR=3.9						
CMB	**Columbia Colle**	**82.71**	**43**	P	**P**	**18 45 01.7**	**-1.0**
	2.7nm,1.1s,mb3.7						
TXAR	**Lajitas Array**	**90.03**	**58**	P	**P**	**18 45 38.6**	**+0.8**
	0.3nm,0.7s,mb3.2,baz=186,slow=7.3,SNR=2.8						
HFS	**Hagfors**	**142.01**	**349**	PKhKP		18 52 01.3	
	1.1nm,0.3s,baz=57,slow=3.9,SNR=18						
AKASG	**Malin Array Be**	**144.56**	**328**	PKP	PKPdf	18 52 10.3	+0.9
	0.6nm,0.4s,baz=44,slow=4.1,SNR=6.8						
EKA	**Eskdalemuir Ar**	**147.95**	**4**	PKPbc	PKPbc	18 52 17.9	-1.0
	0.7nm,0.7s,baz=2.3,slow=3.6,SNR=4.7						

IDC 05 18:36:22.0±2.1, 0°.70N×126°.95E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/19, mbtmp3.4/3, Error ellipse: s-maj=175.3km s-min=26.6km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.76**	**161**	P	P	18 41 14.8	-0.6
	1.2nm,0.4s,baz=340,slow=12,SNR=4.5						
ASAR	**Alice Springs**	**25.15**	**165**	P	P	18 41 49.5	+0.5
	0.4nm,0.4s,baz=346,slow=11,SNR=7.4						
MKAR	**Makanchi Array**	**60.16**	**326**	P	P	18 46 31.6	0.0
	0.2nm,0.3s,baz=116,slow=7.7,SNR=5.4						

IDC 05 18:36:36.3±63.0, 16°.85S×178°.57E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.6/16, mbtmp3.9/3, Error ellipse: s-maj=1121.0km s-min=144.5km az=76.0, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**36.66**	**239**	P	P	18 43 44.9	+0.1
	0.7nm,0.3s,baz=90,slow=18,SNR=5.3						
WRA	**Warramunga Arr**	**42.00**	**259**	P	P	18 44 29.6	0.0
	0.2nm,0.3s,baz=93,slow=7.8,SNR=12						
ASAR	**Alice Springs**	**42.32**	**253**	P	P	18 44 31.9	-0.2
	2.0nm,0.6s,baz=85,slow=7.8,SNR=32						

MAN 05 18:46:35, 16°.51N×120°.55E, h15km, mb4.5, ML3.3, MS3.2, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCPH	**Baguio City Da**	**0.13**	**167**	⇑*i*P	Pg	18 46 39.1	+0.5
BCPH				*i*S	Sg	18 46 42.3	+1.3
BOLP	**Bolinao**	**0.62**	**259**	*e*P	Pg	18 46 47.5	+0.3
ABRA	**Dolores**	**1.15**	**8**	*e*P	Pn	18 46 54.9	-1.7
ABRA				*e*S	Sb	18 47 12.8	+1.6
BALP	**Baler**	**1.25**	**128**	*e*P	Pn	18 46 57.1	-0.8
BALP				*e*S	Sb	18 47 11.4	-2.7
APYP	**Conner**	**1.50**	**26**	*e*P	Pn	18 47 02.6	+1.2

*ISCJB **05** 18:50:12.9±0.9, 31°.45N×0°.02×104°.20E±0°.03, h19km±6km, mb4.6/68, MS3.4/4, Error ellipse: s-maj=3.9km s-min=3.8km az=162.3*
*IDC **05** 18:50:12.1±0.5, 31°.50N×104°.13E, h0km, mb4.4/21, mb1 4.5/23, mb1mx4.4/32, mbtmp4.4/23, ML3.6/2, MS3.4/3, Ms1 3.4/3, ms1mx2.8/28, Error ellipse: s-maj=18.6km s-min=11.6km az=52.0*
*BJI **05** 18:50:13.2, 31°.47N×104°.31E, h12km, mB4.6/14, mb4.5/29, ML4.4/26, Ms4.2/33, Ms7 4.0/33*
*NEIC **05** 18:50:13.6±2.4, 31°.53N×104°.19E, h10km±15km, mb4.8/35, Error ellipse: s-maj=4.9km s-min=3.7km az=73.0*
*MOS **05** 18:50:15.1±0.8, 31°.47N×104°.20E, h33km, mb5.0/29, Error ellipse: s-maj=9.1km s-min=5.6km az=107.8*
ISC 05 18:50:12.8±0.7, 31°.50N±0°.02×104°.15E±0°.03, h4km±4km, h14km±2.8km: pP-P, n188, σ1§12/208, mb4.6/68, MS3.4/4, 8C-3D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.68**	**210**	Pg	**Pg**	**18 50 27.1**	**+1.3**
CD2				Sg	**Sg**	**18 50 37.2**	**+2.6**
CD2				smax			
	comp=N,9μm,1.1s						
CD2				smax			
	comp=E,10μm,0.7s						
LZH	**Lanzhou**	**4.58**	**357**	Pn	**Pn**	**18 51 25.2**	**+2.2**
LZH				Pg	**Pg**	**18 51 40.0**	**-0.7**
LZH				Sn	**Sn**	**18 52 19.3**	**+2.6**
LZH				Sg	**Sg**	**18 52 38.3**	**-1.8**
LZH				smax			
	comp=N,560nm,0.8s						
LZH				smax			
	comp=E,960nm,0.8s						
LZH				LR	LR		
	comp=E,3μm,7.4s						
LZH				LR	LR		
	comp=Z,3μm,8.8s						
XAN	**Xi'an**	**4.75**	**56**	Pn	**Pn**	**18 51 26.9**	**+1.6**
XAN				Sn	**Sn**	**18 52 21.8**	**+1.0**
XAN				Sg	**Sg**	**18 52 44.3**	**-1.1**
XAN				smax			
	comp=N,670nm,0.6s						
XAN				smax			
	comp=E,460nm,0.9s						
XAN				LR	LR		
	comp=N,600nm,6.8s						
XAN				LR	LR		
	comp=E,420nm,8.3s						
XAN				LR	LR		
	comp=Z,430nm,8.8s						
GYA	**Guiyang**	**5.48**	**156**	Pn	**Pn**	**18 51 34.8**	**-0.5**
GYA				Sn	**Sn**	**18 52 38.9**	**0.0**
GYA				Sg	**Sg**	**18 53 09.6**	**+0.6**
GYA				smax			
	comp=N,50nm,0.8s						
GYA				smax			
	comp=E,60nm,0.8s						
KMI	**Kunming**	**6.47**	**191**	Pn	**Pn**	**18 51 50.3**	**+1.4**
KMI				Sn	**Sn**	**18 53 04.3**	**+1.0**
KMI				smax			
	comp=N,110nm,0.9s						
KMI				smax			
	comp=E,95nm,1.0s						
KMI				LR	LR		
	comp=N,1μm,6.5s						
KMI				LR	LR		
	comp=E,640nm,6.5s						
KMI				LR	LR		
	comp=Z,930nm,9.4s						
GTA	**Gaotai**	**8.65**	**337**	⇓P	**Pn**	**18 52 22.6**	**+3.8**
GTA				pP		18 52 25.6	
GTA				sP		18 52 28.5	
GTA				S	**Sn**	**18 54 03.0**	**+6.2**
GTA				sS		18 54 08.3	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,79nm,3.8s						
GTA				LR	LR		
	comp=N,1μm,10.1s						
GTA				LR	LR		
	comp=E,950nm,8.0s						
GTA				LR	LR		
	comp=Z,1μm,9.8s						
WHN	**Wuhan**	**8.80**	**94**	*e*P	**Pn**	**18 52 21.0**	**+0.1**
WHN				S	**Sn**	**18 53 56.5**	**-4.1**
WHN				LR	LR		
	comp=N,2μm,9.1s						
WHN				LR	LR		
	comp=E,2μm,6.5s						
WHN				LR	LR		
	comp=Z,2μm,8.3s						
HHC	**Hu-ho-hao-te**	**11.08**	**31**	*e*P	**Pn**	**18 52 52.3**	**+0.2**
HHC				PP		18 53 00.9	
HHC				S	**Sn**	**18 54 58.1**	**+1.6**
HHC				sS		18 55 03.0	
HHC				SS		18 55 10.7	
HHC				PcS	PcS	19 02 21.2	-2.2
HHC				ScS	ScS	19 05 53.8	-4.5
HHC				pmax	pmax		
	comp=Z,9.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,84nm,4.5s						
HHC				LR	LR		
	comp=N,670nm,8.6s						
HHC				LR	LR		
	comp=E,660nm,8.2s						
HHC				LR	LR		
	comp=Z,640nm,8.7s						
LSA	**Lhasa**	**11.35**	**264**	P	**Pn**	**18 52 57.1**	**+1.3**
LSA				LR	LR		
	comp=E,360nm,10.0s						
LSA				LR	LR		
	comp=Z,480nm,10.3s						
GZH	**Guangzhou**	**11.70**	**133**	P	**Pn**	**18 52 59.9**	**-0.7**
GZH				S	**Sn**	**18 55 05.8**	**-5.9**
GZH				LR	LR		
	comp=N,780nm,4.3s						
GZH				LR	LR		
	comp=E,1μm,6.1s						
GZH				LR	LR		
	comp=Z,860nm,9.4s						
NJ2	**Nanjing**	**12.53**	**84**	*e*P	**Pn**	**18 53 11.8**	**-0.1**
NJ2				pP		18 53 15.1	
NJ2				sP		18 53 18.4	
NJ2				PP		18 53 22.0	
NJ2				S	**Sn**	**18 55 32.0**	**+0.1**
NJ2				sS		18 55 37.9	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,100nm,4.6s						
NJ2				LR	LR		
	comp=N,520nm,8.4s						
NJ2				LR	LR		
	comp=E,680nm,12.2s						
NJ2				LR	LR		
	comp=Z,850nm,9.0s						
BJI	**Beijing**	**12.95**	**46**	P	**Pn**	**18 53 17.8**	**+0.2**
BJI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BJI				LR	LR		
	comp=N,160nm,8.1s						
BJI				LR	LR		
	comp=E,260nm,7.3s						
QIZ	**Qiongzhong**	**13.44**	**156**	P	**Pn**	**18 53 24.6**	**+0.2**
QIZ				S	**Sn**	**18 55 52.9**	**-1.4**
QIZ				pmax	pmax		
	comp=Z,7.0nm,1.3s						
QIZ				LR	LR		
	comp=N,490nm,7.0s						
QIZ				LR	LR		
	comp=Z,510nm,8.1s						
CHTO	**Chiang Mai**	**13.48**	**202**	*e*P	**Pn**	**18 53 25.8**	**+0.8**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CHTO	**Chiang Mai**	**13.48**	**202**	*e*Pn	**Pn**	**18 53 25.8**	**+0.9**
	comp=Z,7.3nm,0.8s						
CM31	**Chiang Mai Arr**	**13.81**	**201**	Pn	**Pn**	**18 53 27.0**	**-2.6**
	comp=Z,3.6nm,0.3s						
CMAR	**Chiang Mai Arr**	**13.81**	**201**	Pn	**Pn**	**18 53 30.9**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=8.3,slow=11,SNR=9.9						
TAPN	**Taplejung**	**14.91**	**258**	*e*P	**Pn**	**18 53 44.0**	**-0.5**
	comp=Z,22nm,0.7s						
ODAN	**Odare**	**15.35**	**257**	*e*P	**Pn**	**18 53 47.5**	**-2.9**
RAMN	**Ramite**	**15.98**	**258**	*e*P	**Pn**	**18 53 56.2**	**-2.3**
JIRN	**Jiri**	**16.09**	**261**	*e*P	**Pn**	**18 53 58.5**	**-1.4**
GUN	**Gumba**	**16.27**	**262**	*e*P	**Pn**	**18 54 00.9**	**-1.4**
SONM	**Songino Array**	**16.41**	**5**	Pn	**Pn**	**18 54 04.0**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=188,slow=12,SNR=11						
SONM				Lg		18 58 47.2	
	comp=Z,0.0nm,0.3s,baz=198,slow=27,SNR=2.6						
SONM				LR	LR	19 00 59.8	
	comp=Z,230nm,18.9s,baz=277,slow=40						
ULN	**Ulaanbaatar**	**16.50**	**7**	*e*P	**Pn**	**18 54 02.8**	**-2.3**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ULN	**Ulaanbaatar**	**16.50**	**7**	*e*Pn	**Pn**	**18 54 02.8**	**-2.3**
	comp=Z,5.3nm,0.8s						
YHNB	**Yeheng**	**16.64**	**110**	*e*Pn	**Pn**	**18 54 04.0**	**-3.1**
SSLB	**Suanglung**	**16.74**	**113**	*e*Pn	**Pn**	**18 54 11.0**	**+2.7**
	comp=Z,30nm,1.0s						
PKI	**Pulchoki**	**16.77**	**261**	*e*P	**Pn**	**18 54 06.7**	**-2.0**
	comp=Z,29nm,0.7s						
PKIN	**Phulchoki**	**16.78**	**261**	*e*P	**Pn**	**18 54 07.0**	**-1.8**
KKN	**Kakani**	**16.82**	**262**	*e*P	**Pn**	**18 54 07.2**	**-2.1**
	comp=Z,68nm,1.0s						
DMN	**Daman**	**17.02**	**262**	*e*P	**Pn**	**18 54 10.0**	**-1.8**
	comp=Z,82nm,1.1s						
WMQ	**Urumqi**	**17.88**	**318**	P	**Pn**	**18 54 25.0**	**+2.6**
WMQ				pP	pP	18 54 28.6	+4.5
WMQ				sP	sP	18 54 32.0	+7.4
WMQ				PP		18 54 39.8	
WMQ				*e*S	**Sn**	**18 57 42.0**	**-0.1**
WMQ				SS		18 58 05.0	
WMQ				PcP	PcP	18 59 02.0	+3.1
WMQ				pmax	pmax		
	comp=Z,13nm,0.8s						
WMQ				LR	LR		
	comp=N,110nm,16.4s						
WMQ				LR	LR		
	comp=E,76nm,13.6s						
WMQ				LR	LR		
	comp=Z,98nm,14.0s						
KOLN	**Koldanda**	**18.25**	**263**	*e*P	**Pn**	**18 54 24.5**	**-2.5**
	comp=Z,24nm,0.6s						
TLY	**Talaya**	**20.17**	**359**	*e*P	**P**	**18 54 46.7**	**-1.5**
TLY				*e*SS		18 58 39.4	
TLY				pmax	pmax		
	comp=Z,7.0nm,1.0s						
TLY				MLR	MLR		
	comp=Z,209nm,12.0s,MS3.7						
MOY	**Mondy**	**20.29**	**354**	*e*P	**P**	**18 54 52.1**	**+2.7**
KSRS	**Korea Array**	**20.45**	**67**	P	**P**	**18 54 52.0**	**+0.6**
	comp=Z,11nm,0.7s,baz=257,slow=10,SNR=34						
KSRS	**Korea Array**	**20.45**	**67**	P	**P**	**18 54 52.0**	**+0.6**
KSRS				pmax	pmax		
	comp=Z,11nm,0.7s						
IRK	**Irkutsk**	**20.73**	**0**	*e*P	**P**	**18 54 56.5**	**+2.3**
IRK				pmax	pmax		
	comp=Z,34nm,0.4s						
CN2	**Changchun**	**20.79**	**48**	⇑P	**P**	**18 54 56.6**	**+1.6**
CN2				*e*pP		18 55 00.6	
CN2				*e*sP	sP	18 55 03.6	+7.1
CN2				*e*S	**S**	**18 58 43.4**	**-4.1**
CN2				pmax	pmax		
	comp=Z,80nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,15.0s,MS3.8						
CN2				LR	LR		
	comp=E,200nm,15.0s,MS3.8						
CN2				LR	LR		
	comp=Z,200nm,14.0s,MS3.6						
KZLR	**Kyzyl**	**21.42**	**343**	⇓*i*P	**P**	**18 55 02.6**	**+1.0**
MK31	**Makanchi Array**	**22.71**	**318**	*e*P	**P**	**18 55 15.2**	**-0.3**
MKAR	**Makanchi Array**	**22.71**	**318**	P	**P**	**18 55 16.4**	**+0.8**
	comp=Z,6.6nm,0.6s,mb3.9,baz=120,slow=12,SNR=41						
MDJ	**Mudanjiang**	**23.82**	**49**	P	**P**	**18 55 24.4**	**-2.5**
MDJ				pP		18 55 27.3	
MDJ				S	**S**	**18 59 40.0**	**-3.1**
MDJ				sS	sS	18 59 45.1	+0.2
MDJ				ScP	ScP	19 02 46.1	-3.1
MDJ				PcS	PcS	19 02 48.1	-1.4
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.5s,mb3.8						
KSH	**Kashi**	**24.22**	**297**	P	**P**	**18 55 34.4**	**+3.7**
KSH				pP		18 55 38.1	
KSH				sP	sP	18 55 41.1	+8.9
KSH				PP		18 56 10.1	
KSH				PcP	PcP	18 59 12.6	+1.5
KSH				S	**S**	**18 59 51.5**	**+1.8**
KSH				SS		19 00 47.4	
KSH				ScP	ScP	19 02 49.8	-0.7
KSH				PcS	PcS	19 02 51.3	+0.5
KSH				ScS	ScS	19 06 36.5	-1.2
KSH				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.2						
KSH				pmax	pmax		
	comp=Z,82nm,4.5s						
KSH				LR	LR		
	comp=N,200nm,9.9s						
KSH				LR	LR		
	comp=E,150nm,6.9s						
KSH				LR	LR		
	comp=Z,140nm,7.9s						
VLA	**Vladivostok**	**24.81**	**54**	*e*P	**P**	**18 55 36.7**	**+0.7**
VLA				pmax	pmax		
	comp=Z,23nm,0.6s,mb4.9						
TKM2	**Tokmak 2**	**25.32**	**305**	*e*P	**P**	**18 55 40.6**	**0.0**
TKM2				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.2						
TKM2	**Tokmak 2**	**25.32**	**305**	*e*P	**P**	**18 55 40.6**	**0.0**
	comp=Z,7.6nm,0.9s,mb4.2						
UCH	**Uchtor**	**25.90**	**303**	*e*P	**P**	**18 55 47.4**	**+1.5**
	comp=Z,501nm,0.6s						
FRU	**Bishkek**	**25.98**	**304**	*e*P	**P**	**18 55 54.0**	**+7.4**
KULM	**Kulim**	**26.28**	**188**	*e*P	**P**	**18 55 48.7**	**-0.8**
	comp=Z,6.6nm,0.9s,mb4.2						
ZAA0	**Zalesovo Array**	**26.39**	**334**	*e*P	**P**	**18 55 50.0**	**-0.1**
ZALV	**Zalesovo Beam**	**26.39**	**334**	P	**P**	**18 55 50.2**	**+0.1**
	comp=Z,14nm,0.9s,mb4.5,baz=131,slow=9.4,SNR=40						
ZALV				LR	LR	19 06 50.8	
	comp=Z,39nm,21.2s,MS2.9,baz=236,slow=38						
ZALV	**Zalesovo Beam**	**26.39**	**334**	P	**P**	**18 55 50.2**	**+0.1**
ZALV				LR	LR	19 06 50.8	
EKS2	**Erkin-Say**	**26.54**	**303**	*e*P	**P**	**18 55 52.2**	**+0.6**
	comp=Z,3.4nm,0.7s,mb4.0						
KURK	**Kurchatov**	**26.96**	**323**	P	**P**	**18 55 55.

MAJO	Matsushiro	28.58	71	eP	P	18 56 08.8	-1.2
	comp=Z,3.7nm,0.6s,mb4.3						
MAT	Matsushiro	28.58	71	P	P	18 56 08.9	-1.1
MJAR	Matsushiro Arr	28.58	71	P	P	18 56 09.9	-0.2
	comp=Z,1.4nm,0.6s,mb3.9,baz=278,slow=11,SNR=12						
HABR	Khabarovsk	28.85	45	P	P	18 56 10.2	-2.1
HABR				e*PP	pP	18 56 19.8	+6.4
HABR				e		18 57 01.1	
HABR				S	S	19 00 58.2	-4.7
HABR				e*SS	sS	19 01 14.4	+10
HABR				eSS	SS	19 02 21.2	-44
HABR				e		19 06 52.0	
PSI	Prapat	28.97	191	P	P	18 56 14.0	+0.4
	comp=Z,7.8nm,0.7s,mb4.6,baz=336,slow=7.6,SNR=10.0						
KBL	Kabul	29.51	285	eP	P	18 56 19.3	+1.0
KBL				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
KBL	Kabul	29.51	285	eP	P	18 56 19.3	+1.1
	comp=Z,9.2nm,1.0s,mb4.5						
KSM	Kuching	30.42	168	eP	P	18 56 26.5	0.0
BVAR	Borovoye Array	32.51	321	P	P	18 56 45.0	+0.5
	comp=Z,2.7nm,0.6s,mb4.3,baz=116,slow=10,SNR=14						
BVAR				PcP	PcP	18 59 30.3	-1.0
	comp=Z,0.9nm,0.6s,baz=146,slow=2.1,SNR=4.3						
BRVK	Borovoye	32.58	321	c iP	P	18 56 45.8	+0.7
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
BRVK	Borovoye	32.58	321	eP	P	18 56 44.8	-0.3
	comp=Z,6.4nm,0.8s,mb4.6						
YSS	Yuzh-Sakhalins	33.27	51	eP	P	18 56 52.0	+0.7
YSS				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
YSS	Yuzh-Sakhalins	33.27	51	eP	P	18 56 52.0	+0.7
	comp=Z,14nm,1.1s,mb4.8						
YAK	Yakutsk	34.72	21	eP	P	18 57 03.3	-0.4
YAK				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
YAK	Yakutsk	34.72	21	eP	P	18 57 03.3	-0.4
	comp=Z,6.1nm,0.6s,mb4.7						
ABKAR	Akbulak array	37.44	311	eP	P	18 57 26.7	-0.4
	comp=Z,4.9nm,0.8s,mb4.4						
AKTK	Aktyubinsk	38.90	313	P	P	18 57 39.9	+0.5
AKTK				PcP	PcP	18 59 48.9	-1.3
AKTO	Aktyubinsk	38.90	313	P	P	18 57 39.9	+0.5
	comp=Z,2.3nm,0.7s,mb4.0,baz=91,slow=8.8,SNR=9.6						
AKTO				PcP	PcP	18 59 48.9	-1.3
	comp=Z,1.2nm,0.6s,baz=108,slow=7.4,SNR=3.5						
SVE	Sverdlovsk	39.21	323⇑	eP	P	18 57 43.2	+1.3
SVE				pmax	pmax		
	comp=Z,23nm,1.1s,mb4.8						
ARU	Arti	40.15	322	c iP	P	18 57 50.1	+0.4
ARU				S	S	19 03 55.8	-0.9
ARU				SS	SS	19 06 48.7	-5.3
ARU				pmax	pmax		
	comp=Z,37nm,1.2s,mb5.0						
ARU	Arti	40.15	322	eP	P	18 57 49.8	+0.1
	comp=Z,24nm,0.8s,mb5.0						
SOKR	Solikamsk	42.09	326⇑	iP	P	18 58 07.2	+1.5
SOKR				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.7						
TIXI	Tiksi	42.36	11	eP	P	18 58 05.9	-1.8
TIXI				pmax	pmax		
	comp=Z,7.0nm,2.0s,mb3.9						
TIXI	Tiksi	42.36	11	eP	P	18 58 06.3	-1.4
	comp=Z,1.9nm,0.4s,mb4.1						
PETK	Petropavlovsk-	43.88	44	P	P	18 58 20.7	+0.4
	comp=Z,1.7nm,0.6s,mb4.0,baz=260,slow=5.9,SNR=4.1						
PETK	Petropavlovsk-	43.88	44	P	P	18 58 20.7	+0.4
KIV	Kislovodsk	49.13	303⇓	iP	P	18 59 02.5	+0.9
KIV				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.8						
KIV	Kislovodsk	49.13	303	P	P	18 59 01.5	-0.2
	comp=Z,8.5nm,0.9s,mb4.8						
BILL	Bilibino	50.80	25	c iP	P	18 59 13.5	-0.5
BILL				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.2						
BILL	Bilibino	50.80	25	eP	P	18 59 13.2	-0.7
	comp=Z,2.8nm,0.6s,mb4.4						
VSR	Storozhevoye	50.85	313	eP	P	18 59 14.3	-0.2
VSR				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
VSR				pmax	pmax		
	comp=N,10.0nm,1.0s						
VSR				pmax	pmax		
	comp=E,10.0nm,1.0s						
OBN	Obninsk	52.22	318⇑	iP	P	18 59 25.1	+0.4
OBN				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
OBN	Obninsk	52.22	318	P	P	18 59 27.5	+2.8
ANN	Anapa	52.74	305	eP	P	18 59 31.7	+2.9
ANN				pmax	pmax		
	comp=Z,46nm,1.1s,mb5.3						
MBWA	Marble Bar	54.45	162	eP	P	18 59 40.5	-0.9
	comp=Z,8.2nm,0.9s,mb4.7						
BRTR	Keskin Array B	56.58	299	P	P	18 59 56.4	-0.4
	comp=Z,0.4nm,0.5s,mb3.7,baz=91,slow=6.0,SNR=3.2						
ARCES	ARCESS Array B	56.92	336	P	P	18 59 57.9	-0.8
	comp=Z,2.8nm,0.7s,mb4.4,baz=80,slow=8.8,SNR=8.6						
ARCES				PcP	PcP	19 00 53.1	-0.9
	comp=Z,1.6nm,0.6s,baz=91,slow=5.0,SNR=6.2						
ARCES				LR	LR	19 29 38.5	
	comp=Z,30nm,19.2s,MS3.4,baz=10,slow=42						
ARCES	ARCESS Array B	56.92	336	P	P	18 59 57.9	-0.8
ARCES						19 00 53.1	
AKASG	Malin Array Be	57.15	313	P	P	18 59 59.8	-0.8
	comp=Z,4.9nm,0.7s,mb4.7,baz=70,slow=6.8,SNR=7.7						
AKBB	Malin Array Si	57.15	313	eP	P	18 59 59.6	-1.0
FINES	FINESS Array B	57.26	326	P	P	19 00 01.1	-0.1
	comp=Z,6.7nm,0.8s,mb4.8,baz=76,slow=8.0,SNR=18						
VSU	Vasula	57.31	322	eP	P	19 00 01.2	-0.4
VSU				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.1						
IDID	Didziasalis	57.79	319	eP	P	19 00 04.9	-0.2
IDID				AMB	AMB	19 00 09.6	
	comp=Z,9.1nm,0.8s,mb4.8						
IDID	Didziasalis	57.79	319	eP	P	19 00 05.2	+0.1
IDID				AMB	AMB	19 00 09.6	
	comp=Z,8.7nm,0.9s,mb4.8						
IZAR	Zarasai	57.99	319	eP	P	19 00 06.6	+0.1
IZAR				AMB	AMB	19 00 11.9	
	comp=Z,4.6nm,0.9s,mb4.5						
IZAR	Zarasai	57.99	319	eP	P	19 00 06.6	+0.1
IZAR				AMB	AMB	19 00 11.9	
	comp=Z,4.5nm,0.9s,mb4.5						
IIGN	Ignalina	58.08	319	eP	P	19 00 07.1	+0.1
IIGN				AMB	AMB	19 00 11.7	
	comp=Z,9.7nm,0.9s,mb4.8						
IIGN	Ignalina	58.08	319	eP	P	19 00 07.2	+0.2
IIGN				AMB	AMB	19 00 11.7	
	comp=Z,9.6nm,0.9s,mb4.8						
ISAL	Salakas	58.09	319	eP	P	19 00 06.9	-0.3
ISAL				AMB	AMB	19 00 11.7	
	comp=Z,5.9nm,0.8s,mb4.7						
ISAL	Salakas	58.09	319	eP	P	19 00 07.2	0.0
ISAL				AMB	AMB	19 00 11.7	
	comp=Z,5.9nm,0.8s,mb4.7						
WRAB	Tennant Creek	58.77	146	eP	P	19 00 12.5	+0.2
WRAB				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.2						
WRAB	Tennant Creek	58.77	146	eP	P	19 00 12.5	+0.3
	comp=Z,27nm,1.0s,mb5.2						
WRA	Warramunga Arr	58.78	146	P	P	19 00 12.6	+0.3
	comp=Z,11nm,0.7s,mb5.0,baz=338,slow=7.6,SNR=105						
WRA	Warramunga Arr	58.78	146	P	P	19 00 12.6	+0.3
ASAR	Alice Springs	61.81	149	P	P	19 00 33.4	+0.4
	comp=Z,3.0nm,0.8s,mb4.5,baz=325,slow=6.8,SNR=28						
STHS	Stebnicka Huta	62.45	313	eP	P	19 00 41.1	+4.0
STHS	Stebnicka Huta	62.45	313	eP	P	19 00 41.1	+4.0
OJC	Ojcow	63.10	314	eP	P	19 00 42.3	+0.9
OKC	Ostrava-Krasne	64.23	314	eP	P	19 00 49.6	+0.7
OKC				e		19 00 52.7	
OKC	Ostrava-Krasne	64.23	314	eP	P	19 00 49.6	+0.7
OKC				epP	pP	19 00 52.7	+2.6
VYHS	Vyhne	64.24	313	eP	P	19 00 52.4	+3.4
VYHS	Vyhne	64.24	313	eP	P	19 00 52.4	+3.4
NB2	NORSAR Subarra	64.35	327	P	P	19 00 48.3	-1.2
	comp=Z,5.7nm,0.8s,mb4.7,baz=75,slow=6.9						
NOA	NORSAR Array B	64.35	327	P	P	19 00 47.9	-1.6
	comp=Z,4.0nm,0.8s,mb4.5,baz=72,slow=6.9,SNR=12						
MORC	Moravsky Berou	64.62	314	eP	P	19 00 51.3	-0.2
MORC				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
MORC	Moravsky Berou	64.62	314	eP	P	19 00 51.3	-0.2
	comp=Z,5.7nm,0.8s,mb4.7						
DPC	Dobruska-Polom	65.17	315	eP	P	19 00 55.3	+0.3
DPC				e		19 00 59.0	
DPC	Dobruska-Polom	65.17	315	eP	P	19 00 55.3	+0.3
DPC				epP	pP	19 00 59.0	+2.8
NWAO	Narrogin (SRO)	65.26	168	eP	P	19 00 55.8	+0.2
NWAO				pmax	pmax		
	comp=Z,12nm,0.8s						
NWAO	Narrogin (SRO)	65.26	168	eP	P	19 00 55.8	+0.2
	comp=Z,12nm,0.8s,mb5.0						
CTA	Charters Tower	65.28	136	P	P	19 00 56.0	0.0
	comp=Z,5.0nm,0.8s,mb4.6,baz=336,slow=10.0,SNR=2.3						
UPC	Upice	65.30	315	eP	P	19 00 55.7	-0.2
UPC				e		19 00 59.7	
UPC	Upice	65.30	315	eP	P	19 00 55.7	-0.2
UPC				epP	pP	19 00 59.7	+2.6
PRU	Pruhonice	66.37	315	eP	P	19 00 59.8	-3.0
PRU				epP	pP	19 01 06.6	+2.7
BRG	Berggiesshubel	66.41	316	eP	P	19 01 02.7	-0.3
	comp=Z,6.0nm,0.8s,mb4.7						
BRG	Berggiesshubel	66.41	316	eP	P	19 01 02.8	-0.2
	comp=Z,3.2nm,0.8s,mb4.4						
BRG				i		19 01 06.5	
	comp=Z,5.5nm,0.8s						
BRG	Berggiesshubel	66.41	316	eP	P	19 01 02.8	-0.2
BRG				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
BRG				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
CLL	Collm	66.80	317	eP	P	19 01 06.0	+0.5
CLL				e	pP	19 01 08.0	+1.3
CLL	Collm	66.80	317	eP	P	19 01 06.0	+0.5
CLL				epP	pP	19 01 08.0	+1.3
	comp=Z,4.0nm,0.8s						
CLL				ePP	PP	19 03 29.0	-3.2
KHC	Kasperske Hory	67.27	315	eP	P	19 01 08.6	+0.1
KHC				e		19 01 12.5	
KHC	Kasperske Hory	67.27	315	eP	P	19 01 08.6	+0.1
KHC				epP	pP	19 01 12.5	+2.8
BSEG	Bad Segeberg	67.33	320	eP	P	19 01 09.5	+0.7
	comp=Z,16nm,0.9s,mb5.0						
NKC	Novy Kostel	67.53	316	eP	P	19 01 13.7	+3.6
NKC				smax			
	comp=N,3.0nm,0.5s						
NKC	Novy Kostel	67.53	316	eP	P	19 01 13.7	+3.6
NKC	Novy Kostel	67.53	316	eP	P	19 01 13.7	+3.6
BPAW	Bear Paw Mtn.	68.23	27	eP	P	19 01 13.8	-0.5
	comp=N,5.8nm,0.6s,mb4.8						
PPLA	Purkeypile	68.30	29	eP	P	19 01 15.2	+0.4
	comp=N,8.8nm,0.6s,mb5.0						
GRF	Grafenberg Arr	68.47	316	eP	P	19 01 16.4	+0.3
	comp=Z,13nm,0.8s,mb5.0						
GRF	Grafenberg Arr	68.47	316	eP	P	19 01 16.4	+0.3
GRF				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.0						
COLA	College	69.06	26	eP	P	19 01 18.9	-0.6
COLA				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
COLA	College	69.06	26	eP	P	19 01 18.9	-0.5
	comp=Z,9.1nm,0.8s,mb4.8						
MCK	McKinley	69.21	27	P	P	19 01 19.7	-0.7
PMR	Palmer	70.18	29	eP	P	19 01 25.7	-0.7
KDAK	Kodiak Island	70.49	34	P	P	19 01 28.0	-0.4
	comp=Z,14nm,0.6s,mb5.0,baz=305,slow=5.0,SNR=8.7						
DAVOX	Davos/Dischmat	70.49	313	P	P	19 01 28.3	-0.3
	comp=Z,8.9nm,0.8s,mb4.8,baz=71,slow=18,SNR=9.4						
TUE	Stuetta	70.96	313	eP	P	19 01 31.4	-0.1
	comp=Z,4.9nm,0.6s,mb4.6						
KMBO	Kilima Mbogo	71.04	257	eP	P	19 01 32.4	-0.1
KMBO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KMBO	Kilima Mbogo	71.04	257	eP	P	19 01 32.4	-0.1
	comp=Z,5.9nm,0.9s,mb4.5						
CDF	Champ du Feu	71.36	316	eP	P	19 01 33.6	-0.3
	comp=Z,15nm,1.0s,mb4.6						
CDF	Champ du Feu	71.36	316	eP	P	19 01 33.6	-0.3
CDF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
CDF	Champ du Feu	71.36	316	eP	P	19 01 33.6	-0.3
	comp=Z,7.4nm,1.0s,mb4.6						
WLF	Walferdange	71.46	317	P	P	19 01 33.9	-0.5
	comp=Z,16nm,1.2s,mb4.8						
WLF	Walferdange	71.46	317	eP	P	19 01 38.6	+4.1
WLF	Walferdange	71.46	317	eP	P	19 01 34.9	+0.4
WLF				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.0						
WLF	Walferdange	71.46	317	eP	P	19 01 34.9	+0.4
	comp=Z,19nm,0.9s,mb5.0						
INK	Inuvik	71.77	19	eP	P	19 01 35.2	-0.8
INK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
INK	Inuvik	71.77	19	eP	P	19 01 35.2	-0.8
	comp=Z,7.9nm,0.7s,mb4.8						
BMRM	Bremner River	72.37	28	eP	P	19 01 39.8	+0.1
	comp=Z,9.4nm,0.6s,mb4.9						
DAWY	Dawson	72.57	24	eP	P	19 01 40.1	-0.8
LPG	La Plagne	73.01	313	eP	P	19 01 44.3	+0.5
	comp=Z,25nm,0.7s,mb5.0						
LPG	La Plagne	73.01	313	eP	P	19 01 44.3	+0.5
LPG				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.9						
LPG	La Plagne	73.01	313	eP	P	19 01 44.3	+0.5
	comp=Z,12nm,0.7s,mb5.0						
LPL	La Plagne	73.01	313	eP	P	19 01 44.2	+0.4
	comp=Z,31nm,0.8s,mb5.0						
LPL	La Plagne	73.01	313	eP	P	19 01 44.2	+0.4
LPL				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
LPL	La Plagne	73.01	313	eP	P	19 01 44.2	+0.4
	comp=Z,15nm,0.8s,mb5.0						
EKA	Eskdalemuir Ar	73.65	325	P	P	19 01 48.9	+1.5
	comp=Z,2.6nm,0.9s,mb4.2,baz=51,slow=6.6,SNR=4.3						
ORIF	Oris-en-Rattie	73.83	313	eP	P	19 01 48.5	-0.1
	comp=Z,16nm,0.9s,mb4.6						
ORIF	Oris-en-Rattie	73.83	313	eP	P	19 01 48.5	-0.1
ORIF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
ORIF	Oris-en-Rattie	73.83	313	eP	P	19 01 48.5	-0.1
	comp=Z,7.8nm,0.9s,mb4.6						
SMF	Signal de Mont	74.25	315	eP	P	19 01 50.6	-0.5
	comp=Z,14nm,0.8s,mb4.6						
SMF	Signal de Mont	74.25	315	eP	P	19 01 50.6	-0.5
SMF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
SMF	Signal de Mont	74.25	315	eP	P	19 01 50.6	-0.5
	comp=Z,6.8nm,0.8s,mb4.6						
TCF	Toulx Ste Croi	75.40	315	eP	P	19 01 57.5	-0.3
SKAG	Skagway	76.97	27	eP	P	19 02 06.9	+0.5
	comp=Z,10.0nm,0.9s,mb4.8						
YKA	Yellowknife Ar	81.31	17	P	P	19 02 29.9	-0.2
	comp=Z,2.6nm,0.5s,mb4.4,baz=328,slow=5.2,SNR=14						
LSZ	Lusaka	86.34	250	eP	P	19 02 55.3	-1.3
LSZ				pmax	pmax		
	comp=Z,17nm,1.5s,mb5.0						
LSZ	Lusaka	86.34	250	eP	P	19 02 55.3	-1.3
	comp=Z,17nm,1.5s,mb5.0						
FFC	Flin Flon	91.23	15	i P	P	19 03 19.8	+0.7
OTAV	Otavalo	148.34	5	ePKPbc	PKPbc	19 10 02.3	+1.1

*NEIC **05** 18:52:50.3, 18°.13N×103°.40W, h13km, MD4.1(MEX), After MEX.*

MEX 05 18:52:50.3±0.8, 18°.13N×103°.40W, h13km±4km, MD4.1, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMIG	Aquila	0.16	17	i P	Pg	18 52 53.3	-0.8
MMIG				i S	Sg	18 52 56.4	-0.4
SFJM	Santa Fe	2.36	8	i P	Pn	18 53 26.5	-2.3
SFJM				i S	Sn	18 53 53.9	-3.8
SFJM	Santa Fe	2.36	8	i P	Pn	18 53 26.5	-2.3
SFJM				i S	Sn	18 53 53.9	-3.8
MOIG	Morelia	2.59	53	eP	Pn	18 53 28.4	-3.5
MOIG				i S	Sn	18 53 58.2	-5.1
MOIG	Morelia	2.59	53	eP	Pn	18 53 28.4	-3.5
MOIG				i S	Sn	18 53 58.2	-5.1
ANIG	Ahuacatlan	3.09	340	eP	Pn	18 53 35.8	-3.0
ANIG				i S	Sn	18 54 10.7	-5.0
CAIG	El Cayaco	3.17	109	eP	Pn	18 53 37.9	-2.0
CAIG				i S	Sn	18 54 15.2	-2.5
CAIG	El Cayaco	3.17	109	eP	Pn	18 53 37.9	-2.0
CAIG				i S	Sn	18 54 15.2	-2.5
MZVM		4.09	74	eP	Pn	18 53 53.6	+1.1
MZVM				i S	Sn	18 54 38.2	-2.0
PPM	Popocatepetl	4.62	78	eP	Pn	18 53 57.1	-2.7
PPM				i S	Sn	18 54 49.8	-3.5
PPM	Popocatepetl	4.62	78	eP	Pn	18 53 57.1	-2.7
PPM				i S	Sn	18 54 49.8	-3.5
UTMO	Huajuapan	5.33	92	eP	Pn	18 53 51.1	+1.5
UTMO				i S	Sn	18 55 11.8	+0.8
LNIG	Linares	7.66	28	eP	Pn	18 54 42.6	+1.0

*CSEM **05** 19:00:19.3±0.1, 36°.16N×42°.31E, h4km, MD3.6, Error ellipse: s-maj=4.5km s-min=3.5km az=45.0*

ISK 05 19:00:18.1, 36°.18N×42°.27E, h2km, MD3.6, Iraq

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSL	Mosul	0.71	72	ex	x	19 00 35.0	
MSL				ex	x	19 00 36.0	
CUKT	Cukurca	1.51	45	ePN	Pn	19 00 47.1	+0.9
CUKT				eSN	Sn	19 01 08.2	+1.8
CUKT	Cukurca	1.51	45	ePn	Pn	19 00 47.1	+0.9
CUKT				eSn	Sn	19 01 08.2	+1.8
HKR	Hakkari	1.82	40	ePN	Pn	19 00 51.5	+1.0
HKR	Hakkari	1.82	40	ePn	Pn	19 00 51.5	+1.0
VANB	Van	2.57	20	ePN	Pn	19 01 02.2	+1.6
VANB	Van	2.57	20	ePn	Pn	19 01 02.3	+1.6
BINT	Bingol	3.04	333	ePN	Pn	19 01 08.8	+1.6
BINT	Bingol	3.04	333	ePn	Pn	19 01 08.8	+1.6
URFA	Urfa	3.04	295	ePN	Pn	19 01 08.9	+1.7
URFA	Urfa	3.04	295	ePn	Pn	19 01 08.9	+1.7
SVRC	Sivrice-ELAZID	3.22	314	ePN	Pn	19 01 11.6	+1.8
SVRC	Sivrice-ELAZID	3.22	314	ePn	Pn	19 01 11.6	+1.9
BHD	Baghdad	3.38	149	ex	x	19 01 12.0	
BHD				ex	x	19 01 54.0	
BHD	Baghdad	3.38	149	ePn	Pn	19 01 12.0	+0.1
BHD				eSn	Sn	19 01 54.0	+1.3
AGRB	Hanur-Agry	3.43	9	ePN	Pn	19 01 14.5	+1.9
AGRB	Hanur-Agry	3.43	9	ePn	Pn	19 01 14.5	+1.9
PTK	Pertek	3.54	321	ePN	Pn	19 01 16.1	+2.0
PTK	Pertek	3.54	321	ePn	Pn	19 01 16.1	+2.0
EZM	Erzurum	3.79	349	ePN	Pn	19 01 19.5	+2.1

IDC 05 19:33:45.3±62.0, 48°.97N×179°.74E, h0km, mb3.6/3, mb1 3.6/3, mb1mx3.3/26, mbtmp3.6/3, Error ellipse: s-maj=1382.0km s-min=168.7km az=150.0, South of Aleutian Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	46.92	298	P	P	19 42 17.2	0.0
	0.4nm,0.5s,baz=75,slow=7.8,SNR=4.5						
MKAR	Makanchi Array	60.80	309	P	P	19 43 59.0	+0.2
	0.3nm,0.4s,baz=52,slow=5.5,SNR=9.6						
BVAR	Borovoye Array	62.13	320	P	P	19 44 07.5	-0.1
	0.4nm,0.3s,baz=52,slow=8.2,SNR=4.4						

*ISK **05** 20:10:17.9, 37°.00N×29°.24E, h6km, MD3.1*
*ISCJB **05** 20:10:18.4±0.6, 36°.99N±0°.03×29°.22E±0°.03, h2km±6km, Error ellipse: s-maj=4.7km s-min=4.3km az=151.9*
*CSEM **05** 20:10:18.6±0.1, 37°.02N×29°.24E, h5km, MD3.1, Error ellipse: s-maj=3.9km s-min=2.8km az=19.0*
*DDA **05** 20:10:19.1, 37°.00N×29°.17E, h32km±4km, Md3.1*

ISC 05 20:10:18.9±0.5, 36°.99N±0°.03×29°.22E±0°.03, h3km±5km, n44, σ0°93/62, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLHS	Glhisar (BURDU	0.28	55	ePG	Pg	20 10 23.3	-1.0
GLHS				eSG	Sg	20 10 28.4	+0.5
GLHS	Glhisar (BURDU	0.28	55	ePg	Pg	20 10 23.3	-1.0
GLHS				eSg	Sg	20 10 28.4	+0.5
TURN	Turunc	0.51	256	i P	Pg	20 10 32.9	+4.4
TURN				i S	Sg	20 10 45.4	+10
TURN	Turunc	0.51	256	i P	Pg	20 10 32.9	+4.3
ELL	Elmali	0.61	114	ePG	Pg	20 10 29.5	-1.1
ELL				eSG	Sg	20 10 38.6	+0.2
ELL	Elmali	0.61	114	ePg	Pg	20 10 29.5	-1.0
ELL				eSg	Sg	20 10 38.7	+0.3
DNZL	Cakiroluk	0.71	349	i P	Pg	20 10 31.6	-0.8
DNZL				i S	Sg	20 10 43.9	+2.3
DNZL	Cakiroluk	0.71	349	i P	Pg	20 10 31.6	-0.9
YER	Yerkesik	0.76	281	ePG	Pg	20 10 33.4	0.0
YER	Yerkesik	0.76	281	ePg	Pg	20 10 33.4	0.0
DENT	Denizli	0.77	349	ePG	Pg	20 10 32.8	-0.9
DENT	Denizli	0.77	349	ePg	Pg	20 10 32.8	-0.9
AKAS	Kas	0.82	157	i P	Pg	20 10 34.0	-0.6
AKAS				i S	Sg	20 10 48.2	+3.0
AKAS	Kas	0.82	157	i P	Pg	20 10 34.0	-0.6
AKAS				i S	Sg	20 10 48.2	+2.9
KSL	Kastellorizon	0.89	160	eP	Pg	20 10 35.5	-0.5
KORT	Korkueli	0.91	89	i P	Pg	20 10 36.8	+0.5
KORT				i S	Sg	20 10 51.5	+3.4
KORT	Korkueli	0.91	89	i P	Pg	20 10 36.8	+0.5
KORT				i S	Sg	20 10 51.5	+3.4
ARG	Arkhangelos	1.17	229	eP	Pg	20 10 41.5	+0.2
MLSB	Milas	1.19	285	ePN	Pn	20 10 41.6	-0.8
MLSB	Milas	1.19	285	ePn	Pn	20 10 41.6	-0.7
AYDN	Tasoluk	1.25	302	i P	Pg	20 10 43.0	+0.1
AYDN				i S	Sg	20 10 58.9	-0.3
AYDN	Tasoluk	1.25	302	i P	Pg	20 10 43.0	+0.1
AYDN				i S	Sg	20 10 58.9	-0.3
DAT	Datca	1.34	259	ePN	Pn	20 10 44.4	0.0
DAT	Datca	1.34	259	ePn	Pn	20 10 44.4	0.0
KHL	Karahalli	1.35	10	ePN	Pn	20 10 43.5	-1.1
KHL	Karahalli

0.1nm,0.3s,baz=19,slow=21,SNR=4.9
ASAR Alice Springs 21.85 192 P P 20 21 57.9 +0.5
0.6nm,0.4s,baz=16,slow=11,SNR=13
STKA Stephens Creek 29.68 175 P P 20 23 10.6 -0.1
0.7nm,0.5s,baz=355,slow=11,SNR=3.7
MKAR Makanchi Array 69.30 322 P P 20 28 12.2 -0.1
0.4nm,0.8s,baz=102,slow=6.6,SNR=4.7

IDC 05 20:25:59.8±1.5, 9°.83N×125°.99E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.5/21, mbtmp3.7/5, Error ellipse: s-maj=172.7km s-min=21.4km az=69.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**30.71**	**164**	P	P	20 32 15.7	-0.9
0.4nm,1.0s,baz=341,slow=9.8,SNR=3.1							
ASAR	**Alice Springs**	**34.18**	**167**	P	P	20 32 48.0	+1.0
0.2nm,0.4s,baz=348,slow=7.7,SNR=10							
MKAR	**Makanchi Array**	**52.21**	**323**	P	P	20 35 13.0	+0.5
0.6nm,0.6s,baz=125,slow=7.9,SNR=10							
ARCES	**ARCESS Array B**	**84.51**	**340**	P	P	20 38 34.0	-0.3
1.7nm,0.8s,baz=73,slow=6.0,SNR=5.9							
FINES	**FINESS Array B**	**86.14**	**332**	P	P	20 38 42.3	-0.3
0.9nm,0.5s,baz=75,slow=2.2,SNR=8.0							

KRSC 05 20:35:50.8±0.3, 55°.98N×163°.49E, h11km±11km, ML3.5, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.44**	**302**	*i* P	Pg	20 35 58.9	-0.5
KBTR				*eS*	Sg	20 36 05.4	+0.1
SRKR	**Sorokina**	**1.46**	**299**	*i* P	Pn	20 36 17.4	+0.4
SRKR				*eS*	Sn	20 36 37.2	+1.1
ZLN	**Zelenaya**	**1.51**	**273**	*e*P	Pn	20 36 18.8	+1.1
ZLN				*eS*	Sn	20 36 39.6	+2.3
BZGR	**Bezymyannyi-Gr**	**1.57**	**270**	P	Pn	20 36 19.7	+1.1
BZGR				S	Sn	20 36 40.8	+1.9
BKI	**Bering**	**1.61**	**118**	*e*P	Pn	20 36 17.4	-1.7
BKI				*i* S	Sn	20 36 37.5	-2.3
KLY	**Klyuchi**	**1.62**	**283**	*e*P	Pn	20 36 18.1	-1.2
KLY				*eS*	Sn	20 36 38.5	-1.6
KRSR	**Krestovskiy**	**1.66**	**279**	*e*P	Pn	20 36 19.8	+0.1
KRSR				*eS*	Sn	20 36 41.5	+0.5
MKZ	**Mys Kozlova**	**1.75**	**216**	*e*P	Pn	20 36 20.6	-0.4
MKZ				S	Sn	20 36 41.7	-1.5
KPT	**Kopyto**	**1.84**	**271**	*i* P	Pn	20 36 23.9	+1.7
KPT				*eS*	Sn	20 36 48.7	+3.3
KMNR	**Kamenistaya**	**1.85**	**264**	*e*P	Pn	20 36 23.3	+0.9
KMNR				*eS*	Sn	20 36 47.5	+1.8
KOZ	**Kozyrevsk**	**2.03**	**274**	*e*P	Pn	20 36 27.1	+2.2
KOZ				*eS*	Sn	20 36 53.6	+3.4
SRDR	**Sredinnyy**	**2.14**	**281**	*e*P	Pn	20 36 28.5	+2.1
SRDR				*eS*	Sn	20 36 55.5	+2.7
SPN	**Mys Shipunski**	**3.52**	**216**	*i* S	Sn	20 37 25.4	-1.6
NLC	**Nalytchevo**	**3.71**	**222**	S	Sn	20 37 31.8	+0.3
AVH	**Avacha**	**3.88**	**227**	P	Pn	20 36 52.7	+2.5
GNL	**Ganaly**	**3.94**	**237**	P	Pn	20 36 52.5	+1.4

IDC 05 20:58:13.5±34.0, 21°.53S×176°.46W, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.9/16, mbtmp4.0/4, Error ellipse: s-maj=616.3km s-min=144.9km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**34.83**	**265**	P	P	21 05 06.7	+0.2
2.5nm,0.5s,baz=118,slow=13,SNR=2.9							
STKA	**Stephens Creek**	**38.66**	**246**	P	P	21 05 38.4	-0.6
1.5nm,0.5s,baz=89,slow=11,SNR=12							
ASAR	**Alice Springs**	**45.69**	**257**	P	P	21 06 37.1	+0.6
1.1nm,0.6s,baz=89,slow=7.2,SNR=10							
WRA	**Warramunga Arr**	**45.89**	**263**	P	P	21 06 37.7	-0.4
1.1nm,0.7s,baz=99,slow=8.3,SNR=6.6							

*BJI **05** 20:58:12.6, 3°.93S×100°.85E, h10km, mB4.8/4, mb4.4/6, Ms4.2/2, Ms7 4.0/2*
*NEIC **05** 20:58:15.8±6.6, 3°.59S×100°.57E, h3km±40km, mb4.3/11, Error ellipse: s-maj=26.9km s-min=8.4km az=55.0*
*IDC **05** 20:58:16.8±1.6, 3°.40S×100°.78E, h0km, mb4.0/10, mb1 4.1/11, mb1mx4.0/21, mbtmp4.0/11, ML3.6/1, MS3.7/8, Ms1 3.7/8, ms1mx3.4/23, Error ellipse: s-maj=56.7km s-min=15.2km az=58.0*
*ISCJB **05** 20:58:18.9±0.8, 3°.5S±0°.1×100°.6E±0°.1, h33km, mb4.2/25, MS3.9/8, Error ellipse: s-maj=24.9km s-min=9.6km az=146.0*
ISC 05 20:58:21.3±0.8, 3°.5S±0°.1×100°.7E±0°.1, h35km, (h23km±5.4km:pP-P), n39, σ0s82/33, mb4.2/25, MS3.9/8, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**6.46**	**344**	Pn	**Pn**	**20 59 51.9**	**-2.0**
1.3nm,0.3s,baz=186,slow=10,SNR=4.2							
PSI				LR	LR	21 02 35.0	
comp=Z,428nm,20.8s,baz=143,slow=41							
PSI	**Prapat**	**6.46**	**344**	Pn	**Pn**	**20 59 51.9**	**-2.0**
PSI				LR	LR	21 02 35.0	
KULM	**Kulim**	**8.69**	**0**	Pn	**Pn**	**21 00 19.0**	**-5.7**
39nm,1.5s							
CM31	**Chiang Mai Arr**	**21.84**	**356**	*e*P	**P**	**21 03 11.0**	**0.0**
4.6nm,0.7s,mb4.0							
CMAR	**Chiang Mai Arr**	**21.84**	**356**	P	**P**	**21 03 10.0**	**-0.9**
3.7nm,0.8s,mb3.9,baz=186,slow=9.8,SNR=18							
CHTO	**Chiang Mai**	**22.20**	**356**	*e*P	**P**	**21 03 15.9**	**+1.2**
7.1nm,1.3s,mb3.9							
MBWA	**Marble Bar**	**25.57**	**135**	P	**P**	**21 03 43.4**	**-3.9**
7.8nm,1.1s,mb4.2							
LSA	**Lhasa**	**34.21**	**345**	P	**P**	**21 04 55.2**	**-8.5**
YHNB	**Yeheng**	**34.46**	**35**	P	**P**	**21 05 06.7**	**+0.7**
7.9nm,0.8s,mb4.7							
WRA	**Warramunga Arr**	**36.71**	**119**	P	**P**	**21 05 24.7**	**-0.6**
0.9nm,0.4s,mb3.9,baz=298,slow=8.7,SNR=25							
WRAB	**Tennant Creek**	**36.72**	**119**	*e*P	**P**	**21 05 25.7**	**+0.3**
3.1nm,0.6s,mb4.3							
ASAR	**Alice Springs**	**37.88**	**125**	P	**P**	**21 05 35.5**	**+0.3**
1.1nm,0.4s,mb3.9,baz=304,slow=8.6,SNR=23							
XAN	**Xi'an**	**38.11**	**11**	P	**P**	**21 05 37.1**	**+0.1**
XAN				pP	pP	21 05 45.4	-1.8
XAN				pmax	pmax		
comp=Z,3.0nm,0.7s,mb4.1							
LZH	**Lanzhou**	**39.45**	**4**	*e*P	**P**	**21 05 48.0**	**-0.2**
LZH				pP	pP	21 05 53.2	-5.3
LZH				sP	sP	21 05 55.8	-6.9
LZH				pmax	pmax		
comp=Z,21nm,1.5s,mb4.7							
LZH				pmax	pmax		
comp=Z,100nm,4.8s							
GTA	**Gaotai**	**42.67**	**359**	*e*P	**P**	**21 06 15.6**	**+1.0**
GTA				pP	pP	21 06 21.2	-3.7
GTA				sP	sP	21 06 24.5	-4.6
GTA				PP	PP	21 07 54.6	+0.5
GTA				pmax	pmax		
comp=Z,3.0nm,1.2s,mb3.9							
GTA				pmax	pmax		
comp=Z,60nm,4.5s							
GTA				LR	LR		
comp=N,100nm,14.6s							
GTA				LR	LR		
comp=E,130nm,20.5s							
GTA				LR	LR		
comp=Z,140nm,14.3s,MS4.0							
STKA	**Stephens Creek**	**47.70**	**131**	P	**P**	**21 06 54.9**	**+0.1**
comp=Z,2.5nm,0.9s,mb4.2,baz=293,slow=7.7,SNR=2.6							
STKA				LR	LR	21 28 11.7	
comp=Z,165nm,20.9s,MS4.0,baz=346,slow=38							
KSRS	**Korea Array**	**47.95**	**29**	P	**P**	**21 06 56.1**	**-0.4**
comp=Z,1.6nm,0.8s,mb4.1,baz=224,slow=8.7,SNR=4.1							
SONM	**Songino Array**	**51.33**	**5**	P	**P**	**21 07 23.9**	**+1.8**
comp=Z,3.6nm,0.7s,mb4.4,baz=185,slow=9.2,SNR=34							
ULN	**Ulaanbaatar**	**51.42**	**6**	*e*P	**P**	**21 07 22.6**	**-0.1**
comp=Z,1.5nm,0.6s,mb4.1							
ULN				*e*	pP	21 07 32.7	-0.6
TKM2	**Tokmak 2**	**51.42**	**337**	*e*P	**P**	**21 07 24.1**	**+1.2**
comp=Z,3.5nm,0.9s,mb4.3							
EKS2	**Erkin-Say**	**51.95**	**335**	*e*P	**P**	**21 07 27.4**	**+0.6**
comp=Z,3.0nm,0.8s,mb4.3							
MK31	**Makanchi Array**	**52.60**	**344**	*e*P	**P**	**21 07 32.2**	**+0.6**
MKAR	**Makanchi Array**	**52.60**	**344**	P	**P**	**21 07 32.5**	**+0.9**
comp=Z,2.2nm,0.7s,mb4.2,baz=148,slow=8.2,SNR=32							
MKAR				LR	LR	21 34 56.7	
comp=Z,36nm,18.2s,MS3.5,baz=358,slow=42							
MKAR	**Makanchi Array**	**52.60**	**344**	P	**P**	**21 07 32.5**	**+0.9**
MKAR				LR	LR	21 34 56.7	
MJAR	**Matsushiro Arr**	**53.01**	**38**	P	**P**	**21 07 33.8**	**-1.0**
comp=Z,0.4nm,0.4s,mb3.7,baz=215,slow=8.1,SNR=6.3							
KURK	**Kurchatov**	**57.18**	**344**	*e*P	**P**	**21 08 03.7**	**-1.0**
comp=Z,3.5nm,1.0s,mb4.3							
ZAA0	**Zalesovo Array**	**58.72**	**349**	*e*P	**P**	**21 08 14.9**	**-0.5**
ZALV	**Zalesovo Beam**	**58.72**	**349**	P	**P**	**21 08 15.8**	**+0.4**
comp=Z,2.7nm,0.7s,mb4.4,baz=180,slow=5.1,SNR=17							
ZALV	**Zalesovo Beam**	**58.72**	**349**	P	**P**	**21 08 15.8**	**+0.4**
BVAR	**Borovoye Array**	**61.77**	**340**	P	**P**	**21 08 36.1**	**-0.2**
comp=Z,1.1nm,0.6s,mb4.2,baz=150,slow=8.2,SNR=9.8							
ABKAR	**Akbulak array**	**63.23**	**331**	*e*P	**P**	**21 08 45.6**	**-0.5**
comp=Z,1.8nm,0.6s,mb4.4							
YAK	**Yakutsk**	**68.99**	**14**	P	**P**	**21 09 22.3**	**-0.6**
comp=Z,11nm,0.6s,mb5.0							
MAW	**Mawson**	**69.04**	**195**	LR	LR	21 32 06.3	
comp=Z,88nm,21.2s,MS4.0,baz=154,slow=29							
MMAI	**Mount Meron Ar**	**71.42**	**306**	LR	LR	21 41 03.6	
comp=Z,68nm,18.4s,MS3.9,baz=270,slow=36							
BRTR	**Keskin Array B**	**74.78**	**313**	P	**P**	**21 09 57.4**	**-0.7**
comp=Z,0.3nm,0.5s,mb3.5,baz=129,slow=5.4,SNR=2.7							
BOSA	**Boshof**	**75.53**	**241**	LR	LR	21 41 00.6	
comp=Z,74nm,18.1s,MS4.0,baz=156,slow=34							
ARCES	**ARCESS Array B**	**88.06**	**340**	LR	LR	21 55 19.2	
comp=Z,49nm,19.1s,MS3.9,baz=234,slow=39							
NOA	**NORSAR Array B**	**92.73**	**331**	LR	LR	21 59 56.2	
comp=Z,20nm,19.2s,MS3.6,baz=215,slow=40							
TXAR	**Lajitas Array**	**145.44**	**39**	PKPbc	PKPbc	21 17 57.3	+0.9
comp=Z,3.1nm,0.7s,baz=298,slow=0.9,SNR=41							

*ISCJB **05** 21:38:02.1±1.0, 10°.31N±0°.04×62°.25W±0°.03, h12km±7km, Error ellipse: s-maj=7.3km s-min=4.2km az=159.9*
*TRN **05** 21:38:02.5, 10°.28N×62°.18W, h9km, MD3.0*
*FUNV **05** 21:38:03.2, 10°.35N×62°.25W, h5km, MW2.9*
ISC 05 21:38:02.8±0.6, 10°.35N±0°.04×62°.25W±0°.03, h13km±5km, n16, σ0s74/25, 2C-3D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.29**	**6**	⇑*i*P	**Pg**	**21 38 09.2**	**+0.2**
GUIV				*eS*	**Sg**	**21 38 13.4**	**+0.4**
TCE	**Chacachacare**	**0.60**	**55**	⇓*i*P	**Pg**	**21 38 14.2**	**-0.3**
TCE				*eS*	**Sg**	**21 38 22.6**	**+0.1**
GUNV	**Guanoco**	**0.70**	**255**	⇑*e*P	**Pg**	**21 38 16.5**	**0.0**
GUNV				*eS*	**Sg**	**21 38 26.4**	**+0.6**
TRN	**Trinidad (W)**	**0.89**	**70**	*i* P	**Pg**	**21 38 18.9**	**-1.0**
TRN				*eS*	**Sg**	**21 38 31.4**	**-0.2**
CRUV	**Carupano**	**1.02**	**288**	⇓*e*P	**Pb**	**21 38 21.1**	**-1.2**
CRUV				*eS*	**Sb**	**21 38 34.6**	**-1.0**
ITEV	**Isla Los Testi**	**1.32**	**319**	*e*P	**Pn**	**21 38 26.9**	**0.0**
ITEV				*eS*	**Sb**	**21 38 44.9**	**+0.6**
ORIV	**Oritupano**	**1.71**	**222**	⇓*i*P	**Pn**	**21 38 33.8**	**+1.6**
TOSP	**Speyside**	**1.93**	**61**	*e*P	**Pn**	**21 38 35.7**	**+0.4**
TOSP				*eS*	**Sn**	**21 38 59.8**	**+0.3**
PCRV	**Puerto La Cruz**	**2.35**	**266**	*e*P	**Pn**	**21 38 41.2**	**+0.1**
GURV	**El Guri**	**2.70**	**198**	*e*P	**Pn**	**21 38 47.2**	**+1.2**
PRGV	**PARIAGUAN**	**2.84**	**236**	*e*P	**Pn**	**21 38 47.8**	**0.0**
CUPV	**Cępira**	**3.49**	**266**	*e*P	**Pn**	**21 38 57.5**	**+0.7**
CUPV				*eS*	**Sn**	**21 39 37.7**	**-0.3**
BIRV	**Birongo**	**3.95**	**272**	*e*P	**Pn**	**21 39 03.9**	**+0.8**
LUEV	**Luepa**	**4.55**	**170**	*e*P	**Pn**	**21 39 10.6**	**-0.7**
CAOV	**Caicara del Or**	**5.02**	**234**	*e*P	**Pn**	**21 39 17.1**	**-0.8**
CAOV				*eS*	**Sn**	**21 40 12.1**	**-3.6**
BAUV	**El Baul**	**5.88**	**257**	*e*P	**Pn**	**21 39 28.8**	**-0.8**

GUC 05 21:41:59.5±0.6, 23°.05S×67°.14W, h210km, ML3.7, 1C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**2.30**	**289**	*e*P	Pn	21 42 50.4	+8.5
PB04				*eS*	S	21 43 29.0	+14
PB04				AML	AML	21 43 32.7	
comp=N,209nm,0.5s							
CEN1	**Los Morros**	**2.83**	**262**	⇓*i*P	Pn	21 42 51.5	+3.8
CEN1				*i* S	S	21 43 30.3	+4.8
CEN1				AML	AML	21 43 33.7	
comp=N,56nm,0.6s							
ANCH	**Antofagasta**	**3.07**	**257**	⇑*i*P	Pn	21 42 51.3	+0.9
ANCH				*i* S	S	21 43 31.8	+1.4
PSGC	**Pisagua**	**4.42**	**320**	*e*P	Pn	21 43 09.8	+2.9
PSGC				*i* S	S	21 44 02.4	+2.5
MNMC	**Miæe Miæ**	**4.52**	**329**	*e*P	Pn	21 43 11.3	+3.2
MNMC				*eS*	S	21 44 05.9	+3.6

*IDC **05** 22:00:19.1±1.5, 5°.21N×127°.45E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.7/23, mbtmp3.9/6, Error ellipse: s-maj=97.1km s-min=18.3km az=69.0*
*ISCJB **05** 22:00:26.8±5.1, 5°.3N±0°.2×127°.6E±0°.4, h82km±44km, mb3.9/6, Error ellipse: s-maj=67.6km s-min=17.8km az=151.2*
ISC 05 22:00:28.7±5.0, 5°.2N±0°.2×127°.5E±0°.4, h79km±43km, n7, σ0s52/8, mb3.9/6, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**2.69**	**290**	*e*P	**Pn**	**22 01 10.1**	**+0.2**
GSPH				*eS*	**Sn**	**22 01 41.3**	**-0.2**
FITZ	**Fitzroy Crossi**	**23.19**	**184**	P	**P**	**22 05 29.2**	**+0.4**
2.5nm,0.8s,mb3.6							
WRA	**Warramunga Arr**	**25.84**	**165**	P	**P**	**22 05 52.1**	**-0.8**
1.7nm,0.4s,mb3.9,baz=343,slow=10,SNR=25							
ASAR	**Alice Springs**	**29.33**	**168**	P	**P**	**22 06 24.4**	**+0.3**
0.2nm,0.3s,mb3.2,baz=353,slow=7.8,SNR=11							
STKA	**Stephens Creek**	**39.21**	**161**	P	**P**	**22 07 49.2**	**0.0**
1.3nm,0.3s,mb4.2,baz=336,slow=8.8,SNR=8.6							
MKAR	**Makanchi Array**	**56.83**	**324**	P	**P**	**22 10 05.0**	**0.0**
0.8nm,0.4s,mb4.1,baz=117,slow=7.5,SNR=16							
KURK	**Kurchatov**	**60.96**	**327**	P	**P**	**22 10 33.5**	**0.0**
0.6nm,0.3s,mb4.2,baz=126,slow=6.5,SNR=3.6							

*NIED **05** 22:05:00, 36°.00N×142°.40E, h8km, Mw4.7 Best double couple: M0 1.31000×10^16 NP1:φs206.00000°, δ63.00000°, λ98.00000°. NP2:φs9.00000°, δ28.00000°, λ76.00000°.*
*IDC **05** 22:05:40.3±0.5, 35°.86N×142°.43E, h0km, mb4.5/28, mb1 4.5/33, mb1mx4.5/38, mbtmp4.5/33, ML4.2/5, MS4.1/22, Ms1 4.2/22, ms1mx3.9/35, Error ellipse: s-maj=13.1km s-min=11.5km az=144.0*
*JMA **05** 22:05:43.0±0.2, 35°.95N×142°.38E, h79km±5km, M4.9*
*ISCJB **05** 22:05:44.2±0.1, 36°.06N±0°.03×142°.31E±0°.02, h29km, mb4.7/151, MS4.5/50, Error ellipse: s-maj=4.3km s-min=2.4km az=171.5*
*NEIC **05** 22:05:44.7±2.3, 36°.09N×142°.30E, h18km±14km, mb4.8/86, MW4.7(NIED), Error ellipse: s-maj=5.2km s-min=3.6km az=145.0*
*BJI **05** 22:05:45.4, 36°.17N×142°.09E, h29km, mB5.0/31, mb4.8/49, Ms4.8/51, Ms7 4.6/48*
*MOS **05** 22:05:46.5±0.9, 36°.28N×142°.25E, h37km, mb5.0/58, MS4.7/12, Error ellipse: s-maj=7.7km s-min=5.0km az=111.0*
*SZGRF **05** 22:05:51.3, 36°.31N×141°.17E, h30km, mb5.0, MS4.7, Near east coast of eastern Honshu, Japan*
ISC 05 22:05:46.2±0.1, 36°.06N±0°.03×142°.31E±0°.02, h31km, h31km±.5km:pP-P, n488, σ0s87/475, mb4.7/151, MS4.5/50, 129C-111D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.23**	**254**	⇑P	**Pn**	**22 06 05.7**	**-1.5**
CHOJ				*eS*	**Sn**	**22 06 22.1**	**-0.6**
JHO	**Hitachi**	**1.51**	**292**	⇑P	**Pn**	**22 06 09.7**	**-1.4**
BSO1	**Boso 1**	**1.77**	**218**	⇓P	**Pn**	**22 06 11.5**	**-3.2**
JMM	**Marumori**	**2.18**	**327**	⇑P	**Pn**	**22 06 19.1**	**-1.1**
JAG	**Ashikaga**	**2.34**	**280**	⇑P	**Pn**	**22 06 21.3**	**-1.1**
JOD2	**Odawara 2**	**2.74**	**254**	P	**Pn**	**22 06 26.5**	**-1.5**
JRY	**Ryogami san**	**2.76**	**270**	⇑P	**Pn**	**22 06 27.2**	**-1.1**
JNS	**Sasagawa**	**2.97**	**307**	P	**Pn**	**22 06 31.4**	**+0.2**
JMK	**Ichinoseki**	**3.02**	**344**	⇑P	**Pn**	**22 06 30.6**	**-1.2**
JYK	**Kaneyama**	**3.25**	**332**	⇑P	**Pn**	**22 06 34.4**	**-0.6**
MJAR	**Matsushiro Arr**	**3.35**	**280**	Pn	**Pn**	**22 06 35.9**	**-0.4**
11nm,0.3s,baz=228,slow=52,SNR=303							
MJAR				Sn	**Sn**	**22 07 19.1**	**+4.1**
11nm,0.3s,baz=42,slow=36,SNR=4.6							
MJAR	**Matsushiro Arr**	**3.35**	**280**	P	**Pn**	**22 06 35.9**	**-0.4**
MJAR						22 07 19.1	
MJAR				pmax	pmax		
comp=Z,11nm,0.3s							
MJAR				smax			
comp=N,11nm,0.3s							
MAJO	**Matsushiro**	**3.35**	**280**	*e*P	**Pn**	**22 06 36.7**	**+0.3**
MAT	**Matsushiro**	**3.35**	**280**	P	**Pn**	**22 06 36.5**	**+0.1**
MAT				S	**Sn**	**22 07 15.0**	**-0.1**
MAT	**Matsushiro**	**3.35**	**280**	P	**Pn**	**22 06 36.6**	**+0.2**
JAW	**Awa shima**	**3.42**	**315**	P	**Pn**	**22 06 37.3**	**0.0**
JOM	**Ohasama**	**3.50**	**347**	P	**Pn**	**22 06 37.2**	**-1.3**
JHJ2	**Mitsune**	**3.59**	**216**	P	**Pn**	**22 06 36.7**	**-2.9**
JHJ2				*eS*	**Sn**	**22 07 16.9**	**-4.0**
JHJ	**Hachijo jima 2**	**3.60**	**216**	Pn	**Pn**	**22 06 36.0**	**-3.8**
comp=N,46nm,0.3s,baz=128,slow=8.9,SNR=23							
JHJ				Sn	**Sn**	**22 07 16.8**	**-4.3**
comp=N,120nm,0.3s,baz=27,slow=23,SNR=9.3							
JSD	**Sado**	**3.79**	**303**	P	**Pn**	**22 06 42.0**	**-0.5**
ERM	**Erimo**	**5.99**	**6**	*e*Pn	**Pn**	**22 07 09.8**	**-2.7**
ERM				*e*Sn	**Sn**	**22 08 18.1**	**-1.9**
ASAJ	**Asahikawa**	**8.05**	**1**	Pn	**Pn**	**22 07 39.9**	**-1.1**
comp=N,7.7nm,0.3s,baz=220,slow=12,SNR=54							
ASAJ				Sn	**Sn**	**22 09 09.4**	**-1.5**
comp=N,3.3nm,0.3s,baz=65,slow=27,SNR=7.1							
ASAJ				LR	LR	22 11 56.4	
comp=N,2μm,18.2s,baz=11,slow=46							
ASAJ	**Asahikawa**	**8.05**	**1**	P	**Pn**	**22 07 39.9**	**-1.0**
ASAJ						22 09 09.4	
ASAJ				pmax	pmax		
comp=Z,8.0nm,0.3s							
ASAJ				smax			
comp=N,3.0nm,0.3s							
ASAJ				MLR	MLR		
comp=Z,2μm,18.2s							
YUK	**Yuzh-Kuril'sk**	**8.42**	**18**	*e*P	**Pn**	**22 07 39.8**	**-6.2**
YUK				S	**Sn**	**22 09 13.2**	**-6.7**
YUK				pmax	pmax		
comp=Z,300nm,1.7s							
YUK				pmax	pmax		
comp=N,51nm,0.7s							
YUK				pmax	pmax		
comp=E,99nm,0.7s							
YUK				pmax	pmax		
comp=Z,95nm,0.7s							
YUK				smax			
comp=N,900nm,0.7s							
YUK				smax			
comp=E,400nm,0.7s							
CBIJ	**Chichi jima**	**8.93**	**181**	Pn	**Pn**	**22 07 46.1**	**-7.0**
comp=E,15nm,0.3s,baz=299,slow=7.7,SNR=15							
CBIJ				Sn	**Sn**	**22 09 20.4**	**-12**
comp=E,14nm,0.3s,baz=21,slow=23,SNR=4.2							
VLA	**Vladivostok**	**10.69**	**314**	*e*P	**Pn**	**22 08 16.9**	**-0.1**
YSS	**Yuzh-Sakhalins**	**10.89**	**2**	*e*P	**Pn**	**22 08 17.0**	**-2.8**
YSS				*eS*	**Sn**	**22 10 16.5**	**-4.0**
KSRS	**Korea Array**	**11.63**	**281**	Pn	**Pn**	**22 08 31.6**	**+1.7**
comp=E,0.3nm,0.3s,baz=99,slow=13,SNR=35							
KSRS				LR	LR	22 12 28.0	
comp=E,739nm,21.6s,baz=121,slow=35							
MDJ	**Mudanjiang**	**12.92**	**315**	P	**Pn**	**22 08 46.5**	**-1.0**
MDJ				pP		22 08 53.6	
MDJ				sP		22 08 58.8	
MDJ				S	**Sn**	**22 11 08.2**	**-1.9**
MDJ				ScP	ScP	22 17 53.0	+1.7
MDJ				PcS	PcS	22 17 56.5	+1.8
MDJ				pmax	pmax		
comp=Z,3.0nm,1.3s							
MDJ				pmax	pmax		
comp=Z,150nm,8.4s							
MDJ				LR	LR		
comp=N,1μm,14.7s							
MDJ				LR	LR		
comp=E,1μm,13.0s							
MDJ				LR	LR		
comp=Z,2μm,12.4s							
HABR	**Khabarovsk**	**13.51**	**339**	*e*P	**Pn**	**22 08 52.8**	**-2.8**
HABR				pmax	pmax		
comp=E,39nm,2.0s							
HABR				pmax	pmax		
comp=Z,91nm,2.5s							
HABR				pmax	pmax		
comp=N,25nm,1.8s							
CN2	**Changchun**	**15.06**	**306**	*e*P	**Pn**	**22 09 17.4**	**+0.8**
CN2				*e*pP	pP	22 09 20.8	-9.0
CN2				*e*sP	sP	22 09 24.4	-9.4
CN2				*e*S	**Sn**	**22 12 04.3**	**+2.1**
CN2				pmax	pmax		
comp=Z,10.0nm,0.7s							
CN2				pmax	pmax		
comp=Z,200nm,10.0s							
CN2				LR	LR		
comp=N,2μm,13.0s							
CN2				LR	LR		
comp=E,1μm,13.0s							
CN2				LR	LR		
comp=Z,2μm,15.0s							
SNY	**Shenyang**	**15.66**	**297**	⇑P	**Pn**	**22 09 23.2**	**-1.3**
SNY				S	**Sn**	**22 12 11.3**	**-5.7**
SNY				pmax	pmax		
comp=Z,9.0nm,0.9s							
SNY				pmax	pmax		
comp=Z,290nm,5.9s							
SNY				LR	LR		
comp=N,2μm,14.2s							
SNY				LR	LR		
comp=E,2μm,14.7s							
SNY				LR	LR		
comp=Z,2μm,15.0s							
SKR	**Severo-Kuril's**	**17.69**	**30**	*e*P	**Pn**	**22 09 53.7**	**+3.7**
SKR				*e*		22 13 07.0	
SKR				pmax	pmax		
comp=Z,50nm,0.9s							
NJ2	**Nanjing**	**19.83**	**265**	*e*P	**Pn**	**22 10 18.8**	**+2.8**
NJ2				pP	pP	22 10 26.6	+4.0
NJ2				sP	sP	22 10 31.8	+5.2
NJ2				PP		22 10 37.5	
NJ2				S	**Sn**	**22 13 57.5**	**-0.5**
NJ

GUMO e*PP 22 10 55.6
GUMO pmax pmax
comp=Z,196nm,1.1s,mb5.5
GUMO Guam 22.49 173 eP **P 22 10 45.1 +2.1**
comp=Z,196nm,1.1s,mb5.5
GUMO epP 22 10 55.6
TWG Pinlang 22.66 240 eP **P 22 10 45.3 +0.5**
comp=Z,24nm,1.0s,mb4.6
TPUB Ta-pu 22.66 242 eP **P 22 10 40.3 -4.5**
comp=Z,14nm,0.7s,mb4.5
CLNS Chul'man 23.87 336 eP **P 22 10 55.8 -0.8**
CLNS e 22 11 21.3
CLNS eSS 22 16 06.1
CLNS pmax pmax
comp=Z,23nm,1.0s,mb4.6
CLNS pmax pmax
comp=N,17nm,0.9s
CLNS pmax pmax
comp=E,6.0nm,1.1s
CLNS pmax pmax
comp=N,23nm,1.1s
CLNS pmax pmax
comp=Z,28nm,1.1s,mb4.6
CLNS pmax pmax
comp=E,17nm,1.0s
CLNS MLR MLR
comp=E,1μm,15.0s,MS4.6
CLNS MLR MLR
comp=Z,1μm,14.0s,MS4.6
CLNS MLR MLR
comp=N,830nm,15.0s,MS4.6
WHN Wuhan 23.96 265 ⇓P **P 22 10 55.7 -2.1**
WHN S **S 22 15 15.5 +3.0**
WHN LR LR
comp=N,4μm,12.6s,MS5.2
WHN LR LR
comp=E,3μm,13.0s,MS5.2
WHN LR LR
comp=Z,5μm,12.6s,MS5.2
HHC Hu-ho-hao-te 24.48 291 eP **P 22 11 03.2 +0.8**
HHC sP sP 22 11 17.1 +2.0
HHC PP 22 11 39.1
HHC PcP PcP 22 14 43.8 +3.4
HHC S **S 22 15 17.5 -3.1**
HHC sS sS 22 15 32.5 -2.9
HHC SS 22 16 11.8
HHC ScP ScP 22 18 18.2 +1.5
HHC PcS PcS 22 18 22.7 +2.5
HHC ScS ScS 22 22 04.9 +0.6
HHC pmax pmax
comp=Z,67nm,0.8s,mb5.1
HHC pmax pmax
comp=Z,250nm,4.6s
HHC LR LR
comp=N,720nm,12.4s,MS4.6
HHC LR LR
comp=E,1μm,12.4s,MS4.6
HHC LR LR
comp=Z,1μm,12.3s,MS4.5
CIT Chita 25.88 317 eP **P 22 11 15.6 +0.6**
CIT e 22 11 29.7
CIT e 22 11 53.7
CIT e 22 12 07.6
CIT pmax pmax
comp=Z,156nm,1.9s,mb5.2
YAK Yakutsk 27.18 347 eP **P 22 11 26.3 -0.3**
YAK e*PP pP 22 11 35.2 -0.4
YAK e 22 12 09.0
YAK ePPP 22 12 17.9
YAK e 22 14 48.5
YAK eS **S 22 16 00.0 -3.0**
YAK eSSS 22 17 37.4
YAK e 22 22 14.5
YAK pmax pmax
comp=Z,40nm,1.0s,mb4.9
YAK pmax pmax
comp=N,21nm,1.1s
YAK pmax pmax
comp=E,5.0nm,1.3s
YAK pmax pmax
comp=Z,57nm,1.6s,mb4.8
YAK pmax pmax
comp=E,21nm,2.0s
YAK pmax pmax
comp=N,46nm,1.5s
YAK smax
comp=E,132nm,11.4s
YAK smax
comp=N,314nm,11.5s
YAK MLR MLR
comp=Z,2μm,14.0s,MS4.9
YAK MLR MLR
comp=E,602nm,14.0s,MS4.8
YAK MLR MLR
comp=N,2μm,15.0s,MS4.8
YAK Yakutsk 27.18 347 eP **P 22 11 27.1 +0.6**
comp=N,49nm,0.9s,mb5.0
XAN Xi'an 27.34 276 P **P 22 11 27.8 -0.5**
XAN S **S 22 16 08.1 +2.1**
XAN pmax pmax
comp=Z,9.0nm,1.5s,mb4.1
XAN pmax pmax
comp=Z,44nm,11.4s
XAN LR LR
comp=N,600nm,12.9s,MS4.3
XAN LR LR
comp=E,240nm,16.5s,MS4.3
XAN LR LR
comp=Z,340nm,14.1s,MS4.1
SEY Seymchan 27.62 10⇑eP **P 22 11 31.4 +0.9**
ULN Ulaanbaatar 28.50 305 eP **P 22 11 40.0 +1.4**
ULN pmax pmax
comp=Z,11nm,0.9s,mb4.6
ULN Ulaanbaatar 28.50 305 eP **P 22 11 40.0 +1.4**
comp=Z,11nm,0.9s,mb4.6
SONM Songino Array 28.93 305 P **P 22 11 43.3 +1.0**
comp=Z,21nm,1.0s,mb4.8,baz=108,slow=8.8,SNR=47
SONM LR LR 22 23 13.8
comp=Z,237nm,20.3s,MS3.8,baz=74,slow=36
LZH Lanzhou 30.96 282 ⇓P **P 22 12 01.1 +0.7**
LZH pP pP 22 12 09.5 0.0
LZH sP sP 22 12 13.7 +0.4
LZH PP PP 22 13 02.5 -8.0
LZH S **S 22 17 02.3 -0.6**
LZH sS sS 22 17 18.0 +0.2
LZH SS SS 22 18 41.0 -35
LZH pmax pmax
comp=Z,58nm,1.2s,mb5.3
LZH LR LR
comp=E,1μm,13.5s
LZH LR LR
comp=Z,1μm,14.8s,MS4.8
IRK Irkutsk 31.29 313 eP **P 22 12 04.7 +1.5**
IRK pmax pmax
comp=Z,19nm,1.4s,mb4.7
TLY Talaya 31.52 312c iP **P 22 12 06.4 +1.2**
TLY e 22 13 19.6
TLY pmax pmax
comp=Z,18nm,0.9s,mb4.9
TLY MLR MLR
comp=Z,930nm,13.0s,MS4.6
TLY Talaya 31.52 312 eP **P 22 12 06.4 +1.2**
comp=Z,18nm,0.9s,mb4.9
GYA Guiyang 31.79 263 P **P 22 12 09.8 +2.0**
GYA pP pP 22 12 18.5 +1.6
GYA sP sP 22 12 25.3 +4.6
GYA PP PP 22 13 17.2 -2.7
GYA S **S 22 17 16.0 -0.1**
GYA sS sS 22 17 34.9 +3.9
GYA ScP ScP 22 18 40.6 +1.0
GYA SS SS 22 19 09.2 -24
GYA pmax pmax
comp=Z,20nm,0.8s,mb5.0
GYA pmax pmax
comp=Z,120nm,4.8s
GYA LR LR
comp=N,560nm,17.8s,MS4.4
GYA LR LR
comp=E,510nm,18.2s,MS4.4
GYA LR LR
comp=Z,690nm,17.6s,MS4.4
CD2 Chengdu 32.41 272 P **P 22 12 12.8 -0.5**
CD2 pP pP 22 12 25.4 +3.0
CD2 sP sP 22 12 29.3 +3.2
CD2 PP PP 22 13 23.6 -3.1
CD2 S **S 22 17 26.2 +0.4**
CD2 sS sS 22 17 42.2 +1.5
CD2 SS SS 22 19 22.0 -24
CD2 pmax pmax
comp=Z,20nm,0.5s,mb5.2
CD2 pmax pmax
comp=Z,110nm,4.5s
CD2 LR LR
comp=N,2μm,13.7s
CD2 LR LR
comp=Z,1μm,11.9s,MS4.8
MOY Mondy 33.12 311 eP **P 22 12 21.2 +2.0**
QIZ Qiongzhong 33.21 248 P **P 22 12 21.6 +1.3**
QIZ pP pP 22 12 29.3 -0.1
QIZ sP sP 22 12 33.5 +0.3
QIZ S **S 22 17 35.3 -2.9**
QIZ sS sS 22 17 55.0 +1.8
QIZ pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
QIZ LR LR
comp=N,670nm,16.4s
QIZ LR LR
comp=Z,520nm,14.2s,MS4.4
GTA Gaotai 33.55 289 ⇑P **P 22 12 24.2 +1.1**
GTA pP pP 22 12 29.7 -2.5
GTA sP sP 22 12 33.2 -2.8
GTA pmax pmax
comp=Z,35nm,1.1s,mb5.2
GTA pmax pmax
comp=Z,160nm,4.8s
GTA LR LR
comp=N,1μm,13.4s,MS4.8
GTA LR LR
comp=E,610nm,12.8s,MS4.8
GTA LR LR
comp=Z,780nm,14.3s,MS4.6
BILL Biilibino 34.77 16c iP **P 22 12 32.9 -0.4**
BILL pmax pmax
comp=Z,7.0nm,1.6s,mb4.3
BILL MLR MLR
comp=Z,400nm,17.0s,MS4.2
BILL Biilibino 34.77 16 eP **P 22 12 33.1 -0.2**
KMI Kunming 35.55 263 ⇑P **P 22 12 40.1 -0.4**
KMI pP pP 22 12 51.5 +1.9
KMI sP sP 22 12 55.9 +2.5
KMI PP PP 22 14 00.7 -0.8
KMI PcP PcP 22 15 09.6 +0.4
KMI S **S 22 18 11.2 -3.1**
KMI sS sS 22 18 30.5 +1.2
KMI ScP ScP 22 18 50.9 -1.9
KMI PcS PcS 22 18 55.5 -1.0
KMI SS SS 22 20 30.5 -19
KMI ScS ScS 22 22 54.0 -3.7
KMI pmax pmax
comp=Z,30nm,1.3s,mb5.1
KMI pmax pmax
comp=Z,150nm,5.3s
KMI LR LR
comp=N,790nm,15.1s,MS4.8
KMI LR LR
comp=E,960nm,13.5s,MS4.8
KMI LR LR
comp=Z,920nm,13.5s,MS4.7
TIXI Tiksi 36.35 353 eP **P 22 12 47.3 +0.5**
TIXI eS **S 22 18 27.0 +1.5**
TIXI pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
TIXI MLR MLR
comp=Z,642nm,15.0s,MS4.5
TIXI Tiksi 36.35 353 eP **P 22 12 46.9 +0.1**
comp=Z,6.7nm,0.9s,mb4.6
KRAR Krasnoyarsk 38.67 317 eP **P 22 13 06.5 -0.1**
KRAR pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
CHRT Chiangrai 40.53 258 ⇑P **P 22 13 23.0 +0.4**
comp=Z,132nm,1.0s,mb5.5
CHG Chiang Mai 41.77 258 ⇑P **P 22 13 32.5 -0.3**
comp=Z,23nm,1.2s,mb4.7
CHTO Chiang Mai 41.77 258 eP **P 22 13 32.6 -0.2**
CHTO pmax pmax
comp=Z,22nm,1.1s,mb4.7
CHTO Chiang Mai 41.77 258 eP **P 22 13 32.6 -0.2**
comp=Z,22nm,1.1s,mb4.7
WMQ Urumqi 41.93 298 P **P 22 13 35.1 +1.3**
WMQ pP pP 22 13 45.0 +1.9
WMQ sP sP 22 13 48.9 +2.1
WMQ PP PP 22 15 15.5 +4.5
WMQ PcP PcP 22 15 31.5 +2.6
WMQ S **S 22 19 50.2 +0.1**
WMQ SS SS 22 22 51.5 -5.6
WMQ ScS ScS 22 23 33.2 -0.9
WMQ pmax pmax
comp=Z,31nm,1.4s,mb4.8
WMQ pmax pmax
comp=Z,230nm,3.0s
WMQ LR LR
comp=N,490nm,18.6s,MS4.5
WMQ LR LR
comp=E,240nm,16.8s,MS4.5
WMQ LR LR
comp=Z,230nm,17.6s,MS4.1
CM31 Chiang Mai Arr 41.97 257 eP **P 22 13 34.4 0.0**
comp=Z,5.4nm,0.7s,mb4.3
CMAR Chiang Mai Arr 41.97 257 P **P 22 13 34.1 -0.3**
comp=Z,5.7nm,0.8s,mb4.3
LSA Lhasa 43.03 277 P **P 22 13 43.9 +1.0**
ZAA0 Zalesovo Array 43.11 313 eP **P 22 13 43.8 +0.5**
ZALV Zalesovo Beam 43.11 313 P **P 22 13 44.0 +0.8**
comp=Z,7.0nm,0.6s,mb4.6,baz=94,slow=7.1,SNR=38
ZALV LR LR 22 31 55.7
comp=Z,114nm,19.9s,MS3.8,baz=69,slow=36
NVS Novosibirsk 44.04 314 ⇓iP **P 22 13 49.8 -0.9**
NVS pmax pmax
comp=N,10.0nm,1.8s
NVS pmax pmax
comp=E,30nm,1.8s
NVS pmax pmax
comp=Z,37nm,1.8s,mb4.8
SHL Shillong 44.13 271 ePKP **P 22 13 51.9 +0.1**
MK31 Makanchi Array 45.25 303 eP **P 22 14 01.1 +0.6**
MKAR Makanchi Array 45.25 303 P **P 22 14 01.0 +0.5**
comp=Z,14nm,0.7s,mb4.9,baz=91,slow=8.9,SNR=38
MKAR LR LR 22 33 00.1
comp=Z,243nm,18.4s,MS4.2,baz=84,slow=36
MKAR Makanchi Array 45.25 303 P **P 22 14 01.0 +0.5**
MKAR LR LR 22 33 00.1
KSM Kuching 45.42 228 eP **P 22 14 02.2 +0.1**
comp=Z,34nm,1.3s,mb5.0
TAPN Taplejung 46.74 275 eP **P 22 14 11.7 -0.8**
comp=Z,38nm,0.9s,mb5.3
TAPN Taplejung 46.74 275 eP **P 22 14 12.3 -0.2**
comp=Z,19nm,0.6s,mb5.2
KURK Kurchatov 47.10 309 P **P 22 14 15.9 +0.9**
comp=Z,16nm,0.8s,mb5.0,baz=84,slow=7.9,SNR=12
KURK LR LR 22 34 39.6
comp=Z,259nm,20.6s,MS4.2,baz=90,slow=37
KURK Kurchatov 47.10 309 eP **P 22 14 14.7 -0.3**
KURK pmax pmax
comp=Z,30nm,0.8s,mb5.3
KURK Kurchatov 47.10 309 eP **P 22 14 14.7 -0.3**
comp=Z,30nm,0.8s,mb5.3
ODAN Odare 47.21 275 eP **P 22 14 14.8 -1.4**
comp=Z,48nm,1.0s,mb5.4
ODAN Odare 47.21 275 eP **P 22 14 16.1 -0.1**
comp=Z,48nm,1.0s,mb5.4
KDAK Kodiak Island 47.35 41 P **P 22 14 16.8 -0.1**
comp=Z,11nm,0.9s,mb4.8,baz=320,slow=6.6,SNR=4.8
RAMN Ramite 47.80 275 eP **P 22 14 19.8 -1.0**
comp=Z,118nm,0.8s,mb6.0
RAMN Ramite 47.80 275 eP **P 22 14 20.7 -0.1**
comp=Z,118nm,0.8s,mb6.0
JIRN Jiri 47.84 277 eP **P 22 14 21.0 0.0**
comp=Z,45nm,0.8s,mb5.6
JIRN Jiri 47.84 277 eP **P 22 14 21.5 +0.5**
comp=Z,45nm,0.8s,mb5.6
GUN Gumba 47.98 277 eP **P 22 14 22.0 -0.2**
comp=Z,34nm,0.8s,mb5.4
GUN Gumba 47.98 277 eP **P 22 14 22.4 +0.2**
PKI Pulchoki 48.50 277 eP **P 22 14 25.9 -0.3**
PKI Pulchoki 48.50 277 eP **P 22 14 26.0 -0.2**
comp=Z,23nm,0.9s,mb5.2
PKIN Phulchoki 48.51 277 eP **P 22 14 26.0 -0.2**
comp=Z,12nm,0.6s,mb5.1
PKIN Phulchoki 48.51 277 eP **P 22 14 26.4 +0.2**
comp=Z,8.5nm,0.7s,mb4.9
KKN Kakani 48.51 277 eP **P 22 14 26.1 -0.2**
comp=Z,19nm,0.8s,mb5.2
KKN Kakani 48.51 277 eP **P 22 14 26.3 0.0**
comp=Z,17nm,0.7s,mb5.2
DMN Daman 48.73 277 eP **P 22 14 27.4 -0.5**
comp=Z,23nm,1.1s,mb5.1
DMN Daman 48.73 277 eP **P 22 14 27.7 -0.2**
GKN Gorkha 48.94 278 eP **P 22 14 29.0 -0.6**
comp=Z,46nm,0.9s,mb5.5
GKN Gorkha 48.94 278 eP **P 22 14 29.4 -0.2**
comp=Z,27nm,0.6s,mb5.4
MCK McKinley 49.05 33 eP **P 22 14 30.2 +0.4**
MCK pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
MCK McKinley 49.05 33 eP **P 22 14 30.2 +0.3**
comp=Z,6.8nm,0.9s,mb4.7
KAKA Kakadu 49.39 193 eP **P 22 14 32.1 -0.9**
comp=Z,28nm,0.8s,mb5.3
KAKA Kakadu 49.39 193 eP **P 22 14 34.4 +1.4**
comp=Z,52nm,0.8s,mb5.6
COLA College 49.52 32 eP **P 22 14 33.8 +0.3**
COLA pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
COLA College 49.52 32 eP **P 22 14 33.8 +0.3**
comp=Z,7.4nm,0.9s,mb4.7
COEN Coen 49.75 179 eP **P 22 14 34.7 -1.0**
COEN Coen 49.75 179 eP **P 22 14 37.5 +1.8**
comp=Z,261nm,0.8s
KOLN Koldanda 49.87 278 eP **P 22 14 36.1 -0.6**
comp=Z,12nm,0.7s,mb5.0
KOLN Koldanda 49.87 278 eP **P 22 14 36.5 -0.2**
comp=Z,10nm,0.7s,mb5.0
TKM2 Tokmak 2 50.73 299 eP **P 22 14 44.5 +1.5**
BMRM Bremner River 51.20 37 eP **P 22 14 48.0 +1.7**
comp=Z,19nm,1.2s,mb4.9
FRU Bishkek 51.45 300 eP **P 22 14 49.0 +0.6**
FRU pmax pmax
comp=Z,38nm,1.8s,mb5.0
AAK Ala-Archa 51.59 299 LR LR 22 38 05.7
comp=Z,475nm,21.2s,MS4.5,baz=33,slow=38
UCH Uchtor 51.70 299 eP **P 22 14 51.5 +1.3**
comp=Z,5.9nm,0.9s,mb4.5
BVAR Borovoye Array 51.77 313 P **P 22 14 50.6 +0.1**
comp=Z,1.9nm,0.6s,mb4.2,baz=79,slow=7.7,SNR=9.9
BRVK Borovoye 51.82 313c iP **P 22 14 51.4 +0.4**
BRVK pmax pmax
comp=Z,22nm,2.5s,mb4.6
BRVK Borovoye 51.82 313 eP **P 22 14 51.5 +0.6**
comp=Z,8.2nm,0.9s,mb4.7
PSI Prapat 51.93 241 P **P 22 14 51.9 -0.4**
comp=Z,8.6nm,0.4s,mb5.0,baz=158,slow=8.0,SNR=5.8
EKS2 Erkin-Say 52.09 300 eP **P 22 14 53.7 +0.5**
comp=Z,5.9nm,0.8s,mb4.6
DDI Dehra Dun 53.22 283 ex x 22 14 53.0
DAWY Dawson 53.23 33 eP **P 22 15 02.2 +1.0**
INK Inuvik 54.93 27 P **P 22 15 13.2 -0.3**
comp=Z,2.6nm,0.7s,mb4.4,baz=204,slow=28,SNR=3.1
INK LR LR 22 43 30.3
comp=Z,178nm,18.3s,MS4.2,baz=246,slow=41
INK Inuvik 54.93 27 eP **P 22 15 14.0 +0.4**
INK e*PP pP 22 15 21.3 -1.7
INK pmax pmax
comp=Z,5.0nm,0.8s
INK Inuvik 54.93 27 eP **P 22 15 14.0 +0.4**
comp=Z,4.7nm,0.8s,mb4.6
INK epP pP 22 15 21.3 -1.7
CTAO Charters Tower 55.96 176 eP **P 22 15 21.7 +0.2**
CTAO pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
CTAO Charters Tower 55.96 176 eP **P 22 15 21.7 +0.2**
comp=Z,10nm,0.8s,mb4.9
WRAB Tennant Creek 56.19 189 eP **P 22 15 21.0 -2.1**
WRAB pmax pmax
comp=Z,14nm,0.7s,mb5.1
WRAB Tennant Creek 56.19 189 eP **P 22 15 21.0 -2.1**
comp=Z,14nm,0.7s,mb5.1
WRA Warramunga Arr 56.20 189 P **P 22 15 20.7 -2.5**
comp=Z,4.4nm,0.9s,mb4.5,baz=9.5,slow=7.6,SNR=27
WRA Warramunga Arr 56.20 189 P **P 22 15 20.7 -2.5**
SVE Sverdlovsk 56.36 319⇓eP **P 22 15 24.1 +0.1**
SVE pmax pmax
comp=Z,14nm,0.9s,mb5.0
SVE MLR MLR
comp=Z,837nm,15.0s,MS5.0
SOKR Solikamsk 57.55 323d iP **P 22 15 33.8 +1.5**
SOKR pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
ARU Arti 57.57 319d iP **P 22 15 33.3 +0.7**
ARU e 22 17 40.5
ARU S **S 22 23 31.2 +3.1**
ARU SS SS 22 27 14.7 -3.1
ARU pmax pmax
comp=Z,29nm,1.7s,mb5.0
ARU MLR MLR
comp=Z,482nm,14.0s,MS4.8
ARU Arti 57.57 319 eP **P 22 15 32.7 +0.2**
comp=Z,17nm,0.8s,mb5.1
KBL Kabul 58.45 292 eP **P 22 15 39.4 +0.3**
KBL pmax pmax
comp=Z,11nm,0.9s,mb4.9
KBL Kabul 58.45 292 eP **P 22 15 39.4 +0.3**
comp=Z,11nm,0.9s,mb4.9
HYB Hyderabad 58.91 270 eP **P 22 15 42.5 0.0**
HYB Hyderabad 58.91 270 iP **P 22 15 42.5 0.0**
AKTK Aktyubinsk 59.87 313 P **P 22 15 48.5 -0.1**
AKTO Aktyubinsk 59.87 313 P **P 22 15 48.5 -0.1**
comp=Z,7.5nm,0.9s,mb4.7,baz=70,slow=9.6,SNR=12
ASAR Alice Springs 59.93 189 P **P 22 15 47.2 -2.0**
comp=Z,1.0nm,0.7s,mb4.0,baz=5.7,slow=6.3,SNR=8.3
RMQ Roma 62.50 173 eP **P 22 16 05.7 -0.9**
comp=Z,23nm,0.8s,mb5.4
RES Resolute Bay 63.37 14 eP **P 22 16 12.3 +0.4**
RES e*PP pP 22 16 20.5 -1.0
RES pmax pmax
comp=Z,12nm,1.0s,mb5.0
RES Resolute Bay 63.37 14 eP **P 22 16 12.3 +0.4**
comp=Z,12nm,1.0s,mb5.0
RES epP pP 22 16 20.5 -1.0
YKA Yellowknife Ar 64.29 30 P **P 22 16 17.5 -0.6**
comp=Z,3.4nm,0.9s,mb4.3,baz=295,slow=6.8,SNR=6.8
ARCES ARCESS Array B 65.16 340 P **P 22 16 22.6 -1.1**
comp=Z,1.4nm,0.7s,mb4.1,baz=50,slow=9.6,SNR=3.8
ARCES LR LR 22 46 43.5
comp=Z,163nm,19.3s,MS4.2,baz=42,slow=38
NLWA Neilton Lookou 66.84 48 ⇑P **P 22 16 34.9 +0.1**
baz=67
JOF Joensuu 67.16 332 eP **P 22 16 27.8 -8.8**
JOF pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
JOF Joensuu 67.16 332 ep **P 22 16 27.8 -8.8**
comp=Z,6.9nm,0.7s,mb4.8
CMSA Cobar Meteorol 67.31 177 eP **P 22 16 36.7 -1.1**
STKA Stephens Creek 67.58 181 eP **P 22 16 37.9 -1.6**
comp=Z,6.1nm,0.8s,mb4.7
STKA Stephens Creek 67.58 181 P **P 22 16 36.6 -2.9**
comp=Z,2.5nm,0.8s,mb4.3,baz=350,slow=7.7,SNR=3.1
STKA Stephens Creek 67.58 181 eP **P 22 16 40.9 +1.3**
STKA epP pP 22 16 46.5 -2.7
JCW Jim Creek 67.60 46 eP **P 22 16 40.1 +0.4**
comp=Z,33nm,0.9s,mb5.4
LON Longmire 68.39 47 eP **P 22 16 45.0 +0.4**
LON pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
LON Longmire 68.39 47 eP **P 22 16 45.0 +0.4**
comp=Z,7.7nm,1.0s,mb4.7
F04A Amboy 68.42 48 ⇑pP pP 22 16 54.5 -0.1
baz=68
ETW Entiat 68.83 46 eP **P 22 16 48.3 +0.9**
comp=Z,22nm,0.9s,mb5.1
B08A Colville Reser 69.02 45 ⇑P **P 22 16 48.1 -0.4**
baz=69
B08A ⇓pP pP 22 16 57.8 -0.4
baz=69
OBN Obninsk 69.31 324⇑eP **P 22 16 49.5 -0.7**
OBN pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
OBN MLR MLR
comp=Z,400nm,15.0s,MS4.8
KAF Kangasniemi 69.50 333 eP **P 22 16 44.4 -6.9**
KAF pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
KAF Kangasniemi 69.50 333 eP **P 22 16 44.4 -6.9**
comp=Z,6.8nm,0.8s,mb4.6
KAF Kangasniemi 69.50 333 ep **P 22 16 44.4 -6.9**
comp=Z,6.8nm,0.8s,mb4.6
MAK Makhachkala 69.63 309 eP **P 22 16 52.0 -0.4**
EDM Edmonton 69.66 38 eP **P 22 16 52.2 -0.2**

HUMO Hull Mountain 69.77 52 *e*P **P 22 16 55.2 +2.0**
comp=Z,3.6nm,0.9s,mb4.3
G06A Carlson Farm, 69.86 48 ⇑pP pP 22 17 03.1 -0.4
baz=70
OD2 Odessa Site #2 69.88 46 *e*P **P 22 16 54.5 +0.7**
comp=Z,12nm,0.8s,mb4.9
D08A Wollman Farm, 69.93 46 ⇓P **P 22 16 53.5 -0.7**
baz=70
D08A ⇓pP pP 22 17 03.0 -0.9
baz=70
FINES FINESS Array B 70.01 333 P **P 22 16 53.7 -0.7**
comp=Z,6.3nm,0.9s,mb4.6,baz=57,slow=7.0,SNR=11
FINES LR LR 22 49 40.1
comp=Z,159nm,19.0s,MS4.3,baz=173,slow=38
VSR Storozhevoye 70.14 319 *e*P **P 22 16 55.1 -0.3**
VSR pmax pmax
comp=N,10.0nm,1.3s
VSR pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
VSR pmax pmax
comp=E,4.0nm,0.6s
VSR MLR MLR
comp=N,370nm,18.0s,MS4.9
VSR MLR MLR
comp=E,500nm,18.0s,MS4.9
VSR MLR MLR
comp=Z,940nm,18.0s,MS5.1
E08A Dider Farm, El 70.15 47 ⇑pP pP 22 17 04.4 -0.8
baz=70
NEW Newport 70.33 44 *e*P **P 22 16 57.2 +0.6**
NEW pmax pmax
comp=Z,13nm,0.9s
NEW Newport 70.33 44 *e*P **P 22 16 57.1 +0.6**
comp=Z,14nm,0.9s,mb4.9
YBH Yreka Blue Hor 70.37 52 P **P 22 16 56.6 -0.4**
comp=Z,2.4nm,0.8s,mb4.2,baz=279,slow=3.6,SNR=12
YBH Yreka Blue Hor 70.37 52 P **P 22 16 56.6 -0.4**
YBH pmax pmax
comp=Z,2.0nm,0.8s
YBH Yreka Blue Hor 70.37 52 *e*P **P 22 16 57.7 +0.7**
comp=Z,8.3nm,0.9s,mb4.7
E09A Wood Farm, Sta 70.67 46 ⇓P **P 22 16 58.2 -0.5**
baz=70
E09A ⇓pP pP 22 17 08.0 -0.5
baz=70
LNOR Lincton Mounta 70.93 47 *e*P **P 22 17 01.4 +1.1**
LNOR pmax pmax
comp=Z,12nm,1.3s,mb4.7
LNOR Lincton Mounta 70.93 47 *e*P **P 22 17 01.4 +1.1**
comp=Z,12nm,1.3s,mb4.7
C11A Tepee Creek (N 71.05 44 ⇓P **P 22 17 00.6 -0.3**
baz=71
C11A ⇓pP pP 22 17 10.4 -0.3
baz=71
WDC Whiskeytown Da 71.08 53 *e*P **P 22 17 01.6 +0.3**
WDC pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
WDC Whiskeytown Da 71.08 53 *e*P **P 22 17 01.6 +0.3**
comp=Z,8.5nm,1.0s,mb4.6
H08A Prairie City 71.42 48 ⇓P **P 22 17 03.6 +0.3**
baz=71
F10A Beach Ranch, E 71.50 46 ⇑pP pP 22 17 12.7 -0.8
baz=71
G09A Cove 71.55 47 ⇑P **P 22 17 03.9 -0.2**
baz=71
G09A ⇓pP pP 22 17 13.2 -0.6
baz=71
WALA Waterton Lakes 71.67 42 *e*P **P 22 17 06.0 +1.2**
comp=Z,0.4nm,0.8s
B13A Whitefish 71.75 43 ⇑P **P 22 17 04.7 -0.5**
baz=72,SNR=7.9
B13A ⇓pP pP 22 17 15.1 +0.1
baz=72
MOD Modoc 71.81 51 *e*P **P 22 17 06.1 +0.4**
comp=Z,7.9nm,0.8s,mb4.7
G10A Bishop Farm, J 71.93 47 ⇓P **P 22 17 06.3 -0.1**
baz=72
G10A ⇓pP pP 22 17 15.4 -0.7
baz=72
D12A Red Ives Fores 71.99 45 ⇓P **P 22 17 06.8 +0.1**
baz=72
D12A ⇑pP pP 22 17 15.7 -0.7
baz=72
A14A Double T Ranch 71.99 42 ⇑P **P 22 17 06.8 +0.2**
baz=72
A14A ⇑pP pP 22 17 16.0 -0.4
baz=72
ZEI Tsey 71.99 310 *e*P **P 22 17 06.0 -0.8**
ZEI pmax pmax
comp=Z,6.0nm,0.4s,mb4.9
BMO Blue Mountains 72.06 47 *e*P **P 22 17 08.0 +0.9**
BMO *e**PP pP 22 17 15.8 -1.1
BMO pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
BMO Blue Mountains 72.06 47 *e*P **P 22 17 08.0 +0.8**
comp=Z,6.4nm,1.1s,mb4.5
BMO *e*pP pP 22 17 15.8 -1.1
C13A Hot Springs 72.08 44 ⇑P **P 22 17 07.1 -0.1**
baz=72
KIV Kislovodsk 72.09 312 *c i*P **P 22 17 08.1 +0.7**
KIV pmax pmax
comp=Z,25nm,1.0s,mb5.1
KIV Kislovodsk 72.09 312 *e*P **P 22 17 07.9 +0.6**
comp=Z,25nm,1.0s,mb5.1
J08A Circle Bar Ran 72.17 49 ⇓P **P 22 17 07.6 -0.2**
baz=72
J08A ⇑pP pP 22 17 17.7 +0.1
baz=72
F11A Grangeville 72.17 46 ⇓P **P 22 17 07.2 -0.6**
baz=72,SNR=8.1
E12A Beaver Dam Sad 72.22 45 ⇓P **P 22 17 08.2 +0.1**
baz=72
E12A ⇑pP pP 22 17 17.4 -0.4
baz=72
I09A Lost Marbles R 72.28 48 ⇑P **P 22 17 08.8 +0.3**
baz=72
I09A ⇑pP pP 22 17 17.8 -0.5
baz=72
A15A Johnson Ranch, 72.36 42 ⇓P **P 22 17 08.5 -0.3**
baz=72,SNR=5.3
A15A ⇓pP pP 22 17 17.2 -1.4
baz=72
G11A Walters Elk Ra 72.38 46 ⇓P **P 22 17 08.9 -0.1**
baz=72,SNR=17
G11A ⇑pP pP 22 17 18.0 -0.8
baz=72
B14A Marquette Ranc 72.42 43 ⇓P **P 22 17 08.3 -0.9**
baz=72
B14A ⇑pP pP 22 17 18.6 -0.3
baz=72
D13A Huson 72.47 44 ⇓P **P 22 17 09.1 -0.4**
baz=72,SNR=6.9
D13A ⇓pP pP 22 17 18.7 -0.6
baz=72
C14A Swan Lake 72.49 43 ⇑P **P 22 17 09.1 -0.5**
baz=72
C14A ⇓pP pP 22 17 19.0 -0.4
baz=72
SWMT Swartz Lake 72.50 44 *e*P **P 22 17 10.5 +0.8**
comp=Z,17nm,1.1s,mb4.9
H10A Noah's Angus R 72.54 47 ⇑P **P 22 17 09.1 -0.9**
baz=72
H10A ⇓pP pP 22 17 18.8 -1.0
baz=72
WVOR Wild Horse Val 72.57 50 *e*P **P 22 17 11.3 +1.1**
WVOR *e**PP pP 22 17 19.1 -0.9
WVOR pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
WVOR Wild Horse Val 72.57 50 *e*P **P 22 17 11.2 +1.0**
comp=Z,8.3nm,1.1s,mb4.6
WVOR *e*pP pP 22 17 19.1 -0.9
F12A Elk City 72.77 46 ⇓P **P 22 17 10.7 -0.6**
baz=72,SNR=8.4
F12A ⇑pP pP 22 17 20.8 -0.3
baz=72
B15A Bradely Ranch, 72.83 42 ⇓P **P 22 17 11.1 -0.6**
baz=73,SNR=12
B15A ⇑pP pP 22 17 20.7 -0.8
baz=73
BEKR Beckworth 72.87 53 ⇓P **P 22 17 11.7 -0.4**
baz=73
BEKR ⇑pP pP 22 17 21.1 -0.7
baz=73
GNI Garni 72.87 307 P **P 22 17 12.2 +0.2**
comp=Z,4.1nm,0.9s,mb4.4,baz=114,slow=15,SNR=3.5
GNI Garni 72.87 307 *e*P **P 22 17 12.6 +0.5**
GNI pmax pmax
comp=Z,8.0nm,1.3s

GNI Garni 72.87 307 *e*P **P 22 17 13.0 +0.9**
comp=Z,16nm,1.2s,mb4.8
MSO Missoula 72.92 44 *e*P **P 22 17 12.7 +0.5**
comp=Z,11nm,1.2s,mb4.7
D14A Greenough 73.02 44 ⇑pP pP 22 17 21.8 -0.8
baz=73
C15A Salmond Ranch, 73.12 43 ⇑P **P 22 17 13.3 -0.1**
baz=73,SNR=13
B16A M & M Farms, S 73.24 42 ⇓P **P 22 17 14.0 -0.1**
baz=73
B16A ⇑pP pP 22 17 23.3 -0.6
baz=73
CHMT Chamberlain Mo 73.25 44 *e*P **P 22 17 13.9 -0.3**
comp=Z,3.9nm,1.1s,mb4.2
CHMT *e*pP pP 22 17 22.6 -1.4
F13A Darby 73.28 45 ⇓P **P 22 17 13.7 -0.7**
baz=73
F13A ⇑pP pP 22 17 23.6 -0.5
baz=73
K10A MacKenzie Ranc 73.47 49 ⇑pP pP 22 17 25.3 -0.1
baz=73
C16A Fuhringer Ranc 73.58 43 ⇑P **P 22 17 15.7 -0.3**
baz=73,SNR=9.8
C16A ⇑pP pP 22 17 25.5 -0.4
baz=73
IZAR Zarasai 73.62 328 *e*P **P 22 17 16.7 +0.5**
H12A Diamond D Ranc 73.68 47 ⇓P **P 22 17 16.3 -0.5**
baz=73
H12A ⇑pP pP 22 17 25.8 -0.7
baz=73
IDID Didziasalis 73.69 328 *e*P **P 22 17 17.2 +0.6**
G13A Cobalt 73.74 46 ⇓P **P 22 17 16.5 -0.6**
baz=74,SNR=9.7
G13A ⇑pP pP 22 17 26.0 -0.8
baz=74
ISAL Salakas 73.79 328 *e*P **P 22 17 17.8 +0.6**
B17A L&G Farms, Che 73.80 42 ⇑P **P 22 17 17.0 -0.4**
baz=74,SNR=6.2
B17A ⇓pP pP 22 17 26.8 -0.4
baz=74
F14A Wisdom 73.82 45 ⇓pP pP 22 17 26.8 -0.5
baz=74
E15A Deer Lodge 73.88 44 ⇑P **P 22 17 17.4 -0.5**
baz=74,SNR=7.2
E15A ⇑pP pP 22 17 27.1 -0.6
baz=74
IIGN Ignalina 73.89 328 *e*P **P 22 17 18.2 +0.5**
A18A Metzer Ranch, 73.94 41 ⇑P **P 22 17 17.8 -0.4**
baz=74
I12A Atlanta 73.95 47 ⇑P **P 22 17 18.2 -0.2**
baz=74,SNR=7.0
I12A ⇓pP pP 22 17 27.7 -0.4
baz=74
K11A Parker Ranch, 73.98 49 ⇑P **P 22 17 18.4 -0.1**
baz=74
H13A Challis 74.03 46 ⇓P **P 22 17 18.5 -0.3**
baz=74
H13A ⇑pP pP 22 17 27.7 -0.8
baz=74
SOC Sochi 74.09 312 *e*P **P 22 17 16.8 -2.4**
SOC *e*S S 22 26 49.5 -0.3
SOC *e* 22 27 39.3
SOC *e*SS SS 22 31 39.8 +5.5
SOC pmax pmax
comp=Z,25nm,1.3s,mb5.0
SOC MLR MLR
comp=Z,358nm,16.0s,MS4.8
L10A Juniper Basin 74.11 49 ⇓P **P 22 17 18.4 -0.9**
baz=74
L10A ⇓pP pP 22 17 28.7 -0.4
baz=74
FFC Flin Flon 74.14 33 *e*P **P 22 17 19.7 +0.5**
FFC pmax pmax
comp=Z,15nm,1.0s,mb4.9
FFC Flin Flon 74.14 33 *e*P **P 22 17 19.7 +0.5**
comp=Z,15nm,1.0s,mb4.9
D16A Dana Ranch, Ca 74.14 43 ⇑P **P 22 17 19.0 -0.3**
baz=74
C17A Wharram Farm, 74.21 42 ⇑P **P 22 17 19.4 -0.5**
baz=74
C17A ⇑pP pP 22 17 28.6 -1.0
baz=74
B18A Beardsley Farm 74.29 41 ⇓P **P 22 17 19.6 -0.6**
baz=74,SNR=6.6
B18A ⇓pP pP 22 17 29.6 -0.4
baz=74
F15A Butte 74.31 44 ⇓P **P 22 17 20.6 +0.2**
baz=74,SNR=15
F15A ⇑pP pP 22 17 29.6 -0.6
baz=74
LRM Limekiln Ridge 74.34 44 *e*P **P 22 17 21.2 +0.7**
comp=Z,191nm,1.1s,mb5.9
E16A East Helena 74.36 44 ⇑P **P 22 17 19.9 -0.8**
baz=74
E16A ⇓pP pP 22 17 29.9 -0.6
baz=74
M10A I.L. Ranch, Tu 74.38 50 ⇓pP pP 22 17 30.5 -0.2
baz=74
I13A Wildhorse Cree 74.48 47 ⇓P **P 22 17 20.7 -0.7**
baz=74
I13A ⇑pP pP 22 17 31.0 -0.2
baz=74
L11A Cat Creek Ranc 74.50 49 ⇑P **P 22 17 21.4 -0.1**
baz=74,SNR=5.7
L11A ⇑pP pP 22 17 31.2 -0.2
baz=74
HLID Hailey 74.51 47 ⇑P **P 22 17 21.1 -0.5**
baz=74
HLID Hailey 74.51 47 *e*P **P 22 17 21.9 +0.3**
comp=Z,3.8nm,1.0s,mb4.3
H14A Leadore 74.51 46 ⇑P **P 22 17 21.4 -0.2**
baz=74
DLMT Dillon 74.53 45 *e*P **P 22 17 22.4 +0.7**
comp=Z,22nm,1.0s,mb5.0
EGMT Eagleton 74.53 42 ⇓P **P 22 17 20.2 -1.4**
baz=74
EGMT ⇑pP pP 22 17 30.5 -0.9
baz=74
EGMT Eagleton 74.53 42 *e*P **P 22 17 21.5 -0.1**
comp=Z,22nm,1.0s,mb5.0
D17A Six Diamond Ra 74.54 43 ⇓P **P 22 17 21.1 -0.7**
baz=74
D17A ⇓pP pP 22 17 31.0 -0.5
baz=74
FCC Fort Churchill 74.55 27 *e*P **P 22 17 21.4 -0.1**
comp=Z,0.4nm,1.0s
G15A Dillon 74.70 45 ⇓P **P 22 17 22.2 -0.5**
baz=74
G15A ⇓pP pP 22 17 32.4 -0.1
baz=74
ANN Anapa 74.73 314 *e*P **P 22 17 20.7 -2.2**
ANN pmax pmax
comp=Z,53nm,1.2s,mb5.3
J13A Cove Ranch, Pi 74.74 47 ⇑P **P 22 17 23.0 0.0**
baz=74
K12A Draper Farm, C 74.75 48 ⇓P **P 22 17 23.1 +0.1**
baz=74
F16A Kennard Place, 74.83 44 ⇓P **P 22 17 23.4 0.0**
baz=75
E17A Martinsdale 74.86 43 ⇑P **P 22 17 23.7 +0.1**
baz=75,SNR=6.1
E17A ⇑pP pP 22 17 33.0 -0.4
baz=75
I14A Mackay 74.86 47 ⇑P **P 22 17 23.7 0.0**
baz=75,SNR=9.0
I14A ⇓pP pP 22 17 33.6 +0.1
baz=75
M11A Holland Ranch, 74.89 50 ⇑pP pP 22 17 33.9 +0.3
baz=75
BOZ Bozeman (W) 74.91 44 ⇑P **P 22 17 24.0 +0.1**
baz=75,SNR=9.9
BOZ ⇑pP pP 22 17 33.2 -0.5
baz=75
BOZ Bozeman (W) 74.91 44 *e*P **P 22 17 24.0 +0.1**
BOZ pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
BOZ Bozeman (W) 74.91 44 *e*P **P 22 17 24.0 +0.1**
comp=Z,9.2nm,0.9s,mb4.7
H15A Lima 74.93 46 ⇓P **P 22 17 22.3 -1.7**
baz=75
L12A House Creek Ra 74.96 49 ⇓P **P 22 17 24.0 -0.3**
baz=75
NVAR Mina Array Bea 74.99 53 P **P 22 17 24.1 -0.4**
comp=Z,2.5nm,0.8s,mb4.2,baz=286,slow=6.1,SNR=9.5
D18A Linhart Farms, 75.00 42 ⇓P **P 22 17 24.1 -0.2**
baz=75
D18A ⇓pP pP 22 17 33.9 -0.3
baz=75

G16A Moss Hill, Enn 75.06 45 ⇑P **P 22 17 24.4 -0.3**
baz=75
G16A ⇓pP pP 22 17 34.0 -0.6
baz=75
F17A Fitzpatrick Pl 75.30 44 ⇑P **P 22 17 26.1 0.0**
baz=75
E18A Harlowton 75.32 43 ⇓P **P 22 17 25.3 -1.0**
baz=75
E18A ⇑pP pP 22 17 35.8 -0.2
baz=75
NB2 NORSAR Subarra 75.36 338 P **P 22 17 26.6 +0.4**
comp=Z,7.5nm,0.8s,mb4.7,baz=41,slow=5.9
NOA NORSAR Array B 75.36 338 P **P 22 17 26.9 +0.7**
comp=Z,6.4nm,0.8s,mb4.6,baz=39,slow=5.7,SNR=21
NOA LR LR 22 53 53.2
comp=Z,271nm,18.6s,MS4.6,baz=45,slow=38
M12A Wells 75.44 49 ⇑P **P 22 17 27.2 +0.2**
baz=75,SNR=10
M12A ⇓pP pP 22 17 37.1 +0.2
baz=75
AKASG Malin Array Be 75.51 323 P **P 22 17 27.2 0.0**
comp=Z,1.3nm,0.5s,mb4.2,baz=44,slow=5.1,SNR=11
AKASG LR LR 22 52 22.0
comp=Z,174nm,18.1s,MS4.4,baz=30,slow=37
AKASG Malin Array Be 75.51 323 P **P 22 17 27.2 0.0**
AKASG LR LR 22 52 21.9
AKBB Malin Array Si 75.51 323 *e*P **P 22 17 27.3 +0.1**
KIEV Kiev 75.52 323 *e*P **P 22 17 27.1 -0.2**
KIEV *e**PP pP 22 17 36.4 -0.7
KIEV pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
KIEV Kiev 75.52 323 *e*P **P 22 17 27.1 -0.2**
comp=Z,8.9nm,1.1s,mb4.6
KIEV *e*pP pP 22 17 36.4 -0.7
NAO01 NORSAR Array S 75.62 338 *e*P **P 22 17 27.9 +0.3**
comp=Z,4.0nm,0.7s,mb4.5
ELK Elko 75.63 50 P **P 22 17 28.9 +0.7**
comp=Z,1.0nm,0.4s,mb4.1,baz=324,slow=5.3,SNR=5.2
H16A Russell Place, 75.69 45 ⇑P **P 22 17 28.3 -0.1**
baz=75
H16A ⇓pP pP 22 17 37.9 -0.2
baz=75
N12A Clover Valley, 75.69 50 *e*P **P 22 17 29.4 +1.0**
comp=Z,5.1nm,1.1s,mb4.4
N12A *e*pP pP 22 17 37.5 -0.8
J15A Blackfoot 75.77 47 ⇓pP pP 22 17 38.6 -0.1
baz=76
F18A Big Timber 75.83 43 ⇑P **P 22 17 29.1 0.0**
baz=76,SNR=9.4
F18A ⇓pP pP 22 17 38.6 -0.4
baz=76
GCMT Greycliff 75.92 43 *e*P **P 22 17 30.8 +1.1**
comp=Z,14nm,1.3s,mb4.7
M13A Montello 75.93 49 ⇓P **P 22 17 29.3 -0.6**
baz=76
M13A Montello 75.93 49 *e*P **P 22 17 31.2 +1.3**
comp=Z,6.4nm,0.8s,mb4.6
Q10A Clear Creek Ra 76.00 52 ⇑pP pP 22 17 40.1 0.0
baz=76
I16A Newdale 76.04 46 ⇑P **P 22 17 29.9 -0.5**
baz=76
I16A ⇑pP pP 22 17 40.6 +0.4
baz=76
L14A Malta 76.10 48 ⇓P **P 22 17 30.1 -0.7**
baz=76
L14A ⇑pP pP 22 17 40.5 -0.1
baz=76
O12A Currie 76.21 50 ⇑P **P 22 17 31.7 +0.3**
baz=76,SNR=8.7
O12A ⇑pP pP 22 17 41.1 -0.2
baz=76
J16A Bone 76.33 46 ⇑P **P 22 17 32.7 +0.6**
baz=76
M14A Sheep Mountain 76.35 48 ⇓P **P 22 17 32.3 +0.1**
baz=76,SNR=7.8
M14A ⇑pP pP 22 17 41.7 -0.3
baz=76
S10A Tonopah Range, 76.39 53 ⇓P **P 22 17 33.1 +0.6**
baz=76
Q11A Duckwater 76.46 52 ⇓pP pP 22 17 42.3 -0.5
baz=76
HVU Hansel Valley 76.53 48 *e*P **P 22 17 34.4 +1.2**
HVU pmax pmax
comp=Z,11nm,1.0s,mb4.7
HVU Hansel Valley 76.53 48 *e*P **P 22 17 34.4 +1.1**
comp=Z,11nm,1.0s,mb4.7
SIM Simferopol' 76.53 316 P **P 22 17 33.8 +0.6**
SIM pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
SIM MLR MLR
comp=Z,270nm,18.0s,MS4.6
RLMT Red Lodge 76.55 44 ⇓pP pP 22 17 42.8 -0.3
baz=76
RLMT Red Lodge 76.55 44 *e*P **P 22 17 34.9 +1.6**
comp=Z,13nm,1.2s,mb4.7
P12A McGill 76.57 51 ⇑P **P 22 17 32.7 -0.8**
baz=76
TPAW Teton Pass 76.58 46 *e*P **P 22 17 34.3 +0.8**
comp=Z,10nm,0.9s,mb4.8
L15A Malad City 76.63 48 ⇑P **P 22 17 33.7 -0.1**
baz=76
L15A ⇑pP pP 22 17 43.4 -0.2
baz=76
LOHW Long Hollow 76.71 46 *e*P **P 22 17 35.5 +1.3**
comp=Z,5.0nm,0.9s,mb4.4
R11A Troy Canyon, C 76.79 52 ⇑P **P 22 17 34.4 -0.4**
baz=77
J17A Brown Place, J 76.80 46 ⇓P **P 22 17 34.7 0.0**
baz=76
N14A Grayback Hills 76.83 49 ⇑P **P 22 17 34.9 0.0**
baz=77,SNR=7.9
MPMC Manual Prospec 76.87 55 ⇓P **P 22 17 34.8 -0.4**
baz=77
BGU Big Grassy Mou 76.88 49 *e*P **P 22 17 35.8 +0.6**
comp=Z,4.6nm,0.9s,mb4.4
M15A Larsen Ranch, 76.91 48 ⇓P **P 22 17 34.7 -0.7**
baz=77,SNR=7.9
FURC Furnace Creek, 77.05 54 ⇓pP pP 22 17 45.7 -0.4
baz=77
N15A Stansbury Isla 77.21 49 ⇓pP pP 22 17 46.7 -0.2
baz=77
EDW2 Edwards Air Fo 77.21 56 ⇓pP pP 22 17 47.2 +0.1
baz=77
HWUT Hardware Ranch 77.36 48 *e*P **P 22 17 39.4 +1.5**
comp=Z,19nm,1.2s,mb4.9
R12A Pony Springs, 77.43 52 ⇓P **P 22 17 38.2 -0.2**
baz=77
R12A ⇓pP pP 22 17 48.2 +0.1
baz=77
Q13A Wheeler Ranch, 77.43 51 ⇑P **P 22 17 38.0 -0.3**
baz=77
DUG Dugway 77.45 49 ⇓P **P 22 17 38.5 +0.1**
baz=77,SNR=10.0
DUG ⇑pP pP 22 17 48.3 0.0
baz=77
DUG Dugway 77.45 49 *e*P **P 22 17 38.9 +0.5**
DUG pmax pmax
comp=Z,16nm,1.1s,mb4.9
DUG Dugway 77.45 49 *e*P **P 22 17 38.9 +0.5**
comp=Z,16nm,1.1s,mb4.9
FRB Frobisher Bay 77.56 14 LR LR 22 57 11.8
comp=Z,128nm,18.9s,MS4.5,baz=9.0,slow=40
K18A Toltan Ranch, 77.63 46 ⇓P **P 22 17 40.3 +0.9**
baz=77
K18A ⇓pP pP 22 17 49.3 +0.1
baz=77
P14A Drum Mountains 77.65 50 ⇓P **P 22 17 39.9 +0.3**
baz=77,SNR=5.0
BW06 Boulder Array 77.83 46 ⇑P **P 22 17 40.4 -0.1**
baz=78
BW06 ⇓pP pP 22 17 49.8 -0.6
baz=78
BW06 Boulder Array 77.83 46 *e*P **P 22 17 40.5 0.0**
comp=Z,4.3nm,0.7s,mb4.5
BW06 *e*pP pP 22 17 49.2 -1.1
PDAR Pinedale Array 77.83 46 P **P 22 17 40.8 +0.2**
comp=Z,3.1nm,0.9s,mb4.2,baz=284,slow=2.4,SNR=18
M17A Scullys Gap (B 77.98 47 ⇑P **P 22 17 41.4 0.0**
baz=78
L18A Fontenelle, Gr 78.07 47 ⇓P **P 22 17 41.4 -0.5**
baz=78
P15A Leamington 78.15 50 ⇓P **P 22 17 41.9 -0.4**
baz=78
DAU Daniels Canyon 78.27 48 *e*P **P 22 17 45.2 +2.2**
DAU pmax pmax
comp=Z,18nm,1.2s,mb4.9
DAU Daniels Canyon 78.27 48 *e*P **P 22 17 45.2 +2.2**
comp=Z,18nm,1.2s,mb4.9

S13A	Holt Ranch, En	78.35	52	⇓pP	pP	22 17 53.2	-0.2
	baz=78						
HEC	Hector,Ludlow	78.36	55	⇑pP	pP	22 17 53.5	+0.1
	baz=78						
V11A	Goodsprings	78.36	54	⇓pP	pP	22 17 53.5	+0.1
	baz=78						
T13A	Saint George	78.65	52	⇓pP	pP	22 17 55.0	-0.1
	baz=78						
O17A	Robinson Place	78.71	48	⇓P	P	22 17 45.4	0.0
	baz=78						
MSU	Marysvale	78.85	50	eP	P	22 17 48.1	+1.9
MSU				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
MSU	Marysvale	78.85	50	eP	P	22 17 48.1	+1.8
	comp=Z,9.5nm,1.2s,mb4.6						
BELC	Belle Mtn. Jos	79.06	56	⇑P	P	22 17 47.5	0.0
	baz=79						
N19A	John Jarvie Ra	79.22	47	⇑P	P	22 17 47.8	-0.4
	baz=79						
V13A	Grand Canyon W	79.30	53	⇑P	P	22 17 49.0	+0.3
	baz=79						
KWP	Kalwaria Pacla	79.34	325	eP	P	22 17 49.2	+0.5
KWP				pmax	pmax		
	comp=Z,28nm,1.1s,mb5.1						
KWP	Kalwaria Pacla	79.34	325	eP	P	22 17 49.1	+0.4
	comp=Z,28nm,1.1s,mb5.1						
P18A	Preston Nutter	79.36	49	⇓P	P	22 17 48.8	-0.1
	baz=79						
M20A	Sweetwater, Wa	79.43	46	⇑P	P	22 17 48.9	-0.4
	baz=79						
SRU	San Rafael	79.51	49	⇓P	P	22 17 49.5	-0.3
	baz=79						
SRU	San Rafael	79.51	49	eP	P	22 17 50.3	+0.5
SRU				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.8						
SRU	San Rafael	79.51	49	eP	P	22 17 50.3	+0.5
	comp=Z,16nm,1.2s,mb4.8						
BUR08	Bucovina Ar. S	79.51	322	eP	P	22 17 51.1	+1.4
L21A	Rawlins	79.60	45	⇑P	P	22 17 50.0	-0.3
	baz=79						
T15A	Red Dirt Ranch	79.63	52	⇑P	P	22 17 50.0	-0.5
	baz=79						
BC3	Big Chuckawall	79.63	56	⇑P	P	22 17 50.4	-0.2
	baz=79						
N20A	Spence Gulch,	79.80	47	⇓P	P	22 17 50.6	-0.7
	baz=80						
ULM	Lac du Bonnet	79.92	34	eP	P	22 17 52.8	+1.0
	comp=Z,5.6nm,0.9s,mb4.5						
V14A	Boquillas Ranc	80.00	53	⇑P	P	22 17 52.3	-0.3
	baz=80						
BR131	Keskin Array S	80.04	312	eP	P	22 17 53.3	+0.6
	comp=Z,4.3nm,1.0s,mb4.3						
BRTR	Keskin Array B	80.04	312	P	P	22 17 53.6	+0.9
	comp=Z,2.0nm,0.8s,mb4.1,baz=82,slow=3.3,SNR=9.6						
BRTR				LR	LR	22 57 53.3	
	comp=Z,92nm,18.9s,MS4.2,baz=225,slow=39						
BRTR	Keskin Array B	80.04	312	ceP	P	22 17 53.5	+0.8
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
U15A	North Rim	80.04	52	⇓P	P	22 17 52.3	-0.5
	baz=80						
P19A	Cripple Cowboy	80.12	48	⇓P	P	22 17 52.6	-0.5
	baz=80						
STHS	Stebnicka Huta	80.17	325	eP	P	22 17 54.4	+1.2
STHS				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.2						
STHS	Stebnicka Huta	80.17	325	eP	P	22 17 54.4	+1.2
	comp=Z,3.6nm,1.2s,mb4.2						
STHS	Stebnicka Huta	80.17	325	eP	P	22 17 54.4	+1.2
UZH	Uzhgorod	80.24	324	eP	P	22 17 55.0	+1.4
UZH				i	pP	22 18 03.6	+0.2
O20A	White River Ci	80.25	47	⇓P	P	22 17 53.6	-0.2
	baz=80						
OJC	Ojcow	80.25	327	eP	P	22 17 51.3	-2.3
W14A	Seligman	80.27	54	⇑P	P	22 17 53.7	-0.3
	baz=80						
CRVS	Cervenica-Dubn	80.44	325	eP	P	22 17 53.8	-0.8
CRVS				pmax	pmax		
	comp=Z,398nm,6.0s						
CRVS	Cervenica-Dubn	80.44	325	eP	P	22 17 53.8	-0.8
	comp=Z,398nm,6.0s						
CRVS	Cervenica-Dubn	80.44	325	eP	P	22 17 53.8	-0.8
V15A	Kaibab Nationa	80.49	53	⇓P	P	22 17 55.1	-0.1
	baz=80						
NIE	Niedzica	80.60	326	eP	P	22 17 56.6	+1.1
S18A	Hurst Farm, Bl	80.71	50	⇑P	P	22 17 56.0	-0.3
	baz=80						
S18A				⇑pP	pP	22 18 06.3	+0.1
	baz=80						
W15A	Williams	80.82	53	⇑pP	pP	22 18 07.4	+0.6
	baz=81						
N22A	Wattenberg Ran	80.87	46	⇑pP	pP	22 18 06.9	-0.1
	baz=81						
PV04	Paradox Valley	80.94	49	eP	P	22 17 59.2	+1.6
Q20A	Ridgley Place,	80.96	48	⇓P	P	22 17 56.2	-1.4
	baz=81						
WUAZ	Wupatki	81.19	52	eP	P	22 18 00.0	+1.1
	comp=Z,5.2nm,1.0s,mb4.4						
WUAZ				epP	pP	22 18 08.4	-0.4
S19A	Harvey Farm, M	81.21	50	⇑P	P	22 17 57.6	-1.4
	baz=81						
OKC	Ostrava-Krasne	81.26	327	eP	P	22 17 59.2	+0.2
OKC				e	pP	22 18 09.4	+0.5
OKC				MLR	MLR		
	comp=Z,400nm,13.0s,MS5.0						
OKC	Ostrava-Krasne	81.26	327	eP	P	22 17 59.2	+0.2
OKC				e	pP	22 18 09.4	+0.5
OKC	Ostrava-Krasne	81.26	327	eP	P	22 17 59.2	+0.2
OKC				epP	pP	22 18 09.4	+0.5
OKC				AMS	AMS	23 01 10.0	
	comp=Z,400nm,13.0s						
KSP	Ksiaz	81.31	329	eP	P	22 17 59.8	+0.5
KSP				e		22 18 06.4	
PV01	Paradox Valley	81.31	49	eP	P	22 18 00.4	+0.9
	comp=Z,989nm,1.2s						
R20A	Redvale	81.39	49	⇑P	P	22 17 59.8	-0.2
	baz=81						
P22A	Eagle	81.47	47	⇓P	P	22 18 00.3	-0.1
	baz=81						
MORC	Moravsky Berou	81.57	327	eP	P	22 18 00.6	-0.1
MORC				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
MORC	Moravsky Berou	81.57	327	eP	P	22 18 00.6	-0.1
	comp=Z,4.7nm,1.1s,mb4.3						
U18A	Rough Rock, Ch	81.58	51	⇑P	P	22 18 00.6	-0.4
	baz=81						
SMCO	Snowmass	81.61	47	eP	P	22 18 02.6	+1.5
	comp=Z,3.6nm,1.0s,mb4.3						
DPC	Dobruska-Polom	81.67	328	eP	P	22 18 02.4	+1.2
DPC				e		22 18 09.0	
DPC				MLR	MLR		
	comp=Z,500nm,14.1s,MS5.0						
DPC	Dobruska-Polom	81.67	328	eP	P	22 18 02.4	+1.2
DPC				e		22 18 09.0	
DPC	Dobruska-Polom	81.67	328	eP	P	22 18 02.4	+1.2
DPC				epP	pP	22 18 09.0	-2.1
DPC				AMS	AMS	22 59 30.0	
	comp=Z,500nm,14.1s						
UPC	Upice	81.68	329	eP	P	22 18 02.4	+1.2
UPC				epP	pP	22 18 10.3	-0.8
R21A	Cimarron	81.78	48	⇓P	P	22 18 01.5	-0.5
	baz=82						
PSZ	Piszkesteto	81.87	325	eP	P	22 18 02.5	+0.2
PSZ				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
PSZ	Piszkesteto	81.87	325	eP	P	22 18 02.5	+0.2
	comp=Z,7.3nm,1.0s,mb4.6						
VYHS	Vyhne	81.94	326	eP	P	22 18 03.0	+0.4
VYHS				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
VYHS	Vyhne	81.94	326	eP	P	22 18 03.0	+0.4
	comp=Z,1.9nm,1.0s,mb4.0						
VYHS	Vyhne	81.94	326	eP	P	22 18 03.0	+0.4
V18A	Ganado	81.99	52	⇓P	P	22 18 02.7	-0.4
	baz=82						
S21A	Coal Bank Pass	82.09	49	⇓P	P	22 18 03.8	+0.2
	baz=82						
BRG	Berggiesshubel	82.26	330	i P	P	22 18 05.0	+0.7
	comp=Z,10nm,1.6s,mb4.5						
BRG							
	comp=N,588nm,14.3s						
BRG							
	comp=E,423nm,12.6s						
BRG							
	comp=Z,513nm,15.1s						
BRG	Berggiesshubel	82.26	330	i P	P	22 18 05.0	+0.7
BRG				pmax	pmax		
	comp=Z,6.0nm,1.6s,mb4.3						
BRG				MLR	MLR		
	comp=N,352nm,14.3s,MS5.0						
BRG				MLR	MLR		
	comp=E,253nm,12.6s,MS5.0						
BRG				MLR	MLR		
	comp=Z,307nm,15.1s,MS4.8						
PVCC	Panska Ves	82.27	329	eP	P	22 18 05.3	+1.0
PVCC				e		22 18 11.9	
PVCC				MLR	MLR		
	comp=Z,600nm,13.8s,MS5.1						
PVCC	Panska Ves	82.27	329	eP	P	22 18 05.3	+1.0
PVCC				e		22 18 11.9	
PVCC	Panska Ves	82.27	329	eP	P	22 18 05.3	+1.0
PVCC				epP	pP	22 18 11.9	-2.3
PVCC				AMS	AMS	22 59 20.0	
	comp=Z,600nm,13.8s						
CLL	Collm	82.30	331	⇑iP	P	22 18 04.2	-0.3
CLL				i	pP	22 18 11.6	-2.8
CLL				eS	S	22 28 18.0	+0.2
CLL				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
CLL	Collm	82.30	331	⇑iP	P	22 18 04.2	-0.3
CLL				i		22 18 06.5	
CLL				i	pP	22 18 11.6	-2.8
CLL				eS	S	22 28 18.0	+0.2
CLL	Collm	82.30	331	⇑iP	P	22 18 04.2	-0.3
	comp=Z,7.0nm,1.0s,mb4.5						
CLL				i Pmax		22 18 06.5	
	comp=Z,12nm,1.2s						
CLL				i pP	pP	22 18 11.6	-2.8
CLL				i sP	sP	22 18 13.3	-4.7
CLL				eS	S	22 28 18.0	+0.2
CLL				e		22 38 06.0	
PRU	Pruhonice	82.69	329	eP	P	22 18 07.4	+0.9
PRU				e		22 18 14.1	
PRU				MLR	MLR		
	comp=Z,500nm,12.1s,MS5.1						
PRU	Pruhonice	82.69	329	eP	P	22 18 07.4	+0.9
PRU				e		22 18 14.1	
PRU	Pruhonice	82.69	329	eP	P	22 18 07.4	+0.9
PRU				epP	pP	22 18 14.1	-2.3
PRU				AMS	AMS	23 00 30.0	
	comp=Z,500nm,12.1s						
TREC	Trest	82.82	328	AMS	AMS	23 00 50.0	
	comp=Z,600nm,13.9s						
MMAI	Mount Meron Ar	83.12	306	P	P	22 18 09.6	+0.5
	comp=Z,8.4nm,0.9s,mb4.8,baz=344,slow=5.6,SNR=7.5						
MMAI				LR	LR	22 58 25.5	
	comp=Z,145nm,21.1s,MS4.3,baz=75,slow=38						
PMOR	Pomariorio Ree	83.12	114	eT		23 49 21.9	
	comp=Z,5.2nm,0.2s						
Y18A	Canyon Day Jun	83.13	53	⇓P	P	22 18 08.9	-0.3
	baz=83						
X19A	St. Johns	83.20	52	⇑P	P	22 18 09.7	+0.2
	baz=83						
CSS	Prodhromos	83.23	309	eP	P	22 18 09.9	+0.3
	comp=Z,14nm,1.0s,mb4.9						
NKC	Novy Kostel	83.36	330	AMS	AMS	22 59 10.0	
	comp=Z,400nm,14.2s						
Q25A	Bedland, Calha	83.39	46	⇑P	P	22 18 10.2	-0.2
	baz=83						
SDCO	Great Sand Dun	83.42	48	eP	P	22 18 11.5	+0.9
	comp=Z,3.2nm,1.1s,mb4.3						
SDCO				epP	pP	22 18 19.7	-0.8
PPT	Papeete	83.55	117	eLR	LR	22 44 18.8	
	comp=Z,218nm,29.0s						
PPT	Papeete	83.55	117	LR	LR	22 48 12.9	
	comp=Z,141nm,19.8s,MS4.3,baz=274,slow=31						
TUC	Tucson	83.56	55	eP	P	22 18 11.9	+0.5
TUC				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2						
TUC	Tucson	83.56	55	eP	P	22 18 11.9	+0.5
	comp=Z,2.4nm,0.9s,mb4.3						
X20A	Quemado	83.64	52	⇓P	P	22 18 11.4	-0.3
	baz=83						
S24A	Houchin Ranch,	83.66	48	⇑P	P	22 18 11.4	-0.4
	baz=83						
KHC	Kasperske Hory	83.75	329	eP	P	22 18 12.4	+0.4
KHC				e		22 18 18.5	
KHC				MLR	MLR		
	comp=Z,500nm,12.1s,MS5.1						
KHC	Kasperske Hory	83.75	329	eP	P	22 18 11.3	-0.7
	comp=Z,6.6nm,1.0s,mb4.7						
KHC	Kasperske Hory	83.75	329	eP	P	22 18 12.4	+0.4
KHC				epP	pP	22 18 18.5	-3.4
KHC				AMS	AMS	23 00 40.0	
	comp=Z,500nm,12.1s						
217A	Green Valley	83.87	55	⇑P	P	22 18 12.5	-0.5
	baz=84						
118A	Homack Ranch,	83.89	54	⇓P	P	22 18 12.2	-0.9
	baz=84						
U23A	El Rito	83.92	49	⇓P	P	22 18 12.0	-1.2
	baz=84						
Y20A	Horse Springs,	84.12	52	⇓P	P	22 18 13.7	-0.5
	baz=84						
ECSD	EROS Data Cent	84.23	39	eP	P	22 18 14.4	-0.2
	comp=Z,7.0nm,1.0s,mb4.8						
ECSD				epP	pP	22 18 22.4	-2.1
GRF	Grafenberg Arr	84.28	331	eP	P	22 18 15.2	+0.5
	comp=Z,13nm,1.3s,mb4.9						
GRF				epP	pP	22 18 23.8	-0.8
GRF				eL		23 01 10.2	
	comp=Z,332nm,18.5s						
GRF	Grafenberg Arr	84.28	331	eP	P	22 18 15.2	+0.5
GRF				e*PP	pP	22 18 23.8	-0.8
GRF				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.9						
GRF				MLR	MLR		
	comp=Z,300nm,18.5s,MS4.7						
Z20A	Nine Sixteen R	84.49	53	⇑P	P	22 18 15.8	-0.3
	baz=84						
318A	Bisbee	84.63	55	⇑P	P	22 18 16.0	-0.9
	baz=84						
ANMO	Albuquerque	84.66	50	P	P	22 18 17.4	+0.4
	comp=Z,1.7nm,0.9s,mb4.2,baz=231,slow=4.8,SNR=3.4						
219A	White Tail Can	84.76	54	⇑P	P	22 18 17.2	-0.3
	baz=84						
MEH	Mehetia	84.84	116	eT		23 51 30.7	
	comp=Z,41nm,0.2s						
U25A	Circle Dot Ran	84.96	48	⇑P	P	22 18 17.6	-0.8
	baz=85						
BNM	Barren Site	85.07	51	eP	P	22 18 19.4	+0.4
V25A	Rancho No Teng	85.21	49	⇑P	P	22 18 19.3	-0.4
	baz=85						
V26A	Tequesquite Ra	85.74	48	⇓P	P	22 18 21.7	-0.6
	baz=86						
BCLA	Clavier	85.92	334	P	P	22 18 23.5	+0.6
	comp=Z,14nm,2.0s,mb4.8						
Y24A	Capitan	85.97	50	⇑P	P	22 18 23.3	-0.1
	baz=86						
SCHQ	Schefferville	86.07	16	LR	LR	23 02 40.4	
	comp=Z,93nm,18.5s,MS4.2,baz=9.0,slow=40						
SNF	Seneffe	86.20	335	P	P	22 18 24.5	+0.2
	comp=Z,15nm,1.8s,mb4.9						
DOU	Dourbes	86.44	334	P	P	22 18 25.5	+0.1
	comp=Z,10nm,2.3s,mb4.7						
BFO	Black Forest	86.51	331	eP	P	22 18 25.5	-0.3
BFO				e*PP	pP	22 18 34.4	-1.4
BFO				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb5.0						
BFO	Black Forest	86.51	331	eP	P	22 18 25.5	-0.4
	comp=Z,7.7nm,0.9s,mb4.9						
BFO				epP	pP	22 18 34.4	-1.4
TBI	Tubuai	87.40	121	eT		23 54 42.5	
	comp=Z,4.1nm,0.3s						
MNTX	Cornudas Mount	87.47	52	eP	P	22 18 31.0	+0.1
	comp=Z,4.1nm,1.4s,mb4.5						
WMOK	Wichita Mounta	89.44	46	eP	P	22 18 40.8	+0.7
WMOK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.5						
WMOK	Wichita Mounta	89.44	46	eP	P	22 18 40.8	+0.6
	comp=Z,1.9nm,0.8s,mb4.5						
TXAR	Lajitas Array	90.14	53	P	P	22 18 42.5	-1.0
	comp=Z,1.3nm,0.8s,mb4.3,baz=318,slow=1.7,SNR=14						
TXAR				LR	LR	23 01 21.7	
	comp=Z,46nm,18.7s,MS3.9,baz=0.0,slow=37						
ATD	Arta Tunnel	90.81	285	LR	LR	23 03 03.4	
	comp=Z,62nm,20.0s,MS4.0,baz=17,slow=38						
MIAR	Mount Ida	92.55	43	eP	P	22 18 54.9	+0.4
MIAR				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb5.1						
MIAR	Mount Ida	92.55	43	eP	P	22 18 54.9	+0.4
	comp=Z,7.8nm,1.1s,mb5.0						
KEST	Kesra	96.24	323	LR	LR	23 07 29.3	
	comp=Z,63nm,18.1s,MS4.1,baz=293,slow=38						
ESDC	Sonseca Array	98.48	334	LR	LR	23 08 07.9	
	comp=Z,170nm,19.6s,MS4.5,baz=0.0,slow=38						
LBTB	Lobatse	125.23	263	ePKIKP	PKPdf	22 24 44.9	+1.0
QSPA	South Pole Qui	125.80	180	PKP	PKPdf	22 24 42.0	-1.4
	comp=Z,2.2nm,1.0s,baz=64,slow=1.0,SNR=7.0						
LPAZ	La Paz	146.54	62	PKPbc	PKPbc	22 25 24.6	-0.2
	comp=Z,1.8nm,0.7s,baz=12,slow=5.9,SNR=7.9						
LPAZ	La Paz	146.54	62	ePKPdf	PKPbc	22 25 24.6	-0.2
LCO	Las Campanas	151.39	85	ePKPbc	PKPbc	22 25 37.9	+0.9

ISCJB ***05*** *22:09:38.4±0.8, 36°.21N±0°.08×70°.3E±0°.1, h77km±15km, mb3.8/3, Error ellipse: s-maj=20.8km s-min=6.6km az=32.8*

NEIC ***05*** *22:09:40.3±1.0, 36°.25N×70°.00E, h64km±17km, mb3.6/1, Error ellipse: s-maj=22.6km s-min=10.6km az=125.0*

NNC ***05*** *22:09:43.2±4.7, 36°.87N×69°.98E, h0km, mb4.1, mpv3.7, Error ellipse: s-maj=44.6km s-min=36.2km az=93.0*

IDC ***05*** *22:09:44.1±8.8, 36°.57N×69°.85E, h76km±62km, mb3.7/3, mb1 3.7/7, mb1mx3.3/28, mbtmp3.6/7, ML3.5/4, Error ellipse: s-maj=83.4km s-min=45.4km az=161.0*

ISC 05 22:09:40.3±0.7, 36°.22N±0°.07×70°.2E±0°.1, h72km±13km, n20, σ0°96/29, mb3.8/3, 4C-1D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	1.91	209	ePn	Pn	22 10 10.5	-0.2
KBL				eSn	Sn	22 10 33.2	-0.6
KSH	Kashi	5.65	53	Pn	Pn	22 10 56.7	-4.9
KSH				Sn	Sn	22 11 50.7	-14
KSH				smax			
	comp=N,84nm,0.9s						
KSH				smax			
	comp=E,87nm,0.9s						
KK31	Karatay Array	6.88	2	Pn	Pn	22 11 19.5	+1.1
	comp=E,2.2nm,0.3s,baz=184,slow=14,SNR=106						
KK31				⇑Sn	Sn	22 12 35.3	+0.2
	comp=E,5.0nm,0.4s,baz=0.0,slow=0.1,SNR=4.5						
UCH	Uchtor	6.88	28	ePn	Pn	22 11 18.8	+0.3
	comp=E,5.8nm,0.5s						
UCH				eSn	Sn	22 12 30.5	-4.7
EKS2	Erkin-Say	7.01	22	ePn	Pn	22 11 20.5	+0.3
	comp=E,9.5nm,0.5s						
EKS2				eSn	Sn	22 12 37.7	-0.7
AAK	Ala-Archa	7.23	26	P	Pn	22 11 24.0	+0.8
	comp=E,2.1nm,0.3s,baz=161,slow=4.8,SNR=8.0						
AAK				S	Sn	22 12 42.8	-0.9
	comp=E,3.1nm,0.3s,baz=314,slow=21,SNR=14						
AAK	Ala-Archa	7.23	26	P	Pn	22 11 24.0	+0.8
AAK				S	Sn	22 12 42.8	-0.9
TKM2	Tokmak 2	7.90	30	⇑Pn	Pn	22 11 31.9	-0.3
	comp=E,1.4nm,0.3s						
TKM2				⇑Sn	Sn	22 12 58.3	-1.7
	comp=E,11nm,0.7s						
TKM2	Tokmak 2	7.90	30	ePn	Pn	22 11 31.8	-0.5
	comp=E,5.7nm,0.5s						
MKAR	Makanchi Array	13.92	37	P	Pn	22 12 56.1	+2.1
	comp=E,0.1nm,0.3s,baz=218,slow=9.1,SNR=5.6						
AB31	Akbulak array	15.02	333	⇑Pn	Pn	22 13 08.2	0.0
	comp=E,3.1nm,0.5s,baz=156,slow=13,SNR=68						
AB31				⇓Sn	Sn	22 15 43.4	-10
	comp=E,5.4nm,0.7s,baz=68,slow=7.0,SNR=39						
ABKAR	Akbulak array	15.02	333	ePn	Pn	22 13 08.3	+0.1
	comp=E,3.2nm,0.4s						
AKTK	Aktyubinsk	16.70	332	P	Pn	22 13 29.8	+0.4
AKTO	Aktyubinsk	16.70	332	P	Pn	22 13 29.8	+0.4
	comp=E,0.4nm,0.3s,baz=144,slow=12,SNR=17						
BVAR	Borovoye Array	16.80	0	P	Pn	22 13 31.6	+0.9
	comp=E,0.3nm,0.3s,baz=241,slow=46,SNR=6.0						
ZALV	Zalesovo Beam	20.45	25	P	P	22 14 14.4	+2.7
	comp=E,4.7nm,0.4s,baz=216,slow=10,SNR=13						
ARU	Arti	21.69	342	P	P	22 14 23.5	-1.3
	comp=E,2.0nm,0.7s,mb3.6						
FINES	FINESS Array B	37.34	327	P	P	22 16 44.3	-1.0
	comp=E,0.6nm,0.4s,mb3.9,baz=108,slow=6.2,SNR=4.4						
FINES	FINESS Array B	37.34	327	P	P	22 16 44.3	-1.0
ARCES	ARCESS Array B	41.15	338	P	P	22 17 16.6	-0.3
	comp=E,1.8nm,0.7s,mb4.0,baz=114,slow=9.0,SNR=3.6						

ISCJB ***05*** *22:10:56.1±1.4, 5°.6N±0°.2×93°.2E±0°.2, h30km, mb4.0/6, Error ellipse: s-maj=37.6km s-min=13.4km az=138.8*

IDC ***05*** *22:10:57.8±2.7, 5°.55N×93°.15E, h31km±6km, mb3.7/5, mb1 3.8/6, mb1mx3.5/24, mbtmp3.7/6, ML3.1/1, Error ellipse: s-maj=107.6km s-min=16.0km az=58.0*

NEIC ***05*** *22:10:58.4±1.0, 5°.59N×93°.18E, h35km, mb4.4/1, Error ellipse: s-maj=27.8km s-min=9.9km az=49.0*

ISC 05 22:10:58.1±1.4, 5°.6N±0°.2×93°.2E±0°.2, h32km, h32km±.3km; pP-P, n8, σ0°35/9, mb4.0/6, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	6.39	115	Pn	Pn	22 12 30.8	+0.8
	0.5nm,0.3s,baz=348,slow=23,SNR=3.9						
KULM	Kulim	7.47	92	ePn	Pn	22 12 44.5	-0.4
KULM				eS	Sn	22 14 01.4	-7.2
MKAR	Makanchi Array	42.11	349	P	P	22 18 47.0	-0.1
	0.9nm,0.8s,mb3.5,baz=168,slow=8.7,SNR=4.6						
MKAR				pP	pP	22 18 56.2	-0.5
	0.3nm,0.5s,baz=168,slow=9.1,SNR=3.0						
SONM	Songino Array	43.59	13	P	P	22 18 59.1	0.0
	1.0nm,0.6s,mb3.8,baz=220,slow=5.9,SNR=5.5						
WRA	Warramunga Arr	47.79	123	P	P	22 19 32.5	-0.3
	2.9nm,0.7s,mb4.4,baz=302,slow=9.1,SNR=11						
WRA				pP	pP	22 19 41.4	-1.0
	1.3nm,0.6s,baz=302,slow=9.0,SNR=5.5						
WRAB	Tennant Creek	47.80	123	eP	P	22 19 32.8	0.0
	2.8nm,0.7s,mb4.4						
ZALV	Zalesovo Beam	48.69	353	P	P	22 19 39.5	+0.3
	1.2nm,0.5s,mb4.2,baz=169,slow=8.8,SNR=6.4						
ZALV				pP	pP	22 19 49.0	+0.1
	0.5nm,0.4s,baz=170,slow=7.0,SNR=3.9						
ASAR	Alice Springs	49.26	128	P	P	22 19 43.8	-0.2
	0.9nm,0.8s,mb3.9,baz=297,slow=8.8,SNR=5.6						
ASAR				pP	pP	22 19 53.0	-0.7
	0.2nm,0.4s,baz=304,slow=8.4,SNR=1.6						

PGC ***05*** *22:27:29.8±14.0, 65°.80N×140°.74W, h1km, ML3.2/3, 203km northwest of Dawson, Yt Northern Yukon Territory, Canada*

NEIC 05 22:27:30.2, 65°.77N×141°.16W, h10km, ML2.9(AEIC)**, 5D, After AEIC., Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGAK	Eagle	1.00	180	P	Pg	22 27 49.1	-0.3
EGAK				S	Sg	22 28 02.9	+0.5
DAWY	Dawson	1.87	155	P	Pn	22

mb1 4.0/11, mb1mx3.8/28, mbtmp3.9/11, ML4.1/2, Error ellipse: s-maj=30.0km s-min=16.6km az=60.0
*PGC **05** 22:47:25.8±1.8, 71°56'N×134°09'W, h35km, ML3.7/1, 311km west of Sachs Harbour, Nt Beaufort Sea*
*NEIC **05** 22:47:25.8, 71.56N×134.09W, h35km, ML3.8(AEIC), ML3.7(PGC), After PGC.*
ISC 05 22:47:23.7±2.9, 71°45'N±0°05'×133°8'W±0°1', h15km±20km, n49, σ0°90/68, mb3.9/11, 11D, Beaufort Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INK	**Inuvik**	**3.16**	**178**	Pn	**Pn**	**22 48 14.5**	**+1.7**
	23nm,0.3s,baz=8.1,slow=16,SNR=557						
INK				Sn	**Sn**	**22 48 49.3**	**-0.8**
	23nm,0.3s,baz=197,slow=21,SNR=11						
INK	**Inuvik**	**3.16**	**178**	*e*Pn	**Pn**	**22 48 13.9**	**+1.0**
INK				*e*S	**Sn**	**22 48 48.8**	**-1.4**
INK	**Inuvik**	**3.16**	**178**	⇓Pn	**Pn**	**22 48 14.0**	**+1.2**
INK				⇓Sn	**Sn**	**22 48 48.8**	**-1.4**
BM3	**Burnt Mountain**	**5.56**	**229**	P	**Pn**	**22 48 45.6**	**-0.2**
COLD	**Coldfoot**	**7.18**	**242**	P	**Pn**	**22 49 07.7**	**-0.2**
COLD				S	**Sn**	**22 50 21.8**	**-7.2**
EGAK	**Eagle**	**7.25**	**206**	P	**Pn**	**22 49 08.5**	**-0.4**
DAWY	**Dawson**	**7.72**	**199**	P	**Pn**	**22 49 14.6**	**-0.7**
DAWY	**Dawson**	**7.72**	**199**	⇓Pn	**Pn**	**22 49 14.8**	**-0.6**
DAWY				⇑Sn	**Sn**	**22 50 36.7**	**-5.6**
COLA	**College**	**8.41**	**225**	*e*Pn	**Pn**	**22 49 24.6**	**-0.3**
COLA				*e*S	**Sn**	**22 50 54.0**	**-5.3**
DOT	**Dot Lake**	**8.75**	**212**	P	**Pn**	**22 49 29.3**	**-0.2**
BCA3	**Beaver Creek A**	**8.97**	**204**	P	**Pn**	**22 49 32.0**	**-0.4**
IM3	**Indian Mountai**	**9.06**	**243**	P	**Pn**	**22 49 32.2**	**-1.6**
ROMN	**Roman Lake**	**9.27**	**133**	⇓Pn	**Pn**	**22 49 37.3**	**+0.7**
ROMN				⇑Sn	**Sn**	**22 51 11.4**	**-8.9**
MENT	**Mentasta**	**9.37**	**209**	*e*Pn	**Pn**	**22 49 38.0**	**+0.1**
MCK	**McKinley**	**9.64**	**224**	*e*Pn	**Pn**	**22 49 42.0**	**+0.4**
MCK				*e*S	**Sn**	**22 51 23.0**	**-6.4**
CTLN	**Castor Lake**	**9.66**	**128**	⇑Pn	**Pn**	**22 49 42.3**	**+0.4**
CTLN				⇑Sn	**Sn**	**22 51 21.6**	**-8.3**
JERN	**Jeri Cho Mine,**	**9.70**	**113**	⇓Pn	**Pn**	**22 49 43.0**	**+0.5**
JERN				⇑Sn	**Sn**	**22 51 22.8**	**-8.3**
BPAW	**Bear Paw Mtn.**	**9.80**	**230**	P	**Pn**	**22 49 42.7**	**-1.2**
TRF	**Thorofare Moun**	**10.19**	**226**	*e*Pn	**Pn**	**22 49 49.4**	**+0.2**
	15nm,0.4s						
TRF				*e*S	**Sn**	**22 51 35.9**	**-7.0**
HYT	**Haines Junctio**	**10.78**	**190**	*e*Pn	**Pn**	**22 49 57.1**	**-0.1**
HYT	**Haines Junctio**	**10.78**	**190**	⇓Pn	**Pn**	**22 49 57.2**	**0.0**
WHY	**Whitehorse**	**10.85**	**183**	⇑Pn	**Pn**	**22 49 58.0**	**-0.2**
PPLA	**Purkeypile**	**11.11**	**229**	*e*Pn	**Pn**	**22 50 02.0**	**+0.2**
PPLA				*e*S	**Sn**	**22 51 58.1**	**-7.4**
BMRM	**Bremner River**	**11.37**	**208**	*e*Pn	**Pn**	**22 50 07.1**	**+1.8**
	15nm,0.8s						
YKW3	**Yellowknife Ar**	**11.57**	**131**	⇑Pn	**Pn**	**22 50 07.9**	**-0.1**
YKW3				⇓Sn	**Sn**	**22 52 05.5**	**-11**
RES	**Resolute Bay**	**11.60**	**56**	Pn	**Pn**	**22 50 06.5**	**-2.0**
	1.1nm,0.3s,baz=253,slow=11,SNR=60						
RES				Sn	**Sn**	**22 52 07.0**	**-10**
	3.6nm,0.3s,baz=178,slow=22,SNR=11						
RES	**Resolute Bay**	**11.60**	**56**	*e*Pn	**Pn**	**22 50 06.7**	**-1.8**
	6.0nm,0.7s						
RES				*e*S	**Sn**	**22 52 05.6**	**-12**
RES	**Resolute Bay**	**11.60**	**56**	⇓Pn	**Pn**	**22 50 06.4**	**-2.0**
RES				⇓Sn	**Sn**	**22 52 04.6**	**-13**
YKA	**Yellowknife Ar**	**11.63**	**131**	Pn	**Pn**	**22 50 08.7**	**-0.2**
	1.1nm,0.3s,baz=321,slow=13,SNR=26						
YKA				Sn	**Sn**	**22 52 08.3**	**-10**
	2.4nm,0.3s,baz=325,slow=23,SNR=13						
YKA	**Yellowknife Ar**	**11.63**	**131**	Pn	**Pn**	**22 50 08.7**	**-0.2**
YKA				Sn	**Sn**	**22 52 08.3**	**-10**
SKAG	**Skagway**	**12.06**	**184**	*e*Pn	**Pn**	**22 50 14.7**	**-0.1**
PLBC	**Pleasant Camp**	**12.09**	**186**	⇓Pn	**Pn**	**22 50 15.6**	**+0.4**
RC01	**Rabbit Creek A**	**12.17**	**219**	Pn	**Pn**	**22 50 18.5**	**+2.3**
DLBC	**Dease Lake**	**13.16**	**171**	Pn	**Pn**	**22 50 30.4**	**+0.7**
	0.6nm,0.3s,baz=6.2,slow=10,SNR=12						
DLBC	**Dease Lake**	**13.16**	**171**	*e*Pn	**Pn**	**22 50 30.3**	**+0.6**
DLBC	**Dease Lake**	**13.16**	**171**	⇓Pn	**Pn**	**22 50 30.8**	**+1.0**
FNBB	**Fort Nelson**	**13.36**	**155**	⇑Pn	**Pn**	**22 50 30.0**	**-2.5**
FNBB				⇑Sn	**Sn**	**22 52 50.2**	**-10**
SCHQ	**Schefferville**	**32.30**	**85**	P	**P**	**22 53 55.2**	**+3.8**
	2.3nm,1.0s,mb4.0,baz=307,slow=10,SNR=3.4						
NVAR	**Mina Array Bea**	**34.03**	**158**	P	**P**	**22 54 10.8**	**+4.0**
	0.6nm,0.7s,mb3.7,baz=338,slow=7.4,SNR=3.8						
JOF	**Joensuu**	**45.51**	**10**	*e*p	**P**	**22 55 40.8**	**-1.0**
	2.8nm,0.9s,mb4.2						
KAF	**Kangasniemi**	**46.00**	**13**	*e*p	**P**	**22 55 45.1**	**-0.5**
	4.8nm,1.0s,mb4.4						
FINES	**FINESS Array B**	**46.65**	**13**	P	**P**	**22 55 50.6**	**-0.1**
	0.9nm,0.4s,mb4.0,baz=2.2,slow=8.4,SNR=23						
ZALV	**Zalesovo Beam**	**51.96**	**332**	P	**P**	**22 56 31.9**	**+0.5**
	1.2nm,0.7s,mb3.9,baz=7.1,slow=6.0,SNR=6.8						
SONM	**Songino Array**	**53.65**	**313**	P	**P**	**22 56 44.9**	**+0.9**
	1.0nm,0.7s,mb3.8,baz=17,slow=7.4,SNR=6.9						
BVAR	**Borovoye Array**	**54.65**	**342**	P	**P**	**22 56 51.0**	**-0.1**
	0.6nm,0.5s,mb3.9,baz=28,slow=6.7,SNR=4.7						
AKASG	**Malin Array Be**	**57.55**	**13**	P	**P**	**22 57 12.0**	**+0.1**
	0.5nm,0.3s,mb4.0,baz=350,slow=6.8,SNR=7.7						
AKASG	**Malin Array Be**	**57.55**	**13**	P	**P**	**22 57 12.0**	**+0.1**
MKAR	**Makanchi Array**	**59.30**	**332**	P	**P**	**22 57 24.3**	**+0.1**
	0.4nm,0.5s,mb3.7,baz=40,slow=6.8,SNR=7.8						
ESDC	**Sonseca Array**	**63.62**	**41**	P	**P**	**22 57 55.0**	**+1.5**
	0.2nm,0.4s,mb3.5,baz=348,slow=7.2,SNR=3.1						

*ISCJB **05** 22:50:23.3±0.7, 11°14S±0°09×41°3E±0°1, h10km, mb3.8/7, MS3.1/3, Error ellipse: s-maj=14.9km s-min=12.9km az=145.2*
*IDC **05** 22:50:24.8±0.8, 11°03S×41°47E, h0km, mb3.9/8, mb1 4.1/9, mb1mx3.7/25, mbtmp4.0/9, ML5.0/1, MS3.3/4, Ms1 3.3/4, ms1mx2.9/24, Error ellipse: s-maj=28.6km s-min=18.3km az=129.0*
*NEIC **05** 22:50:25.2±0.7, 11°02S×41°28E, h10km, mb4.1/2, Error ellipse: s-maj=15.2km s-min=12.4km az=71.0*
ISC 05 22:50:25.5±0.6, 11°01S±0°08×41°31E±0°09, h10km, n16, σ1°36/21, mb3.8/7, MS3.1/3, Northwest of Madagascar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**9.42**	**144**	Pn	**Pn**	**22 52 40.0**	**-1.4**
	16nm,0.3s,baz=306,slow=11,SNR=166						
OPO				Sn	**Sn**	**22 54 18.8**	**-8.7**
	11nm,0.3s,baz=234,slow=18,SNR=8.6						
ABPO	**Ambohimpanom**	**9.80**	**145**	*e*Pn	**Pn**	**22 52 45.3**	**-1.2**
	56nm,0.6s						
ABPO				*e*Sn	**Sn**	**22 54 29.1**	**-7.7**
KMBO	**Kilima Mbogo**	**10.61**	**337**	*e*Pn	**Pn**	**22 52 55.9**	**-1.9**
	7.5nm,0.5s						
KMBO				*e*S	**Sn**	**22 54 50.7**	**-6.1**
LSZ	**Lusaka**	**13.47**	**250**	Pn	**Pn**	**22 53 34.7**	**-2.1**
	4.6nm,0.3s,baz=76,slow=12,SNR=82						
LSZ				Sn	**Sn**	**22 55 55.5**	**-11**
	2.3nm,0.3s,baz=162,slow=22,SNR=6.5						
LSZ				Lg		22 57 31.8	
	0.7nm,0.3s,baz=165,slow=11,SNR=2.3						
LSZ				LR	LR	22 59 17.0	
	comp=Z,92nm,19.3s,baz=78,slow=39						
LSZ	**Lusaka**	**13.47**	**250**	*e*Pn	**Pn**	**22 53 34.4**	**-2.4**
LSZ				*e*Sn	**Sn**	**22 55 47.0**	**-20**
LSZ				Lg		22 57 31.8	
LSZ				LR	LR	22 59 17.0	
LBTB	**Lobatse**	**20.40**	**225**	P	**P**	**22 55 03.5**	**+0.8**
	4.4nm,0.7s,baz=60,slow=12,SNR=7.4						
LBTB				Lg		23 01 12.2	
	6.5nm,0.8s,baz=181,slow=5.2,SNR=4.0						
LBTB				LR	LR	23 02 43.3	
	comp=Z,102nm,18.3s,MS3.2,baz=269,slow=36						
BOSA	**Boshof**	**23.08**	**218**	P	**P**	**22 55 32.5**	**+1.1**
	2.9nm,0.5s,mb3.9,baz=46,slow=12,SNR=9.9						
BOSA				LR	LR	23 03 43.0	
	comp=Z,70nm,19.0s,MS3.1,baz=123,slow=34						
BOSA	**Boshof**	**23.08**	**218**	*e*P	**P**	**22 55 32.7**	**+1.2**
	9.2nm,1.2s,mb4.1						
BOSA				LR	LR	23 03 43.0	
TSUM	**Tsumeb**	**24.29**	**248**	P	**P**	**22 55 47.0**	**+3.6**
	4.6nm,0.7s,mb4.0,baz=54,slow=9.9,SNR=20						
TSUM				LR	LR	23 05 37.9	
	comp=Z,58nm,18.9s,MS3.1,baz=296,slow=37						
TSUM	**Tsumeb**	**24.29**	**248**	*e*P	**P**	**22 55 47.3**	**+4.0**
	2.9nm,0.6s,mb3.9						
TSUM				LR	LR	23 05 37.9	
SUR	**Sutherland**	**28.45**	**218**	P	**P**	**22 56 23.2**	**+2.5**
BRTR	**Keskin Array B**	**50.97**	**352**	P	**P**	**22 59 28.4**	**+1.1**
	0.4nm,0.4s,mb3.7,baz=164,slow=6.3,SNR=6.1						
MKAR	**Makanchi Array**	**68.19**	**29**	P	**P**	**23 01 26.9**	**+0.8**
	0.4nm,0.7s,mb3.5,baz=213,slow=6.6,SNR=3.6						
ZALV	**Zalesovo Beam**	**74.46**	**25**	P	**P**	**23 02 03.5**	**-0.3**
	0.5nm,0.5s,mb3.7,baz=224,slow=4.1,SNR=4.2						
ASAR	**Alice Springs**	**87.99**	**114**	P	**P**	**23 03 17.4**	**+0.9**
	0.4nm,0.7s,mb3.8,baz=283,slow=4.7,SNR=3.6						
WRA	**Warramunga Arr**	**89.11**	**110**	P	**P**	**23 03 22.3**	**+0.5**
	1.0nm,0.8s,mb4.2,baz=260,slow=2.6,SNR=8.1						

WEL 05 23:02:41.1±0.4, 36°35S×177°47E, h211km±4km, ML3.9/8, Error ellipse: s-maj=7.1km s-min=6.3km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.38**	**151**	*e*PN	Pn	23 03 15.0	+0.3
MXZ				SN	S	23 03 40.6	-0.5
URZ	**Urewera**	**1.93**	**188**	PN	Pn	23 03 19.8	+0.3
URZ				SN	S	23 03 50.0	+0.2
MWZ	**Matawai**	**1.98**	**179**	PN	Pn	23 03 20.3	+0.2
MWZ				SN	S	23 03 50.7	-0.1
CNGZ	**Carnagh Statio**	**2.21**	**165**	PN	Pn	23 03 23.0	+0.5
KNZ	**Kokohu**	**2.67**	**177**	PN	Pn	23 03 27.3	-0.2
NMHZ	**Naumai**	**2.79**	**191**	*e*PN	Pn	23 03 29.5	+0.7
WNVZ	**Wahianoa**	**3.32**	**206**	PN	Pn	23 03 35.0	+0.1
PNHZ	**Pukenui**	**3.70**	**195**	PN	Pn	23 03 38.2	-1.2
DVHZ	**Dannevirke**	**4.07**	**194**	PN	Pn	23 03 42.2	-1.8
MRZ	**Mangatainoka R**	**4.55**	**198**	PN	Pn	23 03 47.5	-2.4
MRZ				*e*SN	S	23 04 40.5	-4.0
TIWZ	**Tintock**	**4.59**	**195**	*e*PN	Pn	23 03 48.5	-2.0
HOWZ	**Holdsworth Sta**	**4.79**	**198**	PN	Pn	23 03 50.4	-2.6
OGWZ	**Otaki Gorge**	**4.81**	**201**	PN	Pn	23 03 50.9	-2.3
CAW	**Cannon Point**	**5.11**	**201**	PN	Pn	23 03 54.0	-3.0
TUWZ	**Tuamarina**	**5.77**	**207**	*e*PN	Pn	23 04 02.1	-3.3
THZ	**Tophouse**	**6.47**	**212**	*e*PN	Pn	23 04 12.9	-1.5

*IDC **05** 23:03:35.7±3.1, 23°49S×179°97E, h517km±30km, mb3.4/6, mb1 3.6/7, mb1mx3.4/15, mbtmp3.4/7, Error ellipse: s-maj=36.8km s-min=25.2km az=156.0*
*ISCJB **05** 23:03:36.5±5.0, 23°5S±0°3×179°9E±0°2, h539km±63km, mb4.0/8, Error ellipse: s-maj=43.9km s-min=23.1km az=27.0*
*NEIC **05** 23:03:36.9±2.9, 23°54S×179°97E, h536km±33km, mb4.3/3, Error ellipse: s-maj=28.9km s-min=15.3km az=206.0*
ISC 05 23:03:35.7±4.4, 23°5S±0°3×180°0E±0°2, h517km±52km, n16, σ0°50/12, mb4.0/8, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.94**	**189**	P	**P**	**23 06 44.5**	**-0.2**
	1.2nm,0.3s,baz=49,slow=14,SNR=7.8						
EIDS	**Eidsvold**	**26.33**	**260**	*e*P	**P**	**23 08 30.4**	**+0.3**
CTA	**Charters Tower**	**31.43**	**270**	P	**P**	**23 09 15.6**	**+1.1**
	14nm,0.4s,mb4.9,baz=93,slow=11,SNR=32						
CTA	**Charters Tower**	**31.43**	**270**	P	**P**	**23 09 15.6**	**+1.1**
CTAO	**Charters Tower**	**31.43**	**270**	*e*P	**P**	**23 09 15.3**	**+0.8**
	9.7nm,0.4s,mb4.7						
STKA	**Stephens Creek**	**34.84**	**248**	P	**P**	**23 09 43.5**	**+0.3**
	2.5nm,0.7s,mb3.9,baz=108,slow=11,SNR=4.9						
ASAR	**Alice Springs**	**42.06**	**260**	P	**P**	**23 10 41.9**	**-0.1**
	2.2nm,0.4s,mb4.0,baz=90,slow=7.3,SNR=47						
ASAR				ScP	ScP	23 15 25.8	-0.4
	0.8nm,0.8s,baz=99,slow=4.2,SNR=6.1						
WRAB	**Tennant Creek**	**42.38**	**266**	*e*P	**P**	**23 10 43.7**	**-0.8**
	3.6nm,0.4s,mb4.2						
WRA	**Warramunga Arr**	**42.39**	**266**	P	**P**	**23 10 44.0**	**-0.7**
	4.5nm,0.3s,mb4.4,baz=93,slow=8.5,SNR=271						
QSPA	**South Pole Qui**	**66.61**	**180**	*e*P	**P**	**23 13 34.0**	**+0.2**
	7.6nm,1.2s,mb4.1						
MJAR	**Matsushiro Arr**	**71.52**	**326**	P	**P**	**23 14 04.0**	**-0.1**
	1.0nm,0.8s,mb3.3,baz=164,slow=6.2,SNR=4.4						
TXAR	**Lajitas Array**	**90.25**	**58**	P	**P**	**23 15 41.3**	**+0.1**
	0.2nm,0.6s,mb3.1,baz=224,slow=5.2,SNR=3.5						
AKASG	**Malin Array Be**	**144.59**	**328**	PKP	PKPdf	23 22 11.2	-1.7
	0.8nm,0.4s,baz=43,slow=4.3,SNR=6.0						
BRTR	**Keskin Array B**	**147.28**	**308**	PKPbc	PKPbc	23 22 20.9	-0.1
	0.5nm,0.6s,baz=71,slow=4.7,SNR=4.8						
MMAI	**Mount Meron Ar**	**147.48**	**295**	PKPbc	PKPbc	23 22 22.0	+0.2
	1.2nm,0.5s,baz=82,slow=6.2,SNR=6.8						
CLL	**Collm**	**150.44**	**343**	*e*PKPbc	PKPbc	23 22 27.0	-1.4

*CSEM **05** 23:26:13.6±0.3, 40°34N×13°12E, h20km, ML4.1/8, Error ellipse: s-maj=5.1km s-min=3.8km az=12.0*
*ROM **05** 23:26:18.5±0.3, 40°54N×13°29E, h4km±2km, Ml2.9/34, Error ellipse: s-maj=2.4km s-min=2.1km az=59.0*
*ISCJB **05** 23:26:19.8±1.0, 40°52N±0°04×13°28E±0°04, h17km±8km, Error ellipse: s-maj=7.4km s-min=5.1km az=11.2*
ISC 05 23:26:14.0±0.6, 40°37N±0°03×13°12E±0°03, h17km±6km, n80, σ0°99/102, 4D, Tyrrhenian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VENT	**Ventotene**	**0.48**	**28**	⇓*i*Pg	**Pg**	**23 26 25.6**	**+1.8**
VENT				Sg	**Sg**	**23 26 28.3**	**-2.0**
	10μm,0.2s						
VENT	**Ventotene**	**0.48**	**28**	⇓*i*Pg	**Pg**	**23 26 25.6**	**+1.8**
VENT				Sg	**Sg**	**23 26 28.3**	**-2.0**
	10μm,0.2s						
MODR	**Mondragone**	**0.97**	**36**	Pg	**Pg**	**23 26 34.1**	**+1.3**
MODR				Sg	**Sg**	**23 26 43.6**	**-1.9**
	568nm,0.5s						
MODR	**Mondragone**	**0.97**	**36**	Pg	**Pg**	**23 26 34.1**	**+1.3**
MODR				Sg	**Sg**	**23 26 43.6**	**-1.9**
	568nm,0.5s						
RFI	**Roccamonfina**	**1.14**	**35**	Pg	**Pg**	**23 26 37.2**	**+1.1**
RFI				Sg	**Sg**	**23 26 50.0**	**-1.0**
	44nm,0.4s						
RFI	**Roccamonfina**	**1.14**	**35**	Pg	**Pg**	**23 26 37.2**	**+1.1**
RFI				Sg	**Sg**	**23 26 50.0**	**-1.0**
	44nm,0.4s						
GIUL	**Giuliano Di Ro**	**1.19**	**5**	Pg	**Pg**	**23 26 38.3**	**+1.2**
GIUL				Sg	**Sg**	**23 26 52.7**	**0.0**
GIUL	**Giuliano Di Ro**	**1.19**	**5**	Pg	**Pg**	**23 26 38.3**	**+1.2**
GIUL				Sg	**Sg**	**23 26 52.7**	**0.0**
VAGA	**Valle Agricola**	**1.34**	**39**	Pg	**Pg**	**23 26 41.0**	**+1.1**
VAGA				Sg	**Sg**	**23 26 57.2**	**-0.3**
	514nm,0.6s						
VAGA	**Valle Agricola**	**1.34**	**39**	Pg	**Pg**	**23 26 41.0**	**+1.1**
VAGA				Sg	**Sg**	**23 26 57.2**	**-0.3**
	514nm,0.6s						
SGG	**Gregorio Mates**	**1.40**	**43**	Pg	**Pg**	**23 26 41.8**	**+0.9**
SGG				Sg	**Sg**	**23 26 58.6**	**-0.5**
	367nm,0.5s						
SGG	**Gregorio Mates**	**1.40**	**43**	Pg	**Pg**	**23 26 41.8**	**+0.9**
SGG				Sg	**Sg**	**23 26 58.6**	**-0.5**
	367nm,0.5s						
CERA	**Filignano**	**1.40**	**29**	Pg	**Pg**	**23 26 41.6**	**+0.5**
	724nm,1.2s						
CERA	**Filignano**	**1.40**	**29**	Pg	**Pg**	**23 26 41.6**	**+0.5**
	724nm,1.2s						
POFI	**Posta Fibreno**	**1.42**	**18**	Pg	**Pg**	**23 26 41.5**	**+0.1**
POFI				Sg	**Sg**	**23 26 58.2**	**-1.7**
	208nm,0.3s						
POFI	**Posta Fibreno**	**1.42**	**18**	Pg	**Pg**	**23 26 41.5**	**+0.1**
POFI				Sg	**Sg**	**23 26 58.2**	**-1.7**
	208nm,0.3s						
RDP	**Rocca di Papa**	**1.42**	**348**	Pg	**Pg**	**23 26 43.4**	**+2.0**
	547nm,0.6s						
RDP	**Rocca di Papa**	**1.42**	**348**	Pg	**Pg**	**23 26 43.4**	**+2.0**
	547nm,0.6s						
GUAR	**Guarcino**	**1.43**	**6**	⇓*i*Pg	**Pg**	**23 26 42.1**	**+0.5**
GUAR				Sg	**Sg**	**23 26 59.9**	**-0.4**
	396nm,0.4s						
GUAR	**Guarcino**	**1.43**	**6**	⇓*i*Pg	**Pg**	**23 26 42.1**	**+0.5**
GUAR				Sg	**Sg**	**23 26 59.9**	**-0.4**
	396nm,0.4s						
ROM9	**Roma**	**1.53**	**343**	Pg	**Pg**	**23 26 46.0**	**+2.5**
	464nm,0.0s						
ROM9	**Roma**	**1.53**	**343**	Pg	**Pg**	**23 26 46.0**	**+2.5**
	464nm,0.0s						
CSSN	**Cassano Irpino**	**1.53**	**71**	Pg	**Pg**	**23 26 43.8**	**+0.3**
	50nm,0.4s						
CSSN	**Cassano Irpino**	**1.53**	**71**	Pg	**Pg**	**23 26 43.8**	**+0.3**
	50nm,0.4s						
MIDA	**Miranda**	**1.53**	**34**	Pg	**Pg**	**23 26 43.8**	**+0.2**
	172nm,0.5s						
MIDA	**Miranda**	**1.53**	**34**	Pg	**Pg**	**23 26 43.8**	**+0.2**
	172nm,0.5s						
PSB1	**Pescosannita**	**1.54**	**56**	Pg	**Pg**	**23 26 44.3**	**+0.6**
	228nm,1.1s						
PSB1	**Pescosannita**	**1.54**	**56**	Pg	**Pg**	**23 26 44.3**	**+0.6**
	228nm,1.1s						
VVLD	**Villa Vallelon**	**1.55**	**14**	Pg	**Pg**	**23 26 43.4**	**-0.4**
	385nm,0.8s						
VVLD	**Villa Vallelon**	**1.55**	**14**	Pg	**Pg**	**23 26 43.4**	**-0.4**
	385nm,0.8s						
SACR	**S. Croce Del S**	**1.58**	**49**	Pg	**Pg**	**23 26 44.9**	**+0.4**
	197nm,0.8s						
SACR	**S. Croce Del S**	**1.58**	**49**	Pg	**Pg**	**23 26 44.9**	**+0.4**
	197nm,0.8s						
CERT	**Cerreto**	**1.58**	**356**	Pg	**Pg**	**23 26 44.7**	**+0.2**
	447nm,0.6s						
CERT	**Cerreto**	**1.58**	**356**	Pg	**Pg**	**23 26 44.7**	**+0.2**
	447nm,0.6s						
MRB1	**Monte Rocchett**	**1.60**	**61**	Pg	**Pg**	**23 26 45.2**	**+0.4**
	278nm,0.7s						
MRB1	**Monte Rocchett**	**1.60**	**61**	Pg	**Pg**	**23 26 45.2**	**+0.4**
	278nm,0.7s						
MCRV	**Calabrutti - M**	**1.61**	**74**	Pg	**Pg**	**23 26 45.3**	**+0.2**
	174nm,0.6s						
MCRV	**Calabrutti - M**	**1.61**	**74**	Pg	**Pg**	**23 26 45.3**	**+0.2**
	174nm,0.6s						
BSSO	**Busso**	**1.62**	**43**	Pg	**Pg**	**23 26 45.7**	**+0.5**
	142nm,0.6s						
BSSO	**Busso**	**1.62**	**43**	Pg	**Pg**	**23 26 45.7**	**+0.5**
	142nm,0.6s						
CDRU	**Civita di Ruta**	**1.67**	**85**	Pg	**Pg**	**23 26 46.2**	**0.0**
	64nm,0.7s						
CDRU	**Civita di Ruta**	**1.67**	**85**	Pg	**Pg**	**23 26 46.2**	**0.0**
	64nm,0.7s						
MTCE	**Montecelio**	**1.68**	**350**	Pg	**Pg**	**23 26 46.6**	**+0.3**
	75nm,0.7s						
MTCE	**Montecelio**	**1.68**	**350**	Pg	**Pg**	**23 26 46.6**	**+0.3**
	75nm,0.7s						
SNAL	**S. Angelo Dei**	**1.68**	**70**	Pg	**Pg**	**23 26 46.3**	**-0.1**
	216nm,0.9s						
SNAL	**S. Angelo Dei**	**1.68**	**70**	Pg	**Pg**	**23 26 46.3**	**-0.1**
	216nm,0.9s						
CAFE	**Carife**	**1.74**	**67**	Pg	**Pg**	**23 26 47.5**	**+0.1**
	41nm,0.7s						
CAFE	**Carife**	**1.74**	**67**	Pg	**Pg**	**23 26 47.5**	**+0.1**
	41nm,0.7s						
BULG	**Bulgheria - Ca**	**1.75**	**99**	Pg	**Pg**	**23 26 48.9**	**+1.2**
	74nm,0.3s						
BULG	**Bulgheria - Ca**	**1.75**	**99**	Pg	**Pg**	**23 26 48.9**	**+1.2**
	74nm,0.3s						
TRIV	**Trivento**	**1.77**	**37**	Pg	**Pg**	**23 26 48.1**	**+0.1**
	44nm,0.5s						
TRIV	**Trivento**	**1.77**	**37**	Pg	**Pg**	**23 26 48.1**	**+0.1**
	44nm,0.5s						
MRLC	**Muro Lucano**	**1.84**	**77**	Pg	**Pg**	**23 26 49.1**	**-0.4**
	44nm,0.5s						
MRLC	**Muro Lucano**	**1.84**	**77**	Pg	**Pg**	**23 26 49.1**	**-0.4**
	44nm,0.5s						
SGTA	**Sant Agata di**	**1.87**	**65**	Pg	**Pg**	**23 26 49.6**	**-0.3**
	81nm,0.8s						
SGTA	**Sant Agata di**	**1.87**	**65**	Pg	**Pg**	**23 26 49.6**	**-0.3**
	81nm,0.8s						
TOLF	**Tolfa**	**1.89**	**334**	Pg	**Pg**	**23 26 51.0**	**+0.6**
	155nm,0.6s						
TOLF	**Tolfa**	**1.89**	**334**	Pg	**Pg**	**23 26 51.0**	**+0.6**
	155nm,0.6s						
FIAM	**Fiamignano**	**1.90**	**360**	Pg	**Pg**	**23 26 49.9**	**-0.6**
	100nm,0.7s						
FIAM	**Fiamignano**	**1.90**	**360**	Pg	**Pg**	**23 26 49.9**	**-0.6**
	100nm,0.7s						
FAGN	**Fagnano**	**1.93**	**10**	Pg	**Pg**	**23 26 50.7**	**-0.4**
	203nm,0.5s						
FAGN	**Fagnano**	**1.93**	**10**	Pg	**Pg**	**23 26 50.7**	**-0.4**
	203nm,0.5s						
MTSN	**Montesano sull**	**2.01**	**92**	Pg	**Pg**	**23 26 52.3**	**-0.4**
MTSN	**Montesano sull**	**2.01**	**92**	Pg	**Pg**	**23 26 52.3**	**-0.4**
MNS	**Montasola**	**2.04**	**351**	Pg	**Pg**	**23 26 51.9**	**-1.3**
	58nm,0.7s						
MNS	**Montasola**	**2.04**	**351**	Pg	**Pg**	**23 26 51.9**	**-1.3**
	58nm,0.7s		

TAPN	Taplejung	52.91	313	eP	P	23 50 37.4	-0.2
	17nm,0.4s,mb5.1						
RAMN	Ramite	53.51	311	eP	P	23 50 41.9	-0.1
	55nm,0.6s,mb5.5						
JIRN	Jiri	54.20	312	eP	P	23 50 46.8	-0.2
	16nm,0.6s,mb5.0						
GUN	Gumba	54.57	312	eP	P	23 50 49.5	-0.1
	39nm,0.7s						
PKI	Pulchoki	54.73	311	eP	P	23 50 50.4	-0.4
	18nm,0.5s,mb5.0						
PKIN	Phulchoki	54.74	311	eP	P	23 50 50.5	-0.4
	13nm,0.6s,mb4.9						
PKIN	Phulchoki	54.74	311	eP	P	23 50 51.0	+0.1
KKN	Kakani	54.95	311	eP	P	23 50 51.9	-0.5
	20nm,0.6s,mb5.0						
DMN	Daman	54.98	311	eP	P	23 50 52.4	-0.2
	14nm,0.6s,mb4.9						
GKN	Gorkha	55.54	311	eP	P	23 50 56.2	-0.4
	28nm,0.5s						
KOLN	Koldanda	56.19	310	eP	P	23 51 01.2	-0.1
	28nm,0.6s						
SONM	Songino Array	58.58	342	P	P	23 51 18.1	+0.6
	1.3nm,0.6s,mb3.9,baz=153,slow=6.7,SNR=5.8						
MK31	Makanchi Array	68.10	327	eP	P	23 52 20.2	+0.1
MKAR	Makanchi Array	68.10	327	P	P	23 52 20.2	+0.1
	1.1nm,0.4s,mb4.0,baz=130,slow=7.7,SNR=30						
MKAR	Makanchi Array	68.10	327	P	P	23 52 20.2	+0.1
ZAA0	Zalesovo Array	71.58	334	eP	P	23 52 40.2	-1.0
ZALV	Zalesovo Beam	71.58	334	P	P	23 52 40.4	-0.8
	2.3nm,0.6s,mb4.1,baz=131,slow=5.9,SNR=14						
KURK	Kurchatov	72.42	329	eP	P	23 52 46.2	-0.1
	2.2nm,0.6s,mb4.1						
BVAR	Borovoye Array	77.96	328	P	P	23 53 17.9	+0.1
	1.0nm,0.7s,mb3.5,baz=64,slow=3.4,SNR=6.9						
TIXI	Tiksi	78.92	360	eP	P	23 53 22.1	-0.6
	0.9nm,0.3s,mb3.9						
ABKAR	Akbulak array	82.29	322	eP	P	23 53 41.2	+0.1
	0.6nm,0.4s,mb3.6						
ARCES	ARCESS Array B	101.67	340	P	Pdif	23 55 10.5	-1.2
	4.2nm,1.1s,baz=82,slow=8.7,SNR=4.9						
TORD	Torodi Ar. Bea	128.01	281	PKP	PKPdf	00 00 27.3	+2.1
	0.4nm,0.7s,baz=87,slow=1.4,SNR=5.7						
TORD	Torodi Ar. Bea	128.01	281	PKP	PKPdf	00 00 27.3	+2.1

*DDA **06** 00:03:44.7, 36.4′47N×26.°98E, h6km±2km, Md3.0*
*ATH **06** 00:03:44.6, 36.4′42N×27.°23E, h83km±5km*
*NEIC **06** 00:03:44.6, 36.4′42N×27.°23E, h83km, After ATH.*
*CSEM **06** 00:03:45.5±0.2, 36.4′46N×27.°09E, h5km, MD3.2, Error ellipse: s-maj=5.0km s-min=3.7km az=128.0*
*ISK **06** 00:03:45.0, 36.4′48N×27.°17E, h5km, MD3.2*
ISC 06 00:03:45.6±0.7,**36.4′46N**±0.′03×**27.°06E**±0.°05,**h3**km±6km,
n41,σ0°89/59,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	Datca	0.50	57	ePG	Pg	00 03 54.1	-1.0
DAT				eSG	Sg	00 04 01.3	-0.3
DAT	Datca	0.50	57	ePg	Pg	00 03 54.1	-1.0
DAT				eSg	Sg	00 04 01.3	-0.3
BODT	Bodrum	0.63	19	ePG	Pg	00 03 57.7	0.0
BODT				eSG	Sg	00 04 06.9	+1.0
BODT	Bodrum	0.63	19	ePg	Pg	00 03 57.7	0.0
BODT				eSg	Sg	00 04 06.9	+1.0
BDRM	Kayabasi	0.68	27	iP	Pg	00 03 58.2	-0.4
BDRM				iS	Sg	00 04 07.9	+0.5
BDRM	Kayabasi	0.68	27	iP	Pg	00 03 58.2	-0.4
BDRM				iS	Sg	00 04 07.9	+0.5
ARG	Arkhangelos	0.90	106	eP	Pg	00 04 01.4	-1.4
ARG				eS	Sg	00 04 15.1	+0.7
ARG	Arkhangelos	0.90	106	eP	Pg	00 04 01.4	-1.4
ARG				eS	Sg	00 04 15.1	+0.7
ARG	Arkhangelos	0.90	106	eP	Pg	00 04 01.4	-1.4
ARG				eS	Sg	00 04 15.1	+0.7
KARP	Karpathos	0.92	175	eP	Pg	00 04 03.2	0.0
KARP				eS	Sg	00 04 16.6	+1.6
KARP	Karpathos	0.92	175	eP	Pg	00 04 03.2	0.0
KARP				eS	Sg	00 04 16.6	+1.6
KARP	Karpathos	0.92	175	eP	Pg	00 04 03.2	0.0
KARP				eS	Sg	00 04 16.6	+1.6
MLSB	Milas	1.01	35	ePG	Pg	00 04 04.8	-0.2
MLSB				eSG	Sg	00 04 18.9	+0.7
MLSB	Milas	1.01	35	ePg	Pg	00 04 04.8	-0.2
MLSB				eSg	Sg	00 04 18.9	+0.8
YER	Yerkesik	1.19	55	ePN	Pn	00 04 07.6	-1.5
YER	Yerkesik	1.19	55	ePn	Pn	00 04 07.6	-1.5
SMG	Samos	1.26	352	eP	Pg	00 04 08.6	-1.1
SMG	Samos	1.26	352	eP	Pg	00 04 08.6	-1.1
SMG	Samos	1.26	352	eP	Pg	00 04 08.6	-1.1
AYDN	Tasoluk	1.36	29	iP	Pn	00 04 11.1	-0.4
AYDN				iS	Sb	00 04 31.3	+1.7
AYDN	Tasoluk	1.36	29	iP	Pn	00 04 11.1	-0.4
AYDN				iS	Sb	00 04 31.3	+1.7
APE	Apeiranthos	1.37	297	ePN	Pn	00 04 13.2	+1.7
APE	Apeiranthos	1.37	297	eP	Pn	00 04 11.3	-0.2
APE	Apeiranthos	1.37	297	eP	Pn	00 04 11.2	-0.3
APE	Apeiranthos	1.37	297	eP	Pn	00 04 11.3	-0.2
APE	Apeiranthos	1.37	297	ePn	Pn	00 04 13.3	+1.8
NPS	Neapolis	1.68	225	eP	Pn	00 04 14.4	-1.4
NPS	Neapolis	1.68	225	eP	Pn	00 04 14.4	-1.4
NPS	Neapolis	1.68	225	eP	Pn	00 04 14.4	-1.4
BLCB	Balcova	1.92	360	ePN	Pn	00 04 20.2	+1.1
BLCB	Balcova	1.92	360	ePn	Pn	00 04 20.2	+1.1
GLHS	Glhisar (BURDU	2.08	70	ePN	Pn	00 04 21.1	-0.2
GLHS	Glhisar (BURDU	2.08	70	ePn	Pn	00 04 21.1	-0.2
CHOS	Chios island	2.08	338	eP	Pn	00 04 20.4	-0.9
CHOS	Chios island	2.08	338	eP	Pn	00 04 20.4	-0.9
IDI	Anoyia	2.11	237	ePn	Pn	00 04 22.2	+0.4
IDI				eS	Sn	00 04 49.4	+0.8
IDI	Anoyia	2.11	237	ePn	Pn	00 04 22.2	+0.4
IDI				eS	Sn	00 04 49.4	+0.9
ELL	Elmali	2.31	82	ePN	Pn	00 04 24.5	0.0
ELL	Elmali	2.31	82	ePn	Pn	00 04 24.5	0.0
KARN	Karanos	2.76	248	eP	Pn	00 04 30.3	-0.4
KARN	Karanos	2.76	248	eP	Pn	00 04 30.3	-0.4

*CSEM **06** 00:20:39.5, 40.°03N×29.°15W, h5km, ML2.3, After PDA*
PDA 06 00:20:39.5±0.7,**40.°03N**×**29.°15W,h5**km,**MD3.8,ML2.3,**
Error ellipse: s-maj=13.7km s-min=5.1km az=75.0,
Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCED	Cedros	1.44	166	eP	Pn	00 21 01.2	-5.0
PCED	Cedros	1.44	166	eP	Pn	00 21 01.2	-5.0
ROSA	Rosais	1.48	151	eP	Pn	00 21 02.2	-4.6
ROSA	Rosais	1.48	151	eP	Pn	00 21 02.2	-4.6
CALA	Caldeira	1.48	166	eP	Pn	00 21 02.0	-4.8
CALA				eS	Sn	00 21 19.4	-7.2
CALA	Caldeira	1.48	166	eP	Pn	00 21 02.0	-4.8
CALA				eS	Sn	00 21 19.4	-7.2
HOR	Horta	1.55	165	eP	Pn	00 21 02.8	-4.9
HOR	Horta	1.55	165	eP	Pn	00 21 02.8	-4.9
PMAN	Manadas	1.62	149	eP	Pn	00 21 04.2	-4.4
PMAN				eS	Sn	00 21 21.9	-7.9
PMAN				A		00 21 28.5	
	18nm,0.4s						
PMAN	Manadas	1.62	149	eP	Pn	00 21 04.2	-4.4
PMAN				eS	Sn	00 21 21.9	-7.9
PCAN	Candelaria	1.64	162	eP	Pn	00 21 04.3	-4.7
PCAN				eS	Sn	00 21 22.8	-7.7
PCAN				A		00 21 23.0	
	14nm,0.2s						
PCAN	Candelaria	1.64	162	eP	Pn	00 21 04.3	-4.7
PCAN				eS	Sn	00 21 22.8	-7.7

IGQ 06 00:22:33.9, 1.°03N×79.°52W, h5km±2km, Mb4.0, Ms3.8,
9C-8D, Error ellipse: s-maj=2.4km s-min=1.4km az=85.4,
Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAG1	Magdalena	1.13	193	⇑P	Pg	00 22 56.3	+0.7
OTAV	Otavalo	1.33	126	⇓S	Sb	00 23 17.9	+1.1
OTAV	Otavalo	1.33	126	⇓P	Pn	00 22 59.6	+0.4
COTA	Cotacachi	1.37	120	P	Pn	00 23 00.7	+0.9
JAMA	Jama	1.46	208	⇑S	Sb	00 23 19.6	-0.8
JAMA	Jama	1.46	208	⇑P	Pn	00 23 00.5	-0.4
YANA	Yana	1.49	140	S	Sn	00 23 22.9	+1.7
YANA	Yana	1.49	140	P	Pn	00 23 02.7	+1.4
PINO	Pino	1.50	142	⇓P	Pn	00 23 02.9	+1.4
TERV	Terraza Guagua	1.51	143	S	Sn	00 23 24.2	+2.5
TERV	Terraza Guagua	1.51	143	P	Pn	00 23 03.1	+1.5
GGP	Refugio Guagua	1.52	142	⇓P	Pn	00 23 02.8	+1.1
JUA2	San Juan 2	1.54	143	⇑S	Sn	00 23 24.1	+1.7
JUA2	San Juan 2	1.54	143	⇑P	Pn	00 23 03.6	+1.5
CAYA	Cayambe	1.81	122	P	Pn	00 23 08.2	+2.5
PITA	Cotopaxi Volc	1.92	145	⇓P	Pn	00 23 10.5	+3.2
CAMI	Rancho Maria	1.98	149	P	Pn	00 23 11.1	+3.0
BNAS	Cotopaxi Volca	1.99	148	⇑S	Sn	00 23 37.7	+4.2
BNAS	Cotopaxi Volca	1.99	148	⇑P	Pn	00 23 11.3	+3.1
ANTI	Antisana	2.01	137	S	Sn	00 23 37.9	+3.9
ANTI	Antisana	2.01	137	P	Pn	00 23 11.4	+2.9
VC1	Cotopaxi 1	2.01	146	P	Pn	00 23 11.8	+3.3
BREF	Cotopaxi Volca	2.01	147	⇓P	Pn	00 23 11.6	+3.1
BVC2	Cotopaxi Volca	2.01	147	⇓P	Pn	00 23 11.8	+3.2
BTAM	Cotopaxi Volca	2.04	146	⇑S	Sn	00 23 40.2	+5.5
BTAM	Cotopaxi Volca	2.04	146	⇑P	Pn	00 23 12.2	+3.3
BMOR	Cotopaxi Volca	2.05	149	⇓P	Pn	00 23 11.9	+2.8
COV1	Cotopaxi Volc	2.06	145	P	Pn	00 23 11.8	+2.6
COV1	Cotopaxi Volc	2.06	145	S	Sn	00 23 38.6	+3.4
TAMB	Tambo	2.07	146	P	Pn	00 23 12.6	+3.3
CHAR	Charly	2.16	121	P	Pn	00 23 15.5	+4.9
CONE	Cono NE Rev Vo	2.18	120	P	Pn	00 23 15.7	+4.9
LAV3	Lava3-Reventad	2.20	121	P	Pn	00 23 15.2	+4.1
PISA	Pisayambo	2.37	151	P	Pn	00 23 17.3	+3.8
ARRY	Arrayan	2.74	157	P	Pn	00 23 18.4	-0.2

*IDC **06** 00:39:39.6±0.9, 52.°04N×169.°54W, h0km, mb4.0/19, mb1 4.1/20, mb1mx4.1/28, mbtmp4.0/20, ML4.8/1, Error ellipse: s-maj=26.0km s-min=15.5km az=173.0*
*ISCJB **06** 00:39:44.3±1.3, 52.°1N±0.°1×169.°57W±0.°10, h46km±9km, mb4.0/22, Error ellipse: s-maj=18.6km s-min=7.9km az=159.9*
*NEIC **06** 00:39:45.2±1.2, 52.°03N×169.°56W, h37km±9km, mb4.0/2, ML3.5(AEIC), Error ellipse: s-maj=18.1km s-min=7.4km az=168.0*
ISC 06 00:39:45.2±1.2,**52.°07N**±0.′10×**169.°60W**±0.°09,**h36**km±9km,
n36,σ1°06/39,mb4.0/22,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	Nikolski	1.02	26	ePg	Pn	00 40 01.5	-1.5
NIKO				eS	Sn	00 40 16.9	+0.9
UNV	Unalaska Valle	2.59	45	ePn	Pn	00 40 24.4	-0.1
UNV				eSn	Sn	00 40 54.5	-0.3
ATKA	Atka Island	2.83	275	P	Pn	00 40 28.4	+0.6
AKGG	Akutan Green G	3.05	44	P	Pn	00 40 30.9	+0.1
AKGG				S	Sn	00 41 05.0	-1.1
AKUT	Akutan	3.10	47	ePn	Pn	00 40 33.4	+1.8
SDPT	Sand Point	6.34	55	ePn	Pn	00 41 16.0	0.0
KDAK	Kodiak Island	11.33	53	Pn	Pn	00 42 22.9	-1.4
	0.7nm,0.3s,baz=207,slow=4.5,SNR=1.3						
RSO	Redoubt South	12.55	41	ePn	Pn	00 42 41.5	+0.5
BPAW	Bear Paw Mtn.	15.48	32	ePn	Pn	00 43 22.5	+2.0
	4.8nm,0.6s						
PEA0B	Petropavlovsk-	19.80	286	eP	Pn	00 44 12.9	-1.0
PETK	Petropavlovsk-	19.80	286	P	Pn	00 44 12.8	-1.2
	2.7nm,0.3s,baz=84,slow=14,SNR=27						
SKAG	Skagway	20.46	55	eP	P	00 44 20.9	+1.6
	5.5nm,0.6s						
INK	Inuvik	23.68	33	P	P	00 44 51.2	-1.8
	1.9nm,0.5s,mb3.8,baz=247,slow=10,SNR=5.9						
BBB	Bella Bella	25.23	73	P	P	00 45 07.0	-0.3
	8.6nm,0.8s,mb4.3,baz=252,slow=3.2,SNR=3.0						
YKA	Yellowknife Ar	30.55	48	P	P	00 45 55.3	+0.5
	0.8nm,0.5s,mb3.8,baz=274,slow=8.1,SNR=6.9						
PDAR	Pinedale Array	40.60	79	P	P	00 47 22.3	+1.2
	0.3nm,0.6s,mb3.1,baz=316,slow=8.4,SNR=3.5						
KSRS	Korea Array	45.30	277	P	P	00 48 00.3	+1.2
	1.3nm,0.9s,mb3.8,baz=51,slow=8.6,SNR=4.7						
SONM	Songino Array	51.33	301	P	P	00 48 47.1	+1.6
	0.2nm,0.3s,mb3.5,baz=60,slow=12,SNR=3.6						
TXAR	Lajitas Array	52.90	89	P	P	00 48 55.4	-2.0
	0.5nm,0.7s,mb3.5,baz=317,slow=9.1,SNR=7.2						
TXAR	Lajitas Array	52.90	89	P	P	00 48 55.4	-2.0
SCHQ	Schefferville	55.76	43	P	P	00 49 14.4	-3.4
	1.0nm,0.6s,mb4.0,baz=45,slow=5.7,SNR=2.3						
ZALV	Zalesovo Beam	57.55	318	P	P	00 49 29.9	-0.7
	0.6nm,0.4s,mb3.9,baz=55,slow=6.8,SNR=4.1						
ARCES	ARCESS Array B	58.21	354	P	P	00 49 34.8	-0.2
	0.7nm,0.5s,mb4.0,baz=22,slow=8.0,SNR=2.4						
BVAR	Borovoye Array	63.87	324	P	P	00 50 14.0	+0.4
	2.8nm,0.5s,mb4.6,baz=61,slow=6.8,SNR=16						
MKAR	Makanchi Array	63.91	313	P	P	00 50 13.2	-0.7
	0.3nm,0.3s,mb3.8,baz=47,slow=6.7,SNR=14						
JOF	Joensuu	64.18	350	ep	P	00 50 14.7	-0.8
	1.3nm,0.5s,mb4.2						
KAF	Kangasniemi	65.47	352	ep	P	00 50 23.0	-0.9
	5.0nm,0.6s,mb4.7						
FINES	FINESS Array B	66.15	352	P	P	00 50 28.1	-0.1
	2.2nm,0.5s,mb4.4,baz=7.0,slow=7.4,SNR=19						
NOA	NORSAR Array B	67.25	360	P	P	00 50 35.4	+0.2
	1.4nm,0.7s,mb4.1,baz=2.5,slow=6.4,SNR=4.0						
NOA	NORSAR Array B	67.25	360	P	P	00 50 35.4	+0.2
AKASG	Malin Array Be	76.38	348	P	P	00 51 30.0	-0.1
	0.8nm,0.5s,mb3.9,baz=18,slow=5.9,SNR=3.3						
CMAR	Chiang Mai Arr	76.54	283	P	P	00 51 31.4	-0.3
	1.2nm,0.3s,mb4.3,baz=35,slow=9.9,SNR=2.9						
BRTR	Keskin Array B	86.37	342	P	P	00 52 25.5	+2.2
	0.4nm,0.6s,mb3.8,baz=347,slow=5.9,SNR=2.2						
WRA	Warramunga Arr	86.70	231	P	P	00 52 24.5	-0.5
	0.4nm,0.7s,mb3.8,baz=34,slow=5.5,SNR=3.5						
ESDC	Sonseca Array	87.78	11	P	P	00 52 30.8	+0.6
	0.3nm,0.4s,mb3.8,baz=339,slow=4.3,SNR=3.6						
ASAR	Alice Springs	90.09	230	P	P	00 52 41.5	+0.5
	0.8nm,0.7s,mb4.2,baz=32,slow=5.6,SNR=9.8						

*NEIC **06** 00:45:54.9, 38.°89N×21.°17E, h24km, MD2.8(ATH), After ATH.*
*ATH **06** 00:45:54.9, 38.°89N×21.°17E, h24km±1km, MD2.8/7*
*CSEM **06** 00:45:55.8±0.2, 38.°84N×21.°24E, h20km, ML2.1/3, Error ellipse: s-maj=6.3km s-min=3.9km az=147.0*
*ISCJB **06** 00:45:56.0±0.5, 38.°86N±0.°03×21.°22E±0.°04, h25km±5km, Error ellipse: s-maj=6.7km s-min=4.1km az=142.0*
*THE **06** 00:45:56.2, 38.°82N×21.°24E, h26km, ML2.1/3, Error ellipse: s-maj=0.9km s-min=0.5km az=187.0*
ISC 06 00:45:56.0±0.5,**38.°85N**±0.°04×**21.°23E**±0.°04,**h24**km±6km,
n26,σ0°82/51,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKD2	Lefkada island	0.45	262	P	Pb	00 46 05.4	+0.1
LKD2				S	Sb	00 46 13.0	+1.4
LKD2	Lefkada island	0.45	262	P	Pb	00 46 05.4	+0.1
LKD2				S	Sb	00 46 13.0	+1.4
EVR	Evrytania	0.46	82	ePb	Pb	00 46 05.1	-0.4
EVR				eSb	Sb	00 46 12.6	+0.7
EVR	Evrytania	0.46	82	ePB	Pb	00 46 05.1	-0.4
EVR				eSB	Sb	00 46 12.6	+0.7
EVR	Evrytania	0.46	82	ePb	Pb	00 46 05.1	-0.4
EVR				eSb	Sb	00 46 12.6	+0.7
EFP	Efpalio	0.68	128	ePN	Pn	00 46 09.0	-1.2
EFP				eSN	Sn	00 46 20.0	0.0
EFP	Efpalio	0.68	128	P	Pb	00 46 08.3	-0.9
EFP				S	Sb	00 46 18.6	+0.4
EFP	Efpalio	0.68	128	P	Pb	00 46 08.3	-0.9
EFP	Efpalio	0.68	128	ePn	Pn	00 46 09.0	-1.2
EFP				S	Sb	00 46 18.6	+0.4
RLS	Riolos of Patr	0.81	167	ePb	Pb	00 46 11.1	-0.4
RLS				eSn	Sn	00 46 24.1	+0.8
RLS	Riolos of Patr	0.81	167	ePB	Pb	00 46 11.1	-0.4
RLS				eSN	Sn	00 46 24.1	+0.8
RLS	Riolos of Patr	0.81	167	ePb	Pb	00 46 11.1	-0.4
RLS				eSn	Sn	00 46 24.1	+0.8
KFL	Anninata	0.82	205	P	Pb	00 46 10.8	-0.7
KFL	Anninata	0.82	205	P	Pb	00 46 10.8	-0.7
VLS	Valsamata	0.84	217	ePn	Pn	00 46 11.1	-1.2
VLS				eSn	Sn	00 46 24.2	+0.3
VLS	Valsamata	0.84	217	ePN	Pn	00 46 11.1	-1.2
VLS				eSN	Sn	00 46 24.2	+0.3
VLS	Valsamata	0.84	217	P	Pb	00 46 11.0	-0.9
VLS				S	Sb	00 46 23.1	+0.4
VLS	Valsamata	0.84	217	P	Pb	00 46 11.0	-0.9
VLS				S	Sb	00 46 23.1	+0.4
VLS				eSn	Sn	00 46 24.2	+0.3
AGG	Agios Georgios	0.88	78	ePn	Pn	00 46 12.1	-0.8
AGG				eSn	Sn	00 46 25.0	+0.1
AGG	Agios Georgios	0.88	78	ePN	Pn	00 46 12.1	-0.8
AGG				eSN	Sn	00 46 25.0	+0.1
AGG	Agios Georgios	0.88	78	ePn	Pn	00 46 12.1	-0.8
AGG				eSn	Sn	00 46 25.0	+0.1
THL	Klokotos Trika	0.94	40	ePN	Pn	00 46 13.1	-0.6
THL				eSN	Sn	00 46 26.8	+0.4
THL	Klokotos Trika	0.94	40	P	Pb	00 46 13.2	-0.4
THL				S	Sb	00 46 26.3	+0.7
THL	Klokotos Trika	0.94	40	P	Pb	00 46 13.2	-0.4
THL				S	Sb	00 46 26.3	+0.7
THL				eSn	Sn	00 46 26.8	+0.4
GUR	Goura	1.27	136	ePN	Pn	00 46 20.0	+1.8
GUR				eSN	Sn	00 46 38.1	+3.6
GUR	Goura	1.27	136	ePn	Pn	00 46 20.0	+1.8
GUR				eSn	Sn	00 46 38.1	+3.6

*ISCJB **06** 00:50:55.3±0.4, 38.°49N±0.°03×23.°47E±0.°04, h26km±4km, Error ellipse: s-maj=4.9km s-min=4.2km az=152.0*
*ATH **06** 00:50:55.6, 38.°47N×23.°44E, h23km±1km, MD3.1/16, ML2.2*
*CSEM **06** 00:50:55.4±0.2, 38.°49N×23.°42E, h30km±2km, ML2.9/7, Error ellipse: s-maj=5.2km s-min=3.3km az=54.0*
*THE **06** 00:50:55.4, 38.°49N×23.°42E, h16km±1km, ML2.9/7, Error ellipse: s-maj=1.0km s-min=0.6km az=270.0*
ISC 06 00:50:55.4±0.4,**38.°50N**±0.′03×**23.°46E**±0.°04,**h25**km±4km,
n49,σ1°03/76,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKR	Lokris	0.39	293	ePB	Pb	00 51 03.2	-0.6
LKR				eSB	Sb	00 51 09.4	-0.1
LKR	Lokris	0.39	293	P	Pb	00 51 03.1	-0.7
LKR				S	Sb	00 51 08.7	-0.8
LKR	Lokris	0.39	293	ePb	Pb	00 51 03.2	-0.6
LKR				S	Sb	00 51 08.7	-0.8
LKR				eSb	Sb	00 51 09.4	-0.1
ATAL	Atalanti	0.39	300	P	Pb	00 51 03.3	-0.6
ATAL				S	Sb	00 51 08.8	-0.8
ATAL	Atalanti	0.39	300	P	Pb	00 51 03.3	-0.6
ATAL				S	Sb	00 51 08.8	-0.8
PTL	Penteli	0.55	144	ePN	Pn	00 51 06.4	-1.2
PTL				eSN	Sb	00 51 13.9	0.0
PTL	Penteli	0.55	144	ePn	Pn	00 51 06.4	-1.2
PTL				eSn	Sb	00 51 13.9	0.0
ATH	Athens Observa	0.56	159	ePN	Pn	00 51 06.8	-1.0
ATH				eSN	Sb	00 51 15.0	+0.7
ATH	Athens Observa	0.56	159	ePn	Pn	00 51 06.8	-1.0
ATH				eSn	Sb	00 51 15.0	+0.7
ATHU	Athens Univers	0.59	154	P	Pb	00 51 07.3	+0.2
ATHU				S	Sb	00 51 15.4	+0.4
ATHU	Athens Univers	0.59	154	P	Pb	00 51 07.3	+0.2
ATHU				S	Sb	00 51 15.4	+0.4
LTK	Loutraki	0.61	219	ePN	Pn	00 51 06.9	-1.6
LTK				eSN	Sn	00 51 16.0	-1.5
LTK	Loutraki	0.61	219	P	Pb	00 51 06.8	-0.6
LTK				S	Sb	00 51 15.6	0.0
LTK	Loutraki	0.61	219	ePn	Pn	00 51 06.9	-1.6
LTK				S	Sb	00 51 15.6	0.0
LTK				eSn	Sn	00 51 16.0	-1.5
VLY	Voula,Athens	0.70	157	ePN	Pn	00 51 09.0	-0.6
VLY				eSN	Sn	00 51 18.0	-1.6
VLY	Voula,Athens	0.70	157	ePn	Pn	00 51 09.0	-0.6
VLY				eSn	Sn	00 51 18.0	-1.6
DSF	Desfina	0.73	264	P	Pb	00 51 08.8	-0.8
DSF				S	Sb	00 51 19.5	+0.3
DSF	Desfina	0.73	264	P	Pb	00 51 08.8	-0.8
DSF				S	Sb	00 51 19.5	+0.3
NAIG	Nisos Aigina	0.74	178	ePN	Pn	00 51 09.5	-0.7
NAIG	Nisos Aigina	0.74	178	ePn	Pn	00 51 09.5	-0.7
AOS	Alonnisos	0.75	26	P	Pb	00 51 10.5	+0.7
AOS				S	Sb	00 51 20.8	+1.2
AOS	Alonnisos	0.75	26	P	Pb	00 51 10.5	+0.7
AOS				S	Sb	00 51 20.8	+1.2
NEO	Neokhori	0.83	347	ePN	Pn	00 51 12.3	+0.8
NEO	Neokhori	0.83	347	ePn	Pn	00 51 12.3	+0.8
DID	Didima	1.00	190	ePN	Pn	00 51 14.0	+0.1
DID				eSN	Sn	00 51 29.2	+2.0
DID	Didima	1.00	190	P	Pn	00 51 14.0	+0.1
DID				S	Sb	00 51 27.7	+0.8
DID	Didima	1.00	190	P	Pn	00 51 14.0	+0.1
DID				S	Sb	00 51 27.7	+0.8
DID				eSn	Sn	00 51 29.2	+2.0
AGG	Agios Georgios	1.03	301	ePB	Pb	00 51 14.5	0.0
AGG	Agios Georgios	1.03	301	ePb	Pb	00 51 14.5	0.0
KALE	Kalithea	1.04	265	P	Pn	00 51 14.3	-0.1
KALE	Kalithea	1.04	265	P	Pn	00 51 14.3	-0.1
GUR	Goura	1.04	238	ePN	Pn	00 51 15.7	+1.3
GUR	Go

ITM	**Ithomi**	**0.78 149**	*e*Pn	**Pn**	**00 51 36.6**	**-1.3**
ITM	**Ithomi**	**0.78 149**	*e*PN	**Pn**	**00 51 36.6**	**-1.3**
ITM	**Ithomi**	**0.78 149**	*e*Pn	**Pn**	**00 51 36.6**	**-1.3**
VLX	**Vlachokerasia**	**0.90 122**	*e*PN	**Pn**	**00 51 39.7**	**+0.2**
VLX			*e*SN	**Sn**	**00 51 53.4**	**+1.0**
VLX	**Vlachokerasia**	**0.90 122**	P	**Pg**	**00 51 38.0**	**-0.2**
VLX			S	**Sg**	**00 51 50.8**	**+0.9**
VLX	**Vlachokerasia**	**0.90 122**	P	**Pg**	**00 51 38.0**	**-0.2**
VLX	**Vlachokerasia**	**0.90 122**	*e*Pn	**Pn**	**00 51 39.7**	**+0.2**
VLX			S	**Sg**	**00 51 50.8**	**+0.9**
PYL	**PYLOS**	**0.99 165**	*e*PN	**Pn**	**00 51 39.2**	**-1.6**
PYL	**PYLOS**	**0.99 165**	P	**Pg**	**00 51 39.4**	**-0.6**
PYL	**PYLOS**	**0.99 165**	*e*Pn	**Pn**	**00 51 39.2**	**-1.6**
PYL	**PYLOS**	**0.99 165**	P	**Pg**	**00 51 39.4**	**-0.6**
EVR	**Evrytania**	**1.10 16**	*e*Pb	**Pb**	**00 51 40.8**	**-1.3**
EVR			*e*Sn	**Sn**	**00 51 57.9**	**+0.3**
EVR	**Evrytania**	**1.10 16**	*e*PB	**Pb**	**00 51 40.8**	**-1.3**
EVR			*e*SN	**Sn**	**00 51 57.9**	**+0.3**
EVR	**Evrytania**	**1.10 16**	*e*Pb	**Pb**	**00 51 40.8**	**-1.3**
EVR			*e*Sn	**Sn**	**00 51 57.9**	**+0.3**
LKD2	**Lefkada island**	**1.11 327**	P	**Pb**	**00 51 40.8**	**-1.5**
LKD2			S	**Sb**	**00 51 57.0**	**+0.2**
LKD2	**Lefkada island**	**1.11 327**	P	**Pb**	**00 51 40.8**	**-1.5**
LKD2			S	**Sb**	**00 51 57.0**	**+0.2**
LTK	**Loutraki**	**1.23 82**	*e*PN	**Pn**	**00 51 44.9**	**+0.8**
LTK	**Loutraki**	**1.23 82**	*e*Pn	**Pn**	**00 51 44.9**	**+0.8**
AGG	**Agios Georgios**	**1.36 31**	*e*Pn	**Pn**	**00 51 47.9**	**+1.9**
AGG	**Agios Georgios**	**1.36 31**	*e*PN	**Pn**	**00 51 47.9**	**+1.9**
DID	**Didima**	**1.48 103**	*e*PN	**Pn**	**00 51 50.0**	**+2.5**
DID			*e*SN	**Sn**	**00 52 11.4**	**+4.7**
VLI	**Veliai**	**1.65 133**	*e*Pn	**Pn**	**00 51 53.0**	**+3.1**
VLI	**Veliai**	**1.65 133**	*e*PN	**Pn**	**00 51 53.0**	**+3.1**
THL	**Klokotos Trika**	**1.77 15**	*e*PN	**Pn**	**00 51 52.3**	**+0.8**
THL	**Klokotos Trika**	**1.77 15**	*e*Pn	**Pn**	**00 51 52.3**	**+0.8**

NIED ***06*** *01:00:00, 45.°30N×151.°50E, h17km, Mw5.7 Best double couple: M0 3.95000×10^17 NP1:φs 28.00000°, δ 49.00000°, λ 72.00000°. NP2:φs 234.00000°, δ 45.00000°, λ 110.00000°.*

BGS ***06*** *01:00:04.3±1.4, 45.°13N×152.°78E, h10km, mb5.7, MS5.4*

ISCJB ***06*** *01:00:06.8±0.1, 45.°23N±0.°02×151.°22E±0.°01, h22km, mb5.5/438, MS5.5/295, Error ellipse: s-maj=2.8km s-min=1.3km az=163.7*

JMA ***06*** *01:00:06.1±0.7, 45.°34N×151.°53E, h30km, M5.7*

SKHL ***06*** *01:00:07.5±1.8, 45.°15N×151.°50E, h46km±15km, mb6.1/5, mbh5.9/3, Ms5.6/4, msh6.3/3*

BJI ***06*** *01:00:07.0, 45.°33N×150.°95E, h18km, mB5.6/39, mb5.6/66, Ms5.6/75, Ms7 5.5/61*

NEIC ***06*** *01:00:08.8±0.1, 45.°35N×151.°04E, h22km, mb5.5/258, MS5.5/202, MW5.7, MW5.6, Error ellipse: s-maj=3.5km s-min=2.2km az=164.0, Moment Tensor Solution. s88 Moment tensor: Scale 10^17Nm; Mrr 1.91; Mθθ -0.26; Mφφ -1.64; Mrθ 1.50; Mθφ -0.05; Mφr 1.94; Best double couple: M0 3.00000×10^17 NP1:φs 29.00000°, δ 73.00000°, λ 102.00000°. NP2:φs 172.00000°, δ 21.00000°, λ 55.00000°. Principal axes: T 3.2900, Plg60.0000°, Azm316.0000°; N -0.5900, Plg11.0000°, Azm205.0000°; P -2.7000, Plg26.0000°, Azm109.0000°;*

DJA ***06*** *01:00:08, 45.°33N×151.°41E, h23km, Mw5.9/28*

MOS ***06*** *01:00:09.3±1.0, 45.°36N×151.°10E, h36km, mb5.8/116, MS5.5/99, Error ellipse: s-maj=6.0km s-min=3.7km az=100.9*

MOS Felt (III-IV) at Petropavlovsk-Kamchatskiy.

IDC ***06*** *01:00:11.6±0.4, 45.°41N×151.°04E, h43km±3km, mb4.9/22, mb1 5.0/26, mb1mx5.0/27, mbtmp4.9/26, ML4.4/4, MS5.4/36, Ms1 5.4/36, ms1mx5.3/47, Error ellipse: s-maj=12.8km s-min=10.0km az=130.0*

GCMT ***06*** *01:00:13.9±0.1, 45.°29N×151.°39E, h22km, MW5.7, Moment Tensor Solution. s95,c188; s8,c8; Moment tensor: Scale 10^17Nm; Mrr 3.70±.06; Mθθ -1.71±.04; Mφφ -2.00±.04; Mrθ 1.23±.08; Mθφ -2.37±.03; Mφr 2.32±.08; Best double couple: M0 4.80000×10^17 NP1:φs 234.00000°, δ 30.00000°, λ 107.00000°. NP2:φs 34.00000°, δ 62.00000°, λ 80.00000°. Principal axes: T 4.5500, Plg71.0000°, Azm282.0000°; N 0.4200, Plg8.0000°, Azm39.0000°; P -4.9800, Plg16.0000°, Azm131.0000°; Data Used: II IU IC G CN. Surface waves: sta=108, comp=227, per= 50.*

SZGRF ***06*** *01:00:19.9, 46.°54N×150.°28E, h33km, mb6.0, MS5.9, Kuril Islands, Russia*

ISC 06 01:00:09.1±0.1, 45.°33N±0.°02×151.°16E±0.°02, h23km, h23km±1.5km; pP-P, n1830, σ0 8/7 1747, mb5.5/438, MS5.5/294, 541C-180D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.32**	**269**	⇑*i*	P*N	**Pn**	**01 00 46.0**	**+0.2**
KUR					pmax	pmax		
	comp=N,2μm,0.6s							
KUR					pmax	pmax		
	comp=E,760nm,0.6s							
KUR					pmax	pmax		
	comp=Z,4μm,0.6s							
KUR	**Kuril'sk**	**2.32**	**269**	⇑*i*	P	**Pn**	**01 00 46.0**	**+0.2**
KUR					AMB	AMB	01 00 52.3	
	comp=Z,2μm,0.6s							
KUR					AMB	AMB	01 00 52.3	
	comp=Z,760nm,0.6s							
KUR					AMB	AMB	01 00 52.3	
	comp=Z,4μm,0.6s							
KUR					AMB	AMB	01 00 58.0	
	comp=Z,20μm,2.0s							
KUR					AMB	AMB	01 00 58.0	
	comp=Z,12μm,2.0s							
KUR					AMB	AMB	01 00 58.0	
	comp=Z,20μm,2.0s							
KUR				*i*	S	**Sn**	**01 01 05.0**	**-8.6**
KUR					A		01 01 20.3	
	comp=Z,120μm,2.0s							
KUR					A		01 01 20.3	
	comp=Z,78μm,2.0s							
KUR					A		01 01 20.3	
	comp=Z,16μm,0.6s							
KUR					A		01 01 20.3	
	comp=Z,10μm,0.6s							
KUR					A		01 01 23.6	
	comp=Z,206μm,2.0s							
KUR					A		01 01 23.6	
	comp=Z,25μm,2.0s							
YUK	**Yuzh-Kuril'sk**	**3.99**	**253**	⇑*i*	P*N	**Pn**	**01 01 09.4**	**+0.7**
YUK					pmax	pmax		
	comp=Z,8μm,1.7s							
YUK					pmax	pmax		
	comp=E,2μm,0.5s							
YUK					pmax	pmax		
	comp=Z,4μm,0.5s							
YUK					pmax	pmax		
	comp=N,2μm,0.2s							
YUK	**Yuzh-Kuril'sk**	**3.99**	**253**	⇑*i*	P	**Pn**	**01 01 09.4**	**+0.7**
YUK					AMB	AMB	01 01 17.0	
	comp=N,5μm,2.3s							
YUK					AMB	AMB	01 01 17.0	
	comp=N,11μm,2.3s							
YUK					AMB	AMB	01 01 17.0	
	comp=N,10μm,1.4s							
YUK					AMB	AMB	01 01 22.0	
	comp=N,8μm,0.5s							
YUK					AMB	AMB	01 01 22.0	
	comp=N,2μm,0.4s							
YUK					AMB	AMB	01 01 22.0	
	comp=N,3μm,0.4s							
YUK				*i*	S	**Sn**	**01 01 57.2**	**+2.5**
YUK					A		01 02 15.0	
	comp=N,24μm,0.6s							
YUK					A		01 02 15.0	
	comp=N,9μm,0.6s							
YUK					A		01 02 20.0	
	comp=N,70μm,1.0s							
YUK					A		01 02 20.0	
	comp=N,110μm,1.8s							
YUK					AMS	AMS	01 08 34.3	
	comp=N,3μm,11.0s							
YUK					AMS	AMS	01 08 34.3	
	comp=N,16μm,11.0s							
YUK					AMS	AMS	01 08 34.3	
	comp=N,12μm,11.0s							
NEM2	**Nemuro 2**	**4.35**	**245**	⇑	P	**Pn**	**01 01 12.7**	**-1.0**
NEM2				*e*	S	**Sn**	**01 02 02.4**	**-1.2**
JRA	**Rausu**	**4.52**	**254**	⇑	P	**Pn**	**01 01 17.6**	**+1.5**
JNK	**Nakash**	**4.92**	**252**	⇑	P	**Pn**	**01 01 22.4**	**+0.8**
JAK	**Akkeshi**	**5.20**	**246**	⇑	P	**Pn**	**01 01 24.5**	**-0.8**
JAK				*e*	S	**Sn**	**01 02 22.8**	**-1.7**
JTKR	**Abashiri--Toko**	**5.34**	**258**	⇑	P	**Pn**	**01 01 29.2**	**+1.8**
JAR	**Ashorobuto**	**5.67**	**252**	⇑	P	**Pn**	**01 01 33.1**	**+1.2**
JMP	**Maruseppu**	**5.71**	**259**	⇑	P	**Pn**	**01 01 34.7**	**+2.3**
JOB	**Onbets**	**5.80**	**248**	⇑	P	**Pn**	**01 01 33.6**	**0.0**
YSS	**Yuzh-Sakhalins**	**6.06**	**289**	⇑*i*	PN	**Pn**	**01 01 40.0**	**+2.8**
YSS							01 02 58.0	
YSS					pmax	pmax		
	comp=Z,2μm,9.0s							
YSS					pmax	pmax		
	comp=Z,510nm,1.0s							
YSS					MLR	MLR		
	comp=N,16μm,16.0s							
YSS					MLR	MLR		
	comp=E,52μm,16.0s							
YSS					MLR	MLR		
	comp=Z,61μm,16.0s							
YSS	**Yuzh-Sakhalins**	**6.06**	**289**	*e*	Pn	**Pn**	**01 01 40.4**	**+3.2**
YSS	**Yuzh-Sakhalins**	**6.06**	**289**	⇑*i*	P	**Pn**	**01 01 40.0**	**+2.8**
YSS				⇑*i*	P		01 01 40.0	
YSS					AMB	AMB	01 01 45.0	
	comp=Z,2μm,9.0s							
YSS					AMB	AMB	01 01 49.5	
	comp=Z,510nm,1.0s							
YSS				*e*	S	**Sn**	**01 02 48.0**	**+2.3**
YSS					A		01 02 57.0	
	comp=Z,470nm,1.0s							
YSS				*e*	LQ		01 02 58.0	
YSS				*e*	LR	LR	01 03 19.0	
YSS					AMS	AMS	01 04 04.0	
	comp=Z,82μm,16.0s							
YSS					AMS	AMS	01 04 04.0	
	comp=Z,61μm,16.0s							
YSS					AMS	AMS	01 04 04.0	
	comp=Z,18μm,16.0s							
YSS					AMS	AMS	01 04 04.0	
	comp=Z,51μm,16.0s							
YSS					AMS	AMS	01 04 04.0	
	comp=Z,16μm,16.0s							
YSS					AMS	AMS	01 04 04.0	
	comp=Z,52μm,16.0s							
JSE	**Soyaes**	**6.07**	**270**		P	**Pn**	**01 01 40.6**	**+3.2**
JKK2	**Kamakawa 2**	**6.18**	**259**		P	**Pn**	**01 01 40.4**	**+1.6**
ASAJ	**Asahikawa**	**6.22**	**262**		P	**Pn**	**01 01 42.2**	**+2.9**
	comp=Z,43nm,0.3s,baz=91,slow=13,SNR=276							
ASAJ					LR	LR	01 04 20.5	
	comp=Z,62μm,18.9s,baz=84,slow=40							
ASAJ	**Asahikawa**	**6.22**	**262**		PN	**Pn**	**01 01 42.3**	**+3.0**
ASAJ					pmax	pmax		
	comp=Z,43nm,0.3s							
ASAJ					MLR	MLR		
	comp=Z,62μm,18.9s							
ASAJ	**Asahikawa**	**6.22**	**262**		P	**Pn**	**01 01 42.3**	**+3.0**
JCH	**Churui**	**6.24**	**247**	⇑	P	**Pn**	**01 01 38.7**	**-1.0**
JCH				*e*	S	**Sn**	**01 02 47.6**	**-2.6**
SKR	**Severo-Kuril's**	**6.31**	**30**	*e*	PN	**Pn**	**01 01 40.0**	**-0.6**
SKR					pmax	pmax		
	comp=N,1μm,4.0s							
SKR					pmax	pmax		
	comp=Z,2μm,4.0s							
SKR					pmax	pmax		
	comp=E,1μm,2.0s							
SKR					pmax	pmax		
	comp=Z,710nm,0.6s							
SKR					pmax	pmax		
	comp=N,300nm,0.5s							
SKR					pmax	pmax		
	comp=E,290nm,0.5s							
SKR					MLR	MLR		
	comp=Z,48μm,14.0s							
SKR					MLR	MLR		
	comp=N,25μm,16.0s							
SKR					MLR	MLR		
	comp=E,30μm,20.0s							
SKR	**Severo-Kuril's**	**6.31**	**30**	*e*	P	**Pn**	**01 01 40.0**	**-0.6**
SKR					AMB	AMB	01 01 47.0	
	comp=E,1μm,4.0s							
SKR					AMB	AMB	01 01 47.0	
	comp=E,2μm,4.0s							
SKR					AMB	AMB	01 01 47.0	
	comp=E,1μm,2.0s							
SKR					AMB	AMB	01 01 48.0	
	comp=E,710nm,0.6s							
SKR					AMB	AMB	01 01 48.0	
	comp=E,300nm,0.5s							
SKR					AMB	AMB	01 01 48.0	
	comp=E,290nm,0.5s							
SKR				*i*	S	**Sn**	**01 02 50.0**	**-1.8**
SKR					A		01 02 58.0	
	comp=E,4μm,6.0s							
SKR					A		01 02 58.0	
	comp=E,17μm,10.0s							
SKR					A		01 02 58.0	
	comp=E,11μm,10.0s							
SKR					A		01 02 58.0	
	comp=E,17μm,10.0s							
SKR					A		01 02 58.0	
	comp=E,11μm,10.0s							
SKR					A		01 02 58.0	
	comp=E,3μm,6.0s							
SKR					A		01 03 19.5	
	comp=E,750nm,0.9s							
SKR					A		01 03 19.5	
	comp=E,2μm,0.9s							
SKR					A		01 03 19.5	
	comp=E,820nm,0.9s							
JFR	**Furan**	**6.52**	**254**		P	**Pn**	**01 01 45.0**	**+1.5**
JFR					S	**Sn**	**01 03 03.1**	**+6.1**
JWK2	**Keihoku**	**6.53**	**273**		P	**Pn**	**01 01 48.5**	**+4.9**
JAB	**Ashibetsu**	**6.65**	**257**		P	**Pn**	**01 01 48.2**	**+2.9**
JEM	**Erimo**	**6.67**	**243**		P	**Pn**	**01 01 46.4**	**+0.8**
ERM	**Erimo**	**6.68**	**243**		Pn	**Pn**	**01 01 47.9**	**+2.3**
	comp=E,8μm,0.6s,SNR=68							
ERM	**Erimo**	**6.68**	**243**	*e*	Pn	**Pn**	**01 01 45.9**	**+0.2**
ERM				*e*	Sn	**Sn**	**01 02 59.7**	**-1.2**
JSS	**Shosan**	**6.68**	**265**		P	**Pn**	**01 01 49.6**	**+4.0**
JNBK	**Urakawa-nobuka**	**6.80**	**246**		P	**Pn**	**01 01 46.3**	**-1.0**
JNBK				*e*	S	**Sn**	**01 03 04.9**	**+1.0**
JBT2	**Biratori 2**	**6.83**	**251**	⇑	P	**Pn**	**01 01 48.0**	**+0.3**
JBT2					S	**Sn**	**01 03 20.2**	**+16**
JHR	**Hokuryu**	**6.92**	**260**		P	**Pn**	**01 01 52.0**	**+3.0**
UGL	**Uglegorsk**	**7.24**	**304**	*e*	PN	**Pn**	**01 01 57.5**	**+4.2**
UGL					pmax	pmax		
	comp=Z,941nm,1.0s							
UGL					pmax	pmax		
	comp=N,23μm,20.0s							
UGL					pmax	pmax		
	comp=E,21μm,20.0s							
UGL					MLR	MLR		
	comp=N,31μm,15.0s							
UGL					MLR	MLR		
	comp=E,60μm,15.0s							
UGL	**Uglegorsk**	**7.24**	**304**	*e*	P	**Pn**	**01 01 57.5**	**+4.2**
UGL					AMB	AMB	01 01 59.5	
	comp=E,410nm,1.0s							
UGL					A		01 04 14.0	
	comp=E,23μm,20.0s							
UGL					A		01 04 14.0	
	comp=E,21μm,20.0s							
UGL					AMS	AMS	01 05 07.0	
	comp=E,31μm,15.0s							
UGL					AMS	AMS	01 05 07.0	
	comp=E,60μm,15.0s							
JEW	**Eniwo**	**7.42**	**254**		P	**Pn**	**01 01 57.1**	**+1.3**
JNB	**Noboribetsu**	**7.84**	**252**		P	**Pn**	**01 02 01.8**	**+0.1**
JNB				*e*	S	**Sn**	**01 03 25.7**	**-4.0**
JSK	**Shakotan**	**7.91**	**259**		P	**Pn**	**01 02 05.5**	**+3.0**
TYV	**Tymovskoe**	**7.94**	**317**	*e*	P	**Pn**	**01 02 05.0**	**+2.1**
TYV					AMB	AMB	01 02 15.0	
	comp=E,264nm,1.0s							
TYV					AMB	AMB	01 02 15.0	
	comp=E,396nm,1.0s							
TYV				*e*	S	**Sn**	**01 03 37.0**	**+5.1**
TYV					A		01 03 42.0	
	comp=E,418nm,1.0s							
JKB	**Kayabe**	**8.11**	**248**		P	**Pn**	**01 02 04.8**	**-0.5**
JKB				*e*	S	**Sn**	**01 03 30.3**	**-5.9**
JYM2	**Yakumo 2**	**8.44**	**251**	⇑	P	**Pn**	**01 02 09.7**	**-0.2**
JSH	**Shimam**	**8.45**	**255**		P	**Pn**	**01 02 11.3**	**+1.4**
JANG	**Nango**	**8.64**	**238**		P	**Pn**	**01 02 09.2**	**-3.3**
JANG				*e*	S	**Sn**	**01 03 39.6**	**-10**
JTM	**Tenmabayashi**	**8.66**	**242**		P	**Pn**	**01 02 11.2**	**-1.7**
JTM				*e*	S	**Sn**	**01 03 43.1**	**-6.7**
JSR	**Shiriuchi**	**8.69**	**248**	⇓	P	**Pn**	**01 02 11.6**	**-1.6**
JSR				*e*	S	**Sn**	**01 03 45.6**	**-4.7**
JTH	**Tanohata**	**8.71**	**235**		P	**Pn**	**01 02 09.7**	**-3.8**
JTH				*e*	S	**Sn**	**01 03 41.0**	**-10**
PEA0B	**Petropavlovsk-**	**8.89**	**26**	*e*	Pn	**Pn**	**01 02 15.9**	**+0.1**
PETK	**Petropavlovsk-**	**8.89**	**26**		P	**Pn**	**01 02 16.4**	**+0.5**
	comp=E,2.3nm,0.3s,baz=191,slow=12,SNR=42							
PETK	**Petropavlovsk-**	**8.89**	**26**		P	**Pn**	**01 02 16.4**	**+0.5**
JOSM	**Okushiri--Mats**	**9.06**	**253**		P	**Pn**	**01 02 18.1**	**-0.2**
PET	**Petropavlovsk**	**9.13**	**30**	*e*	PN	**Pn**	**01 02 20.6**	**+1.3**
PET					pmax	pmax		
	comp=Z,200nm,8.6s							
PET					pmax	pmax		
	comp=Z,117nm,0.7s							
PET					pmax	pmax		
	comp=Z,900nm,16.2s							
PET					MLR	MLR		
	comp=Z,18μm,15.0s							
PET					MLR	MLR		
	comp=Z,20μm,15.0s							
PET	**Petropavlovsk**	**9.13**	**30**	*e*	Pn	**Pn**	**01 02 20.2**	**+0.9**
PET				*e*	Sn	**Sn**	**01 03 59.6**	**-1.6**
OFUJ	**Ofunato**	**9.40**	**232**		P	**Pn**	**01 02 19.4**	**-3.6**
OFUJ				*e*	S	**Sn**	**01 03 57.7**	**-10**
JRG	**Rokugo**	**9.78**	**236**		P	**Pn**	**01 02 25.1**	**-3.1**
JOG2	**Oga 2**	**9.96**	**241**		P	**Pn**	**01 02 29.0**	**-1.7**
JIO	**Ouri**	**10.02**	**230**		P	**Pn**	**01 02 27.6**	**-3.9**
TEY	**Ternei**	**10.28**	**274**	*e*	P	**Pn**	**01 02 37.8**	**+2.7**
TEY					AMB	AMB	01 02 38.0	
	comp=Z,665nm,1.7s							
TEY					AMB	AMB	01 02 38.0	
	comp=Z,52nm,1.0s							
NKL	**Nikolayevsk**	**10.39**	**323**	*i*	P	**Pn**	**01 02 37.0**	**+0.5**
NKL					AMB	AMB	01 02 40.0	
	comp=Z,560nm,1.7s							
NKL					AMB	AMB	01 02 40.0	
	comp=Z,900nm,1.7s							
NKL					AMB	AMB	01 02 40.0	
	comp=Z,2μm,2.0s							
NKL					AMB	AMB	01 02 47.0	
	comp=Z,2μm,10.0s							
NKL					AMB	AMB	01 02 47.0	
	comp=Z,2μm,10.0s							
NKL					AMB	AMB	01 02 47.0	
	comp=Z,3μm,10.0s							
NKL				*e*	L		01 05 28.0	
NKL					AMS	AMS	01 07 13.0	
	comp=Z,24μm,17.0s							
NKL					AMS	AMS	01 07 13.0	
	comp=Z,11μm,17.0s							
NKL					AMS	AMS	01 07 13.0	
	comp=Z,36μm,17.0s							
JYA	**Atsumi**	**10.85**	**236**		P	**Pn**	**01 02 40.4**	**-2.4**
JFK	**Kawauchi**	**11.08**	**228**		P	**Pn**	**01 02 42.6**	**-3.4**
HABR	**Khabarovsk**	**11.46**	**292**	*c i*	PN	**Pn**	**01 02 55.1**	**+4.0**
HABR					pmax	pmax		
	comp=E,302nm,1.6s							
HABR					pmax	pmax		
	comp=Z,325nm,1.6s							
HABR					pmax	pmax		
	comp=N,49nm,1.7s							
MAJO	**Matsushiro**	**13.13**	**233**	*e*	PN	**Pn**	**01 03 10.8**	**-3.2**
MAT	**Matsushiro**	**13.13**	**233**		P	**Pn**	**01 03 11.1**	**-2.9**
MAT					S	**Sn**	**01 05 46.0**	**+6.7**
MJAR	**Matsushiro Arr**	**13.13**	**233**		P	**Pn**	**01 03 11.0**	**-3.0**
	comp=N,4.6nm,0.3s,baz=26,slow=15,SNR=77							
JNG	**Nsakai**	**13.29**	**232**		P	**Pn**	**01 03 13.5**	**-2.7**
JGN	**Niukaw**	**13.86**	**234**		P	**Pn**	**01 03 21.5**	**-2.5**
VLA	**Vladivostok**	**13.99**	**268**	*c i*	P	**Pn**	**01 03 24.6**	**-1.1**
VLA					pmax	pmax		
	comp=Z,157nm,1.0s							
VLA					MLR	MLR		
	comp=Z,18μm,17.0s							
JGF	**Kuroka**	**14.29**	**232**		P	**Pn**	**01 03 27.6**	**-2.2**
JHJ	**Hachijo jima 2**	**15.02**	**220**		P	**Pn**	**01 03 39.0**	**-0.8**
	comp=Z,5.4nm,0.3s,baz=40,slow=17,SNR=2.6							
MDJ	**Mudanjiang**	**15.28**	**275**		P	**Pn**	**01 03 41.2**	**-1.9**
MDJ					S	**Sn**	**01 06 29.4**	**-2.1**
MDJ					PcP	PcP	01 08 49.0	+1.5
MDJ					ScP	ScP	01 12 23.7	+3.7
MDJ					ScS	ScS	01 16 00.2	+2.2
MDJ					pmax	pmax		
	comp=Z,50nm,1.2s							
MDJ					LR	LR		
	comp=N,17μm,17.7s							
MDJ					LR	LR		
	comp=E,16μm,18.7s							
MDJ					LR	LR		
	comp=Z,27μm,16.1s							
SMY	**Shemya**	**16.72**	**55**	*e*	P	**Pn**	**01 04 02.2**	**+0.6**
SMY					pmax	pmax		
	comp=Z,232nm,0.9s							
SMY	**Shemya**	**16.72**	**55**	*e*	Pn	**Pn**	**01 04 02.2**	**+0.6**
	comp=Z,232nm,0.9s							
SMY				*e*	Sn	**Sn**	**01 06 53.4**	**-13**
ZEA	**Zeya**	**17.59**	**307**	⇑*e*	P	**Pn**	**01 04 09.8**	**-2.6**
ZEA				⇑*e*	P		01 04 09.8	
ZEA					AMB	AMB	01 04 14.8	
	comp=Z,120nm,1.2s							
ZEA					AMB	AMB	01 04 14.8	
	comp=Z,140nm,1.2s							
ZEA					AMB	AMB	01 04 14.8	
	comp=Z,220nm,1.2s							
ZEA					AMB	AMB	01 04 16.0	
	comp=Z,1μm,9.0s							
ZEA					AMB	AMB	01 04 16.0	
	comp=Z,4μm,10.0s							
ZEA					AMB	AMB	01 04 16.0	
	comp=Z,3μm,10.0s							
ZEA				*e*	S	**Sn**	**01 07 22.0**	**-5.4**
ZEA					A		01 07 35.0	
	comp=Z,2μm,15.0s							
ZEA					A		01 07 35.0	
	comp=Z,1μm,12.0s							
SEY	**Seymchan**	**17.66**	**2**	⇓*i*	P	**Pn**	**01 04 13.3**	**+0.1**
CN2	**Changchun**	**18.36**	**274**	*e*	P	**Pn**	**01 04 20.3**	**-1.7**
CN2				*e*	pP	pP	01 04 26.4	-1.9
CN2				*e*	sP	sP	01 04 30.5	-0.8
CN2				*e*	S	**Sn**	**01 07 45.3**	**-1.0**
CN2					pmax	pmax		
	comp=Z,70nm,1.0s							
CN2					pmax	pmax		
	comp=Z,200nm,6.0s							
CN2					LR	LR		
	comp=N,7μm,13.0s							
CN2					LR	LR		
	comp=E,12μm,13.0s							
CN2					LR	LR		
	comp=Z,14μm,14.0s							
KSRS	**Korea Array**	**19.08**	**254**		P	**Pn**	**01 04 28.4**	**-2.4**
	comp=Z,1.7nm,0.3s,baz=61,slow=11,SNR=48							
KSRS					PcP	PcP	01 08 54.2	+0.5
	baz=19,slow=1.4,SNR=4.1							
KSRS					pPcP		01 09 08.4	
	comp=Z,0.2nm,0.3s,baz=86,slow=0.3,SNR=8.8							
KSRS					LR	LR	01 12 04.8	
	comp=Z,12μm,18.6s,baz=61,slow=37							
CBIJ	**Chichi jima**	**19.55**	**205**		P	**Pn**	**01 04 34.4**	**-2.1**
	comp=Z,5.5nm,0.3s,baz=355,slow=11,SNR=3.9							
INCN	**Inchon**	**19.94**	**255**	*e*	P	**Pn**	**01 04 39.5**	**-1.5**
	comp=Z,127nm,0.8s							
INCN	**Inchon**	**19.94**	**255**		P	**Pn**	**01 04 39.9**	**-1.1**
	SNR=7.6							
CLNS	**Chul'man**	**19.98**	**315**	*e*	P	**Pn**	**01 04 38.6**	**-2.7**
CLNS				*e*	S	**Sn**	**01 08 23

SNY			LR	LR		
	comp=N,9μm,15.0s,MS5.5					
SNY			LR	LR		
	comp=E,13μm,15.6s,MS5.5					
SNY			LR	LR		
	comp=Z,15μm,15.3s,MS5.5					
JTZ	**Takazaki**	**20.55 236**	P	**P**	**01 04 47.5**	**+1.6**
JHD	**Hondo**	**20.72 239**	P	**P**	**01 04 48.7**	**+1.0**
YAK	**Yakutsk**	**20.85 331**	*e*P	**P**	**01 04 46.4**	**-2.4**
YAK			*e*PP		01 04 57.5	
YAK			*e*		01 05 06.4	
YAK			*e*S	**S**	**01 08 35.7**	**-4.3**
YAK			*e*SS		01 08 58.4	
YAK			*e*SSS		01 09 13.1	
YAK			*e*		01 16 09.6	
YAK			pmax	pmax		
	comp=E,53nm,1.1s					
YAK			pmax	pmax		
	comp=N,56nm,1.1s					
YAK			pmax	pmax		
	comp=Z,213nm,0.9s					
YAK			pmax	pmax		
	comp=E,315nm,1.6s					
YAK			pmax	pmax		
	comp=N,341nm,1.5s					
YAK			pmax	pmax		
	comp=Z,373nm,0.9s					
YAK			smax			
	comp=E,274nm,2.1s					
YAK			smax			
	comp=N,693nm,2.9s					
YAK			MLR	MLR		
	comp=N,2μm,13.0s					
YAK			MLR	MLR		
	comp=Z,6μm,14.0s,MS5.1					
YAK			MLR	MLR		
	comp=E,5μm,20.0s					
YAK	**Yakutsk**	**20.85 331**	*e*P	**P**	**01 04 48.1**	**-0.8**
	comp=E,402nm,1.0s					
YAK			LR	LR		
	comp=Z,8μm,20.0s,MS5.1					
DL2	**Dalian**	**22.74 264⇑**	*i*P	**P**	**01 05 08.0**	**-1.3**
DL2			S	**S**	**01 09 13.1**	**-3.8**
DL2			sS	sS	01 09 25.2	-2.6
DL2			pmax	pmax		
	comp=Z,130nm,1.1s,mb5.3					
DL2			pmax	pmax		
	comp=Z,860nm,8.2s					
DL2			LR	LR		
	comp=N,2μm,19.3s,MS4.8					
DL2			LR	LR		
	comp=E,2μm,17.5s,MS4.8					
DL2			LR	LR		
	comp=Z,3μm,22.5s,MS4.7					
BILL	**Bilibino**	**24.10 14**	*ce*P	**P**	**01 05 21.2**	**-1.2**
BILL			pmax	pmax		
	comp=Z,63nm,1.3s,mb4.9					
BILL			MLR	MLR		
	comp=Z,19μm,16.0s,MS5.7					
BILL	**Bilibino**	**24.10 14**	*e*P	**P**	**01 05 20.9**	**-1.5**
	comp=Z,44nm,0.9s,mb4.9					
BILL			LR	LR		
	comp=Z,15μm,19.0s,MS5.5					
BJI	**Beijing**	**26.11 271**	P	**P**	**01 05 40.8**	**-0.3**
BJI			S	**S**	**01 10 13.7**	**+2.6**
BJI			pmax	pmax		
	comp=Z,150nm,1.1s,mb5.4					
BJI			pmax	pmax		
	comp=Z,2μm,5.3s					
BJI			LR	LR		
	comp=N,9μm,20.1s					
BJI			LR	LR		
	comp=E,13μm,15.0s					
BJI			LR	LR		
	comp=Z,10μm,23.7s,MS5.3					
TIA	**Tai'an**	**27.17 262**	P	**P**	**01 05 50.3**	**-0.3**
TIA			S	**S**	**01 10 29.3**	**+1.6**
TIA			pmax	pmax		
	comp=Z,140nm,1.6s,mb5.2					
TIA			LR	LR		
	comp=N,5μm,20.9s,MS5.3					
TIA			LR	LR		
	comp=E,6μm,17.4s,MS5.3					
SSE	**Sheshan**	**27.31 249**	P	**P**	**01 05 52.7**	**+0.8**
SSE			S	**S**	**01 10 33.2**	**+3.0**
SSE			pmax	pmax		
	comp=Z,140nm,0.8s,mb5.5					
SSE			pmax	pmax		
	comp=Z,1μm,9.9s					
SSE			LR	LR		
	comp=N,4μm,17.2s,MS5.5					
SSE			LR	LR		
	comp=E,10μm,17.2s,MS5.5					
SSE			LR	LR		
	comp=Z,10μm,17.7s,MS5.4					
NJ2	**Nanjing**	**28.28 253**	*e*P	**P**	**01 06 00.5**	**0.0**
NJ2			pP	pP	01 06 12.3	+4.8
NJ2			PP	PP	01 06 49.5	-15
NJ2			S	**S**	**01 10 41.0**	**-4.3**
NJ2			sS	sS	01 11 01.0	+4.2
NJ2			pmax	pmax		
	comp=Z,80nm,1.0s,mb5.3					
NJ2			pmax	pmax		
	comp=Z,1μm,4.6s					
NJ2			LR	LR		
	comp=N,17μm,20.2s,MS5.8					
NJ2			LR	LR		
	comp=E,17μm,17.4s,MS5.8					
NJ2			LR	LR		
	comp=Z,15μm,17.5s,MS5.6					
TIXI	**Tiksi**	**28.48 345**	*e*P	**P**	**01 05 58.7**	**-3.2**
TIXI			*e*S	**S**	**01 10 50.5**	**+2.8**
TIXI			pmax	pmax		
	comp=Z,38nm,2.0s,mb4.7					
TIXI			MLR	MLR		
	comp=Z,8μm,15.0s,MS5.5					
TIXI	**Tiksi**	**28.48 345**	*e*P	**P**	**01 05 59.0**	**-2.9**
	comp=Z,9.4nm,0.5s,mb4.7					
TIXI			*e*PcP	PcP	01 09 12.2	-0.9
TIXI			LR	LR		
	comp=Z,7μm,20.0s,MS5.3					
WAKE	**Wake Island**	**28.98 149**	PFAKE		01 06 20.0	+13
WAKE			LR	LR		
	comp=Z,7μm,19.0s,MS5.3					
HHC	**Hu-ho-hao-te**	**29.05 275**	*e*P	**P**	**01 06 07.8**	**+0.5**
HHC			sP	sP	01 06 16.7	-0.5
HHC			PP	PP	01 07 01.1	-12
HHC			PcP	PcP	01 09 16.0	+0.9
HHC			S	**S**	**01 10 52.5**	**-4.8**
HHC			sS	sS	01 11 05.5	-3.3
HHC			SS	SS	01 12 24.3	-36
HHC			ScP	ScP	01 12 56.2	+1.2
HHC			PcS	PcS	01 12 58.6	+0.9
HHC			ScS	ScS	01 16 48.5	-0.4
HHC			pmax	pmax		
	comp=Z,220nm,0.9s,mb5.9					
HHC			pmax	pmax		
	comp=Z,1μm,4.4s					
HHC			LR	LR		
	comp=N,9μm,13.3s,MS5.7					
HHC			LR	LR		
	comp=E,11μm,14.6s,MS5.7					
HHC			LR	LR		
	comp=Z,9μm,14.3s,MS5.5					
TIY	**Taiyuan**	**29.75 269**	⇑P	**P**	**01 06 14.5**	**+1.0**
TIY			S	**S**	**01 11 10.5**	**+2.2**
TIY			LR	LR		
	comp=N,5μm,14.0s					
TIY			LR	LR		
	comp=E,2μm,20.8s					
TIY			LR	LR		
	comp=Z,7μm,22.9s					
ULN	**Ulaanbaatar**	**30.11 291**	*e*P	**P**	**01 06 16.0**	**-0.6**
ULN			*e*		01 09 17.8	
ULN			pmax	pmax		
	comp=Z,38nm,0.9s,mb5.1					
ULN			MLR	MLR		
	comp=Z,11μm,20.0s,MS5.5					
ULN	**Ulaanbaatar**	**30.11 291**	*e*P	**P**	**01 06 16.0**	**-0.6**
	comp=Z,38nm,0.9s,mb5.1					
ULN			*e*PcP	PcP	01 09 17.8	+0.2
ULN			LR	LR		
	comp=Z,11μm,20.0s,MS5.5					
ULN	**Ulaanbaatar**	**30.11 291**	P	**P**	**01 06 16.8**	**+0.2**
	SNR=36					
MIDW	**Midway**	**30.20 114**	PFAKE		01 06 30.0	+12
MIDW			LR	LR		
	comp=Z,5μm,20.0s,MS5.1					
BTO	**Baotou**	**30.23 276**	*e*P	**P**	**01 06 17.5**	**-0.3**
BTO			pmax	pmax		
	comp=Z,54nm,1.7s,mb5.0					
SONM	**Songino Array**	**30.55 291**	P	**P**	**01 06 20.2**	**-0.3**
	comp=Z,22nm,1.2s,mb4.9,baz=74,slow=8.6,SNR=43					
SONM			PcP	PcP	01 09 18.2	-0.6
	comp=Z,7.0nm,0.8s,baz=122,slow=2.9,SNR=4.0					
SONM			pPcP		01 09 33.6	
	comp=Z,18nm,1.0s,baz=108,slow=2.8,SNR=5.7					
SONM			LR	LR	01 19 44.7	
	comp=Z,15μm,18.6s,MS5.7,baz=81,slow=38					
SONM	**Songino Array**	**30.55 291**	P	**P**	**01 06 20.2**	**-0.3**
SONM					01 09 18.2	
IRK	**Irkutsk**	**31.20 300**	*e*P	**P**	**01 06 24.0**	**-2.2**
IRK			*e*		01 13 16.9	
IRK			pmax	pmax		
	comp=Z,32nm,1.3s,mb5.0					
TATO	**Taipei**	**31.36 240**	PFAKE		01 06 40.0	+12
TATO			LR	LR		
	comp=Z,16μm,20.0s,MS5.7					
TLY	**Talaya**	**31.65 299**	P	**P**	**01 06 30.1**	**-0.1**
	comp=Z,120nm,1.0s,mb5.7,SNR=5.5					
TLY	**Talaya**	**31.65 299**	*c i*P	**P**	**01 06 27.7**	**-2.5**
TLY			*e*		01 07 29.4	
TLY			*e*PPP		01 07 45.8	
TLY			*e*		01 09 21.9	
TLY			pmax	pmax		
	comp=Z,18nm,0.9s,mb4.9					
TLY			MLR	MLR		
	comp=Z,17μm,17.0s,MS5.8					
TLY	**Talaya**	**31.65 299**	*e*P	**P**	**01 06 29.1**	**-1.0**
	comp=Z,31nm,1.2s,mb5.0					
TLY			*e*PcP	PcP	01 09 21.7	0.0
TLY			LR	LR		
	comp=Z,18μm,19.0s,MS5.8					
TLY	**Talaya**	**31.65 299**	P	**P**	**01 06 29.1**	**-1.0**
	SNR=13					
YHNB	**Yeheng**	**31.65 239**	*e*P	**P**	**01 06 29.6**	**-0.8**
	comp=Z,15nm,0.8s,mb4.9					
YHNB			LR	LR		
	comp=Z,20μm,20.0s,MS5.8					
GUMO	**Guam**	**32.08 192**	PFAKE		01 06 50.0	+16
GUMO			LR	LR		
	comp=Z,5μm,20.0s,MS5.2					
WHN	**Wuhan**	**32.25 256**	⇑P	**P**	**01 06 35.3**	**-0.4**
WHN			S	**S**	**01 11 38.4**	**-9.3**
WHN			pmax	pmax		
	comp=Z,130nm,0.8s,mb5.8					
WHN			pmax	pmax		
	comp=Z,1μm,8.5s					
WHN			LR	LR		
	comp=N,27μm,18.2s,MS6.0					
WHN			LR	LR		
	comp=E,12μm,18.6s,MS6.0					
WHN			LR	LR		
	comp=Z,26μm,16.6s,MS6.0					
SSLB	**Suanglung**	**32.56 239**	*e*P	**P**	**01 06 38.8**	**+0.4**
	comp=Z,43nm,0.9s,mb5.4					
YULB	**Yu-li**	**32.66 238**	*e*P	**P**	**01 06 39.5**	**+0.3**
	comp=Z,52nm,0.8s,mb5.5					
TPUB	**Ta-pu**	**33.13 239**	*e*P	**P**	**01 06 43.2**	**-0.1**
	comp=Z,180nm,1.0s,mb6.0					
QZH	**Quanzhou**	**33.18 243⇑**	*i*P	**P**	**01 06 44.0**	**+0.2**
QZH			S	**S**	**01 12 04.2**	**+2.1**
QZH			sS	sS	01 12 18.0	+4.4
QZH			pmax	pmax		
	comp=Z,190nm,1.2s,mb5.9					
QZH			LR	LR		
	comp=N,9μm,16.5s,MS5.8					
QZH			LR	LR		
	comp=E,9μm,14.0s,MS5.8					
QZH			LR	LR		
	comp=Z,8μm,18.1s,MS5.5					
TWG	**Pinlang**	**33.22 238**	*e*P	**P**	**01 06 43.5**	**-0.7**
	comp=Z,102nm,0.8s,mb5.8					
MOY	**Mondy**	**33.28 299**	*e*P	**P**	**01 06 44.3**	**-0.2**
MOY			pmax	pmax		
	comp=Z,42nm,1.9s,mb5.0					
XAN	**Xi'an**	**34.04 266**	P	**P**	**01 06 50.9**	**-0.4**
XAN			pP	pP	01 06 57.6	-0.7
XAN			sP	sP	01 06 59.9	-1.2
XAN			PP	PP	01 08 05.2	-3.2
XAN			S	**S**	**01 12 15.7**	**+0.3**
XAN			SS	SS	01 14 21.0	-22
XAN			pmax	pmax		
	comp=Z,19nm,1.2s,mb4.9					
XAN			LR	LR		
	comp=N,4μm,15.3s,MS5.3					
XAN			LR	LR		
	comp=E,1μm,14.2s,MS5.3					
XAN			LR	LR		
	comp=Z,2μm,16.4s,MS4.8					
TTA	**Tatalina**	**34.39 40**	*e*P	**P**	**01 06 55.0**	**+1.0**
SVW2	**Sparrevohn**	**34.47 43**	*e*P	**P**	**01 06 52.8**	**-1.8**
	comp=Z,47nm,2.5s,mb5.0					
OHAK	**Old Harbor**	**35.73 50**	*e*P	**P**	**01 07 05.7**	**+0.1**
	comp=Z,206nm,1.4s,mb5.9					
RSO	**Redoubt South**	**35.84 45**	*e*P	**P**	**01 07 06.9**	**+0.4**
KDAK	**Kodiak Island**	**36.06 49**	*i* P	**P**	**01 07 08.9**	**+0.5**
KDAK	**Kodiak Island**	**36.06 49**	*e*P	**P**	**01 07 08.1**	**-0.3**
	comp=Z,96nm,0.8s,mb5.8					
KDAK			LR	LR		
	comp=Z,7μm,20.0s,MS5.4					
PPLA	**Purkeypile**	**36.14 40**	*e*P	**P**	**01 07 10.4**	**+1.4**
	comp=Z,412nm,1.7s,mb6.1					
PPLA			*e*PcP	PcP	01 09 34.2	0.0
LZH	**Lanzhou**	**36.58 272**	⇑P	**P**	**01 07 14.4**	**+1.3**
LZH			pP	pP	01 07 20.0	-0.1
LZH			sP	sP	01 07 26.3	+3.3
LZH			PP	PP	01 08 38.5	+2.1
LZH			S	**S**	**01 12 54.2**	**-0.1**
LZH			sS	sS	01 13 04.1	-1.8
LZH			SS	SS	01 15 19.0	-15
LZH			pmax	pmax		
	comp=Z,410nm,1.4s,mb6.1					
LZH			pmax	pmax		
	comp=Z,1μm,6.3s					
LZH			LR	LR		
	comp=N,6μm,15.8s					
LZH			LR	LR		
	comp=Z,8μm,16.8s,MS5.6					
BPAW	**Bear Paw Mtn.**	**36.72 38**	*e*P	**P**	**01 07 14.6**	**+0.6**
	comp=Z,171nm,1.6s,mb5.6					
BPAW			*e*PcP	PcP	01 09 37.1	+1.2
COLD	**Coldfoot**	**37.27 33⇑**	*i*P	**P**	**01 07 19.1**	**+0.5**
	comp=Z,36nm,1.0s,mb5.2					
RC01	**Rabbit Creek A**	**37.30 43**	*e*P	**P**	**01 07 18.7**	**-0.3**
	comp=Z,43nm,0.9s,mb5.3					
RC01			*e*PcP	PcP	01 09 38.0	+0.2
KRAR	**Krasnoyarsk**	**37.37 308**	*e*P	**P**	**01 07 17.9**	**-1.7**
KRAR			pmax	pmax		
	comp=Z,19nm,0.9s,mb4.9					
KRAR			MLR	MLR		
	comp=Z,22μm,19.0s,MS6.0					
PMR	**Palmer**	**37.57 43**	*e*P	**P**	**01 07 21.4**	**+0.2**
PMR			pmax	pmax		
	comp=Z,151nm,2.1s,mb5.4					
PMR	**Palmer**	**37.57 43**	*e*P	**P**	**01 07 21.4**	**+0.2**
	comp=Z,151nm,2.1s,mb5.4					
MCK	**McKinley**	**37.62 39⇑**	*i*P	**P**	**01 07 21.8**	**+0.2**
MCK			pmax	pmax		
	comp=Z,54nm,1.0s,mb5.2					
MCK	**McKinley**	**37.62 39⇑**	*i*P	**P**	**01 07 21.8**	**+0.2**
	comp=Z,54nm,1.0s,mb5.2					
GZH	**Guangzhou**	**37.85 247**	P	**P**	**01 07 17.8**	**-6.2**
GZH			S	**S**	**01 13 05.4**	**-8.5**
GZH			LR	LR		
	comp=N,11μm,20.8s,MS5.7					
GZH			LR	LR		
	comp=E,3μm,19.5s,MS5.7					
GZH			LR	LR		
	comp=Z,13μm,17.3s,MS5.8					
GTA	**Gaotai**	**37.85 280**	⇑P	**P**	**01 07 25.1**	**+1.2**
GTA			pP	pP	01 07 31.0	+0.1
GTA			sP	sP	01 07 34.0	+0.2
GTA			PP	PP	01 08 55.2	+4.8
GTA			PcP	PcP	01 09 40.5	+0.6
GTA			S	**S**	**01 13 15.8**	**+2.1**
GTA			sS	sS	01 13 25.4	+0.1
GTA			ScP	ScP	01 13 26.3	+0.5
GTA			PcS	PcS	01 13 28.5	-0.1
GTA			SS	SS	01 15 52.5	-7.5
GTA			ScS	ScS	01 17 33.3	-1.4
GTA			pmax	pmax		
	comp=Z,170nm,1.1s,mb5.7					
GTA			pmax	pmax		
	comp=Z,1μm,6.9s					
GTA			LR	LR		
	comp=N,8μm,16.6s,MS5.7					
GTA			LR	LR		
	comp=E,6μm,17.3s,MS5.7					
GTA			LR	LR		
	comp=Z,9μm,16.7s,MS5.7					
COLA	**College**	**38.10 37⇑**	*i*P	**P**	**01 07 26.4**	**+0.8**
COLA			pmax	pmax		
	comp=Z,287nm,1.6s,mb5.8					
COLA			MLR	MLR		
	comp=Z,5μm,21.0s,MS5.3					
COLA	**College**	**38.10 37⇑**	*i*P	**P**	**01 07 26.4**	**+0.8**
	comp=Z,287nm,1.6s,mb5.8					
COLA			LR	LR		
	comp=Z,5μm,21.0s,MS5.3					
DIV	**Divide**	**39.22 43⇑**	*i*P	**P**	**01 07 35.6**	**+0.6**
	comp=Z,78nm,0.9s,mb5.4					
CD2	**Chengdu**	**39.40 265**	P	**P**	**01 07 37.5**	**+0.6**
CD2			pP	pP	01 07 43.4	-0.6
CD2			sP	sP	01 07 46.3	-0.6
CD2			PP	PP	01 09 11.8	+4.4
CD2			PcP	PcP	01 09 47.1	+2.3
CD2			S	**S**	**01 13 32.4**	**-4.7**
CD2			sS	sS	01 13 46.5	-2.3
CD2			SS	SS	01 16 21.8	-10
CD2			pmax	pmax		
	comp=Z,320nm,1.0s,mb6.0					
CD2			pmax	pmax		
	comp=Z,1μm,11.0s					
CD2			LR	LR		
	comp=N,5μm,20.2s					
CD2			LR	LR		
	comp=Z,6μm,16.7s,MS5.5					
BMRM	**Bremner River**	**39.80 43⇑**	*i*P	**P**	**01 07 40.7**	**+0.7**
	comp=Z,84nm,0.9s,mb5.5					
MENT	**Mentasta**	**40.01 40**	*e*P	**P**	**01 07 42.6**	**+1.1**
GYA	**Guiyang**	**40.07 257⇑**	*i*P	**P**	**01 07 42.2**	**-0.4**
GYA			pP	pP	01 07 49.2	-0.5
GYA			sP	sP	01 07 53.7	+1.2
GYA			PP	PP	01 09 19.0	+4.2
GYA			PcP	PcP	01 09 48.3	+1.3
GYA			ScP	ScP	01 13 35.2	+0.7
GYA			S	**S**	**01 13 44.5**	**-2.8**
GYA			sS	sS	01 13 58.2	-0.7
GYA			pmax	pmax		
	comp=Z,70nm,1.0s,mb5.3					
GYA			pmax	pmax		
	comp=Z,560nm,7.9s					
GYA			LR	LR		
	comp=N,4μm,19.6s,MS5.5					
GYA			LR	LR		
	comp=E,5μm,17.7s,MS5.5					
GYA			LR	LR		
	comp=Z,7μm,18.7s,MS5.5					
EGAK	**Eagle**	**40.96 37⇑**	*i*P	**P**	**01 07 49.4**	**0.0**
	comp=Z,82nm,1.1s,mb5.3					
EGAK			LR	LR		
	comp=Z,4μm,19.0s,MS5.3					
DAWY	**Dawson**	**41.81 38⇑**	*i*P	**P**	**01 07 56.8**	**+0.4**
ZAA0	**Zalesovo Array**	**42.35 307**	*e*P	**P**	**01 07 58.3**	**-2.6**
ZAA0			*e*PcP	PcP	01 09 53.5	-0.5
ZALV	**Zalesovo Beam**	**42.35 307**	P	**P**	**01 07 58.7**	**-2.3**
	comp=Z,12nm,0.6s,mb4.7,baz=66,slow=7.2,SNR=30					
ZALV			PcP	PcP	01 09 54.1	+0.1
	comp=Z,33nm,0.8s,baz=79,slow=3.2,SNR=12					
ZALV			pPcP		01 10 02.5	
	comp=Z,13nm,0.7s,baz=99,slow=2.8,SNR=4.2					
ZALV			ScP	ScP	01 13 45.1	+2.1
	comp=Z,1.7nm,0.8s,baz=106,slow=4.7,SNR=2.6					
ZALV			LR	LR	01 26 44.0	
	comp=Z,7μm,19.0s,MS5.5,baz=63,slow=38					
ZALV	**Zalesovo Beam**	**42.35 307**	P	**P**	**01 07 58.7**	**-2.3**
ZALV					01 09 54.1	
ZALV	**Zalesovo Beam**	**42.35 307**	P	**P**	**01 07 58.7**	**-2.3**
ZALV			PcP	PcP	01 09 54.1	+0.1
ZALV			pPcP		01 10 02.5	
ZALV			ScP	ScP	01 13 45.1	+2.1
ZALV			LR	LR	01 26 44.0	
PNL	**Peninsula**	**42.58 45**	*e*P	**P**	**01 08 03.4**	**+0.7**
	comp=Z,41nm,1.5s,mb4.9					
NVS	**Novosibirsk**	**42.99 308⇓**	*i*P	**P**	**01 08 03.9**	**-2.2**
NVS			*e*		01 09 43.7	
NVS			*i*		01 18 02.8	
NVS			pmax	pmax		
	comp=Z,35nm,1.5s,mb4.9					
NVS			pmax	pmax		
	comp=N,15nm,1.6s					
NVS			pmax	pmax		
	comp=E,24nm,1.6s					
NVS			pmax	pmax		
	comp=E,28nm,2.0s					
NVS			pmax	pmax		
	comp=Z,75nm,2.0s,mb5.1					
NVS			pmax	pmax		
	comp=N,13nm,1.7s					
QIZ	**Qiongzhong**	**43.03 246**	P	**P**	**01 08 07.4**	**+0.5**
QIZ			pP	pP	01 08 12.6	-1.4
QIZ			PP	PP	01 09 45.8	-1.1
QIZ			S	**S**	**01 14 29.5**	**-1.7**
QIZ			sS	sS	01 14 39.4	-3.5
QIZ			pmax	pmax		
	comp=Z,33nm,1.6s,mb4.8					
QIZ			LR	LR		
	comp=N,5μm,20.5s					
QIZ			LR	LR		
	comp=Z,7μm,17.6s,MS5.6					
JOHN	**Johnston Islan**	**43.47 118**	PFAKE		01 08 20.0	+10
JOHN			LR	LR		
	comp=Z,6μm,21.0s,MS5.5					
INK	**Inuvik**	**43.58 31⇑**	*i*P	**P**	**01 08 11.6**	**+0.8**
INK			pmax	pmax		
	comp=Z,70nm,1.0s					
INK	**Inuvik**	**43.58 31⇑**	*i*P	**P**	**01 08 11.6**	**+0.8**
	comp=Z,70nm,1.0s,mb5.3					
KMI	**Kunming**	**43.64 259**	⇑P	**P**	**01 08 12.1**	**+0.4**
KMI			pP	pP	01 08 18.6	-0.3
KMI			sP	sP	01 08 21.1	-0.6
KMI			PP	PP	01 09 55.1	+1.7
KMI			PcP	PcP	01 09 59.7	+0.9
KMI			PcS	PcS	01 13 52.3	+0.6
KMI			S	**S**	**01 14 39.8**	**-0.2**
KMI			sS	sS	01 14 50.8	-1.0
KMI			SS	SS	01 17 47.1	-8.3
KMI			ScS	ScS	01 18 09.5	-0.3
KMI			pmax	pmax		
	comp=Z,77nm,1.3s,mb5.3					
KMI			pmax	pmax		
	comp=Z,940nm,6.0s					
KMI			LR	LR		
	comp=N,6μm,16.8s,MS5.6					
KMI			LR	LR		
	comp=E,4μm,17.6s,MS5.6					
KMI			LR	LR		
	comp=Z,6μm,16.1s,MS5.6					
DAV	**Davao City (W)**	**44.09 218**	PFAKE		01 08 30.0	+15
DAV			LR	LR		
	comp=Z,3μm,20.0s,MS5.2					
WMQ	**Urumqi**	**44.18 292**	P	**P**	**01 08 17.7**	**+1.8**
WMQ			pP	pP	01 08 23.7	+0.7
WMQ			sP	sP	01 08 26.6	+0.8
WMQ			PP	PP	01 10 01.9	+3.1
WMQ			ScP	ScP	01 13 52.7	+2.1
WMQ			S	**S**	**01 14 48.9**	**+1.4**
WMQ			sS	sS	01 14 58.7	-0.6
WMQ			SS	SS	01 17 58.2	-7.1
WMQ			ScS	ScS	01 18 12.9	+0.3
WMQ			pmax	pmax		
	comp=Z,87nm,0.8s,mb5.5					
WMQ			pmax	pmax		
	comp=Z,1μm,4.2s					
WMQ			LR	LR		
	comp=N,7μm,18.6s,MS5.7					
WMQ			LR	LR		
	comp=E,4μm,21.0s,MS5.7					
WMQ			LR	LR		
	comp=Z,7μm,19.0s,MS5.6					
SKAG	**Skagway**	**44.64 44**	*e*P	**P**	**01 08 21.1**	**+1.8**
	comp=Z,96nm,2.2s,mb5.2					
MK31	**Makanchi Array**	**46.39 298**	*i* P	**P**	**01 08 32.5**	**-0.9**
MK31			pmax	pmax		
	comp=Z,70nm,0.8s,mb5.6					

MK31 Makanchi Array 46.39 298 *e*P **P** **01 08 31.7 -1.7**
MKAR Makanchi Array 46.39 298 P **P** **01 08 32.2 -1.1**
comp=Z,65nm,0.9s,mb5.5,baz=73,slow=7.1,SNR=194
MKAR PcP PcP 01 10 07.3 -0.7
comp=Z,14nm,0.6s,baz=58,slow=3.6,SNR=6.2
MKAR pPcP 01 10 17.2
comp=Z,11nm,0.6s,baz=57,slow=5.8,SNR=3.0
MKAR LR LR 01 29 08.2
comp=Z,16μm,19.3s,MS6.0,baz=68,slow=38
MKAR Makanchi Array 46.39 298 P **P** **01 08 32.3 -1.1**
MKAR 01 10 07.3
MKAR 01 10 17.2
KURK Kurchatov 47.02 304 P **P** **01 08 37.8 -0.5**
comp=Z,402nm,0.8s,mb6.4,SNR=12
KURK Kurchatov 47.02 304 LR LR 01 29 16.8
comp=Z,2μm,19.7s,MS5.2,baz=80,slow=37
KURK Kurchatov 47.02 304 *e*P **P** **01 08 36.1 -2.2**
KURK pmax pmax
comp=Z,63nm,0.9s,mb5.5
KURK MLR MLR
comp=Z,3μm,21.0s,MS5.2
KURK Kurchatov 47.02 304 *e*P **P** **01 08 36.1 -2.2**
comp=Z,63nm,0.9s,mb5.5
KURK LR LR
comp=Z,3μm,21.0s,MS5.2
SGSI Sangihe 47.15 216 P **P** **01 08 41.8 +2.2**
DLBC Dease Lake 47.57 44⇑*i*P **P** **01 08 44.5 +2.1**
KIP Kipapa 47.74 103 PFAKE 01 09 00.0 +16
KIP LR LR
comp=Z,4μm,19.0s,MS5.4
SMPI Sarmi 48.39 197 P **P** **01 08 49.3 +0.1**
comp=Z,1μmcomp=Z,74nm,1.6s,mb5.5
KDM Kudat 48.45 228 P **P** **01 08 50.5 +0.8**
LSA Lhasa 48.99 273 P **P** **01 08 55.7 +2.0**
LSA pP pP 01 09 04.8 +3.9
LSA sP sP 01 09 08.7 +4.9
LSA PP PP 01 10 50.0 +2.9
LSA S **S** **01 15 57.9 +1.2**
LSA pmax pmax
comp=Z,130nm,1.1s,mb5.9
LSA LR LR
comp=N,2μm,19.4s
LSA LR LR
comp=E,3μm,25.0s
LSA LR LR
comp=Z,5μm,23.3s,MS5.5
MYLDM Lahad Datu 49.07 225 P **P** **01 08 55.4 +0.9**
MYLDM Lahad Datu 49.07 225 P **P** **01 08 54.7 +0.2**
comp=Z,1μmcomp=Z,55nm,1.7s,mb5.3
TNTI Ternate 49.08 212 P Px 01 09 08.0
CHRT Chiangrai 49.16 256 ⇑P **P** **01 08 55.5 +0.4**
comp=Z,179nm,1.0s,mb6.0
SDKM Sandakan 49.34 227 P **P** **01 08 57.1 +0.5**
MNI Manado 49.47 216 P **P** **01 08 56.8 -0.7**
comp=Z,184nm,0.9s,mb6.1
KKM Kota Kinabalu 49.51 228 P **P** **01 08 58.7 +0.9**
KKM Kota Kinabalu 49.51 228 *e*P **P** **01 08 58.5 +0.6**
comp=Z,24nm,1.0s,mb5.2
KKM LR LR
comp=Z,4μm,20.0s,MS5.4
KKM Kota Kinabalu 49.51 228 P **P** **01 08 59.0 +1.1**
comp=Z,711nmcomp=Z,34nm,1.9s,mb5.0
IMP Imphal 50.01 266 *ex* x 01 08 51.0
TSM Tawau 50.15 225 P **P** **01 09 03.7 +1.0**
CHG Chiang Mai 50.46 256 ⇑P **P** **01 09 05.4 +0.4**
comp=Z,54nm,0.7s,mb5.7
CHTO Chiang Mai 50.46 256⇑*i*P **P** **01 09 05.3 +0.3**
CHTO pmax pmax
comp=Z,53nm,1.1s,mb5.5
CHTO MLR MLR
comp=Z,5μm,19.0s,MS5.5
CHTO Chiang Mai 50.46 256⇑*i*P **P** **01 09 05.3 +0.3**
comp=Z,53nm,1.1s,mb5.5
CHTO LR LR
comp=Z,5μm,19.0s,MS5.5
CHTO Chiang Mai 50.46 256 P **P** **01 09 05.1 +0.1**
comp=Z,1μmcomp=Z,63nm,1.4s,mb5.5
CHTO Chiang Mai 50.46 256 P **P** **01 09 05.8 +0.7**
SNR=13
VOSK Vostochnaya 50.52 309 P **P** **01 09 02.2 -2.9**
VOSK pmax pmax
comp=Z,23nm,1.0s,mb5.1
POHA Pohakuloa 50.57 102 PFAKE 01 09 20.0 +14
POHA LR LR
comp=Z,4μm,19.0s,MS5.5
CM31 Chiang Mai Arr 50.70 256 *e*P **P** **01 09 08.0 +1.1**
comp=Z,12nm,0.5s,mb5.1
CM31 LR LR
comp=Z,4μm,19.0s,MS5.4
CMAR Chiang Mai Arr 50.70 256 P **P** **01 09 07.3 +0.5**
comp=Z,18nm,0.8s,mb5.0,baz=36,slow=8.0,SNR=49
CMAR PcP PcP 01 10 24.7 +0.8
comp=Z,4.8nm,0.8s,baz=27,slow=6.6,SNR=4.1
CMAR pPcP 01 10 39.7
comp=Z,12nm,0.7s,baz=19,slow=2.3,SNR=7.6
CMAR Chiang Mai Arr 50.70 256 P **P** **01 09 07.4 +0.5**
CMAR 01 10 24.7
BVAR Borovoye Array 50.71 310 P **P** **01 09 04.8 -1.7**
comp=Z,4.0nm,0.5s,mb4.6,baz=56,slow=7.9,SNR=29
BVAR PcP PcP 01 10 23.5 0.0
comp=Z,16nm,0.7s,baz=91,slow=3.0,SNR=6.8
BRVK Borovoye 50.76 310 P **P** **01 09 05.3 -1.5**
comp=Z,106nm,0.7s,mb5.9,SNR=9.3
BRVK Borovoye 50.76 310*c i*P **P** **01 09 04.9 -1.9**
BRVK pmax pmax
comp=Z,21nm,1.2s,mb4.9
BRVK MLR MLR
comp=Z,12μm,20.0s,MS5.9
BRVK Borovoye 50.76 310 *e*P **P** **01 09 04.5 -2.3**
comp=Z,63nm,1.3s,mb5.4
BRVK LR LR
comp=Z,8μm,21.0s,MS5.7
BRVK Borovoye 50.76 310 P **P** **01 09 04.9 -1.9**
SNR=15
ALE Alert 51.29 5 P **P** **01 09 10.0 -0.6**
comp=Z,350nm,1.0s,mb6.2,SNR=29
AAA Alma-Ata 51.37 296 *e*P **P** **01 09 12.5 +0.9**
AAA *e*S **S** **01 16 32.0 +2.5**
AAA pmax pmax
comp=Z,1μm,10.1s
AAA smax
comp=E,700nm,17.8s
AAA MLR MLR
comp=Z,12μm,17.0s,MS6.0
ZRNK Zerenda 51.50 310 P **P** **01 09 09.7 -2.7**
ZRNK pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
MRSI Marisa 51.57 219 P **P** **01 09 12.8 -0.6**
comp=Z,2μmcomp=Z,123nm,1.4s,mb5.7
NST Nakhon Sawan 51.85 252 P **P** **01 09 15.0 -0.5**
ULHL Ulahol 52.33 295 P **P** **01 09 20.3 +1.5**
SNR=39
TKM2 Tokmak 2 52.40 296 P **P** **01 09 20.0 +0.7**
SNR=80
TKM2 Tokmak 2 52.40 296⇑*i*P **P** **01 09 19.4 +0.1**
TKM2 pmax pmax
comp=Z,262nm,1.6s,mb5.9
TKM2 MLR MLR
comp=Z,7μm,20.0s,MS5.7
TKM2 Tokmak 2 52.40 296⇑*i*P **P** **01 09 19.4 +0.1**
comp=Z,262nm,1.6s,mb5.9
TKM2 LR LR
comp=Z,7μm,20.0s,MS5.7
AGT Agartala 52.47 267 *i* P **P** **01 09 18.0 -2.1**
AGT *i* x x 01 09 55.0
LUWI Luwuk 52.57 217 P **P** **01 09 18.8 -2.0**
comp=Z,1μmcomp=Z,86nm,1.4s,mb5.5
RES Resolute Bay 52.62 18 LR LR 01 35 19.4
comp=Z,3μm,20.1s,MS5.3,baz=194,slow=40
RES Resolute Bay 52.62 18⇑*i*P **P** **01 09 20.4 -0.1**
RES pmax pmax
comp=Z,53nm,1.0s,mb5.4
RES Resolute Bay 52.62 18⇑*i*P **P** **01 09 20.4 -0.1**
comp=Z,53nm,1.0s,mb5.4
TAPN Taplejung 52.81 273 *e*P **P** **01 09 22.8 +0.2**
comp=Z,254nm,0.9s,mb6.2
YKA Yellowknife Ar 52.88 36 P **P** **01 09 22.8 +0.3**
comp=Z,10nm,0.8s,mb4.8,baz=298,slow=7.0,SNR=30
YKA sP sP 01 09 38.6 +6.0
comp=Z,19nm,0.8s,baz=298,slow=6.9,SNR=12
YKA Yellowknife Ar 52.88 36 P **P** **01 09 22.8 +0.3**
YKA sP sP 01 09 38.6 +6.0
CHMS Chumysh 52.90 297 P **P** **01 09 23.7 +0.7**
SNR=23
AAI Ambon 52.92 209 P **P** **01 09 22.3 -1.0**
comp=Z,96nm,1.4s,mb5.5
USP Ospenovka 52.92 297 P **P** **01 09 23.5 +0.4**
SNR=142
APSI Ampana 52.94 218 P **P** **01 09 22.7 -0.8**
comp=Z,111nm,1.3s,mb5.6
KBK Karagaybulak 52.95 296 P **P** **01 09 24.4 +1.1**
SNR=52
KZA Kyzart 53.05 295 P **P** **01 09 26.3 +2.1**
SNR=37
AAK Ala-Archa 53.24 296 P **P** **01 09 26.7 +1.2**
comp=Z,474nm,1.2s,mb6.3,SNR=19
AAK Ala-Archa 53.24 296 P **P** **01 09 27.0 +1.5**
SNR=25
AAK Ala-Archa 53.24 296 LR LR 01 33 29.6
comp=Z,9μm,18.4s,MS5.8,baz=44,slow=38
ODAN Odare 53.34 273 *e*P **P** **01 09 26.2 -0.2**
comp=Z,168nm,0.7s,mb6.1
TLE Tual 53.34 203 P **P** **01 09 24.2 -2.3**
comp=Z,101nm,1.4s,mb5.6
UCH Uchtor 53.44 296 P **P** **01 09 28.3 +1.3**
SNR=21
UCH Uchtor 53.44 296 *e*P **P** **01 09 27.8 +0.8**
comp=Z,37nm,1.0s,mb5.3
BTM Bintulu 53.57 230 P **P** **01 09 29.0 +0.7**
EKS2 Erkin-Say 53.68 297 P **P** **01 09 29.9 +1.1**
SNR=8.5
EKS2 Erkin-Say 53.68 297 PFAKE 01 09 40.0 +11
EKS2 LR LR
comp=Z,8μm,22.0s,MS5.7
KBS Kingsbay 53.69 351⇑*i*P **P** **01 09 28.1 -0.3**
KBS *e*S **S** **01 16 58.5 -2.0**
KBS AMS AMS 01 34 00.5
comp=Z,3μm,18.6s,MS5.4
KBS Kingsbay 53.69 351⇑*e*P **P** **01 09 26.8 -1.6**
KBS pmax pmax
comp=Z,101nm,1.0s,mb5.7
KBS Kingsbay 53.69 351 *e*P **P** **01 09 27.2 -1.1**
comp=Z,73nm,0.9s,mb5.6
KBS LR LR
comp=Z,3μm,19.0s,MS5.4
JIRN Jiri 53.70 274 *e*P **P** **01 09 29.3 +0.3**
comp=Z,400nm,0.8s,mb6.4
PCI Palu 53.74 220 P **P** **01 09 23.7 -5.7**
GUN Gumba 53.76 275 *e*P **P** **01 09 29.6 +0.1**
comp=Z,524nm,1.0s,mb6.4
SPITS Spitsbergen Ar 53.77 350 LR LR 01 34 44.7
comp=Z,4μm,18.9s,MS5.5,baz=35,slow=39
RAMN Ramite 53.84 273 *e*P **P** **01 09 30.0 -0.1**
comp=Z,255nm,0.5s,mb6.4
KSH Kashi 53.93 292 P **P** **01 09 35.0 +4.4**
KSH pP pP 01 09 42.1 +4.2
KSH sP sP 01 09 46.0 +5.3
KSH PcP PcP 01 10 39.6 +3.8
KSH PP PP 01 11 37.4 +5.7
KSH ScP ScP 01 14 34.4 +2.2
KSH PcS PcS 01 14 37.6 +2.6
KSH S **S** **01 17 07.9 +3.3**
KSH sS sS 01 17 20.7 +4.1
KSH ScS ScS 01 19 19.5 +1.1
KSH SS SS 01 20 48.8 +3.3
KSH pmax pmax
comp=Z,150nm,1.1s,mb5.8
KSH LR LR
comp=N,9μm,17.4s,MS6.0
KSH LR LR
comp=E,5μm,16.5s,MS6.0
KSH LR LR
comp=Z,12μm,18.6s,MS6.0
SVE Sverdlovsk 53.95 317⇑*e*P **P** **01 09 29.1 -1.4**
SVE *e* 01 10 30.3
SVE *e*S **S** **01 16 54.2 -10**
SVE pmax pmax
comp=Z,50nm,0.9s,mb5.4
SVE MLR MLR
comp=Z,4μm,16.0s,MS5.6
KKN Kakani 54.26 275 *e*P **P** **01 09 33.2 +0.1**
comp=Z,418nm,1.0s,mb6.3
PKI Pulchoki 54.30 275 *e*P **P** **01 09 33.3 -0.2**
comp=Z,227nm,0.9s,mb6.1
PKIN Phulchoki 54.30 275 *e*P **P** **01 09 33.6 +0.1**
comp=Z,257nm,0.9s,mb6.2
NNT Nongplab 54.34 250 P **P** **01 09 35.0 +1.2**
SOKR Solikamsk 54.36 321*c i*P **P** **01 09 30.4 -3.0**
SOKR 01 11 41.1
SOKR S **S** **01 17 04.4 -5.4**
SOKR *e* 01 19 20.3
SOKR SS SS 01 20 56.3 +4.9
SOKR pmax pmax
comp=Z,20nm,0.9s,mb5.0
SOKR MLR MLR
comp=Z,11μm,17.0s,MS6.0
DMN Daman 54.49 275 *e*P **P** **01 09 35.0 +0.2**
comp=Z,350nm,0.8s,mb6.3
GKN Gorkha 54.58 276 *e*P **P** **01 09 35.4 -0.1**
comp=Z,654nm,1.1s,mb6.6
SBUM Sibu 54.66 230 P **P** **01 09 37.4 +1.2**
SBUM Sibu 54.66 230 P **P** **01 09 36.4 +0.2**
comp=Z,788nmcomp=Z,26nm,1.4s,mb5.0
HNR Honiara 55.08 169 LR LR 01 29 56.2
comp=Z,4μm,22.0s,MS5.4,baz=327,slow=32
HNR Honiara 55.08 169 PFAKE 01 09 50.0 +11
HNR LR LR
comp=Z,4μm,19.0s,MS5.5
ARU Arti 55.14 317 P **P** **01 09 37.4 -1.7**
comp=Z,304nm,0.6s,mb6.5,SNR=18
ARU Arti 55.14 317*c i*P **P** **01 09 36.9 -2.2**
ARU *e* 01 10 38.7
ARU *e* 01 11 42.8
ARU *e*PPP 01 12 53.0
ARU S **S** **01 17 18.4 -2.0**
ARU 01 19 22.1
ARU SSS 01 23 08.5
ARU pmax pmax
comp=Z,42nm,1.0s,mb5.4
ARU MLR MLR
comp=Z,5μm,17.0s,MS5.7
ARU Arti 55.14 317⇑*i*P **P** **01 09 36.7 -2.4**
comp=Z,31nm,0.6s,mb5.5
ARU LR LR
comp=Z,6μm,19.0s,MS5.7
KDI Kendari 55.27 215 P **P** **01 09 40.7 +0.2**
comp=Z,1μmcomp=Z,69nm,2.2s,mb5.3
CAL Calcutta 55.39 268 *e*PKP **P** **01 09 41.2 -0.2**
CAL *ex* x 01 17 11.5
KOLN Koldanda 55.45 276 *e*P **P** **01 09 41.9 +0.1**
KK31 Karatay Array 55.49 299 P **P** **01 09 41.2 -0.7**
KK31 pmax pmax
comp=Z,36nm,0.6s,mb5.6
NLWA Neilton Lookou 55.81 55 ⇓P **P** **01 09 44.2 +0.1**
baz=56,SNR=6.5
NLWA Neilton Lookou 55.81 55 *e*P **P** **01 09 44.8 +0.8**
comp=Z,22nm,0.8s,mb5.2
NLWA LR LR
comp=Z,3μm,22.0s,MS5.3
BOK Bokaro 56.31 271 *e*PKP **P** **01 09 48.6 +0.6**
SPSI Sidrap Palu 56.48 219 P **P** **01 09 48.3 -0.9**
comp=Z,915nmcomp=Z,37nm,1.6s,mb5.2
JCW Jim Creek 56.49 53 *e*P **P** **01 09 49.0 +0.1**
KSM Kuching 56.52 232 P **P** **01 09 51.1 +1.6**
KSM Kuching 56.52 232⇑*i*P **P** **01 09 49.7 +0.2**
comp=Z,52nm,1.0s,mb5.5
KSM LR LR
comp=Z,2μm,20.0s,MS5.1
KSM Kuching 56.52 232 P **P** **01 09 49.6 0.0**
comp=Z,1μmcomp=Z,61nm,1.2s,mb5.5
B06A Marblemount 56.56 53 ⇑P **P** **01 09 49.7 +0.2**
baz=56
RPW Rockport 56.59 53 *e*P **P** **01 09 50.1 +0.5**
JOSI Joshimath 56.59 281 *e*PKP **P** **01 09 51.0 +1.1**
KLP Kalpa 56.91 283 *e*PKP **P** **01 09 53.1 +0.9**
HEBO Mount Hebo 57.04 57 *e*P **P** **01 09 55.4 +2.4**
comp=Z,119nm,1.3s,mb5.8
STKI Sintang 57.06 230 P **P** **01 09 53.8 +0.5**
comp=Z,82nm,1.5s,mb5.5
LON Longmire 57.34 55 *e*P **P** **01 09 55.7 +0.7**
MTMW Mount Mitchell 57.50 56 P **P** **01 09 58.2 +2.1**
LVZ Lovozero 57.53 336⇑*e*P **P** **01 09 54.2 -1.8**
LVZ pmax pmax
comp=Z,48nm,1.7s,mb5.2
LVZ MLR MLR
comp=Z,4μm,16.0s,MS5.6
LVZ Lovozero 57.53 336 PFAKE 01 10 10.0 +14
LVZ LR LR
comp=Z,4μm,19.0s,MS5.6
BKSI Bulukumba 57.55 217 P **P** **01 09 55.2 -1.5**
comp=Z,711nmcomp=Z,51nm,1.0s,mb5.5
KTGM Kuala Trenggan 57.64 241 P **P** **01 09 58.6 +1.1**
COR Corvallis 57.66 57 *e*P **P** **01 09 57.9 +0.7**
COR pmax pmax
comp=Z,72nm,0.9s,mb5.7
COR MLR MLR
comp=Z,3μm,22.0s,MS5.3
COR Corvallis 57.66 57 *e*P **P** **01 09 57.9 +0.7**
comp=Z,72nm,0.9s,mb5.7
COR LR LR
comp=Z,3μm,22.0s,MS5.3
ETW Entiat 57.71 53 *e*P **P** **01 09 58.3 +0.7**
SNG Songkhla 57.80 245 P **P** **01 09 59.0 +0.4**
comp=Z,120nm,0.7s,mb6.0
G04A Mulino 57.80 56 ⇓P **P** **01 09 58.2 0.0**
baz=58
SDNR Sundarnagar 57.81 284 *e*PKP **P** **01 09 58.9 +0.4**
B08A Colville Reser 57.85 52 ⇑P **P** **01 09 57.8 -0.7**
baz=58,SNR=7.8
SMLA Simla 57.90 283 *i* P **P** **01 09 59.5 +0.3**
SMLA *i* S **S** **01 17 56.3 -1.3**
SSOR Sweet Springs 58.01 57 P **P** **01 10 02.7 +3.0**
DAG Danmarks Havn 58.01 357⇓*e*P **P** **01 09 58.6 -0.7**
DAG pmax pmax
comp=Z,110nm,1.1s,mb5.8
DAG Danmarks Havn 58.01 357⇓*i*P **P** **01 09 58.6 -0.7**
comp=Z,105nm,1.1s,mb5.8
THN Thein Dam 58.11 285 *e*PKP **P** **01 09 59.6 -1.0**
VLL Laurance Lake 58.13 56 P **P** **01 10 03.0 +2.5**
HOOD Mount Hood Mea 58.22 56 *e*P **P** **01 10 02.5 +1.3**
comp=Z,174nm,0.9s,mb6.1
KEV Kevo 58.23 340 PFAKE 01 10 10.0 +9.1
KEV LR LR
comp=Z,4μm,21.0s,MS5.5
BHK Bhakra 58.24 284 *e*PKP **P** **01 09 58.6 -2.9**
H04A Detroit Lake 58.26 57 ⇑P **P** **01 10 00.7 -0.8**
baz=58,SNR=6.9
EDM Edmonton 58.29 45⇑*i*P **P** **01 10 01.6 +0.1**
AB31 Akbulak array 58.29 310 *e*P **P** **01 10 01.0 -0.6**
AB31 pmax pmax
comp=Z,22nm,0.4s,mb5.5
ABKAR Akbulak array 58.29 310 *e*P **P** **01 09 60.0 -1.6**
comp=Z,30nm,0.4s,mb5.7
AKTO Aktyubinsk 58.66 312 LR LR 01 38 05.3
comp=Z,14μm,18.6s,MS6.1,baz=239,slow=39
OD2 Odessa Site #2 58.74 53 *e*P **P** **01 10 04.2 -0.6**
ARCES ARCESS Array B 58.75 340 P **P** **01 10 04.0 -0.5**
comp=Z,7.6nm,0.6s,mb4.9,baz=24,slow=7.7,SNR=8.9
ARCES PcP PcP 01 10 54.5 +0.5
comp=Z,12nm,0.7s,baz=28,slow=5.5,SNR=4.6
ARCES LR LR 01 40 37.2
comp=Z,3μm,18.1s,MS5.4,baz=37,slow=41
ARCES ARCESS Array B 58.75 340 P **P** **01 10 04.0 -0.5**
ARCES 01 10 54.5
ARCES ARCESS Array B 58.75 340 P **P** **01 10 04.0 -0.5**
ARCES PcP PcP 01 10 54.5 +0.5
ARCES LR LR 01 40 37.2
ARE0 ARCESS Array S 58.75 340 *e*P **P** **01 10 04.3 -0.2**
CROR Criterion Ridg 58.80 56 P **P** **01 10 06.6 +1.4**
RSW Rattlesnake Hi 58.81 54 *e*P **P** **01 10 06.5 +1.3**
KKR Kurukshetra 58.84 282 *e*PKP **P** **01 10 06.0 +0.2**
HAWA Hanford 58.84 54 *e*P **P** **01 10 06.4 +0.9**
comp=Z,46nm,1.3s,mb5.3
HAWA LR LR
comp=Z,2μm,20.0s,MS5.2
G06A Carlson Farm, 58.86 56 ⇓P **P** **01 10 06.0 +0.3**
baz=59,SNR=5.8
F07A Phinny Hill Vi 58.90 55 ⇑P **P** **01 10 05.8 -0.1**
baz=59,SNR=6.9
HUMO Hull Mountain 58.98 59 *e*P **P** **01 10 08.7 +2.2**
comp=Z,16nm,1.1s,mb5.0
HUMO LR LR
comp=Z,2μm,20.0s,MS5.2
BBOR Butler Butte 58.98 59 P **P** **01 10 09.1 +2.5**
E08A Dider Farm, El 59.06 54 ⇑P **P** **01 10 07.2 +0.2**
baz=59
NEW Newport 59.13 51⇑*i*P **P** **01 10 07.5 +0.1**
NEW pmax pmax
comp=Z,34nm,1.3s
NEW MLR MLR
comp=Z,2μm,19.0s
NEW Newport 59.13 51⇑*i*P **P** **01 10 07.5 +0.1**
comp=Z,34nm,1.3s,mb5.2
NEW LR LR
comp=Z,2μm,19.0s,MS5.3
KULM Kulim 59.22 243 P **P** **01 10 09.7 +1.1**
KULM Kulim 59.22 243⇑*i*P **P** **01 10 09.1 +0.5**
comp=Z,123nm,1.1s,mb5.8
KULM LR LR
comp=Z,2μm,21.0s,MS5.2
KULM Kulim 59.22 243 P **P** **01 10 09.2 +0.7**
comp=Z,2μmcomp=Z,120nm,1.3s,mb5.8
FUNA Funafuti 59.24 147 PFAKE 01 10 20.0 +11
FUNA LR LR
comp=Z,6μm,20.0s,MS5.8
BISR Bishrakh 59.26 281 *e*PKP **P** **01 10 09.2 +0.6**
PBKI Pangkalan Bun 59.29 228 P **P** **01 10 09.1 +0.1**
NDI New Delhi 59.34 281 *e*PKP **P** **01 10 08.0 -1.2**
NDI *ex* x 01 18 14.0
COEN Coen 59.44 189 *e*P **P** **01 10 10.3 +0.5**
comp=Z,308nm,1.0s,mb6.3
COEN Coen 59.44 189 P **P** **01 10 09.7 -0.2**
comp=Z,162nm,1.1s,mb6.0
AYAN Aya Nagar 59.53 281 *e*PKP **P** **01 10 10.0 -0.5**
AYAN AMb AMB 01 10 14.3
comp=Z,128nm,1.0s,mb5.9
A12A Yaak River Ran 59.54 50 ⇑P **P** **01 10 11.0 +0.7**
baz=59
E09A Wood Farm, Sta 59.56 53 ⇓P **P** **01 10 10.7 +0.2**
baz=59,SNR=7.4
IPM Ipoh 59.61 243 P **P** **01 10 12.4 +1.2**
IPM Ipoh 59.61 243 P **P** **01 10 11.2 0.0**
comp=Z,939nmcomp=Z,50nm,1.6s,mb5.3
YBH Yreka Blue Hor 59.63 60 LR LR 01 30 58.4
comp=Z,2μm,21.6s,MS5.3,baz=305,slow=31
YBH Yreka Blue Hor 59.63 60 *e*P **P** **01 10 12.6 +1.6**
YBH pmax pmax
comp=Z,15nm,0.9s
YBH MLR MLR
comp=Z,2μm,22.0s
YBH Yreka Blue Hor 59.63 60 *e*P **P** **01 10 12.6 +1.6**
comp=Z,15nm,0.9s,mb5.0
YBH LR LR
comp=Z,2μm,22.0s,MS5.2
MMRI Maumere 59.68 214 P **P** **01 10 11.2 -0.4**
comp=Z,2μmcomp=Z,96nm,2.1s,mb5.5
SONA Sohna 59.70 281 *e*PKP **P** **01 10 11.9 +0.2**
SONA AMb AMB 01 10 14.4
comp=Z,126nm,1.0s,mb5.9
G08A Pilot Rock 59.80 55 ⇑P **P** **01 10 12.7 +0.5**
baz=60,SNR=11
C11A Tepee Creek (N 59.85 51 ⇓P **P** **01 10 12.7 +0.3**
baz=60
LNOR Lincton Mounta 59.85 54 *e*P **P** **01 10 13.8 +1.3**
MYKOM Kota Tinggi 59.99 238 P **P** **01 10 15.1 +1.3**
MYKOM Kota Tinggi 59.99 238 P **P** **01 10 14.5 +0.7**
comp=Z,1μmcomp=Z,57nm,1.5s,mb5.4
KGM Kluang 60.13 239 P **P** **01 10 16.4 +1.6**
TRO Tromso 60.14 343 *e*P **P** **01 10 12.6 -1.5**
TRO AMb AMB 01 10 14.5
comp=Z,84nm,2.7s,mb5.3
TRO *e*S **S** **01 18 24.4 -1.1**
TRO AMS AMS 01 42 30.8
comp=Z,3μm,18.3s,MS5.4
TRO Tromso 60.14 343 *e*P **P** **01 10 12.6 -1.5**
TRO pmax pmax
comp=Z,84nm,2.7s,mb5.3
TRO MLR MLR
comp=Z,3μm,18.3s,MS5.4
TRO Tromso 60.14 343 *e*P **P** **01 10 12.6 -1.5**
comp=Z,84nm,2.7s,mb5.3
TRO LR LR
comp=Z,3μm,18.3s,MS5.4
K05A Summer Lake 60.15 58 ⇑P **P** **01 10 15.7 +1.1**
baz=60,SNR=12
KAKA Kakadu 60.19 201 *e*P **P** **01 10 15.0 -0.1**
comp=Z,75nm,0.7s,mb5.8
KAKA Kakadu 60.19 201 *e*P **P** **01 10 14.8 -0.2**
comp=Z,242nm,0.8s,mb6.3
KAKA Kakadu 60.19 201 P **P** **01 10 15.4 +0.3**
comp=Z,1μmcomp=Z,182nm,0.8s,mb6.2
A13A Flathead Natio 60.21 49 ⇑P **P** **01 10 15.0 +0.1**
baz=60
KCPM Cahto Peak 60.28 62 *e*P **P** **01 10 16.1 +0.5**
C12B Naegeli Ranch, 60.35 51 ⇑P **P** **01 10 16.7 +0.9**
baz=60
F10A Beach Ranch, E 60.39 53 ⇓P **P** **01 10 16.2 0.0**
baz=60

WALA Waterton Lakes 60.40 49 eP P 01 10 16.7 +0.5
comp=Z,0.9nm,0.9s
WDC Whiskeytown Da 60.40 61 eP P 01 10 16.9 +0.5
WDC pmax pmax
comp=Z,34nm,1.1s,mb5.3
WDC MLR MLR
comp=Z,1µm,22.0s,MS5.1
WDC Whiskeytown Da 60.40 61 eP P 01 10 16.9 +0.5
WDC LR LR
comp=Z,34nm,1.1s,mb5.3
comp=Z,1µm,22.0s,MS5.1
H08A Prairie City 60.42 55 P P 01 10 17.3 +0.9
baz=60,SNR=7.1
G09A Cove 60.49 54 ⇑P P 01 10 16.7 -0.1
baz=60
B13A Whitefish 60.51 50 ⇓P P 01 10 16.9 -0.1
baz=60,SNR=15
BSMT Bassoo Peak 60.64 50 eP P 01 10 18.2 +0.3
KHET Khetri 60.69 281 ePKP P 01 10 18.7 +0.2
KHET AMb AMB 01 10 21.7
comp=Z,86nm,1.3s,mb5.7
LTIM Timbered Crate 60.70 60 P P 01 10 19.7 +1.3
A14A Double T Ranch 60.71 49 ⇑P P 01 10 18.0 -0.4
baz=60,SNR=10
D12A Red Ives Fores 60.81 51 ⇓P P 01 10 19.6 +0.7
baz=61
G10A Bishop Farm, J 60.85 54 ⇓P P 01 10 19.7 +0.3
baz=61,SNR=7.6
C13A Hot Springs 60.86 50 ⇑P P 01 10 19.5 +0.2
baz=61
JTMT Jette 60.98 50 eP P 01 10 20.8 +0.6
MOD Modoc 60.99 59 eP P 01 10 21.2 +0.9
comp=Z,25nm,0.9s,mb5.3
MOD LR LR
comp=Z,2µm,22.0s,MS5.3
BMO Blue Mountains 61.01 54 eP P 01 10 21.4 +1.0
comp=Z,7.6nm,0.9s,mb4.8
HOPS Hopland 61.01 63 PFAKE 01 10 30.0 +9.5
HOPS LR LR
comp=Z,2µm,21.0s,MS5.2
F11A Grangeville 61.05 53 ⇑P P 01 10 20.9 +0.2
baz=61,SNR=11
E12A Beaver Dam Sad 61.06 52 P P 01 10 21.1 +0.3
baz=61,SNR=18
A15A Johnson Ranch, 61.08 48 ⇑P P 01 10 19.8 -1.0
baz=61,SNR=13
B14A Marquette Ranc 61.16 49 ⇓P P 01 10 21.4 +0.1
baz=61,SNR=6.4
J08A Circle Bar Ran 61.22 56 ⇑P P 01 10 22.5 +0.6
baz=61,SNR=9.4
C14A Swan Lake 61.26 50 ⇑P P 01 10 22.1 +0.1
baz=61
D13A Huson 61.27 51 ⇓P P 01 10 22.0 -0.1
baz=61,SNR=10.0
G11A Walters Elk Ra 61.27 53 ⇓P P 01 10 22.3 +0.1
baz=61,SNR=19
SWMT Swartz Lake 61.28 50 eP P 01 10 22.4 +0.3
I09A Lost Marbles R 61.28 55 ⇑P P 01 10 22.9 +0.7
baz=61
KBL Kabul 61.32 291 ⇑iP P 01 10 22.2 -0.5
KBL pmax pmax
comp=Z,260nm,1.1s,mb6.3
KBL Kabul 61.32 291 ⇑iP P 01 10 22.2 -0.5
comp=Z,260nm,1.1s,mb6.3
H10A Noah's Angus R 61.48 54 ⇑P P 01 10 23.5 -0.2
baz=61,SNR=12
TPI Tanjungpandan 61.49 231 P P 01 10 23.7 -0.3
comp=Z,992nmcomp=Z,60nm,1.3s,mb5.6
B15A Bradely Ranch, 61.57 49 ⇑P P 01 10 24.0 -0.1
baz=61,SNR=18
F12A Elk City 61.63 53 ⇓P P 01 10 24.7 +0.1
baz=61,SNR=15
MCCM Marconi Confer 61.64 63 PFAKE 01 10 40.0 +15
MCCM LR LR
comp=Z,2µm,22.0s,MS5.1
WVOR Wild Horse Val 61.67 57 ⇑iP P 01 10 25.3 +0.4
WVOR pmax pmax
comp=Z,31nm,1.0s,mb5.4
WVOR MLR MLR
comp=Z,2µm,21.0s,MS5.3
WVOR Wild Horse Val 61.67 57 ⇑iP P 01 10 25.3 +0.4
comp=Z,31nm,1.0s,mb5.4
WVOR LR LR
comp=Z,2µm,21.0s,MS5.3
SLMT Seeley Lake 61.71 50 eP P 01 10 25.6 +0.5
MSO Missoula 61.72 51 eP P 01 10 25.5 +0.4
comp=Z,29nm,1.2s,mb5.3
MSO LR LR
comp=Z,1µm,21.0s,MS5.0
I10A Payette 61.75 55 ⇓P P 01 10 24.9 -0.6
baz=62
OHCM Honcut 61.80 62 eP P 01 10 26.3 +0.4
D14A Greenough 61.80 51 ⇑P P 01 10 25.8 +0.1
baz=62,SNR=13
E13A Victor 61.81 51 ⇑P P 01 10 25.8 0.0
baz=62,SNR=7.6
H11A Donnelly 61.84 54 ⇓P P 01 10 26.2 +0.2
baz=62
C15A Salmond Ranch, 61.87 49 ⇑P P 01 10 26.8 +0.7
baz=62,SNR=22
B16A M & M Farms, S 61.96 49 ⇓P P 01 10 26.8 0.0
baz=62,SNR=6.1
G12A Big Creek, Yel 61.97 53 ⇑P P 01 10 27.3 +0.4
baz=62
JOF Joensuu 62.00 333 eP P 01 10 24.7 -2.1
JOF pmax pmax
comp=Z,16nm,0.3s,mb5.6
JOF Joensuu 62.00 333 ep P 01 10 24.7 -2.1
comp=Z,16nm,0.3s,mb5.6
CHMT Chamberlain Mo 62.04 51 eP P 01 10 27.8 +0.5
VIS Vishakhapatnam 62.08 267 ePKP P 01 10 28.4 +0.3
VIS AMb AMB 01 10 29.4
comp=Z,128nm,1.3s,mb5.9
F13A Darby 62.13 52 ⇓P P 01 10 28.0 0.0
baz=62,SNR=8.4
BEKR Beckworth 62.17 60 P P 01 10 28.9 +0.6
baz=62
E14A Clinton 62.21 51 ⇓P P 01 10 28.5 0.0
baz=62
XMAS Kiritimati 62.29 118 PFAKE 01 10 40.0 +11
XMAS LR LR
comp=Z,5µm,22.0s,MS5.6
STEI Steigen 62.31 343 eP P 01 10 28.5 -0.3
C16A Fuhringer Ranc 62.31 49 ⇓P P 01 10 29.2 +0.1
baz=62,SNR=24
I11A Placerville 62.35 55 ⇑P P 01 10 30.0 +0.6
baz=62
D15A Lincoln 62.36 50 ⇓P P 01 10 29.8 +0.3
baz=62,SNR=6.3
AJM Ajmer 62.50 281 ePKP P 01 10 31.1 +0.4
K10A MacKenzie Ranc 62.50 56 ⇓P P 01 10 29.9 -0.6
baz=62,SNR=13
BSI Banda Aceh 62.51 248 P P 01 10 31.4 +0.5
comp=Z,30nm,1.6s,mb5.2
B17A L&G Farms, Che 62.51 48 ⇑P P 01 10 30.5 +0.1
baz=62
H12A Diamond D Ranc 62.59 53 ⇑P P 01 10 30.7 -0.3
baz=62
G13A Cobalt 62.61 53 ⇑P P 01 10 30.8 -0.4
baz=62,SNR=17
A18A Metzger Ranch, 62.62 47 ⇓P P 01 10 30.5 -0.6
baz=62,SNR=8.9
BHPL Bhopal 62.62 276 ePKP P 01 10 31.8 +0.2
E15A Deer Lodge 62.67 51 ⇓P P 01 10 31.5 -0.1
baz=62,SNR=9.5
FFC Flin Flon 62.71 39 P P 01 10 32.9 +1.3
comp=Z,224nm,0.8s,mb6.3,SNR=14
FFC Flin Flon 62.71 39 ⇑iP P 01 10 32.0 +0.4
FFC pmax pmax
comp=Z,41nm,0.9s,mb5.6
FFC MLR MLR
comp=Z,2µm,20.0s,MS5.3
FFC Flin Flon 62.71 39 ⇑iP P 01 10 32.0 +0.3
comp=Z,41nm,0.9s,mb5.5
FFC LR LR
comp=Z,2µm,20.0s,MS5.3
NGP Nagpur 62.83 273 ePKP P 01 10 31.6 -1.4
BKNI Bangkinang 62.85 240 P P 01 10 34.1 +1.0
comp=Z,3µmcomp=Z,310nm,1.0s,mb6.4
PAHR Pah Rah Range 62.87 60 eP P 01 10 33.8 +0.9
WCN Washoe City 62.88 61 ⇑P P 01 10 33.2 +0.1
baz=63
D16A Dana Ranch, Ca 62.89 50 ⇑P P 01 10 33.7 +0.7
baz=63,SNR=12
I12A Atlanta 62.89 54 ⇑P P 01 10 33.4 +0.4
baz=63,SNR=14
H13A Challis 62.92 53 ⇓P P 01 10 32.9 -0.3
baz=63
C17A Wharram Farm, 62.94 49 ⇑P P 01 10 33.3 0.0
baz=63,SNR=12
B18A Beardsley Farm 62.98 48 ⇑P P 01 10 33.9 +0.3
baz=63,SNR=9.6
K11A Parker Ranch, 63.00 56 ⇑P P 01 10 33.7 -0.1
baz=63
F15A Butte 63.11 51 ⇓P P 01 10 34.4 -0.1
baz=63,SNR=23
LRM Limekiln Ridge 63.15 51 eP P 01 10 35.3 +0.5
FCC Fort Churchill 63.20 32 ⇑iP P 01 10 34.6 -0.3
comp=Z,0.6nm,0.7s
EGMT Eagleton 63.23 48 ⇑P P 01 10 35.4 +0.1
baz=63,SNR=11
EGMT Eagleton 63.23 48 ⇑iP P 01 10 35.3 +0.1
comp=Z,64nm,1.1s,mb5.7
EGMT LR LR
comp=Z,3µm,20.0s,MS5.4
J12A Stokes Ranch, 63.24 55 ⇓P P 01 10 34.9 -0.5
baz=63,SNR=9.3
CMB Columbia Colle 63.27 62 eP P 01 10 36.6 +0.9
CMB pmax pmax
comp=Z,22nm,1.1s,mb5.2
CMB MLR MLR
comp=Z,2µm,20.0s,MS5.3
CMB Columbia Colle 63.27 62 eP P 01 10 36.6 +0.9
comp=Z,22nm,1.1s,mb5.2
CMB LR LR
comp=Z,2µm,20.0s,MS5.3
D17A Six Diamond Ra 63.28 49 ⇓P P 01 10 35.1 -0.4
baz=63,SNR=13
DLMT Dillon 63.35 52 eP P 01 10 37.7 +1.6
comp=Z,60nm,1.6s,mb5.5
MNSI Mandailing Nat 63.37 241 P P 01 10 35.7 -0.9
comp=Z,34nm,0.6s,mb5.6
SAO San Andreas Ge 63.38 64 PFAKE 01 10 50.0 +14
SAO LR LR
comp=Z,1µm,19.0s,MS5.1
H14A Leadore 63.39 53 ⇑P P 01 10 37.0 +0.7
baz=63
I13A Wildhorse Cree 63.40 54 ⇑P P 01 10 36.6 +0.2
baz=63,SNR=10
HLID Hailey 63.45 54 ⇑P P 01 10 36.8 0.0
baz=63,SNR=18
HLID Hailey 63.45 54 eP P 01 10 37.2 +0.4
comp=Z,7.6nm,0.9s,mb4.8
HLID LR LR
comp=Z,2µm,21.0s,MS5.3
M10A I.L. Ranch, Tu 63.47 57 ⇑P P 01 10 36.9 0.0
baz=63,SNR=12
L11A Cat Creek Ranc 63.53 56 ⇑P P 01 10 37.7 +0.4
baz=63,SNR=14
G15A Dillon 63.53 52 P P 01 10 37.6 +0.3
baz=63,SNR=14
SJI Sawahan 63.54 225 P P 01 10 36.5 -1.1
comp=Z,3µmcomp=Z,74nm,1.8s,mb5.4
MCMT McKenzie Canyo 63.55 52 eP P 01 10 37.9 +0.5
comp=Z,4.6nm,0.9s,mb4.5
WAKR Walker 63.57 61 eP P 01 10 39.0 +1.3
SDSI Sungai Dareh 63.61 238 P P 01 10 38.7 +0.5
comp=Z,2µmcomp=Z,111nm,1.8s,mb5.6
E17A Martinsdale 63.62 50 ⇓P P 01 10 38.2 +0.4
baz=63,SNR=13
SMRI Semarang 63.62 226 P P 01 10 38.7 +0.5
comp=Z,196nm,1.9s,mb5.8
F16A Kennard Place, 63.62 51 ⇑P P 01 10 39.3 +1.4
baz=63
J13A Cove Ranch, Pi 63.68 54 ⇑P P 01 10 38.6 +0.2
baz=64,SNR=9.1
BOZ Bozeman (W) 63.71 51 ⇓P P 01 10 38.8 +0.4
baz=64,SNR=25
BOZ Bozeman (W) 63.71 51 ⇑iP P 01 10 39.0 +0.6
BOZ pmax pmax
comp=Z,20nm,0.9s,mb5.2
BOZ MLR MLR
comp=Z,2µm,20.0s,MS5.3
BOZ Bozeman (W) 63.71 51 ⇑iP P 01 10 39.0 +0.6
comp=Z,20nm,0.9s,mb5.2
BOZ LR LR
comp=Z,2µm,20.0s,MS5.3
D18A Linhart Farms, 63.72 49 ⇓P P 01 10 37.7 -0.8
baz=64
BMN Battle Mountai 63.73 58 eP P 01 10 39.2 +0.5
BMN pmax pmax
comp=Z,24nm,0.9s,mb5.2
BMN MLR MLR
comp=Z,2µm,21.0s,MS5.3
BMN Battle Mountai 63.73 58 eP P 01 10 39.2 +0.5
comp=Z,24nm,0.9s,mb5.2
BMN LR LR
comp=Z,2µm,21.0s,MS5.3
K12A Draper Farm, C 63.74 55 ⇓P P 01 10 38.6 -0.1
baz=64,SNR=5.3
I14A Mackay 63.77 53 ⇑P P 01 10 39.6 +0.8
baz=64,SNR=18
PWJI Pagerwojo 63.77 224 P P 01 10 38.0 -1.1
comp=Z,179nm,1.3s,mb5.9
H15A Lima 63.79 52 ⇓P P 01 10 39.2 +0.2
baz=64
PPI Padang Panjang 63.85 240 P P 01 10 39.5 -0.3
comp=Z,6µmcomp=Z,37nm,1.1s,mb5.3
G16A Moss Hill, Enn 63.87 51 ⇑P P 01 10 39.9 +0.4
baz=64,SNR=15
MOR8 Moi Rana 63.96 342 ⇑iP P 01 10 37.9 -1.9
MOR8 AMb AMB 01 10 39.1
comp=Z,109nm,1.1s,mb5.8
MOR8 Moi Rana 63.96 342 ⇑iP P 01 10 37.9 -1.9
comp=Z,109nm,1.1s,mb5.8
M11A Holland Ranch, 63.96 57 ⇓P P 01 10 41.0 +0.8
baz=64,SNR=11
KONS Konsvik 63.97 343 eP P 01 10 39.6 -0.2
L12A House Creek Ra 63.97 56 ⇓P P 01 10 40.5 +0.2
baz=64
FLOS Flostrand 64.06 342 eP P 01 10 40.2 -0.2
E18A Harlowton 64.06 49 ⇓P P 01 10 41.3 +0.5
baz=64,SNR=9.6
F17A Fitzpatrick Pl 64.08 50 ⇑P P 01 10 41.1 +0.3
baz=64,SNR=9.2
KNA Kununurra 64.09 204 P P 01 10 41.0 -0.2
comp=Z,2µmcomp=Z,187nm,0.9s,mb6.1
J14A Carey 64.11 54 ⇑P P 01 10 42.0 +0.9
baz=64,SNR=12
KAF Kangasniemi 64.15 335 eP P 01 10 40.0 -1.1
KAF pmax pmax
comp=Z,47nm,0.7s,mb5.6
KAF Kangasniemi 64.15 335 eP P 01 10 40.0 -1.1
comp=Z,47nm,0.7s,mb5.6
KAF Kangasniemi 64.15 335 ep P 01 10 40.0 -1.1
comp=Z,47nm,0.7s,mb5.6
PDSI Padang 64.17 239 P P 01 10 42.0 +0.1
comp=Z,74nm,1.4s,mb5.5
K13A Stover Farm, H 64.20 55 ⇑P P 01 10 42.7 +0.9
baz=64
O10A Cortez Mining, 64.25 58 ⇓P P 01 10 43.1 +1.0
baz=64
NVAR Mina Array Bea 64.31 61 P P 01 10 43.1 +0.5
comp=Z,6.2nm,0.8s,mb4.7,baz=292,slow=6.2,SNR=32
NVAR sP sP 01 10 59.5 +6.8
comp=Z,3.9nm,0.7s,baz=3.0,slow=31,SNR=10
NVAR PcP PcP 01 11 19.1 +2.0
comp=Z,6.6nm,0.8s,baz=280,slow=6.3,SNR=4.8
QLMT Earthquake Lak 64.33 52 eP P 01 10 43.4 +0.8
comp=Z,37nm,1.4s,mb5.2
SCO Scoresbysund 64.40 357 ⇑iP P 01 10 42.8 +0.2
SCO *i* S S 01 19 20.3 +1.1
SCO pmax pmax
comp=Z,46nm,1.0s,mb5.5
SCO MLR MLR
comp=Z,2µm,18.0s,MS5.4
SCO Scoresbysund 64.40 357 ⇑iP P 01 10 42.8 +0.2
comp=Z,46nm,1.0s,mb5.5
SCO *i* S S 01 19 20.3 +1.1
SCO
comp=Z,2µm,18.0s
G17A Pierce Place, 64.40 51 ⇑P P 01 10 43.9 +0.9
baz=64
M12A Wells 64.49 56 ⇓P P 01 10 44.4 +0.8
baz=64,SNR=9.3
H16A Russell Place, 64.51 52 ⇑P P 01 10 44.3 +0.6
baz=64,SNR=8.9
AKL Akola 64.56 274 ePKP P 01 10 44.7 +0.3
F18A Big Timber 64.58 50 ⇑P P 01 10 44.7 +0.5
baz=64,SNR=13
L13A Double Diamond 64.63 55 ⇓P P 01 10 45.1 +0.5
baz=64
PUL Pulkovo 64.64 331 ⇑eP P 01 10 44.4 +0.1
PUL pmax pmax
comp=Z,82nm,0.3s,mb6.2
PUL MLR MLR
comp=Z,3µm,17.0s,MS5.6
J15A Blackfoot 64.67 53 ⇑P P 01 10 45.4 +0.6
baz=64,SNR=5.3
GCMT Greycliff 64.68 50 eP P 01 10 46.0 +1.2
comp=Z,20nm,1.2s,mb5.0
P10A Eureka 64.69 59 ⇑P P 01 10 45.4 +0.4
baz=64
KLSI 64.72 233 P P 01 10 45.2 -0.2
comp=Z,136nm,1.9s,mb5.7
ELK Elko 64.72 57 PFAKE 01 11 00.0 +15
ELK LR LR
comp=Z,2µm,21.0s,MS5.3
FINES FINESS Array B 64.74 334 P P 01 10 43.4 -1.5
comp=Z,51nm,0.6s,mb5.8,baz=44,slow=5.6,SNR=276
FINES LR LR 01 43 15.8
comp=Z,4µm,18.9s,MS5.6,baz=36,slow=40
FINES FINESS Array B 64.74 334 P P 01 10 43.4 -1.5
FINES LR LR 01 43 15.8
N12A Clover Valley, 64.77 57 ⇓P P 01 10 45.3 -0.2
baz=65
N12A Clover Valley, 64.77 57 eP P 01 10 46.0 +0.5
comp=Z,17nm,1.0s,mb5.0
KLI Kotabumi 64.79 233 P P 01 10 47.6 +1.7
comp=Z,5µmcomp=Z,96nm,1.5s,mb5.6
K14A Jones Ranch, D 64.79 54 ⇓P P 01 10 46.0 +0.4
baz=65,SNR=8.6
MTUM Tungsten Hills 64.82 62 eP P 01 10 47.0 +1.1
MTUM epP pP 01 11 00.1 +6.8
O11A Cowboy Ranch, 64.85 58 ⇓P P 01 10 46.4 +0.3
baz=65
MDSI Maura Dua 64.86 234 P P 01 10 46.6 +0.3
comp=Z,49nm,2.1s,mb5.2
I16A Newdale 64.90 52 ⇑P P 01 10 46.3 0.0
baz=65,SNR=7.6
LEM Lembang 64.90 229 P P 01 10 46.8 +0.2
comp=Z,82nm,1.3s,mb5.6
M13A Montello 64.96 56 ⇓P P 01 10 46.5 -0.3
baz=65
M13A Montello 64.96 56 eP P 01 10 47.3 +0.5
comp=Z,20nm,1.1s,mb5.1
G18A Lazy EL Ranch, 65.04 50 ⇓P P 01 10 46.9 -0.3
baz=65
LKWY Lake 65.07 51 PFAKE 01 11 00.0 +13
LKWY LR LR
comp=Z,4µm,19.0s,MS5.7
K15A Arbon 65.07 54 ⇑P P 01 10 47.4 0.0
baz=65,SNR=6.7
L14A Malta 65.07 55 ⇑P P 01 10 47.6 +0.1
baz=65
IMW Indian Meadow 65.19 52 ⇑iP P 01 10 49.4 +1.2
comp=Z,25nm,1.2s,mb5.1
TPH Tonopah 65.20 60 PFAKE 01 11 00.0 +12
TPH LR LR
comp=Z,1µm,20.0s,MS5.2
J16A Bone 65.22 53 ⇑P P 01 10 48.2 -0.1
baz=65,SNR=11
Q10A Clear Creek Ra 65.23 59 ⇑P P 01 10 47.7 -0.8
baz=65
CTA Charters Tower 65.25 185 LR LR 01 35 49.0
comp=Z,2µm,21.2s,MS5.2,baz=358,slow=33
CTAO Charters Tower 65.25 185 eP P 01 10 49.2 +0.6
CTAO pmax pmax
comp=Z,24nm,1.0s,mb5.2
CTAO MLR MLR
comp=Z,2µm,20.0s,MS5.3
CTAO Charters Tower 65.25 185 eP P 01 10 49.2 +0.5
comp=Z,24nm,1.0s,mb5.2
CTAO LR LR
comp=Z,2µm,20.0s,MS5.3
N13A Wendover, West 65.26 56 ⇑P P 01 10 48.9 +0.2
baz=65
N13A Wendover, West 65.26 56 ⇑iP P 01 10 49.0 +0.3
comp=Z,28nm,0.9s,mb5.3
O12A Currie 65.31 57 ⇓P P 01 10 49.4 +0.4
baz=65,SNR=12
RLMT Red Lodge 65.33 50 ⇓P P 01 10 49.4 +0.4
baz=65,SNR=10
RLMT Red Lodge 65.33 50 eP P 01 10 50.6 +1.5
comp=Z,59nm,1.5s,mb5.4
RLMT LR LR
comp=Z,3µm,21.0s,MS5.5
RRI2 Red Ridge 65.33 53 ⇑iP P 01 10 50.2 +1.1
comp=Z,36nm,0.8s,mb5.5
M14A Sheep Mountain 65.35 55 ⇓P P 01 10 49.3 +0.1
baz=65,SNR=11
TPAW Teton Pass 65.45 52 ⇑iP P 01 10 51.0 +1.1
comp=Z,47nm,1.2s,mb5.4
HVU Hansel Valley 65.50 55 eP P 01 10 51.9 +1.7
K16A Soda Springs 65.51 53 ⇑P P 01 10 51.9 +1.7
baz=65,SNR=7.6
LOHW Long Hollow 65.56 52 ⇑iP P 01 10 51.3 +0.7
comp=Z,38nm,1.3s,mb5.3
SNOW Snow King Moun 65.58 52 eP P 01 10 52.4 +1.7
comp=Z,32nm,1.1s,mb5.3
PKM Peak Mountain 65.58 65 ⇓P P 01 10 51.9 +1.1
baz=65
L15A Malad City 65.58 54 ⇑P P 01 10 50.9 +0.1
baz=65,SNR=5.9
REDW Red Top Meadow 65.58 52 ⇑iP P 01 10 51.7 +1.0
comp=Z,45nm,1.2s,mb5.4
R10A Warm Springs 65.63 60 ⇑P P 01 10 51.3 +0.2
baz=66
HYB Hyderabad 65.66 270 eP P 01 10 51.0 -0.5
HYB Hyderabad 65.66 270 ⇑iP P 01 10 51.0 -0.5
comp=Z,75nm,1.0s,mb5.7
HYB eS S 01 19 40.0 +4.0
J17A Brown Place, J 65.66 52 ⇑P P 01 10 51.8 +0.5
baz=66,SNR=8.7
Q11A Duckwater 65.67 59 ⇓P P 01 10 51.6 +0.2
baz=66
S10A Tonopah Range, 65.68 60 ⇑P P 01 10 51.5 +0.1
baz=66,SNR=17
CWC Cottonwood Cre 65.70 62 ⇑P P 01 10 52.0 +0.4
baz=66
OBN Obninsk 65.70 325 P P 01 10 50.7 -0.6
comp=Z,240nm,0.8s,mb6.3,SNR=5.8
OBN Obninsk 65.70 325 eP P 01 10 49.9 -1.4
OBN pmax pmax
comp=Z,37nm,1.0s,mb5.4
OBN Obninsk 65.70 325 eP P 01 10 49.9 -1.4
comp=Z,35nm,0.8s,mb5.4
OBN LR LR
comp=Z,5µm,19.0s,MS5.8
P12A McGill 65.72 58 ⇑P P 01 10 51.7 +0.1
baz=66
DGMT Dagmar 65.78 45 eP P 01 10 51.7 -0.2
comp=Z,20nm,0.4s,mb5.5
DGMT LR LR
comp=Z,4µm,20.0s,MS5.6
AHID Auburn Hatcher 65.83 53 PFAKE 01 11 00.0 +7.7
AHID LR LR
comp=Z,2µm,19.0s,MS5.3
O13A Hicks Ranch, I 65.85 57 ⇑P P 01 10 53.9 +1.4
baz=66
N14A Grayback Hills 65.86 56 ⇑P P 01 10 52.0 -0.6
baz=66,SNR=7.3
M15A Larsen Ranch, 65.89 55 P P 01 10 53.3 +0.6
baz=66,SNR=18
BGU Big Grassy Mou 65.90 56 eP P 01 10 53.4 +0.6
comp=Z,13nm,1.2s,mb4.8
NSS Namsos 65.91 342 eP P 01 10 50.8 -1.7
NSS eS S 01 19 36.1 -1.7
NSS AMS AMS 01 43 05.2
comp=Z,3µm,22.0s,MS5.5
LAO LASA Array 65.92 47 ⇑iP P 01 10 53.3 +0.5
comp=Z,40nm,0.9s,mb5.5
LAO LR LR
comp=Z,3µm,21.0s,MS5.4
I18A Diamond G Ranc 65.94 52 ⇓P P 01 10 53.7 +0.7
baz=66
ISA Isabella 65.94 63 ⇑P P 01 10 52.7 -0.5
baz=66
SPUT South Promonto 65.99 55 eP P 01 10 54.0 +0.6
comp=Z,22nm,1.1s,mb5.1
R11A Troy Canyon, C 66.02 59 ⇓P P 01 10 53.5 -0.2
baz=66,SNR=18
Q12A Willow Creek R 66.04 58 ⇓P P 01 10 53.5 -0.3
baz=66
ARVC Arvin 66.06 64 ⇑P P 01 10 54.4 +0.5
baz=66
DAC Darwin (Calif) 66.11 62 PFAKE 01 11 10.0 +16
DAC LR LR
comp=Z,1µm,20.0s,MS5.1
L16A Fish Haven 66.12 54 ⇓P P 01 10 54.0 -0.2
baz=66
ABKT Ailbek 66.15 300 P P 01 10 55.3 +0.8
comp=Z,621nm,0.8s,mb6.7,SNR=46

N15A	Stansbury Isla	66.22	55	⇓P	P	01 10 54.9	+0.1
	baz=66						
P13A	Bates Ranch, G	66.26	57	⇑P	P	01 10 55.0	-0.2
	baz=66						
MPMC	Manual Prospec	66.31	62	⇑P	P	01 10 55.0	-0.6
	baz=66,SNR=9.4						
HWUT	Hardware Ranch	66.31	54	⇑*i*P	P	01 10 55.7	+0.3
	comp=Z,20nm,1.1s,mb5.1						
HWUT				LR	LR		
	comp=Z,2μm,19.0s,MS5.4						
S11A	Rachel	66.37	60	⇑P	P	01 10 56.0	0.0
	baz=66						
L17A	Cokeville	66.39	54	⇓P	P	01 10 55.2	-0.8
	baz=66						
LATR	Latur	66.39	273	*e*PKP	P	01 10 56.1	-0.2
FURC	Furnace Creek,	66.44	62	⇑P	P	01 10 56.8	+0.5
	baz=66,SNR=11						
DUG	Dugway	66.50	56	⇓P	P	01 10 56.7	+0.1
	baz=66,SNR=15						
DUG	Dugway	66.50	56	⇑*i*P	P	01 10 57.0	+0.4
DUG				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.2						
DUG				MLR	MLR		
	comp=Z,1μm,20.0s,MS5.2						
DUG	Dugway	66.50	56	⇑*i*P	P	01 10 57.0	+0.4
	comp=Z,26nm,1.1s,mb5.2						
DUG				LR	LR		
	comp=Z,1μm,20.0s,MS5.2						
K18A	Toltan Ranch,	66.51	53	⇑P	P	01 10 56.6	-0.1
	baz=66,SNR=8.2						
Q13A	Wheeler Ranch,	66.58	58	P	P	01 10 57.8	+0.6
	baz=66,SNR=18						
R12A	Pony Springs,	66.63	59	⇑P	P	01 10 57.0	-0.5
	baz=66,SNR=7.4						
BW06	Boulder Array	66.69	52	⇓P	P	01 10 57.6	-0.2
	baz=66,SNR=15						
BW06	Boulder Array	66.69	52	*e*P	P	01 10 58.1	+0.2
BW06				LR	LR		
	comp=Z,2μm,21.0s,MS5.3						
PDAR	Pinedale Array	66.69	52	P	P	01 10 57.6	-0.2
	comp=Z,6.5nm,0.8s,mb4.7,baz=288,slow=1.7,SNR=53						
PDAR				pP	pP	01 11 11.9	+6.6
	comp=Z,6.0nm,0.7s,baz=323,slow=2.2,SNR=11						
PDAR				PcP	PcP	01 11 27.1	+0.3
	comp=Z,5.8nm,0.9s,baz=324,slow=4.0,SNR=5.9						
PDAR				PKPPKP		01 39 26.3	
	comp=Z,1.3nm,1.0s,baz=174,slow=2.8,SNR=6.1						
PDAR				LR	LR	01 42 09.2	
	comp=Z,1μm,18.4s,MS5.2,baz=343,slow=38						
WRAB	Tennant Creek	66.72	197	P	P	01 10 57.0	-1.1
	comp=Z,660nm,1.0s,mb6.6,SNR=12						
WRAB	Tennant Creek	66.72	197	*e*P	P	01 10 57.2	-0.9
WRAB				pmax	pmax		
	comp=Z,110nm,1.0s,mb5.8						
WRAB				MLR	MLR		
	comp=Z,2μm,22.0s,MS5.3						
WRAB	Tennant Creek	66.72	197	*e*P	P	01 10 57.2	-0.9
	comp=Z,110nm,1.0s,mb5.8						
WRAB				LR	LR		
	comp=Z,2μm,22.0s,MS5.3						
WRAB	Tennant Creek	66.72	197	P	P	01 10 57.6	-0.5
	comp=Z,2μmcomp=Z,134nm,1.1s,mb5.9						
WRA	Warramunga Arr	66.73	197	P	P	01 10 57.1	-1.1
	comp=Z,47nm,1.1s,mb5.4,baz=16,slow=6.2,SNR=94						
WRA				pP	pP	01 11 11.5	+5.9
	comp=Z,68nm,0.9s,baz=14,slow=6.5,SNR=20						
WRA				LR	LR	01 38 21.2	
	comp=Z,1μm,21.3s,MS5.2,baz=15,slow=34						
WRA				PKP2bc		01 39 31.9	
	comp=Z,1.7nm,0.9s,baz=191,slow=2.7,SNR=6.5						
WRA	Warramunga Arr	66.73	197	P	P	01 10 57.1	-1.1
WRA				*PP	pP	01 11 11.5	+5.9
WRA	Warramunga Arr	66.73	197	P	P	01 10 57.1	-1.1
WRA				pP	pP	01 11 11.5	+5.9
WRA				LR	LR	01 38 21.2	
WRA				⇑*e*		01 39 31.9	
P14A	Drum Mountains	66.73	57	⇓P	P	01 10 56.1	-2.0
	baz=67						
EDW2	Edwards Air Fo	66.75	63	⇑P	P	01 10 56.1	-2.3
	baz=67,SNR=6.4						
U10A	Ash Meadows, A	66.80	61	⇓P	P	01 10 59.1	+0.5
	baz=67						
VSU	Vasula	66.84	332	*c i*P	P	01 10 57.1	-1.4
VSU				pmax	pmax		
	comp=Z,65nm,1.0s,mb5.6						
VSU				MLR	MLR		
	comp=Z,3μm,17.0s,MS5.5						
M17A	Scullys Gap (B	66.91	54	⇑P	P	01 10 58.9	-0.3
	baz=67,SNR=7.3						
S12A	Delamar Landin	66.94	59	⇑P	P	01 10 59.9	+0.4
	baz=67,SNR=9.2						
T11A	Corn Creek, Al	66.95	60	⇓P	P	01 10 59.9	+0.3
	baz=67,SNR=18						
L18A	Fontenelle, Gr	66.97	53	⇓P	P	01 10 59.2	-0.5
	baz=67						
Q14A	Sevier Lake (B	67.00	57	⇓P	P	01 11 00.1	+0.2
	baz=67,SNR=16						
JLU	Jordanelle	67.03	55	*e*P	P	01 11 00.7	+0.7
	comp=Z,47nm,1.6s,mb5.3						
K19A	Absolon Red Bu	67.05	52	⇑P	P	01 10 60.0	-0.2
	baz=67,SNR=7.3						
NLU	North Lily Min	67.08	56	*e*P	P	01 11 02.9	+2.5
	comp=Z,18nm,1.0s,mb5.1						
R13A	O'Grain Ranch,	67.11	58	⇓P	P	01 11 00.7	+0.1
	baz=67						
N17A	Moffit Pass	67.16	54	⇓P	P	01 11 00.7	-0.1
	baz=67						
P15A	Leamington	67.21	56	P	P	01 11 01.9	+0.7
	baz=67,SNR=6.0						
GSC	Goldstone	67.22	62	⇓P	P	01 11 01.0	-0.4
	baz=67						
GSC	Goldstone	67.22	62	*e*P	P	01 11 02.7	+1.4
GSC				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
GSC	Goldstone	67.22	62	*e*P	P	01 11 02.7	+1.4
	comp=Z,9.6nm,0.9s,mb4.8						
L19A	Farson	67.24	53	⇑P	P	01 11 01.9	+0.5
	baz=67						
FITZ	Fitzroy Crossi	67.25	206	*e*P	P	01 11 01.3	-0.2
	comp=Z,40nm,0.9s,mb5.4						
FITZ	Fitzroy Crossi	67.25	206	⇑*i*P	P	01 11 01.3	-0.3
	comp=Z,49nm,1.1s,mb5.5						
FITZ	Fitzroy Crossi	67.25	206	P	P	01 11 01.6	+0.1
	comp=Z,102nm,1.3s,mb5.7						
O16A	Springville	67.25	55	⇓P	P	01 11 02.1	+0.7
	baz=67						
DAU	Daniels Canyon	67.26	55	*e*P	P	01 11 02.1	+0.6
M18A	Lyman	67.28	54	⇓P	P	01 11 02.7	+1.1
	baz=67						
BHV	Bhavnagar	67.29	278	*e*PKP	P	01 11 02.0	+0.1
MSVF	Nonsavu	67.35	152	*e*P	P	01 11 02.9	+0.7
	comp=Z,25nm,1.0s,mb5.2						
MSVF				LR	LR		
	comp=Z,5μm,21.0s,MS5.7						
VSR	Storozhevoye	67.36	321	*c i*P	P	01 11 01.3	-0.7
VSR				*e*S	S	01 19 59.1	+3.2
VSR				pmax	pmax		
	comp=N,10.0nm,0.4s						
VSR				pmax	pmax		
	comp=E,10.0nm,0.4s						
VSR				pmax	pmax		
	comp=Z,40nm,0.4s,mb5.8						
VSR				smax			
	comp=N,180nm,4.7s						
VSR				smax			
	comp=E,330nm,4.7s						
VSR				smax			
	comp=Z,80nm,4.7s						
VSR				MLR	MLR		
	comp=N,6μm,21.0s,MS5.9						
VSR				MLR	MLR		
	comp=E,6μm,21.0s,MS5.9						
VSR				MLR	MLR		
	comp=Z,12μm,21.0s,MS6.1						
BFSC	Mount Baldy Ra	67.37	64	⇓P	P	01 11 01.9	-0.4
	baz=67						
U11A	Corn Creek	67.38	61	⇑P	P	01 11 02.0	-0.3
	baz=67						
MDRS	Chennai	67.41	266	*ex*	x	01 11 24.2	
MDRS				*ex*	x	01 13 53.2	
K20A	Yellowstone Ra	67.44	52	⇓P	P	01 11 01.9	-0.7
	baz=67,SNR=10.0						
Q15A	Fillmore	67.52	57	⇓P	P	01 11 02.4	-0.8
	baz=67						
S13A	Holt Ranch, En	67.56	59	⇓P	P	01 11 03.3	-0.1
	baz=67,SNR=8.8						
R14A	James Farms, M	67.60	58	⇑P	P	01 11 03.4	-0.3
	baz=67						
ARUT	Antelope Range	67.68	58	*e*P	P	01 11 04.2	0.0
ARUT				pmax	pmax		
	comp=Z,17nm,1.0s,mb5.0						
ARUT	Antelope Range	67.68	58	*e*P	P	01 11 04.2	0.0
	comp=Z,18nm,1.0s,mb5.0						
V11A	Goodsprings	67.73	61	⇓P	P	01 11 04.6	+0.1
	baz=68,SNR=5.6						
N18A	Larsen Ranch,	67.80	54	⇓P	P	01 11 05.6	+0.7
	baz=68						
HEC	Hector,Ludlow	67.82	63	⇑P	P	01 11 04.8	-0.4
	baz=68,SNR=6.4						
AFI	Afiamalu	67.83	141	PFAKE		01 11 20.0	+15
AFI				LR	LR		
	comp=Z,3μm,20.0s,MS5.5						
S14A	Cedar City	67.86	58	⇓P	P	01 11 05.7	+0.3
	baz=68						
L20A	Wamsutter	67.87	52	⇓P	P	01 11 05.3	0.0
	baz=68,SNR=8.5						
CCUT	Cedar City	67.88	59	*e*P	P	01 11 06.5	+1.1
	comp=Z,17nm,1.0s,mb5.0						
U12A	Valley of Fire	67.89	60	⇑P	P	01 11 04.9	-0.6
	baz=68						
T13A	Saint George	67.90	59	⇓P	P	01 11 06.0	+0.4
	baz=68						
MSU	Marysvale	67.96	57	*e*P	P	01 11 07.3	+1.3
TMUT	Trail Mountain	68.02	56	⇑*i*P	P	01 11 06.7	+0.4
	comp=Z,13nm,0.8s,mb5.0						
BHJ	Bhuj	68.03	281	*e*PKP	P	01 11 07.2	+0.6
MURC	Murrieta	68.07	64	⇓P	P	01 11 06.7	-0.1
	baz=68						
O18A	Roosevelt	68.08	55	⇓P	P	01 11 07.0	+0.3
	baz=68,SNR=7.6						
N19A	John Jarvie Ra	68.14	54	⇑P	P	01 11 07.3	+0.3
	baz=68						
V12A	Nelson	68.16	61	⇓P	P	01 11 06.4	-0.8
	baz=68						
P17A	Butcher Ranch,	68.18	56	⇑P	P	01 11 07.4	+0.1
	baz=68						
POO	Poona	68.22	275	*e*PKP	P	01 11 08.1	+0.2
POO				AMb	AMB	01 11 10.0	
	comp=Z,142nm,1.1s,mb5.9						
U13A	Pakoon Wash	68.25	60	⇓P	P	01 11 08.4	+0.5
	baz=68,SNR=27						
GMRC	Granite Mounta	68.27	62	⇑P	P	01 11 08.1	+0.1
	baz=68,SNR=6.7						
Q16A	Castle Valley	68.29	56	⇓P	P	01 11 07.7	-0.3
	baz=68,SNR=5.6						
M20A	Sweetwater, Wa	68.30	53	⇑P	P	01 11 07.3	-0.8
	baz=68,SNR=7.4						
P18A	Preston Nutter	68.36	55	⇑P	P	01 11 07.5	-1.0
	baz=68,SNR=7.3						
T14A	Hurricane	68.37	59	⇑P	P	01 11 08.4	-0.1
	baz=68,SNR=10						
W12A	Cal Nev Ari	68.42	61	⇑P	P	01 11 08.3	-0.6
	baz=68						
L21A	Rawlins	68.44	52	⇑P	P	01 11 08.6	-0.3
	baz=68,SNR=6.9						
ULM	Lac du Bonnet	68.49	39	P	P	01 11 08.6	-0.5
	comp=Z,15nm,0.8s,mb5.1,baz=311,slow=7.6,SNR=12						
ULM				LR	LR	01 43 45.5	
	comp=Z,2μm,18.7s,MS5.4,baz=331,slow=38						
ULM	Lac du Bonnet	68.49	39	⇑*i*P	P	01 11 08.3	-0.7
	comp=Z,21nm,0.9s,mb5.2						
ULM				LR	LR		
	comp=Z,3μm,19.0s,MS5.5						
DZM	Mont Dzumac	68.50	165	*e*S	S	01 20 10.5	+0.6
	comp=Z,598nm,23.2s						
DZM				*e*SS	SS	01 24 31.2	-3.4
	comp=Z,689nm,31.4s						
DZM				*e*LR	LR	01 31 54.9	
	comp=Z,4μm,23.2s						
R16A	Teasdale	68.52	57	⇑P	P	01 11 09.2	-0.2
	baz=68,SNR=12						
PFO	Pinyon Flat Ob	68.54	64	PFAKE		01 11 20.0	+10
PFO				LR	LR		
	comp=Z,2μm,22.0s,MS5.2						
SRU	San Rafael	68.54	56	⇓P	P	01 11 09.9	+0.3
	baz=68,SNR=10						
SRU	San Rafael	68.54	56	*e*P	P	01 11 10.3	+0.7
SRU				pmax	pmax		
	comp=Z,13nm,0.7s,mb5.0						
SRU	San Rafael	68.54	56	*e*P	P	01 11 10.3	+0.7
	comp=Z,13nm,0.7s,mb5.0						
O19A	Miners Draw (B	68.56	54	⇑P	P	01 11 07.3	-2.4
	baz=68						
V13A	Grand Canyon W	68.61	60	⇑P	P	01 11 10.2	+0.1
	baz=68,SNR=20						
M21A	Separation Pea	68.68	52	⇑P	P	01 11 10.0	-0.5
	baz=68,SNR=7.2						
N20A	Spence Gulch,	68.70	53	⇑P	P	01 11 10.8	+0.3
	baz=68,SNR=15						
U14A	Mt Trumbull	68.73	59	⇑P	P	01 11 11.4	+0.6
	baz=69,SNR=12						
Q18A	Rafter H Ranch	68.78	56	⇓P	P	01 11 10.5	-0.6
	baz=69						
RSSD	Black Hills	68.79	48	*e*P	P	01 11 11.0	0.0
RSSD				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.1						
RSSD				MLR	MLR		
	comp=Z,3μm,19.0s,MS5.5						
RSSD	Black Hills	68.79	48	*e*P	P	01 11 11.0	-0.1
	comp=Z,21nm,0.9s,mb5.1						
RSSD				LR	LR		
	comp=Z,3μm,19.0s,MS5.5						
KAD	Karad	68.81	273	*e*PKP	P	01 11 11.4	-0.1
T15A	Red Dirt Ranch	68.82	59	⇑P	P	01 11 11.0	-0.3
	baz=69,SNR=8.4						
S16A	Weppner Ranch,	68.83	58	⇓P	P	01 11 11.8	+0.4
	baz=69,SNR=11						
R17A	Hanksville Air	68.89	56	⇓P	P	01 11 12.2	+0.4
	baz=69,SNR=7.1						
L22A	Ellis Ranch, M	68.91	51	⇓P	P	01 11 11.2	-0.7
	baz=69,SNR=9.4						
MAK	Makhachkala	68.96	310	*c i*P	P	01 11 12.8	+0.7
MAK				*e*		01 11 35.3	
MAK				*e*		01 13 43.6	
MAK				*e*PPP		01 15 18.9	
MAK				*e*S	S	01 20 15.1	-0.1
MAK				pmax	pmax		
	comp=N,35nm,1.1s						
MAK				pmax	pmax		
	comp=E,53nm,0.9s						
MAK				pmax	pmax		
	comp=Z,184nm,0.9s,mb6.0						
MAK				pmax	pmax		
	comp=Z,500nm,1.9s,mb6.1						
MAK				MLR	MLR		
	comp=E,7μm,21.0s,MS6.1						
MAK				MLR	MLR		
	comp=Z,6μm,17.0s,MS5.9						
MAK				MLR	MLR		
	comp=N,7μm,15.0s,MS6.1						
IRM	Iron Mountain	69.00	62	⇑P	P	01 11 12.6	+0.1
	baz=69,SNR=7.9						
P19A	Cripple Cowboy	69.09	55	⇓P	P	01 11 13.0	0.0
	baz=69,SNR=11						
NB2	NORSAR Subarra	69.12	340	P	P	01 11 12.6	-0.2
	comp=Z,381nm,1.4s,mb6.1,baz=28,slow=6.5						
NB2	NORSAR Subarra	69.12	340	P	P	01 11 12.6	-0.2
	baz=28,slow=6.5						
NB2	NORSAR Subarra	69.12	340	P	P	01 11 12.6	-0.2
NB2	NORSAR Subarra	69.12	340	P	P	01 11 12.6	-0.2
NOA	NORSAR Array B	69.12	340	P	P	01 11 12.1	-0.8
	comp=Z,108nm,0.8s,mb5.8,baz=29,slow=6.3,SNR=243						
NOA				LR	LR	01 46 33.5	
	comp=Z,2μm,18.1s,MS5.4,baz=15,slow=40						
IZAR	Zarasai	69.13	330	*e*P	P	01 11 12.6	-0.4
IZAR				AMB	AMB	01 11 13.2	
	comp=Z,20nm,0.8s,mb5.1						
BC3	Big Chuckawall	69.14	63	⇓P	P	01 11 12.6	-0.8
	baz=69,SNR=5.8						
N21A	Black Mountain	69.16	53	⇑P	P	01 11 13.1	-0.3
	baz=69,SNR=6.7						
W13A	Hualapai Mount	69.17	61	⇑P	P	01 11 13.7	+0.1
	baz=69						
O20A	White River Ci	69.17	54	⇑P	P	01 11 12.7	-0.8
	baz=69,SNR=6.6						
U15A	North Rim	69.26	59	⇓P	P	01 11 14.6	+0.4
	baz=69,SNR=21						
V14A	Boquillas Ranc	69.29	60	⇑P	P	01 11 14.4	+0.1
	baz=69,SNR=24						
IDID	Didziasalis	69.29	330	*e*P	P	01 11 13.7	-0.3
IDID				AMB	AMB	01 11 16.2	
	comp=Z,38nm,0.9s,mb5.3						
HFS	Hagfors	69.30	339	LR	LR	01 44 06.5	
	comp=Z,4μm,20.9s,MS5.6,baz=24,slow=38						
ISAL	Salakas	69.31	330	*e*P	P	01 11 13.8	-0.2
ISAL				AMB	AMB	01 11 15.5	
	comp=Z,35nm,1.1s,mb5.2						
S17A	Black Ridge (B	69.36	57	⇑P	P	01 11 14.6	0.0
	baz=69,SNR=6.5						
NAO01	NORSAR Array S	69.38	340	⇑*i*P	P	01 11 13.8	-0.6
	comp=Z,60nm,0.8s,mb5.6						
NAO01				LR	LR		
	comp=Z,3μm,19.0s,MS5.5						
Q19A	Hogan Spring (	69.38	55	⇓P	P	01 11 14.3	-0.5
	baz=69,SNR=12						
R18A	Canyonlands Na	69.39	56	P	P	01 11 14.4	-0.4
	baz=69,SNR=15						
IIGN	Ignalina	69.45	330	*e*P	P	01 11 14.5	-0.4
IIGN				AMB	AMB	01 11 16.4	
	comp=Z,42nm,1.2s,mb5.2						
MICGM	Minsk	69.52	329	*e*P	P	01 11 15.0	-0.4
X13A	Yucca	69.53	61	⇑P	P	01 11 15.7	-0.1
	baz=69,SNR=13						
PDMCI	Parker Dam,Lak	69.53	62	⇓P	P	01 11 16.3	+0.5
	baz=69						
MNK	Minsk	69.54	329	*e*P	P	01 11 15.0	-0.5
MNK				pmax	pmax		
	comp=Z,840nm,0.5s,mb6.9						
MNK				MLR	MLR		
	comp=Z,15μm,18.0s,MS6.3						
O21A	Pagoda	69.56	53	⇓P	P	01 11 15.4	-0.5
	baz=69						
W14A	Seligman	69.58	60	⇓P	P	01 11 16.2	+0.1
	baz=69,SNR=24						
NACGM	Naroch	69.61	329	*e*P	P	01 11 13.0	-2.9
Y12C	Blythe	69.66	62	⇓P	P	01 11 15.9	-0.7
	baz=70						
N22A	Wattenberg Ran	69.73	52	⇓P	P	01 11 16.9	0.0
	baz=70,SNR=7.4						
V15A	Kaibab Nationa	69.74	59	⇑P	P	01 11 17.5	+0.4
	baz=70,SNR=14						
S18A	Hurst Farm, Bl	69.80	57	⇓P	P	01 11 16.6	-0.7
	baz=70,SNR=18						
R19A	Curley Farm, L	69.82	56	⇓P	P	01 11 16.8	-0.8
	baz=70,SNR=6.2						
AGMN	Agassiz Nation	69.90	41	⇑*i*P	P	01 11 17.0	-0.9
	comp=Z,41nm,1.0s,mb5.3						
AGMN				LR	LR		
	comp=Z,2μm,20.0s,MS5.3						
GLA	Glamis	69.93	63	⇓P	P	01 11 17.8	-0.5
	baz=70,SNR=5.8						
GLA	Glamis	69.93	63	*e*P	P	01 11 18.6	+0.3
GLA				pmax	pmax		
	comp=Z,42nm,1.3s,mb5.2						
GLA	Glamis	69.93	63	*e*P	P	01 11 18.6	+0.4
	comp=Z,42nm,1.3s,mb5.2						
Q20A	Ridgley Place,	69.94	55	⇑P	P	01 11 17.6	-0.7
	baz=70,SNR=8.8						
PHWY	Pilot Hill	69.94	51	⇑*i*P	P	01 11 17.8	-0.5
PV04	Paradox Valley	69.96	55	*e*P	P	01 11 18.6	+0.2
FOO	Floro	69.97	344	*e*P	P	01 11 17.3	-0.8
FOO				AMb	AMB	01 11 38.8	
	comp=Z,69nm,1.7s,mb5.3						
FOO				*e*S	S	01 20 25.4	-1.1
FOO				*e*SS	SS	01 25 11.9	+17
FOO				AMS	AMS	01 44 17.7	
	comp=Z,2μm,25.7s,MS5.2						
FOO	Floro	69.97	344	*e*P	P	01 11 17.3	-0.8
	comp=Z,69nm,1.7s,mb5.3						
FOO				LR	LR		
	comp=Z,2μm,25.7s,MS5.2						
P21A	Newcastle	70.04	54	⇑P	P	01 11 18.3	-0.6
	baz=70,SNR=8.1						
Y13A	Salome	70.05	62	⇑P	P	01 11 19.0	0.0
	baz=70						
W15A	Williams	70.11	60	⇑P	P	01 11 19.2	-0.1
	baz=70,SNR=7.6						
BORG	Borgarnes	70.11	357	P	P	01 11 20.0	+1.1
	comp=Z,385nm,0.9s,mb6.3,SNR=7.7						
BORG	Borgarnes	70.11	357	LR	LR	01 42 25.3	
	comp=Z,1μm,19.5s,MS5.1,baz=7.6,slow=36						
BORG	Borgarnes	70.11	357	*e*P	P	01 11 20.1	+1.2
BORG				pmax	pmax		
	comp=Z,123nm,1.4s						
BORG				MLR	MLR		
	comp=Z,1μm,21.0s						
BORG	Borgarnes	70.11	357	*e*P	P	01 11 20.1	+1.2
	comp=Z,123nm,1.4s,mb5.6						
BORG				LR	LR		
	comp=Z,1μm,21.0s,MS5.1						
O22A	Kremmling	70.11	53	⇑P	P	01 11 19.3	0.0
	baz=70,SNR=7.1						
U17A	Shonto	70.13	58	⇓P	P	01 11 19.4	0.0
	baz=70,SNR=10						
HYA	Hoyanger	70.13	343	⇑*i*P	P	01 11 19.4	+0.4
HYA				AMb	AMB	01 11 20.6	
	comp=Z,126nm,1.1s,mb5.8						
HYA	Hoyanger	70.13	343	⇑*i*P	P	01 11 19.4	+0.4
	comp=Z,126nm,1.1s,mb5.8						
X14A	Yava	70.20	61	⇓P	P	01 11 18.9	-1.0
	baz=70,SNR=18						
OSL	Oslo	70.21	340	*e*P	P	01 11 19.5	0.0
OSL				AMb	AMB	01 11 20.6	
	comp=Z,92nm,1.0s,mb5.7						
OSL	Oslo	70.21	340	*e*P	P	01 11 19.5	0.0
	comp=Z,92nm,1.0s,mb5.7						
T18A	Mexican Hat	70.24	57	⇑P	P	01 11 18.8	-1.4
	baz=70,SNR=11						
S19A	Harvey Farm, M	70.26	56	⇓P	P	01 11 20.0	-0.3
	baz=70,SNR=21						
GOA	Goa	70.29	272	⇓*e*PKP	P	01 11 20.1	-0.5
PV01	Paradox Valley	70.33	55	*e*P	P	01 11 20.7	0.0
	comp=Z,1μm,1.0s,mb6.8						
EIDS	Eidsvold	70.35	180	*e*P	P	01 11 21.1	+0.4
	comp=Z,18nm,1.0s,mb5.0						
EIDS				*e*		01 11 35.1	
P22A	Eagle	70.38	53	⇓P	P	01 11 20.2	-0.8
	baz=70						
R20A	Redvale	70.41	55	⇑P	P	01 11 21.2	+0.1
	baz=70,SNR=6.8						
WUAZ	Wupatki	70.42	59	⇓P	P	01 11 21.7	+0.4
	baz=70,SNR=9.8						
WUAZ	Wupatki	70.42	59	⇑*i*P	P	01 11 21.4	+0.2
	comp=Z,55nm,1.5s,mb5.3						
WUAZ				LR	LR		
	comp=Z,1μm,21.0s,MS5.2						
Q21A	Lamborn Mesa,	70.43	54	⇓P	P	01 11 21.4	+0.1
	baz=70,SNR=8.4						
ASAR	Alice Springs	70.44	197	P	P	01 11 21.0	-0.2
	comp=Z,16nm,0.8s,mb5.0,baz=2.1,slow=5.8,SNR=81						
ASAR				pP	pP	01 11 35.4	+6.6
	comp=Z,42nm,0.9s,baz=8.1,slow=4.3,SNR=14						
Y14A	Wickenburg	70.48	61	⇑P	P	01 11 20.8	-0.8
	baz=70,SNR=11						
SUE	Sulen	70.52	343	⇑*i*P	P	01 11 21.5	+0.1
SMCO	Snowmass	70.54	54	*e*P	P	01 11 22.8	+0.8
	comp=Z,20nm,1.0s,mb5.0						
Z13A	Yuma Proving G	70.56	62	⇑P	P	01 11 22.0	-0.2
	baz=70,SNR=8.2						
X15A	Humboldt

KIV Kislovodsk 70.80 314c iP P 01 11 23.8 +0.4
KIV e 01 11 43.7
KIV eS S 01 20 36.5 -0.3
KIV eSS SS 01 25 12.3 +4.0
KIV pmax pmax
comp=Z,277nm,1.0s,mb6.1
KIV pmax pmax
comp=Z,319nm,5.4s
KIV MLR MLR
comp=Z,6µm,18.0s,MS5.9
KIV Kislovodsk 70.80 314⇑iP P 01 11 23.2 -0.2
comp=Z,212nm,0.8s,mb6.1
KIV LR LR
comp=Z,7µm,19.0s,MS5.9
KIV Kislovodsk 70.80 314 P P 01 11 24.4 +0.9
SNR=98
Y15A Casa Rosa Ranc 70.88 61 ⇓P P 01 11 23.8 -0.3
baz=71,SNR=6.5
ISCO Idaho Springs 70.89 53 eP P 01 11 24.7 +0.7
ISCO pmax pmax
comp=Z,13nm,0.8s,mb4.9
ISCO MLR MLR
comp=Z,2µm,20.0s,MS5.4
ISCO Idaho Springs 70.89 53 eP P 01 11 24.7 +0.7
comp=Z,13nm,0.8s,mb4.9
ISCO LR LR
comp=Z,2µm,20.0s,MS5.4
T19A Beclabito 70.95 57 ⇓P P 01 11 23.8 -0.6
baz=71,SNR=7.1
ASK Askoy 70.96 343⇑iP P 01 11 23.3 -0.8
MVCO Mesa Verde 71.00 56 ⇓P P 01 11 23.8 -1.0
baz=71
MVCO Mesa Verde 71.00 56 eP P 01 11 25.1 +0.3
comp=Z,55nm,1.5s,mb5.3
MVCO LR LR
comp=Z,2µm,20.0s,MS5.3
ZEI Tsey 71.01 312 eP P 01 11 22.2 -2.5
ZEI eS S 01 20 37.9 -1.3
ZEI pmax pmax
comp=Z,117nm,0.9s,mb5.8
ZEI pmax pmax
comp=N,120nm,0.9s
ZEI pmax pmax
comp=E,142nm,0.9s
ZEI MLR MLR
comp=Z,9µm,20.0s,MS6.0
ZEI MLR MLR
comp=E,4µm,18.0s,MS6.0
ZEI MLR MLR
comp=N,6µm,18.0s,MS6.0
BER Bergen 71.02 343 eP P 01 11 23.9 -0.5
BER AMb AMB 01 11 25.8
comp=Z,122nm,0.5s,mb6.1
BER eS S 01 20 39.8 +1.0
BER eSS SS 01 25 31.4 +21
BER AMS AMS 01 45 35.5
comp=Z,2µm,18.8s,MS5.5
BER Bergen 71.02 343 eP P 01 11 23.9 -0.6
BER pmax pmax
comp=Z,122nm,0.5s,mb6.1
BER MLR MLR
comp=Z,2µm,18.8s,MS5.5
BER Bergen 71.02 343 eP P 01 11 23.9 -0.5
comp=Z,122nm,0.5s,mb6.1
BER LR LR
comp=Z,2µm,18.8s,MS5.5
P23A Jefferson 71.05 53 ⇑P P 01 11 24.5 -0.6
baz=71
S21A Coal Bank Pass 71.10 55 ⇑P P 01 11 25.3 -0.1
baz=71,SNR=13
X16A Lo Mia Camp, P 71.12 60 ⇑P P 01 11 25.5 0.0
baz=71,SNR=21
PALK Pallekele 71.14 261 iP P 01 11 26.6 +0.7
PALK Pallekele 71.14 261 eP P 01 11 25.5 -0.3
comp=Z,96nm,1.5s,mb5.5
PALK Pallekele 71.14 261 P P 01 11 24.4 -1.5
comp=Z,29nm,1.6s,mb5.0
DGRG David-gareji 71.15 310 P P 01 11 26.4 +0.8
V18A Ganado 71.16 58 ⇑P P 01 11 25.3 -0.4
baz=71,SNR=7.0
ODD1 Odda 71.17 342⇑iP P 01 11 25.6 +0.2
ODD1 AMb AMB 01 11 26.9
comp=Z,80nm,1.0s,mb5.6
ODD1 Odda 71.17 342⇑iP P 01 11 25.6 +0.2
comp=Z,80nm,1.0s,mb5.6
U19A Dine' College, 71.20 57 ⇑P P 01 11 25.6 -0.4
baz=71,SNR=9.1
MTA Mtatsminda 71.29 311 P P 01 11 27.0 +0.6
TBLG Delisi 71.29 311 eP P 01 11 27.5 +1.1
TBLG Delisi 71.29 311 P P 01 11 27.6 +1.1
R22A Saguache, Gunn 71.31 54 ⇓P P 01 11 26.5 -0.1
baz=71,SNR=12
KEH Kehvi 71.31 312 P P 01 11 26.3 -0.3
114A Black Gap (USA 71.35 62 ⇑P P 01 11 27.2 +0.3
baz=71,SNR=11
ONI Oni 71.37 312 P P 01 11 28.2 +1.3
GOR Gori 71.45 311 P P 01 11 29.0 +1.7
Y16A Circle Bar Ran 71.46 60 ⇑P P 01 11 28.2 +0.6
baz=71,SNR=7.9
P24A Kohler Place, 71.48 52 ⇑P P 01 11 28.7 +1.1
baz=71
X17A Forest Lakes 71.56 60 ⇓P P 01 11 28.8 +0.6
baz=71
SUW Suwalki 71.58 331 eP P 01 11 27.1 -0.9
comp=Z,300nm,1.2s,mb6.1
SUW epP pP 01 11 34.6 -0.8
SUW ePcP PcP 01 11 44.7 -2.5
SUW LMZ 01 39 50.8
comp=Z,2µm,28.9s
SUW Suwalki 71.58 331⇑iP P 01 11 26.8 -1.2
comp=Z,165nm,1.0s,mb5.9
S22A 4UR Ranch, Cre 71.60 55 ⇓P P 01 11 28.4 0.0
baz=71,SNR=16
BLS5 Blasjo 71.65 342⇑iP P 01 11 28.4 +0.1
BLS5 AMb AMB 01 11 29.8
comp=Z,63nm,1.1s,mb5.5
BLS5 Blasjo 71.65 342⇑iP P 01 11 28.4 +0.1
comp=Z,63nm,1.1s,mb5.5
V19A Window Rock 71.69 58 ⇑P P 01 11 28.1 -0.9
baz=72
T21A Navajo Lake 71.71 56 ⇑P P 01 11 28.8 -0.3
baz=72
Q24A Divide 71.72 53 ⇓P P 01 11 28.1 -1.0
baz=72,SNR=7.1
115A Sonoran Desert 71.79 62 ⇓P P 01 11 28.1 -1.5
baz=72
Z16A Peralta Trail, 71.85 61 ⇑P P 01 11 27.7 -2.3
baz=72
P25A Willow Gulch B 71.89 52 ⇓P P 01 11 28.9 -1.2
baz=72,SNR=6.3
W19A Sanders 71.89 58 ⇑P P 01 11 29.3 -0.9
baz=72
214A Organ Pipe Nat 71.93 63 ⇑P P 01 11 30.8 +0.3
baz=72
X18A Snowflake 71.95 59 ⇑P P 01 11 30.0 -0.5
baz=72,SNR=5.3
AKASG Malin Array Be 71.96 325 P P 01 11 29.1 -1.2
comp=Z,49nm,0.4s,mb5.7,baz=35,slow=6.1,SNR=194
AKASG LR LR 01 45 50.6
comp=Z,6µm,18.1s,MS5.9,baz=10.0,slow=38
AKBB Malin Array Si 71.96 325⇑iP P 01 11 29.5 -0.8
KIEV Kiev 71.97 325⇑iP P 01 11 28.7 -1.7
KIEV pmax pmax
comp=Z,121nm,1.0s,mb5.8
KIEV MLR MLR
comp=Z,5µm,19.0s,MS5.8
KIEV Kiev 71.97 325⇑iP P 01 11 28.7 -1.7
comp=Z,121nm,1.0s,mb5.8
KIEV LR LR
comp=Z,5µm,19.0s,MS5.8
Y17A Roosevelt 71.97 60 ⇑P P 01 11 30.7 0.0
baz=72,SNR=6.4
V20A Brimhall 71.98 57 ⇓P P 01 11 30.2 -0.5
baz=72
U21A Nageezi 72.02 56 ⇓P P 01 11 31.0 +0.1
baz=72
OGNE Ogallala 72.06 50⇑iP P 01 11 30.8 -0.3
comp=Z,108nm,1.0s,mb5.7
OGNE LR LR
comp=Z,3µm,19.0s,MS5.5
T22A Edith 72.06 55 ⇑P P 01 11 30.9 -0.3
baz=72,SNR=5.3
MBWA Marble Bar 72.09 211 eP P 01 11 30.8 -0.5
comp=Z,32nm,1.0s,mb5.2
MBWA LR LR
comp=Z,652nm,22.0s,MS4.9
MBWA Marble Bar 72.09 211 P P 01 11 30.9 -0.4

comp=Z,54nm,1.1s,mb5.4
KMY Karmoy 72.11 342⇑iP P 01 11 31.3 +0.3
KMY AMb AMB 01 11 32.6
comp=Z,92nm,1.1s,mb5.6
KMY Karmoy 72.11 342⇑iP P 01 11 31.3 +0.3
comp=Z,92nm,1.1s,mb5.6
EYMN Ely 72.14 39⇑iP P 01 11 30.8 -0.6
comp=Z,48nm,1.1s,mb5.3
EYMN LR LR
comp=Z,2µm,20.0s,MS5.3
116A Eloy 72.21 62 ⇑P P 01 11 29.7 -2.4
baz=72
R24A Sanders Place, 72.25 53 ⇓P P 01 11 31.4 -0.9
baz=72,SNR=9.9
Q25A Bedland, Calha 72.26 52 ⇓P P 01 11 29.7 -2.6
baz=72
STAV Stavanger 72.26 342 eP P 01 11 32.0 +0.1
STAV AMb AMB 01 11 33.4
comp=Z,82nm,1.1s,mb5.5
STAV Stavanger 72.26 342 eP P 01 11 32.0 +0.1
comp=Z,82nm,1.1s,mb5.6
SDCO Great Sand Dun 72.36 54 eP P 01 11 31.5 -1.5
comp=Z,11nm,1.1s,mb4.7
SDCO LR LR
comp=Z,2µm,22.0s,MS5.3
GNI Garni 72.40 310 eP P 01 11 34.5 +1.4
GNI Garni 72.40 310 LR LR 01 50 08.2
comp=Z,4µm,18.5s,MS5.8,baz=89,slow=42
GNI Garni 72.40 310c iP P 01 11 32.7 -0.4
GNI pmax pmax
comp=Z,261nm,1.2s
GNI Garni 72.40 310⇑iP P 01 11 34.9 +1.8
comp=Z,228nm,1.0s,mb6.1
GNI LR LR
comp=Z,4µm,19.0s,MS5.7
GNI Garni 72.40 310 P P 01 11 35.3 +2.2
SNR=68
Y18A Canyon Day Jun 72.41 60 ⇓P P 01 11 32.6 -0.7
baz=72,SNR=17
W20A Ramah 72.42 58 ⇓P P 01 11 33.8 +0.5
baz=72
X19A St. Johns 72.42 59 ⇑P P 01 11 33.8 +0.4
baz=72,SNR=8.2
V21A Milan 72.46 57 ⇑P P 01 11 34.6 +1.0
baz=72
Z17A San Carlos Hig 72.47 60 ⇓P P 01 11 34.5 +0.8
baz=72
LRW Lerwick 72.49 346 P P 01 11 32.8 -0.5
LRW AMb AMB 01 11 36.3
comp=Z,91nm,2.6s,mb5.2
LRW AMS AMS 01 48 09.1
comp=Z,1µm,17.9s
LRW Lerwick 72.49 346⇑eP P 01 11 32.8 -0.5
LRW AMb AMB 01 11 36.3
comp=Z,91nm,2.6s,mb5.2
LRW AMS AMS 01 48 09.1
comp=Z,1µm,17.9s,MS5.3
U22A Llaves 72.53 56 ⇑P P 01 11 33.1 -0.9
baz=72,SNR=5.3
T23A Casias Ranch, 72.55 55 ⇓P P 01 11 33.8 -0.2
baz=72
SOC Sochi 72.57 315c iP P 01 11 34.4 +0.3
SOC e*PP pP 01 11 41.4 -0.2
SOC e 01 14 10.8
SOC ePPP 01 15 56.0
SOC eS S 01 20 53.8 -3.4
SOC eSS SS 01 25 35.4 0.0
SOC pmax pmax
comp=Z,142nm,0.9s,mb5.9
SOC pmax pmax
comp=Z,540nm,1.9s,mb6.2
SOC MLR MLR
comp=Z,5µm,16.0s,MS5.9
S24A Houchin Ranch, 72.60 54 ⇓P P 01 11 34.0 -0.3
baz=72,SNR=11
216A Three Points, 72.74 62 ⇓P P 01 11 35.1 -0.2
baz=73,SNR=9.1
Y19A Nutrioso 72.76 59 ⇓P P 01 11 34.9 -0.5
baz=73,SNR=8.0
117A Oracle 72.80 61 ⇓P P 01 11 35.6 0.0
baz=73,SNR=7.6
ANN Anapa 72.80 317c iP P 01 11 34.4 -1.0
ANN i *PP pP 01 11 43.9 +1.0
ANN i 01 11 48.0
ANN i 01 14 16.9
ANN ePPP 01 16 02.6
ANN i S S 01 21 06.2 +6.4
ANN eSS SS 01 25 41.2 +2.4
ANN pmax pmax
comp=N,20nm,0.6s
ANN pmax pmax
comp=E,17nm,0.6s
ANN pmax pmax
comp=Z,103nm,0.6s,mb5.9
V22A San Miguel Ran 72.82 56 ⇑P P 01 11 34.3 -1.4
baz=73
X20A Quemado 72.82 58 ⇓P P 01 11 36.5 +0.7
baz=73,SNR=14
ECSD EROS Data Cent 72.86 45⇑iP P 01 11 34.8 -1.0
comp=Z,43nm,0.9s,mb5.4
ECSD LR LR
comp=Z,3µm,20.0s,MS5.6
TRD Trivandrum 72.89 265⇑ePKP P 01 11 37.5 +1.1
U23A El Rito 72.95 56 ⇑P P 01 11 36.9 +0.5
baz=73,SNR=13
TUC Tucson 72.95 61 eP P 01 11 35.9 -0.6
TUC pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
TUC MLR MLR
comp=Z,1µm,20.0s,MS5.1
TUC Tucson 72.95 61 eP P 01 11 35.9 -0.6
comp=Z,8.7nm,0.9s,mb4.7
TUC LR LR
comp=Z,1µm,20.0s,MS5.1
DIGO Kars 72.95 310 iP P 01 11 38.2 +1.8
KARS Kars 72.96 311 eP P 01 11 38.0 +1.6
S25A Robets Cordova 73.03 53 ⇓P P 01 11 36.3 -0.7
baz=73
BCA Borcka 73.14 312 eP P 01 11 37.6 +0.1
ARTV Artvin 73.17 312 iP P 01 11 38.8 +1.1
DBOC Borcka 73.19 312 iP P 01 11 38.7 +0.9
Z19A T-Link Ranch, 73.21 60 ⇑P P 01 11 37.9 -0.2
baz=73
118A Homack Ranch, 73.23 61 ⇑P P 01 11 38.4 +0.2
baz=73,SNR=18
DAGI Agillar 73.25 312 iP P 01 11 38.9 +0.7
217A Green Valley 73.29 62 ⇑P P 01 11 38.7 +0.2
baz=73,SNR=7.8
BSD Bornholm Skovb 73.30 335⇑iP P 01 11 37.4 -0.8
BSD i S S 01 21 06.7 +1.6
BSD pmax pmax
comp=Z,92nm,0.8s,mb5.8
BSD MLR MLR
comp=Z,4µm,20.0s,MS5.7
BSD Bornholm Skovb 73.30 335⇑iP P 01 11 37.4 -0.8
comp=Z,92nm,0.8s,mb5.8
BSD i S S 01 21 06.7 +1.6
BSD
comp=Z,4µm,20.0s
X21A Alamocita Cree 73.31 58 ⇑P P 01 11 39.0 +0.4
baz=73
Y20A Horse Springs, 73.33 59 ⇑P P 01 11 38.9 +0.2
baz=73,SNR=12
V23A Ortiz Mt. (NFS 73.36 56 ⇑P P 01 11 38.0 -0.8
baz=73,SNR=7.4
DYDN Diyadin 73.40 310 iP P 01 11 41.0 +2.0
T25A Trinidad 73.41 54 ⇓P P 01 11 39.2 +0.1
baz=73,SNR=12
U24A Moreno Valley 73.42 55 ⇑P P 01 11 39.3 0.0
baz=73
DDEM Demirkent 73.47 312 iP P 01 11 40.9 +1.4
COP Copenhagen 73.51 337⇑iP P 01 11 39.2 -0.2
COP eS S 01 21 04.0 -3.4
COP pmax pmax
comp=Z,42nm,1.0s,mb5.3
COP MLR MLR
comp=Z,1µm,20.0s,MS5.2
COP Copenhagen 73.51 337⇑iP P 01 11 39.2 -0.2
comp=Z,42nm,1.0s,mb5.3
COP eS S 01 21 04.0 -3.4
COP
comp=Z,1µm,20.0s
119A Ashpeak Ranch, 73.55 60 ⇑P P 01 11 39.0 -1.1
baz=73
CLDR Caldiran 73.56 309 eP P 01 11 41.5 +1.5
218A Dragoon 73.64 61 ⇑P P 01 11 40.7 +0.1

baz=74,SNR=19
Y21A Point of Rocks 73.68 58 ⇑P P 01 11 40.9 +0.1
baz=74
MUD Monsted U'grnd 73.69 339⇑iP P 01 11 40.3 -0.1
MUD pmax pmax
comp=Z,34nm,0.8s,mb5.3
MUD MLR MLR
comp=Z,3µm,20.0s,MS5.6
MUD Monsted U'grnd 73.69 339⇑iP P 01 11 40.3 -0.1
comp=Z,34nm,0.8s,mb5.3
MUD
comp=Z,3µm,20.0s
LAZ Ladron 73.73 58 eP P 01 11 42.1 +1.1
comp=Z,9.8nm,1.2s,mb4.6
Z20A Nine Sixteen R 73.74 59 ⇑P P 01 11 40.5 -0.7
baz=74,SNR=7.3
ANMO Albuquerque 73.75 57 LR LR 01 40 30.2
comp=Z,2µm,21.5s,MS5.3,baz=112,slow=33
ANMO Albuquerque 73.75 57 PFAKE 01 11 50.0 +8.8
ANMO LR LR
comp=Z,2µm,21.0s,MS5.3
AGRB Hanur-Agry 73.75 310 eP P 01 11 42.9 +1.8
WAR Warsaw 73.78 331 eP P 01 11 41.4 +0.4
comp=Z,800nm,1.4s,mb6.5
WAR LMZ 01 52 07.9
comp=Z,3µm,18.1s
W23A Werner Place, 73.78 56 ⇓P P 01 11 41.7 +0.3
baz=74
V24A Rampart Ranch, 73.90 55 ⇓P P 01 11 40.8 -1.3
baz=74,SNR=8.3
U25A Circle Dot Ran 73.93 54 ⇑P P 01 11 40.2 -2.0
baz=74,SNR=6.3
TUTA Tutak 73.97 310 iP P 01 11 44.3 +1.9
HOMI Horasan 74.00 311 iP P 01 11 44.0 +1.5
318A Bisbee 74.04 61 ⇓P P 01 11 41.4 -1.5
baz=74,SNR=16
219A White Tail Can 74.10 61 ⇑P P 01 11 43.5 +0.1
baz=74,SNR=14
120A U Bar Ranch, L 74.11 60 ⇓P P 01 11 43.2 -0.2
baz=74,SNR=12
Y22A Socorro 74.15 58 ⇑P P 01 11 42.9 -0.7
baz=74,SNR=5.7
Z21A St. Cloud Mine 74.16 59 ⇓P P 01 11 44.1 +0.5
baz=74,SNR=14
GKP Gorka Klasztor 74.17 333 eP P 01 11 43.4 0.0
comp=Z,300nm,0.5s,mb6.5
GKP LMZ 01 47 18.8
comp=Z,5µm,20.6s
GKP Gorka Klasztor 74.17 333⇑eP P 01 11 43.4 +0.1
GKP pmax pmax
comp=Z,300nm,0.5s,mb6.5
GKP MLR MLR
comp=Z,5µm,20.6s,MS5.8
W24A Lazy 6 Ranch, 74.18 56 ⇓P P 01 11 43.9 +0.2
baz=74,SNR=14
V25A Rancho No Teng 74.20 55 ⇑P P 01 11 43.0 -0.9
baz=74,SNR=5.6
BNM Barren Site 74.20 57 eP P 01 11 44.4 +0.5
comp=Z,14nm,1.3s,mb4.7
VANB Van 74.24 309 eP P 01 11 45.5 +1.5
RGN Rugen 74.25 336⇑iP P 01 11 44.0 +0.2
comp=Z,206nm,1.0s,mb6.0
SIM Simferopol' 74.26 319c iP P 01 11 45.0 +1.0
SIM eS S 01 21 18.0 +1.8
SIM ePS 01 22 01.0
SIM pmax pmax
comp=Z,131nm,0.8s,mb5.9
SIM MLR MLR
comp=Z,6µm,16.4s,MS6.0
U26A Atchley Ranch, 74.31 54 ⇑P P 01 11 44.5 0.0
baz=74
ERZM Erzurum 74.39 311 iP P 01 11 46.4 +1.6
EZM Erzurum 74.39 311 eP P 01 11 46.8 +1.9
ORE Reay 74.43 347 P P 01 11 44.7 -0.1
ORE Reay 74.43 347⇑eP P 01 11 44.7 -0.1
MACK Trabzon 74.47 313 iP P 01 11 45.6 +0.3
319A Douglas 74.52 61 ⇑P P 01 11 45.8 +0.1
baz=74,SNR=13
COWI Conover 74.59 39 eP P 01 11 45.0 -0.8
comp=Z,18nm,0.7s,mb5.1
COWI LR LR
comp=Z,2µm,19.0s,MS5.4
220A Playas Peak, P 74.62 60 ⇑P P 01 11 46.2 -0.1
baz=74,SNR=13
121A Cookes Peak, D 74.63 59 ⇓P P 01 11 45.3 -1.1
baz=74,SNR=9.6
LVV L'vov 74.68 328 iP P 01 11 46.2 -0.2
LVV e 01 12 07.0
LVV eS S 01 21 19.2 -1.6
LVV e 01 22 11.6
LVV MLR MLR
comp=N,3µm,19.0s,MS5.8
LVV MLR MLR
comp=Z,4µm,19.0s,MS5.7
LVV MLR MLR
comp=E,2µm,16.0s,MS5.8
Y23A Lovelace Mesa, 74.70 57 ⇑P P 01 11 46.4 -0.4
baz=74,SNR=9.3
W25A X Bar L Ranch, 74.73 55 ⇑P P 01 11 46.7 -0.2
baz=74,SNR=12
HKR Hakkari 74.77 308 eP P 01 11 48.2 +1.1
HAKT HAKKARI 74.81 308 iP P 01 11 45.9 -1.4
CBKS Cedar Bluff 74.81 50 eP P 01 11 47.0 -0.3
CBKS MLR MLR
comp=Z,2µm,19.0s,MS5.5
TATV Tatvan 74.91 310 iP P 01 11 49.3 +1.3
GUMT Gumushane 74.97 313 eP P 01 11 49.6 +1.4
320A Kipp Ranch, An 75.01 61 ⇓P P 01 11 49.1 +0.5
baz=75,SNR=5.7
ESPY Espiye-Giresun 75.02 314 eP P 01 11 48.0 -0.5
KIS Kishinev 75.03 323⇑iP P 01 11 47.5 -0.9
comp=Z,2µm,1.6s,mb6.7
KIS Kishinev 75.03 323 iPcP PcP 01 12 04.0 +1.9
KIS eS S 01 21 20.0 -4.7
KIS Kishinev 75.03 323⇑iP P 01 11 47.5 -0.9
KIS i 01 12 04.0
KIS e 01 14 38.0
KIS e 01 16 30.0
KIS eS S 01 21 20.0 -4.7
KIS ePS 01 22 06.0
KIS pmax pmax
comp=Z,600nm,1.0s,mb6.5
KIS pmax pmax
comp=Z,2µm,1.6s,mb6.7
KIS MLR MLR
comp=E,5µm,17.0s,MS6.2
KIS MLR MLR
comp=Z,12µm,17.0s,MS6.3
KIS MLR MLR
comp=N,8µm,16.0s,MS6.2
KIS MLR MLR
comp=Z,11µm,16.0s
KIS Kishinev 75.03 323 P P 01 11 48.5 +0.1
KIS Kishinev 75.03 323⇓iP P 01 11 48.5 +0.1
Y24A Capitan 75.07 57 ⇑P P 01 11 48.4 -0.5
baz=75,SNR=7.5
CUKT Cukurca 75.08 308 eP P 01 11 49.6 +0.6
MVH1 Achvaich 75.09 347 P P 01 11 48.4 -0.2
MVH1 Achvaich 75.09 347⇑eP P 01 11 48.4 -0.2
X25A Clemmons Ranch 75.10 56 ⇑P P 01 11 48.6 -0.5
baz=75
SCHQ Schefferville 75.14 22 P P 01 11 49.0 0.0
comp=Z,28nm,0.8s,mb5.2,baz=348,slow=5.4,SNR=33
SCHQ LR LR 01 47 35.2
comp=Z,2µm,20.9s,MS5.5,baz=344,slow=38
SCHQ Schefferville 75.14 22⇑iP P 01 11 48.7 -0.2
comp=Z,73nm,1.2s,mb5.5
SCHQ LR LR
comp=Z,3µm,21.0s,MS5.6
BNGL BINGOL 75.19 311 iP P 01 11 51.3 +1.8
GRSN GIRESUNGRSN 75.25 314 iP P 01 11 49.3 -0.5
MCD Coleburn Disti 75.26 346 P P 01 11 49.2 -0.3
MCD Coleburn Disti 75.26 346⇑eP P 01 11 49.2 -0.3
BANOM Banah 75.26 292 P P 01 11 50.2 +0.1
SNR=11
COCO West Island 75.31 235 PFAKE 01 12 00.0 +10
COCO LR LR
comp=Z,2µm,20.0s,MS5.4
KWP Kalwaria Pacla 75.33 328 eP P 01 11 50.9 +0.8
comp=Z,2µm,1.8s,mb6.6
KWP epP pP 01 11 57.6 0.0
KWP LMZ 01 48 05.4
comp=Z,8µm,18.1s
KWP Kalwaria Pacla 75.33 328⇑eP P 01 11 50.9 +0.8
KWP e*PP pP 01 11 57.6 0.0
KWP pmax pmax

comp=Z,2µm,1.8s,mb6.6
KWP MLR MLR

comp=Z,8µm,18.1s,MS6.0
KWP Kalwaria Pacla 75.33 328⇑ *i*P **P 01 11 50.4 +0.3**
comp=Z,727nm,1.2s,mb6.5
KWP LR LR

comp=Z,6µm,19.0s,MS5.9
KWP Kalwaria Pacla 75.33 328⇓ *i*P **P 01 11 50.6 +0.5**
ARMA Armidale 75.38 180 *e*P **P 01 11 52.0 +1.6**
ARMA Armidale 75.38 180 *e*P **P 01 11 51.7 +1.3**
comp=Z,33nm,0.8s,mb5.3
IAS Iasi 75.40 324 P **P 01 11 50.6 +0.1**
IAS Iasi 75.40 324⇓ *i*P **P 01 11 50.6 +0.1**
MME1 Meikle Cairn 75.47 346 P **P 01 11 50.3 -0.5**
MME1 Meikle Cairn 75.47 346⇑ *e*P **P 01 11 50.3 -0.5**
Y25A Mesa, Roswell 75.51 56⇓ P **P 01 11 51.0 -0.4**
baz=75,SNR=6.9
Z24A Sheeppen Canyo 75.53 57⇓ P **P 01 11 50.9 -0.7**
baz=75,SNR=6.4
EZC Erzincan 75.56 312 *e*P **P 01 11 52.6 +1.0**
X26A CR and CF Fran 75.58 55⇑⇑ P **P 01 11 49.0 -2.8**
baz=75
MDO Dochfour 75.58 347 P **P 01 11 51.2 -0.2**
MDO Dochfour 75.58 347⇑ *i*P **P 01 11 51.2 -0.2**
BINT Bingol 75.60 311 *e*P **P 01 11 55.4 +3.5**
BSEG Bad Segeberg 75.63 337 *e*P **P 01 11 52.1 +0.3**
comp=Z,103nm,1.0s,mb5.7
BSEG *e*S S 01 21 30.3 -0.9
W27A Bowe Ranch, En 75.65 55⇑⇑ P **P 01 11 51.4 -0.8**
baz=76
KAC Achnashellach 75.68 347 P **P 01 11 51.8 -0.1**
KAC Achnashellach 75.68 347⇑ *i*P **P 01 11 51.8 -0.1**
LEOM Leova 75.68 323 P **P 01 11 52.4 +0.2**
LEOM Leova 75.68 323⇓ *i*P **P 01 11 52.4 +0.2**
WBK Wadi Bani Khal 75.75 288 P **P 01 11 55.0 +2.0**
SNR=6.5
KPL Plockton 75.89 347 P **P 01 11 53.0 -0.1**
KPL AMb AMB 01 11 54.5
comp=Z,124nm,2.5s,mb5.4
KPL AMS AMS 01 57 44.9
comp=Z,1µm,15.9s
KPL Plockton 75.89 347⇑ *e*P **P 01 11 53.0 -0.1**
KPL AMb AMB 01 11 54.5
comp=Z,124nm,2.5s,mb5.4
KPL AMS AMS 01 57 44.9
comp=Z,1µm,15.9s,MS5.2
SCIA State Center 75.89 44⇑ *i*P **P 01 11 52.7 -0.7**
comp=Z,90nm,0.8s,mb5.8
SCIA LR LR

comp=Z,3µm,20.0s,MS5.6
OJC Ojcow 75.89 330 *e*P **P 01 11 50.8 -2.5**
OJC *e*S S 01 21 34.3 +0.1
OJC *e*SS SS 01 26 25.7 +0.3
OJC MLR MLR

comp=Z,5µm,18.8s,MS5.8
124A Stringfield Ra 75.92 58⇓ P **P 01 11 53.4 -0.4**
baz=76,SNR=5.4
RUE Ruedersdorf 75.92 335⇑ *i*P **P 01 11 53.4 0.0**
comp=Z,192nm,1.1s,mb5.9
Z25A Roswell 75.95 57⇑⇑ P **P 01 11 52.9 -1.1**
baz=76
KSB Sheil Bridge 75.97 347 P **P 01 11 53.0 -0.6**
KSB Sheil Bridge 75.97 347⇑ *e*P **P 01 11 53.0 -0.6**
BUR08 Bucovina Ar. S 75.99 326⇑ *i*P **P 01 11 54.2 +0.2**
BUR01 Bucovina Ar. S 76.01 326 P **P 01 11 54.6 +0.6**
BURAR Bucovina Array 76.01 326⇑⇑ P **P 01 11 54.5 +0.5**
BURAR Bucovina Array 76.01 326⇑ *i*P **P 01 11 54.5 +0.5**
HATD Hatta, Dubai 76.13 291 P **P 01 11 55.5 +0.4**
SNR=13
PTK Pertek 76.17 312 *e*P **P 01 11 56.3 +1.2**
ERBA Erbaa 76.20 315 *i*P **P 01 11 56.4 +1.1**
HOQ Hoqain 76.20 290 P **P 01 11 56.1 +0.6**
SNR=13
DIKM Dikmen 76.21 316 *e*P **P 01 11 56.2 +0.9**
KVT Kavak 76.25 315 *e*P **P 01 11 56.6 +1.0**
KSU1 Kansas State U 76.26 48 *e*P **P 01 11 54.4 -1.2**
comp=Z,19nm,0.8s,mb5.1
KSU1 *e*PcP PcP 01 12 07.4 -0.2
KSU1 LR LR

comp=Z,3µm,20.0s,MS5.6
ASHO Ashiyiah 76.27 291 P **P 01 11 56.6 +0.7**
SNR=14
UZH Uzhgorod 76.31 328⇓ *i*P **P 01 11 55.2 -0.5**
UZH *e* pP 01 12 02.8 -0.4
UZH *e* 01 12 13.0
UZH *e* 01 14 50.8
UZH *e* 01 16 40.4
UZH *e*S S 01 21 32.2 -6.6
UZH *i* 01 22 04.6
UZH *e* 01 29 48.2
UZH MLR MLR

comp=N,2µm,17.0s,MS5.7
UZH MLR MLR

comp=E,2µm,17.0s,MS5.7
UZH MLR MLR

comp=Z,900nm,17.0s,MS5.2
KAR1 Arisaig 76.32 347 P **P 01 11 55.1 -0.5**
KAR1 Arisaig 76.32 347⇑ *e*P **P 01 11 55.1 -0.5**
224A Cornudas Mount 76.32 58⇑⇑ P **P 01 11 54.8 -1.2**
baz=76,SNR=6.8
TESR 76.32 324⇑⇑ P **P 01 11 55.7 -0.1**
TESR 76.32 324⇑ *i*P **P 01 11 55.7 -0.1**
NAZ Nazwa, Dubai 76.32 292 P **P 01 11 56.5 +0.3**
SNR=7.0
KEMA Kemaliye 76.36 313 *i*P **P 01 11 57.6 +1.4**
NIE Niedzica 76.38 329 *e*P **P 01 11 57.0 +0.9**
Z26A Caprock 76.39 56⇑⇑ P **P 01 11 55.4 -1.1**
baz=76,SNR=15
CRVS Cervenica-Dubn 76.40 329 *e*P **P 01 11 56.4 +0.2**
CRVS pmax pmax

comp=Z,624nm,2.7s,mb6.1
CRVS Cervenica-Dubn 76.40 329 *e*P **P 01 11 56.4 +0.2**
comp=Z,624nm,2.7s,mb6.1
CRVS Cervenica-Dubn 76.40 329 *e*P **P 01 11 56.4 +0.2**
125A Gardner Draw, 76.42 57⇑⇑ P **P 01 11 54.6 -2.0**
baz=76,SNR=9.2
Y27A Causey 76.43 55⇓ P **P 01 11 56.0 -0.7**
baz=76
TLCR 76.46 322⇑⇑ P **P 01 11 56.9 +0.3**
TLCR 76.46 322⇑ *i*P **P 01 11 56.9 +0.3**
JMDO Jabal Madar 76.50 288 P **P 01 11 58.2 +0.9**
SNR=9.4
JFWS Jewell Farm 76.54 42 *e*P **P 01 11 55.8 -1.3**
JFWS pmax pmax

comp=Z,14nm,0.8s,mb4.9
JFWS MLR MLR

comp=Z,3µm,22.0s,MS5.5
JFWS Jewell Farm 76.54 42 *e*P **P 01 11 55.8 -1.4**
comp=Z,14nm,0.8s,mb4.9
JFWS LR LR

comp=Z,3µm,22.0s,MS5.5
KSP Ksiaz 76.55 332 *e*P **P 01 11 57.4 +0.3**
comp=Z,600nm,1.4s,mb6.3
KSP *e*pP pP 01 12 02.0 -2.5
KSP *e*PcP PcP 01 12 04.9 -3.7
KSP *e*S S 01 21 38.3 -3.1
KSP LMZ 01 48 20.9

comp=Z,8µm,20.9s
KSP Ksiaz 76.55 332⇑ *i*P **P 01 11 57.3 +0.3**
KSP *e* 01 14 46.5
KSP *e*S S 01 21 33.5 -7.9
KSP MLR MLR

comp=Z,10µm,19.2s,MS6.2
KSP Ksiaz 76.55 332⇑ *i*P **P 01 11 57.3 +0.3**
KSP *e*pP pP 01 12 01.6 -3.0
KSP *e*PP PP 01 14 46.5 -2.0
KSP *e*S S 01 21 33.5 -7.9
KSP *e*SS SS 01 26 53.0 +18
RAC Raciborz 76.56 331 *e*P **P 01 11 58.0 +0.9**
RAC *e*S S 01 21 43.3 +1.7
RAC MLR MLR

comp=Z,2µm,17.0s,MS5.5
AMTX Amarillo 76.57 54 *e*P **P 01 11 57.4 0.0**
comp=Z,55nm,0.9s,mb5.5
AMTX LR LR

comp=Z,2µm,22.0s,MS5.3
EBH Black Hill 76.58 346 P **P 01 11 56.9 -0.2**
EBH Black Hill 76.58 346⇑ *i*P **P 01 11 56.9 -0.2**
BZK Bozkurt 76.59 317 *e*P **P 01 11 57.2 -0.3**
BYBT Boyabat 76.59 316 *e*P **P 01 11 58.4 +1.0**
MSTX Muleshoe 76.59 55⇓⇓ P **P 01 11 56.6 -1.0**
baz=76
TOKA Tokat 76.61 314 *i*P **P 01 11 58.5 +1.0**
SCER sogukcermik 76.62 314 *i*P **P 01 11 58.9 +1.2**

CPRX Cap Rock 76.62 57 *e*P **P 01 11 58.8 +1.0**
comp=Z,14nm,1.1s,mb4.8
TRPA Tarpa 76.63 327⇑ *i*P **P 01 11 57.5 -0.1**
BMR Baia Mare 76.64 327 P **P 01 11 58.4 +0.8**
BMR Baia Mare 76.64 327⇓ *i*P **P 01 11 58.4 +0.8**
SVSK Karacayir 76.65 314 *e*P **P 01 11 59.0 +1.2**
MNTX Cornudas Mount 76.67 58 *e*P **P 01 11 57.5 -0.6**
comp=Z,10.0nm,0.9s,mb4.8
MNTX LR LR

comp=Z,828nm,20.0s,MS5.0
PETR 76.71 323⇓⇓ P **P 01 11 59.2 +1.2**
PETR 76.71 323⇓ *i*P **P 01 11 59.3 +1.3**
225A Deer Hill, Car 76.71 58⇓⇓ P **P 01 11 58.0 -0.3**
baz=76
ESY Stoneypath 76.73 345 P **P 01 11 57.6 -0.4**
ESY Stoneypath 76.73 345⇑ *i*P **P 01 11 57.6 -0.4**
CFR Carcaliu 76.75 322 P **P 01 11 58.4 +0.1**
CFR Carcaliu 76.75 322⇓ *i*P **P 01 11 58.4 +0.1**
EAB Aberfoyle 76.78 346 P **P 01 11 57.6 -0.6**
EAB Aberfoyle 76.78 346⇑ *e*P **P 01 11 57.6 -0.6**
324A Moseley Ranch, 76.79 59⇑⇑ P **P 01 11 58.0 -0.7**
baz=77
OKC Ostrava-Krasne 76.79 331 *e*P **P 01 11 58.9 +0.5**
OKC *e*S S 01 21 41.6 -2.4
OKC MLR MLR

comp=Z,3µm,15.3s,MS5.7
OKC Ostrava-Krasne 76.79 331 *e*P **P 01 11 58.9 +0.5**
OKC *e*S S 01 21 41.6 -2.4
OKC *e*SS SS 01 27 11.3 +32
OKC Ostrava-Krasne 76.79 331 *e*P **P 01 11 58.9 +0.5**
OKC *e*S S 01 21 41.6 -2.4
OKC *e*x x 01 27 11.3
OKC AMS AMS 01 53 10.0

comp=Z,3µm,15.3s
ASUD Al Ashush, Dub 76.79 292 P **P 01 11 59.5 +0.6**
SNR=8.2
VRI Vrincioaia 76.80 324⇓⇓ P **P 01 11 58.9 +0.3**
VRI Vrincioaia 76.80 324⇓ *i*P **P 01 11 58.9 +0.3**
Z27A Tatum 76.81 56⇓⇓ P **P 01 11 58.0 -0.8**
baz=77,SNR=21
126A Clayton Basin, 76.81 57⇓⇓ P **P 01 11 57.4 -1.4**
baz=77
EDI Edinburgh 76.83 346 AMS AMS 01 54 45.6
comp=Z,1µm,17.0s,MS5.3
EDI Edinburgh 76.83 346 AMS AMS 01 54 45.6
comp=Z,1µm,17.0s
PLOR Plostina 76.85 324 P **P 01 11 59.8 +1.0**
BSY Bisya 76.85 289 P **P 01 12 00.5 +1.3**
SNR=11
ARQ Araqi 76.89 290 P **P 01 12 00.6 +1.2**
SNR=9.7
GDL2 Guadalupe Moun 76.92 57 *e*P **P 01 11 59.8 +0.3**
comp=Z,18nm,1.1s,mb4.9
UPC Upice 76.93 332 *e*P **P 01 11 59.6 +0.4**
EBL Broad Law 76.95 345 P **P 01 11 58.8 -0.4**
EBL Broad Law 76.95 345⇑ *i*P **P 01 11 58.8 -0.4**
EAU Auchinoon 76.95 346 P **P 01 11 59.2 0.0**
EAU Auchinoon 76.95 346⇑ *i*P **P 01 11 59.2 0.0**
DARE Darende-Malaty 76.95 313 *e*P **P 01 12 03.6 +4.1**
DPC Dobruska-Polom 76.97 332 *e*P **P 01 11 59.9 +0.5**
DPC *e*S S 01 21 41.1 -4.8
DPC MLR MLR

comp=Z,4µm,20.3s,MS5.8
DPC Dobruska-Polom 76.97 332 *e*P **P 01 11 59.9 +0.5**
DPC *e*S S 01 21 41.1 -4.8
DPC *e*SS SS 01 27 11.2 +30
DPC Dobruska-Polom 76.97 332 *e*P **P 01 11 59.9 +0.5**
DPC *e*S S 01 21 41.1 -4.8
DPC *e*x x 01 27 11.2
DPC AMS AMS 01 48 20.0

comp=Z,4µm,20.3s
MORC Moravsky Berou 77.05 331⇑ *i*P **P 01 11 59.5 -0.4**
MORC pmax pmax

comp=Z,219nm,1.0s,mb6.0
MORC Moravsky Berou 77.05 331⇑ *i*P **P 01 11 59.5 -0.3**
comp=Z,219nm,1.0s,mb6.0
MORC Moravsky Berou 77.05 331⇓ *i*P **P 01 12 00.2 +0.3**
GRER 77.09 323 P **P 01 12 01.9 +1.7**
GRER 77.09 323⇑ *i*P **P 01 11 59.3 -0.9**
MYA Malataya 77.10 312 *e*P **P 01 12 01.7 +1.3**
KECS Kecovo 77.10 329 *e*P **P 01 12 00.3 +0.1**
KECS pmax pmax

comp=Z,59nm,1.1s,mb5.4
KECS Kecovo 77.10 329 *e*P **P 01 12 00.3 +0.1**
comp=Z,59nm,1.1s,mb5.4
KECS Kecovo 77.10 329 *e*P **P 01 12 00.3 +0.1**
LIKS Likavka 77.12 330 *e*P **P 01 12 01.0 +0.7**
LIKS pmax pmax

comp=Z,171nm,1.1s,mb5.9
LIKS Likavka 77.12 330 *e*P **P 01 12 01.0 +0.7**
comp=Z,171nm,1.1s,mb5.9
LIKS Likavka 77.12 330 *e*P **P 01 12 01.0 +0.7**
325A Bean Ranch, Si 77.15 58⇑⇑ P **P 01 11 59.5 -1.3**
baz=77,SNR=6.1
PGBU Glenifferbraes 77.16 346 P **P 01 12 00.2 -0.1**
PGBU AMb AMB 01 12 01.3

comp=Z,176nm,1.4s,mb5.8
PGBU AMS AMS 01 50 17.7

comp=Z,1µm,19.0s
PGBU Glenifferbraes 77.16 346⇑ *e*P **P 01 12 00.2 -0.1**
PGBU AMb AMB 01 12 01.3

comp=Z,176nm,1.4s,mb5.8
PGBU AMS AMS 01 50 17.7

comp=Z,1µm,19.0s,MS5.2
226A Malaga, Loving 77.18 57⇓⇓ P **P 01 12 00.3 -0.6**
baz=77,SNR=9.2
CLL Collm 77.18 335 *e*P **P 01 12 00.5 -0.1**
comp=Z,279nm,1.2s,mb6.1
CLL *e*S S 01 21 44.5 -3.8
CLL Collm 77.18 335⇑ *i*P **P 01 12 00.4 -0.2**
CLL *e*S S 01 21 49.0 +0.7
CLL pmax pmax

comp=Z,280nm,1.2s,mb6.1
CLL MLR MLR

comp=Z,5µm,19.3s,MS5.8
CLL Collm 77.18 335⇑ *i*P **P 01 12 00.4 -0.2**
CLL *e*S S 01 21 49.0 +0.7
CLL Collm 77.18 335⇑ *i*P **P 01 12 00.4 -0.2**
comp=Z,280nm,1.2s,mb6.1
CLL *e*PP PP 01 14 48.0 -5.8
CLL *e*S S 01 21 49.0 +0.7
CLL *e*PS 01 22 30.0
CLL *e*SS SS 01 27 00.0 +15
CLL *e* 01 27 30.0
CLL *e*SSS 01 30 36.0
CLL LmH 01 44 00.0

comp=N,2µm,21.3s
CLL LmH 01 44 00.0

comp=E,4µm,20.2s
CLL LmV 01 49 00.0

comp=N,3µm,18.9s
CLL LmV 01 49 00.0

comp=E,2µm,19.5s
CLL LmV 01 49 00.0

comp=Z,5µm,19.3s
TIRR Tirgusor 77.21 322⇑ *i*P **P 01 12 00.9 0.0**
TIRR pmax pmax

comp=Z,96nm,1.0s,mb5.7
TIRR Tirgusor 77.21 322⇑ *i*P **P 01 12 00.9 0.0**
comp=Z,96nm,1.0s,mb5.7
TIRR Tirgusor 77.21 322⇓ *i*P **P 01 12 01.1 +0.2**
BALT Daday 77.21 317 *i*P **P 01 12 02.3 +1.4**
CTKT Corum 77.22 316 *i*P **P 01 12 02.2 +1.2**
BRG Berggiesshubel 77.27 334 *e*P **P 01 12 00.9 -0.2**
comp=Z,93nm,1.2s,mb5.6
BRG *e*S S 01 21 51.3 +2.0
BRG Berggiesshubel 77.27 334⇑ *i*P **P 01 12 01.1 0.0**
comp=Z,93nm,1.2s,mb5.6
BRG S S 01 21 43.0 -6.3
BRG

comp=N,2µm,16.5s
BRG

comp=E,2µm,16.1s
BRG

comp=Z,2µm,17.3s
BRG Berggiesshubel 77.27 334⇑ *i*P **P 01 12 01.1 0.0**
BRG S S 01 21 43.0 -6.3
BRG pmax pmax

comp=Z,56nm,1.2s,mb5.4
BRG MLR MLR

comp=N,1µm,16.5s,MS5.4
BRG MLR MLR

comp=E,1µm,16.1s,MS5.4
BRG MLR MLR

comp=Z,2µm,17.3s,MS5.4

TOS Tosya 77.28 316 *e*P **P 01 12 02.8 +1.5**
STKA Stephens Creek 77.33 188 *e*P **P 01 12 02.0 +0.6**
comp=Z,24nm,1.1s,mb5.0
STKA Stephens Creek 77.33 188 P **P 01 12 02.1 +0.7**
comp=Z,17nm,1.1s,mb4.9,baz=345,slow=6.0,SNR=8.5
STKA LR LR 01 49 15.6
comp=Z,1µm,18.3s,MS5.3,baz=7.6,slow=38
STKA Stephens Creek 77.33 188 *e*P **P 01 12 02.1 +0.7**
comp=Z,9.8nm,1.1s,mb4.7
PVCC Panska Ves 77.38 333 *e*P **P 01 12 02.1 +0.4**
PVCC MLR MLR

comp=Z,7µm,18.5s,MS6.0
PVCC Panska Ves 77.38 333 *e*P **P 01 12 02.1 +0.4**
PVCC *e*SS SS 01 27 30.5 +43
PVCC Panska Ves 77.38 333 *e*P **P 01 12 02.1 +0.4**
PVCC *e*x x 01 27 30.5
PVCC AMS AMS 01 49 40.0

comp=Z,7µm,18.5s
AKCD Akcadag 77.38 312 *i*P **P 01 12 03.5 +1.6**
ESK Eskdalemuir 77.41 345 P **P 01 12 02.2 +0.4**
comp=Z,314nm,1.0s,mb6.2,SNR=11
ESK Eskdalemuir 77.41 345 P **P 01 12 01.7 -0.1**
ESK AMb AMB 01 12 02.5

comp=Z,101nm,1.6s,mb5.5
ESK AMS AMS 01 53 18.3

comp=Z,2µm,17.8s
ESK Eskdalemuir 77.41 345⇑ *e*P **P 01 12 01.7 -0.1**
ESK AMb AMB 01 12 02.5

comp=Z,101nm,1.6s,mb5.5
ESK AMS AMS 01 53 18.3

comp=Z,2µm,17.8s,MS5.4
ESK Eskdalemuir 77.41 345 *i*P **P 01 12 02.5 +0.7**
ESK Eskdalemuir 77.41 345 *e*P **P 01 12 01.5 -0.3**
comp=Z,271nm,1.8s,mb5.9
ESK LR LR

comp=Z,1µm,21.0s,MS5.3
ILGA Ilgaz 77.42 317 *i*P **P 01 12 04.0 +1.9**
MLR Muntele Rosu 77.43 324 P **P 01 12 02.6 +0.5**
MLR Muntele Rosu 77.43 324⇓ *i*P **P 01 12 02.6 +0.5**
BHD Baghdad 77.50 305 *e*x x 01 11 58.5
BHD *i*x x 01 12 18.0
BHD *e*x x 01 21 49.0
BHD *e*x x 01 22 09.0
ECK Cauldkaine Hil 77.53 345 P **P 01 12 02.4 -0.1**
ECK Cauldkaine Hil 77.53 345⇑ *i*P **P 01 12 02.4 -0.1**
URFA Urfa 77.55 311 *e*P **P 01 12 04.1 +1.2**
AMRR Amara 77.55 323 P **P 01 12 03.7 +1.0**
AMRR Amara 77.55 323⇓ *i*P **P 01 12 03.7 +0.9**
425A Indio Mountain 77.55 59⇑⇑ P **P 01 12 02.9 -0.1**
baz=77,SNR=8.0
WIT Witteveen 77.60 339⇑ *i*P **P 01 12 03.9 +1.0**
comp=Z,735nm,1.5s,mb6.4
CORM Corum 77.64 315 *e*P **P 01 12 04.7 +1.3**
XAL Allendale 77.66 345 P **P 01 12 03.2 0.0**
XAL Allendale 77.66 345⇑ *i*P **P 01 12 03.2 0.0**
DRGR 77.67 327⇑⇑ P **P 01 12 03.9 +0.5**
DRGR 77.67 327⇑ *i*P **P 01 12 03.9 +0.5**
VYHS Vyhne 77.69 330 *e*P **P 01 12 03.9 +0.4**
VYHS pmax pmax

comp=Z,91nm,1.2s,mb5.6
VYHS Vyhne 77.69 330 *e*P **P 01 12 03.9 +0.4**
comp=Z,91nm,1.2s,mb5.6
VYHS Vyhne 77.69 330 *e*P **P 01 12 03.9 +0.4**
SARI SarD1z-Kayseri 77.73 313 *e*P **P 01 12 07.0 +3.1**
KOLL Kolacno 77.77 330 *e*P **P 01 12 04.7 +0.8**
KOLL Kolacno 77.77 330 *e*P **P 01 12 04.7 +0.8**
VRAC Vranov 77.77 331 LR LR 01 48 58.2
comp=Z,3µm,21.1s,MS5.6,baz=26,slow=38
VRAC Vranov 77.77 331 P **P 01 12 04.4 +0.5**
VRAC Vranov 77.77 331⇓ *i*P **P 01 12 04.4 +0.5**
SAFT Safranbolu 77.77 317 *e*P **P 01 12 04.9 +0.8**
326A Caldwell Ranch 77.78 58⇑⇑ P **P 01 12 03.3 -1.0**
baz=78
IBBN Ibbenburen 77.78 338 *e*P **P 01 12 04.2 +0.3**
comp=Z,151nm,0.9s,mb5.9
PSZ Piszkesteto 77.79 329⇑ *i*P **P 01 12 04.3 +0.2**
PSZ pmax pmax

comp=Z,142nm,1.1s,mb5.8
PSZ MLR MLR

comp=Z,4µm,19.0s,MS5.8
PSZ Piszkesteto 77.79 329⇑ *i*P **P 01 12 04.3 +0.2**
comp=Z,142nm,1.1s,mb5.8
PSZ LR LR

comp=Z,4µm,19.0s,MS5.8
PSZ Piszkesteto 77.79 329⇑ *i*P **P 01 12 04.3 +0.2**
ATAB Bozova 77.80 311 *i*P **P 01 12 05.9 +1.6**
CANT Cankiri 77.81 316 *e*P **P 01 12 05.4 +1.1**
VOIR 77.84 324 P **P 01 12 04.9 +0.5**
VOIR 77.84 324⇓ *i*P **P 01 12 04.9 +0.5**
PRU Pruhonice 77.86 333 *e*P **P 01 12 05.1 +0.7**
PRU *e*S S 01 21 53.2 -2.4
PRU MLR MLR

comp=Z,6µm,17.5s,MS6.0
PRU Pruhonice 77.86 333 *e*P **P 01 12 05.1 +0.7**
PRU *e*S S 01 21 53.2 -2.4
PRU *e*SS SS 01 27 36.9 +42
PRU Pruhonice 77.86 333 *e*P **P 01 12 05.1 +0.7**
PRU *e*S S 01 21 53.2 -2.4
PRU *e*x x 01 27 36.9
PRU AMS AMS 01 50 00.0

comp=Z,6µm,17.5s
PINB Pinarbasi 77.89 313 *i*P **P 01 12 06.1 +1.4**
PSN Preselentsi 77.92 322 *i*P **P 01 12 05.2 +0.3**
SULR 77.96 323⇑ *i*P **P 01 12 06.8 +1.8**
ELDT Eldivan 77.99 316 *i*P **P 01 12 06.2 +0.8**
GAL1 Galloway 78.10 346 P **P 01 12 05.3 -0.4**
GAL1 AMb AMB 01 12 06.3

comp=Z,94nm,1.3s,mb5.6
GAL1 AMS AMS 01 51 23.6

comp=Z,1µm,19.6s
GAL1 Galloway 78.10 346⇑ *e*P **P 01 12 05.3 -0.4**
GAL1 AMb AMB 01 12 06.3

comp=Z,94nm,1.3s,mb5.6
GAL1 AMS AMS 01 51 23.6

comp=Z,1µm,19.6s,MS5.2
TANN Tannenbergstha 78.13 334 *e*P **P 01 12 06.1 +0.2**
comp=Z,69nm,1.2s,mb5.5
TREC Trest 78.15 332 *e*P **P 01 12 06.3 +0.3**
TREC *e*S S 01 21 56.9 -1.9
TREC MLR MLR

comp=Z,5µm,21.0s,MS5.8
TREC Trest 78.15 332 *e*P **P 01 12 06.3 +0.3**
TREC *e*S S 01 21 56.9 -1.9
TREC *e*x x 01 27 35.4
TREC AMS AMS 01 49 00.0

comp=Z,5µm,21.0s
SMOL Smolenice 78.17 331 *e*P **P 01 12 07.2 +1.1**
SMOL Smolenice 78.17 331 *e*P **P 01 12 07.2 +1.1**
MOX Moxa 78.18 335 *e*P **P 01 12 06.1 -0.1**
comp=Z,171nm,1.4s,mb5.8
MOX *e*S S 01 21 59.0 -0.1
MOX

comp=Z,4µm,21.0s
MOX Moxa 78.18 335 *e*P **P 01 12 06.3 +0.1**
comp=Z,124nm,1.2s,mb5.7
MOX *e*S S 01 21 55.5 -3.6
MOX Moxa 78.18 335 *e*P **P 01 12 06.1 -0.1**
MOX *e*S S 01 21 59.0 -0.1
426A McDonald Obser 78.21 58⇑⇑ P **P 01 12 05.8 -1.0**
baz=78,SNR=5.7
GZT Gaziantep 78.28 312 *i*P **P 01 12 08.2 +1.3**
NKC Novy Kostel 78.30 334 *e*P **P 01 12 06.9 +0.1**
NKC *e*S S 01 21 59.0 -1.3
NKC MLR MLR

comp=Z,4µm,18.4s,MS5.7
NKC Novy Kostel 78.30 334 *e*P **P 01 12 06.9 +0.1**
NKC *e*S S 01 21 59.0 -1.3
NKC *e*SS SS 01 27 34.9 +33
NKC Novy Kostel 78.30 334 *e*P **P 01 12 06.9 +0.1**
NKC *e*S S 01 21 59.0 -1.3
NKC *e*x x 01 27 34.9
NKC AMS AMS 01 49 30.0

comp=Z,4µm,18.4s
WMOK Wichita Mounta 78.31 52 *e*P **P 01 12 06.5 -0.7**
WMOK pmax pmax

comp=Z,20nm,1.0s,mb5.0
WMOK MLR MLR

comp=Z,2µm,20.0s,MS5.3
WMOK Wichita Mounta 78.31 52 *e*P **P 01 12 06.5 -0.7**
comp=Z,20nm,1.0s,mb5.0
WMOK LR LR

comp=Z,2µm,20.0s,MS5.3
WTSB Winterswijk 78.34 338⇑ *i*P **P 01 12 07.1 +0.1**
comp=Z,191nm,1.1s,mb6.0

HPK Haverah Park 78.41 344 P P 01 12 07.6 +0.2
HPK AMb AMB 01 12 08.4
comp=Z,230nm,1.3s,mb6.0
HPK AMS AMS 01 54 34.2
comp=Z,1µm,16.6s
HPK Haverah Park 78.41 344⇑eP P 01 12 07.6 +0.2
HPK AMb AMB 01 12 08.4
comp=Z,230nm,1.3s,mb6.0
HPK AMS AMS 01 54 34.2
comp=Z,1µm,16.6s,MS5.3
328A Wristen Ranch, 78.43 57 ⇓P P 01 12 07.1 -0.8
baz=78
427A Hayter Ranch, 78.46 58 ⇑P P 01 12 07.4 -0.6
baz=78
BR131 Keskin Array S 78.48 316 i P P 01 12 08.2 +0.2
comp=Z,21nm,0.8s,mb5.1
BR131 LR LR
comp=Z,2µm,20.0s,MS5.5
BRTR Keskin Array B 78.48 316 P P 01 12 08.3 +0.3
comp=Z,41nm,1.0s,mb5.3,baz=62,slow=3.4,SNR=138
BRTR LR LR 01 51 57.5
comp=Z,3µm,19.4s,MS5.6,baz=48,slow=40
BRTR Keskin Array B 78.48 316 ceP P 01 12 08.5 +0.5
BRTR pmax pmax
comp=Z,41nm,1.0s
BUD Budapest 78.48 329⇑eP P 01 12 04.6 -3.3
UBBA Unterbreizbach 78.50 336 eP P 01 12 07.8 -0.1
comp=Z,169nm,1.6s,mb5.7
UBBA eS S 01 21 59.2 -3.3
KMRS Kahramanmaras 78.51 312 eP P 01 12 09.0 +0.8
SGKT Sivrigoynuk 78.59 317 i P P 01 12 09.6 +1.0
GAZ Gaziantep 78.60 312 eP P 01 12 09.7 +1.0
FORT Forrest 78.60 200 eP P 01 12 09.1 +0.6
comp=Z,80nm,0.9s,mb5.7
FORT Forrest 78.60 200 eP P 01 12 09.1 +0.6
comp=Z,72nm,0.8s,mb5.7
526A Mary Lane Ranc 78.61 59 ⇑P P 01 12 08.9 -0.1
baz=78,SNR=13
PRD Provadia 78.65 322 i P P 01 12 09.5 +0.6
BUG Bochum--Univer 78.69 338 eP P 01 12 09.2 +0.2
comp=Z,208nm,1.2s,mb5.9
BUG eS S 01 22 03.9 -0.7
GZR Gura Zlata 78.80 326 P P 01 12 09.7 0.0
GZR Gura Zlata 78.80 326 ⇓iP P 01 12 09.7 0.0
HDIL Hopedale 78.82 43⇑iP P 01 12 09.1 -0.8
comp=Z,145nm,0.8s,mb6.0
HDIL LR LR
comp=Z,2µm,21.0s,MS5.5
527A Woodward Ranch 78.84 58 ⇑P P 01 12 09.9 -0.3
baz=79,SNR=6.8
BBAL Bala 78.87 316 i P P 01 12 11.0 +0.8
KHC Kasperske Hory 78.91 333 eP P 01 12 10.7 +0.5
KHC e 01 12 15.0
KHC eS S 01 22 13.5 +6.5
KHC MLR MLR
comp=Z,6µm,17.3s,MS6.0
KHC Kasperske Hory 78.91 333⇑iP P 01 12 10.4 +0.2
comp=Z,164nm,1.0s,mb5.9
KHC Kasperske Hory 78.91 333 eP P 01 12 10.7 +0.5
KHC epP pP 01 12 15.0 -2.8
KHC ex x 01 15 26.4
KHC eS S 01 22 13.5 +6.5
KHC ex x 01 27 57.7
KHC AMS AMS 01 50 50.0
comp=Z,6µm,17.3s
626A Big Bend Ranch 78.95 59 ⇑P P 01 12 10.5 -0.3
baz=79,SNR=13
KUZU Kuzuini 78.97 312 i P P 01 12 12.2 +1.5
428A Kincaid Ranch, 78.98 57 ⇑P P 01 12 11.0 0.0
baz=79,SNR=12
KBI1 Birley Grange 79.05 344 P P 01 12 11.1 +0.2
KBI1 Birley Grange 79.05 344⇑iP P 01 12 11.1 +0.2
BZS Buzias 79.07 327 P P 01 12 10.9 -0.3
BZS Buzias 79.07 327⇓iP P 01 12 10.9 -0.3
MDU Mudurnu 79.08 318 eP P 01 12 11.7 +0.4
KOZT Kozan 79.09 313 eP P 01 12 11.7 +0.3
WET Wettzell 79.12 334 eP P 01 12 11.9 +0.5
comp=Z,215nm,1.2s,mb6.0
WET eS S 01 22 07.0 -2.2
TIM Timisoara 79.12 327 ⇓P P 01 12 12.3 +0.8
TIM Timisoara 79.12 327⇓iP P 01 12 12.3 +0.8
GRF Grafenberg Arr 79.15 335 eP P 01 12 12.3 +0.8
comp=Z,337nm,1.2s,mb6.2
GRF eS S 01 22 08.6 -0.8
GRF eL 01 51 01.9
comp=Z,5µm,19.4s
GRF Grafenberg Arr 79.15 335 eP P 01 12 12.3 +0.8
GRF eS S 01 22 08.6 -0.8
GRF pmax pmax
comp=Z,337nm,1.2s,mb6.2
GRF MLR MLR
comp=Z,5µm,19.4s,MS5.9
CONA Conrad Observa 79.20 331 i P P 01 12 12.6 +0.7
comp=Z,138nm,1.3s,mb5.7,SNR=87
SZH Strazhica 79.23 323 i P P 01 12 11.8 -0.3
CRAR CRAIOVA 79.27 325 P P 01 12 12.8 +0.5
CRAR CRAIOVA 79.27 325 ⇓iP P 01 12 12.8 +0.5
SILT Sile 79.27 319 eP P 01 12 12.6 +0.3
528A Cox Ranch, San 79.32 58 ⇓P P 01 12 12.4 -0.4
baz=79
SPNC Sapanca-Adapaz 79.33 318 eP P 01 12 13.1 +0.4
KWE Weaver Farm 79.34 344 P P 01 12 12.5 0.0
KWE Weaver Farm 79.34 344⇑eP P 01 12 12.5 0.0
RAO Raoul Island 79.38 153 PFAKE 01 12 20.0 +7.2
RAO LR LR
comp=Z,4µm,20.0s,MS5.8
TXAR Lajitas Array 79.39 59 P P 01 12 11.8 -1.4
comp=Z,6.6nm,0.7s,mb4.7,baz=304,slow=8.9,SNR=40
TXAR pP pP 01 12 27.2 +6.4
comp=Z,15nm,0.8s,baz=303,slow=3.9,SNR=16
TXAR PKKPbc PKKPbc 01 31 01.7 +1.4
comp=Z,0.5nm,0.8s,baz=134,slow=5.4,SNR=5.8
TXAR Lajitas Array 79.39 59 P P 01 12 11.8 -1.4
TXAR *PP pP 01 12 27.2 +6.4
TXAR pmax pmax
comp=Z,7.0nm,0.7s
TXAR Lajitas Array 79.39 59 P P 01 12 11.8 -1.4
TXAR pP pP 01 12 27.2 +6.4
TXAR PKKPbc PKKPbc 01 31 01.7 +1.4
GULT Gulveren 79.43 318 eP P 01 12 13.7 +0.4
KLYT Kilyos 79.47 319 eP P 01 12 13.1 -0.3
627A Terlingua Ranc 79.47 59 P P 01 12 13.2 -0.4
baz=79,SNR=11
TNS Taunus Mts 79.47 337 eP P 01 12 13.7 +0.4
comp=Z,213nm,1.2s,mb6.0
CEYT Ceyhan 79.48 313 eP P 01 12 14.4 +0.8
CWF Charnwood Fore 79.50 343 P P 01 12 13.3 -0.1
CWF AMb AMB 01 12 15.0
comp=Z,127nm,1.8s,mb5.5
CWF AMS AMS 01 50 00.3
comp=Z,1µm,15.1s
CWF Charnwood Fore 79.50 343⇑eP P 01 12 13.3 -0.1
CWF AMb AMB 01 12 15.0
comp=Z,127nm,1.8s,mb5.5
CWF AMS AMS 01 50 00.3
comp=Z,1µm,15.1s,MS5.3
WPM1 Penmaenmawr 79.50 345 P P 01 12 13.3 -0.1
WPM1 Penmaenmawr 79.50 345⇑eP P 01 12 13.3 -0.1
HRT Hereke 79.52 319 eP P 01 12 13.3 -0.4
WLF1 Llynfaes 79.56 345 AMS AMS 01 54 26.7
comp=Z,5µm,15.0s,MS6.0
WLF1 Llynfaes 79.56 345 AMS AMS 01 54 26.7
comp=Z,5µm,15.0s
JMB Yambol 79.60 322 P P 01 12 14.2 +0.1
JMB Yambol 79.60 322 P P 01 12 14.2 +0.1
JMB Yambol 79.60 322 i P P 01 12 14.4 +0.3
ISK Istanbul-Kandi 79.61 319 eP P 01 12 13.6 -0.6
CTYL Yal??k??y-??at 79.64 320 eP P 01 12 13.4 -0.9
BGKT Bogazkoy 79.65 320 eP P 01 12 14.4 0.0
KARA Karaisali 79.65 313 eP P 01 12 15.1 +0.6
HGN Heimansgroeve 79.66 338⇑iP P 01 12 13.8 -0.5
comp=Z,186nm,1.3s,mb5.8
HGN Heimansgroeve 79.66 338 eS S 01 22 16.3 +1.5
YURE YUREGIR 79.69 313 i P P 01 12 16.3 +1.6
PKSM Moragy 79.69 329 ⇑P P 01 12 13.8 -0.8
PKSM Moragy 79.69 329⇑iP P 01 12 13.8 -0.8
BEBN Eben Emael 79.70 339 P P 01 12 14.4 -0.1
comp=Z,64nm,1.3s,mb5.4
SULT Sultanhani-AKS 79.71 315 eP P 01 12 15.1 +0.3
SVRH Sivrihisar-ESK 79.72 317 eP P 01 12 14.8 -0.1
CTKS Kestanelik-??a 79.73 320 eP P 01 12 14.6 -0.2
628A Black Gap, Mar 79.75 58 ⇑P P 01 12 14.7 -0.5
baz=80
GULE Gulek 79.78 313 i P P 01 12 16.7 +1.5

MEM Membach 79.78 338 P P 01 12 15.0 +0.1
comp=Z,110nm,1.3s,mb5.6
ADVT Abdulvahap 79.80 319 eP P 01 12 15.2 0.0
CCM Cathedral Cave 79.80 45⇑iP P 01 12 14.2 -1.1
CCM pmax pmax
comp=Z,57nm,0.8s,mb5.5
CCM MLR MLR
comp=Z,2µm,20.0s,MS5.3
CCM Cathedral Cave 79.80 45⇑iP P 01 12 14.2 -1.1
comp=Z,57nm,0.8s,mb5.5
CCM LR LR
comp=Z,2µm,20.0s,MS5.3
MOA Molln 79.81 332 i P P 01 12 15.4 +0.2
comp=Z,49nm,1.1s,mb5.4,SNR=38
ELBA Catalca 79.83 320 i P P 01 12 15.7 +0.3
RAR Rarotonga 79.85 134 LR LR 01 48 29.7
comp=Z,3µm,18.2s,MS5.7,baz=247,slow=36
RAR Rarotonga 79.85 134 PFAKE 01 12 30.0 +14
RAR LR LR
comp=Z,4µm,19.0s,MS5.8
SLM Saint Louis 79.86 44⇑iP P 01 12 14.7 -0.9
SLM pmax pmax
comp=Z,64nm,1.0s,mb5.5
SLM Saint Louis 79.86 44⇑iP P 01 12 14.7 -0.9
comp=Z,64nm,1.0s,mb5.5
YLV Yalova 79.86 319 eP P 01 12 15.5 0.0
SLVT Silivri 79.87 320 eP P 01 12 15.8 +0.2
BORA Eskisehir 79.89 318 i P P 01 12 16.1 +0.3
ARSA Arzberg 79.91 331 i P P 01 12 16.0 +0.3
comp=Z,76nm,1.5s,mb5.4,SNR=28
CAVI Cavuskoy 79.93 318 eP P 01 12 16.2 +0.3
TOD Tromm 79.93 336 eP P 01 12 16.0 +0.2
HTY Hatay 79.96 312 eP P 01 12 19.3 +3.2
ESKT Eskisehir 79.99 317 eP P 01 12 16.6 +0.3
ESKT Eskisehir 79.99 317 i P P 01 12 16.6 +0.3
KIZT Kizilcal 79.99 316 eP P 01 12 16.4 +0.1
AAM Ann Arbor 80.00 38⇑iP P 01 12 15.8 -0.5
AAM pmax pmax
comp=Z,31nm,0.8s,mb5.3
AAM MLR MLR
comp=Z,2µm,19.0s,MS5.4
AAM Ann Arbor 80.00 38⇑iP P 01 12 15.8 -0.5
comp=Z,31nm,0.8s,mb5.3
AAM LR LR
comp=Z,2µm,19.0s,MS5.4
KRTS Karatas 80.01 313 eP P 01 12 17.2 +0.8
EDRB Edirne 80.03 321 eP P 01 12 16.6 +0.2
ABH Alteburg 80.03 337 eP P 01 12 16.5 +0.2
YAYL Yayladag 80.04 312 i P P 01 12 17.7 +1.1
GEMT Gemlik 80.05 319 eP P 01 12 15.9 -0.7
ARMT Armutlu 80.10 319 eP P 01 12 16.6 -0.3
BCLA Clavier 80.14 339 P P 01 12 16.9 +0.1
comp=Z,88nm,1.5s,mb5.5
CRLT Corlu 80.16 320 eP P 01 12 18.0 +0.8
MERS Mersin 80.23 313 eP P 01 12 16.8 -0.8
FVM French Village 80.27 45⇑iP P 01 12 16.8 -1.0
FVM pmax pmax
comp=Z,42nm,0.7s,mb5.5
FVM French Village 80.27 45⇑iP P 01 12 16.8 -1.0
comp=Z,42nm,0.7s,mb5.5
LADK Ladik-KONYA 80.28 316 eP P 01 12 18.0 +0.1
CAN Canberra 80.29 182 eP P 01 12 19.2 +1.6
CAN pmax pmax
comp=Z,33nm,1.3s,mb5.1
CAN MLR MLR
comp=Z,2µm,21.0s,MS5.5
CAN Canberra 80.29 182 eP P 01 12 19.2 +1.6
comp=Z,33nm,1.3s,mb5.1
CAN LR LR
comp=Z,2µm,21.0s,MS5.5
ULDT Uludag 80.31 319 i P P 01 12 18.5 +0.5
SNF Seneffe 80.32 339 P P 01 12 18.1 +0.2
comp=Z,96nm,1.9s,mb5.4
KOGS Kog 80.35 330 i P P 01 12 17.9 -0.2
RJOB Jochberg 80.39 333 eP P 01 12 18.8 +0.5
comp=Z,92nm,1.3s,mb5.5
KTD Kalmit 80.39 336 eP P 01 12 18.4 +0.1
DIM Dimitrovgrad 80.39 322 i P P 01 12 18.7 +0.3
KONT Konya--Tatoy 80.48 315 eP P 01 12 19.0 0.0
FUR Furstenfeldbru 80.48 334 eP P 01 12 19.3 +0.5
comp=Z,206nm,1.2s,mb5.9
FUR eS S 01 22 18.6 -5.0
MCH1 Michaelchurch 80.53 344 P P 01 12 18.2 -0.7
MCH1 AMb AMB 01 12 19.9
comp=Z,134nm,1.3s,mb5.7
MCH1 Michaelchurch 80.53 344⇑eP P 01 12 18.2 -0.7
MCH1 AMb AMB 01 12 19.9
comp=Z,134nm,1.3s,mb5.7
GIVF Givet 80.55 339⇑iP P 01 12 18.8 -0.3
comp=Z,248nm,1.3s,mb5.7
GIVF Givet 80.55 339⇑iP P 01 12 18.8 -0.3
GIVF pmax pmax
comp=Z,124nm,1.3s,mb5.7
GIVF Givet 80.55 339⇑iP P 01 12 18.8 -0.3
comp=Z,124nm,1.3s,mb5.7
STU Stuttgart 80.57 336 eP P 01 12 19.5 +0.3
comp=Z,138nm,1.3s,mb5.7
STU eS S 01 22 22.2 -2.3
STU Stuttgart 80.57 336⇑iP P 01 12 19.2 0.0
STU pmax pmax
comp=Z,94nm,1.1s,mb5.6
STU Stuttgart 80.57 336⇑iP P 01 12 19.2 0.0
comp=Z,94nm,1.1s,mb5.6
PGB Panagyurishte 80.57 323 i P P 01 12 19.2 -0.2
BOLV Bolvadin 80.57 317 i P P 01 12 20.1 +0.7
SOKA Soboth 80.57 331⇑iP P 01 12 19.4 +0.1
comp=Z,93nm,1.0s,mb5.7
PERS Pernice 80.58 331 i P P 01 12 19.5 +0.2
PERS eS SKSac 01 22 45.3 +9.4
WLF Walferdange 80.61 338 P P 01 12 19.8 +0.3
comp=Z,84nm,1.9s,mb5.3
WLF Walferdange 80.61 338 eP P 01 12 19.5 +0.1
WLF pmax pmax
comp=Z,107nm,1.3s,mb5.6
WLF MLR MLR
comp=Z,4µm,22.0s,MS5.7
WLF Walferdange 80.61 338 eP P 01 12 19.5 +0.1
comp=Z,107nm,1.3s,mb5.6
WLF LR LR
comp=Z,4µm,22.0s,MS5.7
DOU Dourbes 80.62 339 P P 01 12 19.4 -0.1
comp=Z,56nm,1.8s,mb5.2
MFT Murefte 80.64 320 eP P 01 12 20.1 +0.4
BNT Bandirma 80.70 320 eP P 01 12 20.6 +0.5
PLD Plovdiv 80.70 323 P P 01 12 20.1 0.0
PLD Plovdiv 80.70 323 P P 01 12 20.1 0.0
PLD Plovdiv 80.70 323 i P P 01 12 18.7 -1.4
ALT Altintas 80.71 317 eP P 01 12 20.3 +0.1
BAIF Baives 80.75 339⇑iP P 01 12 20.0 -0.2
comp=Z,415nm,1.6s,mb5.8
BAIF Baives 80.75 339⇑iP P 01 12 20.0 -0.2
BAIF pmax pmax
comp=Z,208nm,1.6s,mb5.8
BAIF Baives 80.75 339⇑iP P 01 12 20.0 -0.2
comp=Z,208nm,1.6s,mb5.8
KDZ Kurdzhali 80.77 322 i P P 01 12 20.8 +0.4
LANF Langenberg 80.78 337 eP P 01 12 20.6 +0.3
KBA Koelnbreinsper 80.79 332⇓iP P 01 12 20.9 +0.5
comp=Z,152nm,1.4s,mb5.8,SNR=75
MENF Mencas 80.79 341 eP P 01 12 20.4 0.0
OLIL Olney 80.82 43 eP P 01 12 19.9 -0.9
comp=Z,38nm,0.7s,mb5.4
WOL Wolverton 80.83 343 P P 01 12 19.9 -0.6
WOL AMb AMB 01 12 22.1
comp=Z,170nm,2.0s,mb5.6
WOL AMS AMS 01 51 00.5
comp=Z,1µm,19.5s
WOL Wolverton 80.83 343⇑eP P 01 12 19.9 -0.6
WOL AMb AMB 01 12 22.1
comp=Z,170nm,2.0s,mb5.6
WOL AMS AMS 01 51 00.5
comp=Z,1µm,19.5s,MS5.3
JCT Junction City 80.85 56 eP P 01 12 20.2 -0.9
JCT pmax pmax
comp=Z,37nm,1.0s,mb5.3
JCT MLR MLR
comp=Z,2µm,22.0s,MS5.3
JCT Junction City 80.85 56 eP P 01 12 20.1 -0.9
comp=Z,37nm,1.0s,mb5.3
JCT LR LR
comp=Z,2µm,22.0s,MS5.3
OBKA Obir 80.88 331 i P P 01 12 20.8 -0.2
comp=Z,39nm,1.4s,mb5.2,SNR=23
SHUT Suhut-Afyon 80.89 317 eP P 01 12 21.8 +0.6
VTS Vitosha 80.94 324 P P 01 12 21.7 +0.4

VTS Vitosha 80.94 324 P P 01 12 21.7 +0.4
VTS Vitosha 80.94 324 i P P 01 12 21.0 -0.3
VTS Vitosha 80.94 324⇑iP P 01 12 21.7 +0.4
KRBG Karabiga-Canak 80.95 320 eP P 01 12 21.7 +0.3
DIVS Divibare 80.97 327 P P 01 12 21.0 -0.5
GDZ Gediz 80.98 318 i P P 01 12 22.1 +0.5
RZN Rozhen 81.04 322 i P P 01 12 21.8 -0.1
DURS Dursunbey 81.05 319 i P P 01 12 22.1 +0.2
GONE Gonen-Balikesi 81.05 320 eP P 01 12 21.9 0.0
SIUC Southern Illin 81.08 44 eP P 01 12 21.4 -0.8
comp=Z,136nm,0.8s,mb5.9
SIUC e 01 12 35.4
ERIK Erikli-Kesan 81.08 321 eP P 01 12 22.4 +0.3
MYKA Terra Mystica 81.08 332⇑iP P 01 12 21.6 -0.4
comp=Z,44nm,1.2s,mb5.3
ALN Alexandroupoli 81.10 321 P P 01 12 22.3 +0.1
ALN Alexandroupoli 81.10 321 P P 01 12 22.3 +0.1
WATA Walderalm 81.13 333⇑iP P 01 12 22.8 +0.5
comp=Z,32nm,0.7s,mb5.4,SNR=45
IKL Isikli 81.14 313 eP P 01 12 22.1 -0.4
SISC Sisak 81.15 330 P P 01 12 21.8 -0.6
WTTA Wattenberg 81.17 333⇑iP P 01 12 23.2 +0.8
comp=Z,90nm,1.0s,mb5.7,SNR=60
HDMB Hadim 81.19 315 eP P 01 12 22.3 -0.4
ENEZ Enez 81.19 321 eP P 01 12 22.7 0.0
LPK Lapseki 81.21 320 eP P 01 12 23.1 +0.3
BFO Black Forest 81.22 336 P P 01 12 22.6 -0.1
comp=Z,338nm,1.0s,mb6.2,SNR=23
BFO Black Forest 81.22 336 eP P 01 12 22.8 +0.1
comp=Z,90nm,1.2s,mb5.6
BFO eS S 01 22 28.0 -3.2
BFO Black Forest 81.22 336⇑iP P 01 12 22.5 -0.2
BFO pmax pmax
comp=Z,79nm,1.1s,mb5.6
BFO MLR MLR
comp=Z,2µm,20.0s,MS5.5
BFO Black Forest 81.22 336⇑iP P 01 12 22.5 -0.2
comp=Z,79nm,1.1s,mb5.6
BFO LR LR
comp=Z,2µm,20.0s,MS5.5
BLO Bloomington 81.22 42 eP P 01 12 22.1 -0.8
BLO pmax pmax
comp=Z,19nm,0.6s,mb5.2
BLO Bloomington 81.22 42 eP P 01 12 22.1 -0.8
comp=Z,19nm,0.6s,mb5.2
RETA Reutte 81.25 334 i P P 01 12 23.2 +0.3
comp=Z,90nm,1.2s,mb5.6,SNR=26
MOTA Moosalm 81.27 334 i P P 01 12 23.4 +0.4
comp=Z,122nm,1.2s,mb5.7,SNR=54
BALB Balikesir 81.29 319 eP P 01 12 23.4 +0.1
MIAR Mount Ida 81.29 49⇑iP P 01 12 22.4 -0.9
MIAR pmax pmax
comp=Z,50nm,0.8s,mb5.5
MIAR MLR MLR
comp=Z,2µm,19.0s,MS5.5
MIAR Mount Ida 81.29 49⇑iP P 01 12 22.4 -0.9
comp=Z,50nm,0.8s,mb5.5
MIAR LR LR
comp=Z,2µm,19.0s,MS5.5
SPAK Spaichingen-Ko 81.29 336 eP P 01 12 23.4 +0.3
GELI Tayfur-Gelibol 81.32 321 eP P 01 12 23.0 -0.4
BALY Balya 81.33 319 i P P 01 12 23.9 +0.4
ABTA Abfaltersbach 81.35 333⇑iP P 01 12 22.9 -0.5
comp=Z,38nm,1.3s,mb5.2,SNR=22
DEMI Demirci 81.38 318 i P P 01 12 23.9 +0.1
VISS Visnje 81.40 331 i P P 01 12 23.1 -0.6
EREN Erenkoy 81.44 313 eP P 01 12 24.5 +0.4
CDF Champ du Feu 81.44 337⇑iP P 01 12 23.7 -0.2
comp=Z,292nm,1.3s,mb5.8
CDF Champ du Feu 81.44 337⇑iP P 01 12 23.7 -0.2
CDF pmax pmax
comp=Z,146nm,1.3s,mb5.8
CDF Champ du Feu 81.44 337⇑iP P 01 12 23.7 -0.2
comp=Z,146nm,1.3s,mb5.8
HWQ Hawqa 81.46 311 eP P 01 12 24.4 +0.2
BOJS Bojanci 81.52 330 i P P 01 12 23.9 -0.5
BOJS eS S 01 22 40.5 +6.0
VOY Vojsko 81.52 331 eP P 01 12 23.2 -1.2
VOY e 01 12 51.7
SUTC Sutluce-Ispart 81.52 316 eP P 01 12 24.3 -0.2
GMNA Gemona 81.53 332 P P 01 12 23.5 -0.9
MMB Musomiste 81.54 323 i P P 01 12 24.6 0.0
KHAL Karahalli 81.55 317 i P P 01 12 25.0 +0.3
HEX Exmoor 81.57 344 P P 01 12 24.6 +0.1
HEX Exmoor 81.57 344⇑eP P 01 12 24.6 +0.1
JAVS Javornik 81.58 331 i P P 01 12 23.6 -1.1
JAVS Javornik 81.58 331 i P P 01 12 23.6 -1.1
JAVS eS S 01 22 42.3 +7.2
LIBD Limburg 81.59 336 eP P 01 12 25.0 +0.3
KKB Krupnik 81.59 324 i P P 01 12 25.1 +0.3
PARMO Parma 81.63 45 eP P 01 12 24.7 -0.4
PARMO e 01 12 38.2
ECH Echery 81.65 337 eP P 01 12 25.1 +0.1
ECH Echery 81.65 337⇑iP P 01 12 24.7 -0.3
ECH pmax pmax
comp=Z,91nm,1.2s,mb5.6
ECH MLR MLR
comp=Z,2µm,19.0s,MS5.6
ECH Echery 81.65 337⇑iP P 01 12 24.6 -0.4
comp=Z,91nm,1.2s,mb5.6
ECH LR LR
comp=Z,2µm,19.0s,MS5.6
FETA Feichten 81.67 334 i P P 01 12 25.6 +0.4
comp=Z,75nm,1.1s,mb5.5,SNR=42
LONY Lake Ozonia 81.69 31 eP P 01 12 23.7 -1.6
comp=Z,14nm,0.9s,mb4.9
LONY LR LR
comp=Z,1µm,19.0s,MS5.3
KAVA Kavala 81.69 322 P P 01 12 25.4 0.0
DAVA Damuels 81.70 335 i P P 01 12 25.5 +0.3
comp=Z,76nm,1.4s,mb5.4,SNR=19
ERPA Erie 81.71 36⇑iP P 01 12 25.0 -0.4
comp=Z,72nm,1.1s,mb5.5
ERPA LR LR
comp=Z,2µm,21.0s,MS5.5
FELD Feldberg im Sc 81.72 336 eP P 01 12 25.6 +0.2
UALR University of 81.76 48 eP P 01 12 25.3 -0.5
comp=Z,16nm,0.8s,mb5.0
HTL Hartland 81.77 345 P P 01 12 25.8 +0.3
HTL AMb AMB 01 12 26.6
comp=Z,187nm,2.3s,mb5.6
HTL AMS AMS 01 58 01.7
comp=Z,1µm,15.6s
HTL Hartland 81.77 345⇑eP P 01 12 25.8 +0.3
HTL AMb AMB 01 12 26.6
comp=Z,187nm,2.3s,mb5.6
HTL AMS AMS 01 58 01.7
comp=Z,1µm,15.6s,MS5.4
KULA Kula-Manisa 81.83 318 eP P 01 12 25.9 -0.2
GAZI Gazipasa 81.84 314 i P P 01 12 25.2 -1.0
TRI Trieste 81.85 331⇑iP P 01 12 24.7 -1.4
TRI pmax pmax
comp=Z,29nm,0.8s,mb5.3
TRI MLR MLR
comp=Z,3µm,20.0s,MS5.7
TRI Trieste 81.85 331⇑iP P 01 12 24.7 -1.4
comp=Z,29nm,0.8s,mb5.3
TRI LR LR
comp=Z,3µm,20.0s,MS5.7
EZN Ezine 81.85 320 eP P 01 12 25.3 -0.9
PLE Pljevlja 81.85 327⇑iP P 01 12 26.6 +0.4
PLE Pljevlja 81.85 327⇑iP P 01 12 26.6 +0.5
BHL Bhannes 81.90 311 eP P 01 12 26.9 +0.3
AKHS Akhisar 81.93 319 i P P 01 12 26.8 +0.1
AKS Akhisar 81.93 319 eP P 01 12 26.8 +0.1
LFK Lefkose 81.96 313 eP P 01 12 26.4 -0.5
MEZF Maizieres J'vi 81.97 338⇑iP P 01 12 26.7 +0.1
comp=Z,489nm,1.5s,mb5.9
MEZF Maizieres J'vi 81.97 338⇑iP P 01 12 26.7 +0.1
comp=Z,489nm,1.5s,mb6.2
THEF They Montfort 81.97 337 eP P 01 12 26.7 0.0
ACSO Alum Creek Sta 81.98 39 eP P 01 12 26.1 -0.8
comp=Z,54nm,0.9s,mb5.5
ACSO LR LR
comp=Z,2µm,19.0s,MS5.5
MOF Molkenrain 81.99 336 eP P 01 12 26.8 0.0
HBAR Harrisburg 82.04 47 eP P 01 12 27.1 -0.1
GNAR Gosnell 82.04 46⇑iP P 01 12 27.1 -0.2
comp=Z,1µm,0.9s,mb6.9
IVA Berane 82.04 326⇑iP P 01 12 27.3 +0.1
IVA Berane 82.04 326⇑iP P 01 12 27.4 +0.2
HAU Haudompre 82.07 337⇑iP P 01 12 26.8 -0.4
comp=Z,152nm,1.3s,mb5.5
HAU eMLR MLR

comp=Z,3µm,20.2s,MS5.3
HAU Haudompre 82.07 337⇑*i*P P 01 12 26.8 -0.4
HAU pmax pmax
comp=Z,76nm,1.3s,mb5.5
HAU MLR MLR
comp=Z,3µm,20.3s,MS5.6
HAU Haudompre 82.07 337⇑*i*P P 01 12 26.8 -0.4
comp=Z,76nm,1.3s,mb5.5
HAU LR LR
comp=Z,3µm,20.3s,MS5.6
WCI Wyandotte Cave 82.08 42⇑*i*P P 01 12 27.0 -0.4
WCI *e* 01 12 40.8
WCI pmax pmax
comp=Z,53nm,0.8s,mb5.5
WCI MLR MLR
comp=Z,1µm,20.0s,MS5.3
WCI Wyandotte Cave 82.08 42*i*P P 01 12 27.0 -0.5
comp=Z,53nm,0.8s,mb5.5
WCI *e* 01 12 40.8
WCI LR LR
comp=Z,1µm,20.0s,MS5.3
AYVA Ayvalik 82.10 320 *i* P P 01 12 27.3 -0.2
HINF Hinteralfeld 82.10 337⇑*i*P P 01 12 26.8 -0.6
comp=Z,55nm,1.0s,mb5.2
HINF Hinteralfeld 82.10 337⇑*i*P P 01 12 26.8 -0.6
HINF pmax pmax
comp=Z,28nm,1.0s,mb5.2
HINF Hinteralfeld 82.10 337⇑*i*P P 01 12 26.8 -0.6
comp=Z,28nm,1.0s,mb5.1
UPM Unac-Piva 82.15 327⇑*i*P P 01 12 27.1 -0.6
UPM Unac-Piva 82.15 327⇑*i*P P 01 12 27.2 -0.5
DAVOX Davos/Dischmat 82.15 334 LR LR 01 51 37.4
comp=Z,1µm,20.2s,MS5.2,baz=18,slow=38
GLAT Glass 82.17 45 *e*P P 01 12 27.7 -0.3
GLAT *e* 01 12 41.4
SKO Skopje 82.18 325 P P **01 12 28.8 +0.9**
SKO Skopje 82.18 325⇑*i*P P 01 12 28.8 +0.9
SKO Skopje 82.18 325 P P **01 12 28.8 +0.9**
DYA Yadsworthy 82.20 344 P P **01 12 27.7 -0.2**
DYA AMS AMS 01 54 16.0
comp=Z,1µm,16.5s
DYA Yadsworthy 82.20 344⇑*e*P P 01 12 27.7 -0.2
DYA AMS AMS 01 54 16.0
comp=Z,1µm,16.5s,MS5.4
KORT Korkueli 82.22 316 *i* P P 01 12 28.0 -0.2
BBS Basel-Blauen 82.23 336 *e*P P 01 12 28.3 +0.2
PVY Plav 82.25 326⇑*i*P P 01 12 27.8 -0.4
PVY Plav 82.25 326⇑*i*P P 01 12 27.9 -0.4
VAY Valandovo 82.25 324 P P **01 12 27.9 -0.4**
VAY Valandovo 82.25 324⇑*i*P P 01 12 27.7 -0.6
VAY Valandovo 82.25 324 P P **01 12 27.9 -0.4**
BRMO Bormio 82.27 334 P P **01 12 28.9 +0.6**
DNZL Cakiroluk 82.30 317 *i* P P 01 12 29.1 +0.5
LIA Limnos Island 82.30 321 P P **01 12 28.3 -0.3**
LIA Limnos Island 82.30 321 P P **01 12 28.3 -0.3**
CSS Prodhromos 82.31 313 P P **01 12 27.9 -0.8**
CSS Prodhromos 82.31 313 P P **01 12 27.9 -0.8**
UTMT University of 82.33 45 *e*P P 01 12 29.3 +0.5
comp=Z,54nm,0.8s,mb5.5
UTMT *e* 01 12 42.1
SOH Sokhos 82.34 323 P P **01 12 28.2 -0.5**
SOH Sokhos 82.34 323 P P **01 12 28.2 -0.5**
PRK Paraskevi 82.34 320 P P **01 12 28.3 -0.5**
PRK Paraskevi 82.34 320 P P **01 12 28.3 -0.5**
KLBR Kellerberrin 82.35 208 *e*P P 01 12 27.8 -0.8
comp=Z,194nm,1.8s,mb5.7
NCB Newcomb 82.38 31⇑*i*P P 01 12 27.8 -1.2
comp=Z,63nm,1.5s,mb5.3
NCB LR LR
comp=Z,1µm,19.0s,MS5.3
BCI Bajram Curri 82.40 326 *e*PN P 01 12 29.0 -0.1
GOLH Golhisar 82.41 317 *i* P P 01 12 29.5 +0.3
LEF Lefka 82.41 313 *e*P P 01 12 28.5 -0.7
NKY Niksic 82.44 327⇑*i*P P 01 12 28.8 -0.5
NKY Niksic 82.44 327⇑*i*P P 01 12 28.8 -0.4
PPT Papeete 82.46 124 *e*S S 01 22 44.7 +0.1
comp=Z,3µm,29.0s
PPT *e*LR LR 01 38 19.9
comp=Z,6µm,22.8s,baz=324
PPT Papeete 82.46 124 LR LR 01 48 09.7
comp=Z,3µm,18.4s,MS5.7,baz=241,slow=35
PPT Papeete 82.46 124 *e*LR LR 01 12 31.6
comp=Z,247nm,26.0s
NVLJ Novalja 82.47 330 P P **01 12 27.6 -1.7**
LOMF Lomont 82.53 336 *e*P P 01 12 30.1 +0.5
BRY Bratogost 82.55 327⇑*i*P P 01 12 28.5 -1.3
BRY Bratogost 82.55 327⇑*i*P P 01 12 28.5 -1.3
KDAG Bornova 82.57 319 *i* P P 01 12 29.8 -0.2
TUE Stuetta 82.59 334⇑*i*P P 01 12 30.1 +0.2
comp=Z,68nm,1.1s,mb5.6
TUE LR LR
comp=Z,3µm,19.0s,MS5.7
MABI Malga Bissina 82.60 334 P P **01 12 29.6 -0.4**
ELL Elmali 82.63 316 *e*P P 01 12 29.7 -0.7
PLG Polygyros 82.67 322 P P **01 12 29.9 -0.6**
PLG Polygyros 82.67 322 P P **01 12 29.9 -0.6**
TTG Podgorica 82.67 326⇑*i*P P 01 12 29.3 -1.1
TTG Podgorica 82.67 326⇑*i*P P 01 12 29.4 -1.1
TOO Toolangi 82.67 185 *e*P P 01 12 29.7 -0.5
CCA1 Carnmenellis 82.68 345 P P **01 12 29.4 -1.0**
CCA1 AMb AMB 01 12 31.2
comp=Z,155nm,1.4s,mb5.8
CCA1 Carnmenellis 82.68 345⇑*e*P P 01 12 29.4 -1.0
CCA1 AMb AMB 01 12 31.2
comp=Z,155nm,1.4s,mb5.8
BLCB Balcova 82.69 319 *e*P P 01 12 30.0 -0.6
MMAI Mount Meron Ar 82.72 310 P P **01 12 31.8 +0.9**
comp=Z,28nm,0.6s,mb5.5,baz=44,slow=7.4,SNR=55
MMAI sP sP 01 12 47.9 +6.7
comp=Z,29nm,0.6s,baz=41,slow=6.9,SNR=6.9
MMAI LR LR 01 54 38.6
comp=Z,4µm,19.7s,MS5.8,baz=65,slow=40
PUK Puka 82.75 326 *e*PN P 01 12 31.0 +0.2
KRUS Krusevo 82.76 324⇑*i*P P 01 12 30.4 -0.5
NATX Nacogdoches 82.82 52 *e*P P 01 12 32.0 +0.6
comp=Z,108nm,0.9s,mb5.9
AYDN Tasoluk 82.88 318 *i* P P 01 12 32.6 +0.9
STON Ston 82.89 327 P P **01 12 29.9 -1.7**
URLA Izmir 82.91 319 *i* P P 01 12 31.6 -0.2
BUM Brajici-Budva 82.92 326⇑*i*P P 01 12 31.4 -0.3
PAIG Paliouri 82.94 322 P P **01 12 31.5 -0.4**
PAIG Paliouri 82.94 322 P P **01 12 31.5 -0.4**
HCY Herceg Novi 82.95 327⇑*i*P P 01 12 31.2 -0.7
HCY Herceg Novi 82.95 327⇑*i*P P 01 12 31.3 -0.6
PKME Peaks-Kenny Pk 82.96 27⇑*i*P P 01 12 31.3 -0.6
comp=Z,98nm,1.6s,mb5.6
PKME LR LR
comp=Z,1µm,20.0s,MS5.3
LBNH Lisbon 82.97 30 *e*P P 01 12 31.7 -0.3
LBNH pmax pmax
comp=Z,29nm,1.1s,mb5.2
LBNH MLR MLR
comp=Z,2µm,20.0s,MS5.5
LBNH Lisbon 82.97 30 *e*P P 01 12 31.7 -0.3
comp=Z,29nm,1.1s,mb5.2
LBNH LR LR
comp=Z,2µm,20.0s,MS5.5
WVT Waverly 83.01 44⇑*i*P P 01 12 31.8 -0.5
WVT *e* 01 12 45.7
WVT pmax pmax
comp=Z,38nm,0.8s,mb5.5
WVT MLR MLR
comp=Z,2µm,20.0s,MS5.6
WVT Waverly 83.01 44⇑*i*P P 01 12 31.8 -0.5
comp=Z,38nm,0.8s,mb5.5
WVT *e* 01 12 45.7
WVT LR LR
comp=Z,2µm,20.0s,MS5.6
JSA Saint Aubin 83.03 343 AMS AMS 01 54 35.4
comp=Z,2µm,21.5s,MS5.4
JSA Saint Aubin 83.03 343 AMS AMS 01 54 35.4
comp=Z,2µm,21.5s
ULC Ulcinj 83.07 326⇑*i*P P 01 12 32.2 -0.3
ULC Ulcinj 83.07 326⇑*i*P P 01 12 32.2 -0.3
YER Yerkesik 83.11 317 *e*P P 01 12 33.3 +0.5
CHOS Chios island 83.14 320 P P **01 12 32.8 -0.2**
GCAM G?zelcaml? 83.15 318 *i* P P 01 12 33.2 +0.2
LDF La Druitiere 83.15 341⇑*i*P P 01 12 32.4 -0.4
comp=Z,53nm,0.9s,mb5.3
LDF La Druitiere 83.15 341⇑*i*P P 01 12 32.4 -0.4
LDF pmax pmax
comp=Z,26nm,0.9s,mb5.3
LDF La Druitiere 83.15 341⇑*i*P P 01 12 32.4 -0.4
comp=Z,26nm,0.9s,mb5.3

OHR Ohrid 83.16 325 P P **01 12 32.0 -1.0**
OHR Ohrid 83.16 325⇑*i*P P 01 12 32.0 -1.0
OHR Ohrid 83.16 325 P P **01 12 32.0 -1.0**
TURN Turunc 83.16 317 *i* P P 01 12 35.0 +1.8
AKAS Kas 83.19 316 *i* P P 01 12 33.5 +0.2
FNA Florina 83.20 324 P P **01 12 32.5 -0.7**
FNA Florina 83.20 324 P P **01 12 32.5 -0.7**
MLSB Milas 83.22 318 *e*P P 01 12 33.4 0.0
ABTO Aybut 83.22 288 P P **01 12 34.6 +0.9**
SNR=5.1
BINY Binghamton 83.24 33 *e*P P 01 12 32.0 -1.4
comp=Z,20nm,1.1s,mb5.1
BINY LR LR
comp=Z,2µm,22.0s,MS5.4
TIR Tirane 83.34 325⇑*i*P P 01 12 33.5 -0.5
TIR pmax pmax
comp=Z,102nm,1.0s,mb5.8
TIR MLR MLR
comp=Z,4µm,20.0s,MS5.8
TIR Tirane 83.34 325⇑*i*P P 01 12 33.5 -0.5
comp=Z,102nm,1.0s,mb5.8
TIR LR LR
comp=Z,4µm,20.0s,MS5.8
CABF La Chapelle 83.42 337⇑*i*P P 01 12 34.2 0.0
comp=Z,115nm,1.1s,mb5.5
CABF La Chapelle 83.42 337⇑*i*P P 01 12 34.2 0.0
CABF pmax pmax
comp=Z,58nm,1.1s,mb5.5
CABF La Chapelle 83.42 337⇑*i*P P 01 12 34.2 0.0
comp=Z,58nm,1.1s,mb5.5
LOR Lormes 83.42 338⇑*i*P P 01 12 34.0 -0.2
comp=Z,512nm,1.6s,mb6.0
LOR *e*MLR MLR
comp=Z,4µm,19.8s,MS5.5
LOR Lormes 83.42 338⇑*i*P P 01 12 34.0 -0.2
LOR pmax pmax
comp=Z,256nm,1.6s,mb6.0
LOR MLR MLR
comp=Z,4µm,19.8s,MS5.8
LOR Lormes 83.42 338⇑*i*P P 01 12 34.0 -0.2
comp=Z,256nm,1.6s,mb6.0
LOR LR LR
comp=Z,4µm,19.8s,MS5.8
AOS Alonnisos 83.47 321 P P **01 12 34.2 -0.5**
AOS Alonnisos 83.47 321 P P **01 12 34.2 -0.5**
OXF Oxford 83.49 46 *e*P P 01 12 34.0 -0.8
OXF pmax pmax
comp=Z,89nm,1.0s,mb5.8
OXF MLR MLR
comp=Z,2µm,19.0s,MS5.6
OXF Oxford 83.49 46 *e*P P 01 12 34.0 -0.8
comp=Z,89nm,1.0s,mb5.8
OXF LR LR
comp=Z,2µm,19.0s,MS5.6
GRR Gorron 83.51 342⇑*i*P P 01 12 34.6 -0.1
comp=Z,377nm,1.2s,mb6.1
GRR Gorron 83.51 342⇑*i*P P 01 12 34.6 -0.1
GRR pmax pmax
comp=Z,188nm,1.2s,mb6.1
GRR Gorron 83.51 342⇑*i*P P 01 12 34.6 -0.1
comp=Z,188nm,1.2s,mb6.1
HKT Hockley 83.53 54 *e*P P 01 12 34.9 -0.2
HKT MLR MLR
comp=Z,3µm,19.0s,MS5.7
BDRM Kayabasi 83.56 318 *i* P P 01 12 35.0 -0.2
KBN Korca 83.58 324 *e*PN P 01 12 33.0 -2.2
BODT Bodrum 83.63 318 *e*P P 01 12 34.6 -0.9
NEST Nestorio 83.64 324 P P **01 12 35.1 -0.4**
SSF Saint Saulge 83.70 338⇑*i*P P 01 12 35.5 -0.2
comp=Z,198nm,1.4s,mb5.8
SSF Saint Saulge 83.70 338⇑*i*P P 01 12 35.5 -0.2
SSF pmax pmax
comp=Z,99nm,1.4s,mb5.8
SSF Saint Saulge 83.70 338⇑*i*P P 01 12 35.5 -0.2
comp=Z,99nm,1.4s,mb5.8
HYF Humbligny 83.73 339⇑*i*P P 01 12 36.1 +0.3
NWAO Narrogin (SRO) 83.75 208 PFAKE 01 12 50.0 +14
NWAO LR LR
comp=Z,917nm,19.0s,MS5.2
DAT Datca 83.77 318 *e*P P 01 12 35.1 -1.1
SSPA Standing Stone 83.81 35 *e*P P 01 12 36.0 -0.4
comp=Z,76nm,1.5s,mb5.6
SSPA LR LR
comp=Z,2µm,19.0s,MS5.5
MCWV Mont Chateau 83.81 37⇑*i*P P 01 12 36.1 -0.3
comp=Z,56nm,1.0s,mb5.7
MCWV LR LR
comp=Z,2µm,22.0s,MS5.5
AVF Avril sur Loir 83.99 338⇑*i*P P 01 12 37.2 0.0
comp=Z,510nm,1.4s,mb6.2
AVF Avril sur Loir 83.99 338⇑*i*P P 01 12 37.2 0.0
AVF pmax pmax
comp=Z,255nm,1.4s,mb6.2
AVF Avril sur Loir 83.99 338⇑*i*P P 01 12 37.2 0.0
comp=Z,255nm,1.4s,mb6.2
SMF Signal de Mont 84.00 338⇑*i*P P 01 12 37.2 0.0
comp=Z,730nm,1.4s,mb6.3
SMF Signal de Mont 84.00 338⇑*i*P P 01 12 37.2 0.0
SMF pmax pmax
comp=Z,365nm,1.4s,mb6.3
SMF Signal de Mont 84.00 338⇑*i*P P 01 12 37.2 0.0
comp=Z,365nm,1.4s,mb6.3
SGMF Saint Gilles 84.00 343 *e*P P 01 12 37.2 0.0
comp=Z,98nm,0.6s,mb5.8
SGMF Saint Gilles 84.00 343 *e*P P 01 12 37.2 0.0
SGMF pmax pmax
comp=Z,49nm,0.6s,mb5.8
SGMF Saint Gilles 84.00 343 *e*P P 01 12 37.2 0.0
comp=Z,49nm,0.6s,mb5.8
ROSF Rostrenen 84.07 343 *e*P P 01 12 37.5 -0.1
comp=Z,151nm,1.0s,mb5.8
ROSF Rostrenen 84.07 343 *e*P P 01 12 37.5 -0.1
ROSF pmax pmax
comp=Z,76nm,1.0s,mb5.8
ROSF Rostrenen 84.07 343 *e*P P 01 12 37.5 -0.1
comp=Z,76nm,1.0s,mb5.8
FNVD Fontana Vidola 84.09 332 P P **01 12 38.5 +0.8**
BOB Bobbio (Coli) 84.09 334 P P **01 12 38.1 +0.4**
KVTX Kingsville 84.14 56 PFAKE 01 12 50.0 +12
KVTX LR LR
comp=Z,1µm,19.0s,MS5.4
LPL La Plagne 84.23 336⇑*i*P P 01 12 39.0 +0.6
comp=Z,133nm,1.0s,mb5.7
LPL La Plagne 84.23 336⇑*i*P P 01 12 39.0 +0.6
LPL pmax pmax
comp=Z,67nm,1.0s,mb5.7
LPL La Plagne 84.23 336⇑*i*P P 01 12 39.0 +0.6
comp=Z,67nm,1.0s,mb5.7
ATAL Atalanti 84.24 322 P P **01 12 37.3 -1.3**
LPG La Plagne 84.24 336⇑*i*P P 01 12 39.2 +0.7
comp=Z,187nm,1.0s,mb5.8
LPG La Plagne 84.24 336⇑*i*P P 01 12 39.2 +0.7
LPG pmax pmax
comp=Z,94nm,1.0s,mb5.9
LPG La Plagne 84.24 336⇑*i*P P 01 12 39.2 +0.7
comp=Z,94nm,1.0s,mb5.9
CRE Caprese Michel 84.30 332 P P **01 12 39.2 +0.4**
BGF Bois d'Agland 84.33 339⇑*i*P P 01 12 39.0 +0.1
comp=Z,266nm,1.5s,mb5.8
BGF Bois d'Agland 84.33 339⇑*i*P P 01 12 39.0 +0.1
BGF pmax pmax
comp=Z,133nm,1.5s,mb5.8
BGF Bois d'Agland 84.33 339⇑*i*P P 01 12 39.0 +0.1
comp=Z,133nm,1.5s,mb5.8
VLC Villacollemand 84.33 333⇑*i*P P 01 12 39.2 +0.2
comp=Z,72nm,1.1s,mb5.7
VLC LR LR
comp=Z,4µm,20.0s,MS5.8
MURB Monte Urbino 84.42 331 P P **01 12 39.9 +0.5**
QUIF Quistinic 84.45 343 *e*P P 01 12 38.5 -1.0
comp=Z,371nm,1.5s,mb6.0
QUIF Quistinic 84.45 343 *e*P P 01 12 38.5 -1.0
QUIF pmax pmax
comp=Z,185nm,1.5s,mb6.0
QUIF Quistinic 84.45 343 *e*P P 01 12 38.5 -1.0
comp=Z,185nm,1.5s,mb6.0
SRN Sarande 84.53 324 *e*PN P 01 12 37.6 -2.4
SWET Sewanee 84.67 44⇑*i*P P 01 12 40.0 -0.8
SWET *e* 01 12 53.7
BNI Bardonecchia 84.67 336⇑*i*P P 01 12 41.4 +0.8
BNI pmax pmax
comp=Z,35nm,0.9s,mb5.5
BNI MLR MLR
comp=Z,3µm,20.0s,MS5.7
BNI Bardonecchia 84.67 336⇑*i*P P 01 12 41.4 +0.7
comp=Z,35nm,0.9s,mb5.5

BNI LR LR
comp=Z,3µm,20.0s,MS5.7
PLDF La Plantade 84.68 338 *e*P P 01 12 41.5 +0.8
GDM Grand'Maison 84.69 336 *e*P P 01 12 41.8 +1.0
VBMS Vicksburg 84.70 49 *e*P P 01 12 41.4 +0.3
comp=Z,76nm,0.8s,mb5.9
VBMS LR LR
comp=Z,2µm,20.0s,MS5.5
AGO Saint Agoulin 84.73 338 *e*P P 01 12 41.9 +1.0
TCF Toulx Ste Croi 84.75 339⇑*i*P P 01 12 41.3 +0.3
comp=Z,199nm,1.2s,mb5.8
TCF Toulx Ste Croi 84.75 339⇑*i*P P 01 12 41.3 +0.3
TCF pmax pmax
comp=Z,100nm,1.2s,mb5.8
TCF Toulx Ste Croi 84.75 339⇑*i*P P 01 12 41.3 +0.3
comp=Z,100nm,1.2s,mb5.8
KEK Kerkira 84.75 324 P P **01 12 40.4 -0.8**
KEK Kerkira 84.75 324 P P **01 12 40.4 -0.8**
KALE Kalithea 84.88 322 P P **01 12 40.3 -1.5**
AQU L'Aquila 84.92 330 P P **01 12 41.9 0.0**
AQU L'Aquila 84.92 330⇑*i*P P 01 12 41.8 -0.1
comp=Z,106nm,1.1s,mb5.9
AQU LR LR
comp=Z,4µm,20.0s,MS5.8
AQU L'Aquila 84.92 330⇓*i*P P 01 12 43.3 +1.4
MBDF Montbardon 84.94 335⇑*i*P P 01 12 42.0 0.0
comp=Z,45nm,0.7s,mb5.4
MBDF Montbardon 84.94 335⇑*i*P P 01 12 42.0 0.0
MBDF pmax pmax
comp=Z,22nm,0.7s,mb5.4
MBDF Montbardon 84.94 335⇑*i*P P 01 12 42.0 0.0
comp=Z,22nm,0.7s,mb5.4
EFP Efpalio 84.95 322 P P **01 12 40.8 -1.4**
ORIF Oris-en-Rattie 85.02 336⇑*i*P P 01 12 43.0 +0.6
comp=Z,107nm,0.9s,mb5.7
ORIF *e*MLR MLR
comp=Z,3µm,22.0s,MS5.3
ORIF Oris-en-Rattie 85.02 336⇑*i*P P 01 12 43.0 +0.6
ORIF pmax pmax
comp=Z,54nm,0.9s,mb5.7
ORIF Oris-en-Rattie 85.02 336⇑*i*P P 01 12 43.0 +0.6
comp=Z,54nm,0.9s,mb5.7
MFF Saint Martin d 85.03 341 *e*P P 01 12 41.9 -0.5
comp=Z,105nm,1.0s,mb5.6
MFF Saint Martin d 85.03 341 *e*P P 01 12 41.9 -0.5
MFF pmax pmax
comp=Z,52nm,1.0s,mb5.6
MFF Saint Martin d 85.03 341 *e*P P 01 12 41.9 -0.5
comp=Z,52nm,1.0s,mb5.6
PYM Petit Puy Mans 85.04 338 *e*P P 01 12 43.6 +1.1
SSB Saint Sauveur 85.07 337⇑*i*P P 01 12 43.2 +0.6
SSB pmax pmax
comp=Z,112nm,1.3s,mb5.8
SSB MLR MLR
comp=Z,1µm,21.0s,MS5.3
SSB Saint Sauveur 85.07 337⇑*i*P P 01 12 43.2 +0.5
comp=Z,112nm,1.3s,mb5.8
SSB LR LR
comp=Z,1µm,21.0s,MS5.3
LAKA Lakka 85.07 322 P P **01 12 41.3 -1.5**
SURF Saint Ours 85.15 335 *e*P P 01 12 44.0 +0.9
CPCT Cooper Cave 85.16 43⇑*i*P P 01 12 42.5 -0.7
GUR Goura 85.17 322 P P **01 12 41.8 -1.5**
LKD2 Lefkada island 85.17 323 P P **01 12 42.4 -0.9**
FG5 Orsara di Pugl 85.18 328 P P **01 12 43.4 +0.1**
LTRZ Laterza 85.18 327 P P **01 12 42.7 -0.6**
MIDA Miranda 85.24 329 P P **01 12 43.6 0.0**
IMI Imperia 85.34 334 P P **01 12 43.9 -0.1**
TKL Tuckaleechee C 85.34 42 LR LR 01 50 02.1
comp=Z,3µm,21.5s,MS5.6,baz=338,slow=35
TKL Tuckaleechee C 85.34 42⇑*i*P P 01 12 43.6 -0.6
TKL *e* 01 12 57.5
SAOF Saorge 85.38 335 *e*P P 01 12 44.0 -0.2
AUTN L'Aution 85.41 335 *e*P P 01 12 44.6 +0.2
VIVF Saint-Julien-I 85.42 337⇑*i*P P 01 12 44.9 +0.5
comp=Z,339nm,1.6s,mb5.9
VIVF Saint-Julien-I 85.42 337⇑*i*P P 01 12 44.9 +0.5
VIVF pmax pmax
comp=Z,169nm,1.6s,mb5.9
VIVF Saint-Julien-I 85.42 337⇑*i*P P 01 12 44.9 +0.5
comp=Z,169nm,1.6s,mb5.9
ELN Prospectdale 85.44 39 *e*P P 01 12 43.8 -0.9
MTCE Montecelio 85.44 330 P P **01 12 43.6 -1.0**
TOUF Mont Tournerai 85.44 335 *e*P P 01 12 44.9 +0.3
LBL Lubilhac 85.46 338 *e*P P 01 12 45.7 +1.1
LUCF Luceram 85.53 335 *e*P P 01 12 45.0 0.0
SBF Sospel 85.53 335⇑*i*P P 01 12 44.5 -0.5
comp=Z,304nm,1.3s,mb6.1
SBF Sospel 85.53 335⇑*i*P P 01 12 44.5 -0.5
SBF pmax pmax
comp=Z,152nm,1.3s,mb6.1
SBF Sospel 85.53 335⇑*i*P P 01 12 44.5 -0.5
comp=Z,152nm,1.3s,mb6.1
MVIF Mont Vial 85.58 335 *e*P P 01 12 45.5 +0.3
BLA Blacksburg 85.60 39⇑*i*P P 01 12 44.8 -0.7
BLA pmax pmax
comp=Z,50nm,0.9s,mb5.7
BLA MLR MLR
comp=Z,1µm,19.0s,MS5.4
BLA Blacksburg 85.60 39⇑*i*P P 01 12 44.8 -0.6
comp=Z,50nm,0.9s,mb5.7
BLA LR LR
comp=Z,1µm,19.0s,MS5.4
RFI Roccamonfina 85.63 329 P P **01 12 45.2 -0.3**
REVF Revere 85.66 335 *e*P P 01 12 45.6 0.0
TOLF Tolfa 85.66 331 P P **01 12 45.2 -0.5**
KFL Anninata 85.69 323 P P **01 12 45.5 -0.4**
VLS Valsamata 85.72 323 P P **01 12 44.6 -1.4**
VLS Valsamata 85.72 323 P P **01 12 44.6 -1.4**
ORI Oriolo Calabro 85.79 327 P P **01 12 46.7 +0.4**
CALN Calern 85.79 335 *e*P P 01 12 46.6 +0.3
RJF Les Rejaudoux 85.84 339 *e*P P 01 12 46.0 -0.5
comp=Z,143nm,1.1s,mb5.8
RJF *e*MLR MLR
comp=Z,4µm,19.0s,MS5.5
RJF Les Rejaudoux 85.84 339 *e*P P 01 12 46.0 -0.5
RJF pmax pmax
comp=Z,72nm,1.1s,mb5.8
RJF MLR MLR
comp=Z,4µm,19.0s,MS5.8
RJF Les Rejaudoux 85.84 339 *e*P P 01 12 46.0 -0.5
comp=Z,72nm,1.1s,mb5.8
RJF LR LR
comp=Z,4µm,19.0s,MS5.8
LRAL Lakeview Retre 85.88 46 *e*P P 01 12 46.3 -0.6
comp=Z,18nm,0.9s,mb5.3
LRAL LR LR
comp=Z,2µm,22.0s,MS5.4
SMRF Simiane la Rot 85.97 336⇑*i*P P 01 12 47.6 +0.4
comp=Z,233nm,1.6s,mb5.9
SMRF Simiane la Rot 85.97 336⇑*i*P P 01 12 47.6 +0.4
comp=Z,233nm,1.6s,mb6.2
ITM Ithomi 85.98 322 P P **01 12 46.2 -1.1**
ITM Ithomi 85.98 322 P P **01 12 46.2 -1.1**
LAST Lasithi 86.03 318 P P **01 12 46.9 -0.7**
LAST Lasithi 86.03 318 P P **01 12 46.9 -0.7**
FRF La Foret Royal 86.04 335⇑*i*P P 01 12 47.1 -0.4
comp=Z,307nm,1.6s,mb6.0
FRF La Foret Royal 86.04 335⇑*i*P P 01 12 47.1 -0.4
FRF pmax pmax
comp=Z,154nm,1.6s,mb6.0
FRF La Foret Royal 86.04 335⇑*i*P P 01 12 47.1 -0.4
comp=Z,154nm,1.6s,mb6.0
CAF Calviac 86.05 339 *e*P P 01 12 47.6 0.0
comp=Z,132nm,0.9s,mb5.9
CAF Calviac 86.05 339 *e*P P 01 12 47.6 0.0
CAF pmax pmax
comp=Z,66nm,0.9s,mb5.9
CAF Calviac 86.05 339 *e*P P 01 12 47.6 0.0
comp=Z,66nm,0.9s,mb5.9
CBN Corbin 86.08 36 *e*P P 01 12 47.3 -0.5
comp=Z,35nm,0.8s,mb5.6
CBN LR LR
comp=Z,2µm,21.0s,MS5.5
LMR La Mourre 86.28 335⇑*i*P P 01 12 48.6 -0.1
comp=Z,280nm,1.1s,mb6.1
LMR La Mourre 86.28 335⇑*i*P P 01 12 48.6 -0.1
LMR pmax pmax
comp=Z,140nm,1.1s,mb6.1
LMR La Mourre 86.28 335⇑*i*P P 01 12 48.6 -0.1
comp=Z,140nm,1.1s,mb6.1
PYL PYLOS 86.30 322 P P **01 12 47.3 -1.6**
LASF Ste Croix 86.36 337⇑*i*P P 01 12 49.8 +0.7
comp=Z,197nm,1.5s,mb5.8
LFF La Frestale 86.38 339 *e*P P 01 12 48.7 -0.4

comp=Z,156nm,1.0s,mb5.9
LFF La Frestale 86.38 339 *e*P **P 01 12 48.7 -0.4**
LFF pmax pmax
comp=Z,78nm,1.0s,mb5.9
LFF La Frestale 86.38 339 *e*P **P 01 12 48.7 -0.4**
comp=Z,78nm,1.0s,mb5.9
SIVA Sivas 86.46 319 P **P 01 12 48.9 -0.9**
SIVA Sivas 86.46 319 P **P 01 12 48.9 -0.9**
KARN Karanos 86.56 319 P **P 01 12 49.4 -0.8**
GOGA Godfrey 87.32 43 *e*P **P 01 12 53.0 -1.0**
GOGA pmax pmax
comp=Z,14nm,0.7s,mb5.3
GOGA MLR MLR
comp=Z,2μm,21.0s,MS5.6
GOGA Godfrey 87.32 43 *e*P **P 01 12 53.0 -1.0**
comp=Z,14nm,0.7s,mb5.3
GOGA LR LR
comp=Z,2μm,21.0s,MS5.6
DGAR Diego Garcia 87.35 257 *e*P **P 01 12 51.5 -2.8**
BRAL Brewton 87.46 47 *e*P **P 01 12 54.5 -0.2**
comp=Z,92nm,0.7s,mb6.1
BRAL LR LR
comp=Z,2μm,20.0s,MS5.5
MTLF Montolieu 87.49 338 *e*P **P 01 12 54.3 -0.3**
comp=Z,54nm,1.1s,mb5.4
MTLF Montolieu 87.49 338 *e*P **P 01 12 54.3 -0.3**
MTLF pmax pmax
comp=Z,27nm,1.0s,mb5.4
MTLF Montolieu 87.49 338 *e*P **P 01 12 54.3 -0.3**
comp=Z,27nm,1.0s,mb5.4
CEL Celeste 87.56 326 *e*P **P 01 12 53.6 -1.5**
comp=Z,21nm,1.0s,mb5.3
CEL LR LR
comp=Z,5μm,19.0s,MS6.0
JSC Jenkinsville 87.65 41 *e*P **P 01 12 55.1 -0.4**
JSC *e* 01 13 09.1
SOI Samo 87.66 326 P **P 01 12 54.4 -1.1**
LRDF Laroque-de-Fa 87.78 337 *e*P **P 01 12 56.2 +0.2**
DGI Dorgali Grotta 88.03 332 P **P 01 12 57.1 -0.2**
CARF Carcanieres 88.10 338 *e*P **P 01 12 57.5 0.0**
SJAF Saint Jean de 88.11 337 *e*P **P 01 12 57.1 -0.5**
FILF Fillols 88.12 337 *e*P **P 01 12 57.8 +0.2**
EJON La Jonquera 88.14 337 P **P 01 12 57.5 -0.2**
comp=Z,237nm,3.0s
MLS Moulis 88.14 338 *e*P **P 01 12 56.4 -1.3**
EPF Esparros 88.27 339 *e*P **P 01 12 56.9 -1.4**
comp=Z,38nm,1.1s,mb5.2
EPF Esparros 88.27 339 *e*P **P 01 12 56.9 -1.4**
EPF pmax pmax
comp=Z,19nm,1.0s,mb5.3
EPF Esparros 88.27 339 *e*P **P 01 12 56.9 -1.4**
comp=Z,19nm,1.0s,mb5.3
CLLI Livia 88.36 338 P **P 01 12 58.6 -0.2**
CNNC Cliffs of the 88.36 38 PFAKE 01 13 10.0 +11
CNNC LR LR
comp=Z,2μm,19.0s,MS5.5
VALF Valcebollere 88.42 338 *e*P **P 01 12 59.2 +0.2**
RESF Ens 88.48 339 *e*P **P 01 12 59.5 +0.2**
VIEF Viey 88.48 339 *e*P **P 01 12 59.4 +0.1**
EALK Alkurruntz 88.54 340 P **P 01 12 59.1 -0.5**
comp=Z,48nm,1.5s,mb5.6
SJPF Ste Jean 88.57 340 *e*P **P 01 13 00.3 +0.5**
comp=Z,33nm,1.1s,mb5.3
SJPF Ste Jean 88.57 340 *e*P **P 01 13 00.3 +0.5**
SJPF pmax pmax
comp=Z,16nm,1.1s,mb5.3
SJPF Ste Jean 88.57 340 *e*P **P 01 13 00.3 +0.5**
comp=Z,16nm,1.1s,mb5.3
ELIZ Elizondo 88.60 340 P **P 01 12 58.8 -1.1**
ELIZ pmax pmax
comp=Z,36nm,1.2s,mb5.6
ELIZ Elizondo 88.60 340 P **P 01 12 58.8 -1.1**
comp=Z,36nm,1.2s,mb5.6
ETSF Etsaut 88.61 340 *e*P **P 01 12 59.3 -0.7**
comp=Z,28nm,0.7s,mb5.4
ETSF Etsaut 88.61 340 *e*P **P 01 12 59.3 -0.7**
ETSF pmax pmax
comp=Z,14nm,0.7s,mb5.4
ETSF Etsaut 88.61 340 *e*P **P 01 12 59.3 -0.7**
comp=Z,14nm,0.7s,mb5.4
EBIE Bielsa 88.64 339 P **P 01 13 00.2 +0.1**
comp=Z,75nm,1.7s,mb5.8
CSOR Sort 88.68 338 P **P 01 13 00.2 0.0**
comp=Z,210nm,2.7s,mb6.0
SNZO South Karori 88.79 162 PFAKE 01 13 10.0 +10
SNZO LR LR
comp=Z,2μm,21.0s,MS5.6
VSL Villasalto 88.85 331 *e*P **P 01 12 59.9 -1.2**
comp=Z,32nm,1.2s,mb5.5
VSL LR LR
comp=Z,2μm,20.0s,MS5.5
CFON Fontmartina 88.90 337 P **P 01 13 02.3 +1.0**
comp=Z,22nm,0.9s,mb5.5
ELAN Lanestosa 88.97 342 P **P 01 13 01.1 -0.5**
comp=Z,77nm,2.3s,mb5.6
NHSC New Hope 89.12 41 *e*P **P 01 13 02.3 -0.2**
comp=Z,75nm,1.0s,mb6.0
NHSC LR LR
comp=Z,2μm,20.0s,MS5.6
ECRI Cripan 89.35 341 P **P 01 13 03.2 -0.2**
ECRI pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
ECRI Cripan 89.35 341 P **P 01 13 03.2 -0.3**
comp=Z,8.7nm,1.0s,mb5.0
EPOB Poblet 89.65 338 P **P 01 13 04.1 -0.7**
comp=Z,37nm,1.2s,mb5.6
ESAC San Caprasio 89.70 339 P **P 01 13 04.2 -0.9**
comp=Z,84nm,1.5s,mb5.8
WDD Wield Dalam 90.18 326 PFAKE 01 13 20.0 +13
WDD LR LR
comp=Z,2μm,19.0s,MS5.6
ERTA Horta de San J 90.21 338 P **P 01 13 06.6 -0.9**
comp=Z,37nm,1.9s,mb5.4
RPZ Rata Peaks 90.41 166 *e*P **P 01 13 10.0 +2.1**
comp=Z,43nm,0.9s,mb5.8
ETOS Mallorca 90.65 336 P **P 01 13 09.3 -0.3**
comp=Z,80nm,1.4s,mb5.9
ETOR Torete 90.94 340 P **P 01 13 10.5 -0.4**
ETOR pmax pmax
comp=Z,14nm,0.8s,mb5.3
ETOR Torete 90.94 340 P **P 01 13 10.4 -0.4**
comp=Z,14nm,0.8s,mb5.3
PBRG Braganca 91.03 344 *e*P **P 01 13 10.7 -0.6**
comp=Z,21nm,2.8s,mb5.0
GUD Guadarrama 91.60 341 P **P 01 13 13.3 -0.6**
GUD pmax pmax
comp=Z,26nm,1.9s,mb5.2
GUD Guadarrama 91.60 341 P **P 01 13 13.3 -0.6**
comp=Z,26nm,1.9s,mb5.2
MVO Moncorvo 91.71 344 *e*P **P 01 13 13.3 -1.1**
comp=Z,34nm,1.4s,mb5.5
MVO *e*S SKSac 01 23 48.8 +3.2
MVO *e*LR LR 01 50 10.7
comp=Z,2μm,18.0s
MVO Moncorvo 91.71 344 P **P 01 13 12.6 -1.9**
PVRL Vila Real 91.73 344 *e*P **P 01 13 13.6 -0.9**
comp=Z,44nm,1.0s,mb5.7
KEST Kesra 92.24 330 P **P 01 13 16.7 -0.3**
comp=Z,9.9nm,1.0s,mb5.1,baz=26,slow=3.3,SNR=25
KEST LR LR 02 00 30.0
comp=Z,1μm,18.4s,MS5.4,baz=156,slow=39
KEST Kesra 92.24 330 ⇑*i*P **P 01 13 16.6 -0.4**
PVIS Viseu 92.31 344 *e*P **P 01 13 16.2 -1.0**
comp=Z,43nm,1.4s,mb5.6
ESDC Sonseca Array 92.48 341 P **P 01 13 16.8 -1.2**
comp=Z,5.9nm,0.9s,mb4.9,baz=15,slow=3.7,SNR=26
ESDC LR LR 02 00 48.8
comp=Z,2μm,18.2s,MS5.5,baz=20,slow=39
ESDC Sonseca Array 92.48 341 P **P 01 13 16.8 -1.3**
comp=Z,12nm,1.1s,mb5.1
ESLA Sonseca Array 92.48 341 PFAKE 01 13 30.0 +12
ESLA LR LR
comp=Z,9μm,19.0s,MS6.2
MTE Manteigas 92.55 344 *e*P **P 01 13 17.3 -1.0**
comp=Z,37nm,1.9s,mb5.5
MTE *e*S S 01 24 09.2 -12
MTE *e*LR LR 01 49 53.1
comp=Z,2μm,18.0s
MTE Manteigas 92.55 344 PFAKE 01 13 30.0 +12
MTE LR LR
comp=Z,2μm,19.0s,MS5.6
EPLA Plasencia 92.57 343 P **P 01 13 17.2 -1.2**
EPLA pmax pmax
comp=Z,22nm,1.7s,mb5.3
EPLA Plasencia 92.57 343 P **P 01 13 17.2 -1.3**
comp=Z,22nm,1.7s,mb5.3

DWPF Disney 92.66 45 PFAKE 01 13 30.0 +11
DWPF LR LR
comp=Z,2μm,21.0s,MS5.6
PAB San Pablo 92.69 341 PFAKE 01 13 30.0 +11
PAB LR LR
comp=Z,2μm,19.0s,MS5.5
EVIA Vianos 93.12 340 P **P 01 13 20.4 -0.6**
EVIA pmax pmax
comp=Z,26nm,1.3s,mb5.5
EVIA Vianos 93.12 340 P **P 01 13 20.4 -0.6**
comp=Z,26nm,1.3s,mb5.5
PMRV Marv??o 93.45 344 *e*P **P 01 13 21.7 -0.8**
comp=Z,14nm,2.0s,mb5.0
PMRV *e*S SKKSac 01 24 12.8 -2.0
PMRV *e*LR LR 01 53 10.6
comp=Z,2μm,18.0s
PTOM Tomar 93.47 344 *e*P **P 01 13 22.0 -0.6**
comp=Z,35nm,1.3s,mb5.6
EBAN Banos Encina 93.88 340 P **P 01 13 24.0 -0.5**
EBAN pmax pmax
comp=Z,20nm,1.6s,mb5.3
EBAN Banos Encina 93.88 340 P **P 01 13 24.0 -0.5**
comp=Z,20nm,1.6s,mb5.3
PESTR Estremoz 94.03 344 *e*P **P 01 13 23.8 -1.4**
comp=Z,20nm,2.0s,mb5.2
PESTR *e*S SKSac 01 24 04.5 +5.9
PESTR *e*LR LR 01 51 57.7
comp=Z,2μm,20.0s
PMAFR Mafra 94.28 345 *e*LR LR 01 50 31.0
comp=Z,2μm,18.0s
ATD Arta Tunnel 94.38 291 LR LR 01 57 13.6
comp=Z,1μm,20.5s,MS5.3,baz=289,slow=36
EVO Evora 94.44 344 ⇑*i*P **P 01 13 25.4 -1.7**
comp=Z,44nm,1.4s,mb5.4
EVO *e*MLR MLR
comp=Z,2μm,20.0s,MS5.3
EVOP Sao Brissos 94.47 344 *e*P **P 01 13 27.1 -0.1**
EVOP *e*S SKSac 01 24 00.1 -0.8
EVOP *e*S SKSac 01 24 00.8 -0.1
EVOP AMS AMS 02 00 08.0
comp=Z,2μm,18.0s,MS5.5
EVOP Sao Brissos 94.47 344 *e*P **P 01 13 27.0 -0.2**
EVOP *e*S SKSac 01 24 00.1 -0.9
LIS Lisbon 94.48 345 *e*P **P 01 13 27.1 -0.1**
LIS AMS AMS 02 04 58.1
comp=N,2μm,18.4s
ELUQ Luque 94.57 341 P **P 01 13 27.5 -0.2**
ELUQ pmax pmax
comp=Z,23nm,1.3s,mb5.5
ELUQ Luque 94.57 341 P **P 01 13 27.5 -0.2**
comp=Z,23nm,1.3s,mb5.5
PBAR Barrancos 94.59 343 *e*P **P 01 13 26.4 -1.4**
comp=Z,27nm,2.0s,mb5.3
PBAR *e*S SKSac 01 24 08.7 +7.1
PBAR *e*LR LR 01 51 56.9
comp=Z,2μm,16.0s
PBEJ Beja 94.90 344 *e*P **P 01 13 27.0 -2.2**
comp=Z,28nm,1.4s,mb5.5
MESJ Messejana 95.15 344 *e*P **P 01 13 30.4 +0.1**
MESJ *e*S SKSac 01 24 04.1 -0.5
MESJ *e*S SKSac 01 24 04.3 -0.4
MESJ AMS AMS 02 05 21.4
comp=Z,2μm,16.0s,MS5.7
MESJ Messejana 95.15 344 *e*P **P 01 13 30.4 +0.1**
MESJ *e*S SKSac 01 24 04.1 -0.6
MESJ A 02 05 21.4
comp=Z,2μm,16.0s
MESJ Messejana 95.15 344 *e*P **P 01 13 30.4 +0.1**
MESJ *e*S SKSac 01 24 04.2 -0.5
PCVE Castro Verde 95.32 344 *e*P **P 01 13 30.7 -0.4**
comp=Z,23nm,1.4s,mb5.4
PCVE *e*S SKSac 01 24 15.1 +10
PCVE *e*LR LR 01 52 43.5
comp=Z,2μm,18.0s
TEIG Tepich 95.36 54 PFAKE 01 13 40.0 +8.4
TEIG LR LR
comp=Z,1μm,19.0s,MS5.4
PVAQ Vaqueiros 95.47 343 *e*S SKSac 01 24 13.3 +6.9
PVAQ *e*LR LR 01 55 57.8
comp=Z,2μm,18.0s
RKT Rikitea 95.53 117 *e*SP SP 01 26 04.0 -1.4
comp=Z,940nm,29.2s
RKT *e*SS SS 01 31 15.8 -0.6
comp=Z,910nm,25.0s
RKT *e*LR LR 01 44 16.5
comp=Z,3μm,32.0s,baz=317
PBDV Barranco-do-Ve 95.67 343 *e*S SKKSac 01 24 25.4 -5.8
PBDV *e*LR LR 01 52 47.0
comp=Z,2μm,18.0s
MORF Marmelete 95.75 344 *e*S SKKSac 01 24 31.3 -0.5
MORF *e*LR LR 01 54 48.8
comp=Z,2μm,18.0s
MORF Marmelete 95.75 344 *e*P **P 01 13 33.0 -0.1**
MORF *e*S SKSac 01 24 07.6 -0.3
PFVI Vila Bisbo 95.95 344 *e*S SKKSac 01 24 33.6 +0.3
PFVI *e*LR LR 01 52 09.2
comp=Z,2μm,18.0s
SFS San Fernando 96.06 342 PFAKE 01 13 50.0 +16
SFS LR LR
comp=Z,4μm,19.0s,MS5.9
BBSR BB Station 96.10 30 PFAKE 01 13 50.0 +15
BBSR LR LR
comp=Z,2μm,22.0s,MS5.4
CMLA Cha da Macela 97.24 357 PFAKE 01 13 50.0 +10
CMLA LR LR
comp=Z,1μm,20.0s,MS5.4
MSEY Mahe Island 97.29 271 PFAKE 01 13 50.0 +10
MSEY LR LR
comp=Z,1μm,19.0s,MS5.4
TGUH Tegucigalpa,Un 100.80 57 PFAKE 01 14 10.0 +14
TGUH LR LR
comp=Z,903nm,21.0s,MS5.3
GTBY Guantanamo Bay 102.64 44 PFAKE 01 14 20.0 +16
GTBY LR LR
comp=Z,1μm,20.0s,MS5.5
MTDJ Mount Denham 102.84 47 PFAKE 01 14 20.0 +15
MTDJ LR LR
comp=Z,1μm,20.0s,MS5.5
GRTK Grand Turk 103.16 40 PFAKE 01 14 20.0 +14
GRTK LR LR
comp=Z,1μm,21.0s,MS5.4
JTS JuntasAbangare 105.15 58 PFAKE 01 18 40.0 +10
JTS LR LR
comp=Z,755nm,20.0s,MS5.2
SDDR Presa de Saban 105.28 41 PFAKE 01 18 40.0 +10
SDDR LR LR
comp=Z,1μm,21.0s,MS5.5
TAM Tamanrasset 105.33 327 PFAKE 01 18 40.0 +10
TAM LR LR
comp=Z,1μm,22.0s,MS5.4
KMBO Kilima Mbogo 107.44 287 PFAKE 01 18 50.0 +16
KMBO LR LR
comp=Z,1μm,19.0s,MS5.5
SJG San Juan 108.34 37 PFAKE 01 18 50.0 +14
SJG LR LR
comp=Z,1μm,20.0s,MS5.4
BCIP Isla Barro Col 109.04 54 PFAKE 01 18 50.0 +13
BCIP LR LR
comp=Z,818nm,20.0s,MS5.3
ANWB Willy Bob 110.53 34 PFAKE 01 18 50.0 +10
ANWB LR LR
comp=Z,1μm,21.0s,MS5.4
DRV Dumont d'Urvil 111.98 185 SP SP 01 28 57.0 +2.4
DRV SS SS 01 35 08.0 +6.5
ABPO Ambohimpanom 112.97 266 PFAKE 01 19 00.0 +16
ABPO LR LR
comp=Z,2μm,20.0s,MS5.6
FDF Fort de France 113.44 34 PFAKE 01 19 00.0 +15
FDF LR LR
comp=Z,1μm,21.0s,MS5.6
SDV Santo Domingo 114.27 46 PFAKE 01 19 00.0 +13
SDV LR LR
comp=Z,530nm,21.0s,MS5.1
RPN Rapa Nui 115.17 104 PFAKE 01 19 00.0 +12
RPN LR LR
comp=Z,3μm,20.0s,MS5.9
BBGH Gun Hill 115.51 33 PFAKE 01 19 00.0 +11
BBGH LR LR
comp=Z,2μm,22.0s,MS5.8
CASY Casey 115.56 197 PFAKE 01 19 00.0 +12
CASY LR LR
comp=Z,734nm,22.0s,MS5.2
TORD Torodi Ar. Bea 115.58 327 PKiKP PKiKP 01 18 48.2 -1.2
comp=Z,1.6nm,0.4s,baz=17,slow=2.0,SNR=12
GRGR Grenville 115.59 36 PFAKE 01 19 00.0 +10

GRGR LR LR
comp=Z,1μm,20.0s,MS5.5
OTAV Otavalo 117.02 59 *e*PKPdf PKPdf 01 18 52.6 +0.3
OTAV LR LR
comp=Z,678nm,21.0s,MS5.2
SACV Santiago Islan 119.81 354 PFAKE 01 19 10.0 +12
SACV LR LR
comp=Z,1μm,19.0s,MS5.5
SBA Scott Base 123.28 176 *e*PKIKP PKPdf 01 19 01.6 -0.8
SBA MLR MLR
comp=Z,882nm,19.0s,MS5.4
LSZ Lusaka 123.78 283 *e*PKIKP PKPdf 01 19 04.8 -0.3
LSZ MLR MLR
comp=Z,1μm,20.0s,MS5.5
DBIC Dimbokro 123.95 331 PKP PKPdf 01 19 04.5 -1.1
comp=Z,7.9nm,0.6s,baz=338,slow=3.2,SNR=17
DBIC Dimbokro 123.95 331 *e*PKPdf PKPdf 01 19 04.2 -1.4
DBIC *e* 01 19 18.2
DBIC LR LR
comp=Z,1μm,19.0s,MS5.5
TIC Toumodi 124.03 331 *e*PKP1 PKPdf 01 19 04.7 -1.1
comp=Z,42nm,0.9s
KIC Kosan Boka 124.20 331 *e*PKP1 PKPdf 01 19 05.0 -1.1
comp=Z,27nm,0.8s
LIC Lamto 124.42 331 *e*PKIKP PKPdf 01 19 04.1 -2.4
comp=Z,150nm,1.6s
LIC *e*MLR MLR
comp=Z,1μm,21.2s,MS5.3
LIC Lamto 124.42 331 *e*PKP1 PKPdf 01 19 05.6 -0.9
comp=Z,100nm,1.5s
LIC Lamto 124.42 331 *e*PKPdf PKPdf 01 19 04.1 -2.4
LIC LR LR
comp=Z,690nm,21.3s,MS5.3
NNA Nana 127.46 66 *e*PKPdf PKPdf 01 19 12.5 +0.3
NNA LR LR
comp=Z,858nm,21.0s,MS5.4
MAW Mawson 130.28 210 *e*P PKPdf 01 19 15.4 -0.5
comp=Z,5.9nm,0.7s
MAW Mawson 130.28 210 PKP PKPdf 01 19 15.8 -0.1
comp=Z,3.3nm,0.6s,baz=82,slow=3.5,SNR=11
MAW SKPbc SKPbc 01 22 35.6 -1.8
comp=Z,3.9nm,0.8s,baz=51,slow=5.3,SNR=4.4
MAW Mawson 130.28 210 *e*PKPdf PKPdf 01 19 15.3 -0.6
MAW *e*SKPbc SKPbc 01 22 37.0 -0.4
MAW LR LR
comp=Z,837nm,21.0s,MS5.4
LBTB Lobatse 132.09 276 *e*PKIKP PKPdf 01 19 20.4 -0.3
LBTB MLR MLR
comp=Z,1μm,20.0s,MS5.6
TSUM Tsumeb 133.73 289 *e*PKPdf PKPdf 01 19 23.5 -0.4
TSUM LR LR
comp=Z,2μm,21.0s,MS5.8
BOSA Boshof 134.53 272 PKhKP PKPpre 01 19 21.6
comp=Z,2.5nm,1.0s,baz=318,slow=2.0,SNR=3.8
BOSA PKP PKPdf 01 19 28.5 +3.3
comp=Z,4.6nm,0.8s,baz=277,slow=0.3,SNR=6.6
BOSA Boshof 134.53 272 PKP PKPpre 01 19 21.6
BOSA *e*PKPdf PKPdf 01 19 28.2 +3.0
BOSA LR LR
comp=Z,1μm,19.0s,MS5.7
QSPA South Pole Qui 135.06 180 *e*PKPdf PKPdf 01 19 24.8 +0.1
QSPA LR LR
comp=Z,1μm,22.0s,MS5.5
LPAZ La Paz 136.22 61 PKP PKPdf 01 19 30.2 +1.6
comp=Z,3.9nm,0.8s,baz=337,slow=2.6,SNR=14
LPAZ pPKP pPKPdf 01 19 42.3 +5.8
comp=Z,14nm,0.8s,baz=339,slow=4.0,SNR=17
LPAZ La Paz 136.22 61 PKIKP PKPdf 01 19 30.3 +1.6
LPAZ 01 19 42.3
LPAZ pmax pmax
comp=Z,4.0nm,0.8s
LPAZ La Paz 136.22 61 *e*PKPdf PKPdf 01 19 29.1 +0.4
LPAZ LR LR
comp=Z,1μm,22.0s,MS5.5
SYO Syowa Base 138.99 211 ⇑*e*PKPdf PKPdf 01 19 30.1 -2.1
SYO Syowa Base 138.99 211 ⇓*e*PKiKP PKiKP 01 19 34.0 -0.4
SYO Syowa Base 138.99 211 ⇓*e*pPKPdf pPKPdf 01 19 40.2 +0.2
SUR Sutherland 139.83 271 PFAKE 01 19 50.0 +15
SUR LR LR
comp=Z,1μm,22.0s,MS5.6
RCBR Riachuelo 140.18 11 PFAKE 01 19 50.0 +14
RCBR LR LR
comp=Z,861nm,20.0s,MS5.5
LCO Las Campanas 143.34 78 *e*PKPdf PKPdf 01 19 41.9 +0.7
LCO LR LR
comp=Z,2μm,20.0s,MS5.8
SHEL Horse Pasture 144.87 319 PFAKE 01 20 00.0 +16
SHEL LR LR
comp=Z,1μm,19.0s,MS5.7
NVL N'lazarevskaya 147.78 204 ⇑*i*PKIKP PKPdf 01 19 47.1 -0.5
NVL *i* 01 20 01.6
NVL *e* 01 26 53.5
NVL *e*SS SS 01 42 15.9 -5.2
NVL *e*SSS 01 48 00.7
CPUP Villa Florida 150.36 60 PKPbc PKPbc 01 19 57.1 -1.2
comp=Z,7.2nm,0.6s,baz=297,slow=2.4,SNR=23
CPUP pPKPbc pPKPbc 01 20 11.2 +5.0
comp=Z,62nm,0.8s,baz=306,slow=2.9,SNR=30
CPUP Villa Florida 150.36 60 PKIKP PKPbc 01 19 57.1 -1.3
CPUP 01 20 11.2
CPUP pmax pmax
comp=Z,7.0nm,0.6s
CPUP Villa Florida 150.36 60 *e*PKPbc PKPbc 01 19 57.0 -1.4
CPUP LR LR
comp=Z,209nm,19.0s,MS5.0
PMSA Palmer Station 152.55 148 PFAKE 01 20 10.0 +15
PMSA LR LR
comp=Z,3μm,20.0s,MS6.1
VNA1 Neumayer--Stat 152.67 195 *e*PKPdf PKPbc 01 20 01.3 -1.0
VNA1 *e* 01 20 03.1
VNA1 *e* 01 20 06.2
SPB Sao Paulo 153.57 41 *e*PKPab PKPab 01 20 17.6 -0.6
SPB LR LR
comp=Z,1μm,21.0s,MS5.7
TRQA Tornquist 154.34 85 PFAKE 01 20 10.0 +11
TRQA LR LR
comp=Z,2μm,19.0s,MS5.9
CAM4 Nova Friburgo 154.49 31 (P) PKPbc 01 20 08.8 +1.0
CAM4 *i* 01 20 15.0
CAM4 *i* 01 20 20.6
CAM4 *i* 01 20 30.0
CAM4 *i* 01 20 33.7
CAM4 *i* 01 20 42.1
CAM4 *i* 01 20 47.4
CAM4 *i* 01 20 58.3
CAM4 *i* 01 21 13.5

IDC ***06*** *01:14:07.3±1.5, 45°.36N×151°.52E, h0km, mb4.0/9, mb1 4.0/13, mb1mx3.8/28, mbtmp3.9/13, ML3.6/4, MS3.8/1, Ms1 3.8/1, ms1mx2.9/37, Error ellipse: s-maj=37.3km s-min=23.3km az=121.0*
MOS ***06*** *01:14:09.1±1.0, 45°.29N×151°.50E, h30km, mb4.4/8, Error ellipse: s-maj=15.5km s-min=12.9km az=47.8*
NEIC ***06*** *01:14:09.6±3.7, 45°.29N×151°.62E, h20km±23km, mb4.3/4, Error ellipse: s-maj=18.9km s-min=8.9km az=133.0*
JMA ***06*** *01:14:10.5±0.6, 45°.50N×151°.31E, h30km, M4.4*
ISCJB ***06*** *01:14:14.4±1.8, 45°.1N±0°.1×151°.0E±0°.2, h61km±14km, mb4.1/13, Error ellipse: s-maj=25.2km s-min=15.4km az=139.4*

ISC 06 01:14:13.8±1.5,**45°.2N**±0°.1×**151°.2E**±0°.2,**h41**km±12km,**n51**, σ**1**°**16**/54,**mb4.1**/13,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**3.98**	**255**	*e*PN	**Pn**	**01 15 11.5**	**-0.8**
YUK				pmax	pmax		
	comp=Z,60μm,0.5s						
YUK				pmax	pmax		
	comp=N,70nm,0.5s						
YUK				pmax	pmax		
	comp=E,90nm,0.5s						
YUK				pmax	pmax		
	comp=Z,130nm,0.5s						
NEM2	**Nemuro 2**	**4.33**	**247**	P	**Pn**	**01 15 16.1**	**-0.9**
NEM2				*e*S	**Sn**	**01 16 05.0**	**-1.2**
JRA	**Rausu**	**4.52**	**256**	P	**Pn**	**01 15 21.0**	**+1.3**
JNK	**Nakash**	**4.92**	**253**	P	**Pn**	**01 15 25.9**	**+0.8**
JAK	**Akkeshi**	**5.18**	**247**	P	**Pn**	**01 15 27.8**	**-0.9**
JAK				*e*S	**Sn**	**01 16 25.3**	**-1.8**
JTKR	**Abashiri--Toko**	**5.35**	**259**	P	**Pn**	**01 15 32.5**	**+1.4**
JAR	**Ashorobuto**	**5.67**	**253**	P	**Pn**	**01 15 36.3**	**+0.9**
JMP	**Maruseppu**	**5.72**	**261**	P	**Pn**	**01 15 37.9**	**+1.7**

JOB	**Onbets**	**5.78 249**	P	**Pn**	**01 15 36.8**	**-0.2**
JKK2	**Kamakawa 2**	**6.18 260**	P	**Pn**	**01 15 44.5**	**+2.0**
JCH	**Churui**	**6.22 248**	P	**Pn**	**01 15 42.4**	**-0.7**
JCH			*e*S	**Sn**	**01 16 51.0**	**-1.9**
ASAJ	**Asahikawa**	**6.23 263**	Pn	**Pn**	**01 15 45.5**	**+2.4**
	comp=Z,2.1nm,0.3s,baz=70,slow=17,SNR=8.3					
ASAJ			LR	LR	01 17 22.6	
	comp=Z,926nm,21.8s,baz=324,slow=30					
ASAJ	**Asahikawa**	**6.23 263**	PN	**Pn**	**01 15 45.5**	**+2.4**
ASAJ			pmax	pmax		
	comp=Z,2.0nm,0.3s					
ASAJ			MLR	MLR		
	comp=Z,926nm,21.8s					
ERM	**Erimo**	**6.65 244**	*e*Pn	**Pn**	**01 15 50.1**	**+1.2**
ERM			*e*Sg	Sn	01 17 34.7	+31
JNBK	**Urakawa-nobuka**	**6.78 247**	P	**Pn**	**01 15 50.3**	**-0.4**
JKB	**Kayabe**	**8.09 249**	P	**Pn**	**01 16 07.6**	**-1.1**
JKB			*e*S	**Sn**	**01 17 33.9**	**-4.9**
JANG	**Nango**	**8.60 239**	P	**Pn**	**01 16 12.7**	**-3.0**
JANG			*e*S	**Sn**	**01 17 42.6**	**-8.7**
PETK	**Petropavlovsk-**	**8.97 26**	Pn	**Pn**	**01 16 16.2**	**-4.5**
	comp=Z,0.6nm,0.3s,baz=270,slow=7.9,SNR=2.0					
PETK	**Petropavlovsk-**	**8.97 26**	PN	**Pn**	**01 16 16.2**	**-4.5**
PETK			pmax	pmax		
	comp=Z,1.0nm,0.3s					
MJAR	**Matsushiro Arr**	**13.09 233**	Pn	**Pn**	**01 17 17.7**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=52,slow=8.0,SNR=3.6					
KSRS	**Korea Array**	**19.07 254**	P	**Pn**	**01 18 34.0**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=55,slow=11,SNR=3.7					
SONM	**Songino Array**	**30.61 291**	P	**P**	**01 20 24.9**	**+1.3**
	comp=Z,0.3nm,0.5s,mb3.3,baz=108,slow=4.7,SNR=2.3					
DAWY	**Dawson**	**41.88 38**	*e*P	**P**	**01 21 54.4**	**-5.1**
MK31	**Makanchi Array**	**46.47 298**	*e*P	**P**	**01 22 37.0**	**+0.6**
MKAR	**Makanchi Array**	**46.47 298**	P	**P**	**01 22 37.1**	**+0.7**
	comp=Z,0.8nm,0.7s,mb3.8,baz=70,slow=7.8,SNR=7.2					
MKAR			PcP	PcP	01 24 11.4	+0.9
	comp=Z,0.3nm,0.6s,baz=50,slow=3.2,SNR=3.3					
MKAR	**Makanchi Array**	**46.47 298**	P	**P**	**01 22 37.1**	**+0.7**
MKAR					01 24 11.4	
MKAR			pmax	pmax		
	comp=Z,1.0nm,0.7s					
KURK	**Kurchatov**	**47.11 304**	P	**P**	**01 22 40.7**	**-0.7**
	comp=Z,0.6nm,0.4s,mb3.9,baz=70,slow=8.0,SNR=4.7					
KURK	**Kurchatov**	**47.11 304**	*e*P	**P**	**01 22 41.4**	**0.0**
KURK			pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9					
KURK	**Kurchatov**	**47.11 304**	*e*P	**P**	**01 22 41.4**	**0.0**
	comp=Z,1.1nm,0.6s,mb4.0					
EKS2	**Erkin-Say**	**53.76 297**	*e*P	**P**	**01 23 32.7**	**+0.9**
	comp=Z,1.2nm,0.4s,mb4.2					
ABKAR	**Akbulak array**	**58.38 310**	*e*P	**P**	**01 24 03.7**	**-0.9**
	comp=Z,1.2nm,0.4s,mb4.3					
KBL	**Kabul**	**61.38 291**	*e*P	**P**	**01 24 25.8**	**+0.3**
KBL			pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.7					
KBL	**Kabul**	**61.38 291**	*e*P	**P**	**01 24 25.8**	**+0.3**
	comp=Z,3.3nm,0.5s,mb4.7					
JOF	**Joensuu**	**62.11 333**	*e*P	**P**	**01 24 28.0**	**-1.9**
JOF			pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.4					
JOF	**Joensuu**	**62.11 333**	*e*p	**P**	**01 24 28.0**	**-1.9**
	comp=Z,0.9nm,0.3s,mb4.4					
FINES	**FINESS Array B**	**64.85 334**	P	**P**	**01 24 46.5**	**-1.5**
	comp=Z,1.1nm,0.4s,mb4.2,baz=36,slow=8.1,SNR=16					
FINES	**FINESS Array B**	**64.85 334**	P	**P**	**01 24 46.5**	**-1.5**
FINES			pmax	pmax		
	comp=Z,1.0nm,0.4s					
WRA	**Warramunga Arr**	**66.64 197**	P	**P**	**01 25 00.7**	**+0.8**
	comp=Z,0.4nm,0.8s,mb3.5,baz=15,slow=6.7,SNR=3.3					
WRA			pP	pP	01 25 15.4	+3.3
	comp=Z,0.7nm,0.9s,baz=16,slow=6.2,SNR=2.8					
WRA	**Warramunga Arr**	**66.64 197**	P	**P**	**01 25 00.7**	**+0.8**
WRA			*PP	pP	01 25 15.4	+3.3
WRA			pmax	pmax		
	comp=Z,1.0nm,1.0s					
NB2	**NORSAR Subarra**	**69.24 340**	P	**P**	**01 25 15.3**	**-0.6**
	comp=Z,1.3nm,0.5s,mb4.1,baz=26,slow=6.5					
NOA	**NORSAR Array B**	**69.24 340**	P	**P**	**01 25 15.6**	**-0.3**
	comp=Z,1.3nm,0.5s,mb4.1,baz=26,slow=6.2,SNR=11					
NOA	**NORSAR Array B**	**69.24 340**	P	**P**	**01 25 15.6**	**-0.3**
NOA			pmax	pmax		
	comp=Z,1.0nm,0.5s					
NOA	**NORSAR Array B**	**69.24 340**	P	**P**	**01 25 15.6**	**-0.3**
AKASG	**Malin Array Be**	**72.07 325**	P	**P**	**01 25 32.6**	**-0.7**
	comp=Z,1.4nm,0.3s,mb4.3,baz=37,slow=6.0,SNR=7.4					
AKASG	**Malin Array Be**	**72.07 325**	P	**P**	**01 25 32.6**	**-0.7**
AKASG			pmax	pmax		
	comp=Z,1.0nm,0.4s					
CLL	**Collm**	**77.30 335**	*i* P	**P**	**01 26 03.1**	**-0.4**
VRAC	**Vranov**	**77.88 332**	P	**P**	**01 26 07.3**	**+0.4**
	comp=Z,3.7nm,1.0s,mb4.3,baz=48,slow=7.3,SNR=5.0					
VRAC	**Vranov**	**77.88 332**	P	**P**	**01 26 07.3**	**+0.5**
VRAC			pmax	pmax		
	comp=Z,4.0nm,1.0s					
TXAR	**Lajitas Array**	**79.42 59**	pP	pP	01 26 29.7	+1.6
	comp=Z,0.3nm,0.7s,baz=305,slow=3.2,SNR=3.8					
MMAI	**Mount Meron Ar**	**82.81 310**	P	**P**	**01 26 35.0**	**+1.4**
	comp=Z,0.7nm,0.5s,mb4.0,baz=63,slow=6.6,SNR=3.9					
TORD	**Torodi Ar. Bea**	**115.68 327**	PKiKP	PKiKP	01 32 51.2	-0.7
	comp=Z,0.6nm,0.9s,baz=20,slow=2.3,SNR=2.7					

NEIC ***06*** *01:18:41.4, 58.45N×133.44W, h1km, ML2.8(PGC), After PGC.*

PGC 06 01:18:41.4±2.6, 58.45N×133.44W, h1km, ML2.8/4, 2C-7D, 59km east of Juneau, Ak Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKAG	**Skagway**	**1.41**	**317**	*e*Pn	Pn	01 19 07.3	-0.9
SKAG				*e*Sg	Sg	01 19 27.1	+0.4
SIT	**Sitka**	**1.72**	**217**	*e*Pn	Pn	01 19 07.8	-4.6
DLBC	**Dease Lake**	**1.79**	**89**	⇑Pg	Pg	01 19 13.1	-2.7
DLBC				Sg	Sg	01 19 37.7	-1.3
DLBC	**Dease Lake**	**1.79**	**89**	⇑Pg	Pg	01 19 13.1	-2.7
DLBC				⇓Sg	Sg	01 19 37.7	-1.3
PLBC	**Pleasant Camp**	**1.82**	**305**	⇓Pg	Pg	01 19 13.4	-2.9
PLBC				Sn	Sn	01 19 37.4	-0.1
PLBC				Sg	Sg	01 19 38.8	-1.1
PLBC	**Pleasant Camp**	**1.82**	**305**	⇓Pg	Pg	01 19 13.4	-2.9
PLBC				⇓Sn	Sn	01 19 37.4	-0.1
PLBC				⇓Sg	Sg	01 19 38.8	-1.1
WHY	**Whitehorse**	**2.34**	**342**	Pg	Pg	01 19 23.2	-3.0
WHY				Sg	Sg	01 19 54.2	-2.2
WHY	**Whitehorse**	**2.34**	**342**	⇑Pg	Pg	01 19 23.2	-3.0
WHY				⇓Sg	Sg	01 19 54.2	-2.2
HYT	**Haines Junctio**	**3.15**	**321**	⇑Pg	Pg	01 19 37.4	-4.4
HYT				Sg	Sg	01 20 19.8	-2.8
HYT	**Haines Junctio**	**3.15**	**321**	⇑Pg	Pg	01 19 37.4	-4.4
HYT				⇓Sg	Sg	01 20 19.8	-2.8

WEL 06 01:20:15.2±0.6, 37.01S×177.18E, h178km±5km, ML3.8/6, Error ellipse: s-maj=8.2km s-min=7.5km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.06**	**122**	PN	Pn	01 20 42.8	-0.3
MXZ				SN	Sn	01 21 04.5	-0.2
URZ	**Urewera**	**1.25**	**183**	PN	Pn	01 20 44.8	+0.1
URZ				SN	Sn	01 21 07.5	-0.2
MWZ	**Matawai**	**1.36**	**168**	PN	Pn	01 20 46.3	+0.7
MWZ				SN	Sn	01 21 09.6	+0.3
PUZ	**Puketiti**	**1.37**	**142**	PN	Pn	01 20 46.3	+0.6
PUZ				SN	Sn	01 21 08.9	-0.6
KNZ	**Kokohu**	**2.05**	**169**	PN	Pn	01 20 51.9	-0.7
BKZ	**Black Stump Fm**	**2.23**	**194**	PN	Pn	01 20 54.9	+0.3
PNHZ	**Pukenui**	**3.01**	**195**	PN	Pn	01 21 02.7	-1.0
MRZ	**Mangatainoka R**	**3.86**	**198**	PN	Pn	01 21 12.5	-1.9
OGWZ	**Otaki Gorge**	**4.12**	**202**	PN	Pn	01 21 15.7	-2.0
TUWZ	**Tuamarina**	**5.08**	**209**	PN	Pn	01 21 26.8	-3.3

ISK ***06*** *01:29:52.7, 37.07N×29.16E, h5km, MD3.5*
ISCJB ***06*** *01:29:53.4±0.7, 36.98N±0.03×29.16E±0.03, h2km±6km, Error ellipse: s-maj=5.1km s-min=4.4km az=4.8*
CSEM ***06*** *01:29:53.8±0.1, 36.99N×29.16E, h2km, MD3.5, Error ellipse: s-maj=2.3km s-min=1.4km az=18.0*
DDA ***06*** *01:29:54.2, 36.98N×29.20E, h7km±5km, Md3.4*
ISC 06 01:29:54.2±0.5, 36.99N±0.03×29.16E±0.03, h6km±5km, n60, σ0.97/74, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.32**	**58**	*e*PG	**Pg**	**01 29 59.1**	**-1.4**
GLHS				*e*SG	**Sg**	**01 30 04.6**	**-0.1**
GLHS	**Glhisar (BURDU**	**0.32**	**58**	*e*Pg	**Pg**	**01 29 59.1**	**-1.4**
GLHS				*e*Sg	**Sg**	**01 30 04.6**	**-0.1**
GOLH	**Golhisar**	**0.41**	**52**	*i* P	**Pg**	**01 30 01.6**	**-0.6**
GOLH				*i* S	**Sg**	**01 30 08.9**	**+1.4**
GOLH	**Golhisar**	**0.41**	**52**	*i* P	**Pg**	**01 30 01.6**	**-0.5**
GOLH				*i* S	**Sg**	**01 30 08.9**	**+1.4**
ELL	**Elmali**	**0.65**	**111**	*e*PG	**Pg**	**01 30 06.2**	**-0.4**
ELL	**Elmali**	**0.65**	**111**	*e*Pg	**Pg**	**01 30 06.3**	**-0.3**
DNZL	**Cakiroluk**	**0.71**	**353**	*i* S	**Sg**	**01 30 19.2**	**+2.1**
DNZL				*i* S	**Sg**	**01 30 22.2**	**+5.1**
DNZL	**Cakiroluk**	**0.71**	**353**	*i* S	**Sg**	**01 30 19.2**	**+2.1**
YER	**Yerkesik**	**0.72**	**282**	*e*PG	**Pg**	**01 30 07.5**	**-0.5**
YER	**Yerkesik**	**0.72**	**282**	*e*Pg	**Pg**	**01 30 07.5**	**-0.5**
DENT	**Denizli**	**0.78**	**353**	*e*PG	**Pg**	**01 30 07.0**	**-2.1**
DENT	**Denizli**	**0.78**	**353**	*e*Pg	**Pg**	**01 30 07.0**	**-2.1**
AKAS	**Kas**	**0.83**	**154**	*i* P	**Pg**	**01 30 09.8**	**-0.4**
AKAS				*i* S	**Sg**	**01 30 21.7**	**+0.8**
AKAS	**Kas**	**0.83**	**154**	*i* P	**Pg**	**01 30 09.8**	**-0.4**
AKAS				*i* S	**Sg**	**01 30 21.7**	**+0.7**
KORT	**Korkueli**	**0.95**	**89**	*i* P	**Pg**	**01 30 12.5**	**0.0**
KORT				*i* S	**Sg**	**01 30 32.2**	**+7.3**
KORT	**Korkueli**	**0.95**	**89**	*i* P	**Pg**	**01 30 12.5**	**0.0**
MLSB	**Milas**	**1.15**	**286**	*e*PN	**Pn**	**01 30 15.6**	**-1.2**
MLSB	**Milas**	**1.15**	**286**	*e*Pn	**Pn**	**01 30 15.6**	**-1.2**
ANTB	**Antalya**	**1.20**	**94**	*e*PN	**Pn**	**01 30 17.2**	**-0.3**
ANTB	**Antalya**	**1.20**	**94**	*e*Pn	**Pn**	**01 30 17.2**	**-0.3**
AYDN	**Tasoluk**	**1.22**	**304**	*i* P	**Pg**	**01 30 17.6**	**-0.1**
AYDN				*i* S	**Sg**	**01 30 36.0**	**+2.3**
AYDN	**Tasoluk**	**1.22**	**304**	*i* P	**Pg**	**01 30 17.6**	**-0.1**
AYDN				*i* S	**Sg**	**01 30 36.0**	**+2.4**
BCK	**Bucak**	**1.23**	**67**	*e*PN	**Pn**	**01 30 17.0**	**-1.0**
BCK	**Bucak**	**1.23**	**67**	*e*Pn	**Pn**	**01 30 17.0**	**-1.0**
DAT	**Datca**	**1.29**	**259**	*e*PN	**Pn**	**01 30 18.4**	**-0.4**
DAT	**Datca**	**1.29**	**259**	*e*Pn	**Pn**	**01 30 18.4**	**-0.4**
KHL	**Karahalli**	**1.37**	**12**	*e*PN	**Pn**	**01 30 18.2**	**-1.6**
KHL	**Karahalli**	**1.37**	**12**	*e*Pn	**Pn**	**01 30 18.2**	**-1.6**
BDRM	**Kayabasi**	**1.38**	**274**	*i* P	**Pn**	**01 30 20.4**	**+0.5**
BDRM				*i* S	**Sb**	**01 30 41.9**	**+3.8**
BDRM	**Kayabasi**	**1.38**	**274**	*i* P	**Pn**	**01 30 20.4**	**+0.5**
BDRM				*i* S	**Sb**	**01 30 41.9**	**+3.8**
KHAL	**Karahalli**	**1.41**	**11**	*i* P	**Pn**	**01 30 20.1**	**-0.3**
KHAL				*i* S	**Sb**	**01 30 40.3**	**+1.2**
KHAL	**Karahalli**	**1.41**	**11**	*i* P	**Pn**	**01 30 20.1**	**-0.3**
KHAL				*i* S	**Sb**	**01 30 40.3**	**+1.2**
BODT	**Bodrum**	**1.48**	**274**	*e*PN	**Pn**	**01 30 21.6**	**+0.2**
BODT	**Bodrum**	**1.48**	**274**	*e*Pn	**Pn**	**01 30 21.6**	**+0.2**
SUTC	**Sutluce-Ispart**	**1.55**	**71**	*e*PN	**Pn**	**01 30 22.2**	**-0.1**
SUTC	**Sutluce-Ispart**	**1.55**	**71**	*e*Pn	**Pn**	**01 30 22.2**	**-0.1**
KULA	**Kula-Manisa**	**1.58**	**346**	*e*PN	**Pn**	**01 30 21.6**	**-1.1**
KULA	**Kula-Manisa**	**1.58**	**346**	*e*Pn	**Pn**	**01 30 21.7**	**-1.0**
SHUT	**Suhut-Afyon**	**1.92**	**35**	*e*PN	**Pn**	**01 30 26.8**	**-0.5**
SHUT	**Suhut-Afyon**	**1.92**	**35**	*e*Pn	**Pn**	**01 30 26.8**	**-0.5**
IZM	**Izmir**	**2.06**	**314**	*e*PN	**Pn**	**01 30 29.2**	**-0.2**
IZM	**Izmir**	**2.06**	**314**	*e*Pn	**Pn**	**01 30 29.2**	**-0.2**
BLCB	**Balcova**	**2.19**	**310**	*e*PN	**Pn**	**01 30 30.9**	**-0.2**
BLCB	**Balcova**	**2.19**	**310**	*e*Pn	**Pn**	**01 30 30.9**	**-0.2**
ALT	**Altintas**	**2.20**	**20**	*e*PN	**Pn**	**01 30 30.5**	**-0.8**
ALT	**Altintas**	**2.20**	**20**	*e*Pn	**Pn**	**01 30 30.5**	**-0.8**
HDMB	**Hadim**	**2.66**	**89**	*e*PN	**Pn**	**01 30 38.7**	**+1.0**
HDMB	**Hadim**	**2.66**	**89**	*e*Pn	**Pn**	**01 30 38.7**	**+1.1**
KONT	**Konya--Tatoy**	**2.72**	**68**	*e*PN	**Pn**	**01 30 38.9**	**+0.4**
KONT	**Konya--Tatoy**	**2.72**	**68**	*e*Pn	**Pn**	**01 30 38.9**	**+0.5**
LADK	**Ladik-KONYA**	**2.82**	**64**	*e*PN	**Pn**	**01 30 40.2**	**+0.4**
LADK	**Ladik-KONYA**	**2.82**	**64**	*e*Pn	**Pn**	**01 30 40.2**	**+0.4**
APE	**Apeiranthos**	**2.91**	**273**	*e*PN	**Pn**	**01 30 41.8**	**+0.8**
APE	**Apeiranthos**	**2.91**	**273**	*e*Pn	**Pn**	**01 30 41.8**	**+0.8**
GONE	**Gonen-Balikesi**	**3.27**	**340**	*e*PN	**Pn**	**01 30 45.9**	**-0.1**
GONE	**Gonen-Balikesi**	**3.27**	**340**	*e*Pn	**Pn**	**01 30 45.9**	**-0.1**
SULT	**Sultanhani-AKS**	**3.67**	**69**	*e*PN	**Pn**	**01 30 52.5**	**+1.1**
SULT	**Sultanhani-AKS**	**3.67**	**69**	*e*Pn	**Pn**	**01 30 52.5**	**+1.1**
IKL	**Isikli**	**3.72**	**100**	*e*PN	**Pn**	**01 30 53.8**	**+1.7**
IKL	**Isikli**	**3.72**	**100**	*e*Pn	**Pn**	**01 30 53.8**	**+1.7**

FUNV 06 01:35:04.5, 6.78N×73.21W, h148km, MW3.5, 3C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.40**	**40**	⇑*i*P	Pn	01 35 33.0	+0.1
CAPV				*e*S	Sn	01 35 53.0	-1.7
VIGV	**El Vigia**	**2.75**	**42**	⇑*e*P	Pn	01 35 47.8	-0.8
VIGV				*e*S	Sn	01 36 18.8	-3.9
SOCV	**Socops**	**2.77**	**57**	*e*P	Pn	01 35 48.2	-0.7
SOCV				*e*S	Sn	01 36 19.4	-3.9
ELOV	**Elorza**	**3.71**	**86**	*e*S	Sn	01 36 40.7	-4.1
VIRV	**Villa del Rosa**	**3.78**	**12**	⇓*e*P	Pn	01 36 00.4	-1.5
VIRV				*e*S	Sn	01 36 41.8	-4.7
QARV	**Quebrada Arrib**	**4.32**	**38**	⇑*e*P	Pn	01 36 07.9	-1.0
QARV				*e*S	Sn	01 36 54.5	-4.5
SANV	**Sanarito**	**4.53**	**53**	*e*P	Pn	01 36 10.4	-1.3
SANV				*e*S	Sn	01 36 59.0	-5.1
CURV	**Curarigua**	**4.55**	**45**	*e*P	Pn	01 36 09.5	-2.4
DABV	**Dabajuro**	**4.84**	**32**	*e*P	Pn	01 36 14.0	-1.8
TEPV	**Terepaima**	**5.08**	**51**	*e*P	Pn	01 36 17.2	-1.8
SIQV	**Siquisique**	**5.11**	**41**	*e*P	Pn	01 36 17.3	-2.1
SIQV				*e*S	Sn	01 37 12.3	-5.4
BAUV	**El Baul**	**5.56**	**67**	*e*P	Pn	01 36 22.8	-2.5

IDC 06 01:35:27.2±2.2, 5.15N×127.61E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/22, mbtmp3.4/4, Error ellipse: s-maj=120.4km s-min=25.8km az=70.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**23.18**	**185**	P	P	01 40 36.1	+0.3
	1.7nm,0.7s,baz=13,slow=11,SNR=6.3						
WRA	**Warramunga Arr**	**25.79**	**165**	P	P	01 41 00.2	+0.1
	0.5nm,0.4s,baz=344,slow=9.9,SNR=8.1						
ASAR	**Alice Springs**	**29.29**	**168**	P	P	01 41 31.3	-0.2
	0.2nm,0.6s,baz=356,slow=6.5,SNR=3.5						
MKAR	**Makanchi Array**	**56.91**	**324**	P	P	01 45 14.2	0.0
	0.1nm,0.3s,baz=112,slow=8.6,SNR=4.8						

MAN 06 01:39:32, 9.95N×122.20E, h33km, mb4.2, ML3.0, MS2.8, 1C, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**0.78**	**30**	*e*P	Pn	01 39 47.5	+0.8
SNPH	**Sibulan**	**1.19**	**120**	⇑*i*P	Pn	01 39 50.6	-1.7
SNPH				*i* S	Sn	01 40 11.0	+3.7
CUYO	**Cuyo Island**	**1.47**	**308**	*e*P	Pn	01 39 57.0	+0.8
CUYO				*e*S	Sn	01 40 14.7	+0.5
TBP	**Tagbilaran**	**1.66**	**99**	*e*P	Pn	01 40 00.9	+2.1
TBP				*i* S	Sn	01 40 23.1	+4.1
LLP	**Lapu-Lapu**	**1.78**	**78**	*e*P	Pn	01 40 00.9	+0.5
LLP				*e*S	Sn	01 40 22.6	+0.6
PAGZ	**Pagadian**	**2.39**	**151**	*e*P	Pn	01 40 09.7	+0.8
MSLP	**Maasin**	**2.63**	**86**	*e*P	Pn	01 40 13.7	+1.5

ISCJB ***06*** *02:00:18.0±0.6, 32.00N±0.03×103.67E±0.07, h10km, mb3.1/3, Error ellipse: s-maj=8.8km s-min=4.1km az=2.5*
IDC ***06*** *02:00:19.0±1.6, 31.57N×102.59E, h0km, mb3.1/3, mb1 3.4/4, mb1mx3.2/24, mbtmp3.2/4, Error ellipse: s-maj=90.6km s-min=28.5km az=62.0*
BJI ***06*** *02:00:20.8, 32.03N×103.38E, h16km, ML3.3/12, Ms3.5/1, Ms7 3.3/1*
ISC 06 02:00:20.6±0.6, 31.98N±0.03×103.50E±0.08, h10km, n11, σ1.33/19, mb3.1/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.09**	**168**	Pg	**Pg**	**02 00 40.1**	**-1.5**
CD2				Sg	**Sg**	**02 00 56.1**	**+0.3**
CD2				smax			
	comp=N,2μm,0.7s						
CD2				smax			
	comp=E,3μm,0.6s						
LZH	**Lanzhou**	**4.11**	**4**	*e*Pn	**Pn**	**02 01 22.5**	**-0.9**
LZH				Pg	**Pg**	**02 01 35.7**	**-3.6**
LZH				Sn	**Sn**	**02 02 12.8**	**+1.3**
LZH				Sg	**Sg**	**02 02 32.6**	**+0.1**
LZH				smax			
	comp=N,57nm,1.0s						
LZH				smax			
	comp=E,80nm,1.2s						
XAN	**Xi'an**	**5.00**	**64**	Pn	**Pn**	**02 01 38.2**	**+2.5**
XAN				Pg	**Pg**	**02 01 51.6**	**-4.8**
XAN				Sn	**Sn**	**02 02 42.9**	**+9.4**
XAN				Sg	**Sg**	**02 02 59.9**	**-1.2**
XAN				smax			
	comp=N,49nm,0.7s						
XAN				smax			
	comp=E,24nm,0.9s						
GYA	**Guiyang**	**6.16**	**152**	Pg	**Pg**	**02 02 18.7**	**+0.1**
GYA				Sg	**Sb**	**02 03 17.2**	**-4.6**
GYA				smax			
	comp=N,70nm,0.8s						
GYA				smax			
	comp=E,80nm,0.8s						
KMI	**Kunming**	**6.87**	**186**	Pn	**Pn**	**02 02 02.7**	**+1.4**
GTA	**Gaotai**	**7.99**	**339**	*e*P	**Pb**	**02 02 48.5**	**+9.3**
GTA				pP		02 02 52.4	
GTA				sP		02 02 54.3	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
CMAR	**Chiang Mai Arr**	**14.08**	**198**	Pn	**Pn**	**02 03 39.4**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=14,slow=11,SNR=4.2						
SONM	**Songino Array**	**15.99**	**7**	Pn	**Pn**	**02 04 12.1**	**+6.7**
	baz=202,slow=7.2,SNR=2.9						
MKAR	**Makanchi Array**	**21.98**	**318**	P	**P**	**02 05 12.3**	**-2.3**
	comp=Z,0.1nm,0.5s,mb2.5,baz=125,slow=15,SNR=1.7						
WRA	**Warramunga Arr**	**59.49**	**146**	P	**P**	**02 10 23.5**	**-0.4**
	comp=Z,0.4nm,0.8s,mb3.5,baz=338,slow=7.4,SNR=3.6						
ASAR	**Alice Springs**	**62.51**	**148**	P	**P**	**02 10 46.1**	**+1.7**
	comp=Z,0.2nm,0.8s,mb3.3,baz=327,slow=10.0,SNR=2.8						

ISCJB ***06*** *02:01:42.6±0.6, 21.51S±0.04×68.32W±0.08, h119km±7km, mb4.0/11, Error ellipse: s-maj=12.6km s-min=7.0km az=174.2*
NEIC ***06*** *02:01:42.6±1.1, 21.53S×68.26W, h105km±11km, mb4.3/5, Error ellipse: s-maj=16.7km s-min=10.9km az=91.0*
IDC ***06*** *02:01:44.5±2.2, 21.48S×68.07W, h112km±19km, mb3.8/6, mb1 4.0/8, mb1mx3.7/17, mbtmp3.8/8, Error ellipse: s-maj=27.4km s-min=16.5km az=88.0*
GUC ***06*** *02:01:44.7±0.4, 21.41S×68.66W, h140km±6km, ML3.8*
ISC 06 02:01:43.6±0.6, 21.50S±0.04×68.30W±0.08, h112km±6km, n24, σ1.32/28, mb4.0/11, 2C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**1.20**	**292**	⇑*i*P	**Pn**	**02 02 07.7**	**+0.6**
PB01				*i* S	**Sn**	**02 02 25.1**	**+0.4**
PB01				AML	AML	02 02 26.7	
	comp=E,2μm,0.2s						
PB04	**Plate Boundary**	**1.34**	**235**	*e*P	**Pn**	**02 02 15.8**	**+7.1**
PB04				AML	AML	02 02 48.5	
	comp=E,1μm,0.2s						
HMBC	**Humberston**	**1.92**	**309**	⇑*i*P	**Pn**	**02 02 15.7**	**0.0**
HMBC				*i* S	**Sn**	**02 02 39.1**	**-0.9**
HMBC				AML	AML	02 02 40.2	
	comp=N,1μm,0.5s						
PSGC	**Pisagua**	**2.55**	**318**	⇓*i*P	**Pn**	**02 02 23.1**	**-0.7**
PSGC				*i* S	**Sn**	**02 02 52.5**	**-2.1**
PSGC				AML	AML	02 02 59.8	
	comp=N,220nm,0.5s						
MNMC	**Miaee Miaè**	**2.65**	**332**	⇓*i*P	**Pn**	**02 02 26.0**	**+0.9**
MNMC				*i* S	**Sn**	**02 02 57.4**	**+0.5**
MNMC				AML	AML	02 02 59.3	
	comp=E,638nm,0.4s						
LPAZ	**La Paz**	**5.18**	**2**	P	**Pn**	**02 03 01.4**	**+2.4**
	comp=E,2.1nm,0.3s,baz=182,slow=6.5,SNR=50						
LPAZ				S	**Sn**	**02 04 00.4**	**+2.8**
	comp=E,0.1nm,0.3s,baz=222,slow=15,SNR=1.4						
LCO	**Las Campanas**	**7.79**	**196**	*e*Pn	**Pn**	**02 03 31.4**	**-2.9**
	comp=E,9.1nm,0.5s						
LCO				*e*Sn	**Sn**	**02 05 02.2**	**+1.3**
SIV	**San Ignacio**	**8.77**	**53**	P	**Pn**	**02 03 45.1**	**-2.5**
	comp=E,6.3nm,0.3s,baz=248,slow=12,SNR=111						
CFAA	**Coronel

ellipse: s-maj=1.6km s-min=1.5km az=165.0
THE ***06*** *02:27:23.6,39°.58N×28°.62E,h26km±11km,ML3.8/5,Error ellipse: s-maj=11.9km s-min=1.1km az=91.0*
ISC 06 02:27:21.4±0.3,39°.63N±0°.02×28°.53E±0°.02,h7km±2km, n155,σ0§64/208,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.06**	**234**	*i* P	**Pg**	**02 27 23.2**	**+0.2**
DURS				*i* S	**Sg**	02 27 24.4	+0.3
DURS	**Dursunbey**	**0.06**	**234**	*i* P	**Pg**	**02 27 23.2**	**+0.2**
DURS				*i* S	**Sg**	02 27 24.4	+0.2
BALB	**Balikesir**	**0.50**	**271**	*e*PG	**Pg**	**02 27 31.0**	**-0.2**
BALB				*e*SG	**Sg**	02 27 38.5	+0.7
BALB	**Balikesir**	**0.50**	**271**	*e*Pg	**Pg**	**02 27 31.0**	**-0.2**
BALB				*e*Sg	**Sg**	02 27 38.5	+0.8
DEMI	**Demirci**	**0.61**	**166**	*i* P	**Pg**	**02 27 33.1**	**0.0**
DEMI				*i* S	**Sg**	02 27 40.6	-0.4
DEMI	**Demirci**	**0.61**	**166**	*i* P	**Pg**	**02 27 33.1**	**0.0**
DEMI				*i* S	**Sg**	02 27 40.7	-0.3
ULDT	**Uludag**	**0.69**	**42**	*i* P	**Pg**	**02 27 34.4**	**-0.3**
ULDT				*i* S	**Sg**	02 27 43.9	+0.3
ULDT	**Uludag**	**0.69**	**42**	*i* P	**Pg**	**02 27 34.4**	**-0.3**
ULDT				*i* S	**Sg**	02 27 43.9	+0.3
BALY	**Balya**	**0.71**	**279**	*i* P	**Pg**	**02 27 35.0**	**-0.1**
BALY				*i* S	**Sg**	02 27 45.1	+0.7
BALY	**Balya**	**0.71**	**279**	*i* P	**Pg**	**02 27 35.0**	**-0.1**
BALY				*i* S	**Sg**	02 27 45.1	+0.7
GONE	**Gonen-Balikesi**	**0.77**	**303**	*e*PG	**Pg**	**02 27 35.4**	**-0.9**
GONE				*e*SG	**Sg**	02 27 47.1	+0.8
GONE	**Gonen-Balikesi**	**0.77**	**303**	*e*Pg	**Pg**	**02 27 35.4**	**-0.9**
GONE				*e*Sg	**Sg**	02 27 47.1	+0.8
BNT	**Bandirma**	**0.86**	**327**	*e*PG	**Pg**	**02 27 37.5**	**-0.4**
BNT	**Bandirma**	**0.86**	**327**	*e*Pg	**Pg**	**02 27 37.6**	**-0.4**
EDC	**Edincik**	**0.88**	**324**	*e*PG	**Pg**	**02 27 37.8**	**-0.5**
EDC	**Edincik**	**0.88**	**324**	*e*Pg	**Pg**	**02 27 37.8**	**-0.5**
GDZ	**Gediz**	**0.92**	**126**	*i* P	**Pg**	**02 27 38.7**	**-0.3**
GDZ				*i* S	**Sg**	02 27 55.2	+4.3
GDZ	**Gediz**	**0.92**	**126**	*i* P	**Pg**	**02 27 38.7**	**-0.3**
AKHS	**Akhisar**	**0.94**	**217**	*i* P	**Pg**	**02 27 39.3**	**-0.2**
AKHS				*i* S	**Sg**	02 27 52.3	+0.7
AKHS	**Akhisar**	**0.94**	**217**	*i* P	**Pg**	**02 27 39.3**	**-0.1**
AKHS				*i* S	**Sg**	02 27 52.3	+0.7
AKS	**Akhisar**	**0.94**	**217**	*e*PG	**Pg**	**02 27 39.0**	**-0.4**
AKS	**Akhisar**	**0.94**	**217**	*e*Pg	**Pg**	**02 27 39.0**	**-0.4**
GEMT	**Gemlik**	**0.94**	**32**	*e*PG	**Pg**	**02 27 39.0**	**-0.6**
GEMT	**Gemlik**	**0.94**	**32**	*e*Pg	**Pg**	**02 27 39.0**	**-0.6**
ARMT	**Armutlu**	**0.96**	**15**	*e*PG	**Pg**	**02 27 39.3**	**-0.6**
ARMT	**Armutlu**	**0.96**	**15**	*e*Pg	**Pg**	**02 27 39.3**	**-0.6**
KULA	**Kula-Manisa**	**1.12**	**175**	*e*PN	**Pn**	**02 27 42.5**	**-1.1**
KULA	**Kula-Manisa**	**1.12**	**175**	*e*Pn	**Pn**	**02 27 42.5**	**-1.1**
YLV	**Yalova**	**1.13**	**34**	*e*PN	**Pn**	**02 27 42.5**	**-1.2**
YLV	**Yalova**	**1.13**	**34**	*e*Pn	**Pn**	**02 27 42.5**	**-1.2**
CAVI	**Cavuskoy**	**1.16**	**60**	*e*PN	**Pn**	**02 27 43.1**	**-1.0**
CAVI	**Cavuskoy**	**1.16**	**60**	*e*Pn	**Pn**	**02 27 43.1**	**-0.9**
KRBG	**Karabiga-Canak**	**1.21**	**309**	*e*PN	**Pn**	**02 27 43.6**	**-1.2**
KRBG	**Karabiga-Canak**	**1.21**	**309**	*e*Pn	**Pn**	**02 27 43.6**	**-1.2**
ADVT	**Abdulvahap**	**1.22**	**49**	*e*PN	**Pn**	**02 27 43.4**	**-1.6**
ADVT	**Abdulvahap**	**1.22**	**49**	*e*Pn	**Pn**	**02 27 43.4**	**-1.5**
ALT	**Altintas**	**1.35**	**115**	*e*PN	**Pn**	**02 27 46.0**	**-0.8**
ALT	**Altintas**	**1.35**	**115**	*e*Pn	**Pn**	**02 27 46.0**	**-0.7**
AYVA	**Ayvalik**	**1.46**	**258**	*i* P	**Pn**	**02 27 49.0**	**+0.7**
AYVA				*i* S	**Sn**	02 28 05.7	-1.9
AYVA	**Ayvalik**	**1.46**	**258**	*i* P	**Pn**	**02 27 49.0**	**+0.8**
AYVA				*i* S	**Sn**	02 28 05.7	-1.9
KHAL	**Karahalli**	**1.47**	**149**	*i* P	**Pn**	**02 27 48.4**	**+0.1**
KHAL				*i* S	**Sn**	02 28 08.4	+0.7
KHAL	**Karahalli**	**1.47**	**149**	*i* P	**Pn**	**02 27 48.4**	**+0.1**
KHAL				*i* S	**Sn**	02 28 08.4	+0.7
HRT	**Hereke**	**1.47**	**36**	*e*PN	**Pn**	**02 27 47.4**	**-0.9**
HRT	**Hereke**	**1.47**	**36**	*e*Pn	**Pn**	**02 27 47.4**	**-1.0**
RKY	**Sarkoy-Tekirda**	**1.48**	**316**	*e*PN	**Pn**	**02 27 48.4**	**0.0**
RKY	**Sarkoy-Tekirda**	**1.48**	**316**	*e*Pn	**Pn**	**02 27 48.4**	**-0.1**
SART	**Tekirdag**	**1.48**	**316**	*i* P	**Pn**	**02 27 49.8**	**+1.3**
SART				*i* S	**Sn**	02 28 10.6	+2.6
SART	**Tekirdag**	**1.48**	**316**	*i* P	**Pn**	**02 27 49.8**	**+1.3**
ISK	**Istanbul-Kandi**	**1.48**	**16**	*e*PN	**Pn**	**02 27 48.5**	**0.0**
ISK	**Istanbul-Kandi**	**1.48**	**16**	*e*Pn	**Pn**	**02 27 48.5**	**-0.1**
MFT	**Murefte**	**1.50**	**321**	*e*PN	**Pn**	**02 27 48.7**	**0.0**
MFT	**Murefte**	**1.50**	**321**	*e*Pn	**Pn**	**02 27 48.7**	**0.0**
BORA	**Eskisehir**	**1.50**	**80**	*i* P	**Pn**	**02 27 48.7**	**-0.1**
BORA				*i* S	**Sn**	02 28 08.9	+0.3
BORA	**Eskisehir**	**1.50**	**80**	*i* P	**Pn**	**02 27 48.7**	**-0.1**
BORA				*i* S	**Sn**	02 28 08.9	+0.3
ELBA	**Catalca**	**1.51**	**357**	*i* P	**Pn**	**02 27 49.9**	**+0.9**
ELBA				*i* S	**Sn**	02 28 08.9	+0.1
ELBA	**Catalca**	**1.51**	**357**	*i* P	**Pn**	**02 27 49.9**	**+1.0**
ELBA				*i* S	**Sn**	02 28 08.9	0.0
GPA	**Golpazari**	**1.51**	**64**	*e*PN	**Pn**	**02 27 48.8**	**-0.1**
GPA	**Golpazari**	**1.51**	**64**	*e*Pn	**Pn**	**02 27 48.8**	**-0.1**
KHL	**Karahalli**	**1.52**	**149**	*e*PN	**Pn**	**02 27 49.3**	**+0.3**
KHL	**Karahalli**	**1.52**	**149**	*e*Pn	**Pn**	**02 27 49.3**	**+0.3**
LPK	**Lapseki**	**1.55**	**299**	*e*PN	**Pn**	**02 27 49.3**	**-0.1**
LPK	**Lapseki**	**1.55**	**299**	*e*Pn	**Pn**	**02 27 49.3**	**-0.1**
TKR	**Tekirdag**	**1.55**	**331**	*e*PN	**Pn**	**02 27 49.5**	**0.0**
TKR	**Tekirdag**	**1.55**	**331**	*e*Pn	**Pn**	**02 27 49.5**	**0.0**
BGKT	**Bogazkoy**	**1.56**	**7**	*e*PN	**Pn**	**02 27 49.6**	**0.0**
BGKT	**Bogazkoy**	**1.56**	**7**	*e*Pn	**Pn**	**02 27 49.6**	**+0.1**
KDAG	**Bornova**	**1.58**	**219**	*i* P	**Pn**	**02 27 49.1**	**-0.7**
KDAG				*i* S	**Sn**	02 28 09.9	-0.5
KDAG	**Bornova**	**1.58**	**219**	*i* P	**Pn**	**02 27 49.1**	**-0.7**
KDAG				*i* S	**Sn**	02 28 09.9	-0.5
IZM	**Izmir**	**1.58**	**219**	*e*PN	**Pn**	**02 27 50.0**	**+0.1**
CRLT	**Corlu**	**1.61**	**338**	*e*PN	**Pn**	**02 27 50.4**	**+0.1**
CRLT	**Corlu**	**1.61**	**338**	*e*Pn	**Pn**	**02 27 50.4**	**+0.1**
SLVT	**Silivri**	**1.61**	**351**	*e*PN	**Pn**	**02 27 50.4**	**+0.1**
SLVT	**Silivri**	**1.61**	**351**	*e*Pn	**Pn**	**02 27 50.4**	**+0.1**
KLYT	**Kilyos**	**1.66**	**13**	*e*PN	**Pn**	**02 27 51.0**	**0.0**
KLYT	**Kilyos**	**1.66**	**13**	*e*Pn	**Pn**	**02 27 51.0**	**0.0**
BLCB	**Balcova**	**1.70**	**223**	*e*PN	**Pn**	**02 27 51.2**	**-0.4**
BLCB	**Balcova**	**1.70**	**223**	P	**Pn**	**02 27 51.1**	**-0.5**
BLCB	**Balcova**	**1.70**	**223**	*e*Pn	**Pn**	**02 27 51.2**	**-0.4**
EZN	**Ezine**	**1.71**	**277**	*e*PN	**Pn**	**02 27 51.3**	**-0.3**
EZN	**Ezine**	**1.71**	**277**	*e*Pn	**Pn**	**02 27 51.3**	**-0.4**
GULT	**Gulveren**	**1.72**	**62**	*e*PN	**Pn**	**02 27 52.0**	**+0.2**
GULT	**Gulveren**	**1.72**	**62**	*e*Pn	**Pn**	**02 27 52.0**	**+0.2**
SPNC	**Sapanca-Adapaz**	**1.72**	**52**	*e*PN	**Pn**	**02 27 51.9**	**+0.1**
SPNC	**Sapanca-Adapaz**	**1.72**	**52**	*e*Pn	**Pn**	**02 27 51.9**	**+0.1**
SILT	**Sile**	**1.74**	**29**	*e*PN	**Pn**	**02 27 52.1**	**0.0**
SILT	**Sile**	**1.74**	**29**	*e*Pn	**Pn**	**02 27 52.1**	**+0.1**
GELI	**Tayfur-Gelibol**	**1.75**	**296**	*e*PN	**Pn**	**02 27 52.2**	**0.0**
GELI	**Tayfur-Gelibol**	**1.75**	**296**	*e*Pn	**Pn**	**02 27 52.3**	**0.0**
PRK	**Paraskevi**	**1.79**	**258**	*e*Pn	**Pn**	**02 27 52.8**	**0.0**
PRK				*e*Sn	**Sn**	02 28 15.3	-0.5
PRK	**Paraskevi**	**1.79**	**258**	*e*PN	**Pn**	**02 27 52.8**	**0.0**
PRK				*e*SN	**Sn**	02 28 15.3	-0.5
PRK	**Paraskevi**	**1.79**	**258**	P	**Pn**	**02 27 52.8**	**0.0**
PRK				S	**Sn**	02 28 15.3	-0.5
PRK	**Paraskevi**	**1.79**	**258**	P	**Pn**	**02 27 52.8**	**0.0**
PRK				S	**Sn**	02 28 15.3	-0.5
ESKT	**Eskisehir**	**1.79**	**93**	*e*PN	**Pn**	**02 27 53.0**	**+0.3**
ESKT	**Eskisehir**	**1.79**	**93**	*i* P	**Pn**	**02 27 53.8**	**+1.0**
ESKT	**Eskisehir**	**1.79**	**93**	*e*Pn	**Pn**	**02 27 53.1**	**+0.3**
SEYT	**Eskypehyr**	**1.79**	**93**	*i* P	**Pn**	**02 27 53.8**	**+1.0**
CTYL	**Yal??k??y-??at**	**1.85**	**354**	*e*PN	**Pn**	**02 27 53.7**	**+0.1**
CTYL	**Yal??k??y-??at**	**1.85**	**354**	*e*Pn	**Pn**	**02 27 53.7**	**+0.2**
ERIK	**Erikli-Kesan**	**1.86**	**304**	*e*PN	**Pn**	**02 27 53.9**	**+0.2**
ERIK	**Erikli-Kesan**	**1.86**	**304**	*e*Pn	**Pn**	**02 27 53.9**	**+0.2**
SHUT	**Suhut-Afyon**	**1.91**	**124**	*e*PN	**Pn**	**02 27 54.6**	**+0.3**
SHUT	**Suhut-Afyon**	**1.91**	**124**	*e*Pn	**Pn**	**02 27 54.6**	**+0.3**
BOZC	**Bozcaada**	**1.92**	**277**	*i* P	**Pn**	**02 27 54.5**	**0.0**
URLA	**Izmir**	**1.97**	**230**	*i* P	**Pn**	**02 27 54.6**	**-0.7**
URLA				*i* S	**Sn**	02 28 21.0	+0.7
URLA	**Izmir**	**1.97**	**230**	*i* P	**Pn**	**02 27 54.6**	**-0.7**
URLA				*i* S	**Sn**	02 28 21.0	+0.8
DNZL	**Cakiroluk**	**1.98**	**168**	*e*P	**Pn**	**02 27 55.7**	**+0.4**
DNZL				*e*S	**Sn**	02 28 24.4	+3.9
DNZL	**Cakiroluk**	**1.98**	**168**	*e*P	**Pn**	**02 27 55.7**	**+0.3**
AYDN	**Tasoluk**	**2.04**	**195**	*i* P	**Pn**	**02 27 55.4**	**-0.8**
AYDN				*i* S	**Sn**	02 28 16.8	-5.0
AYDN	**Tasoluk**	**2.04**	**195**	*i* P	**Pn**	**02 27 55.3**	**-0.8**
BOLV	**Bolvadin**	**2.09**	**115**	*i* P	**Pn**	**02 27 57.2**	**+0.4**
BOLV	**Bolvadin**	**2.09**	**115**	*i* P	**Pn**	**02 27 57.2**	**+0.3**
GADA	**Gvkgeada**	**2.10**	**286**	*e*PN	**Pn**	**02 27 57.4**	**+0.4**
GADA	**Gvkgeada**	**2.10**	**286**	*e*Pn	**Pn**	**02 27 57.4**	**+0.4**
SIGR	**SIGRI**	**2.12**	**259**	P	**Pn**	**02 27 57.2**	**0.0**
SIGR				S	**Sn**	02 28 23.5	-0.3
SIGR	**SIGRI**	**2.12**	**259**	P	**Pn**	**02 27 57.2**	**0.0**
SIGR				S	**Sn**	02 28 23.5	-0.3
ENEZ	**Enez**	**2.13**	**302**	*e*PN	**Pn**	**02 27 57.6**	**+0.2**
ENEZ	**Enez**	**2.13**	**302**	*e*Pn	**Pn**	**02 27 57.6**	**+0.2**
GCAM	**G?zelcaml?**	**2.18**	**208**	*i* P	**Pn**	**02 28 02.9**	**+4.7**
GCAM				*i* S	**Sn**	02 28 31.1	+5.7
MDU	**Mudurnu**	**2.22**	**67**	*e*PN	**Pn**	**02 27 59.2**	**+0.5**
MDU	**Mudurnu**	**2.22**	**67**	*e*Pn	**Pn**	**02 27 59.2**	**+0.6**
ALN	**Alexandroupoli**	**2.28**	**304**	*e*Pn	**Pn**	**02 27 59.6**	**+0.1**
ALN				*e*Sn	**Sn**	02 28 27.9	0.0
ALN	**Alexandroupoli**	**2.28**	**304**	*e*PN	**Pn**	**02 27 59.6**	**+0.1**
ALN				*e*SN	**Sn**	02 28 27.9	0.0
ALN	**Alexandroupoli**	**2.28**	**304**	P	**Pn**	**02 27 59.4**	**-0.1**
ALN				S	**Sn**	02 28 28.1	+0.2
ALN	**Alexandroupoli**	**2.28**	**304**	*e*Pn	**Pn**	**02 27 59.6**	**+0.1**
ALN				*e*Sn	**Sn**	02 28 27.9	0.0
CHOS	**Chios island**	**2.30**	**238**	*e*PB	**Pb**	**02 27 59.3**	**-3.9**
CHOS				*e*SN	**Sn**	02 28 28.4	+0.2
CHOS	**Chios island**	**2.30**	**238**	P	**Pn**	**02 27 59.4**	**-0.3**
CHOS				S	**Sn**	02 28 26.9	-1.3
CHOS	**Chios island**	**2.30**	**238**	P	**Pn**	**02 27 59.4**	**-0.3**
CHOS				S	**Sn**	02 28 26.9	-1.3
CHOS				*e*Sn	**Sn**	02 28 28.4	+0.2
SVRH	**Sivrihisar-ESK**	**2.32**	**94**	*e*PN	**Pn**	**02 28 00.6**	**+0.6**
SVRH	**Sivrihisar-ESK**	**2.32**	**94**	*e*Pn	**Pn**	**02 28 00.6**	**+0.6**
SMG	**Samos**	**2.34**	**215**	*e*Pn	**Pn**	**02 28 00.3**	**+0.1**
SMG				*e*Sn	**Sn**	02 28 28.5	-0.7
SMG	**Samos**	**2.34**	**215**	*e*PN	**Pn**	**02 28 00.3**	**+0.1**
SMG				*e*SN	**Sn**	02 28 28.5	-0.7
SMG	**Samos**	**2.34**	**215**	*e*Pn	**Pn**	**02 28 00.3**	**+0.1**
SMG				*e*Sn	**Sn**	02 28 28.5	-0.7
MLSB	**Milas**	**2.41**	**194**	*e*PN	**Pn**	**02 28 01.9**	**+0.7**
MLSB	**Milas**	**2.41**	**194**	*e*Pn	**Pn**	**02 28 02.0**	**+0.7**
EDRB	**Edirne**	**2.59**	**329**	*e*PN	**Pn**	**02 28 04.4**	**+0.6**
EDRB	**Edirne**	**2.59**	**329**	*e*Pn	**Pn**	**02 28 04.4**	**+0.6**
LIA	**Limnos Island**	**2.59**	**277**	*e*Pn	**Pn**	**02 28 03.5**	**-0.3**
LIA				*e*Sn	**Sn**	02 28 35.5	-0.1
LIA	**Limnos Island**	**2.59**	**277**	*e*PN	**Pn**	**02 28 03.5**	**-0.3**
LIA				*e*SN	**Sn**	02 28 35.5	-0.1
LIA	**Limnos Island**	**2.59**	**277**	P	**Pn**	**02 28 04.1**	**+0.3**
LIA				S	**Sn**	02 28 35.8	+0.2
LIA	**Limnos Island**	**2.59**	**277**	*e*Pn	**Pn**	**02 28 03.5**	**-0.3**
LIA	**Limnos Island**	**2.59**	**277**	P	**Pn**	**02 28 04.1**	**+0.3**
LIA				*e*Sn	**Sn**	02 28 35.5	-0.1
LIA				S	**Sn**	02 28 35.8	+0.2
KIZT	**Kizilcal**	**2.71**	**105**	*e*PN	**Pn**	**02 28 06.2**	**+0.9**
KIZT	**Kizilcal**	**2.71**	**105**	*e*Pn	**Pn**	**02 28 06.2**	**+0.9**
SUTC	**Sutluce-Ispart**	**2.90**	**137**	*e*PN	**Pn**	**02 28 08.7**	**+0.8**
SUTC	**Sutluce-Ispart**	**2.90**	**137**	*e*Pn	**Pn**	**02 28 08.7**	**+0.8**
DAT	**Datca**	**3.00**	**195**	*e*PN	**Pn**	**02 28 10.3**	**+0.9**
DAT	**Datca**	**3.00**	**195**	*e*Pn	**Pn**	**02 28 10.3**	**+1.0**
ELL	**Elmali**	**3.08**	**159**	*e*PN	**Pn**	**02 28 11.1**	**+0.7**
ELL	**Elmali**	**3.08**	**159**	*e*Pn	**Pn**	**02 28 11.1**	**+0.6**
APE	**Apeiranthos**	**3.48**	**224**	*e*PN	**Pn**	**02 28 16.3**	**+0.3**
APE	**Apeiranthos**	**3.48**	**224**	*e*PN	**Pn**	**02 28 16.3**	**+0.3**
APE	**Apeiranthos**	**3.48**	**224**	*e*Pn	**Pn**	**02 28 16.3**	**+0.3**
NVR	**Nevrokopi**	**3.95**	**297**	*e*Pn	**Pn**	**02 28 22.7**	**+0.2**
NVR	**Nevrokopi**	**3.95**	**297**	*e*PN	**Pn**	**02 28 22.7**	**+0.2**
NVR	**Nevrokopi**	**3.95**	**297**	*e*Pn	**Pn**	**02 28 22.7**	**+0.2**

IDC ***06*** *02:48:59.2±0.6, 10°.96N×91°.83E, h0km, mb4.1/20, mb1 4.2/21, mb1mx4.1/30, mbtmp4.1/21, ML4.0/1, Error ellipse: s-maj=22.9km s-min=12.8km az=57.0*
BJI ***06*** *02:49:03.1, 11°.00N×91°.90E, h30km, mB4.8/3, mb4.4/13*
NEIC ***06*** *02:49:06.1±1.7, 11°.02N×91°.95E, h50km±14km, mb4.3/10, Error ellipse: s-maj=13.5km s-min=6.8km az=52.0*
ISC 06 02:49:00.8±3.7,10°.93N±0°.07×91°.82E±0°.06,h11km±23km, n60,σ0§83/56,mb4.2/30,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.17**	**42**	Pn	**Pn**	**02 51 26.8**	**0.0**
	0.4nm,0.3s,baz=235,slow=14,SNR=2.4						
CHTO	**Chiang Mai**	**10.43**	**40**	*e*Pn	**Pn**	**02 51 31.7**	**+1.3**
VIS	**Vishakhapatnam**	**10.64**	**310**	*ex*	**Pn**	**02 51 31.2**	**-2.0**
VIS				*ex*	x	02 53 19.7	
VIS				AML	AML	02 53 22.6	
	comp=E,47nm,0.4s						
VIS				AML	AML	02 53 22.7	
	comp=N,53nm,0.5s						
PALK	**Pallekele**	**11.56**	**253**	*e*Pn	**Pn**	**02 51 45.6**	**-0.3**
BOK	**Bokaro**	**13.98**	**337**	*ex*	**Pn**	**02 52 23.9**	**+5.0**
BOK				*ex*	x	02 54 43.0	
BOK				AML	AML	02 55 00.5	
	comp=E,30nm,0.5s						
BOK				AML	AML	02 55 00.5	
	comp=N,28nm,0.8s						
HYB	**Hyderabad**	**14.38**	**298**	*e*P	**Pn**	**02 52 33.0**	**+8.6**
HYB	**Hyderabad**	**14.38**	**298**	*i* P	**Pn**	**02 52 33.0**	**+8.6**
RAMN	**Ramite**	**16.68**	**344**	*e*P	**Pn**	**02 52 53.2**	**-1.3**
	comp=N,30nm,0.5s						
TAPN	**Taplejung**	**16.79**	**347**	*e*P	**Pn**	**02 52 55.3**	**-0.6**
	comp=N,24nm,0.6s						
KMI	**Kunming**	**17.51**	**35**	P	**Pn**	**02 53 14.9**	**+10**
KMI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PKI	**Pulchoki**	**17.62**	**341**	*e*P	**Pn**	**02 53 06.2**	**-0.1**
	comp=Z,19nm,0.5s						
DMN	**Daman**	**17.75**	**340**	*e*P	**Pn**	**02 53 08.3**	**+0.4**
	comp=Z,37nm,0.7s						
GUN	**Gumba**	**17.79**	**343**	*e*P	**Pn**	**02 53 08.7**	**+0.3**
	comp=Z,18nm,0.5s						
GKN	**Gorkha**	**18.27**	**339**	*e*P	**Pn**	**02 53 16.2**	**+1.8**
KOLN	**Koldanda**	**18.45**	**336**	*e*P	**Pn**	**02 53 19.9**	**+3.4**
	comp=Z,14nm,0.3s						
GYA	**Guiyang**	**20.86**	**40**	P	**P**	**02 53 43.2**	**+0.4**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GTA	**Gaotai**	**29.24**	**13**	P	**P**	**02 55 03.6**	**+0.9**
GTA				pP	pP	02 55 09.6	+3.4
GTA				sP	sP	02 55 12.4	+4.8
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.3						
EKS2	**Erkin-Say**	**35.31**	**337**	*e*P	**P**	**02 55 57.5**	**+1.7**
	comp=Z,2.7nm,0.8s,mb4.2						
MK31	**Makanchi Array**	**36.65**	**349**	*e*P	**P**	**02 56 07.5**	**+0.3**
MKAR	**Makanchi Array**	**36.65**	**349**	P	**P**	**02 56 07.3**	**+0.1**
	comp=Z,2.6nm,0.7s,mb4.2,baz=165,slow=8.3,SNR=24						
MKAR				PcP	PcP	02 58 30.7	+0.6
	comp=Z,1.3nm,1.0s,baz=188,slow=2.9,SNR=3.1						
MKAR	**Makanchi Array**	**36.65**	**349**	P	**P**	**02 56 07.3**	**+0.1**
MKAR				PcP	PcP	02 58 30.7	+0.6
SONM	**Songino Array**	**38.78**	**16**	P	**P**	**02 56 25.6**	**+0.4**
	comp=Z,3.7nm,0.9s,mb4.1,baz=196,slow=9.0,SNR=14						
SONM				PcP	PcP	02 58 37.4	+0.8
	comp=Z,0.5nm,0.6s,baz=173,slow=5.8,SNR=2.7						
ULN	**Ulaanbaatar**	**38.98**	**16**	*e*P	**P**	**02 56 26.4**	**-0.5**
	comp=Z,3.1nm,0.9s,mb4.0						
KURK	**Kurchatov**	**41.12**	**347**	P	**P**	**02 56 44.3**	**-0.4**
	comp=Z,2.1nm,0.8s,mb3.8,baz=165,slow=7.5,SNR=8.0						
KURK	**Kurchatov**	**41.12**	**347**	*e*P	**P**	**02 56 44.6**	**-0.2**
	comp=Z,8.1nm,1.1s,mb4.3						
KSRS	**Korea Array**	**41.80**	**45**	P	**P**	**02 56 49.8**	**-0.7**
	comp=Z,2.2nm,0.9s,mb3.8,baz=246,slow=11,SNR=6.7						
ZAA0	**Zalesovo Array**	**43.27**	**354**	*e*P	**P**	**02 57 00.9**	**-1.2**
ZALV	**Zalesovo Beam**	**43.27**	**354**	P	**P**	**02 57 01.9**	**-0.3**
	comp=Z,2.1nm,0.6s,mb4.1,baz=177,slow=10,SNR=11						
CN2	**Changchun**	**43.78**	**35**	*e*P	**P**	**02 57 06.4**	**0.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.5						
FITZ	**Fitzroy Crossi**	**44.12**	**130**	P	**P**	**02 57 09.3**	**-0.2**
	comp=Z,12nm,0.8s,mb4.7,baz=324,slow=5.4,SNR=23						
BVAR	**Borovoye Array**	**45.38**	**342**	P	**P**	**02 57 19.0**	**-0.1**
	comp=Z,0.6nm,0.6s,mb3.6,baz=153,slow=7.4,SNR=4.6						
BVAR				PcP	PcP	02 58 58.9	+0.5
	comp=Z,0.5nm,0.7s,baz=146,slow=2.8,SNR=2.6						
BVAR	**Borovoye Array**	**45.38**	**342**	P	**P**	**02 57 19.0**	**-0.1**
BVAR				PcP	PcP	02 58 58.9	+0.5
BRVK	**Borovoye**	**45.44**	**342**	*e*P	**P**	**02 57 19.2**	**-0.3**
	comp=Z,1.8nm,0.6s,mb4.1						
ABKAR	**Akbulak array**	**46.47**	**331**	*e*P	**P**	**02 57 27.8**	**+0.1**
	comp=Z,2.0nm,0.7s,mb4.2						
AKTK	**Aktyubinsk**	**48.19**	**331**	P	**P**	**02 57 41.4**	**+0.3**
AKTO	**Aktyubinsk**	**48.19**	**331**	P	**P**	**02 57 41.4**	**+0.3**
	comp=Z,0.6nm,0.5s,mb3.9,baz=109,slow=12,SNR=4.1						
MAJO	**Matsushiro**	**48.91**	**51**	*e*P	**P**	**02 57 45.8**	**-1.1**
	comp=Z,2.5nm,0.6s,mb4.4						
MJAR	**Matsushiro Arr**	**48.91**	**51**	P	**P**	**02 57 47.1**	**+0.2**
	comp=Z,0.7nm,1.0s,mb3.7,baz=218,slow=7.7,SNR=4.0						
MJAR				PcP	PcP	02 59 11.7	+0.4
	comp=Z,0.7nm,0.6s,baz=243,slow=3.1,SNR=5.1						
MJAR	**Matsushiro Arr**	**48.91**	**51**	P	**P**	**02 57 47.1**	**+0.2**
MJAR				PcP	PcP	02 59 11.7	+0.4
WRA	**Warramunga Arr**	**51.90**	**126**	P	**P**	**02 58 09.3**	**-0.4**
	comp=Z,1.9nm,0.6s,mb4.2,baz=306,slow=8.4,SNR=25						
WRA				PcP	PcP	02 59 22.6	+0.1
	comp=Z,1.1nm,0.5s,baz=315,slow=3.1,SNR=5.7						
WRA	**Warramunga Arr**	**51.90**	**126**	P	**P**	**02 58 09.3**	**-0.5**
WRA				PcP	PcP	02 59 22.6	+0.1
WRAB	**Tennant Creek**	**51.90**	**126**	*e*P	**P**	**02 58 09.2**	**-0.6**
	comp=Z,13nm,0.6s,mb5.0						
ARU	**Arti**	**52.20**	**337**	*e*P	**P**	**02 58 11.6**	**+0.2**
	comp=Z,2.0nm,0.3s,mb4.5						
ASAR	**Alice Springs**	**53.62**	**130**	P	**P**	**02 58 22.6**	**+0.1**
	comp=Z,3.7nm,0.9s,mb4.3,baz=310,slow=6.8,SNR=22						
ASAR				PcP	PcP	02 59 29.4	+0.5
	comp=Z,1.9nm,0.7s,baz=307,slow=4.6,SNR=6.9						
BR131	**Keskin Array S**	**58.72**	**310**	*e*P	**P**	**02 59 00.0**	**+1.4**
	comp=Z,1.1nm,0.7s,mb4.0						
BRTR	**Keskin Array B**	**58.72**	**310**	P	**P**	**02 58 58.1**	**-0.6**
	comp=Z,0.6nm,0.7s,mb3.8,baz=120,slow=7.4,SNR=4.5						
STKA	**Stephens Creek**	**63.86**	**134**	P	**P**

ARA0 Lg 03 00 12.9
baz=114,slow=37
ARA0 ARCESS Array S 3.50 305 *eP* **Pn 02 59 20.5 +1.9**
ARA0 *e*PG **Pg 02 59 28.8 -1.2**
ARA0 *e*S **Sn 03 00 01.3 +0.7**
ARA0 *e*SG **Sg 03 00 12.9 -2.4**
ARA0 ARCESS Array S 3.50 305 P **Pn 02 59 20.4 +1.8**
ARA0 ARCESS Array S 3.50 305 Pg **Pg 02 59 28.8 -1.2**
baz=117,slow=15,SNR=3.0
ARA0 S **Sn 03 00 01.2 +0.6**
ARA0 Sg **Sg 03 00 12.8 -2.4**
ARA0 Lg 03 00 12.9
baz=114,slow=34,SNR=22
ARCES ARCESS Array B 3.50 305 Pn **Pn 02 59 20.2 +1.7**
comp=Z,3.5nm,0.3s,baz=122,slow=14,SNR=260
ARCES Pg **Pg 02 59 28.7 -1.3**
comp=Z,3.2nm,0.3s,baz=112,slow=16,SNR=8.2
ARCES Sn **Sn 03 00 02.4 +1.8**
comp=Z,3.3nm,0.3s,baz=124,slow=27,SNR=11
ARCES Lg 03 00 12.2
comp=Z,7.5nm,0.3s,baz=113,slow=33,SNR=5.6
HEF Hetta 3.82 285 *e*P **Pn 02 59 24.5 +1.4**
baz=94
HEF *e*SG **Sg 03 00 21.9 -3.8**
HEF MSG 03 00 21.9
comp=Z,7.3nm,0.4s
HEF Hetta 3.82 285 P **Pn 02 59 24.4 +1.3**
HEF Sg **Sg 03 00 21.9 -3.8**
comp=Z,7.3nm,0.4s
FIA0 FINESS Array S 7.12 211 Pn **Pn 03 00 08.4 +0.1**
baz=28,slow=12
FIA0 Sn **Sn 03 01 25.8 -4.0**
baz=17,slow=22
FIA0 Lg 03 01 57.4
baz=28,slow=28
FIA0 FINESS Array S 7.12 211 *e*P **Pn 03 00 08.4 +0.1**
FIA0 *e*S **Sn 03 01 25.8 -4.0**
FIA0 *e* 03 01 57.4
FIA0 FINESS Array S 7.12 211 P **Pn 03 00 08.4 +0.1**
FINES FINESS Array B 7.12 211 Pn **Pn 03 00 08.0 -0.3**
comp=Z,0.2nm,0.3s,baz=27,slow=12,SNR=8.6
FINES Sn **Sn 03 01 24.1 -5.7**
comp=Z,0.2nm,0.3s,baz=28,slow=19,SNR=3.4
FINES Lg 03 01 59.5
comp=Z,1.2nm,0.3s,baz=34,slow=28,SNR=12
SPA0 Spitsbergen Ar 11.56 342 Pn **Pn 03 01 07.9 -1.1**
baz=141,slow=14
SPA0 Spitsbergen Ar 11.56 342 *e*P **Pn 03 01 07.9 -1.1**
SPA0 Spitsbergen Ar 11.56 342 P **Pn 03 01 07.9 -1.1**
HFS Hagfors 11.59 238 Pn **Pn 03 01 07.3 -2.2**
comp=Z,0.1nm,0.3s,baz=69,slow=16,SNR=2.1
HFS Lg 03 04 22.5
comp=Z,0.2nm,0.3s,baz=42,slow=29,SNR=4.1
NOA NORSAR Array B 11.76 246 Pn **Pn 03 01 10.1 -1.7**
comp=Z,0.1nm,0.3s,baz=49,slow=13,SNR=1.8
NOA Lg 03 04 25.9
comp=Z,0.1nm,0.3s,baz=310,slow=21,SNR=3.9

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*ISCJB **06** 03:05:41.0±0.3,27°.15N±0°.05×89°.84E±0°.03,h25km,*
mb3.9/19,Error ellipse: s-maj=6.5km s-min=3.5km az=4.0
*DMN **06** 03:05:41.8±0.4,26°.93N×90°.05E,h40km,Ml4.6/3,Error*
ellipse: s-maj=18.9km s-min=7.3km az=10.0
*IDC **06** 03:05:42.1±0.8,26°.99N×89°.76E,h26km±3km,mb3.6/13,*
mb1 3.7/13,mb1mx3.6/27,mbtmp3.6/13,Error ellipse:
s-maj=25.6km s-min=13.0km az=49.0
*NEIC **06** 03:05:42.0±0.4,26°.98N×89°.73E,mb4.0/11,Error ellipse:*
s-maj=9.8km s-min=7.0km az=219.0
*BJI **06** 03:05:52.9,27°.66N×90°.18E,h25km,mB4.7/2,mb4.0/4,*
ML3.4/1
ISC 06 03:05:42.7±0.4,27°.05N±0°.04×89°.84E±0°.03,h27km,
h27km±.5km:pP-P,n59,σ0s94/72,mb3.9/19,1D,Bhutan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GTK	**Gangtok**	**1.13**	**285**	*e*PKP		**Pn**	**03 06 03.0**	**+0.3**
GTK				*ex*		x	03 06 09.5	
SLGI	**Shiliguri**	**1.32**	**255**	*e*PKP		**Pn**	**03 06 05.2**	**-0.2**
SLGI				*e*S		**Sn**	**03 06 21.1**	**-1.0**
TAPN	**Taplejung**	**1.92**	**279**	*e*Pn		**Pn**	**03 06 15.2**	**+1.5**
TAPN				*e*Sn		**Sn**	**03 06 38.0**	**+1.0**
ODAN	**Odare**	**2.20**	**266**	*e*Pn		**Pn**	**03 06 18.1**	**+0.7**
ODAN				*e*Sn		**Sn**	**03 06 45.4**	**+1.7**
SHL	**Shillong**	**2.35**	**128**	*i,i*P		**Pn**	**03 06 21.0**	**+1.4**
SHL				*e*S		**Sn**	**03 06 50.0**	**+2.4**
LSA	**Lhasa**	**2.88**	**23**	Pg		**Pn**	**03 06 33.4**	**+6.6**
LSA				Sg		**Sn**	**03 07 11.9**	**+11**
LSA				smax				
comp=N,210nm,0.7s								
LSA				smax				
comp=E,350nm,0.9s								
RAMN	**Ramite**	**2.90**	**269**	*e*Pn		**Pn**	**03 06 27.9**	**+0.9**
RAMN				*e*Sn		**Sn**	**03 07 01.1**	**+0.1**
comp=E,484nm,0.3s								
JIRN	**Jiri**	**3.31**	**281**	*e*Pn		**Pn**	**03 06 33.7**	**+1.0**
JIRN				*e*Sn		**Sn**	**03 07 11.5**	**+0.4**
comp=E,351nm,0.2s								
AGT	**Agartala**	**3.40**	**158**	*i* P		**Pn**	**03 06 43.0**	**+9.0**
AGT				*i* S		**Sn**	**03 07 20.0**	**+6.6**
GUN	**Gumba**	**3.62**	**285**	*e*Pn		**Pn**	**03 06 38.4**	**+1.4**
GUN				*e*Sn		**Sn**	**03 07 20.0**	**+1.0**
PKI	**Pulchoki**	**3.98**	**279**	*e*Pn		**Pn**	**03 06 42.1**	**+0.2**
PKI				*e*Sn		**Sn**	**03 07 27.6**	**-0.1**
comp=E,180nm,0.3s								
PKIN	**Phulchoki**	**3.99**	**279**	*e*Pn		**Pn**	**03 06 42.3**	**+0.2**
KKN	**Kakani**	**4.12**	**281**	*e*Pn		**Pn**	**03 06 44.4**	**+0.5**
KKN				*e*Sn		**Sn**	**03 07 31.8**	**+0.5**
DMN	**Daman**	**4.25**	**279**	*e*Pn		**Pn**	**03 06 45.8**	**+0.1**
IMP	**Imphal**	**4.32**	**121**	*ex*		x	03 06 39.0	
IMP				*ex*		x	03 07 17.0	
CAL	**Calcutta**	**4.70**	**197**	*e*S		**Sn**	**03 07 41.7**	**-3.7**
CAL				*ex*		x	03 08 02.9	
GKN	**Gorkha**	**4.72**	**283**	*e*Pn		**Pn**	**03 06 52.4**	**+0.3**
GKN				*e*Sn		**Sn**	**03 07 45.5**	**-0.5**
BOK	**Bokaro**	**4.83**	**229**	*e*PKP		**Pn**	**03 06 53.6**	**0.0**
BOK				*e*S		**Sn**	**03 07 43.4**	**-5.2**
BOK				AML		AML	03 08 12.1	
comp=N,502nm,0.3s								
BOK				AML		AML	03 08 13.8	
comp=E,360nm,0.8s								
JOSI	**Joshimath**	**9.67**	**294**	*e*PKP		**Pn**	**03 07 59.1**	**-1.1**
JOSI				*e*S		**Sn**	**03 09 40.0**	**-7.9**
JOSI				AML		AML	03 09 53.9	
comp=E,103nm,0.4s								
JOSI				AML		AML	03 09 54.0	
comp=N,221nm,0.8s								
VIS	**Vishakhapatnam**	**11.06**	**214**	*e*PKP		**Pn**	**03 08 18.6**	**-0.6**
VIS				*e*S		**Sn**	**03 10 10.5**	**-12**
VIS				AML		AML	03 11 41.1	
comp=E,22nm,0.7s								
VIS				AML		AML	03 11 41.7	
comp=N,20nm,0.9s								
NDI	**New Delhi**	**11.29**	**281**	*ex*		**Sn**	**03 10 22.0**	**-5.6**
NDI				*ex*		x	03 15 19.0	
SONA	**Sohna**	**11.38**	**279**	*e*PKP		**Pn**	**03 08 23.3**	**-0.1**
SONA				*e*S		**Sn**	**03 10 18.6**	**-11**
SONA				AML		AML	03 12 10.5	
comp=N,20nm,1.8s								
SONA				AML		AML	03 12 12.6	
comp=E,19nm,0.9s								
BHPL	**Bhopal**	**11.87**	**254**	*e*PKP		**Pn**	**03 08 27.4**	**-2.9**
BHPL				*e*S		**Sn**	**03 10 29.4**	**-12**
BHPL				AML		AML	03 10 34.1	
comp=E,29nm,0.8s								
BHPL				AML		AML	03 10 36.3	
comp=N,41nm,0.5s								
CMAR	**Chiang Mai Arr**	**11.98**	**134**	Pn		**Pn**	**03 08 36.2**	**+4.5**
comp=N,0.4nm,0.3s,baz=304,slow=14,SNR=3.7								
KHET	**Khetri**	**12.50**	**278**	*e*PKP		**Pn**	**03 08 38.0**	**-0.8**
KHET				*e*S		**Sn**	**03 10 44.8**	**-12**
KHET				AML		AML	03 10 50.4	
comp=N,15nm,0.6s								
KHET				AML		AML	03 10 50.6	
comp=E,14nm,0.4s								
AJM	**Ajmer**	**13.59**	**271**	*ex*		x	03 11 06.5	
AJM				AML		AML	03 11 35.7	
comp=N,13nm,0.3s								
AJM				AML		AML	03 11 38.4	
comp=E,20nm,0.3s								
TKM2	**Tokmak 2**	**19.63**	**327**	*e*P		**Pn**	**03 10 08.1**	**-2.5**
comp=E,3.6nm,0.8s								
UCH	**Uchtor**	**19.66**	**324**	*e*P		**Pn**	**03 10 09.1**	**-1.8**
comp=E,1.5nm,0.6s								
EKS2	**Erkin-Say**	**20.35**	**324**	*e*P		**P**	**03 10 16.7**	**-0.2**
comp=E,4.6nm,0.9s								
MK31	**Makanchi Array**	**20.59**	**345**	*e*P		**P**	**03 10 20.6**	**+1.1**
MKAR	**Makanchi Array**	**20.59**	**345**	P		**P**	**03 10 19.1**	**-0.4**
comp=E,0.4nm,0.3s,baz=159,slow=10.0,SNR=7.8								
MKAR				pP			03 10 26.1	
comp=E,3.8nm,0.8s,baz=163,slow=9.0,SNR=16								
SONM	**Songino Array**	**24.46**	**28**	P		**P**	**03 10 59.3**	**0.0**
comp=E,0.5nm,0.5s,mb3.2,baz=170,slow=8.8,SNR=2.7								
SONM				pP			03 11 07.5	
comp=E,1.9nm,0.7s,baz=216,slow=11,SNR=5.7								
ULN	**Ulaanbaatar**	**24.76**	**28**	*e*P		**P**	**03 11 02.8**	**+0.8**
comp=E,1.4nm,0.4s,mb3.8								
KURK	**Kurchatov**	**25.14**	**343**	P		**P**	**03 11 04.5**	**-0.8**
comp=E,0.3nm,0.5s,mb3.1,baz=167,slow=8.9,SNR=2.7								
KURK				pP		pP	03 11 12.2	-1.0
comp=E,2.3nm,0.7s,baz=163,slow=8.4,SNR=12								
KURK				sP		sP	03 11 16.4	0.0
comp=E,0.7nm,0.4s,baz=202,slow=7.2,SNR=2.9								
KURK	**Kurchatov**	**25.14**	**343**	*e*P		**P**	**03 11 05.0**	**-0.3**
comp=E,3.5nm,0.8s,mb3.9								
KURK				pP		pP	03 11 12.2	-1.0
KURK				sP		sP	03 11 16.4	0.0
ZALV	**Zalesovo Beam**	**27.13**	**353**	P		**P**	**03 11 24.8**	**+1.5**
comp=E,0.4nm,0.3s,mb3.4,baz=172,slow=13,SNR=2.2								
ZALV				sP		sP	03 11 34.7	+0.3
comp=E,1.9nm,0.7s,baz=173,slow=11,SNR=4.3								
ABKAR	**Akbulak array**	**31.98**	**322**	*e*P		**P**	**03 12 05.8**	**-0.5**
comp=E,1.8nm,0.7s,mb4.0								
AKTK	**Aktyubinsk**	**33.66**	**323**	P		**P**	**03 12 21.4**	**+0.3**
AKTK				pP		pP	03 12 28.8	-0.1
AKTO	**Aktyubinsk**	**33.66**	**323**	P		**P**	**03 12 21.4**	**+0.3**
comp=E,0.2nm,0.3s,mb3.5,baz=105,slow=12,SNR=2.6								
AKTO				pP		pP	03 12 28.8	-0.1
comp=E,0.4nm,0.4s,baz=118,slow=13,SNR=3.3								
MAJO	**Matsushiro**	**41.81**	**65**	*e*P		**P**	**03 13 29.7**	**-0.5**
comp=E,1.6nm,0.5s,mb3.9								
MJAR	**Matsushiro Arr**	**41.81**	**65**	P		**P**	**03 13 30.7**	**+0.5**
comp=E,0.7nm,0.7s,mb3.4,baz=276,slow=9.7,SNR=5.3								
MJAR				pP		pP	03 13 37.9	-0.3
comp=E,1.8nm,1.0s,baz=276,slow=10,SNR=5.0								
MJAR	**Matsushiro Arr**	**41.81**	**65**	P		**P**	**03 13 30.7**	**+0.5**
MJAR				pP		pP	03 13 37.9	-0.3
BR131	**Keskin Array S**	**47.89**	**300**	*e*P		**P**	**03 14 18.2**	**-0.4**
comp=E,0.5nm,0.5s,mb3.8								
BRTR	**Keskin Array B**	**47.89**	**300**	P		**P**	**03 14 17.5**	**-1.0**
comp=E,0.6nm,0.6s,mb3.8,baz=92,slow=7.0,SNR=4.9								
AKASG	**Malin Array Be**	**51.15**	**315**	P		**P**	**03 14 41.4**	**-1.8**
comp=E,0.7nm,0.4s,mb4.0,baz=83,slow=7.6,SNR=4.6								
JOF	**Joensuu**	**52.03**	**330**	*ep*		**P**	**03 14 48.6**	**-1.0**
comp=E,0.6nm,0.3s,mb4.0								
FINES	**FINESS Array B**	**54.12**	**328**	P		**P**	**03 15 04.3**	**-0.6**
comp=E,1.4nm,0.8s,mb3.9,baz=103,slow=8.2,SNR=7.0								
FINES				pP		pP	03 15 12.5	-0.7
comp=E,1.2nm,0.6s,baz=99,slow=8.5,SNR=2.2								
ARCES	**ARCESS Array B**	**55.99**	**338**	P		**P**	**03 15 18.3**	**-0.2**
comp=E,2.5nm,0.8s,mb4.3,baz=99,slow=8.6,SNR=3.3								
ARCES	**ARCESS Array B**	**55.99**	**338**	P		**P**	**03 15 18.2**	**-0.2**
NOA	**NORSAR Array B**	**61.27**	**327**	P		**P**	**03 15 54.2**	**-1.1**
comp=E,1.1nm,0.7s,mb4.1,baz=87,slow=6.7,SNR=2.8								
WRA	**Warramunga Arr**	**63.57**	**133**	P		**P**	**03 16 11.0**	**-0.2**
comp=E,1.4nm,0.6s,mb4.2,baz=324,slow=6.8,SNR=26								
WRA				pP		pP	03 16 18.6	-0.9
comp=E,0.8nm,0.6s,baz=324,slow=6.8,SNR=4.0								
ASAR	**Alice Springs**	**65.98**	**136**	P		**P**	**03 16 26.8**	**0.0**
comp=E,1.0nm,0.8s,mb3.9,baz=325,slow=7.8,SNR=7.6								
KEST	**Kesra**	**67.49**	**300**	*e*P		**P**	**03 16 35.5**	**-1.0**
LSZ	**Lusaka**	**73.13**	**243**	*e*P		**P**	**03 17 10.5**	**-0.6**
comp=E,1.5nm,0.5s,mb4.2								
MCK	**McKinley**	**78.50**	**23**	*e*P		**P**	**03 17 41.0**	**-0.1**
comp=E,2.1nm,0.5s,mb4.3								
INK	**Inuvik**	**79.70**	**15**	*e*P		**P**	**03 17 48.4**	**+0.8**
comp=E,2.3nm,0.8s,mb4.2								
TXAR	**Lajitas Array**	**122.46**	**14**	PKP	PKPdf		03 24 35.6	-0.4
comp=E,0.2nm,0.6s,baz=25,slow=1.4,SNR=3.5								
ROSC	**El Rosal**	**144.78**	**332**	PKP	PKPdf		03 25 18.3	+0.3
comp=E,3.8nm,0.7s,baz=90,slow=21,SNR=5.4								
CPUP	**Villa Florida**	**150.70**	**264**	PKPbc	PKPbc		03 25 31.8	-1.0
comp=E,1.0nm,0.5s,baz=82,slow=5.5,SNR=5.7								

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*ROM **06** 03:07:12.7±0.3,44°.20N×8°.27E,h10km±2km,Md2.5/10,*
Ml2.3/9,Error ellipse: s-maj=3.3km s-min=2.1km az=155.0
*ISCJB **06** 03:07:13.0±0.4,44°.27N±0°.02×8°.18E±0°.03,h14km±2km,*
Error ellipse: s-maj=4.4km s-min=2.6km az=135.5
*CSEM **06** 03:07:13.7±0.2,44°.26N×8°.18E,h10km,ML2.7/23,Error*
ellipse: s-maj=4.0km s-min=2.3km az=127.0
*NEIC **06** 03:07:14.8,44°.27N×8°.13E,h10km,ML2.6(STR),*
ML2.5(LDG),After STR.
*STR **06** 03:07:14.8±0.2,44°.27N×8°.13E,h10km,Ml2.5,Error*
ellipse: s-maj=0.0km s-min=0.0km az=0.0
*LDG **06** 03:07:15.2±0.1,44°.19N×8°.15E,h5km,Md2.5/3,Ml2.5/21,*
Error ellipse: s-maj=2.9km s-min=1.3km az=114.0
ISC 06 03:07:13.6±0.4,44°.25N±0°.02×8°.20E±0°.03,h14km±2km,
n97,σ1s04/178,3C,Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
QLNO	**Quiliano**	**0.13**	**54**	*i,i*Pg		**Pg**	**03 07 16.6**	**-0.4**
QLNO				Sg		**Sg**	**03 07 18.6**	**-0.8**
QLNO	**Quiliano**	**0.13**	**54**	*i,i*Pg		**Pg**	**03 07 16.6**	**-0.4**
QLNO				Sg		**Sg**	**03 07 18.6**	**-0.8**
QLNO	**Quiliano**	**0.13**	**54**	*i,i*Pg		**Pg**	**03 07 16.6**	**-0.4**
QLNO				Sg		**Sg**	**03 07 18.6**	**-0.8**
PCP	**Piancastagn**	**0.38**	**40**	Pg		**Pg**	**03 07 21.0**	**-0.3**
PCP				Sg		**Sg**	**03 07 26.5**	**0.0**
PCP	**Piancastagn**	**0.38**	**40**	Pg		**Pg**	**03 07 21.0**	**-0.3**
PCP				Sg		**Sg**	**03 07 26.5**	**0.0**
PCP	**Piancastagn**	**0.38**	**40**	Pg		**Pg**	**03 07 21.0**	**-0.3**
PCP				Sg		**Sg**	**03 07 26.5**	**0.0**
IMI	**Imperia**	**0.41**	**213**	Pg		**Pg**	**03 07 21.3**	**-0.4**
IMI				Sg		**Sg**	**03 07 26.9**	**-0.2**
IMI	**Imperia**	**0.41**	**213**	Pg		**Pg**	**03 07 21.3**	**-0.4**
IMI				Sg		**Sg**	**03 07 26.9**	**-0.2**
224nm,0.3s								
IMI	**Imperia**	**0.41**	**213**	Pg		**Pg**	**03 07 21.3**	**-0.4**
IMI				Sg		**Sg**	**03 07 26.9**	**-0.2**
224nm,0.3s								
SAOF	**Saorge**	**0.53**	**241**	Pg		**Pg**	**03 07 24.5**	**+0.4**
SAOF				Sg		**Sg**	**03 07 31.5**	**+0.3**
SAOF	**Saorge**	**0.53**	**241**	Pg		**Pg**	**03 07 24.5**	**+0.4**
SAOF				Sg		**Sg**	**03 07 31.5**	**+0.3**
AUTN	**L'Aution**	**0.61**	**246**	Pg		**Pg**	**03 07 26.2**	**+0.7**
AUTN				Sg		**Sg**	**03 07 34.3**	**+0.7**
AUTN	**L'Aution**	**0.61**	**246**	Pg		**Pg**	**03 07 26.2**	**+0.7**
AUTN				Sg		**Sg**	**03 07 34.3**	**+0.7**
STV	**Sant Anna di V**	**0.63**	**270**	Pg		**Pg**	**03 07 26.2**	**+0.3**
STV				Sg		**Sg**	**03 07 34.7**	**+0.5**
STV	**Sant Anna di V**	**0.63**	**270**	Pg		**Pg**	**03 07 26.2**	**+0.3**
STV				Sg		**Sg**	**03 07 34.7**	**+0.5**
226nm,0.3s								
STV	**Sant Anna di V**	**0.63**	**270**	Pg		**Pg**	**03 07 26.2**	**+0.3**
STV				Sg		**Sg**	**03 07 34.7**	**+0.5**
226nm,0.3s								
SBF	**Sospel**	**0.67**	**235**	*e*Pg		**Pg**	**03 07 26.7**	**0.0**
SNR=1.0								
SBF				*e*Sg		**Sg**	**03 07 35.1**	**-0.5**
116nm,0.2s,SNR=1.0								
SBF	**Sospel**	**0.67**	**235**	*e*Pg		**Pg**	**03 07 26.7**	**0.0**
SNR=1.0								
SBF				*e*Sg		**Sg**	**03 07 35.1**	**-0.5**
58nm,0.2s,SNR=1.0								
LUCF	**Luceram**	**0.71**	**240**	Pg		**Pg**	**03 07 27.7**	**+0.3**
LUCF				Sg		**Sg**	**03 07 37.5**	**+0.7**
LUCF	**Luceram**	**0.71**	**240**	Pg		**Pg**	**03 07 27.7**	**+0.3**
LUCF				Sg		**Sg**	**03 07 37.5**	**+0.7**
TOUF	**Mont Tournerai**	**0.73**	**251**	Pg		**Pg**	**03 07 28.0**	**+0.3**
TOUF	**Mont Tournerai**	**0.73**	**251**	Pg		**Pg**	**03 07 28.0**	**+0.3**
DOI	**San Damiano**	**0.73**	**291**	Pg		**Pg**	**03 07 27.7**	**-0.1**
DOI	**San Damiano**	**0.73**	**291**	Pg		**Pg**	**03 07 27.7**	**-0.1**
128nm,0.3s								
DOI	**San Damiano**	**0.73**	**291**	Pg		**Pg**	**03 07 27.7**	**-0.1**
128nm,0.3s								
PZZ	**Stroppo**	**0.82**	**289**	Pg		**Pg**	**03 07 29.3**	**-0.2**
PZZ	**Stroppo**	**0.82**	**289**	Pg		**Pg**	**03 07 29.3**	**-0.2**
100nm,0.4s								
PZZ	**Stroppo**	**0.82**	**289**	Pg		**Pg**	**03 07 29.3**	**-0.2**
100nm,0.4s								
MVIF	**Mont Vial**	**0.83**	**245**	Pg		**Pg**	**03 07 30.0**	**+0.3**
MVIF				Sg		**Sg**	**03 07 41.2**	**+0.5**
MVIF	**Mont Vial**	**0.83**	**245**	Pg		**Pg**	**03 07 30.0**	**+0.3**
MVIF				Sg		**Sg**	**03 07 41.2**	**+0.5**
MONC	**Moncucco Torin**	**0.85**	**347**	Pg		**Pg**	**03 07 30.9**	**+0.9**
132nm,0.4s								
MONC	**Moncucco Torin**	**0.85**	**347**	Pg		**Pg**	**03 07 30.9**	**+0.9**
132nm,0.4s								
SC2M	**Scurtabo**	**0.97**	**80**	Pg		**Pg**	**03 07 29.4**	**-2.9**
SC2M				Sg		**Sg**	**03 07 43.6**	**-1.4**
SC2M	**Scurtabo**	**0.97**	**80**	Pg		**Pg**	**03 07 29.4**	**-2.9**
SC2M				Sg		**Sg**	**03 07 43.6**	**-1.4**
84nm,0.3s								
SURF	**Saint Ours**	**1.02**	**284**	Pg		**Pg**	**03 07 33.0**	**-0.3**
SURF	**Saint Ours**	**1.02**	**284**	Pg		**Pg**	**03 07 33.0**	**-0.3**
CALN	**Calern**	**1.07**	**243**	Pg		**Pg**	**03 07 34.6**	**+0.4**
CALN				Sg		**Sg**	**03 07 49.9**	**+1.8**
CALN	**Calern**	**1.07**	**243**	Pg		**Pg**	**03 07 34.6**	**+0.4**
CALN				Sg		**Sg**	**03 07 49.9**	**+1.8**
RSP	**Reno Superiore**	**1.12**	**324**	Pg		**Pg**	**03 07 34.8**	**-0.4**
RSP				Sg		**Sg**	**03 07 50.4**	**+0.6**
RSP	**Reno Superiore**	**1.12**	**324**	Pg		**Pg**	**03 07 34.8**	**-0.4**
RSP				Sg		**Sg**	**03 07 50.4**	**+0.6**
53nm,0.6s								
RSP	**Reno Superiore**	**1.12**	**324**	Pg		**Pg**	**03 07 34.8**	**-0.4**
RSP				Sg		**Sg**	**03 07 50.4**	**+0.6**
53nm,0.6s								
MBDF	**Montbardon**	**1.13**	**296**	*e*Pg		**Pg**	**03 07 34.8**	**-0.6**
MBDF				*e*Sg		**Sg**	**03 07 50.4**	**+0.3**
31nm,0.3s								
MBDF	**Montbardon**	**1.13**	**296**	*e*Pg		**Pg**	**03 07 34.8**	**-0.6**
MBDF				*e*Sg		**Sg**	**03 07 50.4**	**+0.3**
15nm,0.3s								
TRAV	**Traversella**	**1.30**	**346**	Pg		**Pg**	**03 07 38.0**	**-0.7**
TRAV	**Traversella**	**1.30**	**346**	Pg		**Pg**	**03 07 38.0**	**-0.7**
20nm,0.3s								
TRAV	**Traversella**	**1.30**	**346**	Pg		**Pg**	**03 07 38.0**	**-0.7**
20nm,0.3s								
FRF	**La Foret Royal**	**1.32**	**239**	*e*Pg		**Pg**	**03 07 38.5**	**-0.4**
FRF				*e*Sg		**Sg**	**03 07 54.7**	**-1.3**
126nm,0.3s								
FRF	**La Foret Royal**	**1.32**	**239**	*e*Pn		**Pn**	**03 07 37.4**	**-0.2**
FRF				*e*Pg		**Pg**	**03 07 38.5**	**-0.4**
FRF				*e*Sg		**Sg**	**03 07 54.7**	**-1.3**
FRF	**La Foret Royal**	**1.32**	**239**	*e*Pn		**Pn**	**03 07 37.4**	**-0.2**
SNR=1.0								
FRF	**La Foret Royal**	**1.32**	**239**	*e*Pg		**Pg**	**03 07 38.5**	**-0.4**
FRF				*e*Sg		**Sg**	**03 07 54.7**	**-1.3**
63nm,0.3s								
BNI	**Bardonecchia**	**1.35**	**307**	*e*Pn		**Pn**	**03 07 38.3**	**+0.2**
BNI				Pg		**Pg**	**03 07 38.5**	**-1.1**
BNI				*e*Sg		**Sg**	**03 07 56.6**	**-0.5**
BNI	**Bardonecchia**	**1.35**	**307**	Pg		**Pg**	**03 07 38.5**	**-1.1**
77nm,2.6s								
BNI	**Bardonecchia**	**1.35**	**307**	*e*Pn		**Pn**	**03 07 38.3**	**+0.2**
BNI	**Bardonecchia**	**1.35**	**307**	Pg		**Pg**	**03 07 38.5**	**-1.1**
77nm,2.6s								
LMR	**La Mourre**	**1.53**	**234**	*e*Pn		**Pn**	**03 07 40.0**	**-0.5**
SNR=1.0								
LMR				*e*Sn		**Sn**	**03 07 59.1**	**-1.1**
SNR=1.0								
LMR				*e*Sg		**Sg**	**03 08 01.2**	**-1.6**
81nm,0.2s								
LMR	**La Mourre**	**1.53**	**234**	*e*Pn		**Pn**	**03 07 40.0**	**-0.5**
SNR=1.0								
LMR				*e*Sn		**Sn**	**03 07 59.1**	**-1.1**
SNR=1.0								
LMR				*e*Sg		**Sg**	**03 08 01.2**	**-1.6**
40nm,0.2s								
LPG	**La Plagne**	**1.62**	**321**	*e*Pn		**Pn**	**03 07 43.3**	**+1.6**
SNR=1.0								
LPG				*e*Sn		**Sn**	**03 08 03.4**	**+1.0**
13nm,0.3s,SNR=1.0								
LPG	**La Plagne**	**1.62**	**321**	*e*Pn		**Pn**	**03 07 43.3**	**+1.6**
SNR=1.0								
LPG				*e*Sn		**Sn**	**03 08 03.4**	**+1.0**
6.5nm,0.3s,SNR=1.0								
LPL	**La Plagne**	**1.64**	**321**	*e*Pn		**Pn**	**03 07 43.8**	**+1.7**
SNR=1.0								
LPL				*e*Sn		**Sn**	**03 08 03.8**	**+0.8**
8.1nm,0.3s,SNR=1.0								
LPL	**La Plagne**	**1.64**	**321**	*e*Pn		**Pn**	**03 07 43.8**	**+1.7**
SNR=1.0								
LPL				*e*Sn		**Sn**	**03 08 03.8**	**+0.8**
4.1nm,0.3s,SNR=1.0								
VAI	**Varese**	**1.67**	**14**	Pg		**Pg**	**03 07 44.1**	**-1.5**
VAI	**Varese**	**1.67**	**14**	Pg		**Pg**	**03 07 44.1**	**-1.5**
17nm,0.7s								
VAI	**Varese**	**1.67**	**14**	Pg		**Pg**	**03 07 44.1**	**-1.5**
17nm,0.7s								
ORIF	**Oris-en-Rattie**	**1.79**	**293**	*e*Pn		**Pn**	**03 07 45.2**	**+1.1**
SNR=1.0				

CDF			*e*Sn	**Sn**	**03 09 05.9**	**-0.5**
	1.0nm,0.6s					
AVF	**Avril sur Loir**	**4.25 308**	*e*Pn	**Pn**	**03 08 19.0**	**+1.1**
	SNR=1.0					
AVF			*e*Sn	**Sn**	**03 09 05.4**	**-1.9**
	0.8nm,0.4s					
AVF	**Avril sur Loir**	**4.25 308**	*e*Pn	**Pn**	**03 08 19.0**	**+1.1**
	SNR=1.0					
AVF			*e*Sn	**Sn**	**03 09 05.4**	**-1.9**
	0.4nm,0.4s					
LOR	**Lormes**	**4.28 316**	*e*Pn	**Pn**	**03 08 19.6**	**+1.2**
	SNR=1.0					
LOR			*e*Sn	**Sn**	**03 09 06.5**	**-1.6**
	1.2nm,0.3s,SNR=1.0					
LOR	**Lormes**	**4.28 316**	*e*Pn	**Pn**	**03 08 19.6**	**+1.2**
	SNR=1.0					
LOR			*e*Sn	**Sn**	**03 09 06.5**	**-1.6**
	0.6nm,0.3s,SNR=1.0					
SSF	**Saint Saulge**	**4.33 312**	*e*Pn	**Pn**	**03 08 19.7**	**+0.7**
SSF			*e*Sn	**Sn**	**03 09 07.6**	**-1.7**
	0.6nm,0.3s					
SSF	**Saint Saulge**	**4.33 312**	*e*Pn	**Pn**	**03 08 19.7**	**+0.7**
SSF			*e*Sn	**Sn**	**03 09 07.6**	**-1.7**
	0.3nm,0.3s					
BGF	**Bois d'Agland**	**4.42 303**	*e*Pn	**Pn**	**03 08 21.4**	**+1.1**
	SNR=1.0					
BGF			*e*Sn	**Sn**	**03 09 09.5**	**-2.0**
	2.7nm,0.5s					
BGF	**Bois d'Agland**	**4.42 303**	*e*Pn	**Pn**	**03 08 21.4**	**+1.1**
	SNR=1.0					
BGF			*e*Sn	**Sn**	**03 09 09.5**	**-2.0**
	1.4nm,0.5s					
MTLF	**Montolieu**	**4.43 260**	*e*Pn	**Pn**	**03 08 20.7**	**+0.4**
	SNR=1.0					
MTLF			*e*Sn	**Sn**	**03 09 08.9**	**-2.7**
	2.1nm,0.2s,SNR=1.0					
MTLF	**Montolieu**	**4.43 260**	*e*Pn	**Pn**	**03 08 20.7**	**+0.4**
	SNR=1.0					
MTLF			*e*Sn	**Sn**	**03 09 08.9**	**-2.7**
	1.0nm,0.2s,SNR=1.0					
CAF	**Calviac**	**4.44 281**	*e*Pn	**Pn**	**03 08 21.2**	**+0.7**
	SNR=1.0					
CAF			*e*Sn	**Sn**	**03 09 09.0**	**-2.9**
	0.3nm,0.2s					
CAF	**Calviac**	**4.44 281**	*e*Pn	**Pn**	**03 08 21.2**	**+0.7**
	SNR=1.0					
CAF			*e*Sn	**Sn**	**03 09 09.0**	**-2.9**
	0.2nm,0.2s					

*ROM **06** 03:12:56.9±0.2, 44°.20N×8°.24E, h8km±3km, Md2.6/9, Ml2.3/7, Error ellipse: s-maj=3.0km s-min=2.8km az=151.0*
*CSEM **06** 03:12:57.7±0.2, 44°.25N×8°.20E, h10km, ML2.6/22, Error ellipse: s-maj=4.1km s-min=2.5km az=129.0*
*ISCJB **06** 03:12:57.6±0.5, 44°.24N±0°.03×8°.24E±0°.04, h21km±4km, Error ellipse: s-maj=6.2km s-min=3.3km az=37.8*
*NEIC **06** 03:12:59.0, 44°.27N×8°.13E, h10km, ML2.5(STR), ML2.5(LDG), After STR.*
*STR **06** 03:12:59.0±0.3, 44°.27N×8°.13E, h10km, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*LDG **06** 03:12:59.2±0.1, 44°.19N×8°.17E, h5km, Md2.5/3, Ml2.5/21, Error ellipse: s-maj=2.6km s-min=1.3km az=117.0*

ISC 06 03:12:57.9±0.5, 44°.25N±0°.02×8°.19E±0°.03, h14km±2km, n89, σ1.9±0.3/161, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QLNO	**Quiliano**	**0.14**	**55**	Pg	**Pg**	**03 13 00.7**	**-0.8**
QLNO				Sg	**Sg**	**03 13 02.8**	**-1.3**
QLNO	**Quiliano**	**0.14**	**55**	Pg	**Pg**	**03 13 00.7**	**-0.8**
QLNO				Sg	**Sg**	**03 13 02.8**	**-1.3**
QLNO	**Quiliano**	**0.14**	**55**	Pg	**Pg**	**03 13 00.7**	**-0.8**
QLNO				Sg	**Sg**	**03 13 02.8**	**-1.3**
PCP	**Piancastagn**	**0.39**	**41**	Pg	**Pg**	**03 13 05.1**	**-0.7**
PCP	**Piancastagn**	**0.39**	**41**	Pg	**Pg**	**03 13 05.1**	**-0.7**
PCP	**Piancastagn**	**0.39**	**41**	Pg	**Pg**	**03 13 05.1**	**-0.7**
IMI	**Imperia**	**0.40**	**213**	Pg	**Pg**	**03 13 05.4**	**-0.5**
IMI				Sg	**Sg**	**03 13 11.0**	**-0.2**
IMI	**Imperia**	**0.40**	**213**	Pg	**Pg**	**03 13 05.4**	**-0.5**
IMI				Sg	**Sg**	**03 13 11.0**	**-0.2**
	170nm,0.3s						
IMI	**Imperia**	**0.40**	**213**	Pg	**Pg**	**03 13 05.4**	**-0.5**
IMI				Sg	**Sg**	**03 13 11.0**	**-0.2**
	170nm,0.3s						
SAOF	**Saorge**	**0.53**	**241**	Pg	**Pg**	**03 13 08.3**	**+0.1**
SAOF				Sg	**Sg**	**03 13 15.7**	**+0.5**
SAOF	**Saorge**	**0.53**	**241**	Pg	**Pg**	**03 13 08.3**	**+0.1**
SAOF				Sg	**Sg**	**03 13 15.7**	**+0.5**
AUTN	**L'Aution**	**0.60**	**246**	Pg	**Pg**	**03 13 10.4**	**+0.7**
AUTN				Sg	**Sg**	**03 13 18.3**	**+0.6**
AUTN	**L'Aution**	**0.60**	**246**	Pg	**Pg**	**03 13 10.4**	**+0.7**
AUTN				Sg	**Sg**	**03 13 18.3**	**+0.6**
STV	**Sant Anna di V**	**0.62**	**270**	Pg	**Pg**	**03 13 10.4**	**+0.4**
STV				Sg	**Sg**	**03 13 18.8**	**+0.6**
STV	**Sant Anna di V**	**0.62**	**270**	Pg	**Pg**	**03 13 10.4**	**+0.4**
STV				Sg	**Sg**	**03 13 18.8**	**+0.6**
	190nm,0.3s						
STV	**Sant Anna di V**	**0.62**	**270**	Pg	**Pg**	**03 13 10.4**	**+0.4**
STV				Sg	**Sg**	**03 13 18.8**	**+0.6**
	190nm,0.3s						
SBF	**Sospel**	**0.67**	**235**	*e*Pg	**Pg**	**03 13 10.8**	**-0.1**
	SNR=1.0						
SBF				*e*Sg	**Sg**	**03 13 19.2**	**-0.4**
	106nm,0.2s,SNR=1.0						
SBF	**Sospel**	**0.67**	**235**	*e*Pg	**Pg**	**03 13 10.8**	**-0.1**
	SNR=1.0						
SBF				*e*Sg	**Sg**	**03 13 19.2**	**-0.4**
	53nm,0.2s,SNR=1.0						
LUCF	**Luceram**	**0.70**	**240**	Pg	**Pg**	**03 13 11.7**	**+0.1**
LUCF				Sg	**Sg**	**03 13 21.4**	**+0.6**
LUCF	**Luceram**	**0.70**	**240**	Pg	**Pg**	**03 13 11.7**	**+0.1**
LUCF				Sg	**Sg**	**03 13 21.4**	**+0.6**
TOUF	**Mont Tournerai**	**0.72**	**251**	Pg	**Pg**	**03 13 12.4**	**+0.6**
TOUF	**Mont Tournerai**	**0.72**	**251**	Pg	**Pg**	**03 13 12.4**	**+0.6**
DOI	**San Damiano**	**0.72**	**291**	Pg	**Pg**	**03 13 11.8**	**-0.2**
DOI	**San Damiano**	**0.72**	**291**	Pg	**Pg**	**03 13 11.8**	**-0.2**
	113nm,0.2s						
DOI	**San Damiano**	**0.72**	**291**	Pg	**Pg**	**03 13 11.8**	**-0.2**
	113nm,0.2s						
PZZ	**Stroppo**	**0.81**	**289**	Pg	**Pg**	**03 13 13.4**	**-0.3**
PZZ	**Stroppo**	**0.81**	**289**	Pg	**Pg**	**03 13 13.4**	**-0.3**
	89nm,0.3s						
MVIF	**Mont Vial**	**0.82**	**245**	Pg	**Pg**	**03 13 14.1**	**+0.2**
MVIF				Sg	**Sg**	**03 13 25.2**	**+0.5**
MVIF	**Mont Vial**	**0.82**	**245**	Pg	**Pg**	**03 13 14.1**	**+0.2**
MVIF				Sg	**Sg**	**03 13 25.2**	**+0.5**
MONC	**Moncucco Torin**	**0.85**	**347**	Pg	**Pg**	**03 13 15.1**	**+0.8**
	122nm,0.3s						
MONC	**Moncucco Torin**	**0.85**	**347**	Pg	**Pg**	**03 13 15.1**	**+0.8**
	122nm,0.3s						
SC2M	**Scurtabo**	**0.98**	**80**	Pg	**Pg**	**03 13 14.9**	**-1.9**
SC2M	**Scurtabo**	**0.98**	**80**	Pg	**Pg**	**03 13 14.9**	**-1.9**
	70nm,0.3s						
SC2M	**Scurtabo**	**0.98**	**80**	Pg	**Pg**	**03 13 14.9**	**-1.9**
	70nm,0.3s						
SURF	**Saint Ours**	**1.01**	**284**	Pg	**Pg**	**03 13 17.1**	**-0.4**
SURF	**Saint Ours**	**1.01**	**284**	Pg	**Pg**	**03 13 17.1**	**-0.4**
CALN	**Calern**	**1.06**	**243**	Pg	**Pg**	**03 13 18.8**	**+0.5**
CALN				Sg	**Sg**	**03 13 34.0**	**+1.8**
CALN	**Calern**	**1.06**	**243**	Pg	**Pg**	**03 13 18.8**	**+0.5**
CALN				Sg	**Sg**	**03 13 34.0**	**+1.8**
RSP	**Reno Superiore**	**1.12**	**324**	Pg	**Pg**	**03 13 18.8**	**-0.6**
RSP				Sg	**Sg**	**03 13 34.4**	**+0.4**
RSP	**Reno Superiore**	**1.12**	**324**	Pg	**Pg**	**03 13 18.8**	**-0.6**
RSP				Sg	**Sg**	**03 13 34.4**	**+0.4**
	43nm,0.4s						
MBDF	**Montbardon**	**1.12**	**296**	*e*Pg	**Pg**	**03 13 18.9**	**-0.6**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**03 13 34.5**	**+0.3**
	32nm,0.4s,SNR=1.0						
MBDF	**Montbardon**	**1.12**	**296**	*e*Pg	**Pg**	**03 13 18.9**	**-0.6**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**03 13 34.5**	**+0.3**
	16nm,0.4s,SNR=1.0						
FRF	**La Foret Royal**	**1.31**	**239**	*e*Pg	**Pg**	**03 13 22.6**	**-0.5**
	SNR=1.0						
FRF				*e*Sg	**Sg**	**03 13 38.8**	**-1.3**
	112nm,0.3s						
FRF	**La Foret Royal**	**1.31**	**239**	*e*Pn	**Pn**	**03 13 21.5**	**-0.2**
FRF				*e*Pg	**Pg**	**03 13 22.6**	**-0.5**
FRF				*e*Sg	**Sg**	**03 13 38.8**	**-1.3**
FRF	**La Foret Royal**	**1.31**	**239**	*e*Pn	**Pn**	**03 13 21.5**	**-0.2**
	SNR=1.0						
FRF	**La Foret Royal**	**1.31**	**239**	*e*Pg	**Pg**	**03 13 22.6**	**-0.5**
	SNR=1.0						
FRF				*e*Sg	**Sg**	**03 13 38.8**	**-1.3**
	56nm,0.3s						
BNI	**Bardonecchia**	**1.35**	**307**	*e*Pn	**Pn**	**03 13 22.2**	**0.0**
BNI				*e*Pg	**Pg**	**03 13 40.5**	**+17**
BNI	**Bardonecchia**	**1.35**	**307**	*e*Pn	**Pn**	**03 13 22.2**	**0.0**
LMR	**La Mourre**	**1.52**	**234**	*e*Pn	**Pn**	**03 13 24.1**	**-0.5**
	SNR=1.0						
LMR				*e*Sn	**Sn**	**03 13 43.2**	**-1.0**
	SNR=1.0						
LMR				*e*Sg	**Sg**	**03 13 45.4**	**-1.4**
	74nm,0.2s						
LMR	**La Mourre**	**1.52**	**234**	*e*Pn	**Pn**	**03 13 24.1**	**-0.5**
	SNR=1.0						
LMR				*e*Sn	**Sn**	**03 13 43.2**	**-1.0**
	SNR=1.0						
LMR				*e*Sg	**Sg**	**03 13 45.4**	**-1.4**
	37nm,0.2s						
LPG	**La Plagne**	**1.62**	**321**	*e*Pn	**Pn**	**03 13 27.4**	**+1.5**
	SNR=1.0						
LPG				*e*Sn	**Sn**	**03 13 47.5**	**+1.0**
	14nm,0.4s,SNR=1.0						
LPG	**La Plagne**	**1.62**	**321**	*e*Pn	**Pn**	**03 13 27.4**	**+1.5**
	SNR=1.0						
LPG				*e*Sn	**Sn**	**03 13 47.5**	**+1.0**
	7.1nm,0.4s,SNR=1.0						
LPL	**La Plagne**	**1.64**	**321**	*e*Pn	**Pn**	**03 13 27.9**	**+1.7**
	SNR=1.0						
LPL				*e*Sn	**Sn**	**03 13 47.9**	**+0.8**
	14nm,0.5s						
LPL	**La Plagne**	**1.64**	**321**	*e*Pn	**Pn**	**03 13 27.9**	**+1.7**
	SNR=1.0						
LPL				*e*Sn	**Sn**	**03 13 47.9**	**+0.8**
	7.2nm,0.5s						
VAI	**Varese**	**1.67**	**14**	Pg	**Pg**	**03 13 28.2**	**-1.8**
VAI	**Varese**	**1.67**	**14**	Pg	**Pg**	**03 13 28.2**	**-1.8**
	15nm,0.7s						
VAI	**Varese**	**1.67**	**14**	Pg	**Pg**	**03 13 28.2**	**-1.8**
	15nm,0.7s						
ORIF	**Oris-en-Rattie**	**1.78**	**293**	*e*Pn	**Pn**	**03 13 29.3**	**+1.1**
	SNR=1.0						
ORIF				*e*Sn	**Sn**	**03 13 50.4**	**-0.2**
ORIF				*e*Sg	**Sg**	**03 13 55.4**	**+0.2**
	12nm,0.4s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**1.78**	**293**	*e*Pn	**Pn**	**03 13 29.3**	**+1.1**
	SNR=1.0						
ORIF				*e*Sn	**Sn**	**03 13 50.4**	**-0.2**
ORIF				*e*Sg	**Sg**	**03 13 55.4**	**+0.2**
	6.2nm,0.4s,SNR=1.0						
SMRF	**Simiane la Rot**	**1.90**	**263**	*e*P	**Pn**	**03 13 31.6**	**+1.7**
	SNR=1.0						
SMRF				*e*Sg	**Sg**	**03 13 58.3**	**-0.8**
	46nm,0.5s,SNR=1.0						
SMRF	**Simiane la Rot**	**1.90**	**263**	*e*P	**Pn**	**03 13 31.6**	**+1.7**
	SNR=1.0						
SMRF				*e*Sg	**Sg**	**03 13 58.3**	**-0.8**
	23nm,0.5s,SNR=1.0						
VIVF	**Saint-Julien-l**	**2.59**	**285**	*e*Pg	**Pg**	**03 13 47.2**	**-0.3**
VIVF				*e*Sn	**Sn**	**03 14 09.4**	**-1.1**
	6.3nm,0.5s,SNR=1.0						
VIVF	**Saint-Julien-l**	**2.59**	**285**	*e*Pn	**Pn**	**03 13 40.4**	**+1.1**
VIVF				*e*Pg	**Pg**	**03 13 47.2**	**-0.3**
VIVF				*e*Sn	**Sn**	**03 14 09.4**	**-1.1**
VIVF	**Saint-Julien-l**	**2.59**	**285**	*e*Pn	**Pn**	**03 13 40.4**	**+1.1**
	SNR=1.0						
VIVF	**Saint-Julien-l**	**2.59**	**285**	*e*Pg	**Pg**	**03 13 47.2**	**-0.3**
VIVF				*e*Sn	**Sn**	**03 14 09.4**	**-1.1**
	3.2nm,0.5s,SNR=1.0						
CABF	**La Chapelle**	**2.79**	**329**	*e*Pn	**Pn**	**03 13 44.0**	**+1.9**
	SNR=1.0						
CABF				*e*Sn	**Sn**	**03 14 15.6**	**+0.1**
	3.0nm,0.5s						
CABF	**La Chapelle**	**2.79**	**329**	*e*Pn	**Pn**	**03 13 44.0**	**+1.9**
	SNR=1.0						
CABF				*e*Sn	**Sn**	**03 14 15.6**	**+0.1**
	1.5nm,0.5s						
LASF	**Ste Croix**	**3.12**	**268**	*e*Pn	**Pn**	**03 13 47.2**	**+0.6**
	SNR=1.0						
LASF				*e*Sn	**Sn**	**03 14 22.4**	**-1.3**
	2.4nm,0.3s,SNR=1.0						
LASF	**Ste Croix**	**3.12**	**268**	*e*Pn	**Pn**	**03 13 47.2**	**+0.6**
	SNR=1.0						
LASF				*e*Sn	**Sn**	**03 14 22.4**	**-1.3**
	1.2nm,0.3s,SNR=1.0						
HINF	**Hinteralfeld**	**3.69**	**346**	*e*Pn	**Pn**	**03 13 56.1**	**+1.7**
	SNR=1.0						
HINF				*e*Sn	**Sn**	**03 14 37.5**	**-0.2**
	0.8nm,0.3s,SNR=1.0						
HINF	**Hinteralfeld**	**3.69**	**346**	*e*Pn	**Pn**	**03 13 56.1**	**+1.7**
	SNR=1.0						
HINF				*e*Sn	**Sn**	**03 14 37.5**	**-0.2**
	0.4nm,0.3s,SNR=1.0						
SMF	**Signal de Mont**	**3.89**	**310**	*e*Pn	**Pn**	**03 13 58.3**	**+1.1**
	SNR=1.0						
SMF				*e*Sn	**Sn**	**03 14 41.0**	**-1.6**
	0.8nm,0.3s						
SMF	**Signal de Mont**	**3.89**	**310**	*e*Pn	**Pn**	**03 13 58.3**	**+1.1**
	SNR=1.0						
SMF				*e*Sn	**Sn**	**03 14 41.0**	**-1.6**
	0.4nm,0.3s						
HAU	**Haudompre**	**3.97**	**342**	*e*Pn	**Pn**	**03 13 59.8**	**+1.5**
	SNR=1.0						
HAU				*e*Sn	**Sn**	**03 14 43.9**	**-0.7**
	3.3nm,0.4s						
HAU	**Haudompre**	**3.97**	**342**	*e*Pn	**Pn**	**03 13 59.8**	**+1.5**
	SNR=1.0						
HAU				*e*Sn	**Sn**	**03 14 43.9**	**-0.7**
	1.6nm,0.4s						
CDF	**Champ du Feu**	**4.21**	**352**	*e*Pn	**Pn**	**03 14 03.1**	**+1.5**
	SNR=1.0						
CDF				*e*Sn	**Sn**	**03 14 50.1**	**-0.5**
	0.3nm,0.3s						
CDF	**Champ du Feu**	**4.21**	**352**	*e*Pn	**Pn**	**03 14 03.1**	**+1.5**
	SNR=1.0						
CDF				*e*Sn	**Sn**	**03 14 50.1**	**-0.5**
	0.2nm,0.3s						
AVF	**Avril sur Loir**	**4.25**	**309**	*e*Pn	**Pn**	**03 14 03.1**	**+1.0**
	SNR=1.0						
AVF				*e*Sn	**Sn**	**03 14 49.5**	**-1.9**
	1.6nm,0.6s						
AVF	**Avril sur Loir**	**4.25**	**309**	*e*Pn	**Pn**	**03 14 03.1**	**+1.0**
	SNR=1.0						
AVF				*e*Sn	**Sn**	**03 14 49.5**	**-1.9**
	0.8nm,0.6s						
LOR	**Lormes**	**4.28**	**316**	*e*Pn	**Pn**	**03 14 03.7**	**+1.2**
	SNR=1.0						
LOR				*e*Sn	**Sn**	**03 14 50.6**	**-1.6**
	1.1nm,0.3s						
LOR	**Lormes**	**4.28**	**316**	*e*Pn	**Pn**	**03 14 03.7**	**+1.2**
	SNR=1.0						
LOR				*e*Sn	**Sn**	**03 14 50.6**	**-1.6**
	0.6nm,0.3s						
SSF	**Saint Saulge**	**4.33**	**312**	*e*Pn	**Pn**	**03 14 03.8**	**+0.6**
SSF				*e*Sn	**Sn**	**03 14 51.7**	**-1.6**
	0.7nm,0.3s						
SSF	**Saint Saulge**	**4.33**	**312**	*e*Pn	**Pn**	**03 14 03.8**	**+0.6**
SSF				*e*Sn	**Sn**	**03 14 51.7**	**-1.6**
	0.3nm,0.3s						
BGF	**Bois d'Agland**	**4.42**	**303**	*e*Pn	**Pn**	**03 14 05.5**	**+1.1**
	SNR=1.0						
BGF				*e*Sn	**Sn**	**03 14 53.7**	**-1.9**
	2.7nm,0.4s						
BGF	**Bois d'Agland**	**4.42**	**303**	*e*Pn	**Pn**	**03 14 05.5**	**+1.1**
	SNR=1.0						
BGF				*e*Sn	**Sn**	**03 14 53.7**	**-1.9**
	1.4nm,0.4s						
MTLF	**Montolieu**	**4.42**	**260**	*e*Pn	**Pn**	**03 14 04.8**	**+0.4**
	SNR=1.0						
MTLF				*e*Sn	**Sn**	**03 14 53.0**	**-2.6**
	2.3nm,0.3s,SNR=1.0						
MTLF	**Montolieu**	**4.42**	**260**	*e*Pn	**Pn**	**03 14 04.8**	**+0.4**
	SNR=1.0						
MTLF				*e*Sn	**Sn**	**03 14 53.0**	**-2.6**
	1.1nm,0.3s,SNR=1.0						
CAF	**Calviac**	**4.43**	**281**	*e*Pn	**Pn**	**03 14 05.3**	**+0.7**
	SNR=1.0						
CAF				*e*Sn	**Sn**	**03 14 53.1**	**-2.8**
	0.6nm,0.4s						
CAF	**Calviac**	**4.43**	**281**	*e*Pn	**Pn**	**03 14 05.3**	**+0.7**
	SNR=1.0						
CAF				*e*Sn	**Sn**	**03 14 53.1**	**-2.8**
	0.3nm,0.4s						

*NEIC **06** 03:48:55.4, 58°.20N×133°.60W, h1km, ML3.3(PGC), ML2.8(AEIC), After PGC.*

PGC 06 03:48:55.4±6.3, 58°.20N×133°.60W, h1km, ML3.3/4, 5D, 49km east of Juneau, Ak Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESE	**Bessie Mountai**	**0.77**	**301**	P	Pg	03 49 09.8	-0.3
BESE				S	Sg	03 49 20.2	+0.2
SIT	**Sitka**	**1.47**	**220**	P	Pn	03 49 24.6	+1.5
SIT				S	Sg	03 49 46.5	+3.8
SKAG	**Skagway**	**1.56**	**325**	P	Pn	03 49 22.4	-1.8
SKAG				S	Sn	03 49 44.1	-0.9
DLBC	**Dease Lake**	**1.90**	**81**	P	Pn	03 49 27.9	-1.0
DLBC				S	Sn	03 49 52.4	-1.0
DLBC	**Dease Lake**	**1.90**	**81**	⇑P	Pn	03 49 28.0	-0.9
DLBC				⇑Pg	Pg	03 49 29.4	-2.4
DLBC				⇓Sn	Sn	03 49 53.1	-0.3
DLBC				⇓Sg	Sg	03 49 54.6	-1.8
PLBC	**Pleasant Camp**	**1.92**	**312**	Pn	Pn	03 49 29.0	-0.2
PLBC				Pg	Pg	03 49 29.6	-2.5
PLBC				Sn	Sn	03 49 53.5	-0.4
PLBC				Sg	Sg	03 49 55.0	-1.9
PLBC	**Pleasant Camp**	**1.92**	**312**	⇑Pn	Pn	03 49 29.0	-0.2
PLBC				⇓Pg	Pg	03 49 29.6	-2.5
PLBC				⇑Sn	Sn	03 49 53.5	-0.4
PLBC				⇑Sg	Sg	03 49 55.0	-1.9
WHY	**Whitehorse**	**2.56**	**346**	P	Pn	03 49 36.2	-1.7
WHY				S	Sn	03 50 09.6	0.0
WHY	**Whitehorse**	**2.56**	**346**	⇓Pn	Pn	03 49 36.4	-1.6
WHY				⇑Pg	Pg	03 49 40.8	-3.6
HYT	**Haines Junctio**	**3.30**	**325**	Pn	Pn	03 49 48.5	+0.3
HYT				Pg	Pg	03 49 54.6	-4.1
HYT				Sg	Sg	03 50 36.5	-4.9
HYT	**Haines Junctio**	**3.30**	**325**	⇑Pn	Pn	03 49 48.5	+0.3
HYT				⇑Pg	Pg	03 49 54.6	-4.1
HYT				⇓Sg	Sg	03 50 36.5	-4.9
PNL	**Peninsula**	**3.35**	**299**	P	Pn	03 49 49.1	+0.2
PNL				S	Sn	03 50 31.2	+2.0
EGAK	**Eagle**	**7.53**	**334**	*e*Pn	Pn	03 50 45.9	-0.2
	5.3nm,0.8s						
EGAK				*e*Pg	Pg	03 51 12.4	-7.0
EGAK				*e*Sg	Sg	03 52 50.6	-6.1

*ISCJB **06** 03:48:58.3±0.5, 38°.12N±0°.03×21°.53E±0°.03, h7km±4km, Error ellipse: s-maj=4.6km s-min=3.3km az=156.1*
*CSEM **06** 03:48:58.6±0.3, 38°.14N×21°.54E, h10km, MD3.2, Error ellipse: s-maj=6.9km s-min=4.8km az=157.0*
*ATH **06** 03:48:58.8, 38°.11N×21°.55E, h16km±1km, MD3.2/13*
*NEIC **06** 03:48:58.8, 38°.11N×21°.55E, h16km, MD3.2(ATH), After ATH.*
*THE **06** 03:48:58.2, 38°.11N×21°.57E, h20km±2km, ML2.8/4, Error ellipse: s-maj=2.9km s-min=0.4km az=6.0*

ISC 06 03:48:59.0±0.4, 38°.13N±0°.03×21°.54E±0°.03, h10km±3km, n47, σ1.9±0.9/81, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.09**	**223**	*e*Pb	**Pg**	**03 49 01.8**	**+0.4**
RLS				*e*Sb	**Sg**	**03 49 04.4**	**+1.2**
RLS	**Riolos of Patr**	**0.09**	**223**	*e*PB	**Pg**	**03 49 01.8**	**+0.4**
RLS				*e*SB	**Sg**	**03 49 04.4**	**+1.2**
RLS	**Riolos of Patr**	**0.09**	**223**	*e*Pb	**Pg**	**03 49 01.8**	**+0.4**
RLS				*e*Sb	**Sg**	**03 49 04.4**	**+1.2**
UPR	**University Cam**	**0.25**	**50**	*e*PB	**Pg**	**03 49 04.5**	**+0.4**
UPR				*e*SB	**Sg**	**03 49 09.1**	**+1.6**
UPR	**University Cam**	**0.25**	**50**	P	**Pg**	**03 49 03.7**	**-0.4**
UPR				S	**Sg**	**03 49 08.4**	**+0.9**
UPR	**University Cam**	**0.25**	**50**	P	**Pg**	**03 49 03.7**	**-0.4**
UPR	**University Cam**	**0.25**	**50**	*e*Pb	**Pg**	**03 49 04.5**	**+0.4**
UPR				S	**Sg**	**03 49 08.4**	**+0.9**
UPR				*e*Sb	**Sg**	**03 49 09.1**	**+1.6**
LAKA	**Lakka**	**0.36**	**71**	P	**Pg**	**03 49 05.9**	**-0.2**
LAKA				S	**Sg**	**03 49 10.7**	**-0.3**
EFP	**Efpalio**	**0.41**	**43**	*e*PB	**Pg**	**03 49 06.9**	**-0.2**
EFP				*e*SB	**Sg**	**03 49 13.5**	**+0.8**
EFP	**Efpalio**	**0.41**	**43**	P	**Pg**	**03 49 06.8**	**-0.3**
EFP				S	**Sg**	**03 49 13.1**	**+0.4**
EFP	**Efpalio**	**0.41**	**43**	*e*Pb	**Pg**	**03 49 06.9**	**-0.2**
EFP				S	**Sg**	**03 49 13.1**	**+0.4**
EFP				*e*Sb	**Sg**	**03 49 13.5**	**+0.8**
KALE	**Kalithea**	**0.54**	**60**	P	**Pg**	**03 49 08.7**	**-0.8**
KALE				S	**Sg**	**03 49 16.3**	**-0.3**
KALE	**Kalithea**	**0.54**	**60**	P	**Pg**	**03 49 08.7**	**-0.8**
KALE				S	**Sg**	**03 49 16.3**	**-0.3**
KFL	**Anninata**	**0.60**	**269**	P	**Pg**	**03 49 10.1**	**-0.5**
KFL				S	**Sg**	**03 49 19.2**	**+0.8**
KFL	**Anninata**	**0.60**	**269**	P	**Pg**	**03 49 10.1**	**-0.5**
KFL				S	**Sg**	**03 49 19.2**	**+0.8**
GUR	**Goura**	**0.66**	**106**	*e*PB	**Pg**	**03 49 10.5**	**-1.2**
GUR				*e*SN	**Sg**	**03 49 20.3**	**0.0**
GUR	**Goura**	**0.66**	**106**	P	**Pg**	**03 49 10.5**	**-1.2**
GUR				S	**Sg**	**03 49 19.7**	**-0.6**
GUR	**Goura**	**0.66**	**106**	P	**Pg**	**03 49 10.5**	**-1.2**
GUR				S	**Sg**	**03 49 19.7**	**-0.6**
VLS	**Valsamata**	**0.76**	**274**	*e*Pn	**Pn**	**03 49 13.0**	**-2.7**
VLS				*e*Sn	**Sg**	**03 49 24.7**	**+1.3**
VLS	**Valsamata**	**0.76**	**274**	*e*PN	**Pn**	**03 49 13.0**	**-2.7**
VLS			

ARMA Armidale 27.91 245 *eP* **P 04 08 15.3 +1.2**
CNB Canberra Magne 31.07 236 *eP* **P 04 08 42.5 +1.3**
CTA Charters Tower 32.42 265 *eP* **P 04 08 53.0 +0.2**
15nm,0.6s,mb4.8
CTAO Charters Tower 32.42 265 *eP* **P 04 08 52.7 -0.1**
19nm,0.6s,mb4.9
TOO Toolangi 34.75 234 *eP* **P 04 09 12.8 +0.8**
COEN Coen 36.60 275 *eP* **P 04 09 27.0 -0.5**
59nm,0.8s,mb5.2
STKA Stephens Creek 36.63 245 *eP* **P 04 09 28.3 +0.8**
5.0nm,0.6s,mb4.2
STKA Stephens Creek 36.63 245 P **P 04 09 28.3 +0.8**
8.9nm,0.8s,mb4.3,baz=78,slow=9.7,SNR=14
ASAR Alice Springs 43.40 257 P **P 04 10 21.5 +0.1**
19nm,0.8s,mb4.7,baz=95,slow=8.2,SNR=155
ASAR ScP ScP 04 14 51.8 +2.9
1.5nm,0.9s,baz=94,slow=4.5,SNR=6.9
WRAB Tennant Creek 43.51 263 *eP* **P 04 10 21.4 -0.9**
26nm,1.1s,mb4.7
WRA Warramunga Arr 43.52 263 P **P 04 10 21.7 -0.6**
11nm,0.6s,mb4.5,baz=97,slow=8.8,SNR=126
KAKA Kakadu 46.97 272 *eP* **P 04 10 48.6 0.0**
16nm,0.7s,mb4.7
FORT Forrest 48.14 247 *eP* **P 04 10 56.8 -0.3**
14nm,0.6s,mb4.7
FORT Forrest 48.14 247 *eP* **P 04 10 56.6 -0.6**
15nm,0.5s,mb4.8
FITZ Fitzroy Crossi 51.95 263 *eP* **P 04 11 25.2 +0.2**
6.6nm,0.6s,mb4.1
MBWA Marble Bar 56.74 258 *eP* **P 04 11 57.6 -0.8**
10nm,0.7s,mb4.2
YBH Yreka Blue Hor 81.36 39 *eP* **P 04 14 25.6 +0.9**
8.6nm,1.3s,mb4.0
NVAR Mina Array Bea 82.13 44 P **P 04 14 28.9 +0.2**
2.0nm,0.8s,mb3.7,baz=222,slow=8.3,SNR=11
TUC Tucson 84.12 52 *eP* **P 04 14 38.5 -0.3**
2.8nm,1.0s,mb3.8
WVOR Wild Horse Val 84.21 40 *eP* **P 04 14 38.8 -0.2**
2.5nm,1.0s,mb3.7
BMO Blue Mountains 86.38 39 *eP* **P 04 14 49.6 +0.3**
1.2nm,1.0s,mb3.5
DUG Dugway 86.66 45 *eP* **P 04 14 51.2 +0.4**
1.2nm,0.8s,mb3.7
TRF Thorofare Moun 87.20 13 *eP* **P 04 14 51.5 -1.2**
5.5nm,0.7s,mb4.4
HLID Hailey 87.41 41 *eP* **P 04 14 54.4 +0.3**
2.0nm,0.9s,mb3.9
MCK McKinley 87.73 13 *eP* **P 04 14 54.2 -1.0**
4.2nm,0.7s,mb4.3
MNTX Cornudas Mount 87.90 55 *eP* **P 04 14 56.5 -0.3**
1.1nm,0.9s,mb3.6
HWUT Hardware Ranch 88.19 44 *eP* **P 04 14 58.0 +0.2**
1.2nm,0.6s,mb3.8
TXAR Lajitas Array 88.21 58 P **P 04 14 58.4 +0.1**
1.7nm,0.8s,mb3.8,baz=224,slow=4.9,SNR=19
COLA College 88.97 13 *eP* **P 04 15 00.2 -0.7**
3.5nm,0.9s,mb4.2
CMAR Chiang Mai Arr 89.34 290 P **P 04 15 04.1 +0.4**
0.9nm,0.3s,mb4.1,baz=132,slow=3.7,SNR=4.9
REDW Red Top Meadow 89.53 43 *eP* **P 04 15 04.3 +0.3**
2.9nm,1.1s,mb4.0
BW06 Boulder Array 90.06 44 *eP* **P 04 15 06.8 +0.3**
1.3nm,1.0s,mb3.7
PDAR Pinedale Array 90.06 44 P **P 04 15 06.0 -0.5**
1.1nm,0.7s,mb3.8,baz=220,slow=3.9,SNR=11
BOZ Bozeman (W) 90.19 40 *eP* **P 04 15 07.7 +0.7**
0.7nm,0.7s,mb3.6
SDCO Great Sand Dun 90.49 50 *eP* **P 04 15 09.2 +0.6**
0.4nm,0.6s,mb3.4
AKASG Malin Array Be 142.99 330 PKP PKPdf 04 21 32.9 -2.7
2.6nm,0.4s,baz=43,slow=4.0,SNR=12
AKASG Malin Array Be 142.99 330 PKP PKPdf 04 21 32.9 -2.7
CLL Collm 148.35 345 *i* PKPbc PKPbc 04 21 49.0 0.0
comp=Z,5.0nm,1.1s

JMA 06 04:12:18.0±0.1,36°.64N×140°.95E,h49km±1km,M3.8,
1C-2D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.31**	**265**	⇓P	Pn	04 12 27.2	+0.1
JHO				eS	Sn	04 12 33.3	-0.2
ONAJ	**Iwakimizuishiy**	**0.48**	**345**	⇓P	Pn	04 12 28.6	-0.3
ONAJ				S	Sn	04 12 35.9	-0.8
JFK	**Kawauchi**	**0.73**	**355**	⇑P	Pn	04 12 31.6	-0.5
JFK				eS	Sn	04 12 41.1	-1.1
JYT	**Yasato**	**0.74**	**236**	P	Pn	04 12 31.9	-0.2
JYT				eS	Sn	04 12 42.1	-0.3
JFT	**Otama**	**1.00**	**331**	P	Pn	04 12 36.4	+0.7
JFT				eS	Sn	04 12 49.2	+0.4
JAG	**Ashikaga**	**1.22**	**260**	P	Pn	04 12 38.9	+0.2
JKT	**Katashina**	**1.37**	**276**	P	Pn	04 12 41.7	+1.0
MAT	**Matsushiro**	**2.21**	**268**	P	Pn	04 12 53.9	+1.7
MAT				eS	Sn	04 13 21.7	+3.4

ISCJB ***06*** *04:25:47.9±1.2,2°.1S±0°.1×138°.89E±0°.06,h26km±11km, mb3.5/3,Error ellipse: s-maj=19.5km s-min=10.5km az=9.2*
IDC ***06*** *04:25:47.6±4.1,2°.18S×138°.18E,h0km,mb3.6/3, mb1 3.8/4,mb1mx3.6/15,mbtmp3.7/4,ML3.8/1,Error ellipse: s-maj=180.7km s-min=25.6km az=86.0*
DJA ***06*** *04:25:47.1,1.95S×138°.98E,h11km,MLv3.7/3*
ISC 06 04:25:48.2±1.5,2°.1S±0°.1×138°.94E±0°.07,h16km±11km,n8,
σ0°56/9,mb3.5/3,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.25**	**294**	P	**Pg**	**04 25 53.6**	**-0.1**
JAY	**Jayapura**	**1.82**	**103**	P	**Pn**	**04 26 19.0**	**+0.3**
JAY				S	**Sn**	**04 26 41.6**	**+0.2**
BAKI	**Biak**	**2.97**	**287**	P	**Pn**	**04 26 34.4**	**-0.2**
TLE	**Tual**	**7.12**	**240**	P	**Pn**	**04 27 33.0**	**+1.3**
WRA	**Warramunga Arr**	**18.30**	**194**	P	**Pn**	**04 30 01.0**	**-0.5**
0.3nm,0.3s,baz=14,slow=12,SNR=22
ASAR Alice Springs 22.00 192 P **P 04 30 41.0 -0.7**
1.7nm,0.9s,mb3.5,baz=19,slow=10,SNR=8.9
MKAR Makanchi Array 69.44 322 P **P 04 36 55.8 +0.2**
0.6nm,0.9s,mb3.5,baz=126,slow=7.3,SNR=2.4
BVAR Borovoye Array 78.94 325 P **P 04 37 50.3 -0.5**
0.3nm,0.4s,mb3.5,baz=99,slow=7.7,SNR=3.8

IDC ***06*** *04:30:19.4±0.5,25°.46S×176°.24W,h0km,mb5.1/16, mb1 5.2/17,mb1mx5.2/17,mbtmp5.1/17,ML5.7/1,MS5.0/21, Ms1 5.0/21,ms1mx4.9/27,Error ellipse: s-maj=19.1km s-min=11.7km az=160.0*
GCMT ***06*** *04:30:23.7±0.1,25°.58S×175°.88W,h20km,MW5.3, Moment Tensor Solution. s70,c105; s99,c169; Moment tensor: Scale 10^17^Nm; Mrr0.00; Mθθ0.00; Mφφ0.00; Mrθ0.00; Mrφ0.00; Mθφ0.00; Best double couple: M0 1.20000×10^17^ NP1:φs260.00000°,δ56.00000°, λ-150.00000°. NP2:φs152.00000°,δ66.00000°, λ-38.00000°. Principal axes: T 1.1600, Plg6.0000°, Azm208.0000°; N 0.1200, Plg46.0000°, Azm304.0000°; P -1.2800, Plg43.0000°, Azm112.0000°; Data Used: II IU IC G CN.*
SZGRF ***06*** *04:30:24.7,25°.48S×176°.92W,h40km,mb5.5,South of Fiji Islands*
MOS ***06*** *04:30:24.9±2.9,25°.40S×176°.25W,h33km,mb5.5/59, MS5.2/68,Error ellipse: s-maj=10.4km s-min=7.4km az=59.9*
ISCJB ***06*** *04:30:24.1±0.1,25°.53S±0°.04×176°.29W±0°.03,h37km, mb5.5/166,MS5.2/237,Error ellipse: s-maj=6.0km s-min=3.5km az=152.7*
NEIC ***06*** *04:30:26.9±0.1,25°.46S×176°.35W,mb5.5/130,MS5.3/192, Error ellipse: s-maj=5.1km s-min=3.2km az=146.0*
BJI ***06*** *04:30:26.3,25°.17S×175°.94W,h53km,mB5.5/24, mb5.4/43,Ms5.3/38,Ms7 5.0/37*
BGS ***06*** *04:30:26.9±5.0,25°.46S×176°.35W,h49km,mb5.5(NEIC)*
DJA ***06*** *04:30:42,25°.86S×176°.70W,h166km,mb5.3/20*
ISC 06 04:30:25.9±0.1,25°.53S±0°.04×176°.26W±0°.03,h39km,
h39km±2.0km:pP-P,n1214,σ0°68/739,mb5.5/166,
MS5.2/237,299C-207D,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.99**	**201**	Pn	**Pn**	**04 31 23.7**	**-0.8**
501nm,0.3s,baz=260,slow=23,SNR=14
RAO Sn **Sn** **04 32 10.2** **+0.1**
167nm,0.3s,baz=66,slow=23,SNR=4.0
RAO Raoul Island 3.99 201 P **Pn** **04 31 23.7 -0.8**
RAO 04 32 10.2
RAO pmax pmax
comp=Z,501nm,0.3s
RAO smax
comp=N,167nm,0.3s
MSVF Nonsavu 9.39 325 Pn **Pn** **04 32 41.0 +2.3**
comp=N,2μm,0.9s,SNR=20
MSVF Nonsavu 9.39 325 *e*Pn **Pn** **04 32 41.5 +2.7**
comp=N,471nm,1.0s
AFI Afiamalu 12.30 21 Pn **Pn** **04 33 09.5 -9.1**
comp=N,23nm,0.3s,baz=294,slow=2.4,SNR=18
AFI Sn **Sn** **04 35 24.3 -10**
comp=N,7.4nm,0.3s,baz=200,slow=20,SNR=3.8
AFI Afiamalu 12.30 21 *e*P **Pn** **04 33 09.6 -9.0**
AFI pmax pmax
comp=Z,575nm,1.0s
AFI Afiamalu 12.30 21 *e*Pn **Pn** **04 33 09.6 -9.0**
comp=Z,575nm,1.0s
AFI *e*Sn **Sn** **04 35 16.9 -18**
OUZ Omahuta 13.03 220 *e*Pn **Pn** **04 33 31.1 +2.6**
comp=Z,136nm,1.3s
URZ Urewera 13.88 202 Pn **Pn** **04 33 34.2 -5.8**
comp=Z,1.3nm,0.3s,baz=140,slow=6.1,SNR=6.3
URZ Sn **Sn** **04 36 02.8 -10**
comp=Z,1.5nm,0.3s,baz=212,slow=21,SNR=3.4
URZ Urewera 13.88 202 *e*Pn **Pn** **04 33 42.5 +2.5**
comp=Z,81nm,0.6s
URZ *e*Sn **Sn** **04 36 04.9 -7.9**
RAR Rarotonga 15.73 78 Pn **Pn** **04 33 54.2 -10**
comp=Z,13nm,0.3s,baz=238,slow=8.8,SNR=26
RAR LR LR 04 38 30.5
comp=Z,5μm,19.2s,baz=258,slow=31
RAR Rarotonga 15.73 78 *e*Pn **Pn** **04 33 54.1 -11**
RAR *e*Sn Sn 04 36 33.8 -24
DZM Mont Dzumac 16.20 279 *e*P **Pn** **04 34 16.8 +6.1**
comp=Z,737nm,1.2s
DZM *e*LQ 04 37 33.4
comp=Z,6μm,27.4s
DZM *e*LR LR 04 38 04.4
comp=Z,13μm,23.6s
DZM Mont Dzumac 16.20 279 *e*P **Pn** **04 34 16.7 +6.0**
DZM Mont Dzumac 16.20 279 *e*Pn **Pn** **04 34 16.0 +5.3**
comp=Z,380nm,1.2s
NOUC Port Laguerre 16.32 278 *e*P **Pn** **04 34 18.5 +6.2**
FUNA Funafuti 17.46 345 *e*Pn **Pn** **04 34 24.1 -2.4**
comp=Z,234nm,1.1s
KHZ Kahutara 18.82 204 *e*P **Pn** **04 34 36.7 -6.3**
comp=Z,102nm,0.6s
RPZ Rata Peaks 20.89 207 P **P** **04 34 59.0 -5.7**
comp=Z,18nm,0.6s,baz=33,slow=2.5,SNR=12
RPZ LR LR 04 43 16.0
comp=Z,13μm,18.6s,MS5.3,baz=36,slow=37
PAE Paea 25.97 78 *e*P **P** **04 35 53.9 -1.1**
comp=Z,67nm,1.4s,mb5.0
PAE Paea 25.97 78 *e*P **P** **04 35 53.9 -1.1**
PAE pmax pmax
comp=Z,67nm,1.4s,mb5.0
PPT Papeete 26.01 78 *e*P **P** **04 35 54.7 -0.7**
comp=Z,168nm,1.4s,mb5.4
PPT *e*LQ 04 40 56.1
comp=Z,10μm,24.0s
PPT *e*LR LR 04 42 12.8
comp=Z,8μm,24.5s,baz=247
PPT Papeete 26.01 78 P **P** **04 35 54.0 -1.3**
comp=Z,146nm,1.3s,mb5.4,baz=273,slow=11,SNR=4.8
PPT LR LR 04 42 52.5
comp=Z,4μm,21.8s,MS4.9,baz=256,slow=29
PPT Papeete 26.01 78 *e*P **P** **04 35 54.7 -0.7**
comp=Z,168nm,1.4s,mb5.4
PPT *e*LQ 04 40 56.1
TIAR Tiarei 26.22 78 *e*P **P** **04 35 56.6 -0.6**
comp=Z,287nm,1.2s,mb5.7
HNR Honiara 27.70 301 LR LR 04 45 25.7
comp=Z,5μm,21.0s,MS5.0,baz=136,slow=33
HNR Honiara 27.70 301 PFAKE 04 36 20.0 +9.4
HNR LR LR
comp=Z,5μm,22.0s,MS5.0
ARMA Armidale 28.72 253 *e*P **P** **04 36 21.5 +1.9**
ARMA Armidale 28.72 253 *e*P **P** **04 36 21.1 +1.6**
comp=Z,15nm,0.8s,mb4.8
EIDS Eidsvold 29.46 263 *e*P **P** **04 36 26.5 +0.4**
comp=Z,56nm,0.6s,mb5.5
CNB Canberra Magne 31.08 243 *e*P **P** **04 36 42.9 +2.5**
CNB *e*pP pP 04 36 52.6 +1.3
CAN Canberra 31.37 244 *e*P **P** **04 36 44.2 +1.2**
CAN pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
CAN MLR MLR
comp=Z,4μm,19.0s,MS5.1
CAN Canberra 31.37 244 *e*P **P** **04 36 44.2 +1.2**
comp=Z,8.5nm,0.8s,mb4.6
CAN LR LR
comp=Z,4μm,19.0s,MS5.1
XMAS Kiritimati 32.91 36 PFAKE 04 37 10.0 +13
XMAS LR LR
comp=Z,3μm,19.0s,MS5.0
TOO Toolangi 34.52 240 *e*P **P** **04 37 09.5 -0.9**
CTA Charters Tower 34.90 271 *e*P **P** **04 37 13.2 -0.7**
comp=Z,20nm,0.5s,mb5.3
CTA Charters Tower 34.90 271 P **P** **04 37 12.5 -1.4**
comp=Z,22nm,0.5s,mb5.3,baz=100,slow=11,SNR=34
CTA LR LR 04 49 45.5
comp=Z,4μm,20.8s,MS5.1,baz=106,slow=33
CTAO Charters Tower 34.90 271 *e*P **P** **04 37 13.4 -0.5**
CTAO pmax pmax
comp=Z,27nm,0.6s,mb5.3
CTAO MLR MLR
comp=Z,3μm,20.0s,MS5.1
CTAO Charters Tower 34.90 271 *e*P **P** **04 37 13.4 -0.5**
comp=Z,27nm,0.6s,mb5.3
CTAO LR LR
comp=Z,3μm,20.0s,MS5.1
CTAO Charters Tower 34.90 271 P **P** **04 37 14.3 +0.4**
comp=Z,42nm,0.6s,mb5.5
STKA Stephens Creek 37.33 250 *e*P **P** **04 37 34.2 -0.4**
comp=Z,12nm,0.6s,mb4.9
STKA *e*PCP PcP 04 39 53.7 +0.5
STKA Stephens Creek 37.33 250 P **P** **04 37 33.0 -1.6**
comp=Z,5.9nm,0.4s,mb4.7,baz=100,slow=11,SNR=28
STKA PcP PcP 04 39 54.6 +1.4
comp=Z,9.5nm,0.7s,baz=94,slow=3.6,SNR=3.8
STKA LR LR 04 51 47.7
comp=Z,5μm,18.0s,MS5.4,baz=84,slow=34
STKA Stephens Creek 37.33 250 *e*P **P** **04 37 34.9 +0.3**
comp=Z,3.6nm,0.8s,mb4.2
RKT Rikitea 37.59 95 *e*S **S** **04 43 21.6 -2.2**
comp=Z,295nm,26.2s
RKT *e*LQ 04 46 05.7
comp=Z,1μm,24.8s
RKT *e*LR LR 04 47 35.2
comp=Z,3μm,26.0s,baz=262
TAOE Nuku Hiva Isla 38.10 71 *e*LR LR 04 47 44.7
comp=Z,4μm,23.1s,baz=244
COEN Coen 39.73 279 *e*P **P** **04 37 54.5 -0.4**
comp=Z,429nm,1.1s,mb6.1
COEN Coen 39.73 279 P **P** **04 37 54.6 -0.3**
comp=Z,187nm,1.1s,mb5.7
JOHN Johnston Islan 42.52 10 PFAKE 04 38 30.0 +12
JOHN LR LR
comp=Z,3μm,19.0s,MS5.2
ASAR Alice Springs 45.14 261 P **P** **04 38 36.8 -2.1**
comp=Z,6.1nm,0.4s,mb4.8,baz=87,slow=7.0,SNR=77
ASAR PcP PcP 04 40 19.1 +0.2
comp=Z,5.6nm,0.8s,baz=102,slow=4.0,SNR=4.7
ASAR S **S** **04 45 21.6 +5.7**
comp=Z,1.9nm,1.1s,baz=101,slow=17,SNR=4.5
ASAR Alice Springs 45.14 261 P **P** **04 38 36.8 -2.1**
ASAR 04 40 19.1
ASAR S **S** **04 45 21.6 +5.7**
ASAR pmax pmax
comp=Z,6.0nm,0.4s
ASAR pmax pmax
comp=Z,6.0nm,0.8s
ASAR smax
comp=N,2.0nm,1.1s
WRAB Tennant Creek 45.69 266 P **P** **04 38 42.0 -1.2**
comp=N,134nm,0.6s,mb6.0,SNR=11
WRAB Tennant Creek 45.69 266 *e*P **P** **04 38 41.4 -1.8**
WRAB pmax pmax
comp=Z,16nm,0.6s,mb5.1
WRAB MLR MLR
comp=Z,3μm,19.0s,MS5.3
WRAB Tennant Creek 45.69 266 *e*P **P** **04 38 41.4 -1.9**
comp=Z,16nm,0.6s,mb5.1
WRAB LR LR
comp=Z,3μm,19.0s,MS5.3
WRAB Tennant Creek 45.69 266 P **P** **04 38 41.9 -1.3**
comp=Z,27nm,0.9s,mb5.2
WRA Warramunga Arr 45.70 266 P **P** **04 38 40.8 -2.5**
comp=Z,12nm,0.6s,mb5.0,baz=102,slow=8.2,SNR=103
WRA PcP PcP 04 40 21.2 +0.4
comp=Z,5.5nm,0.6s,baz=99,slow=3.2,SNR=6.5
WRA S **S** **04 45 29.0 +5.1**
comp=Z,2.0nm,0.8s,baz=98,slow=16,SNR=5.8
WRA LR LR 04 57 10.9
comp=Z,3μm,18.9s,MS5.3,baz=110,slow=35
WRA Warramunga Arr 45.70 266 P **P** **04 38 40.8 -2.5**
WRA 04 40 21.3
WRA S **S** **04 45 29.0 +5.0**
WRA pmax pmax
comp=Z,12nm,0.6s
WRA pmax pmax
comp=Z,6.0nm,0.6s
WRA smax
comp=N,2.0nm,0.9s
WRA MLR MLR
comp=Z,3μm,18.9s
WRA Warramunga Arr 45.70 266 P **P** **04 38 40.8 -2.5**
WRA PcP PcP 04 40 21.2 +0.4
WRA S **S** **04 45 29.0 +5.1**
WRA LR LR 04 57 10.9
WAKE Wake Island 47.54 338 PFAKE 04 39 10.0 +12
WAKE LR LR
comp=Z,2μm,20.0s,MS5.1
FORT Forrest 48.96 250 ⇓*i*P **P** **04 39 07.0 -1.5**
comp=Z,97nm,0.6s,mb6.0
FORT Forrest 48.96 250 *e*P **P** **04 39 07.2 -1.3**
comp=Z,121nm,0.7s,mb6.0
DRV Dumont d'Urvil 49.22 201 S **S** **04 46 06.0 -6.7**
DRV L 04 50 00.0
POHA Pohakuloa 49.32 26 PFAKE 04 39 20.0 +8.8
POHA LR LR
comp=Z,1μm,20.0s,MS5.0
KAKA Kakadu 49.84 275 *e*P **P** **04 39 13.9 -1.6**
comp=Z,13nm,0.6s,mb5.1
KAKA Kakadu 49.84 275 *e*P **P** **04 39 14.2 -1.3**
comp=Z,56nm,0.7s,mb5.7
KAKA Kakadu 49.84 275 P **P** **04 39 17.4 +1.9**
comp=Z,363nmcomp=Z,42nm,0.8s,mb5.5
KIP Kipapa 49.92 22 ⇑*i*P **P** **04 39 15.8 0.0**
KNA Kununurra 52.06 270 P **P** **04 39 31.0 -1.1**
comp=Z,2μmcomp=Z,256nm,0.8s,mb6.2
SBA Scott Base 52.99 184 *e*P **P** **04 39 40.7 +2.6**
SBA pmax pmax
comp=Z,45nm,1.0s,mb5.3
SBA MLR MLR
comp=Z,1μm,19.0s,MS5.1
SBA Scott Base 52.99 184 *e*P **P** **04 39 40.7 +2.5**
comp=Z,45nm,1.0s,mb5.3
SBA LR LR
comp=Z,1μm,19.0s,MS5.1
MIDW Midway 53.45 359 PFAKE 04 39 50.0 +8.0
MIDW LR LR
comp=Z,2μm,20.0s,MS5.2
FITZ Fitzroy Crossi 54.10 265 *e*P **P** **04 39 45.5 -1.6**
comp=Z,28nm,0.7s,mb5.3
FITZ Fitzroy Crossi 54.10 265 P **P** **04 39 46.1 -1.1**
comp=Z,18nm,0.8s,mb5.1,baz=153,slow=7.0,SNR=36
FITZ LR LR 05 00 08.6
comp=Z,780nm,20.9s,MS4.8,baz=114,slow=33
FITZ Fitzroy Crossi 54.10 265 *e*P **P** **04 39 45.5 -1.6**
comp=Z,13nm,0.7s,mb5.0
FITZ Fitzroy Crossi 54.10 265 P **P** **04 39 46.9 -0.2**
comp=Z,61nm,1.1s,mb5.5
GUMO Guam 54.28 311 PFAKE 04 40 00.0 +12
GUMO LR LR
comp=Z,2μm,21.0s,MS5.1
KLBR Kellerberrin 57.51 248 *e*P **P** **04 40 10.2 -1.2**
comp=Z,17nm,0.6s,mb5.2
NWAO Narrogin (SRO) 57.67 246 LR LR 05 01 50.1
comp=Z,12nm,18.4s,baz=328,slow=33
NWAO Narrogin (SRO) 57.67 246 PFAKE 04 40 20.0 +7.5
NWAO LR LR
comp=Z,2μm,19.0s,MS5.1
MBWA Marble Bar 58.45 260 *e*P **P** **04 40 16.8 -1.3**
comp=Z,26nm,0.9s,mb5.3
MBWA LR LR
comp=Z,3μm,20.0s,MS5.4
NLAI Namlea 58.67 282 P **P** **04 40 26.1 +6.4**
comp=Z,7μmcomp=Z,72nm,1.0s,mb5.7
RPN Rapa Nui 59.33 108 LR LR 04 59 35.0
comp=Z,688nm,18.3s,MS4.8,baz=266,slow=30
CASY Casey 60.16 207 *e*P **P** **04 40 29.2 0.0**
CASY Casey 60.16 207 *e*P **P** **04 40 29.4 +0.2**
comp=Z,26nm,0.6s,mb5.4
CASY LR LR
comp=Z,1μm,19.0s,MS5.1
KDI Kendari 62.31 279 P **P** **04 40 46.1 +1.5**
comp=Z,36nm,1.2s,mb5.4
BKSI Bulukumba 63.95 277 P **P** **04 40 51.7 -3.8**
comp=Z,32nm,0.7s,mb5.5
QSPA South Pole Qui 64.56 180 *e*P **P** **04 40 59.7 +1.3**
comp=Z,59nm,0.8s,mb5.7
QSPA LR LR
comp=Z,2μm,20.0s,MS5.3
SPSI Sidrap Palu 64.86 278 P **P** **04 40 56.9 -4.5**
comp=Z,715nmcomp=Z,21nm,1.4s,mb5.0
DAV Davao City (W) 65.13 292 PFAKE 04 41 10.0 +6.8
DAV LR LR
comp=Z,748nm,21.0s,MS4.9
TTSI Tana Toraja 65.22 279 P **P** **04 41 03.8 0.0**
comp=Z,25nm,1.5s,mb5.0
CBIJ Chichi jima 65.89 320 P **P** **04 41 06.7 -1.1**
comp=Z,61nm,0.7s,mb5.7,baz=203,slow=12,SNR=4.5
CBIJ LR LR 05 04 08.2
comp=Z,1μm,22.0s,MS5.1,baz=106,slow=31
PCI Palu 66.17 281 P **P** **04 41 18.0 +8.1**
comp=Z,80nm,1.5s,mb5.5
KKM Kota Kinabalu 72.63 286 *e*P **P** **04 41 49.2 -0.6**
comp=Z,19nm,0.6s,mb5.2
KKM LR LR
comp=Z,536nm,20.0s,MS4.8
KKM Kota Kinabalu 72.63 286 P **P** **04 41 49.3 -0.5**
comp=Z,43nm,1.1s,mb5.3
STKI Sintang 74.06 278 P **P** **04 42 00.5 +2.2**
comp=Z,40nm,0.9s,mb5.3
MJAR Matsushiro Arr 75.19 324 P **P** **04 42 03.5 -0.8**
comp=Z,5.3nm,0.7s,mb4.6,baz=163,slow=5.8,SNR=25
MJAR LR LR 05 09 49.4
comp=Z,872nm,21.6s,MS5.0,baz=140,slow=32
MJAR Matsushiro Arr 75.19 324 P **P** **04 42 03.5 -0.8**
MJAR LR LR 05 09 49.4
MAJO Matsushiro 75.19 324 *e*P **P** **04 42 03.2 -1.1**
MAJO pmax pmax
comp=Z,18nm,0.9s,mb5.0
MAJO MLR MLR
comp=Z,1μm,22.0s,MS5.1
MAJO Matsushiro 75.19 324 *e*P **P** **04 42 03.2 -1.1**
comp=Z,18nm,0.9s,mb5.0
MAJO LR LR
comp=Z,1μm,22.0s,MS5.1
MAT Matsushiro 75.19 324 P **P** **04 42 03.4 -0.9**
MAT S S 04 51 44.0 +3.7
KSM Kuching 75.73 279 *e*P **P** **04 42 06.7 -1.3**
comp=Z,34nm,0.9s,mb5.3
KSM LR LR
comp=Z,620nm,19.0s,MS4.9
KSM Kuching 75.73 279 P **P** **04 42 06.1 -1.8**
comp=Z,444nmcomp=Z,38nm,1.3s,mb5.2
PMSA Palmer Station 76.06 156 PFAKE 04 42 20.0 +11
PMSA LR LR
comp=Z,1μm,19.0s,MS5.3
ERM Erimo 76.97 330 *e*P **P** **04 42 15.1 +0.8**
ERM pmax pmax
comp=Z,28nm,0.7s,mb5.3
ERM MLR MLR
comp=Z,973nm,20.0s,MS5.1
ERM Erimo 76.97 330 *e*P **P** **04 42 15.1 +0.8**
comp=Z,28nm,0.7s,mb5.3
ERM LR LR
comp=Z,973nm,20.0s,MS5.1
MAW Mawson 77.39 200 ⇓*i*P **P** **04 42 17.3 +0.9**
comp=Z,19nm,0.7s,mb5.1
MAW Mawson 77.39 200 P **P** **04 42 16.9 +0.5**
comp=Z,18nm,0.7s,mb5.1,baz=127,slow=7.0,SNR=46
MAW LR LR 05 15 59.7
comp=Z,2μm,18.7s,MS5.4,baz=120,slow=35
MAW Mawson 77.39 200 P **P** **04 42 16.9 +0.5**
MAW pmax pmax
comp=Z,18nm,0.7s
MAW MLR MLR
comp=Z,2μm,18.7s

MAW	**Mawson**	**77.39**	**200**	*e*P	**P**	**04 42 17.5**	**+1.1**
	comp=Z,4.8nm,0.7s,mb4.5						
MAW				LR	LR		
	comp=Z,3μm,22.0s,MS5.5						
ATKA	**Atka Island**	**77.42**	**1**	*e*P	**P**	**04 42 16.0**	**-0.5**
	comp=Z,188nm,1.3s,mb5.9						
TWG	**Pinlang**	**77.44**	**303**	*e*P	**P**	**04 42 16.9**	**-0.5**
	comp=Z,19nm,0.6s,mb5.2						
YULB	**Yu-li**	**77.60**	**303**	*e*P	**P**	**04 42 17.7**	**-0.5**
	comp=Z,14nm,0.8s,mb5.0						
NACB	**Ninganchiao**	**77.82**	**304**	*e*P	**P**	**04 42 18.4**	**-1.1**
	comp=Z,51nm,1.0s,mb5.4						
TPUB	**Ta-pu**	**78.05**	**303**	*e*P	**P**	**04 42 19.8**	**-1.0**
	comp=Z,48nm,0.8s,mb5.5						
SSLB	**Suanglung**	**78.08**	**304**	*e*P	**P**	**04 42 18.9**	**-2.0**
	comp=Z,20nm,0.8s,mb5.1						
YHNB	**Yeheng**	**78.27**	**305**	*e*P	**P**	**04 42 21.5**	**-0.5**
	comp=Z,19nm,0.7s,mb5.1						
YHNB				LR	LR		
	comp=Z,1μm,22.0s,MS5.2						
TATO	**Taipei**	**78.36**	**305**	*e*P	**P**	**04 42 20.8**	**-1.7**
	comp=Z,78nm,0.9s,mb5.6						
TATO				LR	LR		
	comp=Z,808nm,22.0s,MS5.0						
SMY	**Shemya**	**78.38**	**354**	*e*P	**P**	**04 42 21.5**	**-0.3**
SMY				pmax	pmax		
	comp=Z,123nm,1.0s,mb5.8						
SMY	**Shemya**	**78.38**	**354**	*e*P	**P**	**04 42 21.5**	**-0.3**
	comp=Z,123nm,1.0s,mb5.8						
MDSI	**Maura Dua**	**78.67**	**270**	P	**P**	**04 42 23.1**	**-1.4**
	comp=Z,41nm,0.6s,mb5.5						
ASAJ	**Asahikawa**	**78.89**	**331**	LR	LR	05 16 36.3	
	comp=Z,1μm,19.4s,MS5.3,baz=183,slow=35						
SKR	**Severo-Kuril's**	**79.72**	**343**	*e*P	**P**	**04 42 31.0**	**+1.8**
SKR				*e*		04 52 34.0	
SKR				pmax	pmax		
	comp=Z,110nm,1.0s,mb5.7						
SKR				MLR	MLR		
	comp=N,1μm,18.0s						
SKR				MLR	MLR		
	comp=Z,1μm,18.0s,MS5.2						
CIS	**Catalina Islan**	**80.37**	**46**	⇑P	**P**	**04 42 32.9**	**-0.3**
	baz=81						
PKM	**Peak Mountain**	**80.42**	**44**	⇓P	**P**	**04 42 34.1**	**+0.7**
	baz=81						
QZH	**Quanzhou**	**80.51**	**303**	⇓*i*P	**P**	**04 42 34.2**	**+0.1**
QZH				S	S	04 52 37.4	-0.7
QZH				pmax	pmax		
	comp=Z,100nm,0.8s,mb5.8						
QZH				LR	LR		
	comp=N,750nm,17.6s						
QZH				LR	LR		
	comp=E,1μm,23.4s						
QZH				LR	LR		
	comp=Z,1μm,22.5s,MS5.2						
SAO	**San Andreas Ge**	**80.64**	**42**	*e*P	**P**	**04 42 35.4**	**+0.9**
SAO				*e**PP	pP	04 42 51.6	+5.1
SAO				pmax	pmax		
	comp=Z,69nm,1.4s,mb5.4						
SAO				MLR	MLR		
	comp=Z,1μm,20.0s,MS5.2						
SAO	**San Andreas Ge**	**80.64**	**42**	*e*P	**P**	**04 42 35.4**	**+0.9**
	comp=Z,69nm,1.4s,mb5.4						
SAO				*e*pP	pP	04 42 51.6	+5.0
SAO				LR	LR		
	comp=Z,1μm,20.0s,MS5.2						
MCCM	**Marconi Confer**	**80.72**	**40**	PFAKE		04 42 50.0	+15
MCCM				LR	LR		
	comp=Z,974nm,19.0s,MS5.2						
OSI	**Osito Adit**	**80.93**	**45**	⇓P	**P**	**04 42 36.6**	**+0.4**
	baz=81						
OSI	**Osito Adit**	**80.93**	**45**	*e*P	**P**	**04 42 36.1**	**0.0**
	comp=Z,81nm,1.5s,mb5.4						
PASC	**Pasadena Art C**	**80.99**	**45**	*e*P	**P**	**04 42 36.8**	**+0.3**
YSS	**Yuzh-Sakhalins**	**81.09**	**333**	⇓*e*P	**P**	**04 42 37.1**	**+0.4**
YSS				*i*	pP	04 42 47.0	-1.7
YSS				*e*S	S	04 52 46.0	+2.8
YSS				*e*PS		04 53 34.0	
YSS				pmax	pmax		
	comp=Z,180nm,1.5s,mb5.8						
YSS				MLR	MLR		
	comp=N,500nm,19.0s						
YSS				MLR	MLR		
	comp=Z,500nm,19.0s,MS4.9						
YSS	**Yuzh-Sakhalins**	**81.09**	**333**	*e*P	**P**	**04 42 37.6**	**+0.9**
	comp=Z,210nm,1.1s,mb6.0						
YSS				LR	LR		
	comp=Z,259nm,20.0s,MS4.6						
MWC	**Mount Wilson**	**81.11**	**45**	*e*P	**P**	**04 42 37.6**	**+0.5**
MWC				pmax	pmax		
	comp=Z,46nm,1.3s,mb5.2						
MWC	**Mount Wilson**	**81.11**	**45**	*e*P	**P**	**04 42 37.6**	**+0.4**
	comp=Z,46nm,1.3s,mb5.2						
HOPS	**Hopland**	**81.18**	**39**	PFAKE		04 42 50.0	+13
HOPS				LR	LR		
	comp=Z,1μm,20.0s,MS5.3						
ARVC	**Arvin**	**81.19**	**44**	⇑P	**P**	**04 42 36.3**	**-1.2**
	baz=81						
PET	**Petropavlovsk**	**81.22**	**345**	*e*P	**P**	**04 42 37.2**	**0.0**
PET				*e*		04 45 38.2	
PET				*e*S	S	04 52 44.3	0.0
PET				*e*PS		04 53 33.1	
PET				pmax	pmax		
	comp=Z,200nm,4.4s						
PET				pmax	pmax		
	comp=Z,100nm,15.2s						
PET				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.1						
PET				pmax	pmax		
	comp=Z,100nm,12.0s						
PET				MLR	MLR		
	comp=Z,500nm,18.0s,MS4.9						
PET				MLR	MLR		
	comp=Z,400nm,19.0s						
PET	**Petropavlovsk**	**81.22**	**345**	*e*P	**P**	**04 42 37.0**	**-0.2**
	comp=Z,84nm,1.5s,mb5.5						
PET				LR	LR		
	comp=Z,758nm,20.0s,MS5.0						
MURC	**Murrieta**	**81.28**	**46**	⇑P	**P**	**04 42 38.1**	**+0.1**
	baz=82,SNR=10						
MONP	**Monument Peak**	**81.35**	**47**	⇓P	**P**	**04 42 38.9**	**+0.5**
	baz=82,SNR=8.8						
BFSC	**Mount Baldy Ra**	**81.38**	**46**	⇓P	**P**	**04 42 38.2**	**-0.4**
	baz=82,SNR=12						
PEA0B	**Petropavlovsk-**	**81.52**	**344**	*e*P	**P**	**04 42 38.4**	**-0.4**
PETK	**Petropavlovsk-**	**81.52**	**344**	P	**P**	**04 42 38.7**	**-0.1**
	comp=Z,24nm,0.8s,mb5.2,baz=126,slow=7.3,SNR=26						
PETK				LR	LR	05 18 20.2	
	comp=Z,302nm,19.3s,MS4.7,baz=167,slow=35						
PETK	**Petropavlovsk-**	**81.52**	**344**	P	**P**	**04 42 38.7**	**-0.1**
PETK				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.2						
PETK				MLR	MLR		
	comp=Z,302nm,19.3s,MS4.7						
EDW2	**Edwards Air Fo**	**81.56**	**45**	P	**P**	**04 42 39.8**	**+0.2**
	baz=82,SNR=22						
SDPT	**Sand Point**	**81.68**	**9**	*e*P	**P**	**04 42 38.5**	**-1.1**
	comp=Z,94nm,0.8s,mb5.8						
SDPT				LR	LR		
	comp=Z,1μm,19.0s,MS5.3						
KSRS	**Korea Array**	**81.70**	**318**	P	**P**	**04 42 40.8**	**+0.6**
	comp=Z,6.6nm,0.6s,mb4.7,baz=141,slow=5.6,SNR=26						
KSRS				LR	LR	05 14 00.1	
	comp=Z,688nm,21.7s,MS5.0,baz=127,slow=32						
ISA	**Isabella**	**81.75**	**44**	⇓P	**P**	**04 42 40.7**	**+0.2**
	baz=82,SNR=20						
ISA	**Isabella**	**81.75**	**44**	*e*P	**P**	**04 42 40.8**	**+0.3**
ISA				pmax	pmax		
	comp=Z,129nm,1.5s,mb5.6						
ISA	**Isabella**	**81.75**	**44**	*e*P	**P**	**04 42 40.8**	**+0.3**
	comp=Z,129nm,1.5s,mb5.6						
PFO	**Pinyon Flat Ob**	**81.77**	**47**	P	**P**	**04 42 40.9**	**+0.2**
	comp=Z,112nm,1.5s,mb5.6,SNR=8.2						
PFO	**Pinyon Flat Ob**	**81.77**	**47**	⇑P	**P**	**04 42 40.1**	**-0.5**
	baz=82,SNR=13						
PFO	**Pinyon Flat Ob**	**81.77**	**47**	*e*P	**P**	**04 42 40.7**	**0.0**
PFO				pmax	pmax		
	comp=Z,45nm,1.4s,mb5.2						
PFO				MLR	MLR		
	comp=Z,2μm,20.0s,MS5.5						
PFO	**Pinyon Flat Ob**	**81.77**	**47**	*e*P	**P**	**04 42 40.7**	**0.0**
	comp=Z,45nm,1.4s,mb5.2						
PFO				LR	LR		
	comp=Z,2μm,20.0s,MS5.5						
SWSC	**Sam W. Stewart**	**81.80**	**48**	⇑P	**P**	**04 42 39.9**	**-0.9**
	baz=82						
COCO	**West Island**	**82.09**	**260**	PFAKE		04 42 50.0	+7.1
COCO				LR	LR		
	comp=Z,943nm,19.0s,MS5.2						
CMB	**Columbia Colle**	**82.11**	**41**	*e*P	**P**	**04 42 42.4**	**+0.1**
CMB				pmax	pmax		
	comp=Z,54nm,1.3s,mb5.3						
CMB				MLR	MLR		
	comp=Z,942nm,19.0s,MS5.2						
CMB	**Columbia Colle**	**82.11**	**41**	*e*P	**P**	**04 42 42.4**	**+0.1**
	comp=Z,54nm,1.3s,mb5.3						
CMB				LR	LR		
	comp=Z,942nm,19.0s,MS5.2						
LRMC	**Laurel Mountai**	**82.13**	**45**	⇑P	**P**	**04 42 42.7**	**+0.3**
	baz=82						
SYO	**Syowa Base**	**82.19**	**192**	⇑*e*P	**P**	**04 42 40.8**	**-1.5**
SYO	**Syowa Base**	**82.19**	**192**	⇓*e*PcP	PcP	04 42 45.0	-2.6
BELC	**Belle Mtn. Jos**	**82.31**	**47**	⇓P	**P**	**04 42 43.0**	**-0.5**
	baz=82,SNR=14						
OHCM	**Honcut**	**82.32**	**40**	*e*P	**P**	**04 42 44.0**	**+0.6**
112A	**Yuma**	**82.38**	**49**	⇑P	**P**	**04 42 43.2**	**-0.7**
	baz=83						
BC3	**Big Chuckawall**	**82.46**	**47**	⇓P	**P**	**04 42 44.0**	**-0.2**
	baz=83,SNR=22						
CWC	**Cottonwood Cre**	**82.49**	**44**	⇑P	**P**	**04 42 44.8**	**+0.4**
	baz=83,SNR=6.3						
INCN	**Inchon**	**82.50**	**318**	*e*P	**P**	**04 42 44.8**	**+0.4**
	comp=Z,39nm,0.8s,mb5.4						
INCN				LR	LR		
	comp=Z,602nm,22.0s,MS4.9						
GLA	**Glamis**	**82.52**	**48**	⇑P	**P**	**04 42 43.1**	**-1.4**
	baz=83,SNR=12						
GLA	**Glamis**	**82.52**	**48**	*e*P	**P**	**04 42 44.6**	**0.0**
GLA				pmax	pmax		
	comp=Z,65nm,1.4s,mb5.5						
GLA	**Glamis**	**82.52**	**48**	*e*P	**P**	**04 42 44.6**	**0.0**
	comp=Z,64nm,1.4s,mb5.5						
WDC	**Whiskeytown Da**	**82.56**	**38**	*e*P	**P**	**04 42 44.9**	**+0.3**
WDC				pmax	pmax		
	comp=Z,68nm,1.4s,mb5.5						
WDC				MLR	MLR		
	comp=Z,1μm,20.0s,MS5.3						
WDC	**Whiskeytown Da**	**82.56**	**38**	*e*P	**P**	**04 42 44.9**	**+0.3**
	comp=Z,68nm,1.4s,mb5.5						
WDC				LR	LR		
	comp=Z,1μm,20.0s,MS5.3						
GSC	**Goldstone**	**82.58**	**45**	⇑P	**P**	**04 42 44.8**	**-0.1**
	baz=83,SNR=21						
GSC	**Goldstone**	**82.58**	**45**	*e*P	**P**	**04 42 45.1**	**+0.2**
GSC				pmax	pmax		
	comp=Z,81nm,1.4s,mb5.6						
GSC	**Goldstone**	**82.58**	**45**	*e*P	**P**	**04 42 45.0**	**+0.2**
	comp=Z,81nm,1.4s,mb5.6						
HEC	**Hector,Ludlow**	**82.60**	**46**	⇑P	**P**	**04 42 44.8**	**-0.2**
	baz=83,SNR=16						
MPMC	**Manual Prospec**	**82.62**	**44**	P	**P**	**04 42 45.4**	**+0.3**
	baz=83,SNR=44						
DAC	**Darwin (Calif)**	**82.69**	**44**	PFAKE		04 43 00.0	+15
DAC				LR	LR		
	comp=Z,2μm,21.0s,MS5.3						
MTUM	**Tungsten Hills**	**82.77**	**43**	*e*P	**P**	**04 42 46.4**	**+0.7**
MLAC	**Mammoth Lakes**	**82.78**	**42**	⇓P	**P**	**04 42 46.3**	**+0.5**
	baz=83,SNR=5.6						
TIN	**Tinemaha**	**82.79**	**43**	⇑P	**P**	**04 42 46.9**	**+1.0**
	baz=83						
CHGN	**Chignik**	**82.90**	**10**	*e*P	**P**	**04 42 45.6**	**-0.4**
IRM	**Iron Mountain**	**82.97**	**47**	⇓P	**P**	**04 42 47.1**	**+0.2**
	baz=83,SNR=33						
WAKR	**Walker**	**82.98**	**41**	*e*P	**P**	**04 42 47.4**	**+0.6**
GMRC	**Granite Mounta**	**83.01**	**46**	⇑P	**P**	**04 42 46.7**	**-0.4**
	baz=83,SNR=21						
113A	**Mohawk Valley,**	**83.06**	**49**	P	**P**	**04 42 47.5**	**0.0**
	baz=83,SNR=16						
Y12C	**Blythe**	**83.14**	**48**	⇓P	**P**	**04 42 48.1**	**+0.3**
	baz=83,SNR=6.4						
KEBM	**Edson Butte**	**83.16**	**36**	*e*P	**P**	**04 42 48.8**	**+1.1**
TUQ	**Turquoise Moun**	**83.23**	**46**	⇓P	**P**	**04 42 49.0**	**+0.8**
	baz=84,SNR=7.1						
214A	**Organ Pipe Nat**	**83.25**	**50**	⇓P	**P**	**04 42 48.7**	**+0.3**
	baz=84,SNR=7.9						
YBH	**Yreka Blue Hor**	**83.25**	**37**	*e*P	**P**	**04 42 48.7**	**+0.6**
YBH				pmax	pmax		
	comp=Z,41nm,1.2s						
YBH				MLR	MLR		
	comp=Z,949nm,19.0s						
YBH	**Yreka Blue Hor**	**83.25**	**37**	*e*P	**P**	**04 42 48.7**	**+0.6**
	comp=Z,41nm,1.2s,mb5.3						
YBH				LR	LR		
	comp=Z,949nm,19.0s,MS5.2						
FURC	**Furnace Creek,**	**83.28**	**44**	⇑P	**P**	**04 42 48.8**	**+0.4**
	baz=84,SNR=9.0						
GRAC	**Grapevine Rang**	**83.28**	**44**	⇑P	**P**	**04 42 49.3**	**+0.8**
	baz=84,SNR=12						
SHOC	**Shoshone**	**83.29**	**45**	⇓P	**P**	**04 42 48.2**	**-0.3**
	baz=84,SNR=16						
VLA	**Vladivostok**	**83.30**	**325**	*e*P	**P**	**04 42 47.7**	**-0.7**
WCN	**Washoe City**	**83.31**	**41**	⇑P	**P**	**04 42 48.7**	**+0.2**
	baz=84,SNR=22						
BEKR	**Beckworth**	**83.33**	**40**	⇓P	**P**	**04 42 48.8**	**+0.2**
	baz=84						
Z13A	**Yuma Proving G**	**83.39**	**49**	⇓P	**P**	**04 42 48.8**	**-0.4**
	baz=84,SNR=21						
LBCM	**Butte Creek Ri**	**83.40**	**39**	P	**P**	**04 42 49.1**	**+0.2**
LDFC	**Landfair**	**83.55**	**46**	*e*P	**P**	**04 42 50.7**	**+0.8**
	comp=Z,255nm,1.5s,mb6.1						
U10A	**Ash Meadows, A**	**83.58**	**45**	⇑P	**P**	**04 42 50.0**	**0.0**
	baz=84,SNR=26						
NVAR	**Mina Array Bea**	**83.61**	**42**	P	**P**	**04 42 50.0**	**-0.1**
	comp=Z,26nm,1.1s,mb5.3,baz=218,slow=9.1,SNR=68						
Y13A	**Salome**	**83.64**	**48**	⇑P	**P**	**04 42 50.3**	**-0.1**
	baz=84,SNR=14						
114A	**Black Gap (USA**	**83.66**	**49**	⇓P	**P**	**04 42 50.5**	**0.0**
	baz=84,SNR=9.1						
HUMO	**Hull Mountain**	**83.71**	**37**	*e*P	**P**	**04 42 51.1**	**+0.6**
	comp=Z,117nm,1.6s,mb5.8						
HUMO				LR	LR		
	comp=Z,748nm,19.0s,MS5.1						
VNA1	**Neumayer--Stat**	**83.71**	**176**	*e*P	**P**	**04 42 50.2**	**0.0**
VNA1				*e*		04 42 57.2	
PDMCI	**Parker Dam,Lak**	**83.72**	**47**	⇓P	**P**	**04 42 50.9**	**+0.2**
	baz=84,SNR=11						
PAHR	**Pah Rah Range**	**83.79**	**41**	*e*P	**P**	**04 42 51.3**	**+0.3**
MAIT	**Maitri**	**83.80**	**183**	*e*P	**P**	**04 42 50.8**	**+0.1**
V11A	**Goodsprings**	**83.80**	**46**	⇓P	**P**	**04 42 51.5**	**+0.4**
	baz=84,SNR=14						
NVL	**N'lazarevskaya**	**83.80**	**183**	*e*P	**P**	**04 42 47.8**	**-2.9**
NVL				*e**PP	pP	04 42 57.7	-5.0
NVL				pmax	pmax		
	comp=Z,38nm,1.5s,mb5.3						
NVL				MLR	MLR		
	comp=Z,968nm,17.0s,MS5.2						
W12A	**Cal Nev Ari**	**83.84**	**46**	⇓P	**P**	**04 42 51.6**	**+0.3**
	baz=84,SNR=17						
Z14A	**Wintersburg**	**83.97**	**49**	⇑P	**P**	**04 42 52.0**	**-0.1**
	baz=84,SNR=16						
TPH	**Tonopah**	**84.05**	**43**	PFAKE		04 43 00.0	+7.7
TPH				LR	LR		
	comp=Z,977nm,20.0s,MS5.2						
115A	**Sonoran Desert**	**84.08**	**50**	⇑P	**P**	**04 42 52.5**	**-0.1**
	baz=84,SNR=7.1						
X13A	**Yucca**	**84.10**	**47**	P	**P**	**04 42 53.1**	**+0.4**
	baz=84,SNR=47						
V12A	**Nelson**	**84.11**	**46**	⇑P	**P**	**04 42 52.9**	**+0.2**
	baz=84,SNR=28						
HOG	**Hogback Mounta**	**84.14**	**37**	P	**P**	**04 42 53.6**	**+0.9**
216A	**Three Points,**	**84.21**	**51**	⇑P	**P**	**04 42 53.5**	**+0.2**
	baz=84,SNR=8.8						
Y14A	**Wickenburg**	**84.27**	**48**	⇑P	**P**	**04 42 53.4**	**-0.2**
	baz=84,SNR=37						
NJ2	**Nanjing**	**84.31**	**309**	*e*P	**P**	**04 42 54.5**	**+0.7**
NJ2				pP	pP	04 43 05.0	-0.9
NJ2				PP	PP	04 46 12.2	+2.9
NJ2				SKS		04 53 11.0	
NJ2				S	S	04 53 13.0	-3.7
NJ2				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.5						
NJ2				pmax	pmax		
	comp=Z,190nm,6.8s						
NJ2				LR	LR		
	comp=N,900nm,27.0s						
NJ2				LR	LR		
	comp=E,1μm,19.3s						
NJ2				LR	LR		
	comp=Z,110nm,15.8s						
S10A	**Tonopah Range,**	**84.34**	**43**	⇑P	**P**	**04 42 53.9**	**0.0**
	baz=85,SNR=64						
116A	**Eloy**	**84.36**	**50**	⇓P	**P**	**04 42 54.0**	**-0.1**
	baz=85,SNR=16						
W13A	**Hualapai Mount**	**84.36**	**47**	⇑P	**P**	**04 42 54.4**	**+0.4**
	baz=85,SNR=41						
QIZ	**Qiongzhong**	**84.37**	**294**	P	**P**	**04 42 55.1**	**+0.7**
QIZ				S	S	04 53 17.3	-0.6
QIZ				SS	SS	04 58 50.0	+1.0
QIZ				LR	LR		
	comp=E,150nm,23.8s						
QIZ				LR	LR		
	comp=Z,350nm,20.7s,MS4.7						
Z15A	**Gila River Ind**	**84.47**	**49**	⇑P	**P**	**04 42 54.2**	**-0.4**
	baz=85,SNR=5.7						
217A	**Green Valley**	**84.53**	**51**	⇓P	**P**	**04 42 55.0**	**+0.1**
	baz=85,SNR=29						
X14A	**Yava**	**84.65**	**48**	⇓P	**P**	**04 42 55.4**	**-0.1**
	baz=85,SNR=37						
OHAK	**Old Harbor**	**84.67**	**12**	*e*P	**P**	**04 42 54.9**	**-0.1**
	comp=Z,22nm,0.7s,mb5.4						
MOD	**Modoc**	**84.70**	**38**	*e*P	**P**	**04 42 55.7**	**+0.2**
	comp=Z,51nm,1.2s,mb5.5						
MOD				LR	LR		
	comp=Z,1μm,20.0s,MS5.3						
S11A	**Rachel**	**84.70**	**44**	⇑P	**P**	**04 42 55.4**	**-0.3**
	baz=85,SNR=16						
Y15A	**Casa Rosa Ranc**	**84.73**	**49**	⇑P	**P**	**04 42 56.1**	**+0.2**
	baz=85,SNR=48						
U12A	**Valley of Fire**	**84.73**	**45**	⇓P	**P**	**04 42 56.6**	**+0.8**
	baz=85,SNR=57						
V13A	**Grand Canyon W**	**84.75**	**46**	P	**P**	**04 42 56.5**	**+0.6**
	baz=85,SNR=53						
R10A	**Warm Springs**	**84.75**	**43**	P	**P**	**04 42 56.5**	**+0.7**
	baz=85,SNR=28						
T11A	**Corn Creek, Al**	**84.78**	**45**	⇓P	**P**	**04 42 56.9**	**+0.8**
	baz=85,SNR=106						
T12A	**Moapa**	**84.80**	**45**	⇑P	**P**	**04 42 56.7**	**+0.6**
	baz=85,SNR=12						
TUC	**Tucson**	**84.86**	**51**	*e*P	**P**	**04 42 56.5**	**-0.1**
TUC				pmax	pmax		
	comp=Z,58nm,1.3s,mb5.5						
TUC				MLR	MLR		
	comp=Z,2μm,20.0s,MS5.4						
TUC	**Tucson**	**84.86**	**51**	*e*P	**P**	**04 42 56.5**	**-0.1**
	comp=Z,58nm,1.3s,mb5.5						
TUC				LR	LR		
	comp=Z,2μm,20.0s,MS5.4						
COR	**Corvallis**	**84.89**	**35**	PFAKE		04 43 10.0	+14
COR				LR	LR		
	comp=Z,2μm,19.0s,MS5.5						
K05A	**Summer Lake**	**84.91**	**37**	P	**P**	**04 42 57.3**	**+0.7**
	baz=85,SNR=45						
318A	**Bisbee**	**84.93**	**52**	⇑P	**P**	**04 42 57.2**	**+0.2**
	baz=85						
W14A	**Seligman**	**84.96**	**47**	⇑P	**P**	**04 42 58.0**	**+0.9**
	baz=85,SNR=46						
Z16A	**Peralta Trail,**	**85.00**	**50**	⇓P	**P**	**04 42 57.1**	**-0.2**
	baz=85,SNR=28						
Q10A	**Clear Creek Ra**	**85.02**	**43**	⇑P	**P**	**04 42 57.4**	**+0.1**
	baz=85,SNR=18						
117A	**Oracle**	**85.04**	**50**	⇑P	**P**	**04 42 57.9**	**+0.5**
	baz=85,SNR=33						
IRO	**Indian Ridge**	**85.04**	**36**	P	**P**	**04 42 57.2**	**0.0**
MNSI	**Mandailing Nat**	**85.07**	**273**	P	**P**	**04 42 57.8**	**-0.3**
HEBO	**Mount Hebo**	**85.09**	**34**	*e*P	**P**	**04 42 58.0**	**+0.6**
	comp=Z,114nm,1.5s,mb5.8						
U13A	**Pakoon Wash**	**85.09**	**46**	⇓P	**P**	**04 42 58.4**	**+0.8**
	baz=85,SNR=85						
X15A	**Humboldt**	**85.10**	**48**	⇓P	**P**	**04 42 58.5**	**+0.7**
	baz=85,SNR=58						
218A	**Dragoon**	**85.19**	**51**	⇑P	**P**	**04 42 58.5**	**+0.2**
	baz=85,SNR=10.0						
V14A	**Boquillas Ranc**	**85.19**	**47**	⇑P	**P**	**04 42 58.7**	**+0.5**
	baz=85,SNR=50						
R11A	**Troy Canyon, C**	**85.23**	**43**	⇑P	**P**	**04 42 57.9**	**-0.4**
	baz=86,SNR=24						
S12A	**Delamar Landin**	**85.24**	**44**	⇑P	**P**	**04 42 59.2**	**+0.8**
	baz=86,SNR=61						
Y16A	**Circle Bar Ran**	**85.27**	**49**	⇓P	**P**	**04 42 59.0**	**+0.4**
	baz=86,SNR=52						
KDAK	**Kodiak Island**	**85.33**	**12**	LR	LR	05 13 57.8	
	comp=Z,562nm,22.0s,MS4.9,baz=112,slow=31						
KDAK	**Kodiak Island**	**85.33**	**12**	*e*P	**P**	**04 42 58.8**	**+0.5**
KDAK				MLR	MLR		
	comp=Z,2μm,19.0s,MS5.5						
319A	**Douglas**	**85.40**	**52**	⇓P	**P**	**04 42 59.5**	**+0.2**
	baz=86,SNR=18						
P10A	**Eureka**	**85.48**	**42**	⇓P	**P**	**04 42 59.8**	**+0.3**
	baz=86,SNR=7.9						
W15A	**Williams**	**85.48**	**48**	⇓P	**P**	**04 43 00.8**	**+1.1**
	baz=86,SNR=12						
T13A	**Saint George**	**85.49**	**45**	⇑P	**P**	**04 42 59.5**	**-0.1**
	baz=86,SNR=41						
Q11A	**Duckwater**	**85.49**	**43**	⇑P	**P**	**04 42 59.0**	**-0.6**
	baz=86,SNR=34						
BMN	**Battle Mountai**	**85.53**	**41**	*e*P	**P**	**04 43 00.4**	**+0.7**
BMN				pmax	pmax		
	comp=Z,73nm,1.4s,mb5.7						
BMN				MLR	MLR		
	comp=Z,727nm,19.0s,MS5.1						
BMN	**Battle Mountai**	**85.53**	**41**	*e*P	**P**	**04 43 00.4**	**+0.6**
	comp=Z,73nm,1.4s,mb5.7						
BMN				LR	LR		
	comp=Z,727nm,19.0s,MS5.1						
BKCOR	**Black Crater**	**85.53**	**36**	P	**P**	**04 43 00.5**	**+0.8**
MDJ	**Mudanjiang**	**85.53**	**325**	P	**P**	**04 43 00.5**	**+0.8**
MDJ				pP	pP	04 43 10.1	-1.6
MDJ				PP	PP	04 46 18.8	-0.2
MDJ				S	S	04 53 29.6	+1.3
MDJ				sS	sS	04 53 46.1	-2.3
MDJ				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.5						
MDJ				LR	LR		
	comp=N,430nm,19.4s,MS5.0						
MDJ				LR	LR		
	comp=E,480nm,17.4s,MS5.0						
MDJ				LR	LR		
	comp=Z,860nm,20.4s,MS5.1						
H04A	**Detroit Lake**	**85.54**	**35**	⇑P	**P**	**04 42 59.7**	**0.0**
	baz=86,SNR=11						
HABR	**Khabarovsk**	**85.59**	**330**	P	**P**	**04 42 58.7**	**-1.1**
HABR				*e**

KULM Kulim 86.05 278 eP P 04 43 02.8 -0.2
KULM LR LR
comp=Z,1µm,19.0s,MS5.3
PAYG Puerto Ayora 86.07 89 PFAKE 04 43 10.0 +6.9
PAYG LR LR
comp=Z,939nm,19.0s,MS5.2
E03A Lebam 86.11 33 ⇑P P 04 43 03.1 +0.6
baz=86,SNR=9.3
Q12A Willow Creek R 86.12 43 ⇑P P 04 43 02.9 +0.2
baz=86,SNR=14
N10A Dunphy 86.13 41 ⇑P P 04 43 03.4 +0.7
baz=86
R13A O'Grain Ranch, 86.14 44 ⇓P P 04 43 03.7 +0.8
baz=86,SNR=21
119A Ashpeak Ranch, 86.15 51 P P 04 43 03.9 +0.9
baz=86,SNR=30
CCUT Cedar City 86.15 45 eP P 04 43 04.0 +1.1
comp=Z,114nm,1.5s,mb5.9
U15A North Rim 86.19 47 ⇓P P 04 43 03.9 +0.7
baz=86,SNR=80
Y18A Canyon Day Jun 86.20 50 ⇑P P 04 43 03.3 +0.1
baz=86,SNR=96
220A Playas Peak, P 86.23 52 ⇓P P 04 43 03.8 +0.4
baz=86,SNR=60
ARUT Antelope Range 86.25 45 eP P 04 43 04.0 +0.7
ARUT pmax pmax
comp=Z,65nm,1.5s,mb5.6
ARUT Antelope Range 86.25 45 eP P 04 43 04.0 +0.6
comp=Z,65nm,1.5s,mb5.6
F04A Amboy 86.27 34 ⇑P P 04 43 03.7 +0.5
baz=86,SNR=6.5
WUAZ Wupatki 86.27 48 ⇑P P 04 43 03.8 +0.2
baz=86,SNR=37
WUAZ Wupatki 86.27 48 eP P 04 43 04.4 +0.9
comp=Z,145nm,1.5s,mb6.0
WUAZ LR LR
comp=Z,2µm,20.0s,MS5.4
O11A Cowboy Ranch, 86.28 42 ⇓P P 04 43 03.7 +0.2
baz=86,SNR=22
P12A McGill 86.33 43 ⇑P P 04 43 03.5 -0.2
baz=87,SNR=12
LVP Lakeview Peak 86.36 34 P P 04 43 04.3 +0.6
S14A Cedar City 86.40 45 ⇓P P 04 43 04.0 -0.2
baz=87,SNR=22
Z19A T-Link Ranch, 86.47 51 ⇑P P 04 43 04.0 -0.5
baz=87,SNR=9.9
DL2 Dalian 86.47 316 P P 04 43 06.4 +2.0
DL2 eS S 04 53 43.2 +5.5
DL2 pmax pmax
comp=Z,40nm,1.1s,mb5.6
DL2 LR LR
comp=N,250nm,21.9s,MS4.8
DL2 LR LR
comp=E,380nm,21.1s,MS4.8
DL2 LR LR
comp=Z,440nm,21.0s,MS4.8
T15A Red Dirt Ranch 86.47 46 ⇓P P 04 43 05.1 +0.6
baz=87,SNR=13
120A U Bar Ranch, L 86.50 51 ⇓P P 04 43 04.9 +0.1
baz=87,SNR=31
PSI Prapat 86.52 275 LR LR 05 25 44.8
comp=Z,2µm,18.4s,MS5.5,baz=126,slow=38
NLWA Neilton Lookou 86.55 33 ⇑P P 04 43 04.9 +0.3
baz=87,SNR=5.4
NLWA Neilton Lookou 86.55 33 eP P 04 43 05.7 +1.1
comp=Z,28nm,1.2s,mb5.4
NLWA LR LR
comp=Z,1µm,20.0s,MS5.3
Q13A Wheeler Ranch, 86.57 44 ⇓P P 04 43 04.8 -0.1
baz=87,SNR=20
M10A I.L. Ranch, Tu 86.61 41 ⇓P P 04 43 05.2 +0.1
baz=87,SNR=10
N11A Elko Archery C 86.65 41 ⇑P P 04 43 05.4 +0.1
baz=87,SNR=7.4
J08A Circle Bar Ran 86.67 38 ⇓P P 04 43 04.8 -0.5
baz=87,SNR=14
X18A Snowflake 86.68 49 ⇑P P 04 43 06.1 +0.5
baz=87,SNR=17
WHN Wuhan 86.70 306 ⇓P P 04 43 06.3 +0.5
WHN S S 04 53 43.2 +2.8
WHN pmax pmax
comp=Z,61nm,1.0s,mb5.8
WHN LR LR
comp=Z,1µm,22.4s,MS5.2
G06A Carlson Farm, 86.72 36 ⇓P P 04 43 05.5 0.0
baz=87,SNR=9.0
V17A Tonalea, Kykot 86.72 48 ⇑P P 04 43 06.0 +0.3
baz=87,SNR=92
R14A James Farms, M 86.81 45 ⇑P P 04 43 06.6 +0.5
baz=87
221A Mesquite Ranch 86.82 52 ⇑P P 04 43 06.5 +0.2
baz=87,SNR=8.8
Z20A Nine Sixteen R 86.84 51 ⇑P P 04 43 06.9 +0.5
baz=87,SNR=44
Y19A Nutrioso 86.84 50 ⇓P P 04 43 07.3 +0.9
baz=87,SNR=47
S15A Panguitch 86.87 46 ⇑P P 04 43 07.8 +1.4
baz=87,SNR=19
P13A Bates Ranch, G 86.87 43 ⇓P P 04 43 06.2 -0.2
baz=87,SNR=45
ELK Elko 86.91 42 eP P 04 43 06.5 0.0
ELK pmax pmax
comp=Z,54nm,1.7s
ELK MLR MLR
comp=Z,1µm,20.0s
ELK Elko 86.91 42 eP P 04 43 06.5 0.0
comp=Z,54nm,1.7s,mb5.5
ELK LR LR
comp=Z,1µm,20.0s,MS5.3
O12A Currie 86.92 42 ⇑P P 04 43 06.0 -0.5
baz=87,SNR=14
M11A Holland Ranch, 87.00 41 ⇓P P 04 43 06.6 -0.3
baz=87,SNR=7.6
L10A Juniper Basin 87.00 40 ⇑P P 04 43 06.9 -0.1
baz=87,SNR=13
T16A Glen Canyon Da 87.03 46 ⇓P P 04 43 07.7 +0.5
baz=87,SNR=20
Q14A Sevier Lake (B 87.06 44 ⇑P P 04 43 07.3 0.0
baz=87,SNR=62
SNY Shenyang 87.07 320 ⇑P P 04 43 07.8 +0.5
SNY S S 04 53 36.1 -7.3
SNY pmax pmax
comp=Z,22nm,1.8s,mb5.1
SNY LR LR
comp=N,200nm,21.0s,MS4.8
SNY LR LR
comp=E,290nm,18.6s,MS4.8
SNY LR LR
comp=Z,340nm,19.6s,MS4.8
X19A St. Johns 87.08 50 ⇓P P 04 43 08.0 +0.5
baz=87,SNR=39
N12A Clover Valley, 87.09 42 ⇑P P 04 43 07.1 -0.3
baz=87,SNR=12
121A Cookes Peak, D 87.09 52 ⇓P P 04 43 07.9 +0.2
baz=87,SNR=20
LON Longmire 87.13 34 eP P 04 43 07.2 -0.3
LON pmax pmax
comp=Z,43nm,1.7s,mb5.4
LON Longmire 87.13 34 eP P 04 43 07.2 -0.2
comp=Z,44nm,1.7s,mb5.4
W18A Petrified Fore 87.15 49 ⇓P P 04 43 08.1 +0.3
baz=87,SNR=6.7
GNW Green Mountain 87.18 33 eP P 04 43 08.1 +0.4
comp=Z,19nm,1.5s,mb5.1
K10A MacKenzie Ranc 87.21 39 ⇑P P 04 43 07.9 0.0
baz=87,SNR=16
R15A Junction 87.24 45 ⇓P P 04 43 09.2 +1.0
baz=88,SNR=13
CN2 Changchun 87.24 322 eP P 04 43 08.3 +0.2
CN2 epP pP 04 43 19.5 -0.7
CN2 eS S 04 53 42.2 -2.8
CN2 pmax pmax
comp=Z,40nm,1.2s,mb5.5
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,400nm,21.0s,MS5.0
CN2 LR LR
comp=E,400nm,21.0s,MS5.0
CN2 LR LR
comp=Z,300nm,22.0s,MS4.7
O13A Hicks Ranch, I 87.30 43 ⇓P P 04 43 08.7 +0.3
baz=88,SNR=6.2
H08A Prairie City 87.31 37 P P 04 43 08.3 -0.1
baz=88,SNR=9.3
D05A Enumclaw 87.34 34 ⇓P P 04 43 08.7 +0.3
baz=88,SNR=13
V18A Ganado 87.35 48 ⇑P P 04 43 08.8 0.0
baz=88,SNR=36
U17A Shonto 87.36 47 ⇓P P 04 43 09.2 +0.3
baz=88,SNR=31
W19A Sanders 87.39 49 ⇓P P 04 43 09.8 +0.8
baz=88
S16A Weppner Ranch, 87.39 46 ⇓P P 04 43 09.0 0.0
baz=88,SNR=11
Y20A Horse Springs, 87.42 50 ⇑P P 04 43 09.6 +0.4
baz=88,SNR=62
I09A Lost Marbles R 87.47 38 ⇑P P 04 43 09.0 -0.1
baz=88
L11A Cat Creek Ranc 87.47 40 ⇓P P 04 43 09.3 +0.1
baz=88,SNR=21
MSU Marysvale 87.47 45 eP P 04 43 10.3 +1.0
T17A Navajo Res., N 87.50 47 ⇑P P 04 43 10.0 +0.6
baz=88,SNR=32
M12A Wells 87.51 41 ⇑P P 04 43 09.0 -0.4
baz=88,SNR=12
F07A Phinny Hill Vi 87.53 36 ⇑P P 04 43 09.5 +0.1
baz=88
P14A Drum Mountains 87.54 44 ⇓P P 04 43 09.4 -0.2
baz=88,SNR=11
Z21A St. Cloud Mine 87.59 51 ⇑P P 04 43 09.6 -0.4
baz=88,SNR=49
N13A Wendover, West 87.60 42 ⇑P P 04 43 10.4 +0.5
baz=88
N13A Wendover, West 87.60 42 eP P 04 43 10.0 +0.2
comp=Z,76nm,1.3s,mb5.8
Q15A Fillmore 87.63 44 ⇓P P 04 43 10.3 +0.2
baz=88,SNR=12
G08A Pilot Rock 87.65 36 ⇑P P 04 43 09.6 -0.4
baz=88,SNR=19
J10A Berg Farm, Mel 87.67 39 ⇑P P 04 43 10.2 0.0
baz=88
K11A Parker Ranch, 87.69 40 ⇑P P 04 43 10.3 +0.1
baz=88,SNR=16
X20A Quimado 87.69 50 ⇓P P 04 43 10.6 +0.2
baz=88,SNR=68
223A Chaparral, Ant 87.79 53 ⇑P P 04 43 11.4 +0.4
baz=88,SNR=6.5
R16A Teasdale 87.79 45 ⇑P P 04 43 10.9 0.0
baz=88,SNR=13
U18A Rough Rock, Ch 87.79 48 ⇑P P 04 43 11.0 +0.1
baz=88,SNR=13
RSO Redoubt South 87.81 11 eP P 04 43 10.2 -0.2
S17A Black Ridge (B 87.86 46 ⇑P P 04 43 10.8 -0.4
baz=88,SNR=20
L12A House Creek Ra 87.89 41 ⇓P P 04 43 11.2 0.0
baz=88,SNR=9.9
M13A Montello 87.92 42 ⇓P P 04 43 11.2 -0.3
baz=88,SNR=21
M13A Montello 87.92 42 eP P 04 43 11.3 -0.1
comp=Z,39nm,1.3s,mb5.5
SVW2 Sparrevohn 87.94 10 eP P 04 43 10.7 -0.3
comp=Z,44nm,1.6s,mb5.4
SVW2 LR LR
comp=Z,900nm,18.0s,MS5.2
H09A Durkee 87.95 38 ⇓P P 04 43 10.8 -0.7
baz=88,SNR=11
V19A Window Rock 87.95 49 ⇑P P 04 43 11.9 +0.2
baz=88,SNR=9.9
Y21A Point of Rocks 87.97 51 ⇑P P 04 43 11.5 -0.3
baz=88,SNR=75
W20A Ramah 88.00 49 ⇑P P 04 43 12.4 +0.4
baz=88,SNR=96
E07A Sunnyside 88.01 35 ⇓P P 04 43 11.9 +0.3
baz=88
P15A Leamington 88.03 44 ⇓P P 04 43 12.1 +0.2
baz=88,SNR=9.2
RSW Rattlesnake Hi 88.04 35 eP P 04 43 12.7 +0.9
JCW Jim Creek 88.05 33 eP P 04 43 12.2 +0.3
DUG Dugway 88.06 43 ⇑P P 04 43 12.0 -0.1
baz=88,SNR=8.4
DUG Dugway 88.06 43 eP P 04 43 12.1 0.0
DUG pmax pmax
comp=Z,18nm,1.4s,mb5.1
DUG MLR MLR
comp=Z,976nm,20.0s,MS5.2
DUG Dugway 88.06 43 eP P 04 43 12.1 0.0
comp=Z,18nm,1.4s,mb5.1
DUG LR LR
comp=Z,976nm,20.0s,MS5.2
HAWA Hanford 88.06 35 eP P 04 43 12.2 +0.3
comp=Z,60nm,1.5s,mb5.6
HAWA LR LR
comp=Z,1µm,19.0s,MS5.4
Z22A Elephant Butte 88.06 52 P P 04 43 13.1 +0.8
baz=88,SNR=67
I10A Payette 88.07 38 ⇑P P 04 43 13.0 +1.0
baz=88
X21A Alamocita Cree 88.13 50 ⇑P P 04 43 12.3 -0.2
baz=88
U19A Dine' College, 88.16 48 ⇑P P 04 43 12.8 +0.2
baz=88,SNR=38
324A Moseley Ranch, 88.18 54 ⇑P P 04 43 12.6 -0.2
baz=88,SNR=25
T18A Mexican Hat 88.19 47 P P 04 43 13.3 +0.5
baz=88,SNR=64
425A Indio Mountain 88.20 55 ⇓P P 04 43 12.7 -0.3
baz=88,SNR=44
MFID Camas Ranch 88.20 39 ⇓P P 04 43 12.8 +0.2
baz=88,SNR=9.0
626A Big Bend Ranch 88.20 56 ⇑P P 04 43 12.9 -0.1
baz=88,SNR=29
N14A Grayback Hills 88.22 43 ⇓P P 04 43 13.0 +0.2
baz=88
123A Bell Site, Whi 88.24 52 ⇑P P 04 43 13.5 +0.4
baz=88
K12A Draper Farm, C 88.26 40 ⇓P P 04 43 13.2 +0.2
baz=88,SNR=6.1
BMO Blue Mountains 88.27 38 eP P 04 43 12.7 -0.2
BMO pmax pmax
comp=Z,21nm,1.5s,mb5.2
BMO Blue Mountains 88.27 38 eP P 04 43 12.7 -0.2
comp=Z,21nm,1.5s,mb5.1
G09A Cove 88.28 37 ⇑P P 04 43 12.7 -0.3
baz=88,SNR=10.0
TPTI 88.29 274 P P 04 43 13.1 -0.8
comp=Z,39nm,1.1s,mb5.6
O15A The Old Anders 88.32 43 ⇑P P 04 43 13.8 +0.5
baz=88,SNR=5.6
WRW Wenatchee Ridg 88.34 34 P P 04 43 13.4 +0.2
Q16A Castle Valley 88.35 45 ⇑P P 04 43 13.4 -0.1
baz=89,SNR=16
R17A Hanksville Air 88.36 46 ⇓P P 04 43 13.4 -0.1
baz=89,SNR=20
NLU North Lily Min 88.38 44 eP P 04 43 13.8 +0.2
comp=Z,74nm,2.1s,mb5.5
NLU epP pP 04 43 27.9 +2.2
E08A Dider Farm, El 88.38 36 ⇑P P 04 43 13.7 +0.2
baz=89
MNTX Cornudas Mount 88.38 54 eP P 04 43 13.6 -0.2
comp=Z,76nm,1.6s,mb5.7
MNTX LR LR
comp=Z,736nm,19.0s,MS5.1
LNOR Lincton Mounta 88.39 36 eP P 04 43 12.9 -0.6
V20A Brimhall 88.39 49 ⇑P P 04 43 13.2 -0.6
baz=89,SNR=14
H10A Noah's Angus R 88.41 38 ⇑P P 04 43 12.9 -0.7
baz=89,SNR=11
S18A Hurst Farm, Bl 88.42 47 ⇑P P 04 43 14.1 +0.3
baz=89,SNR=8.9
Y22A Socorro 88.43 51 ⇓P P 04 43 14.3 +0.4
baz=89,SNR=37
RPW Rockport 88.43 33 P P 04 43 13.8 +0.2
I11A Placerville 88.44 39 ⇓P P 04 43 13.4 -0.3
baz=89
TXAR Lajitas Array 88.44 56 P P 04 43 12.4 -1.8
comp=Z,9.8nm,0.9s,mb5.0,baz=212,slow=8.8,SNR=68
TXAR LR LR 05 16 28.2
comp=Z,1µm,19.0s,MS5.3,baz=230,slow=31
ETW Entiat 88.45 34 eP P 04 43 14.0 +0.3
224A Cornudas Mount 88.48 53 ⇑P P 04 43 13.7 -0.6
baz=89,SNR=32
B06A Marblemount 88.49 33 ⇑P P 04 43 14.2 +0.3
baz=89
526A Mary Lane Ranc 88.50 56 P P 04 43 14.2 -0.2
baz=89,SNR=36
L13A Double Diamond 88.50 41 ⇑P P 04 43 14.3 +0.2
baz=89,SNR=7.5
M14A Sheep Mountain 88.50 42 ⇓P P 04 43 14.0 -0.2
baz=89,SNR=18
325A Bean Ranch, Si 88.51 54 ⇓P P 04 43 13.8 -0.7
baz=89,SNR=30
J12A Stokes Ranch, 88.52 40 ⇓P P 04 43 14.0 -0.2
baz=89,SNR=17
A05A Maple Falls 88.52 32 ⇑P P 04 43 13.7 -0.3
baz=89,SNR=5.6
LENM Lemitar 88.54 51 eP P 04 43 15.2 +0.7
TMUT Trail Mountain 88.55 45 eP P 04 43 15.5 +1.1
comp=Z,45nm,0.9s,mb5.8
LAZ Ladron 88.55 51 eP P 04 43 15.1 +0.6
comp=Z,60nm,1.6s,mb5.7
T19A Beclabito 88.58 48 ⇑P P 04 43 15.0 +0.4
baz=89,SNR=14
W21A San Fidel 88.58 50 ⇑P P 04 43 15.4 +0.7
baz=89
Z23A Rita Site, Whi 88.59 52 ⇓P P 04 43 14.9 +0.2
baz=89,SNR=11
N15A Stansbury Isla 88.65 43 P P 04 43 14.9 +0.1
baz=89,SNR=13
G10A Bishop Farm, J 88.65 37 ⇑P P 04 43 13.9 -0.8
baz=89,SNR=13
U20A Newcomb 88.67 48 ⇓P P 04 43 14.9 -0.2
baz=89,SNR=11
MPU Maple Canyon 88.69 44 eP P 04 43 15.9 +0.9
comp=Z,20nm,0.9s,mb5.4
X22A Bernardo 88.70 51 ⇓P P 04 43 15.9 +0.6
baz=89,SNR=16
WTV Waterville 88.71 34 P P 04 43 15.2 +0.3
627A Terlingua Ranc 88.71 56 ⇑P P 04 43 14.8 -0.6
baz=89,SNR=38
K13A Stover Farm, H 88.75 41 ⇓P P 04 43 14.7 -0.5
baz=89,SNR=6.0
NLW Nelson Butte 88.76 34 P P 04 43 15.6 +0.4
BNM Barren Site 88.78 51 eP P 04 43 15.9 +0.3
comp=Z,102nm,1.7s,mb5.9
D08A Wollman Farm, 88.82 35 ⇓P P 04 43 14.8 -0.7
baz=89,SNR=22
I12A Atlanta 88.83 39 ⇑P P 04 43 14.9 -0.7
baz=89,SNR=20
426A McDonald Obser 88.85 55 ⇓P P 04 43 15.5 -0.5
baz=89,SNR=32
124A Stringfield Ra 88.85 53 ⇑P P 04 43 15.7 -0.3
baz=89,SNR=31
LPM Los Pinos Moun 88.86 51 eP P 04 43 16.5 +0.5
E09A Wood Farm, Sta 88.87 36 ⇓P P 04 43 15.4 -0.4
baz=89,SNR=11
R18A Canyonlands Na 88.87 46 ⇓P P 04 43 15.7 -0.3
baz=89,SNR=35
SRU San Rafael 88.88 45 ⇑P P 04 43 15.7 -0.3
baz=89,SNR=26
SRU San Rafael 88.88 45 eP P 04 43 16.2 +0.2
SRU pmax pmax
comp=Z,29nm,1.0s,mb5.6
SRU San Rafael 88.88 45 eP P 04 43 16.2 +0.2
comp=Z,29nm,1.0s,mb5.6
O16A Springville 88.88 44 ⇓P P 04 43 15.8 -0.2
baz=89,SNR=8.8
L14A Malta 88.88 42 ⇓P P 04 43 15.7 -0.2
baz=89,SNR=8.2
527A Woodward Ranch 88.89 56 ⇓P P 04 43 14.9 -1.4
baz=89,SNR=14
H11A Donnelly 88.89 38 ⇓P P 04 43 15.0 -0.8
baz=89
SPUT South Promonto 88.94 43 eP P 04 43 16.1 0.0
comp=Z,29nm,1.1s,mb5.5
P17A Butcher Ranch, 88.94 45 ⇓P P 04 43 15.7 -0.6
baz=89,SNR=16
RC01 Rabbit Creek A 88.95 13 eP P 04 43 15.7 -0.1
comp=Z,123nm,1.5s,mb6.0
V21A Milan 88.96 49 ⇑P P 04 43 16.6 +0.1
baz=89,SNR=7.0
225A Deer Hill, Car 89.00 54 ⇓P P 04 43 15.9 -0.9
baz=89,SNR=6.5
HVU Hansel Valley 89.01 42 eP P 04 43 17.0 +0.5
HVU pmax pmax
comp=Z,21nm,1.1s,mb5.4
HVU Hansel Valley 89.01 42 eP P 04 43 17.0 +0.5
comp=Z,21nm,1.1s,mb5.4
S19A Harvey Farm, M 89.01 47 ⇑P P 04 43 16.0 -0.7
baz=89,SNR=20
F10A Beach Ranch, E 89.02 37 ⇓P P 04 43 15.7 -0.8
baz=89,SNR=24
M15A Larsen Ranch, 89.03 42 ⇑P P 04 43 15.5 -1.1
baz=89,SNR=12
Y23A Lovelace Mesa, 89.07 51 ⇑P P 04 43 15.9 -1.1
baz=89,SNR=25
W22A Albuquerque 89.10 50 ⇑P P 04 43 15.9 -1.3
baz=89,SNR=5.6
HLID Hailey 89.11 40 ⇓P P 04 43 15.4 -1.5
baz=89,SNR=20
HLID Hailey 89.11 40 eP P 04 43 17.3 +0.4
comp=Z,31nm,1.5s,mb5.4
HLID LR LR
comp=Z,587nm,20.0s,MS5.0
628A Black Gap, Mar 89.11 57 ⇑P P 04 43 16.0 -1.3
baz=89
Q18A Rafter H Ranch 89.12 45 ⇑P P 04 43 15.6 -1.5
baz=89,SNR=20
JLU Jordanelle 89.14 44 eP P 04 43 17.7 +0.5
comp=Z,12nm,0.9s,mb5.2
MVCO Mesa Verde 89.14 48 ⇓P P 04 43 16.7 -0.5
baz=89,SNR=10
MVCO Mesa Verde 89.14 48 eP P 04 43 17.3 0.0
comp=Z,34nm,1.4s,mb5.5
MVCO LR LR
comp=Z,2µm,20.0s,MS5.5
OD2 Odessa Site #2 89.14 35 eP P 04 43 17.2 +0.2
J13A Cove Ranch, Pi 89.15 40 ⇑P P 04 43 17.2 +0.1
baz=89,SNR=20
DAU Daniels Canyon 89.15 44 eP P 04 43 18.1 +0.9
G11A Walters Elk Ra 89.19 38 ⇑P P 04 43 16.9 -0.3
baz=89,SNR=58
326A Caldwell Ranch 89.22 55 ⇑P P 04 43 16.9 -0.8
baz=89,SNR=5.6
K14A Jones Ranch, D 89.22 41 ⇑P P 04 43 17.5 0.0
baz=90
R19A Curley Farm, L 89.23 46 ⇓P P 04 43 16.8 -0.9
baz=90,SNR=12
Z24A Sheeppen Canyo 89.24 52 ⇓P P 04 43 17.8 0.0
baz=90,SNR=24
U21A Nageezi 89.28 49 ⇑P P 04 43 17.9 0.0
baz=90,SNR=86
N16A Rees Ranch, Co 89.31 43 ⇓P P 04 43 18.5 +0.5
baz=90,SNR=9.8
X23A Hourglass Bar 89.31 51 ⇓P P 04 43 17.8 -0.4
baz=90,SNR=17
ANMO Albuquerque 89.32 50 ⇑iP P 04 43 16.0 -2.1
ANMO Albuquerque 89.32 50 eP P 04 43 18.4 +0.2
comp=Z,52nm,1.1s,mb5.8
ANMO LR LR
comp=Z,2µm,20.0s,MS5.5
P18A Preston Nutter 89.35 45 P P 04 43 18.6 +0.4
baz=90,SNR=12
O17A Robinson Place 89.36 44 ⇑P P 04 43 18.7 +0.5
baz=90,SNR=53
L15A Malad City 89.38 42 ⇓P P 04 43 17.8 -0.4
baz=90,SNR=18
GDL2 Guadalupe Moun 89.38 54 eP P 04 43 18.8 +0.2
125A Gardner Draw, 89.40 53 ⇑P P 04 43 17.9 -0.7
baz=90,SNR=22
427A Hayter Ranch, 89.41 55 ⇓P P 04 43 18.6 0.0
baz=90,SNR=34
H12A Diamond D Ranc 89.45 39 ⇑P P 04 43 18.2 -0.3
baz=90,SNR=25
B08A Colville Reser 89.45 34 ⇓P P 04 43 17.9 -0.5
baz=90,SNR=15
J14A Carey 89.48 40 ⇑P P 04 43 19.1 +0.4
baz=90,SNR=25
I13A Wildhorse Cree 89.49 40 ⇓P P 04 43 18.8 +0.1
baz=90,SNR=7.2
Y24A Capitan 89.50 52 ⇑P P 04 43 19.1 0.0
baz=90,SNR=36
226A Malaga, Loving 89.50 54 ⇓P P 04 43 18.3 -0.8
baz=90,SNR=14
528A Cox Ranch, San 89.52 56 ⇑P P 04 43 18.3 -0.9
baz=90,SNR=26
V22A San Miguel Ran 89.52 49 ⇓P P 04 43 18.7 -0.3
baz=90,SNR=14
PV04 Paradox Valley 89.52 46 eP P 04 43 19.5 +0.4
PMR Palmer 89.53 13 eP P 04 43 17.7 -0.8
PMR pmax pmax
comp=Z,123nm,1.6s,mb6.0
PMR MLR MLR
comp=Z,900nm,20.0s,MS5.2
PMR Palmer 89.53 13 eP P 04 43 17.7 -0.8
comp=Z,123nm,1.6s,mb6.0
PMR LR LR
comp=Z,900nm,20.0s,MS5.2
G12A Big Creek, Yel 89.54 38 ⇓P P 04 43 18.5 -0.4
baz=90
F11A Grangeville 89.55 37 ⇓P P 04 43 17.9 -1.1
baz=90,SNR=14
S20A Disappointment 89.57 47 ⇑P P 04 43 19.1 -0.2
baz=90,SNR=30

Q19A	**Hogan Spring (**	89.60	46	⇓P	P	04 43 18.7	-0.7
	baz=90,SNR=20						
TTA	**Tatalina**	89.62	9	eP	P	04 43 18.9	+0.1
W23A	**Werner Place,**	89.64	50	⇓P	P	04 43 19.3	-0.4
	baz=90,SNR=19						
HWUT	**Hardware Ranch**	89.65	43	eP	P	04 43 19.3	-0.2
	comp=Z,7.0nm,0.7s,mb5.1						
HWUT				LR	LR		
	comp=Z,776nm,20.0s,MS5.1						
T21A	**Navajo Lake**	89.67	48	⇑P	P	04 43 20.1	+0.4
	baz=90,SNR=14						
Z25A	**Roswell**	89.68	53	⇓P	P	04 43 19.8	0.0
	baz=90,SNR=28						
K15A	**Arbon**	89.69	41	⇑P	P	04 43 19.5	-0.2
	baz=90,SNR=10						
N17A	**Moffit Pass**	89.72	44	⇑P	P	04 43 19.7	-0.2
	baz=90,SNR=6.8						
R20A	**Redvale**	89.76	47	⇓P	P	04 43 19.5	-0.7
	baz=90,SNR=13						
H13A	**Challis**	89.80	39	⇑P	P	04 43 19.8	-0.4
	baz=90,SNR=20						
U22A	**Llaves**	89.80	49	⇓P	P	04 43 20.2	-0.2
	baz=90,SNR=18						
DIV	**Divide**	89.82	14	eP	P	04 43 20.4	+0.6
	comp=Z,62nm,1.0s,mb5.9						
X24A	**Lazy VL Ranch,**	89.83	51	⇓P	P	04 43 20.7	+0.2
	baz=90,SNR=5.9						
O18A	**Roosevelt**	89.86	44	⇑P	P	04 43 21.1	+0.6
	baz=90						
126A	**Clayton Basin,**	89.86	53	⇓P	P	04 43 20.7	-0.1
	baz=90,SNR=9.3						
S21A	**Coal Bank Pass**	89.86	48	⇓P	P	04 43 20.2	-0.4
	baz=90,SNR=31						
428A	**Kincaid Ranch,**	89.88	56	⇓P	P	04 43 20.1	-0.7
	baz=90,SNR=14						
I14A	**Mackay**	89.88	40	⇑P	P	04 43 20.8	+0.3
	baz=90,SNR=19						
V23A	**Ortiz Mt. (NFS**	89.93	50	⇑P	P	04 43 21.5	+0.5
	baz=90,SNR=38						
BMRM	**Bremner River**	89.94	15	eP	P	04 43 20.5	+0.1
	comp=Z,178nm,1.5s,mb6.2						
F12A	**Elk City**	89.97	38	P	P	04 43 20.7	-0.2
	baz=90,SNR=61						
L16A	**Fish Haven**	89.97	42	⇑P	P	04 43 20.6	-0.4
	baz=90,SNR=6.4						
Y25A	**Mesa, Roswell**	90.03	52	⇑P	P	04 43 21.2	-0.3
	baz=90,SNR=33						
NNT	**Nongplab**	90.05	284	P	pP	04 43 33.0	-1.2
T22A	**Edith**	90.11	49	⇑P	P	04 43 21.5	-0.3
	baz=90,SNR=18						
328A	**Wristen Ranch,**	90.11	55	P	P	04 43 21.7	-0.2
	baz=90,SNR=6.8						
M17A	**Scullys Gap (B**	90.12	43	P	P	04 43 21.6	-0.1
	baz=90,SNR=18						
G13A	**Cobalt**	90.13	39	P	P	04 43 21.6	0.0
	baz=90,SNR=27						
PNL	**Peninsula**	90.14	18	eP	P	04 43 21.9	+0.5
	comp=Z,142nm,1.4s,mb6.1						
P19A	**Cripple Cowboy**	90.16	45	⇑P	P	04 43 21.6	-0.3
	baz=90,SNR=12						
CPRX	**Cap Rock**	90.17	53	eP	P	04 43 21.7	-0.4
	comp=Z,11nm,1.3s,mb5.0						
J15A	**Blackfoot**	90.17	41	⇓P	P	04 43 21.7	-0.2
	baz=90,SNR=27						
W24A	**Lazy 6 Ranch,**	90.19	51	⇑P	P	04 43 21.8	-0.4
	baz=90,SNR=44						
E12A	**Beaver Dam Sad**	90.20	37	⇑P	P	04 43 21.6	-0.3
	baz=90,SNR=15						
Z26A	**Caprock**	90.21	53	⇑P	P	04 43 22.0	-0.3
	baz=90,SNR=16						
Q20A	**Ridgley Place,**	90.23	46	⇑P	P	04 43 21.7	-0.7
	baz=90,SNR=18						
U23A	**El Rito**	90.23	49	⇑P	P	04 43 21.9	-0.4
	baz=90,SNR=32						
LCO	**Las Campanas**	90.31	122	eP	P	04 43 23.4	+0.3
LCO				LR	LR		
	comp=Z,830nm,21.0s,MS5.1						
H14A	**Leadore**	90.34	39	P	P	04 43 23.3	+0.6
	baz=91,SNR=36						
K16A	**Soda Springs**	90.34	42	⇓P	P	04 43 23.1	+0.3
	baz=91,SNR=18						
L17A	**Cokeville**	90.36	43	⇑P	P	04 43 22.6	-0.2
	baz=91,SNR=7.5						
127A	**Arkansas Junct**	90.36	54	⇓P	P	04 43 22.9	-0.1
	baz=91,SNR=7.4						
X25A	**Clemmons Ranch**	90.36	52	⇑P	P	04 43 22.9	-0.2
	baz=91,SNR=14						
R21A	**Cimarron**	90.40	47	⇓P	P	04 43 22.7	-0.4
	baz=91,SNR=40						
O19A	**Miners Draw (B**	90.44	45	P	P	04 43 22.9	-0.3
	baz=91,SNR=16						
N18A	**Larsen Ranch,**	90.47	44	⇓P	P	04 43 23.5	+0.1
	baz=91,SNR=10.0						
P20A	**De Beque**	90.47	46	P	P	04 43 23.2	-0.2
	baz=91,SNR=20						
M18A	**Lyman**	90.47	43	⇑P	P	04 43 23.4	+0.1
	baz=91,SNR=24						
I15A	**Monteview**	90.49	40	⇑P	P	04 43 23.5	+0.1
	baz=91,SNR=8.3						
F13A	**Darby**	90.50	38	P	P	04 43 23.2	-0.1
	baz=91,SNR=37						
GYA	**Guiyang**	90.51	299	P	P	04 43 24.8	+0.9
GYA				pP	pP	04 43 36.0	-0.1
GYA				sP	sP	04 43 40.7	+0.2
GYA				PP	PP	04 47 01.9	+2.6
GYA				SKS		04 53 52.0	
GYA				S	S	04 54 15.9	-0.6
GYA				SS	SS	05 00 19.8	+1.2
GYA				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.7						
GYA				pmax	pmax		
	comp=Z,160nm,5.8s						
GYA				LR	LR		
	comp=N,1μm,20.6s,MS5.4						
GYA				LR	LR		
	comp=E,850nm,21.7s,MS5.4						
GYA				LR	LR		
	comp=Z,2μm,22.7s,MS5.5						
NEW	**Newport**	90.53	35	eP	P	04 43 23.4	0.0
NEW				pmax	pmax		
	comp=Z,13nm,1.1s						
NEW				MLR	MLR		
	comp=Z,1μm,20.0s						
NEW	**Newport**	90.53	35	eP	P	04 43 23.4	0.0
	comp=Z,13nm,1.1s,mb5.2						
NEW				LR	LR		
	comp=Z,1μm,20.0s,MS5.4						
S22A	**4UR Ranch, Cre**	90.55	48	⇓P	P	04 43 24.2	+0.3
	baz=91,SNR=51						
V24A	**Rampart Ranch,**	90.55	50	⇑P	P	04 43 23.7	-0.2
	baz=91,SNR=37						
BJI	**Beijing**	90.57	315	P	P	04 43 24.3	+0.4
BJI				S	S	04 54 17.5	+1.0
BJI				SS	SS	05 00 19.6	+0.6
BJI				pmax	pmax		
	comp=Z,36nm,1.4s,mb5.5						
BJI				pmax	pmax		
	comp=Z,190nm,3.6s						
BJI				LR	LR		
	comp=N,410nm,22.3s,MS5.0						
BJI				LR	LR		
	comp=E,370nm,19.8s,MS5.0						
BJI				LR	LR		
	comp=Z,500nm,25.4s						
J16A	**Bone**	90.58	41	⇑P	P	04 43 23.6	-0.2
	baz=91,SNR=17						
AHID	**Auburn Hatcher**	90.60	42	PFAKE		04 43 40.0	+16
AHID				LR	LR		
	comp=Z,805nm,19.0s,MS5.2						
Q21A	**Lamborn Mesa,**	90.64	47	⇓P	P	04 43 23.5	-0.8
	baz=91,SNR=20						
G14A	**Jackson**	90.66	39	⇓P	P	04 43 23.9	-0.3
	baz=91						
K17A	**Gardner Place,**	90.70	42	⇑P	P	04 43 24.5	+0.1
	baz=91,SNR=13						
D12A	**Red Ives Fores**	90.71	37	⇑P	P	04 43 23.5	-0.8
	baz=91,SNR=29						
T23A	**Casias Ranch,**	90.71	49	⇑P	P	04 43 24.3	-0.3
	baz=91,SNR=28						
C11A	**Tepee Creek (N**	90.71	36	⇓P	P	04 43 24.0	-0.3
	baz=91,SNR=32						
N19A	**John Jarvie Ra**	90.73	44	⇑P	P	04 43 24.2	-0.4
	baz=91,SNR=6.1						
H15A	**Lima**	90.76	40	⇑P	P	04 43 25.2	+0.6
	baz=91,SNR=13						
MCMT	**McKenzie Canyo**	90.76	40	eP	P	04 43 25.1	+0.4
	comp=Z,18nm,1.2s,mb5.3						
L18A	**Fontenelle, Gr**	90.77	43	⇑P	P	04 43 24.7	0.0
	baz=91,SNR=8.2						
Z27A	**Tatum**	90.78	53	⇑P	P	04 43 24.5	-0.5
	baz=91,SNR=15						
RRI2	**Red Ridge**	90.80	41	eP	P	04 43 25.8	+0.9
	comp=Z,50nm,1.3s,mb5.7						
R22A	**Saguache, Gunn**	90.86	48	⇓P	P	04 43 25.9	+0.7
	baz=91,SNR=29						
W25A	**X Bar L Ranch,**	90.86	51	⇑P	P	04 43 24.9	-0.4
	baz=91,SNR=68						
U24A	**Moreno Valley**	90.90	50	⇓P	P	04 43 24.9	-0.6
	baz=91						
O20A	**White River Ci**	90.91	45	⇓P	P	04 43 25.6	+0.2
	baz=91						
E13A	**Victor**	90.97	38	⇓P	P	04 43 24.5	-1.0
	baz=91,SNR=15						
X26A	**CR and CF Fran**	90.98	52	⇑P	P	04 43 25.1	-0.8
	baz=91,SNR=8.9						
I16A	**Newdale**	91.00	41	⇑P	P	04 43 26.0	+0.2
	baz=91,SNR=18						
DCID1	**Drake Creek**	91.02	41	eP	P	04 43 26.6	+0.7
TRF	**Thorofare Moun**	91.03	11	eP	P	04 43 24.6	-0.8
	comp=Z,43nm,1.0s,mb5.7						
C12B	**Naegeli Ranch,**	91.05	36	⇑P	P	04 43 26.0	+0.1
	baz=91,SNR=5.6						
NST	**Nakhon Sawan**	91.05	287	P	P	04 43 27.0	+0.4
F14A	**Wisdom**	91.05	39	⇓P	P	04 43 25.5	-0.5
	baz=91,SNR=9.6						
V25A	**Rancho No Teng**	91.06	50	⇓P	P	04 43 25.2	-1.0
	baz=91,SNR=38						
M19A	**Rock Springs**	91.08	44	⇑P	P	04 43 26.2	0.0
	baz=91,SNR=8.5						
S23A	**Nye Farm, Mont**	91.08	48	⇓P	P	04 43 25.5	-0.8
	baz=91						
REDW	**Red Top Meadow**	91.09	42	eP	P	04 43 26.4	+0.2
	comp=Z,101nm,1.5s,mb5.9						
P21A	**Newcastle**	91.09	46	⇑P	P	04 43 26.3	0.0
	baz=91						
Q22A	**Crested Butte,**	91.09	47	⇑P	P	04 43 26.2	-0.1
	baz=91,SNR=21						
TPAW	**Teton Pass**	91.10	41	eP	P	04 43 27.0	+0.8
	comp=Z,50nm,1.4s,mb5.7						
Y27A	**Causey**	91.10	53	⇓P	P	04 43 25.9	-0.6
	baz=91						
SKAG	**Skagway**	91.14	20	eP	P	04 43 27.2	+1.2
	comp=Z,110nm,1.5s,mb6.0						
SKAG				LR	LR		
	comp=Z,800nm,19.0s,MS5.2						
K18A	**Toltan Ranch,**	91.17	42	⇓P	P	04 43 26.9	+0.4
	baz=91,SNR=27						
G15A	**Dillon**	91.17	39	⇑P	P	04 43 26.8	+0.2
	baz=91,SNR=34						
J17A	**Brown Place, J**	91.17	42	⇓P	P	04 43 26.8	+0.2
	baz=91,SNR=22						
SNOW	**Snow King Moun**	91.20	42	eP	P	04 43 27.1	+0.4
	comp=Z,36nm,1.0s,mb5.7						
D13A	**Huson**	91.22	37	⇑P	P	04 43 26.1	-0.6
	baz=91,SNR=14						
SMCO	**Snowmass**	91.22	47	eP	P	04 43 27.3	+0.4
	comp=Z,64nm,1.4s,mb5.8						
DLMT	**Dillon**	91.22	39	eP	P	04 43 27.2	+0.5
	comp=Z,40nm,1.2s,mb5.6						
N20A	**Spence Gulch,**	91.28	45	⇓P	P	04 43 26.7	-0.4
	baz=92,SNR=18						
W26A	**Owens Ranch, T**	91.28	51	⇓P	P	04 43 26.1	-1.2
	baz=92,SNR=8.0						
L19A	**Farson**	91.29	43	⇑P	P	04 43 26.8	-0.4
	baz=92,SNR=24						
IMW	**Indian Meadow**	91.34	41	eP	P	04 43 28.0	+0.6
	comp=Z,48nm,1.3s,mb5.7						
MSO	**Missoula**	91.34	37	eP	P	04 43 26.6	-0.6
	comp=Z,14nm,1.2s,mb5.2						
MSO				ePP	PP	04 47 03.2	-2.2
MSO				LR	LR		
	comp=Z,802nm,20.0s,MS5.2						
E14A	**Clinton**	91.34	38	⇓P	P	04 43 26.7	-0.6
	baz=92,SNR=22						
LOHW	**Long Hollow**	91.38	41	eP	P	04 43 27.9	+0.4
	comp=Z,42nm,1.4s,mb5.6						
LOHW				epP	pP	04 43 41.4	+1.7
MSTX	**Muleshoe**	91.43	53	⇑P	P	04 43 27.4	-0.6
	baz=92,SNR=10						
SDCO	**Great Sand Dun**	91.44	48	eP	P	04 43 27.9	0.0
	comp=Z,37nm,1.4s,mb5.5						
SDCO				LR	LR		
	comp=Z,1μm,20.0s,MS5.4						
O21A	**Pagoda**	91.45	46	⇑P	P	04 43 27.5	-0.5
	baz=92						
B12A	**Libby**	91.45	35	P	P	04 43 28.2	+0.4
	baz=92,SNR=5.3						
U25A	**Circle Dot Ran**	91.50	50	P	P	04 43 28.1	-0.2
	baz=92,SNR=45						
BSMT	**Bassoo Peak**	91.50	36	eP	P	04 43 27.6	-0.3
BSMT				ePP	PP	04 47 03.7	-3.0
J18A	**Kendall Valley**	91.50	42	⇓P	P	04 43 28.1	-0.1
	baz=92,SNR=49						
BPAW	**Bear Paw Mtn.**	91.50	11	eP	P	04 43 26.5	-1.1
	comp=Z,23nm,1.5s,mb5.3						
C13A	**Hot Springs**	91.51	37	⇓P	P	04 43 27.3	-0.7
	baz=92,SNR=7.6						
MCK	**McKinley**	91.53	12	eP	P	04 43 27.6	-0.1
MCK				pmax	pmax		
	comp=Z,41nm,1.3s,mb5.6						
MCK	**McKinley**	91.53	12	eP	P	04 43 27.6	-0.1
	comp=Z,41nm,1.3s,mb5.6						
X27A	**F and S Farms,**	91.53	52	⇓P	P	04 43 27.7	-0.8
	baz=92,SNR=16						
BW06	**Boulder Array**	91.53	43	⇑P	P	04 43 27.8	-0.5
	baz=92,SNR=25						
BW06	**Boulder Array**	91.53	43	eP	P	04 43 27.8	-0.5
	comp=Z,18nm,1.1s,mb5.3						
BW06				LR	LR		
	comp=Z,481nm,20.0s,MS4.9						
PDAR	**Pinedale Array**	91.53	43	P	P	04 43 27.4	-0.9
	comp=Z,9.1nm,0.9s,mb5.1,baz=209,slow=3.6,SNR=74						
PDAR				PKKPbc	PKKPbc	05 00 48.6	-1.0
	comp=Z,0.3nm,0.6s,baz=70,slow=4.9,SNR=3.6						
PDAR				LR	LR	05 19 47.3	
	comp=Z,411nm,19.3s,MS4.9,baz=246,slow=32						
F15A	**Butte**	91.56	39	⇓P	P	04 43 28.0	-0.3
	baz=92,SNR=22						
I17A	**Pilgrim Ck.**	91.57	41	⇑P	P	04 43 28.9	+0.5
	baz=92,SNR=5.6						
LRM	**Limekiln Ridge**	91.58	39	eP	P	04 43 28.5	+0.1
S24A	**Houchin Ranch,**	91.58	49	P	P	04 43 29.2	+0.6
	baz=92,SNR=35						
QLMT	**Earthquake Lak**	91.59	40	eP	P	04 43 29.9	+1.5
G16A	**Moss Hill, Enn**	91.60	40	P	P	04 43 29.0	+0.5
	baz=92,SNR=20						
SEY	**Seymchan**	91.62	346	d iP	P	04 43 28.0	-0.1
SEY	**Seymchan**	91.62	346	i P	P	04 43 28.1	0.0
H16A	**Russell Place,**	91.62	40	⇓P	P	04 43 29.1	+0.5
	baz=92,SNR=15						
V26A	**Tequesquite Ra**	91.62	51	⇓P	P	04 43 28.2	-0.7
	baz=92,SNR=19						
HYT	**Haines Junctio**	91.63	18	eP	P	04 43 29.3	+1.1
M20A	**Sweetwater, Wa**	91.68	44	⇑P	P	04 43 28.4	-0.6
	baz=92,SNR=10.0						
A12A	**Yaak River Ran**	91.71	35	⇓P	P	04 43 28.8	-0.1
	baz=92						
N21A	**Black Mountain**	91.71	45	⇑P	P	04 43 28.8	-0.3
	baz=92,SNR=18						
SWMT	**Swartz Lake**	91.72	37	eP	P	04 43 27.5	-1.5
SWMT				ePP	PP	04 47 05.1	-3.4
YFT	**Old Faithful**	91.72	41	eP	P	04 43 31.3	+2.3
	comp=Z,71nm,1.5s,mb5.8						
TRQA	**Tornquist**	91.72	134	eP	P	04 43 29.9	+0.3
	comp=Z,10nm,0.8s,mb5.2						
TRQA				LR	LR		
	comp=Z,1μm,19.0s,MS5.4						
D14A	**Greenough**	91.73	37	⇑P	P	04 43 28.2	-0.9
	baz=92,SNR=25						
YMR	**Madison River**	91.77	40	eP	P	04 43 30.4	+1.2
	comp=Z,163nm,1.6s,mb6.1						
W27A	**Bowe Ranch, En**	91.77	52	⇓P	P	04 43 29.0	-0.6
	baz=92,SNR=6.8						
CHMT	**Chamberlain Mo**	91.77	38	eP	P	04 43 28.9	-0.4
CHMT				ePP	PP	04 47 06.4	-2.5
E15A	**Deer Lodge**	91.82	38	⇓P	P	04 43 29.3	-0.2
	baz=92						
SLMT	**Seeley Lake**	91.83	37	eP	P	04 43 28.8	-0.8
SLMT				ePP	PP	04 47 06.4	-2.9
H17A	**Grant Village**	91.84	41	⇑P	P	04 43 30.8	+1.2
	baz=92,SNR=9.4						
L20A	**Wamsutter**	91.87	44	⇓P	P	04 43 30.0	+0.1
	baz=92,SNR=18						
T25A	**Trinidad**	91.87	49	⇓P	P	04 43 29.7	-0.3
	baz=92						
I18A	**Diamond G Ranc**	91.90	42	⇑P	P	04 43 29.7	-0.2
	baz=92,SNR=9.1						
JCT	**Junction City**	91.93	57	eP	P	04 43 29.4	-1.0
JCT				pmax	pmax		
	comp=Z,60nm,1.6s,mb5.7						
JCT				MLR	MLR		
	comp=Z,1μm,20.0s,MS5.3						
JCT	**Junction City**	91.93	57	eP	P	04 43 29.4	-1.0
	comp=Z,60nm,1.6s,mb5.7						
JCT				LR	LR		
	comp=Z,1μm,20.0s,MS5.3						
BOZ	**Bozeman (W)**	91.94	39	⇓P	P	04 43 30.2	+0.1
	baz=92,SNR=62						
BOZ	**Bozeman (W)**	91.94	39	eP	P	04 43 30.1	0.0
BOZ				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.6						
BOZ				MLR	MLR		
	comp=Z,1μm,20.0s,MS5.3						
BOZ	**Bozeman (W)**	91.94	39	eP	P	04 43 30.1	0.0
	comp=Z,29nm,0.9s,mb5.6						
BOZ				LR	LR		
	comp=Z,1μm,20.0s,MS5.3						
U26A	**Atchley Ranch,**	91.96	50	⇓P	P	04 43 29.9	-0.5
	baz=92,SNR=22						
R24A	**Sanders Place,**	91.96	48	⇑P	P	04 43 30.4	0.0
	baz=92,SNR=17						
B13A	**Whitefish**	91.99	36	⇓P	P	04 43 29.7	-0.5
	baz=92,SNR=7.7						
K19A	**Absolon Red Bu**	92.00	43	⇓P	P	04 43 29.9	-0.5
	baz=92,SNR=9.2						
C14A	**Swan Lake**	92.01	37	⇓P	P	04 43 29.6	-0.7
	baz=92						
F16A	**Kennard Place,**	92.02	39	⇓P	P	04 43 29.6	-0.9
	baz=92,SNR=16						
KVTX	**Kingsville**	92.03	60	PFAKE		04 43 40.0	+9.1
KVTX				LR	LR		
	comp=Z,851nm,19.0s,MS5.2						
LKWY	**Lake**	92.04	41	eP	P	04 43 32.9	+2.3
LKWY				pmax	pmax		
	comp=Z,33nm,1.1s,mb5.6						
LKWY				MLR	MLR		
	comp=Z,786nm,19.0s,MS5.2						
LKWY	**Lake**	92.04	41	eP	P	04 43 32.9	+2.3
	comp=Z,33nm,1.1s,mb5.6						
LKWY				LR	LR		
	comp=Z,786nm,19.0s,MS5.2						
DLBC	**Dease Lake**	92.05	22	LR	LR	05 15 00.8	
	comp=Z,308nm,21.8s,MS4.7,baz=240,slow=29						
DLBC	**Dease Lake**	92.05	22	eP	P	04 43 31.1	+0.9
DLBC				epP	pP	04 43 41.5	-0.9
P23A	**Jefferson**	92.07	47	⇓P	P	04 43 31.2	+0.4
	baz=92,SNR=12						
S25A	**Robets Cordova**	92.12	49	⇓P	P	04 43 30.8	-0.3
	baz=92,SNR=23						
K20A	**Yellowstone Ra**	92.22	43	⇓P	P	04 43 30.7	-0.7
	baz=92,SNR=15						
D15A	**Lincoln**	92.25	38	⇑P	P	04 43 31.1	-0.3
	baz=92,SNR=22						
M21A	**Separation Pea**	92.27	44	⇓P	P	04 43 31.2	-0.4
	baz=92,SNR=12						
G17A	**Pierce Place,**	92.27	40	⇑P	P	04 43 32.0	+0.4
	baz=92						
Q24A	**Divide**	92.31	48	⇑P	P	04 43 32.2	+0.2
	baz=92,SNR=15						
A13A	**Flathead Natio**	92.35	36	⇑P	P	04 43 32.1	+0.2
	baz=93						
RWWY	**Rawlins**	92.41	44	eP	P	04 43 32.4	+0.1
	comp=Z,76nm,1.6s,mb5.8						
N22A	**Wattenberg Ran**	92.42	45	⇑P	P	04 43 32.6	+0.2
	baz=93,SNR=5.4						
E16A	**East Helena**	92.43	39	⇓P	P	04 43 32.1	-0.2
	baz=93,SNR=9.1						
XAN	**Xi'an**	92.43	307	P	P	04 43 33.0	+0.4
XAN				pP	pP	04 43 43.2	-1.6
XAN				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.7						
XAN				pmax	pmax		
	comp=Z,22nm,4.9s						
XAN				LR	LR		
	comp=N,200nm,22.4s,MS4.6						
XAN				LR	LR		
	comp=E,120nm,22.4s,MS4.6						
XAN				LR	LR		
	comp=Z,100nm,24.1s,MS4.2						
ISCO	**Idaho Springs**	92.44	47	eP	P	04 43 33.1	+0.6
ISCO				pmax	pmax		
	comp=Z,49nm,1.8s,mb5.5						
ISCO				MLR	MLR		
	comp=Z,1μm,20.0s,MS5.3						
ISCO	**Idaho Springs**	92.44	47	eP	P	04 43 33.1	+0.6
	comp=Z,49nm,1.8s,mb5.5						
ISCO				LR	LR		
	comp=Z,1μm,20.0s,MS5.3						
HRY	**Holter Researc**	92.44	38	eP	P	04 43 32.9	+0.6
L21A	**Rawlins**	92.45	44	⇑P	P	04 43 32.4	-0.2
	baz=93,SNR=8.2						
B14A	**Marquette Ranc**	92.62	36	⇓P	P	04 43 32.8	-0.3
	baz=93,SNR=8.8						
C15A	**Salmond Ranch,**	92.63	37	⇓P	P	04 43 33.1	-0.2
	baz=93,SNR=19						
F17A	**Fitzpatrick Pl**	92.65	40	⇑P	P	04 43 33.3	0.0
	baz=93,SNR=20						
AMTX	**Amarillo**	92.66	52	eP	P	04 43 33.6	-0.1
	comp=Z,27nm,1.1s,mb5.6						
AMTX				LR	LR		
	comp=Z,2μm,19.0s,MS5.6						
WALA	**Waterton Lakes**	92.69	36	eP	P	04 43 33.6	+0.1
	comp=Z,0.9nm,1.4s						
WALA				ePP	PP	04 47 13.5	-2.5
P24A	**Kohler Place,**	92.76	47	⇓P	P	04 43 34.1	+0.1
	baz=93						
COLA	**College**	92.77	12	i P	P	04 43 32.7	-0.7
COLA	**College**	92.77	12	eP	P	04 43 32.7	-0.7
	comp=Z,20nm,1.0s,mb5.5						
COLA				LR	LR		
	comp=Z,2μm,21.0s,MS5.5						
D16A	**Dana Ranch, Ca**	92.78	38	P	P	04 43 34.1	+0.2
	baz=93,SNR=22						
E17A	**Martinsdale**	92.85	39	⇑P	P	04 43 34.2	0.0
	baz=93,SNR=9.8						
Q25A	**Bedland, Calha**	92.89	48	⇓P	P	04 43 34.3	-0.4
	baz=93,SNR=9.2						
A14A	**Double T Ranch**	92.90	36	P	P	04 43 34.2	-0.2
	baz=93,SNR=19						
G18A	**Lazy EL Ranch,**	92.95	40	⇑P	P	04 43 35.0	+0.2
	baz=93,SNR=12						
B15A	**Bradely Ranch,**	92.97	37	⇓P	P	04 43 33.9	-0.9
	baz=93,SNR=8.5						
RLMT	**Red Lodge**	93.02	41	⇓P	P	04 43 33.9	-1.2

CM31 Chiang Mai Arr 93.28 289 *e*P P 04 43 38.0 +1.1
comp=Z,16nm,0.8s,mb5.5
CM31 LR LR
comp=Z,432nm,19.0s,MS4.9
CMAR Chiang Mai Arr 93.28 289 P P 04 43 38.3 +1.4
comp=Z,13nm,0.8s,mb5.4,baz=137,slow=3.5,SNR=44
CMAR PP PP 04 47 20.8 -0.5
comp=Z,1.0nm,0.3s,baz=123,slow=7.9,SNR=4.0
CMAR Chiang Mai Arr 93.28 289 P P 04 43 38.3 +1.4
CMAR 04 47 20.8
CMAR pmax pmax
comp=Z,13nm,0.8s
CMAR pmax pmax
comp=Z,1.0nm,0.3s
PHWY Pilot Hill 93.32 45 *e*P P 04 43 36.8 +0.2
comp=Z,13nm,1.2s,mb5.2
D17A Six Diamond Ra 93.34 38 ⇓P P 04 43 36.1 -0.4
baz=94,SNR=39
CHG Chiang Mai 93.43 289 ⇓P P 04 43 38.9 +1.3
comp=Z,41nm,0.7s,mb6.0
CHTO Chiang Mai 93.43 289 *e*P P 04 43 38.5 +0.9
CHTO pmax pmax
comp=Z,31nm,0.9s,mb5.7
CHTO MLR MLR
comp=Z,310nm,19.0s,MS4.8
CHTO Chiang Mai 93.43 289 *e*P P 04 43 38.5 +0.9
comp=Z,31nm,0.9s,mb5.7
CHTO LR LR
comp=Z,310nm,19.0s,MS4.8
CHTO Chiang Mai 93.43 289 P P 04 43 38.8 +1.2
E18A Harlowton 93.45 39 ⇓P P 04 43 37.2 +0.2
baz=94,SNR=22
B16A M & M Farms, S 93.49 37 ⇑P P 04 43 36.7 -0.5
baz=94
C17A Wharram Farm, 93.57 38 ⇑P P 04 43 37.1 -0.4
baz=94,SNR=17
DAWY Dawson 93.85 15 *e*P P 04 43 39.1 +0.7
D18A Linhart Farms, 93.86 39 ⇓P P 04 43 39.1 +0.2
baz=94,SNR=10
B17A L&G Farms, Che 93.92 38 ⇑P P 04 43 38.6 -0.5
baz=94,SNR=7.2
HHC Hu-ho-hao-te 93.99 314 *e*P P 04 43 40.9 +1.3
HHC sP sP 04 43 55.6 -0.7
HHC PP PP 04 47 30.3 +3.9
HHC SKS 04 54 11.0
HHC S S 04 54 46.2 -0.8
HHC SS SS 05 01 09.9 +1.9
HHC pmax pmax
comp=Z,24nm,0.9s,mb5.6
HHC pmax pmax
comp=Z,270nm,8.1s
HHC LR LR
comp=N,470nm,17.8s,MS5.1
HHC LR LR
comp=E,450nm,18.5s,MS5.1
HHC LR LR
comp=Z,600nm,18.8s,MS5.1
EGAK Eagle 94.05 14 *e*P P 04 43 39.6 +0.3
comp=Z,23nm,1.3s,mb5.5
EGAK *e*pP pP 04 43 53.9 +2.4
EGAK LR LR
comp=Z,2μm,20.0s,MS5.5
BILL Bilibino 94.19 353 *d i*P P 04 43 39.7 -0.2
BILL *e**PP pP 04 43 50.4 -1.7
BILL *e*PS PS 04 56 08.2 +0.3
BILL pmax pmax
comp=Z,17nm,1.2s,mb5.3
BILL Bilibino 94.19 353 *e*P P 04 43 39.5 -0.4
comp=Z,57nm,1.2s,mb5.9
BILL *e*pP pP 04 43 50.3 -1.8
BILL LR LR
comp=Z,2μm,20.0s,MS5.5
EGMT Eagleton 94.35 38 ⇑P P 04 43 40.6 -0.5
baz=95,SNR=6.1
EGMT Eagleton 94.35 38 *e*P P 04 43 40.8 -0.4
comp=Z,37nm,1.6s,mb5.6
EGMT *e*pP pP 04 43 53.2 -0.1
EGMT LR LR
comp=Z,1μm,20.0s,MS5.3
B18A Beardsley Farm 94.54 38 ⇑P P 04 43 41.8 -0.2
baz=95
WMOK Wichita Mounta 94.69 54 *e*P P 04 43 41.6 -1.4
WMOK pmax pmax
comp=Z,20nm,1.4s,mb5.3
WMOK MLR MLR
comp=Z,643nm,20.0s,MS5.1
WMOK Wichita Mounta 94.69 54 *e*P P 04 43 41.6 -1.5
comp=Z,20nm,1.4s,mb5.3
WMOK LR LR
comp=Z,643nm,20.0s,MS5.1
HKT Hockley 94.73 59 *e*P P 04 43 42.3 -1.0
HKT MLR MLR
comp=Z,852nm,20.0s,MS5.2
A18A Metzger Ranch, 94.80 37 ⇑P P 04 43 42.9 -0.3
baz=95,SNR=5.2
CD2 Chengdu 94.82 302 P P 04 43 45.5 +1.8
CD2 pP pP 04 43 56.1 +0.2
CD2 sP sP 04 44 00.0 -0.3
CD2 PP PP 04 47 36.6 +3.4
CD2 S S 04 54 53.6 -1.2
CD2 SS SS 05 01 22.2 +1.9
CD2 pmax pmax
comp=Z,20nm,0.5s,mb5.8
CD2 pmax pmax
comp=Z,140nm,5.1s
CD2 LR LR
comp=N,590nm,22.0s
CD2 LR LR
comp=Z,730nm,25.5s,MS5.0
TGUH Tegucigalpa,Un 95.04 77 PFAKE 04 44 00.0 +15
TGUH LR LR
comp=Z,469nm,20.0s,MS5.0
OGNE Ogallala 95.38 47 PFAKE 04 44 00.0 +14
OGNE LR LR
comp=Z,2μm,20.0s,MS5.5
EDM Edmonton 95.45 33 *e*P P 04 43 45.8 -0.2
JTS JuntasAbangare 95.53 81 PFAKE 04 44 00.0 +13
JTS LR LR
comp=Z,878nm,19.0s,MS5.2
LAO LASA Array 95.65 41 *e*P P 04 43 47.9 +0.7
comp=Z,75nm,1.7s,mb5.8
LAO LR LR
comp=Z,896nm,19.0s,MS5.3
RSSD Black Hills 95.66 44 *e*P P 04 43 46.6 -0.6
RSSD pmax pmax
comp=Z,47nm,1.3s,mb5.8
RSSD MLR MLR
comp=Z,2μm,20.0s,MS5.6
RSSD Black Hills 95.66 44 *e*P P 04 43 46.6 -0.6
comp=Z,47nm,1.3s,mb5.8
RSSD LR LR
comp=Z,2μm,20.0s,MS5.6
CBKS Cedar Bluff 95.91 50 PFAKE 04 44 00.0 +11
CBKS LR LR
comp=Z,2μm,20.0s,MS5.6
TEIG Tepich 96.74 71 PFAKE 04 44 00.0 +7.3
TEIG LR LR
comp=Z,545nm,19.0s,MS5.0
LZH Lanzhou 97.07 307 *e*P P 04 43 57.5 +3.7
LZH PP PP 04 47 55.5 +5.1
LZH *e*S S 04 55 14.6 +0.7
LZH sS sS 04 55 33.4 -1.0
LZH SS SS 05 01 54.1 +2.1
LZH pmax pmax
comp=Z,38nm,1.0s,mb5.8
LZH pmax pmax
comp=Z,130nm,4.0s
LZH LR LR
comp=N,1μm,18.1s
LZH LR LR
comp=Z,2μm,19.0s,MS5.5
OTAV Otavalo 97.15 93 PFAKE 04 44 10.0 +15
OTAV LR LR
comp=Z,368nm,20.0s,MS4.9
YAK Yakutsk 97.36 337 *e*P P 04 43 57.0 +2.5
YAK pmax pmax
comp=Z,36nm,1.0s,mb5.8
YAK pmax pmax
comp=E,11nm,1.3s
YAK pmax pmax
comp=N,7.0nm,1.0s
YAK Yakutsk 97.36 337 *e*P P 04 43 53.9 -0.6
YAK LR LR
comp=Z,498nm,21.0s,MS5.0
DGMT Dagmar 97.74 40 ⇑P P 04 43 56.4 -0.1
baz=98
DGMT Dagmar 97.74 40 *e*P P 04 43 56.7 +0.2
comp=Z,39nm,1.5s,mb5.7
DGMT LR LR
comp=Z,815nm,20.0s,MS5.2
KSU1 Kansas State U 98.21 51 PFAKE 04 44 10.0 +11
KSU1 LR LR
comp=Z,2μm,20.0s,MS5.5
MIAR Mount Ida 98.45 56 PFAKE 04 44 10.0 +10
MIAR LR LR
comp=Z,1μm,20.0s,MS5.4
LPAZ La Paz 98.65 113 P P 04 44 02.7 +1.2
comp=Z,1.8nm,0.8s,mb4.6,baz=220,slow=1.5,SNR=7.4
LPAZ PP PP 04 48 02.3 -0.2
comp=Z,1.7nm,1.2s,baz=208,slow=13,SNR=4.8
LPAZ LR LR 05 22 21.8
comp=Z,458nm,18.5s,MS5.0,baz=192,slow=32
LPAZ La Paz 98.65 113 P P 04 44 02.7 +1.2
LPAZ 04 48 02.3
LPAZ pmax pmax
comp=Z,2.0nm,0.8s
LPAZ pmax pmax
comp=Z,2.0nm,1.2s
LPAZ La Paz 98.65 113 *e*P P 04 44 03.8 +2.3
comp=Z,3.6nm,1.1s,mb4.8
LPAZ LR LR
comp=Z,485nm,19.0s,MS5.0
INK Inuvik 98.69 15 *e*P P 04 43 59.7 -0.7
INK pmax pmax
comp=Z,6.0nm,1.2s
INK Inuvik 98.69 15 *e*P P 04 43 59.7 -0.7
comp=Z,5.6nm,1.2s,mb5.0
BCIP Isla Barro Col 99.64 84 PFAKE 04 44 20.0 +15
BCIP LR LR
comp=Z,440nm,20.0s,MS5.0
VBMS Vicksburg 99.82 59 PFAKE 04 44 20.0 +14
VBMS LR LR
comp=Z,905nm,19.0s,MS5.3
ULN Ulaanbaatar 100.19 318 *e*P Pdif 04 44 09.5 +1.8
ULN pmax pmax
comp=Z,5.0nm,0.9s
ULN MLR MLR
comp=Z,427nm,21.0s,MS4.9
ULN Ulaanbaatar 100.19 318 *e*Pdif Pdif 04 44 09.5 +1.9
comp=Z,5.1nm,0.9s
ULN LR LR
comp=Z,427nm,21.0s,MS4.9
ECSD EROS Data Cent 100.22 46 PFAKE 04 44 20.0 +12
ECSD LR LR
comp=Z,2μm,20.0s,MS5.5
YKA Yellowknife Ar 100.39 25 P Pdif 04 44 07.3 -1.3
comp=Z,1.0nm,1.0s,baz=244,slow=3.6,SNR=5.9
YKA PP PP 04 48 16.3 +1.1
comp=Z,0.3nm,0.7s,baz=229,slow=6.4,SNR=3.8
YKA Yellowknife Ar 100.39 25 P Pdif 04 44 07.3 -1.3
YKA 04 48 16.3
YKA pmax pmax
comp=Z,1.0nm,1.0s
YKA Yellowknife Ar 100.39 25 P Pdif 04 44 07.3 -1.3
YKA PP PP 04 48 16.3 +1.1
SONM Songino Array 100.57 318 P Pdif 04 44 09.3 -0.1
comp=Z,0.5nm,0.4s,baz=130,slow=4.6,SNR=3.5
SONM Songino Array 100.57 318 P Pdif 04 44 09.3 -0.1
SONM pmax pmax
comp=Z,1.0nm,0.4s
GTA Gaotai 101.36 308 *e*P Pdif 04 44 20.3 +7.4
GTA pP 04 44 30.9
GTA sP 04 44 34.8
GTA PP PP 04 48 33.5 +10
GTA SKS 04 54 55.7
GTA S Sdif 04 55 55.5 +5.6
GTA sS 04 56 13.5
GTA SS SS 05 03 03.7 +12
GTA pmax pmax
comp=Z,3.0nm,1.4s
GTA pmax pmax
comp=Z,73nm,7.2s
GTA LR LR
comp=N,180nm,20.1s,MS4.9
GTA LR LR
comp=E,300nm,20.4s,MS4.9
GTA LR LR
comp=Z,410nm,20.4s,MS4.9
OXF Oxford 101.58 57 PFAKE 04 44 30.0 +16
OXF LR LR
comp=Z,1μm,20.0s,MS5.5
CCM Cathedral Cave 101.60 53 PFAKE 04 44 30.0 +16
CCM LR LR
comp=Z,1μm,21.0s,MS5.3
CPUP Villa Florida 101.72 127 PFAKE 04 44 30.0 +16
CPUP LR LR
comp=Z,161nm,19.0s,MS4.6
SCIA State Center 101.74 49 PFAKE 04 44 30.0 +15
SCIA LR LR
comp=Z,916nm,20.0s,MS5.3
FFC Flin Flon 101.95 35 PFAKE 04 44 30.0 +14
FFC LR LR
comp=Z,1μm,20.0s,MS5.4
BRAL Brewton 102.06 61 PFAKE 04 44 30.0 +14
BRAL LR LR
comp=Z,501nm,20.0s,MS5.0
AGMN Agassiz Nation 102.61 42 PFAKE 04 44 30.0 +12
AGMN LR LR
comp=Z,734nm,20.0s,MS5.2
LRAL Lakeview Retre 102.87 59 PFAKE 04 44 30.0 +10
LRAL LR LR
comp=Z,647nm,20.0s,MS5.2
WVT Waverly 103.39 56 PFAKE 04 44 30.0 +8.1
WVT LR LR
comp=Z,1μm,19.0s,MS5.5
ULM Lac du Bonnet 103.40 41 *e*Pdif Pdif 04 44 21.9 -0.1
ULM LR LR
comp=Z,2μm,20.0s,MS5.6
TLY Talaya 103.81 321 PFAKE 04 44 30.0 +6.2
TLY LR LR
comp=Z,670nm,20.0s,MS5.2
HDIL Hopedale 103.95 52 PFAKE 04 44 40.0 +16
HDIL LR LR
comp=Z,1μm,19.0s,MS5.5
TIXI Tiksi 104.00 345 PFAKE 04 44 30.0 +5.4
TIXI LR LR
comp=Z,1μm,20.0s,MS5.4
JFWS Jewell Farm 104.16 49 PFAKE 04 44 40.0 +15
JFWS LR LR
comp=Z,1μm,21.0s,MS5.4
EYMN Ely 105.18 44 PFAKE 04 49 00.0 +16
EYMN LR LR
comp=Z,1μm,21.0s,MS5.3
MTDJ Mount Denham 105.27 77 PFAKE 04 49 00.0 +15
MTDJ LR LR
comp=Z,357nm,20.0s,MS4.9
WCI Wyandotte Cave 105.29 55 PFAKE 04 49 00.0 +16
WCI LR LR
comp=Z,1μm,19.0s,MS5.4
DWPF Disney 105.55 66 PFAKE 04 49 00.0 +15
DWPF LR LR
comp=Z,369nm,19.0s,MS5.0
GOGA Godfrey 105.76 60 PFAKE 04 49 00.0 +15
GOGA LR LR
comp=Z,810nm,20.0s,MS5.3
COWI Conover 106.04 46 PFAKE 04 49 00.0 +14
COWI LR LR
comp=Z,1μm,20.0s,MS5.4
SDV Santo Domingo 107.83 89 PFAKE 04 49 00.0 +10
SDV LR LR
comp=Z,304nm,22.0s,MS4.8
GTBY Guantanamo Bay 108.03 76 PFAKE 04 49 00.0 +10
GTBY LR LR
comp=Z,305nm,19.0s,MS4.9
NHSC New Hope 108.26 62 PFAKE 04 49 00.0 +10
NHSC LR LR
comp=Z,1μm,20.0s,MS5.4
ACSO Alum Creek Sta 108.38 54 PFAKE 04 49 00.0 +10
ACSO LR LR
comp=Z,1μm,20.0s,MS5.5
AAM Ann Arbor 108.53 51 PFAKE 04 49 00.0 +10
AAM LR LR
comp=Z,2μm,21.0s,MS5.6
BLA Blacksburg 109.36 57 PFAKE 04 49 00.0 +8.0
BLA LR LR
comp=Z,923nm,19.0s,MS5.4
SPB Sao Paulo 110.43 130 PFAKE 04 49 10.0 +15
SPB LR LR
comp=Z,962nm,21.0s,MS5.3
MCWV Mont Chateau 110.51 55 PFAKE 04 49 10.0 +16
MCWV LR LR
comp=Z,2μm,20.0s,MS5.6
CNNC Cliffs of the 110.72 60 PFAKE 04 49 10.0 +15
CNNC LR LR
comp=Z,789nm,20.0s,MS5.3
SDDR Presa de Saban 111.06 78 PFAKE 04 49 10.0 +14
SDDR LR LR
comp=Z,523nm,21.0s,MS5.1
ERPA Erie 111.08 52 PFAKE 04 49 10.0 +15
ERPA LR LR
comp=Z,1μm,20.0s,MS5.4
WMQ Urumqi 111.39 309 *e*Pdif Pdif 04 44 58.6 +1.1
WMQ PP PP 04 49 40.4 +3.6
WMQ SKS SKSdf 04 56 03.6 -0.9
WMQ S Sdif 04 57 10.7 -2.8
WMQ SS SS 05 05 07.6 -0.6
WMQ AMB AMB
comp=Z,29nm,10.0s
WMQ LR LR
comp=N,190nm,21.4s,MS4.9
WMQ LR LR
comp=E,330nm,24.0s,MS4.9
WMQ LR LR
comp=Z,340nm,22.2s,MS4.9
RER Riviere de l'E 111.43 232 PFAKE 04 49 10.0 +14
RER LR LR
comp=Z,1μm,20.0s,MS5.5
CBN Corbin 111.96 57 PFAKE 04 49 10.0 +13
CBN LR LR
comp=Z,862nm,19.0s,MS5.4
GRTK Grand Turk 112.07 76 PFAKE 04 49 10.0 +12
GRTK LR LR
comp=Z,503nm,19.0s,MS5.1
RES Resolute Bay 112.16 16 *e*PKIKP PKiKP 04 48 56.3 +0.1
SSPA Standing Stone 112.22 54 PFAKE 04 49 10.0 +13
SSPA LR LR
comp=Z,1μm,20.0s,MS5.5
BINY Binghamton 113.99 53 PFAKE 04 49 10.0 +9.4
BINY LR LR
comp=Z,1μm,20.0s,MS5.6
SJG San Juan 115.33 81 PFAKE 04 49 20.0 +16
SJG LR LR
comp=Z,369nm,20.0s,MS5.0
LONY Lake Ozonia 115.50 51 PFAKE 04 49 20.0 +17
LONY LR LR
comp=Z,1μm,19.0s,MS5.6
NCB Newcomb 115.63 52 PFAKE 04 49 20.0 +16
NCB LR LR
comp=Z,1μm,19.0s,MS5.5
MKAR Makanchi Array 115.77 312 PKP PKPdf 04 49 02.9 -1.0
comp=Z,3.2nm,0.5s,baz=204,slow=1.1,SNR=27
MKAR PKKPbc PKKPbc 04 59 34.4 -2.4
comp=Z,0.7nm,0.6s,baz=289,slow=3.7,SNR=5.8
MKAR Makanchi Array 115.77 312 PKIKP PKPdf 04 49 02.9 -1.0
MKAR pmax pmax
comp=Z,3.0nm,0.5s
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 115.77 312 PKP PKPdf 04 49 02.9 -1.0
MKAR PKKPbc PKKPbc 04 59 34.4 -2.4
GRGR Grenville 117.22 89 PFAKE 04 49 20.0 +12
GRGR LR LR
comp=Z,292nm,20.0s,MS4.9
LBNH Lisbon 117.31 52 PFAKE 04 49 20.0 +13
LBNH LR LR
comp=Z,1μm,19.0s,MS5.5
FDF Fort de France 118.63 87 PFAKE 04 49 20.0 +10
FDF LR LR
comp=Z,312nm,21.0s,MS4.9
KURK Kurchatov 118.73 316 PKP PKPdf 04 49 07.9 -1.6
comp=Z,3.5nm,0.6s,baz=104,slow=1.7,SNR=20
KURK PKKPbc PKKPbc 04 59 25.8 -0.5
comp=Z,0.7nm,0.8s,baz=269,slow=4.7,SNR=4.8
KURK Kurchatov 118.73 316 *c i*PKIKP PKPdf 04 49 07.8 -1.7
KURK pmax pmax
comp=Z,9.0nm,1.2s
KURK Kurchatov 118.73 316 *e*PKPdf PKPdf 04 49 07.9 -1.5
KURK LR LR
comp=Z,622nm,20.0s,MS5.2
ABPO Ambohimpanom 118.78 228 PFAKE 04 49 20.0 +9.4
ABPO LR LR
comp=Z,905nm,19.0s,MS5.4
MGG Marie-Galante 118.90 85 *e*P PKPdf 04 49 13.8 +2.9
KSH Kashi 119.01 303 *e*PKP PKPdf 04 49 10.8 +0.4
KSH PP PP 04 50 30.3 -0.3
KSH PKS 04 52 45.3
KSH SKS SKSdf 04 56 17.8 -1.5
KSH SKKS SKKSac 04 57 18.8 -8.5
KSH AMB AMB
comp=Z,74nm,4.2s
KSH LR LR
comp=N,110nm,4.2s
KSH LR LR
comp=E,100nm,6.4s
KSH LR LR
comp=Z,230nm,20.9s,MS4.8
ANWB Willy Bob 119.08 83 PFAKE 04 49 20.0 +8.9
ANWB LR LR
comp=Z,328nm,19.0s,MS5.0
PKME Peaks-Kenny Pk 119.32 51 *e*PKPdf PKPdf 04 49 09.6 -1.2
PKME LR LR
comp=Z,1μm,19.0s,MS5.6
BBGH Gun Hill 119.49 89 PFAKE 04 49 20.0 +8.0
BBGH LR LR
comp=Z,424nm,19.0s,MS5.1
TKM2 Tokmak 2 119.84 306 *e*PKIKP PKPdf 04 49 11.3 -0.6
TKM2 MLR MLR
comp=Z,402nm,21.0s,MS5.0
SUR Sutherland 120.16 197 *e*PKPdf PKPdf 04 49 13.7 +0.8
SUR LR LR
comp=Z,1μm,21.0s,MS5.6
UCH Uchtor 120.53 305 *e*PKPdf PKPdf 04 49 13.6 +0.4
AAK Ala-Archa 120.60 306 PKP PKPdf 04 49 12.0 -1.4
comp=Z,1.6nm,0.3s,baz=118,slow=2.9,SNR=3.6
AAK Ala-Archa 120.60 306 PKIKP PKPdf 04 49 12.0 -1.3
AAK pmax pmax
comp=Z,2.0nm,0.3s
BBSR BB Station 120.62 66 PFAKE 04 49 30.0 +16
BBSR LR LR
comp=Z,470nm,21.0s,MS5.1
EKS2 Erkin-Say 121.13 306 *e*PKPdf PKPdf 04 49 14.1 -0.3
EKS2 LR LR
comp=Z,484nm,22.0s,MS5.1
MSEY Mahe Island 121.53 247 PFAKE 04 49 30.0 +14
MSEY LR LR
comp=Z,840nm,19.0s,MS5.4
SCHQ Schefferville 121.56 40 PFAKE 04 49 30.0 +15
SCHQ LR LR
comp=Z,1μm,20.0s,MS5.6
BOSA Boshof 122.33 202 PKP PKPdf 04 49 17.3 +0.1
comp=Z,4.2nm,0.8s,baz=164,slow=7.4,SNR=11
BOSA PKKPbc PKKPbc 04 59 11.5 -1.2
comp=Z,4.9nm,0.9s,baz=88,slow=2.3,SNR=4.2
BOSA Boshof 122.33 202 PKIKP PKPdf 04 49 17.3 +0.1
BOSA pmax pmax
comp=Z,4.0nm,0.8s
BOSA pmax pmax
comp=Z,5.0nm,0.9s
BOSA Boshof 122.33 202 *e*PKPdf PKPdf 04 49 17.9 +0.6
BOSA LR LR
comp=Z,760nm,19.0s,MS5.4
KBL Kabul 123.61 296 *e*PKIKP PKPdf 04 49 19.5 +0.1
BVAR Borovoye Array 123.92 318 PKP PKPdf 04 49 18.0 -1.4
comp=Z,4.4nm,0.6s,baz=110,slow=2.2,SNR=25
BVAR Borovoye Array 123.92 318 PKIKP PKPdf 04 49 18.0 -1.3
BVAR pmax pmax
comp=Z,4.0nm,0.6s
BRVK Borovoye 123.98 318 *d i*PKIKP PKPdf 04 49 18.4 -1.1
BRVK pmax pmax
comp=Z,20nm,2.5s
BRVK Borovoye 123.98 318 *e*PKPdf PKPdf 04 49 18.8 -0.6
BRVK LR LR
comp=Z,433nm,20.0s,MS5.1
LBTB Lobatse 125.49 205 PFAKE 04 49 40.0 +17
LBTB LR LR
comp=Z,599nm,19.0s,MS5.3
KBS Kingsbay 126.40 358 PFAKE 04 49 30.0 +6.5
KBS LR LR
comp=Z,498nm,19.0s,MS5.2
SOKR Solikamsk 130.20 328 *i* PKIKP PKPdf 04 49 31.3 +0.2
SOKR pmax pmax
comp=Z,20nm,1.4s
SOKR MLR MLR
comp=Z,380nm,20.0s,MS5.1
ARU Arti 130.21 324 *i* PKIKP PKPdf 04 49 31.2 -0.1
ARU 04 51 45.2
ARU MLR MLR

comp=Z,428nm,22.0s,MS5.1
ARU Arti 130.21 324 *e*PKPdf PKPdf 04 49 30.8 -0.5
ARU LR LR
comp=Z,419nm,20.0s,MS5.1
RCBR Riachuelo 130.46 123 PFAKE 04 49 40.0 +6.9
RCBR LR LR
comp=Z,819nm,19.0s,MS5.5
ABKAR Akbulak array 130.78 314 *e*PKPdf PKPdf 04 49 31.4 -1.1
AKTK Aktyubinsk 131.83 316 PKP PKPdf 04 49 33.9 -0.7
AKTO Aktyubinsk 131.83 316 PKP PKPdf 04 49 33.9 -0.7
comp=Z,3.4nm,0.6s,baz=70,slow=3.5,SNR=11
AKTO Aktyubinsk 131.83 316 PKIKP PKPdf 04 49 33.9 -0.6
AKTO pmax pmax
comp=Z,3.0nm,0.6s
SCO Scoresbysund 132.63 11 *i* PKIKP PKPdf 04 49 35.6 +0.1
SCO pmax pmax
comp=Z,5.0nm,0.8s
SCO MLR MLR
comp=Z,680nm,20.0s,MS5.4
SCO Scoresbysund 132.63 11 *i* P PKPdf 04 49 35.6 +0.1
comp=Z,4.7nm,0.8s
SCO
comp=Z,670nm,20.0s
LSZ Lusaka 132.97 213 *e*PKIKP PKPdf 04 49 39.5 +1.7
LSZ MLR MLR
comp=Z,801nm,19.0s,MS5.5
TSUM Tsumeb 133.54 198 *e*PKPdf PKPdf 04 49 39.7 +0.8
TSUM LR LR
comp=Z,2μm,19.0s,MS5.8
LVZ Lovozero 133.64 344 PFAKE 04 49 50.0 +13
LVZ LR LR
comp=Z,539nm,20.0s,MS5.3
KEV Kevo 133.69 349 PFAKE 04 49 50.0 +13
KEV LR LR
comp=Z,609nm,20.0s,MS5.3
ARCES ARCESS Array B 134.14 350 PKP PKPdf 04 49 37.5 -0.8
comp=Z,3.3nm,0.5s,baz=73,slow=1.0,SNR=24
ARCES ARCESS Array B 134.14 350 PKIKP PKPdf 04 49 37.6 -0.7
ARCES pmax pmax
comp=Z,3.0nm,0.5s
ARE0 ARCESS Array S 134.14 350 *e*PKPdf PKPdf 04 49 37.1 -1.2
BORG Borgarnes 137.58 16 PFAKE 04 50 00.0 +15
BORG LR LR
comp=Z,802nm,19.0s,MS5.5
KMBO Kilima Mbogo 138.14 236 PKP PKPdf 04 49 47.3 -0.2
comp=Z,1.6nm,0.7s,baz=180,slow=24,SNR=4.4
KMBO Kilima Mbogo 138.14 236 PKIKP PKPdf 04 49 47.3 -0.2
KMBO pmax pmax
comp=Z,2.0nm,0.7s
KMBO Kilima Mbogo 138.14 236 *e*PKPdf PKPdf 04 49 48.3 +0.8
KMBO LR LR
comp=Z,578nm,19.0s,MS5.3
JOF Joensuu 138.39 341 *e*PKHKP PKPpre 04 49 34.8
JOF pmax pmax
comp=Z,12nm,0.6s
JOF Joensuu 138.39 341 *ep* PKPpre 04 49 34.8
comp=Z,12nm,0.6s
KAF Kangasniemi 140.41 344 *e*PKHKP PKPpre 04 49 42.1
KAF pmax pmax
comp=Z,4.0nm,0.6s
KAF Kangasniemi 140.41 344 *ep* PKPpre 04 49 42.1
comp=Z,3.8nm,0.6s
FINES FINESS Array B 141.03 343 PKhKP PKPpre 04 49 42.5
comp=Z,2.7nm,0.5s,baz=61,slow=2.8,SNR=16
FINES PKP PKPdf 04 49 50.7 -0.6
comp=Z,5.3nm,0.7s,baz=52,slow=3.7,SNR=9.7
FINES PP PP 04 52 51.0 -1.4
comp=Z,1.9nm,0.8s,baz=42,slow=13,SNR=4.2
FINES FINESS Array B 141.03 343 PKP PKPpre 04 49 42.5
FINES PKP PKPdf 04 49 50.7 -0.6
FINES PP PP 04 52 51.0 -1.4
OBN Obninsk 141.91 330⇑ *e*PKIKP PKPdf 04 49 49.3 -3.7
OBN *i* 04 49 55.4
OBN *e* 04 52 57.2
OBN pmax pmax
comp=Z,5.0nm,0.7s
OBN pmax pmax
comp=Z,23nm,1.2s
OBN MLR MLR
comp=Z,600nm,20.0s,MS5.3
OBN Obninsk 141.91 330⇑ *e*PKP PKPdf 04 49 55.4 +2.4
OBN LR LR
comp=Z,676nm,21.0s,MS5.4
DGRG David-gareji 142.22 305 P PKPdf 04 49 46.7 -7.3
TBLG Delisi 142.62 306 *e*PKIKP pPKPdf 04 50 04.9 -2.4
TBLG Delisi 142.62 306 P pPKPdf 04 50 04.9 -2.3
VSR Storozhevoye 142.78 323 *e*PKHKP PKPpre 04 49 50.9
VSR pmax pmax
comp=Z,30nm,1.6s
VSR pmax pmax
comp=N,6.0nm,0.5s
VSR pmax pmax
comp=E,5.0nm,0.4s
VSR MLR MLR
comp=N,340nm,20.0s,MS5.3
VSR MLR MLR
comp=E,350nm,20.0s,MS5.3
VSR MLR MLR
comp=Z,620nm,20.0s,MS5.4
GNI Garni 142.94 303 *e*PKIKP PKPdf 04 49 56.1 +0.8
GNI MLR MLR
comp=Z,327nm,19.0s
ZEI Tsey 142.99 308 *e*PKIKP PKPdf 04 49 52.1 -3.2
ZEI pmax pmax
comp=Z,31nm,1.4s
MBAR Mbarara 143.18 229 PFAKE 04 50 10.0 +13
MBAR LR LR
comp=Z,490nm,22.0s,MS5.2
ONI Oni 143.35 308 P PKPdf 04 49 52.4 -3.5
KIV Kislovodsk 143.51 310 *i* PKHKP PKPpre 04 49 52.6
KIV pmax pmax
comp=Z,9.0nm,0.7s
KIV Kislovodsk 143.51 310 *e*PKPdf PKPdf 04 49 54.4 -1.8
KIV LR LR
comp=Z,414nm,20.0s,MS5.2
NB2 NORSAR Subarra144.14 354 PKP PKPdf 04 49 54.1 -2.7
comp=Z,26nm,0.8s,baz=9.2,slow=3.4
NB2 NORSAR Subarra144.14 354 PKP PKPdf 04 49 54.1 -2.7
baz=9.2,slow=3.4
NB2 NORSAR Subarra144.14 354 PKIKP PKPdf 04 49 54.1 -2.7
NB2 NORSAR Subarra144.14 354 PKPab PKPdf 04 49 54.1 -2.7
NOA NORSAR Array B 144.14 354 PKP PKPdf 04 49 54.3 -2.5
comp=Z,18nm,0.8s,baz=10,slow=2.3,SNR=54
NOA NORSAR Array B 144.14 354 PKHKP PKPdf 04 49 54.3 -2.5
NOA pmax pmax
comp=Z,18nm,0.8s
NAO01 NORSAR Array S 144.36 354 *e*PKPdf PKPdf 04 49 55.0 -2.1
TUTA Tutak 144.53 303⇑ *i*P PKPdf 04 49 57.9 -0.3
ARTV Artvin 144.81 306⇓ *i*P PKPdf 04 49 58.2 -0.4
DAGI Agillar 144.84 306⇑ *i*P PKPdf 04 49 58.2 -0.5
DBOC Borcka 144.96 306⇓ *i*P PKPdf 04 49 58.4 -0.4
DDEM Demirkent 145.01 306⇑ *i*P PKPbc 04 49 59.0 +0.7
IZAR Zarasai 145.64 337 *e*P PKPdf 04 49 59.9 +0.4
IZAR AMB AMB 04 50 10.9
comp=Z,122nm,1.0s
KONO Kongsberg 145.66 355 *e*PKIKP PKPdf 04 49 59.2 -0.2
KONO MLR MLR
comp=Z,655nm,19.0s,MS5.4
SOC Sochi 145.67 311 *i* PKIKP PKPdf 04 49 58.7 -1.3
SOC *i* 04 50 03.4
SOC *e* 04 50 14.3
SOC *e* 04 53 21.2
SOC *e* 04 56 58.2
SOC 05 47 35.4
SOC MLR MLR
comp=Z,13μm,21.0s,MS6.7
IDID Didziasalis 145.81 337 *e*P PKPdf 04 50 00.3 +0.5
IDID AMB AMB 04 50 11.4
comp=Z,94nm,1.1s
ISAL Salakas 145.82 337 *e*P PKPdf 04 50 00.5 +0.7
ISAL AMB AMB 04 50 11.6
comp=Z,124nm,1.2s
BNGL BINGOL 145.89 302⇑ *i*P PKPdf 04 50 02.9 +2.4
IIGN Ignalina 145.96 337 *e*P PKPdf 04 50 00.9 +0.8
IIGN AMB AMB 04 50 12.0
comp=Z,124nm,1.0s
NACGM Naroch 146.11 336 *e* PKPdf 04 49 57.0 -3.4
MARD Mardin 146.49 300⇓ *i*P PKPdf 04 50 03.7 +2.1
ORE Reay 146.58 7 P PKPdf 04 50 01.6 +0.6
ORE Reay 146.58 7 *e*P PKPdf 04 50 01.6 +0.6
ANN Anapa 146.74 314 *i* PKIKP PKPdf 04 50 00.9 -0.9
ANN *e* 04 57 11.9
ANN pmax pmax
comp=N,25nm,1.2s
ANN pmax pmax
comp=E,22nm,1.2s
ANN pmax pmax
comp=Z,53nm,1.2s
MVH1 Achvaich 147.14 8 P PKPdf 04 50 02.1 +0.1
MVH1 Achvaich 147.14 8 *e*P PKPdf 04 50 02.1 +0.1
KAC Achnashellach 147.41 9 P PKPdf 04 50 03.1 +0.7
KAC Achnashellach 147.41 9 *e*P PKPdf 04 50 03.1 +0.7
KPL Plockton 147.51 9 P PKPdf 04 50 01.6 -1.0
KPL Plockton 147.51 9 *e*P PKPdf 04 50 01.6 -1.0
GRSN GIRESUNGRSN 147.54 307⇑ *i*P PKPbc 04 50 05.6 -0.3
MCD Coleburn Disti 147.58 7 P PKPdf 04 50 03.4 +0.6
MCD Coleburn Disti 147.58 7 *e*P PKPdf 04 50 03.4 +0.6
MDO Dochfour 147.59 8 P PKPdf 04 50 03.5 +0.8
MDO Dochfour 147.59 8 *e*P PKPdf 04 50 03.5 +0.8
ELZG Elazig 147.64 302⇑ *i*P PKPbc 04 50 08.0 +1.8
KEMA Kemaliye 147.83 304⇓ *i*P PKPbc 04 50 07.9 +1.2
KAR1 Arisaig 147.89 10 P PKPbc 04 50 05.2 -1.1
KAR1 Arisaig 147.89 10 *e*P PKPbc 04 50 05.2 -1.1
SUW Suwalki 148.09 338 *e*PKP PKPbc 04 50 06.5 -0.4
SUW *e* 04 50 16.5
SUW *e* 04 50 24.5
SUW Suwalki 148.09 338 *e*PKPbc PKPbc 04 50 06.5 -0.4
AKASG Malin Array Be 148.15 329 PKPbc PKPbc 04 50 05.9 -1.3
comp=Z,13nm,0.5s,baz=39,slow=3.3,SNR=24
AKASG Malin Array Be 148.15 329 PKIKP PKPbc 04 50 05.9 -1.3
AKASG pmax pmax
comp=Z,13nm,0.5s
AKBB Malin Array Si 148.15 329 *e*PKIKP PKPbc 04 50 05.9 -1.3
KIEV Kiev 148.16 329 *e*PKIKP PKPbc 04 50 06.1 -1.1
KIEV MLR MLR
comp=Z,566nm,22.0s,MS5.3
ATAB Bozova 148.40 301⇑ *i*P PKPbc 04 50 09.4 +1.2
ERBA Erbaa 148.71 307⇑ *i*P PKPbc 04 50 09.8 +0.8
SIM Simferopol' 148.79 316 *c i*PKP2 PKPbc 04 50 11.0 +2.0
MUD Monsted U'grnd 148.85 354 *e*PKP2 PKPbc 04 50 08.6 -0.2
MUD pmax pmax
comp=Z,40nm,1.1s
MUD MLR MLR
comp=Z,400nm,18.0s,MS5.2
MUD Monsted U'grnd 148.85 354 *i* P PKPbc 04 50 08.6 -0.2
comp=Z,40nm,1.1s
MUD
comp=Z,390nm,18.0s
EBH Black Hill 148.86 8 P PKPbc 04 50 08.5 -0.4
EBH Black Hill 148.86 8 *e*P PKPbc 04 50 08.5 -0.4
GZT Gaziantep 148.99 301⇑ *i*P PKPbc 04 50 11.0 +1.2
COP Copenhagen 149.21 350 *e*PKP2 PKPbc 04 50 10.0 +0.3
COP pmax pmax
comp=Z,16nm,0.8s
COP MLR MLR
comp=Z,170nm,18.0s,MS4.9
COP Copenhagen 149.21 350 *i* P PKPbc 04 50 10.0 +0.3
comp=Z,16nm,0.8s
COP
comp=Z,170nm,18.0s
EDI Edinburgh 149.22 8 P PKPbc 04 50 09.0 -0.7
EDI Edinburgh 149.22 8 *e*P PKPbc 04 50 09.0 -0.7
EAU Auchinoon 149.26 8 P PKPbc 04 50 08.5 -1.3
EAU Auchinoon 149.26 8 *e*P PKPbc 04 50 08.5 -1.3
ESY Stoneypath 149.29 7 P PKPbc 04 50 09.6 -0.3
ESY Stoneypath 149.29 7 *e*P PKPbc 04 50 09.6 -0.3
BSD Bornholm Skovb 149.32 347 *e*PKP2 PKPbc 04 50 09.4 -0.6
BSD pmax pmax
comp=Z,34nm,0.9s
BSD MLR MLR
comp=Z,510nm,20.0s,MS5.3
BSD Bornholm Skovb 149.32 347 *i* P PKPbc 04 50 09.4 -0.6
comp=Z,34nm,0.9s
BSD
comp=Z,510nm,20.0s
PINB Pinarbasi 149.56 304⇓ *i*P PKPbc 04 50 11.7 +0.5
BOYT Boyabat 149.76 309⇑ *i*P PKPbc 04 50 11.0 -0.5
ESK Eskdalemuir 149.81 8 *e*PKP2 PKPbc 04 50 11.3 +0.1
ESK MLR MLR
comp=Z,701nm,20.0s,MS5.5
ECK Cauldkaine Hil 149.95 8 P PKPbc 04 50 10.9 -0.7
ECK Cauldkaine Hil 149.95 8 *e*P PKPbc 04 50 10.9 -0.7
GAL1 Galloway 150.04 10 P PKPbc 04 50 11.4 -0.4
GAL1 Galloway 150.04 10 *e*P PKPbc 04 50 11.4 -0.4
CTKT Corum 150.13 308⇑ *i*P PKPbc 04 50 13.2 +0.7
COBT Iskenderun 150.19 299⇑ *i*P PKPbc 04 50 14.0 +1.2
XAL Allendale 150.37 7 P PKPbc 04 50 11.7 -0.9
XAL Allendale 150.37 7 *e*P PKPbc 04 50 11.7 -0.9
YAYL Yayladag 150.41 299⇓ *i*P PKPbc 04 50 13.8 +0.5
GKP Gorka Klasztor 150.50 343 *e*PKP PKPbc 04 50 12.9 -0.1
GKP *e* 04 50 20.2
GKP *e* 04 50 29.9
GKP Gorka Klasztor 150.50 343 *e*PKIKP PKPbc 04 50 12.9 0.0
GKP *e* 04 50 20.2
YURE YUREGIR 150.62 300⇑ *i*P PKPbc 04 50 13.9 +0.2
ILGA Ilgaz 150.73 309⇓ *i*P PKPbc 04 50 14.4 +0.5
BALT Daday 150.77 310⇑ *i*P PKPbc 04 50 14.2 +0.2
LVV L'vov 151.10 332 *i* PKIKP PKPbc 04 50 14.2 -0.3
LVV *e* 04 57 11.2
LVV *e* 05 13 50.6
GULE Gulek 151.17 302⇓ *i*P PKPbc 04 50 16.1 +1.0
BSEG Bad Segeberg 151.21 352 *e*PKPdf PKPdf 04 50 08.6 0.0
BSEG *e*PKPbc PKPbc 04 50 14.3 -0.3
BR131 Keskin Array S 151.27 307 *e*PKPbc PKPbc 04 50 15.0 -0.2
BR131 *e*PKPab PKPab 04 50 22.8 -0.6
BR131 LR LR
comp=Z,367nm,20.0s,MS5.2
BRTR Keskin Array B 151.27 307 PKP PKPdf 04 50 08.2 -1.0
comp=Z,0.5nm,0.5s,baz=94,slow=3.7,SNR=5.9
BRTR PKPbc PKPbc 04 50 14.9 -0.3
comp=Z,9.1nm,0.7s,baz=130,slow=3.5,SNR=45
BRTR PKPab PKPab 04 50 22.2 -1.1
comp=Z,16nm,0.6s,baz=138,slow=5.0,SNR=28
BRTR Keskin Array B 151.27 307 PKIKP PKPdf 04 50 08.3 -0.9
BRTR 04 50 14.9
BRTR 04 50 22.2
BRTR pmax pmax
comp=Z,1.0nm,0.5s
BRTR pmax pmax
comp=Z,9.0nm,0.7s
BRTR pmax pmax
comp=Z,16nm,0.6s
HPK Haverah Park 151.33 7 P PKPbc 04 50 13.9 -1.0
HPK Haverah Park 151.33 7 *e*P PKPbc 04 50 13.9 -1.0
MMAI Mount Meron Ar 151.47 293 PKPbc PKPbc 04 50 16.0 +0.1
comp=Z,21nm,0.6s,baz=74,slow=6.2,SNR=22
MMAI PKPab PKPab 04 50 23.1 -1.3
comp=Z,19nm,0.4s,baz=82,slow=6.1,SNR=17
KWP Kalwaria Pacla 151.79 333 *e*PKP PKPbc 04 50 16.1 +0.1
KWP *e* 04 50 26.1
KWP Kalwaria Pacla 151.79 333 *e*PKIKP PKPbc 04 50 15.8 -0.3
KWP MLR MLR
comp=Z,1μm,20.0s,MS5.6
KWP Kalwaria Pacla 151.79 333 *e*PKPbc PKPbc 04 50 15.8 -0.3
KWP LR LR
comp=Z,1μm,20.0s,MS5.6
KWP Kalwaria Pacla 151.79 333⇑ *i*P PKPbc 04 50 16.3 +0.2
TLCR 151.86 321 ⇑PKIKP PKPbc 04 50 16.5 +0.1
TLCR 151.86 321⇑ *i*P PKPbc 04 50 16.5 +0.1
KBI1 Birley Grange 152.03 7 P PKPdf 04 50 12.9 +3.0
KBI1 Birley Grange 152.03 7 *e*P PKPdf 04 50 12.9 +3.0
RUE Ruedersdorf 152.04 347 *e*PKPbc PKPbc 04 50 16.4 -0.1
BUR08 Bucovina Ar. S 152.18 328 *e*PKPbc PKPbc 04 50 16.9 -0.1
BURAR Bucovina Array 152.19 328 ⇑PKIKP PKPbc 04 50 17.8 +0.8
BURAR Bucovina Array 152.19 328⇑ *i*P PKPbc 04 50 17.8 +0.8
TESR 152.22 325 ⇓P PKPbc 04 50 18.1 +0.9
TESR 152.22 325⇓ *i*P PKPbc 04 50 18.0 +0.8
CFR Carcaliu 152.25 321 ⇑PKIKP PKPbc 04 50 17.3 0.0
CFR Carcaliu 152.25 321⇑ *i*P PKPbc 04 50 17.3 0.0
PHNC Paralimni 152.28 297 P PKPbc 04 50 20.3 +2.6
comp=Z,1.6nm,1.0s
CMLA Cha da Macela 152.38 57 PFAKE PKPbc 04 50 20.0 +2.2
CMLA LR LR
comp=Z,673nm,19.0s,MS5.5
OJC Ojcow 152.41 337 *e*PKIKP PKPdf 04 50 08.6 -2.0
OJC *e* 04 50 15.0
OJC *e* 04 50 25.3
PETR 152.42 323 ⇑P PKPab 04 50 29.6 +1.7
PETR 152.42 323⇑ *i*P PKPab 04 50 29.6 +1.7
TIRR Tirgusor 152.51 320 ⇑PKIKP PKPbc 04 50 18.2 +0.3
TIRR Tirgusor 152.51 320⇑ *i*P PKPbc 04 50 18.2 +0.3
HLM1 Long Mynd 152.59 9 P PKPbc 04 50 16.0 -1.8
HLM1 Long Mynd 152.59 9 *e*P PKPbc 04 50 16.0 -1.8
VRI Vrincioaia 152.60 324 ⇑PKIKP PKPab 04 50 27.4 -1.2
VRI Vrincioaia 152.60 324⇑ *i*P PKPab 04 50 27.4 -1.2
WIT Witteveen 152.66 356 *e*PKiKP PKPbc 04 50 18.7 +0.8
WIT Witteveen 152.66 356 *e*PKPpre PKPab 04 50 28.5 -0.1
UZH Uzhgorod 152.74 333 *e*PKIKP PKPbc 04 50 17.8 -0.4
UZH *e* 04 50 24.8
UZH *e* 05 19 17.0
GRER 152.78 323 ⇑P PKPab 04 50 25.0 -4.4
GRER 152.78 323⇑ *i*P PKPab 04 50 25.0 -4.4
CSS Prodhromos 152.85 297 P PKPbc 04 50 18.8 -0.1
comp=Z,1.2nm,0.9s
CSS Prodhromos 152.85 297 P PKPbc 04 50 18.8 -0.1
CSS LR LR
comp=Z,806nm,21.0s,MS5.5
CRVS Cervenica-Dubn 152.87 334 *e*PKIKP PKPbc 04 50 17.0 -1.5
CRVS Cervenica-Dubn 152.87 334 *e*PKP PKPbc 04 50 17.0 -1.5
NIE Niedzica 152.89 336 *e*PKPab PKPbc 04 50 19.3 +0.8
MAMC Mammari 152.90 298 P PKPab 04 50 26.1 -4.2
BMR Baia Mare 152.95 330 ⇑PKP2 PKPab 04 50 31.3 +1.3
BMR Baia Mare 152.95 330⇑ *i*P PKPab 04 50 31.3 +1.3
KSP Ksiaz 152.95 342 *e*PKP PKPbc 04 50 18.9 +0.3
KSP *e* 04 50 25.7
KSP *e* 04 50 40.7
KSP Ksiaz 152.95 342 *e*PKIKP PKPdf 04 50 11.1 -0.2
KSP *e* 04 50 18.7
KSP *e* 04 50 28.7
KSP Ksiaz 152.95 342 *e*PKPdf PKPdf 04 50 11.1 -0.2
KSP *e*PKPbc PKPbc 04 50 18.7 +0.1
KSP *e*PKPab PKPab 04 50 28.7 -1.2
KSP *ep*PKPab pPKPab 04 50 40.1 -2.0
KSP LR LR
comp=Z,800nm,22.9s,MS5.5
HTR Trewern Hill 152.96 10 P PKPbc 04 50 17.7 -0.9
HTR Trewern Hill 152.96 10 *e*P PKPbc 04 50 17.7 -0.9
TRPA Tarpa 153.03 332⇑ *i*P PKPbc 04 50 21.4 +2.5
IBBN Ibbenburen 153.09 355 *e*PKPbc PKPbc 04 50 18.2 -0.7
MLR Muntele Rosu 153.26 324 ⇑PKIKP PKPbc 04 50 19.5 0.0
MLR Muntele Rosu 153.26 324⇑ *i*P PKPbc 04 50 19.5 0.0
OKC Ostrava-Krasne 153.29 339 *e*PKIKP PKPbc 04 50 19.5 +0.1
OKC *e* 04 50 29.9
OKC MLR MLR
comp=Z,400nm,15.9s,MS5.3
OKC Ostrava-Krasne 153.29 339 *e*PKP PKPbc 04 50 19.5 +0.1
OKC *e* 04 50 29.9
OKC *e* 04 50 41.4
OKC *e*SS SS 05 13 52.1 +17
OKC Ostrava-Krasne 153.29 339⇑ *e*PKP PKPbc 04 50 19.5 +0.1
OKC *e*PKPAB PKPab 04 50 29.9 -1.4
OKC *ep*PKP pPKPdf 04 50 41.4 +17
OKC *ex* x 05 13 52.1
OKC AMS AMS 06 11 20.0
comp=Z,400nm,15.9s
CLL Collm 153.30 347⇓ *e*PKIKP PKPdf 04 50 11.0 -0.8
CLL *i* 04 50 19.0
CLL *i* 04 50 29.4
CLL pmax pmax
comp=Z,18nm,0.8s
CLL pmax pmax
comp=Z,36nm,1.2s
CLL MLR MLR
comp=Z,400nm,19.4s,MS5.2
CLL Collm 153.30 347 *e*PKP PKPdf 04 50 11.0 -0.8
CLL ⇓*i*PKP PKPbc 04 50 19.0 -0.4
CLL *i* PKP PKPab 04 50 29.4 -2.0
CLL *i* pPKP pPKPdf 04 50 41.3 +17
CLL LR LR
comp=Z,400nm,19.4s,MS5.2
CLL Collm 153.30 347 *e*PKPdf PKPdf 04 50 11.0 -0.8
CLL ⇓*i*PKPbc PKPbc 04 50 19.0 -0.4
comp=Z,18nm,0.8s
CLL *i* PKPab PKPab 04 50 29.4 -2.0
comp=Z,36nm,1.2s
CLL *i* pPKPab pPKPab 04 50 41.3 -2.3
comp=Z,56nm,1.0s
CLL *e* 04 51 03.0
CLL *e*PP PP 04 54 00.0 -4.5
CLL *e*SS SS 05 13 41.0 +5.8
CLL *e*SSS 05 19 16.0
CLL *e*SSSS 05 24 00.0
CLL LmV 06 12 00.0
comp=Z,400nm,19.4s
UPC Upice 153.33 342 *e*PKIKP PKPbc 04 50 19.4 -0.1
UPC *e* 04 50 30.0
UPC Upice 153.33 342 *e*PKP PKPbc 04 50 19.4 -0.1
UPC *e* 04 50 30.0
UPC *e* 04 50 41.8
UPC Upice 153.33 342⇑ *e*PKP PKPbc 04 50 19.4 -0.1
UPC *e*PKPAB PKPab 04 50 30.0 -1.5
UPC *ep*PKP pPKPdf 04 50 41.8 +17
GAZI Gazipasa 153.35 300⇑ *i*P PKPbc 04 50 19.4 -0.6
DPC Dobruska-Polom 153.38 342 *e*PKIKP PKPdf 04 50 10.8 -1.2
DPC *e* 04 50 19.8
DPC *e* 04 50 29.9
DPC MLR MLR
comp=Z,600nm,19.1s,MS5.4
DPC Dobruska-Polom 153.38 342 *e*PKP PKPdf 04 50 10.8 -1.2
DPC *e* 04 50 19.8
DPC *e* 04 50 29.9
DPC *e* 04 50 41.7
DPC *e*SS SS 05 13 48.4 +12
DPC LR LR
comp=Z,600nm,19.1s,MS5.4
DPC Dobruska-Polom 153.38 342 *e*PKPDF PKPdf 04 50 10.8 -1.2
DPC ⇑*e*PKP PKPdf 04 50 19.8 +7.8
DPC *e*PKPAB PKPab 04 50 29.9 -1.8
DPC *ep*PKP pPKPdf 04 50 41.7 +17
DPC *ex* x 05 13 48.4
DPC AMS AMS 06 07 50.0
comp=Z,600nm,19.1s
ALFC Alevga 153.39 298 P PKPab 04 50 27.1 -5.3
comp=Z,2.4nm,0.7s
BORA Eskisehir 153.48 309⇓ *i*P PKPbc 04 50 19.9 -0.2
WTSB Winterswijk 153.50 356 PKiKP PKiKP 04 50 19.2 -0.7
comp=Z,23nm,0.8s
WTSB Winterswijk 153.50 356 *e*PKPpre PKPab 04 50 29.5 -2.6
comp=Z,18nm,1.2s
WTSB Winterswijk 153.50 356 *e*PKPab pPKPab 04 50 41.2 -3.2
comp=Z,59nm,1.3s
BRG Berggiesshubel 153.51 345 *e*PKPbc PKPbc 04 50 19.5 -0.3
BRG *e*PKPab PKPab 04 50 30.0 -2.2
BRG *ep*PKPab pPKPab 04 50 42.0 -2.5
BRG Berggiesshubel 153.51 345 *i* PKP PKPbc 04 50 19.9 +0.1
comp=Z,8.9nm,0.7s
BRG *i* 04 50 29.9
comp=Z,17nm,0.7s
BRG *i* 04 50 38.3
comp=Z,24nm,1.1s
BRG *ep*PKP pPKPdf 04 50 42.0 +17
comp=Z,28nm,1.0s
BRG
comp=N,254nm,18.7s
BRG
comp=E,307nm,18.1s
BRG
comp=Z,314nm,15.5s
BRG Berggiesshubel 153.51 345 *i* PKIKP PKPbc 04 50 19.9 +0.1
BRG *i* 04 50 29.9
BRG pmax pmax
comp=Z,5.0nm,0.7s
BRG pmax pmax
comp=Z,10.0nm,0.7s
BRG pmax pmax
comp=Z,14nm,1.1s
BRG pmax pmax
comp=Z,17nm,1.0s
BRG MLR MLR
comp=N,152nm,18.7s,MS5.0
BRG MLR MLR
comp=E,184nm,18.1s,MS5.0
BRG MLR MLR
comp=Z,188nm,15.5s,MS5.0
MORC Moravsky Berou 153.53 340 *e*PKIKP PKPbc 04 50 19.5 -0.4
MORC Moravsky Berou 153.53 340⇑ *i*P PKPbc 04 50 20.2 +0.3
KECS Kecovo 153.59 334 *e*PKIKP PKPab 04 50 30.2 -2.5
KECS Kecovo 153.59 334 *e*PKP PKPab 04 50 30.2 -2.5
PPCY Paphos 153.66 298 P PKPab 04 50 28.0 -5.5
PVCC Panska Ves 153.68 344 *e*PKIKP PKPbc 04 50 20.4 +0.2
PVCC *e* 04 50 30.5
PVCC MLR MLR
comp=Z,700nm,20.5s,MS5.5
PVCC Panska Ves 153.68 344 *e*PKP PKPbc 04 50 20.4 +0.2
PVCC *e* 04 50 30.5
PVCC *e* 04 50 43.7
PVCC LR LR
comp=Z,700nm,20.5s,MS5.5
PVCC Panska Ves 153.68 344⇑ *e*PKP PKPbc 04 50 20.4 +0.2
PVCC *e*PKPAB PKPab 04 50 30.5 -2.5
PVCC *ep*PKP pPKPdf 04 50 43.7 +19

PVCC AMS AMS 06 04 10.0
comp=Z,700nm,20.5s
VOIR **153.77 325** ⇓PKIKP PKPbc 04 50 22.1 +1.5
VOIR **153.77 325** ⇓*i*P PKPbc 04 50 22.1 +1.5
DRGR **153.96 329** ⇑PKIKP PKPbc 04 50 22.0 +1.0
DRGR **153.96 329** ⇑*i*P PKPbc 04 50 22.0 +1.0
BUG **Bochum--Univer** **153.99 355** *e*PKPbc PKPbc 04 50 20.4 -0.5
BUG *ep*PKPab pPKPab 04 50 43.8 -2.7
PRU **Pruhonice** **154.19 344** *e*PKIKP PKPbc 04 50 21.4 +0.1
PRU *e* 04 50 34.8
PRU *e*SS SS 05 13 46.1 +1.1
PRU MLR MLR
comp=Z,500nm,19.9s,MS5.3
PRU **Pruhonice** **154.19 344** *e*PKP PKPbc 04 50 21.4 +0.1
PRU *e* 04 50 34.8
PRU *e* 04 50 45.7
PRU *e*SS SS 05 13 46.1 +1.1
PRU LR LR
comp=Z,500nm,19.9s,MS5.3
PRU **Pruhonice** **154.19 344** ⇑*e*PKP PKPbc 04 50 21.4 +0.1
PRU *e*PKPAB PKPab 04 50 34.8 -0.3
PRU *ep*PKP pPKPdf 04 50 45.7 +20
PRU *e*SS SS 05 13 46.1 +1.1
PRU AMS AMS 06 04 20.0
comp=Z,500nm,19.9s
VYHS **Vyhne** **154.20 337** *e*PKIKP PKPbc 04 50 22.0 +0.6
VYHS **Vyhne** **154.20 337** *e*PKP PKPbc 04 50 22.0 +0.6
MOX **Moxa** **154.20 348** *e*PKP PKPdf 04 50 12.6 -0.5
comp=Z,18nm,1.6s
MOX *e*PP PP 04 54 15.4 +5.9
MOX
comp=Z,400nm,19.0s
MOX **Moxa** **154.20 348** *ep*PKPab pPKPab 04 50 44.7 -2.7
VRAC **Vranov** **154.24 340** ⇑PKIKP PKPab 04 50 31.7 -3.7
VRAC **Vranov** **154.24 340** ⇑*i*P PKPab 04 50 31.7 -3.7
TANN **Tannenbergstha** **154.26 347** *ep*PKPab pPKPab 04 50 45.0 -2.7
PSZ **Piszkesteto** **154.28 334** *e*PKIKP PKPbc 04 50 22.3 +0.7
PSZ *e* 04 50 36.1
PSZ MLR MLR
comp=Z,710nm,20.0s,MS5.5
PSZ **Piszkesteto** **154.28 334** ⇑PKIKP PKPab 04 50 32.3 -3.3
PSZ **Piszkesteto** **154.28 334** ⇑*i*P PKPab 04 50 32.3 -3.3
KOLL **Kolacno** **154.28 337** *e*PKIKP PKPbc 04 50 22.1 +0.5
KOLL **Kolacno** **154.28 337** *e*PKP PKPbc 04 50 22.1 +0.5
ULDT **Uludag** **154.28 311** ⇑*i*P PKPbc 04 50 21.4 -0.5
UBBA **Unterbreizbach** **154.30 351** *e*PKPbc PKPbc 04 50 21.1 -0.4
UBBA *ep*PKPab pPKPab 04 50 44.8 -3.0
NKC **Novy Kostel** **154.44 347** ⇑*e*PKP PKPbc 04 50 22.9 +1.0
NKC *e*PKPAB PKPab 04 50 34.3 -1.9
NKC *e*SS SS 05 13 54.1 +6.5
TREC **Trest** **154.57 342** *e*PKP2 PKPab 04 50 37.1 +0.3
TREC *e*SS SS 05 13 46.5 -2.7
TREC MLR MLR
comp=Z,700nm,18.0s,MS5.5
TREC **Trest** **154.57 342** *e*PKPAB PKPab 04 50 37.1 +0.3
TREC *ep*PKP pPKPdf 04 50 46.9 +21
TREC *e*SS SS 05 13 46.5 -2.7
TREC AMS AMS 06 03 40.0
comp=Z,700nm,18.0s
KORT **Korkueli** **154.63 303** ⇑*i*P PKPbc 04 50 22.7 0.0
SZH **Strazhica** **154.67 320** P PKPab 04 50 38.2 +0.7
HGN **Heimansgroeve** **154.75 357** *e*PKPpre PKPab 04 50 36.5 -1.0
comp=Z,40nm,1.7s
HGN **Heimansgroeve** **154.75 357** *e*PKPab PKPab 04 50 46.9 +9.4
comp=Z,20nm,1.1s
MEM **Membach** **154.90 357** PKPbc PKPbc 04 50 22.8 0.0
GZR **Gura Zlata** **154.95 327** ⇓PKIKP PKPbc 04 50 25.0 +1.9
GZR **Gura Zlata** **154.95 327** ⇓*i*P PKPbc 04 50 25.0 +1.9
BUD **Budapest** **154.97 335** ⇓*e*PKP PKPbc 04 50 22.5 -0.6
ZST **Bratislava** **155.05 339** *e*PKIKP PKPdf 04 50 14.4 0.0
ZST **Bratislava** **155.05 339** *e*PKP PKPdf 04 50 14.4 0.0
SNF **Seneffe** **155.06 359** E PKPab 04 50 38.8 0.0
TNS **Taunus Mts** **155.08 353** *ep*PKPab pPKPab 04 50 48.6 -2.6
BCLA **Clavier** **155.12 358** E PKPab 04 50 39.1 0.0
BCLA E 04 50 49.4
GOLH **Golhisar** **155.14 304** ⇑*i*P PKPab 04 50 31.2 -8.5
GRF **Grafenberg Arr** **155.19 348** *ep*PKPab pPKPab 04 50 49.4 -2.2
GRF *e*PP PP 04 54 17.0 +1.9
GRF *e*SS SS 05 13 58.8 +3.1
GRF *e*L 06 05 59.7
comp=Z,713nm,19.8s
KHC **Kasperske Hory** **155.22 344** *e*PKIKP PKPdf 04 50 13.6 -1.0
KHC *e* 04 50 22.7
KHC *e* 04 50 39.2
KHC *e*SS SS 05 14 00.0 +3.8
KHC MLR MLR
comp=Z,800nm,21.5s,MS5.5
KHC **Kasperske Hory** **155.22 344** *e*PKPDF PKPdf 04 50 13.6 -1.0
KHC ⇑*e*PKP PKPdf 04 50 22.7 +8.1
KHC *e*PKPAB PKPab 04 50 39.2 -0.4
KHC *ep*PKP pPKPdf 04 50 49.2 +22
KHC *e*SS SS 05 14 00.0 +3.8
KHC AMS AMS 06 02 30.0
comp=Z,800nm,21.5s
BZS **Buzias** **155.34 329** ⇑PKIKP PKPdf 04 50 14.5 -0.4
BZS **Buzias** **155.34 329** ⇑*i*P PKPdf 04 50 14.5 -0.4
WET **Wettzell** **155.37 346** *ep*PKPab pPKPab 04 50 50.2 -2.2
AKAS **Kas** **155.44 302** ⇑*i*P PKPdf 04 50 15.5 +0.1
GIVF **Givet** **155.45 358** ⇑*i*PKP2 PKPab 04 50 40.3 -0.2
comp=Z,89nm,1.4s
DOU **Dourbes** **155.47 359** PKPab PKPab 04 50 40.3 -0.2
BAIF **Baives** **155.51 359** ⇑*i*PKP2 PKPab 04 50 40.7 -0.1
comp=Z,46nm,1.2s
ABH **Alteburg** **155.51 354** PKP PKPab 04 50 41.5 +0.7
DIM **Dimitrovgrad** **155.62 318** P PKPab 04 50 32.9 -8.7
TOD **Tromm** **155.65 352** PKP2 PKPab 04 50 40.8 -0.6
CONA **Conrad Observa** **155.69 340** ⇑*i*PKPdf PKPdf 04 50 14.7 -0.6
comp=Z,17nm,1.7s
WLF **Walferdange** **155.83 356** E pPKPab 04 50 52.7 -1.7
WLF **Walferdange** **155.83 356** *ep*PKPab pPKPab 04 50 52.3 -2.1
WLF **Walferdange** **155.83 356** *e*PKP2 PKPab 04 50 40.4 -1.8
WLF MLR MLR
comp=Z,837nm,20.0s,MS5.6
PGB **Panagyurishte** **156.13 320** P PKPab 04 50 46.3 +2.6
RZN **Rozhen** **156.33 318** P PKPab 04 50 45.4 +0.8
LANF **Langenberg** **156.38 353** PKP PKPab 04 50 43.3 -1.2
STU **Stuttgart** **156.41 351** *e*PKPab PKPab 04 50 40.7 -4.0
STU *ep*PKPab pPKPab 04 50 54.2 -2.7
STU **Stuttgart** **156.41 351** *e*PKIKP PKPdf 04 50 15.5 -0.7
FUR **Furstenfeldbru** **156.64 347** *ep*PKPab pPKPab 04 50 55.6 -2.3
VTS **Vitosha** **156.65 322** ⇑PKIKP PKPab 04 50 36.0 -10
VTS **Vitosha** **156.65 322** P PKPab 04 50 46.8 +0.8
VTS **Vitosha** **156.65 322** ⇑*i*P PKPab 04 50 36.0 -10
RJOB **Jochberg** **156.71 344** *e*PKPab PKPab 04 50 46.5 +0.5
RJOB *ep*PKPab pPKPab 04 50 56.5 -1.7
LDF **La Druitiere** **156.78** 7 ⇑*i*PKP2 PKPab 04 50 45.4 -0.8
comp=Z,17nm,0.8s
GRR **Gorron** **156.90** 8 ⇑*i*PKP2 PKPab 04 50 46.4 -0.4
comp=Z,204nm,1.6s
BFO **Black Forest** **156.96 352** *e*PKP2 PKPab 04 50 46.4 -0.6
BFO MLR MLR
comp=Z,602nm,20.0s,MS5.4
MMB **Musomiste** **156.98 319** P PKPab 04 50 47.9 +0.5
CDF **Champ du Feu** **156.99 354** ⇑*i*PKP2 PKPab 04 50 46.9 -0.3
comp=Z,43nm,1.4s
MEZF **Maizieres J'vi** **157.05 358** ⇑*i*PKP2 PKPab 04 50 47.3 -0.1
comp=Z,39nm,1.0s
SOKA **Soboth** **157.06 340** ⇑*i*PKPdf PKPdf 04 50 16.0 -1.1
comp=Z,6.8nm,1.8s
PERS **Pernice** **157.07 340** *i*PKPdf PKPab 04 50 46.8 -0.8
PERS *i*PKPbc pPKPab 04 50 56.2 -3.6
SPAK **Spaichingen-Ko** **157.12 351** PKP PKPab 04 50 47.4 -0.3
KBA **Koelnbreinsper** **157.18 343** ⇑*i*PKPdf PKPdf 04 50 16.5 -0.8
comp=Z,6.8nm,1.7s
ECH **Echery** **157.20 354** PKP PKPab 04 50 47.3 -0.8
ECH **Echery** **157.20 354** *e*PKP2 PKPab 04 50 47.2 -0.9
ECH MLR MLR
comp=Z,586nm,20.0s,MS5.4
ECH **Echery** **157.20 354** *e*PKPab PKPab 04 50 47.2 -0.9
ECH *e* 04 50 57.9
ECH LR LR
comp=Z,586nm,20.0s,MS5.4
THEF **They Montfort** **157.28 356** PKP PKPab 04 50 45.9 -2.5
HAU **Haudompre** **157.47 355** ⇑*i*PKP2 PKPab 04 50 49.0 -0.3
HAU *e*MLR MLR
comp=Z,697nm,20.5s,MS5.2
HAU **Haudompre** **157.47 355** ⇑*i*PKPab PKPab 04 50 49.0 -0.3
HAU LR LR
comp=Z,700nm,20.5s,MS5.5
MOF **Molkenrain** **157.56 354** PKP PKPab 04 50 49.0 -0.6
HINF **Hinteralfeld** **157.62 354** ⇑*i*PKP2 PKPab 04 50 49.3 -0.6
comp=Z,61nm,1.6s

LJU **Ljubljana** **157.78 340** *i*PKPdf PKPab 04 50 51.0 +0.3
LJU *i*PKPbc pPKPab 04 50 59.6 -3.3
VOY **Vojsko** **157.98 341** *e*PKPbc PKPab 04 51 00.3 +8.8
BOJS **Bojanci** **158.02 338** *i*PKPdf PKPab 04 50 51.5 -0.3
BOJS *i*PKPbc pPKPab 04 51 01.5 -2.5
BOJS *i* 04 54 28.5
JAVS **Javornik** **158.06 340** *i*PKPdf PKPab 04 50 51.2 -0.7
JAVS *i*PKPbc pPKPab 04 51 01.0 -3.1
LOMF **Lomont** **158.09 354** PKP PKPab 04 50 51.3 -0.6
LOR **Lormes** **158.31 360** ⇑*i*PKP2 PKPab 04 50 52.5 -0.4
comp=Z,54nm,1.5s
LOR *e*MLR MLR
comp=Z,1μm,20.5s,MS5.4
LOR **Lormes** **158.31 360** ⇑*i*PKPab PKPab 04 50 52.5 -0.4
LOR LR LR
comp=Z,1μm,20.5s,MS5.7
TRI **Trieste** **158.31 341** PFAKE 04 50 30.0 +11
TRI LR LR
comp=Z,548nm,19.0s,MS5.4
SSF **Saint Saulge** **158.51** 0 ⇑*i*PKP2 PKPab 04 50 53.5 -0.3
comp=Z,40nm,1.0s
TUE **Stuetta** **158.63 349** PFAKE 04 50 30.0 +11
TUE LR LR
comp=Z,636nm,22.0s,MS5.4
MFF **Saint Martin d** **158.74** 7 ⇑*i*PKP2 PKPab 04 50 54.4 -0.4
comp=Z,64nm,1.1s
AVF **Avril sur Loir** **158.78** 1 ⇑*i*PKP2 PKPab 04 50 54.4 -0.5
comp=Z,43nm,1.2s
CABF **La Chapelle** **158.88 356** ⇑*i*PKP2 PKPab 04 50 55.2 -0.2
SMF **Signal de Mont** **158.93 360** ⇑*i*PKP2 PKPab 04 50 55.3 -0.3
comp=Z,60nm,1.1s
BGF **Bois d'Agland** **159.00** 2 ⇑*i*PKP2 PKPab 04 50 55.5 -0.4
comp=Z,57nm,1.3s
LIC **Lamto** **159.05 155** *e*PKP2 PKPab 04 50 57.1 +0.1
comp=Z,55nm,1.1s
LIC *e*MLR MLR
comp=Z,820nm,19.5s,MS5.3
LIC **Lamto** **159.05 155** *e*PKP2 PKPab 04 50 57.2 +0.2
comp=Z,63nm,1.1s
LIC **Lamto** **159.05 155** *e*PKPab PKPab 04 50 57.1 +0.1
LIC LR LR
comp=Z,410nm,19.5s,MS5.3
TCF **Toulx Ste Croi** **159.25** 3 ⇑*i*PKP2 PKPab 04 50 56.6 -0.4
comp=Z,13nm,1.0s
KIC **Kosan Boka** **159.28 156** *e*PKP2 PKPab 04 50 58.2 +0.2
comp=Z,47nm,0.9s
TIR **Tirane** **159.32 324** PFAKE 04 50 30.0 +10
TIR LR LR
comp=Z,579nm,21.0s,MS5.4
TIC **Toumodi** **159.44 154** *e*PKP2 PKPab 04 50 58.8 +0.1
comp=Z,328nm,2.0s
AGO **Saint Agoulin** **159.51** 1 PKP PKPab 04 50 59.1 +0.9
DBIC **Dimbokro** **159.52 155** PKP PKPdf 04 50 21.0 -0.2
comp=Z,4.8nm,0.8s,baz=245,slow=2.7,SNR=5.2
DBIC PKPab PKPab 04 50 59.3 +0.3
comp=Z,6.2nm,0.7s,baz=172,slow=6.3,SNR=6.0
DBIC **Dimbokro** **159.52 155** PKIKP PKPdf 04 50 21.0 -0.1
DBIC 04 50 59.3
DBIC pmax pmax
comp=Z,5.0nm,0.8s
DBIC pmax pmax
comp=Z,6.0nm,0.7s
DBIC **Dimbokro** **159.52 155** PKP PKPdf 04 50 21.0 -0.1
DBIC PKPab PKPab 04 50 59.3 +0.3
DBIC *e*PKPab PKPab 04 50 59.6 +0.6
DBIC LR LR
comp=Z,563nm,19.0s,MS5.4
PLDF **La Plantade** **159.60** 0 PKP PKPab 04 50 59.1 +0.6
LPL **La Plagne** **159.91 354** ⇑*i*PKP2 PKPab 04 51 00.6 +0.7
comp=Z,40nm,1.4s
LPG **La Plagne** **159.93 354** ⇑*i*PKP2 PKPab 04 51 01.0 +1.0
RJF **Les Rejaudoux** **160.19** 5 ⇑*i*PKP2 PKPab 04 51 00.6 -0.5
comp=Z,30nm,1.1s
RJF *e*MLR MLR
comp=Z,725nm,19.8s
RJF **Les Rejaudoux** **160.19** 5 ⇑*i*PKPab PKPab 04 51 00.6 -0.5
RJF LR LR
comp=Z,720nm,19.8s
SSB **Saint Sauveur** **160.28 358** PFAKE 04 50 30.0 +9.0
SSB LR LR
comp=Z,848nm,20.0s
LBL **Lubilhac** **160.34** 1 PKP PKPab 04 51 02.7 +0.9
BNI **Bardonecchia** **160.38 354** *e*PKIKP PKPdf 04 50 20.9 -0.2
BNI *e* 04 51 02.0
BNI MLR MLR
comp=Z,817nm,20.0s
LFF **La Frestale** **160.48** 6 ⇑*i*PKP2 PKPab 04 51 02.1 -0.3
comp=Z,41nm,1.1s
ORIF **Oris-en-Rattie** **160.58 355** ⇑*i*PKP2 PKPab 04 51 03.2 +0.4
comp=Z,27nm,1.1s
ORIF *e*MLR MLR
comp=Z,731nm,21.2s
CAF **Calviac** **160.60** 4 ⇑*i*PKP2 PKPab 04 51 02.5 -0.4
comp=Z,8.4nm,0.8s
VLC **Villacollemand** **160.65 345** PFAKE 04 50 30.0 +8.6
VLC LR LR
comp=Z,593nm,20.0s
MBDF **Montbardon** **160.69 353** ⇑*i*PKP2 PKPab 04 51 03.5 +0.2
VIVF **Saint-Julien-l** **160.70 358** ⇑*i*PKP2 PKPab 04 51 03.5 +0.1
AQU **L'Aquila** **161.43 337** *e*PKP2 PKPab 04 51 07.0 +0.4
AQU MLR MLR
comp=Z,717nm,20.0s
AQU **L'Aquila** **161.43 337** ⇑*i*P PKPab 04 51 12.0 +5.4
SBF **Sospel** **161.47 352** ⇑*i*PKP2 PKPab 04 51 06.0 -0.7
SMRF **Simiane la Rot** **161.54 356** ⇑*i*PKP2 PKPab 04 51 07.6 +0.6
comp=Z,29nm,1.1s
PBRG **Braganca** **161.60** 26 *e*PKPab PKPab 04 51 07.2 -0.2
PVRL **Vila Real** **161.64** 28 *e*PKPab PKPab 04 51 07.7 +0.1
FRF **La Foret Royal** **161.86 353** ⇑*i*PKP2 PKPab 04 51 07.9 -0.5
comp=Z,48nm,1.2s
MVO **Moncorvo** **162.02** 27 *e*PKPab PKPab 04 51 09.5 +0.2
MVO *e*P 05 21 54.5
MVO *e*LR LR 05 50 52.4
comp=Z,645nm,18.0s
LMR **La Mourre** **162.10 353** ⇑*i*PKP2 PKPab 04 51 09.1 -0.4
comp=Z,24nm,1.1s
MTLF **Montolieu** **162.19** 4 ⇑*i*PKP2 PKPab 04 51 09.9 0.0
comp=Z,37nm,1.5s
MTE **Manteigas** **162.43** 30 *e*PKPdf PKPdf 04 50 24.0 +0.6
MTE *e*P 05 22 01.8
MTE *e*LR LR 05 52 51.3
comp=Z,581nm,18.0s
MTE **Manteigas** **162.43** 30 PFAKE 04 50 30.0 +6.6
MTE LR LR
comp=Z,819nm,20.0s
PTOM **Tomar** **162.64** 33 *e*PKPdf PKPdf 04 50 24.5 +0.8
PTOM **Tomar** **162.64** 33 *e*PKPab PKPab 04 51 11.3 -0.8
PMAFR **Mafra** **162.69** 36 *e*LR LR 05 55 25.3
comp=Z,620nm,20.0s
PCBR **Castelo Branco** **162.91** 31 *e*PKPdf PKPdf 04 50 24.5 +0.6
PMRV **Marv??o** **163.28** 31 *e*PKPab PKPab 04 51 14.2 -0.7
PMRV *e*P 05 22 12.8
PMRV *e*LR LR 05 54 31.1
comp=Z,676nm,20.0s
CEL **Celeste** **163.67 324** PFAKE 04 50 40.0 +15
CEL LR LR
comp=Z,402nm,21.0s
EVO **Evora** **163.67** 35 *e*PKIKP PKPdf 04 50 24.9 +0.2
comp=Z,38nm,1.3s
EVO *e*MLR MLR
comp=Z,940nm,21.2s
PTEO **Sao Teotonio** **164.00** 39 *e*PKPab PKPab 04 51 17.3 -0.9
PFVI **Vila Bisbo** **164.23** 40 *e*LR LR 05 57 00.4
comp=Z,952nm,20.0s
PBAR **Barrancos** **164.43** 33 *e*LR LR 05 51 09.6
comp=Z,820nm,20.0s
PAB **San Pablo** **164.46** 24 PFAKE 04 50 40.0 +15
PAB LR LR
comp=Z,642nm,20.0s
ESDC **Sonseca Array** **164.48** 23 PKP PKPdf 04 50 25.6 +0.2
comp=Z,0.7nm,0.7s,baz=9.3,slow=1.7,SNR=8.4
ESDC PKPab PKPab 04 51 20.0 -0.1
comp=Z,1.9nm,0.7s,baz=331,slow=3.8,SNR=8.8
ESDC PP PP 04 55 02.3 -3.2
comp=Z,0.1nm,0.3s,baz=270,slow=5.1,SNR=4.2
ESLA **Sonseca Array** **164.48** 23 PFAKE 04 50 40.0 +15
ESLA LR LR
comp=Z,4μm,21.0s
PBDV **Barranco-do-Ve** **164.66** 38 *e*LR LR 05 56 20.2
comp=Z,776nm,20.0s
VSL **Villasalto** **165.29 343** PFAKE 04 50 40.0 +14
VSL LR LR
comp=Z,580nm,20.0s
WDD **Wield Dalam** **166.15 321** PFAKE 04 50 40.0 +13
WDD LR LR
comp=Z,550nm,19.0s
SFS **San Fernando** **166.17** 36 PFAKE 04 50 40.0 +13
SFS LR LR
comp=Z,2μm,21.0s
KEST **Kesra** **168.75 336** PKPab PKPab 04 51 39.2 +0.2
comp=Z,1.8nm,0.9s,baz=71,slow=1.3,SNR=5.0
KEST PP PP 04 55 26.6 -1.0
comp=Z,1.2nm,1.0s,baz=297,slow=2.6,SNR=4.0
TAM **Tamanrasset** **176.83 211** *e*PKIKP PKPdf 04 50 32.5 0.0
TAM *e* 04 52 16.4
TAM MLR MLR
comp=Z,763nm,19.0s

JMA 06 04:42:15.5±0.3, 43°.68N×147°.86E, h7km, M3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.57**	**259**	P	Pn	04 42 44.0	+0.2
NEM2				*e*S	Sn	04 43 04.4	0.0
JRA	**Rausu**	**2.00**	**278**	P	Pn	04 42 50.1	+0.4
JNK	**Nakash**	**2.28**	**269**	P	Pn	04 42 54.0	+0.5
JNK				*e*S	Sn	04 43 22.6	+0.7
JAK	**Akkeshi**	**2.41**	**255**	P	Pn	04 42 55.7	+0.4
JAK				*e*S	Sn	04 43 25.6	+0.6
JTKR	**Abashiri--Toko**	**2.88**	**277**	P	Pn	04 43 02.3	+0.6
JAR	**Ashorobuto**	**3.00**	**264**	P	Pn	04 43 04.6	+1.2
JAR				*e*S	Sn	04 43 40.8	+1.2
JOB	**Onbets**	**3.04**	**257**	P	Pn	04 43 04.9	+0.9
JOB				*e*S	Sn	04 43 41.5	+0.9
JMP	**Maruseppu**	**3.27**	**277**	P	Pn	04 43 08.2	+1.0
JCH	**Churui**	**3.46**	**254**	P	Pn	04 43 10.8	+1.1
JCH				*e*S	Sn	04 43 51.6	+0.7
JFR	**Furan**	**3.87**	**264**	P	Pn	04 43 17.7	+2.3
JNBK	**Urakawa-nobuka**	**4.00**	**251**	P	Pn	04 43 17.8	+0.6
JNBK				*e*S	Sn	04 44 05.0	+0.7
JKB	**Kayabe**	**5.33**	**253**	P	Pn	04 43 36.4	+0.9
JKB				*e*S	Sn	04 44 35.8	-1.3

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*ISCJB **06** 04:51:31.2±1.2, 76°.96N±0°.07×19°.5E±0°.4, h10km, Error ellipse: s-maj=13.0km s-min=8.6km az=149.1*
*CSEM **06** 04:51:32.6±0.1, 76°.83N×18°.57E, h2km, ML2.2, Error ellipse: s-maj=12.8km s-min=1.6km az=66.0*
*NAO **06** 04:51:34.1±2.3, 76°.92N×19°.28E, h17km±24km, ML2.2*
*BER **06** 04:51:35.3±2.9, 76°.94N×19°.82E, h21km±41km, MD2.7, ML2.3, ML2.2(NAO)*

ISC 06 04:51:33.1±2.2, 76°.93N±0°.07×19°.2E±0°.5, h6km±20km, n11, σ0°.42/17, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSP	**Hornsund**	**0.83**	**277**	*e*P	**Pg**	**04 51 49.5**	**+0.5**
HSP				*e*S	**Sg**	**04 51 59.5**	**-0.2**
SPA0	**Spitsbergen Ar**	**1.40**	**335**	Pg	**Pg**	**04 52 00.2**	**+0.4**
baz=149,slow=18							
SPA0				Lg		04 52 18.9	
baz=151,slow=37							
SPA0	**Spitsbergen Ar**	**1.40**	**335**	Pg	**Pg**	**04 52 00.2**	**+0.4**
baz=149,slow=18							
SPA0				Lg		04 52 18.9	
baz=151,slow=37							
SPA0	**Spitsbergen Ar**	**1.40**	**335**	Pg	**Pg**	**04 52 00.2**	**+0.4**
baz=149,slow=17,SNR=422							
SPA0				Lg		04 52 18.9	
baz=151,slow=31							
KBS	**Kingsbay**	**2.52**	**326**	Pn	**Pn**	**04 52 14.9**	**+0.5**
KBS				Pg	**Pg**	**04 52 21.1**	**-0.1**
KBS				Lg		04 52 52.3	
KBS	**Kingsbay**	**2.52**	**326**	*e*P	**Pn**	**04 52 14.9**	**+0.5**
KBS				*e*Sg	**Sg**	**04 52 53.3**	**-0.6**
KBS				AML	AML	04 53 01.9	
comp=Z,29nm,0.3s							
KBS	**Kingsbay**	**2.52**	**326**	*e*P	**Pn**	**04 52 14.9**	**+0.5**
SNR=55							
KBS	**Kingsbay**	**2.52**	**326**	Pg	**Pg**	**04 52 21.1**	**-0.2**
KBS				*e*Sg	**Sg**	**04 52 53.3**	**-0.6**
comp=Z,29nm,0.3s,SNR=92							
ARA0	**ARCESS Array S**	**7.65**	**163**	Pn	**Pn**	**04 53 24.3**	**-0.4**
baz=358,slow=10							
ARA0				Sn	**Sn**	**04 54 43.3**	**-8.2**
baz=0.5,slow=22							
ARA0	**ARCESS Array S**	**7.65**	**163**	Pn	**Pn**	**04 53 24.3**	**-0.4**
baz=358,slow=10							
ARA0				Sn	**Sn**	**04 54 43.3**	**-8.2**
baz=0.5,slow=22							
ARA0	**ARCESS Array S**	**7.65**	**163**	Pn	**Pn**	**04 53 24.3**	**-0.4**
baz=358,slow=9.9,SNR=7.3							

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*ROM **06** 05:10:44.6±0.2, 44°.22N×8°.25E, h10km±1km, Md2.2/6, Ml2.0/6, Error ellipse: s-maj=2.9km s-min=1.8km az=127.0*
*ISCJB **06** 05:10:45.1±0.5, 44°.25N±0°.02×8°.17E±0°.03, h12km±3km, Error ellipse: s-maj=4.7km s-min=3.2km az=135.0*
*CSEM **06** 05:10:45.5±0.2, 44°.25N×8°.20E, h10km, ML2.5/16, Error ellipse: s-maj=3.8km s-min=2.6km az=132.0*
*STR **06** 05:10:46.7±0.5, 44°.30N×8°.13E, h10km, Ml2.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*LDG **06** 05:10:47.3±0.2, 44°.21N×8°.13E, h5km, Md2.3/3, Ml2.4/11, Error ellipse: s-maj=3.7km s-min=2.0km az=103.0*

ISC 06 05:10:45.6±0.5, 44°.24N±0°.02×8°.20E±0°.04, h13km±2km, n55, σ0°.92/106, 2C, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QLNO	**Quiliano**	**0.13**	**51**	⇑*i*Pg	**Pg**	**05 10 48.3**	**-0.7**
QLNO				Sg	**Sg**	**05 10 50.2**	**-1.2**
446nm,0.3s							
QLNO	**Quiliano**	**0.13**	**51**	⇑*i*Pg	**Pg**	**05 10 48.3**	**-0.7**
QLNO				Sg	**Sg**	**05 10 50.2**	**-1.2**
446nm,0.3s							
PCP	**Piancastagn**	**0.39**	**39**	Pg	**Pg**	**05 10 52.7**	**-0.6**
PCP				Sg	**Sg**	**05 10 58.7**	**+0.2**
70nm,0.2s							
PCP	**Piancastagn**	**0.39**	**39**	Pg	**Pg**	**05 10 52.7**	**-0.6**
PCP				Sg	**Sg**	**05 10 58.7**	**+0.2**
70nm,0.2s							
IMI	**Imperia**	**0.40**	**214**	Pg	**Pg**	**05 10 53.1**	**-0.5**
IMI				Sg	**Sg**	**05 10 59.1**	**+0.1**
58nm,0.5s							
IMI	**Imperia**	**0.40**	**214**	Pg	**Pg**	**05 10 53.1**	**-0.5**
IMI				Sg	**Sg**	**05 10 59.1**	**+0.1**
58nm,0.5s							
AUTN	**L'Aution**	**0.61**	**246**	Pg	**Pg**	**05 10 58.2**	**+0.7**
AUTN				Sg	**Sg**	**05 11 06.0**	**+0.4**
AUTN	**L'Aution**	**0.61**	**246**	Pg	**Pg**	**05 10 58.2**	**+0.7**
AUTN				Sg	**Sg**	**05 11 06.0**	**+0.4**
STV	**Sant Anna di V**	**0.63**	**271**	Pg	**Pg**	**05 10 58.4**	**+0.5**
STV				Sg	**Sg**	**05 11 06.3**	**+0.1**
92nm,0.3s							
STV	**Sant Anna di V**	**0.63**	**271**	Pg	**Pg**	**05 10 58.4**	**+0.5**
STV				Sg	**Sg**	**05 11 06.3**	**+0.1**
92nm,0.3s							
SBF	**Sospel**	**0.67**	**236**	*e*Pg	**Pg**	**05 10 58.5**	**-0.1**
SBF				*e*Sg	**Sg**	**05 11 06.9**	**-0.6**
34nm,0.2s							
SBF	**Sospel**	**0.67**	**236**	*e*Pg	**Pg**	**05 10 58.5**	**-0.1**
SBF				*e*Sg	**Sg**	**05 11 06.9**	**-0.6**
17nm,0.2s							
LUCF	**Luceram**	**0.71**	**241**	Pg	**Pg**	**05 10 59.6**	**+0.2**
LUCF				Sg	**Sg**	**05 11 09.0**	**+0.3**
LUCF	**Luceram**	**0.71**	**241**	Pg	**Pg**	**05 10 59.6**	**+0.2**
LUCF				Sg	**Sg**	**05 11 09.0**	**+0.3**
TOUF	**Mont Tournerai**	**0.73**	**252**	Pg	**Pg**	**05 11 00.1**	**+0.5**
TOUF	**Mont Tournerai**	**0.73**	**252**	Pg	**Pg**	**05 11 00.1**	**+0.5**
DOI	**San Damiano**	**0.73**	**291**	Pg	**Pg**	**05 10 59.6**	**-0.2**
DOI				Sg	**Sg**	**05 11 10.3**	**+0.8**
51nm,0.3s							
DOI	**San Damiano**	**0.73**	**291**	Pg	**Pg**	**05 10 59.6**	**-0.2**
DOI				Sg	**Sg**	**05 11 10.3**	**+0.8**
51nm,0.3s							
REVF	**Revere**	**0.79**	**230**	Pg	**Pg**	**05 11 01.5**	**+0.7**
REVF				Sg	**Sg**	**05 11 13.4**	**+2.3**
REVF	**Revere**	**0.79**	**230**	Pg	**Pg**	**05 11 01.5**	**+0.7**
REVF				Sg	**Sg**	**05 11 13.4**	**+2.3**
PZZ	**Stroppo**	**0.82**	**289**	Pg	**Pg**	**05 11 01.3**	**-0.2**
PZZ				Sg	**Sg**	**05 11 12.5**	**+0.2**
40nm,0.4s							
MVIF	**Mont Vial**	**0.83**	**246**	Pg	**Pg**	**05 11 02.0**	**+0.3**
MVIF				Sg	**Sg**	**05 11 13.0**	**+0.4**
MVIF	**Mont Vial**	**0.83**	**246**	Pg	**Pg**	**05 11 02.0**	**+0.3**

MVIF			Sg	**Sg**	05 11 13.0	+0.4
CALN	**Calern**	**1.07 243**	Pg	**Pg**	05 11 06.6	+0.5
CALN			Sg	**Sg**	05 11 21.9	+1.8
CALN	**Calern**	**1.07 243**	Pg	**Pg**	05 11 06.6	+0.5
CALN			Sg	**Sg**	05 11 21.9	+1.8
OG22	**Abries**	**1.07 303**	Pg	**Pg**	05 11 05.4	-0.8
OG22			Sg	**Sg**	05 11 19.7	-0.5
OG22	**Abries**	**1.07 303**	Pg	**Pg**	05 11 05.4	-0.8
OG22			Sg	**Sg**	05 11 19.7	-0.5
MBDF	**Montbardon**	**1.13 296**	*e*Pg	**Pg**	05 11 06.8	-0.6
MBDF			*e*Sg	**Sg**	05 11 22.3	+0.1
	17nm,0.5s					
MBDF	**Montbardon**	**1.13 296**	*e*Pg	**Pg**	05 11 06.8	-0.6
MBDF			*e*Sg	**Sg**	05 11 22.3	+0.1
	8.3nm,0.5s					
FRF	**La Foret Royal**	**1.32 239**	*e*Pn	**Pn**	05 11 09.3	-0.3
FRF	**La Foret Royal**	**1.32 239**	*e*Pg	**Pg**	05 11 10.3	-0.6
FRF			*e*Sg	**Sg**	05 11 26.9	-1.1
	54nm,0.4s					
FRF	**La Foret Royal**	**1.32 239**	*e*Pn	**Pn**	05 11 09.3	-0.3
FRF	**La Foret Royal**	**1.32 239**	*e*Pg	**Pg**	05 11 10.3	-0.6
FRF			*e*Sg	**Sg**	05 11 26.9	-1.1
	27nm,0.4s					
LMR	**La Mourre**	**1.53 234**	*e*Pn	**Pn**	05 11 11.9	-0.6
LMR			*e*Sn	**Sn**	05 11 31.0	-1.1
LMR			*e*Sg	**Sg**	05 11 33.1	-1.6
	25nm,0.2s					
LMR	**La Mourre**	**1.53 234**	*e*Pn	**Pn**	05 11 11.9	-0.6
LMR			*e*Sn	**Sn**	05 11 31.0	-1.1
LMR			*e*Sg	**Sg**	05 11 33.1	-1.6
	13nm,0.2s					
LPG	**La Plagne**	**1.62 321**	*e*Pn	**Pn**	05 11 15.2	+1.4
LPG			*e*Sn	**Sn**	05 11 35.2	+0.6
	3.8nm,0.3s					
LPG	**La Plagne**	**1.62 321**	*e*Pn	**Pn**	05 11 15.2	+1.4
LPG			*e*Sn	**Sn**	05 11 35.2	+0.6
	1.9nm,0.3s					
LPL	**La Plagne**	**1.65 321**	*e*Pn	**Pn**	05 11 15.7	+1.6
LPL			*e*Sn	**Sn**	05 11 35.6	+0.5
	4.6nm,0.4s					
LPL	**La Plagne**	**1.65 321**	*e*Pn	**Pn**	05 11 15.7	+1.6
LPL			*e*Sn	**Sn**	05 11 35.6	+0.5
	2.3nm,0.4s					
ORIF	**Oris-en-Rattie**	**1.79 293**	*e*Pn	**Pn**	05 11 17.3	+1.2
ORIF			*e*Sn	**Sn**	05 11 38.1	-0.6
ORIF			*e*Sg	**Sg**	05 11 43.2	0.0
	5.4nm,0.4s					
ORIF	**Oris-en-Rattie**	**1.79 293**	*e*Pn	**Pn**	05 11 17.3	+1.2
ORIF			*e*Sn	**Sn**	05 11 38.1	-0.6
ORIF			*e*Sg	**Sg**	05 11 43.2	0.0
	2.7nm,0.4s					
SMRF	**Simiane la Rot**	**1.91 263**	*e*P	**Pn**	05 11 19.7	+1.9
SMRF	**Simiane la Rot**	**1.91 263**	*e*Pg	**Pg**	05 11 22.0	-0.2
SMRF			*e*Sg	**Sg**	05 11 46.0	-1.1
	20nm,0.4s					
SMRF	**Simiane la Rot**	**1.91 263**	*e*P	**Pn**	05 11 19.7	+1.9
SMRF	**Simiane la Rot**	**1.91 263**	*e*Pg	**Pg**	05 11 22.0	-0.2
SMRF			*e*Sg	**Sg**	05 11 46.0	-1.1
	9.8nm,0.4s					
VIVF	**Saint-Julien-l**	**2.60 285**	*e*Pn	**Pn**	05 11 28.2	+1.0
VIVF	**Saint-Julien-l**	**2.60 285**	*e*Pg	**Pg**	05 11 34.9	-0.4
VIVF			*e*Sn	**Sn**	05 11 57.2	-1.4
	1.0nm,0.3s					
VIVF	**Saint-Julien-l**	**2.60 285**	*e*Pn	**Pn**	05 11 28.2	+1.0
VIVF	**Saint-Julien-l**	**2.60 285**	*e*Pg	**Pg**	05 11 34.9	-0.4
VIVF			*e*Sn	**Sn**	05 11 57.2	-1.4
	0.5nm,0.3s					
LASF	**Ste Croix**	**3.13 268**	*e*Pn	**Pn**	05 11 35.1	+0.6
LASF			*e*Sn	**Sn**	05 12 10.0	-1.8
	1.0nm,0.3s					
LASF	**Ste Croix**	**3.13 268**	*e*Pn	**Pn**	05 11 35.1	+0.6
LASF			*e*Sn	**Sn**	05 12 10.0	-1.8
	0.5nm,0.3s					
MTLF	**Montolieu**	**4.43 260**	*e*Pn	**Pn**	05 11 52.6	+0.3
MTLF			*e*Sn	**Sn**	05 12 40.7	-3.0
	0.8nm,0.2s					
MTLF	**Montolieu**	**4.43 260**	*e*Pn	**Pn**	05 11 52.6	+0.3
MTLF			*e*Sn	**Sn**	05 12 40.7	-3.0
	0.4nm,0.2s					
CAF	**Calviac**	**4.44 281**	*e*Pn	**Pn**	05 11 53.0	+0.5
CAF			*e*Sn	**Sn**	05 12 40.8	-3.2
	0.5nm,0.3s					
CAF	**Calviac**	**4.44 281**	*e*Pn	**Pn**	05 11 53.0	+0.5
CAF			*e*Sn	**Sn**	05 12 40.8	-3.2
	0.2nm,0.3s					

*IDC **06** 05:23:38.5±0.9, 32.°22N×104.°86E, h0km, mb4.0/9, mb1 4.1/11, mb1mx3.9/26, mbtmp3.9/11, ML3.6/2, Error ellipse: s-maj=38.9km s-min=16.3km az=55.0*
*NEIC **06** 05:23:40.1±0.6, 32.°23N×104.°93E, h10km, mb4.0/4, Error ellipse: s-maj=17.8km s-min=10.1km az=67.0*
*BJI **06** 05:23:42.0, 32.°28N×104.°95E, h16km, mB4.9/4, mb4.4/3, ML3.9/19, Ms3.6/6, Ms7 3.6/6*

ISC 06 05:23:40.5±0.9, 32.°28N±0.°03×104.°89E±0.°05, h9km±6km, n27, σ0.95/39, mb4.1/12, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**1.67**	**216**	Pn	**Pn**	**05 24 11.0**	**+1.1**
CD2				Pg	**Pg**	**05 24 12.8**	**+0.3**
CD2				Sg	**Sg**	**05 24 34.4**	**+0.2**
CD2				smax			
	comp=N,5μm,0.7s						
CD2				smax			
	comp=E,5μm,1.0s						
XAN	**Xi'an**	**3.81**	**61**	Pn	**Pn**	**05 24 41.8**	**+2.4**
XAN				Pg	**Pg**	**05 24 54.0**	**+0.4**
XAN				Sn	**Sn**	**05 25 24.8**	**+0.5**
XAN				Sg	**Sg**	**05 25 35.1**	**-7.9**
XAN				smax			
	comp=N,190nm,0.7s						
XAN				smax			
	comp=E,110nm,0.8s						
XAN				LR	LR		
	comp=N,360nm,8.6s						
XAN				LR	LR		
	comp=E,140nm,10.1s						
XAN				LR	LR		
	comp=Z,150nm,8.2s						
LZH	**Lanzhou**	**3.90**	**347**	Pn	**Pn**	**05 24 42.6**	**+2.1**
LZH				Pg	**Pg**	**05 24 53.2**	**-2.0**
LZH				Sn	**Sn**	**05 25 25.4**	**-1.0**
LZH				Sg	**Sg**	**05 25 42.3**	**-3.3**
LZH				smax			
	comp=N,300nm,1.0s						
LZH				smax			
	comp=E,1μm,1.1s						
LZH				LR	LR		
	comp=N,1μm,4.3s						
LZH				LR	LR		
	comp=Z,2μm,5.3s						
GYA	**Guiyang**	**6.00**	**165**	Pn	**Pn**	**05 25 09.5**	**0.0**
GYA				Pg	**Pg**	**05 25 22.3**	**-13**
GYA				Sn	**Sn**	**05 26 17.0**	**-1.3**
GYA				smax			
	comp=N,130nm,0.8s						
GYA				smax			
	comp=E,200nm,0.8s						
GTA	**Gaotai**	**8.22**	**331**	*e*P	**Pn**	**05 25 40.6**	**+0.7**
GTA				S	**Sn**	**05 27 18.9**	**+6.0**
GTA				sS		05 27 24.2	
GTA				pmax	pmax		
	comp=Z,300nm,5.1s						
GTA				LR	LR		
	comp=N,240nm,10.2s						
GTA				LR	LR		
	comp=E,210nm,11.3s						
GTA				LR	LR		
	comp=Z,370nm,10.5s						
HHC	**Hu-ho-hao-te**	**10.10**	**30**	*e*P	**Pn**	**05 26 05.1**	**-0.5**
HHC				S	**Sn**	**05 27 59.4**	**+0.5**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,160nm,5.2s						
SONM	**Songino Array**	**15.58**	**4**	Pn	**Pn**	**05 27 20.5**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=182,slow=16,SNR=3.4						
ULN	**Ulaanbaatar**	**15.66**	**5**	*e*Pn	**Pn**	**05 27 21.9**	**+0.7**
	comp=Z,1.3nm,0.5s						
KSRS	**Korea Array**	**19.58**	**68**	P	**Pn**	**05 28 08.8**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=253,slow=10,SNR=5.9						
MKAR	**Makanchi Array**	**22.56**	**317**	P	**P**	**05 28 40.9**	**+0.1**
	comp=Z,2.4nm,0.9s,mb3.6,baz=118,slow=12,SNR=7.9						
MKAR	**Makanchi Array**	**22.56**	**317**	P	**P**	**05 28 40.9**	**+0.1**
ZALV	**Zalesovo Beam**	**25.98**	**332**	P	**P**	**05 29 13.6**	**+0.4**
	comp=Z,0.9nm,0.4s,mb3.7,baz=136,slow=9.2,SNR=5.1						
KURK	**Kurchatov**	**26.73**	**321**	P	**P**	**05 29 20.1**	**0.0**
	comp=Z,2.9nm,1.1s,mb3.7,baz=131,slow=8.3,SNR=8.4						
ABKAR	**Akbulak array**	**37.41**	**310**	*e*P	**P**	**05 30 54.4**	**+0.7**
	comp=Z,0.9nm,0.6s,mb3.8						
ARU	**Arti**	**39.93**	**321**	*e*P	**P**	**05 31 14.8**	**+0.2**
	comp=Z,7.6nm,0.9s,mb4.4						
ARCES	**ARCESS Array B**	**56.47**	**335**	P	**P**	**05 33 22.5**	**+0.2**
	comp=Z,2.9nm,0.8s,mb4.4,baz=78,slow=12,SNR=4.0						
FINES	**FINESS Array B**	**56.97**	**326**	P	**P**	**05 33 25.9**	**0.0**
	comp=Z,3.4nm,0.8s,mb4.4,baz=87,slow=11,SNR=5.8						
WRA	**Warramunga Arr**	**59.09**	**147**	P	**P**	**05 33 40.4**	**-0.9**
	comp=Z,2.9nm,0.7s,mb4.4,baz=342,slow=7.5,SNR=27						
ASAR	**Alice Springs**	**62.16**	**150**	P	**P**	**05 34 01.6**	**-0.4**
	comp=Z,1.3nm,0.7s,mb4.2,baz=334,slow=6.9,SNR=9.3						
NB2	**NORSAR Subarra**	**64.03**	**327**	P	**P**	**05 34 12.6**	**-1.6**
	comp=Z,0.9nm,0.6s,mb4.0,baz=72,slow=6.5						
NOA	**NORSAR Array B**	**64.03**	**327**	P	**P**	**05 34 12.0**	**-2.1**
	comp=Z,1.1nm,0.7s,mb4.0,baz=72,slow=6.3,SNR=5.1						
NOA	**NORSAR Array B**	**64.03**	**327**	P	**P**	**05 34 12.0**	**-2.1**
LPG	**La Plagne**	**72.93**	**313**	*e*P	**P**	**05 35 10.4**	**+0.3**
	comp=Z,8.5nm,1.0s,mb4.3						
LPG	**La Plagne**	**72.93**	**313**	*e*P	**P**	**05 35 10.4**	**+0.3**
	comp=Z,4.3nm,1.0s,mb4.3						
LPL	**La Plagne**	**72.94**	**313**	*e*P	**P**	**05 35 10.3**	**+0.2**
YKA	**Yellowknife Ar**	**80.38**	**17**	P	**P**	**05 35 51.0**	**-0.8**
	comp=Z,0.6nm,0.6s,mb3.7,baz=331,slow=5.3,SNR=4.4						
YKA	**Yellowknife Ar**	**80.38**	**17**	P	**P**	**05 35 51.0**	**-0.8**

IDC 06 05:56:01.6±2.2, 54.°09N×86.°35E, h0km, mb1 3.2/3, mb1mx3.0/27, mbtmp3.2/3, ML3.0/3, Error ellipse: s-maj=19.3km s-min=12.8km az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZALV	**Zalesovo Beam**	**0.91**	**262**	Pg	Pg	05 56 17.3	-1.8
	2.5nm,0.3s,baz=77,slow=17,SNR=32						
ZALV				Lg		05 56 32.5	
	16nm,0.3s,baz=77,slow=30,SNR=73						
ZALV				Rg		05 56 37.6	
	15nm,0.5s,baz=73,slow=35,SNR=22						
KURK	**Kurchatov**	**5.81**	**238**	Pn	Pn	05 57 30.6	+1.6
	0.2nm,0.3s,baz=54,slow=14,SNR=11						
KURK				Lg		05 59 08.3	
	0.1nm,0.3s,baz=57,slow=33,SNR=3.8						
MKAR	**Makanchi Array**	**7.75**	**201**	Pn	Pn	05 57 56.5	+0.9
	0.2nm,0.3s,baz=22,slow=12,SNR=8.8						
MKAR				Lg		06 00 07.4	
	0.1nm,0.3s,baz=24,slow=22,SNR=7.7						
BVAR	**Borovoye Array**	**9.56**	**270**	Pn	Pn	05 58 21.0	+0.6
	0.1nm,0.3s,baz=56,slow=18,SNR=2.3						

CASC 06 06:08:10.4±2.8, 8.°42N×82.°94W, h0km±6km, MD4.1, 4C-1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRU2	**Volcan**	**0.45**	**33**	⇑*i*P	Pg	06 08 20.6	+1.6
BRU2				*e*S	Sg	06 08 28.8	+3.9
CTCR	**Cotoan**	**0.51**	**20**	⇑*i*P	Pg	06 08 21.4	+1.2
BAR1		**0.90**	**336**	⇓*i*P	Pg	06 08 27.6	-0.1
CNI	**Changuinola**	**1.08**	**23**	⇑*i*P	Pg	06 08 30.6	-0.5
BUS	**Buena Vista**	**1.39**	**325**	*e*P	Pn	06 08 35.4	-1.7
QCR	**Quepos**	**1.57**	**310**	*e*P	Pn	06 08 37.6	-2.0
QCR				*e*S	Sn	06 09 01.0	+0.4
URSC	**Urasca**	**1.64**	**330**	⇑*e*P	Pn	06 08 39.2	-1.2
URSC				*e*S	Sn	06 09 02.2	0.0
LAJ	**Bijagual**	**1.85**	**321**	*e*P	Pn	06 08 46.2	+2.8
SJS	**Escuela Geolog**	**1.87**	**324**	*e*P	Pn	06 08 44.2	+0.5
PRS1	**Puriscal**	**2.06**	**319**	*e*P	Pn	06 08 45.2	-1.1
CGA2	**Cerro Gallo 2**	**2.19**	**317**	*e*P	Pn	06 08 47.4	-0.6
CGA2				*e*S	Sn	06 09 18.0	+2.1
JCR	**Jicaral**	**2.58**	**304**	*e*P	Pn	06 08 53.1	-0.3
PTEN	**Parque Tenorio**	**3.05**	**319**	*i*P	Pn	06 09 01.6	+1.7
A494	**Palo Verde**	**3.06**	**309**	*i*P	Pn	06 09 01.9	+1.9
A494				*i*S	Sn	06 09 39.0	+1.7
VCR	**Vista de Mar**	**3.15**	**303**	*e*P	Pn	06 09 02.1	+0.8
BCIP	**Isla Barro Col**	**3.16**	**76**	*e*P	Pn	06 09 00.5	-0.8
BCIP				*e*S	Sn	06 09 42.5	+2.8
COLC	**Colonia**	**3.16**	**315**	*i*P	Pn	06 09 02.9	+1.5
GUAB	**Guayabo de Bag**	**3.21**	**315**	*i*P	Pn	06 09 03.1	+1.0
MESS	**Mesas**	**3.21**	**316**	*i*P	Pn	06 09 03.6	+1.6
MESS				*i*S	Sn	06 09 43.4	+2.4
GPS3	**Bodega del ICE**	**3.33**	**314**	*i*P	Pn	06 09 05.8	+2.0

*NIED **06** 06:15:00, 46.°10N×153.°90E, h56km, Mw4.8 Best double couple: M0=1.52000×10^16 NP1:φ0=71.00000°, δ=74.00000°, λ=74.00000°. NP2:φ0=297.00000°, δ=23.00000°, λ=134.00000°.*
*IDC **06** 06:15:34.3±0.5, 45.°77N×153.°98E, h0km, mb4.5/24, mb1 4.6/27, mb1mx4.6/30, mbtmp4.5/27, ML4.0/3, MS3.8/10, Ms1 3.8/10, ms1mx3.6/25, Error ellipse: s-maj=16.2km s-min=11.6km az=149.0*
*JMA **06** 06:15:35.6±0.9, 46.°14N×153.°91E, h30km, M4.8*
*NEIC **06** 06:15:36.2±0.2, 45.°80N×153.°94E, h10km, mb4.8/72, Error ellipse: s-maj=6.3km s-min=3.7km az=163.0*
*SKHL **06** 06:15:36.9±1.5, 45.°86N×154.°06E, h67km±29km, mb5.2/4, Ms4.1/2*
*BJI **06** 06:15:37.2, 46.°01N×153.°48E, h10km, mB4.9/23, mb4.8/40, Ms4.3/26, Ms7 3.9/26*
*ISCJB **06** 06:15:37.1±0.1, 45.°56N±0.°04×153.°93E±0.°02, h33km, mb4.7/137, MS4.0/20, Error ellipse: s-maj=5.8km s-min=2.0km az=167.8*
*MOS **06** 06:15:39.2±1.1, 45.°58N×153.°81E, h49km, mb5.0/59, Error ellipse: s-maj=8.2km s-min=5.7km az=106.2*
*SZGRF **06** 06:15:47.3, 47.°08N×152.°82E, h33km, mb5.0, Kuril Islands, Russia*

ISC 06 06:15:39.6±0.1, 45.°66N±0.°04×153.°90E±0.°02, h35km, (h7km±3.7km:pP-P), n586, σ0.81/614, mb4.7/137, MS4.0/20, 127C-151D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**4.27**	**266**	*i*PN	**Pn**	**06 16 41.0**	**-1.0**
KUR				*e*S	**Sn**	**06 17 28.2**	**-2.3**
KUR				pmax	pmax		
	comp=Z,760nm,0.5s						
KUR				smax			
	comp=N,260nm,0.7s						
KUR				smax			
	comp=E,1μm,0.7s						
KUR	**Kuril'sk**	**4.27**	**266**	⇑*i*P	**Pn**	**06 16 41.0**	**-1.0**
KUR				AMB	AMB	06 16 47.2	
	comp=E,760nm,0.5s						
KUR				*e*S	**Sn**	**06 17 28.2**	**-2.3**
KUR				A		06 17 32.0	
	comp=E,260nm,0.7s						
KUR				A		06 17 32.0	
	comp=E,1μm,0.7s						
SKR	**Severo-Kuril's**	**5.25**	**16**	*e*PN	**Pn**	**06 16 50.0**	**-5.4**
SKR				pmax	pmax		
	comp=E,50nm,0.7s						
SKR				pmax	pmax		
	comp=Z,70nm,0.7s						
SKR				pmax	pmax		
	comp=N,40nm,0.5s						
SKR				MLR	MLR		
	comp=N,1μm,14.0s						
SKR				MLR	MLR		
	comp=Z,1μm,14.0s						
SKR				MLR	MLR		
	comp=E,2μm,12.0s						
SKR	**Severo-Kuril's**	**5.25**	**16**	*e*P	**Pn**	**06 16 50.0**	**-5.4**
SKR				AMB	AMB	06 16 58.0	
	comp=E,40nm,0.5s						
SKR				AMB	AMB	06 16 58.0	
	comp=E,50nm,0.7s						
SKR				AMB	AMB	06 16 58.0	
	comp=E,70nm,0.7s						
SKR				*e*S	**Sn**	**06 17 44.1**	**-10**
SKR				A		06 17 50.4	
	comp=E,110nm,0.7s						
SKR				A		06 17 50.4	
	comp=E,80nm,0.7s						
SKR				A		06 17 50.4	
	comp=E,40nm,0.7s						
SKR				AMS	AMS	06 18 57.0	
	comp=E,1μm,13.0s						
SKR				AMS	AMS	06 18 57.0	
	comp=E,2μm,13.0s						
YUK	**Yuzh-Kuril'sk**	**5.94**	**257**	*e*PN	**Pn**	**06 17 04.2**	**-0.8**
YUK				pmax	pmax		
	comp=N,122nm,0.7s						
YUK				pmax	pmax		
	comp=E,76nm,0.7s						
YUK				pmax	pmax		
	comp=Z,220nm,0.7s						
YUK				pmax	pmax		
	comp=Z,280nm,1.0s						
YUK				MLR	MLR		
	comp=Z,380nm,15.0s						
YUK				MLR	MLR		
	comp=N,240nm,7.0s						
YUK				MLR	MLR		
	comp=E,140nm,7.0s						
YUK	**Yuzh-Kuril'sk**	**5.94**	**257**	*i*P	**Pn**	**06 17 04.2**	**-0.8**
YUK				AMB	AMB	06 17 17.5	
	comp=E,360nm,0.5s						
YUK				AMB	AMB	06 17 17.7	
	comp=E,2μm,1.0s						
YUK				*i*S	**Sn**	**06 18 11.2**	**-0.5**
YUK				A		06 18 18.4	
	comp=E,770nm,0.5s						
YUK				A		06 18 18.4	
	comp=E,350nm,0.5s						
YUK				AMS	AMS	06 21 12.8	
	comp=E,380nm,15.0s						
YUK				AMS	AMS	06 21 12.8	
	comp=E,240nm,7.0s						
YUK				AMS	AMS	06 21 12.8	
	comp=E,140nm,7.0s						
NEM2	**Nemuro 2**	**6.26**	**251**	P	**Pn**	**06 17 07.4**	**-2.0**
NEM2				*e*S	**Sn**	**06 18 14.5**	**-5.2**
JRA	**Rausu**	**6.48**	**258**	P	**Pn**	**06 17 12.3**	**0.0**
JNK	**Nakash**	**6.87**	**256**	P	**Pn**	**06 17 17.8**	**+0.1**
JAK	**Akkeshi**	**7.11**	**251**	P	**Pn**	**06 17 19.6**	**-1.5**
JAK				*e*S	**Sn**	**06 18 35.7**	**-5.0**
JTKR	**Abashiri--Toko**	**7.30**	**260**	P	**Pn**	**06 17 23.6**	**-0.1**
JAR	**Ashorobuto**	**7.62**	**256**	P	**Pn**	**06 17 27.9**	**-0.1**
JMP	**Maruseppu**	**7.67**	**261**	P	**Pn**	**06 17 29.0**	**+0.3**
JOB	**Onbets**	**7.73**	**253**	*e*S	**Sn**	**06 18 51.1**	**-4.6**
YSS	**Yuzh-Sakhalins**	**7.83**	**284**	⇑*i*PN	**Pn**	**06 17 32.3**	**+1.4**
YSS				pmax	pmax		
	comp=Z,60nm,0.9s						
YSS				MLR	MLR		
	comp=Z,400nm,15.0s						
YSS	**Yuzh-Sakhalins**	**7.83**	**284**	*e*Pn	**Pn**	**06 17 32.5**	**+1.7**
YSS	**Yuzh-Sakhalins**	**7.83**	**284**	⇑*i*P	**Pn**	**06 17 32.3**	**+1.4**
YSS				AMB	AMB	06 17 33.5	
	comp=Z,60nm,0.9s						
YSS				*e*S	**Sn**	**06 18 59.0**	**+0.9**
YSS				A		06 19 02.0	
	comp=Z,30nm,1.0s						
YSS				*e*LQ		06 19 15.0	
YSS				*e*LR	LR	06 19 50.0	
YSS				AMS	AMS	06 20 41.0	
	comp=Z,400nm,15.0s						
PEA0B	**Petropavlovsk-**	**7.86**	**17**	*e*Pn	**Pn**	**06 17 27.2**	**-4.0**
PETK	**Petropavlovsk-**	**7.86**	**17**	Pn	**Pn**	**06 17 26.9**	**-4.4**
	comp=Z,2.4nm,0.3s,baz=179,slow=13,SNR=12						
PETK				Sn	**Sn**	**06 18 44.2**	**-15**
	comp=Z,3.0nm,0.3s,baz=50,slow=33,SNR=8.3						
PET	**Petropavlovsk**	**8.00**	**21**	*e*PN	**Pn**	**06 17 27.3**	**-5.9**
PET				pmax	pmax		
	comp=Z,100nm,10.8s						
PET				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PET				MLR	MLR		
	comp=Z,300nm,10.0s						
PET				MLR	MLR		
	comp=Z,400nm,11.0s						
PET	**Petropavlovsk**	**8.00**	**21**	*e*Pn	**Pn**	**06 17 29.6**	**-3.6**
	comp=Z,11nm,0.6s						
PET				*e*Sn	**Sn**	**06 18 51.5**	**-11**
JSE	**Soyaes**	**8.01**	**269**	P	**Pn**	**06 17 34.8**	**+1.5**
JKK2	**Kamakawa 2**	**8.13**	**261**	P	**Pn**	**06 17 35.4**	**+0.3**
JCH	**Churui**	**8.16**	**252**	P	**Pn**	**06 17 34.5**	**-1.0**
JCH				*e*S	**Sn**	**06 19 01.8**	**-4.7**
ASAJ	**Asahikawa**	**8.17**	**263**	Pn	**Pn**	**06 17 35.6**	**0.0**
	comp=Z,2.5nm,0.3s,baz=88,slow=19,SNR=18						
ASAJ				Sn	**Sn**	**06 19 11.7**	**+5.0**
	comp=Z,0.5nm,0.3s,baz=253,slow=26,SNR=1.6						
ASAJ				LR	LR	06 20 43.8	
	comp=Z,360nm,22.0s,baz=350,slow=38						
ASAJ	**Asahikawa**	**8.17**	**263**	PN	**Pn**	**06 17 35.7**	**+0.1**
ASAJ						06 19 11.7	
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,360nm,22.0s						
ASAJ	**Asahikawa**	**8.17**	**263**	P	**Pn**	**06 17 36.4**	**+0.8**
JFR	**Furan**	**8.47**	**257**	P	**Pn**	**06 17 40.3**	**+0.6**
ERM	**Erimo**	**8.57**	**249**	*e*PN	**Pn**	**06 17 40.6**	**-0.5**
JEM	**Erimo**	**8.57**	**249**	P	**Pn**	**06 17 40.7**	**-0.4**
JAB	**Ashibetsu**	**8.61**	**260**	P	**Pn**	**06 17 42.6**	**+1.0**
JNBK	**Urakawa-nobuka**	**8.72**	**251**	P	**Pn**	**06 17 41.0**	**-2.1**
JNBK				*e*S	**Sn**	**06 19 13.9**	**-6.2**
JBT2	**Biratori 2**	**8.77**	**255**	P	**Pn**	**06 17 42.4**	**-1.4**
JEW	**Eniwo**	**9.37**	**257**	P	**Pn**	**06 17 50.9**	**-1.1**
JKB	**Kayabe**	**10.04**	**253**	P	**Pn**	**06 17 59.0**	**-2.2**
JKB				*e*S	**Sn**	**06 19 44.6**	**-7.9**
JANG	**Nango**	**10.49**	**244**	P	**Pn**	**06 18 04.0**	**-3.4**
JANG				*e*S	**Sn**	**06 19 54.1**	**-9.4**
JTH	**Tanohata**	**10.52**	**241**	P	**Pn**	**06 18 03.8**	**-4.0**
JTH				*e*S	**Sn**	**06 19 52.3**	**-12**
JTM	**Tenmabayashi**	**10.55**	**247**	P	**Pn**	**06 18 05.3**	**-2.9**
JTM				*e*S	**Sn**	**06 19 56.6**	**-8.4**
JOSM	**Okushiri--Mats**	**11.01**	**256**	P	**Pn**	**06 18 12.9**	**-1.5**
OFUJ	**Ofunato**	**11.17**	**238**	P	**Pn**	**06 18 13.6**	**-3.1**
OFUJ				*e*S	**Sn**	**06 20 10.5**	**-10**
TEY	**Ternei**	**12.19**	**273**	*e*P	**Pn**	**06 18 30.8**	**+0.2**
HABR	**Khabarovsk**	**13.15**	**289**	*e*PN	**Pn**	**06 18 41.8**	**-1.9**
HABR				pmax	pmax		
	comp=Z,57nm,1.4s						
HABR				pmax	pmax		
	comp=N,26nm,1.7s						
HABR				pmax	pmax		
	comp=E,99nm,2.7s						
HABR				MLR	MLR		
	comp=Z,169nm,14.0s						
MAJO	**Matsushiro**	**14.90**	**238**	*e*P	**Pn**	**06 19 05.1**	**-2.5**
MAJO				pmax	p

comp=Z,200nm,14.0s,MS3.6
KSRS Korea Array 21.03 256 P **P** **06 20 21.6 +1.5**
comp=Z,9.1nm,0.9s,mb4.1,baz=59,slow=12,SNR=22
KSRS LR LR 06 27 31.1
comp=Z,145nm,21.4s,MS3.3,baz=236,slow=34
KSRS Korea Array 21.03 256 P **P** **06 20 21.6 +1.5**
KSRS pmax pmax
comp=Z,9.0nm,0.9s,mb4.1
KSRS MLR MLR
comp=Z,145nm,21.4s,MS3.3
YAK Yakutsk 21.54 328 *e*P **P** **06 20 21.0 -4.4**
YAK *e* 06 20 40.1
YAK *e*S **S** **06 24 15.5 -6.4**
YAK *e* 06 24 25.0
YAK *e*SSS 06 24 50.0
YAK pmax pmax
comp=E,12nm,1.4s
YAK pmax pmax
comp=N,8.0nm,1.2s
YAK pmax pmax
comp=Z,18nm,0.9s,mb4.5
YAK smax
comp=N,118nm,2.5s
YAK smax
comp=E,138nm,3.6s
YAK MLR MLR
comp=Z,126nm,12.0s,MS3.5
YAK MLR MLR
comp=N,103nm,11.0s
YAK MLR MLR
comp=E,140nm,18.0s
YAK Yakutsk 21.54 328 *e*P **P** **06 20 21.8 -3.6**
comp=E,28nm,0.8s,mb4.7
INCN Inchon 21.89 258 *e*P **P** **06 20 31.0 +1.5**
comp=E,27nm,0.9s,mb4.7
BILL Bilibino 23.34 12*c i*P **P** **06 20 43.2 -1.3**
BILL pmax pmax
comp=Z,35nm,1.7s,mb4.5
BILL Bilibino 23.34 12 *e*P **P** **06 20 43.6 -0.9**
comp=Z,19nm,1.0s,mb4.5
BJI Beijing 28.04 272 P **P** **06 21 28.5 +1.2**
BJI S **S** **06 26 10.9 +1.5**
BJI pmax pmax
comp=Z,31nm,1.0s,mb4.9
BJI pmax pmax
comp=Z,120nm,3.9s
BJI LR LR
comp=N,110nm,14.4s
BJI LR LR
comp=E,110nm,20.1s
BJI LR LR
comp=Z,130nm,25.8s
TIXI Tiksi 28.67 344 *e*P **P** **06 21 29.0 -3.6**
TIXI pmax pmax
comp=Z,21nm,1.4s,mb4.7
TIXI MLR MLR
comp=Z,169nm,14.0s,MS3.8
TIXI Tiksi 28.67 344 *e*P **P** **06 21 29.0 -3.6**
comp=Z,31nm,1.6s,mb4.8
NJ2 Nanjing 30.23 256 *e*P **P** **06 21 49.8 +3.0**
NJ2 pP pP 06 21 54.2 -2.6
NJ2 sP sP 06 21 56.8 -4.3
NJ2 PP PP 06 22 48.5 -6.8
NJ2 S **S** **06 26 46.0 +2.1**
NJ2 sS sS 06 26 53.0 -7.5
NJ2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.7
NJ2 pmax pmax
comp=Z,90nm,4.3s
NJ2 LR LR
comp=N,580nm,23.5s
NJ2 LR LR
comp=E,610nm,18.3s
NJ2 LR LR
comp=Z,210nm,8.4s
HHC Hu-ho-hao-te 30.94 276 *e*P **P** **06 21 54.0 +1.0**
HHC sP sP 06 21 59.3 -8.0
HHC PP PP 06 22 55.5 -7.5
HHC PcP PcP 06 24 51.0 +2.3
HHC S **S** **06 26 55.9 +1.0**
HHC sS sS 06 27 01.1 -10
HHC ScP ScP 06 28 32.1 +3.5
HHC PcS PcS 06 28 33.5 +0.9
HHC SS SS 06 28 38.7 -29
HHC ScS ScS 06 32 27.7 +2.3
HHC pmax pmax
comp=Z,31nm,0.8s,mb5.2
HHC pmax pmax
comp=Z,110nm,5.8s
HHC LR LR
comp=N,180nm,12.5s,MS4.1
HHC LR LR
comp=E,190nm,13.2s,MS4.1
HHC LR LR
comp=Z,180nm,13.2s,MS3.9
ULN Ulaanbaatar 31.79 291 *e*P **P** **06 22 00.6 +0.2**
ULN pmax pmax
comp=Z,13nm,1.0s,mb4.7
ULN Ulaanbaatar 31.79 291 *e*P **P** **06 22 00.6 +0.2**
comp=Z,13nm,1.0s,mb4.7
SONM Songino Array 32.23 291 P **P** **06 22 04.0 -0.2**
comp=Z,3.7nm,0.9s,mb4.2,baz=75,slow=8.3,SNR=8.4
SONM LR LR 06 35 52.5
comp=Z,176nm,18.9s,MS3.8,baz=304,slow=38
SONM Songino Array 32.23 291 P **P** **06 22 04.0 -0.2**
SONM pmax pmax
comp=Z,4.0nm,0.9s
SONM MLR MLR
comp=Z,176nm,18.9s
TLY Talaya 33.18 299 *e*P **P** **06 22 08.5 -4.0**
TLY pmax pmax
comp=Z,10.0nm,1.6s,mb4.5
TLY MLR MLR
comp=Z,114nm,13.0s,MS3.8
XAN Xi'an 35.99 267 P **P** **06 22 37.5 +0.5**
XAN pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
LZH Lanzhou 38.49 274 P **P** **06 23 01.0 +2.8**
LZH pP pP 06 23 04.0 -4.4
LZH sP sP 06 23 07.0 -5.6
LZH PP PP 06 24 32.0 +5.5
LZH *e*S **S** **06 28 55.1 +3.9**
LZH sS sS 06 29 03.1 -4.9
LZH SS SS 06 31 34.0 -7.1
LZH pmax pmax
comp=Z,25nm,1.0s,mb4.9
LZH pmax pmax
comp=Z,130nm,4.0s
LZH LR LR
comp=E,1μm,14.4s
LZH LR LR
comp=Z,2μm,15.2s,MS4.9
EGAK Eagle 39.53 38 *e*P **P** **06 23 05.8 -0.7**
comp=Z,83nm,2.6s,mb5.0
GTA Gaotai 39.70 281 ⇓P **P** **06 23 10.2 +2.0**
GTA pP pP 06 23 14.6 -3.9
GTA sP sP 06 23 16.9 -5.8
GTA PP PP 06 24 45.9 +6.3
GTA S **S** **06 29 13.7 +4.4**
GTA sS sS 06 29 21.5 -4.7
GTA SS SS 06 31 52.8 -12
GTA pmax pmax
comp=Z,35nm,1.0s,mb5.0
GTA pmax pmax
comp=Z,160nm,5.1s
GTA LR LR
comp=N,120nm,16.1s,MS4.0
GTA LR LR
comp=E,120nm,16.4s,MS4.0
GTA LR LR
comp=Z,130nm,18.8s,MS3.8
CD2 Chengdu 41.35 267 P **P** **06 23 23.3 +1.3**
CD2 pP pP 06 23 27.8 -4.5
CD2 sP sP 06 23 29.2 -7.2
CD2 PP PP 06 25 02.3 +4.6
CD2 S **S** **06 29 36.6 +2.5**
CD2 sS sS 06 29 43.5 -7.5
CD2 SS SS 06 32 35.2 -3.3
CD2 pmax pmax
comp=Z,30nm,0.9s,mb4.9
CD2 pmax pmax
comp=Z,140nm,6.1s
CD2 LR LR
comp=N,160nm,14.9s
CD2 LR LR
comp=Z,240nm,13.7s,MS4.2

HYT Haines Junctio 41.69 43 *e*P **P** **06 23 25.5 +1.1**
GYA Guiyang 42.03 259 ⇓P **P** **06 23 28.0 +0.4**
GYA PP PP 06 25 10.0 +4.8
GYA PcP PcP 06 25 25.4 +3.2
GYA ScP ScP 06 29 15.0 +5.3
GYA S **S** **06 29 49.0 +4.7**
GYA SS SS 06 32 50.4 -1.6
GYA pmax pmax
comp=Z,30nm,0.8s,mb5.0
GYA pmax pmax
comp=Z,130nm,5.8s
GYA LR LR
comp=N,490nm,17.6s,MS4.6
GYA LR LR
comp=E,450nm,18.7s,MS4.6
GYA LR LR
comp=Z,440nm,17.7s,MS4.4
INK Inuvik 42.29 32 P **P** **06 23 26.9 -2.3**
comp=Z,4.0nm,0.8s,mb4.1,baz=281,slow=7.4,SNR=6.8
INK Inuvik 42.29 32 P **P** **06 23 26.9 -2.3**
INK pmax pmax
comp=Z,4.0nm,0.9s
INK Inuvik 42.29 32 *e*P **P** **06 23 29.6 +0.4**
ZALV Zalesovo Beam 43.70 307 P **P** **06 23 39.1 -1.7**
comp=Z,1.5nm,0.5s,mb4.0,baz=69,slow=7.7,SNR=7.8
ZALV PcP PcP 06 25 27.5 +0.2
comp=Z,2.6nm,0.8s,baz=85,slow=3.1,SNR=6.6
ZALV LR LR 06 42 55.3
comp=Z,139nm,18.8s,MS3.9,baz=147,slow=38
ZALV Zalesovo Beam 43.70 307 P **P** **06 23 39.1 -1.7**
ZALV 06 25 27.5
ZALV pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
ZALV MLR MLR
comp=Z,139nm,18.8s,MS3.9
KMI Kunming 45.60 261 P **P** **06 23 58.0 +1.7**
KMI pP pP 06 24 01.6 -5.0
KMI sP sP 06 24 03.0 -7.8
KMI PP PP 06 25 45.9 +2.6
KMI S **S** **06 30 40.2 +3.9**
KMI sS sS 06 30 45.2 -8.2
KMI SS SS 06 33 55.3 -5.2
KMI pmax pmax
comp=Z,11nm,0.9s,mb4.8
KMI pmax pmax
comp=Z,96nm,4.5s
KMI LR LR
comp=N,100nm,13.9s,MS4.0
KMI LR LR
comp=E,100nm,16.4s,MS4.0
KMI LR LR
comp=Z,98nm,16.4s,MS3.8
WMQ Urumqi 45.84 293 P **P** **06 23 59.0 +1.0**
WMQ pP pP 06 24 03.5 -4.9
WMQ sP sP 06 24 06.0 -6.5
WMQ PP PP 06 25 46.7 +1.2
WMQ pmax pmax
comp=Z,11nm,0.6s,mb5.0
WMQ pmax pmax
comp=Z,140nm,4.1s
WMQ LR LR
comp=N,97nm,17.0s
WMQ LR LR
comp=Z,100nm,24.0s
DLBC Dease Lake 45.97 45 P **P** **06 23 59.2 +0.4**
comp=Z,4.4nm,0.8s,mb4.4,baz=285,slow=11,SNR=8.2
DLBC Dease Lake 45.97 45 *e*P **P** **06 24 00.7 +1.9**
MK31 Makanchi Array 47.94 299 *e*P **P** **06 24 14.0 -0.3**
MKAR Makanchi Array 47.94 299 P **P** **06 24 14.1 -0.2**
comp=Z,5.5nm,0.7s,mb4.7,baz=69,slow=7.7,SNR=45
MKAR PcP PcP 06 25 42.3 +0.1
comp=Z,1.4nm,0.7s,baz=55,slow=4.9,SNR=3.7
MKAR LR LR 06 45 19.1
comp=Z,258nm,18.5s,MS4.2,baz=351,slow=37
MKAR Makanchi Array 47.94 299 P **P** **06 24 14.1 -0.2**
MKAR 06 25 42.3
MKAR pmax pmax
comp=Z,6.0nm,0.7s
MKAR MLR MLR
comp=Z,258nm,18.5s
KURK Kurchatov 48.43 305 ⇓*i*P **P** **06 24 16.7 -1.4**
KURK pmax pmax
comp=Z,13nm,1.2s,mb4.8
KURK Kurchatov 48.43 305 *e*P **P** **06 24 16.9 -1.2**
YKA Yellowknife Ar 51.48 36 P **P** **06 24 40.5 -0.5**
comp=Z,1.5nm,0.7s,mb4.1,baz=297,slow=7.7,SNR=7.2
YKA PcP PcP 06 25 54.8 0.0
comp=Z,0.8nm,0.6s,baz=307,slow=3.6,SNR=8.1
YKA Yellowknife Ar 51.48 36 P **P** **06 24 40.5 -0.5**
YKA 06 25 54.8
YKA pmax pmax
comp=Z,2.0nm,0.7s
YKA Yellowknife Ar 51.48 36 P **P** **06 24 40.5 -0.5**
YKA PcP PcP 06 25 54.9 0.0
RES Resolute Bay 51.70 18 P **P** **06 24 42.4 -0.2**
comp=Z,4.9nm,1.0s,mb4.4,baz=324,slow=12,SNR=4.6
RES Resolute Bay 51.70 18 P **P** **06 24 42.4 -0.2**
RES pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
BVAR Borovoye Array 51.98 310 P **P** **06 24 44.3 -0.6**
comp=Z,2.9nm,0.6s,mb4.4,baz=52,slow=7.9,SNR=14
BVAR Borovoye Array 51.98 310 P **P** **06 24 44.3 -0.6**
BVAR pmax pmax
comp=Z,3.0nm,0.6s
BRVK Borovoye 52.02 310*ce*P **P** **06 24 43.4 -1.8**
BRVK pmax pmax
comp=Z,12nm,1.7s,mb4.5
BRVK Borovoye 52.02 310 *e*P **P** **06 24 44.2 -1.0**
comp=Z,4.8nm,0.6s,mb4.6
CHTO Chiang Mai 52.41 258 *e*P **P** **06 24 50.0 +1.5**
CHTO pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
CHTO Chiang Mai 52.41 258 *e*P **P** **06 24 50.0 +1.4**
comp=Z,4.9nm,0.8s,mb4.5
CMAR Chiang Mai Arr 52.66 258 P **P** **06 24 50.8 +0.4**
comp=Z,3.0nm,0.8s,mb4.3,baz=34,slow=7.8,SNR=9.9
CMAR Chiang Mai Arr 52.66 258 P **P** **06 24 50.8 +0.4**
CMAR pmax pmax
comp=Z,3.0nm,0.8s
TKM2 Tokmak 2 53.98 297 *e*P **P** **06 25 01.5 +1.7**
TKM2 pmax pmax
comp=Z,12nm,1.1s,mb4.7
TKM2 Tokmak 2 53.98 297 *e*P **P** **06 25 01.5 +1.7**
comp=Z,12nm,1.1s,mb4.7
SVE Sverdlovsk 55.01 318 *e*P **P** **06 25 05.7 -1.3**
EKS2 Erkin-Say 55.25 298 *e*P **P** **06 25 09.9 +0.9**
comp=Z,16nm,0.9s,mb5.0
KSH Kashi 55.58 294 *e*P **P** **06 25 16.6 +5.1**
KSH pP pP 06 25 20.7 -1.3
KSH sP sP 06 25 23.9 -2.2
KSH PcP PcP 06 26 14.3 +3.4
KSH PP PP 06 27 22.4 +6.9
KSH ScP ScP 06 30 11.6 +4.7
KSH PcS PcS 06 30 13.4 +2.4
KSH S **S** **06 33 00.1 +5.5**
KSH sS sS 06 33 08.4 -3.6
KSH ScS ScS 06 35 01.3 +3.6
KSH SS SS 06 36 46.5 +7.1
KSH pmax pmax
comp=Z,13nm,1.2s,mb4.8
KSH pmax pmax
comp=Z,120nm,3.7s
KSH LR LR
comp=N,130nm,6.1s
KSH LR LR
comp=E,130nm,9.2s
KSH LR LR
comp=Z,220nm,20.5s,MS4.2
B08A Colville Reser 56.12 53 ⇓P **P** **06 25 14.4 -0.8**
baz=56
ARU Arti 56.19 318*d i*P **P** **06 25 14.6 -0.9**
ARU *e* 06 26 09.2
ARU *e*PPP 06 28 35.9
ARU S **S** **06 33 01.8 -0.4**
ARU SS SS 06 36 44.2 -4.0
ARU pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
ARU Arti 56.19 318 *e*P **P** **06 25 14.7 -0.8**
comp=Z,9.3nm,0.6s,mb5.0
H04A Detroit Lake 56.46 58 ⇓P **P** **06 25 16.4 -1.3**
baz=56
EDM Edmonton 56.68 46 *e*P **P** **06 25 18.7 -0.4**
G08A Pilot Rock 58.02 56 ⇓P **P** **06 25 28.5 -0.2**
baz=58
C11A Tepee Creek (N 58.13 52 ⇑P **P** **06 25 28.8 -0.6**
baz=58
A13A Flathead Natio 58.52 51 ⇑P **P** **06 25 32.0 -0.1**
baz=58
H08A Prairie City 58.63 57 ⇑P **P** **06 25 32.8 -0.2**
baz=58
F10A Beach Ranch, E 58.64 55 ⇑P **P** **06 25 32.9 -0.1**
baz=58
G09A Cove 58.72 56 ⇑P **P** **06 25 33.2 -0.3**
baz=58
B13A Whitefish 58.81 51 ⇑P **P** **06 25 34.3 +0.2**
baz=58
A14A Double T Ranch 59.03 50 ⇓P **P** **06 25 35.0 -0.7**
baz=59
ARCES ARCESS Array B 59.07 341 P **P** **06 25 35.3 -0.3**
comp=Z,3.2nm,0.8s,mb4.4,baz=38,slow=6.1,SNR=9.3
ARCES LR LR 06 54 31.3
comp=Z,139nm,18.8s,MS4.1,baz=205,slow=40
ARCES ARCESS Array B 59.07 341 P **P** **06 25 35.3 -0.3**
ARCES pmax pmax
comp=Z,3.0nm,0.8s
ARCES MLR MLR
comp=Z,139nm,18.8s
G10A Bishop Farm, J 59.09 55 ⇑P **P** **06 25 36.3 +0.2**
baz=59,SNR=6.3
H09A Durkee 59.14 56 ⇑P **P** **06 25 37.2 +0.7**
baz=59
C13A Hot Springs 59.15 52 ⇓P **P** **06 25 36.5 0.0**
baz=59
MOD Modoc 59.16 60 *e*P **P** **06 25 37.1 +0.4**
comp=Z,3.8nm,0.6s,mb4.6
F11A Grangeville 59.30 54 ⇓P **P** **06 25 37.1 -0.4**
baz=59
E12A Beaver Dam Sad 59.33 54 ⇑P **P** **06 25 37.4 -0.3**
baz=59
A15A Johnson Ranch, 59.40 50 ⇑P **P** **06 25 36.9 -1.3**
baz=59
J08A Circle Bar Ran 59.42 58 ⇑P **P** **06 25 37.8 -0.6**
baz=59
G11A Walters Elk Ra 59.52 55 ⇑P **P** **06 25 37.4 -1.6**
baz=59
ABKAR Akbulak array 59.55 311 *e*P **P** **06 25 39.4 +0.2**
comp=Z,6.7nm,0.6s,mb4.8
C14A Swan Lake 59.55 51 ⇓P **P** **06 25 37.4 -1.9**
baz=59
D13A Huson 59.55 52 ⇓P **P** **06 25 38.1 -1.2**
baz=59
H10A Noah's Angus R 59.71 56 ⇓P **P** **06 25 40.0 -0.4**
baz=59
WVOR Wild Horse Val 59.86 59 *e*P **P** **06 25 41.6 +0.2**
WVOR pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
WVOR Wild Horse Val 59.86 59 *e*P **P** **06 25 41.6 +0.1**
comp=Z,1.9nm,0.8s,mb4.2
B15A Bradely Ranch, 59.88 50 ⇑P **P** **06 25 41.2 -0.3**
baz=60
F12A Elk City 59.89 54 ⇑P **P** **06 25 41.2 -0.4**
baz=60,SNR=6.4
MSO Missoula 60.00 52 *e*P **P** **06 25 42.3 -0.1**
comp=Z,3.6nm,1.2s,mb4.3
SLMT Seeley Lake 60.00 52 *e*P **P** **06 25 41.8 -0.5**
comp=Z,2.6nm,0.8s,mb4.3
H11A Donnelly 60.07 55 ⇓P **P** **06 25 42.5 -0.4**
baz=60
D14A Greenough 60.09 52 ⇓P **P** **06 25 42.6 -0.4**
baz=60,SNR=10
C15A Salmond Ranch, 60.17 51 ⇓P **P** **06 25 43.3 -0.2**
baz=60,SNR=11
BEKR Beckworth 60.32 62 P **P** **06 25 45.1 +0.5**
baz=60
CHMT Chamberlain Mo 60.33 52 *e*P **P** **06 25 44.0 -0.5**
comp=Z,1.3nm,0.9s,mb4.0
F13A Darby 60.39 54 ⇑P **P** **06 25 44.3 -0.7**
baz=60
E14A Clinton 60.49 53 ⇓P **P** **06 25 44.5 -1.2**
baz=60
C16A Fuhringer Ranc 60.62 50 ⇓P **P** **06 25 46.3 -0.3**
baz=60
D15A Lincoln 60.66 52 ⇑P **P** **06 25 46.9 0.0**
baz=60
K10A MacKenzie Ranc 60.71 58 ⇓P **P** **06 25 46.8 -0.4**
baz=60
B17A L&G Farms, Che 60.84 50 ⇓P **P** **06 25 47.6 -0.4**
baz=60
G13A Cobalt 60.86 54 ⇑P **P** **06 25 48.1 -0.1**
baz=60,SNR=11
MFID Camas Ranch 60.94 56 ⇑P **P** **06 25 48.9 +0.1**
baz=61
E15A Deer Lodge 60.96 52 ⇓P **P** **06 25 48.0 -0.9**
baz=61
WCN Washoe City 61.03 62 ⇓P **P** **06 25 49.6 +0.1**
baz=61
I12A Atlanta 61.12 56 ⇑P **P** **06 25 50.2 +0.2**
baz=61
H13A Challis 61.16 55 ⇓P **P** **06 25 50.4 +0.1**
baz=61
D16A Dana Ranch, Ca 61.19 51 ⇑P **P** **06 25 50.5 0.0**
baz=61,SNR=9.1
K11A Parker Ranch, 61.21 57 ⇓P **P** **06 25 50.9 +0.3**
baz=61
FFC Flin Flon 61.23 40 *i* P **P** **06 25 51.4 +0.8**
KAKA Kakadu 61.24 204 *e*P **P** **06 25 52.9 +1.9**
comp=Z,17nm,0.6s,mb5.4
KAKA Kakadu 61.24 204 *e*P **P** **06 25 53.0 +2.0**
comp=Z,37nm,0.6s,mb5.7
KAKA *e*PcP PcP 06 26 33.9 +0.5
C17A Wharram Farm, 61.26 50 ⇑P **P** **06 25 50.8 -0.1**
baz=61
B18A Beardsley Farm 61.32 49 ⇓P **P** **06 25 51.6 +0.2**
baz=61
L10A Juniper Basin 61.36 58 ⇑P **P** **06 25 51.4 -0.3**
baz=61
F15A Butte 61.39 53 ⇑P **P** **06 25 52.3 +0.4**
baz=61
LRM Limekiln Ridge 61.43 53 *e*P **P** **06 25 52.3 +0.2**
comp=Z,37nm,1.0s,mb5.5
J12A Stokes Ranch, 61.47 56 ⇓P **P** **06 25 52.1 -0.3**
baz=61
EGMT Eagleton 61.56 49 ⇑P **P** **06 25 52.9 -0.1**
baz=61
EGMT Eagleton 61.56 49 *e*P **P** **06 25 52.5 -0.4**
comp=Z,5.3nm,0.9s,mb4.7
D17A Six Diamond Ra 61.59 51 ⇑P **P** **06 25 53.1 0.0**
baz=61
I13A Wildhorse Cree 61.63 55 ⇓P **P** **06 25 53.8 +0.3**
baz=61,SNR=6.0
M10A I.L. Ranch, Tu 61.66 59 ⇓P **P** **06 25 54.4 +0.7**
baz=61
HLID Hailey 61.68 56 ⇓P **P** **06 25 54.0 +0.2**
baz=61
L11A Cat Creek Ranc 61.73 58 ⇓P **P** **06 25 54.3 +0.1**
baz=61
G15A Dillon 61.80 53 ⇑P **P** **06 25 53.7 -0.9**
baz=61
MCMT McKenzie Canyo 61.80 54 P **P** **06 25 54.9 +0.2**
comp=Z,0.3nm,0.4s,mb3.8
FCC Fort Churchill 61.88 33 *e*P **P** **06 25 54.0 -0.9**
comp=Z,0.2nm,0.7s
F16A Kennard Place, 61.91 52 ⇑P **P** **06 25 54.7 -0.6**
baz=62
J13A Cove Ranch, Pi 61.91 56 ⇓P **P** **06 25 55.3 -0.1**
baz=62
E17A Martinsdale 61.92 51 ⇓P **P** **06 25 55.9 +0.6**
baz=62,SNR=6.1
K12A Draper Farm, C 61.95 57 ⇓P **P** **06 25 55.5 -0.2**
baz=62
BOZ Bozeman (W) 61.99 52 ⇑P **P** **06 25 56.5 +0.6**
baz=62,SNR=8.3
BOZ Bozeman (W) 61.99 52 *e*P **P** **06 25 56.4 +0.5**
BOZ pmax pmax
comp=Z,4.0nm,1.1s,mb4.5
BOZ Bozeman (W) 61.99 52 *e*P **P** **06 25 56.4 +0.5**
comp=Z,4.1nm,1.1s,mb4.5
I14A Mackay 62.01 55 ⇑P **P** **06 25 56.4 +0.4**
baz=62,SNR=7.3
D18A Linhart Farms, 62.04 50 ⇓P **P** **06 25 56.0 -0.2**
baz=62
G16A Moss Hill, Enn 62.15 53 ⇓P **P** **06 25 56.3 -0.6**
baz=62,SNR=11
M11A Holland Ranch, 62.16 58 ⇑P **P** **06 25 56.3 -0.7**
baz=62,SNR=8.6
L12A House Creek Ra 62.18 57 ⇓P **P** **06 25 57.0 -0.3**
baz=62,SNR=5.6
J14A Carey 62.34 55 ⇓P **P** **06 25 58.8 +0.5**
baz=62,SNR=14
F17A Fitzpatrick Pl 62.37 52 ⇓P **P** **06 25 58.4 0.0**
baz=62
NVAR Mina Array Bea 62.46 62 P **P** **06 25 59.3 +0.2**
comp=Z,2.5nm,0.8s,mb4.4,baz=283,slow=6.7,SNR=15

JOF Joensuu 62.56 334 eP P 06 25 59.0 -0.4
JOF pmax pmax
comp=Z,8.0nm,0.7s,mb5.0
JOF Joensuu 62.56 334 ep P 06 25 59.0 -0.4
comp=Z,8.1nm,0.7s,mb5.0
M12A Wells 62.69 58 ⇑P P 06 26 00.5 -0.1
baz=62
H16A Russell Place, 62.78 53 ⇑P P 06 26 01.3 +0.1
baz=62,SNR=5.7
P10A Eureka 62.86 60 ⇓P P 06 26 02.6 +0.8
baz=62
F18A Big Timber 62.89 51 ⇓P P 06 26 02.0 +0.2
baz=62,SNR=5.1
J15A Blackfoot 62.92 55 ⇑P P 06 26 01.0 -1.1
baz=63
KBL Kabul 62.98 293 eP P 06 26 03.0 +0.3
KBL pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
KBL Kabul 62.98 293 eP P 06 26 03.0 +0.3
comp=Z,9.6nm,0.7s,mb5.0
K14A Jones Ranch, D 63.02 56 ⇓P P 06 26 02.6 -0.2
baz=63
M13A Montello 63.17 57 ⇓P P 06 26 04.2 +0.4
baz=63,SNR=5.4
M13A Montello 63.17 57 eP P 06 26 03.5 -0.3
comp=Z,2.3nm,0.8s,mb4.4
L14A Malta 63.30 56 ⇑P P 06 26 05.0 +0.4
baz=63
K15A Arbon 63.30 55 ⇓P P 06 26 04.9 +0.2
baz=63
Q10A Clear Creek Ra 63.39 61 ⇓P P 06 26 04.9 -0.4
baz=63
IMW Indian Meadow 63.46 54 eP P 06 26 06.9 +1.2
comp=Z,1.3nm,0.4s,mb4.4
J16A Bone 63.46 54 ⇑P P 06 26 03.7 -2.0
baz=63
O12A Currie 63.50 59 ⇓P P 06 26 05.3 -0.7
baz=63,SNR=5.4
RRI2 Red Ridge 63.59 54 P P 06 26 07.5 +1.0
comp=Z,5.7nm,0.8s,mb4.7
TPAW Teton Pass 63.70 54 eP P 06 26 08.4 +1.1
comp=Z,5.0nm,0.8s,mb4.6
R10A Warm Springs 63.78 61 ⇑P P 06 26 07.7 -0.3
baz=64
S10A Tonopah Range, 63.83 62 ⇓P P 06 26 07.9 -0.3
baz=64,SNR=5.5
Q11A Duckwater 63.83 60 ⇓P P 06 26 08.3 +0.1
baz=64
SNOW Snow King Moun 63.83 54 eP P 06 26 09.1 +0.9
comp=Z,5.5nm,1.1s,mb4.5
REDW Red Top Meadow 63.84 54 eP P 06 26 09.2 +1.0
comp=Z,9.6nm,1.3s,mb4.7
P12A McGill 63.90 60 ⇑P P 06 26 08.9 +0.3
baz=64
J17A Brown Place, J 63.92 54 ⇑P P 06 26 08.4 -0.3
baz=64
GRAC Grapevine Rang 63.92 63 ⇑P P 06 26 08.9 0.0
baz=64
R11A Troy Canyon, C 64.19 61 ⇑P P 06 26 10.0 -0.6
baz=64,SNR=11
MPMC Manual Prospec 64.44 64 ⇑P P 06 26 11.1 -1.1
baz=64
P13A Bates Ranch, G 64.45 59 ⇓P P 06 26 12.5 +0.3
baz=64
S11A Rachel 64.53 62 ⇓P P 06 26 12.5 -0.3
baz=64
HWUT Hardware Ranch 64.54 56 eP P 06 26 13.2 +0.4
comp=Z,4.5nm,1.2s,mb4.4
FURC Furnace Creek, 64.58 63 ⇓P P 06 26 12.8 -0.3
baz=64,SNR=8.1
L17A Cokeville 64.63 55 ⇓P P 06 26 12.7 -0.7
baz=64
KAF Kangasniemi 64.67 336 eP P 06 26 12.7 -0.6
KAF pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
KAF Kangasniemi 64.67 336 eP P 06 26 12.7 -0.6
comp=Z,6.0nm,0.8s,mb4.7
KAF Kangasniemi 64.67 336 ep P 06 26 12.7 -0.6
comp=Z,6.0nm,0.8s,mb4.7
DUG Dugway 64.70 58 ⇓P P 06 26 13.6 -0.3
baz=64,SNR=6.6
DUG Dugway 64.70 58 eP P 06 26 13.8 -0.1
DUG pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
DUG Dugway 64.70 58 eP P 06 26 13.8 0.0
comp=Z,5.3nm,1.2s,mb4.5
Q13A Wheeler Ranch, 64.76 59 ⇑P P 06 26 14.5 +0.2
baz=64
K18A Toltan Ranch, 64.76 54 ⇓P P 06 26 15.0 +0.7
baz=64
R12A Pony Springs, 64.80 60 ⇑P P 06 26 14.5 -0.1
baz=64
O15A The Old Anders 64.85 58 ⇓P P 06 26 14.7 -0.1
baz=64
EDW2 Edwards Air Fo 64.86 65 ⇓P P 06 26 14.9 -0.1
baz=65
P14A Drum Mountains 64.93 58 ⇓P P 06 26 15.4 0.0
baz=65
BW06 Boulder Array 64.95 54 ⇓P P 06 26 15.2 -0.3
baz=65,SNR=5.9
PDAR Pinedale Array 64.95 54 P P 06 26 15.6 +0.1
comp=Z,2.6nm,0.9s,mb4.3,baz=310,slow=2.8,SNR=22
S12A Delamar Landin 65.11 61 ⇑P P 06 26 17.1 +0.5
baz=65,SNR=5.8
T11A Corn Creek, Al 65.11 62 ⇑P P 06 26 16.5 -0.1
baz=65,SNR=11
M17A Scullys Gap (B 65.14 56 ⇑P P 06 26 16.4 -0.3
baz=65
Q14A Sevier Lake (B 65.19 59 ⇓P P 06 26 16.9 -0.1
baz=65,SNR=5.1
FINES FINESS Array B 65.26 335 P P 06 26 17.1 -0.1
comp=Z,3.6nm,0.5s,mb4.7,baz=29,slow=8.0,SNR=35
FINES FINESS Array B 65.26 335 P P 06 26 17.1 -0.1
FINES pmax pmax
comp=Z,4.0nm,0.5s
K19A Absolon Red Bu 65.32 53 ⇑P P 06 26 16.9 -1.0
baz=65
O16A Springville 65.47 57 ⇓P P 06 26 19.3 +0.5
baz=65
S13A Holt Ranch, En 65.73 61 ⇓P P 06 26 21.0 +0.4
baz=65,SNR=5.8
CTA Charters Tower 65.80 188 LR LR 06 51 52.4
comp=Z,63nm,21.3s,MS3.8,baz=54,slow=33
TUQ Turquoise Moun 65.82 64 ⇓P P 06 26 20.9 -0.3
baz=66
V11A Goodsprings 65.87 63 ⇑P P 06 26 21.4 -0.1
baz=66
HEC Hector,Ludlow 65.95 64 ⇑P P 06 26 22.4 +0.3
baz=66
S14A Cedar City 66.03 60 ⇑P P 06 26 23.2 +0.6
baz=66
N18A Larsen Ranch, 66.04 55 ⇑P P 06 26 22.8 +0.3
baz=66
U12A Valley of Fire 66.05 62 ⇑P P 06 26 23.1 +0.4
baz=66
CCUT Cedar City 66.05 60 eP P 06 26 22.9 +0.2
comp=Z,2.5nm,0.8s,mb4.3
T13A Saint George 66.06 61 ⇑P P 06 26 23.2 +0.5
baz=66,SNR=5.6
L20A Wamsutter 66.13 54 ⇑P P 06 26 23.3 +0.1
baz=66
R15A Junction 66.28 59 ⇓P P 06 26 24.9 +0.7
baz=66
O18A Roosevelt 66.30 56 ⇓P P 06 26 24.7 +0.5
baz=66
N19A John Jarvie Ra 66.38 55 ⇑P P 06 26 24.6 -0.2
baz=66
P17A Butcher Ranch, 66.39 57 ⇑P P 06 26 25.2 +0.4
baz=66
GMRC Granite Mounta 66.40 64 ⇓P P 06 26 25.0 0.0
baz=66
U13A Pakoon Wash 66.41 62 ⇓P P 06 26 24.7 -0.3
baz=66,SNR=14
Q16A Castle Valley 66.49 58 ⇑P P 06 26 25.7 +0.2
baz=66
OBN Obninsk 66.52 326 ⇑iP P 06 26 25.5 +0.1
OBN e 06 28 51.0
OBN pmax pmax
comp=Z,41nm,1.7s,mb5.2
T14A Hurricane 66.53 61 P P 06 26 26.6 +0.8
baz=66,SNR=7.0
M20A Sweetwater, Wa 66.56 54 ⇓P P 06 26 26.3 +0.5
baz=66
LDFC Landfair 66.56 63 eP P 06 26 25.9 -0.1
comp=Z,5.4nm,0.9s,mb4.6
P18A Preston Nutter 66.58 57 ⇓P P 06 26 25.6 -0.4
baz=66
S15A Panguitch 66.58 60 ⇓P P 06 26 25.9 -0.2
baz=66
109C Camp Elliot, M 66.70 66 ⇓P P 06 26 27.1 +0.2
baz=66
L21A Rawlins 66.71 53 ⇑P P 06 26 26.3 -0.5
baz=66
R16A Teasdale 66.71 59 ⇓P P 06 26 27.1 +0.2
baz=66,SNR=5.1
SRU San Rafael 66.75 57 ⇑P P 06 26 27.0 -0.1
baz=66,SNR=9.7
SRU San Rafael 66.75 57 eP P 06 26 26.8 -0.3
SRU pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
SRU San Rafael 66.75 57 eP P 06 26 26.8 -0.3
comp=Z,6.2nm,0.8s,mb4.7
V13A Grand Canyon W 66.76 62 ⇓P P 06 26 26.9 -0.3
baz=66,SNR=8.0
O19A Miners Draw (B 66.80 56 ⇑P P 06 26 27.1 -0.3
baz=66
U14A Mt Trumbull 66.89 61 ⇑P P 06 26 28.4 +0.3
baz=67
N20A Spence Gulch, 66.94 55 ⇓P P 06 26 27.3 -1.0
baz=67
M21A Separation Pea 66.95 54 ⇑P P 06 26 27.3 -1.0
baz=67
Q18A Rafter H Ranch 66.98 57 ⇓P P 06 26 28.4 -0.2
baz=67
T15A Red Dirt Ranch 66.99 60 ⇓P P 06 26 28.0 -0.6
baz=67
S16A Weppner Ranch, 67.01 59 ⇑P P 06 26 29.5 +0.7
baz=67,SNR=6.8
R17A Hanksville Air 67.09 58 ⇓P P 06 26 28.6 -0.6
baz=67,SNR=5.2
L22A Ellis Ranch, M 67.19 53 ⇑P P 06 26 29.8 0.0
baz=67
W13A Hualapai Mount 67.31 63 ⇓P P 06 26 30.1 -0.6
baz=67
P19A Cripple Cowboy 67.31 56 ⇑P P 06 26 30.2 -0.4
baz=67
O20A White River Ci 67.41 55 ⇓P P 06 26 31.0 -0.3
baz=67
N21A Black Mountain 67.41 54 ⇓P P 06 26 30.9 -0.4
baz=67
U15A North Rim 67.43 61 ⇑P P 06 26 31.9 +0.4
baz=67,SNR=5.5
V14A Boquillas Ranc 67.45 62 ⇓P P 06 26 32.2 +0.6
baz=67,SNR=6.4
S17A Black Ridge (B 67.54 59 ⇓P P 06 26 31.9 -0.3
baz=67,SNR=7.5
Q19A Hogan Spring (67.59 57 ⇑P P 06 26 31.6 -0.8
baz=67,SNR=8.3
R18A Canyonlands Na 67.59 58 ⇓P P 06 26 31.8 -0.7
baz=67
WRAB Tennant Creek 67.65 200 eP P 06 26 33.6 +0.8
WRAB pmax pmax
comp=Z,23nm,1.0s,mb5.2
WRAB Tennant Creek 67.65 200 eP P 06 26 33.6 +0.7
comp=Z,23nm,1.0s,mb5.2
WRA Warramunga Arr 67.66 200 P P 06 26 33.8 +0.8
comp=Z,15nm,0.8s,mb5.1,baz=17,slow=6.7,SNR=67
WRA Warramunga Arr 67.66 200 P P 06 26 33.8 +0.9
WRA pmax pmax
comp=Z,15nm,0.8s
X13A Yucca 67.67 63 ⇓P P 06 26 32.5 -0.5
baz=67
W14A Seligman 67.73 62 ⇓P P 06 26 34.1 +0.7
baz=67,SNR=6.1
P20A De Beque 67.74 56 ⇑P P 06 26 32.9 -0.5
baz=67
O21A Pagoda 67.80 55 ⇓P P 06 26 34.2 +0.5
baz=67
V15A Kaibab Nationa 67.90 61 ⇑P P 06 26 35.1 +0.7
baz=68,SNR=5.9
S18A Hurst Farm, Bl 67.99 58 ⇑P P 06 26 34.9 -0.1
baz=68,SNR=6.1
N22A Wattenberg Ran 67.99 54 ⇑P P 06 26 35.3 +0.3
baz=68
R19A Curley Farm, L 68.03 57 ⇑P P 06 26 35.0 -0.2
baz=68
Q20A Ridgley Place, 68.16 56 ⇓P P 06 26 36.0 -0.1
baz=68
P21A Newcastle 68.27 55 ⇓P P 06 26 37.4 +0.6
baz=68
U17A Shonto 68.31 60 ⇓P P 06 26 37.5 +0.5
baz=68
VSR Storozhevoye 68.31 322 eP P 06 26 36.9 +0.1
VSR pmax pmax
comp=N,10.0nm,1.0s
VSR pmax pmax
comp=E,10.0nm,1.0s
VSR pmax pmax
comp=Z,20nm,1.0s,mb5.1
X14A Yava 68.34 63 ⇑P P 06 26 37.0 -0.3
baz=68
O22A Kremmling 68.37 54 ⇓P P 06 26 37.6 +0.3
baz=68
T18A Mexican Hat 68.43 59 ⇓P P 06 26 36.7 -1.0
baz=68
FITZ Fitzroy Crossi 68.44 209 eP P 06 26 39.5 +1.6
comp=Z,16nm,1.8s,mb4.8
S19A Harvey Farm, M 68.47 58 P P 06 26 37.9 -0.1
baz=68,SNR=9.2
PV01 Paradox Valley 68.54 57 eP P 06 26 38.7 +0.2
comp=Z,199nm,1.0s,mb6.0
Y14A Wickenburg 68.62 63 ⇑P P 06 26 39.2 +0.2
baz=68
R20A Redvale 68.62 57 ⇓P P 06 26 39.1 +0.2
baz=68
Q21A Lamborn Mesa, 68.66 56 ⇓P P 06 26 39.5 +0.3
baz=68,SNR=6.1
Z13A Yuma Proving G 68.69 64 ⇓P P 06 26 39.2 -0.3
baz=68
X15A Humboldt 68.73 62 P P 06 26 40.4 +0.7
baz=68,SNR=5.9
SMCO Snowmass 68.78 55 eP P 06 26 40.0 +0.1
comp=Z,3.5nm,0.8s,mb4.3
S20A Disappointment 68.87 57 ⇓P P 06 26 40.2 -0.3
baz=68
V17A Tonalea, Kykot 68.87 60 ⇑P P 06 26 41.1 +0.6
baz=68
U18A Rough Rock, Ch 68.91 59 ⇓P P 06 26 40.8 0.0
baz=69
R21A Cimarron 68.98 56 ⇓P P 06 26 40.9 -0.3
baz=69
Q22A Crested Butte, 69.03 56 ⇓P P 06 26 40.4 -1.0
baz=69
Y15A Casa Rosa Ranc 69.03 63 ⇓P P 06 26 40.9 -0.6
baz=69
T19A Beclabito 69.14 58 ⇓P P 06 26 41.8 -0.4
baz=69
ISCO Idaho Springs 69.14 54 eP P 06 26 42.4 +0.3
ISCO pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
ISCO Idaho Springs 69.14 54 eP P 06 26 42.4 +0.3
comp=Z,3.0nm,0.8s,mb4.3
MVCO Mesa Verde 69.20 58 ⇑P P 06 26 42.3 -0.3
baz=69
X16A Lo Mia Camp, P 69.27 62 ⇓P P 06 26 43.2 +0.1
baz=69
S21A Coal Bank Pass 69.31 57 ⇑P P 06 26 43.6 +0.3
baz=69
V18A Ganado 69.34 60 ⇓P P 06 26 44.0 +0.6
baz=69
U19A Dine' College, 69.39 59 ⇑P P 06 26 44.3 +0.5
baz=69
NB2 NORSAR Subarra 69.44 342 P P 06 26 42.7 -0.9
comp=Z,3.8nm,0.7s,mb4.4,baz=27,slow=6.2
NOA NORSAR Array B 69.44 342 P P 06 26 43.4 -0.2
comp=Z,2.4nm,0.7s,mb4.3,baz=27,slow=6.3,SNR=8.8
NOA LR LR 06 57 56.0
comp=Z,35nm,21.8s,MS3.6,baz=205,slow=37
NOA NORSAR Array B 69.44 342 P P 06 26 43.4 -0.2
NOA pmax pmax
comp=Z,2.0nm,0.7s
NOA MLR MLR
comp=Z,35nm,21.8s
R22A Saguache, Gunn 69.54 56 ⇓P P 06 26 45.8 +1.1
baz=69,SNR=5.2
X17A Forest Lakes 69.72 61 ⇑P P 06 26 46.9 +1.1
baz=69
S22A 4UR Ranch, Cre 69.82 56 ⇑P P 06 26 46.9 +0.6
baz=70,SNR=5.0
T21A Navajo Lake 69.92 57 ⇓P P 06 26 47.8 +0.8
baz=70
115A Sonoran Desert 69.92 64 ⇓P P 06 26 47.6 +0.6
baz=70
Z16A Peralta Trail, 70.00 63 ⇑P P 06 26 47.5 -0.1
baz=70
U21A Nageezi 70.22 58 ⇓P P 06 26 49.0 +0.1
baz=70
T22A Edith 70.28 57 ⇑P P 06 26 49.3 +0.2
baz=70
R24A Sanders Place, 70.49 55 ⇓P P 06 26 51.1 +0.6
baz=70
Y18A Canyon Day Jun 70.57 61 ⇓P P 06 26 51.3 +0.3
baz=70
X19A St. Johns 70.59 60 ⇓P P 06 26 51.7 +0.5
baz=70
T23A Casias Ranch, 70.77 57 ⇑P P 06 26 52.8 +0.6
baz=70
S24A Houchin Ranch, 70.84 56 ⇓P P 06 26 53.2 +0.6
baz=70
216A Three Points, 70.87 64 ⇓P P 06 26 53.2 +0.3
baz=71
X20A Quemado 70.99 60 ⇑P P 06 26 53.9 +0.3
baz=71
U23A El Rito 71.16 57 ⇓P P 06 26 54.7 +0.1
baz=71,SNR=11
ECSD EROS Data Cent 71.25 46 eP P 06 26 53.7 -1.3
comp=Z,3.1nm,0.8s,mb4.3
ASAR Alice Springs 71.35 199 P P 06 26 57.6 +2.0
comp=Z,16nm,0.7s,mb5.0,baz=22,slow=4.8,SNR=97
ASAR Alice Springs 71.35 199 P P 06 26 57.6 +2.0
ASAR pmax pmax
comp=Z,16nm,0.7s
Z19A T-Link Ranch, 71.37 61 ⇑P P 06 26 55.0 -0.8
baz=71
118A Homack Ranch, 71.37 62 ⇑P P 06 26 55.5 -0.5
baz=71
X21A Alamocita Cree 71.49 60 ⇓P P 06 26 56.7 +0.1
baz=71
Y20A Horse Springs, 71.50 60 ⇓P P 06 26 57.5 +0.9
baz=71
V23A Ortiz Mt. (NFS 71.56 58 ⇓P P 06 26 57.5 +0.5
baz=71
218A Dragoon 71.78 63 ⇓P P 06 26 59.1 +0.7
baz=72
KIV Kislovodsk 71.96 315 eP P 06 27 00.3 +1.1
KIV pmax pmax
comp=Z,26nm,1.1s,mb5.1
KIV Kislovodsk 71.96 315 P P 06 27 00.4 +1.1
comp=Z,16nm,0.8s,mb5.0
W23A Werner Place, 71.98 58 ⇑P P 06 27 00.3 +0.7
baz=72
V24A Rampart Ranch, 72.11 57 ⇓P P 06 27 01.2 +0.9
baz=72
U25A Circle Dot Ran 72.16 56 ⇑P P 06 27 00.7 +0.2
baz=72,SNR=6.3
318A Bisbee 72.17 63 ⇓P P 06 27 00.8 +0.1
baz=72
ZEI Tsey 72.20 313 eP P 06 27 00.6 -0.1
ZEI pmax pmax
comp=Z,15nm,0.9s,mb4.9
219A White Tail Can 72.25 62 ⇓P P 06 27 01.1 -0.1
baz=72
120A U Bar Ranch, L 72.26 62 ⇓P P 06 27 01.9 +0.6
baz=72
Z21A St. Cloud Mine 72.33 60 ⇓P P 06 27 01.4 -0.3
baz=72
W24A Lazy 6 Ranch, 72.39 58 ⇓P P 06 27 02.6 +0.6
baz=72,SNR=7.6
MTA Mtatsminda 72.52 312 P P 06 27 04.1 +1.4
KEH Kehvi 72.52 313 P P 06 27 02.4 -0.2
TBLG Delisi 72.52 312 eP P 06 27 04.1 +1.5
TBLG Delisi 72.52 312 P P 06 27 04.2 +1.5
ONI Oni 72.56 314 P P 06 27 04.5 +1.6
319A Douglas 72.66 63 ⇑P P 06 27 03.9 +0.3
baz=72
AKASG Malin Array Be 72.76 327 P P 06 27 03.5 -0.4
comp=Z,11nm,0.5s,mb5.0,baz=33,slow=6.2,SNR=45
AKASG Malin Array Be 72.76 327 P P 06 27 03.5 -0.4
AKASG pmax pmax
comp=Z,11nm,0.5s
AKBB Malin Array Si 72.76 327 eP P 06 27 03.7 -0.2
220A Playas Peak, P 72.77 62 ⇓P P 06 27 04.3 0.0
baz=72
KIEV Kiev 72.77 327 eP P 06 27 03.5 -0.5
KIEV pmax pmax
comp=Z,15nm,0.7s,mb5.0
KIEV Kiev 72.77 327 eP P 06 27 03.5 -0.5
comp=Z,15nm,0.7s,mb5.0
Z22A Elephant Butte 72.80 60 ⇑P P 06 27 04.9 +0.5
baz=72,SNR=6.0
Y23A Lovelace Mesa, 72.89 59 ⇑P P 06 27 05.6 +0.6
baz=72
V26A Tequesquite Ra 72.94 56 ⇑P P 06 27 04.6 -0.7
baz=73
W25A X Bar L Ranch, 72.94 57 P P 06 27 05.6 +0.3
baz=73,SNR=5.4
122A Conniff Cattle 73.16 60 ⇓P P 06 27 06.8 +0.2
baz=73
222A Williams Famil 73.51 61 ⇓P P 06 27 09.4 +0.8
baz=73
GNI Garni 73.66 311 diP P 06 27 11.5 +2.1
GNI pmax pmax
comp=Z,24nm,1.2s
SOC Sochi 73.69 316 eP P 06 27 08.8 -0.7
Y25A Mesa, Roswell 73.70 58 ⇑P P 06 27 09.8 0.0
baz=73
Z24A Sheeppen Canyo 73.72 59 ⇑P P 06 27 10.0 +0.1
baz=73
ANN Anapa 73.86 318 eP P 06 27 07.9 -2.6
ANN e 06 27 23.2
ANN eS S 06 36 35.6 -3.8
ANN pmax pmax
comp=Z,35nm,1.3s,mb5.1
W27A Bowe Ranch, En 73.87 56 ⇓P P 06 27 11.4 +0.6
baz=74
124A Stringfield Ra 74.10 59 ⇓P P 06 27 12.4 +0.2
baz=74
SCHQ Schefferville 74.11 23 P P 06 27 10.9 -0.9
comp=Z,3.8nm,0.8s,mb4.4,baz=17,slow=9.1,SNR=4.6
224A Cornudas Mount 74.49 60 ⇑P P 06 27 14.6 +0.2
baz=74
Z26A Caprock 74.58 58 ⇓P P 06 27 14.7 -0.2
baz=74,SNR=6.6
125A Gardner Draw, 74.61 59 ⇓P P 06 27 15.2 +0.2
baz=74
Y27A Causey 74.64 57 ⇑P P 06 27 14.7 -0.5
baz=74
Z27A Tatum 75.01 58 ⇑P P 06 27 17.2 -0.2
baz=75,SNR=8.5
GDL2 Guadalupe Moun 75.11 59 eP P 06 27 18.2 +0.3
comp=Z,2.0nm,0.8s,mb4.1
SIM Simferopol' 75.26 320 eP P 06 27 21.0 +2.4
SIM pmax pmax
comp=Z,16nm,0.9s,mb5.0
325A Bean Ranch, Si 75.32 60 ⇑P P 06 27 18.4 -0.8
baz=75
425A Indio Mountain 75.72 61 ⇓P P 06 27 21.7 +0.2
baz=75,SNR=6.6
ARMA Armidale 75.74 182 eP P 06 27 23.8 +2.5
326A Caldwell Ranch 75.96 60 ⇓P P 06 27 22.2 -0.7
baz=76,SNR=5.3
KWP Kalwaria Pacla 76.04 330 eP P 06 27 23.9 +0.9
BSEG Bad Segeberg 76.05 339 eP P 06 27 23.1 +0.2
comp=Z,10.0nm,0.9s,mb4.8
426A McDonald Obser 76.39 60 ⇓P P 06 27 24.5 -0.8
baz=76
OJC Ojcow 76.54 332 eP P 06 27 23.8 -2.0
WMOK Wichita Mounta 76.56 54 eP P 06 27 25.7 -0.5
WMOK pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
WMOK Wichita Mounta 76.56 54 eP P 06 27 25.7 -0.5
comp=Z,2.1nm,0.9s,mb4.1
328A Wristen Ranch, 76.62 59 ⇑P P 06 27 26.4 -0.2
baz=76,SNR=7.8
427A Hayter Ranch, 76.64 60 ⇑P P 06 27 26.3 -0.4
baz=76
526A Mary Lane Ranc 76.78 61 ⇓P P 06 27 27.5 0.0
baz=76
BUR08 Bucovina Ar. S 76.79 327 eP P 06 27 27.7 +0.4
BURAR Bucovina Array 76.80 327 ⇑P P 06 27 27.8 +0.5
BURAR Bucovina Array 76.80 327 ⇑iP P 06 27 27.8 +0.5
527A Woodward Ranch 77.01 60 ⇓P P 06 27 28.4 -0.4
baz=77,SNR=5.7
UZH Uzhgorod 77.03 329 eP P 06 27 28.8 +0.2
NIE Niedzica 77.06 331 eP P 06 27 29.6 +0.9
626A Big Bend Ranch 77.11 61 ⇓P P 06 27 29.3 -0.1
baz=77,SNR=6.2
KSP Ksiaz 77.12 334 eP P 06 27 29.1 0.0
KSP Ksiaz 77.12 334 ⇓eP P 06 27 29.1 0.0
TESR 77.16 326 ⇓P P 06 27 28.7 -0.6
TESR 77.16 326 ⇓iP P 06 27 28.7 -0.7
428A Kincaid Ranch, 77.16 59 ⇑P P 06 27 29.6 0.0
baz=77,SNR=6.7

CMSA	Cobar Meteorol	77.19	187	eP	P	06 27 31.4 +1.9
HDIL	Hopedale	77.25	44	eP	P	06 27 28.7 -1.4
comp=Z,9.9nm,0.7s,mb4.8						
TLCR		77.36	324	⇑P	P	06 27 31.2 +0.7
TLCR		77.36	324	⇑iP	P	06 27 31.2 +0.7
TRPA	Tarpa	77.37	329	⇓iP	P	06 27 31.2 +0.7
OKC	Ostrava-Krasne	77.42	332	eP	P	06 27 31.2 +0.5
528A	Cox Ranch, San	77.50	60	⇓P	P	06 27 31.9 +0.3
baz=77						
UPC	Upice	77.51	334	eP	P	06 27 31.8 +0.6
DPC	Dobruska-Polom	77.55	334	eP	P	06 27 31.9 +0.4
TXAR	Lajitas Array	77.55	61	P	P	06 27 29.9 -2.0
comp=Z,4.9nm,0.8s,mb4.5,baz=316,slow=10,SNR=35						
TXAR	Lajitas Array	77.55	61	P	P	06 27 29.9 -2.0
TXAR				pmax	pmax	
comp=Z,5.0nm,0.9s						
TXAR	Lajitas Array	77.55	61	P	P	06 27 29.9 -2.0
627A	Terlingua Ranc	77.64	61	⇓P	P	06 27 32.1 -0.2
baz=77						
VRI	Vrincioaia	77.66	325	⇑P	P	06 27 30.8 -1.4
VRI	Vrincioaia	77.66	325	⇑iP	P	06 27 30.8 -1.4
MORC	Moravsky Berou	77.66	333	⇓P	P	06 27 32.7 +0.6
MORC	Moravsky Berou	77.66	333	eP	P	06 27 32.0 -0.1
comp=Z,11nm,0.9s,mb4.8						
MORC	Moravsky Berou	77.66	333	⇓iP	P	06 27 32.7 +0.6
CLL	Collm	77.69	336	eP	P	06 27 32.0 -0.2
comp=Z,21nm,0.8s,mb5.1						
CLL	Collm	77.69	336	⇓iP	P	06 27 31.9 -0.3
CLL				pmax	pmax	
comp=Z,21nm,0.8s,mb5.1						
CLL	Collm	77.69	336	⇓iP	P	06 27 31.9 -0.3
comp=Z,21nm,0.8s,mb5.1						
CLL				L		07 00 00.0
comp=Z,100nm,19.0s						
KECS	Kecovo	77.80	330	eP	P	06 27 33.1 +0.2
KECS				pmax	pmax	
comp=Z,6.0nm,1.0s,mb4.5						
KECS	Kecovo	77.80	330	eP	P	06 27 33.1 +0.2
comp=Z,5.7nm,1.0s,mb4.5						
KECS	Kecovo	77.80	330	eP	P	06 27 33.1 +0.2
BRG	Berggiesshubel	77.80	335	eP	P	06 27 32.8 -0.1
comp=Z,5.0nm,0.8s,mb4.5						
BRG	Berggiesshubel	77.80	335	eP	P	06 27 32.8 -0.1
comp=Z,3.5nm,0.8s,mb4.3						
BRG	Berggiesshubel	77.80	335	eP	P	06 27 32.8 -0.1
BRG				pmax	pmax	
comp=Z,2.0nm,0.8s,mb4.1						
628A	Black Gap, Mar	77.92	60	⇓P	P	06 27 33.1 -0.8
baz=78						
PVCC	Panska Ves	77.92	335	eP	P	06 27 34.1 +0.5
STKA	Stephens Creek	77.97	191	eP	P	06 27 31.4 -2.4
comp=Z,3.2nm,0.8s,mb4.3						
STKA	Stephens Creek	77.97	191	P	P	06 27 34.0 +0.1
comp=Z,4.3nm,0.8s,mb4.4,baz=335,slow=12,SNR=4.1						
IBBN	Ibbenburen	78.17	340	eP	P	06 27 35.1 +0.2
comp=Z,16nm,0.8s,mb5.0						
CCM	Cathedral Cave	78.18	47	eP	P	06 27 33.0 -2.2
CCM				pmax	pmax	
comp=Z,4.0nm,0.9s,mb4.3						
CCM	Cathedral Cave	78.18	47	eP	P	06 27 33.0 -2.2
comp=Z,3.9nm,0.9s,mb4.3						
MLR	Muntele Rosu	78.28	325	⇑P	P	06 27 37.4 +1.8
MLR	Muntele Rosu	78.28	325	⇑iP	P	06 27 37.4 +1.8
VYHS	Vyhne	78.35	331	eP	P	06 27 36.2 +0.2
VYHS				pmax	pmax	
comp=Z,6.0nm,1.2s,mb4.4						
VYHS	Vyhne	78.35	331	eP	P	06 27 36.2 +0.2
comp=Z,5.6nm,1.2s,mb4.4						
VYHS	Vyhne	78.35	331	eP	P	06 27 36.2 +0.2
VRAC	Vranov	78.38	333	⇑P	P	06 27 37.1 +1.0
VRAC	Vranov	78.38	333	⇑iP	P	06 27 37.1 +1.0
PRU	Pruhonice	78.41	335	eP	P	06 27 37.2 +0.9
PSZ	Piszkesteto	78.48	330	⇑P	P	06 27 37.8 +1.1
PSZ	Piszkesteto	78.48	330	⇑iP	P	06 27 37.8 +1.1
TANN	Tannenbergstha	78.64	336	eP	P	06 27 37.8 +0.3
comp=Z,8.0nm,1.2s,mb4.5						
MOX	Moxa	78.67	337	eP	P	06 27 37.8 +0.1
comp=Z,13nm,1.1s,mb4.8						
MOX	Moxa	78.67	337	eP	P	06 27 37.9 +0.2
comp=Z,12nm,1.1s,mb4.7						
VOIR		78.67	326	⇑P	P	06 27 38.8 +1.0
VOIR		78.67	326	⇑iP	P	06 27 38.8 +1.0
WTSB	Winterswijk	78.72	340	eP	P	06 27 37.8 -0.1
comp=Z,21nm,1.1s,mb5.0						
NKC	Novy Kostel	78.81	336	eP	P	06 27 38.4 0.0
UBBA	Unterbreizbach	78.96	338	eP	P	06 27 39.1 -0.1
comp=Z,22nm,1.6s,mb4.8						
JCT	Junction City	79.06	58	eP	P	06 27 39.8 -0.4
JCT				pmax	pmax	
comp=Z,4.0nm,1.0s,mb4.3						
JCT	Junction City	79.06	58	eP	P	06 27 39.8 -0.4
comp=Z,3.8nm,1.0s,mb4.3						
BUG	Bochum--Univer	79.09	339	eP	P	06 27 40.3 +0.3
comp=Z,12nm,1.0s,mb4.8						
ZST	Bratislava	79.18	332	eP	P	06 27 41.3 +0.8
ZST				pmax	pmax	
comp=Z,9.0nm,1.1s,mb4.6						
ZST	Bratislava	79.18	332	eP	P	06 27 41.3 +0.8
comp=Z,8.7nm,1.1s,mb4.6						
ZST	Bratislava	79.18	332	eP	P	06 27 41.3 +0.8
KHC	Kasperske Hory	79.46	335	eP	P	06 27 42.4 +0.3
comp=Z,12nm,0.9s,mb4.8						
KHC				ePcP	PcP	06 27 50.0 -0.1
KHC	Kasperske Hory	79.46	335	eP	P	06 27 42.4 +0.4
BR131	Keskin Array S	79.56	317	eP	P	06 27 43.6 +0.9
comp=Z,3.7nm,0.8s,mb4.4						
BRTR	Keskin Array B	79.56	317	P	P	06 27 43.0 +0.3
comp=Z,4.5nm,0.9s,mb4.4,baz=70,slow=4.1,SNR=17						
BRTR	Keskin Array B	79.56	317	P	P	06 27 43.1 +0.3
BRTR				pmax	pmax	
comp=Z,5.0nm,0.9s						
GRF	Grafenberg Arr	79.64	336	eP	P	06 27 43.8 +0.8
comp=Z,26nm,0.8s,mb5.2						
GRF	Grafenberg Arr	79.64	336	eP	P	06 27 43.8 +0.8
GRF				pmax	pmax	
comp=Z,26nm,0.8s,mb5.2						
WET	Wettzell	79.66	335	eP	P	06 27 42.9 -0.2
comp=Z,10.0nm,1.0s,mb4.7						
CONA	Conrad Observa	79.82	333	⇓ipP	P	06 27 44.9 +0.9
comp=Z,7.8nm,1.0s,mb4.6,SNR=8.3						
BZS	Buzias	79.83	328	⇓P	P	06 27 44.5 +0.4
BZS	Buzias	79.83	328	⇓iP	P	06 27 44.5 +0.4
TNS	Taunus Mts	79.91	338	eP	P	06 27 44.6 +0.2
comp=Z,19nm,0.8s,mb5.1						
HGN	Heimansgroeve	80.04	340	⇑iP	P	06 27 44.9 -0.2
MEM	Membach	80.16	340	P	P	06 27 46.2 +0.4
comp=Z,9.4nm,1.0s,mb4.7						
MEM				AP	pP	06 27 49.0 -7.8
ERPA	Erie	80.29	38	eP	P	06 27 46.2 -0.4
comp=Z,7.7nm,0.8s,mb4.7						
BCLA	Clavier	80.51	340	P	P	06 27 47.8 +0.1
WCI	Wyandotte Cave	80.52	44	eP	P	06 27 47.7 -0.3
WCI				pmax	pmax	
comp=Z,6.0nm,0.8s,mb4.6						
WCI	Wyandotte Cave	80.52	44	eP	P	06 27 47.7 -0.3
comp=Z,5.8nm,0.8s,mb4.6						
GIVF	Givet	80.92	340	eP	P	06 27 49.6 -0.3
RJOB	Jochberg	80.94	335	eP	P	06 27 50.5 +0.5
comp=Z,9.0nm,1.3s,mb4.5						
FUR	Furstenfeldbru	81.00	336	eP	P	06 27 50.9 +0.5
comp=Z,34nm,1.3s,mb5.1						
STU	Stuttgart	81.04	337	eP	P	06 27 51.0 +0.5
comp=Z,25nm,1.5s,mb4.9						
PPT	Papeete	81.07	126	LR	LR	07 03 23.2
comp=Z,113nm,18.5s,MS4.3,baz=349,slow=35						
BAIF	Baives	81.10	341	eP	P	06 27 50.7 -0.1
comp=Z,43nm,1.3s,mb4.9						
BAIF	Baives	81.10	341	eP	P	06 27 50.7 -0.1
BAIF				pmax	pmax	
comp=Z,22nm,1.3s,mb4.9						
BAIF	Baives	81.10	341	eP	P	06 27 50.7 -0.1
comp=Z,22nm,1.3s,mb4.9						
SOKA	Soboth	81.19	333	⇑iP	P	06 27 51.2 -0.2
comp=Z,12nm,1.1s,mb4.7						
KBA	Koelnbreinsper	81.36	334	⇑ipP	P	06 27 53.5 +1.2
comp=Z,13nm,0.8s,mb5.0,SNR=12						
WVT	Waverly	81.40	46	eP	P	06 27 52.1 -0.6
WVT				pmax	pmax	
comp=Z,3.0nm,0.8s,mb4.3						
WVT	Waverly	81.40	46	eP	P	06 27 52.1 -0.6
comp=Z,2.6nm,0.8s,mb4.2						
WATA	Walderalm	81.67	335	⇓ipP	P	06 27 54.5 +0.6
comp=Z,6.1nm,0.8s,mb4.6						
BFO	Black Forest	81.67	338	eP	P	06 27 54.2 +0.3
comp=Z,12nm,0.9s,mb4.8						
BFO	Black Forest	81.67	338	eP	P	06 27 53.7 -0.2
BFO				pmax	pmax	
comp=Z,11nm,0.9s,mb4.8						
BFO	Black Forest	81.67	338	eP	P	06 27 53.6 -0.3
comp=Z,11nm,0.9s,mb4.8						
WTTA	Wattenberg	81.71	335	⇓ipP	P	06 27 55.0 +0.9
comp=Z,14nm,1.0s,mb4.9						
VTS	Vitosha	81.78	326	⇑P	P	06 27 55.2 +0.6
VTS	Vitosha	81.78	326	⇑iP	P	06 27 55.2 +0.6
MOTA	Moosalm	81.80	335	⇓ipP	P	06 27 55.3 +0.7
comp=Z,11nm,0.9s,mb4.8						
CDF	Champ du Feu	81.88	338	eP	P	06 27 55.0 0.0
comp=Z,22nm,0.9s,mb4.8						
CDF	Champ du Feu	81.88	338	eP	P	06 27 55.0 0.0
CDF				pmax	pmax	
comp=Z,11nm,0.9s,mb4.8						
CDF	Champ du Feu	81.88	338	eP	P	06 27 55.0 0.0
comp=Z,11nm,0.9s,mb4.8						
ECH	Echery	82.09	338	eP	P	06 27 55.8 -0.3
ECH				pmax	pmax	
comp=Z,10.0nm,0.8s,mb4.8						
ECH	Echery	82.09	338	eP	P	06 27 55.8 -0.3
comp=Z,10nm,0.8s,mb4.8						
MEZF	Maizieres J'vi	82.35	340	eP	P	06 27 57.6 +0.1
comp=Z,17nm,0.7s,mb4.8						
MEZF	Maizieres J'vi	82.35	340	eP	P	06 27 57.6 +0.1
comp=Z,17nm,0.7s,mb5.1						
HAU	Haudompre	82.49	339	eP	P	06 27 58.0 -0.2
comp=Z,16nm,0.9s,mb4.6						
HAU	Haudompre	82.49	339	eP	P	06 27 58.0 -0.2
HAU				pmax	pmax	
comp=Z,8.0nm,0.9s,mb4.7						
HAU	Haudompre	82.49	339	eP	P	06 27 58.0 -0.2
comp=Z,8.1nm,0.9s,mb4.7						
HINF	Hinteralfeld	82.54	338	eP	P	06 27 58.0 -0.4
comp=Z,9.8nm,0.9s,mb4.5						
HINF	Hinteralfeld	82.54	338	eP	P	06 27 58.0 -0.4
HINF				pmax	pmax	
comp=Z,5.0nm,0.9s,mb4.5						
HINF	Hinteralfeld	82.54	338	eP	P	06 27 58.0 -0.4
comp=Z,4.9nm,0.9s,mb4.5						
SWET	Sewanee	83.08	45	eP	P	06 28 00.8 -0.7
TUE	Stuetta	83.09	336	eP	P	06 28 02.1 +0.8
comp=Z,8.1nm,0.8s,mb4.8						
LOR	Lormes	83.79	340	eP	P	06 28 04.9 0.0
CABF	La Chapelle	83.85	338	eP	P	06 28 05.4 +0.2
comp=Z,22nm,1.1s,mb4.9						
CABF	La Chapelle	83.85	338	eP	P	06 28 05.4 +0.2
CABF				pmax	pmax	
comp=Z,11nm,1.1s,mb4.9						
CABF	La Chapelle	83.85	338	eP	P	06 28 05.4 +0.2
comp=Z,11nm,1.1s,mb4.9						
MMAI	Mount Meron Ar	83.95	312	P	P	06 28 06.8 +0.7
comp=Z,14nm,0.7s,mb5.2,baz=36,slow=7.2,SNR=12						
MMAI				LR	LR	07 09 13.4
comp=Z,59nm,21.7s,MS3.9,baz=20,slow=38						
SSF	Saint Saulge	84.07	340	eP	P	06 28 06.3 -0.1
ROSF	Rostrenen	84.29	345	eP	P	06 28 07.1 -0.3
AVF	Avril sur Loir	84.36	340	eP	P	06 28 07.7 -0.2
comp=Z,78nm,1.6s,mb5.3						
AVF	Avril sur Loir	84.36	340	eP	P	06 28 07.7 -0.2
AVF				pmax	pmax	
comp=Z,39nm,1.6s,mb5.3						
AVF	Avril sur Loir	84.36	340	eP	P	06 28 07.7 -0.2
comp=Z,39nm,1.6s,mb5.3						
SMF	Signal de Mont	84.38	340	eP	P	06 28 08.0 +0.1
LPL	La Plagne	84.69	337	eP	P	06 28 10.4 +0.9
comp=Z,23nm,1.0s,mb5.0						
LPL	La Plagne	84.69	337	eP	P	06 28 10.4 +0.9
LPL				pmax	pmax	
comp=Z,11nm,1.0s,mb4.9						
LPL	La Plagne	84.69	337	eP	P	06 28 10.4 +0.9
comp=Z,11nm,1.0s,mb5.0						
BGF	Bois d'Agland	84.70	340	eP	P	06 28 09.3 -0.3
LPG	La Plagne	84.70	337	eP	P	06 28 10.6 +1.0
comp=Z,41nm,1.1s,mb5.2						
LPG	La Plagne	84.70	337	eP	P	06 28 10.6 +1.0
LPG				pmax	pmax	
comp=Z,20nm,1.1s,mb5.2						
LPG	La Plagne	84.70	337	eP	P	06 28 10.6 +1.0
comp=Z,20nm,1.1s,mb5.2						
TCF	Toulx Ste Croi	85.10	341	eP	P	06 28 11.6 0.0
comp=Z,43nm,1.4s,mb5.1						
TCF	Toulx Ste Croi	85.10	341	eP	P	06 28 11.6 0.0
TCF				pmax	pmax	
comp=Z,22nm,1.4s,mb5.1						
TCF	Toulx Ste Croi	85.10	341	eP	P	06 28 11.6 0.0
comp=Z,22nm,1.4s,mb5.1						
ORIF	Oris-en-Rattie	85.47	338	eP	P	06 28 14.1 +0.6
comp=Z,42nm,1.4s,mb5.1						
ORIF	Oris-en-Rattie	85.47	338	eP	P	06 28 14.1 +0.6
ORIF				pmax	pmax	
comp=Z,21nm,1.4s,mb5.1						
ORIF	Oris-en-Rattie	85.47	338	eP	P	06 28 14.1 +0.6
comp=Z,21nm,1.4s,mb5.1						
SBF	Sospel	86.03	336	eP	P	06 28 16.0 -0.2
JSC	Jenkinsville	86.11	43	eP	P	06 28 15.9 -0.9
CAF	Calviac	86.42	340	eP	P	06 28 18.2 0.0
FRF	La Foret Royal	86.52	337	eP	P	06 28 18.6 -0.1
comp=Z,25nm,1.4s,mb5.0						
FRF	La Foret Royal	86.52	337	eP	P	06 28 18.6 -0.1
FRF				pmax	pmax	
comp=Z,12nm,1.4s,mb4.9						
FRF	La Foret Royal	86.52	337	eP	P	06 28 18.6 -0.1
comp=Z,12nm,1.4s,mb5.0						
LMR	La Mourre	86.77	337	eP	P	06 28 20.0 +0.1
comp=Z,58nm,1.4s,mb5.3						
LMR	La Mourre	86.77	337	eP	P	06 28 20.0 +0.1
LMR				pmax	pmax	
comp=Z,29nm,1.4s,mb5.3						
LMR	La Mourre	86.77	337	eP	P	06 28 20.0 +0.1
comp=Z,29nm,1.4s,mb5.3						
ESDC	Sonseca Array	92.76	343	P	P	06 28 47.4 -0.7
comp=Z,0.1nm,0.2s,mb3.8,baz=5.7,slow=6.4,SNR=4.4						
CPUP	Villa Florida	148.51	63	PKPbc	PKPbc	06 35 21.3 -1.2
comp=Z,2.9nm,0.7s,baz=284,slow=2.4,SNR=9.2						
CPUP	Villa Florida	148.51	63	PKP2	PKPbc	06 35 21.3 -1.2
CPUP				pmax	pmax	
comp=Z,3.0nm,0.7s						

PGC 06 06:45:07.9±5.3, 58°.29N×133°.45W, h1km, ML3.2/4, 56km east of Juneau, Ak Southeastern Alaska

NEIC 06 06:45:07.9, 58°.29N×133°.45W, h1km, ML3.2(PGC), ML2.8(AEIC), 6D, After PGC., Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BESE	Bessie Mountai	0.80	292	P		Pg	06 45 21.8	-1.3
BESE				S		Sg	06 45 31.6	-1.8
SKAG	Skagway	1.53	321	P		Pn	06 45 35.0	-1.3
SKAG				S		Sn	06 45 53.8	-3.0
SIT	Sitka	1.59	220	P		Pn	06 45 36.7	-0.5
SIT				S		Sn	06 45 58.1	-0.2
DLBC	Dease Lake	1.81	84	P		Pn	06 45 39.6	-0.5
DLBC				S		Sn	06 46 05.9	+2.2
DLBC	Dease Lake	1.81	84	P		Pn	06 45 39.6	-0.6
DLBC				⇑Pg		Pg	06 45 41.2	-1.4
DLBC				⇑Sn		Sn	06 46 04.1	+0.4
DLBC				⇓Sg		Sg	06 46 05.7	-0.2
PLBC	Pleasant Camp	1.92	309	⇓Pn		Pn	06 45 41.4	-0.2
PLBC				⇑Sn		Sn	06 46 05.5	-0.8
PLBC				⇓Sg		Sg	06 46 07.2	-2.1
WHY	Whitehorse	2.49	344	P		Pn	06 45 48.1	-1.4
WHY				S		Sn	06 46 19.5	-0.9
WHY	Whitehorse	2.49	344	⇓Pn		Pn	06 45 48.3	-1.2
HYT	Haines Junctio	3.28	323	⇓Pn		Pn	06 46 00.3	0.0
HYT				⇑Pg		Pg	06 46 06.7	-3.9
HYT				⇓Sg		Sg	06 46 48.9	-4.2
PNL	Peninsula	3.38	297	ePn		Pn	06 46 01.9	+0.2
PNL				eSn		Sn	06 46 46.8	+4.6
DAWY	Dawson	6.47	336	ePn		Pn	06 46 41.9	-2.2
DAWY				eSg		Sg	06 46 27.9	-7.5
EGAK	Eagle	7.48	334	ePn		Pn	06 46 57.4	-0.4
7.8nm,0.7s								

NEIC 06 07:09:36.4±4.5, 58°.41N×133°.39W, h1km, ML2.8(PGC), ML2.6(AEIC), After PGC.

PGC 06 07:09:36.4±4.5, 58°.41N×133°.39W, h1km, ML2.8/4, 7D, 61km east of Juneau, Ak Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BESE	Bessie Mountai	0.79	283	P		Pg	07 09 49.3	-2.2
BESE				S		Sg	07 09 59.6	-2.1
SKAG	Skagway	1.46	317	P		Pn	07 10 02.0	-1.8
SKAG				S		Sg	07 10 21.1	-2.0
SIT	Sitka	1.71	218	P		Pn	07 10 03.6	-3.7
SIT				S		Sn	07 10 26.7	-3.0
DLBC	Dease Lake	1.77	88	P		Pn	07 10 07.7	-0.3
DLBC				S		Sn	07 10 32.1	+1.0
DLBC	Dease Lake	1.77	88	⇓P		Pn	07 10 07.6	-0.4
DLBC				⇑Pg		Pg	07 10 08.9	-1.3
DLBC				⇓Sn		Sn	07 10 30.7	-0.4
DLBC				⇓Sg		Sg	07 10 32.9	-0.2
PLBC	Pleasant Camp	1.87	305	⇑Pn		Pn	07 10 09.3	-0.1
PLBC				⇓Sn		Sn	07 10 32.9	-0.7
PLBC				⇓Sg		Sg	07 10 34.0	-2.3
WHY	Whitehorse	2.38	342	P		Pn	07 10 15.3	-1.2
WHY				S		Sn	07 10 46.9	+0.6
WHY	Whitehorse	2.38	342	⇑Pn		Pn	07 10 15.4	-1.1
HYT	Haines Junctio	3.20	321	⇑Pn		Pn	07 10 27.8	+0.1
HYT				⇓Pg		Pg	07 10 33.7	-3.9
HYT				⇓Sg		Sg	07 11 15.7	-3.4
PNL	Peninsula	3.35	295	P		Pn	07 10 27.5	-2.3

GUC 06 07:17:06.8±0.7, 24°.04S×67°.56W, h215km, ML4.3, 1C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CEN1	Los Morros	2.51	285	⇓iP		Pn	07 17 54.1	+2.4
CEN1				iS		S	07 18 30.1	+3.2
CEN1				AML		AML	07 18 32.2	
comp=E,318nm,0.6s								
ANCH	Antofagasta	2.64	277	⇓iP		Pn	07 17 56.6	+3.5
ANCH				iS		S	07 18 33.1	+3.7
ANCH				AML		AML	07 18 34.8	
comp=E,580nm,0.1s								
MECH	Mejillones	2.81	289	iP		Pn	07 17 59.1	+4.0
MECH				iS		S	07 18 37.4	+4.4
MECH				AML		AML	07 18 46.3	
comp=N,390nm,0.6s								
PB01	Plate Boundary	3.48	329	⇑iP		Pn	07 18 05.3	+2.4
PB01				iS		S	07 18 48.9	+1.9
PB01				AML		AML	07 18 49.8	
comp=E,298nm,0.2s								

IDC 06 07:30:20.0±1.0, 35°.02N×137°.90E, h0km, mb3.6/4, mb1 3.8/6, mb1mx3.5/28, mbtmp3.8/6, ML3.8/2, Error ellipse: s-maj=27.7km s-min=11.8km az=88.0

ISCJB 06 07:30:23.0±0.5, 35°.60N±0°.03×139°.55E±0°.06, h80km±4km, mb3.6/4, Error ellipse: s-maj=8.3km s-min=4.8km az=165.1

JMA 06 07:30:24.5±0.1, 35°.63N×139°.51E, h70km±1km, M3.1 Broadband fault plane solution: P waves. NP1: φ0=268.00000°, δ20.00000°, λ90.00000°. NP2: φ0=88.00000°, δ70.00000°, λ90.00000°. Principal axes: T Plg65.0000°, Azm358.0000°; N Plg0.0000°, Azm88.0000°; P Plg25.0000°, Azm178.0000°;

NEIC 06 07:30:24.6, 35°.63N×139°.51E, h70km, MG3.1(JMA), After JMA.

ISC 06 07:30:24.1±0.5, 35°.60N±0°.03×139°.54E±0°.06, h73km±4km, n21, σ0=70/34, mb3.6/4, 3C-4D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TOK	Tokyo	0.20	63	S		Sn	07 30 44.2	+1.1
JHU	Hanno	0.33	320	⇓P		Pn	07 30 36.0	+0.2
JHU				S		Sn	07 30 43.9	-0.5
JOD2	Odawara 2	0.50	228	⇑P		Pn	07 30 36.9	-0.3
JOD2				S		Sn	07 30 46.1	-0.7
JRY	Ryogami san	0.67	309	⇓P		Pn	07 30 39.1	+0.2
JRY				eS		Sn	07 30 50.1	+0.3
JYN	Shimob	0.82	263	⇑P		Pn	07 30 40.5	-0.1
JYN				eS		Sn	07 30 52.8	0.0
JAG	Ashikaga	0.83	355	⇓P		Pn	07 30 40.5	-0.2
JAG				eS		Sn	07 30 52.2	-0.8
JIM2	Oshima 3	0.88	186	P		Pn	07 30 41.3	0.0
JIM2				eS		Sn	07 30 53.8	-0.3
JIZS	Izushimoda	1.03	212	⇑P		Pn	07 30 43.5	+0.3
JIZS				eS		Sn	07 30 58.1	+0.7
JKT	Katashina	1.19	349	⇓P		Pn	07 30 44.9	-0.2
JKT				S		Sn	07 31 00.0	-0.9
MJAR	Matsushiro Arr	1.43	311	Pg		Pn	07 30 48.2	0.0
20nm,0.3s,baz=154,slow=11,SNR=205								
MJAR				Lg			07 31 07.7	
25nm,0.3s,baz=160,slow=27,SNR=19								
MAJO	Matsushiro	1.44	311	ePn		Pn	07 30 48.6	+0.3
MAT	Matsushiro	1.44	311	P		Pn	07 30 48.5	+0.2
MAT				S		Sn	07 31 06.8	+0.3
MAT	Matsushiro	1.44	311	P		Pn	07 30 48.9	+0.6
MAT				eS		Sn	07 31 06.7	+0.2
BSO1	Boso 1	1.51	128	P		Pn	07 30 48.9	-0.3
BSO1				eS		Sn	07 31 07.8	-0.4
JHJ	Hachijo jima 2	2.48	175	Pn		Pn	07 31 03.5	+1.2
153nm,0.3s,baz=17,slow=0.3,SNR=60								
JHJ				Sn		Sn	07 31 31.9	+0.4
138nm,0.3s,baz=70,slow=23,SNR=14								
ERM	Erimo	7.00	23	ePn		Pn	07 32 05.9	+2.1
ERM				eSn		Sn	07 33 17.1	-4.8
CBIJ	Chichi jima	8.77	164	Pn		Pn	07 32 26.1	-2.0
2.5nm,0.3s,baz=263,slow=22,SNR=7.7								
MKAR	Makanchi Array	43.62	303	P		P	07 38 19.9	-1.0
0.2nm,0.5s,mb3.1,baz=82,slow=8.1,SNR=3.1								
KURK	Kurchatov	45.64	309	P		P	07 38 37.4	+0.4
0.7nm,0.5s,mb3.7,baz=79,slow=7.7,SNR=3.6								
WRA	Warramunga Arr	55.45	186	P		P	07 39 51.0	-0.1
0.4nm,0.3s,mb3.9,baz=0.2,slow=7.6,SNR=22								
ASAR	Alice Springs	59.18	186	P		P	07 40 17.7	+0

272nm,0.2s
IMI Imperia 0.40 212 Pg **Pg 08 04 25.5 -0.6**
IMI Sg **Sg 08 04 31.1 -0.4**
IMI Imperia 0.40 212 Pg **Pg 08 04 25.5 -0.6**
IMI Sg **Sg 08 04 31.1 -0.4**
206nm,0.3s
IMI Imperia 0.40 212 Pg **Pg 08 04 25.5 -0.6**
IMI Sg **Sg 08 04 31.1 -0.4**
206nm,0.3s
SAOF Saorge 0.53 240 Pg **Pg 08 04 28.7 +0.2**
SAOF Sg **Sg 08 04 35.9 +0.4**
SAOF Saorge 0.53 240 Pg **Pg 08 04 28.7 +0.2**
SAOF Sg **Sg 08 04 35.9 +0.4**
AUTN L'Aution 0.60 246 Pg **Pg 08 04 30.6 +0.7**
AUTN Sg **Sg 08 04 38.4 +0.5**
AUTN L'Aution 0.60 246 Pg **Pg 08 04 30.6 +0.7**
AUTN Sg **Sg 08 04 38.4 +0.5**
STV Sant Anna di V 0.62 270 Pg **Pg 08 04 30.7 +0.5**
STV Sg **Sg 08 04 38.7 +0.2**
STV Sant Anna di V 0.62 270 Pg **Pg 08 04 30.7 +0.5**
STV Sg **Sg 08 04 38.7 +0.2**
263nm,0.3s
STV Sant Anna di V 0.62 270 Pg **Pg 08 04 30.7 +0.5**
STV Sg **Sg 08 04 38.7 +0.2**
263nm,0.3s
SBF Sospel 0.67 235 *e*Pg **Pg 08 04 30.8 -0.3**
SNR=1.0
SBF *e*Sg **Sg 08 04 39.2 -0.7**
185nm,0.3s,SNR=1.0
SBF Sospel 0.67 235 *e*Pg **Pg 08 04 30.8 -0.3**
SNR=1.0
SBF *e*Sg **Sg 08 04 39.2 -0.7**
93nm,0.3s,SNR=1.0
LUCF Luceram 0.70 240 Pg **Pg 08 04 31.7 -0.1**
LUCF Sg **Sg 08 04 41.9 +0.8**
LUCF Luceram 0.70 240 Pg **Pg 08 04 31.7 -0.1**
LUCF Sg **Sg 08 04 41.9 +0.8**
TOUF Mont Tournerai 0.72 251 Pg **Pg 08 04 32.5 +0.5**
TOUF Sg **Sg 08 04 42.9 +1.4**
TOUF Mont Tournerai 0.72 251 Pg **Pg 08 04 32.5 +0.5**
TOUF Sg **Sg 08 04 42.9 +1.4**
DOI San Damiano 0.72 291 Pg **Pg 08 04 32.0 -0.2**
DOI San Damiano 0.72 291 Pg **Pg 08 04 32.0 -0.2**
156nm,0.4s
DOI San Damiano 0.72 291 Pg **Pg 08 04 32.0 -0.2**
156nm,0.4s
REVF Revere 0.78 230 Pg **Pg 08 04 33.8 +0.6**
REVF Sg **Sg 08 04 45.7 +2.2**
REVF Revere 0.78 230 Pg **Pg 08 04 33.8 +0.6**
REVF Sg **Sg 08 04 45.7 +2.2**
PZZ Stroppo 0.81 289 Pg **Pg 08 04 33.5 -0.3**
PZZ Stroppo 0.81 289 Pg **Pg 08 04 33.5 -0.3**
103nm,0.4s
PZZ Stroppo 0.81 289 Pg **Pg 08 04 33.5 -0.3**
103nm,0.4s
MVIF Mont Vial 0.82 245 Pg **Pg 08 04 34.1 0.0**
MVIF Sg **Sg 08 04 45.5 +0.6**
MVIF Mont Vial 0.82 245 Pg **Pg 08 04 34.1 0.0**
MVIF Sg **Sg 08 04 45.5 +0.6**
MONC Moncucco Torin 0.85 347 Pg **Pg 08 04 35.5 +1.0**
MONC Moncucco Torin 0.85 347 Pg **Pg 08 04 35.5 +1.0**
SC2M Scurtabo 0.98 80 Pg **Pg 08 04 35.4 -1.6**
SC2M Scurtabo 0.98 80 Pg **Pg 08 04 35.4 -1.6**
SC2M Scurtabo 0.98 80 Pg **Pg 08 04 35.4 -1.6**
SURF Saint Ours 1.01 284 Pg **Pg 08 04 37.2 -0.5**
SURF Saint Ours 1.01 284 Pg **Pg 08 04 37.2 -0.5**
BOB Bobbio (Coli) 1.04 60 Pg **Pg 08 04 37.4 -0.8**
BOB Bobbio (Coli) 1.04 60 Pg **Pg 08 04 37.4 -0.8**
BOB Bobbio (Coli) 1.04 60 Pg **Pg 08 04 37.4 -0.8**
OG22 Abries 1.06 303 Pg **Pg 08 04 37.8 -0.7**
OG22 Sg **Sg 08 04 52.1 -0.3**
OG22 Abries 1.06 303 Pg **Pg 08 04 37.8 -0.7**
OG22 Sg **Sg 08 04 52.1 -0.3**
CALN Calern 1.06 243 Pg **Pg 08 04 38.9 +0.3**
CALN Sg **Sg 08 04 54.1 +1.7**
CALN Calern 1.06 243 Pg **Pg 08 04 38.9 +0.3**
CALN Sg **Sg 08 04 54.1 +1.7**
RSP Reno Superiore 1.11 324 Pg **Pg 08 04 38.9 -0.7**
RSP Sg **Sg 08 04 54.6 +0.4**
RSP Reno Superiore 1.11 324 Pg **Pg 08 04 38.9 -0.7**
RSP Sg **Sg 08 04 54.6 +0.4**
50nm,0.4s
RSP Reno Superiore 1.11 324 Pg **Pg 08 04 38.9 -0.7**
RSP Sg **Sg 08 04 54.6 +0.4**
50nm,0.4s
MBDF Montbardon 1.12 296 *e*Pg **Pg 08 04 38.8 -0.9**
MBDF *e*Sg **Sg 08 04 54.6 +0.2**
38nm,0.4s,SNR=1.0
MBDF Montbardon 1.12 296 *e*Pg **Pg 08 04 38.8 -0.9**
MBDF *e*Sg **Sg 08 04 54.6 +0.2**
19nm,0.4s,SNR=1.0
FRF La Foret Royal 1.31 239 *e*Pg **Pg 08 04 42.6 -0.7**
FRF *e*Sg **Sg 08 04 58.8 -1.5**
166nm,0.4s
FRF La Foret Royal 1.31 239 *e*Pn **Pn 08 04 41.6 -0.2**
FRF *e*Pg **Pg 08 04 42.6 -0.7**
FRF *e*Sg **Sg 08 04 58.8 -1.5**
FRF La Foret Royal 1.31 239 *e*Pn **Pn 08 04 41.6 -0.2**
SNR=1.0
FRF La Foret Royal 1.31 239 *e*Pg **Pg 08 04 42.6 -0.7**
FRF *e*Sg **Sg 08 04 58.8 -1.5**
83nm,0.4s
BNI Bardonecchia 1.34 307 *e*Pn **Pn 08 04 42.7 +0.4**
BNI *e*Sn **Sn 08 05 00.7 +0.8**
BNI Bardonecchia 1.34 307 *e*Pn **Pn 08 04 42.7 +0.4**
BNI *e*Sn **Sn 08 05 00.7 +0.8**
LMR La Mourre 1.52 234 *e*Pn **Pn 08 04 44.2 -0.5**
SNR=1.0
LMR *e*Sn **Sn 08 05 03.2 -1.0**
LMR *e*Sg **Sg 08 05 05.4 -1.7**
78nm,0.2s,SNR=1.0
LMR La Mourre 1.52 234 *e*Pn **Pn 08 04 44.2 -0.5**
SNR=1.0
LMR *e*Sn **Sn 08 05 03.2 -1.0**
LMR *e*Sg **Sg 08 05 05.4 -1.7**
39nm,0.2s,SNR=1.0
LPG La Plagne 1.61 321 *e*Pn **Pn 08 04 47.4 +1.4**
SNR=1.0
LPG *e*Sn **Sn 08 05 07.5 +0.9**
25nm,0.5s,SNR=1.0
LPG La Plagne 1.61 321 *e*Pn **Pn 08 04 47.4 +1.4**
SNR=1.0
LPG *e*Sn **Sn 08 05 07.5 +0.9**
12nm,0.5s,SNR=1.0
LPL La Plagne 1.64 321 *e*Pn **Pn 08 04 48.0 +1.7**
SNR=1.0
LPL *e*Sn **Sn 08 05 07.9 +0.8**
15nm,0.4s
LPL La Plagne 1.64 321 *e*Pn **Pn 08 04 48.0 +1.7**
SNR=1.0
LPL *e*Sn **Sn 08 05 07.9 +0.8**
7.4nm,0.4s
ORIF Oris-en-Rattie 1.78 293 *e*Pn **Pn 08 04 49.3 +1.0**
SNR=1.0
ORIF *e*Sn **Sn 08 05 10.3 -0.4**
ORIF *e*Sg **Sg 08 05 15.4 0.0**
17nm,0.4s
ORIF Oris-en-Rattie 1.78 293 *e*Pn **Pn 08 04 49.3 +1.0**
SNR=1.0
ORIF *e*Sn **Sn 08 05 10.3 -0.4**
ORIF *e*Sg **Sg 08 05 15.4 0.0**
8.6nm,0.4s
SMRF Simiane la Rot 1.90 263 *e*Pg **Pg 08 04 54.1 -0.5**
SMRF *e*Sg **Sg 08 05 18.4 -0.9**
60nm,0.4s,SNR=1.0
SMRF Simiane la Rot 1.90 263 *e*Pn **Pn 08 04 51.7 +1.7**
SMRF *e*Pg **Pg 08 04 54.1 -0.5**
SMRF *e*Sg **Sg 08 05 18.4 -0.9**
SMRF Simiane la Rot 1.90 263 *e*Pn **Pn 08 04 51.7 +1.7**
SMRF Simiane la Rot 1.90 263 *e*Pg **Pg 08 04 54.1 -0.5**
SMRF *e*Sg **Sg 08 05 18.4 -0.9**
30nm,0.4s,SNR=1.0
VIVF Saint-Julien-I 2.59 285 *e*Pg **Pg 08 05 07.2 -0.4**
VIVF *e*Sn **Sn 08 05 29.5 -1.0**
5.8nm,0.4s,SNR=1.0
VIVF Saint-Julien-I 2.59 285 *e*Pn **Pn 08 05 00.4 +1.0**
VIVF *e*Pg **Pg 08 05 07.2 -0.4**
VIVF *e*Sn **Sn 08 05 29.5 -1.0**
VIVF Saint-Julien-I 2.59 285 *e*Pn **Pn 08 05 00.4 +1.0**
SNR=1.0
VIVF Saint-Julien-I 2.59 285 *e*Pg **Pg 08 05 07.2 -0.4**
VIVF *e*Sn **Sn 08 05 29.5 -1.0**
2.9nm,0.4s,SNR=1.0
CABF La Chapelle 2.79 329 *e*Pn **Pn 08 05 04.1 +1.9**
SNR=1.0
CABF *e*Sn **Sn 08 05 35.7 +0.2**
4.2nm,0.5s
CABF La Chapelle 2.79 329 *e*Pn **Pn 08 05 04.1 +1.9**
SNR=1.0
CABF *e*Sn **Sn 08 05 35.7 +0.2**
2.1nm,0.5s
LASF Ste Croix 3.12 268 *e*Pn **Pn 08 05 07.3 +0.6**
SNR=1.0
LASF *e*Sn **Sn 08 05 42.4 -1.3**
3.0nm,0.3s,SNR=1.0
LASF Ste Croix 3.12 268 *e*Pn **Pn 08 05 07.3 +0.6**
SNR=1.0
LASF *e*Sn **Sn 08 05 42.4 -1.3**
1.5nm,0.3s,SNR=1.0
HINF Hinteralfeld 3.69 346 *e*Pn **Pn 08 05 16.1 +1.6**
SNR=1.0
HINF *e*Sn **Sn 08 05 57.5 -0.2**
1.3nm,0.2s
HINF Hinteralfeld 3.69 346 *e*Pn **Pn 08 05 16.1 +1.6**
SNR=1.0
HINF *e*Sn **Sn 08 05 57.5 -0.2**
0.6nm,0.2s
SMF Signal de Mont 3.89 310 *e*Pn **Pn 08 05 18.2 +1.0**
SNR=1.0
SMF *e*Sn **Sn 08 06 01.0 -1.6**
0.9nm,0.2s,SNR=1.0
SMF Signal de Mont 3.89 310 *e*Pn **Pn 08 05 18.2 +1.0**
SNR=1.0
SMF *e*Sn **Sn 08 06 01.0 -1.6**
0.4nm,0.2s,SNR=1.0
CDF Champ du Feu 4.21 352 *e*Pn **Pn 08 05 23.0 +1.3**
CDF *e*Sn **Sn 08 06 10.1 -0.5**
0.8nm,0.3s
CDF Champ du Feu 4.21 352 *e*Pn **Pn 08 05 23.0 +1.3**
CDF *e*Sn **Sn 08 06 10.1 -0.5**
0.4nm,0.3s
AVF Avril sur Loir 4.24 308 *e*Pn **Pn 08 05 23.2 +1.0**
AVF *e*Sn **Sn 08 06 09.6 -1.8**
1.2nm,0.3s
AVF Avril sur Loir 4.24 308 *e*Pn **Pn 08 05 23.2 +1.0**
AVF *e*Sn **Sn 08 06 09.6 -1.8**
0.6nm,0.3s
LOR Lormes 4.28 316 *e*Pn **Pn 08 05 23.7 +1.1**
LOR *e*Sn **Sn 08 06 10.6 -1.6**
2.7nm,0.4s,SNR=1.0
LOR Lormes 4.28 316 *e*Pn **Pn 08 05 23.7 +1.1**
LOR *e*Sn **Sn 08 06 10.6 -1.6**
1.4nm,0.4s,SNR=1.0
SSF Saint Saulge 4.32 312 *e*Pn **Pn 08 05 23.7 +0.5**
SSF *e*Sn **Sn 08 06 11.8 -1.6**
1.7nm,0.5s
SSF Saint Saulge 4.32 312 *e*Pn **Pn 08 05 23.7 +0.5**
SSF *e*Sn **Sn 08 06 11.8 -1.6**
0.9nm,0.5s
BGF Bois d'Agland 4.41 303 *e*Pn **Pn 08 05 25.5 +1.0**
SNR=1.0
BGF *e*Sn **Sn 08 06 13.7 -1.9**
2.0nm,0.3s
BGF Bois d'Agland 4.41 303 *e*Pn **Pn 08 05 25.5 +1.0**
SNR=1.0
BGF *e*Sn **Sn 08 06 13.7 -1.9**
1.0nm,0.3s
MTLF Montolieu 4.42 260 *e*Pn **Pn 08 05 24.9 +0.4**
MTLF *e*Sn **Sn 08 06 13.0 -2.7**
4.3nm,0.5s,SNR=1.0
MTLF Montolieu 4.42 260 *e*Pn **Pn 08 05 24.9 +0.4**
MTLF *e*Sn **Sn 08 06 13.0 -2.7**
2.2nm,0.5s,SNR=1.0
CAF Calviac 4.43 281 *e*Pn **Pn 08 05 25.3 +0.6**
SNR=1.0
CAF *e*Sn **Sn 08 06 13.1 -2.8**
1.7nm,0.3s
CAF Calviac 4.43 281 *e*Pn **Pn 08 05 25.3 +0.6**
SNR=1.0
CAF *e*Sn **Sn 08 06 13.1 -2.8**
0.9nm,0.3s

ROM ***06*** *08:08:19.9±0.2, 44°.21N×8°.25E, h10km±2km, Md2.8/12, Ml2.8/11, Error ellipse: s-maj=3.1km s-min=2.3km az=153.0*
CSEM ***06*** *08:08:20.7±0.1, 44°.25N×8°.20E, h10km, ML3.2/24, Error ellipse: s-maj=3.2km s-min=2.1km az=141.0*
ISCJB ***06*** *08:08:20.3±0.3, 44°.24N±0°.02×8°.29E±0°.03, h24km±3km, Error ellipse: s-maj=4.0km s-min=2.7km az=150.2*
NEIC ***06*** *08:08:21.4, 44°.30N×8°.16E, h10km, ML3.0(LDG), ML2.7(ROM), ML2.8(STR), After STR.*
STR ***06*** *08:08:21.4±0.4, 44°.30N×8°.16E, h10km, Ml2.8, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
LDG ***06*** *08:08:22.6±0.1, 44°.20N×8°.13E, h6km, Md2.7/3, Ml3.0/25, Error ellipse: s-maj=2.0km s-min=1.4km az=145.0*
ISC 06 08:08:20.7±0.3, 44°.24N±0°.02×8°.21E±0°.02, h15km±2km, n105, σ1§14/201, 2C, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QLNO	**Quiliano**	**0.12**	**50⇑**	*i*Pg	**Pg**	**08 08 23.6**	**-0.7**
QLNO				Sg	**Sg**	**08 08 25.6**	**-1.1**
5μm,0.3s							
QLNO	**Quiliano**	**0.12**	**50⇑**	*i*Pg	**Pg**	**08 08 23.6**	**-0.7**
QLNO				Sg	**Sg**	**08 08 25.6**	**-1.1**
5μm,0.3s							
PCP	**Piancastagn**	**0.38**	**39**	Pg	**Pg**	**08 08 28.0**	**-0.5**
PCP				Sg	**Sg**	**08 08 33.7**	**0.0**
766nm,0.2s							
PCP	**Piancastagn**	**0.38**	**39**	Pg	**Pg**	**08 08 28.0**	**-0.5**
PCP				Sg	**Sg**	**08 08 33.7**	**0.0**
766nm,0.2s							
IMI	**Imperia**	**0.41**	**215**	Pg	**Pg**	**08 08 28.4**	**-0.5**
IMI				Sg	**Sg**	**08 08 34.1**	**-0.3**
515nm,0.3s							
IMI	**Imperia**	**0.41**	**215**	Pg	**Pg**	**08 08 28.4**	**-0.5**
IMI				Sg	**Sg**	**08 08 34.1**	**-0.3**
515nm,0.3s							
SAOF	**Saorge**	**0.54**	**242**	Pg	**Pg**	**08 08 31.3**	**0.0**
SAOF				Sg	**Sg**	**08 08 38.6**	**+0.1**
SAOF	**Saorge**	**0.54**	**242**	Pg	**Pg**	**08 08 31.3**	**0.0**
SAOF				Sg	**Sg**	**08 08 38.6**	**+0.1**
AUTN	**L'Aution**	**0.62**	**247**	Pg	**Pg**	**08 08 33.3**	**+0.5**
AUTN				Sg	**Sg**	**08 08 41.6**	**+0.6**
AUTN	**L'Aution**	**0.62**	**247**	Pg	**Pg**	**08 08 33.3**	**+0.5**
AUTN				Sg	**Sg**	**08 08 41.6**	**+0.6**
STV	**Sant Anna di V**	**0.64**	**271**	Pg	**Pg**	**08 08 33.3**	**+0.1**
STV				Sg	**Sg**	**08 08 41.7**	**0.0**
STV	**Sant Anna di V**	**0.64**	**271**	Pg	**Pg**	**08 08 33.3**	**+0.1**
STV				Sg	**Sg**	**08 08 41.7**	**0.0**
SBF	**Sospel**	**0.68**	**236**	*e*Pg	**Pg**	**08 08 33.9**	**0.0**
SNR=1.0							
SBF				*e*Sg	**Sg**	**08 08 42.1**	**-0.8**
529nm,0.3s,SNR=1.0							
SBF	**Sospel**	**0.68**	**236**	*e*Pg	**Pg**	**08 08 33.9**	**0.0**
SNR=1.0							
SBF				*e*Sg	**Sg**	**08 08 42.1**	**-0.8**
264nm,0.3s,SNR=1.0							
LUCF	**Luceram**	**0.72**	**241**	Pg	**Pg**	**08 08 34.6**	**-0.1**
LUCF				Sg	**Sg**	**08 08 44.8**	**+0.7**
LUCF	**Luceram**	**0.72**	**241**	Pg	**Pg**	**08 08 34.6**	**-0.1**
LUCF				Sg	**Sg**	**08 08 44.8**	**+0.7**
TOUF	**Mont Tournerai**	**0.73**	**252**	Pg	**Pg**	**08 08 35.3**	**+0.3**
TOUF				Sg	**Sg**	**08 08 46.0**	**+1.4**
TOUF	**Mont Tournerai**	**0.73**	**252**	Pg	**Pg**	**08 08 35.3**	**+0.3**
TOUF				Sg	**Sg**	**08 08 46.0**	**+1.4**
DOI	**San Damiano**	**0.74**	**291**	Pg	**Pg**	**08 08 34.9**	**-0.2**
411nm,0.3s							
DOI	**San Damiano**	**0.74**	**291**	Pg	**Pg**	**08 08 34.9**	**-0.2**
411nm,0.3s							
REVF	**Revere**	**0.79**	**231**	Pg	**Pg**	**08 08 36.7**	**+0.6**
REVF				Sg	**Sg**	**08 08 48.4**	**+1.9**
REVF	**Revere**	**0.79**	**231**	Pg	**Pg**	**08 08 36.7**	**+0.6**
REVF				Sg	**Sg**	**08 08 48.4**	**+1.9**
PZZ	**Stroppo**	**0.83**	**289**	Pg	**Pg**	**08 08 36.4**	**-0.4**
PZZ				Sg	**Sg**	**08 08 48.1**	**+0.4**
393nm,0.4s							
MVIF	**Mont Vial**	**0.84**	**246**	Pg	**Pg**	**08 08 37.1**	**+0.1**
MVIF				Sg	**Sg**	**08 08 48.2**	**+0.2**
MVIF	**Mont Vial**	**0.84**	**246**	Pg	**Pg**	**08 08 37.1**	**+0.1**
MVIF				Sg	**Sg**	**08 08 48.2**	**+0.2**
MONC	**Moncucco Torin**	**0.85**	**346**	Pg	**Pg**	**08 08 38.3**	**+1.0**
551nm,0.3s							
MONC	**Moncucco Torin**	**0.85**	**346**	Pg	**Pg**	**08 08 38.3**	**+1.0**
551nm,0.3s							
SC2M	**Scurtabo**	**0.96**	**80**	Pg	**Pg**	**08 08 38.2**	**-1.1**
339nm,0.3s							
SC2M	**Scurtabo**	**0.96**	**80**	Pg	**Pg**	**08 08 38.2**	**-1.1**
339nm,0.3s							
BOB	**Bobbio (Coli)**	**1.03**	**59**	Pg	**Pg**	**08 08 40.3**	**-0.3**
122nm,0.5s							
BOB	**Bobbio (Coli)**	**1.03**	**59**	Pg	**Pg**	**08 08 40.3**	**-0.3**
122nm,0.5s							
SURF	**Saint Ours**	**1.03**	**284**	Pg	**Pg**	**08 08 40.0**	**-0.7**
SURF	**Saint Ours**	**1.03**	**284**	Pg	**Pg**	**08 08 40.0**	**-0.7**
CALN	**Calern**	**1.07**	**243**	Pg	**Pg**	**08 08 41.7**	**+0.3**
CALN				Sg	**Sg**	**08 08 56.6**	**+1.1**
CALN	**Calern**	**1.07**	**243**	Pg	**Pg**	**08 08 41.7**	**+0.3**
CALN				Sg	**Sg**	**08 08 56.6**	**+1.1**
OG22	**Abries**	**1.08**	**303**	Pg	**Pg**	**08 08 40.7**	**-0.8**
OG22				Sg	**Sg**	**08 08 54.8**	**-0.8**
OG22	**Abries**	**1.08**	**303**	Pg	**Pg**	**08 08 40.7**	**-0.8**
OG22				Sg	**Sg**	**08 08 54.8**	**-0.8**
RSP	**Reno Superiore**	**1.13**	**324**	Pg	**Pg**	**08 08 41.8**	**-0.7**
RSP				Sg	**Sg**	**08 08 57.7**	**+0.4**
153nm,0.4s							
RSP	**Reno Superiore**	**1.13**	**324**	Pg	**Pg**	**08 08 41.8**	**-0.7**
RSP				Sg	**Sg**	**08 08 57.7**	**+0.4**
153nm,0.4s							
MBDF	**Montbardon**	**1.14**	**296**	*e*Pg	**Pg**	**08 08 41.9**	**-0.8**
SNR=1.0							
MBDF				*e*Sg	**Sg**	**08 08 57.5**	**-0.1**
88nm,0.3s,SNR=1.0							
MBDF	**Montbardon**	**1.14**	**296**	*e*Pg	**Pg**	**08 08 41.9**	**-0.8**
SNR=1.0							
MBDF				*e*Sg	**Sg**	**08 08 57.5**	**-0.1**
44nm,0.3s,SNR=1.0							
FRF	**La Foret Royal**	**1.32**	**239**	*e*Pg	**Pg**	**08 08 45.6**	**-0.6**
FRF				*e*Sg	**Sg**	**08 09 01.8**	**-1.6**
196nm,0.2s							
FRF	**La Foret Royal**	**1.32**	**239**	*e*Pn	**Pn**	**08 08 44.5**	**-0.1**
FRF				*e*Pg	**Pg**	**08 08 45.6**	**-0.6**
FRF				*e*Sg	**Sg**	**08 09 01.8**	**-1.6**
FRF	**La Foret Royal**	**1.32**	**239**	*e*Pn	**Pn**	**08 08 44.5**	**-0.1**
SNR=1.0							
FRF	**La Foret Royal**	**1.32**	**239**	*e*Pg	**Pg**	**08 08 45.6**	**-0.6**
FRF				*e*Sg	**Sg**	**08 09 01.8**	**-1.6**
98nm,0.2s							
BNI	**Bardonecchia**	**1.36**	**307**	*e*Pn	**Pn**	**08 08 45.5**	**+0.4**
BNI				*e*Sn	**Sn**	**08 09 03.8**	**+0.9**
BNI	**Bardonecchia**	**1.36**	**307**	Pg	**Pg**	**08 08 45.7**	**-1.2**
25nm,0.5s							
BNI	**Bardonecchia**	**1.36**	**307**	*e*Pn	**Pn**	**08 08 45.5**	**+0.4**
BNI	**Bardonecchia**	**1.36**	**307**	Pg	**Pg**	**08 08 45.7**	**-1.2**
25nm,0.5s							
BNI				*e*Sn	**Sn**	**08 09 03.8**	**+0.9**
LMR	**La Mourre**	**1.53**	**234**	*e*Pn	**Pn**	**08 08 47.2**	**-0.3**
SNR=1.0							
LMR				*e*Sn	**Sn**	**08 09 06.3**	**-0.8**
SNR=1.0							
LMR				*e*Sg	**Sg**	**08 09 08.4**	**-1.7**
225nm,0.3s							
LMR	**La Mourre**	**1.53**	**234**	*e*Pn	**Pn**	**08 08 47.2**	**-0.3**
SNR=1.0							
LMR				*e*Sn	**Sn**	**08 09 06.3**	**-0.8**
SNR=1.0							
LMR				*e*Sg	**Sg**	**08 09 08.4**	**-1.7**
112nm,0.3s							
VLC	**Villacollemand**	**1.56**	**92**	Pg	**Pg**	**08 08 46.8**	**-4.0**
46nm,0.7s							
LPG	**La Plagne**	**1.63**	**321**	*e*Pn	**Pn**	**08 08 50.4**	**+1.6**
SNR=1.0							
LPG				*e*Sn	**Sn**	**08 09 10.5**	**+1.0**
57nm,0.4s,SNR=1.0							
LPG	**La Plagne**	**1.63**	**321**	*e*Pn	**Pn**	**08 08 50.4**	**+1.6**
SNR=1.0							
LPG				*e*Sn	**Sn**	**08 09 10.5**	**+1.0**
28nm,0.4s,SNR=1.0							
LPL	**La Plagne**	**1.65**	**321**	*e*Pn	**Pn**	**08 08 51.0**	**+1.9**
SNR=1.0							
LPL				*e*Sn	**Sn**	**08 09 10.9**	**+0.9**
49nm,0.4s,SNR=1.0							
LPL	**La Plagne**	**1.65**	**321**	*e*Pn	**Pn**	**08 08 51.0**	**+1.9**
SNR=1.0							
LPL				*e*Sn	**Sn**	**08 09 10.9**	**+0.9**
24nm,0.4s,SNR=1.0							
ORIF	**Oris-en-Rattie**	**1.80**	**293**	*e*Pn	**Pn**	**08 08 52.3**	**+1.2**
SNR=1.0							
ORIF				*e*Sn	**Sn**	**08 09 13.4**	**-0.2**
SNR=1.0							
ORIF				*e*Sg	**Sg**	**08 09 18.5**	**-0.1**
82nm,0.5s							
ORIF	**Oris-en-Rattie**	**1.80**	**293**	*e*Pn	**Pn**	**08 08 52.3**	**+1.2**
SNR=1.0							
ORIF				*e*Sn	**Sn**	**08 09 13.4**	**-0.2**
SNR=1.0							
ORIF				*e*Sg	**Sg**	**08 09 18.5**	**-0.1**
41nm,0.5s							
SMRF	**Simiane la Rot**	**1.92**	**263**	*e*Pg	**Pg**	**08 08 56.9**	**-0.6**
SMRF				*e*Sg	**Sg**	**08 09 21.4**	**-1.0**
178nm,0.5s,SNR=1.0							
SMRF	**Simiane la Rot**	**1.92**	**263**	*e*P	**Pn**	**08 08 54.5**	**+1.7**
SMRF				*e*Pg	**Pg**	**08 08 56.9**	**-0.6**
SMRF				*e*Sg	**Sg**	**08 09 21.4**	**-1.0**
SMRF	**Simiane la Rot**	**1.92**	**263**	*e*P	**Pn**	**08 08 54.5**	**+1.7**
SNR=1.0							
SMRF	**Simiane la Rot**	**1.92**	**263**	*e*Pg	**Pg**	**08 08 56.9**	**-0.6**
SMRF				*e*Sg	**Sg**	**08 09 21.4**	**-1.0**
89nm,0.5s,SNR=1.0							
TUE	**Stuetta**	**2.37**	**19**	*e*Pn	**Pn**	**08 09 01.4**	**+2.5**
TUE				*e*Sn	**Sn**	**08 09 31.1**	**+3.4**
TUE	**Stuetta**	**2.37**	**19**	*e*Pn	**Pn**	**08 09 01.4**	**+2.5**
TUE				*e*Sn	**Sn**	**08 09 31.0**	**+3.3**
VIVF	**Saint-Julien-I**	**2.60**	**285**	*e*Pg	**Pg**	**08 09 10.3**	**-0.3**
VIVF				*e*Sn	**Sn**	**08 09 32.5**	**-1.0**
19nm,0.4s,SNR=1.0							
VIVF	**Saint-Julien-I**	**2.60**	**285**	*e*Pn	**Pn**	**08 09 03.4**	**+1.2**
VIVF				*e*Pg	**Pg**	**08 09 10.3**	**-0.3**
VIVF				*e*Sn	**Sn**	**08 09 32.5**	**-1.0**
VIVF	**Saint-Julien-I**	**2.60**	**285**	*e*Pn	**Pn**	**08 09 03.4**	**+1.2**
SNR=1.0							
VIVF	**Saint-Julien-I**	**2.60**	**285**	*e*Pg	**Pg**	**08 09 10.3**	**-0.3**
VIVF				*e*Sn	**Sn**	**08 09 32.5**	**-1.0**
9.4nm,0.4s,SNR=1.0							
CABF	**La Chapelle**	**2.80**	**328**	*e*Pn	**Pn**	**08 09 07.0**	**+2.1**
SNR=1.0							
CABF				*e*Sn	**Sn**	**08 09 38.7**	**+0.3**
13nm,0.5s,SNR=1.0							
CABF	**La Chapelle**	**2.80**	**328**	*e*Pn	**Pn**	**08 09 07.0**	**+2.1**
SNR=1.0							
CABF				*e*Sn	**Sn**	**08 09 38.7**	**+0.3**
6.3nm,0.5s,SNR=1.0							
LASF	**Ste Croix**	**3.14**	**268**	*e*Pn	**Pn**	**08 09 10.3**	**+0.8**
SNR=1.0							
LASF				*e*Sn	**Sn**	**08 09 45.3**	**-1.4**
7.2nm,0.3s,SNR=1.0							
LASF	**Ste Croix**	**3.14**	**268**	*e*Pn	**Pn**	**08 09 10.3**	**+0.8**
SNR=1.0							
LASF				*e*Sn	**Sn**	**08 09 45.3**	**-1.4**
3.6nm,0.3s,SNR=1.0							
HINF	**Hinteralfeld**	**3.70**	**346**	*e*Pn	**Pn**	**08 09 19.1**	**+1.9**
SNR=1.0							
HINF				*e*Sn	**Sn**	**08 10 00.5**	**0.0**
2.7nm,0.3s,SNR=1.0							
HINF	**Hinteralfeld**	**3.70**	**346**	*e*Pn	**Pn**	**08 09 19.1**	**+1.9**
SNR=1.0							
HINF				*e*Sn	**Sn**	**08 10 00.5**	**0.0**
1.4nm,0.3s,SNR=1.0							
SMF	**Signal de Mont**	**3.90**	**310**	*e*Pn	**Pn**	**08 09 21.3**	**+1.3**
SNR=1.0							
SMF				*e*Sn	**Sn**	**08 10 04.0**	**-1.5**
3.0nm,0.3s							
SMF	**Signal de Mont**	**3.90**	**310**	*e*Pn	**Pn**	**08 09 21.3**	**+1.3**
SNR=1.0							
SMF				*e*Sn	**Sn**	**08 10 04.0**	**-1.5**
1.5nm,0.3s							
HAU	**Haudompre**	**3.98**	**342**	*e*Pn	**Pn**	**08 09 22.8**	**+1.7**
SNR=1.0							
HAU				*e*Sn	**Sn**	**08 10 07.0**	**-0.4**
8.5nm,0.3s							
HAU	**Haudompre**	**3.98**	**342**	*e*Pn	**Pn**	**08 09 22.8**	**+1.7**
SNR=1.0							
HAU				*e*Sn	**Sn**	**08 10 07.0**	**-0.4**
4.2nm,0.3s							
CDF	**Champ du Feu**	**4.22**	**351**	*e*Pn	**Pn**	**08 09 26.1**	**+1.7**
SNR=1.0							
CDF

	SNR=1.0						
AVF				eSn	Sn	08 10 12.6	-1.8
	1.0nm,0.2s						
AVF	**Avril sur Loir**	**4.26**	**308**	ePn	**Pn**	**08 09 26.2**	**+1.2**
	SNR=1.0						
AVF				eSn	Sn	08 10 12.6	-1.8
	0.5nm,0.2s						
LOR	**Lormes**	**4.29**	**316**	ePn	**Pn**	**08 09 26.8**	**+1.4**
	SNR=1.0						
LOR				eSn	Sn	08 10 13.7	-1.5
	4.3nm,0.3s,SNR=1.0						
LOR	**Lormes**	**4.29**	**316**	ePn	**Pn**	**08 09 26.8**	**+1.4**
	SNR=1.0						
LOR				eSn	Sn	08 10 13.7	-1.5
	2.2nm,0.3s,SNR=1.0						
SKDS	**Skadanscina**	**4.32**	**70**	i Pn	**Pn**	**08 09 25.2**	**-0.6**
SKDS				i Sn	Sn	08 10 12.5	-3.4
SSF	**Saint Saulge**	**4.34**	**312**	ePn	**Pn**	**08 09 26.8**	**+0.8**
	SNR=1.0						
SSF				eSn	Sn	08 10 14.8	-1.5
	2.5nm,0.4s						
SSF	**Saint Saulge**	**4.34**	**312**	ePn	**Pn**	**08 09 26.8**	**+0.8**
	SNR=1.0						
SSF				eSn	Sn	08 10 14.8	-1.5
	1.2nm,0.4s						
BGF	**Bois d'Agland**	**4.43**	**303**	ePn	**Pn**	**08 09 28.5**	**+1.2**
	SNR=1.0						
BGF				eSn	Sn	08 10 16.7	-1.9
	5.7nm,0.3s						
BGF	**Bois d'Agland**	**4.43**	**303**	ePn	**Pn**	**08 09 28.5**	**+1.2**
	SNR=1.0						
BGF				eSn	Sn	08 10 16.7	-1.9
	2.8nm,0.3s						
MTLF	**Montolieu**	**4.43**	**260**	ePn	**Pn**	**08 09 27.9**	**+0.6**
	SNR=1.0						
MTLF				eSn	Sn	08 10 16.1	-2.5
	9.0nm,0.4s,SNR=1.0						
MTLF	**Montolieu**	**4.43**	**260**	ePn	**Pn**	**08 09 27.9**	**+0.6**
	SNR=1.0						
MTLF				eSn	Sn	08 10 16.1	-2.5
	4.5nm,0.4s,SNR=1.0						
CAF	**Calviac**	**4.45**	**281**	ePn	**Pn**	**08 09 28.4**	**+0.9**
	SNR=1.0						
CAF				eSn	Sn	08 10 16.1	-2.8
	4.4nm,0.4s						
CAF	**Calviac**	**4.45**	**281**	ePn	**Pn**	**08 09 28.4**	**+0.9**
	SNR=1.0						
CAF				eSn	Sn	08 10 16.1	-2.8
	2.2nm,0.4s						
JAVS	**Javornik**	**4.46**	**66**	i Pn	**Pn**	**08 09 26.7**	**-1.0**
JAVS				i Sn	Sn	08 10 16.6	-2.7
JAVS	**Javornik**	**4.46**	**66**	i Pn	**Pn**	**08 09 26.7**	**-1.0**
JAVS				i Sn	Sn	08 10 16.6	-2.7
SFTF	**Sexfontaines**	**4.53**	**332**	ePn	**Pn**	**08 09 30.0**	**+1.3**
SFTF				eSn	Sn	08 10 19.6	-1.5
	5.2nm,0.3s						
SFTF	**Sexfontaines**	**4.53**	**332**	ePn	**Pn**	**08 09 30.0**	**+1.3**
SFTF				eSn	Sn	08 10 19.6	-1.5
	2.6nm,0.3s						
CEY	**Cerknica**	**4.66**	**69**	i Pn	**Pn**	**08 09 32.3**	**+1.9**
CEY				i Sn	Sn	08 10 20.6	-3.5
CEY	**Cerknica**	**4.66**	**69**	Pn	**Pn**	**08 09 32.3**	**+1.9**
CEY				i Sn	Sn	08 10 20.6	-3.5
TCF	**Toulx Ste Croi**	**4.71**	**298**	ePn	**Pn**	**08 09 31.7**	**+0.6**
	SNR=1.0						
TCF				eSn	Sn	08 10 22.8	-2.5
	1.9nm,0.3s						
TCF	**Toulx Ste Croi**	**4.71**	**298**	ePn	**Pn**	**08 09 31.7**	**+0.6**
	SNR=1.0						
TCF				eSn	Sn	08 10 22.8	-2.5
	0.9nm,0.3s						
MEZF	**Maizieres J'vi**	**4.79**	**334**	ePn	**Pn**	**08 09 33.4**	**+1.2**
MEZF				eSn	Sn	08 10 26.0	-1.3
	3.6nm,0.3s						
MEZF	**Maizieres J'vi**	**4.79**	**334**	ePn	**Pn**	**08 09 33.4**	**+1.2**
MEZF				eSn	Sn	08 10 26.0	-1.3
	1.8nm,0.3s						
BOJS	**Bojanci**	**5.16**	**73**	i Pn	**Pn**	**08 09 37.7**	**+0.4**
BOJS				i Sn	Sn	08 10 34.2	-2.3
BOJS	**Bojanci**	**5.16**	**73**	i Pn	**Pn**	**08 09 37.7**	**+0.4**
BOJS				i Sn	Sn	08 10 34.2	-2.3

IDC ***06*** *08:10:48.2±3.8, 15°.51N×122°.74E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/22, mbtmp3.4/3, Error ellipse: s-maj=330.5km s-min=28.1km az=62.0*
MAN ***06*** *08:10:52, 15°.38N×122°.38E, h1km, mb5.0, ML3.9, MS4.0*
ISCJB ***06*** *08:10:54.3±0.8, 15°.46N±0°.06×122°.4E±0°.1, h58km±12km, mb3.4/3, Error ellipse: s-maj=17.1km s-min=10.1km az=168.8*

ISC 06 08:10:55.0±0.8, 15°.45N±0°.06×122°.4E±0°.1, h48km±13km, n12, σ1§29/12, mb3.4/3, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALP	**Baler**	**0.83**	**291**	eP	**Pn**	**08 11 09.6**	**-0.8**
POLP	**Polilio Island**	**0.83**	**211**	eP	**Pn**	**08 11 07.5**	**-3.0**
PCPH	**Palayan**	**1.24**	**275⇑**	eP	**Pn**	**08 11 15.9**	**-0.1**
CAUP	**Cauayan**	**1.58**	**340**	eP	**Pn**	**08 11 21.6**	**+1.0**
PALP	**Palanan**	**1.60**	**2**	eP	**Sn**	**08 11 39.3**	**-1.2**
BOAC	**Boac**	**2.05**	**195**	eP	**Pn**	**08 11 28.0**	**+1.0**
AUQP	**San Andres**	**2.13**	**172**	eP	**Pn**	**08 11 32.8**	**+4.6**
PVCP	**Virac**	**2.52**	**137**	eP	**Pn**	**08 11 34.7**	**+1.2**
BOLP	**Bolinao**	**2.55**	**292**	eP	**Pn**	**08 11 36.8**	**+3.0**
WRA	**Warramunga Arr**	**37.08**	**161**	P	**P**	**08 17 59.4**	**-1.4**
	0.5nm,0.8s,mb3.4,baz=342,slow=8.9,SNR=7.6						
ASAR	**Alice Springs**	**40.48**	**164**	P	**P**	**08 18 28.8**	**-0.4**
	0.8nm,1.1s,mb3.4,baz=337,slow=7.5,SNR=3.7						
MKAR	**Makanchi Array**	**45.63**	**322**	P	**P**	**08 19 11.7**	**+1.0**
	0.5nm,0.8s,mb3.5,baz=115,slow=6.8,SNR=3.9						

IDC 06 08:30:53.8±2.1, 7°.12S×127°.62E, h0km, mb3.9/1, mb1 3.6/4, mb1mx3.4/18, mbtmp3.5/4, ML3.1/3, Error ellipse: s-maj=108.9km s-min=27.3km az=72.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.08**	**190**	Pn	Pn	08 33 33.6	0.0
	0.1nm,0.3s,baz=29,slow=13,SNR=2.9						
FITZ				Sn	Sn	08 35 27.8	-11
	0.1nm,0.3s,baz=156,slow=20,SNR=3.8						
WRA	**Warramunga Arr**	**14.31**	**154**	Pn	Pn	08 34 18.1	+0.3
	0.1nm,0.3s,baz=331,slow=14,SNR=6.3						
WRA				Sn	Sn	08 36 41.9	-16
	0.1nm,0.3s,baz=326,slow=24,SNR=6.2						
ASAR	**Alice Springs**	**17.52**	**161**	P	Pn	08 34 59.4	-0.2
	0.1nm,0.3s,baz=341,slow=11,SNR=6.8						
MKAR	**Makanchi Array**	**67.05**	**328**	P	P	08 41 48.9	+0.1
	0.9nm,0.7s,baz=144,slow=8.2,SNR=7.4						

ISCJB ***06*** *08:52:50.0±0.3, 38°.05N±0°.02×21°.51E±0°.03, h16km±3km, Error ellipse: s-maj=3.6km s-min=3.6km az=29.4*
THE ***06*** *08:52:49.7, 38°.03N×21°.56E, h0km±1km, ML3.3/6, Error ellipse: s-maj=1.8km s-min=0.6km az=292.0*
NEIC ***06*** *08:52:49.6, 38°.03N×21°.54E, h17km, ML2.5(ATH), After ATH.*
ATH ***06*** *08:52:49.6, 38°.03N×21°.54E, h17km, MD3.5/20, ML2.5*
CSEM ***06*** *08:52:50.0±0.2, 38°.07N×21°.51E, h20km, ML2.5, Error ellipse: s-maj=4.7km s-min=4.0km az=178.0*

ISC 06 08:52:49.8±0.4, 38°.05N±0°.02×21°.52E±0°.03, h16km±2km, n74, σ1§07/119, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.04**	**285**	ePb	**Pg**	**08 52 53.1**	**+0.4**
RLS				eSb	Sg	08 52 55.7	+1.0
RLS	**Riolos of Patr**	**0.04**	**285**	ePB	**Pg**	**08 52 53.1**	**+0.4**
RLS				eSB	Sg	08 52 55.7	+1.0
RLS	**Riolos of Patr**	**0.04**	**285**	ePb	**Pg**	**08 52 53.1**	**+0.4**
RLS				eSb	Sg	08 52 55.7	+1.0
UPR	**University Cam**	**0.32**	**42**	ePB	**Pg**	**08 52 56.6**	**+0.1**
UPR				eSB	Sg	08 53 01.3	+0.3
UPR	**University Cam**	**0.32**	**42**	P	**Pg**	**08 52 56.5**	**0.0**
UPR	**University Cam**	**0.32**	**42**	ePb	**Pg**	**08 52 56.6**	**+0.1**
UPR				eSb	Sg	08 53 01.3	+0.3
LAKA	**Lakka**	**0.41**	**62**	P	**Pg**	**08 52 57.5**	**-0.7**
LAKA				S	Sg	08 53 03.8	0.0
LAKA	**Lakka**	**0.41**	**62**	P	**Pg**	**08 52 57.5**	**-0.7**
LAKA				S	Sg	08 53 03.8	0.0
EFP	**Efpalio**	**0.49**	**39**	ePB	**Pb**	**08 52 59.0**	**-1.0**
EFP				eSB	Sb	08 53 06.8	-0.1
EFP	**Efpalio**	**0.49**	**39**	P	**Pg**	**08 52 59.2**	**-0.4**
EFP				S	Sg	08 53 05.9	-0.2
EFP	**Efpalio**	**0.49**	**39**	P	**Pg**	**08 52 59.2**	**-0.4**
EFP				S	Sg	08 53 05.9	-0.2
EFP				eSb	Sb	08 53 06.8	-0.1
KFL	**Anninata**	**0.58**	**276**	P	**Pg**	**08 53 01.6**	**+0.3**
KFL				S	Sg	08 53 10.9	+1.9
KFL	**Anninata**	**0.58**	**276**	P	**Pg**	**08 53 01.6**	**+0.3**
KFL				S	Sg	08 53 10.9	+1.9
KALE	**Kalithea**	**0.60**	**55**	P	**Pg**	**08 53 00.8**	**-0.8**
KALE				S	Sg	08 53 09.7	+0.1
KALE	**Kalithea**	**0.60**	**55**	P	**Pg**	**08 53 00.8**	**-0.8**
KALE				S	Sg	08 53 09.7	+0.1
GUR	**Goura**	**0.66**	**99**	ePB	**Pg**	**08 53 01.4**	**-1.4**
GUR				eSN	Sg	08 53 10.8	-0.8
GUR	**Goura**	**0.66**	**99**	P	**Pg**	**08 53 01.4**	**-1.4**
GUR				S	Sg	08 53 10.9	-0.7
GUR	**Goura**	**0.66**	**99**	P	**Pg**	**08 53 01.4**	**-1.4**
GUR				S	Sg	08 53 10.9	-0.7
VLS	**Valsamata**	**0.74**	**280**	ePn	**Pn**	**08 53 04.2**	**-1.5**
VLS				eSn	Sn	08 53 15.6	-1.0
VLS	**Valsamata**	**0.74**	**280**	ePN	**Pn**	**08 53 04.2**	**-1.5**
VLS				eSN	Sn	08 53 15.6	-1.0
VLS	**Valsamata**	**0.74**	**280**	P	**Pg**	**08 53 03.9**	**-0.5**
VLS	**Valsamata**	**0.74**	**280**	P	**Pg**	**08 53 03.9**	**-0.5**
VLS	**Valsamata**	**0.74**	**280**	ePn	**Pn**	**08 53 04.2**	**-1.5**
VLS				eSn	Sn	08 53 15.6	-1.0
DSF	**Desfina**	**0.87**	**65**	P	**Pb**	**08 53 05.3**	**-1.3**
DSF	**Desfina**	**0.87**	**65**	P	**Pb**	**08 53 05.3**	**-1.3**
EVR	**Evrytania**	**0.90**	**15**	ePn	**Pn**	**08 53 07.0**	**-0.8**
EVR				eSn	Sn	08 53 19.3	-1.1
EVR	**Evrytania**	**0.90**	**15**	ePN	**Pn**	**08 53 07.0**	**-0.8**
EVR				eSN	Sn	08 53 19.2	-1.2
EVR	**Evrytania**	**0.90**	**15**	ePn	**Pn**	**08 53 07.0**	**-0.8**
EVR				eSn	Sn	08 53 19.3	-1.1
ITM	**Ithomi**	**0.92**	**159**	ePn	**Pn**	**08 53 06.8**	**-1.3**
ITM				eSn	Sn	08 53 19.1	-1.9
ITM	**Ithomi**	**0.92**	**159**	ePN	**Pn**	**08 53 06.8**	**-1.3**
ITM				eSN	Sn	08 53 19.1	-1.9
ITM	**Ithomi**	**0.92**	**159**	P	**Pb**	**08 53 06.7**	**-0.8**
ITM				S	Sb	08 53 19.5	0.0
ITM	**Ithomi**	**0.92**	**159**	P	**Pb**	**08 53 06.7**	**-0.8**
ITM				eSn	Sn	08 53 19.1	-1.9
ITM				S	Sb	08 53 19.5	0.0
VLX	**Vlachokerasia**	**0.96**	**134**	ePN	**Pb**	**08 53 07.3**	**-0.8**
VLX				eSN	Sn	08 53 21.0	-0.9
VLX	**Vlachokerasia**	**0.96**	**134**	P	**Pb**	**08 53 07.3**	**-0.8**
VLX				S	Sb	08 53 20.7	+0.2
VLX	**Vlachokerasia**	**0.96**	**134**	P	**Pb**	**08 53 07.3**	**-0.8**
VLX				S	Sb	08 53 20.7	+0.2
VLX				eSn	Sn	08 53 21.0	-0.9
LKD2	**Lefkada island**	**1.00**	**318**	P	**Pb**	**08 53 08.4**	**-0.4**
LKD2	**Lefkada island**	**1.00**	**318**	P	**Pb**	**08 53 08.4**	**-0.4**
LTK	**Loutraki**	**1.14**	**91**	ePN	**Pn**	**08 53 11.4**	**+0.2**
LTK				eSN	Sn	08 53 26.2	-0.3
LTK	**Loutraki**	**1.14**	**91**	P	**Pn**	**08 53 10.3**	**-0.9**
LTK	**Loutraki**	**1.14**	**91**	P	**Pn**	**08 53 10.3**	**-0.9**
LTK	**Loutraki**	**1.14**	**91**	ePn	**Pn**	**08 53 11.4**	**+0.2**
LTK				eSn	Sn	08 53 26.2	-0.3
PYL	**PYLOS**	**1.16**	**171**	ePN	**Pn**	**08 53 11.4**	**0.0**
PYL				eSN	Sn	08 53 27.4	+0.5
PYL	**PYLOS**	**1.16**	**171**	P	**Pn**	**08 53 11.2**	**-0.2**
PYL	**PYLOS**	**1.16**	**171**	P	**Pn**	**08 53 11.2**	**-0.2**
PYL				eSn	Sn	08 53 27.4	+0.5
AGG	**Agios Georgios**	**1.16**	**33**	ePn	**Pn**	**08 53 11.3**	**-0.1**
AGG				eSn	Sn	08 53 28.3	+1.3
AGG	**Agios Georgios**	**1.16**	**33**	ePN	**Pn**	**08 53 11.3**	**-0.1**
AGG				eSN	Sn	08 53 28.3	+1.3
AGG	**Agios Georgios**	**1.16**	**33**	P	**Pn**	**08 53 11.1**	**-0.3**
AGG	**Agios Georgios**	**1.16**	**33**	ePn	**Pn**	**08 53 11.3**	**-0.1**
LKR	**Lokris**	**1.31**	**62**	ePn	**Pn**	**08 53 13.8**	**+0.3**
LKR				eSn	Sn	08 53 31.7	+1.1
LKR	**Lokris**	**1.31**	**62**	ePN	**Pn**	**08 53 13.8**	**+0.3**
LKR				eSN	Sn	08 53 31.7	+1.1
LKR	**Lokris**	**1.31**	**62**	ePn	**Pn**	**08 53 13.8**	**+0.3**
LKR				eSn	Sn	08 53 31.7	+1.1
DID	**Didima**	**1.47**	**111**	ePN	**Pn**	**08 53 16.4**	**+0.8**
DID				eSN	Sn	08 53 36.7	+2.3
DID	**Didima**	**1.47**	**111**	P	**Pn**	**08 53 16.1**	**+0.5**
DID				S	Sn	08 53 36.5	+2.1
DID	**Didima**	**1.47**	**111**	P	**Pn**	**08 53 16.1**	**+0.5**
DID	**Didima**	**1.47**	**111**	ePn	**Pn**	**08 53 16.4**	**+0.8**
DID				S	Sn	08 53 36.5	+2.1
THL	**Klokotos Trika**	**1.56**	**14**	ePN	**Pn**	**08 53 19.4**	**+2.4**
NAIG	**Nisos Aigina**	**1.58**	**100**	ePn	**Pn**	**08 53 19.2**	**+2.0**
NAIG	**Nisos Aigina**	**1.58**	**100**	ePN	**Pn**	**08 53 19.2**	**+2.0**
ATH	**Athens Observa**	**1.74**	**92**	ePn	**Pn**	**08 53 21.0**	**+1.7**
ATH	**Athens Observa**	**1.74**	**92**	ePN	**Pn**	**08 53 21.0**	**+1.7**
ATH	**Athens Observa**	**1.74**	**92**	ePn	**Pn**	**08 53 21.0**	**+1.7**
VLI	**Veliai**	**1.74**	**139**	P	**Pn**	**08 53 23.4**	**+4.0**
VLI	**Veliai**	**1.74**	**139**	P	**Pn**	**08 53 23.4**	**+4.0**
VLY	**Voula,Athens**	**1.81**	**95**	ePn	**Pn**	**08 53 21.8**	**+1.5**
VLY	**Voula,Athens**	**1.81**	**95**	ePN	**Pn**	**08 53 21.8**	**+1.5**
VLY	**Voula,Athens**	**1.81**	**95**	ePn	**Pn**	**08 53 21.8**	**+1.5**
NEO	**Neokhori**	**1.83**	**46**	ePb	**Pb**	**08 53 21.7**	**-1.3**
NEO	**Neokhori**	**1.83**	**46**	ePB	**Pb**	**08 53 21.7**	**-1.3**
PTL	**Penteli**	**1.85**	**89**	ePn	**Pn**	**08 53 22.7**	**+1.8**
PTL	**Penteli**	**1.85**	**89**	ePN	**Pn**	**08 53 22.7**	**+1.8**
PTL	**Penteli**	**1.85**	**89**	ePn	**Pn**	**08 53 22.7**	**+1.8**
KYTH	**Kithira**	**2.14**	**145**	ePn	**Pn**	**08 53 26.9**	**+2.0**
KYTH	**Kithira**	**2.14**	**145**	ePN	**Pn**	**08 53 26.9**	**+2.0**
KYTH	**Kithira**	**2.14**	**145**	ePn	**Pn**	**08 53 26.9**	**+2.0**

NIED ***06*** *09:08:00, 45°.40N×151°.30E, h14km, Mw5.7 Best double couple: M0=4.09000×10^17 NP1:φs=32.00000°, δ58.00000°, λ73.00000°. NP2:φs=241.00000°, δ36.00000°, λ115.00000°.*
BJI ***06*** *09:08:18.5, 45°.35N×150°.94E, h10km, mB5.9/34, mb6.0/65, Ms5.7/73, Ms7 5.7/62*
SKHL ***06*** *09:08:19.5±2.6, 44°.97N×151°.54E, h55km±24km, mb6.5/6, mbh6.3/4, Ms5.8/5, msh6.3/5*
JMA ***06*** *09:08:20.5±0.5, 45°.40N×151°.29E, h30km, M6.1*
JMA Felt I J1.
BGS ***06*** *09:08:21.5±1.1, 45°.63N×151°.34E, h10km, mb6.1, MS5.4*
NEIC ***06*** *09:08:21.3±0.1, 45°.39N×150°.97E, h17km, mb5.8/283, ME5.6, MS5.5/213, MW5.7, Error ellipse: s-maj=3.6km s-min=2.1km az=162.0 Broadband fault plane solution: P waves. NP1:φs=35.00000°, δ70.00000°, λ80.00000°. NP2:φs=242.00000°, δ22.00000°, λ116.00000°. Principal axes: T Plg64.0000°, Azm289.0000°; N Plg0.0000°, Azm0.0000°; P Plg24.0000°, Azm133.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Recorded [1 JMA] in southeastern Hokkaido.
SZGRF ***06*** *09:08:21.9, 45°.16N×151°.25E, h33km, mb6.4, MS6.0, Kuril Islands, Russia*
MOS ***06*** *09:08:22.7±1.0, 45°.38N×151°.02E, h40km, mb6.0/119, MS5.6/101, Error ellipse: s-maj=6.0km s-min=3.9km az=99.6*
ISCJB ***06*** *09:08:22.6±0.1, 45°.22N±0°.02×151°.16E±0°.01, h43km, mb5.8/495, MS5.5/288, Error ellipse: s-maj=2.8km s-min=1.3km az=163.7*
IDC ***06*** *09:08:24.5±0.4, 45°.44N×151°.06E, h41km±3km, mb5.1/22, mb1 5.2/26, mb1mx5.2/27, mbtmp5. 1/26, ML4.8/4, MS5.6/25, Ms1 5.6/25, ms1mx5.4/33, Error ellipse: s-maj=13.4km s-min=10.0km az=126.0*
GCMT ***06*** *09:08:26.9±0.1, 45°.28N×151°.26E, h24km, MW5.7, Moment Tensor Solution. s93,c188; s16,c17; Moment tensor: Scale 10^17Nm; Mrr3.63±.07; Mθθ-1.90±.05; Mφφ-1.73±.05; Mrθ1.36±.08; Mθφ-2.34±.04; Mφr2.62±.09; Best double couple: M0=4.90000×10^17 NP1:φs=240.00000°, δ28.00000°, λ113.00000°. NP2:φs=34.00000°, δ64.00000°, λ78.00000°. Principal axes: T 4.7200, Plg69.0000°, Azm281.0000°; N 0.3500, Plg11.0000°, Azm39.0000°; P -5.0700, Plg18.0000°, Azm133.0000°; Data Used: II IU IC G CN. Surface waves: sta=108, comp=227, per= 50.*

ISC 06 09:08:24.7±0.1, 45°.29N±0°.02×151°.11E±0°.01, h45km, h45km±1.3km: pP-P, n2066, σ0§91/2013, mb5.8/495, MS5.5/287, 464C-227D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.29**	**270**	i PN	**Pn**	**09 08 58.0**	**-1.9**
KUR				pmax	pmax		
	comp=Z,7μm,0.5s						
KUR	**Kuril'sk**	**2.29**	**270⇓**	i P	**Pn**	**09 08 58.0**	**-1.9**
KUR				AMB	AMB	09 09 01.0	
	comp=Z,7μm,0.5s						
KUR				A		09 09 43.0	
	comp=Z,1000μm,1.0s						
KUR				A		09 09 43.0	
	comp=Z,175μm,1.0s						
KUR				A		09 09 43.0	
	comp=Z,288μm,1.0s						
KUR				A		09 09 43.0	
	comp=Z,75μm,1.0s						
YUK	**Yuzh-Kuril'sk**	**3.95**	**253⇑**	i PN	**Pn**	**09 09 22.0**	**-0.7**
YUK				pmax	pmax		
	comp=N,1μm,0.4s						
YUK				pmax	pmax		
	comp=Z,10.0nm,0.4s						
YUK				pmax	pmax		
	comp=E,3.0nm,0.2s						
YUK				pmax	pmax		
	comp=Z,13μm,0.9s						
YUK				MLR	MLR		
	comp=N,52μm,14.0s						
YUK				MLR	MLR		
	comp=E,41μm,14.0s						
YUK				MLR	MLR		
	comp=Z,30μm,14.0s						
YUK	**Yuzh-Kuril'sk**	**3.95**	**253**	e P	**Pn**	**09 09 22.4**	**-0.3**
YUK	**Yuzh-Kuril'sk**	**3.95**	**253⇑**	i P	**Pn**	**09 09 22.0**	**-0.7**
YUK				AMB	AMB	09 09 26.0	
	comp=Z,2μm,0.5s						
YUK				AMB	AMB	09 09 26.0	
	comp=Z,4μm,0.5s						
YUK				AMB	AMB	09 09 26.0	
	comp=Z,16μm,0.5s						
YUK				AMB	AMB	09 09 36.0	
	comp=Z,16μm,0.8s						
YUK				AMB	AMB	09 09 36.0	
	comp=Z,4μm,1.2s						
YUK				AMB	AMB	09 09 36.0	
	comp=Z,45μm,1.8s						
YUK				i S	**Sn**	**09 10 10.6**	**+2.9**
YUK				A		09 10 15.9	
	comp=Z,255μm,2.0s						
YUK				A		09 10 15.9	
	comp=Z,325μm,1.2s						
YUK				AMS	AMS	09 12 26.1	
	comp=Z,52μm,14.0s						
YUK				AMS	AMS	09 12 26.1	
	comp=Z,41μm,14.0s						
YUK				AMS	AMS	09 12 26.1	
	comp=Z,30μm,14.0s						
NEM2	**Nemuro 2**	**4.30**	**245**	⇑P	**Pn**	**09 09 25.1**	**-2.5**
NEM2				eS	Sn	09 10 13.6	-2.9
JRA	**Rausu**	**4.48**	**255**	⇑P	**Pn**	**09 09 30.1**	**+0.1**
JRA				eS	Sn	09 10 21.4	+0.5
JNK	**Nakash**	**4.88**	**252**	P	**Pn**	**09 09 35.1**	**-0.4**
JNK				eS	Sn	09 10 29.7	-1.0
JAK	**Akkeshi**	**5.15**	**246**	P	**Pn**	**09 09 36.9**	**-2.3**
JAK				eS	Sn	09 10 33.8	-3.6
JTKR	**Abashiri--Toko**	**5.31**	**258**	P	**Pn**	**09 09 41.6**	**+0.3**
JAR	**Ashorobuto**	**5.63**	**252**	⇑P	**Pn**	**09 09 45.7**	**-0.1**
JAR				eS	Sn	09 10 47.8	-1.4
JMP	**Maruseppu**	**5.68**	**260**	⇑P	**Pn**	**09 09 47.1**	**+0.7**
JOB	**Onbets**	**5.76**	**248**	P	**Pn**	**09 09 46.2**	**-1.3**
JOB				eS	Sn	09 10 50.4	-1.8
YSS	**Yuzh-Sakhalins**	**6.04**	**289⇓**	i PN	**Pn**	**09 09 53.0**	**+1.6**
YSS				eS	Sn	09 11 01.0	+1.8
YSS				pmax	pmax		
	comp=Z,2μm,6.0s						
YSS				pmax	pmax		
	comp=Z,1μm,1.0s						
YSS				smax			
	comp=N,860nm,0.9s						
YSS				MLR	MLR		
	comp=N,21μm,16.0s						
YSS				MLR	MLR		
	comp=Z,74μm,16.0s						
YSS	**Yuzh-Sakhalins**	**6.04**	**289**	e Pn	**Pn**	**09 09 52.8**	**+1.4**
YSS	**Yuzh-Sakhalins**	**6.04**	**289⇓**	i P	**Pn**	**09 09 53.0**	**+1.6**
YSS				AMB	AMB	09 09 56.0	
	comp=Z,2μm,6.0s						
YSS				AMB	AMB	09 09 57.8	
	comp=Z,1μm,1.0s						
YSS				eS	**Sn**	**09 11 01.0**	**+1.8**
YSS				A		09 11 06.0	
	comp=Z,860nm,0.9s						
YSS				eLQ		09 11 10.0	
YSS				eLR	LR	09 11 28.0	
YSS				AMS	AMS	09 12 15.0	
	comp=Z,26μm,16.0s						
YSS				AMS	AMS	09 12 15.0	
	comp=Z,65μm,16.0s						
YSS				AMS	AMS	09 12 15.0	
	comp=Z,74μm,16.0s						
YSS				AMS	AMS	09 12 15.0	
	comp=Z,21μm,16.0s						
YSS				AMS	AMS	09 12 15.0	
	comp=Z,102μm,16.0s						
JSE	**Soyaes**	**6.04**	**270**	P	**Pn**	**09 09 52.2**	**+0.8**
JKK2	**Kamakawa 2**	**6.14**	**260**	⇑P	**Pn**	**09 09 53.8**	**+1.1**
ASAJ	**Asahikawa**	**6.18**	**262**	P	**Pn**	**09 09 54.8**	**+1.5**
	comp=Z,60nm,0.3s,baz=90,slow=14,SNR=508						
ASAJ				S	**Sn**	**09 11 15.3**	**+13**
	comp=Z,65nm,0.3s,baz=188,slow=33,SNR=3.7						
ASAJ				LR	LR	09 12 30.9	
	comp=Z,74μm,18.4s,baz=85,slow=40						
ASAJ	**Asahikawa**	**6.18**	**262**	P	**Pn**	**09 09 54.4**	**+1.1**
ASAJ	**Asahikawa**	**6.18**	**262**	P	**Pn**	**09 09 54.6**	**+1.3**
JCH	**Churui**	**6.20**	**247**	P	**Pn**	**09 09 51.5**	**-2.1**
JCH				eS	Sn	09 11 01.0	-2.1
SKR	**Severo-Kuril's**	**6.36**	**30**	ePN	**Pn**	**09 09 53.9**	**-1.8**
SKR				pmax	pmax		
	comp=E,660nm,0.9s						
SKR				pmax	pmax		
	comp=Z,2μm,0.9s						
SKR				pmax	pmax		
	comp=N,190nm,0.5s						
SKR				pmax	pmax		
	comp=Z,4μm,3.0s						
SKR				pmax	pmax		
	comp=

comp=Z,1μm,0.8s
SKR AMS AMS 09 12 32.0
comp=Z,18μm,16.0s
SKR AMS AMS 09 12 32.0
comp=Z,89μm,16.0s
SKR AMS AMS 09 12 32.0
comp=Z,50μm,16.0s
SKR AMS AMS 09 12 32.0
comp=Z,19μm,16.0s
SKR AMS AMS 09 12 32.0
comp=Z,90μm,16.0s
JFR Furan 6.48 254 P **Pn 09 09 57.6 +0.2**
JFR *e*S **Sn 09 11 09.7 -0.2**
JWK2 Keihoku 6.50 274 P **Pn 09 10 01.2 +3.5**
JAB Ashibetsu 6.61 257 P **Pn 09 10 00.8 +1.6**
ERM Erimo 6.63 243 Pn **Pn 09 09 59.8 +0.3**
comp=Z,102μm,0.5s
ERM Erimo 6.63 243 *e*Pn **Pn 09 09 58.6 -0.9**
ERM *e*Sn **Sn 09 11 14.8 +1.0**
JEM Erimo 6.63 243 P **Pn 09 09 59.2 -0.3**
JSS Shosan 6.64 266 P **Pn 09 10 02.2 +2.6**
JNBK Urakawa-nobuka 6.75 246 ⇑P **Pn 09 09 58.9 -2.3**
JBT2 Biratori 2 6.79 251 P **Pn 09 10 00.6 -1.0**
JHR Hokuryu 6.88 260 P **Pn 09 10 04.7 +1.7**
UGL Uglegorsk 7.23 305 ⇑*i*PN **Pn 09 10 10.0 +2.3**
UGL pmax pmax
comp=N,506nm,0.8s
UGL pmax pmax
comp=E,964nm,0.8s
UGL pmax pmax
comp=Z,3μm,0.8s
UGL MLR MLR
comp=N,52μm,15.0s
UGL MLR MLR
comp=E,77μm,15.0s
UGL Uglegorsk 7.23 305 ⇑*i*P **Pn 09 10 10.0 +2.3**
UGL ⇑*i*P 09 10 10.0
UGL AMB AMB 09 10 12.5
comp=E,506nm,0.8s
UGL AMB AMB 09 10 12.5
comp=E,964nm,0.8s
UGL AMB AMB 09 10 12.5
comp=E,3μm,0.8s
UGL A 09 11 58.5
comp=E,987nm,0.9s
UGL A 09 11 58.5
comp=E,1μm,0.9s
UGL A 09 12 12.0
comp=E,19μm,18.0s
UGL A 09 12 12.0
comp=E,32μm,18.0s
UGL AMS AMS 09 13 12.0
comp=E,52μm,15.0s
UGL AMS AMS 09 13 12.0
comp=E,77μm,15.0s
JEW Eniwo 7.38 254 ⇑P **Pn 09 10 09.8 +0.1**
JNB Noboribetsu 7.80 252 P **Pn 09 10 14.6 -1.0**
JNB *e*S **Sn 09 11 40.0 -2.5**
JSK Shakotan 7.87 260 P **Pn 09 10 16.3 -0.2**
JKB Kayabe 8.06 249 P **Pn 09 10 16.8 -2.4**
JKB *e*S **Sn 09 11 42.5 -6.5**
JYM2 Yakumo 2 8.40 252 ⇑P **Pn 09 10 22.2 -1.6**
JSH Shimam 8.41 256 P **Pn 09 10 23.9 0.0**
JSH *e*S **Sn 09 11 57.2 -0.2**
JANG Nango 8.59 238 P **Pn 09 10 21.8 -4.6**
JANG *e*S **Sn 09 11 52.1 -10**
JTM Tenmabayashi 8.62 242 P **Pn 09 10 23.6 -3.2**
JTM *e*S **Sn 09 11 54.2 -8.4**
JSR Shiriuchi 8.64 248 P **Pn 09 10 25.0 -2.1**
JSR *e*S **Sn 09 11 55.9 -7.2**
JTH Tanohata 8.66 235 P **Pn 09 10 22.2 -5.1**
JTH *e*S **Sn 09 11 53.2 -10**
PEA0B Petropavlovsk- 8.93 26 *e*Pn **Pn 09 10 31.1 +0.1**
PETK Petropavlovsk- 8.93 26 P **Pn 09 10 30.9 -0.1**
comp=E,5.1nm,0.3s,baz=192,slow=11,SNR=54
PETK S **Sn 09 12 16.5 +6.4**
baz=226,slow=21,SNR=1.9
PETK Petropavlovsk- 8.93 26 PN **Pn 09 10 30.9 -0.1**
PETK S **Sn 09 12 16.5 +6.4**
PETK pmax pmax
comp=Z,5.0nm,0.3s
JOSM Okushiri--Mats 9.02 253 P **Pn 09 10 30.8 -1.4**
JOSM *e*S **Sn 09 12 07.8 -4.5**
PET Petropavlovsk 9.18 30 *e*PN **Pn 09 10 32.8 -1.5**
PET pmax pmax
comp=Z,400nm,7.5s
PET pmax pmax
comp=Z,400nm,19.0s
PET pmax pmax
comp=Z,58nm,0.9s
PET MLR MLR
comp=Z,16μm,18.0s
PET MLR MLR
comp=Z,15μm,17.0s
PET Petropavlovsk 9.18 30 *e*Pn **Pn 09 10 33.7 -0.6**
comp=Z,97nm,0.6s
PET *e*Sn **Sn 09 12 18.1 +1.9**
OFUJ Ofunato 9.36 232 P **Pn 09 10 32.8 -4.0**
OFUJ *e*S **Sn 09 12 10.2 -10**
JRG Rokugo 9.73 236 P **Pn 09 10 38.2 -3.8**
OKH Okha 9.83 330 ⇓*i*P **Pn 09 10 45.0 +1.8**
OKH *e*P 09 10 45.2
OKH AMB AMB 09 10 46.8
comp=Z,7μm,1.5s
OKH AMB AMB 09 10 47.0
comp=Z,15μm,2.5s
OKH *e*S **Sn 09 12 33.2 +1.1**
OKH *e*S **Sn 09 12 33.4 +1.3**
OKH *e*LQ 09 13 51.0
OKH AMS AMS 09 15 56.4
comp=Z,58μm,13.0s
OKH AMS AMS 09 15 56.4
comp=Z,18μm,13.0s
OKH AMS AMS 09 15 56.4
comp=Z,33μm,13.0s
JOG2 Oga 2 9.92 241 P **Pn 09 10 41.9 -2.7**
JIO Ouri 9.98 230 P **Pn 09 10 40.6 -4.7**
JIO *e*S **Sn 09 12 25.8 -10**
TEY Ternei 10.25 274 *e*P **Pn 09 10 51.0 +1.9**
TEY AMB AMB 09 10 51.8
comp=Z,9.0nm,0.5s
TEY AMB AMB 09 10 51.8
comp=Z,43nm,1.0s
TEY AMB AMB 09 10 51.8
comp=Z,626nm,1.2s
TEY AMB AMB 09 10 51.8
comp=Z,5μm,3.8s
TEY AMB AMB 09 10 51.8
comp=Z,5μm,4.0s
NKL Nikolayevsk 10.40 323 *i*P **Pn 09 10 50.0 -1.1**
NKL AMB AMB 09 10 53.0
comp=Z,4μm,3.0s
NKL AMB AMB 09 10 53.0
comp=Z,4μm,3.0s
NKL AMB AMB 09 10 53.0
comp=Z,6μm,3.0s
NKL AMB AMB 09 10 53.0
comp=Z,840nm,1.0s
NKL AMB AMB 09 10 53.0
comp=Z,1μm,1.0s
NKL AMB AMB 09 10 53.0
comp=Z,2μm,1.0s
NKL *e*S **Sn 09 12 48.0 +1.9**
NKL A 09 12 53.0
comp=Z,910nm,1.5s
NKL A 09 12 56.0
comp=Z,5μm,10.0s
NKL A 09 12 56.0
comp=Z,3μm,10.0s
NKL *e*L 09 13 35.0
NKL AMS AMS 09 15 14.0
comp=Z,35μm,18.0s
NKL AMS AMS 09 15 14.0
comp=Z,11μm,18.0s
NKL AMS AMS 09 15 14.0
comp=Z,45μm,18.0s
JYA Atsumi 10.80 236 P **Pn 09 10 53.3 -3.3**
JYA *e*S **Sn 09 12 48.1 -8.0**
JFK Kawauchi 11.03 228 P **Pn 09 10 55.2 -4.6**
JFK *e*S **Sn 09 12 48.4 -13**
HABR Khabarovsk 11.44 292 *c i*PN **Pn 09 11 08.1 +2.8**
HABR *e* 09 13 16.2
HABR pmax pmax
comp=Z,1μm,1.6s
HABR pmax pmax
comp=E,2μm,1.9s
HABR pmax pmax
comp=N,265nm,1.8s
HABR MLR MLR
comp=E,28μm,17.0s
HABR MLR MLR
comp=N,7μm,15.0s
HABR MLR MLR
comp=Z,33μm,15.0s
JFY Yanaizu 11.63 231 P **Pn 09 11 04.1 -3.9**
JFY *e*S **Sn 09 13 07.7 -8.6**
JSD Sado 12.03 237 P **Pn 09 11 09.4 -4.0**
JIZZ Izumozaki 12.10 235 P **Pn 09 11 12.1 -2.3**
JKT Katashina 12.35 231 P **Pn 09 11 14.9 -2.8**
JSZ Suzu 12.95 238 P **Pn 09 11 22.1 -3.8**
MJAR Matsushiro Arr 13.08 233 P **Pn 09 11 24.3 -3.5**
comp=Z,5.2nm,0.3s,baz=26,slow=12,SNR=89
MJAR S **Sn 09 13 55.2 +3.4**
comp=Z,2.6nm,0.3s,baz=64,slow=20,SNR=3.7
MJAR ScP ScP 09 20 27.8 +1.1
baz=348,slow=1.9,SNR=5.1
MJAR Matsushiro Arr 13.08 233 PN **Pn 09 11 24.3 -3.5**
MJAR pmax pmax
comp=Z,5.0nm,0.3s
MAT Matsushiro 13.08 233 P **Pn 09 11 24.4 -3.4**
MAT S **Sn 09 13 56.0 +4.2**
VLA Vladivostok 13.96 268 ⇓*i*P **Pn 09 11 37.8 -1.8**
VLA pmax pmax
comp=Z,706nm,1.1s
VLA MLR MLR
comp=Z,20μm,16.0s
VLA Vladivostok 13.96 268 ⇓*i*P **Pn 09 11 37.9 -1.7**
JGF Kuroka 14.24 232 P **Pn 09 11 40.3 -3.3**
JHJ2 Mitsune 14.96 220 P **Pn 09 11 56.5 +3.4**
JHJ Hachijo jima 2 14.97 220 P **Pn 09 11 52.5 -0.7**
comp=Z,13nm,0.3s,baz=265,slow=23,SNR=6.0
JHJ S **Sn 09 14 24.4 -13**
comp=Z,44nm,0.3s,baz=79,slow=22,SNR=7.7
MDJ Mudanjiang 15.25 275 P **Pn 09 11 54.6 -2.2**
MDJ S **S 09 14 39.4 -20**
MDJ PcP PcP 09 17 00.5 +0.4
MDJ ScP ScP 09 20 35.8 +5.5
MDJ ScS ScS 09 24 08.7 +0.4
MDJ pmax pmax
comp=Z,170nm,1.2s
MDJ pmax pmax
comp=Z,750nm,4.2s
MDJ LR LR
comp=N,20μm,16.2s
MDJ LR LR
comp=E,18μm,19.9s
MDJ LR LR
comp=Z,33μm,17.4s
JKY Yasaka 15.52 237 P **Pn 09 11 57.0 -3.3**
JAD Aida 16.54 237 P **Pn 09 12 10.3 -3.1**
SMY Shemya 16.77 55 *e*P **Pn 09 12 14.6 -1.5**
SMY pmax pmax
comp=Z,219nm,0.8s
SMY Shemya 16.77 55 *e*P **Pn 09 12 14.6 -1.5**
comp=Z,219nm,0.8s
SMY *e*Sn **Sn 09 15 05.9 -15**
JHS Saijyo 17.14 239 P **Pn 09 12 18.0 -2.8**
ZEA Zeya 17.58 307 ⇑*e*P **Pn 09 12 22.6 -3.5**
ZEA ⇑*e*P 09 12 22.6
ZEA AMB AMB 09 12 26.0
comp=Z,2μm,6.0s
ZEA AMB AMB 09 12 26.0
comp=Z,5μm,7.0s
ZEA AMB AMB 09 12 26.0
comp=Z,3μm,5.0s
ZEA AMB AMB 09 12 27.5
comp=Z,590nm,1.2s
ZEA AMB AMB 09 12 27.5
comp=Z,720nm,1.2s
ZEA AMB AMB 09 12 27.5
comp=Z,960nm,1.0s
ZEA A 09 15 51.0
comp=Z,2μm,11.0s
ZEA A 09 15 51.0
comp=Z,2μm,11.0s
SEY Seymchan 17.70 2 ⇑*i*P **Pn 09 12 26.0 -1.5**
SEY Seymchan 17.70 2 ⇑*i*P **Pn 09 12 26.1 -1.4**
CN2 Changchun 18.33 274 *e*P **Pn 09 12 32.1 -3.3**
CN2 *e*pP pP 09 12 40.0 -5.7
CN2 *e*sP sP 09 12 44.6 -6.8
CN2 *e*S **S 09 15 54.7 -7.5**
CN2 LR LR
comp=N,12μm,13.0s
CN2 LR LR
comp=E,16μm,13.0s
CN2 LR LR
comp=Z,18μm,15.0s
KSRS Korea Array 19.04 254 P **Pn 09 12 40.9 -3.1**
comp=Z,2.1nm,0.3s,baz=60,slow=11,SNR=96
KSRS pPcP 09 17 21.2
baz=102,slow=1.5,SNR=4.6
KSRS LR LR 09 20 15.5
comp=Z,13μm,18.8s,baz=60,slow=37
KSRS ScP ScP 09 20 39.9 +1.7
baz=121,slow=0.9,SNR=6.7
KSRS Korea Array 19.04 254 P **Pn 09 12 40.9 -3.1**
KSRS pmax pmax
comp=Z,2.0nm,0.3s
KSRS MLR MLR
comp=Z,13μm,18.8s
CBIJ Chichi jima 19.51 204 P **Pn 09 12 49.8 +0.1**
comp=Z,5.1nm,0.3s,baz=359,slow=3.2,SNR=6.9
CBIJ S **S 09 16 08.1 -18**
comp=Z,9.0nm,0.3s,baz=266,slow=19,SNR=4.8
CBIJ Chichi jima 19.51 204 P **Pn 09 12 54.2 +4.6**
AMKA Amchitka 19.63 62 *e*P **Pn 09 12 53.5 +2.6**
JNU Nakatsue 19.77 239 P **Pn 09 12 51.3 -1.4**
INCN Inchon 19.90 256 *e*P **Pn 09 12 51.5 -2.7**
comp=Z,490nm,0.9s
INCN Inchon 19.90 256 P **Pn 09 12 52.1 -2.1**
SNR=27
CLNS Chul'man 19.98 315 *e*P **Pn 09 12 51.4 -3.6**
CLNS *e*S **S 09 16 33.2 -1.9**
CLNS pmax pmax
comp=Z,254nm,1.1s
CLNS pmax pmax
comp=N,173nm,1.3s
CLNS pmax pmax
comp=E,187nm,1.3s
CLNS smax
comp=N,419nm,13.7s
CLNS smax
comp=E,220nm,11.6s
CLNS MLR MLR
comp=E,11μm,16.0s
CLNS MLR MLR
comp=Z,16μm,15.0s
CLNS MLR MLR
comp=N,12μm,17.0s
YAK Yakutsk 20.86 331 *c i*P **P 09 12 59.0 -3.5**
YAK *e* 09 13 14.6
YAK *e*S **S 09 16 50.0 -2.4**
YAK *e*SS 09 17 10.7
YAK *e*SSS 09 17 26.3
YAK *e* 09 24 23.1
YAK pmax pmax
comp=Z,408nm,1.0s
YAK pmax pmax
comp=N,155nm,1.0s
YAK pmax pmax
comp=E,244nm,1.4s
YAK smax
comp=E,2μm,2.5s
YAK smax
comp=N,5μm,6.3s
YAK MLR MLR
comp=Z,8μm,13.0s,MS5.3
YAK MLR MLR
comp=N,5μm,12.0s,MS5.2
YAK MLR MLR
comp=E,4μm,16.0s,MS5.2
YAK Yakutsk 20.86 331 *e*P **P 09 13 01.5 -1.0**
comp=E,1μm,0.8s
YAK *e*S **S 09 16 50.0 -2.4**
YAK LR LR
comp=Z,12μm,20.0s,MS5.3
JTN Tanegashima 3 21.49 234 P **P 09 13 10.5 +1.0**
DL2 Dalian 22.71 264 ⇑*i*P **P 09 13 21.3 -1.1**
DL2 S **S 09 17 25.2 -2.6**
DL2 sS sS 09 17 32.4 -14
DL2 ScS ScS 09 24 33.0 +0.5
DL2 pmax pmax
comp=Z,410nm,1.3s,mb5.7
DL2 pmax pmax
comp=Z,2μm,6.1s
DL2 LR LR
comp=N,3μm,16.6s,MS4.9
DL2 LR LR
comp=E,2μm,17.2s,MS4.9
DL2 LR LR
comp=Z,3μm,22.1s,MS4.7
ATKA Atka Island 23.73 61 *e*P **P 09 13 29.4 -3.0**
comp=Z,206nm,1.1s,mb5.5
BILL Bilibino 24.14 14 ⇑*i*P **P 09 13 34.3 -1.7**
BILL *e**PP 09 13 43.7
BILL *e**SP sP 09 13 50.3 -2.8
BILL *e* 09 17 17.2
BILL *e*S **S 09 17 50.4 -0.1**
BILL *e*SS 09 18 37.5
BILL pmax pmax
comp=Z,139nm,1.4s,mb5.2
BILL MLR MLR
comp=Z,22μm,16.0s,MS5.7
BILL Bilibino 24.14 14 *e*P **P 09 13 35.0 -1.0**
comp=Z,64nm,0.6s,mb5.2
BILL LR LR
comp=Z,15μm,19.0s,MS5.5
CIT Chita 25.49 299 *e*P **P 09 13 55.9 +7.5**
CIT *e* pP 09 14 02.7 +2.5
CIT *e* 09 14 28.8
CIT *e* 09 14 35.7
CIT pmax pmax
comp=Z,890nm,1.3s,mb6.1
JOW Kunigami 25.93 232 P **P 09 13 52.4 -0.2**
BJI Beijing 26.08 271 P **P 09 13 53.6 -0.3**
BJI S **S 09 18 22.0 0.0**
BJI pmax pmax
comp=Z,510nm,1.1s,mb6.0
BJI pmax pmax
comp=Z,3μm,3.8s
BJI LR LR
comp=N,12μm,14.5s,MS5.8
BJI LR LR
comp=E,20μm,14.8s,MS5.8
BJI LR LR
comp=Z,12μm,22.9s
TIA Tai'an 27.13 262 P **P 09 14 03.3 -0.1**
TIA S **S 09 18 41.4 +2.8**
TIA pmax pmax
comp=Z,260nm,1.4s,mb5.6
TIA LR LR
comp=N,9μm,16.5s,MS5.5
TIA LR LR
comp=E,6μm,15.9s,MS5.5
SSE Sheshan 27.27 249 P **P 09 14 05.1 +0.4**
SSE pP pP 09 14 13.8 -2.7
SSE S **S 09 18 41.4 +0.5**
SSE pmax pmax
comp=Z,340nm,1.0s,mb5.8
SSE pmax pmax
comp=Z,1μm,7.0s
SSE LR LR
comp=N,5μm,18.1s,MS5.4
SSE LR LR
comp=E,9μm,18.1s,MS5.4
SSE LR LR
comp=Z,11μm,17.5s,MS5.5
NJ2 Nanjing 28.24 253 *e*P **P 09 14 13.5 +0.2**
NJ2 pP pP 09 14 22.9 -2.3
NJ2 sP sP 09 14 26.9 -3.6
NJ2 PP PP 09 15 02.0 -16
NJ2 S **S 09 18 53.0 -3.1**
NJ2 pmax pmax
comp=Z,260nm,1.0s,mb5.8
NJ2 LR LR
comp=N,6μm,20.9s,MS5.4
NJ2 LR LR
comp=E,8μm,22.2s,MS5.4
NJ2 LR LR
comp=Z,6μm,22.9s,MS5.1
TIXI Tiksi 28.50 345 *c i*P **P 09 14 11.5 -3.8**
TIXI *e*S **S 09 18 52.2 -7.3**
TIXI pmax pmax
comp=Z,22nm,0.7s,mb5.0
TIXI MLR MLR
comp=Z,11μm,14.0s,MS5.6
TIXI Tiksi 28.50 345 *e*P **P 09 14 11.9 -3.4**
comp=Z,66nm,1.4s,mb5.2
TIXI LR LR
comp=Z,8μm,22.0s,MS5.3
WAKE Wake Island 28.96 148 PFAKE 09 14 30.0 +10
WAKE LR LR
comp=Z,6μm,22.0s,MS5.2
HHC Hu-ho-hao-te 29.02 275 ⇑*i*P **P 09 14 20.6 +0.4**
HHC sP sP 09 14 25.6 -12
HHC PP PP 09 15 14.1 -12
HHC PcP PcP 09 17 30.2 +2.6
HHC S **S 09 19 07.8 -0.5**
HHC sS sS 09 19 14.1 -14
HHC SS SS 09 20 36.1 -36
HHC ScP ScP 09 21 09.7 +4.4
HHC PcS PcS 09 21 11.8 +1.5
HHC pmax pmax
comp=Z,820nm,0.9s,mb6.5
HHC pmax pmax
comp=Z,5μm,5.2s
HHC LR LR
comp=N,17μm,14.0s,MS5.8
HHC LR LR
comp=E,6μm,14.4s,MS5.8
HHC LR LR
comp=Z,9μm,14.1s,MS5.5
TIY Taiyuan 29.71 269 *e*P **P 09 14 27.4 +1.0**
TIY pP pP 09 14 34.0 -4.3
TIY S **S 09 19 18.0 -1.2**
TIY pmax pmax
comp=Z,260nm,1.2s,mb5.8
TIY LR LR
comp=N,4μm,12.2s
TIY LR LR
comp=E,5μm,20.9s
TIY LR LR
comp=Z,9μm,22.8s
ULN Ulaanbaatar 30.09 291 *e*P **P 09 14 27.8 -1.8**
ULN pmax pmax
comp=Z,193nm,1.0s,mb5.8
ULN MLR MLR
comp=Z,14μm,20.0s,MS5.6
ULN Ulaanbaatar 30.09 291 *e*P **P 09 14 27.8 -1.8**
comp=Z,193nm,1.0s,mb5.8
ULN LR LR
comp=Z,14μm,20.0s,MS5.6
ULN Ulaanbaatar 30.09 291 P **P 09 14 28.4 -1.2**
comp=Z,1μmcomp=Z,197nm,1.1s,mb5.8
ULN Ulaanbaatar 30.09 291 P **P 09 14 27.9 -1.7**
SNR=166
BTO Baotou 30.20 276 *e*P **P 09 14 30.9 +0.3**
BTO pmax pmax
comp=Z,150nm,1.3s,mb5.6
MIDW Midway 30.21 114 PFAKE 09 14 40.0 +9.1
MIDW LR LR
comp=Z,6μm,19.0s,MS5.2
SONM Songino Array 30.53 291 P **P 09 14 33.1 -0.4**
comp=Z,109nm,1.0s,mb5.6,baz=75,slow=6.3,SNR=94
SONM PcP PcP 09 17 30.2 -1.2
comp=Z,16nm,0.9s,baz=121,slow=2.7,SNR=4.3
SONM LR LR 09 27 55.1
comp=Z,19μm,18.5s,MS5.8,baz=81,slow=38
SONM Songino Array 30.53 291 P **P 09 14 33.1 -0.4**
SONM 09 17 30.2
SONM pmax pmax
comp=Z,109nm,1.0s
SONM MLR MLR
comp=Z,19μm,18.5s
IRK Irkutsk 31.18 300 *e*P **P 09 14 37.1 -2.1**
IRK *e* 09 15 50.8
IRK *e* 09 17 33.2
IRK pmax pmax
comp=Z,99nm,1.3s,mb5.5
TATO Taipei 31.31 240 PFAKE 09 14 50.0 +9.4
TATO LR LR
comp=Z,17μm,20.0s,MS5.7
YHNB Yeheng 31.61 239 *e*P **P 09 14 45.2 +2.1**
comp=Z,55nm,0.7s,mb5.5
YHNB LR LR
comp=Z,22μm,20.0s,MS5.8
TLY Talaya 31.64 299 P **P 09 14 41.5 -1.7**

comp=Z,258nm,0.9s,mb6.1,SNR=30
TLY Talaya 31.64 299 *c i*P **P 09 14 40.4 -2.8**
TLY *e*PPP 09 15 48.6
TLY *e* 09 17 35.1
TLY pmax pmax
comp=Z,63nm,1.2s,mb5.3
TLY MLR MLR
comp=Z,22μm,17.0s,MS5.9
TLY Talaya 31.64 299 *e*P **P 09 14 42.0 -1.1**
comp=Z,57nm,1.1s,mb5.3
TLY LR LR
comp=Z,17μm,20.0s,MS5.7
TLY Talaya 31.64 299 P **P 09 14 41.2 -2.0**
SNR=60
NACB Ninganchiao 31.84 239 *e*P **P 09 14 47.3 +2.1**
comp=Z,26nm,0.7s,mb5.2
SDPT Sand Point 31.90 54 *e*P **P 09 14 43.0 -2.4**
comp=Z,17nm,0.7s,mb5.0
GUMO Guam 32.04 191 PFAKE 09 15 00.0 +13
GUMO LR LR
comp=Z,5μm,19.0s,MS5.2
WHN Wuhan 32.21 256⇑ *i*P **P 09 14 48.0 -0.5**
WHN pP pP 09 14 53.4 -7.0
WHN S **S 09 19 57.8 -0.6**
WHN LR LR
comp=N,25μm,18.0s,MS6.0
WHN LR LR
comp=E,10μm,17.8s,MS6.0
WHN LR LR
comp=Z,27μm,16.8s,MS6.0
SSLB Suanglung 32.52 239 *e*P **P 09 14 50.7 -0.5**
comp=Z,160nm,1.2s,mb5.8
YULB Yu-li 32.61 238 *e*P **P 09 14 52.3 +0.3**
comp=Z,122nm,0.9s,mb5.8
CHGN Chignik 33.02 52 *e*P **P 09 14 54.5 -0.7**
TPUB Ta-pu 33.08 239 *e*P **P 09 14 56.0 -0.1**
comp=Z,310nm,0.8s,mb6.3
QZH Quanzhou 33.13 243⇑ *i*P **P 09 14 57.1 +0.6**
QZH S **S 09 20 14.4 +1.7**
QZH pmax pmax
comp=Z,200nm,1.0s,mb6.0
QZH LR LR
comp=N,12μm,17.6s
QZH LR LR
comp=E,8μm,12.6s
QZH LR LR
comp=Z,8μm,18.6s,MS5.4
TWG Pinlang 33.18 238 *e*P **P 09 14 56.6 -0.3**
comp=Z,248nm,0.8s,mb6.2
MOY Mondy 33.27 299 *e*P **P 09 14 55.8 -1.7**
MOY pmax pmax
comp=Z,101nm,1.7s,mb5.5
XAN Xi'an 34.01 266 P **P 09 15 03.7 -0.4**
XAN pP pP 09 15 13.1 -3.0
XAN sP sP 09 15 16.3 -5.1
XAN PP PP 09 16 19.5 -2.0
XAN S **S 09 20 27.2 +1.0**
XAN sS sS 09 20 43.1 -3.1
XAN SS SS 09 22 36.9 -17
XAN pmax pmax
comp=Z,59nm,1.3s,mb5.4
XAN pmax pmax
comp=Z,270nm,11.8s
XAN LR LR
comp=N,6μm,15.0s,MS5.4
XAN LR LR
comp=E,2μm,15.3s,MS5.4
XAN LR LR
comp=Z,2μm,16.3s,MS5.0
TTA Tatalina 34.44 40 *e*P **P 09 15 07.9 +0.4**
TTA *e* pP 09 15 22.2 +2.7
SVW2 Sparrevohn 34.51 43 *e*P **P 09 15 08.3 +0.1**
comp=Z,78nm,2.4s,mb5.2
SVW2 LR LR
comp=Z,4μm,21.0s,MS5.1
OHAK Old Harbor 35.78 50 *e*P **P 09 15 19.0 -0.1**
comp=Z,175nm,1.4s,mb5.8
RSO Redoubt South 35.89 45 *e*P **P 09 15 21.1 +1.1**
KDAK Kodiak Island 36.11 49 P **P 09 15 21.5 -0.4**
comp=Z,614nm,0.7s,mb6.6,SNR=7.4
KDAK Kodiak Island 36.11 49 *i*P **P 09 15 22.1 +0.2**
KDAK Kodiak Island 36.11 49 *e*P **P 09 15 20.8 -1.1**
comp=Z,74nm,0.8s,mb5.7
KDAK LR LR
comp=Z,7μm,21.0s,MS5.4
PPLA Purkeypile 36.18 40 *e*P **P 09 15 23.7 +1.2**
comp=Z,326nm,1.5s,mb6.0
LZH Lanzhou 36.55 272⇓ P **P 09 15 27.1 +1.2**
LZH PP PP 09 16 51.1 +1.6
LZH S **S 09 21 05.1 0.0**
LZH sS sS 09 21 21.0 -4.3
LZH SS SS 09 23 32.0 -14
LZH pmax pmax
comp=Z,510nm,1.2s,mb6.2
LZH pmax pmax
comp=Z,1μm,4.0s
LZH LR LR
comp=E,7μm,14.2s
LZH LR LR
comp=Z,9μm,15.2s,MS5.7
BPAW Bear Paw Mtn. 36.77 38 *e*P **P 09 15 27.9 +0.5**
comp=Z,68nm,1.1s,mb5.4
TRF Thorofare Moun 37.06 40 *e*P **P 09 15 30.3 +0.4**
comp=Z,42nm,0.9s,mb5.3
COLD Coldfoot 37.32 33 *e*P **P 09 15 32.0 -0.1**
comp=Z,33nm,0.8s,mb5.2
COLD *e* pP 09 15 45.7 +1.5
RC01 Rabbit Creek A 37.35 43 *e*P **P 09 15 32.3 -0.1**
comp=Z,134nm,1.3s,mb5.6
KRAR Krasnoyarsk 37.37 308⇑ *i*P **P 09 15 30.6 -2.0**
KRAR pmax pmax
comp=Z,97nm,1.2s,mb5.5
KRAR MLR MLR
comp=Z,23μm,16.0s,MS6.1
PMR Palmer 37.62 43 *e*P **P 09 15 34.4 -0.3**
PMR pmax pmax
comp=Z,63nm,1.2s,mb5.2
PMR MLR MLR
comp=Z,3μm,19.0s,MS5.2
PMR Palmer 37.62 43 *e*P **P 09 15 34.4 -0.3**
comp=Z,63nm,1.2s,mb5.2
PMR LR LR
comp=Z,3μm,19.0s,MS5.2
MCK McKinley 37.67 39 *e*P **P 09 15 35.2 +0.1**
MCK *e* pP 09 15 48.7 +1.5
MCK pmax pmax
comp=Z,89nm,1.0s,mb5.5
MCK McKinley 37.67 39 *e*P **P 09 15 35.2 +0.1**
comp=Z,88nm,1.0s,mb5.4
MCK *e* pP 09 15 48.7 +1.5
GZH Guangzhou 37.81 247 P **P 09 15 32.0 -4.7**
GZH LR LR
comp=N,11μm,20.5s,MS5.7
GZH LR LR
comp=E,2μm,18.6s,MS5.7
GZH LR LR
comp=Z,12μm,21.2s,MS5.7
GTA Gaotai 37.83 280⇑P **P 09 15 37.8 +1.1**
GTA pP pP 09 15 47.6 -1.2
GTA PP PP 09 17 08.0 +4.4
GTA PcP PcP 09 17 53.5 +1.1
GTA S **S 09 21 27.5 +2.9**
GTA ScS ScS 09 25 45.8 +0.7
GTA pmax pmax
comp=Z,600nm,1.0s,mb6.3
GTA pmax pmax
comp=Z,3μm,5.1s
GTA LR LR
comp=N,7μm,19.1s,MS5.7
GTA LR LR
comp=E,8μm,17.7s,MS5.7
GTA LR LR
comp=Z,11μm,17.0s,MS5.7
COLA College 38.15 37⇑ *i*P **P 09 15 39.8 +0.7**
COLA College 38.15 37 *e*P **P 09 15 39.5 +0.4**
comp=Z,87nm,0.8s,mb5.5
COLA LR LR
comp=Z,4μm,20.0s,MS5.3
DIV Divide 39.27 43 *e*P **P 09 15 49.2 +0.6**
comp=Z,354nm,1.7s,mb5.8
CD2 Chengdu 39.37 265 P **P 09 15 50.0 +0.3**
CD2 pP pP 09 15 59.8 -2.1
CD2 sP sP 09 16 03.7 -3.5
CD2 PP PP 09 17 24.6 +4.1
CD2 PcP PcP 09 17 59.5 +2.1
CD2 S **S 09 21 47.8 -0.1**
CD2 sS sS 09 22 04.0 -4.2
CD2 SS SS 09 24 33.8 -9.0
CD2 pmax pmax
comp=Z,800nm,1.0s,mb6.4
CD2 pmax pmax
comp=Z,2μm,9.0s
CD2 LR LR
comp=N,6μm,16.7s
CD2 LR LR
comp=Z,7μm,17.8s,MS5.6
BMRM Bremner River 39.85 43 *e*P **P 09 15 53.8 +0.4**
comp=Z,122nm,1.0s,mb5.6
GYA Guiyang 40.03 257⇑ *i*P **P 09 15 54.7 -0.6**
GYA PP PP 09 17 31.9 +4.0
GYA PcP PcP 09 18 01.0 +1.4
GYA ScP ScP 09 21 45.6 +0.8
GYA S **S 09 21 56.1 -1.9**
GYA SS SS 09 24 48.3 -8.0
GYA pmax pmax
comp=Z,150nm,1.0s,mb5.7
GYA pmax pmax
comp=Z,730nm,5.1s
GYA LR LR
comp=N,5μm,17.7s,MS5.7
GYA LR LR
comp=E,8μm,18.6s,MS5.7
GYA LR LR
comp=Z,10μm,18.6s,MS5.7
MENT Mentasta 40.05 40 *e*P **P 09 15 55.7 +0.7**
EGAK Eagle 41.01 37 *e*P **P 09 16 02.8 -0.1**
EGAK LR LR
comp=Z,4μm,20.0s,MS5.3
DAWY Dawson 41.85 38 *e*P **P 09 16 10.2 +0.4**
ZAA0 Zalesovo Array 42.35 307 *e*P **P 09 16 11.1 -2.9**
ZAA0 *e*PcP PcP 09 18 06.9 +0.3
ZALV Zalesovo Beam 42.35 307 P **P 09 16 11.5 -2.5**
comp=Z,17nm,0.7s,mb4.8,baz=71,slow=5.3,SNR=30
ZALV PcP PcP 09 18 06.9 +0.3
comp=Z,23nm,0.5s,baz=93,slow=3.1,SNR=12
ZALV *p*PcP 09 18 20.1
comp=Z,63nm,0.9s,baz=68,slow=2.8,SNR=8.6
ZALV ScP ScP 09 21 56.6 +3.1
comp=Z,2.2nm,0.6s,baz=104,slow=6.1,SNR=2.4
ZALV LR LR 09 34 53.9
comp=Z,7μm,20.4s,MS5.5,baz=66,slow=38
PNL Peninsula 42.63 45 *e*P **P 09 16 16.4 +0.3**
comp=Z,62nm,1.3s,mb5.2
NVS Novosibirsk 42.98 308⇑ *i*P **P 09 16 16.1 -3.0**
NVS *i* 09 18 03.5
NVS *e*S **S 09 22 42.8 +1.8**
NVS *i* 09 26 14.8
NVS *i* SSS 09 26 32.5
NVS pmax pmax
comp=Z,67nm,1.3s,mb5.2
NVS pmax pmax
comp=N,15nm,1.1s
NVS pmax pmax
comp=E,57nm,0.9s
NVS pmax pmax
comp=Z,144nm,2.1s,mb5.3
NVS pmax pmax
comp=N,70nm,2.4s
NVS pmax pmax
comp=E,196nm,2.5s
NVS smax
comp=N,56nm,1.9s
NVS smax
comp=E,45nm,1.9s
QIZ Qiongzhong 42.99 246 P **P 09 16 19.9 +0.3**
QIZ pP pP 09 16 30.9 -0.9
QIZ PP PP 09 17 59.7 -0.2
QIZ S **S 09 22 42.2 +0.4**
QIZ pmax pmax
comp=Z,850nm,7.8s
QIZ LR LR
comp=N,6μm,20.5s
QIZ LR LR
comp=Z,8μm,16.8s,MS5.7
HYT Haines Junctio 43.29 43 *e*P **P 09 16 23.3 +1.8**
JOHN Johnston Islan 43.48 118 PFAKE 09 16 30.0 +6.5
JOHN LR LR
comp=Z,6μm,22.0s,MS5.5
KMI Kunming 43.60 259⇑P **P 09 16 24.8 +0.3**
KMI pP pP 09 16 35.6 -1.1
KMI sP sP 09 16 38.7 -3.3
KMI PP PP 09 18 07.5 +1.1
KMI PcP PcP 09 18 13.4 +2.0
KMI ScP ScP 09 22 00.8 +1.8
KMI PcS PcS 09 22 06.7 +2.4
KMI S **S 09 22 50.5 -0.2**
KMI sS sS 09 23 08.1 -3.1
KMI SS SS 09 25 59.5 -7.2
KMI ScS ScS 09 26 19.5 -0.6
KMI pmax pmax
comp=Z,220nm,1.2s,mb5.8
KMI LR LR
comp=N,6μm,17.2s,MS5.6
KMI LR LR
comp=E,4μm,17.2s,MS5.6
KMI LR LR
comp=Z,6μm,19.0s,MS5.5
INK Inuvik 43.63 31 *e*P **P 09 16 24.9 +0.7**
INK pmax pmax
comp=Z,143nm,1.2s
INK Inuvik 43.63 31 *e*P **P 09 16 24.9 +0.7**
comp=Z,143nm,1.2s,mb5.6
DAV Davao City (W) 44.04 218 *e*P **P 09 16 28.5 +0.5**
comp=Z,146nm,0.4s,mb6.1
DAV *e* pP 09 16 42.0 +1.6
DAV LR LR
comp=Z,3μm,20.0s,MS5.2
DAV Davao City (W) 44.04 218⇑ *e*P **P 09 16 25.8 -2.3**
DAV Davao City (W) 44.04 218 P sP 09 16 43.7 -1.9
comp=Z,437nm,0.8s,comp=Z,6μm
DAV Davao City (W) 44.04 218 P **P 09 16 28.5 +0.4**
SNR=18
WMQ Urumqi 44.16 292 P **P 09 16 30.0 +1.2**
WMQ pP pP 09 16 39.9 -1.1
WMQ PP PP 09 18 14.2 +2.1
WMQ ScP ScP 09 22 03.6 +2.6
WMQ S **S 09 22 59.3 +0.8**
WMQ sS sS 09 23 15.7 -3.3
WMQ SS SS 09 26 08.4 -8.6
WMQ ScS ScS 09 26 23.7 +0.6
WMQ pmax pmax
comp=Z,300nm,1.0s,mb6.0
WMQ pmax pmax
comp=Z,2μm,4.0s
WMQ LR LR
comp=N,9μm,18.0s,MS5.8
WMQ LR LR
comp=E,5μm,21.0s,MS5.8
WMQ LR LR
comp=Z,9μm,18.6s,MS5.7
CTBH Cotabato--PC H 44.50 220⇑ *e*P **P 09 16 32.6 +0.9**
SKAG Skagway 44.69 44 *e*P **P 09 16 34.0 +1.3**
comp=Z,150nm,2.1s,mb5.5
SKAG LR LR
comp=Z,6μm,19.0s,MS5.6
MK31 Makanchi Array 46.38 298 *e*P **P 09 16 45.3 -1.0**
MKAR Makanchi Array 46.38 298 P **P 09 16 45.1 -1.2**
comp=Z,150nm,0.9s,mb5.9,baz=69,slow=4.9,SNR=265
MKAR PcP PcP 09 18 21.0 +0.4
comp=Z,12nm,0.5s,baz=223,slow=0.8,SNR=6.8
MKAR ScS ScS 09 26 36.9 -0.4
comp=Z,3.7nm,1.2s,baz=81,slow=8.7,SNR=3.9
MKAR LR LR 09 37 18.6
comp=Z,18μm,19.4s,MS6.0,baz=68,slow=38
MKAR PKPPKP 09 48 07.2
comp=Z,0.8nm,1.0s,baz=298,slow=2.6,SNR=3.6
MKAR P4KPbc 09 54 32.4
comp=Z,0.4nm,0.8s,baz=91,slow=5.3,SNR=3.5
MKAR Makanchi Array 46.38 298 P **P 09 16 45.1 -1.2**
MKAR 09 18 21.0
MKAR 09 26 36.9
MKAR pmax pmax
comp=Z,151nm,0.9s
MKAR MLR MLR
comp=Z,18μm,19.4s
MKAR Makanchi Array 46.38 298 P **P 09 16 45.1 -1.2**
MKAR PcP PcP 09 18 21.0 +0.4
MKAR ScS ScS 09 26 36.9 -0.3
MKAR LR LR 09 37 18.6
MKAR P'P' 09 48 07.2
KURK Kurchatov 47.02 304 P **P 09 16 49.9 -1.3**
comp=Z,1μm,0.7s,mb6.9
KURK Kurchatov 47.02 304 P4KPbc 09 54 35.5
comp=Z,0.4nm,0.6s,baz=69,slow=3.6,SNR=3.8
KURK Kurchatov 47.02 304 *c i*P **P 09 16 48.9 -2.3**
KURK pmax pmax
comp=Z,234nm,1.0s,mb6.1
KURK MLR MLR
comp=Z,4μm,13.0s,MS5.5
KURK Kurchatov 47.02 304 *e*P **P 09 16 49.0 -2.2**
comp=Z,220nm,1.0s,mb6.0
KURK LR LR
comp=Z,3μm,20.0s,MS5.2
KURK Kurchatov 47.02 304 P **P 09 16 49.4 -1.8**
SNR=78
SGSI Sangihe 47.10 216 P pP 09 17 04.2 -0.5
DLBC Dease Lake 47.62 44 LR LR 09 39 45.7
comp=Z,3μm,18.3s,MS5.3,baz=304,slow=40
DLBC Dease Lake 47.62 44 *e*P **P 09 16 57.8 +2.1**
KIP Kipapa 47.76 102 PFAKE 09 17 10.0 +13
KIP LR LR
comp=Z,3μm,20.0s,MS5.3
BAKI Biak 48.16 200 P **P 09 17 01.9 +1.5**
UBT Ubonrachathani 48.88 247⇓P **P 09 17 07.5 +1.5**
LSA Lhasa 48.96 273 P **P 09 17 09.4 +2.9**
LSA pP pP 09 17 17.4 -1.5
LSA sP sP 09 17 21.2 -2.9
LSA PP PP 09 19 03.1 +3.0
LSA S **S 09 24 12.2 +4.8**
LSA pmax pmax
comp=Z,310nm,1.2s,mb6.2
LSA LR LR
comp=N,3μm,17.0s,MS5.6
LSA LR LR
comp=E,4μm,17.0s,MS5.6
LSA LR LR
comp=Z,7μm,15.9s,MS5.7
MYLDM Lahad Datu 49.02 225 P **P 09 17 07.0 -0.1**
MYLDM Lahad Datu 49.02 225 P **P 09 17 08.2 +1.1**
comp=Z,2μmcomp=Z,116nm,1.4s,mb5.7
TNTI Ternate 49.04 212 P **P 09 17 07.6 +0.4**
comp=Z,6μmcomp=Z,262nm,2.0s,mb5.9
CHRT Chiangrai 49.12 256⇑P **P 09 17 08.0 +0.2**
comp=Z,368nm,1.2s,mb6.3
SWI Sorong 49.21 207 P sP 09 17 23.5 -2.6
comp=Z,381nm,1.6s,comp=Z,6μm
SDKM Sandakan 49.29 227 P **P 09 17 09.8 +0.6**
MNI Manado 49.42 216 P **P 09 17 10.3 +0.2**
comp=Z,6μmcomp=Z,494nm,1.2s,mb6.4
KKM Kota Kinabalu 49.47 228 P **P 09 17 10.8 +0.3**
KKM Kota Kinabalu 49.47 228 *e*P **P 09 17 11.1 +0.6**
comp=Z,123nm,1.3s,mb5.8
KKM *e* pP 09 17 23.6 +0.6
KKM LR LR
comp=Z,4μm,20.0s,MS5.4
KKM Kota Kinabalu 49.47 228 P **P 09 17 11.4 +0.9**
comp=Z,2μmcomp=Z,104nm,1.4s,mb5.7
KKTK Khon Kaen 49.53 250⇑P **P 09 17 11.6 +0.6**
comp=Z,2μm,0.8s,mb7.1
IMP Imphal 49.98 266 *e*x x 09 17 03.0
IMP *i* x x 09 17 23.0
TSM Tawau 50.10 225 P **P 09 17 15.6 +0.3**
LBMI Labuha 50.28 211 P **P 09 17 24.2 +7.5**
CHG Chiang Mai 50.42 256⇑P **P 09 17 18.1 +0.4**
comp=Z,120nm,0.9s,mb5.9
CHTO Chiang Mai 50.42 256 *e*P **P 09 17 18.2 +0.5**
CHTO pmax pmax
comp=Z,144nm,1.1s,mb5.9
CHTO MLR MLR
comp=Z,5μm,19.0s,MS5.6
CHTO Chiang Mai 50.42 256 *e*P **P 09 17 18.1 +0.5**
comp=Z,144nm,1.1s,mb5.9
CHTO LR LR
comp=Z,5μm,19.0s,MS5.6
CHTO Chiang Mai 50.42 256 P **P 09 17 17.8 +0.1**
comp=Z,3μmcomp=Z,152nm,1.5s,mb5.8
CHTO Chiang Mai 50.42 256 P **P 09 17 18.4 +0.7**
SNR=39
POHA Pohakuloa 50.59 102 PFAKE 09 17 30.0 +11
POHA LR LR
comp=Z,4μm,19.0s,MS5.5
CM31 Chiang Mai Arr 50.66 256 *e*P **P 09 17 20.1 +0.6**
comp=Z,55nm,0.9s,mb5.5
CM31 LR LR
comp=Z,4μm,19.0s,MS5.4
CMAR Chiang Mai Arr 50.66 256 P **P 09 17 20.2 +0.7**
comp=Z,26nm,0.8s,mb5.2,baz=33,slow=8.1,SNR=97
CMAR PcP PcP 09 18 37.4 +0.9
comp=Z,9.7nm,0.8s,baz=19,slow=2.0,SNR=5.2
CMAR *p*PcP 09 18 51.8
comp=Z,25nm,0.8s,baz=9.0,slow=2.8,SNR=9.3
BVAR Borovoye Array 50.71 310 P **P 09 17 17.3 -2.2**
comp=Z,12nm,0.5s,mb5.1,baz=56,slow=7.9,SNR=63
BVAR PcP PcP 09 18 36.5 +0.4
comp=Z,9.9nm,0.4s,baz=64,slow=3.4,SNR=6.6
BVAR LR LR 09 39 51.6
comp=Z,82nm,18.9s,baz=58,slow=37
BVAR P4KPbc 09 54 50.2
comp=Z,0.4nm,0.4s,baz=85,slow=3.1,SNR=5.8
BVAR Borovoye Array 50.71 310 P **P 09 17 17.3 -2.2**
BVAR PcP PcP 09 18 36.5 +0.4
BVAR LR LR 09 39 51.6
BRVK Borovoye 50.75 310 P **P 09 17 17.4 -2.4**
comp=Z,301nm,0.8s,mb6.3,SNR=13
BRVK Borovoye 50.75 310 *c i*P **P 09 17 17.6 -2.2**
BRVK pmax pmax
comp=Z,75nm,1.3s,mb5.5
BRVK MLR MLR
comp=Z,10μm,13.0s,MS6.0
BRVK Borovoye 50.75 310 *e*P **P 09 17 18.1 -1.7**
comp=Z,56nm,1.0s,mb5.5
BRVK LR LR
comp=Z,13μm,19.0s,MS6.0
BRVK Borovoye 50.75 310 P **P 09 17 17.9 -1.9**
SNR=22
SHL Shillong 50.93 268⇓ *i*P **P 09 17 22.7 +1.2**
SHL *e*S **S 09 24 37.0 +2.0**
ALE Alert 51.33 5 P **P 09 17 23.0 -0.8**
comp=Z,717nm,1.2s,mb6.5,SNR=65
AAA Alma-Ata 51.36 296 *e*P **P 09 17 25.0 +0.5**
AAA pmax pmax
comp=Z,2μm,3.5s
AAA MLR MLR
comp=Z,12μm,17.0s,MS6.0
BDT Bhumibol Dam 51.46 255⇓P **P 09 17 27.0 +1.4**
comp=Z,18nm,0.9s,mb5.0
NST Nakhon Sawan 51.81 252 P **P 09 17 28.2 +0.1**
comp=Z,75nm,1.3s,mb5.5
GTK Gangtok 52.15 272 *e*PKP **P 09 17 32.0 +1.4**
GTK *e*x x 09 17 56.0
ULHL Ulahol 52.32 295 P **P 09 17 33.1 +1.5**
SNR=39
TKM2 Tokmak 2 52.39 296 P **P 09 17 32.8 +0.6**
SNR=222
TKM2 Tokmak 2 52.39 296 *e*P **P 09 17 32.8 +0.6**
TKM2 pmax pmax
comp=Z,486nm,1.3s,mb6.3
TKM2 MLR MLR
comp=Z,12μm,19.0s,MS6.0
TKM2 Tokmak 2 52.39 296 *e*P **P 09 17 32.8 +0.6**
comp=Z,486nm,1.3s,mb6.3
TKM2 LR LR
comp=Z,12μm,19.0s,MS6.0
RES Resolute Bay 52.66 18 LR LR 09 43 22.5
comp=Z,4μm,19.7s,MS5.4,baz=310,slow=40
RES Resolute Bay 52.66 18 *e*P **P 09 17 33.2 -0.5**
RES pmax pmax
comp=Z,60nm,0.9s,mb5.5
RES Resolute Bay 52.66 18 *e*P **P 09 17 33.2 -0.5**
comp=Z,60nm,0.9s,mb5.5
TAPN Taplejung 52.78 273 *e*P **P 09 17 35.9 +0.6**
comp=Z,1μm,1.1s,mb6.8
NLAI Namlea 52.84 211 P sP 09 17 52.1 -1.4
comp=Z,91nm,1.5s,comp=Z,3μm
AAI Ambon 52.87 209 P pP 09 17 50.7 +2.2
comp=Z,251nm,1.8s,comp=Z,6μm
CHMS Chumysh 52.88 297 P **P 09 17 35.5 -0.3**
SNR=68
APSI Ampana 52.89 218 P pP 09 17 48.8 +0.1
comp=Z,6μm,0.9s
USP Ospenovka 52.91 297 P **P 09 17 35.7 -0.3**
SNR=302
YKA Yellowknife Ar 52.93 35 P **P 09 17 36.0 +0.2**
comp=Z,14nm,0.7s,mb5.0,baz=299,slow=7.4,SNR=62
YKA pP pP 09 17 46.0 -2.4
comp=Z,22nm,0.8s,baz=301,slow=7.1,SNR=15
YKA *p*PcP 09 18 59.8
comp=Z,21nm,1.0s,baz=303,slow=3.8,SNR=5.7

YKA PKPPKP 09 48 04.4
comp=Z,0.9nm,0.9s,baz=114,slow=2.3,SNR=4.1
YKA Yellowknife Ar 52.93 35 P **P 09 17 36.0 +0.1**
YKA *PP pP 09 17 46.0 -2.4
YKA pmax pmax
comp=Z,14nm,0.7s
YKA Yellowknife Ar 52.93 35 P **P 09 17 36.0 +0.2**
YKA pP pP 09 17 46.0 -2.4
YKA pPcP 09 18 59.8
YKA P'P' 09 48 04.4
KBK Karagaybulak 52.93 296 P **P 09 17 37.0 +0.8**
SNR=66
KZA Kyzart 53.04 295 P **P 09 17 38.1 +1.1**
SNR=278
AAK Ala-Archa 53.23 296 P **P 09 17 38.8 +0.4**
comp=Z,1μm,0.9s,mb6.9,SNR=60
AAK Ala-Archa 53.23 296 P **P 09 17 38.8 +0.4**
SNR=76
AAK Ala-Archa 53.23 296 LR LR 09 41 39.8
comp=Z,10μm,18.9s,MS5.9,baz=42,slow=38
TLE Tual 53.30 203 P sP 09 17 55.5 -1.4
comp=Z,287nm,1.8s
ODAN Odare 53.31 273 *e*P **P 09 17 39.3 +0.1**
comp=Z,828nm,1.1s,mb6.6
BTM Bintulu 53.52 230 P **P 09 17 41.1 +0.3**
JIRN Jiri 53.67 274 *e*P **P 09 17 42.5 +0.7**
comp=Z,596nm,0.6s,mb6.7
EKS2 Erkin-Say 53.67 297 P **P 09 17 42.1 +0.5**
SNR=218
EKS2 Erkin-Say 53.67 297 *e*P **P 09 17 41.9 +0.3**
comp=Z,276nm,1.0s,mb6.1
EKS2 LR LR
comp=Z,10μm,22.0s,MS5.8
PCI Palu 53.69 220 P **P 09 17 42.2 +0.2**
PCI Palu 53.69 220 P **P 09 17 40.9 -1.1**
comp=Z,3μmcomp=Z,228nm,1.2s,mb6.0
KBS Kingsbay 53.73 351⇑*i*P **P 09 17 40.6 -0.9**
KBS *e*S **S 09 25 14.9 +3.0**
KBS AMS AMS 09 42 12.3
comp=Z,3μm,17.1s,MS5.4
KBS Kingsbay 53.73 351*c i*P **P 09 17 41.0 -0.5**
KBS pmax pmax
comp=Z,183nm,1.2s,mb5.9
KBS Kingsbay 53.73 351 *e*P **P 09 17 41.3 -0.2**
comp=Z,223nm,1.2s,mb6.0
KBS LR LR
comp=Z,3μm,19.0s,MS5.4
GUN Gumba 53.73 275 *e*P **P 09 17 42.6 +0.3**
comp=Z,2μm,1.1s,mb6.9
RAMN Ramite 53.81 273 *e*P **P 09 17 43.1 +0.3**
comp=Z,3μm,1.2s,mb7.1
KSH Kashi 53.92 292 P **P 09 17 47.5 +4.0**
KSH pP pP 09 17 57.2 +1.2
KSH sP sP 09 18 01.4 +0.2
KSH PcP PcP 09 18 51.5 +3.1
KSH PP PP 09 19 49.8 +5.1
KSH ScP ScP 09 22 45.3 +2.7
KSH PcS PcS 09 22 49.0 +1.3
KSH S **S 09 25 19.3 +3.8**
KSH sS sS 09 25 35.8 -0.7
KSH ScS ScS 09 27 30.3 +1.4
KSH SS SS 09 28 59.4 +2.8
KSH pmax pmax
comp=Z,530nm,1.2s,mb6.3
KSH LR LR
comp=N,10μm,17.6s,MS6.1
KSH LR LR
comp=E,7μm,14.4s,MS6.1
KSH LR LR
comp=Z,14μm,18.5s,MS6.0
SVE Sverdlovsk 53.95 317⇓*e*P **P 09 17 41.7 -1.7**
SVE *e*S **S 09 25 08.7 -6.8**
SVE *e* 09 27 30.3
SVE *e*SS SS 09 28 53.8 -2.7
SVE pmax pmax
comp=Z,127nm,0.9s,mb5.8
SVE MLR MLR
comp=Z,4μm,16.0s,MS5.6
KKN Kakani 54.23 275 *e*P **P 09 17 46.2 +0.3**
comp=Z,1μm,1.1s,mb6.8
PKI Pulchoki 54.27 275 *e*P **P 09 17 46.3 +0.1**
comp=Z,2μm,1.4s,mb6.8
PKI Pulchoki 54.27 275 *e*P **P 09 17 46.9 +0.7**
PKIN Phulchoki 54.27 275 *e*P **P 09 17 46.9 +0.7**
NNT Nongplab 54.30 250 P **P 09 17 47.9 +1.4**
SOKR Solikamsk 54.37 321*c i*P **P 09 17 44.2 -2.2**
SOKR S **S 09 25 29.3 +8.3**
SOKR *e* 09 27 29.6
SOKR pmax pmax
comp=Z,80nm,1.1s,mb5.6
DMN Daman 54.46 275 *e*P **P 09 17 48.1 +0.5**
comp=Z,2μm,1.3s,mb6.9
SMKI Samarinda 54.52 223 P **P 09 17 50.4 +2.3**
comp=Z,213nm,1.6s,mb5.9
GKN Gorkha 54.55 276 *e*P **P 09 17 48.4 +0.2**
comp=Z,2μm,1.2s,mb7.1
SBUM Sibu 54.62 230 P **P 09 17 49.4 +0.6**
comp=Z,2μmcomp=Z,47nm,1.4s,mb5.3
HSP Hornsund 54.84 349 *e*P **P 09 17 47.1 -2.5**
HNR Honiara 55.05 169 PFAKE 09 18 00.0 +8.2
HNR LR LR
comp=Z,4μm,22.0s,MS5.4
ARU Arti 55.14 317 P **P 09 17 49.8 -2.3**
comp=Z,866nm,0.6s,mb7.0,SNR=31
ARU Arti 55.14 317*c i*P **P 09 17 49.7 -2.4**
ARU *e* 09 18 51.1
ARU *e* 09 19 50.1
ARU PPP 09 21 05.4
ARU S **S 09 25 29.6 -1.9**
ARU 09 27 35.3
ARU SS SS 09 29 20.5 +5.3
ARU pmax pmax
comp=Z,87nm,1.2s,mb5.7
ARU MLR MLR
comp=Z,6μm,16.0s,MS5.8
ARU Arti 55.14 317 *e*P **P 09 17 49.5 -2.6**
comp=Z,126nm,0.8s,mb6.0
ARU LR LR
comp=Z,7μm,20.0s,MS5.7
KDI Kendari 55.22 215 P **P 09 17 53.8 +0.7**
comp=Z,4μmcomp=Z,225nm,1.6s,mb5.9
CAL Calcutta 55.36 268 *e*PKP **P 09 17 55.6 +1.5**
CAL *ex* x 09 25 57.6
KOLN Koldanda 55.42 276 *e*P **P 09 17 55.0 +0.5**
KK31 Karatay Array 55.48 299 *i* P **P 09 17 54.1 -0.6**
TTSI Tana Toraja 55.60 219 P pP 09 18 07.4 -1.1
comp=Z,36nm,1.0s
NLWA Neilton Lookou 55.85 55⇓P **P 09 17 58.1 +0.8**
baz=56
NLWA Neilton Lookou 55.85 55 *e*P **P 09 17 59.3 +2.0**
comp=Z,45nm,0.9s,mb5.5
NLWA LR LR
comp=Z,3μm,22.0s,MS5.3
VDB Vedder Mountai 56.00 52 P **P 09 17 59.2 +0.9**
A05A Maple Falls 56.02 52⇑P **P 09 17 58.3 -0.2**
baz=56
BJO Bjornoya 56.26 346 AMS AMS 09 46 56.5
comp=Z,4μm,15.5s,MS5.7
CMW Cultus Mountai 56.31 53 P **P 09 18 02.4 +1.8**
GNW Green Mountain 56.36 54 *e*P **P 09 18 02.6 +1.7**
comp=Z,13nm,1.2s,mb4.8
GNW *e* pP 09 18 14.1 +0.5
KSM Kuching 56.48 232 P **P 09 18 03.0 +0.9**
KSM Kuching 56.48 232 *e*P **P 09 18 02.5 +0.4**
comp=Z,187nm,1.1s,mb6.0
KSM *e* pP 09 18 15.7 +0.9
KSM LR LR
comp=Z,2μm,20.0s,MS5.1
KSM Kuching 56.48 232 P **P 09 18 03.2 +1.0**
comp=Z,2μmcomp=Z,178nm,1.1s,mb6.0
JCW Jim Creek 56.54 53 *e*P **P 09 18 02.6 +0.5**
comp=Z,56nm,1.0s,mb5.5
JOSI Joshimath 56.56 281 *e*PKP **P 09 18 04.2 +1.5**
B06A Marblemount 56.61 53⇑P **P 09 18 03.4 +0.7**
baz=56
RPW Rockport 56.63 53 P **P 09 18 03.7 +0.9**
PTH Pithoragarh 56.71 280 *e*PKP **P 09 18 04.1 +0.4**
F03A Seaside 56.81 56⇓P **P 09 18 05.0 +0.8**
baz=57
KLP Kalpa 56.89 283 *e*PKP **P 09 18 06.3 +1.4**
STKI Sintang 57.01 230 P **P 09 18 07.0 +1.1**
comp=Z,161nm,1.3s,mb5.9
D05A Enumclaw 57.04 54⇓P **P 09 18 07.1 +1.3**
baz=57
KAPI Kappang 57.38 218 PFAKE 09 18 20.0 +11
KAPI LR LR
comp=Z,2μm,21.0s,MS5.2
RCM Mount Rainier- 57.38 54 P **P 09 18 10.7 +2.5**
LON Longmire 57.39 55 *e*P **P 09 18 09.2 +1.0**
LON pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
LON Longmire 57.39 55 *e*P **P 09 18 09.2 +1.0**
comp=Z,7.6nm,0.8s,mb4.8
F04A Amboy 57.48 56⇓P **P 09 18 09.9 +1.0**
baz=57
KBKI Kotabaru 57.51 223 P **P 09 18 13.4 +4.0**
comp=Z,3μmcomp=Z,148nm,1.4s,mb5.8
COR Corvallis 57.70 57 *e*P **P 09 18 12.4 +1.9**
COR pmax pmax
comp=Z,59nm,0.9s,mb5.6
COR MLR MLR
comp=Z,3μm,22.0s,MS5.3
COR Corvallis 57.70 57 *e*P **P 09 18 12.4 +1.9**
comp=Z,59nm,0.9s,mb5.6
COR LR LR
comp=Z,3μm,22.0s,MS5.3
ETW Entiat 57.76 53 P **P 09 18 12.4 +1.6**
SDNR Sundarnagar 57.79 284 *e*PKP **P 09 18 11.5 +0.2**
SDNR *ex* x 09 26 07.0
G04A Mulino 57.85 56⇑P **P 09 18 12.1 +0.6**
baz=58
DLH Dalhousie 57.85 285 *e*PKP **P 09 18 12.0 +0.3**
DLH *ex* x 09 18 20.0
SMLA Simla 57.87 283 *i* P **P 09 18 12.3 +0.4**
B08A Colville Reser 57.90 52⇑P **P 09 18 11.8 -0.1**
baz=58,SNR=13
DAG Danmarks Havn 58.04 357⇓*i*P **P 09 18 12.0 -0.4**
DAG pmax pmax
comp=Z,400nm,1.4s,mb6.3
DAG Danmarks Havn 58.04 357⇓*i*P **P 09 18 12.0 -0.4**
comp=Z,402nm,1.4s,mb6.3
DAG Danmarks Havn 58.04 357⇓*i*P **P 09 18 12.0 -0.4**
comp=Z,402nm,1.4s,mb6.3
THN Thein Dam 58.09 285 *e*PKP **P 09 18 12.3 -1.1**
THN *ex* x 09 26 20.0
APA Apatity 58.12 336⇓*e*P **P 09 18 13.3 +0.2**
APA *i* 09 19 04.0
APA *i* 09 20 24.0
APA *i* PPP 09 21 48.0
APA *e*S **S 09 26 03.0 -7.6**
APA pmax pmax
comp=Z,95nm,1.3s,mb5.7
APA MLR MLR
comp=Z,4μm,20.0s,MS5.5
VLL Laurance Lake 58.17 56 P **P 09 18 15.0 +1.2**
ALBI Allahabad 58.20 275 *e*PKP **P 09 18 12.5 -1.7**
BHK Bhakra 58.22 284 *e*PKP **P 09 18 11.2 -3.1**
KEV Kevo 58.25 340 *e*P **P 09 18 12.6 -1.3**
KEV pmax pmax
comp=Z,16nm,0.5s,mb5.3
KEV MLR MLR
comp=Z,6μm,19.0s,MS5.7
KEV Kevo 58.25 340 *e*P **P 09 18 12.6 -1.3**
comp=Z,3.9nm,0.5s,mb4.7
KEV LR LR
comp=Z,6μm,19.0s,MS5.7
HOOD Mount Hood Mea 58.27 56 *e*P **P 09 18 15.7 +1.3**
comp=Z,319nm,0.9s,mb6.3
AB31 Akbulak array 58.29 310 *i* P **P 09 18 13.8 -0.7**
AB31 pmax pmax
comp=Z,50nm,0.3s,mb6.0
ABKAR Akbulak array 58.29 310 *e*P **P 09 18 13.6 -0.9**
comp=Z,72nm,0.4s,mb6.1
H04A Detroit Lake 58.31 57⇓P **P 09 18 14.5 -0.3**
baz=58,SNR=15
EDM Edmonton 58.34 45 *e*P **P 09 18 14.6 -0.2**
AKTO Aktyubinsk 58.66 312 LR LR 09 45 47.3
comp=Z,17μm,19.0s,MS6.2,baz=85,slow=38
ARCES ARCESS Array B 58.77 340 P **P 09 18 16.4 -1.1**
comp=Z,7.2nm,0.4s,mb5.1,baz=28,slow=9.3,SNR=67
ARCES PcP PcP 09 19 07.0 +0.2
comp=Z,18nm,0.8s,baz=64,slow=4.1,SNR=6.0
ARCES LR LR 09 48 48.6
comp=Z,4μm,18.8s,MS5.6,baz=212,slow=41
ARCES ARCESS Array B 58.77 340 P **P 09 18 16.5 -1.0**
ARCES 09 19 07.0
ARCES pmax pmax
comp=Z,7.0nm,0.4s
ARCES MLR MLR
comp=Z,4μm,18.8s
ARE0 ARCESS Array S 58.77 340 *e*P **P 09 18 17.0 -0.6**
ARE0 *e*PcP PcP 09 19 06.8 0.0
OD2 Odessa Site #2 58.79 53 P **P 09 18 19.1 +1.1**
CROR Criterion Ridg 58.85 56 P **P 09 18 19.5 +1.1**
RSW Rattlesnake Hi 58.85 54 *e*P **P 09 18 20.3 +1.8**
comp=Z,106nm,1.3s,mb5.7
D08A Wollman Farm, 58.86 53⇑P **P 09 18 18.4 -0.2**
baz=59
HAWA Hanford 58.89 54 *e*P **P 09 18 19.9 +1.1**
comp=Z,84nm,1.4s,mb5.6
HAWA *e* pP 09 18 32.2 +0.8
HAWA LR LR
comp=Z,2μm,20.0s,MS5.1
G06A Carlson Farm, 58.91 56⇑P **P 09 18 18.6 -0.3**
baz=59,SNR=7.7
F07A Phinny Hill Vi 58.95 55⇓P **P 09 18 19.0 -0.1**
baz=59
H2OWA Water 58.95 54 P **P 09 18 20.8 +1.6**
HUMO Hull Mountain 59.02 59 *e*P **P 09 18 21.6 +1.8**
comp=Z,53nm,1.6s,mb5.3
HUMO *e* pP 09 18 36.6 +4.2
HUMO LR LR
comp=Z,2μm,22.0s,MS5.3
E08A Dider Farm, El 59.10 54⇓P **P 09 18 20.4 +0.2**
baz=59
NEW Newport 59.18 51 *e*P **P 09 18 20.8 +0.1**
NEW pmax pmax
comp=Z,61nm,1.3s
NEW MLR MLR
comp=Z,2μm,19.0s
NEW Newport 59.18 51 *e*P **P 09 18 20.8 +0.1**
comp=Z,62nm,1.3s,mb5.5
NEW LR LR
comp=Z,2μm,19.0s,MS5.2
KULM Kulim 59.18 243 *e*P **P 09 18 21.9 +0.7**
comp=Z,212nm,1.2s,mb6.0
KULM *e* pP 09 18 34.5 +0.7
KULM LR LR
comp=Z,1μm,20.0s,MS5.1
FUNA Funafuti 59.23 147 PFAKE 09 18 30.0 +8.6
FUNA LR LR
comp=Z,8μm,19.0s,MS5.9
BISR Bishrakh 59.23 281 *e*PKP **P 09 18 21.9 +0.5**
NDI New Delhi 59.32 281 *e*PKP **P 09 18 21.0 -1.0**
NDI *ex* x 09 26 44.0
COEN Coen 59.40 189 *e*P **P 09 18 22.7 +0.2**
comp=Z,283nm,0.9s,mb6.3
COEN *e* pP 09 18 37.1 +1.8
AYAN Aya Nagar 59.50 281 *e*PKP **P 09 18 23.7 +0.4**
IPM Ipoh 59.57 242 P **P 09 18 23.6 -0.2**
comp=Z,2μmcomp=Z,97nm,2.1s,mb5.5
E09A Wood Farm, Sta 59.61 53⇑P **P 09 18 23.0 -0.7**
baz=59
MMRI Maumere 59.63 214 P pP 09 18 37.2 +0.3
comp=Z,192nm,2.1s,comp=Z,5μm
RTK Rohtak 59.66 282 *e*PKP **P 09 18 24.8 +0.5**
YBH Yreka Blue Hor 59.67 60 *e*P **P 09 18 25.2 +0.9**
YBH *e* pP 09 18 36.6 -0.4
YBH pmax pmax
comp=Z,27nm,1.1s
YBH MLR MLR
comp=Z,2μm,22.0s
YBH Yreka Blue Hor 59.67 60 *e*P **P 09 18 25.2 +1.0**
comp=Z,27nm,1.1s,mb5.2
YBH *e* pP 09 18 36.6 -0.4
YBH LR LR
comp=Z,2μm,22.0s,MS5.2
SONA Sohna 59.68 281 *e*PKP **P 09 18 25.0 +0.5**
AGRA Agra 59.71 279 *e*PKP **P 09 18 25.1 +0.4**
G08A Pilot Rock 59.85 55⇑P **P 09 18 24.8 -0.6**
baz=60,SNR=11
C11A Tepee Creek (N 59.90 51⇑P **P 09 18 25.5 -0.2**
baz=60
LNOR Lincton Mounta 59.90 54 *e*P **P 09 18 27.2 +1.5**
LNOR pmax pmax
comp=Z,69nm,1.5s,mb5.5
LNOR Lincton Mounta 59.90 54 *e*P **P 09 18 27.2 +1.4**
comp=Z,70nm,1.5s,mb5.5
MYKOM Kota Tinggi 59.94 238 P **P 09 18 26.9 +0.5**
comp=Z,2μmcomp=Z,172nm,1.4s,mb5.9
KAKA Kakadu 60.15 201 *e*P **P 09 18 27.9 +0.2**
comp=Z,170nm,0.9s,mb6.1
KAKA Kakadu 60.15 201 *e*P **P 09 18 27.9 +0.3**
comp=Z,675nm,1.0s,mb6.6
KAKA *e* pP 09 18 42.3 +1.8
TRO Tromso 60.16 343⇑*i*P **P 09 18 25.3 -1.9**
TRO AMS AMS 09 48 34.5
comp=Z,3μm,19.4s,MS5.4
K05A Summer Lake 60.20 58⇓P **P 09 18 28.1 +0.3**
baz=60,SNR=11
A13A Flathead Natio 60.26 49⇑P **P 09 18 28.0 -0.1**
baz=60
F10A Beach Ranch, E 60.44 53⇓P **P 09 18 29.3 -0.1**
baz=60
WALA Waterton Lakes 60.45 49 *e*P **P 09 18 30.2 +0.8**
comp=Z,3.7nm,1.4s
WDC Whiskeytown Da 60.45 61 *e*P **P 09 18 30.9 +1.3**
WDC pmax pmax
comp=Z,41nm,1.1s,mb5.4
WDC MLR MLR
comp=Z,1μm,22.0s,MS5.1
WDC Whiskeytown Da 60.45 61 *e*P **P 09 18 30.9 +1.4**
comp=Z,41nm,1.1s,mb5.4
WDC LR LR
comp=Z,1μm,22.0s,MS5.1
H08A Prairie City 60.46 55⇓P **P 09 18 29.1 -0.5**
baz=60,SNR=13
G09A Cove 60.53 54⇑P **P 09 18 29.3 -0.7**
baz=60,SNR=13
B13A Whitefish 60.56 50⇑P **P 09 18 29.7 -0.5**
baz=60,SNR=24
KHET Khetri 60.67 281 *e*PKP **P 09 18 31.6 +0.4**
KHET AMb AMb 09 18 33.2
comp=Z,173nm,0.9s,mb6.2
BSMT Bassoo Peak 60.69 50 *e*P **P 09 18 31.9 +0.8**
comp=Z,66nm,1.4s,mb5.6
BSMT *e* pP 09 18 45.3 +1.4
A14A Double T Ranch 60.76 49⇑P **P 09 18 30.7 -0.9**
baz=60,SNR=14
D12A Red Ives Fores 60.85 51⇑P **P 09 18 32.1 -0.2**
baz=61
G10A Bishop Farm, J 60.90 54⇑P **P 09 18 32.3 -0.2**
baz=61,SNR=9.7
C13A Hot Springs 60.91 50⇑P **P 09 18 32.5 -0.1**
baz=61,SNR=7.7
H09A Durkee 60.96 55⇓P **P 09 18 33.0 0.0**
baz=61
JTMT Jette 61.03 50 *e*P **P 09 18 35.3 +1.9**
comp=Z,26nm,1.1s,mb5.3
LBCM Butte Creek Ri 61.03 60 P **P 09 18 34.3 +0.8**
MOD Modoc 61.04 59 *e*P **P 09 18 34.8 +1.2**
comp=Z,30nm,1.2s,mb5.3
MOD LR LR
comp=Z,1μm,22.0s,MS5.0
BMO Blue Mountains 61.05 54 *e*P **P 09 18 34.7 +1.1**
comp=Z,56nm,1.5s,mb5.5
HOPS Hopland 61.05 63 PFAKE 09 18 40.0 +6.3
HOPS LR LR
comp=Z,2μm,20.0s,MS5.2
F11A Grangeville 61.10 53⇑P **P 09 18 33.5 -0.4**
baz=61,SNR=15
YBMT Yellow Bay 61.10 50 *e*P **P 09 18 35.2 +1.3**
comp=Z,53nm,1.3s,mb5.5
E12A Beaver Dam Sad 61.11 52⇑P **P 09 18 34.0 0.0**
baz=61
A15A Johnson Ranch, 61.12 48⇓P **P 09 18 33.8 -0.2**
baz=61,SNR=16
B14A Marquette Ranc 61.20 49⇑P **P 09 18 33.8 -0.8**
baz=61
J08A Circle Bar Ran 61.26 56⇑P **P 09 18 34.5 -0.5**
baz=61,SNR=11
KBL Kabul 61.30 291 *e*P **P 09 18 34.8 -0.7**
KBL pmax pmax
comp=Z,826nm,1.0s,mb6.8
KBL Kabul 61.30 291 *e*P **P 09 18 34.8 -0.6**
comp=Z,826nm,1.0s,mb6.8
C14A Swan Lake 61.30 50⇓P **P 09 18 34.7 -0.6**
baz=61
D13A Huson 61.32 51⇑P **P 09 18 35.7 +0.3**
baz=61,SNR=9.2
G11A Walters Elk Ra 61.32 53⇓P **P 09 18 35.0 -0.4**
baz=61,SNR=27
SWMT Swartz Lake 61.32 50 *e*P **P 09 18 36.1 +0.7**
comp=Z,89nm,1.4s,mb5.7
I09A Lost Marbles R 61.33 55⇑P **P 09 18 35.1 -0.4**
baz=61
TPI Tanjungpandan 61.44 231 P **P 09 18 37.6 +1.0**
comp=Z,2μmcomp=Z,146nm,1.2s,mb6.0
H10A Noah's Angus R 61.53 54⇑P **P 09 18 36.3 -0.5**
baz=61,SNR=18
B15A Bradely Ranch, 61.61 49⇑P **P 09 18 36.9 -0.5**
baz=61,SNR=22
F12A Elk City 61.68 53⇓P **P 09 18 37.5 -0.3**
baz=62,SNR=14
MCCM Marconi Confer 61.68 63 PFAKE 09 18 50.0 +12
MCCM LR LR
comp=Z,2μm,21.0s,MS5.1
WVOR Wild Horse Val 61.72 57 *e*P **P 09 18 39.0 +0.9**
WVOR pmax pmax
comp=Z,56nm,1.1s,mb5.6
WVOR MLR MLR
comp=Z,2μm,21.0s,MS5.2
WVOR Wild Horse Val 61.72 57 *e*P **P 09 18 39.0 +0.9**
comp=Z,56nm,1.1s,mb5.6
WVOR LR LR
comp=Z,2μm,21.0s,MS5.2
SLMT Seeley Lake 61.76 50 *e*P **P 09 18 38.6 +0.3**
comp=Z,111nm,1.2s,mb5.9
MSO Missoula 61.76 51 *e*P **P 09 18 38.2 -0.2**
comp=Z,64nm,1.3s,mb5.6
MSO LR LR
comp=Z,802nm,20.0s,MS4.9
I10A Payette 61.80 55⇑P **P 09 18 38.4 -0.3**
baz=62
PPBI Pangkal Pinang 61.80 233 P **P 09 18 40.9 +1.9**
comp=Z,4μmcomp=Z,208nm,1.2s,mb6.2
D14A Greenough 61.85 51⇑P **P 09 18 38.5 -0.4**
baz=62,SNR=42
E13A Victor 61.86 51⇓P **P 09 18 38.2 -0.8**
baz=62,SNR=11
H11A Donnelly 61.88 54⇓P **P 09 18 38.7 -0.5**
baz=62,SNR=15
C15A Salmond Ranch, 61.91 49⇓P **P 09 18 39.5 +0.2**
baz=62,SNR=30
B16A M & M Farms, S 62.01 48⇓P **P 09 18 40.0 +0.1**
baz=62
G12A Big Creek, Yel 62.02 53⇓P **P 09 18 39.9 -0.2**
baz=62
JOF Joensuu 62.02 333 *e*P **P 09 18 37.5 -2.3**
JOF pmax pmax
comp=Z,26nm,0.3s,mb5.8
JOF Joensuu 62.02 333 *e*p **P 09 18 37.5 -2.3**
comp=Z,26nm,0.3s,mb5.8
CHMT Chamberlain Mo 62.09 51 *e*P **P 09 18 41.3 +0.7**
comp=Z,23nm,1.2s,mb5.2
SRBI Singaraja 62.14 221 P sP 09 18 55.1 -4.0
comp=Z,310nm,1.5s
F13A Darby 62.18 52⇓P **P 09 18 41.0 -0.1**
baz=62,SNR=12
PSI Prapat 62.18 243 LR LR 09 48 34.1
comp=Z,3μm,18.3s,MS5.4,baz=254,slow=39
KHKI Kahang-Kahang 62.20 221 P pP 09 18 53.7 -0.8
comp=Z,170nm,1.3s
BEKR Beckworth 62.22 60⇑P **P 09 18 41.7 +0.2**
baz=62
J10A Berg Farm, Mel 62.22 55⇑P **P 09 18 42.5 +1.1**
baz=62
SUMG Summit 62.25 3⇑*i*P **P 09 18 42.1 +0.9**
comp=Z,318nm,1.1s,mb6.4
SUMG *i* S **S 09 27 01.5 -1.8**
SUMG LR LR
comp=Z,4μm,18.0s,MS5.7
SUMG Summit 62.25 3⇑*i*P **P 09 18 42.1 +0.9**
comp=Z,318nm,1.1s,mb6.4
SUMG *i* S **S 09 27 01.5 -1.8**
SUMG
comp=Z,4μm,18.0s
E14A Clinton 62.26 51⇓P **P 09 18 42.2 +0.5**
baz=62,SNR=15
XMAS Kiritimati 62.30 118 PFAKE 09 18 50.0 +7.6
XMAS LR LR
comp=Z,5μm,21.0s,MS5.6
STEI Steigen 62.34 343 *e*P **P 09 18 41.2 -0.6**
STEI AMb AMb 09 18 42.3
comp=Z,72nm,1.4s,mb5.6
C16A Fuhringer Ranc 62.36 49 P **P 09 18 43.0 +0.6**
baz=62,SNR=22
I11A Placerville 62.39 55⇑P **P 09 18 42.9 +0.3**
baz=62

D15A **Lincoln** 62.41 50 ⇊P P 09 18 43.2 +0.5
baz=62,SNR=8.0
AJM **Ajmer** 62.47 281 *e*PKP P 09 18 44.2 +0.8
K10A **MacKenzie Ranc** 62.55 56 ⇑P P 09 18 43.6 -0.1
baz=62,SNR=12
B17A **L&G Farms, Che** 62.56 48 ⇊P P 09 18 43.3 -0.4
baz=62,SNR=14
BHPL **Bhopal** 62.59 276 *e*PKP P 09 18 44.8 +0.5
H12A **Diamond D Ranc** 62.63 53 ⇊P P 09 18 43.9 -0.3
baz=62
G13A **Cobalt** 62.65 53 ⇑P P 09 18 44.3 0.0
baz=62,SNR=21
A18A **Metzger Ranch,** 62.67 47 P P 09 18 44.4 0.0
baz=62,SNR=25
F14A **Wisdom** 62.70 52 ⇑P P 09 18 45.0 +0.4
baz=62
E15A **Deer Lodge** 62.72 51 ⇊P P 09 18 44.5 -0.3
baz=62,SNR=12
FFC **Flin Flon** 62.75 39 P P 09 18 45.6 +0.7
comp=Z,499nm,1.1s,mb6.6,SNR=17
FFC **Flin Flon** 62.75 39 *i* P P 09 18 45.5 +0.6
FFC **Flin Flon** 62.75 39 *e*P P 09 18 45.0 +0.2
comp=Z,97nm,1.0s,mb5.9
FFC LR LR 09 27 11.4
comp=Z,2µm,19.0s,MS5.3
MFID **Camas Ranch** 62.77 55 ⇑P P 09 18 45.1 0.0
baz=63
BKNI **Bangkinang** 62.80 240 P P 09 18 47.1 +1.4
comp=Z,4µmcomp=Z,339nm,0.9s,mb6.5
NGP **Nagpur** 62.80 273⇑*i*P P 09 18 44.1 -1.6
NGP *ex* x 09 27 11.4
WCN **Washoe City** 62.93 61 ⇑P P 09 18 46.4 +0.1
baz=63,SNR=26
TPTI 62.94 245 P P 09 18 48.8 +2.2
comp=Z,61nm,1.3s,mb5.6
I12A **Atlanta** 62.94 54 ⇊P P 09 18 45.5 -0.8
baz=63,SNR=22
D16A **Dana Ranch, Ca** 62.94 50 ⇑P P 09 18 45.9 -0.3
baz=63,SNR=22
H13A **Challis** 62.97 53 ⇑P P 09 18 46.1 -0.3
baz=63,SNR=16
HRY **Holter Researc** 62.98 50 *e*P P 09 18 48.2 +1.7
comp=Z,29nm,0.8s,mb5.5
C17A **Wharram Farm,** 62.99 49 ⇑P P 09 18 46.6 +0.1
baz=63,SNR=15
B18A **Beardsley Farm** 63.03 48 ⇊P P 09 18 46.2 -0.6
baz=63,SNR=29
K11A **Parker Ranch,** 63.04 56 ⇊P P 09 18 46.8 -0.2
baz=63,SNR=12
JMIC **Jan Mayen** 63.11 353⇑*i*P P 09 18 46.3 -0.7
JMIC AMb AMB 09 18 48.9
comp=Z,274nm,1.1s,mb6.3
JMIC *e*S S 09 27 18.8 +4.7
JMIC **Jan Mayen** 63.11 353⇑*i*P P 09 18 46.3 -0.7
comp=Z,274nm,1.1s,mb6.3
JMIC *e* 09 27 20.4
JMIC *i* 09 34 58.9
F15A **Butte** 63.16 51 ⇑P P 09 18 47.6 -0.1
baz=63,SNR=17
E16A **East Helena** 63.18 50 ⇊P P 09 18 47.4 -0.4
baz=63,SNR=13
LRM **Limekiln Ridge** 63.20 51 *e*P P 09 18 48.8 +0.9
comp=Z,288nm,1.1s,mb6.3
L10A **Juniper Basin** 63.21 56 ⇑P P 09 18 47.5 -0.6
baz=63
FCC **Fort Churchill** 63.25 32 *e*P P 09 18 44.7 -3.3
comp=Z,1.9nm,0.8s
EGMT **Eagleton** 63.27 48 ⇊P P 09 18 48.1 -0.3
baz=63,SNR=27
EGMT **Eagleton** 63.27 48 *e*P P 09 18 48.4 0.0
comp=Z,88nm,1.1s,mb5.8
EGMT LR LR
comp=Z,2µm,21.0s,MS5.4
J12A **Stokes Ranch,** 63.29 55 ⇊P P 09 18 49.1 +0.5
baz=63
CMB **Columbia Colle** 63.31 62 *e*P P 09 18 49.3 +0.5
CMB pmax pmax
comp=Z,55nm,1.2s,mb5.6
CMB MLR MLR
comp=Z,2µm,19.0s,MS5.2
CMB **Columbia Colle** 63.31 62 *e*P P 09 18 49.3 +0.4
comp=Z,55nm,1.2s,mb5.6
CMB LR LR
comp=Z,2µm,19.0s,MS5.2
D17A **Six Diamond Ra** 63.33 49 ⇑P P 09 18 48.9 +0.2
baz=63,SNR=15
MNSI **Mandalling Nat** 63.33 241 P P 09 18 48.5 -0.7
comp=Z,48nm,1.0s,mb5.6
NGJI **Ngawi** 63.33 225 P P 09 18 55.3 +6.2
comp=Z,224nm,1.7s,mb6.0
DLMT **Dillon** 63.40 52 *e*P P 09 18 49.8 +0.4
comp=Z,86nm,1.3s,mb5.7
SAO **San Andreas Ge** 63.42 64 PFAKE 09 19 00.0 +10
SAO LR LR
comp=Z,1µm,19.0s,MS5.0
H14A **Leadore** 63.43 53 ⇊P P 09 18 49.3 -0.2
baz=63,SNR=8.5
I13A **Wildhorse Cree** 63.44 54 ⇊P P 09 18 48.9 -0.7
baz=63
SJI **Sawahan** 63.49 225 P P 09 18 50.4 +0.2
comp=Z,238nm,1.4s,comp=Z,8µm,mb6.1
SJI P pP 09 19 03.2 +0.1
comp=Z,238nm,1.4s,comp=Z,8µm
HLID **Hailey** 63.49 54 ⇑P P 09 18 50.4 +0.4
baz=63,SNR=11
HLID **Hailey** 63.49 54 *e*P P 09 18 50.9 +0.9
comp=Z,61nm,1.4s,mb5.5
HLID LR LR
comp=Z,2µm,21.0s,MS5.2
M10A **I.L. Ranch, Tu** 63.51 57 ⇑P P 09 18 50.9 +0.8
baz=63,SNR=12
SDSI **Sungai Dareh** 63.56 238 P P 09 18 51.4 +0.7
comp=Z,4µmcomp=Z,246nm,1.5s,mb6.0
SMRI **Semarang** 63.57 226 P P 09 18 51.4 +0.7
comp=Z,6µmcomp=Z,440nm,1.3s,mb6.3
L11A **Cat Creek Ranc** 63.58 56 ⇊P P 09 18 50.1 -0.4
baz=63,SNR=17
G15A **Dillon** 63.58 52 ⇊P P 09 18 50.0 -0.5
baz=63,SNR=18
MCMT **McKenzie Canyo** 63.59 52 *e*P P 09 18 51.3 +0.7
comp=Z,6.4nm,0.9s,mb4.7
E17A **Martinsdale** 63.66 50 ⇊P P 09 18 51.3 +0.3
baz=63,SNR=19
F16A **Kennard Place,** 63.67 51 ⇑P P 09 18 51.2 +0.2
baz=63,SNR=9.6
PWJI **Pagerwojo** 63.72 224 P P 09 18 50.8 -0.9
comp=Z,7µmcomp=Z,567nm,1.4s,mb6.4
J13A **Cove Ranch, Pi** 63.73 54 ⇊P P 09 18 50.6 -1.0
baz=64,SNR=12
BOZ **Bozeman (W)** 63.76 51 ⇑P P 09 18 51.6 -0.1
baz=64,SNR=40
BOZ **Bozeman (W)** 63.76 51 *e*P P 09 18 52.2 +0.6
BOZ pmax pmax
comp=Z,82nm,1.4s,mb5.6
BOZ MLR MLR
comp=Z,2µm,19.0s,MS5.3
BOZ **Bozeman (W)** 63.76 51 *e*P P 09 18 52.2 +0.5
comp=Z,82nm,1.4s,mb5.6
BOZ LR LR
comp=Z,2µm,19.0s,MS5.3
D18A **Linhart Farms,** 63.77 49 ⇊P P 09 18 51.7 0.0
baz=64,SNR=15
BMN **Battle Mountai** 63.78 58 *e*P P 09 18 53.0 +1.1
BMN pmax pmax
comp=Z,38nm,1.0s,mb5.4
BMN MLR MLR
comp=Z,2µm,21.0s,MS5.3
BMN **Battle Mountai** 63.78 58 *e*P P 09 18 53.0 +1.1
comp=Z,38nm,1.0s,mb5.4
BMN LR LR
comp=Z,2µm,21.0s,MS5.3
K12A **Draper Farm, C** 63.78 55 ⇑P P 09 18 51.3 -0.6
baz=64,SNR=8.1
PPI **Padang Panjang** 63.81 240 P P 09 18 52.9 +0.5
comp=Z,2µmcomp=Z,63nm,1.0s,mb5.6
I14A **Mackay** 63.81 53 ⇊P P 09 18 52.0 -0.1
baz=64,SNR=15
H15A **Lima** 63.84 52 ⇊P P 09 18 52.8 +0.6
baz=64
G16A **Moss Hill, Enn** 63.92 51 ⇑P P 09 18 52.7 -0.1
baz=64,SNR=27
MOR8 **Moi Rana** 63.99 342⇑*i*P P 09 18 50.8 -2.0
MOR8 AMb AMB 09 18 52.1
comp=Z,217nm,1.1s,mb6.1
MOR8 **Moi Rana** 63.99 342⇑*i*P P 09 18 50.8 -2.0
comp=Z,217nm,1.1s,mb6.1
KONS **Konsvik** 63.99 343 *e*P P 09 18 52.9 0.0
M11A **Holland Ranch,** 64.01 57 ⇑P P 09 18 53.1 -0.2
baz=64,SNR=15
L12A **House Creek Ra** 64.02 56 ⇑P P 09 18 52.9 -0.6
baz=64,SNR=14
E18A **Harlowton** 64.11 49 ⇑P P 09 18 53.6 -0.4
baz=64,SNR=13
F17A **Fitzpatrick Pl** 64.12 50 ⇑P P 09 18 54.0 0.0
baz=64,SNR=10
PDSI **Padang** 64.13 239 P P 09 18 55.0 +0.5
comp=Z,2µmcomp=Z,149nm,1.2s,mb5.9
J14A **Carey** 64.15 54 ⇊P P 09 18 53.9 -0.4
baz=64,SNR=22
KAF **Kangasniemi** 64.17 335 *e*P P 09 18 51.5 -2.6
KAF pmax pmax
comp=Z,94nm,0.7s,mb5.9
KAF **Kangasniemi** 64.17 335 *e*P P 09 18 51.5 -2.6
comp=Z,94nm,0.7s,mb5.9
KAF **Kangasniemi** 64.17 335 *e*p P 09 18 51.5 -2.6
comp=Z,94nm,0.7s,mb5.9
K13A **Stover Farm, H** 64.25 55 ⇑P P 09 18 54.7 -0.2
baz=64
UGM **Wanagama** 64.27 226 P P 09 18 59.6 +4.3
comp=Z,9µmcomp=Z,662nm,1.4s,mb6.5
I15A **Monteview** 64.31 53 ⇊P P 09 18 55.1 -0.2
baz=64
NVAR **Mina Array Bea** 64.36 61 P P 09 18 56.8 +1.0
comp=Z,4.4nm,0.7s,mb4.6,baz=286,slow=6.5,SNR=41
NVAR PKPPKP 09 47 44.3
comp=Z,1.0nm,1.0s,baz=113,slow=3.4,SNR=4.2
QLMT **Earthquake Lak** 64.38 51 *e*P P 09 18 57.3 +1.6
comp=Z,30nm,1.1s,mb5.2
SCO **Scoresbysund** 64.43 357⇑*i*P P 09 18 55.8 +0.1
SCO pmax pmax
comp=Z,84nm,1.0s,mb5.7
SCO MLR MLR
comp=Z,2µm,18.0s,MS5.4
SCO **Scoresbysund** 64.43 357⇑*i*P P 09 18 55.8 +0.1
comp=Z,84nm,1.0s,mb5.7
SCO LR LR
comp=Z,2µm,18.0s,MS5.4
SCO **Scoresbysund** 64.43 357⇑*i*P P 09 18 55.8 +0.1
comp=Z,84nm,1.0s,mb5.7
SCO
comp=Z,2µm,18.0s
AKL **Akola** 64.53 274⇑*i*P P 09 18 57.3 +0.3
AKL *i* x x 09 27 50.3
M12A **Wells** 64.53 56 ⇑P P 09 18 56.8 0.0
baz=64,SNR=11
H16A **Russell Place,** 64.56 52 ⇊P P 09 18 55.9 -1.0
baz=64,SNR=14
F18A **Big Timber** 64.63 50 ⇑P P 09 18 56.9 -0.5
baz=64,SNR=26
KLSI 64.67 233 P P 09 18 57.9 -0.1
comp=Z,7µmcomp=Z,396nm,1.9s,mb6.1
J15A **Blackfoot** 64.72 53 ⇑P P 09 18 57.9 -0.1
baz=64
GCMT **Greycliff** 64.73 50 *e*P P 09 18 59.2 +1.2
comp=Z,47nm,1.2s,mb5.4
P10A **Eureka** 64.74 59 ⇑P P 09 18 57.2 -0.9
baz=65
YMR **Madison River** 64.74 51 *e*P P 09 18 59.7 +1.7
comp=Z,68nm,1.3s,mb5.5
KLI **Kotabumi** 64.74 233 P P 09 19 04.0 +5.6
comp=Z,171nm,1.1s,mb6.0
FINES **FINESS Array B** 64.76 334 P P 09 18 56.3 -1.7
comp=Z,64nm,0.5s,mb5.9,baz=30,slow=8.1,SNR=453
FINES S S 09 27 31.7 -3.1
comp=Z,6.7nm,0.9s,baz=35,slow=15,SNR=5.8
FINES LR LR 09 49 51.4
comp=Z,5µm,18.9s,MS5.8,baz=265,slow=38
FINES **FINESS Array B** 64.76 334 P P 09 18 56.3 -1.6
FINES S S 09 27 31.7 -3.1
FINES pmax pmax
comp=Z,64nm,0.5s
FINES smax
comp=N,7.0nm,0.9s
FINES MLR MLR
comp=Z,5µm,18.9s
FINES **FINESS Array B** 64.76 334 P P 09 18 56.3 -1.6
FINES S S 09 27 31.7 -3.1
FINES LR LR 09 49 51.4
ELK **Elko** 64.76 57 *e*P P 09 18 59.5 +1.2
ELK pmax pmax
comp=Z,13nm,1.1s
ELK MLR MLR
comp=Z,2µm,22.0s
JASL **Jaisalmer** 64.77 283 *e*PKP P 09 18 59.5 +0.9
MDSI **Maura Dua** 64.81 234 P P 09 18 59.3 +0.4
comp=Z,3µmcomp=Z,116nm,1.7s,mb5.6
N12A **Clover Valley,** 64.81 57 ⇑P P 09 18 59.2 +0.5
baz=65
N12A **Clover Valley,** 64.81 57 *e*P P 09 18 59.9 +1.2
comp=Z,40nm,1.1s,mb5.4
K14A **Jones Ranch, D** 64.83 54 ⇊P P 09 18 59.7 +1.0
baz=65
MOS **Moscow** 64.85 325 *e*P P 09 18 54.3 -4.3
MOS *e* pP 09 19 08.2 -3.3
MOS *e* 09 19 29.9
MOS *e*S S 09 27 31.9 -4.2
MOS *e* 09 28 46.4
MOS pmax pmax
comp=Z,55nm,1.1s,mb5.5
MOS MLR MLR
comp=Z,5µm,16.0s,MS5.8
LEM **Lembang** 64.86 229 P P 09 18 59.1 -0.1
comp=Z,4µmcomp=Z,321nm,1.2s,mb6.2
O11A **Cowboy Ranch,** 64.90 58 ⇑P P 09 18 58.3 -0.9
baz=65
YFT **Old Faithful** 64.95 52 *e*P P 09 19 02.4 +3.0
comp=Z,34nm,0.9s,mb5.4
I16A **Newdale** 64.95 52 ⇊P P 09 18 58.9 -0.6
baz=65,SNR=8.0
KSI **Kapahiang** 65.05 236 P P 09 19 03.6 +3.1
comp=Z,174nm,1.2s,mb6.0
G18A **Lazy EL Ranch,** 65.09 50 ⇊P P 09 19 00.4 +0.1
baz=65
RCTC **Rector, Farmer** 65.10 63 ⇊P P 09 19 00.8 +0.2
baz=65
LKWY **Lake** 65.11 51 *e*P P 09 19 03.6 +3.1
LKWY pmax pmax
comp=Z,39nm,1.2s,mb5.3
LKWY MLR MLR
comp=Z,4µm,19.0s,MS5.6
LKWY **Lake** 65.11 51 *e*P P 09 19 03.6 +3.1
comp=Z,39nm,1.2s,mb5.3
LKWY LR LR
comp=Z,4µm,19.0s,MS5.6
K15A **Arbon** 65.12 54 ⇊P P 09 19 00.5 0.0
baz=65,SNR=8.8
L14A **Malta** 65.12 55 ⇑P P 09 19 00.5 -0.1
baz=65,SNR=7.6
H17A **Grant Village** 65.12 51 ⇑P P 09 19 01.5 +0.9
baz=65,SNR=11
P11A **Circle Ranch,** 65.21 58 ⇊P P 09 19 00.9 -0.3
baz=65
CTA **Charters Tower** 65.21 185 *e*P P 09 19 02.1 +0.8
comp=Z,16nm,1.1s,mb5.0
CTA *e*S S 09 27 42.0 +0.9
CTAO **Charters Tower** 65.21 185 *e*P P 09 19 04.4 +3.1
CTAO pmax pmax
comp=Z,19nm,0.9s,mb5.1
CTAO MLR MLR
comp=Z,2µm,21.0s,MS5.3
CTAO **Charters Tower** 65.21 185 *e*P P 09 19 04.4 +3.1
comp=Z,19nm,0.9s,mb5.1
CTAO LR LR
comp=Z,2µm,21.0s,MS5.3
IMW **Indian Meadow** 65.24 52 *e*P P 09 19 03.8 +2.4
comp=Z,96nm,1.4s,mb5.6
TPH **Tonopah** 65.24 60 PFAKE 09 19 10.0 +8.5
TPH LR LR
comp=Z,1µm,21.0s,MS5.1
J16A **Bone** 65.26 53 ⇊P P 09 19 01.7 +0.2
baz=65,SNR=16
Q10A **Clear Creek Ra** 65.27 59 ⇊P P 09 19 01.8 +0.2
baz=65,SNR=11
SISI **Saibi** 65.29 240 P P 09 19 02.8 +0.8
comp=Z,3µmcomp=Z,209nm,1.0s,mb6.1
DCID1 **Drake Creek** 65.30 52 *e*P P 09 19 03.8 +2.0
comp=Z,131nm,1.3s,mb5.8
N13A **Wendover, West** 65.31 56 ⇑P P 09 19 03.3 +1.4
baz=65
N13A **Wendover, West** 65.31 56 *e*P P 09 19 04.2 +2.4
comp=Z,64nm,1.0s,mb5.6
LWLI **Liwa** 65.31 233 P pP 09 19 14.4 -0.7
O12A **Currie** 65.36 57 ⇑P P 09 19 02.3 +0.1
baz=65,SNR=15
RLMT **Red Lodge** 65.38 50 ⇊P P 09 19 01.8 -0.4
baz=65,SNR=14
RLMT **Red Lodge** 65.38 50 *e*P P 09 19 03.8 +1.5
comp=Z,49nm,1.1s,mb5.5
RLMT LR LR
comp=Z,2µm,21.0s,MS5.4
RRI2 **Red Ridge** 65.38 53 *e*P P 09 19 04.1 +1.8
comp=Z,87nm,1.1s,mb5.7
QUE **Quetta** 65.38 289 *e*P P 09 18 59.0 -3.5
QUE *e*S S 09 27 43.0 -0.4
M14A **Sheep Mountain** 65.39 55 ⇊P P 09 19 01.9 -0.5
baz=65
KASI **Kota Agung** 65.48 233 P pP 09 19 14.9 -1.2
comp=Z,125nm,1.2s
TPAW **Teton Pass** 65.50 52 *e*P P 09 19 04.2 +1.1
comp=Z,133nm,1.2s,mb5.8
HVU **Hansel Valley** 65.55 55 *e*P P 09 19 05.1 +1.7
HVU pmax pmax
comp=Z,51nm,1.4s,mb5.4
HVU **Hansel Valley** 65.55 55 *e*P P 09 19 05.0 +1.6
comp=Z,51nm,1.4s,mb5.4
K16A **Soda Springs** 65.56 53 ⇊P P 09 19 03.4 -0.1
baz=65,SNR=11
LOHW **Long Hollow** 65.61 52 *e*P P 09 19 05.4 +1.6
comp=Z,86nm,1.4s,mb5.6
HYB **Hyderabad** 65.62 270 *e*P P 09 19 04.0 -0.2
HYB *e*S S 09 28 04.0 +17
HYB **Hyderabad** 65.62 270 *i* P P 09 19 04.0 -0.2
comp=Z,125nm,1.0s,mb5.9
HYB *e*S S 09 27 50.0 +3.4
SNOW **Snow King Moun** 65.62 52 *e*P P 09 19 05.5 +1.6
comp=Z,67nm,1.2s,mb5.5
REDW **Red Top Meadow** 65.63 52 *e*P P 09 19 04.8 +0.8
comp=Z,149nm,1.4s,mb5.8
R10A **Warm Springs** 65.67 60 ⇊P P 09 19 04.2 0.0
baz=66,SNR=7.0
J17A **Brown Place, J** 65.71 52 ⇑P P 09 19 03.2 -1.2
baz=66,SNR=18
Q11A **Duckwater** 65.71 59 ⇑P P 09 19 04.1 -0.4
baz=66
OBN **Obninsk** 65.72 325 P P 09 19 02.5 -1.7
comp=Z,495nm,0.5s,mb6.8,SNR=6.4
OBN **Obninsk** 65.72 325*c i*P P 09 19 02.4 -1.8
OBN *e**SP sP 09 19 19.5 -2.7
OBN *e* 09 19 32.0
OBN *e* 09 21 28.6
OBN *e*S S 09 27 45.7 -1.0
OBN *e*SS SS 09 32 00.5 -0.1
OBN pmax pmax
comp=Z,94nm,1.1s,mb5.7
OBN MLR MLR
comp=Z,4µm,15.0s,MS5.8
OBN **Obninsk** 65.72 325 *e*P P 09 19 03.1 -1.1
comp=Z,82nm,0.8s,mb5.8
OBN LR LR
comp=Z,5µm,19.0s,MS5.7
CGJI **Cibinong** 65.72 231 P pP 09 19 15.5 -2.2
comp=Z,132nm,1.3s
S10A **Tonopah Range,** 65.72 60 P P 09 19 05.1 +0.5
baz=66,SNR=19
CWC **Cottonwood Cre** 65.74 62 ⇊P P 09 19 05.2 +0.4
baz=66
P12A **McGill** 65.76 58 ⇊P P 09 19 04.7 -0.1
baz=66
DGMT **Dagmar** 65.83 45 ⇑P P 09 19 04.4 -0.6
baz=66,SNR=11
DGMT **Dagmar** 65.83 45 *e*P P 09 19 05.2 +0.2
comp=Z,166nm,1.3s,mb5.9
DGMT LR LR
comp=Z,3µm,20.0s,MS5.5
AHID **Auburn Hatcher** 65.88 53 *e*P P 09 19 06.8 +1.3
comp=Z,60nm,1.3s,mb5.5
AHID LR LR
comp=Z,2µm,20.0s,MS5.2
O13A **Hicks Ranch, I** 65.89 57 ⇑P P 09 19 04.4 -1.2
baz=66
N14A **Grayback Hills** 65.90 56 ⇊P P 09 19 03.9 -1.8
baz=66
NSS **Namsos** 65.93 342⇑*i*P P 09 19 03.7 -1.8
NSS AMS AMS 09 51 34.4
comp=Z,4µm,20.0s,MS5.6
M15A **Larsen Ranch,** 65.94 55 ⇊P P 09 19 05.2 -0.7
baz=66
LAO **LASA Array** 65.97 47 *e*P P 09 19 06.5 +0.4
comp=Z,87nm,1.0s,mb5.7
LAO LR LR
comp=Z,3µm,22.0s,MS5.4
K17A **Gardner Place,** 65.99 53 ⇑P P 09 19 04.6 -1.6
baz=66
ISA **Isabella** 65.99 63 ⇑P P 09 19 04.4 -2.0
baz=66
ISA **Isabella** 65.99 63 *e*P P 09 19 06.9 +0.6
ISA pmax pmax
comp=Z,23nm,1.2s,mb5.1
ISA **Isabella** 65.99 63 *e*P P 09 19 06.9 +0.6
comp=Z,22nm,1.2s,mb5.1
I18A **Diamond G Ranc** 65.99 52 ⇊P P 09 19 05.1 -1.1
baz=66
R11A **Troy Canyon, C** 66.07 59 ⇊P P 09 19 07.1 +0.3
baz=66,SNR=24
ARVC **Arvin** 66.10 64 ⇊P P 09 19 06.9 -0.2
baz=66
ABKT **Ailbek** 66.14 300 P P 09 19 07.1 -0.2
comp=Z,2µm,1.0s,mb7.2
DAC **Darwin (Calif)** 66.15 62 PFAKE 09 19 20.0 +13
DAC LR LR
comp=Z,1µm,19.0s,MS5.1
L16A **Fish Haven** 66.17 54 ⇑P P 09 19 06.8 -0.6
baz=66
J18A **Kendall Valley** 66.19 52 ⇑P P 09 19 07.2 -0.3
baz=66
P13A **Bates Ranch, G** 66.31 57 ⇑P P 09 19 08.6 +0.3
baz=66,SNR=8.9
MPMC **Manual Prospec** 66.35 62 ⇊P P 09 19 08.0 -0.7
baz=66,SNR=26
HWUT **Hardware Ranch** 66.36 54 *e*P P 09 19 09.7 +1.1
comp=Z,38nm,1.2s,mb5.3
HWUT LR LR
comp=Z,2µm,19.0s,MS5.3
LATR **Latur** 66.36 273 *e*PKP P 09 19 09.8 +0.9
S11A **Rachel** 66.42 60 ⇊P P 09 19 09.1 0.0
baz=66,SNR=19
L17A **Cokeville** 66.43 54 ⇑P P 09 19 08.1 -1.0
baz=66,SNR=11
FURC **Furnace Creek,** 66.48 61 ⇑P P 09 19 08.8 -0.7
baz=66,SNR=9.9
DUG **Dugway** 66.54 56 ⇊P P 09 19 10.3 +0.5
baz=66,SNR=10
DUG **Dugway** 66.54 56 *e*P P 09 19 10.8 +1.0
DUG pmax pmax
comp=Z,59nm,1.3s,mb5.5
DUG MLR MLR
comp=Z,1µm,21.0s,MS5.2
DUG **Dugway** 66.54 56 *e*P P 09 19 10.8 +1.0
comp=Z,59nm,1.3s,mb5.5
DUG LR LR
comp=Z,1µm,21.0s,MS5.2
K18A **Toltan Ranch,** 66.55 53 ⇊P P 09 19 09.1 -0.8
baz=66,SNR=19
BLG **Laguna Peak** 66.60 65 ⇑P P 09 19 09.8 -0.5
baz=66
Q13A **Wheeler Ranch,** 66.62 58 ⇑P P 09 19 10.4 0.0
baz=66,SNR=13
R12A **Pony Springs,** 66.67 59 ⇊P P 09 19 10.4 -0.3
baz=66,SNR=14
WRAB **Tennant Creek** 66.68 197 P P 09 19 10.0 -0.7
comp=Z,1µm,0.8s,mb6.9,SNR=20
WRAB **Tennant Creek** 66.68 197 *e*P P 09 19 10.3 -0.4
WRAB *e* pP 09 19 26.3 +2.7
WRAB pmax pmax
comp=Z,177nm,1.0s,mb6.0
WRAB MLR MLR
comp=Z,2µm,19.0s,MS5.3
WRAB **Tennant Creek** 66.68 197 *e*P P 09 19 10.3 -0.4
comp=Z,107nm,1.0s,mb5.8
WRAB *e* pP 09 19 26.3 +2.7
WRAB LR LR
comp=Z,4µm,19.0s,MS5.6
WRA **Warramunga Arr** 66.69 197 P P 09 19 10.2 -0.6
comp=Z,28nm,0.8s,mb5.4,baz=15,slow=6.5,SNR=66
WRA pP pP 09 19 24.6 +0.9
comp=Z,102nm,0.8s,baz=15,slow=6.6,SNR=17
WRA LR LR 09 45 06.9
comp=Z,1µm,21.1s,MS5.1,baz=15,slow=33
BW06 **Boulder Array** 66.74 52 ⇑P P 09 19 10.8 -0.2
baz=66,SNR=34
BW06 **Boulder Array** 66.74 52 *e*P P 09 19 11.1 +0.1
comp=Z,34nm,0.6s,mb5.6

BW06 LR LR
comp=Z,2µm,22.0s,MS5.2
PDAR Pinedale Array 66.74 52 P **P 09 19 11.2 +0.1**
comp=Z,8.5nm,0.7s,mb4.9,baz=266,slow=1.6,SNR=43
PDAR pP pP 09 19 22.6 -1.3
comp=Z,23nm,0.9s,baz=282,slow=1.2,SNR=19
PDAR PKPPKP 09 47 41.0
comp=Z,1.8nm,1.1s,baz=158,slow=4.3,SNR=5.2
PDAR LR LR 09 50 23.0
comp=Z,1µm,18.4s,MS5.1,baz=103,slow=38
P14A Drum Mountains 66.78 57 ⇑P **P 09 19 11.0 -0.3**
baz=67,SNR=9.0
EDW2 Edwards Air Fo 66.79 63 ⇑P **P 09 19 11.3 -0.2**
baz=67
CTU Camp Tracy 66.84 55 *e*P **P 09 19 13.4 +1.7**
comp=Z,20nm,0.5s,mb5.4
U10A Ash Meadows, A 66.84 61 ⇑P **P 09 19 11.4 -0.4**
baz=67
VSU Vasula 66.86 332⇑*i*P **P 09 19 11.1 -0.4**
SNCC San Nicolas Is 66.86 66 ⇑P **P 09 19 12.0 +0.1**
baz=67
M17A Scullys Gap (B 66.96 54 ⇓P **P 09 19 11.4 -1.0**
baz=67,SNR=8.3
DECC Green Verdugo 66.98 64 ⇓P **P 09 19 12.8 +0.1**
baz=67
S12A Delamar Landin 66.99 59 ⇓P **P 09 19 12.7 0.0**
baz=67,SNR=18
T11A Corn Creek, Al 67.00 60 ⇑P **P 09 19 12.6 -0.2**
baz=67,SNR=25
L18A Fontenelle, Gr 67.02 53 ⇑P **P 09 19 12.0 -0.8**
baz=67,SNR=13
Q14A Sevier Lake (B 67.05 57 ⇑P **P 09 19 12.8 -0.2**
baz=67,SNR=15
JLU Jordanelle 67.07 55 *e*P **P 09 19 14.2 +1.1**
comp=Z,40nm,1.3s,mb5.3
K19A Absolon Red Bu 67.10 52 ⇓P **P 09 19 12.4 -0.9**
baz=67,SNR=13
NLU North Lily Min 67.13 56 *e*P **P 09 19 14.5 +1.0**
comp=Z,34nm,1.1s,mb5.3
NLU *e* pP 09 19 23.9 -2.6
R13A O'Grain Ranch, 67.15 58 ⇓P **P 09 19 13.6 -0.2**
baz=67
MWC Mount Wilson 67.17 64 *e*P **P 09 19 14.9 +1.0**
MWC pmax pmax
comp=Z,33nm,1.1s,mb5.3
MWC Mount Wilson 67.17 64 *e*P **P 09 19 14.9 +1.0**
comp=Z,33nm,1.1s,mb5.3
FITZ Fitzroy Crossi 67.21 206 *e*P **P 09 19 14.3 +0.2**
comp=Z,109nm,1.0s,mb5.8
FITZ Fitzroy Crossi 67.21 206 *e*P **P 09 19 13.9 -0.2**
comp=Z,125nm,1.4s,mb5.8
FITZ *e* pP 09 19 28.2 +1.2
N17A Moffit Pass 67.21 54 ⇑P **P 09 19 13.4 -0.6**
baz=67
SHOC Shoshone 67.21 62 ⇓P **P 09 19 13.3 -0.9**
baz=67
P15A Leamington 67.26 56 ⇓P **P 09 19 13.3 -1.1**
baz=67
BHV Bhavnagar 67.26 278 *e*PKP **P 09 19 14.8 +0.1**
GSC Goldstone 67.27 62 ⇓P **P 09 19 14.4 -0.1**
baz=67
GSC Goldstone 67.27 62 *e*P **P 09 19 15.8 +1.3**
GSC *e* pP 09 19 29.6 +2.2
GSC pmax pmax
comp=Z,46nm,1.3s,mb5.3
GSC Goldstone 67.27 62 *e*P **P 09 19 15.8 +1.3**
comp=Z,46nm,1.3s,mb5.3
GSC *e* pP 09 19 29.6 +2.2
L19A Farson 67.29 53 ⇑P **P 09 19 13.6 -0.9**
baz=67,SNR=6.9
O16A Springville 67.30 55 ⇑P **P 09 19 14.0 -0.7**
baz=67,SNR=12
DAU Daniels Canyon 67.31 55 *e*P **P 09 19 16.3 +1.6**
DAU pmax pmax
comp=Z,36nm,1.2s,mb5.3
DAU Daniels Canyon 67.31 55 *e*P **P 09 19 16.3 +1.6**
comp=Z,36nm,1.2s,mb5.3
M18A Lyman 67.33 54 ⇓P **P 09 19 13.8 -0.9**
baz=67
MSVF Nonsavu 67.33 152 PFAKE 09 19 30.0 +15
MSVF LR LR
comp=Z,5µm,21.0s,MS5.7
MPU Maple Canyon 67.35 56 *e*P **P 09 19 16.5 +1.6**
comp=Z,47nm,1.2s,mb5.4
VSR Storozhevoye 67.37 321*c i*P **P 09 19 13.5 -1.4**
VSR *e* 09 21 40.7
VSR *e*SS S 09 28 03.5 -3.4
VSR *e*SS SS 09 32 30.6 +4.2
VSR pmax pmax
comp=Z,40nm,0.4s,mb5.8
VSR pmax pmax
comp=N,70nm,0.8s
VSR pmax pmax
comp=E,60nm,0.8s
VSR pmax pmax
comp=Z,170nm,3.7s
VSR pmax pmax
comp=N,80nm,0.9s
VSR pmax pmax
comp=E,90nm,0.9s
VSR smax
comp=N,60nm,1.1s
VSR smax
comp=E,60nm,1.1s
VSR smax
comp=Z,9.0nm,0.4s
VSR MLR MLR
comp=N,6µm,18.0s,MS5.9
VSR MLR MLR
comp=E,4µm,18.0s,MS5.9
VSR MLR MLR
comp=Z,10µm,18.0s,MS6.1
BFSC Mount Baldy Ra 67.41 64 ⇓P **P 09 19 14.3 -1.1**
baz=67
U11A Corn Creek 67.43 61 ⇓P **P 09 19 15.0 -0.5**
baz=67
K20A Yellowstone Ra 67.49 52 ⇓P **P 09 19 15.2 -0.6**
baz=67,SNR=17
Q15A Fillmore 67.57 57 ⇑P **P 09 19 15.7 -0.7**
baz=67
P16A Fountain Green 67.60 56 ⇑P **P 09 19 16.1 -0.4**
baz=67
S13A Holt Ranch, En 67.61 59 ⇓P **P 09 19 16.5 -0.1**
baz=67,SNR=17
T12A Moapa 67.64 60 ⇑P **P 09 19 16.2 -0.6**
baz=68
ARUT Antelope Range 67.73 58 *e*P **P 09 19 18.4 +1.1**
ARUT pmax pmax
comp=Z,17nm,0.8s,mb5.1
ARUT Antelope Range 67.73 58 *e*P **P 09 19 18.4 +1.1**
comp=Z,17nm,0.8s,mb5.1
TUQ Turquoise Moun 67.73 62 ⇑P **P 09 19 15.8 -1.6**
baz=68,SNR=14
O17A Robinson Place 67.75 55 ⇓P **P 09 19 17.4 -0.1**
baz=68
V11A Goodsprings 67.78 61 ⇓P **P 09 19 15.5 -2.2**
baz=68,SNR=13
AFI Afiamalu 67.83 141 PFAKE 09 19 30.0 +12
AFI LR LR
comp=Z,3µm,20.0s,MS5.5
N18A Larsen Ranch, 67.85 54 ⇑P **P 09 19 18.9 +0.8**
baz=68,SNR=9.6
BBRC Big Bear Solar 67.86 63 ⇓P **P 09 19 17.9 -0.4**
baz=68
HEC Hector,Ludlow 67.87 63 ⇑P **P 09 19 16.0 -2.3**
baz=68
S14A Cedar City 67.91 58 ⇑P **P 09 19 18.3 -0.2**
baz=68
L20A Wamsutter 67.92 52 P **P 09 19 19.3 +0.8**
baz=68,SNR=11
CCUT Cedar City 67.93 59 *e*P **P 09 19 18.6 0.0**
comp=Z,30nm,1.1s,mb5.2
U12A Valley of Fire 67.94 60 ⇓P **P 09 19 18.0 -0.7**
baz=68
T13A Saint George 67.94 59 ⇓P **P 09 19 18.1 -0.6**
baz=68,SNR=18
BHJ Bhuj 68.00 281 *e*PKP **P 09 19 18.3 -1.0**
MSU Marysvale 68.01 57 *e*P **P 09 19 19.4 +0.3**
MSU pmax pmax
comp=Z,41nm,1.2s,mb5.3
MSU Marysvale 68.01 57 *e*P **P 09 19 19.4 +0.3**
comp=Z,41nm,1.2s,mb5.3
TMUT Trail Mountain 68.07 56 *e*P **P 09 19 21.0 +1.5**
comp=Z,25nm,1.0s,mb5.2
MURC Murrieta 68.11 64 ⇑P **P 09 19 19.4 -0.4**
baz=68
O18A Roosevelt 68.12 55 ⇑P **P 09 19 19.1 -0.8**
baz=68
R15A Junction 68.15 57 ⇑P **P 09 19 19.3 -0.6**
baz=68
N19A John Jarvie Ra 68.19 54 ⇓P **P 09 19 19.5 -0.6**
baz=68
POO Poona 68.20 275 *e*PKP **P 09 19 20.7 +0.2**
V12A Nelson 68.20 61 ⇓P **P 09 19 20.2 -0.2**
baz=68
P17A Butcher Ranch, 68.22 56 ⇓P **P 09 19 20.0 -0.5**
baz=68,SNR=24
U13A Pakoon Wash 68.30 60 ⇑P **P 09 19 20.5 -0.5**
baz=68,SNR=30
GMRC Granite Mounta 68.32 62 ⇑P **P 09 19 21.0 -0.1**
baz=68
Q16A Castle Valley 68.34 56 ⇓P **P 09 19 21.1 -0.1**
baz=68,SNR=14
M20A Sweetwater, Wa 68.35 53 ⇓P **P 09 19 20.8 -0.4**
baz=68,SNR=11
P18A Preston Nutter 68.41 55 ⇓P **P 09 19 21.3 -0.3**
baz=68,SNR=11
T14A Hurricane 68.41 59 ⇓P **P 09 19 21.5 -0.2**
baz=68,SNR=19
S15A Panguitch 68.44 58 ⇓P **P 09 19 22.4 +0.5**
baz=68,SNR=9.8
LDFC Landfair 68.47 62 *e*P **P 09 19 23.0 +1.0**
comp=Z,57nm,0.9s,mb5.6
LDFC *e* pP 09 19 36.8 +1.8
W12A Cal Nev Ari 68.47 61 ⇓P **P 09 19 22.9 +0.9**
baz=68
DZM Mont Dzumac 68.48 165 *e*P **P 09 19 27.6 +5.6**
comp=Z,176nm,1.4s,mb5.9
DZM *e*S S 09 28 26.6 +6.1
comp=Z,2µm,29.2s
DZM *e*LR LR 09 40 11.3
comp=Z,4µm,23.4s
L21A Rawlins 68.49 52 ⇓P **P 09 19 21.9 -0.2**
baz=68,SNR=16
ULM Lac du Bonnet 68.54 39 P **P 09 19 21.4 -0.8**
comp=Z,17nm,0.7s,mb5.1,baz=316,slow=7.3,SNR=12
ULM PKPPKP 09 47 35.3
comp=Z,1.5nm,0.3s,baz=86,slow=1.5,SNR=4.2
ULM LR LR 09 51 49.0
comp=Z,2µm,18.4s,MS5.3,baz=330,slow=38
ULM Lac du Bonnet 68.54 39 *e*P **P 09 19 21.3 -0.9**
comp=Z,17nm,0.8s,mb5.0
ULM LR LR
comp=Z,2µm,19.0s,MS5.4
R16A Teasdale 68.57 57 ⇓P **P 09 19 23.6 +1.0**
baz=68,SNR=23
PFO Pinyon Flat Ob 68.58 64 ⇓P **P 09 19 22.9 +0.1**
baz=68
PFO Pinyon Flat Ob 68.58 64 *e*P **P 09 19 22.9 +0.1**
PFO *e* pP 09 19 36.6 +0.9
PFO pmax pmax
comp=Z,22nm,1.2s,mb5.0
PFO MLR MLR
comp=Z,1µm,21.0s,MS5.2
PFO Pinyon Flat Ob 68.58 64 *e*P **P 09 19 22.9 +0.1**
comp=Z,21nm,1.2s,mb4.9
PFO *e* pP 09 19 36.6 +0.9
PFO LR LR
comp=Z,1µm,21.0s,MS5.2
SRU San Rafael 68.59 56 ⇑P **P 09 19 22.4 -0.3**
baz=68,SNR=22
SRU San Rafael 68.59 56 *e*P **P 09 19 23.2 +0.5**
SRU pmax pmax
comp=Z,45nm,0.9s,mb5.4
SRU San Rafael 68.59 56 *e*P **P 09 19 23.2 +0.5**
comp=Z,45nm,0.9s,mb5.4
O19A Miners Draw (B 68.61 54 ⇑P **P 09 19 22.8 -0.1**
baz=68,SNR=9.1
BELC Belle Mtn. Jos 68.61 63 ⇓P **P 09 19 22.5 -0.5**
baz=68
109C Camp Elliot, M 68.64 65 ⇑P **P 09 19 23.6 +0.5**
baz=68
V13A Grand Canyon W 68.66 60 ⇑P **P 09 19 23.5 +0.3**
baz=68,SNR=17
M21A Separation Pea 68.73 52 ⇓P **P 09 19 22.7 -0.8**
baz=68,SNR=16
N20A Spence Gulch, 68.74 53 ⇑P **P 09 19 24.0 +0.3**
baz=68,SNR=21
RWWY Rawlins 68.76 52 *e*P **P 09 19 24.1 +0.3**
comp=Z,58nm,1.1s,mb5.4
U14A Mt Trumbull 68.78 59 ⇓P **P 09 19 24.1 +0.1**
baz=69,SNR=19
KAD Karad 68.78 273 *e*PKP **P 09 19 24.1 -0.1**
Q18A Rafter H Ranch 68.82 56 ⇑P **P 09 19 24.2 +0.1**
baz=69
RSSD Black Hills 68.84 48 *e*P **P 09 19 24.0 -0.2**
RSSD pmax pmax
comp=Z,49nm,0.8s,mb5.5
RSSD MLR MLR
comp=Z,2µm,20.0s,MS5.4
RSSD Black Hills 68.84 48 *e*P **P 09 19 24.0 -0.2**
comp=Z,50nm,0.8s,mb5.5
RSSD LR LR
comp=Z,2µm,20.0s,MS5.4
T15A Red Dirt Ranch 68.86 58 ⇓P **P 09 19 24.2 -0.3**
baz=69,SNR=15
S16A Weppner Ranch, 68.87 57 ⇓P **P 09 19 24.6 +0.1**
baz=69,SNR=35
R17A Hanksville Air 68.94 56 ⇓P **P 09 19 25.1 +0.2**
baz=69,SNR=18
MAK Makhachkala 68.96 310*c i*P **P 09 19 25.6 +0.6**
MAK *e* 09 19 49.1
MAK *e* 09 21 52.3
MAK *e*S S 09 28 29.8 +3.7
MAK *e*SS SS 09 32 58.7 +7.4
MAK pmax pmax
comp=N,201nm,1.2s
MAK pmax pmax
comp=Z,1µm,1.7s,mb6.6
MAK pmax pmax
comp=Z,732nm,1.2s,mb6.5
MAK pmax pmax
comp=E,232nm,1.4s
MAK MLR MLR
comp=E,5µm,15.0s
MAK MLR MLR
comp=Z,7µm,17.0s,MS6.0
MAK MLR MLR
comp=N,9µm,23.0s
L22A Ellis Ranch, M 68.96 51 ⇑P **P 09 19 24.7 -0.3**
baz=69,SNR=24
IRM Iron Mountain 69.04 62 ⇑P **P 09 19 25.9 +0.3**
baz=69,SNR=16
BAR Barrett 69.05 64 *e*P **P 09 19 26.4 +0.7**
comp=N,51nm,1.4s,mb5.3
P19A Cripple Cowboy 69.14 54 ⇓P **P 09 19 25.7 -0.4**
baz=69,SNR=12
IZAR Zarasai 69.14 330 *e*P **P 09 19 25.7 -0.1**
IZAR AMB AMB 09 19 27.2
comp=Z,43nm,1.3s,mb5.2
NB2 NORSAR Subarra 69.15 340 P **P 09 19 25.1 -0.7**
comp=Z,446nm,1.1s,mb6.3,baz=30,slow=6.5
NB2 NORSAR Subarra 69.15 340 P **P 09 19 25.1 -0.7**
baz=30,slow=6.5
NB2 NORSAR Subarra 69.15 340 P **P 09 19 25.0 -0.8**
NB2 NORSAR Subarra 69.15 340 P **P 09 19 25.0 -0.8**
NOA NORSAR Array B 69.15 340 P **P 09 19 25.5 -0.3**
comp=Z,144nm,0.7s,mb6.0,baz=30,slow=6.4,SNR=354
NOA LR LR 09 54 36.3
comp=Z,3µm,18.4s,MS5.6,baz=15,slow=40
NOA NORSAR Array B 69.15 340 P **P 09 19 25.5 -0.3**
NOA pmax pmax
comp=Z,144nm,0.7s
NOA MLR MLR
comp=Z,3µm,18.4s
BC3 Big Chuckawall 69.18 63 ⇑P **P 09 19 26.1 -0.4**
baz=69,SNR=9.4
N21A Black Mountain 69.21 53 ⇑P **P 09 19 25.8 -0.8**
baz=69,SNR=13
W13A Hualapai Mount 69.21 61 ⇑P **P 09 19 26.5 -0.2**
baz=69
O20A White River Ci 69.22 54 ⇑P **P 09 19 26.8 +0.1**
baz=69
IDID Didziasalis 69.31 330 *e*P **P 09 19 26.9 0.0**
IDID AMB AMB 09 19 28.3
comp=Z,70nm,1.0s,mb5.5
U15A North Rim 69.31 59 ⇓P **P 09 19 27.1 -0.1**
baz=69,SNR=24
HFA0 Hagfors New Ar 69.32 339 P **P 09 19 25.0 -1.9**
ISAL Salakas 69.32 330 *e*P **P 09 19 26.9 -0.1**
ISAL AMB AMB 09 19 28.5
comp=Z,79nm,1.1s,mb5.6
V14A Boquillas Ranc 69.34 60 ⇑P **P 09 19 27.6 +0.1**
baz=69,SNR=19
NAO01 NORSAR Array S 69.40 340 *e*P **P 09 19 26.4 -1.0**
comp=Z,194nm,1.0s,mb6.0
NAO01 LR LR
comp=Z,4µm,19.0s,MS5.7
S17A Black Ridge (B 69.40 57 ⇓P **P 09 19 26.7 -1.1**
baz=69,SNR=32
T16A Glen Canyon Da 69.41 58 ⇓P **P 09 19 27.0 -0.9**
baz=69
Q19A Hogan Spring (69.42 55 ⇓P **P 09 19 27.0 -1.0**
baz=69,SNR=22
DVTC Desert V Tower 69.43 64 ⇓P **P 09 19 27.6 -0.4**
baz=69
R18A Canyonlands Na 69.44 56 ⇑P **P 09 19 26.8 -1.2**
baz=69,SNR=18
IIGN Ignalina 69.46 330 *e*P **P 09 19 27.9 0.0**
IIGN AMB AMB 09 19 29.4
comp=Z,88nm,1.1s,mb5.6
MICGM Minsk 69.53 329 *e*P **P 09 19 27.0 -1.3**
MNK Minsk 69.55 329 *e*P **P 09 19 27.0 -1.4**
MNK *e*S S 09 28 36.0 +3.3
MNK MLR MLR
comp=Z,26µm,16.0s,MS6.6
P20A De Beque 69.56 54 ⇓P **P 09 19 27.6 -1.1**
baz=69
X13A Yucca 69.58 61 ⇑P **P 09 19 29.3 +0.4**
baz=69,SNR=19
PDMCI Parker Dam,Lak 69.58 62 ⇓P **P 09 19 28.7 -0.3**
baz=69
O21A Pagoda 69.61 53 ⇑P **P 09 19 29.1 +0.1**
baz=69
NACGM Naroch 69.62 329 *e*P **P 09 19 24.0 -4.8**
W14A Seligman 69.63 60 ⇓P **P 09 19 29.5 +0.2**
baz=70,SNR=18
Y12C Blythe 69.70 62 ⇓P **P 09 19 29.7 0.0**
baz=70
N22A Wattenberg Ran 69.78 52 ⇓P **P 09 19 30.0 -0.1**
baz=70,SNR=9.6
V15A Kaibab Nationa 69.78 59 ⇓P **P 09 19 30.6 +0.4**
baz=70,SNR=17
T17A Navajo Res., N 69.83 58 ⇑P **P 09 19 27.7 -2.8**
baz=70
S18A Hurst Farm, Bl 69.84 57 ⇑P **P 09 19 30.2 -0.3**
baz=70,SNR=20
R19A Curley Farm, L 69.87 56 ⇓P **P 09 19 30.0 -0.7**
baz=70,SNR=13
PV10 Paradox Valley 69.94 56 *e*P **P 09 19 31.9 +0.8**
comp=Z,1µm,0.9s,mb6.8
AGMN Agassiz Nation 69.95 41 *e*P **P 09 19 30.2 -0.8**
comp=Z,104nm,1.3s,mb5.6
AGMN LR LR
comp=Z,2µm,20.0s,MS5.3
GLA Glamis 69.97 63 ⇑P **P 09 19 31.2 -0.2**
baz=70
GLA Glamis 69.97 63 *e*P **P 09 19 34.9 +3.5**
GLA *e* pP 09 19 45.5 +1.1
GLA pmax pmax
comp=Z,60nm,1.1s,mb5.4
GLA Glamis 69.97 63 *e*P **P 09 19 34.9 +3.5**
comp=Z,60nm,1.1s,mb5.4
GLA *e* pP 09 19 45.5 +1.1
Q20A Ridgley Place, 69.98 55 ⇑P **P 09 19 31.1 -0.3**
baz=70,SNR=14
PHWY Pilot Hill 69.99 51 *e*P **P 09 19 31.7 +0.4**
comp=Z,29nm,1.3s,mb5.0
FOO Floro 70.00 343 *e*P **P 09 19 27.0 -4.0**
FOO *e*S S 09 28 40.7 +3.0
FOO AMS AMS 09 56 21.4
comp=Z,2µm,22.2s,MS5.4
PV04 Paradox Valley 70.01 55 *e*P **P 09 19 32.2 +0.7**
P21A Newcastle 70.08 54 ⇓P **P 09 19 31.1 -0.8**
baz=70,SNR=14
Y13A Salome 70.09 62 ⇓P **P 09 19 32.1 -0.1**
baz=70,SNR=11
BORG Borgarnes 70.14 357 P **P 09 19 33.6 +1.7**
comp=Z,941nm,0.9s,mb6.7,SNR=13
BORG Borgarnes 70.14 357 *e*P **P 09 19 32.9 +1.0**
BORG pmax pmax
comp=Z,236nm,1.2s
BORG MLR MLR
comp=Z,1µm,21.0s
BORG Borgarnes 70.14 357 *e*P **P 09 19 32.9 +1.0**
comp=Z,236nm,1.2s,mb6.0
BORG LR LR
comp=Z,1µm,21.0s,MS5.2
HYA Hoyanger 70.16 343⇑*i*P **P 09 19 32.7 +0.6**
HYA AMb AMB 09 19 33.9
comp=Z,275nm,1.1s,mb6.1
HYA Hoyanger 70.16 343⇑*i*P **P 09 19 32.7 +0.6**
comp=Z,275nm,1.1s,mb6.1
O22A Kremmling 70.16 53 ⇓P **P 09 19 32.1 -0.3**
baz=70,SNR=14
U17A Shonto 70.17 58 ⇓P **P 09 19 32.6 0.0**
baz=70,SNR=6.6
OSL Oslo 70.23 340 *e*P **P 09 19 32.0 -0.5**
OSL AMb AMB 09 19 33.7
comp=Z,234nm,1.4s,mb5.9
OSL Oslo 70.23 340 *e*P **P 09 19 32.0 -0.5**
comp=Z,234nm,1.4s,mb5.9
X14A Yava 70.24 61 ⇓P **P 09 19 33.3 +0.3**
baz=70,SNR=17
GOA Goa 70.26 272⇑*e*PKP **P 09 19 33.0 -0.3**
GOA *ex* x 09 27 16.8
T18A Mexican Hat 70.28 57 ⇓P **P 09 19 32.8 -0.4**
baz=70,SNR=13
S19A Harvey Farm, M 70.31 56 ⇓P **P 09 19 33.1 -0.3**
baz=70,SNR=34
EIDS Eidsvold 70.32 180 *e*P **P 09 19 36.4 +3.1**
comp=Z,41nm,1.4s,mb5.2
EIDS *e* pP 09 19 48.6 +2.2
PV01 Paradox Valley 70.38 55 *e*P **P 09 19 34.7 +0.9**
comp=Z,2µm,0.9s,mb7.1
ASAR Alice Springs 70.39 197 P **P 09 19 34.5 +0.6**
comp=Z,18nm,0.7s,mb5.1,baz=15,slow=4.8,SNR=108
ASAR pP pP 09 19 47.9 +1.1
comp=Z,42nm,0.9s,baz=13,slow=5.6,SNR=19
ASAR PKPPKP 09 47 35.0
comp=Z,3.5nm,1.2s,baz=167,slow=6.3,SNR=5.6
R20A Redvale 70.45 55 ⇑P **P 09 19 33.7 -0.6**
baz=70,SNR=11
112A Yuma 70.47 63 ⇑P **P 09 19 35.2 +0.8**
baz=70
WUAZ Wupatki 70.47 59 ⇓P **P 09 19 35.1 +0.7**
baz=70,SNR=12
WUAZ Wupatki 70.47 59 *e*P **P 09 19 35.4 +1.0**
comp=Z,49nm,1.1s,mb5.3
WUAZ LR LR
comp=Z,1µm,22.0s,MS5.2
Q21A Lamborn Mesa, 70.48 54 ⇑P **P 09 19 35.1 +0.7**
baz=70,SNR=15
Y14A Wickenburg 70.52 61 ⇑P **P 09 19 33.9 -0.9**
baz=70,SNR=18
SUE Sulen 70.55 343⇑*i*P **P 09 19 34.6 +0.2**
SUE AMb AMB 09 19 35.7
comp=Z,227nm,1.5s,mb5.9
SUE Sulen 70.55 343⇑*i*P **P 09 19 34.6 +0.2**
comp=Z,227nm,1.5s,mb5.9
SMCO Snowmass 70.59 54 *e*P **P 09 19 35.9 +0.8**
comp=Z,33nm,1.0s,mb5.2
Z13A Yuma Proving G 70.61 62 ⇑P **P 09 19 34.5 -0.7**
baz=70,SNR=13
X15A Humboldt 70.63 60 ⇑P **P 09 19 35.7 +0.3**
baz=70,SNR=28
W16A Flagstaff 70.66 60 ⇑P **P 09 19 36.2 +0.7**
baz=70
S20A Disappointment 70.70 56 ⇓P **P 09 19 35.5 -0.3**
baz=70,SNR=17
V17A Tonalea, Kykot 70.75 59 ⇓P **P 09 19 36.5 +0.4**
baz=71,SNR=44
KONO Kongsberg 70.76 340⇑*i*P **P 09 19 34.7 -1.0**
KONO *e*S S 09 28 48.0 +1.4
KONO *e*SS SS 09 33 33.8 +16
KONO AMS AMS 09 55 32.6
comp=Z,3µm,17.7s,MS5.6
KONO Kongsberg 70.76 340 *e*P **P 09 19 35.1 -0.6**
KONO pmax pmax
comp=Z,221nm,1.3s,mb5.9
KONO MLR MLR
comp=Z,3µm,19.0s,MS5.6
KONO Kongsberg 70.76 340 *e*P **P 09 19 35.1 -0.6**
comp=Z,221nm,1.3s,mb5.9
KONO LR LR
comp=Z,3µm,19.0s,MS5.6
U18A Rough Rock, Ch 70.77 58 ⇑P **P 09 19 36.2 0.0**
baz=71,SNR=16
KIV Kislovodsk 70.81 313 P **P 09 19 37.9 +1.6**
comp=Z,4µm,0.9s,mb7.3
KIV Kislovodsk 70.81 313*c i*P **P 09 19 37.3 +1.0**

KIV e 09 22 09.6
KIV eS S 09 28 49.6 +1.9
KIV pmax pmax
comp=Z,354nm,3.5s
KIV pmax pmax
comp=Z,823nm,1.1s,mb6.6
KIV MLR MLR
comp=Z,8μm,18.0s,MS6.0
KIV Kislovodsk 70.81 313 eP **P 09 19 37.2 +0.9**
comp=Z,823nm,1.0s,mb6.6
KIV LR LR
comp=Z,8μm,19.0s,MS6.0
KIV Kislovodsk 70.81 313 P **P 09 19 36.8 +0.5**
SNR=214
R21A Cimarron 70.81 55 ⇓P **P 09 19 35.9 -0.5**
baz=71,SNR=21
Q22A Crested Butte, 70.84 54 ⇓P **P 09 19 35.9 -0.7**
baz=71,SNR=17
Y15A Casa Rosa Ranc 70.93 61 ⇑P **P 09 19 37.3 0.0**
baz=71,SNR=29
ISCO Idaho Springs 70.93 52 eP **P 09 19 38.1 +1.0**
ISCO pmax pmax
comp=Z,55nm,1.1s,mb5.4
ISCO MLR MLR
comp=Z,367nm,22.0s,MS4.6
ISCO Idaho Springs 70.93 52 eP **P 09 19 38.1 +0.9**
comp=Z,55nm,1.1s,mb5.4
ISCO LR LR
comp=Z,367nm,22.0s,MS4.6
Z14A Wintersburg 70.94 62 ⇓P **P 09 19 36.7 -0.6**
baz=71
ASK Askoy 70.98 343⇑iP **P 09 19 36.2 -0.9**
T19A Beclabito 70.99 57 ⇓P **P 09 19 37.4 -0.2**
baz=71,SNR=8.3
ZEI Tsey 71.01 312 eP **P 09 19 37.4 -0.2**
ZEI pmax pmax
comp=Z,378nm,1.1s,mb6.2
ZEI pmax pmax
comp=N,404nm,1.6s
ZEI pmax pmax
comp=E,359nm,1.2s
MVCO Mesa Verde 71.04 56 ⇓P **P 09 19 37.3 -0.5**
baz=71,SNR=18
MVCO Mesa Verde 71.04 56 eP **P 09 19 37.8 -0.1**
comp=E,60nm,1.2s,mb5.4
MVCO LR LR
comp=Z,2μm,20.0s,MS5.3
BER Bergen 71.05 343⇑iP **P 09 19 37.6 +0.1**
BER eS S 09 28 50.8 +0.9
BER AMS AMS 09 56 45.1
comp=Z,2μm,10.8s,MS5.7
P23A Jefferson 71.10 53 ⇑P **P 09 19 38.7 +0.6**
baz=71,SNR=10
PALK Pallekele 71.10 261 P **P 09 19 38.5 0.0**
comp=Z,424nm,1.3s,mb6.2,SNR=6.2
PALK Pallekele 71.10 261 iP **P 09 19 39.1 +0.6**
PALK Pallekele 71.10 261 eP **P 09 19 38.3 -0.2**
comp=Z,127nm,1.3s,mb5.7
PALK Pallekele 71.10 261 P **P 09 19 36.6 -1.9**
comp=Z,46nm,1.2s,mb5.3
DGRG David-gareji 71.14 310 P **P 09 19 39.1 +0.7**
S21A Coal Bank Pass 71.15 55 ⇑P **P 09 19 38.2 -0.3**
baz=71,SNR=19
X16A Lo Mia Camp, P 71.17 60 ⇑P **P 09 19 38.7 0.0**
baz=71,SNR=24
ODD1 Odda 71.20 342⇑iP **P 09 19 38.7 +0.3**
ODD1 AMb AMB 09 19 39.9
comp=Z,230nm,1.2s,mb6.0
ODD1 Odda 71.20 342⇑iP **P 09 19 38.7 +0.3**
comp=Z,230nm,1.2s,mb6.0
V18A Ganado 71.21 58 ⇓P **P 09 19 38.7 -0.1**
baz=71,SNR=18
U19A Dine' College, 71.25 57 ⇓P **P 09 19 39.0 -0.1**
baz=71,SNR=24
MTA Mtatsminda 71.29 311 P **P 09 19 39.9 +0.7**
TBLG Delisi 71.29 311 eP **P 09 19 40.6 +1.3**
TBLG Delisi 71.29 311 P **P 09 19 40.6 +1.3**
KEH Kehvi 71.31 312 P **P 09 19 39.1 -0.3**
R22A Saguache, Gunn 71.36 54 ⇑P **P 09 19 40.1 +0.3**
baz=71,SNR=26
ONI Oni 71.37 312 P **P 09 19 40.7 +1.0**
114A Black Gap (USA 71.39 62 ⇑P **P 09 19 39.6 -0.4**
baz=71
GOR Gori 71.45 311 P **P 09 19 41.2 +0.9**
RMQ Roma 71.46 182 eP **P 09 19 41.8 +1.6**
comp=Z,127nm,1.2s,mb5.7
Z15A Gila River Ind 71.48 61 ⇑P **P 09 19 40.4 -0.2**
baz=71
Y16A Circle Bar Ran 71.50 60 ⇓P **P 09 19 40.7 0.0**
baz=71,SNR=14
P24A Kohler Place, 71.52 52 ⇑P **P 09 19 40.5 -0.2**
baz=71
SUW Suwalki 71.60 331 eP **P 09 19 40.0 -0.9**
comp=Z,600nm,1.1s,mb6.4
SUW epP pP 09 19 48.4 -5.5
SUW ePcP PcP 09 19 57.6 -2.4
SUW eS S 09 28 55.6 -1.0
SUW eSKS 09 29 38.8
SUW LMZ 09 56 53.9
comp=Z,4μm,17.6s
SUW Suwalki 71.60 331⇑eP **P 09 19 40.0 -0.9**
SUW epP pP 09 19 48.4 -5.5
SUW ePcP PcP 09 19 57.6 -2.4
SUW eS S 09 28 55.6 -0.9
SUW eSKS 09 29 38.8
X17A Forest Lakes 71.61 60 ⇑P **P 09 19 41.1 -0.2**
baz=71,SNR=17
S22A 4UR Ranch, Cre 71.65 55 ⇓P **P 09 19 40.9 -0.6**
baz=71,SNR=19
BLS5 Blasjo 71.68 342⇑iP **P 09 19 41.4 +0.1**
BLS5 AMb AMB 09 19 42.9
comp=Z,176nm,1.4s,mb5.8
BLS5 Blasjo 71.68 342⇑iP **P 09 19 41.4 +0.1**
comp=Z,176nm,1.4s,mb5.8
T21A Navajo Lake 71.76 56 ⇑P **P 09 19 42.1 -0.1**
baz=72
Q24A Divide 71.77 53 ⇑P **P 09 19 41.9 -0.3**
baz=72
115A Sonoran Desert 71.83 62 ⇑P **P 09 19 43.1 +0.4**
baz=72
Z16A Peralta Trail, 71.90 61 ⇓P **P 09 19 43.2 +0.1**
baz=72,SNR=12
P25A Willow Gulch B 71.94 52 ⇓P **P 09 19 43.0 -0.2**
baz=72,SNR=25
W19A Sanders 71.94 58 ⇑P **P 09 19 42.6 -0.7**
baz=72,SNR=15
AKASG Malin Array Be 71.97 325 P **P 09 19 42.2 -1.0**
comp=Z,47nm,0.3s,mb5.8,baz=36,slow=6.1,SNR=326
AKASG S S 09 28 57.7 -3.2
comp=Z,0.3nm,0.3s,baz=40,slow=12,SNR=4.6
AKASG LR LR 09 54 01.3
comp=Z,8μm,18.5s,MS6.0,baz=25,slow=38
AKASG Malin Array Be 71.97 325 P **P 09 19 42.2 -1.0**
AKASG S S 09 28 57.7 -3.2
AKASG pmax pmax
comp=Z,47nm,0.4s
AKASG MLR MLR
comp=Z,8μm,18.5s
AKBB Malin Array Si 71.97 325 eP **P 09 19 41.9 -1.3**
214A Organ Pipe Nat 71.97 63 ⇑P **P 09 19 43.0 -0.5**
baz=72
KIEV Kiev 71.98 325 eP **P 09 19 42.0 -1.3**
KIEV pmax pmax
comp=Z,409nm,1.3s,mb6.2
KIEV MLR MLR
comp=Z,8μm,19.0s,MS6.0
KIEV Kiev 71.98 325 eP **P 09 19 42.0 -1.3**
comp=Z,409nm,1.3s,mb6.2
KIEV LR LR
comp=Z,8μm,19.0s,MS6.0
Y17A Roosevelt 72.02 60 ⇓P **P 09 19 43.7 -0.1**
baz=72,SNR=12
V20A Brimhall 72.02 57 ⇑P **P 09 19 43.2 -0.6**
baz=72
MBWA Marble Bar 72.04 211 eP **P 09 19 43.4 -0.4**
MBWA Marble Bar 72.04 211 eP **P 09 19 42.9 -0.9**
comp=Z,280nm,1.6s,mb5.9
MBWA e pP 09 19 57.4 +0.5
MBWA LR LR
comp=Z,914nm,20.0s,MS5.0
MBWA Marble Bar 72.04 211 P sP 09 19 58.3 -3.6
comp=Z,130nm,1.8s
U21A Nageezi 72.07 56 ⇓P **P 09 19 43.9 -0.2**
baz=72
OGNE Ogallala 72.10 50 eP **P 09 19 44.7 +0.5**
comp=Z,186nm,0.9s,mb6.0
OGNE LR LR
comp=Z,2μm,20.0s,MS5.5
T22A Edith 72.11 55 ⇓P **P 09 19 43.4 -0.9**
baz=72,SNR=14
KMY Karmoy 72.13 342⇑iP **P 09 19 44.2 +0.2**
KMY AMb AMB 09 19 45.6
comp=Z,200nm,1.2s,mb5.9
KMY Karmoy 72.13 342⇑iP **P 09 19 44.2 +0.2**
comp=Z,200nm,1.2s,mb5.9
EYMN Ely 72.19 39 eP **P 09 19 43.5 -1.0**
comp=Z,84nm,1.1s,mb5.6
EYMN LR LR
comp=Z,2μm,19.0s,MS5.3
116A Eloy 72.25 62 ⇓P **P 09 19 44.8 -0.4**
baz=72
STAV Stavanger 72.29 342 eP **P 09 19 45.0 +0.1**
STAV AMb AMB 09 19 46.4
comp=Z,194nm,1.3s,mb5.9
STAV Stavanger 72.29 342 eP **P 09 19 45.0 +0.1**
comp=Z,194nm,1.3s,mb5.9
R24A Sanders Place, 72.30 53 ⇓P **P 09 19 44.6 -0.8**
baz=72,SNR=17
Q25A Bedland, Calha 72.31 52 ⇑P **P 09 19 44.8 -0.6**
baz=72,SNR=35
GNI Garni 72.40 310 eP **P 09 19 47.5 +1.5**
GNI Garni 72.40 310 LR LR 09 58 19.4
comp=Z,4μm,18.5s,MS5.7,baz=50,slow=41
GNI Garni 72.40 310c iP **P 09 19 47.8 +1.9**
GNI MLR MLR
comp=Z,4μm,21.0s
GNI Garni 72.40 310 eP **P 09 19 47.9 +2.0**
comp=Z,602nm,1.1s,mb6.4
GNI LR LR
comp=Z,3μm,19.0s,MS5.6
GNI Garni 72.40 310 P **P 09 19 47.8 +1.9**
SNR=176
SDCO Great Sand Dun 72.41 54 eP **P 09 19 46.0 -0.1**
comp=Z,26nm,1.2s,mb5.0
SDCO LR LR
comp=Z,1μm,19.0s,MS5.2
Y18A Canyon Day Jun 72.46 60 ⇑P **P 09 19 46.2 -0.2**
baz=72,SNR=17
W20A Ramah 72.46 58 ⇑P **P 09 19 45.9 -0.5**
baz=72,SNR=10
X19A St. Johns 72.47 59 ⇓P **P 09 19 46.3 -0.2**
baz=72
V21A Milan 72.51 57 ⇓P **P 09 19 46.7 0.0**
baz=72
LRW Lerwick 72.52 346 P **P 09 19 45.9 -0.3**
LRW AMb AMB 09 19 46.9
comp=Z,202nm,1.7s,mb5.8
LRW AMS AMS 09 56 21.4
comp=Z,2μm,15.7s
LRW Lerwick 72.52 346 eP **P 09 19 45.9 -0.3**
LRW AMb AMB 09 19 46.9
comp=Z,202nm,1.7s,mb5.8
LRW AMS AMS 09 56 21.4
comp=Z,2μm,15.7s,MS5.4
Z17A San Carlos Hig 72.52 60 ⇓P **P 09 19 46.6 -0.2**
baz=72
SOC Sochi 72.58 315c iP **P 09 19 47.2 +0.3**
SOC e pP 09 19 57.5 -2.5
SOC e 09 22 28.6
SOC ePPP 09 24 09.4
SOC eS S 09 29 04.9 -3.2
SOC e 09 29 46.4
U22A Llaves 72.58 56 P **P 09 19 48.2 +1.2**
baz=72,SNR=12
T23A Casias Ranch, 72.59 55 ⇑P **P 09 19 47.5 +0.4**
baz=72,SNR=8.2
S24A Houchin Ranch, 72.65 54 ⇓P **P 09 19 48.1 +0.6**
baz=72,SNR=17
216A Three Points, 72.79 62 ⇓P **P 09 19 48.0 -0.4**
baz=73,SNR=18
ANN Anapa 72.81 317c iP **P 09 19 47.2 -1.1**
ANN e*PP pP 09 19 57.4 -4.0
ANN e pP 09 20 03.2 +1.8
ANN e 09 22 29.5
ANN ePPP 09 24 15.3
ANN eS S 09 29 12.1 +1.4
ANN pmax pmax
comp=Z,259nm,0.8s,mb6.2
ANN pmax pmax
comp=N,31nm,0.9s
ANN pmax pmax
comp=E,35nm,0.9s
ANN Anapa 72.81 317 iP **P 09 19 47.1 -1.2**
Y19A Nutrioso 72.81 59 ⇑P **P 09 19 46.3 -2.2**
baz=73,SNR=9.7
117A Oracle 72.84 61 ⇑P **P 09 19 48.1 -0.6**
baz=73,SNR=9.2
TRD Trivandrum 72.85 265⇑ex x 09 19 53.5
V22A San Miguel Ran 72.86 56 ⇓P **P 09 19 47.2 -1.6**
baz=73,SNR=11
X20A Quemado 72.86 58 ⇓P **P 09 19 49.0 +0.2**
baz=73,SNR=19
ECSD EROS Data Cent 72.91 45 eP **P 09 19 48.0 -0.9**
comp=E,104nm,1.1s,mb5.7
ECSD LR LR
comp=Z,3μm,21.0s,MS5.5
DIGO Kars 72.95 310 iP **P 09 19 50.7 +1.4**
KARS Kars 72.96 311 eP **P 09 19 50.9 +1.7**
TUC Tucson 72.99 61 eP **P 09 19 50.2 +0.6**
TUC e pP 09 20 03.4 +0.7
TUC pmax pmax
comp=Z,21nm,0.9s,mb5.1
TUC MLR MLR
comp=Z,1μm,20.0s,MS5.1
TUC Tucson 72.99 61 eP **P 09 19 50.2 +0.6**
comp=Z,21nm,0.9s,mb5.1
TUC e pP 09 20 03.4 +0.7
TUC LR LR
comp=Z,1μm,20.0s,MS5.1
U23A El Rito 73.00 55 ⇓P **P 09 19 49.9 +0.3**
baz=73,SNR=39
S25A Robets Cordova 73.08 53 ⇑P **P 09 19 49.5 -0.5**
baz=73
BCA Borcka 73.14 312 eP **P 09 19 50.5 +0.2**
ARTV Artvin 73.17 312 iP **P 09 19 51.3 +0.8**
DBOC Borcka 73.19 312 iP **P 09 19 51.1 +0.5**
DAGI Agillar 73.25 312 iP **P 09 19 52.0 +1.1**
Z19A T-Link Ranch, 73.26 60 ⇑P **P 09 19 51.0 -0.1**
baz=73
118A Homack Ranch, 73.27 60 ⇑P **P 09 19 50.7 -0.6**
baz=73
BSD Bornholm Skovb 73.32 335⇑iP **P 09 19 50.4 -0.7**
BSD pmax pmax
comp=Z,170nm,1.0s,mb5.9
BSD MLR MLR
comp=Z,6μm,20.0s,MS5.9
BSD Bornholm Skovb 73.32 335⇑iP **P 09 19 50.4 -0.7**
comp=Z,171nm,1.0s,mb5.9
BSD Bornholm Skovb 73.32 335⇑iP **P 09 19 50.4 -0.7**
comp=Z,171nm,1.0s,mb5.9
BSD
comp=Z,6μm,20.0s
217A Green Valley 73.34 62 ⇑P **P 09 19 50.8 -0.8**
baz=73
X21A Alamocita Cree 73.36 58 ⇓P **P 09 19 52.1 +0.3**
baz=73
Y20A Horse Springs, 73.37 59 ⇑P **P 09 19 52.6 +0.8**
baz=73,SNR=16
DYDN Diyadin 73.40 310 iP **P 09 19 54.0 +2.2**
V23A Ortiz Mt. (NFS 73.41 56 ⇓P **P 09 19 52.1 +0.1**
baz=73,SNR=12
DBAD Bademkaya 73.41 312 iP **P 09 19 52.8 +0.9**
T25A Trinidad 73.46 54 ⇓P **P 09 19 51.8 -0.4**
baz=73,SNR=20
U24A Moreno Valley 73.47 55 ⇓P **P 09 19 52.1 -0.2**
baz=73
W22A Albuquerque 73.47 57 ⇑P **P 09 19 52.0 -0.4**
baz=73
DDEM Demirkent 73.47 312 iP **P 09 19 53.0 +0.7**
COP Copenhagen 73.53 337⇑iP **P 09 19 52.1 -0.2**
COP pmax pmax
comp=Z,77nm,1.0s,mb5.6
COP MLR MLR
comp=Z,2μm,20.0s,MS5.3
COP Copenhagen 73.53 337⇑iP **P 09 19 52.1 -0.2**
comp=Z,77nm,1.0s,mb5.6
COP LR LR
comp=Z,2μm,20.0s,MS5.4
COP Copenhagen 73.53 337⇑iP **P 09 19 52.1 -0.2**
comp=Z,77nm,1.0s,mb5.6
COP
comp=Z,2μm,20.0s
CLDR Caldiran 73.56 309 eP **P 09 19 54.3 +1.5**
119A Ashpeak Ranch, 73.59 60 ⇑P **P 09 19 53.6 +0.5**
baz=73
218A Dragoon 73.68 61 ⇓P **P 09 19 53.0 -0.7**
baz=74,SNR=16
MUD Monsted U'grnd 73.71 339⇑iP **P 09 19 53.4 0.0**
MUD pmax pmax
comp=Z,62nm,0.8s,mb5.6
MUD MLR MLR
comp=Z,4μm,20.0s,MS5.7
MUD Monsted U'grnd 73.71 339⇑iP **P 09 19 53.4 0.0**
comp=Z,62nm,0.8s,mb5.6
MUD Monsted U'grnd 73.71 339⇑iP **P 09 19 53.4 0.0**
comp=Z,62nm,0.8s,mb5.6
MUD
comp=Z,4μm,20.0s
Y21A Point of Rocks 73.72 58 ⇑P **P 09 19 55.1 +1.2**
baz=74,SNR=18
AGRB Hanur-Agry 73.75 310 eP **P 09 19 55.6 +1.6**
LAZ Ladron 73.77 57 eP **P 09 19 55.1 +1.0**
comp=Z,24nm,1.3s,mb5.0
X22A Bernardo 73.78 57 ⇓P **P 09 19 54.5 +0.3**
baz=74
Z20A Nine Sixteen R 73.79 59 ⇓P **P 09 19 54.1 -0.2**
baz=74,SNR=11
ANMO Albuquerque 73.79 57⇑iP **P 09 19 53.8 -0.5**
ANMO LR LR
comp=Z,2μm,21.0s,MS5.3
WAR Warsaw 73.80 331 eP **P 09 19 54.5 +0.5**
comp=Z,2μm,1.5s,mb6.8
WAR LMZ 10 00 19.3
comp=Z,3μm,18.1s
W23A Werner Place, 73.83 56 ⇓P **P 09 19 54.4 -0.1**
baz=74,SNR=11
V24A Rampart Ranch, 73.95 55 ⇓P **P 09 19 54.7 -0.5**
baz=74,SNR=12
TUTA Tutak 73.97 310 iP **P 09 19 57.2 +1.9**
U25A Circle Dot Ran 73.98 54 ⇓P **P 09 19 54.5 -0.9**
baz=74,SNR=14
HOMI Horasan 74.00 311 iP **P 09 19 56.8 +1.4**
LENM Lemitar 74.03 58 eP **P 09 19 58.9 +3.2**
comp=Z,25nm,1.3s,mb5.0
318A Bisbee 74.08 61 ⇑P **P 09 19 55.8 -0.2**
baz=74
219A White Tail Can 74.15 61 ⇑P **P 09 19 56.8 +0.4**
baz=74,SNR=18
120A U Bar Ranch, L 74.15 60 ⇑P **P 09 19 56.5 +0.1**
baz=74,SNR=11
GKP Gorka Klasztor 74.19 333 eP **P 09 19 56.2 0.0**
comp=Z,400nm,0.5s,mb6.6
GKP eS S 09 29 24.6 -1.4
GKP LMZ 09 55 29.5
comp=Z,7μm,20.0s
GKP Gorka Klasztor 74.19 333⇑eP **P 09 19 56.3 0.0**
comp=Z,0.4nm,0.5s
GKP eS S 09 29 24.6 -1.4
GKP LR LR
comp=Z,7μm,20.0s
Y22A Socorro 74.20 58 ⇑P **P 09 19 56.8 +0.1**
baz=74,SNR=8.7
Z21A St. Cloud Mine 74.21 59 ⇓P **P 09 19 56.7 -0.1**
baz=74,SNR=25
X23A Hourglass Bar 74.21 57 ⇓P **P 09 19 56.2 -0.5**
baz=74,SNR=22
W24A Lazy 6 Ranch, 74.23 56 ⇓P **P 09 19 56.8 0.0**
baz=74,SNR=24
VANB Van 74.24 309 eP **P 09 19 57.8 +1.0**
V25A Rancho No Teng 74.25 55 ⇓P **P 09 19 56.2 -0.8**
baz=74,SNR=9.1
BNM Barren Site 74.25 57 eP **P 09 19 58.1 +1.1**
comp=Z,43nm,1.5s,mb5.2
SIM Simferopol' 74.27 319c iP **P 09 19 58.0 +1.1**
SIM eS S 09 29 31.0 +3.9
SIM ePS 09 30 19.0
SIM pmax pmax
comp=Z,286nm,0.8s,mb6.2
SIM MLR MLR
comp=Z,7μm,15.8s,MS6.1
RGN Rugen 74.27 336 eP **P 09 19 57.0 +0.3**
comp=Z,912nm,1.4s,mb6.5
RGN eS S 09 29 41.2 +14
RGN Rugen 74.27 336 eP **P 09 19 56.6 -0.1**
comp=Z,894nm,1.4s,mb6.5
TVAN Van 74.28 309 iP **P 09 19 59.0 +1.9**
U26A Atchley Ranch, 74.36 54 ⇑P **P 09 19 57.4 -0.2**
baz=74
ERZM Erzurum 74.39 311 iP **P 09 19 59.5 +1.8**
EZM Erzurum 74.39 311 eP **P 09 19 59.5 +1.8**
KTUT Trabzon 74.44 313 eP **P 09 19 57.1 -0.8**
ORE Reay 74.45 347 P **P 09 19 57.4 -0.3**
ORE Reay 74.45 347⇑eP **P 09 19 57.4 -0.3**
319A Douglas 74.56 61 ⇓P **P 09 19 58.8 0.0**
baz=74,SNR=20
220A Playas Peak, P 74.66 60 ⇑P **P 09 19 59.2 -0.2**
baz=74,SNR=16
X24A Lazy VL Ranch, 74.67 56 ⇓P **P 09 19 59.2 -0.2**
baz=74
Z22A Elephant Butte 74.67 58 ⇑P **P 09 19 59.5 +0.1**
baz=74,SNR=14
121A Cookes Peak, D 74.68 59 ⇓P **P 09 19 58.8 -0.7**
baz=74,SNR=7.2
LVV L'vov 74.70 328 eP **P 09 19 59.2 -0.1**
LVV e pP 09 20 11.6 -0.8
LVV e 09 22 46.0
LVV eS S 09 29 30.6 -1.2
LVV e 09 30 25.4
LVV MLR MLR
comp=Z,5μm,18.0s,MS5.8
LVV MLR MLR
comp=E,3μm,17.0s,MS5.9
LVV MLR MLR
comp=N,5μm,22.0s,MS5.9
LVV L'vov 74.70 328 eP **P 09 19 58.0 -1.3**
Y23A Lovelace Mesa, 74.74 57 ⇑P **P 09 19 59.5 -0.4**
baz=74,SNR=27
V26A Tequesquite Ra 74.76 54 ⇓P **P 09 19 59.3 -0.5**
baz=74
KOPT Kop Dagi 74.76 312 iP **P 09 20 01.7 +1.9**
HKR Hakkari 74.77 308 eP **P 09 20 01.0 +1.1**
W25A X Bar L Ranch, 74.78 55 ⇓P **P 09 19 59.3 -0.7**
baz=75,SNR=22
HAKT HAKKARI 74.80 308 iP **P 09 19 58.6 -1.5**
CBKS Cedar Bluff 74.86 50 eP **P 09 20 00.3 -0.1**
CBKS pmax pmax
comp=Z,107nm,1.2s,mb5.7
CBKS MLR MLR
comp=Z,3μm,19.0s,MS5.6
CBKS Cedar Bluff 74.86 50 eP **P 09 20 00.3 -0.1**
comp=Z,107nm,1.2s,mb5.7
CBKS LR LR
comp=Z,3μm,19.0s,MS5.6
RSC Scourie 74.87 347 P **P 09 19 60.0 -0.2**
RSC Scourie 74.87 347⇑iP **P 09 19 60.0 -0.2**
TATV Tatvan 74.91 310 iP **P 09 20 02.4 +1.7**
GUMT Gumushane 74.97 313 eP **P 09 20 02.1 +1.1**
ESPY Espiye-Giresun 75.02 313 eP **P 09 20 00.7 -0.7**
KIS Kishinev 75.03 323⇑iP **P 09 19 59.5 -1.8**
comp=Z,3μm,1.0s,mb7.2
KIS Kishinev 75.03 323 ePcP PcP 09 20 12.0 -2.8
KIS eS S 09 29 32.0 -3.6
KIS Kishinev 75.03 323 ePS 09 30 20.0
KIS LRM 09 55 52.0
comp=Z,14μm,16.0s
KIS Kishinev 75.03 323⇑iP **P 09 19 59.5 -1.8**
KIS e pP 09 20 12.0 -2.4
KIS eS S 09 29 32.0 -3.6
KIS ePS 09 30 20.0
KIS pmax pmax
comp=Z,1μm,1.0s,mb6.7
KIS MLR MLR
comp=N,10μm,17.0s,MS7.0
KIS MLR MLR
comp=E,66μm,17.0s,MS7.0
KIS MLR MLR
comp=Z,15μm,17.0s,MS6.4
KIS MLR MLR
comp=Z,14μm,16.0s
122A Conniff Cattle 75.04 59 ⇑P **P 09 20 02.2 +0.6**
baz=75
221A Mesquite Ranch 75.05 60 ⇓P **P 09 20 00.7 -0.9**
baz=75
320A Kipp Ranch, An 75.06 61 ⇓P **P 09 20 01.2 -0.5**
baz=75
CUKT Cukurca 75.08 308 eP **P 09 20 02.6 +0.9**
Z23A Rita Site, Whi 75.11 58 ⇓P **P 09 20 02.4 +0.5**
baz=75
Y24A Capitan 75.11 57 ⇑P **P 09 20 01.8 -0.1**

baz=75,SNR=19
MVH1 Achvaich 75.12 347 P P 09 20 01.3 -0.2
MVH1 Achvaich 75.12 347⇑ *i* P P 09 20 01.3 -0.2
X25A Clemmons Ranch 75.15 56 ⇓P P 09 20 02.6 +0.5
baz=75
SCHQ Schefferville 75.19 22 P P 09 20 01.8 -0.2
comp=Z,28nm,0.6s,mb5.4,baz=354,slow=7.1,SNR=55
SCHQ LR LR 09 55 36.4
comp=Z,2μm,20.6s,MS5.4,baz=85,slow=38
SCHQ Schefferville 75.19 22 *e*P P 09 20 01.8 -0.2
comp=Z,46nm,0.8s,mb5.5
SCHQ LR LR
comp=Z,3μm,21.0s,MS5.6
BNGL BINGOL 75.19 311 *i* P P 09 20 04.1 +1.8
BANOM Banah 75.25 292 P P 09 20 03.6 +0.8
SNR=18
GRSN GIRESUNGRSN 75.25 314 *i* P P 09 20 02.6 -0.1
COCO West Island 75.26 235 *i* P P 09 20 01.3 -1.6
COCO MLR MLR
comp=Z,2μm,20.0s,MS5.3
W26A Owens Ranch, T 75.27 55 ⇓P P 09 20 02.7 -0.1
baz=75,SNR=9.1
MCD Coleburn Disti 75.29 346 P P 09 20 02.4 -0.1
MCD Coleburn Disti 75.29 346⇑ *i* P P 09 20 02.4 -0.1
KWP Kalwaria Pacla 75.35 328 *e*P P 09 20 03.9 +0.9
comp=Z,2μm,1.3s,mb7.0
KWP *e*pP pP 09 20 08.1 -8.0
KWP LMZ 09 56 04.0
comp=Z,8μm,18.9s
KWP Kalwaria Pacla 75.35 328⇑ *e*P P 09 20 03.9 +0.9
KWP *e*pP pP 09 20 08.1 -8.0
ARMA Armidale 75.35 180 *e*P P 09 20 04.7 +1.7
ARMA *e*S S 09 29 45.2 +6.1
ARMA Armidale 75.35 180 *e*P P 09 20 04.8 +1.8
comp=Z,52nm,1.1s,mb5.4
RRR Rubha Reidh 75.44 347 P P 09 20 03.1 -0.3
RRR Rubha Reidh 75.44 347⇑ *i* P P 09 20 03.1 -0.3
MME1 Meikle Cairn 75.49 346 P P 09 20 03.2 -0.5
MME1 Meikle Cairn 75.49 346⇑ *i* P P 09 20 03.2 -0.5
RRH Rhenigidale 75.51 348 P P 09 20 03.4 -0.4
RRH Rhenigidale 75.51 348⇑ *i* P P 09 20 03.4 -0.4
123A Bell Site, Whi 75.53 58 ⇓P P 09 20 05.2 +0.8
baz=75
Y25A Mesa, Roswell 75.55 56 ⇑P P 09 20 04.3 -0.2
baz=75,SNR=13
Z24A Sheeppen Canyo 75.58 57 ⇓P P 09 20 04.0 -0.7
baz=75
BINT Bingol 75.60 311 *e*P P 09 20 08.4 +3.7
MDO Dochfour 75.61 347 P P 09 20 04.2 -0.2
MDO Dochfour 75.61 347⇑ *i* P P 09 20 04.2 -0.2
X26A CR and CF Fran 75.62 55 ⇑P P 09 20 04.5 -0.3
baz=75
BSEG Bad Segeberg 75.65 337 *e*P P 09 20 04.7 0.0
comp=Z,377nm,1.3s,mb6.2
W27A Bowe Ranch, En 75.69 55 ⇓P P 09 20 04.9 -0.4
baz=76,SNR=9.0
KAC Achnashellach 75.70 347 P P 09 20 04.9 0.0
KAC Achnashellach 75.70 347⇑ *i* P P 09 20 04.9 0.0
WBK Wadi Bani Khal 75.74 288 P P 09 20 07.4 +1.7
SNR=19
OJC Ojcow 75.91 330 *e*P P 09 20 03.6 -2.6
OJC *e*SS SS 09 34 21.6 -15
OJC LR LR
comp=Z,5μm,19.0s,MS5.9
KPL Plockton 75.91 347 P P 09 20 06.1 0.0
KPL AMb AMB 09 20 06.9
comp=Z,302nm,1.3s,mb6.1
KPL AMS AMS 09 57 00.1
comp=Z,1μm,18.5s
KPL Plockton 75.91 347⇑ *i* P P 09 20 06.1 0.0
KPL AMb AMB 09 20 06.9
comp=Z,302nm,1.3s,mb6.1
KPL AMS AMS 09 57 00.1
comp=Z,1μm,18.5s,MS5.2
SCIA State Center 75.94 44 *e*P P 09 20 06.7 +0.1
comp=Z,94nm,0.8s,mb5.8
SCIA LR LR
comp=Z,2μm,20.0s,MS5.5
RUE Ruedersdorf 75.94 335 *e*P P 09 20 06.2 -0.2
comp=Z,804nm,1.3s,mb6.5
RUE *e*S S 09 29 58.6 +13
RUE Ruedersdorf 75.94 335 *e*P P 09 20 06.3 0.0
comp=Z,692nm,1.3s,mb6.4
KSK Scoval 75.95 348 P P 09 20 06.2 -0.2
KSK Scoval 75.95 348⇑ *e*P P 09 20 06.2 -0.2
124A Stringfield Ra 75.97 58 ⇓P P 09 20 06.0 -0.9
baz=76
X27A F and S Farms, 75.97 55 ⇑P P 09 20 06.6 -0.3
baz=76
Z25A Roswell 75.99 57 ⇑P P 09 20 05.3 -1.7
baz=76
KSB Sheil Bridge 76.00 347 P P 09 20 06.4 -0.2
KSB Sheil Bridge 76.00 347⇑ *i* P P 09 20 06.4 -0.2
BUR08 Bucovina Ar. S 76.00 326 *e*P P 09 20 06.9 +0.1
BURAR Bucovina Array 76.02 326 ⇓P P 09 20 06.6 -0.3
BURAR Bucovina Array 76.02 326⇓ *i* P P 09 20 06.6 -0.3
SMDO Samad 76.05 289 P P 09 20 09.1 +1.7
SNR=18
Y26A Elida 76.06 56 ⇓P P 09 20 07.0 -0.4
baz=76
HLG Helgoland 76.07 339 *e*P P 09 20 07.1 0.0
comp=Z,429nm,1.2s,mb6.2
HLG *e*S S 09 30 00.2 +13
HATD Hatta, Dubai 76.11 291 P P 09 20 08.6 +0.8
SNR=30
PTK Pertek 76.17 312 *e*P P 09 20 09.5 +1.6
HOQ Hoqain 76.18 289 P P 09 20 08.9 +0.7
SNR=21
ERBA Erbaa 76.20 314 *i* P P 09 20 09.0 +1.0
DIKM Dikmen 76.22 316 *e*P P 09 20 08.4 +0.3
ASHO Ashiyiah 76.25 291 P P 09 20 09.4 +0.8
SNR=35
NAZ Nazwa, Dubai 76.31 292 P P 09 20 09.2 +0.3
SNR=14
KSU1 Kansas State U 76.31 48 *e*P P 09 20 08.2 -0.6
comp=Z,53nm,0.8s,mb5.5
KSU1 LR LR
comp=Z,3μm,21.0s,MS5.5
UZH Uzhgorod 76.32 328 *e*P P 09 20 08.0 -0.6
UZH *e* pP 09 20 16.8 -4.9
UZH *e* pP 09 20 22.4 +0.7
UZH *e* 09 23 05.0
UZH *e* 09 24 51.8
UZH *e*S S 09 29 43.2 -6.6
UZH *e* 09 30 13.8
UZH MLR MLR
comp=N,3μm,17.0s,MS5.8
UZH MLR MLR
comp=E,1μm,17.0s,MS5.8
UZH MLR MLR
comp=Z,2μm,17.0s,MS5.6
UZH Uzhgorod 76.32 328 *i* P P 09 20 07.0 -1.6
KAR1 Arisaig 76.34 347 P P 09 20 08.6 0.0
KAR1 Arisaig 76.34 347⇑ *i* P P 09 20 08.6 0.0
KEMA Kemaliye 76.36 312 *i* P P 09 20 10.2 +1.2
224A Cornudas Mount 76.36 58 ⇓P P 09 20 07.8 -1.4
baz=76,SNR=8.0
NIE Niedzica 76.40 329 *e*P P 09 20 09.8 +0.8
CRVS Cervenica-Dubn 76.41 328 *e*P P 09 20 09.3 +0.2
CRVS pmax pmax
comp=Z,358nm,1.4s,mb6.1
CRVS Cervenica-Dubn 76.41 328 *e*P P 09 20 09.3 +0.2
comp=Z,358nm,1.4s,mb6.1
CRVS Cervenica-Dubn 76.41 328 *e*P P 09 20 09.3 +0.2
Z26A Caprock 76.43 56 ⇓P P 09 20 08.9 -0.6
baz=76,SNR=19
TLCR 76.46 322 ⇓P P 09 20 10.0 +0.5
TLCR 76.46 322⇓ *i* P P 09 20 10.0 +0.5
125A Gardner Draw, 76.47 57 ⇑P P 09 20 08.8 -0.9
baz=76,SNR=12
Y27A Causey 76.47 55 ⇑P P 09 20 09.0 -0.7
baz=76
JMDO Jabal Madar 76.48 288 P P 09 20 10.7 +0.8
SNR=31
DIYA Diyarbakir 76.50 311 *i* P P 09 20 11.0 +1.2
BOYT Boyabat 76.56 316 *i* P P 09 20 12.2 +2.1
KSP Ksiaz 76.57 332 *e*P P 09 20 10.4 +0.4
comp=Z,1μm,1.2s,mb6.7
KSP LMZ 09 58 02.6
comp=Z,10μm,19.9s
KSP Ksiaz 76.57 332⇑ *e*P P 09 20 09.6 -0.3
KSP *e* pP 09 20 22.2 -0.9
KSP *e* 09 22 58.5
KSP *e*S S 09 29 47.0 -5.4
KSP MLR MLR
comp=Z,12μm,19.7s,MS6.2
KSP Ksiaz 76.57 332⇑ *e*P P 09 20 09.6 -0.3
KSP *e*PcP PcP 09 20 22.2 +0.8
KSP *e*PP PP 09 22 58.5 -3.2
KSP *e*PPP 09 24 59.0
KSP *e*S S 09 29 47.0 -5.4
KSP *e*SS SS 09 34 41.0 -5.8
KSP LR LR
comp=Z,12μm,19.7s,MS6.2
RAC Raciborz 76.58 331 *e*P P 09 20 10.4 +0.4
RAC LR LR
comp=Z,3μm,17.0s,MS5.7
MARD Mardin 76.59 310 *i* P P 09 20 11.9 +1.6
JFWS Jewell Farm 76.59 42 *e*P P 09 20 08.8 -1.4
JFWS pmax pmax
comp=Z,43nm,1.2s,mb5.2
JFWS MLR MLR
comp=Z,3μm,22.0s,MS5.5
JFWS Jewell Farm 76.59 42 *e*P P 09 20 08.8 -1.4
comp=Z,43nm,1.2s,mb5.2
JFWS LR LR
comp=Z,3μm,22.0s,MS5.5
BZK Bozkurt 76.59 317 *e*P P 09 20 09.9 -0.4
BYBT Boyabat 76.59 316 *e*P P 09 20 11.4 +1.1
SVRC Sivrice-ELAZID 76.59 311 *e*P P 09 20 12.0 +1.6
EBH Black Hill 76.60 346 P P 09 20 09.9 -0.1
EBH Black Hill 76.60 346⇑ *i* P P 09 20 09.9 -0.1
TOKA Tokat 76.61 314 *i* P P 09 20 11.5 +1.2
AMTX Amarillo 76.61 54 *e*P P 09 20 11.7 +1.2
comp=Z,62nm,0.8s,mb5.6
AMTX LR LR
comp=Z,2μm,22.0s,MS5.3
SCER sogukcermik 76.62 314 *i* P P 09 20 11.9 +1.4
MSTX Muleshoe 76.64 55 ⇑P P 09 20 09.8 -0.9
baz=76,SNR=14
SVSK Karacayir 76.65 314 *e*P P 09 20 11.4 +0.8
BMR Baia Mare 76.65 327 P P 09 20 11.3 +0.8
CPRX Cap Rock 76.67 56 *e*P P 09 20 11.8 +0.9
comp=Z,22nm,1.0s,mb5.0
ELZG Elazig 76.68 312 *i* P P 09 20 12.5 +1.7
MNTX Cornudas Mount 76.72 58 *e*P P 09 20 12.1 +0.9
comp=Z,30nm,1.0s,mb5.2
MNTX *e* pP 09 20 24.5 +0.2
MNTX LR LR
comp=Z,828nm,20.0s,MS5.0
PETR 76.72 323 ⇓P P 09 20 12.1 +1.2
PETR 76.72 323⇓ *i* P P 09 20 12.1 +1.2
HMDM Hanimaadhoo 76.73 266 P P 09 20 13.4 +2.0
comp=Z,346nm,1.5s,mb6.1
225A Deer Hill, Car 76.76 58 ⇓P P 09 20 10.5 -0.9
baz=77
ESY Stoneypath 76.76 345 P P 09 20 10.9 -0.1
ESY Stoneypath 76.76 345⇑ *i* P P 09 20 10.9 -0.1
CFR Carcaliu 76.76 322 ⇑P P 09 20 11.4 +0.2
CFR Carcaliu 76.76 322⇑ *i* P P 09 20 11.4 +0.2
ASUD Al Ashush, Dub 76.77 292 P P 09 20 12.6 +1.0
SNR=14
EAB Aberfoyle 76.80 346 P P 09 20 11.2 0.0
EAB Aberfoyle 76.80 346⇑ *i* P P 09 20 11.2 0.0
OKC Ostrava-Krasne 76.81 331 *e*P P 09 20 11.4 +0.1
OKC *e*S S 09 29 53.3 -1.7
OKC MLR MLR
comp=Z,3μm,17.1s,MS5.6
OKC Ostrava-Krasne 76.81 331 *e*P P 09 20 11.4 +0.1
OKC *e*S S 09 29 53.3 -1.7
OKC *e*SS SS 09 35 24.7 +34
OKC Ostrava-Krasne 76.81 331 *e*P P 09 20 11.4 +0.1
OKC *e*S S 09 29 53.3 -1.7
OKC *ex* x 09 35 24.7
OKC AMS AMS 09 57 50.0
comp=Z,3μm,17.1s
VRI Vrincioaia 76.81 324 ⇑P P 09 20 11.9 +0.4
VRI Vrincioaia 76.81 324⇑ *i* P P 09 20 11.9 +0.5
BSY Bisya 76.83 289 P P 09 20 13.1 +1.2
SNR=31
324A Moseley Ranch, 76.83 59 ⇓P P 09 20 10.5 -1.4
baz=77
Z27A Tatum 76.85 56 ⇑P P 09 20 11.4 -0.5
baz=77,SNR=42
126A Clayton Basin, 76.86 57 ⇑P P 09 20 11.2 -0.7
baz=77
EDI Edinburgh 76.86 345 P P 09 20 10.9 -0.6
EDI AMb AMB 09 20 12.0
comp=Z,138nm,1.7s,mb5.6
EDI AMS AMS 10 04 30.1
comp=Z,1μm,17.6s
EDI Edinburgh 76.86 345 *e*P P 09 20 10.9 -0.6
EDI AMb AMB 09 20 12.0
comp=Z,138nm,1.7s,mb5.6
EDI AMS AMS 10 04 30.1
comp=Z,1μm,17.6s,MS5.3
PLOR Plostina 76.86 324 ⇑P P 09 20 12.4 +0.7
PLOR Plostina 76.86 324⇑ *i* P P 09 20 12.4 +0.7
ARQ Araqi 76.87 290 P P 09 20 13.0 +0.8
SNR=23
UPC Upice 76.95 332 P P 09 20 12.6 +0.5
UPC Upice 76.95 332 *e*P P 09 20 12.4 +0.3
DARE Darende-Malaty 76.95 313 *e*P P 09 20 16.3 +4.0
GDL2 Guadalupe Moun 76.97 57 *e*P P 09 20 13.5 +0.9
comp=Z,23nm,0.9s,mb5.1
EBL Broad Law 76.97 345 P P 09 20 12.2 0.0
EBL Broad Law 76.97 345⇑ *i* P P 09 20 12.2 0.0
EAU Auchinoon 76.98 346 P P 09 20 12.4 +0.2
EAU Auchinoon 76.98 346⇑ *i* P P 09 20 12.4 +0.2
DPC Dobruska-Polom 76.98 332 *e*P P 09 20 12.7 +0.4
DPC *e*S S 09 29 57.4 +0.5
DPC MLR MLR
comp=Z,5μm,19.5s,MS5.8
DPC Dobruska-Polom 76.98 332 *e*P P 09 20 12.7 +0.4
DPC *e*S S 09 29 57.4 +0.5
DPC *e*SS SS 09 35 27.2 +34
DPC LR LR
comp=Z,5μm,19.5s,MS5.8
DPC Dobruska-Polom 76.98 332 *e*P P 09 20 12.7 +0.4
DPC *e*S S 09 29 57.4 +0.5
DPC *ex* x 09 35 27.2
DPC AMS AMS 09 56 30.0
comp=Z,5μm,19.5s
MORC Moravsky Berou 77.06 331 *e*P P 09 20 12.9 +0.2
comp=Z,700nm,1.2s,mb6.5
MORC Moravsky Berou 77.06 331⇑ *i* P P 09 20 12.9 +0.1
MYA Malataya 77.10 312 *e*P P 09 20 14.9 +1.7
GRER 77.10 323 ⇓P P 09 20 14.8 +1.8
GRER 77.10 323⇓ *i* P P 09 20 14.8 +1.8
KECS Kecovo 77.12 329 *e*P P 09 20 13.4 +0.3
KECS pmax pmax
comp=Z,145nm,1.1s,mb5.8
KECS Kecovo 77.12 329 *e*P P 09 20 13.4 +0.3
comp=Z,144nm,1.1s,mb5.8
KECS Kecovo 77.12 329 *e*P P 09 20 13.4 +0.3
LIKS Likavka 77.14 330 *e*P P 09 20 14.1 +0.9
LIKS Likavka 77.14 330 *e*P P 09 20 14.0 +0.8
PGBU Glenifferbraes 77.19 346 P P 09 20 13.5 +0.2
PGBU AMb AMB 09 20 15.0
comp=Z,450nm,1.6s,mb6.1
PGBU AMS AMS 09 58 57.6
comp=Z,1μm,18.6s
PGBU Glenifferbraes 77.19 346⇑ *i* P P 09 20 13.5 +0.2
PGBU AMb AMB 09 20 15.0
comp=Z,450nm,1.6s,mb6.1
PGBU AMS AMS 09 58 57.6
comp=Z,1μm,18.6s,MS5.2
325A Bean Ranch, Si 77.19 58 ⇓P P 09 20 13.4 -0.4
baz=77,SNR=8.0
CLL Collm 77.20 335 *e*P P 09 20 12.9 -0.6
comp=Z,759nm,1.2s,mb6.5
CLL *e*S S 09 30 08.8 +9.5
CLL Collm 77.20 335⇑ *i* P P 09 20 13.4 -0.1
comp=Z,754nm,1.2s,mb6.5
CLL *e*S S 09 29 52.0 -7.3
CLL LR LR
comp=Z,6μm,19.6s,MS6.0
CLL Collm 77.20 335⇑ *i* P P 09 20 13.4 -0.1
comp=Z,754nm,1.2s,mb6.5
CLL *e*PcP PcP 09 20 24.0 -0.1
CLL *e*pPcP pP 09 20 30.0 +3.4
CLL *e* 09 21 42.0
CLL *e*PP PP 09 23 06.0 -1.0
CLL *e*S S 09 30 04.0 +4.7
CLL *e*PS 09 30 42.0
CLL *e* 09 31 54.0
CLL *e*SS SS 09 35 12.0 +16
CLL *e*SSS 09 38 36.0
CLL *e* 09 39 18.0
CLL Lm 09 57 00.0
comp=N,4μm,20.2s
CLL Lm 09 57 00.0
comp=E,2μm,18.6s
CLL Lm 09 57 00.0
comp=Z,6μm,19.6s
CLNB Carlsbad 77.21 57 *e*P P 09 20 14.6 +0.7
comp=Z,9.0nm,1.2s,mb4.6
BALT Daday 77.21 317 *i* P P 09 20 15.1 +1.4
TIRR Tirgusor 77.22 322 ⇓P P 09 20 13.7 0.0
TIRR Tirgusor 77.22 322 *e*P P 09 20 13.2 -0.5
comp=Z,388nm,1.2s,mb6.2
TIRR Tirgusor 77.22 322⇓ *i* P P 09 20 13.7 0.0
226A Malaga, Loving 77.22 57 ⇑P P 09 20 13.8 -0.2
baz=77,SNR=15
CTKT Corum 77.22 316 *i* P P 09 20 15.2 +1.4
STKA Stephens Creek 77.29 188 *e*P P 09 20 15.0 +1.0
comp=Z,18nm,0.8s,mb5.0
STKA *e*S S 09 30 01.2 +0.9
STKA Stephens Creek 77.29 188 P P 09 20 15.3 +1.3
comp=Z,8.2nm,0.9s,mb4.7,baz=1.7,slow=7.2,SNR=12
STKA LR LR 09 51 23.0
comp=Z,2μm,21.4s,MS5.4,baz=7.2,slow=33
STKA Stephens Creek 77.29 188 *e*P P 09 20 15.8 +1.8
comp=Z,61nm,2.0s,mb5.2
STKA *e* pP 09 20 29.1 +2.0
TOS Tosya 77.29 316 *e*P P 09 20 15.8 +1.7
BRG Berggiesshubel 77.29 334 *e*P P 09 20 13.6 -0.4
comp=Z,302nm,1.4s,mb6.0
BRG Berggiesshubel 77.29 334⇑ *i* P P 09 20 13.9 -0.1
comp=Z,302nm,1.4s,mb6.0
BRG *i* 09 29 55.0
BRG
comp=N,3μm,16.2s
BRG
comp=E,3μm,15.5s
BRG
comp=Z,4μm,16.1s
BRG Berggiesshubel 77.29 334⇑ *i* P P 09 20 13.9 -0.1
BRG *i* 09 29 55.0
BRG pmax pmax
comp=Z,181nm,1.4s,mb5.8
BRG MLR MLR
comp=N,2μm,16.2s,MS5.6
BRG MLR MLR
comp=E,2μm,15.5s,MS5.6
BRG MLR MLR
comp=Z,3μm,16.1s,MS5.7
BRG Berggiesshubel 77.29 334⇑ *i* P P 09 20 13.9 -0.1
comp=Z,181nm,1.4s,mb5.8
BRG *i* 09 29 55.0
BRG LR LR
comp=Z,3μm,16.1s,MS5.7
AKCD Akcadag 77.38 312 *i* P P 09 20 16.8 +2.0
PVCC Panska Ves 77.39 333 *e*P P 09 20 15.0 +0.4
PVCC MLR MLR
comp=Z,8μm,18.1s,MS6.1
PVCC Panska Ves 77.39 333 *e*P P 09 20 15.0 +0.4
PVCC LR LR
comp=Z,8μm,18.1s,MS6.1
PVCC Panska Ves 77.39 333 *e*P P 09 20 15.0 +0.4
PVCC AMS AMS 09 57 50.0
comp=Z,8μm,18.1s
ILGA Ilgaz 77.42 317 *i* P P 09 20 16.6 +1.7
ESK Eskdalemuir 77.44 345 P P 09 20 14.0 -0.7
comp=Z,769nm,1.3s,mb6.5,SNR=20
ESK Eskdalemuir 77.44 345 P P 09 20 14.7 0.0
ESK AMb AMB 09 20 15.6
comp=Z,200nm,1.5s,mb5.8
ESK AMS AMS 10 01 20.3
comp=Z,2μm,18.1s
ESK Eskdalemuir 77.44 345⇑ *i* P P 09 20 14.7 0.0
ESK AMb AMB 09 20 15.6
comp=Z,200nm,1.5s,mb5.8
ESK AMS AMS 10 01 20.3
comp=Z,2μm,18.1s,MS5.5
ESK Eskdalemuir 77.44 345 *i* P P 09 20 15.2 +0.5
ESK Eskdalemuir 77.44 345 *e*P P 09 20 14.4 -0.4
comp=Z,288nm,1.4s,mb6.0
ESK LR LR
comp=Z,1μm,21.0s,MS5.3
MLR Muntele Rosu 77.44 324 ⇑P P 09 20 15.3 +0.4
MLR Muntele Rosu 77.44 324⇑ *i* P P 09 20 15.3 +0.3
CVD Cernavoda 77.49 322 ⇓P P 09 20 16.2 +0.9
CVD Cernavoda 77.49 322⇓ *i* P P 09 20 16.1 +0.8
BHD Baghdad 77.50 305 *ex* x 09 20 11.0
BHD *ex* x 09 20 22.0
BHD *ex* x 09 30 00.0
BHD *ex* x 09 30 20.0
URFA Urfa 77.55 311 *e*P P 09 20 16.8 +1.1
ECK Cauldkaine Hil 77.55 345 P P 09 20 15.4 0.0
ECK Cauldkaine Hil 77.55 345⇑ *i* P P 09 20 15.4 0.0
AMRR Amara 77.56 323 P P 09 20 16.7 +1.1
425A Indio Mountain 77.60 59 ⇑P P 09 20 15.8 -0.3
baz=77,SNR=16
WIT Witteveen 77.63 339⇑ *i* P P 09 20 17.0 +1.2
comp=Z,2μm,1.4s,mb6.8
CORM Corum 77.64 315 *e*P P 09 20 17.3 +1.1
DRGR 77.68 327 ⇑P P 09 20 16.5 +0.2
DRGR 77.68 327⇑ *i* P P 09 20 16.5 +0.2
XAL Allendale 77.69 345 P P 09 20 16.1 -0.1
XAL Allendale 77.69 345⇑ *i* P P 09 20 16.1 -0.1
VYHS Vyhne 77.70 330 *e*P P 09 20 16.6 +0.2
VYHS pmax pmax
comp=Z,299nm,1.3s,mb6.1
VYHS Vyhne 77.70 330 *e*P P 09 20 16.6 +0.2
comp=Z,299nm,1.3s,mb6.1
VYHS Vyhne 77.70 330 *e*P P 09 20 16.6 +0.2
SARI SarD1z-Kayseri 77.73 313 *e*P P 09 20 19.8 +3.1
227A Bennet, Jal 77.74 57 ⇑P P 09 20 17.1 +0.3
baz=78
SAFT Safranbolu 77.78 317 *e*P P 09 20 17.6 +0.7
VRAC Vranov 77.78 331 ⇑P P 09 20 17.3 +0.5
VRAC Vranov 77.78 331⇑ *i* P P 09 20 17.3 +0.5
IBBN Ibbenburen 77.80 338 *e*P P 09 20 16.7 -0.1
comp=Z,666nm,1.5s,mb6.3
ATAB Bozova 77.80 311 *i* P P 09 20 18.8 +1.7
PSZ Piszkesteto 77.81 329 PFAKE 09 20 30.0 +13
PSZ LR LR
comp=Z,6μm,19.0s,MS6.0
CANT Cankiri 77.81 316 *e*P P 09 20 18.2 +1.0
326A Caldwell Ranch 77.83 58 ⇑P P 09 20 16.7 -0.6
baz=78,SNR=13
VOIR 77.85 324 ⇑P P 09 20 17.9 +0.6
VOIR 77.85 324⇑ *i* P P 09 20 17.9 +0.6
PRU Pruhonice 77.87 333 *e*P P 09 20 18.1 +0.8
PRU *e*S S 09 30 08.0 +1.4
PRU MLR MLR
comp=Z,7μm,18.3s,MS6.0
PRU Pruhonice 77.87 333 *e*P P 09 20 18.1 +0.8
PRU *e*S S 09 30 08.0 +1.4
PRU *e*SS SS 09 35 42.3 +36
PRU LR LR
comp=Z,7μm,18.3s,MS6.0
PRU Pruhonice 77.87 333 *e*P P 09 20 18.1 +0.8
PRU *e*S S 09 30 08.0 +1.4
PRU *ex* x 09 35 42.3
PRU AMS AMS 09 58 10.0
comp=Z,7μm,18.3s
PINB Pinarbasi 77.89 313 *i* P P 09 20 18.9 +1.4
PSN Preselentsi 77.93 321 P P 09 20 18.5 +0.8
ELDT Eldivan 78.00 316 *i* P P 09 20 19.2 +1.0
GCD Castle Douglas 78.00 346 P P 09 20 17.9 0.0
GCD Castle Douglas 78.00 346⇑ *i* P P 09 20 17.9 0.0
GAL1 Galloway 78.13 346 P P 09 20 18.5 -0.1
GAL1 AMb AMB 09 20 19.3
comp=Z,253nm,1.4s,mb6.0
GAL1 AMS AMS 09 59 35.1
comp=Z,1μm,17.8s
GAL1 Galloway 78.13 346⇑ *i* P P 09 20 18.5 -0.1
GAL1 AMb AMB 09 20 19.3
comp=Z,253nm,1.4s,mb6.0
GAL1 AMS AMS 09 59 35.1
comp=Z,1μm,17.8s,MS5.3
TANN Tannenbergstha 78.15 334 *e*P P 09 20 18.7 -0.1
comp=Z,330nm,1.6s,mb6.0
TANN *e*S S 09 30 10.0 +0.4
TANN Tannenbergstha 78.15 334 P P 09 20 18.8 0.0
TREC Trest 78.17 332 *e*P P 09 20 19.1 +0.2
TREC *e*S S 09 30 08.6 -1.2
TREC MLR MLR
comp=Z,6μm,20.8s,MS5.9
TREC Trest 78.17 332 *e*P P 09 20 19.1 +0.2
TREC *e*S S 09 30 08.6 -1.2

TREC ex x 09 35 51.9
TREC AMS AMS 09 57 30.0
comp=Z,6µm,20.8s
WERD Werda 78.17 335 *e*P **P 09 20 18.9 0.0**
comp=Z,457nm,1.5s,mb6.2
CDAG Cicekdag 78.19 315 *i* P **P 09 20 20.1 +0.9**
MOX Moxa 78.20 335⇑*i*P **P 09 20 19.1 0.0**
comp=Z,840nm,2.1s,mb6.3
MOX *e*S S 09 30 08.0 -2.1
MOX
comp=Z,5µm,21.0s
MOX Moxa 78.20 335 *e*P **P 09 20 19.0 -0.1**
comp=Z,467nm,1.4s,mb6.2
MOX *e*S S 09 30 09.2 -0.9
MOX Moxa 78.20 335 P **P 09 20 19.3 +0.2**
MOX Moxa 78.20 335⇑*i*P **P 09 20 19.1 0.0**
comp=Z,840nm,2.1s,mb6.3
MOX *e*S S 09 30 08.0 -2.1
MOX LR LR
comp=Z,5µm,21.0s,MS5.8
GUNZ Gunzen 78.23 334 *e*P **P 09 20 19.5 +0.2**
comp=Z,433nm,1.4s,mb6.2
426A McDonald Obser 78.26 58 ⇓P **P 09 20 19.3 -0.5**
baz=78,SNR=14
XDE Dent Fell 78.26 345 P **P 09 20 18.9 -0.4**
XDE Dent Fell 78.26 345⇑*i*P **P 09 20 18.9 -0.4**
GZT Gaziantep 78.28 312 *i* P **P 09 20 21.1 +1.4**
NKC Novy Kostel 78.31 334 *e*P **P 09 20 20.0 +0.3**
NKC MLR MLR
comp=Z,6µm,17.7s,MS6.0
NKC Novy Kostel 78.31 334 *e*P **P 09 20 20.0 +0.3**
NKC AMS AMS 09 59 10.0
comp=Z,6µm,17.7s
WMOK Wichita Mounta 78.35 52 *e*P **P 09 20 20.3 +0.1**
WMOK pmax pmax
comp=Z,42nm,1.1s,mb5.3
WMOK MLR MLR
comp=Z,2µm,21.0s,MS5.3
WMOK Wichita Mounta 78.35 52 *e*P **P 09 20 20.2 0.0**
comp=Z,42nm,1.1s,mb5.3
WMOK LR LR
comp=Z,2µm,21.0s,MS5.3
WTSB Winterswijk 78.36 338⇑*i*P **P 09 20 20.0 +0.1**
comp=Z,471nm,1.1s,mb6.3
HPK Haverah Park 78.43 344 P **P 09 20 20.5 +0.3**
HPK AMb AMB 09 20 21.5
comp=Z,523nm,1.3s,mb6.3
HPK AMS AMS 10 02 36.4
comp=Z,1µm,16.5s
HPK Haverah Park 78.43 344⇑*i*P **P 09 20 20.5 +0.3**
HPK AMb AMB 09 20 21.5
comp=Z,523nm,1.3s,mb6.3
HPK AMS AMS 10 02 36.4
comp=Z,1µm,16.5s,MS5.4
KBD Kabd 78.45 300 *e*P **P 09 20 21.3 +0.5**
KBD AMb AMB 09 20 22.2
comp=Z,274nm,1.0s,mb6.1
328A Wristen Ranch, 78.48 57 ⇓P **P 09 20 20.3 -0.6**
baz=78,SNR=18
BR131 Keskin Array S 78.48 316 *e*P **P 09 20 21.3 +0.5**
comp=Z,185nm,1.1s,mb5.9
BR131 LR LR
comp=Z,3µm,19.0s,MS5.6
BRTR Keskin Array B 78.48 316 P **P 09 20 21.4 +0.6**
comp=Z,165nm,1.1s,mb5.9,baz=64,slow=3.1,SNR=253
BRTR LR LR 10 00 07.5
comp=Z,3µm,19.4s,MS5.6,baz=50,slow=40
BUD Budapest 78.49 329⇑*e*PcP **P 09 20 17.8 -2.9**
427A Hayter Ranch, 78.51 58 ⇑P **P 09 20 20.9 -0.2**
baz=78
KMRS Kahramanmaras 78.51 312 *e*P **P 09 20 22.1 +1.1**
UBBA Unterbreizbach 78.52 336 *e*P **P 09 20 20.3 -0.5**
comp=Z,355nm,1.5s,mb6.1
UBBA *e*S S 09 30 12.2 -1.3
ZST Bratislava 78.56 331 *e*P **P 09 20 22.5 +1.4**
ZST pmax pmax
comp=Z,218nm,1.1s,mb6.0
ZST Bratislava 78.56 331 *e*P **P 09 20 22.5 +1.4**
comp=Z,218nm,1.1s,mb6.0
ZST Bratislava 78.56 331 *e*P **P 09 20 22.5 +1.4**
SGKT Sivrigoynuk 78.59 317 *i* P **P 09 20 22.7 +1.2**
526A Mary Lane Ranc 78.66 59 ⇑P **P 09 20 21.6 -0.4**
baz=78,SNR=16
PRD Provadia 78.66 322 P **P 09 20 22.5 +0.7**
NAY Al-Naaiem 78.67 300 *e*P **P 09 20 22.4 +0.3**
NAY AMb AMB 09 20 25.9
comp=Z,263nm,1.6s,mb5.9
RDF Al-Radifah 78.71 300 *e*P **P 09 20 23.0 +0.7**
RDF AMb AMB 09 20 27.8
comp=Z,789nm,1.3s,mb6.5
BUG Bochum--Univer 78.72 338 *e*P **P 09 20 21.8 -0.1**
comp=Z,658nm,1.3s,mb6.4
BUG *e*S S 09 30 14.3 -1.3
LOD Lodumlu 78.78 316 *e*P **P 09 20 23.3 +0.8**
GZR Gura Zlata 78.81 326 ⇓P **P 09 20 23.1 +0.5**
GZR Gura Zlata 78.81 326⇓*i*P **P 09 20 23.0 +0.5**
HDIL Hopedale 78.87 42 *e*P **P 09 20 22.1 -0.8**
comp=Z,96nm,0.6s,mb5.9
HDIL LR LR
comp=Z,2µm,21.0s,MS5.4
BBAL Bala 78.87 316 *i* P **P 09 20 23.9 +0.9**
527A Woodward Ranch 78.89 58 ⇓P **P 09 20 23.0 -0.2**
baz=79,SNR=9.5
KHC Kasperske Hory 78.93 333 *e*P **P 09 20 23.6 +0.5**
KHC *e* 09 20 31.0
KHC *e*S S 09 30 18.1 +0.1
KHC MLR MLR
comp=Z,9µm,17.4s,MS6.1
KHC Kasperske Hory 78.93 333 *e*P **P 09 20 23.6 +0.5**
KHC *e* 09 20 31.0
KHC *e* 09 21 23.5
KHC *e*S S 09 30 18.1 +0.1
KHC *e*SS SS 09 35 57.9 +36
KHC LR LR
comp=Z,9µm,17.4s,MS6.1
KHC Kasperske Hory 78.93 333 *e*P **P 09 20 23.6 +0.5**
KHC *e*PCP PcP 09 20 31.0 -0.6
KHC *e*x x 09 21 23.5
KHC *e*S S 09 30 18.1 +0.1
KHC *e*x x 09 35 57.9
KHC AMS AMS 09 59 00.0
comp=Z,9µm,17.4s
GMM Mts of Mourne 78.94 347 P **P 09 20 22.8 -0.3**
GMM Mts of Mourne 78.94 347⇑*i*P **P 09 20 22.8 -0.3**
HENT Hendek 78.95 318 *i* P **P 09 20 23.3 -0.1**
KUZU Kuzuini 78.97 312 *i* P **P 09 20 24.7 +1.2**
626A Big Bend Ranch 78.99 59 ⇑P **P 09 20 23.3 -0.6**
baz=79,SNR=18
428A Kincaid Ranch, 79.02 57 ⇓P **P 09 20 23.1 -0.9**
baz=79
KBI1 Birley Grange 79.08 344 P **P 09 20 24.2 +0.3**
KBI1 Birley Grange 79.08 344⇑*i*P **P 09 20 24.2 +0.3**
BZS Buzias 79.08 327 ⇑P **P 09 20 23.8 -0.3**
BZS Buzias 79.08 327⇑*i*P **P 09 20 23.8 -0.2**
MDU Mudurnu 79.08 318 *e*P **P 09 20 24.5 +0.4**
KOZT Kozan 79.09 313 *e*P **P 09 20 25.1 +0.9**
AEU East Anglia Un 79.09 342 P **P 09 20 24.0 0.0**
AEU East Anglia Un 79.09 342⇑*e*P **P 09 20 24.0 0.0**
WET Wettzell 79.14 334 *e*P **P 09 20 24.6 +0.3**
comp=Z,644nm,1.3s,mb6.4
WET *e*S S 09 30 19.8 -0.4
WET Wettzell 79.14 334 P **P 09 20 24.5 +0.2**
GRF Grafenberg Arr 79.16 335 *e*P **P 09 20 24.7 +0.3**
comp=Z,999nm,1.3s,mb6.6
GRF *e*S S 09 30 19.6 -0.8
GRF *e*L 09 58 44.2
comp=Z,7µm,19.7s
GRFO Grafenberg 79.17 335 *e*S S 09 30 19.6 -0.9
ZIMR 79.17 323 ⇑P **P 09 20 25.2 +0.7**
ZIMR 79.17 323⇑*i*P **P 09 20 25.2 +0.7**
CONA Conrad Observa 79.22 331 *i* P **P 09 20 25.4 +0.7**
comp=Z,487nm,1.4s,mb6.2,SNR=185
SZH Strazhica 79.24 323 P **P 09 20 24.7 -0.2**
CRAR CRAIOVA 79.28 324 ⇑P **P 09 20 25.9 +0.8**
CRAR CRAIOVA 79.28 324⇑*i*P **P 09 20 25.9 +0.8**
RAO Raoul Island 79.36 153 PFAKE 09 20 40.0 +14
RAO LR LR
comp=Z,4µm,20.0s,MS5.7
KWE Weaver Farm 79.36 344 P **P 09 20 25.6 +0.2**
KWE Weaver Farm 79.36 344⇑*e*P **P 09 20 25.6 +0.2**
528A Cox Ranch, San 79.37 58 ⇑P **P 09 20 24.4 -1.4**
baz=79,SNR=8.9
TXAR Lajitas Array 79.44 59 P **P 09 20 25.5 -0.8**
comp=Z,1.3nm,0.4s,baz=319,slow=12,SNR=45
TXAR pP pP 09 20 39.1 -0.3
comp=Z,38nm,0.8s,baz=302,slow=4.1,SNR=22
TXAR PKPPKP 09 47 21.4
comp=Z,0.6nm,1.0s,baz=120,slow=4.5,SNR=4.3
TXAR Lajitas Array 79.44 59 P **P 09 20 25.5 -0.7**
TXAR *PP pP 09 20 39.1 -0.3
TXAR Lajitas Array 79.44 59 P **P 09 20 25.5 -0.8**
TXAR pP pP 09 20 39.1 -0.3
TXAR P'P' 09 47 21.4
GULT Gulveren 79.44 318 *e*P **P 09 20 26.4 +0.3**
WME Myndd Eilian 79.47 345 P **P 09 20 25.8 -0.2**
WME Myndd Eilian 79.47 345⇑*e*P **P 09 20 25.8 -0.2**
CEYT Ceyhan 79.48 313 *e*P **P 09 20 27.1 +0.7**
TNS Taunus Mts 79.50 337 *e*P **P 09 20 26.3 +0.1**
comp=Z,635nm,1.3s,mb6.4
TNS *e*S S 09 30 25.8 +1.9
627A Terlingua Ranc 79.52 59 ⇓P **P 09 20 25.0 -1.7**
baz=79,SNR=12
CWF Charnwood Fore 79.52 343 P **P 09 20 26.2 -0.1**
CWF AMb AMB 09 20 28.1
comp=Z,297nm,1.6s,mb6.0
CWF AMS AMS 09 58 09.7
comp=Z,2µm,21.9s
CWF Charnwood Fore 79.52 343⇑*e*P **P 09 20 26.2 -0.1**
CWF AMb AMB 09 20 28.1
comp=Z,297nm,1.6s,mb6.0
CWF AMS AMS 09 58 09.7
comp=Z,2µm,21.9s,MS5.3
WPM1 Penmaenmawr 79.53 345 P **P 09 20 26.3 0.0**
WPM1 Penmaenmawr 79.53 345⇑*i*P **P 09 20 26.3 0.0**
HRT Hereke 79.53 319 *e*P **P 09 20 26.8 +0.2**
PVL Pavlikeni 79.54 323 P **P 09 20 27.0 +0.4**
WLF1 Llynfaes 79.58 345 P **P 09 20 26.4 -0.2**
WLF1 AMb AMB 09 20 27.3
comp=Z,496nm,1.6s,mb6.2
WLF1 Llynfaes 79.58 345⇑*e*P **P 09 20 26.4 -0.2**
WLF1 AMb AMB 09 20 27.3
comp=Z,496nm,1.6s,mb6.2
JMB Yambol 79.61 322 P **P 09 20 27.5 +0.6**
JMB Yambol 79.61 322 P **P 09 20 27.5 +0.6**
JMB Yambol 79.61 322 P **P 09 20 27.7 +0.8**
ISK Istanbul-Kandi 79.61 319 *e*P **P 09 20 26.6 -0.4**
KARA Karaisali 79.65 313 *e*P **P 09 20 28.0 +0.7**
HGN Heimansgroeve 79.68 338⇑*i*P **P 09 20 26.8 -0.4**
comp=Z,448nm,1.2s,mb6.3
HGN Heimansgroeve 79.68 338 *e*S S 09 30 21.8 -4.1
YURE YUREGIR 79.69 313 *i* P **P 09 20 29.2 +1.7**
YLL Llanberis 79.69 345 P **P 09 20 27.3 +0.2**
YLL Llanberis 79.69 345⇑*e*P **P 09 20 27.3 +0.2**
SULT Sultanhani-AKS 79.71 315 *e*P **P 09 20 28.4 +0.7**
BEBN Eben Emael 79.72 339 P **P 09 20 27.6 +0.3**
comp=Z,116nm,1.4s,mb5.6
SVRH Sivrihisar-ESK 79.73 317 *e*P **P 09 20 27.6 -0.1**
CTKS Kestanelik-??a 79.73 320 *e*P **P 09 20 26.4 -1.3**
GULE Gulek 79.78 313 *i* P **P 09 20 29.3 +1.3**
628A Black Gap, Mar 79.80 58 ⇓P **P 09 20 27.3 -0.9**
baz=80
ADVT Abdulvahap 79.80 319 *e*P **P 09 20 28.1 +0.1**
MEM Membach 79.81 338 P **P 09 20 27.9 0.0**
comp=Z,291nm,1.4s,mb6.0
MOA Molln 79.82 332 P **P 09 20 28.0 0.0**
MOA Molln 79.82 332 *i* P **P 09 20 28.2 +0.2**
comp=Z,158nm,1.5s,mb5.7,SNR=65
ELBA Catalca 79.84 320 *i* P **P 09 20 28.6 +0.4**
RAR Rarotonga 79.84 134 PFAKE 09 20 40.0 +12
RAR LR LR
comp=Z,3µm,19.0s,MS5.7
CCM Cathedral Cave 79.85 45 *e*P **P 09 20 27.1 -1.3**
CCM pmax pmax
comp=Z,61nm,0.9s,mb5.5
CCM MLR MLR
comp=Z,2µm,21.0s,MS5.4
CCM Cathedral Cave 79.85 45 *e*P **P 09 20 27.1 -1.3**
comp=Z,61nm,0.9s,mb5.5
CCM LR LR
comp=Z,2µm,21.0s,MS5.4
YLV Yalova 79.87 319 *e*P **P 09 20 28.3 -0.1**
YRE Yr Eifl 79.89 345 P **P 09 20 28.1 -0.1**
YRE Yr Eifl 79.89 345⇑*i*P **P 09 20 28.1 -0.1**
SLM Saint Louis 79.90 44 *e*P **P 09 20 28.2 -0.4**
SLM pmax pmax
comp=Z,82nm,0.9s,mb5.7
SLM Saint Louis 79.90 44 *e*P **P 09 20 28.1 -0.5**
comp=Z,82nm,0.9s,mb5.7
ARSA Arzberg 79.92 331 P **P 09 20 28.9 +0.3**
ARSA Arzberg 79.92 331 *i* P **P 09 20 29.0 +0.4**
comp=Z,236nm,1.5s,mb5.9,SNR=63
CAVI Cavuskoy 79.93 318 *e*P **P 09 20 29.2 +0.5**
TOD Tromm 79.95 336 *e*P **P 09 20 28.8 +0.1**
DSB Dublin 79.97 346 *e*P **P 09 20 28.5 -0.2**
comp=Z,321nm,1.5s,mb6.0
ESKT Eskisehir 79.99 317 *e*P **P 09 20 29.8 +0.7**
ESKT Eskisehir 79.99 317 *i* P **P 09 20 29.2 +0.1**
KIZT Kizilcal 80.00 316 *e*P **P 09 20 29.1 0.0**
KRTS Karatas 80.01 313 *e*P **P 09 20 29.8 +0.5**
EDRB Edirne 80.03 321 *e*P **P 09 20 29.4 +0.2**
YAYL Yayladag 80.04 312 *i* P **P 09 20 30.5 +1.1**
HLM1 Long Mynd 80.04 344 P **P 09 20 29.1 0.0**
HLM1 Long Mynd 80.04 344⇑*e*P **P 09 20 29.1 0.0**
AAM Ann Arbor 80.05 38 *e*P **P 09 20 29.0 -0.3**
AAM pmax pmax
comp=Z,69nm,1.2s,mb5.5
AAM MLR MLR
comp=Z,2µm,19.0s,MS5.5
AAM Ann Arbor 80.05 38 *e*P **P 09 20 29.0 -0.3**
comp=Z,69nm,1.2s,mb5.5
AAM LR LR
comp=Z,2µm,19.0s,MS5.5
UCC Uccle 80.05 339 P **P 09 20 29.3 +0.1**
comp=Z,107nm,1.4s,mb5.6
ABH Alteburg 80.05 337 *e*P **P 09 20 29.3 +0.1**
GEMT Gemlik 80.06 319 *e*P **P 09 20 29.1 -0.3**
ARMT Armutlu 80.10 319 *e*P **P 09 20 29.4 -0.3**
BCLA Clavier 80.16 339 P **P 09 20 29.8 +0.1**
comp=Z,254nm,1.5s,mb5.9
MERS Mersin 80.23 313 *e*P **P 09 20 30.9 +0.5**
CAN Canberra 80.26 182 PFAKE 09 20 40.0 +10
CAN LR LR
comp=Z,3µm,22.0s,MS5.5
LADK Ladik-KONYA 80.29 316 *e*P **P 09 20 31.1 +0.4**
ULDT Uludag 80.31 319 *i* P **P 09 20 31.3 +0.5**
FVM French Village 80.31 45 *e*P **P 09 20 30.6 -0.3**
FVM pmax pmax
comp=Z,64nm,0.9s,mb5.5
FVM French Village 80.31 45 *e*P **P 09 20 30.6 -0.3**
comp=Z,64nm,0.9s,mb5.5
SNF Seneffe 80.34 339 P **P 09 20 31.0 +0.3**
comp=Z,240nm,1.7s,mb5.8
KOGS Kog 80.36 330 *i* P **P 09 20 30.8 -0.2**
SVIS Svilajnac 80.36 326 P **P 09 20 30.9 -0.1**
DIM Dimitrovgrad 80.40 322 P **P 09 20 31.9 +0.7**
RJOB Jochberg 80.40 333 *e*P **P 09 20 31.6 +0.5**
comp=Z,251nm,1.3s,mb6.0
RJOB *e*S S 09 30 32.6 -1.0
KTD Kalmit 80.41 336 *e*P **P 09 20 31.2 0.0**
KONT Konya--Tatoy 80.49 315 *e*P **P 09 20 32.0 +0.3**
FUR Furstenfeldbru 80.50 334 *e*P **P 09 20 31.8 +0.1**
comp=Z,678nm,1.3s,mb6.4
FUR *e*S S 09 30 30.3 -4.3
FUR Furstenfeldbru 80.50 334 P **P 09 20 32.1 +0.4**
HTR Trewern Hill 80.53 344 P **P 09 20 32.0 +0.2**
HTR Trewern Hill 80.53 344⇑*i*P **P 09 20 32.0 +0.2**
MCH1 Michaelchurch 80.56 344 P **P 09 20 32.0 +0.1**
MCH1 AMb AMB 09 20 33.0
comp=Z,338nm,1.4s,mb6.1
MCH1 Michaelchurch 80.56 344⇑*i*P **P 09 20 32.0 +0.1**
MCH1 AMb AMB 09 20 33.0
comp=Z,338nm,1.4s,mb6.1
BOLV Bolvadin 80.57 317 *i* P **P 09 20 33.0 +0.8**
GIVF Givet 80.58 339⇑*i*P **P 09 20 32.1 +0.1**
comp=Z,860nm,1.4s,mb6.2
GIVF Givet 80.58 339⇑*i*P **P 09 20 32.1 +0.1**
GIVF pmax pmax
comp=Z,430nm,1.4s,mb6.2
GIVF Givet 80.58 339⇑*i*P **P 09 20 32.1 +0.1**
comp=Z,430nm,1.4s,mb6.2
PGB Panagyurishte 80.58 323 P **P 09 20 32.3 +0.1**
SOKA Soboth 80.59 331⇑*i*P **P 09 20 32.3 +0.2**
comp=Z,392nm,1.3s,mb6.2
STU Stuttgart 80.59 336 *e*P **P 09 20 32.1 0.0**
comp=Z,446nm,1.3s,mb6.2
STU *e*S S 09 30 35.9 +0.4
STU Stuttgart 80.59 336 *e*P **P 09 20 32.1 0.0**
STU pmax pmax
comp=Z,369nm,1.3s,mb6.2
STU Stuttgart 80.59 336 *e*P **P 09 20 32.0 -0.1**
comp=Z,370nm,1.3s,mb6.2
MORW Morawa 80.59 211 *e*P **P 09 20 31.9 -0.3**
PERS Pernice 80.59 331 *i* P **P 09 20 32.3 +0.1**
WLF Walferdange 80.63 338 P **P 09 20 32.7 +0.4**
comp=Z,202nm,2.1s,mb5.7
WLF Walferdange 80.63 338 *e*P **P 09 20 32.5 +0.2**
comp=Z,412nm,1.5s,mb6.1
WLF *e*S S 09 30 35.6 -0.3
WLF Walferdange 80.63 338 *e*P **P 09 20 32.3 0.0**
comp=Z,470nm,1.6s,mb6.2
WLF LR LR
comp=Z,4µm,20.0s,MS5.8
DOU Dourbes 80.64 339 P **P 09 20 32.5 +0.1**
comp=Z,163nm,1.7s,mb5.7
MFT Murefte 80.65 320 *e*P **P 09 20 32.8 +0.2**
BNT Bandirma 80.70 320 *e*P **P 09 20 33.2 +0.3**
ALT Altintas 80.71 317 *e*P **P 09 20 33.3 +0.3**
PLD Plovdiv 80.71 323 P **P 09 20 32.7 -0.2**
PLD Plovdiv 80.71 323 P **P 09 20 32.7 -0.2**
PLD Plovdiv 80.71 323 P **P 09 20 33.0 +0.1**
BAIF Baives 80.77 339⇑*i*P **P 09 20 33.2 +0.1**
comp=Z,774nm,1.4s,mb6.1
BAIF Baives 80.77 339⇑*i*P **P 09 20 33.2 +0.1**
comp=Z,387nm,1.4s,mb6.1
SART Tekirdag 80.77 320 *i* P **P 09 20 33.7 +0.4**
RKY Sarkoy-Tekirda 80.78 320 *e*P **P 09 20 33.3 0.0**
KDZ Kurdzhali 80.78 322 P **P 09 20 33.7 +0.4**
SWN1 Swindon 80.78 343 P **P 09 20 33.4 +0.3**
SWN1 AMb AMB 09 20 34.4
comp=Z,676nm,1.3s,mb6.4
SWN1 AMS AMS 10 04 46.2
comp=Z,2µm,16.8s
SWN1 Swindon 80.78 343⇑*e*P **P 09 20 33.4 +0.3**
SWN1 AMb AMB 09 20 34.4
comp=Z,676nm,1.3s,mb6.4
SWN1 AMS AMS 10 04 46.2
comp=Z,2µm,16.8s,MS5.5
LANF Langenberg 80.80 336 *e*P **P 09 20 33.5 +0.3**
ZAVS Zavodnje 80.80 331 P **P 09 20 29.3 -4.0**
KBA Koelnbreinsper 80.80 332 *i* P **P 09 20 33.9 +0.6**
comp=Z,405nm,1.0s,mb6.3,SNR=229
WOL Wolverton 80.85 343 P **P 09 20 32.9 -0.5**
WOL AMS AMS 10 02 38.0
comp=Z,2µm,17.9s
WOL Wolverton 80.85 343⇑*e*P **P 09 20 32.9 -0.5**
WOL AMS AMS 10 02 38.0
comp=Z,2µm,17.9s,MS5.5
HGH Gray Hill 80.86 344 P **P 09 20 33.3 -0.2**
HGH Gray Hill 80.86 344⇑*i*P **P 09 20 33.3 -0.2**
OLIL Olney 80.87 43 *e*P **P 09 20 33.3 -0.5**
comp=Z,67nm,0.9s,mb5.6
GRUS Gruza 80.88 326 P **P 09 20 33.3 -0.5**
SHUT Suhut-Afyon 80.90 317 *e*P **P 09 20 34.3 +0.4**
OBKA Obir 80.90 331 *i* P **P 09 20 33.8 0.0**
comp=Z,173nm,1.8s,mb5.7,SNR=29
JCT Junction City 80.90 56 *e*P **P 09 20 33.8 -0.3**
JCT pmax pmax
comp=Z,353nm,1.0s,mb6.2
JCT MLR MLR
comp=Z,2µm,22.0s,MS5.3
JCT Junction City 80.90 56 *e*P **P 09 20 33.8 -0.3**
comp=Z,353nm,1.0s,mb6.2
JCT LR LR
comp=Z,2µm,22.0s,MS5.3
VTS Vitosha 80.95 324 P **P 09 20 34.7 +0.6**
VTS Vitosha 80.95 324 P **P 09 20 34.7 +0.6**
VTS Vitosha 80.95 324 P **P 09 20 34.5 +0.4**
VTS Vitosha 80.95 324⇑*i*P **P 09 20 34.7 +0.6**
KRBG Karabiga-Canak 80.96 320 *e*P **P 09 20 34.4 +0.1**
DIVS Divibare 80.98 327 P **P 09 20 34.1 -0.2**
GDZ Gediz 80.98 318 *i* P **P 09 20 35.0 +0.6**
RZN Rozhen 81.05 322 P **P 09 20 35.3 +0.6**
DURS Dursunbey 81.05 319 *i* P **P 09 20 35.0 +0.3**
GONE Gonen-Balikesi 81.06 320 *e*P **P 09 20 34.5 -0.3**
ERIK Erikli-Kesan 81.09 321 *e*P **P 09 20 35.3 +0.4**
MYKA Terra Mystica 81.10 332⇑*i*P **P 09 20 34.5 -0.4**
comp=Z,194nm,1.6s,mb5.8
ALN Alexandroupoli 81.11 321 P **P 09 20 35.2 +0.1**
ALN Alexandroupoli 81.11 321 *e*P **P 09 20 35.5 +0.4**
ALN Alexandroupoli 81.11 321 P **P 09 20 35.2 +0.1**
SIUC Southern Illin 81.12 44 *e*P **P 09 20 34.6 -0.6**
comp=Z,118nm,0.9s,mb5.8
RDO Rodhopi 81.13 322 P **P 09 20 35.7 +0.5**
RDO Rodhopi 81.13 322 *e*P **P 09 20 36.5 +1.3**
RDO Rodhopi 81.13 322 P **P 09 20 35.7 +0.5**
WATA Walderalm 81.14 333⇑*i*P **P 09 20 35.7 +0.6**
comp=Z,127nm,0.8s,mb5.9,SNR=81
SISC Sisak 81.16 330 P **P 09 20 35.4 +0.1**
CRES Cresnjev 81.18 330 P **P 09 20 34.8 -0.5**
HDMB Hadim 81.19 315 *e*P **P 09 20 35.4 -0.2**
WTTA Wattenberg 81.19 333 *i* P **P 09 20 36.1 +0.8**
comp=Z,502nm,1.5s,mb6.2,SNR=69
ENEZ Enez 81.19 321 *e*P **P 09 20 35.2 -0.3**
LPK Lapseki 81.22 320 *e*P **P 09 20 36.0 +0.3**
BFO Black Forest 81.23 336 P **P 09 20 35.3 -0.3**
comp=Z,939nm,1.1s,mb6.6,SNR=59
BFO Black Forest 81.23 336 *e*P **P 09 20 35.5 -0.1**
comp=Z,310nm,1.3s,mb6.1
BFO *e*S S 09 30 40.7 -1.5
BFO Black Forest 81.23 336 *e*P **P 09 20 35.2 -0.4**
BFO pmax pmax
comp=Z,241nm,1.2s,mb6.0
BFO MLR MLR
comp=Z,3µm,19.0s,MS5.6
BFO Black Forest 81.23 336 *e*P **P 09 20 35.2 -0.4**
comp=Z,241nm,1.2s,mb6.0
BFO LR LR
comp=Z,3µm,19.0s,MS5.6
RETA Reutte 81.27 334 *i* P **P 09 20 36.1 +0.3**
comp=Z,272nm,1.3s,mb6.0,SNR=54
BLO Bloomington 81.27 42 *e*P **P 09 20 35.1 -0.8**
BLO pmax pmax
comp=Z,62nm,1.1s,mb5.5
BLO Bloomington 81.27 42 *e*P **P 09 20 35.1 -0.9**
comp=Z,62nm,1.1s,mb5.5
MOTA Moosalm 81.28 334 *i* P **P 09 20 36.4 +0.5**
comp=Z,401nm,1.2s,mb6.2,SNR=65
BALB Balikesir 81.30 319 *e*P **P 09 20 36.1 +0.1**
SPAK Spaichingen-Ko 81.31 336 *e*P **P 09 20 36.2 +0.2**
LJU Ljubljana 81.31 331 *i* P **P 09 20 35.4 -0.6**
LJU *e*S S 09 30 59.0 +16
GELI Tayfur-Gelibol 81.33 321 *e*P **P 09 20 35.6 -0.6**
BALY Balya 81.33 319 *i* P **P 09 20 36.7 +0.4**
MIAR Mount Ida 81.34 49 *e*P **P 09 20 36.0 -0.4**
MIAR pmax pmax
comp=Z,44nm,0.8s,mb5.4
MIAR MLR MLR
comp=Z,2µm,19.0s,MS5.5
MIAR Mount Ida 81.34 49 *e*P **P 09 20 36.0 -0.3**
comp=Z,44nm,0.8s,mb5.4
MIAR LR LR
comp=Z,2µm,19.0s,MS5.5
ABTA Abfaltersbach 81.36 333⇑*i*P **P 09 20 35.8 -0.5**
comp=Z,116nm,1.3s,mb5.7,SNR=48
DEMI Demirci 81.38 318 *i* P **P 09 20 36.5 0.0**
PTCC Patocco-Chiusa 81.39 332 P **P 09 20 35.6 -0.8**
EREN Erenkoy 81.44 313 *e*P **P 09 20 37.1 +0.2**
HWQ Hawqa 81.46 311 *e*P **P 09 20 37.5 +0.4**
CDF Champ du Feu 81.46 337⇑*i*P **P 09 20 36.9 +0.1**
comp=Z,956nm,1.4s,mb6.2
CDF Champ du Feu 81.46 337⇑*i*P **P 09 20 36.9 +0.1**
CDF pmax pmax
comp=Z,478nm,1.4s,mb6.2
CDF Champ du Feu 81.46 337⇑*i*P **P 09 20 36.9 +0.1**
comp=Z,478nm,1.4s,mb6.2
BLY Banja Luka 81.49 329 P **P 09 20 37.0 0.0**
SUTC Sutluce-Ispart 81.53 316 *e*P **P 09 20 36.9 -0.4**
BOJS Bojanci 81.53 330 *i* P **P 09 20 36.9 -0.3**
BOJS *e*S S 09 31 01.4 +16
VOY Vojsko 81.54 331 *e*P **P 09 20 36.2 -1.0**
VOY *e* pP 09 20 44.7 -5.8
KHAL Karahalli 81.55 317 *i* P **P 09 20 37.6 +0.1**
MMB Musomiste 81.55 323 P **P 09 20 37.9 +0.5**
KKB Krupnik 81.60 324 P **P 09 20 38.0 +0.4**
JAVS Javornik 81.60 331 *i* P **P 09 20 36.7 -0.8**
JAVS *e*S S 09 30 58.8 +13
LIBD Limburg 81.61 336 *e*P **P 09 20 37.5 0.0**
ECH Echery 81.67 337 *e*P **P 09 20 37.6 -0.3**
ECH Echery 81.67 337 *e*P **P 09 20 37.5 -0.4**
ECH pmax pmax
comp=Z,309nm,1.4s,mb6.0
ECH MLR MLR
comp=Z,3µm,19.0s,MS5.6

ECH Echery 81.67 337 *eP* **P 09 20 37.5 -0.4**
comp=Z,308nm,1.4s,mb6.0
ECH LR LR
comp=Z,3μm,19.0s,MS5.6
PARMO Parma 81.68 45 *eP* **P 09 20 38.1 -0.1**
FETA Feichten 81.69 334 *i* P **P 09 20 38.5 +0.5**
comp=Z,177nm,1.3s,mb5.8,SNR=61
NVR Nevrokopi 81.69 323 *eP* **P 09 20 38.5 +0.4**
KAVA Kavala 81.70 322 P **P 09 20 38.4 +0.2**
DAVA Damuels 81.71 334 P **P 09 20 38.6 +0.5**
DAVA Damuels 81.71 334⇑ *iP* **P 09 20 38.5 +0.3**
comp=Z,223nm,1.3s,mb5.9,SNR=40
BCK Bucak 81.74 316 *eP* **P 09 20 37.2 -1.2**
FELD Feldberg im Sc 81.74 336 *eP* **P 09 20 38.4 +0.2**
LONY Lake Ozonia 81.74 31 *eP* **P 09 20 36.5 -1.8**
comp=Z,25nm,1.0s,mb5.1
LONY LR LR
comp=Z,1μm,19.0s,MS5.3
ERPA Erie 81.75 36 *eP* **P 09 20 38.1 -0.4**
comp=Z,54nm,0.7s,mb5.6
ERPA LR LR
comp=Z,2μm,22.0s,MS5.5
HTL Hartland 81.80 345 P **P 09 20 38.5 0.0**
HTL AMb AMB 09 20 39.7
comp=Z,343nm,1.8s,mb6.0
HTL AMS AMS 10 08 13.1
comp=Z,1μm,14.7s
HTL Hartland 81.80 345 *eP* **P 09 20 38.5 0.0**
HTL AMb AMB 09 20 39.7
comp=Z,343nm,1.8s,mb6.0
HTL AMS AMS 10 08 13.1
comp=Z,1μm,14.7s,MS5.4
UALR University of 81.81 48 *eP* **P 09 20 38.9 0.0**
comp=Z,113nm,1.5s,mb5.6
KULA Kula-Manisa 81.83 318 *eP* **P 09 20 38.9 0.0**
GAZI Gazipasa 81.84 314 *i* P **P 09 20 37.9 -1.1**
TRI Trieste 81.86 331 *eP* **P 09 20 37.7 -1.2**
TRI pmax pmax
comp=Z,163nm,1.3s,mb5.8
TRI MLR MLR
comp=Z,5μm,19.0s,MS5.9
TRI Trieste 81.86 331 *eP* **P 09 20 37.6 -1.3**
comp=Z,163nm,1.3s,mb5.8
TRI LR LR
comp=Z,5μm,19.0s,MS5.9
PLE Pljevlja 81.86 327⇑ *iP* **P 09 20 39.5 +0.5**
PLE Pljevlja 81.86 327 P **P 09 20 39.0 0.0**
BHL Bhannes 81.90 311 *eP* **P 09 20 39.7 +0.4**
PHNC Paralimni 81.91 312 P **P 09 20 43.4 +4.0**
comp=Z,1.3nm,0.6s
AKHS Akhisar 81.94 319 *i* P **P 09 20 39.4 0.0**
AKS Akhisar 81.94 319 *eP* **P 09 20 39.3 -0.2**
LFK Lefkose 81.96 313 *eP* **P 09 20 39.9 +0.3**
MEZF Maizieres J'vi 81.99 338⇑ *iP* **P 09 20 39.8 +0.3**
comp=Z,1μm,1.4s,mb6.3
MEZF Maizieres J'vi 81.99 338⇑ *iP* **P 09 20 39.8 +0.3**
comp=Z,1μm,1.4s,mb6.6
THEF They Montfort 81.99 337 *eP* **P 09 20 39.4 -0.1**
MOF Molkenrain 82.01 336 *eP* **P 09 20 39.6 -0.1**
ACSO Alum Creek Sta 82.03 39 *eP* **P 09 20 39.7 -0.2**
comp=Z,47nm,0.8s,mb5.5
ACSO LR LR
comp=Z,2μm,20.0s,MS5.5
IVA Berane 82.05 326⇓ *iP* **P 09 20 39.7 -0.3**
IVA Berane 82.05 326 P **P 09 20 40.0 0.0**
HBAR Harrisburg 82.08 46 *eP* **P 09 20 41.1 +0.8**
HAU Haudompre 82.09 337⇑ *iP* **P 09 20 40.0 -0.1**
comp=Z,462nm,1.4s,mb5.9
HAU *e*MLR MLR
comp=Z,4μm,19.0s,MS5.5
HAU Haudompre 82.09 337⇑ *iP* **P 09 20 40.0 -0.1**
HAU pmax pmax
comp=Z,231nm,1.4s,mb5.9
HAU MLR MLR
comp=Z,4μm,19.0s,MS5.8
HAU Haudompre 82.09 337⇑ *iP* **P 09 20 40.0 -0.1**
comp=Z,231nm,1.4s,mb5.9
HAU LR LR
comp=Z,4μm,19.0s,MS5.8
GNAR Gosnell 82.09 46 *eP* **P 09 20 40.7 +0.3**
comp=Z,1μm,0.7s,mb7.0
AYVA Ayvalik 82.11 320 *i* P **P 09 20 40.0 -0.3**
HINF Hinteralfeld 82.12 337⇑ *iP* **P 09 20 40.0 -0.3**
comp=Z,323nm,1.4s,mb5.8
HINF Hinteralfeld 82.12 337⇑ *iP* **P 09 20 40.0 -0.3**
HINF pmax pmax
comp=Z,162nm,1.4s,mb5.8
HINF Hinteralfeld 82.12 337⇑ *iP* **P 09 20 40.0 -0.3**
comp=Z,162nm,1.4s,mb5.8
WCI Wyandotte Cave 82.13 42 *eP* **P 09 20 40.2 -0.3**
WCI pmax pmax
comp=Z,82nm,1.0s,mb5.6
WCI MLR MLR
comp=Z,2μm,21.0s,MS5.4
WCI Wyandotte Cave 82.13 42 *eP* **P 09 20 40.2 -0.3**
comp=Z,82nm,1.0s,mb5.6
WCI LR LR
comp=Z,2μm,21.0s,MS5.4
UPM Unac-Piva 82.16 327⇑ *iP* **P 09 20 39.7 -0.8**
UPM Unac-Piva 82.16 327 P **P 09 20 40.0 -0.5**
SKO Skopje 82.19 325 P **P 09 20 41.7 +1.0**
SKO Skopje 82.19 325⇑ *iP* **P 09 20 42.1 +1.4**
SKO Skopje 82.19 325 P **P 09 20 41.7 +1.0**
MAMC Mammari 82.21 313 P **P 09 20 40.6 -0.3**
KORT Korkueli 82.22 316 *i* P **P 09 20 40.7 -0.2**
GLAT Glass 82.22 45 *eP* **P 09 20 41.6 +0.6**
DYA Yadsworthy 82.23 344 P **P 09 20 40.6 -0.1**
DYA AMb AMB 09 20 41.7
comp=Z,448nm,1.5s,mb6.2
DYA AMS AMS 10 02 26.3
comp=Z,2μm,18.7s
DYA Yadsworthy 82.23 344⇑ *eP* **P 09 20 40.6 -0.1**
DYA AMb AMB 09 20 41.7
comp=Z,448nm,1.5s,mb6.2
DYA AMS AMS 10 02 26.3
comp=Z,2μm,18.7s,MS5.5
BBS Basel-Blauen 82.25 336 *eP* **P 09 20 41.1 +0.1**
PVY Plav 82.26 326⇓ *iP* **P 09 20 40.4 -0.7**
PVY Plav 82.26 326⇓ *iP* **P 09 20 40.5 -0.6**
DENT Denizli 82.26 317 *eP* **P 09 20 41.7 +0.6**
CTI Castel Tesino 82.26 333 P **P 09 20 40.3 -0.7**
VAY Valandovo 82.26 324 P **P 09 20 40.8 -0.3**
VAY Valandovo 82.26 324⇑ *iP* **P 09 20 40.7 -0.4**
VAY Valandovo 82.26 324 P **P 09 20 40.8 -0.3**
KLBR Kellerberrin 82.30 208 *eP* **P 09 20 40.3 -0.9**
comp=Z,15nm,0.4s,mb5.3
DNZL Cakiroluk 82.30 317 *i* P **P 09 20 42.0 +0.6**
LIA Limnos Island 82.31 321 P **P 09 20 41.4 0.0**
LIA Limnos Island 82.31 321 *eP* **P 09 20 41.5 +0.1**
LIA Limnos Island 82.31 321 P **P 09 20 41.4 0.0**
CSS Prodhromos 82.31 313⇑ P **P 09 20 41.8 +0.3**
comp=Z,1.7nm,1.2s
CSS Prodhromos 82.31 313⇑ *eP* **P 09 20 41.8 +0.3**
SOH Sokhos 82.34 323 P **P 09 20 41.2 -0.4**
SOH Sokhos 82.34 323 *eP* **P 09 20 42.5 +0.9**
SOH Sokhos 82.34 323 P **P 09 20 41.2 -0.4**
PRK Paraskevi 82.35 320 P **P 09 20 41.5 -0.1**
PRK Paraskevi 82.35 320 P **P 09 20 41.5 -0.1**
UTMT University of 82.38 45 *eP* **P 09 20 41.4 -0.4**
comp=Z,248nm,1.1s,mb6.0
GOLH Golhisar 82.42 317 *i* P **P 09 20 42.4 +0.4**
LEF Lefka 82.42 313 *eP* **P 09 20 41.7 -0.4**
NCB Newcomb 82.43 31 *eP* **P 09 20 41.0 -0.9**
comp=Z,59nm,1.3s,mb5.3
NCB LR LR
comp=Z,1μm,19.0s,MS5.3
NKY Niksic 82.46 327⇑ *iP* **P 09 20 40.2 -1.9**
NKY Niksic 82.46 327⇑ *iP* **P 09 20 40.2 -1.9**
PPT Papeete 82.46 124 *eS* S 09 30 58.0 +2.5
comp=Z,3μm,34.5s
PPT *e*SS SS 09 36 17.7 -0.1
comp=Z,716nm,25.8s
PPT *e*LR LR 09 46 35.8
comp=Z,7μm,22.8s,baz=324
PPT Papeete 82.46 124 LR LR 09 56 43.2
comp=Z,4μm,18.0s,MS5.8,baz=251,slow=35
OUR Ouranopolis 82.48 322 P **P 09 20 41.8 -0.5**
OUR Ouranopolis 82.48 322 P **P 09 20 41.8 -0.5**
NVLJ Novalja 82.48 330 P **P 09 20 41.1 -1.0**
ALFC Alevga 82.53 313 P **P 09 20 42.1 -0.6**
comp=Z,1.8nm,0.7s
LOMF Lomont 82.55 336 *eP* **P 09 20 43.0 +0.5**
BRY Bratogost 82.56 327⇑ *iP* **P 09 20 41.2 -1.4**
BRY Bratogost 82.56 327 P **P 09 20 42.0 -0.6**
KDAG Bornova 82.57 319 *i* P **P 09 20 42.6 -0.2**

IZM Izmir 82.58 319 *eP* **P 09 20 44.5 +1.7**
TUE Stuetta 82.61 334 *eP* **P 09 20 43.1 +0.3**
comp=Z,299nm,1.3s,mb6.2
TUE LR LR
comp=Z,4μm,20.0s,MS5.8
MABI Malga Bissina 82.62 334 P **P 09 20 42.4 -0.5**
ELL Elmali 82.63 316 *eP* **P 09 20 43.2 +0.1**
TOO Toolangi 82.64 184 *eP* **P 09 20 45.7 +2.9**
HORT Hortiatis 82.64 323 P **P 09 20 42.5 -0.6**
HORT Hortiatis 82.64 323 P **P 09 20 42.5 -0.6**
PLG Polygyros 82.68 322 *eP* **P 09 20 43.5 +0.2**
PLG Polygyros 82.68 322 P **P 09 20 43.0 -0.3**
TTG Podgorica 82.68 326⇑ *iP* **P 09 20 42.4 -0.9**
TTG Podgorica 82.68 326 P **P 09 20 43.0 -0.3**
BLCB Balcova 82.69 319 *eP* **P 09 20 43.4 0.0**
BLCB Balcova 82.69 319 P **P 09 20 43.4 0.0**
BLCB Balcova 82.69 319 P **P 09 20 43.4 0.0**
CCA1 Carnmenellis 82.71 345 P **P 09 20 43.5 +0.2**
CCA1 AMb AMB 09 20 44.3
comp=Z,264nm,1.6s,mb6.0
CCA1 Carnmenellis 82.71 345⇑ *eP* **P 09 20 43.5 +0.2**
CCA1 AMb AMB 09 20 44.3
comp=Z,264nm,1.6s,mb6.0
MMAI Mount Meron Ar 82.71 310 P **P 09 20 44.8 +1.2**
comp=Z,28nm,0.4s,mb5.6,baz=46,slow=7.1,SNR=60
MMAI LR LR 10 02 08.7
comp=Z,6μm,20.3s,MS5.9,baz=50,slow=39
KRUS Krusevo 82.77 324⇑ *iP* **P 09 20 43.6 -0.2**
TREB Trebinje 82.79 327 P **P 09 20 43.0 -0.8**
MET Memphis--Engin 82.79 46 *eP* **P 09 20 44.9 +0.9**
comp=Z,510nm,1.4s,mb6.4
NATX Nacogdoches 82.86 52 *eP* **P 09 20 45.2 +0.8**
comp=Z,231nm,1.3s,mb6.0
PPCY Paphos 82.88 313 P **P 09 20 44.2 -0.2**
AYDN Tasoluk 82.88 318 *i* P **P 09 20 45.5 +1.0**
STON Ston 82.91 327 P **P 09 20 43.0 -1.5**
URLA Izmir 82.92 319 *i* P **P 09 20 44.5 -0.1**
BUM Brajici-Budva 82.93 326⇓ *iP* **P 09 20 43.8 -0.8**
BUM Brajici-Budva 82.93 326 P **P 09 20 45.0 +0.4**
PAIG Paliouri 82.94 322 P **P 09 20 44.3 -0.4**
PAIG Paliouri 82.94 322 P **P 09 20 44.3 -0.4**
HCY Herceg Novi 82.96 327⇑ *iP* **P 09 20 43.7 -1.0**
HCY Herceg Novi 82.96 327 P **P 09 20 44.0 -0.7**
PKME Peaks-Kenny Pk 83.00 27 *eP* **P 09 20 44.2 -0.7**
comp=Z,76nm,1.3s,mb5.6
PKME LR LR
comp=Z,2μm,19.0s,MS5.4
LBNH Lisbon 83.02 30 PFAKE 09 21 00.0 +15
LBNH LR LR
comp=Z,2μm,20.0s,MS5.5
BIA Bitola 83.03 324⇑ *iP* **P 09 20 44.9 -0.3**
WVT Waverly 83.05 44 *eP* **P 09 20 44.9 -0.4**
WVT pmax pmax
comp=Z,46nm,0.9s,mb5.5
WVT MLR MLR
comp=Z,2μm,21.0s,MS5.5
WVT Waverly 83.05 44 *eP* **P 09 20 44.9 -0.5**
comp=Z,46nm,0.9s,mb5.5
WVT LR LR
comp=Z,2μm,21.0s,MS5.5
JSA Saint Aubin 83.06 343 P **P 09 20 45.2 +0.1**
JSA AMb AMB 09 20 46.1
comp=Z,305nm,1.7s,mb6.1
JSA Saint Aubin 83.06 343 *eP* **P 09 20 45.2 +0.1**
JSA AMb AMB 09 20 46.1
comp=Z,305nm,1.7s,mb6.1
ULC Ulcinj 83.08 326⇑ *iP* **P 09 20 44.2 -1.1**
ULC Ulcinj 83.08 326 P **P 09 20 45.0 -0.3**
YER Yerkesik 83.11 317 *eP* **P 09 20 46.2 +0.6**
CHOS Chios island 83.14 320 *eP* **P 09 20 46.5 +0.7**
CHOS Chios island 83.14 320 P **P 09 20 45.8 0.0**
GCAM G?zelcaml? 83.15 318 *i* P **P 09 20 46.0 +0.2**
TURN Turunc 83.17 317 *i* P **P 09 20 47.8 +1.9**
LDF La Druitiere 83.17 341⇑ *iP* **P 09 20 45.7 0.0**
comp=Z,328nm,1.3s,mb5.9
LDF La Druitiere 83.17 341⇑ *iP* **P 09 20 45.7 0.0**
LDF pmax pmax
comp=Z,164nm,1.3s,mb5.9
LDF La Druitiere 83.17 341⇑ *iP* **P 09 20 45.7 0.0**
comp=Z,164nm,1.3s,mb5.9
OHR Ohrid 83.17 325 P **P 09 20 44.9 -1.0**
OHR Ohrid 83.17 325⇑ *iP* **P 09 20 44.9 -1.0**
OHR Ohrid 83.17 325 P **P 09 20 44.9 -1.0**
AKAS Kas 83.19 316 *i* P **P 09 20 45.9 -0.1**
ABTO Aybut 83.20 288 P **P 09 20 47.4 +1.1**
SNR=8.9
FNA Florina 83.21 324 P **P 09 20 45.6 -0.5**
FNA Florina 83.21 324 P **P 09 20 45.6 -0.5**
MLSB Milas 83.22 318 *eP* **P 09 20 46.6 +0.4**
BINY Binghamton 83.29 33 *eP* **P 09 20 45.4 -1.1**
comp=Z,14nm,0.7s,mb5.1
BINY LR LR
comp=Z,2μm,19.0s,MS5.4
TIR Tirane 83.35 325 *eP* **P 09 20 46.4 -0.4**
TIR pmax pmax
comp=Z,117nm,0.8s,mb6.0
TIR MLR MLR
comp=Z,6μm,19.0s,MS6.0
TIR Tirane 83.35 325 *eP* **P 09 20 46.4 -0.4**
comp=Z,117nm,0.8s,mb6.0
TIR LR LR
comp=Z,6μm,19.0s,MS6.0
CABF La Chapelle 83.44 337⇑ *iP* **P 09 20 47.5 +0.4**
comp=Z,299nm,1.4s,mb5.8
CABF La Chapelle 83.44 337⇑ *iP* **P 09 20 47.5 +0.4**
CABF pmax pmax
comp=Z,150nm,1.4s,mb5.8
CABF La Chapelle 83.44 337⇑ *iP* **P 09 20 47.5 +0.4**
comp=Z,150nm,1.4s,mb5.8
LOR Lormes 83.44 338⇑ *iP* **P 09 20 47.2 +0.1**
comp=Z,1μm,1.5s,mb6.5
LOR *e*MLR MLR
comp=Z,4μm,19.2s,MS5.5
LOR Lormes 83.44 338⇑ *iP* **P 09 20 47.2 +0.1**
LOR pmax pmax
comp=Z,693nm,1.5s,mb6.5
LOR MLR MLR
comp=Z,4μm,19.3s,MS5.8
LOR Lormes 83.44 338⇑ *iP* **P 09 20 47.2 +0.1**
comp=Z,693nm,1.5s,mb6.5
LOR LR LR
comp=Z,4μm,19.3s,MS5.8
KZN Kozani 83.44 323 P **P 09 20 46.5 -0.8**
KZN Kozani 83.44 323 P **P 09 20 46.5 -0.8**
AOS Alonnisos 83.48 321 P **P 09 20 47.1 -0.4**
AOS Alonnisos 83.48 321 P **P 09 20 47.1 -0.4**
GRR Gorron 83.53 342⇑ *iP* **P 09 20 47.7 +0.1**
comp=Z,951nm,1.4s,mb6.4
GRR Gorron 83.53 342⇑ *iP* **P 09 20 47.7 +0.1**
GRR pmax pmax
comp=Z,476nm,1.4s,mb6.4
GRR Gorron 83.53 342⇑ *iP* **P 09 20 47.7 +0.1**
comp=Z,476nm,1.4s,mb6.4
OXF Oxford 83.54 46 *eP* **P 09 20 47.2 -0.6**
OXF pmax pmax
comp=Z,212nm,1.1s,mb6.2
OXF MLR MLR
comp=Z,2μm,21.0s,MS5.5
OXF Oxford 83.54 46 *eP* **P 09 20 47.2 -0.7**
comp=Z,212nm,1.1s,mb6.2
OXF LR LR
comp=Z,2μm,21.0s,MS5.5
BDRM Kayabasi 83.57 318 *i* P **P 09 20 47.9 0.0**
HKT Hockley 83.58 53 *eP* **P 09 20 48.4 +0.3**
HKT pmax pmax
comp=Z,65nm,1.6s,mb5.5
HKT MLR MLR
comp=Z,344nm,21.0s,MS4.7
HKT Hockley 83.58 53 *eP* **P 09 20 48.4 +0.3**
comp=Z,65nm,1.6s,mb5.5
HKT LR LR
comp=Z,344nm,21.0s,MS4.7
XOR Xorichti 83.62 322 P **P 09 20 47.5 -0.7**
XOR Xorichti 83.62 322 P **P 09 20 47.5 -0.7**
BODT Bodrum 83.63 318 *eP* **P 09 20 47.6 -0.7**
NEO Neokhori 83.65 322 *eP* **P 09 20 48.0 -0.4**
NEST Nestorio 83.66 324 P **P 09 20 48.1 -0.2**
NWAO Narrogin (SRO) 83.70 208 *eP* **P 09 20 48.5 +0.1**
comp=Z,293nm,0.9s,mb6.4
NWAO Narrogin (SRO) 83.70 208 *eP* **P 09 20 48.4 0.0**
NWAO *e* pP 09 21 01.9 +0.2
NWAO pmax pmax
comp=Z,92nm,1.3s
NWAO Narrogin (SRO) 83.70 208 *eP* **P 09 20 48.4 0.0**
comp=Z,92nm,1.3s,mb5.8

NWAO *e* pP 09 21 01.9 +0.2
SSF Saint Saulge 83.72 338⇑ *iP* **P 09 20 48.7 +0.2**
comp=Z,626nm,1.6s,mb6.2
SSF Saint Saulge 83.72 338⇑ *iP* **P 09 20 48.7 +0.2**
SSF pmax pmax
comp=Z,313nm,1.6s,mb6.2
SSF Saint Saulge 83.72 338⇑ *iP* **P 09 20 48.7 +0.2**
comp=Z,313nm,1.6s,mb6.2
HYF Humbligny 83.75 339⇑ *iP* **P 09 20 49.4 +0.7**
DAT Datca 83.77 318 *eP* **P 09 20 48.3 -0.8**
SSPA Standing Stone 83.86 35 *eP* **P 09 20 49.0 -0.4**
comp=Z,63nm,1.1s,mb5.7
SSPA *e* pP 09 21 02.4 -0.3
SSPA LR LR
comp=Z,147nm,19.0s,MS4.4
MCWV Mont Chateau 83.86 37 *eP* **P 09 20 49.3 -0.1**
comp=Z,152nm,1.4s,mb5.9
MCWV LR LR
comp=Z,3μm,19.0s,MS5.7
ARG Arkhangelos 83.92 317 P **P 09 20 49.9 +0.1**
ARG Arkhangelos 83.92 317 *eP* **P 09 20 50.0 +0.2**
ARG Arkhangelos 83.92 317 P **P 09 20 49.9 +0.1**
THL Klokotos Trika 83.96 323 *eP* **P 09 20 49.5 -0.4**
THL Klokotos Trika 83.96 323 P **P 09 20 48.2 -1.7**
ZCCA Zocca 83.99 332 P **P 09 20 51.6 +1.6**
AVF Avril sur Loir 84.01 338⇑ *iP* **P 09 20 50.4 +0.4**
comp=Z,2μm,1.5s,mb6.7
AVF Avril sur Loir 84.01 338⇑ *iP* **P 09 20 50.4 +0.4**
comp=Z,932nm,1.5s,mb6.7
SMF Signal de Mont 84.02 338⇑ *iP* **P 09 20 50.4 +0.3**
comp=Z,2μm,1.4s,mb6.8
SMF Signal de Mont 84.02 338⇑ *iP* **P 09 20 50.4 +0.3**
comp=Z,1μm,1.4s,mb6.8
SGMF Saint Gilles 84.03 343⇑ *iP* **P 09 20 50.1 0.0**
comp=Z,275nm,0.9s,mb6.1
SGMF Saint Gilles 84.03 343⇑ *iP* **P 09 20 50.1 0.0**
SGMF pmax pmax
comp=Z,138nm,0.9s,mb6.1
SGMF Saint Gilles 84.03 343⇑ *iP* **P 09 20 50.1 0.0**
comp=Z,138nm,0.9s,mb6.1
ROSF Rostrenen 84.10 343 *eP* **P 09 20 50.5 +0.1**
comp=Z,185nm,1.0s,mb5.9
ROSF Rostrenen 84.10 343 *eP* **P 09 20 50.5 +0.1**
ROSF pmax pmax
comp=Z,93nm,1.0s,mb5.9
ROSF Rostrenen 84.10 343 *eP* **P 09 20 50.5 +0.1**
comp=Z,92nm,1.0s,mb5.9
FNVD Fontana Vidola 84.10 332 P **P 09 20 51.5 +0.9**
CING Cingoli 84.11 331 P **P 09 20 50.7 +0.1**
BOB Bobbio (Coli) 84.11 334 P **P 09 20 51.0 +0.4**
KVTX Kingsville 84.19 56 PFAKE 09 21 00.0 +8.7
KVTX LR LR
comp=Z,1μm,19.0s,MS5.3
LPL La Plagne 84.25 336⇑ *iP* **P 09 20 52.2 +0.9**
comp=Z,280nm,1.1s,mb6.0
LPL La Plagne 84.25 336⇑ *iP* **P 09 20 52.2 +0.9**
LPL pmax pmax
comp=Z,140nm,1.1s,mb6.0
LPL La Plagne 84.25 336⇑ *iP* **P 09 20 52.2 +0.9**
comp=Z,140nm,1.1s,mb6.0
ATAL Atalanti 84.25 322 P **P 09 20 50.3 -1.1**
LPG La Plagne 84.26 336⇑ *iP* **P 09 20 52.4 +1.1**
comp=Z,438nm,1.3s,mb6.1
LPG La Plagne 84.26 336⇑ *iP* **P 09 20 52.4 +1.1**
LPG pmax pmax
comp=Z,219nm,1.3s,mb6.1
LPG La Plagne 84.26 336⇑ *iP* **P 09 20 52.4 +1.1**
comp=Z,219nm,1.3s,mb6.1
AGG Agios Georgios 84.28 322 *eP* **P 09 20 52.0 +0.5**
LKR Lokris 84.29 322 P **P 09 20 50.4 -1.2**
LKR Lokris 84.29 322 *eP* **P 09 20 50.5 -1.1**
LKR Lokris 84.29 322 P **P 09 20 50.4 -1.2**
BADI Badiali 84.31 331 P **P 09 20 52.4 +0.8**
CRE Caprese Michel 84.31 331 P **P 09 20 52.3 +0.7**
VLC Villacollemand 84.35 333 *eP* **P 09 20 52.0 +0.1**
comp=Z,454nm,1.7s,mb6.3
VLC LR LR
comp=Z,6μm,20.0s,MS6.0
BGF Bois d'Agland 84.36 339⇑ *iP* **P 09 20 52.3 +0.5**
comp=Z,709nm,1.5s,mb6.3
BGF Bois d'Agland 84.36 339⇑ *iP* **P 09 20 52.3 +0.5**
BGF pmax pmax
comp=Z,355nm,1.5s,mb6.3
BGF Bois d'Agland 84.36 339⇑ *iP* **P 09 20 52.3 +0.5**
comp=Z,355nm,1.5s,mb6.3
JAN Janina 84.37 324 *eP* **P 09 20 52.0 0.0**
PTL Penteli 84.41 321 *eP* **P 09 20 51.5 -0.7**
MURB Monte Urbino 84.44 331 P **P 09 20 52.9 +0.6**
APE Apeiranthos 84.46 319 *eP* **P 09 20 50.2 -2.3**
APE Apeiranthos 84.46 319 P **P 09 20 50.8 -1.7**
APE Apeiranthos 84.46 319 *eP* **P 09 20 50.5 -2.0**
APE Apeiranthos 84.46 319 P **P 09 20 50.8 -1.7**
QUIF Quistinic 84.47 343 *eP* **P 09 20 51.9 -0.5**
EVR Evrytania 84.59 323 *eP* **P 09 20 54.5 +1.4**
SGRT San Giovanni R 84.60 328 P **P 09 20 52.0 -1.1**
VLY Voula,Athens 84.60 321 *eP* **P 09 20 50.5 -2.7**
BNI Bardonecchia 84.69 336 *eP* **P 09 20 53.3 -0.2**
BNI pmax pmax
comp=Z,103nm,1.2s,mb5.8
BNI MLR MLR
comp=Z,3μm,21.0s,MS5.7
BNI Bardonecchia 84.69 336 *eP* **P 09 20 53.3 -0.2**
comp=Z,103nm,1.2s,mb5.8
BNI LR LR
comp=Z,3μm,21.0s,MS5.7
PLDF La Plantade 84.70 338 *eP* **P 09 20 53.7 +0.2**
DSF Desfina 84.70 322 P **P 09 20 52.0 -1.7**
GDM Grand'Maison 84.71 336 *eP* **P 09 20 54.5 +0.9**
SWET Sewanee 84.71 44 *eP* **P 09 20 53.1 -0.7**
comp=Z,64nm,0.8s,mb5.8
SWET *e* pP 09 21 06.2 -1.0
RGNG Rignano Grg 84.73 328 P **P 09 20 53.1 -0.7**
AGO Saint Agoulin 84.75 338 *eP* **P 09 20 54.6 +0.8**
VBMS Vicksburg 84.75 48 *eP* **P 09 20 54.3 +0.2**
comp=Z,251nm,1.2s,mb6.2
VBMS LR LR
comp=Z,2μm,20.0s,MS5.5
KEK Kerkira 84.76 324 P **P 09 20 53.2 -0.8**
KEK Kerkira 84.76 324 *eP* **P 09 20 54.0 0.0**
KEK Kerkira 84.76 324 P **P 09 20 53.2 -0.8**
TCF Toulx Ste Croi 84.77 339⇑ *iP* **P 09 20 54.4 +0.5**
comp=Z,463nm,1.4s,mb6.1
TCF Toulx Ste Croi 84.77 339⇑ *iP* **P 09 20 54.4 +0.5**
TCF pmax pmax
comp=Z,231nm,1.4s,mb6.1
TCF Toulx Ste Croi 84.77 339⇑ *iP* **P 09 20 54.4 +0.5**
comp=Z,231nm,1.4s,mb6.1
LTK Loutraki 84.83 321 *eP* **P 09 20 54.5 +0.2**
LTK Loutraki 84.83 321 P **P 09 20 52.4 -1.9**
QLNO Quiliano 84.85 334 P **P 09 20 54.0 -0.3**
KALE Kalithea 84.88 322 P **P 09 20 53.1 -1.5**
KARP Karpathos 84.92 317 *eP* **P 09 20 54.5 -0.4**
AQU L'Aquila 84.93 330 ⇓P **P 09 20 55.1 +0.3**
AQU L'Aquila 84.93 330 *eP* **P 09 20 54.9 +0.1**
comp=Z,846nm,1.8s,mb6.6
AQU LR LR
comp=Z,4μm,19.0s,MS5.8
AQU L'Aquila 84.93 330⇓ *iP* **P 09 20 55.1 +0.3**
EFP Efpalio 84.95 322 *eP* **P 09 20 55.0 0.0**
EFP Efpalio 84.95 322 P **P 09 20 54.2 -0.8**
MBDF Montbardon 84.96 335⇑ *iP* **P 09 20 55.2 +0.3**
comp=Z,166nm,1.0s,mb5.8
MBDF Montbardon 84.96 335⇑ *iP* **P 09 20 55.2 +0.3**
MBDF pmax pmax
comp=Z,83nm,1.0s,mb5.8
MBDF Montbardon 84.96 335⇑ *iP* **P 09 20 55.2 +0.3**
comp=Z,83nm,1.0s,mb5.8
SCTE Santa Cesarea 85.00 325 *eP* **P 09 20 54.5 -0.7**
CIGN Sant'Elia a Pi 85.00 329 P **P 09 20 55.4 +0.3**
DOI San Damiano 85.02 335 P **P 09 20 53.8 -1.4**
ORIF Oris-en-Rattie 85.04 336⇑ *iP* **P 09 20 56.2 +0.9**
comp=Z,606nm,1.4s,mb6.2
ORIF *e*MLR MLR
comp=Z,4μm,20.5s,MS5.5
ORIF Oris-en-Rattie 85.04 336⇑ *iP* **P 09 20 56.2 +0.9**
ORIF pmax pmax
comp=Z,303nm,1.4s,mb6.2
ORIF Oris-en-Rattie 85.04 336⇑ *iP* **P 09 20 56.2 +0.9**
comp=Z,303nm,1.4s,mb6.2
MFF Saint Martin d 85.05 341 *eP* **P 09 20 55.1 -0.2**
comp=Z,158nm,1.0s,mb5.8
MFF Saint Martin d 85.05 341 *eP* **P 09 20 55.1 -0.2**
MFF pmax pmax
comp=Z,79nm,1.0s,mb5.8
MFF Saint Martin d 85.05 341 *eP* **P 09 20 55.1 -0.2**

comp=Z,79nm,1.0s,mb5.8
PYM Petit Puy Mans 85.06 338 *e*P **P 09 20 55.8 +0.4**
LAKA Lakka 85.08 322 P **P 09 20 54.9 -0.7**
SSB Saint Sauveur 85.09 337 *e*P **P 09 20 56.1 +0.6**
SSB Saint Sauveur 85.09 337 *e*P **P 09 20 56.2 +0.7**
SSB Saint Sauveur 85.09 337 *e*P **P 09 20 56.0 +0.5**
SSB pmax pmax
comp=Z,248nm,1.2s,mb6.2
SSB MLR MLR
comp=Z,2µm,19.0s,MS5.5
SSB Saint Sauveur 85.09 337 *e*P **P 09 20 56.0 +0.5**
comp=Z,248nm,1.2s,mb6.2
SSB LR LR
comp=Z,2µm,19.0s,MS5.5
COLF Collangettes 85.10 338 *e*P **P 09 20 56.3 +0.8**
DID Didima 85.14 321 *e*P **P 09 20 53.5 -2.4**
DID Didima 85.14 321 P **P 09 20 53.3 -2.6**
SURF Saint Ours 85.17 335 *e*P **P 09 20 56.5 +0.6**
GUR Goura 85.17 322 *e*P **P 09 20 56.0 -0.1**
GUR Goura 85.17 322 P **P 09 20 54.8 -1.3**
LKD2 Lefkada island 85.18 323 P **P 09 20 55.2 -0.9**
CPCT Cooper Cave 85.20 43 *e*P **P 09 20 55.9 -0.4**
CPCT *e* pP 09 21 08.9 -0.6
MIDA Miranda 85.25 329 P **P 09 20 56.6 +0.2**
LATE Laterza 85.26 331 P **P 09 20 56.2 -0.2**
IMI Imperia 85.36 334 P **P 09 20 56.6 -0.3**
TKL Tuckaleechee C 85.39 42 *e*P **P 09 20 56.7 -0.5**
TKL *e* pP 09 21 10.3 -0.2
SAOF Saorge 85.39 335 *e*P **P 09 20 56.9 -0.2**
PSB1 Pescosannita 85.41 328 P **P 09 20 56.9 -0.3**
AUTN L'Aution 85.43 335 *e*P **P 09 20 57.5 +0.3**
CERT Cerreto 85.44 330 P **P 09 20 56.7 -0.6**
VIVF Saint-Julien-I 85.44 337⇑ *i*P **P 09 20 58.1 +0.8**
comp=Z,608nm,1.3s,mb6.3
VIVF Saint-Julien-I 85.44 337⇑ *i*P **P 09 20 58.1 +0.8**
VIVF pmax pmax
comp=Z,304nm,1.3s,mb6.3
VIVF Saint-Julien-I 85.44 337⇑ *i*P **P 09 20 58.1 +0.8**
comp=Z,304nm,1.3s,mb6.3
RLS Riolos of Patr 85.45 322 *e*P **P 09 20 57.5 0.0**
TOUF Mont Tournerai 85.46 335 *e*P **P 09 20 57.8 +0.4**
LBL Lubilhac 85.48 338 *e*P **P 09 20 57.8 +0.3**
ELN Prospectdale 85.49 39 *e*P **P 09 20 56.9 -0.8**
ELN *e* pP 09 21 10.8 -0.2
OCF Saint Nazaire 85.52 336 *e*P **P 09 20 58.5 +0.8**
OG26 St.-Nazaire-De 85.52 336 *e*P **P 09 20 58.5 +0.8**
SBF Sospel 85.54 335⇑ *i*P **P 09 20 57.7 -0.1**
comp=Z,802nm,1.2s,mb6.5
SBF Sospel 85.54 335⇑ *i*P **P 09 20 57.7 -0.1**
SBF pmax pmax
comp=Z,401nm,1.2s,mb6.5
SBF Sospel 85.54 335⇑ *i*P **P 09 20 57.7 -0.1**
comp=Z,401nm,1.2s,mb6.5
LUCF Luceram 85.54 335 *e*P **P 09 20 57.9 +0.1**
MVIF Mont Vial 85.60 335 *e*P **P 09 20 58.3 +0.2**
VLX Vlachokerasia 85.63 321 *e*P **P 09 20 57.5 -0.9**
VLX Vlachokerasia 85.63 321 P **P 09 20 57.1 -1.3**
RFI Roccamonfina 85.65 329 P **P 09 20 58.3 -0.1**
comp=Z,94nm,1.6s,mb5.8
BLA Blacksburg 85.65 39 *e*P **P 09 20 58.2 -0.2**
BLA *e* pP 09 21 10.7 -1.1
BLA pmax pmax
comp=Z,114nm,0.9s,mb6.1
BLA MLR MLR
comp=Z,2µm,19.0s,MS5.4
BLA Blacksburg 85.65 39 *e*P **P 09 20 58.2 -0.2**
comp=Z,114nm,0.9s,mb6.1
BLA *e* pP 09 21 10.7 -1.1
BLA LR LR
comp=Z,2µm,19.0s,MS5.4
MON Monaco 85.67 334 P **P 09 20 59.0 +0.6**
REVF Revere 85.68 335 *e*P **P 09 20 58.4 -0.1**
TOLF Tolfa 85.68 331 P **P 09 20 58.2 -0.3**
KFL Anninata 85.70 323 P **P 09 20 58.1 -0.6**
KFL Anninata 85.70 323 P **P 09 20 59.5 +0.8**
ZKR Zakros 85.73 318 *e*P **P 09 20 59.5 +0.6**
VLS Valsamata 85.73 323 P **P 09 20 57.9 -0.9**
VLS Valsamata 85.73 323 *e*P **P 09 20 58.5 -0.3**
VLS Valsamata 85.73 323 P **P 09 20 57.9 -0.9**
CALN Calern 85.81 335 *e*P **P 09 20 59.5 +0.4**
RJF Les Rejaudoux 85.86 339⇑ *i*P **P 09 20 59.2 -0.2**
comp=Z,539nm,1.5s,mb6.2
RJF *e*MLR MLR
comp=Z,5µm,19.2s,MS5.6
RJF Les Rejaudoux 85.86 339⇑ *i*P **P 09 20 59.2 -0.2**
RJF pmax pmax
comp=Z,270nm,1.5s,mb6.3
RJF MLR MLR
comp=Z,5µm,19.3s,MS5.9
RJF Les Rejaudoux 85.86 339⇑ *i*P **P 09 20 59.2 -0.2**
comp=Z,270nm,1.5s,mb6.2
RJF LR LR
comp=Z,5µm,19.3s,MS5.9
NPS Neapolis 85.89 318 *e*P **P 09 20 59.0 -0.7**
VLI Veliai 85.92 321 *e*P **P 09 20 58.5 -1.3**
LRAL Lakeview Retre 85.93 46 *e*P **P 09 20 59.4 -0.5**
comp=Z,16nm,0.8s,mb5.3
LRAL LR LR
comp=Z,1µm,22.0s,MS5.3
ITM Ithomi 85.99 322 P **P 09 20 58.8 -1.3**
ITM Ithomi 85.99 322 *e*P **P 09 20 59.5 -0.6**
ITM Ithomi 85.99 322 P **P 09 20 58.8 -1.3**
SMRF Simiane la Rot 85.99 336⇑ *i*P **P 09 21 00.9 +0.9**
comp=Z,408nm,1.4s,mb6.2
SMRF Simiane la Rot 85.99 336⇑ *i*P **P 09 21 00.9 +0.9**
comp=Z,408nm,1.4s,mb6.5
LAST Lasithi 86.04 318 *e*P **P 09 21 00.5 +0.1**
FRF La Foret Royal 86.06 335⇑ *i*P **P 09 21 00.4 0.0**
comp=Z,627nm,1.4s,mb6.4
FRF La Foret Royal 86.06 335⇑ *i*P **P 09 21 00.4 0.0**
FRF pmax pmax
comp=Z,314nm,1.4s,mb6.3
FRF La Foret Royal 86.06 335⇑ *i*P **P 09 21 00.4 0.0**
comp=Z,314nm,1.4s,mb6.3
CAF Calviac 86.08 339⇑ *i*P **P 09 21 00.8 +0.4**
comp=Z,248nm,1.0s,mb6.1
CAF Calviac 86.08 339⇑ *i*P **P 09 21 00.8 +0.4**
CAF pmax pmax
comp=Z,124nm,1.0s,mb6.1
CAF Calviac 86.08 339⇑ *i*P **P 09 21 00.8 +0.4**
comp=Z,124nm,1.0s,mb6.1
CBN Corbin 86.12 36 *e*P **P 09 21 00.8 0.0**
comp=Z,66nm,0.8s,mb5.9
CBN LR LR
comp=Z,2µm,22.0s,MS5.5
XRY Khrisi 86.17 318 *e*P **P 09 21 01.5 +0.4**
KYTH Kithira 86.24 320 *e*P **P 09 21 00.5 -0.9**
LMR La Mourre 86.30 335⇑ *i*P **P 09 21 01.8 +0.2**
comp=Z,888nm,1.3s,mb6.5
LMR La Mourre 86.30 335⇑ *i*P **P 09 21 01.8 +0.2**
LMR pmax pmax
comp=Z,444nm,1.3s,mb6.5
LMR La Mourre 86.30 335⇑ *i*P **P 09 21 01.8 +0.2**
comp=Z,444nm,1.3s,mb6.5
PYL PYLOS 86.31 322 P **P 09 21 00.2 -1.5**
LASF Ste Croix 86.39 337⇑ *i*P **P 09 21 03.1 +1.1**
comp=Z,422nm,1.5s,mb6.1
LFF La Frestale 86.40 339⇑ *i*P **P 09 21 01.9 -0.1**
comp=Z,367nm,1.1s,mb6.2
LFF La Frestale 86.40 339⇑ *i*P **P 09 21 01.9 -0.1**
LFF pmax pmax
comp=Z,183nm,1.1s,mb6.2
LFF La Frestale 86.40 339⇑ *i*P **P 09 21 01.9 -0.1**
comp=Z,183nm,1.1s,mb6.2
VAM Vamos 86.43 319 *e*P **P 09 21 03.5 +1.1**
KARN Karanos 86.57 319 *e*P **P 09 21 03.5 +0.5**
DGAR Diego Garcia 87.31 257 *e*P **P 09 21 05.7 -1.2**
DGAR pmax pmax
comp=Z,638nm,1.8s,mb6.5
DGAR MLR MLR
comp=Z,650nm,19.0s,MS5.1
DGAR Diego Garcia 87.31 257 *e*P **P 09 21 05.7 -1.2**
comp=Z,638nm,1.8s,mb6.5
DGAR LR LR
comp=Z,650nm,19.0s,MS5.1
GOGA Godfrey 87.37 43 *e*P **P 09 21 06.7 -0.3**
GOGA pmax pmax
comp=Z,170nm,1.6s,mb6.0
GOGA MLR MLR
comp=Z,2µm,20.0s,MS5.5
GOGA Godfrey 87.37 43 *e*P **P 09 21 06.7 -0.3**
comp=Z,170nm,1.6s,mb6.0
GOGA LR LR
comp=Z,2µm,20.0s,MS5.5
BRAL Brewton 87.51 47 *e*P **P 09 21 07.8 +0.1**
comp=Z,99nm,0.6s,mb6.2
BRAL LR LR
comp=Z,2µm,21.0s,MS5.5
MTLF Montolieu 87.51 338 *e*P **P 09 21 07.2 -0.3**
comp=Z,196nm,1.3s,mb5.9
MTLF Montolieu 87.51 338 *e*P **P 09 21 07.2 -0.3**
MTLF pmax pmax
comp=Z,98nm,1.3s,mb5.9
MTLF Montolieu 87.51 338 *e*P **P 09 21 07.2 -0.3**
comp=Z,98nm,1.3s,mb5.9
CEL Celeste 87.57 326 *e*P **P 09 21 06.8 -1.1**
comp=Z,31nm,0.9s,mb5.5
CEL LR LR
comp=Z,6µm,20.0s,MS6.0
JSC Jenkinsville 87.69 41 *e*P **P 09 21 08.3 -0.2**
JSC *e* pP 09 21 22.7 +0.8
SLNA Salina 87.72 327 P **P 09 21 07.4 -1.1**
LRDF Laroque-de-Fa 87.80 337 *e*P **P 09 21 09.3 +0.5**
DGI Dorgali Grotta 88.05 332 P **P 09 21 09.9 -0.2**
CARF Carcanieres 88.12 338 *e*P **P 09 21 10.7 +0.3**
FILF Filols 88.14 337 *e*P **P 09 21 10.7 +0.2**
EJON La Jonquera 88.16 337 P **P 09 21 11.3 +0.7**
comp=Z,540nm,2.5s,mb6.3
EPF Esparros 88.29 339⇑ *i*P **P 09 21 10.1 -1.1**
comp=Z,210nm,1.5s,mb5.8
EPF Esparros 88.29 339⇑ *i*P **P 09 21 10.1 -1.1**
EPF pmax pmax
comp=Z,105nm,1.5s,mb5.8
EPF Esparros 88.29 339⇑ *i*P **P 09 21 10.1 -1.1**
comp=Z,105nm,1.5s,mb5.8
CLLI Livia 88.38 338 P **P 09 21 11.9 +0.3**
CNNC Cliffs of the 88.41 38 *e*P **P 09 21 12.3 +0.4**
comp=Z,61nm,0.8s,mb5.9
CNNC *e* pP 09 21 24.7 -0.5
CNNC LR LR
comp=Z,2µm,19.0s,MS5.5
VALF Valcebollere 88.44 338 *e*P **P 09 21 12.3 +0.4**
RESF Ens 88.50 339 *e*P **P 09 21 12.7 +0.6**
VIEF Viey 88.51 339 *e*P **P 09 21 12.5 +0.3**
EALK Alkurruntz 88.56 340 P **P 09 21 11.5 -0.9**
comp=Z,251nm,1.8s,mb6.2
SJPF Ste Jean 88.60 340 *e*P **P 09 21 13.5 +0.9**
comp=Z,48nm,1.0s,mb5.5
SJPF Ste Jean 88.60 340 *e*P **P 09 21 13.5 +0.9**
SJPF pmax pmax
comp=Z,24nm,1.0s,mb5.5
SJPF Ste Jean 88.60 340 *e*P **P 09 21 13.5 +0.9**
comp=Z,24nm,1.0s,mb5.5
LARF Larrau 88.61 340 *e*P **P 09 21 12.7 0.0**
ELIZ Elizondo 88.62 340 P **P 09 21 11.2 -1.5**
ELIZ pmax pmax
comp=Z,39nm,0.8s,mb5.8
ELIZ Elizondo 88.62 340 P **P 09 21 11.2 -1.5**
comp=Z,39nm,0.8s,mb5.8
ETSF Etsaut 88.64 340⇑ *i*P **P 09 21 12.6 -0.2**
comp=Z,152nm,1.2s,mb5.9
ETSF Etsaut 88.64 340⇑ *i*P **P 09 21 12.6 -0.2**
ETSF pmax pmax
comp=Z,76nm,1.2s,mb5.9
ETSF Etsaut 88.64 340⇑ *i*P **P 09 21 12.6 -0.2**
comp=Z,76nm,1.2s,mb5.9
EBIE Bielsa 88.66 339 P **P 09 21 13.4 +0.5**
comp=Z,96nm,1.2s,mb6.0
CSOR Sort 88.70 338 P **P 09 21 13.8 +0.7**
comp=Z,211nm,1.5s,mb6.2
SNZO South Karori 88.77 162 PFAKE 09 21 20.0 +7.0
SNZO LR LR
comp=Z,2µm,20.0s,MS5.6
SSY Sortino 88.86 326 P **P 09 21 13.5 -0.4**
VSL Villasalto 88.86 331 *e*P **P 09 21 13.2 -0.8**
comp=Z,74nm,1.1s,mb5.9
VSL LR LR
comp=Z,3µm,21.0s,MS5.6
CFON Fontmartina 88.92 337 P **P 09 21 12.7 -1.5**
comp=Z,101nm,1.5s,mb5.9
ELAN Lanestosa 88.99 342 P **P 09 21 13.3 -1.2**
comp=Z,110nm,1.4s,mb6.0
ERC Erice 89.03 328 P **P 09 21 14.9 +0.2**
HMDC Modica 89.14 326 P **P 09 21 15.1 -0.2**
NHSC New Hope 89.17 41 *e*P **P 09 21 16.0 +0.5**
comp=Z,208nm,1.4s,mb6.3
NHSC LR LR
comp=Z,2µm,20.0s,MS5.6
ECRI Cripan 89.38 341 P **P 09 21 14.3 -2.0**
ECRI pmax pmax
comp=Z,34nm,1.1s,mb5.6
ECRI Cripan 89.38 341 P **P 09 21 14.3 -1.9**
comp=Z,34nm,1.1s,mb5.6
EPOB Poblet 89.67 338 P **P 09 21 17.5 -0.2**
comp=Z,215nm,2.2s,mb6.1
EPON Pontenova 89.67 344 P **P 09 21 15.6 -2.0**
comp=Z,258nm,1.5s,mb6.3
ESAC San Caprasio 89.72 339 P **P 09 21 18.6 +0.7**
comp=Z,149nm,1.0s,mb6.3
WDD Wield Dalam 90.19 326 PFAKE 09 21 30.0 +10
WDD LR LR
comp=Z,3µm,19.0s,MS5.8
STS Santiago 90.36 345 P **P 09 21 19.9 -0.9**
STS pmax pmax
comp=Z,45nm,0.9s,mb5.8
STS Santiago 90.36 345 P **P 09 21 19.9 -1.0**
comp=Z,45nm,0.9s,mb5.8
EMAZ Mazaricos 90.37 346 P **P 09 21 20.7 -0.2**
comp=Z,153nm,1.4s,mb6.1
ERUA La Rua 90.57 344 P **P 09 21 20.3 -1.6**
ERUA pmax pmax
comp=Z,101nm,1.4s,mb6.0
ERUA La Rua 90.57 344 P **P 09 21 20.3 -1.5**
comp=Z,101nm,1.4s,mb6.0
ETOS Mallorca 90.67 336 P **P 09 21 22.7 +0.3**
comp=Z,297nm,1.4s,mb6.4
ECAL Calabor 90.92 344 P **P 09 21 23.0 -0.5**
comp=Z,174nm,1.8s,mb6.1
ETOR Torete 90.97 340 P **P 09 21 23.2 -0.5**
ETOR pmax pmax
comp=Z,27nm,1.3s,mb5.4
ETOR Torete 90.97 340 P **P 09 21 23.2 -0.5**
comp=Z,26nm,1.3s,mb5.4
PBRG Braganca 91.06 344 *e*P **P 09 21 22.1 -2.0**
comp=Z,59nm,1.7s,mb5.6
PBRG Braganca 91.06 344 *e*P **P 09 21 22.0 -2.1**
EZAM Zamans 91.10 345 P **P 09 21 23.1 -1.2**
EZAM pmax pmax
comp=Z,51nm,0.8s,mb5.9
EZAM Zamans 91.10 345 P **P 09 21 23.1 -1.2**
comp=Z,50nm,0.8s,mb5.9
ELOB Lobios 91.25 345 P **P 09 21 23.9 -1.2**
comp=Z,103nm,1.5s,mb5.9
GUD Guadarrama 91.62 341 P **P 09 21 25.3 -1.5**
GUD pmax pmax
comp=Z,21nm,1.1s,mb5.4
GUD Guadarrama 91.62 341 P **P 09 21 25.3 -1.5**
comp=Z,21nm,1.1s,mb5.4
MVO Moncorvo 91.73 344 *e*P **P 09 21 26.1 -1.2**
comp=Z,70nm,1.3s,mb5.8
MVO *e*SKS 09 32 16.0
MVO Moncorvo 91.73 344 P **P 09 21 25.9 -1.4**
PVRL Vila Real 91.76 344 *e*P **P 09 21 26.2 -1.2**
comp=Z,103nm,1.4s,mb6.0
EIBI Ibiza 91.77 337 P **P 09 21 26.8 -0.7**
comp=Z,160nm,1.3s,mb6.2
CMAH Djebel Manchou 92.11 332 P **P 09 21 26.1 -3.0**
KEST Kesra 92.25 330 P **P 09 21 29.7 -0.1**
comp=Z,33nm,1.1s,mb5.6,baz=302,slow=1.4,SNR=43
KEST LR LR 10 07 18.2
comp=Z,1µm,19.9s,MS5.3,baz=104,slow=38
KEST Kesra 92.25 330 *e*P **P 09 21 29.5 -0.3**
PVIS Viseu 92.33 344 *e*P **P 09 21 28.8 -1.3**
comp=Z,53nm,1.4s,mb5.7
PVIS Viseu 92.33 344 *e*P **P 09 21 28.3 -1.8**
ABSA Djebel Ababsia 92.41 331 P **P 09 21 29.8 -0.7**
EBEN Beniarda 92.50 338 P **P 09 21 30.9 +0.1**
comp=Z,157nm,1.9s,mb6.0
ESDC Sonseca Array 92.50 341 P **P 09 21 29.8 -1.0**
comp=Z,14nm,0.9s,mb5.4,baz=13,slow=4.1,SNR=51
ESDC LR LR 10 08 59.9
comp=Z,2µm,18.3s,MS5.6,baz=40,slow=39
ESDC Sonseca Array 92.50 341 P **P 09 21 28.6 -2.3**
comp=Z,17nm,1.0s,mb5.4
ESLA Sonseca Array 92.50 341 *e*P **P 09 21 29.3 -1.5**
comp=Z,13nm,1.2s,mb5.2
ESLA LR LR
comp=Z,13µm,21.0s,MS6.4
CKFL Kef-Lekhel 92.55 332 P **P 09 21 31.7 +0.5**
MTE Manteigas 92.57 344 *e*P **P 09 21 29.8 -1.4**
comp=Z,73nm,1.5s,mb5.9
MTE *e*SKS 09 32 14.8
MTE *i* P 09 34 04.5
MTE Manteigas 92.57 344 *e*P **P 09 21 29.9 -1.3**
comp=Z,46nm,1.2s,mb5.8
MTE LR LR
comp=Z,2µm,20.0s,MS5.6
EPLA Plasencia 92.60 343 P **P 09 21 28.4 -2.9**
EPLA pmax pmax
comp=Z,232nm,2.1s,mb6.2
EPLA Plasencia 92.60 343 P **P 09 21 28.4 -2.8**
comp=Z,232nm,2.1s,mb6.2
DFRA Djebel Bou Aff 92.70 333 P **P 09 21 32.2 +0.4**
DWPF Disney 92.71 45 PFAKE 09 21 40.0 +8.0
DWPF LR LR
comp=Z,2µm,20.0s,MS5.6
PAB San Pablo 92.71 341 *e*P **P 09 21 30.0 -1.8**
PAB pmax pmax
comp=Z,27nm,1.2s,mb5.5
PAB MLR MLR
comp=Z,2µm,19.0s,MS5.7
PAB San Pablo 92.71 341 *e*P **P 09 21 30.0 -1.9**
comp=Z,27nm,1.2s,mb5.5
PAB LR LR
comp=Z,2µm,19.0s,MS5.7
CASM Ain Smara 92.76 332 P **P 09 21 31.4 -0.7**
ETOB Tobarra 92.90 339 P **P 09 21 33.3 +0.6**
comp=Z,105nm,1.5s,mb6.0
AKF Akfadou 93.03 334 P **P 09 21 33.7 +0.3**
PCBR Castelo Branco 93.10 344 *e*P **P 09 21 32.2 -1.4**
comp=Z,58nm,1.2s,mb5.9
EVIA Vianos 93.14 340 P **P 09 21 33.6 -0.2**
EVIA pmax pmax
comp=Z,22nm,1.1s,mb5.5
EVIA Vianos 93.14 340 P **P 09 21 33.6 -0.2**
comp=Z,22nm,1.1s,mb5.5
SET Setif 93.17 333 P **P 09 21 35.0 +1.0**
CKHR Kef el Ahmar 93.30 333 P **P 09 21 34.7 +0.1**
ABA Alger-Bouzarea 93.35 335 P **P 09 21 37.0 +2.2**
PMRV Marv??o 93.48 343 *e*P **P 09 21 34.0 -1.4**
comp=Z,49nm,1.5s,mb5.7
PMRV *e*SKS 09 32 27.7
PMRV *i* P 09 34 13.4
PMRV Marv??o 93.48 343 *e*P **P 09 21 33.9 -1.5**
EBAN Banos Encina 93.90 340 P **P 09 21 36.5 -0.8**
EBAN pmax pmax
comp=Z,9.0nm,0.9s,mb5.2
EBAN Banos Encina 93.90 340 P **P 09 21 36.5 -0.8**
comp=Z,9.3nm,0.9s,mb5.2
EMHD Djebel Mahouad 93.93 335 P **P 09 21 38.0 +0.5**
EHUE Huescar 93.94 339 P **P 09 21 36.3 -1.2**
EHUE pmax pmax
comp=Z,24nm,1.1s,mb5.5
EHUE Huescar 93.94 339 P **P 09 21 36.3 -1.2**
comp=Z,24nm,1.1s,mb5.5
PESTR Estremoz 94.06 343 *e*P **P 09 21 36.6 -1.4**
comp=Z,44nm,1.2s,mb5.8
PESTR *e*SKS 09 32 28.2
PESTR *i* P 09 34 18.7
EQES Quesada 94.07 340 P **P 09 21 36.8 -1.4**
comp=Z,42nm,1.0s,mb5.8
EADA Adamuz 94.08 341 P **P 09 21 37.3 -0.9**
comp=Z,55nm,1.5s,mb5.8
EBNR Beni Rached 94.27 336 P pP 09 21 50.0 -2.5
ECAB El Cabril 94.36 342 P **P 09 21 37.2 -2.3**
comp=Z,101nm,2.0s,mb5.9
EVO Evora 94.47 344⇑ *i*P **P 09 21 38.5 -1.4**
comp=Z,47nm,1.1s,mb5.5
EVO *e*MLR MLR
comp=Z,3µm,20.0s,MS5.5
EVOP Sao Brissos 94.49 344 *e*P **P 09 21 39.5 -0.5**
EVOP *e*SS SS 09 39 11.8 +1.8
EVOP *e*SS SS 09 39 11.9 +1.9
EVOP AMS AMS 10 09 25.5
comp=Z,2µm,15.0s,MS5.8
EVOP Sao Brissos 94.49 344 *e*P **P 09 21 39.5 -0.5**
EVOP *e*SS SS 09 39 11.8 +1.8
LIS Lisbon 94.51 345 *e*P **P 09 21 39.5 -0.6**
LIS *e*SS SS 09 39 12.0 +1.8
LIS AMS AMS 10 09 56.7
comp=N,3µm,22.1s
LIS Lisbon 94.51 345 *e*P **P 09 21 39.5 -0.6**
LIS *e*SS SS 09 39 12.0 +1.8
ELUQ Luque 94.59 341 P **P 09 21 38.8 -1.7**
PBAR Barrancos 94.61 343 *e*P **P 09 21 39.0 -1.6**
comp=N,40nm,1.6s,mb5.6
PBAR *e*SKS 09 32 43.7
PBAR *i* P 09 34 23.8
EANR 'Ain N'Sour 94.71 336 P **P 09 21 40.6 -0.5**
PBEJ Beja 94.93 343 *e*P **P 09 21 40.9 -1.1**
comp=N,69nm,1.1s,mb6.0
PBEJ Beja 94.93 343 *e*P **P 09 21 40.8 -1.2**
EMIN Mina Concepcio 94.93 342 P **P 09 21 41.4 -0.7**
comp=N,38nm,1.6s,mb5.6
ELOJ Sierra Loja 94.96 340 P **P 09 21 39.5 -2.7**
ELOJ pmax pmax
comp=Z,16nm,1.0s,mb5.4
ELOJ Sierra Loja 94.96 340 P **P 09 21 39.5 -2.6**
comp=Z,16nm,1.0s,mb5.4
ETRT Tiaret 95.17 336 P **P 09 21 43.5 +0.3**
MESJ Messejana 95.18 344 *e*P **P 09 21 42.5 -0.6**
MESJ *e*S SKSac 09 32 15.1 -0.2
MESJ *e*S SKSac 09 32 15.2 0.0
MESJ *e*SS SS 09 39 21.2 +1.5
MESJ AMS AMS 10 13 14.7
comp=Z,2µm,18.3s,MS5.7
MESJ Messejana 95.18 344 *e*P **P 09 21 42.5 -0.7**
MESJ *e*S SKSac 09 32 15.1 -0.2
MESJ *e*SS SS 09 39 21.2 +1.4
MESJ A 10 13 14.7
comp=Z,2µm,18.3s
MESJ Messejana 95.18 344 *e*P **P 09 21 42.5 -0.7**
MESJ *e*S SKSac 09 32 15.1 -0.2
MESJ *e*SS SS 09 39 21.2 +1.4
PCVE Castro Verde 95.34 344 *e*P **P 09 21 41.8 -2.1**
comp=Z,59nm,1.3s,mb5.9
PCVE *e*SKS SKKSac 09 32 37.5 -1.9
PCVE *i* P PS 09 34 31.8 +13
TEIG Tepich 95.40 54 PFAKE 09 22 00.0 +15
TEIG LR LR
comp=Z,1µm,19.0s,MS5.4
PVAQ Vaqueiros 95.50 343 *e*SKS SKKSac 09 32 39.6 -0.9
PVAQ *i* P PS 09 34 33.3 +13
RKT Rikitea 95.54 117 *e*SKSac SKSac 09 32 19.0 +1.9
comp=Z,483nm,29.8s
RKT *e*SP SP 09 34 19.1 +2.7
comp=Z,944nm,29.8s
RKT *e*SS SS 09 39 30.7 +2.9
comp=Z,926nm,25.5s
RKT *e*LR LR 09 52 33.6
comp=Z,3µm,31.0s,baz=318
ESPR Espera 95.61 342 P **P 09 21 44.1 -1.1**
comp=Z,138nm,1.9s,mb6.1
PBDV Barranco-do-Ve 95.70 343 *e*P **P 09 21 46.5 +0.9**
MORF Marmelete 95.78 344 *e*P **P 09 21 45.0 -0.9**
comp=Z,102nm,1.6s,mb6.0
MORF *e*SKS S 09 32 55.2 -4.9
MORF *i* P 09 34 37.1
MORF Marmelete 95.78 344 *e*P **P 09 21 45.3 -0.6**
MORF *e*SS SS 09 39 29.2 +0.9
MORF Marmelete 95.78 344 *e*P **P 09 21 45.6 -0.3**
PFVI Vila Bisbo 95.98 344 *e*P **P 09 21 46.6 -0.3**
PFVI Vila Bisbo 95.98 344 *e*P **P 09 21 46.5 -0.4**
SFS San Fernando 96.08 342 PFAKE 09 22 00.0 +13
SFS LR LR
comp=Z,5µm,19.0s,MS6.0
BBSR BB Station 96.15 30 PFAKE 09 22 00.0 +12
BBSR LR LR
comp=Z,2µm,20.0s,MS5.5
MSEY Mahe Island 97.26 271 PFAKE 09 22 00.0 +7.0
MSEY LR LR
comp=Z,1µm,22.0s,MS5.3
CMLA Cha da Macela 97.27 357 PFAKE 09 22 00.0 +7.3
CMLA LR LR
comp=Z,1µm,19.0s,MS5.3
TGUH Tegucigalpa,Un 100.85 57 PFAKE 09 22 20.0 +11
TGUH LR LR
comp=Z,821nm,21.0s,MS5.2
GTBY Guantanamo Bay 102.68 44 PFAKE 09 22 30.0 +13
GTBY LR LR
comp=Z,1µm,20.0s,MS5.4
MTDJ Mount Denham 102.89 47 PFAKE 09 22 30.0 +12
MTDJ LR LR
comp=Z,1µm,20.0s,MS5.5
GRTK Grand Turk 103.20 40 PFAKE 09 22 30.0 +11

GRTK LR LR
comp=Z,1μm,19.0s,MS5.5
JTS JuntasAbangare 105.20 58 PFAKE 09 26 50.0 +7.5
JTS LR LR
comp=Z,779nm,19.0s,MS5.3
SDDR Presa de Saban 105.33 41 PFAKE 09 26 50.0 +7.3
SDDR LR LR
comp=Z,1μm,20.0s,MS5.4
TAM Tamanrasset 105.34 327 PFAKE 09 26 50.0 +7.4
TAM LR LR
comp=Z,1μm,20.0s,MS5.4
KMBO Kilima Mbogo 107.42 287 PFAKE 09 27 00.0 +13
KMBO LR LR
comp=Z,1μm,19.0s,MS5.4
KMBO Kilima Mbogo 107.42 287 P PP 09 27 05.5 -0.4
SNR=6.9
SJG San Juan 108.39 37 PFAKE 09 27 00.0 +12
SJG LR LR
comp=Z,1μm,20.0s,MS5.5
BCIP Isla Barro Col 109.09 54 PFAKE 09 27 00.0 +10
BCIP LR LR
comp=Z,872nm,19.0s,MS5.3
ANWB Willy Bob 110.58 34 PFAKE 09 27 00.0 +7.5
ANWB LR LR
comp=Z,1μm,20.0s,MS5.5
MBAR Mbarara 111.36 292 PFAKE 09 27 00.0 +5.9
MBAR LR LR
comp=Z,502nm,20.0s,MS5.1
DRV Dumont d'Urvil 111.94 185 SP SP 09 37 02.0 -2.9
DRV SS SS 09 43 28.0 +16
DRV L 09 55 00.0
ABPO Ambohimpanom 112.93 266 PFAKE 09 27 10.0 +13
ABPO LR LR
comp=Z,2μm,20.0s,MS5.7
FDF Fort de France 113.49 34 PFAKE 09 27 10.0 +12
FDF LR LR
comp=Z,1μm,22.0s,MS5.5
SDV Santo Domingo 114.32 46 PFAKE 09 27 10.0 +10
SDV LR LR
comp=Z,504nm,22.0s,MS5.1
RPN Rapa Nui 115.19 104 PFAKE 09 27 10.0 +9.1
RPN LR LR
comp=Z,3μm,19.0s,MS6.0
CASY Casey 115.52 197 PFAKE 09 27 10.0 +10
CASY LR LR
comp=Z,790nm,20.0s,MS5.3
BBGH Gun Hill 115.56 33 PFAKE 09 27 10.0 +7.9
BBGH LR LR
comp=Z,2μm,21.0s,MS5.8
TORD Torodi Ar. Bea 115.59 327 PKP PKPdf 09 27 01.2 -0.9
comp=Z,3.2nm,0.5s,baz=14,slow=1.9,SNR=43
TORD sPKP 09 27 13.8
comp=Z,4.2nm,0.6s,baz=15,slow=1.8,SNR=9.8
TORD PP PP 09 28 05.8 +2.1
comp=Z,6.4nm,1.0s,baz=16,slow=9.7,SNR=3.6
TORD PKKPab PKKPab 09 37 42.3 -0.3
comp=Z,1.5nm,1.0s,baz=209,slow=3.0,SNR=3.9
TORD PKPPKP 09 46 11.3
comp=Z,0.8nm,0.6s,baz=191,slow=3.3,SNR=9.0
TORD Torodi Ar. Bea 115.59 327 PKP PKPdf 09 27 01.2 -0.9
TORD sPKP 09 27 13.8
TORD PP PP 09 28 05.8 +2.1
TORD PKKPab PKKPab 09 37 42.3 -0.3
TORD PPP 09 46 11.3
GRGR Grenville 115.63 36 PFAKE 09 27 10.0 +7.8
GRGR LR LR
comp=Z,971nm,20.0s,MS5.4
OTAV Otavalo 117.06 59 PFAKE 09 27 20.0 +15
OTAV LR LR
comp=Z,549nm,21.0s,MS5.2
SACV Santiago Islan 119.84 354 PFAKE 09 27 20.0 +10
SACV LR LR
comp=Z,933nm,20.0s,MS5.4
MIR Mirnyy 119.99 203 *e*PKIKP PKPdf 09 27 09.0 +0.1
MIR *i* 09 27 23.0
MIR *e* 09 28 34.0
MIR pmax pmax
comp=Z,21nm,1.0s
SBA Scott Base 123.25 176 *e*PKIKP PKPdf 09 27 14.7 -0.2
SBA *e* 09 27 28.2
SBA MLR MLR
comp=Z,723nm,19.0s,MS5.3
LSZ Lusaka 123.76 283 *e*PKIKP PKPdf 09 27 17.9 +0.2
LSZ *e* 09 29 02.5
LSZ MLR MLR
comp=Z,2μm,19.0s,MS5.8
DBIC Dimbokro 123.97 331 PKP PKPdf 09 27 17.8 -0.5
comp=Z,11nm,0.5s,baz=350,slow=2.4,SNR=22
DBIC pPKP pPKPdf 09 27 31.3 -0.8
comp=Z,32nm,0.9s,baz=72,slow=1.7,SNR=7.5
DBIC Dimbokro 123.97 331 PKIKP PKPdf 09 27 17.8 -0.5
DBIC 09 27 31.3
DBIC pmax pmax
comp=Z,11nm,0.5s
DBIC Dimbokro 123.97 331 *e*PKPdf PKPdf 09 27 17.8 -0.5
DBIC LR LR
comp=Z,1μm,19.0s,MS5.5
TIC Toumodi 124.05 331 *e*PKIKP PKPdf 09 27 17.8 -0.6
comp=Z,140nm,1.4s
KIC Kosan Boka 124.21 331 *e*PKIKP PKPdf 09 27 18.1 -0.7
comp=Z,30nm,0.7s
LIC Lamto 124.44 331 *e*PKIKP PKPdf 09 27 17.3 -1.9
comp=Z,100nm,1.2s
LIC *e*MLR MLR
comp=Z,2μm,20.2s,MS5.4
LIC Lamto 124.44 331 *e*PKIKP PKPdf 09 27 18.5 -0.7
comp=Z,109nm,1.2s
LIC Lamto 124.44 331 *e*PKPdf PKPdf 09 27 17.3 -1.9
LIC LR LR
comp=Z,820nm,20.3s,MS5.4
NNA Nana 127.50 66 PFAKE 09 27 40.0 +15
NNA LR LR
comp=Z,953nm,22.0s,MS5.4
MAW Mawson 130.23 210 PKP PKPdf 09 27 28.5 0.0
comp=Z,4.3nm,0.7s,baz=63,slow=2.7,SNR=11
MAW pPKP pPKPdf 09 27 42.3 0.0
comp=Z,7.8nm,0.6s,baz=122,slow=8.3,SNR=8.5
MAW SKPbc SKPbc 09 30 48.7 +1.1
comp=Z,20nm,1.2s,baz=71,slow=7.5,SNR=8.4
MAW Mawson 130.23 210 *e*PKPdf PKPdf 09 27 28.7 +0.2
MAW LR LR
comp=Z,714nm,20.0s,MS5.4
LBTB Lobatse 132.06 276 *e*PKIKP PKPdf 09 27 34.6 +1.3
LBTB MLR MLR
comp=Z,1μm,20.0s,MS5.6
TSUM Tsumeb 133.71 289 *e*PKPdf PKPdf 09 27 38.1 +1.6
TSUM LR LR
comp=Z,2μm,21.0s,MS5.8
BOSA Boshof 134.50 272 PKhKP PKPpre 09 27 25.0
comp=Z,2.7nm,0.7s,baz=63,slow=2.3,SNR=3.7
BOSA PP PP 09 30 08.5 -2.7
comp=Z,7.3nm,1.0s,baz=55,slow=8.8,SNR=4.2
BOSA Boshof 134.50 272 PFAKE 09 27 50.0 +12
BOSA LR LR
comp=Z,1μm,19.0s,MS5.7
QSPA South Pole Qui 135.02 180 *e*PKPdf PKPdf 09 27 37.2 0.0
QSPA LR LR
comp=Z,797nm,21.0s,MS5.4
LPAZ La Paz 136.26 61 PKP PKPdf 09 27 41.6 +0.2
comp=Z,3.9nm,0.9s,baz=14,slow=6.7,SNR=9.7
LPAZ La Paz 136.26 61 *e*PKPdf PKPdf 09 27 40.8 -0.6
LPAZ *e* 09 27 55.4
LPAZ LR LR
comp=Z,944nm,21.0s,MS5.5
SYO Syowa Base 138.94 211⇓ *e*PKPdf PKPdf 09 27 45.5 +0.8
SUR Sutherland 139.80 271 PFAKE 09 28 00.0 +13
SUR LR LR
comp=Z,2μm,19.0s,MS5.8
RCBR Riachuelo 140.22 11 PFAKE 09 28 00.0 +11
RCBR LR LR
comp=Z,763nm,21.0s,MS5.4
LCO Las Campanas 143.38 78 *e*PKPdf PKPdf 09 27 54.7 +0.7
LCO LR LR
comp=Z,2μm,20.0s,MS5.8
SHEL Horse Pasture 144.88 319 *e*PKIKP PKPdf 09 27 57.1 +0.2
SHEL MLR MLR
comp=Z,1μm,19.0s,MS5.7
CLCH Cerro Calan 146.03 84 *e*P PKPdf 09 27 57.9 -0.6
FCH Farellones 146.17 84 *e*P PKPdf 09 28 01.4 +2.7
LMEL Las Melosas 146.51 85 *e*P PKPdf 09 27 58.6 -0.6
LMEL Las Melosas 146.51 85 *e*P PKPdf 09 27 58.6 -0.6
NVL N'lazarevskaya 147.73 204⇑ /PKIKP PKPdf 09 28 00.1 0.0
NVL *i* 09 28 16.0
NVL *e* 09 35 06.7
NVL *e*SS SS 09 50 36.3 +4.9

MAIT Maitri 147.75 204 *e*PKPdif PKPdf 09 28 02.8 +2.7
MAIT *e* 09 28 18.2
CPUP Villa Florida 150.40 60 PKPbc PKPbc 09 28 10.5 -0.6
comp=Z,4.4nm,0.7s,baz=112,slow=2.0,SNR=4.2
CPUP pPKPbc pPKPbc 09 28 23.8 -1.1
comp=Z,61nm,1.0s,baz=302,slow=2.6,SNR=17
CPUP Villa Florida 150.40 60 PKIKP PKPbc 09 28 10.5 -0.6
CPUP 09 28 23.8
CPUP pmax pmax
comp=Z,4.0nm,0.7s
CPUP Villa Florida 150.40 60 PFAKE 09 28 20.0 +14
CPUP LR LR
comp=Z,162nm,20.0s,MS4.8
PMSA Palmer Station 152.53 148 PFAKE 09 28 20.0 +12
PMSA LR LR
comp=Z,3μm,20.0s,MS6.1
SPB Sao Paulo 153.62 41 PFAKE 09 28 20.0 +9.3
SPB LR LR
comp=Z,1μm,21.0s,MS5.6
TRQA Tornquist 154.38 85 PFAKE 09 28 20.0 +8.7
TRQA LR LR
comp=Z,2μm,20.0s,MS5.8
CAM4 Nova Friburgo 154.53 31 (P) PKPbc 09 28 19.8 -0.6
CAM4 *i* 09 28 21.0
CAM4 *i* 09 28 33.3
CAM4 *i* 09 28 47.4
CAM4 *i* 09 29 25.4

IDC 06 09:18:57.9±2.3, 4°69S×129°87E, h0km, mb3.8/1, mb1 3.9/3, mb1mx3.6/17, mbtmp3.7/3, ML3.4/2, Error ellipse: s-maj=142.3km s-min=29.9km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.77**	**164**	Pn	Pn	09 22 39.6	-1.9
	0.1nm,0.3s,baz=347,slow=13,SNR=6.0						
WRA				Sn	Sn	09 25 28.9	-8.2
	0.2nm,0.3s,baz=0.2,slow=23,SNR=5.5						
ASAR	**Alice Springs**	**19.26**	**169**	P	Pn	09 23 24.9	-0.1
	0.2nm,0.3s,baz=354,slow=9.4,SNR=5.4						
MKAR	**Makanchi Array**	**66.23**	**326**	P	P	09 29 47.8	+0.1
	0.4nm,0.3s,baz=114,slow=8.3,SNR=6.2						

*NEIC **06** 09:26:20.7, 44°.20N×8°.25E, h8km, ML3.0(LDG), ML2.8(ROM), ML2.8(STR), After ROM.*
*ROM **06** 09:26:20.7±0.3, 44°.20N×8°.25E, h8km±3km, Md2.9/14, Ml2.8/15, Error ellipse: s-maj=3.3km s-min=2.8km az=22.0*
*ISCJB **06** 09:26:21.3±0.3, 44°.23N±0°.02×8°.26E±0°.03, h24km±3km, Error ellipse: s-maj=4.0km s-min=2.7km az=147.2*
*CSEM **06** 09:26:21.1±0.1, 44°.23N×8°.25E, h10km, ML3.3/17, Error ellipse: s-maj=3.4km s-min=2.4km az=148.0*
*STR **06** 09:26:22.6±0.4, 44°.30N×8°.14E, h10km, Ml2.8, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*LDG **06** 09:26:23.5±0.1, 44°.21N×8°.13E, h6km, Md3.0/3, Ml3.0/22, Error ellipse: s-maj=2.1km s-min=1.4km az=143.0*
ISC 06 09:26:21.5±0.3, 44°25N±0°.02×8°22E±0°.02, h14km±2km, n121, σ1°09/209, 4C, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QLNO	**Quiliano**	**0.12**	**49⇑**	*i*Pg	**Pg**	**09 26 24.6**	**-0.3**
QLNO				Sg	**Sg**	**09 26 26.6**	**-0.7**
	5μm,0.3s						
QLNO	**Quiliano**	**0.12**	**49⇑**	*i*Pg	**Pg**	**09 26 24.6**	**-0.3**
QLNO				Sg	**Sg**	**09 26 26.6**	**-0.7**
	5μm,0.3s						
PCP	**Piancastagn**	**0.38**	**38**	Pg	**Pg**	**09 26 29.0**	**-0.1**
	870nm,0.2s						
PCP	**Piancastagn**	**0.38**	**38**	Pg	**Pg**	**09 26 29.0**	**-0.1**
	870nm,0.2s						
IMI	**Imperia**	**0.41**	**215⇑**	*i*Pg	**Pg**	**09 26 29.4**	**-0.3**
IMI				Sg	**Sg**	**09 26 35.2**	**-0.1**
	494nm,0.3s						
IMI	**Imperia**	**0.41**	**215⇑**	*i*Pg	**Pg**	**09 26 29.4**	**-0.3**
IMI				Sg	**Sg**	**09 26 35.2**	**-0.1**
	494nm,0.3s						
SAOF	**Saorge**	**0.55**	**242**	Pg	**Pg**	**09 26 32.6**	**+0.4**
SAOF				Sg	**Sg**	**09 26 39.5**	**0.0**
SAOF	**Saorge**	**0.55**	**242**	Pg	**Pg**	**09 26 32.6**	**+0.4**
SAOF				Sg	**Sg**	**09 26 39.5**	**0.0**
AUTN	**L'Aution**	**0.62**	**247**	Pg	**Pg**	**09 26 34.4**	**+0.7**
AUTN				Sg	**Sg**	**09 26 42.2**	**+0.2**
AUTN	**L'Aution**	**0.62**	**247**	Pg	**Pg**	**09 26 34.4**	**+0.7**
AUTN				Sg	**Sg**	**09 26 42.2**	**+0.2**
STV	**Sant Anna di V**	**0.64**	**270**	Pg	**Pg**	**09 26 34.0**	**-0.1**
STV				Sg	**Sg**	**09 26 42.6**	**0.0**
	751nm,0.3s						
STV	**Sant Anna di V**	**0.64**	**270**	Pg	**Pg**	**09 26 34.0**	**-0.1**
STV				Sg	**Sg**	**09 26 42.6**	**0.0**
	751nm,0.3s						
SBF	**Sospel**	**0.69**	**236**	*e*Pg	**Pg**	**09 26 34.7**	**-0.1**
SBF				*e*Sg	**Sg**	**09 26 42.9**	**-1.0**
	610nm,0.3s						
SBF	**Sospel**	**0.69**	**236**	*e*Pg	**Pg**	**09 26 34.7**	**-0.1**
SBF				*e*Sg	**Sg**	**09 26 42.9**	**-1.0**
	305nm,0.3s						
LUCF	**Luceram**	**0.72**	**241**	Pg	**Pg**	**09 26 35.4**	**-0.2**
LUCF				Sg	**Sg**	**09 26 45.9**	**+0.8**
LUCF	**Luceram**	**0.72**	**241**	Pg	**Pg**	**09 26 35.4**	**-0.2**
LUCF				Sg	**Sg**	**09 26 45.9**	**+0.8**
TOUF	**Mont Tournerai**	**0.74**	**252**	Pg	**Pg**	**09 26 36.3**	**+0.4**
TOUF				Sg	**Sg**	**09 26 46.6**	**+1.0**
TOUF	**Mont Tournerai**	**0.74**	**252**	Pg	**Pg**	**09 26 36.3**	**+0.4**
TOUF				Sg	**Sg**	**09 26 46.6**	**+1.0**
DOI	**San Damiano**	**0.74**	**291**	Pg	**Pg**	**09 26 35.8**	**-0.2**
	472nm,0.4s						
DOI	**San Damiano**	**0.74**	**291**	Pg	**Pg**	**09 26 35.8**	**-0.2**
	472nm,0.4s						
REVF	**Revere**	**0.80**	**231**	Pg	**Pg**	**09 26 37.7**	**+0.7**
REVF	**Revere**	**0.80**	**231**	Pg	**Pg**	**09 26 37.7**	**+0.7**
PZZ	**Stroppo**	**0.83**	**289**	Pg	**Pg**	**09 26 37.4**	**-0.3**
	271nm,0.4s						
PZZ	**Stroppo**	**0.83**	**289**	Pg	**Pg**	**09 26 37.4**	**-0.3**
	271nm,0.4s						
MVIF	**Mont Vial**	**0.85**	**246**	Pg	**Pg**	**09 26 38.1**	**+0.2**
MVIF				Sg	**Sg**	**09 26 49.2**	**+0.2**
MVIF	**Mont Vial**	**0.85**	**246**	Pg	**Pg**	**09 26 38.1**	**+0.2**
MVIF				Sg	**Sg**	**09 26 49.2**	**+0.2**
MONC	**Moncucco Torin**	**0.85**	**346**	Pg	**Pg**	**09 26 39.1**	**+1.1**
	557nm,0.3s						
MONC	**Moncucco Torin**	**0.85**	**346**	Pg	**Pg**	**09 26 39.1**	**+1.1**
	557nm,0.3s						
SC2M	**Scurtabo**	**0.95**	**80**	Pg	**Pg**	**09 26 39.1**	**-0.8**
	320nm,0.3s						
SC2M	**Scurtabo**	**0.95**	**80**	Pg	**Pg**	**09 26 39.1**	**-0.8**
	320nm,0.3s						
BOB	**Bobbio (Coli)**	**1.02**	**59**	Pg	**Pg**	**09 26 41.3**	**+0.1**
	160nm,0.8s						
BOB	**Bobbio (Coli)**	**1.02**	**59**	Pg	**Pg**	**09 26 41.3**	**+0.1**
	160nm,0.8s						
SURF	**Saint Ours**	**1.04**	**284**	Pg	**Pg**	**09 26 41.0**	**-0.5**
SURF	**Saint Ours**	**1.04**	**284**	Pg	**Pg**	**09 26 41.0**	**-0.5**
OG22	**Abries**	**1.08**	**303**	Pg	**Pg**	**09 26 41.6**	**-0.7**
OG22				Sg	**Sg**	**09 26 55.4**	**-1.0**
OG22	**Abries**	**1.08**	**303**	Pg	**Pg**	**09 26 41.6**	**-0.7**
OG22				Sg	**Sg**	**09 26 55.4**	**-1.0**
CALN	**Calern**	**1.08**	**243**	Pg	**Pg**	**09 26 42.7**	**+0.4**
CALN				Sg	**Sg**	**09 26 57.8**	**+1.3**
CALN	**Calern**	**1.08**	**243**	Pg	**Pg**	**09 26 42.7**	**+0.4**
CALN				Sg	**Sg**	**09 26 57.8**	**+1.3**
RSP	**Reno Superiore**	**1.13**	**323**	Pg	**Pg**	**09 26 42.7**	**-0.6**
	162nm,0.3s						
RSP	**Reno Superiore**	**1.13**	**323**	Pg	**Pg**	**09 26 42.7**	**-0.6**
	162nm,0.3s						
MBDF	**Montbardon**	**1.14**	**295**	*e*Pg	**Pg**	**09 26 42.8**	**-0.7**
MBDF				*e*Sg	**Sg**	**09 26 58.4**	**-0.1**
	87nm,0.3s						
MBDF	**Montbardon**	**1.14**	**295**	*e*Pg	**Pg**	**09 26 42.8**	**-0.7**
MBDF				*e*Sg	**Sg**	**09 26 58.4**	**-0.1**
	43nm,0.3s						
TRAV	**Traversella**	**1.31**	**345**	Pg	**Pg**	**09 26 46.3**	**-0.4**
	70nm,0.3s						
TRAV	**Traversella**	**1.31**	**345**	Pg	**Pg**	**09 26 46.3**	**-0.4**
	70nm,0.3s						
FRF	**La Foret Royal**	**1.33**	**239**	*e*Pg	**Pg**	**09 26 46.5**	**-0.6**
FRF				*e*Sg	**Sg**	**09 27 02.6**	**-1.8**
	316nm,0.3s						
FRF	**La Foret Royal**	**1.33**	**239**	*e*Pn	**Pn**	**09 26 45.5**	**0.0**
FRF				*e*Pg	**Pg**	**09 26 46.5**	**-0.6**
FRF				*e*Sg	**Sg**	**09 27 02.6**	**-1.8**

FRF La Foret Royal 1.33 239 *e*Pn **Pn 09 26 45.5 0.0**
FRF La Foret Royal 1.33 239 *e*Pg **Pg 09 26 46.5 -0.6**
FRF *e*Sg **Sg 09 27 02.6 -1.8**
158nm,0.3s
BNI Bardonecchia 1.36 307 *e*Pn **Pn 09 26 46.4 +0.4**
BNI Bardonecchia 1.36 307 Pg **Pn 09 26 46.7 +0.7**
30nm,0.5s
BNI Bardonecchia 1.36 307 *e*Pn **Pn 09 26 46.4 +0.4**
BNI Bardonecchia 1.36 307 Pg **Pn 09 26 46.7 +0.7**
30nm,0.5s
LSD Lago del Serru 1.44 328 Pg **Pn 09 26 47.4 +0.3**
74nm,0.4s
GROG Isola di Gorgo 1.46 124 Pg **Pn 09 26 46.4 -0.9**
188nm,1.6s
GROG Isola di Gorgo 1.46 124 Pg **Pn 09 26 46.4 -0.9**
188nm,1.6s
LMR La Mourre 1.54 234 *e*Pn **Pn 09 26 48.0 -0.4**
LMR *e*Sn **Sn 09 27 06.7 -1.5**
LMR *e*Sg **Sg 09 27 09.2 -1.9**
219nm,0.2s
LMR La Mourre 1.54 234 *e*Pn **Pn 09 26 48.0 -0.4**
LMR *e*Sn **Sn 09 27 06.7 -1.5**
LMR *e*Sg **Sg 09 27 09.2 -1.9**
109nm,0.2s
VLC Villacollemand 1.56 92 Pg **Pn 09 26 47.9 -0.8**
118nm,1.5s
VLC Villacollemand 1.56 92 Pg **Pn 09 26 47.9 -0.8**
118nm,1.5s
LPG La Plagne 1.63 321 *e*Pn **Pn 09 26 51.3 +1.6**
LPG *e*Sn **Sn 09 27 11.3 +0.9**
81nm,0.5s
LPG La Plagne 1.63 321 *e*Pn **Pn 09 26 51.3 +1.6**
LPG *e*Sn **Sn 09 27 11.3 +0.9**
40nm,0.5s
LPL La Plagne 1.65 321 *e*Pn **Pn 09 26 51.9 +1.9**
LPL *e*Sn **Sn 09 27 11.8 +0.8**
57nm,0.5s
LPL La Plagne 1.65 321 *e*Pn **Pn 09 26 51.9 +1.9**
LPL *e*Sn **Sn 09 27 11.8 +0.8**
29nm,0.5s
MAIM Mastiano 1.67 101 Pg **Pn 09 26 48.9 -1.3**
MAIM Mastiano 1.67 101 Pg **Pn 09 26 48.9 -1.3**
ORIF Oris-en-Rattie 1.80 293 *e*Pn **Pn 09 26 53.2 +1.1**
ORIF *e*Sn **Sn 09 27 14.1 -0.6**
ORIF *e*Sg **Sg 09 27 19.2 -0.3**
76nm,0.5s
ORIF Oris-en-Rattie 1.80 293 *e*Pn **Pn 09 26 53.2 +1.1**
ORIF *e*Sn **Sn 09 27 14.1 -0.6**
ORIF *e*Sg **Sg 09 27 19.2 -0.3**
38nm,0.5s
SMRF Simiane la Rot 1.93 263 *e*Pg **Pg 09 26 58.0 -0.4**
SMRF *e*Sg **Sg 09 27 22.1 -1.3**
176nm,0.4s
SMRF Simiane la Rot 1.93 263 *e*Pn **Pn 09 26 54.1 +0.4**
SMRF *e*P 09 26 55.6
SMRF *e*Pg **Pg 09 26 58.0 -0.4**
SMRF *e*Sg **Sg 09 27 22.1 -1.3**
SMRF Simiane la Rot 1.93 263 *e*Pn **Pn 09 26 54.1 +0.4**
SMRF Simiane la Rot 1.93 263 *e*Pg **Pg 09 26 58.0 -0.4**
SMRF *e*Sg **Sg 09 27 22.1 -1.3**
88nm,0.4s
TUE Stuetta 2.36 19 *e*Pn **Pn 09 27 02.1 +2.3**
TUE Stuetta 2.36 19 *e*Pn **Pn 09 27 02.1 +2.4**
VIVF Saint-Julien-l 2.61 285 *e*Pg **Pg 09 27 11.1 -0.4**
VIVF *e*Sn **Sn 09 27 33.2 -1.4**
17nm,0.4s
VIVF Saint-Julien-l 2.61 285 *e*Pn **Pn 09 27 04.3 +1.2**
VIVF *e*Pg **Pg 09 27 11.1 -0.4**
VIVF *e*Sn **Sn 09 27 33.2 -1.4**
VIVF Saint-Julien-l 2.61 285 *e*Pn **Pn 09 27 04.3 +1.2**
VIVF Saint-Julien-l 2.61 285 *e*Pg **Pg 09 27 11.1 -0.4**
VIVF *e*Sn **Sn 09 27 33.2 -1.4**
8.5nm,0.4s
CABF La Chapelle 2.80 328 *e*Pn **Pn 09 27 07.8 +2.0**
CABF *e*Sn **Sn 09 27 39.3 0.0**
7.2nm,0.4s
CABF La Chapelle 2.80 328 *e*Pn **Pn 09 27 07.8 +2.0**
CABF *e*Sn **Sn 09 27 39.3 0.0**
3.6nm,0.4s
SSB Saint Sauveur 2.82 293 *e*Pn **Pn 09 27 07.6 +1.6**
SSB Saint Sauveur 2.82 293 *e*Pn **Pn 09 27 07.6 +1.6**
LASF Ste Croix 3.15 268 *e*Pn **Pn 09 27 11.1 +0.6**
LASF *e*Sn **Sn 09 27 45.2 -2.6**
8.4nm,0.3s
LASF Ste Croix 3.15 268 *e*Pn **Pn 09 27 11.1 +0.6**
LASF *e*Sn **Sn 09 27 45.2 -2.6**
4.2nm,0.3s
HINF Hinteralfeld 3.70 346 *e*Pn **Pn 09 27 20.0 +1.9**
HINF *e*Sn **Sn 09 28 01.2 -0.1**
3.6nm,0.3s
HINF Hinteralfeld 3.70 346 *e*Pn **Pn 09 27 20.0 +1.9**
HINF *e*Sn **Sn 09 28 01.2 -0.1**
1.8nm,0.3s
SMF Signal de Mont 3.91 309 *e*Pn **Pn 09 27 22.1 +1.1**
SMF *e*Sn **Sn 09 28 04.9 -1.6**
4.2nm,0.4s
SMF Signal de Mont 3.91 309 *e*Pn **Pn 09 27 22.1 +1.1**
SMF *e*Sn **Sn 09 28 04.9 -1.6**
2.1nm,0.4s
HAU Haudompre 3.98 342 *e*Pn **Pn 09 27 23.7 +1.7**
HAU *e*Sn **Sn 09 28 07.9 -0.4**
5.4nm,0.3s
HAU Haudompre 3.98 342 *e*Pn **Pn 09 27 23.7 +1.7**
HAU *e*Sn **Sn 09 28 07.9 -0.4**
2.7nm,0.3s
CDF Champ du Feu 4.22 351 *e*Pn **Pn 09 27 26.9 +1.7**
CDF *e*Sn **Sn 09 28 14.0 -0.2**
3.2nm,0.4s
CDF Champ du Feu 4.22 351 *e*Pn **Pn 09 27 26.9 +1.7**
CDF *e*Sn **Sn 09 28 14.0 -0.2**
1.6nm,0.4s
AVF Avril sur Loir 4.26 308 *e*Pn **Pn 09 27 27.0 +1.1**
AVF *e*Sn **Sn 09 28 13.3 -2.1**
2.3nm,0.4s
AVF Avril sur Loir 4.26 308 *e*Pn **Pn 09 27 27.0 +1.1**
AVF *e*Sn **Sn 09 28 13.3 -2.1**
1.1nm,0.4s
EJON La Jonquera 4.29 247 P **Pn 09 27 26.8 +0.6**
EJON S **Sn 09 28 16.3 +0.4**
EJON La Jonquera 4.29 247 P **Pn 09 27 26.8 +0.6**
EJON S **Sn 09 28 16.3 +0.4**
LOR Lormes 4.30 316 *e*Pn **Pn 09 27 27.2 +0.9**
LOR *e*Sn **Sn 09 28 14.4 -1.7**
4.8nm,0.3s
LOR Lormes 4.30 316 *e*Pn **Pn 09 27 27.2 +0.9**
LOR *e*Sn **Sn 09 28 14.4 -1.7**
2.4nm,0.3s
SSF Saint Saulge 4.34 312 *e*Pn **Pn 09 27 27.6 +0.7**
SSF *e*Sn **Sn 09 28 15.4 -1.9**
1.2nm,0.2s
SSF Saint Saulge 4.34 312 *e*Pn **Pn 09 27 27.6 +0.7**
SSF *e*Sn **Sn 09 28 15.4 -1.9**
0.6nm,0.2s
BGF Bois d'Agland 4.43 303 *e*Pn **Pn 09 27 29.4 +1.2**
BGF *e*Sn **Sn 09 28 17.1 -2.5**
14nm,0.6s
BGF Bois d'Agland 4.43 303 *e*Pn **Pn 09 27 29.4 +1.2**
BGF *e*Sn **Sn 09 28 17.1 -2.5**
6.8nm,0.6s
MTLF Montolieu 4.44 260 *e*Pn **Pn 09 27 28.7 +0.4**
MTLF *e*Sn **Sn 09 28 16.0 -3.7**
3.7nm,0.2s
MTLF Montolieu 4.44 260 *e*Pn **Pn 09 27 28.7 +0.4**
MTLF *e*Sn **Sn 09 28 16.0 -3.7**
1.9nm,0.2s
CAF Calviac 4.45 281 *e*Pn **Pn 09 27 29.2 +0.8**
CAF *e*Sn **Sn 09 28 16.8 -3.2**
1.1nm,0.2s
CAF Calviac 4.45 281 *e*Pn **Pn 09 27 29.2 +0.8**
CAF *e*Sn **Sn 09 28 16.8 -3.2**
0.6nm,0.2s
CEY Cerknica 4.65 69 *i* Pn **Pn 09 27 30.7 -0.4**
CEY *i* Sn **Sn 09 28 23.5 -1.3**
CEY Cerknica 4.65 69 *i* Pn **Pn 09 27 30.7 -0.4**
CEY *i* Sn **Sn 09 28 23.5 -1.3**
CLLI Llivia 4.89 251 P **Pn 09 27 36.2 +1.8**
CLLI S **Sn 09 28 30.6 -0.1**
CLLI Llivia 4.89 251 P **Pn 09 27 36.2 +1.8**
CLLI S **Sn 09 28 30.6 -0.1**
CFON Fontmartina 4.92 242 P **Pn 09 27 34.9 0.0**
CFON S **Sn 09 28 31.0 -0.4**
CFON Fontmartina 4.92 242 P **Pn 09 27 34.9 +0.1**
CFON S **Sn 09 28 31.0 -0.5**
HYF Humbligny 4.94 310 *e*Pn **Pn 09 27 35.7 +0.6**

HYF					*e*Sn		**Sn**	**09 28 29.3**	**-2.7**
HYF	**Humbligny**	**4.94**	**310**		*e*Pn		**Pn**	**09 27 35.7**	**+0.6**
HYF					*e*Sn		**Sn**	**09 28 29.3**	**-2.7**
VISS	**Visnje**	**4.94**	**69**		*i* Pn		**Pn**	**09 27 35.5**	**+0.4**
VISS					*i* Sn		**Sn**	**09 28 29.1**	**-3.0**
VISS	**Visnje**	**4.94**	**69**		*i* Pn		**Pn**	**09 27 35.5**	**+0.3**
VISS					*i* Sn		**Sn**	**09 28 29.1**	**-3.0**
BOJS	**Bojanci**	**5.15**	**73**		*i* Pn		**Pn**	**09 27 38.3**	**+0.2**
BOJS					*i* Sn		**Sn**	**09 28 34.3**	**-2.9**
BOJS	**Bojanci**	**5.15**	**73**		*i* Pn		**Pn**	**09 27 38.3**	**+0.2**
BOJS					*i* Sn		**Sn**	**09 28 34.3**	**-3.0**
CSOR	**Sort**	**5.50**	**253**		P		**Pn**	**09 27 45.4**	**+2.6**
CSOR					S		**Sn**	**09 28 47.9**	**+2.1**
CSOR	**Sort**	**5.50**	**253**		P		**Pn**	**09 27 45.4**	**+2.5**
CSOR					S		**Sn**	**09 28 47.9**	**+2.1**
ETOS	**Mallorca**	**6.02**	**224**		P		**Pn**	**09 27 50.4**	**+0.4**
ETOS	**Mallorca**	**6.02**	**224**		P		**Pn**	**09 27 50.4**	**+0.4**

ISC 06 09:30:51.7±0.8, **45°.03N**±0°.04×**14°.65E**±0°.08, **h10**km, **n7**, σ**1°.05**/11, **1C, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NVLJ	**Novalja**	**0.50**	**161**	*e*Pg	**Pg**	**09 31 01.0**	**-0.4**
NVLJ				Sg	**Sg**	**09 31 08.9**	**+1.0**
KNDS	**Knezji Dol**	**0.53**	**339**	*i* Pg	**Pg**	**09 31 00.5**	**-1.6**
KNDS				*i* Sg	**Sg**	**09 31 08.9**	**-0.1**
BOJS	**Bojanci**	**0.63**	**42**	*i* Pg	**Pg**	**09 31 03.2**	**-0.8**
BOJS				*i* Sg	**Sg**	**09 31 13.9**	**+1.6**
BOJS	comp=Z,6.0nm,0.1s						
VISS	**Visnje**	**0.78**	**10**	*e*Pg	**Pg**	**09 31 05.7**	**-1.1**
VISS	comp=Z,8.0nm,0.2s						
PDKS	**Podkum**	**1.06**	**13**	*e*Pg	**Pg**	**09 31 11.5**	**-0.6**
VOY	**Vojsko**	**1.13**	**332**	*e*Sg	**Sg**	**09 31 29.4**	**+1.2**
DRI	**Drenchia**	**1.34**	**329**	⇑*i*Pg	**Pg**	**09 31 16.8**	**-0.7**
DRE				*i* Sg	**Sg**	**09 31 36.3**	**+1.4**

*IDC **06** 09:37:49.3±0.7, 30°.97N×103°.53E, h0km, mb4.1/17, mb1 4.2/18, mb1mx4.1/28, mbtmp4.1/18, ML3.5/1, Error ellipse: s-maj=25.4km s-min=12.9km az=47.0*
*ISCJB **06** 09:37:51.9±0.6, 31°.07N±0°.04×103°.75E±0°.05, h27km±4km, mb4.1/24, Error ellipse: s-maj=7.6km s-min=5.8km az=23.9*
*BJI **06** 09:37:51.8, 31°.09N×103°.79E, h15km, mB5.3/6, mb4.3/12, ML4.3/19, Ms4.0/2, Ms7 4.2/4*
*NEIC **06** 09:37:51.4±0.5, 31°.01N×103°.56E, h10km, mb4.3/11, Error ellipse: s-maj=13.1km s-min=8.9km az=84.0*
ISC 06 09:37:52.4±0.6, **31°.12N**±0°.03×**103°.71E**±0°.05, **h14**km±4km, **n58**, σ**1°.30**/70, **mb4.1**/24, **1C, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.21**	**168**	⇑*i*Pg	**Pg**	**09 37 56.6**	**-0.5**
CD2				Sg	**Sg**	**09 38 01.1**	**+0.7**
CD2	comp=N,98μm,0.6s			smax			
CD2	comp=E,73μm,0.7s			smax			
LZH	**Lanzhou**	**4.96**	**1**	Pn	**Pn**	**09 39 11.3**	**+4.9**
LZH				Pg	**Pg**	**09 39 25.3**	**-2.1**
LZH				Sn	**Sn**	**09 40 11.1**	**+7.6**
LZH				Sg	**Sg**	**09 40 29.8**	**-1.8**
LZH	comp=N,290nm,1.0s			smax			
LZH	comp=E,270nm,0.8s			smax			
LZH	comp=E,1μm,5.1s			LR	LR		
XAN	**Xi'an**	**5.28**	**55**	Pn	**Pn**	**09 39 10.4**	**-0.4**
XAN				Sn	**Sn**	**09 40 08.0**	**-3.4**
XAN				Sg	**Sg**	**09 40 34.8**	**-7.1**
XAN	comp=N,310nm,0.8s			smax			
XAN	comp=E,140nm,0.8s			smax			
GYA	**Guiyang**	**5.32**	**150**	Pn	**Pn**	**09 39 13.8**	**+2.5**
GYA				Sg	**Sg**	**09 40 43.8**	**+0.7**
GYA	comp=N,490nm,1.2s			smax			
GYA	comp=E,400nm,1.2s			smax			
KMI	**Kunming**	**6.03**	**188**	Pn	**Pn**	**09 39 21.5**	**+0.3**
KMI				Sn	**Sn**	**09 40 28.8**	**-1.2**
KMI				Sg	**Sg**	**09 41 01.7**	**-4.3**
KMI	comp=N,71nm,1.1s			smax			
KMI	comp=E,100nm,1.4s			smax			
GTA	**Gaotai**	**8.87**	**340**	*e*P	**Pn**	**09 40 06.8**	**+6.8**
GTA				pP		09 40 10.5	
GTA				sP		09 40 12.8	
GTA				S	**Sn**	**09 41 42.6**	**+2.9**
GTA	comp=Z,5.0nm,1.1s			pmax	pmax		
GTA	comp=Z,2μm,5.4s			pmax	pmax		
GTA	comp=Z,730nm,11.7s			LR	LR		
WHN	**Wuhan**	**9.17**	**91**	P	**Pn**	**09 40 15.0**	**+11**
WHN				S	**Sn**	**09 41 41.4**	**-5.8**
HHC	**Hu-ho-hao-te**	**11.61**	**31**	*e*P	**Pn**	**09 40 38.5**	**+1.0**
HHC				S	**Sn**	**09 42 48.8**	**+1.9**
HHC	comp=Z,13nm,0.5s			pmax	pmax		
HHC	comp=Z,650nm,4.6s			pmax	pmax		
CHTO	**Chiang Mai**	**12.98**	**200**	*e*Pn	**Pn**	**09 40 53.2**	**-3.3**
CMAR	**Chiang Mai Arr**	**13.32**	**200**	Pn	**Pn**	**09 41 01.4**	**+0.2**
TAPN	**Taplejung**	**14.46**	**259**	*e*P	**Pn**	**09 41 21.3**	**+4.7**
RAMN	**Ramite**	**15.53**	**259**	*e*P	**Pn**	**09 41 34.4**	**+3.5**
GUN	**Gumba**	**15.85**	**263**	*e*P	**Pn**	**09 41 35.9**	**+0.9**
PKI	**Pulchoki**	**16.34**	**262**	*e*P	**Pn**	**09 41 42.5**	**+1.1**
PKIN	**Phulchoki**	**16.35**	**262**	*e*P	**Pn**	**09 41 43.1**	**+1.6**
KKN	**Kakani**	**16.39**	**263**	*e*P	**Pn**	**09 41 42.8**	**+0.8**
DMN	**Daman**	**16.59**	**263**	*e*P	**Pn**	**09 41 45.2**	**+0.6**
SONM	**Songino Array**	**16.82**	**6**	Pn	**Pn**	**09 41 47.0**	**-0.4**
GKN	**Gorkha**	**16.88**	**264**	*e*P	**Pn**	**09 41 47.2**	**-1.1**
ULN	**Ulaanbaatar**	**16.92**	**8**	*e*P	**Pn**	**09 41 51.0**	**+2.4**
KOLN	**Koldanda**	**17.83**	**264**	*e*P	**Pn**	**09 41 57.7**	**-2.4**
TLY	**Talaya**	**20.55**	**360**	*e*P	**P**	**09 42 34.0**	**+3.7**
KSRS	**Korea Array**	**20.95**	**66**	P	**P**	**09 42 34.8**	**0.0**
CN2	**Changchun**	**21.33**	**48**	*e*P	**P**	**09 42 42.5**	**+3.7**
CN2	comp=Z,10.0nm,1.1s,mb4.1			pmax	pmax		
MK31	**Makanchi Array**	**22.75**	**320**	*e*P	**P**	**09 42 53.5**	**-0.5**
MKAR	**Makanchi Array**	**22.75**	**320**	P	**P**	**09 42 53.3**	**-0.7**
AAK	**Ala-Archa**	**25.92**	**305**	P	**P**	**09 43 23.0**	**-1.0**
ZAA0	**Zalesovo Array**	**26.57**	**335**	*e*P	**P**	**09 43 31.5**	**+1.8**
ZALV	**Zalesovo Beam**	**26.57**	**335**	P	**P**	**09 43 28.5**	**-1.2**
KURK	**Kurchatov**	**27.04**	**324**	P	**P**	**09 43 32.8**	**-1.2**
KURK	**Kurchatov**	**27.04**	**324**	*e*P	**P**	**09 43 33.1**	**-0.8**
MJAR	**Matsushiro Arr**	**29.07**	**70**	P	**P**	**09 43 54.9**	**+2.6**
BVAR	**Borovoye Array**	**32.57**	**322**	P	**P**	**09 44 21.8**	**-1.2**
BVAR	comp=Z,0.5nm,0.5s,mb3.7,baz=99,slow=8.8,SNR=3.7			PcP	PcP	09 47 10.4	+1.3
ABKAR	**Akbulak array**	**37.41**	**312**	*e*P	**P**	**09 45 03.8**	**-1.0**
AKTK	**Aktyubinsk**	**38.88**	**313**	P	**P**	**09 45 17.9**	**+0.7**
AKTO	**Aktyubinsk**	**38.88**	**313**	P	**P**	**09 45 17.9**	**+0.7**
	comp=Z,0.8nm,0.5s,mb3.7,baz=94,slow=13,SNR=3.8						
TIXI	**Tiksi**	**42.81**	**11**	*e*P	**P**	**09 45 49.6**	**+0.3**
	comp=Z,3.3nm,0.7s,mb4.2						
ARCES	**ARCESS Array B**	**57.11**	**336**	P	**P**	**09 47 38.0**	**+0.1**
	comp=Z,2.1nm,0.9s,mb4.2,baz=67,slow=7.3,SNR=3.7						
ARCES				PcP	PcP	09 48 30.7	-1.8
	comp=Z,2.7nm,0.9s,baz=107,slow=4.8,SNR=3.5						
ARCES	**ARCESS Array B**	**57.11**	**336**	P	**P**	**09 47 38.0**	**+0.1**
ARCES				PcP	PcP	09 48 30.7	-1.9
AKASG	**Malin Array Be**	**57.13**	**313**	P	**P**	**09 47 37.5**	**-0.8**
	comp=Z,0.8nm,0.5s,mb4.0,baz=65,slow=7.7,SNR=2.9						
FINES	**FINESS Array B**	**57.37**	**326**	P	**P**	**09 47 38.1**	**-1.8**
	comp=Z,1.7nm,0.8s,mb4.1,baz=91,slow=10,SNR=5.9						
WRA	**Warramunga Arr**	**58.67**	**146**	P	**P**	**09 47 48.2**	**-1.2**
	comp=Z,8.4nm,0.7s,mb4.9,baz=338,slow=7.7,SNR=14						
WRA	**Warramunga Arr**	**58.67**	**146**	P	**P**	**09 47 48.2**	**-1.2**
ASAR	**Alice Springs**	**61.68**	**148**	P	**P**	**09 48 08.8**	**-1.2**
	comp=Z,1.9nm,0.7s,mb4.3,baz=342,slow=6.4,SNR=19						
NB2	**NORSAR Subarra**	**64.47**	**327**	P	**P**	**09 48 26.6**	**-1.5**
	comp=Z,1.5nm,0.9s,mb4.0,baz=73,slow=6.5						
NOA	**NORSAR Array B**	**64.47**	**327**	P	**P**	**09 48 28.1**	**0.0**
	comp=Z,0.8nm,0.8s,mb3.8,baz=76,slow=5.4,SNR=3.0						
PPLA	**Purkeypile**	**68.82**	**28**	*e*P	**P**	**09 48 56.6**	**+0.8**
	comp=Z,4.1nm,0.7s,mb4.5						
COLA	**College**	**69.56**	**26**	*e*P	**P**	**09 48 59.2**	**-1.2**
	comp=Z,6.4nm,0.8s,mb4.6						
KDAK	**Kodiak Island**	**71.02**	**33**	P	**P**	**09 49 11.0**	**+1.6**
	comp=Z,3.1nm,0.5s,mb4.5,baz=308,slow=7.3,SNR=3.2						
CDF	**Champ du Feu**	**71.37**	**316**	*e*P	**P**	**09 49 12.1**	**+0.3**
STKA	**Stephens Creek**	**72.20**	**147**	P	**P**	**09 49 15.6**	**-1.3**
	comp=Z,3.0nm,0.7s,mb4.4,baz=328,slow=5.5,SNR=7.0						
STKA	**Stephens Creek**	**72.20**	**147**	*e*P	**P**	**09 49 15.6**	**-1.2**
	comp=Z,0.7nm,0.7s,mb3.7						
INK	**Inuvik**	**72.26**	**19**	*e*P	**P**	**09 49 15.7**	**-1.0**
	comp=Z,2.3nm,0.7s,mb4.2						
BMRM	**Bremner River**	**72.89**	**28**	*e*P	**P**	**09 49 23.3**	**+2.7**
	comp=Z,7.0nm,0.7s,mb4.7						
LPG	**La Plagne**	**73.00**	**313**	*e*P	**P**	**09 49 22.1**	**+0.6**
	comp=Z,9.8nm,0.7s,mb4.5						
LPG	**La Plagne**	**73.00**	**313**	*e*P	**P**	**09 49 22.1**	**+0.6**
	comp=Z,4.9nm,0.7s,mb4.5						
LPL	**La Plagne**	**73.00**	**313**	*e*P	**P**	**09 49 22.1**	**+0.6**
YKA	**Yellowknife Ar**	**81.78**	**17**	P	**P**	**09 50 09.4**	**-1.0**
	comp=Z,0.8nm,0.7s,mb3.8,baz=324,slow=4.7,SNR=3.8						

*IDC **06** 09:46:06.1±0.8, 56°.30S×26°.95W, h101km±6km, mb4.2/7, mb1 4.3/8, mb1mx4.0/15, mbtmp4.2/8, Error ellipse: s-maj=23.9km s-min=15.6km az=65.0*
*NEIC **06** 09:46:08.2±3.7, 56°.29S×26°.92W, h121km±31km, mb4.6/6, Error ellipse: s-maj=19.9km s-min=10.1km az=57.0*
ISC 06 09:46:02.8±5.3, **56°.3S**±0°.1×**26°.9W**±0°.3, **h66**km±49km, **n33**, σ**0°.86**/15, **mb4.5**/9, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**19.83**	**230**	P	**Pn**	**09 50 29.3**	**-0.6**
	0.6nm,0.3s,baz=73,slow=11,SNR=3.3						
MAIT	**Maitri**	**21.93**	**146**	*e*P	**P**	**09 50 50.4**	**+0.1**
MAIT				*e*		09 50 55.8	
QSPA	**South Pole Qui**	**33.93**	**180**	P	**P**	**09 52 39.7**	**+0.8**
	9.2nm,0.6s,mb4.8,baz=205,slow=3.7,SNR=75						
QSPA				PcP	PcP	09 55 14.9	-0.6
	4.5nm,0.9s,baz=265,slow=3.1,SNR=3.6						
QSPA				ScP	ScP	09 58 49.2	-5.0
	4.4nm,1.0s,baz=226,slow=2.8,SNR=7.1						
QSPA	**South Pole Qui**	**33.93**	**180**	*e*P	**P**	**09 52 39.6**	**+0.7**
	11nm,0.6s,mb4.9						
QSPA				*e*PcP	PcP	09 55 15.0	-0.6
QSPA				ScP	ScP	09 58 49.2	-5.0
CPUP	**Villa Florida**	**37.10**	**311**	P	**P**	**09 53 05.2**	**-1.3**
	1.8nm,0.6s,mb4.2,baz=123,slow=6.9,SNR=7.0						
CPUP				PcP	PcP	09 55 24.6	-1.1
	0.5nm,0.4s,baz=114,slow=5.1,SNR=5.0						
CPUP	**Villa Florida**	**37.10**	**311**	*e*P	**P**	**09 53 05.5**	**-1.1**
	9.9nm,0.8s,mb4.8						
CPUP				PcP	PcP	09 55 24.6	-1.1
MAW	**Mawson**	**39.85**	**143**	P	**P**	**09 53 29.3**	**+0.1**
	3.7nm,0.6s,mb4.4,baz=228,slow=9.3,SNR=16						
MAW	**Mawson**	**39.85**	**143**	*e*P	**P**	**09 53 28.9**	**-0.2**
	0.9nm,0.7s,mb3.7						
SBA	**Scott Base**	**45.82**	**184**	*e*P	**P**	**09 54 18.5**	**+1.1**
	4.4nm,0.7s,mb4.3						
LPAZ	**La Paz**	**50.65**	**305**	P	**P**	**09 54 56.0**	**+0.9**
	4.7nm,0.6s,mb4.7,baz=153,slow=6.1,SNR=33						
LPAZ	**La Paz**	**50.65**	**305**	*e*P	**P**	**09 54 55.7**	**+0.5**
	6.6nm,0.7s,mb4.8						
OTAV	**Otavalo**	**69.92**	**304**	*e*P	**P**	**09 57 08.0**	**+1.2**
	9.7nm,1.1s,mb4.5						
TORD	**Torodi Ar. Bea**	**73.22**	**29**	P	**P**	**09 57 26.7**	**+0.2**
	2.0nm,0.8s,mb4.0,baz=200,slow=6.0,SNR=9.7						
TORD				pP	pP	09 57 51.1	+6.8
	4.4nm,0.7s,baz=199,slow=6.3,SNR=10						
STKA	**Stephens Creek**	**91.61**	**170**	P	**P**	**09 59 01.4**	**-0.9**
	7.0nm,1.2s,mb4.8,baz=172,slow=7.1,SNR=2.9						
ASAR	**Alice Springs**	**98.69**	**162**	P	**P**	**09 59 33.4**	**-1.3**
	0.7nm,0.6s,mb4.3,baz=179,slow=3.7,SNR=12						
WRA	**Warramunga Arr**	**102.41**	**162**	P	Pdif	09 59 49.7	-1.6
	0.2nm,0.4s,baz=195,slow=4.3,SNR=5.6						
WRA	**Warramunga Arr**	**102.41**	**162**	P	Pdif	09 59 49.7	-1.6
PDAR	**Pinedale Array**	**120.61**	**302**	PKP	PKPdf	10 04 44.0	-1.9
	0.2nm,0.5s,baz=116,slow=5.1,SNR=3.8						
FINES	**FINESS Array B**	**124.55**	**28**	PKP	PKPdf	10 04 51.5	-1.4
	1.1nm,0.6s,baz=163,slow=2.0,SNR=5.4						
FINES				pPKP	pPKPdf	10 05 20.5	+8.5
	0.7nm,0.4s,baz=30,slow=5.9,SNR=1.9						
FINES	**FINESS Array B**	**124.55**	**28**	PKP	PKPdf	10 04 51.5	-1.4
FINES				pPKP	pPKPdf	10 05 20.5	+8.5
ARCES	**ARCESS Array B**	**131.14**	**22**	PKP	PKPdf	10 05 04.0	-1.3
	2.9nm,0.9s,baz=198,slow=1.2,SNR=4.1						
YKA	**Yellowknife Ar**	**136.47**	**318**	PKP	PKPdf	10 05 14.2	-1.2
	1.0nm,0.6s,baz=127,slow=2.5,SNR=10						
YKA	**Yellowknife Ar**	**136.47**	**318**	PKP	PKPdf	10 05 14.2	-1.2
INK	**Inuvik**	**146.10**	**320**	PKPbc	PKPbc	10 05 31.8	-1.9
	6.5nm,0.7s,baz=14,slow=3.6,SNR=10						
DAWY	**Dawson**	**147.08**	**312**	*e*PKPbc	PKPbc	10 05 35.0	-1.6
MENT	**Mentasta**	**148.57**	**308**	*e*PKPbc	PKPbc	10 05 39.2	-1.4
HHC	**Hu-ho-hao-te**	**149.05**	**102**	*e*PKPbc	PKPdf	10 05 36.0	-2.3
HHC				PP	PP	10 09 15.4	+0.7
HHC				SS	SS	10 28 16.3	-4.8
HHC				AMB	AMB		
	comp=Z,880nm,9.5s						
SONM	**Songino Array**	**150.60**	**87**	PKPbc	PKPbc	10 05 44.9	-1.1
	comp=Z,2.4nm,0.5s,baz=228,slow=2.4,SNR=13						
SONM				pPKPbc	pPKPbc	10 06 12.2	+7.3
	comp=Z,0.9nm,0.6s,baz=298,slow=3.2,SNR=2.6						
MCK	**McKinley**	**151.05**	**309**	*e*PKPbc	PKPbc	10 05 45.4	-1.1
KDAK	**Kodiak Island**	**151.06**	**296**	PKPbc	PKPbc	10 05 46.1	-0.6
	comp=Z,3.1nm,0.5s,baz=180,slow=3.0,SNR=4.7						
TRF	**Thorofare Moun**	**151.58**	**308**	*e*PKPbc	PKPbc	10 05 46.9	-0.9
BPAW	**Bear Paw Mtn.**	**152.01**	**309**	*e*PKPbc	PKPbc	10 05 47.4	-1.4
COLD	**Coldfoot**	**152.11**	**316**	*e*PKPbc	PKPbc	10 05 48.1	-0.8

*NIED **06** 09:50:00, 45°.30N×151°.40E, h23km, Mw4.7 Best double couple: M0:1.13000×10^16 NP1:φs=41.00000°, δ50.00000°, λ90.00000°. NP2:φs=222.00000°, δ40.00000°, λ91.00000°.*
*SKHL **06** 09:50:44.0±1.3, 44°.78N×151°.76E, h69km±30km, mb5.2/6, msh5.9/1*
*BJI **06** 09:50:46.0, 45°.41N×151°.20E, h18km, mB5.2/23, mb4.7/46, Ms4.7/28, Ms7 4.6/28*
*NEIC **06** 09:50:47.2±0.2, 45°.29N×151°.01E, h10km, mb4.9/75, Error ellipse: s-maj=6.7km s-min=3.7km az=156.0*
*JMA **06** 09:50:47.1±0.8, 45°.34N×151°.39E, h30km, M5.0*
*MOS **06** 09:50:49.6±1.0, 45°.34N×151°.07E, h36km, mb5.0/63, MS4.1/5, Error ellipse: s-maj=7.8km s-min=4.6km az=102.4*
*ISCJB **06** 09:50:49.6±0.2, 45°.11N±0°.04×151°.09E±0°.04, h44km, mb4.8/155, MS4.5/12, Error ellipse: s-maj=6.2km s-min=2.4km az=149.5*
*IDC **06** 09:50:52.0±0.5, 45°.38N×151°.01E, h45km±4km, mb4.2/25, mb1 4.3/29, mb1mx4.2/31, mbtmp4.2/29, MS4.0/1, Ms1 4.0/1, ms1mx2.9/34, Error ellipse: s-maj=14.6km s-min=10.1km az=146.0*
*SZGRF **06** 09:51:05.2, 47°.58N×150°.34E, h33km, mb5.1, Kuril Islands, Russia*
ISC 06 09:50:51.7±0.2, **45°.19N**±0°.04×**151°.08E**±0°.04, **h46**km, **h46**km±1.3km: **pP-P, n441**, σ**0°.99**/464, **mb4.8**/154, **MS4.5**/12, **72C-25D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.27**	**272**	*i* PN	**Pn**	**09 51 25.7**	**-1.1**
KUR				*e*S	**Sn**	**09 51 56.0**	**+2.4**
KUR	comp=N,230nm,0.6s			pmax	pmax		
KUR	comp=Z,680nm,0.6s			pmax	pmax		
KUR	comp=N,4μm,0.5s			smax			
KUR	comp=N,15μm,2.0s			smax			
KUR	comp=E,5μm,2.0s			smax			
KUR	**Kuril'sk**	**2.27**	**272**	⇑*i*P	**Pn**	**09 51 25.7**	**-1.1**
KUR				AMB	AMB	09 51 27.3	
KUR	comp=E,230nm,0.6s			AMB	AMB	09 51 27.3	
KUR	comp=E,680nm,0.6s			*e*S	**Sn**	**09 51 56.0**	**+2.4**
KUR				A		09 52 01.0	
KUR	comp=E,15μm,2.0s			A		09 52 01.0	
KUR	comp=E,5μm,2.0s			A		09 52 01.0	
KUR	comp=E,4μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**3.90**	**255**	*i* PN	**Pn**	**09 51 49.5**	**+0.4**
YUK				*i* S	**Sn**	**09 52 39.6**	**+5.9**
YUK	comp=N,169nm,0.3s			pmax	pmax		
YUK	comp=Z,699nm,0.3s			pmax	pmax		
YUK	comp=E,98nm,0.1s			pmax	pmax		
YUK	comp=Z,880nm,1.4s			smax			
YUK	comp=E,2μm,0.6s			smax			
YUK	comp=N,9μm,1.2s			smax			
YUK	comp=N,3μm,0.9s			smax			
YUK	comp=E,2μm,0.9s			smax			
YUK	**Yuzh-Kuril'sk**	**3.90**	**255**	*e*P	**Pn**	**09 51 49.5**	**+0.4**
YUK				AMB	AMB	09 51 54.0	
YUK	comp=E,250nm,0.5s			AMB	AMB	09 51 54.0	
YUK	comp=E,360nm,0.3s			AMB	AMB	09 51 54.0	
YUK	comp=E,850nm,0.3s			*e*S	**Sn**	**09 52 39.6**	**+5.9**
YUK				A		09 52 53.7	
YUK	comp=E,9μm,0.8s			A		09 52 53.7	
YUK	comp=E,2μm,0.8s						
NEM2	**Nemuro 2**	**4.25**	**246**	P	**Pn**	**09 51 52.5**	**-1.3**
NEM2				*e*S	**Sn**	**09 52 41.1**	**-1.0**
JRA	**Rausu**	**4.44**	**256**	P	**Pn**	**09 51 57.1**	**+0.6**
JNK	**Nakash**	**4.84**	**253**	P	**Pn**	**09 52 01.9**	**0.0**
JNK				*e*S	**Sn**	**09 52 57.2**	**+0.6**
JAK	**Akkeshi**	**5.10**	**247**	P	**Pn**	**09 52 03.9**	**-1.6**
JTKR	**Abashiri--Toko**	**5.27**	**259**	P	**Pn**	**09 52 08.6**	**+0.7**
JAR	**Ashorobuto**	**5.58**	**253**	P	**Pn**	**09 52 12.6**	**+0.4**
JMP	**Maruseppu**	**5.64**	**261**	P	**Pn**	**09 52 14.2**	**+1.2**
JOB	**Onbets**	**5.70**	**249**	P	**Pn**	**09 52 13.0**	**-0.8**
JOB				*e*S	**Sn**	**09 53 17.9**	**0.0**
JSE	**Soyaes**	**6.03**	**271**	P	**Pn**	**09 52 20.0**	**+1.8**
YSS	**Yuzh-Sakhalins**	**6.06**	**290**	⇑*i*PN	**Pn**	**09 52 19.8**	**+1.1**
YSS	comp=Z,30nm,0.8s			pmax	pmax		
YSS	**Yuzh-Sakhalins**	**6.06**	**290**	*e*Pn	**Pn**	**09 52 20.0**	**+1.4**
YSS	**Yuzh-Sakhalins**	**6.06**	**290**	⇑*i*P	**Pn**	**09 52 19.8**	**+1.1**
YSS	comp=Z,30nm,0.8s			AMB	AMB	09 52 21.0	
JKK2	**Kamakawa 2**	**6.10**	**260**	P	**Pn**	**09 52 20.7**	**+1.4**
JCH	**Churui**	**6.14**	**248**	P	**Pn**	**09 52 19.2**	**-0.7**
ASAJ	**Asahikawa**	**6.15**	**263**	P	**Pn**	**09 52 21.8**	**+1.8**
	comp=Z,6.9nm,0.3s,baz=90,slow=17,SNR=37						
ASAJ				S	**Sn**	**09 53 42.9**	**+14**
	baz=80,slow=18,SNR=2.2						
ASAJ	**Asahikawa**	**6.15**	**263**	PN	**Pn**	**09 52 21.8**	**+1.9**
ASAJ				S	**Sn**	**09 53 42.9**	**+14**
ASAJ	comp=Z,7.0nm,0.3s			pmax	pmax		
ASAJ	**Asahikawa**	**6.15**	**263**	P	**Pn**	**09 52 21.7**	**+1.8**
JFR	**Furan**	**6.43**	**255**	P	**Pn**	**09 52 24.9**	**+1.1**
SKR	**Severo-Kuril's**	**6.45**	**30**	*e*PN	**Pn**	**09 52 21.0**	**-3.0**
SKR	comp=N,50nm,0.5s			pmax	pmax		
SKR	comp=E,80nm,0.5s			pmax	pmax		
SKR	comp=Z,190nm,0.5s			pmax	pmax		
SKR	**Severo-Kuril's**	**6.45**	**30**	*e*P	**Pn**	**09 52 21.0**	**-3.0**
SKR				AMB	AMB	09 52 26.0	
SKR	comp=Z,50nm,0.5s			AMB	AMB	09 52 26.0	
SKR	comp=Z,80nm,0.5s			AMB	AMB	09 52 26.0	
SKR	comp=Z,190nm,0.5s			*e*S	**Sn**	**09 53 33.0**	**-3.3**
SKR				A		09 54 07.1	
SKR	comp=Z,190nm,0.7s			A		09 54 07.1	
SKR	comp=Z,410nm,0.9s			A		09 54 07.1	
SKR	comp=Z,160nm,0.9s						
JWK2	**Keihoku**	**6.49**	**274**	P	**Pn**	**09 52 28.3**	**+3.7**
JEM	**Erimo**	**6.57**	**244**	P	**Pn**	**09 52 26.0**	**+0.3**
ERM	**Erimo**	**6.57**	**244**	*e*PN	**Pn**	**09 52 26.7**	**+1.0**
JSS	**Shosan**	**6.62**	**266**	P	**Pn**	**09 52 29.5**	**+3.2**
JNBK	**Urakawa-nobuka**	**6.70**	**247**	P	**Pn**	**09 52 26.6**	**-0.9**
JBT2	**Biratori 2**	**6.74**	**252**	P	**Pn**	**09 52 27.5**	**-0.5**
JHR	**Hokuryu**	**6.85**	**261**	P	**Pn**	**09 52 31.9**	**+2.3**
UGL	**Uglegorsk**	**7.28**	**306**	*e*P	**Pn**	**09 52 38.5**	**+3.2**
UGL				AMB	AMB	09 52 39.5	
JEW	**Eniwo**	**7.33**	**255**	P	**Pn**	**09 52 36.7**	**+0.6**
JNB	**Noboribetsu**	**7.76**	**253**	P	**Pn**	**09 52 41.6**	**-0.4**
JKB	**Kayabe**	**8.01**	**249**	P	**Pn**	**09 52 44.1**	**-1.4**
JKB				*e*S	**Sn**	**09 54 09.7**	**-5.0**
JYM2	**Yakumo 2**	**8.35**	**252**	P	**Pn**	**09 52 49.2**	**-0.9**
JSH	**Shimam**	**8.37**	**256**	P	**Pn**	**09 52 51.0**	**+0.7**
JANG	**Nango**	**8.52**	**239**	P	**Pn**	**09 52 49.2**	**-3.3**
JANG				*e*S	**Sn**	**09 54 20.2**	**-7.0**
JTM	**Tenmabayashi**	**8.56**	**243**	P	**Pn**	**09 52 50.9**	**-2.0**
JTM				*e*S	**Sn**	**09 54 21.9**	**-6.2**
JSR	**Shiriuchi**	**8.59**	**249**	P	**Pn**	**09 52 51.8**	**-1.6**
JTH	**Tanohata**	**8.59**	**236**

MJAR Matsushiro Arr 13.01 233 PN **Pn** **09 53 51.6 -2.2**
MJAR pmax pmax
comp=Z,1.0nm,0.3s
JHJ Hachijo jima 2 14.88 220 P **Pn** **09 54 19.2 +0.2**
comp=Z,2.4nm,0.3s,baz=73,slow=20,SNR=2.6
JHJ S **Sn** **09 56 53.0 -10**
comp=Z,5.2nm,0.3s,baz=270,slow=20,SNR=4.4
MDJ Mudanjiang 15.24 275 P **Pn** **09 54 22.7 -1.0**
MDJ pmax pmax
comp=Z,31nm,1.0s
ZEA Zeya 17.63 308 *e*P **Pn** **09 54 49.6 -4.1**
ZEA AMB AMB 09 54 54.3
comp=Z,24nm,1.0s
ZEA AMB AMB 09 54 54.3
comp=Z,43nm,1.2s
SEY Seymchan 17.80 2⇓ *e*P **Pn** **09 54 53.8 -1.9**
CN2 Changchun 18.32 275 *e*P **Pn** **09 55 00.6 -1.7**
CN2 *es*P sP 09 55 15.0 -3.6
CN2 *e*S **S** **09 58 21.9 -6.9**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,300nm,11.0s
CN2 LR LR
comp=N,700nm,14.0s
CN2 LR LR
comp=E,700nm,14.0s
CN2 LR LR
comp=Z,700nm,14.0s
KSRS Korea Array 18.99 254 P **Pn** **09 55 09.2 -1.2**
comp=Z,0.3nm,0.3s,baz=59,slow=10,SNR=16
KSRS LR LR 10 01 35.6
comp=Z,467nm,19.9s,baz=65,slow=34
CLNS Chul'man 20.04 315 *e*P **P** **09 55 19.6 -1.0**
CLNS *e*S **S** **09 59 00.1 -3.0**
CLNS pmax pmax
comp=N,4.0nm,0.9s
CLNS pmax pmax
comp=Z,11nm,0.9s
CLNS pmax pmax
comp=E,8.0nm,1.1s
CLNS smax
comp=N,365nm,12.5s
CLNS smax
comp=E,176nm,13.6s
CLNS MLR MLR
comp=Z,625nm,13.0s,MS4.1
CLNS MLR MLR
comp=N,144nm,14.0s,MS3.8
CLNS MLR MLR
comp=E,289nm,13.0s,MS3.8
YAK Yakutsk 20.94 331 *e*P **P** **09 55 28.8 -1.5**
YAK pmax pmax
comp=E,7.0nm,0.9s
YAK pmax pmax
comp=Z,31nm,0.9s
YAK pmax pmax
comp=N,13nm,1.8s
YAK Yakutsk 20.94 331 *e*P **P** **09 55 29.3 -1.0**
comp=N,44nm,0.8s
DL2 Dalian 22.68 264 P **P** **09 55 48.0 -1.0**
DL2 pmax pmax
comp=Z,10.0nm,1.1s,mb4.2
BILL Bilibino 24.24 14⇓ *i*P **P** **09 56 03.9 +0.1**
BILL *e* 09 56 33.7
BILL *e*S **S** **10 00 19.5 +0.5**
BILL pmax pmax
comp=Z,5.0nm,0.5s,mb4.2
BILL MLR MLR
comp=Z,800nm,16.0s,MS4.3
BILL Bilibino 24.24 14 *e*P **P** **09 56 03.8 -0.1**
comp=Z,5.4nm,0.4s,mb4.3
BJI Beijing 26.07 271 P **P** **09 56 20.6 -0.1**
BJI S **S** **10 00 48.6 0.0**
BJI pmax pmax
comp=Z,23nm,0.9s,mb4.7
BJI pmax pmax
comp=Z,800nm,8.9s
BJI LR LR
comp=N,690nm,13.8s,MS4.5
BJI LR LR
comp=E,930nm,16.3s,MS4.5
BJI LR LR
comp=Z,460nm,21.6s
NJ2 Nanjing 28.19 253 *e*P **P** **09 56 41.6 +1.8**
NJ2 pmax pmax
comp=Z,20nm,1.0s,mb4.7
HHC Hu-ho-hao-te 29.01 276 *e*P **P** **09 56 47.9 +0.8**
HHC PP PP 09 57 41.3 -12
HHC PcP PcP 09 59 57.2 +2.7
HHC S **S** **10 01 36.8 +1.8**
HHC SS SS 10 03 04.4 -35
HHC ScP ScP 10 03 36.3 +4.3
HHC PcS PcS 10 03 38.7 +1.5
HHC ScS ScS 10 07 29.1 +3.2
HHC pmax pmax
comp=Z,34nm,0.8s,mb5.1
HHC pmax pmax
comp=Z,620nm,5.3s
HHC LR LR
comp=N,580nm,13.1s,MS4.7
HHC LR LR
comp=E,1μm,13.3s,MS4.7
HHC LR LR
comp=Z,1μm,14.1s,MS4.6
ULN Ulaanbaatar 30.11 291 *e*P **P** **09 56 57.4 +0.7**
ULN pmax pmax
comp=Z,7.0nm,0.9s,mb4.4
ULN Ulaanbaatar 30.11 291 *e*P **P** **09 56 57.4 +0.7**
comp=Z,7.4nm,0.9s,mb4.4
SONM Songino Array 30.55 291 P **P** **09 56 59.9 -0.7**
comp=Z,4.5nm,0.9s,mb4.3,baz=105,slow=6.9,SNR=11
SONM PcP PcP 09 59 57.2 -1.1
comp=Z,0.5nm,0.4s,baz=130,slow=2.3,SNR=3.7
SONM Songino Array 30.55 291 P **P** **09 56 59.9 -0.7**
SONM 09 59 57.2
SONM pmax pmax
comp=Z,5.0nm,0.9s
WHN Wuhan 32.17 256 P **P** **09 57 14.7 -0.3**
TPUB Ta-pu 33.01 239 *e*P **P** **09 57 23.2 +0.8**
comp=Z,22nm,0.8s,mb5.2
TPUB *e*pP pP 09 57 35.1 +0.4
QZH Quanzhou 33.07 243 P **P** **09 57 25.1 +2.2**
XAN Xi'an 33.98 266 P **P** **09 57 30.5 -0.3**
XAN pmax pmax
comp=Z,59nm,1.3s,mb5.4
KDAK Kodiak Island 36.19 49 P **P** **09 57 48.4 -1.1**
comp=Z,4.9nm,0.6s,mb4.6,baz=293,slow=12,SNR=2.7
KDAK pP pP 09 58 01.9 0.0
comp=Z,11nm,0.8s,baz=254,slow=4.9,SNR=4.6
KDAK Kodiak Island 36.19 49 P **P** **09 57 48.4 -1.1**
KDAK *PP pP 09 58 01.9 +0.1
KDAK pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
LZH Lanzhou 36.53 272 ⇑P **P** **09 57 53.8 +1.1**
LZH pP pP 09 58 05.8 +0.8
LZH PP PP 09 59 18.1 +1.8
LZH *e*S **S** **10 03 32.0 +0.3**
LZH sS sS 10 03 51.8 -0.6
LZH SS SS 10 05 58.4 -14
LZH pmax pmax
comp=Z,32nm,1.0s,mb5.1
LZH pmax pmax
comp=Z,270nm,7.8s
LZH LR LR
comp=E,1μm,14.8s
LZH LR LR
comp=Z,2μm,15.9s,MS4.9
TRF Thorofare Moun 37.15 39 *e*P **P** **09 57 57.0 -0.6**
comp=Z,3.0nm,0.8s,mb4.2
PMR Palmer 37.71 43 *e*P **P** **09 58 01.0 -1.3**
MCK McKinley 37.76 39 *e*P **P** **09 58 02.6 -0.1**
MCK pmax pmax
comp=Z,8.0nm,1.0s,mb4.4
MCK McKinley 37.76 39 *e*P **P** **09 58 02.6 -0.1**
comp=Z,7.8nm,1.0s,mb4.4
GTA Gaotai 37.83 280 ⇑P **P** **09 58 04.8 +1.1**
GTA pP pP 09 58 16.8 +0.8
GTA PP PP 09 59 35.4 +4.9
GTA PcP PcP 10 00 21.4 +2.1
GTA S **S** **10 03 52.7 +1.3**
GTA sS sS 10 04 12.5 +0.4
GTA SS SS 10 06 29.1 -8.4
GTA pmax pmax
comp=Z,31nm,0.9s,mb5.0
GTA pmax pmax
comp=Z,600nm,6.6s
GTA LR LR
comp=N,410nm,13.8s,MS4.6
GTA LR LR
comp=E,600nm,14.4s,MS4.6
GTA LR LR
comp=Z,880nm,14.4s,MS4.7
COLA College 38.24 37 *e*P **P** **09 58 06.6 -0.2**
COLA pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
COLA College 38.24 37 *e*P **P** **09 58 06.5 -0.2**
comp=Z,4.5nm,0.6s,mb4.4
CD2 Chengdu 39.34 265 P **P** **09 58 16.8 +0.4**
CD2 pP pP 09 58 27.4 -1.4
CD2 sP sP 09 58 31.3 -3.0
CD2 PP PP 09 59 51.9 +4.7
CD2 S **S** **10 04 15.4 +1.1**
CD2 sS sS 10 04 31.6 -3.5
CD2 SS SS 10 07 01.4 -7.8
CD2 pmax pmax
comp=Z,50nm,0.8s,mb5.3
CD2 pmax pmax
comp=Z,510nm,11.6s
CD2 LR LR
comp=N,780nm,16.1s
CD2 LR LR
comp=Z,930nm,14.3s,MS4.8
BMRM Bremner River 39.94 43 *e*P **P** **09 58 21.1 +0.1**
comp=Z,9.7nm,0.9s,mb4.5
GYA Guiyang 39.99 257 P **P** **09 58 22.4 +0.5**
GYA pP pP 09 58 35.2 +0.9
GYA PP PP 09 59 59.2 +4.8
GYA PcP PcP 10 00 28.4 +2.1
GYA ScP ScP 10 04 12.3 +0.9
GYA S **S** **10 04 25.0 +0.8**
GYA sS sS 10 04 45.8 +0.8
GYA SS SS 10 07 16.3 -6.1
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
GYA pmax pmax
comp=Z,90nm,4.9s
GYA LR LR
comp=N,490nm,17.9s,MS4.5
GYA LR LR
comp=E,480nm,18.0s,MS4.5
GYA LR LR
comp=Z,470nm,18.4s,MS4.4
MENT Mentasta 40.14 40 *e*P **P** **09 58 23.1 +0.4**
EGAK Eagle 41.10 37 *e*P **P** **09 58 30.3 -0.2**
comp=Z,20nm,1.3s,mb4.6
ZALV Zalesovo Beam 42.39 307 P **P** **09 58 39.5 -1.8**
comp=Z,1.9nm,0.6s,mb3.9,baz=56,slow=5.6,SNR=3.0
ZALV PcP PcP 10 00 33.8 +0.1
comp=Z,3.8nm,0.7s,baz=86,slow=3.5,SNR=10
ZALV Zalesovo Beam 42.39 307 P **P** **09 58 39.5 -1.8**
ZALV 10 00 33.8
ZALV pmax pmax
comp=Z,2.0nm,0.6s,mb3.9
HYT Haines Junctio 43.38 43 *e*P **P** **09 58 51.0 +1.8**
KMI Kunming 43.56 259 P **P** **09 58 52.2 +1.1**
KMI pP pP 09 59 04.5 +0.9
KMI PP PP 10 00 35.9 +2.9
KMI S **S** **10 05 17.2 +0.2**
KMI sS sS 10 05 38.5 +0.5
KMI SS SS 10 08 25.0 -7.8
KMI pmax pmax
comp=Z,9.0nm,1.4s,mb4.3
KMI pmax pmax
comp=Z,360nm,6.9s
KMI LR LR
comp=N,220nm,13.8s,MS4.6
KMI LR LR
comp=E,480nm,15.8s,MS4.6
KMI LR LR
comp=Z,240nm,17.6s,MS4.2
INK Inuvik 43.73 31 P **P** **09 58 51.2 -0.6**
comp=Z,1.9nm,0.5s,mb4.1,baz=259,slow=13,SNR=10
INK Inuvik 43.73 31 *e*P **P** **09 58 52.5 +0.7**
INK pmax pmax
comp=Z,10.0nm,1.0s
INK Inuvik 43.73 31 *e*P **P** **09 58 52.5 +0.7**
comp=Z,9.6nm,1.0s,mb4.5
WMQ Urumqi 44.18 292 *e*P **P** **09 58 57.8 +2.0**
WMQ pP pP 09 59 07.7 -0.7
WMQ sP sP 09 59 11.6 -2.2
WMQ PP PP 10 00 42.2 +3.0
WMQ pmax pmax
comp=Z,9.0nm,1.4s,mb4.3
WMQ pmax pmax
comp=Z,550nm,6.8s
WMQ LR LR
comp=N,470nm,17.6s,MS4.5
WMQ LR LR
comp=E,400nm,20.0s,MS4.5
WMQ LR LR
comp=Z,510nm,19.0s,MS4.5
MK31 Makanchi Array 46.41 298 *e*P **P** **09 59 12.4 -1.0**
MKAR Makanchi Array 46.41 298 P **P** **09 59 12.7 -0.7**
comp=Z,6.7nm,0.6s,mb4.7,baz=74,slow=6.7,SNR=69
MKAR PcP PcP 10 00 48.0 +0.4
comp=Z,2.7nm,0.8s,baz=54,slow=2.2,SNR=5.4
MKAR Makanchi Array 46.41 298 P **P** **09 59 12.7 -0.7**
MKAR 10 00 48.0
MKAR pmax pmax
comp=Z,7.0nm,0.6s
KURK Kurchatov 47.06 304 P **P** **09 59 17.4 -1.1**
comp=Z,9.0nm,0.7s,mb4.8,baz=72,slow=8.6,SNR=52
KURK PcP PcP 10 00 50.1 +0.3
comp=Z,2.4nm,0.8s,baz=74,slow=3.5,SNR=4.3
KURK Kurchatov 47.06 304 P **P** **09 59 17.4 -1.1**
KURK 10 00 50.1
KURK pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
KURK Kurchatov 47.06 304 *e*P **P** **09 59 16.9 -1.6**
comp=Z,11nm,0.8s,mb4.8
DLBC Dease Lake 47.70 44 P **P** **09 59 20.0 -3.3**
comp=Z,1.7nm,0.6s,mb4.3,baz=246,slow=20,SNR=3.2
CMAR Chiang Mai Arr 50.62 256 P **P** **09 59 46.9 +0.8**
comp=Z,1.4nm,0.6s,mb4.1,baz=35,slow=7.6,SNR=7.1
CMAR Chiang Mai Arr 50.62 256 P **P** **09 59 46.9 +0.8**
CMAR pmax pmax
comp=Z,1.0nm,0.6s
BVAR Borovoye Array 50.76 310 P **P** **09 59 45.3 -1.5**
comp=Z,1.9nm,0.7s,mb4.2,baz=72,slow=9.8,SNR=7.7
BVAR PcP PcP 10 01 03.1 -0.1
comp=Z,1.9nm,0.7s,baz=90,slow=3.0,SNR=4.8
BVAR Borovoye Array 50.76 310 P **P** **09 59 45.3 -1.5**
BVAR 10 01 03.1
BVAR pmax pmax
comp=Z,2.0nm,0.7s
BRVK Borovoye 50.80 310 ⇑*i*P **P** **09 59 46.0 -1.1**
BRVK pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
ULHL Ulahol 52.35 295 P **P** **10 00 00.0 +1.3**
SNR=7.3
TKM2 Tokmak 2 52.42 296 P **P** **10 00 00.7 +1.4**
SNR=8.2
TKM2 Tokmak 2 52.42 296 *e*P **P** **10 00 00.1 +0.8**
TKM2 pmax pmax
comp=Z,19nm,1.2s,mb4.9
TKM2 Tokmak 2 52.42 296 *e*P **P** **10 00 00.1 +0.8**
comp=Z,19nm,1.2s,mb4.9
RES Resolute Bay 52.76 18 P **P** **09 59 59.6 -1.8**
comp=Z,4.2nm,0.6s,mb4.5,baz=327,slow=6.4,SNR=15
RES Resolute Bay 52.76 18 *e*P **P** **09 59 59.2 -2.2**
RES *e*PP pP 10 00 12.1 -2.1
RES pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
RES Resolute Bay 52.76 18 *e*P **P** **09 59 59.2 -2.2**
comp=Z,5.0nm,0.7s,mb4.5
RES *e*pP pP 10 00 12.1 -2.1
TAPN Taplejung 52.77 273 *e*P **P** **10 00 02.9 +0.8**
comp=Z,33nm,0.8s,mb5.3
USP Ospenovka 52.94 297 P **P** **10 00 04.3 +1.2**
SNR=8.0
KBK Karagaybulak 52.96 296 P **P** **10 00 04.3 +1.0**
SNR=5.2
YKA Yellowknife Ar 53.02 35 P **P** **10 00 03.2 -0.2**
comp=Z,1.4nm,0.7s,mb4.0,baz=298,slow=7.6,SNR=7.3
YKA Yellowknife Ar 53.02 35 P **P** **10 00 03.2 -0.2**
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 53.02 35 P **P** **10 00 03.2 -0.2**
KZA Kyzart 53.07 295 P **P** **10 00 06.0 +1.9**
SNR=26
AAK Ala-Archa 53.26 296 P **P** **10 00 05.9 +0.4**
comp=Z,7.2nm,0.8s,mb4.7,baz=102,slow=5.5,SNR=16
AAK Ala-Archa 53.26 296 P **P** **10 00 05.9 +0.4**
AAK pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
ODAN Odare 53.30 273 *e*P **P** **10 00 06.0 0.0**
comp=Z,60nm,1.2s,mb5.4
JIRN Jiri 53.66 274 *e*P **P** **10 00 09.3 +0.7**
comp=Z,74nm,0.8s,mb5.6
EKS2 Erkin-Say 53.70 297 P **P** **10 00 09.2 +0.5**
SNR=17
EKS2 Erkin-Say 53.70 297 *e*P **P** **10 00 09.2 +0.4**
comp=Z,12nm,0.8s,mb4.9
GUN Gumba 53.72 275 *e*P **P** **10 00 09.8 +0.7**
RAMN Ramite 53.80 273 *e*P **P** **10 00 09.9 +0.2**
comp=Z,47nm,0.6s,mb5.6
KSH Kashi 53.94 292 P **P** **10 00 15.0 +4.5**
KSH pP pP 10 00 27.6 +4.2
KSH PcP PcP 10 01 19.0 +3.6
KSH PP PP 10 02 18.7 +6.8
KSH ScP ScP 10 05 11.5 +2.1
KSH PcS PcS 10 05 16.9 +2.3
KSH S **S** **10 07 47.4 +4.8**
KSH sS sS 10 08 08.6 +4.5
KSH ScS ScS 10 09 56.1 +0.3
KSH SS SS 10 11 28.6 +4.8
KSH pmax pmax
comp=Z,11nm,0.7s,mb4.9
KSH pmax pmax
comp=Z,450nm,9.8s
KSH LR LR
comp=N,510nm,12.1s
KSH LR LR
comp=E,270nm,9.9s
KSH LR LR
comp=Z,650nm,15.8s,MS4.8
SVE Sverdlovsk 54.01 317 *e*P **P** **10 00 09.5 -1.3**
SVE pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
KKN Kakani 54.22 275 *e*P **P** **10 00 13.3 +0.6**
comp=Z,78nm,0.9s,mb5.6
PKI Pulchoki 54.26 275 *e*P **P** **10 00 13.2 +0.2**
PKIN Phulchoki 54.27 275 *e*P **P** **10 00 13.9 +0.8**
comp=Z,30nm,0.8s,mb5.3
DMN Daman 54.45 275 *e*P **P** **10 00 15.0 +0.6**
comp=Z,56nm,0.9s,mb5.5
GKN Gorkha 54.54 276 *e*P **P** **10 00 15.3 +0.2**
comp=Z,97nm,1.0s,mb5.8
ARU Arti 55.21 317 *d i*P **P** **10 00 18.0 -1.4**
ARU *e* 10 02 20.6
ARU S **S** **10 07 59.8 +0.7**
ARU SS SS 10 11 38.5 -4.5
ARU pmax pmax
comp=Z,5.0nm,0.5s,mb4.8
ARU Arti 55.21 317 *e*P **P** **10 00 17.9 -1.6**
comp=Z,7.8nm,0.6s,mb4.9
KOLN Koldanda 55.41 276 *e*P **P** **10 00 21.8 +0.4**
DDI Dehra Dun 57.75 282 *ex* **P** **10 00 39.2 +1.3**
ABKAR Akbulak array 58.34 310 *e*P **P** **10 00 41.0 -0.7**
comp=Z,6.0nm,0.4s,mb5.0
EDM Edmonton 58.42 45 *e*P **P** **10 00 42.1 -0.2**
EDM *e**PP pP 10 00 56.0 +0.7
AKTK Aktyubinsk 58.71 312 P **P** **10 00 43.6 -0.7**
AKTO Aktyubinsk 58.71 312 P **P** **10 00 43.6 -0.7**
comp=Z,2.1nm,0.5s,mb4.4,baz=54,slow=10,SNR=12
AKTO Aktyubinsk 58.71 312 P **P** **10 00 43.6 -0.7**
AKTO pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
ARCES ARCESS Array B 58.86 340 P **P** **10 00 44.1 -0.9**
comp=Z,1.5nm,0.7s,mb4.1,baz=40,slow=7.6,SNR=5.7
ARCES ARCESS Array B 58.86 340 P **P** **10 00 44.1 -1.0**
ARCES pmax pmax
comp=Z,2.0nm,0.7s
NDI New Delhi 59.32 281 *e*PKP **P** **10 00 48.0 -0.9**
KBL Kabul 61.32 291 *e*P **P** **10 01 02.3 -0.2**
KBL pmax pmax
comp=Z,35nm,0.9s,mb5.5
KBL Kabul 61.32 291 *e*P **P** **10 01 02.3 -0.2**
comp=Z,35nm,0.9s,mb5.5
SLMT Seeley Lake 61.84 50 *e*P **P** **10 01 06.0 +0.3**
comp=Z,5.7nm,0.9s,mb4.7
SLMT *e*pP pP 10 01 18.8 0.0
MSO Missoula 61.84 51 *e*P **P** **10 01 05.8 +0.1**
comp=Z,2.9nm,0.9s,mb4.4
MSO *e*pP pP 10 01 19.4 +0.5
JOF Joensuu 62.10 333 *e*P **P** **10 01 05.1 -2.2**
JOF pmax pmax
comp=Z,7.0nm,0.5s,mb5.0
JOF Joensuu 62.10 333 *e*p **P** **10 01 05.1 -2.2**
comp=Z,6.5nm,0.5s,mb5.0
SUMG Summit 62.35 3 *e*P **P** **10 01 08.9 +0.1**
comp=Z,32nm,0.8s,mb5.5
SUMG Summit 62.35 3 *i* P **P** **10 01 09.1 +0.3**
comp=Z,29nm,0.8s,mb5.5
FFC Flin Flon 62.84 39 *i* P **P** **10 01 13.2 +0.8**
FCC Fort Churchill 63.34 32 *e*P **P** **10 01 14.5 -1.1**
comp=Z,0.1nm,0.6s
KAF Kangasniemi 64.26 335 *e*P **P** **10 01 19.2 -2.3**
KAF pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
KAF Kangasniemi 64.26 335 *e*P **P** **10 01 19.2 -2.3**
comp=Z,9.7nm,0.7s,mb4.9
KAF Kangasniemi 64.26 335 *e*p **P** **10 01 19.2 -2.3**
comp=Z,9.7nm,0.7s,mb4.9
NVAR Mina Array Bea 64.42 61 P **P** **10 01 24.1 +1.0**
comp=Z,0.2nm,0.6s,baz=282,slow=5.4,SNR=3.1
SCO Scoresbysund 64.53 357 *i* P **P** **10 01 22.9 -0.3**
SCO pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
SCO Scoresbysund 64.53 357 *i* P **P** **10 01 22.9 -0.3**
comp=Z,5.9nm,0.8s,mb4.7
FINES FINESS Array B 64.84 334 P **P** **10 01 23.9 -1.5**
comp=Z,10nm,0.6s,mb5.0,baz=32,slow=8.1,SNR=56
FINES FINESS Array B 64.84 334 P **P** **10 01 23.9 -1.5**
FINES pmax pmax
comp=Z,10.0nm,0.6s
FINES FINESS Array B 64.84 334 P **P** **10 01 23.9 -1.5**
TPAW Teton Pass 65.57 52 *e*P **P** **10 01 31.8 +1.4**
comp=Z,9.3nm,1.2s,mb4.7
TPAW *e*pP pP 10 01 44.2 +0.7
LOHW Long Hollow 65.69 52 *e*P **P** **10 01 33.6 +2.4**
comp=Z,10nm,0.3s,mb5.3
SNOW Snow King Moun 65.70 52 *e*P **P** **10 01 32.3 +1.1**
comp=Z,6.7nm,0.4s,mb5.0
REDW Red Top Meadow 65.71 52 *e*P **P** **10 01 33.2 +1.9**
comp=Z,7.3nm,1.3s,mb4.5
OBN Obninsk 65.79 325 *e*P **P** **10 01 31.2 -0.4**
OBN *e* 10 02 02.8
OBN *e*SS SS 10 14 27.6 -0.9
OBN pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
OBN MLR MLR
comp=Z,200nm,16.0s,MS4.4
WRAB Tennant Creek 66.58 197 *e*P **P** **10 01 37.3 +0.3**
WRAB *e**PP pP 10 01 50.6 +0.4
WRAB pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
WRAB Tennant Creek 66.58 197 *e*P **P** **10 01 37.3 +0.4**
comp=Z,6.9nm,0.8s,mb4.7
WRAB *e*pP pP 10 01 50.5 +0.4
WRA Warramunga Arr 66.59 197 P **P** **10 01 37.5 +0.5**
comp=Z,5.4nm,0.9s,mb4.6,baz=15,slow=6.7,SNR=14
WRA pP pP 10 01 51.5 +1.2
comp=Z,6.1nm,0.8s,baz=15,slow=6.7,SNR=12
WRA Warramunga Arr 66.59 197 P **P** **10 01 37.5 +0.5**
WRA *PP pP 10 01 51.5 +1.2
WRA pmax pmax
comp=Z,5.0nm,0.9s
WRA Warramunga Arr 66.59 197 P **P** **10 01 37.5 +0.5**
WRA pP pP 10 01 51.5 +1.2
BW06 Boulder Array 66.82 52 *e*P **P** **10 01 38.9 +0.5**
comp=Z,3.6nm,1.1s,mb4.3
PDAR Pinedale Array 66.82 52 P **P** **10 01 39.5 +1.1**
comp=Z,0.8nm,0.8s,mb3.8,baz=268,slow=2.5,SNR=7.2
PDAR pP pP 10 01 51.1 -0.5
comp=Z,1.3nm,0.8s,baz=313,slow=3.0,SNR=6.4
VSR Storozhevoye 67.44 321 *e*P **P** **10 01 42.1 -0.1**
VSR pmax pmax
comp=N,10.0nm,0.7s
VSR pmax pmax
comp=E,9.0nm,0.7s
VSR pmax pmax
comp=Z,20nm,0.7s,mb5.3
RSSD Black Hills 68.92 48 *e*P **P** **10 01 54.0 +2.4**
RSSD *e**PP pP 10 02 02.6 -2.2
RSSD pmax pmax
comp=Z,5.0nm,0.9s,mb4.4

RSSD **Black Hills 68.92 48** *e*P P 10 01 54.0 +2.5
comp=Z,5.0nm,0.9s,mb4.4
RSSD *e*pP pP 10 02 02.6 -2.3
NB2 **NORSAR Subarra 69.24 340** P P 10 01 52.6 -0.7
comp=Z,14nm,0.6s,mb5.1,baz=28,slow=6.5
NB2 **NORSAR Subarra 69.24 340** P P 10 01 52.6 -0.7
NB2 **NORSAR Subarra 69.24 340** P P 10 01 52.6 -0.7
NOA **NORSAR Array B 69.24 340** P P 10 01 52.5 -0.8
comp=Z,11nm,0.6s,mb5.0,baz=28,slow=6.4,SNR=66
NOA **NORSAR Array B 69.24 340** P P 10 01 52.5 -0.8
NOA pmax pmax
comp=Z,11nm,0.6s
PV10 **Paradox Valley 70.01 55** *e*P P 10 02 00.1 +1.6
comp=Z,126nm,0.9s,mb5.8
ASAR **Alice Springs 70.29 197** P P 10 02 01.6 +1.4
comp=Z,3.7nm,0.9s,mb4.3,baz=14,slow=4.5,SNR=12
ASAR pP pP 10 02 15.7 +2.3
comp=Z,5.2nm,0.8s,baz=17,slow=6.0,SNR=13
ASAR **Alice Springs 70.29 197** P P 10 02 01.6 +1.5
ASAR *PP pP 10 02 15.7 +2.3
ASAR pmax pmax
comp=Z,4.0nm,0.9s
PV01 **Paradox Valley 70.45 55** *e*P P 10 02 01.7 +0.6
comp=Z,191nm,0.9s,mb6.0
SMCO **Snowmass 70.66 54** *e*P P 10 02 03.7 +1.3
comp=Z,2.7nm,0.9s,mb4.2
KIV **Kislovodsk 70.86 313** *e*P P 10 02 04.3 +0.8
KIV pmax pmax
comp=Z,56nm,1.1s,mb5.4
KIV **Kislovodsk 70.86 313** *e*P P 10 02 04.6 +1.1
comp=Z,38nm,0.8s,mb5.4
ZEI **Tsey 71.06 312** *e*P P 10 02 04.3 -0.5
ZEI pmax pmax
comp=Z,26nm,1.1s,mb5.1
SUW **Suwalki 71.68 331** *e*P P 10 02 07.4 -0.8
AKASG **Malin Array Be 72.04 325** P P 10 02 09.7 -0.8
comp=Z,8.0nm,0.5s,mb5.0,baz=35,slow=6.1,SNR=44
AKASG **Malin Array Be 72.04 325** P P 10 02 09.7 -0.8
AKASG pmax pmax
comp=Z,8.0nm,0.5s
AKBB **Malin Array Si 72.04 325** *e*P P 10 02 09.5 -1.0
KIEV **Kiev 72.06 325** *e*P P 10 02 09.1 -1.5
KIEV pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
KIEV **Kiev 72.06 325** *e*P P 10 02 09.1 -1.5
comp=Z,8.5nm,0.6s,mb4.8
GNI **Garni 72.45 310⇓** *i*P P 10 02 15.6 +2.5
GNI pmax pmax
comp=Z,35nm,1.2s
GNI **Garni 72.45 310** *e*P P 10 02 15.2 +2.1
comp=Z,36nm,1.1s,mb5.2
SDCO **Great Sand Dun 72.48 54** *e*P P 10 02 14.1 +0.7
comp=Z,1.5nm,1.0s,mb3.9
SDCO *e*pP pP 10 02 26.0 -0.7
ECSD **EROS Data Cent 72.99 45** *e*P P 10 02 15.5 -0.8
comp=Z,10nm,1.1s,mb4.7
GKP **Gorka Klasztor 74.27 333** *e*P P 10 02 23.8 +0.1
SIM **Simferopol' 74.33 319***c* *i*P P 10 02 26.0 +1.9
SIM pmax pmax
comp=Z,15nm,0.7s,mb5.0
LVV **L'vov 74.77 328** *e*P P 10 02 27.2 +0.6
SCHQ **Schefferville 75.29 22** P P 10 02 29.0 -0.5
comp=Z,4.3nm,0.8s,mb4.5,baz=340,slow=6.9,SNR=7.2
SCHQ **Schefferville 75.29 22** P P 10 02 29.0 -0.5
BSEG **Bad Segeberg 75.74 337** *e*P P 10 02 31.7 -0.4
comp=Z,12nm,0.9s,mb4.8
OJC **Ojcow 75.99 330** *e*P P 10 02 31.6 -2.0
SCIA **State Center 76.02 44** *e*P P 10 02 33.1 -0.8
comp=Z,15nm,0.8s,mb5.0
SCIA *e*pP pP 10 02 47.6 +0.3
RUE **Ruedersdorf 76.03 335** *e*P P 10 02 33.9 +0.2
comp=Z,23nm,0.8s,mb5.2
BUR08 **Bucovina Ar. S 76.08 326** *e*P P 10 02 33.8 -0.3
BURAR **Bucovina Array 76.09 326⇑** P P 10 02 34.4 +0.2
BURAR **Bucovina Array 76.09 326⇑** *i*P P 10 02 34.4 +0.2
TESR **76.40 324⇓** P P 10 02 36.2 +0.2
TESR **76.40 324⇓** *i*P P 10 02 36.2 +0.2
UZH **Uzhgorod 76.40 328** *e*P P 10 02 35.8 -0.1
UZH *e* 10 02 43.0
UZH *e* pP 10 02 48.8 -0.6
NIE **Niedzica 76.47 329** *e*P P 10 02 37.0 +0.7
CRVS **Cervenica-Dubn 76.49 328** *e*P P 10 02 36.2 -0.2
CRVS pmax pmax
comp=Z,15nm,1.3s,mb4.8
CRVS **Cervenica-Dubn 76.49 328** *e*P P 10 02 36.2 -0.2
comp=Z,15nm,1.3s,mb4.8
CRVS **Cervenica-Dubn 76.49 328** *e*P P 10 02 36.2 -0.2
TLCR **76.53 322** ⇓P P 10 02 37.1 +0.4
TLCR **76.53 322** ⇓*i*P P 10 02 37.1 +0.4
KSP **Ksiaz 76.65 332** *e*P P 10 02 37.5 +0.2
KSP **Ksiaz 76.65 332** *e*P P 10 02 36.8 -0.5
TRPA **Tarpa 76.72 327⇑** *i*P P 10 02 38.2 +0.5
CFR **Carcaliu 76.83 322** ⇑P P 10 02 38.8 +0.4
CFR **Carcaliu 76.83 322⇑** *i*P P 10 02 38.8 +0.4
VRI **Vrincioaia 76.88 324** ⇑P P 10 02 39.2 +0.5
VRI **Vrincioaia 76.88 324⇑** *i*P P 10 02 39.2 +0.5
OKC **Ostrava-Krasne 76.88 331** *e*P P 10 02 38.9 +0.3
UPC **Upice 77.03 332** *e*P P 10 02 39.7 +0.3
DPC **Dobruska-Polom 77.06 332** *e*P P 10 02 40.0 +0.4
MORC **Moravsky Berou 77.14 331** ⇑P P 10 02 40.8 +0.7
MORC **Moravsky Berou 77.14 331** *e*P P 10 02 39.9 -0.2
comp=Z,38nm,1.1s,mb5.2
MORC **Moravsky Berou 77.14 331⇑** *i*P P 10 02 40.8 +0.7
STKA **Stephens Creek 77.18 188** pP pP 10 02 56.1 +2.4
comp=Z,3.6nm,0.9s,baz=339,slow=11,SNR=2.8
KECS **Kecovo 77.19 329** *e*P P 10 02 40.6 +0.2
KECS pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
KECS **Kecovo 77.19 329** *e*P P 10 02 40.6 +0.2
comp=Z,7.4nm,0.9s,mb4.6
KECS **Kecovo 77.19 329** *e*P P 10 02 40.6 +0.2
KECS *e* 10 36 42.5
TIRR **Tirgusor 77.28 322** ⇓P P 10 02 41.3 +0.3
TIRR **Tirgusor 77.28 322** ⇓*i*P P 10 02 41.3 +0.3
CLL **Collm 77.28 335** *e*P P 10 02 40.2 -0.7
comp=Z,34nm,1.0s,mb5.2
CLL **Collm 77.28 335⇑** *i*P P 10 02 40.4 -0.5
CLL pmax pmax
comp=Z,34nm,1.0s,mb5.2
CLL **Collm 77.28 335⇑** *i*P P 10 02 40.4 -0.5
CLL **Collm 77.28 335⇑** *i*P P 10 02 40.4 -0.5
comp=Z,34nm,1.0s,mb5.2
CLL *e*sP PcP 10 02 46.0 -5.3
BRG **Berggiesshubel 77.37 334** *e*P P 10 02 40.8 -0.6
comp=Z,15nm,1.3s,mb4.8
PVCC **Panska Ves 77.48 333** *e*P P 10 02 42.1 +0.1
MLR **Muntele Rosu 77.51 324** ⇑P P 10 02 43.2 +1.0
MLR **Muntele Rosu 77.51 324⇑** *i*P P 10 02 43.2 +1.0
DRGR **77.75 327** ⇑P P 10 02 43.5 -0.1
DRGR **77.75 327⇑** *i*P P 10 02 43.5 -0.1
VYHS **Vyhne 77.78 330** *e*P P 10 02 43.8 +0.1
VYHS pmax pmax
comp=Z,14nm,1.2s,mb4.8
VYHS **Vyhne 77.78 330** *e*P P 10 02 43.8 +0.1
comp=Z,14nm,1.2s,mb4.8
VYHS **Vyhne 77.78 330** *e*P P 10 02 43.8 +0.1
VRAC **Vranov 77.86 331** ⇓P P 10 02 45.0 +0.9
VRAC **Vranov 77.86 331** ⇓*i*P P 10 02 45.0 +0.9
PSZ **Piszkesteto 77.88 329** ⇓P P 10 02 45.1 +0.8
PSZ **Piszkesteto 77.88 329** ⇓*i*P P 10 02 45.1 +0.8
IBBN **Ibbenburen 77.89 338** *e*P P 10 02 44.0 -0.2
comp=Z,23nm,0.8s,mb5.2
VOIR **77.92 324** ⇓P P 10 02 45.5 +0.9
VOIR **77.92 324** ⇓*i*P P 10 02 45.5 +0.9
PRU **Pruhonice 77.95 333** *e*P P 10 02 45.3 +0.7
TANN **Tannenbergstha 78.23 334** *e*P P 10 02 45.4 -0.8
comp=Z,9.0nm,1.1s,mb4.6
TREC **Trest 78.25 332** *e*P P 10 02 46.3 0.0
TREC **Trest 78.25 332** *e*P P 10 02 46.3 0.0
SMOL **Smolenice 78.26 331** *e*P P 10 02 47.6 +1.3
SMOL **Smolenice 78.26 331** *e*P P 10 02 47.6 +1.3
MOX **Moxa 78.29 335** *e*P P 10 02 46.3 -0.1
comp=Z,23nm,1.3s,mb5.0
MOX **Moxa 78.29 335** *e*P P 10 02 46.3 -0.1
comp=Z,25nm,1.3s,mb5.0
NKC **Novy Kostel 78.40 334** *e*P P 10 02 47.4 +0.3
WMOK **Wichita Mounta 78.43 52** *e*P P 10 02 47.9 +0.4
WMOK *e**PP pP 10 02 59.1 -1.9
WMOK pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
WMOK **Wichita Mounta 78.43 52** *e*P P 10 02 47.9 +0.4
comp=Z,3.4nm,0.9s,mb4.3
WMOK *e*pP pP 10 02 59.1 -1.9
WTSB **Winterswijk 78.45 338⇑** *e*P P 10 02 47.1 -0.2
comp=Z,24nm,0.8s,mb5.2
BR131 **Keskin Array S 78.54 316** *e*P P 10 02 48.9 +0.8
comp=Z,8.9nm,1.1s,mb4.6
BRTR **Keskin Array B 78.54 316** P P 10 02 48.5 +0.5
comp=Z,7.3nm,1.0s,mb4.6,baz=49,slow=3.8,SNR=20
BRTR **Keskin Array B 78.54 316** P P 10 02 48.5 +0.5
BRTR pmax pmax
comp=Z,7.0nm,1.0s
BUD **Budapest 78.57 329⇓** *e*P P 10 02 45.2 -2.9
UBBA **Unterbreizbach 78.61 336** *e*P P 10 02 47.7 -0.5
comp=Z,7.0nm,0.8s,mb4.6
ZST **Bratislava 78.64 331** *e*P P 10 02 49.4 +0.9
ZST pmax pmax
comp=Z,13nm,1.2s,mb4.7
ZST **Bratislava 78.64 331** *e*P P 10 02 49.4 +0.9
comp=Z,13nm,1.2s,mb4.7
ZST **Bratislava 78.64 331** *e*P P 10 02 49.4 +0.9
BUG **Bochum--Univer 78.80 338** *e*P P 10 02 49.0 -0.3
comp=Z,33nm,1.2s,mb5.1
GZR **Gura Zlata 78.88 326** ⇓P P 10 02 49.9 +0.1
GZR **Gura Zlata 78.88 326⇓** *i*P P 10 02 49.9 +0.1
HDIL **Hopedale 78.95 42** *e*P P 10 02 49.8 -0.5
comp=Z,15nm,0.9s,mb4.9
KHC **Kasperske Hory 79.01 333** *e*P P 10 02 50.4 -0.1
comp=Z,32nm,1.1s,mb5.2
KHC **Kasperske Hory 79.01 333** *e*P P 10 02 50.7 +0.2
BZS **Buzias 79.16 327** ⇓P P 10 02 50.6 -0.7
BZS **Buzias 79.16 327⇓** *i*P P 10 02 50.6 -0.7
WET **Wettzell 79.22 334** *e*P P 10 02 51.8 +0.2
comp=Z,30nm,1.2s,mb5.1
GRF **Grafenberg Arr 79.25 335** *e*P P 10 02 52.4 +0.7
comp=Z,65nm,1.3s,mb5.4
GRF **Grafenberg Arr 79.25 335** *e*P P 10 02 52.4 +0.7
GRF pmax pmax
comp=Z,65nm,1.3s,mb5.4
GRF **Grafenberg Arr 79.25 335** *e*P P 10 02 52.4 +0.7
comp=Z,65nm,1.3s,mb5.4
CONA **Conrad Observa 79.30 331⇑** *i*pP P 10 02 52.8 +0.7
comp=Z,25nm,1.5s,mb4.9,SNR=9.9
TXAR **Lajitas Array 79.50 59** P P 10 02 53.9 +0.4
comp=Z,0.4nm,0.5s,mb3.6,baz=292,slow=2.7,SNR=9.2
TXAR pP pP 10 03 07.0 0.0
comp=Z,2.2nm,0.6s,baz=301,slow=4.4,SNR=14
TXAR **Lajitas Array 79.50 59** P P 10 02 53.9 +0.4
TXAR pP pP 10 03 07.0 0.0
TNS **Taunus Mts 79.58 337** *e*P P 10 02 53.6 +0.1
comp=Z,26nm,1.3s,mb5.0
HGN **Heimansgroeve 79.77 338⇑** *e*P P 10 02 53.9 -0.7
comp=Z,18nm,1.2s,mb4.9
PKSM **Moragy 79.78 329** ⇓P P 10 02 55.0 +0.3
PKSM **Moragy 79.78 329⇓** *i*P P 10 02 55.0 +0.3
BEBN **Eben Emael 79.81 339** P P 10 02 55.2 +0.4
comp=Z,8.5nm,0.7s,mb4.8
MEM **Membach 79.89 338** P P 10 02 55.3 0.0
comp=Z,17nm,1.3s,mb4.8
CCM **Cathedral Cave 79.93 45** *e*P P 10 02 54.8 -0.9
CCM pmax pmax
comp=Z,6.0nm,1.3s,mb4.4
CCM **Cathedral Cave 79.93 45** *e*P P 10 02 54.8 -0.9
comp=Z,6.4nm,1.3s,mb4.4
ARSA **Arzberg 80.00 331⇓** *i*pP P 10 02 56.4 +0.5
comp=Z,13nm,1.5s,mb4.6
TOD **Tromm 80.03 336** *e*P P 10 02 55.8 -0.2
ABH **Alteburg 80.14 337** *e*P P 10 02 56.8 +0.2
BCLA **Clavier 80.25 339** P P 10 02 57.2 0.0
comp=Z,16nm,1.7s,mb4.7
SNF **Seneffe 80.43 339** P P 10 02 58.0 -0.1
comp=Z,12nm,1.7s,mb4.5
RJOB **Jochberg 80.48 333** *e*P P 10 02 59.1 +0.6
comp=Z,9.0nm,0.9s,mb4.7
FUR **Furstenfeldbru 80.58 334** *e*P P 10 02 59.4 +0.4
comp=Z,32nm,1.4s,mb5.1
GIVF **Givet 80.66 339⇑** *i*P P 10 02 59.1 -0.3
comp=Z,70nm,1.3s,mb5.1
GIVF **Givet 80.66 339⇑** *i*P P 10 02 59.1 -0.3
GIVF pmax pmax
comp=Z,35nm,1.3s,mb5.1
GIVF **Givet 80.66 339⇑** *i*P P 10 02 59.1 -0.3
comp=Z,35nm,1.3s,mb5.1
SOKA **Soboth 80.67 331⇓** *i*pP P 10 02 59.7 +0.2
comp=Z,14nm,1.1s,mb4.8
STU **Stuttgart 80.67 336** *e*P P 10 02 59.6 +0.1
comp=Z,22nm,1.2s,mb5.0
DOU **Dourbes 80.73 339** P P 10 02 58.5 -1.3
comp=Z,12nm,1.9s,mb4.5
BAIF **Baives 80.86 339⇑** *i*P P 10 03 00.3 -0.1
comp=Z,30nm,1.2s,mb4.8
BAIF **Baives 80.86 339⇑** *i*P P 10 03 00.3 -0.1
BAIF pmax pmax
comp=Z,15nm,1.2s,mb4.8
BAIF **Baives 80.86 339⇑** *i*P P 10 03 00.3 -0.1
comp=Z,15nm,1.2s,mb4.8
KBA **Koelnbreinsper 80.88 332⇑** *i*pP P 10 03 01.2 +0.6
comp=Z,25nm,1.4s,mb4.9,SNR=10
VTS **Vitosha 81.02 324** ⇑P P 10 03 01.6 +0.2
VTS **Vitosha 81.02 324⇑** *i*P P 10 03 01.6 +0.2
BFO **Black Forest 81.32 336** *e*P P 10 03 03.1 +0.2
comp=Z,16nm,1.2s,mb4.8
BFO **Black Forest 81.32 336** *e*P P 10 03 02.7 -0.2
BFO pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
BFO **Black Forest 81.32 336** *e*P P 10 03 02.6 -0.3
comp=Z,7.9nm,1.1s,mb4.6
RETA **Reutte 81.35 334⇑** *i*pP P 10 03 03.4 +0.3
comp=Z,13nm,1.4s,mb4.7
MOTA **Moosalm 81.37 334⇑** *i*pP P 10 03 03.6 +0.4
comp=Z,29nm,1.4s,mb5.0
SPAK **Spaichingen-Ko 81.39 336** *e*P P 10 03 03.8 +0.5
MIAR **Mount Ida 81.42 49** *e*P P 10 03 03.9 +0.2
MIAR *e**PP pP 10 03 16.3 -0.9
MIAR pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
MIAR **Mount Ida 81.42 49** *e*P P 10 03 03.9 +0.2
comp=Z,6.5nm,0.7s,mb4.7
MIAR *e*PcP PcP 10 03 10.5 +0.8
MIAR *e*pP pP 10 03 16.3 -0.9
CDF **Champ du Feu 81.55 337⇑** *i*P P 10 03 04.1 0.0
comp=Z,36nm,1.3s,mb4.8
CDF **Champ du Feu 81.55 337⇑** *i*P P 10 03 04.1 0.0
CDF pmax pmax
comp=Z,18nm,1.3s,mb4.8
CDF **Champ du Feu 81.55 337⇑** *i*P P 10 03 04.1 0.0
comp=Z,18nm,1.3s,mb4.8
LIBD **Limburg 81.69 336** *e*P P 10 03 05.2 +0.3
ECH **Echery 81.76 337** *e*P P 10 03 05.0 -0.2
ECH **Echery 81.76 337** *e*P P 10 03 04.8 -0.4
ECH pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
ECH **Echery 81.76 337** *e*P P 10 03 04.8 -0.5
comp=Z,9.4nm,1.0s,mb4.7
PARMO **Parma 81.76 45** *e*P P 10 03 05.7 +0.2
PARMO *e*pP pP 10 03 19.5 +0.5
FELD **Feldberg im Sc 81.82 336** *e*P P 10 03 05.5 -0.1
MEZF **Maizieres J'vi 82.07 338⇑** *i*P P 10 03 07.0 +0.1
MOF **Molkenrain 82.09 336** *e*P P 10 03 05.5 -1.5
HAU **Haudomont 82.17 337⇑** *i*P P 10 03 07.2 -0.2
HINF **Hinteralfeld 82.21 337** *e*P P 10 03 07.0 -0.6
WCI **Wyandotte Cave 82.21 42** *e*P P 10 03 07.2 -0.6
WCI *e* 10 03 13.7
WCI *e**PP pP 10 03 21.0 -0.4
WCI pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
WCI **Wyandotte Cave 82.21 42** *e*P P 10 03 07.2 -0.6
comp=Z,6.3nm,0.8s,mb4.6
WCI *e*PcP PcP 10 03 13.7 +0.6
WCI *e*pP pP 10 03 21.0 -0.4
MMAI **Mount Meron Ar 82.77 310** P P 10 03 11.5 +0.7
comp=Z,5.5nm,0.5s,mb4.8,baz=41,slow=7.7,SNR=9.9
LDF **La Druitiere 83.26 341** *e*P P 10 03 12.8 -0.3
comp=Z,6.8nm,0.6s,mb4.6
LDF **La Druitiere 83.26 341** *e*P P 10 03 12.8 -0.3
LDF pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
LDF **La Druitiere 83.26 341** *e*P P 10 03 12.8 -0.3
comp=Z,3.4nm,0.6s,mb4.5
CABF **La Chapelle 83.52 337** *e*P P 10 03 14.8 +0.4
comp=Z,48nm,1.3s,mb5.2
CABF **La Chapelle 83.52 337** *e*P P 10 03 14.8 +0.4
CABF pmax pmax
comp=Z,24nm,1.3s,mb5.2
CABF **La Chapelle 83.52 337** *e*P P 10 03 14.8 +0.4
comp=Z,24nm,1.3s,mb5.2
LOR **Lormes 83.52 338⇑** *i*P P 10 03 14.4 0.0
comp=Z,22nm,0.9s,mb5.0
LOR **Lormes 83.52 338⇑** *i*P P 10 03 14.4 0.0
LOR pmax pmax
comp=Z,11nm,0.9s,mb5.0
LOR **Lormes 83.52 338⇑** *i*P P 10 03 14.4 0.0
comp=Z,11nm,0.9s,mb5.0
GRR **Gorron 83.62 342** *e*P P 10 03 14.8 -0.1
comp=Z,40nm,0.8s,mb5.3
GRR **Gorron 83.62 342** *e*P P 10 03 14.8 -0.1
GRR pmax pmax
comp=Z,20nm,0.8s,mb5.3
GRR **Gorron 83.62 342** *e*P P 10 03 14.8 -0.1
comp=Z,20nm,0.8s,mb5.3
SSF **Saint Saulge 83.81 338⇑** *i*P P 10 03 15.9 0.0
comp=Z,9.7nm,0.8s,mb4.7
SSF **Saint Saulge 83.81 338⇑** *i*P P 10 03 15.9 0.0
SSF pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
SSF **Saint Saulge 83.81 338⇑** *i*P P 10 03 15.9 0.0
comp=Z,4.8nm,0.8s,mb4.7
HYF **Humbligny 83.84 339** *e*P P 10 03 16.5 +0.5
AVF **Avril sur Loir 84.10 338⇑** *i*P P 10 03 17.5 +0.1
comp=Z,32nm,0.9s,mb5.1
AVF **Avril sur Loir 84.10 338⇑** *i*P P 10 03 17.5 +0.1
AVF pmax pmax
comp=Z,16nm,0.9s,mb5.2
AVF **Avril sur Loir 84.10 338⇑** *i*P P 10 03 17.5 +0.1
comp=Z,16nm,0.9s,mb5.2
SMF **Signal de Mont 84.10 338⇑** *i*P P 10 03 17.6 +0.2
comp=Z,55nm,1.0s,mb5.3
SMF **Signal de Mont 84.10 338⇑** *i*P P 10 03 17.6 +0.2
SMF pmax pmax
comp=Z,28nm,1.0s,mb5.3
SMF **Signal de Mont 84.10 338⇑** *i*P P 10 03 17.6 +0.2
comp=Z,28nm,1.0s,mb5.3
SGMF **Saint Gilles 84.12 343** *e*P P 10 03 17.3 -0.1
comp=Z,35nm,0.8s,mb5.2
SGMF **Saint Gilles 84.12 343** *e*P P 10 03 17.3 -0.1
SGMF pmax pmax
comp=Z,18nm,0.8s,mb5.2
SGMF **Saint Gilles 84.12 343** *e*P P 10 03 17.3 -0.1
comp=Z,18nm,0.8s,mb5.2
ROSF **Rostrenen 84.19 343** *e*P P 10 03 17.3 -0.5
LPL **La Plagne 84.33 336⇑** *i*P P 10 03 19.4 +0.8
comp=Z,12nm,0.8s,mb4.8
LPL **La Plagne 84.33 336⇑** *i*P P 10 03 19.4 +0.8
LPL pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
LPL **La Plagne 84.33 336⇑** *i*P P 10 03 19.4 +0.8
comp=Z,6.1nm,0.8s,mb4.8
LPG **La Plagne 84.34 336** *e*P P 10 03 19.5 +0.8
comp=Z,38nm,1.3s,mb5.1
LPG **La Plagne 84.34 336** *e*P P 10 03 19.5 +0.8
LPG pmax pmax
comp=Z,19nm,1.3s,mb5.1
LPG **La Plagne 84.34 336** *e*P P 10 03 19.5 +0.8
comp=Z,19nm,1.3s,mb5.1
BGF **Bois d'Agland 84.44 339** *e*P P 10 03 19.2 +0.1
AGO **Saint Agoulin 84.84 338** *e*P P 10 03 22.3 +1.2
TCF **Toulx Ste Croi 84.86 339⇑** *i*P P 10 03 21.6 +0.4
comp=Z,7.0nm,0.7s,mb4.6
TCF **Toulx Ste Croi 84.86 339⇑** *i*P P 10 03 21.6 +0.4
TCF pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
TCF **Toulx Ste Croi 84.86 339⇑** *i*P P 10 03 21.6 +0.4
comp=Z,3.5nm,0.7s,mb4.6
MBDF **Montbardon 85.04 335** *e*P P 10 03 22.4 +0.2
comp=Z,7.9nm,0.7s,mb4.6
MBDF **Montbardon 85.04 335** *e*P P 10 03 22.4 +0.2
MBDF pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
MBDF **Montbardon 85.04 335** *e*P P 10 03 22.4 +0.2
comp=Z,4.0nm,0.7s,mb4.7
ORIF **Oris-en-Rattie 85.13 336⇑** *i*P P 10 03 23.3 +0.7
comp=Z,18nm,0.8s,mb5.0
ORIF **Oris-en-Rattie 85.13 336⇑** *i*P P 10 03 23.3 +0.7
ORIF pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
ORIF **Oris-en-Rattie 85.13 336⇑** *i*P P 10 03 23.3 +0.7
comp=Z,9.2nm,0.8s,mb5.0
MFF **Saint Martin d 85.14 341** *e*P P 10 03 22.2 -0.4
comp=Z,9.0nm,0.7s,mb4.7
MFF **Saint Martin d 85.14 341** *e*P P 10 03 22.2 -0.4
MFF pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
MFF **Saint Martin d 85.14 341** *e*P P 10 03 22.2 -0.4
comp=Z,4.5nm,0.7s,mb4.7
PYM **Petit Puy Mans 85.15 338** *e*P P 10 03 22.8 +0.1
VIVF **Saint-Julien-l 85.53 337⇑** *i*P P 10 03 25.2 +0.6
comp=Z,31nm,1.3s,mb5.1
VIVF **Saint-Julien-l 85.53 337⇑** *i*P P 10 03 25.2 +0.6
VIVF pmax pmax
comp=Z,15nm,1.3s,mb5.1
VIVF **Saint-Julien-l 85.53 337⇑** *i*P P 10 03 25.2 +0.6
comp=Z,15nm,1.3s,mb5.1
RJF **Les Rejaudoux 85.95 339** *e*P P 10 03 26.3 -0.4
comp=Z,23nm,1.1s,mb5.0
RJF **Les Rejaudoux 85.95 339** *e*P P 10 03 26.3 -0.4
RJF pmax pmax
comp=Z,11nm,1.1s,mb5.0
RJF **Les Rejaudoux 85.95 339** *e*P P 10 03 26.3 -0.4
comp=Z,11nm,1.1s,mb5.0
SMRF **Simiane la Rot 86.08 336** *e*P P 10 03 28.0 +0.7
comp=Z,16nm,1.0s,mb4.9
SMRF **Simiane la Rot 86.08 336** *e*P P 10 03 28.0 +0.7
comp=Z,16nm,1.0s,mb5.2
FRF **La Foret Royal 86.14 335** *e*P P 10 03 27.6 -0.1
comp=Z,24nm,1.1s,mb5.0
FRF **La Foret Royal 86.14 335** *e*P P 10 03 27.6 -0.1
FRF pmax pmax
comp=Z,12nm,1.1s,mb5.0
FRF **La Foret Royal 86.14 335** *e*P P 10 03 27.6 -0.1
comp=Z,12nm,1.1s,mb5.0
CAF **Calviac 86.16 338⇑** *i*P P 10 03 27.6 -0.1
comp=Z,21nm,0.9s,mb5.1
CAF **Calviac 86.16 338⇑** *i*P P 10 03 27.6 -0.1
CAF pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
CAF **Calviac 86.16 338⇑** *i*P P 10 03 27.6 -0.1
comp=Z,10nm,0.9s,mb5.1
LMR **La Mourre 86.39 335⇑** *i*P P 10 03 28.8 -0.1
comp=Z,68nm,1.3s,mb5.4
LMR **La Mourre 86.39 335⇑** *i*P P 10 03 28.8 -0.1
LMR pmax pmax
comp=Z,34nm,1.3s,mb5.4
LMR **La Mourre 86.39 335⇑** *i*P P 10 03 28.8 -0.1
comp=Z,34nm,1.3s,mb5.4
LASF **Ste Croix 86.47 337** *e*P P 10 03 30.1 +0.8
comp=Z,56nm,1.6s,mb5.2
LFF **La Frestale 86.49 339** *e*P P 10 03 28.6 -0.7
comp=Z,23nm,0.8s,mb5.2
LFF **La Frestale 86.49 339** *e*P P 10 03 28.6 -0.7
LFF pmax pmax
comp=Z,11nm,0.8s,mb5.1
LFF **La Frestale 86.49 339** *e*P P 10 03 28.6 -0.7
comp=Z,11nm,0.8s,mb5.2
MTLF **Montolieu 87.60 338** *e*P P 10 03 34.5 -0.3
comp=Z,25nm,1.4s,mb5.0
MTLF **Montolieu 87.60 338** *e*P P 10 03 34.5 -0.3
MTLF pmax pmax
comp=Z,13nm,1.4s,mb5.0
MTLF **Montolieu 87.60 338** *e*P P 10 03 34.5 -0.3
comp=Z,13nm,1.4s,mb5.0
EPF **Esparros 88.38 339** *e*P P 10 03 37.4 -1.1
ETSF **Etsaut 88.72 340** *e*P P 10 03 39.3 -0.8
KEST **Kesra 92.33 330** P P 10 03 57.7 +0.7
comp=Z,1.6nm,0.8s,mb4.4,baz=308,slow=2.2,SNR=4.7
ESDC **Sonseca Array 92.59 341** P P 10 03 56.5 -1.6
comp=Z,0.2nm,0.3s,mb4.0,baz=18,slow=4.5,SNR=4.4
TORD **Torodi Ar. Bea 115.66 327** PKP PKPdf 10 09 28.4 -0.8
comp=Z,0.3nm,0.4s,baz=25,slow=2.0,SNR=7.4
LPAZ **La Paz 136.32 62** PKP PKPdf 10 10 09.7 +1.3
comp=Z,0.8nm,0.9s,baz=153,slow=2.3,SNR=3.4
LPAZ pPKP pPKPdf 10 10 22.8 +0.2
comp=Z,1.5nm,0.8s,baz=344,slow=5.1,SNR=5.7
LPAZ **La Paz 136.32 62** *e*PKPdf PKPdf 10 10 10.7 +2.3
CPUP **Villa Florida 150.47 60** PKPbc PKPbc 10 10 37.8 -0.3
comp=Z,1.6nm,0.8s,baz=239,slow=5.9,SNR=4.0
CPUP pPKPbc pPKPbc 10 10 51.5 -0.7
comp=Z,6.3nm,0.7s,baz=292,slow=3.9,SNR=13

JMA 06 09:54:45.8±1.0, 45°.49N×151°.09E, h30km, M4.4, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**4.38**	**243**	P	Pn		09 55 49.3	-0.9
NEM2				*e*S		Sn	09 56 35.7	-4.5
JRA	**Rausu**	**4.53**	**252**	P	Pn		09 55 54.0	+1.8

JNK	Nakash	4.94 250	P	Pn	09 55 58.8	+0.9
JAK	Akkeshi	5.23 244	P	Pn	09 56 00.6	-1.2
JTKR	Abashiri--Toko	5.34 256	P	Pn	09 56 05.7	+2.3
JAR	Ashorobuto	5.69 250	P	Pn	09 56 09.6	+1.5
JMP	Maruseppu	5.70 258	P	Pn	09 56 11.1	+2.7
JOB	Onbets	5.82 246	P	Pn	09 56 09.9	-0.1
JOB			*e*S	Sn	09 57 13.7	-2.0
JKK2	Kamakawa 2	6.16 258	P	Pn	09 56 17.6	+2.9
JCH	Churui	6.27 245	P	Pn	09 56 15.5	-0.6
JEM	Erimo	6.71 242	P	Pn	09 56 23.2	+1.0
JNBK	Urakawa-nobuka	6.82 245	P	Pn	09 56 23.6	-0.2
JBT2	Biratori 2	6.84 250	P	Pn	09 56 24.2	+0.2
JNB	Noboribetsu	7.85 251	P	Pn	09 56 38.6	+0.7
JKB	Kayabe	8.13 247	P	Pn	09 56 41.2	-0.5
JOSM	Okushiri--Mats	9.06 252	P	Pn	09 56 55.4	+0.9

IDC 06 10:06:53.6±1.6, 2°.18N×126°.47E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.6/20, mbtmp3.7/4, Error ellipse: s-maj=105.8km s-min=24.2km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.17 182**		P	P	10 11 29.4	-0.3
	1.6nm,0.8s,baz=353,slow=8.1,SNR=3.4						
WRA	**Warramunga Arr**	**23.30 161**		P	P	10 12 03.4	+0.1
	2.2nm,0.4s,baz=340,slow=11,SNR=46						
WRA				PcP	PcP	10 15 50.2	-0.8
	0.2nm,0.4s,baz=356,slow=3.0,SNR=4.9						
ASAR	**Alice Springs**	**26.68 165**		P	P	10 12 35.1	+0.6
	0.5nm,0.4s,baz=349,slow=10,SNR=9.7						
MKAR	**Makanchi Array**	**58.68 326**		P	P	10 16 52.9	0.0
	0.4nm,0.4s,baz=121,slow=7.6,SNR=5.2						

*ROM **06** 10:09:13.6±0.2, 41°.88N×15°.61E, h3km±2km, Md2.8/17, Ml2.6/17, Error ellipse: s-maj=3.3km s-min=1.5km az=16.0*
*ISCJB **06** 10:09:14.5±0.5, 41°.83N±0°.04×15°.56E±0°.03, h10km±5km, Error ellipse: s-maj=6.6km s-min=3.7km az=15.2*
*CSEM **06** 10:09:14.4±0.2, 41°.86N×15°.61E, h2km, MD2.8/17, Error ellipse: s-maj=4.6km s-min=3.0km az=21.0*

ISC 06 10:09:15.0±0.5, 41°.83N±0°.04×15°.56E±0°.03, h9km±5km, n53, σ0°84/67, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGRT	**San Giovanni R**	**0.16 120**		Pg	**Pg**	**10 09 17.4**	**-1.0**
SGRT				Sg	**Sg**	**10 09 20.1**	**-0.6**
	1μm,0.2s						
SGRT	**San Giovanni R**	**0.16 120**		Pg	**Pg**	**10 09 17.4**	**-1.0**
SGRT				Sg	**Sg**	**10 09 20.1**	**-0.6**
	1μm,0.2s						
RGNG	**Rignano Grg**	**0.16 174**		Pg	**Pg**	**10 09 18.2**	**-0.3**
RGNG				Sg	**Sg**	**10 09 21.0**	**+0.2**
RGNG	**Rignano Grg**	**0.16 174**		Pg	**Pg**	**10 09 18.2**	**-0.3**
RGNG				Sg	**Sg**	**10 09 21.0**	**+0.2**
MSAG	**Monte S. Angel**	**0.29 115**		Pg	**Pg**	**10 09 19.8**	**-0.9**
MSAG				Sg	**Sg**	**10 09 24.3**	**-0.3**
	652nm,0.3s						
MSAG	**Monte S. Angel**	**0.29 115**		Pg	**Pg**	**10 09 19.8**	**-0.9**
MSAG				Sg	**Sg**	**10 09 24.3**	**-0.3**
	652nm,0.3s						
FG2	**Serracapriola**	**0.30 265**		Pg	**Pg**	**10 09 21.0**	**0.0**
	885nm,0.2s						
FG2	**Serracapriola**	**0.30 265**		Pg	**Pg**	**10 09 21.0**	**0.0**
	885nm,0.2s						
MS1	**Monte Sant'Ang**	**0.31 114**		*e*Pg	**Pg**	**10 09 20.4**	**-0.8**
MS1				*e*Sg	**Sg**	**10 09 28.0**	**+2.6**
CIGN	**Sant'Elia a Pi**	**0.52 250**		Pg	**Pg**	**10 09 26.3**	**+1.1**
	81nm,0.4s						
CIGN	**Sant'Elia a Pi**	**0.52 250**		Pg	**Pg**	**10 09 26.3**	**+1.1**
	81nm,0.4s						
MOCO	**Biccari - m.te**	**0.55 213**		Pg	**Pg**	**10 09 25.8**	**+0.1**
	83nm,0.4s						
FG5	**Orsara di Pugl**	**0.59 202**		Pg	**Pg**	**10 09 27.1**	**+0.6**
	90nm,0.4s						
FG5	**Orsara di Pugl**	**0.59 202**		Pg	**Pg**	**10 09 27.1**	**+0.6**
	90nm,0.4s						
FRES	**Fresagrandinar**	**0.68 282**		Pg	**Pg**	**10 09 27.7**	**-0.5**
	142nm,0.4s						
FRES	**Fresagrandinar**	**0.68 282**		Pg	**Pg**	**10 09 27.7**	**-0.5**
	142nm,0.4s						
SGTA	**Sant Agata di**	**0.71 192**		Pg	**Pg**	**10 09 29.1**	**+0.3**
	151nm,0.3s						
SGTA	**Sant Agata di**	**0.71 192**		Pg	**Pg**	**10 09 29.1**	**+0.3**
	151nm,0.3s						
SACR	**S. Croce Del S**	**0.78 236**		Pg	**Pg**	**10 09 30.3**	**+0.3**
	119nm,0.6s						
SACR	**S. Croce Del S**	**0.78 236**		Pg	**Pg**	**10 09 30.3**	**+0.3**
	119nm,0.6s						
BSSO	**Busso**	**0.78 249**		Pg	**Pg**	**10 09 30.0**	**-0.1**
BSSO	**Busso**	**0.78 249**		Pg	**Pg**	**10 09 30.0**	**-0.1**
PSB1	**Pescosannita**	**0.83 223**		Pg	**Pg**	**10 09 31.1**	**+0.1**
	92nm,0.5s						
PSB1	**Pescosannita**	**0.83 223**		Pg	**Pg**	**10 09 31.1**	**+0.1**
	92nm,0.5s						
CAFE	**Carife**	**0.84 197**		Pg	**Pg**	**10 09 31.9**	**+0.7**
	55nm,0.3s						
CAFE	**Carife**	**0.84 197**		Pg	**Pg**	**10 09 31.9**	**+0.7**
	55nm,0.3s						
VULT	**Monte Vulture**	**0.88 177**		Pg	**Pg**	**10 09 33.2**	**+1.3**
	473nm,0.3s						
VULT	**Monte Vulture**	**0.88 177**		Pg	**Pg**	**10 09 33.2**	**+1.3**
	473nm,0.3s						
MRVN	**Minervino Murg**	**0.91 148**		Pg	**Pg**	**10 09 31.8**	**-0.7**
	263nm,0.6s						
MRVN	**Minervino Murg**	**0.91 148**		Pg	**Pg**	**10 09 31.8**	**-0.7**
	263nm,0.6s						
CDT	**Castel del Mon**	**0.92 144**		*e*Pg	**Pg**	**10 09 32.9**	**+0.2**
CDT				*e*Sg	**Sg**	**10 09 45.3**	**+0.6**
PALZ	**Palazzo San Ge**	**0.94 161**		Pg	**Pg**	**10 09 32.4**	**-0.6**
	193nm,0.5s						
PALZ	**Palazzo San Ge**	**0.94 161**		Pg	**Pg**	**10 09 32.4**	**-0.6**
	193nm,0.5s						
SNAL	**S. Angelo Dei**	**0.95 196**		Pg	**Pg**	**10 09 32.8**	**-0.4**
	271nm,0.8s						
SNAL	**S. Angelo Dei**	**0.95 196**		Pg	**Pg**	**10 09 32.8**	**-0.4**
	271nm,0.8s						
MIDA	**Miranda**	**1.00 259**		Pg	**Pg**	**10 09 34.4**	**+0.2**
MIDA	**Miranda**	**1.00 259**		Pg	**Pg**	**10 09 34.4**	**+0.2**
LPEL	**Lama dei Pelig**	**1.05 282**		Pg	**Pg**	**10 09 34.8**	**-0.4**
	203nm,0.3s						
LPEL	**Lama dei Pelig**	**1.05 282**		Pg	**Pg**	**10 09 34.8**	**-0.4**
	203nm,0.3s						
MRLC	**Muro Lucano**	**1.08 183**		Pg	**Pg**	**10 09 35.6**	**-0.1**
	212nm,0.7s						
MRLC	**Muro Lucano**	**1.08 183**		Pg	**Pg**	**10 09 35.6**	**-0.1**
	212nm,0.7s						
AMUR	**Altamura**	**1.21 139**		Pg	**Pn**	**10 09 36.9**	**-1.2**
	85nm,0.2s						
AMUR	**Altamura**	**1.21 139**		Pg	**Pn**	**10 09 36.9**	**-1.2**
	85nm,0.2s						
BAI	**Bari**	**1.23 126**		*e*Pg	**Pn**	**10 09 37.3**	**-1.0**
BAI				*e*Sg	**Sg**	**10 09 55.5**	**+1.0**
MIGL	**Miglionico**	**1.40 151**		Pg	**Pn**	**10 09 39.8**	**-0.8**
MIGL	**Miglionico**	**1.40 151**		Pg	**Pn**	**10 09 39.8**	**-0.8**
NOCI	**Noci**	**1.54 132**		Pg	**Pn**	**10 09 41.6**	**-1.0**
	87nm,0.2s						
NOCI	**Noci**	**1.54 132**		Pg	**Pn**	**10 09 41.6**	**-1.0**
	87nm,0.2s						
PE1	**Pezze di Greco**	**1.74 126**		*e*Pn	**Pn**	**10 09 44.6**	**-0.7**
PE1				*e*Sn	**Sn**	**10 10 11.2**	**+3.7**
STON	**Ston**	**1.89 56**		*e*Pn	**Pn**	**10 09 48.3**	**+0.9**
STON				Sn	**Sn**	**10 10 13.2**	**+1.9**
STON	**Ston**	**1.89 56**		*e*Pn	**Pn**	**10 09 48.3**	**+0.8**
STON				Sn	**Sn**	**10 10 13.2**	**+1.8**
NVLJ	**Novalja**	**2.77 350**		*e*Pn	**Pn**	**10 10 00.7**	**+1.1**
NVLJ				Sn	**Sn**	**10 10 32.3**	**-0.8**
NVLJ	**Novalja**	**2.77 350**		*e*Pn	**Pn**	**10 10 00.6**	**+1.0**
NVLJ				Sn	**Sn**	**10 10 32.3**	**-0.8**

*CSEM **06** 10:11:43.0, 12°.40N×44°.44E, h11km, ML3.9, After DHMR*

DHMR 06 10:11:43.0±1.1, 12°.40N×44°.44E, h12km±14km, ML3.9, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UDYN	**Al 'Udayn**	**1.63 344**		*i* P	Pn	10 12 12.4	+0.8
UDYN				*i* S	Sn	10 12 34.2	+1.7
UDYN				AML	AML	10 12 40.1	
	comp=E,2μm,0.4s						
UDYN	**Al 'Udayn**	**1.63 344**		*i* P	Pn	10 12 12.4	+0.8
UDYN				*i* S	Sn	10 12 34.2	+1.7
	comp=E,793nm,0.4s						
BDHA	**Al Bayda'**	**1.92 35**		*i* P	Pn	10 12 16.8	+1.3
BDHA				*i* S	Sn	10 12 43.2	+3.6
BDHA				AML	AML	10 12 59.7	
	comp=N,2μm,0.6s						
BDHA	**Al Bayda'**	**1.92 35**		*i* P	Pn	10 12 16.8	+1.3
BDHA				*i* S	Sn	10 12 43.2	+3.6
	comp=N,792nm,0.6s						
DHBB	**Dhamar BB**	**2.16 359**		*i* P	Pn	10 12 21.2	+2.3
DHBB				*i* S	Sn	10 12 50.9	+5.2
HAJJ	**Hajjah**	**3.38 346**		*i* P	Pn	10 12 38.1	+2.4
HAJJ				*i* S	Sn	10 13 22.1	+6.3
HAJJ				AML	AML	10 13 45.8	
	comp=N,440nm,0.6s						
HAJJ	**Hajjah**	**3.38 346**		*i* P	Pn	10 12 38.1	+2.4
HAJJ				*i* S	Sn	10 13 22.1	+6.3
	comp=N,220nm,0.6s						

*ISCJB **06** 10:23:05.6±0.9, 17°.66S±0°.10×177°.32W±0°.07, h318km±9km, mb4.3/42, Error ellipse: s-maj=17.6km s-min=5.5km az=148.7*
*BJI **06** 10:23:06.0, 17°.35S×177°.55W, h305km, mB4.8/3, mb4.4/11*
*IDC **06** 10:23:07.2±2.1, 17°.77S×177°.21W, h327km±22km, mb3.9/11, mb1 4.1/12, mb1mx3.8/20, mbtmp3.9/12, Error ellipse: s-maj=20.0km s-min=11.3km az=141.0*
*NEIC **06** 10:23:07.3±1.0, 17°.74S×177°.23W, h328km±10km, mb4.2/24, Error ellipse: s-maj=15.4km s-min=5.7km az=146.0*

ISC 06 10:23:06.6±1.0, 17°.59S±0°.09×177°.32W±0°.06, h314km±10km, h323km±2.9km; pP-P, n259, σ0°65/259, mb4.3/42, 97C-96D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.46 56**		P	**Pn**	**10 24 43.8**	**+1.9**
	48nm,0.3s,baz=28,slow=4.1,SNR=54						
AFI				S	**S**	**10 25 56.4**	**-2.4**
	5.7nm,0.3s,baz=45,slow=20,SNR=3.2						
AFI	**Afiamalu**	**6.46 56**		*e*Pn	**Pn**	**10 24 43.4**	**+1.6**
	202nm,0.6s						
AFI				*e*Sn	**S**	**10 25 56.7**	**-2.2**
URZ	**Urewera**	**21.17 192**		P	**P**	**10 27 25.0**	**-2.8**
	7.5nm,0.8s,mb4.1,baz=21,slow=14,SNR=4.9						
URZ				S	**S**	**10 31 02.8**	**+1.1**
	16nm,1.1s,baz=105,slow=19,SNR=2.6						
RPZ	**Rata Peaks**	**27.84 198**		P	**P**	**10 28 25.7**	**-2.0**
	19nm,1.0s,mb4.5,baz=40,slow=16,SNR=2.6						
EIDS	**Eidsvold**	**30.36 250**		*e*P	**P**	**10 28 50.5**	**+0.4**
	14nm,0.9s,mb4.5						
ARMA	**Armidale**	**31.00 240**		*e*P	**P**	**10 28 56.9**	**+1.2**
ARMA	**Armidale**	**31.00 240**		*e*P	**P**	**10 28 57.0**	**+1.3**
	53nm,1.8s,mb4.8						
CNB	**Canberra Magne**	**34.45 233**		*e*P	**P**	**10 29 25.9**	**+0.5**
CTA	**Charters Tower**	**34.53 260**		*e*P	**P**	**10 29 26.9**	**+0.6**
	8.3nm,0.8s,mb4.3						
CTA	**Charters Tower**	**34.53 260**		P	**P**	**10 29 26.1**	**-0.1**
	10nm,0.8s,mb4.4,baz=84,slow=7.2,SNR=7.2						
CTAO	**Charters Tower**	**34.53 260**		*e*P	**P**	**10 29 26.6**	**+0.4**
	14nm,0.9s,mb4.5						
CMSA	**Cobar Meteorol**	**36.21 240**		*e*P	**P**	**10 29 40.5**	**+0.1**
TOO	**Toolangi**	**38.18 231**		*e*P	**P**	**10 29 57.5**	**+0.8**
STKA	**Stephens Creek**	**39.70 241**		*e*P	**P**	**10 30 10.1**	**+0.8**
	5.8nm,0.7s,mb4.0						
STKA	**Stephens Creek**	**39.70 241**		P	**P**	**10 30 09.8**	**+0.5**
	6.5nm,0.8s,mb4.1,baz=78,slow=6.6,SNR=17						
STKA	**Stephens Creek**	**39.70 241**		*e*P	**P**	**10 30 09.8**	**+0.5**
	1.5nm,0.7s,mb3.4						
BBOO	**Buckleboo**	**44.47 241**		*e*P	**P**	**10 30 47.3**	**-0.3**
	13nm,1.2s,mb4.0						
WRAB	**Tennant Creek**	**45.71 259**		*e*P	**P**	**10 30 56.5**	**-0.8**
	6.1nm,0.8s,mb4.0						
WRA	**Warramunga Arr**	**45.72 259**		P	**P**	**10 30 56.6**	**-0.8**
	4.1nm,0.7s,mb3.8,baz=94,slow=6.9,SNR=37						
ASAR	**Alice Springs**	**45.88 254**		P	**P**	**10 30 58.5**	**-0.2**
	27nm,0.6s,mb4.8,baz=90,slow=8.4,SNR=280						
KAKA	**Kakadu**	**48.63 268**		*e*P	**P**	**10 31 20.0**	**+0.1**
FORT	**Forrest**	**51.09 244**		*e*P	**P**	**10 31 37.5**	**-0.5**
	30nm,0.7s,mb4.7						
FITZ	**Fitzroy Crossi**	**54.11 260**		*e*P	**P**	**10 32 00.2**	**0.0**
	7.2nm,0.7s,mb4.1						
MBWA	**Marble Bar**	**59.16 256**		*e*P	**P**	**10 32 35.2**	**-0.3**
	13nm,0.7s,mb4.5						
QSPA	**South Pole Qui**	**72.47 180**		P	**P**	**10 33 58.2**	**-0.6**
	3.7nm,1.0s,mb4.0,baz=8.1,slow=0.7,SNR=17						
EDW2	**Edwards Air Fo**	**76.75 47**		⇑P	**P**	**10 34 24.3**	**+0.3**
	baz=77						
MONP	**Monument Peak**	**76.82 49**		⇑P	**P**	**10 34 24.7**	**+0.3**
	baz=77						
ISA	**Isabella**	**76.84 46**		⇓P	**P**	**10 34 23.8**	**-0.7**
	baz=77						
ISA	**Isabella**	**76.84 46**		*e*P	**P**	**10 34 23.4**	**-1.1**
	4.8nm,1.2s,mb4.1						
CMB	**Columbia Colle**	**76.89 43**		*e*P	**P**	**10 34 23.5**	**-1.2**
	4.2nm,0.9s,mb4.2						
BELC	**Belle Mtn. Jos**	**77.69 48**		⇑P	**P**	**10 34 29.1**	**-0.1**
	baz=78,SNR=5.5						
MPMC	**Manual Prospec**	**77.73 46**		⇑P	**P**	**10 34 29.6**	**+0.2**
	baz=78						
GSC	**Goldstone**	**77.80 47**		⇓P	**P**	**10 34 29.2**	**-0.6**
	baz=78						
GSC	**Goldstone**	**77.80 47**		*e*P	**P**	**10 34 29.6**	**-0.1**
	4.1nm,1.1s,mb4.1						
HEC	**Hector,Ludlow**	**77.89 47**		P	**P**	**10 34 30.5**	**+0.3**
	baz=78,SNR=6.5						
BC3	**Big Chuckawall**	**77.90 49**		⇓P	**P**	**10 34 30.5**	**+0.2**
	baz=78						
WCN	**Washoe City**	**78.02 42**		⇓P	**P**	**10 34 30.7**	**-0.1**
	baz=78						
GLA	**Glamis**	**78.05 50**		⇑P	**P**	**10 34 31.3**	**+0.2**
	baz=78						
GMRC	**Granite Mounta**	**78.33 48**		⇑P	**P**	**10 34 32.2**	**-0.4**
	baz=78						
IRM	**Iron Mountain**	**78.38 48**		⇓P	**P**	**10 34 32.5**	**-0.5**
	baz=78,SNR=5.1						
FURC	**Furnace Creek,**	**78.38 46**		⇓P	**P**	**10 34 32.2**	**-0.7**
	baz=78						
NVAR	**Mina Array Bea**	**78.47 43**		P	**P**	**10 34 33.7**	**+0.4**
	2.6nm,0.7s,mb4.1,baz=224,slow=9.4,SNR=27						
NJ2	**Nanjing**	**78.54 309**		*e*P	**P**	**10 34 34.6**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.0						
113A	**Mohawk Valley,**	**78.69 50**		⇓P	**P**	**10 34 34.5**	**-0.1**
	baz=79,SNR=5.2						
U10A	**Ash Meadows, A**	**78.72 46**		⇑P	**P**	**10 34 35.2**	**+0.5**
	baz=79						
Z13A	**Yuma Proving G**	**78.98 50**		P	**P**	**10 34 36.7**	**+0.5**
	baz=79,SNR=6.7						
V11A	**Goodsprings**	**79.04 47**		⇑P	**P**	**10 34 36.5**	**+0.1**
	baz=79						
W12A	**Cal Nev Ari**	**79.15 48**		⇑P	**P**	**10 34 36.9**	**-0.2**
	baz=79						
Y13A	**Salome**	**79.15 49**		⇓P	**P**	**10 34 37.1**	**0.0**
	baz=79,SNR=8.8						
K05A	**Summer Lake**	**79.30 39**		⇓P	**P**	**10 34 38.2**	**+0.6**
	baz=79						
114A	**Black Gap (USA**	**79.33 51**		⇓P	**P**	**10 34 38.3**	**+0.3**
	baz=79						
S10A	**Tonopah Range,**	**79.33 45**		⇑P	**P**	**10 34 37.9**	**0.0**
	baz=79						
X13A	**Yucca**	**79.54 49**		⇓P	**P**	**10 34 39.6**	**+0.4**
	baz=80						
Z14A	**Wintersburg**	**79.58 50**		⇑P	**P**	**10 34 39.1**	**-0.3**
	baz=80						
H04A	**Detroit Lake**	**79.71 37**		⇓P	**P**	**10 34 39.9**	**+0.1**
	baz=80						
R10A	**Warm Springs**	**79.72 44**		⇓P	**P**	**10 34 40.5**	**+0.5**
	baz=80						
W13A	**Hualapai Mount**	**79.75 48**		⇓P	**P**	**10 34 40.3**	**0.0**
	baz=80						
S11A	**Rachel**	**79.75 45**		⇓P	**P**	**10 34 40.1**	**-0.2**
	baz=80						
Y14A	**Wickenburg**	**79.81 50**		⇑P	**P**	**10 34 40.7**	**0.0**
	baz=80,SNR=6.4						
T11A	**Corn Creek, Al**	**79.90 46**		⇓P	**P**	**10 34 41.3**	**+0.2**
	baz=80						
U12A	**Valley of Fire**	**79.96 47**		⇑P	**P**	**10 34 41.3**	**-0.1**
	baz=80						
216A	**Three Points,**	**80.03 52**		⇑P	**P**	**10 34 41.3**	**-0.5**
	baz=80						
116A	**Eloy**	**80.11 51**		⇓P	**P**	**10 34 42.8**	**+0.5**
	baz=80						
X14A	**Yava**	**80.15 49**		⇑P	**P**	**10 34 42.8**	**+0.4**
	baz=80,SNR=6.3						
R11A	**Troy Canyon, C**	**80.23 45**		⇓P	**P**	**10 34 42.8**	**+0.1**
	baz=80						
Y15A	**Casa Rosa Ranc**	**80.31 50**		⇓P	**P**	**10 34 43.1**	**-0.1**
	baz=80,SNR=8.3						
S12A	**Delamar Landin**	**80.35 46**		⇑P	**P**	**10 34 43.8**	**+0.5**
	baz=80						
U13A	**Pakoon Wash**	**80.35 47**		⇓P	**P**	**10 34 43.6**	**+0.2**
	baz=80						
W14A	**Seligman**	**80.38 48**		⇓P	**P**	**10 34 44.3**	**+0.7**
	baz=80						
217A	**Green Valley**	**80.41 52**		⇑P	**P**	**10 34 44.6**	**+0.7**
	baz=80						
Q11A	**Duckwater**	**80.44 44**		⇓P	**P**	**10 34 43.2**	**-0.7**
	baz=80						
NLWA	**Neilton Lookou**	**80.47 34**		⇑P	**P**	**10 34 44.1**	**+0.3**
	baz=80						
V14A	**Boquillas Ranc**	**80.57 48**		⇑P	**P**	**10 34 45.5**	**+0.9**
	baz=81						
X15A	**Humboldt**	**80.63 49**		⇓P	**P**	**10 34 45.2**	**+0.3**
	baz=81,SNR=6.1						
TUC	**Tucson**	**80.68 52**		*e*P	**P**	**10 34 46.0**	**+0.7**
	comp=Z,2.9nm,0.7s,mb4.1						
T13A	**Saint George**	**80.69 46**		⇑P	**P**	**10 34 45.9**	**+0.7**
	baz=81						
117A	**Oracle**	**80.83 52**		⇑P	**P**	**10 34 47.0**	**+0.9**
	baz=81,SNR=6.3						
R12A	**Pony Springs,**	**80.88 45**		⇓P	**P**	**10 34 46.0**	**-0.2**
	baz=81						
318A	**Bisbee**	**80.88 53**		⇓P	**P**	**10 34 46.2**	**-0.2**
	baz=81						
Y16A	**Circle Bar Ran**	**80.90 50**		⇓P	**P**	**10 34 46.2**	**-0.1**
	baz=81,SNR=5.4						
U14A	**Mt Trumbull**	**80.90 47**		⇓P	**P**	**10 34 47.3**	**+0.9**
	baz=81						
218A	**Dragoon**	**81.08 53**		⇑P	**P**	**10 34 47.9**	**+0.5**
	baz=81,SNR=10.0						
J08A	**Circle Bar Ran**	**81.11 39**		⇑P	**P**	**10 34 47.7**	**+0.4**
	baz=81						
O11A	**Cowboy Ranch,**	**81.12 43**		⇑P	**P**	**10 34 47.7**	**+0.3**
	baz=81						
X16A	**Lo Mia Camp, P**	**81.18 50**		⇑P	**P**	**10 34 48.4**	**+0.5**
	baz=81,SNR=9.3						
Y17A	**Roosevelt**	**81.28 51**		⇓P	**P**	**10 34 48.9**	**+0.5**
	baz=81						
T14A	**Hurricane**	**81.29 47**		⇑P	**P**	**10 34 49.0**	**+0.7**
	baz=81						
M10A	**I.L. Ranch, Tu**	**81.29 42**		⇓P	**P**	**10 34 48.4**	**+0.1**
	baz=81						
V15A	**Kaibab Nationa**	**81.32 48**		⇓P	**P**	**10 34 49.0**	**+0.4**
	baz=81						
319A	**Douglas**	**81.40 53**		⇓P	**P**	**10 34 49.5**	**+0.5**
	baz=82						
N11A	**Elko Archery C**	**81.43 42**		⇓P	**P**	**10 34 50.0**	**+1.0**
	baz=82						
W16A	**Flagstaff**	**81.43 49**		⇓P	**P**	**10 34 50.3**	**+1.2**
	baz=82						
118A	**Homack Ranch,**	**81.44 52**		⇑P	**P**	**10 34 49.7**	**+0.5**
	baz=82						
U15A	**North Rim**	**81.53 48**		⇑P	**P**	**10 34 50.0**	**+0.4**
	baz=82,SNR=5.1						
Q13A	**Wheeler Ranch,**	**81.59 45**		⇑P	**P**	**10 34 49.7**	**-0.2**
	baz=82						
X17A	**Forest Lakes**	**81.60 50**		⇑P	**P**	**10 34 50.8**	**+0.8**
	baz=82,SNR=8.2						
L10A	**Juniper Basin**	**81.64 41**		⇑P	**P**	**10 34 49.6**	**-0.4**
	baz=82						
219A	**White Tail Can**	**81.69 53**		P	**P**	**10 34 51.5**	**+0.9**
	baz=82,SNR=5.6						
M11A	**Holland Ranch,**	**81.72 42**		⇑P	**P**	**10 34 51.1**	**+0.6**
	baz=82						
T15A	**Red Dirt Ranch**	**81.75 47**		⇑P	**P**	**10 34 50.8**	**0.0**
	baz=82,SNR=5.9						
K10A	**MacKenzie Ranc**	**81.77 40**		⇑P	**P**	**10 34 50.4**	**-0.3**
	baz=82						
P13A	**Bates Ranch, G**	**81.85 44**		⇓P	**P**	**10 34 51.5**	**+0.3**
	baz=82,SNR=5.2						
Y18A	**Canyon Day Jun**	**81.91 51**		⇓P	**P**	**10 34 52.6**	**+0.9**
	baz=82,SNR=7.0						
G08A	**Pilot Rock**	**81.92 37**		⇑P	**P**	**10 34 51.5**	**0.0**
	baz=82						
320A	**Kipp Ranch, An**	**81.96 54**		⇑P	**P**	**10 34 53.1**	**+1.1**
	baz=82,SNR=5.6						
119A	**Ashpeak Ranch,**	**82.00 52**		⇓P	**P**	**10 34 53.2**	**+1.0**
	baz=82						
Q14A	**Sevier Lake (B**	**82.11 45**		⇑P	**P**	**10 34 53.4**	**+0.8**
	baz=82,SNR=6.6						
L11A	**Cat Creek Ranc**	**82.13 41**		P	**P**	**10 34 53.2**	**+0.6**
	baz=82,SNR=5.5						
220A	**Playas Peak, P**	**82.21 53**		⇑P	**P**	**10 34 54.0**	**+0.7**
	baz=82						
V17A	**Tonalea, Kykot**	**82.21 49**		⇓P	**P**	**10 34 53.7**	**+0.5**
	baz=82,SNR=5.7						
O13A	**Hicks Ranch, I**	**82.22 44**		⇓P	**P**	**10 34 52.4**	**-0.7**
	baz=82						
M12A	**Wells**	**82.27 42**		⇑P	**P**	**10 34 53.6**	**+0.2**
	baz=82						
K11A	**Parker Ranch,**	**82.28 41**		⇑P	**P**	**10 34 53.3**	**0.0**
	baz=82						
X18A	**Snowflake**	**82.32 50**		⇓P	**P**	**10 34 54.3**	**+0.5**
	baz=82						
T16A	**Glen Canyon Da**	**82.35 47**		⇓P	**P**	**10 34 54.8**	**+0.9**
	baz=82						
R15A	**

R17A	Hanksville Air	83.59	47	⇑P		P	10 34 59.6	-0.5
	baz=84,SNR=7.0							
W20A	Ramah	83.65	50	⇑P		P	10 35 00.7	+0.2
	baz=84							
TMUT	Trail Mountain	83.66	46	*e*P		P	10 35 01.4	+0.9
	comp=Z,5.6nm,0.9s,mb4.4							
U19A	Dine' College,	83.66	49	⇑P		P	10 35 00.3	-0.3
	baz=84,SNR=6.2							
HLID	Hailey	83.70	41	⇓P		P	10 35 00.3	-0.3
	baz=84,SNR=7.6							
HLID	Hailey	83.70	41	*e*P		P	10 35 01.3	+0.7
	comp=Z,3.0nm,0.8s,mb4.2							
J13A	Cove Ranch, Pi	83.77	41	⇑P		P	10 35 00.7	-0.2
	baz=84							
Y21A	Point of Rocks	83.77	52	⇑P		P	10 35 01.3	+0.2
	baz=84							
X21A	Alamocita Cree	83.88	51	⇑P		P	10 35 02.0	+0.3
	baz=84							
F11A	Grangeville	83.89	38	⇓P		P	10 34 59.6	-1.8
	baz=84							
H12A	Diamond D Ranc	83.95	40	P		P	10 35 02.0	+0.2
	baz=84,SNR=7.7							
G12A	Big Creek, Yel	83.97	39	⇑P		P	10 35 02.0	+0.1
	baz=84							
Z22A	Elephant Butte	83.98	53	⇓P		P	10 35 02.3	0.0
	baz=84							
MCK	McKinley	84.00	12	*e*P		P	10 35 01.1	-0.6
	comp=Z,5.4nm,0.7s,mb4.5							
SRU	San Rafael	84.04	46	⇓P		P	10 35 02.3	-0.1
	baz=84							
R18A	Canyonlands Na	84.14	47	⇓P		P	10 35 03.0	+0.1
	baz=84,SNR=5.9							
J14A	Carey	84.14	41	⇑P		P	10 35 03.4	+0.6
	baz=84							
BJI	Beijing	84.29	315	P		P	10 35 03.8	+0.2
BJI				pP		pP	10 36 18.4	+1.3
BJI				sP		sP	10 36 52.3	+2.4
BJI				S		S	10 45 01.4	-0.8
BJI				SS		SS	10 50 39.6	-0.9
BJI				pmax		pmax		
	comp=Z,5.0nm,0.6s,mb4.5							
BJI				pmax		pmax		
	comp=Z,100nm,4.9s							
BJI				LR		LR		
	comp=N,240nm,14.1s							
BJI				LR		LR		
	comp=E,190nm,14.1s							
BJI				LR		LR		
	comp=Z,110nm,19.1s							
Q18A	Rafter H Ranch	84.31	46	⇑P		P	10 35 02.7	-1.1
	baz=84							
H13A	Challis	84.32	40	⇑P		P	10 35 03.4	-0.3
	baz=84							
F12A	Elk City	84.35	38	⇓P		P	10 35 03.3	-0.4
	baz=84,SNR=15							
324A	Moseley Ranch,	84.36	55	⇓P		P	10 35 03.4	-0.8
	baz=84,SNR=9.0							
S19A	Harvey Farm, M	84.38	48	⇑P		P	10 35 03.3	-0.8
	baz=84							
O17A	Robinson Place	84.41	45	⇓P		P	10 35 03.7	-0.5
	baz=84,SNR=7.0							
425A	Indio Mountain	84.48	55	P		P	10 35 05.7	+0.9
	baz=85,SNR=10							
I14A	Mackay	84.49	41	⇑P		P	10 35 05.1	+0.6
	baz=85							
E12A	Beaver Dam Sad	84.52	38	⇑P		P	10 35 03.9	-0.7
	baz=85							
HWUT	Hardware Ranch	84.54	43	*e*P		P	10 35 00.7	-4.1
	comp=Z,2.7nm,1.0s,mb4.0							
224A	Cornudas Mount	84.59	54	⇑P		P	10 35 05.9	+0.6
	baz=85,SNR=7.3							
G13A	Cobalt	84.61	39	⇑P		P	10 35 04.6	-0.4
	baz=85							
NEW	Newport	84.64	36	*e*P		P	10 35 04.5	-0.6
	comp=Z,1.7nm,0.8s,mb3.9							
626A	Big Bend Ranch	84.66	57	⇓P		P	10 35 05.4	-0.3
	baz=85,SNR=10							
325A	Bean Ranch, Si	84.73	55	⇓P		P	10 35 05.6	-0.4
	baz=85,SNR=8.2							
PV10	Paradox Valley	84.73	47	*e*P		P	10 35 05.6	-0.3
	comp=Z,71nm,0.9s,mb5.5							
L16A	Fish Haven	84.83	43	⇓P		P	10 35 05.5	-0.8
	baz=85							
U21A	Nageezi	84.84	49	⇓P		P	10 35 06.4	-0.1
	baz=85							
J15A	Blackfoot	84.86	42	⇓P		P	10 35 06.6	+0.2
	baz=85,SNR=5.1							
C11A	Tepee Creek (N	84.89	36	⇑P		P	10 35 06.3	-0.2
	baz=85							
526A	Mary Lane Ranc	84.89	56	P		P	10 35 07.8	+0.9
	baz=85,SNR=7.5							
H14A	Leadore	84.89	40	⇑P		P	10 35 07.1	+0.6
	baz=85							
124A	Stringfield Ra	84.90	54	⇓P		P	10 35 07.5	+0.6
	baz=85							
F13A	Darby	84.92	39	⇓P		P	10 35 06.3	-0.3
	baz=85							
TXAR	Lajitas Array	84.94	57	P		P	10 35 05.9	-1.2
	comp=Z,4.5nm,0.9s,mb4.3,baz=217,slow=7.1,SNR=54							
S20A	Disappointment	84.96	48	⇑P		P	10 35 06.8	-0.2
	baz=85							
D12A	Red Ives Fores	84.98	37	⇑P		P	10 35 06.6	-0.3
	baz=85							
225A	Deer Hill, Car	85.14	54	⇑P		P	10 35 07.4	-0.7
	baz=85							
426A	McDonald Obser	85.18	56	⇓P		P	10 35 08.4	+0.1
	baz=85,SNR=8.6							
627A	Terlingua Ranc	85.21	57	⇓P		P	10 35 08.5	+0.1
	baz=85,SNR=15							
COLA	College	85.24	12	*e*P		P	10 35 06.1	-1.6
	comp=Z,4.6nm,0.7s,mb4.4							
MCMT	McKenzie Canyo	85.32	40	*e*P		P	10 35 09.2	+0.6
	comp=Z,1.1nm,0.7s,mb3.8							
J16A	Bone	85.32	42	⇓P		P	10 35 08.3	-0.4
	baz=85							
H15A	Lima	85.34	40	⇓P		P	10 35 08.1	-0.6
	baz=85							
E13A	Victor	85.34	38	⇑P		P	10 35 08.2	-0.4
	baz=85							
Y24A	Capitan	85.42	52	⇑P		P	10 35 09.9	+0.5
	baz=86							
M18A	Lyman	85.44	44	⇓P		P	10 35 09.2	-0.1
	baz=86							
628A	Black Gap, Mar	85.63	57	⇓P		P	10 35 10.9	+0.4
	baz=86							
I16A	Newdale	85.70	41	⇑P		P	10 35 10.9	+0.4
	baz=86							
G15A	Dillon	85.71	40	⇓P		P	10 35 09.4	-1.1
	baz=86,SNR=5.6							
E14A	Clinton	85.74	39	⇑P		P	10 35 10.4	-0.2
	baz=86							
427A	Hayter Ranch,	85.75	56	⇑P		P	10 35 11.1	+0.1
	baz=86,SNR=8.9							
R21A	Cimarron	85.77	48	⇓P		P	10 35 11.2	+0.2
	baz=86							
GYA	Guiyang	85.78	299	P		P	10 35 11.0	-0.3
GYA				pP		pP	10 36 28.0	+3.0
GYA				PP		PP	10 38 37.3	+1.4
GYA				SKS			10 45 02.4	
GYA				S		S	10 45 13.0	-4.4
GYA				pmax		pmax		
	comp=Z,10.0nm,1.0s,mb4.6							
528A	Cox Ranch, San	85.97	57	P		P	10 35 12.5	+0.3
	baz=86,SNR=6.2							
S22A	4UR Ranch, Cre	86.01	49	⇑P		P	10 35 12.3	+0.2
	baz=86							
K18A	Toltan Ranch,	86.03	43	⇓P		P	10 35 11.9	-0.3
	baz=86							
F15A	Butte	86.05	39	⇓P		P	10 35 12.0	-0.1
	baz=86							
CHMT	Chamberlain Mo	86.14	38	*e*P		P	10 35 11.4	-1.2
	comp=Z,0.8nm,0.7s,mb3.7							
G16A	Moss Hill, Enn	86.16	40	⇑P		P	10 35 12.2	-0.5
	baz=86							
L19A	Farson	86.23	44	⇑P		P	10 35 12.3	-0.8
	baz=86							
H16A	Russell Place,	86.25	41	⇑P		P	10 35 13.7	+0.5
	baz=86							
E15A	Deer Lodge	86.25	39	⇓P		P	10 35 12.2	-0.9
	baz=86							
Z26A	Caprock	86.26	54	⇑P		P	10 35 13.3	-0.2
	baz=86							
T23A	Casias Ranch,	86.28	49	⇓P		P	10 35 12.7	-0.8
	baz=86							
J18A	Kendall Valley	86.31	43	⇓P		P	10 35 13.2	-0.3
	baz=86							
PDAR	Pinedale Array	86.40	43	P		P	10 35 13.3	-0.6
	comp=Z,0.7nm,0.7s,mb3.6,baz=239,slow=3.3,SNR=7.7							
328A	Wristen Ranch,	86.43	56	⇑P		P	10 35 14.3	-0.1
	baz=86							
BOZ	Bozeman (W)	86.47	40	⇓P		P	10 35 13.7	-0.5
	baz=86							
BOZ	Bozeman (W)	86.47	40	*e*P		P	10 35 14.1	-0.1
	comp=Z,5.6nm,1.3s,mb4.2							
SMCO	Snowmass	86.53	47	*e*P		P	10 35 14.4	-0.3
	comp=Z,1.5nm,0.8s,mb3.9							
F16A	Kennard Place,	86.55	40	⇑P		P	10 35 14.7	+0.1
	baz=87							
D15A	Lincoln	86.63	38	⇑P		P	10 35 14.7	-0.2
	baz=87							
W25A	X Bar L Ranch,	86.68	52	⇓P		P	10 35 15.4	0.0
	baz=87							
V25A	Rancho No Teng	86.82	51	⇓P		P	10 35 16.1	0.0
	baz=87							
C15A	Salmond Ranch,	86.95	38	⇑P		P	10 35 15.6	-0.9
	baz=87							
A14A	Double T Ranch	87.09	36	⇓P		P	10 35 16.7	-0.3
	baz=87							
Y27A	Causey	87.13	53	⇓P		P	10 35 17.1	-0.6
	baz=87							
F17A	Fitzpatrick Pl	87.19	40	⇓P		P	10 35 17.2	-0.4
	baz=87							
D16A	Dana Ranch, Ca	87.20	39	⇓P		P	10 35 17.0	-0.6
	baz=87							
B15A	Bradely Ranch,	87.25	37	⇑P		P	10 35 15.6	-2.2
	baz=87							
MSTX	Muleshoe	87.46	53	⇓P		P	10 35 18.4	-0.9
	baz=88							
C16A	Fuhringer Ranc	87.47	38	⇓P		P	10 35 18.2	-0.6
	baz=88							
A15A	Johnson Ranch,	87.49	37	⇑P		P	10 35 18.3	-0.6
	baz=88							
G18A	Lazy EL Ranch,	87.59	41	⇑P		P	10 35 20.0	+0.5
	baz=88							
U26A	Atchley Ranch,	87.69	51	⇓P		P	10 35 19.0	-1.2
	baz=88							
F18A	Big Timber	87.77	40	⇓P		P	10 35 19.8	-0.5
	baz=88							
D17A	Six Diamond Ra	87.78	39	⇓P		P	10 35 20.2	-0.1
	baz=88							
HHC	Hu-ho-hao-te	87.79	314	*e*P		P	10 35 21.0	+0.4
HHC				S		S	10 45 33.5	-2.4
HHC				pmax		pmax		
	comp=Z,16nm,0.7s,mb5.0							
HHC				pmax		pmax		
	comp=Z,280nm,7.6s							
E18A	Harlowton	87.96	40	⇓P		P	10 35 21.1	-0.1
	baz=88							
C17A	Wharram Farm,	87.97	38	⇑P		P	10 35 21.0	-0.3
	baz=88							
B17A	L&G Farms, Che	88.26	38	⇑P		P	10 35 22.3	-0.2
	baz=88							
KMI	Kunming	88.61	297	P		P	10 35 25.0	+0.2
KMI				pmax		pmax		
	comp=Z,5.0nm,0.9s,mb4.3							
P25A	Willow Gulch B	88.65	48	⇓P		P	10 35 23.1	-1.6
	baz=89							
CD2	Chengdu	89.77	302	P		P	10 35 30.9	+0.8
CD2				pP		pP	10 36 46.5	+2.1
CD2				sP		sP	10 37 19.1	+2.1
CD2				PP		PP	10 39 09.8	+2.2
CD2				SKS			10 45 28.9	
CD2				S		S	10 45 52.0	-2.7
CD2				sS		sS	10 48 05.1	-1.2
CD2				SS		SS	10 52 00.0	-0.5
CD2				pmax		pmax		
	comp=Z,10.0nm,0.5s,mb4.9							
CD2				pmax		pmax		
	comp=Z,250nm,10.1s							
LZH	Lanzhou	91.52	307	*e*P		P	10 35 40.5	+2.4
LZH				pmax		pmax		
	comp=Z,15nm,1.0s,mb4.9							
DGMT	Dagmar	92.28	40	⇓P		P	10 35 40.5	-0.7
	baz=92							
DGMT	Dagmar	92.28	40	*e*P		P	10 35 40.8	-0.4
	comp=Z,16nm,1.2s,mb4.8							
YKA	Yellowknife Ar	93.61	24	P		P	10 35 46.0	-1.0
	comp=Z,0.8nm,0.6s,mb3.9,baz=238,slow=4.2,SNR=6.1							
BRTR	Keskin Array B	145.29	316	PKPbc		PKPbc	10 42 07.2	-0.6
	comp=Z,0.3nm,0.5s,baz=348,slow=6.2,SNR=2.9							
CLL	Collm	145.37	349	*i* PKPbc		PKPbc	10 42 06.7	-0.9
	comp=Z,7.0nm,1.0s							
CLL				*i* (PKiKP)			10 42 13.0	
	comp=Z,7.0nm,1.2s							
BRG	Berggiesshubel	145.59	347	*i* P		PKPdf	10 42 07.6	+0.1
	comp=Z,3.0nm,1.0s							

SKHL ***06*** *10:25:21.8±4.0, 45°.47N×151°.80E, h65km±35km, mb5.0/2*
BJI ***06*** *10:25:25.2, 44°.33N×150°.71E, h10km, mB5.1/3, mb4.1/6, Ms4.0/1, Ms7 4.1/2*
NEIC ***06*** *10:25:25.7±0.8, 45°.25N×151°.20E, h10km, mb4.4/2, Error ellipse: s-maj=19.9km s-min=11.2km az=137.0*
JMA ***06*** *10:25:27.5±0.5, 45°.44N×151°.16E, h30km, M4.5*
MOS ***06*** *10:25:29.5±1.1, 45°.40N×150°.96E, h47km, mb4.3/14, Error ellipse: s-maj=11.9km s-min=10.4km az=61.2*
IDC ***06*** *10:25:31.0±0.7, 45°.38N×151°.12E, h47km±7km, mb3.7/14, mb1 3.8/17, mb1mx3.7/27, mbtmp3.7/17, ML3.8/3, Error ellipse: s-maj=20.8km s-min=14.4km az=126.0*
ISC 06 10:25:30.1±0.8, 45°.18N±0°.08×151°.08E±0°.08, h42km±6km, h50km±1.7km:pP-P, n86, σ1.9 24/101, mb4.0/22, 4D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.27	273	*e*PN	Pn	10 26 04.2	-0.9
KUR				*e*S	Sn	10 26 33.0	+1.1
KUR				pmax	pmax		
	comp=N,70nm,0.6s						
KUR				pmax	pmax		
	comp=E,90nm,0.6s						
KUR				pmax	pmax		
	comp=Z,150nm,0.6s						
KUR				smax			
	comp=N,680nm,0.5s						
KUR				smax			
	comp=E,300nm,0.5s						
KUR	Kuril'sk	2.27	273	*e*P	Pn	10 26 04.2	-0.9
KUR				AMB	AMB	10 26 16.0	
	comp=E,150nm,0.6s						
KUR				*e*S	Sn	10 26 33.0	+1.1
KUR				A		10 26 40.0	
	comp=E,680nm,0.5s						
KUR				A		10 26 40.0	
	comp=E,300nm,0.5s						
YUK	Yuzh-Kuril'sk	3.90	255	⇓*i*PN	Pn	10 26 28.4	+1.0
YUK				*e*S	Sn	10 27 21.3	+9.4
YUK				pmax	pmax		
	comp=Z,290nm,1.2s						
YUK				pmax	pmax		
	comp=Z,265nm,0.4s						
YUK				pmax	pmax		
	comp=E,73nm,0.2s						
YUK				pmax	pmax		
	comp=N,115nm,0.2s						
YUK				smax			
	comp=N,1μm,1.0s						
YUK				smax			
	comp=E,470nm,1.0s						
YUK				smax			
	comp=N,328nm,0.7s						
YUK				smax			
	comp=E,784nm,0.7s						
YUK	Yuzh-Kuril'sk	3.90	255	⇓*i*P	Pn	10 26 28.4	+1.0
YUK				AMB	AMB	10 26 32.7	
	comp=E,390nm,0.5s						
YUK				AMB	AMB	10 26 32.7	
	comp=E,180nm,0.3s						
YUK				*i* S	Sn	10 27 21.3	+9.4
YUK				A		10 27 29.7	
	comp=E,470nm,0.6s						
YUK				A		10 27 29.7	
	comp=E,950nm,0.6s						
YUK				A		10 27 36.4	
	comp=E,2μm,1.0s						
YUK				A		10 27 36.4	
	comp=E,2μm,1.0s						
NEM2	Nemuro 2	4.24	247	P	Pn	10 26 31.2	-0.9
NEM2				*e*S	Sn	10 27 18.2	-2.1
JRA	Rausu	4.44	256	P	Pn	10 26 36.4	+1.6
JNK	Nakash	4.83	253	P	Pn	10 26 41.0	+0.8
JNK				*e*S	Sn	10 27 35.4	+0.5
JAK	Akkeshi	5.09	247	P	Pn	10 26 43.1	-0.7
JAK				*e*S	Sn	10 27 39.5	-1.8
JTKR	Abashiri--Toko	5.26	259	P	Pn	10 26 47.8	+1.6
JAR	Ashorobuto	5.58	253	P	Pn	10 26 51.5	+1.0
JAR				*e*S	Sn	10 27 53.4	+0.1
JMP	Maruseppu	5.64	261	P	Pn	10 26 53.0	+1.7
JOB	Onbets	5.70	249	P	Pn	10 26 52.2	+0.1
JOB				*e*S	Sn	10 27 55.7	-0.5
YSS	Yuzh-Sakhalins	6.06	290	*e*PN	Pn	10 26 55.0	-2.1
YSS	Yuzh-Sakhalins	6.06	290	*e*Pn	Pn	10 26 59.7	+2.6
	comp=E,13nm,0.4s						
YSS	Yuzh-Sakhalins	6.06	290	*e*P	Pn	10 26 55.0	-2.1
JKK2	Kamakawa 2	6.10	261	P	Pn	10 26 59.8	+2.2
JCH	Churui	6.14	248	P	Pn	10 26 57.5	-0.7
JCH				*e*S	Sn	10 28 04.8	-2.2
ASAJ	Asahikawa	6.15	263	P	Pn	10 27 00.7	+2.4
	comp=E,5.3nm,0.3s,baz=85,slow=14,SNR=49						
ASAJ				S	Sn	10 28 26.6	+19
	comp=E,0.8nm,0.3s,baz=37,slow=20,SNR=1.9						
ASAJ	Asahikawa	6.15	263	P	Pn	10 27 00.8	+2.5
JFR	Furan	6.43	255	P	Pn	10 27 03.7	+1.5
SKR	Severo-Kuril's	6.46	30	*e*PN	Pn	10 27 02.6	0.0
JEM	Erimo	6.56	244	P	Pn	10 27 04.8	+0.8
ERM	Erimo	6.56	244	*e*PN	Pn	10 27 05.2	+1.2
ERM				pmax	pmax		
	comp=Z,79nm,0.6s						
ERM	Erimo	6.56	244	*e*Pn	Pn	10 27 05.2	+1.2
	comp=Z,79nm,0.6s						
JNBK	Urakawa-nobuka	6.69	247	P	Pn	10 27 05.1	-0.7
JBT2	Biratori 2	6.73	252	P	Pn	10 27 06.3	0.0
JNB	Noboribetsu	7.75	253	P	Pn	10 27 20.5	+0.2
JNB				*e*S	Sn	10 28 44.6	-2.1
JKB	Kayabe	8.01	249	P	Pn	10 27 22.8	-1.0
JKB				*e*S	Sn	10 28 47.8	-5.2
JYM2	Yakumo 2	8.35	252	P	Pn	10 27 28.5	0.0
JSH	Shimam	8.36	256	P	Pn	10 27 31.0	+2.3
JANG	Nango	8.52	239	P	Pn	10 27 28.2	-2.6
JANG				*e*S	Sn	10 28 56.5	-9.0
JTM	Tenmabayashi	8.55	243	P	Pn	10 27 29.6	-1.6
JTM				*e*S	Sn	10 28 58.7	-7.6
JSR	Shiriuchi	8.58	249	*e*S	Sn	10 29 01.0	-6.1
JTH	Tanohata	8.58	236	*e*S	Sn	10 28 58.1	-9.0
JOSM	Okushiri--Mats	8.97	254	P	Pn	10 27 37.0	0.0
PETK	Petropavlovsk-	9.04	26	P	Pn	10 27 36.4	-1.5
	comp=Z,0.2nm,0.3s,baz=205,slow=12,SNR=3.1						
PETK	Petropavlovsk-	9.04	26	*e*PN	Pn	10 27 44.6	+6.7
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	Petropavlovsk-	9.04	26	P	Pn	10 27 36.4	-1.5
OFUJ	Ofunato	9.27	232	*e*S	Sn	10 29 15.8	-8.2
JIO	Ouri	9.89	231	*e*S	Sn	10 29 29.3	-10
MJAR	Matsushiro Arr	13.00	233	P	Pn	10 28 30.1	-2.0
	comp=Z,0.2nm,0.3s,baz=30,slow=12,SNR=4.6						
JHJ	Hachijo jima 2	14.87	220	S	Sn	10 31 29.5	-11
	comp=Z,3.2nm,0.3s,baz=52,slow=19,SNR=3.6						
KSRS	Korea Array	18.99	254	P	Pn	10 29 49.2	+0.3
	comp=Z,0.2nm,0.3s,baz=60,slow=11,SNR=6.1						
KSRS	Korea Array	18.99	254	*e*P	Pn	10 29 51.3	+2.4
YAK	Yakutsk	20.95	331	*e*P	P	10 30 07.3	-1.8
YAK				pmax	pmax		
	comp=Z,11nm,0.9s						
BILL	Bilibino	24.25	14	*e*P	pP	10 30 55.3	+1.3
BILL				pmax	pmax		
	comp=Z,2.0nm,1.7s,mb3.3						
HHC	Hu-ho-hao-te	29.01	276	*e*P	P	10 31 26.5	+0.7
HHC				S	S	10 36 16.0	+2.0
HHC				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.8						
HHC				pmax	pmax		
	comp=Z,180nm,5.6s						
SONM	Songino Array	30.55	291	P	P	10 31 40.3	+1.0
	comp=Z,0.3nm,0.4s,mb3.5,baz=82,slow=11,SNR=4.7						
GTA	Gaotai	37.83	280	*e*P	P	10 32 43.5	+1.1
GTA				pP	pP	10 32 47.7	-6.3
GTA				sP	sP	10 32 49.9	-9.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb3.9						
INK	Inuvik	43.74	31	P	P	10 33 29.8	-0.9
	comp=Z,1.7nm,0.8s,mb3.9,baz=264,slow=11,SNR=3.3						
INK	Inuvik	43.74	31	P	P	10 33 29.8	-0.9
INK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MK31	Makanchi Array	46.41	298	*e*P	P	10 33 52.7	+0.5
MKAR	Makanchi Array	46.41	298	P	P	10 33 51.6	-0.7
	comp=Z,0.8nm,0.5s,mb3.9,baz=71,slow=6.4,SNR=15						
MKAR				PcP	PcP	10 35 26.9	+0.4
	comp=Z,0.4nm,0.5s,baz=112,slow=1.3,SNR=4.1						
MKAR	Makanchi Array	46.41	298	P	P	10 33 51.6	-0.6
MKAR						10 35 26.9	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CMAR	Chiang Mai Arr	50.62	256	P	P	10 34 26.4	+1.6
	comp=Z,0.4nm,0.3s,mb3.8,baz=32,slow=5.3,SNR=2.8						
RES	Resolute Bay	52.77	18	P	P	10 34 40.5	+0.2
	comp=Z,1.1nm,0.7s,mb3.9,baz=5.7,slow=10,SNR=3.8						
RES	Resolute Bay	52.77	18	P	P	10 34 40.5	+0.2
RES				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
YKA	Yellowknife Ar	53.03	35	P	P	10 34 43.9	+1.6
	comp=Z,0.3nm,0.6s,mb3.4,baz=296,slow=6.9,SNR=2.9						
ABKAR	Akbulak array	58.34	310	*e*P	P	10 35 20.5	-0.1
	comp=Z,2.2nm,0.3s,mb4.7						
ARCES	ARCESS Array B	58.87	340	P	P	10 35 22.9	-1.0
	comp=Z,1.4nm,0.8s,mb4.0,baz=27,slow=8.1,SNR=3.8						
ARCES	ARCESS Array B	58.87	340	P	P	10 35 22.9	-1.0
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
JOF	Joensuu	62.11	333	*e*P	P	10 35 44.2	-1.9
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.4						
JOF	Joensuu	62.11	333	*e*p	P	10 35 44.2	-1.9
	comp=Z,1.2nm,0.3s,mb4.5						
FINES	FINESS Array B	64.85	334	P	P	10 36 02.9	-1.3
	comp=Z,1.2nm,0.4s,mb4.3,baz=32,slow=7.5,SNR=15						
FINES	FINESS Array B	64.85	334	P	P	10 36 02.9	-1.3
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	FINESS Array B	64.85	334	P	P	10 36 02.9	-1.3
WRA	Warramunga Arr	66.58	197	P	P	10 36 16.4	+0.7
	comp=Z,0.7nm,0.7s,mb3.8,baz=15,slow=6.8,SNR=5.9						
WRA				pP	pP	10 36 30.7	+2.6
	comp=Z,1.1nm,0.8s,baz=15,slow=6.7,SNR=4.6						
WRA	Warramunga Arr	66.58	197	P	P	10 36 16.4	+0.7
WRA				*PP	pP	10 36 30.7	+2.6
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NB2	NORSAR Subarra	69.25	340	P	P	10 36 31.2	-0.9
	comp=Z,1.3nm,0.5s,mb4.1,baz=27,slow=6.5						
NOA	NORSAR Array B	69.25	340	P	P	10 36 31.1

KHC Kasperske Hory 79.02 333 *e*P **P 10 37 29.5 +0.2**
KHC Kasperske Hory 79.02 333 *e*P **P 10 37 29.5 +0.2**
TXAR Lajitas Array 79.51 59 P **P 10 37 32.1 -0.3**
comp=Z,0.1nm,0.6s,mb2.9,baz=230,slow=2.2,SNR=2.8
TXAR pP pP 10 37 45.4 +0.4
comp=Z,0.3nm,0.6s,baz=298,slow=3.6,SNR=4.9
MMAI Mount Meron Ar 82.77 310 P **P 10 37 50.5 +0.9**
comp=Z,0.6nm,0.3s,mb4.1,baz=27,slow=6.8,SNR=2.0

*ISCJB **06** 10:32:02.0±0.4, 38.°15N±0.°02×38.°56E±0.°03, h2km±6km,*
Error ellipse: s-maj=4.2km s-min=3.4km az=142.8
*ISK **06** 10:32:01.9, 38.°15N×38.°58E, h6km, MD3.0*
*DDA **06** 10:32:01.9, 38.°15N×38.°55E, h2km±1km, Md3.0*
*CSEM **06** 10:32:02.1±0.2, 38.°15N×38.°58E, h2km, MD3.0, Error*
ellipse: s-maj=4.1km s-min=3.5km az=128.0
ISC 06 10:32:02.7±0.4, 38.°16N±0.°02×38.°56E±0.°03, h6km±5km,
n34, σ0°84/52, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MYA	**Malataya**	**0.20**	**327**	*e*PG	**Pg**	**10 32 06.8**	**0.0**
MYA				*e*SG	**Sg**	**10 32 10.3**	**+0.9**
MYA	**Malataya**	**0.20**	**327**	*e*Pg	**Pg**	**10 32 06.8**	**+0.1**
MYA				*e*Sg	**Sg**	**10 32 10.3**	**+0.9**
ELZG	**Elazig**	**0.47**	**44**	*i* P	**Pg**	**10 32 11.6**	**-0.3**
ELZG				*i* S	**Sg**	**10 32 18.7**	**+0.6**
ELZG	**Elazig**	**0.47**	**44**	*i* P	**Pg**	**10 32 11.6**	**-0.3**
ELZG				*i* S	**Sg**	**10 32 18.7**	**+0.6**
AKCD	**Akcadag**	**0.52**	**286**	*i* P	**Pg**	**10 32 12.3**	**-0.5**
AKCD				*i* S	**Sg**	**10 32 19.9**	**+0.3**
AKCD	**Akcadag**	**0.52**	**286**	*i* P	**Pg**	**10 32 12.3**	**-0.5**
AKCD				*i* S	**Sg**	**10 32 19.9**	**+0.3**
SVRC	**Sivrice-ELAZID**	**0.63**	**69**	*e*PG	**Pg**	**10 32 14.0**	**-0.8**
SVRC				*e*SG	**Sg**	**10 32 23.4**	**+0.5**
SVRC	**Sivrice-ELAZID**	**0.63**	**69**	*e*Pg	**Pg**	**10 32 14.0**	**-0.8**
SVRC				*e*Sg	**Sg**	**10 32 23.4**	**+0.5**
ATAB	**Bozova**	**0.72**	**197**	*i* P	**Pg**	**10 32 16.1**	**-0.4**
ATAB				*i* S	**Sg**	**10 32 25.8**	**0.0**
ATAB	**Bozova**	**0.72**	**197**	*i* P	**Pg**	**10 32 16.1**	**-0.4**
ATAB				*i* S	**Sg**	**10 32 25.8**	**0.0**
URFA	**Urfa**	**0.74**	**164**	*e*PG	**Pg**	**10 32 16.5**	**-0.5**
URFA	**Urfa**	**0.74**	**164**	*e*Pg	**Pg**	**10 32 16.5**	**-0.5**
PTK	**Pertek**	**0.98**	**41**	*e*PG	**Pg**	**10 32 20.9**	**-0.7**
PTK	**Pertek**	**0.98**	**41**	*e*Pg	**Pg**	**10 32 20.9**	**-0.7**
DARE	**Darende-Malaty**	**0.99**	**323**	*e*PG	**Pg**	**10 32 19.9**	**-1.9**
DARE	**Darende-Malaty**	**0.99**	**323**	*e*Pg	**Pg**	**10 32 19.9**	**-1.9**
KEMA	**Kemaliye**	**1.11**	**357**	*i* P	**Pg**	**10 32 22.8**	**-1.3**
KEMA				*i* S	**Sg**	**10 32 39.9**	**+1.4**
KEMA	**Kemaliye**	**1.11**	**357**	*i* P	**Pg**	**10 32 22.8**	**-1.3**
KEMA				*i* S	**Sg**	**10 32 39.9**	**+1.4**
GZT	**Gaziantep**	**1.12**	**225**	*i* P	**Pg**	**10 32 24.8**	**+0.5**
GZT				*i* S	**Sg**	**10 32 40.7**	**+1.8**
DIYA	**Diyarbakir**	**1.25**	**100**	*i* P	**Pg**	**10 32 25.9**	**-0.8**
DIYA				*i* S	**Sg**	**10 32 45.0**	**+2.1**
DIYA	**Diyarbakir**	**1.25**	**100**	*i* P	**Pg**	**10 32 25.9**	**-0.8**
DIYA				*i* S	**Sg**	**10 32 45.0**	**+2.0**
GAZ	**Gaziantep**	**1.46**	**228**	*e*PN	**Pn**	**10 32 29.5**	**-0.1**
GAZ	**Gaziantep**	**1.46**	**228**	*e*Pn	**Pn**	**10 32 29.5**	**-0.1**
KMRS	**Kahramanmaras**	**1.47**	**244**	*e*PN	**Pn**	**10 32 29.7**	**-0.1**
KMRS	**Kahramanmaras**	**1.47**	**244**	*e*Pn	**Pn**	**10 32 29.7**	**-0.1**
SARI	**SarD1z-Kayseri**	**1.56**	**290**	*e*PN	**Pg**	**10 32 33.0**	**+0.4**
SARI	**SarD1z-Kayseri**	**1.56**	**290**	*e*Pn	**Pg**	**10 32 33.0**	**+0.4**
EZC	**Erzincan**	**1.71**	**21**	*e*PN	**Pn**	**10 32 32.9**	**-0.2**
KUZU	**Kuzuini**	**1.82**	**221**	*i* P	**Pn**	**10 32 33.6**	**-1.0**
KUZU				*i* S	**Sg**	**10 33 01.1**	**-0.1**
KUZU	**Kuzuini**	**1.82**	**221**	*i* P	**Pn**	**10 32 33.6**	**-1.0**
KUZU				*i* S	**Sg**	**10 33 01.1**	**-0.1**
MARD	**Mardin**	**1.95**	**115**	*i* P	**Pg**	**10 32 39.1**	**-1.0**
MARD				*i* S	**Sn**	**10 33 01.9**	**+0.8**
SVSK	**Karacayir**	**2.14**	**326**	*e*PN	**Pn**	**10 32 39.4**	**+0.3**
SVSK	**Karacayir**	**2.14**	**326**	*e*Pn	**Pn**	**10 32 39.4**	**+0.4**
KOZT	**Kozan**	**2.27**	**254**	*e*PN	**Pn**	**10 32 41.1**	**+0.3**

BJI 06 10:43:12.5, 32.°28N×119.°11E, h19km, ML3.7/9, 1C,
Southeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NJ2	**Nanjing**	**0.32**	**224**	*e*Pg	Pg	10 43 17.7	-1.6
NJ2				Sg	Sg	10 43 21.7	-2.3
SSE	**Sheshan**	**2.13**	**123**	Pg	Pg	10 43 50.8	-2.6
TIA	**Tai'an**	**4.25**	**338**	*e*Pg	Pg	10 44 29.4	-4.6
TIA				Sg	Sg	10 45 24.7	-4.3
TIA				smax			
comp=N,110nm,0.7s
TIA smax
comp=E,140nm,0.9s
WHN Wuhan 4.42 248 ⇑Pg Pg 10 44 31.0 -6.2
WHN Sg Sg 10 45 26.2 -8.3
WHN smax
comp=N,480nm,0.4s
WHN smax
comp=E,480nm,0.4s
XAN Xi'an 8.72 284 P Pn 10 45 17.6 0.0
XAN S Sn 10 46 59.9 +4.5
XAN smax
comp=N,9.0nm,0.8s
XAN smax
comp=E,3.0nm,0.9s

*BJI **06** 10:47:00.5, 23.°60S×180.°00E, h508km, mB4.7/4, mb4.6/12*
*IDC **06** 10:47:02.8±1.1, 23.°53S×179.°96W, h519km±11km,*
mb3.9/10, mb1 4.2/12, mb1mx4.0/17, mbtmp4.0/12, Error
ellipse: s-maj=15.8km s-min=13.0km az=132.0
*NEIC **06** 10:47:02.6±0.7, 23.°56S×179.°95E, h508km±9km, mb4.5/50,*
Error ellipse: s-maj=10.2km s-min=5.8km az=157.0
*ISCJB **06** 10:47:03.5±0.8, 23.°82S±0.°06×179.°96E±0.°05,*
h537km±10km, mb4.5/66, Error ellipse: s-maj=9.2km
s-min=5.9km az=156.3
ISC 06 10:47:04.5±0.9, 23.°89S±0.°07×179.°99W±0.°05,
h540km±11km, h501km±7.0km: pP-P, n405, σ0°64/384,
mb4.5/66, 137C-147D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.65**	**161**	P	**P**	**10 48 40.4**	**+1.2**
152nm,0.3s,baz=37,slow=19,SNR=4.3
RAO S **S** **10 49 56.2** **-0.7**
73nm,0.3s,baz=270,slow=20,SNR=3.2
AFI Afiamalu 12.60 39 P **P 10 49 44.2 -5.1**
3.8nm,0.3s,baz=145,slow=23,SNR=5.5
AFI S **S** **10 51 51.7** **-13**
baz=36,slow=19,SNR=3.3
AFI Afiamalu 12.60 39 *e*Pn **P 10 49 44.8 -4.6**
URZ Urewera 14.54 189 P **P 10 50 08.7 -0.4**
8.1nm,0.3s,baz=9.6,slow=2.7,SNR=43
URZ S **S** **10 52 37.3** **-3.8**
1.4nm,0.3s,baz=206,slow=23,SNR=3.1
URZ Urewera 14.54 189 *e*P **P 10 50 08.0 -1.1**
25nm,0.6s
URZ *e*S **S** **10 52 43.2** **+2.0**
URZ Urewera 14.54 189 PN **P 10 50 08.8 -0.3**
URZ SN **S** **10 52 43.0** **+1.8**
BKZ Black Stump Fm 15.52 190 PN **P 10 50 17.1 -2.1**
BKZ SN **S** **10 52 57.7** **-1.8**
MRZ Mangatainoka R 17.13 192 PN **P 10 50 33.0 -1.7**
MRZ SN **S** **10 53 22.6** **-3.5**
KIW Kapiti Island 17.46 193 PN **P 10 50 37.2 -0.4**
NNZ Nelson 18.15 196 PN **P 10 50 43.8 -0.2**
TUWZ Tuamarina 18.21 195 PN **P 10 50 43.8 -0.8**
THZ Tophouse 18.78 197 PN **P 10 50 50.6 +0.8**
KHZ Kahutara 19.24 195 PN **P 10 50 53.9 -0.1**
LTZ Lake Taylor 19.90 197 PN **P 10 50 59.5 -0.4**
WVZ Waitaha Valley 20.61 200 PN **P 10 51 05.6 -0.8**
RPZ Rata Peaks 21.10 198 P **P 10 51 13.7 +2.9**
26nm,0.6s,mb5.1,baz=44,slow=6.2,SNR=7.8
RPZ Rata Peaks 21.10 198 *e*P **P 10 51 13.5 +2.7**
24nm,0.5s,mb5.1
ARMA Armidale 26.04 249 *e*P **P 10 51 57.1 +2.2**
ARMA Armidale 26.04 249 *e*P **P 10 51 56.5 +1.6**
5.0nm,0.6s,mb4.3
EIDS Eidsvold 26.32 261 *e*P **P 10 51 58.4 +0.9**
EIDS Eidsvold 26.32 261 *e*P **P 10 51 58.2 +0.7**
14nm,0.5s,mb4.8
CMSA Cobar Meteorol 31.23 248 *e*P **P 10 52 41.2 +1.1**
CTA Charters Tower 31.49 270 *e*P **P 10 52 43.3 +0.9**
40nm,0.3s,mb5.4
CTAO Charters Tower 31.49 270 *e*P **P 10 52 42.9 +0.4**
55nm,0.4s,mb5.4
MTSU Mount Surprise 33.75 273 *e*P **P 10 53 02.3 +0.7**
59nm,0.7s,mb5.2
STKA Stephens Creek 34.74 248 *e*P **P 10 53 10.8 +1.1**
3.1nm,0.4s,mb4.2
STKA Stephens Creek 34.74 248 P **P 10 53 10.7 +1.0**
4.3nm,0.5s,mb4.2,baz=324,slow=24,SNR=17
STKA Stephens Creek 34.74 248 *e*P **P 10 53 10.4 +0.7**
0.9nm,0.6s,mb3.5
COEN Coen 36.13 279 *e*P **P 10 53 21.9 +0.4**
COEN Coen 36.13 279 *e*P **P 10 53 21.6 +0.1**
50nm,0.5s,mb5.3
ASAR Alice Springs 42.05 261 P **P 10 54 09.6 +0.4**
11nm,0.4s,mb4.7,baz=95,slow=7.8,SNR=231
ASAR pP pP 10 55 45.3 -0.3
1.6nm,0.6s,baz=91,slow=6.2,SNR=3.0
ASAR ScP ScP 10 58 53.3 +2.6
5.3nm,0.7s,baz=108,slow=4.6,SNR=20
ASAR S **S** **10 59 47.6** **-1.9**
0.8nm,0.9s,baz=96,slow=16,SNR=4.4
WRAB Tennant Creek 42.41 266 *e*P **P 10 54 11.6 -0.5**
18nm,0.5s,mb4.8
WRA Warramunga Arr 42.42 266 P **P 10 54 11.8 -0.3**
18nm,0.3s,mb5.0,baz=96,slow=8.4,SNR=890
WRA ScP ScP 10 58 55.5 +3.2
4.4nm,0.9s,baz=99,slow=4.1,SNR=15
WRA S **S** **10 59 52.0** **-3.0**
1.2nm,0.7s,baz=99,slow=14,SNR=4.8
KAKA Kakadu 46.32 275 *e*P **P 10 54 42.2 -0.1**
14nm,0.4s,mb4.8
KAKA Kakadu 46.32 275 *e*P **P 10 54 41.7 -0.6**
59nm,0.7s,mb5.2
FORT Forrest 46.33 250 *e*P **P 10 54 42.1 0.0**
44nm,0.6s,mb5.2
FORT Forrest 46.33 250 *e*P **P 10 54 42.0 -0.1**
55nm,0.7s,mb5.2
KNA Kununurra 48.67 270 *e*P **P 10 54 59.7 -0.2**
10nm,0.2s,mb5.0
GUMO Guam 50.67 314 P **P 10 55 13.3 -1.2**
24nm,0.6s,mb4.8,baz=248,slow=5.2,SNR=4.6
FITZ Fitzroy Crossi 50.84 266 *e*P **P 10 55 16.3 +0.5**
17nm,0.7s,mb4.5
FITZ Fitzroy Crossi 50.84 266 *e*P **P 10 55 16.0 +0.2**
14nm,0.6s,mb4.3
SBA Scott Base 54.39 183 *e*P **P 10 55 43.8 +3.7**
5.9nm,1.0s,mb3.9
MORW Morawa 56.89 250 *e*P **P 10 55 58.5 +0.1**
QSPA South Pole Qui 66.19 180 P **P 10 57 00.6 +2.5**
3.8nm,0.6s,mb4.1,baz=58,slow=0.8,SNR=39
QSPA South Pole Qui 66.19 180 P **P 10 57 00.6 +2.5**
MJAR Matsushiro Arr 71.90 326 P **P 10 57 30.3 -2.8**
0.6nm,0.7s,baz=164,slow=6.3,SNR=4.1
PETK Petropavlovsk- 79.09 347 P **P 10 58 11.5 -1.1**
1.5nm,0.6s,mb3.5,baz=117,slow=7.3,SNR=3.2
NJ2 Nanjing 80.67 311 *e*P **P 10 58 20.1 -1.3**
NJ2 pmax pmax
comp=Z,20nm,0.7s,mb4.7
DECC Green Verdugo 82.28 47 ⇑P **P 10 58 29.7 +0.1**
baz=82
ARVC Arvin 82.46 46 ⇓P **P 10 58 30.6 +0.1**
baz=82
MURC Murrieta 82.67 48 ⇑P **P 10 58 31.6 0.0**
baz=83
BFSC Mount Baldy Ra 82.72 48 ⇑P **P 10 58 32.0 +0.1**
baz=83,SNR=6.9
MONP Mument Peak 82.81 49 ⇓P **P 10 58 33.0 +0.7**
baz=83
EDW2 Edwards Air Fo 82.87 47 ⇓P **P 10 58 32.8 +0.2**
baz=83
DVTC Desert V Tower 82.90 50 ⇑P **P 10 58 33.2 +0.3**
baz=83,SNR=14
ISA Isabella 83.00 46 ⇓P **P 10 58 33.5 +0.3**
baz=83,SNR=14
ISA Isabella 83.00 46 *e*P **P 10 58 33.7 +0.4**
comp=Z,14nm,0.8s,mb4.5
CMB Columbia Colle 83.19 43 *e*P **P 10 58 33.6 -0.5**
comp=Z,13nm,0.8s,mb4.5
PFO Pinyon Flat Ob 83.19 49 ⇑P **P 10 58 33.9 -0.3**
baz=83
SWSC Sam W. Stewart 83.27 50 ⇑P **P 10 58 34.9 +0.2**
baz=83
WDC Whiskeytown Da 83.44 40 *e*P **P 10 58 35.6 +0.3**
comp=Z,13nm,1.2s,mb4.3
BELC Bell Mtn. Jos 83.72 49 ⇓P **P 10 58 36.8 -0.1**
baz=84,SNR=10
MPMC Manual Prospec 83.89 46 ⇑P **P 10 58 37.6 0.0**
baz=84,SNR=6.8
CN2 Changchun 83.89 324 *e*P **P 10 58 34.8 -2.6**
CN2 pmax pmax
comp=Z,10.0nm,1.0s,mb4.3
112A Yuma 83.90 51 ⇑P **P 10 58 37.4 -0.4**
baz=84
BC3 Big Chuckawall 83.91 49 ⇓P **P 10 58 38.2 +0.4**
baz=84,SNR=6.2
GSC Goldstone 83.91 47 ⇓P **P 10 58 37.9 +0.2**
baz=84,SNR=6.5
GSC Goldstone 83.91 47 *e*P **P 10 58 38.3 +0.6**
comp=Z,6.1nm,0.6s,mb4.3
MTUM Tungsten Hills 83.94 45 *e*P **P 10 58 38.8 +0.9**
HEC Hector,Ludlow 83.96 48 ⇑P **P 10 58 38.0 0.0**
baz=84,SNR=18
GLA Glamis 84.01 50 ⇑P **P 10 58 38.4 +0.1**
baz=84,SNR=5.4
GLA Glamis 84.01 50 *e*P **P 10 58 39.6 +1.3**
comp=Z,6.0nm,0.8s,mb4.2
YBH Yreka Blue Hor 84.07 39 *e*P **P 10 58 39.0 +0.7**
comp=Z,5.3nm,0.8s,mb4.1
WCN Washoe City 84.34 43 ⇓P **P 10 58 39.4 -0.4**
baz=84
GMRC Granite Mounta 84.39 48 ⇓P **P 10 58 40.1 -0.1**
baz=84,SNR=6.1
IRM Iron Mountain 84.40 49 ⇓P **P 10 58 40.1 -0.1**
baz=84,SNR=10.0
HUMO Hull Mountain 84.48 38 *e*P **P 10 58 40.5 +0.1**
comp=Z,8.7nm,1.0s,mb4.2
FURC Furnace Creek, 84.54 46 ⇑P **P 10 58 40.4 -0.5**
baz=84
TUQ Turquoise Moun 84.58 48 ⇑P **P 10 58 40.7 -0.3**
baz=85
SHOC Shoshone 84.60 47 ⇓P **P 10 58 41.1 0.0**
baz=85
113A Mohawk Valley, 84.60 51 ⇑P **P 10 58 40.9 -0.3**
baz=85
Y12C Blythe 84.61 50 ⇓P **P 10 58 41.2 0.0**
baz=85
NVAR Mina Array Bea 84.74 44 P **P 10 58 42.0 +0.2**
comp=Z,2.6nm,0.7s,mb3.9,baz=220,slow=8.8,SNR=22
214A Organ Pipe Nat 84.85 52 ⇓P **P 10 58 43.1 +0.7**
baz=85,SNR=5.0
U10A Ash Meadows, A 84.86 47 ⇓P **P 10 58 42.3 -0.1**
baz=85
Z13A Yuma Proving G 84.91 50 ⇓P **P 10 58 43.0 +0.3**
baz=85
LDFC Landfair 84.93 48 *e*P **P 10 58 44.1 +1.3**
comp=Z,24nm,0.7s,mb4.8
NEE2 Needles Airpor 85.10 49 ⇑P **P 10 58 44.2 +0.6**
baz=85
Y13A Salome 85.12 50 ⇑P **P 10 58 44.1 +0.3**
baz=85,SNR=9.8
V11A Goodsprings 85.14 47 ⇓P **P 10 58 43.8 0.0**
baz=85,SNR=5.2
PDMCI Parker Dam,Lak 85.17 49 ⇓P **P 10 58 44.6 +0.6**
baz=85
114A Black Gap (USA 85.22 51 ⇓P **P 10 58 44.3 0.0**
baz=85,SNR=5.3
V12A Nelson 85.47 48 ⇓P **P 10 58 45.6 +0.2**
baz=86
U11A Corn Creek 85.49 47 ⇑P **P 10 58 45.6 +0.1**
baz=86
Z14A Wintersburg 85.50 51 ⇓P **P 10 58 45.8 +0.2**
baz=86
S10A Tonopah Range, 85.54 45 P **P 10 58 46.0 +0.3**
baz=86,SNR=19
X13A Yucca 85.55 49 ⇓P **P 10 58 46.2 +0.4**
baz=86,SNR=7.0
MOD Modoc 85.59 40 *e*P **P 10 58 45.8 0.0**
comp=Z,6.2nm,0.7s,mb4.3
115A Sonoran Desert 85.66 52 ⇓P **P 10 58 46.5 +0.1**
baz=86
K05A Summer Lake 85.74 39 ⇑P **P 10 58 46.9 +0.4**
baz=86,SNR=6.1
Y14A Wickenburg 85.77 50 ⇓P **P 10 58 46.7 -0.2**
baz=86,SNR=5.8
W13A Hualapai Mount 85.78 49 ⇑P **P 10 58 47.0 +0.1**
baz=86
S11A Rachel 85.94 46 ⇓P **P 10 58 47.6 +0.1**
baz=86
R10A Warm Springs 85.94 45 ⇓P **P 10 58 47.6 0.0**
baz=86,SNR=6.4
116A Eloy 85.97 52 ⇑P **P 10 58 48.5 +0.7**
baz=86
Z15A Gila River Ind 86.02 51 ⇓P **P 10 58 48.8 +0.7**
baz=86
T11A Corn Creek, Al 86.06 46 ⇓P **P 10 58 48.4 +0.2**
baz=86,SNR=14
U12A Valley of Fire 86.06 47 ⇑P **P 10 58 48.8 +0.6**
baz=86,SNR=8.1
T12A Moapa 86.11 47 ⇑P **P 10 58 48.1 -0.3**
baz=86
V13A Grand Canyon W 86.12 48 ⇓P **P 10 58 48.4 -0.1**
baz=86,SNR=13
X14A Yava 86.13 50 ⇓P **P 10 58 48.8 +0.3**
baz=86,SNR=6.9
Q10A Clear Creek Ra 86.18 45 ⇑P **P 10 58 48.6 -0.1**
baz=86
217A Green Valley 86.20 53 ⇓P **P 10 58 49.4 +0.4**
baz=86,SNR=18
217A ⇑PcP PcP 10 58 50.4 -0.3
baz=86
H04A Detroit Lake 86.23 37 ⇑P **P 10 58 48.1 -0.7**
baz=86
Y15A Casa Rosa Ranc 86.25 50 ⇑P **P 10 58 48.4 -0.7**
baz=86,SNR=8.6
W14A Seligman 86.40 49 ⇓P **P 10 58 50.2 +0.5**
baz=86,SNR=7.0
R11A Troy Canyon, C 86.44 45 ⇑P **P 10 58 49.7 -0.2**
baz=86
U13A Pakoon Wash 86.44 48 ⇑P **P 10 58 50.2 +0.2**
baz=86,SNR=16
TUC Tucson 86.50 52 *e*P **P 10 58 51.2 +0.8**
comp=Z,8.6nm,0.8s,mb4.4
S12A Delamar Landin 86.51 46 ⇑P **P 10 58 50.7 +0.4**
baz=86,SNR=9.6
Z16A Peralta Trail, 86.57 51 ⇑P **P 10 58 51.1 +0.4**
baz=87,SNR=5.8
P10A Eureka 86.59 44 ⇓P **P 10 58 50.0 -0.6**
baz=87
X15A Humboldt 86.60 50 ⇑P **P 10 58 50.6 -0.2**
baz=87,SNR=6.3
V14A Boquillas Ranc 86.61 49 ⇑P **P 10 58 51.0 +0.2**
baz=87,SNR=12
318A Bisbee 86.64 54 ⇑P **P 10 58 51.3 +0.3**
baz=87
117A Oracle 86.67 52 ⇑P **P 10 58 51.3 +0.1**
baz=87,SNR=8.3
Q11A Duckwater 86.67 45 ⇓P **P 10 58 50.4 -0.6**
baz=87
GYA Guiyang 86.75 301 P **P 10 58 52.0 +0.3**
GYA pP pP 11 00 43.8 -5.8
GYA sP sP 11 01 32.4 -12
GYA PP PP 11 02 25.9 +1.4
GYA SKS 11 08 30.0
GYA S S 11 08 47.6 +3.2
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
T13A Saint George 86.81 47 ⇓P **P 10 58 51.6 -0.1**
baz=87,SNR=5.3
Y16A Circle Bar Ran 86.82 51 ⇑P **P 10 58 52.4 +0.6**
baz=87,SNR=7.9
218A Dragoon 86.87 53 ⇓P **P 10 58 52.6 +0.5**
baz=87
218A ⇑PcP PcP 10 58 53.6 -0.1
baz=87,SNR=18
F04A Amboy 86.89 36 ⇓P **P 10 58 52.3 +0.5**
baz=87
WVOR Wild Horse Val 86.89 41 *e*P **P 10 58 52.1 +0.1**
comp=Z,16nm,1.4s,mb4.5
U14A Mt Trumbull 86.98 48 ⇓P **P 10 58 52.7 +0.2**
baz=87,SNR=15
R12A Pony Springs, 87.06 46 ⇑P **P 10 58 53.1 +0.3**
baz=87,SNR=9.0
X16A Lo Mia Camp, P 87.12 50 ⇑P **P 10 58 52.3 -1.0**
baz=87
X16A ⇓PcP PcP 10 58 54.5 -0.2
baz=87,SNR=9.4
319A Douglas 87.13 54 ⇑PcP PcP 10 58 54.8 0.0
baz=87,SNR=14
S13A Holt Ranch, En 87.15 47 ⇑P **P 10 58 53.8 +0.5**
baz=87
Y17A Roosevelt 87.17 51 ⇑P **P 10 58 53.0 -0.5**
baz=87
118A Homack Ranch, 87.26 53 ⇑P **P 10 58 54.1 +0.2**
baz=87
Q12A Willow Creek R 87.31 45 ⇑P **P 10 58 54.2 +0.2**
baz=87
V15A Kaibab Nationa 87.35 49 ⇑P **P 10 58 54.7 +0.4**
baz=87,SNR=5.9
O11A Cowboy Ranch, 87.39 44 ⇓P **P 10 58 54.6 +0.2**
baz=87
R13A O'Grain Ranch, 87.40 46 ⇑P **P 10 58 54.3 -0.2**
baz=87
G06A Carlson Farm, 87.44 37 ⇓P **P 10 58 54.4 0.0**
baz=87,SNR=7.3
219A White Tail Can 87.46 53 ⇓P **P 10 58 55.3 +0.4**
baz=88,SNR=9.2
CCUT Cedar City 87.46 47 *e*P **P 10 58 55.7 +0.9**
comp=Z,6.7nm,0.9s,mb4.3
P12A McGill 87.50 45 ⇑P **P 10 58 55.1 +0.2**
baz=88
X17A Forest Lakes 87.53 51 ⇓PcP PcP 10 58 56.6 +0.1
baz=88,SNR=8.1
J08A Circle Bar Ran 87.54 40 ⇑P **P 10 58 55.2 +0.2**
baz=88,SNR=14
ARUT Antelope Range 87.54 47 *e*P **P 10 58 55.8 +0.7**
comp=Z,2.6nm,0.6s,mb4.1
U15A North Rim 87.59 48 ⇓P **P 10 58 56.1 +0.7**
baz=88,SNR=17
M10A I.L. Ranch, Tu 87.63 42 ⇓P **P 10 58 56.0 +0.6**
baz=88,SNR=10
320A Kipp Ranch, An 87.67 54 ⇓P **P 10 58 56.7 +0.8**
baz=88,SNR=14
S14A Cedar City 87.71 47 ⇑P **P 10 58 56.5 +0.7**
baz=88
LON Longmire 87.74 36 *e*P **P 10 58 55.9 +0.1**
comp=Z,2.0nm,0.6s,mb4.0
WUAZ Wupatki 87.74 49 ⇑P **P 10 58 57.0 +0.9**
baz=88
WUAZ Wupatki 87.74 49 *e*P **P 10 58 57.2 +1.1**
comp=Z,7.9nm,1.3s,mb4.3
Q13A Wheeler Ranch, 87.79 45 ⇓P **P 10 58 56.4 +0.1**
baz=88,SNR=6.5
Y18A Canyon Day Jun 87.79 52 ⇑P **P 10 58 56.9 +0.5**
baz=88,SNR=14
119A Ashpeak Ranch, 87.81 53 ⇑P **P 10 58 57.3 +0.8**
baz=88
T15A Red Dirt Ranch 87.84 48 ⇑P **P 10 58 56.6 +0.1**
baz=88,SNR=11
220A Playas Peak, P 87.95 54 ⇑PcP PcP 10 58 58.7 +0.3
baz=88
L10A Juniper Basin 87.99 42 ⇓P **P 10 58 57.3 +0.2**
baz=88,SNR=14
O12A Currie 88.05 44 ⇑P **P 10 58 57.3 -0.1**
baz=88
P13A Bates Ranch, G 88.07 45 ⇓P **P 10 58 57.9 +0.4**
baz=88
H08A Prairie City 88.11 39 ⇓P **P 10 58 57.4 -0.2**
baz=88
K10A MacKenzie Ranc 88.15 41 ⇑P **P 10 58 58.2 +0.4**
baz=88,SNR=16
N12A Clover Valley, 88.19 43 ⇓P **P 10 58 58.4 +0.3**
baz=88,SNR=6.9
N12A Clover Valley, 88.19 43 *e*P **P 10 58 58.5 +0.4**
comp=Z,6.6nm,0.7s,mb4.5
120A U Bar Ranch, L 88.19 53 ⇓PcP PcP 10 58 59.8 +0.4
baz=88
V17A Tonalea, Kykot 88.20 50 ⇓P **P 10 58 58.6 +0.3**
baz=88,SNR=6.8
S15A Panguitch 88.20 47 ⇑P **P 10 58 59.1 +0.9**
baz=88,SNR=5.6
X18A Snowflake 88.23 51 ⇑P **P 10 58 58.8 +0.4**
baz=88,SNR=5.5
Q14A Sevier Lake (B 88.30 46 ⇑P **P 10 58 58.8 +0.2**
baz=88,SNR=14
I09A Lost Marbles R 88.33 40 ⇑P **P 10 58 58.8 +0.1**
baz=88,SNR=7.2
G08A Pilot Rock 88.41 38 ⇓P **P 10 58 59.4 +0.4**
baz=88,SNR=18
T16A Glen Canyon Da 88.42 48 ⇑P **P 10 58 59.1 -0.1**
baz=88
Y19A Nutrioso 88.44 52 ⇑PcP PcP 10 59 00.6 +0.1
baz=88,SNR=8.6
L11A Cat Creek Ranc 88.48 42 P **P 10 59 00.0 +0.6**
baz=88,SNR=14
Z20A Nine Sixteen R 88.50 53 ⇓PcP PcP 10 59 01.3 +0.4
baz=88,SNR=6.0
R15A Junction 88.54 47 ⇓PcP PcP 10 59 01.2 +0.4

baz=88
M12A **Wells** 88.58 43 ⇑P P 10 59 00.1 +0.2
baz=89,SNR=7.1
J10A **Berg Farm, Mel** 88.59 41 ⇑P P 10 59 00.4 +0.5
baz=89
K11A **Parker Ranch,** 88.66 41 ⇓P P 10 59 00.3 +0.1
baz=89,SNR=11
N13A **Wendover, West** 88.72 44 ⇑P P 10 59 00.3 -0.2
baz=89
N13A **Wendover, West** 88.72 44 eP P 10 59 00.9 +0.4
comp=Z,12nm,1.1s,mb4.6
PMR **Palmer** 88.73 14 eP P 10 58 59.3 -0.8
comp=Z,5.7nm,0.8s,mb4.5
S16A **Weppner Ranch,** 88.74 48 ⇑P P 10 59 00.4 -0.3
baz=89,SNR=6.2
HAWA **Hanford** 88.75 37 eP P 10 59 01.2 +0.7
comp=Z,10nm,0.9s,mb4.7
P14A **Drum Mountains** 88.76 45 ⇓P P 10 59 00.2 -0.6
baz=89
MSU **Marysvale** 88.77 47 eP P 10 59 01.7 +0.9
H09A **Durkee** 88.78 39 ⇑P P 10 59 00.8 +0.1
baz=89,SNR=5.7
U17A **Shonto** 88.80 49 ⇑P P 10 59 01.3 +0.3
baz=89
121A **Cookes Peak, D** 88.81 54 ⇑P P 10 59 01.4 +0.3
baz=89
Q15A **Fillmore** 88.89 46 ⇓P P 10 59 01.9 +0.5
baz=89
T17A **Navajo Res., N** 88.90 48 ⇓P P 10 59 02.4 +0.9
baz=89,SNR=8.3
L12A **House Creek Ra** 88.92 42 ⇓P P 10 59 01.9 +0.5
baz=89,SNR=13
RPW **Rockport** 88.96 35 eP P 10 59 01.1 -0.3
comp=Z,5.5nm,0.5s,mb4.6
M13A **Montello** 89.02 43 ⇓P P 10 59 02.1 +0.2
baz=89
M13A **Montello** 89.02 43 eP P 10 59 02.4 +0.5
comp=Z,18nm,1.1s,mb4.8
Y20A **Horse Springs,** 89.05 52 ⇓P P 10 59 03.1 +0.8
baz=89,SNR=8.0
ETW **Entiat** 89.06 36 eP P 10 59 02.4 +0.5
E08A **Dider Farm, El** 89.07 37 ⇑P P 10 59 02.6 +0.6
baz=89
G09A **Cove** 89.07 39 ⇓P P 10 59 02.2 +0.2
baz=89,SNR=8.0
222A **Williams Famil** 89.11 54 ⇓P P 10 59 03.0 +0.4
baz=89,SNR=7.6
R16A **Teasdale** 89.11 47 ⇓P P 10 59 03.0 +0.6
baz=89,SNR=7.1
MFID **Camas Ranch** 89.14 41 ⇓P P 10 59 02.2 -0.2
baz=89,SNR=12
S17A **Black Ridge (B** 89.23 48 ⇑P P 10 59 02.8 -0.2
baz=89,SNR=8.2
U18A **Rough Rock, Ch** 89.25 49 ⇓P P 10 59 02.6 -0.5
baz=89
P15A **Leamington** 89.26 46 ⇑P P 10 59 03.1 0.0
baz=89
K12A **Draper Farm, C** 89.27 42 ⇑P P 10 59 03.3 +0.3
baz=89,SNR=8.7
H10A **Noah's Angus R** 89.27 40 ⇑P P 10 59 02.9 -0.1
baz=89,SNR=10
Z21A **St. Cloud Mine** 89.27 53 ⇓PcP PcP 10 59 04.7 +0.5
baz=89,SNR=8.3
KMI **Kunming** 89.27 298 P P 10 59 04.9 +1.4
KMI pmax pmax
comp=Z,6.0nm,0.6s,mb4.6
X20A **Quemado** 89.28 52 ⇑PcP PcP 10 59 04.3 +0.1
baz=89,SNR=8.7
I11A **Placerville** 89.35 41 ⇓P P 10 59 03.2 -0.1
baz=89,SNR=16
N14A **Grayback Hills** 89.36 44 ⇑P P 10 59 03.9 +0.4
baz=89
G10A **Bishop Farm, J** 89.46 39 ⇑P P 10 59 03.8 -0.1
baz=89,SNR=7.5
122A **Conniff Cattle** 89.47 54 ⇓PcP PcP 10 59 05.9 +0.8
baz=90,SNR=7.0
D08A **Wollman Farm,** 89.49 37 ⇑P P 10 59 04.0 0.0
baz=90,SNR=5.9
J12A **Stokes Ranch,** 89.49 41 ⇑P P 10 59 04.2 +0.2
baz=90,SNR=18
L13A **Double Diamond** 89.56 43 ⇑P P 10 59 04.6 +0.2
baz=90
W20A **Ramah** 89.56 51 ⇓P P 10 59 05.0 +0.4
baz=90,SNR=8.0
W20A ⇑PcP PcP 10 59 05.8 +0.3
baz=90
Y21A **Point of Rocks** 89.61 52 ⇑P P 10 59 04.6 -0.3
baz=90,SNR=11
M14A **Sheep Mountain** 89.61 44 ⇓P P 10 59 04.8 +0.1
baz=90,SNR=8.7
T18A **Mexican Hat** 89.61 49 ⇑P P 10 59 05.1 +0.3
baz=90,SNR=13
U19A **Dine' College,** 89.65 50 ⇑P P 10 59 04.7 -0.2
baz=90,SNR=6.3
Q16A **Castle Valley** 89.65 47 ⇓P P 10 59 05.4 +0.5
baz=90,SNR=8.1
R17A **Hanksville Air** 89.70 47 ⇑P P 10 59 05.5 +0.3
baz=90,SNR=7.1
X21A **Alamocita Cree** 89.74 52 ⇑P P 10 59 06.1 +0.6
baz=90
Z22A **Elephant Butte** 89.76 53 ⇓P P 10 59 05.8 +0.3
baz=90,SNR=11
H11A **Donnelly** 89.77 40 ⇓P P 10 59 05.3 0.0
baz=90,SNR=16
I12A **Atlanta** 89.78 41 ⇑P P 10 59 05.2 -0.1
baz=90,SNR=9.2
K13A **Stover Farm, H** 89.78 42 ⇓P P 10 59 06.0 +0.6
baz=90,SNR=14
F10A **Beach Ranch, E** 89.80 38 ⇓P P 10 59 04.5 -0.9
baz=90,SNR=5.9
TMUT **Trail Mountain** 89.82 46 eP P 10 59 07.2 +1.5
comp=Z,15nm,0.6s,mb5.0
MPU **Maple Canyon** 89.92 46 eP P 10 59 06.9 +0.8
comp=Z,7.7nm,0.8s,mb4.6
L14A **Malta** 89.97 43 ⇑P P 10 59 06.4 +0.2
baz=90
324A **Moseley Ranch,** 90.00 55 ⇓P P 10 59 06.2 -0.5
baz=90,SNR=9.5
G11A **Walters Elk Ra** 90.01 39 ⇑P P 10 59 05.2 -1.2
baz=90,SNR=11
B08A **Colville Reser** 90.05 36 ⇓P P 10 59 05.5 -1.0
baz=90
425A **Indio Mountain** 90.07 56 ⇓P P 10 59 06.6 -0.5
baz=90,SNR=8.0
HLID **Hailey** 90.08 41 ⇓P P 10 59 07.0 +0.2
baz=90,SNR=12
HLID **Hailey** 90.08 41 eP P 10 59 07.1 +0.3
comp=Z,6.4nm,1.0s,mb4.4
Y22A **Socorro** 90.09 53 ⇓P P 10 59 06.9 -0.1
baz=90,SNR=8.6
O16A **Springville** 90.11 45 ⇓P P 10 59 06.7 -0.3
baz=90,SNR=12
HVU **Hansel Valley** 90.12 44 eP P 10 59 07.3 +0.3
comp=Z,9.7nm,0.7s,mb4.7
J13A **Cove Ranch, Pi** 90.13 42 ⇓P P 10 59 07.2 +0.2
baz=90,SNR=9.9
TRF **Thorofare Moun** 90.14 13 eP P 10 59 05.3 -1.3
comp=Z,5.3nm,0.8s,mb4.4
626A **Big Bend Ranch** 90.15 58 ⇑P P 10 59 06.8 -0.6
baz=90,SNR=8.2
SRU **San Rafael** 90.18 47 ⇓P P 10 59 07.5 +0.2
baz=90,SNR=10
SRU **San Rafael** 90.18 47 eP P 10 59 07.8 +0.5
comp=Z,13nm,0.8s,mb4.8
MNTX **Cornudas Mount** 90.20 55 eP P 10 59 07.8 +0.1
comp=Z,2.7nm,0.9s,mb4.1
P17A **Butcher Ranch,** 90.22 46 ⇑P P 10 59 07.4 -0.2
baz=90,SNR=7.0
R18A **Canyonlands Na** 90.23 48 ⇑P P 10 59 07.0 -0.6
baz=90,SNR=8.2
224A **Cornudas Mount** 90.27 55 ⇓P P 10 59 08.5 +0.6
baz=90,SNR=6.3
K14A **Jones Ranch, D** 90.28 43 ⇑P P 10 59 08.0 +0.2
baz=90
JLU **Jordanelle** 90.35 45 eP P 10 59 08.8 +0.7
comp=Z,4.9nm,0.9s,mb4.3
325A **Bean Ranch, Si** 90.35 56 ⇓P P 10 59 08.4 +0.1
baz=90,SNR=8.3
H12A **Diamond D Ranc** 90.36 40 ⇑P P 10 59 07.6 -0.5
baz=90,SNR=9.9
DAU **Daniels Canyon** 90.37 45 eP P 10 59 09.2 +1.0
G12A **Big Creek, Yel** 90.41 40 ⇑P P 10 59 08.1 -0.1
baz=90
TXAR **Lajitas Array** 90.42 58 P P 10 59 07.4 -1.3
comp=Z,4.2nm,0.7s,mb4.4,baz=198,slow=8.4,SNR=57
526A **Mary Lane Ranc** 90.42 57 ⇑P P 10 59 08.3 -0.4
baz=90,SNR=6.0
HHC **Hu-ho-hao-te** 90.42 315 eP P 10 59 09.3 +0.9
HHC S S 11 09 18.7 +1.3
HHC pmax pmax
comp=Z,23nm,0.7s,mb5.1
HHC pmax pmax
comp=Z,280nm,7.7s
S19A **Harvey Farm, M** 90.43 48 ⇓P P 10 59 08.6 0.0
baz=90
Q18A **Rafter H Ranch** 90.44 47 ⇑P P 10 59 07.9 -0.6
baz=90,SNR=5.9
I13A **Wildhorse Cree** 90.45 41 ⇓P P 10 59 07.7 -0.8
baz=90
L15A **Malad City** 90.49 44 ⇓P P 10 59 08.3 -0.4
baz=90,SNR=6.7
J14A **Carey** 90.49 42 ⇑P P 10 59 08.8 +0.1
baz=90,SNR=12
N16A **Rees Ranch, Co** 90.50 45 ⇓P P 10 59 08.7 -0.1
baz=90,SNR=5.1
O17A **Robinson Place** 90.60 46 ⇑P P 10 59 09.6 +0.3
baz=91,SNR=28
MVCO **Mesa Verde** 90.60 49 ⇑P P 10 59 09.4 0.0
baz=91
124A **Stringfield Ra** 90.61 54 ⇓P P 10 59 09.7 +0.1
baz=91,SNR=5.9
R19A **Curley Farm, L** 90.62 48 ⇑P P 10 59 09.4 0.0
baz=91
P18A **Preston Nutter** 90.63 46 ⇑P P 10 59 09.6 +0.2
baz=91
627A **Terlingua Ranc** 90.69 58 ⇑P P 10 59 10.4 +0.5
baz=91,SNR=9.3
H13A **Challis** 90.73 41 ⇑P P 10 59 09.9 +0.2
baz=91,SNR=6.0
426A **McDonald Obser** 90.75 57 ⇓P P 10 59 10.6 +0.5
baz=91,SNR=7.8
Y23A **Lovelace Mesa,** 90.75 53 ⇑P P 10 59 10.0 -0.1
baz=91
K15A **Arbon** 90.76 43 ⇑P P 10 59 10.1 +0.2
baz=91,SNR=6.8
HWUT **Hardware Ranch** 90.80 44 eP P 10 59 10.2 0.0
comp=Z,5.3nm,0.6s,mb4.7
F12A **Elk City** 90.80 39 ⇓P P 10 59 09.7 -0.4
baz=91,SNR=10.0
U21A **Nageezi** 90.80 50 ⇑P P 10 59 10.8 +0.5
baz=91,SNR=19
225A **Deer Hill, Car** 90.81 55 ⇓P P 10 59 10.7 +0.2
baz=91
PV10 **Paradox Valley** 90.81 48 eP P 10 59 10.2 -0.1
comp=Z,61nm,0.8s
527A **Woodward Ranch** 90.83 57 ⇓P P 10 59 10.7 +0.1
baz=91,SNR=5.9
I14A **Mackay** 90.86 42 ⇓P P 10 59 11.1 +0.7
baz=91,SNR=7.8
PV04 **Paradox Valley** 90.91 48 eP P 10 59 10.9 +0.2
Q19A **Hogan Spring (** 90.95 47 ⇓P P 10 59 10.9 0.0
baz=91,SNR=5.9
Z24A **Sheeppen Canyo** 90.97 54 ⇓P P 10 59 11.7 +0.6
baz=91
S20A **Disappointment** 91.00 49 ⇑P P 10 59 11.0 -0.1
baz=91
PV01 **Paradox Valley** 91.01 48 eP P 10 59 10.9 -0.3
G13A **Cobalt** 91.03 40 ⇓P P 10 59 10.7 -0.5
baz=91
CD2 **Chengdu** 91.09 303 P P 10 59 13.3 +1.6
CD2 pP pP 11 01 04.3 -6.3
CD2 sP sP 11 01 53.6 -11
CD2 PP PP 11 03 00.8 +2.4
CD2 SKS 11 08 57.5
CD2 S S 11 09 26.9 +3.2
CD2 sS sS 11 12 43.3 -13
CD2 SS SS 11 15 48.2 +3.4
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
CD2 pmax pmax
comp=Z,80nm,5.9s
628A **Black Gap, Mar** 91.09 58 ⇓P P 10 59 12.0 +0.2
baz=91
L16A **Fish Haven** 91.10 44 ⇑P P 10 59 10.8 -0.7
baz=91
O18A **Roosevelt** 91.11 46 ⇓P P 10 59 10.9 -0.8
baz=91
T21A **Navajo Lake** 91.16 50 ⇓P P 10 59 11.9 -0.1
baz=91
MENT **Mentasta** 91.18 16 eP P 10 59 10.8 -0.6
125A **Gardner Draw,** 91.19 55 ⇓P P 10 59 12.2 0.0
baz=91
Y24A **Capitan** 91.20 53 ⇓P P 10 59 12.5 +0.3
baz=91,SNR=9.7
J15A **Blackfoot** 91.20 42 ⇑P P 10 59 12.4 +0.5
baz=91,SNR=13
W23A **Werner Place,** 91.27 52 ⇑P P 10 59 13.0 +0.5
baz=91
H14A **Leadore** 91.29 41 ⇓P P 10 59 12.2 -0.1
baz=91
M17A **Scullys Gap (B** 91.31 45 ⇓P P 10 59 12.3 -0.2
baz=91,SNR=9.1
427A **Hayter Ranch,** 91.31 57 ⇓P P 10 59 12.1 -0.6
baz=91,SNR=13
S21A **Coal Bank Pass** 91.31 49 ⇓P P 10 59 13.1 +0.5
baz=91
F13A **Darby** 91.36 40 ⇑P P 10 59 12.1 -0.5
baz=91
C11A **Tepee Creek (N** 91.42 37 ⇑P P 10 59 12.7 -0.2
baz=91
K16A **Soda Springs** 91.43 43 ⇓P P 10 59 12.7 -0.3
baz=91
Z25A **Roswell** 91.43 54 ⇑P P 10 59 13.3 0.0
baz=91
D12A **Red Ives Fores** 91.47 38 ⇓P P 10 59 12.0 -1.1
baz=92
P19A **Cripple Cowboy** 91.48 47 ⇓P P 10 59 13.3 0.0
baz=92
L17A **Cokeville** 91.50 44 ⇓P P 10 59 13.0 -0.4
baz=92
V23A **Ortiz Mt. (NFS** 91.52 51 ⇓P P 10 59 13.9 +0.3
baz=92
Q20A **Ridgley Place,** 91.60 48 ⇑P P 10 59 12.6 -1.3
baz=92
J16A **Bone** 91.64 43 ⇓P P 10 59 14.1 +0.1
baz=92,SNR=5.5
M18A **Lyman** 91.67 45 ⇓P P 10 59 14.4 +0.3
baz=92,SNR=6.2
N18A **Larsen Ranch,** 91.69 45 ⇑P P 10 59 14.1 -0.2
baz=92,SNR=5.9
MCMT **McKenzie Canyo** 91.71 41 eP P 10 59 14.9 +0.6
comp=Z,0.8nm,0.7s,mb3.9
O19A **Miners Draw (B** 91.72 46 ⇓P P 10 59 14.1 -0.3
baz=92,SNR=5.6
H15A **Lima** 91.72 41 ⇓P P 10 59 14.3 0.0
baz=92
Y25A **Mesa, Roswell** 91.75 54 ⇑P P 10 59 14.7 0.0
baz=92
E13A **Victor** 91.80 39 ⇑P P 10 59 13.5 -1.1
baz=92
K17A **Gardner Place,** 91.80 43 ⇓P P 10 59 14.4 -0.4
baz=92,SNR=5.4
P20A **De Beque** 91.81 47 ⇑P P 10 59 14.6 -0.3
baz=92
R21A **Cimarron** 91.82 49 ⇓P P 10 59 14.6 -0.3
baz=92,SNR=7.2
W24A **Lazy 6 Ranch,** 91.83 52 ⇑P P 10 59 15.0 -0.1
baz=92
RRI2 **Red Ridge** 91.86 43 eP P 10 59 15.2 +0.2
comp=Z,2.3nm,0.7s,mb4.3
Z26A **Caprock** 91.97 54 ⇓P P 10 59 15.6 -0.2
baz=92
N19A **John Jarvie Ra** 91.98 46 ⇑P P 10 59 14.8 -0.8
baz=92
S22A **4UR Ranch, Cre** 92.02 49 ⇓P P 10 59 15.8 -0.1
baz=92
Q21A **Lamborn Mesa,** 92.03 48 ⇑P P 10 59 15.8 -0.1
baz=92
G15A **Dillon** 92.11 41 ⇓P P 10 59 15.5 -0.6
baz=92
B12A **Libby** 92.14 37 ⇓P P 10 59 16.0 -0.2
baz=92
REDW **Red Top Meadow** 92.16 43 eP P 10 59 16.3 -0.1
comp=Z,4.8nm,1.2s,mb4.4
V24A **Rampart Ranch,** 92.16 52 ⇓P P 10 59 16.0 -0.6
baz=92
T23A **Casias Ranch,** 92.23 50 ⇑P P 10 59 15.9 -0.9
baz=92
J17A **Brown Place, J** 92.25 43 ⇑P P 10 59 16.1 -0.7
baz=92
SNOW **Snow King Moun** 92.28 43 eP P 10 59 17.1 +0.2
comp=Z,2.6nm,0.7s,mb4.4
K18A **Toltan Ranch,** 92.30 44 ⇑P P 10 59 16.1 -0.9
baz=92,SNR=8.0
R22A **Saguache, Gunn** 92.30 49 ⇓P P 10 59 17.7 +0.5
baz=92
L19A **Farson** 92.47 45 ⇑P P 10 59 17.0 -0.8
baz=92
Q22A **Crested Butte,** 92.50 48 ⇓P P 10 59 17.1 -0.9
baz=92
W25A **X Bar L Ranch,** 92.51 53 ⇑P P 10 59 16.9 -1.3
baz=92
N20A **Spence Gulch,** 92.55 46 ⇓P P 10 59 16.8 -1.4
baz=92
CHMT **Chamberlain Mo** 92.60 39 eP P 10 59 16.9 -1.4
comp=Z,0.4nm,0.4s,mb3.8
J18A **Kendall Valley** 92.61 43 ⇓P P 10 59 18.1 -0.3
baz=93,SNR=9.8
SMCO **Snowmass** 92.61 48 eP P 10 59 19.1 +0.6
comp=Z,2.4nm,0.6s,mb4.4
H16A **Russell Place,** 92.61 42 ⇓P P 10 59 18.2 -0.2
baz=93
BW06 **Boulder Array** 92.67 44 ⇓P P 10 59 17.0 -1.7
baz=93
BW06 **Boulder Array** 92.67 44 eP P 10 59 18.1 -0.6
comp=Z,1.8nm,0.6s,mb4.3
PDAR **Pinedale Array** 92.67 44 P P 10 59 18.4 -0.3
comp=Z,2.4nm,0.7s,mb4.3,baz=227,slow=3.2,SNR=21
V25A **Rancho No Teng** 92.69 52 ⇓P P 10 59 18.8 -0.1
baz=93
O21A **Pagoda** 92.77 47 ⇓P P 10 59 18.1 -1.1
baz=93
Y27A **Causey** 92.86 54 ⇑P P 10 59 19.4 -0.4
baz=93
BOZ **Bozeman (W)** 92.88 41 ⇑P P 10 59 19.2 -0.4
baz=93
SDCO **Great Sand Dun** 92.95 50 eP P 10 59 20.3 +0.2
comp=Z,3.3nm,0.9s,mb4.4
N21A **Black Mountain** 93.01 46 ⇓P P 10 59 18.9 -1.4
baz=93
U25A **Circle Dot Ran** 93.10 51 ⇓P P 10 59 19.9 -0.9
baz=93
S24A **Houchin Ranch,** 93.10 50 ⇑P P 10 59 21.2 +0.4
baz=93
K19A **Absolon Red Bu** 93.16 44 ⇓P P 10 59 20.4 -0.6
baz=93
DAWY **Dawson** 93.22 17 eP P 10 59 19.9 -0.8
B14A **Marquette Ranc** 93.37 38 ⇓P P 10 59 21.1 -0.7
baz=93
O22A **Kremmling** 93.37 47 ⇑P P 10 59 21.9 -0.1
baz=93
LZH **Lanzhou** 93.38 308 eP P 10 59 23.0 +0.8
LZH PP PP 11 03 20.0 +4.0
LZH pmax pmax
comp=Z,13nm,1.0s,mb4.9
T25A **Trinidad** 93.43 51 ⇓P P 10 59 22.5 +0.1
baz=93
R24A **Sanders Place,** 93.45 50 ⇓P P 10 59 21.6 -0.8
baz=93
P23A **Jefferson** 93.48 48 ⇓P P 10 59 23.1 +0.6
baz=94
M21A **Separation Pea** 93.52 46 ⇓P P 10 59 21.4 -1.2
baz=94
U26A **Atchley Ranch,** 93.57 52 ⇑P P 10 59 22.1 -0.9
baz=94
F17A **Fitzpatrick Pl** 93.59 41 ⇓P P 10 59 22.7 -0.2
baz=94
A14A **Double T Ranch** 93.61 37 ⇑P P 10 59 22.5 -0.4
baz=94
D16A **Dana Ranch, Ca** 93.65 40 ⇑P P 10 59 22.8 -0.3
baz=94
S25A **Robets Cordova** 93.66 50 ⇑P P 10 59 22.6 -0.8
baz=94
N22A **Wattenberg Ran** 93.74 47 ⇓P P 10 59 22.8 -0.9
baz=94
B15A **Bradely Ranch,** 93.74 38 ⇓P P 10 59 22.3 -1.1
baz=94
Q24A **Divide** 93.76 49 ⇑P P 10 59 22.8 -1.0
baz=94
D17A **Six Diamond Ra** 94.22 40 ⇓P P 10 59 25.6 0.0
baz=94
L22A **Ellis Ranch, M** 94.33 46 ⇑P P 10 59 26.3 -0.1
baz=94
Q25A **Bedland, Calha** 94.36 49 ⇑P P 10 59 26.3 -0.3
baz=94
C17A **Wharram Farm,** 94.42 39 ⇓P P 10 59 25.8 -0.8
baz=94
B18A **Beardsley Farm** 95.37 39 ⇓P P 10 59 30.2 -0.7
baz=95
WMQ **Urumqi** 107.74 311 eP Pdif 11 00 28.2 +2.0
WMQ LR LR
comp=E,82nm,20.4s
WMQ LR LR
comp=Z,76nm,21.2s
MKAR **Makanchi Array** 112.16 313 PKiKP PKiKP 11 04 37.4 -1.2
comp=Z,0.5nm,0.6s,baz=27,slow=0.6,SNR=3.4
KURK **Kurchatov** 115.20 316 PKP PKPdf 11 04 42.6 -1.7
comp=Z,0.7nm,0.5s,baz=264,slow=5.3,SNR=2.6
BVAR **Borovoye Array** 120.44 319 PKP PKPdf 11 04 53.5 -0.8
comp=Z,1.0nm,0.4s,baz=48,slow=2.2,SNR=7.6
ARU **Arti** 126.89 324 ePKPdf PKPdf 11 05 06.2 -0.3
AKTO **Aktyubinsk** 128.30 316 PKP PKPdf 11 05 08.6 -0.9
comp=Z,0.9nm,0.6s,baz=80,slow=2.6,SNR=4.2
ARCES **ARCESS Array B** 131.88 348 PKP PKPdf 11 05 14.6 -1.1
comp=Z,1.6nm,0.5s,baz=45,slow=1.4,SNR=9.4
ARCES SKPbc SKPbc 11 07 51.5 +0.1
comp=Z,2.4nm,0.8s,baz=69,slow=6.6,SNR=4.7
FINES **FINESS Array B** 138.44 341 PKhKP PKPpre 11 05 18.3
comp=Z,0.7nm,0.6s,baz=62,slow=4.5,SNR=4.6
FINES PKP PKPdf 11 05 28.3 +0.2
comp=Z,1.5nm,0.6s,baz=60,slow=4.6,SNR=8.3
FINES SKPbc SKPbc 11 08 12.0 0.0
comp=Z,2.6nm,0.6s,baz=52,slow=3.4,SNR=9.4
NB2 **NORSAR Subarra** 142.08 351 PKP PKPdf 11 05 30.0 -4.7
comp=Z,1.2nm,0.6s,baz=10,slow=3.2
NOA **NORSAR Array B** 142.08 351 PKhKP PKPpre 11 05 29.9
comp=Z,1.9nm,0.7s,baz=16,slow=4.7,SNR=6.5
NOA SKPbc SKPbc 11 08 21.7 +0.2
comp=Z,1.2nm,0.6s,baz=14,slow=4.1,SNR=3.8
AKASG **Malin Array Be** 144.97 327 PKP PKPdf 11 05 39.3 -0.7
comp=Z,3.0nm,0.5s,baz=42,slow=4.0,SNR=9.7
AKASG SKPbc SKPbc 11 08 29.5 +0.9
comp=Z,1.5nm,0.6s,baz=43,slow=2.5,SNR=3.9
BRTR **Keskin Array B** 147.58 307 PKPbc PKPbc 11 05 47.9 -0.4
comp=Z,1.4nm,0.8s,baz=144,slow=5.6,SNR=4.3
MMAI **Mount Meron Ar** 147.71 294 PKPbc PKPbc 11 05 49.5 +0.6
comp=Z,4.4nm,0.5s,baz=74,slow=6.2,SNR=5.8
CSS **Prodhromos** 149.09 299 ePKPdf PKPbc 11 05 50.9 -1.4
CRVS **Cervenica-Dubn** 149.86 331 ePKP PKPbc 11 05 53.6 0.0
CLL **Collm** 150.85 343 ⇑ iPKPbc PKPbc 11 05 55.4 -0.4
comp=Z,12nm,0.8s
CLL ePKPab PKPab 11 06 05.0 -0.5
BRG **Berggiesshubel** 150.98 342 i PKP PKPbc 11 05 55.9 -0.3
comp=Z,6.3nm,0.4s
VYHS **Vyhne** 151.29 333 ePKP PKPbc 11 05 56.3 -0.6
ESDC **Sonseca Array** 163.91 11 PKPab PKPab 11 07 00.8 -1.5
comp=Z,0.3nm,0.4s,baz=344,slow=5.6,SNR=4.5
TORD **Torodi Ar. Bea** 169.19 189 PKP PKPdf 11 06 10.1 -0.5
comp=Z,2.3nm,1.2s,baz=36,slow=2.9,SNR=3.9

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*NEIC **06** 10:47:57.7, 13°.87N×93°.33W, h11km, MD3.9(MEX), After MEX.*

MEX 06 10:47:57.7±0.7, 13°.87N×93°.33W, h11km±20km, MD3.9,
Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.46**	**45**	*i* P	Pn	10 48 20.2	-3.7
THIG				*i* S	Sn	10 48 38.0	-5.0
PCIG		**1.83**	**3**	*i* P	Pn	10 48 24.9	-4.2
PCIG				*i* S	Sn	10 48 47.4	-4.8
TGIG		**2.90**	**4**	*i* P	Pn	10 48 42.2	-1.5
TGIG				*i* S	Sn	10 49 14.7	-4.0
SCX	**San Cristobal**	**2.92**	**13**	*e*P	Pn	10 48 41.7	-2.5
SCX				*i* S	Sn	10 49 15.9	-3.4
SCX	**San Cristobal**	**2.92**	**13**	*e*P	Pn	10 48 41.7	-2.5
SCX				*i* S	Sn	10 49 15.9	-3.4
HUIG	**Huatulco**	**3.29**	**305**	*e*P	Pn	10 48 46.6	-2.5
HUIG				*i* S	Sn	10 49 24.3	-3.9
HUIG	**Huatulco**	**3.29**	**305**	*e*P	Pn	10 48 46.6	-2.5
HUIG				*i* S	Sn	10 49 24.3	-3.9
VHO	**Vista Hermosa**	**4.57**	**315**	*i* P	Pn	10 49 04.7	-2.1
VHO				*i* S	Sn	10 49 56.4	-3.6
VHO	**Vista Hermosa**	**4.57**	**315**	*i* P	Pn	10 49 04.7	-2.1
VHO				*i* S	Sn	10 49 56.4	-3.6
PNIG	**Pinotepa**	**5.27**	**299**	*e*P	Pn	10 49 14.7	-1.7
PNIG				*i* S	Sn	10 50 14.3	-2.8
PNIG	**Pinotepa**	**5.27**	**299**	*e*P	Pn	10 49 14.7	-1.7
PNIG				*i* S	Sn	10 50 14.3	-2.8
UTMO	**Huajuapan**	**5.84**	**313**	*i* P	Pn	10 49 22.8	-1.4
UTMO				*i* S	Sn	10 50 31.6	+0.4

PPM	**Popocatepetl**	**7.25 316**	*e*P	Pn	10 49 39.5	-4.1
PPM		*i* S	Sn		10 51 13.9	+7.9
PPM	**Popocatepetl**	**7.25 316**	*e*P	Pn	10 49 39.5	-4.1
PPM		*i* S	Sn		10 51 13.9	+7.9

*BJI **06** 10:58:58.1, 43.°14N×81.°63E, h15km, ML2.9/6*
NNC 06 10:58:54.7±4.2, 43.°69N×81.°11E, h0km, mb3.7, mpv3.4, 7C-2D, Error ellipse: s-maj=59.0km s-min=15.5km az=138.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**3.21**	**15**	⇑Pn	Pn	10 59 48.3	+1.9
	3.7nm,0.3s,baz=37,slow=62,SNR=234						
MK31				⇑Lg		11 00 39.3	
	13nm,0.5s						
TKM2	**Tokmak 2**	**4.10**	**261**	⇑Pn	Pn	11 00 01.1	+2.5
	2.1nm,0.5s						
TKM2				⇑Pg	Pg	11 00 07.8	-5.4
	5.6nm,0.4s						
TKM2				⇓Lg		11 01 01.1	
	18nm,0.6s						
KURK	**Kurchatov**	**7.23**	**347**	⇑Pn	Pn	11 00 41.5	0.0
	1.6nm,1.0s						
KURK				⇑Lg		11 02 43.8	
	11nm,1.1s						
KK31	**Karatay Array**	**7.74**	**269**	⇑Pg	Pg	11 01 16.9	-6.1
	1.6nm,0.6s,baz=74,slow=15,SNR=8.3						
KK31				⇓Lg		11 02 57.8	
	3.3nm,0.6s,baz=74,slow=27,SNR=4.3						

*ISCJB **06** 11:08:29.8±0.5, 39.°83N±0.°02×25.°57E±0.°02, h1km±4km, Error ellipse: s-maj=3.7km s-min=2.7km az=20.9*
*ATH **06** 11:08:30.4, 39.°83N×25.°61E, h21km±2km, MD3.4/6*
*CSEM **06** 11:08:30.2±0.1, 39.°82N×25.°54E, h2km, MD3.4, Error ellipse: s-maj=3.5km s-min=3.0km az=16.0*
*DDA **06** 11:08:30.4, 39.°80N×25.°63E, h22km±1km, Md3.4*
*NEIC **06** 11:08:30.6, 39.°82N×25.°61E, h19km, MD3.4(ATH), After ATH.*
*THE **06** 11:08:31.0, 39.°83N×25.°61E, h11km±1km, ML3.5/7, Error ellipse: s-maj=2.1km s-min=1.0km az=212.0*
*ISK **06** 11:08:32.4, 39.°88N×25.°80E, h4km, MD3.4*
ISC 06 11:08:30.2±0.5, 39.°83N±0.°02×25.°53E±0.°02, h4km±3km, n111, σ0°99/145, 5D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIA	**Limnos Island**	**0.28**	**284**	⇓*i*P	**Pg**	**11 08 37.9**	**+2.3**
LIA				*e*Sb	**Sg**	**11 08 42.8**	**+3.5**
LIA	**Limnos Island**	**0.28**	**284**	⇓*i*PB	**Pg**	**11 08 37.9**	**+2.3**
LIA				*e*SB	**Sg**	**11 08 42.8**	**+3.5**
LIA	**Limnos Island**	**0.28**	**284**	P	**Pg**	**11 08 37.8**	**+2.2**
LIA				S	**Sg**	**11 08 42.9**	**+3.6**
LIA	**Limnos Island**	**0.28**	**284**	P	**Pg**	**11 08 37.8**	**+2.2**
LIA				S	**Sg**	**11 08 42.9**	**+3.6**
BOZC	**Bozcaada**	**0.40**	**88**	*i* P	**Pg**	**11 08 37.6**	**-0.3**
BOZC				*i* S	**Sg**	**11 08 42.7**	**-0.4**
GADA	**Gvkgeada**	**0.46**	**38**	*e*PG	**Pg**	**11 08 39.5**	**+0.5**
GADA	**Gvkgeada**	**0.46**	**38**	*e*Pg	**Pg**	**11 08 39.5**	**+0.5**
EZN	**Ezine**	**0.61**	**90**	*e*PG	**Pg**	**11 08 41.1**	**-0.8**
EZN	**Ezine**	**0.61**	**90**	*e*Pg	**Pg**	**11 08 41.1**	**-0.8**
PRK	**Paraskevi**	**0.81**	**135**	*e*Pn	**Pn**	**11 08 45.6**	**-2.8**
PRK				*e*Sn	**Sg**	**11 08 56.2**	**-0.2**
PRK	**Paraskevi**	**0.81**	**135**	*e*PN	**Pn**	**11 08 45.6**	**-2.8**
PRK				*e*SN	**Sg**	**11 08 56.2**	**-0.2**
PRK	**Paraskevi**	**0.81**	**135**	P	**Pg**	**11 08 45.4**	**-0.5**
PRK				S	**Sg**	**11 08 56.2**	**-0.2**
PRK	**Paraskevi**	**0.81**	**135**	P	**Pg**	**11 08 45.4**	**-0.5**
PRK				S	**Sg**	**11 08 56.2**	**-0.2**
GELI	**Tayfur-Gelibol**	**0.92**	**51**	*e*PG	**Pg**	**11 08 47.2**	**-0.6**
GELI	**Tayfur-Gelibol**	**0.92**	**51**	*e*Pg	**Pg**	**11 08 47.2**	**-0.6**
ENEZ	**Enez**	**1.02**	**27**	*e*PG	**Pg**	**11 08 50.0**	**+0.2**
ENEZ	**Enez**	**1.02**	**27**	*e*Pg	**Pg**	**11 08 50.0**	**+0.2**
AYVA	**Ayvalik**	**1.03**	**120**	*i* P	**Pg**	**11 08 50.4**	**+0.3**
AYVA				*i* S	**Sg**	**11 09 05.1**	**+1.6**
AYVA	**Ayvalik**	**1.03**	**120**	*i* P	**Pg**	**11 08 50.4**	**+0.3**
AYVA				*i* S	**Sg**	**11 09 05.1**	**+1.6**
LPK	**Lapseki**	**1.09**	**60**	*e*PG	**Pg**	**11 08 50.0**	**-1.1**
LPK	**Lapseki**	**1.09**	**60**	*e*Pg	**Pg**	**11 08 50.0**	**-1.1**
ERIK	**Erikli-Kesan**	**1.13**	**41**	*e*PG	**Pg**	**11 08 51.5**	**-0.3**
ERIK				*e*SG	**Sg**	**11 09 05.3**	**-1.2**
ERIK	**Erikli-Kesan**	**1.13**	**41**	*e*Pg	**Pg**	**11 08 51.6**	**-0.2**
ERIK				*e*Sg	**Sg**	**11 09 05.3**	**-1.1**
ALN	**Alexandroupoli**	**1.14**	**20**	*e*Pn	**Pn**	**11 08 52.1**	**-0.8**
ALN				*e*Sn	**Sn**	**11 09 08.1**	**-0.8**
ALN	**Alexandroupoli**	**1.14**	**20**	*e*PN	**Pn**	**11 08 52.1**	**-0.8**
ALN				*e*SN	**Sn**	**11 09 07.1**	**-1.8**
ALN	**Alexandroupoli**	**1.14**	**20**	P	**Pg**	**11 08 51.9**	**-0.1**
ALN				S	**Sg**	**11 09 07.7**	**+0.9**
ALN	**Alexandroupoli**	**1.14**	**20**	P	**Pg**	**11 08 51.9**	**-0.1**
ALN				S	**Sg**	**11 09 07.7**	**+0.9**
ALN				*e*Sn	**Sn**	**11 09 08.1**	**-0.8**
OUR	**Ouranopolis**	**1.29**	**293**	P	**Pg**	**11 08 54.0**	**-1.0**
OUR				S	**Sg**	**11 09 12.2**	**+0.4**
OUR	**Ouranopolis**	**1.29**	**293**	P	**Pg**	**11 08 54.0**	**-1.0**
OUR				S	**Sg**	**11 09 12.2**	**+0.4**
RDO	**Rodhopi**	**1.31**	**0**	*e*Pb	**Pn**	**11 08 54.5**	**-0.8**
RDO	**Rodhopi**	**1.31**	**0**	*e*PN	**Pn**	**11 08 54.5**	**-0.8**
RDO	**Rodhopi**	**1.31**	**0**	*e*Pb	**Pn**	**11 08 54.5**	**-0.8**
KAVA	**Kavala**	**1.40**	**327**	P	**Pn**	**11 08 56.5**	**0.0**
KAVA				S	**Sb**	**11 09 14.8**	**-0.4**
KAVA	**Kavala**	**1.40**	**327**	P	**Pn**	**11 08 56.5**	**0.0**
KAVA				S	**Sb**	**11 09 14.8**	**-0.4**
PAIG	**Paliouri**	**1.43**	**275**	P	**Pn**	**11 08 56.9**	**0.0**
PAIG				S	**Sb**	**11 09 16.9**	**+0.9**
PAIG	**Paliouri**	**1.43**	**275**	P	**Pn**	**11 08 56.9**	**0.0**
PAIG				S	**Sb**	**11 09 16.9**	**+0.9**
AOS	**Alonnisos**	**1.44**	**243**	P	**Pn**	**11 08 58.3**	**+1.3**
AOS	**Alonnisos**	**1.44**	**243**	P	**Pn**	**11 08 58.3**	**+1.3**
KRBG	**Karabiga-Canak**	**1.47**	**67**	*e*PN	**Pn**	**11 08 56.6**	**-0.8**
KRBG	**Karabiga-Canak**	**1.47**	**67**	*e*Pn	**Pn**	**11 08 56.6**	**-0.8**
CHOS	**Chios island**	**1.50**	**164**	*e*PN	**Pn**	**11 08 57.1**	**-0.7**
CHOS	**Chios island**	**1.50**	**164**	P	**Pn**	**11 08 56.8**	**-1.0**
CHOS				S	**Sn**	**11 09 16.7**	**-1.0**
CHOS	**Chios island**	**1.50**	**164**	P	**Pn**	**11 08 56.8**	**-1.0**
CHOS	**Chios island**	**1.50**	**164**	*e*Pb	**Pn**	**11 08 57.1**	**-0.7**
CHOS				S	**Sn**	**11 09 16.7**	**-1.0**
RKY	**Sarkoy-Tekirda**	**1.52**	**55**	*e*PN	**Pn**	**11 08 57.7**	**-0.4**
RKY	**Sarkoy-Tekirda**	**1.52**	**55**	*e*Pn	**Pn**	**11 08 57.7**	**-0.5**
SART	**Tekirdag**	**1.52**	**55**	*i* P	**Pn**	**11 08 58.0**	**-0.2**
SART				*i* S	**Sn**	**11 09 19.5**	**+1.1**
SART	**Tekirdag**	**1.52**	**55**	*i* P	**Pn**	**11 08 58.0**	**-0.2**
SART				*i* S	**Sn**	**11 09 19.5**	**+1.1**
BALY	**Balya**	**1.61**	**93**	*i* P	**Pn**	**11 08 58.8**	**-0.5**
BALY				*i* S	**Sn**	**11 09 19.0**	**-1.5**
BALY	**Balya**	**1.61**	**93**	*i* P	**Pn**	**11 08 58.8**	**-0.6**
BALY				*i* S	**Sn**	**11 09 19.0**	**-1.5**
MFT	**Murefte**	**1.64**	**54**	*e*PN	**Pn**	**11 08 59.8**	**0.0**
MFT	**Murefte**	**1.64**	**54**	*e*Pn	**Pn**	**11 08 59.8**	**0.0**
GONE	**Gonen-Balikesi**	**1.67**	**82**	*e*PN	**Pn**	**11 08 59.5**	**-0.7**
GONE	**Gonen-Balikesi**	**1.67**	**82**	*e*Pn	**Pn**	**11 08 59.5**	**-0.7**
URLA	**Izmir**	**1.68**	**150**	*i* P	**Pn**	**11 08 59.4**	**-1.0**
URLA				*i* S	**Sn**	**11 09 20.4**	**-2.0**
URLA	**Izmir**	**1.68**	**150**	*i* P	**Pn**	**11 08 59.4**	**-1.0**
URLA				*i* S	**Sn**	**11 09 20.4**	**-2.0**
PLG	**Polygyros**	**1.69**	**289**	*e*Pb	**Pb**	**11 09 00.6**	**-1.3**
PLG	**Polygyros**	**1.69**	**289**	*e*PB	**Pb**	**11 09 00.6**	**-1.3**
PLG	**Polygyros**	**1.69**	**289**	P	**Pn**	**11 09 01.2**	**+0.7**
PLG	**Polygyros**	**1.69**	**289**	*e*Pb	**Pb**	**11 09 00.6**	**-1.3**
PLG	**Polygyros**	**1.69**	**289**	P	**Pn**	**11 09 01.2**	**+0.7**
BALB	**Balikesir**	**1.82**	**95**	*e*PN	**Pn**	**11 09 02.6**	**+0.3**
BALB	**Balikesir**	**1.82**	**95**	*e*Pn	**Pn**	**11 09 02.6**	**+0.4**
BLCB	**Balcova**	**1.86**	**140**	*e*PN	**Pn**	**11 09 04.6**	**+1.8**
BLCB	**Balcova**	**1.86**	**140**	*e*Pn	**Pn**	**11 09 04.6**	**+1.8**
BNT	**Bandirma**	**1.90**	**73**	*e*PN	**Pn**	**11 09 03.4**	**0.0**
SOH	**Sokhos**	**1.94**	**301**	*e*Pb	**Pb**	**11 09 04.7**	**-1.4**
SOH	**Sokhos**	**1.94**	**301**	*e*PB	**Pb**	**11 09 04.7**	**-1.4**
SOH	**Sokhos**	**1.94**	**301**	*e*Pb	**Pb**	**11 09 04.7**	**-1.4**
IZM	**Izmir**	**1.96**	**136**	*e*PN	**Pn**	**11 09 05.9**	**+1.7**
IZM	**Izmir**	**1.96**	**136**	*e*Pn	**Pn**	**11 09 05.9**	**+1.7**
NVR	**Nevrokopi**	**1.98**	**321**	⇓*i*Pb	**Pb**	**11 09 05.2**	**-1.6**
NVR	**Nevrokopi**	**1.98**	**321**	⇓*i*PB	**Pb**	**11 09 05.2**	**-1.6**
NVR	**Nevrokopi**	**1.98**	**321**	⇓*i*Pb	**Pb**	**11 09 05.2**	**-1.6**
AKHS	**Akhisar**	**2.01**	**118**	*i* P	**Pn**	**11 09 04.6**	**-0.2**
AKHS	**Akhisar**	**2.01**	**118**	*i* P	**Pn**	**11 09 04.6**	**-0.2**
AKS	**Akhisar**	**2.01**	**118**	*e*PN	**Pn**	**11 09 05.8**	**+0.9**
AKS	**Akhisar**	**2.01**	**118**	*e*Pn	**Pn**	**11 09 05.8**	**+1.0**
EDRB	**Edirne**	**2.21**	**24**	*e*PN	**Pn**	**11 09 09.3**	**+1.6**
EDRB	**Edirne**	**2.21**	**24**	*e*Pn	**Pn**	**11 09 09.3**	**+1.6**
DURS	**Dursunbey**	**2.28**	**95**	*i* P	**Pn**	**11 09 07.6**	**-1.0**
DURS				*i* S	**Sn**	**11 09 37.3**	**+0.2**
DURS	**Dursunbey**	**2.28**	**95**	*i* P	**Pn**	**11 09 07.6**	**-1.0**
DURS				*i* S	**Sn**	**11 09 37.3**	**+0.2**
LKR	**Lokris**	**2.29**	**240**	*e*Pb	**Pb**	**11 09 11.5**	**-0.6**
LKR	**Lokris**	**2.29**	**240**	*e*PB	**Pb**	**11 09 10.5**	**-1.6**
LKR	**Lokris**	**2.29**	**240**	*e*Pb	**Pb**	**11 09 11.5**	**-0.6**
PLD	**Plovdiv**	**2.36**	**345**	P	**Pn**	**11 09 15.7**	**+6.0**
SLVT	**Silivri**	**2.47**	**55**	*e*PN	**Pn**	**11 09 12.0**	**+0.7**
SLVT	**Silivri**	**2.47**	**55**	*e*Pn	**Pn**	**11 09 12.0**	**+0.8**
DEMI	**Demirci**	**2.59**	**107**	*i* P	**Pn**	**11 09 12.8**	**0.0**
DEMI	**Demirci**	**2.59**	**107**	*i* P	**Pn**	**11 09 12.8**	**0.0**
ARMT	**Armutlu**	**2.65**	**73**	*e*PN	**Pn**	**11 09 14.4**	**+0.7**
ARMT	**Armutlu**	**2.65**	**73**	*e*Pn	**Pn**	**11 09 14.4**	**+0.7**
CTKS	**Kestanelik-??a**	**2.67**	**57**	*e*PN	**Pn**	**11 09 14.6**	**+0.7**
CTKS	**Kestanelik-??a**	**2.67**	**57**	*e*Pn	**Pn**	**11 09 14.6**	**+0.7**
APE	**Apeiranthos**	**2.76**	**180**	*e*PN	**Pn**	**11 09 19.3**	**+4.2**
KULA	**Kula-Manisa**	**2.76**	**117**	*e*PN	**Pn**	**11 09 16.5**	**+1.3**
KULA	**Kula-Manisa**	**2.76**	**117**	*e*Pn	**Pn**	**11 09 16.5**	**+1.3**
GEMT	**Gemlik**	**2.87**	**77**	*e*PN	**Pn**	**11 09 17.3**	**+0.7**
GEMT	**Gemlik**	**2.87**	**77**	*e*Pn	**Pn**	**11 09 17.3**	**+0.7**
ISK	**Istanbul-Kandi**	**2.96**	**64**	*e*PN	**Pn**	**11 09 18.8**	**+0.8**
ISK	**Istanbul-Kandi**	**2.96**	**64**	*e*Pn	**Pn**	**11 09 18.8**	**+0.9**
YLV	**Yalova**	**3.03**	**75**	*e*PN	**Pn**	**11 09 19.8**	**+0.9**
YLV	**Yalova**	**3.03**	**75**	*e*Pn	**Pn**	**11 09 19.8**	**+0.9**
ADVT	**Abdulvahap**	**3.28**	**78**	*e*PN	**Pn**	**11 09 23.2**	**+0.9**
ADVT	**Abdulvahap**	**3.28**	**78**	*e*Pn	**Pn**	**11 09 23.2**	**+0.9**
HRT	**Hereke**	**3.31**	**71**	*e*PN	**Pn**	**11 09 23.7**	**+0.9**
HRT	**Hereke**	**3.31**	**71**	*e*Pn	**Pn**	**11 09 23.7**	**+0.9**
ALT	**Altintas**	**3.63**	**101**	*e*PN	**Pn**	**11 09 27.9**	**+0.8**
ALT	**Altintas**	**3.63**	**101**	*e*Pn	**Pn**	**11 09 27.9**	**+0.8**
GULT	**Gulveren**	**3.87**	**79**	*e*PN	**Pn**	**11 09 31.5**	**+1.1**
GULT	**Gulveren**	**3.87**	**79**	*e*Pn	**Pn**	**11 09 31.5**	**+1.1**

DJA 06 11:16:08, 3.°57S×127.°21E, h2km, MLv3.5/6, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.35**	**341**	P	Pg	11 16 15.3	+0.6
NLAI				S	Sg	11 16 19.5	+0.3
AAI	**Ambon**	**0.99**	**97**	P	Pg	11 16 26.6	-0.4
AAI				S	Sg	11 16 40.3	+0.5
LBMI	**Labuha**	**2.93**	**6**	P	Pn	11 16 56.9	+1.3
LBMI				S	Sn	11 17 32.7	+1.3
TNTI	**Ternate**	**4.32**	**2**	P	Pn	11 17 14.6	-0.1
KDI	**Kendari**	**4.60**	**265**	P	Pn	11 17 18.0	-0.6

*ISCJB **06** 11:22:30.6±0.5, 15.°96N±0.°06×145.°52E±0.°08, h522km±7km, mb3.9/28, Error ellipse: s-maj=12.1km s-min=9.7km az=165.8*
*IDC **06** 11:22:31.3±1.2, 15.°98N×145.°64E, h520km±14km, mb3.3/17, mb1 3.5/20, mb1mx3.4/29, mbtmp3.4/20, Error ellipse: s-maj=16.9km s-min=9.1km az=87.0*
*NEIC **06** 11:22:31.5±0.8, 15.°92N×145.°62E, h527km±10km, mb4.1/10, Error ellipse: s-maj=14.7km s-min=10.1km az=93.0*
ISC 06 11:22:31.1±0.5, 15.°95N±0.°06×145.°61E±0.°08, h516km±7km, n100, σ0°76/96, mb3.9/28, 21C-34D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.46**	**197**	P	**P**	**11 23 40.3**	**+0.1**
	39nm,0.3s,baz=311,slow=3.4,SNR=16						
GUMO				S	**S**	**11 24 35.2**	**-1.0**
	38nm,0.3s,baz=323,slow=23,SNR=12						
GUMO	**Guam**	**2.46**	**197**	*e*Pn	**P**	**11 23 40.0**	**-0.2**
GUMO				*e*S	**S**	**11 24 36.1**	**-0.1**
CBIJ	**Chichi jima**	**11.53**	**345**	P	**P**	**11 25 05.4**	**+0.7**
	5.4nm,0.3s,baz=287,slow=23,SNR=11						
CBIJ				S	**S**	**11 27 19.9**	**+8.8**
	1.6nm,0.3s,baz=287,slow=19,SNR=2.0						
JHJ	**Hachijo jima 2**	**17.89**	**344**	P	**P**	**11 26 07.5**	**-2.0**
	4.6nm,0.3s,baz=93,slow=20,SNR=16						
MJAR	**Matsushiro Arr**	**21.54**	**344**	P	**P**	**11 26 42.6**	**-0.1**
	1.3nm,0.4s,mb3.9,baz=168,slow=10,SNR=11						
MAJO	**Matsushiro**	**21.54**	**344**	*e*P	**P**	**11 26 44.4**	**+1.7**
	4.8nm,0.4s,mb4.5						
MAT	**Matsushiro**	**21.54**	**344**	P	**P**	**11 26 43.8**	**+1.1**
KSRS	**Korea Array**	**26.52**	**327**	P	**P**	**11 27 26.9**	**0.0**
	0.8nm,0.4s,mb3.7,baz=151,slow=9.3,SNR=6.5						
CTA	**Charters Tower**	**35.82**	**179**	P	**P**	**11 28 47.3**	**+0.4**
	1.4nm,0.4s,mb3.8,baz=0.0,slow=12,SNR=3.0						
WRAB	**Tennant Creek**	**37.34**	**198**	*e*P	**P**	**11 28 59.3**	**-0.2**
	3.9nm,0.4s,mb4.3						
WRA	**Warramunga Arr**	**37.35**	**198**	P	**P**	**11 28 59.7**	**+0.1**
	2.2nm,0.4s,mb4.1,baz=19,slow=8.3,SNR=58						
WRA	**Warramunga Arr**	**37.35**	**198**	P	**P**	**11 28 59.7**	**+0.1**
FITZ	**Fitzroy Crossi**	**39.14**	**211**	P	**P**	**11 29 14.3**	**+0.2**
	1.8nm,0.8s,mb3.7,baz=179,slow=5.1,SNR=7.0						
ASAR	**Alice Springs**	**41.00**	**196**	P	**P**	**11 29 28.9**	**-0.1**
	1.0nm,0.5s,mb3.6,baz=22,slow=5.8,SNR=14						
ASAR				PcP	PcP	11 31 16.5	-0.3
	0.5nm,0.6s,baz=21,slow=3.5,SNR=4.3						
CMAR	**Chiang Mai Arr**	**44.55**	**280**	P	**P**	**11 29 58.0**	**+1.0**
	0.3nm,0.4s,mb3.2,baz=66,slow=8.0,SNR=4.4						
SONM	**Songino Array**	**45.25**	**323**	P	**P**	**11 30 03.6**	**+1.7**
	0.3nm,0.3s,mb3.2,baz=129,slow=6.0,SNR=3.1						
SONM				PcP	PcP	11 31 30.8	-0.2
	0.7nm,0.6s,baz=129,slow=3.9,SNR=4.1						
ZALV	**Zalesovo Beam**	**60.14**	**323**	P	**P**	**11 31 47.1**	**-1.2**
	0.9nm,0.3s,mb3.5,baz=108,slow=7.0,SNR=4.0						
MKAR	**Makanchi Array**	**60.31**	**315**	P	**P**	**11 31 50.1**	**+0.5**
	1.5nm,0.3s,mb3.7,baz=91,slow=8.3,SNR=41						
MKAR				PcP	PcP	11 32 27.9	-0.6
	0.6nm,0.5s,baz=87,slow=5.9,SNR=4.5						
KDAK	**Kodiak Island**	**61.70**	**32**	P	**P**	**11 31 58.5**	**0.0**
	3.2nm,0.4s,mb4.1,baz=333,slow=2.3,SNR=3.4						
KURK	**Kurchatov**	**63.26**	**319**	*e*P	**P**	**11 32 08.5**	**-0.3**
	3.4nm,0.7s,mb3.9						
BVAR	**Borovoye Array**	**68.53**	**321**	P	**P**	**11 32 41.5**	**-0.1**
	2.9nm,0.4s,mb4.2,baz=103,slow=6.7,SNR=21						
BRVK	**Borovoye**	**68.60**	**321**	*e*P	**P**	**11 32 42.2**	**+0.2**
	3.5nm,0.7s,mb4.0						
INK	**Inuvik**	**71.92**	**23**	*e*P	**P**	**11 33 00.2**	**-1.2**
	2.7nm,0.8s,mb3.7						
YKA	**Yellowknife Ar**	**80.44**	**28**	P	**P**	**11 33 47.9**	**-0.7**
	1.7nm,0.5s,mb3.6,baz=287,slow=5.1,SNR=14						
B08A	**Colville Reser**	**81.55**	**42**	⇓P	**P**	**11 33 54.3**	**-0.2**
	baz=80						
K05A	**Summer Lake**	**81.87**	**48**	⇓P	**P**	**11 33 56.7**	**+0.4**
	baz=80						
D08A	**Wollman Farm,**	**82.15**	**43**	⇑P	**P**	**11 33 57.7**	**0.0**
	baz=81						
BEKR	**Beckworth**	**82.97**	**51**	⇓P	**P**	**11 34 01.9**	**-0.1**
	baz=82						
NEW	**Newport**	**83.00**	**42**	*e*P	**P**	**11 34 01.9**	**-0.1**
	2.1nm,0.5s,mb3.9						
G09A	**Cove**	**83.38**	**45**	⇓P	**P**	**11 34 04.0**	**+0.1**
	baz=82						
G10A	**Bishop Farm, J**	**83.83**	**45**	⇑P	**P**	**11 34 04.6**	**-1.5**
	baz=82						
H10A	**Noah's Angus R**	**84.28**	**45**	⇓P	**P**	**11 34 07.1**	**-1.2**
	baz=83,SNR=5.2						
F11A	**Grangeville**	**84.31**	**44**	⇓P	**P**	**11 34 07.5**	**-1.0**
	baz=83						
G11A	**Walters Elk Ra**	**84.37**	**44**	⇓P	**P**	**11 34 07.3**	**-1.5**
	baz=83,SNR=6.9						
D12A	**Red Ives Fores**	**84.49**	**43**	⇓P	**P**	**11 34 09.2**	**-0.2**
	baz=83						
E12A	**Beaver Dam Sad**	**84.54**	**43**	⇓P	**P**	**11 34 09.6**	**-0.1**
	baz=83						
BSMT	**Bassoo Peak**	**84.62**	**42**	*e*P	**P**	**11 34 10.3**	**+0.4**
	4.6nm,0.9s,mb4.0						
K10A	**MacKenzie Ranc**	**84.72**	**47**	P	**P**	**11 34 10.9**	**+0.4**
	baz=83,SNR=7.9						
H11A	**Donnelly**	**84.75**	**45**	⇓P	**P**	**11 34 10.2**	**-0.5**
	baz=83,SNR=6.1						
NVAR	**Mina Array Bea**	**84.90**	**52**	P	**P**	**11 34 12.1**	**+0.5**
	1.8nm,0.6s,mb3.8,baz=271,slow=5.7,SNR=22						
NVAR	**Mina Array Bea**	**84.90**	**52**	P	**P**	**11 34 12.1**	**+0.5**
I11A	**Placerville**	**85.02**	**46**	⇓P	**P**	**11 34 11.4**	**-0.6**
	baz=84,SNR=5.7						
ARCES	**ARCESS Array B**	**85.07**	**342**	P	**P**	**11 34 10.8**	**-0.9**
	0.8nm,0.4s,mb3.6,baz=81,slow=7.5,SNR=8.4						
G12A	**Big Creek, Yel**	**85.09**	**45**	⇓P	**P**	**11 34 11.5**	**-0.9**
	baz=84						
MFID	**Camas Ranch**	**85.26**	**46**	⇑P	**P**	**11 34 12.9**	**-0.3**
	baz=84,SNR=13						
K11A	**Parker Ranch,**	**85.31**	**47**	⇑P	**P**	**11 34 12.5**	**-1.0**
	baz=84						
I12A	**Atlanta**	**85.62**	**46**	P	**P**	**11 34 15.2**	**+0.3**
	baz=84,SNR=7.1						
L11A	**Cat Creek Ranc**	**85.68**	**47**	⇓P	**P**	**11 34 14.4**	**-0.9**
	baz=84						
G13A	**Cobalt**	**85.84**	**44**	P	**P**	**11 34 15.9**	**0.0**
	baz=84,SNR=8.1						
H13A	**Challis**	**85.99**	**45**	⇑P	**P**	**11 34 16.5**	**-0.2**
	baz=85						
K12A	**Draper Farm, C**	**86.14**	**47**	⇑P	**P**	**11 34 17.8**	**+0.4**
	baz=85						
HLID	**Hailey**	**86.19**	**46**	⇓P	**P**	**11 34 18.1**	**+0.4**
	baz=85,SNR=6.9						
HLID	**Hailey**	**86.19**	**46**	*e*P	**P**	**11 34 17.8**	**+0.1**
	3.0nm,1.0s,mb3.9						
MPMC	**Manual Prospec**	**86.19**	**54**	⇑P	**P**	**11 34 18.0**	**+0.2**
	baz=85						
L12A	**House Creek Ra**	**86.21**	**47**	⇑P	**P**	**11 34 17.7**	**-0.1**
	baz=85,SNR=6.6						
I13A	**Wildhorse Cree**	**86.29**	**45**	⇓P	**P**	**11 34 17.7**	**-0.4**
	baz=85						
S10A	**Tonopah Range,**	**86.33**	**52**	⇑P	**P**	**11 34 19.1**	**+0.7**
	baz=85,SNR=6.5						
J13A	**Cove Ranch, Pi**	**86.41**	**46**	⇑P	**P**	**11 34 18.7**	**0.0**
	baz=85,SNR=5.9						
JOF	**Joensuu**	**86.46**	**335**	*e*p	**P**	**11 34 15.6**	**-2.9**
	2.7nm,0.5s,mb4.1						
M12A	**Wells**	**86.51**	**48**	⇓P	**P**	**11 34 19.5**	**+0.2**
	baz=85						
J14A	**Carey**	**86.89**	**46**	⇓P	**P**	**11 34 22.1**	**+1.1**
	baz=86						
O12A	**Currie**	**86.99**	**49**	⇑P	**P**	**11 34 22.1**	**+0.6**
	baz=86						
M13A	**Montello**	**87.06**	**48**	⇓P	**P**	**11 34 22.3**	**+0.5**
	baz=86						
HEC	**Hector,Ludlow**	**87.46**	**55**	⇑P	**P**	**11 34 23.7**	**-0.1**
	baz=86						
J15A	**Blackfoot**	**87.61**	**46**	⇓P	**P**	**11 34 25.5**	**+1.2**
	baz=86						
R12A	**Pony Springs,**	**87.70**	**51**	⇓P	**P**	**11 34 25.6**	**+0.7**
	baz=86						
K15A	**Arbon**	**87.78**	**46**	⇓P	**P**	**11 34 25.2**	**+0.1**
	baz=86						
V11A	**Goodsprings**	**87.85**	**53**	⇓P	**P**	**11 34 26.2**	**+0.5**
	baz=87						
BELC	**Belle Mtn. Jos**	**87.97**	**55**	⇑P	**P**	**11 34 26.0**	**-0.2**
	baz=87						
GMRC	**Granite Mounta**	**88.00**	**54**	⇓P	**P**	**11 34 26.9**	**+0.5**
	baz=87						
I16A	**Newdale**	**88.09**	**45**	⇓P	**P**	**11 34 27.7**	**+1.1**
	baz=87						
J16A	**Bone**	**88.22**	**45**	⇓P	**P**	**11 34 27.6**	**+0.5**
	baz=87						
V12A	**Nelson**	**88.34**	**53**	⇓P	**P**	**11 34 28.2**	**+0.3**
	baz=87						
**D

JTS	JuntasAbangare	6.34	130	P	Pn	11 24 23.3	-0.4
	comp=Z,4.4nm,0.3s,baz=315,slow=20,SNR=32						
JTS				S	S	11 25 30.9	-6.5
	comp=Z,7.2nm,0.3s,baz=298,slow=21,SNR=11						
JTS	JuntasAbangare	6.34	130	P	Pn	11 24 23.3	-0.4
JTS				S	S	11 25 30.9	-6.5
NATX	Nacogdoches	17.80	347	eP	P	11 26 42.1	-0.2
	comp=Z,9.8nm,0.3s						
OTAV	Otavalo	18.08	140	eP	P	11 26 47.6	+2.0
	comp=Z,1.7nm,0.6s						
JCT	Junction City	18.40	332	eP	P	11 26 48.5	-0.3
	comp=Z,11nm,0.6s						
LRAL	Lakeview Retre	18.71	8	eP	P	11 26 53.2	+1.1
	comp=Z,6.4nm,1.0s						
628A	Black Gap, Mar	19.21	323	⇓P	P	11 26 58.0	+0.4
	baz=19						
627A	Terlingua Ranc	19.48	322	⇓P	P	11 27 01.1	+0.6
	baz=20,SNR=12						
TXAR	Lajitas Array	19.55	322	P	P	11 26 59.7	-1.6
	comp=Z,0.3nm,0.3s,baz=142,slow=13,SNR=26						
528A	Cox Ranch, San	19.66	325	⇓P	P	11 27 02.1	-0.3
	baz=20						
626A	Big Bend Ranch	20.00	321	⇓P	P	11 27 06.5	+0.6
	baz=20						
MIAR	Mount Ida	20.31	351	eP	P	11 27 09.2	+0.1
	comp=Z,10nm,0.8s						
526A	Mary Lane Ranc	20.33	322	⇑P	P	11 27 09.3	-0.2
	baz=20						
UALR	University of	20.38	354	eP	P	11 27 09.6	-0.4
	comp=Z,30nm,1.0s						
328A	Wristen Ranch,	20.62	327	⇑P	P	11 27 12.0	-0.6
	baz=21,SNR=9.2						
426A	McDonald Obser	20.75	324	⇑P	P	11 27 13.6	-0.3
	baz=21						
SWET	Sewanee	21.00	9	eP	P	11 27 16.0	-0.5
326A	Caldwell Ranch	21.20	325	⇓P	P	11 27 17.6	-1.0
	baz=21						
WVT	Waverly	21.69	5	eP	P	11 27 21.4	-1.8
	comp=Z,8.1nm,1.1s,mb4.2						
WMOK	Wichita Mounta	21.76	340	eP	P	11 27 22.4	-1.5
	comp=Z,3.2nm,0.9s,mb3.9						
325A	Bean Ranch, Si	21.81	323	⇓P	P	11 27 23.2	-1.1
	baz=22						
TKL	Tuckaleechee C	21.84	13	P	P	11 27 24.6	-0.1
	comp=Z,4.1nm,0.5s,mb4.2,baz=190,slow=11,SNR=10.0						
127A	Arkansas Junct	21.92	328	⇓P	P	11 27 24.5	-0.9
	baz=22						
324A	Moseley Ranch,	22.16	322	⇓P	P	11 27 26.4	-1.2
	baz=22						
126A	Clayton Basin,	22.24	327	⇓P	P	11 27 28.0	-0.3
	baz=22						
Z27A	Tatum	22.36	330	⇑P	P	11 27 27.8	-1.6
	baz=22,SNR=6.5						
125A	Gardner Draw,	22.59	326	⇑P	P	11 27 31.0	-0.5
	baz=23						
224A	Cornudas Mount	22.64	324	⇑P	P	11 27 31.7	-0.3
	baz=23						
MSTX	Muleshoe	22.69	331	⇓P	P	11 27 31.4	-1.0
	baz=23,SNR=6.1						
Y27A	Causey	22.80	330	⇓P	P	11 27 33.0	-0.4
	baz=23						
AMTX	Amarillo	22.98	335	eP	P	11 27 35.3	+0.3
	comp=Z,10nm,0.4s,mb4.7						
Z25A	Roswell	23.10	327	⇑P	P	11 27 36.0	-0.1
	baz=23,SNR=5.2						
SIUC	Southern Illin	23.20	1	eP	P	11 27 38.0	+1.0
	comp=Z,18nm,1.0s,mb4.5						
CCM	Cathedral Cave	23.57	357	eP	P	11 27 39.8	-0.5
	comp=Z,12nm,1.3s,mb4.4						
Y25A	Mesa, Roswell	23.59	328	⇑P	P	11 27 41.2	+0.6
	baz=24,SNR=5.4						
W27A	Bowe Ranch, En	23.73	332	P	P	11 27 42.0	+0.1
	baz=24,SNR=11						
WCI	Wyandotte Cave	23.92	7	eP	P	11 27 43.4	-0.1
	comp=Z,8.6nm,0.8s,mb4.4						
Y24A	Capitan	23.98	327	⇑P	P	11 27 44.2	0.0
	baz=24						
OLIL	Olney	24.26	3	eP	P	11 27 48.6	+2.0
	comp=Z,13nm,0.7s,mb4.7						
Y23A	Lovelace Mesa,	24.32	326	⇑P	P	11 27 47.0	-0.2
	baz=24,SNR=5.8						
W25A	X Bar L Ranch,	24.51	330	⇓P	P	11 27 49.3	+0.4
	baz=24						
V26A	Tequesquite Ra	24.66	332	⇑P	P	11 27 50.5	+0.2
	baz=25						
Y22A	Socorro	24.83	324	⇑P	P	11 27 53.2	+1.4
	baz=25						
V25A	Rancho No Teng	25.08	331	⇑P	P	11 27 54.2	+0.1
	baz=25,SNR=7.5						
U26A	Atchley Ranch,	25.14	333	⇓P	P	11 27 55.0	+0.4
	baz=25						
V24A	Rampart Ranch,	25.31	330	⇓P	P	11 27 56.7	+0.6
	baz=25						
U25A	Circle Dot Ran	25.45	332	⇑P	P	11 27 57.4	+0.1
	baz=26						
T25A	Trinidad	26.06	333	⇓P	P	11 28 02.6	-0.2
	baz=26						
U23A	El Rito	26.24	329	⇑P	P	11 28 05.0	+0.6
	baz=26,SNR=5.7						
S24A	Houchin Ranch,	26.83	332	⇓P	P	11 28 10.9	+1.2
	baz=27						
Q25A	Bedland, Calha	27.48	335	⇑P	P	11 28 15.7	+0.2
	baz=28						
S22A	4UR Ranch, Cre	27.67	330	⇓P	P	11 28 17.2	0.0
	baz=28						
PV04	Paradox Valley	29.20	328	eP	P	11 28 32.0	+1.3
PV10	Paradox Valley	29.26	328	eP	P	11 28 31.3	+0.1
	comp=Z,28nm,0.7s,mb5.0						
O22A	Kremmling	29.50	334	⇑P	P	11 28 33.3	+0.1
	baz=30						
ECSD	EROS Data Cent	29.77	350	eP	P	11 28 34.5	-1.1
	comp=Z,7.3nm,1.3s,mb4.2						
N22A	Wattenberg Ran	29.99	334	⇓P	P	11 28 37.9	+0.3
	baz=30						
N20A	Spence Gulch,	30.80	332	⇓P	P	11 28 45.4	+0.7
	baz=31						
P17A	Butcher Ranch,	30.96	328	⇓P	P	11 28 47.0	+0.9
	baz=31						
O18A	Roosevelt	31.18	329	⇓P	P	11 28 49.5	+1.5
	baz=31						
N19A	John Jarvie Ra	31.27	331	⇑P	P	11 28 49.5	+0.6
	baz=31						
L21A	Rawlins	31.34	334	⇓P	P	11 28 49.3	0.0
	baz=31						
SADO	Sadowa	31.59	15	P	P	11 28 50.1	-1.4
	comp=Z,1.6nm,0.4s,mb3.9,baz=240,slow=10,SNR=3.6						
RSSD	Black Hills	31.96	341	eP	P	11 28 55.3	+0.5
	comp=Z,2.3nm,0.5s,mb4.0						
PDAR	Pinedale Array	32.93	333	P	P	11 29 02.6	-0.6
	comp=Z,0.3nm,0.5s,mb3.1,baz=126,slow=13,SNR=4.5						
J18A	Kendall Valley	33.49	333	⇓P	P	11 29 09.0	+0.9
	baz=34						
J17A	Brown Place, J	33.92	332	⇑P	P	11 29 12.8	+1.1
	baz=34						
REDW	Red Top Meadow	33.98	332	eP	P	11 29 13.2	+0.9
	comp=Z,4.3nm,0.6s,mb4.2						
SNOW	Snow King Moun	34.02	332	eP	P	11 29 13.4	+0.8
	comp=Z,4.7nm,0.6s,mb4.2						
K14A	Jones Ranch, D	34.47	329	⇓P	P	11 29 16.2	-0.3
	baz=34						
NVAR	Mina Array Bea	34.66	319	P	P	11 29 19.4	+1.2
	comp=Z,0.3nm,0.7s,mb2.9,baz=173,slow=8.2,SNR=3.4						
NVAR				pP	pP	11 30 10.8	+3.9
	comp=Z,0.3nm,0.4s,baz=131,slow=8.3,SNR=3.2						
DGMT	Dagmar	35.95	344	⇑P	P	11 29 29.1	+0.2
	baz=36						
MCMT	McKenzie Canyo	36.02	332	eP	P	11 29 30.6	+0.9
	comp=Z,0.6nm,0.5s,mb3.4						
H13A	Challis	36.48	330	⇑P	P	11 29 33.2	-0.4
	baz=36						
I11A	Placerville	36.86	328	⇑P	P	11 29 37.5	+0.7
	baz=37						
LPAZ	La Paz	37.33	144	P	P	11 29 40.9	-0.1
	comp=Z,1.5nm,0.6s,mb3.7,baz=309,slow=6.1,SNR=9.4						
F12A	Elk City	37.84	331	⇓P	P	11 29 44.3	-0.6
	baz=38						
SCHQ	Schefferville	44.13	19	P	P	11 30 34.5	-1.5
	comp=Z,5.0nm,0.5s,mb4.1,baz=220,slow=5.8,SNR=12						
SCHQ	Schefferville	44.13	19	eP	P	11 30 34.6	-1.3
	comp=Z,5.7nm,0.6s,mb4.1						
YKA	Yellowknife Ar	51.10	346	P	P	11 31 28.1	-1.2
	comp=Z,0.5nm,0.4s,mb3.3,baz=131,slow=7.6,SNR=6.4						
YKA	Yellowknife Ar	51.10	346	P	P	11 31 28.1	-1.2
BJI	Beijing	120.63	337	PKP	PKPdf	11 41 15.5	+0.7
BJI				SS	SS	11 58 55.3	+0.9
BJI				LR	LR		
	comp=N,2μm,17.5s						
BJI				LR	LR		
	comp=E,2μm,14.9s						
BJI				LR	LR		
	comp=Z,940nm,13.0s						
HHC	Hu-ho-hao-te	121.52	341	ePKP	PKPdf	11 41 13.8	-2.7
HHC				PP	PP	11 42 51.1	+0.6
HHC				AMB	AMB		
	comp=Z,44nm,9.5s						
WMQ	Urumqi	122.00	2	ePKP	PKPdf	11 41 18.6	+1.3
NJ2	Nanjing	126.20	330	ePKP	PKPdf	11 41 27.7	+2.0
LZH	Lanzhou	128.11	346	ePKP	PKPdf	11 41 32.0	+2.7
LZH				sPKP		11 42 52.5	
CD2	Chengdu	133.05	344	PKP	PKPdf	11 41 39.3	+0.5

NEIC ***06*** *11:25:48.5, 35°.58N×31°.26E, h35km, MD3.7(ISK), ML3.5(NIC), After NIC.*
IDC ***06*** *11:25:48.3±3.4, 35°.46N×31°.73E, h0km, mb3.6/2, mb1 3.5/5, mb1mx3.3/23, mbtmp3.4/5, ML3.2/3, Error ellipse: s-maj=69.0km s-min=21.6km az=58.0*
NIC ***06*** *11:25:48.5±0.1, 35°.58N×31°.26E, h35km, ML3.5, MW3.5*
ISK ***06*** *11:25:50.3, 35°.30N×31°.51E, h59km, MD3.7*
ISCJB ***06*** *11:25:51.0±0.6, 35°.31N±0°.04×31°.51E±0°.05, h56km±11km, mb3.3/2, Error ellipse: s-maj=8.5km s-min=4.9km az=41.4*
CSEM ***06*** *11:25:52.3±0.2, 35°.34N×31°.51E, h40km, Mw3.5, Error ellipse: s-maj=7.0km s-min=3.8km az=32.0*

ISC 06 11:25:52.4±0.6, 35°.34N±0°.04×31°.51E±0°.05, h44km±13km, n73, σ0°84/86, mb3.3/2, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPCY	Paphos	0.82	123	P	Pn	11 26 07.8	+0.2
PPCY	Paphos	0.82	123	P	Pn	11 26 07.8	+0.2
ALFC	Alevga	0.91	101	P	Pn	11 26 08.4	-0.4
	53nm,0.2s						
ALFC				S	Sn	11 26 24.1	+3.4
ALFC	Alevga	0.91	101	P	Pn	11 26 08.4	-0.4
	53nm,0.2s						
GAZI	Gazipasa	1.11	36	*i* P	Pn	11 26 08.8	-2.7
GAZI				*i* S	Sn	11 26 19.1	-6.5
GAZI	Gazipasa	1.11	36	*i* P	Pn	11 26 08.8	-2.7
LEF	Lefka	1.15	101	*e*PN	Pn	11 26 10.5	-1.6
LEF	Lefka	1.15	101	*e*Pn	Pn	11 26 10.5	-1.6
MAMC	Mammari	1.41	96	P	Pn	11 26 15.4	-0.2
MAMC	Mammari	1.41	96	P	Pn	11 26 15.4	-0.2
CSS	Prodhromos	1.54	104	P	Pn	11 26 17.4	0.0
	4.9nm,0.6s						
CSS				S	Sn	11 26 40.1	+4.0
CSS	Prodhromos	1.54	104	P	Pn	11 26 17.4	0.0
	4.9nm,0.6s						
LFK	Lefkose	1.65	91	*e*PN	Pn	11 26 18.0	-1.0
LFK	Lefkose	1.65	91	*e*Pn	Pn	11 26 18.0	-1.0
ERMK	Ermenek	1.73	41	*i* P	Pn	11 26 19.7	-0.3
ERMK	Ermenek	1.73	41	*i* P	Pn	11 26 19.7	-0.3
ERMK				*i* S	Sn	11 26 45.6	+4.8
HDMB	Hadim	1.80	26	*e*PN	Pn	11 26 19.9	-1.2
HDMB				*e*SN	Sn	11 26 42.8	0.0
HDMB	Hadim	1.80	26	*e*Pn	Pn	11 26 19.9	-1.1
HDMB				*e*Sn	Sn	11 26 42.8	+0.1
KORT	Korkueli	1.91	331	*i* P	Pn	11 26 27.1	+4.7
KORT	Korkueli	1.91	331	*i* P	Pn	11 26 27.1	+4.7
ELL	Elmali	1.92	318	*e*PN	Pn	11 26 22.1	-0.5
ELL	Elmali	1.92	318	*e*Pn	Pn	11 26 22.1	-0.5
IKL	Isikli	1.98	62	*e*PN	Pn	11 26 22.7	-0.8
IKL				*e*SN	Sn	11 26 46.9	-0.2
IKL	Isikli	1.98	62	*e*Pn	Pn	11 26 22.7	-0.8
IKL				*e*Sn	Sn	11 26 46.9	-0.2
PHNC	Paralimni	2.09	98	P	Pn	11 26 27.7	+2.7
	8.3nm,0.9s						
PHNC				S	Sn	11 26 58.6	+8.8
SUTC	Sutluce-Ispart	2.17	349	*e*PN	Pn	11 26 26.0	-0.1
SUTC	Sutluce-Ispart	2.17	349	*e*Pn	Pn	11 26 26.0	-0.1
EREN	Erenkoy	2.18	84	*e*PN	Pn	11 26 25.7	-0.5
EREN	Erenkoy	2.18	84	*e*Pn	Pn	11 26 25.7	-0.5
BCK	Bucak	2.25	341	*e*PN	Pn	11 26 27.0	-0.1
BCK	Bucak	2.25	341	*e*Pn	Pn	11 26 27.0	-0.1
GLHS	Gihisar (BURDU	2.44	319	*e*PN	Pn	11 26 29.4	-0.4
GLHS	Gihisar (BURDU	2.44	319	*e*Pn	Pn	11 26 29.4	-0.3
KONT	Konya--Tatoy	2.69	14	*e*PN	Pn	11 26 33.3	+0.1
KONT	Konya--Tatoy	2.69	14	*e*Pn	Pn	11 26 33.3	+0.1
MERS	Mersin	2.88	57	*e*PN	Pn	11 26 35.7	-0.1
MERS	Mersin	2.88	57	*e*Pn	Pn	11 26 35.7	-0.1
LADK	Ladik-KONYA	2.94	13	*e*PN	Pn	11 26 36.8	+0.2
LADK	Ladik-KONYA	2.94	13	*e*Pn	Pn	11 26 36.8	+0.2
GULE	Gulek	3.27	53	*i* P	Pn	11 26 43.4	+2.2
GULE	Gulek	3.27	53	*i* P	Pn	11 26 43.4	+2.2
SULT	Sultanhani-AKS	3.28	29	*e*PN	Pn	11 26 41.6	+0.4
SULT	Sultanhani-AKS	3.28	29	*e*Pn	Pn	11 26 41.6	+0.3
KRTS	Karatas	3.37	67	*e*PN	Pn	11 26 42.7	+0.2
KRTS	Karatas	3.37	67	*e*Pn	Pn	11 26 42.7	+0.2
KHL	Karahalli	3.38	332	*e*PN	Pn	11 26 43.0	+0.4
KHL	Karahalli	3.38	332	*e*Pn	Pn	11 26 43.0	+0.3
KARA	Karaisali	3.45	55	*e*PN	Pn	11 26 43.9	+0.3
KARA	Karaisali	3.45	55	*e*Pn	Pn	11 26 43.9	+0.3
DAT	Datca	3.48	295	*e*PN	Pn	11 26 44.2	+0.2
DAT	Datca	3.48	295	*e*Pn	Pn	11 26 44.2	+0.2
KIZT	Kizilcal	3.55	5	*e*PN	Pn	11 26 45.5	+0.5
KIZT	Kizilcal	3.55	5	*e*Pn	Pn	11 26 45.5	+0.5
BODT	Bodrum	3.81	298	*e*PN	Pn	11 26 48.9	+0.4
BODT	Bodrum	3.81	298	*e*Pn	Pn	11 26 48.9	+0.4
MMAI	Mount Meron Ar	3.97	125	Pn	Pn	11 26 50.5	-0.4
	6.9nm,0.3s,baz=311,slow=14,SNR=10						
MMAI				Sn	Sn	11 27 35.6	-0.5
	9.4nm,0.3s,baz=308,slow=26,SNR=5.0						
KOZT	Kozan	4.08	57	*e*PN	Pn	11 26 52.6	+0.3
SVRH	Sivrihisar-ESK	4.10	0	*e*PN	Pn	11 26 53.4	+0.9
SVRH	Sivrihisar-ESK	4.10	0	*e*Pn	Pn	11 26 53.4	+0.8
BRTR	Keskin Array B	4.69	20	Pn	Pn	11 27 00.0	-0.7
	0.4nm,0.3s,baz=190,slow=15,SNR=9.4						
BRTR				Sn	Sn	11 27 59.0	+5.1
	0.3nm,0.3s,baz=186,slow=27,SNR=3.3						
BRTR	Keskin Array B	4.69	20	Pn	Pn	11 27 00.0	-0.7
BRTR				Sn	Sn	11 27 59.0	+5.1
BRTR	Keskin Array B	4.69	20	Pn	Pn	11 27 00.0	-0.7
BR131	Keskin Array S	4.70	20	*e*PN	Pn	11 26 59.8	-0.9
BR131	Keskin Array S	4.70	20	*e*Pn	Pn	11 26 59.8	-0.9
KMRS	Kahramanmaras	4.85	62	*e*PN	Pn	11 27 03.6	+0.8
KMRS	Kahramanmaras	4.85	62	*e*Pn	Pn	11 27 03.7	+0.8
GAZ	Gaziantep	4.96	67	*e*PN	Pn	11 27 04.7	+0.4
GAZ	Gaziantep	4.96	67	*e*Pn	Pn	11 27 04.7	+0.4
ASF	Jabal al Asfar	5.49	124	Pn	Pn	11 27 11.5	-0.1
	0.5nm,0.3s,baz=14,slow=8.3,SNR=3.1						
ASF				Sn	Sn	11 28 14.2	+0.8
	0.3nm,0.3s,baz=227,slow=19,SNR=1.6						
FINES	FINESS Array B	26.35	354	P	P	11 31 24.8	+0.7
	0.9nm,0.5s,mb3.5,baz=159,slow=11,SNR=7.0						
FINES	FINESS Array B	26.35	354	P	P	11 31 24.8	+0.7
MKAR	Makanchi Array	39.33	57	P	P	11 33 16.1	-1.1
	0.2nm,0.5s,mb3.1,baz=265,slow=10.0,SNR=2.5						
MKAR	Makanchi Array	39.33	57	P	P	11 33 16.1	-1.1

DJA 06 11:28:15, 1°.08N×125°.34E, h50km, MLv3.6/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	Manado	0.62	306	P	Pn	11 28 28.6	+0.9
KMSI	Cibinong	1.45	250	P	Pn	11 28 38.1	-0.7
LBMI	Labuha	2.75	128	P	Pn	11 28 57.0	+0.3
LUWI	Luwuk	3.32	231	P	Pn	11 29 04.0	-0.5
NLAI	Namlea	4.64	158	P	Pn	11 29 21.6	-1.0

NEIC ***06*** *11:37:34.8±1.1, 19°.05N×145°.12E, h397km±12km, mb4.0/4, Error ellipse: s-maj=19.3km s-min=10.5km az=79.0*
ISCJB ***06*** *11:37:35.5±1.1, 19°.05N±0°.09×145°.1E±0°.2, h418km±13km, mb3.8/21, Error ellipse: s-maj=28.0km s-min=14.3km az=170.2*
IDC ***06*** *11:37:35.7±1.6, 19°.03N×145°.09E, h403km±17km, mb3.3/14, mb1 3.4/16, mb1mx3.3/25, mbtmp3.2/16, Error ellipse: s-maj=21.5km s-min=11.7km az=75.0*

ISC 06 11:37:35.3±1.1, 19°.06N±0°.09×145°.2E±0°.2, h404km±13km, n28, σ0°96/26, mb3.8/21, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	5.45	183	P	Pn	11 39 01.2	-1.1
	1.5nm,0.3s,baz=15,slow=10,SNR=1.9						
GUMO				S	S	11 40 13.6	+0.6
	2.3nm,0.3s,baz=195,slow=20,SNR=3.2						
MJAR	Matsushiro Arr	18.45	342	P	P	11 41 23.5	-0.8
	0.3nm,0.3s,baz=138,slow=5.7,SNR=4.0						
KSRS	Korea Array	23.72	324	P	P	11 42 13.7	+0.6
	1.5nm,0.6s,mb3.6,baz=143,slow=9.4,SNR=6.6						
WRAB	Tennant Creek	40.18	196	eP	P	11 44 34.9	+0.4
	5.6nm,1.0s,mb3.9						
WRA	Warramunga Arr	40.19	196	P	P	11 44 34.4	-0.2
	1.4nm,0.7s,mb3.4,baz=17,slow=8.9,SNR=17						
SONM	Songino Array	42.54	321	P	P	11 44 54.6	+1.5
	1.8nm,0.6s,mb3.5,baz=140,slow=8.0,SNR=12						
CMAR	Chiang Mai Arr	43.66	277	P	P	11 45 03.0	+0.6
	0.6nm,0.6s,mb3.1,baz=66,slow=7.0,SNR=2.8						
ASAR	Alice Springs	43.87	195	P	P	11 45 03.8	-0.1
	0.4nm,0.7s,mb2.9,baz=23,slow=6.7,SNR=8.8						
ZALV	Zalesovo Beam	57.41	322	P	P	11 46 43.6	+0.4
	0.9nm,0.4s,mb3.4,baz=79,slow=7.7,SNR=5.9						
MKAR	Makanchi Array	57.84	314	P	P	11 46 47.5	+1.1
	1.7nm,0.6s,mb3.5,baz=88,slow=8.3,SNR=14						
MKAR				PcP	PcP	11 47 33.9	+0.2
	0.6nm,0.6s,baz=104,slow=3.4,SNR=3.9						
MKAR	Makanchi Array	57.84	314	P	P	11 46 47.5	+1.1
MKAR				PcP	PcP	11 47 33.9	+0.2
KURK	Kurchatov	60.66	318	eP	P	11 47 05.8	+0.5
	2.8nm,0.3s,mb4.2						
BVAR	Borovoye Array	65.87	320	P	P	11 47 39.6	+0.6
	3.4nm,0.5s,mb4.2,baz=87,slow=7.6,SNR=14						
ARU	Arti	72.47	324	eP	P	11 48 19.4	+0.4
	2.3nm,0.4s,mb4.1						
ABKAR	Akbulak array	72.72	317	eP	P	11 48 20.5	-0.1
	1.8nm,0.6s,mb3.8						
AKTK	Aktyubinsk	73.75	318	P	P	11 48 25.9	-0.6
AKTO	Aktyubinsk	73.75	318	P	P	11 48 25.9	-0.6
	1.0nm,0.6s,mb3.6,baz=79,slow=10,SNR=4.8						
YKA	Yellowknife Ar	77.91	28	P	P	11 48 51.2	+1.7
	0.7nm,0.6s,mb3.5,baz=289,slow=5.5,SNR=3.3						
ARCES	ARCESS Array B	81.99	342	P	P	11 49 11.1	+0.1
	1.8nm,0.6s,mb4.0,baz=80,slow=7.4,SNR=8.8						
NVAR	Mina Array Bea	83.32	52	P	P	11 49 19.6	+1.2
	0.3nm,0.5s,mb3.3,baz=272,slow=6.2,SNR=5.2						
JOF	Joensuu	83.47	335	ep	P	11 49 17.1	-1.5
	3.8nm,0.5s,mb4.4						
KAF	Kangasniemi	85.88	336	ep	P	11 49 28.1	-2.4
	2.2nm,0.6s,mb4.1						
FINES	FINESS Array B	86.34	335	P	P	11 49 31.5	-1.2
	1.6nm,0.3s,mb4.2,baz=61,slow=4.5,SNR=35						
HFS	Hagfors	91.86	338	P	P	11 49 56.8	-1.6
	1.9nm,0.8s,mb4.1,baz=132,slow=4.2,SNR=9.6						
BRTR	Keskin Array B	93.49	314	P	P	11 50 06.4	-0.1
	4.6nm,1.3s,mb4.2,baz=112,slow=4.5,SNR=3.4						
TORD	Torodi Ar. Bea	131.83	309	PKP	PKPdf	11 56 02.0	-0.1
	0.2nm,0.5s,baz=84,slow=0.9,SNR=4.2						
LPAZ	La Paz	148.19	90	PKPbc	PKPbc	11 56 37.1	+1.9
	0.9nm,0.6s,baz=270,slow=5.6,SNR=5.4						
LPAZ	La Paz	148.19	90	*e*PKPbc	PKPbc	11 56 37.0	+1.8

IDC 06 11:59:37.3±2.6, 39°.58N×51°.99E, h0km, mb3.5/4, mb1 3.6/6, mb1mx3.4/25, mbtmp3.6/6, ML3.6/2, Error ellipse: s-maj=35.7km s-min=32.0km az=112.0, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKTO	Aktyubinsk	11.66	19	Pn	Pn	12 02 23.3	-1.6
	0.4nm,0.3s,baz=206,slow=12,SNR=6.5						
AKTO				Sn	Sn	12 04 26.9	-8.8
	0.5nm,0.3s,baz=30,slow=20,SNR=4.9						
BVAR	Borovoye Array	18.43	37	P	Pn	12 03 54.2	+0.1
	0.2nm,0.3s,baz=234,slow=12,SNR=3.7						
KURK	Kurchatov	21.72	50	P	P	12 04 28.1	-1.7
	0.3nm,0.5s,baz=252,slow=11,SNR=3.7						
MKAR	Makanchi Array	23.14	62	P	P	12 04 44.6	-0.4
	1.4nm,0.9s,baz=251,slow=10,SNR=4.5						
ZALV	Zalesovo Beam	26.40	46	P	P	12 05 15.6	+0.4
	0.4nm,0.4s,baz=264,slow=7.0,SNR=3.2						
FINES	FINESS Array B	27.06	333	P	P	12 05 20.6	-0.5
	0.8nm,0.5s,baz=129,slow=11,SNR=6.7						

IDC ***06*** *12:01:27.3±0.4, 15°.31N×122°.52E, h0km, mb5.0/39, mb1 5.0/40, mb1mx5.0/42, mbtmp5.0/40, ML5.2/1, MS4.8/26, Ms1 4.8/26, ms1mx4.7/31, Error ellipse: s-maj=12.4km s-min=9.1km az=80.0*
MAN ***06*** *12:01:29, 15°.40N×122°.38E, h1km, mb5.8, ML4.9, MS5.4*
MAN INTENSITY IV - BALER AURORA; DAET CAMARINES; LABO CAMARINES NORTE; GABALDON NUEVA ECIJA; PLARIDEL BULACAN; POLILIO ISLAND; MANILA; INTENSITY III - QUEZON CITY; MAKATI CITY; TAGUIG CITY; PARANAQUE; PASIG CITY; INFANTA QUEZON; TARLAC CITY; DINGALAN AURORA.
ISCJB ***06*** *12:01:30.7±0.1, 15°.41N±0°.01×122°.45E±0°.02, h26km, mb5.3/235, MS5.0/77, Error ellipse: s-maj=

GUIM	**Jordan**	**4.75 178**	*e*P	**Pn**	**12 02 44.0 +1.8**
OCLP	**Ormoc**	**4.82 154**	*e*P	**Pn**	**12 02 49.6 +6.4**
BBP	**Basco**	**5.03 355**	*e*P	**Pn**	**12 02 44.5 -1.6**
ENPP	**El Nido**	**5.09 215**	*e*P	**Pn**	**12 02 48.0 +1.0**
LLP	**Lapu-Lapu**	**5.27 163**	*e*P	**Pn**	**12 02 48.1 -1.4**
LLP			*e*S	**Sn**	**12 03 54.1 +4.8**
MSLP	**Maasin**	**5.75 155**	*e*P	**Pn**	**12 03 01.6 +5.6**
TBP	**Tagbilaran**	**5.85 166**	*e*P	**Pn**	**12 02 59.6 +2.2**
SNPH	**Sibulan**	**6.07 172⇑**	*e*P	**Pn**	**12 03 04.9 +4.4**
PPR	**Puerto Princes**	**6.65 213⇑**	*e*P	**Pn**	**12 03 09.9 +1.4**
CGP	**Cagayan de Oro**	**7.25 162⇓**	*e*P	Px	12 03 34.7
TWG	**Pinlang**	**7.49 350**	*e*Pn	**Pn**	**12 03 17.6 -2.3**
	86nm,0.6s				
PAGZ	**Pagadian**	**7.56 173**	*e*P	**Pn**	**12 03 24.2 +3.3**
BUKP	**Musuan**	**7.91 161**	*e*P	**Pn**	**12 03 29.1 +3.4**
BATP	**Bataraza**	**7.97 215**	*e*P	**Pn**	**12 03 28.3 +1.7**
YULB	**Yu-li**	**8.02 353**	*e*Pn	**Pn**	**12 03 25.9 -1.2**
	76nm,0.7s				
YULB			*e*Sn	**Sn**	**12 04 56.1 -0.9**
TPUB	**Ta-pu**	**8.04 348**	*e*Pn	**Pn**	**12 03 26.8 -0.6**
	128nm,0.8s				
CTBH	**Cotabato--PC H**	**8.32 167⇑**	*e*P	**Pn**	**12 03 32.5 +1.1**
SSLB	**Suanglung**	**8.46 351**	*e*Pn	**Pn**	**12 03 32.0 -1.2**
	102nm,0.9s				
SSLB			*e*Sn	**Sn**	**12 05 09.5 +1.7**
NACB	**Ninganchiao**	**8.76 355**	*e*Pn	**Pn**	**12 03 36.9 -0.5**
	86nm,0.8s				
NACB			*e*Sn	**Sn**	**12 05 08.8 -6.4**
DMPH	**Davao City--Mi**	**8.80 160**	*e*P	**Pn**	**12 03 42.7 +4.8**
DAV	**Davao City (W)**	**8.84 159**	Pn	**Pn**	**12 03 35.2 -3.2**
	28nm,0.3s,baz=338,slow=8.1,SNR=2.6				
DAV			LR	LR	12 08 28.9
	comp=Z,9μm,18.9s,baz=22,slow=48				
DAV	**Davao City (W)**	**8.84 159**	P	**Pn**	**12 03 47.0 +8.6**
	6μm333nm,1.6s				
YHNB	**Yeheng**	**9.27 354**	*e*Pn	**Pn**	**12 03 44.9 +0.5**
	113nm,0.6s				
YHNB			*e*Sn	**Sn**	**12 05 22.6 -5.2**
TATO	**Taipei**	**9.57 355**	*e*Pn	**Pn**	**12 03 50.1 +1.8**
KDM	**Kudat**	**10.06 214**	P	**Pn**	**12 04 00.8 +5.6**
QZH	**Quanzhou**	**10.15 340**	*e*P	**Pn**	**12 03 54.7 -1.7**
QZH			S	**Sn**	**12 05 54.4 +5.0**
QZH			LR	LR	
	comp=N,9μm,12.4s				
QZH			LR	LR	
	comp=E,10μm,14.6s				
QZH			LR	LR	
	comp=Z,19μm,16.0s				
MYLDM	**Lahad Datu**	**10.87 201**	P	**Pn**	**12 04 11.2 +4.9**
MYLDM	**Lahad Datu**	**10.87 201**	P	**Pn**	**12 04 11.2 +5.0**
	comp=Z,3μmcomp=Z,131nm,1.6s				
SDKM	**Sandakan**	**10.98 208**	P	**Pn**	**12 04 10.7 +3.0**
KKM	**Kota Kinabalu**	**11.12 214**	P	**Pn**	**12 04 13.8 +4.0**
KKM	**Kota Kinabalu**	**11.12 214**	*e*Pn	**Pn**	**12 04 08.5 -1.2**
KKM	**Kota Kinabalu**	**11.12 214**	P	**Pn**	**12 04 13.1 +3.4**
	comp=Z,2μmcomp=Z,96nm,1.9s				
GZH	**Guangzhou**	**11.49 313**	P	**Pn**	**12 04 15.6 +0.9**
GZH			S	**Sn**	**12 06 26.3 +4.2**
GZH			LR	LR	
	comp=N,16μm,16.6s				
GZH			LR	LR	
	comp=E,16μm,16.6s				
TSM	**Tawau**	**11.91 203**	P	**Pn**	**12 04 24.8 +4.2**
SGSI	**Sangihe**	**12.04 165**	P	**Pn**	**12 04 27.2 +4.9**
QIZ	**Qiongzhong**	**12.55 288**	P	**Pn**	**12 04 29.6 +0.3**
QIZ			pP		12 04 35.5
QIZ			sP		12 04 40.5
QIZ			S	**Sn**	**12 06 46.2 -2.0**
QIZ			LR	LR	
	comp=N,8μm,18.1s				
QIZ			LR	LR	
	comp=Z,4μm,15.2s				
MNI	**Manado**	**14.07 170**	P	**Pn**	**12 04 57.0 +6.9**
	comp=Z,5μmcomp=Z,244nm,0.8s				
KMSI	**Cibinong**	**14.81 174**	P	**Pn**	**12 05 09.3 +9.1**
	comp=Z,545nm,1.1s				
MRSI	**Marisa**	**14.84 182**	P	**Pn**	**12 05 03.4 +2.9**
	comp=Z,3μmcomp=Z,118nm,2.1s				
BTM	**Bintulu**	**15.22 218**	P	**Pn**	**12 05 08.2 +2.6**
TNTI	**Ternate**	**15.33 161**	P	**Pn**	**12 05 07.0 -0.1**
	comp=Z,3μmcomp=Z,160nm,1.3s				
SSE	**Sheshan**	**15.66 356**	P	**Pn**	**12 05 10.7 -0.6**
SSE			S	**Sn**	**12 08 05.6 +1.6**
SSE			pmax	pmax	
	comp=Z,64nm,0.8s				
SSE			pmax	pmax	
	comp=Z,240nm,10.6s				
SSE			LR	LR	
	comp=N,2μm,19.0s				
SSE			LR	LR	
	comp=E,4μm,19.0s				
SSE			LR	LR	
	comp=Z,4μm,14.7s				
APSI	**Ampana**	**16.23 183**	P	**Pn**	**12 05 23.2 +4.6**
	comp=Z,6μm,1.4s				
SBUM	**Sibu**	**16.34 219**	P	**Pn**	**12 05 23.0 +3.0**
SBUM	**Sibu**	**16.34 219**	P	**Pn**	**12 05 23.1 +3.1**
	comp=Z,5μmcomp=Z,217nm,1.6s				
LUWI	**Luwuk**	**16.34 179**	P	**Pn**	**12 05 26.5 +6.4**
	comp=Z,9μmcomp=Z,359nm,1.3s				
PCI	**Palu**	**16.40 189**	P	**Pn**	**12 05 23.0 +2.1**
	comp=Z,3μmcomp=Z,133nm,1.3s				
LBMI	**Labuha**	**16.71 162**	P	**Pn**	**12 05 32.7 +8.0**
	comp=Z,3μmcomp=Z,113nm,2.6s				
WHN	**Wuhan**	**16.80 335**	P	**Pn**	**12 05 28.0 +2.3**
WHN			sP	sP	12 05 41.5 +2.7
WHN			LR	LR	
	comp=N,9μm,15.1s				
WHN			LR	LR	
	comp=E,12μm,14.3s				
WHN			LR	LR	
	comp=Z,19μm,16.8s				
NJ2	**Nanjing**	**16.89 350**	*e*P	**Pn**	**12 05 28.1 +1.2**
NJ2			pP	pP	12 05 35.9 -0.4
NJ2			sP	sP	12 05 40.5 +0.6
NJ2			PP		12 05 42.7
NJ2			S	**Sn**	**12 08 31.0 -2.9**
NJ2			sS	sS	12 08 46.0 -10
NJ2			pmax	pmax	
	comp=Z,30nm,0.5s				
NJ2			pmax	pmax	
	comp=Z,220nm,5.8s				
NJ2			LR	LR	
	comp=N,4μm,14.5s				
NJ2			LR	LR	
	comp=E,7μm,18.0s				
NJ2			LR	LR	
	comp=Z,4μm,13.7s				
KSM	**Kuching**	**18.29 222**	P	**Pn**	**12 05 45.5 +1.1**
KSM	**Kuching**	**18.29 222**	*e*P	**Pn**	**12 05 45.3 +0.9**
	comp=Z,278nm,1.7s				
KSM	**Kuching**	**18.29 222**	P	**Pn**	**12 05 47.1 +2.7**
	comp=Z,2μmcomp=Z,100nm,2.2s				
GYA	**Guiyang**	**18.36 309**	P	**Pn**	**12 05 46.0 +0.9**
GYA			pP	pP	12 05 54.2 +1.7
GYA			PP		12 06 03.8
GYA			S	**Sn**	**12 09 13.3 +3.8**
GYA			SS		12 09 33.8
GYA			pmax	pmax	
	comp=Z,20nm,1.0s				
GYA			pmax	pmax	
	comp=Z,130nm,5.4s				
GYA			LR	LR	
	comp=N,9μm,15.6s				
GYA			LR	LR	
	comp=E,4μm,15.0s				
GYA			LR	LR	
	comp=Z,3μm,15.7s				
TTSI	**Tana Toraja**	**18.51 188**	P	**Pn**	**12 05 48.6 +1.6**
	comp=Z,2μmcomp=Z,94nm,1.4s				
STKI	**Sintang**	**18.69 216**	P	**Pn**	**12 05 49.9 +0.7**
	comp=Z,91nm,1.5s				
NLAI	**Namlea**	**19.09 166**	P	**Pn**	**12 05 56.1 +2.1**
	comp=Z,81nm,1.1s				
KDI	**Kendari**	**19.23 179**	P	**Pn**	**12 05 54.3 -1.5**
	comp=Z,2μmcomp=Z,109nm,1.1s				
SPSI	**Sidrap Palu**	**19.42 188**	P	**Pn**	**12 05 57.5 -0.5**
	comp=Z,1μmcomp=Z,62nm,1.0s				
KBKI	**Kotabaru**	**19.59 199**	P	**Pn**	**12 05 58.8 -1.2**
	comp=Z,5μmcomp=Z,481nm,1.0s				
AAI	**Ambon**	**19.81 163**	P	**Pn**	**12 06 00.7 -1.9**
	comp=Z,3μmcomp=Z,102nm,0.9s				
BNSI	**Bone**	**19.81 187**	P	**Pn**	**12 06 02.8 +0.2**
	comp=Z,3μmcomp=Z,114nm,1.2s				
KAPI	**Kappang**	**20.45 188**	P	**P**	**12 06 07.6 -0.4**
	comp=Z,477nm,0.9s,SNR=6.3				
KAPI	**Kappang**	**20.45 188**	P	**P**	**12 06 05.1 -2.9**
	comp=Z,42nm,0.7s,baz=8.2,slow=7.2,SNR=14				
KAPI			LR	LR	12 16 09.2
	comp=Z,2μm,18.6s,MS4.6,baz=13,slow=43				
BKSI	**Bulukumba**	**20.71 186**	P	**P**	**12 06 10.3 -0.5**
	comp=Z,989nmcomp=Z,62nm,1.0s				
KMI	**Kunming**	**20.82 301**	P	**P**	**12 06 14.5 +2.6**
KMI			pP		12 06 23.6
KMI			sP	sP	12 06 27.6 +4.5
KMI			PP		12 06 37.4
KMI			S	**S**	**12 10 00.4 -2.6**
KMI			sS	sS	12 10 15.9 +0.8
KMI			PcP	PcP	12 10 21.7 +1.4
KMI			SS		12 10 30.7
KMI			pmax	pmax	
	comp=Z,28nm,1.3s				
KMI			pmax	pmax	
	comp=Z,390nm,5.5s				
KMI			LR	LR	
	comp=N,5μm,18.5s,MS5.1				
KMI			LR	LR	
	comp=E,4μm,15.4s,MS5.1				
KMI			LR	LR	
	comp=Z,5μm,11.6s,MS5.1				
TIA	**Tai'an**	**21.26 348**	P	**P**	**12 06 16.1 -0.4**
TIA			S	**S**	**12 10 14.6 +3.3**
TIA			pmax	pmax	
	comp=Z,100nm,1.1s,mb5.1				
TIA			LR	LR	
	comp=N,2μm,17.1s,MS4.9				
TIA			LR	LR	
	comp=E,3μm,15.3s,MS4.9				
BAKI	**Biak**	**21.32 139**	P	**P**	**12 06 17.3 -0.1**
	comp=E,3μmcomp=E,215nm,1.0s,mb5.4				
KTGM	**Kuala Trenggan**	**21.43 244**	P	**P**	**12 06 18.9 +0.3**
NST	**Nakhon Sawan**	**21.48 274**	P	**P**	**12 06 19.0 -0.1**
	comp=E,56nm,0.9s,mb4.9				
CBIJ	**Chichi jima**	**21.75 54**	P	**P**	**12 06 20.8 -1.1**
	comp=E,46nm,0.7s,mb5.0,baz=267,slow=21,SNR=4.8				
CBIJ			LR	LR	12 13 14.8
	comp=E,2μm,19.1s,MS4.6,baz=31,slow=33				
GUMO	**Guam**	**21.80 92**	*e*P	**P**	**12 06 22.8 +0.2**
GUMO			pmax	pmax	
	comp=Z,317nm,1.2s,mb5.6				
GUMO	**Guam**	**21.80 92**	*e*P	**P**	**12 06 22.8 +0.2**
	comp=Z,317nm,1.2s,mb5.6				
GUMO	**Guam**	**21.80 92**	P	**P**	**12 06 22.6 0.0**
	comp=Z,4μmcomp=Z,259nm,1.3s,mb5.5				
CHRT	**Chiangrai**	**22.03 285**	P	**P**	**12 06 19.0 -5.9**
	comp=Z,237nm,0.7s,mb5.7				
NNT	**Nongplab**	**22.19 266**	P	**P**	**12 06 19.0 -7.7**
XAN	**Xi'an**	**22.20 329**	P	**P**	**12 06 26.1 -0.6**
XAN			pP		12 06 36.1
XAN			sP	sP	12 06 40.4 +2.5
XAN			S	**S**	**12 10 32.7 +2.9**
XAN			pmax	pmax	
	comp=Z,12nm,0.8s,mb4.4				
XAN			pmax	pmax	
	comp=Z,60nm,5.0s				
XAN			LR	LR	
	comp=N,2μm,15.6s,MS4.8				
XAN			LR	LR	
	comp=E,2μm,13.4s,MS4.8				
XAN			LR	LR	
	comp=Z,1μm,14.8s,MS4.5				
INCN	**Inchon**	**22.31 9**	*e*P	**P**	**12 06 28.9 +1.1**
	comp=Z,259nm,1.0s,mb5.6				
INCN			*e*		12 06 37.2
INCN	**Inchon**	**22.31 9**	P	**P**	**12 06 29.5 +1.8**
	SNR=8.0				
KSRS	**Korea Array**	**22.50 11**	P	**P**	**12 06 28.6 -1.2**
	comp=Z,15nm,0.6s,mb4.6,baz=197,slow=11,SNR=86				
KSRS			LR	LR	12 16 01.4
	comp=Z,1μm,18.6s,MS4.4,baz=195,slow=39				
KSRS	**Korea Array**	**22.50 11**	P	**P**	**12 06 28.6 -1.2**
KSRS			pmax	pmax	
	comp=Z,15nm,0.6s,mb4.6				
KSRS			MLR	MLR	
	comp=Z,1μm,18.6s,MS4.4				
CMAR	**Chiang Mai Arr**	**22.67 281**	P	**P**	**12 06 31.4 -0.3**
	comp=Z,31nm,0.6s,mb4.9,baz=95,slow=7.9,SNR=126				
CMAR			PcP	PcP	12 10 25.0 +1.0
	comp=Z,6.5nm,0.8s,baz=116,slow=1.0,SNR=18				
CMAR			LR	LR	12 15 32.1
	comp=Z,3μm,18.2s,MS4.8,baz=190,slow=37				
CMAR	**Chiang Mai Arr**	**22.67 281**	P	**P**	**12 06 31.4 -0.3**
CMAR					12 10 25.0
CMAR			pmax	pmax	
	comp=Z,31nm,0.6s				
CMAR			pmax	pmax	
	comp=Z,7.0nm,0.8s				
CMAR			MLR	MLR	
	comp=Z,3μm,18.2s				
CM31	**Chiang Mai Arr**	**22.67 281**	*e*P	**P**	**12 06 33.0 +1.2**
	comp=Z,27nm,0.6s,mb4.9				
CHTO	**Chiang Mai**	**22.69 282**	*e*P	**P**	**12 06 33.3 +1.3**
CHTO			pmax	pmax	
	comp=Z,61nm,1.4s,mb4.8				
CHTO	**Chiang Mai**	**22.69 282**	*e*P	**P**	**12 06 33.3 +1.3**
	comp=Z,61nm,1.4s,mb4.8				
CHTO	**Chiang Mai**	**22.69 282**	P	**P**	**12 06 33.7 +1.7**
	comp=Z,1μmcomp=Z,30nm,1.3s,mb4.6				
CHTO	**Chiang Mai**	**22.69 282**	P	**P**	**12 06 34.5 +2.5**
	SNR=8.9				
MYKOM	**Kota Tinggi**	**22.77 235**	P	**P**	**12 06 33.5 +0.6**
MYKOM	**Kota Tinggi**	**22.77 235**	P	**P**	**12 06 33.3 +0.4**
	comp=Z,1μmcomp=Z,58nm,1.4s,mb4.8				
CD2	**Chengdu**	**23.03 315**	P	**P**	**12 06 35.9 +0.4**
CD2			pP		12 06 42.9
CD2			sP	sP	12 06 46.4 -0.3
CD2			PP		12 07 06.9
CD2			S	**S**	**12 10 41.4 -3.1**
CD2			sS	sS	12 10 52.8 -5.1
CD2			SS		12 11 26.9
CD2			pmax	pmax	
	comp=Z,90nm,1.0s,mb5.2				
CD2			pmax	pmax	
	comp=Z,580nm,6.1s				
CD2			LR	LR	
	comp=N,10μm,14.3s				
CD2			LR	LR	
	comp=Z,5μm,18.4s,MS5.0				
KGM	**Kluang**	**23.06 237**	P	**P**	**12 06 35.2 -0.8**
TPI	**Tanjungpandan**	**23.22 220**	P	**P**	**12 06 38.2 +0.6**
	comp=Z,2μmcomp=Z,95nm,1.2s,mb5.1				
TLE	**Tual**	**23.27 153**	P	**P**	**12 06 38.6 +0.6**
	comp=Z,642nm,1.6s,mb5.8				
DL2	**Dalian**	**23.43 358**	⇓P	**P**	**12 06 39.7 +0.2**
DL2			S	**S**	**12 10 51.2 +0.5**
DL2			pmax	pmax	
	comp=Z,40nm,1.2s,mb4.7				
DL2			pmax	pmax	
	comp=Z,480nm,4.9s				
DL2			LR	LR	
	comp=N,2μm,17.6s,MS4.8				
DL2			LR	LR	
	comp=E,2μm,16.6s,MS4.8				
DL2			LR	LR	
	comp=Z,2μm,17.0s,MS4.6				
SMPI	**Sarmi**	**23.62 136**	P	**P**	**12 06 41.1 -0.5**
	comp=Z,4μmcomp=Z,236nm,1.6s,mb5.4				
JHJ	**Hachijo jima 2**	**23.64 39**	P	**P**	**12 06 41.3 -0.3**
	comp=Z,76nm,0.7s,mb5.2,baz=207,slow=4.5,SNR=4.6				
JHJ			LR	LR	12 14 33.1
	comp=Z,3μm,18.8s,MS4.8,baz=252,slow=33				
KULM	**Kulim**	**23.64 247**	P	**P**	**12 06 41.3 -0.4**
KULM	**Kulim**	**23.64 247**	*e*P	**P**	**12 06 40.9 -0.9**
	comp=Z,56nm,0.9s,mb5.0				
KULM	**Kulim**	**23.64 247**	P	**P**	**12 06 41.1 -0.6**
	comp=Z,1μmcomp=Z,76nm,1.0s,mb5.1				
IPM	**Ipoh**	**23.68 245**	P	**P**	**12 06 40.6 -1.5**
IPM	**Ipoh**	**23.68 245**	P	**P**	**12 06 40.3 -1.8**
	comp=Z,1μmcomp=Z,131nm,0.9s,mb5.4				
PPBI	**Pangkal Pinang**	**23.75 224**	P	**P**	**12 06 42.2 -0.6**
	comp=Z,3μmcomp=Z,75nm,1.2s,mb5.0				
MMRI	**Maumere**	**23.88 180**	P	**P**	**12 06 42.6 -1.3**
	comp=Z,4μmcomp=Z,213nm,1.6s,mb5.3				
SRBI	**Singaraja**	**24.40 198**	P	**P**	**12 06 47.7 -1.0**
	comp=Z,169nm,1.1s,mb5.4				
KHKI	**Kahang-Kahang**	**24.56 196**	P	**P**	**12 06 49.2 -0.9**
	comp=Z,119nm,1.5s,mb5.2				
NGJI	**Ngawi**	**25.09 206**	P	**P**	**12 06 57.4 +2.4**
	comp=Z,156nm,1.2s,mb5.4				
BJI	**Beijing**	**25.15 349**	P	**P**	**12 06 54.7 -0.5**
BJI			S	**S**	**12 11 23.2 +4.7**
BJI			pmax	pmax	
	comp=Z,62nm,1.0s,mb5.1				
BJI			pmax	pmax	
	comp=Z,870nm,5.1s				
BJI			LR	LR	
	comp=N,2μm,15.4s,MS5.0				
BJI			LR	LR	
	comp=E,3μm,18.5s,MS5.0				
BJI			LR	LR	
	comp=Z,1μm,16.9s,MS4.5				
GMJI	**Gumukmas**	**25.15 201**	P	**P**	**12 06 57.8 +2.3**
	comp=Z,79nm,1.1s,mb5.1				
SMRI	**Semarang**	**25.27 209**	P	**P**	**12 06 56.8 +0.2**
	comp=Z,128nm,1.6s,mb5.2				
SJI	**Sawahan**	**25.30 205**	P	**P**	**12 06 56.4 -0.4**
	comp=Z,5μmcomp=Z,129nm,1.5s,mb5.2				
MAJO	**Matsushiro**	**25.32 31**	*e*P	**P**	**12 06 57.0 +0.2**
MAJO			pmax	pmax	
	comp=Z,267nm,2.4s,mb5.3				
MAJO	**Matsushiro**	**25.32 31**	*e*P	**P**	**12 06 57.0 +0.2**
	comp=Z,267nm,2.4s,mb5.3				
MAT	**Matsushiro**	**25.32 31**	P	**P**	**12 06 54.9 -1.9**
MAT			S	**S**	**12 11 21.0 -0.3**
MJAR	**Matsushiro Arr**	**25.32 31**	P	**P**	**12 06 54.5 -2.3**
	comp=Z,2.9nm,0.6s,mb4.0,baz=209,slow=7.9,SNR=16				
MJAR			PcP	PcP	12 10 30.0 +0.6
	comp=Z,2.3nm,0.8s,baz=195,slow=2.5,SNR=4.1				
MJAR			LR	LR	12 16 17.2
	comp=Z,944nm,19.3s,MS4.3,baz=210,slow=35				
MJAR	**Matsushiro Arr**	**25.32 31**	P	**P**	**12 06 54.5 -2.3**
MJAR					12 10 30.0
MJAR			pmax	pmax	
	comp=Z,3.0nm,0.6s				
MJAR			pmax	pmax	
	comp=Z,2.0nm,0.8s				
MJAR			MLR	MLR	
	comp=Z,945nm,19.3s				
JAY	**Jayapura**	**25.38 133**	P	Px	12 07 27.5
KRKI	**Karangkates**	**25.41 204**	P	**P**	**12 06 57.1 -0.7**
PWJI	**Pagerwojo**	**25.54 205**	P	**P**	**12 06 58.8 -0.2**
	comp=Z,116nm,1.0s,mb5.4				
BKNI	**Bangkinang**	**25.89 237**	P	**P**	**12 07 01.7 -0.6**
	comp=Z,2μmcomp=Z,137nm,1.2s,mb5.4				
PCJI	**Pacitan**	**25.96 206**	P	**P**	**12 07 04.2 +1.4**
	comp=Z,141nm,1.3s,mb5.3				
TSI	**Tuntungan**	**26.30 246**	P	**P**	**12 07 10.1 +4.1**
PSI	**Prapat**	**26.32 244**	P	**P**	**12 07 04.7 -1.5**
	comp=Z,22nm,0.8s,mb4.7,baz=37,slow=6.1,SNR=16				
PSI			LR	LR	12 18 04.2
	comp=Z,2μm,19.6s,MS4.6,baz=220,slow=38				
PSI	**Prapat**	**26.32 244**	P	**P**	**12 07 04.7 -1.5**
PSI			pmax	pmax	
	comp=Z,22nm,0.9s,mb4.7				
PSI			MLR	MLR	
	comp=Z,2μm,19.6s,MS4.6				
SDSI	**Sungai Dareh**	**26.35 234**	P	**P**	**12 07 05.6 -0.8**
	comp=Z,941nmcomp=Z,73nm,1.1s,mb5.1				
SNY	**Shenyang**	**26.35 2**	⇓P	**P**	**12 07 06.1 0.0**
SNY			S	**S**	**12 11 37.0 -0.5**
SNY			pmax	pmax	
	comp=Z,33nm,0.7s,mb5.0				
SNY			pmax	pmax	
	comp=Z,500nm,5.1s				
SNY			LR	LR	
	comp=N,3μm,18.0s,MS5.2				
SNY			LR	LR	
	comp=E,5μm,15.6s,MS5.2				
SNY			LR	LR	
	comp=Z,4μm,15.5s,MS5.1				
LZH	**Lanzhou**	**26.45 325**	*e*P	**P**	**12 07 07.0 -0.1**
LZH			pP	pP	12 07 14.0 -1.3
LZH			sP	sP	12 07 18.0 -0.7
LZH			PP		12 07 51.0
LZH			S	**S**	**12 11 38.3 -0.9**
LZH			sS	sS	12 11 50.2 -2.5
LZH			SS		12 12 49.6
LZH			pmax	pmax	
	comp=Z,34nm,1.0s,mb4.8				
LZH			pmax	pmax	
	comp=Z,260nm,6.4s				
LZH			LR	LR	
	comp=N,6μm,14.2s				
LZH			LR	LR	
	comp=Z,6μm,15.2s,MS5.3				
LEM	**Lembang**	**26.51 215**	P	**P**	**12 07 08.9 +1.0**
	comp=Z,66nm,0.9s,mb5.2				
KLSI	**26.56 223**	P	**P**	**12 07 09.1 +0.8**
	comp=Z,4μmcomp=Z,202nm,1.0s,mb5.6				
KLI	**Kotabumi**	**26.61 222**	P	**P**	**12 07 17.0 +8.2**
	comp=Z,125nm,0.9s,mb5.5				
MDSI	**Maura Dua**	**26.78 224**	P	**P**	**12 07 10.4 +0.1**
	comp=Z,2μmcomp=Z,62nm,1.2s,mb5.0				
SBJI	**Serang**	**26.79 218**	P	**P**	**12 07 09.6 -0.8**
	comp=Z,139nm,1.2s,mb5.4				
MNSI	**Mandailing Nat**	**26.82 239**	P	**P**	**12 07 09.7 -1.0**
	comp=Z,2μmcomp=Z,121nm,1.1s,mb5.3				
PPI	**Padang Panjang**	**26.87 236**	P	**P**	**12 07 10.7 -0.4**
	comp=Z,74nm,1.3s,mb5.1				
HHC	**Hu-ho-hao-te**	**27.06 342**	*e*P	**P**	**12 07 13.7 +1.2**
HHC			sP	sP	12 07 26.9 +2.8
HHC			PP		12 08 01.1
HHC			PcP	PcP	12 10 33.9 +0.6
HHC			S	**S**	**12 11 48.6 -0.1**
HHC			sS	sS	12 12 04.5 +2.3
HHC			SS		12 13 05.2
HHC			ScP	ScP	12 14 10.0 -1.8
HHC			PcS	PcS	12 14 14.0 -0.7
HHC			ScS	ScS	12 18 00.0 -2.8
HHC			pmax	pmax	
	comp=Z,22nm,0.5s,mb4.9				
HHC			pmax	pmax	
	comp=Z,330nm,5.3s				
HHC			LR	LR	
	comp=N,4μm,13.0s,MS5.4				
HHC			LR	LR	
	comp=E,6μm,13.7s,MS5.4				
HHC			LR	LR	
	comp=Z,4μm,13.2s,MS5.1				
LWLI	**Liwa**	**27.25 223**	P	**P**	**12 07 19.2 +4.7**
	comp=Z,7μmcomp=Z,200nm,1.1s,mb5.6				
SKJI	**Sukabumi**	**27.25 216**	P	**P**	**12 07 07.7 -6.8**
	comp=Z,180nm,1.0s,mb5.5				
BTO	**Baotou**	**27.34 339**	*e*P	**P**	**12 07 16.3 +1.3**
CN2	**Changchun**	**28.42 5**	*e*P	**P**	**12 07 27.5 +2.8**
CN2			*e*pP	pP	12 07 37.0 +4.1
CN2			*e*sP	sP	12 07 41.1 +4.8
CN2			*e*S	**S**	**12 12 13.2 +3.1**
CN2			pmax	pmax	
	comp=Z,10.0nm,0.7s,mb4.5				
CN2			pmax	pmax	
	comp=Z,200nm,5.0s				
CN2			LR	LR	
	comp=N,2μm,15.0s,MS5.0				
CN2			LR	LR	
	comp=E,2μm,15.0s,MS5.0				
CN2			LR	LR	
	comp=Z,2μm,17.0s,MS4.8				
KAKA	**Kakadu**	**29.64 160**	*e*P	**P**	**12 07 32.4 -3.3**
	comp=Z,66nm,0.8s,mb5.4				
KAKA	**Kakadu**	**29.64 160**	*e*P	**P**	**12 07 32.4 -3.4**
	comp=Z,165nm,0.7s,mb5.9				
KAKA	**Kakadu**	**29.64 160**	P	**P**	**12 07 32.9 -2.8**
	comp=Z,1μmcomp=Z,141nm,0.7s,mb5.8				
MDJ	**Mudanjiang**	**29.75 10**	P	**P**	**12 07 38.7 +2.3**
MDJ			pP	pP	12 07 44.8 +0.1
MDJ			sP	sP	12 07 47.5 -0.6
MDJ			PcP	PcP	12 10 40.4 +0.5
MDJ			S	**S**	**12 12 35.7 +4.8**
MDJ			ScP	ScP	12 14 24.1 +4.0
MDJ			pmax	pmax	
	comp=Z,15nm,0.8s,mb4.8				
MDJ			pmax	pmax	
	comp=Z,120nm,3.7s				
MDJ			LR	LR	
	comp=N,2μm,17.0s,MS5.0				
MDJ			LR	LR	
	comp=E,3μm,18.1s,MS5.0				
MDJ			LR	LR	
	comp=Z,2μm,17.0s,MS4.8				
GTA	**Gaotai**	**31.05 325**	*e*P	**P**	**12 07 46.8 -1.3**
GTA			pP	pP	12 07 56.4 +0.1
GTA			sP	sP	12 08 00.4 +0.7
GTA			PP	PP	12 08 50.0 -8.4
GTA			PcP	PcP	12 10 44.6 +1.2
GTA			S	**S**	**12 12 49.4 -2.1**
GTA	

GTA SS SS 12 14 36.0 -29
GTA pmax pmax
comp=Z,4.0nm,1.0s,mb4.2
GTA pmax pmax
comp=Z,210nm,5.7s
GTA LR LR
comp=N,3μm,18.2s,MS5.1
GTA LR LR
comp=E,2μm,17.3s,MS5.1
GTA LR LR
comp=Z,3μm,16.4s,MS5.0
KNA Kununurra 31.58 168 P **P 12 07 49.8 -3.0**
comp=Z,987nmcomp=Z,131nm,0.9s,mb5.8
ERM Erimo 31.98 30 *e*P **P 12 07 56.2 0.0**
ERM pmax pmax
comp=Z,11nm,0.9s,mb4.7
ERM Erimo 31.98 30 *e*P **P 12 07 56.2 0.0**
comp=Z,11nm,0.9s,mb4.7
LSA Lhasa 32.08 302 P **P 12 07 57.8 +0.6**
LSA S **S 12 13 08.4 +0.6**
LSA LR LR
comp=N,620nm,15.8s,MS4.8
LSA LR LR
comp=E,1μm,17.6s,MS4.8
LSA LR LR
comp=Z,2μm,13.9s,MS5.0
CAL Calcutta 32.96 288 *e*S **S 12 13 22.4 +0.7**
ASAJ Asahikawa 33.36 27 P **P 12 08 08.4 +0.2**
comp=Z,7.5nm,0.8s,mb4.7,baz=134,slow=4.9,SNR=9.7
ASAJ Asahikawa 33.36 27 P **P 12 08 08.5 +0.2**
ASAJ pmax pmax
comp=Z,8.0nm,0.8s
FITZ Fitzroy Crossi 33.44 174 *e*P **P 12 08 07.0 -2.1**
comp=Z,117nm,1.2s,mb5.7
FITZ Fitzroy Crossi 33.44 174 *e*P **P 12 08 06.8 -2.4**
comp=Z,164nm,1.3s,mb5.8
FITZ Fitzroy Crossi 33.44 174 P **P 12 08 07.0 -2.1**
comp=Z,187nm,1.4s,mb5.8
TAPN Taplejung 34.33 296 *e*P **P 12 08 14.7 -2.2**
comp=Z,90nm,1.0s,mb5.7
ODAN Odare 34.50 295 *e*P **P 12 08 17.2 -1.2**
comp=Z,156nm,1.0s,mb5.9
HABR Khabarovsk 34.58 15 *e*P **P 12 08 17.6 -1.1**
HABR *e**PP pP 12 08 26.2 -0.8
HABR 12 09 32.9
HABR *e* 12 10 49.6
HABR *e*S **S 12 13 46.5 +0.4**
HABR *e**SS sS 12 14 01.2 +1.5
HABR *e*SS SS 12 16 01.4 -15
HABR *e*SSS 12 16 17.9
HABR MLR MLR
comp=Z,2μm,20.0s,MS4.7
KLR Kul'dur 34.59 11 *e*P **P 12 08 13.7 -5.1**
KLR *e*S **S 12 13 42.5 -3.7**
KLR *e*SSS 12 16 20.5
KLR MLR MLR
comp=N,2μm,15.0s,MS5.1
KLR MLR MLR
comp=E,2μm,15.0s,MS5.1
ULN Ulaanbaatar 34.78 342 *e*P **P 12 08 20.0 -0.5**
ULN *e**PP pP 12 08 29.2 +0.4
ULN pmax pmax
comp=Z,35nm,0.7s,mb5.4
ULN Ulaanbaatar 34.78 342 *e*P **P 12 08 20.0 -0.5**
comp=Z,35nm,0.7s,mb5.4
ULN *e*pP pP 12 08 29.2 +0.4
ULN Ulaanbaatar 34.78 342 P **P 12 08 21.0 +0.5**
comp=Z,495nmcomp=Z,53nm,0.9s,mb5.5
ULN Ulaanbaatar 34.78 342 P **P 12 08 20.9 +0.5**
SNR=34
YUK Yuzh-Kuril'sk 34.80 30 *e*P **P 12 08 17.8 -3.0**
YUK *e*S **S 12 13 56.0 +6.3**
YUK MLR MLR
comp=N,700nm,19.0s,MS4.5
YUK MLR MLR
comp=E,400nm,19.0s,MS4.5
YUK MLR MLR
comp=Z,700nm,19.0s,MS4.4
SONM Songino Array 34.95 341 P **P 12 08 21.6 -0.4**
comp=Z,8.9nm,0.7s,mb4.8,baz=161,slow=9.3,SNR=47
SONM PcP PcP 12 10 54.1 +0.1
comp=Z,3.0nm,0.6s,baz=168,slow=2.7,SNR=4.7
SONM LR LR 12 23 24.0
comp=Z,3μm,20.9s,MS5.0,baz=152,slow=38
SONM Songino Array 34.95 341 P **P 12 08 21.6 -0.4**
SONM 12 10 54.1
SONM pmax pmax
comp=Z,9.0nm,0.7s
SONM pmax pmax
comp=Z,3.0nm,0.6s
SONM MLR MLR
comp=Z,3μm,20.9s
RAMN Ramite 35.21 295 *e*P **P 12 08 23.6 -0.9**
comp=Z,98nm,0.7s,mb5.8
BOK Bokaro 35.34 289 *e*PKP **P 12 08 25.0 -0.7**
BOK AMb AMB 12 08 29.8
comp=Z,69nm,1.6s,mb5.3
COEN Coen 35.66 144 *e*P **P 12 08 26.3 -2.1**
COEN Coen 35.66 144 *e*P **P 12 08 26.1 -2.3**
comp=Z,1μm,1.6s,mb6.7
COEN *e*pP pP 12 08 34.7 -2.1
COEN Coen 35.66 144 P **P 12 08 26.6 -1.8**
comp=Z,218nm,1.3s,mb5.9
JIRN Jiri 35.71 296 *e*P **P 12 08 28.1 -0.7**
comp=Z,157nm,1.0s,mb5.9
YSS Yuzh-Sakhalins 35.72 24 *e*P **P 12 08 30.0 +1.4**
YSS *e*S **S 12 14 03.0 -0.7**
YSS *e*SSS 12 16 45.0
YSS pmax pmax
comp=Z,30nm,0.9s,mb5.2
YSS MLR MLR
comp=Z,1μm,18.0s,MS4.8
YSS MLR MLR
comp=N,900nm,16.0s,MS4.8
YSS MLR MLR
comp=E,1μm,16.0s,MS4.8
YSS Yuzh-Sakhalins 35.72 24 *e*P **P 12 08 29.9 +1.3**
comp=E,73nm,1.2s,mb5.5
GUN Gumba 36.04 296 *e*P **P 12 08 30.7 -0.9**
comp=E,294nm,1.0s,mb6.2
PKI Pulchoki 36.37 296 *e*P **P 12 08 33.0 -1.5**
comp=E,140nm,1.0s,mb5.8
PKIN Phulchoki 36.38 296 *e*P **P 12 08 33.1 -1.5**
comp=E,80nm,0.9s,mb5.7
MBWA Marble Bar 36.43 184 *e*P **P 12 08 32.3 -2.6**
comp=E,75nm,1.2s,mb5.5
MBWA Marble Bar 36.43 184 P **P 12 08 32.5 -2.4**
comp=E,52nm,1.0s,mb5.4
KKN Kakani 36.53 296 *e*P **P 12 08 34.4 -1.4**
comp=E,201nm,1.2s,mb5.8
DMN Daman 36.64 296 *e*P **P 12 08 35.5 -1.3**
comp=E,250nm,1.1s,mb6.0
WRAB Tennant Creek 37.02 161 P **P 12 08 37.0 -2.9**
comp=E,624nm,1.2s,mb6.3,SNR=28
WRAB Tennant Creek 37.02 161 *e*P **P 12 08 36.5 -3.4**
WRAB pmax pmax
comp=Z,78nm,0.8s,mb5.6
WRAB Tennant Creek 37.02 161 *e*P **P 12 08 36.5 -3.4**
comp=Z,78nm,0.8s,mb5.6
WRAB Tennant Creek 37.02 161 P **P 12 08 37.0 -2.9**
comp=Z,114nm,0.9s,mb5.7
WRA Warramunga Arr 37.02 161 P **P 12 08 36.1 -3.9**
comp=Z,57nm,0.7s,mb5.5,baz=342,slow=9.3,SNR=144
WRA S **S 12 14 25.9 +1.8**
comp=Z,5.1nm,1.1s,baz=341,slow=14,SNR=6.1
WRA Warramunga Arr 37.02 161 P **P 12 08 36.1 -3.9**
WRA S **S 12 14 25.9 +1.8**
WRA pmax pmax
comp=Z,57nm,0.7s
WRA smax
comp=N,5.0nm,1.1s
WRA Warramunga Arr 37.02 161 P **P 12 08 36.1 -3.9**
WRA S **S 12 14 25.9 +1.8**
GKN Gorkha 37.13 296 *e*P **P 12 08 39.3 -1.6**
comp=N,201nm,0.9s,mb5.9
VIS Vishakhapatnam 37.50 279 *e*PKP **P 12 08 43.4 -0.8**
VIS AMb AMB 12 08 48.4
comp=Z,57nm,1.6s,mb5.0
KOLN Koldanda 37.98 295 *e*P **P 12 08 46.9 -1.3**
comp=Z,138nm,0.9s,mb5.7
TLY Talaya 39.19 342 P **P 12 08 58.5 +0.6**
comp=Z,294nm,0.8s,mb6.1,SNR=16
TLY Talaya 39.19 342 *e*P **P 12 08 58.0 +0.1**
TLY *e*PPP 12 10 37.7
TLY *e*S **S 12 14 51.6 -4.6**
TLY pmax pmax
comp=Z,53nm,0.9s,mb5.3
TLY Talaya 39.19 342 *e*P **P 12 08 58.2 +0.3**
comp=Z,33nm,0.8s,mb5.1
TLY *e*pP pP 12 09 06.6 +0.4
TLY Talaya 39.19 342 P **P 12 08 58.5 +0.6**
SNR=51
IRK Irkutsk 39.49 342 *e*P **P 12 09 01.0 +0.6**
IRK *e* 12 11 10.2
IRK pmax pmax
comp=Z,96nm,1.5s,mb5.3
MOY Mondy 40.03 339 *e*P **P 12 09 05.5 +0.5**
MOY pmax pmax
comp=Z,117nm,1.3s,mb5.5
ASAR Alice Springs 40.42 164 P **P 12 09 05.8 -2.6**
comp=Z,14nm,0.4s,mb5.1,baz=342,slow=7.8,SNR=202
ASAR S **S 12 15 19.7 +4.5**
comp=Z,3.5nm,1.0s,baz=359,slow=20,SNR=4.4
ASAR Alice Springs 40.42 164 P **P 12 09 05.8 -2.6**
ASAR S **S 12 15 19.7 +4.5**
ASAR pmax pmax
comp=Z,14nm,0.4s
ASAR smax
comp=N,4.0nm,1.0s
WMQ Urumqi 40.90 321 P **P 12 09 14.7 +2.5**
WMQ pP pP 12 09 22.0 +1.4
WMQ sP sP 12 09 25.5 +1.5
WMQ PP PP 12 10 52.9 +6.1
WMQ PcP PcP 12 11 15.1 +2.6
WMQ S **S 12 15 25.3 +3.2**
WMQ SS SS 12 18 23.2 -0.9
WMQ ScS ScS 12 19 15.6 +0.3
WMQ pmax pmax
comp=Z,24nm,1.2s,mb4.7
WMQ pmax pmax
comp=Z,280nm,4.4s
WMQ LR LR
comp=N,4μm,19.6s,MS5.4
WMQ LR LR
comp=E,3μm,18.0s,MS5.4
WMQ LR LR
comp=Z,3μm,18.8s,MS5.2
PTH Pithoragarh 41.23 297 *e*PKP **P 12 09 15.0 -0.2**
CLNS Chul'man 41.40 2 *e*P **P 12 09 20.5 +4.4**
CLNS *e**PP pP 12 09 32.4 +7.9
CLNS *e* 12 10 55.6
CLNS *e* 12 11 18.0
CLNS *e*PPP 12 11 23.7
CLNS *e*S **S 12 15 33.4 +4.3**
CLNS pmax pmax
comp=Z,66nm,1.7s,mb5.0
CLNS pmax pmax
comp=E,23nm,1.2s
CLNS pmax pmax
comp=N,48nm,1.3s
CLNS pmax pmax
comp=E,5.0nm,0.7s
CLNS pmax pmax
comp=Z,7.0nm,0.9s,mb4.3
CLNS pmax pmax
comp=N,9.0nm,0.9s
CLNS smax
comp=N,291nm,10.5s
CLNS smax
comp=E,222nm,13.5s
CLNS MLR MLR
comp=N,1μm,14.0s,MS5.0
CLNS MLR MLR
comp=Z,2μm,18.0s,MS5.1
CLNS MLR MLR
comp=E,1μm,20.0s,MS5.0
NGP Nagpur 41.49 285 *e*PKP **P 12 09 16.7 -0.7**
NGP AMb AMB 12 09 19.7
comp=Z,106nm,1.9s,mb5.1
MEEK Meekatharra 41.95 185 *e*P **P 12 09 18.0 -3.0**
JOSI Joshimath 41.98 299 *e*PKP **P 12 09 21.4 +0.1**
HYB Hyderabad 42.07 279 *e*P **P 12 09 22.0 -0.2**
HYB *e*S **S 12 15 44.0 +3.9**
HYB Hyderabad 42.07 279 *i* P **P 12 09 22.0 -0.2**
HYB *e*S **S 12 15 44.0 +3.9**
CTA Charters Tower 42.34 146 *e*P **P 12 09 24.0 -0.2**
comp=Z,28nm,0.9s,mb4.9
CTA *e*S **S 12 15 45.5 +1.7**
CTAO Charters Tower 42.34 146 *e*P **P 12 09 23.3 -0.9**
CTAO pmax pmax
comp=Z,48nm,1.0s,mb5.1
CTAO Charters Tower 42.34 146 *e*P **P 12 09 23.3 -0.9**
comp=Z,48nm,1.0s,mb5.1
CTAO Charters Tower 42.34 146 P **P 12 09 24.2 0.0**
comp=Z,62nm,1.5s,mb5.0
AGRA Agra 42.87 294 *e*PKP **P 12 09 27.2 -1.4**
AGRA AMb AMB 12 09 31.8
comp=Z,50nm,0.6s,mb5.5
BHPL Bhopal 43.04 288 *e*PKP **P 12 09 29.9 -0.2**
BHPL AMb AMB 12 09 39.6
comp=Z,76nm,0.7s,mb5.5
DDI Dehra Dun 43.22 298 *e*x **P 12 09 27.8 -3.6**
KLP Kalpa 43.28 300 *e*PKP **P 12 09 32.5 +0.6**
KLP AMb AMB 12 09 36.2
comp=Z,158nm,1.3s,mb5.6
BISR Bishrakh 43.48 295 *e*x **P 12 09 28.4 -5.1**
BISR AMb AMB 12 09 36.4
comp=Z,94nm,0.1s,mb6.3
AYAN Aya Nagar 43.74 295 *e*PKP **P 12 09 34.3 -1.3**
KKR Kurukshetra 44.22 297 *e*PKP **P 12 09 39.2 -0.2**
SDNR Sundarnagar 44.34 299 *e*PKP **P 12 09 40.9 +0.5**
RTK Rohtak 44.43 296 *e*PKP **P 12 09 39.7 -1.5**
RTK AMb AMB 12 09 43.0
comp=Z,155nm,0.2s,mb6.5
HNR Honiara 44.62 121 LR LR 12 25 09.6
comp=Z,1μm,20.6s,MS4.9,baz=99,slow=32
MORW Morawa 44.63 188 *e*P **P 12 09 39.5 -3.1**
BHK Bhakra 44.80 299 *e*x **P 12 09 41.2 -2.8**
KHET Khetri 44.85 294 *e*PKP **P 12 09 43.2 -1.3**
THN Thein Dam 45.56 300 *e*x **P 12 09 47.8 -2.3**
MK31 Makanchi Array 45.70 322 *e*P **P 12 09 51.3 +0.3**
MK31 *e**PP pP 12 10 00.2 +0.8
MKAR Makanchi Array 45.70 322 P **P 12 09 50.7 -0.3**
comp=Z,39nm,0.9s,mb5.3,baz=115,slow=7.3,SNR=113
MKAR PcP PcP 12 11 29.1 +0.5
comp=Z,14nm,0.8s,baz=104,slow=3.1,SNR=5.3
MKAR Makanchi Array 45.70 322 *c*e*P* **P 12 09 51.2 +0.2**
MKAR pmax pmax
comp=Z,39nm,0.9s
AJM Ajmer 45.74 292 *e*PKP **P 12 09 51.4 -0.2**
AJM AMb AMB 12 09 54.0
comp=Z,96nm,1.8s,mb5.4
FORT Forrest 46.23 173 *e*P **P 12 09 53.0 -2.3**
comp=Z,91nm,0.8s,mb5.8
PEA0B Petropavlovsk- 46.74 29 *e*P **P 12 09 59.2 +0.1**
PEA0B *e*pP pP 12 10 07.5 0.0
PETK Petropavlovsk- 46.74 29 P **P 12 09 58.7 -0.4**
comp=Z,15nm,0.8s,mb5.0,baz=204,slow=4.9,SNR=20
PETK LR LR 12 30 37.9
comp=Z,459nm,19.1s,MS4.5,baz=118,slow=37
PETK Petropavlovsk- 46.74 29 P **P 12 09 58.7 -0.3**
PETK pmax pmax
comp=Z,15nm,0.8s,mb5.0
PETK MLR MLR
comp=Z,459nm,19.1s,MS4.5
PETK Petropavlovsk- 46.74 29 P **P 12 09 58.7 -0.4**
PETK LR LR 12 30 37.9
YAK Yakutsk 46.85 5 *e*P **P 12 09 59.3 -0.5**
YAK *e**PP pP 12 10 07.2 -1.1
YAK *e* 12 11 31.8
YAK *e* 12 11 52.7
YAK *e*PPP 12 12 34.3
YAK *e*S **S 12 16 45.8 -2.6**
YAK *e**SS sS 12 17 03.2 +0.8
YAK *e* 12 19 51.4
YAK pmax pmax
comp=Z,69nm,1.1s,mb5.5
YAK pmax pmax
comp=N,35nm,1.1s
YAK pmax pmax
comp=E,12nm,1.5s
YAK pmax pmax
comp=Z,252nm,4.2s
YAK pmax pmax
comp=E,46nm,2.2s
YAK pmax pmax
comp=N,217nm,4.0s
YAK smax
comp=N,92nm,2.8s
YAK smax
comp=E,79nm,4.0s
YAK MLR MLR
comp=E,2μm,18.0s,MS5.2
YAK MLR MLR
comp=N,1μm,16.0s,MS5.2
YAK MLR MLR
comp=Z,1μm,17.0s,MS4.9
YAK Yakutsk 46.85 5 *e*P **P 12 09 59.8 0.0**
comp=Z,197nm,1.0s,mb6.0
YAK *e*pP pP 12 10 07.5 -0.8
KLBR Kellerberrin 46.94 185 *e*P **P 12 09 58.2 -2.6**
comp=Z,93nm,1.1s,mb5.6
KSH Kashi 47.06 310 *e*P **P 12 10 04.3 +2.6**
KSH pP pP 12 10 14.3 +4.1
KSH sP sP 12 10 18.7 +5.1
KSH PcP PcP 12 11 35.9 +2.3
KSH PP PP 12 11 54.8 +2.2
KSH ScP ScP 12 15 25.6 -0.1
KSH PcS PcS 12 15 29.6 +1.0
KSH S **S 12 16 54.4 +2.4**
KSH sS sS 12 17 10.6 +4.6
KSH ScS ScS 12 19 53.7 -0.6
KSH SS SS 12 20 14.4 -4.8
KSH pmax pmax
comp=Z,100nm,1.2s,mb5.6
KSH pmax pmax
comp=Z,340nm,5.6s
KSH LR LR
comp=N,2μm,14.2s,MS5.5
KSH LR LR
comp=E,3μm,16.0s,MS5.5
KSH LR LR
comp=Z,2μm,17.3s,MS5.2
PET Petropavlovsk 47.13 29 *e*P **P 12 10 02.3 +0.2**
PET *e*S **S 12 16 52.8 +0.2**
PET pmax pmax
comp=Z,200nm,5.0s
PET pmax pmax
comp=Z,200nm,18.4s
PET pmax pmax
comp=Z,79nm,1.2s,mb5.5
PET MLR MLR
comp=Z,600nm,17.0s,MS4.6
PET MLR MLR
comp=Z,500nm,17.0s
PET Petropavlovsk 47.13 29 *e*P **P 12 10 03.3 +1.2**
comp=Z,93nm,1.2s,mb5.6
PET *e*pP pP 12 10 10.5 -0.1
ULHL Ulahol 47.73 314 P **P 12 10 08.2 +1.2**
SNR=13
NWAO Narrogin (SRO) 48.31 186 *e*P **P 12 10 09.3 -2.1**
comp=Z,460nm,1.2s,mb6.4
NWAO Narrogin (SRO) 48.31 186 *e*P **P 12 10 09.2 -2.2**
NWAO pmax pmax
comp=Z,78nm,1.0s
NWAO Narrogin (SRO) 48.31 186 *e*P **P 12 10 09.2 -2.2**
comp=Z,78nm,1.0s,mb5.7
ZAA0 Zalesovo Array 48.35 331 *e*P **P 12 10 10.8 -0.8**
ZAA0 *e*pP pP 12 10 19.5 -0.6
ZALV Zalesovo Beam 48.35 331 P **P 12 10 11.1 -0.5**
comp=Z,32nm,0.8s,mb5.4,baz=116,slow=6.8,SNR=93
ZALV LR LR 12 31 47.1
comp=Z,1μm,18.4s,MS5.0,baz=129,slow=38
ZALV Zalesovo Beam 48.35 331 P **P 12 10 11.1 -0.4**
ZALV pmax pmax
comp=Z,32nm,0.8s,mb5.4
ZALV MLR MLR
comp=Z,1μm,18.4s,MS5.0
ZALV Zalesovo Beam 48.35 331 P **P 12 10 11.1 -0.5**
ZALV LR LR 12 31 47.1
KZA Kyzart 48.37 313 P **P 12 10 13.7 +1.8**
SNR=22
KBK Karagaybulak 48.77 314 P **P 12 10 16.6 +1.6**
SNR=7.6
CHMS Chumysh 49.02 314 P **P 12 10 17.2 +0.3**
SNR=8.2
AAK Ala-Archa 49.08 314 P **P 12 10 19.1 +1.8**
comp=Z,211nm,1.0s,mb6.1,SNR=8.1
AAK Ala-Archa 49.08 314 P **P 12 10 19.0 +1.6**
comp=Z,5.7nm,0.7s,mb4.7,baz=110,slow=8.4,SNR=8.7
AAK Ala-Archa 49.08 314 P **P 12 10 19.0 +1.7**
AAK pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
JASL Jaisalmer 49.10 292 *e*PKP **P 12 10 17.6 -0.2**
JASL AMb AMB 12 10 20.0
comp=Z,97nm,1.3s,mb5.7
EIDS Eidsvold 49.21 145 *e*P **P 12 10 17.2 -1.2**
comp=Z,51nm,1.1s,mb5.5
EIDS *e*pP pP 12 10 25.3 -1.8
USP Ospenovka 49.28 314 P **P 12 10 19.4 +0.6**
SNR=14
EKS2 Erkin-Say 49.59 313 P **P 12 10 22.6 +1.3**
SNR=9.5
EKS2 Erkin-Say 49.59 313 *e*P **P 12 10 22.4 +1.1**
comp=Z,76nm,1.2s,mb5.6
EKS2 *e*pP pP 12 10 30.7 +0.9
BBOO Buckleboo 49.68 165 *e*P **P 12 10 20.0 -1.9**
comp=Z,74nm,1.0s,mb5.7
KURK Kurchatov 49.74 325 P **P 12 10 22.8 +0.6**
comp=Z,3μm,0.9s
KURK Kurchatov 49.74 325 P **P 12 10 22.4 +0.2**
comp=Z,120nm,0.7s,mb6.0,baz=122,slow=8.6,SNR=108
KURK Kurchatov 49.74 325 P **P 12 10 22.4 +0.2**
KURK pmax pmax
comp=Z,120nm,0.7s,mb6.0
KURK Kurchatov 49.74 325 *e*P **P 12 10 22.3 +0.1**
comp=Z,498nm,0.9s,mb6.5
KURK *e*pP pP 12 10 31.1 +0.4
KURK Kurchatov 49.74 325 P **P 12 10 22.8 +0.5**
SNR=247
STKA Stephens Creek 50.48 159 *e*P **P 12 10 26.5 -1.5**
comp=Z,31nm,0.9s,mb5.3
STKA Stephens Creek 50.48 159 P **P 12 10 26.1 -1.9**
comp=Z,26nm,0.9s,mb5.3,baz=339,slow=7.5,SNR=30
STKA Stephens Creek 50.48 159 *e*P **P 12 10 26.1 -1.9**
comp=Z,10nm,1.0s,mb4.8
KBL Kabul 51.40 302 *e*P **P 12 10 35.6 +0.5**
KBL pmax pmax
comp=Z,51nm,1.0s,mb5.4
KBL Kabul 51.40 302 *e*P **P 12 10 35.6 +0.5**
comp=Z,51nm,1.0s,mb5.4
SEY Seymchan 51.90 17 *e*P **P 12 10 39.7 +1.4**
ARMA Armidale 53.53 148 *e*P **P 12 10 50.4 -0.4**
ARMA Armidale 53.53 148 *e*P **P 12 10 50.0 -0.8**
comp=Z,70nm,1.5s,mb5.4
ARPS Mount Arapiles 55.03 161 *e*P **P 12 10 59.4 -2.2**
comp=Z,54nm,0.7s,mb5.7
BVAR Borovoye Array 55.34 325 P **P 12 11 03.6 -0.1**
comp=Z,22nm,0.8s,mb5.2,baz=116,slow=10,SNR=79
BVAR Borovoye Array 55.34 325 P **P 12 11 03.6 -0.1**
BVAR pmax pmax
comp=Z,22nm,0.8s
BRVK Borovoye 55.41 325 P **P 12 11 04.6 +0.4**
comp=Z,1μm,1.1s,mb6.8,SNR=29
BRVK Borovoye 55.41 325 *e*P **P 12 11 04.6 +0.4**
BRVK *e**PP pP 12 11 13.0 +0.2
BRVK pmax pmax
comp=Z,252nm,1.1s,mb6.2
BRVK Borovoye 55.41 325 *e*P **P 12 11 04.5 +0.4**
comp=Z,252nm,1.1s,mb6.2
BRVK *e*pP pP 12 11 13.0 +0.2
BRVK Borovoye 55.41 325 P **P 12 11 04.8 +0.7**
SNR=127
TIXI Tiksi 56.36 2 *i* P **P 12 11 09.9 -0.8**
TIXI *e*S **S 12 18 58.0 -1.1**
TIXI pmax pmax
comp=N,51nm,1.6s
TIXI pmax pmax
comp=Z,109nm,1.1s,mb5.8
TIXI pmax pmax
comp=E,5.0nm,0.8s
TIXI pmax pmax
comp=Z,107nm,6.6s
TIXI MLR MLR
comp=Z,2μm,19.0s,MS5.3
TIXI Tiksi 56.36 2 *e*P **P 12 11 10.3 -0.4**
comp=Z,71nm,0.9s,mb5.7
TIXI *e*pP pP 12 11 18.7 -0.7
CAN Canberra 56.39 154 *e*P **P 12 11 10.4 -1.0**
CAN pmax pmax
comp=Z,36nm,1.2s,mb5.3
CAN Canberra 56.39 154 *e*P **P 12 11 10.3 -1.0**
comp=Z,36nm,1.2s,mb5.3
CNB Canberra Magne 56.54 154 *e*P **P 12 11 11.5 -0.9**
TOO Toolangi 56.98 158 *e*P **P 12 11 14.5 -1.0**
DZM Mont Dzumac 56.99 130 *e*P **P 12 11 16.1 +0.2**
comp=Z,113nm,1.5s,mb5.7

DZM *e*S **S** **12 19 07.1 -1.6**
comp=Z,1µm,26.1s
DZM *e*LR LR 12 28 03.0
comp=Z,880nm,25.4s
BILL Bilibino 59.59 18*c i*P **P** **12 11 33.8 +0.4**
BILL *e**PP pP 12 11 42.3 +0.2
BILL *e* 12 12 18.6
BILL pmax pmax
comp=Z,47nm,1.7s,mb5.2
BILL MLR MLR
comp=Z,1µm,16.0s,MS5.0
BILL Bilibino 59.59 18 *e*P **P** **12 11 33.2 -0.2**
comp=Z,53nm,1.0s,mb5.5
BILL *e*pP pP 12 11 41.7 -0.4
ABKT Ailbek 60.51 305 P **P** **12 11 41.7 +1.4**
comp=Z,305nm,1.2s,mb6.3,SNR=10
ABKAR Akbulak array 60.57 318 *e*P **P** **12 11 40.1 -0.4**
comp=Z,16nm,0.7s,mb5.2
SVE Sverdlovsk 61.89 327⇑*e*P **P** **12 11 49.5 +0.3**
SVE *e*S **S** **12 20 16.4 +5.2**
SVE pmax pmax
comp=Z,197nm,1.2s,mb6.1
SVE MLR MLR
comp=Z,1µm,18.0s,MS5.1
AKTK Aktyubinsk 62.01 319 P **P** **12 11 50.0 -0.2**
AKTO Aktyubinsk 62.01 319 P **P** **12 11 50.0 -0.2**
comp=Z,8.5nm,0.6s,mb5.0,baz=99,slow=9.8,SNR=23
AKTO Aktyubinsk 62.01 319 P **P** **12 11 50.0 -0.2**
AKTO pmax pmax
comp=Z,9.0nm,0.6s,mb5.1
ARU Arti 62.90 326 P **P** **12 11 56.1 +0.1**
comp=Z,482nm,1.2s,mb6.5,SNR=12
ARU Arti 62.90 326*c i*P **P** **12 11 55.3 -0.7**
ARU *e* 12 12 34.1
ARU *e* 12 14 12.7
ARU PPP 12 15 47.5
ARU S **S** **12 20 24.9 +1.0**
ARU 12 21 40.4
ARU SS SS 12 24 27.7 -1.5
ARU SSS 12 27 17.5
ARU pmax pmax
comp=Z,36nm,1.0s,mb5.5
ARU MLR MLR
comp=Z,1µm,17.0s,MS5.2
ARU Arti 62.90 326 *e*P **P** **12 11 55.4 -0.7**
comp=Z,125nm,1.2s,mb5.9
ARU *e*pP pP 12 12 04.0 -0.8
SOKR Solikamsk 64.55 329 *e*P **P** **12 12 07.4 +0.6**
SOKR S **S** **12 20 43.3 -1.0**
SOKR pmax pmax
comp=Z,60nm,1.3s,mb5.5
SOKR MLR MLR
comp=Z,2µm,21.0s,MS5.2
MAK Makhachkala 68.69 310 *e*P **P** **12 12 32.1 -1.5**
MAK *e* 12 13 02.2
MAK *e*PPP 12 16 48.0
MAK *e*S S 12 21 36.9 +1.9
MAK *e* 12 22 34.0
MAK pmax pmax
comp=Z,238nm,1.7s,mb5.8
KBD Kabd 69.51 296 *e*P **P** **12 12 37.7 -1.2**
KBD AMb AMB 12 12 48.3
comp=Z,79nm,1.3s,mb5.5
RDF Al-Radifah 69.66 296 *e*P **P** **12 12 38.5 -1.4**
RDF AMb AMB 12 12 49.7
comp=Z,162nm,1.0s,mb5.9
NAY Al-Naaiem 69.89 296 *e*P **P** **12 12 39.4 -1.9**
NAY AMb AMB 12 12 50.4
comp=Z,58nm,1.4s,mb5.3
SDPT Sand Point 70.14 36 *e*P **P** **12 12 41.3 -1.0**
comp=Z,20nm,0.6s,mb5.2
DGRG David-gareji 70.34 309 P **P** **12 12 45.4 +1.6**
MTA Mtatsminda 70.76 309 P **P** **12 12 46.2 -0.2**
TBLG Delisi 70.80 309 *e*P **P** **12 12 46.1 -0.5**
TBLG Delisi 70.80 309 P **P** **12 12 46.1 -0.4**
GNI Garni 70.90 308 P **P** **12 12 49.0 +1.8**
comp=Z,13nm,0.8s,mb4.9,baz=39,slow=12,SNR=8.6
GNI Garni 70.90 308*c i*P **P** **12 12 48.6 +1.3**
GNI pmax pmax
comp=Z,44nm,1.6s
GNI Garni 70.90 308 *e*P **P** **12 12 49.2 +1.9**
comp=Z,106nm,1.4s,mb5.6
GNI Garni 70.90 308 P **P** **12 12 49.5 +2.3**
SNR=19
GOR Gori 71.25 310 P **P** **12 12 50.8 +1.5**
AFI Afiamalu 71.28 111 LR LR 12 37 00.5
comp=Z,489nm,20.7s,MS4.8,baz=312,slow=30
ZEI Tsey 71.35 310 *e*P **P** **12 12 49.7 -0.2**
ZEI pmax pmax
comp=Z,80nm,1.4s,mb5.5
KEH Kehvi 71.35 310 P **P** **12 12 49.5 -0.5**
ONI Oni 71.69 310 P **P** **12 12 53.5 +1.6**
HAKT HAKKARI 71.93 305 *i*P **P** **12 12 51.6 -1.9**
KIV Kislovodsk 72.14 312 P **P** **12 12 55.8 +1.1**
comp=Z,429nm,0.9s,mb6.4,SNR=8.7
KIV Kislovodsk 72.14 312 *e*P **P** **12 12 55.7 +1.0**
KIV *e*S S 12 22 16.3 +1.0
KIV pmax pmax
comp=Z,85nm,1.0s,mb5.6
KIV pmax pmax
comp=Z,74nm,4.6s
KIV MLR MLR
comp=Z,933nm,18.0s,MS5.1
KIV Kislovodsk 72.14 312 *e*P **P** **12 12 55.3 +0.6**
comp=Z,114nm,1.2s,mb5.7
KIV *e*pP pP 12 13 03.2 -0.3
KIV Kislovodsk 72.14 312 P **P** **12 12 55.5 +0.8**
SNR=21
TTA Tatalina 72.58 28 *e*P **P** **12 12 57.4 +0.5**
DBOC Borcka 73.12 309 *i*P **P** **12 13 01.1 +0.5**
DBAD Bademkaya 73.14 309 *i*P **P** **12 13 01.5 +0.8**
RPZ Rata Peaks 73.71 145 LR LR 12 46 21.7
comp=Z,548nm,20.1s,MS4.8,baz=310,slow=37
RPZ Rata Peaks 73.71 145 *e*P **P** **12 13 02.4 -1.3**
comp=Z,19nm,0.7s,mb5.1
RPZ *e*pP pP 12 13 11.8 -0.8
VSR Storozhevoye 73.96 319 *e*P **P** **12 13 04.6 -0.6**
VSR pmax pmax
comp=Z,30nm,0.7s,mb5.3
VSR pmax pmax
comp=N,2.0nm,0.3s
VSR pmax pmax
comp=E,10.0nm,0.7s
URZ Urewera 73.97 138 LR LR 12 46 45.0
comp=E,456nm,18.8s,MS4.8,baz=209,slow=37
OHAK Old Harbor 74.12 34 *e*P **P** **12 13 05.5 -0.5**
comp=E,18nm,0.9s,mb5.0
RSO Redoubt South 74.19 31 *e*P **P** **12 13 06.8 +0.4**
MARD Mardin 74.28 305 *i*P **P** **12 13 08.2 +0.8**
SOC Sochi 74.32 312 *e*P **P** **12 13 07.3 -0.2**
SOC *e*S S 12 22 36.1 -3.9
SOC pmax pmax
comp=Z,48nm,0.7s,mb5.5
SOC MLR MLR
comp=Z,1µm,17.0s,MS5.3
PPLA Purkeypile 74.33 28 *e*P **P** **12 13 07.6 +0.5**
comp=Z,48nm,1.3s,mb5.3
KDAK Kodiak Island 74.46 34 P **P** **12 13 05.5 -2.5**
comp=Z,16nm,0.8s,mb5.0,baz=272,slow=8.9,SNR=7.5
KDAK Kodiak Island 74.46 34 P **P** **12 13 05.5 -2.5**
KDAK pmax pmax
comp=Z,16nm,0.8s,mb5.0
KDAK Kodiak Island 74.46 34 *e*P **P** **12 13 08.3 +0.3**
comp=Z,64nm,1.4s,mb5.4
MOS Moscow 74.51 324 *e*P **P** **12 13 04.8 -3.6**
MOS *e* 12 13 15.3
MOS pmax pmax
comp=Z,43nm,1.1s,mb5.3
MOS MLR MLR
comp=Z,1µm,19.0s,MS5.2
BPAW Bear Paw Mtn. 74.79 27 *e*P **P** **12 13 10.1 +0.2**
comp=Z,98nm,1.1s,mb5.7
BPAW *e*pP pP 12 13 19.1 +0.3
COLD Coldfoot 74.91 24 *e*P **P** **12 13 11.4 +0.9**
comp=Z,27nm,1.0s,mb5.1
COLD *e*pP pP 12 13 19.9 +0.5
TRF Thorofare Moun 75.15 28 *e*P **P** **12 13 12.5 +0.6**
comp=Z,42nm,1.1s,mb5.3
OBN Obninsk 75.17 324⇓*i*P **P** **12 13 11.5 -0.7**
OBN *e**PP pP 12 13 20.0 -1.1
OBN *e*SS SS 12 27 39.7 +1.5
OBN pmax pmax
comp=Z,23nm,0.7s,mb5.2
OBN MLR MLR
comp=Z,600nm,18.0s,MS4.9
OBN Obninsk 75.17 324 *e*P **P** **12 13 11.9 -0.2**
comp=Z,48nm,1.0s,mb5.4
OBN *e*pP pP 12 13 19.8 -1.2
APA Apatity 75.52 337⇓*i*P **P** **12 13 14.0 0.0**
APA pmax pmax
comp=Z,43nm,1.2s,mb5.2
APA MLR MLR
comp=Z,2µm,16.0s,MS5.5
RC01 Rabbit Creek A 75.62 30 *e*P **P** **12 13 14.3 -0.4**
comp=Z,23nm,1.1s,mb5.0
MCK McKinley 75.73 27 *e*P **P** **12 13 14.9 -0.3**
MCK *e**PP pP 12 13 23.6 -0.5
MCK pmax pmax
comp=Z,104nm,1.1s,mb5.7
MCK McKinley 75.73 27 *e*P **P** **12 13 14.9 -0.4**
comp=Z,104nm,1.1s,mb5.7
MCK *e*pP pP 12 13 23.6 -0.6
KEMA Kemaliye 75.79 307 *i*P **P** **12 13 17.2 +1.2**
ANN Anapa 75.80 313 *e*P **P** **12 13 13.2 -2.9**
ANN *e**PP pP 12 13 23.9 -1.1
ANN *e* 12 16 02.9
ANN *e*PPP 12 17 48.2
ANN *e*S S 12 22 53.1 -3.3
ANN *e*SS SS 12 27 43.8 -4.5
ANN pmax pmax
comp=Z,101nm,1.5s,mb5.5
ANN MLR MLR
comp=N,694nm,17.0s,MS5.2
ANN MLR MLR
comp=E,906nm,17.0s,MS5.2
ANN MLR MLR
comp=Z,556nm,17.0s,MS4.9
PMR Palmer 75.86 30 *e*P **P** **12 13 14.6 -1.4**
PMR pmax pmax
comp=Z,39nm,1.6s,mb5.1
PMR Palmer 75.86 30 *e*P **P** **12 13 14.6 -1.4**
comp=Z,39nm,1.6s,mb5.1
COLA College 76.08 26 *e*P **P** **12 13 16.9 -0.3**
COLA *e**PP pP 12 13 25.8 -0.3
COLA pmax pmax
comp=Z,18nm,0.9s,mb5.0
COLA College 76.08 26 *e*P **P** **12 13 16.9 -0.3**
comp=Z,18nm,0.9s,mb5.0
COLA *e*pP pP 12 13 25.8 -0.3
GZT Gaziantep 76.80 305 *i*P **P** **12 13 22.5 +0.6**
JOF Joensuu 76.94 332 *e*P **P** **12 13 21.1 -1.0**
JOF pmax pmax
comp=Z,12nm,0.6s,mb5.0
JOF Joensuu 76.94 332 *e*p **P** **12 13 21.1 -1.0**
comp=Z,12nm,0.6s,mb5.0
DIV Divide 77.52 30 *e*P **P** **12 13 26.1 +0.7**
comp=Z,28nm,0.7s,mb5.3
ARCES ARCESS Array B 78.10 339 P **P** **12 13 28.2 -0.3**
comp=Z,12nm,0.9s,mb4.8,baz=84,slow=7.8,SNR=25
ARCES LR LR 12 52 03.5
comp=Z,674nm,18.3s,MS5.0,baz=271,slow=39
ARCES ARCESS Array B 78.10 339 P **P** **12 13 28.2 -0.3**
ARCES pmax pmax
comp=Z,12nm,0.9s
ARCES MLR MLR
comp=Z,674nm,18.3s
ARE0 ARCESS Array S 78.10 339 *e*P **P** **12 13 28.3 -0.2**
SIM Simferopol' 78.11 314*c i*P **P** **12 13 31.0 +2.0**
SIM *e*S S 12 23 25.0 +3.4
SIM pmax pmax
comp=Z,44nm,0.7s,mb5.5
SIM MLR MLR
comp=Z,760nm,20.3s,MS5.0
BMRM Bremner River 78.11 30 *e*P **P** **12 13 28.9 +0.2**
comp=Z,30nm,1.0s,mb5.2
BMRM *e*pP pP 12 13 37.1 -0.5
MENT Mentasta 78.17 28 *e*P **P** **12 13 29.4 +0.4**
YAYL Yayladag 78.19 304 *i*P **P** **12 13 30.6 +0.9**
ASF Jabal al Asfar 78.25 300 P **P** **12 13 31.5 +1.4**
comp=Z,3.1nm,0.6s,mb4.4,baz=197,slow=2.3,SNR=11
ASF Jabal al Asfar 78.25 300 P **P** **12 13 31.5 +1.4**
ASF pmax pmax
comp=Z,3.0nm,0.6s
SPITS Spitsbergen Ar 78.27 348 P **P** **12 13 29.0 -0.4**
comp=Z,9.2nm,0.7s,mb4.8,baz=78,slow=5.2,SNR=9.5
SPITS Spitsbergen Ar 78.27 348 P **P** **12 13 29.0 -0.4**
SPITS pmax pmax
comp=Z,9.0nm,0.7s
CDAG Cicekdag 78.88 308 *i*P **P** **12 13 32.8 -0.6**
EGAK Eagle 78.91 26 *e*P **P** **12 13 33.3 +0.2**
comp=Z,15nm,0.7s,mb5.0
EGAK *e*pP pP 12 13 40.3 -1.8
GULE Gulek 79.00 306 *i*P **P** **12 13 35.1 +1.0**
BALT Daday 79.25 310 *i*P **P** **12 13 36.6 +1.2**
MMAI Mount Meron Ar 79.33 301 P **P** **12 13 36.3 +0.3**
comp=Z,0.6nm,0.2s,mb4.1,baz=70,slow=13,SNR=2.7
MMAI LR LR 12 53 35.0
comp=Z,281nm,19.6s,MS4.6,baz=50,slow=39
KAF Kangasniemi 79.36 332 *e*P **P** **12 13 34.2 -1.4**
KAF pmax pmax
comp=Z,20nm,1.0s,mb5.0
KAF Kangasniemi 79.36 332 *e*P **P** **12 13 34.2 -1.4**
comp=Z,20nm,1.0s,mb5.0
KAF Kangasniemi 79.36 332 *e*p **P** **12 13 34.2 -1.4**
comp=Z,20nm,1.0s,mb5.0
BR131 Keskin Array S 79.41 308 *e*P **P** **12 13 36.2 -0.1**
comp=Z,2.7nm,0.6s,mb4.3
BRTR Keskin Array B 79.41 308 P **P** **12 13 35.3 -1.0**
comp=Z,4.1nm,0.7s,mb4.5,baz=96,slow=4.0,SNR=19
BRTR LR LR 12 55 27.0
comp=Z,456nm,20.0s,MS4.8,baz=218,slow=41
FINES FINESS Array B 79.62 331 P **P** **12 13 36.4 -0.5**
comp=Z,5.7nm,0.5s,mb4.8,baz=58,slow=6.0,SNR=56
FINES LR LR 12 51 53.0
comp=Z,1µm,19.7s,MS5.2,baz=347,slow=38
FINES FINESS Array B 79.62 331 P **P** **12 13 36.4 -0.6**
FINES pmax pmax
comp=Z,6.0nm,0.5s
FINES MLR MLR
comp=Z,1µm,19.7s
DAWY Dawson 79.83 26 *e*P **P** **12 13 39.0 +0.9**
DAWY *e*pP pP 12 13 47.2 +0.2
MICGM Minsk 80.23 324 *e* **P** **12 13 39.0 -1.4**
AKASG Malin Array Be 80.25 320 P **P** **12 13 39.5 -1.1**
comp=Z,13nm,0.9s,mb4.9,baz=65,slow=5.1,SNR=30
AKASG LR LR 12 50 07.2
comp=Z,642nm,18.9s,MS5.0,baz=55,slow=36
AKASG Malin Array Be 80.25 320 P **P** **12 13 39.5 -1.1**
AKASG pmax pmax
comp=Z,13nm,0.9s
AKASG MLR MLR
comp=Z,643nm,18.9s
AKBB Malin Array Si 80.25 320 *e*P **P** **12 13 39.9 -0.7**
MNK Minsk 80.25 324 *e*P **P** **12 13 39.0 -1.5**
KIEV Kiev 80.26 320 *e*P **P** **12 13 39.7 -1.0**
KIEV pmax pmax
comp=Z,29nm,1.1s,mb5.1
KIEV Kiev 80.26 320 *e*P **P** **12 13 39.7 -1.0**
comp=Z,29nm,1.1s,mb5.1
EIL Elat 80.39 298 P **P** **12 13 41.8 0.0**
comp=Z,3.0nm,0.6s,mb4.4,baz=39,slow=15,SNR=8.4
CSS Prodhromos 80.62 304 *e*P **P** **12 13 41.9 -1.0**
comp=Z,74nm,1.1s,mb5.5
CSS *e*pP pP 12 13 50.8 -1.1
IDID Didziasalis 80.68 325 *e*P **P** **12 13 43.0 +0.2**
IDID AMB AMB 12 13 52.2
comp=Z,29nm,1.1s,mb5.1
NACGM Naroch 80.76 324 *e* **P** **12 13 39.0 -4.2**
IZAR Zarasai 80.85 325 *e*P **P** **12 13 43.9 +0.1**
IZAR AMB AMB 12 13 53.1
comp=Z,22nm,1.1s,mb5.0
INK Inuvik 80.91 21 P **P** **12 13 43.8 0.0**
comp=Z,14nm,1.0s,mb4.8,baz=313,slow=4.8,SNR=18
INK Inuvik 80.91 21 P **P** **12 13 43.8 0.0**
INK pmax pmax
comp=Z,14nm,1.0s
INK Inuvik 80.91 21 *e*P **P** **12 13 43.9 +0.1**
comp=Z,36nm,1.2s,mb5.2
PNL Peninsula 80.92 31 *e*P **P** **12 13 46.0 +1.9**
comp=Z,40nm,1.0s,mb5.3
PNL *e*pP pP 12 13 54.0 +1.0
IIGN Ignalina 80.96 325 *e*P **P** **12 13 44.5 +0.2**
IIGN AMB AMB 12 13 53.7
comp=Z,19nm,1.2s,mb4.9
ISAL Salakas 80.96 325 *e*P **P** **12 13 44.5 +0.1**
ISAL AMB AMB 12 13 53.6
comp=Z,16nm,1.2s,mb4.8
HENT Hendek 81.24 310 *i*P **P** **12 13 46.1 0.0**
ABPO Ambohimpanom 81.51 248 *e*P **P** **12 13 47.4 -0.5**
ABPO *e**PP pP 12 13 55.9 -1.0
ABPO pmax pmax
comp=Z,13nm,1.0s,mb4.8
ABPO Ambohimpanom 81.51 248 *e*P **P** **12 13 47.4 -0.5**
comp=Z,13nm,1.0s,mb4.8
ABPO *e*pP pP 12 13 55.9 -1.0
TLCR 81.74 315⇓P **P** **12 13 48.8 +0.1**
TLCR 81.74 315⇓*i*P **P** **12 13 48.8 +0.1**
TIRR Tirgusor 82.19 314⇓P **P** **12 13 51.5 +0.4**
TIRR Tirgusor 82.19 314⇓*i*P **P** **12 13 51.5 +0.4**
CFR Carcaliu 82.21 315⇓P **P** **12 13 51.6 +0.4**
CFR Carcaliu 82.21 315⇓*i*P **P** **12 13 51.6 +0.4**
KORT Korkueli 82.52 306 *i*P **P** **12 13 52.8 -0.1**
TESR 82.89 316⇓P **P** **12 13 54.5 -0.2**
TESR 82.89 316⇓*i*P **P** **12 13 54.5 -0.2**
SKAG Skagway 82.97 30 *e*P **P** **12 13 56.8 +2.0**
comp=Z,23nm,1.0s,mb5.2
VRI Vrincioaia 83.00 316⇑P **P** **12 13 55.2 -0.1**
VRI Vrincioaia 83.00 316⇑*i*P **P** **12 13 55.2 -0.1**
SUW Suwalki 83.02 324 *e*P **P** **12 13 54.7 -0.4**
SUW LMZ 12 50 52.8
comp=Z,1µm,21.1s
SUW Suwalki 83.02 324 *e*P **P** **12 13 54.8 -0.4**
comp=Z,159nm,1.3s,mb5.9
PLOR Plostina 83.06 316 P **P** **12 13 56.6 +1.1**
PRD Provadia 83.21 313 P **P** **12 13 56.9 +0.5**
DEMI Demirci 83.28 309 *i*P **P** **12 13 56.8 0.0**
DURS Dursunbey 83.33 309 *i*P **P** **12 13 56.6 -0.5**
BURAR Bucovina Array 83.54 318⇑P **P** **12 13 58.7 +0.7**
BURAR Bucovina Array 83.54 318⇑*i*P **P** **12 13 58.7 +0.7**
BUR08 Bucovina Ar. S 83.55 318 *e*P **P** **12 13 58.4 +0.4**
MLR Muntele Rosu 83.63 315 P **P** **12 13 58.9 +0.4**
comp=Z,25nm,0.9s,mb5.3,baz=78,slow=3.6,SNR=30
MLR Muntele Rosu 83.63 315 P **P** **12 13 58.9 +0.4**
MLR pmax pmax
comp=Z,25nm,0.9s
MLR Muntele Rosu 83.63 315⇑*i*P **P** **12 13 58.8 +0.3**
LVV L'vov 83.69 320 *e*P **P** **12 13 58.6 -0.1**
LVV *e* pP 12 14 06.6 -1.1
LVV *e* 12 19 07.2
LVV *e*S S 12 24 18.8 -0.8
LVV *e* 12 25 16.4
LVV *e* 12 29 54.8
BALY Balya 83.93 309 *i*P **P** **12 13 59.7 -0.5**
SZH Strazhica 84.23 313 P **P** **12 14 01.8 +0.2**
VOIR 84.25 315⇓P **P** **12 14 01.7 0.0**
VOIR 84.25 315⇓*i*P **P** **12 14 01.7 0.0**
RAR Rarotonga 84.53 114 LR LR 12 45 11.8
comp=Z,227nm,19.9s,MS4.6,baz=147,slow=31
KWP Kalwaria Pacla 84.57 320 *e*P **P** **12 14 03.9 +0.7**
KWP LMZ 12 51 25.8
comp=Z,700nm,22.5s
KWP Kalwaria Pacla 84.57 320⇑P **P** **12 14 04.1 +0.9**
KWP Kalwaria Pacla 84.57 320 *e*P **P** **12 14 03.1 -0.1**
comp=Z,63nm,0.9s,mb5.8
KWP Kalwaria Pacla 84.57 320⇑*i*P **P** **12 14 04.1 +0.9**
BMR Baia Mare 84.64 318 P **P** **12 14 04.9 +1.3**
GCAM G?zelcaml? 84.75 308 *i*P **P** **12 14 04.3 -0.1**
DIM Dimitrovgrad 84.84 312 P **P** **12 14 05.0 +0.3**
KDZ Kurdzhali 85.04 312 P **P** **12 14 05.8 +0.1**
URLA Izmir 85.06 308 *i*P **P** **12 14 05.9 0.0**
TRPA Tarpa 85.12 319⇑*i*P **P** **12 14 06.6 +0.6**
UZH Uzhgorod 85.13 319 *e*P **P** **12 14 07.0 +1.0**
UZH *e* pP 12 14 14.8 -0.3
UZH *e*S S 12 24 33.8 -0.2
UZH *e* 12 25 32.8
DRGR 85.42 317⇑P **P** **12 14 08.3 +0.8**
DRGR 85.42 317⇑*i*P **P** **12 14 08.3 +0.8**
RZN Rozhen 85.53 312 P **P** **12 14 08.4 +0.2**
DEV Deva 85.56 316⇑P **P** **12 14 09.1 +0.8**
DEV Deva 85.56 316⇑*i*P **P** **12 14 09.1 +0.8**
CRVS Cervenica-Dubn 85.57 319 *e*P **P** **12 14 09.9 +1.7**
CRVS pmax pmax
comp=Z,76nm,1.2s,mb5.8
CRVS Cervenica-Dubn 85.57 319 *e*P **P** **12 14 09.9 +1.7**
comp=Z,76nm,1.2s,mb5.8
CRVS Cervenica-Dubn 85.57 319 *e*P **P** **12 14 09.9 +1.7**
KMBO Kilima Mbogo 85.64 268 P **P** **12 14 09.7 +0.4**
comp=Z,22nm,0.9s,mb5.4,baz=180,slow=24,SNR=34
KMBO LR LR 12 50 39.6
comp=Z,615nm,19.2s,MS5.0,baz=90,slow=34
KMBO Kilima Mbogo 85.64 268 *e*P **P** **12 14 10.3 +1.0**
KMBO *e**PP pP 12 14 19.0 +0.7
KMBO pmax pmax
comp=Z,35nm,1.0s
KMBO Kilima Mbogo 85.64 268 *e*P **P** **12 14 10.3 +1.0**
comp=Z,35nm,1.0s,mb5.5
KMBO *e*pP pP 12 14 19.0 +0.7
KMBO Kilima Mbogo 85.64 268 P **P** **12 14 11.4 +2.2**
SNR=15
GZR Gura Zlata 85.79 316⇑P **P** **12 14 10.0 +0.6**
GZR Gura Zlata 85.79 316⇑*i*P **P** **12 14 10.0 +0.6**
DLBC Dease Lake 85.90 30 *e*P **P** **12 14 10.4 +0.7**
DLBC *e*pP pP 12 14 19.6 +0.9
NIE Niedzica 86.12 320 *e*P **P** **12 14 11.1 +0.2**
OJC Ojcow 86.17 321 *e*P **P** **12 14 08.7 -2.5**
OJC *e* 12 14 13.8
OJC *e*S S 12 24 38.7 -5.5
OJC MLR MLR
comp=Z,800nm,19.2s,MS5.1
MMB Musomiste 86.27 312 P **P** **12 14 11.6 -0.3**
KECS Kecovo 86.32 319 *e*P **P** **12 14 12.4 +0.5**
KECS pmax pmax
comp=Z,22nm,0.8s,mb5.4
KECS Kecovo 86.32 319 *e*P **P** **12 14 12.4 +0.5**
comp=Z,22nm,0.8s,mb5.4
KECS Kecovo 86.32 319 *e*P **P** **12 14 12.4 +0.5**
VTS Vitosha 86.34 313⇑P **P** **12 14 11.7 -0.5**
VTS Vitosha 86.34 313 P **P** **12 14 12.5 +0.3**
VTS Vitosha 86.34 313⇑*i*P **P** **12 14 11.7 -0.5**
BZS Buzias 86.50 316⇓P **P** **12 14 13.2 +0.3**
BZS Buzias 86.50 316⇓*i*P **P** **12 14 13.2 +0.3**
NB2 NORSAR Subarra 86.52 333 P **P** **12 14 12.2 -0.5**
comp=Z,29nm,0.8s,mb5.5,baz=64,slow=4.8
NOA NORSAR Array B 86.52 333 P **P** **12 14 12.2 -0.5**
comp=Z,21nm,0.7s,mb5.5,baz=65,slow=4.9,SNR=66
NOA LR LR 12 56 54.5
comp=Z,2µm,18.2s,MS5.5,baz=60,slow=38
NOA NORSAR Array B 86.52 333 P **P** **12 14 12.2 -0.5**
NOA pmax pmax
comp=Z,21nm,0.7s
NOA MLR MLR
comp=Z,2µm,18.2s
KKB Krupnik 86.65 312 P **P** **12 14 13.6 -0.1**
NAO01 NORSAR Array S 86.75 333 *e*P **P** **12 14 13.1 -0.7**
comp=Z,20nm,0.8s,mb5.4
PSZ Piszkesteto 86.88 319⇑P **P** **12 14 14.6 -0.1**
PSZ Piszkesteto 86.88 319⇑*i*P **P** **12 14 14.6 -0.1**
RES Resolute Bay 87.10 9 P **P** **12 14 15.3 0.0**
comp=Z,29nm,0.8s,mb5.6,baz=302,slow=5.4,SNR=45
RES Resolute Bay 87.10 9 *e*P **P** **12 14 15.7 +0.4**
RES *e**PP pP 12 14 23.8 -0.5
RES pmax pmax
comp=Z,59nm,1.1s,mb5.7
RES Resolute Bay 87.10 9 *e*P **P** **12 14 15.7 +0.4**
comp=Z,59nm,1.1s,mb5.7
RES *e*pP pP 12 14 23.8 -0.5
OKC Ostrava-Krasne 87.30 321 *e*P **P** **12 14 17.2 +0.5**
OKC *e**PP pP 12 14 24.7 -1.1
OKC *e*S S 12 24 59.1 +4.0
OKC MLR MLR
comp=Z,700nm,15.2s,MS5.2
OKC Ostrava-Krasne 87.30 321 *e*P **P** **12 14 17.2 +0.5**
OKC *e*pP pP 12 14 24.7 -1.1
OKC *e*S S 12 24 59.1 +4.0
OKC Ostrava-Krasne 87.30 321 *e*P **P** **12 14 17.2 +0.5**
OKC *e*pP pP 12 14 24.7 -1.1
OKC *e*S S 12 24 59.1 +4.0
OKC AMS AMS 12 56 10.0
comp=Z,700nm,15.2s
VYHS Vyhne 87.35 320 *e*P **P** **12 14 17.8 +0.8**
VYHS pmax pmax
comp=Z,22nm,1.5s,mb5.2
VYHS Vyhne 87.35 320 *e*P **P** **12 14 17.8 +0.8**
comp=Z,22nm,1.5s,mb5.2
VYHS Vyhne 87.35 320 *e*P **P** **12 14 17.8 +0.8**
BUD Budapest 87.58 319⇑*e*P **P** **12 14 15.2 -2.9**
MORC Moravsky Berou 87.69 321 *e*P **P** **12 14 18.7 +0.1**
MORC *e**PP pP 12 14 26.2 -1.4
MORC pmax pmax
comp=Z,43nm,1.6s,mb5.4
MORC Moravsky Berou 87.69 321 *e*P **P** **12 14 18.7 +0.1**
comp=Z,43nm,1.6s,mb5.4
MORC *e*pP pP 12 14 26.2 -1.4

MORC	Moravsky Berou	87.69	321	⇓iP	P	12 14 18.5	-0.1
KSP	Ksiaz	88.04	322	eP	P	12 14 20.7	+0.4
KSP				LMZ		12 56 30.3	
	comp=Z,2µm,18.7s						
KSP	Ksiaz	88.04	322	eP	P	12 14 19.9	-0.3
KSP				e*PP	pP	12 14 28.3	-1.0
KSP				e		12 17 52.0	
KSP				eS	S	12 25 04.5	+2.3
KSP				MLR	MLR		
	comp=Z,2µm,18.7s,MS5.6						
KSP	Ksiaz	88.04	322	eP	P	12 14 19.9	-0.3
KSP				epP	pP	12 14 28.3	-1.0
KSP				ePP	PP	12 17 52.0	+5.4
KSP				eS	S	12 25 04.5	+2.3
DPC	Dobruska-Polom	88.21	322	eP	P	12 14 21.7	+0.7
DPC				e*PP	pP	12 14 29.4	-0.7
DPC				eS	S	12 24 53.3	-10
DPC				MLR	MLR		
	comp=Z,800nm,17.6s,MS5.2						
DPC	Dobruska-Polom	88.21	322	eP	P	12 14 21.7	+0.7
DPC				epP	pP	12 14 29.4	-0.7
DPC				eS	S	12 24 53.3	-10
DPC				LR	LR		
	comp=Z,800nm,17.6s,MS5.2						
DPC	Dobruska-Polom	88.21	322	eP	P	12 14 21.7	+0.7
DPC				epP	pP	12 14 29.4	-0.7
DPC				eSKS		12 24 53.3	
DPC				AMS	AMS	12 58 00.0	
	comp=Z,800nm,17.6s						
UPC	Upice	88.33	322	eP	P	12 14 22.3	+0.7
UPC				epP	pP	12 14 29.8	-0.9
VRAC	Vranov	88.44	321	P	P	12 14 21.8	-0.3
	comp=Z,12nm,0.8s,mb5.2,baz=80,slow=4.3,SNR=15						
VRAC	Vranov	88.44	321	⇑P	P	12 14 22.6	+0.5
VRAC	Vranov	88.44	321	⇑iP	P	12 14 22.6	+0.5
ZST	Bratislava	88.53	320	eP	P	12 14 23.2	+0.6
ZST				pmax	pmax		
	comp=Z,24nm,1.7s,mb5.2						
ZST	Bratislava	88.53	320	eP	P	12 14 23.2	+0.6
	comp=Z,24nm,1.7s,mb5.3						
ZST	Bratislava	88.53	320	eP	P	12 14 23.2	+0.6
TREC	Trest	89.11	321	eP	P	12 14 26.0	+0.7
TREC				e*PP	pP	12 14 34.0	-0.4
TREC				eS	S	12 25 13.6	+1.2
TREC				MLR	MLR		
	comp=Z,700nm,19.6s,MS5.1						
TREC	Trest	89.11	321	eP	P	12 14 26.0	+0.7
TREC				epP	pP	12 14 34.0	-0.4
TREC				eS	S	12 25 13.6	+1.2
TREC				AMS	AMS	12 54 30.0	
	comp=Z,700nm,19.6s						
PVCC	Panska Ves	89.18	323	eP	P	12 14 26.7	+1.1
PVCC				e*PP	pP	12 14 33.7	-1.0
PVCC				MLR	MLR		
	comp=Z,1µm,16.5s,MS5.3						
PVCC	Panska Ves	89.18	323	eP	P	12 14 26.7	+1.1
PVCC				epP	pP	12 14 33.7	-1.0
PVCC				LR	LR		
	comp=Z,1µm,16.5s,MS5.3						
PVCC	Panska Ves	89.18	323	eP	P	12 14 26.7	+1.1
PVCC				epP	pP	12 14 33.7	-1.0
PVCC				AMS	AMS	12 57 10.0	
	comp=Z,1µm,16.5s						
BRG	Berggiesshubel	89.40	323	eP	P	12 14 26.6	0.0
	comp=Z,11nm,1.1s,mb5.1						
BRG	Berggiesshubel	89.40	323	iP	P	12 14 26.6	0.0
	comp=Z,12nm,1.2s,mb5.1						
BRG				i	pP	12 14 33.9	-1.8
	comp=Z,14nm,1.1s						
BRG				i		12 18 01.7	
	comp=Z,12nm,1.6s						
BRG				S	S	12 25 21.0	+6.0
BRG							
	comp=N,710nm,19.2s						
BRG							
	comp=E,763nm,15.7s						
BRG							
	comp=Z,1µm,16.1s						
BRG	Berggiesshubel	89.40	323	iP	P	12 14 26.6	0.0
BRG				i	pP	12 14 33.9	-1.8
BRG				i		12 18 01.7	
BRG				S	S	12 25 21.0	+6.0
BRG				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.9						
BRG				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb5.0						
BRG				pmax	pmax		
	comp=Z,7.0nm,1.6s,mb4.7						
BRG				MLR	MLR		
	comp=N,425nm,19.2s,MS5.1						
BRG				MLR	MLR		
	comp=E,457nm,15.7s,MS5.1						
BRG				MLR	MLR		
	comp=Z,624nm,16.1s,MS5.1						
CONA	Conrad Observa	89.41	320	⇑iPcP	PcP	12 14 27.1	-1.1
	comp=Z,25nm,1.4s,SNR=12						
PRU	Pruhonice	89.41	322	eP	P	12 14 27.9	+1.2
PRU				e*PP	pP	12 14 35.7	0.0
PRU				eS	S	12 25 18.7	+3.6
PRU				MLR	MLR		
	comp=Z,800nm,17.4s,MS5.2						
PRU	Pruhonice	89.41	322	eP	P	12 14 27.9	+1.2
PRU				epP	pP	12 14 35.7	0.0
PRU				eS	S	12 25 18.7	+3.6
PRU				LR	LR		
	comp=Z,800nm,17.4s,MS5.2						
PRU	Pruhonice	89.41	322	eP	P	12 14 27.9	+1.2
PRU				epP	pP	12 14 35.7	0.0
PRU				eS	S	12 25 18.7	+3.6
PRU				AMS	AMS	12 57 20.0	
	comp=Z,800nm,17.4s						
CLL	Collm	89.77	324	eP	P	12 14 27.8	-0.5
	comp=Z,24nm,1.5s,mb5.3						
CLL				ePP	PP	12 18 00.9	+0.6
CLL	Collm	89.77	324	iP	P	12 14 28.1	-0.2
CLL				e	pP	12 14 36.0	-1.4
CLL				eS	S	12 25 21.0	+2.6
CLL				pmax	pmax		
	comp=Z,23nm,1.5s,mb5.3						
CLL				MLR	MLR		
	comp=Z,1µm,19.9s,MS5.2						
CLL	Collm	89.77	324	iP	P	12 14 28.1	-0.2
	comp=Z,23nm,1.5s,mb5.3						
CLL				e		12 14 33.0	
CLL				e	pP	12 14 36.0	-1.4
CLL				eS	S	12 25 21.0	+2.6
CLL				LR	LR		
	comp=Z,1µm,19.9s,MS5.2						
CLL	Collm	89.77	324	iP	P	12 14 28.1	-0.2
	comp=Z,23nm,1.5s,mb5.3						
CLL				epP	pP	12 14 36.0	-1.4
	comp=Z,24nm,1.4s						
CLL				e		12 14 48.0	
CLL				ePP	PP	12 18 01.0	+0.7
CLL				e		12 18 06.0	
CLL				i pPP		12 18 08.9	
CLL				eS	S	12 25 21.0	+2.6
CLL				ePS	PS	12 26 28.0	+0.9
CLL				ePPS		12 26 55.0	
CLL				e		12 27 32.0	
CLL				e		12 37 06.0	
CLL				eSSSS		12 38 06.0	
CLL				LmH		12 59 00.0	
	comp=N,600nm,18.6s						
CLL				LmH		12 59 00.0	
	comp=E,800nm,19.9s						
CLL				LmH		12 59 00.0	
	comp=Z,1µm,19.9s						
ARSA	Arzberg	89.88	319	⇑iPcP	PcP	12 14 29.2	-1.0
	comp=Z,13nm,1.2s,SNR=7.8						
BSEG	Bad Segeberg	90.11	327	eP	P	12 14 29.8	-0.1
	comp=Z,25nm,1.2s,mb5.4						
KHC	Kasperske Hory	90.33	322	eP	P	12 14 31.2	+0.2
KHC				e*PP	pP	12 14 39.6	-0.5
KHC				MLR	MLR		
	comp=Z,700nm,19.5s,MS5.1						
KHC	Kasperske Hory	90.33	322	eP	P	12 14 31.2	+0.2
KHC				epP	pP	12 14 39.6	-0.5
KHC				eSKS		12 25 06.7	
KHC				AMS	AMS	12 59 30.0	
	comp=Z,700nm,19.5s						
SOKA	Soboth	90.41	319	⇑iPcP	PcP	12 14 31.7	-0.9
	comp=Z,14nm,1.2s						
MOA	Molln	90.43	320	⇑iPcP	PcP	12 14 32.1	-0.5
	comp=Z,66nm,1.6s,SNR=16						
TANN	Tannenbergstha	90.45	323	eP	P	12 14 31.7	+0.1
	comp=Z,13nm,1.4s,mb5.1						
NKC	Novy Kostel	90.54	323	eP	P	12 14 33.1	+1.1
NKC				e*PP	pP	12 14 40.0	-1.0
NKC				MLR	MLR		
	comp=Z,1µm,15.9s,MS5.4						
NKC	Novy Kostel	90.54	323	eP	P	12 14 33.1	+1.1
NKC				epP	pP	12 14 40.0	-1.0
NKC	Novy Kostel	90.54	323	eP	P	12 14 33.1	+1.1
NKC				epP	pP	12 14 40.0	-1.0
NKC				AMS	AMS	12 58 10.0	
	comp=Z,1µm,15.9s						
YKA	Yellowknife Ar	90.57	23	P	P	12 14 32.1	+0.3
	comp=Z,7.0nm,0.7s,mb5.1,baz=304,slow=4.4,SNR=35						
YKA	Yellowknife Ar	90.57	23	P	P	12 14 32.1	+0.2
YKA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BOJS	Bojanci	90.73	318	iP	P	12 14 33.3	+0.3
WET	Wettzell	90.74	322	eP	P	12 14 33.6	+0.7
	comp=Z,19nm,1.5s,mb5.2						
MOX	Moxa	90.84	323	eP	P	12 14 34.2	+0.8
	comp=Z,31nm,1.9s,mb5.3						
MOX				e	pP	12 14 42.4	0.0
MOX							
	comp=Z,700nm,19.0s						
MOX	Moxa	90.84	323	eP	P	12 14 33.3	-0.1
	comp=Z,28nm,1.7s,mb5.3						
MOX	Moxa	90.84	323	eP	P	12 14 34.2	+0.8
MOX				e	pP	12 14 42.4	0.0
MOX				pmax	pmax		
	comp=Z,31nm,1.9s,mb5.3						
MOX				MLR	MLR		
	comp=Z,700nm,19.0s,MS5.1						
LJU	Ljubljana	90.98	318	iP	P	12 14 34.4	+0.3
LJU				e	pP	12 14 42.5	-0.7
CEY	Cerknica	91.17	318	iP	P	12 14 35.0	0.0
KBA	Koelnbreinsper	91.31	320	⇓iP	P	12 14 34.7	-1.0
	comp=Z,21nm,0.9s,mb5.5,SNR=8.6						
SUMG	Summit	91.31	354	eP	P	12 14 35.8	+0.7
	comp=Z,56nm,1.3s,mb5.7						
SUMG				epP	pP	12 14 44.0	-0.2
SUMG	Summit	91.31	354	iP	P	12 14 36.0	+0.9
	comp=Z,9.7nm,0.9s,mb5.1						
SUMG				i	pP	12 14 44.2	0.0
JAVS	Javornik	91.34	318	iP	P	12 14 35.5	-0.3
RJOB	Jochberg	91.38	321	eP	P	12 14 36.0	+0.1
	comp=Z,19nm,1.1s,mb5.3						
VOY	Vojsko	91.39	319	eP	P	12 14 35.8	-0.2
VOY				e		12 15 04.1	
GRF	Grafenberg Arr	91.48	323	eP	P	12 14 36.6	+0.2
	comp=Z,42nm,1.6s,mb5.5						
GRF				epP	pP	12 14 44.8	-0.6
GRF				eL		12 59 06.8	
	comp=Z,1µm,18.4s						
GRF	Grafenberg Arr	91.48	323	eP	P	12 14 36.6	+0.2
GRF				e*PP	pP	12 14 44.8	-0.6
GRF				pmax	pmax		
	comp=Z,42nm,1.6s,mb5.5						
GRF				MLR	MLR		
	comp=Z,1µm,18.4s,MS5.3						
PTCC	Patocco-Chiusa	91.58	319	P	P	12 14 36.6	-0.3
TRI	Trieste	91.60	318	eP	P	12 14 36.7	-0.3
UBBA	Unterbreizbach	91.68	324	eP	P	12 14 38.0	+0.7
	comp=Z,15nm,1.7s,mb5.0						
ABTA	Abfaltersbach	91.97	320	⇑iP	P	12 14 37.8	-0.8
	comp=Z,23nm,1.3s,mb5.3,SNR=9.6						
FUR	Furstenfeldbru	92.12	321	eP	P	12 14 40.2	+0.9
	comp=Z,31nm,1.0s,mb5.6						
IBBN	Ibbenburen	92.23	326	eP	P	12 14 39.8	0.0
	comp=Z,41nm,1.6s,mb5.5						
WTTA	Wattenberg	92.29	320	iPcP	PcP	12 14 40.4	-0.5
	comp=Z,38nm,1.2s,SNR=9.4						
MOTA	Moosalm	92.58	321	⇑iPcP	PcP	12 14 41.3	-0.9
	comp=Z,14nm,1.0s,SNR=7.8						
PPT	Papeete	92.69	107	eS	S	12 25 39.5	-6.6
	comp=Z,501nm,26.8s						
PPT				eSP	SP	12 26 56.3	-1.2
	comp=Z,300nm,30.2s						
PPT				eSS	SS	12 31 55.9	-3.6
	comp=Z,122nm,26.0s						
PPT				eLQ		12 40 08.4	
	comp=Z,784nm,29.5s						
PPT				eLR	LR	12 44 35.7	
	comp=Z,1µm,28.5s,baz=292						
PPT	Papeete	92.69	107	LR	LR	12 52 24.6	
	comp=Z,227nm,18.4s,MS4.7,baz=288,slow=33						
BUG	Bochum--Univer	92.91	325	eP	P	12 14 43.7	+0.8
	comp=Z,17nm,1.2s,mb5.3						
FETA	Feichten	92.95	320	iPcP	PcP	12 14 43.4	-0.4
	comp=Z,37nm,1.4s,SNR=8.6						
CEL	Celeste	93.06	311	eP	P	12 14 43.9	0.0
	comp=Z,18nm,0.9s,mb5.5						
STU	Stuttgart	93.08	322	eP	P	12 14 43.9	+0.1
	comp=Z,34nm,1.8s,mb5.5						
STU	Stuttgart	93.08	322	eP	P	12 14 43.2	-0.6
SNTG	Esanatoglia	93.15	316	P	P	12 14 44.8	+0.6
MAW	Mawson	93.24	199	P	P	12 14 42.5	-1.4
	comp=Z,1.8nm,0.6s,mb4.7,baz=34,slow=6.8,SNR=6.7						
MAW				LR	LR	12 54 37.2	
	comp=Z,235nm,19.0s,MS4.7,baz=56,slow=34						
BRMO	Bormio	93.41	320	P	P	12 14 46.5	+1.1
PGC	Sidney	93.66	37	eP	P	12 14 47.9	+1.4
	comp=Z,1.0nm,0.9s,mb4.2						
PGC				epP	pP	12 14 56.2	+0.6
NLWA	Neilton Lookou	94.00	39	eP	P	12 14 49.5	+1.5
	comp=Z,10nm,0.9s,mb5.3						
MEM	Membach	94.02	325	P	P	12 14 48.6	+0.5
	comp=Z,10nm,1.8s,mb5.0						
TUE	Stuetta	94.05	320	eP	P	12 14 49.1	+0.8
	comp=Z,51nm,1.4s,mb5.8						
TUE				epP	pP	12 14 57.3	0.0
CDF	Champ du Feu	94.38	323	eP	P	12 14 49.1	-0.6
	comp=Z,65nm,1.5s,mb5.5						
CDF	Champ du Feu	94.38	323	eP	P	12 14 49.1	-0.6
CDF				pmax	pmax		
	comp=Z,32nm,1.5s,mb5.5						
CDF	Champ du Feu	94.38	323	eP	P	12 14 49.1	-0.6
	comp=Z,32nm,1.5s,mb5.5						
WLF	Walferdange	94.41	324	P	P	12 14 50.7	+0.9
	comp=Z,19nm,1.5s,mb5.3						
WLF	Walferdange	94.41	324	eP	P	12 14 50.9	+1.0
	comp=Z,28nm,1.1s,mb5.6						
VAE	Valguarnera	94.44	311	P	P	12 14 51.1	+0.8
	comp=Z,3.1nm,0.3s,mb5.2,baz=294,slow=4.3,SNR=2.5						
VAE	Valguarnera	94.44	311	P	P	12 14 51.1	+0.8
BCLA	Clavier	94.50	325	P	P	12 14 50.7	+0.5
	comp=Z,15nm,1.7s,mb5.2						
GNW	Green Mountain	94.55	38	eP	P	12 14 52.3	+1.8
	comp=Z,4.1nm,1.0s,mb4.8						
JCW	Jim Creek	94.77	37	P	P	12 14 53.1	+1.5
RPW	Rockport	94.89	37	P	P	12 14 53.3	+1.2
HINF	Hinteralfeld	94.91	322	eP	P	12 14 51.2	-1.0
	comp=Z,18nm,1.1s,mb5.1						
HINF	Hinteralfeld	94.91	322	eP	P	12 14 51.2	-1.0
HINF				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb5.1						
HINF	Hinteralfeld	94.91	322	eP	P	12 14 51.2	-1.0
	comp=Z,8.8nm,1.1s,mb5.1						
GIVF	Givet	94.93	325	eP	P	12 14 51.5	-0.7
DOU	Dourbes	95.06	325	P	P	12 14 53.1	+0.3
	comp=Z,14nm,1.9s,mb5.1						
DOU				AP	pP	12 15 01.0	-0.9
HAU	Haudompre	95.12	323	eP	P	12 14 52.1	-1.0
HAU				eMLR	MLR		
	comp=Z,1µm,17.5s,MS5.1						
HAU	Haudompre	95.12	323	eP	P	12 14 52.1	-1.0
HAU				LR	LR		
	comp=Z,1µm,17.5s,MS5.4						
BAIF	Baives	95.29	325	eP	P	12 14 53.2	-0.7
	comp=Z,48nm,1.4s,mb5.4						
BAIF	Baives	95.29	325	eP	P	12 14 53.2	-0.7
BAIF				pmax	pmax		
	comp=Z,24nm,1.4s,mb5.4						
BAIF	Baives	95.29	325	eP	P	12 14 53.2	-0.7
	comp=Z,24nm,1.4s,mb5.4						
MPOR	Mary's Peak	95.55	41	P	P	12 14 57.0	+1.8
MEZF	Maizieres J'vi	95.62	324	eP	P	12 14 54.8	-0.6
	comp=Z,92nm,1.4s,mb5.7						
MEZF	Maizieres J'vi	95.62	324	eP	P	12 14 54.8	-0.6
	comp=Z,92nm,1.4s,mb6.0						
CABF	La Chapelle	95.96	322	eP	P	12 14 56.3	-0.7
	comp=Z,42nm,1.4s,mb5.4						
CABF	La Chapelle	95.96	322	eP	P	12 14 56.3	-0.7
CABF				pmax	pmax		
	comp=Z,21nm,1.4s,mb5.4						
CABF	La Chapelle	95.96	322	eP	P	12 14 56.3	-0.7
	comp=Z,21nm,1.4s,mb5.4						
ETW	Entiat	96.00	37	P	P	12 14 58.8	+1.7
LPG	La Plagne	96.10	320	eP	P	12 14 57.6	-0.1
	comp=Z,37nm,1.1s,mb5.4						
LPG	La Plagne	96.10	320	eP	P	12 14 57.6	-0.1
LPG				pmax	pmax		
	comp=Z,18nm,1.1s,mb5.4						
LPG	La Plagne	96.10	320	eP	P	12 14 57.6	-0.1
	comp=Z,18nm,1.1s,mb5.4						
LPL	La Plagne	96.11	320	eP	P	12 14 57.4	-0.3
	comp=Z,49nm,1.3s,mb5.5						
LPL	La Plagne	96.11	320	eP	P	12 14 57.4	-0.3
LPL				pmax	pmax		
	comp=Z,25nm,1.3s,mb5.5						
LPL	La Plagne	96.11	320	eP	P	12 14 57.4	-0.3
	comp=Z,25nm,1.3s,mb5.5						
BNI	Bardonecchia	96.36	320	eP	P	12 14 59.0	+0.1
BNI				pmax	pmax		
	comp=Z,15nm,1.1s,mb5.3						
BNI	Bardonecchia	96.36	320	eP	P	12 14 59.0	+0.1
	comp=Z,15nm,1.1s,mb5.3						
SBF	Sospel	96.46	319	eP	P	12 14 58.2	-1.2
	comp=Z,90nm,1.4s,mb5.7						
SBF	Sospel	96.46	319	eP	P	12 14 58.2	-1.2
SBF				pmax	pmax		
	comp=Z,45nm,1.4s,mb5.7						
SBF	Sospel	96.46	319	eP	P	12 14 58.2	-1.2
	comp=Z,45nm,1.4s,mb5.7						
MBDF	Montbardon	96.47	320	eP	P	12 14 58.2	-1.2
EDM	Edmonton	96.62	30	eP	P	12 15 00.5	+0.6
CROR	Criterion Ridg	96.92	40	P	P	12 15 02.6	+1.2
ORIF	Oris-en-Rattie	96.92	320	eP	P	12 14 59.6	-1.8
ORIF				eMLR	MLR		
	comp=Z,987nm,21.8s,MS5.0						
LOR	Lormes	96.94	323	eP	P	12 15 00.4	-1.1
	comp=Z,40nm,1.4s,mb5.3						
LOR				eMLR	MLR		
	comp=Z,861nm,21.2s,MS4.9						
LOR	Lormes	96.94	323	eP	P	12 15 00.4	-1.1
LOR				pmax	pmax		
	comp=Z,20nm,1.4s,mb5.3						
LOR				MLR	MLR		
	comp=Z,860nm,21.3s,MS5.2						
LOR	Lormes	96.94	323	eP	P	12 15 00.4	-1.1
	comp=Z,20nm,1.4s,mb5.4						
LOR				LR	LR		
	comp=Z,860nm,21.3s,MS5.2						
FRF	La Foret Royal	97.11	319	eP	P	12 15 01.3	-1.0
	comp=Z,29nm,1.1s,mb5.3						
FRF	La Foret Royal	97.11	319	eP	P	12 15 01.3	-1.0
FRF				pmax	pmax		
	comp=Z,14nm,1.1s,mb5.3						
FRF	La Foret Royal	97.11	319	eP	P	12 15 01.3	-1.0
	comp=Z,14nm,1.1s,mb5.3						
SSF	Saint Saulge	97.26	323	eP	P	12 15 02.0	-0.9
	comp=Z,111nm,1.7s,mb5.7						
SSF	Saint Saulge	97.26	323	eP	P	12 15 02.0	-0.9
SSF				pmax	pmax		
	comp=Z,56nm,1.7s,mb5.7						
SSF	Saint Saulge	97.26	323	eP	P	12 15 02.0	-0.9
	comp=Z,56nm,1.7s,mb5.7						
SMF	Signal de Mont	97.28	322	eP	P	12 15 01.8	-1.2
	comp=Z,49nm,1.5s,mb5.4						
SMF	Signal de Mont	97.28	322	eP	P	12 15 01.8	-1.2
SMF				pmax	pmax		
	comp=Z,25nm,1.5s,mb5.4						
SMF	Signal de Mont	97.28	322	eP	P	12 15 01.8	-1.2
	comp=Z,25nm,1.5s,mb5.4						
LMR	La Mourre	97.31	319	eP	P	12 15 02.3	-0.9
	comp=Z,28nm,1.2s,mb5.3						
LMR	La Mourre	97.31	319	eP	P	12 15 02.3	-0.9
LMR				pmax	pmax		
	comp=Z,14nm,1.2s,mb5.3						
LMR	La Mourre	97.31	319	eP	P	12 15 02.3	-0.9
	comp=Z,14nm,1.2s,mb5.3						
YBH	Yreka Blue Hor	97.39	43	P	P	12 15 04.0	+0.4
	comp=Z,2.6nm,1.0s,mb4.6,baz=286,slow=11,SNR=4.5						
YBH	Yreka Blue Hor	97.39	43	P	P	12 15 04.0	+0.4
YBH				pmax	pmax		
	comp=Z,3.0nm,1.0s						
YBH	Yreka Blue Hor	97.39	43	eP	P	12 15 04.8	+1.2
	comp=Z,4.4nm,1.0s,mb4.8						
NEW	Newport	97.49	36	eP	P	12 15 04.8	+0.9
NEW				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NEW	Newport	97.49	36	eP	P	12 15 04.8	+0.9
	comp=Z,5.3nm,0.9s,mb5.0						
AVF	Avril sur Loir	97.49	323	eP	P	12 15 02.2	-1.7
	comp=Z,29nm,1.4s,mb5.2						
AVF	Avril sur Loir	97.49	323	eP	P	12 15 02.2	-1.7
AVF				pmax	pmax		
	comp=Z,15nm,1.4s,mb5.2						
AVF	Avril sur Loir	97.49	323	eP	P	12 15 02.2	-1.7
	comp=Z,15nm,1.4s,mb5.2						
SMRF	Simiane la Rot	97.58	319	eP	P	12 15 03.7	-0.7
	comp=Z,76nm,1.8s,mb5.6						
SMRF	Simiane la Rot	97.58	319	eP	P	12 15 03.7	-0.7
	comp=Z,76nm,1.8s,mb5.9						
VIVF	Saint-Julien-l	97.70	321	eP	P	12 15 04.2	-0.7
TCF	Toulx Ste Croi	98.42	323	eP	P	12 15 07.4	-0.7
LASF	Ste Croix	98.60	320	eP	P	12 15 08.2	-0.8
KEST	Kesra	98.87	311	LR	LR	13 06 23.3	
	comp=Z,112nm,18.5s,MS4.4,baz=337,slow=39						
BSMT	Bassoo Peak	99.02	35	eP	P	12 15 12.8	+2.0
	comp=Z,1.4nm,0.8s,mb4.5						
BSMT				epP	pP	12 15 20.2	+0.4
BMO	Blue Mountains	99.22	38	eP	P	12 15 12.7	+0.9
BMO				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.7						
BMO	Blue Mountains	99.22	38	eP	P	12 15 12.7	+1.0
	comp=Z,2.2nm,0.8s,mb4.7						
BMO				epP	pP	12 15 21.1	+0.2
RJF	Les Rejaudoux	99.36	322	eP	P	12 15 12.3	-0.1
RJF				eMLR	MLR		
	comp=Z,906nm,20.2s,MS5.0						
RJF	Les Rejaudoux	99.36	322	eP	P	12 15 12.3	-0.1
RJF				LR	LR		
	comp=Z,910nm,20.3s,MS5.3						
MFF	Saint Martin d	99.61	324	eP	Pdif	12 15 13.1	-0.1
	comp=Z,44nm,1.3s						
MFF	Saint Martin d	99.61	324	eP	Pdif	12 15 13.1	-0.1
MFF				pmax	pmax		
	comp=Z,22nm,1.3s,mb5.4						
MFF	Saint Martin d	99.61	324	eP	Pdif	12 15 13.1	-0.1
	comp=Z,22nm,1.3s						
WVOR	Wild Horse Val	99.68	41	eP	Pdif	12 15 15.7	+2.1
WVOR				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.9						
WVOR	Wild Horse Val	99.68	41	ePdif	Pdif	12 15 15.7	+2.1
	comp=Z,5.3nm,1.0s						
SGMF	Saint Gilles	99.98	326	eP	Pdif	12 15 14.0	-0.9
	comp=Z,403nm,1.9s						
SGMF	Saint Gilles	99.98	326	eP	Pdif	12 15 14.0	-0.9
SGMF				pmax	pmax		
	comp=Z,202nm,1.9s,mb6.2						
SGMF	Saint Gilles	99.98	326	eP	Pdif	12 15 14.0	-0.9
	comp=Z,202nm,1.9s						
MTLF	Montolieu	100.00	320	eP	Pdif	12 15 14.7	-0.3
	comp=Z,44nm,1.6s						
MTLF	Montolieu	100.00	320	eP	Pdif	12 15 14.7	-0.3
MTLF				pmax	pmax		
	comp=Z,22nm,1.6s,mb5.3						
MTLF	Montolieu	100.00	320	eP	Pdif	12 15 14.7	-0.3
	comp=Z,22nm,1.6s						
SLMT	Seeley Lake	100.08	35	ePdif	Pdif	12 15 15.9	+0.6
	comp=Z,3.4nm,0.9s						
QUIF	Quistinic	100.51	326	eP	Pdif	12 15 16.5	-0.7
	comp=Z,137nm,1.3s						
QUIF	Quistinic	100.51	326	eP	Pdif	12 15 16.5	-0.7
QUIF				pmax	pmax		
	comp=Z,69nm,1.3s						
QUIF	Quistinic	100.51	326	eP	Pdif	12 15 16.5	-0.7
	comp=Z,69nm,1.3s						
CMB	Columbia Colle	100.72	46	eP	Pdif	12 15 19.3	+1.1
EPF	Esparros	101.32	321	eP	Pdif	12 15 20.3	-0.6
HLID	Hailey	101.67	38	ePdif	Pdif	12 15 24.1	+1.7
	comp=Z,3.0nm,0.8s						
DLMT	Dillon	101.69	36	ePdif	Pdif	12 15 22.3	-0.2
	comp=Z,3.9nm,1.0s						
ETSF	Etsaut	101.94	321	eP	Pdif	12 15 23.2	-0.4
	comp=Z,49nm,1.6s						
ETSF	Etsaut	101.94	321	eP	Pdif	12 15 23.2	-0.4
ETSF				pmax	pmax		
	comp=Z,25nm,1.6s						
ETSF	Etsaut	101.94	321	eP	Pdif	12 15 23.2	-0.4
	comp=Z,25nm,1.6s						

NVAR	Mina Array Bea	101.95	44	P	Pdif	12 15 24.1	+0.4
	comp=Z,1.6nm,0.7s,baz=302,slow=5.2,SNR=13						
ELK	Elko	102.73	41	Pdiff	Pdif	12 15 29.4	+2.3
	comp=Z,1.2nm,0.7s,baz=229,slow=11,SNR=4.4						
ELK	Elko	102.73	41	Pdif	Pdif	12 15 29.4	+2.3
PDAR	Pinedale Array	105.00	37	Pdiff	Pdif	12 15 40.8	+3.5
	comp=Z,0.2nm,0.5s,baz=39,slow=5.8,SNR=3.3						
PDAR				PKKP	PKKPbc	12 31 34.9	+14
	comp=Z,0.6nm,0.9s,baz=92,slow=6.3,SNR=4.5						
PDAR	Pinedale Array	105.00	37	Pdif	Pdif	12 15 40.8	+3.5
PDAR				PKKP	PKKPbc	12 31 34.9	+14
RKT	Rikitea	107.26	110	eLR	LR	12 51 11.8	
	comp=Z,444nm,30.5s,baz=289						
TORD	Torodi Ar. Bea	114.87	293	PKP	PKiKP	12 20 10.9	-0.7
	comp=Z,2.9nm,0.8s,baz=40,slow=1.5,SNR=15						
TORD				PKKPab	PKKPab	12 30 53.7	-1.2
	comp=Z,2.2nm,0.9s,baz=259,slow=4.3,SNR=8.7						
TORD				PKKP	PKKPbc	12 31 07.7	+20
	comp=Z,1.5nm,0.8s,baz=260,slow=3.8,SNR=5.2						
TXAR	Lajitas Array	117.09	45	PKP	PKPdf	12 20 15.7	+0.1
	comp=Z,1.3nm,0.7s,baz=236,slow=1.4,SNR=20						
JCT	Junction City	118.91	42	ePKIKP	PKPdf	12 20 19.4	+0.4
WVT	Waverly	121.30	29	ePKIKP	PKPdf	12 20 22.9	-0.5
WVT				e		12 20 31.3	
DBIC	Dimbokro	123.36	289	PKP	PKPdf	12 20 27.8	-0.2
	comp=Z,7.4nm,0.7s,baz=66,slow=5.3,SNR=8.7						
DBIC				PKKPbc	PKKPbc	12 30 08.9	-8.0
	comp=Z,3.5nm,0.8s,baz=292,slow=5.4,SNR=2.8						
KIC	Kosan Boka	123.38	288	ePKIKP	PKPdf	12 20 27.8	-0.2
	comp=Z,22nm,0.7s						
TIC	Toumodi	123.52	289	ePKIKP	PKPdf	12 20 27.9	-0.4
	comp=Z,86nm,1.4s						
LIC	Lamto	123.69	288	i PKIKP	PKPdf	12 20 28.3	-0.3
	comp=Z,22nm,0.8s						
LIC				eMLR	MLR		
	comp=Z,310nm,21.5s,MS4.6						
LIC	Lamto	123.69	288	ePKIKP	PKPdf	12 20 28.3	-0.3
	comp=Z,35nm,0.8s						
LIC	Lamto	123.69	288	i PKPdf	PKPdf	12 20 28.3	-0.3
LIC				LR	LR		
	comp=Z,160nm,21.5s,MS4.6						
SDDR	Presa de Saban	143.26	22	ePKPdf	PKPdf	12 21 10.2	+5.2
AGPR	Aguadilla, PR	145.06	16	ePKPdf	PKPdf	12 21 07.4	-0.8
CBYP	Canovanas	145.56	14	ePKPdf	PKPdf	12 21 09.7	+0.7
MTP	Monte Pirata	145.80	14	ePKPdf	PKPdf	12 21 09.9	+0.5
BCIP	Isla Barro Col	147.10	44	ePKPbc	PKPbc	12 21 13.7	-0.1
FDF	Fort de France	149.85	7	ePKP2	PKPbc	12 21 21.0	+0.1
SDV	Santo Domingo	152.62	29	ePKPdf	PKPdf	12 21 21.9	+1.4
SDV				ePKPbc	PKPbc	12 21 28.3	+0.8
ROSC	El Rosal	153.91	41	ePKPdf	PKPdf	12 21 21.8	-0.6
OTAV	Otavalo	154.18	55	ePKPdf	PKPdf	12 21 25.0	+2.3
TRQA	Tornquist	157.10	171	ePKPab	PKPab	12 21 55.2	-1.1
CPUP	Villa Florida	169.12	181	PKPab	PKPab	12 22 48.0	-1.2
	comp=Z,11nm,0.8s,baz=146,slow=6.6,SNR=23						
CPUP	Villa Florida	169.12	181	PKP2	PKPab	12 22 48.0	-1.2
CPUP				pmax	pmax		
	comp=Z,11nm,0.9s						
LPAZ	La Paz	169.80	96	PKP	PKPdf	12 21 39.6	+1.3
	comp=Z,3.3nm,0.9s,baz=180,slow=6.1,SNR=13						
LPAZ				PKPab	PKPab	12 22 52.9	0.0
	comp=Z,5.3nm,1.2s,baz=220,slow=7.9,SNR=2.0						
LPAZ	La Paz	169.80	96	PKIKP	PKPdf	12 21 39.7	+1.3
LPAZ						12 22 52.9	
LPAZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LPAZ				pmax	pmax		
	comp=Z,5.0nm,1.2s						
LPAZ	La Paz	169.80	96	ePKPdf	PKPdf	12 21 40.2	+1.9

*IDC **06** 12:11:12.0±0.7, 15°.35N×122°.70E, h0km, mb4.1/15, mb1 4.2/15, mb1mx4.1/24, mbtmp4.1/15, Error ellipse: s-maj=21.2km s-min=13.1km az=80.0*
*ISCJB **06** 12:11:14.9±1.2, 15°.36N±0°.04×122°.54E±0°.05, h29km±9km, mb4.4/21, Error ellipse: s-maj=9.5km s-min=6.0km az=150.8*
*MAN **06** 12:11:15, 15°.38N×122°.40E, h9km, mb5.1, ML4.0, MS4.2*
*NEIC **06** 12:11:17.1±0.3, 15°.31N×122°.67E, h35km, mb4.8/8, Error ellipse: s-maj=10.1km s-min=4.9km az=77.0*

ISC 06 12:11:14.6±1.2, 15°.38N±0°.04×122°.49E±0°.05, h12km±7km, n38, σ1s19/45, mb4.4/21, 2C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	Polilio Island	0.84	219	eP	Pg	12 11 30.0	-0.9
POLP				eS	Sg	12 11 43.7	+1.8
BALP	Baler	0.95	292	eP	Pg	12 11 31.9	-1.1
BALP				eS	Sg	12 11 44.4	-1.0
PCPH	Palayan	1.36	278	i eP	Pn	12 11 38.3	-1.1
PCPH				eS	Sb	12 11 55.8	-1.5
PALP	Palanan	1.67	358	eP	Pn	12 11 43.6	-0.1
PALP				eS	Sn	12 12 14.9	+10
TGY	Tagaytay City	1.97	230	Pn	Pn	12 11 49.6	+1.8
	1μm,0.3s,baz=80,slow=1.8,SNR=46						
TGY				Sn	Sn	12 12 17.6	+5.1
	929nm,0.3s,baz=302,slow=21,SNR=11						
BOAC	Boac	2.01	198	eP	Pn	12 11 50.4	+2.0
AUQP	San Andres	2.06	175	eP	Pn	12 11 52.1	+3.1
BCPH	Baguio City Da	2.09	299	i P	Pn	12 11 49.9	+0.5
BCPH				i S	Sn	12 12 15.5	+0.2
PVCP	Virac	2.40	138	eP	Pn	12 11 55.3	+1.6
OTRP	Odiongan	3.04	189	eP	Pn	12 12 04.5	+2.0
SSLB	Suanglung	8.48	350	ePn	Pn	12 13 18.6	+1.2
KAPI	Kappang	20.45	188	P	P	12 15 51.0	-1.1
	11nm,1.0s,baz=59,slow=21,SNR=4.1						
KSRS	Korea Array	22.50	11	P	P	12 16 14.2	+0.2
	1.0nm,0.8s,mb3.3,baz=190,slow=8.7,SNR=4.7						
CMAR	Chiang Mai Arr	22.73	281	P	P	12 16 18.1	+1.5
	2.5nm,0.5s,mb3.9,baz=92,slow=7.7,SNR=17						
MJAR	Matsushiro Arr	25.30	31	P	P	12 16 40.3	-0.7
	0.4nm,0.6s,baz=235,slow=8.5,SNR=2.9						
HHC	Hu-ho-hao-te	27.09	342	eP	P	12 16 58.4	+1.2
HHC				S	S	12 21 35.8	+0.7
HHC				pmax	pmax		
	comp=Z,14nm,0.5s,mb4.8						
HHC				pmax	pmax		
	comp=Z,1μm,5.5s						
KAKA	Kakadu	29.60	160	eP	P	12 17 18.5	-1.3
	comp=Z,45nm,0.6s,mb5.4						
FITZ	Fitzroy Crossi	33.42	175	eP	P	12 17 51.8	-1.5
	comp=Z,2.8nm,0.5s,mb4.5						
SONM	Songino Array	34.99	341	P	P	12 18 06.7	0.0
	comp=Z,0.5nm,0.5s,mb3.7,baz=177,slow=5.8,SNR=2.5						
WRAB	Tennant Creek	36.98	161	eP	P	12 18 21.0	-3.1
	comp=Z,12nm,0.6s,mb4.9						
WRA	Warramunga Arr	36.99	161	P	P	12 18 22.1	-2.0
	comp=Z,12nm,0.6s,mb4.9,baz=343,slow=9.3,SNR=77						
ASAR	Alice Springs	40.38	164	P	P	12 18 51.1	-1.4
	comp=Z,3.2nm,0.4s,mb4.5,baz=340,slow=7.8,SNR=83						
MK31	Makanchi Array	45.75	322	eP	P	12 19 36.6	+0.8
MKAR	Makanchi Array	45.75	322	P	P	12 19 36.6	+0.8
	comp=Z,1.8nm,0.7s,mb4.1,baz=116,slow=10,SNR=10						
NWAO	Narrogin (SRO)	48.30	186	eP	P	12 19 54.7	-1.1
	comp=Z,7.6nm,0.6s,mb4.9						
ZALV	Zalesovo Beam	48.40	331	P	P	12 19 56.5	+0.2
	comp=Z,0.9nm,0.5s,mb4.1,baz=123,slow=5.5,SNR=4.6						
ZALV	Zalesovo Beam	48.40	331	P	P	12 19 56.5	+0.2
KURK	Kurchatov	49.79	325	P	P	12 20 08.0	+0.9
	comp=Z,8.6nm,0.7s,mb4.9,baz=121,slow=8.4,SNR=51						
KURK	Kurchatov	49.79	325	eP	P	12 20 07.5	+0.5
	comp=Z,9.7nm,0.7s,mb4.9						
STKA	Stephens Creek	50.44	159	P	P	12 20 10.9	-1.3
	comp=Z,3.3nm,0.6s,mb4.5,baz=331,slow=8.5,SNR=5.1						
BVAR	Borovoye Array	55.39	325	P	P	12 20 49.4	+0.9
	comp=Z,0.8nm,0.6s,mb4.0,baz=106,slow=7.9,SNR=5.0						
BRVK	Borovoye	55.46	325	eP	P	12 20 49.9	+0.8
	comp=Z,7.4nm,1.0s,mb4.7						
ABKAR	Abkulak array	60.62	318	eP	P	12 21 25.5	+0.2
	comp=Z,3.0nm,0.9s,mb4.4						
FINES	FINESS Array B	79.66	331	P	P	12 23 20.8	-1.0
	comp=Z,0.7nm,0.6s,mb3.8,baz=69,slow=10,SNR=4.7						
AKASG	Malin Array Be	80.30	320	P	P	12 23 24.8	-0.7
	comp=Z,0.2nm,0.3s,mb3.6,baz=60,slow=4.4,SNR=2.1						
NB2	NORSAR Subarra	86.56	333	P	P	12 23 57.1	-0.4
	comp=Z,1.1nm,0.8s,mb4.1,baz=62,slow=5.1						
NOA	NORSAR Array B	86.56	333	P	P	12 23 56.7	-0.8
	comp=Z,1.6nm,0.7s,mb4.3,baz=64,slow=4.9,SNR=5.3						
RES	Resolute Bay	87.11	9	eP	P	12 24 00.4	+0.5
	comp=Z,4.5nm,0.9s,mb4.7						

*CSEM **06** 12:21:03.1±0.2, 41°.22N×23°.14E, h2km, ML1.9, Error ellipse: s-maj=4.6km s-min=2.4km az=66.0*
*THE **06** 12:21:03.2, 41°.22N×23°.14E, h2km±3km, ML2.9/4, Error ellipse: s-maj=3.2km s-min=0.6km az=210.0*
*SKO **06** 12:21:03.7, 41°.22N×23°.12E, h4km, M1.3, ML1.8*
*BEO **06** 12:21:05.8±0.7, 41°.30N×23°.05E, h1km±4km, ML1.9/5*

ISC 06 12:21:03.4±0.5, 41°.21N±0°.02×23°.11E±0°.04, h7km±8km, n24, σ0s68/41, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.42	285	i Pg	Pg	12 21 11.4	-0.1
VAY				eSg	Sg	12 21 17.7	+0.7
VAY	Valandovo	0.42	285	ePg	Pg	12 21 11.3	-0.2
VAY				eSg	Sg	12 21 18.1	+1.0
VAY				eLg		12 21 18.2	
	comp=E,64nm,0.6s						
VAY				eLg		12 21 18.2	
	comp=N,71nm,0.5s						
VAY	Valandovo	0.42	285	P	Pg	12 21 11.3	-0.2
VAY				S	Sg	12 21 17.8	+0.8
VAY	Valandovo	0.42	285	i Pg	Pg	12 21 11.4	-0.1
VAY				eSg	Sg	12 21 17.7	+0.7
SOH	Sokhos	0.43	154	P	Pg	12 21 11.6	-0.2
SOH				S	Sg	12 21 17.4	-0.1
SOH	Sokhos	0.43	154	P	Pg	12 21 11.6	-0.2
SOH				S	Sg	12 21 17.4	-0.1
THE	Thessaloniki	0.59	191	P	Pg	12 21 14.8	0.0
THE				S	Sg	12 21 23.1	+0.6
THE	Thessaloniki	0.59	191	P	Pg	12 21 14.8	0.0
THE				S	Sg	12 21 23.1	+0.6
HORT	Hortiatis	0.62	181	P	Pg	12 21 15.2	-0.1
HORT	Hortiatis	0.62	181	P	Pg	12 21 15.2	-0.1
PLG	Polygyros	0.88	163	P	Pg	12 21 19.5	-0.8
PLG				S	Sg	12 21 31.8	+0.2
PLG	Polygyros	0.88	163	P	Pg	12 21 19.5	-0.8
PLG				S	Sg	12 21 31.8	+0.2
KAVA	Kavala	1.08	101	S	Sg	12 21 38.0	-0.3
KAVA	Kavala	1.08	101	S	Sg	12 21 38.0	-0.3
OUR	Ouranopolis	1.10	143	P	Pg	12 21 23.6	-0.9
OUR				S	Sg	12 21 39.7	+0.9
OUR	Ouranopolis	1.10	143	P	Pg	12 21 23.6	-0.9
OUR				S	Sg	12 21 39.7	+0.9
PAIG	Paliouri	1.36	161	P	Pn	12 21 28.1	-0.7
PAIG	Paliouri	1.36	161	P	Pn	12 21 28.1	-0.7
VTS	Vitosha	1.38	3	ePg	Pg	12 21 29.3	-0.6
VTS				eSg	Sg	12 21 47.4	-0.3
VTS	Vitosha	1.38	3	ePg	Pg	12 21 29.3	-0.6
VTS				eSg	Sg	12 21 47.4	-0.3
PLD	Plovdiv	1.49	53	eSg	Sg	12 21 52.8	+1.5
BARS	Barje	1.87	329	ePn	Pn	12 21 37.3	+1.5
BARS				eSg	Sg	12 22 02.9	-0.6
BARS	Barje	1.87	329	ePn	Pn	12 21 37.3	+1.5
BARS				eSg	Sg	12 22 02.9	-0.6
ZAPS	Zavoj	2.09	350	ePn	Pb	12 21 41.0	-0.6
ZAPS				eSg	Sb	12 22 07.8	0.0

*IDC **06** 12:37:34.6±0.8, 15°.31N×122°.72E, h0km, mb3.9/10, mb1 4.0/10, mb1mx3.9/21, mbtmp3.9/10, ML5.4/1, MS3.6/2, Ms1 3.6/2, ms1mx3.0/35, Error ellipse: s-maj=24.5km s-min=14.7km az=74.0*
*ISCJB **06** 12:37:35.3±1.6, 15°.35N±0°.03×122°.69E±0°.05, h13km±11km, mb4.3/18, Error ellipse: s-maj=8.2km s-min=5.4km az=0.5*
*MAN **06** 12:37:36, 15°.40N×122°.47E, h1km, mb5.3, ML4.2, MS4.5*
*NEIC **06** 12:37:39.7±0.4, 15°.31N×122°.71E, h35km, mb4.9/7, Error ellipse: s-maj=16.1km s-min=7.3km az=72.0*

ISC 06 12:37:37.5±1.7, 15°.42N±0°.03×122°.55E±0°.05, h10km±11km, n49, σ1s34/53, mb4.3/18, 2C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	Polilio Island	0.91	221	eP	Pb	12 37 52.5	-2.9
POLP				eS	Sb	12 38 03.0	-4.4
BALP	Baler	1.00	289	eP	Pb	12 37 55.0	-1.9
BALP				eS	Sb	12 38 05.6	-4.5
PCPH	Palayan	1.41	276	i eP	Pn	12 38 00.8	-2.5
PALP	Palanan	1.64	356	eP	Pn	12 38 06.3	-0.2
CAUP	Cauayan	1.67	335	eP	Pn	12 38 07.1	+0.2
TGY	Tagaytay City	2.04	230	Pn	Pn	12 38 11.8	-0.1
	1μm,0.3s,baz=355,slow=1.9,SNR=49						
TGY				Sn	Sn	12 38 39.5	+2.1
	557nm,0.3s,baz=311,slow=19,SNR=6.4						
BOAC	Boac	2.06	200	eP	Pn	12 38 12.9	+0.7
AUQP	San Andres	2.08	177	eP	Pn	12 38 14.9	+2.3
BCPH	Baguio City Da	2.13	297	i P	Pn	12 38 12.5	-0.6
BCPH				i S	Sn	12 38 39.7	+0.1
PVCP	Virac	2.38	139	eP	Pn	12 38 17.8	+1.2
SCZP	Santa Cruz	2.57	278	eP	Pn	12 38 19.6	+0.4
BOLP	Bolinao	2.72	291	eP	Pn	12 38 21.2	0.0
APYP	Conner	2.74	333	eP	Pn	12 38 21.5	0.0
LUBP	Lubang	2.79	233	eP	Pn	12 38 22.3	+0.1
ABRA	Dolores	2.84	322	eP	Pn	12 38 24.2	+1.3
OTRP	Odiongan	3.08	190	eP	Pn	12 38 27.0	+0.8
SJMP	San Jose	3.25	206	eP	Pn	12 38 29.8	+1.2
PIP	Pasuquin	3.44	328	i P	Pn	12 38 32.0	+0.9
PIP				i S	Sn	12 39 16.9	+5.0
CNP	Catarman	3.54	144	eP	Pn	12 38 34.5	+1.9
BUSP	Coron	4.09	214	eP	Pn	12 38 40.1	-0.1
GUIM	Jordan	4.76	180	eP	Pn	12 38 51.8	+2.4
CUYO	Cuyo Island	4.78	198	eP	Pn	12 38 49.1	-0.5
BBP	Basco	5.03	354	eP	Pn	12 38 52.3	-0.8
MSLP	Maasin	5.71	157	eP	Pn	12 39 05.1	+2.6
YULB	Yu-li	8.02	352	ePn	Pn	12 39 34.1	-0.1
DAV	Davao City (W)	8.81	160	LR	LR	12 43 54.1	
	comp=Z,366nm,21.6s,baz=355,slow=44						
KAPI	Kappang	20.49	188	LR	LR	12 52 32.0	
	comp=Z,170nm,18.7s,baz=183,slow=44						
KSRS	Korea Array	22.46	11	P	P	12 42 37.4	+0.6
	2.0nm,0.7s,mb3.6,baz=193,slow=11,SNR=9.0						
CMAR	Chiang Mai Arr	22.78	281	P	P	12 42 40.6	+0.2
	1.2nm,0.6s,mb3.5,baz=90,slow=7.8,SNR=7.5						
HHC	Hu-ho-hao-te	27.08	341	eP	P	12 43 22.1	+1.8
HHC				S	S	12 47 59.5	+1.2
HHC				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb4.6						
HHC				pmax	pmax		
	comp=Z,210nm,5.2s						
KAKA	Kakadu	29.61	160	eP	P	12 43 40.4	-2.7
	comp=Z,38nm,0.6s,mb5.3						
FITZ	Fitzroy Crossi	33.44	175	eP	P	12 44 14.1	-2.7
	comp=Z,26nm,1.5s,mb4.9						
SONM	Songino Array	34.98	341	P	P	12 44 28.8	-1.0
	comp=Z,0.5nm,0.5s,mb3.7,baz=160,slow=4.6,SNR=2.6						
WRAB	Tennant Creek	36.99	161	eP	P	12 44 44.2	-3.1
	comp=Z,18nm,1.0s,mb4.9						
WRA	Warramunga Arr	37.00	161	P	P	12 44 44.5	-2.9
	comp=Z,13nm,0.8s,mb4.8,baz=342,slow=9.3,SNR=80						
ASAR	Alice Springs	40.40	164	P	P	12 45 13.4	-2.4
	comp=Z,2.6nm,0.6s,mb4.2,baz=345,slow=6.8,SNR=39						
MK31	Makanchi Array	45.77	322	eP	P	12 45 59.8	+0.7
MKAR	Makanchi Array	45.77	322	P	P	12 45 59.9	+0.8
	comp=Z,1.8nm,0.8s,mb4.0,baz=118,slow=8.8,SNR=12						
MKAR	Makanchi Array	45.77	322	P	P	12 45 59.9	+0.8
ZAA0	Zalesovo Array	48.40	331	eP	P	12 46 19.2	-0.4
ZALV	Zalesovo Beam	48.40	331	P	P	12 46 19.4	-0.2
	comp=Z,1.2nm,0.6s,mb4.1,baz=117,slow=8.5,SNR=5.1						
KURK	Kurchatov	49.80	325	eP	P	12 46 30.6	+0.2
	comp=Z,25nm,1.0s,mb5.2						
STKA	Stephens Creek	50.44	159	P	P	12 46 33.1	-2.3
	comp=Z,5.1nm,0.9s,mb4.6,baz=320,slow=7.3,SNR=7.2						
STKA	Stephens Creek	50.44	159	eP	P	12 46 34.0	-1.5
	comp=Z,1.6nm,0.9s,mb4.0						
BVAR	Borovoye Array	55.40	325	P	P	12 47 12.1	+0.3
	comp=Z,0.7nm,0.7s,mb3.8,baz=120,slow=5.2,SNR=3.8						
BRVK	Borovoye	55.47	325	eP	P	12 47 14.6	+2.3
	comp=Z,9.2nm,0.9s,mb4.8						
ABKAR	Abkulak array	60.64	318	eP	P	12 47 49.2	+0.5
	comp=Z,2.2nm,0.8s,mb4.3						
FINES	FINESS Array B	79.67	331	P	P	12 49 44.8	-0.3
	comp=Z,1.8nm,0.9s,mb4.0,baz=86,slow=7.1,SNR=2.8						
NOA	NORSAR Array B	86.56	333	P	P	12 50 19.0	-1.7
	comp=Z,0.5nm,0.8s,mb3.8,baz=58,slow=5.8,SNR=2.6						

CASC 06 12:37:40.6±2.5, 8°.28N×82°.80W, h16km±9km, MD3.6, 1C, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	Volcan	0.52	11	i P	Pg	12 37 51.1	+0.1
BRU2				eS	Sg	12 38 00.1	+2.1
CTCR	Cotoan	0.61	3	eP	Pg	12 37 52.1	-0.5
CTCR				eS	Sg	12 38 00.8	0.0
BAR1		1.08	332	i eP	Pb	12 37 59.5	-1.4
BAR1				eS	Sb	12 38 14.4	-0.3
BUS	Buena Vista	1.58	323	eP	Pn	12 38 07.1	-0.8
BUS				eS	Sn	12 38 29.0	+0.9
URSC	Urasca	1.82	328	eP	Pn	12 38 11.3	0.0
URSC				eS	Sn	12 38 36.3	+2.3
PRS1	Puriscal	2.26	319	eP	Pn	12 38 17.6	+0.3
PRS1				eS	Sn	12 38 46.4	+1.7

*IDC **06** 12:46:51.7±0.4, 15°.26N×122°.54E, h0km, mb4.8/26, mb1 4.8/26, mb1mx4.8/30, mbtmp4.8/26, MS4.0/9, Ms1 4.0/9, ms1mx3.7/36, Error ellipse: s-maj=17.0km s-min=9.8km az=73.0*
*ISCJB **06** 12:46:54.8±0.2, 15°.36N±0°.02×122°.52E±0°.03, h27km, mb5.0/137, MS4.0/22, Error ellipse: s-maj=3.7km s-min=2.8km az=168.5*
*BJI **06** 12:46:54.8, 15°.25N×122°.48E, h29km, mB4.9/31, mb4.6/49, Ms4.5/37, Ms7 4.2/35*
*NEIC **06** 12:46:56.0±0.1, 15°.25N×122°.49E, mb5.1/59, Error ellipse: s-maj=5.0km s-min=3.6km az=79.0*
NEIC Felt [III PIVS] at Labo and [I PIVS] at Dingalan and Quezon City, Luzon. Felt [III] at Manila. Also felt at Angeles, Antipolo, Cabanatuan, Cainta and San Pedro.
*MAN **06** 12:46:56, 15°.41N×122°.39E, h15km, mb5.7, ML4.8, MS5.2*
MAN INTENSITY III - CAMARINES NORTE; GABALDON NUEVA ECIJA; INTENSITY II - DINGALAN AURORA; INTENSITY I - QUEZON CITY.
*SZGRF **06** 12:46:56.1, 15°.41N×123°.09E, h33km, mb5.0, Philippine Islands region*
*GCMT **06** 12:46:56.5±0.4, 15°.41N×122°.67E, h31km±1km, MW5.0, Moment Tensor Solution. s25,c29; s57,c74; Moment tensor: Scale 10^{16}Nm; M_{rr}3.95±.31; $M_{\theta\theta}$-0.49±.17; $M_{\phi\phi}$-3.46±.18; $M_{r\theta}$0.09±.22; $M_{\theta\phi}$0.39±.09; $M_{\phi r}$1.66±.18; Best double couple: $M_0$4.10000×10^{16} NP1:ϕ_s169.00000°, δ33.00000°, λ84.00000°. NP2:ϕ_s356.00000°, δ57.00000°, λ94.00000°. Principal axes: T 4.3100, Plg78.0000°, Azm280.0000°; N -0.4500, Plg3.0000°, Azm174.0000°; P -3.8600, Plg12.0000°, Azm84.0000°; Data Used: II IU G IC CN.*
*MOS **06** 12:46:56.9±0.8, 15°.56N×122°.46E, h33km, mb5.3/46 Error ellipse: s-maj=9.7km s-min=5.5km az=121.6*

ISC 06 12:46:56.9±0.2, 15°.38N±0°.02×122°.49E±0°.03, h28km, h28km±.7km: pP-P, n396, σ1s08/400, mb5.0/137, MS4.0/22, 49C-22D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	Polilio Island	0.84	219	eP	Pn	12 47 09.6	-3.3
POLP				eS	Sb	12 47 25.4	+1.4
BALP	Baler	0.95	292	eP	Pn	12 47 12.1	-2.3
BALP				eS	Sb	12 47 32.4	+5.4
PCPH	Palayan	1.36	278	i eP	Pn	12 47 17.5	-2.5
PCPH				i S	Sn	12 47 36.6	-0.5
PALP	Palanan	1.67	358	eP	Pn	12 47 23.5	-0.8
PALP				eS	Sn	12 47 53.4	+8.6
CAUP	Cauayan	1.68	338	eP	Pn	12 47 24.1	-0.3
TGY	Tagaytay City	1.97	230	Pn	Pn	12 47 28.8	+0.3
	3μm,0.3s,baz=18,slow=1.2,SNR=358						
TGY				Sn	Sn	12 47 56.4	+4.1
	1μm,0.3s,baz=340,slow=23,SNR=8.8						
BOAC	Boac	2.01	198	eP	Pn	12 47 30.1	+1.0
AUQP	San Andres	2.06	175	eP	Pn	12 47 31.9	+2.4
BCPH	Baguio City Da	2.09	299	i P	Pn	12 47 29.9	-0.2
BCPH				i S	Sn	12 47 55.7	+0.6
PGP	Puerto Galera	2.39	219	i eP	Pn	12 47 34.2	0.0
CVP	Callao Caves	2.39	345	i eP	Pn	12 47 34.1	-0.1
CVP				eS	Sn	12 48 05.6	+2.9
PVCP	Virac	2.40	138	eP	Pn	12 47 36.9	+2.6
SCZP	Santa Cruz	2.52	279	eP	Pn	12 47 36.9	+1.0
BOLP	Bolinao	2.67	292	eP	Pn	12 47 38.4	+0.4
APYP	Conner	2.74	334	eP	Pn	12 47 38.6	-0.4
ABRA	Dolores	2.83	323	eP	Pn	12 47 41.4	+1.2
SGCP	Mt. Cagua	2.87	352	eP	Pn	12 47 40.5	-0.3
OTRP	Odiongan	3.04	189	eP	Pn	12 47 43.9	+0.8
SJMP	San Jose	3.20	205	eP	Pn	12 47 47.1	+1.8
PIP	Pasuquin	3.43	329	i i P	Pn	12 47 49.7	+1.2
PIP				i S	Sn	12 48 34.9	+6.6
CNP	Catarman	3.55	143	eP	Pn	12 47 50.9	+0.8
BUSP	Coron	4.03	214	eP	Pn	12 47 57.2	+0.5
CUYO	Cuyo Island	4.73	198	eP	Pn	12 48 05.9	-0.5
GUIM	Jordan	4.73	179	eP	Pn	12 48 08.7	+2.3
OCLP	Ormoc	4.77	154	eP	Pn	12 48 11.1	+4.1
BBP	Basco	5.05	354	eP	Pn	12 48 09.7	-1.1
ENPP	El Nido

comp=N,5µm,15.3s
GYA LR LR
comp=E,3µm,15.8s
GYA LR LR
comp=Z,6µm,15.0s
TTSI Tana Toraja 18.50 188 P **Pn 12 51 16.8 +5.5**
comp=Z,670nmcomp=Z,31nm,1.1s
STKI Sintang 18.71 217 P Px 12 51 28.0
comp=Z,40nm,1.2s
KKTK Khon Kaen 18.95 276 P **Pn 12 51 16.8 +0.1**
comp=Z,247nm,1.0s
KDI Kendari 19.22 180 P **Pn 12 51 17.9 -2.0**
comp=Z,32nm,1.1s
SPSI Sidrap Palu 19.41 188 P **Pn 12 51 25.5 +3.2**
comp=Z,33nm,1.0s
KBKI Kotabaru 19.59 199 P **Pn 12 51 22.1 -2.3**
BNSI Bone 19.80 187 P **Pn 12 51 33.0 +6.1**
KAPI Kappang 20.45 188 P **P 12 51 30.8 -1.5**
comp=Z,22nm,0.6s,baz=23,slow=7.5,SNR=16
BKSI Bulukumba 20.70 187 P **P 12 51 40.7 +5.6**
comp=Z,27nm,1.2s
KMI Kunming 20.89 301 ⇑P **P 12 51 39.5 +2.5**
KMI pP 12 51 48.2
KMI sP sP 12 51 52.5 +4.2
KMI PP 12 52 02.2
KMI S **S 12 55 25.5 -3.1**
KMI sS sS 12 55 40.4 -0.4
KMI PcP PcP 12 55 45.8 +1.1
KMI SS 12 55 58.7
KMI pmax pmax
comp=Z,26nm,1.1s
KMI pmax pmax
comp=Z,250nm,10.2s
KMI LR LR
comp=N,460nm,14.4s,MS4.3
KMI LR LR
comp=E,760nm,12.6s,MS4.3
KMI LR LR
comp=Z,810nm,15.3s,MS4.2
TIA Tai'an 21.29 348 P **P 12 51 41.6 +0.4**
TIA pmax pmax
comp=Z,47nm,1.1s,mb4.7
NST Nakhon Sawan 21.55 274 P **P 12 51 43.4 -0.8**
CBIJ Chichi jima 21.71 54 LR LR 12 58 29.3
comp=Z,345nm,18.6s,MS3.8,baz=124,slow=32
GUMO Guam 21.74 92 P **P 12 51 44.7 -1.5**
comp=Z,59nm,0.8s,mb5.0,baz=185,slow=8.1,SNR=6.5
GUMO LR LR 13 00 10.4
comp=Z,331nm,18.1s,MS3.8,baz=90,slow=37
GUMO Guam 21.74 92 *e*P **P 12 51 46.1 -0.1**
GUMO pmax pmax
comp=Z,106nm,1.0s,mb5.2
GUMO Guam 21.74 92 *e*P **P 12 51 46.1 -0.1**
comp=Z,106nm,1.0s,mb5.2
CHRT Chiangrai 22.09 285 P **P 12 51 51.0 +1.0**
comp=Z,145nm,0.7s,mb5.5
XAN Xi'an 22.25 329 P **P 12 51 51.7 +0.2**
XAN pP 12 52 00.7
XAN pmax pmax
comp=Z,12nm,1.1s,mb4.2
XAN LR LR
comp=N,330nm,14.4s,MS4.0
XAN LR LR
comp=E,150nm,13.6s,MS4.0
XAN LR LR
comp=Z,170nm,13.1s,MS3.6
INCN Inchon 22.32 9 *e*P **P 12 51 53.9 +1.7**
comp=Z,44nm,0.8s,mb5.0
INCN *e*pP 12 52 02.1
KSRS Korea Array 22.50 11 P **P 12 51 53.2 -1.0**
comp=Z,5.3nm,0.8s,mb4.0,baz=192,slow=11,SNR=21
KSRS LR LR 13 01 25.5
comp=Z,272nm,20.2s,MS3.7,baz=200,slow=39
BDT Bhumibol Dam 22.62 278 P **P 12 51 55.0 -0.6**
comp=Z,11nm,0.9s,mb4.3
CM31 Chiang Mai Arr 22.73 281 *e*P **P 12 51 57.1 +0.2**
comp=Z,20nm,0.6s,mb4.7
CMAR Chiang Mai Arr 22.73 281 P **P 12 51 57.0 +0.2**
comp=Z,31nm,0.7s,mb4.9,baz=93,slow=7.6,SNR=133
CMAR PcP PcP 12 55 49.5 +1.1
comp=Z,2.1nm,0.6s,baz=34,slow=0.8,SNR=8.6
CMAR LR LR 13 00 56.9
comp=Z,291nm,18.1s,MS3.8,baz=106,slow=37
CMAR Chiang Mai Arr 22.73 281 P **P 12 51 57.0 +0.2**
CMAR 12 55 49.6
CHG Chiang Mai 22.76 282 ⇓P **P 12 51 57.3 +0.2**
comp=Z,19nm,0.8s,mb4.6
CHTO Chiang Mai 22.76 282 *e*P **P 12 51 56.7 -0.4**
CHTO pmax pmax
comp=Z,12nm,0.8s,mb4.4
CHTO Chiang Mai 22.76 282 *e*P **P 12 51 56.7 -0.4**
comp=Z,12nm,0.8s,mb4.4
MYKOM Kota Tinggi 22.82 235 P **P 12 52 05.7 +8.0**
comp=Z,29nm,1.3s,mb4.6
CD2 Chengdu 23.09 315 P **P 12 52 00.9 +0.5**
CD2 pP 12 52 07.9
CD2 sP sP 12 52 11.4 -0.4
CD2 PP 12 52 31.8
CD2 S **S 12 56 07.2 -2.6**
CD2 sS sS 12 56 18.6 -4.6
CD2 SS 12 56 53.3
CD2 pmax pmax
comp=Z,90nm,0.9s,mb5.2
CD2 pmax pmax
comp=Z,580nm,11.8s
CD2 LR LR
comp=N,2µm,16.1s
CD2 LR LR
comp=Z,750nm,10.7s
TLE Tual 23.22 153 P **P 12 52 03.5 +1.5**
comp=Z,192nm,1.6s,mb5.3
DL2 Dalian 23.45 358 P **P 12 52 04.0 -0.1**
DL2 pmax pmax
comp=Z,10.0nm,0.9s,mb4.2
SMPI Sarmi 23.57 136 P **P 12 52 13.2 +7.8**
comp=Z,3µmcomp=Z,56nm,1.8s,mb4.7
KULM Kulim 23.69 247 *e*P **P 12 52 04.4 -2.2**
comp=Z,38nm,1.2s,mb4.7
IPM Ipoh 23.73 245 P **P 12 52 03.9 -3.1**
comp=Z,56nm,0.9s,mb5.0
KMMI Kalianget 23.84 201 P **P 12 52 14.6 +6.7**
comp=Z,148nm,2.0s,mb5.1
NGJI Ngawi 25.11 207 P **P 12 52 23.8 +4.3**
comp=Z,10µmcomp=Z,85nm,1.2s,mb5.1
BJI Beijing 25.18 349 P **P 12 52 19.6 -0.3**
BJI S **S 12 56 47.9 +4.6**
BJI pmax pmax
comp=Z,36nm,0.9s,mb4.9
BJI pmax pmax
comp=Z,270nm,3.5s
BJI LR LR
comp=N,290nm,12.4s
BJI LR LR
comp=E,310nm,20.9s
BJI LR LR
comp=Z,120nm,16.2s,MS3.5
MAJO Matsushiro 25.30 31 *e*P **P 12 52 21.9 +0.9**
MAJO pmax pmax
comp=Z,16nm,1.4s,mb4.4
MAJO Matsushiro 25.30 31 *e*P **P 12 52 21.9 +0.9**
comp=Z,16nm,1.4s,mb4.3
MJAR Matsushiro Arr 25.30 31 P **P 12 52 19.7 -1.4**
comp=Z,2.1nm,0.8s,mb3.7,baz=223,slow=9.3,SNR=14
MJAR PcP PcP 12 55 54.1 +0.4
comp=Z,1.1nm,1.0s,baz=163,slow=1.6,SNR=4.0
MJAR LR LR 13 02 56.1
comp=Z,148nm,18.4s,MS3.5,baz=130,slow=38
MJAR Matsushiro Arr 25.30 31 P **P 12 52 19.7 -1.3**
MJAR 12 55 54.1
SNY Shenyang 26.37 2 ⇑P **P 12 52 30.5 -0.1**
SNY pmax pmax
comp=Z,10.0nm,0.8s,mb4.4
SNY pmax pmax
comp=Z,310nm,10.3s
SNY LR LR
comp=N,310nm,12.0s,MS4.2
SNY LR LR
comp=E,280nm,12.0s,MS4.2
SNY LR LR
comp=Z,430nm,11.4s,MS4.2
PSI Prapat 26.37 244 P **P 12 52 30.1 -1.0**
comp=Z,9.9nm,0.8s,mb4.4,baz=77,slow=9.2,SNR=7.9
PSI LR LR 13 03 18.8
comp=Z,317nm,19.4s,MS3.9,baz=322,slow=37
LZH Lanzhou 26.50 325 *e*P **P 12 52 32.5 +0.6**
LZH pP pP 12 52 38.5 -1.7
LZH sP sP 12 52 43.0 -0.6
LZH PP 12 53 17.0
LZH S **S 12 57 04.5 +0.1**
LZH sS sS 12 57 15.6 -2.4
LZH SS 12 58 15.0
LZH pmax pmax
comp=Z,28nm,1.5s,mb4.6
LZH pmax pmax
comp=Z,160nm,5.3s
LZH LR LR
comp=N,600nm,13.0s
LZH LR LR
comp=Z,730nm,15.2s,MS4.3
HHC Hu-ho-hao-te 27.09 342 *e*P **P 12 52 37.0 -0.2**
HHC sP sP 12 52 50.7 +1.8
HHC PP 12 53 24.5
HHC PcP PcP 12 55 56.8 -0.9
HHC S **S 12 57 12.7 -0.9**
HHC sS sS 12 57 28.6 +1.4
HHC SS 12 58 29.6
HHC ScP ScP 12 59 33.0 -3.3
HHC PcS PcS 12 59 36.5 -2.7
HHC ScS ScS 13 03 22.2 -5.1
HHC pmax pmax
comp=Z,20nm,0.6s,mb4.8
HHC pmax pmax
comp=Z,250nm,5.0s
HHC LR LR
comp=N,590nm,12.9s,MS4.5
HHC LR LR
comp=E,590nm,13.2s,MS4.5
HHC LR LR
comp=Z,520nm,12.6s,MS4.3
CN2 Changchun 28.43 4 *e*P **P 12 52 55.4 +6.2**
CN2 *e*pP pP 12 53 05.0 +7.6
CN2 *e*S **S 12 57 33.9 -0.8**
CN2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
CN2 pmax pmax
comp=Z,200nm,8.0s
CN2 LR LR
comp=N,300nm,12.0s,MS4.3
CN2 LR LR
comp=E,300nm,12.0s,MS4.3
CN2 LR LR
comp=Z,200nm,11.0s,MS4.0
KAKA Kakadu 29.60 160 *e*P **P 12 52 57.0 -2.8**
comp=Z,27nm,0.6s,mb5.2
KAKA Kakadu 29.60 160 *e*P **P 12 52 57.1 -2.7**
comp=Z,72nm,0.6s,mb5.6
KAKA Kakadu 29.60 160 P **P 12 52 57.1 -2.7**
comp=Z,496nmcomp=Z,65nm,0.6s,mb5.5
MDJ Mudanjiang 29.75 10 P **P 12 53 03.2 +2.3**
MDJ pmax pmax
comp=Z,8.0nm,1.2s,mb4.3
MDJ pmax pmax
comp=Z,50nm,4.7s
SHL Shillong 30.34 294 *e*PKP **P 12 53 05.0 -1.4**
SHL *ex* x 12 56 06.5
GTA Gaotai 31.11 325 *e*P **P 12 53 13.2 +0.3**
GTA pP pP 12 53 22.6 +1.4
GTA sP sP 12 53 26.8 +2.2
GTA PP PP 12 54 16.8 -6.6
GTA PcP PcP 12 56 09.4 +1.5
GTA S **S 12 58 15.9 -0.8**
GTA sS sS 12 58 31.8 +1.4
GTA SS SS 13 00 02.5 -28
GTA pmax pmax
comp=Z,4.0nm,1.7s,mb4.0
GTA pmax pmax
comp=Z,220nm,6.0s
GTA LR LR
comp=N,320nm,19.5s,MS4.1
GTA LR LR
comp=E,200nm,19.2s,MS4.1
GTA LR LR
comp=Z,230nm,19.8s,MS3.8
KNA Kununurra 31.55 168 *e*P **P 12 53 14.0 -3.0**
comp=Z,8.1nm,0.6s,mb4.7
KNA Kununurra 31.55 168 P **P 12 53 14.2 -2.8**
comp=Z,515nmcomp=Z,56nm,1.0s,mb5.4
LSA Lhasa 32.14 302 P **P 12 53 22.8 +0.7**
FITZ Fitzroy Crossi 33.42 175 *e*P **P 12 53 30.3 -3.0**
comp=Z,32nm,1.3s,mb5.1
FITZ Fitzroy Crossi 33.42 175 P **P 12 53 30.6 -2.7**
comp=Z,18nm,1.1s,mb4.9,baz=25,slow=8.2,SNR=23
FITZ Fitzroy Crossi 33.42 175 *e*P **P 12 53 30.5 -2.8**
comp=Z,47nm,1.3s,mb5.2
FITZ Fitzroy Crossi 33.42 175 P **P 12 53 31.2 -2.1**
comp=Z,48nm,1.4s,mb5.2
KLR Kul'dur 34.59 11 *e*P **P 12 53 40.0 -3.2**
KLR pmax pmax
comp=Z,42nm,1.8s,mb5.1
ULN Ulaanbaatar 34.81 342 *e*P **P 12 53 45.9 +0.7**
ULN *e*PP pP 12 53 53.8 +0.3
ULN pmax pmax
comp=Z,18nm,1.1s,mb4.9
ULN Ulaanbaatar 34.81 342 *e*P **P 12 53 45.9 +0.8**
comp=Z,18nm,1.1s,mb4.9
ULN *e*pP pP 12 53 53.8 +0.3
ULN Ulaanbaatar 34.81 342 P **P 12 53 45.3 +0.1**
comp=Z,17nm,1.1s,mb4.9
ULN Ulaanbaatar 34.81 342 P **P 12 53 45.9 +0.8**
SNR=9.0
SONM Songino Array 34.99 341 P **P 12 53 46.6 -0.1**
comp=Z,7.9nm,0.9s,mb4.7,baz=161,slow=8.9,SNR=39
SONM PcP PcP 12 56 18.7 +0.2
comp=Z,1.8nm,0.7s,baz=180,slow=2.3,SNR=4.6
SONM LR LR 13 09 45.7
comp=Z,292nm,19.0s,MS4.0,baz=143,slow=39
SONM Songino Array 34.99 341 P **P 12 53 46.6 -0.1**
SONM 12 56 18.7
BOK Bokaro 35.41 289 *e*PKP **P 12 53 50.9 +0.3**
BOK AMb AMB 12 53 53.0
comp=Z,37nm,1.1s,mb5.2
COEN Coen 35.61 144 *e*P **P 12 53 50.0 -2.4**
comp=Z,132nm,0.9s,mb5.9
COEN *e*pP pP 12 54 01.2 +0.5
JIRN Jiri 35.78 296 *e*P **P 12 53 54.3 +0.5**
comp=Z,57nm,0.7s,mb5.6
GUN Gumba 36.10 296 *e*P **P 12 53 56.8 +0.3**
comp=Z,171nm,0.9s,mb6.0
PKI Pulchoki 36.44 296 *e*P **P 12 53 59.2 -0.2**
comp=Z,108nm,1.1s,mb5.7
PKIN Phulchoki 36.45 296 *e*P **P 12 54 00.0 +0.5**
comp=Z,45nm,0.7s,mb5.5
KKN Kakani 36.59 296 *e*P **P 12 54 00.4 -0.3**
comp=Z,94nm,1.0s,mb5.6
DMN Daman 36.71 296 *e*P **P 12 54 01.6 -0.1**
comp=Z,134nm,1.1s,mb5.7
WRAB Tennant Creek 36.98 161 P **P 12 54 01.9 -2.1**
comp=Z,222nm,0.7s,mb6.1,SNR=22
WRAB Tennant Creek 36.98 161 *e*P **P 12 54 01.2 -2.8**
WRAB pmax pmax
comp=Z,35nm,1.0s,mb5.1
WRAB Tennant Creek 36.98 161 *e*P **P 12 54 01.2 -2.8**
comp=Z,36nm,1.0s,mb5.2
WRAB Tennant Creek 36.98 161 P **P 12 54 01.2 -2.8**
comp=Z,47nm,0.9s,mb5.3
WRA Warramunga Arr 36.99 161 P **P 12 54 01.3 -2.8**
comp=Z,27nm,0.8s,mb5.1,baz=340,slow=9.6,SNR=86
WRA Warramunga Arr 36.99 161 P **P 12 54 01.3 -2.8**
GKN Gorkha 37.20 296 *e*P **P 12 54 05.3 -0.6**
comp=Z,132nm,0.8s,mb5.8
KOLN Koldanda 38.05 295 *e*P **P 12 54 13.0 -0.1**
comp=Z,78nm,0.8s,mb5.5
TLY Talaya 39.22 341 *e*P **P 12 54 23.1 +0.5**
TLY pmax pmax
comp=Z,15nm,0.9s,mb4.7
TLY MLR MLR
comp=Z,181nm,18.0s,MS4.0
TLY Talaya 39.22 341 *e*P **P 12 54 22.7 +0.2**
comp=Z,15nm,0.8s,mb4.8
TLY Talaya 39.22 341 P **P 12 54 23.7 +1.1**
SNR=10
IRK Irkutsk 39.53 342 *e*P **P 12 54 24.6 -0.5**
IRK *e* pP 12 54 33.0 -0.5
IRK pmax pmax
comp=Z,29nm,1.7s,mb4.7
MTSU Mount Surprise 39.65 146 *e*P **P 12 54 25.6 -0.9**
comp=Z,38nm,1.1s,mb5.0
ASAR Alice Springs 40.38 164 P **P 12 54 30.6 -2.0**
comp=Z,6.7nm,0.6s,mb4.6,baz=343,slow=6.9,SNR=74
WMQ Urumqi 40.95 321 P **P 12 54 37.7 +0.6**
WMQ pP pP 12 54 45.0 -0.5
WMQ sP sP 12 54 48.5 -0.4
WMQ PP PP 12 56 15.9 +4.2
WMQ PcP PcP 12 56 38.1 +1.0
WMQ *e*S **S 13 00 48.3 +1.1**
WMQ SS SS 13 03 46.2 -3.4
WMQ ScS ScS 13 04 38.6 -1.4
WMQ pmax pmax
comp=Z,18nm,1.4s,mb4.5
WMQ pmax pmax
comp=Z,200nm,5.2s
WMQ LR LR
comp=N,410nm,21.2s,MS4.3
WMQ LR LR
comp=E,250nm,24.0s,MS4.3
WMQ LR LR
comp=Z,230nm,18.4s
NGP Nagpur 41.55 285 *e*PKP **P 12 54 41.1 -1.2**
JOSI Joshimath 42.05 299 *e*PKP **P 12 54 46.0 -0.3**
HYB Hyderabad 42.13 279 *e*P **P 12 54 46.5 -0.6**
HYB Hyderabad 42.13 279 *i* P **P 12 54 46.5 -0.6**
CTA Charters Tower 42.29 146 P **P 12 54 47.6 -0.6**
comp=Z,7.3nm,0.7s,mb4.4,baz=332,slow=11,SNR=5.8
CTAO Charters Tower 42.29 146 *e*P **P 12 54 47.6 -0.6**
CTAO pmax pmax
comp=Z,12nm,1.0s,mb4.5
CTAO Charters Tower 42.29 146 *e*P **P 12 54 47.6 -0.6**
comp=Z,12nm,1.0s,mb4.5
AGRA Agra 42.94 294 *e*PKP **P 12 54 52.2 -1.3**
BHPL Bhopal 43.11 288 *e*PKP **P 12 54 54.8 -0.2**
BHPL AMb AMB 12 54 56.3
comp=Z,48nm,1.0s,mb5.2
DDI Dehra Dun 43.28 298 *ex* **P 12 54 55.0 -1.3**
KLP Kalpa 43.34 300 *e*PKP **P 12 54 57.4 +0.7**
KLP AMb AMB 12 54 59.0
comp=Z,118nm,1.2s,mb5.5
AYAN Aya Nagar 43.81 295 *e*PKP **P 12 54 59.0 -1.6**
AYAN AMb AMB 12 54 59.8
comp=Z,9.6nm,0.7s,mb4.7
SONA Sohna 43.82 295 *e*PKP **P 12 54 59.3 -1.3**
SONA AMb AMB 12 55 00.3
comp=Z,50nm,0.9s,mb5.2
SDNR Sundarnagar 44.41 299 *e*PKP **P 12 55 05.5 +0.2**
KHET Khetri 44.91 294 *e*PKP **P 12 55 08.2 -1.2**
KHET AMb AMB 12 55 08.9
comp=Z,15nm,0.8s,mb4.9
THN Thein Dam 45.62 300 *e*PKP **P 12 55 13.0 -2.0**
MK31 Makanchi Array 45.75 322 *e*P **P 12 55 16.3 +0.5**
MK31 *e**PP pP 12 55 24.5 +0.2
MKAR Makanchi Array 45.75 322 P **P 12 55 16.5 +0.7**
comp=Z,35nm,0.8s,mb5.3,baz=119,slow=8.7,SNR=193
MKAR PcP PcP 12 56 53.4 +0.2
comp=Z,7.9nm,0.8s,baz=109,slow=4.6,SNR=6.3
AJM Ajmer 45.80 292 *e*PKP **P 12 55 16.1 -0.3**
AJM AMb AMB 12 55 18.0
comp=Z,67nm,1.1s,mb5.5
FORT Forrest 46.21 173 *e*P **P 12 55 16.3 -3.2**
comp=Z,31nm,0.7s,mb5.3
PETK Petropavlovsk- 46.72 29 P **P 12 55 22.9 -0.3**
comp=Z,8.9nm,0.9s,mb4.7,baz=202,slow=2.2,SNR=9.4
YAK Yakutsk 46.87 5 *e*P **P 12 55 23.5 -0.7**
YAK *e* pP 12 55 32.0 -0.8
YAK pmax pmax
comp=Z,46nm,1.3s,mb5.2
YAK pmax pmax
comp=N,22nm,1.3s
YAK Yakutsk 46.87 5 *e*P **P 12 55 24.3 0.0**
YAK *e*pP pP 12 55 32.7 0.0
PET Petropavlovsk 47.11 29 *e*P **P 12 55 24.9 -1.4**
PET pmax pmax
comp=Z,17nm,1.0s,mb4.9
PET Petropavlovsk 47.11 29 *e*P **P 12 55 25.2 -1.1**
comp=Z,17nm,1.1s,mb4.9
PET *e*pP pP 12 55 34.5 -0.4
KSH Kashi 47.12 310 *e*P **P 12 55 29.3 +2.7**
KSH pP pP 12 55 36.5 +1.4
KSH sP sP 12 55 39.4 +0.9
KSH PcP PcP 12 57 00.5 +2.4
KSH PP PP 12 57 19.5 +2.0
KSH ScP ScP 13 00 51.3 +1.0
KSH PcS PcS 13 00 54.5 +1.3
KSH S **S 13 02 19.6 +2.4**
KSH sS sS 13 02 31.6 +0.3
KSH ScS ScS 13 05 18.4 -0.7
KSH SS SS 13 05 40.7 -3.8
KSH pmax pmax
comp=Z,23nm,0.9s,mb5.1
KSH pmax pmax
comp=Z,310nm,10.5s
KSH LR LR
comp=N,370nm,12.3s,MS4.7
KSH LR LR
comp=E,340nm,14.3s,MS4.7
KSH LR LR
comp=Z,290nm,16.8s,MS4.3
ULHL Ulahol 47.79 314 P **P 12 55 33.3 +1.6**
SNR=12
NWAO Narrogin (SRO) 48.30 186 P **P 12 55 32.9 -2.9**
comp=Z,26nm,0.6s,mb5.4,baz=10.0,slow=7.3,SNR=19
NWAO Narrogin (SRO) 48.30 186 *e*P **P 12 55 33.6 -2.1**
NWAO pmax pmax
comp=Z,27nm,0.8s
NWAO Narrogin (SRO) 48.30 186 *e*P **P 12 55 33.6 -2.1**
comp=Z,27nm,0.8s,mb5.3
ZAA0 Zalesovo Array 48.40 331 *e*P **P 12 55 36.0 -0.2**
ZAA0 *e*pP pP 12 55 42.9 -1.9
ZALV Zalesovo Beam 48.40 331 P **P 12 55 36.0 -0.3**
comp=Z,34nm,0.9s,mb5.4,baz=116,slow=6.8,SNR=111
KZA Kyzart 48.43 313 P **P 12 55 38.9 +2.1**
SNR=8.2
KBK Karagaybulak 48.83 314 P **P 12 55 41.3 +1.5**
SNR=7.2
CHMS Chumysh 49.08 314 P **P 12 55 42.5 +0.8**
SNR=9.1
AAK Ala-Archa 49.14 314 P **P 12 55 43.4 +1.3**
comp=Z,2.2nm,0.3s,mb4.6,baz=222,slow=1.7,SNR=9.6
AAK Ala-Archa 49.14 314 P **P 12 55 43.4 +1.2**
JASL Jaisalmer 49.17 292 *e*PKP **P 12 55 42.2 -0.5**
USP Ospenovka 49.34 314 P **P 12 55 44.4 +0.8**
SNR=10
EKS2 Erkin-Say 49.65 313 P **P 12 55 47.4 +1.4**
SNR=6.2
EKS2 Erkin-Say 49.65 313 *e*P **P 12 55 47.2 +1.2**
comp=Z,12nm,0.8s,mb5.0
EKS2 *e*pP pP 12 55 55.0 +0.4
NVS Novosibirsk 49.68 331 ⇑*i*P **P 12 55 46.1 0.0**
NVS *i* pP 12 55 54.3 -0.3
NVS pmax pmax
comp=Z,84nm,1.2s,mb5.7
NVS pmax pmax
comp=N,59nm,1.4s
NVS pmax pmax
comp=E,58nm,1.3s
KURK Kurchatov 49.79 325 P **P 12 55 47.5 +0.5**
comp=E,1µm,0.8s
KURK Kurchatov 49.79 325 *e*P **P 12 55 47.6 +0.6**
KURK *e**PP pP 12 55 55.4 -0.2
KURK pmax pmax
comp=Z,165nm,0.8s,mb6.1
KURK Kurchatov 49.79 325 *e*P **P 12 55 47.6 +0.6**
comp=Z,165nm,0.8s,mb6.1
KURK *e*pP pP 12 55 55.4 -0.1
KURK Kurchatov 49.79 325 P **P 12 55 48.0 +1.0**
SNR=88
STKA Stephens Creek 50.44 159 *e*P **P 12 55 50.4 -1.7**
comp=Z,8.6nm,0.7s,mb4.9
STKA Stephens Creek 50.44 159 P **P 12 55 49.1 -2.9**
comp=Z,14nm,1.1s,mb4.9,baz=341,slow=8.2,SNR=14
STKA Stephens Creek 50.44 159 *e*P **P 12 55 50.3 -1.8**
comp=Z,2.7nm,0.9s,mb4.3
KBL Kabul 51.46 302 *e*P **P 12 56 00.4 +0.5**
KBL pmax pmax
comp=Z,11nm,0.6s,mb5.0
KBL Kabul 51.46 302 *e*P **P 12 56 00.4 +0.4**
comp=Z,11nm,0.6s,mb5.0
CMSA Cobar Meteorol 51.70 155 *e*P **P 12 56 00.8 -0.7**
SEY Seymchan 51.90 17 ⇑*e*P **P 12 56 04.2 +1.5**
KK31 Karatay Array 52.07 313 ⇑*e*P **P 12 56 04.4 +0.1**
VOSK Vostochnaya 54.94 324 P **P 12 56 25.0 -0.2**
VOSK pmax pmax
comp=Z,28nm,0.8s,mb5.3
BVAR Borovoye Array 55.39 325 P **P 12 56 29.0 +0.6**
comp=Z,17nm,0.8s,mb5.1,baz=114,slow=10,SNR=102
BVAR PcP PcP 12 57 28.8 +0.2
comp=Z,7.2nm,0.9s,baz=126,slow=3.9,SNR=4.0
BRVK Borovoye 55.46 325 P **P 12 56 29.4 +0.5**
comp=Z,388nm,0.9s,SNR=33

BRVK Borovoye 55.46 325 *c iP* **P 12 56 29.6 +0.7**
BRVK pmax pmax
comp=Z,93nm,1.2s,mb5.7
BRVK Borovoye 55.46 325 *eP* **P 12 56 29.3 +0.4**
comp=Z,57nm,0.9s,mb5.6
BRVK *ep*P pP 12 56 37.6 0.0
BRVK Borovoye 55.46 325 P **P 12 56 29.9 +1.0**
SNR=31
ZRNK Zerenda 56.14 324 P **P 12 56 34.0 +0.2**
ZRNK pmax pmax
comp=Z,60nm,1.0s,mb5.6
TIXI Tiksi 56.38 2 *eP* **P 12 56 34.9 -0.3**
TIXI pmax pmax
comp=Z,41nm,1.1s,mb5.4
TIXI Tiksi 56.38 2 *eP* **P 12 56 34.5 -0.7**
comp=Z,29nm,0.9s,mb5.3
TIXI *ep*P pP 12 56 43.1 -0.8
BILL Bilibino 59.59 18 *c iP* **P 12 56 58.2 +0.5**
BILL *e**PP pP 12 57 06.5 0.0
BILL *e* 12 57 46.2
BILL pmax pmax
comp=Z,25nm,1.8s,mb4.9
BILL MLR MLR
comp=Z,100nm,15.0s,MS4.1
BILL Bilibino 59.59 18 *eP* **P 12 56 58.3 +0.6**
comp=Z,12nm,1.0s,mb4.9
BILL *ep*P pP 12 57 05.8 -0.6
ABKT Ailbek 60.58 305 P **P 12 57 06.4 +1.3**
comp=Z,118nm,1.0s,mb6.0,SNR=6.8
AB31 Akbulak array 60.63 318⇑ *eP* **P 12 57 05.2 0.0**
ABKAR Akbulak array 60.63 318 *eP* **P 12 57 05.1 0.0**
comp=Z,12nm,0.7s,mb5.2
SVE Sverdlovsk 61.94 327⇓ *eP* **P 12 57 14.1 +0.1**
SVE pmax pmax
comp=Z,58nm,1.1s,mb5.6
ARU Arti 62.95 326 P **P 12 57 20.9 +0.2**
comp=Z,147nm,1.0s,mb6.1,SNR=7.3
ARU Arti 62.95 326 *c iP* **P 12 57 20.3 -0.4**
ARU *e* 12 57 57.3
ARU *e* 12 59 34.8
ARU S **S 13 05 51.4 +2.5**
ARU SS SS 13 09 52.3 -2.0
ARU SSS 13 12 36.2
ARU pmax pmax
comp=Z,45nm,1.7s,mb5.3
ARU Arti 62.95 326 *eP* **P 12 57 20.2 -0.5**
comp=Z,23nm,1.0s,mb5.2
ARU *ep*P pP 12 57 27.8 -1.7
DGRG David-gareji 70.40 309 P **P 12 58 09.6 +1.1**
MTA Mtatsminda 70.82 309 P **P 12 58 10.6 -0.5**
TBLG Delisi 70.86 309 *eP* **P 12 58 11.0 -0.3**
TBLG Delisi 70.86 309 P **P 12 58 11.0 -0.3**
GNI Garni 70.96 308 *d iP* **P 12 58 12.4 +0.4**
GNI pmax pmax
comp=Z,29nm,1.5s
GNI Garni 70.96 308 *eP* **P 12 58 13.5 +1.5**
comp=Z,32nm,1.2s,mb5.1
ZEI Tsey 71.41 310 *eP* **P 12 58 14.3 -0.3**
ZEI pmax pmax
comp=Z,30nm,1.0s,mb5.2
KEH Kehvi 71.41 310 P **P 12 58 13.9 -0.8**
ONI Oni 71.75 310 P **P 12 58 17.4 +0.8**
KIV Kislovodsk 72.20 312 *c iP* **P 12 58 19.8 +0.4**
KIV pmax pmax
comp=Z,36nm,0.9s,mb5.3
KIV Kislovodsk 72.20 312 *eP* **P 12 58 20.1 +0.7**
comp=Z,31nm,0.8s,mb5.3
KIV Kislovodsk 72.20 312 P **P 12 58 20.0 +0.6**
SNR=8.5
TTA Tatalina 72.56 28 *eP* **P 12 58 22.2 +1.1**
TTA pmax pmax
comp=Z,11nm,1.2s,mb4.7
TTA Tatalina 72.56 28 *eP* **P 12 58 22.2 +1.1**
comp=Z,11nm,1.2s,mb4.7
RPZ Rata Peaks 73.66 145 P **P 12 58 26.8 -1.0**
comp=Z,25nm,0.9s,mb5.2,baz=356,slow=5.2,SNR=5.5
VSR Storozhevoye 74.01 319 *eP* **P 12 58 28.9 -1.0**
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,10.0nm,0.9s
VSR pmax pmax
comp=Z,20nm,0.9s,mb5.0
SOC Sochi 74.38 312 *eP* **P 12 58 30.1 -2.1**
SOC *e* 12 58 43.5
SOC *e*S S 13 08 03.3 -1.7
SOC *e*SS SS 13 12 44.1 -7.1
SOC pmax pmax
comp=Z,31nm,0.7s,mb5.3
BPAW Bear Paw Mtn. 74.78 27 *eP* **P 12 58 35.1 +1.0**
comp=Z,43nm,1.3s,mb5.2
COLD Coldfoot 74.90 24 *eP* **P 12 58 36.2 +1.4**
comp=Z,6.5nm,0.9s,mb4.6
COLD *ep*P pP 12 58 44.3 +0.6
TRF Thorofare Moun 75.14 28 *eP* **P 12 58 36.8 +0.5**
comp=Z,13nm,1.1s,mb4.8
TRF *ep*P pP 12 58 45.2 +0.1
OBN Obninsk 75.22 324⇓ *eP* **P 12 58 36.4 -0.4**
OBN *e* 13 01 19.9
OBN *e*SS SS 13 13 03.5 +0.2
OBN pmax pmax
comp=Z,28nm,1.3s,mb5.0
OBN MLR MLR
comp=Z,100nm,18.0s,MS4.2
OBN Obninsk 75.22 324⇓ *eP* **P 12 58 36.5 -0.3**
MCK McKinley 75.71 27 *eP* **P 12 58 39.8 +0.3**
MCK *e**PP pP 12 58 47.7 -0.8
MCK pmax pmax
comp=Z,25nm,0.9s,mb5.1
MCK McKinley 75.71 27 *eP* **P 12 58 39.8 +0.2**
comp=Z,25nm,0.9s,mb5.1
MCK *ep*P pP 12 58 47.7 -0.8
PMR Palmer 75.84 30 *eP* **P 12 58 40.5 +0.2**
PMR pmax pmax
comp=Z,18nm,1.1s,mb4.9
PMR Palmer 75.84 30 *eP* **P 12 58 40.5 +0.2**
comp=Z,18nm,1.1s,mb4.9
ANN Anapa 75.86 313 *eP* **P 12 58 42.8 +2.0**
ANN pmax pmax
comp=Z,49nm,1.1s,mb5.3
COLA College 76.06 26 *eP* **P 12 58 41.8 +0.3**
COLA pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
COLA College 76.06 26 *eP* **P 12 58 41.8 +0.3**
comp=Z,6.9nm,1.1s,mb4.5
JOF Joensuu 76.98 332 *eP* **P 12 58 46.0 -0.7**
JOF pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
JOF Joensuu 76.98 332 *ep* **P 12 58 46.0 -0.7**
comp=Z,6.8nm,0.6s,mb4.8
ARCES ARCESS Array B 78.14 339 P **P 12 58 53.4 +0.3**
comp=Z,3.8nm,0.7s,mb4.5,baz=77,slow=7.7,SNR=16
MENT Mentasta 78.15 28 *eP* **P 12 58 54.3 +1.0**
MENT *ep*P pP 12 59 02.4 +0.1
SIM Simferopol' 78.17 314 *eP* **P 12 58 55.0 +1.3**
SIM pmax pmax
comp=Z,30nm,0.7s,mb5.3
EGAK Eagle 78.90 26 *eP* **P 12 58 57.7 +0.3**
comp=Z,6.7nm,0.8s,mb4.6
KAF Kangasniemi 79.41 332 *eP* **P 12 58 58.3 -1.9**
KAF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
KAF Kangasniemi 79.41 332 *eP* **P 12 58 58.3 -1.9**
comp=Z,9.8nm,0.9s,mb4.7
KAF Kangasniemi 79.41 332 *ep* **P 12 58 58.3 -1.9**
comp=Z,9.8nm,0.9s,mb4.7
BR131 Keskin Array S 79.47 308 *eP* **P 12 59 00.7 -0.3**
comp=Z,2.7nm,0.8s,mb4.2
BRTR Keskin Array B 79.47 308 P **P 12 59 00.8 -0.2**
comp=Z,2.2nm,0.7s,mb4.2,baz=72,slow=3.8,SNR=11
FINES FINESS Array B 79.67 331 P **P 12 59 01.2 -0.3**
comp=Z,4.0nm,0.6s,mb4.5,baz=58,slow=5.1,SNR=34
DAWY Dawson 79.81 26 *eP* **P 12 59 03.0 +0.6**
DAWY *ep*P pP 12 59 11.6 +0.3
VSU Vasula 80.01 328⇑ *iP* **P 12 59 03.4 -0.1**
AKASG Malin Array Be 80.30 320 P **P 12 59 04.0 -1.3**
comp=Z,7.1nm,0.8s,mb4.6,baz=63,slow=5.4,SNR=25
KIEV Kiev 80.31 320 *eP* **P 12 59 04.1 -1.2**
KIEV pmax pmax
comp=Z,4.0nm,0.4s,mb4.7
KIEV Kiev 80.31 320 *eP* **P 12 59 04.1 -1.2**
comp=Z,3.6nm,0.4s,mb4.7
CSS Prodhromos 80.68 304 *eP* **P 12 59 06.1 -1.5**
comp=Z,20nm,0.9s,mb5.0
NACGM Naroch 80.81 324 *e* **P 12 59 05.0 -2.9**

INK Inuvik 80.91 21 *eP* **P 12 59 08.0 -0.2**
INK pmax pmax
comp=Z,23nm,1.5s
INK Inuvik 80.91 21 *eP* **P 12 59 08.0 -0.1**
comp=Z,23nm,1.5s,mb4.9
TLCR 81.80 315⇓ **P 12 59 12.7 -0.7**
TLCR 81.80 315⇓ **P 12 59 12.7 -0.7**
PETR 82.75 315⇑ **P 12 59 18.4 +0.1**
PETR 82.75 315⇑ **P 12 59 18.4 +0.1**
ODB Odobesti 82.86 315⇑ **P 12 59 10.0 -8.9**
TESR 82.94 316⇑ **P 12 59 19.2 -0.2**
TESR 82.94 316⇑ **P 12 59 19.2 -0.1**
TESR 82.94 316⇑ **P 12 59 19.2 -0.1**
VRI Vrincioaia 83.06 316⇓ **P 12 59 20.3 +0.4**
VRI Vrincioaia 83.06 316⇓ **P 12 59 20.3 +0.4**
VRI Vrincioaia 83.06 316⇓ **P 12 59 20.3 +0.4**
SUW Suwalki 83.07 324 *eP*KP **P 12 59 19.8 0.0**
SUW Suwalki 83.07 324 *eP* **P 12 59 19.3 -0.5**
SUW pmax pmax
comp=Z,58nm,1.1s,mb5.5
SUW Suwalki 83.07 324 *eP* **P 12 59 19.2 -0.5**
comp=Z,58nm,1.1s,mb5.5
PLOR Plostina 83.11 316⇑ **P 12 59 21.3 +1.1**
PLOR Plostina 83.11 316⇑ **P 12 59 21.3 +1.1**
PLOR Plostina 83.11 316⇑ **P 12 59 21.3 +1.1**
PRD Provadia 83.27 313 P **P 12 59 21.0 -0.1**
BURAR Bucovina Array 83.60 318⇑ **P 12 59 22.8 +0.1**
BURAR Bucovina Array 83.60 318⇑ **P 12 59 22.8 +0.1**
BUR08 Bucovina Ar. S 83.60 318 *eP* **P 12 59 22.7 0.0**
MLR Muntele Rosu 83.68 315⇑ **P 12 59 23.3 +0.1**
MLR Muntele Rosu 83.68 315⇑ **P 12 59 23.3 +0.1**
VOIR 84.31 315⇓ **P 12 59 26.3 0.0**
VOIR 84.31 315⇓ **P 12 59 26.3 0.0**
KWP Kalwaria Pacla 84.62 320 *e*PKP **P 12 59 28.2 +0.4**
KWP Kalwaria Pacla 84.62 320⇑ **P 12 59 28.0 +0.2**
KWP Kalwaria Pacla 84.62 320 *eP* **P 12 59 27.8 0.0**
comp=Z,96nm,1.4s,mb5.7
KWP Kalwaria Pacla 84.62 320⇑ *iP* **P 12 59 28.0 +0.2**
BMR Baia Mare 84.70 318 P **P 12 59 29.1 +0.8**
UZH Uzhgorod 85.19 319 *eP* **P 12 59 30.6 -0.1**
UZH *e* *ep*P 12 59 39.0 -0.8
UZH *e* 12 59 48.0
DRGR 85.47 317⇓ **P 12 59 32.8 +0.6**
DRGR 85.47 317⇓ **P 12 59 32.8 +0.6**
RZN Rozhen 85.59 312 P **P 12 59 32.2 -0.7**
DEV Deva 85.62 316⇑ **P 12 59 34.0 +1.1**
DEV Deva 85.62 316⇑ **P 12 59 34.0 +1.1**
CRVS Cervenica-Dubn 85.62 319 *eP* **P 12 59 33.8 +0.9**
CRVS pmax pmax
comp=Z,50nm,1.2s,mb5.6
CRVS Cervenica-Dubn 85.62 319 *eP* **P 12 59 33.8 +0.9**
comp=Z,50nm,1.2s,mb5.6
CRVS Cervenica-Dubn 85.62 319 *eP* **P 12 59 33.8 +0.9**
KMBO Kilima Mbogo 85.71 268 *eP* **P 12 59 34.6 +0.6**
KMBO pmax pmax
comp=Z,21nm,1.3s
KMBO Kilima Mbogo 85.71 268 *eP* **P 12 59 34.6 +0.7**
comp=Z,21nm,1.3s,mb5.2
KMBO Kilima Mbogo 85.71 268 P **P 12 59 35.3 +1.4**
SNR=5.8
PGB Panagyurishte 85.73 313 P **P 12 59 33.3 -0.3**
GZR Gura Zlata 85.85 316⇑ **P 12 59 32.0 -2.1**
GZR Gura Zlata 85.85 316⇑ **P 12 59 32.0 -2.1**
DLBC Dease Lake 85.88 30 *eP* **P 12 59 35.9 +2.0**
NIE Niedzica 86.17 320 *eP* **P 12 59 36.2 +0.6**
OJC Ojcow 86.22 321 *eP* **P 12 59 33.5 -2.3**
KECS Kecovo 86.37 319 *eP* **P 12 59 36.9 +0.3**
KECS pmax pmax
comp=Z,15nm,0.9s,mb5.2
KECS Kecovo 86.37 319 *eP* **P 12 59 36.9 +0.3**
comp=Z,15nm,0.9s,mb5.2
KECS Kecovo 86.37 319 *eP* **P 12 59 36.9 +0.3**
VTS Vitosha 86.40 313⇑ **P 12 59 36.6 -0.2**
VTS Vitosha 86.40 313 P **P 12 59 36.2 -0.6**
VTS Vitosha 86.40 313⇑ *iP* **P 12 59 36.6 -0.2**
BZS Buzias 86.56 316⇑ **P 12 59 37.1 -0.5**
BZS Buzias 86.56 316⇑ *iP* **P 12 59 37.1 -0.5**
NB2 NORSAR Subarra 86.56 333 P **P 12 59 36.0 -1.3**
comp=Z,18nm,0.8s,mb5.4,baz=64,slow=4.8
NOA NORSAR Array B 86.56 333 P **P 12 59 36.4 -0.9**
comp=Z,12nm,0.7s,mb5.2,baz=65,slow=4.9,SNR=35
PSZ Piszkesteto 86.93 319⇑ **P 12 59 39.7 +0.4**
PSZ Piszkesteto 86.93 319 *eP* **P 12 59 39.2 -0.1**
comp=Z,36nm,1.4s,mb5.4
PSZ Piszkesteto 86.93 319⇑ *iP* **P 12 59 39.7 +0.4**
RES Resolute Bay 87.11 9 *eP* **P 12 59 39.8 +0.1**
RES pmax pmax
comp=Z,39nm,1.4s,mb5.4
RES Resolute Bay 87.11 9 *eP* **P 12 59 39.8 +0.1**
comp=Z,39nm,1.4s,mb5.5
OKC Ostrava-Krasne 87.36 321 *eP* **P 12 59 41.8 +0.5**
VYHS Vyhne 87.40 320 *eP* **P 12 59 41.6 0.0**
VYHS pmax pmax
comp=Z,13nm,1.5s,mb4.9
VYHS Vyhne 87.40 320 *eP* **P 12 59 41.6 0.0**
comp=Z,13nm,1.5s,mb4.9
VYHS Vyhne 87.40 320 *eP* **P 12 59 41.6 0.0**
BUD Budapest 87.63 319⇑ *eP* **P 12 59 39.4 -3.3**
MORC Moravsky Berou 87.74 321⇓ **P 12 59 43.6 +0.4**
MORC Moravsky Berou 87.74 321 *eP* **P 12 59 43.0 -0.2**
comp=Z,39nm,2.0s,mb5.3
MORC *ep*P pP 12 59 50.6 -1.7
MORC Moravsky Berou 87.74 321⇓ *iP* **P 12 59 43.6 +0.4**
KSP Ksiaz 88.09 322 *e*PKP **P 12 59 45.3 +0.5**
KSP Ksiaz 88.09 322 *eP* **P 12 59 44.8 -0.1**
KSP *ep*P pP 12 59 52.4 -1.6
KSP *e*PP PP 13 03 12.5 +1.1
DPC Dobruska-Polom 88.26 322 *eP* **P 12 59 46.3 +0.6**
UPC Upice 88.39 322 *eP* **P 12 59 46.5 +0.2**
VRAC Vranov 88.49 321⇑ **P 12 59 46.9 +0.1**
VRAC Vranov 88.49 321⇑ *iP* **P 12 59 46.9 +0.1**
ZST Bratislava 88.59 320 *eP* **P 12 59 47.1 -0.2**
ZST pmax pmax
comp=Z,11nm,1.8s,mb4.9
ZST Bratislava 88.59 320 *eP* **P 12 59 47.1 -0.2**
comp=Z,11nm,1.8s,mb4.9
ZST Bratislava 88.59 320 *eP* **P 12 59 47.1 -0.2**
TREC Trest 89.17 321 *eP* **P 12 59 50.3 +0.4**
TREC Trest 89.17 321 *eP* **P 12 59 50.3 +0.4**
PVCC Panska Ves 89.23 323 *eP* **P 12 59 51.2 +1.0**
BRG Berggiesshubel 89.45 323 *eP* **P 12 59 51.0 -0.3**
comp=Z,7.7nm,1.2s,mb4.9
BRG Berggiesshubel 89.45 323 *eP* **P 12 59 51.0 -0.3**
BRG pmax pmax
comp=Z,5.0nm,1.2s,mb4.7
PRU Pruhonice 89.46 322 *eP* **P 12 59 52.3 +1.0**
CONA Conrad Observa 89.46 320⇑ *iPcP* PcP 12 59 51.2 -1.5
comp=Z,12nm,1.6s
CLL Collm 89.82 324⇑ *iP* **P 12 59 52.1 -0.8**
CLL *i* pP 13 00 00.7 -1.4
CLL pmax pmax
comp=Z,9.0nm,1.3s,mb4.9
CLL Collm 89.82 324⇑ *iP* **P 12 59 52.1 -0.8**
comp=Z,9.0nm,1.3s,mb4.9
CLL *i* pP 13 00 00.7 -1.4
CLL Collm 89.82 324⇑ *iP* **P 12 59 52.1 -0.8**
comp=Z,9.0nm,1.3s,mb4.9
CLL *i* pP pP 13 00 00.7 -1.4
KHC Kasperske Hory 90.38 322⇓ *iP* **P 12 59 55.9 +0.3**
KHC Kasperske Hory 90.38 322 *eP* **P 12 59 55.8 +0.2**
SOKA Soboth 90.46 319⇑ *iPcP* **P 12 59 55.8 -0.2**
comp=Z,6.7nm,1.0s,mb4.9
MOA Molln 90.48 320⇑ *iPcP* **P 12 59 55.8 -0.3**
comp=Z,20nm,1.1s,mb5.3,SNR=12
YKA Yellowknife Ar 90.56 23 P **P 12 59 56.9 +0.8**
comp=Z,3.1nm,0.8s,mb4.7,baz=301,slow=4.4,SNR=10
YKA Yellowknife Ar 90.56 23 P **P 12 59 56.9 +0.8**
BOJS Bojanci 90.78 318 *i P* **P 12 59 57.2 -0.4**
VISS Visnje 90.93 318 *i P* **P 12 59 58.5 +0.2**
CEY Cerknica 91.22 318 *i P* **P 12 59 59.4 -0.2**
SUMG Summit 91.34 354 *eP* **P 13 00 00.1 +0.5**
comp=Z,24nm,1.4s,mb5.3
SUMG Summit 91.34 354 *i P* **P 13 00 00.7 +1.1**
comp=Z,7.2nm,1.0s,mb5.0
SUMG *e* 13 10 42.3
JAVS Javornik 91.39 318 *i P* **P 12 59 59.8 -0.6**
GRF Grafenberg Arr 91.54 323 *eP* **P 13 00 00.5 -0.5**
comp=Z,11nm,1.2s,mb5.1
GRF Grafenberg Arr 91.54 323 *eP* **P 13 00 00.5 -0.5**
GRF pmax pmax
comp=Z,11nm,1.2s,mb5.1
ABTA Abfaltersbach 92.02 320⇓ *iP* **P 13 00 01.7 -1.6**
comp=Z,13nm,1.2s,mb5.1,SNR=6.4

WTTA Wattenberg 92.34 320⇑ *iPcP* **P 13 00 04.3 -0.5**
comp=Z,24nm,1.2s,mb5.4
PPT Papeete 92.63 107 LR LR 13 37 09.4
comp=Z,98nm,18.2s,MS4.3,baz=306,slow=33
FETA Feichten 93.01 320⇑ *iPcP* **P 13 00 07.8 0.0**
comp=Z,16nm,1.2s,mb5.3,SNR=7.4
MAW Mawson 93.24 199 P **P 13 00 06.0 -2.3**
comp=Z,1.4nm,0.7s,mb4.5,baz=50,slow=8.6,SNR=4.1
DAVA Damuels 93.41 321⇓ *iPcP* **P 13 00 09.5 -0.2**
comp=Z,9.8nm,1.1s,mb5.2
CDF Champ du Feu 94.43 323 *eP* **P 13 00 13.9 -0.5**
comp=Z,15nm,1.1s,mb5.0
CDF Champ du Feu 94.43 323 *eP* **P 13 00 13.9 -0.5**
CDF pmax pmax
comp=Z,8.0nm,1.1s,mb5.1
CDF Champ du Feu 94.43 323 *eP* **P 13 00 13.9 -0.5**
comp=Z,7.6nm,1.1s,mb5.0
WLF Walferdange 94.46 324 P **P 13 00 14.7 +0.2**
JCW Jim Creek 94.75 37 *eP* **P 13 00 17.6 +1.8**
comp=Z,6.0nm,0.7s,mb5.1
DOU Dourbes 95.11 325 P **P 13 00 17.6 +0.1**
HAU Haudompre 95.17 323 *eP* **P 13 00 16.9 -0.9**
MEZF Maizieres J'vi 95.67 324 *eP* **P 13 00 19.7 -0.3**
LPG La Plagne 96.16 320 *eP* **P 13 00 22.4 +0.1**
comp=Z,24nm,1.2s,mb5.2
LPG La Plagne 96.16 320 *eP* **P 13 00 22.4 +0.1**
LPG pmax pmax
comp=Z,12nm,1.2s,mb5.2
LPG La Plagne 96.16 320 *eP* **P 13 00 22.4 +0.1**
comp=Z,12nm,1.2s,mb5.2
LPL La Plagne 96.16 320 *eP* **P 13 00 22.4 +0.1**
comp=Z,30nm,1.2s,mb5.3
LPL La Plagne 96.16 320 *eP* **P 13 00 22.4 +0.1**
LPL pmax pmax
comp=Z,15nm,1.2s,mb5.3
LPL La Plagne 96.16 320 *eP* **P 13 00 22.4 +0.1**
comp=Z,15nm,1.2s,mb5.3
SMF Signal de Mont 97.33 322 *eP* **P 13 00 26.8 -0.8**
comp=Z,17nm,1.1s,mb5.1
SMF Signal de Mont 97.33 322 *eP* **P 13 00 26.8 -0.8**
SMF pmax pmax
comp=Z,8.0nm,1.1s,mb5.1
SMF Signal de Mont 97.33 322 *eP* **P 13 00 26.8 -0.8**
comp=Z,8.4nm,1.1s,mb5.1
YBH Yreka Blue Hor 97.35 43 LR LR 13 43 30.5
comp=Z,93nm,19.2s,MS4.3,baz=332,slow=35
HLID Hailey 101.64 38 *e*Pdif Pdif 13 00 48.9 +2.3
NVAR Mina Array Bea 101.92 44 P Pdif 13 00 50.2 +2.3
comp=Z,0.6nm,0.7s,baz=249,slow=6.2,SNR=4.8
NVAR Mina Array Bea 101.92 44 P Pdif 13 00 50.2 +2.3
TORD Torodi Ar. Bea 114.93 293 PKP PKiKP 13 05 35.4 -0.7
comp=Z,1.4nm,0.8s,baz=38,slow=1.8,SNR=7.3
TORD PKKPab PKKPab 13 16 17.6 -1.3
comp=Z,1.0nm,1.0s,baz=257,slow=3.7,SNR=3.8
TXAR Lajitas Array 117.06 45 PKP PKPdf 13 05 40.2 +0.4
comp=Z,0.6nm,0.8s,baz=153,slow=0.3,SNR=8.0
CPUP Villa Florida 169.11 181 PKPab PKPab 13 08 12.5 -1.0
comp=Z,3.2nm,0.7s,baz=153,slow=2.3,SNR=11
LPAZ La Paz 169.74 96 PKP PKPdf 13 07 04.3 +1.6
comp=Z,2.3nm,1.1s,baz=297,slow=2.3,SNR=4.6
LPAZ La Paz 169.74 96 *e*PKPdf PKPdf 13 07 04.1 +1.4

IDC ***06*** *12:56:21.8±1.6, 15°.31N×122°.79E, h0km, mb3.6/4, mb1 3.9/5, mb1mx3.6/23, mbtmp3.7/5, ML4.7/1, Error ellipse: s-maj=32.6km s-min=23.1km az=47.0*
ISCJB ***06*** *12:56:27.1±1.7, 15°.49N±0°.06×122°.5E±0°.1, h35km±17km, mb3.6/4, Error ellipse: s-maj=17.7km s-min=8.1km az=158.4*
MAN ***06*** *12:56:27, 15°.33N×122°.20E, h1km, mb5.1, ML4.0, MS4.1*
ISC 06 12:56:27.3±2.0, 15°.49N±0°.07×122°.6E±0°.1, h36km±20km, n12, σ1°.41/17, mb3.6/4, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**0.99**	**220**	*eP*	**Pn**	**12 56 40.0**	**-4.8**
POLP				*eS*	**Sn**	**12 56 54.1**	**-3.3**
BALP	**Baler**	**1.02**	**284**	*eP*	**Pn**	**12 56 42.1**	**-3.0**
BALP				*eS*	**Sn**	**12 56 54.7**	**-3.5**
TGY	**Tagaytay City**	**2.12**	**230**	Pn	**Pn**	**12 57 00.2**	**0.0**
	256nm,0.3s,baz=37,slow=5.1,SNR=16						
TGY				Sn	**Sn**	**12 57 26.8**	**+1.5**
	76nm,0.3s,baz=311,slow=20,SNR=11						
BCPH	**Baguio City Da**	**2.13**	**295**⇑	*iP*	**Pn**	**12 57 01.7**	**+1.3**
BCPH				*i* S	**Sn**	**12 57 26.0**	**+0.3**
BOAC	**Boac**	**2.15**	**200**	*eP*	**Pn**	**12 57 00.6**	**0.0**
BOAC				*eS*	**Sn**	**12 57 26.7**	**+0.6**
AUQP	**San Andres**	**2.16**	**178**	*eP*	**Pn**	**12 57 03.7**	**+2.9**
BOLP	**Bolinao**	**2.73**	**289**	*eP*	**Pn**	**12 57 08.2**	**-0.5**
LUBP	**Lubang**	**2.87**	**233**	*eP*	**Pn**	**12 57 10.3**	**-0.3**
CMAR	**Chiang Mai Arr**	**22.81**	**281**	P	**P**	**13 01 27.7**	**+0.5**
	0.7nm,0.7s,mb3.2,baz=95,slow=7.2,SNR=4.6						
WRA	**Warramunga Arr**	**37.05**	**161**	P	**P**	**13 03 30.7**	**-3.3**
	1.6nm,0.8s,mb3.9,baz=339,slow=9.9,SNR=6.6						
ASAR	**Alice Springs**	**40.45**	**164**	P	**P**	**13 04 01.3**	**-1.2**
	0.6nm,0.7s,mb3.4,baz=342,slow=7.4,SNR=6.3						
MKAR	**Makanchi Array**	**45.73**	**322**	P	**P**	**13 04 47.0**	**+1.9**
	1.0nm,0.8s,mb3.8,baz=110,slow=10,SNR=6.7						

LJU ***06*** *12:57:07.7, 46°.11N×13°.59E, h19km, ML2.1*
ROM ***06*** *12:57:07.5±0.2, 46°.13N×13°.64E, h10km, Md2.7/4, MI1.9/4, Error ellipse: s-maj=4.8km s-min=1.2km az=59.0*
ISCJB ***06*** *12:57:08.4±0.2, 46°.11N±0°.02×13°.60E±0°.02, h10km, Error ellipse: s-maj=2.4km s-min=1.6km az=23.7*
VIE ***06*** *12:57:08.3±0.1, 46°.14N×13°.63E, h12km±1km, mb1.6/8, ML2.4/8, Error ellipse: s-maj=0.9km s-min=0.8km az=49.0*
10 km SW of Tolmin
CSEM ***06*** *12:57:08.3±0.1, 46°.12N×13°.59E, h15km, ML2.6/13, Error ellipse: s-maj=2.2km s-min=1.4km az=22.0*
ISC 06 12:57:08.6±0.3, 46°.12N±0°.02×13°.60E±0°.02, h15km±3km, n88, σ0°.67/154, 20C-13D, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRE	**Drenchia**	**0.06**	**27**⇑	*iPg*	**Pg**	**12 57 11.5**	**-0.1**
DRE				Sg	**Sg**	**12 57 13.8**	**+0.3**
DRE	**Drenchia**	**0.06**	**27**	*i Pg*	**Pg**	**12 57 11.5**	**-0.1**
DRE				Sg	**Sg**	**12 57 13.8**	**+0.3**
SABO	**M.te Sabotino**	**0.14**	**181**⇑	*iPg*	**Pg**	**12 57 12.2**	**-0.3**
SABO				*i* Sg	**Sg**	**12 57 14.9**	**0.0**
SABO	**M.te Sabotino**	**0.14**	**181**	*i Pg*	**Pg**	**12 57 12.1**	**-0.3**
SABO				*i* Sg	**Sg**	**12 57 14.9**	**0.0**
ROBS	**Robic**	**0.14**	**333**⇓	*iPg*	**Pg**	**12 57 12.2**	**-0.3**
ROBS				*i* Sg	**Sg**	**12 57 15.1**	**0.0**
ROBS							
	comp=Z,213nm,0.1s						
ROBS	**Robic**	**0.14**	**333**	Pg	**Pg**	**12 57 12.2**	**-0.3**
ROBS				*i* Sg	**Sg**	**12 57 15.1**	**+0.1**
	comp=Z,213nm,0.1s						
CADS	**Cadrg**	**0.14**	**40**⇓	*iPg*	**Pg**	**12 57 12.5**	**0.0**
CADS				*i* Sg	**Sg**	**12 57 15.6**	**+0.5**
CADS							
	comp=Z,466nm,0.2s						
CADS	**Cadrg**	**0.14**	**40**⇓	*iPg*	**Pg**	**12 57 12.5**	**0.0**
CADS				*i* Sg	**Sg**	**12 57 15.6**	**+0.5**
	comp=Z,466nm,0.2s						
COLI	**Coloredo**	**0.16**	**276**⇑	*iPg*	**Pg**	**12 57 12.3**	**-0.4**
COLI				Sg	**Sg**	**12 57 15.3**	**-0.1**
COLI	**Coloredo**	**0.16**	**276**	*i Pg*	**Pg**	**12 57 12.3**	**-0.4**
COLI				Sg	**Sg**	**12 57 15.3**	**-0.1**
VOJS	**Vojsko**	**0.21**	**114**⇑	*iPg*	**Pg**	**12 57 13.5**	**0.0**
VOJS							
	comp=Z,55nm,0.1s						
VOJS	**Vojsko**	**0.21**	**114**	*iPg*	**Pg**	**12 57 13.5**	**0.0**
	comp=Z,55nm,0.1s						
VOY	**Vojsko**	**0.22**	**113**	*e*Sg	**Sg**	**12 57 17.7**	**+0.7**
VINO	**Villanova**	**0.26**	**302**⇓	*iPg*	**Pg**	**12 57 13.8**	**-0.5**
VINO				*i* Sg	**Sg**	**12 57 18.0**	**-0.1**
VINO	**Villanova**	**0.26**	**302**	*i Pg*	**Pg**	**12 57 13.8**	**-0.5**
VINO				*i* Sg	**Sg**	**12 57 18.0**	**-0.2**
BAD	**Bernadia**	**0.28**	**295**⇓	*iPg*	**Pg**	**12 57 14.0**	**-0.6**
BAD				*i* Sg	**Sg**	**12 57 18.4**	**-0.2**
BAD	**Bernadia**	**0.28**	**295**	*i Pg*	**Pg**	**12 57 14.0**	**-0.6**
BAD				*i* Sg	**Sg**	**12 57 18.4**	**-0.2**
GMNA	**Gemona**	**0.30**	**302**	Pg	**Pg**	**12 57 15.3**	**+0.4**
GMNA				Sg	**Sg**	**12 57 21.0**	**+1.8**
	comp=Z,178nm,0.2s						
GMNA	**Gemona**	**0.30**	**302**	Pg	**Pg**	**12 57 15.3**	**+0.4**
GMNA				Sg	**Sg**	**12 57 21.0**	**+1.8**
	comp=Z,178nm,0.2s						
PTCC	**Patocco-Chiusa**	**0.34**	**329**	Pg	**Pg**	**12 57 14.9**	**-0.7**
PTCC				Sg	**Sg**	**12 57 20.3**	**0.0**

comp=Z,101nm,0.5s
PTCC Patocco-Chiusa 0.34 329 Pg **Pg 12 57 14.9 -0.7**
PTCC Sg **Sg 12 57 20.3 0.0**
comp=Z,101nm,0.5s
GORS Gorjuse 0.34 54 *i* Pg **Pg 12 57 15.7 +0.1**
GORS *i* Sg **Sg 12 57 21.2 +0.9**
GORS
comp=Z,58nm,0.2s
GORS Gorjuse 0.34 54 *i* Pg **Pg 12 57 15.7 +0.1**
GORS *i* Sg **Sg 12 57 21.2 +0.9**
comp=Z,58nm,0.2s
BUA Buia 0.35 287⇑*i*Pg **Pg 12 57 15.4 -0.4**
BUA *i* Sg **Sg 12 57 21.1 +0.5**
BUA Buia 0.35 287 *i* Pg **Pg 12 57 15.4 -0.4**
BUA *i* Sg **Sg 12 57 21.1 +0.5**
LSR Lussari 0.36 352⇓*i*Pg **Pg 12 57 15.7 -0.4**
LSR *i* Sg **Sg 12 57 21.8 +0.7**
LSR Lussari 0.36 352 *i* Pg **Pg 12 57 15.7 -0.4**
LSR *i* Sg **Sg 12 57 21.8 +0.8**
JAVS Javornik 0.39 125 *i* Pg **Pg 12 57 16.2 -0.4**
JAVS *i* Sg **Sg 12 57 22.5 +0.6**
JAVS
comp=Z,38nm,0.1s
JAVS Javornik 0.39 125 *i* Pg **Pg 12 57 16.2 -0.4**
JAVS *i* Sg **Sg 12 57 22.5 +0.6**
comp=Z,38nm,0.1s
TLI Talmassons 0.40 241⇑*i*Pg **Pg 12 57 16.1 -0.6**
TLI Talmassons 0.40 241 *i* Pg **Pg 12 57 16.1 -0.6**
BOO Bordano 0.40 300⇓*i*Pg **Pg 12 57 15.9 -0.9**
BOO Bordano 0.40 300 *i* Pg **Pg 12 57 15.9 -0.9**
TRI Trieste 0.42 165⇑*i*Pg **Pg 12 57 16.4 -0.8**
TRI *i* Sg **Sg 12 57 22.7 -0.2**
TRI Trieste 0.42 165 Pg **Pg 12 57 16.4 -0.8**
TRI Sg **Sg 12 57 22.8 -0.1**
comp=Z,107nm,0.2s
TRI Trieste 0.42 165 Pg **Pg 12 57 16.4 -0.8**
TRI Sg **Sg 12 57 22.8 -0.1**
comp=Z,107nm,0.2s
ACOM Acomizza, Ital 0.43 352⇑*i*Pg **Pg 12 57 17.1 -0.2**
ACOM *i* Sg **Sg 12 57 24.2 +1.0**
ACOM Acomizza, Ital 0.43 352 *i* Pg **Pg 12 57 17.1 -0.3**
ACOM *i* Sg **Sg 12 57 24.2 +1.0**
MPRI Monte Prat 0.45 286⇓*i*Pg **Pg 12 57 17.0 -0.5**
MPRI *i* Sg **Sg 12 57 24.7 +1.1**
MPRI Monte Prat 0.45 286 *i* Pg **Pg 12 57 17.0 -0.5**
MPRI *i* Sg **Sg 12 57 24.7 +1.2**
CRNS Crni Vrh 0.46 94 *i* Pg **Pg 12 57 17.6 -0.2**
CRNS *i* Sg **Sg 12 57 24.9 +0.9**
FUSE Fusea 0.51 306⇑*e*Pg **Pg 12 57 17.7 -1.1**
FUSE *e*Sg **Sg 12 57 25.4 -0.2**
FUSE Fusea 0.51 306 *e*Pg **Pg 12 57 17.7 -1.1**
FUSE *e*Sg **Sg 12 57 25.4 -0.2**
MYKA Terra Mystica 0.51 3⇓*i*Pg **Pg 12 57 18.4 -0.4**
MYKA ⇓*i*Sg **Sg 12 57 25.1 -0.6**
comp=Z,7.9nm,0.1s
MYKA Terra Mystica 0.51 3 Pg **Pg 12 57 18.4 -0.4**
MYKA Sg **Sg 12 57 25.1 -0.6**
comp=Z,7.9nm,0.1s
PLRO Paularo 0.53 324⇑*i*Pg **Pg 12 57 18.5 -0.7**
PLRO *i* Sg **Sg 12 57 26.7 +0.3**
PLRO Paularo 0.53 324 *i* Pg **Pg 12 57 18.5 -0.7**
PLRO *i* Sg **Sg 12 57 26.7 +0.3**
ZOU Zoufplan 0.62 315⇑*i*Pg **Pg 12 57 20.0 -0.8**
ZOU *i* Sg **Sg 12 57 29.4 +0.4**
ZOU Zoufplan 0.62 315 *i* Pg **Pg 12 57 20.0 -0.8**
ZOU *i* Sg **Sg 12 57 29.4 +0.4**
SKDS Skadanscina 0.64 153 *i* Pg **Pg 12 57 20.2 -1.0**
LJU Ljubljana 0.65 96 *i* Pg **Pg 12 57 21.6 +0.3**
LJU Ljubljana 0.65 96 *i* Pg **Pg 12 57 21.6 +0.3**
CEY Cerknica 0.69 123 *i* Pg **Pg 12 57 21.3 -0.7**
CEY Cerknica 0.69 123 *i* Pg **Pg 12 57 21.3 -0.8**
MLNI Malnisio 0.69 273⇑*i*Pg **Pg 12 57 22.1 0.0**
MLNI *i* Sg **Sg 12 57 32.5 +1.2**
MLNI Malnisio 0.69 273 *i* Pg **Pg 12 57 22.1 0.0**
MLNI *i* Sg **Sg 12 57 32.5 +1.2**
FVI Forni Avoltri 0.74 310 Pg **Pg 12 57 22.0 -1.1**
FVI Sg **Sg 12 57 32.9 -0.1**
comp=Z,36nm,0.2s
FVI Forni Avoltri 0.74 310 Pg **Pg 12 57 22.0 -1.1**
FVI Sg **Sg 12 57 32.9 -0.1**
comp=Z,36nm,0.2s
OBKA Obir 0.76 59⇓*e*Pg **Pg 12 57 23.0 -0.5**
SNR=6.4
OBKA ⇑*i*Sg **Sg 12 57 33.1 -0.5**
comp=Z,35nm,0.3s
OBKA Obir 0.76 59 Pg **Pg 12 57 23.0 -0.5**
SNR=6.4
OBKA Sg **Sg 12 57 33.1 -0.5**
comp=Z,35nm,0.3s
VNDS Vrh nad Dolski 0.76 91 *i* Pg **Pg 12 57 23.2 -0.3**
CSMI Casera Mimoias 0.77 301⇓*i*Pg **Pg 12 57 23.5 -0.1**
CSMI *i* Sg **Sg 12 57 34.3 +0.6**
CSMI Casera Mimoias 0.77 301 *i* Pg **Pg 12 57 23.5 -0.1**
CSMI *i* Sg **Sg 12 57 34.3 +0.6**
KNDS Knezji Dol 0.80 137 *i* Pg **Pg 12 57 23.9 -0.3**
KNDS Knezji Dol 0.80 137 *i* Pg **Pg 12 57 23.9 -0.3**
CAE Caneva 0.82 263 *e*Pg **Pg 12 57 24.7 +0.2**
CAE *e*Sg **Sg 12 57 37.0 +1.6**
CAE Caneva 0.82 263 *e*Pg **Pg 12 57 24.7 +0.1**
CAE *e*Sg **Sg 12 57 37.0 +1.7**
CSO Casso 0.90 280 *e*Pg **Pg 12 57 24.6 -1.5**
CSO *e*Sg **Sg 12 57 38.9 +0.9**
CSO Casso 0.90 280 *e*Pg **Pg 12 57 24.6 -1.5**
CSO *e*Sg **Sg 12 57 38.8 +0.9**
VISS Visnje 0.92 110 *i* Pn **Pn 12 57 26.2 -0.7**
VISS Visnje 0.92 110 *i* Pn **Pn 12 57 26.2 -0.7**
PDKS Podkum 0.97 93 *i* Pg **Pg 12 57 27.2 -0.2**
PDKS *i* Sg **Sg 12 57 41.8 +1.7**
PDKS Podkum 0.97 93 *i* Pg **Pg 12 57 27.2 -0.2**
PDKS *i* Sg **Sg 12 57 41.8 +1.6**
KBA Koelnbreinsper 0.98 350⇑*e*Pg **Pg 12 57 27.4 -0.1**
SNR=11
KBA ⇑*i*Sg **Sg 12 57 40.7 +0.4**
comp=Z,7.3nm,0.2s
KBA Koelnbreinsper 0.98 350 Pg **Pg 12 57 27.4 -0.1**
SNR=11
KBA Sg **Sg 12 57 40.7 +0.4**
comp=Z,7.3nm,0.2s
ABTA Abfaltersbach 0.98 310⇑*e*Pg **Pg 12 57 27.2 -0.4**
SNR=13
ABTA ⇓*i*Sg **Sg 12 57 40.9 +0.3**
comp=Z,12nm,0.2s
ABTA Abfaltersbach 0.98 310 Pg **Pg 12 57 27.2 -0.4**
SNR=13
ABTA Sg **Sg 12 57 40.8 +0.3**
comp=Z,12nm,0.2s
ZAVS Zavodnje 1.03 72 *i* Pg **Pg 12 57 28.1 -0.6**
SOKA Soboth 1.14 60⇑*i*Pg **Pg 12 57 29.9 -0.7**
SOKA ⇑*i*Sg **Sg 12 57 45.3 -0.1**
comp=Z,7.3nm,0.2s
SOKA Soboth 1.14 60 Pg **Pg 12 57 29.9 -0.7**
SOKA Sg **Sg 12 57 45.3 -0.1**
comp=Z,7.3nm,0.2s
CGRP Cima Grappa 1.28 260⇑*i*Pg **Pn 12 57 32.1 +0.2**
CGRP *i* Sg **Sg 12 57 49.4 -0.5**
CGRP Cima Grappa 1.28 260 *i* Pg **Pn 12 57 32.1 +0.2**
CGRP *i* Sg **Sg 12 57 49.4 -0.5**
BOJS Bojanci 1.31 117 *i* Pg **Pn 12 57 33.0 +0.8**
BOJS Bojanci 1.31 117 *i* Pg **Pn 12 57 33.0 +0.8**
CTI Castel Tesino 1.36 268 Pg **Pn 12 57 33.4 +0.4**
comp=Z,310nm,4.7s
CTI Castel Tesino 1.36 268 Pg **Pn 12 57 33.4 +0.4**
comp=Z,310nm,4.7s
NVLJ Novalja 1.79 150 *e*Pn **Pn 12 57 39.6 +0.7**
NVLJ Sn **Sn 12 58 03.1 +1.7**
NVLJ Novalja 1.79 150 *e*Pn **Pn 12 57 39.6 +0.7**
NVLJ Sn **Sn 12 58 03.1 +1.7**

IDC 06 13:00:35.2±6.0, 7°98S×158°35E, h0km, mb3.9/4, mb1 4.0/5, mb1mx3.7/18, mbtmp3.9/5, ML4.0/1, Error ellipse: s-maj=125.0km s-min=29.1km az=18.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.14**	**133**	Pn	Pn	13 01 12.4	+0.3
	46nm,0.3s,baz=214,slow=8.0,SNR=46						
HNR				Sn	Sn	13 01 32.9	-6.5
	148nm,0.3s,baz=337,slow=22,SNR=16						
WRA	**Warramunga Arr**	**26.12**	**240**	P	P	13 06 12.6	+1.5
	0.5nm,0.3s,baz=66,slow=9.2,SNR=8.8						
ASAR	**Alice Springs**	**28.15**	**234**	P	P	13 06 29.2	-0.1
	0.7nm,0.6s,baz=61,slow=10,SNR=10						
STKA	**Stephens Creek**	**28.44**	**211**	P	P	13 06 30.7	-1.1
	1.8nm,0.9s,baz=52,slow=15,SNR=4.2						
FITZ	**Fitzroy Crossi**	**33.37**	**249**	P	P	13 07 14.9	-0.5
	1.0nm,0.6s,baz=67,slow=7.7,SNR=5.3						

*IDC **06** 13:01:21.1±1.2, 15°.53N×122°.75E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/22, mbtmp3.4/4, Error ellipse: s-maj=33.6km s-min=20.1km az=77.0*
*ISCJB **06** 13:01:24.3±1.0, 15°.47N±0°.09×122°.66E±0°.09, h33km, mb3.4/4, Error ellipse: s-maj=15.1km s-min=9.1km az=42.1*
*MAN **06** 13:01:29, 15°.20N×122°.13E, h19km, mb4.7, ML3.6, MS3.6*
ISC 06 13:01:26.4±1.0, 15°.42N±0°.10×122°.56E±0°.10, h35km, n9, σ1§31/13, mb3.4/4, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**0.92**	**221**	*e*P	Pn	13 01 40.8	-2.1
POLP				*e*S	Sn	13 01 50.4	-4.4
BALP	**Baler**	**1.00**	**288**	*e*P	Pn	13 01 43.3	-0.7
BALP				*e*S	Sn	13 01 54.1	-2.8
PCPH	**Palayan**	**1.42**	**276**⇓	*e*P	Pn	13 01 49.4	-0.4
TGY	**Tagaytay City**	**2.05**	**230**	Pn	Pn	13 02 00.1	+1.6
	196nm,0.3s,baz=358,slow=2.1,SNR=6.2						
TGY				Sn	Sn	13 02 27.3	+4.5
	114nm,0.3s,baz=299,slow=21,SNR=4.6						
BCPH	**Baguio City Da**	**2.13**	**297**⇑	*i*P	Pn	13 02 01.2	+1.7
BCPH				*i* S	Sn	13 02 25.7	+0.9
SONM	**Songino Array**	**34.98**	**341**	P	P	13 08 13.8	-1.4
	0.3nm,0.3s,mb3.7,baz=146,slow=8.2,SNR=3.4						
WRA	**Warramunga Arr**	**37.00**	**161**	P	P	13 08 32.6	-0.2
	0.4nm,0.7s,mb3.3,baz=342,slow=9.1,SNR=3.8						
ASAR	**Alice Springs**	**40.40**	**164**	P	P	13 09 01.7	+0.4
	0.5nm,0.9s,mb3.2,baz=345,slow=7.7,SNR=2.6						
MKAR	**Makanchi Array**	**45.76**	**322**	P	P	13 09 45.3	+0.9
	0.4nm,0.7s,mb3.5,baz=120,slow=11,SNR=3.1						

*SZGRF **06** 13:22:08.9, 17°.81S×177°.72W, h33km, Fiji Islands region*
*DJA **06** 13:22:49, 18°.09S×177°.49W, h411km, mb5.2/20*
*ISCJB **06** 13:23:05.7±0.7, 17°.75S±0°.07×178°.54W±0°.04, h537km±8km, mb4.5/77, Error ellipse: s-maj=11.8km s-min=4.4km az=164.5*
*MOS **06** 13:23:06.5±1.1, 17°.56S×178°.56W, h538km, mb4.6/14, Error ellipse: s-maj=13.4km s-min=10.0km az=158.1*
*IDC **06** 13:23:07.8±1.1, 17°.83S×178°.44W, h555km±12km, mb3.9/18, mb1 4.1/20, mb1mx4.1/22, mbtmp4.0/20, Error ellipse: s-maj=13.8km s-min=9.0km az=151.0*
*NEIC **06** 13:23:07.8±0.6, 17°.78S×178°.47W, h556km±7km, mb4.4/36, Error ellipse: s-maj=9.3km s-min=5.3km az=155.0*
ISC 06 13:23:07.7±0.8, 17°.77S±0°.07×178°.49W±0°.04, h548km±9km, h547km±3.0km: pP-P, n511, σ0§67/350, mb4.5/77, 136C-119D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.51**	**60**	P	P	13 24 59.4	-1.2
	9.3nm,0.3s,baz=214,slow=11,SNR=19						
AFI				S	S	13 26 29.4	-3.7
	8.3nm,0.3s,baz=17,slow=19,SNR=4.6						
AFI	**Afiamalu**	**7.51**	**60**	*e*P	P	13 24 59.1	-1.5
AFI				pmax	pmax		
	comp=Z,96nm,0.9s						
AFI	**Afiamalu**	**7.51**	**60**	*e*P	P	13 24 59.1	-1.6
	comp=Z,96nm,0.9s						
FUNA	**Funafuti**	**9.46**	**346**	*e*P	P	13 25 21.5	+1.3
DZM	**Mont Dzumac**	**14.80**	**251**	*e*P	P	13 26 18.1	+3.0
	comp=Z,4.4nm,0.2s						
DZM				*e*S	S	13 28 50.8	+1.3
	comp=Z,483nm,24.8s						
RAR	**Rarotonga**	**17.98**	**104**	P	P	13 26 45.3	-0.2
	comp=Z,1.1nm,0.3s,baz=254,slow=8.9,SNR=6.2						
URZ	**Urewera**	**20.78**	**190**	P	P	13 27 08.6	-2.1
	comp=Z,8.3nm,0.7s,baz=27,slow=6.8,SNR=7.6						
URZ				S	S	13 30 21.4	-5.9
	comp=Z,12nm,0.8s,baz=201,slow=16,SNR=4.5						
URZ	**Urewera**	**20.78**	**190**	*e*P	P	13 27 08.9	-1.8
RPZ	**Rata Peaks**	**27.34**	**197**	P	P	13 28 07.6	-1.2
	comp=Z,5.3nm,0.7s,mb4.3,baz=51,slow=6.5,SNR=2.6						
PPT	**Papeete**	**27.54**	**94**	*e*LR	LR	13 34 58.4	
	comp=Z,206nm,26.0s						
PPT	**Papeete**	**27.54**	**94**	P	P	13 28 10.5	-0.5
	comp=Z,32nm,0.6s,mb5.1,baz=205,slow=5.3,SNR=4.2						
ARMA	**Armidale**	**29.94**	**240**	*e*P	P	13 28 33.0	+1.3
	comp=Z,38nm,0.8s,mb5.0						
CTA	**Charters Tower**	**33.39**	**260**	P	P	13 29 01.1	-0.2
	comp=Z,25nm,0.6s,mb4.9,baz=95,slow=10,SNR=34						
CTA				PcP	PcP	13 31 25.9	-0.8
	comp=Z,3.2nm,0.7s,baz=34,slow=3.6,SNR=3.5						
CTA	**Charters Tower**	**33.39**	**260**	P	P	13 29 01.1	-0.2
CTA				PcP	PcP	13 31 25.9	-0.8
CTAO	**Charters Tower**	**33.39**	**260**	*e*P	P	13 29 01.6	+0.3
CTAO				pmax	pmax		
	comp=Z,30nm,0.8s,mb4.9						
CTAO	**Charters Tower**	**33.39**	**260**	*e*P	P	13 29 01.6	+0.3
	comp=Z,30nm,0.8s,mb4.9						
CAN	**Canberra**	**33.73**	**232**	*e*P	P	13 29 05.0	+1.1
CAN				pmax	pmax		
	comp=Z,41nm,0.9s,mb5.0						
CAN	**Canberra**	**33.73**	**232**	*e*P	P	13 29 05.0	+1.1
	comp=Z,41nm,0.9s,mb5.0						
STKA	**Stephens Creek**	**38.63**	**241**	P	P	13 29 45.6	+1.2
	comp=Z,51nm,0.5s,mb5.3,baz=89,slow=9.2,SNR=125						
STKA	**Stephens Creek**	**38.63**	**241**	*e*P	P	13 29 45.6	+1.2
STKA				pmax	pmax		
	comp=Z,17nm,0.8s						
STKA	**Stephens Creek**	**38.63**	**241**	*e*P	P	13 29 45.6	+1.2
	comp=Z,17nm,0.8s,mb4.6						
WRAB	**Tennant Creek**	**44.57**	**259**	*e*P	P	13 30 30.9	-0.6
WRAB				pmax	pmax		
	comp=Z,26nm,0.5s,mb5.0						
WRAB	**Tennant Creek**	**44.57**	**259**	*e*P	P	13 30 30.9	-0.6
	comp=Z,26nm,0.5s,mb5.0						
WRAB	**Tennant Creek**	**44.57**	**259**	P	P	13 30 31.3	-0.2
	comp=Z,80nm,1.2s,mb5.1						
WRA	**Warramunga Arr**	**44.58**	**259**	P	P	13 30 30.9	-0.6
	comp=Z,41nm,0.7s,mb5.1,baz=93,slow=7.1,SNR=913						
WRA				PcP	PcP	13 32 02.1	-0.6
	comp=Z,7.8nm,0.7s,baz=90,slow=3.7,SNR=7.7						
WRA				ScP	ScP	13 35 02.3	-0.6
	comp=Z,1.9nm,0.9s,baz=82,slow=4.5,SNR=4.9						
WRA				S	S	13 36 23.1	-4.8
	comp=Z,1.1nm,0.8s,baz=90,slow=12,SNR=4.0						
WRA	**Warramunga Arr**	**44.58**	**259**	P	P	13 30 30.9	-0.6
WRA						13 32 02.1	
WRA				S	S	13 36 23.1	-4.8
ASAR	**Alice Springs**	**44.75**	**254**	P	P	13 30 33.1	+0.3
	comp=Z,251nm,0.6s,baz=88,slow=8.2,SNR=3674						
ASAR				PcP	PcP	13 32 02.7	-0.5
	comp=Z,9.0nm,0.5s,baz=106,slow=4.2,SNR=5.9						
ASAR				S	S	13 36 27.6	-2.7
	comp=Z,3.9nm,1.0s,baz=91,slow=17,SNR=9.8						
SMPI	**Sarmi**	**44.83**	**286**	P	P	13 30 33.4	-0.1
	comp=Z,4μmcomp=Z,102nm,0.9s,mb5.3						
KAKA	**Kakadu**	**47.51**	**269**	*e*P	P	13 30 54.3	+0.5
	comp=Z,178nm,0.6s						
KAKA	**Kakadu**	**47.51**	**269**	P	P	13 30 54.2	+0.4
	comp=Z,200nm,0.6s						
TLE	**Tual**	**49.11**	**278**	P	P	13 31 05.9	+0.1
	comp=Z,190nm,1.0s,mb5.6						
KNA	**Kununurra**	**50.41**	**264**	P	P	13 31 14.6	-0.7
	comp=Z,4μmcomp=Z,378nm,0.7s						
FITZ	**Fitzroy Crossi**	**52.98**	**260**	*e*P	P	13 31 33.8	0.0
	comp=Z,9.9nm,0.8s,mb4.2						
FITZ	**Fitzroy Crossi**	**52.98**	**260**	P	P	13 31 32.5	-1.2
	comp=Z,42nm,1.2s,mb4.7						
AAI	**Ambon**	**54.02**	**279**	P	P	13 31 40.3	-0.9
	comp=Z,76nm,1.0s,mb5.0						
NLAI	**Namlea**	**55.20**	**279**	P	P	13 31 50.1	+0.6
	comp=Z,964nmcomp=Z,107nm,0.6s,mb5.2						
LBMI	**Labuha**	**55.72**	**280**	P	P	13 31 53.3	+0.2
	comp=Z,839nmcomp=Z,88nm,0.8s,mb5.0						
TNTI	**Ternate**	**56.35**	**283**	P	P	13 31 56.9	-0.6
	comp=Z,2μmcomp=Z,176nm,0.9s,mb5.3						
MBWA	**Marble Bar**	**58.03**	**256**	P	P	13 32 07.2	-1.6
	comp=Z,47nm,2.3s,mb4.3						
MMRI	**Maumere**	**58.22**	**271**	P	P	13 32 09.8	-0.4
	comp=Z,83nm,0.7s,mb5.1						
KDI	**Kendari**	**59.20**	**276**	P	P	13 32 15.5	-1.3
	comp=Z,35nm,1.1s,mb4.5						
KMSI	**Cibinong**	**59.43**	**282**	P	P	13 32 17.9	-0.5
	comp=Z,2μmcomp=Z,168nm,0.8s,mb5.3						
LUWI	**Luwuk**	**60.01**	**279**	P	P	13 32 22.5	+0.3
	comp=Z,140nm,1.0s,mb5.2						
MRSI	**Marisa**	**61.31**	**281**	P	P	13 32 28.9	-1.8
	comp=Z,53nm,0.8s,mb4.9						
BNSI	**Bone**	**61.45**	**275**	P	P	13 32 30.5	-1.2
	comp=Z,74nm,1.2s,mb4.9						
TTSI	**Tana Toraja**	**62.14**	**276**	P	P	13 32 37.7	+1.5
	comp=Z,29nm,1.0s,mb4.7						
PCI	**Palu**	**62.82**	**278**	P	P	13 32 42.1	+1.6
	comp=Z,968nmcomp=Z,115nm,1.0s,mb5.3						
MYLDM	**Lahad Datu**	**66.20**	**284**	P	P	13 33 03.5	+1.6
MJAR	**Matsushiro Arr**	**67.75**	**323**	P	P	13 33 10.4	-0.6
	comp=Z,11nm,0.7s,mb4.5,baz=160,slow=6.2,SNR=56						
MAJO	**Matsushiro**	**67.75**	**323**	*e*P	P	13 33 10.4	-0.5
MAJO				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.7						
MAJO	**Matsushiro**	**67.75**	**323**	*e*P	P	13 33 10.4	-0.5
	comp=Z,18nm,0.8s,mb4.6						
MAT	**Matsushiro**	**67.75**	**323**	P	P	13 33 10.4	-0.5
TWG	**Pinlang**	**71.53**	**302**	*e*P	P	13 33 32.1	-1.7
	comp=Z,11nm,0.6s,mb4.5						
YULB	**Yu-li**	**71.63**	**303**	*e*P	P	13 33 33.3	-1.0
	comp=Z,11nm,0.7s,mb4.4						
SSLB	**Suanglung**	**72.09**	**303**	*e*P	P	13 33 35.8	-1.3
	comp=Z,26nm,0.8s,mb4.7						
TPUB	**Ta-pu**	**72.12**	**302**	*e*P	P	13 33 36.0	-1.2
	comp=Z,71nm,0.7s,mb5.2						
KSM	**Kuching**	**72.59**	**277**	*e*P	P	13 33 40.2	0.0
	comp=Z,79nm,0.8s,mb5.2						
PET	**Petropavlovsk**	**73.22**	**346**	*e*P	P	13 33 42.0	-0.8
PET				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.5						
YSS	**Yuzh-Sakhalins**	**73.26**	**333**	*e*P	P	13 33 43.0	-0.2
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb4.7						
PETK	**Petropavlovsk-**	**73.52**	**345**	P	P	13 33 44.0	-0.6
	comp=Z,10nm,0.7s,mb4.4,baz=132,slow=8.3,SNR=16						
PETK	**Petropavlovsk-**	**73.52**	**345**	P	P	13 33 44.0	-0.6
KSRS	**Korea Array**	**74.55**	**318**	P	P	13 33 51.2	+0.5
	comp=Z,5.2nm,0.7s,mb4.1,baz=130,slow=6.3,SNR=28						
MURC	**Murrieta**	**77.58**	**49**	⇓P	P	13 34 07.3	-0.3
	baz=78						
BFSC	**Mount Baldy Ra**	**77.59**	**48**	⇓P	P	13 34 07.4	-0.2
	baz=78						
EDW2	**Edwards Air Fo**	**77.69**	**47**	⇓P	P	13 34 08.6	+0.4
	baz=78						
ISA	**Isabella**	**77.78**	**46**	⇑P	P	13 34 08.9	+0.3
	baz=78						
ISA	**Isabella**	**77.78**	**46**	*e*P	P	13 34 08.6	0.0
ISA				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.2						
ISA	**Isabella**	**77.78**	**46**	*e*P	P	13 34 08.6	0.0
	comp=Z,12nm,0.9s,mb4.2						
MONP	**Monument Peak**	**77.78**	**50**	⇑P	P	13 34 09.1	+0.4
	baz=78						
CMB	**Columbia Colle**	**77.79**	**43**	*e*P	P	13 34 08.4	-0.2
CMB				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.0						
CMB	**Columbia Colle**	**77.79**	**43**	*e*P	P	13 34 08.4	-0.2
	comp=Z,9.2nm,1.0s,mb4.1						
NJ2	**Nanjing**	**77.79**	**309**	*e*P	P	13 34 10.4	+1.7
NJ2				pmax	pmax		
	comp=Z,20nm,0.7s,mb4.6						
HABR	**Khabarovsk**	**77.85**	**330**	*e*P	P	13 34 07.9	-0.8
HABR						13 34 14.3	
HABR				*e*		13 37 10.7	
HABR				*e*PPP		13 39 03.0	
HABR				*e*S	S	13 43 15.0	-1.9
HABR				*e*		13 43 33.5	
HABR				pmax	pmax		
	comp=N,30nm,2.0s						
HABR				pmax	pmax		
	comp=Z,35nm,1.1s,mb4.6						
HABR				pmax	pmax		
	comp=E,40nm,1.8s						
HABR				MLR	MLR		
	comp=Z,84nm,16.0s						
DVTC	**Desert V Tower**	**77.90**	**50**	⇓P	P	13 34 09.8	+0.5
	baz=78						
PFO	**Pinyon Flat Ob**	**78.12**	**49**	⇓P	P	13 34 10.8	+0.4
	baz=78						
LRMC	**Laurel Mountai**	**78.22**	**47**	⇑P	P	13 34 11.3	+0.3
	baz=78						
SWSC	**Sam W. Stewart**	**78.26**	**50**	⇓P	P	13 34 11.2	-0.1
	baz=78						
CWC	**Cottonwood Cre**	**78.46**	**46**	⇑P	P	13 34 11.8	-0.4
	baz=79						
YBH	**Yreka Blue Hor**	**78.47**	**39**	P	P	13 34 12.6	+0.5
	comp=Z,5.5nm,0.7s,mb4.0,baz=221,slow=1.5,SNR=18						
MLAC	**Mammoth Lakes**	**78.59**	**44**	⇑P	P	13 34 13.7	+0.8
	baz=79						
BELC	**Belle Mtn. Jos**	**78.65**	**49**	⇑P	P	13 34 13.1	-0.2
	baz=79						
MPMC	**Manual Prospec**	**78.66**	**46**	⇓P	P	13 34 13.2	-0.1
	baz=79						
GSC	**Goldstone**	**78.74**	**47**	⇓P	P	13 34 12.9	-0.8
	baz=79						
BEKR	**Beckworth**	**78.84**	**42**	P	P	13 34 13.9	-0.2
	baz=79						
BC3	**Big Chuckawall**	**78.87**	**49**	⇑P	P	13 34 14.6	+0.2
	baz=79						
WCN	**Washoe City**	**78.91**	**43**	⇑P	P	13 34 15.0	+0.4
	baz=79						
GLA	**Glamis**	**79.02**	**50**	⇓P	P	13 34 16.1	+0.8
	baz=79						
GRAC	**Grapevine Rang**	**79.24**	**46**	⇓P	P	13 34 16.9	+0.6
	baz=79						
GMRC	**Granite Mounta**	**79.28**	**48**	⇓P	P	13 34 16.8	+0.2
	baz=79						
FURC	**Furnace Creek,**	**79.31**	**46**	⇑P	P	13 34 16.8	0.0
	baz=80						
IRM	**Iron Mountain**	**79.34**	**49**	P	P	13 34 17.5	+0.5
	baz=80,SNR=5.7						
NVAR	**Mina Array Bea**	**79.38**	**44**	P	P	13 34 17.1	0.0
	comp=Z,5.7nm,0.8s,mb4.0,baz=225,slow=8.2,SNR=35						
SHOC	**Shoshone**	**79.42**	**47**	⇓P	P	13 34 17.3	0.0
	baz=80						
TUQ	**Turquoise Moun**	**79.43**	**48**	⇑P	P	13 34 17.7	+0.3
	baz=80						
Y12C	**Blythe**	**79.59**	**50**	⇑P	P	13 34 18.3	+0.1
	baz=80						
113A	**Mohawk Valley,**	**79.66**	**51**	⇓P	P	13 34 19.0	+0.3
	baz=80,SNR=5.3						
LDFC	**Landfair**	**79.82**	**48**	*e*P	P	13 34 19.6	+0.2
	comp=Z,20nm,1.0s,mb4.4						
CN2	**

116A **Eloy** 81.10 52 ⇓P P 13 34 26.9 +0.8
baz=81,SNR=5.0
X14A **Yava** 81.12 50 ⇑P P 13 34 26.6 +0.4
baz=81,SNR=6.3
R11A **Troy Canyon, C** 81.15 45 ⇓P P 13 34 25.8 -0.5
baz=81,SNR=7.4
P10A **Eureka** 81.22 44 ⇓P P 13 34 26.9 +0.3
baz=81
S12A **Delamar Landin** 81.28 46 ⇑P P 13 34 27.8 +0.8
baz=81,SNR=23
Y15A **Casa Rosa Ranc** 81.28 50 ⇓P P 13 34 27.4 +0.3
baz=81
U13A **Pakoon Wash** 81.30 47 ⇑P P 13 34 27.2 +0.1
baz=81,SNR=16
W14A **Seligman** 81.34 49 ⇑P P 13 34 27.7 +0.4
baz=82,SNR=8.2
WVOR **Wild Horse Val** 81.35 40 eP P 13 34 27.2 0.0
WVOR pmax pmax
comp=Z,10.0nm,0.9s,mb4.2
WVOR **Wild Horse Val** 81.35 40 eP P 13 34 27.2 0.0
comp=Z,10nm,0.9s,mb4.3
Q11A **Duckwater** 81.36 45 ⇓P P 13 34 27.9 +0.6
baz=82,SNR=5.2
217A **Green Valley** 81.41 53 ⇓P P 13 34 28.5 +0.7
baz=82,SNR=10
V14A **Boquillas Ranc** 81.52 48 ⇓P P 13 34 28.4 +0.1
baz=82,SNR=12
X15A **Humboldt** 81.60 50 ⇓P P 13 34 28.7 0.0
baz=82,SNR=12
T13A **Saint George** 81.63 47 ⇑P P 13 34 28.8 0.0
baz=82,SNR=10
TUC **Tucson** 81.67 52 eP P 13 34 29.3 +0.2
TUC pmax pmax
comp=Z,10.0nm,1.1s,mb4.2
TUC **Tucson** 81.67 52 eP P 13 34 29.3 +0.2
comp=Z,9.8nm,1.1s,mb4.2
R12A **Pony Springs,** 81.80 46 ⇓P P 13 34 29.4 -0.2
baz=82,SNR=8.6
117A **Oracle** 81.83 52 ⇑P P 13 34 30.1 +0.2
baz=82,SNR=6.5
U14A **Mt Trumbull** 81.85 48 ⇑P P 13 34 30.4 +0.5
baz=82,SNR=21
Y16A **Circle Bar Ran** 81.88 51 ⇑P P 13 34 30.5 +0.4
baz=82,SNR=7.8
318A **Bisbee** 81.89 53 ⇓P P 13 34 29.9 -0.4
baz=82
S13A **Holt Ranch, En** 81.94 46 ⇑P P 13 34 30.6 +0.2
baz=82,SNR=7.7
J08A **Circle Bar Ran** 81.96 40 ⇑P P 13 34 30.1 -0.2
baz=82,SNR=9.3
Q12A **Willow Creek R** 82.01 45 ⇓P P 13 34 30.2 -0.5
baz=82
O11A **Cowboy Ranch,** 82.02 44 ⇓P P 13 34 30.2 -0.5
baz=82,SNR=6.2
218A **Dragoon** 82.08 53 ⇓P P 13 34 31.3 +0.1
baz=82
X16A **Lo Mia Camp, P** 82.15 50 ⇑P P 13 34 31.9 +0.4
baz=82,SNR=14
R13A **O'Grain Ranch,** 82.16 46 ⇓P P 13 34 31.4 -0.1
baz=82
M10A **I.L. Ranch, Tu** 82.17 42 ⇑P P 13 34 31.2 -0.2
baz=82,SNR=8.1
P12A **McGill** 82.18 44 ⇓P P 13 34 30.9 -0.6
baz=82
T14A **Hurricane** 82.23 47 P P 13 34 32.4 +0.6
baz=82,SNR=6.6
Y17A **Roosevelt** 82.26 51 ⇓P P 13 34 32.8 +0.8
baz=82
V15A **Kaibab Nationa** 82.28 49 ⇑P P 13 34 32.7 +0.6
baz=82,SNR=11
ARUT **Antelope Range** 82.33 46 eP P 13 34 32.9 +0.6
ARUT pmax pmax
comp=Z,4.0nm,0.9s,mb3.9
ARUT **Antelope Range** 82.33 46 eP P 13 34 32.9 +0.5
comp=Z,3.6nm,0.9s,mb3.8
W16A **Flagstaff** 82.40 50 P P 13 34 33.6 +0.9
baz=82,SNR=11
319A **Douglas** 82.41 54 ⇑P P 13 34 33.5 +0.7
baz=82
118A **Homack Ranch,** 82.44 52 ⇓P P 13 34 33.5 +0.5
baz=83
U15A **North Rim** 82.48 48 ⇓P P 13 34 33.6 +0.5
baz=83,SNR=24
H08A **Prairie City** 82.49 39 ⇑P P 13 34 32.7 -0.2
baz=83
S14A **Cedar City** 82.51 47 ⇓P P 13 34 34.1 +0.9
baz=83
L10A **Juniper Basin** 82.51 42 ⇓P P 13 34 33.4 +0.3
baz=83
X17A **Forest Lakes** 82.58 51 ⇓P P 13 34 34.6 +0.9
baz=83,SNR=6.3
M11A **Holland Ranch,** 82.61 42 ⇓P P 13 34 34.1 +0.5
baz=83
ELK **Elko** 82.61 43 P P 13 34 33.9 +0.2
comp=Z,4.7nm,0.9s,mb4.0,baz=238,slow=4.8,SNR=17
K10A **MacKenzie Ranc** 82.63 41 ⇑P P 13 34 33.4 -0.3
baz=83,SNR=9.2
O12A **Currie** 82.69 44 ⇓P P 13 34 34.1 +0.1
baz=83,SNR=6.9
219A **White Tail Can** 82.69 53 ⇑P P 13 34 34.2 -0.1
baz=83
T15A **Red Dirt Ranch** 82.70 48 ⇓P P 13 34 34.6 +0.4
baz=83,SNR=14
WUAZ **Wupatki** 82.71 49 ⇑P P 13 34 33.5 -0.8
baz=83,SNR=5.7
WUAZ **Wupatki** 82.71 49 eP P 13 34 33.4 -0.9
comp=Z,9.9nm,1.0s,mb4.3
G08A **Pilot Rock** 82.75 38 P P 13 34 34.5 +0.2
baz=83,SNR=9.4
P13A **Bates Ranch, G** 82.77 45 ⇑P P 13 34 34.5 0.0
baz=83,SNR=10
N12A **Clover Valley,** 82.79 43 ⇓P P 13 34 34.5 0.0
baz=83,SNR=6.6
N12A **Clover Valley,** 82.79 43 eP P 13 34 34.4 -0.1
comp=Z,7.7nm,0.9s,mb4.2
Y18A **Canyon Day Jun** 82.90 51 ⇓P P 13 34 35.9 +0.7
baz=83,SNR=6.6
320A **Kipp Ranch, An** 82.97 54 ⇓P P 13 34 36.7 +1.0
baz=83
119A **Ashpeak Ranch,** 83.00 53 ⇓P P 13 34 36.8 +1.0
baz=83
L11A **Cat Creek Ranc** 83.01 42 ⇓P P 13 34 35.5 -0.2
baz=83,SNR=6.8
S15A **Panguitch** 83.03 47 ⇓P P 13 34 37.0 +1.1
baz=83
Q14A **Sevier Lake (B** 83.03 45 ⇓P P 13 34 36.0 +0.2
baz=83,SNR=15
K11A **Parker Ranch,** 83.15 41 ⇓P P 13 34 36.6 +0.3
baz=83,SNR=6.4
M12A **Wells** 83.16 43 ⇓P P 13 34 36.3 -0.1
baz=83,SNR=6.8
V17A **Tonalea, Kykot** 83.18 49 ⇑P P 13 34 37.0 +0.3
baz=83,SNR=13
220A **Playas Peak, P** 83.21 54 ⇓P P 13 34 36.8 -0.1
baz=83
X18A **Snowflake** 83.30 51 ⇑P P 13 34 38.0 +0.8
baz=83
T16A **Glen Canyon Da** 83.30 48 ⇓P P 13 34 37.8 +0.6
baz=83
E08A **Dider Farm, El** 83.36 37 ⇑P P 13 34 37.1 -0.2
baz=84
I10A **Payette** 83.37 40 ⇓P P 13 34 37.6 +0.2
baz=84
G09A **Cove** 83.43 38 ⇓P P 13 34 37.8 +0.1
baz=84
P14A **Drum Mountains** 83.47 45 ⇑P P 13 34 37.6 -0.4
baz=84,SNR=5.3
L12A **House Creek Ra** 83.47 42 ⇑P P 13 34 38.3 +0.4
baz=84
BMO **Blue Mountains** 83.48 39 eP P 13 34 37.3 -0.6
BMO pmax pmax
comp=Z,1.0nm,0.6s,mb3.5
BMO **Blue Mountains** 83.48 39 eP P 13 34 37.3 -0.6
comp=Z,0.9nm,0.6s,mb3.5
Y19A **Nutrioso** 83.56 51 ⇑P P 13 34 38.1 -0.5
baz=84,SNR=5.8
MFID **Camas Ranch** 83.62 41 ⇓P P 13 34 38.2 -0.4
baz=84,SNR=7.6
M13A **Montello** 83.62 43 ⇓P P 13 34 38.9 +0.2
baz=84,SNR=7.9
M13A **Montello** 83.62 43 eP P 13 34 38.8 +0.2
comp=Z,3.9nm,0.7s,mb4.0
SEY **Seymchan** 83.62 347 ⇑eP P 13 34 36.8 -1.4
BJI **Beijing** 83.63 315 P P 13 34 38.7 -0.1
BJI S S 13 44 17.4 +1.6
BJI SS SS 13 49 59.9 +0.7
BJI pmax pmax
comp=Z,20nm,0.9s,mb4.7
BJI pmax pmax
comp=Z,89nm,3.5s
H10A **Noah's Angus R** 83.68 39 ⇑P P 13 34 38.5 -0.4
baz=84,SNR=8.8
Z20A **Nine Sixteen R** 83.69 52 ⇑P P 13 34 39.6 +0.4
baz=84
U17A **Shonto** 83.72 49 ⇑P P 13 34 40.0 +0.7
baz=84
X19A **St. Johns** 83.74 51 ⇑P P 13 34 40.3 +0.8
baz=84
K12A **Draper Farm, C** 83.79 42 ⇑P P 13 34 40.0 +0.5
baz=84
I11A **Placerville** 83.80 40 ⇓P P 13 34 39.5 0.0
baz=84,SNR=5.6
T17A **Navajo Res., N** 83.80 48 ⇓P P 13 34 39.4 -0.3
baz=84
G10A **Bishop Farm, J** 83.83 39 ⇑P P 13 34 39.0 -0.6
baz=84
V18A **Ganado** 83.84 50 ⇑P P 13 34 38.6 -1.3
baz=84
TRF **Thorofare Moun** 83.89 12 eP P 13 34 38.0 -1.5
comp=Z,8.5nm,0.7s,mb4.4
MAW **Mawson** 83.97 200 P P 13 34 40.1 +0.1
comp=Z,7.8nm,0.7s,mb4.3,baz=134,slow=7.2,SNR=22
MAW **Mawson** 83.97 200 eP P 13 34 39.8 -0.2
MAW pmax pmax
comp=Z,1.0nm,0.7s
MAW **Mawson** 83.97 200 eP P 13 34 39.8 -0.2
comp=Z,1.1nm,0.7s,mb3.5
121A **Cookes Peak, D** 84.05 53 ⇑P P 13 34 40.2 -0.9
baz=84
F10A **Beach Ranch, E** 84.14 38 ⇓P P 13 34 40.2 -0.9
baz=84,SNR=6.2
H11A **Donnelly** 84.18 39 ⇑P P 13 34 40.4 -1.0
baz=84,SNR=8.3
U18A **Rough Rock, Ch** 84.21 49 ⇓P P 13 34 41.3 -0.4
baz=84
M14A **Sheep Mountain** 84.22 43 ⇑P P 13 34 41.8 +0.2
baz=84
I12A **Atlanta** 84.25 41 ⇓P P 13 34 41.4 -0.3
baz=84,SNR=6.9
B08A **Colville Reser** 84.27 35 ⇑P P 13 34 40.9 -0.8
baz=84
G11A **Walters Elk Ra** 84.40 39 ⇓P P 13 34 41.5 -0.9
baz=85,SNR=12
Q16A **Castle Valley** 84.44 46 ⇑P P 13 34 43.4 +0.6
baz=85
Z21A **St. Cloud Mine** 84.47 53 ⇑P P 13 34 44.0 +0.9
baz=85
R17A **Hanksville Air** 84.53 47 ⇑P P 13 34 43.2 0.0
baz=85
T18A **Mexican Hat** 84.53 48 ⇑P P 13 34 43.6 +0.4
baz=85,SNR=16
HLID **Hailey** 84.57 41 ⇑P P 13 34 43.7 +0.4
baz=85,SNR=9.5
HLID **Hailey** 84.57 41 eP P 13 34 43.5 +0.1
comp=Z,4.0nm,1.0s,mb3.9
U19A **Dine' College,** 84.63 49 ⇑P P 13 34 43.7 -0.1
baz=85
W20A **Ramah** 84.63 51 ⇓P P 13 34 44.4 +0.6
baz=85
J13A **Cove Ranch, Pi** 84.64 41 P P 13 34 44.1 +0.5
baz=85,SNR=9.4
Y21A **Point of Rocks** 84.76 52 ⇓P P 13 34 45.2 +0.7
baz=85
H12A **Diamond D Ranc** 84.81 40 ⇑P P 13 34 44.0 -0.4
baz=85,SNR=9.0
G12A **Big Creek, Yel** 84.82 39 ⇑P P 13 34 43.4 -1.1
baz=85
GYA **Guiyang** 84.90 300 eP P 13 34 46.0 +0.7
GYA pP pP 13 36 47.3 +3.2
GYA sP sP 13 37 43.6 +3.9
GYA PP PP 13 38 15.7 +3.3
GYA SKS 13 44 16.2
GYA S S 13 44 28.7 0.0
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.3
SRU **San Rafael** 84.98 46 ⇓P P 13 34 45.3 -0.1
baz=85,SNR=5.7
SRU **San Rafael** 84.98 46 eP P 13 34 45.3 -0.1
SRU pmax pmax
comp=Z,3.0nm,0.7s,mb3.9
SRU **San Rafael** 84.98 46 eP P 13 34 45.3 -0.1
comp=Z,3.3nm,0.7s,mb4.0
J14A **Carey** 85.02 42 ⇑P P 13 34 46.2 +0.7
baz=85,SNR=7.3
R18A **Canyonlands Na** 85.08 47 ⇓P P 13 34 45.4 -0.5
baz=85
H13A **Challis** 85.18 40 ⇓P P 13 34 45.8 -0.5
baz=85
F12A **Elk City** 85.19 39 P P 13 34 46.0 -0.2
baz=85,SNR=15
Q18A **Rafter H Ranch** 85.24 47 ⇑P P 13 34 46.2 -0.5
baz=85
S19A **Harvey Farm, M** 85.33 48 ⇑P P 13 34 47.0 -0.1
baz=86
O17A **Robinson Place** 85.33 45 ⇑P P 13 34 47.5 +0.4
baz=86,SNR=6.9
K15A **Arbon** 85.33 43 ⇑P P 13 34 47.0 0.0
baz=86
I14A **Mackay** 85.36 41 ⇓P P 13 34 47.7 +0.6
baz=86,SNR=8.2
324A **Moseley Ranch,** 85.38 55 ⇓P P 13 34 47.0 -0.5
baz=86,SNR=6.7
G13A **Cobalt** 85.47 40 ⇓P P 13 34 46.7 -0.9
baz=86
R19A **Curley Farm, L** 85.48 48 ⇓P P 13 34 47.5 -0.4
baz=86
425A **Indio Mountain** 85.50 56 ⇑P P 13 34 47.9 -0.3
baz=86,SNR=8.0
224A **Cornudas Mount** 85.60 54 ⇓P P 13 34 48.7 +0.1
baz=86,SNR=6.2
626A **Big Bend Ranch** 85.70 57 ⇓P P 13 34 49.5 +0.4
baz=86,SNR=12
C11A **Tepee Creek (N** 85.70 37 ⇑P P 13 34 47.9 -0.8
baz=86
325A **Bean Ranch, Si** 85.75 55 ⇑P P 13 34 48.6 -0.7
baz=86,SNR=5.6
H14A **Leadore** 85.76 41 ⇑P P 13 34 48.7 -0.3
baz=86,SNR=5.8
F13A **Darby** 85.76 39 ⇑P P 13 34 48.2 -0.8
baz=86,SNR=5.6
D12A **Red Ives Fores** 85.81 38 ⇑P P 13 34 49.0 -0.2
baz=86
U21A **Nageezi** 85.81 50 ⇑P P 13 34 49.4 -0.1
baz=86,SNR=9.2
124A **Stringfield Ra** 85.91 54 ⇓P P 13 34 50.0 -0.1
baz=86
526A **Mary Lane Ranc** 85.93 57 ⇑P P 13 34 50.6 +0.4
baz=86
Y23A **Lovelace Mesa,** 85.95 53 ⇓P P 13 34 50.2 0.0
baz=86
M17A **Scullys Gap (B** 85.97 44 ⇑P P 13 34 49.9 -0.3
baz=86
TXAR **Lajitas Array** 85.99 58 P P 13 34 51.5 +1.0
comp=Z,5.2nm,0.8s,mb4.2,baz=216,slow=6.2,SNR=54
TXAR **Lajitas Array** 85.99 58 P P 13 34 51.5 +1.0
I15A **Monteview** 86.00 41 ⇓P P 13 34 50.3 +0.1
baz=86
G14A **Jackson** 86.01 40 ⇑P P 13 34 50.6 +0.4
baz=86
ANMO **Albuquerque** 86.07 52 P P 13 34 50.8 +0.1
comp=Z,2.1nm,0.7s,mb3.9,baz=208,slow=4.3,SNR=8.6
XAN **Xi'an** 86.11 307 P P 13 34 51.4 +0.4
XAN pmax pmax
comp=Z,12nm,1.0s,mb4.5
225A **Deer Hill, Car** 86.16 55 ⇓P P 13 34 51.1 -0.2
baz=86
H15A **Lima** 86.21 41 ⇑P P 13 34 50.8 -0.4
baz=86,SNR=5.2
426A **McDonald Obser** 86.22 56 ⇑P P 13 34 51.7 +0.2
baz=86,SNR=8.3
S21A **Coal Bank Pass** 86.25 49 ⇓P P 13 34 50.9 -0.7
baz=86
627A **Terlingua Ranc** 86.25 58 ⇓P P 13 34 52.3 +0.6
baz=86,SNR=17
BILL **Bilibino** 86.28 354 cP P 13 34 50.6 -0.4
BILL pmax pmax
comp=Z,13nm,2.4s,mb4.1
527A **Woodward Ranch** 86.34 57 ⇑P P 13 34 51.3 -0.8
baz=86,SNR=6.7
Y24A **Capitan** 86.42 53 ⇑P P 13 34 52.2 -0.2
baz=86,SNR=7.3
326A **Caldwell Ranch** 86.51 56 ⇑P P 13 34 52.6 -0.3
baz=87
BSMT **Bassoo Peak** 86.55 37 eP P 13 34 52.1 -0.6
comp=Z,1.3nm,0.6s,mb3.7
GDL2 **Guadalupe Moun** 86.55 55 eP P 13 34 53.4 +0.3
comp=Z,2.2nm,1.0s,mb3.7
G15A **Dillon** 86.57 40 ⇓P P 13 34 53.2 +0.4
baz=87
I16A **Newdale** 86.58 42 ⇑P P 13 34 54.1 +1.2
baz=87,SNR=5.7
C13A **Hot Springs** 86.59 37 ⇓P P 13 34 52.0 -0.9
baz=87
DLMT **Dillon** 86.60 40 eP P 13 34 53.1 +0.1
comp=Z,9.3nm,1.4s,mb4.2
V23A **Ortiz Mt. (NFS** 86.61 51 ⇓P P 13 34 53.0 -0.3
baz=87
628A **Black Gap, Mar** 86.67 58 ⇑P P 13 34 54.0 +0.3
baz=87,SNR=7.9
226A **Malaga, Loving** 86.70 55 ⇑P P 13 34 52.9 -0.9
baz=87
Z25A **Roswell** 86.71 54 ⇓P P 13 34 52.9 -0.9
baz=87
R21A **Cimarron** 86.72 48 ⇑P P 13 34 53.7 -0.1
baz=87
REDW **Red Top Meadow** 86.74 42 eP P 13 34 53.9 +0.2
comp=Z,9.1nm,1.3s,mb4.2
427A **Hayter Ranch,** 86.78 56 ⇓P P 13 34 54.9 +0.7
baz=87,SNR=8.9
D14A **Greenough** 86.91 38 ⇑P P 13 34 52.6 -1.8
baz=87
K18A **Toltan Ranch,** 86.93 43 ⇑P P 13 34 54.4 -0.2
baz=87
IMW **Indian Meadow** 86.93 42 eP P 13 34 55.0 +0.5
comp=Z,6.7nm,1.0s,mb4.2
S22A **4UR Ranch, Cre** 86.97 49 ⇓P P 13 34 55.4 +0.5
baz=87,SNR=5.7
Y25A **Mesa, Roswell** 86.98 53 ⇓P P 13 34 55.0 -0.1
baz=87
B13A **Whitefish** 87.00 37 ⇑P P 13 34 54.2 -0.6
baz=87
528A **Cox Ranch, San** 87.01 57 ⇑P P 13 34 55.7 +0.4
baz=87,SNR=5.2
G16A **Moss Hill, Enn** 87.02 41 ⇓P P 13 34 54.3 -0.7
baz=87
HHC **Hu-ho-hao-te** 87.12 314 eP P 13 34 55.8 +0.3
HHC pP pP 13 36 55.9 +0.7
HHC sP sP 13 37 49.4 -1.1
HHC PP PP 13 38 32.0 +2.3
HHC SKS 13 44 31.0
HHC S S 13 44 49.6 +0.4
HHC sS sS 13 48 21.6 -0.8
HHC SS SS 13 50 53.8 +4.0
HHC pmax pmax
comp=Z,19nm,0.7s,mb4.8
HHC pmax pmax
comp=Z,84nm,7.3s
H16A **Russell Place,** 87.12 41 ⇑P P 13 34 56.5 +1.0
baz=87,SNR=7.3
L19A **Farson** 87.13 44 ⇓P P 13 34 55.9 +0.4
baz=87,SNR=6.0
J18A **Kendall Valley** 87.20 43 P P 13 34 56.3 +0.4
baz=87,SNR=11
R22A **Saguache, Gunn** 87.23 48 ⇑P P 13 34 56.3 +0.1
baz=87
Z26A **Caprock** 87.27 54 ⇓P P 13 34 55.6 -0.9
baz=87
BW06 **Boulder Array** 87.30 43 ⇑P P 13 34 55.6 -0.7
baz=87,SNR=7.1
PDAR **Pinedale Array** 87.30 43 P P 13 34 56.2 -0.2
comp=Z,2.4nm,0.6s,mb4.0,baz=227,slow=2.8,SNR=28
N20A **Spence Gulch,** 87.30 46 ⇓P P 13 34 56.5 +0.1
baz=87
BOZ **Bozeman (W)** 87.33 40 ⇑P P 13 34 56.8 +0.4
baz=88
SMCO **Snowmass** 87.48 48 eP P 13 34 56.8 -0.5
comp=Z,2.7nm,1.0s,mb3.8
W25A **X Bar L Ranch,** 87.68 52 ⇑P P 13 34 57.9 -0.4
baz=88
B14A **Marquette Ranc** 87.68 37 ⇑P P 13 34 57.4 -0.6
baz=88
KMI **Kunming** 87.70 297 P P 13 34 59.5 +0.9
KMI pmax pmax
comp=Z,14nm,1.2s,mb4.6
E16A **East Helena** 87.73 39 ⇓P P 13 34 58.6 +0.4
baz=88
L20A **Wamsutter** 87.77 45 ⇑P P 13 34 59.2 +0.7
baz=88
N21A **Black Mountain** 87.78 46 ⇓P P 13 34 58.2 -0.4
baz=88
C15A **Salmond Ranch,** 87.78 38 ⇓P P 13 34 58.1 -0.4
baz=88
K19A **Absolon Red Bu** 87.80 44 ⇑P P 13 34 57.5 -1.1
baz=88
V25A **Rancho No Teng** 87.81 51 ⇑P P 13 34 57.7 -1.2
baz=88
A14A **Double T Ranch** 87.91 37 ⇑P P 13 34 58.3 -0.7
baz=88
D16A **Dana Ranch, Ca** 88.05 39 ⇑P P 13 34 59.5 -0.3
baz=88
F17A **Fitzpatrick Pl** 88.05 40 ⇑P P 13 34 59.7 -0.1
baz=88
K20A **Yellowstone Ra** 88.06 44 P P 13 34 59.6 -0.3
baz=88,SNR=6.0
S24A **Houchin Ranch,** 88.10 50 ⇑P P 13 35 00.1 -0.1
baz=88
U25A **Circle Dot Ran** 88.19 51 ⇓P P 13 34 58.4 -2.3
baz=88
O22A **Kremmling** 88.19 47 ⇓P P 13 35 01.0 +0.4
baz=88,SNR=5.4
M21A **Separation Pea** 88.25 45 ⇑P P 13 35 00.8 0.0
baz=88
L21A **Rawlins** 88.40 45 ⇓P P 13 35 01.4 -0.2
baz=88
MSTX **Muleshoe** 88.47 54 ⇓P P 13 35 01.5 -0.6
baz=89
N22A **Wattenberg Ran** 88.53 46 ⇑P P 13 35 02.5 +0.4
baz=89,SNR=6.4
D17A **Six Diamond Ra** 88.62 39 ⇑P P 13 35 02.8 +0.4
baz=89
S25A **Robets Cordova** 88.67 50 ⇓P P 13 35 03.0 +0.1
baz=89
CM31 **Chiang Mai Arr** 88.76 290 eP P 13 35 04.2 +0.5
comp=Z,9.8nm,1.0s,mb4.6
CMAR **Chiang Mai Arr** 88.76 290 P P 13 35 04.5 +0.8
comp=Z,10nm,0.9s,mb4.7,baz=110,slow=2.7,SNR=54
CD2 **Chengdu** 88.93 303 P P 13 35 05.1 +0.9
CD2 pP pP 13 37 04.5 +0.1
CD2 sP sP 13 37 57.8 -1.8
CD2 PP PP 13 38 47.1 +2.9
CD2 SKS 13 44 42.6
CD2 S S 13 45 06.3 0.0
CD2 sS sS 13 48 37.4 -3.2
CD2 SS SS 13 51 19.2 +3.0
CD2 pmax pmax
comp=Z,20nm,0.5s,mb5.2
CD2 pmax pmax
comp=Z,150nm,7.6s
L22A **Ellis Ranch, M** 89.06 45 ⇓P P 13 35 04.9 +0.3
baz=89,SNR=5.3
JCT **Junction City** 89.53 58 eP P 13 35 06.2 -0.8
JCT pmax pmax
comp=Z,3.0nm,0.9s,mb4.1
JCT **Junction City** 89.53 58 eP P 13 35 06.2 -0.9
comp=Z,3.1nm,0.9s,mb4.1
A18A **Metzger Ranch,** 89.95 38 ⇑P P 13 35 08.2 -0.3
baz=90
LZH **Lanzhou** 90.74 308 eP P 13 35 13.0 +0.5
LZH pP pP 13 37 13.5 +0.5
LZH sP sP 13 38 06.0 -2.1
LZH pmax pmax
comp=Z,25nm,1.0s,mb5.1
LZH pmax pmax
comp=Z,140nm,5.0s
ULN **Ulaanbaatar** 93.00 319 eP P 13 35 21.4 -1.2
ULN pmax pmax
comp=Z,8.0nm,1.4s,mb4.6
ULN **Ulaanbaatar** 93.00 319 eP P 13 35 21.4 -1.2
comp=Z,8.5nm,1.4s,mb4.6
DGMT **Dagmar** 93.14 40 ⇓P P 13 35 23.4 +0.2
baz=93
SONM **Songino Array** 93.39 319 P P 13 35 24.1 -0.3
comp=Z,1.0nm,0.6s,mb4.1,baz=115,slow=5.1,SNR=8.9
GTA **Gaotai** 94.89 310 eP P 13 35 31.8 +0.4
GTA pP pP 13 37 31.9 -0.3
GTA sP sP 13 38 25.3 -1.9
GTA pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
ZALV **Zalesovo Beam** 108.08 322 PKiKP PKiKP 13 40 31.0 -2.1
comp=Z,1.7nm,0.7s,baz=186,slow=0.7,SNR=7.4
ZALV **Zalesovo Beam** 108.08 322 PKPdf PKiKP 13 40 31.0 -2.1
MKAR **Makanchi Array** 108.98 314 Pdiff Pdif 13 36 32.2 -1.9
comp=Z,0.4nm,0.8s,baz=80,slow=10,SNR=3.6

MKAR PKiKP PKiKP 13 40 33.2 -1.8
comp=Z,1.8nm,0.5s,baz=159,slow=0.4,SNR=33
MKAR Makanchi Array 108.98 314 Pdif Pdif 13 36 32.2 -1.9
MKAR PKPdf PKiKP 13 40 33.2 -1.8
KURK Kurchatov 111.67 318 ⇓*i*PKiKP PKiKP 13 40 38.6 -1.4
KURK pmax pmax
comp=Z,1.0nm,0.7s
KURK Kurchatov 111.67 318 *e*PKiKP PKiKP 13 40 38.1 -1.8
BVAR Borovoye Array 116.69 321 PKP PKPdf 13 40 47.8 -1.8
comp=Z,3.3nm,0.5s,baz=101,slow=1.5,SNR=21
BRVK Borovoye 116.75 321 *d i*PKiKP PKPdf 13 40 47.8 -1.9
BRVK pmax pmax
comp=Z,2.0nm,0.7s
ARU Arti 122.69 326 *e*PKiKP PKPdf 13 40 59.3 -1.7
ARU Arti 122.69 326 *e*PKPdf PKPdf 13 40 59.3 -1.7
ABKAR Akbulak array 123.78 318 *e*PKPdf PKPdf 13 41 01.8 -1.5
ARCES ARCESS Array B 126.16 350 PKP PKPdf 13 41 06.2 -1.1
comp=Z,2.3nm,0.7s,baz=45,slow=0.4,SNR=8.1
JOF Joensuu 130.40 343 *e*PKiKP PKPdf 13 41 13.9 -1.6
JOF pmax pmax
comp=Z,2.0nm,0.5s
JOF Joensuu 130.40 343 *ep* PKPdf 13 41 13.9 -1.6
comp=Z,2.3nm,0.5s
KAF Kangasniemi 132.41 345 *e*PKiKP PKPdf 13 41 15.3 -4.0
KAF pmax pmax
comp=Z,2.0nm,0.4s
KAF Kangasniemi 132.41 345 *ep* PKPdf 13 41 15.3 -4.0
comp=Z,1.5nm,0.4s
FINES FINESS Array B 133.03 344 PKP PKPdf 13 41 18.2 -2.3
comp=Z,2.5nm,0.9s,baz=64,slow=3.5,SNR=9.7
FINES SKPbc SKPbc 13 43 54.9 -2.4
comp=Z,1.8nm,0.6s,baz=69,slow=4.6,SNR=6.7
FINES FINESS Array B 133.03 344 PKP PKPdf 13 41 18.2 -2.3
FINES SKPbc SKPbc 13 43 54.9 -2.4
OBN Obninsk 134.14 333 *e*PKiKP PKPdf 13 41 21.6 -1.2
OBN *e* 13 43 59.7
OBN pmax pmax
comp=Z,6.0nm,1.3s
VSR Storozhevoye 135.26 327 *e*PKiKP PKPdf 13 41 23.9 -1.1
VSR pmax pmax
comp=N,5.0nm,0.4s
VSR pmax pmax
comp=E,6.0nm,0.4s
VSR pmax pmax
comp=Z,4.0nm,0.4s
NB2 NORSAR Subarra136.23 353 PKPdf PKPdf 13 41 26.4 -0.1
comp=Z,0.6nm,0.5s,baz=31,slow=1.9
NOA NORSAR Array B 136.23 353 PKP PKPdf 13 41 26.0 -0.5
comp=Z,1.2nm,0.8s,baz=15,slow=3.8,SNR=3.4
NOA NORSAR Array B 136.23 353 PKP PKPdf 13 41 26.0 -0.5
AKASG Malin Array Be 140.40 332 PKhKP 13 41 26.5
comp=Z,1.3nm,0.5s,baz=44,slow=3.7,SNR=8.6
AKASG PKP PKPdf 13 41 35.4 +1.0
comp=Z,2.1nm,0.6s,baz=41,slow=2.1,SNR=5.7
AKASG SKPbc SKPbc 13 44 16.7 -2.6
comp=Z,1.6nm,0.7s,baz=36,slow=2.0,SNR=3.7
AKASG Malin Array Be 140.40 332 PKHKP 13 41 26.5
AKASG 13 41 35.4
GZT Gaziantep 142.86 309 *i P* PKPdf 13 41 36.9 -2.4
LVV L'vov 143.25 336 *e*PKHKP 13 41 36.4
BSEG Bad Segeberg 143.26 351 *e*PKPbc PKPdf 13 41 36.5 -2.9
KWP Kalwaria Pacla 143.91 336 ⇓PKiKP PKPdf 13 41 39.2 -1.5
KWP Kalwaria Pacla 143.91 336 *e*PKPbc PKPdf 13 41 38.9 -1.8
KWP Kalwaria Pacla 143.91 336 ⇓*i*P PKPdf 13 41 39.2 -1.5
TLCR 144.41 326 ⇑PKiKP PKPdf 13 41 41.3 -0.4
TLCR 144.41 326 ⇑*i*P PKPdf 13 41 41.3 -0.4
BURO8 Bucovina Ar. S 144.44 332 *e*PKPbc PKPdf 13 41 41.5 -0.2
BURAR Bucovina Array 144.45 332 ⇑PKiKP PKPdf 13 41 41.3 -0.4
BURAR Bucovina Array 144.45 332 ⇑*i*P PKPdf 13 41 41.3 -0.4
OJC Ojcow 144.46 340 *e*PKHKP 13 41 38.6
TESR 144.60 330 ⇓*i*P PKPdf 13 41 41.5 -0.5
BR131 Keskin Array S 144.63 315 *e*PKPdf PKPdf 13 41 41.8 -0.4
BRTR Keskin Array B 144.63 315 PKP PKPdf 13 41 41.9 -0.4
comp=Z,19nm,0.8s,baz=129,slow=3.3,SNR=67
UZH Uzhgorod 144.88 336 *e*PKiKP PKPdf 13 41 42.0 -0.4
GULE Gulek 144.93 310 *i P* PKPdf 13 41 43.7 +0.9
KSP Ksiaz 144.96 344 *e*PKiKP PKPdf 13 41 41.4 -1.0
NIE Niedzica 144.96 338 *e*PKP PKPdf 13 41 43.0 +0.5
CRVS Cervenica-Dubn 144.98 337 *e*PKiKP PKPdf 13 41 42.5 0.0
CRVS Cervenica-Dubn 144.98 337 *e*PKP PKPdf 13 41 42.5 0.0
VRI Vrincioaia 145.02 329 ⇑PKiKP PKPdf 13 41 43.0 +0.3
VRI Vrincioaia 145.02 329 ⇑*i*P PKPdf 13 41 43.0 +0.3
PLOR Plostina 145.07 329 ⇑PKiKP PKPdf 13 41 43.2 +0.4
PLOR Plostina 145.07 329 ⇑*i*P PKPdf 13 41 43.2 +0.4
BMR Baia Mare 145.16 334 ⇑PKiKP PKPdf 13 41 43.4 +0.5
BMR Baia Mare 145.16 334 ⇑*i*P PKPdf 13 41 43.4 +0.5
IBBN Ibbenburen 145.19 353 *e*PKPbc PKPbc 13 41 43.2 -0.6
SGKT Sivrigoynuk 145.25 317 *i P* PKPdf 13 41 43.7 +0.4
CLL Collm 145.31 347 *e*PKPbc PKPbc 13 41 43.3 -0.9
CLL Collm 145.31 347 ⇓*i*PKiKP PKPdf 13 41 43.3 +0.3
CLL pmax pmax
comp=Z,31nm,0.9s
CLL Collm 145.31 347 ⇓*i*PKPbc PKPbc 13 41 43.3 -0.9
comp=Z,31nm,0.9s
OKC Ostrava-Krasne 145.32 341 *e*PKiKP PKPdf 13 41 43.9 +0.8
OKC Ostrava-Krasne 145.32 341 *e*PKP PKPdf 13 41 43.9 +0.8
UPC Upice 145.33 344 *e*PKP2 PKPdf 13 41 44.2 -0.1
UPC Upice 145.33 344 *e*PKP PKPbc 13 41 44.2 -0.1
DPC Dobruska-Polom 145.39 343 *e*PKP2 PKPbc 13 41 44.2 -0.2
DPC Dobruska-Polom 145.39 343 *e*PKP PKPbc 13 41 44.2 -0.2
DPC *ex* x 13 41 46.0
BRG Berggiesshubel 145.51 346 *e*PKPbc PKPbc 13 41 43.8 -1.0
BRG Berggiesshubel 145.51 346 *i* PKP PKPdf 13 41 44.0 +0.6
comp=Z,12nm,0.8s
BRG Berggiesshubel 145.51 346 *i* PKiKP PKPdf 13 41 44.0 +0.6
BRG pmax pmax
comp=Z,7.0nm,0.8s
MORC Moravsky Berou 145.56 342 ⇑PKiKP PKPdf 13 41 43.4 -0.1
MORC Moravsky Berou 145.56 342 *e*PKPbc PKPbc 13 41 44.3 -0.6
MORC Moravsky Berou 145.56 342 ⇑*i*P PKPdf 13 41 43.4 -0.1
MLR Muntele Rosu 145.67 329 ⇓PKiKP PKPdf 13 41 42.6 -1.2
MLR Muntele Rosu 145.67 329 ⇓*i*P PKPdf 13 41 42.6 -1.2
PVCC Panska Ves 145.69 345 *e*PKP2 PKPbc 13 41 45.3 0.0
PVCC Panska Ves 145.69 345 *e*PKP PKPbc 13 41 45.3 0.0
KECS Kecovo 145.69 337 *e*PKiKP PKPbc 13 41 44.9 -0.4
KECS Kecovo 145.69 337 *e*PKP PKPbc 13 41 44.8 -0.5
MMAI Mount Meron Ar 146.00 303 PKPbc PKPbc 13 41 46.6 -0.1
comp=Z,24nm,0.6s,baz=64,slow=5.7,SNR=28
BUG Bochum--Univer 146.09 354 *e*PKPbc PKPbc 13 41 45.6 -0.8
DRGR 146.18 333 ⇑PKP2 PKPbc 13 41 46.4 -0.4
DRGR 146.18 333 ⇑*i*P PKPbc 13 41 46.4 -0.4
PRU Pruhonice 146.19 345 *e*PKP2 PKPbc 13 41 46.6 -0.1
PRU Pruhonice 146.19 345 *e*PKP PKPbc 13 41 46.6 -0.1
PRU *ex* x 13 41 49.1
MOX Moxa 146.22 348 *e*PKP PKPdf 13 41 46.0 +1.4
comp=Z,16nm,1.4s
MOX Moxa 146.22 348 *e*PKPbc PKPbc 13 41 45.7 -1.1
VRAC Vranov 146.25 342 ⇓PKP2 PKPbc 13 41 46.6 -0.3
VRAC Vranov 146.25 342 ⇓*i*P PKPbc 13 41 46.6 -0.3
VYHS Vyhne 146.26 339 *e*PKiKP PKPdf 13 41 46.4 +1.7
VYHS Vyhne 146.26 339 *e*PKP PKPdf 13 41 46.4 +1.7
TANN Tannenbergstha 146.27 347 *e*PKPbc PKPbc 13 41 46.2 -0.7
UBBA Unterbreizbach 146.34 350 *e*PKPbc PKPbc 13 41 45.9 -1.2
PSZ Piszkesteto 146.38 337 ⇑PKiKP PKPdf 13 41 46.5 +1.6
PSZ Piszkesteto 146.38 337 *e*PKPbc PKPbc 13 41 46.8 -0.5
PSZ Piszkesteto 146.38 337 ⇑*i*P PKPbc 13 41 46.5 -0.8
NKC Novy Kostel 146.44 347 *e*PKP2 PKPbc 13 41 47.0 -0.4
NKC Novy Kostel 146.44 347 *e*PKP PKPbc 13 41 47.0 -0.4
TREC Trest 146.58 343 *e*PKP2 PKPbc 13 41 47.2 -0.6
TREC Trest 146.58 343 *e*PKP PKPbc 13 41 47.2 -0.6
TREC *ex* x 13 41 50.1
SMOL Smolenice 146.71 341 *e*PKP2 PKPbc 13 41 48.4 +0.2
SMOL Smolenice 146.71 341 *e*PKP PKPbc 13 41 48.4 +0.2
CSS Prodhromos 146.93 307 *e*PKP PKPdf 13 41 47.1 +0.8
MEM Membach 147.04 355 PKPbc PKPbc 13 41 48.3 -0.6
BUD Budapest 147.06 338 ⇓*e* PKPdf 13 41 46.5 +0.4
ZST Bratislava 147.09 341 *e*PKP2 PKPbc 13 41 49.1 -0.1
ZST Bratislava 147.09 341 *e*PKP PKPbc 13 41 49.0 -0.2
TNS Taunus Mts 147.15 352 *e*PKPbc PKPbc 13 41 48.7 -0.6
GRF Grafenberg Arr 147.20 348 *e*PKPbc PKPbc 13 41 48.7 -0.7
KHC Kasperske Hory 147.22 345 *e*PKPdf PKPdf 13 41 46.0 -0.3
KHC *e*PKPbc PKPbc 13 41 49.1 -0.4
KHC Kasperske Hory 147.22 345 *e*PKP PKPbc 13 41 49.1 -0.4
KHC *ex* x 13 41 53.3
GZR Gura Zlata 147.24 332 ⇑PKHKP PKPbc 13 41 48.5 -1.2
GZR Gura Zlata 147.24 332 ⇑*i*P PKPbc 13 41 48.5 -1.2
BCLA Clavier 147.28 356 PKPbc PKPbc 13 41 48.4 -1.2
BCLA PKPab PKPab 13 41 51.9 -1.4
WET Wettzell 147.37 346 *e*PKPbc PKPbc 13 41 49.3 -0.6
BZS Buzias 147.57 333 ⇑PKiKP PKPbc 13 41 49.5 -1.0
BZS Buzias 147.57 333 ⇑*i*P PKPbc 13 41 49.5 -1.0
GIVF Givet 147.63 356 *e*PKP1 PKPbc 13 41 49.3 -1.2
comp=Z,34nm,0.7s
DOU Dourbes 147.66 356 PKPbc PKPbc 13 41 50.1 -0.5
CONA Conrad Observa 147.71 342 *i* PKPbc PKPbc 13 41 50.4 -0.4
comp=Z,12nm,0.6s,SNR=19
BAIF Baives 147.71 357 *e*PKP1 PKPbc 13 41 49.5 -1.2
comp=Z,43nm,1.0s
WLF Walferdange 147.96 354 PKPbc PKPbc 13 41 51.2 -0.2
WLF PKPab PKPab 13 41 54.8 -1.2
WLF Walferdange 147.96 354 *e*PKPbc PKPbc 13 41 51.1 -0.3
WLF Walferdange 147.96 354 *e*PKPbc PKPbc 13 41 51.1 -0.3
MOA Molln 148.23 344 ⇑*i*PKPbc PKPbc 13 41 51.6 -0.5
comp=Z,3.4nm,0.7s
PKSM Moragy 148.28 337 PKHKP PKPbc 13 41 51.4 -0.9
DIM Dimitrovgrad 148.28 325 P PKPbc 13 41 51.7 -0.7
STU Stuttgart 148.45 350 *e*PKPbc PKPbc 13 41 52.0 -0.6
KDZ Kurdzhali 148.61 324 P PKPbc 13 41 52.2 -1.1
FUR Furstenfeldbru 148.65 347 *e*PKPbc PKPbc 13 41 52.5 -0.6
BFO Black Forest 149.01 351 *e*PKPbc PKPbc 13 41 53.1 -0.9
BFO Black Forest 149.01 351 *e*PKPbc PKPbc 13 41 53.0 -1.0
CDF Champ du Feu 149.08 353 *e*PKP1 PKPbc 13 41 52.9 -1.3
comp=Z,21nm,0.7s
SOKA Soboth 149.08 342 ⇓*i*PKPbc PKPbc 13 41 52.6 -1.6
comp=Z,15nm,1.4s
VTS Vitosha 149.13 328 P PKPbc 13 41 53.6 -0.9
KBA Koelnbreinsper 149.19 344 ⇑*i*PKPbc PKPbc 13 41 53.0 -1.5
comp=Z,7.2nm,0.5s,SNR=11
MEZF Maizieres J'vi 149.21 355 *e*PKP1 PKPbc 13 41 53.4 -1.1
comp=Z,13nm,0.6s
LDF La Druitiere 149.22 2 *e*PKP1 PKPbc 13 41 52.7 -1.8
comp=Z,8.1nm,0.4s
ROSF Rostrenen 149.26 6 *e*PKP1 PKPbc 13 41 52.3 -2.3
GRR Gorron 149.40 3 *e*PKP1 PKPbc 13 41 52.6 -2.4
comp=Z,18nm,0.6s
SGMF Saint Gilles 149.41 5 *e*PKP1 PKPbc 13 41 52.6 -2.4
comp=Z,36nm,0.9s
WTTA Wattenberg 149.43 346 ⇑*i*PKPbc PKPbc 13 41 54.1 -0.9
comp=Z,18nm,0.5s
MYKA Terra Mystica 149.52 343 ⇓*i*PKPbc PKPbc 13 41 53.4 -2.0
comp=Z,9.5nm,0.5s
MMB Musomiste 149.58 326 P PKPbc 13 41 54.3 -1.3
HAU Haudompre 149.58 354 *e*PKP1 PKPbc 13 41 54.0 -1.4
comp=Z,18nm,0.7s
QUIF Quistinic 149.69 6 *e*PKP1 PKPbc 13 41 53.3 -2.4
HINF Hinteralfeld 149.71 353 *e*PKP1 PKPbc 13 41 54.1 -1.6
comp=Z,14nm,0.8s
KKB Krupnik 149.72 327 P PKPbc 13 41 55.1 -0.8
FETA Feichten 149.85 347 ⇓*i*PKPbc PKPbc 13 41 55.1 -1.0
comp=Z,14nm,1.0s,SNR=6.0
LOR Lormes 150.52 357 *e*PKP1 PKPbc 13 41 56.3 -1.3
comp=Z,24nm,0.7s
HYF Humbligny 150.56 358 *e*PKP1 PKPbc 13 41 56.7 -1.0
TUE Stuetta 150.65 349 *e*PKPbc PKPbc 13 41 57.5 -0.5
SSF Saint Saulge 150.74 357 *e*PKP1 PKPbc 13 41 56.9 -1.2
comp=Z,18nm,0.6s
CABF La Chapelle 150.99 353 *e*PKP1 PKPbc 13 41 57.9 -0.8
comp=Z,38nm,1.0s
AVF Avril sur Loir 151.02 357 *e*PKP1 PKPbc 13 41 56.9 -1.9
SMF Signal de Mont 151.14 357 *e*PKP1 PKPbc 13 41 57.6 -1.5
MFF Saint Martin d 151.21 2 *e*PKP1 PKPbc 13 41 57.6 -1.6
comp=Z,27nm,0.9s
BGF Bois d'Agland 151.27 358 *e*PKP1 PKPbc 13 41 57.9 -1.5
comp=Z,45nm,1.0s
TCF Toulx Ste Croi 151.56 359 *e*PKP1 PKPbc 13 41 58.4 -1.6
comp=Z,12nm,0.8s
LPL La Plagne 151.99 352 *e*PKP1 PKPbc 13 42 00.4 -0.6
LPG La Plagne 152.01 352 *e*PKP1 PKPbc 13 42 00.5 -0.5
comp=Z,7.6nm,0.7s
RJF Les Rejaudoux 152.54 360 *e*PKP1 PKPbc 13 42 01.2 -1.0
comp=Z,13nm,0.8s
ORIF Oris-en-Rattie 152.68 353 *e*PKP1 PKPbc 13 42 01.4 -1.1
MBDF Montbardon 152.76 352 *e*PKP1 PKPbc 13 42 01.5 -1.2
comp=Z,11nm,0.7s
VIVF Saint-Julien-l 152.86 355 *e*PKP1 PKPbc 13 42 01.7 -1.2
CAF Calviac 152.92 359 *e*PKP1 PKPbc 13 42 01.7 -1.3
SBF Sospel 153.51 350 *e*PKP1 PKPbc 13 42 02.4 -1.9
ESDC Sonseca Array 157.66 11 PKPab PKPab 13 42 36.0 -1.5
comp=Z,0.1nm,0.3s,baz=330,slow=3.6,SNR=5.2
KEST Kesra 160.80 340 PKPab PKPab 13 42 50.1 -1.2
comp=Z,1.3nm,0.7s,baz=56,slow=3.6,SNR=4.6
TORD Torodi Ar. Bea 175.40 182 PKP PKPdf 13 42 13.4 -2.3
comp=Z,2.2nm,1.0s,baz=319,slow=0.9,SNR=9.0
TORD PKPab PKPab 13 43 53.8 -2.4
comp=Z,0.3nm,0.5s,baz=196,slow=1.0,SNR=2.6

*ISCJB **06** 13:38:09.4±0.5, 37°.91N±0°.02×21°.44E±0°.03, h10km, Error ellipse: s-maj=4.0km s-min=3.0km az=139.1*
*CSEM **06** 13:38:09.5±0.2, 37°.90N×21°.44E, h8km, MD3.1, Error ellipse: s-maj=2.9km s-min=2.2km az=37.0*
*THE **06** 13:38:10.0, 37°.92N×21°.45E, h4km±1km, ML3.1/7, Error ellipse: s-maj=1.4km s-min=0.5km az=348.0*
*ATH **06** 13:38:10.4, 37°.92N×21°.43E, h10km±2km, MD3.1/9*
*NEIC **06** 13:38:10.4, 37°.92N×21°.43E, h10km, MD3.1(ATH), After ATH.*

ISC 06 13:38:10.1±0.5, 37°.91N±0°.02×21°.45E±0°.03, h8km±4km, n55, σ0°84/86, 2C, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.15**	**5**	*e*Pg	**Pg**	**13 38 13.5**	**+0.1**
RLS				*e*Sg	**Sg**	**13 38 16.0**	**+0.4**
RLS	**Riolos of Patr**	**0.15**	**5**	*e*PG	**Pg**	**13 38 13.5**	**+0.1**
RLS				*e*SG	**Sg**	**13 38 16.0**	**+0.4**
RLS	**Riolos of Patr**	**0.15**	**5**	*e*Pg	**Pg**	**13 38 13.5**	**+0.1**
RLS				*e*Sg	**Sg**	**13 38 16.0**	**+0.4**
UPR	**University Cam**	**0.46**	**35**	*e*PB	**Pg**	**13 38 18.9**	**-0.2**
UPR	**University Cam**	**0.46**	**35**	P	**Pg**	**13 38 18.1**	**-1.0**
UPR	**University Cam**	**0.46**	**35**	P	**Pg**	**13 38 18.1**	**-1.0**
UPR	**University Cam**	**0.46**	**35**	*e*Pb	**Pg**	**13 38 18.9**	**-0.2**
LAKA	**Lakka**	**0.53**	**51**	P	**Pg**	**13 38 20.4**	**0.0**
LAKA				S	**Sg**	**13 38 27.9**	**+0.5**
LAKA	**Lakka**	**0.53**	**51**	P	**Pg**	**13 38 20.4**	**0.0**
LAKA				S	**Sg**	**13 38 27.9**	**+0.5**
KFL	**Anninata**	**0.56**	**291**	P	**Pg**	**13 38 21.0**	**0.0**
KFL	**Anninata**	**0.56**	**291**	P	**Pg**	**13 38 21.0**	**0.0**
EFP	**Efpalio**	**0.63**	**34**	*e*PB	**Pg**	**13 38 22.0**	**-0.3**
EFP				*e*SB	**Sb**	**13 38 31.9**	**-0.5**
EFP	**Efpalio**	**0.63**	**34**	P	**Pg**	**13 38 22.0**	**-0.3**
EFP				S	**Sg**	**13 38 31.2**	**+0.6**
EFP	**Efpalio**	**0.63**	**34**	P	**Pg**	**13 38 22.0**	**-0.3**
EFP				S	**Sg**	**13 38 31.2**	**+0.6**
EFP				*e*Sb	**Sb**	**13 38 31.9**	**-0.5**
GUR	**Goura**	**0.70**	**87**	*e*PG	**Pg**	**13 38 23.8**	**+0.1**
GUR				*e*SB	**Sb**	**13 38 34.9**	**+0.4**
GUR	**Goura**	**0.70**	**87**	P	**Pg**	**13 38 22.9**	**-0.8**
GUR				S	**Sg**	**13 38 33.4**	**+0.5**
GUR	**Goura**	**0.70**	**87**	P	**Pg**	**13 38 22.9**	**-0.8**
GUR	**Goura**	**0.70**	**87**	*e*Pg	**Pg**	**13 38 23.8**	**+0.1**
GUR				S	**Sg**	**13 38 33.4**	**+0.5**
GUR				*e*Sb	**Sb**	**13 38 34.9**	**+0.4**
KALE	**Kalithea**	**0.73**	**48**	P	**Pg**	**13 38 23.6**	**-0.5**
KALE				S	**Sg**	**13 38 33.6**	**0.0**
KALE	**Kalithea**	**0.73**	**48**	P	**Pg**	**13 38 23.6**	**-0.5**
KALE				S	**Sg**	**13 38 33.6**	**0.0**
VLS	**Valsamata**	**0.73**	**292**	⇑*i*Pb	**Pg**	**13 38 23.4**	**-0.8**
VLS				*e*Sb	**Sg**	**13 38 35.4**	**+1.6**
VLS	**Valsamata**	**0.73**	**292**	⇑*i*PB	**Pg**	**13 38 23.4**	**-0.8**
VLS				*e*SB	**Sg**	**13 38 35.4**	**+1.6**
VLS	**Valsamata**	**0.73**	**292**	P	**Pg**	**13 38 23.4**	**-0.8**
VLS	**Valsamata**	**0.73**	**292**	P	**Pg**	**13 38 23.4**	**-0.8**
ITM	**Ithomi**	**0.82**	**152**	*e*Pb	**Pg**	**13 38 25.5**	**-0.3**
ITM				*e*Sb	**Sg**	**13 38 38.6**	**+2.2**
ITM	**Ithomi**	**0.82**	**152**	*e*PB	**Pg**	**13 38 25.5**	**-0.3**
ITM				*e*SB	**Sg**	**13 38 38.6**	**+2.2**
ITM	**Ithomi**	**0.82**	**152**	P	**Pg**	**13 38 25.6**	**-0.2**
ITM	**Ithomi**	**0.82**	**152**	*e*Pb	**Pg**	**13 38 25.5**	**-0.3**
ITM				*e*Sb	**Sg**	**13 38 38.6**	**+2.2**
VLX	**Vlachokerasia**	**0.91**	**126**	P	**Pg**	**13 38 27.5**	**-0.1**
VLX				S	**Sg**	**13 38 40.1**	**+0.7**
VLX	**Vlachokerasia**	**0.91**	**126**	P	**Pg**	**13 38 27.5**	**-0.1**
VLX				S	**Sg**	**13 38 40.1**	**+0.7**
DSF	**Desfina**	**0.99**	**59**	P	**Pg**	**13 38 27.9**	**-1.2**
DSF	**Desfina**	**0.99**	**59**	P	**Pg**	**13 38 27.9**	**-1.2**
EVR	**Evrytania**	**1.05**	**15**	*e*Pb	**Pg**	**13 38 30.1**	**-0.2**
EVR				*e*Sb	**Sg**	**13 38 45.3**	**+1.4**
EVR	**Evrytania**	**1.05**	**15**	*e*PB	**Pg**	**13 38 30.1**	**-0.2**
EVR				*e*SB	**Sg**	**13 38 45.3**	**+1.4**
EVR	**Evrytania**	**1.05**	**15**	*e*Pb	**Pg**	**13 38 30.1**	**-0.2**
EVR				*e*Sb	**Sg**	**13 38 45.3**	**+1.4**
LKD2	**Lefkada island**	**1.08**	**325**	P	**Pg**	**13 38 29.7**	**-1.2**
LKD2				S	**Sg**	**13 38 45.5**	**+0.6**
LKD2	**Lefkada island**	**1.08**	**325**	P	**Pg**	**13 38 29.7**	**-1.2**
LKD2				S	**Sg**	**13 38 45.5**	**+0.6**
LTK	**Loutraki**	**1.20**	**84**	P	**Pb**	**13 38 32.7**	**-0.4**
LTK	**Loutraki**	**1.20**	**84**	P	**Pb**	**13 38 32.7**	**-0.4**
AGG	**Agios Georgios**	**1.31**	**31**	P	**Pn**	**13 38 33.8**	**-0.9**
AGG	**Agios Georgios**	**1.31**	**31**	P	**Pn**	**13 38 33.8**	**-0.9**
LKR	**Lokris**	**1.43**	**58**	*e*Pg	**Pg**	**13 38 37.1**	**-0.4**
LKR	**Lokris**	**1.43**	**58**	*e*PG	**Pg**	**13 38 37.1**	**-0.4**
LKR	**Lokris**	**1.43**	**58**	P	**Pn**	**13 38 36.2**	**-0.1**
LKR	**Lokris**	**1.43**	**58**	P	**Pn**	**13 38 36.2**	**-0.1**
LKR	**Lokris**	**1.43**	**58**	*e*Pg	**Pg**	**13 38 37.1**	**-0.4**
DID	**Didima**	**1.47**	**105**	P	**Pn**	**13 38 36.4**	**-0.5**
DID				S	**Sn**	**13 38 56.9**	**+0.6**
DID	**Didima**	**1.47**	**105**	P	**Pn**	**13 38 36.4**	**-0.5**
DID				S	**Sn**	**13 38 56.9**	**+0.6**
VLI	**Veliai**	**1.68**	**135**	*e*Pn	**Pg**	**13 38 42.4**	**+0.2**
VLI	**Veliai**	**1.68**	**135**	*e*PN	**Pg**	**13 38 42.4**	**+0.2**
VLI	**Veliai**	**1.68**	**135**	*e*Pn	**Pg**	**13 38 42.4**	**+0.2**
THL	**Klokotos Trika**	**1.71**	**15**	*e*PG	**Pg**	**13 38 41.8**	**-1.2**
THL				*e*SN	**Sn**	**13 39 05.2**	**+2.9**
THL	**Klokotos Trika**	**1.71**	**15**	*e*Pg	**Pg**	**13 38 41.8**	**-1.2**
THL				*e*Sn	**Sn**	**13 39 05.2**	**+2.9**
KYTH	**Kithira**	**2.06**	**142**	*e*Pn	**Pg**	**13 38 48.2**	**-1.4**
KYTH	**Kithira**	**2.06**	**142**	*e*PN	**Pg**	**13 38 48.2**	**-1.4**

*IDC **06** 13:43:49.6±0.8, 15°.28N×122°.71E, h0km, mb3.9/9, mb1 4.0/9, mb1mx3.9/21, mbtmp3.9/9, ML5.2/1, MS3.3/2, Ms1 3.3/2, ms1mx2.8/43, Error ellipse: s-maj=25.0km s-min=15.4km az=84.0*
*MAN **06** 13:43:52, 15°.39N×122°.33E, h2km, mb5.1, ML4.0, MS4.2*
*NEIC **06** 13:43:54.6±0.3, 15°.27N×122°.68E, h35km, mb4.7/2, Error ellipse: s-maj=12.3km s-min=6.6km az=74.0*

ISC 06 13:43:50.0±1.4, 15°.37N±0°.03×122°.64E±0°.06, h0km±8km, n34, σ1°30/40, mb4.0/12, MS3.2/2, 2C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**0.94**	**227**	*e*P	**Pg**	**13 44 07.0**	**-1.0**
POLP				*e*S	**Sg**	**13 44 23.0**	**+2.8**
BALP	**Baler**	**1.09**	**290**	*e*P	**Pg**	**13 44 09.4**	**-1.6**
BALP				*e*S	**Sg**	**13 44 23.0**	**-2.2**
PCPH	**Palayan**	**1.50**	**277**	⇑*e*P	**Pn**	**13 44 15.9**	**-2.3**
PALP	**Palanan**	**1.69**	**353**	*e*P	**Pn**	**13 44 21.1**	**+0.3**
CAUP	**Cauayan**	**1.75**	**333**	*e*P	**Pn**	**13 44 21.5**	**-0.1**
AUQP	**San Andres**	**2.04**	**179**	*e*P	**Pn**	**13 44 29.4**	**+3.8**
BOAC	**Boac**	**2.06**	**202**	*e*P	**Pn**	**13 44 27.2**	**+1.4**
BOAC				*e*S	**Sn**	**13 44 50.9**	**-1.3**
TGY	**Tagaytay City**	**2.08**	**233**	Pn	**Pn**	**13 44 26.8**	**+0.6**
	766nm,0.3s,baz=35,slow=2.9,SNR=20						
TGY				Sn	**Sn**	**13 44 53.4**	**+0.7**
	519nm,0.3s,baz=75,slow=23,SNR=6.6						
BCPH	**Baguio City Da**	**2.22**	**297**	⇑*i*P	**Pn**	**13 44 27.1**	**-1.1**
BCPH				*i* S	**Sn**	**13 44 52.1**	**-4.2**
PVCP	**Virac**	**2.29**	**140**	*e*P	**Pn**	**13 44 35.7**	**+6.6**
SCZP	**Santa Cruz**	**2.66**	**279**	*e*P	**Pn**	**13 44 35.4**	**+1.2**
BOLP	**Bolinao**	**2.81**	**291**	*e*P	**Pn**	**13 44 36.0**	**-0.2**
APYP	**Conner**	**2.81**	**332**	*e*P	**Pn**	**13 44 37.8**	**+1.5**
ABRA	**Dolores**	**2.92**	**321**	*e*P	**Pn**	**13 44 39.3**	**+1.5**
OTRP	**Odiongan**	**3.06**	**192**	*e*P	**Pn**	**13 44 42.4**	**+2.8**
SJMP	**San Jose**	**3.25**	**207**	*e*P	**Pn**	**13 44 44.9**	**+2.6**
CNP	**Catarman**	**3.46**	**145**	*e*P	**Pn**	**13 44 51.3**	**+6.2**
BUSP	**Coron**	**4.11**	**216**	*e*P	**Pn**	**13 44 54.7**	**+0.6**
BBP	**Basco**	**5.08**	**353**	*e*P	**Pn**	**13 45 07.3**	**-0.2**
KSRS	**Korea Array**	**22.48**	**11**	P	**P**	**13 48 51.9**	**+1.0**
	0.7nm,0.7s,mb3.2,baz=197,slow=9.0,SNR=4.5						
KSRS				LR	LR	13 57 46.1	
	comp=Z,36nm,18.3s,MS2.8,baz=225,slow=37						
MJAR	**Matsushiro Arr**	**25.23**	**30**	P	**P**	**13 49 18.4**	**+0.8**
	0.2nm,0.4s,mb3.2,baz=229,slow=11,SNR=4.7						
HHC	**Hu-ho-hao-te**	**27.15**	**341**	*e*P	**P**	**13 49 37.1**	**+2.2**
HHC				S	**S**	**13 54 12.8**	**-1.5**
HHC				pmax	pmax		
	comp=Z,25nm,0.5s,mb5.2						
HHC				pmax	pmax		
	comp=Z,76nm,6.2s						
KAKA	**Kakadu**	**29.54**	**160**	*e*P	**P**	**13 49 55.1**	**-1.3**
FITZ	**Fitzroy Crossi**	**33.40**	**175**	*e*P	**P**	**13 50 29.3**	**-1.0**
SONM	**Songino Array**	**35.05**	**341**	P	**P**	**13 50 44.5**	**+0.1**
	comp=Z,0.4nm,0.5s,mb3.6,baz=186,slow=4.3,SNR=3.3						
SONM				LR	LR	14 05 56.0	
	comp=Z,82nm,19.4s,MS3.5,baz=245,slow=38						
WRAB	**Tennant Creek**	**36.92**	**161**	*e*P	**P**	**13 50 58.9**	**-1.9**
	comp=Z,4.8nm,0.6s,mb4.4						
WRA	**Warramunga Arr**	**36.93**	**161**	P	**P**	**13 50 59.0**	**-1.9**
	comp=Z,6.3nm,0.7s,mb4.5,baz=342,slow=9.3,SNR=57						
ASAR	**Alice Springs**	**40.33**	**164**	P	**P

SONM Songino Array 147.99 86 PKPbc PKPbc 14 11 28.7 -1.0
comp=Z,1.9nm,0.9s,baz=220,slow=2.2,SNR=8.4

PPT 06 13:54:46.4±0.4, 17°.59S×148°.63W, h10km, MI0.0/6, Error ellipse: s-maj=38.4km s-min=8.7km az=180.0, Society Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIAR	**Tiarei**	**0.69**	**273**	*e*Pn	Pn	13 54 57.9	-4.3
	3.7nm,0.1s						
TIAR				*e*Sn	Sg	13 55 04.3	-4.4
	18nm,0.1s						
TIAR	**Tiarei**	**0.69**	**273**	*e*Pn	Pn	13 54 57.2	-5.0
	3.7nm,0.1s						
TIAR				*e*Sn	Sg	13 55 04.4	-4.3
	17nm,0.1s						
PPT	**Papeete**	**0.91**	**271**	*e*Pn	Pn	13 55 00.1	-5.1
	0.6nm,0.1s						
PPT				*e*Sn	Sn	13 55 10.0	-8.4
	2.7nm,0.2s						
PPT	**Papeete**	**0.91**	**271**	*e*Pn	Pn	13 55 00.0	-5.2
	0.6nm,0.1s						
PPT				*e*Sn	Sn	13 55 10.2	-8.2
	2.7nm,0.2s						
PAE	**Paea**	**0.91**	**265**	*e*Pn	Pn	13 55 00.1	-5.2
	0.3nm,0.1s						
PAE				*e*Sn	Sn	13 55 10.2	-8.3
	0.3nm,0.2s						

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*IDC **06** 13:56:26.2±7.6, 6°.76S×129°.60E, h90km±70km, mb3.6/3, mb1 3.8/5, mb1mx3.4/18, mbtmp3.7/5, ML4.2/2, Error ellipse: s-maj=107.3km s-min=25.7km az=60.0*
*ISCJB **06** 13:56:28.3±3.8, 6°.7S±0°.2×130°.1E±0°.3, h133km±39km, mb3.6/3, Error ellipse: s-maj=47.3km s-min=25.1km az=144.6*
*NEIC **06** 13:56:29.2±2.4, 6°.69S×129°.86E, h117km±23km, mb3.9/1, Error ellipse: s-maj=35.0km s-min=17.5km az=62.0*
ISC 06 13:56:29.1±3.2, 6.7S±0°.2×130°.1E±0°.2, h121km±33km, n11, σ1§00/11, mb3.7/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.39**	**159**	*e*P	**Pn**	**13 58 02.2**	**+1.3**
	59nm,0.4s						
KAKA				*e*S	**Sn**	**13 59 11.2**	**-1.4**
FITZ	**Fitzroy Crossi**	**12.09**	**200**	*e*P	**Pn**	**13 59 17.4**	**-0.1**
	5.3nm,0.3s						
WRAB	**Tennant Creek**	**13.77**	**163**	*e*P	**Pn**	**13 59 39.7**	**+0.4**
	4.2nm,0.6s						
WRA	**Warramunga Arr**	**13.78**	**163**	P	**Pn**	**13 59 38.0**	**-1.4**
	0.9nm,0.3s,baz=340,slow=12,SNR=31						
WRA				S	Sx	14 02 04.4	
	0.8nm,0.3s,baz=343,slow=22,SNR=5.1						
ASAR	**Alice Springs**	**17.24**	**168**	P	**Pn**	**14 00 24.1**	**+1.5**
	1.1nm,0.3s,baz=345,slow=12,SNR=30						
ASAR				S	Sx	14 03 28.9	
	0.7nm,0.3s,baz=356,slow=26,SNR=10						
STKA	**Stephens Creek**	**27.24**	**158**	P	**P**	**14 02 02.5**	**+0.6**
	3.5nm,1.0s,mb3.8,baz=337,slow=13,SNR=3.1						
MK31	**Makanchi Array**	**68.03**	**327**	*e*P	**P**	**14 07 15.8**	**+0.4**
MKAR	**Makanchi Array**	**68.03**	**327**	P	**P**	**14 07 15.3**	**-0.1**
	0.5nm,0.4s,mb3.7,baz=127,slow=6.4,SNR=13						
MKAR	**Makanchi Array**	**68.03**	**327**	P	**P**	**14 07 15.3**	**-0.1**
KURK	**Kurchatov**	**72.31**	**329**	P	**P**	**14 07 40.2**	**-1.3**
	0.5nm,0.7s,mb3.5,baz=126,slow=5.2,SNR=3.1						
LPAZ	**La Paz**	**150.90**	**142**	PKPbc	PKPbc	14 16 10.9	+2.3
	0.4nm,0.4s,baz=117,slow=2.3,SNR=5.0						

MAN 06 14:01:39, 15°.77N×120°.63E, h5km, mb4.7, ML3.5, MS3.5, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCPH	**Baguio City Da**	**0.61**	**356**	⇑*i*P	Pg	14 01 51.8	+1.1
BCPH				*i*S	Sg	14 02 02.8	+4.2
SCZP	**Santa Cruz**	**0.69**	**270**	*e*P	Pg	14 01 52.6	+0.3
BALP	**Baler**	**0.91**	**92**	*e*P	Pg	14 01 53.5	-3.0
BOLP	**Bolinao**	**0.92**	**311**	*e*P	Pg	14 01 57.1	+0.5
CAUP	**Cauayan**	**1.63**	**44**	*e*P	Pn	14 02 07.9	-0.5
POLP	**Polilio Island**	**1.64**	**129**	*e*P	Sn	14 02 29.9	0.0
PALP	**Palanan**	**2.15**	**53**	*e*P	Sn	14 02 44.0	+1.5
APYP	**Conner**	**2.16**	**16**	*e*P	Pn	14 02 16.3	+0.7
BOAC	**Boac**	**2.58**	**153**	*e*P	Sn	14 02 50.2	-3.1
AUQP	**San Andres**	**3.14**	**141**	*e*P	Sn	14 02 53.6	-13
PVCP	**Virac**	**4.04**	**122**	*e*P	Pg	14 02 57.5	+1.1

IDC 06 14:06:00.5±3.3, 7°.23S×154°.57E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.7/16, mbtmp3.8/4, Error ellipse: s-maj=107.8km s-min=30.9km az=114.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.34**	**235**	P	P	14 11 10.9	+0.1
	1.8nm,0.6s,baz=58,slow=9.4,SNR=67						
ASAR	**Alice Springs**	**25.70**	**228**	P	P	14 11 32.2	-0.4
	0.5nm,0.6s,baz=55,slow=8.5,SNR=6.8						
SONM	**Songino Array**	**69.30**	**328**	P	P	14 17 10.7	+1.0
	0.5nm,0.5s,baz=123,slow=5.5,SNR=3.8						
MKAR	**Makanchi Array**	**83.30**	**319**	P	P	14 18 29.9	+0.6
	0.8nm,0.8s,baz=105,slow=4.1,SNR=4.4						
TORD	**Torodi Ar. Bea**	**152.68**	**285**	PKPbc	PKPbc	14 25 59.5	-0.9
	0.5nm,0.7s,baz=66,slow=3.5,SNR=3.1						

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*ISCJB **06** 14:24:18.3±0.6, 58°.36N±0°.05×133°.41W±0°.06, h10km, Error ellipse: s-maj=7.4km s-min=4.6km az=15.1*
*NEIC **06** 14:24:18.2, 58°.32N×133°.54W, h0km, ML2.7(PGC), ML2.4(AEIC), After AEIC.*
*PGC **06** 14:24:19.6±5.6, 58°.38N×133°.43W, h1km, ML2.7/4, 58km east of Juneau, Ak Southeastern Alaska*
ISC 06 14:24:18.9±0.6, 58°.41N±0°.05×133°.47W±0°.06, h10km, n11, σ1§48/28, 12D, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESE	**Bessie Mountai**	**0.75**	**284**	P	**Pg**	**14 24 32.2**	**-1.2**
SKAG	**Skagway**	**1.43**	**318**	P	**Pn**	**14 24 45.2**	**+0.3**
SKAG				S	**Sn**	**14 25 04.5**	**+0.8**
SIT	**Sitka**	**1.68**	**217**	P	**Pn**	**14 24 46.9**	**-1.4**
SIT				S	**Sn**	**14 25 10.0**	**+0.1**
DLBC	**Dease Lake**	**1.81**	**88**	P	**Pn**	**14 24 51.8**	**+1.6**
DLBC				S	**Sn**	**14 25 16.4**	**+3.3**
DLBC	**Dease Lake**	**1.81**	**88**	⇓P	**Pn**	**14 24 50.6**	**+0.5**
DLBC				⇑Pg	**Pg**	**14 24 51.9**	**-1.7**
DLBC				⇓Sn	**Sn**	**14 25 14.7**	**+1.6**
DLBC				⇓Sg	**Sg**	**14 25 16.5**	**-0.6**
PLBC	**Pleasant Camp**	**1.84**	**306**	⇓Pn	**Pn**	**14 24 52.1**	**+1.6**
PLBC				Sn	**Sn**	**14 25 16.4**	**+2.7**
PLBC				Sg	**Sg**	**14 25 17.7**	**-0.2**
PLBC	**Pleasant Camp**	**1.84**	**306**	⇓Pn	**Pn**	**14 24 52.1**	**+1.6**
PLBC				⇓Sn	**Sn**	**14 25 16.4**	**+2.7**
PLBC				⇓Sg	**Sg**	**14 25 17.7**	**-0.2**
WHY	**Whitehorse**	**2.37**	**343**	⇓Pn	**Pn**	**14 24 58.9**	**+1.1**
WHY				Pg	**Pg**	**14 25 02.1**	**-2.3**
WHY				S	**Sn**	**14 25 32.9**	**+6.0**
WHY	**Whitehorse**	**2.37**	**343**	⇓Pn	**Pn**	**14 24 58.9**	**+1.1**
WHY				⇓Pg	**Pg**	**14 25 02.1**	**-2.3**
HYT	**Haines Junctio**	**3.18**	**322**	⇓Pn	**Pn**	**14 25 10.8**	**+1.9**
HYT				Pg	**Pg**	**14 25 17.0**	**-2.7**
HYT				Sg	**Sg**	**14 25 59.0**	**-1.9**
HYT	**Haines Junctio**	**3.18**	**322**	⇓Pn	**Pn**	**14 25 10.8**	**+1.9**
HYT				⇑Pg	**Pg**	**14 25 17.0**	**-2.7**
HYT				⇑Sg	**Sg**	**14 25 59.0**	**-1.9**

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*ISCJB **06** 14:31:00.6±0.4, 29°.17N±0°.04×139°.8E±0°.1, h398km±5km, mb3.9/24, Error ellipse: s-maj=16.6km s-min=5.5km az=163.5*
*JMA **06** 14:31:00.9±0.2, 29°.22N×140°.13E, h408km±4km, M3.5*
*IDC **06** 14:31:01.1±0.6, 29°.20N×139°.70E, h381km±7km, mb3.6/17, mb1 3.6/22, mb1mx3.5/31, mbtmp3.5/22, Error ellipse: s-maj=19.0km s-min=7.7km az=72.0*
*NEIC **06** 14:31:02.0±1.0, 29°.16N×139°.59E, h388km±9km, mb3.9/5, Error ellipse: s-maj=14.7km s-min=9.0km az=78.0*
ISC 06 14:31:01.5±0.4, 29°.18N±0°.05×139°.8E±0°.1, h389km±5km, n54, σ0§96/60, mb3.9/24, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.93**	**134**	P	**Pn**	**14 32 03.4**	**0.0**
	151nm,0.3s,baz=330,slow=3.6,SNR=194						
CBIJ				S	**S**	**14 32 53.0**	**-0.3**
	109nm,0.3s,baz=281,slow=22,SNR=19						
CBIJ	**Chichi jima**	**2.93**	**134**	P	**Pn**	**14 32 03.2**	**-0.2**
CBIJ				*e*S	**S**	**14 32 53.1**	**-0.2**
JHHJ	**Haha-jima-NKT**	**3.28**	**140**	P	**Pn**	**14 32 06.1**	**-0.2**
JHHJ				S	**S**	**14 32 57.6**	**-1.0**
JHJ2	**Mitsune**	**3.92**	**360**	P	**Pn**	**14 32 13.0**	**+1.0**
JHJ2				S	**S**	**14 33 09.1**	**-0.1**
JHJ	**Hachijo jima 2**	**3.93**	**359**	P	**Pn**	**14 32 12.8**	**+0.7**
	23nm,0.3s,baz=83,slow=17,SNR=18						
JHJ				S	**S**	**14 33 07.1**	**-2.2**
	18nm,0.3s,baz=73,slow=22,SNR=4.2						
JKO	**Kozu shima**	**5.03**	**353**	P	**Pn**	**14 32 23.9**	**+0.8**
BSO1	**Boso 1**	**5.54**	**10**	P	**Pn**	**14 32 29.3**	**+0.7**
BSO1				S	**S**	**14 33 38.2**	**-1.3**
JIE	**Ise**	**5.84**	**334**	P	**Pn**	**14 32 33.9**	**+2.1**
JIE				S	**S**	**14 33 46.1**	**+0.7**
JOD2	**Odawara 2**	**6.10**	**354**	P	**Pn**	**14 32 35.1**	**+0.5**
JRY	**Ryogami san**	**6.86**	**354**	P	**Pn**	**14 32 43.4**	**+0.3**
JRY				*e*S	**S**	**14 34 02.7**	**-3.5**
MJAR	**Matsushiro Arr**	**7.47**	**350**	P	**Pn**	**14 32 49.7**	**-0.3**
	0.6nm,0.3s,baz=185,slow=14,SNR=9.7						
MJAR				S	**S**	**14 34 16.0**	**-2.8**
	0.5nm,0.3s,baz=278,slow=4.7,SNR=5.4						
MAJO	**Matsushiro**	**7.47**	**350**	*e*Pn	**Pn**	**14 32 50.0**	**0.0**
MAT	**Matsushiro**	**7.47**	**350**	P	**Pn**	**14 32 49.8**	**-0.2**
MAT				S	**S**	**14 34 15.7**	**-3.1**
MAT	**Matsushiro**	**7.47**	**350**	P	**Pn**	**14 32 50.4**	**+0.4**
MAT				*e*S	**S**	**14 34 17.2**	**-1.6**
JHS	**Saijyo**	**8.13**	**317**	P	**Pn**	**14 32 59.7**	**+2.0**
JMK	**Ichinoseki**	**9.81**	**6**	P	**Pn**	**14 33 18.6**	**+1.5**
KSRS	**Korea Array**	**12.93**	**313**	P	**P**	**14 33 52.4**	**+0.7**
	0.7nm,0.3s,baz=128,slow=10,SNR=24						
ERM	**Erimo**	**13.09**	**11**	*e*P	**P**	**14 33 56.0**	**+2.7**
ASAJ	**Asahikawa**	**15.07**	**8**	P	**P**	**14 34 16.4**	**+1.5**
	0.4nm,0.3s,baz=188,slow=11,SNR=4.8						
ULN	**Ulaanbaatar**	**31.39**	**316**	*e*P	**P**	**14 36 48.0**	**+0.2**
	7.5nm,1.0s,mb4.0						
SONM	**Songino Array**	**31.78**	**315**	P	**P**	**14 36 51.5**	**+0.3**
	2.6nm,0.4s,mb3.9,baz=118,slow=7.8,SNR=20						
CMAR	**Chiang Mai Arr**	**38.73**	**263**	P	**P**	**14 37 49.7**	**-0.4**
	0.8nm,0.6s,mb3.2,baz=84,slow=4.7,SNR=3.8						
ZALV	**Zalesovo Beam**	**46.56**	**318**	P	**P**	**14 38 51.4**	**-0.3**
	2.8nm,0.4s,mb4.0,baz=95,slow=7.4,SNR=13						
ZALV				PcP	PcP	14 40 18.1	-0.4
	1.4nm,0.4s,baz=96,slow=4.5,SNR=5.0						
MK31	**Makanchi Array**	**47.56**	**308**	*e*P	**P**	**14 38 59.0**	**-0.4**
MKAR	**Makanchi Array**	**47.56**	**308**	P	**P**	**14 38 59.0**	**-0.4**
	1.6nm,0.3s,mb3.8,baz=83,slow=10,SNR=49						
MKAR				PcP	PcP	14 40 21.8	-0.5
	0.8nm,0.5s,baz=90,slow=8.5,SNR=5.2						
FITZ	**Fitzroy Crossi**	**48.96**	**198**	P	**P**	**14 39 11.0**	**+0.7**
	2.1nm,0.5s,mb3.7,baz=16,slow=6.4,SNR=12						
WRAB	**Tennant Creek**	**49.11**	**187**	*e*P	**P**	**14 39 11.3**	**-0.1**
	1.4nm,0.5s,mb3.5						
WRA	**Warramunga Arr**	**49.12**	**187**	P	**P**	**14 39 11.6**	**+0.1**
	1.4nm,0.5s,mb3.5,baz=2.3,slow=7.8,SNR=15						
WRA	**Warramunga Arr**	**49.12**	**187**	P	**P**	**14 39 11.6**	**+0.1**
KURK	**Kurchatov**	**50.05**	**313**	P	**P**	**14 39 17.7**	**-0.4**
	7.2nm,0.4s,mb4.3,baz=92,slow=7.8,SNR=41						
ASAR	**Alice Springs**	**52.85**	**187**	P	**P**	**14 39 38.4**	**-0.4**
	0.4nm,0.6s,mb2.8,baz=4.2,slow=6.7,SNR=5.8						
BVAR	**Borovoye Array**	**55.11**	**316**	P	**P**	**14 39 54.6**	**0.0**
	6.8nm,0.4s,mb4.2,baz=91,slow=7.5,SNR=47						
BVAR				PcP	PcP	14 40 50.6	+0.1
	1.1nm,0.4s,baz=109,slow=3.0,SNR=4.8						
BRVK	**Borovoye**	**55.17**	**316**	*e*P	**P**	**14 39 55.2**	**+0.1**
	3.7nm,0.9s,mb3.6						
ARU	**Arti**	**61.51**	**321**	*e*P	**P**	**14 40 37.9**	**-0.4**
	10nm,0.9s,mb4.3						
ABKAR	**Akbulak array**	**62.16**	**313**	*e*P	**P**	**14 40 42.2**	**-0.5**
	3.1nm,0.4s,mb4.2						
AKTK	**Aktyubinsk**	**63.10**	**315**	P	**P**	**14 40 48.0**	**-0.8**
AKTO	**Aktyubinsk**	**63.10**	**315**	P	**P**	**14 40 48.0**	**-0.8**
	4.1nm,0.6s,mb4.1,baz=80,slow=12,SNR=14						
ARCES	**ARCESS Array B**	**70.89**	**340**	P	**P**	**14 41 37.5**	**+0.5**
	2.3nm,0.6s,mb3.9,baz=75,slow=9.2,SNR=15						
ARCES	**ARCESS Array B**	**70.89**	**340**	P	**P**	**14 41 37.5**	**+0.5**
JOF	**Joensuu**	**72.30**	**333**	*ep*	**P**	**14 41 44.5**	**-0.9**
	6.1nm,0.6s,mb4.3						
KAF	**Kangasniemi**	**74.70**	**333**	*ep*	**P**	**14 41 58.3**	**-0.9**
	3.5nm,0.5s,mb4.2						
FINES	**FINESS Array B**	**75.16**	**333**	P	**P**	**14 42 01.4**	**-0.4**
	2.6nm,0.4s,mb4.3,baz=64,slow=4.8,SNR=43						
FINES	**FINESS Array B**	**75.16**	**333**	P	**P**	**14 42 01.4**	**-0.4**
AKASG	**Malin Array Be**	**79.72**	**323**	P	**P**	**14 42 26.5**	**-0.5**
	1.4nm,0.4s,mb4.0,baz=50,slow=5.4,SNR=13						
HFS	**Hagfors**	**80.69**	**336**	P	**P**	**14 42 31.2**	**-0.8**
	3.3nm,0.6s,mb4.3,baz=72,slow=4.8,SNR=24						
NVAR	**Mina Array Bea**	**80.85**	**51**	P	**P**	**14 42 35.4**	**+2.2**
	0.3nm,0.5s,mb3.3,baz=303,slow=5.0,SNR=3.3						
NB2	**NORSAR Subarra**	**80.91**	**337**	P	**P**	**14 42 33.0**	**-0.1**
	comp=Z,1.4nm,0.5s,mb4.0,baz=50,slow=4.8						
NOA	**NORSAR Array B**	**80.91**	**337**	P	**P**	**14 42 32.4**	**-0.7**
	comp=Z,1.8nm,0.6s,mb4.0,baz=47,slow=4.8,SNR=9.6						
BRTR	**Keskin Array B**	**83.07**	**312**	P	**P**	**14 42 44.9**	**+0.2**
	comp=Z,1.5nm,0.6s,mb3.9,baz=83,slow=3.8,SNR=7.3						
TORD	**Torodi Ar. Bea**	**121.66**	**310**	PKP	PKPdf	14 49 08.9	-1.4
	comp=Z,0.3nm,0.7s,baz=34,slow=1.5,SNR=4.8						
BOSA	**Boshof**	**123.43**	**253**	PKP	PKPdf	14 49 15.7	+2.4
	comp=Z,6.2nm,1.1s,baz=315,slow=5.7,SNR=3.0						
LPAZ	**La Paz**	**151.28**	**70**	PKPbc	PKPbc	14 50 12.6	+2.4
	comp=Z,0.8nm,0.5s,baz=40,slow=3.4,SNR=6.2						
LPAZ	**La Paz**	**151.28**	**70**	*e*PKPbc	PKPbc	14 50 12.5	+2.4
CPUP	**Villa Florida**	**164.54**	**84**	PKP	PKPdf	14 50 21.2	+1.7
	comp=Z,0.2nm,0.3s,baz=23,slow=19,SNR=2.8						

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*IDC **06** 14:30:57.1±0.7, 1°.54N×128°.74E, h0km, mb4.2/13, mb1 4.2/15, mb1mx4.1/23, mbtmp4.2/15, ML3.7/2, MS3.1/3, Ms1 3.1/3, ms1mx2.6/31, Error ellipse: s-maj=28.2km s-min=13.5km az=81.0*
*NEIC **06** 14:30:58.4±0.4, 1°.54N×128°.82E, h10km, mb4.4/3, Error ellipse: s-maj=12.4km s-min=6.7km az=80.0*
*ISCJB **06** 14:31:03.0±1.0, 1°.47N±0°.05×128°.75E±0°.06, h64km±10km, mb4.3/17, Error ellipse: s-maj=10.9km s-min=7.8km az=154.0*
*DJA **06** 14:31:04, 1°.35N×128°.72E, h24km, MLv4.6/7*
ISC 06 14:31:04.8±0.9, 1°.44N±0°.05×128°.73E±0°.06, h61km±9km, n44, σ1§09/46, mb4.3/17, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.52**	**244**	P	**Pn**	**14 31 28.6**	**-1.2**
TNTI				S	**Sn**	**14 31 49.2**	**+0.6**
LBMI	**Labuha**	**2.41**	**211**	P	**Pn**	**14 31 41.1**	**-0.7**
LBMI				S	**Sn**	**14 32 09.8**	**-0.4**
MNI	**Manado**	**3.89**	**270**	P	**Pn**	**14 32 02.5**	**+0.4**
SGSI	**Sangihe**	**3.90**	**305**	P	**Pn**	**14 32 01.5**	**-0.7**
KMSI	**Cibinong**	**4.83**	**260**	P	**Pn**	**14 32 15.5**	**+0.6**
NLAI	**Namlea**	**4.93**	**199**	P	**Pn**	**14 32 16.1**	**-0.2**
AAI	**Ambon**	**5.12**	**186**	P	**Pn**	**14 32 24.5**	**+5.5**
LUWI	**Luwuk**	**6.45**	**248**	P	**Pn**	**14 32 40.9**	**+3.7**
MRSI	**Marisa**	**6.86**	**262**	P	**Pn**	**14 32 44.4**	**+1.6**
	0.1nm358nm40nm,0.8s						
BAKI	**Biak**	**7.83**	**110**	P	**Pn**	**14 32 57.1**	**+1.1**
	0.2nm1μm54nm,0.6s						
KDI	**Kendari**	**8.13**	**229**	P	**Pn**	**14 33 00.4**	**+0.2**
	42nm,0.9s						
TTSI	**Tana Toraja**	**9.96**	**243**	P	**Pn**	**14 33 23.9**	**-1.4**
	572nm45nm,0.9s						
SPSI	**Sidrap Palu**	**10.45**	**239**	P	**Pn**	**14 33 32.1**	**+0.2**
MYLDM	**Lahad Datu**	**10.87**	**290**	P	**Pn**	**14 33 40.1**	**+2.5**
KAPI	**Kappang**	**11.03**	**234**	Pn	**Pn**	**14 33 38.9**	**-0.9**
	1.0nm,0.3s,baz=127,slow=14,SNR=4.3						
KAPI				LR	LR	14 37 59.2	
	comp=Z,52nm,21.0s,baz=2.9,slow=38						
KAPI	**Kappang**	**11.03**	**234**	*e*P	**Pn**	**14 33 39.0**	**-0.8**
KAPI				LR	LR	14 37 59.2	
KAKA	**Kakadu**	**14.54**	**165**	*e*P	**Pn**	**14 34 22.8**	**-4.4**
KSM	**Kuching**	**18.42**	**270**	*e*P	**Pn**	**14 35 14.8**	**-1.1**
	13nm,0.8s						
FITZ	**Fitzroy Crossi**	**19.66**	**189**	P	**Pn**	**14 35 29.3**	**-1.4**
	0.1nm,0.3s,baz=101,slow=18,SNR=3.9						
FITZ	**Fitzroy Crossi**	**19.66**	**189**	*e*P	**Pn**	**14 35 29.1**	**-1.6**
WRAB	**Tennant Creek**	**21.95**	**166**	*e*P	**P**	**14 35 53.5**	**+0.1**
	17nm,1.1s,mb4.4						
WRA	**Warramunga Arr**	**21.95**	**166**	P	**P**	**14 35 53.3**	**-0.2**
	3.2nm,0.5s,mb4.0,baz=345,slow=10,SNR=34						
ASAR	**Alice Springs**	**25.46**	**169**	P	**P**	**14 36 27.4**	**+0.3**
	2.6nm,0.6s,mb3.9,baz=351,slow=6.8,SNR=26						
CTA	**Charters Tower**	**27.44**	**142**	LR	LR	14 47 31.6	
	comp=Z,100nm,21.5s,baz=222,slow=36						
PSI	**Prapat**	**29.82**	**273**	P	**P**	**14 37 06.8**	**+0.5**
	2.2nm,0.3s,mb4.3,baz=326,slow=7.3,SNR=3.6						
STKA	**Stephens Creek**	**35.31**	**161**	P	**P**	**14 37 54.6**	**+0.5**
	4.2nm,0.6s,mb4.6,baz=335,slow=4.8,SNR=8.3						
KSRS	**Korea Array**	**35.84**	**359**	P	**P**	**14 37 58.0**	**-0.6**
	1.4nm,0.5s,mb4.2,baz=176,slow=9.5,SNR=10						
KSRS				LR	LR	14 50 15.8	
	comp=Z,25nm,21.4s,baz=5.0,slow=32						
MAJO	**Matsushiro**	**36.01**	**13**	P	**P**	**14 37 59.0**	**-0.9**
	4.0nm,0.6s,mb4.5						
MJAR	**Matsushiro Arr**	**36.01**	**13**	P	**P**	**14 37 58.5**	**-1.5**
	3.3nm,0.7s,mb4.4,baz=185,slow=9.4,SNR=19						
LZH	**Lanzhou**	**41.48**	**329**	*e*P	**P**	**14 38 47.5**	**+1.7**
LZH				pP	pP	14 38 52.5	-8.8
LZH				sP	sP	14 38 55.0	-13
LZH				pmax	pmax		
	comp=Z,25nm,1.0s,mb4.8						
LZH				pmax	pmax		
	comp=Z,98nm,4.4s						
HHC	**Hu-ho-hao-te**	**42.19**	**341**	*e*P	**P**	**14 38 49.1**	**-2.5**
HHC				S	**S**	**14 45 06.7**	**-0.6**
HHC				pmax	pmax		
	comp=Z,14nm,0.6s,mb4.8						
HHC				pmax	pmax		
	comp=Z,66nm,6.4s						
SHL	**Shillong**	**42.84**	**307**	*e*PKP	**P**	**14 39 00.0**	**+2.9**
ULN	**Ulaanbaatar**	**49.91**	**341**	*e*P	**P**	**14 39 52.2**	**+0.1**
SONM	**Songino Array**	**50.10**	**341**	P	**P**	**14 39 53.7**	**+0.2**
	comp=Z,0.4nm,0.4s,mb3.8,baz=156,slow=8.7,SNR=5.4						
PETK	**Petropavlovsk-**	**56.82**	**20**	P	**P**	**14 40 44.1**	**+1.4**
	comp=Z,1.1nm,0.6s,mb4.1,baz=184,slow=4.2,SNR=6.1						
MK31	**Makanchi Array**	**60.56**	**325**	*e*P	**P**	**14 41 09.1**	**+0.3**
MKAR	**Makanchi Array**	**60.56**	**325**	P	**P**	**14 41 09.0**	**+0.1**
	comp=Z,2.5nm,0.4s,mb4.7,baz=117,slow=8.2,SNR=39						
ZALV	**Zalesovo Beam**	**63.52**	**333**	P	**P**	**14 41 27.0**	**-1.5**
	comp=Z,0.9nm,0.5s,mb4.1,baz=131,slow=7.9,SNR=3.3						
KURK	**Kurchatov**	**64.73**	**327**	P	**P**	**14 41 36.3**	**-0.3**
	comp=Z,4.4nm,0.5s,mb4.8,baz=127,slow=6.0,SNR=22						
KURK	**Kurchatov**	**64.73**	**327**	*e*P	**P**	**14 41 36.1**	**-0.5**
BVAR	**Borovoye Array**	**70.31**	**327**	P	**P**	**14 42 11.3**	**-0.5**
	comp=Z,1.1nm,0.6s,mb3.9,baz=174,slow=4.3,SNR=4.5						
BRVK	**Borovoye**	**70.39**	**327**	*e*P	**P**	**14 42 11.2**	**-0.9**
SBA	**Scott Base**	**81.82**	**172**	*e*P	**P**	**14 43 18.8**	**+2.2**
BRTR	**Keskin Array B**	**93.01**	**310**	P	**P**	**14 44 13.3**	**+1.4**
	comp=Z,0.7nm,0.9s,mb4.1,baz=54,slow=4.9,SNR=3.7						

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*ISCJB **06** 14:36:46.7±0.6, 38°.00N±0°.05×21°.55E±0°.03, h29km±4km, Error ellipse: s-maj=8.7km s-min=4.2km az=172.5*
*CSEM **06** 14:36:46.6±0.1, 38°.01N×21°.55E, h30km, MD2.5, Error ellipse: s-maj=3.4km s-min=2.0km az=171.0*
*ATH **06** 14:36:46.0, 37°.98N×21°.52E, h26km±1km, MD2.5/4*
*THE **06** 14:36:47.0, 38°.00N×21°.55E, h22km±4km, ML2.5/3, Error ellipse: s-maj=4.9km s-min=0.4km az=12.0*
ISC 06 14:36:46.7±0.6, 37°.98N±0°.06×21°.55E±0°.03, h28km±5km, n22, σ0§59/41, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.10**	**319**	*e*PB	**Pb**	**14 36 50.9**	**-0.7**
RLS				*e*SB	**Sb**	**14 36 54.2**	**-0.8**
UPR	**University Cam**	**0.35**	**32**	*e*PB	**Pb**	**14 36 54.4**	**-0.3**
UPR				*e*SB	**Sb**	**14 37 00.7**	**+0.6**
UPR	**University Cam**	**0.35**	**32**	*e*Pb	**Pb**	**14 36 54.4**	**-0.3**
UPR				*e*Sb	**Sb**	**14 37 00.7**	**+0.6**
LAKA	**Lakka**	**0.43**	**53**	P	**Pb**	**14 36 55.5**	**-0.3**
LAKA				S	**Sb**	**14 37 02.1**	**+0.1**
LAKA	**Lakka**	**0.43**	**53**	P	**Pb**	**14 36 55.5**	**-0.3**
LAKA				S	**Sb**	**14 37 02.1**	**+0.1**
EFP	**Efpalio**	**0.53**	**32**

NIED **06** *14:54:00, 45°.50N×151°.20E, h5km, Mw4.0 Best double couple: M0=1.20000×10^15 NP1:φ=345.00000°, δ85.00000°, λ80.00000°. NP2:φ=232.00000°, δ11.00000°, λ156.00000°.*
JMA **06** *14:54:56.5±0.9, 45°.52N×151°.23E, h30km, M4.3*
IDC **06** *14:55:02.5±1.1, 46°.42N×150°.10E, h0km, mb3.7/7, mb1 3.8/10, mb1mx3.6/27, mbtmp3.6/10, ML3.2/3, Error ellipse: s-maj=30.5km s-min=23.3km az=121.0*
NEIC **06** *14:55:03.6±1.0, 46°.35N×150°.01E, h10km, Error ellipse: s-maj=28.1km s-min=12.7km az=127.0*

ISC 06 14:55:01.6±3.2, 46°.0N±0°.2×150°.4E±0°.3, h14km±24km, n27, σ1°35/25, mb3.7/7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**4.23**	**234**	P	Px	14 56 01.5	
NEM2				*e*S	Sx	14 56 49.6	
JRA	**Rausu**	**4.27**	**244**	P	**Pn**	**14 56 06.4**	**+0.2**
JNK	**Nakash**	**4.71**	**242**	P	**Pn**	**14 56 11.1**	**-1.1**
JNK				*e*S	Sx	14 57 06.7	
JTKR	**Abashiri--Toko**	**5.04**	**249**	P	**Pn**	**14 56 17.8**	**+1.1**
JAK	**Akkeshi**	**5.06**	**236**	P	Px	14 56 13.1	
JMP	**Maruseppu**	**5.38**	**251**	P	**Pn**	**14 56 23.5**	**+2.1**
JAR	**Ashorobuto**	**5.45**	**243**	P	**Pn**	**14 56 21.9**	**-0.4**
JAR				*e*S	**Sn**	**14 57 24.5**	**-0.2**
JOB	**Onbets**	**5.62**	**239**	P	**Pn**	**14 56 22.4**	**-2.4**
JKK2	**Kamakawa 2**	**5.84**	**252**	P	**Pn**	**14 56 29.7**	**+2.0**
ASAJ	**Asahikawa**	**5.85**	**254**	Pn	**Pn**	**14 56 30.1**	**+2.2**
	0.7nm,0.3s,baz=82,slow=20,SNR=10						
ASAJ				Sn	Sx	14 57 33.2	
	0.4nm,0.3s,baz=68,slow=21,SNR=1.7						
JCH	**Churui**	**6.07**	**239**	P	**Pn**	**14 56 27.8**	**-3.1**
ERM	**Erimo**	**6.56**	**236**	*e*P	**Pn**	**14 56 37.5**	**-0.1**
	41nm,0.6s						
JNBK	**Urakawa-nobuka**	**6.64**	**239**	P	**Pn**	**14 56 35.1**	**-3.6**
JNB	**Noboribetsu**	**7.59**	**246**	P	**Pn**	**14 56 51.6**	**-0.2**
JKB	**Kayabe**	**7.91**	**242**	P	**Pn**	**14 56 53.5**	**-2.6**
PETK	**Petropavlovsk-**	**8.57**	**31**	Pn	**Pn**	**14 57 04.5**	**-0.6**
	0.2nm,0.3s,baz=257,slow=13,SNR=3.2						
JANG	**Nango**	**8.58**	**233**	P	Px	14 56 58.4	
JANG				*e*S	Sx	14 58 26.8	
MJAR	**Matsushiro Arr**	**13.14**	**229**	Pn	**Pn**	**14 58 12.1**	**+4.4**
	0.1nm,0.3s,baz=48,slow=14,SNR=4.0						
MKAR	**Makanchi Array**	**45.64**	**297**	P	**P**	**15 03 22.0**	**+0.6**
	0.8nm,0.8s,mb3.7,baz=72,slow=10,SNR=6.0						
MKAR	**Makanchi Array**	**45.54**	**297**	P	**P**	**15 03 22.0**	**+0.6**
KURK	**Kurchatov**	**46.24**	**303**	P	**P**	**15 03 26.6**	**+0.6**
	0.4nm,0.5s,mb3.6,baz=71,slow=8.5,SNR=3.6						
FINES	**FINESS Array B**	**63.94**	**334**	P	**P**	**15 05 33.5**	**-0.1**
	1.1nm,0.9s,mb3.9,baz=343,slow=4.4,SNR=3.5						
WRA	**Warramunga Arr**	**67.20**	**196**	P	**P**	**15 06 00.4**	**+5.3**
	0.8nm,0.6s,mb3.9,baz=15,slow=6.8,SNR=7.8						
NOA	**NORSAR Array B**	**68.35**	**340**	P	**P**	**15 06 01.6**	**-0.4**
	0.5nm,0.5s,mb3.8,baz=33,slow=7.4,SNR=3.6						
AKASG	**Malin Array Be**	**71.14**	**325**	P	**P**	**15 06 17.9**	**-1.4**
	0.8nm,0.6s,mb3.9,baz=40,slow=6.2,SNR=3.5						
BUR08	**Bucovina Ar. S**	**75.18**	**325**	*e*P	**P**	**15 06 42.0**	**-1.2**
TXAR	**Lajitas Array**	**79.50**	**59**	P	**P**	**15 07 11.5**	**+3.7**
	0.1nm,0.5s,mb3.0,baz=309,slow=5.1,SNR=3.8						

IDC **06** *14:58:32.8±1.5, 36°.95N×29°.09E, h0km, mb3.9/1, mb1 3.8/5, mb1mx3.4/26, mbtmp3.6/5, ML3.4/4, MS2.6/1, Ms1 2.6/1, ms1mx2.0/39, Error ellipse: s-maj=26.6km s-min=23.4km az=112.0*
CSEM **06** *14:58:33.7±0.1, 37°.04N×29°.19E, h2km, MD3.5, Error ellipse: s-maj=3.4km s-min=2.6km az=174.0*
ISK **06** *14:58:33.2, 37°.05N×29°.18E, h6km, MD3.5*
ISCJB **06** *14:58:33.7±0.5, 37°.00N±0°.02×29°.19E±0°.03, h7km±4km, Error ellipse: s-maj=4.1km s-min=3.4km az=173.4*
DDA **06** *14:58:34.2, 37°.02N×29°.19E, h4km, Md3.4*
THE **06** *14:58:36.5, 37°.02N×29°.28E, h18km±21km, Error ellipse: s-maj=22.7km s-min=5.0km az=24.0*

ISC 06 14:58:34.4±0.5, 37°.00N±0°.02×29°.19E±0°.02, h9km±4km, n89, σ0°94/111, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.29**	**58**	PG	**Pg**	**14 58 39.3**	**-0.8**
GLHS				*e*SG	**Sg**	**14 58 43.9**	**-0.1**
GLHS	**Glhisar (BURDU**	**0.29**	**58**	*i*Pg	**Pg**	**14 58 39.3**	**-0.8**
GLHS				*e*Sg	**Sg**	**14 58 43.9**	**-0.1**
GOLH	**Golhisar**	**0.38**	**51**	*i*P	**Pg**	**14 58 41.0**	**-0.7**
GOLH				*i*S	**Sg**	**14 58 48.2**	**+1.4**
GOLH	**Golhisar**	**0.38**	**51**	*i*P	**Pg**	**14 58 41.0**	**-0.8**
GOLH				*i*S	**Sg**	**14 58 48.2**	**+1.4**
TURN	**Turunc**	**0.49**	**255**	*i*P	**Pg**	**14 58 47.9**	**+4.1**
TURN				*i*S	**Sg**	**14 59 00.1**	**+10**
ELL	**Elmali**	**0.63**	**114**	*e*PG	**Pg**	**14 58 46.2**	**-0.3**
ELL				*e*SG	**Sg**	**14 58 56.2**	**+1.5**
ELL	**Elmali**	**0.63**	**114**	*e*Pg	**Pg**	**14 58 46.2**	**-0.3**
ELL				*e*Sg	**Sg**	**14 58 56.2**	**+1.5**
DNZL	**Cakiroluk**	**0.70**	**350**	*i*P	**Pg**	**14 58 46.6**	**-1.2**
DNZL				*i*S	**Sg**	**14 58 58.5**	**+1.6**
DNZL	**Cakiroluk**	**0.70**	**350**	*i*P	**Pg**	**14 58 46.6**	**-1.2**
DNZL				*i*S	**Sg**	**14 58 58.5**	**+1.6**
YER	**Yerkesik**	**0.74**	**281**	*e*PG	**Pg**	**14 58 47.4**	**-1.2**
YER	**Yerkesik**	**0.74**	**281**	*e*Pg	**Pg**	**14 58 47.4**	**-1.2**
DENT	**Denizli**	**0.76**	**350**	*e*PG	**Pg**	**14 58 47.3**	**-1.8**
DENT	**Denizli**	**0.76**	**350**	*e*Pg	**Pg**	**14 58 47.3**	**-1.8**
AKAS	**Kas**	**0.84**	**156**	*i*P	**Pg**	**14 58 50.2**	**-0.3**
AKAS				*i*S	**Sg**	**14 59 06.3**	**+5.0**
AKAS	**Kas**	**0.84**	**156**	*i*P	**Pg**	**14 58 50.2**	**-0.3**
ARG	**Arkhangelos**	**1.16**	**228**	*e*P	**Pb**	**14 58 56.5**	**-0.2**
ARG	**Arkhangelos**	**1.16**	**228**	P	**Pb**	**14 58 54.6**	**-2.1**
ARG				S	**Sg**	**14 59 13.3**	**+1.5**
ARG	**Arkhangelos**	**1.16**	**228**	P	**Pb**	**14 58 54.6**	**-2.1**
ARG				S	**Sg**	**14 59 13.3**	**+1.5**
MLSB	**Milas**	**1.17**	**285**	*e*PN	**Pn**	**14 58 55.6**	**-1.3**
MLSB	**Milas**	**1.17**	**285**	*e*Pn	**Pn**	**14 58 55.6**	**-1.3**
ANTB	**Antalya**	**1.18**	**95**	*e*PN	**Pn**	**14 58 56.4**	**-0.6**
ANTB	**Antalya**	**1.18**	**95**	*e*Pn	**Pn**	**14 58 56.4**	**-0.6**
BCK	**Bucak**	**1.21**	**67**	*e*PN	**Pn**	**14 58 56.6**	**-0.8**
BCK	**Bucak**	**1.21**	**67**	*e*Pn	**Pn**	**14 58 56.6**	**-0.9**
AYDN	**Tasoluk**	**1.24**	**303**	*i*P	**Pn**	**14 58 57.0**	**-0.9**
AYDN				*i*S	**Sb**	**14 59 15.3**	**+1.3**
AYDN	**Tasoluk**	**1.24**	**303**	*i*P	**Pn**	**14 58 57.0**	**-0.9**
AYDN				*i*S	**Sb**	**14 59 15.3**	**+1.3**
DAT	**Datca**	**1.32**	**259**	*e*PN	**Pn**	**14 58 58.9**	**-0.2**
DAT	**Datca**	**1.32**	**259**	*e*Pn	**Pn**	**14 58 58.9**	**-0.2**
KHL	**Karahalli**	**1.34**	**11**	*e*PN	**Pn**	**14 58 58.5**	**-0.9**
KHL	**Karahalli**	**1.34**	**11**	*e*Pn	**Pn**	**14 58 58.5**	**-0.9**
BDRM	**Kayabasi**	**1.40**	**273**	*i*P	**Pn**	**14 58 59.9**	**-0.2**
BDRM				*i*S	**Sb**	**14 59 17.8**	**-0.9**
BDRM	**Kayabasi**	**1.40**	**273**	*i*P	**Pn**	**14 58 59.9**	**-0.2**
BDRM				*i*S	**Sb**	**14 59 17.8**	**-0.9**
BODT	**Bodrum**	**1.51**	**273**	*e*PN	**Pn**	**14 59 01.4**	**-0.2**
BODT	**Bodrum**	**1.51**	**273**	*e*Pn	**Pn**	**14 59 01.4**	**-0.2**
SUTC	**Sutluce-Ispart**	**1.52**	**71**	*e*PN	**Pn**	**14 59 01.6**	**-0.2**
SUTC	**Sutluce-Ispart**	**1.52**	**71**	*e*Pn	**Pn**	**14 59 01.6**	**-0.2**
KULA	**Kula-Manisa**	**1.57**	**345**	*e*PN	**Pn**	**14 59 01.9**	**-0.6**
KULA	**Kula-Manisa**	**1.57**	**345**	*e*Pn	**Pn**	**14 59 01.9**	**-0.5**
NIS1	**Nisyros Isl.**	**1.67**	**257**	P	**Pn**	**14 59 04.8**	**+1.0**
NIS1	**Nisyros Isl.**	**1.67**	**257**	P	**Pn**	**14 59 04.8**	**+1.0**
SHUT	**Suhut-Afyon**	**1.89**	**34**	*e*PN	**Pn**	**14 59 06.5**	**-0.3**
SHUT	**Suhut-Afyon**	**1.89**	**34**	*e*Pn	**Pn**	**14 59 06.5**	**-0.3**
SMG	**Samos**	**2.00**	**291**	*e*P	**Pn**	**14 59 08.0**	**-0.4**
IZM	**Izmir**	**2.07**	**313**	*e*PN	**Pn**	**14 59 09.0**	**-0.3**
GDZ	**Gediz**	**2.10**	**6**	*i*P	**Pn**	**14 59 10.4**	**+0.7**
GDZ				*i*S	**Sn**	**14 59 36.6**	**+0.7**
GDZ	**Gediz**	**2.10**	**6**	*i*P	**Pn**	**14 59 10.4**	**+0.7**
GDZ				*i*S	**Sn**	**14 59 36.6**	**+0.7**
AKHS	**Akhisar**	**2.17**	**330**	*i*P	**Pn**	**14 59 10.2**	**-0.5**
AKHS				*i*S	**Sn**	**14 59 37.8**	**+0.1**
AKHS	**Akhisar**	**2.17**	**330**	*i*P	**Pn**	**14 59 10.1**	**-0.6**
AKHS				*i*S	**Sn**	**14 59 37.8**	**+0.1**
AKS	**Akhisar**	**2.17**	**330**	*e*PN	**Pn**	**14 59 10.1**	**-0.6**
AKS	**Akhisar**	**2.17**	**330**	*e*Pn	**Pn**	**14 59 10.1**	**-0.6**
ALT	**Altintas**	**2.17**	**19**	*e*PN	**Pn**	**14 59 10.3**	**-0.5**
ALT	**Altintas**	**2.17**	**19**	*e*Pn	**Pn**	**14 59 10.3**	**-0.5**
KARP	**Karpathos**	**2.19**	**229**	*e*P	**Pn**	**14 59 11.5**	**+0.5**
BLCB	**Balcova**	**2.19**	**310**	*e*PN	**Pn**	**14 59 10.6**	**-0.4**
BLCB	**Balcova**	**2.19**	**310**	P	**Pn**	**14 59 10.6**	**-0.5**
BLCB	**Balcova**	**2.19**	**310**	P	**Pn**	**14 59 10.6**	**-0.5**
HDMB	**Hadim**	**2.64**	**90**	*e*PN	**Pn**	**14 59 17.7**	**+0.5**
HDMB	**Hadim**	**2.64**	**90**	*e*Pn	**Pn**	**14 59 17.7**	**+0.6**
KONT	**Konya--Tatoy**	**2.69**	**69**	*e*PN	**Pn**	**14 59 18.2**	**+0.3**
KONT	**Konya--Tatoy**	**2.69**	**69**	*e*Pn	**Pn**	**14 59 18.2**	**+0.3**
LADK	**Ladik-KONYA**	**2.79**	**64**	*e*PN	**Pn**	**14 59 19.5**	**+0.3**
LADK	**Ladik-KONYA**	**2.79**	**64**	*e*Pn	**Pn**	**14 59 19.5**	**+0.3**
BALB	**Balikesir**	**2.83**	**339**	*e*PN	**Pn**	**14 59 19.7**	**-0.1**
BALB	**Balikesir**	**2.83**	**339**	*e*Pn	**Pn**	**14 59 19.7**	**-0.1**
KIZT	**Kizilcal**	**2.83**	**48**	*e*PN	**Pn**	**14 59 20.1**	**+0.3**
KIZT	**Kizilcal**	**2.83**	**48**	*e*Pn	**Pn**	**14 59 20.1**	**+0.3**
APE	**Apeiranthos**	**2.93**	**272**	*e*PN	**Pn**	**14 59 22.1**	**+0.9**
APE	**Apeiranthos**	**2.93**	**272**	*e*Pn	**Pn**	**14 59 22.1**	**+0.9**
ZKR	**Zakros**	**3.06**	**233**	P	**Pn**	**14 59 24.8**	**+1.9**
ZKR	**Zakros**	**3.06**	**233**	P	**Pn**	**14 59 24.8**	**+1.9**
GONE	**Gonen-Balikesi**	**3.26**	**339**	*e*PN	**Pn**	**14 59 25.9**	**+0.1**
GONE	**Gonen-Balikesi**	**3.26**	**339**	*e*Pn	**Pn**	**14 59 25.9**	**+0.2**
NPS	**Neapolis**	**3.38**	**240**	*e*P	**Pn**	**14 59 27.5**	**+0.2**
LAST	**Lasithi**	**3.52**	**240**	P	**Pn**	**14 59 30.3**	**+1.0**
LAST	**Lasithi**	**3.52**	**240**	P	**Pn**	**14 59 30.3**	**+1.0**
IKL	**Isikli**	**3.69**	**101**	*e*PN	**Pn**	**14 59 32.9**	**+1.2**
IKL	**Isikli**	**3.69**	**101**	*e*Pn	**Pn**	**14 59 32.9**	**+1.2**
CSS	**Prodhromos**	**3.92**	**120**	P	**Pn**	**14 59 34.1**	**-0.8**
CSS	**Prodhromos**	**3.92**	**120**	P	**Pn**	**14 59 34.1**	**-0.8**
GADA	**Gvkgeada**	**4.10**	**322**	*e*PN	**Pn**	**14 59 37.2**	**0.0**
GADA	**Gvkgeada**	**4.10**	**322**	*e*Pn	**Pn**	**14 59 37.2**	**0.0**
LIA	**Limnos Island**	**4.27**	**314**	*e*P	**Pn**	**14 59 40.0**	**+0.4**
BRTR	**Keskin Array B**	**4.43**	**51**	Pn	**Pn**	**14 59 43.1**	**+1.4**
	0.8nm,0.3s,baz=229,slow=15,SNR=21						
BRTR				Sn	**Sn**	**15 00 36.7**	**+3.3**
	0.8nm,0.3s,baz=220,slow=24,SNR=10						
KARN	**Karanos**	**4.55**	**251**	P	**Pn**	**14 59 45.1**	**+1.6**
KARN	**Karanos**	**4.55**	**251**	P	**Pn**	**14 59 45.1**	**+1.6**
MMAI	**Mount Meron Ar**	**6.46**	**126**	Pn	**Pn**	**15 00 09.2**	**-0.6**
	2.7nm,0.3s,baz=308,slow=12,SNR=11						
MMAI				Sn	**Sn**	**15 01 21.5**	**-2.2**
	1.4nm,0.3s,baz=256,slow=41,SNR=3.3						
EIL	**Elat**	**8.75**	**145**	Pn	**Pn**	**15 00 41.1**	**-0.1**
	1.4nm,0.3s,baz=343,slow=19,SNR=3.7						
EIL				LR	LR	15 04 13.7	
	comp=Z,42nm,20.3s,baz=116,slow=39						
MLR	**Muntele Rosu**	**8.82**	**345**	Pn	**Pn**	**15 00 43.2**	**+1.1**
	0.1nm,0.3s,baz=146,slow=18,SNR=2.5						
TORD	**Torodi Ar. Bea**	**34.19**	**233**	P	**P**	**15 05 19.2**	**-1.1**
	0.7nm,0.4s,baz=33,slow=8.7,SNR=14						

NIED **06** *15:00:00, 45°.40N×151°.50E, h32km, Mw4.4 Best double couple: M0=4.45000×10^15 NP1:φ=31.00000°, δ50.00000°, λ92.00000°. NP2:φ=207.00000°, δ40.00000°, λ87.00000°.*
IDC **06** *15:00:26.6±0.6, 45°.34N×150°.90E, h0km, mb4.2/26, mb1 4.3/29, mb1mx4.3/35, mbtmp4.2/29, ML3.5/3, MS3.7/16, Ms1 3.8/16, ms1mx3.5/37, Error ellipse: s-maj=16.8km s-min=13.8km az=136.0*
JMA **06** *15:00:26.5±0.6, 45°.37N×151°.55E, h30km, M4.8*
ISCJB **06** *15:00:27.9±1.1, 45°.12N±0°.05×151°.16E±0°.06, h25km±7km, mb4.6/76, MS3.9/21, Error ellipse: s-maj=9.8km s-min=3.9km az=142.8*
MOS **06** *15:00:28.7±1.0, 45°.24N×151°.09E, h27km, mb4.9/21, Error ellipse: s-maj=9.2km s-min=5.7km az=108.2*
SKHL **06** *15:00:29.2±1.8, 45°.10N×151°.28E, h34km±3km, mb5.9/1, Ms3.9/2, msh5.0/2*
BJI **06** *15:00:30.6, 45°.32N×151°.16E, h45km, mB4.7/16, mb4.5/27, Ms4.1/11, Ms7 3.9/11*
NEIC **06** *15:00:31.5±1.7, 45°.29N×150°.94E, h32km±11km, mb4.8/19, MS4.0/2, Error ellipse: s-maj=8.3km s-min=5.8km az=136.0*
SZGRF **06** *15:00:33.4, 45°.25N×150°.40E, h33km, mb4.8, Kuril Islands, Russia*

ISC 06 15:00:31.0±1.1, 45°.19N±0°.04×151°.18E±0°.05, h34km±7km, n242, σ1°06/265, mb4.6/75, MS3.9/21, 17C-20D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.34**	**272**	*e*PN	**Pn**	**15 01 05.5**	**-1.6**
KUR				pmax	pmax		
	comp=N,210nm,0.8s						
KUR				pmax	pmax		
	comp=E,320nm,0.8s						
KUR				pmax	pmax		
	comp=Z,540nm,0.8s						
KUR	**Kuril'sk**	**2.34**	**272**	*e*P	**Pn**	**15 01 05.5**	**-1.6**
KUR				AMB	AMB	15 01 17.2	
	comp=Z,210nm,0.8s						
KUR				AMB	AMB	15 01 17.2	
	comp=Z,320nm,0.8s						
KUR				AMB	AMB	15 01 17.2	
	comp=Z,540nm,0.8s						
KUR				A		15 01 40.0	
	comp=Z,5μm,2.0s						
KUR				A		15 01 40.0	
	comp=Z,2μm,2.0s						
KUR				A		15 01 43.0	
	comp=Z,2μm,0.6s						
KUR				A		15 01 43.0	
	comp=Z,1μm,0.6s						
YUK	**Yuzh-Kuril'sk**	**3.97**	**255**	*i*PN	**Pn**	**15 01 30.1**	**+0.7**
YUK				*i*S	**Sn**	**15 02 16.9**	**+2.1**
YUK				pmax	pmax		
	comp=Z,442nm,0.3s						
YUK				pmax	pmax		
	comp=N,231nm,0.3s						
YUK				pmax	pmax		
	comp=E,192nm,0.3s						
YUK				pmax	pmax		
	comp=Z,320nm,0.8s						
YUK				smax			
	comp=E,3μm,0.7s						
YUK				smax			
	comp=N,1μm,0.7s						
YUK				smax			
	comp=N,807nm,0.7s						
YUK				smax			
	comp=E,2μm,0.7s						
YUK				MLR	MLR		
	comp=N,340nm,13.0s						
YUK				MLR	MLR		
	comp=E,390nm,13.0s						
YUK				MLR	MLR		
	comp=Z,280nm,13.0s						
YUK	**Yuzh-Kuril'sk**	**3.97**	**255**	*i*P	**Pn**	**15 01 30.1**	**+0.7**
YUK				AMB	AMB	15 01 37.2	
	comp=Z,620nm,0.3s						
YUK				AMB	AMB	15 01 37.2	
	comp=Z,350nm,0.3s						
YUK				AMB	AMB	15 01 37.2	
	comp=Z,230nm,0.3s						
YUK				AMB	AMB	15 01 56.7	
	comp=Z,2μm,1.0s						
YUK				AMB	AMB	15 01 56.7	
	comp=Z,2μm,1.0s						
YUK				*i*S	**Sn**	**15 02 16.9**	**+2.1**
YUK				A		15 02 31.7	
	comp=Z,3μm,0.8s						
YUK				A		15 02 31.7	
	comp=Z,5μm,0.8s						
YUK				A		15 02 31.8	
	comp=Z,2μm,0.7s						
YUK				A		15 02 31.8	
	comp=Z,3μm,0.7s						
YUK				AMS	AMS	15 04 33.2	
	comp=Z,280nm,13.0s						
YUK				AMS	AMS	15 04 33.2	
	comp=Z,340nm,13.0s						
YUK				AMS	AMS	15 04 33.2	
	comp=Z,390nm,13.0s						
NEM2	**Nemuro 2**	**4.31**	**247**	P	**Pn**	**15 01 33.6**	**-0.5**
NEM2				*e*S	**Sn**	**15 02 22.1**	**-1.0**
JRA	**Rausu**	**4.51**	**256**	P	**Pn**	**15 01 38.3**	**+1.5**
JNK	**Nakash**	**4.90**	**253**	P	**Pn**	**15 01 42.9**	**+0.7**
JNK				*e*S	**Sn**	**15 02 38.9**	**+1.2**
JAK	**Akkeshi**	**5.16**	**247**	P	**Pn**	**15 01 45.1**	**-0.7**
JAK				*e*S	**Sn**	**15 02 44.1**	**0.0**
JTKR	**Abashiri--Toko**	**5.33**	**259**	P	**Pn**	**15 01 49.9**	**+1.7**
JTKR				*e*S	**Sn**	**15 02 57.5**	**+9.1**
JAR	**Ashorobuto**	**5.65**	**253**	P	**Pn**	**15 01 53.6**	**+1.1**
JAR				*e*S	**Sn**	**15 02 56.7**	**+0.5**
JMP	**Maruseppu**	**5.71**	**261**	P	**Pn**	**15 01 55.2**	**+1.9**
JOB	**Onbets**	**5.76**	**249**	P	**Pn**	**15 01 54.2**	**+0.1**
JOB				*e*S	**Sn**	**15 03 00.9**	**+1.9**
JSE	**Soyaes**	**6.09**	**271**	P	**Pn**	**15 02 00.8**	**+2.2**
YSS	**Yuzh-Sakhalins**	**6.12**	**290**	*e*PN	**Pn**	**15 02 01.0**	**+2.0**
YSS				MLR	MLR		
	comp=E,600nm,16.0s						
YSS				MLR	MLR		
	comp=Z,900nm,16.0s						
YSS	**Yuzh-Sakhalins**	**6.12**	**290**	P	**Pn**	**15 01 57.5**	**-1.5**
	comp=Z,30nm,0.6s						
YSS	**Yuzh-Sakhalins**	**6.12**	**290**	*e*P	**Pn**	**15 02 01.0**	**+2.0**
YSS				*e*S	**Sn**	**15 03 04.0**	**-3.8**
YSS				A		15 03 09.5	
	comp=Z,30nm,0.8s						
YSS				*e*LQ		15 03 34.0	
YSS				*e*LR	LR	15 03 54.0	
YSS				AMS	AMS	15 04 20.0	
	comp=Z,600nm,16.0s						
YSS				AMS	AMS	15 04 20.0	
	comp=Z,900nm,16.0s						
JKK2	**Kamakawa 2**	**6.17**	**261**	P	**Pn**	**15 02 01.6**	**+1.9**
JCH	**Churui**	**6.21**	**248**	P	**Pn**	**15 02 00.1**	**-0.1**
JCH				*e*S	**Sn**	**15 03 09.5**	**-0.4**
ASAJ	**Asahikawa**	**6.22**	**263**	Pn	**Pn**	**15 02 01.6**	**+1.3**
	comp=Z,4.5nm,0.3s,baz=88,slow=16,SNR=53						
ASAJ				Sn	**Sn**	**15 03 05.5**	**-4.6**
	baz=176,slow=16,SNR=1.7						
ASAJ				LR	LR	15 04 27.9	
	comp=Z,728nm,21.1s,baz=167,slow=40						
ASAJ	**Asahikawa**	**6.22**	**263**	PN	**Pn**	**15 02 01.6**	**+1.3**
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,728nm,21.1s						
ASAJ	**Asahikawa**	**6.22**	**263**	P	**Pn**	**15 02 02.6**	**+2.3**
SKR	**Severo-Kuril's**	**6.42**	**29**	*e*PN	**Pn**	**15 02 04.0**	**+0.9**
SKR				pmax	pmax		
	comp=Z,50nm,0.5s						
SKR				pmax	pmax		
	comp=Z,2μm,2.0s						
SKR				MLR	MLR		
	comp=N,1μm,14.0s						
SKR				MLR	MLR		
	comp=E,1μm,14.0s						
SKR				MLR	MLR		
	comp=Z,1μm,14.0s						
SKR	**Severo-Kuril's**	**6.42**	**29**	*e*P	**Pn**	**15 02 04.0**	**+0.9**
SKR				AMB	AMB	15 02 07.4	
	comp=Z,50nm,0.5s						
SKR				AMB	AMB	15 02 08.0	
	comp=Z,800nm,2.0s						
SKR				*e*S	**Sn**	**15 03 13.6**	**-1.5**
SKR				A		15 03 21.4	
	comp=Z,1μm,8.0s						
SKR				A		15 03 21.4	
	comp=Z,50nm,0.5s						
SKR				A		15 03 21.4	
	comp=Z,80nm,0.5s						
SKR				AMS	AMS	15 04 42.0	
	comp=Z,1μm,14.0s						
SKR				AMS	AMS	15 04 42.0	
	comp=Z,1μm,14.0s						
SKR				AMS	AMS	15 04 42.0	
	comp=Z,1μm,14.0s						
JFR	**Furan**	**6.50**	**255**	P	**Pn**	**15 02 05.6**	**+1.4**
JWK2	**Keihoku**	**6.55**	**274**	P	**Pn**	**15 02 08.8**	**+3.9**
ERM	**Erimo**	**6.63**	**244**	*e*PN	**Pn**	**15 02 07.1**	**+1.1**
JEM	**Erimo**	**6.63**	**244**	P	**Pn**	**15 02 06.8**	**+0.8**
JAB	**Ashibetsu**	**6.64**	**258**	P	**Pn**	**15 02 09.0**	**+2.9**
JNBK	**Urakawa-nobuka**	**6.76**	**248**	P	**Pn**	**15 02 07.1**	**-0.7**
JNBK				*e*S	**Sn**	**15 03 23.2**	**-0.3**
JBT2	**Biratori 2**	**6.80**	**252**	P	**Pn**	**15 02 08.5**	**+0.2**
JBT2				*e*S	**Sn**	**15 03 24.4**	**-0.1**
UGL	**Uglegorsk**	**7.33**	**305**	*e*P	**Pn**	**15 02 18.0**	**+2.4**
UGL				AMB	AMB	15 02 19.5	
	comp=Z,90nm,1.0s						
UGL				AMS	AMS	15 05 21.0	
	comp=Z,500nm,15.0s						
UGL				AMS	AMS	15 05 21.0	
	comp=Z,800nm,15.0s						
JEW	**Eniwo**	**7.40**	**255**	P	**Pn**	**15 02 18.6**	**+2.1**
JEW				*e*S	**Sn**	**15 03 46.2**	**+7.0**
JNB	**Noboribetsu**	**7.82**	**253**	P	**Pn**	**15 02 23.1**	**+0.8**
JNB				*e*S	**Sn**	**15 03 47.0**	**-2.6**
TYV	**Tymovskoe**	**8.05**	**318**	*e*P	**Pn**	**15 02 26.0**	**+0.5**
TYV				AMB	AMB	15 02 27.0	
	comp=Z,8.0nm,1.0s						
TYV				AMB	AMB	15 02 27.0	
	comp=Z,15nm,1.0s						
TYV				AMB	AMB	15 02 27.0	
	comp=Z,17nm,0.8s						
TYV				*e*S	**Sn**	**15 03 54.0**	**-1.3**
TYV				A		15 03 56.0	
	comp=Z,22nm,1.0s						
JKB	**Kayabe**	**8.07**	**249**	P	**Pn**	**15 02 25.1**	**-0.7**
JKB				*e*S	**Sn**	**15 03 49.3**	**-6.6**
JYM2	**Yakumo 2**	**8.42**	**252**	P	**Pn**	**15 02 30.4**	**-0.1**
JANG	**Nango**	**8.58**	**239**	P	**Pn**	**15 02 30.1**	**-2.6**
JANG				*e*S	**Sn**	**15 03 59.1**	**-9.2**
JTM	**Tenmabayashi**	**8.62**	**243**	P	**Pn**

BILL pmax pmax
comp=Z,5.0nm,1.4s,mb3.8
HHC Hu-ho-hao-te 29.08 276 *eP* **P 15 06 28.4 +0.2**
HHC PP PP 15 07 21.9 -12
HHC PcP PcP 15 09 39.2 +3.7
HHC S **S 15 11 11.1 -6.4**
HHC ScP ScP 15 13 14.1 -0.2
HHC PcS PcS 15 13 20.8 +2.6
HHC pmax pmax
comp=Z,26nm,0.7s,mb5.1
HHC pmax pmax
comp=Z,96nm,6.1s
HHC LR LR
comp=N,210nm,12.8s,MS4.2
HHC LR LR
comp=E,260nm,12.3s,MS4.2
HHC LR LR
comp=Z,360nm,12.5s,MS4.2
SONM Songino Array 30.61 291 P **P 15 06 40.2 -1.4**
comp=Z,1.6nm,0.8s,mb3.9,baz=85,slow=8.5,SNR=7.9
SONM LR LR 15 20 01.0
comp=Z,198nm,18.5s,MS3.8,baz=69,slow=39
WHN Wuhan 32.24 256 P **P 15 06 50.5 -5.6**
LZH Lanzhou 36.60 273 *eP* **P 15 07 34.5 +0.7**
LZH pP pP 15 07 48.5 +4.9
LZH sP sP 15 07 53.0 +5.4
LZH pmax pmax
comp=Z,25nm,1.0s,mb5.0
LZH pmax pmax
comp=Z,160nm,6.5s
GTA Gaotai 37.90 280 ⇑P **P 15 07 45.2 +0.4**
GTA PP PP 15 09 16.0 +4.5
GTA PcP PcP 15 10 01.9 +1.6
GTA S **S 15 13 35.6 +1.7**
GTA SS SS 15 16 12.8 -8.1
GTA pmax pmax
comp=Z,11nm,1.2s,mb4.5
GTA pmax pmax
comp=Z,100nm,4.8s
GTA LR LR
comp=N,130nm,17.6s,MS4.0
GTA LR LR
comp=E,130nm,16.4s,MS4.0
GTA LR LR
comp=Z,140nm,15.5s,MS3.9
ZALV Zalesovo Beam 42.45 307 P **P 15 08 20.7 -1.6**
comp=Z,0.6nm,0.3s,mb3.7,baz=66,slow=7.1,SNR=3.3
ZALV PcP PcP 15 10 13.8 -0.9
comp=Z,2.4nm,0.8s,baz=87,slow=1.1,SNR=8.4
ZALV LR LR 15 26 59.3
comp=Z,69nm,19.4s,MS3.5,baz=243,slow=38
ZALV Zalesovo Beam 42.45 307 P **P 15 08 20.7 -1.6**
ZALV 15 10 13.8
KMI Kunming 43.63 259 P **P 15 08 33.2 +1.0**
KMI pmax pmax
comp=Z,9.0nm,1.2s,mb4.4
INK Inuvik 43.69 31 P **P 15 08 34.0 +1.9**
comp=Z,1.5nm,0.5s,mb4.0,baz=296,slow=5.6,SNR=3.6
MK31 Makanchi Array 46.47 298 *eP* **P 15 08 53.6 -0.9**
MKAR Makanchi Array 46.47 298 P **P 15 08 53.5 -1.0**
comp=Z,3.0nm,0.7s,mb4.4,baz=72,slow=6.7,SNR=25
MKAR PcP PcP 15 10 28.9 +0.3
comp=Z,0.9nm,0.5s,baz=62,slow=4.9,SNR=4.9
MKAR LR LR 15 29 24.4
comp=Z,168nm,18.9s,MS4.0,baz=358,slow=38
MKAR Makanchi Array 46.47 298 P **P 15 08 53.5 -1.0**
MKAR 15 10 28.9
KURK Kurchatov 47.12 304 P **P 15 08 58.1 -1.3**
comp=Z,2.6nm,0.4s,mb4.5,baz=72,slow=8.3,SNR=25
KURK PcP PcP 15 10 31.2 +0.4
comp=Z,1.0nm,0.8s,baz=82,slow=2.9,SNR=3.7
KURK LR LR 15 28 54.8
comp=Z,37nm,19.6s,MS3.4,baz=185,slow=36
KURK Kurchatov 47.12 304 P **P 15 08 58.2 -1.3**
KURK 15 10 31.3
CMAR Chiang Mai Arr 50.69 256 P **P 15 09 27.7 +0.5**
comp=Z,1.5nm,0.9s,mb3.9,baz=33,slow=7.8,SNR=9.1
CMAR PcP PcP 15 10 45.0 +0.8
comp=Z,0.8nm,0.8s,baz=3.8,slow=4.3,SNR=4.2
CMAR LR LR 15 33 09.0
comp=Z,64nm,18.9s,MS3.7,baz=50,slow=39
CMAR Chiang Mai Arr 50.69 256 P **P 15 09 27.7 +0.5**
CMAR 15 10 45.1
BVAR Borovoye Array 50.82 310 P **P 15 09 27.9 +0.1**
comp=Z,0.8nm,0.6s,mb3.9,baz=52,slow=9.6,SNR=6.2
BVAR PcP PcP 15 10 44.1 -0.1
comp=Z,1.1nm,0.5s,baz=104,slow=6.3,SNR=5.8
BRVK Borovoye 50.86 310⇑*eP* **P 15 09 26.6 -1.5**
BRVK pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
SHL Shillong 50.98 268 *e*PKP **P 15 09 31.0 +1.6**
RES Resolute Bay 52.74 18 P **P 15 09 42.2 +0.4**
comp=Z,3.5nm,0.9s,mb4.3,baz=326,slow=5.5,SNR=5.8
TAPN Taplejung 52.84 273 *eP* **P 15 09 45.0 +1.8**
comp=Z,23nm,0.8s,mb5.2
YKA Yellowknife Ar 52.98 35 P **P 15 09 43.5 -0.3**
comp=Z,0.8nm,0.7s,mb3.8,baz=298,slow=6.9,SNR=3.4
YKA Yellowknife Ar 52.98 35 P **P 15 09 43.5 -0.3**
ODAN Odare 53.36 273 *eP* **P 15 09 47.6 +0.5**
JIRN Jiri 53.72 274 *eP* **P 15 09 50.6 +0.9**
comp=Z,31nm,0.7s,mb5.3
EKS2 Erkin-Say 53.76 297 *eP* **P 15 09 49.6 -0.2**
comp=Z,6.2nm,0.8s,mb4.6
GUN Gumba 53.79 275 *eP* **P 15 09 51.1 +0.9**
comp=Z,45nm,0.8s,mb5.5
RAMN Ramite 53.87 273 *eP* **P 15 09 51.2 +0.4**
KKN Kakani 54.29 275 *eP* **P 15 09 54.6 +0.8**
comp=Z,37nm,0.9s,mb5.3
PKI Pulchoki 54.33 275 *eP* **P 15 09 54.6 +0.4**
comp=Z,18nm,0.7s,mb5.1
PKIN Phulchoki 54.33 275 *eP* **P 15 09 55.2 +1.0**
comp=Z,16nm,0.8s,mb5.0
DMN Daman 54.52 275 *eP* **P 15 09 55.8 +0.3**
comp=Z,19nm,0.6s,mb5.3
GKN Gorkha 54.61 276 *eP* **P 15 09 56.5 +0.3**
KOLN Koldanda 55.48 276 *eP* **P 15 10 03.0 +0.5**
comp=Z,7.4nm,0.4s,mb5.1
ABKAR Akbulak array 58.39 310 *eP* **P 15 10 21.9 -0.9**
comp=Z,3.5nm,0.3s,mb4.9
AKTK Aktyubinsk 58.76 312 P **P 15 10 23.6 -1.8**
AKTK LR LR 15 37 52.9
AKTO Aktyubinsk 58.76 312 P **P 15 10 23.6 -1.8**
comp=Z,1.0nm,0.5s,mb4.1,baz=53,slow=9.4,SNR=7.2
AKTO LR LR 15 37 52.9
comp=Z,179nm,19.0s,MS4.2,baz=234,slow=38
ARCES ARCESS Array B 58.88 341 P **P 15 10 24.7 -1.2**
comp=Z,1.0nm,0.5s,mb4.2,baz=36,slow=7.4,SNR=6.3
ARCES LR LR 15 38 30.3
comp=Z,52nm,19.8s,MS3.7,baz=268,slow=39
KBL Kabul 61.39 291 *eP* **P 15 10 42.4 -1.2**
KBL pmax pmax
comp=Z,24nm,0.9s,mb5.3
KBL Kabul 61.39 291 *eP* **P 15 10 42.4 -1.2**
comp=Z,24nm,0.9s,mb5.3
JOF Joensuu 62.13 333 *eP* **P 15 10 45.7 -2.4**
JOF pmax pmax
comp=Z,2.0nm,0.4s,mb4.6
JOF Joensuu 62.13 333 *ep* **P 15 10 45.7 -2.4**
comp=Z,1.7nm,0.4s,mb4.5
SUMG Summit 62.35 3 *i P* **P 15 10 50.1 +0.6**
comp=Z,19nm,0.9s,mb5.2
NVAR Mina Array Bea 64.37 61 P **P 15 11 05.5 +2.2**
comp=Z,0.2nm,0.4s,mb3.5,baz=300,slow=7.2,SNR=3.8
FINES FINESS Array B 64.87 334 P **P 15 11 04.2 -2.0**
comp=Z,2.3nm,0.5s,mb4.5,baz=41,slow=6.2,SNR=27
FINES FINESS Array B 64.87 334 P **P 15 11 04.2 -2.0**
OBN Obninsk 65.83 325 *eP* **P 15 11 12.4 -0.2**
OBN *e* 15 11 43.1
OBN pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
WRA Warramunga Arr 66.61 197 P **P 15 11 18.9 +1.1**
comp=Z,3.3nm,0.8s,mb4.4,baz=16,slow=6.8,SNR=19
PDAR Pinedale Array 66.77 52 P **P 15 11 20.1 +1.4**
comp=Z,0.5nm,0.7s,mb3.7,baz=294,slow=1.5,SNR=4.2
VSR Storozhevoye 67.48 321 *eP* **P 15 11 19.5 -3.7**
VSR pmax pmax
comp=N,3.0nm,0.5s
VSR pmax pmax
comp=E,4.0nm,0.5s
VSR pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
NB2 NORSAR Subarra 69.26 340 P **P 15 11 33.2 -0.9**
comp=Z,4.8nm,0.6s,mb4.6,baz=27,slow=6.5
NOA NORSAR Array B 69.26 340 P **P 15 11 33.5 -0.6**
comp=Z,4.0nm,0.6s,mb4.5,baz=29,slow=6.3,SNR=19
NOA LR LR 15 46 52.5
comp=Z,28nm,18.2s,MS3.5,baz=235,slow=40
HFS Hagfors 69.44 339 P **P 15 11 33.6 -1.6**
comp=Z,5.8nm,0.6s,mb4.7,baz=35,slow=3.6,SNR=19
ASAR Alice Springs 70.31 197 P **P 15 11 42.5 +1.5**
comp=Z,2.8nm,0.8s,mb4.2,baz=19,slow=7.0,SNR=17
KIV Kislovodsk 70.91 314 *eP* **P 15 11 45.6 +1.1**
KIV pmax pmax
comp=Z,14nm,0.9s,mb4.9
KIV MLR MLR
comp=Z,83nm,18.0s,MS4.0
ZEI Tsey 71.12 312 *eP* **P 15 11 44.8 -1.0**
ZEI pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
AKASG Malin Array Be 72.08 325 P **P 15 11 50.4 -1.1**
comp=Z,2.7nm,0.4s,mb4.6,baz=35,slow=6.1,SNR=13
AKASG LR LR 15 46 07.0
comp=Z,86nm,18.5s,MS4.0,baz=150,slow=38
AKASG Malin Array Be 72.08 325 P **P 15 11 50.4 -1.1**
AKASG LR LR 15 46 07.0
GNI Garni 72.50 310 P **P 15 11 55.0 +0.9**
comp=Z,3.8nm,0.4s,mb4.7,baz=180,slow=7.5,SNR=4.4
GNI Garni 72.50 310⇓*eP* **P 15 11 56.1 +1.9**
GNI pmax pmax
comp=Z,18nm,1.4s
ANN Anapa 72.92 317 *eP* **P 15 11 57.4 +0.8**
ANN *e* 15 12 13.1
ANN *e*PPP 15 16 23.7
ANN *e*S S 15 21 19.1 -1.4
ANN pmax pmax
comp=Z,64nm,1.2s,mb5.4
SCHQ Schefferville 75.27 22 LR LR 15 46 01.0
comp=Z,44nm,19.7s,MS3.8,baz=239,slow=36
KWP Kalwaria Pacla 75.46 328 *eP* **P 15 12 11.3 0.0**
KWP pmax pmax
comp=Z,31nm,1.0s,mb5.2
KWP Kalwaria Pacla 75.46 328 *eP* **P 15 12 11.3 0.0**
comp=Z,31nm,1.0s,mb5.2
BUR08 Bucovina Ar. S 76.12 326 *eP* **P 15 12 15.0 -0.1**
BURAR Bucovina Array 76.14 326 ⇓P **P 15 12 15.2 0.0**
BURAR Bucovina Array 76.14 326 ⇓*iP* **P 15 12 15.2 0.0**
STHS Stebnicka Huta 76.18 329 *eP* **P 15 12 16.4 +1.0**
STHS pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
STHS Stebnicka Huta 76.18 329 *eP* **P 15 12 16.4 +1.0**
comp=Z,10nm,1.3s,mb4.6
STHS Stebnicka Huta 76.18 329 *eP* **P 15 12 16.3 +0.9**
TESR 76.44 324 ⇓P **P 15 12 16.9 -0.1**
TESR 76.44 324 ⇓*iP* **P 15 12 16.9 0.0**
CRVS Cervenica-Dubn 76.52 329 *eP* **P 15 12 17.3 -0.1**
CRVS pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
CRVS Cervenica-Dubn 76.52 329 *eP* **P 15 12 17.3 -0.1**
comp=Z,5.0nm,1.0s,mb4.4
CRVS Cervenica-Dubn 76.52 329 *eP* **P 15 12 17.3 -0.1**
TLCR 76.58 322 ⇓P **P 15 12 17.6 -0.1**
TLCR 76.58 322 ⇓*iP* **P 15 12 17.6 -0.1**
KSP Ksiaz 76.68 333 *eP* **P 15 12 17.5 -0.7**
TRPA Tarpa 76.76 327⇑*iP* **P 15 12 18.8 +0.1**
OKC Ostrava-Krasne 76.92 331 *eP* **P 15 12 19.4 -0.2**
VRI Vrincioaia 76.92 324 ⇓P **P 15 12 19.1 -0.6**
VRI Vrincioaia 76.92 324 ⇓*iP* **P 15 12 19.1 -0.6**
UPC Upice 77.06 332 *eP* **P 15 12 20.6 +0.2**
DPC Dobruska-Polom 77.10 332 *eP* **P 15 12 20.5 -0.1**
MORC Moravsky Berou 77.18 331 ⇓P **P 15 12 21.1 +0.1**
MORC Moravsky Berou 77.18 331 *eP* **P 15 12 20.6 -0.5**
comp=Z,15nm,1.0s,mb4.9
MORC Moravsky Berou 77.18 331 ⇓*iP* **P 15 12 21.1 +0.1**
KECS Kecovo 77.23 329 *eP* **P 15 12 20.9 -0.4**
KECS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
KECS Kecovo 77.23 329 *eP* **P 15 12 20.9 -0.4**
comp=Z,3.9nm,1.0s,mb4.3
KECS Kecovo 77.23 329 *eP* **P 15 12 20.8 -0.5**
CLL Collm 77.32 335 *eP* **P 15 12 20.9 -0.9**
comp=Z,16nm,1.1s,mb4.9
CLL Collm 77.32 335⇑*iP* **P 15 12 21.1 -0.7**
CLL pmax pmax
comp=Z,16nm,1.1s,mb4.9
CLL Collm 77.32 335⇑*iP* **P 15 12 21.1 -0.7**
comp=Z,16nm,1.1s,mb4.9
CLL *es*PcP 15 12 47.0
BRG Berggiesshubel 77.41 334 *eP* **P 15 12 21.9 -0.4**
comp=Z,4.0nm,1.1s,mb4.3
BRG Berggiesshubel 77.41 334 *eP* **P 15 12 22.0 -0.3**
comp=Z,4.0nm,1.1s,mb4.2
BRG Berggiesshubel 77.41 334 *eP* **P 15 12 22.0 -0.3**
BRG pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
EKA Eskdalemuir Ar 77.53 345 P **P 15 12 22.8 -0.1**
comp=Z,0.8nm,0.4s,mb4.0,baz=17,slow=4.8,SNR=6.6
MLR Muntele Rosu 77.55 324⇑P **P 15 12 24.4 +1.2**
MLR Muntele Rosu 77.55 324⇑*iP* **P 15 12 24.4 +1.2**
DRGR 77.80 327⇑P **P 15 12 24.7 +0.2**
DRGR 77.80 327⇑*iP* **P 15 12 24.7 +0.2**
VYHS Vyhne 77.82 330 *eP* **P 15 12 24.6 0.0**
VYHS pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
VYHS Vyhne 77.82 330 *eP* **P 15 12 24.6 0.0**
comp=Z,4.8nm,1.0s,mb4.4
VYHS Vyhne 77.82 330 *eP* **P 15 12 24.6 0.0**
VRAC Vranov 77.90 332 P **P 15 12 24.8 -0.3**
comp=Z,9.2nm,0.9s,mb4.7,baz=35,slow=6.1,SNR=10.0
VRAC Vranov 77.90 332 ⇓P **P 15 12 25.6 +0.6**
VRAC Vranov 77.90 332 ⇓*iP* **P 15 12 25.6 +0.5**
VOIR 77.97 324 ⇓P **P 15 12 26.2 +0.7**
VOIR 77.97 324 ⇓*iP* **P 15 12 26.2 +0.7**
PRU Pruhonice 77.99 333 *eP* **P 15 12 26.2 +0.7**
TREC Trest 78.28 332 *eP* **P 15 12 27.3 +0.1**
TREC Trest 78.28 332 *eP* **P 15 12 27.3 +0.1**
MOX Moxa 78.32 335 *eP* **P 15 12 27.1 -0.3**
comp=Z,6.0nm,1.0s,mb4.5
MOX Moxa 78.32 335 *eP* **P 15 12 26.9 -0.5**
comp=Z,6.0nm,0.9s,mb4.5
BRTR Keskin Array B 78.59 316 P **P 15 12 28.6 -0.5**
comp=Z,2.9nm,0.9s,mb4.2,baz=53,slow=4.8,SNR=11
KHC Kasperske Hory 79.04 333 *eP* **P 15 12 31.4 +0.1**
comp=Z,11nm,1.0s,mb4.8
KHC Kasperske Hory 79.04 333 *eP* **P 15 12 31.5 +0.1**
BZS Buzias 79.19 327⇑P **P 15 12 32.6 +0.3**
BZS Buzias 79.19 327⇑*iP* **P 15 12 32.6 +0.3**
WET Wettzell 79.25 334 *eP* **P 15 12 32.7 +0.2**
comp=Z,11nm,1.1s,mb4.7
GRF Grafenberg Arr 79.28 335 *eP* **P 15 12 32.5 -0.2**
comp=Z,18nm,0.9s,mb5.0
GRF Grafenberg Arr 79.28 335 *eP* **P 15 12 32.5 -0.2**
GRF pmax pmax
comp=Z,18nm,0.9s,mb5.0
CONA Conrad Observa 79.34 331⇑*iP* **P 15 12 33.5 +0.5**
comp=Z,11nm,1.3s,mb4.6
TXAR Lajitas Array 79.44 59 P **P 15 12 34.9 +1.0**
comp=Z,0.4nm,0.6s,mb3.6,baz=298,slow=2.7,SNR=6.5
RAR Rarotonga 79.74 134 LR LR 15 42 17.4
comp=Z,168nm,20.1s,MS4.4,baz=251,slow=31
GIVF Givet 80.69 339 *eP* **P 15 12 39.8 -0.5**
SOKA Soboth 80.70 331 ⇓*iP* **P 15 12 40.3 -0.1**
comp=Z,5.5nm,0.9s,mb4.5
BAIF Baives 80.89 339 *eP* **P 15 12 41.1 -0.2**
KBA Koelnbreinsper 80.92 332⇑*iP* **P 15 12 42.0 +0.4**
comp=Z,8.4nm,0.7s,mb4.8
VTS Vitosha 81.06 324⇑P **P 15 12 42.4 0.0**
VTS Vitosha 81.06 324⇑*iP* **P 15 12 42.4 0.0**
WATA Walderalm 81.26 334 ⇓*iP* **P 15 12 43.5 +0.1**
comp=Z,3.2nm,0.5s,mb4.5
WTTA Wattenberg 81.31 333⇑*iP* **P 15 12 44.1 +0.5**
comp=Z,4.8nm,0.5s,mb4.7
MOTA Moosalm 81.40 334⇑*iP* **P 15 12 44.2 +0.1**
comp=Z,5.2nm,0.9s,mb4.5
CDF Champ du Feu 81.58 337 *eP* **P 15 12 44.6 -0.4**
comp=Z,31nm,1.4s,mb4.8
CDF Champ du Feu 81.58 337 *eP* **P 15 12 44.6 -0.4**
CDF pmax pmax
comp=Z,15nm,1.4s,mb4.7
CDF Champ du Feu 81.58 337 *eP* **P 15 12 44.6 -0.4**
comp=Z,15nm,1.4s,mb4.7
MEZF Maizieres J'vi 82.10 338 *eP* **P 15 12 47.7 -0.1**
HAU Haudompre 82.20 337 *eP* **P 15 12 48.0 -0.3**
HAU *e*MLR MLR
comp=Z,59nm,19.8s,MS3.6
HAU Haudompre 82.20 337 *eP* **P 15 12 48.0 -0.3**
HAU LR LR
comp=Z,60nm,19.8s,MS4.0
HINF Hinteralfeld 82.24 337 *eP* **P 15 12 47.8 -0.7**
DAVOX Davos/Dischmat 82.28 334 P **P 15 12 49.7 +1.0**
comp=Z,3.3nm,0.7s,mb4.4,baz=49,slow=20,SNR=5.7
MMAI Mount Meron Ar 82.82 310 P **P 15 12 52.8 +0.9**
comp=Z,2.9nm,0.5s,mb4.6,baz=44,slow=7.3,SNR=8.7
MMAI LR LR 15 54 04.1
comp=Z,79nm,19.3s,MS4.1,baz=100,slow=39
LOR Lormes 83.55 338 *eP* **P 15 12 55.1 -0.2**
comp=Z,5.6nm,0.5s,mb4.7
LOR *e*MLR MLR
comp=Z,62nm,23.0s,MS3.6
LOR Lormes 83.55 338 *eP* **P 15 12 55.1 -0.2**
LOR pmax pmax
comp=Z,3.0nm,0.5s,mb4.7
LOR MLR MLR
comp=Z,60nm,23.0s,MS3.9
LOR Lormes 83.55 338 *eP* **P 15 12 55.1 -0.2**
comp=Z,2.8nm,0.5s,mb4.7
LOR LR LR
comp=Z,60nm,23.0s,MS3.9
GRR Gorron 83.65 342 *eP* **P 15 12 54.9 -0.9**
SSF Saint Saulge 83.83 338 *eP* **P 15 12 56.7 -0.1**
AVF Avril sur Loir 84.12 338 *eP* **P 15 12 58.2 -0.1**
comp=Z,9.8nm,0.8s,mb4.7
AVF Avril sur Loir 84.12 338 *eP* **P 15 12 58.2 -0.1**
AVF pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
AVF Avril sur Loir 84.12 338 *eP* **P 15 12 58.2 -0.1**
comp=Z,4.9nm,0.8s,mb4.7
SMF Signal de Mont 84.13 338 *eP* **P 15 12 58.2 -0.1**
SGMF Saint Gilles 84.14 343 *eP* **P 15 12 57.9 -0.4**
LPL La Plagne 84.36 336 *eP* **P 15 13 00.1 +0.6**
LPG La Plagne 84.38 336 *eP* **P 15 13 00.2 +0.6**
comp=Z,11nm,0.9s,mb4.7
LPG La Plagne 84.38 336 *eP* **P 15 13 00.2 +0.6**
LPG pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
LPG La Plagne 84.38 336 *eP* **P 15 13 00.2 +0.6**
comp=Z,5.5nm,0.9s,mb4.7
TCF Toulx Ste Croi 84.89 339 *eP* **P 15 13 02.2 +0.1**
MBDF Montbardon 85.07 335 *eP* **P 15 13 03.1 0.0**
ORIF Oris-en-Rattie 85.16 336 *eP* **P 15 13 04.0 +0.5**
comp=Z,7.8nm,0.8s,mb4.6
ORIF *e*MLR MLR
comp=Z,40nm,18.0s,MS3.5
ORIF Oris-en-Rattie 85.16 336 *eP* **P 15 13 04.0 +0.5**
ORIF pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
ORIF Oris-en-Rattie 85.16 336 *eP* **P 15 13 04.0 +0.5**
comp=Z,3.9nm,0.8s,mb4.6
MFF Saint Martin d 85.17 341 *eP* **P 15 13 02.8 -0.7**
VIVF Saint-Julien-l 85.56 337 *eP* **P 15 13 05.9 +0.4**
RJF Les Rejaudoux 85.98 339 *eP* **P 15 13 07.0 -0.6**
RJF *e*MLR MLR
comp=Z,66nm,19.5s,MS3.7
RJF Les Rejaudoux 85.98 339 *eP* **P 15 13 07.0 -0.6**
RJF LR LR
comp=Z,70nm,19.5s,MS4.1
SMRF Simiane la Rot 86.11 336 *eP* **P 15 13 09.3 +1.1**
FRF La Foret Royal 86.17 335 *eP* **P 15 13 08.4 -0.2**
CAF Calviac 86.19 339 *eP* **P 15 13 08.4 -0.2**
comp=Z,27nm,1.1s,mb5.1
CAF Calviac 86.19 339 *eP* **P 15 13 08.4 -0.2**
CAF pmax pmax
comp=Z,14nm,1.1s,mb5.1
CAF Calviac 86.19 339 *eP* **P 15 13 08.4 -0.2**
comp=Z,14nm,1.1s,mb5.1
LMR La Mourre 86.42 335 *eP* **P 15 13 09.6 -0.2**
comp=Z,38nm,1.0s,mb5.3
LMR La Mourre 86.42 335 *eP* **P 15 13 09.6 -0.2**
LMR pmax pmax
comp=Z,19nm,1.0s,mb5.3
LMR La Mourre 86.42 335 *eP* **P 15 13 09.6 -0.2**
comp=Z,19nm,1.0s,mb5.3
LFF La Frestale 86.51 339 *eP* **P 15 13 10.1 -0.1**
MTLF Montolieu 87.63 338 *eP* **P 15 13 15.6 -0.1**
EPF Esparros 88.40 339 *eP* **P 15 13 18.1 -1.3**
ETSF Etsaut 88.75 340 *eP* **P 15 13 20.3 -0.7**
ESDC Sonseca Array 92.62 341 LR LR 16 05 52.7
comp=Z,35nm,18.3s,MS3.9,baz=235,slow=42
CPUP Villa Florida 150.41 60 PKPbc PKPbc 15 20 19.1 +0.3
comp=Z,0.3nm,0.5s,baz=300,slow=6.9,SNR=4.8

IDC 06 15:26:05.8±2.0, 5.79S×156.36E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.8/16, mbtmp3.9/6, Error ellipse: s-maj=63.4km s-min=31.2km az=99.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.61**	**235**	P	P	15 31 37.1	0.0
	0.6nm,0.6s,baz=59,slow=9.6,SNR=5.2						
WRA				PcP	PcP	15 35 07.6	-0.7
	0.2nm,0.3s,baz=53,slow=2.7,SNR=7.6						
ASAR	**Alice Springs**	**27.98**	**228**	P	P	15 32 00.5	+2.0
	0.4nm,0.3s,baz=62,slow=9.8,SNR=4.2						
CMAR	**Chiang Mai Arr**	**61.51**	**294**	P	P	15 36 23.3	-1.7
	1.5nm,0.8s,baz=126,slow=5.0,SNR=8.0						
MKAR	**Makanchi Array**	**83.41**	**318**	P	P	15 38 36.1	+1.0
	0.7nm,0.7s,baz=90,slow=7.8,SNR=6.4						
ZALV	**Zalesovo Beam**	**83.95**	**326**	P	P	15 38 38.9	+1.2
	0.6nm,0.6s,baz=114,slow=6.5,SNR=2.7						
MAW	**Mawson**	**86.02**	**203**	P	P	15 38 46.9	-1.0
	1.1nm,0.9s,baz=99,slow=6.9,SNR=6.7						

NIED ***06*** *15:36:00, 45.40N×151.50E, h11km, Mw4.0 Best double couple: M0 1.24000×10^15 NP1:φ=355.00000°, δ65.00000°, λ60.00000°. NP2:φ=229.00000°, δ38.00000°, λ137.00000°.*
IDC ***06*** *15:36:14.6±1.7, 45.20N×151.27E, h0km, mb3.9/9, mb1 3.9/13, mb1mx3.7/28, mbtmp3.8/13, ML3.0/4, MS3.2/3, Ms1 3.2/3, ms1mx2.7/30, Error ellipse: s-maj=38.7km s-min=24.2km az=122.0*
MOS ***06*** *15:36:15.5±1.9, 44.97N×151.51E, h28km, mb4.5/8, Error ellipse: s-maj=11.8km s-min=11.1km az=86.7*
JMA ***06*** *15:36:16.0±0.7, 45.43N×151.45E, h30km, M4.1*
BJI ***06*** *15:36:17.2, 44.56N×151.18E, h31km, mB4.3/3, mb4.3/6, Ms3.7/2, Ms7 3.4/2*
NEIC ***06*** *15:36:18.1±3.8, 45.18N×151.16E, h20km±24km, mb4.3/5, Error ellipse: s-maj=22.2km s-min=9.4km az=124.0*
ISCJB ***06*** *15:36:18.4±1.4, 44.93N±0.09×151.3E±0.1, h44km±11km, mb4.1/18, Error ellipse: s-maj=15.9km s-min=10.8km az=148.3*

ISC 06 15:36:19.6±1.7, 45.07N±0.09×151.32E±0.09, h35km±13km, n61, σ1.11/67, mb4.1/18, 1C-3D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.45**	**275**	*e*PN	**Pn**	**15 36 56.0**	**-1.0**
KUR				*e*S	**Sn**	**15 37 25.5**	**-0.2**
KUR				smax			
	comp=N,410nm,0.4s						
KUR				smax			
	comp=E,240nm,0.4s						
NEM2	**Nemuro 2**	**4.35**	**249**	P	**Pn**	**15 37 22.2**	**-1.0**
NEM2				*e*S	**Sn**	**15 38 10.8**	**-1.9**
JRA	**Rausu**	**4.57**	**258**	P	**Pn**	**15 37 27.6**	**+1.3**
JNK	**Nakash**	**4.96**	**255**	P	**Pn**	**15 37 31.9**	**+0.3**
JNK				*e*S	**Sn**	**15 38 28.1**	**+0.4**
JAK	**Akkeshi**	**5.20**	**249**	P	**Pn**	**15 37 34.0**	**-0.9**
JAK				*e*S	**Sn**	**15 38 32.9**	**-0.8**
JTKR	**Abashiri--Toko**	**5.41**	**261**	P	**Pn**	**15 37 39.2**	**+1.4**
JAR	**Ashorobuto**	**5.71**	**255**	P	**Pn**	**15 37 42.8**	**+0.9**
JAR				*e*S	**Sn**	**15 38 47.8**	**+1.7**
JMP	**Maruseppu**	**5.79**	**262**	P	**Pn**	**15 37 44.7**	**+1.8**
JOB	**Onbets**	**5.82**	**251**	P	**Pn**	**15 37 43.1**	**-0.2**
JOB				*e*S	**Sn**	**15 38 48.6**	**-0.1**
JKK2	**Kamakawa 2**	**6.25**	**262**	P	**Pn**	**15 37 50.9**	**+1.6**
JCH	**Churui**	**6.25**	**250**	P	**Pn**	**15 37 48.5**	**-0.8**
YSS	**Yuzh-Sakhalins**	**6.26**	**291**	*e*PN	**Pn**	**15 37 56.0**	**+6.7**
YSS				MLR	MLR		
	comp=E,400nm,16.0s						
YSS				MLR	MLR		
	comp=Z,400nm,16.0s						
ASAJ	**Asahikawa**	**6.30**	**264**	Pn	**Pn**	**15 37 50.2**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=87,slow=18,SNR=7.1						
ASAJ				LR	LR	15 40 30.7	
	comp=Z,231nm,18.8s,baz=163,slow=41						
ASAJ	**Asahikawa**	**6.30**	**264**	P	**Pn**	**15 37 52.2**	**+2.2**
JFR	**Furan**	**6.56**	**256**	P	**Pn**	**15 37 55.4**	**+1.8**
JEM	**Erimo**	**6.67**	**246**	P	**Pn**	**15 37 55.9**	**+0.9**
ERM	**Erimo**	**6.67**	**246**	*e*PN	**Pn**	**15 37 56.1**	**+1.1**
ERM				pmax	pmax		
	comp=Z,49nm,0.8s						
ERM	**Erimo**	**6.67**	**246**	*e*Pn	**Pn**	**15 37 56.1**	**+1.0**
	comp=Z,49nm,0.8s						

JNBK Urakawa-nobuka 6.81 249 P **Pn 15 37 55.9 -1.0**
JBT2 Biratori 2 6.86 254 P **Pn 15 37 57.8 +0.2**
JKB Kayabe 8.13 251 P **Pn 15 38 14.4 -0.6**
JKB eS **Sn 15 39 40.1 -5.5**
PETK Petropavlovsk- 9.07 25 Pn **Pn 15 38 27.2 -0.7**
comp=Z,0.1nm,0.3s,baz=195,slow=11,SNR=3.7
PETK Petropavlovsk- 9.07 25 Pn **Pn 15 38 27.2 -0.7**
JRG Rokugo 9.74 238 P **Pn 15 38 35.3 -1.8**
MJAR Matsushiro Arr 13.07 234 Pn **Pn 15 39 21.1 -1.6**
comp=Z,0.1nm,0.3s,baz=32,slow=13,SNR=6.0
MAJO Matsushiro 13.07 234 ePN **Pn 15 39 22.1 -0.6**
MAJO pmax pmax
comp=Z,4.0nm,0.7s
MAJO Matsushiro 13.07 234 eP **Pn 15 39 22.1 -0.6**
comp=Z,4.1nm,0.7s
KSRS Korea Array 19.12 255 P **Pn 15 40 39.3 -1.2**
comp=Z,0.1nm,0.3s,baz=67,slow=9.9,SNR=3.5
KSRS LR LR 15 48 05.4
comp=Z,44nm,18.6s,baz=55,slow=37
YAK Yakutsk 21.13 331 eP **P 15 40 59.3 -1.8**
YAK pmax pmax
comp=Z,5.0nm,0.6s,mb4.0
YAK Yakutsk 21.13 331 eP **P 15 40 59.3 -1.8**
comp=Z,5.1nm,0.6s,mb4.0
BILL Bilibino 24.32 14 eP **P 15 41 34.5 +1.0**
BILL pmax pmax
comp=Z,1.0nm,1.0s,mb3.2
SONM Songino Array 30.75 291 P **P 15 42 30.4 -0.9**
comp=Z,0.6nm,0.5s,mb3.7,baz=96,slow=6.6,SNR=6.5
GTA Gaotai 38.01 280⇑ eP **P 15 43 35.0 +0.8**
GTA pP pP 15 43 39.7 -4.7
GTA pmax pmax
comp=Z,7.0nm,1.0s,mb4.3
ZALV Zalesovo Beam 42.60 307 LR LR 16 02 55.4
comp=Z,34nm,18.1s,baz=75,slow=38
MK31 Makanchi Array 46.61 298 eP **P 15 44 44.3 +0.2**
MKAR Makanchi Array 46.61 298 P **P 15 44 44.0 0.0**
comp=Z,1.7nm,0.7s,mb4.1,baz=68,slow=7.8,SNR=9.5
MKAR Makanchi Array 46.61 298 eP **P 15 44 44.0 -0.1**
MKAR pmax pmax
comp=Z,2.0nm,0.7s
KURK Kurchatov 47.27 304 P **P 15 44 48.5 -0.7**
comp=Z,1.8nm,0.8s,mb4.1,baz=72,slow=8.8,SNR=13
KURK Kurchatov 47.27 304⇓ iP **P 15 44 47.0 -2.1**
KURK pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
KURK Kurchatov 47.27 304 eP **P 15 44 47.2 -1.9**
comp=Z,2.3nm,0.8s,mb4.2
SUMG Summit 62.46 3 eP **P 15 46 39.9 +1.2**
comp=Z,5.9nm,1.0s,mb4.7
SUMG Summit 62.46 3 iP **P 15 46 39.9 +1.2**
comp=Z,5.2nm,1.1s,mb4.6
FINES FINESS Array B 65.02 334 P **P 15 46 54.4 -1.3**
comp=Z,1.7nm,0.8s,mb4.1,baz=30,slow=9.6,SNR=5.4
OBN Obninsk 65.98 325 eP **P 15 46 59.7 -2.3**
OBN e 15 47 33.2
OBN pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
WRA Warramunga Arr 66.52 197 P **P 15 47 06.9 +1.1**
comp=Z,0.6nm,0.9s,mb3.6,baz=12,slow=6.5,SNR=2.3
NB2 NORSAR Subarra 69.41 341 P **P 15 47 22.8 -0.7**
comp=Z,1.2nm,0.6s,mb4.0,baz=29,slow=6.2
NOA NORSAR Array B 69.41 341 P **P 15 47 22.5 -0.9**
comp=Z,1.6nm,0.7s,mb4.1,baz=30,slow=6.2,SNR=5.9
NOA NORSAR Array B 69.41 341 P **P 15 47 22.5 -0.9**
KIV Kislovodsk 71.07 314 eP **P 15 47 35.2 +1.3**
KIV pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
AKASG Malin Array Be 72.24 326 P **P 15 47 40.1 -0.7**
comp=Z,1.0nm,0.5s,mb4.0,baz=38,slow=6.7,SNR=5.7
BUR08 Bucovina Ar. S 76.27 326 eP **P 15 48 04.7 +0.3**
STHS Stebnicka Huta 76.33 329 eP **P 15 48 05.7 +1.0**
STHS pmax pmax
comp=Z,5.0nm,1.3s,mb4.3
STHS Stebnicka Huta 76.33 329 eP **P 15 48 05.7 +1.0**
comp=Z,4.9nm,1.3s,mb4.3
STHS Stebnicka Huta 76.33 329 eP **P 15 48 05.7 +1.0**
CLL Collm 77.47 335⇓ iP **P 15 48 10.8 -0.3**
CLL pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
CLL Collm 77.47 335⇓ iP **P 15 48 10.8 -0.3**
comp=Z,5.0nm,0.9s,mb4.4
VYHS Vyhne 77.97 330 eP **P 15 48 14.2 +0.3**
VYHS pmax pmax
comp=Z,3.0nm,1.4s,mb4.0
VYHS Vyhne 77.97 330 eP **P 15 48 14.2 +0.3**
comp=Z,2.9nm,1.4s,mb4.0
VYHS Vyhne 77.97 330 eP **P 15 48 14.2 +0.3**
BRTR Keskin Array B 78.74 316 P **P 15 48 19.1 +0.8**
comp=Z,0.9nm,0.6s,mb3.9,baz=46,slow=5.3,SNR=4.4
MMAI Mount Meron Ar 82.97 310 P **P 15 48 42.2 +1.1**
comp=Z,0.5nm,0.4s,mb3.9,baz=20,slow=9.8,SNR=2.6

*IDC **06** 16:02:27.1±0.8, 15°.31N×122°.74E, h0km, mb3.8/9, mb1 4.1/9, mb1mx3.9/22, mbtmp3.9/9, ML5.2/1, MS3.3/3, Ms1 3.4/3, ms1mx2.9/29, Error ellipse: s-maj=22.0km s-min=15.4km az=82.0*
*NEIC **06** 16:02:30.1±3.4, 15°.33N×122°.73E, h22km±25km, mb4.4/3, Error ellipse: s-maj=11.1km s-min=6.1km az=80.0*
*MAN **06** 16:02:31, 15°.41N×122°.34E, h13km, mb5.2, ML4.2, MS4.4*
ISC 06 16:02:28.7±1.2, 15°.45N±0°.03×122°.53E±0°.05, h3km±8km, n44, σ1°.31/47, mb4.2/15, MS3.5/2, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
POLP	**Polilio Island**	**0.92**	**218**	e*P*	**Pg**	**16 02 45.3**	**-1.0**
POLP				e*S*	**Sg**	**16 02 56.4**	**-1.8**
BALP	**Baler**	**0.96**	**288**	e*P*	**Pg**	**16 02 47.0**	**-0.2**
BALP				e*S*	**Sg**	**16 02 59.6**	**-0.1**
PALP	**Palanan**	**1.61**	**356**	e*P*	**Pn**	**16 02 58.4**	**+0.3**
PALP				e*S*	**Sn**	**16 03 16.6**	**-2.8**
CAUP	**Cauayan**	**1.63**	**336**	e*P*	**Pn**	**16 02 59.0**	**+0.5**
TGY	**Tagaytay City**	**2.04**	**229**	Pn	**Pn**	**16 03 04.9**	**+0.9**
	808nm,0.3s,baz=43,slow=2.4,SNR=38						
TGY				Sn	**Sn**	**16 03 31.8**	**+1.7**
	619nm,0.3s,baz=336,slow=20,SNR=4.4						
BOAC	**Boac**	**2.09**	**199**	e*P*	**Pn**	**16 03 05.3**	**+0.6**
BCPH	**Baguio City Da**	**2.09**	**297**	i*P*	**Pn**	**16 03 03.7**	**-1.0**
BCPH				i*S*	**Sn**	**16 03 28.3**	**-3.0**
AUQP	**San Andres**	**2.12**	**176**	e*P*	**Pn**	**16 03 07.2**	**+2.1**
PVCP	**Virac**	**2.42**	**139**	e*P*	**Pn**	**16 03 10.3**	**+1.0**
SCZP	**Santa Cruz**	**2.54**	**278**	e*P*	**Pn**	**16 03 12.1**	**+1.1**
BOLP	**Bolinao**	**2.68**	**291**	e*P*	**Pn**	**16 03 13.8**	**+1.0**
APYP	**Conner**	**2.70**	**333**	e*P*	**Pn**	**16 03 13.6**	**+0.5**
LUBP	**Lubang**	**2.79**	**233**	e*P*	**Pn**	**16 03 14.2**	**-0.2**
ABRA	**Dolores**	**2.79**	**322**	e*P*	**Pn**	**16 03 16.4**	**+1.9**
OTRP	**Odiongan**	**3.11**	**189**	e*P*	**Pn**	**16 03 19.3**	**+0.5**
SJMP	**San Jose**	**3.27**	**205**	e*P*	**Pn**	**16 03 22.6**	**+1.6**
CNP	**Catarman**	**3.58**	**144**	e*P*	**Pn**	**16 03 27.5**	**+2.2**
BUSP	**Coron**	**4.11**	**214**	e*P*	**Pn**	**16 03 32.5**	**0.0**
GUIM	**Jordan**	**4.80**	**179**	e*P*	**Pn**	**16 03 43.5**	**+1.5**
CUYO	**Cuyo Island**	**4.80**	**198**	e*P*	**Pn**	**16 03 41.7**	**-0.4**
BBP	**Basco**	**4.99**	**354**	e*P*	**Pn**	**16 03 44.4**	**-0.3**
YULB	**Yu-li**	**7.99**	**352**	e*P*	**Pn**	**16 04 26.3**	**+0.5**
DAV	**Davao City (W)**	**8.85**	**160**	LR	LR	16 08 17.5	
	comp=Z,142nm,21.9s,baz=78,slow=40						
KSM	**Kuching**	**18.39**	**222**	P	**Pn**	**16 06 43.6**	**-1.4**
KSRS	**Korea Array**	**22.43**	**11**	P	**P**	**16 07 29.2**	**+0.4**
	1.5nm,0.7s,mb3.5,baz=196,slow=11,SNR=8.3						
CMAR	**Chiang Mai Arr**	**22.75**	**281**	P	**P**	**16 07 33.5**	**+1.1**
	3.1nm,0.7s,mb3.9,baz=93,slow=7.7,SNR=18						
CHTO	**Chiang Mai**	**22.78**	**282**	e*P*	**P**	**16 07 33.5**	**+0.8**
	1.4nm,0.6s,mb3.6						
MJAR	**Matsushiro Arr**	**25.23**	**31**	P	**P**	**16 07 55.3**	**-0.6**
	0.3nm,0.6s,mb3.0,baz=156,slow=9.5,SNR=4.1						
KAKA	**Kakadu**	**29.65**	**160**	e*P*	**P**	**16 08 32.6**	**-3.2**
	11nm,0.6s,mb4.8						
KAKA	**Kakadu**	**29.65**	**160**	e*P*	**P**	**16 08 32.4**	**-3.4**
FITZ	**Fitzroy Crossi**	**33.48**	**175**	e*P*	**P**	**16 09 06.7**	**-2.8**
	4.1nm,0.5s,mb4.6						
FITZ	**Fitzroy Crossi**	**33.48**	**175**	e*P*	**P**	**16 09 06.8**	**-2.7**
SONM	**Songino Array**	**34.94**	**341**	P	**P**	**16 09 22.3**	**+0.4**
	0.3nm,0.5s,mb3.4,baz=164,slow=9.2,SNR=3.6						
SONM				LR	LR	16 24 33.3	
	comp=Z,65nm,20.9s,MS3.4,baz=1.9,slow=38						
WRAB	**Tennant Creek**	**37.03**	**161**	e*P*	**P**	**16 09 37.0**	**-3.0**
	8.0nm,0.8s,mb4.6						
WRA	**Warramunga Arr**	**37.04**	**161**	P	**P**	**16 09 37.1**	**-3.0**
	7.6nm,0.6s,mb4.7,baz=343,slow=9.3,SNR=73						
ASAR	**Alice Springs**	**40.44**	**164**	P	**P**	**16 10 06.3**	**-2.2**
	2.2nm,0.4s,mb4.3,baz=341,slow=7.8,SNR=93						
MKAR	**Makanchi Array**	**45.72**	**322**	P	**P**	**16 10 51.3**	**+0.1**
	0.4nm,0.7s,mb3.5,baz=90,slow=11,SNR=5.5						
KLBR	**Kellerberrin**	**46.99**	**186**	e*P*	**P**	**16 10 58.3**	**-3.0**
	40nm,1.5s,mb5.1						
ZAA0	**Zalesovo Array**	**48.36**	**331**	P	**P**	**16 11 10.8**	**-0.8**
ZALV	**Zalesovo Beam**	**48.36**	**331**	P	**P**	**16 11 12.1**	**+0.4**
	1.9nm,0.9s,mb4.1,baz=111,slow=6.5,SNR=5.6						
KURK	**Kurchatov**	**49.76**	**325**	e*P*	**P**	**16 11 22.4**	**-0.1**
	8.1nm,1.0s,mb4.7						
STKA	**Stephens Creek**	**50.48**	**159**	P	**P**	**16 11 24.0**	**-4.1**
	4.0nm,1.0s,mb4.4,baz=333,slow=9.0,SNR=3.8						
STKA	**Stephens Creek**	**50.48**	**159**	P	**P**	**16 11 24.0**	**-4.1**
NOA	**NORSAR Array B**	**86.52**	**333**	LR	LR	16 58 19.2	
	comp=Z,23nm,19.9s,MS3.6,baz=55,slow=39						

MAN 06 16:37:32, 13°.43N×120°.22E, h34km, mb4.6, ML3.5, MS3.5, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.30**	**5**	e*P*	Pb	16 37 41.3	+1.4
PGP	**Puerto Galera**	**0.72**	**84⇓**	e*P*	Pn	16 37 46.2	+0.4
SJMP	**San Jose**	**1.30**	**138**	e*P*	Pn	16 37 55.2	+1.4
BUSP	**Coron**	**1.42**	**181**	e*P*	Pn	16 37 56.5	+1.1
BUSP				e*S*	Sn	16 38 09.4	-3.5
BOAC	**Boac**	**1.58**	**89**	e*P*	Pn	16 37 59.0	+1.3
BOAC				e*S*	Sn	16 38 17.1	+0.2
ENPP	**El Nido**	**2.34**	**199**	e*P*	Pn	16 38 08.6	+0.4
CUYO	**Cuyo Island**	**2.68**	**163**	e*P*	Pn	16 38 12.8	0.0

MAN 06 16:47:59, 15°.36N×122°.18E, h19km, mb4.9, ML3.8, MS3.8, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
POLP	**Polilio Island**	**0.67**	**200**	e*P*	Pb	16 48 12.2	+0.1
POLP				e*S*	Sb	16 48 23.0	+2.0
BALP	**Baler**	**0.69**	**303**	e*P*	Pb	16 48 14.3	+1.8
BALP				e*S*	Sb	16 48 24.7	+3.0
CAUP	**Cauayan**	**1.61**	**348**	e*P*	Pn	16 48 26.5	+0.1
PALP	**Palanan**	**1.71**	**8**	e*P*	Pn	16 48 27.1	-0.7
BCPH	**Baguio City Da**	**1.84**	**304⇑**	i*P*	Pn	16 48 36.9	+7.3
BCPH				i*S*	Sn	16 48 53.5	+1.1
BOAC	**Boac**	**1.92**	**190**	e*P*	Pn	16 48 32.5	+1.8
BOAC				e*S*	Sn	16 48 54.1	-0.2
AUQP	**San Andres**	**2.08**	**167**	e*P*	Pn	16 48 34.8	+1.9
PVCP	**Virac**	**2.60**	**132**	e*P*	Pn	16 48 40.8	+0.8
APYP	**Conner**	**2.64**	**340**	e*P*	Pn	16 48 43.1	+2.5

MAN 06 16:50:27, 15°.20N×122°.07E, h39km, mb4.9, ML3.8, MS3.9, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
POLP	**Polilio Island**	**0.49**	**195**	e*P*	Pn	16 50 40.3	+2.7
POLP				e*S*	Sn	16 50 48.0	+3.1
BALP	**Baler**	**0.71**	**318**	e*P*	Pn	16 50 42.7	+2.0
BALP				e*S*	Sn	16 50 53.7	+3.3
CAUP	**Cauayan**	**1.75**	**352**	e*P*	Pn	16 50 55.0	+0.1
PVCP	**Virac**	**2.58**	**128**	e*P*	Pn	16 51 08.6	+2.3
APYP	**Conner**	**2.76**	**343**	e*P*	Sn	16 51 44.3	+3.4

*NIED **06** 17:05:00, 27°.80N×142°.30E, h32km, Mw4.9 Best double couple: M0=2.82000×10^16 NP1:φ=168.00000°, δ85.00000°, λ7.00000°. NP2:φ=78.00000°, δ83.00000°, λ175.00000°.*
*MOS **06** 17:05:16.5±1.1, 27°.82N×142°.24E, h30km, mb5.3/57, Error ellipse: s-maj=8.8km s-min=4.8km az=104.4*
*SZGRF **06** 17:05:18.8, 27°.95N×142°.56E, h55km, mb4.8, Bonin Islands, Japan, region*
*BJI **06** 17:05:18.1, 27°.75N×142°.31E, h56km, mB4.7/29, mb4.8/48, Ms4.3/46, Ms7 4.1/44*
*ISCJB **06** 17:05:19.7±0.1, 27°.90N±0°.02×142°.20E±0°.02, h54km, mb5.0/193, MS4.1/39, Error ellipse: s-maj=2.6km s-min=2.3km az=168.5*
*IDC **06** 17:05:20.7±0.5, 27°.75N×142°.22E, h56km±4km, mb4.6/21, mb1 4.8/26, mb1mx4.7/30, mbtmp4.6/26, MS4.0/25, Ms1 4.0/25, ms1mx3.9/35, Error ellipse: s-maj=14.0km s-min=6.3km az=87.0*
*NEIC **06** 17:05:20.4±0.9, 27°.76N×142°.25E, h52km±7km, mb5.0/116, MW4.9(NIED), Error ellipse: s-maj=5.4km s-min=4.2km az=142.0*
NEIC Recorded [2 JMA] in the Chichijima-retto and [1 JMA] in the Hahajima-retto.
*JMA **06** 17:05:21.0±0.1, 27°.75N×141°.73E, h50km, M5.7*
JMA Felt II J1.
*GCMT **06** 17:05:23.6±0.2, 27°.81N×142°.40E, h51km±2km, MW5.1, Moment Tensor Solution. s44,c67; s86,c135; Moment tensor: Scale 10^16Nm; Mrr0.48±.19; Mθθ2.32±.15; Mφφ-2.80±.15; Mrθ-1.21±.13; Mθφ-3.20±.10; Mφr3.13±.14; Best double couple: M0=5.30000×10^16 NP1:φ=249.00000°, δ51.00000°, λ175.00000°. NP2:φ=342.00000°, δ86.00000°, λ40.00000°. Principal axes: T 5.2700, Plg30.0000°, Azm214.0000°; N 0.0900, Plg50.0000°, Azm347.0000°; P -5.3600, Plg24.0000°, Azm109.0000°; Data Used: II IU IC G CN.*
*DJA **06** 17:05:28, 27°.86N×142°.03E, h109km, Mw5.5/15*
ISC 06 17:05:21.3±0.1, 27°.88N±0°.02×142°.22E±0°.02, h56km, h56km±1.3km; pP-P, n694, σ0°.89/720, mb5.0/193, MS4.1/39, 135C-125D, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**0.78**	**182**	P	**Pn**	**17 05 35.6**	**-0.7**
	7μm,0.3s,baz=39,slow=6.3						
CBIJ				S	**Sn**	**17 05 45.6**	**-1.6**
	10μm,0.3s,baz=66,slow=22,SNR=123						
CBIJ	**Chichi jima**	**0.78**	**182**	⇑P	**Pn**	**17 05 35.7**	**-0.6**
CBIJ				S	**Sn**	**17 05 46.1**	**-1.1**
JHHJ	**Haha-jima-NKT**	**1.24**	**182**	⇑P	**Pn**	**17 05 41.4**	**-1.0**
JHHJ				e*S*	**Sn**	**17 05 57.0**	**-1.1**
JHJ2	**Mitsune**	**5.62**	**339**	P	**Pn**	**17 06 41.7**	**-0.5**
JHJ2				e*S*	**Sn**	**17 07 43.4**	**-2.0**
JHJ	**Hachijo jima 2**	**5.63**	**339**	P	**Pn**	**17 06 41.8**	**-0.6**
	121nm,0.3s,baz=115,slow=4.5,SNR=156						
JHJ				S	**Sn**	**17 07 43.3**	**-2.5**
	359nm,0.3s,baz=76,slow=21,SNR=11						
JHJ				LR	LR	17 08 48.9	
	comp=Z,1μm,21.9s,baz=116,slow=36						
JMY	**Miyakejima3**	**6.60**	**340**	P	**Pn**	**17 06 56.1**	**+0.4**
JMY				S	**Sn**	**17 08 07.9**	**-1.6**
JKO	**Kozu shima**	**6.82**	**338**	P	**Pn**	**17 06 59.4**	**+0.6**
JKO				S	**Sn**	**17 08 15.9**	**+0.9**
BSO1	**Boso 1**	**6.84**	**351**	P	**Pn**	**17 06 58.0**	**-1.0**
BSO1				S	**Sn**	**17 08 12.8**	**-2.6**
BSO3	**Boso 3**	**7.06**	**349**	P	**Pn**	**17 07 00.8**	**-1.2**
BSO3				e*S*	**Sn**	**17 08 16.7**	**-4.1**
TK01	**Tokai 1**	**7.09**	**327**	P	**Pn**	**17 07 06.0**	**+3.6**
JOD2	**Odawara 2**	**7.83**	**341**	P	**Pn**	**17 07 12.3**	**-0.3**
JOD2				e*S*	**Sn**	**17 08 38.4**	**-1.4**
JWZ	**Kozaga**	**7.94**	**317**	P	**Pn**	**17 07 15.8**	**+1.7**
JIE	**Ise**	**8.03**	**325**	P	**Pn**	**17 07 16.3**	**+1.0**
JRY	**Ryogami san**	**8.59**	**342**	P	**Pn**	**17 07 22.6**	**-0.4**
JRY				S	**Sn**	**17 08 57.2**	**-1.2**
MJAR	**Matsushiro Arr**	**9.28**	**340**	P	**Pn**	**17 07 31.9**	**-0.5**
	23nm,0.3s,baz=162,slow=12,SNR=174						
MJAR				S	**Sn**	**17 09 13.4**	**-2.0**
	12nm,0.3s,baz=238,slow=35,SNR=7.5						
MJAR				LR	LR	17 10 59.1	
	comp=Z,608nm,19.6s,baz=170,slow=36						
MJAR	**Matsushiro Arr**	**9.28**	**340**	P	**Pn**	**17 07 31.9**	**-0.5**
MJAR				S	**Sn**	**17 09 13.4**	**-1.9**
MAJO	**Matsushiro**	**9.28**	**340**	e*P*	**Pn**	**17 07 31.6**	**-0.8**
MAT	**Matsushiro**	**9.28**	**340**	P	**Pn**	**17 07 32.1**	**-0.3**
MAT				S	**Sn**	**17 09 12.4**	**-3.0**
MAT	**Matsushiro**	**9.28**	**340**	P	**Pn**	**17 07 32.3**	**-0.1**
JTO	**Tosashimizu**	**9.53**	**304**	P	**Pn**	**17 07 38.9**	**+3.1**
JMZ	**Minamidaito 2**	**10.03**	**261**	P	**Pn**	**17 07 46.4**	**+3.7**
JMZ				e*S*	**Sn**	**17 09 37.8**	**+4.0**
JHS	**Saijyo**	**10.52**	**315**	P	**Pn**	**17 07 52.0**	**+2.6**
JMK	**Ichinoseki**	**11.08**	**356**	P	**Pn**	**17 07 55.3**	**-1.7**
JMK				e*S*	**Sn**	**17 09 49.8**	**-9.5**
JAM	**Amami Oshima**	**11.14**	**276**	P	**Pn**	**17 08 04.0**	**+6.1**
ERM	**Erimo**	**14.13**	**3**	Pn	**Pn**	**17 08 35.7**	**-2.7**
	521nm,0.6s,SNR=61						
ERM	**Erimo**	**14.13**	**3**	e*P*	**Pn**	**17 08 34.9**	**-3.5**
ERM				pmax	pmax		
	comp=Z,45nm,0.6s						
ERM	**Erimo**	**14.13**	**3**	e*Pn*	**Pn**	**17 08 34.9**	**-3.5**
	comp=Z,45nm,0.6s						
ERM				e*Sn*	**Sn**	**17 10 59.1**	**-15**
GUMO	**Guam**	**14.43**	**170**	P	**Pn**	**17 08 41.7**	**-0.8**
	comp=Z,1.5nm,0.3s,baz=118,slow=17,SNR=2.5						
GUMO				LR	LR	17 13 15.8	
	comp=Z,400nm,18.7s,baz=357,slow=33						
GUMO	**Guam**	**14.43**	**170**	P	**Pn**	**17 08 41.7**	**-0.8**
GUMO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
GUMO				MLR	MLR		
	comp=Z,400nm,18.7s						
GUMO	**Guam**	**14.43**	**170**	e*Pn*	**Pn**	**17 08 37.4**	**-5.1**
	comp=Z,270nm,1.2s						
GUMO	**Guam**	**14.43**	**170**	P	**Pn**	**17 08 47.2**	**+4.7**
	comp=Z,214nm,1.2s						
KSRS	**Korea Array**	**15.35**	**312**	P	**Pn**	**17 08 55.1**	**+0.8**
	comp=Z,1.7nm,0.3s,baz=126,slow=10,SNR=32						
KSRS				LR	LR	17 14 30.8	
	comp=Z,527nm,21.6s,baz=123,slow=36						
KSRS	**Korea Array**	**15.35**	**312**	P	**Pn**	**17 08 55.2**	**+0.8**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,527nm,21.6s						
KS15	**Wonju Array Si**	**15.37**	**312**	e*Pn*	**Pn**	**17 08 56.1**	**+1.5**
ASAJ	**Asahikawa**	**16.21**	**1**	P	**Pn**	**17 09 05.2**	**-0.1**
	comp=Z,4.9nm,0.3s,baz=214,slow=12,SNR=47						
ASAJ				S	**S**	**17 11 57.9**	**-17**
	comp=Z,5.1nm,0.3s,baz=59,slow=28,SNR=6.4						
ASAJ				LR	LR	17 15 45.6	
	comp=Z,334nm,21.9s,baz=173,slow=38						
ASAJ	**Asahikawa**	**16.21**	**1**	P	**Pn**	**17 09 05.2**	**-0.1**
ASAJ				S	**S**	**17 11 57.9**	**-17**
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ASAJ				smax			
	comp=N,5.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,334nm,21.9s						
INCN	**Inchon**	**16.23**	**310**	e*Pn*	**Pn**	**17 09 06.9**	**+1.3**
	comp=Z,44nm,1.0s						
YUK	**Yuzh-Kuril'sk**	**16.39**	**9⇓**	i*P*	**Pn**	**17 09 06.6**	**-1.0**
YUK				pmax	pmax		
	comp=N,38nm,0.3s						
YUK				pmax	pmax		
	comp=Z,261nm,0.3s						
YUK				pmax	pmax		
	comp=E,45nm,0.3s						
YUK				pmax	pmax		
	comp=Z,430nm,0.7s						
YUK				MLR	MLR		
	comp=N,400nm,19.0s						
YUK				MLR	MLR		
	comp=E,460nm,19.0s						
YUK				MLR	MLR		
	comp=Z,250nm,19.0s						
SSE	**Sheshan**	**18.58**	**285**	P	**Pn**	**17 09 31.4**	**-3.2**
SSE				sP	sP	17 09 52.2	-1.0
SSE				S	**S**	**17 12 59.0**	**-3.6**
SSE				pmax	pmax		
	comp=Z,25nm,0.7s						
SSE				pmax	pmax		
	comp=Z,310nm,9.9s						
SSE				LR	LR		
	comp=N,240nm,20.0s						
SSE				LR	LR		
	comp=E,390nm,20.0s						
SSE				LR	LR		
	comp=Z,540nm,20.0s						
TATO	**Taipei**	**18.79**	**266**	e*Pn*	**Pn**	**17 09 38.5**	**+1.4**
	comp=Z,80nm,0.9s						
NACB	**Ninganchiao**	**18.89**	**263**	e*P*	**Pn**	**17 09 38.1**	**-0.3**
	comp=Z,25nm,0.4s						
YHNB	**Yeheng**	**18.96**	**265**	e*P*	**Pn**	**17 09 38.7**	**-0.5**
	comp=Z,81nm,0.8s						
YSS	**Yuzh-Sakhalins**	**19.05**	**1⇑**	i*P*	**Pn**	**17 09 43.0**	**+2.9**
YSS				e*S*	**S**	**17 13 07.0**	**-4.9**
YSS				pmax	pmax		
	comp=Z,50nm,0.9s						
YSS				pmax	pmax		
	comp=Z,500nm,4.0s						
YSS				MLR	MLR		
	comp=Z,300nm,16.0s						
YSS	**Yuzh-Sakhalins**	**19.05**	**1**	e*Pn*	**Pn**	**17 09 43.2**	**+3.1**
	comp=Z,75nm,1.1s						
YULB	**Yu-li**	**19.38**	**261**	e*P*	**Pn**	**17 09 44.1**	**-0.1**
	comp=Z,65nm,0.8s						
MDJ	**Mudanjiang**	**19.52**	**332**	P	**Pn**	**17 09 45.1**	**-0.6**
MDJ				pP	pP	17 09 56.5	+0.2
MDJ				sP	sP	17 10 03.1	-0.3
MDJ				S	**S**	**17 13 22.5**	**+1.0**
MDJ				sS	sS	17 13 41.6	+0.2
MDJ				PcP	PcP	17 14 01.7	-0.8
MDJ				ScS	ScS	17 21 17.7	+1.9
MDJ				pmax	pmax		
	comp=Z,20nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,100nm,3.6s						
MDJ				LR	LR		
	comp=N,310nm,17.0s						
MDJ				LR	LR		
	comp=E,410nm,16.4s						
MDJ				LR	LR		
	comp=Z,560nm,17.0s						
SSLB	**Suanglung**	**19.56**	**263**	e*P*	**Pn**	**17 09 46.2**	**-0.2**
	comp=Z,236nm,0.9s						
TWG	**Pinlang**	**19.75**	**260**	e*Pn*	**Pn**	**17 09 47.8**	**-0.8**
	comp=Z,97nm,0.8s						
TPUB	**Ta-pu**	**19.99**	**262**	e*Pn*	**Pn**	**17 09 50.9**	**-0.5**
	comp=Z,88nm,0.9s						
DL2	**Dalian**	**20.36**	**308**	P	**P**	**17 09 52.4**	**-0.8**
DL2				pP		17 10 06.2	
DL2				S	**S**	**17 13 34.8**	**-3.5**
DL2				SS		17 14 01.8	
DL2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
DL2				pmax	pmax		
	comp=Z,100nm,7.5s						
DL2				LR	LR		
	comp=N,180nm,17.3s,MS3.6						
DL2				LR	LR		
	comp=E,190nm,19.1s,MS3.6						
DL2				LR	LR		
	comp=Z,280nm,16.8s,MS3.7						
SNY	**Shenyang**	**20.62**	**317**	⇓P	**P**	**17 09 56.5**	**+0.6**
SNY				S	**S**	**17 13 43.3**	**0.0**
SNY				pmax	pmax		
	comp=Z,18nm

HABR eS S 17 13 58.3 +1.7
HABR 17 14 04.2
HABR eSS 17 14 27.0
HABR e 17 21 19.7
HABR pmax pmax
comp=E,33nm,1.4s
HABR pmax pmax
comp=Z,94nm,1.5s,mb4.9
HABR pmax pmax
comp=N,71nm,1.5s
HABR MLR MLR
comp=Z,159nm,19.0s,MS3.4
QZH Quanzhou 21.35 268⇑ iP P 17 10 04.2 +0.2
QZH S S 17 13 57.4 -0.6
QZH LR LR
comp=Z,1µm,27.3s,MS4.2
KLR Kul'dur 22.80 342 eP P 17 10 16.7 -2.4
KLR eS S 17 14 20.5 -3.6
KLR pmax pmax
comp=E,57nm,1.6s
KLR pmax pmax
comp=Z,85nm,1.6s,mb4.9
TGY Tagaytay City 24.08 240 P P 17 10 31.8 +0.2
comp=Z,112nm,0.5s,mb5.6,baz=14,slow=1.9,SNR=17
WHN Wuhan 24.44 283 P P 17 10 35.0 +0.1
WHN S S 17 14 42.6 -8.6
WHN pmax pmax
comp=Z,92nm,0.7s,mb5.3
WHN LR LR
comp=N,1µm,19.6s
WHN LR LR
comp=E,430nm,12.0s
WHN LR LR
comp=Z,2µm,33.0s
BJI Beijing 24.68 306 P P 17 10 37.9 +1.0
BJI S S 17 14 49.0 -5.7
BJI pmax pmax
comp=Z,4.0nm,0.6s,mb4.1
BJI pmax pmax
comp=Z,75nm,4.6s
BJI LR LR
comp=N,320nm,15.6s,MS4.1
BJI LR LR
comp=E,410nm,18.6s,MS4.1
BJI LR LR
comp=Z,430nm,27.1s
SKR Severo-Kuril's 25.11 21 eP sP 17 10 57.5 -3.7
SKR pmax pmax
comp=N,1µm,4.0s
SKR pmax pmax
comp=Z,1µm,4.0s
SKR pmax pmax
comp=Z,400nm,1.5s,mb5.7
DAV Davao City (W) 26.01 220 P P 17 10 48.8 -0.4
comp=Z,128nm,0.4s,mb5.8,baz=287,slow=11,SNR=5.2
DAV LR LR 17 19 17.3
comp=Z,437nm,20.1s,MS4.0,baz=342,slow=32
PETK Petropavlovsk- 27.70 20 LR LR 17 21 22.8
comp=Z,140nm,19.3s,MS3.6,baz=204,slow=35
PET Petropavlovsk 27.93 21 eP pP 17 11 21.1 +1.1
PET MLR MLR
comp=Z,200nm,15.0s,MS3.8
HHC Hu-ho-hao-te 28.27 305 eP P 17 11 09.8 +0.6
HHC pP pP 17 11 24.1 +0.9
HHC sP sP 17 11 31.7 +1.9
HHC PP PP 17 12 02.2 -12
HHC PcP PcP 17 14 21.0 -0.3
HHC S S 17 15 50.3 -1.1
HHC sS sS 17 16 15.3 +0.2
HHC SS SS 17 17 17.7 -35
HHC ScP ScP 17 17 55.9 -1.8
HHC PcS PcS 17 18 03.3 -0.2
HHC pmax pmax
comp=Z,16nm,0.5s,mb4.9
HHC pmax pmax
comp=Z,67nm,5.7s
HHC LR LR
comp=N,820nm,12.3s,MS4.7
HHC LR LR
comp=E,810nm,12.4s,MS4.7
HHC LR LR
comp=Z,800nm,12.6s,MS4.5
XAN Xi'an 29.12 291 P P 17 11 16.4 -0.5
XAN pP pP 17 11 30.8 -0.1
XAN S S 17 15 55.1 -10
XAN pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
XAN pmax pmax
comp=Z,25nm,8.0s
XAN LR LR
comp=N,210nm,17.6s
XAN LR LR
comp=E,110nm,23.4s
XAN LR LR
comp=Z,110nm,22.0s,MS3.4
SMPI Sarmi 29.88 187 P P 17 11 23.8 0.0
comp=Z,62nm,1.6s,mb5.1
QIZ Qiongzhong 30.90 261 P P 17 11 33.4 +0.6
QIZ pP pP 17 11 46.4 -0.4
QIZ sP sP 17 11 52.9 -0.5
QIZ S S 17 16 31.5 -1.7
QIZ LR LR
comp=N,440nm,20.6s
QIZ LR LR
comp=Z,500nm,32.4s
MNI Manado 31.10 215 P P 17 11 31.6 -3.0
comp=Z,1µmcomp=Z,98nm,0.6s,mb5.8
GYA Guiyang 31.60 276 P P 17 11 38.7 -0.2
GYA pP pP 17 11 56.0 +3.1
GYA sP sP 17 12 03.7 +4.2
GYA PP PP 17 12 47.4 -3.6
GYA PcP PcP 17 14 31.2 +1.0
GYA S S 17 16 39.2 -4.7
GYA sS sS 17 17 12.0 +4.3
GYA ScP ScP 17 18 08.6 -0.2
GYA PcS PcS 17 18 15.4 +0.6
GYA SS SS 17 18 38.0 -23
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
GYA pmax pmax
comp=Z,40nm,4.3s
GYA LR LR
comp=N,540nm,16.8s,MS4.4
GYA LR LR
comp=E,410nm,17.1s,MS4.4
GYA LR LR
comp=Z,460nm,17.4s,MS4.2
KDM Kudat 31.82 234 P P 17 11 41.7 +0.8
MYLDM Lahad Datu 31.90 229 P P 17 11 42.7 +1.0
MYLDM Lahad Datu 31.90 229 P P 17 11 43.8 +2.2
comp=Z,44nm,1.9s,mb5.0
CIT Chita 32.26 326 eP P 17 11 46.1 +1.8
CIT e pP 17 12 00.5 +2.1
CIT pmax pmax
comp=Z,141nm,1.5s,mb5.6
SDKM Sandakan 32.46 232 P P 17 11 47.5 +1.0
KKM Kota Kinabalu 32.87 233 P P 17 11 51.0 +0.9
KKM Kota Kinabalu 32.87 233 eP P 17 11 50.5 +0.4
comp=Z,52nm,1.2s,mb5.3
KKM Kota Kinabalu 32.87 233 P P 17 11 52.3 +2.2
comp=Z,37nm,1.2s,mb5.2
TSM Tawau 32.97 229 P P 17 11 52.0 +1.0
LZH Lanzhou 33.39 294 eP P 17 11 54.4 -0.1
LZH pP pP 17 12 09.4 +0.8
LZH sP sP 17 12 14.5 -0.6
LZH PP PP 17 13 08.4 -2.4
LZH S S 17 17 10.4 -1.3
LZH sS sS 17 17 36.0 +0.5
LZH SS SS 17 19 16.8 -21
LZH pmax pmax
comp=Z,29nm,1.3s,mb5.0
LZH pmax pmax
comp=Z,130nm,4.0s
LZH LR LR
comp=E,1µm,16.2s
LZH LR LR
comp=Z,1µm,17.3s,MS4.8
MRSI Marisa 33.46 219 P P 17 11 55.9 +0.6
comp=Z,2µmcomp=Z,143nm,1.5s,mb5.7
CD2 Chengdu 33.53 285⇑ iP P 17 11 55.3 -0.5
CD2 pP pP 17 12 10.3 +0.4
CD2 sP sP 17 12 17.5 +1.1
CD2 PP PP 17 13 09.3 -3.1
CD2 S S 17 17 12.5 -1.5
CD2 sS sS 17 17 38.1 +0.2
CD2 SS SS 17 19 20.0 -20
CD2 pmax pmax
comp=Z,100nm,4.5s
CD2 LR LR
comp=N,640nm,20.2s
CD2 LR LR
comp=Z,400nm,26.9s
ULN Ulaanbaatar 33.78 316 eP P 17 11 57.9 +0.2
ULN pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
ULN Ulaanbaatar 33.78 316 eP P 17 11 57.9 +0.2
comp=Z,6.5nm,0.7s,mb4.7
ULN Ulaanbaatar 33.78 316 P P 17 11 58.1 +0.4
comp=Z,8.7nm,1.0s,mb4.7
ULN Ulaanbaatar 33.78 316 P P 17 11 58.6 +0.9
SNR=5.9
SONM Songino Array 34.18 315 P P 17 12 01.3 +0.2
comp=Z,3.7nm,0.5s,mb4.5,baz=124,slow=8.4,SNR=28
SONM PcP PcP 17 14 36.7 -0.3
comp=Z,2.1nm,0.7s,baz=148,slow=3.6,SNR=5.0
SONM ScP ScP 17 18 17.4 +0.1
comp=Z,4.6nm,1.1s,baz=114,slow=3.0,SNR=9.3
SONM LR LR 17 25 46.7
comp=Z,232nm,21.9s,MS3.9,baz=111,slow=36
SONM Songino Array 34.18 315 P P 17 12 01.3 +0.2
SONM 17 14 36.7
LUWI Luwuk 34.28 216 P P 17 12 02.0 -0.4
comp=Z,1µmcomp=Z,84nm,1.2s,mb5.5
YAK Yakutsk 35.16 350 eP P 17 12 12.6 +3.2
YAK pmax pmax
comp=Z,14nm,0.9s,mb4.9
YAK pmax pmax
comp=N,7.0nm,1.3s
YAK Yakutsk 35.16 350 eP P 17 12 07.4 -2.0
comp=N,25nm,0.9s,mb5.2
KMI Kunming 35.33 275 P P 17 12 11.7 +0.3
KMI pP pP 17 12 28.5 +2.9
KMI sP sP 17 12 35.3 +3.2
KMI PP PP 17 13 34.2 +1.8
KMI S S 17 17 41.5 -0.3
KMI sS sS 17 18 09.2 +3.4
KMI SS SS 17 20 03.7 -14
KMI pmax pmax
comp=Z,31nm,1.1s,mb5.2
KMI LR LR
comp=N,300nm,20.2s
KMI LR LR
comp=E,190nm,12.7s
KMI LR LR
comp=Z,350nm,26.9s
SEY Seymchan 35.69 8⇑ iP P 17 12 17.3 +3.3
PCI Palu 35.79 221 P P 17 12 15.3 0.0
comp=Z,1µmcomp=Z,86nm,1.5s,mb5.5
GTA Gaotai 36.82 299 eP P 17 12 24.7 +0.8
GTA pP pP 17 12 40.0 +1.8
GTA sP sP 17 12 47.1 +2.4
GTA PcP PcP 17 14 46.7 +1.8
GTA S S 17 18 04.5 +0.2
GTA ScP ScP 17 18 26.5 -0.6
GTA sS sS 17 18 30.5 +2.2
GTA PcS PcS 17 18 32.8 -0.2
GTA SS SS 17 20 34.4 -13
GTA ScS ScS 17 22 31.0 -3.1
GTA pmax pmax
comp=Z,9.0nm,1.1s,mb4.5
GTA pmax pmax
comp=Z,69nm,6.0s
GTA LR LR
comp=N,300nm,20.6s,MS4.2
GTA LR LR
comp=E,250nm,21.5s,MS4.2
GTA LR LR
comp=Z,300nm,21.5s,MS4.0
KDI Kendari 36.85 214 P P 17 12 24.9 +0.5
comp=Z,997nmcomp=Z,84nm,1.1s,mb5.5
BTM Bintulu 37.07 234 P P 17 12 27.3 +1.0
IRK Irkutsk 37.25 321⇑ iP P 17 12 27.9 +0.5
IRK e pP 17 12 42.9 +1.3
IRK pmax pmax
comp=Z,23nm,0.7s,mb5.1
TLY Talaya 37.36 320 P P 17 12 29.3 +1.0
comp=Z,90nm,0.5s,mb5.9,SNR=7.2
TLY Talaya 37.36 320 eP P 17 12 29.6 +1.3
TLY pmax pmax
comp=Z,9.0nm,0.7s,mb4.7
TLY MLR MLR
comp=Z,212nm,22.0s,MS3.9
TLY Talaya 37.36 320 eP P 17 12 29.6 +1.3
comp=Z,13nm,0.9s,mb4.8
TLY Talaya 37.36 320 P P 17 12 30.0 +1.6
SNR=7.8
SBUM Sibu 38.21 234 P P 17 12 36.5 +0.5
SBUM Sibu 38.21 234 P P 17 12 36.0 +0.1
comp=Z,416nmcomp=Z,27nm,1.5s,mb4.8
SPSI Sidrap Palu 38.34 218 P P 17 12 37.9 +0.9
comp=Z,35nm,1.2s,mb5.0
MOY Mondy 38.87 319 eP P 17 12 42.0 +1.0
KSM Kuching 40.26 235 P P 17 12 53.5 +0.5
KSM Kuching 40.26 235 eP P 17 12 52.4 -0.7
KSM Kuching 40.26 235 P P 17 12 50.9 -2.1
comp=Z,18nm,1.5s,mb4.6
STKI Sintang 40.41 232 P P 17 12 54.7 +0.4
comp=Z,3µmcomp=Z,92nm,1.1s,mb5.4
CHTO Chiang Mai 40.57 267 eP P 17 12 54.9 -0.7
CHTO pmax pmax
comp=Z,18nm,1.2s,mb4.6
CHTO Chiang Mai 40.57 267 eP P 17 12 54.9 -0.7
comp=Z,18nm,1.2s,mb4.6
CHTO Chiang Mai 40.57 267 P P 17 12 55.5 -0.1
comp=Z,17nm,1.2s,mb4.5
CM31 Chiang Mai Arr 40.70 266 eP P 17 12 53.9 -2.7
comp=Z,3.9nm,0.6s,mb4.2
CMAR Chiang Mai Arr 40.70 266 P P 17 12 57.0 +0.4
comp=Z,2.3nm,0.4s,mb4.2,baz=82,slow=4.7,SNR=32
CMAR PcP PcP 17 14 57.1 -0.3
comp=Z,4.1nm,1.1s,baz=95,slow=1.1,SNR=7.1
CMAR ScP ScP 17 18 43.0 +0.7
comp=Z,2.4nm,1.2s,baz=46,slow=3.9,SNR=4.4
CMAR LR LR 17 29 14.7
comp=Z,233nm,18.6s,MS4.1,baz=84,slow=35
CMAR Chiang Mai Arr 40.70 266 P P 17 12 57.1 +0.5
CMAR 17 14 57.1
KAKA Kakadu 41.44 194 eP P 17 13 01.8 -0.9
comp=Z,29nm,0.9s,mb4.9
KAKA Kakadu 41.44 194 eP P 17 13 00.7 -2.0
comp=Z,36nm,0.5s,mb5.3
BILL Bilibino 42.69 13⇓ iP P 17 13 12.7 +0.4
BILL i pP 17 13 26.6 -0.2
BILL pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
BILL Bilibino 42.69 13 eP P 17 13 12.6 +0.3
comp=Z,40nm,1.3s,mb5.0
KTGM Kuala Trenggan 43.35 246 P P 17 13 19.5 +1.2
KHKI Kahang-Kahang 44.27 219 P P 17 13 25.5 -0.2
comp=Z,2µmcomp=Z,187nm,1.4s,mb5.6
TIXI Tiksi 44.44 354 eP P 17 13 25.9 -0.4
TIXI e*PP pP 17 13 40.5 -0.3
TIXI eS S 17 19 55.7 -1.2
TIXI pmax pmax
comp=Z,3.0nm,0.5s,mb4.3
TIXI MLR MLR
comp=Z,101nm,17.0s,MS3.8
TIXI Tiksi 44.44 354 eP P 17 13 26.3 0.0
LSA Lhasa 44.50 285 P P 17 13 26.1 -1.3
SHL Shillong 44.76 279 ePKP P 17 13 31.0 +1.5
SHL eS S 17 20 02.0 -0.7
MYKOM Kota Tinggi 44.91 241 P P 17 13 32.0 +1.2
MYKOM Kota Tinggi 44.91 241 P P 17 13 32.2 +1.4
comp=Z,668nmcomp=Z,85nm,1.0s,mb5.5
KGM Kluang 45.19 242 P P 17 13 34.1 +1.1
KNA Kununurra 45.28 198 P P 17 13 33.7 +0.1
comp=Z,628nmcomp=Z,64nm,0.9s,mb5.4
KULM Kulim 45.40 248 P P 17 13 35.7 +1.0
KULM Kulim 45.40 248 eP P 17 13 34.4 -0.3
comp=Z,14nm,0.5s,mb5.1
IPM Ipoh 45.55 247 P P 17 13 36.9 +1.0
IPM Ipoh 45.55 247 P P 17 13 36.2 +0.3
comp=Z,41nm,1.4s,mb5.2
WMQ Urumqi 46.15 305 P P 17 13 41.5 +1.3
WMQ pP pP 17 13 57.0 +2.2
WMQ sP sP 17 14 04.1 +2.8
WMQ PcP PcP 17 15 16.5 +1.1
WMQ PP PP 17 15 30.9 +1.7
WMQ eS S 17 20 23.2 +1.0
WMQ ScS ScS 17 23 28.5 -2.1
WMQ SS SS 17 23 41.6 -6.1
WMQ pmax pmax
comp=Z,17nm,1.0s,mb4.9
WMQ pmax pmax
comp=Z,160nm,5.6s
WMQ LR LR
comp=N,340nm,24.0s,MS4.2
WMQ LR LR
comp=E,180nm,26.0s,MS4.2
WMQ LR LR
comp=Z,210nm,26.0s,MS4.0
CTA Charters Tower 47.84 175 eP P 17 13 52.0 -1.6
comp=Z,3.9nm,0.5s,mb4.7
CTAO Charters Tower 47.84 175 eP P 17 13 51.4 -2.2
CTAO pmax pmax
comp=Z,13nm,1.0s,mb4.9
CTAO Charters Tower 47.84 175 eP P 17 13 51.4 -2.1
comp=Z,13nm,1.0s,mb4.9
TAPN Taplejung 47.95 283 eP P 17 13 54.6 +0.1
comp=Z,17nm,0.4s,mb5.5
LEM Lembang 48.03 229 P P 17 13 55.3 +0.1
comp=Z,3µmcomp=Z,316nm,1.0s,mb6.3
WRAB Tennant Creek 48.13 190 P P 17 13 54.0 -1.8
comp=Z,715nm,0.5s
WRAB Tennant Creek 48.13 190 eP P 17 13 54.0 -1.8
WRAB pmax pmax
comp=Z,72nm,0.7s,mb5.8
WRAB Tennant Creek 48.13 190 eP P 17 13 54.0 -1.8
comp=Z,72nm,0.7s,mb5.8
WRAB Tennant Creek 48.13 190 P P 17 13 54.4 -1.4
comp=Z,133nm,1.2s,mb5.8
WRA Warramunga Arr 48.14 190 P P 17 13 54.2 -1.6
comp=Z,48nm,0.4s,mb5.8,baz=12,slow=8.6,SNR=454
WRA ScP ScP 17 19 11.0 -1.5
comp=Z,4.2nm,1.0s,baz=16,slow=4.6,SNR=6.0
WRA S S 17 20 44.8 -6.1
comp=Z,22nm,1.1s,baz=12,slow=15,SNR=16
CBJI Citeko 48.26 230 P P 17 13 57.6 +0.6
comp=Z,195nm,0.9s,mb6.1
ODAN Odare 48.35 282 eP P 17 13 57.4 -0.2
comp=Z,19nm,0.3s,mb5.6
FITZ Fitzroy Crossi 48.44 201 eP P 17 13 57.0 -1.2
comp=Z,62nm,1.0s,mb5.6
FITZ Fitzroy Crossi 48.44 201 eP P 17 13 56.9 -1.4
comp=Z,110nm,1.4s,mb5.7
SDSI Sungai Dareh 48.50 241 P P 17 13 59.1 +0.3
comp=Z,974nmcomp=Z,35nm,1.1s,mb5.3
MDSI Maura Dua 48.78 235 P P 17 14 00.1 -0.9
comp=Z,2µmcomp=Z,193nm,1.1s,mb6.0
ZAA0 Zalesovo Array 48.92 319 eP P 17 14 01.5 -0.1
ZAA0 ePcP PcP 17 15 24.8 -0.3
ZALV Zalesovo Beam 48.92 319 P P 17 14 02.0 +0.5
comp=Z,5.3nm,0.4s,mb4.9,baz=103,slow=7.3,SNR=34
ZALV PcP PcP 17 15 24.9 -0.2
comp=Z,8.9nm,0.6s,baz=89,slow=3.5,SNR=7.9
ZALV ScP ScP 17 19 13.8 -1.6
comp=Z,1.0nm,0.5s,baz=93,slow=3.3,SNR=4.6
ZALV LR LR 17 35 08.9
comp=Z,128nm,19.9s,MS3.9,baz=264,slow=36
ZALV Zalesovo Beam 48.92 319 P P 17 14 02.1 +0.5
ZALV 17 15 24.9
ZALV Zalesovo Beam 48.92 319 P P 17 14 02.0 +0.5
ZALV PcP PcP 17 15 24.9 -0.2
ZALV ScP ScP 17 19 13.8 -1.6
ZALV LR LR 17 35 08.9
PPI Padang Panjang 49.00 242 P P 17 14 04.6 +1.9
comp=Z,5µmcomp=Z,45nm,1.1s,mb5.4
RAMN Ramite 49.01 283 eP P 17 14 02.6 -0.1
comp=Z,22nm,0.4s,mb5.6
SDPT Sand Point 49.09 39 eP P 17 14 00.4 -2.5
JIRN Jiri 49.19 284 eP P 17 14 04.4 +0.4
comp=Z,27nm,0.3s,mb5.8
TPTI 49.39 249 P P 17 14 03.8 -1.9
GUN Gumba 49.40 284 eP P 17 14 05.7 +0.1
comp=Z,33nm,0.3s,mb5.8
KKN Kakani 49.94 284 eP P 17 14 09.4 -0.4
comp=Z,15nm,0.3s,mb5.4
NVS Novosibirsk 49.96 320 i P P 17 14 10.0 +0.5
NVS e*PP pP 17 14 26.5 +2.2
NVS i S S 17 21 15.0 -0.8
NVS e 17 23 54.6
NVS pmax pmax
comp=E,26nm,1.4s
NVS pmax pmax
comp=Z,31nm,1.4s,mb5.2
NVS smax
comp=E,30nm,1.6s
NVS smax
comp=N,17nm,2.0s
MK31 Makanchi Array 50.00 309 eP P 17 14 09.6 -0.3
MK31 e 17 15 29.1
MKAR Makanchi Array 50.00 309 P P 17 14 09.8 -0.1
comp=N,4.1nm,0.3s,mb4.9,baz=84,slow=10,SNR=103
MKAR PcP PcP 17 15 29.0 -0.2
comp=N,9.0nm,0.7s,baz=81,slow=13,SNR=9.6
MKAR ScP ScP 17 19 19.6 -0.6
comp=N,0.8nm,0.5s,baz=78,slow=5.0,SNR=4.2
MKAR LR LR 17 37 20.7
comp=N,135nm,19.7s,MS4.0,baz=92,slow=38
MKAR Makanchi Array 50.00 309 P P 17 14 09.8 -0.1
MKAR 17 15 29.0
MKAR Makanchi Array 50.00 309 P P 17 14 09.8 -0.1
MKAR PcP PcP 17 15 29.0 -0.2
MKAR ScP ScP 17 19 19.6 -0.6
MKAR LR LR 17 37 20.7
DMN Daman 50.13 284 eP P 17 14 11.1 -0.1
comp=N,21nm,0.4s,mb5.5
GKN Gorkha 50.44 284 eP P 17 14 13.2 -0.3
comp=N,18nm,0.3s,mb5.5
KOLN Koldanda 51.38 285 eP P 17 14 21.2 +0.6
ASAR Alice Springs 51.86 190 P P 17 14 22.0 -2.1
comp=N,5.2nm,0.4s,mb4.9,baz=9.5,slow=5.9,SNR=116
ASAR PcP PcP 17 15 34.8 -1.5
comp=N,5.3nm,0.8s,baz=3.1,slow=5.7,SNR=5.4
ASAR ScP ScP 17 19 26.4 -2.0
comp=N,0.3nm,0.5s,baz=287,slow=5.1,SNR=4.0
ASAR S S 17 21 39.7 -2.9
comp=N,2.2nm,1.0s,baz=17,slow=22,SNR=5.2
ASAR Alice Springs 51.86 190 P P 17 14 22.0 -2.1
ASAR 17 15 34.8
ASAR S S 17 21 39.7 -2.9
KURK Kurchatov 52.46 314 P P 17 14 28.4 +0.1
comp=N,238nm,0.6s,mb6.3,SNR=22
KURK Kurchatov 52.46 314 LR LR 17 38 22.9
comp=N,246nm,19.1s,MS4.3,baz=85,slow=38
KURK Kurchatov 52.46 314c iP P 17 14 28.4 +0.1
KURK pmax pmax
comp=Z,43nm,1.0s,mb5.3
KURK Kurchatov 52.46 314 eP P 17 14 28.1 -0.2
comp=Z,58nm,1.1s,mb5.4
KURK Kurchatov 52.46 314 P P 17 14 29.1 +0.8
SNR=15
SVW2 Sparrevohn 52.62 33 eP P 17 14 30.5 +1.2
comp=Z,24nm,0.9s,mb5.1
TTA Tatalina 52.76 30 eP P 17 14 30.4 +0.1
TTA e pP 17 14 44.2 -1.0
TTA pmax pmax
comp=Z,16nm,1.2s,mb4.8
TTA Tatalina 52.76 30 eP P 17 14 30.4 +0.1
comp=Z,16nm,1.2s,mb4.8
TTA e pP 17 14 44.2 -1.0
KDAK Kodiak Island 53.73 37 P P 17 14 37.5 0.0
comp=Z,21nm,0.4s,mb5.4,baz=249,slow=4.0,SNR=28
KDAK Kodiak Island 53.73 37 P P 17 14 37.5 0.0
PPLA Purkeypile 54.48 31 eP P 17 14 44.0 +1.1
comp=Z,31nm,1.2s,mb5.1
DZM Mont Dzumac 54.89 152 eLR LR 17 30 51.8
comp=Z,342nm,24.6s
BPAW Bear Paw Mtn. 55.18 29 eP P 17 14 48.2 +0.3
comp=Z,26nm,1.3s,mb5.1
BPAW e pP 17 15 01.7 -1.2
KSH Kashi 55.21 300 P P 17 14 52.2 +3.7
KSH pmax pmax
comp=Z,59nm,4.2s
KSH Kashi 55.21 300 eP P 17 14 52.3 +3.8
KSH pP pP 17 15 07.6 +4.1
KSH sP sP 17 15 14.8 +5.0
KSH PcP PcP 17 15 50.2 +1.2
KSH PP PP 17 16 58.8 +6.5
KSH ScP ScP 17 19 43.6 +0.6
KSH PcS PcS 17 19 49.2 +0.3
KSH S S 17 22 31.3 +3.4
KSH sS sS 17 22 58.3 +5.3
KSH ScS ScS 17 24 32.7 -0.2
KSH SS SS 17 26 17.7 +5.3
KSH LR LR

comp=N,220nm,7.1s
KSH LR LR
comp=E,130nm,10.2s
KSH LR LR
comp=Z,110nm,5.7s
TRF Thorofare Moun 55.41 30 *e*P **P 17 14 49.7 +0.2**
comp=Z,14nm,0.8s,mb5.0
RC01 Rabbit Creek A 55.44 33 *e*P **P 17 14 48.2 -1.6**
comp=Z,28nm,1.1s,mb5.2
PMR Palmer 55.77 33 *e*P **P 17 14 52.3 +0.1**
PMR pmax pmax
comp=Z,42nm,0.9s,mb5.5
PMR Palmer 55.77 33 *e*P **P 17 14 52.3 +0.1**
comp=Z,42nm,0.9s,mb5.5
AAK Ala-Archa 55.84 304 LR LR 17 41 12.5
comp=Z,160nm,19.0s,MS4.1,baz=64,slow=38
COLD Coldfoot 55.96 26 *e*P **P 17 14 54.4 +0.9**
comp=Z,18nm,1.2s,mb5.0
MCK McKinley 56.04 30 *e*P **P 17 14 54.0 -0.1**
MCK pmax pmax
comp=Z,26nm,1.1s,mb5.2
MCK McKinley 56.04 30 *e*P **P 17 14 54.0 -0.1**
comp=Z,26nm,1.1s,mb5.2
EKS2 Erkin-Say 56.36 305 *e*P **P 17 14 56.2 -0.5**
comp=Z,2.2nm,0.6s,mb4.4
COLA College 56.62 29 *e*P **P 17 14 57.5 -0.7**
COLA pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
COLA College 56.62 29 *e*P **P 17 14 57.5 -0.7**
comp=Z,5.7nm,0.7s,mb4.7
BVAR Borovoye Array 57.49 317 P **P 17 15 05.1 +0.6**
comp=Z,18nm,0.4s,mb5.5,baz=81,slow=6.7,SNR=125
BRVK Borovoye 57.55 317 P **P 17 15 05.1 +0.1**
comp=Z,176nm,0.8s,mb6.1,SNR=13
BRVK Borovoye 57.55 317*c i*P **P 17 15 05.7 +0.7**
BRVK pmax pmax
comp=Z,32nm,1.0s,mb5.3
BRVK Borovoye 57.55 317 *e*P **P 17 15 05.3 +0.4**
comp=Z,12nm,0.5s,mb5.2
BRVK Borovoye 57.55 317 P **P 17 15 06.3 +1.3**
SNR=14
BMRM Bremner River 57.93 33 *e*P **P 17 15 07.2 -0.3**
comp=Z,37nm,1.0s,mb5.4
STKA Stephens Creek 59.42 181 *e*P **P 17 15 16.3 -1.8**
comp=Z,3.3nm,0.3s,mb4.8
STKA Stephens Creek 59.42 181 P **P 17 15 17.5 -0.6**
comp=Z,4.1nm,0.4s,mb4.8,baz=0.4,slow=9.4,SNR=25
STKA LR LR 17 40 02.1
comp=Z,170nm,19.3s,MS4.2,baz=18,slow=35
STKA Stephens Creek 59.42 181 *e*P **P 17 15 16.1 -2.0**
comp=Z,0.9nm,0.4s,mb4.2
EGAK Eagle 59.47 29 *e*P **P 17 15 18.4 +0.2**
comp=Z,6.3nm,0.8s,mb4.7
FORT Forrest 59.87 194 *e*P **P 17 15 19.4 -1.8**
comp=Z,42nm,0.4s,mb5.8
DAWY Dawson 60.26 30 *e*P **P 17 15 24.4 +0.8**
KBL Kabul 61.70 296 *e*P **P 17 15 33.6 -0.3**
KBL pmax pmax
comp=Z,5.0nm,0.6s,mb4.8
KBL Kabul 61.70 296 *e*P **P 17 15 33.6 -0.3**
comp=Z,5.4nm,0.6s,mb4.8
INK Inuvik 62.31 25 P **P 17 15 37.9 +0.5**
comp=Z,1.9nm,0.4s,mb4.5,baz=269,slow=6.3,SNR=6.7
INK Inuvik 62.31 25 P **P 17 15 37.9 +0.5**
INK pmax pmax
comp=Z,2.0nm,0.4s
INK Inuvik 62.31 25 *e*P **P 17 15 37.5 +0.1**
comp=Z,20nm,1.2s,mb5.1
SVE Sverdlovsk 62.63 322⇓*e*P **P 17 15 41.0 +1.3**
SVE pmax pmax
comp=Z,47nm,0.9s,mb5.6
CNB Canberra Magne 63.21 173 *e*P **P 17 15 44.1 +0.4**
KLBR Kellerberrin 63.56 203 *e*P **P 17 15 44.9 -1.2**
comp=Z,35nm,1.1s,mb5.3
ARU Arti 63.83 322 P **P 17 15 48.8 +1.2**
comp=Z,553nm,0.6s,SNR=29
ARU Arti 63.83 322 *e*P **P 17 15 48.2 +0.6**
ARU pmax pmax
comp=Z,65nm,0.8s,mb5.7
ARU Arti 63.83 322 *e*P **P 17 15 48.2 +0.6**
comp=Z,65nm,0.8s,mb5.7
SOKR Solikamsk 64.13 326*c i*P **P 17 15 50.4 +0.8**
SOKR pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
SOKR MLR MLR
comp=Z,300nm,24.0s,MS4.4
ABKAR Akbulak array 64.57 314 *e*P **P 17 15 52.8 +0.2**
comp=Z,13nm,0.5s,mb5.2
ABKAR *e* pP 17 16 07.6 -0.3
NWAO Narrogin (SRO) 64.96 203 *e*P **P 17 15 53.9 -1.3**
NWAO pmax pmax
comp=Z,60nm,1.1s
NWAO Narrogin (SRO) 64.96 203 *e*P **P 17 15 53.9 -1.3**
comp=Z,60nm,1.1s,mb5.5
TOO Toolangi 65.17 177 *e*P **P 17 15 56.3 -0.2**
AKTO Aktyubinsk 65.50 316 LR LR 17 46 03.7
comp=Z,127nm,19.7s,MS4.1,baz=232,slow=37
YKA Yellowknife Ar 71.45 28 P **P 17 16 35.4 -0.1**
comp=Z,4.1nm,0.6s,mb4.5,baz=295,slow=6.2,SNR=18
NLWA Neilton Lookou 72.53 45⇑P **P 17 16 42.5 +0.3**
baz=72
ARCES ARCESS Array B 72.82 341 P **P 17 16 44.6 +1.0**
comp=Z,4.4nm,0.7s,mb4.5,baz=39,slow=7.8,SNR=14
ARCES LR LR 17 53 36.2
comp=Z,170nm,21.2s,MS4.3,baz=74,slow=40
ARE0 ARCESS Array S 72.82 341 *e*P **P 17 16 44.2 +0.6**
JCW Jim Creek 73.43 44 *e*P **P 17 16 47.9 +0.3**
comp=Z,17nm,0.8s,mb5.0
D05A Enumclaw 73.79 45⇓P **P 17 16 50.0 +0.3**
baz=74
F04A Amboy 74.02 46⇑P **P 17 16 51.4 +0.3**
baz=74
G04A Mulino 74.27 47⇑P **P 17 16 53.4 +0.8**
baz=74
JOF Joensuu 74.40 334 *e*P **P 17 16 52.9 -0.1**
JOF pmax pmax
comp=Z,20nm,0.5s,mb5.3
JOF Joensuu 74.40 334 *e*p **P 17 16 52.9 -0.1**
comp=Z,20nm,0.5s,mb5.3
H04A Detroit Lake 74.67 47⇑P **P 17 16 54.5 -0.4**
baz=74
NAC Naches 74.70 45 P **P 17 16 56.0 +0.9**
EBG Ellensburg 74.79 45 P **P 17 16 56.6 +1.0**
B08A Colville Reser 74.94 43⇑P **P 17 16 56.1 -0.3**
baz=75,SNR=7.1
MOS Moscow 75.08 325 *e*P pP 17 17 14.4 +1.8
HOQ Hoqain 75.10 289 P **P 17 16 58.2 +0.5**
SNR=6.8
G06A Carlson Farm, 75.45 46⇓P **P 17 16 58.9 -0.4**
baz=75
YBH Yreka Blue Hor 75.53 50 *e*P **P 17 17 00.7 +0.8**
YBH pmax pmax
comp=Z,18nm,1.3s
YBH Yreka Blue Hor 75.53 50 *e*P **P 17 17 00.7 +0.8**
comp=Z,18nm,1.3s,mb4.8
GMO Grizzlie Mount 75.58 47 P **P 17 17 01.1 +1.0**
F07A Phinny Hill Vi 75.62 46⇓P **P 17 17 00.9 +0.6**
baz=76
D08A Wollman Farm, 75.75 44⇑P **P 17 17 01.0 0.0**
baz=76,SNR=7.6
ARQ Araqi 75.86 289 P **P 17 17 03.1 +1.0**
SNR=6.2
OBN Obninsk 75.91 325*d i*P **P 17 17 02.7 +0.9**
OBN *e* 17 17 11.5
OBN *e*SS SS 17 31 34.1 +1.7
OBN pmax pmax
comp=Z,26nm,1.0s,mb5.1
OBN Obninsk 75.91 325 *e*P **P 17 17 01.9 +0.2**
comp=Z,16nm,0.9s,mb5.0
E08A Dider Farm, El 75.91 45⇓P **P 17 17 02.2 +0.3**
baz=76
RPZ Rata Peaks 75.99 159 LR LR 17 45 30.1
comp=Z,139nm,18.1s,MS4.3,baz=10.0,slow=32
EDM Edmonton 76.18 37 *e*P **P 17 17 02.9 -0.5**
NEW Newport 76.32 43 *e*P **P 17 17 04.5 +0.3**
NEW pmax pmax
comp=Z,11nm,1.0s
NEW Newport 76.32 43 *e*P **P 17 17 04.5 +0.3**
comp=Z,12nm,1.0s,mb4.8
K05A Summer Lake 76.34 49⇑P **P 17 17 05.1 +0.6**
baz=76
VSR Storozhevoye 76.36 321 *e*P **P 17 17 04.6 +0.2**
VSR *e**PP pP 17 17 15.0 -5.0
VSR *e**SP sP 17 17 19.0 -7.3
VSR *e* 17 19 57.1
VSR *e*S S 17 26 42.7 -2.4
VSR pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
VSR pmax pmax
comp=N,2.0nm,0.3s
VSR pmax pmax
comp=E,3.0nm,0.3s
VSR pmax pmax
comp=N,70nm,4.1s
VSR pmax pmax
comp=Z,110nm,4.1s
VSR pmax pmax
comp=E,10.0nm,1.0s
VSR smax
comp=N,140nm,2.2s
VSR smax
comp=Z,40nm,2.2s
VSR smax
comp=E,30nm,1.1s
E09A Wood Farm, Sta 76.47 44⇑P **P 17 17 05.9 +0.8**
baz=76,SNR=6.9
G08A Pilot Rock 76.50 46⇓P **P 17 17 05.5 +0.2**
baz=76,SNR=7.8
LTIM Timbered Crate 76.60 50 P **P 17 17 06.8 +0.8**
KAF Kangasniemi 76.79 334 *e*P **P 17 17 06.3 -0.3**
KAF pmax pmax
comp=Z,26nm,0.5s,mb5.4
KAF Kangasniemi 76.79 334 *e*P **P 17 17 06.3 -0.3**
comp=Z,26nm,0.5s,mb5.4
KAF Kangasniemi 76.79 334 *e*p **P 17 17 06.3 -0.3**
comp=Z,26nm,0.5s,mb5.4
H08A Prairie City 77.02 46⇑P **P 17 17 08.4 +0.1**
baz=77,SNR=13
C11A Tepee Creek (N 77.03 43⇓P **P 17 17 08.0 -0.3**
baz=77,SNR=11
G09A Cove 77.25 45⇑P **P 17 17 09.7 +0.1**
baz=77,SNR=7.1
FINES FINESS Array B 77.26 334 P **P 17 17 09.8 +0.5**
comp=Z,3.8nm,0.3s,mb4.9,baz=81,slow=4.9,SNR=54
ZEI Tsey 77.27 312 *e*P **P 17 17 09.6 -0.1**
ZEI pmax pmax
comp=Z,22nm,0.8s,mb5.1
KIV Kislovodsk 77.53 313 P **P 17 17 12.1 +0.9**
comp=Z,244nm,1.0s,mb6.1,SNR=6.0
KIV Kislovodsk 77.53 313 *e*P **P 17 17 12.1 +0.9**
KIV *e*S S 17 27 00.0 +1.8
KIV pmax pmax
comp=Z,42nm,1.0s,mb5.3
KIV MLR MLR
comp=Z,121nm,19.0s,MS4.2
KIV Kislovodsk 77.53 313 *e*P **P 17 17 12.6 +1.4**
comp=Z,66nm,1.3s,mb5.4
KIV Kislovodsk 77.53 313 P **P 17 17 13.1 +1.9**
SNR=14
H09A Durkee 77.60 46⇓P **P 17 17 10.0 -1.5**
baz=78,SNR=9.5
G10A Bishop Farm, J 77.66 45⇓P **P 17 17 11.8 0.0**
baz=78,SNR=18
J08A Circle Bar Ran 77.66 47 P **P 17 17 12.6 +0.6**
baz=78,SNR=17
BMO Blue Mountains 77.74 46 *e*P **P 17 17 12.4 +0.1**
BMO pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
BMO Blue Mountains 77.74 46 *e*P **P 17 17 12.4 +0.1**
comp=Z,10nm,0.8s,mb4.8
WALA Waterton Lakes 77.84 41 *e*P **P 17 17 13.5 +0.8**
comp=Z,2.3nm,1.6s,mb3.9
B13A Whitefish 77.84 42⇓P **P 17 17 12.6 -0.2**
baz=78,SNR=11
GNI Garni 77.85 309*c i*P **P 17 17 14.8 +1.8**
GNI pmax pmax
comp=Z,25nm,1.2s
GNI Garni 77.85 309 *e*P **P 17 17 14.6 +1.6**
comp=Z,54nm,1.4s,mb5.3
GNI Garni 77.85 309 P **P 17 17 14.7 +1.7**
SNR=6.7
I09A Lost Marbles R 77.86 47⇑P **P 17 17 12.9 -0.1**
baz=78
BSMT Bassoo Peak 77.90 42 *e*P **P 17 17 13.7 +0.6**
comp=Z,5.6nm,0.9s,mb4.5
D12A Red Ives Fores 77.93 43⇓P **P 17 17 12.7 -0.6**
baz=78
BEKR Beckworth 77.94 51 P **P 17 17 12.7 -0.8**
baz=78
WVOR Wild Horse Val 77.97 48 *e*P **P 17 17 13.2 -0.4**
WVOR pmax pmax
comp=Z,11nm,1.1s,mb4.7
WVOR Wild Horse Val 77.97 48 *e*P **P 17 17 13.2 -0.4**
comp=Z,11nm,1.1s,mb4.7
F11A Grangeville 77.98 44⇓P **P 17 17 12.9 -0.8**
baz=78,SNR=12
E12A Beaver Dam Sad 78.10 44⇑P **P 17 17 12.8 -1.5**
baz=78,SNR=12
C13A Hot Springs 78.11 42⇓P **P 17 17 14.8 +0.5**
baz=78
G11A Walters Elk Ra 78.14 45⇓P **P 17 17 13.9 -0.7**
baz=78,SNR=34
A14A Double T Ranch 78.16 41 P **P 17 17 15.4 +0.8**
baz=78,SNR=12
H10A Noah's Angus R 78.21 46 P **P 17 17 15.3 +0.4**
baz=78,SNR=21
I10A Payette 78.41 46⇑P **P 17 17 16.4 +0.3**
baz=78,SNR=6.1
D13A Huson 78.45 43⇑P **P 17 17 16.5 +0.3**
baz=78
SWMT Swartz Lake 78.53 42 *e*P **P 17 17 17.0 +0.4**
comp=Z,14nm,1.0s,mb4.8
C14A Swan Lake 78.55 42⇑P **P 17 17 16.7 0.0**
baz=78
A15A Johnson Ranch, 78.56 40⇑P **P 17 17 15.9 -0.8**
baz=78,SNR=14
F12A Elk City 78.60 44⇓P **P 17 17 16.7 -0.4**
baz=78,SNR=12
WCN Washoe City 78.61 52⇓P **P 17 17 16.5 -0.8**
baz=78
H11A Donnelly 78.62 45⇑P **P 17 17 17.3 +0.1**
baz=78,SNR=20
VSU Vasula 78.73 331 *i*P **P 17 17 18.2 +0.7**
CMB Columbia Colle 78.74 53 *e*P **P 17 17 18.0 0.0**
CMB pmax pmax
comp=Z,26nm,1.1s,mb5.1
CMB Columbia Colle 78.74 53 *e*P **P 17 17 18.0 0.0**
comp=Z,26nm,1.1s,mb5.1
G12A Big Creek, Yel 78.86 45⇑P **P 17 17 17.8 -0.7**
baz=79
MSO Missoula 78.89 43 *e*P **P 17 17 18.7 0.0**
comp=Z,1.3nm,0.8s,mb3.9
E13A Victor 78.93 43⇑P **P 17 17 18.5 -0.3**
baz=79
SLMT Seeley Lake 78.96 42 *e*P **P 17 17 19.1 +0.1**
comp=Z,18nm,1.0s,mb5.0
K10A MacKenzie Ranc 78.97 47⇑P **P 17 17 19.2 +0.1**
baz=79,SNR=15
B15A Bradely Ranch, 78.98 41⇓P **P 17 17 19.5 +0.4**
baz=79,SNR=17
D14A Greenough 79.03 42⇑P **P 17 17 18.9 -0.5**
baz=79,SNR=6.7
F13A Darby 79.16 44⇑P **P 17 17 19.9 -0.2**
baz=79,SNR=9.3
C15A Salmond Ranch, 79.22 42⇑P **P 17 17 20.4 -0.1**
baz=79,SNR=13
CHMT Chamberlain Mo 79.26 42 *e*P **P 17 17 20.4 -0.2**
comp=Z,5.8nm,1.2s,mb4.4
MFID Camas Ranch 79.35 47⇓P **P 17 17 21.3 +0.1**
baz=79,SNR=34
E14A Clinton 79.36 43⇓P **P 17 17 20.8 -0.4**
baz=79
H12A Diamond D Ranc 79.43 45⇑P **P 17 17 21.9 +0.3**
baz=79,SNR=15
B16A M & M Farms, S 79.43 41⇓P **P 17 17 21.6 +0.1**
baz=79,SNR=5.9
K11A Parker Ranch, 79.52 47⇓P **P 17 17 21.9 -0.2**
baz=79,SNR=20
G13A Cobalt 79.55 44⇓P **P 17 17 21.9 -0.4**
baz=79,SNR=23
L10A Juniper Basin 79.56 48⇑P **P 17 17 22.1 -0.3**
baz=79
I12A Atlanta 79.61 46⇓P **P 17 17 22.5 -0.1**
baz=80,SNR=10
SOC Sochi 79.61 314 *e*P **P 17 17 22.7 +0.1**
SOC *e*S S 17 27 17.7 -2.7
SOC pmax pmax
comp=Z,67nm,1.0s,mb5.5
SOC MLR MLR
comp=Z,206nm,18.0s,MS4.5
C16A Fuhringer Ranc 79.71 41⇓P **P 17 17 23.6 +0.5**
baz=80,SNR=19
M10A I.L. Ranch, Tu 79.78 48⇓P **P 17 17 24.3 +0.7**
baz=80,SNR=8.9
H13A Challis 79.80 45⇓P **P 17 17 20.9 -2.7**
baz=80,SNR=16
SUMG Summit 79.82 0 *i*P pP 17 17 40.9 +2.0
comp=Z,16nm,0.8s
E15A Deer Lodge 79.87 43⇓P **P 17 17 21.5 -2.5**
baz=80,SNR=10
PMOR Pomariorio Ree 79.95 113 *e*T 18 45 04.0
comp=Z,19nm,0.2s
PPT Papeete 79.98 116 *e*LR LR 17 42 24.4
comp=Z,344nm,27.0s
PPT Papeete 79.98 116 LR LR 17 45 56.5
comp=Z,165nm,20.2s,MS4.4,baz=297,slow=30
L11A Cat Creek Ranc 79.99 48⇓P **P 17 17 23.0 -1.7**
baz=80,SNR=12
B17A L&G Farms, Che 80.01 40⇑P **P 17 17 24.8 +0.1**
baz=80,SNR=19
NVAR Mina Array Bea 80.02 52 P **P 17 17 25.1 +0.1**
comp=Z,9.6nm,0.8s,mb4.8,baz=272,slow=5.6,SNR=57
HLID Hailey 80.18 46⇓P **P 17 17 26.1 +0.4**
baz=80,SNR=16
HLID Hailey 80.18 46 *e*P **P 17 17 26.1 +0.4**
comp=Z,7.1nm,0.9s,mb4.6
I13A Wildhorse Cree 80.20 45⇓P **P 17 17 26.6 +0.8**
baz=80,SNR=18
HRY Holter Researc 80.21 42 *e*P **P 17 17 26.6 +0.8**
comp=Z,6.5nm,0.5s,mb4.8
D16A Dana Ranch, Ca 80.22 42⇑P **P 17 17 26.1 +0.3**
baz=80,SNR=13
A18A Metzger Ranch, 80.23 40⇓P **P 17 17 26.0 +0.2**
baz=80,SNR=9.8
F15A Butte 80.25 43⇑P **P 17 17 26.4 +0.3**
baz=80,SNR=36
LRM Limekiln Ridge 80.28 43 *e*P **P 17 17 26.9 +0.7**
comp=Z,140nm,0.9s,mb5.9
M11A Holland Ranch, 80.31 48⇑P **P 17 17 27.1 +0.6**
baz=80
K12A Draper Farm, C 80.32 47⇓P **P 17 17 26.8 +0.4**
baz=80,SNR=5.3
H14A Leadore 80.32 45⇓P **P 17 17 26.8 +0.4**
baz=80,SNR=9.1
C17A Wharram Farm, 80.37 41⇑P **P 17 17 26.5 -0.1**
baz=80,SNR=5.6
O10A Cortez Mining, 80.38 50⇑P **P 17 17 26.5 -0.4**
baz=80
E16A East Helena 80.39 42⇓P **P 17 17 27.3 +0.5**
baz=80,SNR=5.3
J13A Cove Ranch, Pi 80.41 46⇓P **P 17 17 27.5 +0.6**
baz=80,SNR=9.0
DLMT Dillon 80.43 44 *e*P **P 17 17 27.4 +0.4**
comp=Z,21nm,1.3s,mb4.9
ANN Anapa 80.46 316 *e*P **P 17 17 22.5 -4.7**
ANN *e* 17 17 30.0
ANN *e**PP pP 17 17 40.0 -2.9
ANN *e* 17 20 25.7
ANN *e*S S 17 27 22.5 -6.7
ANN pmax pmax
comp=Z,77nm,1.8s,mb5.3
L12A House Creek Ra 80.48 47⇑P **P 17 17 28.1 +0.8**
baz=80,SNR=14
MICGM Minsk 80.50 327 *e* **P 17 17 28.0 +0.8**
MNK Minsk 80.53 327 *e*P **P 17 17 28.0 +0.7**
KBD Kabd 80.53 298 *e*P **P 17 17 27.8 -0.1**
IZAR Zarasai 80.54 329 *e*P **P 17 17 28.6 +1.2**
IZAR *e*pP pP 17 17 40.8 -2.3
IZAR AMB AMB 17 17 44.8
comp=Z,21nm,0.7s,mb5.2
MCMT McKenzie Canyo 80.54 44 *e*P **P 17 17 27.8 +0.2**
comp=Z,2.0nm,0.8s,mb4.1
B18A Beardsley Farm 80.54 40⇓P **P 17 17 26.6 -1.0**
baz=80,SNR=18
PKM Peak Mountain 80.56 56⇓P **P 17 17 28.2 +0.2**
baz=80
IDID Didziasalis 80.57 328 *e*P **P 17 17 28.5 +1.0**
IDID *e*pP pP 17 17 41.1 -2.2
IDID AMB AMB 17 17 44.9
comp=Z,17nm,0.8s,mb5.0
G15A Dillon 80.59 44⇓P **P 17 17 28.1 +0.3**
baz=80,SNR=6.0
I14A Mackay 80.61 45⇓P **P 17 17 28.3 +0.3**
baz=80,SNR=35
D17A Six Diamond Ra 80.66 41⇓P **P 17 17 29.0 +0.8**
baz=80,SNR=19
ISAL Salakas 80.70 329 *e*P **P 17 17 29.3 +1.0**
ISAL *e*pP pP 17 17 41.8 -2.2
ISAL AMB AMB 17 17 45.7
comp=Z,18nm,0.8s,mb5.0
P10A Eureka 80.73 50⇑P **P 17 17 29.6 +0.9**
baz=81,SNR=5.9
EGMT Eagleton 80.75 40⇓P **P 17 17 28.6 -0.1**
baz=81,SNR=7.9
EGMT Eagleton 80.75 40 *e*P **P 17 17 28.0 -0.7**
comp=Z,12nm,0.9s,mb4.8
RDF Al-Radifah 80.75 298 *e*P **P 17 17 29.4 +0.3**
RDF AMb AMB 17 17 30.5
comp=Z,89nm,1.3s,mb5.5
IIGN Ignalina 80.78 329 *e*P **P 17 17 29.9 +1.2**
IIGN *e*pP pP 17 17 42.2 -2.2
IIGN AMB AMB 17 17 46.0
comp=Z,9.6nm,1.0s,mb4.7
NACGM Naroch, 80.79 328 *e* **P 17 17 27.0 -1.7**
F16A Kennard Place, 80.80 43⇓P **P 17 17 28.7 -0.3**
baz=81
K13A Stover Farm, H 80.84 47⇓P **P 17 17 29.8 +0.6**
baz=81,SNR=6.5
NAY Al-Naaiem 80.85 298 *e*P **P 17 17 29.4 -0.2**
NAY AMb AMB 17 17 32.4
comp=Z,54nm,1.0s,mb5.4
J14A Carey 80.87 46⇑P **P 17 17 30.0 +0.6**
baz=81,SNR=21
BOZ Bozeman (W) 80.87 43⇑P **P 17 17 28.7 -0.7**
baz=81,SNR=12
BOZ Bozeman (W) 80.87 43 *e*P **P 17 17 29.6 +0.2**
BOZ pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
BOZ Bozeman (W) 80.87 43 *e*P **P 17 17 29.6 +0.2**
comp=Z,3.8nm,0.6s,mb4.5
M12A Wells 80.90 48⇑P **P 17 17 27.5 -2.0**
baz=81,SNR=10
E17A Martinsdale 80.92 42⇓P **P 17 17 30.0 +0.4**
baz=81,SNR=15
G16A Moss Hill, Enn 80.98 43⇑P **P 17 17 30.7 +0.8**
baz=81,SNR=15
ELK Elko 81.01 49 *e*P **P 17 17 30.6 +0.4**
ELK pmax pmax
comp=Z,12nm,0.9s
ELK Elko 81.01 49 *e*P **P 17 17 30.6 +0.4**
comp=Z,12nm,0.9s,mb4.8
O11A Cowboy Ranch, 81.03 49⇓P **P 17 17 30.9 +0.6**
baz=81,SNR=7.5
FFC Flin Flon 81.07 32 *i*P **P 17 17 30.6 +0.4**
FFC Flin Flon 81.07 32 *e*P **P 17 17 30.1 -0.1**
comp=Z,23nm,1.2s,mb5.0
N12A Clover Valley, 81.09 48⇑P **P 17 17 31.2 +0.6**
baz=81,SNR=5.8
N12A Clover Valley, 81.09 48 *e*P **P 17 17 31.4 +0.7**
comp=Z,18nm,1.1s,mb4.9
Q10A Clear Creek Ra 81.15 51⇑P **P 17 17 31.1 +0.1**
baz=81,SNR=8.9
D18A Linhart Farms, 81.16 41⇓P **P 17 17 31.1 +0.3**
baz=81,SNR=6.3
ARVC Arvin 81.17 55⇑P **P 17 17 31.1 -0.1**
baz=81
ISA Isabella 81.18 54⇓P **P 17 17 30.4 -0.8**
baz=81
L13A Double Diamond 81.20 47⇑P **P 17 17 31.4 +0.2**
baz=81,SNR=9.5
P11A Circle Ranch, 81.24 50⇑P **P 17 17 31.6 +0.1**
baz=81
F17A Fitzpatrick Pl 81.32 42⇓P **P 17 17 32.7 +0.9**
baz=81,SNR=8.9
GRAC Grapevine Rang 81.34 53⇓P **P 17 17 32.1 0.0**
baz=81
QLMT Earthquake Lak 81.41 44 *e*P **P 17 17 33.5 +1.2**
comp=Z,4.3nm,0.6s,mb4.6
M13A Montello 81.42 48⇑P **P 17 17 33.2 +0.8**
baz=81
M13A Montello 81.42 48 *e*P **P 17 17 32.8 +0.4**
comp=Z,6.1nm,0.8s,mb4.6
E18A Harlowton 81.42 42⇓P **P 17 17 33.3 +1.1**
baz=81,SNR=19
S10A Tonopah Range, 81.44 52⇓P **P 17 17 32.7 +0.1**
baz=81,SNR=25
K14A Jones Ranch, D 81.47 46⇑P **P 17 17 31.5 -1.1**
baz=81,SNR=8.1
R10A Warm Springs 81.47 51⇓P **P 17 17 33.4 +0.7**
baz=81,SNR=6.2
J15A Blackfoot 81.51 45⇑P **P 17 17 32.8 0.0**
baz=81,SNR=5.6

O12A **Currie** 81.57 49 ⇓P P 17 17 33.8 +0.6
baz=81,SNR=20
G17A **Pierce Place,** 81.58 43 ⇑P P 17 17 33.8 +0.7
baz=81
H16A **Russell Place,** 81.58 44 ⇓P P 17 17 34.0 +0.9
baz=81,SNR=6.5
N13A **Wendover, West** 81.64 48 ⇓P P 17 17 33.9 +0.3
baz=82
N13A **Wendover, West** 81.64 48 eP P 17 17 33.6 +0.1
comp=Z,11nm,1.0s,mb4.8
Q11A **Duckwater** 81.65 51 ⇑P P 17 17 34.0 +0.4
baz=82,SNR=9.7
L14A **Malta** 81.69 47 ⇓P P 17 17 34.8 +1.1
baz=82,SNR=7.8
MPMC **Manual Prospec** 81.70 54 P P 17 17 34.1 +0.1
baz=82,SNR=13
LRMC **Laurel Mountai** 81.83 54 ⇑P P 17 17 34.8 +0.1
baz=82,SNR=12
P12A **McGill** 81.85 50 ⇓P P 17 17 35.3 +0.6
baz=82,SNR=8.3
I16A **Newdale** 81.86 45 ⇑P P 17 17 35.4 +0.8
baz=82,SNR=8.3
M14A **Sheep Mountain** 81.88 47 P P 17 17 35.6 +0.8
baz=82,SNR=13
F18A **Big Timber** 81.88 42 P P 17 17 35.6 +0.9
baz=82,SNR=11
EDW2 **Edwards Air Fo** 81.90 55 ⇑P P 17 17 35.1 +0.1
baz=82,SNR=12
R11A **Troy Canyon, C** 81.94 51 ⇑P P 17 17 35.2 0.0
baz=82,SNR=23
FURC **Furnace Creek,** 81.95 53 ⇑P P 17 17 34.9 -0.4
baz=82,SNR=12
AKASG **Malin Array Be** 82.01 324 P P 17 17 35.0 -0.2
comp=Z,2.5nm,0.3s,mb4.6,baz=52,slow=5.3,SNR=21
AKASG LR LR 17 57 01.5
comp=Z,200nm,20.1s,MS4.5,baz=60,slow=38
AKBB **Malin Array Si** 82.01 324 eP P 17 17 35.0 -0.3
KIEV **Kiev** 82.02 324 eP P 17 17 34.8 -0.5
KIEV pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
KIEV **Kiev** 82.02 324 eP P 17 17 34.8 -0.5
comp=Z,5.9nm,0.5s,mb4.8
J16A **Bone** 82.09 45 ⇓P P 17 17 36.8 +0.9
baz=82,SNR=14
HVU **Hansel Valley** 82.11 47 eP P 17 17 36.9 +0.9
HVU pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
HVU **Hansel Valley** 82.11 47 eP P 17 17 36.9 +0.9
comp=Z,2.4nm,0.6s,mb4.3
Q12A **Willow Creek R** 82.11 50 ⇓P P 17 17 36.6 +0.5
baz=82
H17A **Grant Village** 82.16 44 ⇑P P 17 17 38.1 +2.0
baz=82,SNR=6.8
IMW **Indian Meadow** 82.19 44 eP P 17 17 37.9 +1.5
comp=Z,14nm,0.9s,mb4.9
RRI2 **Red Ridge** 82.24 45 eP P 17 17 37.4 +0.8
comp=Z,11nm,0.8s,mb4.8
L15A **Malad City** 82.25 46 P P 17 17 37.4 +0.7
baz=82,SNR=8.2
N14A **Grayback Hills** 82.31 48 ⇓P P 17 17 37.9 +0.8
baz=82
K16A **Soda Springs** 82.33 45 ⇑P P 17 17 38.3 +1.2
baz=82,SNR=12
U10A **Ash Meadows, A** 82.35 53 ⇓P P 17 17 37.7 +0.3
baz=82,SNR=8.6
TPAW **Teton Pass** 82.39 45 eP P 17 17 38.3 +0.9
comp=Z,20nm,1.3s,mb4.9
SIM **Simferopol'** 82.41 317 eP P 17 17 40.0 +2.5
SIM eS S 17 27 53.0 +3.6
SIM pmax pmax
comp=Z,18nm,1.0s,mb5.0
SIM MLR MLR
comp=Z,90nm,18.2s,MS4.2
BFSC **Mount Baldy Ra** 82.44 55 ⇓P P 17 17 37.9 0.0
baz=82
P13A **Bates Ranch, G** 82.46 49 ⇓P P 17 17 38.2 +0.3
baz=82,SNR=18
REDW **Red Top Meadow** 82.52 45 eP P 17 17 38.5 +0.3
comp=Z,4.9nm,1.1s,mb4.5
REDW e pP 17 17 54.3 +0.4
LOHW **Long Hollow** 82.55 44 eP P 17 17 38.9 +0.7
comp=Z,15nm,1.4s,mb4.8
GSC **Goldstone** 82.55 54 ⇑P P 17 17 38.0 -0.4
baz=82,SNR=10
GSC **Goldstone** 82.55 54 eP P 17 17 38.3 -0.1
GSC pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
GSC **Goldstone** 82.55 54 eP P 17 17 38.3 -0.1
comp=Z,9.8nm,0.9s,mb4.8
RLMT **Red Lodge** 82.56 43 P P 17 17 39.7 +1.4
baz=82,SNR=7.9
RLMT **Red Lodge** 82.56 43 eP P 17 17 39.3 +1.0
comp=Z,13nm,1.0s,mb4.9
R12A **Pony Springs,** 82.62 51 ⇓P P 17 17 39.0 +0.3
baz=82,SNR=8.7
SHOC **Shoshone** 82.64 53 ⇓P P 17 17 39.0 +0.1
baz=82
Q13A **Wheeler Ranch,** 82.70 50 ⇑P P 17 17 39.7 +0.5
baz=83,SNR=5.3
T11A **Corn Creek, Al** 82.73 52 P P 17 17 39.8 +0.5
baz=83,SNR=8.7
S12A **Delamar Landin** 82.81 51 ⇑P P 17 17 39.8 +0.1
baz=83
L16A **Fish Haven** 82.86 46 ⇓P P 17 17 39.8 -0.1
baz=83
DUG **Dugway** 82.89 48 ⇑P P 17 17 40.8 +0.7
baz=83,SNR=14
DUG **Dugway** 82.89 48 eP P 17 17 40.5 +0.4
DUG pmax pmax
comp=Z,16nm,1.0s,mb5.0
DUG **Dugway** 82.89 48 eP P 17 17 40.5 +0.4
comp=Z,16nm,1.0s,mb5.0
NB2 **NORSAR Subarra** 82.90 338 P P 17 17 39.4 -0.3
comp=Z,1.3nm,0.8s,mb4.0,baz=48,slow=5.6
NOA **NORSAR Array B** 82.90 338 P P 17 17 39.8 +0.1
comp=Z,5.1nm,0.8s,mb4.6,baz=42,slow=5.2,SNR=13
NOA LR LR 17 57 39.7
comp=Z,80nm,22.0s,MS4.0,baz=45,slow=38
NOA **NORSAR Array B** 82.90 338 P P 17 17 39.8 +0.1
NOA LR LR 17 57 39.7
HWUT **Hardware Ranch** 82.98 47 eP P 17 17 40.9 +0.3
comp=Z,21nm,1.1s,mb5.1
SUW **Suwalki** 83.00 329 eP P 17 17 40.0 -0.4
SUW e pP 17 17 55.8 -0.4
SUW pmax pmax
comp=Z,16nm,0.3s,mb5.5
SUW **Suwalki** 83.00 329 eP P 17 17 40.0 -0.4
comp=Z,16nm,0.3s,mb5.5
SUW e pP 17 17 55.8 -0.4
P14A **Drum Mountains** 83.03 49 ⇓P P 17 17 40.8 0.0
baz=83,SNR=14
MURC **Murrieta** 83.08 56 ⇑P P 17 17 41.0 -0.2
baz=83
TUQ **Turquoise Moun** 83.12 54 ⇓P P 17 17 41.5 +0.1
baz=83,SNR=6.0
J18A **Kendall Valley** 83.12 45 ⇓P P 17 17 41.2 0.0
baz=83,SNR=8.5
HEC **Hector,Ludlow** 83.12 54 ⇓P P 17 17 41.2 -0.2
baz=83
R13A **O'Grain Ranch,** 83.13 50 ⇓P P 17 17 39.8 -1.5
baz=83
L17A **Cokeville** 83.17 46 P P 17 17 42.3 +0.8
baz=83,SNR=7.6
Q14A **Sevier Lake (B** 83.19 49 ⇓P P 17 17 42.0 +0.4
baz=83,SNR=18
V11A **Goodsprings** 83.27 53 ⇓P P 17 17 41.7 -0.4
baz=83
CTU **Camp Tracy** 83.33 47 eP P 17 17 43.0 +0.6
comp=Z,8.5nm,0.9s,mb4.8
K18A **Toltan Ranch,** 83.41 45 ⇓P P 17 17 43.3 +0.6
baz=83
LAO **LASA Array** 83.49 40 eP P 17 17 43.3 +0.3
comp=Z,16nm,1.0s,mb5.0
NLU **North Lily Min** 83.50 48 eP P 17 17 43.5 +0.3
comp=Z,25nm,1.6s,mb5.0
S13A **Holt Ranch, En** 83.50 51 ⇑P P 17 17 43.8 +0.6
baz=83,SNR=12
P15A **Leamington** 83.56 49 ⇓P P 17 17 44.2 +0.6
baz=83
JLU **Jordanelle** 83.57 47 eP P 17 17 44.1 +0.5
comp=Z,2.4nm,0.6s,mb4.5
JLU e pP 17 17 59.5 0.0
U12A **Valley of Fire** 83.60 52 ⇓P P 17 17 43.8 -0.1
baz=84
DGMT **Dagmar** 83.61 38 ⇑P P 17 17 43.5 -0.1
baz=83
PFO **Pinyon Flat Ob** 83.62 55 P P 17 17 43.0 -1.0
comp=Z,73nm,0.8s,mb5.9,SNR=7.5
PFO **Pinyon Flat Ob** 83.62 55 P P 17 17 43.8 -0.2
baz=84,SNR=11
PFO **Pinyon Flat Ob** 83.62 55 eP P 17 17 43.4 -0.6
PFO e pP 17 18 00.3 +0.5
PFO pmax pmax
comp=Z,13nm,1.1s,mb5.0
PFO **Pinyon Flat Ob** 83.62 55 eP P 17 17 43.4 -0.6
comp=Z,13nm,1.1s,mb5.0
PFO e pP 17 18 00.3 +0.4
GMRC **Granite Mounta** 83.63 54 ⇑P P 17 17 43.8 -0.2
baz=84,SNR=11
M17A **Scullys Gap (B** 83.63 46 ⇓P P 17 17 44.1 +0.3
baz=84,SNR=14
BW06 **Boulder Array** 83.64 45 ⇑P P 17 17 43.8 -0.1
baz=84,SNR=10.0
PDAR **Pinedale Array** 83.64 45 P P 17 17 43.6 -0.3
comp=Z,4.8nm,0.9s,mb4.6,baz=298,slow=3.2,SNR=28
PDAR PP PP 17 21 02.2 +5.6
comp=Z,1.2nm,1.0s,baz=285,slow=5.7,SNR=3.5
PDAR LR LR 17 47 51.5
comp=Z,152nm,22.0s,MS4.3,baz=279,slow=30
ARUT **Antelope Range** 83.69 51 eP P 17 17 44.4 +0.2
ARUT e pP 17 17 59.7 -0.4
ARUT pmax pmax
comp=Z,22nm,1.3s,mb5.1
ARUT **Antelope Range** 83.69 51 eP P 17 17 44.4 +0.2
comp=Z,22nm,1.3s,mb5.1
ARUT e pP 17 17 59.7 -0.4
R14A **James Farms, M** 83.71 50 ⇓P P 17 17 43.8 -0.6
baz=84
V12A **Nelson** 83.73 53 ⇓P P 17 17 43.9 -0.6
baz=84,SNR=5.7
O16A **Springville** 83.75 48 ⇑P P 17 17 44.1 -0.4
baz=84
T13A **Saint George** 83.75 51 ⇓P P 17 17 44.2 -0.4
baz=84,SNR=9.8
BELC **Belle Mtn. Jos** 83.76 55 ⇑P P 17 17 43.6 -1.1
baz=84,SNR=12
L18A **Fontenelle, Gr** 83.79 46 ⇑P P 17 17 44.9 +0.2
baz=84,SNR=6.3
N17A **Moffit Pass** 83.80 47 ⇑P P 17 17 44.4 -0.4
baz=84
DAU **Daniels Canyon** 83.80 47 eP P 17 17 45.7 +0.9
DAU pmax pmax
comp=Z,51nm,1.5s,mb5.4
DAU **Daniels Canyon** 83.80 47 eP P 17 17 45.7 +0.9
comp=Z,51nm,1.5s,mb5.4
LDFC **Landfair** 83.87 54 eP P 17 17 45.3 +0.1
comp=Z,8.2nm,0.8s,mb4.9
S14A **Cedar City** 83.88 50 ⇓P P 17 17 43.3 -2.0
baz=84
MONP **Monument Peak** 84.00 56 ⇑P P 17 17 45.3 -0.6
baz=84,SNR=5.1
U13A **Pakoon Wash** 84.01 52 ⇓P P 17 17 46.0 +0.1
baz=84,SNR=18
M18A **Lyman** 84.03 46 ⇑P P 17 17 45.5 -0.4
baz=84
K19A **Absolon Red Bu** 84.05 44 P P 17 17 46.0 0.0
baz=84,SNR=9.0
L19A **Farson** 84.12 45 ⇓P P 17 17 46.6 +0.3
baz=84,SNR=12
MSU **Marysvale** 84.17 49 eP P 17 17 47.4 +0.7
MSU pmax pmax
comp=Z,50nm,1.8s,mb5.3
MSU **Marysvale** 84.17 49 eP P 17 17 47.4 +0.7
comp=Z,50nm,1.8s,mb5.3
O17A **Robinson Place** 84.25 47 ⇑P P 17 17 46.8 -0.2
baz=84,SNR=16
V13A **Grand Canyon W** 84.28 52 ⇑P P 17 17 47.1 -0.2
baz=84
IRM **Iron Mountain** 84.30 54 ⇑P P 17 17 47.2 -0.2
baz=84,SNR=8.8
T14A **Hurricane** 84.30 51 ⇑P P 17 17 46.9 -0.5
baz=84,SNR=7.0
BC3 **Big Chuckawall** 84.33 55 P P 17 17 47.8 +0.2
baz=84,SNR=15
DVTC **Desert V Tower** 84.34 56 ⇑P P 17 17 47.3 -0.4
baz=84
K20A **Yellowstone Ra** 84.46 44 ⇑P P 17 17 48.2 +0.2
baz=84,SNR=12
S15A **Panguitch** 84.48 50 ⇑P P 17 17 47.8 -0.5
baz=84
N18A **Larsen Ranch,** 84.52 46 ⇑P P 17 17 48.5 +0.1
baz=84,SNR=7.8
U14A **Mt Trumbull** 84.56 52 ⇓P P 17 17 47.9 -0.8
baz=84,SNR=7.6
P17A **Butcher Ranch,** 84.63 48 ⇑P P 17 17 49.0 0.0
baz=84,SNR=6.9
Q16A **Castle Valley** 84.63 49 ⇓P P 17 17 49.7 +0.7
baz=84,SNR=12
O18A **Roosevelt** 84.69 47 ⇑P P 17 17 50.1 +0.8
baz=84,SNR=6.3
R16A **Teasdale** 84.76 49 ⇑P P 17 17 50.2 +0.6
baz=85,SNR=16
T15A **Red Dirt Ranch** 84.80 51 ⇑P P 17 17 50.3 +0.4
baz=85,SNR=9.3
P18A **Preston Nutter** 84.87 48 ⇓P P 17 17 50.3 +0.1
baz=85,SNR=14
N19A **John Jarvie Ra** 84.89 46 ⇑P P 17 17 50.6 +0.4
baz=85
PDMCI **Parker Dam,Lak** 84.95 54 ⇓P P 17 17 51.0 +0.3
baz=85
Y12C **Blythe** 84.95 55 ⇑P P 17 17 50.6 -0.1
baz=85
SRU **San Rafael** 84.96 48 ⇑P P 17 17 51.1 +0.5
baz=85,SNR=16
SRU **San Rafael** 84.96 48 eP P 17 17 51.0 +0.3
SRU e*PP pP 17 18 08.8 +2.3
SRU pmax pmax
comp=Z,9.0nm,0.6s,mb5.1
SRU **San Rafael** 84.96 48 eP P 17 17 51.0 +0.4
comp=Z,9.4nm,0.6s,mb5.1
SRU epP pP 17 18 08.8 +2.3
S16A **Weppner Ranch,** 84.97 50 ⇑P P 17 17 50.8 0.0
baz=85,SNR=7.4
V14A **Boquillas Ranc** 85.01 52 ⇑P P 17 17 50.8 -0.1
baz=85,SNR=11
X13A **Yucca** 85.03 53 ⇓P P 17 17 51.1 0.0
baz=85,SNR=10
GLA **Glamis** 85.08 55 ⇓P P 17 17 51.3 -0.1
baz=85,SNR=8.0
GLA **Glamis** 85.08 55 eP P 17 17 50.5 -0.9
GLA pmax pmax
comp=Z,14nm,1.0s,mb5.0
GLA **Glamis** 85.08 55 eP P 17 17 50.5 -0.9
comp=Z,14nm,1.0s,mb5.0
U15A **North Rim** 85.17 51 ⇑P P 17 17 52.5 +0.8
baz=85,SNR=20
M20A **Sweetwater, Wa** 85.19 45 ⇑P P 17 17 52.2 +0.5
baz=85
R17A **Hanksville Air** 85.20 49 P P 17 17 51.9 0.0
baz=85,SNR=16
Q18A **Rafter H Ranch** 85.22 48 ⇑P P 17 17 51.5 -0.5
baz=85,SNR=5.0
W14A **Seligman** 85.24 53 ⇑P P 17 17 51.9 -0.2
baz=85,SNR=7.0
O19A **Miners Draw (B** 85.24 47 ⇑P P 17 17 51.7 -0.4
baz=85
Y13A **Salome** 85.42 54 ⇓P P 17 17 53.4 +0.4
baz=85,SNR=6.8
L21A **Rawlins** 85.44 45 ⇑P P 17 17 53.7 +0.7
baz=85,SNR=15
BR131 **Keskin Array S** 85.50 313 eP P 17 17 53.6 +0.2
comp=Z,9.6nm,0.8s,mb5.0
BRTR **Keskin Array B** 85.50 313 P P 17 17 53.9 +0.5
comp=Z,8.9nm,0.8s,mb5.0,baz=101,slow=4.1,SNR=36
BRTR LR LR 17 59 30.8
comp=Z,65nm,21.0s,MS4.0,baz=190,slow=38
N20A **Spence Gulch,** 85.50 46 P P 17 17 54.3 +1.0
baz=85,SNR=22
M21A **Separation Pea** 85.64 45 ⇑P P 17 17 54.0 0.0
baz=86,SNR=9.3
RWWY **Rawlins** 85.69 45 eP P 17 17 54.4 +0.1
comp=Z,20nm,1.1s,mb5.2
P19A **Cripple Cowboy** 85.69 47 P P 17 17 54.8 +0.4
baz=86,SNR=31
X14A **Yava** 85.76 53 ⇑P P 17 17 54.9 +0.1
baz=86,SNR=9.3
R18A **Canyonlands Na** 85.76 49 ⇓P P 17 17 54.6 -0.1
baz=86,SNR=11
W15A **Williams** 85.83 52 ⇓P P 17 17 55.1 0.0
baz=86
BSD **Bornholm Skovb** 85.85 333 eP P 17 17 53.9 -0.8
BSD pmax pmax
comp=Z,12nm,1.0s,mb5.1
BSD **Bornholm Skovb** 85.85 333 i P P 17 17 53.9 -0.8
comp=Z,12nm,1.0s,mb5.1
Z13A **Yuma Proving G** 85.86 55 ⇑P P 17 17 55.6 +0.4
baz=86,SNR=19
Q19A **Hogan Spring (** 85.88 48 ⇓P P 17 17 54.7 -0.5
baz=86,SNR=6.1
T17A **Navajo Res., N** 85.89 50 ⇓P P 17 17 55.3 -0.1
baz=86
O20A **White River Ci** 85.90 46 ⇓P P 17 17 55.7 +0.4
baz=86,SNR=8.8
BUR08 **Bucovina Ar. S** 85.94 323 eP P 17 17 55.6 +0.2
Y14A **Wickenburg** 85.95 54 ⇓P P 17 17 54.7 -1.0
baz=86,SNR=12
L22A **Ellis Ranch, M** 85.98 44 ⇑P P 17 17 55.7 0.0
baz=86
113A **Mohawk Valley,** 86.00 55 ⇑P P 17 17 56.0 +0.1
baz=86,SNR=11
KWP **Kalwaria Pacla** 86.00 325 eP P 17 17 55.5 -0.1
KWP pmax pmax
comp=Z,28nm,1.0s,mb5.5
KWP **Kalwaria Pacla** 86.00 325 eP P 17 17 55.5 -0.1
comp=Z,28nm,1.0s,mb5.5
N21A **Black Mountain** 86.01 46 ⇑P P 17 17 56.0 +0.1
baz=86,SNR=11
S18A **Hurst Farm, Bl** 86.07 49 P P 17 17 56.4 +0.1
baz=86,SNR=11
P20A **De Beque** 86.15 47 ⇓P P 17 17 55.9 -0.7
baz=86
U17A **Shonto** 86.20 50 ⇑P P 17 17 56.3 -0.5
baz=86
X15A **Humboldt** 86.21 53 ⇓P P 17 17 57.0 0.0
baz=86,SNR=15
RSSD **Black Hills** 86.22 41 eP P 17 17 56.0 -0.8
RSSD pmax pmax
comp=Z,22nm,1.5s,mb5.2
RSSD **Black Hills** 86.22 41 eP P 17 17 56.0 -0.9
comp=Z,22nm,1.5s,mb5.2
R19A **Curley Farm, L** 86.23 48 ⇓P P 17 17 56.1 -0.9
baz=86,SNR=9.2
WUAZ **Wupatki** 86.28 52 ⇓P P 17 17 57.6 +0.3
baz=86,SNR=7.8
WUAZ **Wupatki** 86.28 52 eP P 17 17 57.6 +0.3
comp=Z,12nm,1.0s,mb5.1
O21A **Pagoda** 86.34 46 ⇓P P 17 17 56.9 -0.6
baz=86
PV04 **Paradox Valley** 86.41 48 eP P 17 17 57.9 0.0
COP **Copenhagen** 86.42 334 eP P 17 17 59.5 +2.0
COP pmax pmax
comp=Z,15nm,0.9s,mb5.2
COP **Copenhagen** 86.42 334 i P P 17 17 59.5 +2.0
comp=Z,15nm,0.9s,mb5.2
Y15A **Casa Rosa Ranc** 86.42 53 ⇓P P 17 17 58.0 0.0
baz=86
T18A **Mexican Hat** 86.45 50 ⇓P P 17 17 57.7 -0.4
baz=86,SNR=8.2
Q20A **Ridgley Place,** 86.51 47 ⇑P P 17 17 58.2 -0.2
baz=86,SNR=20
S19A **Harvey Farm, M** 86.61 49 ⇓P P 17 17 58.5 -0.3
baz=86
V17A **Tonalea, Kykot** 86.62 51 ⇓P P 17 17 59.2 +0.2
baz=86,SNR=20
114A **Black Gap (USA** 86.64 55 ⇑P P 17 17 59.7 +0.6
baz=86,SNR=11
N22A **Wattenberg Ran** 86.66 45 ⇑P P 17 17 59.6 +0.6
baz=86
PV01 **Paradox Valley** 86.78 48 eP P 17 17 59.7 +0.1
comp=Z,585nm,0.6s
ULM **Lac du Bonnet** 86.78 33 LR LR 17 53 24.9
comp=Z,91nm,21.1s,MS4.2,baz=297,slow=33
X16A **Lo Mia Camp, P** 86.81 53 ⇓P P 17 18 00.5 +0.7
baz=87,SNR=5.5
U18A **Rough Rock, Ch** 86.83 50 ⇑P P 17 17 59.1 -0.9
baz=87,SNR=8.4
STHS **Stebnicka Huta** 86.87 326 eP P 17 17 59.8 -0.1
STHS pmax pmax
comp=Z,6.0nm,1.7s,mb4.5
STHS **Stebnicka Huta** 86.87 326 eP P 17 17 59.8 -0.1
comp=Z,5.7nm,1.7s,mb4.5
STHS **Stebnicka Huta** 86.87 326 eP P 17 17 59.8 -0.1
R20A **Redvale** 86.87 48 ⇑P P 17 18 00.5 +0.4
baz=87,SNR=6.9
Z15A **Gila River Ind** 86.89 54 ⇓P P 17 18 00.4 +0.1
baz=87
O22A **Kremmling** 86.96 46 ⇑P P 17 18 00.6 +0.1
baz=87,SNR=8.4
PHWY **Pilot Hill** 87.00 44 eP P 17 18 01.1 +0.4
comp=Z,4.6nm,0.9s,mb4.7
OJC **Ojcow** 87.04 327 eP P 17 17 58.5 -2.2
Y16A **Circle Bar Ran** 87.06 53 ⇑P P 17 18 00.9 -0.2
baz=87,SNR=5.2
S20A **Disappointment** 87.08 48 ⇑P P 17 18 00.9 -0.3
baz=87
CRVS **Cervenica-Dubn** 87.09 325 eP P 17 18 00.8 -0.2
CRVS pmax pmax
comp=Z,12nm,1.8s,mb4.8
CRVS **Cervenica-Dubn** 87.09 325 eP P 17 18 00.8 -0.2
comp=Z,12nm,1.8s,mb4.8
CRVS **Cervenica-Dubn** 87.09 325 eP P 17 18 00.8 -0.2
214A **Organ Pipe Nat** 87.10 55 ⇑P P 17 18 01.2 -0.2
baz=87,SNR=9.7
115A **Sonoran Desert** 87.14 54 ⇑P P 17 18 01.1 -0.5
baz=87
V18A **Ganado** 87.17 51 ⇓P P 17 18 01.3 -0.3
baz=87,SNR=5.8
T19A **Beclabito** 87.18 50 ⇑P P 17 18 02.0 +0.3
baz=87
SMCO **Snowmass** 87.24 47 eP P 17 18 02.6 +0.7
comp=Z,9.1nm,1.0s,mb5.0
R21A **Cimarron** 87.32 48 ⇑P P 17 18 02.2 -0.1
baz=87,SNR=9.1
NIE **Niedzica** 87.32 326 eP P 17 18 01.8 -0.3
MVCO **Mesa Verde** 87.33 49 ⇓P P 17 18 01.8 -0.5
baz=87
U19A **Dine' College,** 87.35 50 ⇓P P 17 18 02.5 0.0
baz=87,SNR=8.2
Q22A **Crested Butte,** 87.46 47 ⇑P P 17 18 03.2 +0.3
baz=87,SNR=9.6
116A **Eloy** 87.59 54 ⇓P P 17 18 03.2 -0.5
baz=88,SNR=5.5
ISCO **Idaho Springs** 87.76 46 eP P 17 18 05.3 +0.9
ISCO pmax pmax
comp=Z,10.0nm,1.4s,mb4.8
ISCO **Idaho Springs** 87.76 46 eP P 17 18 05.3 +0.9
comp=Z,9.5nm,1.4s,mb4.8
KECS **Kecovo** 87.86 326 eP P 17 18 05.0 +0.4
KECS pmax pmax
comp=Z,16nm,2.8s,mb4.8
KECS **Kecovo** 87.86 326 eP P 17 18 05.0 +0.4
comp=Z,16nm,2.8s,mb4.8
KECS **Kecovo** 87.86 326 eP P 17 18 05.0 +0.4
MMAI **Mount Meron Ar** 87.88 306 P P 17 18 05.1 0.0
comp=Z,9.9nm,0.8s,mb5.1,baz=73,slow=6.3,SNR=9.1
R22A **Saguache, Gunn** 87.91 47 ⇓P P 17 18 02.0 -3.1
baz=88,SNR=6.8
216A **Three Points,** 88.06 55 ⇓P P 17 18 06.2 +0.2
baz=88,SNR=5.3
OKC **Ostrava-Krasne** 88.09 328 epP pP 17 18 21.3 -0.4
KSP **Ksiaz** 88.26 329 eP P 17 18 06.6 +0.1
KSP e*PP pP 17 18 22.2 -0.3
DPC **Dobruska-Polom** 88.59 329 eP P 17 18 08.6 +0.5
DPC epP pP 17 18 24.1 +0.1
UPC **Upice** 88.62 329 eP P 17 18 10.3 +2.1
UPC epP pP 17 18 23.4 -0.8
217A **Green Valley** 88.64 55 ⇑P P 17 18 07.2 -1.5
baz=88,SNR=6.9
VYHS **Vyhne** 88.67 326 eP P 17 18 08.5 0.0
VYHS pmax pmax
comp=Z,36nm,3.1s
VYHS **Vyhne** 88.67 326 eP P 17 18 08.5 0.0
comp=Z,36nm,3.1s
VYHS **Vyhne** 88.67 326 eP P 17 18 08.5 0.0
X20A **Quemado** 88.79 51 ⇓P P 17 18 07.3 -2.1
baz=89,SNR=5.6
Y20A **Horse Springs,** 89.22 52 ⇑P P 17 18 09.1 -2.3
baz=89,SNR=5.8
BUD **Budapest** 89.25 325 ⇓eP P 17 18 08.3 -3.0
BRG **Berggiesshubel** 89.29 330 eP P 17 18 17.3 +6.0
comp=Z,2.2nm,0.9s,mb4.5
BRG **Berggiesshubel** 89.29 330 eP P 17 18 17.3 +5.9
BRG pmax pmax
comp=Z,1.0nm,0.9s,mb4.2
CLL **Collm** 89.39 331 eP P 17 18 14.0 +2.2
CLL e*PP pP 17 18 27.0 -0.8
CLL **Collm** 89.39 331 e(P) P 17 18 14.0 +2.2
CLL epP pP 17 18 27.0 -0.8
CLL esP sP 17 18 34.0 +0.1
CLL LmV 18 02 00.0
comp=Z,100nm,18.4s
Z20A **Nine Sixteen R** 89.51 52 ⇓P P 17 18 12.3 -0.5
baz=89,SNR=7.7

219A	White Tail Can	89.64	54	⇑P	P	17 18 13.6	+0.2
	baz=90,SNR=5.1						
PRU	Pruhonice	89.66	329	eP	P	17 18 15.8	+2.7
PRU				epP	pP	17 18 30.4	+1.3
ANMO	Albuquerque	89.96	50	eP	P	17 18 15.4	+0.6
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ANMO	Albuquerque	89.96	50	eP	P	17 18 15.4	+0.6
	comp=Z,1.8nm,0.8s,mb4.5						
NKC	Novy Kostel	90.41	330	eP	P	17 18 17.1	+0.5
NKC				epP	pP	17 18 32.7	+0.1
MOX	Moxa	90.47	331	eP	pP	17 18 32.7	-0.1
W24A	Lazy 6 Ranch,	90.52	49	⇑P	P	17 18 15.8	-1.6
	baz=90,SNR=5.1						
ECSD	EROS Data Cent	90.67	38	eP	P	17 18 17.2	-0.8
	comp=Z,2.4nm,0.9s,mb4.5						
KHC	Kasperske Hory	90.71	329	eP	P	17 18 17.8	-0.2
KHC				e*PP	pP	17 18 33.7	-0.3
KHC	Kasperske Hory	90.71	329	eP	P	17 18 17.4	-0.6
	comp=Z,4.6nm,0.8s,mb4.9						
KHC	Kasperske Hory	90.71	329	eP	P	17 18 17.8	-0.2
KHC				epP	pP	17 18 33.7	-0.3
ARSA	Arzberg	91.14	327	⇑iPcP	P	17 18 20.1	+0.1
	comp=Z,4.6nm,1.1s,mb4.7						
GRF	Grafenberg Arr	91.34	331	eP	P	17 18 20.6	-0.4
	comp=Z,6.0nm,1.2s,mb4.8						
GRF				epP	pP	17 18 36.4	-0.5
GRF	Grafenberg Arr	91.34	331	eP	P	17 18 20.6	-0.4
GRF				e*PP	pP	17 18 36.4	-0.5
GRF				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.8						
SOKA	Soboth	91.78	327	⇑iPcP	P	17 18 22.5	-0.5
	comp=Z,7.6nm,1.5s,mb4.8						
X26A	CR and CF Fran	91.97	49	⇓P	P	17 18 22.7	-1.5
	baz=92,SNR=5.9						
W27A	Bowe Ranch, En	92.16	48	⇓P	P	17 18 24.2	-0.9
	baz=92,SNR=8.6						
224A	Cornudas Mount	92.23	52	⇑P	P	17 18 24.2	-1.3
	baz=92,SNR=8.9						
125A	Gardner Draw,	92.50	51	⇑P	P	17 18 23.6	-3.0
	baz=92						
MNTX	Cornudas Mount	92.55	52	eP	P	17 18 27.0	+0.1
	comp=Z,5.0nm,0.9s,mb4.9						
MNTX				e	pP	17 18 42.3	-0.6
Z26A	Caprock	92.60	50	⇑P	P	17 18 27.1	0.0
	baz=92,SNR=5.7						
324A	Moseley Ranch,	92.62	52	⇓P	P	17 18 25.8	-1.5
	baz=92,SNR=8.1						
GDL2	Guadalupe Moun	92.96	51	eP	P	17 18 28.9	+0.1
	comp=Z,2.2nm,0.7s,mb4.7						
GDL2				e	pP	17 18 44.8	0.0
325A	Bean Ranch, Si	93.02	52	⇑P	P	17 18 27.8	-1.3
	baz=93,SNR=6.6						
Z27A	Tatum	93.09	50	⇑P	P	17 18 27.9	-1.5
	baz=93,SNR=7.7						
AMTX	Amarillo	93.18	48	eP	P	17 18 30.2	+0.4
	comp=Z,6.2nm,0.7s,mb5.2						
425A	Indio Mountain	93.35	53	⇓P	P	17 18 29.4	-1.2
	baz=93,SNR=9.9						
BFO	Black Forest	93.62	331	eP	P	17 18 30.5	-1.0
BFO				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb5.0						
BFO	Black Forest	93.62	331	eP	P	17 18 30.5	-1.0
	comp=Z,4.2nm,0.6s,mb5.0						
SCHQ	Schefferville	93.92	16	LR	LR	17 58 08.2	
	comp=Z,90nm,21.0s,MS4.2,baz=312,slow=34						
CDF	Champ du Feu	94.00	332	eP	P	17 18 31.1	-2.1
426A	McDonald Obser	94.08	52	⇑P	P	17 18 31.3	-2.7
	baz=94,SNR=6.9						
HINF	Hinteralfeld	94.64	332	eP	P	17 18 34.7	-1.5
HAU	Haudompre	94.71	332	eP	P	17 18 34.0	-2.5
TXAR	Lajitas Array	95.12	53	P	P	17 18 36.8	-1.9
	comp=Z,0.2nm,0.4s,mb3.9,baz=288,slow=4.5,SNR=24						
TXAR				LR	LR	18 03 20.0	
	comp=Z,38nm,18.1s,MS3.9,baz=180,slow=37						
627A	Terlingua Ranc	95.24	53	⇓P	P	17 18 38.9	-0.5
	baz=95,SNR=7.2						
LOR	Lormes	96.31	333	eP	P	17 18 41.8	-2.0
LPL	La Plagne	96.50	330	eP	P	17 18 43.6	-1.1
	comp=Z,9.1nm,0.5s,mb5.1						
LPL	La Plagne	96.50	330	eP	P	17 18 43.6	-1.1
LPL				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb5.2						
LPL	La Plagne	96.50	330	eP	P	17 18 43.6	-1.1
	comp=Z,4.6nm,0.5s,mb5.2						
LPG	La Plagne	96.50	330	eP	P	17 18 43.7	-1.0
	comp=Z,9.8nm,0.5s,mb5.2						
LPG	La Plagne	96.50	330	eP	P	17 18 43.7	-1.0
LPG				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb5.2						
LPG	La Plagne	96.50	330	eP	P	17 18 43.7	-1.0
	comp=Z,4.9nm,0.5s,mb5.2						
SSF	Saint Saulge	96.62	333	eP	P	17 18 43.0	-2.2
	comp=Z,4.6nm,0.6s,mb4.8						
SSF	Saint Saulge	96.62	333	eP	P	17 18 43.0	-2.2
SSF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.7						
SSF	Saint Saulge	96.62	333	eP	P	17 18 43.0	-2.2
	comp=Z,2.3nm,0.6s,mb4.8						
SMF	Signal de Mont	96.82	333	eP	P	17 18 43.6	-2.5
AVF	Avril sur Loir	96.91	333	eP	P	17 18 45.0	-1.5
	comp=Z,8.9nm,0.8s,mb5.0						
AVF	Avril sur Loir	96.91	333	eP	P	17 18 45.0	-1.5
AVF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.9						
AVF	Avril sur Loir	96.91	333	eP	P	17 18 45.0	-1.5
	comp=Z,4.4nm,0.8s,mb4.9						
MBDF	Montbardon	97.09	330	eP	P	17 18 45.4	-2.0
CEL	Celeste	97.24	320	eP	P	17 18 48.8	+0.5
	comp=Z,17nm,0.9s,mb5.5						
TORD	Torodi Ar. Bea	124.09	312	PKP	PKPdf	17 24 13.3	-1.0
	comp=Z,0.9nm,0.4s,baz=34,slow=1.3,SNR=19						
TORD	Torodi Ar. Bea	124.09	312	PKP	PKPdf	17 24 13.3	-1.0
BOSA	Boshof	125.06	253	PKP	PKPdf	17 24 15.3	-0.4
	comp=Z,1.6nm,0.5s,baz=68,slow=5.4,SNR=8.7						
LPAZ	La Paz	149.69	74	PKP	PKPdf	17 25 02.0	+1.2
	comp=Z,5.5nm,0.8s,baz=298,slow=2.0,SNR=4.8						
LPAZ				PKPbc	PKPbc	17 25 06.3	+0.8
	comp=Z,5.5nm,0.8s,baz=356,slow=6.0,SNR=21						

*IDC **06** 17:23:47.6±1.0, 32°.32N×85°.49E, h0km, mb3.5/6, mb1 3.7/8, mb1mx3.5/26, mbtmp3.6/8, ML3.5/2, MS3.8/2, Ms1 3.9/2, ms1mx2.9/25, Error ellipse: s-maj=33.6km s-min=19.8km az=57.0*

*NEIC **06** 17:23:48.4±0.8, 32°.30N×85°.21E, h10km, mb3.5/1, Error ellipse: s-maj=17.9km s-min=12.3km az=54.0*

ISC 06 17:23:47.0±3.0, 32°.27N±0°.09×85°.2E±0°.1, h0km±20km, n17, σ1§19/15, mb3.6/7, MS3.3/3, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	Lhasa	5.74	115	P	Pn	17 25 19.9	+6.5
LSA				S	Sg	17 26 51.6	+0.2
LSA				LR	LR		
	comp=E,340nm,34.3s						
LSA				LR	LR		
	comp=Z,440nm,34.3s						
KBL	Kabul	13.66	284	ePn	Pn	17 27 01.0	-1.0
	comp=Z,5.3nm,0.7s						
MK31	Makanchi Array	14.67	352	Pn	Pn	17 27 15.4	-0.2
MKAR	Makanchi Array	14.67	352	Pn	Pn	17 27 18.6	+3.0
	comp=Z,0.1nm,0.3s,baz=170,slow=14,SNR=3.6						
CMAR	Chiang Mai Arr	18.52	135	P	Pn	17 28 05.2	+0.1
	comp=Z,0.1nm,0.3s,baz=323,slow=12,SNR=11						
KURK	Kurchatov	19.05	347	P	Pn	17 28 10.0	-1.3
	comp=Z,0.0nm,0.3s,baz=166,slow=10,SNR=9.4						
ZAA0	Zalesovo Array	21.67	359	eP	P	17 28 39.6	+0.7
ZALV	Zalesovo Beam	21.67	359	P	P	17 28 38.9	-0.1
	comp=Z,2.1nm,0.7s,mb3.7,baz=179,slow=12,SNR=11						
SONM	Songino Array	22.37	40	P	P	17 28 45.8	-0.7
	comp=Z,1.3nm,0.9s,mb3.3,baz=230,slow=11,SNR=7.0						
ABKAR	Akbulak array	25.37	319	eP	P	17 29 14.3	-1.4
	comp=Z,0.6nm,0.5s,mb3.6						
TGY	Tagaytay City	37.29	111	LR	LR	17 48 16.6	
	comp=Z,3.1nm,20.0s,MS2.1,baz=227,slow=40						
AKASG	Malin Array Be	44.62	311	P	P	17 32 03.6	+2.7
	comp=Z,1.1nm,0.6s,mb4.0,baz=82,slow=6.8,SNR=5.3						
CBIJ	Chichi jima	49.31	80	LR	LR	17 52 13.3	
	comp=Z,96nm,19.8s,MS3.8,baz=135,slow=35						
ESDC	Sonseca Array	69.65	305	LR	LR	18 09 37.4	
	comp=Z,69nm,19.3s,MS3.9,baz=145,slow=39						
WRA	Warramunga Arr	70.07	131	P	P	17 35 00.2	-0.7
	comp=Z,0.3nm,0.6s,mb3.6,baz=327,slow=6.6,SNR=6.4						
ASAR	Alice Springs	72.53	134	P	P	17 35 15.3	-0.5
	comp=Z,0.4nm,0.6s,mb3.7,baz=316,slow=5.0,SNR=5.6						
TORD	Torodi Ar. Bea	77.65	278	P	P	17 35 47.8	+2.1
	comp=Z,0.3nm,0.6s,mb3.6,baz=44,slow=4.6,SNR=3.8						

MAN 06 17:24:22, 15°.32N×122°.12E, h32km, mb3.8, ML2.5, MS2.1, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	Polilio Island	0.61	196	eP	Pb	17 24 35.1	+0.8
POLP				eS	Sb	17 24 46.0	+3.2
BALP	Baler	0.67	309	eP	Pn	17 24 37.2	+2.0
BALP				eS	Sb	17 24 45.3	+1.0
CAUP	Cauayan	1.64	350	eP	Pn	17 24 49.4	+0.8
BOAC	Boac	1.87	188	eP	Pn	17 24 55.6	+3.8
PVCP	Virac	2.62	131	eP	Pn	17 25 03.6	+1.5

*ISCJB **06** 17:34:26.8±0.3, 38°.39N±0°.02×21°.91E±0°.02, h2km±3km, Error ellipse: s-maj=2.9km s-min=2.5km az=178.2*

*ATH **06** 17:34:26.8, 38°.40N×21°.92E, h9km, MD3.4/13, ML3.1*

*CSEM **06** 17:34:27.2±0.1, 38°.38N×21°.91E, h8km, ML3.1, Error ellipse: s-maj=3.7km s-min=3.3km az=51.0*

*THE **06** 17:34:27.2, 38°.40N×21°.91E, h2km±1km, ML4.0/9, Error ellipse: s-maj=1.4km s-min=0.5km az=321.0*

*NEIC **06** 17:34:27.2, 38°.39N×21°.91E, h2km, ML3.1(ATH), After THE.*

ISC 06 17:34:27.3±0.3, 38°.39N±0°.02×21°.92E±0°.02, h2km±3km, n117, σ0§92/171, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	Efpalio	0.04	346	ePG	Pg	17 34 28.5	+0.3
EFP				eSG	Sg	17 34 29.7	+0.9
EFP	Efpalio	0.04	346	P	Pg	17 34 28.4	+0.2
EFP				S	Sg	17 34 29.1	+0.3
EFP	Efpalio	0.04	346	ePg	Pg	17 34 28.5	+0.3
EFP				S	Sg	17 34 29.1	+0.3
EFP				eSg	Sg	17 34 29.7	+0.9
UPR	University Cam	0.15	224	ePG	Pg	17 34 30.6	+0.4
UPR	University Cam	0.15	224	P	Pg	17 34 30.6	+0.4
UPR				S	Sg	17 34 32.4	+0.3
UPR	University Cam	0.15	224	P	Pg	17 34 30.6	+0.4
UPR				S	Sg	17 34 32.4	+0.3
LAKA	Lakka	0.16	162	P	Pg	17 34 30.9	+0.5
LAKA				S	Sg	17 34 33.0	+0.6
LAKA	Lakka	0.16	162	P	Pg	17 34 30.9	+0.5
LAKA				S	Sg	17 34 33.0	+0.6
KALE	Kalithea	0.17	89	P	Pg	17 34 31.0	+0.3
KALE				S	Sg	17 34 33.8	+0.8
KALE	Kalithea	0.17	89	P	Pg	17 34 31.0	+0.3
KALE				S	Sg	17 34 33.8	+0.8
DSF	Desfina	0.48	87	P	Pg	17 34 35.9	-0.6
DSF	Desfina	0.48	87	P	Pg	17 34 35.9	-0.6
RLS	Riolos of Patr	0.49	227	ePb	Pg	17 34 36.6	0.0
RLS				eSb	Sg	17 34 43.4	+0.5
RLS	Riolos of Patr	0.49	227	ePB	Pg	17 34 36.6	0.0
RLS				eSB	Sg	17 34 43.4	+0.5
RLS	Riolos of Patr	0.49	227	ePb	Pg	17 34 36.6	0.0
RLS				eSb	Sg	17 34 43.4	+0.5
EVR	Evrytania	0.53	351	ePb	Pg	17 34 36.8	-0.8
EVR				eSb	Sg	17 34 44.6	+0.1
EVR	Evrytania	0.53	351	ePB	Pg	17 34 36.8	-0.8
EVR				eSB	Sg	17 34 44.6	+0.1
EVR	Evrytania	0.53	351	ePb	Pg	17 34 36.8	-0.8
EVR				eSb	Sg	17 34 44.6	+0.1
GUR	Goura	0.56	143	ePB	Pg	17 34 37.7	-0.4
GUR				eSB	Sg	17 34 45.6	+0.2
GUR	Goura	0.56	143	P	Pg	17 34 37.6	-0.5
GUR				S	Sg	17 34 46.3	+0.9
GUR	Goura	0.56	143	P	Pg	17 34 37.6	-0.5
GUR				eSb	Sg	17 34 45.6	+0.2
GUR				S	Sg	17 34 46.3	+0.9
AGG	Agios Georgios	0.71	27	ePb	Pg	17 34 39.7	-1.2
AGG	Agios Georgios	0.71	27	ePB	Pg	17 34 39.7	-1.2
AGG	Agios Georgios	0.71	27	P	Pg	17 34 39.6	-1.3
AGG				S	Sg	17 34 50.3	+0.1
AGG	Agios Georgios	0.71	27	ePb	Pg	17 34 39.7	-1.2
AGG				S	Sg	17 34 50.3	+0.1
LKR	Lokris	0.89	73	ePg	Pg	17 34 43.4	-0.9
LKR				eSb	Sg	17 34 56.1	+0.2
LKR	Lokris	0.89	73	ePG	Pg	17 34 43.4	-0.9
LKR				eSB	Sg	17 34 56.1	+0.2
LKR	Lokris	0.89	73	P	Pg	17 34 43.3	-1.1
LKR				S	Sg	17 34 56.9	+1.0
LKR	Lokris	0.89	73	ePg	Pg	17 34 43.4	-0.9
LKR				eSb	Sg	17 34 56.1	+0.2
LKR				S	Sg	17 34 56.9	+1.0
LTK	Loutraki	0.90	114	ePB	Pg	17 34 44.3	-0.4
LTK				eSB	Sg	17 34 56.8	+0.4
LTK	Loutraki	0.90	114	P	Pg	17 34 44.8	+0.1
LTK				S	Sg	17 34 57.5	+1.1
LTK	Loutraki	0.90	114	ePb	Pg	17 34 44.3	-0.4
LTK	Loutraki	0.90	114	P	Pg	17 34 44.8	+0.1
LTK				eSb	Sg	17 34 56.8	+0.4
LTK				S	Sg	17 34 57.5	+1.1
ATAL	Atalanti	0.92	70	P	Pg	17 34 44.6	-0.3
ATAL				S	Sg	17 34 57.7	+0.9
ATAL	Atalanti	0.92	70	P	Pg	17 34 44.6	-0.3
ATAL				S	Sg	17 34 57.7	+0.9
KFL	Anninata	0.93	253	P	Pg	17 34 44.7	-0.5
KFL	Anninata	0.93	253	P	Pg	17 34 44.7	-0.5
LKD2	Lefkada island	1.06	292	P	Pg	17 34 46.5	-1.2
LKD2	Lefkada island	1.06	292	P	Pg	17 34 46.5	-1.2
VLS	Valsamata	1.07	259	ePg	Pg	17 34 46.9	-0.9
VLS	Valsamata	1.07	259	ePG	Pg	17 34 46.9	-0.9
VLS	Valsamata	1.07	259	P	Pg	17 34 46.4	-1.4
VLS				S	Sg	17 35 02.5	+0.9
VLS	Valsamata	1.07	259	P	Pg	17 34 46.4	-1.4
VLS	Valsamata	1.07	259	ePg	Pg	17 34 46.9	-0.9
VLS				S	Sg	17 35 02.5	+0.9
VLX	Vlachokerasia	1.08	160	ePG	Pg	17 34 47.0	-1.0
VLX	Vlachokerasia	1.08	160	P	Pg	17 34 47.0	-1.0
VLX				S	Sg	17 35 03.1	+1.0
VLX	Vlachokerasia	1.08	160	P	Pg	17 34 47.0	-1.0
VLX				S	Sg	17 35 03.1	+1.0
THL	Klokotos Trika	1.18	4	ePB	Pb	17 34 48.7	-1.6
THL	Klokotos Trika	1.18	4	P	Pg	17 34 48.2	-1.7
THL				S	Sg	17 35 06.4	+1.3
THL	Klokotos Trika	1.18	4	P	Pg	17 34 48.2	-1.7
THL	Klokotos Trika	1.18	4	ePb	Pb	17 34 48.7	-1.6
THL				S	Sg	17 35 06.4	+1.3
ITM	Ithomi	1.21	180	ePg	Pg	17 34 49.6	-0.9
ITM	Ithomi	1.21	180	ePG	Pg	17 34 49.6	-0.9
ITM	Ithomi	1.21	180	P	Pg	17 34 49.5	-1.0
ITM	Ithomi	1.21	180	ePg	Pg	17 34 49.6	-0.9
DID	Didima	1.37	130	ePB	Pb	17 34 53.0	-0.5
DID				eSB	Sb	17 35 11.3	-0.1
DID	Didima	1.37	130	P	Pn	17 34 52.9	-0.4
DID				S	Sg	17 35 12.1	+0.9
DID	Didima	1.37	130	ePb	Pb	17 34 53.0	-0.5
DID				eSb	Sb	17 35 11.3	-0.1
DID				S	Sg	17 35 12.1	+0.9
NEO	Neokhori	1.37	48	ePb	Pb	17 34 52.5	-1.1
NEO				eSb	Sb	17 35 10.7	-0.9
NEO	Neokhori	1.37	48	ePB	Pb	17 34 52.5	-1.1
NEO				eSB	Sb	17 35 10.7	-0.9
NEO	Neokhori	1.37	48	ePb	Pb	17 34 52.5	-1.1
NEO				eSb	Sb	17 35 10.7	-0.9
NAIG	Nisos Aigina	1.39	116	ePB	Pb	17 34 53.2	-0.8
NAIG	Nisos Aigina	1.39	116	ePb	Pb	17 34 53.2	-0.8
XOR	Xorichti	1.39	45	P	Pn	17 34 53.5	-0.2
XOR	Xorichti	1.39	45	P	Pn	17 34 52.5	-1.2
XOR	Xorichti	1.39	45	P	Pn	17 34 53.5	-0.2
ATH	Athens Observa	1.48	106	ePB	Pb	17 34 54.4	-1.1
ATH				eSB	Sb	17 35 14.2	-0.5
ATH	Athens Observa	1.48	106	ePb	Pb	17 34 54.4	-1.1
ATH				eSb	Sb	17 35 14.3	-0.4
PYL	PYLOS	1.50	185	ePG	Pg	17 34 54.7	-1.3
PYL	PYLOS	1.50	185	P	Pn	17 34 54.0	-1.1
PYL	PYLOS	1.50	185	P	Pn	17 34 54.0	-1.1
PYL	PYLOS	1.50	185	ePg	Pg	17 34 54.7	-1.3
ATHU	Athens Univers	1.53	105	P	Pn	17 34 55.3	-0.3
ATHU	Athens Univers	1.53	105	P	Pn	17 34 55.3	-0.3
PTL	Penteli	1.57	102	ePb	Pn	17 34 55.6	-0.6
PTL	Penteli	1.57	102	ePB	Pn	17 34 55.6	-0.6
PTL	Penteli	1.57	102	ePb	Pn	17 34 55.6	-0.6
VLY	Voula,Athens	1.57	109	ePg	Pn	17 34 56.0	-0.2
VLY	Voula,Athens	1.57	109	ePG	Pn	17 34 56.0	-0.2
VLY	Voula,Athens	1.57	109	ePg	Pn	17 34 56.0	-0.2
AOS	Alonnisos	1.72	62	P	Pg	17 35 00.0	-0.3
AOS	Alonnisos	1.72	62	P	Pg	17 35 00.0	-0.3
VLI	Veliai	1.85	154	ePn	Pn	17 35 00.7	+0.6
VLI	Veliai	1.85	154	ePN	Pn	17 35 00.7	+0.6
VLI	Veliai	1.85	154	ePn	Pn	17 35 00.7	+0.6
KZN	Kozani	1.92	357	P	Pn	17 35 02.5	+1.6
KZN	Kozani	1.92	357	P	Pn	17 35 00.6	-0.3
KZN	Kozani	1.92	357	P	Pn	17 35 00.6	-0.3
PAIG	Paliouri	2.06	41	P	Pn	17 35 02.6	-0.3
PAIG	Paliouri	2.06	41	P	Pn	17 35 02.6	-0.3
KEK	Kerkira	2.11	309	ePN	Pn	17 35 04.7	+1.1
KEK	Kerkira	2.11	309	ePn	Pn	17 35 04.7	+1.1
NEST	Nestorio	2.13	342	P	Pn	17 35 05.6	+1.7
NEST	Nestorio	2.13	342	P	Pn	17 35 05.6	+1.7
KYTH	Kithira	2.29	157	ePN	Pn	17 35 07.4	+1.4
KYTH	Kithira	2.29	157	ePn	Pn	17 35 07.4	+1.4
PLG	Polygyros	2.31	30	P	Pn	17 35 07.0	+0.7
PLG	Polygyros	2.31	30	P	Pn	17 35 07.0	+0.7
HORT	Hortiatis	2.39	22	P	Pn	17 35 07.4	0.0
HORT	Hortiatis	2.39	22	P	Pn	17 35 07.4	0.0
FNA	Florina	2.43	350	P	Pn	17 35 08.8	+0.9
FNA	Florina	2.43	350	P	Pn	17 35 08.6	+0.7
FNA	Florina	2.43	350	P	Pn	17 35 08.6	+0.7
SOH	Sokhos	2.67	24	P	Pn	17 35 12.7	+1.4
SOH	Sokhos	2.67	24	P	Pn	17 35 12.7	+1.4
VAY	Valandovo	2.97	10	ePn	Pn	17 35 18.0	+2.6
VAY				eSn	Sn	17 35 55.3	+3.8
KRUS	Krusevo	3.02	350	ePn	Pn	17 35 16.7	+0.6
KRUS				eSn	Sn	17 35 53.0	+0.2
TIR	Tirane	3.35	333	Pn	Pn	17 35 19.6	-1.0
TIR	Tirane	3.35	333	Pn	Pn	17 35 19.6	-1.0
IDI	Anoyia	3.91	141	ePn	Pn	17 35 29.5	+1.3
IDI				eSn	Sn	17 36 11.1	-3.6
IDI	Anoyia	3.91	141	ePn	Pn	17 35 29.5	+1.2
IDI				eSn	Sn	17 36 11.1	-3.6
SMG	Samos	3.94	98	P	Pn	17 35 28.6	-0.2
SMG	Samos	3.94	98	P	Pn	17 35 28.6	-0.2
BARS	Barje	4.42	359	ePn	Pn	17 35 35.9	+0.5
STON	Ston	5.51	326	ePn	Pn	17 35 50.3	+0.1
STON				Sn	Sn	17 36 53.1	-1.0
STON	Ston	5.51	326	ePn	Pn	17 35 50.3	0.0
STON				Sn	Sn	17 36 53.0	-1.1
DIVS	Divibare	5.88	346	ePn	Pn	17 35 58.4	+3.0

*ISCJB **06** 17:36:27.4±0.6, 5°.03S±0°.03×145°.69E±0°.04, h209km±6km, mb4.8/77, Error ellipse: s-maj=6.5km s-min=5.6km az=14.8*

*MOS **06** 17:36:28.3±0.7, 5°.03S×145°.64E, h220km, mb4.6/11, Error ellipse: s-maj=12.9km s-min=7.6km az=101.0*

*BJI **06** 17:36:28.7, 5°.29S×145°.97E, h247km, mB4.7/21, mb4.8/41*

*NEIC **06** 17:36:29.5±0.9, 5°.04S×145°.64E, h216km±9km, mb4.7/28, Error ellipse: s-maj=7.1km s-min=6.4km az=98.0*

*GCMT **06** 17:36:31.1±0.3, 5°.06S×145°.57E, h225km±3km, MW5.1, Moment Tensor Solution. s22,c27; s61,c85; Moment tensor: Scale 10^{16}Nm; M_{rr}1.03±.27; $M_{\theta\theta}$1.10±.22; $M_{\phi\phi}$-2.13±.25; $M_{r\theta}$1.56±.24; $M_{\theta\phi}$-3.35±.18; $M_{\phi r}$-3.02±.22; Best double couple: $M_0$5.10000×10^{16} NP1:ϕ_s72.00000°, δ49.00000°, λ166.00000°. NP2:ϕ_s171.00000°, δ80.00000°, λ41.00000°. Principal axes: T 5.3500, Plg36.0000°, Azm40.0000°; N -0.4900, Plg47.0000°, Azm182.0000°; P -4.8500, Plg20.0000°, Azm295.0000°; Data Used: II IC IU G CN.*

*IDC **06** 17:36:31.9±0.9, 5°.11S×145°.63E, h238km±8km, mb4.3/20, mb1 4.3/23, mb1mx4.3/25, mbtmp4.3/23 Error ellipse: s-maj=14.0km s-min=6.8km az=102.0*

*DJA **06** 17:36:31, 5°.06S×145°.52E, h204km, Mw5.4/10*

ISC 06 17:36:29.4±0.6, 5°.08S±0°.03×145°.65E±0°.04, h213km±6km, h233km±2.3km: pP-P, n160, σ1§02/170, mb4.8/77, 6C-8D, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	4.55	161	eP	Pn	17 37 37.7	-0.9
PMG				eS	S	17 38 30.3	-2.9
JAY	Jayapura	5.55	297	P	Pn	17 37 50.1	-1.0
	2.6nm663nm,0.7s						
SMPI	Sarmi	7.57	294	P	Pn	17 38 16.4	-0.8
	3μm273nm,0.7s						
COEN	Coen	9.15	195	ePn	Pn	17 38 38.2	+0.6
	918nm,1.1s						
COEN				eS	S	17 40 19.1	-1.4
COEN	Coen	9.15	195	P	Pn	17 38 38.7	+1.1
	367nm,1.2s						
TLE	Tual	12.86	267	P	Pn	17 39 24.3	-0.6
	7μm452nm,1.2s						
HNR	Honiara	14.83	108	P	Pn	17 39 49.5	+0.4
	19nm,0.3s,baz=222,slow=3.1,SNR=13						
HNR				S	S	17 42 36.0	+2.3
	baz=278,slow=23,SNR=3.4						
CTA	Charters Tower	14.93	178	eP	Pn	17 39 52.2	+1.9
	7.8nm,0.8s						
CTA	Charters Tower	14.93	178	P	Pn	17

comp=Z,4.8nm,0.8s,mb4.2
STKA Stephens Creek 26.93 188 P **P 17 41 51.7 +0.6**
comp=Z,7.9nm,0.8s,mb4.4,baz=351,slow=11,SNR=7.6
STKA pP pP 17 42 38.4 +4.7
comp=Z,8.7nm,0.6s,baz=355,slow=11,SNR=4.4
STKA Stephens Creek 26.93 188 *e*P **P 17 41 50.7 -0.3**
STKA *e**PP pP 17 42 35.5 +1.8
STKA pmax pmax
comp=Z,2.0nm,0.8s
STKA Stephens Creek 26.93 188 *e*P **P 17 41 50.7 -0.4**
comp=Z,1.6nm,0.8s,mb3.7
STKA *e*pP pP 17 42 35.5 +1.8
MYLDM Lahad Datu 28.96 290 P **P 17 42 10.6 +1.2**
TSM Tawau 29.26 288 P **P 17 42 11.6 -0.4**
SDKM Sandakan 30.34 290 P **P 17 42 20.5 -1.0**
KKM Kota Kinabalu 31.39 290 P **P 17 42 28.4 -2.4**
KKM Kota Kinabalu 31.39 290 *e*P **P 17 42 29.1 -1.6**
comp=Z,18nm,0.9s,mb4.7
CBIJ Chichi jima 32.16 354 P **P 17 42 35.8 -1.4**
comp=Z,154nm,1.0s,mb5.5,baz=331,slow=5.4,SNR=13
BTM Bintulu 33.55 284 P **P 17 42 50.6 +1.0**
SBUM Sibu 34.22 282 P **P 17 42 55.7 +0.5**
KSM Kuching 35.90 280 P **P 17 43 09.3 -0.3**
KSM Kuching 35.90 280 *e*P **P 17 43 09.2 -0.4**
comp=Z,44nm,1.3s,mb4.8
TWG Pinlang 36.69 320 *e*P **P 17 43 14.3 -1.8**
YULB Yu-li 36.95 321 *e*P **P 17 43 17.2 -1.1**
comp=Z,23nm,0.6s,mb4.9
TPUB Ta-pu 37.31 320 *e*P **P 17 43 19.8 -1.5**
comp=Z,60nm,0.8s,mb5.2
NACB Ninganchiao 37.34 322 *e*P **P 17 43 21.1 -0.5**
comp=Z,87nm,0.9s,mb5.3
SSLB Suanglung 37.46 321 *e*P **P 17 43 21.5 -1.1**
comp=Z,29nm,0.7s,mb4.9
YHNB Yeheng 37.84 322 *e*P **P 17 43 25.7 -0.1**
comp=Z,59nm,0.8s,mb5.2
TATO Taipei 38.00 323 *e*P **P 17 43 27.2 +0.1**
comp=Z,127nm,0.7s,mb5.6
JHJ Hachijo jima 2 38.39 352 P **P 17 43 29.4 -0.8**
comp=Z,22nm,0.3s,mb5.1,baz=125,slow=11,SNR=8.5
QZH Quanzhou 39.78 320⇑P **P 17 43 42.5 +0.6**
QZH pmax pmax
comp=Z,110nm,0.8s,mb5.3
MJAR Matsushiro Arr 41.98 351 P **P 17 43 59.2 -0.4**
comp=Z,2.9nm,0.6s,mb3.9,baz=173,slow=29,SNR=15
MAJO Matsushiro 41.98 351 *e*P **P 17 43 58.9 -0.7**
MAJO pmax pmax
comp=Z,25nm,1.5s,mb4.4
MAJO Matsushiro 41.98 351 *e*P **P 17 43 58.9 -0.7**
comp=Z,25nm,1.5s,mb4.4
MAT Matsushiro 41.98 351 P **P 17 43 58.7 -0.9**
MAT S **S 17 49 57.0 -5.1**
MYKOM Kota Tinggi 42.31 278 P **P 17 44 03.0 +0.4**
KGM Kluang 42.87 278 P **P 17 44 06.7 -0.5**
URZ Urewera 43.69 143 P **P 17 44 14.2 +0.8**
comp=Z,12nm,1.0s,mb4.2,baz=272,slow=9.8,SNR=7.5
KTGM Kuala Trenggan 43.69 283 P **P 17 44 13.9 +0.1**
NJ2 Nanjing 44.88 327 *e*P **P 17 44 25.0 +2.2**
NJ2 pmax pmax
comp=Z,20nm,0.7s,mb4.6
KSRS Korea Array 45.42 340 P **P 17 44 27.4 +0.4**
comp=Z,20nm,0.7s,mb4.5,baz=159,slow=8.9,SNR=89
IPM Ipoh 45.57 281 P **P 17 44 28.6 0.0**
INCN Inchon 45.90 339 *e*P **P 17 44 31.2 +0.4**
comp=Z,36nm,1.0s,mb4.7
KULM Kulim 46.10 282 P **P 17 44 32.6 -0.2**
KULM Kulim 46.10 282 *e*P **P 17 44 31.5 -1.3**
comp=Z,73nm,1.3s,mb4.8
WHN Wuhan 46.38 322⇑P **P 17 44 35.3 +0.7**
PSI Prapat 47.33 278 P **P 17 44 41.8 -0.5**
comp=Z,6.8nm,0.3s,mb4.4
ASAJ Asahikawa 49.05 357 P **P 17 44 55.4 +0.6**
comp=Z,7.9nm,0.8s,mb4.1,baz=216,slow=13,SNR=7.7
GYA Guiyang 49.07 312 P **P 17 44 56.4 +1.1**
GYA pP pP 17 45 48.0 +6.1
GYA sP sP 17 46 13.7 +8.1
GYA PcP PcP 17 46 18.2 +2.5
GYA PP PP 17 46 54.8 +3.6
GYA ScP ScP 17 49 48.6 -2.0
GYA PcS PcS 17 50 12.5 0.0
GYA S **S 17 51 44.9 +1.1**
GYA ScS ScS 17 54 22.0 -3.3
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.1
GYA pmax pmax
comp=Z,80nm,4.9s
KMI Kunming 51.37 308⇓P **P 17 45 14.3 +1.7**
KMI pP pP 17 46 05.8 +6.2
KMI sP sP 17 46 31.5 +8.3
KMI PP PP 17 47 16.3 +4.2
KMI S **S 17 52 15.6 0.0**
KMI sS sS 17 53 44.8 +6.8
KMI SS SS 17 55 53.6 -0.9
KMI pmax pmax
comp=Z,26nm,1.1s,mb4.6
KMI LR LR
comp=N,110nm,11.1s
KMI LR LR
comp=E,96nm,11.7s
KMI LR LR
comp=Z,110nm,12.3s
CHRT Chiangrai 51.45 300⇓P **P 17 45 14.0 +0.7**
comp=Z,290nm,0.7s,mb5.8
MDJ Mudanjiang 51.53 345 P **P 17 45 14.9 +1.5**
MDJ pP pP 17 46 04.8 +4.4
MDJ sP sP 17 46 29.5 +5.5
MDJ PP PP 17 47 14.2 +1.0
MDJ PcS PcS 17 50 20.9 -1.5
MDJ S **S 17 52 16.6 -0.5**
MDJ sS sS 17 53 47.6 +8.0
MDJ ScS ScS 17 54 38.5 -2.9
MDJ pmax pmax
comp=Z,6.0nm,0.6s,mb4.2
MDJ LR LR
comp=N,77nm,25.2s
MDJ LR LR
comp=E,170nm,26.2s
MDJ LR LR
comp=Z,31nm,26.5s
CM31 Chiang Mai Arr 51.63 298 *e*P **P 17 45 15.4 +0.8**
comp=Z,45nm,0.8s,mb5.0
CMAR Chiang Mai Arr 51.63 298 P **P 17 45 15.6 +0.9**
comp=Z,44nm,0.9s,mb4.9,baz=122,slow=5.9,SNR=156
CHG Chiang Mai 51.76 299⇓P **P 17 45 16.2 +0.6**
comp=Z,35nm,1.0s,mb4.7
CHTO Chiang Mai 51.76 299 *e*P **P 17 45 16.3 +0.7**
CHTO pmax pmax
comp=Z,34nm,1.0s,mb4.7
CHTO Chiang Mai 51.76 299 *e*P **P 17 45 16.3 +0.7**
comp=Z,34nm,1.0s,mb4.7
YSS Yuzh-Sakhalins 51.87 357⇑*e*P **P 17 45 15.1 -0.8**
YSS Yuzh-Sakhalins 51.87 357 *e*P **P 17 45 15.8 -0.1**
comp=Z,7.1nm,0.6s,mb4.3
CN2 Changchun 51.96 341 *e*P **P 17 45 19.6 +3.0**
CN2 *e*pP pP 17 46 12.0 +8.3
CN2 *e*S **S 17 52 21.8 -1.2**
CN2 pmax pmax
comp=Z,10.0nm,0.4s,mb4.6
CN2 pmax pmax
comp=Z,200nm,4.0s
XAN Xi'an 52.12 321 P **P 17 45 17.9 -0.1**
XAN pmax pmax
comp=Z,12nm,1.0s,mb4.3
BJI Beijing 52.45 332 P **P 17 45 20.2 -0.1**
BJI PP PP 17 47 22.9 +1.3
BJI S **S 17 52 31.9 +2.1**
BJI SS SS 17 56 13.9 +2.8
BJI pmax pmax
comp=Z,24nm,0.8s,mb4.7
BJI pmax pmax
comp=Z,100nm,3.8s
BJI LR LR
comp=N,130nm,17.3s
BJI LR LR
comp=E,180nm,20.1s
BJI LR LR
comp=Z,48nm,18.5s
CD2 Chengdu 53.67 315 P **P 17 45 29.6 +0.2**
CD2 pP pP 17 46 21.2 +4.4
CD2 PP PP 17 47 36.8 +4.1
CD2 S **S 17 52 47.1 +0.5**
CD2 pmax pmax
comp=Z,80nm,0.6s,mb5.4
CD2 pmax pmax
comp=Z,100nm,4.8s

HHC Hu-ho-hao-te 55.35 329 *e*P **P 17 45 41.2 -0.1**
HHC pP pP 17 46 33.6 +4.7
HHC PcP PcP 17 46 38.6 -0.5
HHC PP PP 17 47 49.7 +2.2
HHC ScP ScP 17 50 15.2 -2.3
HHC PcS PcS 17 50 37.7 -1.6
HHC S **S 17 53 07.1 -1.6**
HHC ScS ScS 17 55 04.6 -4.0
HHC SS SS 17 56 56.2 -0.6
HHC pmax pmax
comp=Z,17nm,0.7s,mb4.7
HHC pmax pmax
comp=Z,91nm,6.7s
LZH Lanzhou 56.64 320 *e*P **P 17 45 52.0 +1.5**
LZH pP pP 17 46 48.4 +10
LZH S **S 17 53 24.0 -1.9**
LZH SS SS 17 57 19.5 +2.3
LZH pmax pmax
comp=Z,50nm,1.0s,mb5.1
LZH pmax pmax
comp=Z,150nm,4.4s
PETK Petropavlovsk- 58.86 8 P **P 17 46 06.0 +0.5**
comp=Z,13nm,0.8s,mb4.6,baz=173,slow=6.6,SNR=16
SHL Shillong 60.39 303 *e*PKP **P 17 46 18.8 +2.2**
GTA Gaotai 61.18 321⇓P **P 17 46 22.6 +1.0**
GTA pP pP 17 47 13.7 +3.4
GTA S **S 17 54 24.1 0.0**
GTA SS SS 17 58 30.0 +1.6
GTA pmax pmax
comp=Z,20nm,0.8s,mb4.8
GTA pmax pmax
comp=Z,91nm,6.3s
GTA LR LR
comp=N,69nm,18.0s
GTA LR LR
comp=E,63nm,16.5s
GTA LR LR
comp=Z,77nm,16.5s
LSA Lhasa 62.61 307 P **P 17 46 33.2 +1.8**
ULN Ulaanbaatar 62.66 332 *e*P **P 17 46 31.7 +0.4**
SONM Songino Array 62.95 331 P **P 17 46 34.2 +1.0**
comp=Z,4.1nm,0.7s,mb4.2,baz=162,slow=5.7,SNR=29
TAPN Taplejung 64.52 303 *e*P **P 17 46 44.1 +0.2**
comp=Z,59nm,0.6s,mb5.4
ODAN Odare 64.62 303 *e*P **P 17 46 44.7 +0.2**
comp=Z,54nm,0.6s,mb5.4
RAMN Ramite 65.31 303 *e*P **P 17 46 49.0 0.0**
comp=Z,36nm,0.5s,mb5.2
JIRN Jiri 65.89 303 *e*P **P 17 46 53.0 +0.3**
comp=Z,41nm,0.5s,mb5.4
GUN Gumba 66.24 303 *e*P **P 17 46 55.3 +0.4**
comp=Z,108nm,0.4s,mb5.8
PKI Pulchoki 66.52 303 *e*P **P 17 46 56.5 -0.2**
KKN Kakani 66.70 303 *e*P **P 17 46 57.8 0.0**
comp=Z,77nm,0.8s,mb5.4
DMN Daman 66.78 303 *e*P **P 17 46 58.6 +0.2**
comp=Z,87nm,0.7s,mb5.5
GKN Gorkha 67.30 303 *e*P **P 17 47 01.3 -0.3**
comp=Z,70nm,0.6s,mb5.4
SEY Seymchan 68.01 3 *ce*P **P 17 47 05.7 +0.4**
KOLN Koldanda 68.10 302 *e*P **P 17 47 06.4 -0.2**
comp=Z,59nm,0.7s,mb5.3
MOY Mondy 68.13 332 *e*P **P 17 47 06.7 +0.4**
MOY pmax pmax
comp=Z,14nm,1.6s,mb4.3
HYB Hyderabad 69.88 291 *e*P **P 17 47 16.5 -1.2**
HYB Hyderabad 69.88 291 *i*P **P 17 47 16.5 -1.2**
WMQ Urumqi 71.22 320 *e*P **P 17 47 26.3 +1.0**
WMQ PcP PcP 17 47 45.2 +1.3
WMQ pP pP 17 48 18.9 +3.5
WMQ PP PP 17 50 09.5 +3.1
WMQ pmax pmax
comp=Z,17nm,0.8s,mb4.7
WMQ pmax pmax
comp=Z,100nm,4.1s
BILL Bilibino 74.38 8⇓*e*P **P 17 47 42.6 -0.8**
BILL pmax pmax
comp=Z,6.0nm,1.3s,mb4.1
SDPT Sand Point 74.74 29 *e*P **P 17 47 45.7 0.0**
MK31 Makanchi Array 75.93 321 *e*P **P 17 47 52.7 0.0**
MKAR Makanchi Array 75.93 321 P **P 17 47 52.8 +0.1**
comp=Z,8.2nm,0.7s,mb4.5,baz=97,slow=8.6,SNR=54
MKAR Makanchi Array 75.93 321 *ce*P **P 17 47 52.7 0.0**
MKAR pmax pmax
comp=Z,8.0nm,0.6s
TIXI Tiksi 77.37 355 *e*P **P 17 47 59.6 -0.6**
TIXI pmax pmax
comp=Z,2.0nm,0.8s,mb3.8
TIXI Tiksi 77.37 355 *e*P **P 17 47 59.6 -0.6**
comp=Z,1.6nm,0.8s,mb3.7
ZAA0 Zalesovo Array 77.52 328 *e*P **P 17 47 59.6 -1.8**
ZALV Zalesovo Beam 77.52 328 P **P 17 48 00.3 -1.1**
comp=Z,4.8nm,0.5s,mb4.4,baz=110,slow=5.6,SNR=28
ZALV Zalesovo Beam 77.52 328 P **P 17 48 00.3 -1.1**
KSH Kashi 77.76 312 *e*P **P 17 48 04.3 +1.2**
KSH PcP PcP 17 48 14.5 +2.3
KSH pP pP 17 48 58.7 +4.7
KSH PP PP 17 51 05.7 +3.9
KSH S S 17 57 37.7 -0.1
KSH SKS 17 57 50.9
KSH ScS ScS 17 57 59.8 -2.5
KSH pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
KSH pmax pmax
comp=Z,63nm,5.3s
KSH LR LR
comp=N,82nm,5.0s
KSH LR LR
comp=E,74nm,5.1s
KSH LR LR
comp=Z,87nm,5.3s
NVS Novosibirsk 78.75 328 *e*P **P 17 48 06.7 -1.4**
NVS *e* pP 17 48 59.8 +0.6
NVS pmax pmax
comp=Z,19nm,1.4s,mb4.5
NVS pmax pmax
comp=E,17nm,1.5s
KURK Kurchatov 79.67 323 P **P 17 48 13.2 0.0**
comp=E,2.3nm,0.4s,mb4.1,baz=104,slow=7.0,SNR=35
KURK pP pP 17 49 09.3 +4.9
comp=E,2.0nm,1.0s,baz=102,slow=5.4,SNR=3.0
KURK Kurchatov 79.67 323 *di*P **P 17 48 12.4 -0.8**
KURK pmax pmax
comp=Z,9.0nm,0.9s,mb4.4
KURK Kurchatov 79.67 323 P **P 17 48 13.2 0.0**
KURK pP pP 17 49 09.3 +4.9
SVW2 Sparrevohn 79.98 25 *e*P **P 17 48 15.6 +1.0**
comp=Z,14nm,1.2s,mb4.5
EKS2 Erkin-Say 80.25 315 *e*P **P 17 48 16.7 +0.2**
EKS2 pmax pmax
comp=Z,18nm,1.4s,mb4.5
EKS2 Erkin-Say 80.25 315 *e*P **P 17 48 16.7 +0.2**
comp=Z,18nm,1.4s,mb4.5
KBL Kabul 81.90 306 *e*P **P 17 48 24.2 -1.2**
KBL pmax pmax
comp=Z,4.0nm,0.9s,mb4.0
KBL Kabul 81.90 306 *e*P **P 17 48 24.2 -1.2**
comp=Z,4.2nm,0.9s,mb4.1
MAW Mawson 82.58 203 P **P 17 48 28.1 -0.1**
comp=Z,1.4nm,0.6s,mb3.9,baz=70,slow=8.5,SNR=6.7
PMR Palmer 82.97 26 *e*P **P 17 48 29.5 -0.8**
PMR pmax pmax
comp=Z,13nm,1.2s,mb4.5
PMR Palmer 82.97 26 *e*P **P 17 48 29.5 -0.7**
comp=Z,13nm,1.2s,mb4.5
TRF Thorofare Moun 83.27 24 *e*P **P 17 48 30.7 -1.1**
comp=Z,2.7nm,0.6s,mb4.2
BPAW Bear Paw Mtn. 83.28 23 *e*P **P 17 48 31.1 -0.7**
comp=Z,9.9nm,1.2s,mb4.4
MCK McKinley 83.94 24 *e*P **P 17 48 34.3 -0.9**
MCK pmax pmax
comp=Z,24nm,1.1s,mb4.8
MCK McKinley 83.94 24 *e*P **P 17 48 34.3 -0.9**
comp=Z,24nm,1.1s,mb4.8
BVAR Borovoye Array 85.24 324 P **P 17 48 41.1 -0.8**
comp=Z,4.8nm,0.7s,mb4.3,baz=104,slow=6.3,SNR=27
BRVK Borovoye 85.31 324⇑*e*P **P 17 48 42.0 -0.2**
BRVK pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
EGAK Eagle 87.48 24 *e*P **P 17 48 51.5 -1.0**
comp=Z,7.6nm,1.0s,mb4.4
DAWY Dawson 88.01 25 *e*P **P 17 48 55.1 0.0**
SYO Syowa Base 90.99 200⇓*e*P **P 17 49 07.2 -1.7**
SYO Syowa Base 90.99 200⇓*e*PcP PcP 17 49 09.6 -0.2
ABKAR Akbulak array 91.00 319 *e*P **P 17 49 07.7 -1.7**

comp=Z,1.8nm,0.8s,mb4.0
AKTK Aktyubinsk 92.36 320 P **P 17 49 14.4 -1.2**
AKTO Aktyubinsk 92.36 320 P **P 17 49 14.4 -1.2**
comp=Z,1.0nm,0.7s,mb3.8,baz=75,slow=5.3,SNR=5.3
NVAR Mina Array Bea 97.87 52 PP PP 17 53 47.2 +4.8
comp=Z,0.8nm,1.0s,baz=255,slow=12,SNR=3.7
OBN Obninsk 105.01 326 *e*P Pdif 17 50 11.0 -1.4
OBN *e* 17 54 34.5
OBN pmax pmax
comp=Z,4.0nm,0.8s
TORD Torodi Ar. Bea 143.55 285 PKP PKPdf 17 55 37.1 -2.6
comp=Z,1.7nm,0.6s,baz=70,slow=3.5,SNR=19
KIC Kosan Boka 150.51 274 *e*PKIKP PKPbc 17 55 56.8 -0.2
comp=Z,17nm,0.7s
DBIC Dimbokro 150.62 275 PKPbc PKPbc 17 55 57.0 -0.2
comp=Z,5.5nm,0.7s,baz=107,slow=4.3,SNR=6.4
DBIC PKPab PKPab 17 56 04.9 +0.1
comp=Z,7.0nm,0.7s,baz=111,slow=9.5,SNR=8.7
TIC Toumodi 150.78 275 *e*PKIKP PKPbc 17 55 56.8 -0.8
comp=Z,37nm,0.2s
LIC Lamto 150.80 274 *e*PKIKP PKPbc 17 55 57.3 -0.3
comp=Z,52nm,1.3s

ISCJB ***06*** *17:37:36.9±0.6, 36°.98N±0°.03×29°.18E±0°.03, h3km±5km, Error ellipse: s-maj=4.7km s-min=3.8km az=19.2*
DDA ***06*** *17:37:36.8, 37°.01N×29°.17E, h7km±5km, Md3.2, Ml3.5*
ISK ***06*** *17:37:36.4, 37°.04N×29°.22E, h2km, MD3.2*
IDC ***06*** *17:37:36.9±2.1, 36°.86N×29°.15E, h0km, mb3.3/1, mb1 3.1/3, mb1mx3.0/24, mbtmp3.1/3, ML3.2/2, Error ellipse: s-maj=48.5km s-min=26.7km az=148.0*
CSEM ***06*** *17:37:38.0±0.1, 37°.02N×29°.20E, h8km, MD3.2, Error ellipse: s-maj=2.5km s-min=1.5km az=1.0*
ISC 06 17:37:37.5±0.5, 37°.00N±0°.03×29°.18E±0°.03, h4km±4km, n55, σ0.73/73, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**59**	PG	**Pg**	**17 37 42.4**	**-1.0**
GLHS				*e*SG	**Sg**	**17 37 47.8**	**+0.5**
GLHS	**Glhisar (BURDU**	**0.30**	**59**	*i* Pg	**Pg**	**17 37 42.4**	**-0.9**
GLHS				*e*Sg	**Sg**	**17 37 47.8**	**+0.5**
GOLH	**Golhisar**	**0.39**	**52**	*i* P	**Pg**	**17 37 44.3**	**-0.7**
GOLH				*i* S	**Sg**	**17 37 50.5**	**+0.4**
GOLH	**Golhisar**	**0.39**	**52**	*i* P	**Pg**	**17 37 44.3**	**-0.7**
GOLH				*i* S	**Sg**	**17 37 50.5**	**+0.4**
TURN	**Turunc**	**0.48**	**255**	*i* P	**Pg**	**17 37 51.4**	**+4.8**
TURN				*i* S	**Sg**	**17 38 02.3**	**+9.4**
TURN	**Turunc**	**0.48**	**255**	*i* P	**Pg**	**17 37 51.4**	**+4.7**
ELL	**Elmali**	**0.64**	**113**	*e*PG	**Pg**	**17 37 49.5**	**-0.2**
ELL				*e*SG	**Sg**	**17 37 59.0**	**+1.0**
ELL	**Elmali**	**0.64**	**113**	*e*Pg	**Pg**	**17 37 49.5**	**-0.3**
ELL				*e*Sg	**Sg**	**17 37 59.0**	**+0.9**
DNZL	**Cakiroluk**	**0.70**	**351**	*i* P	**Pg**	**17 37 50.5**	**-0.4**
DNZL				*i* S	**Sg**	**17 38 00.8**	**+0.9**
DNZL	**Cakiroluk**	**0.70**	**351**	*i* P	**Pg**	**17 37 50.5**	**-0.4**
DNZL				*i* S	**Sg**	**17 38 00.8**	**+0.9**
YER	**Yerkesik**	**0.73**	**281**	*e*PG	**Pg**	**17 37 51.9**	**+0.4**
YER	**Yerkesik**	**0.73**	**281**	*e*Pg	**Pg**	**17 37 51.9**	**+0.4**
DENT	**Denizli**	**0.76**	**351**	*e*PG	**Pg**	**17 37 51.2**	**-0.9**
DENT	**Denizli**	**0.76**	**351**	*e*Pg	**Pg**	**17 37 51.2**	**-0.9**
AKAS	**Kas**	**0.84**	**156**	*i* P	**Pg**	**17 37 52.7**	**-0.9**
AKAS				*i* S	**Sg**	**17 38 06.0**	**+1.5**
AKAS	**Kas**	**0.84**	**156**	*i* P	**Pg**	**17 37 52.7**	**-0.9**
AKAS				*i* S	**Sg**	**17 38 05.9**	**+1.4**
KORT	**Korkueli**	**0.94**	**90**	*i* P	**Pg**	**17 37 54.7**	**-0.9**
KORT				*i* S	**Sg**	**17 38 07.9**	**+0.2**
KORT	**Korkueli**	**0.94**	**90**	*i* P	**Pg**	**17 37 54.7**	**-0.8**
KORT				*i* S	**Sg**	**17 38 07.9**	**+0.2**
MLSB	**Milas**	**1.16**	**285**	*e*PN	**Pn**	**17 37 59.9**	**-0.5**
MLSB	**Milas**	**1.16**	**285**	*e*Pn	**Pn**	**17 37 59.9**	**-0.6**
BCK	**Bucak**	**1.22**	**67**	*e*PN	**Pn**	**17 37 59.8**	**-1.5**
BCK	**Bucak**	**1.22**	**67**	*e*Pn	**Pn**	**17 37 59.8**	**-1.5**
AYDN	**Tasoluk**	**1.23**	**303**	*i* P	**Pg**	**17 38 01.1**	**0.0**
AYDN				*i* S	**Sg**	**17 38 17.0**	**+0.1**
AYDN	**Tasoluk**	**1.23**	**303**	*i* P	**Pg**	**17 38 01.1**	**+0.1**
AYDN				*i* S	**Sg**	**17 38 17.0**	**+0.1**
DAT	**Datca**	**1.31**	**259**	*e*PN	**Pn**	**17 38 02.8**	**+0.2**
DAT	**Datca**	**1.31**	**259**	*e*Pn	**Pn**	**17 38 02.8**	**+0.2**
KHL	**Karahalli**	**1.35**	**12**	*e*PN	**Pn**	**17 38 02.4**	**-0.7**
KHL	**Karahalli**	**1.35**	**12**	*e*Pn	**Pn**	**17 38 02.4**	**-0.7**
BDRM	**Kayabasi**	**1.39**	**273**	*i* P	**Pn**	**17 38 04.1**	**+0.5**
BDRM	**Kayabasi**	**1.39**	**273**	*i* P	**Pn**	**17 38 04.1**	**+0.5**
KHAL	**Karahalli**	**1.39**	**10**	*i* P	**Pn**	**17 38 03.4**	**-0.3**
KHAL				*i* S	**Sb**	**17 38 23.4**	**+1.3**
KHAL	**Karahalli**	**1.39**	**10**	*i* P	**Pn**	**17 38 03.3**	**-0.4**
KHAL				*i* S	**Sb**	**17 38 23.4**	**+1.3**
BODT	**Bodrum**	**1.49**	**273**	*e*PN	**Pn**	**17 38 05.7**	**+0.6**
BODT	**Bodrum**	**1.49**	**273**	*e*Pn	**Pn**	**17 38 05.7**	**+0.6**
SUTC	**Sutluce-Ispart**	**1.53**	**71**	*e*PN	**Pn**	**17 38 05.2**	**-0.4**
SUTC	**Sutluce-Ispart**	**1.53**	**71**	*e*Pn	**Pn**	**17 38 05.2**	**-0.4**
KULA	**Kula-Manisa**	**1.57**	**345**	*e*PN	**Pn**	**17 38 05.8**	**-0.3**
KULA	**Kula-Manisa**	**1.57**	**345**	*e*Pn	**Pn**	**17 38 05.8**	**-0.3**
SHUT	**Suhut-Afyon**	**1.89**	**35**	*e*PN	**Pn**	**17 38 10.2**	**-0.4**
SHUT	**Suhut-Afyon**	**1.89**	**35**	*e*Pn	**Pn**	**17 38 10.2**	**-0.4**
IZM	**Izmir**	**2.06**	**313**	*e*PN	**Pn**	**17 38 13.3**	**+0.4**
IZM	**Izmir**	**2.06**	**313**	*e*Pn	**Pn**	**17 38 13.3**	**+0.4**
KDAG	**Bornova**	**2.06**	**313**	*i* P	**Pn**	**17 38 13.3**	**+0.3**
KDAG	**Bornova**	**2.06**	**313**	*i* P	**Pn**	**17 38 13.3**	**+0.4**
ALT	**Altintas**	**2.18**	**19**	*e*PN	**Pn**	**17 38 14.2**	**-0.4**
ALT	**Altintas**	**2.18**	**19**	*e*Pn	**Pn**	**17 38 14.2**	**-0.3**
BLCB	**Balcova**	**2.19**	**310**	*e*PN	**Pn**	**17 38 14.9**	**+0.3**
BLCB	**Balcova**	**2.19**	**310**	*e*Pn	**Pn**	**17 38 15.0**	**+0.4**
HDMB	**Hadim**	**2.65**	**90**	*e*PN	**Pn**	**17 38 21.2**	**+0.2**
HDMB	**Hadim**	**2.65**	**90**	*e*Pn	**Pn**	**17 38 21.2**	**+0.2**
KIZT	**Kizilcal**	**2.84**	**48**	*e*PN	**Pn**	**17 38 23.8**	**+0.2**
KIZT	**Kizilcal**	**2.84**	**48**	*e*Pn	**Pn**	**17 38 23.8**	**+0.1**
BRTR	**Keskin Array B**	**4.44**	**51**	Pn	**Pn**	**17 38 46.8**	**+1.2**
	0.4nm,0.3s,baz=236,slow=12,SNR=8.5						
BRTR				Sn	**Sn**	**17 39 41.2**	**+3.5**
	0.2nm,0.3s,baz=226,slow=24,SNR=6.1						
MMAI	**Mount Meron Ar**	**6.47**	**126**	Pn	**Pn**	**17 39 13.7**	**+0.2**
	1.4nm,0.3s,baz=308,slow=11,SNR=6.7						
TORD	**Torodi Ar. Bea**	**34.18**	**233**	P	**P**	**17 44 22.9**	**-1.1**
	0.2nm,0.5s,baz=34,slow=8.2,SNR=4.4						

BJI ***06*** *17:44:10.7, 7°.36S×130°.05E, h144km, mB4.8/19, mb4.7/31*
MOS ***06*** *17:44:12.6±0.9, 6°.75S×129°.48E, h112km, mb4.9/15, Error ellipse: s-maj=16.5km s-min=7.3km az=115.1*
IDC ***06*** *17:44:15.5±2.6, 6°.77S×129°.50E, h123km±24km, mb4.3/16, mb1 4.4/20, mb1mx4.4/24, mbtmp4.4/20, MS3.3/1, Ms1 3.3/1, ms1mx2.1/23, Error ellipse: s-maj=18.6km s-min=10.7km az=70.0*
NEIC ***06*** *17:44:17.2±1.1, 6°.81S×129°.60E, h144km±11km, mb4.8/20, Error ellipse: s-maj=10.5km s-min=5.9km az=57.0*
ISCJB ***06*** *17:44:19.3±0.4, 6°.88S±0°.03×129°.72E±0°.04, h183km±4km, mb4.7/59, Error ellipse: s-maj=6.9km s-min=5.1km az=160.3*
DJA ***06*** *17:44:21, 6°.92S×129°.67E, h160km, mb5.1/19*
ISC 06 17:44:20.2±0.4, 6°.93S±0°.03×129°.72E±0°.04, h176km±4km, h162km±6km:pP-P, n151, σ1.24/155, mb4.7/59, 5C-1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**3.26**	**67**	P	**Pn**	**17 45 12.8**	**+0.9**
TLE				S	**Sn**	**17 45 52.1**	**0.0**
AAI	**Ambon**	**3.56**	**335**	P	**Pn**	**17 45 14.7**	**-0.9**
NLAI	**Namlea**	**4.50**	**324**	P	**Pn**	**17 45 27.6**	**+0.1**
KAKA	**Kakadu**	**6.34**	**155**	*e*P	**Pn**	**17 45 52.7**	**+1.0**
	372nm,0.5s						
KAKA				*e*S	**Sn**	**17 46 51.3**	**-12**
KAKA	**Kakadu**	**6.34**	**155**	P	**Pn**	**17 45 53.2**	**+1.5**
TNTI	**Ternate**	**8.00**	**343**	P	**Pn**	**17 46 12.4**	**-1.1**
BAKI	**Biak**	**8.54**	**48**	P	**Pn**	**17 46 21.1**	**+0.4**
	966nm,0.8s						
KNA	**Kununurra**	**8.82**	**186**	P	**Pn**	**17 46 23.6**	**-0.7**
	1um,0.8s						
MNI	**Manado**	**9.63**	**329**	P	**Pn**	**17 46 34.8**	**-0.2**
	1um159nm,1.0s						
WSI	**Waingapu**	**9.71**	**253**	P	**Pn**	**17 46 33.8**	**-2.2**
	258nm,0.7s						
KAPI	**Kappang**	**10.09**	**280**	P	**Pn**	**17 46 33.6**	**-7.4**
	0.3nm,0.3s,baz=13,slow=22,SNR=1.9						
KAPI	**Kappang**	**10.09**	**280**	*e*Pn	**Pn**	**17 46 37.0**	**-4.0**
	32nm,1.1s						
SMPI	**Sarmi**	**10.22**	**62**	P	**Pn**	**17 46 39.2**	**-3.5**
SPSI	**Sidrap Palu**	**10.33**	**286**	P	**Pn**	**17 46 51.3**	**+7.1**
TTSI	**Tana Toraja**	**10.59**	**291**	P	**Pn**	**17 46 50.6**	**+3.1**

MRSI	Marisa	10.69 313	P	Pn	17 46 50.8	+2.0
	980nm115nm,0.8s					
PCI	Palu	11.53 301	P	Pn	17 47 04.5	+4.8
FITZ	Fitzroy Crossi	11.80 199	eP	Pn	17 47 01.0	-2.2
	52nm,0.3s					
FITZ			eS	Sn	17 49 03.5	-11
FITZ	Fitzroy Crossi	11.80 199	P	Pn	17 47 01.2	-1.9
	7.9nm,0.3s,baz=41,slow=9.5,SNR=106					
FITZ			S	Sn	17 48 59.5	-15
	6.0nm,0.3s,baz=67,slow=6.6,SNR=3.1					
FITZ			LR	LR	17 51 44.4	
	comp=Z,165nm,20.6s,baz=52,slow=38					
FITZ	Fitzroy Crossi	11.80 199	P	Pn	17 47 02.8	-0.4
	134nm,0.7s					
WRAB	Tennant Creek	13.69 161	eP	Pn	17 47 25.0	-2.2
WRAB			pmax	pmax		
	comp=Z,71nm,0.4s					
WRAB	Tennant Creek	13.69 161	ePn	Pn	17 47 24.9	-2.3
	comp=Z,71nm,0.4s					
WRAB	Tennant Creek	13.69 161	P	Pn	17 47 26.0	-1.2
	comp=Z,185nm,1.1s					
WRA	Warramunga Arr	13.70 161	P	Pn	17 47 25.7	-1.6
	comp=Z,5.4nm,0.3s,baz=335,slow=13,SNR=56					
WRA			S	Sn	17 49 51.1	-8.5
	comp=Z,17nm,0.3s,baz=341,slow=23,SNR=13					
DAV	Davao City (W)	14.50 343	ePn	Pn	17 47 34.0	-3.4
DAV	Davao City (W)	14.50 343	P	Pn	17 47 38.9	+1.5
	comp=Z,342nm,0.5s					
COEN	Coen	14.96 119	ePn	Pn	17 47 42.5	-0.5
	comp=Z,440nm,1.0s					
COEN	Coen	14.96 119	P	Pn	17 47 47.0	+4.0
	comp=Z,180nm,1.0s					
TSM	Tawau	16.25 313	P	Pn	17 47 59.0	+0.2
MYLDM	Lahad Datu	16.43 317	P	Pn	17 48 02.9	+1.9
MYLDM	Lahad Datu	16.43 317	P	Pn	17 48 03.2	+2.2
	comp=Z,52nm,1.1s					
ASAR	Alice Springs	17.12 167	P	Pn	17 48 10.8	+1.6
	comp=Z,13nm,0.3s,baz=347,slow=9.0,SNR=230					
ASAR			S	S	17 51 16.0	-1.5
	comp=Z,5.1nm,0.3s,baz=354,slow=26,SNR=7.8					
MBWA	Marble Bar	17.13 213	eP	Pn	17 48 08.9	-0.5
	comp=Z,21nm,0.8s					
SDKM	Sandakan	17.66 315	P	Pn	17 48 15.9	+0.2
KKM	Kota Kinabalu	18.64 313	P	P	17 48 24.5	-0.3
KKM	Kota Kinabalu	18.64 313	eP	P	17 48 23.8	-1.0
	comp=Z,93nm,1.0s					
KKM	Kota Kinabalu	18.64 313	P	P	17 48 22.9	-1.9
BTM	Bintulu	19.41 301	P	P	17 48 35.3	+2.2
STKI	Sintang	19.48 290	P	P	17 48 34.4	+0.6
	comp=Z,2μmcomp=Z,46nm,1.0s					
SBUM	Sibu	19.79 297	P	P	17 48 38.5	+1.3
SBUM	Sibu	19.79 297	P	P	17 48 38.2	+1.0
	comp=Z,783nmcomp=Z,72nm,1.0s					
CTA	Charters Tower	20.70 131	eP	P	17 48 50.0	+3.2
	comp=Z,16nm,1.0s					
CTA	Charters Tower	20.70 131	P	P	17 48 50.0	+3.2
	comp=Z,19nm,0.9s,baz=301,slow=12,SNR=13					
CTAO	Charters Tower	20.70 131	eP	P	17 48 49.0	+2.2
CTAO			pmax	pmax		
	comp=Z,26nm,1.0s					
CTAO	Charters Tower	20.70 131	eP	P	17 48 49.0	+2.1
	comp=Z,26nm,1.0s					
CTAO	Charters Tower	20.70 131	P	P	17 48 50.7	+3.9
	comp=Z,27nm,1.4s					
KSM	Kuching	21.09 293	P	P	17 48 52.1	+1.0
KSM	Kuching	21.09 293	eP	P	17 48 50.1	-0.9
	comp=Z,39nm,0.9s,mb4.7					
KSM	Kuching	21.09 293	P	P	17 48 51.3	+0.2
	comp=Z,50nm,1.1s,mb4.8					
LEM	Lembang	21.94 269	P	P	17 49 00.1	+0.1
	comp=Z,84nm,1.1s,mb5.1					
CBJI	Citeko	22.72 270	P	P	17 49 06.2	-1.1
	comp=Z,230nm,0.8s,mb5.6					
FORT	Forrest	23.78 184	eP	P	17 49 18.6	+1.9
	comp=Z,53nm,0.7s,mb5.2					
FORT	Forrest	23.78 184	eP	P	17 49 17.5	+0.8
	comp=Z,95nm,0.9s,mb5.3					
STKA	Stephens Creek	27.19 157	eP	P	17 49 49.2	+1.8
	comp=Z,10nm,0.4s,mb4.8					
STKA	Stephens Creek	27.19 157	P	P	17 49 49.4	+1.9
	comp=Z,13nm,0.3s,mb5.0,baz=332,slow=8.9,SNR=56					
STKA	Stephens Creek	27.19 157	eP	P	17 49 49.0	+1.6
STKA			pmax	pmax		
	comp=Z,4.0nm,0.8s					
STKA	Stephens Creek	27.19 157	eP	P	17 49 49.0	+1.6
	comp=Z,3.9nm,0.8s,mb4.1					
MYKOM	Kota Tinggi	27.23 288	P	P	17 49 50.3	+2.3
KGM	Kluang	27.80 288	P	P	17 49 55.7	+2.5
NWAO	Narrogin (SRO)	28.35 203	P	P	17 49 59.3	+1.6
	comp=Z,3.6nm,0.3s,mb4.5,baz=50,slow=15,SNR=6.2					
SDSI	Sungai Dareh	28.83 281	P	P	17 50 03.0	+0.7
	comp=Z,16nm,2.1s,mb4.4					
IPM	Ipoh	30.80 291	P	P	17 50 20.6	+1.0
ARMA	Armidale	31.13 141	eP	P	17 50 25.1	+2.8
KULM	Kulim	31.45 292	P	P	17 50 26.8	+1.5
KULM	Kulim	31.45 292	eP	P	17 50 23.5	-1.8
PSI	Prapat	32.22 286	P	P	17 50 29.3	-2.8
	comp=Z,3.3nm,0.3s,mb4.5,baz=121,slow=7.3,SNR=8.7					
PSI	Prapat	32.22 286	P	P	17 50 29.3	-2.8
COCO	West Island	32.83 258	eP	P	17 50 34.1	-3.3
COCO			pmax	pmax		
	comp=Z,63nm,0.6s,mb5.5					
COCO	West Island	32.83 258	eP	P	17 50 34.1	-3.3
	comp=Z,63nm,0.6s,mb5.5					
CAN	Canberra	33.36 151	eP	P	17 50 44.8	+3.1
CAN			pmax	pmax		
	comp=Z,30nm,0.8s,mb5.1					
CAN	Canberra	33.36 151	eP	P	17 50 44.8	+3.1
	comp=Z,30nm,0.8s,mb5.1					
QZH	Quanzhou	33.48 341	i P	P	17 50 41.2	-1.6
CNB	Canberra Magne	33.53 150	eP	P	17 50 46.5	+3.3
TOO	Toolangi	33.71 157	eP	P	17 50 48.7	+4.0
CMAR	Chiang Mai Arr	39.47 310	P	P	17 51 33.1	-0.5
	comp=Z,7.4nm,0.7s,mb4.4,baz=138,slow=7.4,SNR=46					
CMAR			PcP	PcP	17 53 39.3	+1.3
	comp=Z,1.4nm,0.7s,baz=157,slow=2.9,SNR=5.7					
CM31	Chiang Mai Arr	39.47 310	eP	P	17 51 33.1	-0.5
	comp=Z,1.7nm,0.4s,mb4.0					
CHTO	Chiang Mai	39.68 311	eP	P	17 51 34.6	-0.8
CHTO			pmax	pmax		
	comp=Z,15nm,0.8s,mb4.7					
CHTO	Chiang Mai	39.68 311	eP	P	17 51 34.6	-0.8
	comp=Z,15nm,0.8s,mb4.7					
CHTO	Chiang Mai	39.68 311	P	P	17 51 35.3	-0.1
	comp=Z,26nm,0.9s,mb4.8					
GYA	Guiyang	40.02 327	P	P	17 51 38.9	+0.8
GYA			PP	PP	17 53 18.6	+4.6
GYA			PcP	PcP	17 53 42.4	+2.8
GYA			ScP	ScP	17 57 14.0	+1.8
GYA			PcS	PcS	17 57 31.1	+0.8
GYA			S	S	17 57 32.4	+1.8
GYA			sS	sS	17 58 36.0	-1.0
GYA			ScS	ScS	18 01 26.8	+0.7
GYA			pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.5					
GYA			pmax	pmax		
	comp=Z,80nm,4.8s					
WHN	Wuhan	40.06 339	P	P	17 51 28.5	-10
NJ2	Nanjing	40.12 346	eP	P	17 51 39.6	+0.8
NJ2			pmax	pmax		
	comp=Z,20nm,0.6s,mb4.9					
KMI	Kunming	41.28 321	P	P	17 51 50.4	+2.0
KMI			PP	PP	17 53 31.2	+3.6
KMI			S	S	17 57 52.9	+3.5
KMI			sS	sS	17 58 55.1	-1.0
KMI			pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.2					
KMI			pmax	pmax		
	comp=Z,72nm,6.4s					
KMI			LR	LR		
	comp=N,94nm,18.4s					
KMI			LR	LR		
	comp=E,110nm,15.7s					
KMI			LR	LR		
	comp=Z,78nm,16.4s					
MJAR	Matsushiro Arr	43.96 10	P	P	17 52 08.4	-1.4
	comp=Z,3.5nm,0.7s,mb4.1,baz=188,slow=9.8,SNR=19					
MAJO	Matsushiro	43.97 10	eP	P	17 52 08.1	-1.7
MAJO			pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.4					
MAJO	Matsushiro	43.97 10	eP	P	17 52 08.1	-1.8
	comp=Z,8.9nm,0.9s,mb4.4					
MAT	Matsushiro	43.97 10	P	P	17 52 08.5	-1.3
KSRS	Korea Array	44.18 358	P	P	17 52 11.7	+0.1
	comp=Z,1.2nm,0.5s,mb3.8,baz=176,slow=9.2,SNR=10					
CD2	Chengdu	45.09 328	P	P	17 52 20.8	+1.9
CD2			pP	pP	17 52 56.5	-1.0
CD2			PP	PP	17 54 09.2	+1.1
CD2			S	S	17 58 46.9	+2.2
CD2			sS	sS	17 59 49.6	-2.7
CD2			SS	SS	18 02 05.8	-4.7
CD2			pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.7					
CD2			pmax	pmax		
	comp=Z,60nm,7.7s					
XAN	Xi'an	45.25 335	P	P	17 52 18.3	-1.8
XAN			pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.0					
BJI	Beijing	48.38 346	P	P	17 52 45.6	+1.4
BJI			pP	pP	17 53 21.3	-2.1
BJI			S	S	17 59 33.2	+2.2
BJI			sS	sS	18 00 37.0	-2.4
BJI			pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.4					
LZH	Lanzhou	49.21 332	eP	P	17 52 50.0	-0.6
LZH			pP	pP	17 53 26.0	-3.9
LZH			sP	sP	17 53 42.5	-7.0
LZH			pmax	pmax		
	comp=Z,15nm,1.0s,mb4.6					
LZH			pmax	pmax		
	comp=Z,76nm,4.4s					
HHC	Hu-ho-hao-te	50.38 342	eP	P	17 52 59.0	-0.4
HHC			pP	pP	17 53 36.0	-2.9
HHC			PcP	PcP	17 54 15.6	+0.3
HHC			PP	PP	17 54 57.4	+0.5
HHC			ScP	ScP	17 57 54.2	-0.5
HHC			PcS	PcS	17 58 11.5	-1.1
HHC			S	S	17 59 58.4	-0.6
HHC			sS	sS	18 01 02.4	-5.4
HHC			ScS	ScS	18 02 30.8	-1.4
HHC			pmax	pmax		
	comp=Z,13nm,0.7s,mb4.7					
HHC			pmax	pmax		
	comp=Z,84nm,7.1s					
HHC			LR	LR		
	comp=N,96nm,15.2s					
HHC			LR	LR		
	comp=E,110nm,15.4s					
HHC			LR	LR		
	comp=Z,93nm,15.4s					
CN2	Changchun	50.63 356	eP	P	17 53 04.0	+2.8
CN2			eS	S	17 59 59.8	-2.5
CN2			pmax	pmax		
	comp=Z,10.0nm,0.4s,mb4.8					
CN2			pmax	pmax		
	comp=Z,200nm,4.0s					
PALK	Pallekele	50.88 285	i P	Px	17 53 18.9	
ASAJ	Asahikawa	52.12 12	P	P	17 53 12.0	-0.3
	comp=Z,3.2nm,0.8s,mb4.0,baz=196,slow=15,SNR=6.3					
ODAN	Odare	53.00 311	eP	P	17 53 18.2	-0.8
	comp=Z,12nm,0.4s,mb5.0					
TAPN	Taplejung	53.03 312	eP	P	17 53 18.4	-0.9
	comp=Z,17nm,0.4s,mb5.2					
RAMN	Ramite	53.64 311	eP	P	17 53 22.9	-0.8
	comp=Z,42nm,0.6s,mb5.4					
GTA	Gaotai	53.77 331	eP	P	17 53 24.4	0.0
GTA			pP	pP	17 54 01.5	-2.9
GTA			sP	sP	17 54 19.4	-4.4
GTA			S	S	18 00 45.1	-0.1
GTA			sS	sS	18 01 48.7	-6.1
GTA			SS	SS	18 04 27.8	-1.1
GTA			pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5					
GTA			pmax	pmax		
	comp=Z,72nm,6.6s					
GTA			LR	LR		
	comp=N,62nm,15.6s					
GTA			LR	LR		
	comp=E,74nm,14.4s					
GTA			LR	LR		
	comp=Z,79nm,15.6s					
JIRN	Jiri	54.33 311	eP	P	17 53 27.7	-1.0
	comp=Z,12nm,0.3s,mb5.1					
GUN	Gumba	54.69 311	eP	P	17 53 30.6	-0.7
	comp=Z,36nm,0.5s,mb5.3					
KKN	Kakani	55.08 311	eP	P	17 53 33.1	-1.0
DMN	Daman	55.11 311	eP	P	17 53 33.4	-1.0
	comp=Z,18nm,0.7s,mb4.9					
GKN	Gorkha	55.67 311	eP	P	17 53 37.2	-1.1
	comp=Z,17nm,0.3s,mb5.4					
KOLN	Koldanda	56.34 310	eP	P	17 53 42.3	-0.8
	comp=Z,15nm,0.5s,mb5.1					
ULN	Ulaanbaatar	58.11 342	eP	P	17 53 55.4	+0.3
ULN			pmax	pmax		
	comp=Z,16nm,0.8s,mb4.9					
ULN	Ulaanbaatar	58.11 342	eP	P	17 53 55.4	+0.4
	comp=Z,16nm,0.8s,mb4.9					
ULN	Ulaanbaatar	58.11 342	P	P	17 53 55.4	+0.3
SONM	Songino Array	58.28 342	P	P	17 53 56.6	+0.4
	comp=Z,3.9nm,0.6s,mb4.4,baz=153,slow=6.2,SNR=30					
SONM			PcP	PcP	17 54 42.5	-2.9
	comp=Z,1.5nm,0.8s,baz=113,slow=1.9,SNR=4.0					
WMQ	Urumqi	63.18 327	eP	P	17 54 31.0	+1.6
WMQ			PcP	PcP	17 55 07.1	+1.8
WMQ			pP	pP	17 55 08.7	-2.0
WMQ			PP	PP	17 56 53.2	+2.4
WMQ			pmax	pmax		
	comp=Z,11nm,0.8s,mb4.7					
WMQ			pmax	pmax		
	comp=Z,120nm,4.0s					
MOY	Mondy	63.35 340	eP	P	17 54 31.4	+1.0
MOY			pmax	pmax		
	comp=Z,22nm,1.6s,mb4.7					
PETK	Petropavlovsk-	64.34 18	P	P	17 54 37.4	+0.5
	comp=Z,4.4nm,0.7s,mb4.4,baz=116,slow=3.4,SNR=5.6					
KSH	Kashi	67.77 318	eP	P	17 54 59.0	0.0
KSH			PcP	PcP	17 55 25.6	+1.1
KSH			pP	pP	17 55 37.4	-3.4
KSH			sP	sP	17 55 54.8	-4.9
KSH			PP	PP	17 57 30.3	-0.7
KSH			ScP		17 59 12.5	
KSH			PcS		17 59 28.7	
KSH			S	S	18 03 38.7	-4.1
KSH			ScS	ScS	18 04 37.5	-3.5
KSH			sS	sS	18 04 45.3	-10
KSH			pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2					
KSH			pmax	pmax		
	comp=Z,94nm,5.3s					
KSH			LR	LR		
	comp=N,91nm,7.1s					
KSH			LR	LR		
	comp=E,77nm,5.5s					
KSH			LR	LR		
	comp=Z,95nm,4.8s					
MK31	Makanchi Array	68.01 327	eP	P	17 55 00.8	+0.5
MKAR	Makanchi Array	68.01 327	P	P	17 55 00.4	+0.1
	comp=Z,8.8nm,0.3s,mb4.9,baz=116,slow=8.3,SNR=172					
YAK	Yakutsk	68.75 360	eP	P	17 55 03.8	-0.8
YAK			pmax	pmax		
	comp=Z,28nm,0.8s,mb5.0					
YAK			pmax	pmax		
	comp=N,9.0nm,1.4s					
KBL	Kabul	70.50 310	eP	P	17 55 16.2	+0.3
KBL			pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4					
KBL	Kabul	70.50 310	eP	P	17 55 16.2	+0.3
	comp=Z,6.5nm,0.8s,mb4.4					
EKS2	Erkin-Say	70.78 320	eP	P	17 55 17.9	+0.5
EKS2			pmax	pmax		
	comp=Z,14nm,0.8s,mb4.7					
EKS2	Erkin-Say	70.78 320	eP	P	17 55 17.9	+0.4
	comp=Z,14nm,0.8s,mb4.7					
ZAA0	Zalesovo Array	71.39 334	eP	P	17 55 19.5	-1.4
ZALV	Zalesovo Beam	71.39 334	P	P	17 55 19.9	-0.9
	comp=Z,10nm,0.6s,mb4.7,baz=119,slow=4.8,SNR=56					
ZALV	Zalesovo Beam	71.39 334	P	P	17 55 19.9	-0.9
KURK	Kurchatov	72.31 329	P	P	17 55 25.8	-0.6
	comp=Z,17nm,0.7s,mb4.9,baz=130,slow=4.8,SNR=52					
KURK	Kurchatov	72.31 329	c i P	P	17 55 26.3	-0.1
KURK			pmax	pmax		
	comp=Z,34nm,1.2s,mb5.0					
KURK	Kurchatov	72.31 329	eP	P	17 55 26.1	-0.3
NVS	Novosibirsk	72.68 334	i P	P	17 55 27.5	-1.0
NVS			i S	S	18 04 34.8	-4.3
NVS			pmax	pmax		
	comp=Z,28nm,1.2s,mb4.9					
NVS			pmax	pmax		
	comp=N,10.0nm,1.1s					
NVS			pmax	pmax		
	comp=E,18nm,1.3s					
NVS			smax			
	comp=E,16nm,1.7s					
MAW	Mawson	74.92 201	P	P	17 55 42.1	+0.7
	comp=E,1.8nm,0.7s,mb3.8,baz=16,slow=9.5,SNR=3.7					
BVAR	Borovoye Array	77.85 328	P	P	17 55 58.2	+0.1
	comp=E,9.7nm,0.8s,mb4.5,baz=129,slow=4.7,SNR=39					
BRVK	Borovoye	77.92 328	c i P	P	17 55 58.3	-0.2
BRVK			pmax	pmax		
	comp=Z,26nm,1.3s,mb4.7					
BRVK	Borovoye	77.92 328	eP	P	17 55 58.1	-0.4
TIXI	Tiksi	78.41 360	eP	P	17 56 00.5	-0.3
TIXI			pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.4					
TIXI	Tiksi	78.41 360	eP	P	17 55 59.5	-1.3
	comp=Z,5.4nm,0.6s,mb4.3					
ABKAR	Akbulak array	82.28 322	eP	P	17 56 21.4	-0.4
	comp=Z,5.8nm,0.6s,mb4.4					
SVE	Sverdlovsk	84.56 329	i eP	P	17 56 33.7	+0.4
SVE			pmax	pmax		
	comp=Z,19nm,1.1s,mb4.7					
ARU	Arti	85.49 328	eP	P	17 56 37.0	-1.0
ARU			pmax	pmax		
	comp=Z,17nm,0.9s,mb4.8					
ARU	Arti	85.49 328	eP	P	17 56 37.0	-1.0
	comp=Z,17nm,0.9s,mb4.8					
RDF	Al-Radifah	86.50 300	eP	P	17 56 44.0	+0.3
RDF			AMb	AMB	17 56 44.9	
	comp=Z,35nm,1.1s,mb5.1					
NAY	Al-Naaiem	86.83 300	eP	P	17 56 44.6	-0.6
NAY			AMb	AMB	17 56 45.8	
	comp=Z,30nm,0.8s,mb5.2					
ZEI	Tsey	91.59 313	eP	P	17 57 00.0	-7.2
ZEI			pmax	pmax		
	comp=Z,7.0nm,0.4s,mb5.0					
BRTR	Keskin Array B	99.05 309	P	P	17 57 40.5	-0.7
	comp=Z,0.5nm,0.6s,mb4.1,baz=133,slow=6.9,SNR=3.7					
BRTR	Keskin Array B	99.05 309	c eP	P	17 57 41.2	0.0
BRTR			pmax	pmax		
	comp=Z,1.0nm,0.6s					
CDF	Champ du Feu	116.37 321	ePKP1	PKPdf	18 02 41.8	-1.1
HINF	Hinteralfeld	116.85 321	ePKP1	PKPdf	18 02 43.2	-0.6
	comp=Z,6.6nm,0.6s					
SMF	Signal de Mont	119.19 320	ePKP1	PKPdf	18 02 48.1	-0.3
	comp=Z,25nm,1.2s					
TCF	Toulx Ste Croi	120.36 320	ePKP1	PKPdf	18 02 50.6	0.0
	comp=Z,4.7nm,0.7s					
TXAR	Lajitas Array	125.13 59	PKP	PKPdf	18 03 02.0	+1.7
	comp=Z,0.5nm,0.5s,baz=233,slow=2.9,SNR=7.6					
TORD	Torodi Ar. Bea	128.52 281	PKP	PKPdf	18 03 08.5	+1.4
	comp=Z,1.5nm,0.6s,baz=64,slow=2.3,SNR=11					
CPUP	Villa Florida	146.24 169	PKPbc	PKPbc	18 03 42.9	+2.2
	comp=Z,1.9nm,0.6s,baz=114,slow=1.3,SNR=6.1					
CPUP			PP	PP	18 07 04.7	+2.0
	comp=Z,1.5nm,0.7s,baz=278,slow=1.6,SNR=4.9					
LPAZ	La Paz	150.95 143	PKP	PKPdf	18 03 48.9	+1.7
	comp=Z,0.9nm,0.7s,baz=170,slow=3.4,SNR=4.6					
LPAZ			PKPbc	PKPbc	18 03 56.3	+3.2
	comp=Z,1.3nm,0.5s,baz=54,slow=3.9,SNR=9.2					
LPAZ			PKPab	PKPab	18 04 00.9	0.0
	comp=Z,0.9nm,0.5s,baz=352,slow=5.4,SNR=4.7					

MAN 06 17:44:42, 15.41N×122.38E, h1km, mb5.0, ML3.9, MS4.0, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	Polilio Island	0.80	213	eP	Pg	17 44 57.6	+0.3
BALP	Baler	0.85	293	eP	Pg	17 44 59.9	+1.7
CAUP	Cauayan	1.62	341	eP	Pn	17 45 11.9	+0.2
PALP	Palanan	1.65	1	eP	Pn	17 45 12.2	+0.1
BCPH	Baguio City Da	1.99	299	i P	Pn	17 45 15.4	-1.4
BCPH				i S	Sn	17 45 43.0	+0.7
BOAC	Boac	2.01	195	eP	Pn	17 45 17.6	+0.6
AUQP	San Andres	2.09	172	eP	Pn	17 45 20.8	+2.6
PVCP	Virac	2.49	136	eP	Pn	17 45 24.5	+0.9
LUBP	Lubang	2.66	231	eP	Pn	17 45 28.1	+2.1
APYP	Conner	2.67	336	eP	Pn	17 45 27.3	+1.1
ABRA	Dolores	2.75	325	eP	Pn	17 45 29.4	+2.2
SJMP	San Jose	3.18	203	eP	Pn	17 45 35.3	+2.2
CNP	Catarman	3.63	142	eP	Pn	17 45 44.0	+4.6

*IDC **06** 18:03:16.0±3.1, 4.90S×101.71E, h0km, mb3.7/8, mb1 3.8/8, mb1mx3.6/22, mbtmp3.7/8, Error ellipse: s-maj=132.3km s-min=16.6km az=57.0*
*NEIC **06** 18:03:18.6±2.1, 5.32S×101.25E, h35km, mb3.7/2, Error ellipse: s-maj=86.3km s-min=10.8km az=56.0*
*ISCJB **06** 18:03:25.0±0.9, 4.55S±0.08×102.30E±0.07, h67km±8km, mb3.6/9, Error ellipse: s-maj=16.8km s-min=5.6km az=37.5*
*DJA **06** 18:03:26, 4.53S×102.35E, h34km, MLv4.1/9*

ISC 06 18:03:26.4±0.8, 4.52S±0.08×102.34E±0.07, h62km±8km, n25, σ19°00/30, mb3.6/9, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	Manna	0.64	75	P	Pn	18 03 39.1	-0.9
MNAI				S	Sn	18 03 49.7	-0.3
KSI	Kapahiang	0.90	16	P	Pn	18 03 42.0	-1.3
KSI				S	Sn	18 03 53.9	-1.9
LHSI	Lahat	1.37	60	P	Pn	18 03 49.5	+0.1
LWLI	Liwa	1.78	106	P	Pn	18 03 55.6	+0.6
LWLI				S	Sn	18 04 16.8	+0.2
MDSI	Maura Dua	1.83	89	P	Pn	18 03 55.7	0.0
MDSI				S	Sn	18 04 18.5	+0.6
KASI	Kota Agung	2.37	115	P	Pn	18 04 03.2	+0.2
KASI				S	Sn	18 04 30.0	-0.9
KLSI		2.39	94	P	Pn	18 04 04.2	+1.0
KLSI				S	Sn	18 04 34.3	+2.9
PPSI	Pulau Pagai	2.91	307	P	Pn	18 04 10.2	-0.2
SDSI	Sungai Dareh	3.68	346	P	Pn	18 04 23.5	+2.6
CGJI	Cibinong	3.93	122	P	Pn	18 04 23.9	-0.4
PDSI	Padang	4.05	332	P	Pn	18 04 26.6	+0.7
PPI	Padang Panjang	4.48	334	P	Pn	18 04 32.7	+0.8
SISI	Saibi	4.54	314	P	Pn	18 04 32.9	+0.2
CMAR	Chiang Mai Arr	23.08	352	P	P	18 08 27.7	+0.7
	0.3nm,0.6s,mb2.9,baz=179,slow=8.7,SNR=3.3						
FITZ	Fitzroy Crossi	26.48	122	P	P	18 08 57.9	-0.3
	2.9nm,0.9s,mb3.8,baz=346,slow=12,SNR=6.9						
WRA	Warramunga Arr	34.72	119	P	P	18 10 10.1	-0.8
	0.3nm,0.3s,mb3.8,baz=322,slow=11,SNR=23						
WRAB	Tennant Creek	34.73	119	eP	P	18 10 10.3	-0.6
	0.9nm,0.6s,mb3.9						
ASAR	Alice Springs	35.89	125	P	P	18 10 20.9	0.0
	0.6nm,0.4s,mb3.9,baz=299,slow=7.4,SNR=27						
STKA	Stephens Creek	45.74	131	P	P	18 11 42.5	+0.7
	1.4nm,0.6s,mb4.1,baz=318,slow=14,SNR=2.8						
STKA	Stephens Creek	45.74	131	eP	P	18 11 38.2	-3.6
	0.9nm,1.0s,mb3.6						
SONM	Songino Array	52.26	3	P	P	18 12 32.6	+1.3
	0.2nm,0.5s,mb3.3,baz=189,slow=10,SNR=4.0						
SONM	Songino Array	52.26	3	P	P	18 12 32.6	+1.3
MKAR	Makanchi Array	54.09	343	P	P	18 12 42.6	-2.2
	0.2nm,0.4s,mb3.4,baz=153,slow=9.1,SNR=6.8						
ZALV	Zalesovo Beam	60.08	348	P	P	18 13 26.5	-0.5
	0.5nm,0.4s,mb3.9,baz=166,slow=0.6,SNR=3.6						
TXAR	Lajitas Array	145.14	42	PKPbc	PKPbc	18 22

0.3nm,0.4s,mb3.5,baz=194,slow=10,SNR=3.8
ZALV Zalesovo Beam 41.11 352 P P 18 22 23.8 +1.0
0.5nm,0.5s,mb3.4,baz=167,slow=8.9,SNR=2.7
WRA Warramunga Arr 51.79 129 P P 18 23 47.9 +0.8
0.8nm,0.6s,mb3.9,baz=300,slow=9.7,SNR=17
WRAB Tennant Creek 51.80 129 *eP* **P 18 23 45.3 -1.9**
0.5nm,0.6s,mb3.6
ASAR Alice Springs 53.74 133 P P 18 24 02.0 +0.5
0.6nm,0.4s,mb3.8,baz=307,slow=6.6,SNR=12
DAWY Dawson 92.85 21 *eP* **P 18 27 52.0 +0.7**

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*ISCJB **06** 18:31:54.2±1.0, 36°.00N±0°.03×21°.31E±0°.04, h4km±.7km, mb3.5/7, Error ellipse: s-maj=5.7km s-min=4.9km az=166.2*
*CSEM **06** 18:31:56.2±0.3, 36°.06N×21°.34E, h5km, ML3.9/4, Error ellipse: s-maj=7.5km s-min=5.8km az=167.0*
*ATH **06** 18:31:57.0, 36°.10N×21°.38E, h25km±1km, MD3.7/8*
*NEIC **06** 18:31:57.0, 36°.10N×21°.38E, h25km, MD3.7(ATH), After ATH.*
*THE **06** 18:31:58.9, 36°.13N×21°.65E, h0km±2km, ML3.9/4, Error ellipse: s-maj=4.9km s-min=1.2km az=246.0*
*IDC **06** 18:32:00.1±2.3, 36°.20N×21°.48E, h45km±26km, mb3.3/8, mb1 3.4/11, mb1mx3.3/29, mbtmp3.4/11, ML3.3/3, MS3.0/1, Ms1 3.0/1, ms1mx2.2/21, Error ellipse: s-maj=27.5km s-min=16.0km az=179.0*
ISC 06 18:31:55.2±1.0, 36°.02N±0°.03×21°.37E±0°.04, h0km±6km, n118, σ1§17/141, mb3.6/7, 1D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.93**	**19**	*e*PB	**Pg**	**18 32 12.5**	**-0.5**
PYL				*e*SN	**Sg**	**18 32 25.4**	**+0.4**
PYL	**PYLOS**	**0.93**	**19**	P	**Pg**	**18 32 12.5**	**-0.5**
PYL	**PYLOS**	**0.93**	**19**	P	**Pg**	**18 32 12.5**	**-0.5**
PYL				*e*Sn	**Sg**	**18 32 25.4**	**+0.4**
ITM	**Ithomi**	**1.24**	**21**	*e*Pn	**Pn**	**18 32 19.0**	**-0.8**
ITM				*e*Sb	**Sb**	**18 32 35.8**	**-0.3**
ITM	**Ithomi**	**1.24**	**21**	*e*PN	**Pn**	**18 32 19.0**	**-0.8**
ITM				*e*SB	**Sb**	**18 32 35.8**	**-0.3**
ITM	**Ithomi**	**1.24**	**21**	P	**Pg**	**18 32 18.8**	**-0.2**
ITM				S	**Sg**	**18 32 34.5**	**-0.7**
ITM	**Ithomi**	**1.24**	**21**	P	**Pg**	**18 32 18.8**	**-0.2**
ITM				S	**Sg**	**18 32 34.5**	**-0.7**
ITM				*e*Sb	**Sb**	**18 32 35.8**	**-0.3**
KYTH	**Kithira**	**1.37**	**79**	*e*Pn	**Pn**	**18 32 22.3**	**+0.7**
KYTH	**Kithira**	**1.37**	**79**	*e*PN	**Pn**	**18 32 22.3**	**+0.7**
KYTH	**Kithira**	**1.37**	**79**	*e*Pn	**Pn**	**18 32 22.3**	**+0.7**
VLI	**Veliai**	**1.44**	**61**	*e*Pn	**Pn**	**18 32 22.9**	**+0.3**
VLI				*e*Sn	**Sn**	**18 32 41.8**	**-0.4**
VLI	**Veliai**	**1.44**	**61**	*e*PN	**Pn**	**18 32 22.9**	**+0.3**
VLI				*e*SN	**Sn**	**18 32 41.8**	**-0.4**
VLI	**Veliai**	**1.44**	**61**	*e*Pn	**Pn**	**18 32 22.9**	**+0.3**
VLI				*e*Sn	**Sn**	**18 32 41.8**	**-0.4**
VLX	**Vlachokerasia**	**1.57**	**31**	*e*PN	**Pn**	**18 32 24.5**	**+0.1**
VLX	**Vlachokerasia**	**1.57**	**31**	P	**Pn**	**18 32 24.7**	**+0.3**
VLX				S	**Sn**	**18 32 44.4**	**-1.0**
VLX	**Vlachokerasia**	**1.57**	**31**	*e*Pn	**Pn**	**18 32 24.5**	**+0.1**
VLX				S	**Sn**	**18 32 44.4**	**-1.0**
RLS	**Riolos of Patr**	**2.04**	**2**	*e*Pn	**Pn**	**18 32 31.2**	**+0.5**
RLS	**Riolos of Patr**	**2.04**	**2**	*e*PN	**Pn**	**18 32 31.2**	**+0.5**
RLS	**Riolos of Patr**	**2.04**	**2**	*e*Pn	**Pn**	**18 32 31.2**	**+0.5**
GUR	**Goura**	**2.07**	**22**	*e*PN	**Pn**	**18 32 31.4**	**+0.3**
GUR	**Goura**	**2.07**	**22**	P	**Pn**	**18 32 32.3**	**+1.2**
GUR				S	**Sn**	**18 32 57.2**	**-0.4**
GUR	**Goura**	**2.07**	**22**	*e*Pn	**Pn**	**18 32 31.4**	**+0.3**
GUR	**Goura**	**2.07**	**22**	P	**Pn**	**18 32 32.3**	**+1.2**
GUR				S	**Sn**	**18 32 57.2**	**-0.4**
DID	**Didima**	**2.11**	**45**	*e*PN	**Pn**	**18 32 31.6**	**-0.1**
DID	**Didima**	**2.11**	**45**	P	**Pn**	**18 32 31.6**	**-0.1**
DID	**Didima**	**2.11**	**45**	P	**Pn**	**18 32 31.6**	**-0.1**
KARN	**Karanos**	**2.16**	**106**	P	**Pn**	**18 32 33.3**	**+0.9**
KARN				S	**Sn**	**18 32 59.7**	**-0.2**
KARN	**Karanos**	**2.16**	**106**	P	**Pn**	**18 32 33.3**	**+0.9**
KARN				S	**Sn**	**18 32 59.7**	**-0.2**
VLS	**Valsamata**	**2.24**	**344**	*e*Pn	**Pn**	**18 32 33.7**	**+0.1**
VLS	**Valsamata**	**2.24**	**344**	*e*PN	**Pn**	**18 32 33.7**	**+0.1**
VLS	**Valsamata**	**2.24**	**344**	*e*Pn	**Pn**	**18 32 33.7**	**+0.1**
LAKA	**Lakka**	**2.27**	**12**	P	**Pn**	**18 32 34.8**	**+0.9**
LAKA				S	**Sn**	**18 33 03.3**	**+0.7**
LAKA	**Lakka**	**2.27**	**12**	P	**Pn**	**18 32 34.8**	**+0.9**
LAKA				S	**Sn**	**18 33 03.3**	**+0.7**
LTK	**Loutraki**	**2.37**	**32**	*e*PN	**Pn**	**18 32 35.5**	**+0.1**
LTK	**Loutraki**	**2.37**	**32**	P	**Pn**	**18 32 35.2**	**-0.2**
LTK	**Loutraki**	**2.37**	**32**	P	**Pn**	**18 32 35.2**	**-0.2**
LTK	**Loutraki**	**2.37**	**32**	*e*Pn	**Pn**	**18 32 35.5**	**+0.1**
VAM	**Vamos**	**2.38**	**104**	*e*Pb	**Pb**	**18 32 37.4**	**-1.5**
VAM	**Vamos**	**2.38**	**104**	*e*PB	**Pb**	**18 32 37.4**	**-1.5**
VAM	**Vamos**	**2.38**	**104**	*e*Pb	**Pb**	**18 32 37.4**	**-1.5**
NAIG	**Nisos Aigina**	**2.43**	**44**	*e*Pn	**Pn**	**18 32 36.2**	**+0.1**
NAIG	**Nisos Aigina**	**2.43**	**44**	*e*PN	**Pn**	**18 32 36.2**	**+0.1**
NAIG	**Nisos Aigina**	**2.43**	**44**	*e*Pn	**Pn**	**18 32 36.2**	**+0.1**
EFP	**Efpalio**	**2.44**	**10**	P	**Pn**	**18 32 37.6**	**+1.3**
EFP				S	**Sn**	**18 33 07.7**	**+0.9**
EFP	**Efpalio**	**2.44**	**10**	P	**Pn**	**18 32 37.6**	**+1.3**
EFP				S	**Sn**	**18 33 07.7**	**+0.9**
KALE	**Kalithea**	**2.45**	**14**	P	**Pn**	**18 32 38.0**	**+1.6**
KALE	**Kalithea**	**2.45**	**14**	P	**Pn**	**18 32 38.0**	**+1.6**
VLY	**Voula,Athens**	**2.67**	**46**	P	**Pn**	**18 32 40.3**	**+0.9**
VLY	**Voula,Athens**	**2.67**	**46**	P	**Pn**	**18 32 40.3**	**+0.9**
EVR	**Evrytania**	**2.91**	**7**	*e*Pn	**Pn**	**18 32 43.3**	**+0.5**
EVR	**Evrytania**	**2.91**	**7**	*e*PN	**Pn**	**18 32 43.3**	**+0.5**
EVR	**Evrytania**	**2.91**	**7**	*e*Pn	**Pn**	**18 32 43.3**	**+0.5**
LKR	**Lokris**	**2.93**	**26**	*e*Pn	**Pn**	**18 32 43.0**	**0.0**
LKR	**Lokris**	**2.93**	**26**	*e*PN	**Pn**	**18 32 43.0**	**0.0**
LKR	**Lokris**	**2.93**	**26**	P	**Pn**	**18 32 42.6**	**-0.4**
LKR	**Lokris**	**2.93**	**26**	P	**Pn**	**18 32 42.6**	**-0.4**
LKR	**Lokris**	**2.93**	**26**	*e*Pn	**Pn**	**18 32 43.0**	**0.0**
AGG	**Agios Georgios**	**3.09**	**14**	P	**Pn**	**18 32 47.6**	**+2.3**
AGG	**Agios Georgios**	**3.09**	**14**	P	**Pn**	**18 32 46.2**	**+0.9**
AGG	**Agios Georgios**	**3.09**	**14**	P	**Pn**	**18 32 46.2**	**+0.9**
LAST	**Lasithi**	**3.46**	**103**	P	**Pn**	**18 32 53.5**	**+3.3**
LAST	**Lasithi**	**3.46**	**103**	P	**Pn**	**18 32 53.5**	**+3.3**
THL	**Klokotos Trika**	**3.58**	**8**	P	**Pn**	**18 32 51.9**	**0.0**
THL	**Klokotos Trika**	**3.58**	**8**	P	**Pn**	**18 32 51.9**	**0.0**
XOR	**Xorichti**	**3.64**	**23**	P	**Pn**	**18 32 55.7**	**+2.9**
XOR	**Xorichti**	**3.64**	**23**	P	**Pn**	**18 32 55.7**	**+2.9**
AOS	**Alonnisos**	**3.72**	**32**	P	**Pn**	**18 32 55.3**	**+1.4**
AOS	**Alonnisos**	**3.72**	**32**	P	**Pn**	**18 32 52.5**	**-1.4**
AOS	**Alonnisos**	**3.72**	**32**	P	**Pn**	**18 32 52.5**	**-1.4**
KZN	**Kozani**	**4.29**	**4**	P	**Pn**	**18 33 04.1**	**+2.4**
KZN	**Kozani**	**4.29**	**4**	P	**Pn**	**18 33 04.1**	**+2.4**
NEST	**Nestorio**	**4.40**	**357**	P	**Pn**	**18 33 03.7**	**+0.5**
NEST	**Nestorio**	**4.40**	**357**	P	**Pn**	**18 33 03.7**	**+0.5**
SOI	**Samo**	**4.72**	**297**	Pn	**Pn**	**18 33 07.0**	**-0.6**
SOI	**Samo**	**4.72**	**297**	Pn	**Pn**	**18 33 07.0**	**-0.6**
FNA	**Florina**	**4.76**	**0**	P	**Pn**	**18 33 08.4**	**+0.3**
FNA	**Florina**	**4.76**	**0**	P	**Pn**	**18 33 07.4**	**-0.7**
FNA	**Florina**	**4.76**	**0**	P	**Pn**	**18 33 08.4**	**+0.3**
CEL	**Celeste**	**4.91**	**299**	*e*P	**Pn**	**18 33 09.4**	**-0.9**
CEL	**Celeste**	**4.91**	**299**	*e*P	**Pn**	**18 33 09.4**	**-0.9**
SOH	**Sokhos**	**5.04**	**17**	P	**Pn**	**18 33 14.0**	**+2.0**
SOH	**Sokhos**	**5.04**	**17**	P	**Pn**	**18 33 14.0**	**+2.0**
HAVL	**Avola**	**5.12**	**282**	Pn	**Pn**	**18 33 12.0**	**-1.1**
HAVL	**Avola**	**5.12**	**282**	Pn	**Pn**	**18 33 12.0**	**-1.1**
NVR	**Nevrokopi**	**5.67**	**19**	P	**Pn**	**18 33 21.7**	**+1.1**
NVR	**Nevrokopi**	**5.67**	**19**	P	**Pn**	**18 33 21.7**	**+1.1**
VAE	**Valguarnera**	**5.78**	**287**	P	**Pn**	**18 33 24.3**	**+2.2**
1.7nm,0.3s,baz=90,slow=3.0,SNR=2.9							
VAE				S	**Sn**	**18 34 30.2**	**+1.2**
1.9nm,0.3s,baz=294,slow=15,SNR=1.9							
VAE	**Valguarnera**	**5.78**	**287**	P	**Pn**	**18 33 24.3**	**+2.2**
VAE				S	**Sn**	**18 34 30.2**	**+1.2**
MMB	**Musomiste**	**5.86**	**18**	P	**Pn**	**18 33 22.7**	**-0.5**
MMB	**Musomiste**	**5.86**	**18**	P	**Pn**	**18 33 22.7**	**-0.5**
KKB	**Krupnik**	**5.99**	**12**	P	**Pn**	**18 33 23.1**	**-1.9**
KKB	**Krupnik**	**5.99**	**12**	P	**Pn**	**18 33 23.1**	**-1.9**
RZN	**Rozhen**	**6.23**	**24**	P	**Pn**	**18 33 28.1**	**-0.3**
RZN	**Rozhen**	**6.23**	**24**	P	**Pn**	**18 33 28.1**	**-0.3**
VTS	**Vitosha**	**6.72**	**12**	P	**Pn**	**18 33 35.1**	**+0.1**
VTS	**Vitosha**	**6.72**	**12**	P	**Pn**	**18 33 35.1**	**+0.1**
BARS	**Barje**	**6.80**	**3**	*i*Pn	**Pn**	**18 33 34.6**	**-1.5**
STON	**Ston**	**7.41**	**339**	*e*Pn	**Pn**	**18 33 41.0**	**-3.5**
STON				Sn	**Sn**	**18 34 59.4**	**-10**
BBLS	**Lazići**	**7.98**	**350**	*e*Pn	**Pn**	**18 33 51.0**	**-1.4**
NVLJ	**Novalja**	**9.87**	**332**	*e*Pn	**Pn**	**18 34 15.7**	**-2.6**
NVLJ				Sn	**Sn**	**18 35 58.5**	**-11**
NVLJ	**Novalja**	**9.87**	**332**	*e*Pn	**Pn**	**18 34 15.6**	**-2.7**
MLR	**Muntele Rosu**	**10.08**	**19**	P	**Pn**	**18 34 24.6**	**+3.5**

0.2nm,0.3s,baz=162,slow=20,SNR=2.3
BRTR Keskin Array B 10.38 65 P Pn 18 34 24.5 -0.7
0.1nm,0.3s,baz=250,slow=10,SNR=2.9
BRTR Keskin Array B 10.38 65 P Pn 18 34 24.5 -0.8
MMAI Mount Meron Ar 11.96 100 P Pn 18 34 47.8 +0.9
0.4nm,0.3s,baz=298,slow=9.6,SNR=3.1
ESDC Sonseca Array 20.32 288 P P 18 36 32.7 0.0
0.8nm,0.6s,baz=93,slow=10,SNR=3.4
ESDC Sonseca Array 20.32 288 P P 18 36 32.7 0.0
HFS Hagfors 24.64 351 P P 18 37 14.1 -3.0
0.8nm,0.5s,mb3.7,baz=156,slow=11,SNR=5.9
HFS Hagfors 24.64 351 P P 18 37 14.1 -3.0
FINES FINESS Array B 25.62 5 P P 18 37 23.4 -2.6
1.6nm,0.8s,mb3.7,baz=167,slow=10,SNR=7.2
NOA NORSAR Array B 25.86 349 P P 18 37 27.2 -1.0
0.5nm,0.6s,mb3.3,baz=154,slow=10,SNR=2.8
NOA NORSAR Array B 25.86 349 P P 18 37 27.2 -1.0
TORD Torodi Ar. Bea 28.84 223 P P 18 37 56.1 +0.8
0.3nm,0.7s,mb3.2,baz=32,slow=7.6,SNR=2.7
ARCES ARCESS Array B 33.65 3 LR LR 18 53 08.9
comp=Z,24nm,18.7s,baz=346,slow=38
MKAR Makanchi Array 45.88 57 P P 18 40 16.1 -3.0
0.7nm,0.5s,mb4.0,baz=270,slow=7.1,SNR=15
ZALV Zalesovo Beam 46.65 47 P P 18 40 20.8 -4.3
0.5nm,0.4s,mb4.0,baz=278,slow=9.9,SNR=3.0
SONM Songino Array 61.31 50 P P 18 42 10.5 -1.8
0.1nm,0.4s,mb3.3,baz=273,slow=2.6,SNR=2.6
SONM Songino Array 61.31 50 P P 18 42 10.5 -1.8

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*DDA **06** 18:37:16.5, 34°.91N×33°.93E, h17km±3km, Md3.5*
*ISK **06** 18:37:18.8, 34°.79N×34°.00E, h44km, MD3.6*
*NEIC **06** 18:37:19.0, 34°.83N×34°.00E, h30km, MD3.5(ISK), ML3.4(NIC), After ISK.*
*ISCJB **06** 18:37:19.3±0.3, 34°.86N±0°.02×33°.92E±0°.03, h68km±5km, Error ellipse: s-maj=4.0km s-min=3.5km az=32.9*
*CSEM **06** 18:37:20.7±0.1, 34°.89N×33°.92E, h49km±4km, Mw3.5, Error ellipse: s-maj=3.4km s-min=3.1km az=32.0*
*NIC **06** 18:37:21.8±0.2, 34°.98N×33°.86E, h49km, ML3.4, MW3.5*
*GRAL **06** 18:37:21.9±1.3, 34°.83N×33°.93E, h43km±14km, MD3.4*
*HLW **06** 18:37:23.0, 34°.76N×33°.55E, h31km±34km, Md3.1, Ml2.6*
ISC 06 18:37:20.6±0.3, 34°.88N±0°.02×33°.95E±0°.03, h56km±6km, n84, σ0§93/124, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHNC	**Paralimni**	**0.14**	**29**	P	**Pn**	**18 37 29.6**	**+0.3**
73nm,0.2s							
PHNC				S	**Sn**	**18 37 35.9**	**+0.4**
PHNC	**Paralimni**	**0.14**	**29**	P	**Pn**	**18 37 29.6**	**+0.3**
73nm,0.2s							
PHNC				S	**Sn**	**18 37 35.9**	**+0.4**
CSS	**Prodhromos**	**0.51**	**280**	P	**Pn**	**18 37 32.1**	**-0.3**
37nm,0.2s							
CSS				S	**Sn**	**18 37 40.6**	**-0.3**
CSS	**Prodhromos**	**0.51**	**280**	P	**Pn**	**18 37 32.1**	**-0.3**
37nm,0.2s							
CSS				S	**Sn**	**18 37 40.6**	**-0.3**
LFK	**Lefkose**	**0.53**	**320**	PG	**Pn**	**18 37 31.8**	**-0.7**
LFK				*e*SG	**Sn**	**18 37 41.5**	**+0.3**
LFK	**Lefkose**	**0.53**	**320**	*i* Pg	**Pn**	**18 37 31.8**	**-0.7**
LFK				*e*Sg	**Sn**	**18 37 41.5**	**+0.3**
MAMC	**Mammari**	**0.67**	**296**	P	**Pn**	**18 37 34.0**	**-0.2**
MAMC	**Mammari**	**0.67**	**296**	P	**Pn**	**18 37 34.0**	**-0.2**
EREN	**Erenkoy**	**0.68**	**16**	*e*PG	**Pn**	**18 37 33.6**	**-0.7**
EREN	**Erenkoy**	**0.68**	**16**	*e*Pg	**Pn**	**18 37 33.6**	**-0.8**
SZAC	**Souni-Zanaja**	**0.88**	**262**	P	**Pn**	**18 37 37.2**	**+0.3**
SZAC				S	**Sn**	**18 37 49.4**	**+0.4**
SZAC	**Souni-Zanaja**	**0.88**	**262**	P	**Pn**	**18 37 37.2**	**+0.3**
SZAC				S	**Sn**	**18 37 49.4**	**+0.4**
LEF	**Lefka**	**0.90**	**286**	*e*PG	**Pn**	**18 37 37.2**	**+0.1**
LEF				*e*SG	**Sn**	**18 37 50.2**	**+0.9**
LEF	**Lefka**	**0.90**	**286**	*e*Pg	**Pn**	**18 37 37.2**	**0.0**
LEF				*e*Sg	**Sn**	**18 37 50.2**	**+0.8**
ALFC	**Alevga**	**1.14**	**285**	P	**Pn**	**18 37 40.0**	**-0.4**
68nm,0.1s							
ALFC				S	**Sn**	**18 37 54.5**	**-0.5**
ALFC	**Alevga**	**1.14**	**285**	P	**Pn**	**18 37 40.0**	**-0.4**
68nm,0.1s							
ALFC				S	**Sn**	**18 37 54.5**	**-0.5**
PPCY	**Paphos**	**1.32**	**271**	P	**Pn**	**18 37 43.2**	**+0.5**
PPCY	**Paphos**	**1.32**	**271**	P	**Pn**	**18 37 43.2**	**+0.5**
IKL	**Isikli**	**1.38**	**351**	*e*PN	**Pn**	**18 37 43.0**	**-0.5**
IKL	**Isikli**	**1.38**	**351**	*e*Pn	**Pn**	**18 37 43.0**	**-0.5**
BHL	**Bhannes**	**1.71**	**124**	*e*P	**Pn**	**18 37 48.2**	**+0.1**
BHL				*e*S	**Sn**	**18 38 07.2**	**-1.7**
BHL	**Bhannes**	**1.71**	**124**	*e*P	**Pn**	**18 37 48.2**	**+0.1**
BHL				*e*S	**Sn**	**18 38 07.2**	**-1.7**
HWQ	**Hawqa**	**1.75**	**109**	*e*P	**Pn**	**18 37 49.6**	**+0.9**
HWQ	**Hawqa**	**1.75**	**109**	*e*P	**Pn**	**18 37 49.6**	**+0.9**
MATL	**Matarih**	**1.80**	**140**	*e*P	**Pn**	**18 37 49.7**	**+0.4**
MATL	**Matarih**	**1.80**	**140**	*e*P	**Pn**	**18 37 49.7**	**+0.4**
GAZI	**Gazipasa**	**1.90**	**316**	*i* P	**Pn**	**18 37 50.2**	**-0.5**
GAZI				*i* S	**Sn**	**18 38 11.1**	**-2.3**
GAZI	**Gazipasa**	**1.90**	**316**	*i* P	**Pn**	**18 37 50.2**	**-0.4**
GAZI				*i* S	**Sn**	**18 38 11.1**	**-2.3**
ERMK	**Ermenek**	**1.95**	**335**	*i* P	**Pn**	**18 37 51.8**	**+0.5**
ERMK				*i* S	**Sn**	**18 38 13.9**	**-0.8**
ERMK	**Ermenek**	**1.95**	**335**	*i* P	**Pn**	**18 37 51.8**	**+0.5**
ERMK				*i* S	**Sn**	**18 38 13.9**	**-0.8**
MERS	**Mersin**	**2.04**	**13**	*e*PN	**Pn**	**18 37 53.0**	**+0.5**
MERS	**Mersin**	**2.04**	**13**	*e*Pn	**Pn**	**18 37 53.1**	**+0.5**
KRTS	**Karatas**	**2.05**	**34**	*e*PN	**Pn**	**18 37 52.9**	**+0.1**
KRTS	**Karatas**	**2.05**	**34**	*e*Pn	**Pn**	**18 37 52.9**	**+0.2**
RCY	**Rachaya**	**2.08**	**131**	*e*P	**Pn**	**18 37 54.0**	**+0.9**
RCY				*e*S	**Sn**	**18 38 17.1**	**-0.8**
RCY	**Rachaya**	**2.08**	**131**	*e*P	**Pn**	**18 37 54.0**	**+0.9**
RCY				*e*S	**Sn**	**18 38 17.1**	**-0.8**
YAYL	**Yayladag**	**2.11**	**56**	*i* P	**Pn**	**18 37 53.7**	**+0.2**
YAYL				*i* S	**Sn**	**18 38 17.2**	**-1.4**
YAYL	**Yayladag**	**2.11**	**56**	*i* P	**Pn**	**18 37 53.7**	**+0.2**
YAYL				*i* S	**Sn**	**18 38 17.2**	**-1.3**
FKH	**Fakeheh**	**2.12**	**107**	*e*P	**Pn**	**18 37 55.0**	**+1.3**
FKH				*e*S	**Sn**	**18 38 18.3**	**-0.6**
FKH	**Fakeheh**	**2.12**	**107**	*e*P	**Pn**	**18 37 55.0**	**+1.3**
FKH				*e*S	**Sn**	**18 38 18.3**	**-0.6**
YURE	**YUREGIR**	**2.38**	**35**	*i* P	**Pn**	**18 37 57.6**	**+0.4**
YURE				*i* S	**Sn**	**18 38 21.3**	**-3.9**
YURE	**YUREGIR**	**2.38**	**35**	*i* P	**Pn**	**18 37 57.6**	**+0.4**
YURE				*i* S	**Sn**	**18 38 21.3**	**-3.9**
HDMB	**Hadim**	**2.40**	**331**	*e*PN	**Pn**	**18 37 58.5**	**+1.1**
HDMB	**Hadim**	**2.40**	**331**	*e*Pn	**Pn**	**18 37 58.5**	**+1.1**
GULE	**Gulek**	**2.50**	**15**	*i* P	**Pn**	**18 37 59.9**	**+1.2**
GULE				*i* S	**Sn**	**18 38 27.0**	**-1.0**
KARA	**Karaisali**	**2.54**	**20**	*e*PN	**Pn**	**18 38 00.0**	**+0.6**
KOZT	**Kozan**	**3.01**	**30**	*e*PN	**Pn**	**18 38 06.6**	**+0.7**
KUZU	**Kuzuini**	**3.17**	**52**	*i* P	**Pn**	**18 38 08.1**	**+0.1**
KUZU				*i* S	**Sn**	**18 38 41.3**	**-3.3**
KUZU	**Kuzuini**	**3.17**	**52**	*i* P	**Pn**	**18 38 08.1**	**+0.1**
KUZU				*i* S	**Sn**	**18 38 41.3**	**-3.3**
KONT	**Konya--Tatoy**	**3.32**	**338**	*e*PN	**Pn**	**18 38 11.4**	**+1.4**
KONT	**Konya--Tatoy**	**3.32**	**338**	*e*Pn	**Pn**	**18 38 11.4**	**+1.4**
GAZ	**Gaziantep**	**3.50**	**48**	*e*PN	**Pn**	**18 38 12.9**	**+0.4**
GAZ	**Gaziantep**	**3.50**	**48**	*e*Pn	**Pn**	**18 38 12.9**	**+0.4**
KMRS	**Kahramanmaras**	**3.55**	**41**	*e*PN	**Pn**	**18 38 13.8**	**+0.6**
ELL	**Elmali**	**3.77**	**301**	*e*PN	**Pn**	**18 38 17.9**	**+1.6**
ELL	**Elmali**	**3.77**	**301**	*e*Pn	**Pn**	**18 38 17.9**	**+1.6**
AKAS	**Kas**	**3.79**	**292**	*i* P	**Pn**	**18 38 16.4**	**-0.1**
AKAS				*i* S	**Sn**	**18 38 50.3**	**-9.5**
AKAS	**Kas**	**3.79**	**292**	*i* P	**Pn**	**18 38 16.4**	**-0.1**
AMAG	**Maghara**	**4.27**	**189**	P	**Pn**	**18 38 24.1**	**+1.1**
baz=185							
AMAG				S	**Sn**	**18 39 09.9**	**-1.6**
baz=185							
AMAG	**Maghara**	**4.27**	**189**	P	**Pn**	**18 38 24.1**	**+1.0**
AMAG				S	**Sn**	**18 39 09.9**	**-1.7**
SARI	**SarD1z-Kayseri**	**4.39**	**29**	*e*PN	**Pn**	**18 38 21.4**	**-3.3**
SARI	**SarD1z-Kayseri**	**4.39**	**29**	*e*Pn	**Pn**	**18 38 21.4**	**-3.3**
TURN	**Turunc**	**4.77**	**296**	*i* P	**Pn**	**18 38 32.9**	**+2.9**
TURN				*i* S	**Sn**	**18 39 24.1**	**+0.2**
TURN	**Turunc**	**4.77**	**296**	*i* P	**Pn**	**18 38 32.9**	**+2.9**
TURN				*i* S	**Sn**	**18 39 24.1**	**+0.1**
DNZL	**Cakiroluk**	**4.85**	**307**	*i* P	**Pn**	**18 38 31.8**	**+0.8**
DNZL				*i* S	**Sn**	**18 39 24.2**	**-1.7**
DNZL	**Cakiroluk**	**4.85**	**307**	*i* P	**Pn**	**18 38 31.8**	**+0.8**
DNZL				*i* S	**Sn**	**18 39 24.2**	**-1.7**
HNKL	**Nakhl**	**4.93**	**180**	P	**Pn**	**18 38 33.8**	**+1.6**
baz=175							
HNKL				AMP		18 39 00.0	
comp=N,10μm,0.2s,logA/T=4.6,baz=175							
HNKL				S	**Sn**	**18 39 27.3**	**-0.7**
baz=175							
HNKL	**Nakhl**	**4.93**	**180**	P	**Pn**	**18 38 33.8**	**+1.6**
HNKL				S	**Sn**	**18 39 27.3**	**-0.6**
SUZ		**5.11**	**191**	P	**Pn**	**18 38 35.3**	**+0.7**
baz=188							
SUZ		**5.11**	**191**	P	**Pn**	**18 38 35.3**	**+0.7**
KOT	**Kottamia**	**5.25**	**201**	P	**Pn**	**18 38 35.8**	**-0.8**
baz=198							
KOT	**Kottamia**	**5.25**	**201**	P	**Pn**	**18 38 35.8**	**-0.7**
GLL	**Jalalah**	**5.61**	**200**	P	**Pn**	**18 38 41.2**	**-0.3**
baz=198							
GLL	**Jalalah**	**5.61**	**200**	P	**Pn**	**18 38 41.2**	**-0.3**
BDRM	**Kayabasi**	**5.71**	**294**	*i* P	**Pn**	**18 38 42.1**	**-0.6**
BDRM				*i* S	**Sn**	**18 39 37.1**	**-10**
BDRM	**Kayabasi**	**5.71**	**294**	*i* P	**Pn**	**18 38 42.1**	**-0.7**
GRB	**Gharib**	**6.66**	**189**	P	**Pn**	**18 38 56.4**	**+0.5**
baz=186							
GRB	**Gharib**	**6.66**	**189**	P	**Pn**	**18 38 56.4**	**+0.5**
HMAT	**Matruh**	**6.88**	**239**	P	**Pn**	**18 38 58.3**	**-0.6**
baz=238							
HMAT				S	**Sn**	**18 40 09.3**	**-6.4**
baz=238							
HMAT	**Matruh**	**6.88**	**239**	P	**Pn**	**18 38 58.3**	**-0.6**
SLUM		**8.06**	**248**	P	**Pn**	**18 39 13.7**	**-1.3**
baz=248							
SLUM		**8.06**	**248**	P	**Pn**	**18 39 13.7**	**-1.3**
SWA2		**9.13**	**234**	P	**Pn**	**18 39 29.1**	**-0.6**
baz=234							
SWA2		**9.13**	**234**	P	**Pn**	**18 39 29.1**	**-0.6**

IDC 06 19:16:15.8±5.7, 6°.16S×154°.36E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.5/16, mbtmp3.5/4, Error ellipse: s-maj=170.7km s-min=29.6km az=110.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.79**	**233**	P	P	19 21 31.1	+0.5
0.5nm,0.8s,baz=57,slow=9.7,SNR=4.0							
ASAR	**Alice Springs**	**26.27**	**226**	P	P	19 21 52.6	-0.5
1.0nm,0.8s,baz=66,slow=7.9,SNR=6.9							
SONM	**Songino Array**	**68.29**	**327**	P	P	19 27 19.1	+0.4
0.2nm,0.4s,baz=140,slow=5.2,SNR=3.6							
MKAR	**Makanchi Array**	**82.36**	**319**	P	P	19 28 39.8	0.0
0.7nm,0.8s,baz=97,slow=7.1,SNR=3.6							

WEL 06 19:36:52.3±0.9, 47°.91S×165°.53E, h12km, ML4.2/8, Error ellipse: s-maj=9.4km s-min=6.3km az=90.0, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYZ	**Puysegur Point**	**1.91**	**25**	PN	Pn	19 37 23.6	-1.1
PYZ	

VLX				S	Sn	19 54 15.2	-2.1
RLS	Riolos of Patr	1.94	5	ePn	Pn	19 54 05.7	+2.8
RLS	Riolos of Patr	1.94	5	ePN	Pn	19 54 05.7	+2.8
RLS	Riolos of Patr	1.94	5	ePn	Pn	19 54 05.7	+2.8
GUR	Goura	2.02	26	ePN	Pn	19 54 06.3	+2.3
GUR	Goura	2.02	26	P	Pn	19 54 06.3	+2.3
GUR				S	Sn	19 54 28.7	-0.1
GUR	Goura	2.02	26	P	Pn	19 54 06.3	+2.3
GUR				S	Sn	19 54 28.7	-0.1
VLS	Valsamata	2.12	346	ePb	Pb	19 54 06.9	-1.7
VLS	Valsamata	2.12	346	ePB	Pb	19 54 06.9	-1.7
VLS	Valsamata	2.12	346	ePb	Pb	19 54 06.9	-1.7
DID	Didima	2.12	49	ePB	Pn	19 54 05.7	+0.3
DID	Didima	2.12	49	P	Pn	19 54 05.7	+0.3
DID	Didima	2.12	49	ePb	Pn	19 54 05.7	+0.3
LAKA	Lakka	2.20	16	P	Pn	19 54 08.7	+2.3
LAKA				S	Sn	19 54 35.6	+2.4
LAKA	Lakka	2.20	16	P	Pn	19 54 08.7	+2.3
LAKA				S	Sn	19 54 35.6	+2.4
KARN	Karanos	2.30	107	ePN	Pn	19 54 07.7	-0.1
KARN	Karanos	2.30	107	ePn	Pn	19 54 07.7	-0.1
LTK	Loutraki	2.35	36	ePN	Pn	19 54 09.1	+0.6
LTK	Loutraki	2.35	36	P	Pn	19 54 09.1	+0.6
LTK	Loutraki	2.35	36	P	Pn	19 54 09.1	+0.6
EFP	Efpalio	2.37	13	ePB	Pb	19 54 11.8	-1.0
EFP	Efpalio	2.37	13	P	Pb	19 54 11.7	-1.1
EFP	Efpalio	2.37	13	ePb	Pb	19 54 11.8	-1.0
VAM	Vamos	2.52	106	ePn	Pn	19 54 10.7	-0.1
VAM	Vamos	2.52	106	ePN	Pn	19 54 10.7	-0.1
VAM	Vamos	2.52	106	ePn	Pn	19 54 10.7	-0.1
VLY	Voula,Athens	2.68	49	ePn	Pn	19 54 13.0	-0.1
VLY	Voula,Athens	2.68	49	ePN	Pn	19 54 13.0	-0.1
VLY	Voula,Athens	2.68	49	ePn	Pn	19 54 13.0	-0.1
LKR	Lokris	2.89	29	ePn	Pn	19 54 16.5	+0.5
LKR	Lokris	2.89	29	ePN	Pn	19 54 16.5	+0.5
LKR	Lokris	2.89	29	ePn	Pn	19 54 16.5	+0.5
AGG	Agios Georgios	3.03	16	ePn	Pn	19 54 20.5	+2.7
AGG	Agios Georgios	3.03	16	ePN	Pn	19 54 20.5	+2.7
AGG	Agios Georgios	3.03	16	P	Pn	19 54 20.1	+2.3
AGG	Agios Georgios	3.03	16	P	Pn	19 54 20.1	+2.3
AGG	Agios Georgios	3.03	16	ePn	Pn	19 54 20.5	+2.7
THL	Klokotos Trika	3.50	10	ePN	Pn	19 54 26.2	+2.0
THL	Klokotos Trika	3.50	10	ePn	Pn	19 54 26.3	+2.1
LAST	Lasithi	3.59	104	ePn	Pn	19 54 25.6	+0.1
LAST	Lasithi	3.59	104	ePN	Pn	19 54 25.6	+0.1
LAST	Lasithi	3.59	104	ePn	Pn	19 54 25.6	+0.1
KZN	Kozani	4.20	6	ePn	Pn	19 54 36.5	+2.5
KZN	Kozani	4.20	6	ePN	Pn	19 54 36.5	+2.5
KZN	Kozani	4.20	6	ePn	Pn	19 54 36.5	+2.5
CEL	Celeste	4.77	298	ePn	Pn	19 54 43.5	+1.8
CEL				eSn	Sn	19 55 34.9	-1.7
CEL	Celeste	4.77	298	ePn	Pn	19 54 43.5	+1.8
CEL				eSn	Sn	19 55 34.9	-1.6
BARS	Barje	6.70	4	⇓iPn	Pn	19 55 08.7	+0.4
STON	Ston	7.27	339	ePn	Pn	19 55 15.1	-1.1
STON				Sn	Sn	19 56 34.5	-3.8
STON	Ston	7.27	339	ePn	Pn	19 55 15.0	-1.1
BBLS	Lazići	7.86	350	⇓iPn	Pn	19 55 24.6	+0.4
DIVS	Divibare	8.03	354	⇓iPn	Pn	19 55 25.7	-0.7
NVLJ	Novalja	9.73	332	Sn	Sn	19 57 33.4	-5.2
MMAI	Mount Meron Ar	12.09	101	Pn	Pn	19 56 20.7	-1.4
	0.5nm,0.3s,baz=276,slow=14,SNR=2.6						
AKASG	Malin Array Be	15.68	19	Pn	Pn	19 57 08.4	-2.2
	0.4nm,0.3s,baz=211,slow=9.9,SNR=3.5						
ESDC	Sonseca Array	20.18	288	P	P	19 58 10.2	+5.9
	0.2nm,0.3s,baz=83,slow=11,SNR=3.7						
ESDC	Sonseca Array	20.18	288	P	P	19 58 10.2	+5.9
FINES	FINESS Array B	25.53	5	P	P	19 58 57.6	-0.5
	0.9nm,0.8s,mb3.4,baz=172,slow=11,SNR=6.2						
FINES	FINESS Array B	25.53	5	P	P	19 58 57.6	-0.5
ARCES	ARCESS Array B	33.55	3	P	P	20 00 09.1	-0.1
	1.1nm,0.8s,mb3.8,baz=191,slow=8.8,SNR=2.5						
ARCES	ARCESS Array B	33.55	3	P	P	20 00 09.1	-0.1
MKAR	Makanchi Array	45.92	57	P	P	20 01 50.5	-1.8
	0.3nm,0.3s,mb3.7,baz=272,slow=7.0,SNR=12						
ZALV	Zalesovo Beam	46.66	47	P	P	20 01 56.5	-1.6
	0.3nm,0.3s,mb3.7,baz=252,slow=8.9,SNR=2.4						
ZALV	Zalesovo Beam	46.66	47	P	P	20 01 56.5	-1.5

*IDC **06** 19:58:51.3±0.9, 15°.34N×122°.75E, h0km, mb3.7/8, mb1 3.9/9, mb1mx3.7/24, mbtmp3.8/9, ML4.8/1, Error ellipse: s-maj=27.5km s-min=15.3km az=66.0*
*MAN **06** 19:58:53, 15°.40N×122°.44E, h1km, mb5.3, ML4.3, MS4.5*
*ISCJB **06** 19:58:54.5±1.3, 15°.43N±0°.04×122°.51E±0°.07, h19km±11km, mb3.7/10, Error ellipse: s-maj=11.1km s-min=5.6km az=166.4*
*NEIC **06** 19:58:56.0±0.6, 15°.30N×122°.73E, h35km, mb3.8/3, Error ellipse: s-maj=15.4km s-min=8.9km az=57.0*

ISC 06 19:58:57.4±0.6, 15°.40N±0°.04×122°.49E±0°.06, h42km±8km, n28, σ1°32/32, mb3.7/10, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	Polilio Island	0.85	218	eP	Pn	19 59 08.8	-4.1
POLP				eS	Sn	19 59 23.6	-0.6
BALP	Baler	0.94	291	eP	Pn	19 59 11.3	-2.9
BALP				eS	Sn	19 59 23.6	-2.8
PCPH	Palayan	1.35	277	⇓eP	Pn	19 59 17.6	-2.1
PALP	Palanan	1.66	358	eP	Pn	19 59 22.8	-1.1
PALP				eS	Sn	19 59 44.9	+0.9
CAUP	Cauayan	1.66	338	eP	Pn	19 59 23.3	-0.7
TGY	Tagaytay City	1.98	229	Pn	Pn	19 59 29.2	+0.9
	286nm,0.3s,baz=343,slow=1.3,SNR=19						
TGY				Sn	Sn	19 59 56.6	+4.6
	227nm,0.3s,baz=102,slow=20,SNR=9.6						
BOAC	Boac	2.03	198	eP	Pn	19 59 29.2	+0.1
AUQP	San Andres	2.07	175	eP	Pn	19 59 31.2	+1.5
PVCP	Virac	2.41	138	eP	Pn	19 59 34.0	-0.4
APYP	Conner	2.72	334	eP	Pn	19 59 37.9	-0.8
LUBP	Lubang	2.73	233	eP	Pn	19 59 38.4	-0.3
ABRA	Dolores	2.81	323	eP	Pn	19 59 40.6	+0.8
OTRP	Odiongan	3.05	189	eP	Pn	19 59 44.2	+1.0
SJMP	San Jose	3.21	205	eP	Pn	19 59 46.8	+1.5
CNP	Catarman	3.57	143	eP	Pn	19 59 50.6	+0.3
BUSP	Coron	4.04	214	eP	Pn	19 59 56.4	-0.3
GUIM	Jordan	4.75	179	eP	Pn	20 00 07.9	+1.5
CM31	Chiang Mai Arr	22.72	281	eP	P	20 03 57.2	+1.4
	5.3nm,1.3s,mb3.8						
CMAR	Chiang Mai Arr	22.72	281	P	P	20 03 57.4	+1.5
	0.6nm,0.7s,mb3.1,baz=85,slow=7.9,SNR=6.9						
FITZ	Fitzroy Crossi	33.43	175	P	P	20 05 30.6	-1.8
	1.6nm,0.6s,mb4.1,baz=22,slow=23,SNR=8.3						
SONM	Songino Array	34.97	341	P	P	20 05 46.1	+0.6
	0.2nm,0.6s,mb3.3,baz=165,slow=6.0,SNR=2.3						
WRAB	Tennant Creek	37.00	161	eP	P	20 05 59.7	-3.4
	2.4nm,0.8s,mb4.1						
WRA	Warramunga Arr	37.00	161	P	P	20 06 01.1	-2.0
	2.1nm,0.5s,mb4.2,baz=343,slow=9.2,SNR=25						
ASAR	Alice Springs	40.40	164	P	P	20 06 30.5	-1.1
	0.5nm,0.3s,mb3.7,baz=345,slow=7.0,SNR=28						
MKAR	Makanchi Array	45.74	322	P	P	20 07 16.3	+1.8
	0.4nm,0.9s,mb3.4,baz=107,slow=9.5,SNR=2.2						
ZALV	Zalesovo Beam	48.38	331	P	P	20 07 36.4	+1.4
	0.3nm,0.3s,mb3.8,baz=140,slow=11,SNR=3.0						
STKA	Stephens Creek	50.45	159	P	P	20 07 50.6	-0.5
	5.4nm,1.1s,mb4.5,baz=24,slow=10.0,SNR=3.1						
STKA	Stephens Creek	50.45	159	eP	P	20 07 49.2	-1.9
	0.3nm,0.7s,mb3.4						

IGQ 06 20:13:32.3, 11°.11S×78°.28W, h9km±1km, Mb4.0, Ms3.8, 39C-3D, Error ellipse: s-maj=1.1km s-min=0.3km az=3.7, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PISA	Pisayambo	0.12	297	⇓P	Pg	20 13 36.1	+1.0
BRUN	Tungurahua Vol	0.33	203	⇑P	Pg	20 13 39.3	+0.4
RUN5	Runtun	0.33	206	⇑P	Pg	20 13 39.3	+0.4
ULBA	Ulba	0.36	201	⇑P	Pg	20 13 39.5	+0.1
JUI6	Juive	0.36	212	⇑S	Sg	20 13 44.5	+0.2
JUI6	Juive	0.36	212	⇑P	Pg	20 13 39.5	0.0
RETU	Refugio	0.38	206	⇓P	Pg	20 13 40.1	+0.4
BIL2	Estacion Bilba	0.41	213	⇑S	Sg	20 13 46.5	+0.8
BIL2	Estacion Bilba	0.41	213	⇑P	Pg	20 13 40.3	0.0
BMOR	Cotopaxi Volca	0.42	335	⇑S	Sg	20 13 47.5	+1.4
BMOR	Cotopaxi Volca	0.42	335	⇑P	Pg	20 13 41.5	+0.9
TAMB	Tambo	0.43	348	⇑P	Pg	20 13 41.4	+0.8
ARRY	Arrayan	0.43	204	⇑P	Pg	20 13 40.6	-0.1
MOV1	Cotopaxi Vol s	0.43	338	⇑P	Pg	20 13 41.5	+0.8
BMAS	Trigal station	0.44	207	⇑P	Pg	20 13 40.8	-0.1
BMAS	Trigal station	0.44	207	⇑S	Sg	20 13 47.7	+1.1
BTAM	Cotopaxi Volca	0.45	345	⇑S	Sg	20 13 49.0	+2.0
BTAM	Cotopaxi Volca	0.45	345	⇑P	Pg	20 13 41.9	+0.8
COV1	Cotopaxi Volc	0.45	352	⇑S	Sg	20 13 49.5	+2.4
COV1	Cotopaxi Volc	0.45	352	⇑P	Pg	20 13 42.6	+1.4
BREF	Cotopaxi Volca	0.47	340	⇑S	Sg	20 13 49.7	+2.0
BREF	Cotopaxi Volca	0.47	340	⇑P	Pg	20 13 42.6	+1.1
BVC2	Cotopaxi Volca	0.47	344	⇑S	Sg	20 13 49.4	+1.6
BVC2	Cotopaxi Volca	0.47	344	⇑P	Pg	20 13 42.3	+0.8
BNAS	Cotopaxi Volca	0.48	335	⇑S	Sg	20 13 50.3	+2.2
BNAS	Cotopaxi Volca	0.48	335	⇑P	Pg	20 13 42.7	+1.0
VC1	Cotopaxi 1	0.48	345	⇑P	Pg	20 13 42.5	+0.8
CAMI	Rancho Maria	0.49	332	⇑P	Pg	20 13 42.8	+1.0
NAS2	Nasa	0.50	338	⇑P	Pg	20 13 43.2	+1.1
IGUA	Igualata	0.52	224	⇑P	Pg	20 13 43.1	+0.7
PITA	Cotopaxi Volc	0.57	344	⇑P	Pg	20 13 44.1	+0.7
ANTI	Antisana	0.67	10	⇑P	Pg	20 13 45.4	+0.1
RIOE	Riobamba	0.73	209	P	Pg	20 13 46.1	-0.2
JUA2	San Juan 2	0.95	340	S	Sg	20 14 04.5	+1.5
JUA2	San Juan 2	0.95	340	P	Pg	20 13 51.2	+0.6
GGP	Refugio Guagua	0.98	341	⇑P	Pg	20 13 51.7	+0.4
TERV	Terraza Guagua	0.99	341	S	Sg	20 14 05.9	+1.7
TERV	Terraza Guagua	0.99	341	P	Pg	20 13 51.9	+0.6
PINO	Pino	1.00	341	⇑P	Pg	20 13 52.0	+0.4
YANA	Yana	1.03	344	P	Pg	20 13 52.4	+0.3
MACE	Macas	1.14	176	S	Sg	20 14 09.6	+0.6
MACE	Macas	1.14	176	P	Pb	20 13 54.2	+0.1
CAYR	Refugio Cayamb	1.15	14	⇓P	Pb	20 13 54.5	+0.1
CHAR	Charly	1.19	31	⇑S	Sb	20 14 11.7	+1.3
CHAR	Charly	1.19	31	⇑P	Pb	20 13 55.6	+0.7
LAV3	Lava3-Reventad	1.20	33	⇑P	Pb	20 13 55.5	+0.3
LAV3	Lava3-Reventad	1.20	33	⇑S	Sb	20 14 11.9	+1.1
CAYA	Cayambe	1.21	14	P	Pn	20 13 55.0	-0.4
CONE	Cono NE Rev Vo	1.22	32	⇑P	Pn	20 13 55.9	+0.5
CONE	Cono NE Rev Vo	1.22	32	⇑S	Sb	20 14 12.5	+1.3
OTAV	Otavalo	1.35	353	⇑P	Pn	20 13 57.6	+0.3
COTA	Cotacachi	1.44	358	P	Pn	20 14 00.1	+1.6
MAG1	Magdalena	1.82	305	P	Pn	20 14 06.4	+2.7

*ISCJB **06** 20:25:53.2±1.0, 35°.65N±0°.03×120°.70W±0°.05, h8km±6km, Error ellipse: s-maj=7.2km s-min=4.9km az=145.6*
*NEIC **06** 20:25:54.5, 35°.64N×120°.76W, h6km, MW3.7(BRK), After NCEDC.*
NEIC Felt at Paso Robles.

ISC 06 20:25:54.0±1.0, 35°.65N±0°.03×120°.68W±0°.05, h12km±6km, n23, σ1°17/36, 8C-11D, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMMC	Simmler	0.65	121	⇑P	Pg	20 26 07.7	+1.1
	baz=0.7						
SMMC				⇑S	Sg	20 26 16.3	+1.1
	baz=0.7						
PKM	Peak Mountain	1.03	136	⇓P	Pb	20 26 13.9	+0.2
	baz=1.1						
SAO	San Andreas Ge	1.27	331	ePn	Pn	20 26 16.6	-1.0
SAO				eSn	Sn	20 26 34.0	-0.6
RCTC	Rector, Farmer	1.34	60	⇓Pg	Pg	20 26 19.4	-0.4
	baz=1.4						
RCTC				⇓Sg	Sg	20 26 37.1	-0.2
	baz=1.4						
SBC	Santa Barbara	1.44	146	⇓Pb	Pb	20 26 20.9	+0.2
	baz=1.5						
SBC				⇓Pb	Pb	20 26 22.3	+1.6
	baz=1.5						
ARVC	Arvin	1.60	108	⇓Pb	Pb	20 26 22.2	-1.3
	baz=1.7						
ISA	Isabella	1.80	89	⇑Pb	Pb	20 26 25.9	-0.9
	baz=1.9						
ISA				⇑Sb	Sb	20 26 49.3	-0.1
	baz=1.9						
ISA	Isabella	1.80	89	ePn	Pn	20 26 25.6	+0.8
ISA				eSn	Sn	20 26 48.6	+1.0
OSI	Osito Adit	1.91	122	ePn	Pn	20 26 28.2	+1.9
BLG	Laguna Peak	2.03	139	⇑Pn	Pn	20 26 27.5	-0.5
	baz=2.1						
CWC	Cottonwood Cre	2.25	69	⇓Pb	Pb	20 26 33.8	-0.8
	baz=2.3						
CWC				⇓Sb	Sb	20 27 02.4	0.0
	baz=2.3						
EDW2	Edwards Air Fo	2.33	108	⇑Pn	Pn	20 26 32.5	+0.3
	baz=2.4						
EDW2				⇓Pb	Pb	20 26 34.4	-1.6
	baz=2.4						
SAC	San Andreas	2.38	325	ePn	Pn	20 26 31.5	-1.3
SAC				eSn	Sn	20 27 10.0	+8.0
DECC	Green Verdugo	2.38	125	⇓Pb	Pb	20 26 35.9	-0.9
	baz=2.4						
CMB	Columbia Colle	2.40	6	ePn	Pn	20 26 34.1	+1.1
CMB				eSn	Sn	20 27 02.0	-0.2
MTUM	Tungsten Hills	2.41	44	ePn	Pn	20 26 35.9	+2.7
MTUM				eSn	Sn	20 27 06.3	+3.6
MLAC	Mammoth Lakes	2.48	36	⇓Pb	Pb	20 26 37.3	-1.1
	baz=2.5						
PASC	Pasadena Art C	2.53	125	ePn	Pn	20 26 35.1	+0.3
PASC				eSn	Sn	20 27 04.0	-1.5
MWC	Mount Wilson	2.58	123	ePn	Pn	20 26 36.5	+0.9
MWC				eSn	Sn	20 27 02.7	-4.2
MPMC	Manual Prospec	2.63	80	⇑Pb	Pb	20 26 38.7	-2.3
	baz=2.7						
CIS	Catalina Islan	2.92	139	⇑Pn	Pn	20 26 39.7	-0.5
	baz=3.0						
WAKR	Walker	3.02	19	ePn	Pn	20 26 44.4	+2.8
OHCM	Honcut	3.74	350	ePn	Pn	20 26 53.4	+1.9

NNC 06 20:26:09.1±2.8, 41°.96N×79°.46E, h0km, mb3.6, mpv3.1, 2C-1D, Error ellipse: s-maj=25.8km s-min=8.7km az=167.0, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDC	Almaty	2.23	305	⇑Pn	Pn	20 26 47.5	+0.2
	16nm,0.5s						
KNDC				⇑Sn	Sn	20 27 16.8	+1.3
	48nm,0.3s						
MK31	Makanchi Array	5.24	22	Pn	Pn	20 27 31.7	+3.1
	1.6nm,0.7s,baz=182,slow=27,SNR=18						
MK31				Sn	Sn	20 28 35.9	+6.3
	4.4nm,0.8s,baz=201,slow=22,SNR=5.6						
KK31	Karatay Array	6.71	283	Pg	Pg	20 28 07.3	-10
	0.5nm,0.5s,baz=92,slow=15,SNR=7.5						
KK31				⇓Lg		20 29 39.5	
	0.9nm,0.5s,baz=100,slow=28,SNR=4.5						

*ISCJB **06** 20:26:32.3±0.3, 34°.83N×0°.02×116°.31W±0°.02, h7km±2km, Error ellipse: s-maj=2.6km s-min=2.5km az=141.0*

ISC 06 20:26:33.0±0.3, 34°.84N±0°.01×116°.33W±0°.02, h10km±2km, n46, σ0°54/76, 34C-36D, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEC	Hector,Ludlow	0.01	185	⇓P	Pg	20 26 34.9	0.0
	baz=0.0						
HEC				⇓S	Sg	20 26 36.0	-0.1
	baz=0.0						
RRX	Edison Barstow	0.55	275	⇑P	Pg	20 26 44.0	+0.2
	baz=0.6,SNR=64						
RRX				⇑S	Sg	20 26 51.2	+0.1
	baz=0.6						
GMRC	Granite Mounta	0.55	96	⇓P	Pg	20 26 44.3	+0.5
	baz=0.5						
GSC	Goldstone	0.61	320	⇓P	Pg	20 26 44.7	-0.1
	baz=0.6,SNR=92						
GSC				⇓S	Sg	20 26 52.8	0.0
	baz=0.6						
GSC	Goldstone	0.61	320	ePn	Pg	20 26 44.7	-0.1
TUQ	Turquoise Moun	0.68	29	⇓P	Pg	20 26 46.1	-0.2
	baz=0.7,SNR=365						
TUQ				⇓S	Sg	20 26 55.4	+0.2
	baz=0.7						
BBRC	Big Bear Solar	0.75	221	⇓P	Pg	20 26 47.4	-0.2
	baz=0.8,SNR=28						
BBRC				⇑S	Sg	20 26 57.8	+0.4
	baz=0.8						
BELC	Belle Mtn. Jos	0.88	162	⇓P	Pg	20 26 50.5	+0.5
	baz=0.9,SNR=695						
BELC				⇓S	Sg	20 27 02.2	+0.8
	baz=0.9						
SHOC	Shoshone	1.06	2	⇓P	Pb	20 26 52.8	-0.6
	baz=1.0,SNR=69						
SHOC				⇑S	Sg	20 27 07.7	+0.4
	baz=1.0						
IRM	Iron Mountain	1.19	124	⇑P	Pb	20 26 55.0	-0.5
	baz=1.2,SNR=540						
IRM				⇓S	Sb	20 27 11.2	+0.3
	baz=1.2						
PFO	Pinyon Flat Ob	1.23	185	⇑Pg	Pg	20 26 56.3	-0.3
	baz=1.3,SNR=250						
PFO				⇑S	Sb	20 27 12.7	+0.6
	baz=1.3						
V11A	Goodsprings	1.24	36	⇑Pn	Pn	20 26 55.9	-0.4
	baz=1.2,SNR=359						
V11A				⇑Pg	Pg	20 26 56.8	-0.1
	baz=1.2						
BFSC	Mount Baldy Ra	1.25	242	⇑Pb	Pb	20 26 56.1	-0.5
	baz=1.3						
BFSC				⇓Pg	Pg	20 26 56.7	-0.3
	baz=1.3						
BFSC				⇓S	Sb	20 27 13.2	+0.5
	baz=1.3						
W12A	Cal Nev Ari	1.28	68	⇑Pn	Pn	20 26 56.5	-0.5
	baz=1.3						
W12A				⇑Pg	Pg	20 26 57.4	-0.3
	baz=1.3						
W12A				⇓S	Sb	20 27 14.3	+0.6
	baz=1.3						
LRMC	Laurel Mountai	1.28	300	⇓S	Sb	20 27 14.0	+0.2
	baz=1.3						
EDW2	Edwards Air Fo	1.37	272	⇓Pg	Pg	20 26 58.8	-0.5
	baz=1.4						
EDW2				⇓S	Sb	20 27 16.3	+0.1
	baz=1.4						
BC3	Big Chuckawall	1.38	148	⇑Pn	Pn	20 26 58.0	-0.3
	baz=1.4,SNR=140						
BC3				⇑Pg	Pg	20 26 59.4	-0.2
	baz=1.4						
BC3				⇓Sn	Sn	20 27 17.0	+0.4
	baz=1.4						
BC3				⇑Sg	Sg	20 27 18.8	+1.2
	baz=1.4						
NEE2	Needles Airpor	1.41	92	⇑Pn	Pn	20 26 58.1	-0.6
	baz=1.4						
NEE2				⇓Pg	Pg	20 26 59.8	-0.3
	baz=1.4,SNR=37						
NEE2				⇑Sg	Sg	20 27 19.4	+1.0
	baz=1.4						
MURC	Murrieta	1.43	211	⇓Pg	Pg	20 26 60.0	-0.5
	baz=1.5						
MURC				⇓Sn	Sn	20 27 18.2	+0.4
	baz=1.5						
V12A	Nelson	1.50	53	⇓Pn	Pn	20 26 59.5	-0.5
	baz=1.5,SNR=101						
V12A				⇑Pg	Pg	20 27 01.4	-0.4
	baz=1.5						
V12A				⇓Sb	Sb	20 27 21.0	+1.0
	baz=1.5						
MPMC	Manual Prospec	1.54	323	⇓Sn	Sn	20 27 20.7	0.0
	baz=1.5						
MPMC				⇑Sb	Sb	20 27 22.0	+0.7
	baz=1.5						
U10A	Ash Meadows, A	1.58	360	⇓Pn	Pn	20 27 00.5	-0.5
	baz=1.6						
U10A				⇑Pb	Pb	20 27 01.8	-0.5
	baz=1.6						
U10A				⇓Sb	Sb	20 27 23.0	+0.8
	baz=1.6						
FURC	Furnace Creek,	1.69	345	⇑Sb	Sb	20 27 26.5	+1.2
	baz=1.7						
Y12C	Blythe	1.85	125	⇓Pn	Pn	20 27 04.3	-0.4
	baz=1.8,SNR=29						
MONP	Monument Peak	1.94	182	⇓Pn	Pn	20 27 04.8	-1.2
	baz=2.0						
MONP				⇑Pg	Pg	20 27 10.1	-0.2
	baz=2.0						
W13A	Hualapai Mount	2.02	82	⇑Pn	Pn	20 27 07.1	0.0
	baz=2.0,SNR=43						
W13A				⇓Sg	Sg	20 27 38.9	+0.8
	baz=2.0						
109C	Camp Elliot, M	2.05	199	⇑Sb	Sb	20 27 36.9	+1.2
	baz=2.1						
X13A	Yucca	2.07	96	⇑Pn	Pn	20 27 07.6	-0.2
	baz=2.1,SNR=60						
U12A	Valley of Fire	2.16	42	⇓Pn	Pn	20 27 08.8	-0.2
	baz=2.1						
V13A	Grand Canyon W	2.17	61	⇑Pn	Pn	20 27 08.7	-0.4
	baz=2.1,SNR=9.4						
GLA	Glamis	2.17	145	⇑Pn	Pn	20 27 08.6	-0.6
	baz=2.2						
GLA				⇑Sn	Sn	20 27 36.5	+0.3
	baz=2.2						
Y13A	Salome	2.31	116	⇓Pn	Pn	20 27 10.6	-0.5
	baz=2.3,SNR=31						
Y13A				⇑Sn	Sn	20 27 39.7	+0.3
	baz=2.3						
U13A	Pakoon Wash	2.49	50	⇓Pn	Pn	20 27 13.5	0.0
	baz=2.5,SNR=16						
W14A	Seligman	2.69	81	⇑Pn	Pn	20 27 16.4	+0.1
	baz=2.7,SNR=27						
Z13A	Yuma Proving G	2.75	126	Pn	Pn	20 27 16.6	-0.6
	baz=2.8,SNR=136						
X14A	Yava	2.86	96	⇑Pn	Pn	20 27 18.4	-0.2
	baz=2.8,SNR=23						

KK31 Karatay Array 5.94 348 Pn **Pn 20 40 46.2 +0.2**
comp=E,12nm,0.5s,baz=159,slow=12,SNR=181
KK31 ⇓Sn **S 20 41 51.0 -3.6**
comp=E,55nm,0.3s,baz=167,slow=19,SNR=5.1
CHMS Chumysh 6.01 18 P **Pn 20 40 47.5 +0.6**
SNR=38
USP Ospenovka 6.21 16 P **Pn 20 40 49.8 +0.4**
SNR=19
SDNR Sundarnagar 7.00 144 *e*PKP **Pn 20 41 00.1 +0.3**
SDNR *e*S **S 20 42 14.5 -5.1**
SMLA Simla 7.40 145 *i* P **Pn 20 41 05.0 0.0**
SMLA *i* S **S 20 42 22.0 -7.1**
SMLA *i* S **S 20 42 24.2 -4.9**
SMLA 20 42 27.1
comp=E,1μm,0.3s
SMLA ⇓ 20 42 28.2
comp=N,2μm,0.3s
KLP Kalpa 7.62 137 *e*x **Pn 20 41 08.0 +0.3**
KLP *e*S **S 20 42 28.6 -5.5**
JOSI Joshimath 9.08 136 *e*x x 20 41 37.5
JOSI *e*S **S 20 43 02.1 -6.8**
JOSI AML AML 20 43 10.0
comp=E,149nm,0.8s
JOSI AML AML 20 43 17.0
comp=N,160nm,0.7s
NDI New Delhi 9.57 153 *e*x **S 20 43 15.0 -5.4**
KHET Khetri 9.69 161 *e*S **S 20 43 09.5 -14**
SONA Sohna 9.91 154 *e*x **Pn 20 41 35.2 -2.3**
SONA *e*S **S 20 43 14.6 -14**
AGRA Agra 11.15 153 *e*S **S 20 43 44.7 -13**
MK31 Makanchi Array 12.07 35 ⇑Pn **Pn 20 42 04.9 +0.2**
comp=N,2.2nm,0.6s,baz=218,slow=13,SNR=41
MK31 Makanchi Array 12.07 35 *e*Pn **Pn 20 42 04.7 0.0**
MKAR Makanchi Array 12.07 35 P **Pn 20 42 05.2 +0.6**
comp=N,0.5nm,0.3s,baz=209,slow=12,SNR=15
KOLN Koldanda 13.50 131 *e*P **Pn 20 42 22.0 -0.8**
comp=N,14nm,0.3s
GKN Gorkha 13.97 128 *e*P **Pn 20 42 28.1 -0.5**
comp=N,17nm,0.3s
KURK Kurchatov 14.17 17 ⇓Pn **Pn 20 42 31.7 +1.0**
comp=N,8.0nm,1.0s
KURK Kurchatov 14.17 17 P **Pn 20 42 30.7 -0.1**
comp=N,1.2nm,0.3s,baz=204,slow=11,SNR=4.8
KURK Kurchatov 14.17 17 *e*Pn **Pn 20 42 30.2 -0.5**
KKN Kakani 14.53 127 *e*P **Pn 20 42 35.2 -0.2**
comp=N,7.2nm,0.2s
DMN Daman 14.54 128 *e*P **Pn 20 42 35.2 -0.4**
comp=N,18nm,0.4s
PKI Pulchoki 14.76 127 *e*P **Pn 20 42 38.5 +0.2**
GUN Gumba 14.83 125 *e*P **Pn 20 42 38.5 -0.6**
comp=N,21nm,0.4s
ABKAR Akbulak array 14.89 327 *e*Pn **Pn 20 42 38.1 -1.5**
comp=N,5.4nm,0.4s
ABKAR *e*S **S 20 45 15.4 -9.1**
JIRN Jiri 15.20 125 *e*P **Pn 20 42 43.3 -0.3**
comp=N,41nm,0.4s
VOSK Vostochnaya 15.44 357 ⇑Pn **Pn 20 42 46.1 -0.1**
comp=N,2.6nm,0.3s
BVAR Borovoye Array 15.77 356 P **Pn 20 42 50.4 +0.2**
comp=N,3.7nm,0.3s,baz=161,slow=10,SNR=85
BVAR S **S 20 45 41.0 -3.4**
comp=N,0.1nm,0.3s,baz=167,slow=19,SNR=2.6
ZRNK Zerenda 15.80 353 ⇓Pn **Pn 20 42 51.1 +0.5**
comp=N,8.5nm,0.7s
BRVK Borovoye 15.81 356 ⇑Pn **Pn 20 42 51.0 +0.4**
comp=N,20nm,1.0s
BRVK ⇑Sn **S 20 45 44.5 -0.8**
comp=N,4.5nm,1.0s
BRVK Borovoye 15.81 356 *e*P **Pn 20 42 50.0 -0.6**
comp=N,16nm,0.9s
RAMN Ramite 15.95 126 *e*P **Pn 20 42 51.5 -1.2**
comp=N,20nm,0.6s
TAPN Taplejung 16.41 123 *e*P **P 20 42 57.6 +0.5**
comp=N,9.0nm,0.3s
ODAN Odare 16.53 125 *e*P **P 20 42 59.4 +1.0**
comp=N,12nm,0.5s
AKTK Aktyubinsk 16.61 327 P **P 20 42 59.9 +0.9**
AKTK S **S 20 46 00.8 -0.6**
AKTO Aktyubinsk 16.61 327 P **P 20 42 59.9 +0.9**
comp=N,4.8nm,0.3s,baz=129,slow=11,SNR=87
AKTO S **S 20 46 00.8 -0.6**
comp=N,0.1nm,0.3s,baz=323,slow=20,SNR=3.6
ZAA0 Zalesovo Array 18.78 24 *e*P **P 20 43 22.4 -0.2**
ZALV Zalesovo Beam 18.78 24 P **P 20 43 22.8 +0.1**
comp=N,13nm,0.3s,baz=226,slow=11,SNR=289
ZALV S **S 20 46 41.4 -3.3**
comp=N,0.2nm,0.3s,baz=211,slow=18,SNR=4.2
ZALV Zalesovo Beam 18.78 24 P **P 20 43 22.8 +0.1**
ZALV S **S 20 46 41.4 -3.3**
ARU Arti 21.21 339 *e*P **P 20 43 48.1 -0.4**
comp=N,6.2nm,0.5s,mb4.4
SONM Songino Array 27.08 56 P **P 20 44 43.3 +1.1**
comp=N,1.1nm,0.8s,mb3.5,baz=271,slow=9.5,SNR=6.4
BRTR Keskin Array B 30.13 287 P **P 20 45 10.5 +1.2**
comp=N,0.6nm,0.6s,mb3.4,baz=108,slow=11,SNR=2.5
AKASG Malin Array Be 33.21 308 P **P 20 45 36.7 +0.6**
comp=N,1.0nm,0.4s,mb3.7,baz=106,slow=7.5,SNR=5.7
JOF Joensuu 35.67 329 *e*P **P 20 45 57.1 +0.2**
JOF Joensuu 35.67 329 *e*p **P 20 45 57.1 +0.2**
comp=N,6.1nm,0.4s,mb4.5
FINES FINESS Array B 37.37 325 P **P 20 46 11.3 0.0**
comp=N,2.6nm,0.3s,mb4.2,baz=119,slow=9.2,SNR=55
KAF Kangasniemi 37.49 326 *e*p **P 20 46 11.9 -0.4**
comp=N,1.4nm,0.3s,mb4.0
ARCES ARCESS Array B 40.78 337 P **P 20 46 39.6 +0.2**
comp=N,3.3nm,0.4s,mb4.1,baz=115,slow=8.1,SNR=57
NB2 NORSAR Subarra 44.33 322 P **P 20 47 07.3 -0.8**
comp=Z,2.3nm,0.5s,mb3.8,baz=92,slow=7.9
NOA NORSAR Array B 44.33 322 P **P 20 47 07.6 -0.5**
comp=Z,2.6nm,0.6s,mb3.8,baz=94,slow=7.6,SNR=11
INK Inuvik 72.95 10 P **P 20 50 24.5 -0.6**
comp=Z,2.2nm,0.6s,mb4.0,baz=302,slow=7.9,SNR=5.4
YKA Yellowknife Ar 80.39 3 P **P 20 51 06.2 -0.6**
comp=Z,1.1nm,0.5s,mb3.8,baz=350,slow=5.3,SNR=12
WRA Warramunga Arr 81.60 123 P **P 20 51 16.2 +2.5**
comp=Z,0.7nm,1.1s,mb3.2,baz=327,slow=4.8,SNR=5.8
DLBC Dease Lake 82.82 12 *e*P **P 20 51 26.3 +6.8**

SKHL ***06*** *20:47:59.1±1.7, 46.°16N×151.°52E, h154km±22km, mb5.3/4, msh5.3/2*
NIED ***06*** *20:48:00, 45.°70N×151.°40E, h83km, Mw4.1 Best double couple: M0 1.81000×10^15 NP1:φs 238.00000°, δ56.00000°, λ44.00000°. NP2:φs 119.00000°, δ54.00000°, λ137.00000°.*
BJI ***06*** *20:48:01.9, 46.°23N×151.°07E, h118km, mB4.6/7, mb4.5/11*
ISCJB ***06*** *20:48:02.6±0.6, 46.°37N±0.°05×151.°11E±0.°07, h127km±5km, mb4.1/35, Error ellipse: s-maj=10.7km s-min=5.2km az=138.1*
NEIC ***06*** *20:48:02.8±0.8, 46.°58N×151.°00E, h106km±7km, mb4.6/11, Error ellipse: s-maj=11.1km s-min=6.2km az=138.0*
MOS ***06*** *20:48:02.4±1.2, 46.°60N×151.°09E, h117km, mb4.6/7, Error ellipse: s-maj=11.1km s-min=7.2km az=73.7*
JMA ***06*** *20:48:05.2±0.6, 45.°70N×151.°40E, h125km, M4.1*
IDC ***06*** *20:48:05.6±2.3, 46.°74N×151.°00E, h127km±21km, mb3.7/25, mb1 3.9/28, mb1mx3.8/32, mbtmp3.7/28, Error ellipse: s-maj=15.5km s-min=10.4km az=155.0*

ISC 06 20:48:03.4±0.5, 46.°39N±0.°05×151.°14E±0.°07, h121km±4km, **n124,** σ1°**39**/146, **mb4.1**/35, **5C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.57**	**244**	*e*PN	**Pn**	**20 48 44.0**	**0.0**
KUR				*e*S	**Sn**	**20 49 19.0**	**+3.8**
KUR				pmax	pmax		
	comp=E,150nm,0.5s						
KUR				pmax	pmax		
	comp=Z,380nm,0.5s						
KUR				smax			
	comp=N,1μm,0.5s						
KUR				smax			
	comp=E,680nm,0.5s						
KUR	**Kuril'sk**	**2.57**	**244**	*e*P	**Pn**	**20 48 44.0**	**0.0**
KUR				AMB	AMB	20 48 45.5	
	comp=E,150nm,0.5s						
KUR				AMB	AMB	20 48 45.5	
	comp=E,380nm,0.5s						
KUR				*e*S	**Sn**	**20 49 19.0**	**+3.8**
KUR				A		20 49 26.0	
	comp=E,1μm,0.5s						
KUR				A		20 49 26.0	
	comp=E,680nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**4.41**	**240**	⇑*i*PN	**Pn**	**20 49 10.4**	**+2.0**
YUK				*i* S	**Sn**	**20 50 02.6**	**+3.7**
YUK				pmax	pmax		
	comp=N,62nm,0.3s						
YUK				pmax	pmax		
	comp=E,126nm,0.3s						
YUK				pmax	pmax		
	comp=Z,426nm,0.3s						
YUK				pmax	pmax		
	comp=Z,300nm,1.3s						
YUK				smax			
	comp=N,800nm,0.9s						
YUK				smax			
	comp=E,400nm,0.9s						
YUK				smax			
	comp=N,427nm,0.2s						
YUK				smax			
	comp=E,1μm,0.6s						
YUK	**Yuzh-Kuril'sk**	**4.41**	**240**	⇑*i*P	**Pn**	**20 49 10.4**	**+2.0**
YUK				AMB	AMB	20 49 10.9	
	comp=E,510nm,0.4s						
YUK				*i* S	**Sn**	**20 50 02.6**	**+3.7**
YUK				A		20 50 21.5	
	comp=E,2μm,0.5s						
YUK				A		20 50 21.5	
	comp=E,2μm,0.8s						
YUK				A		20 50 21.8	
	comp=E,390nm,0.5s						
YUK				A		20 50 21.8	
	comp=E,1μm,0.5s						
NEM2	**Nemuro 2**	**4.89**	**234**	P	**Pn**	**20 49 14.5**	**-0.3**
NEM2				*e*S	**Sn**	**20 50 08.8**	**-1.5**
JRA	**Rausu**	**4.91**	**242**	P	**Pn**	**20 49 16.9**	**+1.8**
JNK	**Nakash**	**5.35**	**241**	P	**Pn**	**20 49 22.5**	**+1.5**
SKR	**Severo-Kuril's**	**5.42**	**36**	*e*PN	**Pn**	**20 49 20.0**	**-1.8**
SKR				pmax	pmax		
	comp=N,50nm,0.5s						
SKR				pmax	pmax		
	comp=Z,90nm,0.5s						
SKR	**Severo-Kuril's**	**5.42**	**36**	*e*P	**Pn**	**20 49 20.0**	**-1.8**
SKR				AMB	AMB	20 49 22.5	
	comp=Z,50nm,0.5s						
SKR				AMB	AMB	20 49 22.5	
	comp=Z,90nm,0.5s						
SKR				*e*S	**Sn**	**20 50 25.0**	**+2.1**
SKR				A		20 50 42.0	
	comp=Z,800nm,6.0s						
SKR				A		20 50 42.0	
	comp=Z,50nm,0.5s						
SKR				A		20 50 42.0	
	comp=Z,70nm,0.5s						
SKR				A		20 50 42.0	
	comp=Z,50nm,0.7s						
JTKR	**Abashiri--Toko**	**5.66**	**247**	P	**Pn**	**20 49 27.4**	**+2.3**
JAK	**Akkeshi**	**5.71**	**236**	P	**Pn**	**20 49 25.4**	**-0.5**
JAK				*e*S	**Sn**	**20 50 29.7**	**-0.5**
YSS	**Yuzh-Sakhalins**	**5.80**	**279**	⇑*i*PN	**Pn**	**20 49 29.0**	**+2.0**
YSS				*e*S	**Sn**	**20 50 34.0**	**+1.8**
YSS				pmax	pmax		
	comp=Z,90nm,0.7s						
YSS				smax			
	comp=E,20nm,0.7s						
YSS	**Yuzh-Sakhalins**	**5.80**	**279**	*e*Pn	**Pn**	**20 49 29.5**	**+2.5**
	comp=E,98nm,0.7s						
YSS	**Yuzh-Sakhalins**	**5.80**	**279**	⇑*i*P	**Pn**	**20 49 29.0**	**+2.0**
YSS				AMB	AMB	20 49 30.0	
	comp=E,90nm,0.7s						
YSS				*e*S	**Sn**	**20 50 34.0**	**+1.8**
YSS				A		20 50 35.0	
	comp=E,20nm,0.7s						
JMP	**Maruseppu**	**5.99**	**249**	P	**Pn**	**20 49 32.4**	**+2.7**
JAR	**Ashorobuto**	**6.09**	**242**	P	**Pn**	**20 49 32.5**	**+1.6**
JSE	**Soyaes**	**6.17**	**260**	P	**Pn**	**20 49 35.4**	**+3.4**
JOB	**Onbets**	**6.27**	**239**	P	**Pn**	**20 49 34.0**	**+0.6**
JOB				*e*S	**Sn**	**20 50 43.1**	**-0.6**
ASAJ	**Asahikawa**	**6.45**	**252**	P	**Pn**	**20 49 39.2**	**+3.4**
	comp=E,4.3nm,0.3s,baz=76,slow=13,SNR=42						
ASAJ	**Asahikawa**	**6.45**	**252**	PN	**Pn**	**20 49 39.2**	**+3.4**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ASAJ	**Asahikawa**	**6.45**	**252**	P	**Pn**	**20 49 39.7**	**+3.9**
JKK2	**Kamakawa 2**	**6.45**	**250**	P	**Pn**	**20 49 38.7**	**+2.9**
JWK2	**Keihoku**	**6.55**	**264**	P	**Pn**	**20 49 41.8**	**+4.7**
JCH	**Churui**	**6.72**	**239**	P	**Pn**	**20 49 39.4**	**-0.1**
JCH				*e*S	**Sn**	**20 50 52.7**	**-1.9**
JAB	**Ashibetsu**	**6.96**	**249**	P	**Pn**	**20 49 45.8**	**+3.1**
JEM	**Erimo**	**7.21**	**236**	P	**Pn**	**20 49 46.9**	**+0.7**
ERM	**Erimo**	**7.21**	**236**	*e*PN	**Pn**	**20 49 46.5**	**+0.3**
ERM				pmax	pmax		
	comp=Z,37nm,0.4s						
ERM	**Erimo**	**7.21**	**236**	*e*Pn	**Pn**	**20 49 46.5**	**+0.3**
	comp=Z,37nm,0.4s						
ERM				*e*Sn	**Sn**	**20 51 01.7**	**-4.8**
JBT2	**Biratori 2**	**7.23**	**243**	P	**Pn**	**20 49 47.2**	**+0.8**
JNBK	**Urakawa-nobuka**	**7.29**	**239**	P	**Pn**	**20 49 45.9**	**-1.2**
JEW	**Eniwo**	**7.77**	**246**	P	**Pn**	**20 49 55.1**	**+1.4**
PEA0B	**Petropavlovsk-**	**7.95**	**30**	*e*Pn	**Pn**	**20 49 54.0**	**-1.9**
PETK	**Petropavlovsk-**	**7.95**	**30**	P	**Pn**	**20 49 54.1**	**-1.8**
	comp=Z,2.5nm,0.3s,baz=195,slow=9.5,SNR=29						
JNB	**Noboribetsu**	**8.22**	**245**	P	**Pn**	**20 49 59.9**	**0.0**
JNB				*e*S	**Sn**	**20 51 30.9**	**-0.1**
JKB	**Kayabe**	**8.55**	**242**	P	**Pn**	**20 50 03.2**	**-1.1**
JKB				*e*S	**Sn**	**20 51 34.3**	**-4.6**
JSH	**Shimam**	**8.77**	**249**	P	**Pn**	**20 50 08.1**	**+0.9**
JYM2	**Yakumo 2**	**8.83**	**245**	P	**Pn**	**20 50 08.0**	**-0.1**
JSR	**Shiriuchi**	**9.13**	**242**	P	**Pn**	**20 50 10.8**	**-1.3**
JSR				*e*S	**Sn**	**20 51 48.3**	**-4.7**
JTM	**Tenmabayashi**	**9.21**	**236**	P	**Pn**	**20 50 10.8**	**-2.3**
JTM				*e*S	**Sn**	**20 51 46.9**	**-7.9**
JANG	**Nango**	**9.23**	**233**	P	**Pn**	**20 50 10.7**	**-2.8**
JANG				*e*S	**Sn**	**20 51 48.1**	**-7.4**
JTH	**Tanohata**	**9.35**	**230**	P	**Pn**	**20 50 11.7**	**-3.4**
JTH				*e*S	**Sn**	**20 51 51.4**	**-7.0**
JOSM	**Okushiri--Mats**	**9.42**	**247**	P	**Pn**	**20 50 15.9**	**0.0**
OFUJ	**Ofunato**	**10.09**	**227**	P	**Pn**	**20 50 22.7**	**-2.3**
JRG	**Rokugo**	**10.40**	**232**	P	**Pn**	**20 50 27.1**	**-2.1**
JRG				*e*S	**Sn**	**20 52 18.0**	**-5.8**
JIO	**Ouri**	**10.73**	**226**	P	**Pn**	**20 50 30.9**	**-2.7**
JIO				*e*S	**Sn**	**20 52 22.8**	**-9.0**
JYA	**Atsumi**	**11.48**	**231**	P	**Pn**	**20 50 41.9**	**-1.6**
JYA				*e*S	**Sn**	**20 52 44.0**	**-5.8**
JFY	**Yanaizu**	**12.37**	**228**	P	**Pn**	**20 50 53.8**	**-1.4**
MAJO	**Matsushiro**	**13.80**	**229**	*e*P	**Pn**	**20 51 12.8**	**-1.0**
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.6s						
MAJO	**Matsushiro**	**13.80**	**229**	*e*Pn	**Pn**	**20 51 12.8**	**-1.0**
	comp=Z,7.1nm,0.6s						
MAT	**Matsushiro**	**13.80**	**229**	P	**Pn**	**20 51 13.8**	**0.0**
MJAR	**Matsushiro Arr**	**13.80**	**229**	P	**Pn**	**20 51 14.0**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=31,slow=13,SNR=12						
ZEA	**Zeya**	**16.95**	**304**	*e*P	**Pn**	**20 51 50.8**	**-2.2**
ZEA				AMB	AMB	20 51 52.1	
	comp=Z,32nm,1.2s						
KSRS	**Korea Array**	**19.39**	**251**	P	**P**	**20 52 23.1**	**+3.3**
	comp=Z,0.6nm,0.3s,baz=54,slow=12,SNR=18						
KSRS	**Korea Array**	**19.39**	**251**	P	**P**	**20 52 23.1**	**+3.3**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KS15	**Wonju Array Si**	**19.43**	**251**	*e*P	**P**	**20 52 24.1**	**+4.0**
YAK	**Yakutsk**	**19.91**	**330**	*c i*P	**P**	**20 52 28.5**	**+3.3**
YAK				pmax	pmax		
	comp=Z,93nm,1.3s						
YAK				pmax	pmax		
	comp=E,19nm,1.1s						
YAK				pmax	pmax		
	comp=N,22nm,1.1s						
YAK	**Yakutsk**	**19.91**	**330**	*e*P	**P**	**20 52 25.7**	**+0.5**
	comp=N,89nm,0.7s						
BILL	**Bilibino**	**23.06**	**15**	*e*P	**P**	**20 52 56.0**	**-1.9**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.5s,mb3.2						
HHC	**Hu-ho-hao-te**	**28.96**	**273**	*e*P	**P**	**20 53 49.6**	**-1.6**
HHC				S	**S**	**20 58 28.5**	**-4.6**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb4.7						
HHC				pmax	pmax		
	comp=Z,100nm,5.3s						
SONM	**Songino Array**	**30.17**	**289**	P	**P**	**20 54 02.3**	**+0.5**
	comp=Z,0.3nm,0.4s,mb3.2,baz=76,slow=8.4,SNR=3.0						
GTA	**Gaotai**	**37.68**	**278**	*e*P	**P**	**20 55 08.0**	**+1.2**
ZALV	**Zalesovo Beam**	**41.72**	**306**	P	**P**	**20 55 39.1**	**-0.8**
	comp=Z,0.4nm,0.4s,mb3.5,baz=58,slow=8.2,SNR=3.5						
ZALV				PcP	PcP	20 57 35.0	+0.9
	comp=Z,1.3nm,0.5s,baz=75,slow=3.2,SNR=9.2						
ZALV	**Zalesovo Beam**	**41.72**	**306**	*e*P	**P**	**20 55 39.1**	**-0.9**
INK	**Inuvik**	**42.68**	**32**	P	**P**	**20 55 47.5**	**0.0**
	comp=Z,1.2nm,0.3s,mb4.0,baz=284,slow=3.3,SNR=5.9						
MKAR	**Makanchi Array**	**45.89**	**297**	P	**P**	**20 56 13.3**	**-0.2**
	comp=Z,1.1nm,0.5s,mb3.8,baz=62,slow=6.5,SNR=29						
MKAR				PcP	PcP	20 57 49.2	+0.7
	comp=Z,0.7nm,0.6s,baz=57,slow=5.6,SNR=6.4						
MKAR	**Makanchi Array**	**45.89**	**297**	P	**P**	**20 56 13.3**	**-0.2**
MKAR				PcP	PcP	20 57 49.2	+0.7
KURK	**Kurchatov**	**46.43**	**303**	P	**P**	**20 56 16.9**	**-0.6**
	comp=Z,2.0nm,0.4s,mb4.2,baz=72,slow=8.9,SNR=10						
KURK	**Kurchatov**	**46.43**	**303**	P	**P**	**20 56 16.9**	**-0.6**
BVAR	**Borovoye Array**	**50.03**	**309**	P	**P**	**20 56 44.5**	**-0.7**
	comp=Z,1.4nm,0.5s,mb4.1,baz=61,slow=7.6,SNR=18						
BVAR				PcP	PcP	20 58 03.8	+0.6
	comp=Z,0.6nm,0.4s,baz=85,slow=4.4,SNR=4.5						
CMAR	**Chiang Mai Arr**	**50.97**	**255**	P	**P**	**20 56 55.0**	**+2.3**
	comp=Z,1.9nm,0.7s,mb4.2,baz=34,slow=7.3,SNR=12						
SHL	**Shillong**	**51.00**	**267**	*e*PKP	**P**	**20 56 56.0**	**+3.2**
RES	**Resolute Bay**	**51.60**	**18**	P	**P**	**20 56 55.6**	**-1.0**
	comp=Z,1.0nm,0.5s,mb4.1,baz=17,slow=17,SNR=5.7						
YKA	**Yellowknife Ar**	**52.02**	**36**	P	**P**	**20 56 59.1**	**-0.7**
	comp=Z,0.8nm,0.5s,mb4.0,baz=299,slow=7.0,SNR=6.0						
ARU	**Arti**	**54.35**	**317**	*e*P	**P**	**20 57 15.4**	**-1.6**
ARU				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.8						
ARU	**Arti**	**54.35**	**317**	*e*P	**P**	**20 57 15.4**	**-1.6**
	comp=Z,3.9nm,0.4s,mb4.8						
EDM	**Edmonton**	**57.54**	**45**	*e*P	**P**	**20 57 40.0**	**+0.2**
ABKAR	**Akbulak array**	**57.60**	**309**	*e*P	**P**	**20 57 39.0**	**-1.3**
	comp=Z,2.6nm,0.5s,mb4.5						
ARCES	**ARCESS Array B**	**57.74**	**340**	P	**P**	**20 57 39.5**	**-1.4**
	comp=Z,1.4nm,0.7s,mb4.1,baz=79,slow=6.3,SNR=8.1						
AKTK	**Aktyubinsk**	**57.95**	**311**	P	**P**	**20 57 42.8**	**+0.2**
AKTO	**Aktyubinsk**	**57.95**	**311**	P	**P**	**20 57 42.8**	**+0.2**
	comp=Z,0.9nm,0.5s,mb4.0,baz=102,slow=17,SNR=5.1						
YBH	**Yreka Blue Hor**	**59.11**	**60**	P	**P**	**20 57 53.1**	**+2.2**
	comp=Z,1.5nm,0.5s,mb4.2,baz=77,slow=5.0,SNR=5.6						
JOF	**Joensuu**	**61.04**	**333**	*e*P	**P**	**20 58 01.6**	**-2.1**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
JOF	**Joensuu**	**61.04**	**333**	*e*p	**P**	**20 58 01.6**	**-2.1**
	comp=Z,2.3nm,0.5s,mb4.5						
FINES	**FINESS Array B**	**63.77**	**334**	P	**P**	**20 58 19.9**	**-2.1**
	comp=Z,2.9nm,0.5s,mb4.4,baz=36,slow=7.3,SNR=31						
NVAR	**Mina Array Bea**	**63.80**	**61**	P	**P**	**20 58 24.3**	**+1.8**
	comp=Z,1.6nm,0.6s,mb4.1,baz=299,slow=7.3,SNR=14						
FRB	**Frobisher Bay**	**65.82**	**18**	P	**P**	**20 58 34.2**	**-0.9**
	comp=Z,2.5nm,0.4s,mb4.4,baz=342,slow=17,SNR=1.6						
PDAR	**Pinedale Array**	**66.05**	**53**	P	**P**	**20 58 38.2**	**+1.3**
	comp=Z,1.2nm,0.6s,mb3.9,baz=305,slow=1.0,SNR=7.2						
WRA	**Warramunga Arr**	**67.75**	**197**	P	**P**	**20 58 49.5**	**+1.6**
	comp=Z,0.5nm,0.5s,mb3.6,baz=15,slow=6.9,SNR=7.9						
NB2	**NORSAR Subarra**	**68.12**	**340**	P	**P**	**20 58 48.4**	**-1.3**
	comp=Z,1.4nm,0.6s,mb4.0,baz=31,slow=6.5						
NOA	**NORSAR Array B**	**68.12**	**340**	P	**P**	**20 58 48.4**	**-1.3**
	comp=Z,1.0nm,0.5s,mb3.9,baz=29,slow=6.5,SNR=5.6						
AKASG	**Malin Array Be**	**71.08**	**325**	P	**P**	**20 59 06.3**	**-1.8**
	comp=Z,0.8nm,0.3s,mb4.0,baz=38,slow=6.1,SNR=4.7						
ASAR	**Alice Springs**	**71.46**	**197**	P	**P**	**20 59 13.6**	**+3.1**
	comp=Z,0.8nm,0.7s,mb3.7,baz=16,slow=5.4,SNR=6.8						
SCHQ	**Schefferville**	**74.16**	**22**	P	**P**	**20 59 26.8**	**+0.6**
	comp=Z,2.4nm,0.4s,mb4.3,baz=279,slow=6.6,SNR=14						
SCHQ	**Schefferville**	**74.16**	**22**	P	**P**	**20 59 26.8**	**+0.6**
BUR08	**Bucovina Ar. S**	**75.11**	**325**	*e*P	**P**	**20 59 31.4**	**-0.5**
KHC	**Kasperske Hory**	**77.95**	**333**	*e*P	**P**	**20 59 48.0**	**+0.2**
KHC				*e*x	x	20 59 53.0	
TXAR	**Lajitas Array**	**78.85**	**59**	P	**P**	**20 59 54.4**	**+1.3**
	comp=Z,1.2nm,0.6s,mb3.9,baz=296,slow=4.0,SNR=17						
MMAI	**Mount Meron Ar**	**82.02**	**310**	P	**P**	**21 00 11.9**	**+2.0**
	comp=Z,1.4nm,0.4s,mb4.1,baz=46,slow=7.1,SNR=12						
LDF	**La Druitiere**	**82.14**	**341**	*e*P	**P**	**21 00 10.1**	**-0.2**
	comp=Z,3.4nm,0.5s,mb4.2						
LDF	**La Druitiere**	**82.14**	**341**	*e*P	**P**	**21 00 10.1**	**-0.2**
LDF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2						
LDF	**La Druitiere**	**82.14**	**341**	*e*P	**P**	**21 00 10.1**	**-0.2**
	comp=Z,1.7nm,0.5s,mb4.1						
LOR	**Lormes**	**82.42**	**338**	*e*P	**P**	**21 00 12.6**	**+0.8**
GRR	**Gorron**	**82.49**	**342**	*e*P	**P**	**21 00 12.5**	**+0.4**
SSF	**Saint Saulge**	**82.70**	**338**	*e*P	**P**	**21 00 14.0**	**+0.8**
SGMF	**Saint Gilles**	**82.98**	**343**	*e*P	**P**	**21 00 14.8**	**+0.1**
AVF	**Avril sur Loir**	**82.99**	**338**	*e*P	**P**	**21 00 14.1**	**-0.7**
SMF	**Signal de Mont**	**83.00**	**338**	*e*P	**P**	**21 00 14.1**	**-0.7**
LPL	**La Plagne**	**83.25**	**336**	*e*P	**P**	**21 00 18.1**	**+2.0**
	comp=Z,10nm,0.9s,mb4.4						
LPL	**La Plagne**	**83.25**	**336**	*e*P	**P**	**21 00 18.1**	**+2.0**
LPL				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.3						
LPL	**La Plagne**	**83.25**	**336**	*e*P	**P**	**21 00 18.1**	**+2.0**
	comp=Z,5.2nm,0.9s,mb4.4						
LPG	**La Plagne**	**83.27**	**336**	*e*P	**P**	**21 00 18.2**	**+2.0**
	comp=Z,7.7nm,0.7s,mb4.3						
LPG	**La Plagne**	**83.27**	**336**	*e*P	**P**	**21 00 18.2**	**+2.0**
LPG				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.4						
LPG	**La Plagne**	**83.27**	**336**	*e*P	**P**	**21 00 18.2**	**+2.0**
	comp=Z,3.8nm,0.7s,mb4.3						
TCF	**Toulx Ste Croi**	**83.75**	**339**	*e*P	**P**	**21 00 19.1**	**+0.5**
MFF	**Saint Martin d**	**84.02**	**341**	*e*P	**P**	**21 00 19.8**	**-0.2**
ORIF	**Oris-en-Rattie**	**84.04**	**336**	*e*P	**P**	**21 00 21.7**	**+1.5**
	comp=Z,6.0nm,0.6s,mb4.3						
ORIF	**Oris-en-Rattie**	**84.04**	**336**	*e*P	**P**	**21 00 21.7**	**+1.5**
ORIF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3						
ORIF	**Oris-en-Rattie**	**84.04**	**336**	*e*P	**P**	**21 00 21.7**	**+1.5**
	comp

PKVZ	Pokaka	1.29	283	*e*PN	Pn	21 05 02.3 +0.5
MWZ	Matawai	1.32	19	PN	Pn	21 05 02.0 -0.4
URZ	Urewera	1.33	5	PN	Pn	21 05 02.3 -0.1
MRZ	Mangatainoka R	1.51	224	PN	Pn	21 05 04.2 -0.7
HOWZ	Holdsworth Sta	1.72	220	PN	Pn	21 05 06.7 -1.0
TMWZ	Te Maipa	1.73	208	PN	Pn	21 05 06.3 -1.5
VRZ	Vera Road	1.77	284	PN	Pn	21 05 08.7 +0.2
OGWZ	Otaki Gorge	1.85	228	PN	Pn	21 05 08.4 -1.1
MTW	Mount Morrison	1.93	215	PN	Pn	21 05 09.2 -1.4
TUWZ	Tuamarina	2.95	230	PN	Pn	21 05 22.7 -2.0
LTZ	Lake Taylor	4.77	226	PN	Pn	21 05 48.1 -1.6
CTZ	Chatham Island	6.34	133	PN	Pn	21 06 10.7 -0.6

*IDC **06** 21:10:14.5±1.4, 32.°63N×105.°37E, h0km, mb3.4/3, mb1 3.5/5, mb1mx3.3/25, mbtmp3.4/5, ML3.2/2, Error ellipse: s-maj=47.5km s-min=24.3km az=50.0*
*ISCJB **06** 21:10:15.0±1.2, 32.°87N±0.°09×105.°39E±0.°08, h10km, mb3.5/3, Error ellipse: s-maj=13.7km s-min=7.3km az=31.4*
*BJI **06** 21:10:16.6, 32.°79N×105.°62E, h14km, mb3.7/1, ML3.2/10, Ms3.1/2, Ms7 3.1/3*

ISC 06 21:10:16.9±1.0, 32.°83N±0.°07×105.°52E±0.°06, h10km, n7, σ1°30/13, mb3.5/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.09**	**66**	Pn	**Pn**	**21 11 06.2**	**+0.5**
XAN				Pg	**Pb**	**21 11 12.5**	**+0.5**
XAN				Sn	**Sn**	**21 11 43.8**	**+1.1**
XAN				Sg	**Sg**	**21 11 53.7**	**-2.5**
XAN				smax			
	comp=N,120nm,0.6s						
XAN				smax			
	comp=E,81nm,0.8s						
LZH	**Lanzhou**	**3.54**	**337**	Pn	**Pn**	**21 11 14.4**	**+2.5**
LZH				Pg	**Pg**	**21 11 23.6**	**-1.1**
LZH				Sn	**Sn**	**21 11 56.8**	**+3.1**
LZH				Sg	**Sg**	**21 12 09.4**	**-1.1**
LZH				smax			
	comp=N,160nm,0.8s						
LZH				smax			
	comp=E,160nm,0.5s						
LZH				LR	LR		
	comp=N,240nm,4.6s						
LZH				LR	LR		
	comp=Z,430nm,5.5s						
SONM	**Songino Array**	**15.01**	**2**	Pn	**Pn**	**21 13 48.8**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=161,slow=9.2,SNR=3.0						
KSRS	**Korea Array**	**18.88**	**70**	P	**Pn**	**21 14 38.9**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=256,slow=10,SNR=3.4						
MKAR	**Makanchi Array**	**22.54**	**315**	P	**P**	**21 15 16.9**	**0.0**
	comp=Z,0.4nm,0.5s,mb3.1,baz=107,slow=11,SNR=6.6						
FINES	**FINESS Array B**	**56.82**	**326**	P	**P**	**21 20 00.9**	**-0.2**
	comp=Z,0.7nm,0.4s,mb4.1,baz=91,slow=8.4,SNR=9.4						
WRA	**Warramunga Arr**	**59.26**	**148**	P	**P**	**21 20 17.0**	**-1.7**
	comp=Z,0.2nm,0.6s,mb3.3,baz=342,slow=7.3,SNR=2.7						

IDC 06 21:13:28.8±21.0, 9.°44S×158.°48E, h635km±244km, mb2.8/5, mb1 2.9/5, mb1mx2.7/17, mbtmp2.8/5, Error ellipse: s-maj=172.3km s-min=91.9km az=78.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.55**	**243**	P	P	21 18 10.5	+0.3
	1.6nm,0.3s,baz=72,slow=9.0,SNR=36						
ASAR	**Alice Springs**	**27.41**	**236**	P	P	21 18 26.2	-0.3
	0.3nm,0.4s,baz=59,slow=9.7,SNR=9.9						
FITZ	**Fitzroy Crossi**	**32.99**	**251**	P	P	21 19 14.7	+0.5
	1.1nm,0.4s,baz=59,slow=8.8,SNR=11						
SONM	**Songino Array**	**73.25**	**326**	P	P	21 23 57.6	+0.4
	0.6nm,0.5s,baz=140,slow=4.4,SNR=5.3						
MKAR	**Makanchi Array**	**87.51**	**318**	P	P	21 25 10.7	0.0
	0.2nm,0.4s,baz=100,slow=5.7,SNR=3.5						

*ATH **06** 21:14:16.7, 36.°07N×21.°45E, h18km±1km, MD3.8/14*
*ISCJB **06** 21:14:17.3±1.3, 36.°14N±0.°05×21.°50E±0.°09, h0km±7km, Error ellipse: s-maj=12.1km s-min=8.6km az=3.5*
*CSEM **06** 21:14:20.1±0.6, 36.°16N×21.°53E, h18km±1km, ML3.1/3, Error ellipse: s-maj=12.8km s-min=6.7km az=65.0*
*THE **06** 21:14:20.6, 36.°22N×21.°66E, h2km±1km, ML3.1/3, Error ellipse: s-maj=3.3km s-min=1.3km az=273.0*

ISC 06 21:14:18.2±1.4, 36.°14N±0.°06×21.°52E±0.°09, h2km±7km, n46, σ0°70/65, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.78**	**13**	*e*PB	**Pg**	**21 14 32.7**	**-0.4**
PYL				*e*SN	**Sg**	**21 14 45.2**	**+2.0**
PYL	**PYLOS**	**0.78**	**13**	P	**Pg**	**21 14 32.6**	**-0.5**
PYL				S	**Sg**	**21 14 43.5**	**+0.3**
PYL	**PYLOS**	**0.78**	**13**	P	**Pg**	**21 14 32.6**	**-0.5**
PYL				S	**Sg**	**21 14 43.5**	**+0.3**
PYL				*e*Sn	**Sg**	**21 14 45.2**	**+2.0**
ITM	**Ithomi**	**1.09**	**18**	*e*PN	**Pg**	**21 14 39.1**	**0.0**
ITM				*e*SN	**Sn**	**21 14 55.1**	**-0.9**
ITM	**Ithomi**	**1.09**	**18**	P	**Pg**	**21 14 39.0**	**-0.1**
ITM				S	**Sg**	**21 14 52.5**	**-0.8**
ITM	**Ithomi**	**1.09**	**18**	P	**Pg**	**21 14 39.0**	**-0.1**
ITM				S	**Sg**	**21 14 52.5**	**-0.8**
ITM				*e*Sn	**Sn**	**21 14 55.1**	**-0.9**
VLI	**Veliai**	**1.28**	**63**	*e*PN	**Pn**	**21 14 42.8**	**-0.3**
VLI				*e*SN	**Sn**	**21 15 01.3**	**+0.5**
VLI	**Veliai**	**1.28**	**63**	*e*Pn	**Pn**	**21 14 42.8**	**-0.3**
VLI				*e*Sn	**Sn**	**21 15 01.3**	**+0.5**
VLX	**Vlachokerasia**	**1.41**	**29**	*e*PN	**Pn**	**21 14 44.9**	**+0.1**
VLX				*e*SN	**Sn**	**21 15 05.4**	**+1.4**
VLX	**Vlachokerasia**	**1.41**	**29**	P	**Pn**	**21 14 44.8**	**0.0**
VLX				S	**Sg**	**21 15 03.6**	**0.0**
VLX	**Vlachokerasia**	**1.41**	**29**	*e*Pn	**Pn**	**21 14 44.9**	**+0.1**
VLX				S	**Sg**	**21 15 03.6**	**0.0**
VLX				*e*Sn	**Sn**	**21 15 06.4**	**+2.4**
GUR	**Goura**	**1.91**	**20**	*e*PN	**Pn**	**21 14 52.2**	**+0.5**
GUR	**Goura**	**1.91**	**20**	P	**Pn**	**21 14 52.1**	**+0.4**
GUR				S	**Sn**	**21 15 15.8**	**-0.5**
GUR	**Goura**	**1.91**	**20**	P	**Pn**	**21 14 52.1**	**+0.4**
GUR				S	**Sn**	**21 15 15.8**	**-0.5**
RLS	**Riolos of Patr**	**1.92**	**359**	*e*PN	**Pn**	**21 14 51.3**	**-0.5**
RLS	**Riolos of Patr**	**1.92**	**359**	*e*Pn	**Pn**	**21 14 51.3**	**-0.5**
DID	**Didima**	**1.94**	**45**	*e*PN	**Pn**	**21 14 51.9**	**-0.2**
DID	**Didima**	**1.94**	**45**	P	**Pn**	**21 14 51.6**	**-0.5**
DID				S	**Sn**	**21 15 16.1**	**-0.9**
DID	**Didima**	**1.94**	**45**	P	**Pn**	**21 14 51.6**	**-0.5**
DID	**Didima**	**1.94**	**45**	*e*Pn	**Pn**	**21 14 51.9**	**-0.2**
DID				S	**Sn**	**21 15 16.1**	**-0.9**
KARN	**Karanos**	**2.09**	**110**	*e*PN	**Pn**	**21 14 53.4**	**-0.7**
KARN	**Karanos**	**2.09**	**110**	P	**Pn**	**21 14 54.6**	**+0.5**
KARN	**Karanos**	**2.09**	**110**	*e*Pn	**Pn**	**21 14 53.4**	**-0.7**
KARN	**Karanos**	**2.09**	**110**	P	**Pn**	**21 14 54.6**	**+0.5**
VLS	**Valsamata**	**2.17**	**340**	*e*PN	**Pn**	**21 14 55.0**	**-0.2**
NAIG	**Nisos Aigina**	**2.26**	**44**	*e*PN	**Pn**	**21 14 56.9**	**+0.4**
NAIG	**Nisos Aigina**	**2.26**	**44**	*e*Pn	**Pn**	**21 14 56.9**	**+0.4**
EFP	**Efpalio**	**2.31**	**8**	*e*PB	**Pn**	**21 14 57.9**	**+0.8**
EFP	**Efpalio**	**2.31**	**8**	P	**Pn**	**21 14 58.3**	**+1.2**
EFP	**Efpalio**	**2.31**	**8**	*e*Pn	**Pn**	**21 14 57.9**	**+0.8**
EFP	**Efpalio**	**2.31**	**8**	P	**Pn**	**21 14 58.3**	**+1.2**
VLY	**Voula,Athens**	**2.50**	**46**	*e*PN	**Pn**	**21 15 00.2**	**+0.4**
VLY	**Voula,Athens**	**2.50**	**46**	*e*Pn	**Pn**	**21 15 00.2**	**+0.4**
PTL	**Penteli**	**2.68**	**44**	*e*PN	**Pn**	**21 15 01.5**	**-0.7**
PTL	**Penteli**	**2.68**	**44**	*e*Pn	**Pn**	**21 15 01.5**	**-0.7**
LKR	**Lokris**	**2.77**	**25**	*e*PN	**Pn**	**21 15 03.7**	**+0.2**
LKR	**Lokris**	**2.77**	**25**	P	**Pn**	**21 15 03.0**	**-0.5**
LKR	**Lokris**	**2.77**	**25**	*e*Pn	**Pn**	**21 15 02.7**	**-0.8**
LKR	**Lokris**	**2.77**	**25**	P	**Pn**	**21 15 03.0**	**-0.5**
AGG	**Agios Georgios**	**2.95**	**12**	*e*PN	**Pn**	**21 15 06.5**	**+0.5**
AGG	**Agios Georgios**	**2.95**	**12**	*e*Pn	**Pn**	**21 15 06.5**	**+0.5**
THL	**Klokotos Trika**	**3.44**	**6**	*e*PN	**Pn**	**21 15 12.6**	**-0.1**
THL	**Klokotos Trika**	**3.44**	**6**	*e*Pn	**Pn**	**21 15 12.6**	**-0.1**
SOH	**Sokhos**	**4.89**	**17**	*e*PN	**Pn**	**21 15 33.6**	**+0.9**
SOH	**Sokhos**	**4.89**	**17**	*e*Pn	**Pn**	**21 15 32.6**	**-0.1**
STON	**Ston**	**7.34**	**337**	*e*Pn	**Pn**	**21 16 01.8**	**-4.5**
STON				Sn	**Sn**	**21 17 18.3**	**-12**

*IDC **06** 21:35:36.8±1.1, 15.°34N×122.°74E, h0km, mb3.6/6, mb1 3.9/7, mb1mx3.6/23, mbtmp3.7/7, ML4.7/1, Error ellipse: s-maj=28.5km s-min=18.0km az=72.0*

*NEIC **06** 21:35:41.5±0.6, 15.°33N×122.°69E, h35km, mb4.3/2, Error ellipse: s-maj=15.7km s-min=8.7km az=76.0*
*MAN **06** 21:35:41, 15.°40N×122.°21E, h12km, mb5.0, ML4.0, MS4.1*

ISC 06 21:35:40.5±1.5, 15.°43N±0.°04×122.°36E±0.°08, h9km±9km, n25, σ1°07/29, mb3.9/9, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**0.80**	**210**	*e*P	**Pg**	**21 35 54.4**	**-1.7**
BALP	**Baler**	**0.82**	**293**	*e*P	**Pg**	**21 35 56.5**	**+0.3**
BALP				*e*S	**Sg**	**21 36 07.7**	**+0.8**
PCPH	**Palayan**	**1.22**	**277**	↓*e*P	**Pn**	**21 36 02.3**	**-1.6**
CAUP	**Cauayan**	**1.59**	**341**	*e*P	**Pn**	**21 36 08.7**	**-0.3**
PALP	**Palanan**	**1.63**	**2**	*e*P	**Pn**	**21 36 09.1**	**-0.3**
TGY	**Tagaytay City**	**1.90**	**226**	Pn	**Pn**	**21 36 13.8**	**+0.6**
	235nm,0.3s,baz=152,slow=1.5,SNR=34						
TGY				Sn	**Sn**	**21 36 42.4**	**+5.1**
	153nm,0.3s,baz=140,slow=23,SNR=8.8						
BOAC	**Boac**	**2.02**	**194**	*e*P	**Pn**	**21 36 14.6**	**-0.2**
BOAC				*e*S	**Sn**	**21 36 39.5**	**-0.7**
AUQP	**San Andres**	**2.11**	**172**	*e*P	**Pn**	**21 36 20.0**	**+3.9**
PVCP	**Virac**	**2.52**	**136**	*e*P	**Pn**	**21 36 23.6**	**+2.0**
LUBP	**Luibang**	**2.65**	**231**	*e*P	**Pn**	**21 36 24.3**	**+0.8**
APYP	**Conner**	**2.65**	**336**	*e*P	**Pn**	**21 36 23.2**	**-0.3**
OTRP	**Odiongan**	**3.06**	**186**	*e*P	**Pn**	**21 36 29.8**	**+0.6**
SJMP	**San Jose**	**3.18**	**202**	*e*P	**Pn**	**21 36 34.5**	**+3.6**
CNP	**Catarman**	**3.66**	**142**	*e*P	**Pn**	**21 36 41.4**	**+4.0**
SSLB	**Suanglung**	**8.42**	**351**	Pn	**Pn**	**21 37 42.0**	**-0.9**
CMAR	**Chiang Mai Arr**	**22.60**	**281**	P	**P**	**21 40 43.0**	**+1.4**
	0.7nm,0.6s,mb3.3,baz=104,slow=8.1,SNR=4.3						
HHC	**Hu-ho-hao-te**	**27.01**	**342**	*e*P	**P**	**21 41 25.1**	**+2.2**
HHC				S	**S**	**21 46 00.7**	**+0.2**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.6						
HHC				pmax	pmax		
	comp=Z,66nm,5.0s						
SONM	**Songino Array**	**34.91**	**341**	P	**P**	**21 42 32.3**	**-0.2**
	comp=Z,0.3nm,0.5s,mb3.5,baz=166,slow=11,SNR=2.3						
WRAB	**Tennant Creek**	**37.06**	**161**	*e*P	**P**	**21 42 46.5**	**-4.7**
	comp=Z,0.5nm,0.3s,mb3.8						
WRA	**Warramunga Arr**	**37.07**	**161**	P	**P**	**21 42 46.7**	**-4.5**
	comp=Z,1.4nm,0.6s,mb4.0,baz=343,slow=9.2,SNR=12						
ASAR	**Alice Springs**	**40.46**	**164**	P	**P**	**21 43 16.0**	**-3.6**
	comp=Z,0.3nm,0.3s,mb3.5,baz=345,slow=7.2,SNR=9.1						
MKAR	**Makanchi Array**	**45.64**	**322**	P	**P**	**21 44 01.6**	**+0.2**
	comp=Z,1.0nm,0.8s,mb3.8,baz=106,slow=8.9,SNR=5.8						
ZALV	**Zalesovo Beam**	**48.30**	**331**	P	**P**	**21 44 21.1**	**-0.9**
	comp=Z,1.1nm,0.7s,mb4.0,baz=130,slow=6.5,SNR=6.3						
KURK	**Kurchatov**	**49.68**	**325**	*e*P	**P**	**21 44 32.6**	**-0.1**
	comp=Z,7.7nm,0.9s,mb4.7						
KBL	**Kabul**	**51.33**	**302**	P	**P**	**21 44 44.7**	**-0.8**

*IDC **06** 21:42:14.0±1.2, 6.°14S×103.°57E, h0km, mb4.1/12, mb1 4.2/12, mb1mx4.0/21, mbtmp4.1/12, MS3.3/1, Ms1 3.5/1, ms1mx2.5/23, Error ellipse: s-maj=43.9km s-min=16.8km az=52.0*
*NEIC **06** 21:42:19.1±0.4, 6.°09S×103.°63E, h35km, mb4.3/8, Error ellipse: s-maj=16.8km s-min=6.6km az=53.0*
*ISCJB **06** 21:42:21.7±1.2, 6.°02S±0.°10×103.°74E±0.°10, h74km±8km, mb4.1/20, Error ellipse: s-maj=21.6km s-min=7.7km az=136.4*
*DJA **06** 21:42:23.5, 5.°97S×103.°84E, h33km, MLv4.0/9*

ISC 06 21:42:22.3±1.2, 6.°04S±0.°09×103.°7E±0.°1, h61km±9km, n41, σ0°99/40, mb4.2/20, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LWLI	**Liwa**	**1.07**	**19**	P	**Pn**	**21 42 40.8**	**-0.5**
MDSI	**Maura Dua**	**1.61**	**17**	P	**Pn**	**21 42 47.8**	**-0.7**
KLI	**Kotabumi**	**1.64**	**45**	P	**Pn**	**21 42 50.9**	**+2.1**
BLSI	**Bandar Lampung**	**1.67**	**67**	P	**Pn**	**21 42 46.7**	**-2.6**
KLSI		**1.68**	**37**	P	**Pn**	**21 42 49.1**	**-0.4**
MNAI	**Manna**	**1.83**	**336**	P	**Pn**	**21 42 52.0**	**+0.6**
RBSI	**Rajabasa**	**2.03**	**85**	P	**Pn**	**21 42 52.5**	**-1.7**
KSI	**Kapahiang**	**2.62**	**335**	P	**Pn**	**21 43 03.4**	**+1.2**
SKJI	**Sukabumi**	**2.99**	**109**	P	**Pn**	**21 43 08.7**	**+1.4**
CBJI	**Citeko**	**3.15**	**97**	P	**Pn**	**21 43 10.2**	**+0.8**
LEM	**Lembang**	**3.96**	**102**	P	**Pn**	**21 43 21.5**	**+0.9**
KULM	**Kulim**	**11.66**	**345**	*e*Pn	**Pn**	**21 45 02.7**	**-3.3**
FITZ	**Fitzroy Crossi**	**24.53**	**121**	*e*P	**P**	**21 47 36.2**	**-0.1**
	1.9nm,0.7s,mb3.7						
CM31	**Chiang Mai Arr**	**24.79**	**349**	*e*P	**P**	**21 47 37.6**	**-1.0**
CMAR	**Chiang Mai Arr**	**24.79**	**349**	P	**P**	**21 47 38.4**	**-0.2**
	3.9nm,0.7s,mb4.0,baz=182,slow=8.8,SNR=10.0						
CMAR				LR	LR	21 58 31.9	
	comp=Z,60nm,18.1s,baz=190,slow=39						
CHTO	**Chiang Mai**	**25.14**	**349**	*e*P	**P**	**21 47 41.3**	**-0.4**
	7.6nm,0.1s,mb5.2						
WRA	**Warramunga Arr**	**32.81**	**118**	P	**P**	**21 48 49.1**	**-1.0**
	1.3nm,0.6s,mb4.0,baz=286,slow=13,SNR=14						
WRAB	**Tennant Creek**	**32.81**	**118**	*e*P	**P**	**21 48 49.5**	**-0.6**
	1.4nm,0.5s,mb4.2						
ASAR	**Alice Springs**	**33.92**	**124**	P	**P**	**21 48 59.9**	**+0.2**
	2.0nm,1.1s,mb3.9,baz=299,slow=8.0,SNR=2.6						
STKA	**Stephens Creek**	**43.72**	**131**	P	**P**	**21 50 21.7**	**+0.1**
	3.0nm,0.8s,mb4.1,baz=323,slow=14,SNR=6.3						
STKA	**Stephens Creek**	**43.72**	**131**	*e*P	**P**	**21 50 20.9**	**-0.7**
KSRS	**Korea Array**	**48.81**	**26**	P	**P**	**21 51 02.4**	**+1.0**
	3.0nm,0.7s,mb4.4,baz=222,slow=7.9,SNR=12						
MJAR	**Matsushiro Arr**	**53.27**	**35**	P	**P**	**21 51 35.9**	**+1.1**
	0.3nm,0.4s,mb3.6,baz=228,slow=4.9,SNR=4.1						
SONM	**Songino Array**	**53.69**	**2**	P	**P**	**21 51 39.0**	**+1.3**
	4.0nm,0.7s,mb4.4,baz=182,slow=9.3,SNR=26						
ULN	**Ulaanbaatar**	**53.75**	**3**	*e*P	**P**	**21 51 38.5**	**+0.3**
	0.9nm,0.5s,mb4.0						
EKS2	**Erkin-Say**	**55.58**	**334**	*e*P	**P**	**21 51 49.7**	**-1.8**
	1.9nm,0.6s,mb4.3						
MK31	**Makanchi Array**	**55.93**	**342**	*e*P	**P**	**21 51 53.9**	**-0.1**
MKAR	**Makanchi Array**	**55.93**	**342**	P	**P**	**21 51 54.1**	**+0.2**
	2.9nm,0.7s,mb4.4,baz=154,slow=8.2,SNR=20						
KURK	**Kurchatov**	**60.53**	**342**	*e*P	**P**	**21 52 26.5**	**+0.5**
	3.2nm,0.7s,mb4.6						
ZAA0	**Zalesovo Array**	**61.84**	**347**	*e*P	**P**	**21 52 34.5**	**-0.2**
ZALV	**Zalesovo Beam**	**61.84**	**347**	P	**P**	**21 52 34.5**	**-0.3**
	3.9nm,0.6s,mb4.7,baz=149,slow=4.9,SNR=23						
ZALV	**Zalesovo Beam**	**61.84**	**347**	P	**P**	**21 52 34.5**	**-0.3**
BVAR	**Borovoye Array**	**65.25**	**339**	P	**P**	**21 52 57.2**	**0.0**
	0.9nm,0.6s,mb4.0,baz=147,slow=9.4,SNR=6.4						
BRVK	**Borovoye**	**65.31**	**339**	P	**P**	**21 52 56.9**	**-0.8**
ABKAR	**Akbulak array**	**66.94**	**330**	*e*P	**P**	**21 53 08.0**	**-0.2**
	1.8nm,0.6s,mb4.3						
ABKAR				*e*	pP	21 53 22.3	-2.5
ARU	**Arti**	**72.37**	**336**	*e*P	**P**	**21 53 41.3**	**-0.2**
	2.6nm,0.8s,mb4.2						
BOSA	**Boshof**	**77.01**	**242**	P	**P**	**21 54 07.8**	**-1.2**
BRTR	**Keskin Array B**	**78.76**	**312**	P	**P**	**21 54 19.4**	**+0.9**
	0.6nm,0.7s,mb3.6,baz=148,slow=8.0,SNR=4.3						
BUR08	**Bucovina Ar. S**	**86.73**	**318**	*e*P	**P**	**21 55 01.3**	**+1.7**
FINES	**FINESS Array B**	**89.38**	**332**	P	**P**	**21 55 12.7**	**+0.8**
	1.3nm,0.9s,mb4.2,baz=90,slow=4.4,SNR=3.8						
TXAR	**Lajitas Array**	**145.29**	**45**	PKPbc	PKPbc	22 01 54.8	+1.1
	2.5nm,0.8s,baz=290,slow=1.0,SNR=26						

IDC 06 22:15:51.5±6.5, 2.°48S×140.°03E, h0km, mb3.5/2, mb1 3.8/3, mb1mx3.4/14, mbtmp3.6/3, ML3.5/1, Error ellipse: s-maj=254.8km s-min=30.8km az=87.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.23**	**197**	P	Pn	22 20 05.0	-1.0
	0.1nm,0.3s,baz=14,slow=12,SNR=8.6						
ASAR	**Alice Springs**	**21.88**	**195**	P	P	22 20 46.9	+0.7
	1.4nm,0.8s,baz=25,slow=10,SNR=9.1						
MKAR	**Makanchi Array**	**70.42**	**322**	P	P	22 27 07.6	+0.1
	0.5nm,0.7s,baz=99,slow=8.8,SNR=4.8						

GUC 06 22:20:07.0±0.9, 30.°11S×72.°07W, h8km±11km, ML3.6, 3C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OVCH	**Ovalle**	**0.90**	**124**	*e*P	**Pg**	22 20 23.9	-0.5
OVCH				*i* S	Sg	22 20 36.8	+0.8
OVCH				AML	AML	22 20 38.1	
	comp=N,1μm,0.3s						
CMCH	**Combarbala**	**1.40**	**139**	↓*i*P	Pn	22 20 31.6	-1.3
CMCH				*i* S	Sb	22 20 50.6	-0.9
CMCH				AML	AML	22 20 53.2	
	comp=E,2μm,0.5s						
CHNG	**Los Chungos**	**1.83**	**165**	↑*i*P	Pn	22 20 39.1	+0.3
CHNG				*i* S	Sn	22 21 02.6	+0.4
PEL	**Peldehue**	**3.25**	**159**	↑*i*P	Pn	22 20 59.1	+0.9
PEL				*i* S	Sn	22 21 39.2	+2.2
PEL				AML	AML	22 21 55.3	
	comp=E,127nm,0.9s						
CLCH	**Cerro Calan**	**3.53**	**159**	*e*P	Pn	22 21 03.1	+1.0
CLCH				*i* S	Sn	22 21 45.6	+1.7
CLCH				AML	AML	22 22 03.5	
	comp=E,92nm,0.6s						
FCH	**Farellones**	**3.55**	**155**	*e*P	Pn	22 21 03.7	+1.3
FCH				*i* S	Sn	22 21 47.7	+3.2
FCH				AML	AML	22 21 51.2	
	comp=E,63nm,0.3s						
LMEL	**Las Melosas**	**4.05**	**157**	↑*i*P	Pn	22 21 10.7	+1.5
LMEL				*i* S	Sn	22 21 58.9	+2.0
LMEL				AML	AML	22 22 01.2	
	comp=N,73nm,0.1s						

MAN 06 22:50:17, 15.°35N×122.°31E, h3km, mb4.6, ML3.5, MS3.5, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**0.71**	**210**	*e*P	Pg	22 50 31.0	+0.3
POLP				*e*S	Sg	22 50 45.6	+5.6
BALP	**Baler**	**0.80**	**299**	*e*P	Pg	22 50 33.5	+1.1
BALP				*e*S	Sg	22 50 44.5	+1.7
PCPH	**Palayan**	**1.18**	**280**	↓*e*P	Pg	22 50 39.8	+0.1
CAUP	**Cauayan**	**1.65**	**344**	*e*P	Pn	22 50 45.5	-1.4
PVCP	**Virac**	**2.50**	**134**	*e*P	Pn	22 50 59.8	+1.2
OTRP	**Odiongan**	**2.98**	**185**	*e*P	Pn	22 51 06.5	+1.2

MAN 06 22:52:17, 15.°25N×122.°33E, h64km, mb4.7, ML3.6, MS3.5, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**0.64**	**216**	*e*P	Pn	22 52 32.9	+2.0
POLP				*e*S	Sn	22 52 44.0	+3.0
BALP	**Baler**	**0.88**	**304**	*e*P	Pn	22 52 34.4	+0.8
BALP				*e*S	Sn	22 52 48.4	+2.4
PCPH	**Palayan**	**1.23**	**285**	↑*e*P	Pn	22 52 39.2	+1.0

JMA 06 22:59:27.7±0.2, 43.°96N×148.°06E, h0km, M4.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.78**	**251**	P	Pn	23 00 00.2	+0.5
NEM2				*e*S	Sn	23 00 23.7	+0.6
JRA	**Rausu**	**2.12**	**270**	P	Pn	23 00 05.2	+0.8
JRA				*e*S	Sn	23 00 31.9	+0.5
JNK	**Nakash**	**2.45**	**262**	*e*S	Sn	23 00 40.1	+0.6
JTKR	**Abashiri--Toko**	**3.00**	**272**	P	Pn	23 00 17.8	+1.4
JAR	**Ashorobuto**	**3.19**	**259**	P	Pn	23 00 20.9	+1.9
JOB	**Onbets**	**3.25**	**253**	*e*S	Sn	23 01 00.9	+1.6
JCH	**Churui**	**3.68**	**250**	P	Pn	23 00 27.7	+1.8

*RSPR **06** 23:00:39.4, 19.°00N×64.°87W, h38km±15km, MD3.3/4, MD3.3/4*
*NEIC **06** 23:00:39.4, 19.°00N×64.°87W, h38km, MD3.3(RSPR), After RSPR.*

ISC 06 23:00:37.4±2.5, 19.°1N±0.°1×64.°9W±0.°2, h25km±23km, n12, σ0°27/24, 10C-2D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.69**	**155**	↑*e*P	**Pb**	**23 00 50.6**	**-0.2**
TBVI				*e*S	**Sb**	**23 00 59.7**	**-0.2**
TBVI	**Tortola**	**0.69**	**155**	↑*e*P	**Pb**	**23 00 50.6**	**-0.2**
TBVI				*e*S	**Sb**	**23 00 59.7**	**-0.2**
STVI	**Saint Thomas**	**0.69**	**183**	↓*e*P	**Pb**	**23 00 51.0**	**+0.1**
STVI				*e*S	**Sb**	**23 01 00.2**	**+0.2**
STVI	**Saint Thomas**	**0.69**	**183**	↓*e*P	**Pb**	**23 00 51.0**	**+0.1**
STVI				*e*S	**Sb**	**23 01 00.2**	**+0.2**
MTP	**Monte Pirata**	**1.12**	**213**	↑*e*P	**Pn**	**23 00 57.6**	**+0.1**
MTP				*e*S	**Sn**	**23 01 12.5**	**+0.4**
MTP	**Monte Pirata**	**1.12**	**213**	↑*e*P	**Pn**	**23 00 57.6**	**+0.1**
MTP				*e*S	**Sn**	**23

KBL	**Kabul**	59.68	359	*e*P	P	23 25 19.6	+0.1
	4.8nm,1.0s,mb4.5						
STKA	**Stephens Creek**	62.09	114	LR	LR	23 48 49.7	
	comp=Z,286nm,21.1s,MS4.4,baz=206,slow=32						
QSPA	**South Pole Qui**	64.67	180	P	P	23 25 52.5	0.0
	4.0nm,0.9s,mb4.5,baz=299,slow=3.3,SNR=12						
QSPA	**South Pole Qui**	64.67	180	*e*P	P	23 25 51.9	-0.6
	9.1nm,1.1s,mb4.7						
SBA	**Scott Base**	66.71	167	*e*P	P	23 26 05.7	0.0
	1.6nm,0.8s,mb4.1						
MMAI	**Mount Meron Ar**	66.85	329	P	P	23 26 09.1	+2.0
	0.9nm,0.5s,mb4.1,baz=126,slow=3.7,SNR=4.3						
EKS2	**Erkin-Say**	67.87	3	*e*P	P	23 26 13.2	-0.1
	14nm,2.0s,mb4.7						
GNI	**Garni**	69.40	340	*e*P	P	23 26 23.9	+1.0
	6.8nm,0.9s,mb4.6						
CSS	**Prodhromos**	69.43	328	P	P	23 26 22.9	-0.4
GTA	**Gaotai**	70.27	24	*e*P	P	23 26 29.2	+0.9
GTA				pP	pP	23 26 35.8	+4.2
GTA				sP	sP	23 26 40.1	+7.3
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
MK31	**Makanchi Array**	72.76	9	*e*P	P	23 26 42.5	-0.7
MKAR	**Makanchi Array**	72.76	9	P	P	23 26 42.5	-0.7
	comp=Z,1.4nm,0.8s,mb4.0,baz=202,slow=6.6,SNR=6.5						
MKAR				LR	LR	23 57 51.2	
	comp=Z,66nm,19.8s,MS3.9,baz=178,slow=35						
BRTR	**Keskin Array B**	73.20	331	P	P	23 26 46.2	+0.3
	comp=Z,1.7nm,0.9s,mb4.0,baz=152,slow=5.6,SNR=7.2						
BRTR				LR	LR	23 58 59.7	
	comp=Z,38nm,18.9s,MS3.7,baz=114,slow=36						
BR131	**Keskin Array S**	73.20	331	*e*P	P	23 26 45.8	-0.2
ABKAR	**Akbulak array**	74.92	353	*e*P	P	23 26 55.0	-0.7
	comp=Z,11nm,1.3s,mb4.6						
KURK	**Kurchatov**	76.22	6	P	P	23 27 02.6	-0.6
	comp=Z,1.4nm,0.9s,mb3.9,baz=201,slow=6.3,SNR=5.4						
KURK	**Kurchatov**	76.22	6	*e*P	P	23 27 02.8	-0.4
	comp=Z,8.4nm,1.1s,mb4.6						
BVAR	**Borovoye Array**	78.15	0	P	P	23 27 15.0	+1.0
	comp=Z,0.6nm,0.5s,mb3.8,baz=150,slow=6.7,SNR=2.8						
SONM	**Songino Array**	79.94	24	P	P	23 27 24.2	+0.3
	comp=Z,1.4nm,0.8s,mb3.9,baz=216,slow=4.1,SNR=8.7						
SONM				LR	LR	00 01 00.3	
	comp=Z,119nm,21.5s,MS4.2,baz=221,slow=34						
ZALV	**Zalesovo Beam**	80.10	9	P	P	23 27 23.9	-0.7
	comp=Z,1.6nm,0.7s,mb4.0,baz=197,slow=4.6,SNR=9.0						
ZALV				LR	LR	00 02 39.2	
	comp=Z,33nm,18.9s,MS3.7,baz=62,slow=36						
ULN	**Ulaanbaatar**	80.21	24	*e*P	P	23 27 24.8	-0.6
	comp=Z,14nm,1.3s,mb4.7						
ARU	**Arti**	82.14	354	*e*P	P	23 27 35.1	-0.3
	comp=Z,18nm,1.4s,mb4.8						
TLY	**Talaya**	82.28	20	*e*P	P	23 27 35.8	-0.5
KSRS	**Korea Array**	82.90	43	P	P	23 27 40.0	+0.1
	comp=Z,0.4nm,0.3s,mb3.9,baz=237,slow=5.5,SNR=2.4						
KSRS				LR	LR	23 59 00.0	
	comp=Z,73nm,21.3s,MS4.0,baz=44,slow=32						
KEST	**Kesra**	83.60	314	LR	LR	00 02 24.7	
	comp=Z,40nm,18.9s,MS3.8,baz=304,slow=34						
AKASG	**Malin Array Be**	83.97	335	P	P	23 27 44.4	-0.6
	comp=Z,0.4nm,0.4s,mb3.9,baz=145,slow=4.5,SNR=2.2						
AQU	**L'Aquila**	85.32	322	P	P	23 27 52.6	+0.5
MJAR	**Matsushiro Arr**	89.01	48	LR	LR	00 07 57.3	
	comp=Z,71nm,19.7s,MS4.1,baz=250,slow=36						
FINES	**FINESS Array B**	93.57	340	LR	LR	00 08 00.7	
	comp=Z,32nm,21.7s,MS3.7,baz=128,slow=34						
ESDC	**Sonseca Array**	94.56	312	LR	LR	00 12 40.2	
	comp=Z,70nm,21.5s,MS4.1,baz=255,slow=36						

*ISCJB **06** 23:16:02.6±2.1, 9°.04S×0°.07×79°.3W±0°.2, h56km±21km, mb4.1/8, MS2.9/3, Error ellipse: s-maj=30.0km s-min=8.7km az=164.8*
*NEIC **06** 23:16:02.0, 9°.24S×79°.46W, h55km, mb4.3/2, After LIM.*
NEIC Felt [II] at Chimbote.
*IDC **06** 23:16:04.7±3.3, 9°.21S×79°.44W, h47km±34km, mb3.6/5, mb1 4.0/9, mb1mx3.8/19, mbtmp3.8/9, ML4.0/4, MS3.1/6, Ms1 3.1/6, ms1mx2.9/19, Error ellipse: s-maj=43.2km s-min=8.7km az=78.0*
ISC 06 23:16:06.2±1.8, 9°.04S±0°.07×79°.2W±0°.2, h75km±17km, n31, σ1°56/26, mb4.0/8, Off coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	2.04	22	P	Pn	23 16 41.0	+2.5
	65nm,0.3s,baz=212,slow=4.3,SNR=167						
ATAH				S	Sn	23 17 08.9	+5.7
	114nm,0.3s,baz=213,slow=4.3,SNR=9.2						
ATAH				LR	LR	23 17 45.0	
	comp=Z,366nm,19.1s,baz=299,slow=44						
NNA	**Nana**	3.70	142	P	Pn	23 17 00.2	-0.9
	34nm,0.3s,baz=323,slow=12,SNR=53						
NNA				S	Sn	23 17 43.1	-0.4
	67nm,0.3s,baz=150,slow=16,SNR=15						
NNA	**Nana**	3.70	142	*e*Pn	Pn	23 16 58.9	-2.1
NNA				Sn	Sn	23 17 40.1	-3.4
OTAV	**Otavalo**	9.25	4	*e*Pn	Pn	23 18 17.6	+0.7
	6.8nm,0.6s						
OTAV				*e*Sn	Sn	23 19 59.7	+0.4
LPAZ	**La Paz**	12.93	125	P	Pn	23 19 09.5	+2.5
	0.1nm,0.3s,baz=330,slow=15,SNR=7.2						
LPAZ				LR	LR	23 24 41.0	
	comp=Z,95nm,21.4s,baz=5.6,slow=40						
LPAZ	**La Paz**	12.93	125	*e*Pn	Pn	23 19 05.5	-1.6
	0.9nm,0.3s						
LPAZ				LR	LR	23 24 41.0	
ROSC	**El Rosal**	14.62	19	LR	LR	23 25 50.8	
	comp=Z,88nm,19.8s,baz=93,slow=39						
ROSC	**El Rosal**	14.62	19	Pn	Pn	23 19 29.3	+0.1
BCIP	**Isla Barro Col**	18.10	358	*e*P	Pn	23 20 10.7	-2.0
SIV	**San Ignacio**	18.94	113	P	Pn	23 20 24.7	+1.9
	0.2nm,0.3s,baz=307,slow=14,SNR=9.4						
SDV	**Santo Domingo**	19.73	26	P	Pn	23 20 30.2	-1.9
JTS	**JuntasAbangare**	20.06	343	LR	LR	23 27 48.0	
	comp=Z,43nm,19.2s,baz=36,slow=35						
SJG	**San Juan**	29.88	25	LR	LR	23 35 18.4	
	comp=Z,22nm,20.1s,baz=181,slow=38						
CMIG	**Matias Romero**	30.27	329	LR	LR	23 30 49.4	
	comp=Z,28nm,18.0s,baz=288,slow=29						
TEIG	**Tepich**	30.44	343	*e*P	P	23 22 09.4	-2.4
TXAR	**Lajitas Array**	44.88	329	P	P	23 24 14.1	+0.7
	0.6nm,0.9s,mb3.3,baz=152,slow=8.5,SNR=5.9						
MIAR	**Mount Ida**	45.45	343	*e*P	P	23 24 15.8	-2.1
	2.4nm,0.7s,mb4.0						
ACSO	**Alum Creek Sta**	49.15	356	*e*P	P	23 24 45.4	-1.0
ANMO	**Albuquerque**	50.81	331	*e*P	P	23 24 58.9	-0.2
	2.0nm,0.5s,mb4.4						
RKT	**Rikitea**	55.13	248	*e*T		00 24 22.6	
	3.7nm,0.4s						
HWUT	**Hardware Ranch**	58.53	332	*e*P	P	23 25 54.4	-0.5
	4.3nm,0.6s,mb4.7						
PDAR	**Pinedale Array**	58.56	334	P	P	23 25 56.0	+1.0
	0.9nm,0.9s,mb3.8,baz=122,slow=6.5,SNR=5.6						
NVAR	**Mina Array Bea**	59.67	325	P	P	23 26 05.5	+2.7
	1.3nm,0.7s,mb4.1,baz=141,slow=6.2,SNR=9.5						
PPT	**Papeete**	68.75	255	*e*LR	LR	23 48 00.4	
	82nm,25.0s						
YKA	**Yellowknife Ar**	76.39	344	P	P	23 27 48.0	+1.0
	1.5nm,0.7s,mb3.8,baz=141,slow=5.9,SNR=10						
YKA	**Yellowknife Ar**	76.39	344	P	P	23 27 48.0	+0.9
QSPA	**South Pole Qui**	81.07	180	P	P	23 28 15.2	+2.7
	1.8nm,0.7s,mb4.0,baz=97,slow=1.3,SNR=3.7						
QSPA	**South Pole Qui**	81.07	180	P	P	23 28 15.2	+2.7
ASAR	**Alice Springs**	134.17	224	PKP	PKPdf	23 35 17.6	+1.5
	1.0nm,0.9s,baz=125,slow=2.8,SNR=5.2						
KURK	**Kurchatov**	134.57	20	PKP	PKPdf	23 35 18.2	+2.3
	0.6nm,0.5s,baz=322,slow=2.5,SNR=3.5						
WRA	**Warramunga Arr**	136.22	229	PKP	PKPdf	23 35 22.1	+2.1
	0.8nm,0.4s,baz=132,slow=1.5,SNR=4.8						

*IDC **06** 23:23:47.8±1.9, 10°.72N×91°.94E, h0km, mb4.0/9, mb1 4.1/9, mb1mx3.8/24, mbtmp4.0/9, Error ellipse: s-maj=72.0km s-min=16.7km az=65.0*
*ISCJB **06** 23:23:50.3±0.8, 10°.7N±0°.1×91.9E±0°.2, h33km, mb3.9/12, Error ellipse: s-maj=32.7km s-min=10.6km az=149.5*
*NEIC **06** 23:23:52.3±0.7, 10°.73N×91°.83E, h35km, mb4.0/5, Error ellipse: s-maj=30.4km s-min=7.9km az=59.0*
ISC 06 23:23:52.6±0.8, 10°.8N±0°.1×91°.9E±0°.2, h35km, n20, σ0°69/20, mb3.9/12, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UCH	**Uchtor**	34.85	337	P	P	23 30 41.2	+0.8
EKS2	**Erkin-Say**	35.51	337	*e*P	P	23 30 46.5	+0.5
	1.2nm,0.7s,mb3.9						
MK31	**Makanchi Array**	36.84	349	*e*P	P	23 30 55.8	-1.5
MKAR	**Makanchi Array**	36.84	349	P	P	23 30 57.4	+0.1
	1.3nm,0.7s,mb3.9,baz=167,slow=8.7,SNR=12						
MKAR	**Makanchi Array**	36.84	349	P	P	23 30 57.4	+0.1
SONM	**Songino Array**	38.93	16	P	P	23 31 15.8	+0.9
	0.3nm,0.4s,mb3.4,baz=202,slow=6.8,SNR=3.6						
ULN	**Ulaanbaatar**	39.14	16	*e*P	P	23 31 16.1	-0.6
	3.0nm,1.5s,mb3.8						
KURK	**Kurchatov**	41.32	347	P	P	23 31 35.4	+0.6
	0.6nm,0.5s,mb3.5,baz=172,slow=7.4,SNR=4.3						
KURK	**Kurchatov**	41.32	347	P	P	23 31 34.4	-0.3
KSRS	**Korea Array**	41.88	45	P	P	23 31 39.1	-0.4
	0.4nm,0.4s,mb3.4,baz=218,slow=12,SNR=2.5						
ZALV	**Zalesovo Beam**	43.46	354	P	P	23 31 52.3	+0.3
	0.7nm,0.6s,mb3.6,baz=152,slow=6.7,SNR=4.6						
FITZ	**Fitzroy Crossi**	43.95	130	P	P	23 31 55.2	-1.3
	4.3nm,0.8s,mb4.3,baz=217,slow=3.4,SNR=7.8						
FITZ	**Fitzroy Crossi**	43.95	130	*e*P	P	23 31 56.0	-0.5
	6.5nm,0.9s,mb4.4						
WRA	**Warramunga Arr**	51.73	126	P	P	23 32 57.6	+0.8
	2.3nm,0.6s,mb4.3,baz=305,slow=8.7,SNR=13						
WRAB	**Tennant Creek**	51.74	126	*e*P	P	23 32 57.4	+0.5
	2.9nm,0.5s,mb4.5						
ASAR	**Alice Springs**	53.45	130	P	P	23 33 10.1	+0.6
	1.0nm,0.5s,mb4.0,baz=307,slow=6.6,SNR=10.0						
CTAO	**Charters Tower**	61.65	120	*e*P	P	23 34 07.0	-0.3
STKA	**Stephens Creek**	63.68	134	P	P	23 34 20.7	+0.1
	3.1nm,0.8s,mb4.4,baz=304,slow=8.2,SNR=4.4						
STKA	**Stephens Creek**	63.68	134	*e*P	P	23 34 19.9	-0.7
	0.5nm,0.6s,mb3.7						
ESLA	**Sonseca Array**	87.68	310	*e*P	P	23 36 37.1	-0.7

*IDC **06** 23:26:30.8±1.0, 15°.37N×122°.77E, h0km, mb4.0/9, mb1 4.1/9, mb1mx3.8/24, mbtmp4.0/9, ML4.9/1, MS3.7/2, Ms1 3.7/2, ms1mx2.8/23, Error ellipse: s-maj=28.8km s-min=16.9km az=73.0*
*ISCJB **06** 23:26:34.3±1.3, 15°.38N±0°.05×122°.56E±0°.09, h34km±11km, mb4.0/11, MS3.7/2, Error ellipse: s-maj=15.0km s-min=8.1km az=168.4*
*MAN **06** 23:26:34, 15°.39N×122°.32E, h4km, mb4.9, ML3.8, MS3.9*
*NEIC **06** 23:26:35.6±0.4, 15°.32N×122°.75E, h35km, mb4.2/4, Error ellipse: s-maj=13.5km s-min=6.9km az=71.0*
ISC 06 23:26:36.2±2.6, 15°.37N±0°.05×122°.46E±0°.06, h32km±19km, n27, σ1°38/30, mb4.0/11, MS3.7/2, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	0.81	219	*e*P	Pn	23 26 48.7	-2.6
POLP				*e*S	Sn	23 27 02.6	+0.4
BALP	**Baler**	0.93	294	*e*P	Pn	23 26 50.9	-2.1
BALP				*e*S	Sn	23 27 03.7	-1.5
PCPH	**Palayan**	1.33	279	⇑*e*P	Pn	23 26 56.6	-1.9
PCPH				*i* S	Sn	23 27 14.9	-0.2
CAUP	**Cauayan**	1.69	339	*e*P	Pn	23 27 02.9	-0.5
TGY	**Tagaytay City**	1.94	230	Pn	Pn	23 27 09.0	+2.2
	377nm,0.3s,baz=37,slow=1.6,SNR=66						
TGY				Sn	Sn	23 27 36.3	+6.2
	274nm,0.3s,baz=313,slow=19,SNR=7.5						
PVCP	**Virac**	2.41	137	*e*P	Pn	23 27 16.5	+3.2
LUBP	**Lubang**	2.69	233	*e*P	Pn	23 27 19.0	+1.8
APYP	**Conner**	2.74	335	*e*P	Pn	23 27 18.1	+0.1
SJMP	**San Jose**	3.17	204	*e*P	Pn	23 27 26.4	+2.6
CMAR	**Chiang Mai Arr**	22.71	281	P	P	23 31 37.0	+1.6
	3.4nm,0.7s,mb3.9,baz=93,slow=7.9,SNR=16						
FITZ	**Fitzroy Crossi**	33.40	175	P	P	23 33 11.1	-0.8
	7.0nm,1.3s,mb4.4,baz=308,slow=7.6,SNR=3.4						
FITZ	**Fitzroy Crossi**	33.40	175	*e*P	P	23 33 09.7	-2.2
	2.0nm,0.7s,mb4.2						
WRAB	**Tennant Creek**	36.97	161	*e*P	P	23 33 40.7	-2.0
	1.6nm,0.6s,mb4.0						
WRA	**Warramunga Arr**	36.98	161	P	P	23 33 40.5	-2.3
	0.7nm,0.4s,mb3.8,baz=345,slow=9.7,SNR=3.2						
WRA				LR	LR	23 47 58.4	
	comp=Z,123nm,20.7s,MS3.7,baz=285,slow=35						
TLY	**Talaya**	39.23	341	P	P	23 34 01.2	-0.1
ASAR	**Alice Springs**	40.37	164	P	P	23 34 10.2	-1.0
	0.9nm,0.8s,mb3.6,baz=342,slow=7.3,SNR=4.2						
MKAR	**Makanchi Array**	45.75	322	P	P	23 34 55.5	+1.1
	1.4nm,0.7s,mb4.0,baz=117,slow=9.7,SNR=9.0						
ZALV	**Zalesovo Beam**	48.40	331	P	P	23 35 15.3	+0.4
	2.2nm,0.9s,mb4.2,baz=133,slow=6.3,SNR=8.9						
EKS2	**Erkin-Say**	49.64	313	*e*P	P	23 35 25.8	+1.1
KURK	**Kurchatov**	49.79	325	P	P	23 35 26.8	+1.1
	6.1nm,0.6s,mb4.8,baz=121,slow=8.4,SNR=47						
KURK	**Kurchatov**	49.79	325	*e*P	P	23 35 26.7	+1.0
	7.9nm,0.7s,mb4.8						
BVAR	**Borovoye Array**	55.39	325	P	P	23 36 07.7	+0.6
	0.6nm,0.7s,mb3.8,baz=95,slow=9.1,SNR=5.4						
BRVK	**Borovoye**	55.46	325	*e*P	P	23 36 07.6	0.0
	2.0nm,0.8s,mb4.2						
ARU	**Arti**	62.95	326	P	P	23 36 59.1	-0.3
KIV	**Kislovodsk**	72.19	312	P	P	23 37 59.1	+1.1
ARCES	**ARCESS Array B**	78.15	339	LR	LR	00 15 49.4	
	comp=Z,34nm,19.1s,MS3.7,baz=204,slow=38						
FINES	**FINESS Array B**	79.67	331	P	P	23 38 40.8	+0.5
	0.9nm,0.7s,mb3.8,baz=58,slow=5.4,SNR=3.5						

*NEIC **06** 23:58:29.7, 43°.11S×170°.93E, h6km, ML3.9(WEL), After WEL.*
WEL 06 23:58:29.6±0.1, 43°.11S×170°.93E, h5km, ML3.9/22, 2C-2D, Error ellipse: s-maj=0.9km s-min=0.8km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WVZ	**Waitaha Valley**	0.15	284	⇓PG	Pg	23 58 32.8	+0.3
WVZ				SG	Sg	23 58 34.9	+0.4
WVZ	**Waitaha Valley**	0.15	284	P	Pg	23 58 32.8	+0.3
WVZ				S	Sg	23 58 34.9	+0.4
RPZ	**Rata Peaks**	0.61	172	⇑P*	Pg	23 58 41.5	+0.2
RPZ				SG	Sg	23 58 49.1	-0.1
RPZ	**Rata Peaks**	0.61	172	P	Pg	23 58 41.1	-0.2
FOZ	**Fox Glacier**	1.01	243	P*	Pb	23 58 47.0	-2.6
FOZ	**Fox Glacier**	1.01	243	P	Pg	23 58 47.0	-2.0
LTZ	**Lake Taylor**	1.04	72	⇓P*	Pb	23 58 49.3	-0.7
LTZ	**Lake Taylor**	1.04	72	P	Pg	23 58 49.3	-0.2
CRLZ	**Canterbury Las**	1.32	111	P*	Pb	23 58 54.5	-0.3
CRLZ	**Canterbury Las**	1.32	111	P	Pn	23 58 54.5	-0.1
LBZ	**Lake Benmore**	1.38	203	⇑PN	Pn	23 58 54.8	-0.7
LBZ	**Lake Benmore**	1.38	203	P	Pn	23 58 54.8	-0.7
MQZ	**McQueen's Vall**	1.39	116	PN	Pn	23 58 55.1	-0.5
MQZ	**McQueen's Vall**	1.39	116	P	Pn	23 58 55.1	-0.5
DSZ	**Denniston Nort**	1.51	26	PN	Pn	23 58 56.4	-0.8
DSZ	**Denniston Nort**	1.51	26	P	Pn	23 58 56.4	-0.9
JCZ	**Jackson Bay**	1.85	238	PN	Pn	23 59 00.9	-1.0
JCZ	**Jackson Bay**	1.85	238	P	Pn	23 59 00.9	-1.0
ODZ	**Otahua Downs**	1.94	186	PN	Pn	23 59 02.8	-0.5
ODZ	**Otahua Downs**	1.94	186	P	Pn	23 59 02.8	-0.4
THZ	**Tophouse**	1.99	48	PN	Pn	23 59 03.6	-0.2
THZ	**Tophouse**	1.99	48	P	Pn	23 59 04.3	+0.5
KHZ	**Kahutara**	2.04	71	PN	Pn	23 59 04.6	0.0
KHZ	**Kahutara**	2.04	71	P	Pn	23 59 04.6	0.0
WKZ	**Wanaka**	2.20	218	PN	Pn	23 59 06.2	-0.6
WKZ	**Wanaka**	2.20	218	P	Pn	23 59 06.2	-0.6
EAZ	**Earnscleugh**	2.42	208	PN	Pn	23 59 08.3	-1.4
QRZ	**Quartz Range**	2.58	28	PN	Pn	23 59 11.3	-0.6
QRZ	**Quartz Range**	2.58	28	P	Pn	23 59 11.3	-0.6
NNZ	**Nelson**	2.63	45	PN	Pn	23 59 13.4	+0.7
NNZ	**Nelson**	2.63	45	P	Pn	23 59 13.4	+0.8
TUWZ	**Tuamarina**	2.80	54	PN	Pn	23 59 16.6	+1.6
MLZ	**Mavora Lakes**	2.99	221	*e*PN	Pn	23 59 17.4	-0.2
TUZ	**Tuapeka**	2.99	198	PN	Pn	23 59 16.6	-1.0
TUZ	**Tuapeka**	2.99	198	P	Pn	23 59 16.6	-1.0
TCW	**Tory Channel**	3.13	54	*e*PN	Pn	23 59 21.8	+2.2
SYZ	**Scrubby Hill**	3.65	200	PN	Pn	23 59 25.0	-1.7
SYZ	**Scrubby Hill**	3.65	200	P	Pn	23 59 25.0	-1.7
APZ	**The Paps**	4.26	208	*e*PN	Pn	23 59 33.3	-1.8
HIZ	**Hauiti**	5.47	34	PN	Pn	23 59 51.7	0.0
HIZ	**Hauiti**	5.47	34	P	Pn	23 59 51.7	-0.1

MEX 07 00:07:41.2±0.7, 16°.71N×99°.71W, h25km±28km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	0.64	302	*i* P	Pb	00 07 51.7	-2.0
CAIG				*i* S	Sb	00 07 59.9	-2.2
MEIG	**Mezcala**	1.21	4	*i* P	Pn	00 07 59.5	-3.1
MEIG				*i* S	Sn	00 08 14.8	-3.5
PNIG	**Pinotepa**	1.55	101	*i* P	Pn	00 08 04.4	-2.8
PNIG				*i* S	Sn	00 08 23.4	-3.1
UTMO	**Huajuapan**	2.13	58	*e*P	Pn	00 08 14.4	-0.8
UTMO				*i* S	Sn	00 08 37.6	-3.3
MZVM		2.51	10	*e*P	Pn	00 08 18.3	-2.2
MZVM				*i* S	Sn	00 08 46.8	-3.4
PPM	**Popocatepetl**	2.56	23	*e*P	Pn	00 08 20.2	-0.9
PPM				*i* S	Sn	00 08 50.0	-1.5

*CRAAG **07** 00:08:09.8, 35°.50N×6°.14E, Ml3.8*
*CSEM **07** 00:08:15.8±0.5, 35°.75N×6°.15E, h10km, ML3.5, Error ellipse: s-maj=11.4km s-min=5.4km az=174.0*
*NEIC **07** 00:08:16.2, 35°.78N×6°.03E, h2km, ML3.5(ALG), After CSEM.*
ISC 07 00:08:17.2±0.8, 35°.83N±0°.05×6°.11E±0°.04, h17km±5km, n62, σ1°30/85, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTEI	**Djebel Teioual**	0.34	46	P	Pg	00 08 23.4	-0.9
CTEI	**Djebel Teioual**	0.34	46	P	Pg	00 08 23.4	-0.9
CTEI	**Djebel Teioual**	0.34	46	P	Pg	00 08 23.4	-0.9
CKHR	**Kef el Ahmar**	0.52	291	P	Pg	00 08 24.9	-2.7
CKHR	**Kef el Ahmar**	0.52	291	P	Pg	00 08 24.6	-3.0
CKHR	**Kef el Ahmar**	0.52	291	P	Pg	00 08 24.9	-2.7
CASM	**Ain Smara**	0.53	36	P	Pg	00 08 28.7	+0.9
CASM	**Ain Smara**	0.53	36	P	Pg	00 08 28.1	+0.3
CASM	**Ain Smara**	0.53	36	P	Pg	00 08 28.1	+0.3
SET	**Setif**	0.68	303	P	Pg	00 08 30.0	-0.6
SET	**Setif**	0.68	303	P	Pg	00 08 30.0	-0.6
DFRA	**Djebel Bou Aff**	0.74	345	P	Pb	00 08 32.6	+1.0
DFRA	**Djebel Bou Aff**	0.74	345	P	Pb	00 08 32.6	+1.0
CKFL	**Kef-Lekhel**	0.75	41	P	Pb	00 08 32.4	+0.5
CKFL	**Kef-Lekhel**	0.75	41	P	Pb	00 08 32.0	+0.2
CKFL	**Kef-Lekhel**	0.75	41	P	Pb	00 08 32.4	+0.5
CAEH	**'Ain El Ouahch**	1.12	32	P	Pn	00 08 37.0	-1.1
CAEH	**'Ain El Ouahch**	1.12	32	P	Pn	00 08 37.0	-1.1
ABSA	**Djebel Ababsia**	1.19	68	P	Pn	00 08 37.2	-1.9
ABSA	**Djebel Ababsia**	1.19	68	P	Pn	00 08 37.2	-1.9
CMAH	**Djebel Manchou**	1.32	53	P	Pn	00 08 39.5	-1.4
CMAH	**Djebel Manchou**	1.32	53	P	Pn	00 08 39.5	-1.4
AKF	**Akfadou**	1.48	303	P	Pn	00 08 44.5	+1.4
AKF	**Akfadou**	1.48	303	P	Pn	00 08 44.5	+1.4
EMHD	**Djebel Mahouad**	2.58	279	P	Pn	00 08 58.0	-0.3
EMHD	**Djebel Mahouad**	2.58	279	P	Pn	00 08 58.0	-0.3
KEST	**Kesra**	2.63	91	*e*Pn	Pn	00 08 57.6	-1.3
KEST				Sn	Sn	00 09 31.1	+0.7
KEST	**Kesra**	2.63	91	*e*Pn	Pn	00 08 57.6	-1.3
KEST				Sn	Sn	00 09 31.1	+0.6
EBNR	**Beni Rached**	3.74	278	P	Pn	00 09 11.0	-3.1
EBNR	**Beni Rached**	3.74	278	P	Pn	00 09 11.0	-3.1
ETRT	**Tiaret**	3.94	265	P	Pn	00 09 18.0	+1.1
ETRT	**Tiaret**	3.94	265	P	Pn	00 09 18.0	+1.1
EANR	**'Ain N'Sour**	4.07	273	P	Pn	00 09 17.0	-1.7
EANR	**'Ain N'Sour**	4.07	273	P	Pn	00 09 17.0	-1.7
ETOS	**Mallorca**	4.72	327	P	Pn	00 09 28.3	+0.8
ETOS				S	Sn	00 10 21.5	-0.3
ETOS	**Mallorca**	4.72	327	P	Pn	00 09 28.3	+0.7
ETOS				S	Sn	00 10 21.5	-0.3
EIBI	**Ibiza**	4.96	311	P	Pn	00 09 31.1	+0.3
EIBI				S	Sn	00 10 26.4	-1.4
EIBI	**Ibiza**	4.96	311	P	Pn	00 09 31.1	+0.3
EIBI				S	Sn	00 10 26.4	-1.3
EBEN	**Beniarda**	5.81	301	P	Pn	00 09

HUIG	Huatulco	3.20	298	eP	Pn	00 30 37.1 -4.3
HUIG				i S	Sn	00 31 09.6 -8.9
CMIG	Matias Romero	3.26	330	Pn	Pn	00 30 40.4 -1.8
14nm,0.3s,baz=141,slow=12,SNR=39						
CMIG				Sn	Sn	00 31 15.3 -4.5
26nm,0.3s,baz=72,slow=21,SNR=8.1						
CMIG				LR	LR	00 32 01.4
comp=Z,195nm,19.6s,baz=333,slow=41						
CMIG	Matias Romero	3.26	330	i P	Pn	00 30 39.6 -2.5
CMIG				Pn	Pn	00 30 40.4 -1.8
CMIG				Sn	Sn	00 31 15.3 -4.6
CMIG				i S	Sn	00 31 16.5 -3.4
CMIG				LR	LR	00 32 01.4
CMIG	Matias Romero	3.26	330	i P	Pn	00 30 39.6 -2.5
CMIG				i S	Sn	00 31 16.5 -3.4
MRL	Marmol	3.47	76	eP	Pn	00 30 46.7 +1.6
TEIG	Tepich	7.56	38	ePn	Pn	00 31 40.7 -0.6
41nm,0.3s						
TEIG				eSn	Sn	00 33 06.4 +0.4
JTS	JuntasAbangare	8.96	115	Pn	Pn	00 32 03.9 +3.4
0.3nm,0.3s,baz=298,slow=19,SNR=2.1						
BCIP	Isla Barro Col	14.01	110	Pn	Pn	00 33 09.6 -0.1
DWPF	Disney	17.58	37	ePn	Pn	00 33 54.9 -1.1
60nm,1.4s						
628A	Black Gap, Mar	17.61	331	⇑P	Pn	00 33 57.1 +0.8
baz=17						
TXAR	Lajitas Array	17.86	329	P	Pn	00 33 59.9 +0.5
0.1nm,0.3s,baz=144,slow=15,SNR=13						
528A	Cox Ranch, San	18.14	332	⇓P	Pn	00 34 03.7 +1.0
baz=17						
626A	Big Bend Ranch	18.28	328	⇑P	Pn	00 34 05.2 +0.7
baz=17						
527A	Woodward Ranch	18.50	330	⇓P	Pn	00 34 07.6 +0.4
baz=18,SNR=6.2						
428A	Kincaid Ranch,	18.57	333	⇑P	Pn	00 34 07.5 -0.5
baz=18						
526A	Mary Lane Ranc	18.67	329	⇑P	Pn	00 34 09.8 +0.6
baz=18						
426A	McDonald Obser	19.14	330	⇓P	Pn	00 34 15.8 +0.9
baz=18,SNR=8.2						
328A	Wristen Ranch,	19.19	334	⇓P	Pn	00 34 15.0 -0.6
baz=18						
425A	Indio Mountain	19.71	329	⇑P	Pn	00 34 21.1 -0.6
baz=19						
OTAV	Otavalo	20.16	132	eP	P	00 34 23.9 -1.3
325A	Bean Ranch, Si	20.17	330	⇑P	P	00 34 26.4 +1.2
baz=19						
MIAR	Mount Ida	20.20	359	ePn	P	00 34 23.9 -1.5
11nm,1.2s						
MIAR				eSn	S	00 38 12.7 +2.2
226A	Malaga, Loving	20.34	332	⇑P	P	00 34 27.8 +0.9
baz=20						
324A	Moseley Ranch,	20.48	329	⇑P	P	00 34 29.3 +0.7
baz=20						
127A	Arkansas Junct	20.55	335	⇑P	P	00 34 29.3 +0.1
baz=20						
MNTX	Cornudas Mount	20.64	329	eP	P	00 34 30.6 +0.3
3.4nm,0.9s						
225A	Deer Hill, Car	20.71	331	⇑P	P	00 34 31.4 +0.4
baz=20						
ROSC	El Rosal	20.79	115	P	P	00 34 33.5 +1.5
2.7nm,0.6s,baz=97,slow=21,SNR=4.8						
ROSC	El Rosal	20.79	115	eP	P	00 34 32.9 +0.9
126A	Clayton Basin,	20.80	333	⇓P	P	00 34 31.6 -0.4
baz=20						
WMOK	Wichita Mounta	21.00	347	eP	P	00 34 29.9 -4.2
6.9nm,1.1s,mb3.9						
Z27A	Tatum	21.05	336	⇑P	P	00 34 33.6 -1.0
baz=20,SNR=12						
125A	Gardner Draw,	21.09	332	⇑P	P	00 34 35.0 -0.1
baz=20,SNR=7.9						
Z26A	Caprock	21.32	334	⇓P	P	00 34 36.9 -0.7
baz=20,SNR=9.0						
124A	Stringfield Ra	21.50	331	⇓P	P	00 34 39.9 +0.4
baz=21,SNR=6.5						
Z25A	Roswell	21.64	333	⇓P	P	00 34 40.7 -0.4
baz=21						
SWET	Sewanee	21.86	16	P	P	00 34 44.1 +0.8
Z24A	Sheeppen Canyo	21.98	332	⇑P	P	00 34 44.7 +0.1
baz=21,SNR=12						
Y25A	Mesa, Roswell	22.18	334	⇓P	P	00 34 46.7 -0.1
baz=21						
WVT	Waverly	22.30	11	eP	P	00 34 48.6 +0.6
1.6nm,0.7s,mb3.6						
Z23A	Rita Site, Whi	22.33	330	⇑P	P	00 34 48.9 +0.5
baz=22						
220A	Playas Peak, P	22.48	324	⇓P	P	00 34 51.0 +1.0
baz=22						
Y24A	Capitan	22.51	333	⇓P	P	00 34 50.2 0.0
baz=22,SNR=9.3						
121A	Cookes Peak, D	22.55	326	⇓P	P	00 34 51.4 +0.7
baz=22,SNR=11						
W27A	Bowe Ranch, En	22.55	338	⇓P	P	00 34 49.9 -0.7
baz=22						
Z22A	Elephant Butte	22.68	329	⇑P	P	00 34 52.5 +0.4
baz=22						
X25A	Clemmons Ranch	22.69	335	⇓P	P	00 34 52.6 +0.4
baz=22						
Y23A	Lovelace Mesa,	22.80	331	⇓P	P	00 34 53.5 +0.2
baz=22,SNR=8.0						
TKL	Tuckaleechee C	22.92	20	P	P	00 34 54.4 -0.2
1.7nm,0.7s,mb3.6,baz=78,slow=18,SNR=1.9						
TKL				LR	LR	00 43 51.5
comp=Z,74nm,20.1s,MS3.1,baz=269,slow=37						
219A	White Tail Can	22.98	323	⇑P	P	00 34 56.2 +1.0
baz=22						
318A	Bisbee	23.02	321	⇑P	P	00 34 56.7 +1.0
baz=22						
X24A	Lazy VL Ranch,	23.05	333	⇑P	P	00 34 55.7 -0.2
baz=22						
Z21A	St. Cloud Mine	23.09	328	⇓P	P	00 34 56.6 +0.3
baz=22						
W25A	X Bar L Ranch,	23.21	336	⇑P	P	00 34 56.6 -1.0
baz=22,SNR=7.5						
Y22A	Socorro	23.23	330	⇓P	P	00 34 58.2 +0.2
baz=22						
218A	Dragoon	23.42	322	⇓P	P	00 35 00.5 +0.5
baz=23						
Z20A	Nine Sixteen R	23.43	326	⇑P	P	00 35 00.2 +0.2
baz=23						
119A	Ashpeak Ranch,	23.56	324	⇑P	P	00 35 01.7 +0.6
baz=23						
W24A	Lazy 6 Ranch,	23.59	334	⇑P	P	00 35 00.9 -0.5
baz=23						
217A	Green Valley	23.76	320	⇓P	P	00 35 04.4 +1.4
baz=23						
V25A	Rancho No Teng	23.81	336	⇓P	P	00 35 03.0 -0.5
baz=23						
ANMO	Albuquerque	23.83	332	P	P	00 35 03.0 -0.6
0.7nm,0.5s,mb3.3,baz=139,slow=11,SNR=5.8						
ANMO	Albuquerque	23.83	332	eP	P	00 35 02.0 -1.6
1.9nm,0.9s,mb3.5						
118A	Homack Ranch,	23.85	323	⇑P	P	00 35 04.5 +0.6
baz=23						
Y20A	Horse Springs,	23.92	327	⇓P	P	00 35 05.4 +0.9
baz=23,SNR=7.3						
V24A	Rampart Ranch,	23.97	335	⇑P	P	00 35 05.0 +0.1
baz=23						
U26A	Atchley Ranch,	23.98	339	⇓P	P	00 35 04.9 -0.1
baz=23						
X21A	Alamocita Cree	24.04	329	⇓P	P	00 35 05.8 +0.2
baz=23						
TUC	Tucson	24.11	321	eP	P	00 35 05.8 -0.4
2.3nm,0.8s,mb3.7						
U25A	Circle Dot Ran	24.23	337	⇑P	P	00 35 06.9 -0.3
baz=23						
117A	Oracle	24.26	322	⇑P	P	00 35 08.7 +1.1
baz=24						
Y19A	Nutrioso	24.43	326	⇓P	P	00 35 09.5 +0.4
baz=24						
X20A	Quemado	24.48	328	⇑P	P	00 35 10.3 +0.7
baz=24						
T25A	Trinidad	24.89	338	⇑P	P	00 35 12.9 -0.3
baz=24						
W20A	Ramah	24.94	329	⇓P	P	00 35 14.2 +0.5
baz=24						
S25A	Robets Cordova	25.36	339	⇑P	P	00 35 17.7 +0.2
baz=24						
U21A	Nageezi	25.59	332	⇑P	P	00 35 20.6 +1.0
baz=25						
SDCO	Great Sand Dun	25.82	337	eP	P	00 35 22.2 +0.5
2.7nm,1.1s,mb3.7						
ATAH	Atahualpa	25.83	144	P	P	00 35 22.1 +0.2
2.7nm,0.6s,mb4.0,baz=226,slow=5.3,SNR=3.5						
ATAH				LR	LR	00 43 48.7
comp=Z,67nm,18.7s,MS3.2,baz=171,slow=32						
R24A	Sanders Place,	26.11	338	⇓P	P	00 35 24.5 +0.2
baz=25						
S21A	Coal Bank Pass	26.68	334	⇑P	P	00 35 29.6 +0.1
baz=26						
P23A	Jefferson	27.39	338	⇓P	P	00 35 36.4 +0.6
baz=26						
PV01	Paradox Valley	27.41	333	eP	P	00 35 35.0 -1.1
122nm,1.0s						
PCRV	Puerto La Cruz	28.18	95	P	P	00 35 45.4 +2.2
13nm,0.9s,mb4.6,baz=5.8,slow=12,SNR=3.4						
AAM	Ann Arbor	29.13	15	eP	P	00 35 51.2 -0.1
NNA	Nana	30.70	147	P	P	00 36 02.6 -2.8
HWUT	Hardware Ranch	31.58	333	P	P	00 36 11.8 -1.1
PDAR	Pinedale Array	31.72	337	P	P	00 36 14.5 +0.4
0.3nm,0.6s,mb3.3,baz=137,slow=9.6,SNR=2.9						
REDW	Red Top Meadow	32.73	336	eP	P	00 36 22.1 -1.0
5.5nm,1.0s,mb4.4						
NVAR	Mina Array Bea	32.75	322	P	P	00 36 24.9 +1.6
2.0nm,0.9s,mb4.0,baz=143,slow=9.1,SNR=7.4						
NVAR	Mina Array Bea	32.75	322	P	P	00 36 24.9 +1.6
HLID	Hailey	34.40	332	eP	P	00 36 36.1 -1.6
F17A	Fitzpatrick Pl	34.81	338	⇑P	P	00 36 41.3 +0.1
baz=34,SNR=5.8						
LPAZ	La Paz	39.16	140	eP	P	00 37 16.8 -1.6
2.0nm,1.2s,mb3.7						
SIV	San Ignacio	43.71	132	P	P	00 37 53.5 -2.2
0.5nm,0.7s,mb3.4,baz=304,slow=15,SNR=3.4						
SCHQ	Schefferville	45.38	21	LR	LR	00 58 08.1
comp=Z,98nm,19.9s,MS3.7,baz=165,slow=37						
YKA	Yellowknife Ar	50.51	347	P	P	00 38 46.7 -1.5
3.4nm,0.7s,mb4.4,baz=152,slow=7.4,SNR=23						
YKA	Yellowknife Ar	50.51	347	P	P	00 38 46.7 -1.5
DLBC	Dease Lake	51.95	336	P	P	00 38 58.0 -1.0
INK	Inuvik	59.87	344	eP	P	00 39 54.1 -1.4
2.4nm,0.7s,mb4.3						
RES	Resolute Bay	60.42	359	P	P	00 39 58.2 -1.1
NOA	NORSAR Array B	84.46	28	LR	LR	01 17 54.3
comp=Z,19nm,19.4s,MS3.5,baz=0.0,slow=34						
CMAR	Chiang Mai Arr	145.36	339	PKPbc	PKPbc	00 49 27.6 -1.1
1.2nm,0.4s,baz=347,slow=4.6,SNR=6.7						

*ISCJB **07** 01:14:17.9±0.4, 53°.49N±0°.05×158°.9E±0°.1, h146km±3km, mb3.7/9, Error ellipse: s-maj=11.8km s-min=5.6km az=37.3*
*MOS **07** 01:14:17.6±0.5, 53°.71N×158°.42E, h140km, mb3.8/6, Error ellipse: s-maj=40.2km s-min=20.4km az=79.9*
*KRSC **07** 01:14:18.3±0.1, 53°.49N×159°.00E, h141km±21km, ML3.9*
*IDC **07** 01:14:19.2±0.6, 53°.55N×158°.41E, h146km±8km, mb3.5/9, mb1 3.7/9, mb1mx3.4/27, mbtmp3.5/9, Error ellipse: s-maj=30.4km s-min=16.7km az=175.0*
*NEIC **07** 01:14:19.2±0.5, 53°.52N×158°.47E, h146km±6km, Error ellipse: s-maj=21.4km s-min=13.4km az=180.0*

ISC 07 01:14:19.0±0.4, 53°.49N±0°.05×158°.89E±0°.10, h143km±3km, n35, σ1§12/49, mb3.7/9, 1D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AVH	Avacha	0.24	202	eP	Pn	01 14 38.5	0.0
AVH				i S	Sn	01 14 53.9	+0.6
NLC	Nalytchevo	0.42	140	eP	Pn	01 14 38.7	-0.4
NLC				i S	Sn	01 14 54.4	0.0
PET	Petropavlovsk	0.49	197	⇓iPN	Pn	01 14 39.1	-0.4
PET				i S	Sn	01 14 54.5	-0.5
PET				pmax	pmax		
comp=Z,300nm,0.4s							
PET				pmax	pmax		
comp=Z,320nm,0.3s							
PET				smax			
comp=E,2μm,3.2s							
PET				smax			
comp=E,852nm,0.8s							
PET				smax			
comp=N,374nm,0.5s							
PET				smax			
comp=E,400nm,6.9s							
PET	Petropavlovsk	0.49	197	eP	Pn	01 14 39.2	-0.3
PET				i S	Sn	01 14 53.8	-1.2
PET	Petropavlovsk	0.49	197	ePn	Pn	01 14 39.1	-0.4
PET				eS	Sn	01 14 56.0	+1.0
GNL	Ganaly	0.60	290	eP	Pn	01 14 39.7	-0.4
GNL				i S	Sn	01 14 56.2	+0.1
KII	Karymskiy	0.64	31	eP	Pn	01 14 40.2	-0.1
SPN	Mys Shipunski	0.78	120	eP	Pn	01 14 40.4	-0.9
SPN				i S	Sn	01 14 57.0	-1.3
PEA0B	Petropavlovsk-	0.81	242	ePn	Pn	01 14 41.4	-0.2
PETK	Petropavlovsk-	0.81	242	P	Pn	01 14 41.3	-0.2
comp=E,124nm,0.3s,baz=68,slow=12,SNR=1410							
PETK				S	Sn	01 14 58.1	-0.5
comp=E,9.5nm,0.3s,baz=67,slow=11,SNR=6.7							
PETK	Petropavlovsk-	0.81	242	PN	Pn	01 14 41.3	-0.2
PETK				S	Sn	01 14 58.2	-0.5
PETK				pmax	pmax		
comp=Z,124nm,0.3s							
PETK				smax			
comp=N,10.0nm,0.3s							
GRL	Gorelyy	1.06	208	eP	Pn	01 14 44.3	+0.7
GRL				i S	Sn	01 15 04.0	+1.6
MIPR	Malaya Ipel'ka	1.78	228	eP	Pn	01 14 51.2	+0.2
MKZ	Mys Kozlova	1.98	56	eP	Pn	01 14 53.2	-0.2
MKZ				i S	Sn	01 15 17.7	-2.2
KMNR	Kamenistaya	2.40	18	eP	Pn	01 14 59.8	+1.4
KMNR				i S	Sn	01 15 30.9	+2.0
BZMR	Bezymyannaya	2.62	20	eP	Pn	01 15 03.0	+1.9
SRDR	Sredinnyy	2.87	9	eP	Pn	01 15 04.6	+0.3
SKR	Severo-Kuril's	3.29	212	ePN	Pn	01 15 10.5	+0.7
SKR				eS	Sn	01 15 49.3	+0.2
SKR				smax			
comp=N,50nm,0.5s							
SKR				smax			
comp=E,80nm,0.5s							
KBTR	Krutoberegovo	3.54	38	eP	Pn	01 15 13.2	+0.2
KBTR				i S	Sn	01 15 52.1	-2.7
INK	Inuvik	34.00	38	P	P	01 20 49.3	+0.9
comp=E,0.7nm,0.3s,mb3.8,baz=270,slow=7.1,SNR=15							
INK	Inuvik	34.00	38	P	P	01 20 49.3	+0.9
INK				pmax	pmax		
comp=Z,1.0nm,0.3s							
YKA	Yellowknife Ar	43.36	42	P	P	01 22 07.1	+0.8
comp=Z,0.4nm,0.3s,mb3.5,baz=299,slow=7.2,SNR=6.2							
YKA	Yellowknife Ar	43.36	42	P	P	01 22 07.1	+0.8
KURK	Kurchatov	46.91	301	P	P	01 22 32.5	-2.1
comp=Z,0.8nm,0.3s,mb3.8,baz=58,slow=7.6,SNR=4.4							
KURK	Kurchatov	46.91	301	P	P	01 22 32.5	-2.0
KURK				pmax	pmax		
comp=Z,1.0nm,0.3s,mb3.9							
MKAR	Makanchi Array	47.33	295	P	P	01 22 36.1	-1.8
comp=Z,0.2nm,0.5s,mb3.0,baz=55,slow=8.8,SNR=3.8							
BVAR	Borovoye Array	49.58	308	P	P	01 22 53.2	-1.7
comp=Z,0.7nm,0.5s,mb3.5,baz=63,slow=8.5,SNR=7.0							
BVAR	Borovoye Array	49.58	308	P	P	01 22 53.2	-1.7
BVAR				pmax	pmax		
comp=Z,1.0nm,0.5s							
PDAR	Pinedale Array	57.95	60	P	P	01 23 58.0	+2.0
comp=Z,1.1nm,0.5s,mb3.9,baz=337,slow=3.2,SNR=12							
FINES	FINESS Array B	59.47	336	P	P	01 24 04.9	-1.2
comp=Z,1.3nm,0.9s,mb3.7,baz=268,slow=11,SNR=3.1							
FINES	FINESS Array B	59.47	336	P	P	01 24 04.9	-1.2
FINES				pmax	pmax		
comp=Z,1.0nm,0.9s							
TXAR	Lajitas Array	71.14	66	P	P	01 25 23.6	+1.9
comp=Z,1.0nm,0.4s,mb3.9,baz=296,slow=5.0,SNR=26							
TXAR	Lajitas Array	71.14	66	P	P	01 25 23.6	+1.9
TXAR				pmax	pmax		
comp=Z,1.0nm,0.4s							
BRTR	Keskin Array B	75.85	319	eP	P	01 25 56.8	+7.7
BRTR				pmax	pmax		
comp=Z,1.0nm,0.7s							
STKA	Stephens Creek	86.33	195	P	P	01 26 43.9	-0.4
comp=Z,2.5nm,0.6s,mb4.1,baz=334,slow=11,SNR=4.0							

*ISCJB **07** 01:26:35.6±0.6, 15°.48N±0°.06×94°.77W±0°.03, h33km, mb3.4/8, Error ellipse: s-maj=8.4km s-min=3.6km az=10.4*
*MEX **07** 01:26:36.6±1.1, 15°.31N×94°.79W, h16km±16km, MD4.3*
*NEIC **07** 01:26:36.0, 15°.31N×94°.79W, h16km, mb3.8/6, MD4.3(MEX), After MEX.*
*IDC **07** 01:26:38.6±5.5, 15°.67N×94°.66W, h39km±35km, mb3.4/5, mb1 3.8/7, mb1mx3.6/20, mbtmp3.4/7, ML3.6/2, MS3.2/2, Ms1 3.2/2, ms1mx2.5/17, Error ellipse: s-maj=72.2km s-min=20.9km az=38.0*

ISC 07 01:26:35.8±2.2, 15°.41N±0°.07×94°.75W±0°.03, h26km±19km, n28, σ1§31/38, mb3.4/8, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	1.36	286	i P	Pn	01 26 57.5	-1.6
HUIG				i S	Sn	01 27 12.2	-4.0
PCIG		1.50	78	i P	Pn	01 26 59.6	-1.4
PCIG				i S	Sn	01 27 17.0	-2.7
CMIG	Matias Romero	1.68	356	Pn	Pn	01 27 01.8	-1.7
116nm,0.3s,baz=157,slow=11,SNR=793							
CMIG				Sn	Sn	01 27 19.8	-4.4
186nm,0.3s,baz=142,slow=18,SNR=30							
CMIG	Matias Romero	1.68	356	Pn	Pn	01 27 01.8	-1.7
CMIG				Sn	Sn	01 27 19.8	-4.4
TGIG		2.07	49	eP	Pn	01 27 09.5	+0.6
TGIG				eS	Sn	01 27 34.7	+0.8
SCX	San Cristobal	2.42	57	i P	Pn	01 27 13.8	+0.1
SCX				i S	Sn	01 27 42.2	-0.3
THIG		2.45	101	eP	Pn	01 27 14.2	+0.2
THIG				eS	Sn	01 27 42.2	-0.8
VHO	Vista Hermosa	2.53	311	eP	Pn	01 27 16.3	+1.2
VHO				eS	Sn	01 27 44.5	-0.5
PNIG	Pinotepa	3.40	287	eP	Pn	01 27 26.6	-0.4
PNIG				eS	Sn	01 28 04.4	-2.1
APG	El Apazote	4.15	95	Pn	Pn	01 27 38.8	+1.3
2.5nm,0.3s,baz=313,slow=13,SNR=24							
APG				Sn	Sn	01 28 28.7	+3.5
12nm,0.3s,baz=126,slow=17,SNR=5.2							
APG				LR	LR	01 29 33.8	
comp=Z,287nm,19.7s,baz=270,slow=43							
TGUH	Tegucigalpa,Un	7.35	100	Pn	Pn	01 28 27.8	+6.3
TEIG	Tepich	7.81	51	ePn	Pn	01 28 26.7	-1.0
33nm,0.5s							
TEIG				eS	Sn	01 29 54.2	-1.1
JTS	JuntasAbangare	10.82	117	Pn	Pn	01 29 14.5	+5.5
0.5nm,0.3s,baz=311,slow=21,SNR=2.8							
JCT	Junction City	15.70	344	Pn	Pn	01 30 18.1	+2.9
8.8nm,0.7s							
TXAR	Lajitas Array	16.12	331	Pn	Pn	01 30 20.8	+0.2
0.1nm,0.3s,baz=153,slow=12,SNR=7.7							
TXAR	Lajitas Array	16.12	331	Pn	Pn	01 30 20.8	+0.2
WMOK	Wichita Mounta	19.59	350	eP	Pn	01 31 01.4	-2.0
4.6nm,0.9s							
AMTX	Amarillo	20.37	343	eP	P	01 31 11.0	+0.6
6.0nm,0.5s							
BNM	Barren Site	21.52	332	eP	P	01 31 24.4	+1.6
LAZ	Ladron	21.96	332	eP	P	01 31 30.0	+2.4
0.9nm,1.0s,mb3.1							
ANMO	Albuquerque	22.12	334	P	P	01 31 30.1	+0.8
0.4nm,0.3s,mb3.3,baz=140,slow=11,SNR=3.9							
TUC	Tucson	22.27	322	P	P	01 31 32.5	+1.6
1.9nm,0.8s,mb3.6							
ATAH	Atahualpa	27.64	143	LR	LR	01 41 36.3	
comp=Z,40nm,19.3s,baz=196,slow=32							
PDAR	Pinedale Array	30.09	338	P	P	01 32 43.4	+0.5
0.3nm,0.9s,mb3.0,baz=116,slow=8.1,SNR=2.8							
NVAR	Mina Array Bea	30.93	322	P	P	01 32 50.2	-0.2
0.2nm,0.3s,mb3.4,baz=163,slow=11,SNR=3.7							
MCMT	McKenzie Canyo	33.08	336	eP	P	01 33 11.8	+2.5
0.7nm,0.7s,mb3.7							
YKA	Yellowknife Ar	49.08	348	P	P	01 35 19.9	-0.6
0.9nm,0.8s,mb3.9,baz=156,slow=6.6,SNR=4.8							
ESDC	Sonseca Array	80.93	51	P	P	01 38 47.5	-0.5
0.1nm,0.2s,mb3.4,baz=297,slow=4.1,SNR=5.2							

*ISCJB **07** 01:30:49.7±1.1, 17°.7S±0°.3×178°.6W±0°.2, h567km±13km, mb4.2/10, Error ellipse: s-maj=48.8km s-min=18.5km az=149.4*
*IDC **07** 01:30:49.6±2.1, 17°.49S×178°.89W, h526km±28km, mb3.6/5, mb1 3.8/6, mb1mx3.4/16, mbtmp3.6/6, Error ellipse: s-maj=46.3km s-min=17.2km az=147.0*
*NEIC **07** 01:30:50.7±1.0, 17°.69S×178°.70W, h555km±10km, mb4.4/3, Error ellipse: s-maj=45.8km s-min=14.8km az=155.0*

ISC 07 01:30:50.8±1.0, 17°.7S±0°.3×178°.7W±0°.2, h557km±12km, n20, σ0§89/17, mb4.2/10, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.13	269	ePn	P	01 32 08.4	+1.2
AFI	Afiamalu	7.63	61	P	P	01 32 43.8	-1.4
5.4nm,0.3s,baz=15,slow=17,SNR=11							
AFI	Afiamalu	7.63	61	P	P	01 32 43.8	-1.4
ARMA	Armidale	29.83	239	eP	P	01 36 13.9	+0.5
CTA	Charters Tower	33.24	260	eP	P	01 36 38.3	-4.3
6.1nm,0.8s,mb4.2							
CTAO	Charters Tower	33.24	260	eP	P	01 36 42.4	-0.2
6.4nm,0.6s,mb4.3							
STKA	Stephens Creek	38.51	241	eP	P	01 37 26.2	+0.2
5.2nm,0.6s,mb4.2							
STKA	Stephens Creek	38.51	241	P	P	01 37 26.4	+0.4
4.9nm,0.5s,mb4.3,baz=99,slow=7.8,SNR=15							
WRAB	Tennant Creek	44.42	259	eP	P	01 38 11.8	-1.0
2.9nm,0.5s,mb4.1							
WRA	Warramunga Arr	44.43	259	P	P	01 38 11.9	-1.0
3.7nm,0.5s,mb4.2,baz=93,slow=7.0,SNR=26							
ASAR	Alice Springs	44.61	254	P	P	01 38 13.9	-0.3
38nm,0.6s,mb5.1,baz=89,slow=8.3,SNR=331							
KAKA	Kakadu	47.34	269	eP	P	01 38 35.6	+0.5
7.9nm,0.3s,mb4.7							
FITZ	Fitzroy Crossi	52.82	260	eP	P	01 39 14.9	-0.2
4.9nm,0.6s,mb4.0							
MBWA	Marble Bar	57.88	256	eP	P	01 39 49.8	-0.5
MJAR	Matsushiro Arr	67.59	323	P	P	01 40 52.1	-0.2
0.8nm,0.3s,mb3.7,baz=288,slow=31,SNR=3.3							
YHNB	Yeheng	72.01	304	eP	P	01 41 19.5	+0.5
6.4nm,0.3s,mb4.5							
TXAR	Lajitas Array	86.09	58	P	P	01 42 35.5	+2.2
0.3nm,0.7s,mb3.0,baz=206,slow=5.8,SNR=5.4							
BRTR	Keskin Array B	144.46	315	PKP	PKPdf	01 49 24.9	+0.7
1.3nm,0.8s,baz=128,slow=3.8,SNR=7.8							
CLL	Collm	145.20	347	i PKPbc	PKPbc	01 49 26.6	+0.5
comp=Z,3.0nm,0.6s							
MMAI	Mount Meron Ar	145.82	303	PKPbc	PKPbc	01 49 28.5	0.0
comp=Z,1.8nm,0.5s,baz=69,slow=4.6,SNR=5.6							

*MOS **07** 01:59:14.2±1.9, 56°.09N×164°.35E, h17km, mb4.2/1, Error ellipse: s-maj=44.4km s-min=32.3km az=144.7*

KRSC 07 01:59:19.9±0.6, 56°.02N×163°.65E, h15km±15km, ML4.0, Near east coast of Kamchatka Peninsula

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*BEO **07** 02:07:41.8±0.5, 41°.63N×23°.40E, h9km±5km, ML1.8/4*
*SKO **07** 02:07:41.1, 41°.71N×23°.52E, h2km, M1.5, ML1.7*
*THE **07** 02:07:41.7, 41°.55N×23°.42E, h20km±1km, ML2.7/5, Error ellipse: s-maj=1.7km s-min=0.6km az=269.0*
ISC 07 02:07:40.6±0.5, 41°.58N±0°.02×23°.43E±0°.04, h13km±5km, n28, σ0°80/55, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.69	249	*i* Pg	Pg	02 07 55.4	+1.3
VAY				*e*Sg	Sg	02 08 03.9	+0.7
VAY	Valandovo	0.69	249	*e*Pg	Pg	02 07 55.4	+1.3
VAY				*e*Sg	Sg	02 08 07.3	+4.1
VAY				*e*Lg		02 08 07.3	
	comp=E,20nm,0.4s						
VAY				*e*Lg		02 08 07.4	
	comp=N,16nm,0.2s						
VAY	Valandovo	0.69	249	P	Pg	02 07 55.2	+1.1
VAY				S	Sg	02 08 03.9	+0.7
VAY	Valandovo	0.69	249	P	Pg	02 07 55.2	+1.1
VAY	Valandovo	0.69	249	*i* Pg	Pg	02 07 55.4	+1.3
VAY				S	Sg	02 08 03.9	+0.7
SOH	Sokhos	0.76	184	P	Pg	02 07 54.9	-0.4
SOH				S	Sg	02 08 05.9	+0.7
SOH	Sokhos	0.76	184	P	Pg	02 07 54.9	-0.4
SOH				S	Sg	02 08 05.9	+0.7
KAVA	Kavala	1.00	125	P	Pb	02 07 59.5	-0.3
KAVA				S	Sg	02 08 13.4	+0.4
KAVA	Kavala	1.00	125	P	Pb	02 07 59.5	-0.3
KAVA				S	Sg	02 08 13.4	+0.4
THE	Thessaloniki	1.01	200	P	Pb	02 07 59.8	0.0
THE				S	Sg	02 08 13.6	+0.5
THE	Thessaloniki	1.01	200	P	Pb	02 07 59.8	0.0
THE				S	Sg	02 08 13.6	+0.5
HORT	Hortiatis	1.01	194	P	Pb	02 07 59.7	-0.2
HORT				S	Sg	02 08 13.1	-0.1
HORT	Hortiatis	1.01	194	P	Pb	02 07 59.7	-0.2
HORT				S	Sg	02 08 13.1	-0.1
VTS	Vitosha	1.03	351	*e*Pg	Pg	02 07 59.6	-0.8
VTS				*e*Sg	Sg	02 08 13.1	-0.7
VTS	Vitosha	1.03	351	P	Pb	02 08 00.2	0.0
VTS				S	Sb	02 08 15.2	+1.7
VTS	Vitosha	1.03	351	*e*Pg	Pg	02 07 59.6	-0.8
VTS	Vitosha	1.03	351	P	Pb	02 08 00.2	0.0
VTS				*e*Sg	Sg	02 08 13.1	-0.7
VTS				S	Sb	02 08 15.2	+1.7
PLD	Plovdiv	1.09	61	*e*Pg	Pg	02 08 01.7	+0.2
PLD				*e*Sg	Sg	02 08 15.6	-0.1
PLD	Plovdiv	1.09	61	P	Pb	02 08 01.4	+0.2
PLD				S	Sb	02 08 16.4	+1.1
PLD	Plovdiv	1.09	61	P	Pb	02 08 01.4	+0.2
PLD	Plovdiv	1.09	61	*e*Pg	Pg	02 08 01.7	+0.2
PLD				*e*Sg	Sg	02 08 15.6	-0.1
PLD				S	Sb	02 08 16.4	+1.1
OUR	Ouranopolis	1.31	161	P	Pn	02 08 03.8	-0.7
OUR				S	Sb	02 08 20.9	-0.8
OUR	Ouranopolis	1.31	161	P	Pn	02 08 03.8	-0.7
OUR				S	Sb	02 08 20.9	-0.8
PAIG	Paliouri	1.66	173	P	Pn	02 08 08.9	-0.4
PAIG				S	Sn	02 08 29.3	-1.2
PAIG	Paliouri	1.66	173	P	Pn	02 08 08.9	-0.4
PAIG				S	Sn	02 08 29.3	-1.2
BARS	Barje	1.72	316	*e*Pn	Pn	02 08 10.2	0.0
BARS				*e*Sg	Sg	02 08 35.5	-0.5
BARS	Barje	1.72	316	*e*Pn	Pn	02 08 10.2	0.0
BARS				*e*Sg	Sg	02 08 35.5	-0.5
ZAPS	Zavoj	1.79	341	*e*Pn	Pn	02 08 12.5	+1.3
ZAPS				*e*Sg	Sg	02 08 36.1	-2.2

*NEIC **07** 02:18:21.2, 43°.04N×17°.94E, h11km, ML2.5(PDG), After PDG.*
*ISCJB **07** 02:18:21.1±0.4, 43°.09N±0°.02×17°.94E±0°.03, h10km, Error ellipse: s-maj=3.4km s-min=2.7km az=43.5*
*PDG **07** 02:18:21.2±0.1, 43°.04N×17°.94E, h11km, MD2.4/1, ML2.5/10, Error ellipse: s-maj=0.5km s-min=0.9km az=0.0*
*CSEM **07** 02:18:21.3±0.3, 43°.07N×17°.95E, h2km, ML2.5/10, Error ellipse: s-maj=5.0km s-min=4.0km az=37.0*
*VIE **07** 02:18:22.8±0.9, 43°.19N×18°.26E, h10km, mb2.3/1, ML1.8/1, Error ellipse: s-maj=17.9km s-min=6.4km az=53.0 73 km S of Sarajevo*
*BEO **07** 02:18:22.1±0.5, 43°.11N×17°.90E, h4km±3km, ML2.8/4*
ISC 07 02:18:21.0±0.5, 43°.10N±0°.02×17°.89E±0°.03, h3km±5km, n48, σ1°05/90, 24C-6D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STON	Ston	0.26	212	*i* Pg	Pg	02 18 26.8	+0.7
STON				Sg	Sg	02 18 31.4	+1.8
STON	Ston	0.26	212	*i* Pg	Pg	02 18 26.8	+0.7
STON				Sg	Sg	02 18 31.3	+1.8
TREB	Trebinje	0.51	138	*e*Pg	Pg	02 18 31.0	+0.2
TREB				*e*Sg	Sg	02 18 38.9	+1.5
TREB	Trebinje	0.51	138	*e*Pg	Pg	02 18 31.0	+0.2
TREB				*e*Sg	Sg	02 18 38.9	+1.5
BRY	Bratogost	0.52	112	⇑*i*Pg	Pg	02 18 29.7	-1.3
BRY				*e*Sg	Sg	02 18 37.4	-0.3
BRY	Bratogost	0.52	112	⇑*i*Pg	Pg	02 18 29.7	-1.3
BRY				*e*Sg	Sg	02 18 37.4	-0.3
UPM	Unac-Piva	0.76	82	⇑*i*Pg	Pg	02 18 34.3	-1.2
UPM				*e*Sg	Sg	02 18 46.1	+0.8
UPM	Unac-Piva	0.76	82	⇑*i*Pg	Pg	02 18 34.3	-1.2
UPM				*e*Sg	Sg	02 18 46.1	+0.8
HCY	Herceg Novi	0.79	145	⇑*i*Pg	Pg	02 18 34.5	-1.7
HCY				*e*Sg	Sg	02 18 46.3	-0.1
HCY	Herceg Novi	0.79	145	⇑*i*Pg	Pg	02 18 34.5	-1.7
HCY				*e*Sg	Sg	02 18 46.3	-0.1
NKY	Niksic	0.86	109	⇑*i*Pg	Pg	02 18 36.4	-1.2
NKY				*e*Sg	Sg	02 18 49.4	+0.7
NKY	Niksic	0.86	109	⇑*i*Pg	Pg	02 18 36.4	-1.2
NKY				*e*Sg	Sg	02 18 49.4	+0.7
BUM	Brajici-Budva	1.09	137	⇑*i*Pg	Pg	02 18 40.1	-1.8
BUM				*e*Sg	Sg	02 18 56.2	+0.2
BUM	Brajici-Budva	1.09	137	⇑*i*Pg	Pg	02 18 40.1	-1.8
BUM				*e*Sg	Sg	02 18 56.2	+0.2
PLE	Pljevlja	1.12	78	⇓*i*Pg	Pg	02 18 41.7	-0.9
PLE				*e*Sg	Sg	02 18 58.6	+1.4
PLE	Pljevlja	1.12	78	⇓*i*Pg	Pg	02 18 41.7	-0.9
PLE				*e*Sg	Sg	02 18 58.6	+1.4
PDG	Podgorica	1.21	123	⇓*i*Pg	Pn	02 18 42.5	-2.4
PDG				*e*Sg	Sg	02 19 00.6	+0.7
TTG	Podgorica	1.21	123	⇓*i*Pg	Pn	02 18 42.5	-2.4
TTG				*e*Sg	Sg	02 19 00.6	+0.7
TTG	Podgorica	1.21	123	⇓*i*Pg	Pn	02 18 42.5	-2.4
TTG				*e*Sg	Sg	02 19 00.6	+0.7
BBLS	Lazići	1.34	55	*e*Pg	Pn	02 18 45.9	-0.8
BBLS				*e*Sg	Sg	02 19 05.1	+0.9
BBLS	Lazići	1.34	55	*e*Pg	Pn	02 18 45.9	-0.8
BBLS				*e*Sg	Sg	02 19 05.1	+0.9
BEY	Berane	1.49	98	⇑*i*Pg	Pn	02 18 48.4	-0.3
BEY				*e*Sg	Sg	02 19 10.2	+1.3
IVA	Berane	1.49	98	⇑*i*Pg	Pn	02 18 48.4	-0.3
IVA				*e*Sg	Sg	02 19 10.2	+1.3
IVA	Berane	1.49	98	⇑*i*Pg	Pn	02 18 48.4	-0.3
IVA				*e*Sg	Sg	02 19 10.2	+1.3
ULC	Ulcinj	1.52	138	⇑*i*Pg	Pn	02 18 47.9	-1.1
ULC				*e*Sg	Sg	02 19 10.1	+0.4
ULC	Ulcinj	1.52	138	⇑*i*Pg	Pn	02 18 47.9	-1.1
ULC				*e*Sg	Sg	02 19 10.1	+0.4
SJES	Sjenica	1.53	83	*e*Pg	Pb	02 18 49.4	-0.7
SJES				*e*Sg	Sg	02 19 10.3	0.0
PVY	Plav	1.61	107	⇑*i*Pg	Pn	02 18 49.8	-0.6
PVY				*e*Sg	Sg	02 19 13.1	+0.3
PVY	Plav	1.61	107	⇑*i*Pg	Pn	02 18 49.8	-0.6
PVY				*e*Sg	Sg	02 19 13.1	+0.3
BLY	Banja Luka	1.73	343	*e*Pg	Pg	02 18 53.9	-0.3
BLY				*e*Sg	Sg	02 19 16.9	+0.3
BCI	Bajram Curri	1.76	114	*i* PN	Pb	02 18 53.4	-0.6
BCI				*i* SN	Sg	02 19 18.7	+1.0
BCI	Bajram Curri	1.76	114	*i* Pn	Pb	02 18 53.4	-0.6
BCI				*i* Sn	Sg	02 19 18.7	+1.0
PUK	Puka	1.82	125	*i* PN	Pb	02 18 54.3	-0.6
PUK				*i* SN	Sg	02 19 19.2	-0.2
PUK	Puka	1.82	125	*i* Pn	Pb	02 18 54.3	-0.6
PUK				*i* Sn	Sg	02 19 19.2	-0.2
DIVS	Divibare	1.83	56	⇑*i*Pn	Pn	02 18 52.8	-0.5
DIVS				*e*Sg	Sg	02 19 18.9	-0.8
DIVS	Divibare	1.83	56	⇑*i*Pn	Pn	02 18 52.8	-0.5
DIVS				*e*Sg	Sg	02 19 18.9	-0.8
TIR	Tirane	2.28	139	*e*Pn	Pb	02 19 02.3	-0.6
TIR	Tirane	2.28	139	*e*Pn	Pb	02 19 02.3	-0.6
NVLJ	Novalja	2.63	305	*i* Pn	Pn	02 19 06.0	+1.7
NVLJ				Sn	Sg	02 19 43.5	-2.0
NVLJ	Novalja	2.63	305	*i* Pn	Pn	02 19 06.0	+1.6
NVLJ				Sn	Sg	02 19 43.4	-2.1
BARS	Barje	2.90	94	⇑*i*Pn	Pn	02 19 08.5	+0.5
BARS				*e*Sn	Sn	02 19 44.1	+0.7
BARS	Barje	2.90	94	⇑*i*Pn	Pn	02 19 08.5	+0.5
BARS				*e*Sn	Sn	02 19 44.1	+0.7
ZAPS	Zavoj	3.48	85	*e*Pn	Pn	02 19 16.4	+0.4
ZAPS	Zavoj	3.48	85	*e*Pn	Pn	02 19 16.4	+0.4
SOKA	Soboth	4.12	331	⇓*i*Pn	Pn	02 19 26.5	+1.7
SOKA				⇑*i*Sn	Sn	02 20 16.9	+3.5
SOKA	Soboth	4.12	331	Pn	Pn	02 19 26.5	+1.7
SOKA				Sn	Sn	02 20 16.9	+3.5
ARSA	Arzberg	4.48	339	⇑*i*Pn	Pn	02 19 31.6	+1.8
ARSA	Arzberg	4.48	339	⇑*i*Pn	Pn	02 19 31.6	+1.8

*JMA **07** 02:26:42.9±0.1, 28°.83N×140°.11E, h489km, M3.6*
*ISCJB **07** 02:26:43.2±0.6, 28°.79N±0°.07×139°.7E±0°.2, h464km±10km, mb3.7/10, Error ellipse: s-maj=33.6km s-min=7.9km az=167.7*
*IDC **07** 02:26:43.3±0.9, 28°.66N×139°.52E, h453km±18km, mb3.3/8, mb1 3.4/10, mb1mx3.1/25, mbtmp3.3/10, Error ellipse: s-maj=52.4km s-min=29.8km az=39.0*
ISC 07 02:26:44.2±0.5, 28°.82N±0°.07×139°.9E±0°.2, h467km±10km, n25, σ0°77/32, mb3.7/10, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.65	130	P	P	02 27 50.2	0.0
	53nm,0.3s,baz=281,slow=16,SNR=42						
CBIJ				S	S	02 28 42.9	-0.8
	73nm,0.3s,baz=269,slow=22,SNR=12						
CBIJ	Chichi jima	2.65	130	P	P	02 27 50.1	-0.1
CBIJ				*e*S	S	02 28 43.0	-0.7
JHHJ	Haha-jima-NKT	2.97	137	P	P	02 27 52.7	+0.3
JHHJ				*e*S	S	02 28 47.6	-0.1
BSO1	Boso 1	5.89	9	*e*S	S	02 29 34.1	-0.4
BSO3	Boso 3	5.99	5	P	P	02 28 19.5	+0.6
BSO3				*e*S	S	02 29 36.0	-0.3
BSO4	Boso 4	6.17	3	P	P	02 28 22.0	+1.4
BSO4				*e*S	S	02 29 39.2	-0.4
JIE	Ise	6.19	335	P	P	02 28 22.4	+1.5
HMMJ	Hamamatsu 2	6.30	343	P	P	02 28 22.0	0.0
JOD2	Odawara 2	6.46	354	P	P	02 28 24.2	+0.6
JNY	Yasuok	6.75	346	P	P	02 28 27.5	+0.9
JHU	Hanno	7.03	356	P	P	02 28 29.3	-0.2
JHU				*e*S	S	02 29 52.5	-3.4
JRY	Ryogami san	7.23	354	P	P	02 28 32.0	+0.5
JAG	Ashikaga	7.59	357	P	P	02 28 34.8	-0.6
JAG				*e*S	S	02 30 02.3	-4.4
MJAR	Matsushiro Arr	7.83	350	P	P	02 28 37.8	-0.1
	1.8nm,0.3s,baz=169,slow=9.3,SNR=7.8						
MAT	Matsushiro	7.83	350	P	P	02 28 37.7	-0.2
SONM	Songino Array	32.08	316	P	P	02 32 30.8	-0.4
	1.5nm,0.5s,mb3.7,baz=124,slow=8.0,SNR=11						
ZALV	Zalesovo Beam	46.87	318	P	P	02 34 29.0	-1.7
	0.4nm,0.3s,mb3.3,baz=98,slow=10,SNR=3.1						
MKAR	Makanchi Array	47.82	308	P	P	02 34 37.0	-1.1
	0.9nm,0.4s,mb3.4,baz=86,slow=9.9,SNR=19						
KURK	Kurchatov	50.34	314	P	P	02 34 56.3	-0.4
	3.0nm,0.4s,mb4.0,baz=91,slow=7.5,SNR=20						
BVAR	Borovoye Array	55.41	317	P	P	02 35 32.7	-0.3
	1.5nm,0.4s,mb3.7,baz=99,slow=9.2,SNR=7.1						
ARCES	ARCESS Array B	71.25	340	P	P	02 37 16.1	+1.3
	2.4nm,0.8s,mb3.8,baz=64,slow=8.2,SNR=6.0						
JOF	Joensuu	72.64	333	*ep*	P	02 37 23.4	+0.4
	3.3nm,0.6s,mb4.0						
KAF	Kangasniemi	75.04	334	*ep*	P	02 37 36.6	-0.1
	1.3nm,0.5s,mb3.7						
FINES	FINESS Array B	75.51	333	P	P	02 37 39.7	+0.4
	1.2nm,0.3s,mb3.8,baz=65,slow=4.8,SNR=19						
NOA	NORSAR Array B	81.26	337	P	P	02 38 10.4	+0.2
	0.6nm,0.5s,mb3.4,baz=45,slow=5.0,SNR=3.0						

*ISCJB **07** 02:29:54.9±0.7, 31°.32N±0°.05×103°.33E±0°.09, h10km, mb3.5/5, Error ellipse: s-maj=11.3km s-min=5.8km az=158.7*
*IDC **07** 02:29:54.8±1.2, 31°.20N×103°.42E, h0km, mb3.6/5, mb1 3.8/7, mb1mx3.5/25, mbtmp3.6/7, ML3.6/2, Error ellipse: s-maj=35.2km s-min=21.5km az=58.0*
*BJI **07** 02:29:56.8, 31°.32N×103°.41E, h17km, mB4.2/1, mb4.3/1, ML3.6/18, Ms7 3.4/1*
ISC 07 02:29:56.9±0.6, 31°.37N±0°.03×103°.44E±0°.07, h10km, n12, σ1°19/21, mb3.5/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.53	149	Pg	Pg	02 30 05.8	-1.5
CD2				Sg	Sg	02 30 14.7	+0.4
CD2				smax			
	comp=N,5μm,0.9s						
LZH	Lanzhou	4.71	4	Pn	Pn	02 31 12.8	+4.8
LZH				Pg	Pg	02 31 25.7	-1.5
LZH				Sn	Sn	02 32 07.6	+4.8
LZH				Sg	Sg	02 32 28.3	0.0
LZH				smax			
	comp=N,87nm,1.0s						
LZH				smax			
	comp=E,86nm,0.9s						
XAN	Xi'an	5.33	59	Pn	Pn	02 31 17.1	+0.6
XAN				Pg	Pg	02 31 34.7	-4.3
XAN				Sn	Sn	02 32 23.3	+5.4
XAN				Sg	Sg	02 32 47.5	-0.5
XAN				smax			
	comp=N,57nm,0.7s						
XAN				smax			
	comp=E,31nm,0.7s						
GYA	Guiyang	5.65	149	Pg	Pb	02 31 38.5	+2.9
GYA				Sn	Sn	02 32 26.7	+0.8
GYA				smax			
	comp=N,50nm,0.7s						
GYA				smax			
	comp=E,50nm,0.8s						
KMI	Kunming	6.26	186	Pn	Pn	02 31 29.5	+0.3
KMI				Sg	Sg	02 33 10.8	-7.0
KMI				LR	LR		
	comp=Z,230nm,8.1s						
CMAR	Chiang Mai Arr	13.49	199	Pn	Pn	02 33 05.7	-2.7
	comp=Z,0.2nm,0.3s,baz=22,slow=10.0,SNR=4.0						
SONM	Songino Array	16.60	7	Pn	Pn	02 33 50.4	+0.9
	comp=Z,0.1nm,0.3s,baz=193,slow=12,SNR=7.3						
KSRS	Korea Array	21.06	67	P	P	02 34 41.6	+0.6
	comp=Z,2.1nm,0.6s,mb3.7,baz=254,slow=9.5,SNR=9.4						
MKAR	Makanchi Array	22.41	319	P	P	02 34 57.3	+1.9
	comp=Z,1.0nm,0.8s,mb3.3,baz=126,slow=12,SNR=6.6						
ZALV	Zalesovo Beam	26.24	335	P	P	02 35 31.7	-0.1
	comp=Z,0.6nm,0.4s,mb3.4,baz=139,slow=9.0,SNR=3.5						
KURK	Kurchatov	26.69	324	P	P	02 35 36.3	+0.3
	comp=Z,0.6nm,0.7s,mb3.2,baz=128,slow=9.4,SNR=4.1						
WRA	Warramunga Arr	59.01	146	P	P	02 39 55.4	-1.6
	comp=Z,0.7nm,0.7s,mb3.8,baz=340,slow=7.4,SNR=7.5						

*BJI **07** 02:50:34.4, 26°.13N×95°.23E, h55km, mB4.9/23, mb4.8/43, ML4.9/6, Ms4.2/37, Ms7 3.9/29*
*ISCJB **07** 02:50:34.9±0.1, 25°.92N±0°.02×95°.16E±0°.02, h71km, mb4.7/120, Error ellipse: s-maj=3.6km s-min=2.7km az=17.8*
*SZGRF **07** 02:50:35.6, 25°.36N×94°.97E, h72km, mb5.3, Myanmar-India border region*
*LDG **07** 02:50:35.7±0.3, 25°.92N×94°.98E, h72km, Mb4.7/17, Ms3.5/6, Error ellipse: s-maj=14.1km s-min=11.9km az=157.0*
*IDC **07** 02:50:36.7±0.6, 25°.91N×95°.36E, h74km±4km, mb4.1/21, mb1 4.2/21, mb1mx4.2/24, mbtmp4.1/21, MS3.5/15, Ms1 3.5/15, ms1mx3.4/31, Error ellipse: s-maj=16.7km s-min=10.5km az=54.0*
*NEIC **07** 02:50:36.7±0.2, 25°.97N×95°.33E, mb4.9/44, Error ellipse: s-maj=6.3km s-min=3.7km az=55.0*
*MOS **07** 02:50:37.0±0.9, 25°.95N×95°.34E, h91km, mb4.7/45, Error ellipse: s-maj=10.3km s-min=5.0km az=123.4*
*DJA **07** 02:50:39, 25°.87N×95°.27E, h91km, mb4.9/15*
*GCMT **07** 02:50:39.2±0.4, 25°.95N×95°.34E, h70km, MW4.9, Moment Tensor Solution. s22,c22; s60,c84; Moment tensor: Scale 10^{16}Nm; M_{rr}1.70±.13; $M_{\theta\theta}$-2.27±.10; $M_{\phi\phi}$0.56±.11; $M_{r\theta}$-0.88±.09; $M_{r\phi}$1.06±.10; $M_{\theta\phi}$-0.56±.08; Best double couple: $M_0$2.50000×10^{16} NP1:ϕ_s137.00000°, δ45.00000°, λ135.00000°. NP2:ϕ_s262.00000°, δ60.00000°, λ55.00000°. Principal axes: T 2.2700, Plg59.0000°, Azm121.0000°; N 0.4400, Plg30.0000°, Azm281.0000°; P -2.7200, Plg9.0000°, Azm16.0000°; Data Used: IU II CN IC G.*
ISC 07 02:50:37.0±0.2, 25°.90N±0°.03×95°.13E±0°.02, h73km, h73km±.5km: pP-P, n377, σ1°12/347, mb4.7/120, 25C-17D, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	Imphal	1.55	225	*ex*	x	02 50 53.0	
IMP				*e*S	Sn	02 51 20.0	-2.2
SHL	Shillong	2.95	264	*e*PKP	Pn	02 51 22.5	+1.0
SHL				*e*S	Sn	02 51 54.0	-1.9
AGT	Agartala	4.06	241	*i* P	Pn	02 51 32.0	-4.6
AGT				*i* x	x	02 52 58.0	
LSA	Lhasa	5.18	318	P	Pn	02 51 54.4	+2.5
LSA				S	Sn	02 52 50.2	-0.1
LSA				smax			
	comp=N,470nm,1.0s						
LSA				smax			
	comp=E,600nm,1.0s						
GTK	Gangtok	6.01	285	*ex*	x	02 52 16.0	
GTK				*e*S	Sn	02 53 04.0	-6.6
SLGI	Shiliguri	6.08	279	*ex*	x	02 52 40.5	
TAPN	Taplejung	6.80	284	*e*Pn	Pn	02 52 13.0	-1.1
TAPN				*e*Sn	Sn	02 53 26.3	-3.8
KMI	Kunming	6.92	95	P	Pn	02 52 18.1	+2.4
KMI				S	Sn	02 53 35.4	+2.5
KMI				pmax	pmax		
	comp=Z,210nm,0.9s						
KMI				LR	LR		
	comp=N,700nm,8.3s						
KMI				LR	LR		
	comp=E,720nm,6.0s						
KMI				LR	LR		
	comp=Z,690nm,11.1s						
ODAN	Odare	7.01	280	*e*Pn	Pn	02 52 16.4	-0.6
ODAN				*e*Sn	Sn	02 53 32.6	-2.6
CHRT	Chiangrai	7.37	144	PG	Pn	02 52 22.0	+0.1
RAMN	Ramite	7.72	280	*e*Pn	Pn	02 52 26.4	-0.3
RAMN				*e*Sn	Sn	02 53 50.3	-2.3
CHG	Chiang Mai	7.88	153	⇑P	Pn	02 52 30.3	+1.4
	comp=Z,140nm,0.8s						
CHTO	Chiang Mai	7.88	153	*e*Pn	Pn	02 52 30.4	+1.5
CHTO	Chiang Mai	7.88	153	P	Pn	02 52 30.2	+1.3
	comp=Z,0.8nmcomp=Z,2μmcomp=Z,188nm,1.0s						
JIRN	Jiri	8.18	284	*e*Pn	Pn	02 52 32.9	-0.1
JIRN				*e*Sn	Sn	02 54 00.2	-3.7
	comp=Z,611nm,0.4s						
CM31	Chiang Mai Arr	8.20	154	*e*Pn	Pn	02 52 34.8	+1.5
CMAR	Chiang Mai Arr	8.20	154	Lg		02 54 55.7	
	comp=Z,0.7nm,0.3s,baz=307,slow=33,SNR=4.6						
CMAR				ScP	ScP	03 02 25.5	-1.7
	comp=Z,0.4nm,0.3s,baz=263,slow=2.7,SNR=5.0						
GUN	Gumba	8.50	286	*e*Pn	Pn	02 52 36.4	-0.9
GUN				*e*Sn	Sn	02 54 08.6	-3.1
	comp=Z,996nm,0.5s						
BOK	Bokaro	8.66	258	*e*PKP	Pn	02 52 39.5	0.0
BOK				*e*S	Sn	02 54 08.8	-6.8
BOK				AML	AML	02 54 17.5	
	comp=N,938nm,0.4s						
BOK				AML	AML	02 54 19.5	
	comp=E,498nm,0.4s						
PKI	Pulchoki	8.85	283	*e*Pn	Pn	02 52 41.0	-1.1
PKI				*e*Sn	Sn	02 54 15.3	-5.0
PKIN	Phulchoki	8.87	283	*e*Pn	Pn	02 52 41.6	-0.7
PKIN				*e*Sn	Sn	02 54 16.0	-4.6
KKN	Kakani	9.00	284	*e*Pn	Pn	02 52 43.6	-0.6
KKN				*e*Sn	Sn	02 54 20.2	-3.7
	comp=E,535nm,0.5s						
CD2	Chengdu	9.09	55	P	Pn	02 52 43.9	-1.4
CD2				S	Sn	02 54 22.4	-3.6
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,200nm,3.6s						
CD2				LR	LR		
	comp=N,1μm,3.8s						
CD2				LR	LR		
	comp=Z,560nm,9.5s						
DMN	Daman	9.12	283	*e*Pn	Pn	02 52 44.2	-1.7
DMN				*e*Sn	Sn	02 54 22.7	-4.2
BDT	Bhumibol Dam	9.33	157	⇑P	Pn	02 52 51.0	+2.3
	comp=Z,58nm,1.1s						
GKN	Gorkha	9.60	285	*e*Pn	Pn	02 52 50.4	-1.9
GKN				*e*Sn	Sn	02 54 33.9	-4.6
GYA	Guiyang	10.37	84	P	Pn	02 53 02.6	-0.3
GYA				PP		02 53 11.0	
GYA				S	Sn	02 54 51.9	-5.6
GYA				pmax	pmax		
	comp=Z,20nm,0.9s						
GYA				pmax	pmax		
	comp=Z,130nm,4.8s						
GYA				LR	LR		
	comp=N,2μm,9.9s						
GYA				LR	LR		
	comp=E,2μm,13.2s						
GYA				LR	LR		
	comp=Z,2μm,12.8s						
LZH	Lanzhou	12.60	34	*e*P	Pn	02 53 30.0	-3.2
LZH				pP		02 53 43.0	
LZH				S	Sn	02 55 47.0	-4.7
LZH				SS		02 56 04.3	
LZH				pmax	pmax		
	comp=Z,59nm,1.0s						
LZH				pmax	pmax		
	comp=Z,170nm,4.2s						
LZH				LR	LR		
	comp=E,720nm,10.0s						
LZH				LR	LR		
	comp=Z,900nm,11.5s						
VIS	Vishakhapatnam	13.64	236	*e*PKP	Pn	02 53 46.2	-1.0
VIS				AMb	AMB	02 53 48.7	
	comp=Z,136nm,1.3s						
VIS				*e*S	Sn	02 56 06.6	-11
PTH	Pithoragarh	13.70	289	*ex*	x	02

comp=Z,43nm,0.5s
BHPL eS S 02 57 08.3 -22
SDNR Sundarnagar 16.88 293 ePKP **Pn 02 54 27.5 -1.0**
BHK Bhakra 17.32 293 ex pP 02 54 48.0 -1.1
AKL Akola 17.42 256 ePKP **Pn 02 54 35.8 +0.6**
WHN Wuhan 17.55 70 eP **Pn 02 54 33.6 -3.2**
WHN S **S 02 57 46.5 -8.9**
WHN LR LR
comp=Z,610nm,13.8s
HYB Hyderabad 17.56 245 i P **Pn 02 54 39.5 +2.6**
HYB e 02 57 40.0
HYB eS **S 02 57 55.0 -0.7**
THN Thein Dam 18.15 296 ePKP **Pn 02 54 42.4 -1.7**
THN eS **S 02 57 46.8 -20**
AJM Ajmer 18.40 276 ex x 02 55 00.0
AJM eS **S 02 57 57.0 -16**
LATR Latur 18.73 250 ex x 02 55 00.2
LATR eS **S 02 58 04.3 -15**
WMQ Urumqi 18.88 343 P **Pn 02 54 51.9 -0.8**
WMQ pP pP 02 55 05.6 -0.6
WMQ PP 02 55 10.8
WMQ eS **S 02 58 15.4 -6.6**
WMQ PcP PcP 02 59 16.2 +1.3
WMQ ScS ScS 03 06 23.8 -1.7
WMQ pmax pmax
comp=Z,81nm,0.8s
WMQ LR LR
comp=N,180nm,12.0s
WMQ LR LR
comp=E,470nm,12.0s
WMQ LR LR
comp=Z,220nm,13.9s
BTO Baotou 19.20 37 eP **Pn 02 54 54.9 -1.6**
HHC Hu-ho-hao-te 20.21 38 eP **P 02 55 04.0 -1.9**
HHC PP 02 55 26.5
HHC S **S 02 58 39.5 -9.1**
HHC SS 02 59 12.2
HHC PcP PcP 02 59 17.4 0.0
HHC ScP ScP 03 02 45.2 -2.1
HHC PcS PcS 03 02 53.6 -1.3
HHC pmax pmax
comp=Z,32nm,0.8s
HHC pmax pmax
comp=Z,120nm,5.0s
HHC LR LR
comp=N,350nm,10.7s
HHC LR LR
comp=E,340nm,10.6s
HHC LR LR
comp=Z,400nm,10.9s
BSI Banda Aceh 20.29 180 P **P 02 55 06.7 -0.2**
comp=Z,30nm,1.0s
POO Poona 21.01 254 eS **S 02 58 58.3 -6.4**
KSH Kashi 21.02 315 P **P 02 55 16.1 +1.5**
KSH pP 02 55 32.7
KSH PP 02 55 42.0
KSH S **S 02 58 58.4 -6.2**
KSH PcP PcP 02 59 21.4 +2.5
KSH sS sS 02 59 25.7 -3.9
KSH SS 02 59 37.2
KSH ScP ScP 03 02 50.9 +1.6
KSH PcS PcS 03 02 57.1 +0.2
KSH ScS ScS 03 06 31.1 -1.8
KSH pmax pmax
comp=Z,11nm,0.7s,mb4.3
KSH LR LR
comp=N,180nm,6.6s
KSH LR LR
comp=E,140nm,6.3s
KSH LR LR
comp=Z,130nm,5.8s
KULM Kulim 21.16 165 eP **P 02 55 18.2 +1.9**
comp=Z,58nm,1.2s,mb4.8
KULM Kulim 21.16 165 P **P 02 55 17.2 +0.9**
comp=Z,48nm,1.1s,mb4.7
KAD Karad 21.25 250 ex **P 02 55 19.4 +2.2**
KAD AMb AMB 02 55 50.2
comp=Z,117nm,1.6s,mb5.0
KAD eS **S 02 59 02.4 -6.9**
TIA Tai'an 21.42 56 eP **P 02 55 16.4 -2.5**
CEP Cherat 21.61 297 P **P 02 55 21.5 +0.6**
NJ2 Nanjing 21.62 68 eP **P 02 55 18.0 -3.1**
NJ2 pP 02 55 33.6
NJ2 sP sP 02 55 43.0 -2.5
NJ2 PP 02 55 43.6
NJ2 S **S 02 59 03.5 -13**
NJ2 pmax pmax
comp=Z,320nm,1.0s,mb5.6
NJ2 pmax pmax
comp=Z,780nm,4.3s
NJ2 LR LR
comp=N,270nm,14.6s
NJ2 LR LR
comp=E,740nm,13.9s
NJ2 LR LR
comp=Z,510nm,18.7s
IPM Ipoh 22.03 164 P **P 02 55 26.2 +0.6**
comp=Z,34nm,1.1s,mb4.6
BJI Beijing 22.52 46 P **P 02 55 27.7 -2.9**
BJI S **S 02 59 27.8 -4.7**
BJI pmax pmax
comp=Z,8.0nm,0.7s,mb4.2
BJI pmax pmax
comp=Z,86nm,3.9s
BJI LR LR
comp=N,230nm,13.8s
BJI LR LR
comp=E,170nm,18.7s
BJI LR LR
comp=Z,79nm,22.9s
TPTI 22.59 175 P **P 02 55 30.3 -1.2**
comp=Z,47nm,1.2s,mb4.7
MK31 Makanchi Array 23.22 337 eP **P 02 55 37.2 -0.4**
MK31 eScP ScP 03 02 54.9 +0.1
MKAR Makanchi Array 23.22 337 P **P 02 55 37.1 -0.5**
comp=Z,13nm,0.6s,mb4.4,baz=146,slow=11,SNR=94
MKAR ScP ScP 03 02 54.4 -0.3
comp=Z,3.6nm,0.8s,baz=117,slow=4.3,SNR=12
MKAR LR LR 03 06 07.2
comp=Z,136nm,19.7s,baz=154,slow=40
MKAR Makanchi Array 23.22 337 P **P 02 55 37.1 -0.5**
MKAR pmax pmax
comp=Z,13nm,0.6s
MKAR pmax pmax
comp=N,4.0nm,0.9s
MKAR MLR MLR
comp=Z,136nm,19.7s
MKAR Makanchi Array 23.22 337 P **P 02 55 37.0 -0.5**
MKAR ScP ScP 03 02 54.4 -0.3
MKAR LR LR 03 06 07.2
PSI Prapat 23.25 170 P **P 02 55 38.6 +0.5**
comp=Z,28nm,0.9s,mb4.6,baz=333,slow=7.9,SNR=20
PSI Prapat 23.25 170 P **P 02 55 38.6 +0.5**
PSI pmax pmax
comp=Z,28nm,0.9s,mb4.6
SONM Songino Array 23.63 19 P **P 02 55 40.6 -0.7**
comp=Z,6.1nm,0.8s,mb4.0,baz=202,slow=10,SNR=25
SONM LR LR 03 05 52.2
comp=Z,243nm,21.5s,baz=182,slow=39
SONM Songino Array 23.63 19 P **P 02 55 40.6 -0.7**
SONM pmax pmax
comp=Z,6.0nm,0.8s
SONM MLR MLR
comp=Z,243nm,21.5s
AAK Ala-Archa 23.77 320 P **P 02 55 44.6 +2.0**
comp=Z,2.9nm,0.5s,mb3.9,baz=145,slow=4.6,SNR=12
AAK Ala-Archa 23.77 320 P **P 02 55 44.6 +2.0**
AAK pmax pmax
comp=Z,3.0nm,0.5s,mb3.9
FRU Bishkek 23.82 320 eP pP 02 56 02.0 +2.3
FRU pmax pmax
comp=Z,150nm,2.1s,mb5.0
ULN Ulaanbaatar 23.85 20 eP **P 02 55 42.0 -1.3**
ULN pmax pmax
comp=Z,20nm,1.0s,mb4.4
ULN Ulaanbaatar 23.85 20 eP **P 02 55 42.0 -1.3**
comp=Z,20nm,1.0s,mb4.4
ULN Ulaanbaatar 23.85 20 P **P 02 55 42.6 -0.7**
comp=Z,249nmcomp=Z,22nm,1.2s,mb4.4
KBL Kabul 24.08 297 eP **P 02 55 47.7 +2.1**
KBL pmax pmax
comp=Z,69nm,0.8s,mb5.0
KBL Kabul 24.08 297 eP **P 02 55 47.6 +2.0**
comp=Z,68nm,0.8s,mb5.0
EKS2 Erkin-Say 24.21 319 eP **P 02 55 48.5 +1.9**
comp=Z,42nm,0.8s,mb4.8
MYKOM Kota Tinggi 25.39 159 P **P 02 55 56.9 -0.8**
comp=Z,21nm,1.9s,mb4.2
MOY Mondy 26.12 8 eP **P 02 56 07.2 +3.4**
MOY pmax pmax
comp=Z,21nm,1.8s,mb4.3
KK31 Karatay Array 26.43 317 i P pP 02 56 24.4 +0.4
KK31 pmax pmax
comp=Z,7.0nm,0.6s,mb4.3
TLY Talaya 26.55 12 eP **P 02 56 02.7 -5.0**
TLY e 02 56 32.5
TLY eS **S 03 00 38.3 +1.6**
TLY eSS 03 01 53.6
TLY pmax pmax
comp=Z,4.0nm,0.9s,mb4.0
TLY MLR MLR
comp=Z,168nm,20.0s
KURK Kurchatov 27.83 337 P **P 02 56 19.8 +0.5**
comp=Z,59nm,0.7s,mb5.2,SNR=5.6
KURK Kurchatov 27.83 337 P **P 02 56 19.4 +0.1**
comp=Z,4.0nm,0.6s,mb4.1,baz=147,slow=9.9,SNR=20
KURK ScP ScP 03 03 06.5 -1.4
comp=Z,0.8nm,0.3s,baz=155,slow=2.6,SNR=5.5
KURK LR LR 03 08 54.8
comp=Z,100nm,21.1s,baz=140,slow=39
KURK Kurchatov 27.83 337 d i P **P 02 56 19.8 +0.5**
KURK pmax pmax
comp=Z,19nm,1.7s,mb4.3
KURK Kurchatov 27.83 337 eP **P 02 56 19.6 +0.4**
comp=Z,18nm,1.0s,mb4.5
ZAA0 Zalesovo Array 29.05 347 eP **P 02 56 30.8 +0.8**
ZALV Zalesovo Beam 29.05 347 P **P 02 56 30.6 +0.5**
comp=Z,2.4nm,0.6s,mb4.0,baz=177,slow=9.1,SNR=14
ZALV LR LR 03 08 48.3
comp=Z,47nm,19.5s,baz=228,slow=38
ZALV Zalesovo Beam 29.05 347 P **P 02 56 30.6 +0.6**
ZALV pmax pmax
comp=Z,2.0nm,0.6s,mb3.9
ZALV MLR MLR
comp=Z,47nm,19.5s
ZALV Zalesovo Beam 29.05 347 P **P 02 56 30.6 +0.5**
ZALV LR LR 03 08 48.3
KSRS Korea Array 30.05 59 ScP ScP 03 03 12.6 -2.7
comp=Z,2.1nm,0.9s,baz=246,slow=3.3,SNR=7.0
KSRS LR LR 03 08 39.7
comp=Z,79nm,20.4s,baz=92,slow=36
NVS Novosibirsk 30.21 346 i P **P 02 56 40.9 +0.6**
NVS e pP 02 56 58.8 +1.1
NVS eS **S 03 01 31.3 -3.0**
NVS pmax pmax
comp=N,32nm,1.6s
NVS pmax pmax
comp=Z,30nm,1.6s,mb4.7
NVS smax
comp=E,35nm,1.5s
CN2 Changchun 30.39 46 eP **P 02 56 40.3 -1.7**
CN2 esP sP 02 57 05.8 -2.2
CN2 eS **S 03 01 32.1 -5.2**
CN2 pmax pmax
comp=Z,90nm,0.6s,mb5.6
CN2 LR LR
comp=N,500nm,19.0s
CN2 LR LR
comp=E,300nm,19.0s
CN2 LR LR
comp=Z,600nm,18.0s
MYLDM Lahad Datu 30.40 129 P **P 02 56 42.3 -0.1**
comp=Z,27nm,1.4s,mb4.7
BVAR Borovoye Array 32.83 332 P **P 02 57 03.9 +0.6**
comp=Z,4.3nm,0.6s,mb4.4,baz=134,slow=11,SNR=33
BVAR pP pP 02 57 22.2 +1.4
comp=Z,8.9nm,0.7s,baz=134,slow=8.5,SNR=14
BVAR PcP PcP 02 59 46.6 0.0
comp=Z,2.9nm,0.7s,baz=150,slow=3.2,SNR=5.5
BVAR Borovoye Array 32.83 332 P **P 02 57 03.9 +0.6**
BVAR *PP pP 02 57 22.2 +1.4
BVAR 02 59 46.6
BVAR pmax pmax
comp=Z,4.0nm,0.6s
BVAR pmax pmax
comp=Z,9.0nm,0.7s
BVAR pmax pmax
comp=Z,3.0nm,0.7s
BRVK Borovoye 32.90 332 P **P 02 57 04.9 +1.0**
comp=Z,72nm,0.7s,mb5.6,SNR=8.8
BRVK Borovoye 32.90 332 d i P **P 02 57 04.6 +0.7**
BRVK pmax pmax
comp=Z,7.0nm,0.6s,mb4.7
BRVK Borovoye 32.90 332 eP **P 02 57 04.4 +0.5**
comp=Z,14nm,0.8s,mb4.8
ZRNK Zerenda 33.37 331 i P **P 02 57 07.8 -0.2**
ZRNK pmax pmax
comp=Z,7.0nm,0.6s,mb4.7
MDJ Mudanjiang 33.44 47 P **P 02 57 06.9 -1.9**
MDJ pmax pmax
comp=Z,6.0nm,1.0s,mb4.4
MDJ pmax pmax
comp=Z,51nm,4.7s
AB31 Akbulak array 35.86 320 c eP **P 02 57 29.9 +0.3**
AB31 pmax pmax
comp=Z,11nm,0.7s,mb4.9
ABKAR Akbulak array 35.86 320 eP **P 02 57 30.4 +0.8**
comp=Z,7.2nm,0.6s,mb4.8
MRSI Marisa 36.15 130 P **P 02 57 33.5 +1.1**
comp=Z,22nm,1.1s,mb5.0
KLR Kul'dur 36.68 41 eP **P 02 57 32.0 -4.6**
TTSI Tana Toraja 37.41 137 P **P 02 57 44.1 +1.0**
comp=Z,2μmcomp=Z,50nm,0.9s,mb5.4
MAT Matsushiro 38.06 63 P **P 02 57 44.5 -3.9**
MJAR Matsushiro Arr 38.06 63 P **P 02 57 45.5 -2.9**
comp=Z,3.1nm,0.8s,mb4.2,baz=267,slow=11,SNR=12
MJAR ScP ScP 03 03 41.1 -2.5
comp=Z,2.6nm,0.8s,baz=268,slow=3.5,SNR=5.8
MJAR LR LR 03 15 27.5
comp=Z,38nm,20.7s,baz=95,slow=39
MJAR Matsushiro Arr 38.06 63 P **P 02 57 45.6 -2.8**
MJAR pmax pmax
comp=Z,3.0nm,0.9s
MJAR pmax pmax
comp=N,3.0nm,0.8s
MJAR MLR MLR
comp=Z,38nm,20.7s
SPSI Sidrap Palu 38.10 138 P **P 02 57 49.7 +0.8**
comp=Z,51nm,1.4s,mb5.2
SVE Sverdlovsk 39.56 331 eP **P 02 58 02.3 +1.7**
ARU Arti 40.27 329 c i P **P 02 58 07.9 +1.4**
ARU 02 59 39.9
ARU S **S 03 04 16.8 +8.5**
ARU pmax pmax
comp=Z,15nm,1.7s,mb4.5
ARU Arti 40.27 329 eP **P 02 58 07.3 +0.8**
comp=Z,16nm,1.0s,mb4.8
ARU epP pP 02 58 25.5 +1.1
ASAJ Asahikawa 42.27 52 P **P 02 58 20.9 -2.3**
comp=Z,3.4nm,0.3s,mb4.6,baz=279,slow=17,SNR=5.2
ASAJ Asahikawa 42.27 52 P **P 02 58 20.9 -2.3**
ASAJ pmax pmax
comp=Z,3.0nm,0.3s
ERM Erimo 42.39 55 eP **P 02 58 19.0 -5.1**
SOKR Solikamsk 42.82 332 c i P pP 02 58 47.2 +1.9
SOKR pmax pmax
comp=Z,60nm,1.0s,mb5.3
YSS Yuzh-Sakhalins 42.92 48⇓eP **P 02 58 26.2 -2.1**
YSS e 02 58 56.0
YSS e 03 00 13.0
YSS pmax pmax
comp=Z,40nm,1.0s,mb5.1
DGRG David-gareji 43.63 304 P pP 02 58 54.3 +2.2
GNI Garni 44.02 302 P **P 02 58 40.2 +2.9**
GNI e*PP pP 02 58 58.1 +2.7
GNI pmax pmax
comp=Z,23nm,0.9s
GNI Garni 44.02 302 P **P 02 58 40.2 +3.0**
comp=Z,23nm,0.9s,mb4.9
GNI epP pP 02 58 58.1 +2.7
MTA Mtatsminda 44.08 304 P pP 02 58 57.2 +1.4
TBLG Delisi 44.12 304 eP pP 02 58 57.6 +1.4
TBLG Delisi 44.12 304 P pP 02 58 57.7 +1.5
ZEI Tsey 44.83 305 eP pP 02 59 02.0 +0.1
ZEI pmax pmax
comp=Z,34nm,1.3s,mb4.9
ONI Oni 45.15 305 P pP 02 59 07.2 +2.8
GOF Gofitskoye 45.69 309 eP pP 02 59 08.6 0.0
GOF pmax pmax
comp=Z,20nm,1.2s,mb4.7
KIV Kislovodsk 45.82 307 eP **P 02 58 52.8 +1.3**
KIV pmax pmax
comp=Z,10.0nm,1.1s,mb4.5
KIV MLR MLR
comp=Z,28nm,16.0s
VSR Storozhevoye 49.10 316 eP pP 02 59 35.0 -0.2
VSR pmax pmax
comp=N,2.0nm,0.5s
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
VSR pmax pmax
comp=E,20nm,1.0s
TIXI Tiksi 49.51 13 eP **P 02 59 23.5 +3.8**
TIXI pmax pmax
comp=Z,12nm,1.8s,mb4.5
MOS Moscow 50.81 322 eP pP 02 59 46.9 -1.3
MOS e 03 00 05.7
MOS pmax pmax
comp=Z,91nm,1.0s,mb5.8
OBN Obninsk 51.29 321⇓eP **P 02 59 34.3 +1.0**
OBN i pP 02 59 52.2 +0.4
OBN eS **S 03 06 54.9 +8.3**
OBN eSS SS 03 10 22.9 +0.3
OBN pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
OBN MLR MLR
comp=Z,100nm,18.0s
OBN Obninsk 51.29 321 P **P 02 59 33.8 +0.5**
comp=Z,49nm,1.4s,mb5.3
OBN epP pP 02 59 52.4 +0.6
MMAI Mount Meron Ar 51.90 293 LR LR 03 26 22.7
comp=Z,23nm,19.2s,baz=85,slow=41
MBWA Marble Bar 52.51 151 eP **P 02 59 42.1 -0.7**
comp=Z,83nm,2.0s,mb5.4
BR131 Keskin Array S 52.55 301 eP **P 02 59 45.1 +2.1**
BRTR Keskin Array B 52.55 301 P **P 02 59 44.7 +1.7**
comp=Z,2.6nm,0.8s,mb4.3,baz=101,slow=7.5,SNR=13
BRTR pP pP 03 00 02.0 +0.5
comp=Z,9.5nm,1.0s,baz=112,slow=8.0,SNR=12
BRTR Keskin Array B 52.55 301 P **P 02 59 44.7 +1.7**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
BRTR pmax pmax
comp=Z,10.0nm,1.0s
KNA Kununurra 52.77 138 P **P 02 59 43.7 -1.1**
comp=Z,178nm,0.9s
KAKA Kakadu 52.83 132 eP **P 02 59 40.6 -4.7**
comp=Z,79nm,1.3s,mb5.6
KAKA Kakadu 52.83 132 P **P 02 59 43.5 -1.8**
comp=Z,24nm,1.0s,mb5.2
FITZ Fitzroy Crossi 52.84 143 eP **P 02 59 44.1 -1.2**
comp=Z,9.6nm,0.6s,mb5.0
FITZ Fitzroy Crossi 52.84 143 P **P 02 59 43.9 -1.4**
PETK Petropavlovsk- 53.36 42 P **P 02 59 47.7 -1.0**
comp=Z,5.5nm,0.9s,mb4.6,baz=178,slow=5.3,SNR=5.2
PETK LR LR 03 22 43.6
comp=Z,27nm,18.1s,baz=102,slow=36
PETK Petropavlovsk- 53.36 42 P **P 02 59 47.7 -1.0**
PETK pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
PETK MLR MLR
comp=Z,27nm,18.1s
PETK Petropavlovsk- 53.36 42 P **P 02 59 47.7 -1.0**
PETK LR LR 03 22 43.6
AKASG Malin Array Be 55.32 315 P **P 03 00 02.5 -0.4**
comp=Z,2.5nm,0.5s,mb4.5,baz=82,slow=6.3,SNR=8.4
AKASG pP pP 03 00 21.5 -0.1
comp=Z,21nm,0.8s,baz=79,slow=6.9,SNR=18
AKASG Malin Array Be 55.32 315 P **P 03 00 02.5 -0.4**
AKASG *PP pP 03 00 21.5 -0.1
AKASG pmax pmax
comp=Z,3.0nm,0.5s
AKASG pmax pmax
comp=Z,21nm,0.8s
AKBB Malin Array Si 55.32 315 eP **P 03 00 03.3 +0.4**
AKBB e*PP pP 03 00 21.3 -0.3
KIEV Kiev 55.33 315 eP **P 03 00 02.9 -0.1**
KIEV pmax pmax
comp=Z,24nm,0.9s,mb5.2
KIEV Kiev 55.33 315 eP **P 03 00 02.9 -0.1**
comp=Z,24nm,0.9s,mb5.2
JOF Joensuu 55.38 330 eP **P 03 00 03.4 +0.2**
JOF pmax pmax
comp=Z,33nm,0.8s,mb5.4
JOF Joensuu 55.38 330 ep **P 03 00 03.4 +0.2**
comp=Z,33nm,0.8s,mb5.4
MICGM Minsk 56.22 320 e pP 03 00 27.0 -1.1
MNK Minsk 56.25 320 eP pP 03 00 27.0 -1.3
NACGM Naroch 56.87 320 e pP 03 00 30.0 -2.7
IDID Didziasalis 56.91 321 eP pP 03 00 33.6 +0.7
IDID AMB AMB 03 00 35.5
comp=Z,11nm,0.9s,mb4.9
VRI Vrincioaia 57.16 309⇑P **P 03 00 17.8 +1.7**
VRI Vrincioaia 57.16 309⇑i P **P 03 00 17.8 +1.7**
TESR 57.16 310⇓P pP 03 00 35.6 +0.6
TESR 57.16 310⇓i P pP 03 00 35.6 +0.7
IZAR Zarasai 57.20 321 eP pP 03 00 35.4 +0.4
IZAR AMB AMB 03 00 36.7
comp=Z,14nm,0.8s,mb5.0
IIGN Ignalina 57.20 321 eP pP 03 00 35.7 +0.6
IIGN AMB AMB 03 00 36.9
comp=Z,21nm,0.8s,mb5.2
PLOR Plostina 57.21 309⇓P **P 03 00 18.8 +2.3**
PLOR Plostina 57.21 309⇓i P **P 03 00 18.8 +2.3**
ISAL Salakas 57.26 321 eP pP 03 00 36.1 +0.6
ISAL AMB AMB 03 00 37.2
comp=Z,15nm,0.9s,mb5.0
FINES FINESS Array B 57.61 328 P **P 03 00 19.6 +0.6**
comp=Z,1.4nm,0.6s,mb4.2,baz=90,slow=8.9,SNR=7.1
FINES pP pP 03 00 38.5 +0.6
comp=Z,15nm,0.7s,baz=90,slow=8.0,SNR=24
FINES FINESS Array B 57.61 328 P **P 03 00 19.6 +0.6**
FINES *PP pP 03 00 38.5 +0.6
FINES pmax pmax
comp=Z,1.0nm,0.6s
FINES pmax pmax
comp=Z,15nm,0.7s
MLR Muntele Rosu 57.73 309 LR LR 03 27 38.4
comp=Z,42nm,19.0s,baz=195,slow=38
MLR Muntele Rosu 57.73 309⇑P **P 03 00 22.1 +1.9**
MLR Muntele Rosu 57.73 309⇑i P **P 03 00 22.1 +1.9**
BURAR Bucovina Array 58.05 312⇑P **P 03 00 22.4 0.0**
BURAR Bucovina Array 58.05 312⇑i P **P 03 00 22.4 0.0**
BUR08 Bucovina Ar. S 58.06 312 eP **P 03 00 22.6 +0.2**
VOIR 58.37 309⇑P **P 03 00 25.2 +0.6**
VOIR 58.37 309⇑i P **P 03 00 25.2 +0.6**
LVV L'vov 58.67 314 eP pP 03 00 45.4 -0.1
ARCES ARCESS Array B 58.88 337 P **P 03 00 28.3 +0.6**
comp=Z,1.4nm,0.8s,mb4.0,baz=83,slow=7.4,SNR=3.8
ARCES pP pP 03 00 48.2 +1.6
comp=Z,5.9nm,0.7s,baz=81,slow=7.5,SNR=8.4
ARCES LR LR 03 27 03.0
comp=Z,44nm,20.2s,baz=145,slow=37
ARCES ARCESS Array B 58.88 337 P **P 03 00 28.4 +0.7**
ARCES *PP pP 03 00 48.3 +1.7
SUW Suwalki 58.98 319 eP **P 03 00 28.3 -0.4**
SUW epP pP 03 00 47.5 -0.1
SUW Suwalki 58.98 319 eP **P 03 00 28.6 -0.1**
comp=Z,74nm,1.0s,mb5.7
WRAB Tennant Creek 59.38 136 P **P 03 00 31.0 -0.9**
comp=Z,428nm,0.8s,SNR=17
WRAB Tennant Creek 59.38 136 eP **P 03 00 31.0 -0.9**
WRAB pmax pmax
comp=Z,48nm,0.8s,mb5.6
WRAB Tennant Creek 59.38 136 eP **P 03 00 31.0 -0.9**
comp=Z,48nm,0.8s,mb5.6
WRA Warramunga Arr 59.38 136 P **P 03 00 31.0 -0.9**
comp=Z,39nm,0.7s,mb5.5,baz=327,slow=7.4,SNR=95
WRA Warramunga Arr 59.38 136 P **P 03 00 31.0 -0.9**
WRA pmax pmax
comp=Z,39nm,0.7s
KWP Kalwaria Pacla 59.55 314 eP **P 03 00 33.3 +0.6**
KWP epP pP 03 00 52.3 +0.7
KWP Kalwaria Pacla 59.55 314⇓P **P 03 00 33.6 +0.9**
KWP Kalwaria Pacla 59.55 314⇓i P **P 03 00 33.6 +0.9**
TRPA Tarpa 59.80 312⇑i P pP 03 00 54.8 +1.4
DRGR 59.83 311⇑P **P 03 00 36.1 +1.4**
DRGR 59.83 311⇑i P **P 03 00 36.1 +1.4**
VTS Vitosha 60.05 306⇑P **P 03 00 36.9 +0.6**
VTS Vitosha 60.05 306⇑i P **P 03 00 36.8 +0.5**
CRVS Cervenica-Dubn 60.43 313 eP pP 03 00 59.0 +1.3
CRVS Cervenica-Dubn 60.43 313 epP pP 03 00 59.0 +1.3
STHS Stebnicka Huta 60.52 314 eP pP 03 00 58.3 0.0
STHS Stebnicka Huta 60.52 314 epP pP 03 00 58.3 0.0
NIE Niedzica 61.12 314 eP pP 03 01 03.7 +1.3
KECS Kecovo 61.12 313 eP pP 03 01 02.7 +0.2

KECS Kecovo 61.12 313 pP pP 03 01 02.7 +0.2
ASAR Alice Springs 61.93 139 P **P** **03 00 48.5 -0.6**
comp=Z,36nm,0.8s,mb5.5,baz=322,slow=6.6,SNR=228
ASAR Alice Springs 61.93 139 P **P** **03 00 48.6 -0.6**
ASAR pmax pmax
comp=Z,36nm,0.8s
KMBO Kilima Mbogo 61.95 254 *e*P **P** **03 00 51.4 +1.9**
KMBO pmax pmax
comp=Z,78nm,2.4s
KMBO Kilima Mbogo 61.95 254 *e*P **P** **03 00 51.4 +1.9**
comp=Z,78nm,2.4s,mb5.3
NWAO Narrogin (SRO) 62.17 159 *e*P **P** **03 00 49.2 -1.3**
NWAO pmax pmax
comp=Z,14nm,0.5s
NWAO Narrogin (SRO) 62.17 159 *e*P **P** **03 00 49.2 -1.4**
comp=Z,14nm,0.5s,mb5.2
VYHS Vyhne 62.21 313 *e*P pP 03 01 09.3 -0.5
VYHS Vyhne 62.21 313 *e*pP pP 03 01 09.3 -0.5
BUD Budapest 62.23 312⇑*e*pP pP 03 01 06.1 -3.9
OKC Ostrava-Krasne 62.46 315 *e*P **P** **03 00 53.1 +0.7**
OKC *e**PP pP 03 01 11.7 +0.2
OKC Ostrava-Krasne 62.46 315 *e*P **P** **03 00 53.1 +0.7**
OKC *e*pP pP 03 01 11.7 +0.2
KOLL Kolacno 62.48 313 *e*P pP 03 01 04.1 -7.5
KOLL Kolacno 62.48 313 *e* pP 03 01 04.1 -7.5
GKP Gorka Klasztor 62.57 319 *e*P **P** **03 00 54.1 +1.0**
GKP *e*pP pP 03 01 12.6 +0.4
PKSM Moragy 62.70 311 ⇓P **P** **03 00 54.3 +0.2**
PKSM Moragy 62.70 311⇓*i*P **P** **03 00 54.3 +0.2**
MORC Moravsky Berou 62.86 315 *e*P **P** **03 00 55.7 +0.6**
MORC *e**PP pP 03 01 14.2 +0.1
MORC pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
MORC Moravsky Berou 62.86 315 *e*P **P** **03 00 55.7 +0.6**
comp=Z,5.3nm,1.1s,mb4.4
MORC *e*pP pP 03 01 14.2 0.0
MORC Moravsky Berou 62.86 315⇓*i*P **P** **03 00 56.2 +1.1**
SMOL Smolenice 63.13 313 *e*P pP 03 01 16.6 +0.6
SMOL Smolenice 63.13 313 *e*pP pP 03 01 16.6 +0.6
ZST Bratislava 63.40 313 *e*P **P** **03 00 59.9 +1.2**
ZST Bratislava 63.40 313 *e*P **P** **03 00 59.9 +1.2**
KSP Ksiaz 63.48 316 *e*P **P** **03 00 59.8 +0.6**
KSP *e*pP pP 03 01 18.8 +0.5
KSP Ksiaz 63.48 316 *e*P **P** **03 00 59.3 +0.1**
KSP *e*pP pP 03 01 18.4 +0.1
VRAC Vranov 63.54 314 LR LR 03 33 44.7
comp=Z,35nm,18.4s,baz=44,slow=41
VRAC Vranov 63.54 314 ⇓P **P** **03 01 01.0 +1.4**
VRAC Vranov 63.54 314⇓*i*P **P** **03 01 01.0 +1.4**
DPC Dobruska-Polom 63.55 315 *e*P **P** **03 01 01.2 +1.6**
DPC Dobruska-Polom 63.55 315 *e*P **P** **03 01 01.2 +1.6**
DPC *e*pP pP 03 01 19.0 +0.3
HFS Hagfors 63.69 326 LR LR 03 31 13.0
comp=Z,66nm,18.8s,baz=139,slow=38
UPC Upice 63.72 316 *e*pP pP 03 01 20.5 +0.7
TREC Trest 64.26 314 *e*pP pP 03 01 24.3 +0.9
CONA Conrad Observa 64.26 313⇑*i*P **P** **03 01 05.0 +0.7**
comp=Z,5.5nm,0.9s,mb4.4
PVCC Panska Ves 64.62 316 *e*P **P** **03 01 07.7 +1.1**
PVCC *e**PP pP 03 01 26.7 +0.9
PVCC Panska Ves 64.62 316 *e*P **P** **03 01 07.7 +1.1**
PVCC *e*pP pP 03 01 26.7 +0.9
PRU Pruhonice 64.73 315 *e*P **P** **03 01 09.1 +1.7**
PRU *e**PP pP 03 01 27.8 +1.2
PRU Pruhonice 64.73 315 *e*P **P** **03 01 09.1 +1.7**
PRU *e*pP pP 03 01 27.8 +1.2
RUE Ruedersdorf 64.76 318 *e*P **P** **03 01 08.8 +1.3**
comp=Z,29nm,1.1s,mb5.0
RUE *e*pP pP 03 01 27.1 +0.4
GROS Grobnik 64.79 311 *e*P pP 03 01 26.9 -0.1
NB2 NORSAR Subarra 64.79 328 P **P** **03 01 06.9 -0.7**
comp=Z,0.4nm,0.7s,baz=83,slow=6.9
NOA NORSAR Array B 64.79 328 P **P** **03 01 07.2 -0.4**
comp=Z,2.7nm,0.7s,mb4.2,baz=82,slow=6.5,SNR=8.3
NOA pP pP 03 01 26.6 -0.1
comp=Z,7.0nm,0.8s,baz=82,slow=6.5,SNR=11
NOA LR LR 03 32 06.1
comp=Z,39nm,21.7s,baz=315,slow=38
NOA NORSAR Array B 64.79 328 P **P** **03 01 07.2 -0.4**
NOA *PP pP 03 01 26.6 -0.1
NOA pmax pmax
comp=Z,3.0nm,0.7s
NOA pmax pmax
comp=Z,7.0nm,0.8s
NOA MLR MLR
comp=Z,39nm,21.7s
BRG Berggiesshubel 64.95 316 *e*P **P** **03 01 09.6 +0.8**
comp=Z,15nm,1.0s,mb4.8
BRG *e*pP pP 03 01 27.9 0.0
BRG Berggiesshubel 64.95 316 *e*P **P** **03 01 09.6 +0.9**
comp=Z,11nm,1.5s,mb4.5
BRG *e* pP 03 01 28.0 +0.1
comp=Z,15nm,1.0s
BRG *e* 03 18 31.9
comp=Z,1.5nm,0.8s
CRES Cresnjev 64.95 311 *e*P pP 03 01 28.2 +0.1
SOKA Soboth 65.06 312⇑*i*P **P** **03 01 09.7 +0.1**
comp=Z,2.5nm,0.8s,mb4.1
MOA Molln 65.33 313⇑*i*P **P** **03 01 10.8 -0.5**
comp=Z,4.3nm,0.8s,mb4.3
VNDS Vrh nad Dolski 65.41 311 *i* P pP 03 01 31.3 +0.2
CLL Collm 65.45 317 *e*P **P** **03 01 12.6 +0.6**
comp=Z,16nm,1.1s,mb4.8
CLL *e*pP pP 03 01 30.9 -0.3
CLL Collm 65.45 317 *e*P **P** **03 01 13.0 +1.0**
CLL *i* pP pP 03 01 31.0 -0.2
comp=Z,17nm,1.2s
CLL *e*PcP PcP 03 01 43.0 -0.4
KHC Kasperske Hory 65.52 314 *e*P **P** **03 01 13.1 +0.6**
KHC *e**PP pP 03 01 32.3 +0.6
KHC Kasperske Hory 65.52 314 *e*P **P** **03 01 13.1 +0.6**
KHC *e*pP pP 03 01 32.3 +0.6
TANN Tannenbergstha 65.96 316 *e*P **P** **03 01 16.5 +1.2**
comp=Z,15nm,1.3s,mb4.7
TANN *e*pP pP 03 01 34.8 +0.3
WET Wettzell 65.97 315 *e*P **P** **03 01 15.8 +0.4**
comp=Z,12nm,0.9s,mb4.7
WET *e*pP pP 03 01 35.1 +0.5
NKC Novy Kostel 66.01 316 *e*pP pP 03 01 34.9 +0.1
WERD Werda 66.05 316 *e*P **P** **03 01 15.7 -0.2**
comp=Z,15nm,1.1s,mb4.7
WERD *e*pP pP 03 01 35.4 +0.3
GUNZ Gunzen 66.05 316 *e*P **P** **03 01 16.9 +1.0**
comp=Z,22nm,1.1s,mb4.9
GUNZ *e*pP pP 03 01 35.4 +0.3
RJOB Jochberg 66.33 313 *e*P **P** **03 01 17.9 +0.2**
comp=Z,15nm,1.2s,mb4.7
RJOB *e*pP pP 03 01 37.2 +0.3
CEL Celeste 66.41 302 *e*P **P** **03 01 18.4 0.0**
comp=Z,12nm,0.8s,mb4.8
MOX Moxa 66.44 316 *e*P **P** **03 01 18.9 +0.5**
MOX *e* pP 03 01 38.4 +0.8
comp=Z,21nm,1.3s
MOX Moxa 66.44 316 *e*P **P** **03 01 18.6 +0.2**
comp=Z,16nm,1.1s,mb4.8
MOX *e*pP pP 03 01 38.2 +0.6
BSEG Bad Segeberg 66.52 320 *e*P **P** **03 01 20.2 +1.4**
comp=Z,28nm,0.9s,mb5.1
BSEG *e*pP pP 03 01 38.8 +0.7
GRF Grafenberg Arr 66.90 315 *e*P **P** **03 01 22.7 +1.4**
comp=Z,37nm,1.2s,mb5.1
GRF *e*pP pP 03 01 41.6 +1.0
GRF Grafenberg Arr 66.90 315 *e*P **P** **03 01 22.7 +1.4**
GRF *e**PP pP 03 01 41.6 +1.0
GRF pmax pmax
comp=Z,37nm,1.2s,mb5.1
AQU L'Aquila 67.20 307 *e*P **P** **03 01 29.6 +6.2**
AQU pmax pmax
comp=Z,31nm,1.1s,mb5.0
AQU L'Aquila 67.20 307 *e*P **P** **03 01 29.6 +6.2**
comp=Z,32nm,1.1s,mb5.1
FUR Furstenfeldbru 67.22 314 *e*P **P** **03 01 24.1 +0.7**
comp=Z,34nm,1.1s,mb5.1
FUR *e*pP pP 03 01 43.3 +0.6
CTAO Charters Tower 67.47 128 *e*P **P** **03 01 24.5 -0.8**
CTAO pmax pmax
comp=Z,73nm,1.9s,mb5.2
CTAO Charters Tower 67.47 128 *e*P **P** **03 01 24.5 -0.8**
comp=Z,73nm,1.9s,mb5.2
MOTA Moosalm 67.53 313⇓*i*P **P** **03 01 25.6 +0.2**
comp=Z,5.0nm,0.8s,mb4.4
RETA Reutte 67.72 313⇑*i*P **P** **03 01 26.5 -0.1**
comp=Z,4.8nm,0.7s,mb4.4
FETA Feichten 67.86 313⇑*i*P **P** **03 01 27.9 +0.5**

comp=Z,3.9nm,1.0s,mb4.2
DAVA Damuels 68.35 313⇑*i*P **P** **03 01 30.3 -0.2**
comp=Z,5.1nm,0.8s,mb4.4
DAVOX Davos/Dischmat 68.48 313 LR LR 03 35 27.1
comp=Z,36nm,19.1s,baz=270,slow=39
TNS Taunus Mts 68.51 316 *e*P **P** **03 01 31.4 0.0**
comp=Z,27nm,1.0s,mb5.0
TNS *e*pP pP 03 01 51.3 +0.5
BUG Bochum--Univer 68.91 318 *e*P **P** **03 01 33.7 -0.2**
comp=Z,17nm,1.1s,mb4.8
BFO Black Forest 69.08 314 *e*pP pP 03 01 54.9 +0.5
CDF Champ du Feu 69.74 315 *e*P **P** **03 01 38.8 -0.3**
CDF *e*pP pP 03 01 57.8 -0.6
MEM Membach 69.91 317 P **P** **03 01 41.0 +0.9**
WLF Walferdange 70.09 316 P **P** **03 01 43.1 +1.9**
comp=Z,26nm,1.0s,mb5.0
WLF AP pP 03 02 01.6 +1.0
WLF Walferdange 70.09 316 *e*P **P** **03 01 42.8 +1.6**
comp=Z,44nm,0.9s,mb5.3
WLF *e*pP pP 03 02 01.7 +1.1
WLF Walferdange 70.09 316 *e*P **P** **03 01 43.4 +2.2**
WLF *e* pP 03 02 01.2 +0.6
WLF pmax pmax
comp=Z,44nm,1.0s,mb5.2
WLF Walferdange 70.09 316 *e*P **P** **03 01 43.4 +2.2**
comp=Z,44nm,1.0s,mb5.2
WLF *e* pP 03 02 01.2 +0.6
HINF Hinteralfeld 70.18 314 *e*P **P** **03 01 41.1 -0.7**
HAU Haudompre 70.45 315 *e*P **P** **03 01 43.0 -0.4**
HAU *e*MLR MLR
comp=Z,34nm,20.0s
HAU Haudompre 70.45 315 *e*P **P** **03 01 43.0 -0.4**
HAU LR LR
comp=Z,30nm,20.0s
LPG La Plagne 70.93 312 *e*P **P** **03 01 46.9 +0.5**
comp=Z,13nm,0.8s,mb4.5
LPG La Plagne 70.93 312 *e*P **P** **03 01 46.9 +0.5**
LPG pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
LPG La Plagne 70.93 312 *e*P **P** **03 01 46.9 +0.5**
comp=Z,6.4nm,0.8s,mb4.5
LPL La Plagne 70.94 312 *e*P **P** **03 01 46.9 +0.4**
LPL *e*pP pP 03 02 05.8 -0.1
SBF Sospel 70.97 310 *e*P **P** **03 01 46.3 -0.4**
CABF La Chapelle 71.03 313 *e*P **P** **03 01 46.9 -0.1**
MEZF Maizieres J'vi 71.12 315 *e*P **P** **03 01 47.5 0.0**
MEZF *e*pP pP 03 02 05.8 -1.2
MBDF Montbardon 71.16 311 *e*P **P** **03 01 47.9 +0.1**
comp=Z,8.8nm,0.9s,mb4.3
MBDF Montbardon 71.16 311 *e*P **P** **03 01 47.9 +0.1**
MBDF pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
MBDF Montbardon 71.16 311 *e*P **P** **03 01 47.9 +0.1**
comp=Z,4.4nm,0.9s,mb4.3
BAIF Baives 71.17 317 *e*P **P** **03 01 47.6 -0.2**
FRF La Foret Royal 71.61 310 *e*P **P** **03 01 50.1 -0.4**
ORIF Oris-en-Rattie 71.70 312 *e*P **P** **03 01 50.6 -0.5**
ORIF *e*MLR MLR
comp=Z,62nm,20.8s
LMR La Mourre 71.77 310 *e*P **P** **03 01 51.3 -0.2**
KEST Kesra 72.16 302 P **P** **03 01 54.5 +0.5**
comp=Z,5.4nm,1.1s,mb4.3,baz=90,slow=20,SNR=7.5
SMRF Simiane la Rot 72.21 311 *e*P **P** **03 01 54.1 0.0**
LOR Lormes 72.28 314 *e*P **P** **03 01 53.9 -0.6**
comp=Z,7.6nm,0.9s,mb4.2
LOR *e*pP pP 03 02 13.1 -0.9
LOR *e*MLR MLR
comp=Z,40nm,19.5s
LOR Lormes 72.28 314 *e*P **P** **03 01 53.9 -0.6**
LOR *e**PP pP 03 02 13.1 -0.9
LOR pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
LOR MLR MLR
comp=Z,40nm,19.5s
LOR Lormes 72.28 314 *e*P **P** **03 01 53.9 -0.6**
comp=Z,3.8nm,0.9s,mb4.2
LOR *e*pP pP 03 02 13.1 -0.9
LOR LR LR
comp=Z,40nm,19.5s
SMF Signal de Mont 72.49 314 *e*P **P** **03 01 55.4 -0.4**
comp=Z,23nm,1.0s,mb4.7
SMF Signal de Mont 72.49 314 *e*P **P** **03 01 55.4 -0.4**
SMF pmax pmax
comp=Z,11nm,1.0s,mb4.6
SMF Signal de Mont 72.49 314 *e*P **P** **03 01 55.4 -0.4**
comp=Z,11nm,1.0s,mb4.7
VIVF Saint-Julien-l 72.53 312 *e*P **P** **03 01 55.8 -0.2**
comp=Z,12nm,0.9s,mb4.4
VIVF Saint-Julien-l 72.53 312 *e*P **P** **03 01 55.8 -0.2**
VIVF pmax pmax
comp=Z,6.0nm,0.9s,mb4.4
VIVF Saint-Julien-l 72.53 312 *e*P **P** **03 01 55.8 -0.2**
comp=Z,6.2nm,0.9s,mb4.4
STKA Stephens Creek 72.57 140 P **P** **03 01 55.4 -0.9**
comp=Z,13nm,0.8s,mb4.8,baz=332,slow=6.5,SNR=12
SSF Saint Saulge 72.57 314 *e*P **P** **03 01 55.9 -0.3**
comp=Z,16nm,0.9s,mb4.5
SSF *e*pP pP 03 02 15.1 -0.6
SSF Saint Saulge 72.57 314 *e*P **P** **03 01 55.9 -0.3**
SSF *e**PP pP 03 02 15.1 -0.6
SSF pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
SSF Saint Saulge 72.57 314 *e*P **P** **03 01 55.9 -0.3**
comp=Z,7.8nm,0.9s,mb4.5
SSF *e*pP pP 03 02 15.1 -0.6
AVF Avril sur Loir 72.76 314 *e*P **P** **03 01 57.1 -0.3**
AVF *e*pP pP 03 02 16.2 -0.7
HYF Humbligny 73.06 315 *e*P **P** **03 01 59.5 +0.4**
BGF Bois d'Agland 73.17 314 *e*P **P** **03 01 59.2 -0.6**
LASF Ste Croix 73.34 311 *e*P **P** **03 02 00.9 0.0**
TCF Toulx Ste Croi 73.67 314 *e*P **P** **03 02 02.9 +0.1**
comp=Z,78nm,1.6s,mb4.9
TCF *e*pP pP 03 02 22.1 -0.2
TCF Toulx Ste Croi 73.67 314 *e*P **P** **03 02 02.9 +0.1**
TCF *e**PP pP 03 02 22.1 -0.2
TCF pmax pmax
comp=Z,39nm,1.5s,mb4.9
TCF Toulx Ste Croi 73.67 314 *e*P **P** **03 02 02.9 +0.1**
comp=Z,39nm,1.5s,mb4.9
TCF *e*pP pP 03 02 22.1 -0.2
CAF Calviac 74.25 313 *e*P **P** **03 02 06.3 +0.2**
comp=Z,18nm,1.1s,mb4.4
CAF *e*pP pP 03 02 25.6 -0.1
CAF Calviac 74.25 313 *e*P **P** **03 02 06.3 +0.2**
CAF *e**PP pP 03 02 25.6 -0.1
CAF pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
CAF Calviac 74.25 313 *e*P **P** **03 02 06.3 +0.2**
comp=Z,9.3nm,1.0s,mb4.5
CAF *e*pP pP 03 02 25.6 -0.1
EIDS Eidsvold 74.26 129 *e*P **P** **03 02 05.9 -0.5**
comp=Z,75nm,2.0s,mb5.1
LDF La Druitiere 74.33 317 *e*P **P** **03 02 06.0 -0.5**
LDF *e*pP pP 03 02 25.2 -0.9
RJF Les Rejaudoux 74.48 313 *e*P **P** **03 02 07.9 +0.5**
comp=Z,25nm,1.1s,mb4.6
RJF *e*pP pP 03 02 27.2 +0.2
RJF *e*MLR MLR
comp=Z,46nm,22.5s
RJF Les Rejaudoux 74.48 313 *e*P **P** **03 02 07.9 +0.5**
RJF *e**PP pP 03 02 27.2 +0.2
RJF pmax pmax
comp=Z,12nm,1.1s,mb4.5
RJF MLR MLR
comp=Z,50nm,22.5s
RJF Les Rejaudoux 74.48 313 *e*P **P** **03 02 07.9 +0.5**
comp=Z,12nm,1.1s,mb4.5
RJF *e*pP pP 03 02 27.2 +0.2
RJF LR LR
comp=Z,50nm,22.5s
MTLF Montolieu 74.71 311 *e*P **P** **03 02 08.8 -0.1**
comp=Z,59nm,1.7s,mb4.7
MTLF *e*pP pP 03 02 28.0 -0.4
MTLF Montolieu 74.71 311 *e*P **P** **03 02 08.8 -0.1**
MTLF *e**PP pP 03 02 28.0 -0.4
MTLF pmax pmax
comp=Z,29nm,1.7s,mb4.7
MTLF Montolieu 74.71 311 *e*P **P** **03 02 08.8 -0.1**
comp=Z,30nm,1.7s,mb4.7
MTLF *e*pP pP 03 02 28.0 -0.4
GRR Gorron 74.86 317 *e*P **P** **03 02 09.4 -0.2**
MFF Saint Martin d 75.08 315 *e*P **P** **03 02 10.7 -0.2**
comp=Z,30nm,1.2s,mb4.6
MFF Saint Martin d 75.08 315 *e*P **P** **03 02 10.7 -0.2**
MFF pmax pmax

comp=Z,15nm,1.2s,mb4.6
MFF Saint Martin d 75.08 315 *e*P **P** **03 02 10.7 -0.2**
comp=Z,15nm,1.2s,mb4.6
LFF La Frestale 75.12 313 *e*P **P** **03 02 11.5 +0.3**
TTA Tatalina 75.34 27 *e*P **P** **03 02 11.4 -0.7**
BPAW Bear Paw Mtn. 76.70 24 *e*P **P** **03 02 19.3 -0.5**
comp=Z,10nm,0.8s,mb4.6
ETSF Etsaut 76.77 311 *e*P **P** **03 02 20.9 +0.3**
comp=Z,54nm,1.4s,mb4.8
ETSF Etsaut 76.77 311 *e*P **P** **03 02 20.9 +0.3**
ETSF pmax pmax
comp=Z,27nm,1.4s,mb4.8
ETSF Etsaut 76.77 311 *e*P **P** **03 02 20.9 +0.3**
comp=Z,27nm,1.4s,mb4.8
SUMG Summit 76.87 347 *i* P **P** **03 02 21.0 +0.4**
comp=Z,4.2nm,0.9s,mb4.2
SUMG *i* 03 02 49.5
LSZ Lusaka 76.90 246 *e*P **P** **03 02 22.3 +0.6**
LSZ pmax pmax
comp=Z,9.0nm,0.6s,mb4.7
LSZ Lusaka 76.90 246 *e*P **P** **03 02 22.3 +0.6**
comp=Z,9.4nm,0.6s,mb4.7
COLA College 77.40 23 *e*P **P** **03 02 23.2 -0.5**
COLA pmax pmax
comp=Z,14nm,1.4s,mb4.5
COLA College 77.40 23 *e*P **P** **03 02 23.2 -0.6**
comp=Z,14nm,1.4s,mb4.5
RSO Redoubt South 77.92 28 *e*P **P** **03 02 25.1 -1.5**
PMR Palmer 78.79 26 *e*P **P** **03 02 29.8 -1.6**
PMR pmax pmax
comp=Z,22nm,1.1s,mb4.9
PMR Palmer 78.79 26 *e*P **P** **03 02 29.8 -1.6**
comp=Z,22nm,1.1s,mb4.9
INK Inuvik 79.51 16 *e*P **P** **03 02 34.7 -0.6**
INK pmax pmax
comp=Z,9.0nm,1.0s
INK Inuvik 79.51 16 *e*P **P** **03 02 34.7 -0.6**
comp=Z,8.8nm,1.0s,mb4.5
EGAK Eagle 79.73 21 *e*P **P** **03 02 36.0 -0.5**
comp=Z,14nm,1.3s,mb4.6
ESDC Sonseca Array 80.43 309 P **P** **03 02 40.8 0.0**
comp=Z,1.5nm,0.9s,mb3.8,baz=50,slow=5.2,SNR=7.5
ESDC pP pP 03 03 00.7 +0.1
comp=Z,4.2nm,0.9s,baz=49,slow=5.7,SNR=7.7
DAWY Dawson 80.78 21 *e*P **P** **03 02 41.8 -0.4**
BMRM Bremner River 80.92 25 *e*P **P** **03 02 42.8 -0.2**
comp=Z,30nm,1.1s,mb5.0
HYT Haines Junctio 83.64 23 *e*P **P** **03 02 58.0 +0.8**
LBTB Lobatse 84.08 239 *e*P **P** **03 03 00.3 +0.3**
BOSA Boshof 86.24 236 P **P** **03 03 10.5 -0.2**
comp=Z,6.4nm,0.8s,mb4.6,baz=62,slow=5.1,SNR=8.5
BOSA LR LR 03 37 56.0
comp=Z,80nm,19.9s,baz=265,slow=33
YKA Yellowknife Ar 88.76 13 P **P** **03 03 20.7 -1.6**
comp=Z,1.3nm,0.8s,mb4.0,baz=331,slow=4.2,SNR=7.8
YKA Yellowknife Ar 88.76 13 P **P** **03 03 20.7 -1.6**
YKA pmax pmax
comp=Z,1.0nm,0.8s
DBIC Dimbokro 96.03 280 P **P** **03 03 57.0 +0.2**
comp=Z,5.5nm,1.0s,mb4.9,baz=46,slow=7.6,SNR=3.7
DBIC Dimbokro 96.03 280 P **P** **03 03 57.0 +0.2**
DBIC pmax pmax
comp=Z,6.0nm,1.0s
DBIC Dimbokro 96.03 280 P **P** **03 03 57.0 +0.2**
MNTX Cornudas Mount 119.47 20 *e*PKPdf PKPdf 03 09 17.9 -0.7
JCT Junction City 122.15 15 *e*PKIKP PKPdf 03 09 22.8 -0.9
TXAR Lajitas Array 122.20 19 PKP PKPdf 03 09 23.1 -0.7
comp=Z,1.1nm,0.8s,baz=221,slow=1.8,SNR=10
TXAR pPKP pPKPdf 03 09 45.1 +0.3
comp=Z,0.9nm,0.8s,baz=194,slow=2.2,SNR=6.7
TXAR Lajitas Array 122.20 19 PKIKP PKPdf 03 09 23.2 -0.7
TXAR 03 09 45.1
TXAR pmax pmax
comp=Z,1.0nm,0.8s
TXAR pmax pmax
comp=Z,1.0nm,0.8s
ROSC El Rosal 147.77 340 PKPbc PKPbc 03 10 15.6 +1.4
comp=Z,31nm,0.8s,baz=90,slow=20,SNR=28
ROSC El Rosal 147.77 340 *e*PKPdf PKPdf 03 10 13.0 +1.6
ROSC *e*PKPbc PKPbc 03 10 15.6 +1.4
CPUP Villa Florida 155.28 263 PKP PKPdf 03 10 22.2 0.0
comp=Z,2.0nm,0.7s,baz=43,slow=4.6,SNR=5.8
CPUP PKPbc PKPdf 03 10 30.6 +8.3
comp=Z,2.4nm,0.7s,baz=43,slow=2.5,SNR=7.7
CPUP Villa Florida 155.28 263 PKIKP PKPdf 03 10 22.3 0.0
CPUP pmax pmax
comp=Z,2.0nm,0.7s
CPUP pmax pmax
comp=Z,2.0nm,0.7s
SIV San Ignacio 155.73 289 PKP PKPdf 03 10 23.2 +0.1
comp=Z,1.1nm,0.9s,baz=85,slow=11,SNR=4.7
SIV PKPbc PKPdf 03 10 32.2 +9.1
comp=Z,1.5nm,0.8s,baz=82,slow=4.4,SNR=6.0
LPAZ La Paz 161.71 298 PKP PKPdf 03 10 30.9 +0.7
comp=Z,2.9nm,1.0s,baz=32,slow=7.6,SNR=6.8
LPAZ La Paz 161.71 298 PKIKP PKPdf 03 10 31.0 +0.8
LPAZ pmax pmax
comp=Z,3.0nm,1.0s

GUC 07 03:06:43.3±0.7**,23°.62S×67°.17W,h235**km**,ML3.9,2C-1D,**
Chile-Argentina border region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
PB04 Plate Boundary 2.53 302 *e*P Pn 03 07 38.0 +8.3
PB04 *i* S S 03 08 19.2 +13
PB04 AML AML 03 08 26.1
comp=N,96nm,0.3s
CEN1 Los Morros 2.79 274⇓*i*P Pn 03 07 36.2 +3.6
CEN1 *i* S S 03 08 15.7 +4.4
CEN1 AML AML 03 08 18.9
comp=E,74nm,0.5s
ANCH Antofagasta 2.97 268⇑*i*P Pn 03 07 36.3 +1.7
ANCH *i* S S 03 08 16.4 +1.4
ANCH AML AML 03 08 20.5
comp=E,234nm,0.1s
MECH Mejillones 3.06 279⇑*i*P Pn 03 07 38.3 +2.8
MECH *i* S S 03 08 19.8 +3.1
MECH AML AML 03 08 29.2
comp=N,140nm,0.4s
MNMC Miæe Miæ 5.00 333 *e*P Pn 03 08 02.1 +3.3
MNMC *i* S S 03 09 03.1 +4.4

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*ISCJB **07** 03:12:11.8±1.9, 13°.6S±0°.8×72°.1W±0°.3, h76km±50km, Error ellipse: s-maj=145.5km s-min=10.7km az=22.3*
*IDC **07** 03:12:13.3±1.9, 13°.91S×72°.25W, h90km±37km, mb3.5/1, mb1 3.4/4, mb1mx3.3/16, mbtmp3.3/4, Error ellipse: s-maj=159.4km s-min=15.4km az=23.0*
*NEIC **07** 03:12:14.0±1.1, 13°.93S×72°.19W, h100km±22km, Error ellipse: s-maj=94.2km s-min=12.6km az=203.0*
ISC 07 03:12:13.6±1.1**,13°.7S**±0°.6×**72°.2W**±0°.3**,h78**km±35km**,n7,**
σ**0s.77**/8**,Central Peru**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
LPAZ La Paz 4.68 124 P **Pn** **03 13 21.7 -0.1**
1.5nm,0.3s,baz=300,slow=7.5,SNR=60
LPAZ La Paz 4.68 124 *e*Pn **Pn** **03 13 21.7 0.0**
NNA Nana 4.87 289 P **Pn** **03 13 24.8 +0.4**
1.3nm,0.3s,baz=140,slow=14,SNR=4.7
NNA S **Sn** **03 14 19.5 0.0**
5.5nm,0.3s,baz=125,slow=16,SNR=5.5
NNA Nana 4.87 289 *e*Pn **Pn** **03 13 25.7 +1.3**
NNA *e*Sn **Sn** **03 14 18.4 -1.1**
SIV San Ignacio 10.96 104 P **Pn** **03 14 47.3 -0.2**
0.2nm,0.3s,baz=291,slow=14,SNR=5.6
YKA Yellowknife Ar 82.81 342 P **P** **03 24 28.8 0.0**
0.6nm,0.7s,baz=131,slow=5.3,SNR=5.0
SONM Songino Array 145.90 2 PKPbc PKPbc 03 31 42.1 -2.0
0.7nm,0.6s,baz=351,slow=2.4,SNR=4.6

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*NEIC **07** 03:41:40.6, 31°.96S×71°.67W, h30km, ML2.9(GUC), After GUC.*
GUC 07 03:41:40.6±0.5**,31°.96S×71°.67W,h30**km±2km**,MD3.5,**
ML2.9,1C-3D,Near coast of central Chile

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
CHNG Los Chungos 0.16 63⇓*i*P Pb 03 41 46.3 -0.2
CHNG *i* S Sb 03 41 50.7 +0.2
CMCH Combarbala 0.97 36 *e*P Pn 03 41 58.1 0.0
CMCH *i* S Sn 03 42 11.5 +0.8

CMCH	**Combarbala**	**0.97**	**36**	*e*P	Pn	03 41 58.1	0.0
CMCH				*i* S	Sn	03 42 11.5	+0.8
CMCH				AML	AML	03 42 16.6	
	comp=N,2μm,0.6s						
JACH	**Jahuel**	**1.17**	**129**	*e*P	Pn	03 42 01.5	+0.7
JACH				*i* S	Sn	03 42 17.0	+1.3
JACH	**Jahuel**	**1.17**	**129**	*e*P	Pn	03 42 01.5	+0.7
JACH				*i* S	Sn	03 42 17.0	+1.3
PEL	**Peldehue**	**1.45**	**145**	⇑*i*P	Pn	03 42 05.5	+0.9
PEL				*i* S	Sn	03 42 24.6	+2.0
PEL				AML	AML	03 42 26.8	
	comp=E,289nm,0.3s						
CLCH	**Cerro Calan**	**1.73**	**147**	*e*P	Pn	03 42 10.0	+1.5
CLCH				*i* S	Sn	03 42 32.8	+3.3
CLCH				AML	AML	03 42 34.9	
	comp=E,105nm,0.7s						
FCH	**Farellones**	**1.80**	**140**	*i* P	Pn	03 42 11.5	+2.0
FCH				*i* S	Sn	03 42 34.8	+3.6
FCH	**Farellones**	**1.80**	**140**	*i* P	Pn	03 42 11.5	+2.0
FCH				*i* S	Sn	03 42 34.8	+3.6
TACH	**Talagante**	**1.80**	**160**	*e*P	Pn	03 42 11.0	+1.5
TACH	**Talagante**	**1.80**	**160**	*e*P	Pn	03 42 11.0	+1.5
TACH				*e*		03 42 11.0	
LMEL	**Las Melosas**	**2.25**	**147**	⇓*i*P	Pn	03 42 17.8	+2.0
LMEL	**Las Melosas**	**2.25**	**147**	⇓*i*P	Pn	03 42 17.8	+2.0
LMEL				AML	AML	03 42 54.9	
	comp=N,120nm,0.2s						
LCO	**Las Campanas**	**3.05**	**16**	*e*Pn	Pn	03 42 28.0	+1.3
LCO				*e*S	Sn	03 43 08.0	+5.8

WEL 07 03:42:43.6±0.5, 38°21S×176°08E, h151km±4km, ML3.5/7, Error ellipse: s-maj=4.5km s-min=4.2km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.81**	**94**	PN	Pn	03 43 06.7	-0.2
URZ				SN	Sn	03 43 24.6	-0.1
URZ				SN	Sn	03 43 24.6	-0.1
BKZ	**Black Stump Fm**	**1.01**	**162**	PN	Pn	03 43 08.6	+0.1
BKZ				SN	Sn	03 43 27.2	-0.4
OTVZ	**Oturere**	**1.01**	**199**	PN	Pn	03 43 09.1	+0.6
NMHZ	**Naumai**	**1.06**	**148**	PN	Pn	03 43 09.8	+0.9
RAHZ	**Arahi**	**1.06**	**132**	PN	Pn	03 43 09.1	+0.2
RAHZ				SN	Sn	03 43 28.7	+0.4
MWZ	**Matawai**	**1.14**	**97**	PN	Pn	03 43 09.7	0.0
MWZ				SN	Sn	03 43 29.3	-0.2
MOVZ	**Moawhango**	**1.23**	**192**	PN	Pn	03 43 10.3	-0.2
KNZ	**Kokohu**	**1.49**	**124**	PN	Pn	03 43 13.1	+0.1
CNGZ	**Carnagh Statio**	**1.69**	**100**	PN	Pn	03 43 15.8	+0.6
KAHZ	**Kahuranaki**	**1.70**	**159**	PN	Pn	03 43 15.4	0.0
PNHZ	**Pukenui**	**1.71**	**177**	PN	Pn	03 43 14.7	-0.7
MHGZ	**Mahia Peninsul**	**1.71**	**124**	PN	Pn	03 43 15.6	+0.1
TSZ	**Takapari Road**	**1.85**	**183**	PN	Pn	03 43 16.3	-0.8
WPHZ	**Waipukurau**	**1.88**	**172**	PN	Pn	03 43 16.6	-0.7
DVHZ	**Dannevirke**	**2.09**	**178**	PN	Pn	03 43 18.5	-1.3
MRZ	**Mangatainoka R**	**2.48**	**189**	PN	Pn	03 43 22.5	-2.0
TIWZ	**Tintock**	**2.57**	**183**	PN	Pn	03 43 23.8	-1.8
OGWZ	**Otaki Gorge**	**2.70**	**195**	PN	Pn	03 43 25.1	-2.1
HOWZ	**Holdsworth Sta**	**2.73**	**189**	PN	Pn	03 43 25.2	-2.3
MTW	**Mount Morrison**	**2.98**	**188**	PN	Pn	03 43 27.9	-2.8

NEIC 07 04:22:31.8, 61°38N×146°81W, h14km, ML3.6(PMR), ML3.5(AEIC), After AEIC., Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DIV	**Divide**	**0.56**	**116**	*e*Pg	Pg	04 22 41.8	-1.1
DIV				*e*S	Sg	04 22 49.4	-0.9
KNK	**Knik Glacier**	**0.79**	**273**	P	Pg	04 22 45.9	-1.2
SML	**Sawmill**	**0.84**	**301**	P	Pg	04 22 46.1	-2.1
SML				S	Sg	04 22 57.6	-1.6
EYAK	**Cordova Ski Ar**	**0.98**	**148**	P	Pb	04 22 48.9	-1.6
PMR	**Palmer**	**1.13**	**282**	*e*Pg	Pg	04 22 50.8	-2.9
PMR				*e*S	Sb	04 23 05.7	-2.0
BMRM	**Bremner River**	**1.15**	**110**	P	Pb	04 22 50.4	-3.0
BMRM				S	Sb	04 23 05.5	-2.6
RC01	**Rabbit Creek A**	**1.44**	**260**	*e*Pn	Pn	04 22 56.1	-1.4
RC01				*e*S	Sn	04 23 14.7	-1.4
SLKM	**Skilak Lake**	**1.88**	**244**	P	Pn	04 23 02.0	-1.4
MENT	**Mentasta**	**2.14**	**41**	*e*Pn	Pn	04 23 05.7	-1.3
RND	**Reindeer**	**2.25**	**336**	P	Pn	04 23 07.7	-0.8
SKT	**Skwentna**	**2.33**	**287**	P	Pn	04 23 08.2	-1.4
MCK	**McKinley**	**2.56**	**338**	*e*Pn	Pn	04 23 12.3	-0.5
MCK				*e*S	Sn	04 23 43.5	-0.2
BRLK	**Bradley Lake**	**2.58**	**233**	P	Pn	04 23 11.7	-1.4
DOT	**Dot Lake**	**2.61**	**28**	P	Pn	04 23 13.3	-0.2
TRF	**Thorofare Moun**	**2.63**	**324**	P	Pn	04 23 12.9	-0.9
BCA3	**Beaver Creek A**	**2.90**	**52**	P	Pn	04 23 16.5	-1.0
PPLA	**Purkeypile**	**2.95**	**303**	*e*Pn	Pn	04 23 16.8	-1.3
PPLA				*e*S	Sn	04 23 57.0	+3.8
RSO	**Redoubt South**	**3.04**	**255**	*e*Pn	Pn	04 23 17.7	-1.7
RSO				*e*S	Sn	04 23 54.7	-0.9
BPAW	**Bear Paw Mtn.**	**3.34**	**327**	P	Pn	04 23 22.0	-1.5
COLA	**College**	**3.54**	**353**	*e*Pn	Pn	04 23 26.9	+0.6
COLA				*e*S	Sn	04 24 07.4	-0.4
CHUM	**Lake Minchumin**	**3.57**	**317**	P	Pn	04 23 25.2	-1.5
SVW2	**Sparrevohn**	**4.25**	**270**	*e*P	Pn	04 23 33.1	-2.9
EGAK	**Eagle**	**4.27**	**35**	*e*Pn	Pn	04 23 35.4	-0.9
DAWY	**Dawson**	**4.35**	**48**	P	Pn	04 23 36.6	-0.8
TT01	**Tatalina**	**4.58**	**294**	P	Pn	04 23 38.0	-2.6
TTA	**Tatalina**	**4.59**	**294**	*e*Pn	Pn	04 23 38.0	-2.6
IM3	**Indian Mountai**	**5.56**	**329**	P	Pn	04 23 52.4	-1.6
SKAG	**Skagway**	**6.00**	**104**	*e*Pn	Pn	04 24 00.1	0.0
	8.8nm,0.6s						
COLD	**Coldfoot**	**6.05**	**347**	P	Pn	04 24 00.3	-0.5
BM3	**Burnt Mountain**	**6.14**	**8**	P	Pn	04 24 00.6	-1.4

*IDC **07** 04:27:35.6±1.0, 15°38N×122°74E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.6/21, mbtmp3.7/6, ML4.8/1, Error ellipse: s-maj=29.5km s-min=17.3km az=86.0*
*ISCJB **07** 04:27:36.6±0.7, 15°40N±0°04×122°51E±0°05, h10km, mb3.7/6, Error ellipse: s-maj=7.6km s-min=5.6km az=17.2*
*MAN **07** 04:27:38, 15°45N×122°33E, h8km, mb4.9, ML3.8, MS3.8*
*NEIC **07** 04:27:40.4±0.7, 15°39N×122°75E, h35km, mb4.6/1, Error ellipse: s-maj=20.4km s-min=11.6km az=80.0*
ISC 07 04:27:37.9±0.6, 15°40N±0°04×122°45E±0°05, h10km, n20, σ1§06/27, mb3.7/6, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**0.83**	**216**	*e*P	**Pg**	04 27 53.5	**-0.4**
POLP				*e*S	**Sg**	04 28 04.5	**-0.1**
BALP	**Baler**	**0.90**	**292**	*e*P	**Pg**	04 27 54.9	**-0.5**
BALP				*e*S	**Sg**	04 28 07.9	**+0.7**
PCPH	**Palayan**	**1.31**	**277**	⇑*e*P	**Pn**	04 28 01.5	**-0.8**
PCPH				*e*S	**Sb**	04 28 18.2	**-1.3**
PALP	**Palanan**	**1.66**	**359**	*e*P	**Pn**	04 28 06.5	**-0.5**
PALP				*e*S	**Sn**	04 28 29.3	**+0.9**
TGY	**Tagaytay City**	**1.95**	**229**	Pn	**Pn**	04 28 14.1	**+3.1**
	263nm,0.3s,baz=56,slow=7.3,SNR=20						
TGY				Sn	**Sn**	04 28 40.8	**+5.2**
	238nm,0.3s,baz=348,slow=20,SNR=10						
TGY	**Tagaytay City**	**1.95**	**229**	Pn	**Pn**	04 28 14.1	**+3.1**
TGY				Sn	**Sn**	04 28 40.8	**+5.2**
BOAC	**Boac**	**2.01**	**197**	*e*P	**Pn**	04 28 13.8	**+1.8**
BOAC				*e*S	**Sn**	04 28 40.7	**+3.5**
APYP	**Conner**	**2.71**	**335**	*e*P	**Pn**	04 28 21.6	**+0.1**
KSRS	**Korea Array**	**22.50**	**11**	P	**P**	04 32 37.5	**-0.1**
	0.5nm,0.3s,mb3.4,baz=204,slow=12,SNR=3.6						
SONM	**Songino Array**	**34.96**	**341**	P	**P**	04 34 29.9	**-0.2**
	0.3nm,0.4s,mb3.6,baz=154,slow=10,SNR=2.6						
SONM	**Songino Array**	**34.96**	**341**	P	**P**	04 34 29.9	**-0.2**
WRA	**Warramunga Arr**	**37.02**	**161**	P	**P**	04 34 45.7	**-2.3**
	1.0nm,0.6s,mb3.8,baz=342,slow=9.4,SNR=3.9						
WRA	**Warramunga Arr**	**37.02**	**161**	P	**P**	04 34 45.7	**-2.3**
ASAR	**Alice Springs**	**40.41**	**164**	P	**P**	04 35 15.2	**-1.2**
	0.3nm,0.4s,mb3.4,baz=339,slow=8.1,SNR=6.9						
ASAR	**Alice Springs**	**40.41**	**164**	P	**P**	04 35 15.2	**-1.2**
MKAR	**Makanchi Array**	**45.71**	**322**	P	**P**	04 35 60.0	**+0.8**
	0.8nm,0.8s,mb3.7,baz=113,slow=8.2,SNR=8.3						
MKAR	**Makanchi Array**	**45.71**	**322**	P	**P**	04 35 60.0	**+0.8**
ZALV	**Zalesovo Beam**	**48.36**	**331**	P	**P**	04 36 19.4	**-0.3**
	1.2nm,0.3s,mb4.4,baz=131,slow=4.2,SNR=4.5						
ZALV	**Zalesovo Beam**	**48.36**	**331**	P	**P**	04 36 19.4	**-0.3**
KURK	**Kurchatov**	**49.75**	**325**	*e*P	**P**	04 36 31.1	**+0.6**
	5.3nm,0.8s						

*ISCJB **07** 04:40:48.7±0.6, 32°97S±0°04×69°83W±0°07, h125km±6km, Error ellipse: s-maj=9.2km s-min=6.0km az=6.1*
*GUC **07** 04:40:49.5±0.8, 33°00S×69°91W, h124km±5km, MD3.6, ML3.5*
*NEIC **07** 04:40:49.8±0.4, 33°02S×69°75W, h112km±6km, MD3.6(GUC), Error ellipse: s-maj=9.1km s-min=6.6km az=95.0*
*IDC **07** 04:40:50.5±6.0, 32°97S×69°75W, h112km±41km, mb1 3.3/2, mb1mx3.1/13, mbtmp3.1/2, Error ellipse: s-maj=75.1km s-min=55.9km az=107.0*
ISC 07 04:40:49.6±0.7, 32°98S±0°04×69°82W±0°06, h121km±7km, n36, σ0§76/62, 13C-13D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FCH	**Farellones**	**0.53**	**228**	⇓*i*P	**Pn**	04 41 16.0	**+8.2**
FCH				*i* S	**Sn**	04 41 30.2	**+8.7**
FCH				AML	AML	04 41 39.0	
	comp=E,972nm,0.3s						
JACH	**Jahuel**	**0.71**	**294**	⇓*i*P	**Pn**	04 41 09.4	**+0.3**
JACH				*i* S	**Sn**	04 41 24.2	**+0.3**
JACH	**Jahuel**	**0.71**	**294**	⇓*i*P	**Pn**	04 41 09.4	**+0.3**
JACH				*i* S	**Sn**	04 41 24.2	**+0.3**
CLCH	**Cerro Calan**	**0.73**	**235**	⇓*i*P	**Pn**	04 41 09.2	**0.0**
CLCH				*i* S	**Sn**	04 41 24.2	**+0.1**
CLCH				AML	AML	04 41 27.7	
	comp=E,1μm,0.5s						
CLCH				AML	AML	04 41 28.3	
	comp=E,1μm,0.5s						
PEL	**Peldehue**	**0.74**	**257**	⇑*i*P	**Pn**	04 41 09.2	**-0.1**
PEL				*i* S	**Sn**	04 41 24.4	**+0.1**
PEL				AML	AML	04 41 26.3	
	comp=N,7μm,0.3s						
FSR	**Penalolen**	**0.77**	**230**	⇑*i*P	**Pn**	04 41 09.8	**+0.1**
FSR				S	**Sn**	04 41 25.7	**+1.0**
FSR	**Penalolen**	**0.77**	**230**	⇑*i*P	**Pn**	04 41 09.8	**+0.1**
FSR				*i* S	**Sn**	04 41 25.7	**+1.0**
FSR				AML	AML	04 41 27.8	
	comp=E,328nm,0.3s						
SAN	**Santiago**	**0.85**	**236**	⇑*i*P	**Pn**	04 41 10.2	**-0.1**
SAN				*i* S	**Sn**	04 41 25.7	**-0.2**
SAN	**Santiago**	**0.85**	**236**	⇑*i*P	**Pn**	04 41 10.2	**-0.1**
SAN				*i* S	**Sn**	04 41 25.7	**-0.2**
SAN				AML	AML	04 41 26.2	
	comp=E,3μm,0.4s						
PCH	**Pirque**	**0.86**	**222**	⇑*i*P	**Pn**	04 41 10.5	**+0.1**
PCH				*i* S	**Sn**	04 41 26.6	**+0.5**
PCH	**Pirque**	**0.86**	**222**	⇑*i*P	**Pn**	04 41 10.5	**+0.1**
PCH				*i* S	**Sn**	04 41 26.6	**+0.5**
ANTU	**Antumapu**	**0.90**	**229**	⇑*i*P	**Pn**	04 41 10.8	**+0.1**
ANTU				*i* S	**Sn**	04 41 26.7	**0.0**
ANTU	**Antumapu**	**0.90**	**229**	⇑*i*P	**Pn**	04 41 10.8	**+0.1**
ANTU				*i* S	**Sn**	04 41 26.7	**0.0**
ANTU				AML	AML	04 41 28.0	
	comp=N,925nm,0.5s						
LMEL	**Las Melosas**	**0.92**	**200**	⇓*i*P	**Pn**	04 41 10.8	**-0.1**
LMEL	**Las Melosas**	**0.92**	**200**	⇓*i*P	**Pn**	04 41 10.8	**-0.1**
LMEL				AML	AML	04 41 37.6	
	comp=N,602nm,0.2s						
ROCH	**El Roble**	**1.00**	**270**	*e*P	**Pn**	04 41 12.0	**+0.3**
ROCH				*i* S	**Sn**	04 41 28.4	**0.0**
ROCH	**El Roble**	**1.00**	**270**	*e*P	**Pn**	04 41 12.0	**+0.3**
ROCH				*i* S	**Sn**	04 41 28.4	**0.0**
TACH	**Talagante**	**1.15**	**234**	⇑*i*P	**Pn**	04 41 12.9	**-0.3**
TACH				*i* S	**Sn**	04 41 30.9	**-0.2**
TACH	**Talagante**	**1.15**	**234**	⇑*i*P	**Pn**	04 41 12.9	**-0.3**
TACH				*i* S	**Sn**	04 41 30.9	**-0.2**
CACH	**El Canelo**	**1.31**	**210**	⇓*i*P	**Pn**	04 41 15.3	**+0.4**
CACH				*i* S	**Sn**	04 41 35.8	**+1.7**
CACH	**El Canelo**	**1.31**	**210**	⇓*i*P	**Pn**	04 41 15.3	**+0.4**
CACH				*i* S	**Sn**	04 41 35.8	**+1.7**
IHA	**Instituto Hidr**	**1.53**	**268**	⇓*i*P	**Pn**	04 41 17.1	**-0.3**
IHA				*e*S	**Sn**	04 41 37.4	**-1.2**
IHA	**Instituto Hidr**	**1.53**	**268**	⇓*i*P	**Pn**	04 41 17.1	**-0.3**
IHA				*e*S	**Sn**	04 41 37.4	**-1.2**
LNV	**Longovilo**	**1.65**	**233**	⇑*i*P	**Pn**	04 41 17.8	**-1.0**
LNV				*i* S	**Sn**	04 41 39.9	**-1.1**
LNV	**Longovilo**	**1.65**	**233**	⇑*i*P	**Pn**	04 41 17.8	**-1.0**
LNV				*i* S	**Sn**	04 41 39.9	**-1.1**
CHNG	**Los Chungos**	**1.79**	**307**	⇓*i*P	**Pn**	04 41 20.5	**-0.1**
CHNG				*i* S	**Sn**	04 41 44.0	**-0.1**
CHNG				AML	AML	04 41 51.6	
	comp=E,300nm,0.3s						
CFAA	**Coronel Fontan**	**1.92**	**45**	P	**Pn**	04 41 22.1	**0.0**
	comp=E,1.0nm,0.3s,baz=220,slow=12,SNR=33						
CFAA				S	**Sn**	04 41 46.3	**-0.5**
	comp=E,7.3nm,0.3s,baz=183,slow=22,SNR=29						
CMCH	**Combarbala**	**2.06**	**331**	⇓*i*P	**Pn**	04 41 24.1	**+0.3**
CMCH				*i* S	**Sn**	04 41 50.7	**+0.7**
CMCH	**Combarbala**	**2.06**	**331**	⇓*i*P	**Pn**	04 41 24.1	**+0.3**
CMCH				*i* S	**Sn**	04 41 50.7	**+0.7**
CMCH				AML	AML	04 41 53.0	
	comp=E,2μm,0.7s						
LCO	**Las Campanas**	**4.03**	**349**	*e*Pn	**Pn**	04 41 49.9	**+0.4**
LCO				*e*S	**Sn**	04 42 34.1	**-1.9**
TRQA	**Tornquist**	**8.15**	**131**	*e*Pn	**Pn**	04 42 43.3	**-1.9**
LPAZ	**La Paz**	**16.69**	**6**	P	**Pn**	04 44 38.6	**+2.3**
	comp=E,0.2nm,0.3s,baz=204,slow=14,SNR=8.7						
LPAZ	**La Paz**	**16.69**	**6**	*e*Pn	**Pn**	04 44 39.0	**+2.7**
SIV	**San Ignacio**	**18.68**	**27**	P	**P**	04 44 59.3	**+0.9**
	comp=E,0.2nm,0.3s,baz=220,slow=13,SNR=8.2						
BVAR	**Borovoye Array**	**145.27**	**43**	PKPbc	PKPbc	05 00 14.1	+1.6
	comp=E,0.6nm,0.5s,baz=289,slow=4.5,SNR=3.6						
ZALV	**Zalesovo Beam**	**152.37**	**33**	PKPbc	PKPbc	05 00 32.0	+1.3
	comp=E,1.9nm,0.4s,baz=336,slow=3.0,SNR=6.6						

*IDC **07** 04:43:50.8±3.9, 13°45N×91°52W, h0km, mb3.6/4, mb1 4.1/6, mb1mx3.8/19, mbtmp3.7/6, ML3.9/1, Error ellipse: s-maj=59.2km s-min=26.9km az=167.0*
*ISCJB **07** 04:43:54.6±0.9, 13°64N±0°04×91°58W±0°03, h15km±6km, mb3.7/5, Error ellipse: s-maj=7.9km s-min=3.5km az=20.3*
*NEIC **07** 04:43:57.7±1.1, 13°61N×91°59W, h39km±13km, mb3.9/1, MD4.6(MEX), Error ellipse: s-maj=21.9km s-min=9.4km az=198.0*
*CASC **07** 04:43:57.2±1.5, 13°60N×91°39W, h13km±13km, MD3.8, mb3.9(NEIC)*
*MEX **07** 04:43:59.2±0.7, 13°58N×91°88W, h20km±25km, MD4.6*
ISC 07 04:43:55.8±1.1, 13°67N±0°04×91°52W±0°02, h11km±7km, n119, σ1§01/142, mb3.7/5, 36C-42D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.66**	**350**	⇓*i*P	**Pg**	04 44 11.4	**+2.8**
FUG	**Fuego 3**	**1.02**	**40**	*e*P	**Pb**	04 44 15.4	**0.0**
FG6		**1.08**	**35**	⇑*e*P	**Pb**	04 44 16.5	**0.0**
PCG	**Pacaya**	**1.14**	**51**	⇑*e*P	**Pb**	04 44 17.6	**0.0**
PCG				*e*S	**Sb**	04 44 32.1	**-0.3**
TP2	**Tecpan 2**	**1.21**	**23**	⇓*e*P	**Pn**	04 44 19.2	**+0.5**
THIG		**1.43**	**330**	*i* P	**Pn**	04 44 19.7	**-2.1**
THIG				*i* S	**Sn**	04 44 36.7	**-3.9**
NBG	**Las Nubes**	**1.46**	**51**	*e*P	**Pn**	04 44 23.2	**+1.0**
APG	**El Apazote**	**1.68**	**37**	Pn	**Pn**	04 44 25.8	**+0.6**
	48nm,0.3s,baz=207,slow=12,SNR=624						
APG				Sn	**Sn**	04 44 47.8	**+1.1**
	59nm,0.3s,baz=150,slow=20,SNR=9.6						
RBDL	**Robledal**	**1.83**	**76**	*e*P	**Pn**	04 44 26.7	**-0.6**
SBLS	**San Blas**	**1.85**	**84**	*e*P	**Pn**	04 44 26.2	**-1.3**
BOQS	**Boqueron**	**2.18**	**88**	*e*P	**Pn**	04 44 31.1	**-0.9**
BOQS				*e*S	**Sn**	04 44 58.4	**-0.6**
MTO2	**Montecristo 2**	**2.22**	**71**	*e*P	**Pn**	04 44 32.1	**-0.5**
MRL	**Marmol**	**2.25**	**52**	*e*P	**Pn**	04 44 38.8	**+1.7**
LFRS	**El Faro**	**2.39**	**91**	*e*P	**Pn**	04 44 34.2	**-0.7**
LFRS				*e*S	**Sn**	04 45 03.4	**-0.8**
SNVI	**San Vicente**	**2.60**	**91**	*e*P	**Pn**	04 44 37.6	**-0.3**
SNVI				*e*S	**Sn**	04 45 09.4	**-0.2**
PCIG		**2.61**	**321**	*i* P	**Pn**	04 44 35.9	**-2.1**
PCIG				*i* S	**Sn**	04 45 05.5	**-4.2**
VSM	**San Miguel**	**3.16**	**94**	*e*P	**Pn**	04 44 45.4	**-0.2**
BLLM	**Bellamira**	**3.20**	**94**	*e*P	**Pn**	04 44 46.1	**0.0**
CAHU	**Cacacuatique**	**3.22**	**88**	*e*P	**Pn**	04 44 45.9	**-0.4**
SCX	**San Cristobal**	**3.24**	**341**	*e*P	**Pn**	04 44 47.9	**+1.3**
SCX				*i* S	**Sn**	04 45 24.1	**-1.1**
SCX	**San Cristobal**	**3.24**	**341**	*e*P	**Pn**	04 44 47.9	**+1.3**
SCX				*i* S	**Sn**	04 45 24.1	**-1.1**
TGIG		**3.46**	**334**	*i* P	**Pn**	04 44 49.6	**-0.1**
TGIG				*i* S	**Sn**	04 45 27.7	**-3.0**
CNCH	**Conchagua**	**3.60**	**96**	*e*P	**Pn**	04 44 51.4	**-0.3**
TGUH	**Tegucigalpa,Un**	**4.14**	**84**	*e*Pn	**Pn**	04 44 58.0	**-1.1**
CMIG	**Matias Romero**	**4.71**	**317**	Pn	**Pn**	04 45 05.5	**-1.3**
	5.0nm,0.3s,baz=138,slow=13,SNR=38						
CMIG				Sn	**Sn**	04 46 01.6	**+0.1**
	8.9nm,0.3s,baz=165,slow=16,SNR=4.1						
HUIG	**Huatulco**	**4.91**	**296**	*e*P	**Pn**	04 45 07.2	**-2.4**
HUIG				*i* S	**Sn**	04 45 58.4	**-8.1**
HUIG	**Huatulco**	**4.91**	**296**	*e*P	**Pn**	04 45 07.2	**-2.4**
HUIG				*i* S	**Sn**	04 45 58.4	**-8.1**
OXX	**Oaxaca**	**6.06**	**305**	*e*P	**Pn**	04 45 23.5	**-1.9**
OXX				*i* S	**Sn**	04 46 28.6	**-6.3**
OXX	**Oaxaca**	**6.06**	**305**	*e*P	**Pn**	04 45 23.5	**-1.9**
OXX				*i* S	**Sn**	04 46 28.6	**-6.3**
VHO	**Vista Hermosa**	**6.06**	**305**	*e*P	**Pn**	04 45 23.9	**-1.5**
VHO				*i* S	**Sn**	04 46 26.9	**-8.1**
VHO	**Vista Hermosa**	**6.06**	**305**	*e*P	**Pn**	04 45 23.9	**-1.5**
VHO				*i* S	**Sn**	04 46 26.9	**-8.1**
PNIG	**Pinotepa**	**6.94**	**294**	*i* P	**Pn**	04 45 36.1	**-1.4**
PNIG				*i* S	**Sn**	04 46 48.2	**-8.3**
PNIG	**Pinotepa**	**6.94**	**294**	*i* P	**Pn**	04 45 36.1	**-1.4**
PNIG				*i* S	**Sn**	04 46 48.2	**-8.3**
TEIG	**Tepich**	**7.22**	**25**	*e*Pn	**Pn**	04 45 42.0	**+0.6**
	36nm,0.4s						
TEIG				*e*S	**Sn**	04 47 04.1	**+0.6**
JTS	**JuntasAbangare**	**7.25**	**117**	Pn	**Pn**	04 45 43.2	**+1.4**
UTMO	**Huajuapan**	**7.33**	**305**	*e*P	**Pn**	04 45 40.8	**-2.1**
UTMO				*i* S	**Sn**	04 46 58.7	**-7.4**
PPM	**Popocatepetl**	**8.68**	**309**	*e*P	**Pn**	04 46 03.7	**+2.3**
PPM				*i* S	**Sn**	04 47 35.1	**-4.3**
PPM	**Popocatepetl**	**8.68**	**309**	*e*P	**Pn**	04 46 03.7	**+2.3**
PPM				*i* S	**Sn**	04 47 35.1	**-4.3**
628A	**Black Gap, Mar**	**18.94**	**328**	⇓P	**Pn**	04 48 17.2	**-0.3**
	baz=19						
TXAR	**Lajitas Array**	**19.23**	**326**	P	**Pn**	04 48 19.5	**-1.6**
	0.1nm,0.3s,baz=146,slow=13,SNR=20						
TXAR	**Lajitas Array**	**19.23**	**326**	P	**Pn**	04 48 19.5	**-1.6**
528A	**Cox Ranch, San**	**19.44**	**329**	⇑P	**Pn**	04 48 22.3	**-1.2**
	baz=19						
626A	**Big Bend Ranch**	**19.66**	**326**	⇑P	**Pn**	04 48 25.4	**-0.8**
	baz=20,SNR=5.1						
527A	**Woodward Ranch**	**19.84**	**328**	⇓P	**Pn**	04 48 27.3	**-1.1**
	baz=20						
428A	**Kincaid Ranch,**	**19.85**	**331**	⇑P	**Pn**	04 48 26.8	**-1.7**
	baz=20						
526A	**Mary Lane Ranc**	**20.03**	**327**	⇑P	**P**	04 48 29.4	**+0.5**
	baz=20						
328A	**Wristen Ranch,**	**20.46**	**331**	⇓P	**P**	04 48 33.6	**+0.1**
	baz=20,SNR=5.5						
426A	**McDonald Obser**	**20.48**	**328**	⇓P	**P**	04 48 34.3	**+0.6**
	baz=20						
326A	**Caldwell Ranch**	**20.97**	**329**	⇓P	**P**	04 48 39.2	**+0.1**
	baz=21,SNR=7.4						
425A	**Indio Mountain**	**21.08**	**326**	⇑P	**P**	04 48 41.2	**+1.0**
	baz=21,SNR=5.0						
325A	**Bean Ranch, Si**	**21.52**	**327**	⇓P	**P**	04 48 45.6	**+0.5**
	baz=21						
226A	**Malaga, Loving**	**21.64**	**330**	⇓P	**P**	04 48 46.3	**+0.1**
	baz=22						
127A	**Arkansas Junct**	**21.80**	**332**	⇓P	**P**	04 48 47.9	**0.0**
	baz=22						
324A	**Moseley Ranch,**	**21.85**	**326**	⇓P	**P**	04 48 48.8	**+0.3**
	baz=22						
MNTX	**Cornudas Mount**	**22.00**	**327**	P	**P**	04 48 50.0	**-0.1**
	3.8nm,0.8s,mb3.9						
225A	**Deer Hill, Car**	**22.03**	**329**	⇓P	**P**	04 48 51.0	**+0.6**
	baz=22						
Z27A	**Tatum**	**22.27**	**333**

baz=37
J08A Circle Bar Ran 37.57 327 ⇓P **P 04 51 10.6 +0.3**
baz=37,SNR=5.7
I09A Lost Marbles R 37.62 328 ⇓P **P 04 51 10.7 0.0**
baz=38,SNR=7.8
F12A Elk City 37.76 333 ⇓P **P 04 51 11.3 -0.5**
baz=38
G11A Walters Elk Ra 37.95 331 ⇓P **P 04 51 13.3 -0.1**
baz=38
E12A Beaver Dam Sad 38.41 333 ⇑P **P 04 51 16.7 -0.6**
baz=38
D13A Huson 38.46 335 ⇑P **P 04 51 17.2 -0.5**
baz=38
H08A Prairie City 38.48 328 ⇓P **P 04 51 18.4 +0.5**
baz=38
D12A Red Ives Fores 38.80 334 ⇑P **P 04 51 20.4 -0.2**
baz=38
F10A Beach Ranch, E 38.83 331 ⇑P **P 04 51 20.2 -0.6**
baz=39,SNR=5.8
A14A Double T Ranch 39.57 337 ⇓P **P 04 51 25.9 -1.0**
baz=39
C11A Tepee Creek (N 39.80 334 ⇑P **P 04 51 28.4 -0.5**
baz=40
YKA Yellowknife Ar 51.46 347 P **P 04 52 57.9 -3.0**
0.3nm,0.3s,mb3.7,baz=151,slow=7.9,SNR=4.2

ISCJB ***07*** *04:44:48.5±1.3, 16°.39S±0°.04×174°.17W±0°.04, h70km±11km, mb5.0/128, Error ellipse: s-maj=8.1km s-min=4.8km az=147.1*
IDC ***07*** *04:44:48.9±1.8, 16°.41S×174°.07W, h59km±15km, mb4.7/17, mb1 4.9/18, mb1mx4.9/19, mbtmp4.7/18, MS4.2/17, Ms1 4.1/17, ms1mx4.1/23, Error ellipse: s-maj=18.9km s-min=10.2km az=132.0*
BJI ***07*** *04:44:54.0, 16°.12S×173°.79W, h115km, mB5.1/22, mb5.1/26*
MOS ***07*** *04:44:55.3±1.5, 15°.97S×173°.82W, h103km, mb5.1/29, MS4.5/10, Error ellipse: s-maj=11.4km s-min=7.7km az=54.7*
NEIC ***07*** *04:44:55.6±0.2, 16°.43S×174°.05W, h116km, mb5.0/103, MW5.5, Error ellipse: s-maj=7.2km s-min=4.7km az=154.0, Moment Tensor Solution. s25 Moment tensor: Scale 10^{17}Nm; M_{rr}0.42; $M_{\theta\theta}$-1.57; $M_{\phi\phi}$1.15; $M_{r\theta}$-1.22; $M_{\theta\phi}$-0.74; $M_{\phi r}$-1.22; Best double couple: $M_0$2.30000×10^{17} NP1: ϕ_s218.00000°, δ84.00000°, λ51.00000°. NP2: ϕ_s121.00000°, δ40.00000°, λ170.00000°. Principal axes: T 2.0700, Plg38.0000°, Azm93.0000°; N 0.4900, Plg39.0000°, Azm223.0000°; P -2.5500, Plg27.0000°, Azm338.0000°;*
SZGRF ***07*** *04:44:57.6, 15°.91S×173°.48W, h130km, Tonga Islands*
GCMT ***07*** *04:44:59.6±0.1, 16°.44S×173°.71W, h128km±1km, MW5.5, Moment Tensor Solution. s92,c173; s6,c7; Moment tensor: Scale 10^{17}Nm; M_{rr}0.73±.03; $M_{\theta\theta}$-1.54±.04; $M_{\phi\phi}$0.81±.04; $M_{r\theta}$-1.54±.02; $M_{\theta\phi}$0.14±.04; $M_{\phi r}$-1.38±.02; Best double couple: $M_0$2.50000×10^{17} NP1:ϕ_s128.00000°, δ30.00000°, λ161.00000°. NP2:ϕ_s235.00000°, δ80.00000°, λ61.00000°. Principal axes: T 2.5200, Plg47.0000°, Azm116.0000°; N -0.1100, Plg28.0000°, Azm241.0000°; P -2.4100, Plg30.0000°, Azm348.0000°; Data Used: II IU IC G CN. Surface waves: sta=110, comp=219, per= 50.*
ISC 07 04:44:54.4±1.5,**16°.50S**±0°.04×**174°.11W**±0°.04,
h110km±13km,**h117**km±3.2km:**pP-P**,**n868**,σ0s**63**/618,
mb5.0/128,**204C-219D**,**Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.42**	**42**	**P**			**Pn**	**04 45 40.3**	**-5.8**
	753nm,0.3s,baz=209,slow=18,SNR=550								
AFI						S	Sx	04 46 16.7	
	3μm,0.3s,baz=276,slow=18,SNR=20								
AFI						LR	LR	04 46 47.7	
	comp=Z,2μm,18.7s,baz=198,slow=36								
AFI	**Afiamalu**	**3.42**	**42**	*e*P			**Pn**	**04 45 40.9**	**-5.1**
AFI				*e*S			Sx	04 46 16.2	
MSVF	**Nonsavu**	**7.59**	**260**	Pn			**Pn**	**04 46 50.9**	**+8.4**
	748nm,0.7s,SNR=11								
MSVF	**Nonsavu**	**7.59**	**260**	*e*Pn			**Pn**	**04 46 50.2**	**+7.8**
	114nm,0.9s								
FUNA	**Funafuti**	**10.26**	**320**	Pn			**Pn**	**04 47 21.3**	**+2.5**
	587nm,1.8s								
RAO	**Raoul Island**	**13.17**	**195**	LR			LR	04 51 37.4	
	comp=Z,778nm,21.6s,baz=105,slow=31								
RAR	**Rarotonga**	**14.36**	**111**	P			**Pn**	**04 48 10.1**	**-2.6**
	7.5nm,0.3s,baz=254,slow=8.1,SNR=15								
RAR						S	Sx	04 50 39.2	
	2.8nm,0.3s,baz=300,slow=20,SNR=3.8								
RAR						LR	LR	04 52 57.9	
	comp=Z,1μm,18.3s,baz=291,slow=34								
RAR	**Rarotonga**	**14.36**	**111**	*e*Pn			**Pn**	**04 48 11.3**	**-1.4**
DZM	**Mont Dzumac**	**19.17**	**250**	*e*P			**P**	**04 49 16.6**	**+7.2**
	146nm,1.0s								
DZM				*e*LR			LR	04 53 50.8	
	3μm,26.6s								
DZM	**Mont Dzumac**	**19.17**	**250**	*e*P			**P**	**04 49 13.2**	**+3.7**
	67nm,0.9s								
NOUC	**Port Laguerre**	**19.30**	**250**	*e*P			**P**	**04 49 15.4**	**+4.5**
URZ	**Urewera**	**23.02**	**198**	P			**P**	**04 49 48.7**	**-1.3**
	24nm,0.4s,mb4.8,baz=9.1,slow=3.2,SNR=16								
URZ						S	**S**	**04 53 51.8**	**-0.3**
	5.7nm,0.6s,baz=32,slow=15,SNR=3.6								
URZ	**Urewera**	**23.02**	**198**	*e*P			**P**	**04 49 49.5**	**-0.4**
	30nm,0.5s,mb4.9								
URZ	**Urewera**	**23.02**	**198**	PN			**P**	**04 49 48.6**	**-1.4**
PAE	**Paea**	**23.48**	**96**	*e*P			**P**	**04 49 53.6**	**-0.8**
	49nm,1.3s,mb4.7								
PAE	**Paea**	**23.48**	**96**	*e*P			**P**	**04 49 53.6**	**-0.8**
PAE						pmax	pmax		
	comp=Z,49nm,1.3s,mb4.7								
PPT	**Papeete**	**23.48**	**96**	*e*P			**P**	**04 49 54.0**	**-0.4**
	comp=Z,95nm,1.2s,mb5.0								
PPT				*e*LQ				04 54 27.7	
	comp=Z,3μm,26.2s								
PPT				*e*LR			LR	04 55 21.8	
	comp=Z,3μm,31.5s								
PPT	**Papeete**	**23.48**	**96**	LR			LR	04 57 27.5	
	comp=Z,529nm,18.6s,baz=270,slow=32								
PPT	**Papeete**	**23.48**	**96**	*e*P			**P**	**04 49 54.0**	**-0.4**
	comp=Z,95nm,1.2s,mb5.0								
PPT				*e*LQ				04 54 27.7	
TIAR	**Tiarei**	**23.70**	**96**	*e*P			**P**	**04 49 56.0**	**-0.4**
	comp=Z,206nm,1.1s,mb5.4								
TBI	**Tubuai**	**24.14**	**110**	*e*P			**P**	**04 50 00.7**	**+0.3**
	comp=Z,477nm,1.3s,mb5.7								
TBI				*e*LQ				04 54 46.1	
TBI				*e*LR			LR	04 55 46.8	
	comp=Z,3μm,33.8s								
TBI	**Tubuai**	**24.14**	**110**	*e*P			**P**	**04 50 00.7**	**+0.3**
	comp=Z,477nm,1.3s,mb5.7								
TBI				*e*LQ				04 54 46.1	
XMAS	**Kiritimati**	**24.70**	**43**	*e*P			**P**	**04 50 04.6**	**-1.0**
	comp=Z,102nm,0.9s,mb5.2								
PMOR	**Pomariorio Ree**	**25.27**	**90**	*e*P			**P**	**04 50 10.3**	**-0.4**
	comp=Z,301nm,1.4s,mb5.5								
MRZ	**Mangatainoka R**	**25.69**	**198**	PN			**P**	**04 50 12.3**	**-1.9**
QRZ	**Quartz Range**	**26.86**	**203**	PN			**P**	**04 50 24.8**	**0.0**
THZ	**Tophouse**	**27.55**	**201**	PN			**P**	**04 50 31.7**	**+0.8**
RPZ	**Rata Peaks**	**29.91**	**202**	P			**P**	**04 50 52.6**	**+0.7**
	comp=Z,18nm,1.0s,mb4.7,baz=17,slow=2.9,SNR=8.3								
EIDS	**Eidsvold**	**33.60**	**249**	*e*P			**P**	**04 51 23.4**	**-1.0**
	comp=Z,19nm,0.9s,mb4.9								
ARMA	**Armidale**	**34.20**	**240**	*e*P			**P**	**04 51 29.0**	**-0.5**
ARMA	**Armidale**	**34.20**	**240**	*e*P			**P**	**04 51 29.6**	**+0.1**
	comp=Z,22nm,1.0s,mb5.0								
RKT	**Rikitea**	**37.33**	**107**	*e*P			**P**	**04 51 56.6**	**+0.2**
	comp=Z,75nm,1.1s,mb5.5								
RKT				*e*LR			LR	05 01 36.0	
	comp=Z,2μm,32.8s								
CNB	**Canberra Magne**	**37.54**	**233**	*e*P			**P**	**04 51 57.9**	**-0.1**
CNB				*e*			pP	04 52 27.2	+4.4
CTA	**Charters Tower**	**37.74**	**258**	*e*P			**P**	**04 52 00.9**	**+1.0**
	comp=Z,7.4nm,1.1s,mb4.4								
CTAO	**Charters Tower**	**37.74**	**258**	*e*P			**P**	**04 52 00.2**	**+0.3**
WAKE	**Wake Island**	**40.27**	**331**	*e*P			**P**	**04 52 20.8**	**-0.1**
	comp=Z,223nm,0.8s,mb6.0								
KIP	**Kipapa**	**40.86**	**23**	*e*P			**P**	**04 52 26.0**	**+0.3**
KIP						pmax	pmax		
	comp=Z,76nm,1.0s,mb5.5								
KIP	**Kipapa**	**40.86**	**23**	*e*P			**P**	**04 52 25.9**	**+0.3**
	comp=Z,76nm,1.0s,mb5.5								
TOO	**Toolangi**	**41.25**	**231**	*e*P			**P**	**04 52 27.5**	**-1.3**
STKA	**Stephens Creek**	**42.90**	**241**	*e*P			**P**	**04 52 41.5**	**-0.8**
	comp=Z,29nm,0.9s,mb5.0								
STKA				*e*				04 53 13.2	
STKA	**Stephens Creek**	**42.90**	**241**	P			**P**	**04 52 42.6**	**+0.3**
	comp=Z,23nm,0.6s,mb5.1,baz=71,slow=7.3,SNR=28								
STKA						LR	LR	05 08 28.2	
	comp=Z,485nm,20.9s,baz=72,slow=33								
STKA	**Stephens Creek**	**42.90**	**241**	*e*P			**P**	**04 52 42.4**	**0.0**
	comp=Z,5.0nm,0.8s,mb4.3								
WRAB	**Tennant Creek**	**48.92**	**258**	P			**P**	**04 53 30.0**	**+0.2**
	comp=Z,95nm,0.8s,mb5.8,SNR=12								
WRAB	**Tennant Creek**	**48.92**	**258**	*e*P			**P**	**04 53 30.0**	**+0.2**
WRAB						pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8								
WRAB	**Tennant Creek**	**48.92**	**258**	*e*P			**P**	**04 53 30.0**	**+0.2**
	comp=Z,15nm,1.1s,mb4.8								
WRA	**Warramunga Arr**	**48.94**	**258**	P			**P**	**04 53 29.2**	**-0.6**
	comp=Z,5.5nm,0.3s,mb4.9,baz=90,slow=7.8,SNR=35								
WRA						LR	LR	05 12 50.1	
	comp=Z,268nm,19.2s,baz=105,slow=34								
ASAR	**Alice Springs**	**49.13**	**253**	P			**P**	**04 53 30.6**	**-0.7**
	comp=Z,27nm,0.7s,mb5.3,baz=85,slow=8.5,SNR=134								
ASAR						ScP	ScP	04 58 42.1	+3.6
	comp=Z,1.5nm,0.9s,baz=106,slow=4.0,SNR=4.9								
ASAR						S	**S**	**05 00 23.4**	**-5.1**
	comp=Z,0.6nm,0.7s,baz=93,slow=15,SNR=3.1								
KAKA	**Kakadu**	**51.74**	**267**	*e*P			**P**	**04 53 51.5**	**+0.4**
	comp=Z,9.8nm,0.4s,mb5.2								
KAKA	**Kakadu**	**51.74**	**267**	*e*P			**P**	**04 53 52.2**	**+1.2**
	comp=Z,28nm,0.5s,mb5.5								
FORT	**Forrest**	**54.32**	**244**	*e*P			**P**	**04 54 08.5**	**-1.3**
	comp=Z,30nm,0.9s,mb5.3								
FITZ	**Fitzroy Crossi**	**57.32**	**259**	*e*P			**P**	**04 54 32.0**	**+0.6**
	comp=Z,7.9nm,0.8s,mb4.8								
FITZ	**Fitzroy Crossi**	**57.32**	**259**	*e*P			**P**	**04 54 32.2**	**+0.8**
	comp=Z,2.8nm,0.5s,mb4.5								
CBIJ	**Chichi jima**	**60.63**	**315**	LR			LR	05 16 52.2	
	comp=Z,256nm,20.6s,baz=124,slow=32								
SBA	**Scott Base**	**62.11**	**185**	*e*P			**P**	**04 55 05.6**	**+2.4**
SBA						pmax	pmax		
	comp=Z,29nm,0.9s,mb5.3								
SBA	**Scott Base**	**62.11**	**185**	*e*P			**P**	**04 55 05.5**	**+2.3**
	comp=Z,29nm,0.9s,mb5.3								
MBWA	**Marble Bar**	**62.40**	**254**	*e*P			**P**	**04 55 06.2**	**0.0**
	comp=Z,17nm,0.8s,mb5.1								
KLBR	**Kellerberrin**	**63.13**	**243**	*e*P			**P**	**04 55 09.2**	**-1.6**
	comp=Z,16nm,0.6s,mb5.1								
NWAO	**Narrogin (SRO)**	**63.49**	**241**	*e*P			**P**	**04 55 11.9**	**-1.3**
DAV	**Davao City (W)**	**64.08**	**287**	LR			LR	05 20 50.9	
	comp=Z,174nm,21.7s,baz=124,slow=34								
JHJ	**Hachijo jima 2**	**66.12**	**319**	LR			LR	05 24 54.9	
	comp=Z,179nm,18.3s,baz=229,slow=36								
MJAR	**Matsushiro Arr**	**69.33**	**320**	P			**P**	**04 55 50.3**	**+0.1**
	comp=Z,3.6nm,0.5s,mb4.4,baz=149,slow=5.2,SNR=9.0								
MJAR						LR	LR	05 21 01.3	
	comp=Z,150nm,21.0s,baz=150,slow=31								
MAT	**Matsushiro**	**69.34**	**320**	P			**P**	**04 55 50.0**	**-0.2**
MAT				*e*S			S	05 04 46.0	-2.3
UNV	**Unalaska Valle**	**70.36**	**5**	*e*P			**P**	**04 55 54.9**	**-1.2**
	comp=Z,20nm,0.8s,mb5.0								
KKM	**Kota Kinabalu**	**72.43**	**282**	*e*P			**P**	**04 56 10.2**	**+0.8**
	comp=Z,16nm,0.6s,mb5.0								
SDPT	**Sand Point**	**72.49**	**8**	*e*P			**P**	**04 56 07.7**	**-1.1**
	comp=Z,34nm,0.7s,mb5.3								
SMMC	**Simmler**	**72.69**	**44**	⇓P			**P**	**04 56 10.1**	**-0.4**
	baz=73								
ARVC	**Arvin**	**73.37**	**45**	⇑P			**P**	**04 56 13.4**	**-1.1**
	baz=74								
MWC	**Mount Wilson**	**73.39**	**46**	*e*P			**P**	**04 56 14.8**	**+0.2**
MWC						pmax	pmax		
	comp=Z,12nm,0.8s,mb4.8								
MWC	**Mount Wilson**	**73.39**	**46**	*e*P			**P**	**04 56 14.8**	**+0.1**
	comp=Z,12nm,0.8s,mb4.8								
PEA0B	**Petropavlovsk-**	**73.46**	**343**	*e*P			**P**	**04 56 13.5**	**-1.2**
PETK	**Petropavlovsk-**	**73.46**	**343**	P			**P**	**04 56 13.1**	**-1.6**
	comp=Z,13nm,0.7s,mb4.9,baz=115,slow=9.0,SNR=15								
PETK						LR	LR	05 22 15.2	
	comp=Z,88nm,21.6s,baz=176,slow=31								
PETK	**Petropavlovsk-**	**73.46**	**343**	P			**P**	**04 56 13.1**	**-1.6**
PETK						LR	LR	05 22 15.2	
QSPA	**South Pole Qui**	**73.56**	**180**	*e*P			**P**	**04 56 16.0**	**+1.1**
	comp=Z,40nm,0.9s,mb5.1								
MURC	**Murrieta**	**73.64**	**47**	⇓P			**P**	**04 56 15.3**	**-0.8**
	baz=74								
BFSC	**Mount Baldy Ra**	**73.67**	**46**	⇓P			**P**	**04 56 16.0**	**-0.3**
	baz=74,SNR=6.5								
CHGN	**Chignik**	**73.71**	**9**	*e*P			**P**	**04 56 14.8**	**-1.2**
EDW2	**Edwards Air Fo**	**73.80**	**45**	⇓P			**P**	**04 56 16.9**	**-0.2**
	baz=74,SNR=16								
MONP	**Monument Peak**	**73.81**	**48**	⇑P			**P**	**04 56 17.2**	**0.0**
	baz=74,SNR=14								
DVTC	**Desert V Tower**	**73.91**	**48**	⇓P			**P**	**04 56 17.6**	**-0.1**
	baz=74,SNR=6.4								
ISA	**Isabella**	**73.91**	**44**	⇓P			**P**	**04 56 17.7**	**0.0**
	baz=74,SNR=8.9								
ISA	**Isabella**	**73.91**	**44**	*e*P			**P**	**04 56 17.7**	**0.0**
ISA						pmax	pmax		
	comp=Z,41nm,1.5s,mb4.9								
ISA	**Isabella**	**73.91**	**44**	*e*P			**P**	**04 56 17.7**	**+0.1**
	comp=Z,41nm,1.5s,mb4.9								
CMB	**Columbia Colle**	**74.03**	**41**	*e*P			**P**	**04 56 18.4**	**+0.1**
CMB						pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.6								
CMB	**Columbia Colle**	**74.03**	**41**	*e*P			**P**	**04 56 18.4**	**+0.1**
	comp=Z,8.3nm,0.7s,mb4.6								
YSS	**Yuzh-Sakhalins**	**74.09**	**331**	*e*P			**P**	**04 56 18.0**	**-0.5**
YSS				*e*			pP	04 56 44.2	-2.0
YSS						pmax	pmax		
	comp=Z,30nm,1.0s,mb5.0								
YSS	**Yuzh-Sakhalins**	**74.09**	**331**	*e*P			**P**	**04 56 18.9**	**+0.4**
	comp=Z,19nm,0.8s,mb4.9								
PFO	**Pinyon Flat Ob**	**74.17**	**47**	P			**P**	**04 56 20.0**	**+0.8**
	comp=Z,82nm,0.9s,mb5.5,SNR=7.2								
PFO	**Pinyon Flat Ob**	**74.17**	**47**	⇓P			**P**	**04 56 19.1**	**-0.1**
	baz=74,SNR=11								
PFO	**Pinyon Flat Ob**	**74.17**	**47**	*e*P			**P**	**04 56 20.0**	**+0.8**
PFO						pmax	pmax		
	comp=Z,18nm,1.1s,mb4.7								
PFO	**Pinyon Flat Ob**	**74.17**	**47**	*e*P			**P**	**04 56 19.9**	**+0.7**
	comp=Z,18nm,1.1s,mb4.7								
WDC	**Whiskeytown Da**	**74.26**	**38**	*e*P			**P**	**04 56 19.3**	**-0.3**
WDC						pmax	pmax		
	comp=Z,11nm,0.8s,mb4.6								
WDC	**Whiskeytown Da**	**74.26**	**38**	*e*P			**P**	**04 56 19.3**	**-0.2**
	comp=Z,11nm,0.8s,mb4.6								
SWSC	**Sam W. Stewart**	**74.28**	**48**	⇓P			**P**	**04 56 19.8**	**-0.1**
	baz=74								
LRMC	**Laurel Mountai**	**74.33**	**45**	⇓P			**P**	**04 56 20.1**	**0.0**
	baz=74,SNR=5.2								
CWC	**Cottonwood Cre**	**74.61**	**44**	⇓P			**P**	**04 56 21.4**	**-0.3**
	baz=75								
BELC	**Belle Mtn. Jos**	**74.70**	**47**	⇑P			**P**	**04 56 22.2**	**0.0**
	baz=75,SNR=12								
MLAC	**Mammoth Lakes**	**74.79**	**43**	⇑P			**P**	**04 56 22.5**	**-0.3**
	baz=75								
MPMC	**Manual Prospec**	**74.79**	**45**	⇓P			**P**	**04 56 22.8**	**0.0**
	baz=75,SNR=31								
MTUM	**Tungsten Hills**	**74.81**	**43**	*e*P			**P**	**04 56 23.5**	**+0.7**
GSC	**Goldstone**	**74.84**	**45**	⇑P			**P**	**04 56 23.1**	**0.0**
	baz=75,SNR=14								
GSC	**Goldstone**	**74.84**	**45**	*e*P			**P**	**04 56 23.2**	**+0.1**
GSC						pmax	pmax		
	comp=Z,35nm,1.3s,mb4.9								
GSC	**Goldstone**	**74.84**	**45**	*e*P			**P**	**04 56 23.2**	**+0.1**
	comp=Z,35nm,1.3s,mb4.9								
YBH	**Yreka Blue Hor**	**74.88**	**37**	P			**P**	**04 56 23.9**	**+0.8**
	comp=Z,37nm,0.7s,mb5.2,baz=278,slow=0.3,SNR=49								
YBH	**Yreka Blue Hor**	**74.88**	**37**	*e*P			**P**	**04 56 24.1**	**+1.0**
YBH						pmax	pmax		
	comp=Z,30nm,0.8s								
YBH	**Yreka Blue Hor**	**74.88**	**37**	*e*P			**P**	**04 56 24.1**	**+0.9**
	comp=Z,30nm,0.8s,mb5.1								
BC3	**Big Chuckawall**	**74.90**	**48**	⇑P			**P**	**04 56 23.5**	**+0.1**
	baz=75,SNR=16								
HEC	**Hector,Ludlow**	**74.91**	**46**	⇓P			**P**	**04 56 23.2**	**-0.3**
	baz=75,SNR=12								
WAKR	**Walker**	**74.91**	**42**	*e*P			**P**	**04 56 23.7**	**+0.2**
112A	**Yuma**	**74.94**	**49**	⇑P			**P**	**04 56 23.6**	**-0.1**
	baz=75,SNR=5.2								
SSLB	**Suanglung**	**74.98**	**301**	*e*P			**P**	**04 56 24.3**	**+0.2**
	comp=Z,10nm,0.6s,mb4.7								
GLA	**Glamis**	**75.03**	**48**	⇑P			**P**	**04 56 23.8**	**-0.4**
	baz=75								
GLA	**Glamis**	**75.03**	**48**	*e*P			**P**	**04 56 25.0**	**+0.8**
GLA						pmax	pmax		
	comp=Z,33nm,1.4s,mb4.9								
GLA	**Glamis**	**75.03**	**48**	*e*P			**P**	**04 56 25.0**	**+0.8**
	comp=Z,33nm,1.4s,mb4.9								
LBCM	**Butte Creek Ri**	**75.13**	**39**	P			**P**	**04 56 24.9**	**+0.3**
WCN	**Washoe City**	**75.18**	**41**	⇑P			**P**	**04 56 25.1**	**+0.2**
	baz=75,SNR=19								
HUMO	**Hull Mountain**	**75.29**	**36**	*e*P			**P**	**04 56 26.1**	**+0.6**
	comp=Z,12nm,0.7s,mb4.7								
GMRC	**Granite Mounta**	**75.35**	**46**	⇑P			**P**	**04 56 26.0**	**0.0**
	baz=76,SNR=13								
IRM	**Iron Mountain**	**75.38**	**47**	⇓P			**P**	**04 56 26.2**	**0.0**
	baz=76,SNR=22								
GRAC	**Grapevine Rang**	**75.40**	**44**	⇑P			**P**	**04 56 26.3**	**+0.1**
	baz=76								
FURC	**Furnace Creek,**	**75.44**	**44**	⇓P			**P**	**04 56 26.5**	**0.0**
	baz=76,SNR=12								
BUOR	**Burton Butte**	**75.49**	**37**	P			**P**	**04 56 27.2**	**+0.5**
TUQ	**Turquoise Moun**	**75.52**	**46**	⇓P			**P**	**04 56 27.0**	**0.0**
	baz=76,SNR=14								
SHOC	**Shoshone**	**75.53**	**45**	⇓P			**P**	**04 56 26.7**	**-0.3**
	baz=76,SNR=12								
NVAR	**Mina Array Bea**	**75.60**	**42**	P			**P**	**04 56 27.7**	**+0.4**
	comp=Z,19nm,0.9s,mb4.8,baz=225,slow=9.8,SNR=61								
Y12C	**Blythe**	**75.61**	**48**	⇑P			**P**	**04 56 27.5**	**0.0**
	baz=76								
113A	**Mohawk Valley,**	**75.65**	**49**	⇓P			**P**	**04 56 27.7**	**-0.1**
	baz=76,SNR=32								
PAHR	**Pah Rah Range**	**75.65**	**41**	*e*P			**P**	**04 56 28.1**	**+0.4**
U10A	**Ash Meadows, A**	**75.77**	**45**	⇑P			**P**	**04 56 28.6**	**+0.2**
	baz=76,SNR=12								
LDFC	**Landfair**	**75.89**	**46**	*e*P			**P**	**04 56 29.8**	**+0.7**
	comp=Z,37nm,1.1s,mb5.0								
214A	**Organ Pipe Nat**	**75.94**	**50**	⇑P			**P**	**04 56 29.5**	**0.0**
	baz=76,SNR=11								
Z13A	**Yuma Proving G**	**75.94**	**49**	⇑P			**P**	**04 56 29.5**	**0.0**
	baz=76,SNR=33								
NEE2	**Needles Airpor**	**76.07**	**47**	⇑P			**P**	**04 56 30.3**	**+0.2**
	baz=76								
V11A	**Goodsprings**	**76.07**	**46**	⇑P			**P**	**04 56 30.3**	**+0.2**
	baz=76,SNR=15								
KDAK	**Kodiak Island**	**76.12**	**12**	*e*P			**P**	**04 56 30.1**	**+0.2**
KDAK						pmax	pmax		
	comp=Z,48nm,1.1s,mb5.1								
KDAK	**Kodiak Island**	**76.12**	**12**	*e*P			**P**	**04 56 30.1**	**+0.3**
	comp=Z,48nm,1.1s,mb5.1								
Y13A	**Salome**	**76.14**	**48**	⇑P			**P**	**04 56 30.5**	**0.0**
	baz=76,SNR=8.2								
PDMCI	**Parker Dam,Lak**	**76.16**	**48**	⇑P			**P**	**04 56 30.7**	**0.0**
	baz=76,SNR=5.9								
W12A	**Cal Nev Ari**	**76.17**	**46**	⇑P			**P**	**04 56 30.9**	**+0.2**
	baz=76								
114A	**Black Gap (USA**	**76.28**	**49**	⇓P			**P**	**04 56 31.5**	**+0.2**
	baz=76,SNR=7.1								
MOD	**Modoc**	**76.40**	**38**	*e*P			**P**	**04 56 31.5**	**-0.3**
	comp=Z,13nm,0.8s,mb4.7								
V12A	**Nelson**	**76.41**	**46**	⇓P			**P**	**04 56 32.1**	**+0.1**
	baz=76,SNR=15								
U11A	**Corn Creek**	**76.42**	**45**	⇓P			**P**	**04 56 32.5**	**+0.4**
	baz=76								
S10A	**Tonopah Range,**	**76.42**	**43**	⇑P			**P**	**04 56 32.1**	**0.0**
	baz=77,SNR=26								
KSRS	**Korea Array**	**76.46**	**316**	P			**P**	**04 56 33.4**	**+1.1**
	comp=Z,6.6nm,0.8s,mb4.4,baz=129,slow=5.8,SNR=30								
KSRS						LR	LR	05 26 41.1	
	comp=Z,96nm,19.2s,baz=123,slow=33								
X13A	**Yucca**	**76.53**	**47**	⇑P			**P**	**04 56 32.9**	**+0.1**
	baz=77,SNR=18								
Z14A	**Wintersburg**	**76.54**	**49**	⇑P			**P**	**04 56 32.8**	**0.0**
	baz=77,SNR=3.1								
K05A	**Summer Lake**	**76.55**	**37**	⇑P			**P**	**04 56 33.2**	**+0.5**
	baz=77,SNR=15								
115A	**Sonoran Desert**	**76.73**	**50**	⇓P			**P**	**04 56 34.1**	**+0.2**
	baz=77								
W13A	**Hualapai Mount**	**76.76**	**47**	⇑P			**P**	**04 56 34.2**	**+0.2**
	baz=77,SNR=16								
Y14A	**Wickenburg**	**76.79**	**48**	⇑P			**P**	**04

comp=Z,38nm,3.8s
SSE LR LR
comp=N,180nm,34.3s
SSE LR LR
comp=E,320nm,36.2s
SSE LR LR
comp=Z,400nm,29.7s
X16A Lo Mia Camp, P 78.15 49 ⇓P P 04 56 42.4 +0.6
baz=78,SNR=49
Q12A Willow Creek R 78.19 43 ⇑P P 04 56 41.9 0.0
baz=78,SNR=20
Y17A Roosevelt 78.23 50 ⇑P P 04 56 42.5 +0.3
baz=78,SNR=9.9
G06A Carlson Farm, 78.24 35 ⇑P P 04 56 41.3 -0.7
baz=78
O11A Cowboy Ranch, 78.25 42 ⇑P P 04 56 42.3 +0.1
baz=78,SNR=18
319A Douglas 78.30 52 ⇓P P 04 56 42.7 0.0
baz=78
R13A O'Grain Ranch, 78.31 44 ⇓P P 04 56 43.0 +0.5
baz=78,SNR=23
T14A Hurricane 78.32 46 ⇓P P 04 56 43.0 +0.3
baz=78,SNR=5.5
V15A Kaibab Nationa 78.32 47 ⇑P P 04 56 43.3 +0.6
baz=78,SNR=36
J08A Circle Bar Ran 78.35 38 ⇑P P 04 56 42.3 -0.3
baz=78,SNR=26
P12A McGill 78.38 43 ⇑P P 04 56 42.9 0.0
baz=78,SNR=14
CCUT Cedar City 78.39 45 *eP* **P 04 56 44.0 +1.0**
comp=Z,26nm,0.9s,mb5.0
W16A Flagstaff 78.42 48 ⇑P P 04 56 44.0 +0.8
baz=78
ARUT Antelope Range 78.46 45 *eP* **P 04 56 43.9 +0.5**
ARUT pmax pmax
comp=Z,29nm,1.0s,mb5.0
ARUT Antelope Range 78.46 45 *eP* **P 04 56 43.9 +0.5**
comp=Z,29nm,1.0s,mb5.0
M10A I.L. Ranch, Tu 78.47 40 ⇑P P 04 56 43.5 +0.2
baz=79,SNR=35
Z18A Geronimo 78.53 50 ⇑P P 04 56 44.3 +0.4
baz=79,SNR=5.0
GNW Green Mountain 78.54 33 *eP* **P 04 56 43.2 -0.4**
comp=Z,10nm,1.1s,mb4.6
U15A North Rim 78.55 46 ⇓P P 04 56 44.3 +0.4
baz=79,SNR=62
LON Longmire 78.55 34 *eP* **P 04 56 43.2 -0.5**
LON pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
LON Longmire 78.55 34 *eP* **P 04 56 43.2 -0.4**
comp=Z,3.8nm,0.7s,mb4.3
X17A Forest Lakes 78.57 49 ⇑P P 04 56 44.6 +0.5
baz=79,SNR=28
N11A Elko Archery C 78.58 41 ⇓P P 04 56 44.0 0.0
baz=79,SNR=6.4
RSO Redoubt South 78.60 11 *eP* **P 04 56 42.7 -0.9**
219A White Tail Can 78.61 52 ⇓P P 04 56 44.4 +0.1
baz=79,SNR=32
S14A Cedar City 78.63 45 ⇑P P 04 56 44.6 +0.3
baz=79,SNR=17
Q13A Wheeler Ranch, 78.68 44 ⇑P P 04 56 44.7 +0.1
baz=79
D05A Enumclaw 78.73 33 ⇓P P 04 56 45.2 +0.5
baz=79
WUAZ Wupatki 78.74 48 ⇓P P 04 56 44.9 -0.1
baz=79,SNR=14
WUAZ Wupatki 78.74 48 *eP* **P 04 56 45.4 +0.4**
comp=Z,16nm,0.9s,mb4.8
SVW2 Sparrevohn 78.74 9 *eP* **P 04 56 43.7 -0.7**
comp=Z,34nm,0.8s,mb5.2
T15A Red Dirt Ranch 78.78 46 ⇓P P 04 56 45.5 +0.3
baz=79,SNR=44
L10A Juniper Basin 78.82 40 ⇑P P 04 56 45.2 -0.1
baz=79,SNR=44
JBO Jordan Butte 78.83 36 P **P 04 56 45.2 0.0**
ELK Elko 78.85 42 *eP* **P 04 56 45.6 +0.1**
ELK pmax pmax
comp=Z,33nm,0.9s
ELK Elko 78.85 42 *eP* **P 04 56 45.5 +0.1**
comp=Z,33nm,0.9s,mb5.2
320A Kipp Ranch, An 78.86 53 ⇓P P 04 56 46.4 +0.7
baz=79,SNR=24
Y18A Canyon Day Jun 78.86 50 ⇑P P 04 56 46.4 +0.7
baz=79,SNR=23
M11A Holland Ranch, 78.88 41 ⇑P P 04 56 45.7 +0.1
baz=79,SNR=14
HABR Khabarovsk 78.90 328 P **P 04 56 43.0 -2.5**
HABR *eS* S 05 06 29.5 -5.3
HABR *e* 05 06 53.9
HABR *e**SS sS 05 07 14.3 -8.7
HABR SS SS 05 11 35.0 -7.7
HABR *e*SSS 05 15 01.1
HABR pmax pmax
comp=E,33nm,1.9s
HABR pmax pmax
comp=N,14nm,1.1s
HABR pmax pmax
comp=Z,20nm,1.0s,mb4.9
HABR MLR MLR
comp=Z,120nm,20.0s
O12A Currie 78.91 42 ⇓P P 04 56 45.7 -0.1
baz=79,SNR=33
H08A Prairie City 78.92 37 ⇑P P 04 56 45.5 -0.3
baz=79,SNR=8.0
PGC Sidney 78.92 32 *eP* **P 04 56 45.6 0.0**
119A Ashpeak Ranch, 78.93 51 ⇓P P 04 56 46.4 +0.3
baz=79,SNR=14
P13A Bates Ranch, G 78.95 43 ⇑P P 04 56 46.1 0.0
baz=79,SNR=36
K10A MacKenzie Ranc 78.97 39 ⇓P P 04 56 45.9 -0.2
baz=79,SNR=48
W17A Winslow 79.00 48 ⇓P P 04 56 46.9 +0.5
baz=79
RMW Rattlesnake Mo 79.00 33 P **P 04 56 46.6 +0.5**
R14A James Farms, M 79.00 45 ⇓P P 04 56 46.7 +0.3
baz=79
N12A Clover Valley, 79.04 42 ⇑P P 04 56 46.5 0.0
baz=79,SNR=43
N12A Clover Valley, 79.04 42 *eP* **P 04 56 46.6 +0.1**
comp=Z,48nm,0.9s,mb5.3
F07A Phinny Hill Vi 79.04 35 ⇑P P 04 56 46.0 -0.4
baz=79
220A Playas Peak, P 79.11 52 ⇑P P 04 56 47.5 +0.4
baz=79,SNR=31
S15A Panguitch 79.13 45 ⇑P P 04 56 48.2 +1.1
baz=79,SNR=19
I09A Lost Marbles R 79.14 38 ⇓P P 04 56 46.5 -0.5
baz=79,SNR=11
Q14A Sevier Lake (B 79.19 44 ⇓P P 04 56 47.6 +0.2
baz=79,SNR=40
Z19A T-Link Ranch, 79.20 51 ⇑P P 04 56 47.9 +0.4
baz=79
V17A Tonalea, Kykot 79.20 48 ⇑P P 04 56 48.0 +0.5
baz=79,SNR=33
G08A Pilot Rock 79.22 36 ⇓P P 04 56 47.2 -0.2
baz=79,SNR=25
X18A Snowflake 79.28 49 ⇓P P 04 56 48.2 +0.2
baz=79,SNR=9.4
L11A Cat Creek Ranc 79.31 40 ⇓P P 04 56 48.0 0.0
baz=80,SNR=39
120A U Bar Ranch, L 79.33 51 ⇓P P 04 56 48.6 +0.4
baz=79,SNR=15
O13A Hicks Ranch, I 79.33 43 ⇑P P 04 56 48.2 +0.1
baz=80,SNR=7.2
T16A Glen Canyon Da 79.37 46 ⇑P P 04 56 48.7 +0.3
baz=80,SNR=13
JCW Jim Creek 79.40 33 *eP* **P 04 56 49.7 +1.4**
R15A Junction 79.46 45 ⇑P P 04 56 49.2 +0.4
baz=80,SNR=15
MDJ Mudanjiang 79.47 323 P **P 04 56 50.5 +1.7**
MDJ pP pP 04 57 18.0 +1.2
MDJ sP sP 04 57 30.5 +2.0
MDJ PP PP 04 59 52.0 +1.2
MDJ S S 05 06 44.9 +3.8
MDJ sS sS 05 07 31.1 +1.8
MDJ pmax pmax
comp=Z,12nm,0.7s,mb4.8
MDJ pmax pmax
comp=Z,55nm,6.2s
MDJ LR LR
comp=Z,440nm,35.5s
K11A Parker Ranch, 79.48 39 ⇑P P 04 56 48.5 -0.3
baz=80,SNR=27
Y19A Nutrioso 79.52 50 ⇑P P 04 56 49.8 +0.5
baz=80,SNR=35
RSW Rattlesnake Hi 79.53 35 *eP* **P 04 56 49.4 +0.3**
comp=Z,12nm,0.8s,mb4.8

HAWA Hanford 79.56 35 *eP* **P 04 56 49.3 +0.1**
comp=Z,13nm,0.7s,mb4.9
N13A Wendover, West 79.57 42 ⇓P P 04 56 49.5 +0.1
baz=80,SNR=24
N13A Wendover, West 79.57 42 *eP* **P 04 56 49.8 +0.4**
comp=Z,60nm,0.9s,mb5.4
H09A Durkee 79.59 37 ⇓P P 04 56 49.0 -0.4
baz=80,SNR=12
Z20A Nine Sixteen R 79.62 51 ⇓P P 04 56 50.3 +0.5
baz=80,SNR=25
P14A Drum Mountains 79.64 43 ⇓P P 04 56 49.9 +0.1
baz=80,SNR=44
S16A Weppner Ranch, 79.68 46 ⇑P P 04 56 50.2 +0.2
baz=80,SNR=32
MSU Marysvale 79.68 45 *eP* **P 04 56 51.0 +1.0**
MSU pmax pmax
comp=Z,31nm,1.0s,mb5.1
MSU Marysvale 79.68 45 *eP* **P 04 56 51.0 +1.0**
comp=Z,31nm,1.0s,mb5.1
X19A St. Johns 79.71 49 ⇓P P 04 56 50.9 +0.6
baz=80,SNR=17
221A Mesquite Ranch 79.73 52 ⇑P P 04 56 50.7 +0.3
baz=80,SNR=5.5
L12A House Creek Ra 79.76 40 ⇓P P 04 56 50.1 -0.2
baz=80,SNR=32
U17A Shonto 79.77 47 ⇓P P 04 56 51.1 +0.5
baz=80,SNR=26
RPW Rockport 79.78 33 *eP* **P 04 56 50.1 -0.2**
Q15A Fillmore 79.80 44 ⇓P P 04 56 50.9 +0.3
baz=80,SNR=7.7
A05A Maple Falls 79.84 32 ⇑P P 04 56 50.0 -0.7
baz=80
V18A Ganado 79.86 48 ⇓P P 04 56 51.2 +0.1
baz=80,SNR=34
T17A Navajo Res., N 79.87 47 ⇑P P 04 56 51.7 +0.6
baz=80,SNR=31
M13A Montello 79.87 41 ⇓P P 04 56 50.8 -0.2
baz=80,SNR=19
M13A Montello 79.87 41 *eP* **P 04 56 50.9 -0.1**
comp=Z,24nm,1.1s,mb4.9
ETW Entiat 79.87 34 *eP* **P 04 56 50.0 -0.9**
G09A Cove 79.88 37 ⇓P P 04 56 50.4 -0.5
baz=80,SNR=22
E08A Dider Farm, El 79.88 35 ⇓P P 04 56 50.7 -0.3
baz=80,SNR=5.7
BMO Blue Mountains 79.91 37 *eP* **P 04 56 50.5 -0.6**
BMO pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
BMO Blue Mountains 79.91 37 *eP* **P 04 56 50.5 -0.6**
comp=Z,8.5nm,0.8s,mb4.6
LNOR Lincton Mounta 79.94 36 *eP* **P 04 56 50.9 -0.4**
121A Cookes Peak, D 79.96 52 ⇓P P 04 56 52.0 +0.4
baz=80,SNR=18
MFID Camas Ranch 79.96 39 ⇓P P 04 56 51.2 -0.2
baz=80,SNR=18
R16A Teasdale 80.04 45 ⇑P P 04 56 52.6 +0.7
baz=80,SNR=48
H10A Noah's Angus R 80.08 38 ⇑P P 04 56 51.2 -0.8
baz=80,SNR=60
K12A Draper Farm, C 80.10 40 ⇓P P 04 56 51.8 -0.4
baz=80,SNR=19
DUG Dugway 80.12 43 ⇑P P 04 56 52.0 -0.3
baz=80,SNR=30
DUG Dugway 80.12 43 *eP* **P 04 56 52.3 -0.1**
DUG pmax pmax
comp=Z,20nm,1.1s,mb4.9
DUG Dugway 80.12 43 *eP* **P 04 56 52.3 -0.1**
comp=Z,20nm,1.1s,mb4.8
WTV Waterville 80.13 34 P **P 04 56 52.1 -0.1**
Y20A Horse Springs, 80.14 50 ⇑P P 04 56 53.4 +0.8
baz=80,SNR=17
P15A Leamington 80.16 44 ⇑P P 04 56 52.8 +0.2
baz=80,SNR=6.8
S17A Black Ridge (B 80.18 46 ⇑P P 04 56 52.6 -0.2
baz=80,SNR=28
N14A Grayback Hills 80.22 42 ⇓P P 04 56 52.7 -0.2
baz=80,SNR=16
U18A Rough Rock, Ch 80.24 47 ⇑P P 04 56 53.5 +0.4
baz=80,SNR=29
G10A Bishop Farm, J 80.27 37 ⇑P P 04 56 52.5 -0.5
baz=80,SNR=20
NJ2 Nanjing 80.28 308 *eP* **P 04 56 55.2 +1.8**
NJ2 pP pP 04 57 27.4 +5.9
NJ2 sP sP 04 57 40.2 +7.0
NJ2 PP PP 05 00 01.8 +4.0
NJ2 S S 05 06 49.5 -0.6
NJ2 sS sS 05 07 44.5 +6.1
NJ2 LR LR
comp=N,6μm,24.4s
NJ2 LR LR
comp=E,740nm,23.3s
NJ2 LR LR
comp=Z,3μm,21.7s
222A Williams Famil 80.28 52 ⇑P P 04 56 53.4 -0.1
baz=80,SNR=7.2
D08A Wollman Farm, 80.30 35 ⇓P P 04 56 52.8 -0.3
baz=80,SNR=16
J12A Stokes Ranch, 80.31 39 ⇑P P 04 56 53.2 -0.1
baz=80,SNR=25
PMR Palmer 80.33 12 *eP* **P 04 56 52.1 -0.8**
PMR pmax pmax
comp=Z,30nm,0.7s,mb5.2
PMR Palmer 80.33 12 *eP* **P 04 56 52.1 -0.8**
comp=Z,30nm,0.7s,mb5.2
X20A Quemado 80.35 50 ⇑P P 04 56 54.5 +0.7
baz=80,SNR=32
BGU Big Grassy Mou 80.36 42 *eP* **P 04 56 53.5 -0.1**
comp=Z,6.6nm,0.9s,mb4.5
O15A The Old Anders 80.39 43 ⇓P P 04 56 54.3 +0.4
baz=80
Z21A St. Cloud Mine 80.39 51 ⇓P P 04 56 54.3 +0.3
baz=80,SNR=38
L13A Double Diamond 80.40 41 ⇓P P 04 56 53.5 -0.3
baz=80,SNR=15
E09A Wood Farm, Sta 80.40 35 ⇑P P 04 56 52.8 -1.0
baz=81,SNR=6.7
TTA Tatalina 80.43 8 *eP* **P 04 56 53.1 -0.4**
M14A Sheep Mountain 80.47 42 ⇑P P 04 56 54.0 -0.2
baz=81,SNR=58
V19A Window Rock 80.50 48 ⇓P P 04 56 55.0 +0.5
baz=81,SNR=5.9
Q16A Castle Valley 80.57 45 ⇑P P 04 56 55.1 +0.3
baz=81,SNR=22
H11A Donnelly 80.58 38 ⇑P P 04 56 53.8 -0.9
baz=81,SNR=28
I12A Atlanta 80.59 39 ⇓P P 04 56 54.8 0.0
baz=81,SNR=50
F10A Beach Ranch, E 80.60 36 ⇑P P 04 56 54.0 -0.8
baz=81,SNR=37
K13A Stover Farm, H 80.61 40 ⇓P P 04 56 54.8 -0.1
baz=81,SNR=34
DIV Divide 80.61 14 *eP* **P 04 56 54.0 -0.5**
comp=Z,68nm,0.9s,mb5.5
W20A Ramah 80.61 49 ⇓P P 04 56 55.7 +0.6
baz=81,SNR=48
122A Conniff Cattle 80.62 52 ⇑P P 04 56 55.8 +0.5
baz=81,SNR=13
R17A Hanksville Air 80.63 45 ⇓P P 04 56 55.2 +0.1
baz=81,SNR=39
U19A Dine' College, 80.65 48 ⇑P P 04 56 55.5 +0.2
baz=81,SNR=31
N15A Stansbury Isla 80.68 43 ⇓P P 04 56 54.9 -0.4
baz=81,SNR=26
Y21A Point of Rocks 80.71 50 ⇓P P 04 56 56.7 +1.1
baz=81,SNR=15
TMUT Trail Mountain 80.73 44 *eP* **P 04 56 56.9 +1.2**
BMRM Bremner River 80.74 14 *eP* **P 04 56 54.8 -0.3**
comp=Z,56nm,1.0s,mb5.3
S18A Hurst Farm, Bl 80.77 46 ⇑P P 04 56 55.9 0.0
baz=81,SNR=11
MPU Maple Canyon 80.81 44 *eP* **P 04 56 55.4 -0.7**
comp=Z,14nm,0.9s,mb4.8
L14A Malta 80.81 41 ⇑P P 04 56 55.7 -0.3
baz=81,SNR=19
NOQ North Oquirrh 80.81 43 *eP* **P 04 56 56.4 +0.3**
comp=Z,11nm,0.7s,mb4.8
G11A Walters Elk Ra 80.82 37 ⇑P P 04 56 55.2 -0.8
baz=81,SNR=60
X21A Alamocita Cree 80.82 50 ⇑P P 04 56 56.8 +0.5
baz=81,SNR=14
B08A Colville Reser 80.86 33 ⇑P P 04 56 54.9 -1.2
baz=81,SNR=14
Z22A Elephant Butte 80.90 51 ⇑P P 04 56 57.0 +0.3
baz=81,SNR=32
HLID Hailey 80.90 39 ⇓P P 04 56 56.5 0.0
baz=81,SNR=64
HLID Hailey 80.90 39 *eP* **P 04 56 56.8 +0.3**

SPUT South Promonto 80.94 42 *eP* **P 04 56 56.7 -0.1**
comp=Z,21nm,1.0s,mb4.9
V20A Brimhall 80.95 49 ⇑P P 04 56 57.1 +0.2
baz=81,SNR=8.9
J13A Cove Ranch, Pi 80.96 40 ⇑P P 04 56 56.9 +0.1
baz=81,SNR=36
HVU Hansel Valley 80.97 42 *eP* **P 04 56 57.1 +0.2**
HVU pmax pmax
comp=Z,27nm,0.9s,mb5.1
HVU Hansel Valley 80.97 42 *eP* **P 04 56 57.1 +0.2**
comp=Z,27nm,0.9s,mb5.1
PPLA Purkeypile 80.98 10 *eP* **P 04 56 56.3 -0.1**
comp=Z,13nm,0.9s,mb4.8
O16A Springville 80.99 44 ⇓P P 04 56 57.4 +0.4
baz=81
M15A Larsen Ranch, 81.02 42 ⇑P P 04 56 56.8 -0.4
baz=81,SNR=44
T19A Beclabito 81.03 47 ⇑P P 04 56 57.6 +0.3
baz=81,SNR=29
CTU Camp Tracy 81.08 43 *eP* **P 04 56 57.9 +0.4**
comp=Z,18nm,1.0s,mb4.8
SRU San Rafael 81.10 45 ⇓P P 04 56 57.6 -0.1
baz=81,SNR=26
SRU San Rafael 81.10 45 *eP* **P 04 56 58.2 +0.6**
SRU pmax pmax
comp=Z,14nm,0.9s,mb4.8
SRU San Rafael 81.10 45 *eP* **P 04 56 58.2 +0.6**
comp=Z,14nm,0.9s,mb4.8
K14A Jones Ranch, D 81.12 41 ⇓P P 04 56 57.5 -0.1
baz=81,SNR=39
P17A Butcher Ranch, 81.13 44 ⇓P P 04 56 58.0 +0.3
baz=81,SNR=20
F11A Grangeville 81.17 37 ⇓P P 04 56 56.1 -1.7
baz=81,SNR=26
R18A Canyonlands Na 81.17 46 ⇓P P 04 56 58.0 -0.1
baz=81,SNR=29
H12A Diamond D Ranc 81.18 38 ⇑P P 04 56 57.6 -0.3
baz=81,SNR=20
U20A Newcomb 81.18 48 ⇓P P 04 56 58.4 +0.3
baz=81,SNR=6.2
Y22A Socorro 81.20 51 ⇓P P 04 56 58.3 0.0
baz=81,SNR=9.3
JLU Jordanelle 81.23 43 *eP* **P 04 56 58.5 +0.2**
comp=Z,19nm,1.0s,mb4.9
324A Moseley Ranch, 81.24 54 ⇑P P 04 56 58.5 0.0
baz=81,SNR=30
DAU Daniels Canyon 81.26 43 *eP* **P 04 56 58.9 +0.5**
I13A Wildhorse Cree 81.28 39 ⇑P P 04 56 58.3 -0.2
baz=81,SNR=28
LAZ Ladron 81.28 50 *eP* **P 04 56 59.7 +1.0**
comp=Z,12nm,1.2s,mb4.6
LENM Lemitar 81.30 51 *eP* **P 04 57 00.7 +1.9**
J14A Carey 81.32 40 ⇑P P 04 56 59.1 +0.4
baz=82,SNR=32
L15A Malad City 81.34 42 ⇓P P 04 56 58.4 -0.4
baz=82,SNR=26
425A Indio Mountain 81.35 54 ⇑P P 04 56 59.5 +0.4
baz=81,SNR=37
Q18A Rafter H Ranch 81.36 45 ⇓P P 04 56 58.7 -0.3
baz=82,SNR=16
N16A Rees Ranch, Co 81.38 43 ⇓P P 04 56 58.9 -0.2
baz=82,SNR=13
X22A Bernardo 81.42 50 ⇓P P 04 57 00.3 +0.9
baz=82,SNR=5.4
MNTX Cornudas Mount 81.42 53 *eP* **P 04 57 00.1 +0.5**
comp=Z,19nm,1.1s,mb4.8
Z23A Rita Site, Whi 81.45 52 ⇑P P 04 56 59.8 +0.2
baz=82,SNR=7.0
CN2 Changchun 81.48 320 *eP* **P 04 57 02.1 +2.6**
CN2 *ep*P pP 04 57 30.5 +2.8
CN2 *es*P sP 04 57 42.7 +3.3
CN2 *eS* S 05 07 03.5 +1.4
CN2 pmax pmax
comp=Z,20nm,0.8s,mb5.0
CN2 pmax pmax
comp=Z,200nm,5.0s
O17A Robinson Place 81.49 44 ⇓P P 04 57 00.1 +0.4
baz=82,SNR=56
626A Big Bend Ranch 81.51 56 ⇓P P 04 57 00.4 +0.4
baz=82,SNR=13
P18A Preston Nutter 81.54 45 ⇑P P 04 57 00.4 +0.4
baz=82
H13A Challis 81.55 39 ⇓P P 04 56 59.6 -0.2
baz=82,SNR=25
BNM Barren Site 81.55 51 *eP* **P 04 57 00.8 +0.7**
comp=Z,14nm,1.0s,mb4.7
V21A Milan 81.55 49 ⇑P P 04 57 00.6 +0.6
baz=82,SNR=9.4
MVCO Mesa Verde 81.59 47 ⇓P P 04 57 00.5 +0.3
baz=82,SNR=7.1
MVCO Mesa Verde 81.59 47 *eP* **P 04 57 00.7 +0.5**
K15A Arbon 81.60 41 ⇑P P 04 56 59.9 -0.3
baz=82,SNR=9.5
325A Bean Ranch, Si 81.60 54 ⇑P P 04 57 00.5 0.0
baz=82,SNR=45
F12A Elk City 81.61 37 ⇓P P 04 56 59.4 -0.7
baz=82,SNR=88
LPM Los Pinos Moun 81.62 51 *eP* **P 04 57 01.4 +1.0**
HWUT Hardware Ranch 81.66 42 *eP* **P 04 57 00.4 -0.1**
I14A Mackay 81.69 40 ⇓P P 04 57 00.8 +0.2
baz=82,SNR=6.4
526A Mary Lane Ranc 81.75 55 ⇑P P 04 57 01.6 +0.3
baz=82,SNR=20
PV10 Paradox Valley 81.76 46 *eP* **P 04 57 01.5 +0.4**
comp=Z,629nm,0.8s
W22A Albuquerque 81.78 50 ⇓P P 04 57 02.1 +0.8
baz=82,SNR=6.0
TXAR Lajitas Array 81.79 56 P **P 04 57 00.7 -0.8**
comp=Z,11nm,1.1s,mb4.6,baz=195,slow=9.1,SNR=30
TXAR LR LR 05 28 26.9
comp=Z,75nm,18.1s,baz=340,slow=32
124A Stringfield Ra 81.80 53 ⇑P P 04 57 01.9 +0.4
baz=82,SNR=15
E12A Beaver Dam Sad 81.80 37 ⇓P P 04 57 00.3 -0.8
baz=82,SNR=14
N17A Moffit Pass 81.80 43 ⇑P P 04 57 01.7 +0.4
baz=82,SNR=5.1
TRF Thorofare Moun 81.82 11 *eP* **P 04 56 59.8 -1.0**
comp=Z,66nm,0.8s,mb5.5
U21A Nageezi 81.82 48 ⇓P P 04 57 01.9 +0.4
baz=82,SNR=55
G13A Cobalt 81.85 38 ⇓P P 04 57 01.1 -0.4
baz=82,SNR=18
PV04 Paradox Valley 81.86 46 *eP* **P 04 57 01.9 +0.3**
Y23A Lovelace Mesa, 81.88 51 ⇑P P 04 57 01.7 -0.2
baz=82,SNR=14
Q19A Hogan Spring (81.88 45 ⇑P P 04 57 01.7 0.0
baz=82,SNR=26
L16A Fish Haven 81.95 42 ⇓P P 04 57 01.6 -0.5
baz=82,SNR=35
PV01 Paradox Valley 81.97 46 *eP* **P 04 57 02.6 +0.4**
comp=Z,2μm,0.9s
S20A Disappointment 81.97 47 ⇓P P 04 57 02.4 +0.2
baz=82,SNR=30
SKAG Skagway 81.99 19 *eP* **P 04 57 02.9 +1.1**
NEW Newport 81.99 34 *eP* **P 04 57 00.9 -1.2**
NEW pmax pmax
comp=Z,4.0nm,0.7s
NEW Newport 81.99 34 *eP* **P 04 57 00.9 -1.2**
comp=Z,4.2nm,0.7s,mb4.4
O18A Roosevelt 82.01 44 ⇑P P 04 57 02.6 +0.2
baz=82
225A Deer Hill, Car 82.03 53 ⇑P P 04 57 03.0 +0.3
baz=82,SNR=21
J15A Blackfoot 82.04 40 ⇑P P 04 57 02.8 +0.3
baz=82,SNR=8.9
426A McDonald Obser 82.05 55 ⇓P P 04 57 03.0 +0.2
baz=82,SNR=25
H14A Leadore 82.11 39 ⇓P P 04 57 02.8 0.0
baz=82,SNR=25
R20A Redvale 82.13 46 ⇓P P 04 57 03.2 +0.1
baz=82,SNR=15
V22A San Miguel Ran 82.13 49 ⇑P P 04 57 03.3 +0.2
baz=82,SNR=11
Z24A Sheeppen Canyo 82.14 52 ⇓P P 04 57 03.5 +0.3
baz=82,SNR=18
527A Woodward Ranch 82.16 56 ⇓P P 04 57 03.4 0.0
baz=82,SNR=17
F13A Darby 82.17 38 ⇑P P 04 57 02.3 -0.8
baz=82,SNR=26
T21A Navajo Lake 82.17 48 ⇓P P 04 57 03.2 0.0
baz=82,SNR=12
M17A Scullys Gap (B 82.18 43 ⇑P P 04 57 02.5 -0.7
baz=82,SNR=17
C11A Tepee Creek (N 82.22 35 ⇑P P 04 57 02.7 -0.6
baz=82,SNR=35
K16A Soda Springs 82.27 41 ⇓P P 04 57 03.7 +0.1
baz=82,SNR=30

D12A **Red Ives Fores** 82.28 36 ⇓P P 04 57 02.5 -1.1
baz=82,SNR=19
S21A **Coal Bank Pass** 82.29 47 ⇑P P 04 57 04.4 +0.5
baz=82,SNR=47
BPAW **Bear Paw Mtn.** 82.30 10 eP P 04 57 01.4 -2.0
comp=Z,16nm,0.9s,mb4.9
I15A **Monteview** 82.32 40 ⇑P P 04 57 04.4 +0.5
baz=82,SNR=7.5
MCK **McKinley** 82.32 11 eP P 04 57 03.1 -0.3
MCK pmax pmax
comp=Z,136nm,0.8s,mb5.8
MCK **McKinley** 82.32 11 eP P 04 57 03.1 -0.3
comp=Z,136nm,0.8s,mb5.8
Y24A **Capitan** 82.34 51 ⇓P P 04 57 04.5 +0.3
baz=82,SNR=25
W23A **Werner Place,** 82.35 50 ⇓P P 04 57 04.4 +0.1
baz=82,SNR=18
326A **Caldwell Ranch** 82.35 54 ⇑P P 04 57 04.0 -0.3
baz=82,SNR=9.1
L17A **Cokeville** 82.36 42 ⇑P P 04 57 04.0 -0.1
baz=82,SNR=5.9
U22A **Llaves** 82.38 49 ⇑P P 04 57 04.6 +0.2
baz=82,SNR=12
125A **Gardner Draw,** 82.39 53 ⇓P P 04 57 04.7 +0.2
baz=82,SNR=7.1
P19A **Cripple Cowboy** 82.40 45 ⇑P P 04 57 04.4 0.0
baz=82,SNR=14
GDL2 **Guadalupe Moun** 82.42 53 eP P 04 57 05.7 +0.9
HYT **Haines Junctio** 82.45 17 eP P 04 57 04.6 +0.4
628A **Black Gap, Mar** 82.47 56 ⇑P P 04 57 04.5 -0.6
baz=83,SNR=12
J16A **Bone** 82.48 41 ⇑P P 04 57 04.9 +0.1
baz=83,SNR=28
MCMT **McKenzie Canyo** 82.53 39 eP P 04 57 05.5 +0.5
comp=Z,18nm,1.0s,mb4.9
H15A **Lima** 82.55 39 ⇑P P 04 57 05.0 -0.1
baz=83,SNR=23
M18A **Lyman** 82.55 43 ⇓P P 04 57 04.8 -0.3
baz=83,SNR=23
Q20A **Ridgley Place,** 82.55 46 ⇑P P 04 57 05.1 -0.1
baz=83,SNR=30
AHID **Auburn Hatcher** 82.55 41 eP P 04 57 05.6 +0.5
comp=Z,41nm,1.3s,mb5.1
226A **Malaga, Loving** 82.57 54 ⇓P P 04 57 05.5 0.0
baz=83,SNR=12
V23A **Ortiz Mt. (NFS** 82.58 49 ⇓P P 04 57 06.3 +0.8
baz=83,SNR=33
C12B **Naegeli Ranch,** 82.58 36 ⇓P P 04 57 04.6 -0.6
baz=83
N18A **Larsen Ranch,** 82.58 44 ⇓P P 04 57 05.8 +0.4
baz=83
Z25A **Roswell** 82.61 52 ⇑P P 04 57 05.9 +0.2
baz=83,SNR=15
E13A **Victor** 82.61 37 ⇑P P 04 57 04.4 -1.0
baz=83,SNR=35
427A **Hayter Ranch,** 82.61 55 ⇓P P 04 57 06.1 +0.3
baz=83,SNR=22
X24A **Lazy VL Ranch,** 82.62 51 ⇓P P 04 57 05.4 -0.3
baz=83,SNR=6.1
O19A **Miners Draw (B** 82.62 44 ⇓P P 04 57 05.4 -0.1
baz=83,SNR=16
T22A **Edith** 82.63 48 ⇓P P 04 57 05.6 -0.1
baz=83,SNR=15
K17A **Gardner Place,** 82.66 42 ⇑P P 04 57 04.9 -0.8
baz=83,SNR=21
QIZ **Qiongzhong** 82.68 292 P P 04 57 07.7 +1.4
QIZ sP sP 04 57 47.5 +1.2
QIZ S S 05 07 16.7 +1.3
QIZ sS sS 05 08 05.3 +1.4
QIZ SS SS 05 12 42.0 +1.8
RRI2 **Red Ridge** 82.70 41 eP P 04 57 06.5 +0.6
comp=Z,40nm,0.9s,mb5.2
P20A **De Beque** 82.74 45 ⇓P P 04 57 06.3 +0.1
baz=83,SNR=35
F14A **Wisdom** 82.75 38 ⇓P P 04 57 05.5 -0.6
baz=83,SNR=16
R21A **Cimarron** 82.79 47 ⇓P P 04 57 07.0 +0.5
baz=83,SNR=31
L18A **Fontenelle, Gr** 82.81 43 ⇑P P 04 57 06.0 -0.5
baz=83,SNR=11
D13A **Huson** 82.81 36 ⇑P P 04 57 05.1 -1.3
baz=83,SNR=37
528A **Cox Ranch, San** 82.82 56 ⇓P P 04 57 07.0 +0.1
baz=83,SNR=16
U23A **El Rito** 82.83 49 ⇓P P 04 57 07.1 +0.4
baz=83,SNR=26
I16A **Newdale** 82.87 40 ⇓P P 04 57 07.3 +0.5
baz=83
126A **Clayton Basin,** 82.87 53 ⇓P P 04 57 06.8 -0.2
baz=83,SNR=10
N19A **John Jarvie Ra** 82.87 44 ⇑P P 04 57 06.2 -0.6
baz=83,SNR=11
Y25A **Mesa, Roswell** 82.90 52 ⇑P P 04 57 07.0 -0.2
baz=83,SNR=24
DCID1 **Drake Creek** 82.92 41 eP P 04 57 07.8 +0.8
comp=Z,34nm,1.0s,mb5.1
W24A **Lazy 6 Ranch,** 82.92 50 ⇓P P 04 57 07.2 0.0
baz=83,SNR=35
G15A **Dillon** 82.93 39 ⇓P P 04 57 06.8 -0.2
baz=83,SNR=61
MSO **Missoula** 82.96 37 eP P 04 57 06.2 -1.0
DLBC **Dease Lake** 82.96 22 eP P 04 57 07.1 +0.2
DLMT **Dillon** 82.97 39 eP P 04 57 07.3 +0.1
comp=Z,37nm,1.0s,mb5.2
Q21A **Lamborn Mesa,** 82.99 46 ⇓P P 04 57 07.7 +0.2
baz=83,SNR=28
E14A **Clinton** 83.00 37 ⇑P P 04 57 06.9 -0.5
baz=83,SNR=23
REDW **Red Top Meadow** 83.01 41 eP P 04 57 07.9 +0.4
TPAW **Teton Pass** 83.01 41 eP P 04 57 07.6 +0.1
S22A **4UR Ranch, Cre** 83.01 47 ⇑P P 04 57 08.0 +0.3
baz=83,SNR=47
BSMT **Bassoo Peak** 83.05 36 eP P 04 57 07.2 -0.3
C13A **Hot Springs** 83.07 36 ⇓P P 04 57 06.7 -1.0
baz=83
J17A **Brown Place, J** 83.09 41 ⇓P P 04 57 07.9 -0.1
baz=83,SNR=32
SNOW **Snow King Moun** 83.12 41 eP P 04 57 08.6 +0.6
comp=Z,54nm,0.9s,mb5.4
428A **Kincaid Ranch,** 83.13 55 ⇑P P 04 57 08.6 +0.2
baz=83,SNR=12
O20A **White River Ci** 83.14 45 ⇑P P 04 57 08.1 -0.1
baz=83,SNR=19
K18A **Toltan Ranch,** 83.16 42 ⇓P P 04 57 08.5 +0.2
baz=83,SNR=78
Z26A **Caprock** 83.16 53 ⇑P P 04 57 08.3 -0.2
baz=83,SNR=34
227A **Bennet, Jal** 83.17 54 ⇓P P 04 57 08.5 -0.1
baz=83
X25A **Clemmons Ranch** 83.17 51 ⇓P P 04 57 08.3 -0.2
baz=83
M19A **Rock Springs** 83.18 43 ⇑P P 04 57 07.9 -0.6
baz=83,SNR=25
IMW **Indian Meadow** 83.22 41 eP P 04 57 09.1 +0.5
comp=Z,57nm,0.9s,mb5.4
V24A **Rampart Ranch,** 83.24 50 ⇓P P 04 57 09.1 +0.2
baz=83,SNR=23
T23A **Casias Ranch,** 83.26 48 ⇑P P 04 57 09.4 +0.4
baz=83,SNR=11
JTMT **Jette** 83.27 36 eP P 04 57 08.2 -0.6
comp=Z,4.3nm,0.6s,mb4.5
F15A **Butte** 83.28 38 ⇑P P 04 57 08.2 -0.6
baz=83,SNR=21
R22A **Saguache, Gunn** 83.28 47 ⇑P P 04 57 09.3 +0.3
baz=83,SNR=30
LOHW **Long Hollow** 83.29 41 eP P 04 57 09.2 +0.3
comp=Z,23nm,1.0s,mb5.0
328A **Wristen Ranch,** 83.29 55 ⇑P P 04 57 09.0 -0.3
baz=83,SNR=8.6
LRM **Limekiln Ridge** 83.30 38 eP P 04 57 08.8 -0.1
comp=Z,68nm,0.7s,mb5.6
SWMT **Swartz Lake** 83.30 36 eP P 04 57 07.8 -1.1
L19A **Farson** 83.34 43 ⇑P P 04 57 09.1 -0.1
baz=84,SNR=66
D14A **Greenough** 83.35 37 ⇑P P 04 57 07.9 -1.2
baz=84,SNR=32
G16A **Moss Hill, Enn** 83.37 39 ⇑P P 04 57 08.9 -0.5
baz=84,SNR=29
127A **Arkansas Junct** 83.39 53 ⇓P P 04 57 09.6 -0.2
baz=84,SNR=11
SEY **Seymchan** 83.39 345 ⇑⇑P P 04 57 08.7 -0.3
CHMT **Chamberlain Mo** 83.41 37 eP P 04 57 09.1 -0.4
H16A **Russell Place,** 83.44 40 ⇑P P 04 57 10.2 +0.6
baz=84,SNR=126
SLMT **Seeley Lake** 83.44 37 eP P 04 57 09.1 -0.6
comp=Z,5.9nm,0.7s,mb4.5
N20A **Spence Gulch,** 83.45 44 ⇑P P 04 57 10.0 +0.1
baz=84

J18A **Kendall Valley** 83.46 41 ⇑P P 04 57 09.7 -0.1
baz=84,SNR=118
I17A **Pilgrim Ck.** 83.46 41 ⇓P P 04 57 10.4 +0.6
baz=84,SNR=9.1
Q22A **Crested Butte,** 83.46 46 ⇓P P 04 57 10.3 +0.4
baz=84,SNR=30
E15A **Deer Lodge** 83.50 38 ⇑P P 04 57 09.3 -0.6
baz=84,SNR=22
B13A **Whitefish** 83.51 35 ⇓P P 04 57 08.8 -1.1
baz=84,SNR=9.3
BW06 **Boulder Array** 83.53 42 ⇓P P 04 57 09.3 -0.9
baz=84,SNR=83
BW06 **Boulder Array** 83.53 42 eP P 04 57 09.7 -0.5
PDAR **Pinedale Array** 83.53 42 P P 04 57 09.9 -0.3
comp=Z,40nm,0.8s,mb5.3,baz=212,slow=3.1,SNR=259
PDAR PP PP 05 00 21.1 -3.2
comp=Z,1.0nm,0.9s,baz=242,slow=6.2,SNR=4.2
PDAR LR LR 05 32 02.8
comp=Z,95nm,18.0s,baz=244,slow=34
COLA **College** 83.56 11 eP P 04 57 09.1 -0.7
COLA pmax pmax
comp=Z,120nm,0.8s,mb5.8
COLA **College** 83.56 11 eP P 04 57 09.1 -0.7
comp=Z,120nm,0.8s,mb5.8
SMCO **Snowmass** 83.56 46 eP P 04 57 11.2 +0.8
YFT **Old Faithful** 83.57 40 eP P 04 57 12.2 +1.8
comp=Z,16nm,0.8s,mb4.9
YMR **Madison River** 83.60 40 eP P 04 57 11.5 +1.0
comp=Z,45nm,0.7s,mb5.4
W25A **X Bar L Ranch,** 83.62 51 ⇑P P 04 57 10.4 -0.4
baz=84,SNR=20
BOZ **Bozeman (W)** 83.69 39 ⇑P P 04 57 10.5 -0.4
baz=84,SNR=33
BOZ **Bozeman (W)** 83.69 39 eP P 04 57 11.1 +0.1
H17A **Grant Village** 83.70 40 ⇓P P 04 57 12.2 +1.2
baz=84,SNR=24
Z27A **Tatum** 83.76 53 ⇓P P 04 57 11.1 -0.5
baz=84,SNR=16
F16A **Kennard Place,** 83.77 39 ⇓P P 04 57 11.3 0.0
baz=84,SNR=24
V25A **Rancho No Teng** 83.77 50 ⇑P P 04 57 11.4 -0.2
baz=84,SNR=26
M20A **Sweetwater, Wa** 83.81 44 ⇓P P 04 57 11.7 0.0
baz=84,SNR=9.7
I18A **Diamond G Ranc** 83.83 41 ⇑P P 04 57 11.6 -0.1
baz=84,SNR=12
LKWY **Lake** 83.89 40 eP P 04 57 14.0 +2.0
LKWY pmax pmax
comp=Z,55nm,1.0s,mb5.3
LKWY **Lake** 83.89 40 eP P 04 57 14.0 +2.0
comp=Z,56nm,1.0s,mb5.3
D15A **Lincoln** 83.90 37 ⇓P P 04 57 11.5 -0.5
baz=84,SNR=36
N21A **Black Mountain** 83.92 45 ⇑P P 04 57 12.5 +0.3
baz=84,SNR=40
SDCO **Great Sand Dun** 83.95 48 eP P 04 57 12.7 +0.2
comp=Z,12nm,1.2s,mb4.6
L20A **Wamsutter** 83.96 43 ⇑P P 04 57 12.5 +0.2
baz=84,SNR=44
K19A **Absolon Red Bu** 84.02 42 ⇓P P 04 57 11.9 -0.8
baz=84,SNR=16
Y27A **Causey** 84.03 52 ⇓P P 04 57 12.7 -0.3
baz=84,SNR=18
G17A **Pierce Place,** 84.07 39 ⇓P P 04 57 12.7 -0.1
baz=84,SNR=16
E16A **East Helena** 84.13 38 ⇓P P 04 57 12.7 -0.4
baz=84
HRY **Holter Researc** 84.13 38 eP P 04 57 13.2 +0.1
B14A **Marquette Ranc** 84.17 36 ⇑P P 04 57 12.0 -1.4
baz=84,SNR=8.7
WALA **Waterton Lakes** 84.20 35 eP P 04 57 13.2 -0.3
comp=Z,0.7nm,1.5s
C15A **Salmond Ranch,** 84.24 37 ⇑P P 04 57 12.8 -0.9
baz=84,SNR=31
K20A **Yellowstone Ra** 84.27 43 ⇑P P 04 57 13.2 -0.8
baz=84,SNR=19
O22A **Kremmling** 84.30 45 ⇓P P 04 57 14.1 -0.1
baz=84,SNR=21
V26A **Tequesquite Ra** 84.36 50 ⇑P P 04 57 14.0 -0.5
baz=84,SNR=14
MSTX **Muleshoe** 84.37 52 ⇓P P 04 57 14.4 -0.3
baz=84,SNR=22
X27A **F and S Farms,** 84.40 52 ⇓P P 04 57 14.5 -0.3
baz=84,SNR=8.8
F17A **Fitzpatrick Pl** 84.41 39 ⇓P P 04 57 14.7 +0.1
baz=84,SNR=48
M21A **Separation Pea** 84.41 44 ⇑P P 04 57 14.3 -0.4
baz=84,SNR=29
A14A **Double T Ranch** 84.42 35 ⇓P P 04 57 13.9 -0.7
baz=85,SNR=30
R24A **Sanders Place,** 84.44 48 ⇑P P 04 57 14.8 -0.2
baz=85,SNR=7.5
D16A **Dana Ranch, Ca** 84.46 38 ⇑P P 04 57 14.5 -0.3
baz=85,SNR=39
B15A **Bradely Ranch,** 84.55 36 ⇓P P 04 57 13.6 -1.6
baz=85,SNR=24
RWWY **Rawlins** 84.55 44 eP P 04 57 15.1 -0.3
comp=Z,34nm,1.0s,mb5.2
E17A **Martinsdale** 84.58 38 ⇓P P 04 57 14.9 -0.5
baz=85,SNR=15
L21A **Rawlins** 84.58 43 ⇓P P 04 57 14.6 -0.9
baz=85,SNR=14
W27A **Bowe Ranch, En** 84.59 51 ⇑P P 04 57 14.6 -1.2
baz=85,SNR=6.5
DAWY **Dawson** 84.65 15 eP P 04 57 15.1 -0.2
N22A **Wattenberg Ran** 84.65 45 ⇓P P 04 57 15.4 -0.5
baz=85,SNR=23
Q24A **Divide** 84.73 47 ⇑P P 04 57 16.4 0.0
baz=85,SNR=7.4
C16A **Fuhringer Ranc** 84.75 37 ⇑P P 04 57 15.3 -0.9
baz=85,SNR=46
ISCO **Idaho Springs** 84.78 46 eP P 04 57 16.8 +0.2
ISCO pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
ISCO **Idaho Springs** 84.78 46 eP P 04 57 16.8 +0.2
comp=Z,10nm,1.3s,mb4.6
G18A **Lazy EL Ranch,** 84.78 40 ⇓P P 04 57 16.2 -0.3
baz=85,SNR=21
A15A **Johnson Ranch,** 84.81 36 ⇓P P 04 57 15.4 -1.1
baz=85,SNR=29
EGAK **Eagle** 84.84 14 eP P 04 57 16.3 0.0
RLMT **Red Lodge** 84.87 40 ⇑P P 04 57 17.0 +0.1
baz=85,SNR=17
RLMT **Red Lodge** 84.87 40 eP P 04 57 17.4 +0.5
comp=Z,28nm,1.0s,mb5.1
CMIG **Matias Romero** 84.89 71 P P 04 57 18.1 +0.5
comp=Z,8.0nm,1.1s,mb4.5,baz=259,slow=9.6,SNR=6.0
F18A **Big Timber** 84.98 39 ⇑P P 04 57 17.3 -0.1
baz=85,SNR=25
D17A **Six Diamond Ra** 85.03 38 ⇑P P 04 57 17.3 -0.4
baz=85,SNR=55
B16A **M & M Farms, S** 85.09 36 ⇓P P 04 57 16.7 -1.2
baz=85,SNR=13
E18A **Harlowton** 85.19 39 ⇓P P 04 57 18.5 0.0
baz=85,SNR=20
L22A **Ellis Ranch, M** 85.22 44 ⇑P P 04 57 18.8 0.0
baz=85,SNR=19
C17A **Wharram Farm,** 85.23 37 ⇑P P 04 57 18.1 -0.5
baz=85,SNR=57
B17A **L&G Farms, Che** 85.54 37 ⇑P P 04 57 19.1 -1.1
baz=86,SNR=7.5
AMTX **Amarillo** 85.56 52 eP P 04 57 20.7 +0.1
comp=Z,14nm,0.8s,mb5.0
D18A **Linhart Farms,** 85.57 38 ⇓P P 04 57 20.1 -0.3
baz=86,SNR=7.3
BJI **Beijing** 85.72 314 P P 04 57 22.2 +0.9
BJI PP PP 05 00 42.9 +0.7
BJI S S 05 07 36.0 -8.9
BJI SS SS 05 13 27.0 +2.6
BJI pmax pmax
comp=Z,22nm,0.8s,mb5.1
BJI pmax pmax
comp=Z,170nm,4.0s
BJI LR LR
comp=N,170nm,16.2s
BJI LR LR
comp=E,120nm,21.8s
BJI LR LR
comp=Z,190nm,28.0s
EGMT **Eagleton** 86.01 37 ⇑P P 04 57 21.7 -0.8
baz=86,SNR=14
EGMT **Eagleton** 86.01 37 eP P 04 57 22.1 -0.4
comp=Z,18nm,1.0s,mb5.0
B18A **Beardsley Farm** 86.18 37 ⇓P P 04 57 22.6 -0.7
baz=86,SNR=22
A18A **Metzger Ranch,** 86.41 37 ⇓P P 04 57 23.6 -0.8
baz=86,SNR=21
MAW **Mawson** 86.54 199 eP P 04 57 24.9 0.0

comp=Z,5.7nm,0.8s,mb4.5
MAW e pP 04 57 57.6 +4.3
MAW **Mawson** 86.54 199 P P 04 57 25.5 +0.6
comp=Z,8.1nm,0.8s,mb4.7,baz=111,slow=5.4,SNR=24
MAW LR LR 05 32 28.0
comp=Z,156nm,20.7s,baz=120,slow=33
MAW **Mawson** 86.54 199 eP P 04 57 25.4 +0.5
EDM **Edmonton** 86.77 32 eP P 04 57 25.4 -0.7
LAO **LASA Array** 87.48 40 eP P 04 57 29.6 -0.1
comp=Z,28nm,0.9s,mb5.2
RSSD **Black Hills** 87.73 43 eP P 04 57 30.0 -0.9
RSSD pmax pmax
comp=Z,11nm,0.8s,mb4.9
RSSD **Black Hills** 87.73 43 eP P 04 57 30.0 -0.9
comp=Z,11nm,0.8s,mb4.9
GYA **Guiyang** 87.95 298 P P 04 57 33.6 +1.2
GYA pP pP 04 58 05.4 +4.4
GYA sP sP 04 58 18.0 +5.4
GYA PP PP 05 01 04.4 +4.0
GYA SKS 05 07 49.0
GYA S S 05 08 06.3 -0.7
GYA sS sS 05 09 00.8 +4.7
GYA SS SS 05 13 59.6 +2.1
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,130nm,4.9s
GYA LR LR
comp=N,740nm,15.9s
GYA LR LR
comp=E,470nm,16.2s
GYA LR LR
comp=Z,570nm,16.8s
HHC **Hu-ho-hao-te** 89.27 313 eP P 04 57 39.0 +0.7
HHC pP pP 04 58 08.0 +1.1
HHC sP sP 04 58 19.7 +1.2
HHC PP PP 05 01 13.1 +2.5
HHC SKS 05 07 56.3
HHC S S 05 08 17.8 -0.9
HHC sS sS 05 09 07.9 -0.1
HHC SS SS 05 14 18.4 +2.3
HHC pmax pmax
comp=Z,20nm,0.7s,mb5.3
HHC pmax pmax
comp=Z,140nm,7.0s
HHC LR LR
comp=N,140nm,16.5s
HHC LR LR
comp=E,190nm,16.9s
HHC LR LR
comp=Z,260nm,16.8s
INK **Inuvik** 89.49 14 eP P 04 57 37.2 -1.5
INK pmax pmax
comp=Z,12nm,0.8s
INK **Inuvik** 89.49 14 eP P 04 57 37.2 -1.4
comp=Z,12nm,0.8s,mb5.0
DGMT **Dagmar** 89.51 39 ⇓P P 04 57 38.7 -0.4
baz=90,SNR=12
KMI **Kunming** 90.88 296 P P 04 57 47.3 +1.1
KMI pP pP 04 58 16.8 +2.0
KMI sP sP 04 58 29.2 +2.8
KMI PP PP 05 01 26.9 +3.1
KMI SKS 05 08 07.8
KMI S S 05 08 32.3 -2.0
KMI sS sS 05 09 24.4 +0.7
KMI SS SS 05 14 42.3 +2.3
KMI LR LR
comp=N,170nm,14.0s
KMI LR LR
comp=E,170nm,20.0s
KMI LR LR
comp=Z,380nm,29.7s
YKA **Yellowknife Ar** 91.37 24 P P 04 57 46.9 -0.6
comp=Z,4.0nm,0.9s,mb4.5,baz=238,slow=4.2,SNR=17
SYO **Syowa Base** 91.40 192 ⇓eP P 04 57 45.4 -2.3
SYO **Syowa Base** 91.40 192 ⇓ePcP PcP 04 57 49.0 +0.4
MIAR **Mount Ida** 91.67 55 eP P 04 57 51.1 +1.5
CMAR **Chiang Mai Arr** 92.31 288 P P 04 57 55.0 +2.1
comp=Z,4.8nm,0.7s,mb4.8,baz=92,slow=2.5,SNR=18
ECSD **EROS Data Cent** 92.51 45 eP P 04 57 53.5 +0.2
comp=Z,2.2nm,0.7s,mb4.6
VNA1 **Neumayer--Stat** 92.52 175 eP P 04 57 53.4 +0.5
VNA1 e 04 58 31.0
UALR **University of** 92.70 55 eP P 04 57 55.6 +1.2
LZH **Lanzhou** 93.32 307 eP P 04 57 59.0 +1.8
LZH pP pP 04 58 28.0 +2.2
LZH sP sP 04 58 42.0 +4.6
LZH PP PP 05 01 47.0 +4.3
LZH SKS 05 08 24.0
LZH S S 05 08 53.0 -2.6
LZH sS sS 05 09 48.0 +2.7
LZH SS SS 05 15 18.0 +3.4
LZH pmax pmax
comp=Z,13nm,1.0s,mb5.2
LZH pmax pmax
comp=Z,90nm,7.7s
LZH LR LR
comp=N,210nm,17.0s
LZH LR LR
comp=Z,250nm,18.6s
FFC **Flin Flon** 93.39 34 i P P 04 57 57.5 +0.5
FFC **Flin Flon** 93.39 34 eP P 04 57 56.3 -0.7
comp=Z,5.8nm,1.3s,mb4.8
SCIA **State Center** 94.27 48 eP P 04 58 02.6 +1.2
CFAA **Coronel Fontan** 94.40 125 P P 04 58 03.0 +0.6
comp=Z,0.8nm,0.9s,mb4.1,baz=243,slow=4.0,SNR=20
AGMN **Agassiz Nation** 94.56 41 eP P 04 58 00.9 -1.6
comp=Z,12nm,1.0s,mb5.3
SONM **Songino Array** 95.20 318 P P 04 58 05.8 +0.2
comp=Z,1.2nm,0.8s,mb4.3,baz=113,slow=2.7,SNR=4.8
ULM **Lac du Bonnet** 95.21 39 P P 04 58 03.2 -2.3
comp=Z,8.1nm,0.8s,mb5.2,baz=263,slow=4.3,SNR=6.0
ULM LR LR 05 38 45.3
comp=Z,185nm,18.2s,baz=234,slow=34
ULM **Lac du Bonnet** 95.21 39 P P 04 58 03.2 -2.3
ULM LR LR 05 38 45.3
COWI **Conover** 98.29 44 eP P 04 58 18.8 -0.7
comp=Z,14nm,0.9s,mb5.5
TKL **Tuckaleechee C** 99.69 56 LR LR 05 40 36.2
comp=Z,61nm,18.7s,baz=262,slow=34
WMQ **Urumqi** 107.08 311 ePdif Pdif 04 59 01.8 +3.2
WMQ PP PP 05 03 32.6 +5.9
WMQ SS SS 05 18 28.8 +3.1
WMQ AMB AMB
comp=Z,47nm,10.0s
WMQ LR LR
comp=N,230nm,32.0s
WMQ LR LR
comp=E,390nm,38.0s
WMQ LR LR
comp=Z,140nm,28.0s
ZALV **Zalesovo Beam** 109.66 322 PKiKP PKiKP 05 03 12.6 +0.4
comp=Z,1.0nm,0.5s,baz=96,slow=2.9,SNR=4.6
MK31 **Makanchi Array** 111.10 314 ePKiKP PKiKP 05 03 14.5 -0.6
MKAR **Makanchi Array** 111.10 314 PKiKP PKiKP 05 03 13.9 -1.1
comp=Z,2.1nm,0.7s,baz=63,slow=1.9,SNR=24
MKAR PKKPab PKKPab 05 14 21.9 +0.6
comp=Z,0.7nm,0.9s,baz=256,slow=0.6,SNR=3.9
KURK **Kurchatov** 113.51 319 ⇑iPKiKP PKiKP 05 03 18.9 -0.6
KURK pmax pmax
comp=Z,6.0nm,2.5s
BVAR **Borovoye Array** 118.32 322 PKP PKPdf 05 03 28.4 -0.3
comp=Z,3.7nm,0.7s,baz=90,slow=1.5,SNR=19
BRVK **Borovoye** 118.37 322 ⇓iPKIKP PKPdf 05 03 28.9 +0.1
BRVK pmax pmax
comp=Z,4.0nm,1.0s
ARU **Arti** 123.90 328 PKIKP PKPdf 05 03 39.4 +0.1
KEV **Kevo** 125.17 351 ePKIKP PKPdf 05 03 38.9 -2.5
KEV pmax pmax
comp=Z,6.0nm,0.7s
KEV **Kevo** 125.17 351 ep PKPdf 05 03 38.9 -2.5
comp=Z,5.6nm,0.7s
ARCES **ARCESS Array B** 125.59 352 PKP PKPdf 05 03 42.2 0.0
comp=Z,8.0nm,0.6s,baz=108,slow=1.5,SNR=40
ARCES **ARCESS Array B** 125.59 352 PKP PKPdf 05 03 42.2 0.0
ABKAR **Akbulak array** 125.60 319 ePKPdf PKPdf 05 03 43.3 +0.5
JOF **Joensuu** 130.35 345 ePKIKP PKPdf 05 03 50.2 -1.3
JOF pmax pmax
comp=Z,10.0nm,0.6s
JOF **Joensuu** 130.35 345 ep PKPdf 05 03 50.2 -1.3
comp=Z,9.6nm,0.6s
KAF **Kangasniemi** 132.21 347 ePKIKP PKPdf 05 03 53.8 -1.2
KAF pmax pmax
comp=Z,6.0nm,0.6s
KAF **Kangasniemi** 132.21 347 ep PKPdf 05 03 53.8 -1.2

comp=Z,6.0nm,0.6s
FINES FINESS Array B 132.85 347 PKhKP 05 03 46.9
comp=Z,1.1nm,0.6s,baz=27,slow=2.1,SNR=3.3
FINES PKP PKPdf 05 03 56.6 +0.4
comp=Z,4.0nm,0.6s,baz=48,slow=2.8,SNR=10
FINES FINESS Array B 132.85 347 PKP 05 03 46.9
FINES PKP PKPdf 05 03 56.6 +0.4
OBN Obninsk 134.83 336 ⇓iPKIKP PKPdf 05 04 01.2 +1.1
OBN e 05 06 36.5
OBN e 05 09 30.7
OBN e 05 10 58.5
OBN i PS PS 05 16 48.4 -10
OBN eSS SS 05 24 47.7 +29
OBN pmax pmax
comp=Z,12nm,0.5s
OBN MLR MLR
comp=Z,100nm,21.0s
NB2 NORSAR Subarra135.35 356 PKPdf 05 03 47.9
comp=Z,1.9nm,0.8s,baz=6.6,slow=1.8
NOA NORSAR Array B 135.35 356 PKhKP 05 03 48.5
comp=Z,0.9nm,0.7s,baz=28,slow=1.9,SNR=3.6
NOA PKP PKPdf 05 04 02.6 +1.7
comp=Z,1.5nm,0.6s,baz=13,slow=4.0,SNR=4.7
VSR Storozhevoye 136.37 330 ePKIKP PKPdf 05 04 04.0 +0.9
VSR pmax pmax
comp=N,3.0nm,0.5s
VSR pmax pmax
comp=E,5.0nm,0.5s
VSR pmax pmax
comp=Z,9.0nm,0.5s
GOF Gofitskoye 137.82 320 ePKIKP PKPdf 05 04 06.9 +0.9
KIV Kislovodsk 138.59 319 i PKIKP PKPdf 05 04 12.1 +4.6
KIV e 05 11 10.9
KIV eSS SS 05 25 02.7 -1.6
KIV pmax pmax
comp=Z,3.0nm,0.7s
AKASG Malin Array Be 141.07 336 PKhKP 05 04 05.6
comp=Z,2.5nm,0.7s,baz=38,slow=4.0,SNR=12
KIEV Kiev 141.08 336 ePKHKP 05 04 05.7
BSEG Bad Segeberg 142.48 356 ePKPbc PKPdf 05 04 09.2 -5.0
LVV L'vov 143.66 340 ePKIKP PKPdf 05 04 21.4 +5.0
IBBN Ibbenburen 144.24 358 ePKPbc PKPdf 05 04 15.9 -1.4
KWP Kalwaria Pacla 144.24 341 ePKP PKPdf 05 04 15.2 -2.2
KWP Kalwaria Pacla 144.24 341 ⇓P PKPdf 05 04 16.3 -1.1
KWP Kalwaria Pacla 144.24 341 ⇓iP PKPdf 05 04 16.3 -1.1
KMBO Kilima Mbogo 144.44 243 PKP PKPdf 05 04 19.4 +0.5
comp=Z,9.7nm,0.9s,baz=180,slow=20,SNR=9.2
KMBO Kilima Mbogo 144.44 243 ePKPdf PKPdf 05 04 18.9 +0.1
OJC Ojcow 144.53 345 ePKHKP 05 04 13.9
KSP Ksiaz 144.73 349 ePKP PKPdf 05 04 17.5 -0.7
KSP Ksiaz 144.73 349 ePKP PKPdf 05 04 17.1 -1.1
KSP epPKP pPKPdf 05 04 49.9 +1.8
CLL Collm 144.81 352 ePKPbc PKPdf 05 04 17.0 -1.3
CLL Collm 144.81 352 ⇑iPKPdf PKPdf 05 04 16.9 -1.4
comp=Z,38nm,0.7s
CLL epPKPdf pPKPdf 05 04 50.0 +1.8
CLL ePP PP 05 07 33.0 -2.8
CLL ePPP 05 10 48.0
CLL e 05 11 35.0
CLL eSKKSac SKKSac 05 14 18.0 -0.3
CLL e 05 16 41.0
CLL ePSKS 05 17 50.0
CLL ePPS 05 20 08.0
CLL eSS SS 05 26 06.0 -8.7
CLL ePSS 05 27 03.0
CLL eSSS 05 31 54.0
STHS Stebnicka Huta 144.87 343 ePKIKP PKPdf 05 04 18.1 -0.4
STHS Stebnicka Huta 144.87 343 ePKP PKPdf 05 04 18.1 -0.4
BUR08 Bucovina Ar. S 145.10 337 ePKPdf PKPdf 05 04 18.9 0.0
BRG Berggiesshubel 145.10 351 ePKPbc PKPbc 05 04 18.0 -0.5
BRG Berggiesshubel 145.10 351 i PKP PKPdf 05 04 18.2 -0.6
comp=Z,22nm,0.8s
BRG SKP 05 07 42.0
BRG SS SS 05 27 12.0 +54
UPC Upice 145.10 349 ePKIKP PKPdf 05 04 18.9 0.0
UPC Upice 145.10 349 ePKP PKPdf 05 04 18.9 0.0
BURAR Bucovina Array 145.11 337 ⇓PKIKP PKPdf 05 04 19.3 +0.3
BURAR Bucovina Array 145.11 337 ⇓iP PKPbc 05 04 19.3 +0.6
BUG Bochum--Univer 145.12 358 ePKPbc PKPbc 05 04 18.0 -0.6
NIE Niedzica 145.13 343 ePKP PKPdf 05 04 19.0 +0.1
DPC Dobruska-Polom 145.20 348 ePKIKP PKPdf 05 04 19.5 +0.5
DPC e 05 04 51.5
DPC eSS SS 05 27 11.1 +52
DPC Dobruska-Polom 145.20 348 ePKP PKPdf 05 04 19.5 +0.5
DPC epPKP pPKPdf 05 04 51.5 +2.6
DPC ex x 05 27 11.1
DPC ex x 05 53 39.4
DPC AMS AMS 06 04 40.0
UZH Uzhgorod 145.25 341 ⇓iPKIKP PKPdf 05 04 19.4 +0.2
UZH e 05 04 48.8
CRVS Cervenica-Dubn 145.27 342 ePKIKP PKPdf 05 04 19.1 -0.1
CRVS Cervenica-Dubn 145.27 342 ePKP PKPdf 05 04 19.1 -0.1
OKC Ostrava-Krasne 145.29 346 ePKIKP PKPdf 05 04 19.6 +0.4
OKC e 05 04 50.9
OKC MLR MLR
comp=Z,200nm,21.5s
OKC Ostrava-Krasne 145.29 346 ePKP PKPdf 05 04 19.6 +0.4
OKC epPKP pPKPdf 05 04 50.9 +1.8
OKC AMS AMS 06 07 50.0
comp=Z,200nm,21.5s
PVCC Panska Ves 145.34 350 ePKIKP PKPdf 05 04 19.6 +0.3
PVCC Panska Ves 145.34 350 ePKP PKPdf 05 04 19.6 +0.3
PVCC ex x 05 53 27.0
PVCC AMS AMS 06 08 20.0
TESR 145.45 334 ⇑P PKPdf 05 04 20.0 +0.4
TESR 145.45 334 ⇑iP PKPdf 05 04 20.0 +0.4
MORC Moravsky Berou 145.49 347 ⇑PKP2 PKPab 05 04 20.2 +0.1
MORC Moravsky Berou 145.49 347 ePKPdf PKPdf 05 04 19.4 -0.1
MORC Moravsky Berou 145.49 347 ⇑iP PKPdf 05 04 20.2 +0.7
TLCR 145.52 331 ⇓PKP2 PKPab 05 04 20.5 +0.1
TLCR 145.52 331 ⇓iP PKPdf 05 04 20.5 +0.7
UBBA Unterbreizbach 145.60 355 ePKPbc PKPbc 05 04 19.6 -0.5
TRPA Tarpa 145.61 340 ⇓iP PKPdf 05 04 19.9 +0.1
MOX Moxa 145.62 354 ePKP PKPdf 05 04 20.0 +0.3
comp=Z,60nm,1.1s
MOX Moxa 145.62 354 ePKPbc PKPbc 05 04 19.8 -0.4
WERD Werda 145.74 353 ePKPbc PKPbc 05 04 20.1 -0.4
WERD epPKPbc pPKPbc 05 04 55.3 +5.3
TANN Tannenbergstha 145.75 353 ePKPbc PKPbc 05 04 20.4 -0.2
BEBN Eben Emael 145.78 0 PKP PKPdf 05 04 20.1 +0.1
GUNZ Gunzen 145.82 353 ePKPbc PKPbc 05 04 20.5 -0.3
GUNZ epPKPbc pPKPbc 05 04 56.0 +5.7
CFR Carcaliu 145.84 332 ⇓PKIKP PKPdf 05 04 21.6 +1.3
CFR Carcaliu 145.84 332 ⇓iP PKPdf 05 04 21.6 +1.3
PRU Pruhonice 145.87 350 ePKP2 PKPab 05 04 21.9 +0.4
PRU eSS SS 05 27 20.1 +53
PRU MLR MLR
comp=Z,100nm,20.0s
PRU Pruhonice 145.87 350 ePKP PKPdf 05 04 21.9 +1.7
PRU epPKP pPKPdf 05 04 54.1 +4.0
PRU ex x 05 27 20.1
PRU ex x 05 53 41.6
PRU AMS AMS 06 05 40.0
comp=Z,100nm,20.0s
KECS Kecovo 145.93 343 ePKP2 PKPab 05 04 21.7 -0.1
KECS Kecovo 145.93 343 ePKP PKPdf 05 04 21.7 +1.4
VRI Vrincioaia 145.93 334 ⇓PKIKP PKPdf 05 04 21.4 +1.0
VRI Vrincioaia 145.93 334 ⇓iP PKPdf 05 04 21.4 +1.0
NKC Novy Kostel 145.93 352 ePKP2 PKPab 05 04 21.5 -0.3
NKC Novy Kostel 145.93 352 ePKP PKPdf 05 04 21.5 +1.2
NKC epPKP pPKPdf 05 04 53.3 +3.1
NKC AMS AMS 06 05 10.0
MEM Membach 145.97 360 PKP PKPdf 05 04 21.3 +1.0
PLOR Plostina 145.97 334 ⇓PKIKP PKPdf 05 04 21.9 +1.4
PLOR Plostina 145.97 334 ⇓iP PKPdf 05 04 21.9 +1.4
SNF Seneffe 146.05 2 PKP PKPdf 05 04 21.7 +1.2
VRAC Vranov 146.13 347 ⇓PKP2 PKPab 05 04 22.6 +0.1
VRAC Vranov 146.13 347 ⇓iP PKPdf 05 04 22.6 +1.9
BCLA Clavier 146.16 1 PKP PKPdf 05 04 21.9 +1.2
GRER 146.21 333 ⇑P PKPab 05 04 25.7 +2.7
GRER 146.21 333 ⇑iP PKPab 05 04 25.7 +2.7
TIRR Tirgusor 146.26 330 ⇑PKIKP PKPdf 05 04 22.7 +1.7
TIRR Tirgusor 146.26 330 ⇑iP PKPdf 05 04 22.7 +1.7
TNS Taunus Mts 146.29 357 ePKPbc PKPbc 05 04 22.1 -0.1
TREC Trest 146.37 349 ePKIKP PKPdf 05 04 21.5 +0.4
TREC MLR MLR
comp=Z,100nm,18.8s
TREC Trest 146.37 349 ePKP PKPdf 05 04 21.5 +0.4
TREC ex x 05 53 27.1
TREC AMS AMS 06 08 20.0
comp=Z,100nm,18.8s
VYHS Vyhne 146.37 344 ePKP2 PKPab 05 04 22.9 -0.6
VYHS Vyhne 146.37 344 ePKP PKPdf 05 04 22.9 +1.8
KOLL Kolacno 146.40 345 ePKP2 PKPab 05 04 23.2 -0.4
KOLL Kolacno 146.40 345 ePKP PKPdf 05 04 23.2 +2.1
GIVF Givet 146.47 1 ePKP1 PKPbc 05 04 22.7 0.0
comp=Z,83nm,0.7s
DOU Dourbes 146.47 2 PKP PKPdf 05 04 22.9 +1.7
BAIF Baives 146.49 2 ePKP1 PKPbc 05 04 23.1 +0.3
comp=Z,110nm,0.7s
BR131 Keskin Array S 146.55 319 ePKPdf PKPdf 05 04 22.4 +0.7
BR131 ePKPbc PKPbc 05 04 23.9 +0.6
BRTR Keskin Array B 146.55 319 PKPbc PKPbc 05 04 23.6 +0.2
comp=Z,17nm,0.6s,baz=96,slow=3.1,SNR=59
MLR Muntele Rosu 146.56 334 ⇓PKP2 PKPab 05 04 24.1 -0.2
MLR Muntele Rosu 146.56 334 ⇓iP PKPab 05 04 24.1 -0.2
GRF Grafenberg Arr 146.61 354 ePKPbc PKPbc 05 04 23.6 +0.5
PSZ Piszkesteto 146.61 343 ePKHKP PKPdf 05 04 21.0 -0.5
PSZ e 05 04 24.5
PSZ Piszkesteto 146.61 343 ⇓iP PKPab 05 04 24.9 +0.5
ABH Alteburg 146.67 358 PKP PKPdf 05 04 23.7 +2.1
DRGR 146.72 339 ⇓PKIKP PKPdf 05 04 23.6 +1.9
DRGR 146.72 339 ⇓iP PKPdf 05 04 23.6 +1.9
KHC Kasperske Hory 146.85 351 ePKP2 PKPab 05 04 24.5 -0.8
KHC eSS SS 05 27 32.4 +54
KHC MLR MLR
comp=Z,200nm,20.3s
KHC Kasperske Hory 146.85 351 ePKPdf PKPdf 05 04 22.8 +0.9
KHC ePKPbc PKPbc 05 04 24.2 +0.4
KHC Kasperske Hory 146.85 351 ePKP PKPbc 05 04 24.5 +0.6
KHC epPKP pPKPdf 05 04 57.5 +5.7
KHC ex x 05 27 32.4
KHC ex x 05 54 23.1
KHC AMS AMS 06 08 20.0
comp=Z,200nm,20.3s
RUP Ruppelstein 146.87 359 PKP PKPbc 05 04 24.5 +0.6
TOD Tromm 146.89 357 PKP PKPdf 05 04 24.0 +2.1
WLF Walferdange 146.92 360 PKP PKPbc 05 04 25.0 +1.0
WLF Walferdange 146.92 360 ePKPbc PKPbc 05 04 23.9 -0.1
WLF epPKPbc pPKPbc 05 04 58.6 +5.0
WLF Walferdange 146.92 360 ePKPbc PKPbc 05 04 24.6 +0.6
WET Wettzell 146.94 352 ePKPbc PKPbc 05 04 24.4 +0.3
WET epPKPbc pPKPbc 05 04 57.9 +4.2
VOIR 146.97 335 ⇓PKP2 PKPab 05 04 25.5 -0.5
VOIR 146.97 335 ⇓iP PKPab 05 04 25.5 -0.5
ZST Bratislava 147.07 346 ePKP2 PKPbc 05 04 25.3 +0.8
ZST Bratislava 147.07 346 ePKP PKPbc 05 04 25.3 +0.8
KTD Kalmit 147.21 357 PKP PKPbc 05 04 25.6 +0.7
BUD Budapest 147.25 343 ⇑ePKP PKPdf 05 04 24.4 +1.8
ROSF Rostrenen 147.37 11 ePKP1 PKPbc 05 04 25.0 -0.3
comp=Z,92nm,0.8s
LANF Langenberg 147.56 358 PKP PKPbc 05 04 26.5 +0.7
SGMF Saint Gilles 147.58 11 ePKP1 PKPbc 05 04 25.7 -0.2
comp=Z,208nm,0.7s
CONA Conrad Observa 147.60 347 ⇓iPKPbc PKPbc 05 04 25.9 0.0
comp=Z,32nm,1.2s,SNR=19
LDF La Drutiere 147.61 7 ePKP1 PKPbc 05 04 25.6 -0.4
comp=Z,65nm,0.6s
STU Stuttgart 147.70 356 ePKPbc PKPbc 05 04 26.7 +0.5
GRR Gorron 147.72 8 ePKP1 PKPbc 05 04 26.3 0.0
comp=Z,215nm,0.6s
QUIF Quistinic 147.79 11 ePKP1 PKPbc 05 04 26.2 -0.3
comp=Z,66nm,0.8s
GZR Gura Zlata 147.89 337 ⇓PKIKP PKPbc 05 04 27.2 +0.4
GZR Gura Zlata 147.89 337 ⇓iP PKPbc 05 04 27.2 +0.4
MOA Molln 147.98 349 ⇓iPKPbc PKPbc 05 04 27.2 +0.2
comp=Z,27nm,1.0s,SNR=16
FUR Furstenfeldbru 148.11 353 ePKPbc PKPbc 05 04 27.8 +0.5
FUR epPKPbc pPKPbc 05 05 01.0 +4.0
BZS Buzias 148.12 339 ⇑PKP2 PKPbc 05 04 28.0 +0.6
BZS Buzias 148.12 339 ⇑iP PKPbc 05 04 28.0 +0.6
CDF Champ du Feu 148.15 358 ePKP1 PKPbc 05 04 27.7 +0.3
comp=Z,99nm,0.9s
BFO Black Forest 148.19 357 ePKPbc PKPbc 05 04 27.5 0.0
BFO Black Forest 148.19 357 ePKPbc PKPbc 05 04 27.9 +0.4
ARSA Arzberg 148.31 347 ⇑iPKIKP PKiKP 05 04 28.6 -0.9
comp=Z,12nm,0.8s,SNR=6.5
RJOB Jochberg 148.33 351 ePKPbc PKPbc 05 04 28.2 +0.3
ECH Echery 148.35 358 PKP PKPbc 05 04 28.1 +0.2
ECH Echery 148.35 358 ePKHKP PKPdf 05 04 23.6 -0.8
ECH 05 04 28.1
ECH e 05 04 28.6
ECH Echery 148.35 358 ePKPdf PKPdf 05 04 23.6 -0.8
ECH PKP PKPbc 05 04 28.1 +0.2
ECH ePKPbc PKPbc 05 04 28.6 +0.7
THEF They Montfort 148.35 360 PKP PKPbc 05 04 28.5 +0.5
SPAK Spaichingen-Ko 148.39 356 PKP PKPbc 05 04 28.5 +0.5
PKSM Moragy 148.52 343 ⇓PKIKP PKPbc 05 04 27.8 -0.6
PKSM Moragy 148.52 343 ⇓iP PKPbc 05 04 27.8 -0.6
HAU Haudompre 148.57 359 ePKP1 PKPbc 05 04 28.8 +0.3
comp=Z,84nm,0.9s
HAU eMLR MLR
comp=Z,83nm,22.0s
HAU Haudompre 148.57 359 ePKP PKPbc 05 04 28.8 +0.3
HAU LR LR
comp=Z,80nm,22.0s
FELD Feldberg im Sc 148.66 357 PKP PKPbc 05 04 28.3 -0.4
MMAI Mount Meron Ar 148.70 307 PKPbc PKPbc 05 04 30.1 +0.8
comp=Z,18nm,0.6s,baz=60,slow=4.9,SNR=21
HINF Hinteralfeld 148.76 359 ePKP1 PKPbc 05 04 29.0 0.0
comp=Z,22nm,0.7s
RETA Reutte 148.83 354 ⇓iPKPbc PKPbc 05 04 29.2 0.0
comp=Z,24nm,1.3s
KBA Koelnbreinsper 148.88 350 ⇓iPKPbc PKPbc 05 04 29.4 +0.1
comp=Z,12nm,0.8s,SNR=7.6
MOTA Moosalm 148.94 353 ⇓iPKPbc PKPbc 05 04 29.2 -0.2
comp=Z,16nm,0.8s,SNR=7.2
WTTA Wattenberg 148.95 352 ⇓iPKPbc PKPbc 05 04 29.5 0.0
comp=Z,36nm,0.7s,SNR=21
SOKA Soboth 148.96 348 ⇑iPKPbc PKPbc 05 04 29.5 -0.1
comp=Z,24nm,1.5s
PERS Pernice 148.98 348 i PKPbc PKPbc 05 04 29.3 -0.3
DAVA Damuels 149.12 355 ⇓iPKPbc PKPbc 05 04 30.2 +0.2
comp=Z,30nm,0.7s
LOMF Lomont 149.22 359 PKP PKPbc 05 04 30.8 +0.6
LOR Lormes 149.27 3 ePKP1 PKPbc 05 04 29.7 -0.6
comp=Z,76nm,0.9s
LOR eMLR MLR
comp=Z,175nm,21.5s
LOR Lormes 149.27 3 ePKP PKPbc 05 04 29.7 -0.6
LOR LR LR
comp=Z,170nm,21.5s
FETA Feichten 149.30 354 ⇑iPKPbc PKPbc 05 04 30.4 0.0
comp=Z,33nm,1.2s,SNR=11
ABTA Abfaltersbach 149.34 351 ⇓iPKPbc PKPbc 05 04 29.9 -0.6
comp=Z,24nm,0.8s,SNR=12
SSF Saint Saulge 149.46 3 ePKP1 PKPbc 05 04 30.3 -0.5
comp=Z,99nm,0.9s
PTCC Patocco-Chiusa 149.54 350 PKP PKPbc 05 04 31.0 0.0
MFF Saint Martin d 149.56 8 ePKP1 PKPbc 05 04 31.1 +0.1
comp=Z,42nm,0.8s
LJU Ljubljana 149.67 348 ePKPbc PKPbc 05 04 31.4 0.0
AVF Avril sur Loir 149.72 3 ePKP1 PKPbc 05 04 31.4 0.0
comp=Z,60nm,1.1s
KDZ Kurdzhali 149.82 330 i P PKPbc 05 04 32.0 +0.2
SMF Signal de Mont 149.89 3 ePKP1 PKPbc 05 04 31.9 +0.1
comp=Z,33nm,0.6s
BGF Bois d'Agland 149.92 4 ePKP1 PKPbc 05 04 31.5 -0.4
comp=Z,96nm,1.0s
CABF La Chapelle 149.97 360 ePKP1 PKPbc 05 04 33.0 +1.0
comp=Z,150nm,1.0s
TUE Stuetta 149.97 355 ePKPdf PKPdf 05 04 28.8 +1.7
TUE ePKPbc PKPbc 05 04 33.2 +1.2
BOJS Bojanci 150.03 347 i PKPbc PKPbc 05 04 32.6 +0.4
VTS Vitosha 150.07 334 ⇓PKHKP PKPbc 05 04 32.7 +0.3
VTS Vitosha 150.07 334 i P PKPbc 05 04 32.0 -0.4
VTS Vitosha 150.07 334 ⇓iP PKPbc 05 04 32.7 +0.3
TCF Toulx Ste Croi 150.14 5 ePKP1 PKPbc 05 04 31.8 -0.6
comp=Z,55nm,1.0s
CTI Castel Tesino 150.14 352 PKHKP PKPbc 05 04 32.8 +0.3
AGO Saint Agoulin 150.44 4 PKP PKPbc 05 04 33.6 +0.4
PLDF La Plantade 150.55 3 PKP PKPbc 05 04 34.1 +0.7
MMB Musomiste 150.65 332 i P PKPbc 05 04 33.5 -0.3
KKB Krupnik 150.71 333 i P PKPbc 05 04 33.8 -0.2
PYM Petit Puy Mans 150.73 4 PKP PKPbc 05 04 34.6 +0.7
ORO Oropa 150.90 357 PKIKP PKPbc 05 04 34.0 -0.3
RJF Les Rejaudoux 151.04 6 ePKP1 PKPbc 05 04 34.0 -0.6
comp=Z,20nm,0.6s
RJF eMLR MLR
comp=Z,175nm,22.0s
RJF Les Rejaudoux 151.04 6 ePKP PKPbc 05 04 34.0 -0.6
RJF LR LR
comp=Z,180nm,22.0s
LPL La Plagne 151.06 359 ePKP1 PKPbc 05 04 35.9 +1.2
comp=Z,56nm,0.7s
LPG La Plagne 151.08 359 ePKP1 PKPbc 05 04 36.1 +1.4
comp=Z,64nm,0.7s
SSB Saint Sauveur 151.28 2 ePKIKP PKPbc 05 04 35.9 +0.7
LFF La Frestale 151.31 8 ePKP1 PKPbc 05 04 35.5 +0.2
comp=Z,48nm,0.8s
CAF Calviac 151.47 6 ePKP1 PKPbc 05 04 36.0 +0.4
comp=Z,28nm,0.7s
BNI Bardonecchia 151.52 359 ePKPdf PKPdf 05 04 30.9 +1.4
BNI ePKPbc PKPbc 05 04 37.1 +1.4
ORIF Oris-en-Rattie 151.66 0 ePKP1 PKPbc 05 04 36.7 +0.6
comp=Z,48nm,0.7s
ORIF eMLR MLR
comp=Z,136nm,20.5s
VIVF Saint-Julien-l 151.71 2 ePKP1 PKPbc 05 04 36.8 +0.6
comp=Z,42nm,0.7s
MBDF Montbardon 151.85 359 ePKP1 PKPbc 05 04 37.1 +0.6
comp=Z,53nm,0.7s
PCAB Cabril 152.16 23 ePKPbc PKPbc 05 04 38.3 +1.0
PCAB Cabril 152.16 23 ePKPab PKPab 05 04 47.7 +0.4
LASF Ste Croix 152.45 3 ePKP1 PKPbc 05 04 38.6 +0.7
comp=Z,52nm,0.8s
PBRG Braganca 152.54 21 ePKPab PKPab 05 04 49.1 +0.3
TOUF Mont Tournerai 152.54 358 PKP PKPbc 05 04 38.6 +0.5
AUTN L'Aution 152.56 358 PKP PKPbc 05 04 38.6 +0.5
SAOF Saorge 152.56 357 PKP PKPbc 05 04 39.2 +1.1
SMRF Simiane la Rot 152.61 0 ePKP1 PKPbc 05 04 39.2 +1.0
comp=Z,48nm,0.7s
PVRL Vila Real 152.66 23 ePKPbc PKPbc 05 04 39.6 +1.2
PVRL Vila Real 152.66 23 ePKPab PKPab 05 04 49.7 +0.4
LUCF Luceram 152.66 358 PKP PKPbc 05 04 38.8 +0.5
MVIF Mont Vial 152.67 358 PKP PKPbc 05 04 38.1 -0.3
SBF Sospel 152.69 358 ePKP1 PKPbc 05 04 38.3 -0.1
comp=Z,57nm,0.8s
SJPF Ste Jean 152.78 11 ePKP1 PKPbc 05 04 38.4 -0.2
CALN Calern 152.82 358 PKP PKPbc 05 04 39.5 +0.8
MVO Moncorvo 153.00 22 ePKPbc PKPbc 05 04 39.3 +0.1
FRF La Foret Royal 153.01 359 ePKP1 PKPbc 05 04 39.1 0.0
comp=Z,21nm,0.7s
MTLF Montolieu 153.06 6 ePKP1 PKPbc 05 04 39.5 +0.3
comp=Z,15nm,1.0s
PVIS Viseu 153.07 24 ePKPbc PKPbc 05 04 39.9 +0.5
PVIS Viseu 153.07 24 ePKPab PKPab 05 04 51.3 +0.2
ETSF Etsaut 153.11 11 ePKP1 PKPbc 05 04 39.3 -0.1
comp=Z,43nm,0.9s
EPF Esparros 153.13 9 ePKP1 PKPbc 05 04 39.6 +0.2
LMR La Mourre 153.24 359 ePKP1 PKPbc 05 04 39.6 0.0
comp=Z,26nm,0.9s
MTE Manteigas 153.48 23 ePKPbc PKPbc 05 04 39.0 -1.3
MTE Manteigas 153.48 23 ePKPab PKPab 05 04 53.0 +0.2
PCBR Castelo Branco 153.99 24 ePKPab PKPab 05 04 56.9 +1.9
PMRV Marv??o 154.38 24 ePKPbc PKPbc 05 04 41.1 -1.1
PMRV Marv??o 154.38 24 ePKPab PKPab 05 04 56.4 -0.3
PESTR Estremoz 154.78 25 ePKPbc PKPbc 05 04 41.9 -1.2
PESTR Estremoz 154.78 25 ePKPab PKPab 05 04 58.1 -0.3
EVO Evora 154.88 26 ePKIKP PKPdf 05 04 34.0 -0.6
comp=Z,48nm,1.4s
EVO eMLR MLR
comp=Z,91nm,20.0s
ESDC Sonseca Array 155.36 18 PKPab PKPab 05 05 01.4 +0.6
comp=Z,13nm,0.9s,baz=322,slow=3.3,SNR=24
PCVE Castro Verde 155.62 28 ePKPab PKPab 05 05 02.2 +0.1
CMAH Djebel Manchou 159.90 356 P PKPab 05 05 19.7 -0.8
DFRA Djebel Bou Aff 160.03 0 P PKPab 05 05 21.6 +0.5
SET Setif 160.37 1 P PKPab 05 05 23.0 +0.4
CKHR Kef el Ahmar 160.55 1 P PKPab 05 05 24.0 +0.6
KEST Kesra 160.59 352 PKPab PKPab 05 05 23.1 -0.5
comp=Z,1.2nm,0.7s,baz=324,slow=4.8,SNR=5.0

*NEIC **07** 05:12:48.9, 58°.32N×133°.53W, h1km, ML3.2(PGC), ML2.8(AEIC), After PGC.*

PGC 07 05:12:48.9±5.1, 58°.32N×133°.53W, h1km, ML3.2/4, 6D, 51km east of Juneau, Ak Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESE	Bessie Mountai	0.74	291	P	Pg	05 13 02.3	-0.9
BESE				S	Sg	05 13 12.5	-0.3
SKAG	Skagway	1.48	322	P	Pn	05 13 14.6	-2.0
SKAG				S	Sg	05 13 34.1	-2.3
SIT	Sitka	1.59	218	ePn	Pn	05 13 17.2	-1.0
SIT				S	Sn	05 13 38.5	-0.8
SIT				eSn	Sn	05 13 39.8	+0.5
DLBC	Dease Lake	1.85	85	P	Pn	05 13 19.8	-1.9
DLBC				S	Sn	05 13 44.7	-1.0
DLBC	Dease Lake	1.85	85	⇑P	Pn	05 13 20.4	-1.4
DLBC				⇓Pg	Pg	05 13 21.8	-2.5
DLBC				⇓Sn	Sn	05 13 45.1	-0.6
DLBC				⇑Sg	Sg	05 13 46.8	-1.5
PLBC	Pleasant Camp	1.86	309	ePn	Pn	05 13 21.9	-0.1
PLBC				eSg	Sg	05 13 46.4	-2.3
PLBC	Pleasant Camp	1.86	309	⇓Pn	Pn	05 13 21.9	-0.1
PLBC				⇓Sg	Sg	05 13 46.4	-2.3
WHY	Whitehorse	2.45	344	P	Pn	05 13 28.3	-1.6
WHY	Whitehorse	2.45	344	⇓Pn	Pn	05 13 28.4	-1.5
WHY				⇑Pg	Pg	05 13 33.1	-2.8
HYT	Haines Junctio	3.23	323	⇑Pn	Pn	05 13 40.9	+0.3
HYT				⇓Pg	Pg	05 13 46.8	-3.9
HYT				⇑Sg	Sg	05 14 29.1	-3.4
PNL	Peninsula	3.33	297	ePn	Pn	05 13 42.6	+0.6
PNL				eSg	Sg	05 14 37.5	+1.9
DAWY	Dawson	6.42	336	ePn	Pn	05 14 23.8	-0.7
EGAK	Eagle	7.43	334	ePn	Pn	05 14 38.6	+0.3
	4.2nm,0.7s						

*MAN **06** 05:13:08, 15°.33N×122°.23E, h1km, mb4.8, ML3.7, MS3.8*
*IDC **07** 05:13:04.5±1.1, 15°.25N×122°.80E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.6/23, mbtmp3.7/5, MS3.8/3, Ms1 3.8/3, ms1mx3.3/24, Error ellipse: s-maj=30.9km s-min=18.7km az=74.0*
*ISCJB **07** 05:13:08.7±1.4, 15°.37N±0°.09×122°.5E±0°.1, h38km±15km, mb3.8/6, MS3.9/3, Error ellipse: s-maj=20.8km s-min=7.6km az=141.0*
*NEIC **07** 05:13:09.6±0.7, 15°.23N×122°.74E, h35km, mb4.3/1, Error ellipse: s-maj=19.1km s-min=11.3km az=71.0*

ISC 07 05:13:09.8±1.5, 15°.39N±0°.09×122°.5E±0°.1, h36km±16km, n19, σ1951/20, mb3.8/6, MS3.9/3, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	Polilio Island	0.87	221	eP	Pn	05 13 21.1	-4.3
POLP				eS	Sn	05 13 32.1	-4.8
BALP	Baler	0.98	291	eP	Pn	05 13 23.6	-3.5
BALP				eS	Sn	05 13 37.5	-2.3
TGY	Tagaytay City	2.00	231	Pn	Pn	05 13 42.1	+1.0
	557nm,0.3s,baz=52,slow=5.8,SNR=28						
TGY				Sn	Sn	05 14 08.9	+4.1
	212nm,0.3s,baz=0.0,slow=20,SNR=11						
BOAC	Boac	2.03	199	eP	Pn	05 13 41.6	+0.2
BCPH	Baguio City Da	2.12	298	⇑iP	Pn	05 13 41.3	-1.5
BCPH				i S	Sn	05 14 07.9	0.0
PVCP	Virac	2.37	138	eP	Pn	05 13 46.0	-0.2
LUBP	Lubang	2.75	234	eP	Pn	05 13 51.2	-0.2
OTRP	Odiongan	3.04	189	eP	Pn	05 13 56.7	+1.3
SJMP	San Jose	3.21	205	eP	Pn	05 13 59.3	+1.6
CNP	Catarman	3.53	144	eP	Pn	05 14 07.8	+5.7
SONM	Songino Array	35.00	341	P	P	05 20 01.0	+2.4
	0.2nm,0.4s,mb3.4,baz=169,slow=8.9,SNR=2.1						
WRAB	Tennant Creek	36.97	161	eP	P	05 20 14.0	-1.8
	3.0nm,0.6s,mb4.3						
WRA	Warramunga Arr	36.98	161	P	P	05 20 13.7	-2.2
	3.2nm,0.7s,mb4.3,baz=342,slow=9.3,SNR=9.0						
ASAR	Alice Springs	40.37	164	P	P	05 20 42.9	-1.4
	0.5nm,0.3s,mb3.7,baz=340,slow=7.0,SNR=8.9						
MKAR	Makanchi Array	45.77	322	P	P	05 21 29.1	+1.3
	0.3nm,0.8s,mb3.3,baz=125,slow=7.6,SNR=2.7						
ZALV	Zalesovo Beam	48.41	331	LR	LR	05 45 36.1	
	comp=Z,78nm,18.2s,MS3.7,baz=77,slow=40						
KURK	Kurchatov	49.81	325	P	P	05 22 01.1	+2.1
	0.8nm,0.5s,mb4.0,baz=120,slow=8.7,SNR=5.2						
KURK				pP	pP	05 22 07.1	-2.5
	4.2nm,0.9s,baz=122,slow=8.3,SNR=13						
AKASG	Malin Array Be	80.32	320	LR	LR	06 07 30.7	
	comp=Z,84nm,19.8s,MS4.1,baz=50,slow=40						
KEST	Kesra	98.96	311	LR	LR	06 15 55.9	
	comp=Z,40nm,21.5s,MS3.9,baz=221,slow=38						

*ISCJB **07** 05:49:10.2±1.2, 43°.07N±0°.07×145°.72E±0°.07, h91km±9km, Error ellipse: s-maj=13.5km s-min=6.4km az=147.5*

*JMA **07** 05:49:11.7±0.1, 43°.08N×145°.65E, h86km±1km, M3.8*
JMA Felt I J1.
*SKHL **07** 05:49:12.0±0.4, 43°.05N×145°.82E, h77km±8km, mb4.9/2*
ISC 07 05:49:10.8±1.2, **43°.07N**±0°.07×**145°.71E**±0°.07, **h88**km±9km, **n11**, σ0**°51**/22, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.30**	**5**	P	**Pn**	**05 49 24.7**	**+0.6**
NEM2				*e*S	**Sn**	**05 49 34.0**	**+1.0**
JAK	**Akkeshi**	**0.75**	**265**	P	**Pn**	**05 49 27.8**	**+0.2**
JAK				*e*S	**Sn**	**05 49 40.0**	**-0.2**
JNK	**Nakash**	**0.89**	**306**	P	**Pn**	**05 49 29.0**	**-0.1**
JNK				*e*S	**Sn**	**05 49 42.1**	**-0.7**
JRA	**Rausu**	**0.97**	**334**	P	**Pn**	**05 49 30.6**	**+0.6**
JRA				*e*S	**Sn**	**05 49 44.7**	**+0.3**
YUK	**Yuzh-Kuril'sk**	**0.97**	**7**	*e*P	**Pn**	**05 49 30.7**	**+0.6**
YUK				AMB	AMB	05 49 36.9	
	150nm,0.1s						
YUK				AMB	AMB	05 49 36.9	
	560nm,0.1s						
YUK				AMB	AMB	05 49 36.9	
	130nm,0.1s						
YUK				*e*S	**Sn**	**05 49 44.4**	**-0.1**
YUK				A		05 49 45.5	
	3μm,0.5s						
YUK				A		05 49 45.5	
	3μm,0.5s						
YUK				A		05 49 46.0	
	4μm,0.7s						
JOB	**Onbets**	**1.39**	**264**	P	**Pn**	**05 49 35.3**	**+0.3**
JOB				*e*S	**Sn**	**05 49 53.0**	**-0.3**
JAR	**Ashorobuto**	**1.44**	**280**	P	**Pn**	**05 49 36.0**	**+0.3**
JAR				*e*S	**Sn**	**05 49 54.1**	**-0.4**
JTKR	**Abashiri--Toko**	**1.59**	**305**	P	**Pn**	**05 49 38.2**	**+0.6**
JTKR				*e*S	**Sn**	**05 49 57.9**	**0.0**
JCH	**Churui**	**1.79**	**256**	P	**Pn**	**05 49 40.2**	**+0.1**
JCH				*e*S	**Sn**	**05 50 01.4**	**-1.0**
JMP	**Maruseppu**	**1.95**	**300**	P	**Pn**	**05 49 42.8**	**+0.5**
JMP				*e*S	**Sn**	**05 50 06.5**	**+0.3**
KUR	**Kuril'sk**	**2.66**	**35**	*e*P	**Pn**	**05 49 51.0**	**-0.7**
KUR				AMB	AMB	05 49 51.2	
	100nm,0.5s						
KUR				*e*S	**Sn**	**05 50 22.1**	**-1.1**

*IDC **07** 05:57:30.0±2.1, 54°.14N×86°.03E, h0km, mb1 3.6/3, mb1mx3.4/27, mbtmp3.6/3, ML3.3/3, Error ellipse: s-maj=17.4km s-min=12.0km az=45.0*
ISC 07 05:57:33.4±3.1, **54°.1N**±0°.1×**85°.6E**±0°.3, **h3**km±15km, **n6**, σ1**°07**/11, **2C-4D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**0.47**	**254**	Pg	**Pg**	**05 57 42.1**	**-0.2**
	2.2nm,0.3s,baz=66,slow=17,SNR=20						
ZALV				Lg		05 57 55.2	
	14nm,0.3s,baz=72,slow=30,SNR=67						
KURK	**Kurchatov**	**5.43**	**234**	⇓Pn	**Pn**	**05 58 55.4**	**+0.3**
	3.2nm,0.7s						
KURK				⇑Sn	**Sn**	**06 00 00.9**	**+2.8**
	1.1nm,0.6s						
KURK				⇓Lg		06 00 30.4	
	7.1nm,0.7s						
KURK	**Kurchatov**	**5.43**	**234**	Pn	**Pn**	**05 58 57.9**	**+2.8**
	0.3nm,0.3s,baz=52,slow=14,SNR=30						
KURK				Sn	**Sn**	**06 00 07.6**	**+9.5**
	0.1nm,0.3s,baz=46,slow=22,SNR=3.1						
KURK				Lg		06 00 34.1	
	0.1nm,0.3s,baz=49,slow=34,SNR=6.5						
MK31	**Makanchi Array**	**7.59**	**197**	⇓Pn	**Pn**	**05 59 24.2**	**-0.6**
	2.8nm,0.6s,baz=24,slow=15,SNR=43						
MK31				⇓Sn	**Sn**	**06 00 51.7**	**+0.5**
	1.0nm,0.6s,baz=26,slow=26,SNR=7.1						
MK31				⇑Lg		06 01 34.0	
	4.0nm,0.9s,baz=24,slow=31,SNR=4.7						
MKAR	**Makanchi Array**	**7.59**	**197**	Pn	**Pn**	**05 59 24.6**	**-0.1**
	0.6nm,0.3s,baz=21,slow=12,SNR=52						
MKAR				Sn	**Sn**	**06 00 50.4**	**-0.8**
	0.2nm,0.3s,baz=19,slow=27,SNR=13						
MKAR				Lg		06 01 36.0	
	0.2nm,0.3s,baz=18,slow=33,SNR=7.4						
BVAR	**Borovoye Array**	**9.11**	**270**	Pn	**Pn**	**05 59 46.1**	**+0.5**
	0.3nm,0.3s,baz=71,slow=15,SNR=6.6						
BVAR				Sn	**Sn**	**06 01 25.2**	**-3.3**
	0.3nm,0.3s,baz=73,slow=24,SNR=4.8						

*NEIC **07** 06:07:13.5, 58°.34N×133°.43W, h1km, ML3.1(PGC), ML2.7(AEIC), After PGC.*
PGC 07 06:07:13.5±7.5, **58°.34N**×**133°.43W, h1**km, **ML3.1**/4, **2D, 57km east of Juneau, Ak Southeastern Alaska, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESE	**Bessie Mountai**	**0.79**	**289**	P	Pg	06 07 26.9	-1.7
BESE				S	Sg	06 07 37.0	-1.8
SKAG	**Skagway**	**1.50**	**320**	P	Pn	06 07 39.3	-2.2
SKAG				S	Sb	06 07 58.9	-2.7
SIT	**Sitka**	**1.64**	**219**	P	Pn	06 07 41.7	-1.7
SIT				S	Sn	06 08 03.3	-1.8
DLBC	**Dease Lake**	**1.80**	**85**	P	Pn	06 07 44.6	-1.0
DLBC				S	Sn	06 08 10.1	+1.2
DLBC	**Dease Lake**	**1.80**	**85**	P	Pn	06 07 44.8	-0.8
DLBC				Pg	Pg	06 07 46.4	-1.5
DLBC				⇓Sn	Sn	06 08 08.3	-0.6
DLBC				⇑Sg	Sg	06 08 09.8	-1.3
PLBC	**Pleasant Camp**	**1.89**	**308**	*e*Pn	Pn	06 07 46.8	-0.1
PLBC				*e*Sn	Sn	06 08 11.0	-0.4
PLBC	**Pleasant Camp**	**1.89**	**308**	Pn	Pn	06 07 46.8	-0.1
PLBC				⇑Sn	Sn	06 08 11.0	-0.4
PLBC				⇑Sg	Sg	06 08 12.1	-2.2
WHY	**Whitehorse**	**2.45**	**343**	P	Pn	06 07 53.4	-1.2
WHY				S	Sn	06 08 24.9	-0.1
WHY	**Whitehorse**	**2.45**	**343**	⇓Pn	Pn	06 07 53.6	-0.9
WHY				Pg	Pg	06 07 57.2	-3.2
HYT	**Haines Junctio**	**3.25**	**322**	*e*Pn	Pn	06 08 05.4	-0.1
HYT				*e*Sg	Sg	06 08 54.5	-3.1
HYT	**Haines Junctio**	**3.25**	**322**	⇑Pn	Pn	06 08 05.4	-0.1
HYT				⇑Pg	Pg	06 08 11.7	-3.9
HYT				⇑Sg	Sg	06 08 54.5	-3.1
PNL	**Peninsula**	**3.36**	**296**	*e*Pn	Pn	06 08 06.7	-0.4
PNL				*e*Sn	Sn	06 08 44.1	-3.5
DAWY	**Dawson**	**6.43**	**336**	*e*Pn	Pn	06 08 48.6	-0.5
EGAK	**Eagle**	**7.44**	**334**	*e*Pn	Pn	06 09 04.1	+1.1
	8.2nm,0.9s						

*NIED **07** 06:14:00, 39°.00N×140°.90E, h5km, Mw3.8 Best double couple: M0=6.03000×10^14 NP1:φ=199.00000°, δ=68.00000°, λ=47.00000°. NP2:φ=88.00000°, δ=47.00000°, λ=150.00000°.*
*IDC **07** 06:14:13.8±1.5, 39°.30N×140°.96E, h0km, mb3.6/3, mb1 3.8/5, mb1mx3.5/25, mbtmp3.6/5, ML3.5/2, MS3.6/2, Ms1 3.6/2, ms1mx2.5/37, Error ellipse: s-maj=30.1km s-min=27.9km az=120.0*
*ISCJB **07** 06:14:16.7±0.5, 39°.04N±0°.03×140°.92E±0°.04, h12km±5km, mb3.6/3, Error ellipse: s-maj=5.7km s-min=4.9km az=14.7*
*NEIC **07** 06:14:17.1, 39°.04N×140°.89E, h10km, MG4.2(JMA), After JMA.*
NEIC Recorded [2 JMA] in Akita, Iwate and Miyagi.
*JMA **07** 06:14:17.0, 39°.04N×140°.89E, h10km±1km, M4.0*
JMA Felt II J1.
ISC 07 06:14:17.3±0.5, **39°.03N**±0°.03×**140°.91E**±0°.04, **h2**km±5km, **n18**, σ0**°78**/26, **mb3.6**/3, **4C-4D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.26**	**107**	⇓P	**Pg**	**06 14 22.4**	**+0.2**
JMK				*e*S	**Sg**	**06 14 26.2**	**+0.7**
JRG	**Rokugo**	**0.43**	**330**	⇓P	**Pg**	**06 14 25.1**	**-0.4**
JRG				*e*S	**Sg**	**06 14 31.7**	**+0.7**
JYK	**Kaneyama**	**0.44**	**256**	⇑P	**Pg**	**06 14 25.5**	**-0.2**
JYK				*e*S	**Sg**	**06 14 31.4**	**0.0**
JOM	**Ohasama**	**0.54**	**34**	⇑P	**Pg**	**06 14 27.3**	**-0.3**
JOM				*e*S	**Sg**	**06 14 34.6**	**0.0**
JIO	**Ouri**	**0.67**	**149**	⇓P	**Pg**	**06 14 29.8**	**-0.3**
JIO				*e*S	**Sg**	**06 14 39.2**	**+0.5**
JOU	**Okura**	**0.69**	**196**	⇓P	**Pg**	**06 14 30.4**	**0.0**
JOU				*e*S	**Sg**	**06 14 39.5**	**+0.2**
JYA	**Atsumi**	**1.03**	**245**	⇑P	**Pg**	**06 14 36.3**	**-0.7**
JYS	**Shiratake**	**1.04**	**220**	⇑P	**Pg**	**06 14 36.7**	**-0.5**
JYS				*e*S	**Sg**	**06 14 51.2**	**+0.5**
MAJO	**Matsushiro**	**3.27**	**222**	*e*Pn	**Pn**	**06 15 09.8**	**+0.2**
MAJO				*e*Sn	**Sn**	**06 15 49.1**	**0.0**
MAT	**Matsushiro**	**3.27**	**222**	P	**Pn**	**06 15 10.1**	**+0.5**
MAT				*e*S	**Sn**	**06 15 53.4**	**+4.3**
MJAR	**Matsushiro Arr**	**3.27**	**222**	Pn	**Pn**	**06 15 10.0**	**+0.5**
	1.8nm,0.3s,baz=28,slow=14,SNR=12						
MJAR				Pg	**Pg**	**06 15 16.7**	**-3.3**
	4.7nm,0.3s,baz=27,slow=15,SNR=18						
MJAR				Lg		06 15 58.5	
	1.9nm,0.3s,baz=242,slow=25,SNR=2.8						
KSRS	**Korea Array**	**10.34**	**265**	Pn	**Pn**	**06 16 46.7**	**+0.2**
	0.8nm,0.3s,baz=78,slow=14,SNR=14						
KSRS				Sn	**Sn**	**06 18 45.9**	**+3.0**
	0.5nm,0.3s,baz=71,slow=24,SNR=4.7						
CBIJ	**Chichi jima**	**11.95**	**174**	LR	LR	06 21 45.1	
	comp=Z,62nm,20.0s,baz=96,slow=37						
MKAR	**Makanchi Array**	**42.75**	**300**	P	**P**	**06 22 10.7**	**-5.1**
	0.4nm,0.7s,mb3.2,baz=88,slow=8.6,SNR=5.3						
PSI	**Prapat**	**52.50**	**237**	LR	LR	06 47 13.8	
	comp=Z,211nm,18.2s,baz=302,slow=38						
WRA	**Warramunga Arr**	**58.98**	**187**	P	**P**	**06 24 16.4**	**-1.9**
	0.5nm,0.4s,mb3.9,baz=3.5,slow=7.2,SNR=6.4						
ASAR	**Alice Springs**	**62.71**	**187**	P	**P**	**06 24 42.8**	**-0.8**
	0.3nm,0.5s,mb3.7,baz=351,slow=5.0,SNR=4.4						
LPAZ	**La Paz**	**145.98**	**56**	PKPbc	PKPbc	06 33 56.0	-2.9
	0.5nm,0.7s,baz=333,slow=4.6,SNR=4.6						

*ISCJB **07** 06:32:51.9±0.1, 47°.14N±0°.03×122°.87E±0°.03, h10km, mb4.5/87, MS3.8/14, Error ellipse: s-maj=3.9km s-min=2.9km az=147.4*
*IDC **07** 06:32:51.1±0.5, 47°.04N×123°.02E, h0km, mb4.4/23, mb1 4.5/25, mb1mx4.5/31, mbtmp4.4/25, ML3.6/2, MS3.4/10, Ms1 3.4/10, ms1mx3.2/27, Error ellipse: s-maj=14.6km s-min=12.8km az=15.0*
*BJI **07** 06:32:52.0, 47°.08N×123°.07E, h14km, mB4.6/18, mb4.5/24, ML5.0/18, Ms4.6/30, Ms7 4.3/27*
*NEIC **07** 06:32:53.2±0.2, 47°.14N×122°.89E, h10km, mb4.7/57, Error ellipse: s-maj=7.0km s-min=4.3km az=183.0*
*MOS **07** 06:32:54.9±1.1, 47°.08N×122°.87E, h37km, mb4.8/41, Error ellipse: s-maj=9.0km s-min=6.2km az=107.1*
ISC 07 06:32:52.0±1.1, **47°.14N**±0°.03×**122°.93E**±0°.03, **h1**km±6km, **n448**, σ0**°70**/466, **mb4.7**/87, **MS3.8**/14, **123C-136D, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CN2	**Changchun**	**3.78**	**151**	*e*Pg	**Pg**	**06 34 04.6**	**+0.2**
CN2				*e*Sg	**Sg**	**06 34 49.5**	**-3.8**
CN2				smax			
	comp=N,100nm,0.7s						
CN2				smax			
	comp=E,100nm,0.7s						
CN2	**Changchun**	**3.78**	**151**	*e*Pn	**Pn**	**06 33 49.8**	**-1.5**
CN2				*e*Sg	**Sg**	**06 34 49.5**	**-3.8**
MDJ	**Mudanjiang**	**5.29**	**116**	Pn	**Pn**	**06 34 11.6**	**-0.5**
MDJ				P		06 34 12.5	
MDJ				smax			
	comp=N,160nm,0.6s						
MDJ				smax			
	comp=E,360nm,0.7s						
SNY	**Shenyang**	**5.33**	**175**	⇑Pn	**Pn**	**06 34 10.9**	**-1.8**
SNY				Sg	**Sg**	**06 35 39.9**	**-3.3**
SNY				smax			
	comp=N,490nm,0.9s						
SNY				smax			
	comp=E,760nm,0.9s						
KLR	**Kul'dur**	**6.26**	**67**	*e*P	**Pn**	**06 34 20.9**	**-4.4**
KLR				MLR	MLR		
	comp=E,3μm,8.5s						
KLR				MLR	MLR		
	comp=Z,5μm,8.5s						
VLA	**Vladivostok**	**7.50**	**119**	P	**Pn**	**06 34 45.3**	**+2.8**
HABR	**Khabarovsk**	**8.27**	**76**	*e*P	**Pn**	**06 34 54.4**	**+1.4**
HABR						06 36 28.8	
HABR				pmax	pmax		
	comp=E,42nm,1.0s						
HABR				pmax	pmax		
	comp=N,29nm,1.4s						
HABR				pmax	pmax		
	comp=Z,57nm,1.3s						
HABR				MLR	MLR		
	comp=N,365nm,7.0s						
HABR				MLR	MLR		
	comp=Z,3μm,11.0s						
HABR				MLR	MLR		
	comp=E,2μm,7.0s						
DL2	**Dalian**	**8.29**	**187**	P	**Pn**	**06 34 52.9**	**-0.3**
DL2				smax			
	comp=N,140nm,0.8s						
DL2				smax			
	comp=E,150nm,1.1s						
BJI	**Beijing**	**8.62**	**217**	P	**Pn**	**06 34 57.2**	**-0.7**
BJI				S	**Sn**	**06 36 36.4**	**+0.7**
BJI				pmax	pmax		
	comp=Z,20nm,0.6s						
BJI				pmax	pmax		
	comp=Z,100nm,3.6s						
BJI				LR	LR		
	comp=N,2μm,13.0s						
BJI				LR	LR		
	comp=E,4μm,17.0s						
HHC	**Hu-ho-hao-te**	**10.32**	**237**	*e*P	**Pn**	**06 35 21.5**	**+0.4**
HHC				PP		06 35 30.2	
HHC				S	**Sn**	**06 37 18.2**	**+0.8**
HHC				SS		06 37 30.5	
HHC				PcS	PcS	06 44 59.8	-1.9
HHC				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,61nm,5.1s						
HHC				LR	LR		
	comp=N,2μm,8.7s						
HHC				LR	LR		
	comp=E,1μm,8.1s						
HHC				LR	LR		
	comp=Z,1μm,8.2s						
KSRS	**Korea Array**	**10.36**	**157**	Pn	**Pn**	**06 35 21.1**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=333,slow=13,SNR=11						
KSRS				Pg	Pn	06 36 03.4	+42
	comp=Z,1.0nm,0.3s,baz=346,slow=17,SNR=6.6						
KSRS				Sn	**Sn**	**06 37 13.7**	**-4.6**
	comp=Z,0.3nm,0.3s,baz=345,slow=19,SNR=3.5						
KSRS				Lg		06 38 10.1	
	comp=Z,0.9nm,0.3s,baz=334,slow=28,SNR=4.9						
KSRS				LR	LR	06 38 30.8	
	comp=Z,33nm,20.8s,baz=340,slow=33						
ULN	**Ulaanbaatar**	**10.77**	**280**	*e*Pn	**Pn**	**06 35 24.6**	**-2.6**
ULN				*e*Sn	**Sn**	**06 37 27.7**	**-0.7**
SONM	**Songino Array**	**11.22**	**280**	Pn	**Pn**	**06 35 30.5**	**-2.8**
	comp=Z,2.6nm,0.3s,baz=96,slow=13,SNR=33						
SONM				Sn	**Sn**	**06 37 35.9**	**-3.4**
	comp=Z,4.1nm,0.3s,baz=86,slow=21,SNR=7.0						
SONM				Lg		06 38 43.7	
	comp=Z,7.1nm,0.3s,baz=84,slow=27,SNR=5.5						
SONM				LR	LR	06 40 29.7	
	comp=Z,462nm,20.4s,baz=95,slow=41						
SONM	**Songino Array**	**11.22**	**280**	P	**Pn**	**06 35 30.5**	**-2.8**
SONM						06 37 35.9	
SONM				pmax	pmax		
	comp=Z,3.0nm,0.3s						
SONM				smax			
	comp=N,4.0nm,0.3s						
SONM				MLR	MLR		
	comp=Z,462nm,20.4s						
TIA	**Tai'an**	**11.75**	**204**	*e*P	**Pn**	**06 35 46.5**	**+5.9**
TLY	**Talaya**	**13.35**	**297**	*e*P	**Pn**	**06 36 01.1**	**-1.3**
TLY				*e*SS		06 38 33.8	
TLY				pmax	pmax		
	comp=Z,3.0nm,0.6s						
TLY				MLR	MLR		
	comp=Z,268nm,12.0s						
TLY	**Talaya**	**13.35**	**297**	*e*Pn	**Pn**	**06 36 01.2**	**-1.2**
	comp=Z,4.5nm,0.7s						
YSS	**Yuzh-Sakhalins**	**13.52**	**84**	*e*P	**Pn**	**06 36 09.5**	**+4.7**
YSS				*e*S	**Sn**	**06 38 44.0**	**+8.4**
YSS				MLR	MLR		
	comp=Z,500nm,14.0s						
YSS				MLR	MLR		
	comp=E,700nm,12.0s						
ASAJ	**Asahikawa**	**14.09**	**95**	Pn	**Pn**	**06 36 14.6**	**+2.1**
	comp=E,0.4nm,0.3s,baz=288,slow=12,SNR=5.4						
ASAJ				LR	LR	06 41 51.3	
	comp=E,292nm,18.6s,baz=206,slow=38						
MOY	**Mondy**	**14.96**	**296**	*e*P	**Pn**	**06 36 24.7**	**+0.2**
MOY				pmax	pmax		
	comp=Z,13nm,1.0s						
NJ2	**Nanjing**	**15.39**	**193**	*e*P	**Pn**	**06 36 25.6**	**-4.6**
NJ2				pP	pP	06 36 32.2	-3.1
NJ2				sP	sP	06 36 36.2	+0.8
NJ2				PP		06 36 36.8	
NJ2				S	**Sn**	**06 39 13.5**	**-7.8**
NJ2				sS	sS	06 39 29.0	-9.3
NJ2				pmax	pmax		
	comp=Z,590nm,6.8s						
NJ2				LR	LR		
	comp=N,500nm,11.4s						
NJ2				LR	LR		
	comp=E,320nm,11.1s						
NJ2				LR	LR		
	comp=Z,730nm,9.6s						
YAK	**Yakutsk**	**15.41**	**12**	*e*P	**Pn**	**06 36 29.9**	**-0.4**
YAK				*e*S	**Sn**	**06 39 23.2**	**+1.7**
YAK				pmax	pmax		
	comp=Z,21nm,1.0s						
YAK				pmax	pmax		
	comp=N,31nm,1.3s						
YAK				pmax	pmax		
	comp=E,14nm,1.3s						
YAK				pmax	pmax		
	comp=Z,103nm,0.9s						
YAK				pmax	pmax		
	comp=E,21nm,0.8s						
YAK				pmax	pmax		
	comp=N,29nm,1.1s						
YAK				smax			
	comp=E,16nm,0.8s						
YAK				smax			
	comp=N,20nm,0.9s						
YAK				MLR	MLR		
	comp=N,202nm,8.0s						
YAK				MLR	MLR		
	comp=Z,283nm,9.0s						
YAK				MLR	MLR		
	comp=E,71nm,6.0s						
YAK	**Yakutsk**	**15.41**	**12**	*e*Pn	**Pn**	**06 36 31.1**	**+0.7**
	comp=E,108nm,0.8s						
MAJO	**Matsushiro**	**15.52**	**128**	*e*P	**Pn**	**06 36 33.9**	**+2.0**
MAJO				pmax	pmax		
	comp=Z,153nm,1.0s						
MAJO	**Matsushiro**	**15.52**	**128**	*e*P	**Pn**	**06 36 33.9**	**+2.0**
	comp=Z,153nm,1.0s						
MAT	**Matsushiro**	**15.52**	**128**	P	**Pn**	**06 36 33.2**	**+1.3**
MJAR	**Matsushiro Arr**	**15.52**	**128**	Pn	**Pn**	**06 36 31.9**	**0.0**
	comp=Z,0.5nm,0.3s,baz=312,slow=12,SNR=6.5						
MJAR				LR	LR	06 41 54.4	
	comp=Z,190nm,18.3s,baz=310,slow=35						
MJAR	**Matsushiro Arr**	**15.52**	**128**	P	**Pn**	**06 36 32.0**	**+0.1**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR				MLR	MLR		
	comp=Z,190nm,18.3s						
WHN	**Wuhan**	**17.85**	**205**	⇑P	**Pn**	**06 37 03.4**	**+1.9**
WHN				S	**Sn**	**06 40 20.3**	**-0.7**
WHN				LR	LR		
	comp=Z,730nm,12.2s						
LZH	**Lanzhou**	**18.00**	**239**	*e*P	**Pn**	**06 37 07.5**	**+4.2**
LZH				pP	pP	06 37 12.5	+8.3
LZH				sP	sP	06 37 15.5	+11
LZH				PP		06 37 22.5	
LZH				S	**Sn**	**06 40 27.2**	**+2.7**
LZH				sS	sS	06 40 32.0	+0.6
LZH				SS		06 40 49.0	
LZH				pmax	pmax		
	comp=Z,30nm,1.4s						
LZH				pmax	pmax		
	comp=Z,120nm,4.5s						
LZH				LR	LR		
	comp=N,890nm,11.2s						
LZH				LR	LR		
	comp=Z,950nm,12.2s						
GTA	**Gaotai**	**18.48**	**254**	⇑*e*P	**Pn**	**06 37 12.2**	**+3.0**
GTA				pP	pP	06 37 15.8	+6.4
GTA				sP	sP	06 37 19.2	+10
GTA				S	**Sn**	**06 40 40.6**	**+4.5**
GTA				sS	sS	06 40 46.3	+5.2
GTA				PcP	PcP	06 41 37.5	-1.8
GTA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,130nm,7.5s						
GTA				LR	LR		
	comp=N,740nm,8.3s						
GTA				LR	LR		
	comp=E,850nm,8.7s						
GTA				LR	LR		
	comp=Z,1μm,9.3s						
KRAR	**Krasnoyarsk**	**20.54**	**307**	⇓*e*P	**P**	**06 37 34.3**	**+2.7**
CD2	**Chengdu**	**21.92**	**229**	P	**P**	**06 37 46.5**	**-0.2**
CD2				pP		06 37 50.7	
CD2				sP	sP	06 37 52.5	+5.5
CD2				PP		06 38 12.3	
CD2				S	**S**	**06 41 44.3**	**-5.1**
CD2				sS	sS	06 41 50.6	+0.8
CD2				SS		06 42 22.5	
CD2				pmax	pmax		
	comp=Z,40nm,1.0s,mb4.8						
CD2				pmax	pmax		
	comp=Z,80nm,4.5s						
CD2				LR	LR		
	comp=N,1μm,4.9s						
CD2				LR	LR		
	comp=Z,650nm,5.4s						
SEY	**Seymchan**	**22.82**	**35**	P	**P**	**06 37 56.4**	**+0.4**
PEA0B	**Petropavlovsk-**	**22.91**	**62**	*e*P	**P**	**06 37 57.6**	**+0.6**
PETK	**Petropavlovsk-**	**22.91**	**62**	P	**P**	**06 37 57.5**	**+0.5**
	comp=Z,47nm,0.9s,mb5.0,baz=260,slow=8.3,SNR=42						
PETK				LR	LR	06 47 08.8	
	comp=Z,74nm,19.4s,MS3.1,baz=273,slow=37						
PETK	**Petropavlovsk-**	**22.91**	**62**	P	**P**	**06 37 57.5**	**+0.5**
PETK				pmax	pmax		
	comp=Z,47nm,0.9s,mb5.0						
PETK				MLR	MLR		
	comp=Z,74nm,19.4s,MS3.1						
PET	**Petropavlovsk**	**23.49**	**62**	*e*P	**P**	**06 38 03.2**	**+0.1**
PET				*e*S	**S**	**06 42 12.1**	**-5.1**
PET				MLR	MLR		
	comp=Z,300nm,10.0s,MS4.0						
PET				MLR	MLR		
	comp=Z,200nm,13.0s						
GYA	**Guiyang**	**24.32**	**218**	P	**P**	**06 38 11.8**	**+0.8**
GYA				pP		06 38 15.4	
GYA				PP		06 38 47.3	
GYA				PcP	PcP	06 41 54.0	+3.2
GYA				S	**S**	**06 42 28.4**	**-2.5**
GYA				SS		06 43 21.7	
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.7						
GYA				pmax	pmax		
	comp=Z,110nm,4.5s						
GYA				LR	LR		
	comp=N,640nm,14.9s,MS4.3						
GYA				LR	LR		
	comp=E,490nm,15.2s,MS4.3						
GYA				LR	LR		
	comp=Z,470nm,14.8s,MS4.1						
TIXI	**Tiksi**	**24.75**	**4**	*c i*P	**P**	**06 38 14.3**	**-0.2**
TIXI				pmax	pmax		
	comp=Z,39nm,0.8s,mb5.2						
TIXI				MLR	MLR		
	comp=Z,153nm,9.0s						
TIXI	**Tiksi**	**24.75**	**4**	*e*P	**P**	**06 38 14.4**	**-0.1**
	comp=Z,37nm,0.8s,mb5.2						
WMQ	**Urumqi**	**24.80**	**275**	P	**P**	**06 38 15.8**	**+0.5**
WMQ				pP		06 38 20.0	
WMQ				sP	sP	06 38 22.8	+7.1
WMQ				PP		06 38 52.6	
WMQ				PcP	PcP	06 41 53.2	+1.6
WMQ				*e*S	**S**	**06 42 35.1**	**-3.4**
WMQ				SS		06 43 32.3	
WMQ				ScS	ScS	06 49 17.0	-2.3
WMQ				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.8						
WMQ				LR	LR		
	comp=N,330nm,17.8s,MS4.0						
WMQ				LR	LR		
	com

comp=Z,250nm,18.6s,MS3.7
ZAA0 Zalesovo Array 24.92 300 *e*P **P 06 38 16.8 +0.5**
ZALV Zalesovo Beam 24.92 300 P **P 06 38 17.2 +0.9**
comp=Z,2.7nm,0.7s,mb4.1,baz=101,slow=7.7,SNR=11
ZALV PP 06 38 51.9
comp=Z,2.6nm,0.6s,baz=95,slow=8.9,SNR=5.2
ZALV PcP PcP 06 41 50.1 -1.5
comp=Z,1.0nm,0.4s,baz=114,slow=3.6,SNR=3.9
ZALV Lg 06 45 57.1
comp=Z,0.5nm,0.4s,baz=146,slow=32,SNR=3.1
ZALV LR LR 06 48 28.7
comp=Z,90nm,19.1s,MS3.3,baz=68,slow=38
ZALV Zalesovo Beam 24.92 300 P **P 06 38 17.2 +0.9**
ZALV 06 38 51.9
ZALV 06 41 50.1
ZALV pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
ZALV pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
ZALV pmax pmax
comp=Z,1.0nm,0.4s,mb3.9
ZALV MLR MLR
comp=Z,90nm,19.1s,MS3.3
NVS Novosibirsk 25.86 302 *e*P **P 06 38 27.4 +2.6**
NVS pmax pmax
comp=Z,18nm,1.8s,mb4.4
NVS pmax pmax
comp=E,11nm,1.5s
KMI Kunming 27.21 223 P **P 06 38 39.4 +2.1**
KMI pP 06 38 42.0
KMI sP sP 06 38 43.6 +5.9
KMI PP 06 39 25.8
KMI S **S 06 43 16.5 -0.5**
KMI sS sS 06 43 21.4 +4.0
KMI SS 06 44 30.5
KMI pmax pmax
comp=Z,8.0nm,1.0s,mb4.4
KMI pmax pmax
comp=Z,89nm,3.9s
KMI LR LR
comp=N,530nm,15.2s,MS4.5
KMI LR LR
comp=E,720nm,14.3s,MS4.5
KMI LR LR
comp=Z,410nm,12.0s,MS4.2
MK31 Makanchi Array 27.52 284 *e*P **P 06 38 42.5 +2.6**
MKAR Makanchi Array 27.52 284 P **P 06 38 41.4 +1.6**
comp=Z,1.2nm,0.8s,mb3.8,baz=74,slow=8.3,SNR=14
MKAR Lg 06 47 17.3
comp=Z,0.6nm,0.6s,baz=105,slow=7.4,SNR=3.0
MKAR Makanchi Array 27.52 284 *ce*P **P 06 38 42.5 +2.6**
MKAR pmax pmax
comp=Z,1.0nm,0.7s
MKAR Makanchi Array 27.52 284 P **P 06 38 41.4 +1.5**
MKAR Lg 06 47 17.3
KURK Kurchatov 29.00 294 P **P 06 38 53.9 +0.9**
comp=Z,7.4nm,0.8s,mb4.6,baz=80,slow=9.8,SNR=28
KURK PcP PcP 06 42 00.1 -1.3
comp=Z,1.7nm,0.8s,baz=84,slow=2.5,SNR=4.1
KURK Lg 06 48 10.7
comp=Z,0.2nm,0.2s,baz=30,slow=21,SNR=4.4
KURK LR LR 06 51 27.2
comp=Z,114nm,18.2s,MS3.5,baz=90,slow=38
KURK Kurchatov 29.00 294 *de*P **P 06 38 53.2 +0.2**
KURK pmax pmax
comp=Z,15nm,1.2s,mb4.7
KURK Kurchatov 29.00 294 *e*P **P 06 38 53.6 +0.5**
comp=Z,8.3nm,0.8s,mb4.6
QIZ Qiongzhong 30.02 205 P **P 06 39 03.2 +0.9**
QIZ S **S 06 44 01.6 +0.4**
QIZ sS sS 06 44 07.3 +5.7
QIZ LR LR
comp=N,200nm,20.8s,MS3.9
QIZ LR LR
comp=E,190nm,19.1s,MS3.9
QIZ LR LR
comp=Z,310nm,11.8s
BVAR Borovoye Array 33.58 300 P **P 06 39 33.5 +0.2**
comp=Z,3.1nm,0.7s,mb4.4,baz=97,slow=12,SNR=14
BVAR PcP PcP 06 42 12.5 -1.1
comp=Z,1.5nm,0.4s,baz=66,slow=2.0,SNR=7.6
BVAR Borovoye Array 33.58 300 P **P 06 39 33.5 +0.2**
BVAR 06 42 12.5
BVAR pmax pmax
comp=Z,3.0nm,0.7s
BVAR pmax pmax
comp=Z,2.0nm,0.4s
BRVK Borovoye 33.63 300 *e*P **P 06 39 33.4 -0.4**
BRVK pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
BRVK Borovoye 33.63 300 *e*P **P 06 39 34.5 +0.7**
comp=Z,9.3nm,1.1s,mb4.6
AAK Ala-Archa 34.17 281 P **P 06 39 40.4 +1.9**
comp=Z,1.9nm,0.4s,mb4.3,baz=228,slow=2.5,SNR=6.3
AAK LR LR 06 53 12.6
comp=Z,39nm,21.8s,MS3.1,baz=203,slow=36
AAK Ala-Archa 34.17 281 P **P 06 39 40.4 +1.8**
AAK pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
AAK MLR MLR
comp=Z,39nm,21.8s,MS3.1
CMAR Chiang Mai Arr 34.72 223 P **P 06 39 41.6 -1.9**
comp=Z,0.6nm,0.3s,mb4.0,baz=22,slow=7.8,SNR=3.9
CMAR Chiang Mai Arr 34.72 223 P **P 06 39 41.6 -1.9**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
ARU Arti 39.50 308 *d i*P **P 06 40 23.0 -0.7**
ARU S **S 06 46 23.1 -3.4**
ARU SS SS 06 49 10.8 -9.5
ARU pmax pmax
comp=Z,13nm,1.7s,mb4.3
ABKAR Akbulak array 40.96 297 *e*P **P 06 40 36.8 +0.9**
comp=Z,5.0nm,0.7s,mb4.3
TTA Tatalina 45.71 39 *e*P **P 06 41 12.6 -1.5**
COLD Coldfoot 46.56 32⇑ *i*P **P 06 41 20.9 +0.2**
comp=Z,16nm,0.9s,mb5.2
PPLA Purkeypile 47.35 38 *e*P **P 06 41 27.2 +0.2**
comp=Z,7.3nm,0.8s,mb4.9
PPLA *e*PcP PcP 06 42 56.7 -1.0
BPAW Bear Paw Mtn. 47.39 37 *e*P **P 06 41 27.1 -0.2**
comp=Z,7.3nm,0.8s,mb4.9
BPAW *e*PcP PcP 06 42 56.9 -0.9
APA Apatity 47.40 329⇑ *e*P **P 06 41 36.4 +9.1**
APA pmax pmax
comp=Z,27nm,1.4s,mb5.2
APA MLR MLR
comp=Z,300nm,15.0s,MS4.4
SPITS Spitsbergen Ar 47.55 344 P **P 06 41 28.7 +0.3**
comp=Z,10nm,0.8s,mb5.0,baz=72,slow=8.1,SNR=8.6
SPITS PcP PcP 06 42 57.5 -0.7
comp=Z,2.8nm,0.7s,baz=180,slow=1.9,SNR=2.6
SPITS Spitsbergen Ar 47.55 344 P **P 06 41 28.7 +0.3**
SPITS 06 42 57.5
SPITS pmax pmax
comp=Z,10.0nm,0.8s
SPITS pmax pmax
comp=Z,3.0nm,0.7s
TRF Thorofare Moun 47.93 37 *e*P **P 06 41 31.3 -0.2**
comp=Z,17nm,0.9s,mb5.2
COLA College 48.34 35 *e*P **P 06 41 34.9 +0.3**
COLA pmax pmax
comp=Z,13nm,0.8s,mb5.1
COLA College 48.34 35 *e*P **P 06 41 34.9 +0.3**
comp=Z,14nm,0.8s,mb5.1
MCK McKinley 48.37 37 *e*P **P 06 41 35.6 +0.7**
MCK pmax pmax
comp=Z,14nm,0.7s,mb5.2
MCK McKinley 48.37 37 *e*P **P 06 41 35.5 +0.7**
comp=Z,14nm,0.7s,mb5.2
KEV Kevo 48.66 333 *e*P **P 06 41 36.4 -0.6**
KEV pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
KEV Kevo 48.66 333 *e*P **P 06 41 36.4 -0.6**
comp=Z,9.9nm,0.8s,mb4.9
KEV Kevo 48.66 333 *e*p **P 06 41 36.4 -0.6**
comp=Z,9.9nm,0.8s,mb4.9
PMR Palmer 49.19 39 *e*P **P 06 41 39.8 -1.4**
PMR pmax pmax
comp=Z,33nm,0.7s,mb5.5
PMR Palmer 49.19 39 *e*P **P 06 41 39.8 -1.4**
comp=Z,33nm,0.7s,mb5.5
ARCES ARCESS Array B 49.23 333 P **P 06 41 41.1 -0.3**
comp=Z,3.4nm,0.7s,mb4.5,baz=64,slow=9.7,SNR=12
ARCES ARCESS Array B 49.23 333 P **P 06 41 41.1 -0.3**
ARCES pmax pmax
comp=Z,3.0nm,0.7s
KDAK Kodiak Island 49.29 45 P **P 06 41 41.2 -0.8**
comp=Z,8.9nm,0.7s,mb4.9,baz=296,slow=3.7,SNR=5.8
KDAK Kodiak Island 49.29 45 P **P 06 41 41.2 -0.8**
KDAK pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
SML Sawmill 49.44 39 *e*P **P 06 41 43.2 +0.1**
SML pmax pmax
comp=Z,14nm,0.8s,mb5.0
SML Sawmill 49.44 39 *e*P **P 06 41 43.2 +0.1**
comp=Z,14nm,0.8s,mb5.0
JOF Joensuu 50.14 323 *e*P **P 06 41 47.6 -0.8**
JOF pmax pmax
comp=Z,4.0nm,0.4s,mb4.7
JOF Joensuu 50.14 323 *ep* **P 06 41 47.6 -0.8**
comp=Z,3.5nm,0.4s,mb4.6
MOS Moscow 50.64 313 *e*P **P 06 41 51.4 -0.9**
MOS pmax pmax
comp=Z,37nm,0.8s,mb5.4
EGAK Eagle 50.94 33 *e*P **P 06 41 54.4 -0.1**
comp=Z,11nm,0.8s,mb4.8
BMRM Bremner River 51.42 39 *e*P **P 06 41 58.5 +0.4**
comp=Z,6.8nm,0.5s,mb4.8
OBN Obninsk 51.47 313⇓ *i*P **P 06 41 58.6 +0.1**
OBN *e* 06 43 58.8
OBN *e*S **S 06 49 23.9 +4.8**
OBN pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
OBN MLR MLR
comp=Z,200nm,15.0s,MS4.3
INK Inuvik 51.77 27 P **P 06 42 00.8 +0.2**
comp=Z,16nm,0.9s,mb5.0,baz=322,slow=7.3,SNR=28
INK Inuvik 51.77 27 P **P 06 42 00.8 +0.2**
INK pmax pmax
comp=Z,16nm,0.9s
INK Inuvik 51.77 27 *e*P **P 06 42 01.1 +0.6**
comp=Z,22nm,1.0s,mb5.0
DAWY Dawson 51.96 34 *e*P **P 06 42 01.6 -0.5**
FINES FINESS Array B 53.01 323 P **P 06 42 09.7 -0.2**
comp=Z,4.0nm,0.5s,mb4.6,baz=73,slow=6.8,SNR=16
FINES FINESS Array B 53.01 323 P **P 06 42 09.7 -0.2**
FINES pmax pmax
comp=Z,4.0nm,0.5s
KIV Kislovodsk 53.92 298 *e*P **P 06 42 17.4 +0.6**
KIV pmax pmax
comp=Z,35nm,1.0s,mb5.3
KIV MLR MLR
comp=Z,75nm,17.0s,MS3.8
KIV Kislovodsk 53.92 298 *e*P **P 06 42 18.0 +1.2**
comp=Z,32nm,0.9s,mb5.3
RES Resolute Bay 55.86 11 *e*P **P 06 42 30.3 -0.2**
RES pmax pmax
comp=Z,24nm,0.8s,mb5.3
RES Resolute Bay 55.86 11 *e*P **P 06 42 30.3 -0.2**
comp=Z,24nm,0.8s,mb5.3
SKAG Skagway 56.13 37 *e*P **P 06 42 33.7 +1.1**
comp=Z,23nm,0.9s,mb5.2
ANN Anapa 56.55 302 *e*P **P 06 42 31.4 -4.4**
ANN *e*S **S 06 50 20.0 -8.1**
ANN pmax pmax
comp=Z,68nm,1.1s,mb5.6
AKASG Malin Array Be 57.60 311 P **P 06 42 41.9 -1.2**
comp=Z,7.9nm,0.7s,mb4.9,baz=47,slow=7.5,SNR=21
AKASG Malin Array Be 57.60 311 P **P 06 42 41.9 -1.2**
AKASG pmax pmax
comp=Z,8.0nm,0.7s
AKBB Malin Array Si 57.60 311 *e*P **P 06 42 43.0 -0.1**
KIEV Kiev 57.61 311 *e*P **P 06 42 43.0 -0.2**
KIEV pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
KIEV Kiev 57.61 311 *e*P **P 06 42 43.0 -0.3**
comp=Z,6.9nm,0.8s,mb4.7
DLBC Dease Lake 58.92 36 P **P 06 42 52.1 -0.1**
comp=Z,6.2nm,0.7s,mb4.8,baz=314,slow=6.5,SNR=4.4
DLBC Dease Lake 58.92 36 *e*P **P 06 42 53.5 +1.2**
NB2 NORSAR Subarra 58.98 328 P **P 06 42 51.6 -1.0**
comp=Z,12nm,1.2s,mb4.8,baz=45,slow=6.5
NOA NORSAR Array B 58.98 328 P **P 06 42 52.0 -0.6**
comp=Z,6.8nm,1.0s,mb4.6,baz=46,slow=6.7,SNR=5.6
NOA NORSAR Array B 58.98 328 P **P 06 42 52.0 -0.6**
NOA pmax pmax
comp=Z,7.0nm,1.0s
SUMG Summit 59.88 354 *e*P **P 06 42 59.2 +0.5**
comp=Z,4.0nm,0.5s,mb4.7
SUMG Summit 59.88 354 *i* P **P 06 42 58.9 +0.2**
comp=Z,7.5nm,0.9s,mb4.7
YKA Yellowknife Ar 61.51 26 P **P 06 43 08.8 -1.1**
comp=Z,2.9nm,0.8s,mb4.5,baz=322,slow=6.3,SNR=17
YKA Yellowknife Ar 61.51 26 P **P 06 43 08.8 -1.1**
YKA pmax pmax
comp=Z,3.0nm,0.9s
BUR08 Bucovina Ar. S 61.56 310 *e*P **P 06 43 11.4 +0.9**
BR131 Keskin Array S 61.86 299 *e*P **P 06 43 13.2 +0.5**
comp=Z,2.2nm,0.8s,mb4.4
BRTR Keskin Array B 61.86 299 P **P 06 43 13.0 +0.3**
comp=Z,2.5nm,0.8s,mb4.5,baz=59,slow=5.7,SNR=9.4
BRTR PcP PcP 06 43 53.4 -0.2
comp=Z,3.3nm,1.0s,baz=92,slow=2.8,SNR=6.1
BRTR LR LR 07 13 11.6
comp=Z,23nm,19.5s,MS3.4,baz=265,slow=39
BRTR Keskin Array B 61.86 299 P **P 06 43 13.0 +0.3**
BRTR 06 43 53.4
BRTR pmax pmax
comp=Z,3.0nm,0.8s
BRTR pmax pmax
comp=Z,3.0nm,1.0s
BRTR MLR MLR
comp=Z,23nm,19.5s
OJC Ojcow 62.59 315 *e*P **P 06 43 15.3 -2.1**
CRVS Cervenica-Dubn 62.65 313 *e*P **P 06 43 18.1 +0.3**
CRVS pmax pmax
comp=Z,5.0nm,1.7s,mb4.4
CRVS Cervenica-Dubn 62.65 313 *e*P **P 06 43 18.1 +0.3**
comp=Z,5.4nm,1.7s,mb4.4
CRVS Cervenica-Dubn 62.65 313 *e*P **P 06 43 18.1 +0.3**
MORC Moravsky Berou 63.97 316 *e*P **P 06 43 26.5 0.0**
MORC pmax pmax
comp=Z,3.0nm,0.5s,mb4.8
MORC Moravsky Berou 63.97 316 *e*P **P 06 43 26.5 0.0**
comp=Z,3.4nm,0.5s,mb4.8
VYHS Vyhne 64.22 314 *e*P **P 06 43 29.3 +1.1**
VYHS pmax pmax
comp=Z,3.0nm,0.9s,mb4.5
VYHS Vyhne 64.22 314 *e*P **P 06 43 29.3 +1.1**
comp=Z,2.7nm,0.9s,mb4.5
VYHS Vyhne 64.22 314 *e*P **P 06 43 29.3 +1.1**
CLL Collm 64.99 319 *e*(P) **P 06 43 35.0 +1.8**
CLL LmV 07 14 00.0
comp=Z,100nm,21.0s
MMAI Mount Meron Ar 65.10 292 LR LR 07 14 21.7
comp=Z,56nm,18.6s,MS3.8,baz=110,slow=38
KHC Kasperske Hory 66.27 317 *e*P **P 06 43 42.3 +0.8**
comp=Z,4.4nm,0.8s,mb4.7
KHC Kasperske Hory 66.27 317 *e*P **P 06 43 41.5 0.0**
WRA Warramunga Arr 67.56 168 P **P 06 43 48.1 -1.7**
comp=Z,3.4nm,0.6s,mb4.8,baz=351,slow=7.0,SNR=7.1
WRA Warramunga Arr 67.56 168 P **P 06 43 48.1 -1.7**
WRA pmax pmax
comp=Z,3.0nm,0.6s
EDM Edmonton 69.14 32 *e*P **P 06 43 59.0 -0.6**
B06A Marblemount 69.52 40⇓ P **P 06 44 01.1 -0.9**
baz=69
JCW Jim Creek 69.57 40 *e*P **P 06 44 02.5 +0.2**
comp=Z,24nm,1.0s,mb5.3
FCC Fort Churchill 70.15 19 *e*P **P 06 44 04.0 -1.7**
comp=Z,0.2nm,0.6s,mb3.4
B08A Colville Reser 70.58 39⇓P **P 06 44 07.9 -0.5**
baz=70
F04A Amboy 71.06 42⇑P **P 06 44 10.8 -0.6**
baz=71
ASAR Alice Springs 71.17 169 P **P 06 44 10.8 -1.3**
comp=Z,4.2nm,0.6s,mb4.7,baz=351,slow=5.4,SNR=13
ASAR Alice Springs 71.17 169 P **P 06 44 10.9 -1.2**
ASAR pmax pmax
comp=Z,4.0nm,0.6s
G04A Mulino 71.58 43⇓P **P 06 44 14.5 -0.1**
baz=71
NEW Newport 71.58 38 *e*P **P 06 44 14.3 -0.2**
NEW pmax pmax
comp=Z,3.0nm,0.8s
NEW Newport 71.58 38 *e*P **P 06 44 14.3 -0.2**
comp=Z,3.0nm,0.8s,mb4.5
FFC Flin Flon 71.65 26 *i* P **P 06 44 13.9 -1.0**
A12A Yaak River Ran 71.66 36⇑P **P 06 44 14.7 -0.3**
baz=71
E07A Sunnyside 71.73 40⇓P **P 06 44 14.7 -0.8**
baz=72
D08A Wollman Farm, 71.76 39⇓P **P 06 44 15.1 -0.5**
baz=72,SNR=5.0
RSW Rattlesnake Hi 71.97 40 *e*P **P 06 44 17.2 +0.3**
comp=Z,4.4nm,0.3s,mb5.1
LPL La Plagne 72.08 318 *e*P **P 06 44 17.4 -0.2**
LPG La Plagne 72.09 318 *e*P **P 06 44 17.7 +0.1**
H04A Detroit Lake 72.11 43⇑P **P 06 44 17.6 -0.1**
baz=72
E08A Dider Farm, El 72.13 40⇑P **P 06 44 17.5 -0.4**
baz=72
A13A Flathead Natio 72.16 36⇑P **P 06 44 17.7 -0.3**
baz=72
F07A Phinny Hill Vi 72.21 41⇓P **P 06 44 17.9 -0.5**
baz=72
WALA Waterton Lakes 72.25 35 *e*P **P 06 44 18.4 -0.2**
C11A Tepee Creek (N 72.28 37⇑P **P 06 44 18.7 0.0**
baz=72
G06A Carlson Farm, 72.40 42⇑P **P 06 44 19.0 -0.5**
baz=72
E09A Wood Farm, Sta 72.51 39⇓P **P 06 44 19.9 -0.3**
baz=72
A14A Double T Ranch 72.52 35⇓P **P 06 44 19.5 -0.7**
baz=72
AVF Avril sur Loir 72.58 321 *e*P **P 06 44 18.7 -1.9**
comp=Z,8.6nm,0.8s,mb4.6
AVF Avril sur Loir 72.58 321 *e*P **P 06 44 18.7 -1.9**
AVF pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
AVF Avril sur Loir 72.58 321 *e*P **P 06 44 18.7 -1.9**
comp=Z,4.3nm,0.8s,mb4.6
B13A Whitefish 72.58 36⇓P **P 06 44 20.1 -0.4**
baz=72
MBDF Montbardon 72.67 318 *e*P **P 06 44 19.2 -1.9**
C12B Naegeli Ranch, 72.70 37⇓P **P 06 44 21.3 +0.1**
baz=72
A15A Johnson Ranch, 72.78 35⇓P **P 06 44 21.1 -0.7**
baz=72
BSMT Bassoo Peak 72.87 37 *e*P **P 06 44 22.8 +0.6**
comp=Z,8.5nm,1.0s,mb4.8
ORIF Oris-en-Rattie 72.92 319 *e*P **P 06 44 21.8 -0.8**
C13A Hot Springs 73.09 37⇓P **P 06 44 23.3 -0.2**
baz=73
G08A Pilot Rock 73.11 41⇑P **P 06 44 23.6 -0.1**
baz=73
D12A Red Ives Fores 73.27 37⇓P **P 06 44 24.0 -0.7**
baz=73
F10A Beach Ranch, E 73.33 39⇓P **P 06 44 24.8 -0.3**
baz=73
C14A Swan Lake 73.36 36⇓P **P 06 44 25.0 -0.1**
baz=73
B15A Bradely Ranch, 73.39 35⇑P **P 06 44 24.5 -0.8**
baz=73
SWMT Swartz Lake 73.46 36 *e*P **P 06 44 25.8 +0.1**
comp=Z,5.1nm,0.9s,mb4.7
TCF Toulx Ste Croi 73.46 322 *e*P **P 06 44 24.6 -1.2**
D13A Huson 73.61 37⇑P **P 06 44 26.0 -0.7**
baz=73
B16A M & M Farms, S 73.64 34⇑P **P 06 44 26.1 -0.7**
baz=73
G09A Cove 73.64 40⇓P **P 06 44 26.3 -0.5**
baz=73,SNR=8.7
E12A Beaver Dam Sad 73.69 38⇓P **P 06 44 26.9 -0.2**
baz=73
C15A Salmond Ranch, 73.81 35⇓P **P 06 44 27.6 -0.2**
baz=74
H08A Prairie City 73.84 41⇓P **P 06 44 27.9 -0.1**
baz=74
F11A Grangeville 73.86 39⇓P **P 06 44 28.0 -0.2**
baz=74
SLMT Seeley Lake 73.88 36 *e*P **P 06 44 28.5 +0.3**
comp=Z,6.7nm,0.9s,mb4.7
G10A Bishop Farm, J 73.92 40⇓P **P 06 44 28.2 -0.3**
baz=74,SNR=5.4
D14A Greenough 74.01 36⇓P **P 06 44 28.6 -0.4**
baz=74,SNR=15
MSO Missoula 74.03 37 *e*P **P 06 44 28.9 -0.2**
comp=Z,4.2nm,0.9s,mb4.5
B17A L&G Farms, Che 74.09 34⇑P **P 06 44 28.6 -0.8**
baz=74
C16A Fuhringer Ranc 74.12 35⇓P **P 06 44 29.5 -0.2**
baz=74
H09A Durkee 74.17 40⇑P **P 06 44 29.8 -0.1**
baz=74
BMO Blue Mountains 74.18 40 *e*P **P 06 44 30.1 +0.1**
BMO pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
BMO Blue Mountains 74.18 40 *e*P **P 06 44 30.1 0.0**
comp=Z,3.6nm,0.9s,mb4.4
G11A Walters Elk Ra 74.20 39⇑P **P 06 44 29.5 -0.7**
baz=74,SNR=5.4
K05A Summer Lake 74.21 43⇑P **P 06 44 30.4 +0.1**
baz=74
E13A Victor 74.24 37⇓P **P 06 44 30.2 -0.2**
baz=74
CHMT Chamberlain Mo 74.24 36 *e*P **P 06 44 30.2 -0.2**
comp=Z,4.4nm,1.0s,mb4.4
F12A Elk City 74.35 38⇓P **P 06 44 30.6 -0.4**
baz=74
B18A Beardsley Farm 74.39 33⇑P **P 06 44 30.8 -0.4**
baz=74
D15A Lincoln 74.44 36⇓P **P 06 44 31.1 -0.3**
baz=74
E14A Clinton 74.55 37⇑P **P 06 44 31.7 -0.5**
baz=74,SNR=5.4
H10A Noah's Angus R 74.63 40⇑P **P 06 44 31.8 -0.9**
baz=74,SNR=6.3
C17A Wharram Farm, 74.64 34⇑P **P 06 44 31.5 -1.2**
baz=74
I09A Lost Marbles R 74.68 41⇑P **P 06 44 33.0 +0.1**
baz=74
EGMT Eagleton 74.70 34⇓P **P 06 44 32.5 -0.5**
baz=74
D16A Dana Ranch, Ca 74.83 35⇓P **P 06 44 33.1 -0.7**
baz=74
J08A Circle Bar Ran 74.83 42⇓P **P 06 44 33.9 +0.1**
baz=75
E15A Deer Lodge 74.89 36⇓P **P 06 44 33.6 -0.5**
baz=75,SNR=5.5
I10A Payette 75.01 40⇓P **P 06 44 34.1 -0.8**
baz=75
D17A Six Diamond Ra 75.07 35⇑P **P 06 44 34.3 -0.8**
baz=75
F14A Wisdom 75.09 37⇑P **P 06 44 35.1 -0.2**
baz=75
MOD Modoc 75.12 44 *e*P **P 06 44 36.0 +0.5**
comp=Z,6.9nm,1.0s,mb4.6
G13A Cobalt 75.31 38⇑P **P 06 44 35.7 -0.9**
baz=75
D18A Linhart Farms, 75.37 34⇓P **P 06 44 36.2 -0.7**
baz=75
F15A Butte 75.42 36⇑P **P 06 44 36.9 -0.3**
baz=75
LRM Limekiln Ridge 75.45 36 *e*P **P 06 44 37.9 +0.5**
comp=Z,16nm,0.9s,mb5.0
H12A Diamond D Ranc 75.48 39⇓P **P 06 44 37.2 -0.4**
baz=75
WVOR Wild Horse Val 75.49 42 *e*P **P 06 44 38.0 +0.4**
WVOR pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
WVOR Wild Horse Val 75.49 42 *e*P **P 06 44 38.0 +0.3**
comp=Z,3.2nm,0.9s,mb4.3
E17A Martinsdale 75.57 35⇑P **P 06 44 37.9 -0.2**
baz=75
DLMT Dillon 75.77 37 *e*P **P 06 44 39.3 +0.1**
comp=Z,8.1nm,1.0s,mb4.8
F16A Kennard Place, 75.82 36⇓P **P 06 44 38.9 -0.5**
baz=76
BOZ Bozeman (W) 75.93 36⇑P **P 06 44 39.7 -0.4**
baz=76
I12A Atlanta 75.97 39⇑P **P 06 44 40.3 0.0**
baz=76
MFID Camas Ranch 75.97 40⇑P **P 06 44 40.2 -0.1**
baz=76
G15A Dillon 75.97 37⇑P **P 06 44 40.0 -0.3**
baz=76,SNR=11
K10A MacKenzie Ranc 76.02 41⇓P **P 06 44 40.4 -0.3**
baz=76
H14A Leadore 76.06 38⇓P **P 06 44 40.2 -0.7**
baz=76
MCMT McKenzie Canyo 76.10 37 *e*P **P 06 44 41.4 +0.3**
comp=Z,3.5nm,1.0s,mb4.4
F17A Fitzpatrick Pl 76.10 35⇑P **P 06 44 40.8 -0.3**
baz=76
G16A Moss Hill, Enn 76.20 36⇓P **P 06 44 41.3 -0.4**
baz=76
I13A Wildhorse Cree 76.31 39⇓P **P 06 44 42.0 -0.3**
baz=76,SNR=7.6
H15A Lima 76.36 37⇓P **P 06 44 42.2 -0.3**

baz=76,SNR=12
K11A Parker Ranch, 76.39 40 ⇓P P 06 44 42.7 -0.1
baz=76
HLID Hailey 76.47 39 ⇑P P 06 44 43.3 +0.1
baz=76,SNR=9.9
HLID Hailey 76.47 39 eP P 06 44 43.3 +0.1
comp=Z,4.2nm,0.8s,mb4.6
F18A Big Timber 76.47 35 ⇑P P 06 44 42.9 -0.3
baz=76
G17A Pierce Place, 76.55 36 ⇑P P 06 44 43.9 +0.2
baz=76
J13A Cove Ranch, Pi 76.70 39 ⇑P P 06 44 44.6 +0.1
baz=76,SNR=7.1
L10A Juniper Basin 76.75 41 ⇑P P 06 44 44.9 +0.1
baz=76,SNR=5.4
H16A Russell Place, 76.86 36 ⇓P P 06 44 44.7 -0.7
baz=77
I15A Monteview 76.93 38 ⇓P P 06 44 45.7 -0.1
baz=77
K12A Draper Farm, C 77.00 40 ⇑P P 06 44 46.2 0.0
baz=77
L11A Cat Creek Ranc 77.00 41 ⇑P P 06 44 46.4 +0.2
baz=77,SNR=5.3
M10A I.L. Ranch, Tu 77.16 42 ⇓P P 06 44 47.5 +0.4
baz=77
RLMT Red Lodge 77.30 35 ⇑P P 06 44 48.0 +0.1
baz=77
L12A House Creek Ra 77.34 40 ⇑P P 06 44 48.3 +0.1
baz=77
K13A Stover Farm, H 77.34 39 ⇓P P 06 44 48.5 +0.4
baz=77
WCN Washoe City 77.41 45 ⇑P P 06 44 49.0 +0.4
baz=77
M11A Holland Ranch, 77.57 41 ⇓P P 06 44 50.2 +0.7
baz=77
K14A Jones Ranch, D 77.82 39 ⇓P P 06 44 51.3 +0.5
baz=78
L13A Double Diamond 77.86 40 ⇑P P 06 44 51.5 +0.5
baz=78
J16A Bone 77.89 37 ⇓P P 06 44 51.5 +0.3
baz=78
M12A Wells 77.98 41 ⇓P P 06 44 52.0 +0.2
baz=78
N11A Elko Archery C 78.09 41 ⇓P P 06 44 52.5 +0.1
baz=78
CMB Columbia Colle 78.09 46 eP P 06 44 52.6 +0.2
CMB pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
CMB Columbia Colle 78.09 46 eP P 06 44 52.6 +0.2
comp=Z,2.3nm,0.8s,mb4.4
L14A Malta 78.21 39 ⇓P P 06 44 52.7 -0.3
baz=78
M13A Montello 78.35 40 ⇑P P 06 44 53.7 -0.1
baz=78,SNR=5.6
M13A Montello 78.35 40 eP P 06 44 54.0 +0.2
comp=Z,3.1nm,0.9s,mb4.4
N12A Clover Valley, 78.38 41 ⇓P P 06 44 53.9 0.0
baz=78
J18A Kendall Valley 78.59 37 ⇓P P 06 44 54.9 -0.2
baz=78
M14A Sheep Mountain 78.60 40 ⇑P P 06 44 55.0 -0.1
baz=78,SNR=5.4
L15A Malad City 78.60 39 ⇓P P 06 44 55.1 0.0
baz=78
NVAR Mina Array Bea 78.80 45 P P 06 44 56.9 +0.6
comp=Z,3.5nm,0.8s,mb4.5,baz=308,slow=4.4,SNR=24
O12A Currie 78.98 41 ⇓P P 06 44 57.3 0.0
baz=79
L16A Fish Haven 79.00 38 ⇓P P 06 44 57.3 0.0
baz=79
M15A Larsen Ranch, 79.02 39 ⇑P P 06 44 57.1 -0.4
baz=79
BW06 Boulder Array 79.15 36 ⇓P P 06 44 57.5 -0.7
baz=79
PDAR Pinedale Array 79.15 36 P P 06 44 57.0 -1.1
comp=Z,0.7nm,0.7s,mb3.8,baz=31,slow=4.0,SNR=10
L17A Cokeville 79.16 38 ⇑P P 06 44 57.8 -0.4
baz=79
N14A Grayback Hills 79.20 40 ⇓P P 06 44 58.3 -0.2
baz=79,SNR=5.9
HWUT Hardware Ranch 79.28 38 eP P 06 44 59.1 +0.2
comp=Z,5.6nm,0.9s,mb4.6
N15A Stansbury Isla 79.46 39 ⇑P P 06 44 59.8 0.0
baz=79
L18A Fontenelle, Gr 79.65 37 ⇓P P 06 45 00.4 -0.5
baz=79
Q11A Duckwater 79.71 43 ⇓P P 06 45 01.4 +0.1
baz=79
M17A Scullys Gap (B 79.77 38 ⇑P P 06 45 00.9 -0.7
baz=80
L19A Farson 79.78 37 ⇓P P 06 45 01.0 -0.7
baz=80
R10A Warm Springs 79.86 43 ⇑P P 06 45 02.3 +0.2
baz=80,SNR=6.0
DUG Dugway 79.90 40 ⇑P P 06 45 01.9 -0.4
baz=80
DUG Dugway 79.90 40 eP P 06 45 01.5 -0.8
DUG pmax pmax
comp=Z,1.0nm,0.8s,mb3.8
DUG Dugway 79.90 40 eP P 06 45 01.5 -0.8
comp=Z,1.4nm,0.8s,mb3.9
Q12A Willow Creek R 79.93 42 ⇑P P 06 45 02.4 -0.1
baz=80
P13A Bates Ranch, G 79.97 41 ⇓P P 06 45 02.5 -0.2
baz=80
O15A The Old Anders 79.98 40 ⇑P P 06 45 02.4 -0.3
baz=80
S10A Tonopah Range, 80.01 44 ⇑P P 06 45 03.0 +0.1
baz=80,SNR=8.8
RCTC Rector, Farmer 80.01 46 ⇑P P 06 45 02.9 -0.1
baz=80
M18A Lyman 80.06 38 ⇑P P 06 45 03.2 +0.1
baz=80
RSSD Black Hills 80.13 32 eP P 06 45 02.8 -0.7
RSSD pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
RSSD Black Hills 80.13 32 eP P 06 45 02.8 -0.7
comp=Z,2.0nm,0.7s,mb4.2
R11A Troy Canyon, C 80.14 43 ⇑P P 06 45 03.8 +0.1
baz=80
L20A Wamsutter 80.28 36 ⇑P P 06 45 04.0 -0.3
baz=80
P14A Drum Mountains 80.28 41 ⇑P P 06 45 04.2 -0.1
baz=80
Q13A Wheeler Ranch, 80.37 42 ⇓P P 06 45 05.0 +0.1
baz=80
GRAC Grapevine Rang 80.38 45 ⇓P P 06 45 05.4 +0.4
baz=80,SNR=8.3
SMMC Simmler 80.42 48 ⇓P P 06 45 05.4 +0.2
baz=80
STKA Stephens Creek 80.43 164 eP P 06 45 04.9 -0.1
comp=Z,5.0nm,1.5s,mb4.2
N18A Larsen Ranch, 80.59 38 ⇑P P 06 45 05.7 -0.3
baz=80
R12A Pony Springs, 80.61 42 ⇓P P 06 45 06.4 +0.2
baz=80
P15A Leamington 80.64 40 ⇓P P 06 45 06.2 -0.1
baz=80
Q14A Sevier Lake (B 80.68 41 ⇑P P 06 45 06.7 +0.2
baz=80
M20A Sweetwater, Wa 80.77 36 ⇑P P 06 45 06.9 0.0
baz=80
PKM Peak Mountain 80.84 48 ⇓P P 06 45 08.1 +0.7
baz=81
R13A O'Grain Ranch, 81.02 42 ⇓P P 06 45 08.4 0.0
baz=81
FURC Furnace Creek, 81.05 45 ⇑P P 06 45 08.9 +0.4
baz=81,SNR=7.2
MPMC Manual Prospec 81.07 46 ⇓P P 06 45 09.1 +0.4
baz=81
S12A Delamar Landin 81.08 43 ⇑P P 06 45 09.3 +0.6
baz=81
T11A Corn Creek, Al 81.21 43 ⇓P P 06 45 09.6 +0.2
baz=81,SNR=5.8
N20A Spence Gulch, 81.30 37 ⇑P P 06 45 10.1 +0.3
baz=81
U10A Ash Meadows, A 81.34 45 ⇓P P 06 45 10.7 +0.6
baz=81,SNR=6.6
O19A Miners Draw (B 81.39 38 ⇓P P 06 45 10.1 -0.2
baz=81
P17A Butcher Ranch, 81.39 39 ⇑P P 06 45 10.2 -0.2
baz=81
LRMC Laurel Mountai 81.44 46 ⇑P P 06 45 10.9 +0.3
baz=81
ESDC Sonseca Array 81.47 321 P P 06 45 10.5 -0.2
comp=Z,0.9nm,0.4s,mb4.1,baz=17,slow=4.9,SNR=4.5
P18A Preston Nutter 81.48 39 ⇓P P 06 45 10.5 -0.2
baz=81

MSU Marysvale 81.56 41 eP P 06 45 12.1 +0.9
MSU pmax pmax
comp=Z,7.0nm,1.4s,mb4.6
MSU Marysvale 81.56 41 eP P 06 45 12.1 +0.9
comp=Z,7.2nm,1.4s,mb4.6
S13A Holt Ranch, En 81.56 42 ⇓P P 06 45 11.5 +0.2
baz=81
N21A Black Mountain 81.66 36 ⇓P P 06 45 11.0 -0.7
baz=81
S14A Cedar City 81.73 42 ⇑P P 06 45 12.1 -0.1
baz=82
EDW2 Edwards Air Fo 81.77 47 ⇑P P 06 45 12.4 0.0
baz=82
BLG Laguna Peak 81.84 48 ⇑P P 06 45 12.8 0.0
baz=82
O20A White River Ci 81.89 37 ⇑P P 06 45 12.8 -0.2
baz=82
T13A Saint George 82.00 43 ⇑P P 06 45 13.8 +0.2
baz=82
P19A Cripple Cowboy 82.01 38 ⇓P P 06 45 13.0 -0.5
baz=82
GSC Goldstone 82.01 46 ⇓P P 06 45 13.8 +0.1
baz=82
N22A Wattenberg Ran 82.05 36 ⇑P P 06 45 14.0 +0.2
baz=82
R16A Teasdale 82.06 40 ⇓P P 06 45 14.2 +0.3
baz=82,SNR=8.4
S15A Panguitch 82.16 41 ⇑P P 06 45 15.0 +0.6
baz=82,SNR=6.2
U12A Valley of Fire 82.18 43 ⇑P P 06 45 14.9 +0.4
baz=82
V11A Goodsprings 82.24 44 ⇓P P 06 45 15.5 +0.6
baz=82
R17A Hanksville Air 82.28 40 ⇑P P 06 45 14.1 -0.9
baz=82
BFSC Mount Baldy Ra 82.44 47 ⇑P P 06 45 16.1 +0.1
baz=82
Q19A Hogan Spring (82.46 38 ⇓P P 06 45 15.0 -0.9
baz=82
U13A Pakoon Wash 82.46 43 ⇓P P 06 45 16.3 +0.2
baz=82
S16A Weppner Ranch, 82.47 41 ⇓P P 06 45 16.1 +0.1
baz=82,SNR=6.9
O22A Kremmling 82.56 36 ⇓P P 06 45 16.0 -0.4
baz=82
V12A Nelson 82.61 44 ⇑P P 06 45 17.0 +0.2
baz=82,SNR=5.7
T15A Red Dirt Ranch 82.70 42 ⇑P P 06 45 17.3 +0.1
baz=82
BBRC Big Bear Solar 82.79 46 ⇓P P 06 45 17.6 -0.1
baz=82
U14A Mt Trumbull 82.83 42 ⇑P P 06 45 18.5 +0.6
baz=83
Q20A Ridgley Place, 82.86 38 ⇓P P 06 45 17.3 -0.8
baz=83
S17A Black Ridge (B 82.89 40 ⇓P P 06 45 17.9 -0.3
baz=83
GMRC Granite Mounta 82.99 45 ⇓P P 06 45 19.1 +0.4
baz=83
ECSD EROS Data Cent 83.00 28 eP P 06 45 16.9 -1.8
comp=Z,2.6nm,0.9s,mb4.5
MURC Murrieta 83.18 47 ⇓P P 06 45 19.7 -0.1
baz=83
S18A Hurst Farm, Bl 83.20 40 ⇓P P 06 45 19.5 -0.3
baz=83
SMCO Snowmass 83.22 37 eP P 06 45 20.0 +0.1
comp=Z,4.6nm,0.9s,mb4.7
U15A North Rim 83.22 42 ⇓P P 06 45 20.7 +0.7
baz=83
ISCO Idaho Springs 83.24 36 eP P 06 45 19.9 -0.1
ISCO pmax pmax
comp=Z,2.0nm,1.1s,mb4.3
ISCO Idaho Springs 83.24 36 eP P 06 45 19.9 -0.1
comp=Z,2.5nm,1.1s,mb4.4
Q21A Lamborn Mesa, 83.27 37 ⇓P P 06 45 20.2 +0.1
baz=83
PV01 Paradox Valley 83.44 38 eP P 06 45 20.8 -0.3
BELC Belle Mtn. Jos 83.45 46 ⇑P P 06 45 21.0 -0.1
baz=83
R20A Redvale 83.47 38 ⇓P P 06 45 21.3 +0.1
baz=83
V14A Boquillas Ranc 83.50 43 ⇑P P 06 45 21.8 +0.4
baz=83,SNR=7.4
PFO Pinyon Flat Ob 83.54 46 ⇓P P 06 45 21.6 0.0
baz=83
R21A Cimarron 83.67 38 ⇑P P 06 45 22.2 0.0
baz=83
IRM Iron Mountain 83.73 45 ⇓P P 06 45 22.7 +0.1
baz=84
V15A Kaibab Nationa 83.78 42 ⇑P P 06 45 23.3 +0.5
baz=84,SNR=6.5
S20A Disappointment 83.78 38 ⇓P P 06 45 22.9 +0.1
baz=84
U17A Shonto 83.81 41 ⇓P P 06 45 23.0 0.0
baz=84,SNR=9.5
W14A Seligman 83.86 43 ⇓P P 06 45 23.5 +0.2
baz=84
BC3 Big Chuckawall 84.00 46 ⇑P P 06 45 24.4 +0.4
baz=84
X13A Yucca 84.01 44 ⇓P P 06 45 24.3 +0.2
baz=84,SNR=8.5
R22A Saguache, Gunn 84.12 37 ⇑P P 06 45 24.8 +0.3
baz=84
MONP Monument Peak 84.14 47 ⇑P P 06 45 25.3 +0.6
baz=84
S21A Coal Bank Pass 84.17 38 ⇓P P 06 45 24.8 0.0
baz=84
MVCO Mesa Verde 84.25 39 ⇑P P 06 45 24.9 -0.3
baz=84
W15A Williams 84.27 43 ⇓P P 06 45 25.8 +0.5
baz=84
T19A Beclabito 84.34 39 ⇓P P 06 45 26.0 +0.3
baz=84
WUAZ Wupatki 84.39 42 ⇓P P 06 45 26.3 +0.3
baz=84
S22A 4UR Ranch, Cre 84.50 37 ⇓P P 06 45 26.8 +0.3
baz=84
X14A Yava 84.56 43 ⇓P P 06 45 27.3 +0.5
baz=84
V17A Tonalea, Kykot 84.57 41 ⇓P P 06 45 27.3 +0.5
baz=84,SNR=7.0
Y13A Salome 84.65 44 ⇓P P 06 45 27.8 +0.5
baz=84
W16A Flagstaff 84.67 42 ⇓P P 06 45 28.2 +0.8
baz=84
R24A Sanders Place, 84.79 36 ⇓P P 06 45 27.8 -0.1
baz=84
X15A Humboldt 84.85 43 ⇑P P 06 45 28.8 +0.5
baz=85,SNR=5.9
V18A Ganado 84.88 41 ⇑P P 06 45 28.8 +0.3
baz=85
Y14A Wickenburg 84.94 44 ⇓P P 06 45 29.0 +0.3
baz=85,SNR=5.2
SDCO Great Sand Dun 85.05 37 eP P 06 45 28.8 -0.4
comp=Z,1.3nm,1.0s,mb4.1
T22A Edith 85.09 38 ⇑P P 06 45 29.2 -0.3
baz=85
Z13A Yuma Proving G 85.24 45 ⇓P P 06 45 30.5 +0.3
baz=85,SNR=6.0
Y15A Casa Rosa Ranc 85.24 43 ⇓P P 06 45 30.6 +0.4
baz=85
S24A Houchin Ranch, 85.25 36 ⇑P P 06 45 29.9 -0.3
baz=85
U21A Nageezi 85.27 39 ⇓P P 06 45 30.3 0.0
baz=85
X16A Lo Mia Camp, P 85.27 42 ⇓P P 06 45 31.0 +0.6
baz=85,SNR=6.9
T23A Casias Ranch, 85.43 37 ⇓P P 06 45 30.9 -0.3
baz=85
113A Mohawk Valley, 85.54 45 ⇓P P 06 45 32.1 +0.4
baz=85
X17A Forest Lakes 85.63 42 ⇑P P 06 45 33.3 +1.1
baz=85
U22A Llaves 85.65 38 ⇑P P 06 45 32.7 +0.4
baz=85
Y16A Circle Bar Ran 85.70 43 ⇑P P 06 45 32.9 +0.4
baz=85
X18A Snowflake 85.86 41 ⇓P P 06 45 33.9 +0.6
baz=86
U23A El Rito 85.97 38 ⇑P P 06 45 34.2 +0.3
baz=86
114A Black Gap (USA 85.97 44 ⇑P P 06 45 34.4 +0.5
baz=86,SNR=6.6
W20A Ramah 86.00 40 ⇓P P 06 45 34.5 +0.5
baz=86
T25A Trinidad 86.01 36 ⇓P P 06 45 33.3 -0.7
baz=86
V22A San Miguel Ran 86.02 38 ⇑P P 06 45 34.3 +0.2
baz=86

Y17A Roosevelt 86.15 42 ⇑P P 06 45 35.4 +0.6
baz=86
Z16A Peralta Trail, 86.17 43 ⇑P P 06 45 35.5 +0.6
baz=86
X19A St. Johns 86.24 41 ⇑P P 06 45 35.8 +0.6
baz=86
W21A San Fidel 86.38 39 ⇑P P 06 45 36.6 +0.7
baz=86
Y18A Canyon Day Jun 86.45 42 ⇑P P 06 45 36.7 +0.4
baz=86
V23A Ortiz Mt. (NFS 86.47 38 ⇑P P 06 45 37.4 +1.1
baz=86
X20A Quemado 86.50 40 ⇓P P 06 45 37.0 +0.5
baz=86
U25A Circle Dot Ran 86.65 36 ⇑P P 06 45 36.5 -0.7
baz=86
Z17A San Carlos Hig 86.65 42 ⇑P P 06 45 38.0 +0.7
baz=86
Y19A Nutrioso 86.65 41 ⇑P P 06 45 37.8 +0.6
baz=86
214A Organ Pipe Nat 86.66 45 ⇓P P 06 45 37.8 +0.5
baz=86
116A Eloy 86.69 44 ⇑P P 06 45 37.9 +0.5
baz=86
V24A Rampart Ranch, 86.87 37 ⇑P P 06 45 38.1 -0.2
baz=87
X21A Alamocita Cree 86.89 40 ⇓P P 06 45 39.4 +1.0
baz=87
U26A Atchley Ranch, 86.92 36 ⇓P P 06 45 38.3 -0.2
baz=87
W23A Werner Place, 86.99 38 ⇓P P 06 45 39.2 +0.3
baz=87
ANMO Albuquerque 87.04 39 eP P 06 45 39.7 +0.6
ANMO pmax pmax
comp=Z,3.0nm,1.2s
ANMO Albuquerque 87.04 39 eP P 06 45 39.7 +0.6
comp=Z,2.7nm,1.2s,mb4.3
V25A Rancho No Teng 87.05 37 ⇓P P 06 45 39.2 +0.1
baz=87
W24A Lazy 6 Ranch, 87.26 38 ⇓P P 06 45 40.5 +0.3
baz=87
119A Ashpeak Ranch, 87.63 42 ⇑P P 06 45 42.5 +0.5
baz=87
Z20A Nine Sixteen R 87.66 41 ⇓P P 06 45 42.6 +0.5
baz=87
Z21A St. Cloud Mine 87.91 40 ⇑P P 06 45 43.8 +0.5
baz=88
218A Dragoon 87.95 43 ⇑P P 06 45 44.4 +0.9
baz=88
Y23A Lovelace Mesa, 88.08 39 ⇑P P 06 45 44.8 +0.7
baz=88
120A U Bar Ranch, L 88.12 41 ⇓P P 06 45 45.1 +0.7
baz=88
Z22A Elephant Butte 88.26 40 ⇓P P 06 45 45.3 +0.3
baz=88
219A White Tail Can 88.29 42 ⇑P P 06 45 45.7 +0.5
baz=88
318A Bisbee 88.42 43 ⇓P P 06 45 46.1 +0.2
baz=88
Z24A Sheeppen Canyo 88.89 39 ⇑P P 06 45 48.3 +0.3
baz=89
Z25A Roswell 89.21 38 ⇓P P 06 45 49.8 +0.3
baz=89
124A Stringfield Ra 89.39 39 ⇑P P 06 45 50.5 +0.2
baz=89
Z27A Tatum 89.80 37 ⇓P P 06 45 51.7 -0.6
baz=90
WMOK Wichita Mounta 90.30 33 eP P 06 45 54.2 -0.3
WMOK pmax pmax
comp=Z,3.0nm,0.9s,mb4.5
WMOK Wichita Mounta 90.30 33 eP P 06 45 54.2 -0.3
comp=Z,2.6nm,0.9s,mb4.5
326A Caldwell Ranch 91.21 39 ⇑P P 06 45 58.8 -0.1
baz=91
626A Big Bend Ranch 92.67 40 ⇑P P 06 46 05.6 -0.1
baz=92
TXAR Lajitas Array 93.06 39 P P 06 46 07.8 +0.4
comp=Z,0.4nm,0.9s,mb3.9,baz=273,slow=2.3,SNR=4.0
TXAR PP PP 06 49 44.4 -5.1
comp=Z,0.3nm,0.9s,baz=42,slow=2.0,SNR=3.0
628A Black Gap, Mar 93.27 39 ⇓P P 06 46 08.4 0.0
baz=93
TORD Torodi Ar. Bea 100.35 302 P Pdif 06 46 39.6 -0.8
comp=Z,0.6nm,0.9s,baz=17,slow=5.4,SNR=2.9
LPAZ La Paz 147.90 20 PKP PKPdf 06 52 35.7 -0.3
comp=Z,3.0nm,0.7s,baz=350,slow=4.8,SNR=18
LPAZ PKPbc PKPbc 06 52 38.1 -0.9
comp=Z,3.0nm,0.7s,baz=5.9,slow=8.9,SNR=18
LPAZ La Paz 147.90 20 PKIKP PKPdf 06 52 35.7 -0.3
LPAZ 06 52 38.1
LPAZ pmax pmax
comp=Z,3.0nm,0.7s
LPAZ pmax pmax
comp=Z,3.0nm,0.7s
LPAZ La Paz 147.90 20 PKP PKPdf 06 52 35.7 -0.3
LPAZ ePKPdf PKPdf 06 52 36.0 0.0
LPAZ ePKPbc PKPbc 06 52 40.1 +1.1
LPAZ ePKPab PKPab 06 52 42.5 +1.0

IDC ***07*** *06:34:27.5±0.7,7°.99S×107°.75E,h0km,mb4.4/12, mb1 4.5/12,mb1mx4.3/21,mbtmp4.4/12,MS3.6/9, Ms1 3.6/9,ms1mx3.2/24,Error ellipse: s-maj=34.2km s-min=15.5km az=53.0*

NEIC ***07*** *06:34:32.6±0.4,7°.98S×107°.81E,h35km,mb4.6/5,Error ellipse: s-maj=20.5km s-min=10.0km az=50.0*

NEIC Felt [II] at Pangandaran.

DJA ***07*** *06:34:34,8°.38S×107°.84E,h18km,MLv5.1/26*

ISCJB ***07*** *06:34:35.7±0.6,8°.12S±0°.07×107°.90E±0°.04,h78km±5km, mb4.3/15,Error ellipse: s-maj=12.0km s-min=4.9km az=23.4*

ISC 07 06:34:37.1±0.5,**8°.15S**±0°.06×**107°.89E**±0°.04,**h74**km±5km, **n85**,σ1**32**/69,**mb4.3**/15,**1D,Jawa**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CLJI	Cilicap	1.19	69	P		Pn		06 34 56.3	-1.9
LEM	Lembang	1.34	348	P		Pn		06 34 59.3	-0.9
LEM				S		Sn		06 35 20.9	+3.4
SKJI	Sukabumi	1.75	311	P		Pn		06 35 02.9	-2.6
YOGI	Yogyakarta	2.40	82	P		Pn		06 35 12.0	-2.3
UGM	Wanagama	2.62	85	P		Pn		06 35 15.1	-2.1
CGJI	Cibinong	2.66	305	P		Pn		06 35 14.6	-3.2
SBJI	Serang	2.67	319	P		Pn		06 35 18.4	+0.5
SMRI	Semarang	2.75	67	P		Pn		06 35 19.2	+0.2
SMRI				S		Sn		06 35 54.2	+2.9
RBSI	Rajabasa	3.13	317	P		Pn		06 35 26.8	+2.6
PCJI	Pacitan	3.25	91	P		Pn		06 35 24.0	-1.8
NGJI	Ngawi	3.62	78	P		Pn		06 35 32.3	+1.5
BLSI	Bandar Lampung	3.82	316	P		Pn		06 35 35.3	+1.8
SJI	Sawahan	3.86	84	P		Pn		06 35 34.9	+0.8
PWJI	Pagerwojo	3.88	88	P		Pn		06 35 33.3	-1.0
KASI	Kota Agung	4.26	308	P		Pn		06 35 41.5	+1.9
KRKI	Karangkates	4.51	90	P		Pn		06 35 43.3	+0.3
KLSI		4.66	317	P		Pn		06 35 44.9	-0.1
LWLI	Liwa	4.92	309	P		Pn		06 35 49.0	+0.4
MDSI	Maura Dua	5.18	314	P		Pn		06 35 52.3	+0.1
	0.3nm1μm106nm,1.1s								
TPI	Tanjungpandan	5.36	357	P		Pn		06 36 01.7	+7.0
	0.5nm94nm,1.1s								
GMJI	Gumukmas	5.50	92	P		Pn		06 35 56.9	+0.5
	1.1nm4μm135nm,0.8s								
KMMI	Kalianget	6.12	80	P		Pn		06 36 05.1	+0.1
	0.6nm126nm,1.5s								
MNAI	Manna	6.19	307	P		Pn		06 36 05.0	-0.9
	1.7nm340nm,1.3s								
IGBI	Denpasar	7.21	96	P		Pn		06 36 18.2	-1.6
	1.8nm300nm,0.9s								
SRBI	Singaraja	7.25	90	P		Pn		06 36 19.0	-1.4
	0.7nm136nm,0.8s								
KHKI	Kahang-Kahang	7.64	92	P		Pn		06 36 26.8	+1.1
	0.5nm82nm,0.7s								
SBUM	Sibu	11.38	22	P		Pn		06 37 21.8	+5.0
	1μm11nm,0.8s								
KAPI	Kappang	12.19	76	LR		LR		06 43 02.7	
	comp=Z,432nm,18.1s,baz=248,slow=42								
TTSI	Tana Toraja	12.90	68	P		Pn		06 37 43.1	+5.5
	36nm,1.1s								
MRSI	Marisa	16.42	59	P		Pn		06 38 26.0	+3.0
	31nm,0.8s								
MYLDM	Lahad Datu	16.95	39	P		Pn		06 38 37.4	+7.8
MBWA	Marble Bar	17.26	140	P		Pn		06 38 33.9	+0.6
NLAI	Namlea	19.72	77	P		Pn		06 39 05.3	+2.3
FITZ	Fitzroy Crossi	19.89	122	eP		Pn		06 39 03.1	-1.8

17nm,0.8s
FITZ **Fitzroy Crossi 19.89 122** P **Pn 06 39 03.0 -2.0**
6.8nm,0.7s,baz=283,slow=7.5,SNR=6.5
FITZ LR LR 06 46 36.2
comp=Z,41nm,21.2s,baz=346,slow=36
FITZ **Fitzroy Crossi 19.89 122** *eP* **Pn 06 39 03.8 -1.1**
FITZ LR LR 06 46 36.2
FITZ **Fitzroy Crossi 19.89 122** P **Pn 06 39 03.5 -1.4**
40nm,2.9s
LBMI **Labuha 20.91 70** P **P 06 39 14.7 +0.9**
1µm137nm,0.9s
TNTI **Ternate 21.34 66** P **P 06 39 17.7 -0.7**
KNA **Kununurra 21.76 112** P **P 06 39 17.0 -5.8**
DAV **Davao City (W) 23.23 50** LR LR 06 50 32.7
comp=Z,138nm,19.0s,baz=209,slow=42
WRA **Warramunga Arr 28.16 117** P **P 06 40 22.6 0.0**
2.1nm,0.6s,mb3.8,baz=289,slow=12,SNR=2.0
CTA **Charters Tower 38.95 112** P **P 06 41 58.4 +2.2**
4.8nm,0.9s,mb4.3,baz=239,slow=6.3,SNR=4.0
CTAO **Charters Tower 38.95 112** P **P 06 41 55.5 -0.7**
STKA **Stephens Creek 39.22 132** *eP* **P 06 41 58.8 +0.5**
7.2nm,0.7s,mb4.6
STKA **Stephens Creek 39.22 132** P **P 06 41 59.2 +0.9**
7.7nm,0.7s,mb4.7,baz=281,slow=7.2,SNR=6.6
STKA **Stephens Creek 39.22 132** *eP* **P 06 41 59.4 +1.1**
CMSA **Cobar Meteorol 42.16 129** *eP* **P 06 42 23.4 +0.9**
HHC **Hu-ho-hao-te 48.87 4** *eP* **P 06 43 15.6 +0.3**
HHC S **S 06 50 12.5 -0.8**
HHC pmax pmax
comp=Z,13nm,0.6s,mb5.0
HHC pmax pmax
comp=Z,170nm,6.2s
KSRS **Korea Array 49.09 21** LR LR 07 04 16.7
comp=Z,34nm,19.4s,baz=175,slow=36
SONM **Songino Array 55.76 359** PcP PcP 06 45 04.9 +0.5
comp=Z,1.9nm,0.8s,baz=191,slow=3.5,SNR=3.4
SONM LR LR 07 09 32.5
comp=Z,90nm,21.6s,baz=30,slow=38
MK31 **Makanchi Array 59.26 340** *eP* **P 06 44 29.4 -1.3**
MKAR **Makanchi Array 59.26 340** P **P 06 44 29.1 -1.7**
comp=Z,1.0nm,0.3s,mb4.3,baz=152,slow=8.0,SNR=20
KURK **Kurchatov 63.88 340** P **P 06 45 00.6 -1.1**
comp=Z,0.7nm,0.4s,mb3.9,baz=162,slow=5.5,SNR=7.0
KURK **Kurchatov 63.88 340** *eP* **P 06 45 00.2 -1.6**
comp=Z,4.0nm,0.8s,mb4.3
ZALV **Zalesovo Beam 64.86 345** P **P 06 45 06.8 -1.3**
comp=Z,1.1nm,0.3s,mb4.2,baz=155,slow=6.0,SNR=5.0
ZALV LR LR 07 15 31.2
comp=Z,27nm,18.7s,baz=121,slow=38
ZALV **Zalesovo Beam 64.86 345** P **P 06 45 06.8 -1.3**
ZALV LR LR 07 15 31.2
MAW **Mawson 66.53 197** *eP* **P 06 45 19.4 +0.7**
comp=Z,10nm,0.9s,mb4.7
MAW **Mawson 66.53 197** P **P 06 45 19.8 +1.0**
comp=Z,13nm,0.8s,mb4.8,baz=40,slow=6.6,SNR=26
MAW LR LR 07 07 15.8
comp=Z,128nm,20.2s,baz=81,slow=30
MAW **Mawson 66.53 197** *eP* **P 06 45 19.5 +0.8**
comp=Z,3.1nm,0.9s,mb4.1
MAW LR LR 07 07 15.8
BVAR **Borovoye Array 68.77 337** P **P 06 45 31.9 -1.1**
comp=Z,1.8nm,0.3s,mb4.4,baz=128,slow=7.3,SNR=16
ABKAR **Akbulak array 70.85 329** *eP* **P 06 45 44.9 -1.0**
PETK **Petropavlovsk- 74.17 29** LR LR 07 18 11.1
comp=Z,19nm,19.2s,baz=347,slow=35
SYO **Syowa Base 74.73 200** *eP* **P 06 46 07.9 -0.7**
SBA **Scott Base 75.75 169** *eP* **P 06 46 16.3 +2.0**
comp=Z,5.6nm,0.8s,mb4.3
LSZ **Lusaka 78.02 256** *eP* **P 06 46 28.8 +0.6**
comp=Z,5.4nm,1.1s,mb4.2
BOSA **Boshof 79.71 242** LR LR 07 16 58.9
comp=Z,87nm,18.5s,baz=289,slow=32
MMAI **Mount Meron Ar 79.99 306** P **P 06 46 38.8 +0.1**
comp=Z,0.6nm,0.2s,mb4.0,baz=146,slow=2.8,SNR=4.3
QSPA **South Pole Qui 81.84 180** *eP* **P 06 46 48.8 +1.2**
comp=Z,13nm,1.0s,mb4.7
BRTR **Keskin Array B 83.25 312** P **P 06 46 55.0 -0.7**
comp=Z,1.2nm,0.7s,mb3.9,baz=140,slow=9.7,SNR=4.8
ARCES **ARCESS Array B 94.92 340** P **P 06 47 51.4 +0.8**
comp=Z,0.5nm,0.3s,mb4.4,baz=110,slow=5.8,SNR=6.3
ARCES **ARCESS Array B 94.92 340** P **P 06 47 51.4 +0.8**
PDAR **Pinedale Array 132.38 37** SKPbc SKPbc 06 57 06.1 +2.7
comp=Z,1.0nm,1.0s,baz=307,slow=5.4,SNR=3.7
TXAR **Lajitas Array 143.64 50** PKhKP 06 54 02.0
comp=Z,0.6nm,0.7s,baz=295,slow=2.2,SNR=7.5
WMOK **Wichita Mounta 143.95 39** *e*PKPdf PKPdf 06 54 03.0 -1.5
NCB **Newcomb 144.27 3** *e*PKPdf PKPdf 06 54 03.1 -1.6
ACCN **Adirondack Com 144.88 2** *eP* PKPdf 06 54 06.2 +0.4
BINY **Binghamton 145.92 5** *e*PKPdf PKPdf 06 54 08.6 +0.9
MIAR **Mount Ida 147.14 34** *e*PKPbc PKPbc 06 54 13.0 +0.7
PARMO **Parma 147.39 27** *e*PKPbc PKPbc 06 54 14.3 +1.5
WCI **Wyandotte Cave 147.43 21** *e*PKPbc PKPbc 06 54 13.4 +0.5
UALR **University of 147.63 32** *eP* PKPdf 06 54 14.3 +3.5
MCWV **Mont Chateau 147.87 11** *e*PKPbc PKPbc 06 54 15.4 +1.4
WVT **Waverly 148.67 25** *e*PKPbc PKPbc 06 54 16.7 +0.4
LPAZ **La Paz 155.40 189** PKP PKPdf 06 54 23.0 -0.1
comp=Z,1.4nm,0.5s,baz=65,slow=3.1,SNR=6.5

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*ISCJB **07** 06:35:06.4±3.3, 4°.5S±0°.1×143°.6E±0°.1, h117km±31km, mb4.2/8, Error ellipse: s-maj=26.1km s-min=19.1km az=147.1*
*IDC **07** 06:35:06.9±1.6, 4°.42S×143°.44E, h101km±7km, mb3.9/7, mb1 4.1/8, mb1mx3.8/18, mbtmp3.9/8, MS3.2/1, Ms1 3.2/1, ms1mx2.3/20, Error ellipse: s-maj=55.2km s-min=16.6km az=96.0*
*NEIC **07** 06:35:07.9±1.0, 4°.48S×143°.41E, mb4.5/2, Error ellipse: s-maj=33.4km s-min=14.5km az=98.0*
ISC 07 06:35:06.9±3.1, 4°.5S±0°.1×143°.5E±0°.1, h103km±27km, h102km±1.5km; pP-P, n24, σ0s92/19, mb4.2/8, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	9.45	182	*e*Pn	Pn	06 37 20.2	0.0
122nm,0.6s							
KAKA	**Kakadu**	13.70	233	*eP*	Pn	06 38 17.4	+0.5
56nm,0.7s							
KAKA	**Kakadu**	13.70	233	*e*Pn	Pn	06 38 18.1	+1.1
139nm,0.6s							
KAKA				*e*Sn	Sn	06 40 47.3	-0.6
KAKA	**Kakadu**	13.70	233	P	Pn	06 38 18.5	+1.6
CTA	**Charters Tower**	15.76	171	LR	LR	06 45 00.7	
comp=Z,77nm,18.4s,baz=152,slow=38							
WRAB	**Tennant Creek**	17.80	209	*eP*	Pn	06 39 07.9	-0.3
21nm,0.8s							
WRAB	**Tennant Creek**	17.80	209	P	Pn	06 39 08.4	+0.2
WRA	**Warramunga Arr**	17.82	209	P	Pn	06 39 06.8	-1.5
1.8nm,0.3s,baz=32,slow=12,SNR=42							
KNA	**Kununurra**	18.36	231	*eP*	P	06 39 16.3	+2.7
71nm,1.0s							
ASAR	**Alice Springs**	21.24	205	P	P	06 39 43.6	-1.1
3.2nm,0.4s,mb4.0,baz=30,slow=12,SNR=31							
FITZ	**Fitzroy Crossi**	22.15	231	*eP*	P	06 39 55.2	+0.7
29nm,0.4s,mb5.0							
FITZ	**Fitzroy Crossi**	22.15	231	P	P	06 39 54.5	0.0
20nm,0.5s,mb4.7,baz=47,slow=8.7,SNR=27							
FITZ	**Fitzroy Crossi**	22.15	231	*eP*	P	06 39 55.0	+0.5
20nm,0.6s,mb4.6							
STKA	**Stephens Creek**	27.34	184	P	P	06 40 43.4	+1.1
1.2nm,0.4s,mb3.8,baz=354,slow=11,SNR=4.5							
KLBR	**Kellerberrin**	36.26	219	*eP*	P	06 42 00.1	-0.2
23nm,1.0s,mb5.0							
NWAO	**Narrogin (SRO)**	37.50	218	P	P	06 42 10.9	+0.2
16nm,0.8s,mb5.0,baz=48,slow=6.4,SNR=5.9							
MKAR	**Makanchi Array**	74.14	321	P	P	06 46 32.1	+0.1
0.4nm,0.5s,mb3.4,baz=101,slow=7.8,SNR=4.7							
MKAR				pP	pP	06 46 57.8	-0.6
1.6nm,0.8s,baz=120,slow=7.1,SNR=4.9							
KURK	**Kurchatov**	77.93	324	P	P	06 46 53.0	-0.5
0.2nm,0.2s,mb3.4,baz=137,slow=7.0,SNR=1.8							
KURK				pP	pP	06 47 18.7	-1.4
2.1nm,1.0s,baz=112,slow=6.0,SNR=5.5							
BVAR	**Borovoye Array**	83.51	324	P	P	06 47 22.8	-0.4
1.6nm,0.7s,mb3.9,baz=78,slow=6.6,SNR=4.3							
BVAR				pP	pP	06 47 50.0	-0.1
3.9nm,0.8s,baz=106,slow=5.3,SNR=6.9							
CPUP	**Villa Florida**	143.32	148	PKP	PKPdf	06 54 29.0	-1.0
2.0nm,0.7s,baz=19,slow=2.1,SNR=6.2							
KIC	**Kosan Boka**	148.37	275	*e*PKP1	PKPbc	06 54 42.0	-0.5
10.0nm,0.6s							
DBIC	**Dimbokro**	148.48	275	PKPbc	PKPbc	06 54 42.5	-0.3
3.7nm,0.5s,baz=104,slow=3.2,SNR=15							
TIC	**Toumodi**	148.64	275	*e*PKP1	PKPbc	06 54 42.7	-0.4
112nm,1.6s							
LIC	**Lamto**	148.66	275	*e*PKP1	PKPbc	06 54 42.7	-0.5
70nm,1.4s							

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*IDC **07** 06:39:37.8±0.8, 7°.98S×107°.93E, h0km, mb4.0/8, mb1 4.1/8, mb1mx3.9/21, mbtmp4.0/8, Error ellipse: s-maj=36.4km s-min=17.9km az=63.0*
*NEIC **07** 06:39:43.1±0.4, 7°.95S×107°.97E, h35km, mb4.4/2, Error ellipse: s-maj=23.1km s-min=9.7km az=58.0*
*DJA **07** 06:39:45, 8°.29S×107°.89E, h29km, MLv4.6/17*
*ISCJB **07** 06:39:46.7±0.7, 8°.1S±0°.1×107°.99E±0°.06, h90km±7km, mb3.9/10, Error ellipse: s-maj=19.2km s-min=5.5km az=23.5*
ISC 07 06:39:47.9±0.7, 8°.1S±0°.1×108°.00E±0°.06, h82km±7km, n39, σ1s01/32, mb3.9/10, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLJI	**Cilicap**	1.06	72	P	Pn	06 40 06.5	-1.3
LEM	**Lembang**	1.28	343	P	Pn	06 40 10.0	-0.5
SKJI	**Sukabumi**	1.77	306	P	Pn	06 40 13.2	-3.6
SKJI				S	Sn	06 40 39.0	+0.3
YOGI	**Yogyakarta**	2.29	84	P	Pn	06 40 22.7	-1.0
UGM	**Wanagama**	2.51	87	P	Pn	06 40 25.8	-0.8
SMRI	**Semarang**	2.62	68	P	Pn	06 40 29.9	+1.7
SMRI				S	Sn	06 41 03.8	+4.7
CGJI	**Cibinong**	2.70	302	P	Pn	06 40 25.2	-4.0
RBSI	**Rajabasa**	3.13	314	P	Pn	06 40 35.0	-0.1
PCJI	**Pacitan**	3.15	93	P	Pn	06 40 34.2	-1.2
PCJI				S	Sn	06 41 11.3	-0.7
NGJI	**Ngawi**	3.50	79	P	Pn	06 40 42.9	+2.8
SJI	**Sawahan**	3.75	85	P	Pn	06 40 44.4	+0.9
PWJI	**Pagerwojo**	3.77	90	P	Pn	06 40 43.0	-0.8
KASI	**Kota Agung**	4.29	306	P	Pn	06 40 50.6	-0.2
KRKI	**Karangkates**	4.41	92	P	Pn	06 40 53.6	+1.1
KLSI		4.66	316	P	Pn	06 40 57.6	+1.7
MDSI	**Maura Dua**	5.19	313	P	Pn	06 41 03.5	+0.3
0.2nm48nm,1.0s							
GMJI	**Gumukmas**	5.40	93	P	Pn	06 41 07.5	+1.6
MBWA	**Marble Bar**	17.27	140	*eP*	Pn	06 43 42.9	-1.0
WRA	**Warramunga Arr**	28.11	118	P	P	06 45 32.6	+0.4
1.0nm,0.6s,mb3.5,baz=300,slow=10.0,SNR=3.2							
ASAR	**Alice Springs**	29.28	125	P	P	06 45 43.2	+0.5
0.6nm,0.6s,mb3.4,baz=304,slow=8.4,SNR=2.8							
SONM	**Songino Array**	55.66	359	P	P	06 49 14.4	-1.0
0.8nm,0.6s,mb4.0,baz=165,slow=6.0,SNR=3.0							
SONM				PcP	PcP	06 50 15.1	+1.1
2.1nm,0.7s,baz=169,slow=4.1,SNR=6.1							
MKAR	**Makanchi Array**	59.21	340	P	P	06 49 40.4	0.0
1.2nm,0.6s,mb4.1,baz=156,slow=7.6,SNR=8.3							
MKAR	**Makanchi Array**	59.21	340	P	P	06 49 40.4	0.0
KURK	**Kurchatov**	63.82	340	P	P	06 50 10.8	-0.6
0.7nm,0.3s,mb3.9,baz=155,slow=6.2,SNR=9.3							
MAW	**Mawson**	66.65	197	P	P	06 50 30.1	+0.5
4.0nm,0.8s,mb4.3,baz=52,slow=5.9,SNR=9.1							
BVAR	**Borovoye Array**	68.72	337	P	P	06 50 42.6	-0.1
2.2nm,0.6s,mb4.2,baz=145,slow=8.0,SNR=9.6							
ABKAR	**Akbulak array**	70.82	329	*eP*	P	06 50 55.4	-0.3
1.7nm,0.5s,mb4.1							
TIXI	**Tiksi**	80.73	7	*eP*	P	06 51 50.9	-0.9
3.0nm,0.6s,mb4.3							
BRTR	**Keskin Array B**	83.26	312	P	P	06 52 06.7	+1.0
0.7nm,0.7s,mb3.6,baz=116,slow=6.6,SNR=2.9							
TXAR	**Lajitas Array**	143.50	50	PKP	PKPdf	06 59 14.1	+0.3
0.5nm,0.8s,baz=326,slow=1.8,SNR=4.9							
WMOK	**Wichita Mounta**	143.81	39	*e*PKPdf	PKPdf	06 59 13.5	-0.7
CCM	**Cathedral Cave**	145.44	27	*e*PKPbc	PKPbc	06 59 18.1	+1.2
JCT	**Junction City**	145.74	46	*e*PKPbc	PKPbc	06 59 20.2	+2.1
MIAR	**Mount Ida**	147.01	34	*e*PKPbc	PKPbc	06 59 23.4	+1.7
SSPA	**Standing Stone**	147.13	8	*e*PKPbc	PKPbc	06 59 22.9	+1.0
WCI	**Wyandotte Cave**	147.30	21	*e*PKPdf	PKPdf	06 59 19.7	-0.4
WCI				*e*PKPbc	PKPbc	06 59 23.7	+1.2
WCI				*e*PKPab	PKPab	06 59 25.7	+1.3
LPAZ	**La Paz**	155.51	189	PKPab	PKPab	07 00 00.5	+1.7
0.5nm,0.5s,baz=206,slow=5.8,SNR=4.6							
LPAZ	**La Paz**	155.51	189	PKPab	PKPab	07 00 00.5	+1.6
OTAV	**Otavalo**	169.92	140	*e*PKPdf	PKPdf	06 59 50.6	+3.3

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*IDC **07** 06:43:19.0±1.0, 28°.69N×143°.17E, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.6/24, mbtmp3.6/5, ML3.5/1, Error ellipse: s-maj=32.7km s-min=22.2km az=93.0*
*ISCJB **07** 06:43:22.5±0.9, 28°.79N±0°.03×142°.8E±0°.2, h33km, mb3.9/5, Error ellipse: s-maj=23.8km s-min=4.5km az=178.0*
*JMA **07** 06:43:23.5±0.2, 28°.76N×142°.53E, h31km, M4.3*
*NEIC **07** 06:43:23.5, 28°.76N×142°.53E, h31km, mb4.4/1, After JMA.*
ISC 07 06:43:24.6±0.9, 28°.73N±0°.03×142°.8E±0°.2, h35km, n14, σ1s11/16, mb3.9/5, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	1.73	200	Pn	Pn	06 43 51.9	-0.2
42nm,0.3s,baz=270,slow=18,SNR=56							
CBIJ				Sn	Sn	06 44 11.6	-1.4
60nm,0.3s,baz=294,slow=23,SNR=6.4							
CBIJ	**Chichi jima**	1.73	200	P	Pn	06 43 51.8	-0.3
JHHJ	**Haha-jima-NKT**	2.17	196	P	Pn	06 43 58.2	-0.1
JHHJ				*e*S	Sn	06 44 24.4	+0.4
BSO1	**Boso 1**	6.11	345	P	Pn	06 44 53.8	+1.4
BSO1				*e*S	Sn	06 45 58.6	-2.4
BSO2	**Boso 2**	6.26	344	*e*S	Sn	06 46 03.7	-0.9
JHU	**Hanno**	7.71	338	*e*S	Sn	06 46 40.2	-0.2
JRY	**Ryogami san**	7.99	336	P	Pn	06 45 19.2	+1.1
MJAR	**Matsushiro Arr**	8.71	335	Pn	Pn	06 45 27.7	-0.3
0.5nm,0.3s,baz=147,slow=11,SNR=3.4							
WRAB	**Tennant Creek**	49.07	191	*eP*	P	06 52 09.1	+0.7
3.3nm,0.8s,mb4.4							
WRA	**Warramunga Arr**	49.08	191	P	P	06 52 07.6	-0.9
1.5nm,0.6s,mb4.2,baz=12,slow=8.4,SNR=6.6							
KURK	**Kurchatov**	52.27	314	P	P	06 52 34.1	+1.9
0.6nm,0.3s,mb4.0,baz=89,slow=7.6,SNR=6.2							
BVAR	**Borovoye Array**	57.24	317	P	P	06 53 09.7	+1.5
0.4nm,0.5s,mb3.7,baz=95,slow=9.1,SNR=2.8							
NVAR	**Mina Array Bea**	79.06	52	P	P	06 55 24.3	-1.0
0.3nm,0.7s,mb3.4,baz=302,slow=5.2,SNR=3.6							
LPAZ	**La Paz**	148.92	73	PKPbc	PKPbc	07 03 09.8	+0.5
0.9nm,0.8s,baz=335,slow=7.1,SNR=4.4							

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*ISCJB **07** 07:46:03.1±0.7, 58°.09S±0°.08×147°.8E±0°.4, h10km, mb4.5/11, MS4.4/12, Error ellipse: s-maj=32.7km s-min=10.0km az=171.6*
*IDC **07** 07:46:03.8±0.8, 58°.10S×147°.55E, h0km, mb4.5/9, mb1 4.6/9, mb1mx4.5/14, mbtmp4.5/9, MS4.4/12, Ms1 4.4/12, ms1mx4.1/20, Error ellipse: s-maj=47.2km s-min=16.4km az=85.0*
*GCMT **07** 07:46:05.8±0.3, 58°.06S×148°.27E, h12km, MW5.0, Moment Tensor Solution. s33,c38; s69,c106; Moment tensor: Scale 10^16 Nm; Mrr=0.16±.13; Mθθ=2.17±.11; Mφφ=-2.01±.13; Mrθ=1.38±.34; Mrφ=-3.62±.09; Mθφ=0.63±.34; Best double couple: M0=4.50000×10^16 NP1:φs=344.00000°, δ70.00000°, λ=-4.00000°. NP2:φs=76.00000°, δ87.00000°, λ=-160.00000°. Principal axes: T 4.4400, Plg11.0000°, Azm208.0000°; N 0.0200, Plg70.0000°, Azm85.0000°; P -4.4600, Plg16.0000°, Azm302.0000°; Data Used: IU II IC G CN.*
*NEIC **07** 07:46:05.2±0.5, 58°.09S×147°.77E, h10km, mb4.8/4 Error ellipse: s-maj=30.7km s-min=9.7km az=82.0*
ISC 07 07:46:04.9±0.6, 58°.08S±0°.08×147°.8E±0°.4, h10km, n54, σ0s95/16, mb4.5/11, MS4.4/12, 4C-3D, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	20.39	55	LR	LR	07 57 19.4	
comp=Z,838nm,18.1s,MS4.1,baz=8.9,slow=33							
SBA	**Scott Base**	20.87	169	*eP*	P	07 50 46.0	-0.6
80nm,1.4s							
STKA	**Stephens Creek**	26.55	348	P	P	07 51 42.7	+0.1
5.3nm,1.0s,mb4.0,baz=161,slow=14,SNR=3.2							
URZ	**Urewera**	27.48	57	LR	LR	08 02 00.2	
comp=Z,1µm,18.7s,MS4.6,baz=215,slow=35							
QSPA	**South Pole Qui**	32.02	180	P	P	07 52 30.3	-0.6
16nm,1.0s,mb4.8,baz=359,slow=3.2,SNR=19							
QSPA				LR	LR	08 06 02.5	
comp=Z,1µm,18.5s,MS4.6,baz=7.0,slow=38							
ASAR	**Alice Springs**	35.80	338	P	P	07 53 03.8	-0.4
4.7nm,0.8s,mb4.5,baz=167,slow=9.0,SNR=24							
MAW	**Mawson**	36.82	220	P	P	07 53 12.9	+0.4
5.3nm,1.0s,mb4.3,baz=101,slow=11,SNR=9.0							
MAW				LR	LR	08 08 03.3	
comp=Z,1µm,18.7s,MS4.7,baz=100,slow=36							
CTA	**Charters Tower**	37.96	358	P	P	07 53 24.9	+2.3
8.5nm,1.0s,mb4.4,baz=198,slow=13,SNR=3.0							
CTAO	**Charters Tower**	37.96	358	*eP*	P	07 53 20.9	-1.7
15nm,1.2s,mb4.6							
WRA	**Warramunga Arr**	39.35	340	P	P	07 53 33.2	-0.9
9.4nm,0.9s,mb4.5,baz=166,slow=7.2,SNR=31							
WRAB	**Tennant Creek**	39.35	340	*eP*	P	07 53 33.6	-0.6
35nm,1.4s,mb4.9							
MBWA	**Marble Bar**	42.13	319	*eP*	P	07 53 57.5	+0.3
12nm,0.7s,mb4.6							
KAKA	**Kakadu**	46.75	339	*eP*	P	07 54 35.7	+1.5
MAIT	**Maitri**	47.73	198	*eP*	P	07 54 41.7	+0.5
MAIT				*e*		07 54 47.3	
MAIT				*e*S	ScP	07 59 59.8	-4.3
HNR	**Honiara**	49.43	16	LR	LR	08 10 47.4	
comp=Z,324nm,20.8s,MS4.3,baz=65,slow=30							
TBI	**Tubuai**	56.12	80	*e*LR	LR	08 11 40.2	
221nm,26.5s,baz=215							
PPT	**Papeete**	60.84	76	*e*LQ		08 11 31.2	
412nm,24.5s							
PPT				*e*LR	LR	08 13 49.2	
252nm,22.2s,baz=208							
PPT	**Papeete**	60.84	76	LR	LR	08 16 56.3	
comp=Z,288nm,21.0s,MS4.4,baz=298,slow=30							
RKT	**Rikitea**	63.97	92	*e*LQ		08 12 44.0	
376nm,29.0s							
RKT				*e*LR	LR	08 15 14.3	
208nm,27.2s							
PLCA	**Paso Flores**	76.46	151	P	P	07 57 56.4	+1.9
3.7nm,1.1s,mb4.2,baz=197,slow=9.1,SNR=2.6							
BOSA	**Boshof**	81.24	229	P	P	07 58 20.4	-0.4
5.3nm,1.0s,mb4.4,baz=186,slow=9.2,SNR=3.3							
BOSA				LR	LR	08 29 19.1	
comp=Z,230nm,18.3s,MS4.6,baz=160,slow=32							
LBTB	**Lobatse**	84.30	230	LR	LR	08 32 00.7	
comp=Z,222nm,18.4s,MS4.6,baz=157,slow=33							
TSUM	**Tsumeb**	92.71	226	LR	LR	08 34 45.5	
comp=Z,209nm,19.1s,MS4.6,baz=131,slow=32							
CPUP	**Villa Florida**	93.32	158	P	P	07 59 18.9	-0.9
1.4nm,0.8s,mb4.5,baz=164,slow=0.8,SNR=4.3							
CPUP				LR	LR	08 36 09.7	
comp=Z,88nm,21.1s,MS4.2,baz=180,slow=32							
CPUP	**Villa Florida**	93.32	158	P	P	07 59 18.9	-0.9
CPUP				LR	LR	08 36 09.7	
MJAR	**Matsushiro Arr**	94.61	352	LR	LR	08 37 18.7	
comp=Z,60nm,21.4s,MS4.0,baz=190,slow=32							
KSRS	**Korea Array**	96.63	344	LR	LR	08 39 58.8	
comp=Z,65nm,21.9s,MS4.1,baz=145,slow=34							
TORD	**Torodi Ar. Bea**	128.39	224	PKP	PKPdf	08 05 11.9	+0.2
2.2nm,1.1s,baz=184,slow=4.5,SNR=5.0							
BRTR	**Keskin Array B**	134.99	276	PKP	PKPdf	08 05 24.8	+1.4
0.5nm,0.7s,baz=200,slow=2.9,SNR=2.5							
MLR	**Muntele Rosu**	143.07	276	*i,iP*	PKPdf	08 05 36.6	-1.3
AKASG	**Malin Array Be**	144.63	285	PKP	PKPdf	08 05 40.4	0.0
4.5nm,0.9s,baz=107,slow=2.5,SNR=5.8							
AKASG	**Malin Array Be**	144.63	285	PKP	PKPdf	08 05 40.4	0.0
AKBB	**Malin Array Si**	144.63	285	*e*PKPdf	PKPdf	08 05 40.1	-0.3
KIEV	**Kiev**	144.63	285	*e*PKPdf	PKPdf	08 05 40.4	0.0
GZR	**Gura Zlata**	144.69	273	*i,iP*	PKPdf	08 05 40.9	+0.2
KEST	**Kesra**	144.69	249	PKP	PKPdf	08 05 43.5	+2.4
5.7nm,1.0s,baz=202,slow=0.8,SNR=11							
KEST	**Kesra**	144.69	249	*e*PKPdf	PKPdf	08 05 43.1	+2.0
BURAR	**Bucovina Array**	144.83	278	*i,iP*	PKPdf	08 05 42.5	+1.6
BUR08	**Bucovina Ar. S**	144.85	278	*e*PKPdf	PKPdf	08 05 42.0	+1.1
BZS	**Buzias**	145.45	273	*i,iP*	PKPdf	08 05 45.0	+3.0
CRVS	**Cervenica-Dubn**	147.60	277	*eP*	PKPbc	08 05 49.7	+1.4
CRVS	**Cervenica-Dubn**	147.60	277	*e*PKP	PKPbc	08 05 49.7	+1.4
KECS	**Kecovo**	147.86	276	*eP*	PKPbc	08 05 51.4	+2.4
KECS	**Kecovo**	147.86	276	*e*PKP	PKPbc	08 05 51.4	+2.4
VYHS	**Vyhne**	148.74	275	*eP*	PKPbc	08 05 52.7	+1.4
VYHS	**Vyhne**	148.74	275	*e*PKP	PKPbc	08 05 52.7	+1.4
JOF	**Joensuu**	149.51	306	*eP*	PKPbc	08 05 56.1	+3.4
JOF	**Joensuu**	149.51	306	*ep*	PKPbc	08 05 56.1	+3.4
6.3nm,0.8s							
OKC	**Ostrava-Krasne**	149.90	276	*i*PKP	PKPbc	08 05 57.3	+3.2
MORC	**Moravsky Berou**	150.18	276	*e*PKPbc	PKPbc	08 05 56.3	+1.5
MORC	**Moravsky Berou**	150.18	276	*i,iP*	PKPbc	08 05 56.3	+1.5
DPC	**Dobruska-Polom**	151.16	276	*i*PKP	PKPbc	08 05 59.1	+2.0
FINES	**FINESS Array B**	151.31	302	PKPbc	PKPbc	08 05 57.3	+0.3
4.5nm,0.7s,baz=132,slow=2.8,SNR=8.4							
ARCES	**ARCESS Array B**	153.24	319	PKPbc	PKPbc	08 06 02.8	+1.6
2.8nm,1.0s,baz=83,slow=20,SNR=3.8							
ARCES				PKPab	PKPab	08 06 12.2	-1.0
2.5nm,1.0s,baz=2.8,slow=5.6,SNR=3.9							

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*IDC **07** 07:48:11.3±0.6, 33°.04S×177°.85W, h0km, mb4.5/12, mb1 4.6/14, mb1mx4.6/19, mbtmp4.5/14, ML4.4/2, MS3.9/4, Ms1 3.9/4, ms1mx3.4/24, Error ellipse: s-maj=18.7km s-min=16.2km az=175.0*
*ISCJB **07** 07:48:14.2±0.5, 33°.44S±0°

CTA	Charters Tower	34.63	283	P	P	07 55 02.4	+0.3
ASAR	Alice Springs	43.28	270	P	P	07 56 14.3	-0.1
	11nm,1.0s,mb4.6,baz=112,slow=7.7,SNR=33						
ASAR				S	S	08 02 39.4	-0.2
	1.1nm,0.9s,baz=119,slow=16,SNR=6.9						
WRAB	Tennant Creek	44.53	275	*e*P	P	07 56 23.9	-0.7
	13nm,0.8s,mb4.8						
WRA	Warramunga Arr	44.54	275	P	P	07 56 23.8	-0.9
	13nm,0.8s,mb4.8,baz=115,slow=7.6,SNR=53						
SBA	Scott Base	45.09	185	*e*P	P	07 56 33.8	+5.5
QSPA	South Pole Qui	56.73	180	P	P	07 57 59.6	+3.8
	20nm,1.0s,mb5.1,baz=41,slow=2.0,SNR=33						
QSPA	South Pole Qui	56.73	180	P	P	07 57 59.6	+3.8
MAW	Mawson	69.61	201	P	P	07 59 23.9	+2.6
	8.3nm,1.1s,mb4.6,baz=99,slow=8.2,SNR=7.7						
SYO	Syowa Base	74.27	193⇑	*e*P	P	07 59 49.6	+0.4
SYO	Syowa Base	74.27	193⇑	*e*P	pP	08 00 02.4	+2.3
MJAR	Matsushiro Arr	80.83	325	P	P	08 00 24.6	-1.5
	0.9nm,0.7s,mb3.8,baz=168,slow=7.5,SNR=3.3						
KSRS	Korea Array	86.78	320	P	P	08 00 56.3	-0.2
	2.7nm,0.9s,mb4.5,baz=141,slow=5.6,SNR=11						
PETK	Petropavlovsk-	88.76	345	P	P	08 01 06.5	+1.0
	2.3nm,0.8s,mb4.5,baz=94,slow=5.8,SNR=3.8						
GSC	Goldstone	88.98	46	*e*P	P	08 01 07.4	+0.3
	6.0nm,1.0s,mb4.9						
LDFC	Landfair	89.85	47	*e*P	P	08 01 12.3	+1.1
	13nm,0.8s,mb5.3						
NVAR	Mina Array Bea	90.26	43	P	P	08 01 12.8	-0.1
	2.0nm,0.8s,mb4.5,baz=219,slow=8.4,SNR=15						
TUC	Tucson	90.78	51	*e*P	P	08 01 16.3	+0.8
	5.2nm,1.3s,mb4.7						
NNA	Nana	92.36	106	LR	LR	08 34 59.4	
	comp=Z,102nm,19.2s,MS4.3,baz=40,slow=30						
CN2	Changchun	92.67	323	*e*P	P	08 01 23.7	-0.3
CN2				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.5						
TXAR	Lajitas Array	93.78	57	P	P	08 01 29.7	+0.2
	comp=Z,0.1nm,0.7s,baz=199,slow=2.7,SNR=3.5						
LPAZ	La Paz	96.69	114	P	P	08 01 44.0	+0.7
	comp=Z,0.7nm,0.9s,mb4.1,baz=258,slow=9.3,SNR=2.8						
LPAZ				LR	LR	08 38 01.6	
	comp=Z,87nm,19.0s,MS4.3,baz=41,slow=31						
MK31	Makanchi Array	119.86	309	*e*PKPdf	PKPdf	08 07 01.8	-0.4
MKAR	Makanchi Array	119.86	309	PKP	PKPdf	08 07 01.9	-0.4
	comp=Z,1.8nm,0.9s,baz=66,slow=3.3,SNR=12						
KURK	Kurchatov	123.27	312	*e*PKPdf	PKPdf	08 07 08.0	-0.7
BVAR	Borovoye Array	128.69	314	PKP	PKPdf	08 07 19.6	+0.6
	comp=Z,2.8nm,0.8s,baz=96,slow=3.0,SNR=13						
ABKAR	Akbulak array	135.00	308	*e*PKPdf	PKPdf	08 07 30.9	-0.1
ARCES	ARCESS Array B	141.55	347	PKhKP	PKPpre	08 07 37.0	
	comp=Z,0.9nm,0.6s,baz=48,slow=1.8,SNR=6.7						
DGRG	David-gareji	145.15	296	P	PKPbc	08 07 50.8	+1.5
JOF	Joensuu	145.27	337	*e*P	PKPbc	08 07 46.4	-2.6
JOF	Joensuu	145.27	337	*e*p	PKPbc	08 07 46.4	-2.6
	comp=Z,8.6nm,0.7s						
KEH	Kehvi	146.22	298	P	PKPdf	08 07 53.2	+1.7
ONI	Oni	146.57	298	P	PKPdf	08 07 55.1	+3.0
KAF	Kangasniemi	147.43	339	*e*P	PKPdf	08 07 53.7	+0.8
KAF	Kangasniemi	147.43	339	*e*p	PKPdf	08 07 53.7	+0.8
	comp=Z,9.9nm,0.6s						
FINES	FINESS Array B	148.02	339	PKPbc	PKPbc	08 07 56.3	-0.7
	comp=Z,29nm,0.8s,baz=36,slow=4.0,SNR=46						
NB2	NORSAR Subarra	151.73	351	PKP	PKPbc	08 08 05.5	-0.6
	comp=Z,10nm,0.8s,baz=15,slow=2.5						
NOA	NORSAR Array B	151.73	351	PKPbc	PKPbc	08 08 05.8	-0.3
	comp=Z,9.1nm,0.8s,baz=14,slow=4.1,SNR=27						
LIC	Lamto	152.13	164	*e*PKP1	PKPbc	08 08 09.1	+0.6
	comp=Z,139nm,1.9s						
IZAR	Zarasai	152.14	331	*e*P	PKPbc	08 08 06.4	-0.8
IZAR				AMB	AMB	08 08 08.3	
	comp=Z,9.1nm,0.9s						
IDID	Didziasalis	152.23	329	*e*P	PKPbc	08 08 07.2	-0.1
IDID				AMB	AMB	08 08 08.4	
	comp=Z,5.2nm,1.0s						
ISAL	Salakas	152.31	330	*e*P	PKPbc	08 08 06.5	-1.0
ISAL				AMB	AMB	08 08 08.6	
	comp=Z,5.1nm,1.2s						
KIC	Kosan Boka	152.32	165	*e*PKP1	PKPbc	08 08 09.7	+0.8
	comp=Z,42nm,1.1s						
MMAI	Mount Meron Ar	152.36	278	PKPbc	PKPbc	08 08 10.0	+1.6
	comp=Z,10nm,0.6s,baz=78,slow=5.2,SNR=14						
IIGN	Ignalina	152.42	330	*e*P	PKPbc	08 08 06.9	-0.9
IIGN				AMB	AMB	08 08 08.9	
	comp=Z,8.9nm,0.8s						
TIC	Toumodi	152.54	164	*e*PKP1	PKPbc	08 08 10.1	+0.7
	comp=Z,194nm,1.6s						
DBIC	Dimbokro	152.60	164	PKPbc	PKPbc	08 08 10.1	+0.6
	comp=Z,17nm,0.9s,baz=175,slow=1.5,SNR=8.3						
AKASG	Malin Array Be	153.78	319	PKPbc	PKPbc	08 08 10.9	0.0
	comp=Z,1.0nm,0.5s,baz=53,slow=2.3,SNR=5.3						
BR131	Keskin Array S	154.13	293	*e*PKPab	PKPab	08 08 25.1	-0.7
BRTR	Keskin Array B	154.13	293	PKPbc	PKPbc	08 08 12.2	+0.1
	comp=Z,3.5nm,0.9s,baz=119,slow=4.4,SNR=9.2						
BRTR				PKPab	PKPab	08 08 25.3	-0.6
	comp=Z,4.6nm,0.8s,baz=118,slow=3.9,SNR=12						
TORD	Torodi Ar. Bea	159.85	178	PKP	PKPdf	08 08 12.7	+0.7
	comp=Z,3.1nm,1.0s,baz=329,slow=0.4,SNR=9.2						
TORD				PKPab	PKPab	08 08 52.4	+1.5
	comp=Z,3.4nm,0.8s,baz=176,slow=3.2,SNR=7.6						
CLL	Collm	160.46	340	*e*PKPab	PKPab	08 08 53.0	+0.3

*ISCJB **07** 08:05:38.5±0.6,51°.77N±0°.09×178°.56E±0°.07,h77km±6km, mb4.0/23, Error ellipse: s-maj=15.5km s-min=6.8km az=176.2*
*NEIC **07** 08:05:39.6±0.7,51°.66N×178°.49E,h79km±6km,mb4.2/7, Error ellipse: s-maj=14.9km s-min=6.6km az=179.0*
*IDC **07** 08:05:42.3±3.2,51°.86N×178°.67E,h98km±28km,mb3.6/16, mb1 3.7/17,mb1mx3.7/27,mbtmp3.6/17,MS3.1/2, Ms1 3.1/2,ms1mx2.6/40, Error ellipse: s-maj=21.7km s-min=13.3km az=172.0*
*BJI **07** 08:05:43.6,51°.70N×178°.50E,h79km,mB5.0/3,mb4.7/2, Ms4.7/2,Ms7 4.3/2*

ISC 07 08:05:39.7±0.6,51°.71N±0°.09×178°.55E±0°.07,h74km±6km, n49,σ1°15/46,mb4.0/23,Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	Amchitka	0.58	125	*e*P	Pn	08 05 53.3	-0.3
AMKA				S	Sn	08 06 03.0	-0.9
SMY	Shemya	2.92	292	*e*P	Pn	08 06 23.6	-0.2
ADK	Adak	2.97	85	P	Pn	08 06 24.0	-0.5
ADK				S	Sn	08 06 58.5	-0.5
FX1	Attu Island--F	3.51	292	P	Pn	08 06 31.3	-0.5
UNV	Unalaska Valle	9.31	71	*e*Pn	Pn	08 07 53.0	+2.1
AKUT	Akutan	9.78	69	*e*P	Pn	08 07 58.8	+1.5
	174nm,1.2s						
PETK	Petropavlovsk-	12.80	284	P	Pn	08 08 42.7	+4.2
	0.6nm,0.3s,baz=92,slow=19,SNR=14						
PETK				S	Sn	08 10 54.5	-4.4
	0.4nm,0.3s,baz=273,slow=29,SNR=4.7						
PETK				LR	LR	08 13 30.9	
	comp=Z,29nm,19.8s,baz=267,slow=36						
PETK	Petropavlovsk-	12.80	284	P	Pn	08 08 42.7	+4.2
PETK				S	Sn	08 10 54.5	-4.4
PETK				LR	LR	08 13 30.9	
SDPT	Sand Point	12.99	65	*e*Pn	Pn	08 08 39.4	-1.6
CHGN	Chignik	14.28	62	*e*Pn	Pn	08 08 59.4	+1.5
RSO	Redoubt South	18.12	50	*e*P	Pn	08 09 48.8	+2.8
BPAW	Bear Paw Mtn.	20.14	40	*e*P	P	08 10 09.1	+1.6
	13nm,1.3s						
EGAK	Eagle	24.40	42	*e*P	P	08 10 50.6	-0.1
	17nm,1.3s,mb4.2						
DAWY	Dawson	25.01	44	*e*P	P	08 10 56.8	+0.6
ASAJ	Asahikawa	25.06	267	P	P	08 10 58.5	+1.6
	6.1nm,0.7s,mb4.1,baz=286,slow=12,SNR=3.7						
YKA	Yellowknife Ar	36.20	46	P	P	08 12 34.2	-0.5
	0.6nm,0.5s,mb3.8,baz=286,slow=7.7,SNR=4.3						
YKA	Yellowknife Ar	36.20	46	P	P	08 12 34.2	-0.5
KSRS	Korea Array	37.98	268	P	P	08 12 52.5	+2.4
	0.5nm,0.3s,mb3.8,baz=52,slow=7.6,SNR=2.8						
HLID	Hailey	44.44	73	*e*P	P	08 13 44.4	+1.5
	0.9nm,0.9s,mb3.5						
SONM	Songino Array	45.01	295	P	P	08 13 48.3	+0.9
	1.2nm,0.5s,mb3.9,baz=58,slow=9.4,SNR=6.1						
NVAR	Mina Array Bea	45.15	81	P	P	08 13 49.1	+0.4
	0.6nm,0.7s,mb3.5,baz=295,slow=7.0,SNR=5.9						
NVAR				ScP	ScP	08 19 11.7	-1.8
	0.9nm,1.0s,baz=258,slow=5.9,SNR=4.2						
PDAR	Pinedale Array	47.78	71	P	P	08 14 07.8	-1.4
	0.6nm,0.5s,mb3.7,baz=324,slow=3.2,SNR=8.7						
WHN	Wuhan	50.98	272	*e*P	P	08 14 37.3	+3.6
ZALV	Zalesovo Beam	52.59	312	PcP	PcP	08 15 54.4	-0.1
	0.6nm,0.3s,baz=20,slow=4.7,SNR=4.7						
SUMG	Summit	53.36	13	*e*P	P	08 14 51.1	+0.3
	139nm,2.9s						
ARCES	ARCESS Array B	57.47	349	P	P	08 15 18.3	-2.0
	2.9nm,1.0s,mb4.3,baz=28,slow=5.5,SNR=5.0						
KURK	Kurchatov	57.58	312	*e*P	P	08 15 21.2	-0.1
	6.5nm,0.9s,mb4.7						
MK31	Makanchi Array	58.52	307	*e*P	P	08 15 27.4	-0.5
MKAR	Makanchi Array	58.52	307	P	P	08 15 27.1	-0.8
	1.6nm,0.5s,mb4.3,baz=48,slow=6.0,SNR=22						
GYA	Guiyang	58.64	274	P	P	08 15 32.4	+3.3
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
BVAR	Borovoye Array	59.55	318	P	P	08 15 34.9	-0.1
	comp=Z,4.6nm,0.5s,mb4.8,baz=56,slow=6.6,SNR=21						
BVAR				PcP	PcP	08 16 21.4	-0.2
	comp=Z,1.9nm,0.7s,baz=29,slow=3.4,SNR=3.7						
BRVK	Borovoye	59.57	318	*e*P	P	08 15 35.2	+0.1
TXAR	Lajitas Array	60.23	79	P	P	08 15 39.8	-0.2
	comp=Z,0.8nm,1.0s,mb3.7,baz=307,slow=4.5,SNR=6.4						
SCHQ	Schefferville	60.76	37	P	P	08 15 42.5	-0.7
	comp=Z,2.4nm,0.8s,mb4.3,baz=285,slow=8.0,SNR=2.9						
FINES	FINESS Array B	65.08	346	P	P	08 16 10.1	-1.6
	comp=Z,0.7nm,0.6s,mb3.7,baz=44,slow=6.6,SNR=4.2						
ABKAR	Akbulak array	66.66	321	*e*P	P	08 16 22.4	+0.4
	comp=Z,1.0nm,0.4s,mb4.0						
NOA	NORSAR Array B	67.14	353	P	P	08 16 24.0	-0.9
	comp=Z,0.5nm,0.7s,mb3.5,baz=81,slow=5.9,SNR=2.8						
LRAL	Lakeview Retre	67.41	65	*e*P	P	08 16 24.7	-2.4
	comp=Z,4.5nm,1.3s,mb4.1						
KBL	Kabul	74.31	306	*e*P	P	08 17 08.5	-0.5
	comp=Z,6.3nm,0.8s,mb4.4						
AKASG	Malin Array Be	74.70	340	P	P	08 17 09.7	-1.2
	comp=Z,0.9nm,0.5s,mb3.8,baz=18,slow=5.8,SNR=2.8						
BUR08	Bucovina Ar. S	78.42	342	*e*P	P	08 17 31.8	-0.2
WRA	Warramunga Arr	81.13	222	P	P	08 17 46.6	-0.1
	comp=Z,0.3nm,0.3s,mb3.6,baz=30,slow=6.4,SNR=10						
BRTR	Keskin Array B	83.93	334	LR	LR	08 58 11.4	
	comp=Z,35nm,20.6s,baz=282,slow=38						
ASAR	Alice Springs	84.64	220	P	P	08 18 05.0	+0.2
	comp=Z,0.3nm,0.8s,mb3.3,baz=23,slow=5.2,SNR=4.0						
TORD	Torodi Ar. Bea	115.36	357	PKP	PKPdf	08 24 11.3	-1.5
	comp=Z,0.3nm,0.5s,baz=4.4,slow=2.7,SNR=5.6						
LBTB	Lobatse	146.30	312	PKPbc	PKPbc	08 25 11.8	+0.2
	comp=Z,11nm,1.2s,baz=348,slow=1.9,SNR=6.0						
LBTB	Lobatse	146.30	312	PKPbc	PKPbc	08 25 11.8	+0.2
BOSA	Boshof	149.50	309	PKPbc	PKPbc	08 25 20.0	0.0
	comp=Z,1.5nm,0.5s,baz=317,slow=9.1,SNR=4.4						
BOSA	Boshof	149.50	309	PKPbc	PKPbc	08 25 20.0	0.0

*ISCJB **07** 08:28:27.7±0.6,19°.95S±0°.05×69°.01W±0°.08,h98km±7km, mb3.9/3, Error ellipse: s-maj=12.6km s-min=7.4km az=6.1*
*GUC **07** 08:28:28.6±0.7,19°.99S×69°.24W,h105km±7km,ML4.3*
*IDC **07** 08:28:31.5±2.2,19°.83S×68°.75W,h121km±19km,mb3.7/4, mb1 4.0/7,mb1mx3.7/18,mbtmp3.7/7,MS3.3/1,Ms1 3.3/1, ms1mx2.7/22, Error ellipse: s-maj=24.7km s-min=16.5km az=74.0*
*NEIC **07** 08:28:34.8±1.1,19°.90S×68°.43W,h152km±11km, Error ellipse: s-maj=16.7km s-min=12.4km az=78.0*

ISC 07 08:28:28.5±0.5,19°.95S±0°.05×68°.97W±0°.06,h91km±7km, n23,σ1°31/24,mb3.9/3,2C-2D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMBC	Humberston	0.92	249	⇓*i*P	Pn	08 28 46.5	-0.8
HMBC				*i*S	Sn	08 29 00.1	-1.3
HMBC				AML	AML	08 29 01.3	
	comp=E,11μm,0.5s						
MNMC	Miæe Miæ	1.00	324	⇑*i*P	Pn	08 28 49.4	+1.2
MNMC				*i*S	Sn	08 29 04.7	+1.6
MNMC				AML	AML	08 29 05.2	
	comp=E,39μm,0.4s						
PSGC	Pisagua	1.14	288	⇑*i*P	Pn	08 28 48.9	-0.8
PSGC				*i*S	Sn	08 29 04.1	-1.7
PSGC				AML	AML	08 29 06.7	
	comp=E,3μm,0.4s						
PB01	Plate Boundary	1.19	204	⇓*i*P	Pn	08 28 50.6	+0.2
PB01				*i*S	Sn	08 29 07.3	+0.3
PB01				AML	AML	08 29 08.8	
	comp=N,6μm,0.5s						
CEN1	Los Morros	3.61	198	*e*P	Pn	08 29 25.2	+2.9
LPAZ	La Paz	3.73	13	P	Pn	08 29 27.4	+3.6
	comp=N,4.8nm,0.3s,baz=189,slow=6.7,SNR=168						
LPAZ				S	Sn	08 30 08.0	+1.3
	comp=N,2.0nm,0.3s,baz=172,slow=16,SNR=6.7						
LPAZ	La Paz	3.73	13	*e*Pn	Pn	08 29 28.6	+4.7
LPAZ				S	Sn	08 30 08.0	+1.3
SIV	San Ignacio	8.48	64	P	Pn	08 30 28.3	-0.3
	comp=N,4.4nm,0.3s,baz=258,slow=11,SNR=84						
SIV				S	Sn	08 32 00.8	-2.0
	comp=N,0.1nm,0.3s,baz=337,slow=22,SNR=3.9						
LCO	Las Campanas	9.16	190	*e*Pn	Pn	08 30 45.3	+7.5
	comp=N,30nm,0.8s						
NNA	Nana	10.95	315	P	Px	08 31 14.4	
	comp=N,0.2nm,0.3s,baz=162,slow=8.8,SNR=5.0						
CPUP	Villa Florida	12.45	123	P	Pn	08 31 22.5	+0.1
	comp=N,0.5nm,0.3s,baz=281,slow=12,SNR=22						
CPUP	Villa Florida	12.45	123	*e*Pn	Pn	08 31 22.8	+0.4
PLCA	Paso Flores	20.76	183	P	P	08 33 04.3	+2.4
	comp=N,4.7nm,0.9s,baz=355,slow=11,SNR=9.0						
PLCA	Paso Flores	20.76	183	P	Pn	08 33 04.3	+2.4
ROSC	El Rosal	25.20	347	LR	LR	08 44 22.3	
	comp=N,63nm,18.6s,baz=19,slow=38						
NVAR	Mina Array Bea	74.24	322	P	P	08 39 56.0	+0.3
	comp=N,0.3nm,0.5s,mb3.3,baz=162,slow=6.5,SNR=3.7						
NVAR	Mina Array Bea	74.24	322	P	P	08 39 56.0	+0.3
TORD	Torodi Ar. Bea	76.90	71	P	P	08 40 09.8	-1.5
	comp=N,0.9nm,0.5s,mb3.8,baz=252,slow=5.5,SNR=26						
TORD				pP	pP	08 40 37.7	+2.8
	comp=N,1.8nm,0.7s,baz=251,slow=5.3,SNR=7.2						
YKA	Yellowknife Ar	89.71	341	P	P	08 41 15.1	-0.8
	comp=N,2.7nm,0.7s,mb4.5,baz=136,slow=4.6,SNR=13						
ASAR	Alice Springs	131.25	208	PKP	PKPdf	08 47 29.4	-1.4
	comp=N,0.4nm,0.6s,baz=128,slow=1.6,SNR=6.1						
WRA	Warramunga Arr	134.25	211	PKP	PKPdf	08 47 35.0	-1.4
	comp=N,0.7nm,0.7s,baz=151,slow=1.8,SNR=7.3						
MKAR	Makanchi Array	144.41	35	PKP	PKPdf	08 47 52.0	-2.0
	comp=N,0.1nm,0.4s,baz=300,slow=4.0,SNR=4.7						
SONM	Songino Array	151.93	7	PKPbc	PKPbc	08 48 12.4	-0.4
	comp=N,1.3nm,0.4s,baz=306,slow=1.6,SNR=6.5						

DJA 07 08:42:40,2°.78S×100°.79E,h20km,MLv3.6/3,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	Pulau Pagai	0.78	271	P	Pb	08 42 56.2	+1.3
PPSI				S	Sb	08 43 05.4	+0.4
KRJI	Kerinci	0.96	44	P	Pb	08 42 55.5	-2.4
PDSI	Padang	1.88	350	P	Pn	08 43 09.4	-1.7
SDSI	Sungai Dareh	1.94	19	P	Pn	08 43 14.7	+2.8
SDSI				S	Sn	08 43 37.2	+1.5

*IDC **07** 08:51:11.8±18.0,27°.96S×179°.49E,h0km,mb3.7/3, mb1 4.1/4,mb1mx3.8/15,mbtmp4.0/4,ML4.6/1, Error ellipse: s-maj=345.6km s-min=48.8km az=67.0*

ISC 07 08:51:26.1±2.1,28°.7S±0°.1×178°.3E±0°.3,h35km,n15, σ1°13/18,mb3.6/3,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	8.80	180	PN	Pn	08 53 32.1	+1.4
URZ	Urewera	9.54	185	Pn	Pn	08 53 43.6	+2.6
	4.6nm,0.3s,baz=274,slow=6.6,SNR=43						
URZ				Sn	Sn	08 55 28.1	+1.2
	2.8nm,0.3s,baz=51,slow=19,SNR=11						
URZ	Urewera	9.54	185	PN	Pn	08 53 43.3	+2.3
URZ				SN	Sn	08 55 27.8	+0.9
MWZ	Matawai	9.59	183	PN	Pn	08 53 41.6	0.0
CNGZ	Carnagh Statio	9.72	180	PN	Pn	08 53 42.5	-0.9
BKZ	Black Stump Fm	10.50	188	PN	Pn	08 53 55.4	+1.3
BKZ				SN	Sn	08 55 50.4	-0.1
PNHZ	Pukenui	11.27	188	PN	Pn	08 54 04.8	+0.1
MRZ	Mangatainoka R	12.09	190	PN	Pn	08 54 14.7	-1.2
OGWZ	Otaki Gorge	12.31	191	PN	Pn	08 54 17.7	-1.2
CAW	Cannon Point	12.61	191	PN	Pn	08 54 21.9	-1.1
TUWZ	Tuamarina	13.14	194	PN	Pn	08 54 28.6	-1.6
THZ	Tophouse	13.70	197	PN	Pn	08 54 37.1	-0.8
STKA	Stephens Creek	31.72	255	P	P	08 57 48.3	+1.7
	2.4nm,0.8s,mb4.0,baz=104,slow=8.3,SNR=3.4						
ASAR	Alice Springs	39.95	267	P	P	08 58 57.6	+0.3
	0.5nm,0.4s,mb3.6,baz=102,slow=7.0,SNR=13						
WRA	Warramunga Arr	40.78	272	P	P	08 59 03.5	-0.7
	0.3nm,0.5s,mb3.2,baz=110,slow=8.1,SNR=9.3						

*NEIC **07** 08:57:49.0,58°.31N×133°.52W,h1km,ML2.9(PGC), ML2.6(AEIC),After PGC.*

PGC 07 08:57:49.0±8.8,58°.31N×133°.52W,h1km,ML2.9/4,9D, 52km east of Juneau, Ak Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESE	Bessie Mountai	0.75	292	P	Pg	08 58 01.6	-1.9
BESE				S	Sg	08 58 12.7	-0.5
SKAG	Skagway	1.49	322	P	Pn	08 58 15.1	-1.8
SKAG				S	Sg	08 58 34.7	-2.1
SIT	Sitka	1.59	218	P	Pn	08 58 16.8	-1.5
SIT				S	Sn	08 58 39.2	-0.1
DLBC	Dease Lake	1.84	85	P	Pn	08 58 20.0	-1.8
DLBC				S	Sn	08 58 45.4	-0.3
DLBC	Dease Lake	1.84	85	⇓P	Pn	08 58 21.2	-0.5
DLBC				⇓Pg	Pg	08 58 22.3	-2.0
DLBC				⇑Sn	Sn	08 58 44.8	-0.9
DLBC				⇓Sg	Sg	08 58 46.8	-1.5
PLBC	Pleasant Camp	1.87	309	*e*Pn	Pn	08 58 22.1	0.0
PLBC				*e*Sn	Sn	08 58 45.5	-0.9
PLBC	Pleasant Camp	1.87	309	⇓Pn	Pn	08 58 22.1	0.0
PLBC				⇑Sn	Sn	08 58 45.5	-0.9
PLBC				⇓Sg	Sg	08 58 46.9	-2.2
WHY	Whitehorse	2.46	344	P	Pn	08 58 27.6	-2.5
WHY				S	Sn	08 59 00.4	-0.4
WHY	Whitehorse	2.46	344	⇓Pn	Pn	08 58 29.2	-0.9
WHY				⇑Pg	Pg	08 58 33.0	-3.1
HYT	Haines Junctio	3.24	323	*e*Pn	Pn	08 58 41.8	+1.0
HYT				*e*Sg	Sg	08 59 29.8	-3.1
HYT	Haines Junctio	3.24	323	⇓Pn	Pn	08 58 41.8	+1.0
HYT				⇓Pg	Pg	08 58 47.3	-3.7
HYT				⇓Sg	Sg	08 59 29.8	-3.1
EGAK	Eagle	7.44	334	*e*Pn	Pn	08 59 40.0	+1.5
	5.0nm,1.1s						

*ISCJB **07** 09:00:08.5±0.7,10°.25N±0°.06×62°.51W±0°.03,h15km±10km, Error ellipse: s-maj=9.5km s-min=4.5km az=171.1*
*FUNV **07** 09:00:09.5,10°.35N×62°.50W,h3km,MW2.8*
*TRN **07** 09:00:09.7,10°.12N×62°.31W,h3km,MD3.3*

ISC 07 09:00:09.4±0.7,10°.33N±0°.05×62°.50W±0°.03,h18km±5km, n14,σ1°29/22,4C,Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	Guiria	0.42	41⇑	*e*P	Pg	09 00 17.1	-0.9
GUIV				*e*S	Sg	09 00 23.8	-0.1
GUNV	Guanoco	0.46	250⇑	*i*P	Pg	09 00 17.9	-0.9
GUNV				*e*S	Sg	09 00 26.6	+1.4
CRUV	Carupano	0.80	296⇑	*e*P	Pb	09 00 23.2	-1.6
CRUV				*e*S	Sb	09 00 33.8	-1.6
TCE	Chacachacare	0.82	63	*e*P	Pb	09 00 24.3	-0.9
TCE				*e*S	Sb	09 00 36.9	+0.9
TPP	Pointe-a-Pierr	1.03	90	*e*S	Sb	09 00 39.0	-3.0
TRN	Trinidad (W)	1.13	73	*e*P	Pn	09 00 29.4	-0.9
TRN				*e*S	Sb	09 00 44.5	-0.2
ITEV	Isla Los Testi	1.20	329	*e*P	Pn	09 00 31.6	+0.3
ITEV				*e*S	Sb	09 00 47.8	+1.1
ORIV	Oritupano	1.54	216⇑	*e*P	Pn	09 00 37.9	+2.0
TPR	Prospect	1.90	63	*e*P	Pn	09 00 42.9	+2.0
BOT	Bacolet	1.94	64	*e*P	Pn	09 00 43.8	+2.3
PCRV	Puerto La Cruz	2.11	266	*e*P	Pn	09 00 44.1	+0.4
BIRV	Birongo	3.71	273	*e*P	Pn	09 01 07.0	+1.1
CAOV	Caicara del Or	4.81	232	*e*P	Pn	09 01 21.6	+0.7
CAOV				*e*S	Sn	09 02 14.8	-1.5
BAUV	El Baul	5.63	256	*e*P	Pn	09 01 32.1	-0.2
BAUV				*e*S	Sn	09 02 33.3	-3.3

**IDC 07 09:04:34.6±4.5,2°.40S×138°.85E,h0km,

LTZ	Lake Taylor	12.53	206	*e*PN	Pn	09 13 24.8	-2.4
LTZ				SN	S	09 15 45.7	-0.8
STKA	Stephens Creek	32.27	259	P	P	09 16 44.4	+2.3
5.4nm,0.8s,mb4.1,baz=91,slow=11,SNR=6.3							
ASAR	Alice Springs	41.08	269	P	P	09 17 56.5	+0.2
0.7nm,0.3s,mb3.3,baz=106,slow=7.4,SNR=8.8							
WRA	Warramunga Arr	42.19	275	P	P	09 18 04.8	-0.5
1.2nm,0.3s,mb3.6,baz=111,slow=8.1,SNR=19							
QSPA	South Pole Qui	58.41	180	P	P	09 20 05.8	+0.3
9.6nm,0.8s,mb4.3,baz=41,slow=1.5,SNR=48							
FINES	FINESS Array B	145.64	338	PKPbc	PKPbc	09 29 37.4	-7.5
0.7nm,0.4s,baz=29,slow=3.2,SNR=4.9							

*IDC **07** 09:14:45.2±7.1,33°.16S×179°.86W,h47km±59km,mb3.9/4, mb1 4.1/5,mb1mx3.8/18,mbtmp4.0/5,ML4.6/1,MS3.6/1, Ms1 3.6/1,ms1mx2.9/20,Error ellipse: s-maj=60.4km s-min=28.0km az=43.0*
*NEIC **07** 09:15:04.8±3.5,34°.45S×178°.67E,h151km±23km,mb4.1/1, Error ellipse: s-maj=47.8km s-min=24.6km az=47.0*
ISC 07 09:15:06.2±2.6,34°.7S±0°.2×179°.1E±0°.3,h197km±16km, n46,σ0°996/40,mb3.7/5,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.91	192	P	Pn	09 15 53.5	-1.0
MXZ				S	Sx	09 16 38.8	
MXZ	Matakaoa Point	2.91	192	PN	Pn	09 15 53.5	-1.1
MXZ				SN	Sx	09 16 40.3	
PUZ	Puketiti	3.41	191	P	Pn	09 15 59.2	-1.4
PUZ				S	Sx	09 16 52.8	
PUZ	Puketiti	3.41	191	PN	Pn	09 15 59.2	-1.3
PUZ				SN	Sx	09 16 51.8	
MWZ	Matawai	3.82	199	P	Pn	09 16 05.4	-0.2
MWZ	Matawai	3.82	199	PN	Pn	09 16 05.4	-0.2
CNGZ	Carnagh Statio	3.82	190	PN	Pn	09 16 04.8	-0.8
CNGZ				SN	Sx	09 17 02.8	
URZ	Urewera	3.87	204	P	Pn	09 16 06.8	+0.5
17nm,0.3s,baz=317,slow=2.1,SNR=32							
URZ				S	Sx	09 17 03.7	
40nm,0.3s,baz=88,slow=22,SNR=16							
URZ	Urewera	3.87	204	P	Pn	09 16 06.8	+0.6
URZ	Urewera	3.87	204	PN	Pn	09 16 06.8	+0.6
URZ				SN	Sx	09 17 04.0	
ALRZ	Allen Road	4.42	209	PN	Pn	09 16 14.3	+1.2
KNZ	Kokohu	4.44	194	PN	Pn	09 16 14.4	+1.1
RAHZ	Arahi	4.48	200	PN	Pn	09 16 14.9	+1.0
MHGZ	Mahia Peninsul	4.52	192	PN	Pn	09 16 15.0	+0.6
OUZ	Omahuta	4.53	262	*e*Pn	Pn	09 16 14.0	-0.6
NMHZ	Naumai	4.74	202	PN	Pn	09 16 18.0	+1.0
NMHZ				SN	Sx	09 17 25.8	
BKZ	Black Stump Fm	4.90	204	PN	Pn	09 16 19.6	+0.5
MCHZ	McNeill Hill	5.08	201	PN	Pn	09 16 22.8	+1.3
KAHZ	Kahuranaki	5.36	198	PN	Pn	09 16 24.7	-0.4
MOVZ	Moawhango	5.38	209	PN	Pn	09 16 27.1	+1.7
PXZ	Pawanui	5.59	198	PN	Pn	09 16 28.0	0.0
PNHZ	Pukenui	5.67	203	PN	Pn	09 16 29.7	+0.7
DVHZ	Dannevirke	6.03	202	PN	Pn	09 16 34.2	+0.5
MRZ	Mangatainoka R	6.55	204	P	Pn	09 16 39.8	-0.6
MRZ	Mangatainoka R	6.55	204	*e*PN	Pn	09 16 38.4	-2.0
HOWZ	Holdsworth Sta	6.78	204	*e*PN	Pn	09 16 41.2	-2.3
MTW	Mount Morrison	7.02	203	P	Pn	09 16 45.3	-1.3
TUWZ	Tuamarina	7.83	210	*e*PN	Pn	09 16 56.3	-0.8
NNZ	Nelson	7.89	213	P	Pn	09 16 57.8	-0.2
NNZ	Nelson	7.89	213	*e*PN	Pn	09 16 57.4	-0.5
NNZ				SN	Sx	09 18 38.3	
THZ	Tophouse	8.54	213	*e*PN	Pn	09 17 06.4	-0.1
THZ				SN	Sx	09 18 53.2	
KHZ	Kahutara	8.82	208	P	Pn	09 17 10.1	0.0
KHZ	Kahutara	8.82	208	*e*PN	Pn	09 17 10.0	-0.1
LTZ	Lake Taylor	9.64	211	PN	Pn	09 17 20.2	-0.6
CTA	Charters Tower	32.42	288	LR	LR	09 33 02.7	
comp=Z,114nm,21.5s,baz=311,slow=33							
ASAR	Alice Springs	40.65	273	P	P	09 22 27.0	-0.2
0.5nm,0.6s,mb3.1,baz=109,slow=7.1,SNR=7.8							
WRAB	Tennant Creek	42.04	279	*e*P	P	09 22 39.0	+0.5
2.8nm,0.5s,mb4.0							
WRA	Warramunga Arr	42.04	279	P	P	09 22 37.2	-1.3
2.2nm,0.4s,mb3.9,baz=116,slow=7.8,SNR=56							
WRA	Warramunga Arr	42.04	279	P	P	09 22 37.2	-1.3
FITZ	Fitzroy Crossi	50.08	275	P	P	09 23 42.7	+1.5
4.0nm,0.8s,mb3.8,baz=127,slow=11,SNR=5.0							
QSPA	South Pole Qui	55.40	180	P	P	09 24 25.3	+6.0
2.1nm,0.5s,mb3.9,baz=142,slow=0.2,SNR=16							
FINES	FINESS Array B	148.20	336	PKPbc	PKPbc	09 34 21.5	-6.4
1.9nm,0.5s,baz=64,slow=4.4,SNR=6.6							
NB2	NORSAR Subarra	152.53	347	PKP	PKPdf	09 34 31.6	+0.6
comp=Z,1.1nm,0.5s,baz=16,slow=2.6							
NOA	NORSAR Array B	152.53	347	PKPbc	PKPbc	09 34 32.3	-5.9
comp=Z,0.9nm,0.6s,baz=24,slow=4.3,SNR=5.7							
NOA	NORSAR Array B	152.53	347	P	PKPdf	09 34 32.3	+1.3
NOA	NORSAR Array B	152.53	347	PKPbc	PKPbc	09 34 32.3	-5.9

*DDA **07** 09:17:27.8,37°.37N×28°.00E,h7km±3km,Md2.8*
CSEM 07 09:17:27.5±0.5,37°.38N×28°.10E,h10km,MD2.8,Error ellipse: s-maj=14.3km s-min=8.2km az=39.0,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSB	Milas	0.27	251	*e*PG	Pg	09 17 34.7	+1.7
MLSB	Milas	0.27	251	*e*Pg	Pg	09 17 34.7	+1.7
YER	Yerkesik	0.29	150	*e*PG	Pg	09 17 33.2	-0.1
YER				*e*SG	Sg	09 17 39.3	+2.2
YER	Yerkesik	0.29	150	*e*Pg	Pg	09 17 33.2	-0.1
YER				*e*Sg	Sg	09 17 39.3	+2.2
AYDN	Tasoluk	0.33	327	*i* P	Pg	09 17 34.2	+0.2
AYDN				*i* S	Sg	09 17 39.4	+1.0
AYDN	Tasoluk	0.33	327	*i* P	Pg	09 17 34.2	+0.2
AYDN				*i* S	Sg	09 17 39.4	+0.9
BDRM	Kayabasi	0.61	239	*i* P	Pg	09 17 38.3	-1.1
BDRM				*i* S	Sg	09 17 46.6	-0.8
BDRM	Kayabasi	0.61	239	*i* P	Pg	09 17 38.3	-1.1
BDRM				*i* S	Sg	09 17 46.6	-0.8
TURN	Turunc	0.65	142	*i* P	Pg	09 17 39.3	-0.7
TURN				*i* S	Sg	09 17 49.6	+1.1
TURN	Turunc	0.65	142	*i* P	Pg	09 17 39.3	-0.7
TURN				*i* S	Sg	09 17 49.6	+1.1

DJA 07 09:19:21,0°.82N×121°.80E,h41km,MLv4.2/12, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	Marisa	0.37	158	P	Pn	09 19 31.2	+1.1
MRSI				S	Sn	09 19 39.1	+2.6
MPSI	Mapaga	1.96	256	P	Pn	09 19 50.9	-0.9
MPSI				S	Sn	09 20 24.4	+9.2
LUWI	Luwuk	2.09	152	P	Pn	09 19 52.9	-0.6
LUWI				S	Sn	09 20 18.0	-0.3
KMSI	Cibinong	2.19	96	P	Pn	09 19 55.2	+0.2
KMSI				S	Sn	09 20 21.0	+0.1
PCI	Palu	2.61	229	P	Pn	09 20 00.2	-0.5
PCI				S	Sn	09 20 30.9	-0.2
MNI	Manado	3.10	78	P	Pn	09 20 06.8	-0.7
MNI				S	Sn	09 20 31.7	-12
TTSI	Tana Toraja	4.32	207	P	Pn	09 20 26.6	+2.4
TTSI				S	Sn	09 20 35.8	-38
SGSI	Sangihe	4.69	53	P	Pn	09 20 28.6	-0.7
SMKI	Samarinda	4.76	255	P	Pn	09 20 29.5	-0.8
KDI	Kendari	4.81	170	P	Pn	09 20 30.8	-0.2
SPSI	Sidrap Palu	5.17	203	P	Pn	09 20 36.7	+0.8
0.1nm23nm,0.7s							
MYLDM	Lahad Datu	5.44	323	P	Pn	09 20 40.7	+1.1

*IDC **07** 09:23:17.5±0.8,46°.65N×155°.46E,h0km,mb3.6/7, mb1 3.9/9,mb1mx3.7/25,mbtmp3.6/9,ML3.3/2,Error ellipse: s-maj=30.7km s-min=20.6km az=126.0*
*NEIC **07** 09:23:18.8±0.6,46°.76N×155°.36E,h10km,Error ellipse: s-maj=20.1km s-min=9.1km az=131.0*
*ISCJB **07** 09:23:19.9±0.7,47°.0N±0°.1×155°.0E±0°.2,h33km,mb3.7/7, Error ellipse: s-maj=21.0km s-min=8.2km az=37.7*
*MOS **07** 09:23:20.4±1.4,46°.88N×155°.22E,h38km,mb4.1/3,Error ellipse: s-maj=31.0km s-min=14.0km az=67.9*
ISC 07 09:23:22.3±0.7,46°.9N±0°.1×155°.1E±0°.2,h35km,n20, σ1°22/21,mb3.7/7,1C,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.82	10	*e*PN	Pn	09 24 17.0	-1.5
SKR				*e*		09 25 02.0	
PEA0B	Petropavlovsk-	6.42	14	*e*Pn	Pn	09 24 53.3	-0.8
PETK	Petropavlovsk-	6.42	14	Pn	Pn	09 24 53.9	-0.2
1.3nm,0.3s,baz=198,slow=12,SNR=11							
PETK				Sn	Sn	09 26 18.7	+13
0.3nm,0.3s,baz=118,slow=27,SNR=3.5							
PETK	Petropavlovsk-	6.42	14	PN	Pn	09 24 53.9	-0.2
PETK						09 26 18.7	
PETK				pmax	pmax		
comp=Z,1.0nm,0.3s							
ERM	Erimo	9.84	244	*e*PN	Pn	09 25 42.9	+1.8
ERM	Erimo	9.84	244	*e*Pn	Pn	09 25 42.2	+1.2
MAJO	Matsushiro	16.29	237	P	Pn	09 27 07.7	-0.5
MJAR	Matsushiro Arr	16.29	237	Pn	Pn	09 27 07.3	-0.9
comp=Z,0.1nm,0.3s,baz=193,slow=15,SNR=3.6							
WHN	Wuhan	35.29	257	⇑P	P	09 30 11.6	-2.1
MKAR	Makanchi Array	48.06	298	P	P	09 32 01.5	+3.6
comp=Z,0.4nm,0.5s,mb3.7,baz=77,slow=6.4,SNR=3.7							
MKAR	Makanchi Array	48.06	298	P	P	09 32 01.5	+3.6
NVAR	Mina Array Bea	61.15	64	P	P	09 33 32.8	-0.1
comp=Z,0.3nm,0.6s,mb3.6,baz=279,slow=9.0,SNR=3.5							
PDAR	Pinedale Array	63.54	55	P	P	09 33 50.5	+1.6
comp=Z,0.4nm,0.8s,mb3.5,baz=325,slow=1.8,SNR=3.9							
FINES	FINESS Array B	64.45	336	P	P	09 33 57.7	+3.1
comp=Z,1.0nm,0.5s,mb4.1,baz=38,slow=9.6,SNR=5.3							
FINES	FINESS Array B	64.45	336	P	P	09 33 57.7	+3.1
FINES				pmax	pmax		
comp=Z,1.0nm,0.5s							
WRA	Warramunga Arr	69.14	201	P	P	09 34 23.9	-0.9
comp=Z,0.6nm,0.6s,mb3.7,baz=23,slow=7.0,SNR=5.9							
WRA	Warramunga Arr	69.14	201	P	P	09 34 23.9	-0.9
WRA				pmax	pmax		
comp=Z,1.0nm,0.6s							
ASAR	Alice Springs	72.82	200	P	P	09 34 47.1	0.0
comp=Z,0.4nm,0.5s,mb3.6,baz=16,slow=5.5,SNR=9.6							
TXAR	Lajitas Array	76.22	62	P	P	09 35 07.1	+0.1
comp=Z,0.6nm,0.8s,mb3.6,baz=297,slow=3.8,SNR=7.5							
TXAR	Lajitas Array	76.22	62	P	P	09 35 07.1	+0.1
TXAR				pmax	pmax		
comp=Z,1.0nm,0.8s							

*ATH **07** 09:32:02.6,38°.24N×21°.49E,h20km±4km,MD3.2/8*
*CSEM **07** 09:32:02.7±0.2,38°.28N×21°.50E,h20km,MD3.2,Error ellipse: s-maj=6.0km s-min=3.6km az=161.0*
*NEIC **07** 09:32:02.6,38°.24N×21°.49E,h20km,MD3.2(ATH),After ATH.*
*ISCJB **07** 09:32:03.2±0.4,38°.22N±0°.04×21°.51E±0°.03,h20km±4km, Error ellipse: s-maj=6.4km s-min=3.6km az=165.5*
*THE **07** 09:32:03.0,38°.20N×21°.51E,h17km±1km,ML3.0/6,Error ellipse: s-maj=1.8km s-min=0.6km az=352.0*
ISC 07 09:32:03.2±0.4,38°.23N±0°.04×21°.51E±0°.03,h20km±5km, n44,σ1°03/75,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.18	191	*e*Pb	Pb	09 32 07.6	-0.4
RLS				*e*Sb	Sb	09 32 11.6	+0.3
RLS	Riolos of Patr	0.18	191	*e*PB	Pb	09 32 07.6	-0.4
RLS				*e*SB	Sb	09 32 11.6	+0.3
RLS	Riolos of Patr	0.18	191	*e*Pb	Pb	09 32 07.6	-0.4
RLS				*e*Sb	Sb	09 32 11.6	+0.3
UPR	University Cam	0.22	77	*e*PB	Pb	09 32 08.4	-0.3
UPR				*e*SB	Sb	09 32 13.1	+0.7
UPR	University Cam	0.22	77	P	Pb	09 32 08.5	-0.2
UPR				S	Sb	09 32 12.8	+0.4
UPR	University Cam	0.22	77	*e*Pb	Pb	09 32 08.4	-0.3
UPR				S	Sb	09 32 12.8	+0.4
UPR				*e*Sb	Sb	09 32 13.1	+0.7
EFP	Efpalio	0.37	58	*e*PB	Pb	09 32 10.1	-0.9
EFP				*e*SB	Sb	09 32 16.0	-0.3
EFP	Efpalio	0.37	58	P	Pb	09 32 10.1	-0.9
EFP				S	Sb	09 32 17.0	+0.7
EFP	Efpalio	0.37	58	P	Pb	09 32 10.1	-0.9
EFP				*e*Sb	Sb	09 32 16.0	-0.3
EFP				S	Sb	09 32 17.0	+0.7
LAKA	Lakka	0.37	89	P	Pb	09 32 10.4	-0.6
LAKA				S	Sb	09 32 16.4	0.0
LAKA	Lakka	0.37	89	P	Pb	09 32 10.4	-0.6
LAKA				S	Sb	09 32 16.4	0.0
KALE	Kalithea	0.52	72	P	Pb	09 32 12.6	-1.0
KALE				S	Sb	09 32 21.4	+0.7
KALE	Kalithea	0.52	72	P	Pb	09 32 12.6	-1.0
KALE				S	Sb	09 32 21.4	+0.7
KFL	Anninata	0.58	258	P	Pb	09 32 14.2	-0.4
KFL				S	Sb	09 32 23.7	+1.3
KFL	Anninata	0.58	258	P	Pb	09 32 14.2	-0.4
KFL				S	Sb	09 32 23.7	+1.3
EVR	Evrytania	0.72	19	*e*Pb	Pb	09 32 15.8	-1.2
EVR	Evrytania	0.72	19	*e*PB	Pb	09 32 15.8	-1.2
EVR	Evrytania	0.72	19	*e*Pb	Pb	09 32 15.8	-1.2
GUR	Goura	0.72	114	*e*PN	Pn	09 32 16.5	-1.7
GUR				*e*SN	Sn	09 32 27.5	-1.1
GUR	Goura	0.72	114	P	Pb	09 32 16.1	-0.9
GUR				S	Sb	09 32 27.1	+0.6
GUR	Goura	0.72	114	P	Pb	09 32 16.1	-0.9
GUR	Goura	0.72	114	*e*Pn	Pn	09 32 16.5	-1.7
GUR				S	Sb	09 32 27.1	+0.6
GUR				*e*Sn	Sn	09 32 27.5	-1.1
VLS	Valsamata	0.73	266	*e*Pb	Pb	09 32 15.8	-1.3
VLS				*e*Sn	Sn	09 32 27.8	-1.0
VLS	Valsamata	0.73	266	*e*PB	Pb	09 32 15.8	-1.3
VLS				*e*SN	Sn	09 32 27.8	-1.0
VLS	Valsamata	0.73	266	P	Pb	09 32 16.0	-1.1
VLS				S	Sb	09 32 27.4	+0.8
VLS	Valsamata	0.73	266	P	Pb	09 32 16.0	-1.1
VLS				S	Sb	09 32 27.4	+0.8
VLS				*e*Sn	Sn	09 32 27.8	-1.0
DSF	Desfina	0.82	77	P	Pb	09 32 18.8	+0.1
DSF				S	Sb	09 32 29.7	+0.4
DSF	Desfina	0.82	77	P	Pb	09 32 18.8	+0.1
DSF				S	Sb	09 32 29.7	+0.4
AGG	Agios Georgios	1.02	39	P	Pb	09 32 21.7	-0.4
AGG				S	Sb	09 32 37.5	+2.5
AGG	Agios Georgios	1.02	39	P	Pb	09 32 21.7	-0.4
AGG				S	Sb	09 32 37.5	+2.5
AGG	Agios Georgios	1.02	39	P	Pb	09 32 21.7	-0.4
AGG				S	Sb	09 32 37.5	+2.5
ITM	Ithomi	1.10	162	*e*Pn	Pn	09 32 23.5	+0.1
ITM	Ithomi	1.10	162	*e*PN	Pn	09 32 23.5	+0.1
ITM	Ithomi	1.10	162	*e*Pn	Pn	09 32 23.5	+0.1
VLX	Vlachokerasia	1.10	141	*e*PN	Pn	09 32 25.0	+1.6
VLX	Vlachokerasia	1.10	141	*e*Pn	Pn	09 32 25.0	+1.6
LTK	Loutraki	1.17	100	*e*PN	Pn	09 32 25.8	+1.5
LTK	Loutraki	1.17	100	*e*Pn	Pn	09 32 25.8	+1.5
LKR	Lokris	1.24	70	*e*Pb	Pb	09 32 24.7	-1.2
LKR	Lokris	1.24	70	*e*PB	Pb	09 32 24.7	-1.2
LKR	Lokris	1.24	70	*e*Pb	Pb	09 32 24.7	-1.2
PYL	PYLOS	1.35	172	*e*PN	Pn	09 32 28.2	+1.4
PYL	PYLOS	1.35	172	*e*Pn	Pn	09 32 28.2	+1.4
THL	Klokotos Trika	1.39	16	*e*PN	Pn	09 32 30.3	+3.0

IDC 07 09:43:52.2±98.0,14°.89S×166°.89E,h0km,mb4.4/3, mb1 4.5/3,mb1mx3.9/16,mbtmp4.4/3,Error ellipse: s-maj=1649.0km s-min=117.1km az=64.0,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	28.61	229	P	P	09 49 50.5	+0.2
2.9nm,0.9s,baz=69,slow=12,SNR=5.3							
WRA	Warramunga Arr	31.43	256	P	P	09 50 15.6	+0.1
1.3nm,0.3s,baz=82,slow=6.8,SNR=48							
ASAR	Alice Springs	32.27	249	P	P	09 50 22.8	-0.1
3.3nm,0.3s,baz=77,slow=9.3,SNR=58							

*BJI **07** 09:58:49.2,10°.44N×91°.54E,h10km,mB4.7/28,mb4.7/43, Ms4.4/42,Ms7 4.2/38*
*IDC **07** 09:58:50.8±0.4,10°.74N×91°.80E,h0km,mb4.6/24, mb1 4.6/25,mb1mx4.6/30,mbtmp4.5/25,ML4.2/1,MS3.9/18, Ms1 3.9/18,ms1mx3.7/32,Error ellipse: s-maj=13.7km s-min=11.5km az=61.0*
*SZGRF **07** 09:58:51.8,10°.76N×92°.92E,h33km,mb5.0,Andaman Islands, India, region*
*NEIC **07** 09:58:52.4±0.2,10°.74N×91°.70E,h10km,mb5.0/36,Error ellipse: s-maj=5.8km s-min=4.7km az=217.0*
*ISCJB **07** 09:58:53.8±0.2,10°.70N±0°.03×91°.68E±0°.03,h33km, mb4.8/109,MS4.1/36,Error ellipse: s-maj=5.0km s-min=3.5km az=36.3*
*MOS **07** 09:58:54.4±1.0,10°.79N×91°.81E,h37km,mb5.2/35, MS4.1/5,Error ellipse: s-maj=9.9km s-min=5.7km az=111.4*
*DJA **07** 09:59:02,10°.55N×91°.46E,h110km,mb4.7/21*
ISC 07 09:58:51.3±1.1,10°.70N±0°.03×91°.68E±0°.03,h3km±6km, h16km±2.1km:pP-P,n276,σ0°95/277,mb4.8/109,MS4.1/36, 16C-12D,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	Banda Aceh	6.29	145	P	Pn	10 00 29.9	+4.9
0.5nm94nm,1.0s							
TPTI		9.18	143	P	Pn	10 01 10.7	+5.9
60nm,1.5s							
NST	Nakhon Sawan	9.60	58	P	Pn	10 01 16.0	+5.5
BDT	Bhumibol Dam	9.63	47	P	Pn	10 01 17.5	+6.6
22nm,0.8s							
KULM	Kulim	10.38	120	*e*Pn	Pn	10 01 21.8	+0.6
23nm,0.8s							
KULM	Kulim	10.38	120	P	Pn	10 01 26.5	+5.3
35nm,1.2s							
CM31	Chiang Mai Arr	10.43	41	*e*Pn	Pn	10 01 22.6	+0.7
CMAR	Chiang Mai Arr	10.43	41	Pn	Pn	10 01 21.8	-0.1
0.5nm,0.3s,baz=238,slow=14,SNR=7.7							
PSI	Prapat	10.64	137	Pn	Pn	10 01 28.6	+3.9
1.2nm,0.3s,baz=291,slow=7.1,SNR=4.2							
VIS	Vishakhapatnam	10.69	312	*e*PKP	Pn	10 01 25.1	-0.4
VIS				*i* S	Sn	10 03 14.9	-11
CHTO	Chiang Mai	10.69	40	*e*P	Pn	10 01 24.8	-0.7
CHTO	Chiang Mai	10.69	40	P	Px	10 01 36.2	
18nm,1.2s							
IPM	Ipoh	11.13	123	P	Pn	10 01 30.6	-0.9
PALK	Pallekele	11.37	253	Pn	Pn	10 01 35.9	+1.2
266nm,0.4s,SNR=9.3							
PALK	Pallekele	11.37	253	*e*P	Pn	10 01 35.4	+0.7
PALK				pmax	pmax		
comp=Z,42nm,0.8s							
PALK	Pallekele	11.37	253	*e*Pn	Pn	10 01 35.4	+0.7
comp=Z,42nm,0.8s							
PALK	Pallekele	11.37	253	P	Pn	10 01 36.3	+1.6
comp=Z,29nm,1.0s							
MDRS	Chennai	11.44	283	*e*x	x	10 02 02.0	
MDRS				*e*x	x	10 02 02.7	
PPI	Padang Panjang	14.07	141	P	Pn	10 02 19.8	+8.1
comp=Z,24nm,1.0s							
BOK	Bokaro	14.15	338	*e*PKP	Pn	10 02 12.5	-0.2
HYB	Hyderabad	14.38	299	*e*P	Pn	10 02 25.0	+9.1
HYB				*e*S	Sn	10 04 57.0	+1.0
HYB	Hyderabad	14.38	299	*i* P	Pn	10 02 25.0	+9.1
HYB				*e*S	Sn	10 04 57.0	+1.0
PDSI	Padang	14.47	142	P	Pn	10 02 24.3	+7.2
comp=Z,5μmcomp=Z,76nm,0.9s							
SHL	Shillong	14.79	1	*e*PKP	Pn	10 02 20.0	-1.5
SHL				*e*x	x	10 04 55.0	
MYKOM	Kota Tinggi	14.98	125	P	Pn	10 02 31.4	+7.3
comp=Z,29nm,2.3s							
SDSI	Sungai Dareh	15.08	139	P	Pn	10 02 32.3	+6.8
comp=Z,1μmcomp=Z,18nm,0.9s							
NGP	Nagpur	15.97	312	*e*PKP	Pn	10 02 36.6	-0.6
RAMN	Ramite	16.86	344	*e*P	Pn	10 02 48.3	-0.2
comp=Z,39nm,0.4s							
TAPN	Taplejung	16.98	348	*e*P	Pn	10 02 49.2	-0.8
comp=Z,107nm,1.0s							
AKL	Akola	17.26	307	*e*PKP	Pn	10 02 53.2	-0.2
AKL				AMb	AMB	10 02 59.1	
comp=Z,84nm,1.2s							
KMI	Kunming	17.77	35	P	Pn	10 03 01.1	+1.2
KMI				pP	pP	10 03 05.9	+4.4
KMI				sP	sP	10 03 07.2	+5.3
KMI				PP		10 03 18.9	
KMI				S	Sn	10 06 20.2	+1.7
KMI				SS		10 06 43.7	
KMI				PcP	PcP	10 07 40.8	+3.0
KMI				pmax	pmax		
comp=Z,12nm,1.4s							
KMI				pmax	pmax		
comp=Z,88nm,4.9s							
KMI				LR	LR		
comp=N,870nm,17.0s							
KMI				LR	LR		
comp=E,470nm,16.0s							
KMI				LR	LR		
comp=Z,840nm,17.3s							
PKI	Pulchoki	17.79	341	*e*P	Pn	10 02 59.8	-0.3
comp=Z,86nm,0.9s							
DMN	Daman	17.92	341	*e*P	Pn	10 03 02.0	+0.3
comp=Z,124nm,1.0s							
KKN	Kakani	18.04	341	*e*P	Pn	10 03 03.9	+0.8
KAD	Karad	18.20	293⇑	*e*PKP	Pn	10 03 03.1	-2.1
KAD				AMb	AMB	10 03 12.2	
comp=Z,59nm,1.3s							
GKN	Gorkha	18.44	340	*e*P	Pn	10 03 08.7	+0.6
BHPL	Bhopal	18.46	314	*e*PKP	Pn	10 03 08.3	-0.1
BHPL				AMb	AMB	10 03 11.6	
comp=Z,47nm,0.8s							
KOLN	Koldanda	18.61	337	*e*P	Pn	10 03 11.4	+1.3
comp=Z,31nm,0.5s							
LSA	Lhasa	18.91	359	P	Pn	10 03 13.8	0.0
LSA				S	Sn	10 06 42.2	-3.8
LSA				LR	LR		
comp=N,280nm,15.7s							
LSA				LR	LR		
comp=E,640nm,14.4s							
LSA				LR	LR		
comp=Z,530nm,15.7s							
POO	Poona	18.92	296	*e*PKP	Pn	10 03 13.5	-0.5
POO				AMb	AMB	10 03 18.4	
comp=Z,101nm,1.5s							
POO				*i* x	x	10 06 31.0	
QIZ	Qiongzhong	19.39	63	P	Pn	10 03 18.5	-1.2

comp=Z,796nmcomp=Z,40nm,1.6s,mb4.7
LZH Lanzhou 27.57 22 *e*P **P 10 04 40.0 +0.3**
LZH pP pP 10 04 45.0 +4.4
LZH sP sP 10 04 49.5 +8.6
LZH PP 10 05 29.0
LZH S **S 10 09 20.5 -1.3**
LZH sS sS 10 09 28.0 +4.8
LZH SS 10 10 41.0
LZH pmax pmax
comp=Z,23nm,1.0s,mb4.8
LZH pmax pmax
comp=Z,88nm,5.7s
LZH LR LR
comp=E,700nm,14.3s
LZH LR LR
comp=Z,870nm,15.0s,MS4.5
XAN Xi'an 28.09 32 P **P 10 04 42.9 -1.4**
XAN pmax pmax
comp=Z,2.0nm,1.1s,mb3.7
XAN LR LR
comp=N,340nm,17.3s,MS4.0
XAN LR LR
comp=E,64nm,13.7s,MS4.0
WHN Wuhan 28.87 44 *e*P **P 10 04 54.6 +3.3**
WHN S **S 10 09 44.7 +2.3**
WHN LR LR
comp=N,930nm,19.5s
WHN LR LR
comp=E,1µm,13.5s
WHN LR LR
comp=Z,1µm,16.0s,MS4.6
GTA Gaotai 29.50 13 ⇓P **P 10 04 57.4 +0.6**
GTA pP pP 10 05 01.7 +4.1
GTA sP sP 10 05 04.4 +6.4
GTA PcP PcP 10 08 02.6 +0.3
GTA S **S 10 09 51.8 -0.2**
GTA sS sS 10 09 59.9 +6.5
GTA SS SS 10 11 27.4 -30
GTA pmax pmax
comp=Z,13nm,1.4s,mb4.5
GTA pmax pmax
comp=Z,62nm,4.8s
GTA LR LR
comp=N,250nm,17.0s,MS4.1
GTA LR LR
comp=E,260nm,16.7s,MS4.1
GTA LR LR
comp=Z,270nm,17.0s,MS3.9
YULB Yu-li 30.92 62 *e*P **P 10 05 10.2 +0.7**
comp=Z,13nm,0.9s,mb4.8
TTSI Tana Toraja 31.16 114 P **P 10 05 13.0 +1.2**
comp=Z,42nm,1.0s,mb5.2
YHNB Yeheng 31.43 60 *e*P **P 10 05 14.6 +0.6**
comp=Z,34nm,0.9s,mb5.2
KBL Kabul 31.47 323 *e*P **P 10 05 15.1 +0.8**
KBL pmax pmax
comp=Z,11nm,0.9s,mb4.7
KBL Kabul 31.47 323 *e*P **P 10 05 15.1 +0.8**
comp=Z,11nm,0.9s,mb4.7
KSH Kashi 31.92 337 P **P 10 05 17.6 -0.6**
KSH pP pP 10 05 22.0 +2.9
KSH sP sP 10 05 24.5 +5.1
KSH PP PP 10 06 22.5 -7.8
KSH PcP PcP 10 08 08.8 +0.1
KSH S **S 10 10 24.3 -5.7**
KSH ScP ScP 10 11 51.6 -1.7
KSH PcS PcS 10 11 53.5 +0.2
KSH SS SS 10 12 13.5 -33
KSH ScS ScS 10 15 47.3 -4.3
KSH pmax pmax
comp=Z,17nm,0.9s,mb4.9
KSH pmax pmax
comp=Z,73nm,4.5s
KSH LR LR
comp=N,840nm,18.6s
KSH LR LR
comp=E,150nm,10.1s
KSH LR LR
comp=Z,160nm,7.1s
KAPI Kappang 32.01 118 P **P 10 05 19.1 -0.2**
comp=Z,11nm,0.8s,mb4.8,baz=292,slow=11,SNR=4.4
KAPI LR LR 10 18 11.3
comp=Z,191nm,19.4s,MS3.8,baz=71,slow=36
KAPI Kappang 32.01 118 *e*P **P 10 05 18.8 -0.5**
KAPI LR LR 10 18 11.3
BNSI Bone 32.03 117 P **P 10 05 19.7 +0.3**
comp=Z,38nm,0.9s,mb5.2
BKSI Bulukumba 32.48 118 P **P 10 05 23.0 -0.4**
comp=Z,87nm,0.9s,mb5.6
NJ2 Nanjing 32.87 46 *e*P **P 10 05 28.0 +1.4**
NJ2 pP pP 10 05 31.9 +4.4
NJ2 sP sP 10 05 35.6 +7.8
NJ2 PP PP 10 06 39.3 -1.6
NJ2 S **S 10 10 45.0 0.0**
NJ2 sS sS 10 10 52.5 +6.1
NJ2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
NJ2 pmax pmax
comp=Z,140nm,5.0s
NJ2 LR LR
comp=N,1µm,14.8s,MS4.8
NJ2 LR LR
comp=E,380nm,13.8s,MS4.8
NJ2 LR LR
comp=Z,360nm,13.3s,MS4.2
WMQ Urumqi 33.18 355 P **P 10 05 30.4 +1.2**
WMQ pP pP 10 05 34.8 +4.8
WMQ sP sP 10 05 37.4 +7.0
WMQ PP PP 10 06 41.6 -2.6
WMQ PcP PcP 10 08 13.1 +1.0
WMQ S **S 10 10 48.7 -0.8**
WMQ SS SS 10 12 49.9 -22
WMQ ScS ScS 10 15 54.5 -3.3
WMQ pmax pmax
comp=Z,19nm,1.0s,mb5.0
WMQ pmax pmax
comp=Z,150nm,5.0s
WMQ LR LR
comp=N,190nm,19.2s,MS4.2
WMQ LR LR
comp=E,370nm,20.2s,MS4.2
WMQ LR LR
comp=Z,140nm,18.0s,MS3.7
KZA Kyzart 34.42 338 P **P 10 05 41.6 +1.6**
SNR=9.6
HHC Hu-ho-hao-te 34.78 27 *e*P **P 10 05 43.9 +0.8**
HHC sP sP 10 05 49.3 +4.9
HHC PP PP 10 07 00.9 -1.0
HHC PcP PcP 10 08 16.4 -0.3
HHC S **S 10 11 13.4 -1.0**
HHC ScP ScP 10 12 00.7 -2.5
HHC PcS PcS 10 12 02.3 -0.9
HHC SS SS 10 13 28.0 -17
HHC ScS ScS 10 16 02.8 -3.6
HHC pmax pmax
comp=Z,19nm,0.5s,mb5.3
HHC pmax pmax
comp=Z,160nm,5.7s
HHC LR LR
comp=N,840nm,12.7s,MS4.8
HHC LR LR
comp=E,800nm,12.2s,MS4.8
HHC LR LR
comp=Z,820nm,12.2s,MS4.7
KBK Karagaybulak 35.03 338 P **P 10 05 47.6 +2.3**
SNR=6.3
AAK Ala-Archa 35.18 338 P **P 10 05 48.7 +2.2**
comp=Z,126nm,1.3s,mb5.7,SNR=6.1
AAK Ala-Archa 35.18 338 P **P 10 05 48.8 +2.3**
SNR=9.7
AAK Ala-Archa 35.18 338 LR LR 10 22 52.0
comp=Z,321nm,20.9s,MS4.0,baz=38,slow=41
FRU Bishkek 35.30 338 *e*P **P 10 05 50.0 +2.4**
FRU pmax pmax
comp=Z,50nm,1.9s,mb5.1
CHMS Chumysh 35.40 338 P **P 10 05 49.1 +0.7**
SNR=5.5
EKS2 Erkin-Say 35.47 337 P **P 10 05 50.9 +1.9**
SNR=15
EKS2 Erkin-Say 35.47 337 *e*P **P 10 05 49.6 +0.6**
comp=Z,39nm,1.4s,mb5.1
USP Ospenovka 35.72 338 P **P 10 05 52.4 +1.2**
SNR=21
BJI Beijing 36.41 32 P **P 10 05 57.5 +0.4**
BJI S **S 10 11 41.3 +2.0**
BJI pmax pmax
comp=Z,15nm,1.2s,mb4.8
BJI pmax pmax
comp=Z,43nm,3.6s
BJI LR LR
comp=N,320nm,17.3s,MS4.5
BJI LR LR
comp=E,530nm,16.3s,MS4.5
BJI LR LR
comp=Z,420nm,19.0s,MS4.2
MK31 Makanchi Array 36.85 349 *i* P **P 10 06 00.4 -0.3**
MK31 pmax pmax
comp=Z,17nm,0.9s,mb4.9
MK31 Makanchi Array 36.85 349 *e*P **P 10 06 00.5 -0.3**
MKAR Makanchi Array 36.85 349 P **P 10 06 01.1 +0.3**
comp=Z,9.8nm,0.9s,mb4.7,baz=167,slow=8.7,SNR=53
MKAR PcP PcP 10 08 22.6 -0.1
comp=Z,2.1nm,1.0s,baz=168,slow=4.2,SNR=2.5
MKAR LR LR 10 25 33.3
comp=Z,166nm,18.8s,MS3.9,baz=162,slow=44
MKAR Makanchi Array 36.85 349 P **P 10 06 01.1 +0.4**
MKAR 10 08 22.6
MKAR Makanchi Array 36.85 349 P **P 10 06 01.1 +0.3**
MKAR PcP PcP 10 08 22.6 -0.1
MKAR LR LR 10 25 33.3
LBMI Labuha 37.36 105 P **P 10 06 06.1 +0.6**
comp=Z,40nm,1.2s,mb5.1
SONM Songino Array 39.03 16 P **P 10 06 19.8 +0.6**
comp=Z,7.9nm,1.0s,mb4.4,baz=199,slow=8.9,SNR=28
SONM PcP PcP 10 08 29.2 -0.2
comp=Z,1.6nm,0.8s,baz=184,slow=3.8,SNR=2.9
SONM LR LR 10 25 46.3
comp=Z,176nm,18.2s,MS3.9,baz=274,slow=42
SONM Songino Array 39.03 16 P **P 10 06 19.8 +0.6**
SONM 10 08 29.2
ULN Ulaanbaatar 39.24 16 *e*P **P 10 06 21.4 +0.5**
ULN pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
ULN Ulaanbaatar 39.24 16 *e*P **P 10 06 21.4 +0.4**
comp=Z,9.7nm,1.0s,mb4.5
ULN Ulaanbaatar 39.24 16 P **P 10 06 21.7 +0.8**
comp=Z,11nm,0.9s,mb4.6
KURK Kurchatov 41.32 347 P **P 10 06 38.9 +0.8**
comp=Z,92nm,1.1s,mb5.3,SNR=11
KURK Kurchatov 41.32 347 *de*P **P 10 06 38.4 +0.3**
KURK pmax pmax
comp=Z,35nm,1.7s,mb4.7
KURK Kurchatov 41.32 347 *e*P **P 10 06 38.3 +0.2**
comp=Z,25nm,1.2s,mb4.7
SNY Shenyang 41.74 36 ⇑P **P 10 06 42.4 +0.7**
SNY S **S 10 13 04.4 +4.8**
SNY pmax pmax
comp=Z,10.0nm,0.5s,mb4.7
SNY pmax pmax
comp=Z,72nm,5.3s
SNY LR LR
comp=E,300nm,15.1s
SNY LR LR
comp=Z,270nm,15.9s,MS4.2
TLY Talaya 42.02 11 *e*P **P 10 06 44.8 +1.0**
TLY *e* 10 08 21.3
TLY *e*PPP 10 09 00.9
TLY *e*S **S 10 13 07.9 +4.5**
TLY pmax pmax
comp=Z,7.0nm,1.2s,mb4.2
TLY MLR MLR
comp=Z,149nm,18.0s,MS3.9
TLY Talaya 42.02 11 *e*P **P 10 06 43.7 -0.1**
comp=Z,6.8nm,1.0s,mb4.2
KSRS Korea Array 42.05 45 P **P 10 06 43.5 -0.9**
comp=Z,4.8nm,1.0s,mb4.1,baz=247,slow=9.4,SNR=17
KSRS LR LR 10 25 10.8
comp=Z,188nm,20.1s,MS4.0,baz=136,slow=38
ZAA0 Zalesovo Array 43.48 354 *e*P **P 10 06 55.7 0.0**
ZALV Zalesovo Beam 43.48 354 P **P 10 06 55.6 -0.1**
comp=Z,9.4nm,0.8s,mb4.5,baz=170,slow=9.0,SNR=23
ZALV LR LR 10 29 28.8
comp=Z,118nm,19.0s,MS3.8,baz=221,slow=42
CN2 Changchun 44.04 35 *e*P **P 10 07 01.2 +0.8**
CN2 *es*P sP 10 07 07.2 +5.6
CN2 *e*S **S 10 13 33.6 +0.2**
CN2 pmax pmax
comp=Z,20nm,1.2s,mb4.7
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,400nm,17.0s,MS4.5
CN2 LR LR
comp=E,200nm,17.0s,MS4.5
CN2 LR LR
comp=Z,200nm,18.0s,MS4.1
FITZ Fitzroy Crossi 44.08 130 *e*P **P 10 06 59.7 -1.3**
comp=Z,44nm,0.9s,mb5.2
FITZ Fitzroy Crossi 44.08 130 P **P 10 06 59.3 -1.7**
comp=Z,10nm,0.8s,mb4.6,baz=309,slow=6.1,SNR=9.5
FITZ Fitzroy Crossi 44.08 130 P **P 10 07 00.4 -0.6**
comp=Z,83nm,1.4s,mb5.3
NVS Novosibirsk 44.54 353 *e*P **P 10 07 03.3 -0.8**
VOSK Vostochnaya 45.12 342 P **P 10 07 07.7 -1.2**
VOSK pmax pmax
comp=Z,14nm,1.1s,mb4.7
KNA Kununurra 45.15 125 P **P 10 07 04.4 -5.2**
BVAR Borovoye Array 45.56 342 P **P 10 07 12.3 0.0**
comp=Z,4.9nm,0.9s,mb4.4,baz=142,slow=7.5,SNR=21
BRVK Borovoye 45.62 342 *ce*P **P 10 07 13.0 +0.2**
BRVK pmax pmax
comp=Z,13nm,1.2s,mb4.7
BRVK Borovoye 45.62 342 *e*P **P 10 07 11.9 -0.9**
comp=Z,10nm,1.1s,mb4.7
ZRNK Zerenda 45.93 341 *i* P **P 10 07 14.2 -1.0**
ZRNK pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
AB31 Akbulak array 46.61 332 *i* P **P 10 07 20.9 +0.2**
AB31 pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
ABKAR Akbulak array 46.61 332 *e*P **P 10 07 21.3 +0.6**
comp=Z,25nm,1.1s,mb5.0
MDJ Mudanjiang 46.93 37 P **P 10 07 24.7 +1.4**
MDJ pP pP 10 07 27.8 +3.6
MDJ sP sP 10 07 30.4 +5.9
MDJ PP PP 10 09 17.1 +3.6
MDJ ScP ScP 10 12 50.3 -0.5
MDJ PcS PcS 10 12 51.2 +0.5
MDJ S **S 10 14 16.8 +1.7**
MDJ sS sS 10 14 22.1 +5.5
MDJ pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
MDJ pmax pmax
comp=Z,56nm,9.8s
MDJ LR LR
comp=N,130nm,16.4s,MS4.2
MDJ LR LR
comp=E,190nm,18.2s,MS4.2
MDJ LR LR
comp=Z,260nm,16.4s,MS4.3
ATD Arta Tunnel 47.88 276 LR LR 10 24 38.6
comp=Z,96nm,18.4s,MS3.8,baz=13,slow=32
AKTO Aktyubinsk 48.33 332 LR LR 10 30 11.2
comp=Z,87nm,18.2s,MS3.8,baz=141,slow=39
SMPI Sarmi 48.46 102 P **P 10 07 33.9 -1.7**
MAT Matsushiro 49.16 51 P **P 10 07 38.6 -2.1**
MJAR Matsushiro Arr 49.16 51 P **P 10 07 40.5 -0.3**
comp=Z,1.8nm,1.0s,mb4.1,baz=251,slow=7.6,SNR=6.5
MJAR LR LR 10 30 53.8
comp=Z,80nm,19.3s,MS3.7,baz=245,slow=39
NWAO Narrogin (SRO) 49.76 152 LR LR 10 28 58.6
comp=Z,2.5nm,19.3s,baz=180,slow=36
CBIJ Chichi jima 50.14 64 LR LR 10 27 41.4
comp=Z,62nm,18.9s,MS3.6,baz=113,slow=35
GNI Garni 50.74 314 *de*P **P 10 07 54.0 +1.3**
GNI pmax pmax
comp=Z,53nm,1.2s
GNI Garni 50.74 314 *e*P **P 10 07 53.9 +1.2**
comp=Z,104nm,1.6s,mb5.5
KLR Kul'dur 50.78 33 *e*P **P 10 07 51.3 -1.4**
WRA Warramunga Arr 51.87 126 P **P 10 08 00.5 -0.9**
comp=Z,4.4nm,0.7s,mb4.5,baz=303,slow=8.4,SNR=18
WRA Warramunga Arr 51.87 126 P **P 10 08 00.5 -0.9**
WRAB Tennant Creek 51.87 126 *e*P **P 10 08 01.0 -0.4**
WRAB pmax pmax
comp=Z,15nm,0.6s,mb5.1
WRAB Tennant Creek 51.87 126 *e*P **P 10 08 01.0 -0.4**
comp=Z,15nm,0.6s,mb5.1
SVE Sverdlovsk 51.90 339 ⇓*e*P **P 10 08 02.0 +0.9**
SVE pmax pmax
comp=Z,38nm,1.2s,mb5.2
HABR Khabarovsk 52.18 35 *e*P **P 10 08 01.5 -1.8**
HABR *PP pP 10 08 10.6 +6.4
HABR *e*SP sP 10 08 14.9 +10
HABR *e* 10 09 58.8
HABR *e*PPP 10 11 01.2
HABR *e*S **S 10 15 23.9 -4.7**
HABR *e*SS sS 10 15 40.5 +10
HABR 10 17 46.8
HABR *e*SS SS 10 19 01.5 -4.4
HABR *e*SSS 10 20 44.4
HABR pmax pmax
comp=N,12nm,1.5s
HABR pmax pmax
comp=Z,49nm,2.4s,mb5.0
HABR pmax pmax
comp=E,39nm,1.9s
HABR MLR MLR
comp=Z,85nm,17.0s,MS3.9
ZEI Tsey 52.33 316 *e*P **P 10 08 05.0 +0.5**
ZEI pmax pmax
comp=Z,8.0nm,0.5s,mb4.9
ARU Arti 52.36 337 *d i*P **P 10 08 04.4 -0.1**
ARU 10 09 58.2
ARU S **S 10 15 29.5 -1.3**
ARU SS SS 10 19 00.2 -8.3
ARU pmax pmax
comp=Z,23nm,1.2s,mb5.0
ARU Arti 52.36 337 *e*P **P 10 08 04.6 +0.1**
comp=Z,17nm,1.0s,mb4.9
OPO Ambohidratompo 52.65 237 P **P 10 08 09.3 +2.1**
comp=Z,2.2nm,0.8s,mb4.2,baz=58,slow=7.9,SNR=4.4
ASAR Alice Springs 53.58 130 P **P 10 08 13.1 -0.8**
comp=Z,13nm,1.0s,mb4.8,baz=309,slow=7.3,SNR=42
KIV Kislovodsk 53.61 317 *e*P **P 10 08 15.3 +1.4**
KIV pmax pmax
comp=Z,32nm,1.0s,mb5.2
KIV Kislovodsk 53.61 317 *e*P **P 10 08 14.7 +0.8**
comp=Z,35nm,1.0s,mb5.2
SOKR Solikamsk 55.31 339 *d i*P **P 10 08 26.6 +0.6**
SOKR pmax pmax
comp=Z,20nm,1.1s,mb5.1
SOKR MLR MLR
comp=Z,240nm,26.0s,MS4.2
KMBO Kilima Mbogo 55.39 261 *ce*P **P 10 08 35.7 +8.3**
KMBO pmax pmax
comp=Z,41nm,0.6s
MMAI Mount Meron Ar 56.05 303 LR LR 10 36 15.6
comp=Z,101nm,18.5s,MS3.9,baz=100,slow=40
YSS Yuzh-Sakhalins 56.12 40 *e*P **P 10 08 39.0 +6.9**
YSS *e* 10 08 52.8
YSS pmax pmax
comp=Z,30nm,0.9s,mb5.3
YSS Yuzh-Sakhalins 56.12 40 *e*P **P 10 08 35.2 +3.1**
comp=Z,14nm,0.8s,mb5.1
ANN Anapa 57.43 317 *e*P **P 10 08 34.9 -6.5**
ANN pmax pmax
comp=Z,95nm,1.2s,mb5.7
YAK Yakutsk 58.14 20 *e*P **P 10 08 45.1 -1.0**
YAK pmax pmax
comp=N,8.0nm,1.0s
YAK pmax pmax
comp=E,10.0nm,1.4s
YAK pmax pmax
comp=Z,33nm,1.0s,mb5.3
BR131 Keskin Array S 58.76 310 *e*P **P 10 08 50.3 -0.6**
comp=Z,5.5nm,0.9s,mb4.6
BRTR Keskin Array B 58.76 310 P **P 10 08 50.2 -0.7**
comp=Z,6.3nm,1.1s,mb4.6,baz=122,slow=6.4,SNR=16
BRTR LR LR 10 38 44.2
comp=Z,30nm,18.7s,MS3.5,baz=96,slow=41
MOS Moscow 61.42 329 *e*P **P 10 09 07.7 -1.1**
MOS pmax pmax
comp=Z,67nm,1.1s,mb5.7
OBN Obninsk 61.71 328 ⇓*e*P **P 10 09 10.5 -0.3**
OBN *i* 10 09 58.4
OBN *i* S **S 10 17 34.7 +0.5**
OBN pmax pmax
comp=Z,74nm,1.7s,mb5.5
CTA Charters Tower 61.80 120 *e*P **P 10 09 12.4 +0.5**
comp=Z,7.7nm,0.9s,mb4.8
CTA Charters Tower 61.80 120 P **P 10 09 11.8 -0.1**
comp=Z,8.2nm,1.0s,mb4.8,baz=264,slow=8.6,SNR=5.4
CTAO Charters Tower 61.80 120 *e*P **P 10 09 11.8 -0.1**
CTAO pmax pmax
comp=Z,14nm,1.0s,mb5.0
CTAO Charters Tower 61.80 120 *e*P **P 10 09 11.8 -0.1**
comp=Z,14nm,1.0s,mb5.1
STKA Stephens Creek 63.80 133 *e*P **P 10 09 25.6 +0.6**
comp=Z,10nm,1.0s,mb4.8
STKA Stephens Creek 63.80 133 P **P 10 09 23.4 -1.7**
comp=Z,9.6nm,0.9s,mb4.8,baz=330,slow=6.5,SNR=5.9
STKA LR LR 10 36 11.6
comp=Z,166nm,19.5s,MS4.2,baz=321,slow=35
AKASG Malin Array Be 64.45 321 P **P 10 09 27.8 -1.3**
comp=Z,4.7nm,0.8s,mb4.6,baz=91,slow=4.9,SNR=16
KIEV Kiev 64.46 321 *e*P **P 10 09 27.1 -2.0**
KIEV pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
KIEV Kiev 64.46 321 *e*P **P 10 09 27.1 -2.0**
comp=Z,2.3nm,0.7s,mb4.3
TIXI Tiksi 64.98 12 *e*P **P 10 09 30.6 -1.5**
TIXI pmax pmax
comp=Z,15nm,1.1s,mb4.9
TIXI MLR MLR
comp=Z,107nm,14.0s,MS4.2
TIXI Tiksi 64.98 12 *e*P **P 10 09 31.3 -0.9**
comp=Z,22nm,1.2s,mb5.1
VRI Vrincioaia 65.00 316 ⇑*i*P **P 10 09 33.5 +0.8**
PLOR Plostina 65.05 316 ⇓*i*P **P 10 09 33.6 +0.5**
TESR 65.17 316 ⇑*i*P **P 10 09 33.9 0.0**
MLR Muntele Rosu 65.47 315 ⇑*i*P **P 10 09 36.6 +0.8**
BURAR Bucovina Array 66.34 317 ⇑*i*P **P 10 09 41.7 +0.3**
BUR08 Bucovina Ar. S 66.36 317 *e*P **P 10 09 41.1 -0.3**
VTS Vitosha 67.00 312 ⇓*i*P **P 10 09 45.1 -0.6**
IDID Didziasalis 67.09 326 *e*P **P 10 09 45.8 -0.2**
IDID AMB AMB 10 09 47.0
comp=Z,10nm,1.0s,mb4.8
PEA0B Petropavlovsk- 67.17 37 *e*P **P 10 09 46.4 -0.2**
PETK Petropavlovsk- 67.17 37 LR LR 10 41 41.8
comp=Z,77nm,18.1s,MS4.0,baz=58,slow=38
JOF Joensuu 67.27 334 *e*P **P 10 09 46.3 -0.7**
JOF pmax pmax
comp=Z,27nm,0.9s,mb5.3
JOF Joensuu 67.27 334 *ep* **P 10 09 46.3 -0.7**
comp=Z,27nm,0.9s,mb5.3
IIGN Ignalina 67.39 326 *e*P **P 10 09 47.8 -0.1**
IIGN AMB AMB 10 09 48.9
comp=Z,7.9nm,1.1s,mb4.7
SEY Seymchan 67.42 26 *ce*P **P 10 09 47.9 0.0**
IZAR Zarasai 67.47 326 *e*P **P 10 09 48.3 -0.1**
IZAR AMB AMB 10 09 50.3
comp=Z,8.4nm,0.7s,mb4.9
ISAL Salakas 67.49 326 *e*P **P 10 09 48.5 -0.1**
ISAL AMB AMB 10 09 49.5
comp=Z,8.2nm,1.2s,mb4.6
DRGR 67.89 316 ⇓*i*P **P 10 09 51.4 +0.1**
LSZ Lusaka 67.97 249 P **P 10 09 53.8 +1.5**
comp=Z,7.1nm,1.0s,mb4.7,baz=66,slow=7.8,SNR=8.3
LSZ Lusaka 67.97 249 *e*P **P 10 09 53.5 +1.2**
LSZ pmax pmax
comp=Z,14nm,1.2s,mb4.9
LSZ Lusaka 67.97 249 *e*P **P 10 09 53.5 +1.2**
comp=Z,14nm,1.2s,mb4.9
APA Apatity 68.37 339 ⇓*e*P **P 10 09 54.0 +0.2**
APA pmax pmax
comp=Z,36nm,1.0s,mb5.4
APA MLR MLR
comp=Z,300nm,15.0s,MS4.7
UZH Uzhgorod 68.44 318 *e*P **P 10 09 52.6 -2.0**
UZH *e* 10 10 08.0
UZH *i* 10 10 13.0
CRVS Cervenica-Dubn 69.02 318 *e*P **P 10 09 58.4 +0.1**
CRVS pmax pmax
comp=Z,15nm,1.3s,mb4.8
CRVS Cervenica-Dubn 69.02 318 *e*P **P 10 09 58.4 +0.1**
comp=Z,14nm,1.3s,mb4.8
CRVS Cervenica-Dubn 69.02 318 *e*P **P 10 09 58.4 +0.1**
FINES FINESS Array B 69.10 332 P **P 10 09 58.1 -0.4**
comp=Z,11nm,0.8s,mb4.8,baz=104,slow=8.0,SNR=20
KAF Kangasniemi 69.19 333 *e*P **P 10 09 57.6 -1.4**
KAF pmax pmax
comp=Z,19nm,1.0s,mb5.0
KAF Kangasniemi 69.19 333 *e*P **P 10 09 57.6 -1.4**
comp=Z,19nm,1.0s,mb5.0
KAF Kangasniemi 69.19 333 *ep* **P 10 09 57.6 -1.4**

comp=Z,19nm,1.0s,mb5.0
STHS Stebnicka Huta 69.23 319 *e*P **P 10 10 01.3 +1.7**
STHS pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
STHS Stebnicka Huta 69.23 319 *e*P **P 10 10 01.3 +1.7**
comp=Z,4.2nm,1.1s,mb4.3
STHS Stebnicka Huta 69.23 319 *e*P **P 10 10 01.3 +1.7**
KECS Kecovo 69.61 318 *e*P **P 10 10 01.5 -0.4**
KECS pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
KECS Kecovo 69.61 318 *e*P **P 10 10 01.5 -0.4**
comp=Z,2.4nm,0.8s,mb4.2
KECS Kecovo 69.61 318 *e*P **P 10 10 01.5 -0.4**
PSZ Piszkesteto 69.94 317⇑*i*P **P 10 10 03.8 -0.1**
OJC Ojcow 70.27 320 *e*P **P 10 10 02.6 -3.3**
HNR Honiara 70.79 104 LR LR 10 44 22.5
comp=Z,108nm,19.8s,MS4.1,baz=308,slow=39
KOLL Kolacno 70.99 318 *e*P **P 10 10 11.0 +0.6**
KOLL Kolacno 70.99 318 *e*P **P 10 10 11.0 +0.6**
MORC Moravsky Berou 71.67 319⇓*i*P **P 10 10 14.5 +0.1**
ARCES ARCESS Array B 71.80 340 P **P 10 10 15.1 +0.2**
comp=Z,5.4nm,0.8s,mb4.5,baz=99,slow=6.3,SNR=15
ARCES LR LR 10 46 13.6
comp=Z,134nm,19.1s,MS4.2,baz=286,slow=40
ARCES ARCESS Array B 71.80 340 P **P 10 10 15.1 +0.2**
ARCES LR LR 10 46 13.6
ARE0 ARCESS Array S 71.80 340 *e*P **P 10 10 14.0 -0.9**
ZST Bratislava 71.83 317 *e*P **P 10 10 15.3 -0.1**
ZST pmax pmax
comp=Z,16nm,1.4s,mb4.8
ZST Bratislava 71.83 317 *e*P **P 10 10 15.3 -0.1**
comp=Z,16nm,1.4s,mb4.8
ZST Bratislava 71.83 317 *e*P **P 10 10 15.2 -0.2**
CEL Celeste 72.32 307 *e*P **P 10 10 18.7 +0.1**
comp=Z,15nm,1.0s,mb4.9
DPC Dobruska-Polom 72.50 319 *e*P **P 10 10 20.0 +0.6**
DPC Dobruska-Polom 72.50 319 *e*P **P 10 10 20.0 +0.6**
UPC Upice 72.71 320 *e*P **P 10 10 21.1 +0.4**
UPC Upice 72.71 320 *e*P **P 10 10 21.1 +0.4**
ARSA Arzberg 72.83 316⇑*i*P **P 10 10 21.5 0.0**
comp=Z,8.2nm,1.2s,mb4.5
SOKA Soboth 73.14 316⇑*i*P **P 10 10 23.3 0.0**
comp=Z,13nm,1.2s,mb4.7
LBTB Lobatse 73.51 240 P **P 10 10 27.6 +1.7**
comp=Z,10nm,0.9s,mb4.8,baz=81,slow=4.3,SNR=4.2
LBTB Lobatse 73.51 240 *e*P **P 10 10 27.1 +1.3**
PRU Pruhonice 73.62 319 *e*P **P 10 10 26.6 +0.5**
PRU Pruhonice 73.62 319 *e*P **P 10 10 26.6 +0.5**
BRG Berggiesshubel 74.04 320 *e*P **P 10 10 28.4 -0.1**
comp=Z,9.0nm,1.0s,mb4.7
BRG Berggiesshubel 74.04 320 *i*P **P 10 10 28.6 0.0**
comp=Z,9.4nm,1.0s,mb4.7
KHC Kasperske Hory 74.21 318 *e*P **P 10 10 29.1 -0.4**
KHC Kasperske Hory 74.21 318 *e*P **P 10 10 29.1 -0.4**
CLL Collm 74.65 320 *e*P **P 10 10 31.8 -0.3**
comp=Z,6.0nm,0.4s,mb4.9
CLL Collm 74.65 320 *e*P **P 10 10 31.0 -1.1**
CLL *e*PcP PcP 10 10 47.0 +0.6
WET Wettzell 74.67 318 *e*P **P 10 10 31.9 -0.3**
comp=Z,11nm,1.3s,mb4.6
BOSA Boshof 75.06 237 P **P 10 10 36.3 +1.5**
comp=Z,16nm,0.9s,mb5.0,baz=62,slow=5.7,SNR=8.7
BOSA LR LR 10 40 03.2
comp=Z,131nm,19.1s,MS4.2,baz=275,slow=33
MOX Moxa 75.51 320 *e*P **P 10 10 36.9 -0.2**
comp=Z,14nm,1.6s,mb4.6
FUR Furstenfeldbru 75.72 317 *e*P **P 10 10 37.1 -1.2**
comp=Z,19nm,0.6s,mb5.2
GRF Grafenberg Arr 75.76 319 *e*P **P 10 10 38.7 +0.2**
comp=Z,22nm,1.2s,mb5.0
GRF Grafenberg Arr 75.76 319 *e*P **P 10 10 38.7 +0.2**
GRF pmax pmax
comp=Z,22nm,1.2s,mb5.0
MOTA Moosalm 75.84 316⇑*i*P **P 10 10 38.0 -1.0**
comp=Z,6.0nm,0.7s,mb4.6
RETA Reutte 76.07 316⇑*i*P **P 10 10 39.8 -0.6**
comp=Z,15nm,1.5s,mb4.7
NB2 NORSAR Subarra 76.09 330 P **P 10 10 39.2 -1.0**
comp=Z,18nm,1.2s,mb4.9,baz=97,slow=5.3
NB2 NORSAR Subarra 76.09 330 P **P 10 10 39.2 -1.0**
NB2 NORSAR Subarra 76.09 330 P **P 10 10 39.2 -1.0**
NOA NORSAR Array B 76.09 330 P **P 10 10 39.5 -0.7**
comp=Z,9.2nm,1.1s,mb4.6,baz=94,slow=5.6,SNR=7.5
NOA LR LR 10 47 46.5
comp=Z,59nm,19.4s,MS3.9,baz=100,slow=39
FETA Feichten 76.10 316⇑*i*P **P 10 10 40.1 -0.4**
comp=Z,6.2nm,1.0s,mb4.5
BSEG Bad Segeberg 76.35 323 *e*P **P 10 10 41.1 -0.7**
comp=Z,21nm,1.0s,mb5.0
DAVA Damuels 76.67 316⇑*i*P **P 10 10 43.1 -0.6**
comp=Z,12nm,1.0s,mb4.8
KEST Kesra 77.65 304 P **P 10 10 49.9 +0.3**
comp=Z,4.9nm,1.0s,mb4.4,baz=356,slow=3.6,SNR=9.7
KEST Kesra 77.65 304 *e*P **P 10 10 49.6 +0.1**
BFO Black Forest 77.69 317 *e*P **P 10 10 47.7 -1.7**
comp=Z,24nm,1.5s,mb4.9
CDF Champ du Feu 78.38 317 *e*P **P 10 10 52.0 -1.3**
TSUM Tsumeb 78.80 248 P **P 10 10 58.0 +1.8**
comp=Z,2.3nm,0.9s,mb4.1,baz=16,slow=7.4,SNR=4.5
LPG La Plagne 78.92 314 *e*P **P 10 10 55.6 -0.7**
comp=Z,38nm,1.2s,mb4.9
LPG La Plagne 78.92 314 *e*P **P 10 10 55.6 -0.7**
LPG pmax pmax
comp=Z,19nm,1.2s,mb4.9
LPG La Plagne 78.92 314 *e*P **P 10 10 55.6 -0.7**
comp=Z,19nm,1.2s,mb4.9
LPL La Plagne 78.93 314 *e*P **P 10 10 55.6 -0.8**
comp=Z,33nm,1.1s,mb4.9
LPL La Plagne 78.93 314 *e*P **P 10 10 55.6 -0.8**
LPL pmax pmax
comp=Z,17nm,1.1s,mb4.9
LPL La Plagne 78.93 314 *e*P **P 10 10 55.6 -0.8**
comp=Z,17nm,1.1s,mb4.9
VIVF Saint-Julien-l 80.44 314 *e*P **P 10 11 03.5 -1.1**
comp=Z,29nm,1.0s,mb4.8
VIVF Saint-Julien-l 80.44 314 *e*P **P 10 11 03.5 -1.1**
VIVF pmax pmax
comp=Z,14nm,1.0s,mb4.8
VIVF Saint-Julien-l 80.44 314 *e*P **P 10 11 03.5 -1.1**
comp=Z,14nm,1.0s,mb4.9
MAW Mawson 80.81 191 *e*P **P 10 11 06.0 0.0**
comp=Z,4.5nm,0.9s,mb4.4
MAW Mawson 80.81 191 P **P 10 11 06.6 +0.6**
comp=Z,5.2nm,0.9s,mb4.5,baz=30,slow=6.7,SNR=9.8
SMF Signal de Mont 80.84 316 *e*P **P 10 11 05.3 -1.4**
comp=Z,21nm,1.0s,mb4.7
SMF Signal de Mont 80.84 316 *e*P **P 10 11 05.3 -1.4**
SMF pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
SMF Signal de Mont 80.84 316 *e*P **P 10 11 05.3 -1.4**
comp=Z,10nm,1.0s,mb4.7
SSF Saint Saulge 81.03 316 *e*P **P 10 11 06.6 -1.1**
comp=Z,40nm,1.3s,mb4.9
SSF Saint Saulge 81.03 316 *e*P **P 10 11 06.6 -1.1**
SSF pmax pmax
comp=Z,20nm,1.3s,mb4.9
SSF Saint Saulge 81.03 316 *e*P **P 10 11 06.6 -1.1**
comp=Z,20nm,1.3s,mb4.9
TTA Tatalina 90.38 25 *e*P **P 10 11 54.4 +0.6**
TTA pmax pmax
comp=Z,6.0nm,1.0s,mb4.9
TTA Tatalina 90.38 25 *e*P **P 10 11 54.4 +0.6**
comp=Z,6.0nm,1.0s,mb4.9
SUMG Summit 90.86 347 *e*P **P 10 11 56.0 +0.1**
comp=Z,3.8nm,0.9s,mb4.7
BPAW Bear Paw Mtn. 91.86 23 *e*P **P 10 12 00.4 -0.3**
comp=Z,7.2nm,1.0s,mb5.0
MCK McKinley 92.83 23 *e*P **P 10 12 05.3 +0.1**
MCK pmax pmax
comp=Z,14nm,1.1s,mb5.3
MCK McKinley 92.83 23 *e*P **P 10 12 05.3 +0.1**
comp=Z,14nm,1.1s,mb5.3
PDAR Pinedale Array 123.36 19 PKP PKPdf 10 17 49.7 -0.5
comp=Z,1.0nm,1.0s,baz=336,slow=3.3,SNR=6.7
NVAR Mina Array Bea 123.67 28 PKP PKPdf 10 17 51.1 +0.2
comp=Z,2.3nm,1.0s,baz=260,slow=1.4,SNR=9.4
ECSD EROS Data Cent 125.31 7 *e*PKPdf PKPdf 10 17 53.0 -0.9
MSU Marysvale 126.21 23 *e*PKIKP PKPdf 10 17 56.3 +0.5
GDL2 Guadalupe Moun 134.67 19 *e*PKPdf PKPdf 10 18 13.3 +1.3
TXAR Lajitas Array 137.54 20 PKhKP 10 18 09.4
comp=Z,0.1nm,0.7s,baz=224,slow=3.5,SNR=3.5
TXAR PKP PKPdf 10 18 17.0 -0.4
comp=Z,0.6nm,0.9s,baz=316,slow=5.2,SNR=5.6
TXAR Lajitas Array 137.54 20 PKP 10 18 09.4
TXAR PKP PKPdf 10 18 17.0 -0.4
JCT Junction City 137.60 15 *e*PKIKP PKPdf 10 18 17.4 -0.1

PLCA Paso Flores 146.22 205 PKPbc PKPbc 10 18 33.9 +0.4
comp=Z,4.5nm,0.9s,baz=134,slow=8.9,SNR=8.1
CPUP Villa Florida 146.88 238 PKPbc PKPbc 10 18 35.6 -0.3
comp=Z,5.6nm,0.8s,baz=71,slow=6.2,SNR=13
SIV San Ignacio 152.99 256 PKP PKPdf 10 18 41.0 -2.9
comp=Z,0.9nm,0.8s,baz=321,slow=2.0,SNR=3.7
SIV PKPbc PKPbc 10 18 50.5 -0.7
comp=Z,1.3nm,0.8s,baz=68,slow=3.9,SNR=6.7
SIV PKPab PKPab 10 19 03.4 +1.0
comp=Z,5.7nm,0.9s,baz=117,slow=4.2,SNR=14
LPAZ La Paz 159.61 252 PKPab PKPab 10 19 31.1 +0.2
comp=Z,4.3nm,1.0s,baz=86,slow=6.2,SNR=9.5

*IDC **07** 10:02:59.0±1.9, 6°.08S×130°.00E, h0km, mb3.3/1, mb1 3.8/4, mb1mx3.5/18, mbtmp3.6/4, ML3.8/3, MS4.1/1, Ms1 4.1/1, ms1mx2.5/19, Error ellipse: s-maj=67.8km s-min=27.6km az=77.0*
ISC 07 10:03:15.3±2.0, 6°.8S±0°.1×129°.9E±0°.1, h156km±17km, n7, σ1§20/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.39**	**157**	*e*P	**Pn**	**10 04 48.1**	**+0.8**
	9.5nm,0.4s						
KAKA				*e*S	**Sn**	**10 05 58.5**	**-0.9**
FITZ	**Fitzroy Crossi**	**12.01**	**200**	*e*P	**Pn**	**10 06 03.5**	**+2.0**
	5.8nm,0.8s						
FITZ				*e*S	**Sn**	**10 08 14.4**	**0.0**
FITZ	**Fitzroy Crossi**	**12.01**	**200**	Pn	**Pn**	**10 06 02.4**	**+0.9**
	0.6nm,0.3s,baz=35,slow=12,SNR=31						
FITZ				Sn	**Sn**	**10 08 12.9**	**-1.6**
	0.5nm,0.3s,baz=148,slow=19,SNR=4.0						
WRA	**Warramunga Arr**	**13.77**	**162**	Pn	**Pn**	**10 06 23.0**	**-1.1**
	0.4nm,0.3s,baz=342,slow=14,SNR=28						
WRA				Sn	**Sn**	**10 08 50.5**	**-6.2**
	1.3nm,0.3s,baz=348,slow=25,SNR=7.3						
ASAR	**Alice Springs**	**17.22**	**168**	P	**Pn**	**10 07 09.4**	**+2.9**
	0.2nm,0.3s,baz=344,slow=9.8,SNR=14						
ASAR				S	**S**	**10 10 17.1**	**+0.2**
	0.3nm,0.3s,baz=352,slow=27,SNR=4.0						
RAO	**Raoul Island**	**53.88**	**121**	LR	LR	10 31 46.2	
	comp=Z,185nm,19.2s,baz=350,slow=32						
MKAR	**Makanchi Array**	**68.00**	**327**	P	**P**	**10 13 56.7**	**-0.9**
	0.1nm,0.4s,baz=122,slow=7.5,SNR=3.8						

*ATH **07** 10:06:13.4, 38°.14N×21°.56E, h24km±1km, MD3.2/12*
*NEIC **07** 10:06:13.4, 38°.14N×21°.56E, h24km, MD3.2(ATH), After ATH.*
*ISCJB **07** 10:06:14.4±0.5, 38°.14N±0°.04×21°.60E±0°.04, h22km±4km, Error ellipse: s-maj=7.0km s-min=4.5km az=154.8*
*CSEM **07** 10:06:14.0±0.2, 38°.14N×21°.60E, h20km, MD3.2, Error ellipse: s-maj=5.9km s-min=3.9km az=144.0*
*THE **07** 10:06:14.6, 38°.14N×21°.63E, h21km±1km, Error ellipse: s-maj=1.5km s-min=0.8km az=134.0*
ISC 07 10:06:14.5±0.5, 38°.15N±0°.04×21°.59E±0°.04, h20km±4km, n38, σ0§79/58, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.14**	**227**	*e*Pb	**Pb**	**10 06 18.3**	**-0.5**
RLS				*e*Sb	**Sb**	**10 06 21.6**	**-0.1**
RLS	**Riolos of Patr**	**0.14**	**227**	*e*PB	**Pb**	**10 06 18.3**	**-0.5**
RLS				*e*SB	**Sb**	**10 06 21.6**	**-0.1**
RLS	**Riolos of Patr**	**0.14**	**227**	*e*Pb	**Pb**	**10 06 18.3**	**-0.5**
RLS				*e*Sb	**Sb**	**10 06 21.6**	**-0.1**
UPR	**University Cam**	**0.20**	**49**	*e*PB	**Pb**	**10 06 19.4**	**-0.3**
UPR				*e*SB	**Sb**	**10 06 24.0**	**+0.7**
UPR	**University Cam**	**0.20**	**49**	P	**Pb**	**10 06 19.5**	**-0.2**
UPR				S	**Sb**	**10 06 23.6**	**+0.3**
UPR	**University Cam**	**0.20**	**49**	*e*Pb	**Pb**	**10 06 19.4**	**-0.3**
UPR				S	**Sb**	**10 06 23.6**	**+0.3**
UPR				*e*Sb	**Sb**	**10 06 24.0**	**+0.7**
LAKA	**Lakka**	**0.32**	**73**	P	**Pb**	**10 06 20.8**	**-0.7**
LAKA				S	**Sb**	**10 06 26.1**	**-0.1**
LAKA	**Lakka**	**0.32**	**73**	P	**Pb**	**10 06 20.8**	**-0.7**
LAKA				S	**Sb**	**10 06 26.1**	**-0.1**
EFP	**Efpalio**	**0.37**	**42**	*e*PB	**Pb**	**10 06 21.7**	**-0.7**
EFP				*e*SB	**Sb**	**10 06 28.7**	**+1.0**
EFP	**Efpalio**	**0.37**	**42**	P	**Pb**	**10 06 21.9**	**-0.5**
EFP				S	**Sb**	**10 06 28.2**	**+0.5**
EFP	**Efpalio**	**0.37**	**42**	*e*Pb	**Pb**	**10 06 21.7**	**-0.7**
EFP				S	**Sb**	**10 06 28.2**	**+0.5**
EFP				*e*Sb	**Sb**	**10 06 28.7**	**+1.0**
KALE	**Kalithea**	**0.49**	**61**	P	**Pb**	**10 06 23.7**	**-0.7**
KALE				S	**Sb**	**10 06 31.6**	**+0.4**
KALE	**Kalithea**	**0.49**	**61**	P	**Pb**	**10 06 23.7**	**-0.7**
GUR	**Goura**	**0.63**	**110**	*e*PB	**Pb**	**10 06 25.9**	**-0.9**
GUR				*e*SN	**Sb**	**10 06 35.5**	**+0.4**
GUR	**Goura**	**0.63**	**110**	P	**Pb**	**10 06 25.8**	**-1.0**
GUR				S	**Sb**	**10 06 35.3**	**+0.2**
GUR	**Goura**	**0.63**	**110**	P	**Pb**	**10 06 25.8**	**-1.0**
GUR				*e*Sn	**Sb**	**10 06 35.5**	**+0.4**
KFL	**Anninata**	**0.64**	**267**	P	**Pb**	**10 06 27.1**	**+0.3**
KFL				S	**Sb**	**10 06 37.1**	**+1.8**
KFL	**Anninata**	**0.64**	**267**	P	**Pb**	**10 06 27.1**	**+0.3**
KFL				S	**Sb**	**10 06 37.1**	**+1.8**
EVR	**Evrytania**	**0.78**	**12**	*e*Pn	**Pn**	**10 06 29.4**	**-0.9**
EVR	**Evrytania**	**0.78**	**12**	*e*PN	**Pn**	**10 06 29.4**	**-0.9**
EVR	**Evrytania**	**0.78**	**12**	*e*Pn	**Pn**	**10 06 29.4**	**-0.9**
VLS	**Valsamata**	**0.79**	**272**	*e*Pn	**Pn**	**10 06 28.6**	**-1.8**
VLS	**Valsamata**	**0.79**	**272**	*e*PN	**Pn**	**10 06 28.6**	**-1.8**
VLS	**Valsamata**	**0.79**	**272**	*e*Pn	**Pn**	**10 06 28.6**	**-1.8**
VLX	**Vlachokerasia**	**1.00**	**141**	*e*PN	**Pn**	**10 06 32.9**	**-0.3**
VLX	**Vlachokerasia**	**1.00**	**141**	*e*Pn	**Pn**	**10 06 32.9**	**-0.3**
ITM	**Ithomi**	**1.00**	**165**	*e*Pn	**Pn**	**10 06 33.0**	**-0.3**
ITM	**Ithomi**	**1.00**	**165**	*e*PN	**Pn**	**10 06 33.0**	**-0.3**
ITM	**Ithomi**	**1.00**	**165**	*e*Pn	**Pn**	**10 06 33.0**	**-0.3**
AGG	**Agios Georgios**	**1.05**	**33**	P	**Pb**	**10 06 34.1**	**+0.2**
AGG				S	**Sb**	**10 06 47.3**	**+0.2**
AGG	**Agios Georgios**	**1.05**	**33**	P	**Pb**	**10 06 34.1**	**+0.2**
LTK	**Loutraki**	**1.09**	**96**	*e*PN	**Pn**	**10 06 35.4**	**+0.8**
LKR	**Lokris**	**1.21**	**65**	*e*Pn	**Pn**	**10 06 36.3**	**+0.1**
LKR	**Lokris**	**1.21**	**65**	*e*PN	**Pn**	**10 06 36.3**	**+0.1**
LKR	**Lokris**	**1.21**	**65**	*e*Pn	**Pn**	**10 06 36.3**	**+0.1**
PYL	**PYLOS**	**1.26**	**174**	*e*PN	**Pn**	**10 06 37.2**	**+0.4**
PYL	**PYLOS**	**1.26**	**174**	*e*Pn	**Pn**	**10 06 37.2**	**+0.4**
DID	**Didima**	**1.45**	**116**	*e*PN	**Pn**	**10 06 41.4**	**+1.9**

*ATH **07** 10:08:25.4, 36°.50N×28°.98E, h44km±34km, MD3.2/5*
*NEIC **07** 10:08:25.0, 36°.56N×28°.96E, h38km, MD3.3(ATH), After ATH.*
*ISK **07** 10:08:27.4, 36°.15N×28°.86E, h32km, MD3.2*
*ISCJB **07** 10:08:27.9±0.6, 36°.15N±0°.04×28°.89E±0°.04, h26km±6km, Error ellipse: s-maj=7.3km s-min=4.7km az=166.7*
*CSEM **07** 10:08:27.1±0.3, 36°.22N×28°.89E, h10km, MD3.0, Error ellipse: s-maj=7.4km s-min=4.7km az=170.0*
*DDA **07** 10:08:29.4, 36°.40N×28°.94E, h7km±4km, Md3.0*
ISC 07 10:08:27.7±0.6, 36°.18N±0°.05×28°.90E±0°.04, h15km±5km, n52, σ1§25/68, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSL	**Kastellorizon**	**0.56**	**93**	*e*Pn	**Pg**	**10 08 38.4**	**-0.3**
KSL	**Kastellorizon**	**0.56**	**93**	*e*P	**Pg**	**10 08 38.4**	**-0.3**
KSL	**Kastellorizon**	**0.56**	**93**	*e*Pn	**Pg**	**10 08 38.4**	**-0.3**
AKAS	**Kas**	**0.58**	**85**	*i*P	**Pg**	**10 08 38.4**	**-0.7**
AKAS				*i*S	**Sg**	**10 08 49.1**	**+2.4**
AKAS	**Kas**	**0.58**	**85**	*i*P	**Pg**	**10 08 38.4**	**-0.7**
ARG	**Arkhangelos**	**0.62**	**273**	*e*Pn	**Pg**	**10 08 40.2**	**+0.3**
ARG				*e*Sn	**Sg**	**10 08 51.4**	**+3.2**
ARG	**Arkhangelos**	**0.62**	**273**	*e*P	**Pg**	**10 08 40.2**	**+0.3**
ARG				*e*S	**Sg**	**10 08 51.4**	**+3.2**
ARG	**Arkhangelos**	**0.62**	**273**	*e*Pn	**Pg**	**10 08 40.2**	**+0.3**
TURN	**Turunc**	**0.73**	**341**	*i*P	**Pb**	**10 08 42.7**	**+0.6**
TURN				*i*S	**Sb**	**10 08 53.4**	**+1.6**
TURN	**Turunc**	**0.73**	**341**	*i*P	**Pb**	**10 08 42.7**	**+0.6**
ELL	**Elmali**	**0.99**	**55**	*e*PG	**Pg**	**10 08 45.2**	**-1.7**
ELL				*e*SG	**Sg**	**10 08 59.7**	**-0.2**
ELL	**Elmali**	**0.99**	**55**	*e*Pg	**Pg**	**10 08 45.2**	**-1.7**
ELL				*e*Sg	**Sg**	**10 08 59.7**	**-0.2**
YER	**Yerkesik**	**1.07**	**333**	*e*PN	**Pn**	**10 08 45.7**	**-2.4**
YER				*e*SN	**Sn**	**10 09 00.8**	**-1.9**
YER	**Yerkesik**	**1.07**	**333**	Pg	**Pg**	**10 08 45.6**	**-2.8**
YER	**Yerkesik**	**1.07**	**333**	Pg	**Pg**	**10 08 45.6**	**-2.8**
YER				*e*Sn	**Sn**	**10 09 00.8**	**-1.9**
GLHS	**Glhisar (BURDU**	**1.08**	**26**	*e*PN	**Pn**	**10 08 46.6**	**-1.8**
GLHS	**Glhisar (BURDU**	**1.08**	**26**	*e*Pn	**Pn**	**10 08 46.6**	**-1.7**

GOLH Golhisar 1.18 27 *i*P **Pn 10 08 48.9 -0.7**
GOLH *i*S **Sb 10 09 07.0 +2.2**
GOLH Golhisar 1.18 27 *i*P **Pn 10 08 48.9 -0.7**
DAT Datca 1.19 298 *e*PN **Pn 10 08 48.0 -1.9**
DAT Datca 1.19 298 *e*Pn **Pn 10 08 48.0 -1.8**
KORT Korkueli 1.43 55 *i*P **Pn 10 08 53.7 +0.6**
KORT *i*S **Sn 10 09 12.6 +1.1**
KORT Korkueli 1.43 55 *i*P **Pn 10 08 53.7 +0.7**
KORT *i*S **Sn 10 09 12.6 +1.1**
MLSB Milas 1.43 321 *e*PN **Pn 10 08 52.0 -1.0**
MLSB Milas 1.43 321 *e*Pn **Pn 10 08 52.0 -1.1**
BDRM Kayabasi 1.46 307 *i*P **Pn 10 08 55.0 +1.5**
BDRM *i*S **Sn 10 09 15.7 +3.3**
BDRM Kayabasi 1.46 307 *i*P **Pn 10 08 55.0 +1.5**
DNZL Cakiroluk 1.51 5 *i*P **Pn 10 08 54.2 +0.1**
DNZL *i*S **Sn 10 09 15.1 +1.5**
DNZL Cakiroluk 1.51 5 *i*P **Pn 10 08 54.2 0.0**
DNZL *i*S **Sn 10 09 15.1 +1.6**
KARP Karpathos 1.54 246 *e*Pn **Pn 10 08 55.1 +0.4**
KARP Karpathos 1.54 246 *e*P **Pn 10 08 55.1 +0.4**
KARP Karpathos 1.54 246 *e*Pn **Pn 10 08 55.1 +0.4**
BODT Bodrum 1.55 305 *e*PN **Pn 10 08 53.7 -1.0**
BODT Bodrum 1.55 305 *e*Pn **Pn 10 08 53.7 -1.0**
DENT Denizli 1.57 4 *e*PN **Pn 10 08 54.4 -0.7**
DENT Denizli 1.57 4 *e*Pn **Pn 10 08 54.4 -0.6**
AYDN Tasoluk 1.68 331 *i*P **Pn 10 08 57.3 +0.7**
AYDN *i*S **Sn 10 09 17.6 -0.2**
AYDN Tasoluk 1.68 331 *i*P **Pn 10 08 57.3 +0.7**
AYDN *i*S **Sn 10 09 17.6 -0.3**
BCK Bucak 1.86 46 *e*PN **Pn 10 08 58.9 -0.2**
BCK Bucak 1.86 46 *e*Pn **Pn 10 08 58.9 -0.1**
SUTC Sutluce-Ispart 2.12 52 *e*PN **Pn 10 09 02.6 0.0**
SUTC Sutluce-Ispart 2.12 52 *e*Pn **Pn 10 09 02.6 0.0**
KHL Karahalli 2.19 13 *e*PN **Pn 10 09 03.3 -0.3**
KHL Karahalli 2.19 13 *e*Pn **Pn 10 09 03.3 -0.3**
KULA Kula-Manisa 2.33 355 *e*PN **Pn 10 09 05.1 -0.4**
KULA Kula-Manisa 2.33 355 *e*Pn **Pn 10 09 05.1 -0.4**
ZKR Zakros 2.43 245 *e*Pn **Pn 10 09 07.8 +1.0**
ZKR Zakros 2.43 245 *e*P **Pn 10 09 07.5 +0.7**
ZKR Zakros 2.43 245 *e*Pn **Pn 10 09 07.8 +1.0**
LAST Lasithi 2.96 251 *e*Pn **Pn 10 09 14.4 +0.2**
LAST Lasithi 2.96 251 *e*P **Pn 10 09 14.4 +0.2**
LAST Lasithi 2.96 251 *e*Pn **Pn 10 09 14.4 +0.2**

*IDC **07** 10:22:05.2±6.2, 19°.74S×177°.83W, h369km±64km, mb3.7/9, mb1 3.9/10, mb1mx3.6/20, mbtmp3.7/10, Error ellipse: s-maj=35.9km s-min=18.5km az=173.0*
*ISCJB **07** 10:22:07.4±1.5, 19°.8S±0°.1×178°.0W±0°.1, h404km±15km, mb4.0/13, Error ellipse: s-maj=24.0km s-min=16.4km az=137.0*
*NEIC **07** 10:22:07.5±2.6, 19°.80S×177°.88W, h393km±14km, mb4.3/3, Error ellipse: s-maj=59.5km s-min=17.8km az=52.0*
ISC 07 10:22:07.7±1.5, 19°.8S±0°.1×177°.9W±0°.1, h395km±15km, n25, σ0§70/22, mb4.0/13, 1C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.34**	**297**	*e*Pn	**Pn**	**10 23 23.0**	**+0.1**
URZ	**Urewera**	**18.92**	**192**	P	**P**	**10 26 00.6**	**-1.5**
	1.3nm,0.3s,baz=156,slow=15,SNR=8.2						
RPZ	**Rata Peaks**	**25.60**	**199**	P	**P**	**10 27 04.0**	**+1.1**
	18nm,1.0s,mb4.5,baz=73,slow=11,SNR=2.8						
ARMA	**Armidale**	**29.47**	**243**	*e*P	**P**	**10 27 38.4**	**+1.1**
CNB	**Canberra Magne**	**32.71**	**235**⇑	P	**P**	**10 28 06.0**	**+0.7**
CTA	**Charters Tower**	**33.66**	**263**	*e*P	**P**	**10 28 14.1**	**+0.5**
	7.6nm,0.6s,mb4.2						
CTA	**Charters Tower**	**33.66**	**263**	P	**P**	**10 28 14.6**	**+0.9**
	12nm,0.7s,mb4.3,baz=93,slow=11,SNR=18						
CTAO	**Charters Tower**	**33.66**	**263**	*e*P	**P**	**10 28 14.0**	**+0.3**
	8.2nm,0.5s,mb4.3						
TOO	**Toolangi**	**36.40**	**233**	*e*P	**P**	**10 28 36.5**	**0.0**
STKA	**Stephens Creek**	**38.19**	**243**	*e*P	**P**	**10 28 51.6**	**+0.2**
	5.7nm,0.9s,mb3.9						
STKA	**Stephens Creek**	**38.19**	**243**	P	**P**	**10 28 52.0**	**+0.6**
	3.0nm,0.4s,mb3.9,baz=78,slow=12,SNR=14						
BBOO	**Buckleboo**	**42.95**	**243**	*e*P	**P**	**10 29 29.6**	**-0.3**
	4.3nm,0.3s,mb4.3						
ASAR	**Alice Springs**	**44.78**	**256**	P	**P**	**10 29 44.3**	**0.0**
	11nm,0.7s,mb4.3,baz=90,slow=8.1,SNR=152						
ASAR				PcP	PcP	10 31 18.5	-0.1
	0.7nm,0.5s,baz=107,slow=3.0,SNR=4.9						
WRAB	**Tennant Creek**	**44.79**	**261**	*e*P	**P**	**10 29 43.9**	**-0.5**
	4.6nm,0.3s,mb4.3						
WRA	**Warramunga Arr**	**44.80**	**261**	P	**P**	**10 29 43.7**	**-0.8**
	4.2nm,0.3s,mb4.2,baz=97,slow=7.2,SNR=178						
FORT	**Forrest**	**49.67**	**246**	*e*P	**P**	**10 30 20.8**	**-0.7**
	11nm,0.9s,mb4.2						
NWAO	**Narrogin (SRO)**	**58.78**	**243**	P	**P**	**10 31 25.7**	**-0.6**
	12nm,1.1s,mb4.1,baz=89,slow=6.2,SNR=7.0						
NWAO	**Narrogin (SRO)**	**58.78**	**243**	P	**P**	**10 31 25.7**	**-0.6**
QSPA	**South Pole Qui**	**70.29**	**180**	*e*P	**P**	**10 32 39.4**	**+0.4**
	7.6nm,1.0s,mb4.2						
NVAR	**Mina Array Bea**	**80.44**	**43**	P	**P**	**10 33 35.9**	**-0.9**
	0.3nm,0.6s,mb3.1,baz=224,slow=7.3,SNR=3.9						
TXAR	**Lajitas Array**	**86.59**	**57**	P	**P**	**10 34 08.6**	**+0.7**
	0.9nm,0.7s,mb3.6,baz=214,slow=6.5,SNR=14						
PDAR	**Pinedale Array**	**88.37**	**43**	P	**P**	**10 34 16.3**	**+0.3**
	0.5nm,0.7s,mb3.4,baz=266,slow=4.3,SNR=4.8						
BRTR	**Keskin Array B**	**146.42**	**313**	PKPbc	PKPbc	10 41 03.6	+0.2
	0.7nm,0.5s,baz=110,slow=6.5,SNR=2.7						
CLL	**Collm**	**147.38**	**347**	*e*PKPbc	PKPbc	10 41 06.0	+0.5
MMAI	**Mount Meron Ar**	**147.53**	**301**	PKPbc	PKPbc	10 41 07.0	+0.5
	1.9nm,0.4s,baz=61,slow=6.8,SNR=5.5						

**IDC 07 10:31:51.2±2.5, 17°.

GTA LR LR
comp=E,140nm,10.2s
GTA LR LR
comp=Z,120nm,12.3s
SONM Songino Array 15.46 2 Pn **Pn 10 47 36.1 +0.8**
baz=170,slow=8.8,SNR=3.5
MKAR Makanchi Array 22.89 316 P **P 10 48 56.9 -4.2**
comp=Z,0.2nm,0.6s,mb2.7,baz=92,slow=13,SNR=2.6
WRA Warramunga Arr 58.86 148 P **P 10 53 56.9 +0.5**
comp=Z,0.8nm,0.8s,mb3.8,baz=341,slow=7.7,SNR=8.1
ASAR Alice Springs 61.95 150 P **P 10 54 18.2 +0.7**
comp=Z,0.4nm,0.6s,mb3.8,baz=332,slow=6.7,SNR=7.3

IDC 07 10:59:01.1±11.0, 19°08S×65°18E, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.8/22, mbtmp3.9/6, Error ellipse: s-maj=380.0km s-min=30.9km az=58.0, Mauritius - Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**63.62**	**108**	P	P	11 09 34.5	+0.2
	1.9nm,0.9s,baz=276,slow=5.7,SNR=15						
WRA	**Warramunga Arr**	**64.74**	**104**	P	P	11 09 41.8	0.0
	2.3nm,0.8s,baz=262,slow=5.4,SNR=17						
MKAR	**Makanchi Array**	**67.36**	**13**	P	P	11 09 58.1	+0.2
	0.5nm,0.8s,baz=188,slow=8.4,SNR=3.9						
ZALV	**Zalesovo Beam**	**74.66**	**12**	P	P	11 10 42.0	0.0
	0.4nm,0.3s,baz=207,slow=13,SNR=3.5						
SONM	**Songino Array**	**76.16**	**27**	P	P	11 10 51.2	+0.4
	1.6nm,0.9s,baz=229,slow=5.8,SNR=4.9						
KSRS	**Korea Array**	**81.49**	**46**	P	P	11 11 20.2	-0.2
	0.5nm,0.7s,baz=151,slow=40,SNR=2.9						

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*ISCJB **07** 11:13:15.5±0.5, 18°7S±0°1×65°69E±0°09, h10km, mb4.0/11, MS4.0/10, Error ellipse: s-maj=16.6km s-min=12.6km az=170.3*
*IDC **07** 11:13:15.9±0.8, 18°66S×65°73E, h0km, mb3.9/10, mb1 4.0/11, mb1mx3.9/23, mbtmp3.9/11, ML3.9/1, MS3.9/10, Ms1 3.9/10, ms1mx3.6/23, Error ellipse: s-maj=29.0km s-min=20.5km az=75.0*
*NEIC **07** 11:13:17.4±0.5, 18°71S×65°66E, h10km, Error ellipse: s-maj=15.3km s-min=11.8km az=172.0*
ISC 07 11:13:17.5±0.5, 18°7S±0°1×65°66E±0°09, h10km, n18, σ0°88/14, mb4.0/11, MS4.0/10, Mauritius - Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABPO	**Ambohimpanom**	**17.45**	**266**	Pn	**Pn**	**11 17 20.6**	**-0.6**
OPO	**Ambohidratompo**	**17.51**	**267**	P	**Pn**	**11 17 22.1**	**+0.1**
	0.4nm,0.3s,baz=89,slow=14,SNR=3.1						
BOSA	**Boshof**	**38.15**	**247**	LR	LR	11 32 44.5	
	comp=Z,180nm,20.9s,MS3.9,baz=121,slow=31						
MAW	**Mawson**	**48.91**	**181**	P	**P**	**11 22 04.3**	**+0.9**
	1.8nm,0.7s,mb4.2,baz=343,slow=11,SNR=3.8						
MAW				LR	LR	11 38 28.1	
	comp=Z,198nm,18.3s,MS4.1,baz=197,slow=31						
CMAR	**Chiang Mai Arr**	**49.32**	**43**	P	**P**	**11 22 09.1**	**+1.9**
	0.7nm,0.3s,mb4.2,baz=257,slow=40,SNR=3.2						
ASAR	**Alice Springs**	**63.30**	**108**	P	**P**	**11 23 46.1**	**-0.8**
	1.5nm,0.7s,mb4.2,baz=272,slow=5.6,SNR=32						
WRA	**Warramunga Arr**	**64.38**	**104**	P	**P**	**11 23 54.0**	**-0.2**
	3.0nm,0.9s,mb4.3,baz=261,slow=5.3,SNR=23						
WRAB	**Tennant Creek**	**64.40**	**104**	*e*P	**P**	**11 23 53.0**	**-1.3**
BRTR	**Keskin Array B**	**65.37**	**333**	P	**P**	**11 24 00.6**	**+0.5**
	0.4nm,0.3s,mb3.9,baz=100,slow=8.5,SNR=1.5						
BRTR				LR	LR	11 47 47.8	
	comp=Z,31nm,19.5s,MS3.5,baz=103,slow=32						
MKAR	**Makanchi Array**	**66.90**	**12**	P	**P**	**11 24 08.7**	**-1.1**
	0.3nm,0.7s,mb3.4,baz=182,slow=3.3,SNR=3.6						
MKAR				LR	LR	11 53 36.9	
	comp=Z,67nm,18.2s,MS3.9,baz=180,slow=36						
STKA	**Stephens Creek**	**68.68**	**118**	LR	LR	11 51 50.9	
	comp=Z,153nm,19.6s,MS4.2,baz=205,slow=34						
QSPA	**South Pole Qui**	**71.39**	**180**	P	**P**	**11 24 37.8**	**+0.5**
	3.2nm,1.0s,mb4.2,baz=253,slow=4.6,SNR=5.3						
BVAR	**Borovoye Array**	**71.55**	**3**	P	**P**	**11 24 37.6**	**-0.9**
	1.0nm,0.8s,mb3.8,baz=149,slow=6.1,SNR=6.3						
DBIC	**Dimbokro**	**73.91**	**283**	LR	LR	11 54 04.9	
	comp=Z,95nm,22.0s,MS4.0,baz=113,slow=33						
ZALV	**Zalesovo Beam**	**74.21**	**12**	P	**P**	**11 24 54.0**	**-0.3**
	1.1nm,0.6s,mb3.9,baz=216,slow=4.8,SNR=4.6						
ZALV				LR	LR	11 56 22.6	
	comp=Z,50nm,18.7s,MS3.8,baz=226,slow=35						
SONM	**Songino Array**	**75.62**	**27**	P	**P**	**11 25 03.7**	**+1.1**
	1.0nm,0.7s,mb3.9,baz=213,slow=5.3,SNR=4.6						
SONM				LR	LR	11 57 12.3	
	comp=Z,118nm,20.7s,MS4.2,baz=250,slow=35						
KSRS	**Korea Array**	**80.91**	**46**	P	**P**	**11 25 32.4**	**+0.3**
	0.3nm,0.4s,mb3.6,baz=268,slow=3.2,SNR=2.7						
KSRS				LR	LR	12 01 15.6	
	comp=Z,56nm,19.1s,MS3.9,baz=342,slow=36						
MJAR	**Matsushiro Arr**	**87.71**	**50**	LR	LR	12 01 20.2	
	comp=Z,65nm,20.2s,MS4.0,baz=50,slow=33						

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*NOU **07** 11:20:58.2±1.2, 14°39S×166°83E, h30km, MD3.5, ML4.3*
*ISCJB **07** 11:21:04.3±2.8, 15°0S±0°1×167°4E±0°1, h117km±24km, mb4.2/8, Error ellipse: s-maj=24.9km s-min=17.1km az=145.9*
*NEIC **07** 11:21:06.0±3.6, 15°01S×167°41E, h123km±29km, Error ellipse: s-maj=31.9km s-min=17.7km az=204.0*
*IDC **07** 11:21:11.8±11.0, 15°09S×167°27E, h172km±100km, mb3.9/8, mb1 4.0/8, mb1mx3.7/19, mbtmp3.9/8, Error ellipse: s-maj=51.3km s-min=22.0km az=47.0*
ISC 07 11:21:04.9±2.5, 14°9S±0°1×167°4E±0°1, h111km±21km, n23, σ1°02/24, mb4.2/8, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.15**	**187**	*e*P	**Pn**	**11 22 46.2**	**-0.7**
DZM				AMP		11 24 11.0	
	comp=Z,349nm,2.0s						
DZM	**Mont Dzumac**	**7.15**	**187**	*e*Pn	**Pn**	**11 22 46.7**	**-0.1**
BAYA	**Yate Dam**	**7.19**	**184**	*e*P	**Pn**	**11 22 46.9**	**-0.5**
BAYA				*e*S	**Sn**	11 24 08.7	+1.2
NOUC	**Port Laguerre**	**7.20**	**188**	*e*S	**Sn**	**11 24 06.9**	**-0.8**
MVNO	**Noumea**	**7.34**	**187**	*e*P	**Pn**	**11 22 50.0**	**+0.5**
MVNO				*e*S	**Sn**	11 24 10.5	-0.8
EIDS	**Eidsvold**	**18.49**	**233**	*e*P	**P**	**11 25 14.0**	**+1.6**
CTA	**Charters Tower**	**20.81**	**253**	*e*P	**P**	**11 25 40.4**	**+2.8**
	comp=Z,2.5nm,0.5s						
CTA	**Charters Tower**	**20.81**	**253**	P	**P**	**11 25 39.6**	**+2.0**
	comp=Z,6.2nm,0.9s,baz=63,slow=18,SNR=5.1						
CTAO	**Charters Tower**	**20.81**	**253**	*e*P	**P**	**11 25 38.6**	**+1.0**
ARMA	**Armidale**	**21.15**	**221**	*e*P	**P**	**11 25 43.4**	**+2.2**
MTSU	**Mount Surprise**	**22.36**	**259**	*e*P	**P**	**11 25 54.3**	**+0.2**
	comp=Z,12nm,0.5s,mb4.5						
COEN	**Coen**	**23.49**	**269**	*e*P	**P**	**11 26 04.8**	**-0.1**
URZ	**Urewera**	**24.76**	**162**	P	**P**	**11 26 16.4**	**+0.2**
	comp=Z,5.5nm,0.8s,mb4.1,baz=358,slow=5.3,SNR=3.6						
STKA	**Stephens Creek**	**28.96**	**230**	*e*P	**P**	**11 26 54.3**	**+0.3**
	comp=Z,6.6nm,0.4s,mb4.6						
STKA	**Stephens Creek**	**28.96**	**230**	P	**P**	**11 26 54.5**	**+0.5**
	comp=Z,11nm,0.6s,mb4.6,baz=45,slow=7.1,SNR=27						
WRAB	**Tennant Creek**	**31.89**	**256**	*e*P	**P**	**11 27 18.5**	**-1.5**
WRA	**Warramunga Arr**	**31.91**	**256**	P	**P**	**11 27 18.6**	**-1.4**
	comp=Z,1.9nm,0.7s,mb4.0,baz=84,slow=8.7,SNR=22						
ASAR	**Alice Springs**	**32.73**	**249**	P	**P**	**11 27 25.9**	**-1.3**
	comp=Z,5.5nm,0.6s,mb4.6,baz=77,slow=9.4,SNR=120						
FITZ	**Fitzroy Crossi**	**40.11**	**260**	*e*P	**P**	**11 28 29.0**	**-1.1**
QSPA	**South Pole Qui**	**75.08**	**180**	P	**P**	**11 32 33.8**	**-0.4**
	comp=Z,3.0nm,0.8s,mb4.1,baz=1.2,slow=0.9,SNR=20						
SONM	**Songino Array**	**82.75**	**324**	P	**P**	**11 33 17.1**	**+0.7**
	comp=Z,0.5nm,0.3s,mb3.8,baz=140,slow=7.4,SNR=3.7						
MKAR	**Makanchi Array**	**97.45**	**316**	P	**P**	**11 34 26.4**	**+0.2**
	comp=Z,0.3nm,0.5s,mb4.0,baz=100,slow=6.3,SNR=5.5						
ARCES	**ARCESS Array B**	**120.49**	**345**	PKP	PKPdf	11 39 42.1	-0.7
	comp=Z,1.8nm,0.9s,baz=64,slow=2.2,SNR=6.4						

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*ATH **07** 11:27:34.5, 38°07N×21°44E, h24km±4km, MD3.0/7*
*THE **07** 11:27:34.9, 38°00N×21°56E, h17km±1km, ML2.5/6, Error ellipse: s-maj=2.0km s-min=0.6km az=9.0*
*ISCJB **07** 11:27:35.8±0.5, 38°07N±0°04×21°55E±0°03, h21km±5km, Error ellipse: s-maj=6.3km s-min=4.0km az=172.4*
*CSEM **07** 11:27:35.4±0.2, 38°07N×21°54E, h20km, MD3.0, Error ellipse: s-maj=7.0km s-min=4.6km az=1.0*
ISC 07 11:27:35.7±0.5, 38°04N±0°04×21°55E±0°03, h17km±3km, n29, σ1°05/50, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.07**	**288**	*e*PB	**Pg**	**11 27 39.1**	**+0.2**
RLS				*e*SB	**Sg**	**11 27 42.2**	**+1.2**
RLS	**Riolos of Patr**	**0.07**	**288**	*e*Pb	**Pg**	**11 27 39.1**	**+0.2**
RLS				*e*Sb	**Sg**	**11 27 42.2**	**+1.2**
LAKA	**Lakka**	**0.40**	**59**	P	**Pg**	**11 27 43.2**	**-0.6**
LAKA				S	**Sg**	**11 27 49.5**	**+0.2**
LAKA	**Lakka**	**0.40**	**59**	P	**Pg**	**11 27 43.2**	**-0.6**
LAKA				S	**Sg**	**11 27 49.5**	**+0.2**
EFP	**Efpalio**	**0.48**	**36**	*e*PN	**Pg**	**11 27 44.5**	**-0.9**
EFP				*e*SN	**Sg**	**11 27 53.2**	**+1.3**
EFP	**Efpalio**	**0.48**	**36**	P	**Pg**	**11 27 44.4**	**-1.0**
EFP				S	**Sg**	**11 27 53.0**	**+1.1**
EFP	**Efpalio**	**0.48**	**36**	*e*Pn	**Pg**	**11 27 44.5**	**-0.9**
EFP				S	**Sg**	**11 27 53.0**	**+1.1**
KALE	**Kalithea**	**0.58**	**53**	P	**Pg**	**11 27 46.2**	**-1.1**
KALE				S	**Sg**	**11 27 55.9**	**+0.8**
KALE	**Kalithea**	**0.58**	**53**	P	**Pg**	**11 27 46.2**	**-1.1**
KALE				S	**Sg**	**11 27 55.9**	**+0.8**
KFL	**Anninata**	**0.60**	**277**	P	**Pg**	**11 27 46.4**	**-1.2**
KFL				S	**Sg**	**11 27 56.6**	**+0.9**
KFL	**Anninata**	**0.60**	**277**	P	**Pg**	**11 27 46.4**	**-1.2**
KFL				S	**Sg**	**11 27 56.6**	**+0.9**
GUR	**Goura**	**0.64**	**99**	*e*PB	**Pb**	**11 27 47.3**	**-1.1**
GUR	**Goura**	**0.64**	**99**	P	**Pg**	**11 27 47.0**	**-1.2**
GUR				S	**Sg**	**11 27 57.0**	**+0.3**
GUR	**Goura**	**0.64**	**99**	P	**Pg**	**11 27 47.0**	**-1.2**
GUR	**Goura**	**0.64**	**99**	*e*Pb	**Pb**	**11 27 47.3**	**-1.1**
GUR				S	**Sg**	**11 27 57.0**	**+0.3**
VLS	**Valsamata**	**0.77**	**281**	P	**Pb**	**11 27 49.1**	**-1.6**
VLS				S	**Sb**	**11 28 01.3**	**+0.4**
VLS	**Valsamata**	**0.77**	**281**	P	**Pb**	**11 27 49.1**	**-1.6**
VLS				S	**Sb**	**11 28 01.3**	**+0.4**
DSF	**Desfina**	**0.86**	**64**	P	**Pb**	**11 27 50.8**	**-1.4**
DSF				S	**Sb**	**11 28 03.6**	**+0.2**
DSF	**Desfina**	**0.86**	**64**	P	**Pb**	**11 27 50.8**	**-1.4**
DSF				S	**Sb**	**11 28 03.6**	**+0.2**
ITM	**Ithomi**	**0.91**	**161**	*e*PN	**Pn**	**11 27 53.3**	**-0.4**
ITM	**Ithomi**	**0.91**	**161**	*e*Pn	**Pn**	**11 27 53.3**	**-0.4**
VLX	**Vlachokerasia**	**0.94**	**135**	*e*PB	**Pb**	**11 27 53.5**	**0.0**
VLX				*e*SN	**Sn**	**11 28 08.9**	**+1.8**
VLX	**Vlachokerasia**	**0.94**	**135**	*e*Pb	**Pb**	**11 27 53.5**	**0.0**
VLX				*e*Sn	**Sn**	**11 28 08.9**	**+1.8**
LKD2	**Lefkada island**	**1.03**	**317**	P	**Pb**	**11 27 53.6**	**-1.5**
LKD2				S	**Sb**	**11 28 09.7**	**+1.4**
LKD2	**Lefkada island**	**1.03**	**317**	P	**Pb**	**11 27 53.6**	**-1.5**
LKD2				S	**Sb**	**11 28 09.7**	**+1.4**
LTK	**Loutraki**	**1.12**	**90**	*e*PN	**Pn**	**11 27 58.7**	**+2.1**
LTK	**Loutraki**	**1.12**	**90**	*e*Pn	**Pn**	**11 27 58.7**	**+2.1**
PYL	**PYLOS**	**1.15**	**172**	*e*PN	**Pn**	**11 27 57.5**	**+0.5**
PYL	**PYLOS**	**1.15**	**172**	*e*Pn	**Pn**	**11 27 57.5**	**+0.5**

WEL 07 11:39:02.0±0.6, 36°73S×177°36E, h172km±6km, ML3.6/11, Error ellipse: s-maj=8.1km s-min=6.0km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.13**	**138**	PN	Pn	11 39 30.4	+0.6
MXZ				SN	Sn	11 39 51.0	-0.4
URZ	**Urewera**	**1.55**	**187**	PN	Pn	11 39 33.7	0.0
URZ				SN	Sn	11 39 58.8	+0.7
MWZ	**Matawai**	**1.61**	**175**	PN	Pn	11 39 34.5	+0.2
MWZ				SN	Sn	11 39 59.3	0.0
CNGZ	**Carnagh Statio**	**1.88**	**159**	PN	Pn	11 39 37.1	0.0
CNGZ				SN	Sn	11 40 02.4	-1.9
RAHZ	**Arahi**	**2.20**	**186**	PN	Pn	11 39 40.6	-0.1
RAHZ				SN	Sn	11 40 11.5	+0.8
BKZ	**Black Stump Fm**	**2.53**	**195**	PN	Pn	11 39 43.8	-0.8
BKZ				SN	Sn	11 40 17.2	-0.4
PNHZ	**Pukenui**	**3.31**	**196**	PN	Pn	11 39 55.4	+1.3
PXZ	**Pawanui**	**3.33**	**187**	PN	Pn	11 39 53.0	-1.2
TSZ	**Takapari Road**	**3.51**	**198**	PN	Pn	11 39 57.7	+1.3
DVHZ	**Dannevirke**	**3.69**	**194**	PN	Pn	11 39 56.9	-1.9
BFZ	**Birch Farm**	**4.05**	**192**	PN	Pn	11 40 01.2	-2.1
MRZ	**Mangatainoka R**	**4.17**	**199**	PN	Pn	11 40 02.1	-2.8
OGWZ	**Otaki Gorge**	**4.48**	**202**	PN	Pn	11 40 05.2	-3.1
MTW	**Mount Morrison**	**4.66**	**198**	PN	Pn	11 40 07.5	-3.7
CAW	**Cannon Point**	**4.73**	**201**	PN	Pn	11 40 08.6	-3.6
TUWZ	**Tuamarina**	**5.40**	**208**	PN	Pn	11 40 16.8	-4.1
THZ	**Tophouse**	**6.10**	**213**	PN	Pn	11 40 27.0	-3.1
KHZ	**Kahutara**	**6.41**	**206**	PN	Pn	11 40 29.6	-4.5
LTZ	**Lake Taylor**	**7.21**	**211**	PN	Pn	11 40 40.2	-4.4

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*ISCJB **07** 12:00:53.6±0.6, 27°96N±0°05×140°0E±0°1, h473km±7km, mb3.3/6, Error ellipse: s-maj=18.0km s-min=7.9km az=172.8*
*IDC **07** 12:00:54.0±0.8, 27°95N×139°87E, h457km±20km, mb3.1/6, mb1 3.1/8, mb1mx2.9/25, mbtmp3.1/8, Error ellipse: s-maj=59.2km s-min=14.2km az=74.0*
*JMA **07** 12:00:54.4±0.1, 28°03N×140°20E, h474km, M3.5*
ISC 07 12:00:54.7±0.6, 28°02N±0°05×140°1E±0°1, h467km±7km, n19, σ0°97/26, mb3.3/6, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.09**	**116**	P	**P**	**12 01 57.5**	**+0.2**
	30nm,0.3s,baz=273,slow=22,SNR=34						
CBIJ				S	**S**	**12 02 47.2**	**-0.7**
	24nm,0.3s,baz=273,slow=21,SNR=7.7						
CBIJ	**Chichi jima**	**2.09**	**116**	P	**P**	**12 01 57.3**	**+0.1**
CBIJ				*e*S	**S**	**12 02 47.1**	**-0.8**
JHHJ	**Haha-jima-NKT**	**2.33**	**126**	P	**P**	**12 01 59.2**	**+0.6**
JHHJ				*e*S	**S**	**12 02 49.9**	**-0.5**
JHJ	**Hachijo jima 2**	**5.09**	**357**	P	**P**	**12 02 21.2**	**+0.6**
	1.9nm,0.3s,baz=252,slow=20,SNR=2.8						
JHJ				S	**S**	**12 03 30.0**	**-0.8**
	3.4nm,0.3s,baz=253,slow=19,SNR=3.9						
BSO1	**Boso 1**	**6.66**	**6**	P	**P**	**12 02 37.9**	**+1.7**
BSO1				*e*S	**S**	**12 04 00.6**	**+1.2**
BSO3	**Boso 3**	**6.78**	**3**	*e*S	**S**	**12 04 00.4**	**-1.1**
JIE	**Ise**	**6.98**	**336**	P	**P**	**12 02 41.7**	**+2.2**
JTO	**Tosashimizu**	**7.92**	**309**	P	**P**	**12 02 50.0**	**+0.6**
JRY	**Ryogami san**	**8.04**	**353**	*e*S	**S**	**12 04 24.7**	**-1.1**
JAG	**Ashikaga**	**8.40**	**357**	P	**P**	**12 02 54.9**	**+0.4**
JAG				*e*S	**S**	**12 04 27.4**	**-5.5**
JHO	**Hitachi**	**8.58**	**3**	P	**P**	**12 02 57.7**	**+1.3**
JHO				*e*S	**S**	**12 04 34.2**	**-2.2**
JSJ	**Shimokoshiki**	**9.71**	**295**	P	**P**	**12 03 08.5**	**-0.1**
JOW	**Kunigami**	**10.55**	**266**	P	**P**	**12 03 17.1**	**-0.7**
WRA	**Warramunga Arr**	**48.00**	**187**	P	**P**	**12 08 49.3**	**-0.8**
	0.2nm,0.5s,mb2.7,baz=4.7,slow=7.8,SNR=3.3						
MKAR	**Makanchi Array**	**48.44**	**309**	P	**P**	**12 08 52.5**	**-0.7**
	0.1nm,0.4s,mb2.5,baz=100,slow=6.1,SNR=2.7						
KURK	**Kurchatov**	**51.00**	**314**	P	**P**	**12 09 11.8**	**-0.3**
	1.1nm,0.5s,mb3.5,baz=92,slow=7.8,SNR=6.0						
BVAR	**Borovoye Array**	**56.10**	**317**	P	**P**	**12 09 48.1**	**-0.2**
	1.8nm,0.5s,mb3.7,baz=92,slow=6.9,SNR=10						
ARCES	**ARCESS Array B**	**72.06**	**340**	P	**P**	**12 11 30.7**	**+0.7**
	1.3nm,0.6s,mb3.6,baz=61,slow=9.9,SNR=5.0						
FINES	**FINESS Array B**	**76.29**	**333**	P	**P**	**12 11 54.0**	**-0.1**
	1.4nm,0.4s,mb3.9,baz=66,slow=4.9,SNR=11						

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*MAN **07** 12:05:54, 18°94N×121°57E, h1km, mb4.7, ML3.6, MS3.6*
*IDC **07** 12:05:55.1±4.5, 18°86N×122°44E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.4/22, mbtmp3.5/4, Error ellipse: s-maj=395.5km s-min=22.8km az=63.0*
*ISCJB **07** 12:05:59.6±1.0, 18°73N±0°06×121°78E±0°10, h33km, mb3.4/4, Error ellipse: s-maj=13.3km s-min=9.0km az=10.1*
ISC 07 12:06:01.2±0.9, 18°66N±0°07×121°78E±0°09, h35km, n9, σ1°33/14, mb3.4/4, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APYP	**Conner**	**0.94**	**213**	*e*P	**Pn**	**12 06 16.1**	**-1.8**
APYP				*e*S	**Sn**	**12 06 30.3**	**+0.1**
CVP	**Callao Caves**	**0.95**	**177**	‖P	**Pn**	**12 06 17.6**	**-0.5**
CVP				*i* S	**Sn**	**12 06 32.1**	**+1.6**
ABRA	**Dolores**	**1.43**	**225**	*e*P	**Pn**	**12 06 23.6**	**-0.9**
ABRA				*e*S	**Sn**	**12 06 43.1**	**+1.0**
PALP	**Palanan**	**1.71**	**159**	*e*P	**Pn**	**12 06 30.8**	**+2.4**
PALP				*e*S	**Sn**	**12 06 57.7**	**+8.7**
BALP	**Baler**	**2.91**	**184**	*e*P	**Pn**	**12 06 42.4**	**-2.6**
BALP				*e*S	**Sn**	**12 07 27.3**	**+8.5**
WRA	**Warramunga Arr**	**40.29**	**162**	P	**P**	**12 13 34.1**	**-1.0**
	0.7nm,0.9s,mb3.4,baz=343,slow=8.8,SNR=3.1						
MKAR	**Makanchi Array**	**42.79**	**320**	P	**P**	**12 13 56.6**	**+1.2**
	0.6nm,0.7s,mb3.4,baz=112,slow=9.3,SNR=4						
ASAR	**Alice Springs**	**43.70**	**164**	P	**P**	**12 14 02.1**	**-0.8**
	0.4nm,0.9s,mb3.2,baz=344,slow=6.6,SNR=3.4						
KURK	**Kurchatov**	**46.75**	**323**	P	**P**	**12 14 27.6**	**+0.7**
	0.7nm,0.6s,mb3.8,baz=122,slow=7.1,SNR=5.7						

IDC 07 12:09:11.9±1.5, 18°47S×66°53E, h0km, mb3.8/3, mb1 3.9/4, mb1mx3.5/23, mbtmp3.7/4, MS3.9/2, Ms1 3.9/2, ms1mx2.9/35, Error ellipse: s-maj=62.9km s-min=33.4km az=11.0, Mauritius - Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**18.35**	**267**	P	Pn	12 13 28.0	+0.1
	baz=115,slow=18,SNR=0.2						
LBTB	**Lobatse**	**38.47**	**253**	LR	LR	12 29 45.1	
	comp=Z,80nm,20.0s,baz=0.0,slow=32						
ASAR	**Alice Springs**	**62.58**	**108**	P	P	12 19 38.4	+0.2
	1.2nm,0.9s,baz=275,slow=5.9,SNR=10						
WRA	**Warramunga Arr**	**63.64**	**104**	P	P	12 19 45.2	0.0
	1.1nm,0.8s,baz=259,slow=5.2,SNR=8.6						
SONM	**Songino Array**	**75.04**	**27**	P	P	12 20 55.5	+0.3
	0.3nm,0.4s,baz=219,slow=1.8,SNR=2.3						
CBIJ	**Chichi jima**	**86.16**	**60**	LR	LR	12 52 37.6	
	comp=Z,167nm,21.3s,baz=102,slow=30						

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*ISCJB **07** 12:12:13.3±2.0, 55°51N±0°06×154°60W±0°09, h13km±12km, mb4.3/19, MS3.4/7, Error ellipse: s-maj=10.8km s-min=6.8km az=142.1*
*IDC **07** 12:12:13.5±0.9, 55°43N×154°73W, h0km, mb4.0/15, mb1 4.2/17, mb1mx4.0/31, mbtmp4.0/17, ML3.4/2, MS3.3/5, Ms1 3.3/5, ms1mx2.9/36, Error ellipse: s-maj=27.5km s-min=15.4km az=14.0*
*NEIC **07** 12:12:13.3, 55°25N×154°36W, h10km, ML3.7(AEIC), After AEIC.*
*MOS **07** 12:12:14.1±1.2, 55°49N×154°65W, h20km, mb4.8/6, Error ellipse: s-maj=21.3km s-min=7.7km az=86.0*
ISC 07 12:12:16.7±2.0, 55°53N±0°06×154°66W±0°09, h22km±14km, n55, σ1°07/55, mb4.3/19, MS3.4/7, 3C-2D, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**1.86**	**24**	P	**Pn**	**12 12 46.5**	**-0.7**
OHAK				S	**Sn**	**12 13 08.9**	**-1.2**
CHGN	**Chignik**	**2.25**	**292**	P	**Pn**	**12 12 52.0**	**-0.5**
KDAK	**Kodiak Island**	**2.54**	**26**	Pn	**Pn**	**12 12 55.5**	**-0.9**
	7.6nm,0.3s,baz=209,slow=8.4,SNR=41						
KDAK				Sn	**Sn**	**12 13 24.9**	**-1.7**
	12nm,0.3s,baz=22,slow=21,SNR=13						
KDAK	**Kodiak Island**	**2.54**	**26**	P	**Pn**	**12 12 55.5**	**-0.9**
KDAK				S	**Sn**	**12 13 25.6**	**-1.0**
SDPT	**Sand Point**	**3.32**	**269**	P	**Pn**	**12 13 05.6**	**-1.6**
BRLK	**Bradley Lake**	**4.71**	**24**	P	**Pn**	**12 13 25.1**	**-1.2**
RSO	**Redoubt South**	**5.05**	**11**	*e*Pn	**Pn**	**12 13 34.1**	**+3.1**
SLKM	**Skilak Lake**	**5.53**	**23**	P	**Pn**	**12 13 36.9**	**-0.6**
SVW2	**Sparrevohn**	**5.61**	**355**	*e*P	**Pn**	**12 13 39.2**	**+0.6**
RC01	**Rabbit Creek A**	**6.15**	**23**	P	**Pn**	**12 13 47.3**	**+1.2**
PMR	**Palmer**	**6.74**	**23**	*e*P	**Pn**	**12 13 53.7**	**-0.4**
TTA	**Tatalina**	**7.46**	**355**	*e*P	**Pn**	**12 14 05.1**	**+1.1**
BMRM	**Bremner River**	**7.61**	**40**	*e*Pn	**Pn**	**12 14 06.0**	**-0.1**
	17nm,0.6s						
MCK	**McKinley**	**8.72**	**17**	*e*P	**Pn**	**12 14 23.4**	**+2.1**
MCK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MCK	**McKinley**	**8.72**	**17**	*e*Pn	**Pn**	**12 14 23.4**	**+2.1**
	comp=Z,6.3nm,0.6s						
PNL	**Peninsula**	**9.18**	**57**	*e*Pn	**Pn**	**12 14 26.4**	**-1.2**
	comp=Z,25nm,0.6s						
MENT	**Mentasta**	**9.30**	**33**	*e*Pn	**Pn**	**12 14 29.1**	**0.0**
COLA	**College**	**9.96**	**17**	*e*P	**Pn**	**12 14 38.7**	**+0.4**
COLA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
COLA	**College**	**9.96**	**17**	*e*Pn	**Pn**	**12 14 38.7**	**+0.4**
	comp=Z,5.5nm,0.8s						
EGAK	**Eagle**	**11.43**	**30**	*e*Pn	**Pn**	**12 14 58.8**	**+0.5**
	comp=Z,4.0nm,0.8s						
INK	**Inuvik**	**16.09**	**29**	Pn	**Pn**	**12 16 01.9**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=239,slow

AKTO Aktyubinsk 70.95 339 P **P** **12 23 32.2 +0.4**
comp=Z,3.1nm,0.8s,mb4.3,baz=18,slow=5.9,SNR=7.8
KIV Kislovodsk 79.81 347 *e*P **P** **12 24 23.5 +0.7**
KIV pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
CMAR Chiang Mai Arr 83.89 294 P **P** **12 24 44.5 -0.2**
comp=Z,0.6nm,0.3s,mb4.2,baz=13,slow=5.8,SNR=5.4
BRTR Keskin Array B 84.86 354 P **P** **12 24 51.0 +1.8**
comp=Z,1.2nm,0.8s,mb4.1,baz=45,slow=1.9,SNR=6.2
BRTR Keskin Array B 84.86 354 *c*eP **P** **12 24 51.0 +1.7**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
LBTB Lobatse 149.52 360 PKPbc PKPbc 12 32 04.0 +0.2
comp=Z,3.0nm,0.9s,baz=307,slow=13,SNR=2.5
LBTB PKPab PKPab 12 32 09.6 +0.9
comp=Z,5.1nm,0.7s,baz=358,slow=4.6,SNR=5.8
BOSA Boshof 153.11 0 PKPbc PKPbc 12 32 14.6 +2.5
comp=Z,2.5nm,1.0s,baz=164,slow=7.4,SNR=2.0
BOSA PKPab PKPab 12 32 23.6 0.0
comp=Z,2.9nm,1.0s,baz=235,slow=16,SNR=4.0

MOS ***07*** *12:18:25.8±1.2, 42°.57N×140°.54E, h130km, mb4.0/14, Error ellipse: s-maj=15.8km s-min=9.1km az=82.9*
ISCJB ***07*** *12:18:26.7±0.3, 42°.49N±0°.03×140°.75E±0°.05, h144km±2km, mb3.9/17, Error ellipse: s-maj=6.7km s-min=4.3km az=40.7*
IDC ***07*** *12:18:27.9±1.2, 42°.50N×140°.74E, h139km±11km, mb3.6/15, mb1 3.7/18, mb1mx3.5/30, mbtmp3.6/18, Error ellipse: s-maj=16.1km s-min=12.2km az=106.0*
JMA ***07*** *12:18:28.0±0.1, 42°.50N×140°.75E, h137km±1km, M3.4*
NEIC ***07*** *12:18:28.1, 42°.50N×140°.75E, h136km, MG3.4(JMA), After JMA.*
ISC 07 12:18:28.0±0.3,**42°.49N**±0°.03×**140°.75E**±0°.05,**h139**km±2km,
n67,σ0°**65**/85,**mb3.9**/17,**1C-1D**,**Hokaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNB	**Noboribetsu**	**0.21**	**96**	P	**Pn**	**12 18 46.6**	**-0.3**
JNB				*e*S	**Sn**	**12 19 00.4**	**-0.8**
JYM2	**Yakumo 2**	**0.47**	**217**	P	**Pn**	**12 18 48.0**	**+0.1**
JYM2				S	**Sn**	**12 19 02.6**	**-0.3**
JSH	**Shimam**	**0.54**	**286**	P	**Pn**	**12 18 48.1**	**-0.1**
JEW	**Eniwo**	**0.62**	**56**	P	**Pn**	**12 18 48.9**	**+0.2**
JEW				*e*S	**Sn**	**12 19 04.8**	**+0.3**
JKB	**Kayabe**	**0.64**	**161**	P	**Pn**	**12 18 48.7**	**-0.2**
JKB				*e*S	**Sn**	**12 19 04.4**	**-0.3**
JSK	**Shakotan**	**0.88**	**347**	P	**Pn**	**12 18 50.6**	**0.0**
JSK				*e*S	**Sn**	**12 19 07.9**	**-0.1**
JSR	**Shiriuchi**	**0.99**	**195**	P	**Pn**	**12 18 51.6**	**0.0**
JSR				*e*S	**Sn**	**12 19 09.7**	**+0.1**
JOSM	**Okushiri--Mats**	**1.03**	**247**	P	**Pn**	**12 18 51.9**	**0.0**
JOSM				*e*S	**Sn**	**12 19 10.0**	**-0.1**
JOT	**Ohata**	**1.13**	**169**	P	**Pn**	**12 18 52.7**	**-0.2**
JHR	**Hokuryu**	**1.44**	**29**	P	**Pn**	**12 18 56.8**	**+0.8**
JHR				*e*S	**Sn**	**12 19 18.8**	**+1.4**
JNBK	**Urakawa-nobuka**	**1.50**	**97**	P	**Pn**	**12 18 56.3**	**-0.3**
JNBK				*e*S	**Sn**	**12 19 18.7**	**+0.2**
JFR	**Furan**	**1.51**	**63**	P	**Pn**	**12 18 56.4**	**-0.4**
JFR				*e*S	**Sn**	**12 19 18.2**	**-0.6**
ERM	**Erimo**	**1.85**	**104**	*e*Pn	**Pn**	**12 19 00.7**	**+0.1**
ERM				*e*Sn	**Sn**	**12 19 25.3**	**-0.3**
JCH	**Churui**	**1.93**	**86**	P	**Pn**	**12 19 01.6**	**0.0**
JCH				*e*S	**Sn**	**12 19 26.9**	**-0.5**
JYG	**Yagishiri**	**2.00**	**14**	P	**Pn**	**12 19 02.4**	**+0.1**
JKK2	**Kamakawa 2**	**2.01**	**46**	P	**Pn**	**12 19 02.7**	**+0.2**
JKK2				*e*S	**Sn**	**12 19 28.8**	**-0.2**
ASAJ	**Asahikawa**	**2.11**	**39**	P	**Pn**	**12 19 04.1**	**+0.4**
ASAJ	19nm,0.3s,baz=259,slow=16,SNR=80			S	**Sn**	**12 19 31.4**	**+0.2**
	4.6nm,0.3s,baz=52,slow=19,SNR=8.6						
ASAJ	**Asahikawa**	**2.11**	**39**	PN	**Pn**	**12 19 04.1**	**+0.4**
ASAJ				S	**Sn**	**12 19 31.4**	**+0.2**
ASAJ				pmax	pmax		
	comp=Z,19nm,0.3s						
ASAJ				smax			
	comp=N,5.0nm,0.3s						
JANG	**Nango**	**2.19**	**165**	P	**Pn**	**12 19 03.4**	**-1.4**
YUK	**Yuzh-Kuril'sk**	**4.04**	**66**⇑	*i*PN	**Pn**	**12 19 28.7**	**+0.4**
YUK				*i* S	**Sn**	**12 20 15.5**	**+0.3**
YUK				pmax	pmax		
	comp=N,41nm,0.5s						
YUK				pmax	pmax		
	comp=Z,82nm,0.5s						
YUK				pmax	pmax		
	comp=E,24nm,0.2s						
YUK				smax			
	comp=E,257nm,0.6s						
YUK				smax			
	comp=N,149nm,0.2s						
YSS	**Yuzh-Sakhalins**	**4.68**	**17**	*e*PN	**Pn**	**12 19 37.4**	**+0.5**
YSS	**Yuzh-Sakhalins**	**4.68**	**17**	*e*P	**Pn**	**12 19 37.4**	**+0.5**
YSS	**Yuzh-Sakhalins**	**4.68**	**17**	*i*||*i*P	**Pn**	**12 19 37.0**	**+0.1**
MAJO	**Matsushiro**	**6.26**	**199**	*e*PN	**Pn**	**12 19 58.7**	**+0.7**
MAT	**Matsushiro**	**6.26**	**199**	P	**Pn**	**12 19 58.2**	**+0.2**
MAT				*e*S	**Sn**	**12 21 10.4**	**+2.1**
MJAR	**Matsushiro Arr**	**6.26**	**199**	P	**Pn**	**12 19 58.7**	**+0.7**
	comp=N,2.2nm,0.3s,baz=37,slow=9.7,SNR=25						
MJAR	**Matsushiro Arr**	**6.26**	**199**	PN	**Pn**	**12 19 58.7**	**+0.7**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
JHJ	**Hachijo jima 2**	**9.39**	**185**	P	**Pn**	**12 20 35.7**	**-4.2**
JHJ				S	**Sn**	**12 22 14.7**	**-9.2**
	comp=Z,9.4nm,0.3s,baz=80,slow=23,SNR=5.8						
KSRS	**Korea Array**	**11.05**	**247**	P	**Pn**	**12 21 05.9**	**+3.9**
	comp=Z,0.1nm,0.3s,baz=67,slow=10,SNR=3.3						
CBIJ	**Chichi jima**	**15.40**	**175**	P	**Pn**	**12 21 54.2**	**-3.6**
	comp=Z,4.4nm,0.3s,baz=142,slow=23,SNR=6.1						
PETK	**Petropavlovsk-**	**15.53**	**41**	P	**Pn**	**12 21 58.6**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=216,slow=7.1,SNR=8.5						
ZAA0	**Zalesovo Array**	**38.02**	**307**	*e*P	**P**	**12 25 32.1**	**-0.2**
ZALV	**Zalesovo Beam**	**38.02**	**307**	P	**P**	**12 25 32.3**	**+0.1**
	comp=Z,2.2nm,0.3s,mb4.2,baz=88,slow=8.1,SNR=11						
ZALV	**Zalesovo Beam**	**38.02**	**307**	P	**P**	**12 25 32.3**	**0.0**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.2						
MKAR	**Makanchi Array**	**40.99**	**297**	P	**P**	**12 25 56.9**	**0.0**
	comp=Z,1.1nm,0.5s,mb3.7,baz=83,slow=10,SNR=19						
MKAR	**Makanchi Array**	**40.99**	**297**	P	**P**	**12 25 56.9**	**0.0**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURK	**Kurchatov**	**42.33**	**303**	P	**P**	**12 26 08.1**	**+0.4**
	comp=Z,3.8nm,0.5s,mb4.3,baz=77,slow=9.1,SNR=17						
KURK	**Kurchatov**	**42.33**	**303**	P	**P**	**12 26 08.1**	**+0.4**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.3						
COLD	**Coldfoot**	**43.71**	**32**	P	**P**	**12 26 18.7**	**+0.1**
BVAR	**Borovoye Array**	**46.65**	**309**	P	**P**	**12 26 42.2**	**+0.2**
	comp=Z,2.2nm,0.5s,mb4.0,baz=78,slow=9.5,SNR=11						
BVAR	**Borovoye Array**	**46.65**	**309**	P	**P**	**12 26 42.2**	**+0.2**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
EGAK	**Eagle**	**47.66**	**35**	*e*P	**P**	**12 26 50.6**	**+0.9**
INK	**Inuvik**	**49.82**	**29**	P	**P**	**12 27 06.2**	**+0.1**
	comp=Z,1.4nm,0.5s,mb3.9,baz=282,slow=9.3,SNR=13						
INK	**Inuvik**	**49.82**	**29**	P	**P**	**12 27 06.2**	**+0.1**
INK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ABKAR	**Akbulak array**	**54.14**	**307**	P	**P**	**12 27 38.1**	**-0.2**
	comp=Z,0.6nm,0.3s,mb3.8						
SPITS	**Spitsbergen Ar**	**55.08**	**348**	P	**P**	**12 27 44.1**	**-0.6**
	comp=Z,1.3nm,0.6s,mb3.8,baz=52,slow=14,SNR=4.2						
SPITS	**Spitsbergen Ar**	**55.08**	**348**	P	**P**	**12 27 44.1**	**-0.6**
SPITS				pmax	pmax		
	comp=Z,1.0nm,0.6s						
RES	**Resolute Bay**	**57.46**	**15**	P	**P**	**12 28 01.0**	**-0.6**
	comp=Z,1.5nm,0.5s,mb4.1,baz=218,slow=2.3,SNR=5.3						
RES	**Resolute Bay**	**57.46**	**15**	P	**P**	**12 28 01.0**	**-0.6**
RES				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2						
ARCES	**ARCESS Array B**	**58.73**	**338**	P	**P**	**12 28 11.0**	**+0.5**
	comp=Z,1.0nm,0.7s,mb3.7,baz=29,slow=8.3,SNR=5.7						
ARCES	**ARCESS Array B**	**58.73**	**338**	P	**P**	**12 28 11.0**	**+0.5**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES	**ARCESS Array B**	**58.73**	**338**	P	**P**	**12 28 11.0**	**+0.5**
JOF	**Joensuu**	**60.94**	**330**	*e*P	**P**	**12 28 24.0**	**-1.7**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.4						
JOF	**Joensuu**	**60.94**	**330**	*e*p	**P**	**12 28 24.0**	**-1.7**
	comp=Z,1.8nm,0.3s,mb4.4						
WRA	**Warramunga Arr**	**62.40**	**187**	P	**P**	**12 28 35.3**	**-0.6**
	comp=Z,0.8nm,0.7s,mb3.7,baz=5.4,slow=6.9,SNR=14						
WRA	**Warramunga Arr**	**62.40**	**187**	P	**P**	**12 28 35.3**	**-0.6**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**63.78**	**331**	P	**P**	**12 28 43.8**	**-0.7**
	comp=Z,2.4nm,0.5s,mb4.3,baz=29,slow=8.0,SNR=11						
FINES	**FINESS Array B**	**63.78**	**331**	P	**P**	**12 28 43.8**	**-0.7**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ASAR	**Alice Springs**	**66.13**	**187**	P	**P**	**12 29 00.3**	**+0.2**
	comp=Z,1.0nm,0.9s,mb3.6,baz=0.9,slow=5.1,SNR=6.8						
ASAR	**Alice Springs**	**66.13**	**187**	P	**P**	**12 29 00.3**	**+0.2**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NB2	**NORSAR Subarra**	**68.97**	**336**	P	**P**	**12 29 16.9**	**-0.7**
	comp=Z,0.6nm,0.5s,mb3.6,baz=40,slow=6.9						
NOA	**NORSAR Array B**	**68.97**	**336**	P	**P**	**12 29 17.1**	**-0.5**
	comp=Z,0.7nm,0.5s,mb3.6,baz=37,slow=6.2,SNR=3.6						
NOA	**NORSAR Array B**	**68.97**	**336**	P	**P**	**12 29 17.2**	**-0.4**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	**69.71**	**321**	P	**P**	**12 29 21.3**	**-1.0**
	comp=Z,0.5nm,0.4s,mb3.6,baz=42,slow=6.1,SNR=4.1						
AKASG	**Malin Array Be**	**69.71**	**321**	P	**P**	**12 29 21.3**	**-1.0**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NVAR	**Mina Array Bea**	**72.17**	**54**	P	**P**	**12 29 39.1**	**+1.8**
	comp=Z,0.2nm,0.3s,mb3.3,baz=2.8,slow=33,SNR=2.6						
PDAR	**Pinedale Array**	**74.23**	**46**	P	**P**	**12 29 49.9**	**+0.5**
	comp=Z,0.2nm,0.4s,mb3.2,baz=23,slow=2.1,SNR=2.9						

BJI ***07*** *12:22:18.3, 31°.53N×104°.04E, h12km, mB4.2/1, mb4.4/1, ML3.6/18, Ms3.4/2, Ms7 3.4/1*
IDC ***07*** *12:22:19.3±0.8, 31°.42N×104°.12E, h0km, mb4.0/12, mb1 4.2/12, mb1mx4.0/26, mbtmp4.1/12, Error ellipse: s-maj=37.6km s-min=14.6km az=55.0*
NEIC ***07*** *12:22:20.9±0.4, 31°.54N×104°.35E, h10km, Error ellipse: s-maj=18.8km s-min=7.6km az=67.0*
ISC 07 12:22:20.6±1.0,**31°.51N**±0°.03×**104°.11E**±0°.06,**h4**km±7km,
n20,σ1°**06**/28,**mb4.0**/11,**Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.67**	**207**	Pg	**Pg**	**12 22 32.3**	**-1.1**
CD2				Sg	**Sg**	**12 22 42.1**	**+0.1**
CD2				smax			
	comp=N,3μm,0.6s						
LZH	**Lanzhou**	**4.57**	**357**	Pn	**Pn**	**12 23 31.0**	**+0.4**
LZH				Sn	**Sn**	**12 24 27.4**	**+3.3**
LZH				Sg	**Sg**	**12 24 46.2**	**-1.3**
LZH				smax			
	comp=N,71nm,0.6s						
LZH				smax			
	comp=E,96nm,0.8s						
LZH				LR	LR		
	comp=E,140nm,4.2s						
LZH				LR	LR		
	comp=Z,240nm,5.1s						
XAN	**Xi'an**	**4.78**	**57**	Pn	**Pn**	**12 23 33.4**	**+0.1**
XAN				Pg	**Pb**	**12 23 46.3**	**+1.4**
XAN				Sn	**Sn**	**12 24 28.7**	**-0.5**
XAN				Sg	**Sb**	**12 24 47.2**	**+4.5**
XAN				smax			
	comp=N,160nm,0.8s						
XAN				smax			
	comp=E,75nm,0.8s						
GYA	**Guiyang**	**5.51**	**155**	Pn	**Pn**	**12 23 45.9**	**+2.5**
GYA				Pg	**Pb**	**12 23 58.3**	**+1.0**
GYA				Sn	**Sn**	**12 24 47.3**	**+0.1**
GYA				smax			
	comp=N,110nm,0.8s						
GYA				smax			
	comp=E,100nm,0.9s						
CMAR	**Chiang Mai Arr**	**13.81**	**201**	Pn	**Pn**	**12 25 38.6**	**+1.3**
	comp=E,0.2nm,0.3s,baz=2.8,slow=11,SNR=4.0						
KSRS	**Korea Array**	**20.48**	**67**	P	**P**	**12 26 59.2**	**-0.2**
	comp=E,2.0nm,0.6s,baz=257,slow=10,SNR=14						
MK31	**Makanchi Array**	**22.68**	**319**	*e*P	**P**	**12 27 23.6**	**+0.7**
MKAR	**Makanchi Array**	**22.68**	**319**	P	**P**	**12 27 23.6**	**+0.7**
	comp=E,5.5nm,1.1s,mb3.9,baz=117,slow=12,SNR=9.9						
ZALV	**Zalesovo Beam**	**26.36**	**334**	P	**P**	**12 27 58.1**	**+0.5**
	comp=E,2.0nm,0.6s,mb3.8,baz=139,slow=9.7,SNR=5.5						
KURK	**Kurchatov**	**26.93**	**323**	P	**P**	**12 28 03.2**	**+0.4**
	comp=E,2.2nm,0.8s,mb3.8,baz=126,slow=9.2,SNR=12						
BVAR	**Borovoye Array**	**32.48**	**321**	P	**P**	**12 28 52.5**	**+0.5**
	comp=E,0.6nm,0.6s,mb3.6,baz=120,slow=8.7,SNR=3.7						
FITZ	**Fitzroy Crossi**	**53.48**	**154**	P	**P**	**12 31 40.4**	**-1.7**
	comp=E,3.1nm,0.8s,mb4.3,baz=326,slow=10,SNR=2.4						
ARCES	**ARCESS Array B**	**56.89**	**336**	P	**P**	**12 32 06.9**	**+0.7**
	comp=E,2.4nm,0.9s,mb4.2,baz=68,slow=9.7,SNR=2.1						
FINES	**FINESS Array B**	**57.24**	**326**	P	**P**	**12 32 08.4**	**-0.4**
	comp=E,1.4nm,0.6s,mb4.2,baz=72,slow=6.2,SNR=4.3						
WRAB	**Tennant Creek**	**58.80**	**146**	*e*P	**P**	**12 32 18.9**	**-1.4**
WRA	**Warramunga Arr**	**58.80**	**146**	P	**P**	**12 32 19.3**	**-1.0**
	comp=E,5.2nm,0.7s,mb4.7,baz=338,slow=7.6,SNR=49						
WRA	**Warramunga Arr**	**58.80**	**146**	P	**P**	**12 32 19.3**	**-1.0**
ASAR	**Alice Springs**	**61.83**	**149**	P	**P**	**12 32 39.9**	**-1.0**
	comp=E,1.0nm,0.5s,mb4.2,baz=337,slow=6.7,SNR=25						
NOA	**NORSAR Array B**	**64.32**	**327**	P	**P**	**12 32 55.1**	**-1.9**
	comp=E,0.8nm,0.7s,mb3.9,baz=72,slow=9.4,SNR=3.3						
INK	**Inuvik**	**71.78**	**19**	P	**P**	**12 33 43.0**	**-0.8**
	comp=E,1.3nm,0.6s,mb4.0,baz=307,slow=8.3,SNR=4.0						

IDC ***07*** *12:54:13.5±1.8, 15°.32N×122°.77E, h0km, mb3.4/3, mb1 3.8/4, mb1mx3.4/23, mbtmp3.6/4, ML4.3/1, Error ellipse: s-maj=34.0km s-min=28.0km az=43.0*
MAN ***07*** *12:54:15, 15°.32N×122°.40E, h3km, mb4.8, ML3.7, MS3.7*
ISCJB ***07*** *12:54:17.4±0.8, 15°.30N±0°.05×122°.44E±0°.06, h33km, mb3.5/3, Error ellipse: s-maj=9.1km s-min=6.3km az=153.2*
ISC 07 12:54:18.6±0.8,**15°.31N**±0°.05×**122°.41E**±0°.07,**h35**km,**n10**,
σ1°**47**/16,**mb3.5**/3,**1C**,**Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**0.74**	**218**	*e*P	**Pn**	**12 54 30.5**	**-2.1**
POLP				*e*S	**Sn**	**12 54 41.6**	**-1.0**
BALP	**Baler**	**0.91**	**298**	*e*P	**Pn**	**12 54 32.6**	**-2.3**
BALP				*e*S	**Sn**	**12 54 45.9**	**-0.8**
PCPH	**Palayan**	**1.29**	**281**⇑	*e*P	**Pn**	**12 54 39.4**	**-0.7**
PCPH				*e*S	**Sn**	**12 54 57.2**	**+1.0**
CAUP	**Cauayan**	**1.72**	**341**	*e*P	**Pn**	**12 54 45.0**	**-1.0**
CAUP				*e*S	**Sn**	**12 55 08.3**	**+1.7**
TGY	**Tagaytay City**	**1.87**	**230**	Pn	**Pn**	**12 54 50.8**	**+2.7**
	102nm,0.3s,baz=2.7,slow=6.7,SNR=9.2						
TGY				Sn	**Sn**	**12 55 18.8**	**+8.4**
	41nm,0.3s,baz=140,slow=23,SNR=10.0						
BOAC	**Boac**	**1.92**	**197**	*e*P	**Pn**	**12 54 51.2**	**+2.3**
BOAC				*e*S	**Sn**	**12 55 19.4**	**+7.5**
PVCP	**Virac**	**2.40**	**135**	*e*P	**Pn**	**12 54 55.4**	**0.0**
WRA	**Warramunga Arr**	**36.95**	**161**	P	**P**	**13 01 23.1**	**-1.4**
	0.9nm,0.5s,mb3.8,baz=343,slow=9.1,SNR=8.8						
ASAR	**Alice Springs**	**40.34**	**164**	P	**P**	**13 01 52.6**	**-0.3**
	0.2nm,0.3s,mb3.3,baz=340,slow=7.3,SNR=18						
MKAR	**Makanchi Array**	**45.76**	**322**	P	**P**	**13 02 38.3**	**+1.8**
	0.2nm,0.6s,mb3.2,baz=127,slow=9.2,SNR=1.5						

ISCJB ***07*** *12:56:30.9±0.5, 72°.62N±0°.05×4°.1E±0°.2, h10km, mb3.5/6, MS3.4/15, Error ellipse: s-maj=9.3km s-min=6.4km az=143.7*
IDC ***07*** *12:56:31.9±0.9, 72°.57N×3°.88E, h0km, mb3.5/5, mb1 3.8/11, mb1mx3.6/27, mbtmp3.7/11, ML3.4/6, MS3.4/21, Ms1 3.4/21, ms1mx3.2/32, Error ellipse: s-maj=22.0km s-min=13.7km az=33.0*
CSEM ***07*** *12:56:31.8±0.3, 72°.60N×3°.94E, h2km, ML2.6, Error ellipse: s-maj=7.9km s-min=5.6km az=86.0*
NAO ***07*** *12:56:32.9±2.6, 72°.51N×4°.37E, ML2.8*
NEIC ***07*** *12:56:33.3±0.8, 72°.62N×4°.08E, h10km, Error ellipse: s-maj=11.9km s-min=8.8km az=87.0*
BER ***07*** *12:56:34.9±3.2, 72°.62N×4°.33E, h0km±33km, MD2.5, ML2.6, ML2.8(NAO)*
ISC 07 12:56:33.7±0.6,**72°.66N**±0°.05×**4°.4E**±0°.2,**h10**km,**n59**,
σ1°**13**/55,**mb3.5**/6,**MS3.4**/15,**Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMIC	**Jan Mayen**	**4.36**	**254**	Pn	**Pn**	**12 57 36.2**	**-3.7**
	2.5nm,0.3s,baz=127,slow=5.1,SNR=2.7						
JMIC				LR	LR	12 58 60.0	
	comp=Z,224nm,20.6s,baz=69,slow=35						
JMIC	**Jan Mayen**	**4.36**	**254**	Pn	**Pn**	**12 57 36.2**	**-3.7**
LOF	**Lofoten**	**5.49**	**141**	*e*P	**Sn**	**12 59 00.6**	**+2.1**
LOF				AML	AML	13 00 04.5	
	comp=Z,8.5nm,0.5s						
TRO	**Tromso**	**5.61**	**116**	*e*P	**Pn**	**12 57 57.4**	**+0.4**
TRO				AML	AML	12 59 00.1	
	comp=Z,18nm,0.3s						
TRO	**Tromso**	**5.61**	**116**	*e*P	**Pn**	**12 57 57.4**	**+0.4**
	SNR=49						
SPA0	**Spitsbergen Ar**	**6.30**	**23**	Pn	**Pn**	**12 58 07.4**	**+0.8**
	baz=207,slow=18						
SPA0	**Spitsbergen Ar**	**6.30**	**23**	Pn	**Pn**	**12 58 07.4**	**+0.9**
SPITS	**Spitsbergen Ar**	**6.30**	**23**	Pn	**Pn**	**12 58 06.8**	**+0.2**
	baz=199,slow=17,SNR=9.2						
SPITS				LR	LR	13 00 08.2	
	comp=Z,185nm,19.6s,baz=250,slow=34						
SPITS	**Spitsbergen Ar**	**6.30**	**23**	Pn	**Pn**	**12 58 06.8**	**+0.3**
KBS	**Kingsbay**	**6.57**	**13**	Pn	**Pn**	**12 58 11.6**	**+1.5**
KBS	**Kingsbay**	**6.57**	**13**	Pn	**Pn**	**12 58 11.6**	**+1.5**
KONS	**Konsvik**	**6.89**	**149**	*e*P	**Pn**	**12 58 14.4**	**-0.3**
KONS				*e*S	**Sn**	**12 59 25.9**	**-7.1**
KONS				AML	AML	12 59 30.1	
	comp=Z,8.6nm,0.5s						
FLOS	**Flostrand**	**7.08**	**149**	*e*P	**Pn**	**12 58 17.2**	**0.0**
FLOS				*e*S	**Sn**	**12 59 31.6**	**-6.0**
FLOS				AML	AML	12 59 37.1	
	comp=Z,12nm,0.9s						
MOR8	**Moi Rana**	**7.41**	**147**	*e*P	**Pn**	**12 58 21.6**	**0.0**
MOR8				*e*S	**Sn**	**12 59 38.2**	**-7.4**
MOR8				AML	AML	12 59 44.9	
	comp=Z,11nm,0.6s						
MOR8	**Moi Rana**	**7.41**	**147**	*e*P	**Pn**	**12 58 21.6**	**0.0**
MOR8				*e*S	**Sn**	**12 59 38.2**	**-7.4**
MOR8	**Moi Rana**	**7.41**	**147**	*e*P	**Pn**	**12 58 21.6**	**-0.1**
	SNR=47						
ARA0	**ARCESS Array S**	**7.52**	**104**	Pn	**Pn**	**12 58 23.5**	**+0.3**
	baz=312,slow=11						
ARA0				Sn	**Sn**	**12 59 45.0**	**-3.3**
	baz=293,slow=22						
ARA0	**ARCESS Array S**	**7.52**	**104**	Pn	**Pn**	**12 58 23.5**	**+0.3**
ARA0				Sn	**Sn**	**12 59 45.0**	**-3.4**
ARCES	**ARCESS Array B**	**7.52**	**104**	Pn	**Pn**	**12 58 24.1**	**+0.8**
	comp=Z,0.7nm,0.3s,baz=309,slow=12,SNR=21						
ARCES				Sn	**Sn**	**12 59 46.2**	**-2.1**
	comp=Z,0.8nm,0.3s,baz=305,slow=20,SNR=5.8						
ARCES				LR	LR	13 01 29.7	
	comp=Z,128nm,21.0s,baz=299,slow=39						
ARCES	**ARCESS Array B**	**7.52**	**104**	Pn	**Pn**	**12 58 24.0**	**+0.8**
ARCES				Sn	**Sn**	**12 59 46.2**	**-2.2**
ARE0	**ARCESS Array S**	**7.52**	**104**	*e*Pn	**Pn**	**12 58 24.4**	**+1.2**
ARE0	**ARCESS Array S**	**7.52**	**104**	*e*Pn	**Pn**	**12 58 24.4**	**+1.2**
KEV	**Kevo**	**7.84**	**101**	*e*P	**Pn**	**12 58 24.6**	**-3.0**
	comp=Z,6.6nm,0.7s						
KEV	**Kevo**	**7.84**	**101**	*e*p	**Pn**	**12 58 24.6**	**-3.0**
	comp=Z,6.6nm,0.7s						
APA0	**Apatity Array**	**10.88**	**103**	Pn	**Pn**	**12 59 09.4**	**+0.2**
	baz=312,slow=16						
APA0	**Apatity Array**	**10.88**	**103**	Pn	**Pn**	**12 59 09.4**	**+0.2**
NB2	**NORSAR Subarra**	**11.96**	**164**	Pn	**Pn**	**12 59 23.2**	**-0.8**
	baz=343,slow=16						
NB2	**NORSAR Subarra**	**11.96**	**164**	Pn	**Pn**	**12 59 23.2**	**-0.8**
NOA	**NORSAR Array B**	**11.96**	**164**	Pn	**Pn**	**12 59 24.6**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=346,slow=13,SNR=4.1						
NOA				LR	LR	13 03 56.8	
	comp=Z,120nm,18.9s,baz=345,slow=37						
NOA	**NORSAR Array B**	**11.96**	**164**	Pn	**Pn**	**12 59 24.6**	**+0.6**
NOA				LR	LR	13 03 56.8	
NOA	**NORSAR Array B**	**11.96**	**164**	Pn	**Pn**	**12 59 24.6**	**+0.6**
NAO01	**NORSAR Array S**	**12.13**	**165**	Pn	**Pn**	**12 59 26.3**	**0.0**
NAO01	**NORSAR Array S**	**12.13**	**165**	Pn	**Pn**	**12 59 26.3**	**0.0**
HFS	**Hagfors**	**13.09**	**159**	Pn	**Pn**	**12 59 38.6**	**-0.9**
	baz=347,slow=14						
HFS	**Hagfors**	**13.09**	**159**	Pn	**Pn**	**12 59 39.3**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=354,slow=14,SNR=14						
HFS				LR	LR	13 04 22.7	
	comp=Z,174nm,19.4s,baz=344,slow=36						
HFS	**Hagfors**	**13.09**	**159**	Pn	**Pn**	**12 59 38.6**	**-0.8**
	baz=347,slow=13,SNR=50						
FIA0	**FINESS Array S**	**13.95**	**132**	Pn	**Pn**	**12 59 50.4**	**-0.8**
	baz=336,slow=16						
FIA0	**FINESS Array S**	**13.95**	**132**	Pn	**Pn**	**12 59 50.3**	**-0.8**

mb1 3.7/4, mb1mx3.5/15, mbtmp3.5/4, Error ellipse: s-maj=246.7km s-min=30.1km az=105.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.93**	**222**	P	Pn	13 42 51.5	-2.0
	0.2nm,0.3s,baz=39,slow=12,SNR=14						
ASAR	**Alice Springs**	**22.94**	**216**	P	P	13 43 24.4	+0.2
	0.5nm,0.6s,baz=50,slow=8.6,SNR=8.5						
MKAR	**Makanchi Array**	**77.94**	**320**	P	P	13 50 18.9	+0.7
	0.1nm,0.3s,baz=98,slow=8.1,SNR=4.4						
ZALV	**Zalesovo Beam**	**79.26**	**327**	P	P	13 50 25.0	-0.3
	0.7nm,0.3s,baz=119,slow=5.1,SNR=2.7						

*IDC **07** 13:48:00.3±1.1, 31°.76N×104°.34E, $h0^{km}$, mb3.9/6, mb1 4.1/7, mb1mx3.7/26, mbtmp3.9/7, MS2.8/2, Ms1 2.8/2, ms1mx2.4/39, Error ellipse: s-maj=44.7km s-min=20.2km az=69.0*
*NEIC **07** 13:48:02.6±0.8, 31°.87N×104°.62E, $h10^{km}$, mb4.3/1, Error ellipse: s-maj=33.3km s-min=13.7km az=87.0*
*BJI **07** 13:48:03.3, 31°.93N×104°.52E, $h18^{km}$, mB4.4/2, mb4.2/4, ML3.8/18, Ms3.6/4, Ms7 3.6/4*
ISC 07 13:48:04.4±1.2, 31°.79N±0°.03×104°.60E±0°.06, $h19^{km}\pm9^{km}$, n18, σ1°31/27, mb4.1/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.13**	**219**	Pg	**Pg**	**13 48 23.6**	**-2.7**
CD2				Sg	**Sg**	**13 48 42.4**	**+1.2**
CD2				smax			
	comp=N,2μm,0.8s						
XAN	**Xi'an**	**4.27**	**57**	Pn	**Pn**	**13 49 10.3**	**+1.9**
XAN				Pg	**Pb**	**13 49 19.1**	**+0.2**
XAN				Sn	**Sn**	**13 49 58.7**	**+0.9**
XAN				Sg	**Sb**	**13 50 10.4**	**+0.2**
XAN				smax			
	comp=N,230nm,0.7s						
XAN				smax			
	comp=E,130nm,0.6s						
LZH	**Lanzhou**	**4.33**	**352**	Pn	**Pn**	**13 49 08.8**	**-0.4**
LZH				Pg	**Pb**	**13 49 19.8**	**-0.1**
LZH				Sn	**Sn**	**13 50 01.7**	**+2.5**
LZH				Sg	**Sb**	**13 50 12.8**	**+1.0**
LZH				smax			
	comp=N,440nm,1.0s						
LZH				smax			
	comp=E,440nm,0.9s						
LZH				LR	LR		
	comp=E,840nm,5.4s						
LZH				LR	LR		
	comp=Z,990nm,6.7s						
GYA	**Guiyang**	**5.61**	**161**	Pn	**Pn**	**13 49 32.4**	**+5.6**
GYA				Sn	**Sn**	**13 50 31.4**	**+0.6**
GYA				smax			
	comp=N,120nm,0.8s						
GYA				smax			
	comp=E,220nm,0.8s						
KMI	**Kunming**	**6.84**	**194**	Pn	**Pn**	**13 49 49.2**	**+5.5**
KMI				smax			
	comp=N,21nm,1.7s						
KMI				smax			
	comp=E,14nm,1.9s						
GTA	**Gaotai**	**8.54**	**334**	*e*P	**Pn**	**13 50 12.0**	**+5.0**
GTA				pP		13 50 16.5	
GTA				sP		13 50 19.1	
GTA				sS		13 51 56.1	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,70nm,4.8s						
GTA				LR	LR		
	comp=N,150nm,9.3s						
GTA				LR	LR		
	comp=E,180nm,11.6s						
GTA				LR	LR		
	comp=Z,160nm,9.3s						
HHC	**Hu-ho-hao-te**	**10.64**	**30**	*e*P	**Pn**	**13 50 34.3**	**-1.5**
HHC				S	**Sn**	**13 52 34.1**	**-0.3**
HHC				pmax	pmax		
	comp=Z,13nm,0.5s						
HHC				pmax	pmax		
	comp=Z,58nm,4.6s						
CMAR	**Chiang Mai Arr**	**14.22**	**202**	Pn	**Pn**	**13 51 26.9**	**+2.0**
	comp=Z,0.0nm,0.3s,baz=10.0,slow=9.8,SNR=3.3						
SONM	**Songino Array**	**16.09**	**4**	Pn	**Pn**	**13 51 49.5**	**+0.1**
	baz=186,slow=8.4,SNR=8.0						
SONM				LR	LR	13 57 18.4	
	comp=Z,22nm,18.4s,baz=60,slow=35						
KSRS	**Korea Array**	**19.99**	**67**	P	**Pn**	**13 52 35.1**	**-2.4**
	comp=Z,1.6nm,0.8s,baz=254,slow=10,SNR=9.1						
KSRS				LR	LR	14 00 06.9	
	comp=Z,32nm,18.7s,baz=240,slow=36						
ZALV	**Zalesovo Beam**	**26.30**	**333**	P	**P**	**13 53 36.4**	**-2.2**
	comp=Z,0.9nm,0.5s,mb3.6,baz=141,slow=10,SNR=4.0						
ARCES	**ARCESS Array B**	**56.81**	**336**	P	**P**	**13 57 44.7**	**-2.3**
	comp=Z,3.5nm,1.0s,mb4.3,baz=88,slow=8.6,SNR=2.4						
ARCES	**ARCESS Array B**	**56.81**	**336**	P	**P**	**13 57 44.7**	**-2.3**
WRAB	**Tennant Creek**	**58.81**	**147**	*e*P	**P**	**13 58 01.1**	**-0.5**
	comp=Z,1.8nm,0.6s,mb4.3						
WRA	**Warramunga Arr**	**58.81**	**147**	P	**P**	**13 58 01.1**	**-0.6**
	comp=Z,1.4nm,0.6s,mb4.2,baz=340,slow=7.7,SNR=18						
ASAR	**Alice Springs**	**61.86**	**149**	P	**P**	**13 58 22.2**	**-0.2**
	comp=Z,0.8nm,0.8s,mb3.9,baz=334,slow=6.6,SNR=16						
INK	**Inuvik**	**71.37**	**19**	P	**P**	**13 59 23.3**	**+0.6**
	comp=Z,1.8nm,0.6s,mb4.2,baz=343,slow=6.7,SNR=6.6						
INK	**Inuvik**	**71.37**	**19**	P	**P**	**13 59 23.3**	**+0.6**

*NEIC **07** 13:48:40.6, 16°.96N×99°.57W, $h24^{km}$, MD3.5(MEX), After MEX.*
MEX 07 13:48:40.6±0.7, 16°.96N×99°.57W, $h24^{km}\pm27^{km}$, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.29**	**252**	*i* P	Pb	13 48 46.6	-0.9
ACX				*i* S	Sb	13 48 52.1	0.0
ACX	**Acapulco**	**0.29**	**252**	*i* P	Pb	13 48 46.6	-0.9
ACX				*i* S	Sb	13 48 52.1	0.0
CAIG	**El Cayaco**	**0.68**	**277**	*i* P	Pb	13 48 51.5	-2.3
CAIG				*i* S	Sb	13 49 00.7	-2.0
CAIG	**El Cayaco**	**0.68**	**277**	*i* P	Pb	13 48 51.5	-2.3
CAIG				*i* S	Sb	13 49 00.7	-2.0
MEIG	**Mezcala**	**0.96**	**357**	*i* P	Pb	13 48 55.5	-3.1
MEIG				*i* S	Sb	13 49 08.0	-2.9
PNIG	**Pinotepa**	**1.49**	**112**	*i* P	Pn	13 49 03.6	-2.3
PNIG				*i* S	Sn	13 49 21.3	-3.3
PNIG	**Pinotepa**	**1.49**	**112**	*i* P	Pn	13 49 03.6	-2.3
PNIG				*i* S	Sn	13 49 21.3	-3.3
UTMO	**Huajuapan**	**1.89**	**63**	*i* P	Pn	13 49 09.1	-2.3
UTMO				*i* S	Sn	13 49 30.8	-3.7
PPM	**Popocatepetl**	**2.28**	**23**	*i* P	Pn	13 49 13.8	-2.9
PPM				*i* S	Sn	13 49 45.1	+1.1
PPM	**Popocatepetl**	**2.28**	**23**	*i* P	Pn	13 49 13.8	-2.9
PPM				*i* S	Sn	13 49 45.1	+1.1

*TRN **07** 13:57:02.1, 19°.14N×64°.87W, $h7^{km}$*
*RSPR **07** 13:57:03.8, 19°.41N×64°.66W, $h30^{km}\pm29^{km}$, MD3.5/6, MD3.5/6*
*NEIC **07** 13:57:03.8, 19°.41N×64°.66W, $h30^{km}$, MD3.5(RSPR), After RSPR.*
ISC 07 13:57:02.5±1.6, 19°.31N±0°.07×64°.78W±0°.09, $h12^{km}\pm8^{km}$, n24, σ0°55/42, 20C-4D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.90**	**170**	*e*P	**Pg**	**13 57 19.8**	**-0.1**
TBVI	**Tortola**	**0.90**	**170**	*e*P	**Pg**	**13 57 19.8**	**-0.1**
STVI	**Saint Thomas**	**0.96**	**190**	*e*P	**Pg**	**13 57 20.7**	**-0.4**
STVI				*e*S	**Sg**	**13 57 34.2**	**+0.5**
STVI	**Saint Thomas**	**0.96**	**190**	*e*P	**Pg**	**13 57 20.7**	**-0.4**
STVI				*e*S	**Sg**	**13 57 34.2**	**+0.5**
MTP	**Monte Pirata**	**1.41**	**212**	*e*P	**Pn**	**13 57 27.3**	**-0.7**
MTP				*e*S	**Sn**	**13 57 46.6**	**0.0**
MTP	**Monte Pirata**	**1.41**	**212**	*e*P	**Pn**	**13 57 27.3**	**-0.7**
MTP				*e*S	**Sn**	**13 57 46.6**	**0.0**
HUMP	**Col San Antoni**	**1.54**	**222**	*e*P	**Pn**	**13 57 29.5**	**-0.3**
HUMP				*e*S	**Sn**	**13 57 48.3**	**-1.5**
HUMP	**Col San Antoni**	**1.54**	**222**	*e*P	**Pn**	**13 57 29.5**	**-0.3**
HUMP				*e*S	**Sn**	**13 57 48.3**	**-1.5**
CDVI	**St. Croix**	**1.54**	**180**	*e*P	**Pn**	**13 57 30.8**	**+0.9**
CDVI				*e*S	**Sn**	**13 57 50.1**	**+0.2**
CDVI	**St. Croix**	**1.54**	**180**	*e*P	**Pn**	**13 57 30.8**	**+0.9**
CDVI				*e*S	**Sn**	**13 57 50.1**	**+0.2**
CPD	**Cerro la Pandu**	**1.66**	**221**	*e*P	**Pn**	**13 57 31.6**	**0.0**
CPD	**Cerro la Pandu**	**1.66**	**221**	*e*P	**Pn**	**13 57 31.6**	**0.0**
SJG	**San Juan**	**1.76**	**228**	*e*P	**Pn**	**13 57 32.6**	**-0.3**
SJG				*e*S	**Sn**	**13 57 54.8**	**-0.5**
SJG	**San Juan**	**1.76**	**228**	*e*P	**Pn**	**13 57 32.6**	**-0.3**
SJG				*e*S	**Sn**	**13 57 54.8**	**-0.5**
AOPR	**Arecibo Observ**	**2.10**	**243**	*e*P	**Pn**	**13 57 37.7**	**+0.1**
AOPR				*e*S	**Sn**	**13 58 04.2**	**+0.5**
AOPR	**Arecibo Observ**	**2.10**	**243**	*e*P	**Pn**	**13 57 37.7**	**+0.1**
AOPR				*e*S	**Sn**	**13 58 04.2**	**+0.5**
CELP	**Cerrillos**	**2.10**	**235**	*e*P	**Pn**	**13 57 37.5**	**-0.1**
CELP				*e*S	**Sn**	**13 58 03.8**	**+0.1**
CELP	**Cerrillos**	**2.10**	**235**	*e*P	**Pn**	**13 57 37.5**	**-0.1**
CELP				*e*S	**Sn**	**13 58 03.8**	**+0.1**
ICM	**Isla Caja Muer**	**2.17**	**230**	*e*P	**Pn**	**13 57 39.2**	**+0.6**
ICM				*e*S	**Sn**	**13 58 05.5**	**+0.1**
ICM	**Isla Caja Muer**	**2.17**	**230**	*e*P	**Pn**	**13 57 39.2**	**+0.6**
ICM				*e*S	**Sn**	**13 58 05.5**	**+0.1**
LSP	**Las Mesas**	**2.46**	**243**	*e*P	**Pn**	**13 57 42.2**	**-0.3**
LSP	**Las Mesas**	**2.46**	**243**	*e*P	**Pn**	**13 57 42.2**	**-0.3**
CRPR	**Cabo Rojo, PR**	**2.56**	**240**	*e*P	**Pn**	**13 57 44.0**	**+0.1**
CRPR				*e*S	**Sn**	**13 58 16.1**	**+1.1**
CRPR	**Cabo Rojo, PR**	**2.56**	**240**	*e*P	**Pn**	**13 57 44.0**	**+0.1**
CRPR				*e*S	**Sn**	**13 58 16.1**	**+1.1**

IDC 07 14:01:02.5±6.6, 18°.86S×66°.46E, $h0^{km}$, mb3.8/5, mb1 4.0/5, mb1mx3.6/22, mbtmp3.8/5, MS3.8/1, Ms1 3.8/1, ms1mx2.7/33, Error ellipse: s-maj=230.1km s-min=32.4km az=51.0, Mauritius - Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**36.71**	**270**	LR	LR	14 21 30.3	
	comp=Z,138nm,18.8s,baz=252,slow=33						
ASAR	**Alice Springs**	**62.53**	**107**	P	P	14 11 28.6	+0.1
	0.8nm,0.8s,baz=267,slow=6.1,SNR=8.2						
WRA	**Warramunga Arr**	**63.52**	**103**	P	P	14 11 35.8	0.0
	1.3nm,0.9s,baz=258,slow=5.3,SNR=5.9						
AKTO	**Aktyubinsk**	**69.39**	**354**	P	P	14 12 11.7	-0.3
	1.1nm,0.4s,baz=129,slow=6.5,SNR=3.1						
BVAR	**Borovoye Array**	**71.66**	**2**	P	P	14 12 26.3	+0.6
	0.3nm,0.4s,baz=184,slow=14,SNR=2.6						
KSRS	**Korea Array**	**80.48**	**45**	P	P	14 13 16.1	-0.2
	0.7nm,0.9s,baz=230,slow=5.9,SNR=4.0						

*NIED **07** 14:07:00, 31°.00N×143°.10E, $h8^{km}$, Mw3.6 Best double couple: M_0=2.60000×10^{14} NP1:ϕ_s=304.00000°, δ84.00000°, λ125.00000°. NP2:ϕ_s=42.00000°, δ36.00000°, λ10.00000°.*
JMA 07 14:07:53.1±0.3, 31°.03N×143°.15E, $h54^{km}$, M4.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.51**	**307**	P	Pn	14 08 46.9	+1.8
JHJ2				S	Sn	14 09 24.7	-0.7
CBIJ	**Chichi jima**	**4.01**	**192**	P	Pn	14 08 52.3	+0.3
CBIJ				S	Sn	14 09 34.5	-3.2
BSO1	**Boso 1**	**4.05**	**334**	P	Pn	14 08 54.1	+1.6
BSO2	**Boso 2**	**4.22**	**332**	S	Sn	14 09 46.0	+3.1
BSO3	**Boso 3**	**4.37**	**330**	P	Pn	14 08 58.8	+1.9
BSO3				S	Sn	14 09 50.0	+3.5
JOD2	**Odawara 2**	**5.42**	**322**	P	Pn	14 09 13.9	+2.5
JOD2				S	Sn	14 10 13.6	+1.2
JYT	**Yasato**	**5.74**	**335**	P	Pn	14 09 16.2	+0.5
JYT				S	Sn	14 10 20.9	+0.7
JHU	**Hanno**	**5.79**	**327**	P	Pn	14 09 19.2	+2.8
JHU				S	Sn	14 10 19.3	-2.2
JHO	**Hitachi**	**5.97**	**340**	P	Pn	14 09 19.2	+0.4
JHO				S	Sn	14 10 22.9	-2.8
JRY	**Ryogami san**	**6.11**	**326**	P	Pn	14 09 23.0	+2.3
JRY				S	Sn	14 10 28.3	-0.9
JAG	**Ashikaga**	**6.20**	**331**	P	Pn	14 09 23.7	+1.7
JAG				S	Sn	14 10 30.7	-0.8

*IDC **07** 14:13:44.5±1.0, 15°.36N×122°.82E, $h0^{km}$, mb3.9/9, mb1 4.0/9, mb1mx3.8/23, mbtmp3.9/9, ML5.0/1, Error ellipse: s-maj=28.1km s-min=16.8km az=70.0*
*ISCJB **07** 14:13:48.8±0.5, 15°.32N±0°.04×122°.49E±0°.05, $h33^{km}$, mb4.0/12, Error ellipse: s-maj=6.8km s-min=5.0km az=165.6*
*MAN **07** 14:13:48, 15°.30N×122°.43E, $h24^{km}$, mb5.1, ML4.0, MS4.2*
*NEIC **07** 14:13:50.1±5.1, 15°.29N×122°.73E, $h38^{km}\pm45^{km}$, mb4.4/3, Error ellipse: s-maj=49.4km s-min=8.9km az=59.0*
ISC 07 14:13:50.4±0.5, 15°.32N±0°.04×122°.45E±0°.05, $h35^{km}$, n23, σ1°32/33, mb4.0/12, 2C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**0.77**	**220**	*e*P	**Pn**	**14 14 02.7**	**-2.0**
POLP				*e*S	**Sn**	**14 14 13.8**	**-1.3**
BALP	**Baler**	**0.94**	**297**	*e*P	**Pn**	**14 14 04.8**	**-2.3**
BALP				*e*S	**Sn**	**14 14 18.3**	**-1.0**
PCPH	**Palayan**	**1.32**	**281**	*e*P	**Pn**	**14 14 11.5**	**-0.9**
PCPH				*i* S	**Sn**	**14 14 29.5**	**+0.7**
CAUP	**Cauayan**	**1.72**	**340**	*e*P	**Pn**	**14 14 16.9**	**-0.9**
CAUP				*e*S	**Sn**	**14 14 39.3**	**+0.7**
PALP	**Palanan**	**1.73**	**359**	*e*P	**Pn**	**14 14 16.5**	**-1.5**
PALP				*e*S	**Sn**	**14 14 37.4**	**-1.5**
TGY	**Tagaytay City**	**1.90**	**231**	Pn	**Pn**	**14 14 22.7**	**+2.4**
	414nm,0.3s,baz=39,slow=1.8,SNR=36						
TGY				Sn	**Sn**	**14 14 51.1**	**+8.1**
	631nm,0.3s,baz=149,slow=22,SNR=20						
BOAC	**Boac**	**1.94**	**198**	*e*P	**Pn**	**14 14 22.6**	**+1.8**
BOAC				*e*S	**Sn**	**14 14 51.0**	**+6.9**
BCPH	**Baguio City Da**	**2.08**	**301**	*i* P	**Pn**	**14 14 22.8**	**0.0**
BCPH				*i* S	**Sn**	**14 14 46.2**	**-1.3**
PVCP	**Virac**	**2.38**	**136**	*e*P	**Pn**	**14 14 26.9**	**0.0**
PVCP				*e*S	**Sn**	**14 15 06.6**	**+12**
CMAR	**Chiang Mai Arr**	**22.70**	**281**	P	**P**	**14 18 51.5**	**+2.3**
	1.2nm,0.7s,mb3.5,baz=94,slow=7.6						
HHC	**Hu-ho-hao-te**	**27.14**	**342**	*e*P	**P**	**14 19 32.3**	**+2.1**
HHC				S	**S**	**14 24 07.6**	**+1.3**
HHC				pmax	pmax		
	comp=Z,16nm,0.5s,mb4.8						
HHC				pmax	pmax		
	comp=Z,51nm,5.0s						
WRAB	**Tennant Creek**	**36.94**	**161**	*e*P	**P**	**14 20 54.8**	**-1.4**
	comp=Z,1.5nm,0.5s,mb4.1						
WRA	**Warramunga Arr**	**36.94**	**161**	P	**P**	**14 20 54.6**	**-1.7**
	comp=Z,1.7nm,0.6s,mb4.1,baz=343,slow=9.3,SNR=13						
ASAR	**Alice Springs**	**40.33**	**164**	P	**P**	**14 21 23.7**	**-1.0**
	comp=Z,0.3nm,0.3s,mb3.5,baz=341,slow=7.0,SNR=18						
MK31	**Makanchi Array**	**45.77**	**322**	*e*P	**P**	**14 22 09.7**	**+1.2**
MKAR	**Makanchi Array**	**45.77**	**322**	P	**P**	**14 22 09.6**	**+1.1**
	comp=Z,1.0nm,0.7s,mb3.8,baz=112,slow=9.3,SNR=11						
ZALV	**Zalesovo Beam**	**48.43**	**331**	P	**P**	**14 22 29.3**	**+0.2**
	comp=Z,1.2nm,0.7s,mb4.1,baz=117,slow=5.0,SNR=6.1						
KURK	**Kurchatov**	**49.82**	**325**	P	**P**	**14 22 41.0**	**+1.3**
	comp=Z,6.4nm,0.6s,mb4.8,baz=121,slow=8.3,SNR=14						
KURK	**Kurchatov**	**49.82**	**325**	*e*P	**P**	**14 22 40.8**	**+1.1**
	comp=Z,7.8nm,0.8s,mb4.8						
BVAR	**Borovoye Array**	**55.41**	**325**	P	**P**	**14 23 22.3**	**+1.2**
	comp=Z,0.6nm,0.6s,mb3.8,baz=112,slow=11,SNR=3.2						
BRVK	**Borovoye**	**55.49**	**325**	*e*P	**P**	**14 23 22.9**	**+1.2**
	comp=Z,2.8nm,0.8s,mb4.3						
FINES	**FINESS Array B**	**79.70**	**331**	P	**P**	**14 25 54.6**	**+0.3**
	comp=Z,0.6nm,0.5s,mb3.8,baz=82,slow=2.9,SNR=3.5						
NOA	**NORSAR Array B**	**86.60**	**333**	P	**P**	**14 26 28.9**	**-1.0**
	comp=Z,0.8nm,0.8s,mb4.0,baz=67,slow=4.9,SNR=3.4						

*ISCJB **07** 14:14:07.0±0.5, 27°.04S±0°.03×26°.75E±0°.03, $h11^{km}\pm3^{km}$, Error ellipse: s-maj=5.5km s-min=3.5km az=136.9*
*PRE **07** 14:14:07.5±1.0, 27°.02S×26°.75E, $h2^{km}$, ML3.9*
*IDC **07** 14:14:07.2±1.2, 26°.99S×26°.69E, $h0^{km}$, mb3.8/2, mb1 4.3/7, mb1mx3.9/27, mbtmp4.3/7, ML4.3/2, MS3.4/3, Ms1 3.4/3, ms1mx2.9/28, Error ellipse: s-maj=18.7km s-min=10.6km az=103.0*
*NEIC **07** 14:14:07.5±0.9, 26°.97S×26°.75E, $h5^{km}$, ML3.7, Error ellipse: s-maj=18.6km s-min=12.1km az=113.0*
ISC 07 14:14:07.6±0.5, 27°.03S±0°.02×26°.73E±0°.03, $h3^{km}\pm3^{km}$, n35, σ1°19/65, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOAB	**Moab Khotsong**	**0.07**	**52**	*e*P	**Pg**	**14 14 08.8**	**-0.2**
MOAB				*e*S	**Sg**	**14 14 09.5**	**-0.6**
MOAB				AML	AML	14 14 11.8	
	comp=Z,8μm,0.4s						
TAUL	**Tau Lekoa**	**0.12**	**288**	*e*P	**Pg**	**14 14 10.6**	**+0.7**
TAUL				*e*S	**Sg**	**14 14 12.2**	**+0.7**
TAUL				AML	AML	14 14 13.4	
	comp=Z,53μm,0.6s						
BFSD	**Buffelsfontein**	**0.17**	**16**	*e*P	**Pg**	**14 14 10.9**	**0.0**
BFSD				*e*S	**Sg**	**14 14 12.8**	**-0.4**
BFSD				AML	AML	14 14 14.2	
	comp=Z,17μm,0.5s						
KSR	**Koster**	**1.19**	**7**	*e*P	**Pg**	**14 14 29.2**	**-1.0**
KSR				*e*S	**Sg**	**14 14 46.1**	**+0.5**
KSR				AML	AML	14 14 51.6	
	comp=Z,1μm,0.9s						
SWZ	**Schweizer**	**1.26**	**263**	*e*P	**Pg**	**14 14 31.3**	**-0.4**
SWZ				*e*S	**Sg**	**14 14 49.0**	**+0.9**
SWZ				AML	AML	14 14 57.0	
	comp=Z,7μm,0.6s						
ERPM	**east rand prop**	**1.51**	**63**	*e*P	**Pn**	**14 14 36.2**	**+0.7**
ERPM				*e*S	**Sn**	**14 14 57.9**	**+2.1**
ERPM				AML	AML	14 15 11.9	
	comp=Z,406nm,0.5s						
SLR	**Silverton**	**1.90**	**47**	*e*P	**Pn**	**14 14 41.3**	**+0.5**
SLR				*e*S	**Sn**	**14 15 06.0**	**+0.8**
SLR				AML	AML	14 15 07.6	
	comp=Z,2μm,0.4s						
BOSA	**Boshof**	**2.05**	**219**	Pn	**Pn**	**14 14 43.1**	**+0.2**
	comp=Z,55nm,0.3s,baz=45,slow=15,SNR=178						
BOSA				Pg	**Pg**	**14 14 45.0**	**-1.8**
	comp=Z,55nm,0.3s,baz=43,slow=18,SNR=150						
BOSA				Lg		14 15 11.4	
	comp=Z,213nm,0.3s,baz=321,slow=19,SNR=33						
BOSA				Rg		14 15 24.2	
	comp=Z,287nm,0.4s,baz=269,slow=13,SNR=5.8						
BOSA	**Boshof**	**2.05**	**219**	*e*Pn	**Pn**	**14 14 42.9**	**0.0**
BOSA				*e*Pb	**Pb**	**14 14 45.0**	**-0.4**
BOSA				*e*Pb	**Pb**	**14 14 45.0**	**-0.4**
BOSA				Pg	**Pg**	**14 14 45.0**	**-1.8**
BOSA				Lg		14 15 11.4	
BOSA				*e*S	**Sn**	**14 15 11.6**	**+2.6**
BOSA				*e*S	**Sn**	**14 15 11.6**	**+2.6**
BOSA				Rg		14 15 24.2	
BOSA	**Boshof**	**2.05**	**219**	*e*P	**Pn**	**14 14 44.1**	**+1.2**
BOSA				*e*S	**Sn**	**14 15 10.9**	**+1.9**
BOSA				AML	AML	14 15 29.5	
	comp=Z,284nm,0.3s						
LBTB	**Lobatse**	**2.25**	**333**	Pn	**Pn**	**14 14 46.3**	**+0.6**
	comp=Z,265nm,0.3s,baz=160,slow=18,SNR=513						
LBTB				Pg	**Pg**	**14 14 47.6**	**-3.2**
	comp=Z,265nm,0.3s,baz=160,slow=18,SNR=460						
LBTB				Lg		14 15 16.3	
	comp=Z,654nm,0.3s,baz=70,slow=20,SNR=81						
LBTB				Rg		14 15 26.4	
	comp=Z,3μm,1.1s,baz=274,slow=16,SNR=21						
LBTB				LR	LR	14 15 46.8	
	comp=Z,349nm,18.4s,baz=190,slow=45						
LBTB	**Lobatse**	**2.25**	**333**	*e*P	**Pn**	**14 14 47.2**	**+1.5**
LBTB				*e*S	**Sn**	**14 15 14.8**	**+0.7**
LBTB				AML	AML	14 15 17.7	
	comp=Z,2μm,0.3s						
HVD	**Gariep Dam**	**3.72**	**197**	*e*P	**Pn**	**14 15 07.3**	**+1.4**
HVD				*e*S	**Sn**	**14 15 50.3**	**+0.1**
HVD				AML	AML	14 16 22.2	
	comp=Z,235nm,0.4s						
KSD	**Kokstad**	**4.21**	**147**	*e*P	**Pn**	**14 15 13.8**	**+1.1**
KSD				*e*S	**Sn**	**14 16 01.2**	**-1.2**
KSD				AML	AML	14 16 20.1	
	comp=Z,463nm,0.4s						
POGA	**Pongola**	**4.36**	**96**	*e*P	**Pn**	**14 15 15.8**	**+1.1**
POGA				*e*S	**Sn**	**14 16 06.9**	**+0.9**
POGA				AML	AML	14 16 29.6	
	comp=Z,423nm,0.7s						
PKA	**Prieska**	**4.38**	**232**	*e*P	**Pn**	**14 15 15.9**	**+0.9**
PKA				*e*S	**Sn**	**14 16 06.3**	**-0.3**
PKA				AML	AML	14 16 26.9	
	comp=Z,397nm,0.2s						
UPI	**Upington**	**5.04**	**253**	*e*P	**Pn**	**14 15 25.0**	**+1.0**
UPI				*e*S	**Sn**	**14 16 21.8**	**-0.9**
UPI				AML	AML	14 16 49.0	
	comp=Z,318nm,0.4s						
MOPA	**Mopani**	**5.48**	**51**	*e*P	**Pn**	**14 15 30.8**	**+0.6**
MOPA				*e*S	**Sn**	**14 16 31.6**	**-2.1**
MOPA				AML	AML	14 16 57.8	
	comp=Z,568nm,0.5s						
MSNA	**Messina**	**5.54**	**33**	*e*P	**Pn**	**14 15 30.4**	**-0.6**
MSNA				*e*S	**Sn**	**14 16 30.4**	**-4.8**
MSNA				AML	AML	14 17 05.5	
	comp=Z,130nm,0.6s						
SOE	**Somerset East**	**5.75**	**190**	*e*P	**Pn**	**14 15 34.4**	**+0.6**
SOE				*e*S	**Sn**	**14 16 38.5**	**-1.8**
SOE				AML	AML	14 17 10.5	
	comp=Z,151nm,0.7s						
GRM	**Grahamstown**	**6.26**	**182**	*e*P	**Pn**	**14 15 42.9**	**+2.0**
GRM				*e*S	**Sn**	**14 16 50.9**	**-2.0**
GRM				AML	AML	14 17 30.9	
	comp=Z,116nm,0.5s						
SUR	**Sutherland**	**7.41**	**223**	Pn	**Pn**	**14 15 57.0**	**+0.4**
	comp=Z,4.7nm,0.3s,baz=51,slow=10,SNR=33						
SUR				Sn	**Sn**	**14 17 19.5**	**-1.7**
	comp=Z,9.7nm,0.3s,baz=148,slow=21,SNR=7.8						
SUR				Lg		14 18 01.3	
	comp=Z,28nm,0.3s,baz=300,slow=23,SNR=8.2						
SUR	**Sutherland**	**7.41**	**223**	*e*Pn	**Pn**	**14 15

APYP	**Conner**	**2.70 336**	*e*P	Pn	14 52 54.8	+0.9
APYP			*e*S	Sn	14 53 29.1	+2.8
ABRA	**Dolores**	**2.77 325**	*e*P	Pn	14 52 57.6	+2.7

*IDC **07** 15:02:35.4±1.1,31°.29N×103°.81E,h0km,mb3.4/6, mb1 3.6/6,mb1mx3.4/23,mbtmp3.5/6,Error ellipse: s-maj=45.8km s-min=19.4km az=53.0*
*ISCJB **07** 15:02:36.1±0.6,31°.47N±0°.04×104°.08E±0°.08,h10km, mb3.4/5,Error ellipse: s-maj=9.9km s-min=5.0km az=19.3*
*BJI **07** 15:02:36.9,31°.58N×104°.11E,h14km,ML3.4/13*
ISC 07 15:02:38.1±0.6,31°.40N±0°.04×104°.09E±0°.08,h10km,n9, σ1§30/13,mb3.4/5,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.56**	**210**	Pg	**Pg**	**15 02 49.2**	**+0.3**
CD2				Sg	**Sg**	**15 02 58.0**	**+1.7**
CD2	comp=N,1μm,0.5s			smax			
LZH	**Lanzhou**	**4.68**	**358**	Pg	**Pg**	**15 04 09.7**	**+1.9**
LZH				Sg	**Sg**	**15 05 09.6**	**+1.1**
LZH	comp=N,26nm,0.5s			smax			
LZH	comp=E,36nm,0.6s			smax			
LZH	comp=E,150nm,4.0s			LR	LR		
LZH	comp=Z,190nm,5.0s			LR	LR		
XAN	**Xi'an**	**4.85**	**56**	Pn	**Pn**	**15 03 51.0**	**-0.1**
XAN				Sn	**Sn**	**15 04 47.4**	**+0.1**
XAN				Sg	**Sg**	**15 05 09.5**	**-4.4**
XAN	comp=N,61nm,0.5s			smax			
XAN	comp=E,32nm,0.9s			smax			
KSRS	**Korea Array**	**20.54**	**66**	P	**P**	**15 07 18.4**	**+1.8**
	comp=E,0.6nm,0.7s,baz=258,slow=10.0,SNR=6.2						
MKAR	**Makanchi Array**	**22.75**	**319**	P	**P**	**15 07 39.0**	**-1.3**
	comp=E,0.8nm,1.0s,mb3.1,baz=122,slow=8.1,SNR=4.7						
ZALV	**Zalesovo Beam**	**26.45**	**334**	P	**P**	**15 08 13.1**	**-1.9**
	comp=E,0.4nm,0.3s,mb3.4,baz=138,slow=12,SNR=3.8						
KURK	**Kurchatov**	**27.01**	**323**	P	**P**	**15 08 18.3**	**-1.7**
	comp=E,0.2nm,0.3s,mb3.1,baz=130,slow=10,SNR=5.5						
WRA	**Warramunga Arr**	**58.72**	**146**	P	**P**	**15 12 35.6**	**-0.5**
	comp=E,0.7nm,0.7s,mb3.8,baz=339,slow=7.7,SNR=12						
ASAR	**Alice Springs**	**61.75**	**149**	P	**P**	**15 12 55.6**	**-1.1**
	comp=E,0.6nm,0.8s,mb3.8,baz=337,slow=6.7,SNR=6.1						

*ISCJB **07** 15:23:37.8±3.0,23°.1S±0°.4×112°.7W±0°.6,h10km,mb3.8/5, MS3.4/3,Error ellipse: s-maj=92.3km s-min=21.3km az=141.5*
*IDC **07** 15:23:37.3±1.7,23°.26S×112°.71W,h0km,mb3.7/4, mb1 4.1/4,mb1mx4.0/13,mbtmp3.7/4,MS3.4/3,Ms1 3.4/3, ms1mx3.3/11,Error ellipse: s-maj=59.0km s-min=36.9km az=38.0*
*NEIC **07** 15:23:39.0±0.9,23°.24S×112°.75W,h10km,mb4.3/1,Error ellipse: s-maj=36.4km s-min=17.2km az=49.0*
ISC 07 15:23:40.2±3.0,23°.1S±0°.4×112°.6W±0°.6,h10km,n16, σ0§63/7,mb3.8/5,MS3.4/3,Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**42.31**	**89**	P	**P**	**15 31 34.5**	**+0.1**
	3.0nm,1.1s,mb3.8,baz=272,slow=8.2,SNR=7.5						
LPAZ				LR	LR	15 46 23.4	
	comp=Z,45nm,19.2s,MS3.4,baz=67,slow=32						
LPAZ	**La Paz**	**42.31**	**89**	*e*P	**P**	**15 31 34.5**	**+0.1**
LPAZ				LR	LR	15 46 23.4	
TRQA	**Tornquist**	**45.52**	**121**	P	**P**	**15 31 60.0**	**0.0**
CPUP	**Villa Florida**	**50.01**	**106**	LR	LR	15 49 34.5	
	comp=Z,41nm,19.9s,MS3.4,baz=317,slow=31						
TXAR	**Lajitas Array**	**52.88**	**10**	P	**P**	**15 32 56.4**	**+0.2**
	0.4nm,1.0s,mb3.3,baz=165,slow=7.5,SNR=4.5						
TXAR				LR	LR	15 51 07.0	
	comp=Z,30nm,21.5s,MS3.3,baz=180,slow=31						
NVAR	**Mina Array Bea**	**61.47**	**355**	P	**P**	**15 33 57.5**	**+0.7**
	1.4nm,0.8s,mb4.1,baz=182,slow=11,SNR=8.7						
PDAR	**Pinedale Array**	**65.63**	**2**	P	**P**	**15 34 22.9**	**-1.3**
	0.7nm,0.8s,mb3.8,baz=178,slow=4.9,SNR=7.4						
HLID	**Hailey**	**66.39**	**359**	*e*P	**P**	**15 34 29.5**	**+0.4**
	2.3nm,1.1s,mb4.1						
ZALV	**Zalesovo Beam**	**146.54**	**341**	PKPbc	PKPbc	15 43 20.3	-1.2
	0.6nm,0.4s,baz=29,slow=2.3,SNR=5.8						
ZALV	**Zalesovo Beam**	**146.54**	**341**	PKPbc	PKPbc	15 43 20.3	-1.2
BVAR	**Borovoye Array**	**150.07**	**356**	PKPbc	PKPbc	15 43 30.3	-0.4
	1.3nm,0.7s,baz=41,slow=7.7,SNR=4.3						
KURK	**Kurchatov**	**151.11**	**345**	PKPbc	PKPbc	15 43 32.0	-1.3
	1.1nm,1.1s,baz=21,slow=2.0,SNR=5.8						
AKTK	**Aktyubinsk**	**151.79**	**13**	PKPbc	PKPbc	15 43 33.1	-1.7
AKTO	**Aktyubinsk**	**151.79**	**13**	PKPbc	PKPbc	15 43 33.1	-1.7
	0.9nm,0.9s,baz=333,slow=4.5,SNR=4.0						
MKAR	**Makanchi Array**	**153.51**	**337**	PKPbc	PKPbc	15 43 38.0	-0.9
	0.4nm,0.7s,baz=11,slow=2.2,SNR=3.7						
MKAR	**Makanchi Array**	**153.51**	**337**	PKPbc	PKPbc	15 43 38.0	-0.9

*ISCJB **07** 15:48:19.7±0.6,51°.51N±0°.03×6°.43E±0°.04,h0km,Error ellipse: s-maj=4.7km s-min=3.0km az=160.0*
*BUG **07** 15:48:20.0,51°.54N×6°.51E,h1km,ML2.3*
*CSEM **07** 15:48:20.4±0.3,51°.54N×6°.46E,h1km,ML3.0/11,Error ellipse: s-maj=5.2km s-min=3.6km az=173.0*
*BGR **07** 15:48:21.9±0.8,51°.50N×6°.55E,h1km,ML2.5/2,Error ellipse: s-maj=12.2km s-min=4.4km az=128.0*
*LDG **07** 15:48:21.4±0.1,51°.55N×6°.57E,h1km,Ml2.8/10,Error ellipse: s-maj=2.5km s-min=1.5km az=7.0,Suspected Mining induced.*
*BNS **07** 15:48:21.5±0.8,51°.55N×6°.56E,h1km,ML2.3*
*NEIC **07** 15:48:33.5±5.5,50°.80N×5°.59E,h10km,ML2.8(LDG), Error ellipse: s-maj=64.5km s-min=16.4km az=202.0*
ISC 07 15:48:20.6±0.6,51°.53N±0°.03×6°.45E±0°.03,h0km,n57, σ1§11/96,Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAUG	**Laupendahl**	**0.36**	**121**	*e*Pg	**Pg**	**15 48 27.3**	**-0.2**
LAUG				*e*Sg	**Sg**	**15 48 32.0**	**-0.1**
LAUG	**Laupendahl**	**0.36**	**121**	Pg	**Pg**	**15 48 27.3**	**-0.2**
LAUG				Sg	**Sg**	**15 48 32.0**	**-0.1**
BUG	**Bochum--Univer**	**0.52**	**100**	*e*Pg	**Pg**	**15 48 30.2**	**-0.4**
	SNR=5.6						
BUG				*e*Sg	**Sg**	**15 48 36.8**	**-0.5**
	SNR=6.8						
BNS	**Bensberg**	**0.73**	**141**	*e*Sg	**Sg**	**15 48 44.9**	**+0.8**
BNS	**Bensberg**	**0.73**	**141**	Sg	**Sg**	**15 48 44.8**	**+0.8**
HOBG	**Hohbusch**	**0.78**	**134**	*e*Pg	**Pg**	**15 48 35.6**	**0.0**
HOBG				*e*Sg	**Sg**	**15 48 46.7**	**+1.0**
HOBG	**Hohbusch**	**0.78**	**134**	Pg	**Pg**	**15 48 35.6**	**0.0**
HOBG				Sg	**Sg**	**15 48 46.7**	**+1.0**
DREG	**Dreilaegerbach**	**0.88**	**189**	*e*Pg	**Pg**	**15 48 38.4**	**+0.9**
	SNR=8.9						
DREG				*e*Sg	**Sg**	**15 48 50.8**	**+1.9**
	SNR=7.1						
DREG	**Dreilaegerbach**	**0.88**	**189**	Pg	**Pg**	**15 48 38.4**	**+0.9**
	SNR=8.9						
DREG				Sg	**Sg**	**15 48 50.8**	**+1.9**
	SNR=7.1						
KLL	**Kalltalsperre**	**0.89**	**186**	*e*Pg	**Pg**	**15 48 39.0**	**+1.3**
KLL				*e*Sg	**Sg**	**15 48 52.1**	**+2.8**
	95nm,0.6s						
KLL	**Kalltalsperre**	**0.89**	**186**	Pg	**Pg**	**15 48 39.0**	**+1.3**
KLL				Sg	**Sg**	**15 48 52.1**	**+2.9**
	95nm,0.6s						
MEM	**Membach**	**0.97**	**197**	P	**Pg**	**15 48 41.4**	**+2.3**
STB	**Steinbach**	**0.97**	**165**	*e*Pg	**Pg**	**15 48 40.3**	**+1.0**
STB				*e*Sg	**Sg**	**15 48 53.2**	**+1.4**
	81nm,0.3s						
STB	**Steinbach**	**0.97**	**165**	Pg	**Pg**	**15 48 40.3**	**+1.1**
STB				Sg	**Sg**	**15 48 53.2**	**+1.4**
	81nm,0.3s						
IBBN	**Ibbenburen**	**1.12**	**46**	*e*Sg	**Sg**	**15 48 57.0**	**+0.5**
	SNR=4.7						
IBBN	**Ibbenburen**	**1.12**	**46**	Sg	**Sg**	**15 48 57.0**	**+0.5**
	SNR=4.7						
KOE	**Koeppel**	**1.38**	**143**	*e*Pg	**Pg**	**15 48 46.1**	**-0.8**
KOE				*e*Sg	**Sg**	**15 49 04.2**	**-0.5**
	38nm,0.2s						
KOE	**Koeppel**	**1.38**	**143**	Pg	**Pg**	**15 48 46.1**	**-0.8**
KOE				Sg	**Sg**	**15 49 04.2**	**-0.5**
	38nm,0.2s						
BGG	**Burgeitz**	**1.44**	**157**	*e*Sg	**Sg**	**15 49 06.3**	**-0.7**
BGG	**Burgeitz**	**1.44**	**157**	Sg	**Sg**	**15 49 06.3**	**-0.6**
GIVF	**Givet**	**1.77**	**216**	*e*P	**Pn**	**15 48 54.3**	**+1.9**
GIVF	**Givet**	**1.77**	**216**	*e*Pg	**Pg**	**15 48 55.5**	**+1.1**
GIVF				*e*Sn	**Sn**	**15 49 14.9**	**-0.6**
GIVF				*e*Sg	**Sg**	**15 49 18.9**	**+1.6**
	22nm,0.3s						
GIVF	**Givet**	**1.77**	**216**	*e*Pn	**Pn**	**15 48 52.1**	**-0.3**
GIVF				*e*Pg	**Pg**	**15 48 55.5**	**+1.1**
GIVF				*e*Sn	**Sn**	**15 49 14.9**	**-0.6**
GIVF				*e*Sg	**Sg**	**15 49 18.9**	**+1.6**
GIVF	**Givet**	**1.77**	**216**	*e*Pn	**Pn**	**15 48 52.1**	**-0.3**
GIVF	**Givet**	**1.77**	**216**	*e*P	**Pn**	**15 48 54.3**	**+1.9**
GIVF	**Givet**	**1.77**	**216**	*e*Pg	**Pg**	**15 48 55.5**	**+1.1**
GIVF				*e*Sn	**Sn**	**15 49 14.9**	**-0.6**
GIVF				*e*Sg	**Sg**	**15 49 18.9**	**+1.6**
	11nm,0.3s						
TNS	**Taunus Mts**	**1.82**	**135**	*e*Pg	**Pg**	**15 48 54.5**	**-1.0**
	SNR=4.7						
TNS	**Taunus Mts**	**1.82**	**135**	Pg	**Pg**	**15 48 54.5**	**-1.0**
	SNR=4.7						
WLF	**Walferdange**	**1.88**	**186**	P	**Pn**	**15 48 56.5**	**+2.6**
WLF	**Walferdange**	**1.88**	**186**	*e*Pg	**Pg**	**15 48 56.4**	**-0.2**
	SNR=2.1						
WLF				*e*Sg	**Sg**	**15 49 19.9**	**-1.1**
	SNR=4.0						
WLF	**Walferdange**	**1.88**	**186**	*e*Pn	**Pn**	**15 48 56.4**	**+2.4**
WLF	**Walferdange**	**1.88**	**186**	Pg	**Pg**	**15 48 56.4**	**-0.2**
	SNR=2.1						
WLF				Sg	**Sg**	**15 49 19.9**	**-1.1**
	SNR=4.0						
BAIF	**Baives**	**2.05**	**225**	*e*Pg	**Pg**	**15 49 00.6**	**+0.7**
BAIF				*e*Sn	**Sn**	**15 49 21.1**	**-1.4**
BAIF				*e*Sg	**Sg**	**15 49 27.3**	**+0.9**
	14nm,0.3s						
BAIF	**Baives**	**2.05**	**225**	*e*Pn	**Pn**	**15 48 56.2**	**-0.1**
BAIF				*e*Pg	**Pg**	**15 49 00.6**	**+0.7**
BAIF				*e*Sn	**Sn**	**15 49 21.1**	**-1.4**
BAIF				*e*Sg	**Sg**	**15 49 27.3**	**+0.9**
BAIF	**Baives**	**2.05**	**225**	*e*Pn	**Pn**	**15 48 56.2**	**-0.1**
BAIF	**Baives**	**2.05**	**225**	*e*Pg	**Pg**	**15 49 00.6**	**+0.7**
BAIF				*e*Sn	**Sn**	**15 49 21.1**	**-1.4**
BAIF				*e*Sg	**Sg**	**15 49 27.3**	**+0.9**
	6.9nm,0.3s						
MEZF	**Maizieres J'vi**	**3.17**	**197**	*e*Sg	**Sg**	**15 50 01.7**	**-0.6**
	16nm,0.4s,baz=24						
MEZF	**Maizieres J'vi**	**3.17**	**197**	*e*Sg	**Sg**	**15 50 01.7**	**-0.6**
	8.1nm,0.4s,baz=24						
CDF	**Champ du Feu**	**3.17**	**170**	*e*Sg	**Sg**	**15 50 01.3**	**-1.1**
	6.5nm,0.5s						
CDF	**Champ du Feu**	**3.17**	**170**	*e*Sg	**Sg**	**15 50 01.3**	**-1.1**
	3.2nm,0.5s						
SFTF	**Sexfontaines**	**3.46**	**196**	*e*Sg	**Sg**	**15 50 10.6**	**-0.9**
	7.0nm,0.3s						
SFTF	**Sexfontaines**	**3.46**	**196**	*e*Sg	**Sg**	**15 50 10.6**	**-0.9**
	3.5nm,0.3s						
HAU	**Haudompre**	**3.53**	**181**	*e*Sg	**Sg**	**15 50 12.9**	**-1.1**
	6.2nm,0.3s						
HAU	**Haudompre**	**3.53**	**181**	*e*Sg	**Sg**	**15 50 12.9**	**-1.1**
	3.1nm,0.3s						
CLL	**Collm**	**4.11**	**91**	*e*(Sn)	**Sg**	**15 50 32.0**	**-0.5**
LOR	**Lormes**	**4.59**	**203**	*e*Pn	**Pn**	**15 49 30.4**	**-0.8**
LOR				*e*Sn	**Sn**	**15 50 21.7**	**-3.5**
	baz=29						
LOR				*e*Sg	**Sg**	**15 50 46.8**	**-1.2**
	6.1nm,0.4s,baz=26						
LOR	**Lormes**	**4.59**	**203**	*e*Pn	**Pn**	**15 49 30.4**	**-0.8**
LOR				*e*Sn	**Sn**	**15 50 21.7**	**-3.5**
	baz=29						
LOR				*e*Sg	**Sg**	**15 50 46.8**	**-1.2**
	3.0nm,0.4s,baz=26						
SSF	**Saint Saulge**	**4.87**	**204**	*e*Pn	**Pn**	**15 49 34.3**	**-0.8**
SSF				*e*Sn	**Sn**	**15 50 27.9**	**-4.2**
SSF				*e*Sg	**Sg**	**15 50 56.4**	**-0.6**
	5.6nm,0.5s						
SSF	**Saint Saulge**	**4.87**	**204**	*e*Pn	**Pn**	**15 49 34.3**	**-0.8**
SSF				*e*Sn	**Sn**	**15 50 27.9**	**-4.2**
SSF				*e*Sg	**Sg**	**15 50 56.4**	**-0.6**
	2.8nm,0.5s						
LDF	**La Druitiere**	**5.16**	**238**	*e*Pn	**Pn**	**15 49 38.6**	**-0.3**
LDF				*e*Sn	**Sn**	**15 50 35.7**	**-3.4**
LDF	**La Druitiere**	**5.16**	**238**	*e*Pn	**Pn**	**15 49 38.6**	**-0.3**
LDF				*e*Sn	**Sn**	**15 50 35.7**	**-3.4**
AVF	**Avril sur Loir**	**5.16**	**204**	*e*Pn	**Pn**	**15 49 38.6**	**-0.5**
AVF	**Avril sur Loir**	**5.16**	**204**	*e*Pn	**Pn**	**15 49 38.6**	**-0.5**
BGF	**Bois d'Agland**	**5.51**	**207**	*e*Sn	**Sn**	**15 50 43.3**	**-4.6**
BGF	**Bois d'Agland**	**5.51**	**207**	*e*Sn	**Sn**	**15 50 43.3**	**-4.6**
GRR	**Gorron**	**5.67**	**239**	*e*Sn	**Sn**	**15 50 48.1**	**-3.6**
GRR	**Gorron**	**5.67**	**239**	*e*Sn	**Sn**	**15 50 48.1**	**-3.6**

*IDC **07** 15:57:34.4±3.6,6°.94S×108°.82E,h0km,mb3.3/3, mb1 3.5/3,mb1mx3.3/21,mbtmp3.3/3,Error ellipse: s-maj=193.3km s-min=29.1km az=49.0*
*ISCJB **07** 15:57:40.8±1.2,8°.0S±0°.2×107°.9E±0°.1,h102km±14km, mb3.2/3,Error ellipse: s-maj=33.9km s-min=11.4km az=25.4*
*DJA **07** 15:57:40,8°.17S×107°.85E,h26km,MLv4.0/6*
ISC 07 15:57:41.7±1.2,8°.1S±0°.2×107°.9E±0°.1,h89km±14km,n9, σ0§67/10,mb3.2/3,Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	**Lembang**	**1.23**	**349**	P	**Pn**	**15 58 03.6**	**-0.6**
LEM				S	**Sn**	**15 58 22.1**	**+1.0**
SKJI	**Sukabumi**	**1.65**	**309**	P	**Pn**	**15 58 09.6**	**+0.2**
CGJI	**Cibinong**	**2.57**	**303**	P	**Pn**	**15 58 21.2**	**-0.3**
UGM	**Wanagama**	**2.65**	**87**	P	**Pn**	**15 58 21.7**	**-0.8**
PCJI	**Pacitan**	**3.29**	**93**	P	**Pn**	**15 58 31.1**	**-0.1**
PWJI	**Pagerwojo**	**3.91**	**90**	P	**Pn**	**15 58 39.6**	**0.0**
WRA	**Warramunga Arr**	**28.24**	**118**	P	**P**	**16 03 27.5**	**+1.0**
	0.3nm,0.7s,mb3.0,baz=294,slow=11,SNR=6.0						
ASAR	**Alice Springs**	**29.40**	**125**	P	**P**	**16 03 37.4**	**+0.7**
	0.4nm,1.0s,mb3.0,baz=300,slow=8.2,SNR=2.7						
MKAR	**Makanchi Array**	**59.15**	**340**	P	**P**	**16 07 32.1**	**-1.0**
	0.3nm,0.5s,mb3.6,baz=136,slow=7.3,SNR=4.8						

MEX 07 16:05:06.7±0.5,16°.69N×100°.16W,h18km±66km,MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.34**	**59**	*i* P	Pg	16 05 12.4	-1.5
ACX				*i* S	Sg	16 05 16.4	-2.5
CAIG	**El Cayaco**	**0.37**	**344**	*i* P	Pg	16 05 13.5	-1.0
CAIG				*i* S	Sg	16 05 18.0	-1.6
PNIG	**Pinotepa**	**1.97**	**98**	*i* P	Pn	16 05 36.0	-3.2
PNIG				*i* S	Sn	16 05 59.2	-4.2
UTMO	**Huajuapan**	**2.52**	**63**	*e*P	Pn	16 05 44.6	-2.1
UTMO				*i* S	Sn	16 06 14.2	-2.8

*IDC **07** 16:18:48.0±0.7,2°.84N×95°.83E,h0km,mb4.4/15, mb1 4.4/17,mb1mx4.3/25,mbtmp4.4/17,ML4.3/2,MS3.8/13, Ms1 3.8/13,ms1mx3.5/38,Error ellipse: s-maj=25.2km s-min=13.7km az=48.0*
*MOS **07** 16:18:51.2±1.0,2°.91N×95°.86E,h33km,mb4.9/15, MS4.1/4,Error ellipse: s-maj=15.1km s-min=7.6km az=107.6*
*ISCJB **07** 16:18:51.4±0.6,2°.79N±0°.04×95°.79E±0°.04,h38km±5km, mb4.7/55,MS4.0/30,Error ellipse: s-maj=7.6km s-min=4.9km az=141.9*
*BJI **07** 16:18:51.6,3°.35N×95°.99E,h11km,mB4.8/29,mb4.7/43, Ms4.4/32,Ms7 4.2/32*
*DJA **07** 16:18:51,2°.86N×95°.78E,h12km,mb4.7/16*
*NEIC **07** 16:18:54.1±1.7,2°.90N×95°.89E,h42km±14km,mb4.7/12, Error ellipse: s-maj=16.5km s-min=6.7km az=56.0*
ISC 07 16:18:53.9±0.6,2°.85N±0°.04×95°.84E±0°.04,h39km±5km, h34km±1.0km:pP-P,n125,σ1§05/137,mb4.7/55,MS4.0/30, 3C,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**1.40**	**73**	P	**Pn**	**16 19 15.8**	**-1.2**
TPTI				S	**Sn**	**16 19 35.5**	**+1.3**
BSI	**Banda Aceh**	**2.68**	**348**	P	**Pn**	**16 19 33.8**	**-0.8**
BSI				S	**Sn**	**16 20 05.3**	**-0.6**
TSI	**Tuntungan**	**2.80**	**77**	P	**Pn**	**16 19 37.6**	**+1.4**
PSI	**Prapat**	**3.08**	**91**	Pn	**Pn**	**16 19 40.1**	**0.0**
	20nm,0.3s,baz=293,slow=8.5,SNR=62						
PSI				LR	LR	16 21 01.4	
	comp=Z,2μm,18.3s,baz=271,slow=43						
MNSI	**Mandailing Nat**	**4.26**	**119**	P	**Pn**	**16 19 56.6**	**+0.3**
MNSI				S	**Sn**	**16 20 43.9**	**-0.9**
SISI	**Saibi**	**5.27**	**142**	P	**Pn**	**16 20 11.2**	**+1.0**
	0.8nm129nm,1.2s						
KULM	**Kulim**	**5.38**	**63**	P	**Pn**	**16 20 10.4**	**-1.2**
KULM	**Kulim**	**5.38**	**63**	*e*P	**Pn**	**16 20 11.7**	**0.0**
	120nm,1.0s						
KULM	**Kulim**	**5.38**	**63**	P	**Pn**	**16 20 12.0**	**+0.3**
	0.5nm2μm97nm,1.3s						
IPM	**Ipoh**	**5.42**	**72**	P	**Pn**	**16 20 13.2**	**+0.9**
IPM	**Ipoh**	**5.42**	**72**	P	**Pn**	**16 20 12.5**	**+0.2**
	0.5nm950nm76nm,1.2s						
PPI	**Padang Panjang**	**5.62**	**126**	P	**Pn**	**16 20 16.5**	**+1.5**
	0.3nm3μm61nm,1.0s						
BKNI	**Bangkinang**	**5.77**	**116**	P	**Pn**	**16 20 17.7**	**+0.6**
	1.1nm1μm95nm,1.3s						
PDSI	**Padang**	**5.94**	**129**	P	**Pn**	**16 20 18.9**	**-0.6**
	0.6nm2μm77nm,1.0s						
SDSI	**Sungai Dareh**	**6.73**	**124**	P	**Pn**	**16 20 30.9**	**+0.6**
	24nm,1.0s						
KGM	**Kluang**	**7.52**	**96**	P	**Pn**	**16 20 40.3**	**-0.8**
KTGM	**Kuala Trenggan**	**7.68**	**71**	P	**Pn**	**16 20 42.9**	**-0.5**
MYKOM	**Kota Tinggi**	**8.07**	**97**	P	**Pn**	**16 20 49.6**	**+0.9**
MYKOM	**Kota Tinggi**	**8.07**	**97**	P	**Pn**	**16 20 49.8**	**+1.1**
	37nm,0.8s						
MNAI	**Manna**	**10.09**	**135**	P	**Pn**	**16 21 15.9**	**-0.5**
	257nm,1.7s						
MDSI	**Maura Dua**	**11.07**	**131**	P	**Pn**	**16 21 29.0**	**-0.8**
	37nm,0.8s						
KLSI		**11.62**	**130**	P	**Pn**	**16 21 36.8**	**-0.5**
	51nm,1.0s						
KASI	**Kota Agung**	**12.00**	**134**	P	**Pn**	**16 21 40.1**	**-2.4**
CGJI	**Cibinong**	**13.61**	**134**	P	**Pn**	**16 21 58.4**	**-6.1**
KSM	**Kuching**	**14.52**	**95**	P	**Pn**	**16 22 17.2**	**+0.2**
	11nm,1.0s						
KSM	**Kuching**	**14.52**	**95**	P	**Pn**	**16 22 23.9**	**+6.9**
CM31	**Chiang Mai Arr**	**15.80**	**11**	*e*P	**Pn**	**16 22 31.3**	**-2.4**
	12nm,0.9s						
CMAR	**Chiang Mai Arr**	**15.80**	**11**	Pn	**Pn**	**16 22 33.1**	**-0.6**
	0.7nm,0.3s,baz=200,slow=11,SNR=30						
CHTO	**Chiang Mai**	**16.15**	**11**	P	**Pn**	**16 22 36.0**	**-2.2**
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CHTO	**Chiang Mai**	**16.15**	**11**	P	**Pn**	**16 22 36.0**	**-2.1**
	comp=Z,6.9nm,1.0s						
CHTO	**Chiang Mai**	**16.15**	**11**	P	**Pn**	**16 22 37.2**	**-1.0**
	comp=Z,11nm,1.6s						
SBUM	**Sibu**	**16.37**	**91**	P	**Pn**	**16 22 42.9**	**+1.9**
SBUM	**Sibu**	**16.37**	**91**	P	**Pn**	**16 22 43.2**	**+2.2**
KKM	**Kota Kinabalu**	**20.56**	**80**	P	**P**	**16 23 30.0**	**+0.5**
KKM	**Kota Kinabalu**	**20.56**	**80**	*e*P	**P**	**16 23 29.8**	**+0.3**
	comp=Z,47nm,1.0s						
KKM	**Kota Kinabalu**	**20.56**	**80**	P	**P**	**16 23 30.7**	**+1.2**
	comp=Z,50nm,1.1s						
QIZ	**Qiongzhong**	**21.12**	**39**	P	**P**	**16 23 36.5**	**+1.0**
QIZ				LR	LR		
	comp=N,330nm,16.4s,MS4.0						
QIZ				LR	LR		
	comp=E,350nm,15.9s,MS4.0						
QIZ				LR	LR		
	comp=Z,570nm,12.9s,MS4.1						
SDKM	**Sandakan**	**21.48**	**82**	P	**P**	**16 23 39.3**	**-0.1**
TSM	**Tawau**	**22.04**	**86**	P	**P**	**16 23 43.8**	**-1.5**
MYLDM	**Lahad Datu**	**22.72**	**83**	P	**P**	**16 23 53.9**	**+1.3**
MYLDM	**Lahad Datu**	**22.72**	**83**	P	**P**	**16 23 53.6**	**+0.9**
	comp=Z,53nm,1.7s,mb4.7						
SHL	**Shillong**	**22.90**	**351**	*e*PKP	**P**	**16 23 50.0**	**-4.4**
KMI	**Kunming**	**23.12**	**16**	P	**P**	**16 23 57.6**	**+0.9**
KMI				S	**S**	**16 28 02.5**	**-2.7**
KMI				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.1						
KMI				pmax	pmax		
	comp=Z,35nm,3.9s						
KMI				LR	LR		
	comp=N,520nm,13.3s,MS4.2						
KMI				LR	LR		
	comp=E,340nm,14.2s,MS4.2						
KMI				LR	LR		
	comp=Z,490nm,12.8s,MS4.2						
PCI	**Palu**	**24.28**	**99**	P	**P**	**16 24 08.3**	**+0.5**
	comp=Z,626nmcomp=Z,60nm,1.1s,mb4.9						
KAPI	**Kappang**	**25.14**	**108**	P	**P**	**16 24 13.7**	**-1.9**
	comp=Z,18nm,1.0s,mb4.5,baz=274,slow=14,SNR=3.8						
KAPI				LR	LR	16 35 19.4	
	comp=Z,334nm,18.2s,MS3.9,baz=205,slow=39						
ODAN	**Odare**	**25.21**	**342**	*e*P	**P**	**16 24 17.0**	**+0.9**
RAMN	**Ramite**	**25.55**	**341**	*e*P	**P**	**16 24 20.6**	**+1.5**
	comp=Z,29nm,0.9s,mb4.8						
TAPN	**Taplejung**	**25.57**	**343**	*e*P	**P**	**16 24 19.7**	**+0.3**
	comp=Z,26nm,0.8s,mb4.8						
GYA	**Guiyang**	**25.67**	**23**	*e*P	**P**	**16 24 19.5**	**-0.7**
GYA				PcP	PcP	16 27 52.6	+2.4
GYA				S	**S**	**16 28 45.3**	**-0.9**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.4						
GYA				pmax	pmax		
	comp=Z,90nm,4.6s						
GYA				LR	LR		
	comp=N,560nm,14.0s,MS4.3						
GYA				LR	LR		
	comp

SSE pmax pmax
comp=Z,54nm,4.2s
SSE LR LR
comp=N,120nm,23.2s,MS3.8
SSE LR LR
comp=E,110nm,22.8s,MS3.8
SSE LR LR
comp=Z,170nm,21.8s,MS3.8
HHC Hu-ho-hao-te 40.40 18 *e*P **P 16 26 28.8 +0.6**
HHC PP PP 16 28 06.3 +4.5
HHC PcP PcP 16 28 32.5 +1.7
HHC ScP ScP 16 32 17.7 +0.4
HHC PcS PcS 16 32 21.5 +0.2
HHC S **S 16 32 33.9 +0.1**
HHC ScS ScS 16 36 30.6 -0.6
HHC pmax pmax
comp=Z,14nm,0.6s,mb4.9
HHC pmax pmax
comp=Z,92nm,5.9s
HHC LR LR
comp=N,360nm,14.0s,MS4.4
HHC LR LR
comp=E,170nm,14.4s,MS4.4
HHC LR LR
comp=Z,320nm,14.4s,MS4.3
KSH Kashi 40.72 336 P **P 16 26 30.5 -0.4**
KSH pP pP 16 26 40.4 -1.6
KSH sP sP 16 26 44.1 -2.5
KSH PP PP 16 28 08.2 +2.9
KSH PcP PcP 16 28 33.8 +1.9
KSH ScP ScP 16 32 19.6 +1.1
KSH PcS PcS 16 32 23.8 +1.2
KSH S **S 16 32 36.4 -2.2**
KSH sS sS 16 32 52.6 -4.4
KSH SS SS 16 35 30.7 -10
KSH ScS ScS 16 36 31.6 -1.6
KSH pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
KSH pmax pmax
comp=Z,79nm,5.9s
KSH LR LR
comp=N,280nm,11.1s,MS4.4
KSH LR LR
comp=E,150nm,12.1s,MS4.4
KSH LR LR
comp=Z,140nm,5.5s
BJI Beijing 41.35 24 P **P 16 26 37.0 +0.9**
BJI S **S 16 32 50.1 +2.1**
BJI pmax pmax
comp=Z,41nm,0.9s,mb5.1
BJI pmax pmax
comp=Z,72nm,3.9s
BJI LR LR
comp=N,150nm,15.3s,MS4.1
BJI LR LR
comp=E,160nm,15.1s,MS4.1
BJI LR LR
comp=Z,46nm,23.6s
WMQ Urumqi 41.43 351 P **P 16 26 38.0 +1.4**
WMQ pP pP 16 26 47.8 0.0
WMQ PP PP 16 28 17.0 +4.1
WMQ PcP PcP 16 28 37.0 +2.9
WMQ pmax pmax
comp=Z,13nm,1.0s,mb4.5
WMQ pmax pmax
comp=Z,150nm,5.2s
WMQ LR LR
comp=N,51nm,20.3s,MS3.6
WMQ LR LR
comp=E,79nm,20.8s,MS3.6
WMQ LR LR
comp=Z,69nm,20.2s,MS3.5
WRA Warramunga Arr 44.06 123 P **P 16 26 58.1 -0.3**
comp=Z,7.4nm,0.9s,mb4.4,baz=301,slow=9.0,SNR=26
WRAB Tennant Creek 44.07 123 *e*P **P 16 26 58.4 0.0**
WRAB pmax pmax
comp=Z,15nm,1.2s,mb4.6
WRAB Tennant Creek 44.07 123 *e*P **P 16 26 58.4 0.0**
comp=Z,15nm,1.2s,mb4.6
EKS2 Erkin-Say 44.26 337 *e*P **P 16 27 01.3 +1.7**
EKS2 pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
EKS2 Erkin-Say 44.26 337 *e*P **P 16 27 01.3 +1.7**
comp=Z,4.3nm,0.8s,mb4.2
KSRS Korea Array 45.30 36 P **P 16 27 06.7 -1.3**
comp=Z,4.0nm,1.0s,mb4.2,baz=227,slow=8.8,SNR=20
KSRS LR LR 16 48 31.5
comp=Z,198nm,18.9s,MS4.1,baz=43,slow=39
MK31 Makanchi Array 45.33 347 *e*P **P 16 27 08.4 +0.4**
MKAR Makanchi Array 45.33 347 P **P 16 27 08.3 +0.3**
comp=Z,12nm,0.4s,mb5.1,baz=157,slow=8.9,SNR=262
MKAR LR LR 16 49 59.2
comp=Z,55nm,19.3s,MS3.5,baz=161,slow=41
ASAR Alice Springs 45.47 128 P **P 16 27 09.2 -0.4**
comp=Z,2.1nm,0.7s,mb4.1,baz=302,slow=7.9,SNR=35
ASAR PcP PcP 16 28 49.1 +1.0
comp=Z,1.0nm,0.8s,baz=297,slow=3.3,SNR=5.9
SONM Songino Array 45.73 10 P **P 16 27 11.1 -0.1**
comp=Z,13nm,0.8s,mb4.9,baz=191,slow=8.6,SNR=73
SONM PcP PcP 16 28 49.6 +1.1
comp=Z,1.1nm,0.5s,baz=202,slow=3.9,SNR=4.6
SONM LR LR 16 48 25.4
comp=Z,239nm,20.3s,MS4.1,baz=190,slow=39
SONM Songino Array 45.73 10 P **P 16 27 11.1 -0.1**
SONM 16 28 49.6
ULN Ulaanbaatar 45.88 11 *e*P **P 16 27 12.0 -0.3**
ULN pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
ULN Ulaanbaatar 45.88 11 *e*P **P 16 27 12.0 -0.3**
comp=Z,9.9nm,0.9s,mb4.7
ULN Ulaanbaatar 45.88 11 P **P 16 27 12.5 +0.2**
KK31 Karatay Array 45.98 334 *e*P **P 16 27 14.0 +0.7**
KK31 pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
CN2 Changchun 48.48 29 *e*P **P 16 27 32.2 -0.6**
CN2 *es*P sP 16 27 47.0 -1.7
CN2 *e*S **S 16 34 30.0 -1.2**
CN2 pmax pmax
comp=Z,20nm,0.9s,mb5.2
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,200nm,18.0s,MS4.3
CN2 LR LR
comp=E,200nm,18.0s,MS4.3
CN2 LR LR
comp=Z,200nm,18.0s,MS4.1
TLY Talaya 49.10 6 *e*P **P 16 27 34.8 -2.5**
TLY *e* 16 29 06.7
TLY pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
TLY MLR MLR
comp=Z,163nm,21.0s,MS4.0
GUMO Guam 49.59 75 LR LR 16 47 32.4
comp=Z,96nm,19.1s,MS3.8,baz=266,slow=35
KURK Kurchatov 49.86 346 *e*P **P 16 27 41.5 -1.7**
KURK pmax pmax
comp=Z,16nm,1.2s,mb4.9
KURK Kurchatov 49.86 346 *e*P **P 16 27 43.6 +0.4**
comp=Z,7.7nm,0.9s,mb4.7
MDJ Mudanjiang 51.12 31 P **P 16 27 53.2 +0.4**
MDJ pP pP 16 28 02.2 -2.0
MDJ sP sP 16 28 06.1 -2.7
MDJ PP PP 16 29 48.5 -1.3
MDJ ScP ScP 16 33 02.4 +0.8
MDJ PcS PcS 16 33 06.4 +0.8
MDJ S **S 16 35 10.0 +2.0**
MDJ pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
MDJ pmax pmax
comp=Z,33nm,5.0s
MDJ LR LR
comp=N,74nm,16.0s,MS4.1
MDJ LR LR
comp=E,150nm,19.0s,MS4.1
MDJ LR LR
comp=Z,170nm,15.0s,MS4.2
MJAR Matsushiro Arr 51.42 44 LR LR 16 52 01.4
comp=Z,67nm,19.0s,MS3.7,baz=245,slow=39
ZAA0 Zalesovo Array 51.73 352 *e*P **P 16 27 57.3 +0.2**
ZALV Zalesovo Beam 51.73 352 P **P 16 27 57.2 0.0**
comp=Z,19nm,0.9s,mb5.0,baz=176,slow=5.9,SNR=67
ZALV LR LR 16 51 40.7
comp=Z,42nm,21.6s,MS3.4,baz=203,slow=38
ZALV Zalesovo Beam 51.73 352 P **P 16 27 57.2 0.0**
ZALV LR LR 16 51 40.7

OPO Ambohidratompo 52.39 244 P **P 16 28 02.8 +0.1**
comp=Z,1.4nm,0.7s,mb4.0,baz=56,slow=11,SNR=2.2
NVS Novosibirsk 52.83 351 *i* P **P 16 28 05.0 -0.3**
NVS pmax pmax
comp=N,3.0nm,0.3s
NVS pmax pmax
comp=Z,3.0nm,0.3s,mb4.7
NVS pmax pmax
comp=E,3.0nm,0.4s
VOSK Vostochnaya 53.81 342 P **P 16 28 12.3 -0.3**
VOSK pmax pmax
comp=Z,3.0nm,0.3s,mb4.7
BVAR Borovoye Array 54.26 341 P **P 16 28 15.5 -0.4**
comp=Z,4.8nm,0.8s,mb4.5,baz=142,slow=7.4,SNR=20
BRVK Borovoye 54.32 341 *e*P **P 16 28 15.4 -0.9**
ZRNK Zerenda 54.65 340 *i* P **P 16 28 18.4 -0.3**
ZRNK pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
KLR Kul'dur 55.42 28 *e*P **P 16 28 20.2 -4.1**
AB31 Akbulak array 55.43 332 *e*P **P 16 28 24.7 +0.3**
AB31 pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
ABKAR Akbulak array 55.43 332 *e*P **P 16 28 24.7 +0.3**
comp=Z,8.9nm,0.8s,mb4.8
STKA Stephens Creek 55.47 132 P **P 16 28 24.5 -0.4**
comp=Z,2.8nm,0.7s,mb4.4,baz=336,slow=13,SNR=4.6
STKA Stephens Creek 55.47 132 P **P 16 28 24.5 -0.4**
HABR Khabarovsk 56.51 30 P **P 16 28 28.8 -3.3**
HABR *e*SP sP 16 28 42.6 -5.6
HABR *e* 16 29 25.4
HABR *e* 16 30 34.6
HABR *e*S **S 16 36 17.5 -3.2**
HABR *e*S **S 16 36 29.7 +9.0**
HABR *e*SS sS 16 36 34.5 -5.3
HABR *e* 16 38 15.3
HABR *e*SS SS 16 40 06.4 -2.1
HABR pmax pmax
comp=N,32nm,2.3s
HABR pmax pmax
comp=Z,42nm,2.8s,mb5.0
HABR pmax pmax
comp=E,37nm,2.0s
HABR MLR MLR
comp=Z,172nm,22.0s,MS4.1
SVE Sverdlovsk 60.66 339⇑ *e*P **P 16 29 01.7 +0.8**
SVE pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
ARU Arti 61.15 337 *c i*P **P 16 29 04.0 -0.2**
ARU 16 31 17.6
ARU S **S 16 37 23.4 +2.7**
ARU SS SS 16 41 27.5 +6.4
ARU pmax pmax
comp=Z,9.0nm,1.2s,mb4.8
ARU Arti 61.15 337 *e*P **P 16 29 03.9 -0.3**
comp=Z,3.8nm,0.8s,mb4.6
MMAI Mount Meron Ar 63.84 305 LR LR 16 59 32.7
comp=Z,58nm,19.1s,MS3.8,baz=10.0,slow=38
YAK Yakutsk 64.23 17 *e*P **P 16 29 22.6 -2.1**
YAK pmax pmax
comp=E,3.0nm,0.9s
YAK pmax pmax
comp=Z,23nm,1.0s,mb5.2
YAK pmax pmax
comp=N,5.0nm,1.4s
YAK Yakutsk 64.23 17 *e*P **P 16 29 23.5 -1.2**
comp=N,20nm,0.9s,mb5.2
BRTR Keskin Array B 67.00 312 P **P 16 29 43.4 +0.4**
comp=N,0.5nm,0.5s,mb3.8,baz=126,slow=9.8,SNR=3.2
OBN Obninsk 70.51 328⇑ *i*P **P 16 30 04.7 +0.2**
OBN *i* 16 32 37.4
OBN *e*S S 16 39 20.5 +5.6
OBN pmax pmax
comp=Z,12nm,1.2s,mb4.7
OBN MLR MLR
comp=Z,100nm,17.0s,MS4.1
TIXI Tiksi 71.81 10 *e*P **P 16 30 10.5 -1.6**
TIXI pmax pmax
comp=Z,11nm,0.9s,mb4.8
TIXI MLR MLR
comp=Z,96nm,15.0s,MS4.2
TIXI Tiksi 71.81 10 *e*P **P 16 30 10.7 -1.4**
comp=Z,7.7nm,0.8s,mb4.7
AKASG Malin Array Be 73.13 322 P **P 16 30 18.6 -1.7**
comp=Z,0.5nm,0.4s,mb3.8,baz=88,slow=5.2,SNR=6.7
BOSA Boshof 74.43 239 LR LR 17 00 40.9
comp=Z,163nm,18.1s,MS4.4,baz=261,slow=34
JOF Joensuu 76.08 335 *e*P **P 16 30 36.5 -0.7**
JOF Joensuu 76.08 335 *e*p **P 16 30 36.5 -0.7**
comp=Z,8.2nm,0.9s,mb4.7
FINES FINESS Array B 77.92 333 P **P 16 30 47.4 -0.1**
comp=Z,2.1nm,0.9s,mb4.1,baz=102,slow=6.4,SNR=7.6
KAF Kangasniemi 78.01 333 *e*P **P 16 30 47.7 -0.3**
KAF pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
KAF Kangasniemi 78.01 333 *e*P **P 16 30 47.7 -0.3**
comp=Z,7.7nm,1.0s,mb4.6
KAF Kangasniemi 78.01 333 *e*p **P 16 30 47.7 -0.3**
comp=Z,7.7nm,1.0s,mb4.6
ARCES ARCESS Array B 80.53 340 P **P 16 31 02.7 +1.0**
comp=Z,1.8nm,0.5s,mb4.3,baz=102,slow=6.0,SNR=21
ARCES LR LR 17 12 13.4
comp=Z,48nm,19.5s,MS3.9,baz=243,slow=40
ARCES ARCESS Array B 80.53 340 P **P 16 31 02.7 +1.0**
ARCES LR LR 17 12 13.4
NOA NORSAR Array B 84.91 331 P **P 16 31 25.8 +1.2**
comp=Z,1.7nm,1.0s,mb4.1,baz=96,slow=5.3,SNR=2.7
NOA LR LR 17 12 30.7
comp=Z,33nm,19.5s,MS3.7,baz=270,slow=38
SPITS Spitsbergen Ar 85.07 348 LR LR 17 15 50.5
comp=Z,68nm,19.2s,MS4.0,baz=90,slow=40

*ISCJB **07** 16:34:35.3±0.5, 34°.46N±0°.08×137°.83E±0°.06, h292km±5km, mb2.8/4, Error ellipse: s-maj=12.9km s-min=8.1km az=8.5*
*JMA **07** 16:34:35.1±0.3, 34°.45N×137°.83E, h296km±3km, M2.8*
*IDC **07** 16:34:36.2±1.1, 34°.42N×137°.83E, h286km±22km, mb2.7/4, mb1 2.8/7, mb1mx2.7/28, mbtmp2.7/7, Error ellipse: s-maj=63.2km s-min=16.9km az=57.0*
ISC 07 16:34:36.3±0.5, 34°.46N±0°.08×137°.83E±0°.06, h285km±5km, n26, σ0°.74/38, mb2.8/4, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TK04	**Tokai 4**	**0.08**	**153**	P	**Pn**	**16 35 13.3**	**+0.7**
HMMJ	**Hamamatsu 2**	**0.41**	**347**	P	**Pn**	**16 35 13.1**	**+0.2**
JNY	**Yasuok**	**0.90**	**2**	P	**Pn**	**16 35 14.9**	**+0.4**
JIE	**Ise**	**0.93**	**266**	P	**Pn**	**16 35 14.6**	**-0.1**
JAO	**Obara**	**0.94**	**330**	P	**Pn**	**16 35 15.0**	**+0.3**
JYN	**Shimob**	**1.19**	**29**	P	**Pn**	**16 35 16.7**	**+0.7**
JOD2	**Odawara 2**	**1.31**	**52**	P	**Pn**	**16 35 17.6**	**+0.9**
JOD2				S	**S**	**16 35 50.2**	**+1.4**
JGM	**Miyama**	**1.54**	**324**	P	**Pn**	**16 35 18.4**	**+0.2**
JGM				S	**S**	**16 35 50.8**	**-0.6**
JRY	**Ryogami san**	**1.79**	**29**	P	**Pn**	**16 35 20.8**	**+0.8**
JRY				S	**S**	**16 35 54.9**	**+0.2**
JHU	**Hanno**	**1.83**	**40**	P	**Pn**	**16 35 20.7**	**+0.4**
JHU				S	**S**	**16 35 54.2**	**-1.1**
JWY	**Kouya**	**1.87**	**263**	P	**Pn**	**16 35 20.8**	**+0.1**
JHJ	**Hachijo jima 2**	**2.10**	**129**	P	**Pn**	**16 35 22.9**	**+0.3**
	4.1nm,0.3s,baz=49,slow=19,SNR=4.4						
JHJ				S	**S**	**16 36 05.7**	**+6.2**
	6.0nm,0.3s,baz=67,slow=19,SNR=7.3						
MAT	**Matsushiro**	**2.10**	**8**	P	**Pn**	**16 35 22.6**	**+0.1**
MAT				*e*S	**S**	**16 36 00.4**	**+1.1**
MAT	**Matsushiro**	**2.10**	**8**	P	**Pn**	**16 35 22.7**	**+0.2**
MAT				S	**S**	**16 36 01.3**	**+2.0**
MJAR	**Matsushiro Arr**	**2.10**	**8**	P	**Pn**	**16 35 22.4**	**-0.1**
	3.1nm,0.3s,baz=187,slow=9.6,SNR=48						
BSO4	**Boso 4**	**2.13**	**75**	P	**Pn**	**16 35 23.3**	**+0.5**
BSO4				S	**S**	**16 35 59.5**	**-0.2**
JWT	**Wachi**	**2.16**	**293**	P	**Pn**	**16 35 22.7**	**-0.3**
JWT				S	**S**	**16 35 58.4**	**-1.8**
JKG	**Kaga**	**2.19**	**326**	P	**Pn**	**16 35 23.2**	**-0.1**
JAG	**Ashikaga**	**2.37**	**34**	P	**Pn**	**16 35 24.4**	**-0.4**
JAG				S	**S**	**16 36 02.1**	**-1.4**
BSO1	**Boso 1**	**2.60**	**85**	P	**Pn**	**16 35 26.3**	**-0.8**
BSO1				S	**S**	**16 36 06.8**	**-0.7**
JYT	**Yasato**	**2.62**	**47**	P	**Pn**	**16 35 26.4**	**-0.8**
JYT				S	**S**	**16 36 03.9**	**-3.8**
KSRS	**Korea Array**	**8.57**	**293**	P	**Pn**	**16 36 37.0**	**+0.3**
	0.1nm,0.3s,baz=112,slow=13,SNR=6.2						
SONM	**Songino Array**	**26.98**	**309**	P	**P**	**16 39 52.7**	**+0.7**
	0.3nm,0.3s,mb3.1,baz=109,slow=9.4,SNR=2.5						
MKAR	**Makanchi Array**	**43.08**	**304**	P	**P**	**16 42 08.2**	**-0.3**
	0.3nm,0.7s,mb2.6,baz=90,slow=7.9,SNR=2.7						
WRA	**Warramunga Arr**	**54.20**	**184**	P	**P**	**16 43 32.1**	**-0.7**
	0.2nm,0.3s,mb2.9,baz=0.7,slow=7.6,SNR=9.5						
ASAR	**Alice Springs**	**57.92**	**184**	P	**P**	**16 43 58.8**	**-0.2**
	0.1nm,0.3s,mb2.7,baz=6.4,slow=7.1,SNR=8.6						

MAN 07 16:40:33, 15°.50N×121°.43E, h12km, mb3.5, ML2.2, MS1.7, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALP	**Baler**	**0.28**	**31**	*e*P	Pg	16 40 39.8	+1.0
BALP				*e*S	Sg	16 40 45.4	+2.7
PCPH	**Palayan**	**0.33**	**282⇑**	*e*P	Pg	16 40 41.0	+1.4
POLP	**Polilio Island**	**0.91**	**147**	*e*P	Pg	16 40 51.3	+0.7
POLP				*e*S	Sg	16 41 05.0	+2.5
CAUP	**Cauayan**	**1.49**	**15**	*e*P	Pn	16 40 58.5	-1.1
CAUP				*e*S	Sn	16 41 19.6	+0.6

*IDC **07** 16:46:56.4±41.0, 19°.90S×178°.28W, h520km±381km, mb3.3/4, mb1 3.4/4, mb1mx3.0/16, mbtmp3.3/4, MS3.4/1, Ms1 3.4/1, ms1mx2.8/18, Error ellipse: s-maj=264.5km s-min=110.6km az=82.0*
NEIC 07 16:46:58.6±4.1, 20°.28S×178°.11W, h561km±23km, mb4.1/1, Error ellipse: s-maj=100.8km s-min=30.9km az=137.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.43**	**304**	*e*P	P	16 48 24.7	+0.1
RAO	**Raoul Island**	**8.93**	**179**	LR	LR	16 51 14.0	
	comp=Z,272nm,21.7s,baz=285,slow=28						
EIDS	**Eidsvold**	**28.81**	**254**	*e*P	P	16 52 12.7	+0.4
CTA	**Charters Tower**	**33.41**	**264**	P	P	16 52 51.5	-0.1
	2.7nm,0.5s,baz=107,slow=12,SNR=6.0						
CTAO	**Charters Tower**	**33.41**	**264**	*e*P	P	16 52 52.1	+0.4
	2.5nm,0.6s						
STKA	**Stephens Creek**	**37.80**	**244**	P	P	16 53 27.6	-0.1
	2.1nm,0.9s,baz=106,slow=18,SNR=3.0						
ASAR	**Alice Springs**	**44.47**	**257**	P	P	16 54 20.9	+0.2
	2.0nm,0.4s,baz=89,slow=8.4,SNR=78						
WRA	**Warramunga Arr**	**44.53**	**262**	P	P	16 54 20.7	-0.5
	1.6nm,0.3s,baz=96,slow=7.6,SNR=109						
BRTR	**Keskin Array B**	**146.62**	**312**	PKPbc	PKPbc	17 05 38.2	+0.3
	0.3nm,0.5s,baz=145,slow=5.3,SNR=2.7						

*CSEM **07** 16:49:14.4±0.9, 35°.98N×21°.83E, h2km, ML3.5/2, Error ellipse: s-maj=16.5km s-min=7.6km az=47.0*
*NEIC **07** 16:49:16.1, 36°.03N×21°.91E, h2km, MD3.5(ATH), After ATH.*
*ATH **07** 16:49:16.1, 36°.03N×21°.91E, h2km, MD3.5/9*
*THE **07** 16:49:16.2, 36°.05N×21°.76E, h0km±10km, ML3.5/2, Error ellipse: s-maj=21.1km s-min=2.4km az=248.0*
ISC 07 16:49:15.2±1.3, 35°.99N±0°.05×21°.83E±0°.08, h10km, n41, σ0°.89/55, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.91**	**356**	*e*PB	**Pg**	**16 49 32.5**	**-0.2**
PYL				*e*SG	**Sg**	**16 49 45.3**	**+0.7**
PYL	**PYLOS**	**0.91**	**356**	P	**Pg**	**16 49 31.6**	**-1.1**
PYL				S	**Sg**	**16 49 45.2**	**+0.6**
PYL	**PYLOS**	**0.91**	**356**	P	**Pg**	**16 49 31.6**	**-1.1**
PYL	**PYLOS**	**0.91**	**356**	*e*Pb	**Pg**	**16 49 32.5**	**-0.2**
PYL				S	**Sg**	**16 49 45.2**	**+0.6**
KYTH	**Kithira**	**1.02**	**73**	*e*Pg	**Pg**	**16 49 34.9**	**+0.1**
KYTH	**Kithira**	**1.02**	**73**	*e*PG	**Pg**	**16 49 34.9**	**+0.1**
KYTH	**Kithira**	**1.02**	**73**	*e*Pg	**Pg**	**16 49 34.9**	**+0.1**
VLI	**Veliai**	**1.16**	**50**	*e*Pg	**Pg**	**16 49 36.8**	**-0.6**
VLI				*e*Sg	**Sg**	**16 49 51.5**	**-0.9**
VLI	**Veliai**	**1.16**	**50**	*e*PG	**Pg**	**16 49 36.8**	**-0.6**
VLI				*e*SG	**Sg**	**16 49 51.5**	**-0.9**
VLI	**Veliai**	**1.16**	**50**	*e*Pg	**Pg**	**16 49 36.8**	**-0.6**
VLI				*e*Sg	**Sg**	**16 49 51.5**	**-0.9**
ITM	**Ithomi**	**1.19**	**4**	*e*Pg	**Pg**	**16 49 37.3**	**-0.8**
ITM				*e*Sb	**Sb**	**16 49 53.8**	**+0.4**
ITM	**Ithomi**	**1.19**	**4**	*e*PG	**Pg**	**16 49 37.3**	**-0.8**
ITM				*e*SB	**Sb**	**16 49 53.8**	**+0.4**
ITM	**Ithomi**	**1.19**	**4**	P	**Pb**	**16 49 37.1**	**-0.8**
ITM				S	**Sb**	**16 49 53.6**	**+0.2**
ITM	**Ithomi**	**1.19**	**4**	*e*Pg	**Pg**	**16 49 37.3**	**-0.8**
ITM				S	**Sb**	**16 49 53.6**	**+0.2**
VLX	**Vlachokerasia**	**1.45**	**18**	*e*PG	**Pg**	**16 49 41.5**	**-1.5**
VLX				*e*SB	**Sb**	**16 50 01.8**	**+1.0**
VLX	**Vlachokerasia**	**1.45**	**18**	P	**Pn**	**16 49 41.3**	**-0.2**
VLX				S	**Sn**	**16 50 02.9**	**+2.4**
VLX	**Vlachokerasia**	**1.45**	**18**	P	**Pn**	**16 49 41.3**	**-0.2**
VLX				*e*Sb	**Sb**	**16 50 01.8**	**+1.0**
VLX				S	**Sn**	**16 50 02.9**	**+2.4**
KARN	**Karanos**	**1.80**	**108**	P	**Pb**	**16 49 48.7**	**+0.5**
DID	**Didima**	**1.89**	**36**	*e*PG	**Pb**	**16 49 49.8**	**0.0**
DID	**Didima**	**1.89**	**36**	P	**Pn**	**16 49 48.8**	**+1.3**
DID	**Didima**	**1.89**	**36**	P	**Pn**	**16 49 48.8**	**+1.3**
DID	**Didima**	**1.89**	**36**	*e*Pg	**Pb**	**16 49 49.8**	**0.0**
GUR	**Goura**	**1.99**	**12**	*e*PG	**Pb**	**16 49 51.7**	**+0.2**
GUR	**Goura**	**1.99**	**12**	P	**Pb**	**16 49 51.4**	**-0.1**
GUR	**Goura**	**1.99**	**12**	P	**Pb**	**16 49 51.4**	**-0.1**
GUR	**Goura**	**1.99**	**12**	*e*Pg	**Pb**	**16 49 51.7**	**+0.2**
VAM	**Vamos**	**2.02**	**106**	*e*Pg	**Pb**	**16 49 52.5**	**+0.6**
VAM	**Vamos**	**2.02**	**106**	*e*PG	**Pb**	**16 49 52.5**	**+0.6**
VAM	**Vamos**	**2.02**	**106**	*e*Pg	**Pb**	**16 49 52.5**	**+0.6**
RLS	**Riolos of Patr**	**2.09**	**352**	*e*Pg	**Pb**	**16 49 54.3**	**+1.1**
RLS	**Riolos of Patr**	**2.09**	**352**	*e*PG	**Pb**	**16 49 54.3**	**+1.1**
RLS	**Riolos of Patr**	**2.09**	**352**	*e*Pg	**Pb**	**16 49 54.3**	**+1.1**
LTK	**Loutraki**	**2.23**	**24**	*e*PG	**Pb**	**16 49 55.9**	**+0.4**
LTK	**Loutraki**	**2.23**	**24**	*e*Pg	**Pb**	**16 49 55.9**	**+0.4**
EFP	**Efpalio**	**2.44**	**1**	*e*PN	**Pb**	**16 49 58.8**	**-0.3**
EFP	**Efpalio**	**2.44**	**1**	*e*Pn	**Pb**	**16 49 58.8**	**-0.3**
VLY	**Voula,Athens**	**2.44**	**40**	*e*Pn	**Pb**	**16 49 58.6**	**-0.5**
VLY	**Voula,Athens**	**2.44**	**40**	*e*PN	**Pb**	**16 49 58.6**	**-0.5**
VLY	**Voula,Athens**	**2.44**	**40**	*e*Pn	**Pb**	**16 49 58.6**	**-0.5**
AGG	**Agios Georgios**	**3.06**	**7**	P	**Pb**	**16 50 08.2**	**-1.5**
AGG	**Agios Georgios**	**3.06**	**7**	P	**Pb**	**16 50 08.2**	**-1.5**

*NEIC **07** 16:51:42.0±1.9, 57°.36S×146°.50E, h10km, mb4.3/1, Error ellipse: s-maj=87.0km s-min=31.0km az=88.0*
IDC 07 16:51:40.8±2.4, 57°.32S×146°.44E, h0km, mb4.2/5, mb1 4.3/5, mb1mx4.0/14, mbtmp4.2/5, MS4.1/11, Ms1 4.1/11, ms1mx4.0/19, Error ellipse: s-maj=111.6km s-min=42.6km az=87.0, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**20.59**	**59**	LR	LR	17 02 15.4	
	comp=Z,835nm,18.8s,baz=214,slow=31						
STKA	**Stephens Creek**	**25.66**	**350**	P	P	16 57 13.9	+1.9
	9.8nm,1.1s,baz=158,slow=11,SNR=7.4						
STKA				LR	LR	17 05 19.6	
	comp=Z,349nm,20.7s,baz=360,slow=32						
URZ	**Urewera**	**27.70**	**60**	LR	LR	17 07 53.2	
	comp=Z,507nm,18.9s,baz=217,slow=35						
ASAR	**Alice Springs**	**34.83**	**340**	P	P	16 58 32.8	-0.4
	1.1nm,0.6s,baz=168,slow=9.0,SNR=20						
ASAR				PcP	PcP	17 01 05.4	-1.0
	0.5nm,0.9s,baz=159,slow=3.7,SNR=4.5						
MAW	**Mawson**	**36.95**	**219**	LR	LR	17 13 18.2	
	comp=Z,459nm,18.6s,baz=97,slow=35						
CTA	**Charters Tower**	**37.18**	**360**	P	P	16 58 52.8	-0.6
	3.2nm,0.7s,baz=204,slow=10.0,SNR=2.7						
CTA				LR	LR	17 12 45.5	
	comp=Z,685nm,18.5s,baz=185,slow=34						
DZM	**Mont Dzumac**	**38.12**	**31**	*e*LR	LR	17 09 29.0	
	1μm,25.4s						
WRA	**Warramunga Arr**	**38.38**	**341**	P	P	16 59 02.7	-0.8
	3.3nm,0.6s,baz=169,slow=7.9,SNR=31						
WRAB	**Tennant Creek**	**38.39**	**341**	*e*P	P	16 59 03.0	-0.6
	3.6nm,0.5s						
FITZ	**Fitzroy Crossi**	**42.11**	**330**	P	P	16 59 34.9	+0.4
	3.3nm,0.9s,baz=148,slow=9.5,SNR=3.0						
FITZ	**Fitzroy Crossi**	**42.11**	**330**	P	P	16 59 35.0	+0.5
HNR	**Honiara**	**46.91**	**18**	LR	LR	17 15 40.3	
	comp=Z,167nm,19.0s,baz=233,slow=29						
TBI	**Tubuai**	**56.71**	**82**	*e*LR	LR	17 17 38.5	
	149nm,27.8s						
PPT	**Papeete**	**61.38**	**78**	*e*LR	LR	17 20 02.6	
	139nm,27.2s						
RPN	**Rapa Nui**	**74.80**	**116**	LR	LR	17 29 14.1	

comp=Z,100nm,18.3s,baz=290,slow=30
BOSA Boshof 81.19 230 LR LR 17 32 33.1
comp=Z,157nm,19.3s,baz=156,slow=30
MJAR Matsushiro Arr 93.76 353 LR LR 17 42 32.4
comp=Z,44nm,20.4s,baz=55,slow=33
CPUP Villa Florida 94.30 159 LR LR 17 46 36.9
comp=Z,94nm,18.6s,baz=178,slow=35
KSRS Korea Array 95.69 345 LR LR 17 44 51.8
comp=Z,43nm,18.2s,baz=169,slow=33
AKASG Malin Array Be 143.72 287 PKP PKPdf 17 11 15.3 -1.2
0.2nm,0.3s,baz=127,slow=2.2,SNR=3.5
FINES FINESS Array B 150.28 303 PKPbc PKPbc 17 11 32.7 +0.5
3.6nm,0.8s,baz=94,slow=2.9,SNR=7.4
FINES FINESS Array B 150.28 303 PKPbc PKPbc 17 11 32.7 +0.4

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*ISCJB **07** 17:08:56.6±0.5,36°.49N±0°.04×69°.79E±0°.07,h227km±6km, mb3.4/3,Error ellipse: s-maj=9.8km s-min=5.2km az=164.0*
*IDC **07** 17:08:56.6±6.4,36°.35N×70°.06E,h211km±55km,mb3.2/4, mb1 3.3/9,mb1mx3.1/27,mbtmp3.3/9,Error ellipse: s-maj=52.7km s-min=24.6km az=45.0*
*NEIC **07** 17:08:57.4±0.8,36°.42N×69°.88E,h223km±9km,mb4.1/3, Error ellipse: s-maj=16.1km s-min=11.0km az=100.0*
*NNC **07** 17:09:06.7±14.0,37°.36N×69°.01E,h212km±125km,mb2.9, mpv3.5,Error ellipse: s-maj=139.6km s-min=94.3km az=12.0*
ISC 07 17:08:57.8±0.5,36°.50N±0°.04×69°.84E±0°.07,h214km±6km, n45,σ1§01/53,mb3.4/3,4C-2D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.06**	**199**	*e*P	**Pn**	**17 09 38.2**	**+0.2**
KBL				*e*S	**S**	**17 10 08.9**	**-0.5**
CEP	**Cherat**	**3.17**	**147**	⇑P	**Pn**	**17 09 51.3**	**+1.2**
CEP				S	**S**	**17 10 33.0**	**+1.8**
SARP	**Sargodha**	**5.14**	**152**	P	**Pn**	**17 10 14.0**	**-0.3**
KSH	**Kashi**	**5.70**	**56**	Pn	**Pn**	**17 10 17.0**	**-4.4**
KSH				Sn	**S**	**17 11 14.7**	**-13**
KSH	comp=N,36nm,0.6s			smax			
KSH	comp=E,31nm,0.4s			smax			
THN	**Thein Dam**	**6.33**	**128**	*e*PKP	**Pn**	**17 10 28.9**	**-0.6**
THN				*e*S	**S**	**17 11 37.6**	**-4.7**
KK31	**Karatay Array**	**6.61**	**4**	P	**Pn**	**17 10 32.5**	**-0.5**
KK31	comp=E,1.7nm,0.3s,baz=195,slow=14,SNR=68			⇑S	**S**	**17 11 40.3**	**-8.5**
EKS2	**Erkin-Say**	**6.86**	**25**	P	**Pn**	**17 10 36.5**	**+0.3**
EKS2	comp=E,3.7nm,0.6s,baz=198,slow=21,SNR=3.8 SNR=13						
EKS2	**Erkin-Say**	**6.86**	**25**	*e*P	**Pn**	**17 10 36.0**	**-0.1**
KZA	**Kyzart**	**6.97**	**35**	P	**Pn**	**17 10 38.1**	**+0.5**
AAK	**Ala-Archa**	**7.10**	**29**	P	**Pn**	**17 10 39.8**	**+0.5**
AAK	**Ala-Archa**	**7.10**	**29**	P	**Pn**	**17 10 39.8**	**+0.5**
AAK	comp=E,6.7nm,0.3s,baz=183,slow=4.9,SNR=25			S	**S**	**17 11 58.7**	**-1.5**
KBK	**Karagaybulak**	**7.30**	**31**	P	**Pn**	**17 10 42.5**	**+0.7**
CHMS	**Chumysh**	**7.51**	**29**	P	**Pn**	**17 10 44.5**	**0.0**
ULHL	**Ulahol**	**7.58**	**39**	P	**Pn**	**17 10 45.5**	**+0.1**
USP	**Ospenovka**	**7.65**	**27**	P	**Pn**	**17 10 46.1**	**-0.2**
KLP	**Kalpa**	**8.56**	**123**	*e*PKP	**Pn**	**17 10 57.7**	**-0.6**
KLP				*e*S	**S**	**17 12 27.6**	**-7.2**
JOSI	**Joshimath**	**10.05**	**123**	*e*PKP	**Pn**	**17 11 14.2**	**-3.2**
JOSI				*e*S	**S**	**17 12 56.1**	**-14**
JOSI	comp=N,83nm,0.8s			AML	AML	17 13 09.4	
JOSI	comp=E,79nm,0.5s			AML	AML	17 13 09.9	
AYAN	**Aya Nagar**	**10.09**	**140**	*e*S	**S**	**17 13 02.2**	**-8.9**
SONA	**Sohna**	**10.26**	**141**	*e*S	**S**	**17 13 04.1**	**-11**
AGRA	**Agra**	**11.52**	**141**	*e*S	**S**	**17 13 35.8**	**-9.3**
MK31	**Makanchi Array**	**13.85**	**38**	P	**Pn**	**17 12 06.2**	**+1.0**
MK31	**Makanchi Array**	**13.85**	**38**	*e*P	**Pn**	**17 12 05.8**	**+0.7**
MKAR	**Makanchi Array**	**13.85**	**38**	P	**Pn**	**17 12 06.1**	**+0.9**
KOLN	**Koldanda**	**14.54**	**123**	*e*P	**Pn**	**17 12 14.8**	**+1.0**
AB31	**Akbulak array**	**14.65**	**334**	⇑P	**Pn**	**17 12 13.3**	**-1.6**
ABKAR	**Akbulak array**	**14.65**	**334**	*e*P	**Pn**	**17 12 13.5**	**-1.4**
GKN	**Gorkha**	**15.11**	**120**	*e*P	**Pn**	**17 12 22.0**	**+1.3**
KURK	**Kurchatov**	**15.55**	**21**	P	**Pn**	**17 12 23.8**	**-2.0**
DMN	**Daman**	**15.68**	**120**	*e*P	**Pn**	**17 12 27.5**	**-0.1**
KKN	**Kakani**	**15.69**	**119**	*e*P	**Pn**	**17 12 28.8**	**+1.1**
PKI	**Pulchoki**	**15.91**	**120**	*e*P	**Pn**	**17 12 30.9**	**+0.5**
VOSK	**Vostochnaya**	**16.24**	**2**	⇓P	**P**	**17 12 33.6**	**+0.5**
AKTK	**Aktyubinsk**	**16.33**	**332**	P	**P**	**17 12 35.0**	**+0.9**
AKTO	**Aktyubinsk**	**16.33**	**332**	P	**P**	**17 12 35.0**	**+0.9**
JIRN	**Jiri**	**16.41**	**118**	*e*P	**P**	**17 12 37.0**	**+1.7**
ZRNK	**Zerenda**	**16.46**	**358**	⇑P	**P**	**17 12 36.4**	**+0.8**
BVAR	**Borovoye Array**	**16.52**	**1**	P	**P**	**17 12 37.0**	**+0.7**
BRVK	**Borovoye**	**16.56**	**1**	⇓P	**P**	**17 12 36.9**	**+0.3**
BRVK	**Borovoye**	**16.56**	**1**	*e*P	**P**	**17 12 36.8**	**+0.1**
RAMN	**Ramite**	**17.13**	**119**	*e*P	**P**	**17 12 43.2**	**0.0**
ODAN	**Odare**	**17.74**	**118**	*e*P	**P**	**17 12 49.5**	**-0.4**
ZALV	**Zalesovo Beam**	**20.31**	**26**	P	**P**	**17 13 17.4**	**+0.1**
ARCES	**ARCESS Array B**	**40.79**	**338**	P	**P**	**17 16 18.4**	**+0.8**
WRA	**Warramunga Arr**	**82.79**	**121**	P	**P**	**17 20 55.7**	**-2.3**
ASAR	**Alice Springs**	**85.03**	**124**	P	**P**	**17 21 07.3**	**-2.0**

comp=E,4.8nm,0.4s
comp=E,1.0nm,0.7s,baz=220,slow=11,SNR=10
comp=E,0.2nm,0.3s,baz=224,slow=9.9,SNR=9.2
comp=E,2.0nm,0.3s,baz=224,slow=9.9,SNR=9.2
comp=E,3.4nm,0.4s
comp=E,8.3nm,0.3s
comp=E,0.2nm,0.3s,baz=211,slow=11,SNR=7.3
comp=E,6.1nm,0.7s
comp=E,5.4nm,0.8s
comp=E,1.8nm,0.5s
comp=E,1.2nm,0.3s,baz=142,slow=13,SNR=22
comp=E,1.7nm,0.4s
comp=E,1.2nm,0.3s,baz=156,slow=9.7,SNR=22
comp=E,6.1nm,0.7s
comp=E,5.4nm,0.8s
comp=E,1.8nm,0.4s,baz=225,slow=11,SNR=10
comp=E,2.0nm,0.9s,mb3.5,baz=116,slow=8.2,SNR=4.7
comp=E,0.5nm,0.8s,mb3.3,baz=318,slow=4.3,SNR=4.7
comp=E,0.3nm,0.5s,mb3.2,baz=315,slow=5.1,SNR=9.4

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*IDC **07** 17:49:22.6±2.0,10°.56N×91°.60E,h0km,mb3.6/6, mb1 3.8/6,mb1mx3.5/22,mbtmp3.6/6,Error ellipse: s-maj=88.6km s-min=20.5km az=62.0*
*NEIC **07** 17:49:24.1±1.2,10°.58N×91°.62E,h10km,mb3.8/1,Error ellipse: s-maj=56.1km s-min=12.7km az=62.0*
*ISCJB **07** 17:49:25.0±1.9,10°.5N±0°.3×91°.5E±0°.5,h33km,mb3.6/7, Error ellipse: s-maj=82.2km s-min=17.6km az=151.3*
ISC 07 17:49:27.5±1.9,10°.6N±0°.3×91°.6E±0°.5,h35km,n9,σ0§39/8, mb3.6/7,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**36.97**	**349**	*e*P	**P**	**17 56 32.9**	**-0.4**
MKAR	**Makanchi Array**	**36.97**	**349**	P	**P**	**17 56 33.5**	**+0.1**
SONM	**Songino Array**	**39.21**	**16**	P	**P**	**17 56 52.4**	**+0.2**
KURK	**Kurchatov**	**41.44**	**348**	P	**P**	**17 57 06.5**	**-4.0**
ZALV	**Zalesovo Beam**	**43.62**	**354**	P	**P**	**17 57 28.1**	**-0.1**
WRA	**Warramunga Arr**	**51.89**	**126**	P	**P**	**17 58 32.8**	**-0.1**
ASAR	**Alice Springs**	**53.58**	**130**	P	**P**	**17 58 45.4**	**0.0**
ARCES	**ARCESS Array B**	**71.90**	**340**	P	**P**	**18 00 47.1**	**+0.4**
NVAR	**Mina Array Bea**	**123.86**	**28**	PKP	PKPdf	18 08 23.7	+1.5

1.2nm,0.7s,mb3.9,baz=123,slow=8.8,SNR=4.0
0.2nm,0.5s,baz=5.5,slow=2.8,SNR=2.9

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*IDC **07** 17:58:32.4±2.0,2°.03S×99°.71E,h0km,mb3.8/8,mb1 3.9/9, mb1mx3.7/22,mbtmp3.8/9,ML3.3/1,Error ellipse: s-maj=74.2km s-min=16.9km az=61.0*
*ISCJB **07** 17:58:35.7±0.8,2°.14S±0°.05×99°.42E±0°.07,h49km±7km, mb4.0/9,Error ellipse: s-maj=12.1km s-min=6.6km az=148.1*
*DJA **07** 17:58:36,2°.08S×99°.46E,h22km,MLv4.1/11*
*NEIC **07** 17:58:37.2±1.0,2°.02S×99°.66E,h35km,mb4.2/2,Error ellipse: s-maj=43.9km s-min=8.9km az=61.0*
ISC 07 17:58:35.9±1.4,2°.16S±0°.05×99°.40E±0°.06,h33km±11km, n30,σ1§18/32,mb4.0/9,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.86**	**135**	P	**Pn**	**17 58 50.1**	**-1.6**
SISI	**Saibi**	**0.88**	**339**	P	**Pn**	**17 58 52.2**	**+0.2**
SISI				S	**Sb**	**17 59 05.1**	**+0.8**
PDSI	**Padang**	**1.63**	**41**	P	**Pn**	**17 59 02.2**	**-0.1**
PDSI				S	**Sn**	**17 59 21.0**	**-1.1**
PPI	**Padang Panjang**	**1.96**	**31**	P	**Pn**	**17 59 06.7**	**-0.2**
PPI				S	**Sn**	**17 59 29.1**	**-1.2**
KRJI	**Kerinci**	**2.06**	**88**	S	**Sn**	**17 59 35.3**	**+2.5**
SDSI	**Sungai Dareh**	**2.36**	**59**	P	**Pn**	**17 59 13.4**	**+1.0**
MNSI	**Mandailing Nat**	**2.94**	**3**	P	**Pn**	**17 59 20.6**	**+0.3**
BKNI	**Bangkinang**	**2.96**	**34**	P	**Pn**	**17 59 21.7**	**+1.1**
KSI	**Kapahiang**	**3.52**	**115**	P	**Pn**	**17 59 30.9**	**+2.6**
MNAI	**Manna**	**4.17**	**122**	P	**Pn**	**17 59 36.4**	**-0.9**
PSI	**Prapat**	**4.95**	**354**	Pn	**Pn**	**17 59 45.7**	**-2.3**
	1.2nm,0.3s,baz=175,slow=12,SNR=4.1						
PSI	**Prapat**	**4.95**	**354**	Pn	**Pn**	**17 59 45.7**	**-2.3**
MDSI	**Maura Dua**	**5.30**	**116**	P	**Pn**	**17 59 46.7**	**-6.1**
TPTI		**5.82**	**338**	P	**Pn**	**17 59 58.7**	**-1.3**
	0.1nm30nm,1.6s						
KLSI		**5.88**	**115**	P	**Pn**	**18 00 01.6**	**+0.7**
	0.2nm36nm,1.4s						
KASI	**Kota Agung**	**6.09**	**124**	P	**Pn**	**18 00 07.0**	**+3.4**
CGJI	**Cibinong**	**7.68**	**125**	P	**Pn**	**18 00 22.9**	**-2.6**
CMAR	**Chiang Mai Arr**	**20.49**	**359**	P	**P**	**18 03 10.7**	**-0.5**
	0.7nm,0.6s,baz=183,slow=10.0,SNR=5.4						
WRA	**Warramunga Arr**	**38.43**	**120**	P	**P**	**18 05 54.1**	**-0.7**
	0.7nm,0.6s,mb3.5,baz=304,slow=9.1,SNR=7.9						
ASAR	**Alice Springs**	**39.65**	**126**	P	**P**	**18 06 04.8**	**-0.1**
	0.4nm,0.5s,mb3.4,baz=304,slow=8.1,SNR=16						
KSRS	**Korea Array**	**47.46**	**31**	P	**P**	**18 07 06.3**	**-1.3**
	0.5nm,0.3s,mb3.9,baz=222,slow=8.4,SNR=6.8						
STKA	**Stephens Creek**	**49.49**	**131**	P	**P**	**18 07 24.1**	**+0.6**
	2.5nm,0.9s,mb4.2,baz=329,slow=19,SNR=2.2						
SONM	**Songino Array**	**50.16**	**6**	P	**P**	**18 07 29.5**	**+1.3**
	1.9nm,0.7s,mb4.2,baz=187,slow=9.3,SNR=16						
MKAR	**Makanchi Array**	**51.02**	**345**	P	**P**	**18 07 35.8**	**+1.2**
	1.3nm,0.7s,mb4.0,baz=155,slow=7.7,SNR=12						
KURK	**Kurchatov**	**55.59**	**344**	*e*P	**P**	**18 08 08.6**	**+0.4**
	1.6nm,0.8s,mb4.1						
ZAA0	**Zalesovo Array**	**57.21**	**350**	*e*P	**P**	**18 08 20.2**	**+0.6**
ZALV	**Zalesovo Beam**	**57.21**	**350**	P	**P**	**18 08 20.3**	**+0.6**
	1.4nm,0.4s,mb4.3,baz=177,slow=5.9,SNR=13						
ZALV	**Zalesovo Beam**	**57.21**	**350**	P	**P**	**18 08 20.3**	**+0.6**
ARU	**Arti**	**67.11**	**337**	P	**P**	**18 09 26.3**	**+0.3**
	1.7nm,0.7s,mb4.2						
TXAR	**Lajitas Array**	**145.19**	**37**	PKP	PKPdf	18 18 11.8	+0.9
	0.9nm,0.7s,baz=236,slow=0.3,SNR=5.1						

IDC 07 18:30:43.0±3.2,11°.22S×118°.79E,h0km,mb3.4/1, mb1 3.6/4,mb1mx3.4/19,mbtmp3.4/4,ML3.3/3,Error ellipse: s-maj=238.7km s-min=26.4km az=49.0,South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.52**	**137**	Pn	Pn	18 33 00.2	-1.2
	0.3nm,0.3s,baz=316,slow=5.6,SNR=15						
FITZ				Sn	Sn	18 34 40.5	-8.8
	0.5nm,0.3s,baz=358,slow=18,SNR=5.4						
WRA	**Warramunga Arr**	**17.29**	**122**	P	Pn	18 34 44.5	-1.5
	0.1nm,0.3s,baz=292,slow=13,SNR=4.3						
WRA				S	Sn	18 37 46.9	-12
	0.1nm,0.3s,baz=284,slow=25,SNR=4.6						
ASAR	**Alice Springs**	**18.98**	**133**	P	Pn	18 35 08.0	+1.3
	0.1nm,0.3s,baz=310,slow=13,SNR=8.6						
CTA	**Charters Tower**	**27.84**	**112**	P	P	18 36 39.4	+5.0
	4.8nm,0.8s,baz=270,slow=14,SNR=2.3						
MKAR	**Makanchi Array**	**66.33**	**333**	P	P	18 41 33.4	0.0
	0.2nm,0.4s,baz=137,slow=6.8,SNR=4.6						

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*IDC **07** 18:31:33.8±4.0,21°.32S×171°.01E,h0km,mb4.3/8, mb1 4.4/8,mb1mx4.2/17,mbtmp4.3/8,MS3.9/13, Ms1 3.8/13,ms1mx3.6/28,Error ellipse: s-maj=97.2km s-min=45.4km az=130.0*
*ISCJB **07** 18:31:37.1±1.0,21°.4S±0°.2×171°.0E±0°.1,h33km,mb4.4/12, MS3.9/10,Error ellipse: s-maj=22.9km s-min=15.2km az=169.9*
*NEIC **07** 18:31:39.4±4.7,21°.28S×170°.98E,h37km±31km,mb4.5/5, Error ellipse: s-maj=39.1km s-min=27.3km az=64.0*
ISC 07 18:31:39.9±1.1,21°.3S±0°.2×170°.9E±0°.1,h35km,n39, σ0§95/27,mb4.3/12,MS3.9/10,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.20**	**259**	*e*Pn	**Pn**	**18 32 42.0**	**+0.6**
	32nm,0.2s						
DZM				*e*LR	LR	18 33 43.3	
	2μm,24.8s						
DZM	**Mont Dzumac**	**4.20**	**259**	*e*P	**Pn**	**18 32 40.9**	**-0.5**
DZM	**Mont Dzumac**	**4.20**	**259**	*e*P	**Pn**	**18 32 41.5**	**+0.2**
NOUC	**Port Laguerre**	**4.33**	**259**	*e*P	**Pn**	**18 32 42.1**	**-1.2**
RAO	**Raoul Island**	**12.84**	**130**	LR	LR	18 38 09.3	
	comp=Z,637nm,19.2s,baz=299,slow=31						
URZ	**Urewera**	**17.71**	**164**	LR	LR	18 41 40.6	
	comp=Z,351nm,18.2s,baz=347,slow=34						
AFI	**Afiamalu**	**18.09**	**69**	LR	LR	18 40 50.8	
	comp=Z,188nm,20.8s,baz=247,slow=31						
EIDS	**Eidsvold**	**18.62**	**254**	*e*P	**Pn**	**18 35 56.8**	**+1.8**
	12nm,0.9s						
ARMA	**Armidale**	**19.53**	**238**	*e*P	**Pn**	**18 36 07.0**	**+1.2**
ARMA	**Armidale**	**19.53**	**238**	*e*P	**Pn**	**18 36 06.5**	**+0.7**
	26nm,1.3s						
RPZ	**Rata Peaks**	**22.33**	**180**	LR	LR	18 44 15.3	
	comp=Z,186nm,18.4s,MS3.5,baz=344,slow=34						
CTA	**Charters Tower**	**23.07**	**269**	*e*P	**P**	**18 36 40.7**	**-1.8**
	10nm,0.9s,mb4.2						
CTA	**Charters Tower**	**23.07**	**269**	P	**P**	**18 36 43.6**	**+1.1**
	8.8nm,1.0s,mb4.2,baz=104,slow=12,SNR=4.9						
CTA				LR	LR	18 45 00.9	
	comp=Z,388nm,19.2s,MS3.9,baz=91,slow=35						
CTA	**Charters Tower**	**23.07**	**269**	P	**P**	**18 36 43.6**	**+1.1**
CTA				LR	LR	18 45 00.9	
CNB	**Canberra Magne**	**23.45**	**229**	*e*P	**P**	**18 36 47.4**	**+1.1**
RAR	**Rarotonga**	**27.33**	**95**	LR	LR	18 44 44.9	
	comp=Z,299nm,18.3s,MS3.9,baz=157,slow=29						
STKA	**Stephens Creek**	**28.14**	**242**	*e*P	**P**	**18 37 28.5**	**-0.3**
	3.3nm,0.9s,mb4.0						
STKA	**Stephens Creek**	**28.14**	**242**	P	**P**	**18 37 29.0**	**+0.2**
	3.7nm,0.8s,mb4.0,baz=76,slow=14,SNR=3.4						
STKA				LR	LR	18 46 46.1	
	comp=Z,158nm,19.8s,MS3.6,baz=325,slow=32						
STKA	**Stephens Creek**	**28.14**	**242**	*e*P	**P**	**18 37 29.0**	**+0.2**
	0.8nm,0.9s,mb3.4						
STKA				LR	LR	18 46 46.1	
WRAB	**Tennant Creek**	**34.17**	**266**	P	**P**	**18 38 20.4**	**-1.6**
	8.0nm,1.0s,mb4.6						
WRA	**Warramunga Arr**	**34.18**	**266**	P	**P**	**18 38 21.3**	**-0.8**
	1.9nm,0.9s,mb4.0,baz=96,slow=8.0,SNR=9.8						
ASAR	**Alice Springs**	**34.19**	**259**	P	**P**	**18 38 21.8**	**-0.4**
	2.9nm,0.9s,mb4.2,baz=84,slow=8.9,SNR=31						
TBI	**Tubuai**	**36.66**	**101**	*e*S	**S**	**18 44 17.2**	**-7.3**
	51nm,29.0s						
TBI				*e*LR	LR	18 48 48.6	
	337nm,27.0s						
PPT	**Papeete**	**37.41**	**91**	*e*S	**S**	**18 44 22.6**	**-13**
	58nm,25.8s						
PPT				*e*LR	LR	18 49 10.8	
	481nm,26.8s						
PPT	**Papeete**	**37.41**	**91**	LR	LR	18 50 10.8	
	comp=Z,182nm,18.7s,MS3.9,baz=165,slow=30						
FITZ	**Fitzroy Crossi**	**42.61**	**266**	*e*P	**P**	**18 39 33.4**	**+0.4**
	18nm,0.9s,mb4.8						
FITZ	**Fitzroy Crossi**	**42.61**	**266**	P	**P**	**18 39 33.4**	**+0.4**
	5.1nm,0.8s,mb4.3,baz=98,slow=6.7,SNR=4.6						
MBWA	**Marble Bar**	**47.50**	**260**	*e*P	**P**	**18 40 11.5**	**-0.4**
	7.6nm,0.8s,mb4.7						
NWAO	**Narrogin (SRO)**	**48.67**	**244**	P	**P**	**18 40 20.2**	**-0.5**
	13nm,1.0s,mb4.9,baz=95,slow=12,SNR=2.9						
SBA	**Scott Base**	**56.61**	**181**	*e*P	**P**	**18 41 18.0**	**-0.8**
	6.4nm,1.1s,mb4.6						
PETK	**Petropavlovsk-**	**75.00**	**352**	LR	LR	19 08 48.5	
	comp=Z,48nm,21.0s,MS3.8,baz=64,slow=30						
MAW	**Mawson**	**77.09**	**202**	LR	LR	19 09 53.6	
	comp=Z,84nm,20.9s,MS4.0,baz=236,slow=30						
CMAR	**Chiang Mai Arr**	**80.76**	**294**	P	**P**	**18 43 49.5**	**-0.7**

0.3nm,0.3s,mb3.7,baz=138,slow=5.6,SNR=2.9
HHC Hu-ho-hao-te 82.80 319 *e*P **P** **18 44 01.3 +0.9**
HHC S S 18 54 16.5 +0.4
HHC pmax pmax
comp=Z,17nm,0.7s,mb5.2
HHC pmax pmax
comp=Z,86nm,6.5s
SONM Songino Array 89.80 323 P **P** **18 44 35.6 +1.0**
comp=Z,0.3nm,0.5s,mb3.9,baz=122,slow=1.9,SNR=3.5
SONM LR LR 19 19 57.3
comp=Z,58nm,18.9s,MS4.0,baz=355,slow=32
TXAR Lajitas Array 96.41 61 LR LR 19 19 46.7
comp=Z,42nm,18.3s,MS4.0,baz=85,slow=30
PDAR Pinedale Array 96.90 47 LR LR 19 19 47.4
comp=Z,50nm,20.9s,MS4.0,baz=70,slow=30
BRG Berggiesshubel 145.41 334 *e*P PKPbc 18 51 12.9 -0.9
comp=Z,3.8nm,1.2s
BRG *e* 18 51 18.3
comp=Z,8.9nm,1.3s
CLL Collm 145.45 335 *e*PKPbc PKPbc 18 51 14.0 0.0
CLL *i* PKiKP PKiKP 18 51 16.6 -1.3
comp=Z,8.0nm,1.1s

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*DDA **07** 18:37:15.7,35°.94N×27°.32E,h20km,Md3.0*
*ATH **07** 18:37:18.9,36°.29N×27°.87E,h33km±10km,MD3.2/4*
*NEIC **07** 18:37:18.9,36°.29N×27°.87E,h33km,MD3.2(ATH), MD2.9(ISK),After ATH.*
*ISCJB **07** 18:37:20.0±0.8,36°.13N±0°.04×27°.73E±0°.05,h1km±6km, Error ellipse: s-maj=6.5km s-min=6.3km az=143.8*
*CSEM **07** 18:37:20.1±0.4,36°.10N×27°.75E,h5km,MD3.0,Error ellipse: s-maj=9.2km s-min=8.0km az=134.0*
*ISK **07** 18:37:22.5,36°.27N×28°.00E,h7km,MD3.0*
ISC 07 18:37:20.4±0.8,36°.11N±0°.04×27°.73E±0°.05,h4km±5km, n32,σ1§29/46,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.34**	**71**	*e*Pb	**Pg**	**18 37 26.5**	**-0.4**
ARG				*e*Sb	**Sg**	**18 37 30.8**	**-0.5**
ARG	**Arkhangelos**	**0.34**	**71**	*e*PB	**Pg**	**18 37 26.5**	**-0.4**
ARG				*e*SB	**Sg**	**18 37 30.8**	**-0.5**
ARG	**Arkhangelos**	**0.34**	**71**	*e*Pb	**Pg**	**18 37 26.5**	**-0.4**
ARG				*e*Sb	**Sg**	**18 37 30.8**	**-0.5**
DAT	**Datca**	**0.64**	**349**	*e*PG	**Pg**	**18 37 34.0**	**+1.4**
DAT				*e*SG	**Sg**	**18 37 42.3**	**+1.5**
DAT	**Datca**	**0.64**	**349**	*e*Pg	**Pg**	**18 37 34.0**	**+1.4**
DAT				*e*Sg	**Sg**	**18 37 42.3**	**+1.5**
KARP	**Karpathos**	**0.73**	**220**	*e*Pb	**Pg**	**18 37 36.3**	**+2.0**
KARP	**Karpathos**	**0.73**	**220**	*e*PB	**Pg**	**18 37 36.3**	**+2.0**
KARP	**Karpathos**	**0.73**	**220**	*e*Pb	**Pg**	**18 37 36.3**	**+2.0**
BODT	**Bodrum**	**1.01**	**341**	*e*PG	**Pg**	**18 37 41.1**	**+1.2**
BODT	**Bodrum**	**1.01**	**341**	*e*Pg	**Pg**	**18 37 41.1**	**+1.3**
YER	**Yerkesik**	**1.12**	**23**	*e*PG	**Pg**	**18 37 39.8**	**-2.0**
YER	**Yerkesik**	**1.12**	**23**	*e*Pg	**Pg**	**18 37 39.8**	**-2.0**
MLSB	**Milas**	**1.19**	**2**	*e*PG	**Pg**	**18 37 43.1**	**0.0**
MLSB				*e*SG	**Sg**	**18 37 57.6**	**-0.9**
MLSB	**Milas**	**1.19**	**2**	*e*Pg	**Pg**	**18 37 43.1**	**-0.1**
MLSB				*e*Sg	**Sg**	**18 37 57.6**	**-1.0**
AKAS	**Kas**	**1.52**	**85**	*i* P	**Pn**	**18 37 48.3**	**0.0**
AKAS				*i* S	**Sn**	**18 38 09.5**	**+1.0**
AKAS	**Kas**	**1.52**	**85**	*i* P	**Pn**	**18 37 48.3**	**0.0**
AKAS				*i* S	**Sn**	**18 38 09.5**	**+1.0**
AYDN	**Tasoluk**	**1.56**	**4**	*i* P	**Pn**	**18 37 46.9**	**-1.9**
AYDN				*i* S	**Sn**	**18 38 08.1**	**-1.3**
AYDN	**Tasoluk**	**1.56**	**4**	*i* P	**Pn**	**18 37 46.9**	**-1.9**
GLHS	**Gihisar (BURDU**	**1.77**	**53**	*e*PN	**Pn**	**18 37 50.4**	**-1.2**
GLHS	**Gihisar (BURDU**	**1.77**	**53**	*e*Pn	**Pn**	**18 37 50.4**	**-1.3**
GOLH	**Golhisar**	**1.85**	**52**	*i* P	**Pn**	**18 37 53.5**	**+0.6**
GOLH				*i* S	**Sn**	**18 38 19.4**	**+2.7**
GOLH	**Golhisar**	**1.85**	**52**	*i* P	**Pn**	**18 37 53.5**	**+0.6**
GOLH				*i* S	**Sn**	**18 38 19.4**	**+2.7**
ELL	**Elmali**	**1.87**	**69**	*e*PN	**Pn**	**18 37 52.2**	**-0.9**
ELL	**Elmali**	**1.87**	**69**	*e*Pn	**Pn**	**18 37 52.2**	**-0.9**
DNZL	**Cakiroluk**	**1.90**	**33**	*i* P	**Pn**	**18 37 53.5**	**-0.1**
DNZL				*i* S	**Sn**	**18 38 19.4**	**+1.5**
DNZL	**Cakiroluk**	**1.90**	**33**	*i* P	**Pn**	**18 37 53.5**	**0.0**
DNZL				*i* S	**Sn**	**18 38 19.4**	**+1.5**
NPS	**Neapolis**	**1.92**	**245**	*e*Pb	**Pb**	**18 37 54.5**	**-1.4**
NPS	**Neapolis**	**1.92**	**245**	*e*PB	**Pb**	**18 37 54.5**	**-1.4**
NPS	**Neapolis**	**1.92**	**245**	*e*Pb	**Pb**	**18 37 54.5**	**-1.4**
PRK	**Paraskevi**	**3.34**	**340**	*e*Pn	**Pn**	**18 38 09.2**	**-4.2**
PRK	**Paraskevi**	**3.34**	**340**	*e*PN	**Pn**	**18 38 09.2**	**-4.2**
PRK	**Paraskevi**	**3.34**	**340**	*e*Pn	**Pn**	**18 38 09.2**	**-4.2**

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*IDC **07** 18:38:06.9±4.1,9°.05S×124°.48E,h80km±49km,mb3.3/2, mb1 3.6/6,mb1mx3.4/19,mbtmp3.5/6,ML3.7/4,Error ellipse: s-maj=105.2km s-min=23.3km az=55.0*
*ISCJB **07** 18:38:07.3±1.4,9°.41S±0°.09×124°.0E±0°.1,h112km±19km, mb3.5/2,Error ellipse: s-maj=26.1km s-min=9.4km az=150.4*
*NEIC **07** 18:38:08.8±1.2,9°.31S×124°.14E,h107km±19km,mb3.6/1, Error ellipse: s-maj=33.0km s-min=11.4km az=50.0*
ISC 07 18:38:08.6±1.2,9°.41S±0°.10×124°.1E±0°.1,h107km±18km, n9,σ1§11/12,mb3.5/2,Timor region

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

0.2nm,0.3s,baz=78,slow=14,SNR=6.1
KSRS Sn **Sn** **18 49 45.4 +3.0**
0.3nm,0.3s,baz=75,slow=24,SNR=6.0
WRA Warramunga Arr 58.70 187 P **P** **18 55 16.6 -1.7**
0.4nm,0.6s,mb3.6,baz=5.1,slow=7.4,SNR=4.3
ASAR Alice Springs 62.43 187 P **P** **18 55 42.4 -1.3**
0.3nm,0.8s,mb3.5,baz=350,slow=5.9,SNR=3.7

IDC 07 19:17:02.6±4.3, 3°.93S×151°.91E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.5/17, mbtmp3.7/5, Error ellipse: s-maj=133.5km s-min=28.9km az=109.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.38**	**226**	P	P	19 22 12.6	-0.6
0.3nm,0.4s,baz=50,slow=9.8,SNR=8.0							
ASAR	**Alice Springs**	**26.22**	**220**	P	P	19 22 39.5	+0.2
0.2nm,0.3s,baz=50,slow=8.8,SNR=3.2							
FITZ	**Fitzroy Crossi**	**29.32**	**239**	P	P	19 23 07.8	+0.7
1.6nm,0.7s,baz=57,slow=8.3,SNR=5.5							
MKAR	**Makanchi Array**	**79.09**	**319**	P	P	19 29 09.9	+1.0
0.4nm,0.5s,baz=123,slow=5.3,SNR=7.2							
BVAR	**Borovoye Array**	**88.01**	**323**	P	P	19 29 53.1	-1.6
0.5nm,0.6s,baz=101,slow=8.0,SNR=4.4							

*NEIC **07** 19:17:26.6, 31°.46S×68°.73W, h144km, MD3.8(GUC), After GUC.*
GUC 07 19:17:26.6±0.8, 31°.46S×68°.73W, h144km, MD3.8, ML3.4, 2C-3D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**1.96**	**278**	*e*P	Pn	19 18 01.5	+0.6
CMCH				*i* S	Sn	19 18 27.7	+0.6
CMCH	**Combarbala**	**1.96**	**278**	*e*P	Pn	19 18 01.5	+0.6
CMCH				*i* S	Sn	19 18 27.7	+0.6
CMCH				AML	AML	19 18 29.8	
comp=E,689nm,0.7s							
TLL	**Tololo Astrono**	**2.20**	**305**	*e*P	Pn	19 18 05.3	+1.6
TLL				*i* S	Sn	19 18 34.0	+1.8
TLL	**Tololo Astrono**	**2.20**	**305**	*e*P	Pn	19 18 05.3	+1.6
TLL				*i* S	Sn	19 18 34.0	+1.8
TLL				AML	AML	19 18 37.8	
comp=E,91nm,0.4s							
FCH	**Farellones**	**2.28**	**215**	*e*P	Pn	19 18 05.9	+1.2
FCH	**Farellones**	**2.28**	**215**	*e*P	Pn	19 18 05.9	+1.2
PEL	**Peldehue**	**2.35**	**224**	⇓*i*P	Pn	19 18 05.8	+0.3
PEL				AML	AML	19 18 38.3	
comp=E,146nm,0.4s							
LMEL	**Las Melosas**	**2.68**	**207**	⇓*i*P	Pn	19 18 10.4	+0.8
LMEL	**Las Melosas**	**2.68**	**207**	⇓*i*P	Pn	19 18 10.4	+0.8
LMEL				AML	AML	19 18 56.3	
comp=N,52nm,0.2s							
LCO	**Las Campanas**	**2.98**	**325**	⇑*i*P	Pn	19 18 14.5	+1.1
LCO				*i* S	Sn	19 18 50.3	+0.8
LCO	**Las Campanas**	**2.98**	**325**	⇑*i*P	Pn	19 18 14.5	+1.1
LCO				*i* S	Sn	19 18 50.3	+0.8
LCO				AML	AML	19 18 52.1	
comp=E,96nm,0.3s							

*CSEM **07** 19:22:44.9, 39°.60N×29°.53W, h5km, ML3.4, After PDA*
PDA 07 19:22:44.9±0.9, 39°.60N×29°.53W, h5km, MD3.7, ML3.4, Error ellipse: s-maj=12.6km s-min=5.3km az=61.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCED	**Cedros**	**1.16**	**146**	*e*P	Pg	19 23 02.5	-4.7
PCED				*e*S	Sg	19 23 16.0	-6.2
PCED				A		19 23 18.7	
192nm,0.5s							
PCED	**Cedros**	**1.16**	**146**	*e*P	Pg	19 23 02.5	-4.7
PCED				*e*S	Sg	19 23 16.0	-6.2
CALA	**Caldeira**	**1.20**	**147**	*e*P	Pg	19 23 03.7	-4.2
CALA				*e*S	Sg	19 23 17.7	-5.8
CALA	**Caldeira**	**1.20**	**147**	*e*P	Pg	19 23 03.7	-4.2
CALA				*e*S	Sg	19 23 17.7	-5.8
HOR	**Horta**	**1.28**	**147**	*e*P	Pn	19 23 04.7	-4.7
HOR				*e*S	Sg	19 23 19.3	-6.6
HOR	**Horta**	**1.28**	**147**	*e*P	Pn	19 23 04.7	-4.7
HOR				*e*S	Sg	19 23 19.3	-6.6
ROSA	**Rosais**	**1.33**	**131**	*e*P	Pn	19 23 05.1	-5.0
ROSA				*e*S	Sg	19 23 20.3	-7.3
ROSA	**Rosais**	**1.33**	**131**	*e*P	Pn	19 23 05.1	-5.0
ROSA				*e*S	Sg	19 23 20.3	-7.3
PCAN	**Candelaria**	**1.39**	**144**	*e*P	Pn	19 23 06.2	-4.8
PCAN				*e*S	Sb	19 23 22.4	-7.0
PCAN				A		19 23 24.1	
387nm,0.4s							
PCAN	**Candelaria**	**1.39**	**144**	*e*P	Pn	19 23 06.2	-4.8
PCAN				*e*S	Sb	19 23 22.4	-7.0
PMAN	**Manadas**	**1.48**	**130**	*e*P	Pn	19 23 07.4	-4.7
PMAN				*e*S	Sn	19 23 24.3	-7.5
PMAN				A		19 23 24.6	
37nm,0.4s							
PMAN	**Manadas**	**1.48**	**130**	*e*P	Pn	19 23 07.4	-4.7
PMAN				*e*S	Sn	19 23 24.3	-7.5
PID	**Ribeirinha**	**1.59**	**136**	*e*P	Pn	19 23 09.2	-4.5
PID				*e*S	Sn	19 23 27.0	-7.6
PID	**Ribeirinha**	**1.59**	**136**	*e*P	Pn	19 23 09.2	-4.5
PID				*e*S	Sn	19 23 27.0	-7.6

IDC 07 19:23:56.2±22.0, 24°.58S×177°.76E, h695km±201km, mb3.1/4, mb1 3.2/4, mb1mx2.9/16, mbtmp3.1/4, Error ellipse: s-maj=218.9km s-min=118.6km az=119.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**29.45**	**272**	P	P	19 29 09.8	+0.7
1.8nm,0.5s,baz=103,slow=12,SNR=5.7							
ASAR	**Alice Springs**	**39.91**	**262**	P	P	19 30 34.2	-0.6
1.3nm,0.5s,baz=101,slow=7.1,SNR=33							
WRA	**Warramunga Arr**	**40.33**	**268**	P	P	19 30 37.8	-0.4
1.3nm,0.3s,baz=102,slow=7.7,SNR=45							
FITZ	**Fitzroy Crossi**	**48.75**	**267**	P	P	19 31 42.4	+0.5
3.9nm,0.9s,baz=104,slow=8.0,SNR=12							
AKASG	**Malin Array Be**	**144.40**	**325**	PKP	PKPdf	19 42 14.5	-1.2
0.2nm,0.2s,baz=49,slow=4.5,SNR=3.0							
MMAI	**Mount Meron Ar**	**146.10**	**293**	PKPbc	PKPbc	19 42 20.4	-1.2
1.9nm,0.9s,baz=60,slow=8.5,SNR=4.5							
BRTR	**Keskin Array B**	**146.33**	**305**	PKPbc	PKPbc	19 42 22.3	+0.3
0.5nm,0.7s,baz=69,slow=8.2,SNR=3.2							

*IDC **07** 19:26:12.6±2.8, 4°.00S×152°.74E, h0km, mb4.1/7, mb1 4.2/7, mb1mx4.0/16, mbtmp4.1/7, MS3.7/10, Ms1 3.7/10, ms1mx3.3/24, Error ellipse: s-maj=84.7km s-min=24.4km az=98.0*
*ISCJB **07** 19:26:16.3±2.0, 4°.0S±0°.1×152°.6E±0°.4, h33km, mb4.0/8, MS3.7/10, Error ellipse: s-maj=61.2km s-min=16.7km az=10.9*
*NEIC **07** 19:26:20.7±1.3, 3°.98S×152°.09E, h35km, mb4.4/1, Error ellipse: s-maj=44.2km s-min=17.0km az=106.0*
ISC 07 19:26:18.4±2.0, 4°.0S±0°.1×152°.6E±0°.4, h35km, n18, σ0°.64/10, mb4.0/8, MS3.7/10, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRAB	**Tennant Creek**	**23.80**	**227**	*e*P	**P**	**19 31 27.5**	**-0.7**
WRA	**Warramunga Arr**	**23.81**	**227**	P	**P**	**19 31 27.7**	**-0.6**
7.1nm,0.9s,mb4.1,baz=50,slow=9.6,SNR=14							
ASAR	**Alice Springs**	**26.59**	**221**	P	**P**	**19 31 53.8**	**+0.2**
1.7nm,1.0s,mb3.5,baz=52,slow=9.1,SNR=4.7							
STKA	**Stephens Creek**	**29.57**	**199**	P	**P**	**19 32 20.9**	**+0.8**
1.8nm,0.7s,mb3.9,baz=34,slow=12,SNR=3.5							
STKA				LR	LR	19 44 01.1	
comp=Z,177nm,21.1s,MS3.7,baz=26,slow=36							
STKA	**Stephens Creek**	**29.57**	**199**	*e*P	**P**	**19 32 20.8**	**+0.7**
STKA				LR	LR	19 44 01.1	
URZ	**Urewera**	**40.76**	**150**	LR	LR	19 47 35.0	
comp=Z,57nm,18.4s,MS3.5,baz=242,slow=32							
MJAR	**Matsushiro Arr**	**42.53**	**343**	LR	LR	19 50 43.3	
comp=Z,54nm,19.4s,MS3.5,baz=190,slow=35							
RPZ	**Rata Peaks**	**42.77**	**160**	LR	LR	19 49 46.6	
comp=Z,236nm,18.6s,MS4.1,baz=109,slow=33							
KSRS	**Korea Array**	**47.21**	**333**	LR	LR	19 53 13.1	
comp=Z,41nm,18.8s,MS3.4,baz=41,slow=34							
RAR	**Rarotonga**	**49.29**	**115**	LR	LR	19 50 40.0	
comp=Z,165nm,19.9s,MS4.0,baz=262,slow=30							
PSI	**Prapat**	**54.06**	**276**	LR	LR	20 01 31.2	
comp=Z,112nm,18.2s,MS4.0,baz=355,slow=39							
PETK	**Petropavlovsk-**	**57.08**	**4**	LR	LR	19 55 20.1	
comp=Z,42nm,21.7s,MS3.5,baz=156,slow=31							
CMAR	**Chiang Mai Arr**	**57.36**	**295**	P	**P**	**19 36 04.7**	**+1.1**
1.6nm,0.7s,mb4.2,baz=110,slow=5.9,SNR=8.4							
SONM	**Songino Array**	**65.56**	**328**	LR	LR	20 03 12.3	
comp=Z,62nm,20.4s,MS3.8,baz=94,slow=34							
MKAR	**Makanchi Array**	**79.60**	**319**	P	**P**	**19 38 22.8**	**+0.7**
0.5nm,0.6s,mb3.6,baz=106,slow=6.9,SNR=4.8							
ZALV	**Zalesovo Beam**	**80.39**	**326**	P	**P**	**19 38 25.6**	**-0.5**
0.9nm,0.6s,mb3.9,baz=105,slow=6.1,SNR=4.5							
ZALV				LR	LR	20 11 43.6	
comp=Z,34nm,19.4s,MS3.7,baz=68,slow=34							
BVAR	**Borovoye Array**	**88.50**	**323**	P	**P**	**19 39 06.9**	**-0.3**
2.1nm,0.7s,mb4.5,baz=96,slow=6.0,SNR=12							
BRVK	**Borovoye**	**88.56**	**323**	*e*P	**P**	**19 39 07.0**	**-0.5**
2.0nm,0.9s,mb4.5							

*NEIC **07** 19:26:39.5, 58°.24N×133°.52W, h1km, ML3.2(PGC), ML2.8(AEIC), After PGC.*
PGC 07 19:26:39.5±5.5, 58°.24N×133°.52W, h1km, ML3.2/4, 2C-9D, 53km east of Juneau, Ak Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESE	**Bessie Mountai**	**0.78**	**296**	P	Pg	19 26 53.6	-0.8
BESE				S	Sg	19 27 02.6	-1.9
SIT	**Sitka**	**1.54**	**220**	P	Pn	19 27 07.9	0.0
SIT				S	Sn	19 27 29.9	+1.4
SKAG	**Skagway**	**1.54**	**323**	P	Pn	19 27 06.2	-1.8
SKAG				S	Sn	19 27 26.1	-2.6
DLBC	**Dease Lake**	**1.85**	**82**	⇓P	Pn	19 27 11.5	-0.8
DLBC				S	Sn	19 27 37.2	+0.9
DLBC	**Dease Lake**	**1.85**	**82**	⇓P	Pn	19 27 11.5	-0.8
DLBC				⇓Pg	Pg	19 27 13.1	-1.9
DLBC				⇓Sn	Sn	19 27 36.0	-0.3
DLBC				⇓Sg	Sg	19 27 37.7	-1.2
PLBC	**Pleasant Camp**	**1.92**	**311**	⇑Pn	Pn	19 27 12.9	-0.3
PLBC	**Pleasant Camp**	**1.92**	**311**	⇑Pn	Pn	19 27 12.9	-0.3
PLBC				⇑Pg	Pg	19 27 13.7	-2.5
PLBC				⇑Sn	Sn	19 27 37.8	-0.1
PLBC				⇑Sg	Sg	19 27 38.8	-2.2
WHY	**Whitehorse**	**2.52**	**345**	⇑Pn	Pn	19 27 20.0	-1.6
WHY				S	Sn	19 27 51.5	-1.4
WHY	**Whitehorse**	**2.52**	**345**	⇑Pn	Pn	19 27 20.0	-1.6
WHY				⇑Pg	Pg	19 27 23.6	-4.3
HYT	**Haines Junctio**	**3.29**	**324**	⇓Pn	Pn	19 27 32.0	-0.1
HYT	**Haines Junctio**	**3.29**	**324**	⇓Pn	Pn	19 27 32.0	-0.1
HYT				⇑Pg	Pg	19 27 38.5	-4.0
HYT				⇓Sg	Sg	19 28 21.2	-3.9

*CSEM **07** 19:33:47.7, 39°.61N×29°.55W, h5km, ML3.1, After PDA*
PDA 07 19:33:47.7±0.7, 39°.61N×29°.55W, h5km, MD3.7, ML3.1, Error ellipse: s-maj=16.3km s-min=5.6km az=58.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCED	**Cedros**	**1.18**	**146**	*e*P	Pg	19 34 05.8	-4.5
PCED				*e*S	Sg	19 34 19.6	-5.9
PCED				A		19 34 22.1	
50nm,0.3s							
PCED	**Cedros**	**1.18**	**146**	*e*P	Pg	19 34 05.8	-4.5
PCED				*e*S	Sg	19 34 19.6	-5.9
CALA	**Caldeira**	**1.22**	**147**	*e*P	Pg	19 34 06.4	-4.6
CALA				*e*S	Sg	19 34 20.6	-6.2
CALA	**Caldeira**	**1.22**	**147**	*e*P	Pg	19 34 06.4	-4.6
CALA				*e*S	Sg	19 34 20.6	-6.2
HOR	**Horta**	**1.29**	**146**	*e*P	Pn	19 34 07.5	-4.9
HOR				*e*S	Sg	19 34 22.2	-7.1
HOR	**Horta**	**1.29**	**146**	*e*P	Pn	19 34 07.5	-4.9
HOR				*e*S	Sg	19 34 22.2	-7.1
ROSA	**Rosais**	**1.35**	**131**	*e*S	Sb	19 34 23.6	-7.4
ROSA	**Rosais**	**1.35**	**131**	*e*S	Sb	19 34 23.6	-7.4
PCAN	**Candelaria**	**1.41**	**144**	*e*P	Pn	19 34 09.5	-4.5
PCAN				*e*S	Sb	19 34 25.6	-7.1
PCAN				A		19 34 27.7	
104nm,0.3s							
PCAN	**Candelaria**	**1.41**	**144**	*e*P	Pn	19 34 09.5	-4.5
PCAN				*e*S	Sb	19 34 25.6	-7.1

*IDC **07** 19:35:27.7±2.3, 59°.15N×152°.70W, h48km±30km, mb3.6/10, mb1 3.8/12, mb1mx3.6/26, mbtmp3.6/12, ML3.7/1, MS2.8/1, Ms1 2.8/1, ms1mx2.4/33, Error ellipse: s-maj=25.2km s-min=17.8km az=120.0*
*ISCJB **07** 19:35:28.3±0.4, 59°.02N±0°.03×152°.34W±0°.07, h85km±4km, mb3.8/10, Error ellipse: s-maj=7.1km s-min=4.8km az=36.3*
*NEIC **07** 19:35:30.8, 59°.01N×152°.36W, h63km, ML3.6(AEIC), ML3.6(PMR), After AEIC.*
ISC 07 19:35:29.6±0.4, 59°.00N±0°.03×152°.32W±0°.07, h77km±4km, n50, σ0°.73/59, mb3.8/10, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUL	**Augustine Lava**	**0.69**	**304**	P	**Pn**	**19 35 44.4**	**-0.4**
AUL				S	**Sn**	**19 35 56.3**	**+0.1**
BRLK	**Bradley Lake**	**1.06**	**43**	P	**Pn**	**19 35 49.2**	**0.0**
BRLK				S	**Sn**	**19 36 03.5**	**-0.2**
KDAK	**Kodiak Island**	**1.23**	**187**	P	**Pn**	**19 35 51.3**	**0.0**
48nm,0.3s,baz=28,slow=8.3,SNR=360							
KDAK				S	**Sn**	**19 36 07.2**	**-0.5**
153nm,0.3s,baz=11,slow=16,SNR=44							
KDAK	**Kodiak Island**	**1.23**	**187**	P	**Pn**	**19 35 51.4**	**+0.1**
KDAK				S	**Sn**	**19 36 07.1**	**-0.5**
RSO	**Redoubt South**	**1.48**	**352**	*e*P	**Pn**	**19 35 54.3**	**-0.2**
SLKM	**Skilak Lake**	**1.85**	**34**	P	**Pn**	**19 35 59.4**	**+0.1**
OHAK	**Old Harbor**	**1.86**	**196**	*e*P	**Pn**	**19 35 59.2**	**-0.3**
FIB	**Fire Island**	**2.42**	**25**	P	**Pn**	**19 36 08.3**	**+1.3**
RC01	**Rabbit Creek A**	**2.46**	**31**	P	**Pn**	**19 36 08.0**	**+0.5**
RC01				S	**Sn**	**19 36 36.1**	**-0.5**
SVW2	**Sparrevohn**	**2.66**	**323**	*e*P	**Pn**	**19 36 09.4**	**-0.8**
SKT	**Skwentna**	**3.01**	**7**	P	**Pn**	**19 36 15.2**	**+0.3**
SKT				S	**Sn**	**19 36 50.6**	**+0.7**
PMR	**Palmer**	**3.04**	**30**	*e*P	**Pn**	**19 36 15.9**	**+0.5**
MID	**Middleton Isla**	**3.10**	**80**	P	**Pn**	**19 36 16.8**	**+0.6**
SML	**Sawmill**	**3.44**	**33**	P	**Pn**	**19 36 20.9**	**+0.2**
SML				S	**Sn**	**19 36 58.8**	**-1.5**
EYAK	**Cordova Ski Ar**	**3.67**	**62**	P	**Pn**	**19 36 23.8**	**-0.1**
EYAK				S	**Sn**	**19 37 03.1**	**-2.7**
PPLA	**Purkeypile**	**3.91**	**1**	P	**Pn**	**19 36 27.7**	**+0.6**
DIV	**Divide**	**3.91**	**54**	P	**Pn**	**19 36 27.9**	**+0.7**
CHGN	**Chignik**	**4.25**	**233**	*e*P	**Pn**	**19 36 31.5**	**-0.3**
TT01	**Tatalina**	**4.31**	**337**	P	**Pn**	**19 36 32.2**	**-0.4**
TTA	**Tatalina**	**4.33**	**337**	*e*P	**Pn**	**19 36 32.5**	**-0.4**
BMRM	**Bremner River**	**4.35**	**60**	P	**Pn**	**19 36 33.3**	**+0.2**
BMRM				S	**Sn**	**19 37 19.6**	**-2.8**
TRF	**Thorofare Moun**	**4.57**	**12**	P	**Pn**	**19 36 35.8**	**-0.4**
RND	**Reindeer**	**4.72**	**19**	P	**Pn**	**19 36 38.5**	**+0.3**
CHUM	**Lake Minchumin**	**4.90**	**0**	P	**Pn**	**19 36 40.8**	**+0.3**
MCK	**McKinley**	**5.02**	**17**	P	**Pn**	**19 36 42.9**	**+0.7**
BPAW	**Bear Paw Mtn.**	**5.16**	**7**	P	**Pn**	**19 36 44.1**	**+0.1**
SDPT	**Sand Point**	**5.75**	**234**	*e*P	**Pn**	**19 36 52.3**	**+0.1**
27nm,0.6s							
MENT	**Mentasta**	**5.75**	**43**	*e*P	**Pn**	**19 36 54.3**	**+2.1**
COLA	**College**	**6.26**	**18**	P	**Pn**	**19 36 59.0**	**-0.1**
BCA3	**Beaver Creek A**	**6.54**	**47**	P	**Pn**	**19 37 03.6**	**+0.6**
PNL	**Peninsula**	**6.65**	**79**	P	**Pn**	**19 37 05.1**	**+0.6**
IM3	**Indian Mountai**	**7.04**	**355**	P	**Pn**	**19 37 10.1**	**+0.3**
EGAK	**Eagle**	**7.82**	**38**	*e*P	**Pn**	**19 37 20.8**	**+0.3**
6.2nm,0.7s							
DAWY	**Dawson**	**7.99**	**45**	*e*P	**Pn**	**19 37 23.8**	**+1.1**
COLD	**Coldfoot**	**8.31**	**6**	*e*P	**Pn**	**19 37 26.8**	**-0.3**
3.9nm,0.7s							
BM3	**Burnt Mountain**	**9.13**	**19**	P	**Pn**	**19 37 37.0**	**-1.2**
DLBC	**Dease Lake**	**11.59**	**83**	S	**Sn**	**19 40 14.1**	**-5.2**
0.0nm,0.3s,baz=252,slow=20,SNR=2.1							
INK	**Inuvik**	**12.45**	**34**	P	**Pn**	**19 38 22.7**	**-0.8**
0.2nm,0.3s,baz=221,slow=13,SNR=6.2							
INK				LR	LR	19 44 37.4	
comp=Z,37nm,18.6s,baz=291,slow=44							
YKA	**Yellowknife Ar**	**18.57**	**63**	P	**Pn**	**19 39 41.3**	**+0.3**
0.3nm,0.3s,baz=276,slow=10.0,SNR=5.3							
YKA	**Yellowknife Ar**	**18.57**	**63**	P	**Pn**	**19 39 41.4**	**+0.3**
PDAR	**Pinedale Array**	**30.83**	**103**	P	**P**	**19 41 42.5**	**+4.7**
0.4nm,0.6s,mb3.4,baz=268,slow=4.5,SNR=3.9							
ARCES	**ARCESS Array B**	**51.75**	**1**	P	**P**	**19 44 28.2**	**-0.1**
2.6nm,1.0s,mb4.2,baz=32,slow=7.1,SNR=4.3							
KSRS	**Korea Array**	**53.74**	**284**	P	**P**	**19 44 44.4**	**+0.8**
1.5nm,0.5s,mb4.3,baz=39,slow=7.8,SNR=8.5							
SONM	**Songino Array**	**55.66**	**307**	P	**P**	**19 44 57.8**	**+0.6**
1.1nm,0.6s,mb4.1,baz=26,slow=5.7,SNR=6.6							
SONM				PcP	PcP	19 45 57.3	+1.6
0.7nm,0.5s,baz=11,slow=2.9,SNR=3.8							
ZALV	**Zalesovo Beam**	**58.39**	**324**	P	**P**	**19 45 16.0**	**-0.3**
0.2nm,0.4s,mb3.5,baz=5.7,slow=4.5,SNR=3.6							
FINES	**FINESS Array B**	**59.88**	**1**	P	**P**	**19 45 26.6**	**0.0**
0.9nm,0.7s,mb3.9,baz=17,slow=10,SNR=2.9							
BVAR	**Borovoye Array**	**63.12**	**333**	P	**P**	**19 45 47.8**	**-0.7**
0.7nm,0.6s,mb3.8,baz=7.1,slow=4.8,SNR=5.2							
MKAR	**Makanchi Array**	**65.43**	**322**	P	**P**	**19 46 02.4**	**-1.3**
0.4nm,0.6s,mb3.4,baz=44,slow=7.0,SNR=5.8							
AKASG	**Malin Array Be**	**70.65**	**359**	P	**P**	**19 46 35.8**	**-0.5**
0.9nm,0.4s,mb4.0,baz=3.1,slow=6.0,SNR=5.6							
BRTR	**Keskin Array B**	**81.51**	**355**	P	**P**	**19 47 38.5**	**+0.4**
0.4nm,0.6s,mb3.4,baz=354,slow=1.4,SNR=3.7							

*ISCJB **07** 19:36:36.0±0.4, 38°.17N±0°.02×21°.76E±0°.03, h10km, Error ellipse: s-maj=3.8km s-min=2.7km az=143.7*
*THE **07** 19:36:36.0, 38°.20N×21°.73E, h11km±3km, ML3.2/5, Error ellipse: s-maj=3.9km s-min=0.8km az=54.0*
*CSEM **07** 19:36:36.5±0.2, 38°.16N×21°.77E, h2km, MD3.1, Error ellipse: s-maj=4.8km s-min=3.9km az=145.0*
*ATH **07** 19:36:37.5, 38°.13N×21°.78E, h13km±3km, MD3.1/11*
*NEIC **07** 19:36:37.5, 38°.13N×21°.78E, h13km, MD3.1(ATH), After ATH.*
ISC 07 19:36:36.3±0.5, 38°.18N±0°.03×21°.76E±0°.03, h19km±5km, n53, σ1°.00/76, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.10**	**10**	*e*PG	**Pg**	**19 36 41.8**	**+1.7**
UPR				*e*SG	**Sg**	**19 36 44.2**	**+1.6**
LAKA	**Lakka**	**0.18**	**72**	P	**Pg**	**19 36 40.6**	**-0.4**
LAKA				S	**Sg**	**19 36 42.8**	**-1.4**
LAKA	**Lakka**	**0.18**	**72**	P	**Pg**	**19 36 40.6**	**-0.4**
LAKA				S	**Sg**	**19 36 42.8**	**-1.4**
RLS	**Riolos of Patr**	**0.27**	**242**	*e*Pg	**Pg**	**19 36 43.4**	**+1.1**
RLS				*e*Sg	**Sg**	**19 36 46.7**	**+0.3**
RLS	**Riolos of Patr**	**0.27**	**242**	*e*PG	**Pg**	**19 36 43.4**	**+1.1**
RLS				*e*SG	**Sg**	**19 36 46.7**	**+0.3**
RLS	**Riolos of Patr**	**0.27**	**242**	*e*Pg	**Pg**	**19 36 43.4**	**+1.1**
RLS				*e*Sg	**Sg**	**19 36 46.7**	**+0.3**
EFP	**Efpalio**	**0.27**	**25**	*e*PG	**Pg**	**19 36 43.2**	**+0.8**
EFP	**Efpalio**	**0.27**	**25**	P	**Pg**	**19 36 43.0**	**+0.6**
EFP				S	**Sg**	**19 36 46.0**	**-0.5**
EFP	**Efpalio**	**0.27**	**25**	P	**Pg**	**19 36 43.0**	**+0.6**
EFP				S	**Sg**	**19 36 46.0**	**-0.5**
TRIZ	**Trizonia**	**0.30**	**53**	P	**Pg**	**19 36 42.5**	**-0.5**
TRIZ				S	**Sg**	**19 36 46.5**	**-1.0**
TRIZ	**Trizonia**	**0.30**	**53**	P	**Pg**	**19 36 42.5**	**-0.5**
TRIZ				S	**Sg**	**19 36 46.5**	**-1.0**
KALE	**Kalithea**	**0.36**	**55**	P	**Pg**	**19 36 43.4**	**-0.6**
KALE				S	**Sg**	**19 36 49.4**	**+0.3**
KALE	**Kalithea**	**0.36**	**55**	P	**Pg**	**19 36 43.4**	**-0.6**
KALE				S	**Sg**	**19 36 49.4**	**+0.3**
GUR	**Goura**	**0.52**	**118**	*e*PB	**Pg**	**19 36 47.0**	**+0.2**
GUR	**Goura**	**0.52**	**118**	P	**Pg**	**19 36 46.1**	**-0.7**
GUR	**Goura**	**0.52**	**118**	P	**Pg**	**19 36 46.1**	**-0.7**
GUR	**Goura**	**0.52**	**118**	*e*Pb	**Pg**	**19 36 47.0**	**+0.2**
DSF	**Desfina**	**0.64**	**69**	P	**Pg**	**19 36 47.9**	**-1.1**
DSF	**Desfina**	**0.64**	**69**	P	**Pg**	**19 36 47.9**	**-1.1**
EVR	**Evrytania**	**0.73**	**3**	*e*Pb	**Pg**	**19 36 51.6**	**+0.9**
EVR				*e*Sb	**Sg**	**19 37 03.3**	**+2.8**
EVR	**Evrytania**	**0.73**	**3**	*e*PB	**Pg**	**19 36 51.6**	**+0.9**
EVR				*e*SB	**Sg**	**19 37 03.3**	**+2.8**
EVR	**Evrytania**	**0.73**	**3**	*e*Pb	**Pg**	**19 36 51.6**	**+0.9**
EVR				*e*Sb	**Sg**	**19 37 03.3**	**+2.8**
KFL	**Anninata**	**0.77**	**265**	P	**Pg**	**19 36 49.8**	**-1.7**
KFL				S	**Sg**	**19 37 01.2**	**-0.5**
KFL	**Anninata**	**0.77**	**265**	P	**Pg**	**19 36 49.8**	**-1.7**
KFL				S	**Sg**	**19 37 01.2**	**-0.5**
VLS	**Valsamata**	**0.93**	**270**	P	**Pg**	**19 36 53.5**	**-0.8**
VLS	**Valsamata**	**0.93**	**270**	P	**Pg**	**19 36 52.7**	**-1.6**
VLS				S	**Sg**	**19 37 06.0**	**-0.5**
VLS	**Valsamata**	**0.93**	**270**	P	**Pg**	**19 36 53.5**	**-0.8**
VLS				S	**Sg**	**19 37 06.0**	**-0.5**
VLX	**Vlachokerasia**	**0.95**	**149**	*e*PG	**Pg**	**19 36 54.2**	**-0.6**
VLX	**Vlachokerasia**	**0.95**	**149**	P	**Pg**	**19 36 54.3**	**-0.5**
VLX				S	**Sg**	**19 37

FWVZ	Far West T-bar	1.67	62	P	Pn	19 39 46.6	-0.1
WPVZ	Whakapapa	1.69	60	PN	Pn	19 39 46.7	-0.1
WPVZ	Whakapapa	1.69	60	P	Pn	19 39 46.7	-0.2
MOVZ	Moawhango	1.74	68	PN	Pn	19 39 46.9	-0.4
MOVZ	Moawhango	1.74	68	P	Pn	19 39 46.9	-0.4
TSZ	Takapari Road	1.77	90	PN	Pn	19 39 47.4	-0.1
TSZ				SN	Sn	19 40 14.4	-1.5
TSZ	Takapari Road	1.77	90	P	Pn	19 39 47.4	-0.1
WTVZ	West Tongariro	1.77	58	PN	Pn	19 39 47.4	-0.2
MTW	Mount Morrison	1.77	128	PN	Pn	19 39 47.3	-0.3
MTW	Mount Morrison	1.77	128	P	Pn	19 39 47.3	-0.3
THZ	Tophouse	1.79	198	PN	Pn	19 39 47.3	-0.4
THZ	Tophouse	1.79	198	P	Pn	19 39 47.3	-0.4
MSWZ	Moikau Station	1.81	139	PN	Pn	19 39 47.7	-0.2
MSWZ	Moikau Station	1.81	139	P	Pn	19 39 47.7	-0.2
KRVZ	Karewarewa	1.81	58	PN	Pn	19 39 47.8	-0.2
TIWZ	Tintock	1.84	113	PN	Pn	19 39 48.1	-0.1
TIWZ	Tintock	1.84	113	P	Pn	19 39 48.1	-0.1
KATZ	Kakaramea	1.92	56	PN	Pn	19 39 49.0	-0.1
KATZ	Kakaramea	1.92	56	P	Pn	19 39 49.0	0.0
PLWZ	Palliser	1.93	142	PN	Pn	19 39 48.5	-0.5
DVHZ	Dannevirke	1.93	98	PN	Pn	19 39 49.0	-0.2
DVHZ	Dannevirke	1.93	98	P	Pn	19 39 49.0	-0.2
PNHZ	Pukenui	1.96	86	PN	Pn	19 39 49.3	-0.1
BFZ	Birch Farm	2.07	108	PN	Pn	19 39 50.4	-0.2
BFZ	Birch Farm	2.07	108	P	Pn	19 39 50.4	-0.1
WPHZ	Waipukurau	2.13	91	PN	Pn	19 39 50.9	-0.3
DSZ	Denniston Nort	2.19	219	P	Pn	19 39 50.9	-0.9
KHZ	Kahutara	2.35	182	P	Pn	19 39 52.5	-1.0
BKZ	Black Stump Fm	2.37	69	P	Pn	19 39 52.5	-1.2
LTZ	Lake Taylor	2.91	201	P	Pn	19 39 58.3	-1.4
URZ	Urewera	3.23	57	P	Pn	19 40 01.5	-2.2
KNZ	Kokohu	3.27	73	P	Pn	19 40 03.3	-0.8
MQZ	McQueen's Vall	3.71	191	P	Pn	19 40 06.5	-2.8
WVZ	Waitaha Valley	3.72	215	P	Pn	19 40 07.2	-2.2
RPZ	Rata Peaks	4.13	207	P	Pn	19 40 12.5	-2.0
MXZ	Matakaoa Point	4.41	57	P	Pn	19 40 15.8	-2.3
FOZ	Fox Glacier	4.58	219	P	Pn	19 40 16.4	-3.8
LBZ	Lake Benmore	5.03	210	P	Pn	19 40 23.1	-2.7
JCZ	Jackson Bay	5.42	221	P	Pn	19 40 26.9	-3.8
ODZ	Otahua Downs	5.45	203	P	Pn	19 40 29.3	-1.9

IDC ***07*** *19:39:18.8±2.8, 4.°19S×152.°09E, h0km, mb4.0/8, mb1 4.2/8, mb1mx3.9/17, mbtmp4.0/8, MS3.6/2, Ms1 3.6/2, ms1mx2.8/20, Error ellipse: s-maj=89.3km s-min=21.1km az=104.0*

ISCJB ***07*** *19:39:50.6±5.1, 4.°7S±0.°2×151.°6E±0.°4, h289km±42km, mb3.8/10, Error ellipse: s-maj=71.1km s-min=28.4km az=9.1*

NEIC ***07*** *19:39:51.1±4.0, 4.°62S×151.°69E, h284km±33km, mb4.3/2, Error ellipse: s-maj=44.5km s-min=18.5km az=97.0*

ISC 07 19:39:51.3±5.5, 4.°6S±0.°2×151.°6E±0.°4, h280km±46km, n15, σ0°45/12, mb3.8/10, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	Coen	12.48	221	eP	Pn	19 42 40.1	+0.1
CTA	Charters Tower	16.25	198	LR	LR	19 48 45.9	
	comp=Z,165nm,20.3s,baz=46,slow=34						
WRAB	Tennant Creek	22.69	226	eP	P	19 44 28.9	-0.4
	15nm,0.7s,mb4.4						
WRA	Warramunga Arr	22.71	226	P	P	19 44 29.1	-0.2
	7.6nm,0.5s,mb4.3,baz=50,slow=10,SNR=92						
ASAR	Alice Springs	25.52	220	P	P	19 44 54.4	-0.4
	1.1nm,0.4s,mb3.7,baz=52,slow=9.1,SNR=35						
STKA	Stephens Creek	28.71	198	P	P	19 45 23.4	+0.3
	1.6nm,0.6s,mb3.6,baz=20,slow=13,SNR=3.0						
FITZ	Fitzroy Crossi	28.73	240	P	P	19 45 23.6	+0.3
	4.5nm,0.7s,mb4.0,baz=69,slow=8.1,SNR=12						
FITZ	Fitzroy Crossi	28.73	240	eP	P	19 45 23.5	+0.2
MBWA	Marble Bar	35.05	239	eP	P	19 46 18.6	+0.4
	4.9nm,0.7s,mb4.2						
AFI	Afiamalu	37.25	107	LR	LR	19 58 16.1	
	comp=Z,119nm,20.0s,baz=258,slow=31						
SONM	Songino Array	65.53	328	P	P	19 50 04.3	-0.6
	0.5nm,0.5s,mb3.5,baz=142,slow=5.3,SNR=3.7						
MKAR	Makanchi Array	79.40	319	P	P	19 51 27.4	+0.9
	0.3nm,0.6s,mb3.2,baz=106,slow=7.6,SNR=4.5						
ZALV	Zalesovo Beam	80.33	327	P	P	19 51 31.6	+0.3
	0.3nm,0.4s,mb3.3,baz=111,slow=6.3,SNR=2.4						
DIB	Dawson Inlet,	85.28	36	T		21 24 51.5	
BVAR	Borovoye Array	88.38	323	P	P	19 52 10.9	-0.5
	0.4nm,0.6s,mb3.5,baz=104,slow=4.6,SNR=3.2						

TRN ***07*** *19:44:54.6, 18.°16N×63.°64W, h35km*

ISCJB ***07*** *19:44:55.9±1.4, 18.°2N±0.°1×63.°63W±0.°07, h33km, Error ellipse: s-maj=18.5km s-min=5.8km az=28.0*

NEIC ***07*** *19:44:56.7, 18.°21N×63.°59W, h44km, MD3.3(RSPR), After RSPR.*

RSPR ***07*** *19:44:56.7, 18.°21N×63.°59W, h44km±9km, MD3.3/7, MD3.3/7*

ISC 07 19:44:55.4±1.3, 18.°2N±0.°1×63.°68W±0.°08, h16km±8km, n14, σ0°58/26, 8C-6D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SABA	Saba	0.70	144	↓eP	Pg	19 45 08.1	-1.0
SABA				eS	Sg	19 45 19.1	+0.6
SABA	Saba	0.70	144	↓eP	Pg	19 45 08.6	-0.5
SABA				eS	Sg	19 45 19.5	+1.1
TBVI	Tortola	0.92	284	↓eP	Pg	19 45 13.0	-0.2
TBVI				eS	Sg	19 45 25.8	+0.4
TBVI	Tortola	0.92	284	↓eP	Pg	19 45 13.1	-0.1
TBVI				eS	Sg	19 45 25.8	+0.4
CDVI	St. Croix	1.12	247	↑eP	Pb	19 45 15.4	-1.0
CDVI				eS	Sb	19 45 30.5	-0.2
CDVI	St. Croix	1.12	247	↑eP	Pb	19 45 15.4	-1.0
CDVI				eS	Sb	19 45 30.5	-0.2
STVI	Saint Thomas	1.22	278	↑eP	Pn	19 45 17.0	-0.8
STVI				eS	Sb	19 45 33.7	+0.1
STVI	Saint Thomas	1.22	278	↑eP	Pn	19 45 17.0	-0.8
STVI				eS	Sb	19 45 33.7	+0.1
MTP	Monte Pirata	1.79	267	↓eP	Pn	19 45 25.4	0.0
MTP				eS	Sn	19 45 47.7	-0.1
MTP	Monte Pirata	1.79	267	↓eP	Pn	19 45 25.4	0.0
MTP				eS	Sn	19 45 47.7	-0.1
HUMP	Col San Antoni	2.06	269	↑eP	Pn	19 45 29.7	+0.4
HUMP				eS	Sn	19 45 55.5	+0.7
HUMP	Col San Antoni	2.06	269	↑eP	Pn	19 45 29.7	+0.4
HUMP				eS	Sn	19 45 55.5	+0.7
CBYP	Canovanas	2.07	273	↑eP	Pn	19 45 30.0	+0.6
CBYP	Canovanas	2.07	273	↑eP	Pn	19 45 30.1	+0.7

IDC ***07*** *19:45:20.9±0.9, 8.°96S×109.°08E, h0km, mb4.3/13, mb1 4.3/14, mb1mx4.2/21, mbtmp4.2/14, ML3.6/1, MS3.7/4, Ms1 3.7/4, ms1mx3.0/24, Error ellipse: s-maj=36.3km s-min=14.4km az=51.0*

NEIC ***07*** *19:45:24.6±0.7, 8.°96S×109.°07E, h25km, mb4.6/5, Error ellipse: s-maj=30.3km s-min=7.5km az=50.0*

ISC 07 19:45:22.5±4.3, 9.°1S±0.°1×109.°0E±0.°1, h12km±28km, n37, σ0°81/36, mb4.5/27, MS3.8/4, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	18.52	121	P	Pn	19 49 38.8	-0.2
	0.2nm,0.3s,baz=298,slow=10,SNR=5.8						
FITZ				S	Sn	19 52 45.4	-21
	0.3nm,0.3s,baz=306,slow=11,SNR=4.2						
WRA	Warramunga Arr	26.80	117	P	P	19 51 02.4	-0.3
	2.6nm,0.5s,mb4.0,baz=289,slow=12,SNR=12						
WRA				PcP	PcP	19 54 25.5	-0.2
	0.5nm,0.7s,baz=286,slow=3.1,SNR=3.5						
ASAR	Alice Springs	27.92	124	P	P	19 51 12.9	+0.2
	0.7nm,0.5s,mb3.6,baz=312,slow=9.8,SNR=5.7						
ASAR				PcP	PcP	19 54 28.7	+0.4
	0.7nm,0.6s,baz=306,slow=2.4,SNR=7.6						
CMAR	Chiang Mai Arr	29.07	340	P	P	19 51 22.4	-0.5
	1.2nm,0.6s,mb3.8,baz=177,slow=8.9,SNR=6.8						
STKA	Stephens Creek	37.83	132	P	P	19 52 39.0	-0.1
	3.1nm,0.6s,mb4.2,baz=300,slow=9.2,SNR=11						
ODAN	Odare	41.38	330	eP	P	19 53 08.2	-0.5
	16nm,0.6s,mb4.8						
TAPN	Taplejung	41.64	331	eP	P	19 53 10.9	+0.1
	20nm,0.7s,mb4.8						
RAMN	Ramite	41.85	329	eP	P	19 53 12.2	-0.3
	7.2nm,0.5s,mb4.5						
GUN	Gumba	43.00	329	eP	P	19 53 22.0	+0.1
DMN	Daman	43.15	328	eP	P	19 53 22.7	-0.4
	11nm,0.6s,mb4.8						
KKN	Kakani	43.21	329	eP	P	19 53 23.1	-0.5
GKN	Gorkha	43.71	328	eP	P	19 53 26.7	-0.9
	11nm,0.4s,mb5.0						
KOLN	Koldanda	44.08	327	eP	P	19 53 29.1	-1.5
	19nm,0.5s,mb5.1						
LZH	Lanzhou	45.15	354	eP	P	19 53 40.0	+1.0
LZH				pP	pP	19 53 45.3	+2.5
LZH				sP	sP	19 53 48.5	+4.3
LZH				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.7						
GTA	Gaotai	48.95	351	eP	P	19 54 10.8	+2.1
GTA				pP	pP	19 54 17.1	+4.6
GTA				sP	sP	19 54 20.0	+6.1
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.4						
KSRS	Korea Array	49.55	20	P	P	19 54 13.5	+0.3
	comp=Z,0.8nm,0.4s,mb4.1,baz=204,slow=7.3,SNR=7.1						
HHC	Hu-ho-hao-te	49.70	3	eP	P	19 54 15.9	+1.5
HHC				S	S	20 01 22.6	-0.4
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
HHC				pmax	pmax		
	comp=Z,67nm,6.5s						
MJAR	Matsushiro Arr	53.02	29	P	P	19 54 37.9	-1.4
	comp=Z,3.7nm,0.8s,mb4.4,baz=208,slow=8.1,SNR=9.5						
MJAR	Matsushiro Arr	53.02	29	P	P	19 54 37.9	-1.4
SONM	Songino Array	56.68	358	P	P	19 55 06.6	+1.0
	comp=Z,2.2nm,0.5s,mb4.4,baz=177,slow=8.3,SNR=23						
SONM				LR	LR	20 19 29.7	
	comp=Z,67nm,18.7s,MS3.8,baz=171,slow=36						
ULN	Ulaanbaatar	56.69	358	eP	P	19 55 06.3	+0.7
	comp=Z,1.9nm,0.8s,mb4.2						
MK31	Makanchi Array	60.47	339	eP	P	19 55 32.3	+0.2
MKAR	Makanchi Array	60.47	339	P	P	19 55 32.4	+0.3
	comp=Z,7.4nm,0.6s,mb4.9,baz=150,slow=7.5,SNR=78						
EKS2	Erkin-Say	60.66	331	eP	P	19 55 33.8	+0.3
	comp=Z,2.1nm,0.6s,mb4.4						
KURK	Kurchatov	65.08	339	eP	P	19 56 02.6	-0.2
	comp=Z,3.0nm,0.6s,mb4.5						
ZAA0	Zalesovo Array	66.00	345	eP	P	19 56 07.0	-1.6
ZALV	Zalesovo Beam	66.00	345	P	P	19 56 07.9	-0.8
	comp=Z,3.5nm,0.8s,mb4.5,baz=165,slow=8.1,SNR=16						
BVAR	Borovoye Array	70.01	336	P	P	19 56 33.9	0.0
	comp=Z,3.4nm,0.6s,mb4.4,baz=145,slow=9.8,SNR=14						
ABKAR	Akbulak array	72.16	329	eP	P	19 56 46.9	-0.1
	comp=Z,9.7nm,0.6s,mb4.9						
AKTO	Aktyubinsk	73.87	329	LR	LR	20 36 10.4	
	comp=Z,32nm,18.9s,MS3.6,baz=298,slow=41						
PETK	Petropavlovsk-	74.44	28	P	P	19 57 00.4	+0.1
	comp=Z,3.7nm,0.8s,mb4.3,baz=286,slow=5.4,SNR=3.4						
MMAI	Mount Meron Ar	81.37	305	P	P	19 57 41.1	+1.7
	comp=Z,1.3nm,0.5s,mb4.1,baz=101,slow=6.2,SNR=4.1						
MMAI				LR	LR	20 33 52.8	
	comp=Z,41nm,18.6s,MS3.8,baz=175,slow=36						
TIXI	Tiksi	81.60	6	eP	P	19 57 39.4	-0.4
	comp=Z,5.6nm,0.7s,mb4.6						
BRTR	Keskin Array B	84.64	311	P	P	19 57 56.9	+0.7
	comp=Z,1.8nm,0.7s,mb4.3,baz=112,slow=6.4,SNR=9.4						
BRTR	Keskin Array B	84.64	311	P	P	19 57 56.9	+0.7
PPT	Papeete	98.06	109	LR	LR	20 39 09.6	
	comp=Z,57nm,20.5s,MS4.0,baz=144,slow=33						
JCT	Junction City	145.72	48	ePKPdf	PKPdf	20 05 02.5	+0.9

IDC 07 19:52:38.6±7.8, 10.°31N×91.°14E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.3/22, mbtmp3.5/4, Error ellipse: s-maj=377.2km s-min=25.7km az=61.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	37.13	350	P	P	19 59 51.4	+0.5
	0.7nm,0.7s,baz=168,slow=8.4,SNR=4.3						
ZALV	Zalesovo Beam	43.82	355	P	P	20 00 45.3	-0.9
	0.3nm,0.4s,baz=190,slow=7.3,SNR=2.4						
WRA	Warramunga Arr	52.07	125	P	P	20 01 50.6	-0.1
	0.3nm,0.5s,baz=302,slow=9.9,SNR=3.4						
ASAR	Alice Springs	53.73	129	P	P	20 02 03.1	+0.2
	0.3nm,0.6s,baz=308,slow=6.7,SNR=6.5						

NIED ***07*** *20:16:00, 45.°50N×151.°60E, h8km, Mw4.0 Best double couple: M0 1.09000×10^15 NP1:φ=352.00000°, δ=75.00000°, λ=63.00000°. NP2:φ=235.00000°, δ=31.00000°, λ=149.00000°.*

SKHL ***07*** *20:16:54.9±2.1, 45.°13N×151.°79E, h39km±8km, mb5.0/3, Ms3.8/1*

JMA ***07*** *20:16:56.7±0.7, 45.°50N×151.°58E, h30km, M4.4*

MOS ***07*** *20:16:57.4±1.5, 45.°33N×151.°57E, h47km, mb4.2/12, Error ellipse: s-maj=11.7km s-min=10.3km az=170.8*

ISCJB ***07*** *20:16:58.3±0.9, 45.°15N±0.°07×151.°45E±0.°08, h56km±7km, mb4.1/21, MS3.5/3, Error ellipse: s-maj=13.7km s-min=6.4km az=143.8*

BJI ***07*** *20:16:58.3, 45.°11N×151.°53E, h54km, mB4.6/8, mb4.2/8, Ms3.9/3, Ms7 3.7/3*

NEIC ***07*** *20:16:59.2±1.1, 45.°41N×151.°45E, h40km±10km, mb4.5/3, Error ellipse: s-maj=14.4km s-min=8.2km az=137.0*

IDC ***07*** *20:17:00.5±3.0, 45.°46N×151.°51E, h50km±27km, mb3.7/14, mb1 3.8/17, mb1mx3.7/28, mbtmp3.7/17, ML3.8/3, MS3.3/4, Ms1 3.3/4, ms1mx2.8/32, Error ellipse: s-maj=20.7km s-min=16.2km az=140.0*

ISC 07 20:17:00.6±0.8, 45.°06N±0.°08×151.°48E±0.°09, h64km±6km, n86, σ1°20/98, mb4.1/21, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.56	275	ePN	Pn	20 17 35.5	-4.3
KUR				i S	Sn	20 18 07.5	-2.3
KUR				pmax	pmax		
	comp=N,30nm,0.4s						
KUR				pmax	pmax		
	comp=Z,200nm,0.4s						
KUR				smax			
	comp=N,720nm,0.5s						
KUR				smax			
	comp=E,530nm,0.5s						
KUR	Kuril'sk	2.56	275	eP	Pn	20 17 35.5	-4.3
KUR				AMB	AMB	20 17 36.7	
	comp=E,90nm,0.4s						
KUR				AMB	AMB	20 17 36.7	
	comp=E,30nm,0.4s						
KUR				AMB	AMB	20 17 36.7	
	comp=E,200nm,0.4s						
KUR				i S	Sn	20 18 07.5	-2.3
KUR				A		20 18 14.0	
	comp=E,720nm,0.5s						
KUR				A		20 18 14.0	
	comp=E,530nm,0.5s						
YUK	Yuzh-Kuril'sk	4.15	258	i PN	Pn	20 18 01.1	-0.3
YUK				eS	Sn	20 18 49.2	+0.7
YUK				pmax	pmax		
	comp=N,61nm,0.3s						
YUK				pmax	pmax		
	comp=E,42nm,0.3s						
YUK				pmax	pmax		
	comp=Z,220nm,0.3s						
YUK				pmax	pmax		
	comp=Z,520nm,1.7s						
YUK				smax			
	comp=E,410nm,0.8s						
YUK				smax			
	comp=N,380nm,0.7s						
YUK				smax			
	comp=E,560nm,0.8s						
YUK	Yuzh-Kuril'sk	4.15	258	i P	Pn	20 18 01.1	-0.3
YUK				AMB	AMB	20 18 02.0	
	comp=E,210nm,0.3s						
YUK				eS	Sn	20 18 49.2	+0.7
YUK				A		20 19 10.0	
	comp=E,290nm,0.5s						
YUK				A		20 19 10.0	
	comp=E,420nm,0.5s						
NEM2	Nemuro 2	4.46	250	P	Pn	20 18 04.5	-1.2
NEM2				eS	Sn	20 18 54.7	-1.5
JRA	Rausu	4.69	258	P	Pn	20 18 09.5	+0.7
JNK	Nakash	5.07	255	P	Pn	20 18 14.2	+0.2
JAK	Akkeshi	5.31	250	P	Pn	20 18 16.2	-1.1
JTKR	Abashiri--Toko	5.52	261	P	Pn	20 18 20.9	+0.7
JAR	Ashorobuto	5.82	255	P	Pn	20 18 24.6	+0.3
JAR				eS	Sn	20 19 31.5	+1.9
JMP	Maruseppu	5.90	263	P	Pn	20 18 26.1	+0.7
JOB	Onbets	5.92	251	P	Pn	20 18 25.5	-0.2
JOB				eS	Sn	20 19 31.0	-1.1
JCH	Churui	6.36	250	P	Pn	20 18 31.0	-0.7
JCH				eS	Sn	20 19 41.6	-1.2
JKK2	Kamakawa 2	6.36	262	P	Pn	20 18 32.9	+1.2
YSS	Yuzh-Sakhalins	6.37	290	ePN	Pn	20 18 33.8	+2.1
YSS				eS	Sn	20 19 53.0	+10
YSS				MLR	MLR		
	comp=E,500nm,16.0s						
YSS				MLR	MLR		
	comp=Z,500nm,16.0s						
YSS	Yuzh-Sakhalins	6.37	290	eP	Pn	20 18 33.8	+2.1
YSS				AMS	AMS	20 20 54.0	
	comp=Z,500nm,16.0s						
YSS				AMS	AMS	20 20 54.0	
	comp=Z,500nm,16.0s						
ASAJ	Asahikawa	6.42	265	P	Pn	20 18 33.6	+1.2
	comp=Z,3.3nm,0.3s,baz=75,slow=16,SNR=32						
ASAJ				LR	LR	20 21 14.1	
	comp=Z,160nm,19.1s,baz=116,slow=39						
ASAJ	Asahikawa	6.42	265	PN	Pn	20 18 33.7	+1.3
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,160nm,19.2s						
ASAJ	Asahikawa	6.42	265	P	Pn	20 18 33.7	+1.3
SKR	Severo-Kuril's	6.43	27	ePN	Pn	20 18 27.5	-5.1
SKR				eS	Sn	20 19 44.5	0.0
SKR				pmax	pmax		
	comp=N,40nm,0.5s						
SKR				pmax	pmax		
	comp=Z,50nm,0.5s						
SKR				smax			
	comp=E,130nm,1.0s						
SKR				smax			
	comp=N,30nm,0.6s						
SKR	Severo-Kuril's	6.43	27	eP	Pn	20 18 27.5	-5.1
SKR				AMB	AMB	20 18 30.0	
	comp=N,40nm,0.5s						
SKR				AMB	AMB	20 18 30.0	
	comp=N,50nm,0.5s						
ERM	Erimo	6.77	246	i PN	Pn	20 18 40.3	+3.0
ERM	Erimo	6.77	246	eP	Pn	20 18 38.7	+1.4
	comp=N,55nm,0.4s						
JEM	Erimo	6.77	246	P	Pn	20 18 38.4	+1.1
JNBK	Urakawa-nobuka	6.91	249	P	Pn	20 18 38.3	-0.9
JBT2	Biratori 2	6.97	254	P	Pn	20 18 39.6	-0.4
JKB	Kayabe	8.23	251	eS	Sn	20 20 24.8	-3.9
JANG	Nango	8.70	241	P	Pn	20 19 01.3	-2.4
JANG				eS	Sn	20 20 33.3	-6.9
JTM	Tenmabayashi	8.75	244	P	Pn	20 19 03.5	-0.9
JTM				eS	Sn	20 20 36.0	-5.4
JTH	Tanohata	8.75	238	eS	Sn	20 20 35.2	-6.3
PETK	Petropavlovsk-	9.03	25	P	Pn	20 19 02.7	-5.3
	comp=N,0.3nm,0.3s,baz=192,slow=12,SNR=4.6						
PETK	Petropavlovsk-	9.03	25	ePN	Pn	20 19 09.5	+1.5
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	Petropavlovsk-	9.03	25	P	Pn	20 19 02.7	-5.3
JOSM	Okushiri--Mats	9.21	255	P	Pn	20 19 10.6	0.0
OFUJ	Ofunato	9.43	234	eS	Sn	20 20 53.1	-4.9
JRG	Rokugo	9.83	239	eS	Sn	20 21 03.8	-4.1
JIO	Ouri	10.04	232	eS	Sn	20 21 06.9	-6.0
HABR	Khabarovsk	11.77	293	ePN	Pn	20 19 47.5	+1.9
HABR				MLR	MLR		
	comp=Z,99nm,16.0s						
MJAR	Matsushiro Arr	13.16	234	P	Pn	20 20 04.8	+0.3
	comp=Z,0.2nm,0.3s,baz=21,slow=12,SNR=3.4						
MJAR	Matsushiro Arr	13.16	234	P	Pn	20 20 04.8	+0.3
KLR	Kul'dur	14.05	294	eP	Pn	20 20 13.0	-3.3
MDJ	Mudanjiang	15.53	276	P	Pn	20 20 37.6	+2.0
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,30nm,3.8s						
ZEA	Zeya	17.93	308	eP	Pn	20 21 00.5	-4.8
ZEA				AMB	AMB	20 21 03.0	
	comp=Z,12nm,1.0s						
KSRS	Korea Array	19.23	255	P	Pn	20 21 21.6	+0.6
	comp=Z,0.3nm,0.3s,baz=61,slow=10,SNR=6.4						
KSRS				LR	LR	20 28 31.1	
	comp=Z,47nm,19.0s,baz=310,slow=36						
HHC	Hu-ho-hao-te	29.31	276	eP	P	20 22 57.9	+1.0
HHC				PP	PP	20 23 53.7	-10
HHC				PcP	PcP	20 26 04.1	+2.2
HHC				S	S	20 27 46.6	+1.2
HHC				SS	SS	20 29 18.7	-33
HHC				ScP	ScP	20 29 41.1	+3.2
HHC				PcS	PcS	20 29 45.9	+1.1
HHC				ScS	ScS	20 33 34.1	+1.9
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.6						
HHC				pmax	pmax		
	comp=Z,78nm,6.0s						
HHC				LR	LR		
	comp=N,95nm,13.2s						
HHC				LR	LR		
	comp=E,110nm,13.0s						
HHC				LR	LR		
	comp=Z,120nm,12.8s						
SONM	Songino Array	30.86	292	P	P	20 23 11.3	+0.8
	comp=Z,0.2nm,0.4s,mb3.3,baz=101,slow=9.8,SNR=3.1						
SONM				LR	LR	20 36 35.5	
	comp=Z,56nm,18.5s,baz=144,slow=38						
KDAK	Kodiak Island	36.06	49	P	P	20 23 53.4	-2.2
	comp=Z,3.2nm,0.6s,mb4.4,baz=248,slow=5.4,SNR=3.8						
KDAK	Kodiak Island	36.06	49	P	P	20 23 53.4	-2.2
KDAK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
GTA	Gaotai	38.13	280	eP	P	20 24 15.1	+1.8
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.9						
ZALV	Zalesovo Beam	42.70	307	PcP	PcP	20 26 42.6	+1.2
	comp=Z,0.5nm,0.6s,baz=76,slow=6.1,SNR=2.8						
INK	Inuvik	43.69	31	P	P	20 24 58.9	+0.3
	comp=Z,1.4nm,0.6s,mb3.9,baz=270,slow=0.9,SNR=3.2						
INK	Inuvik	43.69	31	P	P	20 24 58.9	+0.3
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
INK	Inuvik	43.69	31	P	P	20 24 58.9	+0.3
MKAR	Makanchi Array	46.72	298	P	P	20 25 22.9	0.0
	comp=Z,0.6nm,0.5s,mb3.8,baz=69,slow=7.2,SNR=17		

WRA				pP	pP	20 28 00.8	-0.1
	comp=Z,1.4nm,0.7s,baz=17,slow=6.9,SNR=6.0						
WRA	Warramunga Arr	66.55	198	P	P	20 27 47.1	+3.4
WRA				*PP	pP	20 28 00.8	-0.1
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	Warramunga Arr	66.55	198	P	P	20 27 47.1	+3.4
WRA				pP	pP	20 28 00.8	-0.1
NB2	NORSAR Subarra	69.45	341	P	P	20 28 00.3	-1.2
	comp=Z,4.5nm,0.8s,mb4.5,baz=29,slow=6.5						
NOA	NORSAR Array B	69.45	341	P	P	20 28 00.3	-1.2
	comp=Z,2.5nm,0.7s,mb4.2,baz=28,slow=6.2,SNR=9.6						
NOA	NORSAR Array B	69.45	341	P	P	20 28 00.3	-1.2
NOA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NOA	NORSAR Array B	69.45	341	P	P	20 28 00.3	-1.2
ASAR	Alice Springs	70.25	197	P	P	20 28 10.8	+4.0
	comp=Z,0.6nm,0.7s,mb3.6,baz=6.2,slow=4.7,SNR=7.5						
ASAR				pP	pP	20 28 24.8	+0.7
	comp=Z,0.9nm,0.7s,baz=11,slow=5.1,SNR=5.9						
ASAR	Alice Springs	70.25	197	P	P	20 28 10.8	+4.1
ASAR				*PP	pP	20 28 24.8	+0.7
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KIV	Kislovodsk	71.15	314	eP	P	20 28 13.3	+1.1
KIV				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
AKASG	Malin Array Be	72.31	326	P	P	20 28 17.9	-1.0
	comp=Z,1.6nm,0.4s,mb4.3,baz=37,slow=6.5,SNR=5.4						
AKASG	Malin Array Be	72.31	326	P	P	20 28 18.0	-1.0
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
OJC	Ojcow	76.24	330	eP	P	20 28 39.3	-2.5
BUR08	Bucovina Ar. S	76.34	326	eP	P	20 28 42.4	-0.1
CLL	Collm	77.52	335	i P	P	20 28 48.1	-0.9
	comp=Z,6.0nm,1.1s,mb4.4						
CLL				e(pPcP)		20 29 13.0	
BRTR	Keskin Array B	78.83	316	P	P	20 28 56.5	0.0
	comp=Z,1.4nm,1.0s,mb3.9,baz=28,slow=5.6,SNR=4.9						
BRTR	Keskin Array B	78.83	316	eP	P	20 28 58.0	+1.5
BRTR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MMAI	Mount Meron Ar	83.06	311	P	P	20 29 20.0	+0.8
	comp=Z,1.0nm,0.5s,mb4.1,baz=51,slow=5.7,SNR=2.3						

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*NIED **07** 20:22:00, 38°.90N×140°.80E, h5km, Mw3.5 Best double couple: M0 2.24000×10^14 NP1:φs221.00000°, δ61.00000°, λ136.00000°. NP2:φs336.00000°, δ53.00000°, λ38.00000°.*
*IDC **07** 20:22:27.0±2.0, 38°.98N×141°.08E, h0km, mb3.5/3, mb1 3.5/5, mb1mx3.3/25, mbtmp3.3/5, ML3.2/2, Error ellipse: s-maj=36.9km s-min=30.0km az=97.0*
*NEIC **07** 20:22:28.7±1.1, 38°.98N×141°.00E, h10km, mb4.1/2, Error ellipse: s-maj=26.0km s-min=12.5km az=91.0*
*ISCJB **07** 20:22:29.1±0.6, 38°.87N±0°.03×140°.80E±0°.04, h12km±4km, mb3.7/5, Error ellipse: s-maj=5.7km s-min=4.5km az=151.5*
*JMA **07** 20:22:29.4, 38°.87N×140°.78E, h4km±1km, M3.5 Broadband fault plane solution: P waves. NP1: φs147.00000°, δ71.00000°, λ11.00000°. NP2:φs53.00000°, δ80.00000°, λ161.00000°. Principal axes: T Plg21.0000°, Azm9.0000°; N Plg68.0000°, Azm206.0000°; P Plg6.0000°, Azm101.0000°;*
JMA Felt II J1.
ISC 07 20:22:29.5±0.5**, 38°.87N**±0°.03×**140°.79E**±0°.03**, h3**km±5km**, n20,** σ1s01/31**, mb3.7**/5**, 4C-4D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYK	Kaneyama	0.34	279	⇓P	Pg	20 22 36.0	-0.1
JYK				S	Sg	20 22 40.7	+0.2
JMK	Ichinoseki	0.34	76	⇓P	Pg	20 22 36.1	-0.1
JMK				S	Sg	20 22 41.1	+0.5
JOU	Okura	0.51	191	⇑P	Pg	20 22 39.4	+0.1
JOU				eS	Sg	20 22 46.4	+0.5
JRG	Rokugo	0.54	347	⇑P	Pg	20 22 40.0	+0.1
JIO	Ouri	0.60	133	⇓P	Pg	20 22 40.7	-0.3
JIO				S	Sg	20 22 48.9	+0.1
JOM	Ohasama	0.72	33	⇑P	Pg	20 22 42.8	-0.5
JOM				S	Sg	20 22 52.8	+0.1
JYS	Shirataka	0.86	222	⇑P	Pg	20 22 45.9	-0.1
JYA	Atsumi	0.89	252	⇓P	Pg	20 22 46.1	-0.4
JYA				S	Sg	20 22 58.0	0.0
MAJO	Matsushiro	3.10	222	eP	Pn	20 23 20.1	+0.8
MAT	Matsushiro	3.10	222	P	Pn	20 23 19.8	+0.6
MAT				eS	Sn	20 24 01.9	+5.2
MJAR	Matsushiro Arr	3.10	222	Pn	Pn	20 23 20.4	+1.2
	1.5nm,0.3s,baz=29,slow=16,SNR=7.8						
MJAR				Pg	Pg	20 23 26.9	-1.9
	1.7nm,0.3s,baz=28,slow=16,SNR=16						
MJAR				Sn	Sn	20 24 02.3	+5.6
	1.0nm,0.3s,baz=248,slow=20,SNR=4.0						
MJAR	Matsushiro Arr	3.10	222	Pn	Pn	20 23 20.4	+1.2
MJAR				Pg	Pg	20 23 26.9	-1.9
MJAR				Sn	Sn	20 24 02.3	+5.6
ASAJ	Asahikawa	5.42	14	Pn	Pn	20 23 52.8	+1.7
	0.4nm,0.3s,baz=235,slow=14,SNR=3.4						
KSRS	Korea Array	10.23	266	Pn	Pn	20 24 59.5	+2.2
	0.3nm,0.3s,baz=82,slow=14,SNR=4.9						
ZALV	Zalesovo Beam	40.33	311	P	P	20 30 06.5	-1.4
	0.2nm,0.3s,mb3.3,baz=79,slow=7.5,SNR=2.7						
KURK	Kurchatov	44.43	307	eP	P	20 30 40.5	-0.9
BRVK	Borovoye	49.04	311	eP	P	20 31 15.6	-1.9
	0.9nm,1.0s,mb3.8						
EKS2	Erkin-Say	49.70	297	eP	P	20 31 25.6	+3.0
	2.1nm,0.6s,mb4.3						
WRA	Warramunga Arr	58.81	187	P	P	20 32 27.8	-1.3
	0.8nm,1.0s,mb3.7,baz=4.3,slow=7.0,SNR=5.3						
ASAR	Alice Springs	62.54	187	P	P	20 32 53.9	-0.6
	0.3nm,0.7s,mb3.5,baz=21,slow=5.4,SNR=3.4						

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*IDC **07** 20:28:41.6±0.8, 12°.33N×86°.11W, h0km, mb3.4/3, mb1 3.9/5, mb1mx3.7/20, mbtmp3.6/5, ML3.4/2, MS3.1/2, Ms1 3.2/2, ms1mx2.6/32, Error ellipse: s-maj=51.3km s-min=12.5km az=60.0*
*CASC **07** 20:28:41.0±3.1, 11°.27N×87°.15W, h0km±17km, MD4.4, ML3.4, mb4.0(NEIC)*
*ISCJB **07** 20:28:44.5±1.1, 11°.35N±0°.06×87°.1W±0°.1, h45km±15km, mb3.8/5, Error ellipse: s-maj=19.0km s-min=6.0km az=151.6*
*NEIC **07** 20:28:46.2±1.5, 11°.42N×86°.97W, h46km±15km, mb4.0/1, Error ellipse: s-maj=32.8km s-min=10.8km az=224.0*
ISC 07 20:28:46.4±0.9**, 11°.43N**±0°.06×**86°.97W**±0°.10**, h46**km±14km**, n42,** σ0s94/41**, mb3.8**/5**, 1D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	Copaltepe	0.83	26	eP	Pn	20 29 02.0	+0.2
COPN				eS	Sn	20 29 18.2	+5.2
COPN				AML	AML	20 29 20.4	
	comp=Z,3µm,0.4s						
CRUN	El Crucero	0.86	50	eP	Pn	20 29 02.5	+0.3
CSAN		0.92	35	eP	Pn	20 29 02.8	-0.2
TICN	Ticuantepe	0.94	50	eP	Pn	20 29 03.3	+0.1
XAVN	Gruta Xavier	0.95	41	eP	Pn	20 29 03.5	+0.1
LEON	Leon	0.99	4	eP	Pn	20 29 03.7	-0.2
MGAN	Managua	1.01	45	eP	Pn	20 29 04.2	0.0
MGAN				eS	Sn	20 29 23.2	+6.0
APON	Apoyo	1.01	61	eP	Pn	20 29 04.3	+0.1
MOMN	Momotombo	1.06	23	eP	Pn	20 29 05.3	+0.4
CNGN	Cerro Negro	1.10	14	eP	Pn	20 29 05.2	-0.2
SSN	San Juan del S	1.10	96	eP	Pn	20 29 04.2	-1.3
HUEN		1.20	41	eP	Pn	20 29 06.8	+0.1
CRIN	San Cristobal	1.27	356	eP	Pn	20 29 07.6	-0.1
CONN	Concepcion	1.32	84	eP	Pn	20 29 09.2	+0.8
NY14	Universidad de	1.61	119	i P	Pn	20 29 10.0	-2.4
NY14				i S	Sn	20 29 42.0	+10
LAPC	Finca la Perla	1.65	113	i P	Pn	20 29 10.8	-2.0
GPS2	Hotel Rincˆ‡n	1.72	113	i P	Pn	20 29 12.2	-1.7
VCR	Vista de Mar	1.84	134	eP	Pn	20 29 15.8	+0.2
CUI	Cuipilapa	1.93	113	i P	Pn	20 29 15.7	-1.1
JTS	JuntasAbangare	2.28	119	Pn	Pn	20 29 19.9	-1.7
	comp=Z,5.0nm,0.3s,baz=316,slow=18,SNR=22						
JTS				Pg	Pn	20 29 23.4	+1.8
	comp=Z,27nm,0.3s,baz=302,slow=12,SNR=67						
JTS				Lg		20 29 56.0	
	comp=Z,20nm,0.3s,baz=5.7,slow=15,SNR=4.7						
JCR	Jicaral	2.41	130	eP	Pn	20 29 23.6	+0.3
JCR				eS	Sn	20 30 02.6	+11
TGUH	Tegucigalpa,Un	2.63	354	eP	Pn	20 29 26.0	-0.4
CGA2	Cerro Gallo 2	2.83	119	eP	Pn	20 29 30.5	+1.3
PRS1	Puriscal	2.98	119	eP	Pn	20 29 32.6	+1.4
LAJ	Bijagual	3.20	119	eP	Pn	20 29 29.8	-4.4
URSC	Urasca	3.51	116	⇓eP	Pn	20 29 39.8	+1.3
BUS	Buena Vista	3.67	120	eP	Pn	20 29 40.7	+0.1
BAR1		4.20	121	eP	Pn	20 29 48.6	+0.6
APG	El Apazote	4.92	317	LR	LR	20 32 23.3	
	comp=Z,160nm,19.0s,baz=177,slow=44						
BCIP	Isla Barro Col	7.37	107	P	Pn	20 30 32.6	+1.1
TEIG	Tepich	8.84	352	eP	Pn	20 30 51.8	+0.2
CMIG	Matias Romero	9.51	307	Pn	Pn	20 31 01.3	+0.5
	comp=Z,0.8nm,0.3s,baz=120,slow=11,SNR=10						
TXAR	Lajitas Array	23.66	321	P	P	20 33 52.7	-1.1
	comp=Z,2.5nm,0.6s,mb3.9,baz=141,slow=8.7,SNR=14						
TXAR				PcP	PcP	20 37 40.8	+3.5
	comp=Z,0.6nm,0.7s,baz=146,slow=6.4,SNR=6.9						
MIAR	Mount Ida	23.79	346	eP	P	20 33 55.1	+0.2
	comp=Z,3.9nm,0.7s,mb4.0						
TKL	Tuckaleechee C	24.30	6	P	P	20 33 50.9	-8.6
	comp=Z,24nm,0.5s,mb4.9,baz=113,slow=10,SNR=9.8						
PDAR	Pinedale Array	36.89	332	P	P	20 35 49.4	-1.2
	comp=Z,0.4nm,0.5s,mb3.5,baz=120,slow=7.6,SNR=5.1						
NVAR	Mina Array Bea	38.78	319	P	P	20 36 08.2	+1.6
	comp=Z,0.1nm,0.3s,mb3.0,baz=141,slow=4.4,SNR=2.4						
NVAR				PcP	PcP	20 38 19.2	+1.9
	comp=Z,1.4nm,0.8s,baz=144,slow=3.9,SNR=6.4						
NOA	NORSAR Array B	84.03	29	LR	LR	21 12 55.8	
	comp=Z,13nm,21.5s,baz=15,slow=32						
KSRS	Korea Array	121.39	328	PKP	PKPdf	20 47 35.9	+0.8
	comp=Z,1.4nm,0.7s,baz=356,slow=0.9,SNR=9.4						
ASAR	Alice Springs	139.31	247	PKP	PKPdf	20 48 13.9	+4.6
	comp=Z,0.2nm,0.5s,baz=94,slow=2.8,SNR=3.9						
ASAR	Alice Springs	139.31	247	PKP	PKPdf	20 48 13.9	+4.6
CMAR	Chiang Mai Arr	149.74	349	PKPbc	PKPbc	20 48 32.5	+0.3
	comp=Z,1.2nm,0.7s,baz=314,slow=3.0,SNR=8.1						

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*IDC **07** 20:29:12.4±2.1, 4°.72N×81°.88W, h0km, mb4.0/2, mb1 4.4/3, mb1mx3.8/19, mbtmp4.2/3, MS3.3/2, Ms1 3.3/2, ms1mx2.7/29, Error ellipse: s-maj=186.3km s-min=38.9km az=50.0*
NEIC 07 20:29:14.5±0.8**, 5°.01N**×**81°.62W, h10**km**, mb3.8**/1**, Error ellipse: s-maj=120.0km s-min=13.7km az=56.0, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTS	JuntasAbangare	6.20	328	Pn	Pn	20 30 45.0	-1.2
	baz=107,slow=18,SNR=2.8						
JTS				Sn	Sn	20 31 54.2	-3.0
	2.4nm,0.3s,baz=60,slow=20,SNR=4.8						
JTS	JuntasAbangare	6.20	328	Pn	Pn	20 30 45.0	-1.2
JTS				Sn	Sn	20 31 54.2	-3.0
SJG	San Juan	19.95	48	LR	LR	20 41 20.2	
	comp=Z,55nm,20.7s,baz=256,slow=36						
LPAZ	La Paz	25.02	148	eP	P	20 34 39.4	+0.5
ANMO	Albuquerque	37.62	326	P	P	20 36 30.9	+1.3
	2.4nm,0.8s,baz=159,slow=12,SNR=5.4						
ISCO	Idaho Springs	40.84	331	eP	P	20 36 58.0	+1.5
	1.8nm,0.8s						
NVAR	Mina Array Bea	47.06	320	P	P	20 37 46.6	+0.1
	1.4nm,0.8s,baz=143,slow=8.7,SNR=8.4						
KEST	Kesra	87.89	54	LR	LR	21 19 02.3	
	comp=Z,23nm,19.3s,baz=230,slow=34						
ZALV	Zalesovo Beam	120.17	9	PKP	PKPdf	20 48 05.9	+0.2
	0.4nm,0.5s,baz=303,slow=6.7,SNR=2.6						
MKAR	Makanchi Array	126.49	14	PKP	PKPdf	20 48 17.9	-0.2
	0.6nm,0.8s,baz=328,slow=4.3,SNR=3.7						
SONM	Songino Array	126.91	353	PKP	PKPdf	20 48 18.9	+0.1
	0.9nm,0.9s,baz=317,slow=4.8,SNR=4.3						
ASAR	Alice Springs	141.08	238	PKP	PKPdf	20 48 42.5	-3.5
	0.5nm,0.7s,baz=114,slow=1.6,SNR=4.8						
ASAR	Alice Springs	141.08	238	PKP	PKPdf	20 48 42.5	-3.5

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*IDC **07** 20:45:45.3±1.3, 15°.26N×122°.72E, h0km, mb3.7/5, mb1 4.0/6, mb1mx3.6/23, mbtmp3.8/6, Error ellipse: s-maj=29.6km s-min=20.2km az=55.0*
*MAN **07** 20:45:47, 15°.42N×122°.40E, h3km, mb5.2, ML4.2, MS4.4*
*ISCJB **07** 20:45:50.5±0.5, 15°.39N±0°.04×122°.40E±0°.05, h33km, mb4.0/8, Error ellipse: s-maj=6.9km s-min=4.6km az=156.8*
*NEIC **07** 20:45:50.5±0.7, 15°.18N×122°.60E, h35km, mb4.5/2, Error ellipse: s-maj=18.5km s-min=11.3km az=61.0*
ISC 07 20:45:51.2±0.5**, 15°.38N**±0°.04×**122°.44E**±0°.05**, h35**km**, n23,** σ1s59/31**, mb4.0**/8**, 2C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	Polilio Island	0.81	217	eP	Pn	20 46 02.2	-3.9
POLP				eS	Sn	20 46 13.3	-3.5
BALP	Baler	0.90	294	eP	Pn	20 46 04.3	-3.1
PCPH	Palayan	1.30	278	⇑eP	Pn	20 46 11.1	-1.9
PCPH				eS	Sn	20 46 29.4	+0.2
CAUP	Cauayan	1.66	339	eP	Pn	20 46 16.8	-1.1
PALP	Palanan	1.68	360	eP	Pn	20 46 16.2	-1.9
PALP				eS	Sn	20 46 38.1	-0.3
TGY	Tagaytay City	1.93	229	Pn	Pn	20 46 21.1	-0.5
	254nm,0.3s,baz=7.6,slow=3.9,SNR=16						
TGY				Sn	Sn	20 46 50.5	+5.9
	218nm,0.3s,baz=310,slow=23,SNR=11						
BOAC	Boac	1.99	197	eP	Pn	20 46 22.5	+0.1
BCPH	Baguio City Da	2.04	299	⇑i P	Pn	20 46 21.6	-1.5
BCPH				i S	Sn	20 46 48.8	+1.3
AUQP	San Andres	2.06	173	eP	Pn	20 46 24.4	+1.1
PVCP	Virac	2.43	137	eP	Pn	20 46 27.3	-1.2
PVCP				eS	Sn	20 47 05.4	+8.4
LUBP	Lubang	2.68	233	eP	Pn	20 46 31.9	+0.1
APYP	Conner	2.72	335	eP	Pn	20 46 32.9	+0.5
SJMP	San Jose	3.17	204	eP	Pn	20 46 40.4	+1.8
CNP	Catarman	3.58	143	eP	Pn	20 46 46.7	+2.5
CNP				eS	Sn	20 47 28.8	+3.4
CMAR	Chiang Mai Arr	22.68	281	P	P	20 50 51.2	+1.5
	0.9nm,0.6s,mb3.4,baz=94,slow=8.1,SNR=8.3						
HHC	Hu-ho-hao-te	27.08	342	eP	P	20 51 33.6	+3.0
HHC				S	S	20 56 09.8	+3.5
HHC				pmax	pmax		
	comp=Z,19nm,0.5s,mb4.9						
HHC				pmax	pmax		
	comp=Z,91nm,5.8s						
WRAB	Tennant Creek	36.99	161	eP	P	20 52 54.4	-3.2
	comp=Z,3.6nm,0.7s,mb4.3						
WRA	Warramunga Arr	37.00	161	P	P	20 52 54.8	-2.8
	comp=Z,2.7nm,0.6s,mb4.3,baz=343,slow=9.2,SNR=25						
ASAR	Alice Springs	40.39	164	P	P	20 53 24.0	-2.0
	comp=Z,0.9nm,0.5s,mb3.8,baz=339,slow=7.4,SNR=17						
MKAR	Makanchi Array	45.72	322	P	P	20 54 09.5	+0.6
	comp=Z,0.5nm,0.8s,mb3.5,baz=134,slow=6.9,SNR=3.7						
MKAR	Makanchi Array	45.72	322	P	P	20 54 09.5	+0.6
ZALV	Zalesovo Beam	48.38	331	P	P	20 54 31.8	+2.3
	comp=Z,0.2nm,0.3s,mb3.6,baz=131,slow=9.8,SNR=2.8						
KURK	Kurchatov	49.76	325	P	P	20 54 41.1	+0.9
	comp=Z,5.8nm,1.1s,mb4.5						

IDC 07 20:53:03.4±3.8**, 13°.80N**×**121°.66E, h72**km±32km**, mb3.3**/5**, mb1 3.4**/5**, mb1mx3.1**/23**, mbtmp3.3**/5**, Error ellipse: s-maj=107.9km s-min=16.7km az=62.0, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	Tagaytay City	0.76	293	P	Pn	20 53 20.3	+1.2
	200nm,0.3s,baz=166,slow=4.2,SNR=37						
TGY				S	Sn	20 53 32.1	+1.3
	580nm,0.3s,baz=170,slow=22,SNR=37						
WRA	Warramunga Arr	35.78	159	P	P	20 59 55.2	-0.6
	0.5nm,0.4s,baz=342,slow=9.0,SNR=15						
ASAR	Alice Springs	39.12	162	P	P	21 00 24.4	+0.4
	0.5nm,0.4s,baz=340,slow=6.9,SNR=9.0						
MKAR	Makanchi Array	46.51	323	P	P	21 01 23.7	+0.2
	0.2nm,0.3s,baz=120,slow=7.6,SNR=4.8						
ZALV	Zalesovo Beam	49.40	332	P	P	21 01 45.6	-0.1
	0.4nm,0.3s,baz=138,slow=8.5,SNR=2.8						
KURK	Kurchatov	50.62	326	P	P	21 01 54.8	-0.3
	0.4nm,0.4s,baz=131,slow=7.2,SNR=5.2						

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*NIED **07** 20:56:00, 45°.40N×151°.60E, h23km, Mw4.3 Best double couple: M0 3.26000×10^15 NP1:φs44.00000°, δ49.00000°, λ107.00000°. NP2:φs199.00000°, δ44.00000°, λ72.00000°.*
*IDC **07** 20:56:21.3±0.9, 45°.35N×151°.37E, h0km, mb4.2/16, mb1 4.2/19, mb1mx4.1/29, mbtmp4.1/19, ML4.0/3, MS3.7/8, Ms1 3.7/8, ms1mx3.2/38, Error ellipse: s-maj=23.9km s-min=19.3km az=100.0*
*JMA **07** 20:56:22.1±0.7, 45°.43N×151°.62E, h30km, M4.9*
*BJI **07** 20:56:23.6, 45°.21N×151°.50E, h35km, mB4.7/13, mb4.6/20, Ms4.0/4, Ms7 3.9/4*
*ISCJB **07** 20:56:26.6±1.0, 45°.05N±0°.06×151°.15E±0°.07, h48km±7km, mb4.5/55, MS3.9/9, Error ellipse: s-maj=10.9km s-min=7.1km az=141.7*
*NEIC **07** 20:56:28.8±1.2, 45°.31N×151°.19E, h46km±9km, mb4.6/21, Error ellipse: s-maj=13.2km s-min=8.7km az=141.0*
*SKHL **07** 20:56:31.9±2.7, 44°.91N×150°.97E, h143km±40km, mb4.8/4, Ms3.8/3, msh6.0/1*
*MOS **07** 20:56:33.2±0.9, 45°.10N×150°.59E, h91km, mb4.4/34, Error ellipse: s-maj=11.7km s-min=7.0km az=118.9*
*SZGRF **07** 20:56:35.7, 46°.51N×150°.40E, h33km, Kuril Islands, Russia*
ISC 07 20:56:28.2±0.8**, 45°.05N**±0°.06×**151°.23E**±0°.07**, h50**km±6km**, n228,** σ1s14/246**, mb4.5**/55**, MS3.9**/9**, 26C-12D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.39	276	PN	Pn	20 57 00.5	-4.3
KUR				pmax	pmax		
	comp=N,80nm,0.5s						
KUR				pmax	pmax		
	comp=E,40nm,0.5s						
KUR				pmax	pmax		
	comp=Z,230nm,0.5s						
YUK	Yuzh-Kuril'sk	3.97	257	ePN	Pn	20 57 28.0	+1.5
YUK				pmax	pmax		
	comp=Z,180nm,0.6s						
YUK				pmax	pmax		
	comp=N,110nm,0.3s						
YUK				pmax	pmax		
	comp=E,110nm,0.3s						
YUK				pmax	pmax		
	comp=Z,360nm,0.3s						
YUK				MLR	MLR		
	comp=N,530nm,18.0s						
YUK				MLR	MLR		
	comp=E,590nm,18.0s						
YUK				MLR	MLR		
	comp=Z,440nm,18.0s						
YUK	Yuzh-Kuril'sk	3.97	257	eP	Pn	20 57 28.0	+1.5
YUK				AMB	AMB	20 57 36.0	
	comp=Z,410nm,0.5s						
YUK				AMB	AMB	20 57 36.0	
	comp=Z,570nm,0.5s						
YUK				AMB	AMB	20 57 36.0	
	comp=Z,460nm,0.5s						
YUK				i S	Sn	20 58 12.1	+0.3
YUK				A		20 58 26.4	
	comp=Z,230nm,0.5s						
YUK				A		20 58 26.4	
	comp=Z,490nm,0.5s						
YUK				A		20 58 31.0	
	comp=Z,3µm,0.9s						
YUK				A		20 58 31.0	
	comp=Z,2µm,0.9s						
YUK				AMS	AMS	20 59 04.5	
	comp=Z,530nm,18.0s						
YUK				AMS	AMS	20 59 04.5	
	comp=Z,590nm,18.0s						
YUK				AMS	AMS	20 59 04.5	
	comp=Z,440nm,18.0s						
NEM2	Nemuro 2	4.29	249	P	Pn	20 57 29.7	-1.2
NEM2				eS	Sn	20 58 20.3	+0.6
JRA	Rausu	4.51	258	P	Pn	20 57 34.7	+0.8
JNK	Nakash	4.90	255	P	Pn	20 57 39.4	+0.2
JNK				eS	Sn	20 58 35.5	+0.9
JAK	Akkeshi	5.14	249	P	Pn	20 57 41.8	-0.8
JAK				eS	Sn	20 58 40.4	-0.2
JTKR	Abashiri--Toko	5.35	261	P	Pn	20 57 46.6	+1.2
JAR	Ashorobuto	5.65	255	P	Pn	20 57 50.1	+0.6
JMP	Maruseppu	5.72	262	P	Pn	20 57 51.7	+1.1
JOB	Onbets	5.75	251	P	Pn	20 57 51.2	+0.2
JOB				eS	Sn	20 58 56.4	+0.8
JKK2	Kamakawa 2	6.18	262	P	Pn	20 57 58.6	+1.7
JCH	Churui	6.19	250	P	Pn	20 57 56.7	-0.3
JCH				eS	Sn	20 59 06.1	-0.3
YSS	Yuzh-Sakhalins	6.20	291	ePN	Pn	20 58 04.5	+7.4
YSS				eS	Sn	20 59 05.0	-1.7
YSS				pmax	pmax		
	comp=Z,50nm,1.0s						
YSS				smax			
	comp=E,30nm,1.0s						
YSS				MLR	MLR		
	comp=E,700nm,16.0s						
YSS				MLR	MLR		
	comp=Z,900nm,16.0s						
YSS	Yuzh-Sakhalins	6.20	291	eP	Pn	20 57 58.4	+1.2
	comp=Z,32nm,0.6s						
YSS	Yuzh-Sakhalins	6.20	291	eP	Pn	20 58 04.5	+7.4
YSS				AMB	AMB	20 58 06.0	
	comp=Z,50nm,1.0s						
YSS				eS	Sn	20 59 05.0	-1.7
YSS				A		20 59 06.0	
	comp=Z,30nm,1.0s						
YSS				AMS	AMS	21 00 21.0	
	comp=Z,700nm,16.0s						
YSS				AMS	AMS	21 00 21.0	
	comp=Z,900nm,16.0s						
ASAJ	Asahikawa	6.24	264	Pn	Pn	20 57 58.4	+0.7
	comp=Z,4.6nm,0.3s,baz=85,slow=16,SNR=37						
ASAJ				Sn	Sn	20 59 17.3	+10
	baz=120,slow=19,SNR=1.4						
ASAJ				LR	LR	21 00 38.1	
	comp=Z,560nm,18.5s,baz=80,slow=40						
ASAJ	Asahikawa	6.24	264	PN	Pn	20 57 58.4	+0.8
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,560nm,18.5s						
ASAJ	Asahikawa	6.24	264	P	Pn	20 57 59.3	+1.7
JFR	Furan	6.50	256	P	Pn	20 58 03.0	+1.8
SKR	Severo-Kuril's	6.52	28	ePN	Pn	20 57 58.2	-3.3
SKR				pmax	pmax		
	comp=N,60nm,0.5s						
SKR				pmax	pmax		
	comp=E,40nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
ERM	Erimo	6.61	245	ePN	Pn	20 58 04.4	+1.7
ERM				pmax	pmax		
	comp=Z,14nm,0.8s						
ERM	Erimo	6.61	245	eP	Pn	20 58 04.4	+1.7
	comp=Z,14nm,0.8s						
ERM	Erimo	6.61	245	eP	Pn	20 58 07.1	+4.4
JEM	Erimo	6.61	245	P	Pn	20 58 03.5	+0.8
JNBK	Urakawa-nobuka	6.74	249	P	Pn	20 58 03.9	-0.7
JNBK				eS	Sn	20 59 18.8	-1.2
JBT2	Biratori 2	6.79	254	P	Pn	20 58 05.2	-0.1
UGL	Uglegorsk	7.44	306	PN	Pn	20 58 15.0	+0.9
UGL				pmax	pmax		
	comp=Z,41nm,0.7s						
UGL				MLR	MLR		
	comp=N,500nm,16.0s						
UGL				MLR	MLR		
	comp=E,600nm,16.0s						
UGL	Uglegorsk	7.44	306	eP	Pn	20 58 15.0	+0.9
UGL				AMB	AMB	20 58 16.0	
	comp=E,41nm,0.7s						
UGL				AMS	AMS	21 01 14.0	
	comp=E,500nm,16.0s						
UGL				AMS	AMS	21 01 14.0	
	comp=E,600nm,16.0s						
JNB	Noboribetsu	7.82	254	P	Pn	20 58 19.6	+0.3
JNB				eS	Sn	20 59 45.3	-1.0
JKB	Kayabe	8.06	250	P	Pn	20 58 22.0	-0.6
JKB				eS	Sn	20 59 48.3	-4.1
TYV	Tymovskoe	8.18	318	eP	Pn	20 58 25.8	+1.6
TYV				AMB	AMB	20 58 34.0	
	comp=E,11nm,0.8s						
TYV				AMB	AMB	20 58 34.0	
	comp=E,15nm,0.8s						
JANG	Nango	8.54	240	P	Pn	20 58 26.6	-2.6
JANG				eS	Sn	20 59 57.1	-7.1
JTM	Tenmabayashi	8.59	244	P	Pn	20 58 29.1	-0.7

JTM			*e*S		**Sn**	**20 59 59.0**	**-6.2**
JTH	**Tanohata**	**8.60 237**	P		**Pn**	**20 58 27.5**	**-2.5**
JTH			*e*S		**Sn**	**20 59 58.4**	**-7.1**
JOSM	**Okushiri--Mats**	**9.04 255**	P		**Pn**	**20 58 36.5**	**+0.6**
PETK	**Petropavlovsk-**	**9.11 25**	Pn		**Pn**	**20 58 33.5**	**-3.4**
	comp=E,1.0nm,0.3s,baz=179,slow=12,SNR=5.9						
PETK	**Petropavlovsk-**	**9.11 25**	PN		**Pn**	**20 58 33.5**	**-3.4**
PETK			pmax	pmax			
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**9.11 25**	Pn		**Pn**	**20 58 33.5**	**-3.4**
OFUJ	**Ofunato**	**9.28 233**	P		**Pn**	**20 58 37.5**	**-1.8**
OFUJ			*e*S		**Sn**	**21 00 15.9**	**-6.3**
JRG	**Rokugo**	**9.68 238**	*e*S		**Sn**	**21 00 29.4**	**-2.6**
JIO	**Ouri**	**9.89 232**	P		**Pn**	**20 58 45.6**	**-2.1**
JIO			*e*S		**Sn**	**21 00 30.9**	**-6.3**
HABR	**Khabarovsk**	**11.61 293**	*e*PN		**Pn**	**20 59 13.1**	**+2.0**
HABR			S		**Sn**	**21 01 14.4**	**-4.8**
HABR			pmax	pmax			
	comp=E,46nm,2.7s						
HABR			pmax	pmax			
	comp=N,28nm,2.6s						
HABR			pmax	pmax			
	comp=Z,45nm,2.6s						
HABR			MLR	MLR			
	comp=Z,265nm,18.0s						
MAJO	**Matsushiro**	**13.01 234**	*e*PN		**Pn**	**20 59 27.0**	**-3.3**
MAJO			pmax	pmax			
	comp=Z,8.0nm,0.8s						
MAJO	**Matsushiro**	**13.01 234**	*e*P		**Pn**	**20 59 27.0**	**-3.2**
	comp=Z,8.1nm,0.8s						
MJAR	**Matsushiro Arr**	**13.01 234**	Pn		**Pn**	**20 59 29.0**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=315,slow=14,SNR=6.1						
MDJ	**Mudanjiang**	**15.36 276**	P		**Pn**	**21 00 03.7**	**+2.2**
MDJ			pmax	pmax			
	comp=Z,11nm,0.8s						
MDJ			pmax	pmax			
	comp=Z,40nm,5.4s						
MDJ			LR	LR			
	comp=N,140nm,14.8s						
MDJ			LR	LR			
	comp=E,140nm,17.8s						
MDJ			LR	LR			
	comp=Z,270nm,14.8s						
ZEA	**Zeya**	**17.80 308**	*e*P		**Pn**	**21 00 23.8**	**-8.2**
ZEA			AMB	AMB		21 00 28.0	
	comp=Z,23nm,1.4s						
CN2	**Changchun**	**18.44 275**	*e*P		**Pn**	**21 00 38.2**	**-1.8**
CN2			pmax	pmax			
	comp=Z,10.0nm,0.7s						
KSRS	**Korea Array**	**19.06 255**	P		**Pn**	**21 00 46.5**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=61,slow=11,SNR=8.8						
KSRS			LR	LR		21 08 22.7	
	comp=Z,99nm,18.1s,baz=140,slow=37						
YAK	**Yakutsk**	**21.11 331**	*e*P		**P**	**21 01 04.4**	**-3.9**
YAK			pmax	pmax			
	comp=Z,19nm,1.0s,mb4.4						
YAK			pmax	pmax			
	comp=N,2.0nm,1.0s						
HHC	**Hu-ho-hao-te**	**29.13 276**	*e*P		**P**	**21 02 25.5**	**+1.2**
HHC			sP	sP		21 02 43.0	0.0
HHC			PP	PP		21 03 20.1	-10
HHC			PcP	PcP		21 05 33.3	+2.4
HHC			S	**S**		**21 07 11.9**	**-0.8**
HHC			SS	SS		21 08 42.8	-35
HHC			ScP	ScP		21 09 10.0	+1.9
HHC			PcS	PcS		21 09 14.7	+1.1
HHC			ScS	ScS		21 13 02.0	-0.2
HHC			pmax	pmax			
	comp=Z,17nm,0.5s,mb5.0						
HHC			pmax	pmax			
	comp=Z,86nm,5.4s						
HHC			LR	LR			
	comp=N,210nm,13.2s,MS4.1						
HHC			LR	LR			
	comp=E,200nm,12.8s,MS4.1						
HHC			LR	LR			
	comp=Z,290nm,12.9s,MS4.1						
SONM	**Songino Array**	**30.70 291**	P		**P**	**21 02 38.5**	**+0.4**
	comp=Z,0.7nm,0.4s,mb3.9,baz=78,slow=8.1,SNR=5.4						
SONM			LR	LR		21 16 02.0	
	comp=Z,126nm,18.5s,MS3.6,baz=262,slow=38						
SONM	**Songino Array**	**30.70 291**	P		**P**	**21 02 38.5**	**+0.5**
SONM			pmax	pmax			
	comp=Z,1.0nm,0.4s						
SONM			MLR	MLR			
	comp=Z,126nm,18.5s						
KDAK	**Kodiak Island**	**36.20 49**	*e*P		**P**	**21 03 25.8**	**0.0**
LZH	**Lanzhou**	**36.64 273**	*e*P		**P**	**21 03 31.1**	**+1.3**
LZH			pmax	pmax			
	comp=Z,16nm,1.0s,mb4.8						
LZH			pmax	pmax			
	comp=Z,86nm,5.0s						
GTA	**Gaotai**	**37.96 280**	P		**P**	**21 03 41.8**	**+0.9**
GTA			pP	pP		21 03 47.9	-6.0
GTA			sP	sP		21 03 51.1	-8.7
GTA			pmax	pmax			
	comp=Z,9.0nm,1.0s,mb4.5						
ZALV	**Zalesovo Beam**	**42.56 307**	P		**P**	**21 04 16.9**	**-1.8**
	comp=Z,0.9nm,0.4s,mb3.9,baz=76,slow=8.2,SNR=6.5						
ZALV			PcP	PcP		21 06 10.6	+0.2
	comp=Z,1.5nm,0.7s,baz=72,slow=4.2,SNR=6.4						
ZALV			LR	LR		21 23 00.6	
	comp=Z,87nm,18.8s,MS3.7,baz=71,slow=38						
ZALV	**Zalesovo Beam**	**42.56 307**	P		**P**	**21 04 16.9**	**-1.8**
ZALV						21 06 10.6	
ZALV			pmax	pmax			
	comp=Z,1.0nm,0.4s,mb3.9						
ZALV			pmax	pmax			
	comp=Z,2.0nm,0.7s,mb4.0						
ZALV			MLR	MLR			
	comp=Z,87nm,18.8s,MS3.7						
ZALV	**Zalesovo Beam**	**42.56 307**	P		**P**	**21 04 16.9**	**-1.8**
ZALV			PcP	PcP		21 06 10.6	+0.2
ZALV			LR	LR		21 23 00.6	
MK31	**Makanchi Array**	**46.57 298**	*e*P		**P**	**21 04 49.4**	**-1.4**
MKAR	**Makanchi Array**	**46.57 298**	P		**P**	**21 04 49.8**	**-1.0**
	comp=Z,1.9nm,0.6s,mb4.2,baz=76,slow=7.7,SNR=23						
MKAR			PcP	PcP		21 06 24.2	-0.1
	comp=Z,0.6nm,0.6s,baz=46,slow=4.2,SNR=3.0						
MKAR			LR	LR		21 25 25.2	
	comp=Z,154nm,18.7s,MS4.0,baz=71,slow=38						
MKAR	**Makanchi Array**	**46.57 298**	P		**P**	**21 04 49.8**	**-1.0**
MKAR						21 06 24.2	
MKAR			pmax	pmax			
	comp=Z,2.0nm,0.6s						
MKAR			pmax	pmax			
	comp=Z,1.0nm,0.6s						
MKAR			MLR	MLR			
	comp=Z,154nm,18.7s						
KURK	**Kurchatov**	**47.22 304**	P		**P**	**21 04 54.7**	**-1.1**
	comp=Z,2.1nm,0.6s,mb4.2,baz=73,slow=8.5,SNR=16						
KURK	**Kurchatov**	**47.22 304**	*e*P		**P**	**21 04 52.1**	**-3.8**
KURK			pmax	pmax			
	comp=Z,3.0nm,1.0s,mb4.2						
KURK	**Kurchatov**	**47.22 304**	P		**P**	**21 04 54.7**	**-1.1**
CMAR	**Chiang Mai Arr**	**50.69 256**	P		**P**	**21 05 24.4**	**+1.6**
	comp=Z,0.6nm,0.6s,mb3.7,baz=39,slow=7.1,SNR=4.8						
CMAR	**Chiang Mai Arr**	**50.69 256**	P		**P**	**21 05 24.4**	**+1.6**
CMAR			pmax	pmax			
	comp=Z,1.0nm,0.6s						
TAPN	**Taplejung**	**52.88 273**	*e*P		**P**	**21 05 41.1**	**+2.0**
	comp=Z,27nm,0.9s,mb5.2						
ODAN	**Odare**	**53.41 273**	*e*P		**P**	**21 05 44.3**	**+1.4**
AAK	**Ala-Archa**	**53.42 297**	P		**P**	**21 05 43.3**	**+0.5**
	comp=Z,1.7nm,0.3s,mb4.4,baz=82,slow=4.4,SNR=4.8						
AAK	**Ala-Archa**	**53.42 297**	P		**P**	**21 05 43.3**	**+0.5**
AAK			pmax	pmax			
	comp=Z,2.0nm,0.3s,mb4.5						
GUN	**Gumba**	**53.84 275**	*e*P		**P**	**21 05 47.6**	**+1.5**
RAMN	**Ramite**	**53.91 274**	*e*P		**P**	**21 05 47.5**	**+0.9**
	comp=Z,23nm,0.6s,mb5.3						
KSH	**Kashi**	**54.09 293**	*e*P		**P**	**21 05 52.0**	**+4.3**
KSH			pmax	pmax			
	comp=Z,5.0nm,0.6s,mb4.6						
SVE	**Sverdlovsk**	**54.19 317**	*e*P		**P**	**21 05 46.4**	**-1.8**
SVE			pmax	pmax			
	comp=Z,6.0nm,0.9s,mb4.5						
KKN	**Kakani**	**54.34 275**	*e*P		**P**	**21 05 50.7**	**+1.0**
	comp=Z,24nm,0.7s,mb5.2						
DMN	**Daman**	**54.57 275**	*e*P		**P**	**21 05 52.0**	**+0.6**
	comp=Z,26nm,0.8s,mb5.3						
GKN	**Gorkha**	**54.66 276**	*e*P		**P**	**21 05 53.0**	**+0.9**
	comp=Z,9.8nm,0.4s,mb5.2						
ARU	**Arti**	**55.38 318**	P		**P**	**21 05 53.7**	**-3.1**
ARU	**Arti**	**55.38 318**	*e*P		**P**	**21 05 53.3**	**-3.5**
	comp=Z,4.2nm,0.6s,mb4.7						
KOLN	**Koldanda**	**55.53 276**	*e*P		**P**	**21 05 58.5**	**+0.2**
ABKAR	**Akbulak array**	**58.51 310**	*e*P		**P**	**21 06 17.3**	**-1.8**
	comp=Z,4.1nm,0.4s,mb4.8						
AKTK	**Aktyubinsk**	**58.88 312**	P		**P**	**21 06 20.1**	**-1.5**
AKTO	**Aktyubinsk**	**58.88 312**	P		**P**	**21 06 20.1**	**-1.5**
	comp=Z,1.2nm,0.5s,mb4.2,baz=51,slow=8.6,SNR=8.0						
AKTO	**Aktyubinsk**	**58.88 312**	P		**P**	**21 06 20.1**	**-1.5**
AKTO			pmax	pmax			
	comp=Z,1.0nm,0.5s,mb4.1						
ARCES	**ARCESS Array B**	**59.02 341**	P		**P**	**21 06 20.6**	**-1.8**
	comp=Z,3.3nm,1.0s,mb4.3,baz=49,slow=11,SNR=4.0						
ARCES	**ARCESS Array B**	**59.02 341**	P		**P**	**21 06 20.6**	**-1.7**
ARCES			pmax	pmax			
	comp=Z,3.0nm,1.0s						
KBL	**Kabul**	**61.47 291**	*e*P		**P**	**21 06 38.9**	**-0.7**
KBL			pmax	pmax			
	comp=Z,9.0nm,1.0s,mb4.8						
KBL	**Kabul**	**61.47 291**	*e*P		**P**	**21 06 38.9**	**-0.8**
	comp=Z,9.5nm,1.0s,mb4.9						
JOF	**Joensuu**	**62.27 333**	*e*P		**P**	**21 06 41.9**	**-2.6**
JOF			pmax	pmax			
	comp=Z,2.0nm,0.6s,mb4.4						
JOF	**Joensuu**	**62.27 333**	*e*p		**P**	**21 06 41.9**	**-2.6**
	comp=Z,2.0nm,0.6s,mb4.4						
SUMG	**Summit**	**62.48 3**	*i* P		**P**	**21 06 44.8**	**-1.0**
	comp=Z,11nm,0.7s,mb5.1						
KAF	**Kangasniemi**	**64.42 335**	*e*P		**P**	**21 06 56.7**	**-2.1**
KAF			pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.6						
KAF	**Kangasniemi**	**64.42 335**	*e*P		**P**	**21 06 56.7**	**-2.1**
	comp=Z,4.0nm,0.7s,mb4.6						
KAF	**Kangasniemi**	**64.42 335**	*e*p		**P**	**21 06 56.7**	**-2.1**
	comp=Z,4.0nm,0.7s,mb4.6						
CTA	**Charters Tower**	**64.98 185**	LR		LR	21 31 55.1	
	comp=Z,132nm,19.9s,MS4.1,baz=232,slow=33						
FINES	**FINESS Array B**	**65.01 334**	P		**P**	**21 07 00.6**	**-2.0**
	comp=Z,3.0nm,0.4s,mb4.7,baz=40,slow=6.7,SNR=49						
FINES	**FINESS Array B**	**65.01 334**	P		**P**	**21 07 00.6**	**-2.0**
FINES			pmax	pmax			
	comp=Z,3.0nm,0.4s						
OBN	**Obninsk**	**65.96 325⇑**	*e*P		**P**	**21 07 06.5**	**-2.3**
OBN			*e*			21 09 33.0	
OBN			*e*S		S	21 15 49.6	-2.7
OBN			pmax	pmax			
	comp=Z,9.0nm,0.8s,mb4.8						
OBN			MLR	MLR			
	comp=Z,100nm,17.0s,MS4.1						
WRA	**Warramunga Arr**	**66.49 197**	P		**P**	**21 07 14.1**	**+1.6**
	comp=Z,1.1nm,0.8s,mb3.9,baz=15,slow=6.6,SNR=5.1						
WRA	**Warramunga Arr**	**66.49 197**	P		**P**	**21 07 14.1**	**+1.6**
WRA			pmax	pmax			
	comp=Z,1.0nm,0.8s						
NB2	**NORSAR Subarra**	**69.40 340**	P		**P**	**21 07 28.9**	**-1.5**
	comp=Z,5.0nm,0.5s,mb4.7,baz=27,slow=6.5						
NOA	**NORSAR Array B**	**69.40 340**	P		**P**	**21 07 29.1**	**-1.3**
	comp=Z,4.2nm,0.5s,mb4.7,baz=28,slow=6.3,SNR=26						
NOA			LR	LR		21 46 59.2	
	comp=Z,19nm,18.2s,MS3.4,baz=10.0,slow=44						
NOA	**NORSAR Array B**	**69.40 340**	P		**P**	**21 07 29.1**	**-1.3**
NOA			pmax	pmax			
	comp=Z,4.0nm,0.5s						
NOA			MLR	MLR			
	comp=Z,19nm,18.2s						
ASAR	**Alice Springs**	**70.19 197**	P		**P**	**21 07 37.8**	**+2.2**
	comp=Z,0.7nm,0.8s,mb3.7,baz=12,slow=4.6,SNR=6.1						
ASAR	**Alice Springs**	**70.19 197**	P		**P**	**21 07 37.8**	**+2.2**
ASAR			pmax	pmax			
	comp=Z,1.0nm,0.8s						
KIV	**Kislovodsk**	**71.03 314**	*e*P		**P**	**21 07 41.0**	**+0.3**
KIV			pmax	pmax			
	comp=Z,20nm,0.9s,mb5.0						
KIV			MLR	MLR			
	comp=Z,76nm,18.0s,MS4.0						
KIV	**Kislovodsk**	**71.03 314**	*e*P		**P**	**21 07 40.1**	**-0.5**
	comp=Z,16nm,0.8s,mb5.0						
ZEI	**Tsey**	**71.23 312**	*e*P		**P**	**21 07 40.8**	**-1.1**
ZEI			pmax	pmax			
	comp=Z,8.0nm,0.4s,mb5.0						
DGRG	**David-gareji**	**71.36 310**	P		**P**	**21 07 43.3**	**+0.6**
MTA	**Mtatsminda**	**71.51 311**	P		**P**	**21 07 44.2**	**+0.6**
TBLG	**Delisi**	**71.51 311**	*e*P		**P**	**21 07 44.4**	**+0.8**
TBLG	**Delisi**	**71.51 311**	P		**P**	**21 07 44.4**	**+0.8**
KEH	**Kehvi**	**71.54 312**	P		**P**	**21 07 43.1**	**-0.7**
ONI	**Oni**	**71.59 312**	P		**P**	**21 07 45.4**	**+1.3**
AKASG	**Malin Array Be**	**72.22 326**	P		**P**	**21 07 46.2**	**-1.4**
	comp=Z,4.7nm,0.4s,mb4.8,baz=37,slow=6.3,SNR=22						
AKASG	**Malin Array Be**	**72.22 326**	P		**P**	**21 07 46.2**	**-1.5**
AKASG			pmax	pmax			
	comp=Z,5.0nm,0.4s						
AKASG	**Malin Array Be**	**72.22 326**	P		**P**	**21 07 46.2**	**-1.4**
GNI	**Garni**	**72.62 310**	*e*P		**P**	**21 07 50.1**	**-0.1**
GNI			pmax	pmax			
	comp=Z,18nm,1.2s						
GKP	**Gorka Klasztor**	**74.44 333**	*e*P		**P**	**21 07 59.7**	**-1.0**
SIM	**Simferopol'**	**74.50 319**	*e*P		**P**	**21 08 02.5**	**+1.3**
SIM			pmax	pmax			
	comp=Z,10.0nm,0.9s,mb4.8						
LVV	**L'vov**	**74.94 328**	*e*P		**P**	**21 08 00.6**	**-3.1**
KWP	**Kalwaria Pacla**	**75.59 328**	*e*P		**P**	**21 08 07.2**	**-0.2**
KWP	**Kalwaria Pacla**	**75.59 328**	⇓P		**P**	**21 08 07.1**	**-0.3**
KWP	**Kalwaria Pacla**	**75.59 328**	⇓*i*P		**P**	**21 08 07.1**	**-0.3**
LEOM	**Leova**	**75.93 323**	⇑P		**P**	**21 08 09.4**	**0.0**
LEOM	**Leova**	**75.93 323**	⇑*i*P		**P**	**21 08 09.4**	**0.0**
BUR08	**Bucovina Ar. S**	**76.25 326**	*e*P		**P**	**21 08 10.7**	**-0.5**
BURAR	**Bucovina Array**	**76.27 326**	⇑P		**P**	**21 08 10.7**	**-0.6**
BURAR	**Bucovina Array**	**76.27 326**	⇑*i*P		**P**	**21 08 10.7**	**-0.6**
STHS	**Stebnicka Huta**	**76.31 329**	*e*P		**P**	**21 08 12.2**	**+0.7**
STHS			pmax	pmax			
	comp=Z,6.0nm,0.8s,mb4.6						
STHS	**Stebnicka Huta**	**76.31 329**	*e*P		**P**	**21 08 12.2**	**+0.7**
	comp=Z,6.3nm,0.8s,mb4.6						
STHS	**Stebnicka Huta**	**76.31 329**	*e*P		**P**	**21 08 12.2**	**+0.7**
TESR		**76.57 324**	⇑P		**P**	**21 08 12.5**	**-0.6**
TESR		**76.57 324**	⇑*i*P		**P**	**21 08 12.5**	**-0.5**
CRVS	**Cervenica-Dubn**	**76.66 329**	*i* P		**P**	**21 08 13.0**	**-0.5**
CRVS			pmax	pmax			
	comp=Z,21nm,2.2s,mb4.7						
CRVS	**Cervenica-Dubn**	**76.66 329**	*i* P		**P**	**21 08 13.0**	**-0.5**
	comp=Z,21nm,2.2s,mb4.7						
CRVS	**Cervenica-Dubn**	**76.66 329**	*i* P		**P**	**21 08 13.0**	**-0.5**
TLCR		**76.70 322**	⇑P		**P**	**21 08 13.8**	**0.0**
TLCR		**76.70 322**	⇑*i*P		**P**	**21 08 13.8**	**0.0**
OKC	**Ostrava-Krasne**	**77.06 331**	*e*P		**P**	**21 08 15.6**	**-0.1**
OKC	**Ostrava-Krasne**	**77.06 331**	*e*P		**P**	**21 08 15.6**	**-0.1**
UPC	**Upice**	**77.20 333**	*e*P		**P**	**21 08 16.3**	**-0.2**
UPC	**Upice**	**77.20 333**	*e*P		**P**	**21 08 16.3**	**-0.2**
DPC	**Dobruska-Polom**	**77.23 332**	*e*P		**P**	**21 08 16.9**	**+0.2**
DPC	**Dobruska-Polom**	**77.23 332**	*e*P		**P**	**21 08 16.9**	**+0.2**
MORC	**Moravsky Berou**	**77.31 331**	*e*P		**P**	**21 08 16.2**	**-1.0**
MORC			pmax	pmax			
	comp=Z,12nm,1.1s,mb4.7						
MORC	**Moravsky Berou**	**77.31 331**	*e*P		**P**	**21 08 16.2**	**-0.9**
	comp=Z,12nm,1.1s,mb4.7						
MORC	**Moravsky Berou**	**77.31 331**	⇑*i*P		**P**	**21 08 16.8**	**-0.4**
KECS	**Kecovo**	**77.37 329**	*i* P		**P**	**21 08 17.5**	**0.0**
KECS			pmax	pmax			
	comp=Z,3.0nm,0.9s,mb4.2						
KECS	**Kecovo**	**77.37 329**	*i* P		**P**	**21 08 17.5**	**0.0**
	comp=Z,2.7nm,0.9s,mb4.2						
KECS	**Kecovo**	**77.37 329**	*i* P		**P**	**21 08 17.5**	**0.0**
CLL	**Collm**	**77.45 335**	⇑*i*P		**P**	**21 08 16.5**	**-1.4**
	comp=Z,10.0nm,1.0s,mb4.7						
TIRR	**Tirgusor**	**77.46 322**	⇓P		**P**	**21 08 16.7**	**-1.3**
TIRR	**Tirgusor**	**77.46 322**	⇓*i*P		**P**	**21 08 16.7**	**-1.3**
PVCC	**Panska Ves**	**77.65 333**	*e*P		**P**	**21 08 21.5**	**+2.5**
PVCC	**Panska Ves**	**77.65 333**	*e*P		**P**	**21 08 21.5**	**+2.5**
MLR	**Muntele Rosu**	**77.68 324**	⇓P		**P**	**21 08 20.2**	**+0.9**
MLR	**Muntele Rosu**	**77.68 324**	⇓*i*P		**P**	**21 08 20.2**	**+0.9**
DRGR		**77.93 327**	⇑P		**P**	**21 08 20.3**	**-0.3**
DRGR		**77.93 327**	⇑*i*P		**P**	**21 08 20.3**	**-0.3**
VYHS	**Vyhne**	**77.95 330**	*i* P		**P**	**21 08 21.0**	**+0.3**
VYHS			pmax	pmax			
	comp=Z,5.0nm,1.3s,mb4.3						
VYHS	**Vyhne**	**77.95 330**	*i* P		**P**	**21 08 21.0**	**+0.3**
	comp=Z,5.0nm,1.3s,mb4.3						
VYHS	**Vyhne**	**77.95 330**	*i* P		**P**	**21 08 21.0**	**+0.3**
VRAC	**Vranov**	**78.04 332**	⇓P		**P**	**21 08 21.5**	**+0.3**
VRAC	**Vranov**	**78.04 332**	⇓*i*P		**P**	**21 08 21.5**	**+0.3**
VOIR		**78.10 324**	⇑P		**P**	**21 08 22.3**	**+0.7**
VOIR		**78.10 324**	⇑*i*P		**P**	**21 08 22.3**	**+0.7**
PRU	**Pruhonice**	**78.12 333**	*e*P		**P**	**21 08 21.7**	**0.0**
PRU	**Pruhonice**	**78.12 333**	*e*P		**P**	**21 08 21.7**	**0.0**
TREC	**Trest**	**78.42 332**	*e*P		**P**	**21 08 22.9**	**-0.4**
TREC	**Trest**	**78.42 332**	*e*P		**P**	**21 08 22.9**	**-0.4**
NKC	**Novy Kostel**	**78.57 334**	*e*P		**P**	**21 08 18.2**	**-5.9**
BR131	**Keskin Array S**	**78.71 316**	*e*P		**P**	**21 08 25.8**	**+0.7**
	comp=Z,1.6nm,0.8s,mb4.0						
BRTR	**Keskin Array B**	**78.71 316**	P		**P**	**21 08 25.4**	**+0.3**
	comp=Z,2.5nm,1.1s,mb4.1,baz=50,slow=3.9,SNR=9.2						
BRTR	**Keskin Array B**	**78.71 316**	*e*P		**P**	**21 08 25.3**	**+0.2**
BRTR			pmax	pmax			
	comp=Z,3.0nm,1.0s						
ZST	**Bratislava**	**78.81 331**	*i* P		**P**	**21 08 26.1**	**+0.6**
ZST			pmax	pmax			
	comp=Z,10.0nm,1.4s,mb4.5						
ZST	**Bratislava**	**78.81 331**	*i* P		**P**	**21 08 26.1**	**+0.6**
	comp=Z,10.0nm,1.4s,mb4.5						
ZST	**Bratislava**	**78.81 331**	*i* P		**P**	**21 08 26.1**	**+0.6**
GZR	**Gura Zlata**	**79.06 326**	⇓P		**P**	**21 08 26.6**	**-0.3**
GZR	**Gura Zlata**	**79.06 326**	⇓*i*P		**P**	**21 08 26.6**	**-0.3**
KHC	**Kasperske Hory**	**79.18 333**	*e*P		**P**	**21 08 27.2**	**-0.3**
KHC	**Kasperske Hory**	**79.18 333**	*e*P		**P**	**21 08 27.2**	**-0.3**
BZS	**Buzias**	**79.33 327**	⇓P		**P**	**21 08 28.1**	**-0.2**
BZS	**Buzias**	**79.33 327**	⇓*i*P		**P**	**21 08 28.1**	**-0.2**
GRF	**Grafenberg Arr**	**79.42 335**	*e*P		**P**	**21 08 28.4**	**-0.4**
	comp=Z,14nm,1.4s,mb4.7						
GRF	**Grafenberg Arr**	**79.42 335**	*e*P		**P**	**21 08 28.4**	**-0.4**
GRF			pmax	pmax			
	comp=Z,14nm,1.4s,mb4.7						
CONA	**Conrad Observa**	**79.47 331**	⇑*i*P		**P**	**21 08 29.2**	**+0.1**
	comp=Z,10nm,1.5s,mb4.5						
TXAR	**Lajitas Array**	**79.48 59**	P		**P**	**21 08 29.1**	**-0.4**
	comp=Z,0.4nm,0.7s,mb3.5,baz=304,slow=4.9,SNR=3.7						
KBA	**Koelnbreinsper**	**81.05 332**	⇑*i*P		**P**	**21 08 36.5**	**-1.1**
	comp=Z,8.5nm,1.4s,mb4.5						
VTS	**Vitosha**	**81.19 324**	⇑P		**P**	**21 08 38.2**	**-0.2**
VTS	**Vitosha**	**81.19 324**	⇑*i*P		**P**	**21 08 38.2**	**-0.2**
CDF	**Champ du Feu**	**81.71 337**	*e*P		**P**	**21 08 42.0**	**+0.9**
	comp=Z,2.6nm,0.5s,mb4.1						
CDF	**Champ du Feu**	**81.71 337**	*e*P		**P**	**21 08 42.0**	**+0.9**
CDF			pmax	pmax			
	comp=Z,1.0nm,0.5s,mb4.0						
CDF	**Champ du Feu**	**81.71 337**	*e*P		**P**	**21 08 42.0**	**+0.9**
	comp=Z,1.3nm,0.5s,mb4.1						
HINF	**Hinteralfeld**	**82.37 337**	*e*P		**P**	**21 08 45.7**	**+1.1**
MMAI	**Mount Meron Ar**	**82.93 310**	P		**P**	**21 08 48.4**	**+0.7**
	comp=Z,0.7nm,0.4s,mb4.1,baz=57,slow=5.3,SNR=9.4						
MMAI			LR	LR		21 51 14.1	
	comp=Z,50nm,19.7s,MS3.9,baz=100,slow=40						
LDF	**La Druitiere**	**83.43 341**	*e*P		**P**	**21 08 50.7**	**+0.7**
	comp=Z,3.4nm,0.5s,mb4.4						
LDF	**La Druitiere**	**83.43 341**	*e*P		**P**	**21 08 50.7**	**+0.7**
LDF			pmax	pmax			
	comp=Z,2.0nm,0.5s,mb4.4						
LDF	**La Druitiere**	**83.43 341**	*e*P		**P**	**21 08 50.7**	**+0.7**
	comp=Z,1.7nm,0.5s,mb4.3						
LOR	**Lormes**	**83.69 338**	⇑*i*P		**P**	**21 08 51.3**	**-0.1**
	comp=Z,6.6nm,0.6s,mb4.7						
LOR	**Lormes**	**83.69 338**	⇑*i*P		**P**	**21 08 51.3**	**-0.1**
LOR			pmax	pmax			
	comp=Z,3.0nm,0.6s,mb4.6						
LOR	**Lormes**	**83.69 338**	⇑*i*P		**P**	**21 08 51.3**	**-0.1**
	comp=Z,3.3nm,0.6s,mb4.6						
GRR	**Gorron**	**83.79 342**	*e*P		**P**	**21 08 52.0**	**+0.2**
SSF	**Saint Saulge**	**83.97 338**	⇑*i*P		**P**	**21 08 53.8**	**+1.0**
	comp=Z,8.2nm,0.9s,mb4.5						
SSF	**Saint Saulge**	**83.97 338**	⇑*i*P		**P**	**21 08 53.8**	**+1.0**
SSF			pmax	pmax			
	comp=Z,4.0nm,0.9s,mb4.5						
SSF	**Saint Saulge**	**83.97 338**	⇑*i*P		**P**	**21 08 53.8**	**+1.0**
	comp=Z,4.1nm,0.9s,mb4.6						
AVF	**Avril sur Loir**	**84.26 338**	*e*P		**P**	**21 08 54.4**	**+0.1**
SMF	**Signal de Mont**	**84.27 338**	*e*P		**P**	**21 08 54.4**	**+0.1**
	comp=Z,5.0nm,0.6s,mb4.6						
SMF	**Signal de Mont**	**84.27 338**	*e*P		**P**	**21 08 54.4**	**+0.1**
SMF			pmax	pmax			
	comp=Z,3.0nm,0.6s,mb4.6						
SMF	**Signal de Mont**	**84.27 338**	*e*P		**P**	**21 08 54.4**	**+0.1**
	comp=Z,2.5nm

MIDW Midway 50.21 3 P P 21 14 06.6 -0.1
SBA Scott Base 56.04 183 P P 21 14 47.4 -0.1
CASY Casey 61.58 206 *eP* **P 21 15 24.4 -0.5**
3.2nm,1.1s,mb3.7
QSPA South Pole Qui 67.85 180 *eP* **P 21 16 04.4 +0.1**
2.3nm,0.6s,mb3.9
KSM Kuching 71.75 279 *eP* **P 21 16 27.9 -0.8**
PETK Petropavlovsk- 77.46 346 P **P 21 16 59.1 -0.7**
5.3nm,0.8s,mb4.0,baz=36,slow=7.9,SNR=3.9
NVAR Mina Array Bea 83.61 44 P **P 21 17 32.4 +0.3**
0.2nm,0.6s,mb2.9,baz=231,slow=6.9,SNR=3.6
CMAR Chiang Mai Arr 88.87 290 P **P 21 17 58.8 +1.1**
1.1nm,0.8s,mb3.7,baz=152,slow=2.8,SNR=6.4
TXAR Lajitas Array 89.61 58 P **P 21 18 01.3 +0.4**
0.5nm,0.8s,mb3.4,baz=235,slow=4.4,SNR=6.2
ARCES ARCESS Array B 130.24 349 PKP PKPdf 21 24 06.5 -2.0
0.9nm,0.6s,baz=76,slow=5.1,SNR=5.4
FINES FINESS Array B 136.84 342 PKP PKPdf 21 24 21.2 +0.1
0.7nm,0.7s,baz=77,slow=3.1,SNR=3.4
AKASG Malin Array Be 143.51 328 PKP PKPdf 21 24 30.1 -3.4
1.5nm,0.4s,baz=44,slow=3.9,SNR=14
BRTR Keskin Array B 146.48 309 PKPbc PKPbc 21 24 40.1 -1.3
1.0nm,0.6s,baz=128,slow=5.7,SNR=7.8
MMAI Mount Meron Ar 146.91 297 PKPbc PKPbc 21 24 42.4 -0.4
2.3nm,0.5s,baz=70,slow=7.4,SNR=7.3

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*ISCJB **07** 21:06:51.1±4.2,2.°12S±0.°05×120.°6E±0.°1, h4km±27km, mb3.7/9, Error ellipse: s-maj=19.9km s-min=8.4km az=171.2*
*IDC **07** 21:06:52.7±1.1,2.°17S×120.°56E, h0km, mb3.7/5, mb1 3.9/6, mb1mx3.6/21, mbtmp3.7/6, ML3.9/1, Error ellipse: s-maj=45.9km s-min=17.8km az=72.0*
*NEIC **07** 21:06:55.8±2.7,2.°22S×120.°52E, h23km±20km, mb3.9/5, Error ellipse: s-maj=16.7km s-min=5.8km az=68.0*
ISC 07 21:06:52.9±4.7,2.°16S±0.°05×120.°6E±0.°1, h2km±30km, n18, σ0.°71/19, mb3.7/9, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**2.96**	**197**	Pn	**Pn**	**21 07 40.1**	**-0.8**
18nm,0.3s,baz=14,slow=6.1,SNR=48							
KAPI				Sn	**Sn**	**21 08 18.0**	**+0.9**
18nm,0.3s,baz=37,slow=23,SNR=8.3							
KKM	**Kota Kinabalu**	**9.26**	**332**	*e*Pn	**Pn**	**21 09 08.3**	**+0.8**
FITZ	**Fitzroy Crossi**	**16.59**	**163**	Pn	**Pn**	**21 10 47.2**	**+0.4**
WRAB	**Tennant Creek**	**22.19**	**144**	*e*P	**P**	**21 11 50.7**	**+0.2**
6.7nm,0.9s,mb4.1							
WRA	**Warramunga Arr**	**22.19**	**144**	P	**P**	**21 11 49.6**	**-0.9**
2.1nm,0.8s,mb3.6,baz=319,slow=12,SNR=11							
ASAR	**Alice Springs**	**24.96**	**150**	P	**P**	**21 12 18.8**	**+1.0**
1.1nm,0.7s,mb3.5,baz=341,slow=14,SNR=8.7							
YHNB	**Yeheng**	**26.68**	**2**	P	**P**	**21 12 33.4**	**+0.1**
CTAO	**Charters Tower**	**30.74**	**127**	*e*P	**P**	**21 13 09.8**	**+0.2**
4.2nm,0.6s,mb4.5							
STKA	**Stephens Creek**	**35.56**	**148**	P	**P**	**21 13 53.0**	**+1.3**
3.6nm,1.0s,mb4.3,baz=301,slow=5.9,SNR=2.9							
STKA	**Stephens Creek**	**35.56**	**148**	*e*P	**P**	**21 13 51.6**	**-0.1**
1.2nm,1.0s,mb3.8							
ULN	**Ulaanbaatar**	**51.21**	**348**	*e*P	**P**	**21 15 57.6**	**0.0**
0.6nm,0.4s,mb3.9							
SONM	**Songino Array**	**51.32**	**348**	P	**P**	**21 15 58.7**	**+0.3**
0.2nm,0.4s,mb3.4,baz=173,slow=13,SNR=3.3							
MK31	**Makanchi Array**	**59.24**	**330**	P	**P**	**21 16 55.4**	**-0.2**
MKAR	**Makanchi Array**	**59.24**	**330**	P	**P**	**21 16 55.7**	**0.0**
0.3nm,0.6s,mb3.5,baz=117,slow=8.9,SNR=3.4							
KURK	**Kurchatov**	**63.69**	**332**	P	**P**	**21 17 25.3**	**-0.3**
CASY	**Casey**	**64.39**	**185**	*e*P	**P**	**21 17 27.9**	**-2.1**
MAW	**Mawson**	**76.17**	**199**	*e*P	**P**	**21 18 41.8**	**-0.4**
0.3nm,1.0s,mb3.2							
ARU	**Arti**	**76.76**	**330**	*e*P	**P**	**21 18 45.6**	**0.0**

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*CASC **07** 21:14:03.1±0.5, 16.°46N×95.°00W, h21km, MD4.1, mb4.3(NEIC)*
*NEIC **07** 21:14:29.0, 15.°42N×93.°24W, h102km, mb4.3/18, MD4.4(MEX), After MEX.*
*ISCJB **07** 21:14:30.5±0.3, 15.°55N±0.°04×93.°08W±0.°04, h95km±2km, mb4.2/17, Error ellipse: s-maj=7.8km s-min=3.8km az=38.5*
*MEX **07** 21:14:30.0±0.7, 15.°42N×93.°23W, h102km±6km, MD4.3*
*IDC **07** 21:14:31.1±2.3, 15.°51N×93.°01W, h101km±15km, mb3.8/6, mb1 4.1/10, mb1mx3.8/24, mbtmp3.8/10, MS3.4/1, Ms1 3.4/1, ms1mx2.5/28, Error ellipse: s-maj=55.9km s-min=12.7km az=26.0*
*BJI **07** 21:14:37.0, 15.°40N×93.°20W, h102km, mB4.9/2*
ISC 07 21:14:31.5±0.3, 15.°53N±0.°04×93.°13W±0.°03, h84km±2km, n221, σ0.°97/228, mb4.2/17, 76C-77D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.19**	**332**	*i* P	**Pn**	**21 14 43.7**	**0.0**
PCIG				*i* S	**Sn**	**21 14 53.8**	**+1.1**
THIG		**1.04**	**127**	*i* P	**Pn**	**21 14 49.8**	**-1.4**
THIG				*e*S	**Sn**	**21 15 05.6**	**-0.5**
TGIG		**1.24**	**0**	*i* P	**Pn**	**21 14 53.9**	**+0.3**
TGIG				*e*S	**Sn**	**21 15 11.5**	**+1.2**
SCX	**San Cristobal**	**1.28**	**22**	*i* P	**Pn**	**21 14 55.2**	**+1.0**
SCX				*i* S	**Sn**	**21 15 13.1**	**+1.7**
JAT	**Jato**	**1.88**	**130**	*e*P	**Pn**	**21 15 01.7**	**-0.2**
TP2	**Tecpan 2**	**2.17**	**110**	*e*P	**Pn**	**21 15 06.5**	**+0.8**
CMIG	**Matias Romero**	**2.29**	**313**	P	**Pn**	**21 15 07.3**	**-0.1**
38nm,0.3s,baz=125,slow=12,SNR=210							
CMIG				S	**Sn**	**21 15 35.5**	**+0.7**
143nm,0.3s,baz=312,slow=20,SNR=23							
FG6		**2.38**	**114**	*e*P	**Pn**	**21 15 09.8**	**+1.3**
FUG	**Fuego 3**	**2.46**	**116**	*e*P	**Pn**	**21 15 10.4**	**+0.8**
APG	**El Apazote**	**2.62**	**101**	P	**Pn**	**21 15 11.1**	**-0.7**
32nm,0.3s,baz=304,slow=11,SNR=25							
APG				S	**Sn**	**21 15 41.4**	**-1.4**
238nm,0.3s,baz=69,slow=14,SNR=28							
TUIG	**Tuzandepetl**	**2.78**	**334**	*i* P	**Pn**	**21 15 11.8**	**-2.1**
TUIG				*e*S	**Sn**	**21 15 44.7**	**-1.9**
NBG	**Las Nubes**	**2.85**	**109**	*e*P	**Pn**	**21 15 15.7**	**+0.9**
HUIG	**Huatulco**	**2.88**	**275**	*i* P	**Pn**	**21 15 12.6**	**-2.7**
HUIG				*i* S	**Sn**	**21 15 44.0**	**-5.0**
IXG	**Ixpaco**	**2.92**	**117**	*e*P	**Pn**	**21 15 17.4**	**+1.6**
MRL	**Marmol**	**3.35**	**98**	*e*P	**Pn**	**21 15 21.9**	**+0.3**
VHO	**Vista Hermosa**	**3.79**	**294**	*i* P	**Pn**	**21 15 25.3**	**-2.2**
VHO				*i* S	**Sn**	**21 16 07.7**	**-3.3**
SCIG	**Sabancuy**	**3.88**	**28**	*e*P	**Pn**	**21 15 28.4**	**-0.5**
SCIG				*i* S	**Sn**	**21 16 13.7**	**+0.3**
PNIG	**Pinotepa**	**4.88**	**281**	*i* P	**Pn**	**21 15 40.4**	**-2.1**
PNIG				*i* S	**Sn**	**21 16 32.1**	**-5.7**
TGUH	**Tegucigalpa,Un**	**5.85**	**104**	*e*Pn	**Pn**	**21 15 54.3**	**-1.4**
TGUH				Sn	**Sn**	**21 17 03.0**	**+1.6**
PPM	**Popocatepetl**	**6.32**	**305**	*i* P	**Pn**	**21 16 01.8**	**-0.3**
PPM				*e*S	**Sn**	**21 17 08.4**	**-4.4**
TEIG	**Tepich**	**6.56**	**44**	*e*Pn	**Pn**	**21 16 04.8**	**-0.6**
TEIG				*e*Sn	**Sn**	**21 17 15.6**	**-3.2**
JTS	**JuntasAbangare**	**9.52**	**122**	P	**Pn**	**21 16 45.2**	**-0.6**
1.4nm,0.3s,baz=314,slow=18,SNR=4.1							
BCIP	**Isla Barro Col**	**14.44**	**114**	Pn	**Pn**	**21 17 47.2**	**-4.6**
628A	**Black Gap, Mar**	**16.54**	**329**	⇓P	**Pn**	**21 18 20.0**	**+1.7**
baz=16							
627A	**Terlingua Ranc**	**16.77**	**327**	⇑P	**Pn**	**21 18 22.9**	**+1.8**
baz=16							
TXAR	**Lajitas Array**	**16.82**	**327**	P	**Pn**	**21 18 22.2**	**+0.4**
0.2nm,0.3s,baz=153,slow=12,SNR=28							
528A	**Cox Ranch, San**	**17.05**	**330**	⇓P	**Pn**	**21 18 25.6**	**+1.1**
baz=16							
626A	**Big Bend Ranch**	**17.25**	**326**	⇓P	**Pn**	**21 18 28.3**	**+1.3**
baz=16,SNR=14							
527A	**Woodward Ranch**	**17.44**	**328**	⇓P	**Pn**	**21 18 30.7**	**+1.3**
baz=16,SNR=5.7							
428A	**Kincaid Ranch,**	**17.48**	**332**	⇓P	**Pn**	**21 18 30.8**	**+1.0**
baz=16							
526A	**Mary Lane Ranc**	**17.62**	**327**	⇓P	**Pn**	**21 18 32.7**	**+1.2**
baz=17,SNR=11							
427A	**Hayter Ranch,**	**17.91**	**330**	⇑P	**Pn**	**21 18 35.4**	**+0.3**
baz=17							
426A	**McDonald Obser**	**18.08**	**328**	⇑P	**Pn**	**21 18 37.6**	**+0.5**
baz=17,SNR=5.4							
328A	**Wristen Ranch,**	**18.09**	**332**	⇓P	**Pn**	**21 18 37.3**	**+0.2**
baz=17,SNR=11							
326A	**Caldwell Ranch**	**18.58**	**330**	⇑P	**Pn**	**21 18 42.4**	**-0.7**
baz=18,SNR=9.5							
425A	**Indio Mountain**	**18.67**	**326**	⇑P	**Pn**	**21 18 44.0**	**-0.2**
baz=18							
227A	**Bennet, Jal**	**18.84**	**332**	⇑P	**Pn**	**21 18 45.8**	**-0.3**
baz=18							
MIAR	**Mount Ida**	**18.93**	**359**	*e*P	**Pn**	**21 18 44.5**	**-2.7**
11nm,0.9s							
UALR	**University of**	**19.17**	**2**	*e*P	**Pn**	**21 18 45.1**	**-5.0**
226A	**Malaga, Loving**	**19.25**	**331**	⇑P	**Pn**	**21 18 49.6**	**-1.5**
baz=18,SNR=6.3							
127A	**Arkansas Junct**	**19.43**	**333**	⇓P	**Pn**	**21 18 51.3**	**-1.8**
baz=18							
324A	**Moseley Ranch,**	**19.45**	**327**	⇓P	**Pn**	**21 18 51.7**	**-1.6**
baz=18							
GDL2	**Guadalupe Moun**	**19.49**	**330**	*e*P	**Pn**	**21 18 48.9**	**-4.9**
MNTX	**Cornudas Mount**	**19.59**	**327**	*e*P	**Pn**	**21 18 46.0**	**-9.0**
2.6nm,0.8s							
225A	**Deer Hill, Car**	**19.64**	**329**	⇑P	**Pn**	**21 18 54.6**	**-1.0**
baz=19							
126A	**Clayton Basin,**	**19.70**	**332**	⇑P	**Pn**	**21 18 54.0**	**-2.3**
baz=19,SNR=6.8							
WMOK	**Wichita Mounta**	**19.79**	**346**	*e*P	**Pn**	**21 18 53.7**	**-3.6**
3.1nm,0.6s							
GOGA	**Godfrey**	**19.83**	**24**	*e*P	**Pn**	**21 18 54.0**	**-3.9**
6.7nm,0.6s							
Z27A	**Tatum**	**19.92**	**335**	⇓P	**Pn**	**21 18 55.8**	**-3.1**
baz=19,SNR=31							
CPRX	**Cap Rock**	**19.96**	**333**	*e*P	**Pn**	**21 18 54.9**	**-4.4**
4.8nm,0.8s							
125A	**Gardner Draw,**	**20.01**	**330**	⇑P	**P**	**21 18 57.4**	**0.0**
baz=19,SNR=14							
Z26A	**Caprock**	**20.21**	**333**	⇓P	**P**	**21 18 59.2**	**-0.4**
baz=19,SNR=11							
MSTX	**Muleshoe**	**20.32**	**336**	⇑P	**P**	**21 19 00.3**	**-0.4**
baz=19							
Y27A	**Causey**	**20.39**	**335**	⇑P	**P**	**21 19 01.0**	**-0.6**
baz=19							
124A	**Stringfield Ra**	**20.43**	**329**	⇓P	**P**	**21 19 02.8**	**+0.8**
baz=19,SNR=5.7							
Z25A	**Roswell**	**20.55**	**331**	⇑P	**P**	**21 19 02.9**	**-0.4**
baz=20							
SWET	**Sewanee**	**20.64**	**17**	*e*P	**P**	**21 19 04.2**	**0.0**
Y26A	**Elida**	**20.70**	**334**	⇓P	**P**	**21 19 04.0**	**-0.9**
baz=20							
AMTX	**Amarillo**	**20.74**	**340**	*e*P	**P**	**21 19 05.1**	**-0.3**
26nm,0.5s							
Z24A	**Sheeppen Canyo**	**20.90**	**330**	⇑P	**P**	**21 19 07.8**	**+0.8**
baz=20,SNR=7.5							
WVT	**Waverly**	**21.05**	**12**	*e*P	**P**	**21 19 05.5**	**-3.1**
2.4nm,0.6s,mb3.7							
Y25A	**Mesa, Roswell**	**21.08**	**332**	⇓P	**P**	**21 19 08.8**	**-0.1**
baz=20,SNR=6.8							
X26A	**CR and CF Fran**	**21.24**	**335**	⇓P	**P**	**21 19 10.4**	**-0.2**
baz=20							
Z23A	**Rita Site, Whi**	**21.27**	**328**	⇓P	**P**	**21 19 12.6**	**+1.6**
baz=20							
W27A	**Bowe Ranch, En**	**21.39**	**337**	⇑P	**P**	**21 19 11.8**	**-0.5**
baz=20							
Y24A	**Capitan**	**21.42**	**331**	⇑P	**P**	**21 19 12.7**	**0.0**
baz=20,SNR=5.3							
319A	**Douglas**	**21.59**	**320**	⇓P	**P**	**21 19 16.9**	**+2.4**
baz=21							
Y23A	**Lovelace Mesa,**	**21.72**	**330**	⇓P	**P**	**21 19 17.0**	**+1.1**
baz=21							
LPM	**Los Pinos Moun**	**22.31**	**329**	*e*P	**P**	**21 19 23.0**	**+1.0**
V26A	**Tequesquite Ra**	**22.32**	**337**	⇑P	**P**	**21 19 21.7**	**-0.4**
baz=21							
SIUC	**Southern Illin**	**22.36**	**8**	P	**P**	**21 19 19.3**	**-3.2**
W24A	**Lazy 6 Ranch,**	**22.48**	**333**	⇑P	**P**	**21 19 23.6**	**-0.3**
baz=21,SNR=6.1							
CCM	**Cathedral Cave**	**22.50**	**4**	*e*P	**P**	**21 19 20.8**	**-3.2**
12nm,1.0s,mb4.2							
V25A	**Rancho No Teng**	**22.68**	**335**	⇑P	**P**	**21 19 25.4**	**-0.6**
baz=22,SNR=5.0							
ANMO	**Albuquerque**	**22.74**	**331**	P	**P**	**21 19 26.2**	**-0.4**
4.6nm,0.6s,mb4.0,baz=96,slow=5.1,SNR=7.7							
U26A	**Atchley Ranch,**	**22.83**	**337**	⇑P	**P**	**21 19 26.7**	**-0.8**
baz=22,SNR=7.5							
V24A	**Rampart Ranch,**	**22.86**	**334**	⇑P	**P**	**21 19 27.3**	**-0.5**
baz=22,SNR=5.8							
U25A	**Circle Dot Ran**	**23.09**	**336**	⇑P	**P**	**21 19 29.4**	**-0.6**
baz=22,SNR=12							
V23A	**Ortiz Mt. (NFS**	**23.27**	**332**	⇓P	**P**	**21 19 32.3**	**+0.6**
baz=22							
T25A	**Trinidad**	**23.74**	**337**	⇓P	**P**	**21 19 36.4**	**+0.4**
baz=23,SNR=9.8							
V22A	**San Miguel Ran**	**23.74**	**331**	⇑P	**P**	**21 19 36.7**	**+0.7**
baz=23							
U23A	**El Rito**	**23.76**	**333**	⇓P	**P**	**21 19 37.2**	**+1.0**
baz=23							
U22A	**Llaves**	**24.10**	**332**	⇓P	**P**	**21 19 39.9**	**+0.6**
baz=23							
S25A	**Robets Cordova**	**24.21**	**338**	⇓P	**P**	**21 19 41.0**	**+0.7**
baz=23,SNR=6.8							
T23A	**Casias Ranch,**	**24.29**	**334**	⇑P	**P**	**21 19 41.5**	**+0.5**
baz=23							
SDCO	**Great Sand Dun**	**24.68**	**336**	*e*P	**P**	**21 19 45.2**	**+0.6**
10nm,1.4s,mb4.1							
U20A	**Newcomb**	**24.88**	**329**	⇑P	**P**	**21 19 47.0**	**+0.6**
baz=24							
T21A	**Navajo Lake**	**24.91**	**332**	⇓P	**P**	**21 19 47.7**	**+1.0**
baz=24							
R24A	**Sanders Place,**	**24.96**	**337**	⇑P	**P**	**21 19 47.3**	**+0.3**
baz=24							
U19A	**Dine' College,**	**25.16**	**328**	⇓P	**P**	**21 19 49.4**	**+0.5**
baz=24							
S22A	**4UR Ranch, Cre**	**25.23**	**334**	⇑P	**P**	**21 19 50.0**	**+0.5**
baz=24,SNR=5.3							
MVCO	**Mesa Verde**	**25.54**	**331**	⇑P	**P**	**21 19 52.7**	**+0.4**
baz=24,SNR=5.5							
MVCO	**Mesa Verde**	**25.54**	**331**	*e*P	**P**	**21 19 53.2**	**+0.9**
20nm,0.8s,mb4.6							
T18A	**Mexican Hat**	**26.15**	**328**	⇑P	**P**	**21 19 58.6**	**+0.7**
baz=25							
P23A	**Jefferson**	**26.23**	**337**	⇑P	**P**	**21 19 59.0**	**+0.4**
baz=25							
PV01	**Paradox Valley**	**26.32**	**332**	*e*P	**P**	**21 20 00.1**	**+0.7**
791nm,1.1s							
MTP	**Monte Pirata**	**26.51**	**81**	P	**P**	**21 20 09.0**	**+7.7**
PV04	**Paradox Valley**	**26.68**	**332**	*e*P	**P**	**21 20 03.4**	**+0.7**
R19A	**Curley Farm, L**	**26.76**	**331**	⇓P	**P**	**21 20 03.7**	**+0.4**
baz=26							
BC3	**Big Chuckawall**	**27.06**	**316**	⇑P	**P**	**21 20 07.2**	**+1.2**
baz=26							
Q19A	**Hogan Spring (**	**27.30**	**332**	⇑P	**P**	**21 20 08.4**	**+0.2**
baz=26							
Q18A	**Rafter H Ranch**	**27.82**	**331**	⇑P	**P**	**21 20 13.2**	**+0.4**
baz=27							
V12A	**Nelson**	**27.95**	**320**	⇑P	**P**	**21 20 15.4**	**+1.4**
baz=27							
P18A	**Preston Nutter**	**28.29**	**331**	⇑P	**P**	**21 20 17.1**	**+0.1**
baz=27							
P17A	**Butcher Ranch,**	**28.40**	**331**	⇑P	**P**	**21 20 18.7**	**+0.7**
baz=27							
N20A	**Spence Gulch,**	**28.43**	**335**	⇑P	**P**	**21 20 17.7**	**-0.5**
baz=27,SNR=6.5							
S13A	**Holt Ranch, En**	**28.62**	**324**	⇑P	**P**	**21 20 21.3**	**+1.4**
baz=28							
O18A	**Roosevelt**	**28.70**	**332**	⇓P	**P**	**21 20 21.5**	**+0.9**
baz=28							
M21A	**Separation Pea**	**28.75**	**337**	⇓P	**P**	**21 20 21.7**	**+0.7**
baz=28							
M20A	**Sweetwater, Wa**	**28.96**	**336**	⇓P	**P**	**21 20 22.7**	**-0.3**
baz=28							
O17A	**Robinson Place**	**28.97**	**331**	⇑P	**P**	**21 20 23.5**	**+0.5**
baz=28							
L21A	**Rawlins**	**29.06**	**338**	⇑P	**P**	**21 20 23.3**	**-0.5**
baz=28							
N18A	**Larsen Ranch,**	**29.13**	**334**	⇑P	**P**	**21 20 24.5**	**0.0**
baz=28							
O16A	**Springville**	**29.34**	**330**	⇓P	**P**	**21 20 27.3**	**+1.0**
baz=28							
DAU	**Daniels Canyon**	**29.39**	**331**	*e*P	**P**	**21 20 27.8**	**+1.1**
M17A	**Scullys Gap (B**	**29.97**	**333**	⇓P	**P**	**21 20 31.8**	**0.0**
baz=29							
ISA	**Isabella**	**30.25**	**316**	P	**P**	**21 20 37.0**	**+2.6**
N15A	**Stansbury Isla**	**30.36**	**330**	⇓P	**P**	**21 20 35.8**	**+0.5**
baz=29							
SBC	**Santa Barbara**	**30.43**	**313**	⇑P	**P**	**21 20 38.1**	**+2.1**
baz=30							
S10A	**Tonopah Range,**	**30.44**	**322**	⇑P	**P**	**21 20 37.2**	**+1.1**
baz=30							
HWUT	**Hardware Ranch**	**30.48**	**332**	*e*P	**P**	**21 20 36.5**	**+0.2**
1.9nm,0.4s,mb4.1							
PDAR	**Pinedale Array**	**30.58**	**336**	P	**P**	**21 20 36.5**	**-0.7**
0.8nm,0.7s,mb3.5,baz=124,slow=9.8,SNR=5.6							
N14A	**Grayback Hills**	**30.65**	**329**	⇑P	**P**	**21 20 38.6**	**+0.7**
baz=30,SNR=5.7							
K18A	**Toltan Ranch,**	**30.67**	**335**	⇑P	**P**	**21 20 38.2**	**+0.2**
baz=30							
L16A	**Fish Haven**	**30.75**	**333**	⇑P	**P**	**21 20 38.6**	**-0.1**
baz=30							
VES	**Vestal, Richgr**	**30.76**	**316**	⇓P	**P**	**21 20 41.2**	**+2.3**
baz=30							
M15A	**Larsen Ranch,**	**30.77**	**331**	⇓P	**P**	**21 20 38.9**	**-0.1**
baz=30,SNR=5.2							
O12A	**Currie**	**31.01**	**327**	⇓P	**P**	**21 20 41.9**	**+0.8**
baz=30							
J18A	**Kendall Valley**	**31.14**	**336**	⇓P	**P**	**21 20 42.1**	**-0.1**
baz=30							
L15A	**Malad City**	**31.16**	**332**	⇓P	**P**	**21 20 42.5**	**+0.1**
baz=30							
HVU	**Hansel Valley**	**31.17**	**331**	*e*P	**P**	**21 20 43.6**	**+1.2**
7.7nm,1.0s,mb4.4							
M14A	**Sheep Mountain**	**31.23**	**330**	⇑P	**P**	**21 20 43.4**	**+0.4**
baz=30							
I18A	**Diamond G Ranc**	**31.47**	**336**	⇑P	**P**	**21 20 44.8**	**-0.3**
baz=30							
M13A	**Montello**	**31.52**	**329**	⇓P	**P**	**21 20 46.3**	**+0.8**
baz=30							
L14A	**Malta**	**31.59**	**331**	⇑P	**P**	**21 20 46.2**	**+0.1**
baz=30,SNR=10							
LOHW	**Long Hollow**	**31.71**	**335**	*e*P	**P**	**21 20 46.9**	**-0.2**
8.2nm,0.9s,mb4.5							
K15A	**Arbon**	**31.77**	**332**	⇓P	**P**	**21 20 47.8**	**+0.1**
baz=31							
NVAR	**Mina Array Bea**	**31.80**	**321**	P	**P**	**21 20 49.0**	**+1.0**
3.2nm,0.7s,mb4.1,baz=137,slow=9.2,SNR=24							
NVAR				pP	pP	21 21 12.2	+4.7
1.8nm,0.7s,baz=134,slow=8.7,SNR=6.7							
NVAR	**Mina Array Bea**	**31.80**	**321**	P	**P**	**21 20 49.0**	**+1.0**
NVAR				pP	pP	21 21 12.2	+4.7
J16A	**Bone**	**31.84**	**334**	⇑P	**P**	**21 20 48.4**	**+0.1**
baz=31							
M12A	**Wells**	**31.94**	**328**	⇑P	**P**	**21 20 49.9**	**+0.7**
baz=31							
K14A	**Jones Ranch, D**	**31.95**	**331**	⇓P	**P**	**21 20 49.8**	**+0.5**
baz=31							
J14A	**Carey**	**32.72**	**332**	⇑P	**P**	**21 20 56.1**	**+0.2**
baz=32							
G18A	**Lazy EL Ranch,**	**32.76**	**338**	⇑P	**P**	**21 20 55.6**	**-0.8**
baz=32							
M10A	**I.L. Ranch, Tu**	**32.86**	**327**	⇑P	**P**	**21 20 58.3**	**+1.0**
baz=32							
L11A	**Cat Creek Ranc**	**32.92**	**328**	⇓P	**P**	**21 20 57.8**	**0.0**
baz=32,SNR=5.8							
J13A	**Cove Ranch, Pi**	**33.08**	**331**	⇑P	**P**	**21 20 59.0**	**-0.1**
baz=32							
I14A	**Mackay**	**33.16**	**333**	⇓P	**P**	**21 21 00.7**	**+0.8**
baz=32							
L10A	**Juniper Basin**	**33.22**	**327**	⇓P	**P**	**21 21 01.1**	**+0.7**
baz=32							
HLID	**Hailey**	**33.31**	**331**	⇓P	**P**	**21 21 01.4**	**+0.2**
baz=32,SNR=6.6							
HLID	**Hailey**	**33.31**	**331**	*e*P	**P**	**21 21 01.2**	**0.0**
3.9nm,0.9s,mb4.2							
F18A	**Big Timber**	**33.32**	**339**	⇓P	**P**	**21 21 00.6**	**-0.7**
baz=32							
H15A	**Lima**	**33.37**	**334**	⇑P	**P**	**21 21 02.4**	**+0.7**
baz=32,SNR=6.6							
I13A	**Wildhorse Cree**	**33.45**	**332**	⇑P	**P**	**21 21 03.1**	**+0.7**
baz=32,SNR=9.7							
G16A	**Moss Hill, Enn**	**33.53**	**336**	⇑P	**P**	**21 21 03.5**	**+0.5**
baz=32							
F17A	**Fitzpatrick Pl**	**33.66**	**338**	⇑P	**P**	**21 21 04.3**	**+0.1**
baz=32							
H14A	**Leadore**	**33.67**	**334**	⇑P	**P**	**21 21 04.9**	**+0.6**
baz=33,SNR=8.6							
G15A	**Dillon**	**33.75**	**335**	⇑P	**P**	**21 21 05.6**	**+0.7**
baz=33							
BOZ	**Bozeman (W)**	**33.81**	**336**	⇑P	**P**	**21 21 05.0**	**-0.4**
baz=33							
I12A	**Atlanta**	**33.83**	**331**	⇓P	**P**	**21 21 05.9**	**+0.3**
baz=33,SNR=12							
MFID	**Camas Ranch**	**33.87**	**330**	⇓P	**P**	**21 21 07.2**	**+1.1**
baz=33							
K10A	**MacKenzie Ranc**	**33.93**	**328**	⇓P	**P**	**21 21 07.8**	**+1.2**
baz=33							
E18A	**Harlowton**	**33.97**	**339**	⇓P	**P**	**21 21 06.1**	**-0.7**
baz=33							
H13A	**Challis**	**34.02**	**333**	⇓P	**P**	**21 21 07.6**	**+0.3**
baz=33							
LRM	**Limekiln Ridge**	**34.27**	**336**	*e*P	**P**	**21 21 09.7**	**+0.2**
H12A	**Diamond D Ranc**	**34.28**	**332**	⇑P	**P**	**21 21 09.6**	**0.0**
baz=33,SNR=14							
F15A	**Butte**	**34.31**	**336**	⇓P	**P**	**21 21 09.3**	**-0.5**
baz=33,SNR=6.6							
I11A	**Placerville**	**34.31**	**330**	⇑P	**P**	**21 21 10.4**	**+0.6**
baz=33							
G13A	**Cobalt**	**34.43**	**333**	⇑P	**P**	**21 21 10.5**	**-0.3**
baz=33				

DLBC	Dease Lake	50.82	336	*e*P	P	21 23 23.5	+0.3
INK	Inuvik	58.67	344	P	P	21 24 17.4	-2.3
	11nm,1.1s,mb4.8,baz=134,slow=7.6,SNR=7.7						
INK	Inuvik	58.67	344	*e*P	P	21 24 18.3	-1.5
	7.1nm,1.1s,mb4.6						
TRF	Thorofare Moun	61.79	335	*e*P	P	21 24 39.6	-1.5
	10nm,1.0s,mb4.8						
COLD	Coldfoot	63.31	339	*e*P	P	21 24 49.8	-1.4
	5.4nm,1.2s,mb4.3						
ARCES	ARCESS Array B	85.03	18	P	P	21 26 55.3	-2.1
	1.3nm,0.8s,mb3.9,baz=289,slow=3.7,SNR=6.4						
TIXI	Tiksi	88.54	348	*e*P	P	21 27 11.0	-3.4
	2.0nm,0.5s,mb4.4						
MKAR	Makanchi Array	117.83	4	PKP	PKPdf	21 33 04.8	-3.5
	0.3nm,0.7s,baz=282,slow=1.9,SNR=3.6						
BJI	Beijing	118.35	335	PKP	PKPdf	21 33 13.7	+4.2
BJI				LR	LR		
	comp=N,130nm,18.4s						
BJI				LR	LR		
	comp=E,110nm,16.8s						
BJI				LR	LR		
	comp=Z,52nm,22.4s						
HHC	Hu-ho-hao-te	119.41	339	*e*PKP	PKPdf	21 33 15.1	+3.6
HHC				AMB	AMB		
	comp=Z,83nm,9.3s						
LZH	Lanzhou	126.21	343	*e*PKP	PKPdf	21 33 32.0	+7.3
CD2	Chengdu	131.05	341	PKP	PKPdf	21 33 33.3	-0.6
CMAR	Chiang Mai Arr	144.19	340	PKP	PKPdf	21 33 54.2	-4.3
	comp=Z,0.7nm,0.7s,baz=343,slow=4.3,SNR=5.2						

IDC 07 21:16:31.7±2.0, 14°.50N×88°.68W, h0km, mb3.6/3, mb1 4.1/4, mb1mx3.7/19, mbtmp3.7/4, Error ellipse: s-maj=52.4km s-min=25.6km az=30.0, Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APG	El Apazote	1.80	286	Pg	Pg	21 17 05.0	-1.1
	34nm,0.3s,baz=145,slow=19,SNR=2.3						
JTS	JuntasAbangare	5.55	139	Pn	Pn	21 17 55.8	+0.2
	3.4nm,0.3s,baz=300,slow=20,SNR=5.9						
TXAR	Lajitas Array	20.24	319	P	P	21 21 08.6	0.0
	0.6nm,0.6s,baz=153,slow=12,SNR=5.6						
NVAR	Mina Array Bea	35.38	318	P	P	21 23 28.3	-0.8
	0.8nm,0.3s,baz=138,slow=8.5,SNR=12						
YKA	Yellowknife Ar	51.33	345	P	P	21 25 38.5	+1.0
	0.6nm,0.5s,baz=135,slow=7.2,SNR=4.5						

*MOS **07** 21:17:36.9±1.2, 45°.50N×151°.71E, h23km, mb4.3/4, Error ellipse: s-maj=27.1km s-min=20.9km az=7.9*
*ISCJB **07** 21:17:38.8±1.3, 45°.5N±0°.2×151°.7E±0°.2, h33km, mb3.8/7, MS3.4/2, Error ellipse: s-maj=27.4km s-min=15.4km az=144.8*
*IDC **07** 21:17:43.0±9.3, 45°.49N×151°.59E, h52km±72km, mb3.5/7, mb1 3.6/9, mb1mx3.4/25, mbtmp3.5/9, ML3.7/2, MS3.4/2, Ms1 3.4/2, ms1mx2.5/35, Error ellipse: s-maj=72.7km s-min=26.7km az=84.0*

ISC 07 21:17:41.3±1.3, 45°.5N±0°.2×151°.6E±0°.2, h35km, n19, σ1§06/17, mb3.8/7, MS3.4/2, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.61	266	*e*PN	Pn	21 18 19.5	-1.5
KUR				pmax	pmax		
	comp=Z,90nm,0.3s						
ASAJ	Asahikawa	6.52	261	P	Pn	21 19 16.9	+2.2
	comp=Z,1.7nm,0.3s,baz=79,slow=14,SNR=12						
ASAJ	Asahikawa	6.52	261	PN	Pn	21 19 16.9	+2.3
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KSRS	Korea Array	19.39	254	P	Pn	21 22 04.8	-0.6
	comp=Z,0.2nm,0.3s,baz=62,slow=10,SNR=4.7						
MKAR	Makanchi Array	46.57	298	P	P	21 26 05.7	+0.3
	comp=Z,0.3nm,0.7s,mb3.3,baz=71,slow=7.5,SNR=5.3						
MKAR				LR	LR	21 46 41.9	
	comp=Z,33nm,18.8s,MS3.3,baz=279,slow=37						
KURK	Kurchatov	47.17	304	P	P	21 26 10.1	+0.1
	comp=Z,0.4nm,0.6s,mb3.5,baz=69,slow=8.8,SNR=2.3						
AKTO	Aktyubinsk	58.77	312	LR	LR	21 55 18.5	
	comp=Z,42nm,19.5s,MS3.6,baz=240,slow=38						
FINES	FINESS Array B	64.72	334	P	P	21 28 14.5	-0.9
	comp=Z,4.0nm,1.0s,mb4.4,baz=27,slow=13,SNR=5.3						
FINES	FINESS Array B	64.72	334	P	P	21 28 14.5	-0.9
FINES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
WRA	Warramunga Arr	66.96	198	P	P	21 28 30.1	-0.1
	comp=Z,0.4nm,0.6s,mb3.6,baz=15,slow=5.9,SNR=3.5						
WRA				pP	pP	21 28 43.7	+2.8
	comp=Z,0.7nm,0.8s,baz=15,slow=6.7,SNR=3.3						
WRA	Warramunga Arr	66.96	198	P	P	21 28 30.1	-0.1
WRA				*PP	pP	21 28 43.7	+2.7
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NB2	NORSAR Subarra	69.08	341	P	P	21 28 43.7	+0.6
	comp=Z,0.8nm,0.6s,mb3.8,baz=27,slow=6.5						
NOA	NORSAR Array B	69.08	341	P	P	21 28 43.8	+0.7
	comp=Z,0.9nm,0.6s,mb3.9,baz=28,slow=6.4,SNR=4.2						
NOA	NORSAR Array B	69.08	341	P	P	21 28 43.8	+0.7
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	Alice Springs	70.66	197	pP	pP	21 29 07.5	+3.5
	comp=Z,0.8nm,0.8s,baz=4.8,slow=4.7,SNR=5.2						
AKASG	Malin Array Be	72.00	326	P	P	21 28 59.9	-1.1
	comp=Z,0.6nm,0.4s,mb3.9,baz=34,slow=6.1,SNR=3.4						
AKASG	Malin Array Be	72.00	326	P	P	21 28 59.9	-1.1
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BRTR	Keskin Array B	78.56	316	P	P	21 29 40.4	+1.3
	comp=Z,1.1nm,0.9s,mb3.8,baz=99,slow=6.4,SNR=5.1						
BRTR	Keskin Array B	78.56	316	P	P	21 29 40.4	+1.4
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						

*IDC **07** 21:34:23.2±2.1, 1°.52N×126°.18E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.4/19, mbtmp3.5/3, MS3.4/1, Ms1 3.4/1, ms1mx2.2/20, Error ellipse: s-maj=185.8km s-min=25.9km az=65.0*
*DJA **07** 21:34:26, 0°.19N×126°.19E, h21km, MLv3.4/3*
*ISCJB **07** 21:34:28.5±1.9, 1°.7N±0°.2×126°.6E±0°.1, h60km±15km, mb3.5/3, Error ellipse: s-maj=36.3km s-min=10.1km az=22.8*

ISC 07 21:34:29.6±2.0, 1°.7N±0°.2×126°.6E±0°.1, h52km±17km, n7, σ0§29/7, mb3.5/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.17	139	P	Pn	21 34 49.8	+0.1
TNTI				S	Sn	21 35 04.6	0.0
MNI	Manado	1.77	263	P	Pn	21 34 57.8	-0.1
MNI				S	Sn	21 35 19.3	0.0
KMSI	Cibinong	2.83	248	P	Px	21 35 00.8	
FITZ	Fitzroy Crossi	19.66	183	LR	LR	21 47 04.3	
	comp=Z,112nm,19.4s,baz=359,slow=39						
WRA	Warramunga Arr	22.77	161	P	P	21 39 27.4	-0.4
	1.5nm,0.6s,mb3.6,baz=338,slow=11,SNR=11						
ASAR	Alice Springs	26.16	165	P	P	21 39 59.6	+0.4
	0.5nm,0.5s,mb3.3,baz=354,slow=16,SNR=7.7						
MKAR	Makanchi Array	59.17	326	P	P	21 44 25.2	0.0
	0.2nm,0.4s,mb3.5,baz=120,slow=7.7,SNR=5.1						

*ISCJB **07** 21:38:49.8±1.8, 36°.10N±0°.06×21°.83E±0°.07, h0km±11km, Error ellipse: s-maj=12.5km s-min=7.5km az=41.7*
*ATH **07** 21:38:51.2, 36°.13N×21°.83E, h8km±1km, MD3.6/11*
*THE **07** 21:38:51.0, 36°.10N×21°.75E, h0km±8km, ML3.6/2, Error ellipse: s-maj=15.6km s-min=2.3km az=249.0*
*NEIC **07** 21:38:51.2, 36°.13N×21°.83E, h8km, MD3.6(ATH), ML3.6(THE), After ATH.*
*CSEM **07** 21:38:52.2±0.8, 36°.14N×21°.89E, h2km, MD3.6, Error ellipse: s-maj=16.4km s-min=9.5km az=40.0*

ISC 07 21:38:49.8±2.0, 36°.07N±0°.07×21°.79E±0°.08, h3km±11km, n49, σ1§26/61, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.82	358	*e*PB	Pg	21 39 05.8	+0.2
PYL				*e*SB	Sg	21 39 16.6	+0.3
PYL	PYLOS	0.82	358	P	Pg	21 39 05.4	-0.2
PYL	PYLOS	0.82	358	P	Pg	21 39 05.4	-0.2
PYL	PYLOS	0.82	358	*e*Pb	Pg	21 39 05.8	+0.2
PYL				*e*Sb	Sg	21 39 16.6	+0.3
KYTH	Kithira	1.03	78	*e*Pb	Pg	21 39 10.1	+0.5
KYTH	Kithira	1.03	78	*e*PB	Pg	21 39 10.1	+0.5
KYTH	Kithira	1.03	78	*e*Pb	Pg	21 39 10.1	+0.5
ITM	Ithomi	1.11	6	*e*Pn	Pg	21 39 11.3	+0.1
ITM				S	Sg	21 39 27.4	+1.8
ITM	Ithomi	1.11	6	*e*PN	Pg	21 39 11.3	+0.1
ITM	Ithomi	1.11	6	P	Pg	21 39 10.8	-0.4
ITM				S	Sg	21 39 27.4	+1.8
ITM	Ithomi	1.11	6	P	Pg	21 39 10.8	-0.4
ITM				S	Sg	21 39 27.4	+1.8
VLI	Veliai	1.13	55	*e*Pg	Pg	21 39 11.1	-0.4
VLI				*e*Sb	Sg	21 39 26.5	+0.3
VLI	Veliai	1.13	55	*e*PG	Pg	21 39 11.1	-0.4
VLI				*e*SB	Sg	21 39 26.5	+0.3
VLI	Veliai	1.13	55	*e*Pg	Pg	21 39 11.1	-0.4
VLI				*e*Sb	Sg	21 39 26.5	+0.3
VLX	Vlachokerasia	1.38	20	*e*PG	Pn	21 39 15.6	-0.3
VLX	Vlachokerasia	1.38	20	P	Pn	21 39 15.5	-0.4
VLX				S	Sg	21 39 36.5	+2.2
VLX	Vlachokerasia	1.38	20	P	Pn	21 39 15.5	-0.4
VLX				S	Sg	21 39 36.5	+2.2
DID	Didima	1.85	39	*e*PN	Pn	21 39 23.7	+1.4
DID	Didima	1.85	39	P	Pn	21 39 23.7	+1.4
DID				S	Sg	21 39 47.8	-1.4
DID	Didima	1.85	39	P	Pn	21 39 23.7	+1.4
DID				S	Sg	21 39 47.8	-1.4
KARN	Karanos	1.86	110	P	Pn	21 39 23.8	+1.4
KARN	Karanos	1.86	110	P	Pn	21 39 23.8	+1.4
GUR	Goura	1.92	13	*e*PN	Pb	21 39 25.1	-0.2
GUR	Goura	1.92	13	P	Pb	21 39 25.0	-0.3
GUR	Goura	1.92	13	*e*Pn	Pb	21 39 25.1	-0.2
RLS	Riolos of Patr	2.00	353	*e*Pn	Pb	21 39 27.0	+0.2
RLS	Riolos of Patr	2.00	353	*e*PN	Pb	21 39 27.0	+0.2
RLS	Riolos of Patr	2.00	353	*e*Pn	Pb	21 39 27.0	+0.2
LTK	Loutraki	2.17	26	*e*PN	Pb	21 39 28.4	-1.2
LTK	Loutraki	2.17	26	*e*Pn	Pb	21 39 28.4	-1.2
VLS	Valsamata	2.31	336	*e*Pn	Pb	21 39 31.3	-0.8
VLS	Valsamata	2.31	336	*e*PN	Pb	21 39 31.2	-0.8
VLS	Valsamata	2.31	336	*e*Pn	Pb	21 39 31.3	-0.8
EFP	Efpalio	2.36	2	*e*PN	Pb	21 39 31.8	-1.0
EFP	Efpalio	2.36	2	*e*Pn	Pb	21 39 31.8	-1.0
VLY	Voula,Athens	2.40	42	*e*Pn	Pb	21 39 32.3	-1.3
VLY	Voula,Athens	2.40	42	*e*PN	Pb	21 39 32.3	-1.3
VLY	Voula,Athens	2.40	42	*e*Pn	Pb	21 39 32.3	-1.3
LKR	Lokris	2.75	20	*e*Pn	Pb	21 39 37.6	-2.0
LKR	Lokris	2.75	20	*e*PN	Pb	21 39 37.6	-2.0
LKR	Lokris	2.75	20	*e*Pn	Pb	21 39 37.6	-2.0
EVR	Evrytania	2.84	0	*e*Pn	Pb	21 39 38.9	-2.2
EVR	Evrytania	2.84	0	*e*PN	Pb	21 39 38.9	-2.2
EVR	Evrytania	2.84	0	*e*Pn	Pb	21 39 38.9	-2.2
THL	Klokotos Trika	3.49	3	*e*PN	Pn	21 39 47.9	+3.0
THL	Klokotos Trika	3.49	3	*e*Pn	Pn	21 39 47.9	+3.0
JAN	Janina	3.66	349	*e*Pn	Pn	21 39 49.3	+2.1
JAN	Janina	3.66	349	*e*PN	Pn	21 39 49.3	+2.1
JAN	Janina	3.66	349	*e*Pn	Pn	21 39 49.3	+2.1

*ISCJB **07** 21:39:24.4±0.3, 58°.12S±0°.06×22°.1W±0°.1, h10km, mb5.1/24, MS4.5/23, Error ellipse: s-maj=9.9km s-min=7.9km az=33.1*
*IDC **07** 21:39:24.6±0.5, 58°.09S×22°.03W, h0km, mb4.9/14, mb1 5.0/14, mb1mx4.8/18, mbtmp4.9/14, MS4.2/15, Ms1 4.2/15, ms1mx4.1/19, Error ellipse: s-maj=19.9km s-min=13.6km az=28.0*
*BJI **07** 21:39:24.9, 58°.10S×22°.10W, h10km, mB5.2/14, Ms5.4/18, Ms7 5.0/19*
*NEIC **07** 21:39:26.0±0.2, 58°.07S×22°.15W, h10km, mb5.3/19, Error ellipse: s-maj=7.9km s-min=6.4km az=194.0*
*GCMT **07** 21:39:28.2±0.3, 58°.42S×21°.77W, h12km, MW5.0, Moment Tensor Solution. s35,c46; s73,c112; Moment tensor: Scale 10^16^Nm; M_{rr}2.50±.16; $M_{\theta\theta}$-5.04±.13; $M_{\phi\phi}$2.54±.16; $M_{r\theta}$-0.66±.39; $M_{\theta\phi}$2.41±.13; $M_{\phi r}$-0.47±.51; Best double couple: $M_0$4.70000×10^16^ NP1:ϕ_s148.00000°, δ66.00000°, λ160.00000°. NP2:ϕ_s246.00000°, δ72.00000°, λ25.00000°. Principal axes: T 3.6100, Plg30.0000°, Azm108.0000°; N 2.1600, Plg60.0000°, Azm280.0000°; P -5.7700, Plg3.0000°, Azm16.0000°; Data Used: II IC IU G CN.*

ISC 07 21:39:26.2±0.3, 58°.14S±0°.06×22°.1W±0°.1, h10km, n111, σ1§13/52, mb5.2/23, MS4.5/23, 2D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	13.84	161	*e*Pn	Pn	21 42 39.3	-2.8
VNA1				*e*		21 56 31.7	
MAIT	Maitri	18.94	145	*e*P	Pn	21 43 45.6	-1.8
MAIT				*e*S	Sn	21 47 11.3	-7.8
PMSA	Palmer Station	20.78	234	P	P	21 44 08.2	+1.3
	22nm,1.0s,baz=358,slow=6.3,SNR=3.0						
PMSA				LR	LR	21 50 42.1	
	comp=Z,848nm,19.1s,MS4.1,baz=350,slow=32						
PMSA	Palmer Station	20.78	234	*e*P	P	21 44 08.2	+1.3
TRIS	Tristan da Cun	22.04	21	P	P	21 44 20.7	0.0
USHA	Ushuaia	25.41	257	P	P	21 44 54.4	+0.9
	24nm,0.8s,mb4.8,baz=92,slow=11,SNR=9.6						
USHA				LR	LR	21 52 24.9	
	comp=Z,1μm,21.0s,MS4.3,baz=76,slow=31						
SYO	Syowa Base	28.17	138	‖*e*P	P	21 45 17.0	-1.2
SYO	Syowa Base	28.17	138	‖*e*P	P	21 45 21.4	+3.2
QSPA	South Pole Qui	32.10	180	P	P	21 45 53.8	+1.0
	43nm,1.0s,mb5.2,baz=205,slow=4.9,SNR=44						
QSPA	South Pole Qui	32.10	180	*e*P	P	21 45 53.4	+0.7
	61nm,0.9s,mb5.4						
QSPA				*e*		21 46 46.2	
TRQA	Tornquist	32.69	290	*e*P	P	21 45 57.6	-0.8
	34nm,1.4s,mb5.1						
PLCA	Paso Flores	35.09	278	P	P	21 46 18.2	-0.9
	62nm,1.0s,mb5.5,baz=144,slow=8.0,SNR=46						
PLCA				LR	LR	22 00 50.2	
	comp=Z,346nm,18.1s,MS4.2,baz=345,slow=37						
PLCA	Paso Flores	35.09	278	*e*P	P	21 46 18.2	-1.0
	56nm,0.9s,mb5.5						
MAW	Mawson	36.78	140	*e*P	P	21 46 32.4	-0.9
	14nm,1.1s,mb4.7						
MAW				*e*		21 48 54.2	
MAW	Mawson	36.78	140	P	P	21 46 33.8	+0.5
	18nm,1.1s,mb4.8,baz=243,slow=9.5,SNR=19						
MAW				PcP	PcP	21 48 56.3	+1.1
	7.2nm,0.9s,baz=236,slow=3.3,SNR=4.9						
MAW				LR	LR	21 59 41.4	
	comp=Z,345nm,19.1s,MS4.2,baz=253,slow=33						
MAW	Mawson	36.78	140	*e*P	P	21 46 33.5	+0.2
	6.9nm,1.2s,mb4.4						
MAW				*e*PcP	PcP	21 48 55.3	+0.2
SPB	Sao Paulo	39.01	321	*e*P	P	21 46 51.2	-1.4
	59nm,1.4s,mb5.1						
CPUP	Villa Florida	40.30	307	P	P	21 47 03.9	+0.5
	19nm,0.8s,mb4.9,baz=130,slow=7.3,SNR=40						
CPUP				LR	LR	22 00 49.8	
	comp=Z,237nm,19.9s,MS4.0,baz=138,slow=32						
CPUP	Villa Florida	40.30	307	*e*P	P	21 47 02.8	-0.6
	76nm,0.8s,mb5.5						
CFAA	Coronel Fontan	40.93	290	P	P	21 47 06.7	-1.8
	1.6nm,0.6s,baz=153,slow=7.5,SNR=27						
CFAA				LR	LR	22 03 53.2	
	comp=Z,33nm,19.7s,baz=157,slow=36						
CFAA	Coronel Fontan	40.93	290	P	P	21 47 06.7	-1.8
CFAA				LR	LR	22 03 53.1	
BOSA	Boshof	43.95	69	P	P	21 47 32.8	-0.3
	13nm,0.8s,mb4.7,baz=196,slow=9.0,SNR=14						
BOSA				LR	LR	22 01 58.6	
	comp=Z,239nm,19.7s,MS4.1,baz=219,slow=31						
BOSA	Boshof	43.95	69	*e*P	P	21 47 33.5	+0.3
	73nm,1.6s,mb5.2						
SBA	Scott Base	44.15	183	*e*P	P	21 47 36.1	+1.9
	41nm,1.1s,mb5.1						
SBA				*e*PcP	PcP	21 49 19.4	+0.6
LCO	Las Campanas	44.27	290	*e*P	P	21 47 35.4	-0.2
	112nm,1.7s,mb5.3						
LBTB	Lobatse	47.12	66	*e*P	P	21 47 58.4	+0.1
	36nm,1.4s,mb5.1						
TSUM	Tsumeb	48.47	54	*e*P	P	21 48 09.3	+0.5
	88nm,2.5s,mb5.3						
CASY	Casey	50.95	157	*e*P	P	21 48 27.4	+0.4
CASY	Casey	50.95	157	*e*P	P	21 48 27.7	+0.7
	50nm,1.1s,mb5.4						
CASY				*e*PcP	PcP	21 49 41.3	-1.8
LPAZ	La Paz	53.86	301	P	P	21 48 51.3	+2.1
	50nm,0.8s,mb5.5,baz=147,slow=6.0,SNR=189						
LPAZ				LR	LR	22 09 28.9	
	comp=Z,142nm,18.1s,MS4.1,baz=301,slow=34						
LPAZ	La Paz	53.86	301	*e*P	P	21 48 50.5	+1.3
	317nm,1.5s,mb6.0						
LSZ	Lusaka	56.69	63	*e*P	P	21 49 09.5	-0.2
	12nm,0.9s,mb4.9						
NNA	Nana	61.68	295	*e*P	P	21 49 44.3	0.0
	139nm,1.4s,mb5.9						
ABPO	Ambohimpanom	63.13	83	*e*P	P	21 49 54.3	+0.4
DBIC	Dimbokro	66.08	19	P	P	21 50 13.6	+0.5
	5.4nm,0.9s,mb4.6,baz=238,slow=12,SNR=5.5						
DBIC				LR	LR	22 12 00.6	
	comp=Z,443nm,21.8s,MS4.6,baz=163,slow=30						
DBIC	Dimbokro	66.08	19	*e*P	P	21 50 13.2	+0.1
	3.1nm,0.5s,mb4.6						
OTAV	Otavalo	73.13	300	*e*P	P	21 50 58.1	+1.4
KMBO	Kilima Mbogo	73.32	64	LR	LR	22 21 24.6	
	comp=Z,287nm,18.6s,MS4.6,baz=180,slow=34						
KMBO	Kilima Mbogo	73.32	64	*e*P	P	21 51 01.6	+3.8
ROSC	El Rosal	75.39	305	P	P	21 51 10.7	+0.9
	3.0nm,0.3s,mb4.7,baz=276,slow=22,SNR=8.3						
ROSC	El Rosal	75.39	305	*e*P	P	21 51 09.2	-0.7
SDV	Santo Domingo	77.48	311	*e*P	P	21 51 19.5	-2.2
TAM	Tamanrasset	83.84	25	*e*P	P	21 51 56.1	+0.6
	7.2nm,1.1s,mb4.7						
SJG	San Juan	84.23	318	LR	LR	22 27 11.0	
	comp=Z,102nm,21.4s,MS4.2,baz=112,slow=34						
JTS	JuntasAbangare	84.98	298	*e*P	P	21 52 01.4	-0.1
	93nm,1.6s,mb5.7						
DGAR	Diego Garcia	86.15	98	*e*P	P	21 52 07.7	+0.3
TBI	Tubuai	87.81	227	*e*LR	LR	22 20 09.6	
	156nm,35.2s						
FORT	Forrest	87.95	155	*e*P	P	21 52 17.6	+1.6
	40nm,1.0s,mb5.6						
FORT	Forrest	87.95	155	*e*P	P	21 52 17.8	+1.8
STKA	Stephens Creek	89.28	166	*e*P	P	21 52 21.7	-0.6
	9.1nm,1.0s,mb5.1						
STKA	Stephens Creek	89.28	166	P	P	21 52 22.1	-0.2
	12nm,1.0s,mb5.2,baz=168,slow=7.9,SNR=7.5						
STKA				LR	LR	22 30 47.9	
	comp=Z,332nm,19.2s,MS4.8,baz=98,slow=34						
STKA	Stephens Creek	89.28	166	*e*P	P	21 52 22.0	-0.3
	2.6nm,0.9s,mb4.6						
CMSA	Cobar Meteorol	90.08	170	*e*P	P	21 52 23.0	-3.0
PPT	Papeete	93.08	229	*e*SP	SP	22 04 52.7	-5.4
	63nm,25.8s						
PPT				*e*LR	LR	22 22 43.2	
	284nm,23.0s						
PPT	Papeete	93.08	229	LR	LR	22 24 34.8	
	comp=Z,248nm,18.9s,MS4.7,baz=181,slow=29						
ASAR	Alice Springs	96.07	158	P	P	21 52 53.8	+0.1
	4.6nm,1.0s,mb4.9,baz=196,slow=3.8,SNR=18						
KEST	Kesra	97.16	25	LR	LR	22 32 54.6	
	comp=Z,99nm,19.0s,MS4.3,baz=188,slow=33						
ESDC	Sonseca Array	98.63	14	LR	LR	22 34 28.1	
	comp=Z,79nm,19.1s,MS4.2,baz=115,slow=34						
DZM	Mont Dzumac	99.78	188	*e*LR	LR	22 25 52.0	
	197nm,22.8s						
WRA	Warramunga Arr	99.78	158	P	Pdif	21 53 09.9	-0.7
	0.2nm,0.4s,baz=200,slow=4.5,SNR=5.4						
CLL	Collm	112.80	23	*e*Sdif	Sdif	22 06 48.0	+15
CLL				*e*PS	PS	22 08 30.0	+5.8
CLL				*e*SS	SS	22 14 48.0	+15
CLL				Lm		22 40 00.0	
	comp=Z,100nm,20.9s						
CM31	Chiang Mai Arr	121.75	107	*e*PKPdf	PKPdf	21 58 18.8	-1.2
CMAR	Chiang Mai Arr	121.75	107	PKP	PKPdf	21 58 19.4	-0.6
	comp=Z,6.7nm,0.8s,baz=233,slow=3.6,SNR=28						
MSU	Marysvale	121.77	293	*e*PKPdf	PKPdf	21 58 19.6	+0.1
RWWY	Rawlins	121.87	299	*e*PKPdf	PKPdf	21 58 18.1	-1.5
CHTO	Chiang Mai	122.05	107	*e*PKPdf	PKPdf	21 58 20.2	-0.4
PDAR	Pinedale Array	123.81	298	PKP	PKPdf	21 58 22.3	-0.9
	comp=Z,1.0nm,0.8s,baz=116,slow=3.4,SNR=8.5						
PDAR				PKKPbc	PKKPbc	22 08 14.6	+5.9
	comp=Z,0.6nm,0.8s,baz=304,slow=3.2,SNR=3.6						
HWUT	Hardware Ranch	123.87	295	*e*PKPdf	PKPdf	21 58 22.7	-0.7
NVAR	Mina Array Bea	124.75	288	PKP	PKPdf	21 58 25.2	0.0
	comp=Z,1.1nm,0.8s,baz=148,slow=4.3,SNR=4.0						
LOHW	Long Hollow	124.95	298	*e*PKPdf	PKPdf	21 58 25.2	-0.1
FINES	FINESS Array B	124.99	26	PKP	PKPdf	21 58 24.4	-0.4
	comp=Z,1.2nm,0.6s,baz=132,slow=2.1,SNR=2.9						
TPAW	Teton Pass	125.02	297	*e*PKPdf	PKPdf	21 58 25.4	-0.2
KSH	Kashi	126.49	72	*e*PKP	PKPdf	21 58 28.1	-0.4
KSH				PKS		22 02 03.3	
KSH				SKS	SKSdf	22 05 38.4	-1.5
KSH				SKKS	SKKSac	22 07 11.8	-10
KSH				AMB	AMB		
	comp=Z,170nm,4.1s						
KSH				LR	LR		
	comp=N,130nm,6.1s						
KSH				LR	LR		
	comp=E,110nm,5.1s						
KSH				LR	LR		
	comp=Z,130nm,7.7s						
LRM	Limekiln Ridge	127.48	298	*e*PKPdf	PKPdf	21 58 30.4	+0.2
QIZ	Qiongzhong	127.59	117	PKP	PKPdf	21 58 33.0	+1.8
QIZ				PP	PP	22 00 31.9	-0.2
QIZ				SS	SS	22 17 45.5	+2.7
QIZ				LR	LR		
	comp=Z,160nm,11.7s,MS4.9

LZH LR LR
comp=Z,550nm,18.4s,MS5.3
GTA Gaotai 138.86 91 PKP PKPdf 21 58 54.8 +3.0
GTA SKS SKSdf 22 06 03.4 +1.5
GTA AMB AMB
comp=Z,63nm,6.6s
GTA LR LR
comp=N,53nm,18.0s,MS4.5
GTA LR LR
comp=E,61nm,18.3s,MS4.5
GTA LR LR
comp=Z,94nm,18.3s,MS4.6
YKA Yellowknife Ar 139.62 314 PKP PKPdf 21 58 51.7 -0.7
comp=Z,4.1nm,0.8s,baz=129,slow=2.3,SNR=11
YKA PP PP 22 01 47.4 -1.3
comp=Z,0.9nm,0.7s,baz=126,slow=5.8,SNR=6.6
YKA Yellowknife Ar 139.62 314 PKP PKPdf 21 58 51.7 -0.7
YKA PP PP 22 01 47.4 -1.2
ZALV Zalesovo Beam 140.80 63 PKhKP PKPpre 21 58 48.5
comp=Z,0.6nm,0.4s,baz=259,slow=3.0,SNR=3.8
NJ2 Nanjing 142.88 118 *e*PKP PKPdf 21 58 56.2 -3.1
DLBC Dease Lake 143.80 302 *e*PKPdf PKPdf 21 58 58.2 -1.8
BTO Baotou 145.12 99 *e*PKPbc PKPbc 21 59 00.8 -1.6
HHC Hu-ho-hao-te 146.10 100 *e*PKPbc PKPbc 21 59 03.9 -1.6
HHC PP PP 22 02 31.5 +3.5
HHC PKS 22 02 38.0
HHC SKS SKSdf 22 06 11.3 -1.8
HHC SKKS SKKSac 22 09 20.6 +1.3
HHC SS SS 22 21 25.9 +2.4
HHC AMB AMB
comp=Z,56nm,9.0s
HHC LR LR
comp=N,280nm,20.9s,MS5.2
HHC LR LR
comp=E,270nm,20.5s,MS5.2
HHC LR LR
comp=Z,420nm,20.3s,MS5.2
BJI Beijing 147.89 106 PKPbc PKPbc 21 59 10.6 0.0
BJI SS SS 22 21 44.7 +1.0
BJI LR LR
comp=N,110nm,25.6s,MS4.8
BJI LR LR
comp=E,180nm,25.3s,MS4.8
BJI LR LR
comp=Z,35nm,22.9s,MS4.1
SONM Songino Array 148.08 86 PKPbc PKPbc 21 59 10.0 -0.8
comp=Z,31nm,1.1s,baz=220,slow=2.8,SNR=40
ULN Ulaanbaatar 148.44 87 *e*PKPdf PKPdf 21 59 07.9 -0.3
ULN *e*PKPbc PKPbc 21 59 11.6 -0.2
ULN *e*PKPab PKPab 21 59 15.3 +0.1
TLY Talaya 148.89 78 *e*PKPdf PKPdf 21 59 08.1 -0.7
INK Inuvik 149.21 317 *e*PKPbc PKPbc 21 59 12.6 -0.6
DAWY Dawson 150.28 308 *e*PKPbc PKPbc 21 59 15.2 -0.6
EGAK Eagle 151.22 309 *e*PKPbc PKPbc 21 59 18.1 +0.1
KSRS Korea Array 151.51 123 PKP PKPdf 21 59 12.6 -0.8
comp=Z,0.5nm,0.3s,baz=230,slow=1.5,SNR=6.4
KSRS PKPbc PKPbc 21 59 18.2 -1.4
comp=Z,9.9nm,1.0s,baz=225,slow=0.9,SNR=8.6
KSRS PKPab PKPab 21 59 28.1 0.0
comp=Z,4.0nm,0.7s,baz=212,slow=2.5,SNR=10
DIV Divide 152.13 300 PKPdf PKPdf 21 59 13.6 0.0
DIV *e*PKPbc PKPbc 21 59 18.9 -1.3
MAT Matsushiro 154.78 140 PKP PKPdf 21 59 18.3 +0.1
MJAR Matsushiro Arr 154.78 140 PKPbc PKPbc 21 59 26.3 -0.5
comp=Z,1.7nm,0.7s,baz=211,slow=2.5,SNR=7.1
MJAR PKPab PKPab 21 59 42.3 +0.4
comp=Z,8.4nm,1.1s,baz=205,slow=5.8,SNR=11
CN2 Changchun 155.32 111 *e*PKP PKPdf 21 59 15.7 -3.0
CN2 PKPab PKPab 21 59 43.9 -0.2
CN2 *e*PP PP 22 03 21.9 +0.9
CN2 *e*SS SS 22 23 01.7 -4.0
CN2 LR LR
comp=N,200nm,20.0s,MS5.1
CN2 LR LR
comp=E,200nm,20.0s,MS5.1
CN2 LR LR
comp=Z,300nm,22.0s,MS5.1
MDJ Mudanjiang 157.94 116 PKP PKPdf 21 59 21.6 -0.4
PETK Petropavlovsk- 174.95 178 PKPab PKPab 22 01 11.3 +1.4
comp=Z,11nm,1.1s,baz=227,slow=3.5,SNR=4.8

*MOS **07** 21:49:20.5±1.0,37°.67N×72°.31E,h129km,mb4.4/24,Error ellipse: s-maj=9.5km s-min=4.9km az=124.3*
*IDC **07** 21:49:20.4±4.1,37°.57N×72°.28E,h114km±35km,mb4.0/13, mb1 4.2/18,mb1mx4.0/29,mbtmp4.1/18,MS2.9/1, Ms1 2.9/1,ms1mx2.2/33,Error ellipse: s-maj=26.7km s-min=14.4km az=179.0*
*ISCJB **07** 21:49:20.2±0.4,37°.53N±0°.02×72°.38E±0°.04,h137km±5km, mb4.3/41,Error ellipse: s-maj=5.8km s-min=3.4km az=159.4*
*NEIC **07** 21:49:21.2±0.8,37°.71N×72°.22E,h116km±7km,mb4.4/18, Error ellipse: s-maj=9.9km s-min=5.9km az=146.0*
*BJI **07** 21:49:21.8,37°.56N×72°.21E,h127km,mB4.7/2,mb4.4/5*
*NNC **07** 21:49:29.2±7.3,38°.16N×71°.48E,h206km±56km,mb3.8, mpv5.0,Error ellipse: s-maj=64.9km s-min=51.3km az=21.0*

ISC 07 21:49:21.2±0.4,37°.55N±0°.02×72°.44E±0°.04,h132km±5km, n218,σ1§11/248,mb4.3/41,11C-31D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**3.39**	**54**	P	**Pn**	**21 50 13.0**	**0.0**
KSH				S	**Sn**	**21 50 50.3**	**-2.7**
KSH				smax			
	comp=N,1μm,0.4s						
KSH				smax			
	comp=E,910nm,0.5s						
CEP	**Cherat**	**3.74**	**187**	P	**Pn**	**21 50 19.4**	**+1.8**
CEP				S	**Sn**	**21 51 04.0**	**+2.7**
KBL	**Kabul**	**4.07**	**224**	*e*Pn	**Pn**	**21 50 22.3**	**+0.3**
KBL				Sn	**Sn**	**21 50 58.3**	**-11**
UCH	**Uchtor**	**4.94**	**18**	Pn	**Pn**	**21 50 31.3**	**-2.1**
KZA	**Kyzart**	**5.01**	**25**	P	**Pn**	**21 50 36.3**	**+1.9**
	SNR=19						
EKS2	**Erkin-Say**	**5.21**	**11**	P	**Pn**	**21 50 38.8**	**+1.7**
	SNR=103						
EKS2	**Erkin-Say**	**5.21**	**11**	*e*Pn	**Pn**	**21 50 38.6**	**+1.5**
	comp=E,141nm,0.4s						
EKS2				*e*Sn	**Sn**	**21 51 28.9**	**-7.2**
JMU	**Jammu**	**5.22**	**157**	*e*PKP	**Pn**	**21 50 40.0**	**+2.7**
JMU				*e*S	**Sn**	**21 51 35.0**	**-1.6**
AAK	**Ala-Archa**	**5.32**	**17**	P	**Pn**	**21 50 40.0**	**+1.6**
	SNR=55						
KBK	**Karagaybulak**	**5.45**	**20**	P	**Pn**	**21 50 42.7**	**+2.4**
	SNR=29						
ULHL	**Ulahol**	**5.53**	**31**	P	**Pn**	**21 50 43.7**	**+2.4**
	SNR=45						
CHMS	**Chumysh**	**5.72**	**17**	P	**Pn**	**21 50 45.9**	**+2.0**
	SNR=54						
KK31	**Karatay Array**	**5.74**	**346**	P	**Pn**	**21 50 43.8**	**-0.4**
	comp=E,88nm,0.4s,baz=171,slow=13,SNR=2314						
KK31				S	**Sn**	**21 51 43.0**	**-5.9**
	comp=E,57nm,0.2s,baz=177,slow=25,SNR=25						
THN	**Thein Dam**	**5.77**	**151**	*e*PKP	**Pn**	**21 50 46.0**	**+1.4**
THN				*e*S	**Sn**	**21 51 48.1**	**-1.5**
DLH	**Dalhousie**	**5.77**	**149**	*ex*	x	21 51 38.0	
DLH				*ex*	**Sn**	**21 51 52.0**	**+2.3**
USP	**Ospenovka**	**5.92**	**15**	P	**Pn**	**21 50 48.2**	**+1.6**
	SNR=12						
BHK	**Bhakra**	**6.94**	**151**	*e*PKP	**Pn**	**21 50 59.0**	**-1.4**
BHK				*e*S	**Sn**	**21 52 13.8**	**-4.1**
SDNR	**Sundarnagar**	**7.09**	**147**	*e*PKP	**Pn**	**21 51 03.5**	**+1.0**
SDNR				*e*S	**Sn**	**21 52 18.5**	**-3.2**
SMLA	**Simla**	**7.50**	**147**	*i* P	**Pn**	**21 51 09.3**	**+1.4**
SMLA				*i* S	**Sn**	**21 52 28.2**	**-3.3**
SMLA						21 52 31.4	
	comp=N,9μm,0.5s						
SMLA				⇑		21 52 31.5	
	comp=E,2μm,0.7s						
KLP	**Kalpa**	**7.68**	**140**	*e*PKP	**Pn**	**21 51 12.8**	**+2.4**
KLP				*e*S	**Sn**	**21 52 33.9**	**-1.8**
KLP				*e*S	**Sn**	**21 52 34.5**	**-1.3**
KLP				AML	AML	21 52 40.3	
	comp=E,1μm,0.4s						
KLP				AML	AML	21 52 44.8	
	comp=N,755nm,0.4s						
DDI	**Dehra Dun**	**8.58**	**145**	⇓*i*P	**Pn**	**21 51 22.9**	**+0.4**
DDI				*e*S	**Sn**	**21 52 54.7**	**-2.9**
JOSI	**Joshimath**	**9.13**	**138**	*e*PKP	**Pn**	**21 51 31.4**	**+1.5**
JOSI				*e*S	**Sn**	**21 53 07.2**	**-3.8**
NDI	**New Delhi**	**9.70**	**154**	*e*PKP	**Pn**	**21 51 38.0**	**+0.5**
NDI				*e*S	**Sn**	**21 53 18.5**	**-6.3**
AYAN	**Aya Nagar**	**9.86**	**155**	*e*PKP	**Pn**	**21 51 39.3**	**-0.3**
AYAN				AML	AML	21 53 25.9	
	comp=Z,82nm,0.4s						
KHET	**Khetri**	**9.86**	**162**	*e*PKP	**Pn**	**21 51 38.3**	**-1.3**
KHET				*e*S	**Sn**	**21 53 21.9**	**-6.7**
KHET				AML	AML	21 53 24.0	
	comp=N,42nm,0.4s						
KHET				AML	AML	21 53 24.7	
	comp=E,46nm,0.4s						
BISR	**Bishrakh**	**9.88**	**153**	*e*S	**Sn**	**21 53 24.1**	**-5.1**
BISR				AML	AML	21 53 31.6	
	comp=Z,367nm,0.4s						
SONA	**Sohna**	**10.06**	**156**	*e*PKP	**Pn**	**21 51 41.8**	**-0.5**
SONA				*e*S	**Sn**	**21 53 27.4**	**-6.0**
SONA				AML	AML	21 53 29.4	
	comp=E,95nm,0.5s						
SONA				AML	AML	21 53 30.6	
	comp=N,53nm,0.4s						
AJM	**Ajmer**	**11.19**	**170**	*e*PKP	**Pn**	**21 51 57.1**	**-0.3**
AJM				*e*S	**Sn**	**21 53 53.4**	**-7.5**
AGRA	**Agra**	**11.29**	**154**	*e*PKP	**Pn**	**21 51 58.2**	**-0.4**
AGRA				*e*S	**Sn**	**21 53 54.6**	**-8.4**
AGRA				AML	AML	21 53 59.7	
	comp=E,155nm,0.5s						
AGRA				AML	AML	21 54 00.5	
	comp=N,109nm,0.5s						
MK31	**Makanchi Array**	**11.77**	**35**	⇑P	**Pn**	**21 52 05.9**	**+1.1**
	comp=N,5.1nm,0.5s,baz=202,slow=9.6,SNR=37						
MK31	**Makanchi Array**	**11.77**	**35**	*e*Pn	**Pn**	**21 52 05.8**	**+1.0**
MKAR	**Makanchi Array**	**11.77**	**35**	P	**Pn**	**21 52 06.1**	**+1.3**
	comp=N,0.3nm,0.3s,baz=221,slow=14,SNR=16						
MKAR	**Makanchi Array**	**11.77**	**35**	P	**Pn**	**21 52 06.1**	**+1.3**
KOLN	**Koldanda**	**13.53**	**133**	*e*P	**Pn**	**21 52 27.2**	**-0.6**
	comp=N,33nm,0.3s						
KURK	**Kurchatov**	**13.88**	**17**	⇓P	**Pn**	**21 52 30.0**	**-2.1**
	comp=N,22nm,0.7s						
KURK	**Kurchatov**	**13.88**	**17**	P	**Pn**	**21 52 29.1**	**-3.0**
	comp=N,0.1nm,0.3s,baz=207,slow=10,SNR=12						
KURK				S	**Sn**	**21 55 11.3**	**+5.9**
	comp=N,0.0nm,0.3s,baz=212,slow=24,SNR=2.6						
KURK	**Kurchatov**	**13.88**	**17**	*e*Pn	**Pn**	**21 52 30.0**	**-2.2**
	comp=N,30nm,0.9s						
KURK				*e*		21 52 37.0	
KURK				*e*Sn	**Sn**	**21 55 10.0**	**+4.6**
GKN	**Gorkha**	**13.98**	**129**	*e*P	**Pn**	**21 52 33.0**	**-0.6**
	comp=N,105nm,0.3s						
KKN	**Kakani**	**14.53**	**128**	*e*P	**Pn**	**21 52 39.6**	**-0.9**
	comp=N,141nm,0.6s						
DMN	**Daman**	**14.55**	**129**	*e*P	**Pn**	**21 52 40.5**	**-0.3**
	comp=N,99nm,0.5s						
PKI	**Pulchoki**	**14.77**	**129**	*e*P	**Pn**	**21 52 43.0**	**-0.5**
	comp=N,58nm,0.4s						
AB31	**Akbulak array**	**14.79**	**326**	⇓P	**Pn**	**21 52 40.6**	**-3.0**
	comp=N,8.2nm,0.4s,baz=134,slow=13,SNR=408						
AB31				⇓S	**Sn**	**21 55 10.8**	**-16**
	comp=N,16nm,0.5s,baz=130,slow=24,SNR=7.4						
ABKAR	**Akbulak array**	**14.79**	**326**	*e*Pn	**Pn**	**21 52 39.9**	**-3.7**
	comp=N,15nm,0.4s						
GUN	**Gumba**	**14.82**	**127**	*e*P	**Pn**	**21 52 43.7**	**-0.5**
	comp=N,56nm,0.4s						
BHPL	**Bhopal**	**14.89**	**162**	*e*PKP	**Pn**	**21 52 48.6**	**+3.5**
BHPL				*ex*	x	21 55 20.4	
JIRN	**Jiri**	**15.20**	**126**	*e*P	**Pn**	**21 52 49.3**	**+0.4**
	comp=N,87nm,0.3s						
VOSK	**Vostochnaya**	**15.21**	**357**	⇓P	**Pn**	**21 52 46.3**	**-2.5**
	comp=N,3.6nm,0.4s						
VOSK				⇓S	**S**	**21 55 25.7**	**-19**
	comp=N,10.0nm,1.2s						
BVAR	**Borovoye Array**	**15.54**	**355**	P	**Pn**	**21 52 51.2**	**-1.8**
	comp=N,1.6nm,0.3s,baz=164,slow=12,SNR=33						
BVAR				S	**S**	**21 55 36.3**	**-15**
	comp=N,1.1nm,0.3s,baz=169,slow=24,SNR=14						
BVAR	**Borovoye Array**	**15.54**	**355**	P	**Pn**	**21 52 51.2**	**-1.7**
BVAR				S	**S**	**21 55 36.3**	**-15**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BVAR				smax			
	comp=N,1.0nm,0.3s						
BRVK	**Borovoye**	**15.58**	**355**	⇓P	**Pn**	**21 52 52.3**	**-1.1**
	comp=N,16nm,0.6s						
BRVK				⇑S	**S**	**21 55 35.0**	**-17**
	comp=N,11nm,0.8s						
BRVK	**Borovoye**	**15.58**	**355**	*e*P	**Pn**	**21 52 51.3**	**-2.1**
BRVK				pmax	pmax		
	comp=Z,20nm,0.8s						
BRVK	**Borovoye**	**15.58**	**355**	*e*Pn	**Pn**	**21 52 51.2**	**-2.2**
	comp=Z,20nm,0.8s						
BRVK				*e*Sn	Sn	21 55 21.8	-24
ZRNK	**Zerenda**	**15.59**	**352**	⇓P	**Pn**	**21 52 52.3**	**-1.2**
	comp=Z,11nm,0.6s						
RAMN	**Ramite**	**15.95**	**127**	*e*P	**Pn**	**21 52 57.7**	**-0.5**
	comp=Z,92nm,0.5s						
TAPN	**Taplejung**	**16.39**	**124**	*e*P	**Pn**	**21 53 03.8**	**+0.2**
	comp=Z,45nm,0.4s						
AKTK	**Aktyubinsk**	**16.50**	**326**	P	**Pn**	**21 53 03.3**	**-1.5**
AKTK				S	**S**	**21 55 53.9**	**-15**
AKTO	**Aktyubinsk**	**16.50**	**326**	P	**Pn**	**21 53 03.3**	**-1.5**
	comp=Z,4.3nm,0.3s,baz=132,slow=11,SNR=50						
AKTO				S	**S**	**21 55 53.9**	**-15**
	comp=Z,2.0nm,0.3s,baz=136,slow=22,SNR=9.2						
AKTO	**Aktyubinsk**	**16.50**	**326**	P	**Pn**	**21 53 03.3**	**-1.5**
AKTO				S	**S**	**21 55 53.9**	**-15**
AKTO				pmax	pmax		
	comp=Z,4.0nm,0.3s						
AKTO				smax			
	comp=N,2.0nm,0.3s						
ODAN	**Odare**	**16.52**	**126**	*e*P	**Pn**	**21 53 05.2**	**0.0**
	comp=N,103nm,0.6s						
BOK	**Bokaro**	**17.91**	**136**	*ex*	**Pn**	**21 53 22.5**	**+0.6**
ZAA0	**Zalesovo Array**	**18.49**	**24**	*e*P	**P**	**21 53 27.6**	**+0.8**
ZALV	**Zalesovo Beam**	**18.49**	**24**	P	**P**	**21 53 28.2**	**+1.4**
	comp=N,4.5nm,0.3s,baz=219,slow=10,SNR=101						
ZALV	**Zalesovo Beam**	**18.49**	**24**	P	**P**	**21 53 28.2**	**+1.4**
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.3s						
NVS	**Novosibirsk**	**18.80**	**20**	*i* P	**P**	**21 53 30.9**	**+0.7**
NVS				*e*S	**S**	**21 56 55.1**	**-1.8**
NVS				pmax	pmax		
	comp=N,5.0nm,0.4s						
NVS				pmax	pmax		
	comp=Z,6.0nm,0.4s						
NVS				pmax	pmax		
	comp=E,2.0nm,0.5s						
NVS				smax			
	comp=N,6.0nm,1.0s						
NVS				smax			
	comp=E,1.0nm,0.5s						
SHL	**Shillong**	**20.38**	**120**	*e*PKP	**P**	**21 53 50.0**	**+2.5**
HYB	**Hyderabad**	**20.76**	**163**	*e*P	**P**	**21 53 54.0**	**+2.3**
HYB	**Hyderabad**	**20.76**	**163**	*e*P	**P**	**21 53 54.0**	**+2.3**
HYB	**Hyderabad**	**20.76**	**163**	*i* P	**P**	**21 53 54.0**	**+2.3**
SVE	**Sverdlovsk**	**20.83**	**342**	⇓*e*P	**P**	**21 53 52.1**	**0.0**
SVE				*e*S	**S**	**21 57 36.8**	**0.0**
SVE				pmax	pmax		
	comp=Z,20nm,0.6s						
ARU	**Arti**	**21.05**	**338**	*d i*P	**P**	**21 53 54.0**	**-0.4**
ARU				SS		21 58 15.9	
ARU				pmax	pmax		
	comp=Z,25nm,1.2s,mb4.4						
ARU	**Arti**	**21.05**	**338**	*e*P	**P**	**21 53 53.5**	**-1.0**
	comp=Z,18nm,0.9s,mb4.4						
ARU				S	**S**	**21 57 41.6**	**+0.4**
GTA	**Gaotai**	**21.48**	**77**	*e*P	**P**	**21 54 05.4**	**+6.2**
GTA				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.0						
GNI	**Garni**	**21.70**	**285**	P	**P**	**21 54 02.9**	**+1.4**
	comp=Z,7.3nm,0.8s,mb4.2,baz=240,slow=2.4,SNR=7.4						
GNI				LR	LR	22 03 33.0	
	comp=Z,29nm,19.7s,baz=257,slow=40						
GNI	**Garni**	**21.70**	**285**	*e*P	**P**	**21 53 57.5**	**-4.0**
GNI				pmax	pmax		
	comp=Z,17nm,1.7s						
GNI	**Garni**	**21.70**	**285**	*e*P	**P**	**21 54 00.9**	**-0.5**
	comp=Z,16nm,1.0s,mb4.4						
ZEI	**Tsey**	**22.38**	**292**	*e*P	**P**	**21 54 09.3**	**+0.8**
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.4						
KIV	**Kislovodsk**	**23.35**	**295**	*e*P	**P**	**21 54 17.2**	**-0.4**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.1						
KIV	**Kislovodsk**	**23.35**	**295**	*e*P	**P**	**21 54 16.2**	**-1.4**
SOKR	**Solikamsk**	**24.23**	**340**	*d i*P	**P**	**21 54 26.3**	**+0.9**
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.4						
SONM	**Songino Array**	**26.79**	**57**	P	**P**	**21 54 52.4**	**+3.7**
	comp=Z,0.3nm,0.5s,mb3.2,baz=243,slow=6.5,SNR=4.2						
SONM				pP	pP	21 55 22.8	+6.0
	comp=Z,1.7nm,0.8s,baz=259,slow=11,SNR=7.1						
SONM	**Songino Array**	**26.79**	**57**	P	**P**	**21 54 52.4**	**+3.7**
SONM				*PP	pP	21 55 22.8	+6.0
SONM				pmax	pmax		
	comp=Z,2.0nm,0.8s						
OBN	**Obninsk**	**29.92**	**318**	⇓*e*P	**P**	**21 55 16.1**	**-0.2**
OBN				*e*		21 56 15.7	
OBN				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.6						
BR131	**Keskin Array S**	**30.23**	**286**	*e*P	**P**	**21 55 19.4**	**+0.1**
	comp=Z,1.5nm,0.4s,mb4.1						
BRTR	**Keskin Array B**	**30.23**	**286**	P	**P**	**21 55 19.6**	**+0.3**
	comp=Z,2.8nm,0.6s,mb4.2,baz=99,slow=7.9,SNR=15						
BRTR				PcP	PcP	21 58 19.8	+3.0
	comp=Z,1.5nm,1.1s,baz=180,slow=4.4,SNR=4.5						
BRTR	**Keskin Array B**	**30.23**	**286**	P	**P**	**21 55 19.6**	**+0.3**
BRTR						21 58 19.8	
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BRTR				pmax	pmax		
	comp=Z,2.0nm,1.1s						
HHC	**Hu-ho-hao-te**	**30.32**	**71**	*e*P	**P**	**21 55 21.4**	**+1.3**
HHC				S	**S**	**22 00 10.9**	**+0.4**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.7						
HHC				pmax	pmax		
	comp=Z,60nm,6.0s						
AKASG	**Malin Array Be**	**33.21**	**307**	P	**P**	**21 55 44.6**	**-0.6**
	comp=Z,2.0nm,0.3s,mb4.4,baz=82,slow=7.7,SNR=16						
AKASG	**Malin Array Be**	**33.21**	**307**	P	**P**	**21 55 44.6**	**-0.6**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.3s						
VRI	**Vrincioaia**	**34.73**	**299**	⇓P	**P**	**21 55 59.9**	**+1.5**
VRI	**Vrincioaia**	**34.73**	**299**	⇓*i*P	**P**	**21 55 59.8**	**+1.4**
TESR		**34.76**	**300**	⇑P	**P**	**21 55 59.0**	**+0.3**
TESR		**34.76**	**300**	⇑*i*P	**P**	**21 55 59.0**	**+0.4**
PLOR	**Plostina**	**34.78**	**299**	⇓P	**P**	**21 56 00.1**	**+1.3**
PLOR	**Plostina**	**34.78**	**299**	⇓*i*P	**P**	**21 56 00.1**	**+1.3**
MLR	**Muntele Rosu**	**35.30**	**298**	⇓P	**P**	**21 56 04.9**	**+1.6**
MLR	**Muntele Rosu**	**35.30**	**298**	⇓*i*P	**P**	**21 56 04.9**	**+1.6**
JOF	**Joensuu**	**35.55**	**329**	*e*P	**P**	**21 56 04.3**	**-0.9**
JOF				pmax	pmax		
	comp=Z,14nm,0.4s,mb4.9						
JOF	**Joensuu**	**35.55**	**329**	*ep*	**P**	**21 56 04.3**	**-0.9**
	comp=Z,14nm,0.4s,mb4.9						
BUR01	**Bucovina Ar. S**	**35.70**	**302**	P	**P**	**21 56 07.1**	**+0.4**
BURAR	**Bucovina Array**	**35.70**	**302**	⇓P	**P**	**21 56 07.1**	**+0.4**
BURAR	**Bucovina Array**	**35.70**	**302**	⇓*i*P	**P**	**21 56 07.1**	**+0.4**
BUR08	**Bucovina Ar. S**	**35.71**	**302**	*e*P	**P**	**21 56 06.4**	**-0.4**
VOIR		**35.93**	**298**	⇓P	**P**	**21 56 09.3**	**+0.6**
VOIR		**35.93**	**298**	⇓*i*P	**P**	**21 56 09.3**	**+0.6**
FINES	**FINESS Array B**	**37.27**	**325**	P	**P**	**21 56 19.9**	**0.0**
	comp=Z,7.3nm,0.4s,mb4.7,baz=116,slow=9.1,SNR=85						
FINES	**FINESS Array B**	**37.27**	**325**	P	**P**	**21 56 19.9**	**0.0**
FINES				pmax	pmax		
	comp=Z,7.0nm,0.4s						
KWP	**Kalwaria Pacla**	**37.34**	**305**	*e*P	**P**	**21 56 21.2**	**+0.7**
KWP	**Kalwaria Pacla**	**37.34**	**305**	⇓P	**P**	**21 56 21.0**	**+0.4**
KWP	**Kalwaria Pacla**	**37.34**	**305**	*e*P	**P**	**21 56 20.0**	**-0.6**
	comp=Z,7.7nm,0.5s,mb4.6						
KWP	**Kalwaria Pacla**	**37.34**	**305**	⇓*i*P	**P**	**21 56 21.0**	**+0.4**
KAF	**Kangasniemi**	**37.39**	**326**	*e*P	**P**	**21 56 20.0**	**-0.8**
KAF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.3						
KAF	**Kangasniemi**	**37.39**	**326**	*e*P	**P**	**21 56 20.0**	**-0.8**
	comp=Z,5.4nm,0.6s,mb4.3						
KAF	**Kangasniemi**	**37.39**	**326**	*ep*	**P**	**21 56 20.0**	**-0.8**
	comp=Z,5.4nm,0.6s,mb4.3						
DRGR		**37.45**	**300**	⇓P	**P**	**21 56 22.5**	**+1.0**
DRGR		**37.45**	**300**	⇓*i*P	**P**	**21 56 22.5**	**+1.0**
GZR	**Gura Zlata**	**37.53**	**298**	⇑P	**P**	**21 56 22.6**	**+0.4**
GZR	**Gura Zlata**	**37.53**	**298**	⇑*i*P	**P**	**21 56 22.6**	**+0.4**
CRVS	**Cervenica-Dubn**	**38.17**	**304**	*e*P	**P**	**21 56 27.8**	**+0.2**
CRVS	**Cervenica-Dubn**	**38.17**	**304**	*e*P	**P**	**21 56 27.8**	**+0.2**
STHS	**Stebnicka Huta**	**38.30**	**305**	*e*P	**P**	**21 56 28.4**	**-0.2**
STHS				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.1						
STHS	**Stebnicka Huta**	**38.30**	**305**	*e*P	**P**	**21 56 28.4**	**-0.2**
	comp=Z,2.5nm,0.6s,mb4.0						
STHS	**Stebnicka Huta**	**38.30**	**305**	*e*P	**P**	**21 56 28.4**	**-0.2**
BZS	**Buzias**	**38.31**	**299**	⇓P	**P**	**21 56 29.7**	**+0.9**
BZS	**Buzias**	**38.31**	**299**	⇓*i*P	**P**	**21 56 29.7**	**+0.9**
KECS	**Kecovo**	**38.84**	**303**	*e*P	**P**	**21 56 33.7**	**+0.6**
KECS				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.6						
KECS	**Kecovo**	**38.84**	**303**	*e*P	**P**	**21 56 33.7**	**+0.6**
	comp=Z,1.4nm,0.6s,mb3.8						
KECS	**Kecovo**	**38.84**	**303**	*e*P	**P**	**21 56 33.7**	**+0.6**
OJC	**Ojcow**	**39.21**	**306**	*e*P	**P**	**21 56 33.8**	**-2.4**
VYHS	**Vyhne**	**39.93**	**303**	*e*P	**P**	**21 56 42.2**	**0.0**
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.7s,mb3.9						
VYHS	**Vyhne**	**39.93**	**303**	*e*P	**P**	**21 56 42.2**	**0.0**
	comp=Z,5.1nm,1.7s,mb3.9						
VYHS	**Vyhne**	**39.93**	**303**	*e*P	**P**	**21 56 42.2**	**0.0**
KOLL	**Kolacno**	**40.21**	**304**	*e*P	**P**	**21 56 45.2**	**+0.7**
KOLL	**Kolacno**	**40.21**	**304**	*e*P	**P**	**21 56 45.2**	**+0.7**
KEV	**Kevo**	**40.27**	**337**	*e*P	**P**	**21 56 43.9**	**-0.8**
KEV				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.2						
KEV	**Kevo**	**40.27**	**337**	*e*P	**P**	**21 56 43.9**	**-0.8**
	comp=Z,3.4nm,0.5s,mb4.2						
KEV	**Kevo**	**40.27**	**337**	*ep*	**P**	**21 56 43.9**	**-0.8**
	comp=Z,3.4nm,0.5s,mb4.2						
OKC	**Ostrava-Krasne**	**40.29**	**306**	AMS	AMS	22 39 20.0	
	comp=Z,100nm,21.2s						
ARCES	**ARCESS Array B**	**40.63**	**337**	P	**P**	**21 56 48.1**	**+0.5**
	comp=Z,6.9nm,0.6s,mb4.5,baz=112,slow=8.5,SNR=58						
ARCES	**ARCESS Array B**	**40.63**	**337**	P	**P**	**21 56 48.2**	**+0.5**
ARCES				pmax

AQU	**L'Aquila**	**44.73 295**	P	**P**	**21 57 18.8**	**-2.3**
DAVA	**Damuels**	**46.07 303**	⇑*i*P	**P**	**21 57 31.1**	**-0.4**
	comp=Z,12nm,0.5s,mb4.7					
DAVOX	**Davos/Dischmat**	**46.17 302**	P	**P**	**21 57 32.0**	**-0.4**
	comp=Z,7.5nm,0.6s,mb4.5,baz=94,slow=4.4,SNR=13					
CDF	**Champ du Feu**	**47.55 305**	*e*P	**P**	**21 57 43.0**	**-0.1**
HINF	**Hinteralfeld**	**47.96 304**	*e*P	**P**	**21 57 45.8**	**-0.4**
HAU	**Haudompre**	**48.25 305**	*e*P	**P**	**21 57 48.0**	**-0.4**
SBF	**Sospel**	**48.55 299**	*e*P	**P**	**21 57 50.2**	**-0.7**
LPG	**La Plagne**	**48.59 301**	*e*P	**P**	**21 57 51.2**	**+0.1**
LPG	**La Plagne**	**48.59 301**	*e*P	**P**	**21 57 51.2**	**+0.1**
LPL	**La Plagne**	**48.59 301**	*e*P	**P**	**21 57 51.3**	**+0.1**
	comp=Z,7.9nm,0.4s,mb4.4					
LPL	**La Plagne**	**48.59 301**	*e*P	**P**	**21 57 51.3**	**+0.1**
CABF	**La Chapelle**	**48.75 303**	*e*P	**P**	**21 57 52.0**	**-0.3**
	comp=Z,12nm,0.8s,mb4.3					
CABF	**La Chapelle**	**48.75 303**	*e*P	**P**	**21 57 52.0**	**-0.3**
MBDF	**Montbardon**	**48.78 300**	*e*P	**P**	**21 57 52.0**	**-0.6**
MBDF	**Montbardon**	**48.78 300**	*e*P	**P**	**21 57 52.0**	**-0.6**
MEZF	**Maizieres J'vi**	**48.98 306**	*e*P	**P**	**21 57 53.9**	**-0.1**
MEZF	**Maizieres J'vi**	**48.98 306**	*e*P	**P**	**21 57 53.9**	**-0.1**
BAIF	**Baives**	**49.16 308**	*e*P	**P**	**21 57 55.7**	**+0.3**
BAIF	**Baives**	**49.16 308**	*e*P	**P**	**21 57 55.7**	**+0.3**
FRF	**La Foret Royal**	**49.19 299**	*e*P	**P**	**21 57 55.2**	**-0.5**
KEST	**Kesra**	**49.80 288**	P	**P**	**21 58 01.3**	**+0.8**
	comp=Z,1.1nm,0.5s,mb3.7,baz=51,slow=10,SNR=12					
LOR	**Lormes**	**50.06 304**	*e*P	**P**	**21 58 01.8**	**-0.4**
VIVF	**Saint-Julien-l**	**50.18 301**	*e*P	**P**	**21 58 02.9**	**-0.3**
	comp=Z,5.3nm,0.5s,mb4.1					
VIVF	**Saint-Julien-l**	**50.18 301**	*e*P	**P**	**21 58 02.9**	**-0.3**
VIVF			pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.2					
VIVF	**Saint-Julien-l**	**50.18 301**	*e*P	**P**	**21 58 02.9**	**-0.3**
	comp=Z,2.7nm,0.5s,mb4.1					
SMF	**Signal de Mont**	**50.24 303**	*e*P	**P**	**21 58 02.8**	**-0.8**
	comp=Z,26nm,1.1s,mb4.5					
SMF	**Signal de Mont**	**50.24 303**	*e*P	**P**	**21 58 02.8**	**-0.8**
SMF			pmax	pmax		
	comp=Z,13nm,1.1s,mb4.5					
SMF	**Signal de Mont**	**50.24 303**	*e*P	**P**	**21 58 02.8**	**-0.8**
	comp=Z,13nm,1.1s,mb4.5					
SSF	**Saint Saulge**	**50.35 304**	*e*P	**P**	**21 58 04.6**	**+0.2**
AVF	**Avril sur Loir**	**50.52 304**	*e*P	**P**	**21 58 05.3**	**-0.4**
	comp=Z,21nm,0.9s,mb4.5					
AVF	**Avril sur Loir**	**50.52 304**	*e*P	**P**	**21 58 05.3**	**-0.4**
AVF			pmax	pmax		
	comp=Z,11nm,0.9s,mb4.5					
AVF	**Avril sur Loir**	**50.52 304**	*e*P	**P**	**21 58 05.3**	**-0.4**
	comp=Z,11nm,0.9s,mb4.5					
LASF	**Ste Croix**	**50.96 300**	*e*P	**P**	**21 58 08.5**	**-0.6**
TCF	**Toulx Ste Croi**	**51.42 303**	*e*P	**P**	**21 58 12.3**	**-0.1**
	comp=Z,5.9nm,0.6s,mb4.1					
TCF	**Toulx Ste Croi**	**51.42 303**	*e*P	**P**	**21 58 12.3**	**-0.1**
TCF			pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.1					
TCF	**Toulx Ste Croi**	**51.42 303**	*e*P	**P**	**21 58 12.3**	**-0.1**
	comp=Z,3.0nm,0.6s,mb4.1					
LDF	**La Druitiere**	**52.27 307**	*e*P	**P**	**21 58 18.0**	**-0.7**
	comp=Z,4.4nm,0.4s,mb4.1					
LDF	**La Druitiere**	**52.27 307**	*e*P	**P**	**21 58 18.0**	**-0.7**
LDF			pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.1					
LDF	**La Druitiere**	**52.27 307**	*e*P	**P**	**21 58 18.0**	**-0.7**
	comp=Z,2.2nm,0.4s,mb4.1					
MTLF	**Montolieu**	**52.32 300**	*e*P	**P**	**21 58 19.0**	**-0.2**
GRR	**Gorron**	**52.80 307**	*e*P	**P**	**21 58 21.8**	**-0.8**
LFF	**La Frestale**	**52.81 302**	*e*P	**P**	**21 58 22.7**	**-0.1**
MFF	**Saint Martin d**	**52.88 304**	*e*P	**P**	**21 58 23.3**	**+0.1**
SGMF	**Saint Gilles**	**53.92 307**	*e*P	**P**	**21 58 30.3**	**-0.5**
ROSF	**Rostrenen**	**54.35 307**	*e*P	**P**	**21 58 33.3**	**-0.6**
ETSF	**Etsaut**	**54.39 300**	*e*P	**P**	**21 58 34.3**	**0.0**
QUIF	**Quistinic**	**54.42 307**	*e*P	**P**	**21 58 33.6**	**-0.8**
ESDC	**Sonseca Array**	**57.99 298**	P	**P**	**21 58 59.4**	**-0.5**
	comp=Z,2.1nm,0.6s,mb4.2,baz=56,slow=7.2,SNR=13					
ESDC	**Sonseca Array**	**57.99 298**	P	**P**	**21 58 59.4**	**-0.5**
ESLA	**Sonseca Array**	**57.99 298**	P	**P**	**21 58 59.1**	**-0.8**
INK	**Inuvik**	**72.68 10**	P	**P**	**22 00 35.6**	**+1.6**
	comp=Z,4.8nm,0.5s,mb4.5,baz=328,slow=6.1,SNR=7.9					
INK	**Inuvik**	**72.68 10**	P	**P**	**22 00 35.6**	**+1.6**
INK			pmax	pmax		
	comp=Z,5.0nm,0.5s					
YKA	**Yellowknife Ar**	**80.14 3**	P	**P**	**22 01 17.1**	**+1.0**
	comp=Z,3.3nm,0.4s,mb4.3,baz=351,slow=5.5,SNR=20					
WRA	**Warramunga Arr**	**81.58 123**	P	**P**	**22 01 25.3**	**+1.0**
	comp=Z,0.4nm,0.4s,mb3.4,baz=325,slow=5.0,SNR=14					

NIED ***07*** *21:57:00,45.°50N×151.°60E,h5km,Mw4.2 Best double couple: M0=2.40000×10^15 NP1:φ=6.00000°,δ=77.00000°, λ=73.00000°. NP2:φ=240.00000°,δ=21.00000°,λ=142.00000°.*
SKHL ***07*** *21:57:14.2±1.3,45.°25N×151.°59E,h37km±5km,mb5.1/3, Ms3.5/2*
ISCJB ***07*** *21:57:15.5±1.2,45.°33N±0.°06×151.°41E±0.°06,h32km±8km, mb4.3/54,MS3.8/5,Error ellipse: s-maj=10.9km s-min=4.2km az=147.4*
JMA ***07*** *21:57:15.0±0.5,45.°52N×151.°61E,h30km,M4.8*
MOS ***07*** *21:57:16.1±0.8,45.°41N×151.°44E,h34km,mb4.6/28,Error ellipse: s-maj=9.2km s-min=6.6km az=102.2*
BJI ***07*** *21:57:17.3,45.°21N×151.°31E,h44km,mB4.7/11,mb4.4/18, Ms3.6/3,Ms^7 3.8/4*
NEIC ***07*** *21:57:18.7±0.6,45.°45N×151.°44E,h42km±4km,mb4.5/26, Error ellipse: s-maj=6.3km s-min=4.1km az=136.0*
IDC ***07*** *21:57:19.2±2.6,45.°45N×151.°45E,h48km±24km,mb3.8/22, mb1 3.9/25,mb1mx3.9/32,mbtmp3.8/25,ML4.0/3,MS3.7/5, Ms1 3.7/5,ms1mx3.1/26,Error ellipse: s-maj=19.1km s-min=14.0km az=152.0*

ISC 07 21:57:17.9±0.6,45.°40N±0.°05×151.°41E±0.°06,h35km±4km, h46km±8.3km:pP-P,n208,σ0.°95/228,mb4.3/54,MS3.8/5, 20C-5D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.51**	**267**	*e*PN	**Pn**	**21 57 54.5**	**-1.6**
KUR				*e*S	**Sn**	**21 58 25.7**	**+0.3**
KUR				pmax	pmax		
	comp=N,180nm,0.5s						
KUR				pmax	pmax		
	comp=E,80nm,0.5s						
KUR				pmax	pmax		
	comp=Z,250nm,0.5s						
KUR				smax			
	comp=N,1μm,0.5s						
KUR				smax			
	comp=E,480nm,0.5s						
KUR	**Kuril'sk**	**2.51**	**267**	*e*P	**Pn**	**21 57 54.5**	**-1.6**
KUR				AMB	AMB	21 57 55.6	
	comp=E,180nm,0.5s						
KUR				AMB	AMB	21 57 55.6	
	comp=E,80nm,0.5s						
KUR				AMB	AMB	21 57 55.6	
	comp=E,250nm,0.5s						
KUR				*e*S	**Sn**	**21 58 25.7**	**+0.3**
KUR				A		21 58 32.9	
	comp=E,1μm,0.5s						
KUR				A		21 58 32.9	
	comp=E,480nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**4.19**	**253**	⇓*i*PN	**Pn**	**21 58 19.9**	**+0.7**
YUK				*e*S	**Sn**	**21 59 08.2**	**+1.4**
YUK				pmax	pmax		
	comp=N,180nm,0.3s						
YUK				pmax	pmax		
	comp=E,130nm,0.3s						
YUK				pmax	pmax		
	comp=Z,380nm,0.3s						
YUK				pmax	pmax		
	comp=Z,230nm,0.9s						
YUK				smax			
	comp=N,480nm,0.7s						
YUK				smax			
	comp=E,260nm,0.3s						
YUK				smax			
	comp=N,450nm,1.0s						
YUK				smax			
	comp=E,1μm,1.0s						
YUK				MLR	MLR		
	comp=N,360nm,19.0s						
YUK				MLR	MLR		
	comp=E,330nm,19.0s						
YUK				MLR	MLR		
	comp=Z,230nm,19.0s						
YUK	**Yuzh-Kuril'sk**	**4.19**	**253**	*e*P	**Pn**	**21 58 19.9**	**+0.7**
YUK				AMB	AMB	21 58 26.2	
	comp=Z,230nm,0.5s						
YUK				AMB	AMB	21 58 26.2	
	comp=Z,420nm,0.5s						
YUK				AMB	AMB	21 58 26.2	
	comp=Z,370nm,0.5s						
YUK				*e*S	**Sn**	**21 59 08.2**	**+1.4**
YUK				A		21 59 22.6	
	comp=Z,2μm,1.0s						
YUK				A		21 59 28.9	
	comp=Z,350nm,0.5s						
YUK				A		21 59 28.9	
	comp=Z,570nm,0.5s						
YUK				AMS	AMS	21 59 58.9	
	comp=Z,360nm,19.0s						
YUK				AMS	AMS	21 59 58.9	
	comp=Z,330nm,19.0s						
YUK				AMS	AMS	21 59 58.9	
	comp=Z,230nm,19.0s						
NEM2	**Nemuro 2**	**4.55**	**245**	P	**Pn**	**21 58 23.3**	**-0.8**
NEM2				*e*S	**Sn**	**21 59 13.1**	**-2.6**
JRA	**Rausu**	**4.72**	**254**	P	**Pn**	**21 58 28.3**	**+1.8**
JNK	**Nakash**	**5.12**	**252**	P	**Pn**	**21 58 32.8**	**+0.7**
JNK				*e*S	**Sn**	**21 59 30.0**	**+0.1**
JAK	**Akkeshi**	**5.39**	**246**	P	**Pn**	**21 58 34.9**	**-0.9**
JAK				*e*S	**Sn**	**21 59 34.1**	**-2.5**
JTKR	**Abashiri--Toko**	**5.54**	**258**	P	**Pn**	**21 58 39.6**	**+1.8**
JAR	**Ashorobuto**	**5.87**	**252**	P	**Pn**	**21 58 43.5**	**+1.2**
JAR				*e*S	**Sn**	**21 59 48.3**	**-0.1**
JMP	**Maruseppu**	**5.91**	**259**	P	**Pn**	**21 58 45.1**	**+2.3**
JOB	**Onbets**	**6.00**	**248**	P	**Pn**	**21 58 44.1**	**0.0**
JOB				*e*S	**Sn**	**21 59 49.8**	**-1.7**
SKR	**Severo-Kuril's**	**6.15**	**29**	*e*PN	**Pn**	**21 58 46.5**	**+0.3**
SKR				pmax	pmax		
	comp=N,40nm,0.5s						
SKR				pmax	pmax		
	comp=E,40nm,0.5s						
SKR				pmax	pmax		
	comp=Z,70nm,0.5s						
SKR	**Severo-Kuril's**	**6.15**	**29**	*e*P	**Pn**	**21 58 46.5**	**+0.3**
SKR				AMB	AMB	21 58 50.0	
	comp=Z,40nm,0.5s						
SKR				AMB	AMB	21 58 50.0	
	comp=Z,70nm,0.5s						
SKR				*e*S	**Sn**	**21 59 53.5**	**-1.7**
SKR				A		22 00 21.4	
	comp=Z,40nm,0.5s						
SKR				A		22 00 21.4	
	comp=Z,220nm,0.5s						
YSS	**Yuzh-Sakhalins**	**6.21**	**288**	*e*PN	**Pn**	**21 58 46.0**	**-1.0**
YSS				MLR	MLR		
	comp=E,500nm,16.0s						
YSS				MLR	MLR		
	comp=Z,500nm,16.0s						
YSS	**Yuzh-Sakhalins**	**6.21**	**288**	*e*Pn	**Pn**	**21 58 47.0**	**0.0**
YSS	**Yuzh-Sakhalins**	**6.21**	**288**	*e*P	**Pn**	**21 58 46.0**	**-1.0**
YSS				AMS	AMS	22 01 14.0	
	comp=Z,500nm,16.0s						
YSS				AMS	AMS	22 01 14.0	
	comp=Z,500nm,16.0s						
JKK2	**Kamakawa 2**	**6.37**	**259**	P	**Pn**	**21 58 51.4**	**+2.2**
ASAJ	**Asahikawa**	**6.41**	**262**	P	**Pn**	**21 58 52.4**	**+2.7**
	comp=Z,5.4nm,0.3s,baz=80,slow=15,SNR=23						
ASAJ	**Asahikawa**	**6.41**	**262**	PN	**Pn**	**21 58 52.4**	**+2.7**
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ASAJ	**Asahikawa**	**6.41**	**262**	P	**Pn**	**21 58 52.3**	**+2.6**
JCH	**Churui**	**6.44**	**247**	P	**Pn**	**21 58 49.8**	**-0.4**
JCH				*e*S	**Sn**	**22 00 00.2**	**-2.1**
JWK2	**Keihoku**	**6.71**	**273**	P	**Pn**	**21 58 58.9**	**+5.1**
JAB	**Ashibetsu**	**6.84**	**257**	P	**Pn**	**21 58 58.9**	**+3.2**
JEM	**Erimo**	**6.87**	**243**	P	**Pn**	**21 58 57.2**	**+1.1**
ERM	**Erimo**	**6.87**	**243**	*e*PN	**Pn**	**21 58 57.4**	**+1.3**
ERM				pmax	pmax		
	comp=Z,85nm,0.4s						
ERM	**Erimo**	**6.87**	**243**	*e*Pn	**Pn**	**21 58 57.4**	**+1.2**
	comp=Z,85nm,0.4s						
ERM				*e*Sn	**Sn**	**22 00 13.9**	**+0.8**
JNBK	**Urakawa-nobuka**	**7.00**	**247**	P	**Pn**	**21 58 57.0**	**-0.8**
JNBK				*e*S	**Sn**	**22 00 11.8**	**-4.2**
JBT2	**Biratori 2**	**7.02**	**251**	P	**Pn**	**21 58 58.2**	**0.0**
JKB	**Kayabe**	**8.31**	**249**	P	**Pn**	**21 59 14.9**	**-0.9**
JKB				*e*S	**Sn**	**22 00 42.9**	**-5.4**
PEA0B	**Petropavlovsk-**	**8.73**	**26**	*e*Pn	**Pn**	**21 59 21.7**	**+0.1**
PETK	**Petropavlovsk-**	**8.73**	**26**	P	**Pn**	**21 59 21.5**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=176,slow=10,SNR=14						
PETK	**Petropavlovsk-**	**8.73**	**26**	PN	**Pn**	**21 59 21.5**	**-0.1**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
JANG	**Nango**	**8.83**	**239**	P	**Pn**	**21 59 20.0**	**-3.0**
JANG				*e*S	**Sn**	**22 00 52.3**	**-8.9**
JTM	**Tenmabayashi**	**8.86**	**242**	P	**Pn**	**21 59 22.4**	**-1.0**
JTM				*e*S	**Sn**	**22 00 54.6**	**-7.3**
JTH	**Tanohata**	**8.90**	**236**	P	**Pn**	**21 59 20.9**	**-3.0**
JTH				*e*S	**Sn**	**22 00 53.4**	**-10**
JOSM	**Okushiri--Mats**	**9.26**	**253**	P	**Pn**	**21 59 29.1**	**+0.3**
OFUJ	**Ofunato**	**9.59**	**232**	P	**Pn**	**21 59 30.5**	**-2.9**
OFUJ				*e*S	**Sn**	**22 01 11.6**	**-8.3**
JIO	**Ouri**	**10.21**	**231**	P	**Pn**	**21 59 39.2**	**-2.7**
JIO				*e*S	**Sn**	**22 01 25.7**	**-9.4**
MAJO	**Matsushiro**	**13.32**	**233**	PN	**Pn**	**22 00 26.9**	**+2.5**
MDJ	**Mudanjiang**	**15.45**	**275**	P	**Pn**	**22 00 52.7**	**-0.3**
MDJ				pmax	pmax		
	comp=Z,16nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,31nm,5.2s						
ZEA	**Zeya**	**17.68**	**307**	*e*P	**Pn**	**22 01 16.7**	**-4.4**
ZEA				AMB	AMB	22 01 22.3	
	comp=Z,21nm,1.2s						
CN2	**Changchun**	**18.54**	**274**	*e*P	**Pn**	**22 01 31.0**	**-0.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSRS	**Korea Array**	**19.27**	**254**	P	**Pn**	**22 01 39.4**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=62,slow=11,SNR=9.2						
KSRS				LR	LR	22 09 16.9	
	comp=Z,69nm,18.6s,baz=60,slow=37						
KSRS	**Korea Array**	**19.27**	**254**	*e*P	**Pn**	**22 01 40.5**	**-0.1**
HHC	**Hu-ho-hao-te**	**29.22**	**275**	*e*P	**P**	**22 03 15.9**	**-0.2**
HHC				S	**S**	**22 08 03.4**	**-2.9**
HHC				pmax	pmax		
	comp=Z,14nm,0.5s,mb5.0						
HHC				pmax	pmax		
	comp=Z,82nm,5.4s						
ULN	**Ulaanbaatar**	**30.25**	**291**	*e*P	**P**	**22 03 25.7**	**+0.6**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
ULN	**Ulaanbaatar**	**30.25**	**291**	*e*P	**P**	**22 03 25.7**	**+0.6**
	comp=Z,0.9nm,0.4s,mb3.9						
SONM	**Songino Array**	**30.69**	**291**	P	**P**	**22 03 29.6**	**+0.6**
	comp=Z,0.5nm,0.5s,mb3.6,baz=98,slow=8.9,SNR=3.5						
SONM				LR	LR	22 16 54.5	
	comp=Z,73nm,19.0s,MS3.4,baz=262,slow=38						
SONM	**Songino Array**	**30.69**	**291**	P	**P**	**22 03 29.6**	**+0.6**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM				MLR	MLR		
	comp=Z,73nm,19.0s						
YULB	**Yu-li**	**32.85**	**238**	P	**P**	**22 03 49.0**	**+0.7**
KDAK	**Kodiak Island**	**35.88**	**49**	P	**P**	**22 04 13.1**	**-1.0**
	comp=Z,6.0nm,0.8s,mb4.6,baz=264,slow=6.5,SNR=5.6						
KDAK	**Kodiak Island**	**35.88**	**49**	P	**P**	**22 04 13.1**	**-0.9**
KDAK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
LZH	**Lanzhou**	**36.75**	**272**	*e*P	**P**	**22 04 23.0**	**+1.2**
LZH				pP	pP	22 04 30.0	-2.1
LZH				sP	sP	22 04 35.0	-1.3
LZH				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.0						
LZH				pmax	pmax		
	comp=Z,110nm,4.4s						
GTA	**Gaotai**	**38.02**	**280**	*e*P	**P**	**22 04 33.6**	**+1.1**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.2						
ZALV	**Zalesovo Beam**	**42.45**	**307**	P	**P**	**22 05 09.8**	**+0.8**
	comp=Z,0.3nm,0.3s,mb3.4,baz=86,slow=4.6,SNR=2.6						
ZALV				PcP	PcP	22 07 01.4	+0.1
	comp=Z,0.4nm,0.4s,baz=73,slow=4.8,SNR=4.1						
INK	**Inuvik**	**43.42**	**32**	P	**P**	**22 05 17.1**	**+0.5**
	comp=Z,1.3nm,0.7s,mb3.8,baz=291,slow=8.6,SNR=2.8						
INK	**Inuvik**	**43.42**	**32**	P	**P**	**22 05 17.2**	**+0.5**
INK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
INK	**Inuvik**	**43.42**	**32**	*e*P	**P**	**22 05 15.4**	**-1.3**
	comp=Z,2.1nm,0.8s,mb3.9						
MKAR	**Makanchi Array**	**46.52**	**298**	P	**P**	**22 05 41.6**	**+0.1**
	comp=Z,0.8nm,0.5s,mb3.9,baz=68,slow=7.0,SNR=6.3						
MKAR				PcP	PcP	22 07 15.5	+0.1
	comp=Z,0.8nm,0.6s,baz=144,slow=0.4,SNR=4.3						
MKAR				LR	LR	22 26 16.9	
	comp=Z,106nm,18.0s,MS3.8,baz=80,slow=37						
MKAR	**Makanchi Array**	**46.52**	**298**	P	**P**	**22 05 41.6**	**+0.1**
MKAR						22 07 15.5	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR				MLR	MLR		
	comp=Z,107nm,18.0s						
MKAR	**Makanchi Array**	**46.52**	**298**	P	**P**	**22 05 41.6**	**+0.1**
MKAR				PcP	PcP	22 07 15.5	+0.1
MKAR				LR	LR	22 26 16.9	
KURK	**Kurchatov**	**47.13**	**304**	P	**P**	**22 05 46.6**	**+0.3**
	comp=Z,2.3nm,0.6s,mb4.3,baz=71,slow=8.9,SNR=5.0						
KURK	**Kurchatov**	**47.13**	**304**	P	**P**	**22 05 46.6**	**+0.3**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
KURK	**Kurchatov**	**47.13**	**304**	*e*P	**P**	**22 05 45.0**	**-1.3**
	comp=Z,2.2nm,0.5s,mb4.3						
BVAR	**Borovoye Array**	**50.80**	**310**	P	**P**	**22 06 14.4**	**0.0**
	comp=Z,0.7nm,0.5s,mb3.8,baz=70,slow=9.8,SNR=3.7						
BVAR				PcP	PcP	22 07 30.7	-0.1
	comp=Z,0.8nm,0.6s,baz=60,slow=3.6,SNR=3.8						
BVAR	**Borovoye Array**	**50.80**	**310**	P	**P**	**22 06 14.4**	**0.0**
BVAR						22 07 30.7	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRVK	**Borovoye**	**50.85**	**310**	*e*P	**P**	**22 06 14.7**	**0.0**
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.4						
BRVK	**Borovoye**	**50.85**	**310**	*e*P	**P**	**22 06 14.7**	**0.0**
	comp=Z,6.9nm,1.3s,mb4.4						
CMAR	**Chiang Mai Arr**	**50.90**	**256**	P	**P**	**22 06 16.4**	**+0.9**
	comp=Z,0.5nm,0.6s,mb3.6,baz=41,slow=7.2,SNR=4.0						
CMAR	**Chiang Mai Arr**	**50.90**	**256**	P	**P**	**22 06 16.4**	**+0.9**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA	**Yellowknife Ar**	**52.71**	**36**	P	**P**	**22 06 28.6**	**+0.2**
	comp=Z,1.9nm,0.9s,mb4.0,baz=296,slow=7.7,SNR=3.7						
AAK	**Ala-Archa**	**53.37**	**296**	P	**P**	**22 06 33.7**	**+0.1**
	comp=Z,1.3nm,0.3s,mb4.3						
AAK	**Ala-Archa**	**53.37**	**296**	*e*P	**P**	**22 06 34.4**	**+0.8**
AAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.9						
AAK	**Ala-Archa**	**53.37**	**296**	P	**P**	**22 06 33.2**	**-0.5**
EKS2	**Erkin-Say**	**53.81**	**297**	*e*P	**P**	**22 06 36.7**	**-0.1**
	comp=Z,2.9nm,0.6s,mb4.4						
KSH	**Kashi**	**54.07**	**292**	P	**P**	**22 06 43.3**	**+4.5**
KSH				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
KSH				pmax	pmax		
	comp=Z,100nm,6.0s						
ABKAR	**Akbulak array**	**58.38**	**310**	*e*P	**P**	**22 07 08.5**	**-0.9**
	comp=Z,3.8nm,0.4s,mb4.8						
ARCES	**ARCESS Array B**	**58.73**	**341**	P	**P**	**22 07 11.4**	**-0.1**
	comp=Z,0.9nm,0.5s,mb4.0,baz=32,slow=7.1,SNR=5.6						
ARCES	**ARCESS Array B**	**58.73**	**341**	P	**P**	**22 07 11.4**	**-0.1**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKTK	**Aktyubinsk**	**58.74**	**312**	P	**P**	**22 07 11.3**	**-0.6**
AKTK				LR	LR	22 35 02.1	
AKTO	**Aktyubinsk**	**58.74**	**312**	P	**P**	**22 07 11.3**	**-0.6**
	comp=Z,1.2nm,0.5s,mb4.2,baz=122,slow=6.8,SNR=5.4						
AKTO				LR	LR	22 35 02.1	
	comp=Z,100nm,18.3s,MS4.0,baz=233,slow=38						
AKTO	**Aktyubinsk**	**58.74**	**312**	P	**P**	**22 07 11.3**	**-0.6**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
AKTO				MLR	MLR		
	comp=Z,101nm,18.3s,MS4.0						
KULM	**Kulim**	**59.42**	**244**	*e*P	**P**	**22 07 17.5**	**+0.5**
BMO	**Blue Mountains**	**60.81**	**55**	*e*P	**P**	**22 07 26.4**	**+0.2**
BMO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.2						
BMO	**Blue Mountains**	**60.81**	**55**	*e*P	**P**	**22 07 26.4**	**+0.2**
	comp=Z,1.2nm,0.5s,mb4.3						
KBL	**Kabul**	**61.46**	**291**	*e*P	**P**	**22 07 30.1**	**-0.7**
KBL				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6						
KBL	**Kabul**	**61.46**	**291**	*e*P	**P**	**22 07 30.1**	**-0.7**
	comp=Z,5.3nm,0.9s,mb4.7						
NVAR	**Mina Array Bea**	**64.12**	**61**	P	**P**	**22 07 49.2**	**+0.9**
	comp=Z,0.2nm,0.3s,mb3.6,baz=289,slow=5.6,SNR=3.9						
FINES	**FINESS Array B**	**64.75**	**334**	P	**P**	**22 07 51.2**	**-0.9**
	comp=Z,4.6nm,0.7s,mb4.6,baz=35,slow=7.8,SNR=20						
FINES	**FINESS Array B**	**64.75**	**334**	P	**P**	**22 07 51.2**	**-0.9**
FINES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
FINES	**FINESS Array B**	**64.75**	**334**	P	**P**	**22 07 51.2**	**-0.9**
CTAO	**Charters Tower**	**65.34**	**185**	P	**P**	**22 07 56.5**	**+0.1**
WRAB	**Tennant Creek**	**66.85**	**197**	*e*P	**P**	**22 08 05.7**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
WRAB	**Tennant Creek**	**66.85**	**197**	*e*P	**P**	**22 08 05.7**	**-0.4**
	comp=Z,2.4nm,0.8s,mb4.3						
WRA	**Warramunga Arr**	**66.86**	**197**	P	**P**	**22 08 05.7**	**-0.4**
	com

comp=Z,4.8nm,0.7s,mb4.5
STHS Stebnicka Huta 76.07 329 *eP* **P 22 09 02.3 +0.8**
TESR 76.36 324 ⇑*iP* **P 22 09 02.8 -0.3**
TESR 76.36 324 ⇑*iP* **P 22 09 02.8 -0.3**
CRVS Cervenica-Dubn 76.42 329 *eP* **P 22 09 03.6 +0.2**
CRVS pmax pmax
comp=Z,28nm,2.6s,mb4.7
CRVS Cervenica-Dubn 76.42 329 *eP* **P 22 09 03.6 +0.2**
comp=Z,28nm,2.6s,mb4.7
CRVS Cervenica-Dubn 76.42 329 *eP* **P 22 09 03.6 +0.2**
TLCR 76.50 322 ⇓*iP* **P 22 09 03.9 -0.1**
TLCR 76.50 322 ⇓*iP* **P 22 09 03.9 -0.1**
VRI Vrincioaia 76.85 324 ⇑*iP* **P 22 09 07.5 +1.6**
VRI Vrincioaia 76.85 324 ⇑*iP* **P 22 09 07.5 +1.6**
UPC Upice 76.95 333 *eP* **P 22 09 06.6 +0.2**
UPC Upice 76.95 333 *eP* **P 22 09 06.6 +0.2**
DPC Dobruska-Polom 76.98 332 *eP* **P 22 09 06.8 +0.2**
DPC Dobruska-Polom 76.98 332 *eP* **P 22 09 06.8 +0.2**
MORC Moravsky Berou 77.07 331 ⇓*iP* **P 22 09 07.1 0.0**
MORC Moravsky Berou 77.07 331 *eP* **P 22 09 06.8 -0.3**
comp=Z,5.0nm,1.0s,mb4.4
MORC Moravsky Berou 77.07 331 ⇓*iP* **P 22 09 07.1 0.0**
KECS Kecovo 77.13 329 *eP* **P 22 09 07.6 +0.2**
KECS pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
KECS Kecovo 77.13 329 *eP* **P 22 09 07.6 +0.2**
comp=Z,2.5nm,1.0s,mb4.1
KECS Kecovo 77.13 329 *eP* **P 22 09 07.6 +0.2**
CLL Collm 77.19 335 *iP* **P 22 09 07.1 -0.6**
comp=Z,6.0nm,0.7s,mb4.6
CLL *es*P sP 22 09 25.0 +2.2
BRG Berggiesshubel 77.28 334 *eP* **P 22 09 07.8 -0.4**
comp=Z,4.8nm,1.2s,mb4.3
MLR Muntele Rosu 77.47 324 ⇑*iP* **P 22 09 10.4 +1.0**
MLR Muntele Rosu 77.47 324 ⇑*iP* **P 22 09 10.4 +1.0**
VYHS Vyhne 77.71 330 *eP* **P 22 09 11.0 +0.3**
VYHS pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
VYHS Vyhne 77.71 330 *eP* **P 22 09 11.0 +0.3**
comp=Z,2.6nm,1.1s,mb4.1
VYHS Vyhne 77.71 330 *eP* **P 22 09 11.0 +0.3**
VRAC Vranov 77.79 332 ⇑*iP* **P 22 09 11.1 0.0**
VRAC Vranov 77.79 332 ⇑*iP* **P 22 09 11.1 0.0**
PRU Pruhonice 77.87 333 *eP* **P 22 09 12.3 +0.8**
PRU Pruhonice 77.87 333 *eP* **P 22 09 12.3 +0.8**
VOIR 77.89 325 ⇑*iP* **P 22 09 12.4 +0.7**
VOIR 77.89 325 ⇑*iP* **P 22 09 12.4 +0.7**
BR131 Keskin Array S 78.55 316 *eP* **P 22 09 14.7 -0.8**
comp=Z,1.5nm,0.9s,mb3.9
BRTR Keskin Array B 78.55 316 P **P 22 09 16.1 +0.6**
comp=Z,1.2nm,0.8s,mb3.9,baz=58,slow=7.4,SNR=5.7
BRTR Keskin Array B 78.55 316 *eP* **P 22 09 16.0 +0.5**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
GZR Gura Zlata 78.83 326 ⇑**P P 22 09 16.9 -0.1**
GZR Gura Zlata 78.83 326 ⇑*iP* **P 22 09 16.9 -0.1**
KHC Kasperske Hory 78.92 333 *eP* **P 22 09 16.7 -0.7**
comp=Z,3.2nm,0.9s,mb4.2
KHC Kasperske Hory 78.92 333 *eP* **P 22 09 17.8 +0.4**
BZS Buzias 79.10 327 ⇑**P P 22 09 18.6 +0.2**
BZS Buzias 79.10 327 ⇑*iP* **P 22 09 18.6 +0.2**
TXAR Lajitas Array 79.19 59 P **P 22 09 18.7 -0.5**
comp=Z,0.2nm,0.5s,mb3.3,baz=294,slow=4.0,SNR=4.5
CONA Conrad Observa 79.22 331 ⇑*iP* **P 22 09 19.6 +0.5**
comp=Z,3.3nm,0.7s,mb4.4
BAIF Baives 80.74 339 *eP* **P 22 09 27.4 +0.2**
VTS Vitosha 80.98 324 ⇑**P P 22 09 28.1 -0.5**
VTS Vitosha 80.98 324 ⇑*iP* **P 22 09 28.1 -0.5**
WTTA Wattenberg 81.18 334 P **P 22 09 30.1 +0.5**
comp=Z,4.0nm,0.4s,mb4.7
CDF Champ du Feu 81.44 337 *eP* **P 22 09 30.8 -0.2**
MEZF Maizieres J'vi 81.96 338 *eP* **P 22 09 32.8 -0.9**
HAU Haudompre 82.07 337 *eP* **P 22 09 33.9 -0.4**
HINF Hinteralfeld 82.10 337 *eP* **P 22 09 33.8 -0.6**
MMAI Mount Meron Ar 82.80 310 P **P 22 09 39.2 +0.8**
comp=Z,2.3nm,0.7s,mb4.3,baz=34,slow=8.1,SNR=4.1
LOR Lormes 83.41 338 *eP* **P 22 09 41.0 -0.2**
comp=Z,7.5nm,0.7s,mb4.5
LOR Lormes 83.41 338 *eP* **P 22 09 41.0 -0.2**
LOR pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
LOR Lormes 83.41 338 *eP* **P 22 09 41.0 -0.2**
comp=Z,3.8nm,0.7s,mb4.5
CABF La Chapelle 83.42 337 *eP* **P 22 09 41.4 +0.1**
GRR Gorron 83.49 342 *eP* **P 22 09 41.5 -0.1**
comp=Z,19nm,0.8s,mb4.9
GRR Gorron 83.49 342 *eP* **P 22 09 41.5 -0.1**
GRR pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
GRR Gorron 83.49 342 *eP* **P 22 09 41.5 -0.1**
comp=Z,9.4nm,0.8s,mb4.9
SSF Saint Saulge 83.69 339 *eP* **P 22 09 42.6 -0.1**
AVF Avril sur Loir 83.98 339 *eP* **P 22 09 44.2 0.0**
comp=Z,4.4nm,0.6s,mb4.5
AVF Avril sur Loir 83.98 339 *eP* **P 22 09 44.2 0.0**
AVF pmax pmax
comp=Z,2.0nm,0.6s,mb4.4
AVF Avril sur Loir 83.98 339 *eP* **P 22 09 44.2 0.0**
comp=Z,2.2nm,0.6s,mb4.5
SGMF Saint Gilles 83.98 343 *eP* **P 22 09 44.2 0.0**
SMF Signal de Mont 83.99 338 *eP* **P 22 09 44.2 0.0**
comp=Z,4.9nm,0.7s,mb4.5
SMF Signal de Mont 83.99 338 *eP* **P 22 09 44.2 0.0**
SMF pmax pmax
comp=Z,2.0nm,0.7s,mb4.4
SMF Signal de Mont 83.99 338 *eP* **P 22 09 44.2 0.0**
comp=Z,2.5nm,0.7s,mb4.5
LPL La Plagne 84.23 336 *eP* **P 22 09 46.1 +0.6**
comp=Z,10nm,0.9s,mb4.7
LPL La Plagne 84.23 336 *eP* **P 22 09 46.1 +0.6**
LPL pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
LPL La Plagne 84.23 336 *eP* **P 22 09 46.1 +0.6**
comp=Z,5.3nm,0.9s,mb4.7
LPG La Plagne 84.24 336 *eP* **P 22 09 46.4 +0.8**
BGF Bois d'Agland 84.33 339 *eP* **P 22 09 46.6 +0.6**
comp=Z,7.3nm,0.7s,mb4.6
BGF Bois d'Agland 84.33 339 *eP* **P 22 09 46.6 +0.6**
BGF pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
BGF Bois d'Agland 84.33 339 *eP* **P 22 09 46.6 +0.6**
comp=Z,3.7nm,0.7s,mb4.6
TCF Toulx Ste Croi 84.74 339 *eP* **P 22 09 48.3 +0.3**
MBDF Montbardon 84.94 336 *eP* **P 22 09 48.8 -0.3**
MFF Saint Martin d 85.02 341 *eP* **P 22 09 49.1 -0.3**
ORIF Oris-en-Rattie 85.02 336 *eP* **P 22 09 50.1 +0.6**
comp=Z,9.5nm,0.8s,mb4.7
ORIF Oris-en-Rattie 85.02 336 *eP* **P 22 09 50.1 +0.6**
ORIF pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
ORIF Oris-en-Rattie 85.02 336 *eP* **P 22 09 50.1 +0.6**
comp=Z,4.8nm,0.8s,mb4.7
VIVF Saint-Julien-l 85.42 337 *eP* **P 22 09 51.9 +0.4**
FRF La Foret Royal 86.04 335 *eP* **P 22 09 54.2 -0.4**
LASF Ste Croix 86.36 337 *eP* **P 22 09 56.9 +0.7**
MTLF Montolieu 87.48 338 *eP* **P 22 10 00.5 -1.1**
comp=Z,13nm,1.0s,mb4.8
MTLF Montolieu 87.48 338 *eP* **P 22 10 00.5 -1.1**
MTLF pmax pmax
comp=Z,6.0nm,1.0s,mb4.8
MTLF Montolieu 87.48 338 *eP* **P 22 10 00.5 -1.1**
comp=Z,6.4nm,1.0s,mb4.8

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*BJI **07** 21:59:04.5, 40.°30N×78.°47E, h15km, ML3.4/8*
*NNC **07** 21:59:11.6±3.7, 40.°86N×79.°86E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=37.7km s-min=22.0km az=8.0*
ISC 07 21:59:03.9±2.0, 40.°0N±0.°1×79.°6E±0.°1, h35km, n12, σ1°24/15, 3C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**2.81**	**262**	Pn	**Pn**	**21 59 46.1**	**-0.2**
KSH				Sn	**Sn**	**22 00 19.2**	**+0.3**
KSH				smax			
	comp=N,340nm,0.7s						
KSH				smax			
	comp=E,190nm,0.8s						
ULHL	**Ulahol**	**3.39**	**313**	P	**Pn**	**21 59 50.1**	**-4.2**
	SNR=48						
KNDC	**Almaty**	**3.79**	**330**	⇑Pn	**Pn**	**22 00 01.8**	**+2.0**
	comp=E,44nm,0.7s						
KNDC				⇑Sn	**Sn**	**22 00 43.0**	**-0.2**
	comp=E,152nm,0.6s						
KZA	**Kyzart**	**3.89**	**304**	P	**Pn**	**21 59 58.3**	**-2.8**
	SNR=11						
KBK	**Karagaybulak**	**4.40**	**309**	P	**Pn**	**22 00 06.4**	**-1.7**
	SNR=11						
AAK	**Ala-Archa**	**4.66**	**307**	P	**Pn**	**22 00 11.7**	**0.0**
	SNR=7.9						
CHMS	**Chumysh**	**4.72**	**312**	P	**Pn**	**22 00 13.1**	**+0.5**
	SNR=20						
USP	**Ospenovka**	**5.03**	**313**	P	**Pn**	**22 00 18.6**	**+1.7**
	SNR=10.0						
EKS2	**Erkin-Say**	**5.13**	**304**	P	**Pn**	**22 00 11.6**	**-6.6**
	SNR=5.6						
MK31	**Makanchi Array**	**7.11**	**15**	⇑Pn	**Pn**	**22 00 45.8**	**+0.5**
	comp=E,0.4nm,0.5s,baz=200,slow=12,SNR=7.0						
KK31	**Karatay Array**	**7.48**	**298**	Pn	**Pn**	**22 01 00.1**	**+10**
	comp=E,1.9nm,0.7s,baz=103,slow=15,SNR=6.1						
KK31				⇓Sn	**Sn**	**22 02 26.2**	**+12**
	comp=E,5.2nm,0.8s,baz=121,slow=27,SNR=6.5						
KURK	**Kurchatov**	**10.77**	**357**	⇓Pn	**Pn**	**22 01 34.3**	**-1.3**
	comp=E,3.4nm,0.6s						

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*ISCJB **07** 22:00:26.0±1.0, 23.°92N±0.°04×122.°52E±0.°02, h2km±7km, Error ellipse: s-maj=6.7km s-min=3.0km az=175.5*
*TAP **07** 22:00:26.8, 23.°97N×122.°64E, h52km±2km, ML2.7, C*
*JMA **07** 22:00:28.8±0.3, 24.°15N×122.°47E, h32km, M1.7*
ISC 07 22:00:26.8±0.8, 23.°93N±0.°04×122.°52E±0.°02, h11km±6km, n22, σ0°73/35, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.69**	**40**	P	**Pg**	**22 00 40.4**	**+0.2**
YOJ				S	**Sg**	**22 00 48.6**	**-0.8**
ENA	**Nanau**	**0.86**	**305**	P	**Pg**	**22 00 43.9**	**+0.5**
	baz=300						
ENA				*e*S	**Sg**	**22 00 55.9**	**+1.2**
	baz=300						
TWC	**Suao**	**0.91**	**318**	P	**Pg**	**22 00 44.1**	**-0.3**
	baz=312						
TWC				*e*S	**Sg**	**22 00 55.2**	**-1.0**
	baz=312						
ESL	**Shilin**	**1.00**	**264**	*e*P	**Pg**	**22 00 46.1**	**+0.1**
	baz=255						
TWE	**Neicheng**	**1.10**	**316**	*e*P	**Pb**	**22 00 47.3**	**-0.7**
	baz=303						
TWE				*e*S	**Sb**	**22 01 03.3**	**+0.9**
	baz=303						
ENTT	**Nioudou**	**1.12**	**309**	P	**Pb**	**22 00 48.0**	**-0.2**
	baz=305						
ENTT				*e*S	**Sb**	**22 01 03.1**	**+0.3**
	baz=305						
NNS	**Nan Shan**	**1.16**	**296**	*e*P	**Pb**	**22 00 48.1**	**-0.8**
	baz=292						
NNS				*e*S	**Sb**	**22 01 04.0**	**0.0**
	baz=292						
WHF	**Hehuan Shan**	**1.17**	**281**	*e*P	**Pb**	**22 00 48.5**	**-0.5**
	baz=278						
WHF				*e*S	**Sb**	**22 01 03.5**	**-0.6**
	baz=278						
EHY	**Hungye**	**1.17**	**249**	*e*P	**Pb**	**22 00 49.1**	**0.0**
	baz=249						
EHY				*e*S	**Sb**	**22 01 04.0**	**-0.3**
	baz=249						
IRIF	**Iriomote-Funau**	**1.18**	**70**	P	**Pb**	**22 00 49.3**	**+0.1**
IRIF				S	**Sb**	**22 01 04.3**	**-0.2**
HATJ	**Hateruma jima**	**1.19**	**84**	P	**Pb**	**22 00 50.2**	**+0.9**
HATJ				*e*S	**Sb**	**22 01 05.9**	**+1.3**
TWF1	**Yuli**	**1.26**	**243**	P	**Pn**	**22 00 49.2**	**-1.1**
	baz=236						
TWF1				*e*S	**Sb**	**22 01 06.4**	**-0.4**
	baz=236						
TWT	**Tachien**	**1.27**	**285**	*e*S	**Sb**	**22 01 07.5**	**+0.5**
	baz=282						
NSK	**Sanguang**	**1.29**	**305**	*e*P	**Pn**	**22 00 50.2**	**-0.6**
	baz=292						
JKRS	**Kuro-shima**	**1.40**	**77**	P	**Pn**	**22 00 52.8**	**+0.5**
JKRS				*e*S	**Sn**	**22 01 10.3**	**-0.4**
SMLT	**Sun Moon Lake**	**1.48**	**269**	*e*P	**Pn**	**22 00 53.8**	**+0.4**
	baz=259						
TYC	**Yuchr**	**1.52**	**269**	*e*P	**Pn**	**22 00 55.8**	**+1.8**
	baz=259						
JIJ	**Ishigaki jima**	**1.55**	**73**	P	**Pn**	**22 00 54.0**	**-0.3**
JIJ				S	**Sn**	**22 01 13.5**	**-0.9**
ELDTW	**Lidau**	**1.56**	**242**	*e*P	**Pn**	**22 00 53.1**	**-1.4**
	baz=242						
ALS	**Alishan**	**1.62**	**255**	P	**Pn**	**22 00 56.1**	**+0.7**
	baz=248						
CHN5	**Tsauling**	**1.72**	**259**	*e*P	**Pn**	**22 00 57.8**	**+1.1**
	baz=258						
WTP	**Ta-pu**	**1.87**	**249**	*e*P	**Pn**	**22 00 58.8**	**0.0**
	baz=241						

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*IDC **07** 22:00:40.0±2.3, 4.°28S×129.°18E, h0km, mb3.5/1, mb1 3.6/3, mb1mx3.4/18, mbtmp3.4/3, ML3.1/1, Error ellipse: s-maj=162.5km s-min=29.7km az=69.0*
*ISCJB **07** 22:00:43.8±0.9, 4.°75S±0.°07×128.°2E±0.°2, h33km, Error ellipse: s-maj=23.4km s-min=8.3km az=162.3*
*DJA **07** 22:00:46, 2.°92S×128.°70E, h15km, MLv3.1/3*
ISC 07 22:00:45.2±0.9, 4.°71S±0.°08×128.°2E±0.°2, h35km, n5, σ0°86/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**1.01**	**359**	P	**Pn**	**22 01 02.7**	**-0.2**
AAI				S	**Sn**	**22 01 15.8**	**-0.1**
NLAI	**Namlea**	**1.83**	**323**	P	**Pn**	**22 01 14.7**	**+0.6**
NLAI				S	**Sn**	**22 01 35.1**	**-0.9**
WRA	**Warramunga Arr**	**16.28**	**159**	Pn	**Pn**	**22 04 30.0**	**-1.2**
	0.1nm,0.3s,baz=345,slow=13,SNR=3.8						
ASAR	**Alice Springs**	**19.64**	**164**	P	**Pn**	**22 05 12.8**	**+0.4**
	0.1nm,0.3s,baz=344,slow=11,SNR=8.4						
MKAR	**Makanchi Array**	**65.34**	**327**	P	**P**	**22 11 25.4**	**+1.5**
	0.3nm,0.6s,baz=121,slow=8.3,SNR=5.7						

CASC 07 22:02:42.4±1.8, 12.°90N×90.°26W, h20km±11km, MD3.6, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOQS	**Boqueron**	**1.27**	**49**	*e*P	Pn	22 03 04.6	-0.4
IXG	**Ixpaco**	**1.28**	**352**	*e*P	Pn	22 03 05.0	-0.2
LFRS	**El Faro**	**1.37**	**58**	*e*P	Pn	22 03 06.2	-0.2
FUG	**Fuego 3**	**1.64**	**340**	*e*P	Pn	22 03 10.1	0.0
NBG	**Las Nubes**	**1.68**	**357**	*e*P	Pn	22 03 12.4	+1.8
MTO2	**Montecristo 2**	**1.73**	**30**	*e*P	Pn	22 03 11.5	+0.2
FG6		**1.76**	**340**	*e*P	Pn	22 03 11.4	-0.3
VSM	**San Miguel**	**2.01**	**75**	*e*P	Pn	22 03 15.3	+0.2
TP2	**Tecpan 2**	**2.01**	**339**	*e*P	Pn	22 03 16.2	+0.9
TP2				*e*S	Sn	22 03 40.7	+0.8
BLLM	**Bellamira**	**2.04**	**74**	*e*P	Pn	22 03 15.3	-0.3
MRL	**Marmol**	**2.22**	**14**	*e*P	Pn	22 03 20.1	+2.0

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*ISCJB **07** 22:09:51.8±4.1, 34.°32N±0.°10×80.°48E±0.°08, h15km±29km, mb3.7/7, MS3.5/2, Error ellipse: s-maj=16.8km s-min=10.5km az=173.0*
*IDC **07** 22:09:52.7±1.1, 34.°22N×80.°53E, h0km, mb3.8/7, mb1 3.9/9, mb1mx3.6/26, mbtmp3.8/9, ML3.6/1, MS3.4/3, Ms1 3.4/3, ms1mx2.7/30, Error ellipse: s-maj=50.0km s-min=19.5km az=58.0*
*NEIC **07** 22:09:54.6±0.4, 34.°29N×80.°53E, h10km, mb3.5/3, Error ellipse: s-maj=8.3km s-min=6.6km az=75.0*
ISC 07 22:09:59.2±1.2, 34.°43N±0.°07×80.°54E±0.°08, h41km±11km, n32, σ0°79/30, mb3.7/7, MS3.5/2, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDI	**Dehra Dun**	**4.61**	**208**	*ex*	**Pn**	**22 11 08.0**	**+1.7**
UCH	**Uchtor**	**9.11**	**330**	Pn	**Pn**	**22 12 07.8**	**-0.1**
KBL	**Kabul**	**9.49**	**274**	*e*Pn	**Pn**	**22 12 11.7**	**-1.5**
	2.7nm,0.6s						
KBL				*e*Sn	**Sn**	**22 13 58.5**	**-0.1**
EKS2	**Erkin-Say**	**9.77**	**329**	*e*Pn	**Pn**	**22 12 17.6**	**+0.6**
	2.5nm,0.6s						
MK31	**Makanchi Array**	**12.42**	**6**	*e*Pn	**Pn**	**22 12 53.3**	**+0.1**
MKAR	**Makanchi Array**	**12.42**	**6**	Pn	**Pn**	**22 12 52.2**	**-1.0**
	0.3nm,0.3s,baz=192,slow=13,SNR=11						
KURK	**Kurchatov**	**16.33**	**356**	Pn	**Pn**	**22 13 45.3**	**0.0**
	0.2nm,0.3s,baz=179,slow=11,SNR=5.5						
KURK	**Kurchatov**	**16.33**	**356**	*e*Pn	**Pn**	**22 13 46.2**	**+0.9**
	1.2nm,0.7s						
ZALV	**Zalesovo Beam**	**19.74**	**8**	P	**Pn**	**22 14 27.9**	**+0.9**
	0.1nm,0.3s,baz=191,slow=9.0,SNR=6.6						
ZALV				LR	LR	22 23 51.2	
	comp=Z,40nm,21.4s,baz=74,slow=42						
BVAR	**Borovoye Array**	**19.94**	**342**	P	**Pn**	**22 14 27.5**	**-1.8**
	1.8nm,0.6s,baz=151,slow=12,SNR=15						
BRVK	**Borovoye**	**20.00**	**342**	*e*P	**P**	**22 14 27.9**	**-0.1**
	1.8nm,0.6s						
ABKAR	**Akbulak array**	**21.23**	**320**	*e*P	**P**	**22 14 41.8**	**+0.4**
	1.6nm,0.7s,mb3.5						
AKTK	**Aktyubinsk**	**22.93**	**321**	P	**P**	**22 14 59.6**	**+0.1**
AKTO	**Aktyubinsk**	**22.93**	**321**	P	**P**	**22 14 59.6**	**+0.1**
	0.6nm,0.3s,mb3.5,baz=120,slow=13,SNR=4.6						
ULN	**Ulaanbaatar**	**23.91**	**48**	P	**P**	**22 15 10.1**	**+1.0**
KIV	**Kislovodsk**	**30.61**	**300**	*e*P	**P**	**22 16 09.5**	**+0.3**
MMAI	**Mount Meron Ar**	**37.33**	**281**	LR	LR	22 34 59.3	
	comp=Z,146nm,19.6s,MS3.8,baz=170,slow=40						
KSRS	**Korea Array**	**38.17**	**71**	LR	LR	22 34 31.7	
	comp=Z,40nm,18.5s,MS3.3,baz=220,slow=39						
FINES	**FINESS Array B**	**43.58**	**325**	P	**P**	**22 17 59.1**	**+0.3**
	0.8nm,0.6s,mb3.6,baz=94,slow=7.6,SNR=6.2						
KWP	**Kalwaria Pacla**	**44.46**	**308**	*e*P	**P**	**22 18 05.5**	**-0.5**
ARCES	**ARCESS Array B**	**46.09**	**336**	P	**P**	**22 18 19.9**	**+1.2**
	3.4nm,1.0s,mb4.2,baz=91,slow=8.5,SNR=4.2						
ARCES	**ARCESS Array B**	**46.09**	**336**	P	**P**	**22 18 19.9**	**+1.2**
NB2	**NORSAR Subarra**	**50.67**	**324**	P	**P**	**22 18 53.9**	**-0.2**
	comp=Z,0.5nm,0.5s,mb3.7,baz=88,slow=7.9						
NOA	**NORSAR Array B**	**50.67**	**324**	P	**P**	**22 18 54.1**	**0.0**
	comp=Z,0.4nm,0.6s,mb3.6,baz=88,slow=7.5,SNR=3.5						
ESLA	**Sonseca Array**	**65.23**	**302**	*e*P	**P**	**22 20 36.9**	**+0.5**
WRA	**Warramunga Arr**	**74.43**	**128**	P	**P**	**22 21 31.7**	**-1.5**
	comp=Z,1.1nm,0.8s,mb3.8,baz=319,slow=6.1,SNR=5.8						
WRAB	**Tennant Creek**	**74.43**	**128**	*e*P	**P**	**22 21 33.0**	**-0.2**
ASAR	**Alice Springs**	**76.85**	**131**	P	**P**	**22 21 46.1**	**-0.8**
	comp=Z,0.3nm,0.4s,mb3.6,baz=321,slow=6.1,SNR=4.6						
TSUM	**Tsumeb**	**80.14**	**239**	*e*P	**P**	**22 22 05.1**	**-0.1**
DBIC	**Dimbokro**	**82.48**	**273**	*e*P	**P**	**22 22 18.1**	**+0.2**
SUR	**Sutherland**	**86.98**	**227**	P	**P**	**22 22 40.1**	**+0.1**
LPAZ	**La Paz**	**146.61**	**295**	PKPbc	PKPbc	22 29 37.7	+0.9
	comp=Z,0.5nm,0.5s,baz=63,slow=4.5,SNR=3.3						

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*IDC **07** 22:26:32.0±1.5, 56.°02N×162.°30E, h0km, mb3.6/2, mb1 3.8/3, mb1mx3.4/26, mbtmp3.6/3, ML3.3/1, Error ellipse: s-maj=53.2km s-min=19.6km az=135.0*
*MOS **07** 22:26:33.3±1.4, 55.°84N×162.°53E, h25km, mb4.3/3, Error ellipse: s-maj=20.2km s-min=9.3km az=72.6*
*KRSC **07** 22:26:33.9±0.6, 55.°75N×162.°46E, h23km±23km, ML4.2*
*ISCJB **07** 22:26:35.4±0.4, 55.°79N±0.°03×162.°49E±0.°05, h48km±5km, mb4.0/6, Error ellipse: s-maj=4.7km s-min=4.2km az=10.3*
*NEIC **07** 22:26:36.8±0.5, 55.°99N×162.°19E, h35km, mb4.2/4, Error ellipse: s-maj=14.6km s-min=7.1km az=125.0*
ISC 07 22:26:36.1±0.7, 55.°81N±0.°03×162.°49E±0.°05, h33km±6km, n41, σ1°09/66, mb4.0/6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.44**	**25**	*e*P	**Pb**	**22 26 45.3**	**-0.4**
KBTR				*i*S	**Sb**	**22 26 53.0**	**+0.7**
SMKR	**Semkarok**	**0.96**	**324**	*e*P	**Pn**	**22 26 52.8**	**-0.4**
SMKR				*i*S	**Sn**	**22 27 05.9**	**+0.2**
ZLN	**Zelenaya**	**0.97**	**283**	*e*P	**Pn**	**22 26 52.6**	**-0.8**
ZLN				*i*S	**Sn**	**22 27 06.1**	**+0.1**
CIRR	**Tsirk**	**1.03**	**288**	*e*P	**Pn**	**22 26 53.4**	**-0.7**
CIRR				*i*S	**Sn**	**22 27 07.3**	**0.0**
BDR	**Baidarnaya**	**1.04**	**317**	*e*P	**Pn**	**22 26 54.3**	**-0.1**
BDR				*i*S	**Sn**	**22 27 08.7**	**+0.9**
SRKR	**Sorokina**	**1.12**	**319**	*e*P	**Pn**	**22 26 55.3**	**-0.1**
SRKR				*i*S	**Sn**	**22 27 10.5**	**+0.8**
BZMR	**Bezymyannaya**	**1.14**	**277**	*e*P	**Pn**	**22 26 54.5**	**-1.1**
BZMR				*i*S	**Sn**	**22 27 09.5**	**-0.5**
KLY	**Klyuchi**	**1.15**	**297**	*e*P	**Pn**	**22 26 53.5**	**-2.3**
KLY				*i*S	**Sn**	**22 27 07.8**	**-2.5**
KRSR	**Krestovskiy**	**1.16**	**291**	*e*P	**Pn**	**22 26 54.8**	**-1.1**
KRSR				*i*S	**Sn**	**22 27 09.2**	**-1.3**
KMNR	**Kamenistaya**	**1.27**	**268**	*e*P	**Pn**	**22 26 57.5**	**-0.1**
KMNR				*i*S	**Sn**	**22 27 14.4**	**+0.9**
KPT	**Kopyto**	**1.29**	**278**	*e*P	**Pn**	**22 26 57.4**	**-0.3**
KPT				*i*S	**Sn**	**22 27 14.4**	**+0.6**
MKZ	**Mys Kozlova**	**1.33**	**199**	*e*P	**Pn**	**22 26 56.8**	**-1.6**
MKZ				*i*S	**Sn**	**22 27 13.3**	**-1.6**
KOZR	**Kozyr**	**1.48**	**281**	PN	**Pn**	**22 27 01.0**	**+0.6**
KOZR				S	**Sn**	**22 27 21.1**	**+2.5**
KOZ	**Kozyrevsk**	**1.49**	**281**	*e*P	**Pn**	**22 27 01.0**	**+0.4**
KOZ				*i*S	**Sn**	**22 27 21.1**	**+2.2**
SRDR	**Sredinnyy**	**1.64**	**289**	*e*P	**Pn**	**22 27 03.0**	**+0.5**
SRDR				*i*S	**Sn**	**22 27 24.1**	**+1.7**
BKI	**Bering**	**2.07**	**106**	*e*P	**Pn**	**22 27 09.4**	**+0.9**
BKI				*i*S	**Sn**	**22 27 34.9**	**+1.8**
KII	**Karymskiy**	**2.50**	**226**	*e*P	**Pn**	**22 27 15.0**	**+0.6**
KII				*i*S	**Sn**	**22 27 44.5**	**+0.8**
SPN	**Mys Shipunski**	**3.08**	**209**	*e*P	**Pn**	**22 27 21.2**	**-1.1**
SPN				*i*S	**Sn**	**22 27 54.9**	**-3.1**
NLC	**Nalytchevo**	**3.22**	**216**	*e*P	**Pn**	**22 27 23.9**	**-0.4**
NLC				*i*S	**Sn**	**22 28 00.0**	**-1.5**
AVH	**Avacha**	**3.36**	**222**	*e*P	**Pn**	**22 27 27.4**	**+1.2**
AVH				*i*S	**Sn**	**22 28 05.5**	**+0.6**
GNL	**Ganaly**	**3.38**	**233**	*e*P	**Pn**	**22 27 27.0**	**+0.5**
PET	**Petropavlovsk**	**3.58**	**220**	*e*PN	**Pn**	**22 27 30.9**	**+1.6**
PET				pmax	pmax		
	comp=Z,49nm,0.5s						
PET				MLR	MLR		
	comp=Z,100nm,17.0s						
PET	**Petropavlovsk**	**3.58**	**220**	*e*P	**Pn**	**22 27 30.1**	**+0.8**
PET				*i*S	**Sn**	**22 28 10.6**	**+0.2**
PET	**Petropavlovsk**	**3.58**	**220**	*e*Pn	**Pn**	**22 27 30.1**	**+0.9**
PET				*e*Sn	**Sn**	**22 28 11.1**	**+0.7**
PEA0B	**Petropavlovsk-**	**3.90**	**228**	*e*Pn	**Pn**	**22 27 34.0**	**+0.4**
PEA0B				*e*Sn	**Sn**	**22 28 20.0**	**+1.9**
PETK	**Petropavlovsk-**	**3.90**	**228**	Pn	**Pn**	**22 27 34.4**	**+0.8**
	comp=Z,1.9nm,0.3s,baz=60,slow=17,SNR=13						
PETK				Sn	**Sn**	**22 28 23.1**	**+5.0**
	comp=Z,1.4nm,0.3s,baz=79,slow=40,SNR=4.4

Error ellipse: s-maj=4.3km s-min=2.1km az=180.0, Moment Tensor Solution. s20 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.36; $M_{\theta\theta}$2.74; $M_{\phi\phi}$0.62; $M_{r\theta}$-8.08; $M_{\theta\phi}$-1.90; $M_{\phi r}$-2.06; Best double couple: $M_0$9.10000×10^{16} NP1: ϕ_s319.00000°,λ-17.00000°,δ-34.00000°. NP2:ϕ_s82.00000°, δ81.00000°,λ-104.00000°. Principal axes: T 8.3500, Plg34.0000°, Azm183.0000°; N 1.3400, Plg14.0000°, Azm83.0000°; P -9.6900, Plg52.0000°, Azm334.0000°;

NEIC *Felt on Adak.*

GCMT ***07*** *22:43:51.8±0.1,51.°77N×176.°95W,h69km±2km,MW5.3, Moment Tensor Solution. s76,c123; s99,c183; Moment tensor: Scale 10^{17}Nm; M_{rr}0.20±.02; $M_{\theta\theta}$-0.11±.03; $M_{\phi\phi}$-0.09±.02; $M_{r\theta}$-1.00±.02; $M_{\theta\phi}$-0.30±.02; $M_{\phi r}$-0.10±.02; Best double couple: $M_0$1.10000×10^{17} NP1:ϕ_s10.00000°, δ17.00000°,λ19.00000°. NP2:ϕ_s262.00000°,δ85.00000°, λ106.00000°. Principal axes: T 1.0700, Plg48.0000°, Azm189.0000°; N -0.0100, Plg16.0000°, Azm81.0000°; P -1.0600, Plg38.0000°, Azm338.0000°; Data Used: II IU IC G CN. Surface waves from 103 sta.*

IDC ***07*** *22:43:51.3±0.4,51.°96N×176.°94W,h72km±2km,mb4.8/31, mb1 4.8/32,mb1mx4.8/35,mbtmp4.7/32,MS4.1/21, Ms1 4.1/21,ms1mx4.0/30 Error ellipse: s-maj=11.0km s-min=7.5km az=166.0*

SZGRF ***07*** *22:44:01.6,53.°75N×177.°72W,h79km,mb5.0,Andreanof Islands, Aleutian Islands, United States*

ISC 07 22:43:51.4±0.1,51.°96N±0.°02×177.°06W±0.°02,h70km, h70km±.5km:pP-P,n1097,σ0.°77/1109,mb5.1/289, 204C-206D,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase Op	ID	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**0.63**	**78**	*e*Pn		**Pn**	**22 44 06.3**	**+0.7**
GSTR				*e*Sn		**Sn**	**22 44 15.1**	**-0.9**
AMKA	**Amchitka**	**2.34**	**257**	*e*P		**Pn**	**22 44 28.5**	**+0.9**
AMKA				S		**Sn**	**22 44 56.9**	**+1.7**
SMY	**Shemya**	**5.47**	**282**	P		**Pn**	**22 45 12.1**	**+1.8**
SMY				S		**Sn**	**22 46 17.4**	**+5.6**
OKFG	**Magazine Ridge**	**5.75**	**72**	P		**Pn**	**22 45 16.1**	**+2.0**
FX1	**Attu Island--F**	**6.05**	**283**	P		**Pn**	**22 45 20.0**	**+1.8**
SPIA	**Saint Paul Isl**	**6.55**	**34**	P		**Pn**	**22 45 29.0**	**+4.0**
UNV	**Unalaska Valle**	**6.66**	**69**	P		**Pn**	**22 45 27.1**	**+0.6**
AKGG	**Akutan Green G**	**7.03**	**67**	P		**Pn**	**22 45 33.7**	**+2.1**
AKLV	**Akutan Long Va**	**7.05**	**67**	P		**Pn**	**22 45 33.8**	**+2.0**
AKUT	**Akutan**	**7.14**	**68**	P		**Pn**	**22 45 35.5**	**+2.4**
SDPT	**Sand Point** 36nm,0.4s	**10.41**	**64**	*e*P		**Pn**	**22 46 17.7**	**+0.1**
CHGN	**Chignik**	**11.76**	**61**	*e*Pn		**Pn**	**22 46 35.0**	**-1.0**
CHGN				*e*Sn		**Sn**	**22 48 44.3**	**-1.0**
GAMB	**Gambell** 321nm,1.1s	**12.18**	**11**	*e*Pn		**Pn**	**22 46 45.8**	**+4.1**
GAMB				*e*Sn		**Sn**	**22 48 57.3**	**+1.9**
TNA	**Tin City** 547nm,1.7s	**14.41**	**15**	*e*Pn		**Pn**	**22 47 12.5**	**+1.0**
TNA				*e*Sn		**Sn**	**22 49 50.4**	**+0.7**
TNA				*e*PcP		PcP	22 52 21.9	-0.1
OHAK	**Old Harbor** 22nm,0.5s	**14.71**	**60**	*e*P		**Pn**	**22 47 13.5**	**-1.9**
PET	**Petropavlovsk**	**14.82**	**284**	*e*P		**Pn**	**22 47 20.4**	**+3.6**
PET				*e*S		**Sn**	**22 49 58.5**	**-1.1**
PET	comp=Z,200nm,14.5s			pmax		pmax		
PET	comp=Z,300nm,4.0s			pmax		pmax		
PET	comp=Z,129nm,1.1s			pmax		pmax		
PET	comp=Z,300nm,19.0s			MLR		MLR		
PET	comp=Z,300nm,14.0s			MLR		MLR		
PET	**Petropavlovsk** comp=Z,110nm,1.0s	**14.82**	**284**	*e*Pn		**Pn**	**22 47 17.8**	**+1.0**
SVW2	**Sparrevohn** comp=Z,260nm,1.0s	**14.90**	**44**	*e*P		**Pn**	**22 47 19.2**	**+1.4**
KDAK	**Kodiak Island** comp=Z,4μm,0.4s,SNR=24	**15.20**	**58**	Pn		**Pn**	**22 47 18.0**	**-3.6**
KDAK	**Kodiak Island** comp=Z,6.9nm,0.3s,baz=262,slow=7.1,SNR=22	**15.20**	**58**	P		**Pn**	**22 47 18.5**	**-3.1**
KDAK	comp=Z,2.2nm,0.3s,baz=338,slow=10,SNR=6.4			S		**S**	**22 50 08.8**	**-13**
KDAK	comp=Z,1μm,21.9s,baz=251,slow=37			LR		LR	22 53 17.3	
KDAK	comp=Z,0.5nm,0.3s,baz=39,slow=5.0,SNR=8.9			ScP		ScP	22 55 50.2	-0.6
KDAK	comp=Z,0.3nm,0.3s,baz=165,slow=2.6,SNR=4.8			pScP			22 56 20.5	
KDAK	**Kodiak Island**	**15.20**	**58**	P		**Pn**	**22 47 18.5**	**-3.1**
KDAK				S		**S**	**22 50 08.8**	**-13**
KDAK	comp=Z,7.0nm,0.3s			pmax		pmax		
KDAK	comp=N,2.0nm,0.3s			smax				
KDAK	comp=Z,1μm,21.9s			MLR		MLR		
KDAK	comp=N,1.0nm,0.3s			pmax		pmax		
KDAK	**Kodiak Island** comp=N,325nm,0.4s	**15.20**	**58**	*e*Pn		**Pn**	**22 47 18.6**	**-3.0**
KDAK				Sn		**Sn**	**22 50 09.1**	**+0.3**
PEA0B	**Petropavlovsk-**	**15.38**	**284**	*e*Pn		**Pn**	**22 47 24.2**	**+0.2**
PEA0B				*e*Sn		**Sn**	**22 50 15.2**	**+1.9**
PETK	**Petropavlovsk-** comp=N,2.8nm,0.3s,baz=92,slow=15,SNR=20	**15.38**	**284**	P		**Pn**	**22 47 25.5**	**+1.4**
PETK	baz=24,slow=34,SNR=2.1			S		**S**	**22 50 15.6**	**-10**
PETK	baz=100,slow=6.2,SNR=16			ScP		ScP	22 55 50.2	-1.0
PETK	baz=94,slow=5.9,SNR=7.3			pScP			22 56 24.0	
PETK	**Petropavlovsk-**	**15.38**	**284**	P		**Pn**	**22 47 25.5**	**+1.5**
PETK				S		**S**	**22 50 15.6**	**-10**
PETK	comp=Z,3.0nm,0.3s			pmax		pmax		
TTA	**Tatalina**	**15.69**	**37**	*e*P		**Pn**	**22 47 31.5**	**+3.6**
RSO	**Redoubt South**	**15.89**	**48**	*e*Pn		**Pn**	**22 47 32.2**	**+1.8**
RSO				ScP		ScP	22 55 53.5	+1.5
SKR	**Severo-Kuril's**	**16.78**	**276**	*e*P		**Pn**	**22 47 45.0**	**+3.3**
SKR				*e*S		**S**	**22 50 49.5**	**-4.6**
SKR	comp=Z,40nm,0.5s			pmax		pmax		
SKR	comp=Z,800nm,4.0s			pmax		pmax		
SKR	comp=N,220nm,1.0s			smax				
SKR	comp=E,180nm,1.0s			smax				
SKR	comp=N,1μm,8.0s			smax				
SKR	comp=E,800nm,8.0s			smax				
SKR	comp=Z,900nm,16.0s			MLR		MLR		
SKR	comp=N,800nm,14.0s			MLR		MLR		
SKR	comp=E,900nm,16.0s			MLR		MLR		
PPLA	**Purkeypile** comp=E,887nm,1.5s	**17.16**	**41**	*e*Pn		**Pn**	**22 47 48.5**	**+2.3**
RC01	**Rabbit Creek A** comp=E,135nm,1.2s	**17.50**	**48**	*e*P		**Pn**	**22 47 49.6**	**-0.8**
RC01				*e*PcP		PcP	22 52 26.6	-0.1
PMR	**Palmer**	**17.94**	**47**	*e*P		**Pn**	**22 47 57.1**	**+1.4**
PMR	comp=Z,48nm,0.9s			pmax		pmax		
PMR	**Palmer** comp=Z,48nm,0.9s	**17.94**	**47**	*e*Pn		**Pn**	**22 47 57.1**	**+1.4**
BILL	**Bilibino**	**18.04**	**340**	⇓*i*P		**Pn**	**22 47 59.9**	**+3.1**
BILL	comp=Z,319nm,1.3s			pmax		pmax		
BILL	comp=Z,800nm,18.0s			MLR		MLR		
BILL	**Bilibino** comp=Z,258nm,1.0s	**18.04**	**340**	⇓*i*P		**Pn**	**22 48 00.2**	**+3.4**
BILL				*e*S		**S**	**22 51 22.1**	**+4.0**
TRF	**Thorofare Moun** comp=Z,887nm,1.4s	**18.19**	**40**	*e*P		**Pn**	**22 47 59.0**	**+0.4**
TRF				S		**S**	**22 51 22.0**	**+0.4**
TRF				*e*PcP		PcP	22 52 28.0	+0.2
TRF				*e*ScP		ScP	22 55 55.2	-1.4
BPAW	**Bear Paw Mtn.** comp=Z,240nm,1.0s	**18.22**	**38**	⇓*i*P		**Pn**	**22 48 00.6**	**+1.5**
BPAW				*e*S		**S**	**22 51 23.8**	**+1.3**
BPAW				*e*PcP		PcP	22 52 27.7	-0.1
BPAW				*e*ScP		ScP	22 55 55.4	-1.3
MCK	**McKinley**	**18.85**	**40**	*e*P		**Pn**	**22 48 05.4**	**-1.3**
MCK				*e*S		**S**	**22 51 36.1**	**+0.4**
MCK	comp=Z,208nm,1.0s			pmax		pmax		
MCK	**McKinley** comp=Z,208nm,1.0s	**18.85**	**40**	*e*P		**Pn**	**22 48 05.3**	**-1.3**
MCK				*e*S		**S**	**22 51 36.0**	**+0.3**
MCK				*e*PcP		PcP	22 52 29.2	+0.3
MCK				*e*ScP		ScP	22 55 56.5	-1.6
MCK				*e*ScP		ScP	22 55 56.8	-1.3
DIV	**Divide** comp=Z,148nm,1.2s	**19.35**	**50**	*e*P		**Pn**	**22 48 11.5**	**-1.2**
DIV				S		**S**	**22 51 53.1**	**+7.3**
SEY	**Seymchan**	**19.55**	**316**	*e*P		**Pn**	**22 48 15.0**	**0.0**
COLA	**College**	**19.78**	**38**	*e*P		**Pn**	**22 48 15.5**	**-2.2**
COLA				S		**S**	**22 51 56.1**	**+1.8**
COLA	comp=Z,388nm,1.4s			pmax		pmax		
COLA	**College** comp=Z,388nm,1.4s	**19.78**	**38**	*e*P		**Pn**	**22 48 15.5**	**-2.2**
COLA				S		**S**	**22 51 56.1**	**+1.8**
COLA				*e*PcP		PcP	22 52 30.1	-0.4
COLA				*e*PcP		ScP	22 55 58.3	-1.9
BMRM	**Bremner River** comp=Z,136nm,1.0s	**19.87**	**50**	*e*P		**Pn**	**22 48 17.3**	**-1.4**
BMRM				*e*PcP		PcP	22 52 30.1	-0.7
COLD	**Coldfoot** comp=Z,118nm,0.9s	**20.20**	**31**	*e*P		**P**	**22 48 21.8**	**+1.8**
COLD				*e*PcP		PcP	22 52 31.9	+0.7
MENT	**Mentasta**	**20.77**	**45**	*e*P		**P**	**22 48 26.9**	**+0.7**
PNL	**Peninsula** comp=Z,71nm,0.5s,mb5.2	**22.26**	**55**	*e*P		**P**	**22 48 43.0**	**+0.9**
PNL				*e*PcP		PcP	22 52 34.7	-0.6
EGAK	**Eagle** comp=Z,247nm,1.0s,mb5.5	**22.39**	**41**	*e*P		**P**	**22 48 43.4**	**-0.1**
EGAK				*e*			22 49 00.8	
EGAK				*e*PcP		PcP	22 52 35.9	+0.3
EGAK				*e*ScP		ScP	22 56 04.7	-1.9
DAWY	**Dawson**	**22.94**	**44**	*e*P		**P**	**22 48 48.6**	**-0.6**
DAWY				*e*			22 49 05.6	
DAWY				*e*PcP		PcP	22 52 37.3	+0.6
DAWY				*e*ScP		ScP	22 56 07.3	-0.7
HYT	**Haines Junctio**	**23.28**	**52**	*e*P		**P**	**22 48 52.3**	**-0.3**
MIDW	**Midway**	**23.72**	**181**	*e*P		**P**	**22 48 54.6**	**-2.2**
SKAG	**Skagway**	**24.32**	**56**	*e*P		**P**	**22 49 03.6**	**+1.5**
SIT	**Sitka**	**24.46**	**61**	*e*P		**P**	**22 49 02.7**	**-0.6**
YUK	**Yuzh-Kuril'sk**	**25.82**	**267**	⇓*i*P		**P**	**22 49 16.0**	**+0.2**
YUK				*i*			22 49 56.9	
YUK				*i* S		**S**	**22 53 41.3**	**+1.3**
YUK	comp=N,6.0nm,1.5s			pmax		pmax		
YUK	comp=E,9.0nm,1.5s			pmax		pmax		
YUK	comp=Z,10.0nm,1.5s,mb4.0			pmax		pmax		
YUK	comp=N,540nm,10.2s			smax				
YUK	comp=E,170nm,10.2s			smax				
YSS	**Yuzh-Sakhalins**	**26.35**	**275**	⇓*i*P		**P**	**22 49 22.0**	**+1.5**
YSS				*e*S		**S**	**22 53 49.0**	**+0.7**
YSS				*e*SSS			22 55 24.0	
YSS				*e*			23 00 06.0	
YSS	comp=N,120nm,0.8s			pmax		pmax		
YSS	comp=E,170nm,0.8s			pmax		pmax		
YSS	comp=Z,240nm,0.8s,mb5.7			pmax		pmax		
YSS	comp=Z,200nm,2.0s,mb5.2			pmax		pmax		
YSS	comp=Z,300nm,14.0s			MLR		MLR		
YSS	**Yuzh-Sakhalins** comp=Z,215nm,0.8s,mb5.6	**26.35**	**275**	*e*P		**P**	**22 49 20.9**	**+0.3**
INK	**Inuvik** comp=Z,4.8nm,0.3s,mb4.3,baz=237,slow=7.4,SNR=23	**26.36**	**35**	P		**P**	**22 49 20.2**	**-0.2**
INK	comp=Z,37nm,0.9s,baz=266,slow=1.9,SNR=10.0			PcP		PcP	22 52 44.2	+0.1
INK	comp=Z,42nm,1.0s,baz=245,slow=3.1,SNR=26			ScP		ScP	22 56 16.4	-1.1
INK	comp=Z,13nm,1.0s,baz=243,slow=7.7,SNR=4.8			pScP			22 56 50.0	
INK	comp=Z,518nm,18.9s,baz=242,slow=40			LR		LR	23 01 37.9	
INK	**Inuvik**	**26.36**	**35**	P		**P**	**22 49 20.2**	**-0.2**
INK							22 52 44.2	
INK	comp=Z,5.0nm,0.3s			pmax		pmax		
INK	comp=Z,37nm,0.9s			pmax		pmax		
INK	comp=N,42nm,1.0s			pmax		pmax		
INK	comp=Z,13nm,1.0s			pmax		pmax		
INK	comp=Z,518nm,18.9s			MLR		MLR		
INK	**Inuvik** comp=Z,224nm,1.5s,mb5.4	**26.36**	**35**	*e*P		**P**	**22 49 20.3**	**-0.1**
INK				*e*		pP	22 49 38.2	+1.2
INK				*e*PcP		PcP	22 52 44.2	+0.1
INK				*e*ScP		ScP	22 56 15.7	-1.8
DLBC	**Dease Lake** comp=Z,2.1nm,0.4s,mb4.0,baz=208,slow=26,SNR=3.7	**27.13**	**58**	P		**P**	**22 49 27.2**	**-0.3**
DLBC	comp=Z,17nm,1.0s,baz=243,slow=1.1,SNR=5.4			PcP		PcP	22 52 47.3	+1.2
DLBC	comp=Z,6.9nm,0.9s,baz=321,slow=6.5,SNR=6.6			ScP		ScP	22 56 19.2	-0.7
DLBC	comp=Z,4.4nm,1.0s,baz=162,slow=27,SNR=3.9			pScP			22 56 52.2	
DLBC	comp=Z,524nm,20.1s,baz=279,slow=38			LR		LR	23 00 54.1	
DLBC	**Dease Lake**	**27.13**	**58**	P		**P**	**22 49 27.6**	**+0.1**
DLBC				*e*PcP		PcP	22 52 47.2	+1.0
DLBC				*e*S		**S**	**22 54 01.0**	**+0.6**
DLBC				*e*ScP		ScP	22 56 18.4	-1.6
ASAJ	**Asahikawa** comp=Z,116nm,0.9s,mb5.4,baz=43,slow=5.5,SNR=57	**27.79**	**270**	P		**P**	**22 49 34.9**	**+1.4**
ASAJ	comp=Z,18nm,0.8s,baz=305,slow=7.6,SNR=9.8			ScP		ScP	22 56 21.6	-0.7
ASAJ	**Asahikawa**	**27.79**	**270**	P		**P**	**22 49 34.9**	**+1.4**
ASAJ	comp=Z,117nm,0.9s			pmax		pmax		
ASAJ	comp=N,18nm,0.8s			pmax		pmax		
ERM	**Erimo** comp=N,637nm,0.6s,mb6.4,SNR=18	**28.57**	**266**	P		**P**	**22 49 42.6**	**+2.1**
ERM	**Erimo**	**28.57**	**266**	*e*P		**P**	**22 49 41.0**	**+0.5**
ERM				*e*			22 52 50.7	
ERM	comp=Z,60nm,0.7s,mb5.3			pmax		pmax		
ERM	**Erimo** comp=Z,60nm,0.7s,mb5.3	**28.57**	**266**	*e*P		**P**	**22 49 41.0**	**+0.5**
ERM				*e*PcP		PcP	22 52 50.7	+0.7
BBB	**Bella Bella** comp=Z,37nm,0.9s,mb5.0,baz=95,slow=9.5,SNR=7.9	**29.63**	**70**	P		**P**	**22 49 50.2**	**+0.5**
BBB	comp=Z,139nm,18.7s,baz=279,slow=35			LR		LR	23 01 08.1	
YAK	**Yakutsk**	**29.85**	**311**	*e*P		**P**	**22 49 50.8**	**-0.8**
YAK				*e*			22 50 53.2	
YAK				*e*			22 52 52.3	
YAK				*e*S		**S**	**22 54 39.6**	**-3.5**
YAK				*e*SS		SS	22 56 24.2	-28
YAK				*e*			23 00 19.7	
YAK	comp=N,4.0nm,0.9s			pmax		pmax		
YAK	comp=E,8.0nm,1.0s			pmax		pmax		
YAK	comp=Z,19nm,1.0s,mb4.7			pmax		pmax		
YAK	comp=Z,39nm,1.0s,mb5.0			pmax		pmax		
YAK	comp=E,53nm,1.7s			smax				
YAK	comp=N,49nm,1.9s			smax				
YAK	**Yakutsk**	**29.85**	**311**	P		**P**	**22 49 50.7**	**-0.8**
YAK				*e*PcP		PcP	22 52 52.7	-0.2
YAK				*e*ScP		ScP	22 56 25.9	-2.5
HABR	**Khabarovsk**	**30.40**	**283**	*e*P		**P**	**22 49 56.2**	**-0.4**
HABR							22 52 52.5	
HABR				*e*S		**S**	**22 54 52.2**	**+0.2**
HABR				*e*			22 56 36.5	
HABR				*e*			23 00 23.9	
HABR	comp=N,12nm,0.5s			pmax		pmax		
HABR	comp=E,90nm,1.3s			pmax		pmax		
HABR	comp=Z,55nm,1.4s,mb5.0			pmax		pmax		
HABR	comp=Z,596nm,19.0s			MLR		MLR		
TIXI	**Tiksi**	**30.67**	**330**	*e*P		**P**	**22 49 59.1**	**+0.4**
TIXI				*e*			22 52 53.3	
TIXI				*e*S		**S**	**22 55 00.3**	**+4.6**
TIXI	comp=Z,8.0nm,0.9s,mb4.5			pmax		pmax		
TIXI	comp=Z,381nm,17.0s			MLR		MLR		
TIXI	**Tiksi** comp=Z,106nm,2.2s,mb5.2	**30.67**	**330**	*e*P		**P**	**22 49 57.8**	**-0.9**
TIXI				*e*PcP		PcP	22 52 54.0	-0.8
TIXI				*e*ScP		ScP	22 56 28.0	-3.0
KLR	**Kul'dur**	**32.06**	**286**	*e*P		**P**	**22 50 06.7**	**-4.5**
KIP	**Kipapa**	**33.88**	**147**	*e*P		**P**	**22 50 26.0**	**-1.3**
KIP	comp=Z,137nm,1.1s,mb5.7			pmax		pmax		
KIP	**Kipapa** comp=Z,137nm,1.1s,mb5.7	**33.88**	**147**	*e*P		**P**	**22 50 25.9**	**-1.3**
YKA	**Yellowknife Ar** comp=Z,22nm,0.9s,mb5.0,baz=282,slow=8.6,SNR=50	**34.04**	**47**	P		**P**	**22 50 27.5**	**-0.7**
YKA	comp=Z,21nm,0.8s,baz=288,slow=2.9,SNR=34			PcP		PcP	22 53 04.2	-0.1
YKA	comp=Z,21nm,0.9s,baz=291,slow=3.1,SNR=40			ScP		ScP	22 56 41.4	-1.3
YKA	comp=Z,5.1nm,0.8s,baz=286,slow=3.0,SNR=5.3			pScP			22 57 14.7	
YKA	**Yellowknife Ar**	**34.04**	**47**	P		**P**	**22 50 27.5**	**-0.8**
YKA							22 53 04.2	
YKA	comp=Z,22nm,0.9s			pmax		pmax		
YKA	comp=Z,21nm,0.8s			pmax		pmax		
YKA	comp=N,21nm,0.9s			pmax		pmax		
YKA	comp=Z,5.0nm,0.8s			pmax		pmax		
YKA	**Yellowknife Ar**	**34.04**	**47**	P		**P**	**22 50 27.6**	**-0.7**
YKA				PcP		PcP	22 53 04.2	-0.1
YKA				ScP		ScP	22 56 41.4	-1.3
YKA				pScP			22 57 14.7	
NLWA	**Neilton Lookou** baz=34	**34.08**	**76**	⇓P		**P**	**22 50 29.8**	**+1.0**
NLWA	**Neilton Lookou** comp=Z,76nm,1.3s,mb5.4	**34.08**	**76**	*e*P		**P**	**22 50 29.5**	**+0.8**
NLWA				*e*pP		pP	22 50 45.5	-0.1
A05A	**Maple Falls** baz=34,SNR=14	**34.41**	**73**	⇑P		**P**	**22 50 32.2**	**+0.6**
GNW	**Green Mountain** comp=Z,51nm,1.2s,mb5.2	**34.62**	**75**	*e*P		**P**	**22 50 33.9**	**+0.4**
CMW	**Cultus Mountai**	**34.65**	**74**	P		**P**	**22 50 35.0**	**+1.4**
JCW	**Jim Creek**	**34.86**	**74**	*e*P		**P**	**22 50 36.1**	**+0.6**
VLA	**Vladivostok**	**34.93**	**276**	*d*iP		**P**	**22 50 37.1**	**+1.0**
VLA	comp=Z,137nm,1.0s,mb5.7			pmax		pmax		
MAJO	**Matsushiro**	**34.94**	**262**	*e*P		**P**	**22 50 36.2**	**-0.2**
MAT	**Matsushiro**	**34.94**	**262**	P		**P**	**22 50 36.9**	**+0.5**
MAT				S		**S**	**22 56 02.0**	**-0.7**
MJAR	**Matsushiro Arr** comp=Z,14nm,0.6s,mb4.9,baz=52,slow=7.1,SNR=67	**34.94**	**262**	P		**P**	**22 50 37.8**	**+1.4**
MJAR	comp=Z,3.7nm,0.7s,baz=62,slow=1.3,SNR=5.3			PcP		PcP	22 53 08.4	+1.1
MJAR	comp=Z,4.2nm,0.9s,baz=46,slow=2.9,SNR=7.8			ScP		ScP	22 56 46.5	+0.1
MJAR	comp=Z,4.4nm,0.8s,baz=34,slow=2.2,SNR=8.0			pScP			22 57 20.8	
MJAR	**Matsushiro Arr**	**34.94**	**262**	P		**P**	**22 50 37.8**	**+1.4**
MJAR							22 53 08.4	
MJAR	comp=Z,14nm,0.6s			pmax		pmax		
MJAR	comp=Z,4.0nm,0.7s			pmax		pmax		
MJAR	comp=N,4.0nm,0.9s			pmax		pmax		
MJAR	comp=Z,4.0nm,0.9s			pmax		pmax		
F03A	**Seaside** baz=35	**34.97**	**78**	⇑P		**P**	**22 50 37.4**	**+1.0**
B06A	**Marblemount** baz=35,SNR=9.5	**34.98**	**73**	⇓P		**P**	**22 50 36.5**	**0.0**
RPW	**Rockport**	**34.99**	**73**	P		**P**	**22 50 37.2**	**+0.6**
D05A	**Enumclaw** baz=35,SNR=21	**35.30**	**75**	⇑P		**P**	**22 50 40.3**	**+1.0**
MDJ	**Mudanjiang**	**35.54**	**280**	P		**P**	**22 50 41.1**	**-0.3**
MDJ				pP		pP	22 50 55.9	-2.5
MDJ				sP		sP	22 51 03.5	-3.0
MDJ				PP		PP	22 52 05.3	+2.2
MDJ				PcP		PcP	22 53 09.1	+0.2
MDJ				S		**S**	**22 56 12.3**	**+0.5**
MDJ				ScP		ScP	22 56 47.9	-0.5
MDJ				PcS		PcS	22 56 53.8	-2.2
MDJ	comp=Z,18nm,1.0s,mb5.0			pmax		pmax		
MDJ	comp=Z,68nm,5.0s			pmax		pmax		
MDJ	comp=N,560nm,25.8s			LR		LR		
MDJ	comp=E,230nm,33.0s			LR		LR		
MDJ	comp=Z,400nm,27.3s			LR		LR		
LON	**Longmire**	**35.62**	**76**	*e*P		**P**	**22 50 42.6**	**+0.6**
LON	comp=Z,22nm,0.7s,mb5.2			pmax		pmax		
LON	**Longmire** comp=Z,22nm,0.7s,mb5.2	**35.62**	**76**	*e*P		**P**	**22 50 42.6**	**+0.6**
F04A	**Amboy** baz=36,SNR=8.3	**35.66**	**78**	⇑P		**P**	**22 50 42.6**	**+0.2**
PNT	**Penticton**	**35.72**	**71**	P		**P**	**22 50 43.1**	**+0.3**
COR	**Corvallis**	**35.81**	**80**	*e*P		**P**	**22 50 44.3**	**+0.6**
COR				*e*		pP	22 51 00.0	-0.7
COR				*e*			22 52 06.0	
NLW	**Nelson Butte**	**35.86**	**73**	P		**P**	**22 50 45.3**	**+1.2**
G04A	**Mulino** baz=36,SNR=8.2	**35.99**	**79**	⇓P		**P**	**22 50 45.2**	**0.0**
ETW	**Entiat**	**36.09**	**74**	P		**P**	**22 50 47.1**	**+1.0**
WTV	**Waterville**	**36.27**	**73**	P		**P**	**22 50 48.3**	**+0.7**
JHJ	**Hachijo jima 2** comp=Z,79nm,0.6s,mb5.8,baz=108,slow=13,SNR=4.2	**36.29**	**256**	P		**P**	**22 50 49.4**	**+1.5**
B08A	**Colville Reser** baz=36,SNR=111	**36.32**	**72**	⇑P		**P**	**22 50 48.3**	**+0.2**
HOOD	**Mount Hood Mea** comp=Z,264nm,1.1s,mb6.1	**36.43**	**78**	*e*P		**P**	**22 50 49.5**	**+0.5**
H04A	**Detroit Lake** baz=36,SNR=20	**36.44**	**79**	⇑P		**P**	**22 50 49.5**	**+0.4**
E07A	**Sunnyside** baz=37	**36.89**	**75**	⇑P		**P**	**22 50 53.4**	**+0.6**
HUMO	**Hull Mountain**	**37.09**	**83**	*e*P		**P**	**22 50 55.0**	**+0.4**
HUMO				*e*		pP	22 51 12.0	+0.4
HUMO				*e*PcP		PcP	22 53 13.7	+0.1
G06A	**Carlson Farm,** baz=37	**37.09**	**77**	⇑P		**P**	**22 50 55.0**	**+0.4**
RSW	**Rattlesnake Hi**	**37.13**	**75**	*e*P		**P**	**22 50 54.0**	**-0.9**
RSW				*e*		pP	22 51 12.6	+0.7
OD2	**Odessa Site #2**	**37.16**	**73**	*e*P		**P**	**22 50 55.2**	**+0.1**
HAWA	**Hanford**	**37.16**	**75**	*e*P		**P**	**22 50 55.8**	**+0.6**
HAWA				*e*pP		pP	22 51 14.4	+2.2
F07A	**Phinny Hill Vi** baz=37,SNR=9.5	**37.18**	**76**	⇑P		**P**	**22 50 56.0**	**+0.7**
WRD	**Warden**	**37.19**	**74**	P		**P**	**22 50 55.2**	**-0.2**
D08A	**Wollman Farm,** baz=37,SNR=42	**37.20**	**74**	⇓P		**P**	**22 50 55.3**	**-0.2**
E08A	**Dider Farm, El** baz=37,SNR=32	**37.40**	**75**	⇑P		**P**	**22 50 57.2**	**0.0**
EDM	**Edmonton**	**37.58**	**62**	P		**P**	**22 50 58.0**	**-0.6**
EDM				*e*			22 53 15.5	
EDM				*e*			22 56 54.1	
NEW	**Newport**	**37.67**	**71**	*e*P		**P**	**22 50 59.4**	**0.0**
NEW				*e*			22 53 16.2	
NEW				*e*			22 56 54.7	
YBH	**Yreka Blue Hor**	**37.73**	**84**	*e*P		**P**	**22 51 00.3**	**+0.3**
YBH				*e**PP		pP	22 51 15.9	-1.2
E09A	**Wood Farm, Sta** baz=38,SNR=51	**37.93**	**74**	⇑P		**P**	**22 51 01.6**	**-0.1**
LNOR	**Lincton Mounta**	**38.17**	**75**	*e*P		**P**	**22 51 03.6**	**-0.1**
A12A	**Yaak River Ran** baz=38	**38.20**	**69**	⇑P		**P**	**22 51 04.6**	**+0.7**
K05A	**Summer Lake** baz=38,SNR=21	**38.29**	**81**	⇓P		**P**

B12A Libby 38.46 70 ⇓P P 22 51 05.8 -0.3
baz=38,SNR=6.9
CN2 Changchun 38.50 281 *eP* **P 22 51 06.6 +0.1**
CN2 *e*PP PP 22 52 40.5 +4.9
CN2 *e*S **S 22 56 53.9 -2.8**
CN2 pmax pmax
comp=Z,40nm,0.9s,mb5.2
CN2 pmax pmax
comp=Z,200nm,7.0s
CN2 LR LR
comp=N,200nm,23.0s
CN2 LR LR
comp=E,200nm,23.0s
CN2 LR LR
comp=Z,500nm,25.0s
WDC Whiskeytown Da 38.50 85 *eP* **P 22 51 06.5 0.0**
WDC *e**PP pP 22 51 23.3 -0.4
WDC *e* 22 53 16.9
H08A Prairie City 38.66 77 ⇓P **P 22 51 07.6 -0.2**
baz=38,SNR=10.0
F10A Beach Ranch, E 38.75 74 ⇓P **P 22 51 08.6 0.0**
baz=39,SNR=28
RES Resolute Bay 38.76 25 P **P 22 51 08.1 -0.2**
comp=Z,6.1nm,0.9s,mb4.4,baz=266,slow=11,SNR=7.1
RES ScP ScP 22 56 59.0 -1.0
comp=Z,4.2nm,0.8s,baz=279,slow=5.6,SNR=3.4
RES Resolute Bay 38.76 25 *eP* **P 22 51 08.2 -0.1**
RES *e* pP 22 51 26.7 +1.2
RES PP PP 22 52 39.2 +1.2
G09A Cove 38.79 76 ⇑P **P 22 51 09.0 +0.2**
baz=39,SNR=35
C12B Naegeli Ranch, 38.90 71 ⇓P **P 22 51 09.6 -0.2**
baz=39,SNR=6.2
MOD Modoc 39.11 82 *eP* **P 22 51 12.8 +1.2**
MOD *e*pP pP 22 51 28.4 -0.3
MOD *e*PcP PcP 22 53 20.5 +0.6
MOD *e*ScP ScP 22 57 00.2 -1.6
WALA Waterton Lakes 39.15 68 *eP* **P 22 51 11.4 -0.4**
comp=Z,2.1nm,1.1s,mb3.9
WALA *e* pP 22 51 27.8 -1.2
WALA *e*PcP PcP 22 53 19.8 0.0
WALA *e*ScP ScP 22 57 00.1 -1.8
B13A Whitefish 39.16 70 ⇑P **P 22 51 11.7 -0.2**
baz=39,SNR=23
G10A Bishop Farm, J 39.17 75 ⇑P **P 22 51 12.2 +0.1**
baz=39,SNR=47
H09A Durkee 39.18 76 ⇓P **P 22 51 12.6 +0.5**
baz=39,SNR=11
BSMT Bassoo Peak 39.23 70 *eP* **P 22 51 12.9 +0.3**
comp=Z,148nm,1.1s,mb5.7
BSMT *e*PcP PcP 22 53 20.3 +0.1
BMO Blue Mountains 39.30 76 *eP* **P 22 51 14.0 +0.9**
BMO *e**PP pP 22 51 29.7 -0.6
J08A Circle Bar Ran 39.41 79 ⇑P **P 22 51 14.6 +0.6**
baz=39,SNR=24
F11A Grangeville 39.44 74 ⇑P **P 22 51 13.8 -0.4**
baz=39,SNR=32
A14A Double T Ranch 39.47 68 ⇑P **P 22 51 14.1 -0.4**
baz=39,SNR=60
I09A Lost Marbles R 39.51 77 ⇑P **P 22 51 15.0 0.0**
baz=39,SNR=6.1
JTMT Jette 39.58 70 *eP* **P 22 51 15.6 +0.2**
JTMT *e*PcP PcP 22 53 21.9 +0.6
G11A Walters Elk Ra 39.63 75 ⇓P **P 22 51 15.5 -0.4**
baz=40,SNR=65
YBMT Yellow Bay 39.68 70 *eP* **P 22 51 16.9 +0.6**
YBMT *e*PcP PcP 22 53 21.7 +0.1
H10A Noah's Angus R 39.77 76 ⇑P **P 22 51 17.4 +0.3**
baz=40,SNR=66
D13A Huson 39.81 71 ⇓P **P 22 51 16.5 -0.9**
baz=40,SNR=20
WVOR Wild Horse Val 39.83 80 *eP* **P 22 51 17.9 +0.3**
WVOR *e* pP 22 51 33.8 -0.9
WVOR 22 53 22.2
WVOR pmax pmax
comp=Z,72nm,1.1s,mb5.4
WVOR Wild Horse Val 39.83 80 *eP* **P 22 51 17.9 +0.3**
comp=Z,72nm,1.1s,mb5.4
WVOR *e* pP 22 51 33.8 -1.0
WVOR PcP PcP 22 53 22.2 0.0
WVOR *e*ScP ScP 22 57 02.1 -2.5
B14A Marquette Ranc 39.86 69 ⇑P **P 22 51 17.4 -0.3**
baz=40,SNR=29
A15A Johnson Ranch, 39.86 68 ⇑P **P 22 51 16.5 -1.2**
baz=40,SNR=25
SWMT Swartz Lake 39.87 71 *eP* **P 22 51 18.1 +0.3**
SWMT *e*PcP PcP 22 53 22.2 0.0
OHCM Honcut 39.90 86 *eP* **P 22 51 18.4 +0.2**
OHCM *e*pP pP 22 51 36.0 +0.7
I10A Payette 40.02 77 ⇑P **P 22 51 19.3 +0.2**
baz=40,SNR=11
F12A Elk City 40.04 74 ⇓P **P 22 51 19.2 -0.1**
baz=40,SNR=165
H11A Donnelly 40.15 75 ⇓P **P 22 51 20.1 -0.1**
baz=40,SNR=54
MSO Missoula 40.25 71 *eP* **P 22 51 20.6 -0.4**
comp=Z,90nm,1.2s,mb5.5
MSO *e*PcP PcP 22 53 23.6 +0.2
MSO *e*ScP ScP 22 57 04.5 -1.7
B15A Bradely Ranch, 40.29 69 ⇑P **P 22 51 20.4 -0.9**
baz=40,SNR=49
SLMT Seeley Lake 40.30 71 *eP* **P 22 51 21.1 -0.3**
E13A Victor 40.31 72 ⇑P **P 22 51 21.0 -0.4**
baz=40,SNR=33
D14A Greenough 40.38 71 ⇓P **P 22 51 21.5 -0.5**
baz=40,SNR=80
C15A Salmond Ranch, 40.54 69 ⇑P **P 22 51 23.4 0.0**
baz=40,SNR=194
F13A Darby 40.57 73 ⇑P **P 22 51 23.4 -0.3**
baz=40,SNR=45
CHMT Chamberlain Mo 40.61 71 *eP* **P 22 51 23.5 -0.5**
I11A Placerville 40.62 76 ⇑P **P 22 51 23.6 -0.5**
baz=40,SNR=8.1
K10A MacKenzie Ranc 40.71 78 ⇑P **P 22 51 25.0 +0.2**
baz=41,SNR=46
KSRS Korea Array 40.71 271 P **P 22 51 26.3 +1.4**
comp=Z,153nm,1.0s,mb5.8,baz=58,slow=7.9,SNR=410
KSRS ScP ScP 22 57 09.0 +0.9
comp=Z,5.5nm,0.9s,baz=60,slow=4.5,SNR=12
KSRS pScP 22 57 43.1
comp=Z,3.7nm,0.9s,baz=61,slow=5.0,SNR=3.7
KSRS LR LR 23 07 59.9
comp=Z,68nm,18.8s,baz=55,slow=36
KSRS Korea Array 40.71 271 P **P 22 51 26.3 +1.4**
KSRS pmax pmax
comp=Z,153nm,1.0s,mb5.8
KSRS pmax pmax
comp=N,6.0nm,0.9s
KSRS pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
KSRS MLR MLR
comp=Z,68nm,18.8s
E14A Clinton 40.73 72 ⇑P **P 22 51 24.5 -0.4**
baz=41,SNR=54
B16A M & M Farms, S 40.73 68 ⇑P **P 22 51 23.8 -1.1**
baz=41
SNY Shenyang 40.75 280 ⇓P **P 22 51 26.1 +1.0**
SNY S **S 22 57 31.0 +0.7**
SNY pmax pmax
comp=Z,140nm,0.7s,mb5.9
SNY pmax pmax
comp=Z,190nm,5.9s
SNY LR LR
comp=E,190nm,24.5s
SNY LR LR
comp=Z,350nm,22.3s
H12A Diamond D Ranc 40.93 75 ⇓P **P 22 51 26.1 -0.5**
baz=41,SNR=51
PAHR Pah Rah Range 40.97 84 *eP* **P 22 51 27.8 +0.8**
D15A Lincoln 40.97 70 ⇓P **P 22 51 26.5 -0.4**
baz=41,SNR=47
MFID Camas Ranch 40.98 77 ⇑P **P 22 51 26.8 -0.2**
baz=41,SNR=19
WCN Washoe City 40.98 85 ⇑P **P 22 51 26.9 -0.2**
baz=41,SNR=10
G13A Cobalt 41.00 74 ⇓P **P 22 51 27.3 0.0**
baz=41,SNR=166
C16A Fuhringer Ranc 41.02 69 ⇑P **P 22 51 26.7 -0.7**
baz=41,SNR=53
F14A Wisdom 41.12 72 ⇓P **P 22 51 28.4 +0.1**
baz=41,SNR=33
I12A Atlanta 41.18 76 ⇓P **P 22 51 28.9 +0.2**
baz=41,SNR=92
K11A Parker Ranch, 41.22 78 ⇑P **P 22 51 29.4 +0.4**
baz=41,SNR=16
E15A Deer Lodge 41.23 71 ⇓P **P 22 51 28.4 -0.6**
baz=41,SNR=68
B17A L&G Farms, Che 41.32 68 ⇑P **P 22 51 28.7 -1.0**
baz=41,SNR=31
L10A Juniper Basin 41.35 79 ⇓P **P 22 51 30.1 0.0**
baz=41,SNR=27
CMB Columbia Colle 41.37 87 *eP* **P 22 51 30.4 +0.1**
CMB *e**PP pP 22 51 46.7 -0.9
CMB *e* 22 53 27.4
CMB pmax pmax
comp=Z,22nm,1.1s,mb4.9
CMB Columbia Colle 41.37 87 *eP* **P 22 51 30.4 +0.1**
comp=Z,22nm,1.1s,mb4.9
CMB *e*pP pP 22 51 46.6 -1.0
CMB *e*PcP PcP 22 53 27.4 +0.1
INCN Inchon 41.49 272 *eP* **P 22 51 31.8 +0.5**
INCN Inchon 41.49 272 P **P 22 51 33.0 +1.7**
SNR=29
J12A Stokes Ranch, 41.51 77 ⇓P **P 22 51 32.0 +0.6**
baz=41,SNR=25
A18A Metzger Ranch, 41.54 67 ⇓P **P 22 51 29.8 -1.8**
baz=41,SNR=7.7
D16A Dana Ranch, Ca 41.54 70 ⇓P **P 22 51 30.9 -0.7**
baz=41,SNR=19
HRY Holter Researc 41.55 70 *eP* **P 22 51 31.8 +0.2**
F15A Butte 41.63 72 ⇓P **P 22 51 31.7 -0.6**
baz=42,SNR=25
M10A I.L. Ranch, Tu 41.63 80 ⇑P **P 22 51 32.9 +0.5**
baz=42,SNR=24
LRM Limekiln Ridge 41.66 72 *eP* **P 22 51 25.6 -7.0**
WAKR Walker 41.67 85 *eP* **P 22 51 33.8 +1.1**
C17A Wharram Farm, 41.68 69 ⇓P **P 22 51 31.7 -1.1**
baz=42,SNR=20
I13A Wildhorse Cree 41.72 75 ⇑P **P 22 51 33.1 -0.1**
baz=42,SNR=124
E16A East Helena 41.73 71 ⇑P **P 22 51 32.4 -0.7**
baz=42,SNR=31
L11A Cat Creek Ranc 41.73 78 ⇓P **P 22 51 33.9 +0.7**
baz=42,SNR=62
HLID Hailey 41.74 76 ⇑P **P 22 51 33.3 0.0**
baz=42,SNR=95
HLID Hailey 41.74 76 *eP* **P 22 51 33.4 +0.1**
comp=Z,77nm,1.1s,mb5.3
HLID *e* pP 22 51 50.2 -0.4
HLID *e*PcP PcP 22 53 28.6 +0.2
HLID *e*ScP ScP 22 57 11.2 -0.9
H14A Leadore 41.78 74 ⇑P **P 22 51 33.6 0.0**
baz=42,SNR=109
DLMT Dillon 41.83 73 *eP* **P 22 51 33.8 -0.2**
B18A Beardsley Farm 41.85 67 ⇓P **P 22 51 33.1 -1.0**
baz=42,SNR=12
ALE Alert 41.86 10 P **P 22 51 34.6 +0.8**
comp=Z,97nm,1.0s,mb5.5,SNR=6.8
BMN Battle Mountai 41.86 82 *eP* **P 22 51 34.8 +0.5**
BMN *e* pP 22 51 50.9 -0.7
BMN *e* 22 53 29.2
D17A Six Diamond Ra 41.98 69 ⇑P **P 22 51 34.5 -0.6**
baz=42,SNR=42
K12A Draper Farm, C 41.98 77 ⇑P **P 22 51 35.5 +0.3**
baz=42,SNR=28
J13A Cove Ranch, Pi 41.98 76 ⇓P **P 22 51 35.2 0.0**
baz=42,SNR=72
G15A Dillon 42.00 73 ⇑P **P 22 51 34.8 -0.5**
baz=42,SNR=39
EGMT Eagleton 42.05 68 ⇑P **P 22 51 34.8 -1.0**
baz=42,SNR=25
EGMT Eagleton 42.05 68 *eP* **P 22 51 35.1 -0.7**
EGMT *e*PcP PcP 22 53 29.0 -0.3
EGMT *e*ScP ScP 22 57 11.9 -1.3
I14A Mackay 42.11 75 ⇓P **P 22 51 36.6 +0.3**
baz=42,SNR=26
M11A Holland Ranch, 42.14 79 ⇑P **P 22 51 36.9 +0.3**
baz=42
F16A Kennard Place, 42.17 71 ⇑P **P 22 51 36.0 -0.7**
baz=42,SNR=5.5
L12A House Creek Ra 42.19 78 ⇑P **P 22 51 38.1 +1.1**
baz=42,SNR=35
H15A Lima 42.21 73 ⇑P **P 22 51 36.7 -0.3**
baz=42,SNR=66
BOZ Bozeman (W) 42.24 72 ⇓P **P 22 51 37.2 -0.1**
baz=42,SNR=29
BOZ Bozeman (W) 42.24 72 *eP* **P 22 51 37.2 -0.1**
BOZ *e* 22 53 29.4
BOZ pmax pmax
comp=Z,93nm,1.0s,mb5.5
BOZ Bozeman (W) 42.24 72 *eP* **P 22 51 37.2 -0.1**
comp=Z,93nm,1.0s,mb5.5
BOZ *e*PcP PcP 22 53 29.4 -0.6
BOZ *e*ScP ScP 22 57 11.9 -2.2
E17A Martinsdale 42.25 70 ⇓P **P 22 51 37.3 -0.1**
baz=42,SNR=50
G16A Moss Hill, Enn 42.37 72 ⇓P **P 22 51 37.9 -0.5**
baz=42,SNR=108
NVAR Mina Array Bea 42.41 85 P **P 22 51 39.6 +0.8**
comp=Z,16nm,1.0s,mb4.7,baz=288,slow=8.0,SNR=50
NVAR pP pP 22 51 56.0 -0.2
comp=Z,14nm,0.8s,baz=289,slow=8.9,SNR=7.7
NVAR PcP PcP 22 53 30.9 +0.2
comp=Z,9.6nm,1.1s,baz=280,slow=2.8,SNR=3.9
NVAR pPcP 22 53 50.6
comp=Z,8.3nm,0.8s,baz=267,slow=3.3,SNR=5.3
NVAR ScP ScP 22 57 13.4 -1.5
comp=Z,4.3nm,0.9s,baz=277,slow=3.8,SNR=11
NVAR pScP 22 57 47.0
comp=Z,3.7nm,1.0s,baz=281,slow=4.3,SNR=5.1
NVAR Mina Array Bea 42.41 85 P **P 22 51 39.6 +0.8**
NVAR pP pP 22 51 56.0 -0.2
NVAR PcP PcP 22 53 30.9 +0.2
NVAR pPcP 22 53 50.6
NVAR ScP ScP 22 57 13.4 -1.5
NVAR pScP 22 57 47.0
J14A Carey 42.42 76 ⇓P **P 22 51 39.0 +0.3**
baz=42,SNR=54
K13A Stover Farm, H 42.46 77 ⇑P **P 22 51 39.8 +0.7**
baz=42,SNR=6.2
D18A Linhart Farms, 42.46 69 ⇓P **P 22 51 39.0 -0.1**
baz=42,SNR=28
I15A Monteview 42.65 74 ⇑P **P 22 51 41.5 +0.8**
baz=42
F17A Fitzpatrick Pl 42.67 71 ⇑P **P 22 51 40.5 -0.3**
baz=42,SNR=49
M12A Wells 42.68 79 ⇑P **P 22 51 41.7 +0.8**
baz=42,SNR=17
E18A Harlowton 42.74 70 ⇑P **P 22 51 41.6 +0.2**
baz=43,SNR=51
QLMT Earthquake Lak 42.81 73 *eP* **P 22 51 42.1 +0.2**
comp=Z,56nm,1.1s,mb5.2
QLMT *e*PcP PcP 22 53 33.7 +1.8
QLMT *e*ScP ScP 22 57 16.2 -0.2
P10A Eureka 42.81 82 ⇑P **P 22 51 43.0 +0.9**
baz=43,SNR=6.5
L13A Double Diamond 42.87 77 ⇑P **P 22 51 43.0 +0.5**
baz=43,SNR=16
ELK Elko 42.88 80 *eP* **P 22 51 43.3 +0.7**
ELK pmax pmax
comp=Z,31nm,0.8s
ELK Elko 42.88 80 *eP* **P 22 51 43.3 +0.7**
comp=Z,31nm,0.8s,mb5.1
FFC Flin Flon 42.92 55 *eP* **P 22 51 40.8 -1.9**
FFC *e* pP 22 51 58.4 -1.7
FFC *e* 22 53 31.8
FFC pmax pmax
comp=Z,6.0nm,1.0s,mb4.3
FFC Flin Flon 42.92 55 *eP* **P 22 51 40.8 -1.9**
comp=Z,6.3nm,1.0s,mb4.3
FFC *e* pP 22 51 58.4 -1.6
FFC *e*PcP PcP 22 53 31.8 -0.3
FFC *e*ScP ScP 22 57 14.6 -2.0
MTUM Tungsten Hills 42.92 86 *eP* **P 22 51 43.9 +1.0**
N12A Clover Valley, 42.94 80 ⇓P **P 22 51 43.6 +0.6**
baz=43,SNR=58
N12A Clover Valley, 42.94 80 *eP* **P 22 51 43.5 +0.5**
comp=Z,52nm,0.8s,mb5.3
N12A *e* pP 22 51 59.7 -0.7
N12A *e*PcP PcP 22 53 34.0 +1.6
N12A *e*ScP ScP 22 57 15.6 -1.4
G17A Pierce Place, 42.94 72 ⇓P **P 22 51 43.2 +0.2**
baz=43,SNR=33
H16A Russell Place, 42.99 73 ⇑P **P 22 51 43.4 0.0**
baz=43,SNR=77
O11A Cowboy Ranch, 42.99 81 ⇑P **P 22 51 43.8 +0.3**
baz=43,SNR=12
J15A Blackfoot 43.02 75 ⇑P **P 22 51 44.7 +1.1**
baz=43,SNR=7.7
K14A Jones Ranch, D 43.07 76 ⇓P **P 22 51 44.3 +0.2**
baz=43,SNR=6.4
M13A Montello 43.17 78 *eP* **P 22 51 44.7 -0.2**
comp=Z,32nm,0.9s,mb5.1
M13A *e* pP 22 52 01.2 -1.0
YMR Madison River 43.17 72 *eP* **P 22 51 45.1 +0.2**
comp=Z,166nm,1.1s,mb5.7
YMR *e* pP 22 52 02.2 0.0
YMR *e*PcP PcP 22 53 34.2 +1.1
YMR *e*ScP ScP 22 57 18.1 +0.2
F18A Big Timber 43.22 70 ⇓P **P 22 51 45.1 -0.1**
baz=43,SNR=46
P11A Circle Ranch, 43.29 82 ⇑P **P 22 51 46.5 +0.7**
baz=43
GCMT Greycliff 43.31 70 *eP* **P 22 51 46.4 +0.4**
comp=Z,36nm,1.3s,mb5.0
I16A Newdale 43.31 74 ⇓P **P 22 51 46.2 +0.1**
baz=43,SNR=21
YNR Norris Junctio 43.31 72 *eP* **P 22 51 46.7 +0.7**
TIN Tinemaha 43.32 86 ⇑P **P 22 51 46.4 +0.3**
baz=43,SNR=6.1
L14A Malta 43.33 77 ⇑P **P 22 51 46.5 +0.3**
baz=43,SNR=15
Q10A Clear Creek Ra 43.34 83 ⇑P **P 22 51 46.9 +0.6**
baz=43,SNR=40
YFT Old Faithful 43.37 73 *eP* **P 22 51 48.0 +1.5**
K15A Arbon 43.38 76 ⇑P **P 22 51 47.2 +0.6**
baz=43,SNR=45
N13A Wendover, West 43.45 79 ⇓P **P 22 51 47.5 +0.4**
baz=43,SNR=13
N13A Wendover, West 43.45 79 *eP* **P 22 51 47.3 +0.2**
comp=Z,55nm,0.9s,mb5.3
N13A *e* pP 22 52 03.1 -1.4
O12A Currie 43.47 80 ⇑P **P 22 51 47.9 +0.6**
baz=43,SNR=68
H17A Grant Village 43.56 73 ⇑P **P 22 51 49.1 +1.1**
baz=43,SNR=28
LKWY Lake 43.56 72 *eP* **P 22 51 48.9 +0.9**
LKWY pmax pmax
comp=Z,98nm,0.9s,mb5.5
LKWY Lake 43.56 72 *eP* **P 22 51 48.9 +0.9**
comp=Z,98nm,0.9s,mb5.5
J16A Bone 43.58 75 ⇓P **P 22 51 48.5 +0.3**
baz=43,SNR=67
IMW Indian Meadow 43.63 73 *eP* **P 22 51 48.8 +0.3**
comp=Z,84nm,1.1s,mb5.4
IMW *e*PcP PcP 22 53 35.6 +0.9
IMW *e*ScP ScP 22 57 19.2 -0.6
G18A Lazy EL Ranch, 43.63 71 ⇑P **P 22 51 48.0 -0.5**
baz=44,SNR=12
DCID1 Drake Creek 43.65 74 *eP* **P 22 51 48.9 +0.2**
DL2 Dalian 43.69 278 ⇓P **P 22 51 49.5 +0.4**
DL2 PP PP 22 53 35.5 +3.8
DL2 ScP ScP 22 57 19.9 -0.2
DL2 S **S 22 58 12.2 -1.5**
DL2 ScS ScS 23 01 38.3 -2.9
DL2 pmax pmax
comp=Z,100nm,0.9s,mb5.5
RRI2 Red Ridge 43.72 74 *eP* **P 22 51 50.1 +0.9**
PKM Peak Mountain 43.73 90 ⇑P **P 22 51 49.3 -0.2**
baz=44
HVU Hansel Valley 43.76 77 *eP* **P 22 51 50.1 +0.5**
HVU *e* pP 22 52 06.7 -0.3
HVU *e* 22 53 35.8
HVU Hansel Valley 43.76 77 *eP* **P 22 51 50.1 +0.5**
HVU *e* pP 22 52 06.7 -0.3
HVU *e*PcP PcP 22 53 35.8 +0.6
HVU *e*ScP ScP 22 57 18.9 -1.4
S10A Tonopah Range, 43.78 84 ⇑P **P 22 51 50.1 +0.3**
baz=44,SNR=63
Q11A Duckwater 43.78 82 ⇑P **P 22 51 50.3 +0.4**
baz=44,SNR=22
I17A Pilgrim Ck. 43.83 73 ⇑P **P 22 51 50.7 +0.5**
baz=44
TPAW Teton Pass 43.85 74 *eP* **P 22 51 50.9 +0.5**
comp=Z,55nm,1.3s,mb5.1
TPAW *e* pP 22 52 07.0 -0.7
TPAW *e*PcP PcP 22 53 36.5 +1.1
TPAW *e*ScP ScP 22 57 19.4 -1.3
K16A Soda Springs 43.85 75 ⇑P **P 22 51 51.1 +0.7**
baz=44,SNR=47
L15A Malad City 43.86 76 ⇑P **P 22 51 50.4 -0.1**
baz=44,SNR=25
GRAC Grapevine Rang 43.88 86 ⇓P **P 22 51 50.9 +0.2**
baz=44,SNR=11
RLMT Red Lodge 43.91 71 ⇑P **P 22 51 50.7 -0.2**
baz=44,SNR=78
RLMT Red Lodge 43.91 71 *eP* **P 22 51 51.1 +0.3**
RLMT *e* 22 53 34.1
RLMT *e*ScP ScP 22 57 20.1 -0.8
REDW Red Top Meadow 43.98 74 *eP* **P 22 51 51.8 +0.3**
SNOW Snow King Moun 43.98 74 *eP* **P 22 51 51.9 +0.5**
SNOW *e* pP 22 52 07.9 -0.9
LOHW Long Hollow 43.99 73 *eP* **P 22 51 51.3 -0.1**
comp=Z,40nm,1.1s,mb5.1
LOHW *e*PcP PcP 22 53 36.7 +0.8
LOHW *e*ScP ScP 22 57 20.1 -1.1
ISA Isabella 44.06 88 ⇑P **P 22 51 51.5 -0.7**
baz=44,SNR=19
ISA Isabella 44.06 88 *eP* **P 22 51 51.4 -0.7**
N14A Grayback Hills 44.06 78 ⇑P **P 22 51 52.0 -0.1**
baz=44,SNR=15
BGU Big Grassy Mou 44.12 78 *eP* **P 22 51 52.5 0.0**
comp=Z,116nm,1.7s,mb5.3
BGU *e* pP 22 52 08.9 -1.0
BGU *e* 22 53 36.4
BGU *e*ScP ScP 22 57 20.2 -1.6
R11A Troy Canyon, C 44.13 83 ⇑P **P 22 51 52.4 -0.2**
baz=44,SNR=50
M15A Larsen Ranch, 44.15 77 ⇓P **P 22 51 52.7 0.0**
baz=44,SNR=32
Q12A Willow Creek R 44.17 81 ⇓P **P 22 51 53.3 +0.4**
baz=44,SNR=19
AHID Auburn Hatcher 44.19 75 *eP* **P 22 51 53.4 +0.4**
comp=Z,62nm,1.0s,mb5.3
AHID *e*PcP PcP 22 53 38.0 +1.4
SPUT South Promonto 44.24 77 *eP* **P 22 51 53.9 +0.5**
SPUT *e* pP 22 52 10.1 -0.8
SPUT *e* 22 53 37.1
K17A Gardner Place, 44.30 75 ⇓P **P 22 51 53.9 -0.1**
baz=44,SNR=9.8
I18A Diamond G Ranc 44.40 73 ⇑P **P 22 51 55.2 +0.4**
baz=44,SNR=12
P13A Bates Ranch, G 44.41 80 ⇓P **P 22 51 55.2 +0.3**
baz=44,SNR=30
MPMC Manual Prospec 44.41 87 ⇓P **P 22 51 54.5 -0.5**
baz=44,SNR=21
L16A Fish Haven 44.43 76 ⇑P **P 22 51 55.6 +0.6**
baz=44,SNR=8.6
N15A Stansbury Isla 44.45 78 ⇓P **P 22 51 55.2 +0.1**
baz=44,SNR=21
FURC Furnace Creek, 44.54 86 ⇑P **P 22 51 56.0 +0.1**
baz=44,SNR=21
J18A Kendall Valley 44.57 74 ⇓P **P 22 51 56.1 0.0**
baz=44,SNR=40
HWUT Hardware Ranch 44.59 76 *eP* **P 22 51 56.3 +0.1**
comp=Z,23nm,1.0s,mb4.9
HWUT *e* pP 22 52 13.2 -0.5
HWUT *e*PcP PcP 22 53 38.5 +0.5
HWUT *e*ScP ScP 22 57 21.6 -2.2
OSI Osito Adit 44.59 89 *eP* **P 22 51 57.2 +0.8**
LRMC Laurel Mountai 44.67 87 ⇓P **P 22 51 56.2 -0.7**
baz=44,SNR=14
DUG Dugway 44.69 79 ⇑P **P 22 51 57.7 +0.7**
baz=44,SNR=61
DUG Dugway 44.69 79 *eP* **P 22 51 57.1 0.0**
DUG *e* pP 22 52 14.2 -0.3
DUG pmax pmax
comp=Z,133nm,1.4s,mb5.5
DUG Dugway 44.69 79 *eP* **P 22 51 57.1 +0.1**
comp=Z,133nm,1.4s,mb5.5
DUG *e* pP 22 52 14.2 -0.4
DUG *e*ScP ScP 22 57 22.1 -2.0
L17A Cokeville 44.71 75 ⇑P **P 22 51 58.0 +0.7**
baz=45
Q13A Wheeler Ranch, 44.72 81 ⇑P **P 22 51 57.8 +0.5**
baz=45,SNR=32
R12A Pony Springs, 44.75 82 ⇑P **P 22 51 57.6 0.0**
baz=45
FCC Fort Churchill 44.77 47 *eP* **P 22 51 56.3 -1.2**
comp=Z,0.3nm,0.6s
FCC *e*PcP PcP 22 53 38.4 +0.1
LAO LASA Array 44.80 67 *eP* **P 22 51 58.1 +0.3**
comp=Z,68nm,0.9s,mb5.4
LAO *e*PcP PcP 22 53 39.1 +0.5
NOQ North Oquirrh 44.83 78 *eP* **P 22 51 59.6 +1.4**
NOQ *e*PcP PcP 22 53 40.2 +1.4
NOQ *e*ScP ScP 22 57 23.4 -1.3

O15A	**The Old Anders**	**44.84**	**79**	⇊P	**P**	**22 51 58.7**	**+0.4**
	baz=45,SNR=7.2						
EDW2	**Edwards Air Fo**	**44.87**	**88**	⇊P	**P**	**22 51 58.5**	**-0.1**
	baz=45,SNR=12						
K18A	**Toltan Ranch,**	**44.89**	**74**	⇑P	**P**	**22 51 59.1**	**+0.5**
	baz=45,SNR=66						
U10A	**Ash Meadows, A**	**44.90**	**85**	⇊P	**P**	**22 51 58.8**	**0.0**
	baz=45,SNR=25						
P14A	**Drum Mountains**	**44.90**	**80**	⇑P	**P**	**22 51 59.1**	**+0.4**
	baz=45,SNR=45						
DGMT	**Dagmar**	**44.95**	**64**	*e*P	**P**	**22 51 58.4**	**-0.7**
	comp=Z,9.8nm,0.4s,mb4.9						
DGMT				*e*	pP	22 52 15.4	-1.1
DGMT				*e*PcP	PcP	22 53 39.2	+0.1
CTU	**Camp Tracy**	**45.03**	**78**	*e*P	**P**	**22 52 00.6**	**+0.8**
CTU				*e*pP	pP	22 52 16.2	-1.0
CTU				*e*PcP	PcP	22 53 40.0	+0.4
S12A	**Delamar Landin**	**45.05**	**83**	⇑P	**P**	**22 52 00.4**	**+0.4**
	baz=45,SNR=7.9						
T11A	**Corn Creek, Al**	**45.06**	**84**	⇑P	**P**	**22 52 00.1**	**+0.1**
	baz=45,SNR=82						
N16A	**Rees Ranch, Co**	**45.10**	**77**	⇑P	**P**	**22 52 00.4**	**0.0**
	baz=45,SNR=5.2						
BW06	**Boulder Array**	**45.10**	**74**	⇊P	**P**	**22 52 00.5**	**+0.1**
	baz=45,SNR=215						
BW06	**Boulder Array**	**45.10**	**74**	*e*P	**P**	**22 52 00.3**	**0.0**
	comp=Z,159nm,1.0s,mb5.7						
BW06				*e*pP	pP	22 52 17.0	-0.8
PDAR	**Pinedale Array**	**45.10**	**74**	P	**P**	**22 52 00.3**	**0.0**
	comp=Z,134nm,1.1s,mb5.6,baz=308,slow=4.9,SNR=326						
PDAR				pP	pP	22 52 17.1	-0.7
	comp=Z,42nm,1.0s,baz=302,slow=5.1,SNR=5.0						
PDAR				ScP	ScP	22 57 24.1	-1.8
	comp=Z,4.2nm,0.9s,baz=300,slow=2.9,SNR=6.9						
Q14A	**Sevier Lake (B**	**45.15**	**80**	⇊P	**P**	**22 52 01.0**	**+0.3**
	baz=45,SNR=57						
M17A	**Scullys Gap (B**	**45.21**	**76**	⇊P	**P**	**22 52 00.9**	**-0.3**
	baz=45,SNR=23						
R13A	**O'Grain Ranch,**	**45.23**	**82**	⇑P	**P**	**22 52 01.9**	**+0.5**
	baz=45,SNR=17						
MWC	**Mount Wilson**	**45.26**	**89**	*e*P	**P**	**22 52 02.0**	**+0.3**
SHOC	**Shoshone**	**45.26**	**86**	⇊P	**P**	**22 52 01.2**	**-0.5**
	baz=45,SNR=18						
JLU	**Jordanelle**	**45.27**	**77**	*e*P	**P**	**22 52 02.6**	**+1.0**
NLU	**North Lily Min**	**45.28**	**79**	*e*P	**P**	**22 52 02.7**	**+0.9**
NLU				*e*pP	pP	22 52 19.0	-0.3
NLU				*e*PcP	PcP	22 53 42.1	+1.7
NLU				*e*ScP	ScP	22 57 25.3	-1.3
L18A	**Fontenelle, Gr**	**45.32**	**75**	⇊P	**P**	**22 52 02.0**	**-0.1**
	baz=45,SNR=9.6						
GSC	**Goldstone**	**45.33**	**87**	⇊P	**P**	**22 52 01.5**	**-0.7**
	baz=45,SNR=40						
GSC	**Goldstone**	**45.33**	**87**	*e*P	**P**	**22 52 02.1**	**-0.1**
GSC				*e**PP	pP	22 52 18.8	-0.9
GSC				*e*		22 53 42.0	
GSC	**Goldstone**	**45.33**	**87**	*e*P	**P**	**22 52 02.1**	**-0.1**
GSC				*e*pP	pP	22 52 18.8	-0.9
GSC				*e*PcP	PcP	22 53 42.0	+1.3
GSC				*e*ScP	ScP	22 57 24.8	-2.1
P15A	**Leamington**	**45.40**	**79**	⇑P	**P**	**22 52 02.8**	**+0.1**
	baz=45,SNR=23						
N17A	**Moffit Pass**	**45.43**	**77**	⇊P	**P**	**22 52 03.1**	**+0.2**
	baz=45,SNR=7.8						
U11A	**Corn Creek**	**45.48**	**85**	⇊P	**P**	**22 52 03.2**	**-0.2**
	baz=45						
K19A	**Absolon Red Bu**	**45.49**	**73**	⇊P	**P**	**22 52 02.8**	**-0.6**
	baz=45,SNR=96						
DAU	**Daniels Canyon**	**45.50**	**78**	*e*P	**P**	**22 52 04.5**	**+1.0**
DAU				*e*	pP	22 52 20.6	-0.4
DAU				*e*		22 53 41.1	
DAU				pmax	pmax		
	comp=Z,43nm,1.0s,mb5.1						
DAU	**Daniels Canyon**	**45.50**	**78**	*e*P	**P**	**22 52 04.5**	**+1.0**
	comp=Z,43nm,1.0s,mb5.1						
DAU				*e*	pP	22 52 20.6	-0.4
DAU				*e*PcP	PcP	22 53 41.1	-0.1
BFSC	**Mount Baldy Ra**	**45.50**	**89**	⇊P	**P**	**22 52 03.6**	**0.0**
	baz=45,SNR=16						
MPU	**Maple Canyon**	**45.51**	**78**	*e*P	**P**	**22 52 03.2**	**-0.4**
MPU				*e*pP	pP	22 52 20.5	-0.6
MPU				*e*ScP	ScP	22 57 25.9	-1.6
M18A	**Lyman**	**45.60**	**76**	⇊P	**P**	**22 52 03.9**	**-0.4**
	baz=45,SNR=19						
L19A	**Farson**	**45.62**	**74**	⇊P	**P**	**22 52 04.0**	**-0.4**
	baz=46,SNR=34						
S13A	**Holt Ranch, En**	**45.67**	**82**	⇑P	**P**	**22 52 04.4**	**-0.6**
	baz=46,SNR=42						
Q15A	**Fillmore**	**45.69**	**80**	⇊P	**P**	**22 52 05.5**	**+0.5**
	baz=46,SNR=12						
T12A	**Moapa**	**45.70**	**84**	⇊P	**P**	**22 52 05.0**	**-0.1**
	baz=46						
TUQ	**Turquoise Moun**	**45.79**	**86**	⇑P	**P**	**22 52 05.5**	**-0.3**
	baz=46,SNR=20						
ARUT	**Antelope Range**	**45.80**	**82**	*e*P	**P**	**22 52 06.8**	**+0.9**
ARUT				*e**PP	pP	22 52 23.9	+0.5
ARUT				pmax	pmax		
	comp=Z,26nm,1.0s,mb4.9						
ARUT	**Antelope Range**	**45.80**	**82**	*e*P	**P**	**22 52 06.8**	**+0.9**
	comp=Z,26nm,1.0s,mb4.9						
ARUT				*e*pP	pP	22 52 23.9	+0.4
ARUT				*e*ScP	ScP	22 57 27.9	-0.9
V11A	**Goodsprings**	**45.83**	**85**	⇑P	**P**	**22 52 06.3**	**+0.1**
	baz=46,SNR=19						
K20A	**Yellowstone Ra**	**45.89**	**73**	⇊P	**P**	**22 52 05.6**	**-0.9**
	baz=46,SNR=25						
HEC	**Hector,Ludlow**	**45.93**	**87**	⇊P	**P**	**22 52 06.2**	**-0.8**
	baz=46,SNR=9.9						
O17A	**Robinson Place**	**45.95**	**77**	⇑P	**P**	**22 52 07.8**	**+0.8**
	baz=46,SNR=7.5						
U12A	**Valley of Fire**	**45.99**	**84**	⇊P	**P**	**22 52 07.7**	**+0.3**
	baz=46						
CCUT	**Cedar City**	**46.00**	**82**	*e*P	**P**	**22 52 08.3**	**+0.9**
T13A	**Saint George**	**46.00**	**83**	⇑P	**P**	**22 52 07.8**	**+0.3**
	baz=46,SNR=28						
M19A	**Rock Springs**	**46.10**	**75**	⇑P	**P**	**22 52 07.2**	**-0.9**
	baz=46,SNR=9.8						
N18A	**Larsen Ranch,**	**46.11**	**76**	⇊P	**P**	**22 52 07.4**	**-0.9**
	baz=46,SNR=17						
MSU	**Marysvale**	**46.12**	**80**	*e*P	**P**	**22 52 09.0**	**+0.6**
MSU				*e**PP	pP	22 52 25.2	-0.7
MSU				*e*		22 53 44.8	
MSU				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.0						
MSU	**Marysvale**	**46.12**	**80**	*e*P	**P**	**22 52 09.0**	**+0.7**
	comp=Z,20nm,0.7s,mb5.0						
MSU				*e*pP	pP	22 52 25.2	-0.7
MSU				*e*PcP	PcP	22 53 44.8	+1.4
MURC	**Murrieta**	**46.21**	**89**	⇊P	**P**	**22 52 08.2**	**-1.0**
	baz=46						
TMUT	**Trail Mountain**	**46.22**	**79**	*e*P	**P**	**22 52 09.6**	**+0.4**
	comp=Z,40nm,0.7s,mb5.3						
TMUT				*e*pP	pP	22 52 25.9	-0.8
TMUT				PcP	PcP	22 53 42.1	-1.6
R15A	**Junction**	**46.25**	**81**	⇑P	**P**	**22 52 09.2**	**-0.2**
	baz=46,SNR=7.3						
V12A	**Nelson**	**46.26**	**85**	⇑P	**P**	**22 52 09.4**	**-0.1**
	baz=46,SNR=18						
L20A	**Wamsutter**	**46.28**	**74**	⇑P	**P**	**22 52 09.1**	**-0.5**
	baz=46,SNR=23						
BJI	**Beijing**	**46.31**	**283**	P	**P**	**22 52 11.1**	**+1.3**
BJI				S	**S**	**22 58 53.5**	**+2.0**
BJI				pmax	pmax		
	comp=Z,110nm,0.7s,mb5.7						
BJI				pmax	pmax		
	comp=Z,280nm,3.6s						
BJI				LR	LR		
	comp=N,340nm,17.7s						
BJI				LR	LR		
	comp=E,300nm,23.6s						
BJI				LR	LR		
	comp=Z,330nm,22.4s						
U13A	**Pakoon Wash**	**46.36**	**84**	⇊P	**P**	**22 52 10.1**	**-0.1**
	baz=46,SNR=68						
GMRC	**Granite Mounta**	**46.38**	**87**	⇑P	**P**	**22 52 10.1**	**-0.3**
	baz=46,SNR=20						
P17A	**Butcher Ranch,**	**46.39**	**78**	⇊P	**P**	**22 52 10.7**	**+0.2**
	baz=46,SNR=6.0						
N19A	**John Jarvie Ra**	**46.46**	**76**	⇑P	**P**	**22 52 10.5**	**-0.5**
	baz=46,SNR=12						
Q16A	**Castle Valley**	**46.48**	**79**	⇑P	**P**	**22 52 11.7**	**+0.5**
	baz=46,SNR=10						
T14A	**Hurricane**	**46.48**	**82**	⇑P	**P**	**22 52 11.8**	**+0.6**
	baz=46,SNR=24						
LDFC	**Landfair**	**46.52**	**86**	*e*P	**P**	**22 52 10.9**	**-0.7**
	comp=Z,121nm,1.2s,mb5.5						
LDFC				*e*	pP	22 52 29.2	0.0
LDFC				*e*PcP	PcP	22 53 46.0	+1.1
LDFC				*e*ScP	ScP	22 57 30.0	-1.8
S15A	**Panguitch**	**46.53**	**81**	⇑P	**P**	**22 52 12.0**	**+0.4**
	baz=46,SNR=13						
P18A	**Preston Nutter**	**46.59**	**78**	⇊P	**P**	**22 52 12.5**	**+0.4**
	baz=46,SNR=22						
TLY	**Talaya**	**46.66**	**303**	P	**P**	**22 52 12.9**	**+0.4**
	comp=Z,82nm,0.6s,mb5.6,SNR=8.0						
TLY	**Talaya**	**46.66**	**303**	*e*P	**P**	**22 52 13.0**	**+0.5**
TLY				*e*		22 53 44.6	
TLY				*e*		22 53 57.1	
TLY				*e*S	**S**	**22 59 05.8**	**+10**
TLY				*e*		23 01 58.5	
TLY				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.6						
TLY	**Talaya**	**46.66**	**303**	*e*P	**P**	**22 52 12.2**	**-0.3**
	comp=Z,7.6nm,0.6s,mb4.6						
TLY				*e*PcP	PcP	22 53 45.5	+0.5
TLY				*e*ScP	ScP	22 57 31.1	-1.0
PFO	**Pinyon Flat Ob**	**46.67**	**88**	⇊P	**P**	**22 52 12.4**	**-0.3**
	baz=46,SNR=7.1						
PFO	**Pinyon Flat Ob**	**46.67**	**88**	*e*P	**P**	**22 52 12.3**	**-0.4**
PFO				*e**PP	pP	22 52 28.6	-1.7
PFO				*e*		22 54 03.3	
PFO				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.4						
PFO	**Pinyon Flat Ob**	**46.67**	**88**	*e*P	**P**	**22 52 12.3**	**-0.4**
	comp=Z,7.1nm,0.9s,mb4.4						
PFO				*e*pP	pP	22 52 28.6	-1.7
PFO				*e*PP	PP	22 54 03.3	0.0
M20A	**Sweetwater, Wa**	**46.68**	**74**	⇊P	**P**	**22 52 13.0**	**+0.2**
	baz=46,SNR=52						
R16A	**Teasdale**	**46.68**	**80**	⇊P	**P**	**22 52 13.8**	**+1.0**
	baz=46,SNR=12						
BELC	**Belle Mtn. Jos**	**46.69**	**88**	⇑P	**P**	**22 52 12.3**	**-0.6**
	baz=47,SNR=10						
V13A	**Grand Canyon W**	**46.71**	**84**	⇑P	**P**	**22 52 13.1**	**+0.1**
	baz=47,SNR=32						
SRU	**San Rafael**	**46.75**	**78**	*e*P	**P**	**22 52 13.7**	**+0.4**
SRU				*e**PP	pP	22 52 30.0	-0.9
SRU				pmax	pmax		
	comp=Z,88nm,1.3s,mb5.3						
SRU	**San Rafael**	**46.75**	**78**	*e*P	**P**	**22 52 13.7**	**+0.4**
	comp=Z,88nm,1.3s,mb5.3						
SRU				*e*pP	pP	22 52 30.0	-0.9
SRU				*e*ScP	ScP	22 57 30.4	-2.3
U14A	**Mt Trumbull**	**46.84**	**83**	⇊P	**P**	**22 52 14.6**	**+0.5**
	baz=47,SNR=26						
O19A	**Miners Draw (B**	**46.85**	**76**	⇊P	**P**	**22 52 14.2**	**+0.1**
	baz=47,SNR=33						
T15A	**Red Dirt Ranch**	**46.94**	**82**	⇊P	**P**	**22 52 15.2**	**+0.3**
	baz=47,SNR=32						
ULN	**Ulaanbaatar**	**46.97**	**297**	*e*P	**P**	**22 52 14.9**	**0.0**
ULN				*e*		22 53 46.4	
ULN				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.0						
ULN	**Ulaanbaatar**	**46.97**	**297**	*e*P	**P**	**22 52 14.9**	**0.0**
	comp=Z,24nm,0.8s,mb5.0						
ULN				*e*PcP	PcP	22 53 46.4	+0.2
ULN				*e*ScP	ScP	22 57 32.0	-1.5
ULN	**Ulaanbaatar**	**46.97**	**297**	P	**P**	**22 52 13.9**	**-1.0**
	comp=Z,301nmcomp=Z,33nm,1.0s,mb5.0						
ULN	**Ulaanbaatar**	**46.97**	**297**	P	**P**	**22 52 14.3**	**-0.6**
	SNR=13						
S16A	**Weppner Ranch,**	**46.97**	**81**	⇑P	**P**	**22 52 15.9**	**+0.8**
	baz=47,SNR=19						
Q18A	**Rafter H Ranch**	**46.99**	**78**	⇑P	**P**	**22 52 15.0**	**-0.2**
	baz=47,SNR=28						
NEE2	**Needles Airpor**	**47.03**	**86**	⇊P	**P**	**22 52 15.0**	**-0.6**
	baz=47						
N20A	**Spence Gulch,**	**47.04**	**75**	⇊P	**P**	**22 52 15.7**	**+0.2**
	baz=47,SNR=50						
R17A	**Hanksville Air**	**47.07**	**79**	⇊P	**P**	**22 52 15.8**	**0.0**
	baz=47,SNR=41						
M21A	**Separation Pea**	**47.10**	**74**	⇑P	**P**	**22 52 15.3**	**-0.7**
	baz=47,SNR=31						
IRM	**Iron Mountain**	**47.10**	**87**	⇊P	**P**	**22 52 16.0**	**-0.2**
	baz=47,SNR=18						
RWWY	**Rawlins**	**47.14**	**74**	*e*P	**P**	**22 52 16.0**	**-0.4**
	comp=Z,123nm,1.2s,mb5.5						
RWWY				*e*	pP	22 52 32.7	-1.3
RWWY				*e*PcP	PcP	22 53 47.7	+0.8
RWWY				*e*ScP	ScP	22 57 32.6	-1.8
BAR	**Barrett**	**47.16**	**90**	*e*P	**P**	**22 52 15.8**	**-0.7**
	comp=Z,16nm,0.9s,mb4.7						
BAR				*e*	pP	22 52 32.8	-1.3
BAR				*e*PcP	PcP	22 53 45.2	-1.9
BAR				*e*PP	PP	22 54 05.6	-2.2
MONP	**Monument Peak**	**47.17**	**89**	⇑P	**P**	**22 52 15.5**	**-1.2**
	baz=47,SNR=9.2						
BC3	**Big Chuckawall**	**47.26**	**88**	⇊P	**P**	**22 52 16.8**	**-0.5**
	baz=47,SNR=7.0						
W13A	**Hualapai Mount**	**47.26**	**85**	⇑P	**P**	**22 52 17.0**	**-0.3**
	baz=47,SNR=20						
SONM	**Songino Array**	**47.35**	**297**	P	**P**	**22 52 18.1**	**+0.2**
	comp=Z,14nm,0.7s,mb4.8,baz=58,slow=8.5,SNR=39						
SONM				pP	pP	22 52 35.4	0.0
	comp=Z,8.4nm,0.7s,baz=64,slow=7.1,SNR=6.6						
SONM				PcP	PcP	22 53 46.6	-1.0
	comp=Z,30nm,0.9s,baz=69,slow=1.8,SNR=18						
SONM				pPcP		22 54 05.7	
	comp=Z,8.6nm,1.0s,baz=88,slow=3.6,SNR=3.6						
SONM				ScP	ScP	22 57 33.6	-1.4
	comp=Z,20nm,1.0s,baz=61,slow=3.0,SNR=29						
SONM				pScP		22 58 07.6	
	comp=Z,19nm,1.0s,baz=71,slow=3.0,SNR=12						
SONM				LR	LR	23 11 59.6	
	comp=Z,220nm,20.7s,baz=57,slow=36						
SONM	**Songino Array**	**47.35**	**297**	P	**P**	**22 52 18.1**	**+0.2**
SONM				*PP	pP	22 52 35.4	-0.1
SONM						22 53 46.6	
SONM						22 54 05.7	
SONM				pmax	pmax		
	comp=Z,14nm,0.7s						
SONM				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SONM				pmax	pmax		
	comp=Z,30nm,0.9s						
SONM				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SONM				pmax	pmax		
	comp=N,20nm,1.0s						
SONM				pmax	pmax		
	comp=Z,19nm,1.0s						
SONM				MLR	MLR		
	comp=Z,220nm,20.7s						
SONM	**Songino Array**	**47.35**	**297**	P	**P**	**22 52 18.1**	**+0.2**
SONM				pP	pP	22 52 35.4	0.0
SONM				PcP	PcP	22 53 46.6	-1.0
SONM				pPcP		22 54 05.7	
SONM				ScP	ScP	22 57 33.6	-1.4
SONM				pScP		22 58 07.6	
SONM				LR	LR	23 11 59.6	
P19A	**Cripple Cowboy**	**47.35**	**77**	⇑P	**P**	**22 52 18.1**	**+0.1**
	baz=47,SNR=40						
U15A	**North Rim**	**47.38**	**83**	⇑P	**P**	**22 52 18.7**	**+0.4**
	baz=47,SNR=96						
V14A	**Boquillas Ranc**	**47.39**	**84**	⇑P	**P**	**22 52 18.4**	**0.0**
	baz=47,SNR=41						
L22A	**Ellis Ranch, M**	**47.40**	**73**	⇑P	**P**	**22 52 18.5**	**+0.2**
	baz=47,SNR=27						
O20A	**White River Ci**	**47.48**	**76**	⇑P	**P**	**22 52 18.9**	**-0.1**
	baz=47,SNR=31						
T16A	**Glen Canyon Da**	**47.50**	**81**	⇑P	**P**	**22 52 19.3**	**+0.1**
	baz=47						
S17A	**Black Ridge (B**	**47.51**	**80**	⇊P	**P**	**22 52 19.5**	**+0.2**
	baz=47,SNR=37						
SWSC	**Sam W. Stewart**	**47.52**	**89**	⇊P	**P**	**22 52 18.9**	**-0.5**
	baz=47						
DVTC	**Desert V Tower**	**47.52**	**89**	⇊P	**P**	**22 52 18.9**	**-0.5**
	baz=47						
N21A	**Black Mountain**	**47.53**	**75**	⇑P	**P**	**22 52 19.2**	**-0.2**
	baz=47,SNR=14						
RSSD	**Black Hills**	**47.54**	**69**	*e*P	**P**	**22 52 18.6**	**-0.8**
RSSD				*e**PP	pP	22 52 35.7	-1.3
RSSD				*e*		22 53 48.2	
RSSD				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.0						
RSSD	**Black Hills**	**47.54**	**69**	*e*P	**P**	**22 52 18.6**	**-0.8**
	comp=Z,20nm,0.8s,mb5.0						
RSSD				*e*pP	pP	22 52 35.7	-1.2
RSSD				*e*PcP	PcP	22 53 48.2	-0.1
R18A	**Canyonlands Na**	**47.59**	**79**	⇑P	**P**	**22 52 19.5**	**-0.3**
	baz=47,SNR=15						
Q19A	**Hogan Spring (**	**47.61**	**78**	⇑P	**P**	**22 52 19.4**	**-0.6**
	baz=48,SNR=21						
PDMCI	**Parker Dam,Lak**	**47.64**	**86**	⇑P	**P**	**22 52 19.7**	**-0.5**
	baz=48,SNR=8.5						
W14A	**Seligman**	**47.68**	**84**	⇊P	**P**	**22 52 20.6**	**0.0**
	baz=48,SNR=30						
Y12C	**Blythe**	**47.77**	**87**	⇑P	**P**	**22 52 20.6**	**-0.7**
	baz=48,SNR=5.4						
P20A	**De Beque**	**47.79**	**77**	⇑P	**P**	**22 52 21.9**	**+0.5**
	baz=48						
V15A	**Kaibab Nationa**	**47.85**	**83**	⇊P	**P**	**22 52 22.2**	**+0.3**
	baz=48,SNR=8.6						
O21A	**Pagoda**	**47.90**	**75**	⇑P	**P**	**22 52 21.9**	**-0.3**
	baz=48,SNR=19						
T17A	**Navajo Res., N**	**47.92**	**81**	⇊P	**P**	**22 52 22.5**	**+0.1**
	baz=48,SNR=14						
S18A	**Hurst Farm, Bl**	**47.97**	**80**	⇊P	**P**	**22 52 22.8**	**0.0**
	baz=48,SNR=75						
R19A	**Curley Farm, L**	**48.03**	**78**	⇊P	**P**	**22 52 22.8**	**-0.4**
	baz=48,SNR=30						
MOY	**Mondy**	**48.04**	**304**	*e*P	**P**	**22 52 23.3**	**+0.2**
MOY				pmax	pmax		
	comp=Z,20nm,2.0s,mb4.6						
GLA	**Glamis**	**48.05**	**88**	⇑P	**P**	**22 52 22.7**	**-0.7**
	baz=48,SNR=8.2						
GLA	**Glamis**	**48.05**	**88**	*e*P	**P**	**22 52 23.2**	**-0.3**
GLA				*e**PP	pP	22 52 39.7	-1.4
GLA				*e*		22 53 51.9	
GLA				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.0						
GLA	**Glamis**	**48.05**	**88**	*e*P	**P**	**22 52 23.2**	**-0.2**
	comp=Z,23nm,0.9s,mb5.0						
GLA				*e*pP	pP	22 52 39.7	-1.4
GLA				*e*PcP	PcP	22 53 51.9	+1.6
N22A	**Wattenberg Ran**	**48.14**	**74**	⇑P	**P**	**22 52 24.2**	**+0.1**
	baz=48,SNR=40						
Y13A	**Salome**	**48.15**	**86**	⇑P	**P**	**22 52 23.9**	**-0.4**
	baz=48,SNR=5.1						
TIA	**Tai'an**	**48.16**	**278**	*e*P	**P**	**22 52 24.9**	**+0.6**
PV04	**Paradox Valley**	**48.18**	**78**	*e*P	**P**	**22 52 24.3**	**-0.1**
PV04				*e*pP	pP	22 52 41.3	-0.8
PV04				*e*ScP	ScP	22 57 37.1	-1.7
Q20A	**Ridgley Place,**	**48.19**	**77**	⇊P	**P**	**22 52 23.7**	**-0.8**
	baz=48,SNR=14						
W15A	**Williams**	**48.21**	**84**	⇑P	**P**	**22 52 25.1**	**+0.4**
	baz=48,SNR=8.2						
U17A	**Shonto**	**48.26**	**81**	⇑P	**P**	**22 52 24.9**	**-0.2**
	baz=48,SNR=6.9						
X14A	**Yava**	**48.29**	**85**	⇑P	**P**	**22 52 24.8**	**-0.6**
	baz=48,SNR=20						
T18A	**Mexican Hat**	**48.40**	**80**	⇑P	**P**	**22 52 25.5**	**-0.6**
	baz=48,SNR=79						
PHWY	**Pilot Hill**	**48.42**	**73**	*e*P	**P**	**22 52 25.4**	**-0.9**
	comp=Z,33nm,1.1s,mb5.1						
PHWY				PcP	PcP	22 53 52.6	+1.1
PHWY				*e*ScP	ScP	22 57 38.2	-1.5
S19A	**Harvey Farm, M**	**48.45**	**79**	⇊P	**P**	**22 52 26.3**	**-0.2**
	baz=48,SNR=44						
ULM	**Lac du Bonnet**	**48.46**	**58**	P	**P**	**22 52 24.2**	**-2.2**
	comp=Z,4.8nm,0.7s,mb4.4,baz=312,slow=8.5,SNR=3.9						
ULM				PcP	PcP	22 53 50.9	-0.6
	comp=Z,9.5nm,0.7s,baz=313,slow=6.6,SNR=3.9						
ULM				ScP	ScP	22 57 38.2	-1.5
	comp=Z,12nm,1.0s,baz=293,slow=4.1,SNR=4.6						
ULM				LR	LR	23 13 59.6	
	comp=Z,300nm,19.9s,baz=44,slow=37						
ULM	**Lac du Bonnet**	**48.46**	**58**	P	**P**	**22 52 24.2**	**-2.1**
ULM				PcP	PcP	22 53 50.9	-0.6
ULM				ScP	ScP	22 57 38.2	-1.5
ULM				LR	LR	23 13 59.6	
O22A	**Kremmling**	**48.48**	**75**	⇊P	**P**	**22 52 26.2**	**-0.5**
	baz=48,SNR=50						
WUAZ	**Wupatki**	**48.53**	**83**	⇊P	**P**	**22 52 26.9**	**-0.3**
	baz=48,SNR=8.1						
WUAZ	**Wupatki**	**48.53**	**83**	P	**P**	**22 52 26.7**	**-0.5**
	comp=Z,55nm,0.9s,mb5.5						
WUAZ				*e*pP	pP	22 52 44.3	-0.6
WUAZ				*e*ScP	ScP	22 57 38.9	-1.5
PV01	**Paradox Valley**	**48.55**	**78**	*e*P	**P**	**22 52 27.4**	**+0.1**
	comp=Z,5µm,1.0s						
PV01				*e*pP	pP	22 52 43.7	-1.2
PV01				*e*ScP	ScP	22 57 39.1	-1.2
HHC	**Hu-ho-hao-te**	**48.57**	**286**	*e*P	**P**	**22 52 27.8**	**+0.4**
HHC				pP	pP	22 52 45.4	+0.4
HHC				sP	sP	22 52 52.9	-0.1
HHC				PcP	PcP	22 53 53.7	+1.7
HHC				PP	PP	22 54 20.9	+0.4
HHC				ScP	ScP	22 57 41.6	+1.2
HHC				PcS	PcS	22 57 48.1	0.0
HHC				S	**S**	**22 59 23.4**	**-0.1**
HHC				sS	sS	22 59 51.9	-1.7
HHC				ScS	ScS	23 02 12.3	-0.6
HHC				SS	SS	23 02 48.0	-5.8
HHC				pmax	pmax		
	comp=Z,21nm,0.7s,mb5.2						
HHC				pmax	pmax		
	comp=Z,240nm,6.6s						
HHC				LR	LR		
	comp=N,320nm,16.8s						
HHC				LR	LR		
	comp=E,270nm,16.2s						
HHC				LR	LR		
	comp=Z,420nm,16.0s						
Y14A	**Wickenburg**	**48.58**	**86**	⇑P	**P**	**22 52 27.2**	**-0.3**
	baz=48,SNR=5.8						
R20A	**Redvale**	**48.63**	**78**	⇑P	**P**	**22 52 27.7**	**-0.1**
	baz=48,SNR=13						
Z13A	**Yuma Proving G

baz=49
P23A Jefferson 49.40 75 ⇓P P 22 52 34.7 +0.9
baz=49,SNR=15
114A Black Gap (USA 49.45 87 ⇓P P 22 52 34.0 -0.3
baz=49,SNR=7.6
Y16A Circle Bar Ran 49.56 84 ⇓P P 22 52 35.7 +0.7
baz=49
R22A Saguache, Gunn 49.58 77 ⇓P P 22 52 35.6 +0.4
baz=49,SNR=20
AGMN Agassiz Nation 49.61 60 *eP* **P 22 52 33.1 -2.1**
comp=Z,14nm,1.0s,mb4.9
AGMN *e*pP pP 22 52 51.0 -1.9
AGMN *e*PcP PcP 22 53 55.3 -0.4
AGMN *e*ScP ScP 22 57 42.4 -2.3
BTO Baotou 49.63 287 *eP* **P 22 52 36.3 +0.8**
Q23A Hartsel 49.70 76 ⇓P P 22 52 37.0 +1.0
baz=50
W18A Petrified Fore 49.80 82 ⇑P P 22 52 37.1 +0.3
baz=50,SNR=8.0
V19A Window Rock 49.83 81 ⇑P P 22 52 37.7 +0.6
baz=50
S22A 4UR Ranch, Cre 49.85 77 ⇓P P 22 52 37.5 +0.3
baz=50,SNR=14
SPITS Spitsbergen Ar 49.86 356 P **P 22 52 36.5 -0.2**
comp=Z,43nm,0.8s,mb5.4,baz=121,slow=9.8,SNR=34
SPITS pP pP 22 52 56.0 +1.5
comp=Z,20nm,0.6s,baz=11,slow=6.0,SNR=7.7
SPITS Spitsbergen Ar 49.86 356 P **P 22 52 36.5 -0.3**
SPITS pmax pmax
comp=Z,43nm,0.8s
SPITS pmax pmax
comp=Z,21nm,0.6s
P24A Kohler Place, 49.87 74 ⇑P P 22 52 38.2 +0.9
baz=50
NJ2 Nanjing 49.87 273 *eP* **P 22 52 38.2 +0.8**
NJ2 pP pP 22 52 52.2 -3.0
NJ2 sP sP 22 52 58.9 -4.2
NJ2 PP PP 22 54 33.8 +1.3
NJ2 S **S 22 59 42.3 +0.3**
NJ2 pmax pmax
comp=Z,140nm,0.7s,mb6.0
NJ2 pmax pmax
comp=Z,190nm,5.1s
NJ2 LR LR
comp=N,890nm,19.9s
NJ2 LR LR
comp=E,540nm,18.1s
NJ2 LR LR
comp=Z,710nm,19.2s
T21A Navajo Lake 49.91 79 ⇑P P 22 52 38.3 +0.6
baz=50,SNR=9.1
W19A Sanders 50.02 82 ⇓P P 22 52 38.9 +0.3
baz=50
214A Organ Pipe Nat 50.04 87 ⇑P P 22 52 38.4 -0.3
baz=50,SNR=10
X18A Snowflake 50.06 83 ⇑P P 22 52 39.1 +0.3
baz=50
Y17A Roosevelt 50.07 84 ⇑P P 22 52 39.1 +0.2
baz=50
Q24A Divide 50.08 75 ⇑P P 22 52 39.1 +0.2
baz=50,SNR=5.6
V20A Brimhall 50.13 80 ⇓P P 22 52 39.2 -0.1
baz=50,SNR=8.5
U21A Nageezi 50.21 79 ⇓P P 22 52 40.3 +0.4
baz=50,SNR=29
T22A Edith 50.28 78 ⇑P P 22 52 41.0 +0.5
baz=50,SNR=16
P25A Willow Gulch B 50.31 74 ⇑P P 22 52 41.3 +0.6
baz=50,SNR=41
Y18A Canyon Day Jun 50.52 84 ⇓P P 22 52 43.1 +0.8
baz=50,SNR=5.8
X19A St. Johns 50.53 82 ⇓P P 22 52 42.9 +0.4
baz=50
W20A Ramah 50.55 81 ⇑P P 22 52 42.8 +0.3
baz=50
R24A Sanders Place, 50.57 76 ⇓P P 22 52 43.0 +0.4
baz=50,SNR=18
V21A Milan 50.63 80 ⇑P P 22 52 43.4 +0.3
baz=50
Q25A Bedland, Calha 50.65 75 ⇓P P 22 52 43.7 +0.5
baz=50,SNR=50
SDCO Great Sand Dun 50.65 77 *eP* **P 22 52 43.7 +0.5**
comp=Z,50nm,1.2s,mb5.4
SDCO *e*pP pP 22 53 00.0 -1.0
SDCO *e*ScP ScP 22 57 47.6 -1.8
OGNE Ogallala 50.66 71 *eP* **P 22 52 43.1 -0.2**
comp=Z,290nm,1.4s,mb6.1
OGNE *e*PcP PcP 22 54 00.1 +0.4
U22A Llaves 50.73 79 ⇓P P 22 52 44.3 +0.5
baz=51,SNR=8.7
T23A Casias Ranch, 50.79 78 ⇓P P 22 52 45.4 +1.1
baz=51
S24A Houchin Ranch, 50.89 76 ⇓P P 22 52 45.8 +0.7
baz=51,SNR=31
117A Oracle 50.90 85 ⇑P P 22 52 45.3 +0.1
baz=51,SNR=7.1
V22A San Miguel Ran 51.00 79 ⇑P P 22 52 45.8 -0.1
baz=51,SNR=8.7
HSP Hornsund 51.05 356 *eP* **P 22 52 43.4 -2.3**
W21A San Fidel 51.08 81 ⇓P P 22 52 46.7 +0.2
baz=51
U23A El Rito 51.16 78 ⇓P P 22 52 47.8 +0.7
baz=51,SNR=29
S25A Robets Cordova 51.35 76 ⇓P P 22 52 48.5 0.0
baz=51,SNR=44
Y20A Horse Springs, 51.44 82 ⇓P P 22 52 49.6 +0.3
baz=51
X21A Alamocita Cree 51.45 81 ⇓P P 22 52 49.8 +0.6
baz=51,SNR=8.8
V23A Ortiz Mt. (NFS 51.55 79 ⇑P P 22 52 50.5 +0.5
baz=51,SNR=13
119A Ashpeak Ranch, 51.65 84 ⇓P P 22 52 50.8 0.0
baz=52
T25A Trinidad 51.70 76 ⇑P P 22 52 51.4 +0.2
baz=52,SNR=57
218A Dragoon 51.73 85 ⇓P P 22 52 51.3 -0.1
baz=52,SNR=6.6
Z20A Nine Sixteen R 51.85 83 ⇑P P 22 52 52.7 +0.4
baz=52
LAZ Ladron 51.87 81 *eP* **P 22 52 52.9 +0.5**
comp=Z,12nm,0.8s,mb5.0
LAZ *e*pP pP 22 53 10.1 -0.1
X22A Bernardo 51.88 81 ⇓P P 22 52 53.6 +1.1
baz=52,SNR=11
W23A Werner Place, 51.96 79 ⇓P P 22 52 53.5 +0.4
baz=52,SNR=8.9
ECSD EROS Data Cent 52.00 65 *eP* **P 22 52 51.4 -1.8**
comp=Z,26nm,1.1s,mb5.2
ECSD *e*pP pP 22 53 08.3 -2.8
ECSD *e*PcP PcP 22 54 04.1 -0.6
ECSD *e*ScP ScP 22 57 54.2 -0.8
V24A Rampart Ranch, 52.12 78 ⇑P P 22 52 54.8 +0.5
baz=52,SNR=20
318A Bisbee 52.13 86 ⇑P P 22 52 54.6 +0.2
baz=52
U25A Circle Dot Ran 52.19 77 ⇑P P 22 52 54.9 +0.1
baz=52,SNR=23
219A White Tail Can 52.20 85 ⇓P P 22 52 55.4 +0.5
baz=52
120A U Bar Ranch, L 52.21 84 ⇓P P 22 52 55.6 +0.7
baz=52
Z21A St. Cloud Mine 52.28 82 ⇓P P 22 52 56.2 +0.7
baz=52
Y22A Socorro 52.29 81 ⇑P P 22 52 56.2 +0.7
baz=52
W24A Lazy 6 Ranch, 52.38 79 ⇓P P 22 52 56.7 +0.5
baz=52,SNR=14
V25A Rancho No Teng 52.44 78 ⇓P P 22 52 56.8 +0.2
baz=52,SNR=28
SUMG Summit 52.46 15 *eP* **P 22 52 56.4 +0.1**
comp=Z,101nm,1.4s,mb5.7
SUMG Summit 52.46 15 *i P* **P 22 52 55.7 -0.6**
comp=Z,12nm,1.0s,mb4.9
SUMG *i* pP 22 53 16.9 +2.8
U26A Atchley Ranch, 52.60 77 ⇑P P 22 52 58.1 +0.4
baz=52,SNR=19
220A Playas Peak, P 52.72 84 ⇑P P 22 52 58.9 +0.2
baz=53,SNR=8.0
121A Cookes Peak, D 52.74 83 ⇑P P 22 52 59.5 +0.6
baz=53
X24A Lazy VL Ranch, 52.80 80 ⇓P P 22 52 59.6 +0.3
baz=53,SNR=10
W25A X Bar L Ranch, 52.95 78 ⇓P P 22 53 00.7 +0.3
baz=53,SNR=25
V26A Tequesquite Ra 52.97 77 ⇓P P 22 53 00.4 -0.2
baz=53,SNR=9.3
320A Kipp Ranch, An 53.11 85 ⇑P P 22 53 02.0 +0.4
baz=53
Z23A Rita Site, Whi 53.20 81 ⇓P P 22 53 02.0 -0.2
baz=53
Y24A Capitan 53.23 80 ⇓P P 22 53 02.8 +0.3
baz=53,SNR=61
X25A Clemmons Ranch 53.29 79 ⇓P P 22 53 03.6 +0.7
baz=53
CBKS Cedar Bluff 53.38 72 *eP* **P 22 53 03.3 -0.2**
CBKS *e**PP pP 22 53 20.5 -0.9
CBKS *e* 22 54 06.4
CBKS pmax pmax
comp=Z,246nm,1.2s,mb6.1
CBKS Cedar Bluff 53.38 72 *eP* **P 22 53 03.2 -0.3**
comp=Z,246nm,1.2s,mb6.1
CBKS *e*pP pP 22 53 20.4 -1.0
CBKS *e*PcP PcP 22 54 06.4 -3.6
Z24A Sheeppen Canyo 53.68 81 ⇓P P 22 53 05.7 -0.1
baz=54,SNR=12
Y25A Mesa, Roswell 53.69 80 ⇓P P 22 53 05.8 0.0
baz=54,SNR=22
WHN Wuhan 53.69 275 ⇓P P 22 53 06.2 +0.3
WHN pP pP 22 53 24.7 +0.9
WHN PcP PcP 22 54 12.2 +0.9
WHN S **S 23 00 35.0 +0.5**
WHN pmax pmax
comp=Z,280nm,1.0s,mb6.2
WHN pmax pmax
comp=Z,390nm,6.5s
X26A CR and CF Fran 53.80 78 ⇓P P 22 53 06.0 -0.6
baz=54,SNR=12
W27A Bowe Ranch, En 53.90 77 ⇑P P 22 53 07.3 0.0
baz=54,SNR=6.7
124A Stringfield Ra 54.05 81 ⇓P P 22 53 08.6 +0.1
baz=54,SNR=12
Z25A Roswell 54.11 80 ⇑P P 22 53 08.8 -0.1
baz=54,SNR=8.3
ZAA0 Zalesovo Array 54.41 314 *eP* **P 22 53 10.0 -0.7**
ZAA0 *e*PcP PcP 22 54 13.8 +0.2
ZAA0 *e*ScP ScP 22 58 02.2 -3.2
ZALV Zalesovo Beam 54.41 314 P **P 22 53 09.8 -0.9**
comp=Z,2.9nm,0.7s,mb4.5,baz=62,slow=8.0,SNR=14
ZALV PcP PcP 22 54 13.9 +0.3
comp=Z,20nm,0.6s,baz=37,slow=3.7,SNR=26
ZALV pPcP 22 54 31.9
comp=Z,2.2nm,0.6s,baz=56,slow=3.7,SNR=3.7
ZALV ScP ScP 22 58 03.2 -2.1
comp=Z,6.2nm,0.7s,baz=34,slow=5.0,SNR=13
ZALV pScP 22 58 37.0
comp=Z,3.1nm,0.8s,baz=55,slow=5.6,SNR=4.9
ZALV LR LR 23 18 14.1
comp=Z,205nm,20.3s,baz=59,slow=38
ZALV Zalesovo Beam 54.41 314 P **P 22 53 09.9 -0.9**
ZALV 22 54 13.9
ZALV pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
ZALV pmax pmax
comp=Z,20nm,0.6s,mb5.3
ZALV pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
ZALV pmax pmax
comp=N,6.0nm,0.7s
ZALV pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
ZALV MLR MLR
comp=Z,205nm,20.3s
ZALV Zalesovo Beam 54.41 314 P **P 22 53 09.8 -0.9**
ZALV PcP PcP 22 54 13.9 +0.3
ZALV pPcP 22 54 31.9
ZALV ScP ScP 22 58 03.2 -2.1
ZALV pScP 22 58 37.0
ZALV LR LR 23 18 14.1
224A Cornudas Mount 54.44 82 ⇑P P 22 53 11.1 -0.3
baz=54,SNR=15
SSLB Suanglung 54.46 264 *eP* **P 22 53 11.4 -0.1**
comp=Z,46nm,0.6s,mb5.7
SSLB *e*PcP PcP 22 54 13.4 -0.8
NVS Novosibirsk 54.52 316 *eP* **P 22 53 11.0 -0.5**
NVS *i* 22 54 13.9
NVS *e*S **S 23 00 45.6 +0.7**
NVS pmax pmax
comp=N,7.0nm,0.7s
NVS pmax pmax
comp=E,8.0nm,0.7s
NVS pmax pmax
comp=Z,16nm,0.7s,mb5.2
NVS smax
comp=N,14nm,1.6s
NVS smax
comp=E,4.0nm,1.4s
YULB Yu-li 54.54 263 *eP* **P 22 53 13.2 +1.1**
comp=E,35nm,0.7s,mb5.5
YULB PcP PcP 22 54 15.1 +0.5
COWI Conover 54.56 59 *eP* **P 22 53 10.3 -1.7**
comp=E,5.0nm,0.6s,mb4.7
COWI *e*PcP PcP 22 54 14.0 -0.4
COWI *e*ScP ScP 22 58 04.3 -1.9
Z26A Caprock 54.56 80 ⇓P P 22 53 11.9 -0.3
baz=54,SNR=14
125A Gardner Draw, 54.57 81 ⇑P P 22 53 12.3 0.0
baz=54,SNR=36
XAN Xi'an 54.61 282 P **P 22 53 12.5 0.0**
XAN S **S 23 00 42.8 -3.9**
XAN pmax pmax
comp=Z,35nm,1.0s,mb5.3
XAN LR LR
comp=N,180nm,35.0s
XAN LR LR
comp=E,82nm,35.0s
XAN LR LR
comp=Z,73nm,22.7s
MNTX Cornudas Mount 54.79 82 *eP* **P 22 53 13.9 +0.1**
comp=Z,36nm,0.9s,mb5.4
MNTX *e*pP pP 22 53 30.6 -1.3
MNTX *e*PcP PcP 22 54 14.8 -0.7
MNTX *e*ScP ScP 22 58 05.7 -1.7
CPRX Cap Rock 54.80 80 *eP* **P 22 53 14.0 +0.2**
comp=Z,15nm,0.8s,mb5.1
CPRX *e*pP pP 22 53 31.6 -0.3
MSTX Muleshoe 54.82 78 ⇑P P 22 53 13.5 -0.6
baz=55,SNR=8.8
225A Deer Hill, Car 54.85 81 ⇓P P 22 53 14.5 +0.3
baz=55,SNR=14
324A Moseley Ranch, 54.91 82 ⇑P P 22 53 14.7 0.0
baz=55,SNR=10
126A Clayton Basin, 54.97 80 ⇑P P 22 53 14.7 -0.4
baz=55,SNR=8.5
Z27A Tatum 55.00 79 ⇓P P 22 53 14.9 -0.5
baz=55,SNR=15
KSU1 Kansas State U 55.02 69 *eP* **P 22 53 14.1 -1.3**
comp=Z,88nm,1.0s,mb5.7
KSU1 *e*pP pP 22 53 30.9 -2.4
KSU1 *e*PcP PcP 22 54 16.4 +0.2
GDL2 Guadalupe Moun 55.07 81 *eP* **P 22 53 16.1 +0.3**
comp=Z,7.8nm,0.7s,mb4.8
GDL2 *e*pP pP 22 53 32.9 -0.9
GDL2 *e*ScP ScP 22 58 07.4 -1.2
325A Bean Ranch, Si 55.27 82 ⇓P P 22 53 17.3 0.0
baz=55,SNR=35
226A Malaga, Loving 55.32 81 ⇓P P 22 53 17.5 -0.2
baz=55,SNR=14
425A Indio Mountain 55.67 83 ⇑P P 22 53 20.3 +0.1
baz=56,SNR=43
227A Bennet, Jal 55.85 80 ⇓P P 22 53 21.1 -0.3
baz=56
326A Caldwell Ranch 55.91 81 ⇑P P 22 53 21.7 -0.2
baz=56,SNR=19
JFWS Jewell Farm 56.06 62 *eP* **P 22 53 20.5 -2.3**
JFWS *e**PP pP 22 53 38.4 -2.5
JFWS *e* 22 54 19.7
JFWS pmax pmax
comp=Z,24nm,1.0s,mb5.2
JFWS Jewell Farm 56.06 62 *eP* **P 22 53 20.5 -2.4**
comp=Z,24nm,1.0s,mb5.2
JFWS *e*pP pP 22 53 38.4 -2.5
JFWS *e*PcP PcP 22 54 19.7 -0.5
JFWS *e*ScP ScP 22 58 12.7 -0.2
LZH Lanzhou 56.26 287 ⇑P P 22 53 25.0 +0.7
LZH pP pP 22 53 38.0 -4.3
LZH sP sP 22 53 47.0 -3.2
LZH PP PP 22 55 32.0 +2.1
LZH sS sS 23 01 35.0 -4.3
LZH SS SS 23 04 55.0 -0.7
LZH pmax pmax
comp=Z,49nm,1.0s,mb5.5
LZH pmax pmax
comp=Z,290nm,4.0s
LZH LR LR
comp=E,1μm,15.3s
LZH LR LR
comp=Z,2μm,16.0s
426A McDonald Obser 56.34 82 ⇓P P 22 53 24.5 -0.5
baz=56
GTA Gaotai 56.35 292 ⇓P P 22 53 24.7 -0.2
GTA PcP PcP 22 54 22.1 +0.7
GTA PP PP 22 55 33.2 +2.5
GTA ScP ScP 22 58 12.2 -2.0
GTA S **S 23 01 05.2 -4.6**
GTA ScS ScS 23 03 05.2 -2.1
GTA SS SS 23 04 53.0 -4.0
GTA pmax pmax
comp=Z,15nm,1.4s,mb4.8
GTA pmax pmax
comp=Z,120nm,7.2s
GTA LR LR
comp=N,280nm,19.5s
GTA LR LR
comp=E,270nm,21.6s
GTA LR LR
comp=Z,360nm,19.5s
328A Wristen Ranch, 56.58 80 ⇑P P 22 53 26.2 -0.5
baz=56,SNR=17
427A Hayter Ranch, 56.59 81 ⇑P P 22 53 26.3 -0.4
baz=56,SNR=13
WMOK Wichita Mounta 56.69 75 *eP* **P 22 53 26.9 -0.5**
WMOK *e**PP pP 22 53 44.7 -0.8
WMOK *e* 22 54 23.5
WMOK pmax pmax
comp=Z,36nm,1.0s,mb5.4
WMOK Wichita Mounta 56.69 75 *eP* **P 22 53 26.9 -0.5**
comp=Z,36nm,1.0s,mb5.3
WMOK *e*pP pP 22 53 44.7 -0.8
WMOK sP sP 22 53 52.1 -1.3
WMOK *e*PcP PcP 22 54 23.5 +0.7
526A Mary Lane Ranc 56.73 83 ⇑P P 22 53 27.6 -0.1
baz=57,SNR=30
527A Woodward Ranch 56.96 82 ⇓P P 22 53 28.9 -0.5
baz=57,SNR=17
626A Big Bend Ranch 57.06 83 ⇑P P 22 53 29.6 -0.5
baz=57,SNR=44
428A Kincaid Ranch, 57.12 81 ⇑P P 22 53 30.6 +0.1
baz=57,SNR=26
KEV Kevo 57.33 350 *eP* **P 22 53 30.2 -1.2**
KEV pmax pmax
comp=Z,12nm,0.9s,mb4.9
KEV Kevo 57.33 350 *eP* **P 22 53 30.2 -1.2**
comp=Z,12nm,0.9s,mb4.9
KEV Kevo 57.33 350 *ep* **P 22 53 30.2 -1.2**
comp=Z,12nm,0.9s,mb4.9
528A Cox Ranch, San 57.45 81 ⇓P P 22 53 32.8 -0.1
baz=57,SNR=23
TXAR Lajitas Array 57.50 83 P **P 22 53 30.8 -2.4**
comp=Z,18nm,1.1s,mb5.0,baz=305,slow=18,SNR=44
TXAR pP pP 22 53 49.6 -1.7
comp=Z,20nm,0.9s,baz=309,slow=6.0,SNR=12
TXAR ScP ScP 22 58 17.6 -1.8
comp=Z,4.0nm,1.0s,baz=289,slow=3.8,SNR=6.6
TXAR LR LR 23 14 56.6
comp=Z,92nm,20.4s,baz=65,slow=32
TXAR PKPPKP 23 23 14.4
comp=Z,0.4nm,1.0s,baz=146,slow=2.4,SNR=3.6
TXAR Lajitas Array 57.50 83 P **P 22 53 30.8 -2.4**
TXAR *PP pP 22 53 49.6 -1.7
TXAR pmax pmax
comp=Z,18nm,1.1s
TXAR pmax pmax
comp=Z,20nm,0.9s
TXAR pmax pmax
comp=N,4.0nm,1.0s
TXAR MLR MLR
comp=Z,92nm,20.4s
TXAR Lajitas Array 57.50 83 P **P 22 53 30.8 -2.4**
TXAR pP pP 22 53 49.6 -1.7
TXAR ScP ScP 22 58 17.6 -1.8
TXAR LR LR 23 14 56.6
TXAR P'P' 23 23 14.4
627A Terlingua Ranc 57.59 83 ⇑P P 22 53 33.7 -0.1
baz=58,SNR=36
ARCES ARCESS Array B 57.69 351 P **P 22 53 33.3 -0.6**
comp=Z,11nm,0.7s,mb5.0,baz=8.9,slow=8.6,SNR=22
ARCES pP pP 22 53 53.5 +1.5
comp=Z,15nm,0.7s,baz=10,slow=8.6,SNR=10
ARCES sP sP 22 54 01.4 +1.4
comp=Z,18nm,0.7s,baz=26,slow=6.8,SNR=9.1
ARCES PcP PcP 22 54 25.9 -0.2
comp=Z,6.1nm,0.7s,baz=19,slow=7.7,SNR=3.7
ARCES ScP ScP 22 58 17.2 -2.4
comp=Z,7.0nm,1.0s,baz=34,slow=8.8,SNR=5.5
ARCES LR LR 23 19 32.3
comp=Z,274nm,21.4s,baz=173,slow=37
ARCES ARCESS Array B 57.69 351 P **P 22 53 33.3 -0.6**
ARCES 22 54 25.9
ARCES pmax pmax
comp=Z,11nm,0.7s
ARCES pmax pmax
comp=Z,15nm,0.7s
ARCES pmax pmax
comp=Z,18nm,0.7s
ARCES pmax pmax
comp=Z,6.0nm,0.7s
ARCES pmax pmax
comp=N,7.0nm,1.0s
ARCES MLR MLR
comp=Z,274nm,21.4s
ARE0 ARCESS Array S 57.69 351 *eP* **P 22 53 33.7 -0.2**
ARE0 *e*pP pP 22 53 51.7 -0.3
628A Black Gap, Mar 57.87 82 ⇓P P 22 53 35.4 -0.4
baz=58,SNR=25
HDIL Hopedale 58.19 64 *eP* **P 22 53 35.9 -1.9**
comp=Z,70nm,1.2s,mb5.6
HDIL *e*pP pP 22 53 54.0 -2.0
CCM Cathedral Cave 58.81 67 *eP* **P 22 53 39.7 -2.5**
CCM *e**PP pP 22 53 57.4 -3.0
CCM *e* 22 54 30.7
CCM pmax pmax
comp=Z,36nm,1.1s,mb5.3
CCM Cathedral Cave 58.81 67 *eP* **P 22 53 39.7 -2.5**
comp=Z,36nm,1.1s,mb5.3
CCM *e*pP pP 22 53 57.4 -3.0
CCM *e*PcP PcP 22 54 30.7 -0.4
SCHQ Schefferville 58.87 39 P **P 22 53 42.2 -0.1**
comp=Z,8.9nm,0.7s,mb4.9,baz=354,slow=6.7,SNR=9.5
SCHQ PcP PcP 22 54 34.1 +3.1
comp=Z,8.5nm,0.9s,baz=347,slow=9.8,SNR=4.2
SCHQ LR LR 23 20 20.8
comp=Z,301nm,19.9s,baz=320,slow=37
JCT Junction City 59.05 79 *eP* **P 22 53 43.1 -0.9**
JCT *e**PP pP 22 54 00.0 -2.2
JCT *e* 22 54 32.7
JCT pmax pmax
comp=Z,35nm,0.9s,mb5.4
JCT Junction City 59.05 79 *eP* **P 22 53 43.1 -0.9**
comp=Z,35nm,0.9s,mb5.4
JCT *e*pP pP 22 54 00.0 -2.1
JCT *e*PcP PcP 22 54 32.7 +0.5
FVM French Village 59.33 67 *eP* **P 22 53 44.2 -1.6**
FVM *e**PP pP 22 54 01.5 -2.5
FVM *e* 22 54 33.2
FVM pmax pmax
comp=Z,48nm,0.9s,mb5.5
FVM French Village 59.33 67 *eP* **P 22 53 44.1 -1.6**
comp=Z,48nm,0.9s,mb5.5
FVM *e*pP pP 22 54 01.5 -2.5
FVM *e*PcP PcP 22 54 33.2 +0.1
KURK Kurchatov 59.39 314 P **P 22 53 45.7 -0.3**
comp=Z,406nm,0.5s,SNR=36
KURK Kurchatov 59.39 314 P **P 22 53 46.4 +0.3**
comp=Z,41nm,0.6s,mb5.6,baz=43,slow=6.7,SNR=95
KURK PcP PcP 22 54 33.2 +0.1
comp=Z,11nm,0.7s,baz=46,slow=3.6,SNR=9.7
KURK ScP ScP 22 58 25.5 -1.9
comp=Z,4.2nm,0.6s,baz=46,slow=4.2,SNR=6.0
KURK pScP 22 58 59.5
comp=Z,1.1nm,0.4s,baz=42,slow=4.3,SNR=4.6
KURK Kurchatov 59.39 314 P **P 22 53 46.4 +0.4**
KURK 22 54 33.2
KURK pmax pmax
comp=Z,41nm,0.6s,mb5.6
KURK pmax pmax
comp=Z,11nm,0.7s,mb5.0
KURK pmax pmax
comp=N,4.0nm,0.6s
KURK pmax pmax

comp=Z,1.0nm,0.4s,mb4.2
KURK Kurchatov 59.39 314 eP P **22 53 45.8 -0.3**
comp=Z,41nm,0.6s,mb5.6
KURK eP cP cP 22 54 32.7 -0.5
KURK eS cP S cP 22 58 25.0 -2.4
KURK Kurchatov 59.39 314 P P **22 53 46.0 0.0**
SNR=13
CD2 Chengdu 59.91 283 P P **22 53 51.3 +1.4**
CD2 pP pP 22 54 07.4 -0.7
CD2 sP sP 22 54 14.3 -1.7
CD2 PP PP 22 56 05.6 +3.2
CD2 S S **23 01 56.3 -0.1**
CD2 sS sS 23 02 23.7 -3.6
CD2 SS SS 23 05 54.3 +1.1
CD2 pmax pmax
comp=Z,160nm,0.9s,mb6.0
CD2 pmax pmax
comp=Z,210nm,4.9s
CD2 LR LR
comp=N,410nm,14.8s
CD2 LR LR
comp=Z,210nm,13.1s
MIAR Mount Ida 59.91 71 eP P **22 53 48.7 -1.1**
MIAR pmax pmax
comp=Z,158nm,1.1s,mb6.0
MIAR Mount Ida 59.91 71 eP P **22 53 48.7 -1.1**
comp=Z,158nm,1.1s,mb6.0
WMQ Urumqi 59.93 304 P P **22 53 50.0 +0.2**
WMQ pP pP 22 54 06.1 -1.9
WMQ sP sP 22 54 13.0 -2.9
WMQ PcP PcP 22 54 38.5 +3.1
WMQ PP PP 22 56 04.5 +2.3
WMQ eS S **23 01 55.6 -0.7**
WMQ ScS ScS 23 03 31.2 -2.3
WMQ SS SS 23 05 54.2 +1.3
WMQ pmax pmax
comp=Z,33nm,0.9s,mb5.4
WMQ pmax pmax
comp=Z,140nm,4.8s
WMQ LR LR
comp=N,440nm,24.0s
WMQ LR LR
comp=E,320nm,22.8s
WMQ LR LR
comp=Z,200nm,22.5s
OLIL Olney 60.11 64 eP P **22 53 50.0 -1.1**
comp=Z,103nm,1.0s,mb5.8
OLIL epP pP 22 54 08.1 -1.3
OLIL ePcP PcP 22 54 36.5 +0.3
UALR University of 60.47 70 eP P **22 53 53.1 -0.6**
comp=Z,87nm,1.3s,mb5.6
MK31 Makanchi Array 60.51 309 eP P **22 53 53.1 -0.7**
MK31 e 22 54 36.5
MKAR Makanchi Array 60.51 309 P P **22 53 52.8 -1.0**
comp=Z,5.1nm,0.6s,mb4.8,baz=46,slow=6.2,SNR=69
MKAR pP pP 22 54 12.4 +0.4
comp=Z,1.9nm,0.5s,baz=60,slow=5.3,SNR=3.0
MKAR PcP PcP 22 54 36.7 -1.0
comp=Z,4.1nm,0.6s,baz=59,slow=4.0,SNR=5.2
MKAR LR LR 23 19 22.1
comp=Z,158nm,21.5s,baz=32,slow=35
MKAR Makanchi Array 60.51 309 P P **22 53 52.8 -1.0**
MKAR 22 54 36.7
MKAR pmax pmax
comp=Z,5.0nm,0.6s
MKAR pmax pmax
comp=Z,2.0nm,0.5s
MKAR pmax pmax
comp=Z,4.0nm,0.6s
MKAR MLR MLR
comp=Z,158nm,21.5s
MKAR Makanchi Array 60.51 309 P P **22 53 52.8 -1.0**
MKAR pP pP 22 54 12.4 +0.4
MKAR PcP PcP 22 54 36.7 -1.0
MKAR LR LR 23 19 22.1
SOKR Solikamsk 60.63 332 d iP P **22 53 54.4 0.0**
SOKR pmax pmax
comp=Z,30nm,1.2s,mb5.2
SOKR MLR MLR
comp=Z,260nm,19.0s
BLO Bloomington 60.68 63 eP P **22 53 54.0 -1.0**
BLO e*PP pP 22 54 12.1 -1.2
BLO pmax pmax
comp=Z,45nm,1.3s,mb5.3
BLO Bloomington 60.68 63 eP P **22 53 54.0 -1.0**
comp=Z,45nm,1.3s,mb5.3
BLO epP pP 22 54 12.1 -1.2
HBAR Harrisburg 60.89 69 eP P **22 53 55.2 -1.3**
HBAR epP pP 22 54 13.2 -1.6
GNAR Gosnell 60.97 68 eP P **22 53 56.0 -1.1**
BVAR Borovoye Array 61.13 320 P P **22 53 58.2 +0.3**
comp=Z,47nm,0.7s,mb5.6,baz=53,slow=7.6,SNR=115
BVAR pP pP 22 54 16.9 +0.8
comp=Z,31nm,0.8s,baz=43,slow=6.7,SNR=9.0
BVAR PKPPKP 23 23 23.6
comp=Z,0.3nm,0.5s,baz=180,slow=0.4,SNR=3.6
BVAR Borovoye Array 61.13 320 P P **22 53 58.2 +0.3**
BVAR *PP pP 22 54 16.9 +0.7
BVAR pmax pmax
comp=Z,47nm,0.7s
BVAR pmax pmax
comp=Z,31nm,0.8s
BRVK Borovoye 61.15 321 P P **22 53 58.3 +0.3**
comp=Z,285nm,0.7s,mb6.4,SNR=13
BRVK Borovoye 61.15 321 eP P **22 53 58.2 +0.2**
BRVK pmax pmax
comp=Z,40nm,0.8s,mb5.5
BRVK Borovoye 61.15 321 eP P **22 53 58.2 +0.2**
comp=Z,40nm,0.8s,mb5.5
BRVK e pP 22 54 17.6 +1.3
BRVK Borovoye 61.15 321 P P **22 53 58.7 +0.7**
SNR=15
GLAT Glass 61.17 67 eP P **22 53 57.5 -0.9**
NATX Nacogdoches 61.24 74 eP P **22 53 59.0 +0.1**
comp=Z,19nm,0.6s,mb5.3
NATX epP pP 22 54 16.1 -1.1
GYA Guiyang 61.33 277 ⇓ i P P **22 54 00.0 +0.4**
GYA pP pP 22 54 19.0 +1.1
GYA sP sP 22 54 26.8 +1.0
GYA PcP PcP 22 54 42.6 +1.2
GYA PP PP 22 56 18.4 +3.3
GYA ScP ScP 22 58 37.9 +1.5
GYA PcS PcS 22 58 44.6 +0.2
GYA S S **23 02 13.0 -1.7**
GYA sS sS 23 02 44.8 -0.9
GYA SS SS 23 06 16.0 +0.3
GYA pmax pmax
comp=Z,30nm,1.0s,mb5.3
GYA pmax pmax
comp=Z,140nm,5.3s
GYA LR LR
comp=N,760nm,18.0s
GYA LR LR
comp=E,590nm,19.4s
GYA LR LR
comp=Z,740nm,18.6s
UTMT University of 61.37 67 eP P **22 53 59.5 -0.2**
comp=Z,72nm,0.6s,mb5.9
UTMT epP pP 22 54 16.2 -1.8
HALT Halls 61.40 68 eP P **22 54 00.0 +0.1**
HALT e pP 22 54 17.5 -0.7
WCI Wyandotte Cave 61.47 64 eP P **22 53 58.4 -2.0**
WCI e*PP pP 22 54 16.6 -2.1
WCI e 22 54 41.5
WCI pmax pmax
comp=Z,48nm,1.0s,mb5.5
WCI Wyandotte Cave 61.47 64 eP P **22 53 58.4 -2.0**
comp=Z,48nm,1.0s,mb5.5
WCI epP pP 22 54 16.6 -2.1
WCI ePcP PcP 22 54 41.5 -0.3
SVE Sverdlovsk 61.68 328 ⇑ eP P **22 54 02.1 +0.6**
SVE eS S **23 02 25.9 +7.7**
SVE e 23 03 52.0
SVE pmax pmax
comp=Z,25nm,0.8s,mb5.3
SVE MLR MLR
comp=Z,447nm,22.0s
ZRNK Zerenda 61.73 321 i P P **22 54 01.1 -0.8**
ZRNK pmax pmax
comp=Z,36nm,0.6s,mb5.6
HKT Hockley 61.83 77 eP P **22 54 02.2 -0.7**
HKT e*PP pP 22 54 19.5 -1.7
HKT pmax pmax
comp=Z,58nm,1.7s,mb5.3
HKT Hockley 61.83 77 eP P **22 54 02.2 -0.7**
comp=Z,58nm,1.7s,mb5.3
HKT epP pP 22 54 19.5 -1.7
TGY Tagaytay City 61.84 256 P P **22 54 04.5 +1.4**
comp=Z,142nm,0.3s,mb6.5,baz=186,slow=7.3,SNR=5.5
TGY pP pP 22 54 22.4 +1.0
comp=Z,89nm,0.3s,baz=221,slow=6.3,SNR=1.5
TGY Tagaytay City 61.84 256 P P **22 54 04.5 +1.4**
TGY *PP pP 22 54 22.4 +1.0
TGY pmax pmax
comp=Z,142nm,0.3s
TGY pmax pmax
comp=Z,89nm,0.3s
ACSO Alum Creek Sta 61.85 60 eP P **22 54 01.7 -1.2**
comp=Z,20nm,0.3s,mb5.6
ACSO epP pP 22 54 19.7 -1.5
ACSO ePcP PcP 22 54 43.4 +0.2
ERPA Erie 62.08 57 eP P **22 54 04.2 -0.2**
comp=Z,21nm,0.7s,mb5.3
ERPA epP pP 22 54 21.3 -1.5
WVT Waverly 62.10 66 eP P **22 54 03.7 -1.0**
WVT e*PP pP 22 54 21.6 -1.4
WVT pmax pmax
comp=Z,567nm,1.6s,mb6.3
WVT Waverly 62.10 66 eP P **22 54 03.7 -1.0**
comp=Z,567nm,1.6s,mb6.3
WVT epP pP 22 54 21.6 -1.4
OXF Oxford 62.35 69 eP P **22 54 05.5 -0.9**
OXF e*PP pP 22 54 23.2 -1.5
OXF pmax pmax
comp=Z,328nm,1.2s,mb6.2
OXF Oxford 62.35 69 eP P **22 54 05.5 -0.9**
comp=Z,328nm,1.2s,mb6.2
OXF epP pP 22 54 23.2 -1.5
ARU Arti 62.67 329 P P **22 54 08.9 +0.8**
comp=Z,302nm,0.6s,mb6.4,SNR=17
ARU Arti 62.67 329 d iP P **22 54 08.1 0.0**
ARU e 22 54 45.3
ARU e 22 56 29.7
ARU ePPP 22 57 58.2
ARU S S **23 02 31.0 +0.3**
ARU SS SS 23 06 33.5 -1.7
ARU pmax pmax
comp=Z,40nm,1.0s,mb5.3
ARU MLR MLR
comp=Z,429nm,23.0s
ARU Arti 62.67 329 eP P **22 54 08.0 -0.1**
comp=Z,29nm,0.6s,mb5.4
ARU epP pP 22 54 26.2 -0.3
JOF Joensuu 63.30 346 eP P **22 54 09.7 -2.5**
JOF pmax pmax
comp=Z,15nm,0.9s,mb4.9
JOF Joensuu 63.30 346 ep P **22 54 09.7 -2.5**
comp=Z,15nm,0.9s,mb4.9
VBMS Vicksburg 63.36 71 eP P **22 54 13.2 +0.2**
comp=Z,173nm,1.0s,mb5.9
SWET Sewanee 63.83 66 eP P **22 54 14.7 -1.4**
SWET epP pP 22 54 32.3 -2.3
SWET PcP PcP 22 54 51.0 -0.5
MCWV Mont Chateau 63.94 58 eP P **22 54 15.7 -1.1**
comp=Z,20nm,1.0s,mb4.9
MCWV epP pP 22 54 33.8 -1.4
BINY Binghamton 64.06 54 eP P **22 54 16.2 -1.3**
comp=Z,52nm,1.5s,mb5.1
BINY epP pP 22 54 35.2 -0.8
SSPA Standing Stone 64.24 57 eP P **22 54 17.6 -1.2**
comp=Z,19nm,1.0s,mb4.9
SSPA epP pP 22 54 36.1 -1.1
CPCT Cooper Cave 64.45 65 eP P **22 54 19.1 -1.2**
CPCT epP pP 22 54 36.6 -2.0
KMI Kunming 64.71 279 ⇓ P P **22 54 23.1 +1.1**
KMI PP PP 22 56 48.7 +3.9
KMI S S **23 02 56.0 -0.9**
KMI ScS ScS 23 04 05.1 -5.2
KMI SKS 23 04 05.1
KMI SS SS 23 07 07.9 -0.6
KMI pmax pmax
comp=Z,250nm,1.3s,mb5.9
KMI LR LR
comp=N,140nm,18.6s
KMI LR LR
comp=E,130nm,22.6s
KMI LR LR
comp=Z,190nm,26.7s
TKL Tuckaleechee C 64.72 64 eP P **22 54 21.0 -0.9**
TKL e*PP pP 22 54 38.5 -1.9
KAF Kangasniemi 64.77 348 eP P **22 54 20.1 -1.7**
KAF pmax pmax
comp=Z,11nm,0.7s,mb4.8
KAF Kangasniemi 64.77 348 eP P **22 54 20.1 -1.7**
comp=Z,11nm,0.7s,mb4.8
KAF Kangasniemi 64.77 348 ep P **22 54 20.1 -1.7**
comp=Z,11nm,0.7s,mb4.8
LRAL Lakeview Retre 64.81 68 eP P **22 54 20.6 -2.0**
comp=Z,20nm,0.8s,mb5.0
LRAL epP pP 22 54 38.4 -2.6
QIZ Qiongzhong 64.86 269 P P **22 54 23.4 +0.3**
QIZ pP pP 22 54 39.8 -1.7
QIZ S S **23 02 59.6 +0.8**
QIZ sS sS 23 03 28.1 -2.0
QIZ pmax pmax
comp=Z,170nm,6.8s
QIZ LR LR
comp=N,190nm,15.7s
QIZ LR LR
comp=Z,150nm,16.1s
SMPI Sarmi 65.42 230 P P **22 54 27.1 +0.4**
comp=Z,7μmcomp=Z,29nm,1.2s,mb5.0
BLA Blacksburg 65.42 61 eP P **22 54 25.9 -0.6**
BLA e*PP pP 22 54 43.5 -1.4
BLA pmax pmax
comp=Z,39nm,1.1s,mb5.2
BLA Blacksburg 65.42 61 eP P **22 54 25.9 -0.6**
comp=Z,38nm,1.1s,mb5.1
BLA epP pP 22 54 43.5 -1.5
FINES FINESS Array B 65.44 348 P P **22 54 25.6 -0.6**
comp=Z,4.8nm,0.6s,mb4.5,baz=20,slow=6.2,SNR=22
FINES pP pP 22 54 45.5 +0.8
comp=Z,5.0nm,0.6s,baz=32,slow=7.6,SNR=4.4
FINES LR LR 23 23 32.3
comp=Z,286nm,21.2s,baz=330,slow=36
FINES FINESS Array B 65.44 348 P P **22 54 25.6 -0.6**
FINES pmax pmax
comp=Z,5.0nm,0.6s
FINES pmax pmax
comp=Z,5.0nm,0.6s
FINES MLR MLR
comp=Z,286nm,21.3s
BRAL Brewton 66.25 70 eP P **22 54 30.9 -1.0**
comp=Z,188nm,1.0s,mb5.9
BRAL epP pP 22 54 48.9 -1.6
GOGA Godfrey 66.54 66 eP P **22 54 32.1 -1.6**
GOGA e*PP pP 22 54 50.2 -2.0
GOGA pmax pmax
comp=Z,75nm,1.0s,mb5.5
GOGA Godfrey 66.54 66 eP P **22 54 32.1 -1.6**
comp=Z,74nm,1.0s,mb5.5
GOGA epP pP 22 54 50.1 -2.1
ULHL Ulahol 66.78 309 P P **22 54 36.0 +0.9**
SNR=9.2
USP Ospenovka 66.82 311 P P **22 54 36.0 +0.7**
SNR=15
CHMS Chumysh 66.91 311 P P **22 54 36.4 +0.4**
SNR=9.1
KBK Karagaybulak 67.08 310 P P **22 54 37.5 +0.5**
SNR=15
JSC Jenkinsville 67.13 63 eP P **22 54 36.9 -0.5**
JSC e*PP pP 22 54 53.8 -2.2
NB2 NORSAR Subarra 67.15 356 P P **22 54 36.6 -0.5**
comp=Z,0.5nm,0.6s,baz=7.0,slow=6.2
NOA NORSAR Array B 67.15 356 P P **22 54 36.9 -0.2**
comp=Z,5.8nm,0.7s,mb4.5,baz=5.3,slow=6.4,SNR=17
NOA pP pP 22 54 56.5 +0.9
comp=Z,9.6nm,0.9s,baz=3.8,slow=6.3,SNR=9.2
NOA LR LR 23 22 00.7
comp=Z,161nm,21.6s,baz=355,slow=34
NOA NORSAR Array B 67.15 356 P P **22 54 36.9 -0.2**
NOA pmax pmax
comp=Z,6.0nm,0.7s
NOA pmax pmax
comp=Z,10.0nm,0.9s
NOA MLR MLR
comp=Z,161nm,21.6s
AAK Ala-Archa 67.31 311 P P **22 54 39.9 +1.4**
comp=Z,265nm,0.5s,mb6.3,SNR=10
AAK Ala-Archa 67.31 311 P P **22 54 39.1 +0.7**
SNR=16
AAK Ala-Archa 67.31 311 eP P **22 54 38.8 +0.3**
AAK pmax pmax
comp=Z,26nm,0.6s,mb5.2
AAK Ala-Archa 67.31 311 eP P **22 54 38.8 +0.3**
comp=Z,26nm,0.6s,mb5.2
NAO01 NORSAR Array S 67.36 356 eP P **22 54 39.2 +0.8**
KZA Kyzart 67.39 310 P P **22 54 40.1 +1.2**
SNR=14
EKS2 Erkin-Say 67.63 311 P P **22 54 41.1 +0.6**
SNR=55
EKS2 Erkin-Say 67.63 311 eP P **22 54 41.0 +0.5**
comp=Z,35nm,0.6s,mb5.4
AB31 Akbulak array 68.12 324 i P P **22 54 43.4 0.0**
AB31 pmax pmax
comp=Z,32nm,0.9s,mb5.2
ABKAR Akbulak array 68.12 324 eP P **22 54 43.0 -0.4**
comp=Z,20nm,0.8s,mb5.0
ABKAR epP pP 22 55 01.1 -0.9
NHSC New Hope 68.60 64 eP P **22 54 46.7 0.0**
comp=Z,220nm,1.1s,mb5.9
NHSC epP pP 22 55 03.8 -1.6
KK31 Karatay Array 68.78 313 i P P **22 54 46.7 -0.9**
KK31 pmax pmax
comp=Z,29nm,0.5s,mb5.4
MOS Moscow 68.89 340 eP P **22 54 57.4 +9.3**
MOS e 22 55 07.7
MOS e pP 22 55 15.1 +8.4
MOS pmax pmax
comp=Z,43nm,1.2s,mb5.2
KSH Kashi 69.01 308 P P **22 54 52.8 +3.7**
KSH PcP PcP 22 55 15.9 +3.0
KSH ScP 22 59 08.1
KSH PcS 22 59 19.7
KSH S S 23 03 48.9 +0.6
KSH ScS ScS 23 04 40.3 -3.0
KSH SS SS 23 08 18.4 +4.1
KSH pmax pmax
comp=Z,37nm,0.6s,mb5.4
KSH LR LR
comp=N,130nm,6.5s
KSH LR LR
comp=E,160nm,10.1s
KSH LR LR
comp=Z,320nm,24.5s
OBN Obninsk 69.70 340 ⇓ i P P **22 54 52.5 -0.6**
OBN e*PP pP 22 55 11.3 -0.4
OBN e 22 57 25.4
OBN i S S 23 03 48.8 -7.1
OBN pmax pmax
comp=Z,17nm,1.0s,mb4.8
OBN MLR MLR
comp=Z,200nm,24.0s
OBN Obninsk 69.70 340 eP P **22 54 52.2 -0.9**
comp=Z,11nm,0.8s,mb4.7
OBN epP pP 22 55 11.4 -0.4
MYLDM Lahad Datu 70.35 253 P P **22 55 00.0 +2.4**
comp=Z,46nm,1.2s,mb5.2
SHL Shillong 70.92 287 ePKP P **22 55 00.0 -1.0**
SHL ex x 23 00 10.0
IZAR Zarasai 70.93 346 eP P **22 55 00.3 -0.3**
IZAR AMB AMB 22 55 01.9
comp=Z,6.9nm,1.0s,mb4.5
ISAL Salakas 71.12 346 eP P **22 55 01.3 -0.5**
ISAL AMB AMB 22 55 02.3
comp=Z,5.2nm,1.2s,mb4.2
IDID Didziasalis 71.28 346 eP P **22 55 02.3 -0.4**
IDID AMB AMB 22 55 04.1
comp=Z,6.4nm,1.0s,mb4.4
IIGN Ignalina 71.32 346 eP P **22 55 02.7 -0.3**
IIGN AMB AMB 22 55 04.4
comp=Z,7.7nm,1.1s,mb4.4
DWPF Disney 71.66 68 eP P **22 55 05.4 -0.1**
comp=Z,126nm,1.1s,mb5.7
DWPF epP pP 22 55 23.6 -0.6
CHG Chiang Mai 71.75 277 ⇓ P P **22 55 04.2 -1.9**
comp=Z,81nm,1.2s,mb5.4
CHTO Chiang Mai 71.75 277 eP P **22 55 06.4 +0.3**
CHTO pmax pmax
comp=Z,82nm,1.1s,mb5.5
CHTO Chiang Mai 71.75 277 eP P **22 55 06.4 +0.3**
comp=Z,82nm,1.1s,mb5.5
CHTO Chiang Mai 71.75 277 P P **22 55 05.2 -0.9**
comp=Z,910nmcomp=Z,89nm,1.2s,mb5.5
CHTO Chiang Mai 71.75 277 P P **22 55 06.2 +0.1**
SNR=16
TAPN Taplejung 72.01 291 eP P **22 55 07.7 +0.1**
comp=Z,106nm,0.9s,mb5.7
CM31 Chiang Mai Arr 72.02 277 eP P **22 55 08.6 +0.9**
comp=Z,77nm,0.8s,mb5.6
CM31 e pP 22 55 25.9 -0.6
CMAR Chiang Mai Arr 72.02 277 P P **22 55 08.2 +0.5**
comp=Z,81nm,0.8s,mb5.6,baz=26,slow=7.0,SNR=297
CMAR pP pP 22 55 27.1 +0.6
comp=Z,23nm,1.0s,baz=30,slow=12,SNR=4.1
CMAR Chiang Mai Arr 72.02 277 P P **22 55 08.3 +0.6**
CMAR *PP pP 22 55 27.1 +0.6
CMAR pmax pmax
comp=Z,81nm,0.8s
CMAR pmax pmax
comp=Z,23nm,1.0s
ODAN Odare 72.57 291 eP P **22 55 10.8 -0.1**
GUN Gumba 72.63 293 eP P **22 55 11.7 +0.4**
JIRN Jiri 72.65 293 eP P **22 55 12.2 +0.8**
VSR Storozhevoye 72.73 337 eP P **22 55 11.2 -0.3**
VSR e pP 22 55 30.4 +0.2
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
VSR pmax pmax
comp=N,30nm,1.3s
VSR pmax pmax
comp=E,10.0nm,1.3s
VSR MLR MLR
comp=N,370nm,23.0s
VSR MLR MLR
comp=E,140nm,23.0s
VSR MLR MLR
comp=Z,540nm,23.0s
BDT Bhumibol Dam 72.91 276 ⇑ P P **22 55 13.0 0.0**
RAMN Ramite 72.95 292 eP P **22 55 13.1 -0.1**
comp=Z,160nm,0.8s,mb5.9
SUW Suwalki 73.05 348 eP P **22 55 11.9 -1.4**
KKN Kakani 73.06 293 eP P **22 55 13.6 -0.2**
comp=Z,67nm,0.6s,mb5.6
PKI Pulchoki 73.16 293 eP P **22 55 14.4 0.0**
comp=Z,65nm,0.8s,mb5.5
PPT Papeete 73.27 153 eS S 23 04 46.0 +8.3
comp=Z,206nm,30.0s
PPT eLR LR 23 17 28.4
comp=Z,1μm,30.2s
PPT Papeete 73.27 153 LR LR 23 19 14.1
comp=Z,256nm,20.2s,baz=220,slow=29
GKN Gorkha 73.27 294 eP P **22 55 14.6 -0.4**
comp=Z,64nm,0.6s,mb5.6
DMN Daman 73.30 293 eP P **22 55 15.3 +0.1**
comp=Z,78nm,0.9s,mb5.5
NST Nakhon Sawan 73.41 274 P P **22 55 16.5 +0.5**
comp=Z,67nm,1.0s,mb5.4
TEIG Tepich 73.60 78 eP P **22 55 17.8 +0.7**
comp=Z,89nm,1.7s,mb5.2
KOLN Koldanda 74.03 295 eP P **22 55 19.2 -0.3**
comp=Z,29nm,0.6s,mb5.2
KLP Kalpa 74.05 301 ePKP P **22 55 19.8 +0.2**
KLP AMb AMB 22 55 21.3
comp=Z,62nm,0.8s,mb5.4
COEN Coen 74.13 220 eP P **22 55 19.5 -0.5**
comp=Z,165nm,1.2s,mb5.6
COEN ePcP PcP 22 55 35.2 +0.5
BSEG Bad Segeberg 74.29 355 eP P **22 55 19.9 -0.7**
comp=Z,17nm,1.1s,mb4.7
BSEG epP pP 22 55 41.4 +2.0
BSEG esP sP 22 55 49.2 +2.1
PCI Palu 74.48 248 P P **22 55 21.8 -0.4**
comp=Z,36nm,1.2s,mb5.0
THN Thein Dam 74.67 303 ePKP P **22 55 21.4 -1.7**
DDI Dehra Dun 75.09 300 ex x 22 55 25.0
DZM Mont Dzumac 75.12 196 eS S 23 05 08.3 +10
comp=Z,183nm,29.1s
DZM eLR LR 23 18 41.3
comp=Z,1μm,26.9s
AKASG Malin Array Be 75.31 343 P P **22 55 25.3 -1.2**
comp=Z,12nm,0.8s,mb4.7,baz=18,slow=5.7,SNR=24
AKASG pP pP 22 55 45.5 +0.1
comp=Z,3.3nm,0.4s,baz=18,slow=6.1,SNR=4.5
AKASG LR LR 23 35 07.5
comp=Z,151nm,18.0s,baz=20,slow=41

AKASG **Malin Array Be 75.31 343** P **P** 22 55 25.3 -1.2
AKASG *PP pP 22 55 45.5 +0.1
AKASG pmax pmax
comp=Z,12nm,0.8s
AKASG pmax pmax
comp=Z,3.0nm,0.4s
AKASG MLR MLR
comp=Z,151nm,18.0s
AKBB Malin Array Si 75.31 343 *e*P **P** 22 55 25.3 -1.2
KIEV Kiev 75.32 343 *e*P **P** 22 55 24.4 -2.2
KIEV pmax pmax
comp=Z,11nm,0.9s,mb4.6
KIEV Kiev 75.32 343 *e*P **P** 22 55 24.4 -2.2
comp=Z,12nm,0.9s,mb4.6
NRDL Niedersach Rie 75.74 355 *e*P **P** 22 55 27.5 -1.4
comp=Z,14nm,1.0s,mb4.7
BOK Bokaro 75.78 290 *e*PKP **P** 22 55 30.4 +0.7
BOK AMb AMB 22 55 32.5
comp=Z,47nm,1.0s,mb5.2
IBBN Ibbenburen 76.02 357 *e*P **P** 22 55 30.5 -0.1
comp=Z,56nm,1.5s,mb5.1
IBBN *e*pP pP 22 55 51.8 +2.4
IBBN *e*sP sP 22 55 59.5 +2.3
TTSI Tana Toraja 76.24 246 P **P** 22 55 32.4 +0.1
comp=Z,33nm,1.5s,mb4.8
KBL Kabul 76.32 309 *e*P **P** 22 55 31.8 -0.8
KBL pmax pmax
comp=Z,90nm,0.9s,mb5.5
KBL Kabul 76.32 309 *e*P **P** 22 55 31.8 -0.8
comp=Z,90nm,0.9s,mb5.5
CLL Collm 76.75 354 *e*P **P** 22 55 34.0 -0.7
comp=Z,10.0nm,1.0s,mb4.5
CLL *e*pP pP 22 55 54.4 +0.8
CLL Collm 76.75 354 *i*P **P** 22 55 33.8 -0.9
comp=Z,10.0nm,1.0s,mb4.5
CLL *e*PcP PcP 22 55 46.0 +0.3
CLL *i* pP pP 22 55 54.6 +1.0
CLL *i* sP sP 22 56 03.2 +1.9
CLL *e* 22 56 21.0
CLL *e*PP PP 22 58 48.0 +21
CLL *e*PPP 23 00 23.0
CLL *e*S S 23 05 17.0 +1.2
CLL *e* 23 07 24.0
CLL *e*SS SS 23 10 12.0 +0.6
CLL *e* 23 14 24.0
BISR Bishrakh 76.80 299 *e*PKP **P** 22 55 34.3 -1.0
BUG Bochum--Univer 76.91 357 *e*P **P** 22 55 35.0 -0.6
comp=Z,25nm,1.2s,mb4.8
LVV L'vov 77.02 346 *e*P **P** 22 55 34.9 -1.3
AYAN Aya Nagar 77.04 300 *e*PKP **P** 22 55 36.1 -0.6
AYAN AMb AMB 22 55 37.2
comp=Z,12nm,0.5s,mb4.9
BRG Berggiesshubel 77.12 353 *e*P **P** 22 55 36.1 -0.6
comp=Z,11nm,1.1s,mb4.5
BRG *e*pP pP 22 55 57.1 +1.4
BRG Berggiesshubel 77.12 353 *e*P **P** 22 55 36.1 -0.7
comp=Z,11nm,1.1s,mb4.5
BRG
comp=N,451nm,37.9s
BRG
comp=E,204nm,27.3s
BRG
comp=Z,364nm,24.4s
OJC Ojcow 77.19 349 *e*P **P** 22 55 34.9 -2.3
SONA Sohna 77.25 300 *e*PKP **P** 22 55 37.4 -0.4
SONA AMb AMB 22 55 38.5
comp=Z,13nm,0.2s,mb5.2
UPC Upice 77.31 351 *e*P **P** 22 55 37.5 -0.3
UPC Upice 77.31 351 *e*P **P** 22 55 37.5 -0.3
UPC *e*pP pP 22 55 58.7 +2.0
KWP Kalwaria Pacla 77.39 347 *e*P **P** 22 55 38.2 -0.1
KWP Kalwaria Pacla 77.39 347 ⇓P **P** 22 55 38.0 -0.3
KWP Kalwaria Pacla 77.39 347 *e*P **P** 22 55 38.2 -0.1
comp=Z,30nm,0.9s,mb5.0
KWP *e*PP PP 22 58 35.6 +2.9
KWP Kalwaria Pacla 77.39 347 ⇓*i*P **P** 22 55 38.0 -0.3
PVCC Panska Ves 77.41 352 *e*P **P** 22 55 38.1 -0.3
PVCC MLR MLR
comp=Z,300nm,22.0s
PVCC Panska Ves 77.41 352 *e*P **P** 22 55 38.1 -0.3
PVCC *e*pP pP 22 55 59.4 +2.1
PVCC AMS AMS 23 25 00.0
comp=Z,300nm,22.0s
DPC Dobruska-Polom 77.43 351 *e*P **P** 22 55 38.7 +0.2
DPC *e*S SKSac 23 05 39.5 -5.6
DPC MLR MLR
comp=Z,300nm,24.1s
DPC Dobruska-Polom 77.43 351 *e*P **P** 22 55 38.7 +0.2
DPC *e*pP pP 22 55 58.4 +0.9
DPC *e*SKS 23 05 39.5
DPC AMS AMS 23 26 10.0
comp=Z,300nm,24.1s
MOX Moxa 77.50 354 *e*P **P** 22 55 38.8 -0.1
comp=Z,12nm,1.1s,mb4.5
MOX Moxa 77.50 354 *e*P **P** 22 55 38.3 -0.6
comp=Z,9.0nm,1.0s,mb4.5
WERD Werda 77.66 354 *e*P **P** 22 55 39.2 -0.6
comp=Z,12nm,1.3s,mb4.5
TANN Tannenbergstha 77.68 354 *e*P **P** 22 55 39.5 -0.4
comp=Z,16nm,1.5s,mb4.5
TANN *e*sP sP 22 56 08.8 +2.3
GUNZ Gunzen 77.74 354 *e*P **P** 22 55 40.0 -0.2
comp=Z,14nm,1.5s,mb4.5
KAKA Kakadu 77.74 230 *e*P **P** 22 55 39.9 -0.7
comp=Z,31nm,0.7s,mb5.2
KAKA Kakadu 77.74 230 *e*P **P** 22 55 40.9 +0.3
comp=Z,91nm,0.8s,mb5.6
KAKA *e*PcP PcP 22 55 51.5 +1.1
OKC Ostrava-Krasne 77.76 350 *e*P **P** 22 55 40.2 -0.1
OKC *e*S sS 23 06 04.6 +5.7
OKC MLR MLR
comp=Z,200nm,22.8s
OKC Ostrava-Krasne 77.76 350 *e*P **P** 22 55 40.2 -0.1
OKC *e*pP pP 22 56 01.8 +2.5
OKC *e*XS sS 23 06 04.6 +5.7
OKC AMS AMS 23 29 30.0
comp=Z,200nm,22.8s
MEM Membach 77.77 358 P **P** 22 55 40.5 +0.1
comp=Z,12nm,1.2s,mb4.5
MEM AP pP 22 56 01.2 +1.9
STHS Stebnicka Huta 77.80 348 *e*P **P** 22 55 41.1 +0.5
STHS pmax pmax
comp=Z,6.0nm,1.1s,mb4.2
STHS Stebnicka Huta 77.80 348 *e*P **P** 22 55 41.1 +0.5
comp=Z,6.1nm,1.1s,mb4.2
STHS Stebnicka Huta 77.80 348 *e*P **P** 22 55 41.1 +0.5
NKC Novy Kostel 77.86 354 *e*P **P** 22 55 40.6 -0.3
NKC Novy Kostel 77.86 354 *e*P **P** 22 55 40.6 -0.3
NKC *e*pP pP 22 56 00.4 +0.5
NKC AMS AMS 23 25 00.0
MAK Makhachkala 77.89 328 *e*P **P** 22 55 48.8 +7.6
MAK MLR MLR
comp=Z,313nm,22.0s
SNF Seneffe 77.90 359 P **P** 22 55 41.2 +0.1
comp=Z,22nm,2.4s,mb4.5
PRU Pruhonice 77.95 352 *e*P **P** 22 55 42.1 +0.7
PRU *e*S sS 23 06 00.3 -0.7
PRU Pruhonice 77.95 352 *e*P **P** 22 55 42.1 +0.7
PRU *e*pP pP 22 56 02.9 +2.6
PRU *e*XS sS 23 06 00.3 -0.7
PRU AMS AMS 23 25 30.0
comp=Z,400nm,30.0s
BCLA Clavier 77.97 358 P **P** 22 55 41.1 -0.5
KHET Khetri 78.07 300 *e*PKP **P** 22 55 42.1 -0.4
KHET AMb AMB 22 55 43.0
comp=Z,26nm,1.0s,mb4.9
TNS Taunus Mts 78.08 356 *e*P **P** 22 55 41.6 -0.5
comp=Z,18nm,0.9s,mb4.8
TNS *e*pP pP 22 56 02.6 +1.5
KSM Kuching 78.19 257 *e*P **P** 22 55 43.8 +0.5
comp=Z,9.3nm,0.6s,mb4.7
KSM *e* pP 22 56 01.4 -0.8
KSM *e*PP PP 22 58 41.4 +0.7
KSM Kuching 78.19 257 P **P** 22 55 42.2 -1.0
comp=Z,22nm,1.3s,mb4.7
CRVS Cervenica-Dubn 78.28 348 *e*P **P** 22 55 43.0 -0.2
CRVS pmax pmax
comp=Z,41nm,2.6s,mb4.7
CRVS Cervenica-Dubn 78.28 348 *e*P **P** 22 55 43.0 -0.2
comp=Z,41nm,2.6s,mb4.7
CRVS Cervenica-Dubn 78.28 348 *e*P **P** 22 55 43.0 -0.2
GIVF Givet 78.30 359 *e*P **P** 22 55 43.0 -0.3
comp=Z,41nm,1.1s,mb4.8
GIVF Givet 78.30 359 *e*P **P** 22 55 43.0 -0.3
GIVF pmax pmax
comp=Z,21nm,1.1s,mb4.8
GIVF Givet 78.30 359 *e*P **P** 22 55 43.0 -0.3
comp=Z,21nm,1.1s,mb4.8
DOU Dourbes 78.31 359 P **P** 22 55 43.1 -0.3
comp=Z,16nm,2.9s,mb4.2
DOU AP pP 22 56 04.5 +2.1
BAIF Baives 78.35 359 *e*P **P** 22 55 43.6 0.0
comp=Z,42nm,1.0s,mb4.8
BAIF Baives 78.35 359 *e*P **P** 22 55 43.6 0.0
BAIF pmax pmax
comp=Z,21nm,1.0s,mb4.8
BAIF Baives 78.35 359 *e*P **P** 22 55 43.6 0.0
comp=Z,21nm,1.0s,mb4.8
ABKT Ailbek 78.38 318 P **P** 22 55 44.7 +0.7
comp=Z,142nm,0.8s,mb5.8,SNR=16
UZH Uzhgorod 78.43 347 *e*P **P** 22 55 42.8 -1.3
UZH *i* 22 55 55.8
VRAC Vranov 78.44 351 ⇓P **P** 22 55 43.9 -0.2
VRAC Vranov 78.44 351 ⇓*i*P **P** 22 55 43.9 -0.2
KIV Kislovodsk 78.47 332 *e*P **P** 22 55 45.4 +1.0
KIV *e*S S 23 05 36.0 +1.3
KIV *e*SS SS 23 10 37.7 0.0
KIV pmax pmax
comp=Z,14nm,0.9s,mb4.7
KIV MLR MLR
comp=Z,213nm,20.0s
KIV Kislovodsk 78.47 332 *e*P **P** 22 55 44.5 +0.1
comp=Z,17nm,1.0s,mb4.7
GRF Grafenberg Arr 78.48 355 *e*P **P** 22 55 43.9 -0.4
comp=Z,11nm,0.7s,mb4.7
GRF *e*pP pP 22 56 04.9 +1.6
GRF *e*sP sP 22 56 12.8 +1.8
GRF Grafenberg Arr 78.48 355 *e*P **P** 22 55 43.9 -0.4
GRF pmax pmax
comp=Z,11nm,0.7s,mb4.7
TREC Trest 78.56 352 *e*P **P** 22 55 44.0 -0.8
TREC MLR MLR
comp=Z,400nm,20.9s
TREC Trest 78.56 352 *e*P **P** 22 55 44.0 -0.8
TREC AMS AMS 23 26 00.0
comp=Z,400nm,20.9s
CTA Charters Tower 78.57 215 *e*P **P** 22 55 43.5 -1.6
comp=Z,28nm,1.0s,mb5.0
CTAO Charters Tower 78.57 215 *e*P **P** 22 55 44.4 -0.7
CTAO *e* 22 58 43.9
CTAO pmax pmax
comp=Z,59nm,1.1s,mb5.3
CTAO Charters Tower 78.57 215 *e*P **P** 22 55 44.4 -0.7
comp=Z,59nm,1.1s,mb5.3
CTAO *e*PP PP 22 58 43.9 -0.1
CTAO Charters Tower 78.57 215 P **P** 22 55 42.7 -2.4
comp=Z,46nm,1.1s,mb5.2
TOD Tromm 78.69 356 *e*P **P** 22 55 45.5 0.0
WLF Walferdange 78.71 358 *e*P **P** 22 55 45.1 -0.5
comp=Z,38nm,1.8s,mb4.9
TBI Tubuai 78.79 154 *e*S S 23 05 47.0 +8.8
comp=Z,164nm,35.8s
TBI *e*LR LR 23 19 51.1
comp=Z,999nm,33.2s,baz=342
KECS Kecovo 78.82 348 *e*P **P** 22 55 46.0 -0.2
KECS pmax pmax
comp=Z,4.0nm,1.0s,mb4.2
KECS Kecovo 78.82 348 *e*P **P** 22 55 46.0 -0.2
comp=Z,3.9nm,1.0s,mb4.2
KECS Kecovo 78.82 348 *e*P **P** 22 55 46.0 -0.2
KHC Kasperske Hory 78.88 353 *e*P **P** 22 55 46.2 -0.3
KHC *e*S S 23 05 39.4 +0.6
KHC MLR MLR
comp=Z,300nm,26.4s
KHC Kasperske Hory 78.88 353 *e*P **P** 22 55 46.5 -0.1
comp=Z,6.4nm,0.9s,mb4.5
KHC Kasperske Hory 78.88 353 *e*P **P** 22 55 46.2 -0.3
KHC *e*pP pP 22 56 07.4 +1.9
KHC *e*S S 23 05 39.4 +0.6
KHC AMS AMS 23 25 10.0
comp=Z,300nm,26.4s
WET Wettzell 78.92 353 *e*P **P** 22 55 46.2 -0.5
comp=Z,8.0nm,1.2s,mb4.4
WET *e*pP pP 22 56 07.9 +2.2
TGUH Tegucigalpa,Un 78.94 81 *e*P **P** 22 55 48.3 +0.9
comp=Z,110nm,1.2s,mb5.6
TGUH *e*pP pP 22 56 04.6 -1.7
KIS Kishinev 78.95 342 *e*P **P** 22 55 45.0 -2.0
KIS *e*S S 23 05 40.0 +0.4
KIS LRM 23 35 24.0
comp=Z,300nm,20.0s
KIS Kishinev 78.95 342 *e*P **P** 22 55 45.0 -2.0
KIS *e*S S 23 05 40.0 +0.4
KIS MLR MLR
comp=Z,300nm,19.0s
KIS MLR MLR
comp=Z,300nm,20.0s
BUR08 Bucovina Ar. S 78.96 345 *e*P **P** 22 55 47.1 +0.2
BUR01 Bucovina Ar. S 78.98 345 P **P** 22 55 47.6 +0.4
BURAR Bucovina Array 78.98 345 ⇓P **P** 22 55 47.0 -0.1
BURAR Bucovina Array 78.98 345 ⇓*i*P **P** 22 55 47.0 -0.1
IAS Iasi 78.99 343 ⇑P **P** 22 55 47.5 +0.3
IAS Iasi 78.99 343 ⇑*i*P **P** 22 55 47.5 +0.3
VYHS Vyhne 79.00 349 *e*P **P** 22 55 47.1 -0.1
VYHS Vyhne 79.00 349 *e*P **P** 22 55 47.1 -0.1
ZEI Tsey 79.20 331 *e*P **P** 22 55 48.0 -0.4
ZEI pmax pmax
comp=Z,26nm,0.9s,mb5.1
PSZ Piszkesteto 79.44 348 P **P** 22 55 50.3 +0.7
PSZ Piszkesteto 79.44 348 *e*P **P** 22 55 50.0 +0.3
comp=Z,9.9nm,1.0s,mb4.6
ZST Bratislava 79.49 350 *e*P **P** 22 55 50.1 +0.2
ZST pmax pmax
comp=Z,6.0nm,0.9s,mb4.4
ZST Bratislava 79.49 350 *e*P **P** 22 55 50.1 +0.2
comp=Z,6.1nm,0.9s,mb4.4
ZST Bratislava 79.49 350 *e*P **P** 22 55 50.1 +0.2
ONI Oni 79.49 331 P **P** 22 55 51.6 +1.5
LEOM Leova 79.56 343 ⇓P **P** 22 55 50.8 +0.5
LEOM Leova 79.56 343 ⇓*i*P **P** 22 55 50.8 +0.5
KEH Kehvi 79.61 330 P **P** 22 55 49.6 -1.1
SOC Sochi 79.66 334 *e*P **P** 22 55 50.0 -0.9
SOC *e* 22 58 49.6
SOC *e*PPP 23 00 40.6
SOC *e*S S 23 05 44.6 -2.6
SOC *e*SS SS 23 11 00.0 +4.6
SOC *e*SSS 23 14 24.1
SOC pmax pmax
comp=Z,35nm,1.1s,mb5.1
SOC MLR MLR
comp=Z,209nm,16.0s
LDF La Druitiere 79.79 2 *e*P **P** 22 55 50.7 -0.8
comp=Z,11nm,0.4s,mb4.7
LDF La Druitiere 79.79 2 *e*P **P** 22 55 50.7 -0.8
LDF pmax pmax
comp=Z,5.0nm,0.4s,mb4.7
LDF La Druitiere 79.79 2 *e*P **P** 22 55 50.7 -0.8
comp=Z,5.4nm,0.4s,mb4.7
SIM Simferopol' 79.79 338 *e*P **P** 22 55 52.7 +1.1
SIM pmax pmax
comp=Z,14nm,0.9s,mb4.8
TESR 79.81 344 ⇓P **P** 22 55 51.9 +0.2
TESR 79.81 344 ⇓*i*P **P** 22 55 51.9 +0.2
GOR Gori 79.84 330 P **P** 22 55 52.8 +0.8
CONA Conrad Observa 79.88 351 ⇑*i*P **P** 22 55 52.4 +0.4
comp=Z,8.5nm,1.2s,mb4.5
TBLG Delisi 79.88 330 *e*P **P** 22 55 52.7 +0.6
TBLG Delisi 79.88 330 P **P** 22 55 52.8 +0.6
MEZF Maizieres J'vi 79.90 359 *e*P **P** 22 55 52.0 -0.1
comp=Z,30nm,0.9s,mb4.8
MEZF Maizieres J'vi 79.90 359 *e*P **P** 22 55 52.0 -0.1
comp=Z,30nm,0.9s,mb5.1
MTA Mtatsminda 79.90 329 P **P** 22 55 52.9 +0.6
DGRG David-gareji 79.93 329 P **P** 22 55 53.0 +0.6
CDF Champ du Feu 79.94 357 *e*P **P** 22 55 51.8 -0.5
comp=Z,13nm,0.8s,mb4.5
CDF Champ du Feu 79.94 357 *e*P **P** 22 55 51.8 -0.5
CDF pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
CDF Champ du Feu 79.94 357 *e*P **P** 22 55 51.8 -0.5
comp=Z,6.3nm,0.8s,mb4.5
ROSF Rostrenen 79.94 4 *e*P **P** 22 55 51.8 -0.5
AJM Ajmer 79.96 300 *e*PKP **P** 22 55 51.9 -0.9
AJM AMb AMB 22 55 53.6
comp=Z,46nm,0.8s,mb5.4
GRR Gorron 79.97 3 *e*P **P** 22 55 52.0 -0.5
comp=Z,33nm,0.9s,mb4.9
GRR Gorron 79.97 3 *e*P **P** 22 55 52.0 -0.5
GRR pmax pmax
comp=Z,16nm,0.9s,mb4.8
GRR Gorron 79.97 3 *e*P **P** 22 55 52.0 -0.5
comp=Z,16nm,0.9s,mb4.9
BUD Budapest 79.98 349 ⇑*e*P **P** 22 55 50.3 -2.2
BFO Black Forest 79.98 356 *e*P **P** 22 55 52.1 -0.4
comp=Z,10.0nm,1.1s,mb4.6
FUR Furstenfeldbru 80.00 354 *e*sP sP 22 56 21.2 +1.9
SGMF Saint Gilles 80.05 4 *e*P **P** 22 55 53.3 +0.4
ECH Echery 80.14 357 *e*P **P** 22 55 53.0 -0.4
DRGR 80.17 346 ⇓P **P** 22 55 53.0 -0.6
DRGR 80.17 346 ⇓*i*P **P** 22 55 53.0 -0.6
SPAK Spaichingen-Ko 80.19 356 *e*P **P** 22 55 53.7 0.0
RJOB Jochberg 80.32 353 *e*P **P** 22 55 54.3 -0.1
comp=Z,5.0nm,0.9s,mb4.3
HAU Haudompre 80.37 358 *e*P **P** 22 55 54.2 -0.4
comp=Z,16nm,0.9s,mb4.6
HAU Haudompre 80.37 358 *e*P **P** 22 55 54.2 -0.4
HAU pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
HAU Haudompre 80.37 358 *e*P **P** 22 55 54.2 -0.4
comp=Z,7.9nm,0.9s,mb4.5
VRI Vrincioaia 80.42 343 ⇓P **P** 22 55 55.6 +0.6
VRI Vrincioaia 80.42 343 ⇓*i*P **P** 22 55 55.6 +0.6
FELD Feldberg im Sc 80.44 357 *e*P **P** 22 55 54.9 -0.1
PLOR Plostina 80.45 343 ⇑P **P** 22 55 56.2 +1.1
PLOR Plostina 80.45 343 ⇑*i*P **P** 22 55 56.2 +1.1
PETR 80.47 343 ⇑P **P** 22 55 56.6 +1.4
PETR 80.47 343 ⇑*i*P **P** 22 55 56.6 +1.4
HINF Hinteralfeld 80.54 357 *e*P **P** 22 55 54.8 -0.8
comp=Z,16nm,1.0s,mb4.5
HINF Hinteralfeld 80.54 357 *e*P **P** 22 55 54.8 -0.8
HINF pmax pmax
comp=Z,8.0nm,1.0s,mb4.5
HINF Hinteralfeld 80.54 357 *e*P **P** 22 55 54.8 -0.8
comp=Z,8.1nm,1.0s,mb4.5
TLCR 80.69 342 ⇑P **P** 22 55 57.2 +0.8
TLCR 80.69 342 ⇑*i*P **P** 22 55 57.2 +0.8
CFR Carcaliu 80.83 342 ⇓P **P** 22 55 57.9 +0.7
CFR Carcaliu 80.83 342 ⇓*i*P **P** 22 55 57.9 +0.7
GRER 80.85 343 ⇓P **P** 22 55 58.4 +1.2
GRER 80.85 343 ⇓*i*P **P** 22 55 58.4 +1.1
WTTA Wattenberg 80.87 354 ⇑*i*P **P** 22 55 57.8 +0.5
comp=Z,13nm,1.0s,mb4.7
MLR Muntele Rosu 80.92 344 ⇓P **P** 22 55 58.4 +0.8
MLR Muntele Rosu 80.92 344 ⇓*i*P **P** 22 55 58.4 +0.8
KBA Koelnbreinsper 80.94 353 ⇓*i*P **P** 22 55 57.9 +0.2
comp=Z,30nm,1.1s,mb5.0
BHPL Bhopal 81.03 296 *e*PKP **P** 22 55 57.9 -0.7
BHPL AMb AMB 22 55 59.1
comp=Z,64nm,0.6s,mb5.6
KULM Kulim 81.11 267 *e*P **P** 22 55 59.4 +0.3
comp=Z,28nm,0.8s,mb5.2
VOIR 81.13 344 ⇓P **P** 22 56 00.2 +1.5
VOIR 81.13 344 ⇓*i*P **P** 22 56 00.2 +1.5
LOR Lormes 81.14 359 *e*P **P** 22 55 58.4 -0.4
comp=Z,30nm,1.0s,mb4.8
LOR Lormes 81.14 359 *e*P **P** 22 55 58.4 -0.4
LOR pmax pmax
comp=Z,15nm,1.0s,mb4.8
LOR Lormes 81.14 359 *e*P **P** 22 55 58.4 -0.4
comp=Z,15nm,1.0s,mb4.8
HYF Humbligny 81.15 0 *e*P **P** 22 55 58.7 -0.1
FETA Feichten 81.17 355 ⇑*i*P **P** 22 55 59.4 +0.4
comp=Z,8.6nm,1.0s,mb4.5
SOKA Soboth 81.19 352 ⇑*i*P **P** 22 55 59.1 0.0
comp=Z,15nm,1.0s,mb4.8
GNI Garni 81.31 329 *e*P **P** 22 56 00.3 +0.5
GNI *e* 22 56 06.4
GNI pmax pmax
comp=Z,21nm,1.0s
GNI Garni 81.31 329 *e*P **P** 22 56 00.2 +0.4
comp=Z,21nm,1.0s,mb4.9
GNI *e*PcP PcP 22 56 06.4 +0.6
SSF Saint Saulge 81.35 360 *e*P **P** 22 55 59.5 -0.4
comp=Z,21nm,1.0s,mb4.6
SSF Saint Saulge 81.35 360 *e*P **P** 22 55 59.5 -0.4
SSF pmax pmax
comp=Z,11nm,1.0s,mb4.6
SSF Saint Saulge 81.35 360 *e*P **P** 22 55 59.5 -0.4
comp=Z,11nm,1.0s,mb4.6
TIRR Tirgusor 81.47 342 ⇑P **P** 22 56 00.8 +0.2
TIRR Tirgusor 81.47 342 *e*P **P** 22 56 00.1 -0.4
comp=Z,23nm,1.0s,mb5.0
TIRR Tirgusor 81.47 342 ⇑*i*P **P** 22 56 00.8 +0.2
BZS Buzias 81.48 347 ⇓P **P** 22 56 00.1 -0.5
BZS Buzias 81.48 347 ⇓*i*P **P** 22 56 00.1 -0.5
IPM Ipoh 81.50 266 P **P** 22 55 59.5 -1.7
comp=Z,56nm,0.9s,mb5.4
GZR Gura Zlata 81.53 346 ⇓P **P** 22 56 00.8 -0.1
GZR Gura Zlata 81.53 346 ⇓*i*P **P** 22 56 00.8 -0.1
MTDJ Mount Denham 81.55 71 *e*P **P** 22 56 01.5 +0.1
comp=Z,203nm,1.2s,mb5.8
AVF Avril sur Loir 81.62 360 *e*P **P** 22 56 00.9 -0.4
comp=Z,45nm,1.2s,mb4.9
AVF Avril sur Loir 81.62 360 *e*P **P** 22 56 00.9 -0.4
AVF pmax pmax
comp=Z,23nm,1.2s,mb4.9
AVF Avril sur Loir 81.62 360 *e*P **P** 22 56 00.9 -0.4
comp=Z,23nm,1.2s,mb4.9
CABF La Chapelle 81.77 358 *e*P **P** 22 56 02.1 0.0
comp=Z,16nm,0.9s,mb4.5
CABF La Chapelle 81.77 358 *e*P **P** 22 56 02.1 0.0
CABF pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
CABF La Chapelle 81.77 358 *e*P **P** 22 56 02.1 0.0
comp=Z,8.2nm,0.9s,mb4.6
SMF Signal de Mont 81.77 359 *e*P **P** 22 56 01.6 -0.5
comp=Z,29nm,0.9s,mb4.8
SMF Signal de Mont 81.77 359 *e*P **P** 22 56 01.6 -0.5
SMF pmax pmax
comp=Z,14nm,0.9s,mb4.8
SMF Signal de Mont 81.77 359 *e*P **P** 22 56 01.6 -0.5
comp=Z,14nm,0.9s,mb4.8
NGP Nagpur 81.77 294 *e*PKP **P** 22 56 00.6 -1.9
NGP AMb AMB 22 56 02.5
comp=Z,66nm,1.8s,mb5.2
MFF Saint Martin d 81.78 2 *e*P **P** 22 56 01.9 -0.2
comp=Z,47nm,1.0s,mb5.0
MFF Saint Martin d 81.78 2 *e*P **P** 22 56 01.9 -0.2
MFF pmax pmax
comp=Z,23nm,1.0s,mb5.0
MFF Saint Martin d 81.78 2 *e*P **P** 22 56 01.9 -0.2
comp=Z,24nm,1.0s,mb5.0
BGF Bois d'Agland 81.86 0 *e*P **P** 22 56 02.2 -0.4
comp=Z,25nm,1.0s,mb4.7
BGF Bois d'Agland 81.86 0 *e*P **P** 22 56 02.2 -0.4
BGF pmax pmax
comp=Z,12nm,1.0s,mb4.7
BGF Bois d'Agland 81.86 0 *e*P **P** 22 56 02.2 -0.4
comp=Z,12nm,1.0s,mb4.7
MYKOM Kota Tinggi 81.87 262 P **P** 22 56 03.6 +0.5
comp=Z,44nm,1.1s,mb5.2
VIS Vishakhapatnam 82.00 288 *e*PKP **P** 22 56 04.0 +0.3
TCF Toulx Ste Croi 82.13 1 *e*P **P** 22 56 03.5 -0.5
comp=Z,23nm,1.0s,mb4.7
TCF Toulx Ste Croi 82.13 1 *e*P **P** 22 56 03.5 -0.5
TCF pmax pmax
comp=Z,12nm,1.0s,mb4.7
TCF Toulx Ste Croi 82.13 1 *e*P **P** 22 56 03.5 -0.5
comp=Z,12nm,1.0s,mb4.7
KNA Kununurra 82.14 232 P **P** 22 56 01.8 -2.5
comp=Z,71nm,0.8s,mb5.5
AGO Saint Agoulin 82.36 360 *e*P **P** 22 56 06.7 +1.5
PLDF La Plantade 82.44 360 *e*P **P** 22 56 07.0 +1.4
PYM Petit Puy Mans 82.67 360 *e*P **P** 22 56 08.1 +1.3
LPL La Plagne 82.85 357 *e*P **P** 22 56 07.5 -0.2
LPG La Plagne 82.86 357 *e*P **P** 22 56 07.9 +0.1
SZH Strazhica 83.08 343 *e*P **P** 22 56 07.0 -2.0
RJF Les Rejaudoux 83.11 1 *e*P **P** 22 56 08.8 -0.3
comp=Z,34nm,1.2s,mb4.8
RJF Les Rejaudoux 83.11 1 *e*P **P** 22 56 08.8 -0.3
RJF pmax pmax
comp=Z,17nm,1.2s,mb4.8
RJF Les Rejaudoux 83.11 1 *e*P **P** 22 56 08.8 -0.3
comp=Z,17nm,1.2s,mb4.8
WRAB Tennant Creek 83.18 225 P **P** 22 56 08.9 -0.7
comp=Z,135nm,1.0s,mb5.7,SNR=12
WRAB Tennant Creek 83.18 225 *e*P **P** 22 56 08.5 -1.1
WRAB pmax pmax
comp=Z,26nm,1.0s,mb5.0
WRAB Tennant Creek 83.18 225 *e*P **P** 22 56 08.5 -1.1
comp=Z,26nm,1.0s,mb5.0
WRAB *e*pP pP 22 56 28.3 -0.5
WRAB *e*sP sP 22 56 34.5 -1.8
LBL Lubilhac 83.18 360 *e*P **P** 22 56 11.4 +1.9

WRA Warramunga Arr 83.19 225 P **P** **22 56 08.7 -1.0**
comp=Z,18nm,1.0s,mb4.9,baz=37,slow=6.3,SNR=50
WRA pP pP 22 56 28.6 -0.3
comp=Z,8.2nm,0.9s,baz=36,slow=6.3,SNR=5.0
WRA Warramunga Arr 83.19 225 P **P** **22 56 08.7 -1.0**
WRA pmax pmax
comp=Z,18nm,1.0s
WRA pmax pmax
comp=Z,8.0nm,0.9s
AKL Akola 83.27 295 *e*PKP **P** **22 56 10.2 -0.2**
AKL AMb AMB 22 56 11.2
comp=Z,72nm,0.9s,mb5.5
RKT Rikitea 83.34 142 *e*LR LR 23 22 10.7
comp=Z,825nm,31.8s,baz=332
MPEP Malo Peshtene 83.37 345 *e*P **P** **22 56 09.0 -1.5**
LFF La Frestale 83.46 2 *e*P **P** **22 56 10.7 -0.2**
comp=Z,68nm,1.2s,mb5.0
LFF La Frestale 83.46 2 *e*P **P** **22 56 10.7 -0.2**
LFF pmax pmax
comp=Z,34nm,1.2s,mb5.0
LFF La Frestale 83.46 2 *e*P **P** **22 56 10.7 -0.2**
comp=Z,34nm,1.2s,mb5.0
ORIF Oris-en-Rattie 83.47 358 *e*P **P** **22 56 11.1 +0.2**
comp=Z,14nm,0.9s,mb4.5
ORIF Oris-en-Rattie 83.47 358 *e*P **P** **22 56 11.1 +0.2**
ORIF pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
ORIF Oris-en-Rattie 83.47 358 *e*P **P** **22 56 11.1 +0.2**
comp=Z,7.3nm,0.9s,mb4.5
CAF Calviac 83.49 1 *e*P **P** **22 56 11.0 -0.1**
comp=Z,24nm,1.0s,mb4.7
CAF Calviac 83.49 1 *e*P **P** **22 56 11.0 -0.1**
CAF pmax pmax
comp=Z,12nm,1.0s,mb4.7
CAF Calviac 83.49 1 *e*P **P** **22 56 11.0 -0.1**
comp=Z,12nm,1.0s,mb4.7
VIVF Saint-Julien-l 83.55 359 *e*P **P** **22 56 11.5 +0.1**
comp=Z,20nm,1.0s,mb4.6
VIVF Saint-Julien-l 83.55 359 *e*P **P** **22 56 11.5 +0.1**
VIVF pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
VIVF Saint-Julien-l 83.55 359 *e*P **P** **22 56 11.5 +0.1**
comp=Z,10nm,1.0s,mb4.6
MBDF Montbardon 83.63 357 *e*P **P** **22 56 12.4 +0.6**
comp=Z,9.2nm,0.7s,mb4.4
MBDF Montbardon 83.63 357 *e*P **P** **22 56 12.4 +0.6**
MBDF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
MBDF Montbardon 83.63 357 *e*P **P** **22 56 12.4 +0.6**
comp=Z,4.6nm,0.7s,mb4.4
VTS Vitosha 84.20 345 ⇑P **P** **22 56 14.8 +0.1**
VTS Vitosha 84.20 345 *e*P **P** **22 56 13.2 -1.5**
VTS Vitosha 84.20 345 ⇑*i*P **P** **22 56 14.8 +0.1**
DIM Dimitrovgrad 84.33 343 *e*P **P** **22 56 16.3 +0.9**
LASF Ste Croix 84.34 359 *e*P **P** **22 56 15.4 0.0**
comp=Z,17nm,0.9s,mb4.5
SMRF Simiane la Rot 84.41 358 *e*P **P** **22 56 16.2 +0.4**
comp=Z,34nm,1.0s,mb4.8
SMRF Simiane la Rot 84.41 358 *e*P **P** **22 56 16.2 +0.4**
comp=Z,34nm,1.0s,mb4.5
SBF Sospel 84.47 357 *e*P **P** **22 56 15.6 -0.5**
SDDR Presa de Saban 84.56 66 *e*P **P** **22 56 16.4 -0.5**
comp=Z,48nm,1.1s,mb5.3
KDZ Kurdzhali 84.74 343 *e*P **P** **22 56 16.6 -0.9**
FRF La Foret Royal 84.80 357 *e*P **P** **22 56 17.1 -0.6**
comp=Z,18nm,0.9s,mb4.7
FRF La Foret Royal 84.80 357 *e*P **P** **22 56 17.1 -0.6**
FRF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
FRF La Foret Royal 84.80 357 *e*P **P** **22 56 17.1 -0.6**
comp=Z,8.8nm,0.9s,mb4.7
BR131 Keskin Array S 84.85 337 *e*P **P** **22 56 17.5 -0.6**
comp=Z,10.0nm,0.7s,mb4.8
BRTR Keskin Array B 84.85 337 P **P** **22 56 18.2 +0.2**
comp=Z,17nm,0.8s,mb5.0,baz=53,slow=2.6,SNR=94
BRTR pP pP 22 56 38.2 +1.0
comp=Z,5.4nm,0.8s,baz=10,slow=2.6,SNR=2.7
BRTR LR LR 23 41 24.8
comp=Z,75nm,20.9s,baz=185,slow=41
BRTR Keskin Array B 84.85 337 *ce*P **P** **22 56 18.2 +0.1**
BRTR pmax pmax
comp=Z,17nm,0.8s
KKB Krupnik 84.92 345 *e*P **P** **22 56 17.3 -1.1**
HYB Hyderabad 85.01 292 *e*P **P** **22 56 19.0 -0.2**
HYB Hyderabad 85.01 292 *i* P **P** **22 56 19.0 -0.2**
LMR La Mourre 85.03 357 *e*P **P** **22 56 18.6 -0.3**
MTLF Montolieu 85.07 1 *e*P **P** **22 56 18.9 -0.2**
comp=Z,16nm,0.8s,mb4.7
MTLF Montolieu 85.07 1 *e*P **P** **22 56 18.9 -0.2**
MTLF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
MTLF Montolieu 85.07 1 *e*P **P** **22 56 18.9 -0.2**
comp=Z,7.8nm,0.8s,mb4.7
SJPF Ste Jean 85.23 3 *e*P **P** **22 56 19.7 -0.2**
comp=Z,27nm,1.0s,mb4.8
SJPF Ste Jean 85.23 3 *e*P **P** **22 56 19.7 -0.2**
SJPF pmax pmax
comp=Z,14nm,1.0s,mb4.8
SJPF Ste Jean 85.23 3 *e*P **P** **22 56 19.7 -0.2**
comp=Z,14nm,1.0s,mb4.8
MNSI Mandailing Nat 85.28 265 P **P** **22 56 19.3 -1.2**
comp=Z,44nm,0.7s,mb5.1
EPF Esparros 85.36 2 *e*P **P** **22 56 21.0 +0.5**
comp=Z,12nm,0.9s,mb4.5
EPF Esparros 85.36 2 *e*P **P** **22 56 21.0 +0.5**
EPF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
EPF Esparros 85.36 2 *e*P **P** **22 56 21.0 +0.5**
comp=Z,6.1nm,0.9s,mb4.5
ETSF Etsaut 85.47 3 *e*P **P** **22 56 21.2 +0.1**
comp=Z,18nm,1.0s,mb4.7
ETSF Etsaut 85.47 3 *e*P **P** **22 56 21.2 +0.1**
ETSF pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
ETSF Etsaut 85.47 3 *e*P **P** **22 56 21.2 +0.1**
comp=Z,9.1nm,1.0s,mb4.7
SDSI Sungai Dareh 85.49 263 P **P** **22 56 20.4 -1.2**
comp=Z,21nm,1.3s,mb4.9
AQU L'Aquila 85.62 352 *e*P **P** **22 56 21.4 -0.5**
AQU *e**PP pP 22 56 40.1 -1.0
AQU pmax pmax
comp=Z,18nm,0.8s,mb5.0
AQU L'Aquila 85.62 352 *e*P **P** **22 56 21.4 -0.4**
comp=Z,18nm,0.8s,mb5.0
AQU *e*pP pP 22 56 40.1 -1.0
AQU *e*sP sP 22 56 47.5 -1.2
AQU L'Aquila 85.62 352 ⇓*i*P **P** **22 56 22.3 +0.4**
FITZ Fitzroy Crossi 85.68 233 *e*P **P** **22 56 19.9 -2.4**
comp=Z,37nm,0.6s,mb5.5
FITZ Fitzroy Crossi 85.68 233 *e*P **P** **22 56 22.5 +0.2**
comp=Z,26nm,0.8s,mb5.2
FITZ *e*pP pP 22 56 40.7 -0.8
FITZ sP sP 22 56 47.6 -1.5
FITZ Fitzroy Crossi 85.68 233 P **P** **22 56 20.0 -2.3**
comp=Z,65nm,0.8s,mb5.6
ARMA Armidale 86.51 207 *e*P **P** **22 56 26.5 +0.4**
ARMA Armidale 86.51 207 *e*P **P** **22 56 26.1 0.0**
comp=Z,88nm,1.3s,mb5.5
ARMA *e*pP pP 22 56 45.3 -0.1
ARMA *e*sP sP 22 56 51.9 -1.1
MDSI Maura Dua 86.61 258 P **P** **22 56 24.7 -2.4**
ASAR Alice Springs 86.65 224 P **P** **22 56 26.6 -0.3**
comp=Z,19nm,0.8s,mb5.1,baz=30,slow=4.6,SNR=111
ASAR pP pP 22 56 46.6 +0.4
comp=Z,12nm,0.9s,baz=28,slow=4.6,SNR=5.9
ASAR PKKPbc PKKPbc 23 14 21.1 +0.5
comp=Z,1.0nm,0.7s,baz=224,slow=2.1,SNR=5.2
ASAR Alice Springs 86.65 224 P **P** **22 56 26.7 -0.3**
ASAR pmax pmax
comp=Z,19nm,0.8s
ASAR pmax pmax
comp=Z,12nm,0.9s
ASAR pmax pmax
comp=Z,1.0nm,0.7s
POO Poona 86.78 296 *e*PKP **P** **22 56 27.7 -0.2**
KAD Karad 87.58 295 *e*PKP **P** **22 56 31.0 -0.8**
KAD AMb AMB 22 56 32.3
comp=Z,45nm,0.6s,mb5.7
MTP Monte Pirata 88.47 62 *e*P **P** **22 56 36.2 +0.2**
comp=Z,115nm,1.3s,mb5.8
MTP *e*pP pP 22 56 54.1 -1.2
ESDC Sonseca Array 88.54 5 P **P** **22 56 34.4 -1.6**
comp=Z,2.0nm,0.7s,mb4.3,baz=349,slow=4.6,SNR=13
ESDC LR LR 23 33 18.5
comp=Z,70nm,19.7s,baz=80,slow=34
CEL Celeste 89.44 350 *e*P **P** **22 56 37.5 -2.8**
comp=Z,18nm,0.9s,mb5.1
RIV Riverview 89.86 206 *e*P **P** **22 56 42.4 +0.5**
NAY Al-Naaiem 90.29 322 *e*P **P** **22 56 43.2 -1.2**
NAY AMb AMB 22 56 44.3
comp=Z,18nm,1.1s,mb5.1
RDF Al-Radifah 90.47 322 *e*P **P** **22 56 44.7 -0.5**
RDF AMb AMB 22 56 45.7
comp=Z,50nm,1.2s,mb5.5
MMAI Mount Meron Ar 90.72 333 P **P** **22 56 46.1 -0.3**
comp=Z,4.8nm,0.8s,mb4.7,baz=75,slow=1.0,SNR=7.1
MMAI LR LR 23 45 25.8
comp=Z,81nm,19.0s,baz=80,slow=41
STKA Stephens Creek 91.01 214 *e*P **P** **22 56 47.1 -0.3**
comp=Z,12nm,0.6s,mb5.2
STKA Stephens Creek 91.01 214 P **P** **22 56 47.3 -0.1**
comp=Z,14nm,0.6s,mb5.2,baz=356,slow=6.9,SNR=34
STKA pP pP 22 57 06.2 -0.5
comp=Z,14nm,0.7s,baz=8.4,slow=5.8,SNR=6.1
STKA LR LR 23 34 57.9
comp=Z,340nm,19.0s,baz=22,slow=34
STKA Stephens Creek 91.01 214 *e*P **P** **22 56 46.8 -0.5**
comp=Z,6.0nm,1.1s,mb4.6
STKA *e*pP pP 22 57 04.9 -1.8
ARQ Araqi 91.61 312 P **P** **22 56 50.2 -0.4**
SNR=8.4
PALK Pallekele 91.79 284 *i* P **P** **22 56 53.4 +1.8**
KEST Kesra 92.50 355 LR LR 23 36 21.1
comp=Z,47nm,20.1s,baz=285,slow=34
OTAV Otavalo 95.13 83 *e*P **P** **22 57 07.6 +0.7**
comp=Z,3.2nm,0.9s,mb4.8
OTAV *e*pP pP 22 57 25.4 -0.9
LPAZ La Paz 114.31 85 PKiKP PKiKP 23 02 24.4 +1.5
comp=Z,0.5nm,0.6s,baz=0.0,slow=4.0,SNR=3.6
LPAZ La Paz 114.31 85 *i* PKIKP PKiKP 23 02 24.4 +1.5
LPAZ pmax pmax
comp=Z,1.0nm,0.6s
DBIC Dimbokro 121.22 9 PKP PKPdf 23 02 35.5 -0.9
comp=Z,8.9nm,0.7s,baz=359,slow=4.3,SNR=10
DBIC pPKP pPKPdf 23 02 56.3 -0.2
comp=Z,7.5nm,0.8s,baz=25,slow=7.2,SNR=2.4
DBIC Dimbokro 121.22 9 PKIKP PKPdf 23 02 35.5 -0.9
DBIC pmax pmax
comp=Z,9.0nm,0.7s
DBIC pmax pmax
comp=Z,8.0nm,0.9s
TIC Toumodi 121.23 9 *e*PKIKP PKPdf 23 02 35.4 -1.0
comp=Z,14nm,0.3s
KIC Kosan Boka 121.53 9 *e*PKIKP PKPdf 23 02 36.0 -1.0
comp=Z,27nm,0.8s
LIC Lamto 121.64 9 ⇑*i*PKIKP PKPdf 23 02 36.2 -1.0
comp=Z,51nm,1.0s
LIC Lamto 121.64 9 *e*PKIKP PKPdf 23 02 36.2 -1.0
comp=Z,68nm,1.0s
LIC Lamto 121.64 9 ⇑*i*PKPdf PKPdf 23 02 36.2 -1.0
KMBO Kilima Mbogo 121.76 318 PKP PKPdf 23 02 38.2 +0.8
comp=Z,20nm,1.0s,baz=359,slow=24,SNR=16
KMBO Kilima Mbogo 121.76 318 *e*PKPdf PKPdf 23 02 38.0 +0.6
CPUP Villa Florida 128.46 84 PKP PKPdf 23 02 49.0 -0.8
comp=Z,1.1nm,0.4s,baz=308,slow=1.5,SNR=7.6
CPUP pPKP pPKPdf 23 03 09.3 -0.6
comp=Z,1.8nm,0.6s,baz=340,slow=6.4,SNR=3.1
CPUP Villa Florida 128.46 84 PKIKP PKPdf 23 02 49.0 -0.8
CPUP pmax pmax
comp=Z,1.0nm,0.4s
CPUP pmax pmax
comp=Z,2.0nm,0.6s
CPUP Villa Florida 128.46 84 PKP PKPdf 23 02 49.0 -0.8
CPUP pPKP pPKPdf 23 03 09.3 -0.6
PLCA Paso Flores 130.11 108 PKP PKPdf 23 02 52.1 -0.3
comp=Z,4.2nm,0.8s,baz=354,slow=14,SNR=3.4
PLCA pPKP pPKPdf 23 03 12.1 -0.5
comp=Z,10nm,1.0s,baz=259,slow=2.7,SNR=6.1
PLCA SKPbc 23 06 07.0
comp=Z,5.0nm,0.8s,baz=331,slow=5.1,SNR=5.6
PLCA Paso Flores 130.11 108 PKIKP PKPdf 23 02 52.1 -0.4
PLCA pmax pmax
comp=Z,4.0nm,0.8s
PLCA pmax pmax
comp=Z,10.0nm,1.0s
PLCA pmax pmax
comp=N,5.0nm,0.8s
QSPA South Pole Qui 141.72 180 *e*PKP PKPdf 23 03 06.8 -6.0
PMSA Palmer Station 144.44 137 pPKP pPKPdf 23 03 36.8 -1.4
comp=N,45nm,1.0s,baz=250,slow=6.5,SNR=2.4
TSUM Tsumeb 145.34 335 *e*PKP PKPdf 23 03 20.7 -0.3
TSUM *e*SKP 23 06 50.9
MAW Mawson 147.61 218 ⇑*i*P PKPdf 23 03 25.2 +1.9
comp=N,25nm,0.9s
MAW Mawson 147.61 218 PKPbc PKPbc 23 03 25.6 -0.5
comp=N,36nm,0.9s,baz=40,slow=1.9,SNR=33
MAW pPKPbc pPKPbc 23 03 44.6 -1.5
comp=N,35nm,0.9s,baz=99,slow=6.1,SNR=7.9
MAW Mawson 147.61 218 *e*PKPdf PKPdf 23 03 23.9 +0.5
MAW *e*PKPbc PKPbc 23 03 26.1 -0.1
LBTB Lobatse 148.04 319 *e*PKIKP PKPdf 23 03 25.1 -0.3
LBTB *e* 23 03 28.9
BOSA Boshof 151.35 316 PKP PKPdf 23 03 30.6 +0.1
comp=N,167nm,0.8s,baz=337,slow=4.6,SNR=126
BOSA PKPbc PKPbc 23 03 36.0 -0.6
comp=N,167nm,0.8s,baz=33,slow=1.8,SNR=262
BOSA PKPab PKPab 23 03 44.2 -0.7
comp=N,28nm,0.8s,baz=66,slow=5.2,SNR=8.2
BOSA Boshof 151.35 316 PKIKP PKPdf 23 03 30.7 +0.2
BOSA 23 03 36.1
BOSA 23 03 44.3
BOSA pmax pmax
comp=Z,167nm,0.8s
BOSA pmax pmax
comp=Z,167nm,0.8s
BOSA pmax pmax
comp=Z,28nm,0.8s
BOSA Boshof 151.35 316 *e*PKPdf PKPdf 23 03 30.8 +0.2
BOSA *e*PKPbc PKPbc 23 03 36.8 +0.1
BOSA PKPab PKPab 23 03 44.8 -0.1
VNA1 Neumayer--Stat 160.56 169 *e*PKPdf PKPab 23 04 21.4 -1.9
MAIT Maitri 160.70 189 *e*PKPdif PKPdf 23 04 21.2 -2.7

*DDA **07** 22:49:49.7, 37.°93N×37.°94E, h7km±4km, Md2.9*
*ISK **07** 22:49:49.6, 37.°96N×37.°89E, h18km, MD3.0*
*CSEM **07** 22:49:49.7±0.2, 37.°94N×37.°93E, h16km±2km, MD2.9,*
Error ellipse: s-maj=4.7km s-min=3.7km az=138.0
*ISCJB **07** 22:49:50.4±0.5, 37.°95N±0.°03×37.°94E±0.°05, h23km±8km,*
Error ellipse: s-maj=6.7km s-min=5.2km az=38.0
ISC 07 22:49:50.1±0.5, **37.°94N**±0.°03×**37.°93E**±0.°04, **h18**km±6km,
n22, σ0.°91/35, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKCD	**Akcadag**	**0.35**	**358**	*i* P	**Pg**	**22 49 56.8**	**-0.7**
AKCD				*i* S	**Sg**	**22 50 03.6**	**+1.1**
AKCD	**Akcadag**	**0.35**	**358**	*i* P	**Pg**	**22 49 56.8**	**-0.7**
AKCD				*i* S	**Sg**	**22 50 03.6**	**+1.1**
MYA	**Malataya**	**0.55**	**45**	*e*PG	**Pg**	**22 50 00.3**	**-0.6**
MYA				*e*SG	**Sg**	**22 50 09.7**	**+1.4**
MYA	**Malataya**	**0.55**	**45**	*e*Pg	**Pg**	**22 50 00.3**	**-0.6**
MYA				*e*Sg	**Sg**	**22 50 09.7**	**+1.4**
ATAB	**Bozova**	**0.55**	**149**	*i* P	**Pg**	**22 50 00.2**	**-0.8**
ATAB				*i* S	**Sg**	**22 50 08.4**	**0.0**
ATAB	**Bozova**	**0.55**	**149**	*i* P	**Pg**	**22 50 00.2**	**-0.8**
ATAB				*i* S	**Sg**	**22 50 08.4**	**0.0**
URFA	**Urfa**	**0.86**	**125**	*e*PG	**Pg**	**22 50 07.5**	**+0.7**
URFA				*e*SG	**Sg**	**22 50 21.4**	**+3.1**
URFA	**Urfa**	**0.86**	**125**	*e*Pg	**Pg**	**22 50 07.5**	**+0.6**
URFA				*e*Sg	**Sg**	**22 50 21.4**	**+3.2**
KMRS	**Kahramanmaras**	**0.93**	**242**	*e*PG	**Pg**	**22 50 07.5**	**-0.6**
KMRS				*e*SG	**Sg**	**22 50 20.8**	**+0.5**
KMRS	**Kahramanmaras**	**0.93**	**242**	*e*Pg	**Pg**	**22 50 07.5**	**-0.6**
KMRS				*e*Sg	**Sg**	**22 50 20.8**	**+0.5**
GAZ	**Gaziantep**	**0.96**	**217**	*e*PG	**Pg**	**22 50 08.5**	**-0.2**
GAZ	**Gaziantep**	**0.96**	**217**	*e*Pg	**Pg**	**22 50 08.5**	**-0.2**
ELZG	**Elazig**	**1.00**	**56**	*i* P	**Pg**	**22 50 08.1**	**-1.3**
ELZG				*i* S	**Sg**	**22 50 21.1**	**-1.4**
ELZG	**Elazig**	**1.00**	**56**	*i* P	**Pg**	**22 50 08.1**	**-1.3**
ELZG				*i* S	**Sg**	**22 50 21.1**	**-1.4**
DARE	**Darende-Malaty**	**1.01**	**354**	*e*PG	**Pg**	**22 50 03.3**	**-6.5**
DARE				*e*SG	**Sg**	**22 50 14.4**	**-8.7**
SVRC	**Sivrice-ELAZID**	**1.17**	**68**	*e*PN	**Pn**	**22 50 11.8**	**+0.3**
SVRC	**Sivrice-ELAZID**	**1.17**	**68**	*e*Pn	**Pn**	**22 50 11.8**	**+0.3**
SARI	**SarD1z-Kayseri**	**1.22**	**308**	*e*PN	**Pn**	**22 50 12.9**	**+0.7**
SARI	**SarD1z-Kayseri**	**1.22**	**308**	*e*Pn	**Pn**	**22 50 12.9**	**+0.6**
KOZT	**Kozan**	**1.73**	**255**	*e*PN	**Pn**	**22 50 18.7**	**-0.6**
SVSK	**Karacayir**	**2.10**	**340**	*e*PN	**Pn**	**22 50 24.8**	**+0.4**
SVSK	**Karacayir**	**2.10**	**340**	*e*Pn	**Pn**	**22 50 24.8**	**+0.4**

*ISCJB **07** 23:05:58.5±1.5, 10.°78N±0.°06×61.°81W±0.°08, h47km±10km,*
Error ellipse: s-maj=13.4km s-min=8.8km az=152.4
*TRN **07** 23:05:58.7, 10.°76N×61.°80W, h45km, MD2.5*
*NEIC **07** 23:05:58.7, 10.°76N×61.°80W, h45km, MD2.5(TRN), After TRN.*
ISC 07 23:05:58.8±1.5, **10.°77N**±0.°06×**61.°81W**±0.°08, **h45**km±11km,
n14, σ0.°52/28, **2C, Trinidad**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TCE	**Chacachacare**	**0.09**	**140**	⇑*i*P	**Pn**	**23 06 05.4**	**-0.6**
TCE				*e*S	**Sn**	**23 06 11.2**	**+0.2**
TCE	**Chacachacare**	**0.09**	**140**	⇑*i*P	**Pn**	**23 06 05.4**	**-0.6**
TCE				*e*S	**Sn**	**23 06 11.2**	**+0.2**
TRN	**Trinidad (W)**	**0.42**	**107**	*e*P	**Pn**	**23 06 08.6**	**-0.2**
TRN				*e*S	**Sn**	**23 06 16.3**	**+0.4**
TRN	**Trinidad (W)**	**0.42**	**107**	*e*P	**Pn**	**23 06 08.6**	**-0.2**
TRN				*e*S	**Sn**	**23 06 16.3**	**+0.4**
TPP	**Pointe-a-Pierr**	**0.57**	**142**	*e*P	**Pn**	**23 06 10.4**	**-0.3**
TPP				*e*S	**Sn**	**23 06 19.1**	**-0.1**
TPP	**Pointe-a-Pierr**	**0.57**	**142**	*e*P	**Pn**	**23 06 10.4**	**-0.3**
TPP				*e*S	**Sn**	**23 06 19.1**	**-0.1**
TBH	**Brigand Hill**	**0.79**	**111**	*e*P	**Pn**	**23 06 13.1**	**-0.4**
TBH				*e*S	**Sn**	**23 06 25.6**	**+1.4**
TBH	**Brigand Hill**	**0.79**	**111**	*e*P	**Pn**	**23 06 13.1**	**-0.4**
TBH				*e*S	**Sn**	**23 06 24.1**	**-0.1**
TPR	**Prospect**	**1.10**	**68**	*e*P	**Pn**	**23 06 18.1**	**+0.3**
TPR				*e*S	**Sn**	**23 06 31.6**	**-0.2**
TPR	**Prospect**	**1.10**	**68**	*e*P	**Pn**	**23 06 18.1**	**+0.3**
TPR				*e*S	**Sn**	**23 06 31.6**	**-0.2**
BOT	**Bacolet**	**1.15**	**70**	*e*P	**Pn**	**23 06 18.4**	**0.0**
BOT				*e*S	**Sn**	**23 06 32.5**	**-0.5**
BOT	**Bacolet**	**1.15**	**70**	*e*P	**Pn**	**23 06 18.4**	**0.0**
BOT				*e*S	**Sn**	**23 06 32.5**	**-0.5**
GRW	**Mount Saint Ca**	**1.39**	**6**	*e*P	**Pn**	**23 06 22.9**	**+1.2**
GRW				*e*S	**Sn**	**23 06 38.5**	**-0.5**
GRW	**Mount Saint Ca**	**1.39**	**6**	*e*P	**Pn**	**23 06 22.9**	**+1.2**
GRW				*e*S	**Sn**	**23 06 38.5**	**-0.5**

*NEIC **07** 23:17:02.5, 32.°95S×69.°06W, h10km, ML3.2(GUC), After GUC.*
NEIC Felt [III] at Mendoza.
GUC 07 23:17:02.5±0.8, **32.°95S**×**69.°06W**, **h10**km±4km, **MD3.8,**
ML3.2, 8C-11D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FCH	**Farellones**	**1.10**	**249**	⇓*i*P	Pb	23 17 23.1	-0.6
FCH				*e*S	Sg	23 17 38.5	+0.5
FCH	**Farellones**	**1.10**	**249**	⇓*i*P	Pb	23 17 23.1	-0.6
FCH				AML	AML	23 17 35.9	
	comp=N,474nm,0.4s						
FCH				*e*S	Sg	23 17 38.5	+0.5
LMEL	**Las Melosas**	**1.31**	**226**	⇓*i*P	Pn	23 17 26.5	-0.4
LMEL				*i* S	Sb	23 17 44.9	+0.7
LMEL	**Las Melosas**	**1.31**	**226**	⇓*i*P	Pn	23 17 26.5	-0.4
LMEL				*i* S	Sb	23 17 44.9	+0.7
LMEL				AML	AML	23 17 47.0	
	comp=N,560nm,0.1s						
CLCH	**Cerro Calan**	**1.32**	**250**	⇓*i*P	Pn	23 17 26.9	-0.1
CLCH				*i* S	Sb	23 17 45.4	+1.0
CLCH				AML	AML	23 17 50.8	
	comp=E,410nm,0.1s						
CLCH				AML	AML	23 17 51.5	
	comp=E,544nm,0.6s						
JACH	**Jahuel**	**1.32**	**281**	⇓*i*P	Pn	23 17 26.9	-0.1
JACH				*i* S	Sb	23 17 45.4	+1.1
JACH	**Jahuel**	**1.32**	**281**	⇓*i*P	Pn	23 17 26.9	-0.1
JACH				*i* S	Sb	23 17 45.4	+1.1
PEL	**Peldehue**	**1.38**	**261**	⇑*i*P	Pn	23 17 27.9	+0.1
PEL				*i* S	Sb	23 17 46.6	+0.5
PEL				AML	AML	23 17 47.1	
	comp=N,754nm,0.3s						
PCH	**Pirque**	**1.39**	**241**	⇑*i*P	Pn	23 17 28.3	+0.3
PCH				*i* S	Sb	23 17 48.0	+1.6
PCH	**Pirque**	**1.39**	**241**	⇑*i*P	Pn	23 17 28.3	+0.3
PCH				*i* S	Sb	23 17 48.0	+1.6
CHCH	**Chadas Angostu**	**1.66**	**233**	⇑*i*P	Pn	23 17 32.8	+1.2
CHCH				*i* S	Sn	23 17 55.8	+2.8
CHCH	**Chadas Angostu**	**1.66**	**233**	⇑*i*P	Pn	23 17 32.8	+1.2
CHCH				*i* S	Sn	23 17 55.8	+2.8
TACH	**Talagante**	**1.72**	**245**	⇓*i*P	Pn	23 17 33.7	+1.1
TACH	**Talagante**	**1.72**	**245**	⇓*i*P	Pn	23 17 33.7	+1.1
CACH	**El Canelo**	**1.74**	**227**	⇓*i*P	Pn	23 17 34.4	+1.6
CACH				*i* S	Sn	23 17 58.2	+3.2
CACH	**El Canelo**	**1.74**	**227**	⇓*i*P	Pn	23 17 34.4	+1.6
CACH				*i* S	Sn	23 17 58.2	+3.2
LNV	**Longovilo**	**2.21**	**242**	⇑*i*P	Pn	23 17 41.6	+2.3
LNV				*i* S	Sn	23 18 11.5	+4.9
LNV	**Longovilo**	**2.21**	**242**	⇑*i*P	Pn	23 17 41.6	+2.3
LNV				*i* S	Sn	23 18 11.5	+4.9
CHNG	**Los Chungos**	**2.32**	**297**	⇑*i*P	Pn	23 17 43.5	+2.7
CHNG				*i* S	Sn	23 18 14.7	+5.3
CHNG				AML	AML	23 18 17.5	
	comp=N,234nm,0.7s						
CMCH	**Combarbala**	**2.42**	**316**	*i* P	Pn	23 17 44.1	+2.0
CMCH				*e*S	Sn	23 18 17.2	+5.4
CMCH	**Combarbala**	**2.42**	**316**	*i* P	Pn	23 17 44.1	+2.0
CMCH				*e*S	Sn	23 18 17.2	+5.4
CMCH				AML	AML	23 18 21.0	
	comp=N,2μm,0.7s						
LCO	**Las Campanas**	**4.17**	**340**	*e*Pn	Pn	23 18 06.4	+0.2
LCO				*e*Sn	Sn	23 18 52.9	-2.1
TRQA	**Tornquist**	**7.70**	**133**	*e*Pn	Pn	23 18 52.6	-2.1
TRQA				*e*Sn	Sn	23 20 21.6	-0.4
CPUP	**Villa Florida**	**12.14**	**60**	Pn	Pn	23 19 57.1	+1.5
LPAZ	**La Paz**	**16.61**	**3**	*e*Pn	Pn	23 20 55.6	+0.1

JMA 07 23:34:08.8±0.2, **43.°67N**×**147.°27E**, **h28**km, **M3.6, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.15**	**255**	P	Pn	23 34 29.3	+0.3
NEM2				*e*S	Sn	23 34 44.4	+0.6
JRA	**Rausu**	**1.58**	**281**	P	Pn	23 34 35.5	+0.6
JRA				*e*S	Sn	23 34 55.2	+0.9
JNK	**Nakash**	**1.85**	**268**	P	Pn	23 34 39.4	+0.7
JNK				*e*S	Sn	23 35 01.7	+0.5
JAK	**Akkeshi**	**2.00**	**251**	P	Pn	23 34 41.4	+0.8
JAK				*e*S	Sn	23 35 05.4	+0.8
JTKR	**Abashiri--Toko**	**2.45**	**278**	P	Pn	23 34 48.3	+1.4
JAR	**Ashorobuto**	**2.58**	**263**	P	Pn	23 34 50.3	+1.7
JAR				*e*S	Sn	23 35 20.9	+2.0
JOB	**Onbets**	**2.62**	**254**	P	Pn	23 34 50.5	+1.3
JOB				*e*S	Sn	23 35 21.6	+1.5
JCH	**Churui**	**3.05**	**251**	P	Pn	23 34 55.9	+0.8
JCH				*e*S	Sn	23 35 31.9	+1.3

MEX 07 23:47:40.3±0.8, **17.°35N**×**100.°18W**, **h20**km±44km, **MD3.6, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.31**	**195**	*e*P	Pb	23 47 45.6	-1.5
CAIG				*i* S	Sb	23 47 50.8	-0.9
ACX	**Acapulco**	**0.57**	**147**	*i* P	Pb	23 47 49.9	-1.6
ACX				*i* S	Sb	23 47 56.0	-3.2
PNIG	**Pinotepa**	**2.19**	**115**	*i* P	Pn	23 48 13.5	-2.0
PNIG				*i* S	Sn	23 48 38.2	-3.8
UTMO	**Huajuapan**	**2.32**	**78**	*i* P	Pn	23 48 15.2	-2.2
UTMO				*i* S	Sn	23 48 41.0	-4.3

GUC 07 23:50:24.4±0.8, **22.°42S**×**67.°67W**, **h200**km, **ML3.6, 2C-3D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**1.69**	**275**	⇑*i*P	Pn	23 51 07.7	+7.9
PB04				*i* S	Sn

comp=E,319nm,0.2s
CEN1 Los Morros 2.52 247 ⇓ *i*P Pn 23 51 13.5 +4.9
CEN1 *i* S Sn 23 51 50.0 +7.0
CEN1 AML AML 23 51 52.6
comp=N,50nm,0.1s
CEN1 AML AML 23 51 54.9
comp=E,57nm,0.5s
ANCH Antofagasta 2.82 243 ⇓ *i*P Pn 23 51 13.3 +1.4
ANCH *i* S Sn 23 51 50.3 +1.3
HMBC Humberston 2.97 315 ⇑ *i*P Pn 23 51 13.9 +0.2
HMBC *i* S Sn 23 51 52.6 +0.4
HMBC AML AML 23 51 54.4
comp=N,247nm,0.3s
PSGC Pisagua 3.62 320 *e*P Pn 23 51 21.0 -0.6
PSGC *i* S Sn 23 52 05.3 -1.0
MNMC Miæe Miæ 3.73 331 *e*P Pn 23 51 23.2 +0.3
MNMC *i* S Sn 23 52 09.1 +0.3

*NEIC **07** 23:57:10.0, 42.°06S×72.°50W, h8km, mb4.0/1, ML3.5(GUC), After GUC.*
NEIC Felt [III] at Hornopiren.
GUC 07 23:57:10.0±0.3, 42.°06S×72.°50W, h8km±1km, ML3.5, 4C-1D, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILCA	**Isla Las Cabra**	**0.03**	**261**	⇓ *i*P	Pg	23 57 11.3	-0.2
ILCA				*i* S	Sg	23 57 12.4	-0.1
ILCA				AML	AML	23 57 12.9	
	comp=N,24μm,0.4s						
HOCH	**HornopirØn**	**0.16**	**24**	⇑ *e*P	Pg	23 57 13.5	+0.1
HOCH				*i* S	Sg	23 57 16.0	+0.4
PUEL	**Puelo Alto**	**0.42**	**21**	⇑ *i*P	Pg	23 57 18.1	0.0
PUEL				*i* S	Sg	23 57 24.2	+0.5
PMCH	**Puerto Montt**	**0.64**	**332**	⇑ *e*P	Pg	23 57 21.9	-0.4
PMCH				*e*S	Sg	23 57 31.1	+0.5
PMCH	**Puerto Montt**	**0.64**	**332**	⇑ *e*P	Pg	23 57 21.9	-0.4
PMCH				*e*S	Sg	23 57 31.1	+0.5
PLCA	**Paso Flores**	**1.97**	**49**	*e*Pn	Pn	23 57 43.6	-0.1
PLCA				*e*Sn	Sn	23 58 08.6	-0.1
TRQA	**Tornquist**	**9.00**	**67**	*e*Pn	Pn	23 59 19.7	-0.5
CPUP	**Villa Florida**	**20.04**	**43**	P	P	00 01 43.1	-0.3
LPAZ	**La Paz**	**25.95**	**10**	P	P	00 02 42.8	-0.2
NNA	**Nana**	**30.19**	**352**	*e*P	P	00 03 20.9	0.0
OTAV	**Otavalo**	**42.44**	**351**	*e*P	P	00 05 04.8	-0.6
	comp=N,2.9nm,0.9s						

*NEIC **08** 00:16:39.0, 24.°00S×67.°17W, h210km, mb3.8/2, After GUC.*
GUC 08 00:16:39.0±0.7, 24.°00S×67.°17W, h210km, ML4.3, 6C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**2.84**	**282**	*e*P	Pn	00 17 30.4	+3.0
CEN1				*i* S	S	00 18 08.9	+3.8
CEN1				AML	AML	00 18 12.2	
	comp=N,289nm,0.9s						
ANCH	**Antofagasta**	**2.98**	**275**	⇑ *i*P	Pn	00 17 30.8	+1.8
ANCH				*i* S	S	00 18 09.6	+1.6
ANCH	**Antofagasta**	**2.98**	**275**	⇑ *i*P	Pn	00 17 30.8	+1.8
ANCH				*i* S	S	00 18 09.6	+1.6
MACH	**Maria Elena**	**2.98**	**307**	⇑ *i*P	Pn	00 17 31.1	+2.1
MACH				*i* S	S	00 18 10.7	+2.6
MECH	**Mejillones**	**3.13**	**286**	*e*P	Pn	00 17 32.9	+2.1
MECH				*e*S	S	00 18 13.4	+2.2
MECH				AML	AML	00 18 20.9	
	comp=E,517nm,0.3s						
PB01	**Plate Boundary**	**3.64**	**324**	⇑ *i*P	Pn	00 17 37.6	+0.9
PB01				*i* S	S	00 18 23.1	+0.9
HMBC	**Humberston**	**4.48**	**325**	⇑ *i*P	Pn	00 17 46.8	-0.3
HMBC				*i* S	S	00 18 40.9	0.0
PSGC	**Pisagua**	**5.17**	**327**	⇑ *i*P	Pn	00 17 53.7	-2.1
PSGC				*i* S	S	00 18 55.0	-1.6
LPAZ	**La Paz**	**7.73**	**353**	*e*Pn	Pn	00 18 29.5	+0.7
	comp=E,2.7nm,0.3s						
LPAZ				*e*Sn	S	00 19 57.2	+0.9
CPUP	**Villa Florida**	**9.21**	**107**	*e*Pn	Pn	00 18 48.1	+0.2
TRQA	**Tornquist**	**14.70**	**164**	Pn	Pn	00 19 56.7	-0.3
	comp=E,1.6nm,0.6s						
NNA	**Nana**	**15.07**	**321**	Pn	Pn	00 20 01.6	-0.1

*CSEM **08** 00:18:27.3±0.1, 41.°40N×23.°07E, h5km, ML1.7, Error ellipse: s-maj=2.7km s-min=2.0km az=85.0*
*THE **08** 00:18:27.6, 41.°39N×23.°09E, h1km±1km, ML2.7/7, Error ellipse: s-maj=1.0km s-min=0.4km az=276.0*
*SKO **08** 00:18:28.7, 41.°48N×23.°12E, h4km, M1.8, ML2.0*
*BEO **08** 00:18:28.3±0.5, 41.°40N×22.°98E, h9km±4km, ML1.9/4*
ISC 08 00:18:27.5±0.4, 41.°41N±0.°02×23.°05E±0.°03, h6km±4km, n37, σ0°78/70, 1C, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.37**	**257**	*i*Pg	Pg	00 18 34.7	-0.1
VAY				*e*Sg	Sg	00 18 39.9	+0.2
VAY	**Valandovo**	**0.37**	**257**	⇑ *e*Pg	Pg	00 18 36.6	+1.8
VAY				*e*Sg	Sg	00 18 43.6	+3.9
VAY				*e*Lg		00 18 43.7	
	comp=N,104nm,0.2s						
VAY				*e*Lg		00 18 44.0	
	comp=E,76nm,0.2s						
VAY	**Valandovo**	**0.37**	**257**	P	Pg	00 18 34.7	-0.1
VAY				S	Sg	00 18 40.8	+1.1
VAY	**Valandovo**	**0.37**	**257**	P	Pg	00 18 34.7	-0.1
VAY				*e*Sg	Sg	00 18 39.9	+0.2
VAY				S	Sg	00 18 40.8	+1.1
SOH	**Sokhos**	**0.62**	**159**	P	Pg	00 18 39.2	-0.3
SOH				S	Sg	00 18 47.7	0.0
SOH	**Sokhos**	**0.62**	**159**	P	Pg	00 18 39.2	-0.3
SOH				S	Sg	00 18 47.7	0.0
THE	**Thessaloniki**	**0.78**	**185**	P	Pg	00 18 42.0	-0.4
THE				S	Sg	00 18 52.8	+0.3
THE	**Thessaloniki**	**0.78**	**185**	P	Pg	00 18 42.0	-0.4
THE				S	Sg	00 18 52.8	+0.3
HORT	**Hortiatis**	**0.81**	**178**	P	Pg	00 18 42.7	-0.3
HORT				S	Sg	00 18 53.9	+0.4
HORT	**Hortiatis**	**0.81**	**178**	P	Pg	00 18 42.7	-0.3
HORT				S	Sg	00 18 53.9	+0.4
PLG	**Polygyros**	**1.07**	**164**	P	Pg	00 18 47.3	-0.8
PLG				S	Sg	00 19 02.7	+0.7
PLG	**Polygyros**	**1.07**	**164**	P	Pg	00 18 47.3	-0.8
PLG				S	Sg	00 19 02.7	+0.7
KAVA	**Kavala**	**1.17**	**110**	P	Pg	00 18 49.0	-1.0
KAVA				S	Sg	00 19 05.3	0.0
KAVA	**Kavala**	**1.17**	**110**	P	Pg	00 18 49.0	-1.0
KAVA				S	Sg	00 19 05.3	0.0
VTS	**Vitosha**	**1.19**	**5**	*e*Pg	Pg	00 18 49.7	-0.7
VTS				*e*Sg	Sg	00 19 08.4	+2.6
VTS	**Vitosha**	**1.19**	**5**	P	Pg	00 18 50.0	-0.4
VTS				S	Sg	00 19 07.4	+1.6
VTS	**Vitosha**	**1.19**	**5**	*e*Pg	Pg	00 18 49.7	-0.7
VTS	**Vitosha**	**1.19**	**5**	P	Pg	00 18 50.0	-0.4
VTS				S	Sg	00 19 07.4	+1.6
VTS				*e*Sg	Sg	00 19 08.4	+2.6
OUR	**Ouranopolis**	**1.28**	**146**	P	Pn	00 18 51.0	-1.0
OUR				S	Sg	00 19 08.8	+0.1
OUR	**Ouranopolis**	**1.28**	**146**	P	Pn	00 18 51.0	-1.0
OUR				S	Sg	00 19 08.8	+0.1
FNA	**Florina**	**1.41**	**244**	P	Pn	00 18 54.0	+0.2
FNA				S	Sb	00 19 13.8	+1.3
FNA	**Florina**	**1.41**	**244**	P	Pn	00 18 54.0	+0.2
FNA				S	Sb	00 19 13.8	+1.3
PLD	**Plovdiv**	**1.42**	**60**	*i*Pg	Pg	00 18 55.0	+0.3
PLD				*e*Sg	Sg	00 19 14.2	+1.1
PLD	**Plovdiv**	**1.42**	**60**	P	Pn	00 18 53.5	-0.4
PLD				S	Sb	00 19 13.8	+1.1
PLD	**Plovdiv**	**1.42**	**60**	P	Pn	00 18 53.5	-0.4
PLD	**Plovdiv**	**1.42**	**60**	*i*Pg	Pg	00 18 55.0	+0.3
PLD				S	Sb	00 19 13.8	+1.1
PAIG	**Paliouri**	**1.55**	**162**	P	Pn	00 18 55.3	-0.4
PAIG				S	Sn	00 19 16.5	+0.4
PAIG	**Paliouri**	**1.55**	**162**	P	Pn	00 18 55.3	-0.4
PAIG				S	Sn	00 19 16.5	+0.4
BARS	**Barje**	**1.69**	**327**	*e*Pn	Pn	00 18 57.1	-0.4
BARS				*e*Sg	Sg	00 19 21.5	-0.2
BARS	**Barje**	**1.69**	**327**	*e*Pn	Pn	00 18 57.1	-0.4
BARS				*e*Sg	Sg	00 19 21.5	-0.2
ZAPS	**Zavoj**	**1.89**	**351**	*e*Pn	Pn	00 19 00.6	+0.2
ZAPS				*e*Sg	Sg	00 19 26.1	-2.3
XOR	**Xorichti**	**2.04**	**177**	P	Pn	00 19 01.8	-0.6
XOR	**Xorichti**	**2.04**	**177**	P	Pn	00 19 01.8	-0.6
ALN	**Alexandroupoli**	**2.31**	**102**	P	Pn	00 19 05.6	-0.6
ALN				S	Sn	00 19 35.6	+0.6
ALN	**Alexandroupoli**	**2.31**	**102**	P	Pn	00 19 05.6	-0.6
ALN				S	Sn	00 19 35.6	+0.6
AOS	**Alonnisos**	**2.32**	**164**	P	Pn	00 19 05.5	-0.8
AOS	**Alonnisos**	**2.32**	**164**	P	Pn	00 19 05.5	-0.8

*GUC **08** 00:20:57.3±0.6, 20.°42S×69.°47W, h94km±4km, ML3.8*
*ISCJB **08** 00:20:58.4±0.6, 20.°37S±0.°03×68.°99W±0.°06, h50km±11km, Error ellipse: s-maj=10.1km s-min=5.4km az=7.7*
*IDC **08** 00:21:01.5±4.5, 20.°55S×68.°87W, h65km±96km, mb3.3/1, mb1 3.8/4, mb1mx3.5/17, mbtmp3.6/4, ML4.0/3, Error ellipse: s-maj=41.0km s-min=25.8km az=64.0*
*NEIC **08** 00:21:01.0±0.9, 20.°43S×68.°86W, h58km±15km, mb3.6/2, Error ellipse: s-maj=15.0km s-min=9.2km az=81.0*
ISC 08 00:21:00.0±0.5, 20.°39S±0.°03×69.°06W±0.°05, h40km±13km, n17, σ1°54/27, 3C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**0.76**	**211**	⇑ *i*P	Pn	00 21 13.9	-0.5
PB01				*i* S	Sn	00 21 26.0	+1.3
PB01				AML	AML	00 21 26.9	
	comp=N,5μm,0.1s						
HMBC	**Humberston**	**0.78**	**278**	⇑ *i*P	Pn	00 21 12.3	-2.2
HMBC				*i* S	Sn	00 21 23.5	-1.6
HMBC				AML	AML	00 21 25.0	
	comp=E,5μm,0.6s						
MNMC	**Miæe Miæ**	**1.35**	**338**	⇓ *i*P	Pn	00 21 21.4	-0.9
MNMC				*i* S	Sn	00 21 39.6	+0.7
MNMC				AML	AML	00 21 42.5	
	comp=N,4μm,0.7s						
PB04	**Plate Boundary**	**1.91**	**192**	*e*P	Pn	00 21 31.1	+1.0
PB04				*i* S	Sn	00 21 55.4	+2.5
PB04				AML	AML	00 22 03.0	
	comp=E,672nm,0.9s						
MACH	**Maria Elena**	**1.91**	**200**	⇑ *i*P	Pn	00 21 28.0	-2.1
MACH				*i* S	Sn	00 21 51.4	-1.6
LPAZ	**La Paz**	**4.17**	**12**	P	Pn	00 22 03.6	+2.4
	comp=E,2.2nm,0.3s,baz=191,slow=7.5,SNR=56						
LPAZ				S	Sn	00 22 55.8	+7.0
	comp=E,0.3nm,0.3s,baz=287,slow=20,SNR=1.8						
LPAZ	**La Paz**	**4.17**	**12**	*e*Pn	Pn	00 22 03.4	+2.2
LPAZ				Sn	Sn	00 22 53.6	+4.9
ARE	**Arequipa**	**4.53**	**329**	*e*P	Pn	00 22 08.0	+1.9
ARE				*e*S	Sn	00 22 53.0	-4.6
LCO	**Las Campanas**	**8.71**	**190**	*e*Pn	Pn	00 23 05.8	+2.3
LCO				*e*Sn	Sn	00 24 44.3	+3.8
SIV	**San Ignacio**	**8.76**	**61**	P	Pn	00 23 03.3	-1.0
	comp=E,2.3nm,0.3s,baz=252,slow=11,SNR=29						
SIV				S	Sn	00 24 41.3	-0.4
	comp=E,0.1nm,0.3s,baz=313,slow=19,SNR=3.2						
CPUP	**Villa Florida**	**12.29**	**121**	P	Pn	00 23 52.1	-0.4
	comp=E,0.2nm,0.3s,baz=295,slow=14,SNR=3.9						
CPUP	**Villa Florida**	**12.29**	**121**	Pn	Pn	00 23 50.2	-2.3
PLCA	**Paso Flores**	**20.32**	**183**	P	P	00 25 30.7	-1.9
	comp=E,2.1nm,0.7s,baz=342,slow=11,SNR=3.1						
PLCA	**Paso Flores**	**20.32**	**183**	*e*P	P	00 25 31.2	-1.4
	comp=E,2.0nm,0.7s						
OTAV	**Otavalo**	**22.46**	**335**	*e*P	P	00 25 58.2	+2.4
	comp=E,1.4nm,0.6s						
BCIP	**Isla Barro Col**	**31.22**	**339**	P	P	00 27 15.6	-0.2
BBGH	**Gun Hill**	**34.60**	**16**	*e*P	P	00 27 44.9	-0.5

*ISCJB **08** 00:32:57.8±2.1, 40.°32N±0.°05×25.°8E±0.°2, h28km±5km, Error ellipse: s-maj=25.5km s-min=7.3km az=11.3*
*ISK **08** 00:32:57.9, 40.°29N×25.°88E, h26km, MD2.6*
*DDA **08** 00:32:58.8, 40.°28N×25.°74E, h28km, Md2.9*
*CSEM **08** 00:32:59.0±0.7, 40.°30N×25.°93E, h21km±3km, MD2.6, Error ellipse: s-maj=18.5km s-min=9.3km az=111.0*
ISC 08 00:32:58.0±2.0, 40.°32N±0.°05×25.°8E±0.°2, h26km±6km, n21, σ0°71/30, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.16**	**142**	*e*PG	Pb	00 33 03.0	-0.3
GADA				*e*SG	Sb	00 33 06.4	-0.6
GADA	**Gvkgeada**	**0.16**	**142**	*e*Pg	Pb	00 33 03.1	-0.3
GADA				*e*Sg	Sb	00 33 06.4	-0.6
ENEZ	**Enez**	**0.51**	**35**	*e*PG	Pb	00 33 08.7	+0.3
ENEZ				*e*SG	Sb	00 33 16.4	+0.9
ENEZ	**Enez**	**0.51**	**35**	*e*Pg	Pb	00 33 08.7	+0.3
ENEZ				*e*Sg	Sb	00 33 16.4	+1.0
BOZC	**Bozcaada**	**0.53**	**155**	*i* P	Pb	00 33 08.9	+0.2
BOZC				*i* S	Sb	00 33 16.8	+1.0
GELI	**Tayfur-Gelibol**	**0.55**	**82**	*e*PG	Pb	00 33 08.3	-0.7
GELI	**Tayfur-Gelibol**	**0.55**	**82**	*e*Pg	Pb	00 33 08.3	-0.7
ERIK	**Erikli-Kesan**	**0.67**	**58**	*e*PG	Pb	00 33 10.9	-0.1
ERIK				*e*SG	Sb	00 33 20.2	+0.3
ERIK	**Erikli-Kesan**	**0.67**	**58**	*e*Pg	Pb	00 33 10.9	-0.1
ERIK				*e*Sg	Sb	00 33 20.3	+0.4
LPK	**Lapseki**	**0.76**	**86**	*e*PG	Pb	00 33 11.9	-0.7
LPK	**Lapseki**	**0.76**	**86**	*e*Pg	Pb	00 33 11.9	-0.7
RKY	**Sarkoy-Tekirda**	**1.14**	**71**	*e*PG	Pn	00 33 17.7	-0.5
RKY	**Sarkoy-Tekirda**	**1.14**	**71**	*e*Pg	Pn	00 33 17.7	-0.4
KRBG	**Karabiga-Canak**	**1.17**	**86**	*e*PN	Pn	00 33 17.8	-0.8
KRBG	**Karabiga-Canak**	**1.17**	**86**	*e*Pn	Pn	00 33 17.8	-0.8
MFT	**Murefte**	**1.24**	**68**	*e*PN	Pn	00 33 19.5	-0.1
MFT	**Murefte**	**1.24**	**68**	*e*Pn	Pn	00 33 19.5	-0.1
GONE	**Gonen-Balikesi**	**1.50**	**100**	*e*PN	Pn	00 33 22.4	-0.7
GONE	**Gonen-Balikesi**	**1.50**	**100**	*e*Pn	Pn	00 33 22.4	-0.7
BALY	**Balya**	**1.54**	**112**	*i* P	Pn	00 33 25.4	+1.7
BALY				*i* S	Sn	00 33 48.2	+5.5
BALY	**Balya**	**1.54**	**112**	*i* P	Pn	00 33 25.4	+1.8
BALY				*i* S	Sn	00 33 48.2	+5.5

*NEIC **08** 00:54:08.9, 33.°77S×71.°86W, h38km, MD3.6(GUC), After GUC.*
GUC 08 00:54:08.9±0.6, 33.°77S×71.°86W, h38km±2km, MD3.6, ML2.8, 8C-5D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNV	**Longovilo**	**0.42**	**117**	⇓ *i*P	Pn	00 54 18.6	+0.2
LNV				*i* S	Sn	00 54 25.8	+0.7
LNV	**Longovilo**	**0.42**	**117**	⇓ *i*P	Pn	00 54 18.6	+0.2
LNV				*i* S	Sn	00 54 25.8	+0.7
TACH	**Talagante**	**0.78**	**82**	⇑ *i*P	Pn	00 54 23.4	+0.1
TACH				*i* S	Sn	00 54 34.7	+1.0
TACH	**Talagante**	**0.78**	**82**	⇑ *i*P	Pn	00 54 23.4	+0.1
TACH				*i* S	Sn	00 54 34.7	+1.0
CHCH	**Chadas Angostu**	**1.02**	**100**	⇓ *i*P	Pn	00 54 27.5	+0.9
CHCH				*i* S	Sn	00 54 41.1	+1.4
CHCH	**Chadas Angostu**	**1.02**	**100**	⇓ *i*P	Pn	00 54 27.5	+0.9
CHCH				*i* S	Sn	00 54 41.1	+1.4
ANTU	**Antumapu**	**1.04**	**79**	*e*P	Pn	00 54 27.8	+0.9
ANTU				*i* S	Sn	00 54 42.1	+1.9
ANTU	**Antumapu**	**1.04**	**79**	*e*P	Pn	00 54 27.8	+0.9
ANTU				*i* S	Sn	00 54 42.1	+1.9
ANTU				AML	AML	00 54 42.7	
	comp=N,494nm,0.2s						
SAN	**Santiago**	**1.05**	**73**	*e*P	Pn	00 54 27.8	+0.8
SAN				*i* S	Sn	00 54 41.7	+1.3
SAN	**Santiago**	**1.05**	**73**	*e*P	Pn	00 54 27.8	+0.8
SAN				*i* S	Sn	00 54 41.7	+1.3
CACH	**El Canelo**	**1.10**	**109**	*e*P	Pn	00 54 29.8	+2.0
CACH				*i* S	Sn	00 54 45.1	+3.3
CACH	**El Canelo**	**1.10**	**109**	*e*P	Pn	00 54 29.8	+2.0
CACH				*i* S	Sn	00 54 45.1	+3.3
PCH	**Pirque**	**1.13**	**83**	⇑ *i*P	Pn	00 54 29.1	+1.0
PCH				*i* S	Sn	00 54 44.1	+1.6
PCH	**Pirque**	**1.13**	**83**	⇑ *i*P	Pn	00 54 29.1	+1.0
PCH				*i* S	Sn	00 54 44.1	+1.6
PEL	**Peldehue**	**1.16**	**58**	⇑ *i*P	Pn	00 54 29.8	+1.2
PEL				*i* S	Sn	00 54 45.3	+2.1
PEL				AML	AML	00 54 49.7	
	comp=N,495nm,0.4s						
CLCH	**Cerro Calan**	**1.16**	**72**	⇑ *i*P	Pn	00 54 29.7	+1.1
CLCH				*i* S	Sn	00 54 45.8	+2.4
CLCH				AML	AML	00 54 48.1	
	comp=E,148nm,0.3s						
LMEL	**Las Melosas**	**1.38**	**94**	⇑ *i*P	Pn	00 54 32.9	+1.3
LMEL				*i* S	Sn	00 54 51.8	+3.2
LMEL	**Las Melosas**	**1.38**	**94**	⇑ *i*P	Pn	00 54 32.9	+1.3
LMEL				*i* S	Sn	00 54 51.8	+3.2
LMEL				AML	AML	00 54 53.9	
	comp=N,371nm,0.2s						
FCH	**Farellones**	**1.38**	**72**	⇓ *i*P	Pn	00 54 37.1	+5.4
FCH				*i* S	Sn	00 54 56.3	+7.7
FCH				AML	AML	00 54 59.3	
	comp=E,328nm,0.2s						
JACH	**Jahuel**	**1.52**	**45**	*e*P	Pn	00 54 35.1	+1.6
JACH				*e*S	Sn	00 54 54.9	+2.9
JACH	**Jahuel**	**1.52**	**45**	*e*P	Pn	00 54 35.1	+1.6
JACH				*e*S	Sn	00 54 54.9	+2.9

*CSEM **08** 01:11:38.1±0.5, 50.°43N×18.°65E, h2km, ML2.7/5, Error ellipse: s-maj=11.5km s-min=5.0km az=5.0*
*ISCJB **08** 01:11:38.8±0.6, 50.°34N±0.°04×18.°65E±0.°03, h0km, Error ellipse: s-maj=5.6km s-min=2.8km az=14.6*
*PRU **08** 01:11:39.9, 50.°36N×18.°62E, h0km*
*NEIC **08** 01:11:39.7±1.4, 50.°39N×18.°66E, h5km, MG2.5(WAR), Error ellipse: s-maj=19.0km s-min=7.6km az=180.0*
*WAR **08** 01:11:41.0, 50.°24N×18.°69E*
*VIE **08** 01:11:42.9±0.7, 49.°73N×18.°76E, h0km, mb1.7/2, ML2.1/4, Error ellipse: s-maj=4.9km s-min=4.0km az=113.0 38 km ESE of Ostrava Suspected Mining induced.*
ISC 08 01:11:39.8±0.5, 50.°28N±0.°04×18.°64E±0.°03, h0km, n41, σ1°35/77, 1C-3D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.35**	**235**	*e*Pg	Pg	01 11 48.5	+2.0
RAC				*e*Sg	Sg	01 11 56.1	+5.1
RAC	**Raciborz**	**0.35**	**235**	*e*Pg	Pg	01 11 48.5	+2.0
RAC				*e*Sg	Sg	01 11 56.1	+5.1
OKC	**Ostrava-Krasne**	**0.55**	**216**	*e*Pg	Pg	01 11 51.5	+1.3
OKC				*e*Sg	Sg	01 12 00.2	+2.9
OKC	**Ostrava-Krasne**	**0.55**	**216**	*e*PG	Pg	01 11 51.5	+1.3
OKC				*e*SG	Sg	01 12 00.2	+2.9
	comp=Z,54nm,1.0s						
OKC	**Ostrava-Krasne**	**0.55**	**216**	Pg	Pg	01 11 51.5	+1.3
OKC				Sg	Sg	01 12 00.2	+2.9
	comp=Z,54nm,1.0s						
OJC	**Ojcow**	**0.75**	**94**	*e*Pg	Pg	01 11 52.5	-1.6
OJC				*e*Sg	Sg	01 12 02.3	-1.4
OJC	**Ojcow**	**0.75**	**94**	*e*Pg	Pg	01 11 52.5	-1.6
OJC				*e*Sg	Sg	01 12 02.3	-1.4
MORC	**Moravsky Berou**	**0.87**	**235**	*e*Pg	Pg	01 11 56.8	+0.3
MORC				*e*S	Sg	01 12 09.7	+2.0
MORC	**Moravsky Berou**	**0.87**	**235**	*e*Pg	Pg	01 11 56.8	+0.4
MORC				*e*Sg	Sg	01 12 09.0	+1.3
MORC				*e*S	Sg	01 12 09.7	+2.0
NIE	**Niedzica**	**1.39**	**128**	*e*Pg	Pg	01 12 06.5	+0.2
NIE				*e*Sg	Sg	01 12 24.6	+0.4
NIE	**Niedzica**	**1.39**	**128**	*e*Pg	Pg	01 12 06.5	+0.2
NIE				*e*Sg	Sg	01 12 24.6	+0.4
DPC	**Dobruska-Polom**	**1.49**	**274**	*e*Pg	Pn	01 12 08.1	+0.4
DPC				*e*Sg	Sn	01 12 26.3	-1.5
DPC	**Dobruska-Polom**	**1.49**	**274**	*e*PG	Pn	01 12 08.1	+0.4
DPC				*e*SG	Sn	01 12 26.3	-1.5
	comp=Z,22nm,0.5s						
DPC	**Dobruska-Polom**	**1.49**	**274**	Pg	Pn	01 12 08.1	+0.4
DPC				Sg	Sn	01 12 26.3	-1.5
	comp=Z,22nm,0.5s						
KSP	**Ksiaz**	**1.60**	**291**	*e*Pg	Pg	01 12 11.6	+1.2
KSP				*e*Sg	Sg	01 12 31.7	+0.6
VRAC	**Vranov**	**1.65**	**234**	*e*Pn	Pn	01 12 10.6	+0.7
VRAC				*e*Sg	Sg	01 12 32.3	-0.3
KOLL	**Kolacno**	**1.71**	**185**	*e*Pn	Pn	01 12 13.1	+2.3
KOLL				*e*Sn	Sn	01 12 33.1	-0.3
KOLL	**Kolacno**	**1.71**	**185**	*e*PN	Pn	01 12 13.1	+2.3
KOLL				*e*SN	Sn	01 12 33.1	-0.3
KOLL	**Kolacno**	**1.71**	**185**	*e*Pn	Pn	01 12 13.1	+2.3
KOLL				*e*Sn	Sn	01 12 33.1	-0.3
VYHS	**Vyhne**	**1.79**	**176**	*e*Pn	Pn	01 12 11.8	-0.1
VYHS				*e*Sn	Sn	01 12 33.3	-2.1
VYHS	**Vyhne**	**1.79**	**176**	*e*PN	Pn	01 12 11.8	-0.1
VYHS				*e*SN	Sn	01 12 33.3	-2.1
VYHS	**Vyhne**	**1.79**	**176**	*e*Pn	Pn	01 12 11.8	-0.1
VYHS				*e*Sn	Sn	01 12 33.3	-2.1
STHS	**Stebnicka Huta**	**1.90**	**116**	*e*Pn	Pb	01 12 15.6	+0.4
STHS				*e*Sn	Sb	01 12 40.3	+0.9
STHS	**Stebnicka Huta**	**1.90**	**116**	*e*PN	Pb	01 12 15.6	+0.4
STHS				*e*SN	Sb	01 12 40.3	+0.9
STHS	**Stebnicka Huta**	**1.90**	**116**	*e*Pn	Pb	01 12 15.6	+0.4
STHS				*e*Sn	Sb	01 12 40.3	+0.9
KECS	**Kecovo**	**2.17**	**145**	*e*Pn	Pg	01 12 25.5	+4.2
KECS	**Kecovo**	**2.17**	**145**	*e*PN	Pg	01 12 25.5	+4.2
PRU	**Pruhonice**	**2.65**	**265**	*e*Pg	Pb	01 12 28.0	-0.1
PRU				*e*Sg	Sg	01 13 03.3	-1.7
PRU	**Pruhonice**	**2.65**	**265**	*e*PG	Pb	01 12 28.0	-0.1
PRU				*e*SG	Sg	01 13 03.3	-1.7
	comp=Z,14nm,1.3s						
PRU	**Pruhonice**	**2.65**	**265**	Pg	Pb	01 12 28.0	-0.1
PRU				Sg	Sg	01 13 03.3	-1.7
	comp=Z,14nm,1.3s						
CONA	**Conrad Observa**	**2.98**	**219**	⇓ *i*Pg	Pb	01

*NIC **08** 01:35:47.1±0.3, 33°.73N×32°.40E, h40km, mb4.0, ML3.7, MW3.1*
*NEIC **08** 01:35:48.6±1.6, 33°.93N×32°.51E, h10km, ML3.7(NIC), Error ellipse: s-maj=18.6km s-min=11.8km az=169.0*
*SGS **08** 01:35:49.5, 33°.52N×32°.19E, h6km*
*HLW **08** 01:35:51.0, 33°.65N×32°.40E, h33km±43km, Md3.0, Ml3.4*
*NSSC **08** 01:35:56, 34°.01N×33°.15E, h40km*

ISC 08 01:35:48.1±1.3, 33°.78N±0°.02×32°.51E±0°.03, h18km±10km, n135, σ1§04/169, 3C-5D, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SZAC	Souni-Zanaja	1.02	18	P		Pb	01 36 06.1	-1.1
SZAC				S		Sb	01 36 21.4	+1.2
SZAC	Souni-Zanaja	1.02	18	P		Pb	01 36 06.1	-1.1
SZAC				S		Sb	01 36 21.4	+1.2
PPCY	Paphos	1.11	353	P		Pn	01 36 07.2	-1.5
PPCY	Paphos	1.11	353	P		Pn	01 36 07.2	-1.5
CSS	Prodhromos	1.36	30	P		Pn	01 36 10.6	-1.5
	16nm,0.3s							
CSS				S		Sn	01 36 29.8	+0.1
CSS	Prodhromos	1.36	30	ePn		Pn	01 36 10.4	-1.7
CSS				eSn		Sn	01 36 28.6	-1.1
CSS	Prodhromos	1.36	30	ePn		Pn	01 36 10.4	-1.7
CSS	Prodhromos	1.36	30	P		Pn	01 36 10.6	-1.5
	16nm,0.3s							
CSS				eSn		Sn	01 36 28.6	-1.1
CSS				S		Sn	01 36 29.8	+0.1
LEF	Lefka	1.37	13	ePN		Pn	01 36 12.0	-0.3
LEF	Lefka	1.37	13	Pg		Pg	01 36 11.1	-3.5
LEF	Lefka	1.37	13	Pg		Pg	01 36 11.1	-3.4
LEF	Lefka	1.37	13	ePn		Pn	01 36 12.0	-0.3
ALFC	Alevga	1.37	3	⇑P		Pn	01 36 10.8	-1.5
	23nm,0.1s							
ALFC				S		Sn	01 36 28.8	-1.2
ALFC	Alevga	1.37	3	⇑P		Pn	01 36 10.8	-1.5
	23nm,0.1s							
ALFC				S		Sn	01 36 28.8	-1.2
MAMC	Mammari	1.50	23	⇓P		Pn	01 36 13.3	-0.8
MAMC	Mammari	1.50	23	⇑iP		Pn	01 36 13.3	-0.8
MAMC	Mammari	1.50	23	⇓iP		Pn	01 36 13.3	-0.8
LFK	Lefkose	1.71	29	ePN		Pn	01 36 17.6	+0.6
LFK				eSN		Sn	01 36 41.8	+3.4
LFK	Lefkose	1.71	29	Pn		Pn	01 36 16.6	-0.5
LFK	Lefkose	1.71	29	Pn		Pn	01 36 16.6	-0.4
LFK				eSn		Sn	01 36 40.3	+1.8
PHNC	Paralimni	1.75	46	P		Pn	01 36 16.9	-0.6
PHNC				S		Sn	01 36 40.4	+1.0
PHNC	Paralimni	1.75	46	P		Pn	01 36 16.9	-0.6
PHNC				S		Sn	01 36 40.4	+1.0
EREN	Erenkoy	2.22	38	ePN		Pn	01 36 24.9	+1.0
EREN	Erenkoy	2.22	38	Pn		Pn	01 36 24.3	+0.4
EREN	Erenkoy	2.22	38	Pn		Pn	01 36 24.3	+0.4
EREN				eSn		Sn	01 36 52.8	+2.0
MATL	Matarih	2.37	96	eP		Pn	01 36 24.8	-1.3
MATL	Matarih	2.37	96	eP		Pn	01 36 24.8	-1.3
GAZI	Gazipasa	2.45	356	iP		Pn	01 36 26.4	-0.8
GAZI	Gazipasa	2.45	356	iP		Pn	01 36 26.4	-0.7
GAZI				iS		Sn	01 36 54.3	-2.3
BHL	Bhannes	2.62	87	eP		Pn	01 36 30.0	+0.6
BHL	Bhannes	2.62	87	eP		Pn	01 36 30.0	+0.5
IKL	Isikli	2.63	21	ePN		Pn	01 36 30.4	+0.7
IKL	Isikli	2.63	21	Pn		Pn	01 36 30.3	+0.6
IKL	Isikli	2.63	21	Pn		Pn	01 36 30.3	+0.7
RCY	Rachaya	2.78	95	eP		Pn	01 36 31.5	-0.2
RCY	Rachaya	2.78	95	eP		Pn	01 36 31.5	-0.2
ERMK	Ermenek	2.87	7	iP		Pn	01 36 34.2	+1.3
ERMK	Ermenek	2.87	7	iP		Pn	01 36 34.2	+1.3
ERMK				iS		Sn	01 37 10.3	+3.3
BRBR	Barbar	2.90	96	⇑P		Pn	01 36 33.0	-0.3
BRBR				⇑S		Sn	01 37 01.0	-6.7
BRBR	Barbar	2.90	96	⇑iP		Pn	01 36 33.5	+0.2
HWQ	Hawqa	2.90	79	eP		Pn	01 36 32.6	-0.7
HWQ	Hawqa	2.90	79	eP		Pn	01 36 32.6	-0.7
RSH		3.00	160	P		Pn	01 36 34.7	0.0
QASN	Qassioun	3.15	94	⇑P		Pn	01 36 38.0	+1.2
QASN				⇑S		Sn	01 37 06.0	-8.0
QASN	Qassioun	3.15	94	⇑iP		Pn	01 36 38.1	+1.3
HDMB	Hadim	3.17	360	ePN		Pn	01 36 37.4	+0.4
HDMB	Hadim	3.17	360	Pn		Pn	01 36 38.9	+1.8
HDMB	Hadim	3.17	360	Pn		Pn	01 36 38.8	+1.7
AMAG	Maghara	3.19	169	P		Pn	01 36 37.5	+0.2
	baz=166							
AMAG	Maghara	3.19	169	P		Pn	01 36 37.5	+0.2
TOTH	TOTAH	3.30	96	⇑P		Pn	01 36 39.0	+0.2
TOTH				⇑S		Sn	01 37 10.0	-7.6
TOTH	TOTAH	3.30	96	⇑iP		Pn	01 36 39.8	+1.0
BIDA	Albida	3.38	68	⇑P		Pn	01 36 39.0	-1.0
BIDA				⇑S		Sn	01 37 11.0	-8.6
BIDA	Albida	3.38	68	⇑iP		Pn	01 36 39.6	-0.4
MERS	Mersin	3.49	28	ePN		Pn	01 36 42.6	+1.2
MERS	Mersin	3.49	28	ePn		Pn	01 36 42.6	+1.2
SLNF	Slenfeh	3.56	58	⇑P		Pn	01 36 41.0	-1.3
SLNF				⇑S		Sn	01 37 15.0	-8.9
SLNF	Slenfeh	3.56	58	⇑iP		Pn	01 36 41.8	-0.5
ELL	Elmali	3.64	325	ePN		Pn	01 36 43.8	+0.3
ELL	Elmali	3.64	325	ePn		Pn	01 36 43.8	+0.3
SALA	Sala	3.70	106	⇓P		Pn	01 36 45.0	+0.7
SALA				⇓S		Sn	01 37 21.0	-6.4
SALA	Sala	3.70	106	⇓iP		Pn	01 36 45.4	+1.1
YAYL	Yayladag	3.71	52	iP		Pn	01 36 43.6	-0.9
YAYL	Yayladag	3.71	52	iP		Pn	01 36 43.6	-0.9
YAYL				iS		Sn	01 37 24.3	-3.5
HTY	Hatay	3.79	51	ePN		Pn	01 36 47.6	+2.1
HTY	Hatay	3.79	51	Pn		Pn	01 36 46.9	+1.4
HTY	Hatay	3.79	51	Pn		Pn	01 36 46.9	+1.4
HHAG	Hagoal	3.84	185	P		Pn	01 36 46.7	+0.5
	baz=185							
HHAG				AMP			01 37 00.0	
	comp=E,140μm,0.1s,logA/T=6.0,baz=185							
HHAG	Hagoal	3.84	185	P		Pn	01 36 46.7	+0.5
KOT	Kottamia	3.89	189	P		Pn	01 36 47.4	+0.4
	baz=188							
KOT	Kottamia	3.89	189	P		Pn	01 36 47.3	+0.4
BTCH	Batrach	3.95	54	⇑P		Pn	01 36 47.0	-0.7
BTCH				⇑S		Sn	01 37 24.0	-10
BTCH	Batrach	3.95	54	⇑iP		Pn	01 36 47.2	-0.5
GULE	Gulek	3.95	27	iP		Pn	01 36 44.9	-2.9
GULE	Gulek	3.95	27	iP		Pn	01 36 44.8	-3.0
GULE				iS		Sn	01 37 34.5	+0.9
BCK	Bucak	3.99	337	ePN		Pn	01 36 48.5	+0.2
BCK	Bucak	3.99	337	ePn		Pn	01 36 48.5	+0.2
KARA	Karaisali	4.04	30	ePN		Pn	01 36 49.9	+0.9
KARA	Karaisali	4.04	30	ePn		Pn	01 36 49.9	+0.9
ZALF	Zalf	4.13	101	⇑P		Pn	01 36 51.0	+0.8
ZALF				⇑S		Sn	01 37 30.0	-8.1
ZALF	Zalf	4.13	101	⇑iP		Pn	01 36 51.7	+1.5
KONT	Konya--Tatoy	4.15	358	ePN		Pn	01 36 51.2	+0.6
KONT	Konya--Tatoy	4.15	358	ePn		Pn	01 36 51.2	+0.7
GLHS	Glhisar (BURDU	4.16	325	ePN		Pn	01 36 51.0	+0.3
GLHS	Glhisar (BURDU	4.16	325	ePn		Pn	01 36 51.0	+0.3
GOLH	Golhisar	4.20	326	iP		Pn	01 36 52.7	+1.5
GOLH	Golhisar	4.20	326	iP		Pn	01 36 52.7	+1.5
GOLH				iS		Sn	01 37 41.9	+2.1
AYT	Al 'Ayyat	4.23	196	P		Pn	01 36 51.7	+0.1
	baz=196							
AYT	Al 'Ayyat	4.23	196	P		Pn	01 36 51.7	+0.1
HSAF	As Saff	4.23	191	P		Pn	01 36 51.7	0.0
	baz=191							
HSAF	As Saff	4.23	191	P		Pn	01 36 51.7	+0.1
HMYD	Mayadein	4.23	201	P		Pn	01 36 51.5	-0.2
	baz=200							
HMYD	Mayadein	4.23	201	P		Pn	01 36 51.5	-0.2
GLL	Jalalah	4.25	189	P		Pn	01 36 52.2	+0.3
	baz=189							
GLL	Jalalah	4.25	189	P		Pn	01 36 52.2	+0.3
ZNM		4.41	176	P		Pn	01 36 54.5	+0.4
	baz=174							
ZNM		4.41	176	P		Pn	01 36 54.5	+0.5
DRWC	Darouich	4.43	49	⇑P		Pn	01 36 54.0	-0.3
DRWC				⇑S		Sn	01 37 36.0	-9.4
DRWC	Darouich	4.43	49	⇑iP		Pn	01 36 54.5	+0.2
TURN	Turunc	4.44	315	iP		Pn	01 36 54.7	+0.3
TURN	Turunc	4.44	315	iP		Pn	01 36 54.7	+0.3
TURN				iS		Sn	01 37 44.4	-1.2
KUZU	Kuzuini	4.78	50	iP		Pn	01 36 57.6	-1.6
KUZU	Kuzuini	4.78	50	iP		Pn	01 36 57.6	-1.6
KUZU				iS		Sn	01 37 52.2	-1.9
HBST	Basata	4.93	157	P		Pn	01 37 01.8	+0.5
	baz=155							
HBST	Basata	4.93	157	P		Pn	01 37 01.8	+0.5
HAQS	Haql	5.15	156	P		Pn	01 37 03.8	-0.5
HAQS	Haql	5.15	156	P		Pn	01 37 03.8	-0.5
HAQS				S		Sn	01 37 59.5	-3.7
KHAL	Karahalli	5.19	333	iP		Pn	01 37 05.4	+0.7
KHAL	Karahalli	5.19	333	iP		Pn	01 37 05.4	+0.7
KHAL				iS		Sn	01 38 00.4	-3.7
HMAT	Matruh	5.30	241	P		Pn	01 37 05.9	-0.5
	baz=242							
HMAT				S		Sn	01 38 03.6	-3.3
	baz=242							
HMAT	Matruh	5.30	241	P		Pn	01 37 05.9	-0.5
HMAT				S		Sn	01 38 03.6	-3.4
HDHB	Dhahab	5.36	160	P		Pn	01 37 07.3	+0.1
	baz=158							
HDHB	Dhahab	5.36	160	P		Pn	01 37 07.3	+0.1
HKAT	Jabal Katrina	5.40	166	P		Pn	01 37 07.5	-0.1
	baz=164							
HKAT	Jabal Katrina	5.40	166	P		Pn	01 37 07.5	-0.2
GRB	Gharib	5.50	177	P		Pn	01 37 08.6	-0.5
	baz=176							
GRB	Gharib	5.50	177	P		Pn	01 37 08.6	-0.5
BDAS	Al Bad'	5.78	157	P		Pn	01 37 12.3	-0.6
BDAS	Al Bad'	5.78	157	P		Pn	01 37 12.3	-0.7
AWBH		6.26	211	P		Pn	01 37 19.4	-0.2
	baz=211							
AWBH		6.26	211	P		Pn	01 37 19.4	-0.1
IDI	Anoyia	6.46	286	ePn		Pn	01 37 23.1	+0.8
IDI				eSn		Sn	01 38 31.3	-4.3
IDI	Anoyia	6.46	286	ePn		Pn	01 37 23.1	+0.8
DBAS	Duba	7.20	155	S		Sn	01 38 49.2	-4.6
DBAS	Duba	7.20	155	P		Pn	01 37 32.2	-0.3
DBAS	Duba	7.20	155	P		Pn	01 37 32.2	-0.2
SWA2		7.53	235	S		Sn	01 38 57.2	-4.6
	baz=236							
WJHS		7.79	153	P		Pn	01 37 40.6	0.0
WJHS		7.79	153	P		Pn	01 37 40.6	+0.1
BIDS	Bi'r al Bayda'	7.89	150	P		Pn	01 37 42.2	+0.2
BIDS	Bi'r al Bayda'	7.89	150	P		Pn	01 37 42.2	+0.2
HQSR		8.17	168	P		Pn	01 37 46.1	+0.4
	baz=167							
HQSR		8.17	168	P		Pn	01 37 46.1	+0.4
EMRS	Mersa Alam	8.97	166	P		Pn	01 37 57.1	+0.3
	baz=165							
EMRS	Mersa Alam	8.97	166	P		Pn	01 37 57.1	+0.3

*BJI **08** 01:41:51.6, 15°.22N×122°.48E, h21km, mB4.8/37, mb4.7/51, Ms4.9/52, Ms7 4.6/49*
*MAN **08** 01:41:52, 15°.43N×122°.41E, h3km, mb5.8, ML4.9, MS5.4*
MAN INTENSITY IV - BALER AURORA; QUEZON CITY; MANILA CITY; GABALDON.
*NEIC **08** 01:41:53.3±2.0, 15°.33N×122°.49E, h18km±12km, mb4.9/31, Error ellipse: s-maj=6.9km s-min=4.5km az=83.0*
NEIC Felt [IV PIVS] at Baler, Gabaldon, Manila and Quezon City; [III PIVS] at Baguio, Dingalan, La Trinidad, Makati, Pasig and Taguig; [II PIVS] at Carmona and Lucban, Luzon.
*MOS **08** 01:41:53.8±1.1, 15°.28N×122°.49E, h33km, mb5.2/32, MS4.7/21, Error ellipse: s-maj=10.8km s-min=5.5km az=120.1*
*ISCJB **08** 01:41:53.7±0.2, 15°.40N±0°.02×122°.48E±0°.03, h29km, mb4.9/103, MS4.5/61, Error ellipse: s-maj=3.8km s-min=2.9km az=175.1*
*IDC **08** 01:41:55.4±0.6, 15°.31N×122°.49E, h33km±4km, mb4.5/25, mb1 4.6/26, mb1mx4.5/30, mbtmp4.5/26, MS4.4/28, Ms1 4.4/28, ms1mx4.3/34, Error ellipse: s-maj=13.6km s-min=9.8km az=86.0*
*TEH **08** 01:41:56.0, 15°.38N×122°.50E, h35km*
*GCMT **08** 01:41:56.1±0.2, 15°.39N×122°.45E, h18km±1km, MW5.1, Moment Tensor Solution. s44,c52; s90,c156; Moment tensor: Scale 10^{16}Nm; M_{rr}-0.38±.14; $M_{\theta\theta}$3.09±.12; $M_{\phi\phi}$-2.71±.12; $M_{r\theta}$-1.45±.28; $M_{\theta\phi}$3.48±.09; $M_{\phi r}$4.10±.43; Best double couple: $M_0$6.00000×10^{16} NP1:ϕ_s104.00000°, δ61.00000°, λ-19.00000°. NP2:ϕ_s203.00000°, δ73.00000°, λ-150.00000°. Principal axes: T 4.7800, Plg8.0000°, Azm331.0000°; N 2.3500, Plg56.0000°, Azm229.0000°; P -7.1200, Plg33.0000°, Azm66.0000°; Data Used: II IU G CN IC.*

ISC 08 01:41:55.7±0.2, 15°.40N±0°.02×122°.45E±0°.03, h31km, h31km±1.3km:pP-P, n310, σ1§12/322, mb4.9/103, MS4.5/61, 25C-17D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
POLP	Polilio Island	0.83	217	eP		Pn	01 42 08.2	-3.1
BALP	Baler	0.91	292	eP		Pn	01 42 09.3	-3.1
BALP				eS		Sn	01 42 21.0	-3.5
PCPH	Palayan	1.32	277	⇓eP		Pn	01 42 15.4	-2.6
PCPH				eS		Sn	01 42 34.3	-0.2
PALP	Palanan	1.66	359	eP		Pn	01 42 21.7	-1.0
PALP				eS		Sn	01 42 40.4	-2.5
TGY	Tagaytay City	1.95	229	Pn		Pn	01 42 27.9	+1.2
	4μm,0.3s,baz=60,slow=2.1,SNR=380							
TGY				Sn		Sn	01 42 56.3	+6.1
	5μm,0.3s,baz=332,slow=17,SNR=8.2							
BOAC	Boac	2.01	197	eP		Pn	01 42 28.4	+0.8
BOAC				eS		Sn	01 42 54.6	+2.9
BCPH	Baguio City Da	2.05	299	⇑iP		Pn	01 42 28.1	0.0
BCPH				iS		Sn	01 42 53.3	+0.6
AUQP	San Andres	2.07	174	eP		Pn	01 42 31.2	+2.8
PGP	Puerto Galera	2.38	218	⇑eP		Pn	01 42 32.8	+0.2
PVCP	Virac	2.43	137	eP		Pn	01 42 35.4	+2.1
SCZP	Santa Cruz	2.48	279	eP		Pn	01 42 34.1	+0.1
BOLP	Bolinao	2.63	292	eP		Pn	01 42 36.5	+0.4
LUBP	Lubang	2.70	233	eP		Pn	01 42 37.2	+0.2
APYP	Conner	2.71	335	eP		Pn	01 42 36.5	-0.7
ABRA	Dolores	2.79	324	eP		Pn	01 42 39.4	+1.0
SGCP	Mt. Cagua	2.86	352	eP		Pn	01 42 38.8	-0.4
OTRP	Odiongan	3.04	188	eP		Pn	01 42 42.4	+0.7
SJMP	San Jose	3.19	204	eP		Pn	01 42 46.0	+2.3
PIP	Pasuquin	3.40	329	⇓eP		Pn	01 42 47.2	+0.6
PIP				eS		Sn	01 43 29.6	+3.7
CNP	Catarman	3.58	143	eP		Pn	01 42 50.4	+1.3
RCP	Roxas	3.82	176	⇑eP		Px	01 43 18.9	
BUSP	Coron	4.02	213	eP		Pn	01 42 56.4	+1.1
CUYO	Cuyo Island	4.73	197	eP		Pn	01 43 05.2	+0.2
GUIM	Jordan	4.74	178	eP		Pn	01 43 06.5	+1.4
BBP	Basco	5.04	355	eP		Pn	01 43 07.5	-1.7
ENPP	El Nido	5.10	216	eP		Pn	01 43 14.5	+4.4
LLP	Lapu-Lapu	5.26	164	eP		Pn	01 43 08.9	-3.3
TWG	Pinlang	7.50	350	ePn		Pn	01 43 40.9	-2.1
	64nm,0.5s							
BUKP	Musuan	7.89	161	eP		Pn	01 43 54.9	+6.4
YULB	Yu-li	8.03	352	ePn		Pn	01 43 49.5	-0.7
	42nm,0.6s							
YULB				eSn		Sn	01 45 18.9	-1.2
TPUB	Ta-pu	8.05	348	ePn		Pn	01 43 48.4	-2.2
	115nm,1.0s							
TPUB				eSn		Sn	01 45 16.0	-4.5
SSLB	Suanglung	8.47	351	ePn		Pn	01 43 56.2	-0.1
	30nm,0.4s							
SSLB				eSn		Sn	01 45 32.0	+1.2
NACB	Ninganchiao	8.77	355	ePn		Pn	01 43 58.8	-1.6
DAV	Davao City (W)	8.82	159	Pn		Pn	01 44 00.5	-0.7
	42nm,0.3s,baz=78,slow=19,SNR=1.9							
DAV				LR		LR	01 47 51.3	
	comp=Z,4μm,19.0s,baz=204,slow=41							
YHNB	Yeheng	9.28	354	ePn		Pn	01 44 09.1	+1.6
	35nm,0.6s							
GZH	Guangzhou	11.51	313	P		Pn	01 44 38.3	+0.3
GZH				LR		LR		
	comp=N,5μm,17.6s							
GZH				LR		LR		
	comp=E,5μm,18.4s							
QIZ	Qiongzhong	12.58	288	P		Pn	01 44 53.8	+1.2
QIZ				S		Sn	01 47 10.9	-0.8
QIZ				pmax		pmax		
	comp=Z,25nm,1.5s							
QIZ				LR		LR		
	comp=N,3μm,16.9s							
QIZ				LR		LR		
	comp=Z,2μm,16.5s							
SSE	Sheshan	15.67	356	P		Pn	01 45 38.6	+4.3
SSE				S		Sn	01 48 36.4	+9.4
SSE				pmax		pmax		
	comp=Z,26nm,0.6s							
SSE				pmax		pmax		
	comp=Z,38nm,4.3s							
SSE				LR		LR		
	comp=N,720nm,19.6s							
SSE				LR		LR		
	comp=E,2μm,19.3s							
SSE				LR		LR		
	comp=Z,2μm,15.8s							
NJ2	Nanjing	16.90	349	eP		Pn	01 45 49.9	-0.1
NJ2				pP		pP	01 45 56.6	-3.4
NJ2				sP		sP	01 46 02.2	-1.8
NJ2				PP			01 46 04.6	
NJ2				S		Sn	01 48 57.0	+0.1
NJ2				sS		sS	01 49 08.7	-11
NJ2				pmax		pmax		
	comp=Z,20nm,0.6s							
NJ2				pmax		pmax		
	comp=Z,160nm,4.7s							
NJ2				LR		LR		
	comp=N,2μm,17.0s							
NJ2				LR		LR		
	comp=E,2μm,17.2s							
NJ2				LR		LR		
	comp=Z,8μm,15.9s							
KSM	Kuching	18.30	222	ePn		Pn	01 46 09.9	+2.5
	comp=Z,28nm,1.0s							
GYA	Guiyang	18.38	309	P		Pn	01 46 09.6	+1.3
GYA				pP		pP	01 46 18.8	+2.4
GYA				S		Sn	01 49 32.0	-0.8
GYA				sS		sS	01 49 45.9	-3.9
GYA				SS			01 49 57.3	
GYA				pmax		pmax		
	comp=Z,20nm,1.0s							
GYA				pmax		pmax		
	comp=Z,160nm,5.0s							
GYA				LR		LR		
	comp=N,2μm,12.3s							
GYA				LR		LR		
	comp=E,2μm,13.6s							
GYA				LR		LR		
	comp=Z,3μm,14.1s							
KAPI	Kappang	20.45	188	P		P	01 46 29.4	-1.5
	comp=Z,21nm,0.8s,baz=60,slow=16,SNR=5.6							
KAPI				pP			01 46 39.5	
	comp=Z,15nm,0.5s,baz=274,slow=3.5,SNR=4.3							
KAPI				LR		LR	01 56 59.6	
	comp=Z,787nm,18.6s,MS4.1,baz=11,slow=44							
KMI	Kunming	20.85	301	P		P	01 46 37.9	+2.8
KMI				pP			01 46 42.7	
KMI				sP		sP	01 46 44.8	-2.6
KMI				PP			01 47 02.5	
KMI				S		S	01 50 32.0	+5.9
KMI				sS		sS	01 50 39.9	+0.5
KMI				pmax		pmax		
	comp=Z,24nm,0.9s							
KMI				LR		LR		
	comp=N,2μm,18.9s,MS4.6							
KMI				LR		LR		
	comp=E,990nm,19.6s,MS4.6							
KMI				LR		LR		
	comp=Z,1μm,14.9s,MS4.4							
TIA	Tai'an	21.27	348	eP		P	01 46 39.6	+0.1
NST	Nakhon Sawan	21.51	274	P		P	01 46 42.8	+0.5
CBIJ	Chichi jima	21.73	54	P		P	01 46 45.5	+1.0
	comp=Z,25nm,0.5s,mb4.9,baz=281,slow=18,SNR=4.3							
CBIJ				LR		LR	01 53 37.8	
	comp=Z,786nm,18.5s,MS4.2,baz=276,slow=32							
XAN	Xi'an	22.22	329	P		P	01 46 49.7	0.0
XAN				pP			01 46 58.9	
XAN				sP		sP	01 47 03.1	+1.0
XAN				PP			01 47 20.8	
XAN				S		S	01 50 54.6	+1.8
XAN				pmax		pmax		
	comp=Z,7.0nm,0.5s,mb4.3							
XAN				pmax		pmax		
	comp=Z,22nm,4.3s							
XAN				LR		LR		
	comp=Z,510nm,15.9s,MS4.0							
INCN	Inchon	22.31	9	ePn		P	01 46 51.8	+1.2
	comp=Z,63nm,1.0s,mb5.0							
KSRS	Korea Array	22.50	11	P		P	01 46 51.9	-0.8
	comp=Z,9.0nm,0.6s,mb4.3,baz=196,slow=11,SNR=46							
KSRS				pP			01 47 01.4	
	comp=Z,7.2nm,0.7s,baz=194,slow=10,SNR=8.8							
KSRS				LR		LR	01 55 57.1	
	comp=Z,611nm,18.9s,MS4.0,baz=195,slow=37							
BDT	Bhumibol Dam	22.58	278	P		P	01 46 55.0	+1.3
CM31	Chiang Mai Arr	22.69	281	eP		P	01 46 56.2	+1.3
	comp=Z,10nm,0.5s,mb4.5							
CMAR	Chiang Mai Arr	22.69	281	P		P	01 46 54.9	0.0
	comp=Z,14nm,0.7s,mb4.5,baz=92,slow=7.5							
CMAR				pP			01 47 05.6	
	baz=91,slow=7.9							
CHTO	Chiang Mai	22.72	282	eP		P	01 46 55.1	-0.1
CHTO				pmax		pmax		
	comp=Z,84nm,2.2s,mb4.8							
CHTO	Chiang Mai	22.72	282	eP		P	01 46 55.1	-0.1
	comp=Z,84nm,2.2s,mb4.8							
CD2	Chengdu	23.05	315	P		P	01 46 58.4	-0.2
CD2				pP			01 47 07.6	
CD2				sP		sP	01 47 11.8	+0.9
CD2				PP			01 47 29.1	
CD2				S		S	01 51 03.2	-4.2
CD2				sS		sS	01 51 18.4	-3.7
CD2				SS			01 51 49.1	
CD2				pmax		pmax		
	comp=Z,90nm,0.8s,mb5.2							
CD2				pmax		pmax		
	comp=Z,150nm,3.5s							
CD2				LR		LR		
	comp=N,4μm,13.7s							
CD2				LR		LR		
	comp=Z,2μm,19.0s							
DL2	Dalian	23.43	358	P		P	01 47 06.8	+4.4
DL2				S		S	01 51 17.2	+3.8
DL2				pmax		pmax		
	comp=Z,20nm,0.8s,mb4.6							
DL2				pmax		pmax		
	comp=Z,210nm,3.8s							
DL2				LR		LR		
	comp=N,760nm,17.7s,MS4.3							
DL2				LR		LR		
	comp=E,690nm,16.6s

LZH pmax pmax
comp=Z,25nm,1.0s,mb4.7
LZH pmax pmax
comp=Z,210nm,5.7s
LZH LR LR
comp=N,2μm,13.4s
LZH LR LR
comp=Z,3μm,14.8s,MS4.9
HHC Hu-ho-hao-te 27.07 342 *e*P **P 01 47 35.7 +0.2**
HHC sP sP 01 47 49.2 +0.9
HHC PP 01 48 22.7
HHC PcP PcP 01 50 56.4 +0.3
HHC S **S 01 52 10.5 -0.9**
HHC sS sS 01 52 25.9 -0.4
HHC SS 01 53 27.1
HHC ScP ScP 01 54 32.0 -2.3
HHC PcS PcS 01 54 36.0 -1.5
HHC pmax pmax
comp=Z,17nm,0.5s,mb4.8
HHC pmax pmax
comp=Z,120nm,5.2s
HHC LR LR
comp=N,2μm,13.0s,MS4.9
HHC LR LR
comp=E,1μm,12.4s,MS4.9
HHC LR LR
comp=Z,1μm,12.2s,MS4.7
CN2 Changchun 28.43 5 *e*P **P 01 47 51.2 +3.7**
CN2 *e*S **S 01 52 35.8 +3.1**
CN2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.7
CN2 LR LR
comp=N,1μm,17.0s,MS4.7
CN2 LR LR
comp=E,1μm,17.0s,MS4.7
CN2 LR LR
comp=Z,1μm,18.0s,MS4.5
KAKA Kakadu 29.62 160⇓ *i*P **P 01 47 56.2 -2.2**
comp=Z,22nm,0.6s,mb5.1
KAKA Kakadu 29.62 160 *e*P **P 01 47 56.1 -2.3**
comp=Z,42nm,0.5s,mb5.4
MDJ Mudanjiang 29.75 10 P **P 01 48 01.0 +1.7**
MDJ pP pP 01 48 08.8 +0.5
MDJ sP sP 01 48 14.0 +1.9
MDJ PcP PcP 01 51 01.2 -1.4
MDJ S **S 01 52 54.8 +1.3**
MDJ ScP ScP 01 54 41.3 -1.2
MDJ PcS PcS 01 54 45.8 +0.1
MDJ ScS ScS 01 58 37.8 +0.4
MDJ pmax pmax
comp=Z,13nm,1.1s,mb4.6
MDJ pmax pmax
comp=Z,42nm,6.1s
MDJ LR LR
comp=N,460nm,24.2s,MS4.3
MDJ LR LR
comp=E,770nm,22.5s,MS4.3
MDJ LR LR
comp=Z,590nm,19.4s,MS4.2
SHL Shillong 30.31 294 *e*PKP **P 01 48 02.0 -2.5**
GTA Gaotai 31.07 325 *e*P **P 01 48 11.5 +0.4**
GTA pP pP 01 48 21.0 +0.9
GTA sP sP 01 48 25.2 +1.3
GTA PP PP 01 49 17.7 -3.8
GTA PcP PcP 01 51 07.3 +1.1
GTA S **S 01 53 14.3 -0.1**
GTA pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
GTA pmax pmax
comp=Z,57nm,5.4s
GTA LR LR
comp=N,1μm,18.0s,MS4.7
GTA LR LR
comp=E,840nm,16.2s,MS4.7
GTA LR LR
comp=Z,1μm,15.9s,MS4.6
LSA Lhasa 32.10 302 P **P 01 48 21.0 +0.8**
LSA S **S 01 53 35.5 +4.8**
LSA LR LR
comp=N,550nm,23.7s,MS4.3
LSA LR LR
comp=E,400nm,23.7s,MS4.3
LSA LR LR
comp=Z,510nm,27.4s,MS4.1
FITZ Fitzroy Crossi 33.43 174 *e*P **P 01 48 28.7 -3.2**
comp=Z,15nm,0.6s,mb5.1
TAPN Taplejung 34.35 296 *e*P **P 01 48 39.6 -0.3**
comp=Z,54nm,1.1s,mb5.4
ODAN Odare 34.53 295 *e*P **P 01 48 40.9 -0.5**
comp=Z,75nm,0.8s,mb5.7
KLR Kul'dur 34.59 11 *e*P **P 01 48 38.2 -3.4**
KLR *e*S **S 01 54 06.0 -2.8**
KLR MLR MLR
comp=Z,1μm,15.0s,MS4.7
ULN Ulaanbaatar 34.79 342 *e*P **P 01 48 43.9 +0.5**
ULN pmax pmax
comp=Z,18nm,1.1s,mb4.9
ULN Ulaanbaatar 34.79 342 *e*P **P 01 48 43.9 +0.5**
comp=Z,18nm,1.1s,mb4.9
SONM Songino Array 34.97 341 P **P 01 48 45.2 +0.2**
comp=Z,8.2nm,0.8s,mb4.7,baz=160,slow=9.3,SNR=25
SONM LR LR 02 03 46.7
comp=Z,1μm,21.3s,MS4.6,baz=354,slow=37
RAMN Ramite 35.24 295 *e*P **P 01 48 47.3 -0.3**
comp=Z,68nm,0.7s,mb5.7
COEN Coen 35.64 144 *e*P **P 01 48 48.1 -3.0**
YSS Yuzh-Sakhalins 35.72 24 *e*P **P 01 48 53.0 +1.6**
YSS *e*S **S 01 54 28.0 +1.8**
YSS MLR MLR
comp=N,500nm,16.0s
YSS MLR MLR
comp=Z,500nm,16.0s,MS4.4
GUN Gumba 36.06 296 *e*P **P 01 48 54.3 -0.3**
comp=Z,98nm,0.9s,mb5.7
PKI Pulchoki 36.40 296 *e*P **P 01 48 56.6 -0.9**
comp=Z,41nm,0.8s,mb5.4
PKIN Phulchoki 36.41 296 *e*P **P 01 48 57.4 -0.2**
comp=Z,56nm,1.0s,mb5.5
MBWA Marble Bar 36.42 184 *e*P **P 01 48 55.9 -1.8**
comp=Z,7.5nm,0.5s,mb4.9
KKN Kakani 36.56 296 *e*P **P 01 48 58.0 -0.9**
comp=Z,62nm,0.9s,mb5.4
DMN Daman 36.67 296 *e*P **P 01 48 59.0 -0.8**
comp=Z,53nm,0.9s,mb5.4
WRAB Tennant Creek 37.00 161 P **P 01 49 00.0 -2.6**
comp=Z,156nm,0.6s,mb6.0,SNR=24
WRAB Tennant Creek 37.00 161 *e*P **P 01 49 00.0 -2.6**
WRAB pmax pmax
comp=Z,23nm,0.9s,mb5.0
WRAB Tennant Creek 37.00 161 *e*P **P 01 48 60.0 -2.7**
comp=Z,23nm,0.9s,mb5.0
WRA Warramunga Arr 37.01 161 P **P 01 48 59.9 -2.8**
comp=Z,12nm,0.5s,mb5.0,baz=343,slow=9.2,SNR=72
GKN Gorkha 37.16 296 *e*P **P 01 49 02.8 -1.2**
comp=Z,90nm,0.9s,mb5.6
KOLN Koldanda 38.01 295 *e*P **P 01 49 10.5 -0.7**
comp=Z,57nm,0.8s,mb5.3
TLY Talaya 39.20 341 *e*P **P 01 49 21.1 +0.3**
TLY *e*PPP 01 50 58.1
TLY *e* 01 58 48.8
TLY pmax pmax
comp=Z,16nm,0.8s,mb4.8
TLY MLR MLR
comp=Z,823nm,16.0s,MS4.7
MOY Mondy 40.05 339 *e*P **P 01 49 28.9 +1.0**
MOY pmax pmax
comp=Z,21nm,1.4s,mb4.7
ASAR Alice Springs 40.40 164 P **P 01 49 29.1 -2.0**
comp=Z,3.0nm,0.3s,mb4.5,baz=339,slow=7.3,SNR=44
WMQ Urumqi 40.92 321 P **P 01 49 36.5 +1.3**
WMQ pP pP 01 49 46.3 +1.9
WMQ sP sP 01 49 50.3 +2.1
WMQ PP PP 01 51 14.8 +4.9
WMQ PcP PcP 01 51 36.8 +1.5
WMQ S **S 01 55 46.3 +1.4**
WMQ sS sS 01 56 02.5 +2.4
WMQ SS SS 01 58 44.6 -2.6
WMQ ScS ScS 01 59 36.4 -1.5
WMQ pmax pmax
comp=Z,13nm,1.2s,mb4.4
WMQ pmax pmax
comp=Z,130nm,4.6s
WMQ LR LR
comp=N,2μm,20.6s,MS5.0
WMQ LR LR
comp=E,980nm,18.4s,MS5.0
WMQ LR LR
comp=Z,1μm,20.6s,MS4.7
HYB Hyderabad 42.09 279 *e*P **P 01 49 45.0 -0.2**
HYB Hyderabad 42.09 279 *i* P **P 01 49 45.0 -0.2**
CTA Charters Tower 42.32 146 P **P 01 49 46.3 -0.6**
comp=Z,5.0nm,0.7s,mb4.2,baz=320,slow=12,SNR=5.2
DDI Dehra Dun 43.24 298 *ex* **P 01 49 55.0 +0.6**
MK31 Makanchi Array 45.72 322 *e*P **P 01 50 14.7 +0.8**
MKAR Makanchi Array 45.72 322 P **P 01 50 14.5 +0.6**
comp=Z,27nm,0.8s,mb5.2,baz=118,slow=8.6,SNR=176
MKAR pP pP 01 50 24.2 +1.0
comp=Z,10nm,0.8s,baz=120,slow=6.2,SNR=8.1
MKAR PcP PcP 01 51 51.5 +0.1
comp=Z,5.4nm,0.8s,baz=120,slow=4.9,SNR=4.4
MKAR LR LR 02 09 00.8
comp=Z,591nm,18.5s,MS4.6,baz=126,slow=36
MKAR Makanchi Array 45.72 322 P **P 01 50 14.5 +0.6**
MKAR *PP pP 01 50 24.3 +1.1
MKAR 01 51 51.6
MKAR Makanchi Array 45.72 322 P **P 01 50 14.5 +0.6**
MKAR pP pP 01 50 24.2 +1.0
MKAR PcP PcP 01 51 51.5 +0.1
MKAR LR LR 02 09 00.8
FORT Forrest 46.22 173 *e*P **P 01 50 15.8 -2.2**
comp=Z,27nm,0.7s,mb5.3
FORT Forrest 46.22 173 *e*P **P 01 50 16.2 -1.8**
comp=Z,34nm,0.7s,mb5.4
PETK Petropavlovsk- 46.73 29 P **P 01 50 22.3 +0.6**
comp=Z,7.3nm,0.7s,mb4.7,baz=190,slow=4.0,SNR=5.4
PETK pP pP 01 50 30.2 -0.9
comp=Z,9.8nm,0.7s,baz=194,slow=5.6,SNR=7.0
PETK LR LR 02 12 06.6
comp=Z,158nm,18.1s,MS4.0,baz=103,slow=39
PETK Petropavlovsk- 46.73 29 P **P 01 50 22.3 +0.5**
PETK *PP pP 01 50 30.2 -0.9
PETK Petropavlovsk- 46.73 29 P **P 01 50 22.3 +0.6**
PETK pP pP 01 50 30.2 -0.9
PETK LR LR 02 12 06.6
YAK Yakutsk 46.86 5 *e*P **P 01 50 21.8 -0.8**
YAK *e* 01 51 54.6
YAK *e* 01 52 14.1
YAK *e*S **S 01 57 09.4 -1.6**
YAK *e**SS sS 01 57 25.9 -0.5
YAK *e*SSS 02 01 40.2
YAK pmax pmax
comp=Z,29nm,1.0s,mb5.2
YAK pmax pmax
comp=N,22nm,1.6s
YAK pmax pmax
comp=Z,15nm,0.7s,mb5.0
YAK smax
comp=N,115nm,3.8s
YAK smax
comp=E,70nm,2.8s
YAK MLR MLR
comp=E,567nm,14.0s,MS4.8
YAK MLR MLR
comp=N,542nm,15.0s,MS4.8
YAK MLR MLR
comp=Z,465nm,16.0s,MS4.5
KLBR Kellerberrin 46.93 185 *e*P **P 01 50 20.6 -3.0**
comp=Z,14nm,0.7s,mb5.0
KSH Kashi 47.08 310 P **P 01 50 27.6 +2.9**
KSH pP pP 01 50 38.4 +4.3
KSH sP sP 01 50 41.4 +3.6
KSH PcP PcP 01 51 58.4 +2.0
KSH PP PP 01 52 17.0 +1.3
KSH ScP ScP 01 55 48.3 +0.1
KSH PcS PcS 01 55 53.0 +1.6
KSH S **S 01 57 15.0 +0.1**
KSH sS sS 01 57 33.3 +3.1
KSH ScS ScS 02 00 16.1 -0.8
KSH pmax pmax
comp=Z,16nm,0.8s,mb5.0
KSH pmax pmax
comp=Z,120nm,5.0s
KSH LR LR
comp=N,2μm,18.2s,MS5.1
KSH LR LR
comp=E,980nm,15.9s,MS5.1
KSH LR LR
comp=Z,810nm,17.9s,MS4.7
ULHL Ulahol 47.75 314 P **P 01 50 31.5 +1.6**
SNR=19
ZAA0 Zalesovo Array 48.37 331 *e*P **P 01 50 34.2 -0.3**
ZALV Zalesovo Beam 48.37 331 P **P 01 50 34.4 -0.1**
comp=Z,24nm,0.8s,mb5.3,baz=122,slow=6.7,SNR=78
ZALV pP pP 01 50 44.1 +0.3
comp=Z,8.4nm,0.6s,baz=126,slow=7.7,SNR=6.5
ZALV LR LR 02 12 00.9
comp=Z,259nm,21.6s,MS4.2,baz=274,slow=37
ZALV Zalesovo Beam 48.37 331 P **P 01 50 34.4 -0.1**
ZALV *PP pP 01 50 44.2 +0.4
KZA Kyzart 48.39 313 P **P 01 50 36.8 +1.9**
SNR=17
KBK Karagaybulak 48.79 314 P **P 01 50 39.4 +1.5**
SNR=10.0
CHMS Chumysh 49.04 314 P **P 01 50 40.8 +0.9**
SNR=6.0
FRU Bishkek 49.08 314 *e*P **P 01 50 41.0 +0.8**
FRU pmax pmax
comp=Z,40nm,2.0s,mb5.1
AAK Ala-Archa 49.10 314 LR LR 02 12 32.2
comp=Z,1μm,21.2s,MS4.8,baz=85,slow=37
EKS2 Erkin-Say 49.61 313 P **P 01 50 45.6 +1.4**
SNR=11
EKS2 Erkin-Say 49.61 313 *e*P **P 01 50 45.3 +1.1**
EKS2 pmax pmax
comp=Z,18nm,1.0s,mb5.1
EKS2 Erkin-Say 49.61 313 *e*P **P 01 50 45.3 +1.1**
comp=Z,18nm,1.0s,mb5.1
NVS Novosibirsk 49.65 331 *e*P **P 01 50 44.3 0.0**
NVS pmax pmax
comp=Z,47nm,1.1s,mb5.4
NVS pmax pmax
comp=N,36nm,1.6s
NVS pmax pmax
comp=E,23nm,0.9s
BBOO Buckleboo 49.67 165 *e*P **P 01 50 42.6 -2.0**
comp=E,14nm,0.5s,mb5.2
KURK Kurchatov 49.76 325 P **P 01 50 45.9 +0.7**
comp=E,974nm,0.8s
KURK Kurchatov 49.76 325 LR LR 02 12 52.9
comp=E,286nm,18.3s,MS4.3,baz=115,slow=37
KURK Kurchatov 49.76 325 *de*P **P 01 50 45.8 +0.6**
KURK pmax pmax
comp=Z,148nm,0.9s,mb6.0
KURK Kurchatov 49.76 325 *e*P **P 01 50 45.9 +0.7**
comp=Z,129nm,0.8s,mb6.0
STKA Stephens Creek 50.46 159 *e*P **P 01 50 49.1 -1.6**
comp=Z,10nm,0.7s,mb5.0
STKA Stephens Creek 50.46 159 P **P 01 50 49.6 -1.1**
comp=Z,4.6nm,0.5s,mb4.7,baz=338,slow=7.4,SNR=8.4
STKA LR LR 02 11 51.2
comp=Z,319nm,21.7s,MS4.3,baz=224,slow=36
STKA Stephens Creek 50.46 159 *e*P **P 01 50 49.2 -1.5**
STKA pmax pmax
comp=Z,3.0nm,0.8s
STKA Stephens Creek 50.46 159 *e*P **P 01 50 49.2 -1.5**
comp=Z,3.4nm,0.8s,mb4.4
KBL Kabul 51.43 302 *e*P **P 01 50 58.7 +0.6**
KBL pmax pmax
comp=Z,14nm,0.9s,mb4.9
KBL Kabul 51.43 302 *e*P **P 01 50 58.7 +0.6**
comp=Z,14nm,0.9s,mb4.9
SEY Seymchan 51.90 17 *e*P **P 01 51 01.5 +0.4**
KK31 Karatay Array 52.04 313 *e*P **P 01 51 02.5 0.0**
KK31 pmax pmax
comp=Z,17nm,0.9s,mb5.0
BVAR Borovoye Array 55.36 325 P **P 01 51 27.2 +0.6**
comp=Z,12nm,0.7s,mb5.0,baz=108,slow=9.5,SNR=62
BRVK Borovoye 55.43 325 P **P 01 51 27.1 0.0**
comp=Z,310nm,0.8s,SNR=23
BRVK Borovoye 55.43 325 *e*P **P 01 51 27.7 +0.6**
BRVK *e*PP pP 01 51 33.1 -3.5
BRVK pmax pmax
comp=Z,30nm,0.8s,mb5.4
BRVK Borovoye 55.43 325 *e*P **P 01 51 27.7 +0.6**
comp=Z,30nm,0.8s,mb5.4
BRVK *e*pP pP 01 51 33.1 -3.5
ZRNK Zerenda 56.11 324 *i* P **P 01 51 31.3 -0.7**
ZRNK pmax pmax
comp=Z,54nm,0.9s,mb5.6
TIXI Tiksi 56.37 2 *e*P **P 01 51 32.4 -1.1**
TIXI *e*S **S 01 59 19.7 -2.0**
TIXI pmax pmax
comp=Z,29nm,1.1s,mb5.2
TIXI MLR MLR
comp=Z,1μm,18.0s,MS5.0
TIXI Tiksi 56.37 2 *e*P **P 01 51 33.0 -0.6**
comp=Z,20nm,0.8s,mb5.2
DZM Mont Dzumac 56.96 130 *e*LR LR 02 08 14.4
comp=Z,375nm,24.1s
TOO Toolangi 56.97 158 *e*P **P 01 51 37.5 -0.7**
IMYA Miami 58.87 303 *e*P **P 01 51 51.0 -0.7**
IDAH Dahanechah 58.92 299 *e*P **P 01 51 52.2 0.0**
BILL Bilibino 59.59 18 *e*P **P 01 51 56.8 +0.7**
BILL *e* pP 01 52 05.3 -0.4
BILL *e* 01 52 48.5
BILL pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
BILL MLR MLR
comp=Z,400nm,16.0s,MS4.6
AB31 Akbulak array 60.59 318 *e*P **P 01 52 02.7 -0.7**
AB31 pmax pmax
comp=Z,8.0nm,0.6s,mb5.0
ABKAR Akbulak array 60.59 318 *e*P **P 01 52 03.4 0.0**
comp=Z,8.7nm,0.6s,mb5.1
SVE Sverdlovsk 61.91 327⇓ *e*P **P 01 52 12.7 +0.5**
SVE pmax pmax
comp=Z,58nm,0.9s,mb5.7
SVE MLR MLR
comp=Z,796nm,24.0s,MS4.8
AKTO Aktyubinsk 62.03 319 LR LR 02 18 56.4
comp=Z,693nm,20.5s,MS4.8,baz=103,slow=36
ARU Arti 62.92 326 P **P 01 52 18.2 -0.7**
comp=Z,165nm,1.2s,mb6.0,SNR=7.2
ARU Arti 62.92 326 *d i* P **P 01 52 18.3 -0.6**
ARU *e* 01 52 55.8
ARU pmax pmax
comp=Z,28nm,1.2s,mb5.3
ARU Arti 62.92 326 *e*P **P 01 52 18.2 -0.8**
ARU *e*pP pP 01 52 27.3 -1.3
ARU *e*sP sP 01 52 30.5 -1.7
ICHK Chekchek 63.53 299 *e*P **P 01 52 23.9 +0.4**
IGLO Ghaloghah 63.93 303 *e*P **P 01 52 26.7 +0.7**
SOKR Solikamsk 64.57 329 *c i* P **P 01 52 29.6 -0.1**
SOKR pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
SOKR MLR MLR
comp=Z,680nm,20.0s,MS4.8
IPAR Pars 64.82 296 *e*P **P 01 52 31.4 -0.6**
IPRN Peran 65.13 303 *e*P **P 01 52 34.3 +0.4**
IZEF Zefreh 65.26 299 *e*P **P 01 52 33.3 -1.4**
IKLH Kolahrood 65.87 300 *e*P **P 01 52 38.5 -0.2**
IPIR Pirpir 66.48 299 *e*P **P 01 52 43.1 +0.5**
IRAZ Razeghan 67.12 302 *e*P **P 01 52 45.2 -1.4**
MAK Makhachkala 68.71 310 P **P 01 52 59.5 +3.0**
MAK *e*S S 02 02 05.1 +7.3
MAK MLR MLR
comp=Z,500nm,21.0s,MS4.7
IKOM Komasi 69.19 301 *e*P **P 01 52 58.7 -1.0**
IHRS Heris 69.27 306 *e*P **P 01 52 59.9 -0.2**
RDF Al-Radifah 69.69 296 *e*P **P 01 53 02.2 -0.6**
RDF AMb AMB 01 53 12.4
comp=Z,53nm,0.9s,mb5.5
IVIS Veis 69.71 301 *e*P **P 01 53 01.9 -0.9**
NAY Al-Naaiem 69.92 296 *e*P **P 01 53 03.0 -1.2**
NAY AMb AMB 01 53 13.7
comp=Z,24nm,1.4s,mb4.9
DGRG David-gareji 70.36 309 P **P 01 53 07.9 +1.2**
MTA Mtatsminda 70.78 309 P **P 01 53 09.0 -0.2**
TBLG Delisi 70.82 309 *e*P **P 01 53 09.2 -0.3**
TBLG Delisi 70.82 309 P **P 01 53 09.2 -0.3**
GNI Garni 70.93 308 LR LR 02 28 39.5
comp=Z,121nm,21.3s,MS4.1,baz=254,slow=40
GNI Garni 70.93 308 *e*P **P 01 53 10.4 +0.2**
GNI pmax pmax
comp=Z,12nm,1.2s
GOR Gori 71.27 310 P **P 01 53 21.6 +9.4**
ZEI Tsey 71.37 310 *e*P **P 01 53 12.1 -0.7**
ZEI pmax pmax
comp=Z,13nm,0.8s,mb4.9
KEH Kehvi 71.38 310 P **P 01 53 10.8 -2.0**
ONI Oni 71.71 310 P **P 01 53 15.4 +0.5**
KIV Kislovodsk 72.17 312 *e*P **P 01 53 17.1 -0.5**
KIV pmax pmax
comp=Z,27nm,1.0s,mb5.1
KIV MLR MLR
comp=Z,402nm,20.0s,MS4.7
KIV Kislovodsk 72.17 312 *e*P **P 01 53 18.2 +0.6**
TTA Tatalina 72.57 28 *e*P **P 01 53 20.5 +0.9**
RSO Redoubt South 74.19 31 *e*P **P 01 53 28.5 -0.7**
PPLA Purkeypile 74.32 28 *e*P **P 01 53 31.1 +1.2**
comp=Z,9.1nm,0.9s,mb4.7
SOC Sochi 74.34 312 *e*P **P 01 53 29.8 -0.7**
SOC *e*S S 02 02 56.1 -6.7
SOC *e**SS SKSac 02 03 56.7 +20
SOC pmax pmax
comp=Z,27nm,0.7s,mb5.3
SOC MLR MLR
comp=Z,309nm,16.0s,MS4.7
KDAK Kodiak Island 74.45 34 P **P 01 53 31.4 +0.6**
comp=Z,4.3nm,0.7s,mb4.5,baz=196,slow=5.5,SNR=5.2
KDAK LR LR 02 23 23.8
comp=Z,190nm,20.5s,MS4.4,baz=257,slow=33
KDAK Kodiak Island 74.45 34 *e*P **P 01 53 32.3 +1.6**
BPAW Bear Paw Mtn. 74.79 27 *e*P **P 01 53 33.5 +0.9**
comp=Z,34nm,1.0s,mb5.2
COLD Coldfoot 74.91 24 *e*P **P 01 53 34.3 +1.1**
comp=Z,5.9nm,0.8s,mb4.6
TRF Thorofare Moun 75.14 28 *e*P **P 01 53 35.3 +0.6**
comp=Z,24nm,1.3s,mb5.0
OBN Obninsk 75.19 324 *e*P **P 01 53 33.2 -1.9**
OBN *i* 01 53 47.6
OBN *i* S S 02 03 13.9 +2.2
OBN pmax pmax
comp=Z,31nm,2.5s,mb4.8
OBN MLR MLR
comp=Z,300nm,18.0s,MS4.6
APA Apatity 75.54 337⇑ *e*P **P 01 53 38.4 +1.5**
APA pmax pmax
comp=Z,48nm,1.4s,mb5.2
APA MLR MLR
comp=Z,800nm,18.0s,MS5.1
MCK McKinley 75.72 27 *e*P **P 01 53 38.2 +0.2**
MCK pmax pmax
comp=Z,49nm,1.0s,mb5.4
MCK McKinley 75.72 27 *e*P **P 01 53 38.2 +0.3**
comp=Z,49nm,1.0s,mb5.4
ANN Anapa 75.83 313 *e*P **P 01 53 41.9 +2.9**
ANN *e*S S 02 03 11.2 -8.0
ANN pmax pmax
comp=Z,37nm,0.9s,mb5.3
ANN MLR MLR
comp=N,258nm,22.0s,MS4.9
ANN MLR MLR
comp=E,582nm,22.0s,MS4.9
ANN MLR MLR
comp=Z,377nm,22.0s,MS4.7
JOF Joensuu 76.95 332 *e*P **P 01 53 43.9 -1.1**
JOF Joensuu 76.95 332 *e*p **P 01 53 43.9 -1.1**
comp=Z,5.0nm,0.5s,mb4.7
ARCES ARCESS Array B 78.12 339 P **P 01 53 51.4 0.0**
comp=Z,3.6nm,0.8s,mb4.4,baz=82,slow=8.7,SNR=11
ARCES LR LR 02 34 44.3
comp=Z,252nm,18.1s,MS4.6,baz=60,slow=40
SIM Simferopol' 78.13 314 *c i* P **P 01 53 53.3 +1.3**
SIM *i* *PP pP 01 54 02.2 +0.4
SIM *e* 02 03 49.8
SIM *e*PS 02 04 38.0
SIM pmax pmax
comp=Z,35nm,0.6s,mb5.5
SIM MLR MLR
comp=Z,300nm,19.8s,MS4.6
EGAK Eagle 78.91 26 *e*P **P 01 53 56.4 +0.6**
comp=Z,7.2nm,0.8s,mb4.7
MMAI Mount Meron Ar 79.35 301 LR LR 02 31 50.6
comp=Z,116nm,18.1s,MS4.3,baz=60,slow=38
KAF Kangasniemi 79.38 332 *e*P **P 01 53 56.8 -1.7**
KAF pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
KAF Kangasniemi 79.38 332 *e*P **P 01 53 56.8 -1.7**
comp=Z,5.2nm,0.5s,mb4.7
KAF Kangasniemi 79.38 332 *e*p **P 01 53 56.8 -1.7**
comp=Z,5.2nm,0.5s,mb4.7
BR131 Keskin Array S 79.44 308 *e*P **P 01 53 58.9 -0.3**
comp=Z,2.3nm,0.8s,mb4.2
BRTR Keskin Array B 79.44 308 P **P 01 53 58.7 -0.5**
comp=Z,2.0nm,0.7s,mb4.2,baz=93,slow=3.6,SNR=17
BRTR LR LR 02 34 05.4

comp=Z,171nm,19.6s,MS4.4,baz=238,slow=39
FINES FINESS Array B 79.64 331 P **P 01 53 59.4 -0.5**
comp=Z,2.3nm,0.5s,mb4.4,baz=53,slow=5.5,SNR=27
FINES LR LR 02 32 15.7
comp=Z,431nm,19.9s,MS4.8,baz=85,slow=38
DAWY Dawson 79.82 26 *eP* **P 01 54 01.9 +1.1**
AKASG Malin Array Be 80.27 320 P **P 01 54 02.2 -1.2**
comp=Z,4.2nm,0.7s,mb4.5,baz=63,slow=5.9,SNR=15
AKASG LR LR 02 30 29.9
comp=Z,251nm,18.9s,MS4.6,baz=50,slow=36
AKASG Malin Array Be 80.27 320 *i* P **P 01 54 02.2 -1.3**
AKASG pmax pmax
comp=Z,4.0nm,0.7s
IDID Didziasalis 80.70 325 *eP* **P 01 54 05.9 +0.2**
IDID AMB AMB 01 54 06.5
comp=Z,9.5nm,0.8s,mb4.8
NACGM Naroch 80.78 324 *e* **P 01 54 04.0 -2.1**
IZAR Zarasai 80.87 325 *eP* **P 01 54 06.8 +0.2**
IZAR AMB AMB 01 54 08.4
comp=Z,6.9nm,1.0s,mb4.5
INK Inuvik 80.91 21 P **P 01 54 06.9 +0.3**
comp=Z,4.3nm,0.8s,mb4.4,baz=297,slow=9.2,SNR=7.9
INK LR LR 02 32 52.9
comp=Z,144nm,20.1s,MS4.3,baz=254,slow=38
INK Inuvik 80.91 21 *eP* **P 01 54 06.7 +0.1**
INK pmax pmax
comp=Z,7.0nm,1.0s
INK Inuvik 80.91 21 *eP* **P 01 54 06.7 +0.1**
comp=Z,7.2nm,1.0s,mb4.6
IIGN Ignalina 80.98 325 *eP* **P 01 54 07.3 +0.1**
IIGN AMB AMB 01 54 08.0
comp=Z,4.5nm,1.0s,mb4.3
ISAL Salakas 80.98 325 *eP* **P 01 54 07.4 +0.2**
ISAL AMB AMB 01 54 08.4
comp=Z,6.2nm,1.1s,mb4.5
TLCR 81.77 315 ⇑P **P 01 54 11.3 -0.3**
TLCR 81.77 315 ⇑*i*P **P 01 54 11.3 -0.3**
TIRR Tirgusor 82.22 314 ⇑P **P 01 54 13.3 -0.7**
TESR 82.91 316 ⇓P **P 01 54 17.3 -0.2**
TESR 82.91 316 ⇑*i*P **P 01 54 17.5 -0.1**
VRI Vrincioaia 83.02 316 ⇓P **P 01 54 19.0 +0.9**
VRI Vrincioaia 83.02 316 ⇑*i*P **P 01 54 18.6 +0.5**
SUW Suwalki 83.04 324 *eP* **P 01 54 17.1 -0.9**
PLOR Plostina 83.08 316 ⇓P **P 01 54 18.8 +0.4**
PLOR Plostina 83.08 316 ⇓*i*P **P 01 54 19.2 +0.8**
BURAR Bucovina Array 83.57 318 ⇑P **P 01 54 21.3 +0.4**
BURAR Bucovina Array 83.57 318 ⇓*i*P **P 01 54 21.1 +0.2**
BUR08 Bucovina Ar. S 83.57 318 *eP* **P 01 54 21.2 +0.3**
MLR Muntele Rosu 83.65 315 ⇑P **P 01 54 21.9 +0.5**
MLR Muntele Rosu 83.65 315 ⇑*i*P **P 01 54 21.8 +0.4**
LVV L'vov 83.72 320 *eP* **P 01 54 21.4 -0.2**
VOIR 84.27 315 ⇓P **P 01 54 24.5 -0.1**
VOIR 84.27 315 ⇑*i*P **P 01 54 24.2 -0.4**
KWP Kalwaria Pacla 84.59 320 *eP* **P 01 54 26.6 +0.5**
KWP *e* pP 01 54 35.5 -0.5
KWP Kalwaria Pacla 84.59 320 *eP* **P 01 54 26.6 +0.5**
KWP *e* pP 01 54 35.5 -0.5
KWP Kalwaria Pacla 84.59 320 ⇑*i*P **P 01 54 26.5 +0.4**
UZH Uzhgorod 85.15 319 ⇓*i*P **P 01 54 29.4 +0.5**
UZH *e* pP 01 54 37.6 -1.3
UZH *e* 01 54 45.0
DRGR 85.44 317 ⇑P **P 01 54 30.7 +0.3**
DRGR 85.44 317 ⇓*i*P **P 01 54 30.4 0.0**
STHS Stebnicka Huta 85.56 320 *eP* **P 01 54 31.2 +0.2**
STHS pmax pmax
comp=Z,4.0nm,1.0s,mb4.6
STHS Stebnicka Huta 85.56 320 *eP* **P 01 54 31.2 +0.2**
comp=Z,3.6nm,1.0s,mb4.6
STHS Stebnicka Huta 85.56 320 *eP* **P 01 54 31.2 +0.2**
CRVS Cervenica-Dubn 85.59 319 *eP* **P 01 54 32.0 +0.9**
CRVS pmax pmax
comp=Z,23nm,1.2s,mb5.3
CRVS Cervenica-Dubn 85.59 319 *eP* **P 01 54 32.0 +0.9**
comp=Z,23nm,1.2s,mb5.3
CRVS Cervenica-Dubn 85.59 319 *eP* **P 01 54 32.0 +0.9**
KMBO Kilima Mbogo 85.67 268 P **P 01 54 32.3 +0.1**
comp=Z,2.7nm,0.6s,mb4.7,baz=37,slow=6.1,SNR=4.7
KMBO Kilima Mbogo 85.67 268 *eP* **P 01 54 33.2 +1.0**
KMBO pmax pmax
comp=Z,12nm,1.0s
KMBO Kilima Mbogo 85.67 268 *eP* **P 01 54 33.2 +1.0**
comp=Z,12nm,1.0s,mb5.1
DLBC Dease Lake 85.89 30 LR LR 02 32 20.5
comp=Z,182nm,20.1s,MS4.5,baz=53,slow=35
NIE Niedzica 86.14 320 *eP* **P 01 54 34.6 +0.8**
OJC Ojcow 86.19 321 *eP* **P 01 54 32.0 -2.1**
KECS Kecovo 86.34 319 *eP* **P 01 54 35.0 +0.2**
KECS pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
KECS Kecovo 86.34 319 *eP* **P 01 54 35.0 +0.2**
comp=Z,8.7nm,0.8s,mb5.0
KECS Kecovo 86.34 319 *eP* **P 01 54 35.0 +0.2**
VTS Vitosha 86.36 313 ⇓P **P 01 54 35.3 +0.2**
VTS Vitosha 86.36 313 ⇑*i*P **P 01 54 35.0 -0.1**
NB2 NORSAR Subarra 86.54 333 P **P 01 54 34.3 -1.2**
comp=Z,10.0nm,0.8s,mb5.1,baz=64,slow=4.8
NOA NORSAR Array B 86.54 333 P **P 01 54 35.0 -0.6**
comp=Z,7.9nm,0.7s,mb5.1,baz=64,slow=4.9,SNR=33
NOA LR LR 02 37 17.2
comp=Z,521nm,18.1s,MS5.0,baz=60,slow=38
PSZ Piszkesteto 86.90 319 ⇑P **P 01 54 37.6 0.0**
PSZ Piszkesteto 86.90 319 *eP* **P 01 54 37.7 +0.1**
comp=Z,15nm,1.1s,mb5.1
PSZ Piszkesteto 86.90 319 ⇓*i*P **P 01 54 37.6 0.0**
RES Resolute Bay 87.10 9 P **P 01 54 38.0 0.0**
comp=Z,11nm,0.7s,mb5.2,baz=300,slow=6.6,SNR=4.8
OKC Ostrava-Krasne 87.32 321 *eP* **P 01 54 39.6 0.0**
OKC AMS AMS 02 37 10.0
comp=Z,200nm,20.3s
VYHS Vyhne 87.37 320 *eP* **P 01 54 40.3 +0.5**
VYHS pmax pmax
comp=Z,4.0nm,1.2s,mb4.5
VYHS Vyhne 87.37 320 *eP* **P 01 54 40.3 +0.5**
comp=Z,4.1nm,1.2s,mb4.5
VYHS Vyhne 87.37 320 *eP* **P 01 54 40.3 +0.5**
BUD Budapest 87.60 319 ⇑*e*PcP **P 01 54 37.7 -3.3**
DPC Dobruska-Polom 88.23 322 *eP* **P 01 54 43.8 -0.1**
DPC MLR MLR
comp=Z,300nm,19.7s,MS4.7
DPC Dobruska-Polom 88.23 322 *eP* **P 01 54 43.8 -0.1**
DPC LR LR
comp=Z,300nm,19.7s,MS4.7
DPC Dobruska-Polom 88.23 322 *eP* **P 01 54 43.8 -0.1**
DPC AMS AMS 02 36 40.0
comp=Z,300nm,19.7s
PKSM Moragy 88.29 318 ⇑P **P 01 54 46.1 +1.8**
PKSM Moragy 88.29 318 ⇓*i*P **P 01 54 46.6 +2.3**
VRAC Vranov 88.46 321 ⇑*i*P **P 01 54 45.5 +0.5**
TREC Trest 89.13 321 *eP* **P 01 54 48.5 +0.3**
TREC MLR MLR
comp=Z,300nm,19.5s,MS4.7
TREC Trest 89.13 321 *eP* **P 01 54 48.5 +0.3**
TREC AMS AMS 02 41 10.0
comp=Z,300nm,19.5s
PVCC Panska Ves 89.20 323 AMS AMS 02 37 20.0
comp=Z,400nm,17.8s
BRG Berggiesshubel 89.42 323 *eP* **P 01 54 49.2 -0.3**
comp=Z,5.0nm,1.0s,mb4.8
BRG *e* pP 01 54 58.8 -0.7
comp=Z,7.3nm,1.0s
BRG
comp=N,281nm,19.7s
BRG
comp=E,374nm,15.5s
BRG
comp=Z,471nm,18.7s
PRU Pruhonice 89.43 322 *eP* **P 01 54 50.9 +1.3**
PRU MLR MLR
comp=Z,300nm,15.3s,MS4.8
PRU Pruhonice 89.43 322 *eP* **P 01 54 50.9 +1.3**
PRU LR LR
comp=Z,300nm,15.3s,MS4.8
PRU Pruhonice 89.43 322 *eP* **P 01 54 50.9 +1.3**
PRU AMS AMS 02 37 30.0
comp=Z,300nm,15.3s
CLL Collm 89.78 324 P **P 01 54 56.0 +4.8**
CLL MLR MLR
comp=Z,400nm,20.9s,MS4.8
CLL Collm 89.78 324 *ep*P pP 01 54 56.0 -5.2
CLL *e*PS PS 02 06 53.0 +2.8
CLL LmH 02 35 00.0
comp=N,600nm,20.2s
CLL LmH 02 35 00.0
comp=E,200nm,20.3s
CLL LV 02 39 00.0
comp=Z,400nm,20.9s
KHC Kasperske Hory 90.35 322 *eP* **P 01 54 54.2 +0.3**
KHC MLR MLR
comp=Z,300nm,15.6s,MS4.8
KHC Kasperske Hory 90.35 322 *eP* **P 01 54 54.2 +0.3**
KHC LR LR
comp=Z,300nm,15.6s,MS4.8
KHC Kasperske Hory 90.35 322 *eP* **P 01 54 54.2 +0.3**
KHC AMS AMS 02 39 40.0
comp=Z,300nm,15.6s
MOA Molln 90.45 320 ⇑*i*PcP PcP 01 54 54.7 -0.8
comp=Z,12nm,1.1s
NKC Novy Kostel 90.56 323 AMS AMS 02 38 20.0
comp=Z,400nm,17.2s
YKA Yellowknife Ar 90.57 23 P **P 01 54 55.1 +0.5**
comp=Z,2.9nm,0.6s,mb4.8,baz=304,slow=4.3,SNR=14
YKA pP pP 01 55 04.1 -0.5
comp=Z,3.5nm,0.8s,baz=304,slow=5.0,SNR=9.8
YKA Yellowknife Ar 90.57 23 P **P 01 54 55.1 +0.5**
YKA pP pP 01 55 04.1 -0.5
BOJS Bojanci 90.75 318 *i* P **P 01 54 53.8 -2.0**
VISS Visnje 90.90 318 *i* P **P 01 54 56.3 -0.2**
CEY Cerknica 91.19 318 *i* P **P 01 54 57.9 0.0**
CEY *i* pP 01 55 06.2 -1.6
GRF Grafenberg Arr 91.50 323 *eP* **P 01 54 57.2 -2.0**
comp=Z,3.0nm,0.7s,mb4.7
GRF *e*L 02 39 19.7
comp=Z,421nm,19.6s
GRF Grafenberg Arr 91.50 323 *eP* **P 01 54 57.2 -2.0**
GRF pmax pmax
comp=Z,3.0nm,0.7s,mb4.7
GRF MLR MLR
comp=Z,400nm,19.6s,MS4.9
PPT Papeete 92.67 107 *e*LR LR 02 24 47.9
comp=Z,180nm,24.0s
PPT Papeete 92.67 107 LR LR 02 31 59.7
comp=Z,99nm,19.6s,MS4.3,baz=231,slow=32
FETA Feichten 92.97 320 ⇑*i*PcP PcP 01 55 06.0 -0.7
comp=Z,6.6nm,1.0s
MAW Mawson 93.24 199 LR LR 02 35 20.1
comp=Z,128nm,19.2s,MS4.4,baz=192,slow=34
KEST Kesra 98.89 311 LR LR 02 50 35.0
comp=Z,44nm,18.0s,MS4.0,baz=243,slow=42
NVAR Mina Array Bea 101.93 44 P Pdif 01 55 47.0 +0.7
comp=Z,0.3nm,0.3s,baz=298,slow=3.2,SNR=4.8
SDV Santo Domingo 152.61 29 *e*PKPbc PKPbc 02 01 50.6 +0.4
CPUP Villa Florida 169.12 181 PKPab PKPab 02 03 10.8 -1.1
comp=Z,1.3nm,0.5s,baz=167,slow=5.1,SNR=6.7

MAN 08 01:46:08,15°.13N×122°.14E,h28km,mb4.6,ML3.5,MS3.4, 1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
POLP	**Polilio Island**	**0.45**	**206**	*eP*	Pb	01 46 18.9	+1.5
POLP				*eS*	Sb	01 46 25.9	+2.0
BALP	**Baler**	**0.81**	**318**	*eP*	Pb	01 46 21.0	-2.6
BALP				*eS*	Sb	01 46 27.4	-6.8
PCPH	**Palayan**	**1.09**	**293**	⇓*eP*	Pn	01 46 27.6	+0.1
PCPH				*i* S		01 46 27.6	

MAN 08 02:10:29,15°.30N×122°.21E,h13km,mb4.6,ML3.5,MS3.4, 1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
POLP	**Polilio Island**	**0.63**	**205**	*eP*	Pg	02 10 41.7	+0.4
POLP				*eS*	Sg	02 10 49.2	-0.4
BALP	**Baler**	**0.75**	**306**	*eP*	Pg	02 10 43.4	-0.2
BALP				*eS*	Sg	02 10 50.9	-2.5
PCPH	**Palayan**	**1.10**	**284**	⇓*eP*	Pb	02 10 50.0	0.0
PCPH				*eS*	Sb	02 11 05.3	+1.0
BOAC	**Boac**	**1.87**	**191**	*eP*	Pn	02 11 00.9	+0.2
LUBP	**Lubang**	**2.46**	**231**	*eP*	Pn	02 11 15.4	+6.6
PVCP	**Virac**	**2.54**	**132**	*eP*	Pn	02 11 10.5	+0.6

*BJI **08** 02:11:33.9,34°.27N×80°.79E,h19km,ML3.5/3*
*IDC **08** 02:11:33.1±0.9,34°.28N×80°.42E,h0km,mb3.8/9, mb1 3.9/13,mb1mx3.7/28,mbtmp3.7/13,ML3.4/4,Error ellipse: s-maj=28.8km s-min=16.8km az=62.0*
*ISCJB **08** 02:11:34.5±3.5,34°.42N±0°.07×80°.47E±0°.10,h20km±25km, mb3.6/9,Error ellipse: s-maj=13.6km s-min=11.6km az=13.9*
*NEIC **08** 02:11:34.6±0.7,34°.32N×80°.48E,h10km,mb3.7/2,Error ellipse: s-maj=14.5km s-min=11.3km az=70.0*
ISC 08 02:11:34.3±3.5,34°.35N±0°.06×80°.47E±0°.08,h7km±23km, n23,σ0s89/27,mb3.6/9,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDI	**Dehra Dun**	**4.50**	**208**	*ex*	**Pn**	**02 12 48.8**	**+5.9**
KSH	**Kashi**	**6.29**	**326**	Pn	**Pn**	**02 13 10.1**	**+2.7**
KSH				Sn	**Sn**	**02 14 26.4**	**+6.9**
KSH				smax			
comp=N,18nm,1.1s							
KSH				smax			
comp=E,58nm,1.6s							
KBL	**Kabul**	**9.44**	**274**	Pn	**Pn**	**02 13 50.1**	**-0.6**
KBL				Sn	**Sn**	**02 15 36.7**	**-0.3**
AAK	**Ala-Archa**	**9.50**	**332**	Pn	**Pn**	**02 13 55.6**	**+4.2**
comp=E,0.4nm,0.3s,baz=177,slow=19,SNR=2.2							
AAK				Lg		02 16 43.4	
comp=E,0.4nm,0.3s,baz=222,slow=16,SNR=2.3							
AAK	**Ala-Archa**	**9.50**	**332**	Pn	**Pn**	**02 13 55.6**	**+4.2**
AAK				Lg		02 16 43.4	
MK31	**Makanchi Array**	**12.51**	**6**	*e*Pn	**Pn**	**02 14 33.0**	**+0.5**
MKAR	**Makanchi Array**	**12.51**	**6**	Pn	**Pn**	**02 14 32.2**	**-0.3**
comp=E,0.2nm,0.3s,baz=184,slow=12,SNR=8.7							
MKAR				Sn	**Sn**	**02 16 52.2**	**+0.1**
comp=E,0.0nm,0.3s,baz=186,slow=26,SNR=2.6							
MKAR	**Makanchi Array**	**12.51**	**6**	Pn	**Pn**	**02 14 32.2**	**-0.3**
MKAR				Sn	**Sn**	**02 16 52.2**	**+0.1**
KURK	**Kurchatov**	**16.41**	**356**	Pn	**Pn**	**02 15 23.3**	**-1.6**
comp=E,0.1nm,0.3s,baz=180,slow=11,SNR=5.4							
ZALV	**Zalesovo Beam**	**19.83**	**8**	P	**Pn**	**02 16 05.0**	**-1.9**
comp=E,0.2nm,0.3s,baz=201,slow=12,SNR=4.5							
BVAR	**Borovoye Array**	**20.01**	**342**	P	**P**	**02 16 07.6**	**+0.4**
comp=E,2.4nm,0.7s,baz=153,slow=12,SNR=13							
BRVK	**Borovoye**	**20.06**	**342**	*eP*	**P**	**02 16 08.2**	**+0.3**
comp=E,4.4nm,0.9s							
ABKAR	**Akbulak array**	**21.26**	**321**	*eP*	**P**	**02 16 21.9**	**+1.0**
comp=E,2.0nm,0.8s,mb3.5							
CMAR	**Chiang Mai Arr**	**22.84**	**129**	P	**P**	**02 16 38.7**	**+0.8**
comp=E,0.9nm,0.3s,mb3.7,baz=306,slow=9.6,SNR=6.8							
AKTK	**Aktyubinsk**	**22.96**	**321**	P	**P**	**02 16 38.5**	**-0.5**
AKTO	**Aktyubinsk**	**22.96**	**321**	P	**P**	**02 16 38.5**	**-0.5**
comp=E,1.3nm,0.7s,mb3.5,baz=128,slow=12,SNR=5.6							
BRTR	**Keskin Array B**	**37.43**	**292**	P	**P**	**02 18 47.9**	**-0.2**
comp=E,0.4nm,0.8s,mb3.3,baz=67,slow=11,SNR=2.8							
FINES	**FINESS Array B**	**43.61**	**326**	P	**P**	**02 19 39.4**	**+0.6**
comp=E,0.9nm,0.6s,mb3.7,baz=108,slow=6.2,SNR=3.9							
NB2	**NORSAR Subarra**	**50.71**	**324**	P	**P**	**02 20 34.3**	**+0.1**
comp=Z,0.6nm,0.6s,mb3.7,baz=88,slow=7.4							
NOA	**NORSAR Array B**	**50.71**	**324**	P	**P**	**02 20 34.3**	**+0.1**
comp=Z,0.6nm,0.6s,mb3.7,baz=89,slow=7.5,SNR=4.2							
WRA	**Warramunga Arr**	**74.42**	**128**	P	**P**	**02 23 12.3**	**-0.8**
comp=Z,0.5nm,0.8s,mb3.5,baz=323,slow=5.6,SNR=5.0							
BOSA	**Boshof**	**81.52**	**227**	P	**P**	**02 23 52.3**	**-0.1**
comp=Z,3.2nm,1.0s,mb4.2,baz=8.1,slow=7.1,SNR=4.3							
YKA	**Yellowknife Ar**	**82.73**	**7**	P	**P**	**02 23 59.3**	**+0.9**
comp=Z,0.9nm,0.7s,mb3.9,baz=342,slow=5.8,SNR=3.2							

*ISCJB **08** 02:28:31.1±1.6,56°.09N±0°.04×166°.08W±0°.07,h8km±11km, mb3.9/8,Error ellipse: s-maj=8.0km s-min=6.1km az=138.2*
*IDC **08** 02:28:32.1±1.3,56°.18N×166°.19W,h0km,mb3.9/8, mb1 4.1/10,mb1mx3.8/29,mbtmp3.9/10,ML4.1/2,Error ellipse: s-maj=45.1km s-min=15.6km az=10.0*
*NEIC **08** 02:28:32.2,56°.12N×166°.13W,h5km,ML3.9(AEIC), ML3.9(PMR),After AEIC.*
ISC 08 02:28:32.1±2.4,55°.99N±0°.05×166°.16W±0°.07,h3km±16km, n24,σ1s09/32,mb3.9/8,Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKGG	**Akutan Green G**	**1.80**	**177**	P	**Pn**	**02 29 04.1**	**+0.1**
AKGG				S	**Sn**	**02 29 28.6**	**+1.3**
AKUT	**Akutan**	**1.87**	**173**	*e*Pn	**Pn**	**02 29 05.0**	**0.0**
UNV	**Unalaska Valle**	**2.16**	**185**	*e*Pn	**Pn**	**02 29 08.5**	**-0.5**
UNV				*e*S	**Sg**	**02 29 47.9**	**+6.6**
OKFG	**Magazine Ridge**	**2.78**	**202**	P	**Pn**	**02 29 17.7**	**+0.2**
SDPT	**Sand Point**	**3.28**	**99**	*e*Pn	**Pn**	**02 29 22.4**	**-1.9**
SDPT				*e*S	**Sn**	**02 30 03.1**	**-0.8**
CHGN	**Chignik**	**4.34**	**83**	*e*Pn	**Pn**	**02 29 37.2**	**-1.7**
CHGN				*e*S	**Sb**	**02 30 36.7**	**-5.1**
OHAK	**Old Harbor**	**7.21**	**75**	*e*Pn	**Pn**	**02 30 17.9**	**-0.4**
ADK	**Adak**	**7.45**	**241**	*e*Pn	**Pn**	**02 30 22.7**	**+1.1**
ADK				*e*Sn	**Sn**	**02 31 44.7**	**-1.8**
KDAK	**Kodiak Island**	**7.65**	**71**	Pn	**Pn**	**02 30 25.6**	**+1.3**
1.1nm,0.3s,baz=250,slow=6.5,SNR=6.6							
KDAK				Sn	**Sn**	**02 31 52.8**	**+1.3**
0.4nm,0.3s,baz=156,slow=21,SNR=1.1							
KDAK	**Kodiak Island**	**7.65**	**71**	*e*Pn	**Pn**	**02 30 24.7**	**+0.4**
KDAK				Sn	**Sn**	**02 31 52.8**	**+1.3**
TTA	**Tatalina**	**8.66**	**32**	*e*Pn	**Pn**	**02 30 37.4**	**-0.8**
2.7nm,0.5s							
TTA				*e*S	**Sn**	**02 32 26.7**	**+11**
DAWY	**Dawson**	**15.52**	**48**	*e*Pn	**Pn**	**02 32 12.5**	**+0.9**
INK	**Inuvik**	**19.30**	**37**	P	**Pn**	**02 33 00.8**	**+2.1**
0.2nm,0.3s,baz=223,slow=8.4,SNR=5.3							
INK	**Inuvik**	**19.30**	**37**	P	**Pn**	**02 33 00.8**	**+2.1**
DLBC	**Dease Lake**	**19.57**	**68**	P	**Pn**	**02 33 01.6**	**-0.5**
0.5nm,0.3s,baz=297,slow=11,SNR=4.4							
PETK	**Petropavlovsk-**	**21.01**	**277**	P	**P**	**02 33 18.1**	**+1.6**
3.5nm,0.8s,mb3.7,baz=73,slow=14,SNR=4.6							
NVAR	**Mina Array Bea**	**36.08**	**99**	P	**P**	**02 35 36.1**	**+1.3**
1.0nm,0.7s,mb3.8,baz=295,slow=7.7,SNR=8.1							
PDAR	**Pinedale Array**	**38.05**	**86**	P	**P**	**02 35 51.7**	**+0.2**
0.6nm,0.5s,mb3.5,baz=319,slow=2.4,SNR=7.1							
TXAR	**Lajitas Array**	**50.97**	**94**	P	**P**	**02 37 34.8**	**-0.1**
1.2nm,0.8s,mb3.9,baz=304,slow=7.4,SNR=12							
SONM	**Songino Array**	**51.09**	**300**	P	**P**	**02 37 36.0**	**+0.5**
1.4nm,0.6s,mb4.1,baz=47,slow=7.7,SNR=4.3							
BVAR	**Borovoye Array**	**61.83**	**325**	P	**P**	**02 38 51.5**	**-0.5**
2.0nm,0.8s,mb4.3,baz=48,slow=11,SNR=7.2							
AKASG	**Malin Array Be**	**72.91**	**350**	P	**P**	**02 40 00.2**	**-1.9**
0.7nm,0.5s,mb3.9,baz=2.3,slow=4.6,SNR=3.2							
ESDC	**Sonseca Array**	**83.51**	**14**	P	**P**	**02 41 00.3**	**-0.8**
0.4nm,0.5s,mb3.8,baz=341,slow=5.3,SNR=3.4							
ESDC	**Sonseca Array**	**83.51**	**14**	P	**P**	**02 41 00.3**	**-0.8**

CASC 08 02:28:52.1±1.9,8°.39N×82°.92W,h3km,MD3.8,2C-1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ACR	**Cerro Adams**	**0.35**	**317**	⇑*i*P	Pg	02 28 59.7	+0.7
BRU2	**Volcan**	**0.46**	**30**	*i* P	Pg	02 29 02.6	+1.6
BRU2				*e*S	Sg	02 29 11.2	+4.3
CTCR	**Cotoan**	**0.53**	**18**	*i* P	Pg	02 29 03.5	+1.3
BAR1		**0.93**	**336**	⇓*e*P	Pg	02 29 09.8	-0.1
BAR1				*e*S	Sg	02 29 23.4	+1.4
CNI	**Changuinola**	**1.09**	**21**	*e*P	Pg	02 29 13.3	+0.2
BUS	**Buena Vista**	**1.42**	**325**	⇑*i*P	Pn	02 29 18.0	-0.8
BUS				*e*S	Sb	02 29 37.9	+0.1
URSC	**Urasca**	**1.66**	**330**	*e*P	Pn	02 29 21.5	-0.6
URSC				*e*S	Sn	02 29 44.9	+0.8
PRS1	**Puriscal**	**2.09**	**319**	*e*P	Pn	02 29 29.0	+0.9

*ISCJB **08** 02:32:37.3±0.6,38°.72N±0°.04×31°.20E±0°.03,h1km±7km, Error ellipse: s-maj=6.1km s-min=4.3km az=161.4*
*ISK **08** 02:32:37.0,38°.72N×31°.19E,h13km,MD2.6*
*CSEM **08** 02:32:37.4±0.1,38°.71N×31°.20E,h5km,MD2.9,Error ellipse: s-maj=3.0km s-min=2.4km az=178.0*
*DDA **08** 02:32:38.7,38°.76N×31°.10E,h7km±1km,Md2.9*
ISC 08 02:32:37.8±0.6,38°.72N±0°.04×31°.20E±0°.03,h7km±6km, n24,σ0s48/40,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOLV	**Bolvadin**	**0.19**	**271**	*e*P	**Pg**	**02 32 41.8**	**+0.1**
BOLV				*e*S	**Sg**	**02 32 44.1**	**-0.2**
BOLV	**Bolvadin**	**0.19**	**271**	*e*P	**Pg**	**02 32 41.8**	**+0.1**
BOLV				*e*S	**Sg**	**02 32 44.1**	**-0.2**
SHUT	**Suhut-Afyon**	**0.53**	**252**	*e*PG	**Pg**	**02 32 48.3**	**+0.2**
SHUT				*e*SG	**Sg**	**02 32 55.4**	**+0.4**
SHUT	**Suhut-Afyon**	**0.53**	**252**	*e*Pg	**Pg**	**02 32 48.3**	**+0.3**
SHUT				*e*Sg	**Sg**	**02 32 55.4**	**+0.4**
KIZT	**Kizilcal**	**0.56**	**73**	*e*PG	**Pg**	**02 32 49.0**	**+0.4**
KIZT				*e*SG	**Sg**	**02 32 56.8**	**+0.9**
KIZT	**Kizilcal**	**0.56**	**73**	*e*Pg	**Pg**	**02 32 49.0**	**+0.4**
KIZT				*e*Sg	**Sg**	**02 32 56.8**	**+0.9**
SVRH	**Sivrihisar-ESK**	**0.77**	**19**	*e*PG	**Pg**	**02 32 52.3**	**-0.4**
SVRH				*e*SG	**Sg**	**02 33 03.4**	**+0.6**
SVRH	**Sivrihisar-ESK**	**0.77**	**19**	*e*Pg	**Pg**	**02 32 52.3**	**-0.4**
SVRH				*e*Sg	**Sg**	**02 33 03.4**	**+0.6**
ESKT	**Eskisehir**	**0.85**	**342**	*e*PG	**Pg**	**02 32 53.6**	**-0.5**
ESKT	**Eskisehir**	**0.85**	**342**	*e*P	**Pg**	**02 32 53.7**	**-0.4**
ESKT				*e*S	**Sg**	**02 33 04.8**	**-0.4**
ESKT	**Eskisehir**	**0.85**	**342**	*e*Pg	**Pg**	**02 32 53.6**	**-0.5**
SEYT	**Eskypehyr**	**0.85**	**342**	*e*P	**Pg**	**02 32 53.7**	**-0.4**
SEYT				*e*S	**Sg**	**02 33 04.8**	**-0.3**
ALT	**Altintas**	**0.91**	**292**	*e*PG	**Pg**	**02 32 54.6**	**-0.7**
ALT	**Altintas**	**0.91**	**292**	*e*Pg	**Pg**	**02 32 54.6**	**-0.7**
LADK	**Ladik-KONYA**	**1.05**	**119**	*e*PG	**Pg**	**02 32 57.4**	**-0.7**
LADK	**Ladik-KONYA**	**1.05**	**119**	*e*Pg	**Pg**	**02 32 57.4**	**-0.6**
KONT	**Konya--Tatoy**	**1.20**	**130**	*e*PN	**Pn**	**02 33 00.1**	**-0.8**
KONT	**Konya--Tatoy**	**1.20**	**130**	*e*Pn	**Pn**	**02 33 00.1**	**-0.8**
BORA	**Eskisehir**	**1.30**	**334**	*e*P	**Pn**	**02 33 02.0**	**-0.3**
BORA				*e*S	**Sb**	**02 33 19.6**	**+0.2**
BORA	**Eskisehir**	**1.30**	**334**	*e*P	**Pn**	**02 33 02.0**	**-0.3**
BORA				*e*S	**Sb**	**02 33 19.6**	**+0.2**
KHAL	**Karahalli**	**1.38**	**256**	*e*P	**Pn**	**02 33 03.8**	**+0.3**
KHAL				*e*S	**Sb**	**02 33 22.4**	**+0.7**
KHAL	**Karahalli**	**1.38**	**256**	*e*P	**Pn**	**02 33 03.8**	**+0.3**
KHAL				*e*S	**Sb**	**02 33 22.4**	**+0.7**
GDZ	**Gediz**	**1.39**	**286**	*e*P	**Pn**	**02 33 03.7**	**+0.2**
GDZ				*e*S	**Sb**	**02 33 22.0**	**0.0**
GDZ	**Gediz**	**1.39**	**286**	*e*P	**Pn**	**02 33 03.7**	**+0.1**
GDZ				*e*S	**Sb**	**02 33 22.0**	**0.0**

*IDC **08** 03:02:24.7±1.8,31°.61S×72°.96W,h0km,mb1 3.9/3, mb1mx3.7/15,mbtmp3.7/3,ML4.2/1,Error ellipse: s-maj=75.3km s-min=36.9km az=94.0*
*ISCJB **08** 03:02:26.2±1.4,31°.60S±0°.03×72°.25W±0°.08,h15km±10km, Error ellipse: s-maj=11.7km s-min=4.3km az=5.2*
*GUC **08** 03:02:27.6±0.7,31°.59S×72°.17W,h32km±2km,MD4.4, ML4.2*
*NEIC **08** 03:02:27.6,31°.59S×72°.17W,h32km,ML4.2(GUC),After GUC.*
ISC 08 03:02:27.4±1.3,31°.59S±0°.03×72°.17W±0°.07,h13km±6km, n38,σ0s80/55,3C-5D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHNG	**Los Chungos**	**0.64**	**117**	⇓*i*P	**Pg**	**03 02 40.0**	**+0.2**
CHNG				*i* S	**Sg

TACH	**Talagante**	**2.31 154**	⇓*i*P		**Pn**	**03 03 05.1**	**0.0**
FCH	**Farellones**	**2.35 138**	*e*P		**Pn**	**03 03 00.9**	**-4.8**
FCH			*i* S		**Sn**	**03 03 30.5**	**-3.9**
ANTU	**Antumapu**	**2.36 147**	*e*P		**Pn**	**03 03 05.6**	**-0.2**
ANTU			*i* S		**Sn**	**03 03 34.2**	**-0.5**
ANTU	**Antumapu**	**2.36 147**	*e*P		**Pn**	**03 03 05.6**	**-0.2**
ANTU			*i* S		**Sn**	**03 03 34.2**	**-0.5**
ANTU			AML		AML	03 03 46.7	
	comp=E,954nm,0.5s						
PCH	**Pirque**	**2.46 146**	*e*P		**Pn**	**03 03 07.2**	**-0.1**
PCH			S		**Sn**	**03 03 38.4**	**+1.2**
PCH	**Pirque**	**2.46 146**	*e*P		**Pn**	**03 03 07.2**	**-0.1**
PCH			*e*S		**Sn**	**03 03 38.4**	**+1.2**
CHCH	**Chadas Angostu**	**2.66 152**	*e*P		**Pn**	**03 03 09.8**	**-0.2**
CHCH			*i* S		**Sn**	**03 03 41.8**	**-0.4**
CHCH	**Chadas Angostu**	**2.66 152**	*e*P		**Pn**	**03 03 09.8**	**-0.2**
CHCH			*i* S		**Sn**	**03 03 41.8**	**-0.4**
LMEL	**Las Melosas**	**2.79 144**	*e*P		**Pn**	**03 03 12.3**	**+0.5**
LMEL			*i* S		**Sn**	**03 03 45.5**	**0.0**
LMEL	**Las Melosas**	**2.79 144**	*e*P		**Pn**	**03 03 12.3**	**+0.5**
LMEL			*i* S		**Sn**	**03 03 45.5**	**0.0**
LMEL			AML		AML	03 03 58.8	
	comp=N,627nm,0.2s						
CACH	**El Canelo**	**2.84 153**	*e*P		**Pn**	**03 03 13.3**	**+0.8**
CACH	**El Canelo**	**2.84 153**	*e*P		**Pn**	**03 03 13.3**	**+0.8**
LCO	**Las Campanas**	**2.87 27**	*e*Pn		**Pn**	**03 03 12.3**	**-0.6**
LCO			*e*S		**Sn**	**03 03 49.3**	**+2.1**
PLCA	**Paso Flores**	**9.22 172**	Pn		**Pn**	**03 04 39.8**	**-0.2**
	comp=N,0.8nm,0.3s,baz=334,slow=12,SNR=18						
TRQA	**Tornquist**	**10.57 130**	Pn		**Pn**	**03 05 00.4**	**+1.9**
CPUP	**Villa Florida**	**14.01 72**	Pn		**Pn**	**03 05 53.5**	**+7.9**
	comp=N,0.3nm,0.3s,baz=238,slow=13,SNR=2.8						
LPAZ	**La Paz**	**15.67 15**	Pn		**Pn**	**03 06 08.8**	**+0.8**
	comp=N,0.1nm,0.3s,baz=194,slow=7.4,SNR=4.7						
LPAZ	**La Paz**	**15.67 15**	*e*Pn		**Pn**	**03 06 09.2**	**+1.2**
BVAR	**Borovoye Array**	**145.56 40**	PKPbc		PKPbc	03 22 05.7	+0.6
	comp=N,0.5nm,0.5s,baz=306,slow=3.4,SNR=3.4						
ZALV	**Zalesovo Beam**	**152.22 30**	PKPbc		PKPbc	03 22 22.3	0.0
	comp=N,0.5nm,0.4s,baz=286,slow=5.8,SNR=3.0						
ZALV			PKPab		PKPab	03 22 32.7	+0.6
	comp=N,4.3nm,0.8s,baz=298,slow=2.8,SNR=3.7						
ZALV	**Zalesovo Beam**	**152.22 30**	PKPbc		PKPbc	03 22 22.3	0.0
ZALV			PKPab		PKPab	03 22 32.7	+0.6
MKAR	**Makanchi Array**	**155.20 45**	PKPbc		PKPdf	03 22 32.9	+13
	comp=N,0.2nm,0.7s,baz=245,slow=3.0,SNR=2.5						

*IDC **08** 03:11:12.2±4.2, 6°.66S×147°.51E, h0km, mb4.0/6, mb1 4.2/7, mb1mx4.0/16, mbtmp4.1/7, ML3.2/1, MS3.6/4, Ms1 3.6/4, ms1mx3.3/13, Error ellipse: s-maj=111.4km s-min=23.8km az=107.0*
*NEIC **08** 03:11:19.0±1.1, 6°.67S×147°.20E, h35km, Error ellipse: s-maj=25.7km s-min=12.5km az=95.0*

ISC 08 03:11:15.1±3.5, 6°.6S±0°.1×147°.3E±0°.2, h10km±24km, n13, σ0°77/11, mb4.0/6, MS3.6/3, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.80 182**		*e*Pn	**Pn**	**03 12 00.3**	**+0.3**
PMG				*e*Pg	**Pg**	**03 12 08.8**	**0.0**
CTA	**Charters Tower**	**13.46 184**		LR	LR	03 19 21.8	
	comp=Z,158nm,20.5s,baz=54,slow=36						
KAKA	**Kakadu**	**15.83 246**		*e*Pn	**Pn**	**03 14 58.7**	**+0.5**
	154nm,1.3s						
WRA	**Warramunga Arr**	**18.27 222**		P	**Pn**	**03 15 27.6**	**-1.3**
	0.1nm,0.3s,baz=48,slow=12,SNR=8.0						
ASAR	**Alice Springs**	**21.29 216**		P	**P**	**03 16 02.9**	**+0.9**
	2.0nm,0.8s,mb3.5,baz=35,slow=13,SNR=12						
FITZ	**Fitzroy Crossi**	**23.99 240**		P	**P**	**03 16 29.1**	**-1.0**
	5.4nm,1.0s,mb3.9,baz=61,slow=11,SNR=3.1						
STKA	**Stephens Creek**	**25.71 191**		LR	LR	03 27 41.6	
	comp=Z,223nm,21.5s,MS3.7,baz=23,slow=38						
KSRS	**Korea Array**	**47.39 339**		P	**P**	**03 19 48.8**	**-0.8**
	2.8nm,0.8s,mb4.2,baz=158,slow=9.4,SNR=14						
CMAR	**Chiang Mai Arr**	**53.76 298**		P	**P**	**03 20 39.4**	**+1.2**
	5.1nm,0.8s,mb4.5,baz=121,slow=6.0,SNR=17						
PETK	**Petropavlovsk-**	**60.12 7**		LR	LR	03 44 15.6	
	comp=Z,34nm,19.6s,MS3.5,baz=86,slow=33						
MK31	**Makanchi Array**	**78.12 320**		P	**P**	**03 23 14.8**	**+0.3**
MKAR	**Makanchi Array**	**78.12 320**		P	**P**	**03 23 14.9**	**+0.4**
	0.7nm,0.7s,mb3.7,baz=111,slow=5.5,SNR=7.0						
MKAR				LR	LR	03 59 05.9	
	comp=Z,40nm,19.0s,MS3.8,baz=69,slow=37						
ZALV	**Zalesovo Beam**	**79.65 328**		P	**P**	**03 23 22.1**	**-0.6**
	0.9nm,0.6s,mb3.9,baz=123,slow=5.3,SNR=2.5						

FUNV 08 03:36:28.3, 6°.77N×73°.15W, h166km, MW3.5, 8C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.36**	**37**⇑	*i*P	Pn	03 36 57.4	-0.5
CAPV				*e*S	Sn	03 37 18.6	-1.9
VIGV	**El Vigia**	**2.71**	**41**⇑	*i*P	Pn	03 37 12.0	-0.8
VIGV				*e*S	Sn	03 37 44.2	-3.1
SOCV	**Socops**	**2.72**	**56**⇑	*e*P	Pn	03 37 12.0	-0.9
SOCV				*e*S	Sn	03 37 43.9	-3.6
ELOV	**Elorza**	**3.65**	**86**	*e*P	Pn	03 37 23.8	-0.6
VIRV	**Villa del Rosa**	**3.78**	**11**⇑	*i*P	Pn	03 37 24.3	-1.9
VIRV				*e*S	Sn	03 38 06.8	-4.5
QARV	**Quebrada Arrib**	**4.29**	**37**⇑	*i*P	Pn	03 37 31.9	-0.8
SANV	**Sanarito**	**4.49**	**53**	*e*P	Pn	03 37 33.8	-1.5
CURV	**Curarigua**	**4.51**	**44**	*e*P	Pn	03 37 34.3	-1.3
DABV	**Dabajuro**	**4.81**	**31**	*e*P	Pn	03 37 38.6	-1.0
TEPV	**Terepaima**	**5.04**	**51**⇑	*i*P	Pn	03 37 41.2	-1.3
SIQV	**Siquisique**	**5.07**	**40**⇑	*i*P	Pn	03 37 41.5	-1.5
BAUV	**El Baul**	**5.50**	**67**	*e*P	Pn	03 37 45.9	-2.7
MAPV	**Macapo**	**5.55**	**56**⇑	*i*P	Pn	03 37 47.6	-1.6
MONV	**Montecano**	**6.03**	**31**	*e*P	Pn	03 37 52.8	-2.8
TURV	**Turiamo**	**6.39**	**55**	*e*P	Pn	03 37 58.6	-1.8
CAOV	**Caicara del Or**	**6.80**	**85**	*e*P	Pn	03 38 03.0	-2.7
BIRV	**Birongo**	**7.73**	**61**	*e*P	Pn	03 38 15.8	-2.3
CUPV	**Cœpira**	**7.98**	**65**	*e*P	Pn	03 38 18.9	-2.5

IDC 08 03:37:44.2±14.0, 6°.18S×107°.92E, h303km±138km, mb3.3/6, mb1 3.4/6, mb1mx3.1/21, mbtmp3.3/6, Error ellipse: s-maj=203.2km s-min=17.4km az=54.0, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**26.04 340**		P	P	03 42 51.0	+0.5
	1.4nm,0.3s,baz=179,slow=10,SNR=4.7						
WRA	**Warramunga Arr**	**29.08 121**		P	P	03 43 17.1	-0.3
	0.8nm,0.6s,baz=300,slow=9.9,SNR=3.4						
ASAR	**Alice Springs**	**30.44 128**		P	P	03 43 29.4	0.0
	0.5nm,0.3s,baz=302,slow=8.3,SNR=14						
STKA	**Stephens Creek**	**40.52 133**		P	P	03 44 55.1	+0.6
	1.9nm,0.7s,baz=301,slow=12,SNR=2.8						
MKAR	**Makanchi Array**	**57.44 339**		P	P	03 47 01.0	-0.8
	0.7nm,0.4s,baz=158,slow=7.4,SNR=13						
ZALV	**Zalesovo Beam**	**62.98 345**		P	P	03 47 39.8	+0.9
	0.5nm,0.4s,baz=158,slow=9.0,SNR=2.2						

*ISCJB **08** 04:07:51.3±0.8, 40°.35N±0°.03×25°.78E±0°.04, h6km±7km, Error ellipse: s-maj=4.9km s-min=4.7km az=148.8*
*CSEM **08** 04:07:51.4±0.2, 40°.35N×25°.80E, h5km, ML2.8/7, Error ellipse: s-maj=3.1km s-min=2.5km az=110.0*
*DDA **08** 04:07:51.5, 40°.33N×25°.85E, h7km±3km, Md3.0*
*THE **08** 04:07:51.8, 40°.35N×25°.77E, h10km±1km, ML2.8/7, Error ellipse: s-maj=1.5km s-min=0.7km az=22.0*

ISC 08 04:07:51.7±0.7, 40°.36N±0°.03×25°.78E±0°.04, h11km±7km, n17, σ0°69/34, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALN	**Alexandroupoli**	**0.57 20**		P	**Pg**	**04 08 02.7**	**-0.2**
ALN				S	**Sg**	**04 08 11.4**	**+1.0**
ALN	**Alexandroupoli**	**0.57 20**		P	**Pg**	**04 08 02.7**	**-0.2**
ALN				S	**Sg**	**04 08 11.4**	**+1.0**
LIA	**Limnos Island**	**0.65 225**		P	**Pg**	**04 08 03.6**	**-0.6**
LIA				S	**Sg**	**04 08 13.7**	**+1.0**
LIA	**Limnos Island**	**0.65 225**		P	**Pg**	**04 08 03.6**	**-0.6**
LIA				S	**Sg**	**04 08 13.7**	**+1.0**
SART	**Tekirdag**	**1.12 72**	*i* P		**Pb**	**04 08 12.1**	**-0.8**
SART			*i* S		**Sb**	**04 08 27.3**	**-0.2**
SART	**Tekirdag**	**1.12 72**	*i* P		**Pb**	**04 08 12.1**	**-0.9**
SART			*i* S		**Sb**	**04 08 27.3**	**-0.2**
SIGR	**SIGRI**	**1.15 177**	P		**Pb**	**04 08 12.7**	**-0.8**
SIGR			S		**Sb**	**04 08 29.0**	**+0.7**
SIGR	**SIGRI**	**1.15 177**	P		**Pb**	**04 08 12.7**	**-0.8**
SIGR			S		**Sb**	**04 08 29.0**	**+0.7**
KAVA	**Kavala**	**1.16 304**	P		**Pb**	**04 08 13.5**	**-0.1**
KAVA			S		**Sb**	**04 08 29.1**	**+0.5**
PRK	**Paraskevi**	**1.17 161**	P		**Pb**	**04 08 13.5**	**-0.4**
PRK			S		**Sb**	**04 08 29.4**	**+0.3**
PRK	**Paraskevi**	**1.17 161**	P		**Pb**	**04 08 13.5**	**-0.4**
PRK			S		**Sb**	**04 08 29.4**	**+0.3**
AYVA	**Ayvalik**	**1.26 146**	*i* P		**Pn**	**04 08 14.9**	**-0.2**
AYVA			*i* S		**Sb**	**04 08 31.4**	**-0.2**
AYVA	**Ayvalik**	**1.26 146**	*i* P		**Pn**	**04 08 14.9**	**-0.3**
AYVA			*i* S		**Sb**	**04 08 31.4**	**-0.2**
OUR	**Ouranopolis**	**1.38 270**	P		**Pn**	**04 08 15.1**	**-1.7**
OUR			S		**Sb**	**04 08 35.5**	**+0.6**
BALY	**Balya**	**1.54 113**	*i* P		**Pn**	**04 08 19.4**	**+0.3**
BALY			*i* S		**Sn**	**04 08 40.2**	**+1.2**
BALY	**Balya**	**1.54 113**	*i* P		**Pn**	**04 08 19.4**	**+0.4**
BALY			*i* S		**Sn**	**04 08 40.2**	**+1.2**
CHOS	**Chios island**	**1.98 174**	P		**Pn**	**04 08 24.4**	**-0.7**
CHOS			S		**Sn**	**04 08 50.1**	**+0.3**

MAN 08 04:12:42.9, 9°.71N×122°.00E, h56km, mb4.4, ML3.3, MS3.2, 1C, Sulu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**1.08 32**		*e*P	Pn	04 13 01.6	+0.6
SNPH	**Sibulan**	**1.27 106**⇑		*e*P	Pn	04 13 03.8	+0.3
SNPH				*e*S	Sn	04 13 21.7	+2.0
CUYO	**Cuyo Island**	**1.49 320**		*e*P	Pn	04 13 07.6	+1.1
TBP	**Tagbilaran**	**1.84 90**		*e*P	Pn	04 13 14.9	+3.8
LLP	**Lapu-Lapu**	**2.03 72**		*e*P	Pn	04 13 15.3	+1.5
LLP				*e*S	Sn	04 13 38.8	+0.7
PAGZ	**Pagadian**	**2.30 143**		*e*P	Pn	04 13 18.7	+1.2
BUSP	**Coron**	**2.89 322**		*e*P	Pn	04 13 26.9	+1.4
ENPP	**El Nido**	**2.94 301**		*e*P	Pn	04 13 27.8	+1.6

IDC 08 04:19:15.2±2.1, 54°.24N×87°.26E, h0km, mb3.5/1, mb1 3.3/3, mb1mx3.2/26, mbtmp3.2/3, ML2.9/2, 3C-3D, Error ellipse: s-maj=20.1km s-min=16.5km az=93.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.47 259**		Pn	Pn	04 19 42.0	-0.9
	2.1nm,0.3s,baz=82,slow=16,SNR=19						
ZALV				Lg		04 20 02.8	
	3.4nm,0.3s,baz=79,slow=24,SNR=14						
ZALV				Rg		04 20 11.8	
	13nm,0.6s,baz=77,slow=23,SNR=5.0						
KURK	**Kurchatov**	**6.35 240**		⇑Pn	Pn	04 20 49.7	-0.2
	4.6nm,1.4s						
KURK				⇓Sn	Sn	04 22 01.1	-2.0
	0.9nm,0.5s						
KURK				⇑Lg		04 22 36.1	
	16nm,1.3s						
KURK	**Kurchatov**	**6.35 240**		Pn	Pn	04 20 52.6	+2.7
	0.2nm,0.3s,baz=56,slow=14,SNR=7.6						
KURK				Sn	Sn	04 22 03.9	+0.8
	0.1nm,0.3s,baz=349,slow=18,SNR=4.3						
KURK				Lg		04 22 37.0	
	0.1nm,0.3s,baz=239,slow=30,SNR=6.8						
MK31	**Makanchi Array**	**8.10 205**		⇑Pn	Pn	04 21 15.7	+1.8
	0.5nm,0.8s,baz=27,slow=13,SNR=4.9						
MK31				⇓Sn	Sn	04 22 45.9	-0.2
	0.7nm,0.8s,baz=27,slow=27,SNR=3.7						
MK31				⇓Lg		04 23 25.2	
	4.4nm,0.9s,baz=27,slow=28,SNR=5.4						
MKAR	**Makanchi Array**	**8.10 205**		Pn	Pn	04 21 15.2	+1.3
	0.1nm,0.3s,baz=25,slow=14,SNR=6.3						
MKAR				Sn	Sn	04 22 46.8	+0.7
	0.1nm,0.3s,baz=27,slow=26,SNR=4.7						
MKAR				Lg		04 23 29.8	
	0.1nm,0.3s,baz=31,slow=29,SNR=8.2						
NOA	**NORSAR Array B**	**39.09 311**		P	P	04 26 42.9	-0.7
	0.6nm,0.7s,baz=63,slow=4.6,SNR=3.5						

*NIED **08** 04:20:00, 25°.60N×124°.00E, h155km, Mw3.9 Best double couple: M0 7.95000×10^14 NP1:φs88.00000°, δ81.00000°, λ-126.00000°. NP2:φs347.00000°, δ37.00000°, λ-14.00000°.*
*ISCJB **08** 04:20:39.1±0.3, 25°.67N±0°.06×124°.08E±0°.04, h173km±5km, mb3.8/14, Error ellipse: s-maj=11.1km s-min=4.0km az=151.9*
*JMA **08** 04:20:41.3±0.4, 25°.63N×124°.01E, h163km, M3.9*
*IDC **08** 04:20:42.3±4.0, 25°.59N×123°.83E, h184km±41km, mb3.5/13, mb1 3.7/14, mb1mx3.5/28, mbtmp3.5/14, Error ellipse: s-maj=37.4km s-min=10.9km az=67.0*
*NEIC **08** 04:20:42.8±1.9, 25°.52N×123°.77E, h190km±16km, mb4.0/1, Error ellipse: s-maj=33.9km s-min=9.7km az=65.0*

ISC 08 04:20:40.2±0.3, 25°.68N±0°.06×124°.07E±0°.04, h166km±5km, n41, σ0°98/60, mb3.8/14, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTJ	**Tarama**	**1.18 151**		P	**Pn**	**04 21 09.1**	**+1.0**
JIJ	**Ishigaki jima**	**1.31 177**		P	**Pn**	**04 21 09.5**	**+0.2**
JIJ				S	**Sn**	**04 21 30.3**	**-1.3**
IRIF	**Iriomote-Funau**	**1.38 193**		P	**Pn**	**04 21 09.2**	**-0.7**
IRIF				S	**Sn**	**04 21 32.8**	**+0.1**
JMJ	**Miyako jima 2**	**1.40 128**		P	**Pn**	**04 21 11.6**	**+1.5**
JMJ				S	**Sn**	**04 21 33.6**	**+0.6**
JKRS	**Kuro-shima**	**1.44 182**		P	**Pn**	**04 21 10.9**	**+0.4**
JKRS				S	**Sn**	**04 21 33.4**	**-0.3**
JOGS	**Gusukube**	**1.52 127**		P	**Pn**	**04 21 12.8**	**+1.6**
JOGS				S	**Sn**	**04 21 35.9**	**+0.9**
YOJ	**Yonaguni jima**	**1.55 219**		P	**Pn**	**04 21 12.3**	**+0.7**
YOJ				S	**Sn**	**04 21 35.6**	**-0.1**
HATJ	**Hateruma jima**	**1.64 189**		P	**Pn**	**04 21 13.0**	**+0.5**
HATJ				S	**Sn**	**04 21 36.7**	**-0.6**
JKE	**Kume jima 2**	**2.52 75**		P	**Pn**	**04 21 23.8**	**+1.4**
JKE				S	**Sn**	**04 21 55.0**	**0.0**
YHNB	**Yeheng**	**2.64 248**		*e*Pn	**Pn**	**04 21 25.8**	**+1.9**
NACB	**Ninganchiao**	**2.71 237**		*e*Pn	**Pn**	**04 21 24.5**	**-0.1**
NACB				*e*S	**Sn**	**04 21 58.0**	**-1.0**
JAGN	**Aguni-jima**	**2.99 72**		P	**Pn**	**04 21 29.2**	**+1.2**
JAGN				S	**Sn**	**04 22 04.2**	**-1.0**
NAH1	**Naha**	**3.30 80**		*e*S	**Sn**	**04 22 12.2**	**+0.1**
JJT2	**Tamagusuku 2**	**3.34 81**		P	**Pn**	**04 21 33.8**	**+1.3**
JJT2				*e*S	**Sn**	**04 22 12.6**	**-0.5**
YULB	**Yu-li**	**3.41 229**		*e*Pn	**Pn**	**04 21 32.0**	**-1.3**
YULB				*e*S	**Sn**	**04 22 09.8**	**-4.7**
SSLB	**Suanglung**	**3.41 237**		*e*Pn	**Pn**	**04 21 33.4**	**+0.1**
JIH	**Iheya**	**3.74 68**		P	**Pn**	**04 21 38.1**	**+0.5**
JIH				S	**Sn**	**04 22 20.7**	**-1.5**
TPUB	**Ta-pu**	**3.93 234**		*e*Pn	**Pn**	**04 21 40.1**	**+0.1**
TPUB				*e*S	**Sn**	**04 22 22.2**	**-4.4**
JOW	**Kunigami**	**3.94 72**		P	**Pn**	**04 21 40.0**	**-0.1**
JOW				S	**Sn**	**04 22 24.0**	**-2.8**
TWG	**Pinlang**	**3.95 224**		*e*Pn	**Pn**	**04 21 38.6**	**-1.7**
TWG				*e*S	**Sn**	**04 22 22.8**	**-4.3**
JTK	**Tokunoshima**	**4.84 63**		P	**Pn**	**04 21 51.0**	**-0.7**
JTK				S	**Sn**	**04 22 44.1**	**-3.6**
JAM	**Amami Oshima**	**5.63 60**		P	**Pn**	**04 22 01.0**	**-1.1**
JAM				*e*S	**Sn**	**04 23 02.1**	**-4.3**
JMZ	**Minamidaito 2**	**6.45 87**		P	**Pn**	**04 22 12.0**	**-0.9**
JMZ				*e*S	**Sn**	**04 23 17.5**	**-8.3**
KSRS	**Korea Array**	**12.18 15**		P	**Pn**	**04 23 31.5**	**+3.3**
	0.4nm,0.3s,baz=196,slow=12,SNR=15						
SONM	**Songino Array**	**26.14 332**		P	**P**	**04 26 01.0**	**+2.3**
	0.7nm,0.5s,mb3.6,baz=151,slow=3.3,SNR=4.0						
MK31	**Makanchi Array**	**39.15 314**		*e*P	**P**	**04 27 51.4**	**-0.2**
MKAR	**Makanchi Array**	**39.15 314**		P	**P**	**04 27 51.1**	**-0.4**
	0.7nm,0.4s,mb3.7,baz=83,slow=8.7,SNR=30						
MKAR				PcP	PcP	04 29 57.5	0.0
	0.6nm,0.7s,baz=85,slow=5.1,SNR=5.9						
ZALV	**Zalesovo Beam**	**40.48 325**		P	**P**	**04 28 01.3**	**-1.0**
	5.1nm,0.4s,mb4.5,baz=114,slow=8.9,SNR=23						
KURK	**Kurchatov**	**42.68 318**		P	**P**	**04 28 20.0**	**-0.4**
	1.2nm,0.4s,mb3.9,baz=110,slow=9.1,SNR=14						
FITZ	**Fitzroy Crossi**	**43.55 178**		P	**P**	**04 28 27.0**	**-0.5**
	3.6nm,1.0s,mb3.9,baz=13,slow=9.7,SNR=3.9						
WRA	**Warramunga Arr**	**46.44 167**		P	**P**	**04 28 50.2**	**-0.1**
	1.8nm,0.4s,mb4.0,baz=348,slow=8.6,SNR=10						
WRA	**Warramunga Arr**	**46.44 167**		P	**P**	**04 28 50.2**	**-0.1**
BVAR	**Borovoye Array**	**48.22 319**		P	**P**	**04 29 03.4**	**-0.3**
	1.2nm,0.4s,mb3.9,baz=102,slow=7.6,SNR=6.2						
BVAR				PcP	PcP	04 30 27.9	-0.4
	0.6nm,0.5s,baz=102,slow=6.2,SNR=3.1						
ASAR	**Alice Springs**	**49.97 168**		P	**P**	**04 29 17.5**	**+0.1**
	0.7nm,0.5s,mb3.5,baz=355,slow=13,SNR=10						
ASAR				pP	pP	04 29 57.0	+2.1
	0.2nm,0.5s,baz=347,slow=7.6,SNR=1.4						
ABKAR	**Akbulak array**	**54.30 313**		*e*P	**P**	**04 29 49.2**	**+0.1**
	1.3nm,0.4s,mb4.0						
AKTK	**Aktyubinsk**	**55.56 315**		P	**P**	**04 29 58.5**	**+0.3**
AKTO	**Aktyubinsk**	**55.56 315**		P	**P**	**04 29 58.5**	**+0.3**
	1.0nm,0.6s,mb3.9,baz=96,slow=12,SNR=4.2						
FINES	**FINESS Array B**	**71.48 330**		P	**P**	**04 31 41.8**	**-0.5**
	1.0nm,0.4s,mb3.9,baz=49,slow=5.4,SNR=7.0						
BRTR	**Keskin Array B**	**74.39 307**		P	**P**	**04 32 00.2**	**+0.3**
	0.9nm,0.7s,mb3.6,baz=103,slow=5.6,SNR=5.7						
NOA	**NORSAR Array B**	**78.12 333**		P	**P**	**04 32 19.6**	**-0.9**
	0.6nm,0.6s,mb3.4,baz=55,slow=5.5,SNR=3.2						
NVAR	**Mina Array Bea**	**93.54 44**		P	**P**	**04 33 39.0**	**+1.6**
	0.2nm,0.4s,mb3.6,baz=260,slow=5.4,SNR=2.8						

*NEIC **08** 04:22:00.9, 37°.74N×26°.71E, h21km, MD3.3(ATH), After ATH.*
*ISCJB **08** 04:22:00.7±0.6, 37°.72N±0°.02×26°.64E±0°.03, h2km±5km, Error ellipse: s-maj=4.8km s-min=3.5km az=143.9*
*ATH **08** 04:22:00.9, 37°.74N×26°.71E, h21km±2km, MD3.3/4*
*THE **08** 04:22:01.1, 37°.75N×26°.72E, h0km±1km, ML3.6/2, Error ellipse: s-maj=1.3km s-min=0.5km az=119.0*
*CSEM **08** 04:22:01.2±0.2, 37°.72N×26°.64E, h10km, MD3.3, Error ellipse: s-maj=5.0km s-min=3.6km az=60.0*
*DDA **08** 04:22:02.3, 37°.81N×26°.76E, h4km±4km, Md3.1*

ISC 08 04:22:01.4±0.5, 37°.73N±0°.03×26°.62E±0°.03, h6km±4km, n45, σ1°23/81, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.17**	**97**	*e*Pb	**Pg**	**04 22 05.4**	**+0.6**
SMG				*e*Sb	**Sg**	**04 22 08.0**	**+0.8**
SMG	**Samos**	**0.17**	**97**	*e*PB	**Pg**	**04 22 05.4**	**+0.6**
SMG				*e*SB	**Sg**	**04 22 08.0**	**+0.8**
SMG	**Samos**	**0.17**	**97**	*e*Pb	**Pg**	**04 22 05.4**	**+0.6**
SMG				*e*Sb	**Sg**	**04 22 08.0**	**+0.8**
GCAM	**G?zelcaml?**	**0.48**	**93**	*i* P	**Pg**	**04 22 10.6**	**-0.2**
GCAM				*i* S	**Sg**	**04 22 17.3**	**+0.2**
GCAM	**G?zelcaml?**	**0.48**	**93**	*i* P	**Pg**	**04 22 10.6**	**-0.2**
GCAM				*i* S	**Sg**	**04 22 17.3**	**+0.2**
URLA	**Izmir**	**0.63 358**		*i* P	**Pg**	**04 22 12.8**	**-0.7**
URLA				*i* S	**Sg**	**04 22 21.5**	**-0.3**
URLA	**Izmir**	**0.63 358**		*i* P	**Pg**	**04 22 12.8**	**-0.8**
URLA				*i* S	**Sg**	**04 22 21.5**	**-0.3**
BLCB	**Balcova**	**0.73 27**		P	**Pg**	**04 22 14.5**	**-1.0**
BLCB				S	**Sg**	**04 22 25.2**	**+0.1**
BLCB	**Balcova**	**0.73 27**		P	**Pg**	**04 22 14.5**	**-1.0**
BLCB				S	**Sg**	**04 22 25.2**	**+0.1**
CHOS	**Chios island**	**0.80 326**		*e*PN	**Pn**	**04 22 17.4**	**-1.7**
CHOS				*e*SN	**Sg**	**04 22 28.5**	**+1.5**
CHOS	**Chios island**	**0.80 326**		P	**Pg**	**04 22 17.3**	**+0.6**
CHOS				S	**Sg**	**04 22 29.6**	**+2.6**
CHOS	**Chios island**	**0.80 326**		P	**Pg**	**04 22 17.3**	**+0.6**
CHOS				*e*Sn	**Sg**	**04 22 28.5**	**+1.5**
CHOS				S	**Sg**	**04 22 29.6**	**+2.6**
KDAG	**Bornova**	**0.84 37**		*i* P	**Pg**	**04 22 16.5**	**-1.1**
KDAG				*i* S	**Sg**	**04 22 25.2**	**-3.3**
KDAG	**Bornova**	**0.84 37**		*i* P	**Pg**	**04 22 16.5**	**-1.1**
KDAG				*i* S	**Sg**	**04 22 25.2**	**-3.4**
BDRM	**Kayabasi**	**0.93 135**		*i* P	**Pg**	**04 22 19.5**	**+0.3**
BDRM				*i* S	**Sg**	**04 22 33.2**	**+1.8**
BDRM	**Kayabasi**	**0.93 135**		*i* P	**Pg**	**04 22 19.5**	**+0.2**
BDRM				*i* S	**Sg**	**04 22 33.2**	**+1.8**
AYDN	**Tasoluk**	**1.00 94**		*i* P	**Pg**	**04 22 19.6**	**-1.0**
AYDN				*i* S	**Sg**	**04 22 33.6**	**0.0**
AYDN	**Tasoluk**	**1.00 94**		*i* P	**Pg**	**04 22 19.6**	**-1.0**
AYDN

HYT ⇑Pg Pg 04 28 16.2 -4.2
HYT ⇓Sg Sg 04 28 58.5 -5.0
PNL Peninsula 3.37 299 ePn Pn 04 28 09.0 -1.4
PNL ePg Pg 04 28 19.0 -2.2
DAWY Dawson 6.54 337 ePn Pn 04 28 51.3 -2.7
DAWY eSg Sg 04 30 40.8 -5.9
EGAK Eagle 7.55 335 ePn Pn 04 29 06.8 -0.9
4.6nm,0.8s
EGAK ePg Pg 04 29 32.6 -8.5
EGAK eSg Sg 04 31 12.9 -5.9

*NEIC **08** 05:01:45.0, 36.56N×11.12W, h7km, MG3.6(MDD), After MDD.*
*IGIL **08** 05:01:44.4, 36.46N×11.23W, h18km, ML2.2*
*MDD **08** 05:01:45.5±1.6, 36.63N×11.03W, h0km, mbLg2.5/23, Error ellipse: s-maj=13.6km s-min=11.7km az=49.0*
*CSEM **08** 05:01:47.2±0.3, 36.76N×10.92W, h10km, ML3.1/15, Error ellipse: s-maj=5.6km s-min=4.1km az=56.0*
*INMG **08** 05:01:47.1±0.8, 36.57N×11.03W, h10km, ML1.9, Error ellipse: s-maj=5.9km s-min=3.2km az=85.0*
ISC 08 05:01:47.1±0.9, **36.76N**±0.04×**10.93W**±0.05, **h10km, n123,** σ0.84/226, **3C, Azores-Cape St. Vincent Ridge**

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

PFVI Vila Bisbo 1.73 77 i Pn **Pn 05 02 16.9 -0.3**
PFVI eSn **Sn 05 02 39.5 +0.2**
PFVI A 05 02 40.1
3.8nm,0.1s
PFVI Vila Bisbo 1.73 77 ⇑P **Pn 05 02 16.9 -0.3**
PFVI S **Sn 05 02 39.5 +0.1**
PFVI Vila Bisbo 1.73 77 ⇑P **Pn 05 02 16.9 -0.3**
9.8nm,0.2s,SNR=18
PFVI S **Sn 05 02 39.5 +0.1**
23nm,0.3s,SNR=7.9
PFVI Vila Bisbo 1.73 77 ⇑P **Pn 05 02 16.9 -0.3**
9.8nm,0.2s,SNR=18
PFVI S **Sn 05 02 39.5 +0.1**
23nm,0.3s,SNR=7.9
PFVI Vila Bisbo 1.73 77 P **Pn 05 02 16.9 -0.3**
9.8nm,0.2s,SNR=18
PFVI S **Sn 05 02 39.5 +0.2**
23nm,0.3s,SNR=7.9
MORF Marmelete 1.91 73 ePn **Pn 05 02 19.6 -0.1**
MORF eSn **Sn 05 02 44.1 +0.4**
MORF A 05 02 51.4
6.3nm,0.1s
MORF Marmelete 1.91 73 P **Pn 05 02 19.6 -0.1**
MORF S **Sn 05 02 44.1 +0.4**
6.3nm,0.1s
MORF Marmelete 1.91 73 P **Pn 05 02 19.6 -0.1**
MORF S **Sn 05 02 44.1 +0.4**
6.3nm,0.1s
MORF Marmelete 1.91 73 ePn **Pn 05 02 19.6 -0.1**
MORF eSn **Sn 05 02 44.1 +0.4**
6.3nm,0.1s
PTEO Sao Teotonio 1.93 65 ePn **Pn 05 02 20.3 +0.3**
PTEO eSn **Sn 05 02 46.5 +2.1**
PTEO A 05 02 51.4
3.6nm,0.2s
PTEO Sao Teotonio 1.93 65 P **Pn 05 02 20.3 +0.3**
PTEO S **Sn 05 02 46.5 +2.1**
1.8nm,0.2s
PTEO Sao Teotonio 1.93 65 P **Pn 05 02 20.3 +0.3**
PTEO S **Sn 05 02 46.5 +2.1**
1.8nm,0.2s
PTEO Sao Teotonio 1.93 65 ePn **Pn 05 02 20.3 +0.3**
PTEO eSn **Sn 05 02 46.5 +2.1**
3.6nm,0.2s
MESJ Messejana 2.42 63 eP **Pn 05 02 25.9 -0.8**
MESJ eS **Sn 05 02 57.7 +1.3**
MESJ Messejana 2.42 63 P **Pn 05 02 25.9 -0.8**
MESJ S **Sn 05 02 57.7 +1.4**
MESJ Messejana 2.42 63 P **Pn 05 02 25.9 -0.8**
MESJ S **Sn 05 02 57.7 +1.4**
MESJ Messejana 2.42 63 eP **Pn 05 02 25.9 -0.8**
MESJ eS **Sn 05 02 57.7 +1.4**
PBDV Barranco-do-Ve 2.45 78 ePn **Pn 05 02 27.1 -0.1**
PBDV eSn **Sn 05 02 57.9 +0.7**
PBDV A 05 03 02.3
2.2nm,0.1s
PBDV Barranco-do-Ve 2.45 78 P **Pn 05 02 27.1 -0.1**
PBDV S **Sn 05 02 57.9 +0.7**
2.2nm,0.1s
PBDV Barranco-do-Ve 2.45 78 P **Pn 05 02 27.1 -0.1**
PBDV S **Sn 05 02 57.9 +0.7**
2.2nm,0.1s
PBDV Barranco-do-Ve 2.45 78 ePn **Pn 05 02 27.1 -0.1**
PBDV eSn **Sn 05 02 57.9 +0.7**
2.2nm,0.1s
PCVE Castro Verde 2.47 68 ePn **Pn 05 02 27.6 +0.2**
PCVE eSn **Sn 05 02 58.5 +0.9**
PCVE A 05 03 04.0
2.1nm,0.2s
PCVE Castro Verde 2.47 68 P **Pn 05 02 27.6 +0.2**
PCVE S **Sn 05 02 58.5 +0.9**
2.1nm,0.2s
PCVE Castro Verde 2.47 68 P **Pn 05 02 27.6 +0.2**
PCVE S **Sn 05 02 58.5 +0.9**
2.1nm,0.2s
PCVE Castro Verde 2.47 68 ePn **Pn 05 02 27.6 +0.2**
PCVE eSn **Sn 05 02 58.5 +0.9**
2.1nm,0.2s
PMAFR Mafra 2.55 30 ePn **Pn 05 02 28.8 +0.3**
PMAFR eSn **Sn 05 03 01.0 +1.3**
PMAFR A 05 03 01.9
17nm,0.2s
PMAFR Mafra 2.55 30 P **Pn 05 02 28.9 +0.3**
1.3nm,0.2s,SNR=7.9
PMAFR S **Sn 05 03 01.2 +1.5**
11nm,0.2s,SNR=10
PMAFR Mafra 2.55 30 P **Pn 05 02 28.9 +0.3**
1.3nm,0.2s,SNR=7.9
PMAFR S **Sn 05 03 01.2 +1.5**
11nm,0.2s,SNR=10
PMAFR Mafra 2.55 30 P **Pn 05 02 28.9 +0.4**
1.3nm,0.2s,SNR=7.9
PMAFR eSn **Sn 05 03 01.0 +1.3**
17nm,0.2s
PVAQ Vaqueiros 2.65 75 ePn **Pn 05 02 29.9 0.0**
PVAQ eSn **Sn 05 03 02.5 +0.4**
PVAQ A 05 03 06.6
3.0nm,0.1s
PVAQ Vaqueiros 2.65 75 P **Pn 05 02 29.9 0.0**
PVAQ S **Sn 05 03 02.5 +0.4**
3.0nm,0.1s
PVAQ Vaqueiros 2.65 75 P **Pn 05 02 29.9 0.0**
PVAQ S **Sn 05 03 02.5 +0.4**
3.0nm,0.1s
PVAQ Vaqueiros 2.65 75 ePn **Pn 05 02 29.9 0.0**
PVAQ eSn **Sn 05 03 02.5 +0.4**
3.0nm,0.1s
MOE Montemor 2.70 49 ePn **Pn 05 02 31.4 +0.8**
MOE eSn **Sn 05 03 05.0 +1.6**
MOE Montemor 2.70 49 ePn **Pn 05 02 31.4 +0.8**
MOE eSn **Sn 05 03 05.0 +1.6**
EGRO El Granado 2.86 73 P **Pn 05 02 32.9 +0.1**
EGRO S **Sn 05 03 07.8 +0.5**
EGRO El Granado 2.86 73 P **Pn 05 02 32.9 +0.1**
1.3nm,0.1s,SNR=7.9
EGRO S **Sn 05 03 07.8 +0.5**
8.3nm,0.5s,SNR=7.9
EGRO El Granado 2.86 73 P **Pn 05 02 32.9 +0.1**
1.3nm,0.1s,SNR=7.9
EGRO S **Sn 05 03 07.8 +0.5**
8.3nm,0.5s,SNR=7.9
EGRO El Granado 2.86 73 P **Pn 05 02 32.9 +0.1**
1.3nm,0.1s,SNR=7.9
EGRO S **Sn 05 03 07.8 +0.5**
8.3nm,0.5s,SNR=7.9
EVO Evora 2.92 52 ePn **Pn 05 02 34.1 +0.5**
EVO eSn **Sn 05 03 10.2 +1.6**
EVO A 05 03 12.9
6.6nm,0.1s
EVO Evora 2.92 52 P **Pn 05 02 34.1 +0.5**
EVO S **Sn 05 03 10.2 +1.6**
6.6nm,0.1s
EVO Evora 2.92 52 P **Pn 05 02 34.1 +0.5**
EVO S **Sn 05 03 10.2 +1.6**
6.6nm,0.1s
EVO Evora 2.92 52 ePn **Pn 05 02 34.1 +0.5**
EVO eSn **Sn 05 03 10.2 +1.6**
6.6nm,0.1s
PESTR Estremoz 3.38 51 ePn **Pn 05 02 40.5 +0.5**
PESTR eSn **Sn 05 03 20.8 +0.7**
PESTR A 05 03 24.3
1.8nm,0.3s
PESTR Estremoz 3.38 51 P **Pn 05 02 40.5 +0.5**
PESTR S **Sn 05 03 20.8 +0.7**
1.8nm,0.3s
PESTR Estremoz 3.38 51 P **Pn 05 02 40.5 +0.5**
PESTR S **Sn 05 03 20.8 +0.7**
1.8nm,0.3s
PESTR Estremoz 3.38 51 ePn **Pn 05 02 40.5 +0.5**
PESTR eSn **Sn 05 03 20.8 +0.7**
1.8nm,0.3s
PBAR Barrancos 3.41 64 ePn **Pn 05 02 40.6 +0.3**
PBAR eSn **Sn 05 03 21.0 +0.3**
PBAR A 05 03 29.4
1.3nm,0.2s
PBAR Barrancos 3.41 64 P **Pn 05 02 40.6 +0.3**
PBAR S **Sn 05 03 21.0 +0.3**
1.3nm,0.2s
PBAR Barrancos 3.41 64 P **Pn 05 02 40.6 +0.3**
PBAR S **Sn 05 03 21.0 +0.3**
1.3nm,0.2s
PBAR Barrancos 3.41 64 ePn **Pn 05 02 40.6 +0.3**
PBAR eSn **Sn 05 03 21.0 +0.3**
1.3nm,0.2s
EMIN Mina Concepcio 3.55 72 P **Pn 05 02 41.9 -0.3**
EMIN S **Sn 05 03 24.1 -0.1**
EMIN Mina Concepcio 3.55 72 P **Pn 05 02 41.9 -0.3**
1.0nm,0.3s,SNR=13
EMIN S **Sn 05 03 24.1 -0.1**
7.9nm,0.7s,SNR=7.9
EMIN Mina Concepcio 3.55 72 P **Pn 05 02 41.9 -0.3**
1.0nm,0.3s,SNR=13
EMIN S **Sn 05 03 24.1 -0.1**
7.9nm,0.7s,SNR=7.9
EMIN Mina Concepcio 3.55 72 P **Pn 05 02 41.9 -0.3**
1.0nm,0.3s,SNR=13
EMIN S **Sn 05 03 24.1 -0.1**
7.9nm,0.7s,SNR=7.9
PMRV Marv??o 3.86 45 ePn **Pn 05 02 46.6 +0.1**
PMRV eSn **Sn 05 03 31.7 -0.2**
PMRV A 05 03 35.3
2.1nm,0.2s
PMRV Marv??o 3.86 45 P **Pn 05 02 46.6 +0.1**
PMRV S **Sn 05 03 31.7 -0.2**
2.1nm,0.2s
PMRV Marv??o 3.86 45 P **Pn 05 02 46.6 +0.1**
PMRV S **Sn 05 03 31.7 -0.2**
2.1nm,0.2s
PMRV Marv??o 3.86 45 ePn **Pn 05 02 46.6 +0.1**
PMRV eSn **Sn 05 03 31.7 -0.2**
2.1nm,0.2s
ESPR Espera 4.08 87 P **Pn 05 02 49.0 -0.5**
ESPR S **Sn 05 03 35.7 -1.5**
ESPR Espera 4.08 87 P **Pn 05 02 48.9 -0.5**
2.1nm,0.5s,SNR=4.3
ESPR S **Sn 05 03 35.7 -1.5**
5.6nm,0.2s,SNR=7.9
ESPR Espera 4.08 87 P **Pn 05 02 48.9 -0.5**
2.1nm,0.5s,SNR=4.3
ESPR S **Sn 05 03 35.7 -1.5**
5.6nm,0.2s,SNR=7.9
ESPR Espera 4.08 87 P **Pn 05 02 49.0 -0.5**
ESPR S **Sn 05 03 35.7 -1.5**
5.6nm,0.2s,SNR=7.9
PCBR Castelo Branco 4.11 40 eSn **Sn 05 03 37.6 -0.4**
PCBR A 05 03 40.0
1.2nm,0.2s
PCBR Castelo Branco 4.11 40 S **Sn 05 03 37.6 -0.4**
0.6nm,0.2s
PCBR Castelo Branco 4.11 40 S **Sn 05 03 37.6 -0.4**
0.6nm,0.2s
PCBR Castelo Branco 4.11 40 eSn **Sn 05 03 37.6 -0.4**
1.2nm,0.2s
MTE Manteigas 4.50 35 eSn **Sn 05 03 47.8 +0.1**
MTE A 05 03 50.5
1.4nm,0.1s
ECAB El Cabril 4.58 72 P **Pn 05 02 56.5 0.0**
ECAB S **Sn 05 03 49.2 -0.6**
ECAB El Cabril 4.58 72 P **Pn 05 02 56.5 0.0**
2.5nm,0.5s,SNR=16
ECAB S **Sn 05 03 49.2 -0.6**
5.1nm,0.6s,SNR=7.9
ECAB El Cabril 4.58 72 P **Pn 05 02 56.5 0.0**
2.5nm,0.5s,SNR=16
ECAB S **Sn 05 03 49.2 -0.6**
5.1nm,0.6s,SNR=7.9
ECAB El Cabril 4.58 72 P **Pn 05 02 56.5 0.0**
2.5nm,0.5s,SNR=16
ECAB S **Sn 05 03 49.2 -0.5**
5.1nm,0.6s,SNR=7.9
PVIS Viseu 4.61 30 ePn **Pn 05 02 57.4 +0.6**
PVIS eSn **Sn 05 03 50.4 0.0**
PVIS A 05 03 52.8
2.8nm,0.1s
PVIS Viseu 4.61 30 P **Pn 05 02 57.4 +0.6**
PVIS S **Sn 05 03 50.4 0.0**
1.4nm,0.1s
PVIS Viseu 4.61 30 P **Pn 05 02 57.4 +0.6**
PVIS S **Sn 05 03 50.4 0.0**
1.4nm,0.1s
PVIS Viseu 4.61 30 ePn **Pn 05 02 57.4 +0.6**
PVIS eSn **Sn 05 03 50.4 0.0**
2.8nm,0.1s
EMIJ Mijas 4.96 90 P **Pn 05 03 00.8 -0.8**
EMIJ S **Sn 05 03 57.0 -2.0**
EMIJ Mijas 4.96 90 P **Pn 05 03 00.8 -0.8**
EMIJ S **Sn 05 03 57.0 -2.0**
EPLA Plasencia 5.04 48 P **Pn 05 03 03.3 +0.6**
EPLA S **Sn 05 04 01.2 +0.1**
EPLA Plasencia 5.04 48 P **Pn 05 03 03.3 +0.6**
0.4nm,0.1s,SNR=7.9
EPLA S **Sn 05 04 01.2 +0.1**
4.7nm,0.6s,SNR=7.9
EPLA Plasencia 5.04 48 P **Pn 05 03 03.3 +0.6**
0.4nm,0.1s,SNR=7.9
EPLA S **Sn 05 04 01.2 +0.1**
4.7nm,0.6s,SNR=7.9
EPLA Plasencia 5.04 48 P **Pn 05 03 03.3 +0.5**
0.4nm,0.1s,SNR=7.9
EPLA S **Sn 05 04 01.2 +0.2**
4.7nm,0.6s,SNR=7.9
PVRL Vila Real 5.16 28 eSn **Sn 05 04 03.6 -0.3**
PVRL A 05 04 06.6
2.6nm,0.1s
PVRL Vila Real 5.16 28 S **Sn 05 04 03.6 -0.3**
1.3nm,0.1s
PVRL Vila Real 5.16 28 S **Sn 05 04 03.6 -0.3**
1.3nm,0.1s
PVRL Vila Real 5.16 28 eSn **Sn 05 04 03.6 -0.3**
2.6nm,0.1s
EADA Adamuz 5.25 73 P **Pn 05 03 05.3 -0.3**
EADA S **Sn 05 04 05.1 -1.0**
EADA Adamuz 5.25 73 P **Pn 05 03 05.3 -0.3**
0.5nm,0.1s,SNR=7.9
EADA S **Sn 05 04 05.1 -1.0**
4.5nm,0.4s,SNR=7.9
EADA Adamuz 5.25 73 P **Pn 05 03 05.3 -0.3**
0.5nm,0.1s,SNR=7.9
EADA S **Sn 05 04 05.1 -1.0**
4.5nm,0.4s,SNR=7.9
EADA Adamuz 5.25 73 P **Pn 05 03 05.3 -0.3**
0.5nm,0.1s,SNR=7.9
EADA S **Sn 05 04 05.1 -1.1**
4.5nm,0.4s,SNR=7.9
MVO Moncorvo 5.35 33 ePn **Pn 05 03 07.3 +0.3**
MVO eSn **Sn 05 04 07.9 -0.7**
MVO Moncorvo 5.35 33 P **Pn 05 03 07.6 +0.6**
MVO S **Sn 05 04 08.3 -0.3**
MVO Moncorvo 5.35 33 P **Pn 05 03 07.1 +0.1**
0.5nm,0.1s,SNR=7.9
MVO S **Sn 05 04 07.3 -1.3**
0.9nm,0.2s,SNR=7.9
MVO Moncorvo 5.35 33 P **Pn 05 03 07.1 +0.1**
0.5nm,0.1s,SNR=7.9
MVO S **Sn 05 04 07.3 -1.3**
0.9nm,0.2s,SNR=7.9
MVO Moncorvo 5.35 33 ePn **Pn 05 03 07.3 +0.3**
MVO eSn **Sn 05 04 07.9 -0.7**
MVO S **Sn 05 04 08.3 -0.3**
PCAB Cabril 5.43 24 eSn **Sn 05 04 09.7 -1.0**
PCAB A 05 04 11.2
1.7nm,0.1s
PCAB Cabril 5.43 24 S **Sn 05 04 09.7 -1.0**
0.9nm,0.1s
PCAB Cabril 5.43 24 S **Sn 05 04 09.7 -1.0**
0.9nm,0.1s
PCAB Cabril 5.43 24 eSn **Sn 05 04 09.7 -1.0**
1.7nm,0.1s
ELOB Lobios 5.57 23 P **Pn 05 03 10.4 +0.5**
ELOB S **Sn 05 04 13.9 -0.1**
ELOB Lobios 5.57 23 P **Pn 05 03 10.4 +0.5**
0.2nm,0.1s,SNR=7.9
ELOB S **Sn 05 04 12.9 -1.1**
1.4nm,0.4s,SNR=6.2
ELOB Lobios 5.57 23 P **Pn 05 03 10.4 +0.5**
0.2nm,0.1s,SNR=7.9
ELOB S **Sn 05 04 12.9 -1.1**
1.4nm,0.4s,SNR=6.2
ELOB Lobios 5.57 23 P **Pn 05 03 10.4 +0.4**
0.2nm,0.1s,SNR=7.9
ELOB S **Sn 05 04 13.9 -0.1**
ECAL Calabor 6.11 31 P **Pn 05 03 17.8 +0.3**
ECAL S **Sn 05 04 26.9 -0.5**
ECAL Calabor 6.11 31 P **Pn 05 03 17.7 +0.3**
5.8nm,0.5s,SNR=7.9
ECAL S **Sn 05 04 26.9 -0.5**
6.4nm,0.4s,SNR=7.9
ECAL Calabor 6.11 31 P **Pn 05 03 17.7 +0.3**
5.8nm,0.5s,SNR=7.9
ECAL S **Sn 05 04 26.9 -0.5**
6.4nm,0.4s,SNR=7.9
ECAL Calabor 6.11 31 P **Pn 05 03 17.7 +0.3**
5.8nm,0.5s,SNR=7.9
ECAL S **Sn 05 04 26.9 -0.5**
6.4nm,0.4s,SNR=7.9
ESDC Sonseca Array 6.21 60 P **Pn 05 03 19.0 +0.2**
ESDC S **Sn 05 04 28.1 -1.8**
ESDC Sonseca Array 6.21 60 P **Pn 05 03 19.0 +0.2**
0.5nm,0.3s,baz=244,slow=13,SNR=5.7
ESDC Sonseca Array 6.21 60 P **Pn 05 03 19.0 +0.2**
0.5nm,0.3s,baz=244,slow=13,SNR=5.7
ESDC Sonseca Array 6.21 60 P **Pn 05 03 19.0 +0.2**
0.5nm,0.3s,baz=244,slow=13,SNR=5.7
ESDC S **Sn 05 04 28.1 -1.8**
EMAZ Mazaricos 6.36 13 P **Pn 05 03 20.4 -0.5**
EMAZ S **Sn 05 04 31.2 -2.3**
EMAZ Mazaricos 6.36 13 S **Sn 05 04 28.4 -5.2**
1.4nm,0.1s,SNR=21
EMAZ Mazaricos 6.36 13 S **Sn 05 04 28.4 -5.2**
1.4nm,0.1s,SNR=21
EMAZ Mazaricos 6.36 13 P **Pn 05 03 20.4 -0.5**
EMAZ S **Sn 05 04 31.2 -2.4**
EPON Pontenova 7.17 23 P **Pn 05 03 32.2 +0.2**
EPON S **Sn 05 04 52.0 -1.5**
EPON Pontenova 7.17 23 S **Sn 05 04 52.0 -1.5**
3.4nm,0.4s,SNR=4.0
EPON Pontenova 7.17 23 S **Sn 05 04 52.0 -1.5**
3.4nm,0.4s,SNR=4.0
EPON Pontenova 7.17 23 P **Pn 05 03 32.2 +0.2**
EPON S **Sn 05 04 52.0 -1.5**
3.4nm,0.4s,SNR=4.0
ETOR Torete 8.03 57 P **Pn 05 03 44.5 +0.7**
ETOR S **Sn 05 05 12.3 -2.3**
ETOR Torete 8.03 57 P **Pn 05 03 44.5 +0.7**
0.6nm,0.3s,SNR=4.0
ETOR Torete 8.03 57 P **Pn 05 03 44.5 +0.7**
0.6nm,0.3s,SNR=4.0
ETOR Torete 8.03 57 P **Pn 05 03 44.5 +0.7**
0.6nm,0.3s,SNR=4.0
ETOR S **Sn 05 05 12.3 -2.3**

*NIED **08** 05:04:00, 43.70N×147.80E, h35km, Mw3.8 Best double couple: $M_0$4.74000×10^{14} NP1:ϕ_s45.00000°, δ70.00000°, λ91.00000°. NP2:ϕ_s223.00000°, δ20.00000°, λ88.00000°.*
JMA 08 05:04:16.5±0.2, **43.66N×147.83E, h0km, M4.0, Kuril Islands**

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

NEM2 Nemuro 2 1.55 260 P Pn 05 04 45.4 +0.1
NEM2 eS Sn 05 05 06.1 +0.1
JRA Rausu 1.98 279 P Pn 05 04 52.1 +0.9
JRA eS Sn 05 05 17.9 +1.2
JNK Nakash 2.26 269 P Pn 05 04 56.1 +1.0
JAR Ashorobuto 2.98 264 P Pn 05 05 06.4 +1.5

*ISCJB **08** 05:08:16.4±0.9, 3.33S±0.05×76.77W±0.07, h113km±9km, mb4.4/36, Error ellipse: s-maj=11.1km s-min=8.1km az=166.1*
*IDC **08** 05:08:16.4±0.7, 3.29S×76.85W, h94km±7km, mb3.9/10, mb1 4.0/13, mb1mx3.9/22, mbtmp3.9/13, MS2.5/2, Ms1 2.5/2, ms1mx2.3/26, Error ellipse: s-maj=17.0km s-min=10.5km az=91.0*
*NEIC **08** 05:08:17.7±0.9, 3.34S×76.91W, h110km±9km, mb4.5/29, Error ellipse: s-maj=12.7km s-min=6.9km az=68.0*
ISC 08 05:08:16.7±0.9, **3.29S**±0.05×**76.72W**±0.07, **h95km**±10km, **n309,** σ0.52/300, **mb4.4/36, 107C-131D, Northern Peru**

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

OTAV Otavalo 3.91 334 ePn **Pn 05 09 14.9 +0.3**
OTAV eSn **Sn 05 09 46.6 -13**
ATAH Atahualpa 4.17 204 P **Pn 05 09 18.4 +0.2**
27nm,0.3s,baz=29,slow=8.0,SNR=252
ATAH S **Sn 05 10 04.8 -1.0**
22nm,0.3s,baz=271,slow=14,SNR=12
ATAH LR LR 05 10 27.8
comp=Z,97nm,19.3s,baz=77,slow=32
ROSC El Rosal 8.44 16 P **Pn 05 10 20.6 +4.4**
1.7nm,0.3s,baz=269,slow=23,SNR=5.9
ROSC El Rosal 8.44 16 ePn **Pn 05 10 21.3 +5.1**
NNA Nana 8.64 181 P **Pn 05 10 18.6 -0.5**
30nm,0.3s,baz=348,slow=9.2,SNR=71
NNA S **Sn 05 11 46.6 -8.2**
9.1nm,0.3s,baz=246,slow=20,SNR=2.5
NNA Nana 8.64 181 ePn **Pn 05 10 18.8 -0.2**
102nm,0.6s
SDV Santo Domingo 13.53 27 Pn **Pn 05 11 31.8 +7.0**
LPAZ La Paz 15.43 147 P **Pn 05 11 50.9 +1.7**
0.3nm,0.3s,baz=12,slow=3.0,SNR=12
LPAZ La Paz 15.43 147 eP **Pn 05 11 49.3 +0.1**
1.0nm,0.4s
PCRV Puerto La Cruz 17.99 42 P **Pn 05 12 21.7 +0.9**
0.5nm,0.3s,baz=261,slow=5.3,SNR=2.2
SIV San Ignacio 19.91 130 P **Pn 05 12 43.0 -0.5**
1.9nm,0.4s,baz=312,slow=9.6,SNR=29
APG El Apazote 22.71 323 P **P 05 13 11.2 +0.3**
4.7nm,1.0s,mb3.8,baz=174,slow=10,SNR=3.4
SJG San Juan 23.68 26 P **P 05 13 20.6 +0.8**
12nm,0.6s,mb4.4,baz=182,slow=9.7,SNR=6.9
SJG San Juan 23.68 26 eP **P 05 13 20.4 +0.5**
11nm,0.6s,mb4.4
CMIG Matias Romero 27.05 319 P **P 05 13 49.9 -0.6**
3.4nm,0.9s,mb3.9,baz=127,slow=10,SNR=3.2
CFAA Coronel Fontan 29.28 165 P **P 05 14 11.0 +0.9**
0.2nm,0.9s,baz=337,slow=7.7,SNR=3.9
CFAA LR LR 05 24 51.6
comp=Z,5.0nm,18.7s,baz=112,slow=34
DWPF Disney 31.55 352 eP **P 05 14 30.5 +0.4**
9.8nm,0.5s,mb4.8
CPCT Cooper Cave 39.22 350 eP **P 05 15 35.8 0.0**
SWET Sewanee 39.27 348 eP **P 05 15 35.1 -1.1**
ELN Prospectdale 40.48 355 eP **P 05 15 46.7 +0.5**
WVT Waverly 40.57 346 eP **P 05 15 44.5 -2.4**
3.5nm,0.6s,mb4.4
628A Black Gap, Mar 41.12 324 ⇓P **P 05 15 52.0 +0.4**
baz=41
627A Terlingua Ranc 41.39 324 ⇓P **P 05 15 54.2 +0.4**
baz=42,SNR=5.5
TXAR Lajitas Array 41.47 323 P **P 05 15 53.8 -0.7**
0.7nm,0.6s,mb3.7,baz=144,slow=8.8,SNR=11
TXAR PcP PcP 05 17 50.5 -0.1
0.6nm,0.7s,baz=147,slow=7.3,SNR=6.5
528A Cox Ranch, San 41.56 325 ⇓P **P 05 15 55.1 -0.1**
baz=42
PARMO Parma 41.56 344 eP **P 05 15 53.5 -1.6**
626A Big Bend Ranch 41.91 323 ⇑P **P 05 15 58.0 -0.1**
baz=42,SNR=7.2
428A Kincaid Ranch, 41.93 326 ⇑P **P 05 15 58.2 0.0**
baz=42
527A Woodward Ranch 42.03 324 ⇑P **P 05 15 58.9 -0.2**
baz=42,SNR=7.8
526A Mary Lane Ranc 42.25 324 ⇑P **P 05 16 00.7 -0.1**
baz=42,SNR=6.0
SIUC Southern Illin 42.41 345 eP **P 05 16 00.1 -1.9**
13nm,0.7s,mb4.8
427A Hayter Ranch, 42.43 325 ⇑P **P 05 16 02.2 -0.1**

	baz=43					
328A	Wristen Ranch, baz=43	42.50	326	⇑P	P	05 16 02.5 -0.2
426A	McDonald Obser baz=43	42.66	324	⇓P	P	05 16 04.2 +0.1
FVM	French Village 6.5nm,0.7s,mb4.5	42.99	344	eP	P	05 16 04.6 -2.0
326A	Caldwell Ranch baz=43	43.11	325	⇑P	P	05 16 07.7 0.0
WMOK	Wichita Mounta 7.2nm,0.8s,mb4.5	43.14	333	eP	P	05 16 07.2 -0.8
425A	Indio Mountain baz=43,SNR=6.2	43.31	324	⇑P	P	05 16 09.0 -0.4
ACSO	Alum Creek Sta 7.9nm,0.8s,mb4.5	43.69	353	eP	P	05 16 11.2 -1.1
226A	Malaga, Loving baz=44	43.73	326	⇑P	P	05 16 13.1 +0.3
324A	Moseley Ranch, baz=44,SNR=6.3	44.07	324	⇑P	P	05 16 14.7 -0.8
126A	Clayton Basin, baz=44	44.12	326	⇓P	P	05 16 16.3 +0.5
225A	Deer Hill, Car baz=44	44.18	325	⇑P	P	05 16 16.8 +0.5
Z27A	Tatum baz=44,SNR=5.8	44.19	328	⇓P	P	05 16 15.7 -0.7
MSTX	Muleshoe baz=45	44.46	329	⇓P	P	05 16 18.4 -0.1
125A	Gardner Draw, baz=45,SNR=5.4	44.49	326	⇓P	P	05 16 18.6 -0.2
224A	Cornudas Mount baz=45	44.56	324	⇑P	P	05 16 19.2 -0.2
Z26A	Caprock baz=45,SNR=6.7	44.57	327	⇑P	P	05 16 19.3 -0.2
Y27A	Causey baz=45	44.60	328	⇑P	P	05 16 19.4 -0.2
AMTX	Amarillo 12nm,0.8s,mb4.7	44.63	330	eP	P	05 16 19.7 -0.2
124A	Stringfield Ra baz=45	44.97	325	⇓P	P	05 16 23.0 +0.4
Z25A	Roswell baz=45,SNR=6.5	44.98	326	⇓P	P	05 16 22.6 -0.1
HDIL	Hopedale 11nm,0.5s,mb4.8	45.13	346	eP	P	05 16 21.2 -2.5
X27A	F and S Farms, baz=45,SNR=5.6	45.16	329	⇑P	P	05 16 23.8 -0.3
Z24A	Sheeppen Canyo baz=46,SNR=5.6	45.38	326	⇓P	P	05 16 25.9 0.0
W27A	Bowe Ranch, En baz=46,SNR=5.1	45.47	329	⇓P	P	05 16 26.2 -0.2
222A	Williams Famil baz=46	45.51	323	⇑P	P	05 16 27.0 +0.2
320A	Kipp Ranch, An baz=46	45.86	321	⇓P	P	05 16 29.8 +0.1
Y24A	Capitan baz=46,SNR=5.5	45.86	326	⇓P	P	05 16 29.9 +0.2
Y23A	Lovelace Mesa, baz=46	46.21	326	⇓P	P	05 16 32.6 +0.2
220A	Playas Peak, P baz=46,SNR=5.4	46.24	322	⇑P	P	05 16 32.6 0.0
Z22A	Elephant Butte baz=46	46.25	324	⇓P	P	05 16 33.1 +0.4
W25A	X Bar L Ranch, baz=46	46.31	328	⇑P	P	05 16 33.3 +0.2
X24A	Lazy VL Ranch, baz=46	46.34	327	⇑P	P	05 16 33.7 +0.4
319A	Douglas baz=46	46.36	320	P	P	05 16 33.8 +0.2
V26A	Tequesquite Ra baz=47,SNR=17	46.41	329	⇓P	P	05 16 33.9 0.0
Z21A	St. Cloud Mine baz=47	46.70	324	⇓P	P	05 16 36.3 +0.1
Y22A	Socorro baz=47	46.74	325	⇑P	P	05 16 36.7 +0.3
120A	U Bar Ranch, L baz=47	46.75	322	⇑P	P	05 16 36.9 +0.3
219A	White Tail Can baz=47,SNR=6.2	46.76	321	⇑P	P	05 16 36.4 -0.3
W24A	Lazy 6 Ranch, baz=47	46.81	327	⇓P	P	05 16 37.2 +0.2
U26A	Atchley Ranch, baz=47	46.85	330	⇑P	P	05 16 37.7 +0.4
318A	Bisbee baz=47,SNR=5.4	46.85	320	⇓P	P	05 16 37.2 -0.2
V25A	Rancho No Teng baz=47,SNR=7.3	46.87	329	⇑P	P	05 16 37.4 0.0
Z20A	Nine Sixteen R baz=47	47.11	323	⇑P	P	05 16 39.8 +0.3
V24A	Rampart Ranch, baz=47,SNR=7.6	47.12	328	⇑P	P	05 16 39.4 0.0
W23A	Werner Place, baz=47	47.17	327	⇑P	P	05 16 39.9 +0.1
U25A	Circle Dot Ran baz=47,SNR=5.6	47.19	329	⇑P	P	05 16 40.1 +0.1
218A	Dragoon baz=47	47.24	321	⇑P	P	05 16 40.4 0.0
Y20A	Horse Springs, baz=48	47.54	324	⇑P	P	05 16 43.0 +0.3
X21A	Alamocita Cree baz=48,SNR=5.1	47.57	325	⇓P	P	05 16 43.6 +0.7
217A	Green Valley baz=48	47.60	320	⇓P	P	05 16 43.0 -0.3
118A	Homack Ranch, baz=48	47.64	321	⇓P	P	05 16 43.5 0.0
T25A	Trinidad baz=48,SNR=6.2	47.77	330	⇓P	P	05 16 44.8 +0.4
FRNY	Flat Rock 46nm,1.9s,mb5.0	47.99	3	eP	P	05 16 46.6 +0.6
X20A	Quemado baz=48	48.05	324	⇓P	P	05 16 47.2 +0.5
U23A	El Rito baz=48	48.07	328	⇑P	P	05 16 47.2 +0.4
117A	Oracle baz=48	48.08	321	⇓P	P	05 16 46.8 -0.1
Y19A	Nutrioso baz=48	48.09	323	⇑P	P	05 16 47.6 +0.6
V22A	San Miguel Ran baz=48	48.15	327	⇑P	P	05 16 48.1 +0.7
216A	Three Points, baz=48	48.17	319	⇓P	P	05 16 47.4 -0.2
S25A	Robets Cordova baz=48,SNR=9.3	48.18	330	⇓P	P	05 16 47.8 +0.2
Y18A	Canyon Day Jun baz=49	48.44	322	⇑P	P	05 16 49.7 0.0
U22A	Llaves baz=49	48.46	327	⇑P	P	05 16 50.4 +0.6
V21A	Milan baz=49	48.47	326	⇓P	P	05 16 50.5 +0.6
S24A	Houchin Ranch, baz=49	48.56	330	⇓P	P	05 16 51.2 +0.7
116A	Eloy baz=49	48.69	320	⇓P	P	05 16 51.5 0.0
SDCO	Great Sand Dun 4.2nm,1.0s,mb4.3	48.78	330	eP	P	05 16 52.3 +0.1
X18A	Snowflake baz=49	48.91	323	⇓P	P	05 16 53.2 -0.1
U21A	Nageezi baz=49	48.93	327	⇑P	P	05 16 53.8 +0.4
W19A	Sanders baz=49	48.98	324	⇓P	P	05 16 54.2 +0.4
214A	Organ Pipe Nat baz=49	49.02	318	⇑P	P	05 16 54.0 -0.1
W18A	Petrified Fore baz=49	49.18	324	⇑P	P	05 16 55.6 +0.3
V19A	Window Rock baz=49	49.20	325	⇑P	P	05 16 55.7 +0.3
T21A	Navajo Lake baz=49	49.28	327	⇓P	P	05 16 56.3 +0.3
X17A	Forest Lakes baz=49	49.29	322	⇓P	P	05 16 56.7 +0.5
U20A	Newcomb baz=50	49.38	326	⇓P	P	05 16 57.2 +0.4
Y16A	Circle Bar Ran baz=50	49.40	321	⇑P	P	05 16 57.2 +0.1
S22A	4UR Ranch, Cre baz=50	49.47	328	⇓P	P	05 16 57.9 +0.5
P25A	Willow Gulch B baz=50,SNR=6.1	49.52	332	⇑P	P	05 16 57.9 +0.1
114A	Black Gap (USA baz=50	49.57	319	⇑P	P	05 16 58.1 -0.2
X16A	Lo Mia Camp, P baz=50,SNR=6.4	49.74	322	⇑P	P	05 16 59.8 +0.2
R22A	Saguache, Gunn baz=50	49.79	329	⇑P	P	05 17 00.5 +0.6
S21A	Coal Bank Pass baz=50	49.91	328	⇓P	P	05 17 00.8 0.0
MVCO	Mesa Verde baz=50	49.97	327	⇓P	P	05 17 01.5 +0.3
T19A	Beclabito baz=50	49.98	326	⇓P	P	05 17 01.7 +0.3
Y15A	Casa Rosa Ranc baz=50	49.99	321	⇓P	P	05 17 01.4 -0.1
V17A	Tonalea, Kykot baz=50,SNR=7.8	50.16	324	⇓P	P	05 17 02.8 +0.1
U18A	Rough Rock, Ch baz=50	50.17	325	⇑P	P	05 17 02.7 -0.1
P23A	Jefferson baz=50	50.21	331	⇓P	P	05 17 04.4 +1.4
X15A	Humboldt baz=50,SNR=5.3	50.27	321	⇓P	P	05 17 03.6 0.0
R21A	Cimarron baz=50	50.31	328	⇑P	P	05 17 04.1 +0.3
S20A	Disappointment baz=50	50.34	327	⇓P	P	05 17 04.1 0.0
Q22A	Crested Butte, baz=50	50.35	329	⇓P	P	05 17 04.5 +0.4
Z13A	Yuma Proving G baz=50	50.36	319	⇓P	P	05 17 04.0 -0.3
Y14A	Wickenburg baz=50	50.40	320	⇓P	P	05 17 04.5 -0.1
WUAZ	Wupatki baz=51,SNR=6.1	50.43	323	⇓P	P	05 17 05.0 +0.2
WUAZ	Wupatki 3.6nm,0.8s,mb4.3	50.43	323	eP	P	05 17 04.9 +0.1
R20A	Redvale baz=51	50.62	328	⇑P	P	05 17 06.6 +0.5
X14A	Yava baz=51	50.67	321	⇓P	P	05 17 06.6 0.0
PV01	Paradox Valley	50.68	327	eP	P	05 17 06.8 +0.2
T18A	Mexican Hat baz=51	50.68	326	⇓P	P	05 17 06.4 -0.2
S19A	Harvey Farm, M baz=51,SNR=5.3	50.70	327	⇑P	P	05 17 06.4 -0.3
W15A	Williams baz=51	50.75	322	⇓P	P	05 17 07.9 +0.7
PV10	Paradox Valley 52nm,0.9s	51.11	327	eP	P	05 17 07.9 -1.9
T17A	Navajo Res., N baz=51	51.11	325	⇓P	P	05 17 10.6 +0.8
V15A	Kaibab Nationa baz=51	51.12	323	⇓P	P	05 17 10.1 +0.2
S18A	Hurst Farm, Bl baz=51	51.14	326	⇓P	P	05 17 10.3 +0.2
O22A	Kremmling baz=51	51.16	331	⇓P	P	05 17 10.1 0.0
R19A	Curley Farm, L baz=51,SNR=6.6	51.16	327	⇓P	P	05 17 09.8 -0.5
W14A	Seligman baz=51	51.27	322	⇓P	P	05 17 11.5 +0.3
X13A	Yucca baz=52	51.35	320	⇓P	P	05 17 11.9 +0.2
PDMCI	Parker Dam,Lak baz=52	51.36	320	⇑P	P	05 17 11.7 0.0
U15A	North Rim baz=52	51.59	323	⇑P	P	05 17 13.8 +0.3
N22A	Wattenberg Ran baz=52	51.61	331	⇑P	P	05 17 13.9 +0.4
Q19A	Hogan Spring (baz=52,SNR=7.1	51.65	328	⇑P	P	05 17 13.6 -0.2
W13A	Hualapai Mount baz=52,SNR=6.6	51.70	321	⇓P	P	05 17 14.4 +0.1
R17A	Hanksville Air baz=52	52.05	326	⇑P	P	05 17 17.1 +0.2
Q18A	Rafter H Ranch baz=52	52.22	327	⇑P	P	05 17 18.4 +0.3
V13A	Grand Canyon W baz=52	52.25	322	⇓P	P	05 17 18.2 -0.2
BELC	Belle Mtn. Jos baz=52	52.39	318	⇓P	P	05 17 19.3 -0.2
R16A	Teasdale baz=52	52.39	325	⇑P	P	05 17 19.8 +0.5
T14A	Hurricane baz=53	52.49	323	⇑P	P	05 17 20.9 +0.8
N20A	Spence Gulch, baz=53	52.52	330	⇓P	P	05 17 20.5 +0.2
L22A	Ellis Ranch, M baz=53	52.56	332	⇓P	P	05 17 21.4 +0.9
U13A	Pakoon Wash baz=53	52.60	322	⇓P	P	05 17 21.3 +0.4
GMRC	Granite Mounta baz=53	52.64	319	⇓P	P	05 17 21.4 +0.1
P18A	Preston Nutter baz=53	52.66	328	⇓P	P	05 17 21.6 +0.3
M21A	Separation Pea baz=53	52.67	331	⇓P	P	05 17 21.7 +0.4
V12A	Nelson baz=53	52.71	321	⇑P	P	05 17 21.8 0.0
R15A	Junction baz=53	52.79	325	⇓P	P	05 17 22.9 +0.5
P17A	Butcher Ranch, baz=53	52.81	327	⇓P	P	05 17 22.7 +0.3
U12A	Valley of Fire baz=53	52.96	322	⇓P	P	05 17 23.9 +0.2
M20A	Sweetwater, Wa baz=53	52.98	331	⇓P	P	05 17 24.0 +0.4
CCUT	Cedar City 5.8nm,1.7s,mb4.3	52.98	324	eP	P	05 17 23.9 +0.2
O18A	Roosevelt baz=53	52.99	328	⇑P	P	05 17 24.1 +0.3
N19A	John Jarvie Ra baz=53	53.03	329	⇓P	P	05 17 25.0 +1.0
HEC	Hector,Ludlow baz=53	53.11	319	⇓P	P	05 17 24.9 +0.2
RSSD	Black Hills 1.4nm,0.6s,mb4.2	53.18	336	eP	P	05 17 24.0 -1.1
S13A	Holt Ranch, En baz=53	53.30	323	⇑P	P	05 17 26.7 +0.6
O17A	Robinson Place baz=54,SNR=6.2	53.33	328	⇓P	P	05 17 26.4 +0.2
N18A	Larsen Ranch, baz=54	53.34	329	⇑P	P	05 17 26.9 +0.6
GSC	Goldstone baz=54	53.70	319	⇓P	P	05 17 29.3 +0.2
O16A	Springville baz=54	53.75	327	⇓P	P	05 17 29.7 +0.4
R13A	O'Grain Ranch, baz=54	53.76	324	⇑P	P	05 17 29.8 +0.4
DAU	Daniels Canyon 6.6nm,0.9s,mb4.7	53.76	328	eP	P	05 17 29.7 +0.3
M18A	Lyman baz=54	53.87	329	⇓P	P	05 17 29.8 -0.3
Q14A	Sevier Lake (B baz=54,SNR=6.1	53.90	325	⇓P	P	05 17 30.7 +0.3
K20A	Yellowstone Ra baz=54	53.94	331	⇑P	P	05 17 30.8 +0.2
JLU	Jordanelle 1.7nm,0.4s,mb4.4	54.00	328	eP	P	05 17 31.2 +0.1
AGMN	Agassiz Nation 4.6nm,0.6s,mb4.7	54.03	344	eP	P	05 17 29.3 -1.9
P14A	Drum Mountains baz=54,SNR=6.6	54.19	326	⇑P	P	05 17 32.9 +0.4
N16A	Rees Ranch, Co baz=54	54.20	328	⇓P	P	05 17 33.2 +0.7
M17A	Scullys Gap (B baz=54	54.21	329	⇑P	P	05 17 32.3 -0.4
L18A	Fontenelle, Gr baz=54	54.22	330	⇑P	P	05 17 32.7 0.0
R12A	Pony Springs, baz=54	54.23	323	⇑P	P	05 17 33.4 +0.5
EDW2	Edwards Air Fo baz=54	54.23	318	⇑P	P	05 17 32.7 -0.3
Q13A	Wheeler Ranch, baz=54,SNR=5.9	54.30	324	⇓P	P	05 17 33.5 +0.1
K19A	Absolon Red Bu baz=54	54.31	331	⇓P	P	05 17 33.0 -0.3
FURC	Furnace Creek, baz=54	54.45	320	⇑P	P	05 17 34.1 -0.4
DUG	Dugway baz=55,SNR=5.7	54.46	326	⇑P	P	05 17 34.6 +0.2
DUG	Dugway 1.8nm,0.6s,mb4.3	54.46	326	eP	P	05 17 34.6 +0.2
MPMC	Manual Prospec baz=55	54.60	320	⇓P	P	05 17 34.8 -0.8
BW06	Boulder Array baz=55	54.61	331	⇓P	P	05 17 35.3 -0.2
BW06	Boulder Array 4.9nm,1.3s,mb4.4	54.61	331	eP	P	05 17 34.8 -0.7
P13A	Bates Ranch, G baz=55,SNR=5.9	54.63	325	⇓P	P	05 17 36.1 +0.4
K18A	Toltan Ranch, baz=55,SNR=5.8	54.75	330	⇓P	P	05 17 36.7 +0.2
L17A	Cokeville baz=55	54.77	329	⇓P	P	05 17 36.5 -0.3
HWUT	Hardware Ranch 2.8nm,0.6s,mb4.5	54.78	328	eP	P	05 17 35.9 -0.9
HWUT				e		05 18 37.4
N15A	Stansbury Isla baz=55	54.78	327	⇓P	P	05 17 36.7 -0.1
R11A	Troy Canyon, C baz=55	54.83	323	⇓P	P	05 17 37.6 +0.4
L16A	Fish Haven baz=55	55.00	329	⇓P	P	05 17 38.1 -0.3
SPUT	South Promonto 4.9nm,0.9s,mb4.5	55.03	328	eP	P	05 17 37.4 -1.2
N14A	Grayback Hills baz=55	55.12	327	⇓P	P	05 17 39.4 +0.2
M15A	Larsen Ranch, baz=55	55.14	328	⇓P	P	05 17 39.0 -0.3
P12A	McGill baz=55	55.16	324	⇑P	P	05 17 39.8 +0.3
J18A	Kendall Valley baz=55,SNR=6.3	55.17	331	⇓P	P	05 17 39.0 -0.5
S10A	Tonopah Range, baz=55,SNR=5.6	55.18	322	⇑P	P	05 17 39.8 +0.1
Q11A	Duckwater baz=55	55.19	323	⇓P	P	05 17 40.0 +0.2
K17A	Gardner Place, baz=55	55.27	330	⇑P	P	05 17 40.1 -0.2
L15A	Malad City baz=56,SNR=5.5	55.49	328	⇑P	P	05 17 41.1 -0.7
J17A	Brown Place, J baz=56	55.62	330	⇓P	P	05 17 42.3 -0.4
M14A	Sheep Mountain baz=56	55.65	327	⇓P	P	05 17 42.9 -0.2
K16A	Soda Springs baz=56	55.67	329	⇓P	P	05 17 43.1 0.0
LOHW	Long Hollow 2.2nm,0.8s,mb4.2	55.75	331	eP	P	05 17 43.4 -0.3
ULM	Lac du Bonnet 3.7nm,0.7s,mb4.5,baz=155,slow=6.6,SNR=3.3	55.82	345	P	P	05 17 42.0 -2.1
L14A	Malta baz=56	55.97	328	⇑P	P	05 17 45.3 +0.1
J16A	Bone baz=56	56.00	330	⇑P	P	05 17 45.7 +0.2
M13A	Montello baz=56	56.00	326	⇑P	P	05 17 45.4 -0.1
IMW	Indian Meadow 1.8nm,0.6s,mb4.3	56.12	331	eP	P	05 17 47.7 +1.3
RLMT	Red Lodge baz=56	56.25	333	⇓P	P	05 17 47.0 -0.2
K14A	Jones Ranch, D baz=56,SNR=5.1	56.29	328	⇑P	P	05 17 46.8 -0.7
I16A	Newdale baz=56	56.38	330	⇓P	P	05 17 48.3 +0.2
L13A	Double Diamond baz=56	56.38	327	⇓P	P	05 17 47.8 -0.4
M12A	Wells baz=57	56.46	326	⇑P	P	05 17 48.6 -0.1
J15A	Blackfoot baz=57,SNR=11	56.51	329	⇓P	P	05 17 48.9 -0.2
N11A	Elko Archery C baz=57	56.52	325	⇓P	P	05 17 49.5 +0.2
NVAR	Mina Array Bea 0.9nm,0.5s,mb4.0,baz=143,slow=7.6,SNR=9.2	56.55	321	P	P	05 17 49.3 -0.2
NVAR				pP	pP	05 18 12.6 -0.3
NVAR	Mina Array Bea 0.2nm,0.4s,baz=108,slow=12,SNR=1.4	56.55	321	P	P	05 17 49.3 -0.2
NVAR				pP	pP	05 18 12.6 -0.3
DGMT	Dagmar baz=57	56.84	338	⇓P	P	05 17 51.5 +0.1
H16A	Russell Place, baz=57,SNR=5.5	56.87	331	⇑P	P	05 17 52.0 +0.4
GCMT	Greycliff 11nm,0.9s,mb4.9	56.94	333	eP	P	05 17 52.1 -0.1
L12A	House Creek Ra baz=57	57.00	327	⇓P	P	05 17 52.7 +0.1
J14A	Carey baz=57,SNR=13	57.01	329	⇓P	P	05 17 52.7 +0.1
F18A	Big Timber baz=57,SNR=18	57.05	333	⇓P	P	05 17 52.7 -0.2
K12A	Draper Farm, C baz=57	57.27	327	⇑P	P	05 17 54.7 +0.2
I14A	Mackay baz=58,SNR=5.5	57.40	329	⇑P	P	05 17 55.4 0.0
J13A	Cove Ranch, Pi baz=58	57.41	328	⇑P	P	05 17 55.5 +0.1
L11A	Cat Creek Ranc baz=58	57.42	326	⇓P	P	05 17 55.7 +0.1
F17A	Fitzpatrick Pl baz=58	57.48	332	⇑P	P	05 17 56.3 +0.4
H15A	Lima baz=58	57.49	330	⇑P	P	05 17 56.5 +0.5
G16A	Moss Hill, Enn baz=58,SNR=5.2	57.52	331	⇓P	P	05 17 56.2 0.0
E18A	Harlowton baz=58	57.65	333	⇓P	P	05 17 57.1 0.0
HLID	Hailey baz=58,SNR=5.1	57.65	328	⇑P	P	05 17 57.0 -0.1
HLID	Hailey 1.8nm,0.7s,mb4.2	57.65	328	eP	P	05 17 57.1 0.0
I13A	Wildhorse Cree baz=58,SNR=6.9	57.74	329	⇓P	P	05 17 57.8 0.0
BOZ	Bozeman (W) baz=58,SNR=7.9	57.74	332	⇑P	P	05 17 57.4 -0.4
J12A	Stokes Ranch, baz=58	57.80	328	⇓P	P	05 17 58.3 +0.1
G15A	Dillon baz=58	57.81	331	⇑P	P	05 17 58.3 +0.1
F16A	Kennard Place, baz=58	57.84	332	⇑P	P	05 17 58.6 +0.2
H14A	Leadore baz=58,SNR=6.6	57.85	330	⇓P	P	05 17 58.6 +0.1
K11A	Parker Ranch, baz=58,SNR=6.0	57.98	327	⇓P	P	05 17 59.5 0.0
E17A	Martinsdale baz=58	57.99	333	⇑P	P	05 17 59.7 +0.2
I12A	Atlanta baz=58	58.19	328	⇓P	P	05 18 01.0 +0.2
H13A	Challis baz=58	58.26	329	⇑P	P	05 18 01.7 +0.3
F15A	Butte baz=58	58.30	331	⇑P	P	05 18 02.1 +0.4
MFID	Camas Ranch baz=58,SNR=14	58.30	327	⇑P	P	05 18 01.7 0.0
D17A	Six Diamond Ra baz=59	58.44	333	⇓P	P	05 18 02.5 -0.1
K10A	MacKenzie Ranc baz=59,SNR=6.1	58.45	326	⇑P	P	05 18 02.6 -0.1
SCHQ	Schefferville 5.6nm,0.6s,mb4.8,baz=119,slow=2.4,SNR=10	58.49	7	P	P	05 18 02.9 +0.1
SCHQ	Schefferville 8.0nm,0.6s,mb4.9	58.49	7	eP	P	05 18 02.8 0.0
H12A	Diamond D Ranc baz=59,SNR=5.4	58.56	329	⇓P	P	05 18 03.3 -0.2
G13A	Cobalt baz=59	58.62	330	⇓P	P	05 18 04.3 +0.4
I11A	Placerville baz=59,SNR=7.8	58.70	328	⇓P	P	05 18 04.1 -0.4
D16A	Dana Ranch, Ca baz=59	58.73	333	⇓P	P	05 18 04.6 0.0
C17A	Wharram Farm, baz=59,SNR=5.5	58.83	334	⇑P	P	05 18 04.7 -0.6
B18A	Beardsley Farm baz=59	58.99	335	⇓P	P	05 18 06.4 0.0
F13A	Darby baz=59	59.16	330	⇓P	P	05 18 07.8 +0.2
D15A	Lincoln baz=59	59.19	332	⇑P	P	05 18 07.6 -0.1
E14A	Clinton baz=59	59.20	331	⇑P	P	05 18 07.6 -0.2
A18A	Metzger Ranch, baz=60	59.42	335	⇓P	P	05 18 09.2 -0.2
E13A	Victor baz=60	59.55	331	⇑P	P	05 18 10.1 -0.2
F12A	Elk City baz=60,SNR=5.3	59.60	330	⇓P	P	05 18 10.1 -0.5
MSO	Missoula 4.8nm,1.3s,mb4.4	59.71	331	eP	P	05 18 10.8 -0.6
I09A	Lost Marbles R baz=60	59.71	327	⇓P	P	05 18 11.2 -0.2
C15A	Salmond Ranch, baz=60	59.77	333	⇑P	P	05 18 12.2 +0.5
G11A	Walters Elk Ra baz=60	59.87	329	⇑P	P	05 18 11.9 -0.6
B15A	Bradely Ranch, baz=60	60.14	333	⇓P	P	05 18 14.2 -0.1
D13A	Huson baz=60	60.15	331	⇓P	P	05 18 14.6 +0.3
F11A	Grangeville baz=60	60.15	329	⇑P	P	05 18 13.8 -0.6
E12A	Beaver Dam Sad baz=60	60.21	330	⇓P	P	05 18 14.5 -0.3
G10A	Bishop Farm, J baz=60	60.25	328	⇑P	P	05 18 14.9 -0.2
B14A	Marquette Ranc baz=61,SNR=5.1	60.50	333	⇑P	P	05 18 16.4 -0.4

G09A	Cove	60.59	328	⇑P	P	05 18 16.9	-0.5
	baz=61						
A15A	Johnson Ranch,	60.71	334	⇑P	P	05 18 18.1	-0.1
	baz=61						
B13A	Whitefish	61.06	332	⇑P	P	05 18 20.6	0.0
	baz=61						
C12B	Naegeli Ranch,	61.07	331	⇓P	P	05 18 20.8	+0.2
	baz=61						
G08A	Pilot Rock	61.23	327	⇑P	P	05 18 21.6	-0.1
	baz=61						
WALA	Waterton Lakes	61.30	333	*e*P	P	05 18 20.9	-1.2
	0.1nm,0.9s						
A13A	Flathead Natio	61.44	333	⇓P	P	05 18 23.2	+0.2
	baz=62						
C11A	Tepee Creek (N	61.54	331	⇑P	P	05 18 23.7	0.0
	baz=62						
NEW	Newport	62.25	331	*e*P	P	05 18 27.2	-1.4
	7.3nm,1.3s,mb4.5						
B08A	Colville Reser	63.41	330	⇓P	P	05 18 36.1	-0.1
	baz=64						
A05A	Maple Falls	65.22	329	⇑P	P	05 18 47.8	-0.3
	baz=65						
YKA	Yellowknife Ar	71.62	343	P	P	05 19 26.0	-1.6
	1.5nm,0.7s,mb3.9,baz=129,slow=5.5,SNR=6.6						
DBIC	Dimbokro	72.41	82	P	P	05 19 34.1	+0.7
	2.6nm,0.6s,mb4.3,baz=203,slow=6.6,SNR=4.4						
DBIC				pP	pP	05 19 56.5	-1.1
	5.5nm,1.0s,baz=239,slow=3.4,SNR=2.3						
INK	Inuvik	81.35	342	*e*P	P	05 20 21.6	-0.8
	6.9nm,1.1s,mb4.4						
ZALV	Zalesovo Beam	127.28	14	PKP	PKPdf	05 27 09.6	-0.6
	1.1nm,0.5s,baz=270,slow=3.0,SNR=4.3						
STKA	Stephens Creek	129.53	223	PKP	PKPdf	05 27 14.3	-0.9
	1.1nm,0.3s,baz=16,slow=15,SNR=2.6						
MKAR	Makanchi Array	132.99	20	PKP	PKPdf	05 27 20.6	-0.6
	0.4nm,0.4s,baz=307,slow=2.5,SNR=8.0						
WMQ	Urumqi	137.34	17	*e*PKP	PKPdf	05 27 29.5	0.0
ASAR	Alice Springs	139.91	226	PKP	PKPdf	05 27 33.0	-1.8
	0.9nm,1.0s,baz=72,slow=3.0,SNR=4.7						
ASAR				pPKP	pPKPdf	05 27 59.9	-1.1
	0.8nm,0.8s,baz=118,slow=2.3,SNR=2.2						
WRA	Warramunga Arr	141.75	232	PKhKP	PKPpre	05 27 27.7	
	0.6nm,1.0s,baz=115,slow=3.3,SNR=4.6						
WRA				PKP	PKPdf	05 27 36.7	-1.5
	1.0nm,0.6s,baz=165,slow=1.4,SNR=6.2						
WRA				pPKP	pPKPdf	05 28 04.8	+0.3
	0.7nm,0.6s,baz=123,slow=2.4,SNR=2.8						
LZH	Lanzhou	147.36	359	*e*PKPbc	PKPbc	05 27 47.0	-3.0
LZH				pPKP	pPKPdf	05 28 15.0	+1.3
LZH				sPKP		05 28 24.0	
LZH				LR	LR		
	comp=N,140nm,15.7s						
LZH				LR	LR		
	comp=Z,320nm,16.4s						
NJ2	Nanjing	147.86	335	*e*PKPbc	PKPbc	05 27 48.5	-2.9
WHN	Wuhan	150.94	340	PKPbc	PKPbc	05 27 55.3	-3.8
CD2	Chengdu	152.52	359	PKPbc	PKPdf	05 27 54.7	-1.0
GYA	Guiyang	156.74	352	*e*PKP	PKPdf	05 27 59.0	-2.7
GYA				pPKP	pPKPdf	05 28 30.4	+2.4
GYA				sPKP		05 28 40.6	
GYA				PP	PP	05 32 10.6	+2.5
GYA				AMB	AMB		
	comp=Z,80nm,7.8s						
KMI	Kunming	158.28	1	PKP	PKPdf	05 28 01.1	-2.6

ISCJB ***08*** *05:14:57.4±1.1, 15°.40N×0°.05×122°.40E±0°.06, h10km, mb3.7/2, Error ellipse: s-maj=9.8km s-min=6.7km az=145.7*
MAN ***08*** *05:14:58, 15°.35N×122°.35E, h11km, mb4.8, ML3.7, MS3.7*
IDC ***08*** *05:15:00.6±1.6, 14°.49N×122°.75E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.4/22, mbtmp3.5/3, Error ellipse: s-maj=31.8km s-min=19.7km az=20.0*
ISC 08 05:14:57.3±1.0, 15°.40N±0°.05×122°.40E±0°.06, h10km, n11, σ1§20/15, mb3.7/2, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	Polilio Island	0.80	214	*e*P	Pg	05 15 11.8	-0.9
POLP				*e*S	Sg	05 15 22.7	-0.5
BALP	Baler	0.86	293	*e*P	Pg	05 15 13.7	-0.1
BALP				*e*S	Sg	05 15 25.2	+0.1
PCPH	Palayan	1.27	277	⇓*e*P	Pn	05 15 20.1	-1.0
PCPH				*e*S	Sb	05 15 38.1	+0.6
CAUP	Cauayan	1.63	340	*e*P	Pn	05 15 25.8	-0.3
TGY	Tagaytay City	1.91	228	Pn	Pn	05 15 32.2	+2.2
	119nm,0.3s,baz=182,slow=3.3,SNR=9.5						
TGY				Pg	Pg	05 15 33.6	-0.4
	121nm,0.3s,baz=101,slow=5.2,SNR=10.0						
TGY				Sn	Sn	05 15 58.5	+4.4
	188nm,0.3s,baz=159,slow=21,SNR=11						
BOAC	Boac	2.00	196	*e*P	Pn	05 15 32.0	+0.8
PVCP	Virac	2.47	136	*e*P	Pn	05 15 38.9	+1.2
LUBP	Lubang	2.66	232	*e*P	Pn	05 15 43.7	+3.5
WRA	Warramunga Arr	37.03	161	P	P	05 22 03.7	-3.7
	1.2nm,0.6s,mb3.9,baz=343,slow=9.2,SNR=6.5						
ASAR	Alice Springs	40.42	164	P	P	05 22 33.1	-2.7
	0.3nm,0.3s,mb3.5,baz=339,slow=7.8,SNR=7.2						
MKAR	Makanchi Array	45.68	322	P	Px	05 23 30.5	
	0.3nm,0.9s,baz=120,slow=8.5,SNR=2.7						

ISCJB ***08*** *05:27:56.2±0.8, 20°.3S±0°.1×178°.29W±0°.10, h586km±11km, mb4.0/16, Error ellipse: s-maj=17.5km s-min=12.1km az=143.8*
NEIC ***08*** *05:27:56.9±0.8, 20°.13S×178°.21W, h586km±9km, mb4.5/7, Error ellipse: s-maj=17.1km s-min=12.4km az=133.0*
IDC ***08*** *05:27:58.2±2.1, 20°.33S×178°.32W, h601km±27km, mb3.3/10, mb1 3.6/11, mb1mx3.5/16, mbtmp3.3/11, Error ellipse: s-maj=29.1km s-min=12.2km az=156.0*
ISC 08 05:27:56.9±0.8, 20°.2S±0°.1×178°.26W±0°.10, h581km±10km, n30, σ1§16/25, mb4.0/16, 1C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.28	305	*e*Pn	P	05 29 25.1	+2.0
AFI	Afiamalu	8.82	46	*e*Pn	P	05 30 01.9	-1.9
RAO	Raoul Island	8.99	178	P	P	05 30 04.1	-1.0
	46nm,0.3s,baz=54,slow=19,SNR=2.6						
OUZ	Omahuta	16.58	204	*e*P	P	05 31 23.8	+3.7
	24nm,0.8s						
URZ	Urewera	18.42	192	P	P	05 31 35.8	-1.1
	1.4nm,0.3s,baz=29,slow=6.5,SNR=9.0						
URZ	Urewera	18.42	192	*e*P	P	05 31 37.0	+0.1
	9.7nm,0.6s						
CTAO	Charters Tower	33.28	264	*e*P	P	05 33 47.9	+0.3
	8.5nm,0.5s,mb4.6						
COEN	Coen	37.32	273	*e*P	P	05 34 21.2	0.0
	50nm,0.6s,mb5.2						
STKA	Stephens Creek	37.69	244	P	P	05 34 24.8	+0.8
	2.2nm,0.5s,mb4.0,baz=90,slow=7.1,SNR=3.3						
ASAR	Alice Springs	44.35	256	P	P	05 35 16.7	0.0
	7.7nm,0.7s,mb4.3,baz=91,slow=7.6,SNR=70						
ASAR				PcP	PcP	05 36 47.4	-0.5
	0.2nm,0.4s,baz=115,slow=3.5,SNR=4.3						
ASAR				S	S	05 41 07.9	-1.8
	1.0nm,0.8s,baz=102,slow=16,SNR=5.2						
WRAB	Tennant Creek	44.39	262	*e*P	P	05 35 16.5	-0.6
	15nm,1.1s,mb4.5						
WRA	Warramunga Arr	44.40	262	P	P	05 35 16.4	-0.8
	4.5nm,0.5s,mb4.2,baz=97,slow=8.5,SNR=33						
WRA				S	S	05 41 07.6	-2.8
	0.5nm,0.8s,baz=99,slow=16,SNR=3.3						
QSPA	South Pole Qui	69.84	180	*e*P	P	05 38 10.9	+1.5
	12nm,1.3s,mb4.2						
MJAR	Matsushiro Arr	69.84	324	P	P	05 38 08.5	-1.5
	1.1nm,0.5s,mb3.6,baz=165,slow=6.2,SNR=4.4						
PEA0B	Petropavlovsk-	75.94	345	*e*P	P	05 38 47.5	+3.0
KSRS	Korea Array	76.52	319	P	P	05 38 48.2	+0.2
	0.8nm,0.6s,mb3.3,baz=127,slow=6.8,SNR=4.0						
NVAR	Mina Array Bea	80.99	44	P	P	05 39 12.3	+0.5
	1.0nm,0.8s,mb3.3,baz=224,slow=8.7,SNR=5.5						
TXAR	Lajitas Array	87.11	57	P	P	05 39 42.9	+0.9
	0.6nm,0.9s,mb3.3,baz=202,slow=6.2,SNR=6.5						
COLA	College	87.99	12	*e*P	P	05 39 43.6	-1.7
	3.4nm,0.8s,mb4.1						
PDAR	Pinedale Array	88.93	43	P	P	05 39 50.0	-0.1
	0.6nm,0.7s,mb3.5,baz=242,slow=3.2,SNR=6.4						
HHC	Hu-ho-hao-te	88.99	314	*e*P	P	05 39 51.3	+0.8
HHC				S	S	05 49 48.7	-1.5
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.6						
HHC				pmax	pmax		
	comp=Z,56nm,7.1s						
CMAR	Chiang Mai Arr	89.79	290	P	P	05 39 55.5	+0.7
	comp=Z,1.5nm,0.6s,mb4.0,baz=106,slow=2.4,SNR=6.9						
YKA	Yellowknife Ar	96.36	25	P	P	05 40 23.9	+0.2
	comp=Z,0.3nm,0.6s,mb3.7,baz=226,slow=4.9,SNR=3.2						
MKAR	Makanchi Array	110.83	314	PKiKP	PKiKP	05 45 22.5	-2.0
	comp=Z,0.3nm,0.7s,baz=135,slow=0.5,SNR=4.4						
BVAR	Borovoye Array	118.71	320	PKP	PKPdf	05 45 37.7	-1.6
	comp=Z,1.1nm,0.5s,baz=136,slow=3.4,SNR=5.7						
AKASG	Malin Array Be	142.66	331	PKhKP		05 46 19.4	
	comp=Z,3.3nm,0.6s,baz=44,slow=4.7,SNR=17						
BRTR	Keskin Array B	146.47	312	PKP	PKPdf	05 46 30.6	-0.6
	comp=Z,1.6nm,0.6s,baz=155,slow=5.3,SNR=7.5						
BRTR				PKPbc	PKPbc	05 46 32.6	-1.2
	comp=Z,1.6nm,0.6s,baz=146,slow=5.3,SNR=7.4						
BUR08	Bucovina Ar. S	146.69	331	*e*PKPbc	PKPbc	05 46 33.7	-0.5
MMAI	Mount Meron Ar	147.47	300	PKPbc	PKPbc	05 46 35.7	-0.9
	comp=Z,2.3nm,0.5s,baz=74,slow=7.0,SNR=4.7						
CLL	Collm	147.74	347	⇑*i*PKPbc	PKPbc	05 46 36.1	-0.6
	comp=Z,10.0nm,0.8s						
CLL				*e*PKPab	PKPab	05 46 40.0	-1.2

CSEM ***08*** *06:11:10.2±0.2, 51°.45N×16°.21E, h2km, ML3.5/9, Error ellipse: s-maj=4.2km s-min=2.5km az=20.0*
ISCJB ***08*** *06:11:10.1±0.5, 51°.33N±0°.03×16°.20E±0°.03, h0km, Error ellipse: s-maj=4.2km s-min=2.1km az=17.9*
IPEC ***08*** *06:11:11.6±0.3, 51°.41N×16°.48E, h0km, ML2.5/3, Error ellipse: s-maj=3.1km s-min=2.1km az=98.0*
WAR ***08*** *06:11:11.6, 51°.44N×16°.20E, ML2.8, Mining Induced*
BGR ***08*** *06:11:11.1±0.5, 51°.40N×16°.25E, h1km, ML3.1, Error ellipse: s-maj=6.7km s-min=3.3km az=20.0*
NEIC ***08*** *06:11:11.1, 51°.40N×16°.25E, h1km, ML3.1(SZGRF), After SZGRF.*
VIE ***08*** *06:11:12.4±0.4, 51°.27N×16°.20E, h0km, mb2.6/4, ML3.1/4, Error ellipse: s-maj=2.7km s-min=2.5km az=173.0 60 km WNW of Wroclaw Suspected Mining induced.*
PRU ***08*** *06:11:12.4, 51°.37N×16°.17E, h0km*
ISC 08 06:11:10.4±0.5, 51°.43N±0°.03×16°.22E±0°.03, h0km, n79, σ0§98/152, 3C-2D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.59	175	*e*Pg	Pg	06 11 22.6	+0.9
KSP				*e*Sg	Sg	06 11 31.1	+1.7
KSP	Ksiaz	0.59	175	*e*Pg	Pg	06 11 22.6	+0.9
KSP				*e*Sg	Sg	06 11 31.1	+1.7
KSP	Ksiaz	0.59	175	⇓*i*Pg	Pg	06 11 22.6	+0.9
KSP				*i* Sg	Sg	06 11 30.6	+1.2
KSP				*e*		06 11 34.0	
KSP	Ksiaz	0.59	175	*i* Pg	Pg	06 11 22.6	+0.9
KSP				*e*Sg	Sg	06 11 29.9	+0.5
KSP	Ksiaz	0.59	175	Pg	Pg	06 11 22.6	+0.9
KSP				*e*Sg	Sg	06 11 29.9	+0.5
	baz=11						
UPC	Upice	0.94	188	*e*Pg	Pg	06 11 28.9	+0.6
UPC	Upice	0.94	188	*e*PG	Pg	06 11 28.9	+0.6
UPC	Upice	0.94	188	Pg	Pg	06 11 28.9	+0.6
DPC	Dobruska-Polom	1.09	176	*e*Pn	Pn	06 11 31.5	-1.3
DPC				*e*Sg	Sg	06 11 47.0	+1.7
DPC	Dobruska-Polom	1.09	176	*e*PG	Pg	06 11 31.5	+0.3
DPC				*e*SG	Sg	06 11 45.6	+0.4
	comp=Z,83nm,0.6s						
DPC	Dobruska-Polom	1.09	176	Pg	Pg	06 11 31.5	+0.3
DPC				Sg	Sg	06 11 45.6	+0.4
	comp=Z,83nm,0.6s						
PVCC	Panska Ves	1.38	230	*e*Pg	Pg	06 11 37.0	+0.2
PVCC	Panska Ves	1.38	230	*e*PG	Pg	06 11 37.0	+0.2
PVCC	Panska Ves	1.38	230	Pg	Pg	06 11 37.0	+0.2
BRG	Berggiesshubel	1.54	249	*e*Pn	Pn	06 11 38.1	-0.9
BRG				*e*Sg	Sg	06 12 00.1	+0.4
BRG	Berggiesshubel	1.54	249	PN	Pn	06 11 38.1	-0.9
BRG				PG	Pg	06 11 39.6	-0.2
BRG				SG	Sg	06 11 59.9	+0.2
	comp=Z,96nm,0.4s						
BRG	Berggiesshubel	1.54	249	Pn	Pn	06 11 38.1	-0.9
BRG				Sg	Sg	06 12 00.1	+0.4
PRU	Pruhonice	1.80	217	*e*Pn	Pn	06 11 43.3	+0.7
PRU				*e*Pg	Pg	06 11 44.6	-0.2
PRU				*e*Sg	Sg	06 12 08.7	+0.7
PRU	Pruhonice	1.80	217	*e*PN	Pn	06 11 43.3	+0.7
PRU				*e*PG	Pg	06 11 44.6	-0.2
PRU				*e*SG	Sg	06 12 08.7	+0.7
	comp=Z,68nm,0.4s						
PRU	Pruhonice	1.80	217	Pn	Pn	06 11 43.3	+0.7
PRU	Pruhonice	1.80	217	Pg	Pg	06 11 44.6	-0.2
PRU				Sg	Sg	06 12 08.7	+0.7
	comp=Z,68nm,0.4s						
RUE	Ruedersdorf	1.84	306	*e*Pn	Pn	06 11 45.7	+2.6
RUE	Ruedersdorf	1.84	306	*e*Pn	Pn	06 11 45.7	+2.6
MORC	Moravsky Berou	1.86	153	*e*Pn	Pn	06 11 43.1	-0.3
MORC				*e*Sg	Sg	06 12 08.7	-1.4
MORC	Moravsky Berou	1.86	153	*e*Pg	Pg	06 11 43.1	-2.9
MORC				*e*SG	Sg	06 12 09.9	-0.3
MORC	Moravsky Berou	1.86	153	*e*Pn	Pn	06 11 43.3	-0.2
	baz=338						
MORC				*e*Sg	Sg	06 12 09.9	-0.2
OKC	Ostrava-Krasne	2.02	142	*e*Pn	Pn	06 11 45.8	+0.2
OKC				*e*Sg	Sg	06 12 14.1	-1.0
OKC	Ostrava-Krasne	2.02	142	*e*Pn	Pn	06 11 45.8	+0.2
OKC				*e*Pg	Pg	06 11 48.7	-0.3
OKC				*e*Sg	Sg	06 12 14.1	-1.0
OKC	Ostrava-Krasne	2.02	142	*e*PN	Pn	06 11 45.8	+0.2
OKC				*e*PG	Pg	06 11 48.7	-0.3
OKC				*e*SG	Sg	06 12 14.1	-1.0
	comp=Z,72nm,0.7s						
OKC	Ostrava-Krasne	2.02	142	Pn	Pn	06 11 45.8	+0.2
CLL	Collm	2.02	268	*e*Pn	Pn	06 11 45.0	-0.6
CLL				*i* Pg	Pg	06 11 48.5	-0.5
CLL				*e*Sg	Sg	06 12 16.5	+1.3
CLL	Collm	2.02	268	*e*Pn	Pn	06 11 45.0	-0.6
CLL				*i* Pg	Pg	06 11 48.5	-0.5
CLL				*e*Sg	Sg	06 12 15.0	-0.2
CLL	Collm	2.02	268	*e*Pn	Pn	06 11 45.0	-0.6
CLL				*i* Pg	Pg	06 11 48.5	-0.5
CLL				*e*Sg	Sg	06 12 15.0	-0.2
	comp=Z,45nm,0.7s						
CLL	Collm	2.02	268	Pn	Pn	06 11 45.0	-0.6
VRAC	Vranov	2.14	173	*e*Pn	Pn	06 11 48.1	+0.8
VRAC				*e*Sg	Sg	06 12 16.9	-2.2
KRUC	Moravsky	2.38	177	*e*Pn	Pn	06 11 52.0	+1.5
	baz=1.2						
KRUC				*e*Sg	Sg	06 12 25.2	-1.5
	comp=Z,15nm,0.3s,baz=1.2						
OJC	Ojcow	2.58	117	*e*Pg	Pg	06 11 58.7	-1.0
OJC				Sg	Sg	06 12 32.0	-1.1
TANN	Tannenbergstha	2.59	248	*e*Pn	Pn	06 11 53.5	+0.1
TANN	Tannenbergstha	2.59	248	Pn	Pn	06 11 53.5	+0.1
WERD	Werda	2.66	250	*e*Pn	Pn	06 11 54.2	-0.3
WERD	Werda	2.66	250	Pn	Pn	06 11 54.2	-0.3
NKC	Novy Kostel	2.67	245	*e*Pn	Pn	06 11 54.7	+0.1
NKC				*e*Pg	Pg	06 12 00.7	-0.9
NKC				*e*Sg	Sg	06 12 38.0	+1.8
NKC	Novy Kostel	2.67	245	*e*PN	Pn	06 11 54.7	+0.1
NKC				*e*PG	Pg	06 12 00.7	-0.9
NKC				*e*SG	Sg	06 12 38.0	+1.8
	comp=Z,59nm,0.3s						
NKC	Novy Kostel	2.67	245	Pn	Pn	06 11 54.7	+0.1
NKC	Novy Kostel	2.67	245	Pg	Pg	06 12 00.7	-0.9
NKC				Sg	Sg	06 12 38.0	+1.8
	comp=Z,59nm,0.3s						
JAVC	Velka Javorina	2.74	159	*e*Sg	Sg	06 12 38.0	-0.4
	comp=Z,23nm,0.6s						
KHC	Kasperske Hory	2.86	217	*e*Pn	Pn	06 11 57.0	-0.2
KHC				*e*Pg	Pg	06 12 03.5	-1.6
KHC				*e*Sn	Sn	06 12 35.7	+3.4
KHC	Kasperske Hory	2.86	217	*e*PN	Pn	06 11 57.3	+0.1
KHC				*e*PG	Pg	06 12 03.4	-1.8
KHC				*e*SN	Sn	06 12 30.7	-1.6
KHC				*e*SG	Sg	06 12 41.6	-0.6
	comp=Z,32nm,0.6s						
KHC	Kasperske Hory	2.86	217	Pn	Pn	06 11 57.3	+0.1
MOX	Moxa	3.01	257	*e*PN	Pn	06 11 59.2	0.0
MOX				*e*PG	Pg	06 12 07.6	-0.4
MOX				*i* SG	Sg	06 12 47.5	+0.5
MOX	Moxa	3.01	257	*e*Pn	Pn	06 11 59.2	-0.1
MOX				*e*Pg	Pg	06 12 07.6	-0.4
MOX				*e*Sg	Sg	06 12 48.0	+1.0
MOX	Moxa	3.01	257	Pn	Pn	06 11 59.2	0.0
MOX	Moxa	3.01	257	Pg	Pg	06 12 07.6	-0.4
MOX				Sg	Sg	06 12 48.0	+1.0
WET	Wettzell	3.14	224	*e*Pn	Pn	06 12 01.4	+0.4
WET				*e*Sg	Sg	06 12 50.9	-0.2
WET	Wettzell	3.14	224	Pn	Pn	06 12 01.4	+0.4
WET				Sg	Sg	06 12 50.9	-0.2
KOLL	Kolacno	3.19	153	*e*Pn	Pn	06 12 02.3	+0.6
KOLL				*e*Sg	Sg	06 12 53.1	+0.4
KOLL	Kolacno	3.19	153	*e*PN	Pn	06 12 02.3	+0.6
KOLL				*e*SG	Sg	06 12 53.1	+0.4
KOLL	Kolacno	3.19	153	*e*Pn	Pn	06 12 02.3	+0.6
KOLL				*e*Sg	Sg	06 12 53.1	+0.4
NIE	Niedzica	3.31	126	*e*P	Pg	06 12 13.5	-0.2
NIE				*e*S	Sg	06 12 57.9	+1.4
VYHS	Vyhne	3.39	149	*e*Pg	Pg	06 12 17.3	+1.9
VYHS				*e*Sg	Sg	06 12 58.4	-0.9
VYHS	Vyhne	3.39	149	*e*PG	Pg	06 12 17.3	+1.9
VYHS				*e*SG	Sg	06 12 58.4	-0.9
VYHS	Vyhne	3.39	149	*e*Pg	Pg	06 12 17.3	+1.9
VYHS				*e*Sg	Sg	06 12 58.4	-0.9
CONA	Conrad Observa	3.52	184	⇑*i*Pn	Pn	06 12 05.7	-0.5
CONA				⇑*i*Sg	Sg	06 13 03.1	-0.2
	comp=Z,18nm,0.3s						
CONA	Conrad Observa	3.52	184	Pn	Pn	06 12 05.7	-0.5
CONA				Sg	Sg	06 13 03.1	-0.2
	comp=Z,18nm,0.3s						
GRA1	Grafenberg Arr	3.63	243	Pn	Pn	06 12 07.6	-0.2
GRA1				Sg	Sg	06 13 06.4	-0.5
GRF	Grafenberg Arr	3.63	243	*e*Pn	Pn	06 12 07.6	-0.2
GRF				*e*Sg	Sg	06 13 06.4	-0.5
GRF	Grafenberg Arr	3.63	243	*e*Pn	Pn	06 12 07.6	-0.2
GRF				*e*Sg	Sg	06 13 06.4	-0.5
GRF	Grafenberg Arr	3.63	243	*e*Pn	Pn	06 12 07.6	-0.2
GRF				*e*Sg	Sg	06 13 06.4	-0.5
BSD	Bornholm Skovb	3.77	349	*i* P	Pn	06 12 07.8	-1.9
BSD				*i* S	Sn	06 12 49.1	-5.6
BSD	Bornholm Skovb	3.77	349	*i* P	Pn	06 12 07.8	-1.9
	SNR=49						
STHS	Stebnicka Huta	3.80	120	*e*Pn	Pn	06 12 11.3	+1.3
STHS				*e*Sg	Sg	06 13 16.5	+4.3
STHS	Stebnicka Huta	3.80	120	*e*PN	Pn	06 12 11.3	+1.3
STHS				*e*SG	Sg	06 13 16.5	+4.3
STHS	Stebnicka Huta	3.80	120	*e*Pn	Pn	06 12 11.3	+1.3
STHS				*e*Sg	Sg	06 13 16.5	+4.3
MOA	Molln	3.81	200	⇑*i*Pn	Pn	06 12 10.6	+0.4
MOA				⇓*i*Sg	Sg	06 13 13.0	+0.4
	comp=Z,28nm,0.5s						
MOA	Molln	3.81	200	Pn	Pn	06 12 10.6	+0.4
MOA				Sg	Sg	06 13 13.0	+0.5
	comp=Z,28nm,0.5s						
KECS	Kecovo	4.04	135	*e*SG	Sg	06 13 21.6	+1.5
CRVS	Cervenica-Dubn	4.22	125	*e*Pn	Pn	06 12 19.8	+4.0
CRVS				*e*Sg	Sg	06 13 26.5	+0.7
CRVS	Cervenica-Dubn	4.22	125	*e*PN	Pn	06 12 19.8	+4.0
CRVS				*e*SG	Sg	06 13 26.5	+0.7
CRVS	Cervenica-Dubn	4.22	125	*e*Pn	Pn	06 12 19.8	+4.0
CRVS				*e*Sg	Sg	06 13 26.5	+0.7

ISCJB ***08*** *06:21:20.7±1.3, 16°.9S±0°.2×175°.0W±0°.2, h311km±16km, mb3.7/6, Error ellipse: s-maj=44.5km s-min=19.6km az=137.5*
IDC ***08*** *06:21:22.8±2.1, 16°.88S×174°.98W, h319km±22km, mb3.4/5, mb1 3.7/6, mb1mx3.4/17, mbtmp3.4/6, Error ellipse: s-maj=42.8km s-min=17.1km az=143.0*
NEIC ***08*** *06:21:22.6±1.4, 16°.90S×174°.97W, h322km±16km, mb4.0/1, Error ellipse: s-maj=40.0km s-min=17.6km az=139.0*
ISC 08 06:21:21.5±1.3, 16°.9S±0°.2×175°.0W±0°.2, h304km±16km, n10, σ1§12/10, mb3.7/6, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	4.29	46	P	Pn	06 22 33.3	+2.2
	8.5nm,0.3s,baz=23,slow=4.1,SNR=5.4						
AFI				S	S	06 23 25.3	-1.6
	2.5nm,0.3s,baz=324,slow=14,SNR=1.2						
AFI	Afiamalu	4.29	46	*e*Pn	Pn	06 22 33.0	+1.9
AFI				S	S	06 23 25.3	-1.6
URZ	Urewera	22.37	197	P	P	06 25 54.0	-0.4
	1.9nm,0.4s,mb3.8,baz=216,slow=19,SNR=1.1						
WRAB	Tennant Creek	48.05	258	*e*P	P	06 29 31.4	+0.2
	11nm,1.3s,mb4.0						
WRA	Warramunga Arr	48.06	258	P	P	06 29 29.8	-1.5
	1.2nm,0.5s,mb3.5,baz=90,slow=7.0,SNR=12						
ASAR	Alice Springs	48.23	253	P	P	06 29 33.5	+1.0
	9.4nm,0.6s,mb4.3,baz=87,slow=8.0,SNR=126						
ASAR				PcP	PcP	06 30 55.8	+1.3
	0.2nm,0.5s,baz=87,slow=4.8,SNR=3.6						
NVAR	Mina Array Bea	76.45	42	P	P	06 32 38.8	+0.6
	0.2nm,0.6s,mb2.9,baz=209,slow=8.5,SNR=4.4						
PDAR	Pinedale Array	84.39

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**5.05**	**148**	Pn	**Pn**	**06 46 29.1**	**+1.7**
	2.6nm,0.3s,baz=344,slow=9.1,SNR=2.3						
RPN	**Rapa Nui**	**5.05**	**148**	*e*Pn	**Pn**	**06 46 31.2**	**+3.8**
RKT	**Rikitea**	**20.84**	**265**	*e*T		07 11 16.3	
	1.3nm,0.2s						
PPT	**Papeete**	**35.27**	**272**	*e*LR	LR	07 01 08.8	
	84nm,28.0s						
ATAH	**Atahualpa**	**36.20**	**70**	LR	LR	07 03 03.5	
	comp=Z,119nm,21.7s,MS3.6,baz=72,slow=30						
PLCA	**Paso Flores**	**39.31**	**127**	P	**P**	**06 52 41.3**	**+0.5**
	1.5nm,0.9s,mb3.7,baz=246,slow=18,SNR=1.7						
PLCA				LR	LR	07 04 19.6	
	comp=Z,123nm,19.8s,MS3.7,baz=266,slow=29						
CFAA	**Coronel Fontan**	**39.95**	**112**	P	**P**	**06 52 45.0**	**-1.2**
	0.3nm,0.9s,baz=251,slow=5.1,SNR=4.2						
CFAA				LR	LR	07 04 53.6	
	comp=Z,13nm,21.2s,MS2.7,baz=250,slow=30						
OTAV	**Otavalo**	**40.17**	**60**	*e*P	**P**	**06 52 49.1**	**+0.8**
	20nm,1.7s,mb4.6						
LPAZ	**La Paz**	**42.04**	**89**	P	**P**	**06 53 04.0**	**+0.3**
	9.1nm,1.1s,mb4.3,baz=278,slow=5.5,SNR=17						
LPAZ				LR	LR	07 06 09.8	
	comp=Z,68nm,21.9s,MS3.5,baz=268,slow=30						
LPAZ	**La Paz**	**42.04**	**89**	*e*P	**P**	**06 53 04.4**	**+0.7**
	13nm,1.1s,mb4.5						
JTS	**JuntasAbangare**	**42.48**	**42**	LR	LR	07 06 03.4	
	comp=Z,149nm,19.7s,MS3.9,baz=260,slow=30						
CPUP	**Villa Florida**	**49.83**	**106**	LR	LR	07 10 26.2	
	comp=Z,42nm,21.2s,MS3.4,baz=262,slow=30						
TXAR	**Lajitas Array**	**52.56**	**10**	P	**P**	**06 54 24.1**	**-1.3**
	1.2nm,1.1s,mb3.7,baz=224,slow=5.2,SNR=8.3						
TXAR				LR	LR	07 12 25.0	
	comp=Z,62nm,18.1s,MS3.7,baz=105,slow=31						
626A	**Big Bend Ranch**	**52.70**	**9**	⇓P	**P**	**06 54 26.6**	**+0.2**
	baz=53,SNR=8.0						
627A	**Terlingua Ranc**	**52.72**	**10**	⇑P	**P**	**06 54 26.7**	**+0.2**
	baz=53,SNR=8.2						
628A	**Black Gap, Mar**	**52.83**	**10**	⇑P	**P**	**06 54 27.4**	**+0.1**
	baz=53,SNR=5.6						
526A	**Mary Lane Ranc**	**53.21**	**9**	⇓P	**P**	**06 54 30.4**	**+0.3**
	baz=53,SNR=5.5						
527A	**Woodward Ranch**	**53.36**	**9**	⇓P	**P**	**06 54 31.2**	**0.0**
	baz=54,SNR=6.0						
528A	**Cox Ranch, San**	**53.51**	**10**	⇑P	**P**	**06 54 32.4**	**+0.1**
	baz=54						
425A	**Indio Mountain**	**53.80**	**8**	⇓P	**P**	**06 54 34.3**	**-0.1**
	baz=54,SNR=7.6						
426A	**McDonald Obser**	**53.82**	**9**	⇑P	**P**	**06 54 34.6**	**0.0**
	baz=54						
319A	**Douglas**	**54.01**	**3**	⇓P	**P**	**06 54 36.2**	**+0.3**
	baz=54						
320A	**Kipp Ranch, An**	**54.01**	**4**	⇓P	**P**	**06 54 36.4**	**+0.5**
	baz=54						
318A	**Bisbee**	**54.04**	**2**	⇑P	**P**	**06 54 36.3**	**+0.2**
	baz=54,SNR=8.6						
428A	**Kincaid Ranch,**	**54.08**	**10**	⇑P	**P**	**06 54 36.6**	**+0.2**
	baz=54,SNR=5.8						
427A	**Hayter Ranch,**	**54.09**	**9**	⇓P	**P**	**06 54 36.6**	**+0.1**
	baz=54,SNR=6.4						
217A	**Green Valley**	**54.34**	**2**	⇑P	**P**	**06 54 38.7**	**+0.3**
	baz=54,SNR=10						
325A	**Bean Ranch, Si**	**54.38**	**8**	⇑P	**P**	**06 54 38.1**	**-0.5**
	baz=55,SNR=9.0						
JCT	**Junction City**	**54.38**	**13**	*e*P	**P**	**06 54 38.8**	**+0.1**
	18nm,1.1s,mb4.9						
324A	**Moseley Ranch,**	**54.39**	**7**	⇓P	**P**	**06 54 38.3**	**-0.4**
	baz=55,SNR=10						
214A	**Organ Pipe Nat**	**54.51**	**360**	⇓P	**P**	**06 54 40.3**	**+0.7**
	baz=55						
218A	**Dragoon**	**54.57**	**2**	⇓P	**P**	**06 54 40.2**	**+0.2**
	baz=55						
220A	**Playas Peak, P**	**54.58**	**4**	⇑P	**P**	**06 54 40.3**	**+0.3**
	baz=55						
219A	**White Tail Can**	**54.63**	**3**	⇑P	**P**	**06 54 40.5**	**+0.1**
	baz=55,SNR=8.3						
MNTX	**Cornudas Mount**	**54.66**	**7**	*e*P	**P**	**06 54 39.9**	**-0.8**
	4.6nm,1.3s,mb4.3						
MNTX				*e*		06 54 48.2	
328A	**Wristen Ranch,**	**54.70**	**10**	⇓P	**P**	**06 54 40.4**	**-0.6**
	baz=55						
TUC	**Tucson**	**54.88**	**2**	*e*P	**P**	**06 54 42.5**	**+0.2**
	6.4nm,1.4s,mb4.5						
222A	**Williams Famil**	**54.88**	**5**	⇓P	**P**	**06 54 42.2**	**0.0**
	baz=55						
224A	**Cornudas Mount**	**55.01**	**7**	⇓P	**P**	**06 54 43.1**	**-0.1**
	baz=55,SNR=11						
225A	**Deer Hill, Car**	**55.13**	**8**	⇑P	**P**	**06 54 43.1**	**-0.9**
	baz=55						
117A	**Oracle**	**55.14**	**2**	⇑P	**P**	**06 54 44.4**	**+0.3**
	baz=55,SNR=8.8						
226A	**Malaga, Loving**	**55.18**	**9**	⇓P	**P**	**06 54 44.0**	**-0.4**
	baz=55,SNR=5.2						
120A	**U Bar Ranch, L**	**55.21**	**4**	⇑P	**P**	**06 54 44.7**	**+0.1**
	baz=55						
118A	**Homack Ranch,**	**55.23**	**2**	⇑P	**P**	**06 54 44.8**	**0.0**
	baz=55						
115A	**Sonoran Desert**	**55.25**	**0**	⇑P	**P**	**06 54 45.2**	**+0.3**
	baz=55						
121A	**Cookes Peak, D**	**55.25**	**5**	⇓P	**P**	**06 54 45.0**	**+0.1**
	baz=55						
114A	**Black Gap (USA**	**55.30**	**359**	⇑P	**P**	**06 54 45.9**	**+0.6**
	baz=56						
113A	**Mohawk Valley,**	**55.33**	**359**	⇓P	**P**	**06 54 45.6**	**+0.1**
	baz=56,SNR=5.5						
119A	**Ashpeak Ranch,**	**55.39**	**3**	⇑P	**P**	**06 54 46.8**	**+0.9**
	baz=56						
124A	**Stringfield Ra**	**55.64**	**7**	⇑P	**P**	**06 54 47.8**	**+0.1**
	baz=56,SNR=5.5						
125A	**Gardner Draw,**	**55.69**	**8**	⇑P	**P**	**06 54 47.5**	**-0.6**
	baz=56,SNR=12						
Z13A	**Yuma Proving G**	**55.76**	**359**	⇑P	**P**	**06 54 48.7**	**+0.1**
	baz=56						
Z21A	**St. Cloud Mine**	**56.03**	**5**	⇑P	**P**	**06 54 50.7**	**+0.1**
	baz=56,SNR=5.9						
Y17A	**Roosevelt**	**56.26**	**1**	⇓P	**P**	**06 54 52.2**	**+0.1**
	baz=56						
Z25A	**Roswell**	**56.30**	**8**	⇓P	**P**	**06 54 52.1**	**-0.4**
	baz=56,SNR=6.0						
Z26A	**Caprock**	**56.38**	**8**	⇑P	**P**	**06 54 51.8**	**-1.3**
	baz=57,SNR=6.2						
Y16A	**Circle Bar Ran**	**56.43**	**1**	⇑P	**P**	**06 54 53.8**	**+0.4**
	baz=57,SNR=8.3						
Y15A	**Casa Rosa Ranc**	**56.50**	**0**	⇓P	**P**	**06 54 54.0**	**+0.2**
	baz=57,SNR=6.1						
Z27A	**Tatum**	**56.53**	**9**	⇑P	**P**	**06 54 53.2**	**-0.9**
	baz=57,SNR=10						
Y19A	**Nutrioso**	**56.58**	**3**	⇑P	**P**	**06 54 55.0**	**+0.6**
	baz=57,SNR=7.8						
Y20A	**Horse Springs,**	**56.58**	**4**	⇑P	**P**	**06 54 54.7**	**+0.3**
	baz=57						
BELC	**Belle Mtn. Jos**	**56.65**	**356**	⇓P	**P**	**06 54 55.4**	**+0.4**
	baz=57						
Y22A	**Socorro**	**56.71**	**5**	⇑P	**P**	**06 54 55.7**	**+0.3**
	baz=57						
Y21A	**Point of Rocks**	**56.73**	**5**	⇓P	**P**	**06 54 56.0**	**+0.5**
	baz=57,SNR=12						
IRM	**Iron Mountain**	**56.77**	**357**	⇓P	**P**	**06 54 56.0**	**+0.2**
	baz=57						
Y23A	**Lovelace Mesa,**	**56.79**	**6**	⇓P	**P**	**06 54 56.3**	**+0.4**
	baz=57,SNR=6.7						
Y24A	**Capitan**	**56.85**	**7**	⇑P	**P**	**06 54 56.6**	**+0.2**
	baz=57,SNR=5.5						
PDMCI	**Parker Dam,Lak**	**56.87**	**358**	⇑P	**P**	**06 54 56.7**	**+0.3**
	baz=57						
X17A	**Forest Lakes**	**56.90**	**2**	⇑P	**P**	**06 54 57.0**	**+0.3**
	baz=57,SNR=5.3						
Y25A	**Mesa, Roswell**	**56.93**	**8**	⇓P	**P**	**06 54 56.6**	**-0.4**
	baz=57,SNR=5.4						
LENM	**Lemitar**	**56.94**	**5**	*e*P	**P**	**06 54 57.4**	**+0.4**
X16A	**Lo Mia Camp, P**	**56.97**	**1**	⇑P	**P**	**06 54 57.3**	**+0.2**
	baz=57						
X15A	**Humboldt**	**57.03**	**0**	⇓P	**P**	**06 54 58.0**	**+0.4**
	baz=57,SNR=5.2						
PCRV	**Puerto La Cruz**	**57.09**	**60**	LR	LR	07 14 40.2	
	comp=Z,60nm,18.7s,MS3.7,baz=193,slow=31						
Y27A	**Causey**	**57.10**	**9**	⇑P	**P**	**06 54 57.2**	**-0.9**
	baz=57,SNR=6.0						
X18A	**Snowflake**	**57.12**	**2**	⇑P	**P**	**06 54 58.8**	**+0.5**
	baz=57,SNR=5.6						
X21A	**Alamocita Cree**	**57.15**	**4**	⇓P	**P**	**06 54 58.9**	**+0.4**
	baz=57,SNR=9.9						
X13A	**Yucca**	**57.15**	**359**	⇑P	**P**	**06 54 58.7**	**+0.2**
	baz=57						
X20A	**Quemado**	**57.20**	**4**	⇓P	**P**	**06 54 59.3**	**+0.5**
	baz=57						
GMRC	**Granite Mounta**	**57.41**	**357**	⇓P	**P**	**06 55 01.0**	**+0.7**
	baz=58						
W16A	**Flagstaff**	**57.64**	**1**	⇑P	**P**	**06 55 02.5**	**+0.6**
	baz=58,SNR=8.0						
W13A	**Hualapai Mount**	**57.66**	**358**	⇑P	**P**	**06 55 02.4**	**+0.3**
	baz=58						
W19A	**Sanders**	**57.72**	**3**	⇑P	**P**	**06 55 03.3**	**+0.8**
	baz=58						
W14A	**Seligman**	**57.76**	**359**	⇓P	**P**	**06 55 03.4**	**+0.7**
	baz=58,SNR=10						
W20A	**Ramah**	**57.78**	**4**	⇓P	**P**	**06 55 03.5**	**+0.6**
	baz=58						
GSC	**Goldstone**	**58.00**	**356**	⇑P	**P**	**06 55 04.4**	**-0.1**
	baz=58						
GSC	**Goldstone**	**58.00**	**356**	*e*P	**P**	**06 55 04.9**	**+0.5**
	2.1nm,0.9s,mb4.2						
W23A	**Werner Place,**	**58.00**	**6**	⇓P	**P**	**06 55 04.6**	**+0.1**
	baz=58						
WUAZ	**Wupatki**	**58.06**	**1**	⇑P	**P**	**06 55 05.3**	**+0.4**
	baz=58						
W24A	**Lazy 6 Ranch,**	**58.12**	**7**	⇓P	**P**	**06 55 05.2**	**-0.2**
	baz=58,SNR=7.4						
V14A	**Boquillas Ranc**	**58.18**	**359**	⇑P	**P**	**06 55 06.1**	**+0.4**
	baz=58						
V17A	**Tonalea, Kykot**	**58.18**	**1**	⇑P	**P**	**06 55 06.0**	**+0.3**
	baz=58,SNR=9.8						
W25A	**X Bar L Ranch,**	**58.24**	**8**	⇑P	**P**	**06 55 05.7**	**-0.5**
	baz=58,SNR=5.1						
W27A	**Bowe Ranch, En**	**58.27**	**9**	⇓P	**P**	**06 55 06.3**	**-0.1**
	baz=58						
V18A	**Ganado**	**58.30**	**2**	⇓P	**P**	**06 55 06.8**	**+0.3**
	baz=58,SNR=5.5						
V12A	**Nelson**	**58.31**	**358**	⇓P	**P**	**06 55 07.1**	**+0.4**
	baz=58						
V15A	**Kaibab Nationa**	**58.36**	**0**	⇓P	**P**	**06 55 07.5**	**+0.5**
	baz=58						
V13A	**Grand Canyon W**	**58.41**	**358**	⇓P	**P**	**06 55 07.8**	**+0.5**
	baz=59,SNR=5.6						
V11A	**Goodsprings**	**58.45**	**357**	⇓P	**P**	**06 55 08.3**	**+0.7**
	baz=59						
V20A	**Brimhall**	**58.45**	**4**	⇓P	**P**	**06 55 08.2**	**+0.6**
	baz=59						
SHOC	**Shoshone**	**58.56**	**356**	⇓P	**P**	**06 55 08.9**	**+0.6**
	baz=59						
V22A	**San Miguel Ran**	**58.68**	**5**	⇑P	**P**	**06 55 09.3**	**+0.1**
	baz=59						
MPMC	**Manual Prospec**	**58.80**	**355**	⇑P	**P**	**06 55 10.2**	**+0.2**
	baz=59,SNR=5.5						
V25A	**Rancho No Teng**	**58.83**	**7**	⇑P	**P**	**06 55 09.7**	**-0.5**
	baz=59						
V26A	**Tequesquite Ra**	**58.90**	**8**	⇑P	**P**	**06 55 10.1**	**-0.6**
	baz=59						
U14A	**Mt Trumbull**	**58.96**	**359**	⇓P	**P**	**06 55 11.7**	**+0.6**
	baz=59,SNR=6.2						
U15A	**North Rim**	**58.97**	**0**	⇑P	**P**	**06 55 11.8**	**+0.6**
	baz=59,SNR=5.3						
U13A	**Pakoon Wash**	**58.97**	**358**	⇓P	**P**	**06 55 11.7**	**+0.5**
	baz=59						
U18A	**Rough Rock, Ch**	**59.00**	**2**	⇑P	**P**	**06 55 11.5**	**0.0**
	baz=59,SNR=7.4						
U21A	**Nageezi**	**59.13**	**4**	⇓P	**P**	**06 55 12.3**	**0.0**
	baz=59,SNR=5.3						
U23A	**El Rito**	**59.15**	**6**	⇑P	**P**	**06 55 12.5**	**+0.1**
	baz=59,SNR=8.3						
U25A	**Circle Dot Ran**	**59.41**	**7**	⇓P	**P**	**06 55 14.0**	**-0.3**
	baz=60						
T19A	**Beclabito**	**59.45**	**3**	⇓P	**P**	**06 55 14.4**	**-0.1**
	baz=60,SNR=11						
U26A	**Atchley Ranch,**	**59.49**	**8**	⇑P	**P**	**06 55 14.4**	**-0.4**
	baz=60						
T17A	**Navajo Res., N**	**59.55**	**1**	⇓P	**P**	**06 55 15.5**	**+0.3**
	baz=60,SNR=7.1						
T15A	**Red Dirt Ranch**	**59.55**	**360**	⇓P	**P**	**06 55 15.5**	**+0.3**
	baz=60						
T13A	**Saint George**	**59.57**	**359**	⇑P	**P**	**06 55 15.7**	**+0.4**
	baz=60,SNR=7.3						
T21A	**Navajo Lake**	**59.70**	**4**	⇑P	**P**	**06 55 16.2**	**-0.1**
	baz=60						
T18A	**Mexican Hat**	**59.72**	**2**	⇑P	**P**	**06 55 16.7**	**+0.3**
	baz=60						
T22A	**Edith**	**59.77**	**5**	⇓P	**P**	**06 55 16.8**	**+0.1**
	baz=60,SNR=5.4						
MVCO	**Mesa Verde**	**59.86**	**4**	⇓P	**P**	**06 55 17.2**	**-0.1**
	baz=60,SNR=8.0						
MVCO	**Mesa Verde**	**59.86**	**4**	*e*P	**P**	**06 55 17.3**	**0.0**
	17nm,1.3s,mb4.9						
CCUT	**Cedar City**	**60.09**	**359**	*e*P	**P**	**06 55 19.6**	**+0.7**
	8.9nm,1.3s,mb4.6						
S13A	**Holt Ranch, En**	**60.13**	**359**	⇓P	**P**	**06 55 19.5**	**+0.3**
	baz=60,SNR=10.0						
T25A	**Trinidad**	**60.14**	**7**	⇑P	**P**	**06 55 19.1**	**-0.1**
	baz=60						
S17A	**Black Ridge (B**	**60.19**	**1**	⇑P	**P**	**06 55 20.0**	**+0.4**
	baz=60						
S12A	**Delamar Landin**	**60.19**	**358**	⇑P	**P**	**06 55 20.1**	**+0.5**
	baz=60						
S16A	**Weppner Ranch,**	**60.26**	**1**	⇓P	**P**	**06 55 20.0**	**-0.1**
	baz=60,SNR=5.1						
S11A	**Rachel**	**60.27**	**357**	⇑P	**P**	**06 55 20.7**	**+0.6**
	baz=60						
S14A	**Cedar City**	**60.30**	**359**	⇓P	**P**	**06 55 20.8**	**+0.5**
	baz=60						
S21A	**Coal Bank Pass**	**60.35**	**4**	⇓P	**P**	**06 55 20.9**	**+0.2**
	baz=60						
S19A	**Harvey Farm, M**	**60.36**	**3**	⇓P	**P**	**06 55 20.8**	**0.0**
	baz=60						
S20A	**Disappointment**	**60.48**	**4**	⇓P	**P**	**06 55 21.8**	**+0.3**
	baz=61						
S22A	**4UR Ranch, Cre**	**60.50**	**5**	⇓P	**P**	**06 55 21.9**	**+0.2**
	baz=61						
S10A	**Tonopah Range,**	**60.59**	**356**	⇓P	**P**	**06 55 22.7**	**+0.4**
	baz=61						
SDCO	**Great Sand Dun**	**60.62**	**6**	*e*P	**P**	**06 55 22.5**	**0.0**
	2.4nm,0.9s,mb4.3						
SDCO				*e*		06 55 27.7	
R13A	**O'Grain Ranch,**	**60.73**	**359**	⇑P	**P**	**06 55 23.8**	**+0.5**
	baz=61						
R15A	**Junction**	**60.74**	**0**	⇑P	**P**	**06 55 24.1**	**+0.7**
	baz=61						
PV01	**Paradox Valley**	**60.77**	**3**	*e*P	**P**	**06 55 22.9**	**-0.6**
	217nm,1.1s						
PV01				*e*		06 55 30.2	
R16A	**Teasdale**	**60.82**	**1**	⇑P	**P**	**06 55 23.6**	**-0.3**
	baz=61,SNR=5.8						
R20A	**Redvale**	**60.84**	**4**	⇑P	**P**	**06 55 24.0**	**0.0**
	baz=61						
R19A	**Curley Farm, L**	**60.89**	**3**	⇓P	**P**	**06 55 24.1**	**-0.2**
	baz=61,SNR=11						
R12A	**Pony Springs,**	**60.90**	**358**	⇑P	**P**	**06 55 24.9**	**+0.5**
	baz=61						
R11A	**Troy Canyon, C**	**60.96**	**357**	⇓P	**P**	**06 55 25.3**	**+0.5**
	baz=61						
R18A	**Canyonlands Na**	**60.96**	**2**	⇓P	**P**	**06 55 25.1**	**+0.3**
	baz=61						
R17A	**Hanksville Air**	**60.97**	**1**	⇓P	**P**	**06 55 25.2**	**+0.3**
	baz=61						
R22A	**Saguache, Gunn**	**60.99**	**5**	⇓P	**P**	**06 55 25.6**	**+0.6**
	baz=61						
PV04	**Paradox Valley**	**61.01**	**3**	*e*P	**P**	**06 55 24.9**	**-0.3**
R21A	**Cimarron**	**61.07**	**4**	⇓P	**P**	**06 55 25.7**	**+0.1**
	baz=61						
R24A	**Sanders Place,**	**61.14**	**6**	⇑P	**P**	**06 55 26.1**	**+0.1**
	baz=61						
NVAR	**Mina Array Bea**	**61.22**	**355**	P	**P**	**06 55 27.2**	**+0.6**
	3.7nm,1.0s,mb4.5,baz=180,slow=10,SNR=20						
NVAR	**Mina Array Bea**	**61.22**	**355**	P	**P**	**06 55 27.2**	**+0.6**
Q11A	**Duckwater**	**61.46**	**357**	⇑P	**P**	**06 55 29.1**	**+0.9**
	baz=62						
Q16A	**Castle Valley**	**61.46**	**1**	⇓P	**P**	**06 55 28.7**	**+0.5**
	baz=62						
Q13A	**Wheeler Ranch,**	**61.51**	**359**	⇓P	**P**	**06 55 28.9**	**+0.3**
	baz=62,SNR=7.0						
Q14A	**Sevier Lake (B**	**61.53**	**359**	⇑P	**P**	**06 55 28.9**	**+0.2**
	baz=62,SNR=5.7						
Q15A	**Fillmore**	**61.53**	**360**	⇑P	**P**	**06 55 28.6**	**-0.1**
	baz=62						
Q19A	**Hogan Spring (**	**61.56**	**3**	⇑P	**P**	**06 55 28.6**	**-0.2**
	baz=62,SNR=5.8						
Q20A	**Ridgley Place,**	**61.60**	**4**	⇓P	**P**	**06 55 28.6**	**-0.6**
	baz=62						
SRU	**San Rafael**	**61.67**	**2**	⇓P	**P**	**06 55 29.2**	**-0.4**
	baz=62,SNR=5.9						
SRU	**San Rafael**	**61.67**	**2**	*e*P	**P**	**06 55 29.2**	**-0.4**
	5.3nm,1.1s,mb4.6						
SRU				*e*		06 55 37.4	
Q18A	**Rafter H Ranch**	**61.67**	**2**	⇓P	**P**	**06 55 29.2**	**-0.4**
	baz=62,SNR=5.5						
SMCO	**Snowmass**	**61.91**	**5**	*e*P	**P**	**06 55 31.1**	**-0.2**
	2.1nm,1.0s,mb4.2						
P13A	**Bates Ranch, G**	**62.01**	**359**	⇑P	**P**	**06 55 32.2**	**+0.3**
	baz=62,SNR=9.0						
P17A	**Butcher Ranch,**	**62.02**	**1**	⇓P	**P**	**06 55 32.1**	**+0.2**
	baz=62						
P12A	**McGill**	**62.05**	**358**	⇑P	**P**	**06 55 32.7**	**+0.5**
	baz=62						
P15A	**Leamington**	**62.10**	**0**	⇑P	**P**	**06 55 33.0**	**+0.5**
	baz=62						
P14A	**Drum Mountains**	**62.13**	**359**	⇓P	**P**	**06 55 33.2**	**+0.5**
	baz=62						
P18A	**Preston Nutter**	**62.19**	**2**	⇑P	**P**	**06 55 33.2**	**+0.1**
	baz=62						
P23A	**Jefferson**	**62.20**	**6**	⇑P	**P**	**06 55 33.5**	**+0.2**
	baz=62						
P19A	**Cripple Cowboy**	**62.24**	**3**	⇑P	**P**	**06 55 33.3**	**-0.1**
	baz=62						
DUG	**Dugway**	**62.73**	**360**	*e*P	**P**	**06 55 36.7**	**0.0**
	3.9nm,1.2s,mb4.4						
DUG				*e*		06 55 44.8	
O12A	**Currie**	**62.84**	**358**	⇓P	**P**	**06 55 37.7**	**+0.2**
	baz=63						
O22A	**Kremmling**	**62.93**	**5**	⇑P	**P**	**06 55 38.2**	**+0.2**
	baz=63						
N14A	**Grayback Hills**	**63.39**	**359**	⇓P	**P**	**06 55 40.9**	**-0.2**
	baz=64,SNR=5.2						
N15A	**Stansbury Isla**	**63.42**	**360**	⇓P	**P**	**06 55 41.2**	**-0.1**
	baz=64						
N12A	**Clover Valley,**	**63.43**	**358**	⇓P	**P**	**06 55 41.2**	**-0.1**
	baz=64						
N21A	**Black Mountain**	**63.45**	**4**	⇓P	**P**	**06 55 41.2**	**-0.3**
	baz=64						
N20A	**Spence Gulch,**	**63.48**	**3**	⇑P	**P**	**06 55 41.4**	**-0.3**
	baz=64,SNR=6.1						
N19A	**John Jarvie Ra**	**63.49**	**3**	⇑P	**P**	**06 55 41.3**	**-0.4**
	baz=64						
N22A	**Wattenberg Ran**	**63.57**	**5**	⇓P	**P**	**06 55 41.9**	**-0.3**
	baz=64						
M13A	**Montello**	**63.91**	**358**	⇓P	**P**	**06 55 44.2**	**-0.4**
	baz=64,SNR=5.2						
M13A	**Montello**	**63.91**	**358**	*e*P	**P**	**06 55 44.3**	**-0.2**
	5.4nm,1.3s,mb4.4						
M13A				*e*		06 55 52.7	
M10A	**I.L. Ranch, Tu**	**64.17**	**356**	⇓P	**P**	**06 55 46.2**	**0.0**
	baz=64						
L14A	**Malta**	**64.57**	**359**	⇓P	**P**	**06 55 48.0**	**-0.8**
	baz=65						
L20A	**Wamsutter**	**64.64**	**3**	⇓P	**P**	**06 55 48.8**	**-0.6**
	baz=65						
L21A	**Rawlins**	**64.66**	**4**	⇓P	**P**	**06 55 48.5**	**-0.9**
	baz=65						
L19A	**Farson**	**64.69**	**2**	⇓P	**P**	**06 55 49.1**	**-0.5**
	baz=65						
L12A	**House Creek Ra**	**64.72**	**358**	⇓P	**P**	**06 55 49.6**	**-0.2**
	baz=65						
L11A	**Cat Creek Ranc**	**64.77**	**357**	⇑P	**P**	**06 55 50.3**	**+0.1**
	baz=65						
WVOR	**Wild Horse Val**	**65.22**	**355**	*e*P	**P**	**06 55 53.3**	**+0.2**
	14nm,1.8s,mb4.7						
BW06	**Boulder Array**	**65.35**	**2**	⇑P	**P**	**06 55 52.6**	**-1.2**
	baz=66						
PDAR	**Pinedale Array**	**65.35**	**2**	P	**P**	**06 55 52.5**	**-1.3**
	1.0nm,0.9s,mb3.8,baz=162,slow=6.1,SNR=8.1						
PDAR				LR	LR	07 19 32.4	
	comp=Z,40nm,19.2s,MS3.6,baz=213,slow=32						
K11A	**Parker Ranch,**	**65.39**	**357**	⇑P	**P**	**06 55 54.3**	**+0.1**
	baz=66						
K05A	**Summer Lake**	**65.73**	**353**	⇓P	**P**	**06 55 55.3**	**-1.1**
	baz=66						
J18A	**Kendall Valley**	**65.78**	**2**	⇑P	**P**	**06 55 55.7**	**-0.9**
	baz=66						
J16A	**Bone**	**65.81**	**1**	⇓P	**P**	**06 55 56.2**	**-0.6**
	baz=66						
J12A	**Stokes Ranch,**	**65.83**	**358**	⇑P	**P**	**06 55 56.6**	**-0.4**
	baz=66						
J14A	**Carey**	**65.86**	**359**	⇑P	**P**	**06 55 56.8**	**-0.4**
	baz=66						
J15A	**Blackfoot**	**65.93**	**360**	⇓P	**P**	**06 55 57.3**	**-0.3**
	baz=66						
J13A	**Cove Ranch, Pi**	**65.95**	**359**	⇑P	**P**	**06 55 57.6**	**-0.1**
	baz=66						
TPAW	**Teton Pass**	**66.03**	**1**	*e*P	**P**	**06 55 57.4**	**-0.8**
	3.3nm,1.1s,mb4.3						
TPAW				*e*		06 56 06.8	
HLID	**Hailey**	**66.12**	**358**	⇓P	**P**	**06 55 59.0**	**+0.2**
	baz=66						
HLID	**Hailey**	**66.12**	**358**	*e*P	**P**	**06 55 59.0**	**+0.1**
	7.0nm,1.3s,mb4.5						
J08A	**Circle Bar Ran**	**66.13**	**355**	⇓P	**P**	**06 55 59.0**	**+0.1**
	baz=66						
LOHW	**Long Hollow**	**66.16**	**1**	*e*P	**P**	**06 55 58.9**	**-0.2**
	1.9nm,0.8s,mb4.2						
I12A	**Atlanta**	**66.37**	**358**	⇑P	**P**	**06 56 00.7**	**+0.2**
	baz=67						
**I13A

baz=72
A15A Johnson Ranch, 71.51 360 ⇑P **P 06 56 32.0 -0.3**
baz=72
DZM Mont Dzumac 74.04 252 *e*LR LR 07 19 29.2
130nm,27.1s
ULM Lac du Bonnet 74.23 11 P **P 06 56 47.9 -0.6**
1.7nm,0.5s,mb4.3,baz=288,slow=3.2,SNR=1.7
DLBC Dease Lake 82.31 351 *e*P **P 06 57 32.8 -0.1**
YKA Yellowknife Ar 85.08 359 P **P 06 57 45.7 -1.4**
1.8nm,0.9s,mb4.2,baz=171,slow=4.6,SNR=7.9
WRA Warramunga Arr 102.27 242 Pdiff Pdif 06 59 15.1 +8.1
0.3nm,0.3s,baz=130,slow=3.1,SNR=4.8
LSZ Lusaka 125.88 131 *e*PKPdf PKPdf 07 04 12.9 -1.7
NJ2 Nanjing 134.02 293 *e*PKP PKPdf 07 04 26.7 -2.9
WHN Wuhan 137.83 291 PKP PKPdf 07 04 38.5 +1.8
HHC Hu-ho-hao-te 139.10 307 *e*PKP PKPdf 07 04 36.3 -2.4
HHC PP PP 07 07 32.7 +0.9
HHC PKS 07 08 11.1
HHC SKS SKSdf 07 11 44.8 -4.5
HHC SKKS SKKSac 07 14 22.4 -3.5
HHC SS SS 07 25 46.5 -2.6
HHC AMB AMB
comp=Z,46nm,9.3s
HHC LR LR
comp=N,43nm,20.8s,MS4.4
HHC LR LR
comp=E,54nm,21.6s,MS4.4
HHC LR LR
comp=Z,42nm,21.6s,MS4.2
LZH Lanzhou 146.05 301 *e*PKPbc PKPdf 07 04 47.0 -4.2
LZH pPKP pPKPdf 07 04 55.0 +0.4
LZH sPKP 07 04 57.8
ZALV Zalesovo Beam 146.36 342 PKP PKPdf 07 04 50.1 -1.0
comp=Z,1.6nm,0.8s,baz=41,slow=4.6,SNR=6.2
ZALV PKPbc PKPbc 07 04 52.8 +0.5
comp=Z,0.7nm,0.5s,baz=22,slow=8.1,SNR=4.6
BRTR Keskin Array B 146.66 52 PKPbc PKPbc 07 04 52.6 -1.1
comp=Z,2.4nm,0.9s,baz=222,slow=1.7,SNR=11
CD2 Chengdu 146.93 292 PKPbc PKPdf 07 04 54.5 +1.7
KMI Kunming 147.93 281 PKPbc PKPbc 07 04 54.5 -3.2
GTA Gaotai 148.13 309 PKPbc PKPbc 07 04 57.1 -0.7
GTA pPKP pPKPdf 07 05 01.5 +3.5
GTA sPKP 07 05 04.2
BVAR Borovoye Array 149.81 357 PKPbc PKPbc 07 05 00.4 -1.2
comp=Z,1.6nm,0.8s,baz=42,slow=2.4,SNR=11
BVAR PKPab PKPab 07 05 06.0 -0.9
comp=Z,1.1nm,0.8s,baz=48,slow=2.2,SNR=5.2
CMAR Chiang Mai Arr 150.44 267 PKPbc PKPbc 07 05 03.8 -0.3
comp=Z,6.7nm,1.0s,baz=42,slow=0.1,SNR=20
WMQ Urumqi 153.35 326 *e*PKPbc PKPdf 07 05 02.0 -0.5
MKAR Makanchi Array 153.36 337 PKPbc PKPbc 07 05 08.2 -1.8
comp=Z,1.2nm,0.9s,baz=58,slow=3.0,SNR=7.9

IDC 08 07:00:41.5±1.3, 15°.04S×69°.81W, h209km±18km, mb3.2/5, mb1 3.4/8, mb1mx3.2/19, mbtmp3.1/8, Error ellipse: s-maj=68.0km s-min=20.7km az=26.0, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**2.04**	**128**	P	Pn	07 01 22.4	+1.3
	17nm,0.3s,baz=308,slow=8.0,SNR=885						
LPAZ				S	Sn	07 01 53.4	+1.4
	4.2nm,0.3s,baz=40,slow=19,SNR=19						
SIV	**San Ignacio**	**8.47**	**98**	P	Pn	07 02 42.3	+1.3
	0.2nm,0.3s,baz=286,slow=12,SNR=9.2						
CPUP	**Villa Florida**	**16.19**	**136**	P	P	07 04 17.1	+0.1
	0.4nm,0.3s,baz=318,slow=9.3,SNR=5.2						
TXAR	**Lajitas Array**	**54.91**	**324**	P	P	07 09 50.7	0.0
	0.2nm,0.7s,baz=153,slow=8.4,SNR=3.5						
DBIC	**Dimbokro**	**67.88**	**76**	P	P	07 11 17.8	-0.1
	4.4nm,0.9s,baz=241,slow=13,SNR=2.0						
PDAR	**Pinedale Array**	**68.13**	**330**	P	P	07 11 19.0	+0.2
	0.2nm,0.6s,baz=149,slow=7.2,SNR=3.0						
TORD	**Torodi Ar. Bea**	**76.09**	**72**	P	P	07 12 06.4	-0.3
	0.2nm,0.5s,baz=261,slow=5.0,SNR=2.9						
YKA	**Yellowknife Ar**	**84.84**	**341**	P	P	07 12 52.1	0.0
	0.6nm,0.5s,baz=138,slow=5.3,SNR=4.3						
SONM	**Songino Array**	**147.15**	**5**	PKPbc	PKPbc	07 20 00.3	+0.4
	0.8nm,0.6s,baz=324,slow=0.7,SNR=4.3						

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*IDC **08** 07:05:48.4±0.9, 13°.51N×120°.52E, h0km, mb4.1/8, mb1 4.3/8, mb1mx4.0/23, mbtmp4.2/8, MS2.9/1, Ms1 2.9/1, ms1mx2.6/30, Error ellipse: s-maj=19.5km s-min=14.7km az=97.0*
*MAN **08** 07:05:48, 13°.51N×120°.17E, h1km, mb4.8, ML3.7, MS3.7*
*ISCJB **08** 07:05:51.2±1.1, 13°.53N±0°.03×120°.31E±0°.04, h26km±8km, mb4.4/13, Error ellipse: s-maj=7.2km s-min=4.5km az=168.0*
*NEIC **08** 07:05:53.2±0.4, 13°.54N×120°.60E, h35km, mb4.7/5, Error ellipse: s-maj=14.2km s-min=7.6km az=71.0*

ISC 08 07:05:52.0±1.2, 13°.53N±0°.03×120°.36E±0°.04, h21km±9km, n29, σ1°.16/37, mb4.4/13, 1C-2D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.58**	**93**	⇓*e*P	**Pb**	**07 06 02.6**	**-0.9**
PGP				*e*S	**Sb**	**07 06 11.1**	**-0.2**
TGY	**Tagaytay City**	**0.80**	**45**	Pn	**Pn**	**07 06 06.1**	**-1.9**
	865nm,0.3s,baz=232,slow=5.1,SNR=81						
TGY				Sn	**Sn**	**07 06 18.0**	**-1.3**
	2μm,0.3s,baz=284,slow=20,SNR=11						
SJMP	**San Jose**	**1.30**	**145**	*e*P	**Pn**	**07 06 17.2**	**+2.3**
SJMP				*e*S	**Sn**	**07 06 32.7**	**+1.1**
BOAC	**Boac**	**1.45**	**93**	*e*P	**Pn**	**07 06 18.6**	**+1.6**
BOAC				*e*S	**Sn**	**07 06 36.8**	**+1.4**
BUSP	**Coron**	**1.53**	**186**	*e*P	**Pn**	**07 06 17.6**	**-0.5**
BUSP				*e*S	**Sn**	**07 06 36.9**	**-0.5**
OTRP	**Odiongan**	**2.00**	**125**	*e*P	**Pn**	**07 06 26.4**	**+1.8**
OTRP				*e*S	**Sn**	**07 06 47.6**	**-1.3**
PCPH	**Palayan**	**2.14**	**19**	⇓*e*P	**Pn**	**07 06 24.9**	**-1.6**
SCZP	**Santa Cruz**	**2.27**	**349**	*e*P	**Pn**	**07 06 28.2**	**-0.1**
SCZP				*e*S	**Sn**	**07 06 55.0**	**-0.7**
ENPP	**El Nido**	**2.49**	**202**	*e*P	**Pn**	**07 06 30.5**	**-0.8**
BALP	**Baler**	**2.49**	**28**	*e*P	**Pn**	**07 06 32.8**	**+1.5**
CUYO	**Cuyo Island**	**2.74**	**166**	*e*P	**Pn**	**07 06 34.4**	**-0.4**
BCPH	**Baguio City Da**	**2.84**	**4**	⇑*i*P	**Pn**	**07 06 36.4**	**+0.2**
BCPH				*i*S	**Sn**	**07 07 09.4**	**-0.3**
BOLP	**Bolinao**	**2.86**	**351**	*e*P	**Pn**	**07 06 36.7**	**+0.2**
PVCP	**Virac**	**3.69**	**89**	*e*P	**Pn**	**07 06 51.1**	**+3.3**
CMAR	**Chiang Mai Arr**	**21.15**	**286**	P	**P**	**07 10 37.5**	**+1.6**
	2.1nm,0.7s,mb3.6,baz=92,slow=9.0,SNR=4.2						
KSRS	**Korea Array**	**24.76**	**14**	LR	LR	07 22 13.1	
	comp=Z,26nm,18.0s,baz=200,slow=40						
HHC	**Hu-ho-hao-te**	**28.28**	**346**	*e*P	**P**	**07 11 45.8**	**+1.9**
HHC				PP	PP	07 12 37.5	-10
HHC				PcP	PcP	07 14 58.5	+1.7
HHC				S	**S**	**07 16 28.4**	**-0.5**
HHC				SS		07 17 54.0	
HHC				ScP	ScP	07 18 35.0	-1.8
HHC				PcS	PcS	07 18 39.3	+0.3
HHC				ScS	ScS	07 22 26.9	-2.6
HHC				pmax	pmax		
	comp=Z,21nm,0.5s,mb5.0						
HHC				pmax	pmax		
	comp=Z,95nm,6.0s						
ULN	**Ulaanbaatar**	**35.98**	**345**	*e*P	**P**	**07 12 51.5**	**+0.2**
	comp=Z,2.5nm,0.5s,mb4.4						
WRAB	**Tennant Creek**	**35.99**	**157**	*e*P	**P**	**07 12 49.9**	**-1.7**
	comp=Z,5.3nm,0.5s,mb4.7						
WRA	**Warramunga Arr**	**36.00**	**157**	P	**P**	**07 12 50.3**	**-1.4**
	comp=Z,7.7nm,0.7s,mb4.7,baz=336,slow=9.6,SNR=27						
SONM	**Songino Array**	**36.12**	**344**	P	**P**	**07 12 51.2**	**-1.2**
	comp=Z,3.4nm,0.6s,mb4.5,baz=164,slow=8.9,SNR=7.9						
ASAR	**Alice Springs**	**39.27**	**160**	P	**P**	**07 13 18.6**	**-0.8**
	comp=Z,4.3nm,0.8s,mb4.2,baz=338,slow=7.1,SNR=35						
FORT	**Forrest**	**44.67**	**171**	*e*P	**P**	**07 14 02.3**	**-1.1**
	comp=Z,27nm,0.9s,mb5.1						
MKAR	**Makanchi Array**	**45.97**	**324**	P	**P**	**07 14 15.0**	**+1.4**
	comp=Z,1.2nm,0.7s,mb3.9,baz=122,slow=9.4,SNR=10.0						
ZALV	**Zalesovo Beam**	**49.05**	**333**	P	**P**	**07 14 37.5**	**+0.1**
	comp=Z,1.0nm,0.3s,mb4.3,baz=120,slow=5.6,SNR=3.6						
KURK	**Kurchatov**	**50.14**	**327**	P	**P**	**07 14 46.0**	**+0.3**
	comp=Z,2.4nm,0.6s,mb4.4,baz=135,slow=7.8,SNR=21						
KURK	**Kurchatov**	**50.14**	**327**	*e*P	**P**	**07 14 46.3**	**+0.6**
	comp=Z,8.2nm,0.7s,mb4.9						
BVAR	**Borovoye Array**	**55.72**	**326**	P	**P**	**07 15 27.1**	**+0.2**
	comp=Z,1.0nm,0.5s,mb4.1,baz=126,slow=12,SNR=6.7						
BRVK	**Borovoye**	**55.80**	**326**	*e*P	**P**	**07 15 27.9**	**+0.5**
	comp=Z,3.9nm,0.8s,mb4.5						

CASC 08 07:06:19.5±2.8, 8°.82N×82°.98W, h24km±8km, MD3.8, 3C-5D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTCR	**Cotoan**	**0.23**	**70**	⇓*i*P	Pb	07 06 26.3	+0.9
ACR	**Cerro Adams**	**0.25**	**229**	⇓*i*P	Pb	07 06 26.0	+0.3
BRU2	**Volcan**	**0.28**	**95**	⇑*i*P	Pb	07 06 27.1	+0.9
BRU2				*e*S	Sb	07 06 32.8	+1.9
BAR1		**0.54**	**322**	⇓*i*P	Pb	07 06 30.5	+0.2
CNI	**Changuinola**	**0.75**	**37**	⇓*i*P	Pb	07 06 34.4	+0.5
BUS	**Buena Vista**	**1.06**	**314**	⇑*i*P	Pn	07 06 39.0	+0.1
BUS				*e*S	Sb	07 06 52.5	-0.2
URSC	**Urasca**	**1.28**	**322**	⇑*i*P	Pn	07 06 42.4	+0.5
URSC				*e*S	Sn	07 06 58.5	+0.2
LAJ	**Bijagual**	**1.53**	**313**	*e*P	Pn	07 06 49.8	+4.4
PRS1	**Puriscal**	**1.75**	**311**	⇓*e*P	Pn	07 06 48.5	+0.2
PRS1				*e*S	Sn	07 07 09.1	-0.8
CGA2	**Cerro Gallo 2**	**1.89**	**309**	*e*P	Pn	07 06 50.7	+0.4
CGA2				*e*S	Sn	07 07 13.6	+0.3
JCR	**Jicaral**	**2.34**	**296**	*e*P	Pn	07 06 58.8	+2.3
VCR	**Vista de Mar**	**2.92**	**297**	*e*P	Pn	07 07 05.5	+1.1
BCIP	**Isla Barro Col**	**3.12**	**83**	*e*P	Pn	07 07 08.4	+1.2
BCIP				*e*S	Sn	07 07 44.1	+0.4

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*ISCJB **08** 07:20:25.0±0.6, 36°.96N±0°.04×29°.13E±0°.04, h5km±6km, Error ellipse: s-maj=6.0km s-min=5.2km az=177.9*
*CSEM **08** 07:20:25.2±0.2, 36°.99N×29°.13E, h8km, MD3.0, Error ellipse: s-maj=5.2km s-min=3.9km az=179.0*
*ISK **08** 07:20:25.0, 37°.03N×29°.15E, h11km, MD3.0*
*DDA **08** 07:20:26.0, 36°.99N×29°.18E, h7km±4km, Md2.7*
ISC 08 07:20:25.5±0.6, 36°.97N±0°.04×29°.13E±0°.04, h8km±5km, n32, σ0°.97/46, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.35**	**57**	PG	**Pg**	**07 20 31.7**	**-0.6**
GLHS				*e*SG	**Sg**	**07 20 36.4**	**-0.5**
GLHS	**Glhisar (BURDU**	**0.35**	**57**	*i* Pg	**Pg**	**07 20 31.7**	**-0.6**
GLHS				*e*Sg	**Sg**	**07 20 36.4**	**-0.5**
GOLH	**Golhisar**	**0.43**	**52**	*i* P	**Pg**	**07 20 33.7**	**-0.3**
GOLH				*i* S	**Sg**	**07 20 40.0**	**+0.3**
GOLH	**Golhisar**	**0.43**	**52**	*i* P	**Pg**	**07 20 33.7**	**-0.3**
GOLH				*i* S	**Sg**	**07 20 40.0**	**+0.3**
TURN	**Turunc**	**0.44**	**258**	*i* P	**Pg**	**07 20 32.1**	**-1.9**
TURN				*i* S	**Sg**	**07 20 52.6**	**+13**
TURN	**Turunc**	**0.44**	**258**	*i* P	**Pg**	**07 20 32.1**	**-1.9**
ELL	**Elmali**	**0.66**	**109**	*e*PG	**Pg**	**07 20 38.4**	**+0.2**
ELL				*e*SG	**Sg**	**07 20 48.0**	**+1.2**
ELL	**Elmali**	**0.66**	**109**	*e*Pg	**Pg**	**07 20 38.4**	**+0.2**
ELL				*e*Sg	**Sg**	**07 20 48.0**	**+1.2**
YER	**Yerkesik**	**0.70**	**284**	*e*PG	**Pg**	**07 20 39.1**	**+0.1**
YER	**Yerkesik**	**0.70**	**284**	*e*Pg	**Pg**	**07 20 39.1**	**+0.1**
DNZL	**Cakiroluk**	**0.72**	**354**	*i* P	**Pg**	**07 20 39.4**	**-0.1**
DNZL				*i* S	**Sg**	**07 20 51.0**	**+2.1**
DNZL	**Cakiroluk**	**0.72**	**354**	*i* P	**Pg**	**07 20 39.4**	**-0.1**
DNZL				*i* S	**Sg**	**07 20 51.0**	**+2.1**
DENT	**Denizli**	**0.79**	**354**	*e*PG	**Pg**	**07 20 39.4**	**-1.3**
DENT	**Denizli**	**0.79**	**354**	*e*Pg	**Pg**	**07 20 39.4**	**-1.3**
AKAS	**Kas**	**0.82**	**153**	*i* P	**Pg**	**07 20 42.1**	**+0.7**
AKAS				*i* S	**Sg**	**07 20 58.7**	**+6.6**
AKAS	**Kas**	**0.82**	**153**	*i* P	**Pg**	**07 20 42.1**	**+0.7**
AYDN	**Tasoluk**	**1.22**	**305**	*i* P	**Pb**	**07 20 50.0**	**+1.3**
AYDN				*i* S	**Sb**	**07 21 07.6**	**+3.0**
AYDN	**Tasoluk**	**1.22**	**305**	*i* P	**Pb**	**07 20 50.0**	**+1.2**
AYDN				*i* S	**Sb**	**07 21 07.6**	**+3.0**
DAT	**Datca**	**1.27**	**260**	*e*PN	**Pn**	**07 20 49.7**	**+0.1**
DAT	**Datca**	**1.27**	**260**	*e*Pn	**Pn**	**07 20 49.7**	**+0.1**
KHL	**Karahalli**	**1.39**	**13**	*e*PN	**Pn**	**07 20 49.8**	**-1.4**
KHL	**Karahalli**	**1.39**	**13**	*e*Pn	**Pn**	**07 20 49.8**	**-1.4**
KHAL	**Karahalli**	**1.43**	**11**	*e*P	**Pn**	**07 20 51.8**	**+0.1**
KHAL				*i* S	**Sn**	**07 21 10.8**	**+0.2**
KHAL	**Karahalli**	**1.43**	**11**	*e*P	**Pn**	**07 20 51.8**	**+0.1**
KHAL				*i* S	**Sn**	**07 21 10.9**	**+0.2**
BODT	**Bodrum**	**1.46**	**274**	*e*PN	**Pn**	**07 20 52.2**	**0.0**
BODT	**Bodrum**	**1.46**	**274**	*e*Pn	**Pn**	**07 20 52.2**	**0.0**
SUTC	**Sutluce-Ispart**	**1.57**	**71**	*e*PN	**Pn**	**07 20 53.3**	**-0.4**
SUTC	**Sutluce-Ispart**	**1.57**	**71**	*e*Pn	**Pn**	**07 20 53.3**	**-0.4**
KULA	**Kula-Manisa**	**1.59**	**346**	*e*PN	**Pn**	**07 20 52.7**	**-1.3**
KULA	**Kula-Manisa**	**1.59**	**346**	*e*Pn	**Pn**	**07 20 52.7**	**-1.2**
HDMB	**Hadim**	**2.68**	**89**	*e*PN	**Pn**	**07 21 09.2**	**+0.2**
HDMB	**Hadim**	**2.68**	**89**	*e*Pn	**Pn**	**07 21 09.2**	**+0.2**

NEIC 08 07:33:52.4, 61°.84N×150°.98W, h66km, ML3.6(PMR), ML3.3(AEIC), After AEIC., Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKT	**Skwentna**	**0.30**	**299**	P	Pn	07 34 02.2	-0.8
SKT				S	Sn	07 34 10.8	0.0
FIB	**Fire Island**	**0.78**	**150**	P	Pn	07 34 08.5	+0.7
PMR	**Palmer**	**0.92**	**105**	*e*P	Pn	07 34 08.8	-0.8
PMR				S	Sn	07 34 22.5	+0.3
RC01	**Rabbit Creek A**	**0.96**	**141**	P	Pn	07 34 09.6	-0.5
PPLA	**Purkeypile**	**1.20**	**333**	P	Pn	07 34 12.5	-0.8
PPLA				S	Sn	07 34 28.2	-0.6
SML	**Sawmill**	**1.26**	**90**	P	Pn	07 34 13.5	-0.4
SML				S	Sn	07 34 30.6	+0.5
SLKM	**Skilak Lake**	**1.38**	**164**	P	Pn	07 34 14.8	-0.8
RSO	**Redoubt South**	**1.62**	**213**	*e*Pn	Pn	07 34 18.8	-0.1
TRF	**Thorofare Moun**	**1.65**	**11**	P	Pn	07 34 19.0	-0.2
RND	**Reindeer**	**1.86**	**31**	P	Pn	07 34 21.4	-0.6
MCK	**McKinley**	**2.12**	**25**	P	Pn	07 34 25.3	-0.3
CHUM	**Lake Minchumin**	**2.14**	**344**	P	Pn	07 34 25.2	-0.6
BPAW	**Bear Paw Mtn.**	**2.27**	**360**	P	Pn	07 34 26.8	-0.7
SVW2	**Sparrevohn**	**2.33**	**253**	*e*P	Pn	07 34 27.3	-1.0
TT01	**Tatalina**	**2.58**	**297**	P	Pn	07 34 30.5	-1.3
TTA	**Tatalina**	**2.59**	**297**	*e*P	Pn	07 34 31.0	-0.8
DIV	**Divide**	**2.60**	**104**	P	Pn	07 34 30.6	-1.4
AUL	**Augustine Lava**	**2.74**	**207**	P	Pn	07 34 34.3	+0.3
EYAK	**Cordova Ski Ar**	**2.84**	**115**	P	Pn	07 34 33.4	-2.0
BMRM	**Bremner River**	**3.19**	**103**	P	Pn	07 34 38.0	-2.0
COLA	**College**	**3.36**	**23**	P	Pn	07 34 41.4	-0.9
MENT	**Mentasta**	**3.56**	**69**	*e*Pn	Pn	07 34 44.3	-0.8
DOT	**Dot Lake**	**3.67**	**57**	P	Pn	07 34 46.2	-0.4
KDAK	**Kodiak Island**	**4.15**	**192**	P	Pn	07 34 51.7	-1.4
IM3	**Indian Mountai**	**4.34**	**345**	P	Pn	07 34 54.9	-0.8
BCA3	**Beaver Creek A**	**4.45**	**70**	P	Pn	07 34 56.5	-0.7
OHAK	**Old Harbor**	**4.78**	**195**	*e*P	Pn	07 35 03.8	+2.1
EGAK	**Eagle**	**5.32**	**52**	P	Pn	07 35 08.3	-0.8
COLD	**Coldfoot**	**5.42**	**3**	*e*Pn	Pn	07 35 10.8	+0.2
	11nm,0.4s						
COLD				*e*Sn	Sn	07 36 08.3	-3.2
DAWY	**Dawson**	**5.74**	**62**	P	Pn	07 35 14.2	-0.7
BM3	**Burnt Mountain**	**6.24**	**23**	P	Pn	07 35 21.3	-0.3

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*NIED **08** 07:42:00, 27°.50N×128°.50E, h53km, Mw6.0 Best double couple: M0 1.05000×10^18 NP1:φs41.00000°, δ80.00000°, λ85.00000°. NP2:φs248.00000°, δ11.00000°, λ116.00000°.*
*BJI **08** 07:42:04.0, 27°.18N×128°.95E, h43km, mB5.9/54, mb5.7/52, Ms5.7/77, Ms7 5.6/60*
*MOS **08** 07:42:08.0±1.0, 27°.57N×128°.43E, h33km, mb6.2/128, MS5.9/56, Error ellipse: s-maj=6.6km s-min=3.7km az=113.2*
*JMA **08** 07:42:10.5±0.1, 27°.47N×128°.55E, h45km±2km, M6.1*
*IDC **08** 07:42:10.9±0.4, 27°.55N×128°.37E, h46km±3km, mb5.6/33, mb1 5.5/35, mb1mx5.5/35, mbtmp5.5/35, MS5.4/32, Ms1 5.4/32, ms1mx5.4/35, Error ellipse: s-maj=11.5km s-min=9.5km az=86.0*
*ISCJB **08** 07:42:10.3±0.1, 27°.55N±0°.01×128°.34E±0°.01, h48km, mb6.0/427, MS5.6/277, Error ellipse: s-maj=2.0km s-min=1.4km az=139.6*
*NEIC **08** 07:42:10.7±0.1, 27°.53N×128°.33E, h43km, mb6.0/264, ME5.9, MS5.5/198, MW6.0, MW6.0, MW6.0(NIED), Error ellipse: s-maj=3.2km s-min=2.6km az=162.0, Moment Tensor Solution. s94 Moment tensor: Scale 10^18Nm; Mrr1.06; Mθθ-0.50; Mφφ-0.56; Mrθ0.47; Mθφ-0.63; Mφr0.51; Best double couple: M0 1.30000×10^18 NP1:φs43.00000°, δ61.00000°, λ89.00000°. NP2:φs224.00000°, δ29.00000°, λ91.00000°. Principal axes: T 1.2600, Plg73.0000°, Azm311.0000°; N 0.1000, Plg0.0000°, Azm43.0000°; P -1.3600, Plg16.0000°, Azm133.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*
NEIC Felt [V] at Ishikawa; [IV] at Chatan, Ginowan, Gushikawa and Okinawa; [III] at Nago, Naha and Yomitan. Also felt at Itoman, Nishihara and Urasoe. Recorded [5L JMA] on Yoron-jima; [4 JMA] on Okinawa and Okino-erabu-shima; [3 JMA] on Tokuno-shima; [2 JMA] on Amami-oshima and Kikaiga-shima; [1 JMA] on Kume-jima and Nakano-shima.
*SZGRF **08** 07:42:11.5, 27°.53N×128°.88E, h58km, mb6.4, MS6.3, Ryukyu Islands, Japan*
*TEH **08** 07:42:12.0, 27°.52N×128°.39E, h49km*
*DJA **08** 07:42:12, 27°.72N×128°.58E, h68km, Mw6.4/61*
*GCMT **08** 07:42:13.5±0.1, 27°.31N×128°.65E, h51km, MW6.0, Moment Tensor Solution. s114,c256; s78,c114; Moment tensor: Scale 10^18Nm; Mrr1.05±.01; Mθθ-0.40±.01; Mφφ-0.65±.01; Mrθ0.32±.01; Mθφ-0.56±.01; Mφr0.33±.01; Best double couple: M0 1.20000×10^18 NP1:φs216.00000°, δ34.00000°, λ86.00000°. NP2: φs41.00000°, δ57.00000°, λ92.00000°. Principal axes: T 1.1500, Plg78.0000°, Azm319.0000°; N 0.0500, Plg2.0000°, Azm219.0000°; P -1.1900, Plg12.0000°, Azm129.0000°; Data Used: II IU CN IC G. Surface waves: sta=122, comp=266, per= 50.*
*BGS **08** 07:42:14.7±1.4, 28°.24N×127°.17E, h40km, mb5.5, MS5.8*
ISC 08 07:42:11.9±0.1, 27°.56N±0°.01×128°.37E±0°.01, h50km, h50km±7km: pP-P, n2039, σ0°.89/1840, mb6.0/425, MS5.6/277, 362C-287D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**0.56**	**66**	⇓P	**Pn**	**07 42 21.2**	**-2.6**
JTK				S	**Sn**	**07 42 28.8**	**-3.6**
JIH	**Iheya**	**0.64**	**215**	⇑P	**Pn**	**07 42 23.8**	**-1.0**
JIH				S	**Sn**	**07 42 33.3**	**-0.8**
JOW	**Kunigami**	**0.73**	**187**	⇑P	**Pn**	**07 42 23.6**	**-2.4**
JOW				S	**Sn**	**07 42 33.5**	**-2.7**
JAM	**Amami Oshima**	**1.38**	**52**	⇓P	**Pn**	**07 42 32.8**	**-1.9**
JAM				S	**Sn**	**07 42 49.3**	**-2.6**
JAGN	**Aguni-jima**	**1.40**	**226**	P	**Pn**	**07 42 34.4**	**-0.6**
JAGN				S	**Sn**	**07 42 52.7**	**+0.4**
NAH1	**Naha**	**1.48**	**204**	⇓P	**Pn**	**07 42 35.6**	**-0.5**
NAH1				S	**Sn**	**07 42 54.0**	**-0.4**
JJT2	**Tamagusuku 2**	**1.52**	**202**	P	**Pn**	**07 42 36.1**	**-0.6**
JJT2				S	**Sn**	**07 42 54.5**	**-0.8**
JZK	**Kikaishima**	**1.60**	**62**	⇓P	**Pn**	**07 42 36.7**	**-1.0**
JZK				S	**Sn**	**07 42 55.4**	**-1.9**
JKE	**Kume jima 2**	**1.88**	**229**	⇓P	**Pn**	**07 42 41.2**	**-0.3**
JKE				S	**Sn**	**07 43 04.3**	**+0.3**
JNN	**Nakanoshima**	**2.63**	**30**	⇓P	**Pn**	**07 42 50.6**	**-1.2**
JNN				S	**Sn**	**07 43 22.7**	**+0.2**
JMZ	**Minamidaito 2**	**3.08**	**124**	⇓P	**Pn**	**07 42 52.2**	**-5.8**
JKC	**Kuchinoerabu**	**3.30**	**28**	P	**Pn**	**07 43 00.5**	**-0.6**
JTN	**Tanegashima 3**	**3.83**	**36**	P	**Pn**	**07 43 08.1**	**-0.3**
JTN				S	**Sn**	**07 43 52.5**	**+0.3**
JZO	**Okuchi**	**4.96**	**22**	P	**Pn**	**07 43 25.4**	**+1.7**
TATO	**Taipei**	**6.70**	**249**	*e*Pn	**Pn**	**07 43 50.0**	**+2.3**
TATO	**Taipei**	**6.70**	**249**	P	**Pn**	**07 43 50.9**	**+3.2**
	SNR=25						
YHNB	**Yeheng**	**6.92**	**247**	*e*Pn	**Pn**	**07 43 52.9**	**+2.3**
	2μm,0.8s						
NACB	**Ningangnhiao**	**6.97**	**243**	*e*Pn	**Pn**	**07 43 50.0**	**-1.5**
	1μm,0.9s						
JTU	**Tsushima**	**7.00**	**7**	⇑P	**Pn**	**07 43 55.8**	**+4.1**
SSE	**Sheshan**	**7.20**	**301**	P	**Pn**	**07 43 57.1**	**+2.6**
SSE				S	**Sn**	**07 45 21.4**	**+6.6**
SSE				pmax	pmax		
	comp=Z,440nm,0.6s						
SSE				pmax	pmax		
	comp=Z,2μm,5.2s						
SSE				LR	LR		
	comp=N,21μm,22.6s						
SSE				LR	LR		
	comp=E,24μm,22.6s						
SSE				LR	LR		
	comp=Z,43μm,20.9s						
YULB	**Yu-li**	**7.62**	**239**	*e*Pn	**Pn**	**07 43 57.2**	**-3.2**
	comp=Z,728nm,0.3s						
YULB				*e*Sn	**Sn**	**07 45 23.5**	**-1.8**
SSLB	**Suanglung**	**7.67**	**242**	*e*Pn	**Pn**	**07 43 59.8**	**-1.3**
	comp=Z,966nm,0.4s						
TWG	**Pinlang**	**8.12**	**236**	*e*Pn	**Pn**	**07 44 03.2**	**-4.1**
	comp=Z,538nm,0.6s						
TPUB	**Ta-pu**	**8.18**	**241**	*e*Pn	**Pn**	**07 44 07.4**	**-0.6**
	comp=Z,996nm,0.6s						
TPUB				*e*Sn	**Sn**	**07 45 38.4**	**-0.8**
QZH	**Quanzhou**	**9.16**	**256**	⇑*i*P	**Pn**	**07 44 23.2**	**+1.8**
QZH				S	**Sn**	**07 46 06.3**	**+3.2**
QZH				LR	LR		
	comp=N,25μm,13.0s						
QZH				LR	LR		
	comp=E,28μm,13.2s						
QZH				LR	LR		
	comp=Z,75μm,23.0s						
BBP	**Basco**	**9.19**	**221**	*e*P	**Pn**	**07 44 17.9**	**-4.0**
NJ2	**Nanjing**	**9.40**	**301**	*e*P	**Pn**	**07 44 28.1**	**+

comp=N,26μm,16.3s
TIA LR LR
comp=E,28μm,14.8s
BCPH Baguio City Da 13.26 215⇑*i*P Pn 07 45 16.5 -1.0
BCPH *i*S **Sn 07 47 44.0 +0.6**
BALP Baler 13.35 210 *e*P Pn 07 45 18.1 -0.6
BOLP Bolinao 13.61 217 *e*P Pn 07 45 21.7 -0.5
PCPH Palayan 13.72 211⇓*e*P Pn 07 45 23.0 -0.7
HKC Hong Kong Obse 13.90 251 *e*P Pn 07 45 28.0 +1.8
HKC *e*S **Sn 07 47 56.0 -3.1**
SCZP Santa Cruz 14.11 216 *e*P Pn 07 45 35.6 +6.5
GZH Guangzhou 14.30 255 P **Pn 07 45 29.6 -2.0**
GZH S **Sn 07 48 09.5 +0.7**
GZH LR LR
comp=N,22μm,16.2s
GZH LR LR
comp=E,16μm,22.6s
GZH LR LR
comp=Z,31μm,25.5s
PVCP Virac 14.44 197 *e*P Pn 07 45 33.2 -0.2
SNY Shenyang 14.77 346 ⇑P **Pn 07 45 40.5 +2.9**
SNY sP sP 07 45 57.0 -3.2
SNY S **Sn 07 48 17.7 -2.1**
SNY LR LR
comp=N,17μm,21.0s
SNY LR LR
comp=E,19μm,15.9s
SNY LR LR
comp=Z,27μm,16.2s
TGY Tagaytay City 15.08 209 P **Pn 07 45 41.2 -0.6**
comp=Z,32nm,0.3s,baz=22,slow=1.7,SNR=8.0
TGY Tagaytay City 15.08 209 P **Pn 07 45 41.2 -0.6**
TGY pmax pmax
comp=Z,32nm,0.3s
AUQP San Andres 15.13 202 *e*P sP 07 46 10.1 +5.7
LUBP Lubang 15.71 210 *e*P Pn 07 45 51.5 +1.5
VLA Vladivostok 15.79 10*de*P Pn 07 45 49.9 -0.8
VLA Vladivostok 15.79 10⇓*e*P Pn 07 45 49.0 -1.7
BJI Beijing 16.03 324 P **Pn 07 45 57.5 +3.6**
BJI pP pP 07 46 05.5 -2.4
BJI sP sP 07 46 11.8 -2.5
BJI S **S 07 49 02.6 +0.4**
BJI pmax pmax
comp=Z,820nm,0.8s
BJI pmax pmax
comp=Z,6μm,6.6s
BJI LR LR
comp=N,24μm,18.8s
BJI LR LR
comp=E,16μm,19.6s
BJI LR LR
comp=Z,22μm,27.3s
OTRP Odiongan 16.25 203 *e*P Pn 07 45 59.5 +2.7
CN2 Changchun 16.38 352 *e*P Pn 07 46 00.8 +2.6
CN2 *e*pP pP 07 46 09.8 -1.9
CN2 *e*sP sP 07 46 15.0 -3.1
CN2 *e*S **S 07 49 01.0 -8.1**
CN2 LR LR
comp=N,19μm,18.0s
CN2 LR LR
comp=E,24μm,18.0s
CN2 LR LR
comp=Z,11μm,17.0s
SJMP San Jose 16.49 206 *e*P Pn 07 46 03.9 +4.1
TIY Taiyuan 16.79 311 P **Pn 07 46 07.3 +3.8**
TIY S **S 07 49 19.8 +2.1**
TIY pmax pmax
comp=Z,12μm,6.3s
TIY LR LR
comp=N,4μm,8.3s
TIY LR LR
comp=E,18μm,14.9s
TIY LR LR
comp=Z,24μm,16.1s
MDJ Mudanjiang 17.05 3 P **Pn 07 46 06.8 +0.2**
MDJ pP pP 07 46 18.3 -0.8
MDJ sP sP 07 46 23.5 -2.0
MDJ S **S 07 49 16.6 -6.2**
MDJ PcP PcP 07 50 49.7 +0.1
MDJ PcS PcS 07 54 25.9 +0.4
MDJ pmax pmax
comp=Z,62nm,1.1s
MDJ pmax pmax
comp=Z,6μm,11.0s
MDJ LR LR
comp=N,12μm,26.0s
MDJ LR LR
comp=E,11μm,21.0s
MDJ LR LR
comp=Z,15μm,27.2s
BUSP Coron 17.27 208 *e*P Pn 07 46 11.6 +2.0
LLP Lapu-Lapu 17.65 194 *e*P Pn 07 46 14.9 +0.7
TBP Tagbilaran 18.28 194 *e*P Pn 07 46 14.8 -7.1
ENPP El Nido 18.31 209 *e*P Pn 07 46 22.7 +0.4
ERM Erimo 18.81 36 P **Pn 07 46 24.5 -3.7**
comp=Z,3μm,0.8s,SNR=32
ERM Erimo 18.81 36*de*P Pn 07 46 24.1 -4.1
ERM pmax pmax
comp=Z,379nm,0.8s
ERM Erimo 18.81 36 *e*P Pn 07 46 24.5 -3.7
comp=Z,351nm,0.8s
QIZ Qiongzhong 19.00 247 P **Pn 07 46 29.5 -1.2**
QIZ pP pP 07 46 38.7 -2.3
QIZ sP sP 07 46 44.2 -3.1
QIZ S **S 07 49 58.6 -4.2**
QIZ sS sS 07 50 18.3 -2.8
QIZ pmax pmax
comp=Z,3μm,7.5s
QIZ LR LR
comp=N,8μm,22.9s
QIZ LR LR
comp=Z,17μm,21.0s
HHC Hu-ho-hao-te 19.17 318 *e*P Pn 07 46 32.6 +0.2
HHC sP sP 07 46 49.3 +0.4
HHC PP 07 46 50.6
HHC S **S 07 50 00.9 -4.8**
HHC PcP PcP 07 50 54.2 +0.9
HHC ScP ScP 07 54 24.9 -0.1
HHC PcS PcS 07 54 29.9 -0.3
HHC pmax pmax
comp=Z,100nm,0.5s
HHC pmax pmax
comp=Z,5μm,5.5s
HHC LR LR
comp=N,20μm,12.6s
HHC LR LR
comp=E,18μm,12.8s
HHC LR LR
comp=Z,31μm,12.4s
CGP Cagayan de Oro 19.32 191⇑*e*P Pn 07 46 32.3 -2.1
GYA Guiyang 19.38 272 P **Pn 07 46 35.6 +0.5**
GYA pP pP 07 46 45.2 +0.2
GYA sP sP 07 46 53.8 +2.5
GYA PP 07 46 54.3
GYA S **S 07 50 06.4 -3.7**
GYA pmax pmax
comp=Z,90nm,1.0s
GYA pmax pmax
comp=Z,3μm,8.1s
GYA LR LR
comp=N,9μm,20.5s
GYA LR LR
comp=E,15μm,14.3s
GYA LR LR
comp=Z,20μm,14.6s
BUKP Musuan 19.82 190 *e*P Pn 07 46 39.6 -0.8
PPR Puerto Princes 19.89 209 *e*P Pn 07 46 39.9 -1.3
BTO Baotou 19.96 315 *e*P Pn 07 46 40.3 -1.5
BTO S **S 07 50 28.2 +6.6**
BTO LR LR
comp=N,4μm,13.3s
BTO LR LR
comp=E,3μm,12.2s
ASAJ Asahikawa 20.10 31 P **P 07 46 39.8 -1.5**
comp=E,79nm,0.8s,baz=231,slow=14,SNR=30
ASAJ LR LR 07 54 48.3
comp=E,16μm,21.7s,MS5.3,baz=235,slow=38
ASAJ Asahikawa 20.10 31 P **P 07 46 39.8 -1.4**
ASAJ pmax pmax
comp=Z,79nm,0.8s
ASAJ MLR MLR
comp=Z,16μm,21.7s
PAGZ Pagadian 20.17 194 *e*P P 07 46 43.4 +1.2
DMPH Davao City--Mi 20.55 188⇑*i*P P 07 46 46.0 -0.3
DMPH *i*S sP 07 47 09.0 +4.9

DAV Davao City (W) 20.55 188 P **P 07 46 45.9 -0.4**
comp=Z,340nm,0.4s,baz=223,slow=5.7,SNR=5.7
DAV S **S 07 50 41.8 +8.1**
comp=Z,173nm,0.4s,baz=30,slow=18,SNR=1.6
DAV LR LR 07 54 25.1
comp=Z,14μm,18.6s,MS5.3,baz=42,slow=36
DAV Davao City (W) 20.55 188⇑*e*P P 07 46 48.2 +1.8
DAV Davao City (W) 20.55 188 P **P 07 46 49.5 +3.1**
comp=Z,1μm,1.4s
DAV Davao City (W) 20.55 188 P **P 07 46 46.2 -0.2**
SNR=14
MATI Mati 20.60 186 *e*P pP 07 47 01.2 +2.7
CTBH Cotabato--PC H 20.60 192 *e*P P 07 46 48.1 +1.1
GUMO Guam 20.74 129 *e*P P 07 46 47.2 -1.2
GUMO pmax pmax
comp=Z,2μm,1.1s
GUMO MLR MLR
comp=Z,18μm,20.0s,MS5.4
GUMO Guam 20.74 129 *e*P P 07 46 47.1 -1.3
comp=Z,2μm,1.1s
GUMO LR LR
comp=Z,18μm,20.0s,MS5.4
GUMO Guam 20.74 129 P **P 07 46 47.0 -1.4**
comp=Z,2μm,1.2s
HABR Khabarovsk 21.51 12 *e*P P 07 46 53.4 -3.1
HABR *e**PP 07 47 03.4
HABR *e* 07 47 14.2
HABR *e*S **S 07 50 50.3 -1.8**
HABR *e* 07 50 54.4
HABR *e**SS sS 07 51 07.1 -3.8
HABR *e*SSS 07 51 31.4
HABR *e* 07 58 12.3
HABR pmax pmax
comp=N,21nm,1.3s
HABR pmax pmax
comp=Z,20nm,0.9s,mb4.5
HABR pmax pmax
comp=E,24nm,0.8s
HABR MLR MLR
comp=Z,8μm,16.0s,MS5.2
YUK Yuzh-Kuril'sk 21.64 36*c i*P P 07 46 56.8 -1.1
YUK *i*S **S 07 50 53.7 -0.9**
YUK pmax pmax
comp=N,1μm,1.0s
YUK pmax pmax
comp=Z,2μm,1.0s,mb6.6
YUK pmax pmax
comp=E,330nm,0.5s
YUK pmax pmax
comp=Z,3μm,1.0s,mb6.6
YUK smax
comp=N,5μm,3.6s
YUK smax
comp=E,2μm,3.6s
YUK MLR MLR
comp=N,14μm,26.0s,MS5.3
YUK MLR MLR
comp=E,7μm,26.0s,MS5.3
YUK MLR MLR
comp=Z,13μm,26.0s,MS5.2
CD2 Chengdu 21.73 285 P **P 07 46 57.9 -1.1**
CD2 pP 07 47 09.0
CD2 sP sP 07 47 14.6 -2.2
CD2 PP 07 47 23.8
CD2 S **S 07 50 50.2 -6.4**
CD2 pmax pmax
comp=Z,580nm,1.0s,mb6.0
CD2 pmax pmax
comp=Z,8μm,3.8s
CD2 LR LR
comp=N,22μm,15.5s
CD2 LR LR
comp=Z,22μm,19.0s,MS5.6
KLR Kul'dur 21.79 6 *e*P P 07 46 51.7 -7.8
KLR *e*S **S 07 50 46.0 -11**
KLR pmax pmax
comp=N,1μm,11.0s
KLR pmax pmax
comp=Z,2μm,11.0s
KLR MLR MLR
comp=Z,4μm,11.0s,MS5.0
YSS Yuzh-Sakhalins 22.42 26*ce*P P 07 47 03.0 -3.2
YSS *e**SP sP 07 47 20.0 -4.1
YSS *e*S **S 07 51 05.0 -4.5**
YSS pmax pmax
comp=N,360nm,1.0s
YSS pmax pmax
comp=Z,530nm,1.0s,mb5.9
YSS pmax pmax
comp=Z,5μm,9.0s
YSS pmax pmax
comp=N,3μm,8.0s
YSS pmax pmax
comp=E,2μm,8.0s
YSS smax
comp=N,5μm,12.0s
YSS smax
comp=E,3μm,14.0s
YSS MLR MLR
comp=Z,7μm,16.0s,MS5.2
YSS MLR MLR
comp=N,5μm,17.0s,MS5.2
YSS MLR MLR
comp=E,5μm,17.0s,MS5.2
YSS Yuzh-Sakhalins 22.42 26 *e*P P 07 47 04.6 -1.5
comp=E,538nm,1.0s,mb5.9
YSS LR LR
comp=Z,2μm,20.0s,MS4.6
LZH Lanzhou 22.47 298 ⇓P **P 07 47 07.2 +0.4**
LZH pP 07 47 19.0
LZH sP sP 07 47 27.0 +2.3
LZH PP 07 47 36.2
LZH S **S 07 51 07.2 -3.3**
LZH sS sS 07 51 25.2 -4.7
LZH pmax pmax
comp=Z,370nm,1.0s,mb5.8
LZH pmax pmax
comp=Z,1μm,4.8s
LZH LR LR
comp=E,14μm,12.8s
LZH LR LR
comp=Z,25μm,13.4s,MS5.8
KMI Kunming 23.09 270 P **P 07 47 13.8 +0.3**
KMI pP 07 47 21.0
KMI sP sP 07 47 23.8 -7.6
KMI PP 07 47 39.4
KMI S **S 07 51 11.0 -10**
KMI pmax pmax
comp=Z,290nm,1.2s,mb5.6
KMI pmax pmax
comp=Z,3μm,6.2s
KMI LR LR
comp=N,11μm,14.4s,MS5.6
KMI LR LR
comp=E,12μm,16.9s,MS5.6
KMI LR LR
comp=Z,14μm,14.4s,MS5.5
KDM Kudat 23.27 210 P **P 07 47 15.5 +0.2**
SGSI Sangihe 23.89 187 P **P 07 47 17.9 -3.2**
SGSI Sangihe 23.89 187 P **P 07 47 22.7 +1.6**
MYLDM Lahad Datu 24.16 205 P **P 07 47 23.2 -0.3**
MYLDM Lahad Datu 24.16 205 P **P 07 47 24.6 +1.1**
comp=Z,486nm,1.1s,mb5.9
SDKM Sandakan 24.25 208 P **P 07 47 24.3 0.0**
KKM Kota Kinabalu 24.32 211 P **P 07 47 25.2 +0.2**
KKM Kota Kinabalu 24.32 211 *e*P P 07 47 25.0 0.0
comp=Z,867nm,1.4s,mb6.0
KKM LR LR
comp=Z,8μm,22.0s,MS5.2
KKM Kota Kinabalu 24.32 211 P **P 07 47 25.5 +0.5**
comp=Z,9μmcomp=Z,505nm,1.7s,mb5.7
UBT Ubonrachathani 24.91 245 P **P 07 47 33.0 +2.7**
comp=Z,451nm,0.9s,mb6.0
TSM Tawau 25.21 205 P **P 07 47 32.8 -0.3**
MNI Manado 26.19 188 P **P 07 47 37.4 -4.5**
comp=Z,1μm,0.9s,mb6.4
MNI Manado 26.19 188 P **P 07 47 41.3 -0.6**
comp=Z,1μm,0.9s,mb6.4
ULN Ulaanbaatar 26.21 326⇓*e*P P 07 47 41.0 -0.9
ULN Ulaanbaatar 26.21 326 *e*P P 07 47 42.2 +0.3
comp=Z,2μm,2.0s,mb6.2
ULN LR LR
comp=Z,12μm,20.0s,MS5.4
ULN Ulaanbaatar 26.21 326 P **P 07 47 39.2 -2.7**
comp=Z,6μmcomp=Z,342nm,1.6s,mb5.6
ULN Ulaanbaatar 26.21 326 P **P 07 47 44.0 +2.1**

SNR=79
GTA Gaotai 26.48 304 ⇑P **P 07 47 44.2 -0.1**
GTA pP pP 07 47 55.9 -1.2
GTA sP sP 07 48 01.4 -1.7
GTA S **S 07 52 15.5 +0.7**
GTA sS sS 07 52 35.0 -1.5
GTA SS 07 53 29.7
GTA PcS PcS 07 54 49.6 +0.2
GTA pmax pmax
comp=Z,27nm,0.9s,mb4.8
GTA pmax pmax
comp=Z,2μm,6.3s
GTA LR LR
comp=N,11μm,19.2s,MS5.6
GTA LR LR
comp=E,15μm,20.0s,MS5.6
GTA LR LR
comp=Z,23μm,19.8s,MS5.7
SONM Songino Array 26.52 326 P **P 07 47 44.8 +0.2**
comp=Z,96nm,0.9s,mb5.3,baz=139,slow=8.8,SNR=91
SONM PcP PcP 07 51 09.1 +0.8
comp=Z,17nm,0.7s,baz=151,slow=4.0,SNR=5.3
SONM LR LR 07 59 33.0
comp=Z,14μm,19.8s,MS5.5,baz=142,slow=39
SONM Songino Array 26.52 326 P **P 07 47 44.8 +0.2**
SONM 07 51 09.1
SONM pmax pmax
comp=Z,96nm,0.9s
SONM pmax pmax
comp=Z,17nm,0.7s
SONM MLR MLR
comp=Z,14μm,19.8s
TNTI Ternate 26.65 182 P pP 07 47 57.0 -1.9
comp=Z,1μm,1.0s
TNTI Ternate 26.65 182 P **P 07 47 45.6 -0.5**
comp=Z,1μm,1.0s,mb6.4
CIT Chita 26.85 340 *e*P P 07 47 48.9 +1.4
KMSI Cibinong 27.16 190 P **P 07 47 42.5 -8.2**
comp=Z,691nm,1.0s,mb6.1
KMSI Cibinong 27.16 190 P **P 07 47 50.7 0.0**
comp=Z,694nm,1.0s,mb6.2
CHRT Chiangrai 27.23 260 ⇓P **P 07 47 51.0 -0.3**
comp=Z,868nm,0.9s,mb6.3
MRSI Marisa 27.63 194 P **P 07 47 54.4 -0.4**
comp=Z,7μmcomp=Z,604nm,1.4s,mb6.0
LBMI Labuha 28.05 182 P **P 07 48 00.7 +2.1**
LBMI Labuha 28.05 182 P **P 07 47 59.3 +0.7**
comp=Z,7μmcomp=Z,849nm,1.0s,mb6.3
BTM Bintulu 28.29 214 P **P 07 48 01.3 +0.5**
CHG Chiang Mai 28.36 258 ⇑P **P 07 48 01.9 +0.5**
comp=Z,366nm,0.6s,mb6.2
CHTO Chiang Mai 28.36 258 *e*P P 07 48 01.8 +0.4
CHTO *e* 07 51 13.2
CHTO pmax pmax
comp=Z,223nm,0.8s,mb5.8
CHTO MLR MLR
comp=Z,6μm,19.0s,MS5.2
CHTO Chiang Mai 28.36 258 *e*P P 07 48 01.8 +0.3
comp=Z,223nm,0.8s,mb5.8
CHTO *e*PcP PcP 07 51 13.2 0.0
CHTO LR LR
comp=Z,6μm,19.0s,MS5.2
CHTO Chiang Mai 28.36 258 P **P 07 48 02.5 +1.1**
comp=Z,5μmcomp=Z,447nm,1.2s,mb6.0
CHTO Chiang Mai 28.36 258 P **P 07 48 02.2 +0.7**
SNR=87
SWI Sorong 28.39 174 P **P 07 48 01.7 0.0**
comp=Z,2μmcomp=Z,183nm,1.2s,mb5.6
CM31 Chiang Mai Arr 28.51 258 *e*P P 07 48 04.0 +1.3
comp=Z,44nm,0.5s,mb5.5
CM31 *e*PcP PcP 07 51 14.1 +0.6
CM31 LR LR
comp=Z,8μm,20.0s,MS5.3
CMAR Chiang Mai Arr 28.51 258 P **P 07 48 03.2 +0.5**
comp=Z,75nm,0.8s,mb5.5,baz=58,slow=7.6,SNR=176
CMAR PcP PcP 07 51 14.2 +0.7
comp=Z,69nm,0.7s,baz=37,slow=1.2,SNR=14
CMAR pPcP 07 51 30.8
comp=Z,16nm,0.8s,baz=39,slow=1.6,SNR=2.4
CMAR ScP ScP 07 54 50.6 0.0
comp=Z,1.0nm,0.3s,baz=33,slow=3.5,SNR=4.1
CMAR Chiang Mai Arr 28.51 258 P **P 07 48 03.2 +0.5**
CMAR 07 51 14.3
CMAR pmax pmax
comp=Z,75nm,0.8s
CMAR pmax pmax
comp=Z,69nm,0.7s
CMAR pmax pmax
comp=Z,16nm,0.8s
CMAR pmax pmax
comp=N,1.0nm,0.3s
NST Nakhon Sawan 28.72 252 P **P 07 48 06.0 +1.4**
BDT Bhumibol Dam 28.96 255 P **P 07 48 07.0 +0.2**
comp=N,96nm,0.8s,mb5.6
SBUM Sibu 29.36 215 P **P 07 48 10.1 -0.2**
SBUM Sibu 29.36 215 P **P 07 48 10.0 -0.3**
comp=N,2μmcomp=N,122nm,1.8s,mb5.3
PCI Palu 29.47 198 P **P 07 48 10.1 -1.1**
comp=N,4μmcomp=N,373nm,1.2s,mb6.0
BAKI Biak 29.54 164 P **P 07 48 10.9 -0.9**
comp=N,6μmcomp=N,491nm,1.0s,mb6.2
SMKI Samarinda 29.84 203 P **P 07 48 16.0 +1.5**
comp=N,6μmcomp=N,475nm,1.3s,mb6.1
TLY Talaya 30.43 329 P **P 07 48 20.5 +1.1**
comp=N,204nm,0.9s,mb5.9,SNR=12
TLY Talaya 30.43 329*c i*P P 07 48 17.0 -2.4
TLY *e*PPP 07 49 40.1
TLY *e* 07 51 17.3
TLY *e*S **S 07 53 15.0 -1.7**
TLY pmax pmax
comp=Z,25nm,0.9s,mb4.9
TLY MLR MLR
comp=Z,13μm,19.0s,MS5.6
TLY Talaya 30.43 329 *e*P P 07 48 20.7 +1.3
comp=Z,56nm,1.1s,mb5.2
TLY *e*PcP PcP 07 51 18.5 +0.6
TLY LR LR
comp=Z,14μm,20.0s,MS5.6
TLY Talaya 30.43 329 P **P 07 48 20.6 +1.1**
SNR=19
IRK Irkutsk 30.54 330 *e*P P 07 48 20.6 +0.2
IRK *e* 07 48 38.8
IRK pmax pmax
comp=Z,90nm,0.9s,mb5.6
NLAI Namlea 30.64 182 P **P 07 48 22.6 +1.0**
comp=Z,5μmcomp=Z,258nm,1.4s,mb5.9
NNT Nongplab 30.64 247 P **P 07 48 23.0 +1.3**
SMPI Sarmi 31.02 160 P **P 07 48 24.8 -0.1**
comp=Z,7μmcomp=Z,636nm,0.9s,mb6.4
AAI Ambon 31.06 180 P **P 07 48 24.4 -0.9**
comp=Z,7μmcomp=Z,724nm,1.3s,mb6.4
KSM Kuching 31.18 217 P **P 07 48 27.2 +0.8**
KSM Kuching 31.18 217 *e*P P 07 48 26.9 +0.4
comp=Z,110nm,0.9s,mb5.7
KSM *e*PcP PcP 07 51 20.2 -0.3
KSM LR LR
comp=Z,4μm,21.0s,MS5.0
KSM Kuching 31.18 217 P **P 07 48 26.8 +0.4**
comp=Z,3μmcomp=Z,196nm,0.8s,mb6.0
SKR Severo-Kuril's 31.25 35*c i*P P 07 48 26.0 -0.6
SKR *e* pP 07 48 37.2 -2.3
SKR *e**PP pP 07 48 41.0 +1.5
SKR *e* 07 49 30.0
SKR *e*PPP 07 49 50.0
SKR *e* 07 51 17.0
SKR *i*S **S 07 53 28.0 -1.4**
SKR *e*SS SS 07 55 10.0 -34
SKR pmax pmax
comp=N,1μm,4.0s
SKR pmax pmax
comp=E,800nm,4.0s
SKR pmax pmax
comp=Z,3μm,4.0s
SKR pmax pmax
comp=N,150nm,0.9s
SKR pmax pmax
comp=E,180nm,0.9s
SKR pmax pmax
comp=Z,570nm,0.9s,mb6.4
SKR smax
comp=N,3μm,10.0s
SKR smax
comp=E,4μm,8.0s
SKR MLR MLR
comp=N,3μm,16.0s,MS5.1
SKR MLR MLR

comp=E,3μm,16.0s,MS5.1
SKR MLR MLR
comp=Z,2μm,16.0s,MS5.0
TTSI Tana Toraja 31.52 197 P **P 07 48 28.5 -0.9**
comp=Z,1μmcomp=Z,76nm,1.3s,mb5.4
MOY Mondy 31.67 327 *e*P **P 07 48 30.8 +0.5**
MOY pmax pmax
comp=Z,52nm,3.1s
STKI Sintang 31.79 213 P **P 07 48 33.4 +1.7**
comp=Z,73nm,1.7s,mb5.2
KDI Kendari 31.82 191 P **P 07 48 31.3 -0.7**
comp=Z,4μmcomp=Z,275nm,1.5s,mb5.9
SPSI Sidrap Palu 32.42 196 P **P 07 48 36.2 -1.0**
comp=Z,52nm,1.1s,mb5.3
SHL Shillong 32.63 275⇑ *i*P **P 07 48 38.5 -0.5**
SHL *i* PCP PcP 07 51 24.0 -0.3
SHL *i* PCS PcS 07 55 08.0 -1.6
KTGM Kuala Trenggan 32.64 232 P **P 07 48 40.8 +1.6**
LSA Lhasa 32.65 283 P **P 07 48 40.8 +1.6**
LSA S **S 07 53 49.5 -2.4**
LSA LR LR
comp=N,3μm,23.3s
LSA LR LR
comp=E,9μm,30.4s
LSA LR LR
comp=Z,14μm,26.8s,MS5.5
BNSI Bone 32.76 195 P **P 07 48 41.1 +0.9**
comp=Z,2μmcomp=Z,72nm,1.3s,mb5.5
KBKI Kotabaru 32.86 203 P **P 07 48 40.4 -0.7**
comp=Z,4μmcomp=Z,158nm,1.2s,mb5.8
SNG Songkhla 33.21 238 P **P 07 48 46.0 +1.8**
comp=Z,200nm,0.8s,mb6.1
TLE Tual 33.27 172 P **P 07 48 45.2 +0.6**
comp=Z,263nm,1.4s,mb6.0
PETK Petropavlovsk- 33.51 32 P **P 07 48 45.2 -1.1**
comp=Z,303nm,0.8s,mb6.3,baz=211,slow=4.6,SNR=171
PETK PcP PcP 07 51 25.2 -1.0
comp=Z,23nm,0.8s,baz=202,slow=3.5,SNR=7.0
PETK pPcP 07 51 40.7
comp=Z,9.5nm,0.9s,baz=273,slow=29,SNR=2.7
PETK pScP 07 51 47.0
comp=Z,14nm,0.8s,baz=263,slow=1.2,SNR=3.4
PETK LR LR 08 02 28.9
comp=Z,6μm,21.9s,MS5.3,baz=79,slow=36
PETK Petropavlovsk- 33.51 32 P **P 07 48 45.2 -1.1**
PETK 07 51 25.2
PETK pmax pmax
comp=Z,303nm,0.8s,mb6.3
PETK pmax pmax
comp=Z,23nm,0.8s,mb5.2
PETK pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
PETK pmax pmax
comp=Z,14nm,0.8s,mb4.9
PETK MLR MLR
comp=Z,6μm,21.9s,MS5.3
BKSI Bulukumba 33.65 195 P **P 07 48 48.1 +0.2**
comp=Z,944nmcomp=Z,54nm,0.9s,mb5.5
PET Petropavlovsk 33.91 33*c i*P **P 07 48 48.8 -1.1**
PET *e*S **S 07 54 06.9 -3.9**
PET pmax pmax
comp=Z,474nm,0.9s,mb6.4
PET pmax pmax
comp=Z,3μm,2.6s,mb6.7
PET pmax pmax
comp=Z,1μm,5.8s
PET MLR MLR
comp=Z,10μm,22.0s,MS5.5
PET MLR MLR
comp=Z,7μm,19.0s
PET Petropavlovsk 33.91 33 *e*P **P 07 48 49.2 -0.7**
comp=Z,349nm,0.9s,mb6.3
PET LR LR
comp=Z,9μm,22.0s,MS5.4
KULM Kulim 34.44 235 P **P 07 48 56.5 +1.6**
KULM Kulim 34.44 235 *e*P **P 07 48 55.9 +1.0**
comp=Z,452nm,1.4s,mb6.2
KULM *e*PcP PcP 07 51 29.2 -0.3
KULM LR LR
comp=Z,3μm,21.0s,MS5.0
KULM Kulim 34.44 235 P **P 07 48 55.8 +0.9**
comp=Z,4μmcomp=Z,276nm,1.8s,mb5.9
YAK Yakutsk 34.48 1 *e*P **P 07 48 52.1 -2.6**
YAK *e**PP pP 07 49 01.3 -6.4
YAK *e* 07 50 10.7
YAK *e* 07 51 28.1
YAK *e*S **S 07 54 12.9 -6.5**
YAK *e**SS sS 07 54 28.3 -13
YAK *e*SSS 07 56 38.5
YAK *e* 07 59 09.1
YAK pmax pmax
comp=Z,170nm,0.8s,mb6.0
YAK pmax pmax
comp=N,32nm,1.0s
YAK pmax pmax
comp=E,9.0nm,0.9s
YAK pmax pmax
comp=Z,277nm,2.8s,mb5.7
YAK smax
comp=E,315nm,3.7s
YAK smax
comp=N,256nm,4.6s
YAK MLR MLR
comp=E,3μm,16.0s,MS5.3
YAK MLR MLR
comp=Z,5μm,16.0s,MS5.3
YAK MLR MLR
comp=N,3μm,16.0s,MS5.3
YAK Yakutsk 34.48 1 *e*P **P 07 48 53.6 -1.1**
comp=N,207nm,0.7s,mb6.2
YAK *e*PcP PcP 07 51 28.3 -0.5
YAK LR LR
comp=Z,6μm,22.0s,MS5.3
IPM Ipoh 34.73 234 P **P 07 48 59.2 +1.9**
IPM Ipoh 34.73 234 P **P 07 48 58.0 +0.7**
comp=Z,6μmcomp=Z,407nm,1.6s,mb6.1
MYKOM Kota Tinggi 34.76 227 P **P 07 48 58.9 +1.3**
MYKOM Kota Tinggi 34.76 227 P **P 07 48 58.7 +1.1**
comp=Z,4μmcomp=Z,212nm,1.8s,mb5.8
KGM Kluang 34.93 228 P **P 07 49 00.4 +1.3**
WAKE Wake Island 35.97 95 PFAKE 07 49 20.0 +12
WAKE LR LR
comp=Z,7μm,22.0s,MS5.4
TAPN Taplejung 35.97 279 *e*P **P 07 49 08.6 +0.6**
TPI Tanjungpandan 36.15 217 P **P 07 49 10.4 +0.8**
comp=Z,3μmcomp=Z,155nm,1.2s,mb5.8
ODAN Odare 36.34 279 *e*P **P 07 49 11.6 +0.5**
comp=Z,748nm,0.5s,mb6.8
WMQ Urumqi 36.40 307 P **P 07 49 11.9 +0.5**
WMQ pP pP 07 49 24.0 -0.5
WMQ sP sP 07 49 29.4 -1.0
WMQ PP PP 07 50 36.4 +1.5
WMQ PcP PcP 07 51 35.8 +1.0
WMQ S **S 07 54 49.6 +0.3**
WMQ ScS ScS 07 59 22.2 -1.3
WMQ pmax pmax
comp=Z,110nm,0.9s,mb5.8
WMQ pmax pmax
comp=Z,1μm,5.8s
WMQ LR LR
comp=N,4μm,24.8s,MS5.6
WMQ LR LR
comp=E,11μm,24.6s,MS5.6
WMQ LR LR
comp=Z,14μm,24.4s,MS5.6
MMRI Maumere 36.47 190 P **P 07 49 14.4 +2.2**
comp=Z,5μmcomp=Z,346nm,1.4s,mb6.1
PPBI Pangkal Pinang 36.49 219 P **P 07 49 13.1 +0.6**
comp=Z,5μmcomp=Z,113nm,1.3s,mb5.6
CAL Calcutta 36.51 271 *e*PKP **P 07 49 12.1 -0.5**
RAMN Ramite 37.02 279 *e*P **P 07 49 17.1 +0.2**
comp=Z,298nm,0.6s,mb6.3
KMMI Kalianget 37.12 204 P **P 07 49 18.6 +0.8**
comp=Z,100nm,1.5s,mb5.4
TSI Tuntungan 37.17 235 P **P 07 49 20.6 +2.3**
JIRN Jiri 37.25 280 *e*P **P 07 49 19.9 +1.1**
comp=Z,99nm,0.3s,mb6.1
GUN Gumba 37.48 281 *e*P **P 07 49 21.3 +0.5**
comp=Z,272nm,0.4s,mb6.5
SRBI Singaraja 37.66 202 P **P 07 49 24.2 +1.9**
comp=Z,133nm,0.7s,mb5.8
BKNI Bangkinang 37.70 229 P **P 07 49 23.9 +1.2**
comp=Z,1μm,0.9s,mb6.6
KHKI Kahang-Kahang 37.79 201 P **P 07 49 23.9 +0.5**
comp=Z,133nm,0.8s,mb5.7
PKI Pulchoki 37.95 280 *e*P **P 07 49 24.4 -0.3**
comp=Z,505nm,0.7s,mb6.3
PKIN Phulchoki 37.95 280 *e*P **P 07 49 25.3 +0.5**
comp=Z,656nm,0.7s,mb6.5
KKN Kakani 38.02 281 *e*P **P 07 49 25.3 -0.1**
comp=Z,539nm,0.8s,mb6.3
KRAR Krasnoyarsk 38.12 328*c i*P **P 07 49 26.6 +0.8**
KRAR pmax pmax
comp=Z,39nm,0.6s,mb5.3
DMN Daman 38.20 280 *e*P **P 07 49 27.0 +0.1**
comp=Z,321nm,0.7s,mb6.2
BOK Bokaro 38.34 274 *e*PKP **P 07 49 28.5 +0.4**
BOK AMb AMB 07 49 30.5
comp=Z,196nm,0.6s,mb6.0
MNSI Mandailing Nat 38.34 231 P **P 07 49 28.4 +0.2**
comp=Z,7μmcomp=Z,337nm,1.1s,mb6.0
TPTI 38.35 236 P **P 07 49 27.8 -0.5**
comp=Z,2μmcomp=Z,90nm,1.9s,mb5.2
SDSI Sungai Dareh 38.38 227 P **P 07 49 29.4 +0.9**
comp=Z,4μmcomp=Z,279nm,1.6s,mb5.8
NGJI Ngawi 38.38 208 P **P 07 49 29.5 +1.0**
comp=Z,294nm,1.3s,mb5.9
SMRI Semarang 38.53 209 P **P 07 49 30.1 +0.4**
comp=Z,236nm,1.4s,mb5.7
GKN Gorkha 38.54 281 *e*P **P 07 49 29.6 -0.2**
comp=Z,556nm,0.5s,mb6.6
SJI Sawahan 38.59 207 P **P 07 49 30.1 -0.1**
comp=Z,646nm,1.5s,mb6.1
PPI Padang Panjang 38.70 229 P **P 07 49 32.0 +0.8**
comp=Z,6μmcomp=Z,398nm,1.5s,mb5.9
KRKI Karangkates 38.71 206 P **P 07 49 31.4 +0.2**
SEY Seymchan 38.72 17⇑ *i*P **P 07 49 29.9 -0.8**
PWJI Pagerwojo 38.84 207 P **P 07 49 31.0 -1.3**
comp=Z,5μmcomp=Z,225nm,1.1s,mb5.8
PDSI Padang 39.00 228 P **P 07 49 33.1 -0.6**
comp=Z,413nm,0.6s,mb6.3
UGM Wanagama 39.27 209 P **P 07 49 36.8 +0.9**
comp=Z,351nm,1.9s,mb5.8
KLSI 39.36 219 P **P 07 49 37.6 +1.0**
comp=Z,8μmcomp=Z,466nm,1.2s,mb6.1
KOLN Koldanda 39.49 281 *e*P **P 07 49 37.8 +0.1**
comp=Z,363nm,0.5s,mb6.3
MDSI Maura Dua 39.50 220 P **P 07 49 38.3 +0.5**
comp=Z,4μmcomp=Z,226nm,1.1s,mb5.8
LEM Lembang 39.64 213 P **P 07 49 40.1 +1.1**
comp=Z,7μmcomp=Z,465nm,1.1s,mb6.2
KSI Kapahiang 39.76 223 P **P 07 49 41.2 +1.2**
comp=Z,7μmcomp=Z,405nm,1.1s,mb6.1
RBSI Rajabasa 39.76 217 P **P 07 49 41.7 +1.7**
comp=Z,7μmcomp=Z,468nm,1.3s,mb6.1
SBJI Serang 39.79 216 P **P 07 49 42.2 +2.0**
comp=Z,746nm,1.6s,mb6.2
LWLI Liwa 40.00 220 P **P 07 49 42.0 0.0**
comp=Z,477nm,0.7s,mb6.3
KASI Kota Agung 40.17 219 P **P 07 49 42.5 -0.9**
comp=Z,3μmcomp=Z,202nm,1.1s,mb5.8
SISI Saibi 40.22 229 P **P 07 49 43.3 -0.5**
comp=Z,6μmcomp=Z,362nm,0.7s,mb6.2
KAKA Kakadu 40.22 174 *e*P **P 07 49 44.4 +0.6**
comp=Z,33nm,0.7s,mb5.2
KAKA *e*pP pP 07 49 54.6 -2.4
KAKA *e*PCP PcP 07 51 47.1 0.0
KAKA Kakadu 40.22 174 *e*P **P 07 49 43.9 +0.2**
comp=Z,914nm,1.1s,mb6.4
KAKA *e*pP pP 07 49 55.8 -1.2
KAKA *e*PcP PcP 07 51 47.2 +0.2
KAKA Kakadu 40.22 174 P **P 07 49 46.0 +2.2**
comp=Z,2μmcomp=Z,281nm,1.1s,mb5.9
CGJI Cibinong 40.44 216 P **P 07 49 43.4 -2.2**
comp=Z,171nm,1.1s,mb5.7
MK31 Makanchi Array 40.76 311 *e*P **P 07 49 47.0 -0.9**
MK31 *e* 07 51 48.0
MKAR Makanchi Array 40.76 311 P **P 07 49 46.9 -1.0**
comp=Z,49nm,0.6s,mb5.3,baz=96,slow=10,SNR=228
MKAR PcP PcP 07 51 48.2 -0.2
comp=Z,48nm,0.7s,baz=79,slow=4.2,SNR=9.2
MKAR LR LR 08 09 22.7
comp=Z,5μm,18.2s,MS5.4,baz=92,slow=40
MKAR Makanchi Array 40.76 311 P **P 07 49 46.9 -1.0**
MKAR 07 51 48.2
MKAR pmax pmax
comp=Z,49nm,0.6s
MKAR pmax pmax
comp=Z,48nm,0.7s
MKAR MLR MLR
comp=Z,5μm,18.2s
ZALV Zalesovo Beam 41.28 322 P **P 07 49 50.0 -2.1**
comp=Z,78nm,0.7s,mb5.4,baz=105,slow=9.6,SNR=147
ZALV PcP PcP 07 51 49.0 -0.9
comp=Z,60nm,0.9s,baz=105,slow=3.6,SNR=7.4
ZALV pPcP 07 52 04.8
comp=Z,30nm,0.8s,baz=90,slow=1.5,SNR=2.9
ZALV ScP ScP 07 55 36.7 +0.9
comp=Z,9.0nm,0.6s,baz=113,slow=4.5,SNR=3.0
ZALV LR LR 08 09 05.1
comp=Z,11μm,18.3s,MS5.8,baz=113,slow=39
ZALV Zalesovo Beam 41.28 322 P **P 07 49 50.0 -2.1**
ZALV 07 51 49.0
ZALV 07 52 04.8
ZALV pmax pmax
comp=Z,78nm,0.7s,mb5.5
ZALV pmax pmax
comp=Z,61nm,0.9s,mb5.2
ZALV pmax pmax
comp=Z,30nm,0.8s,mb5.0
ZALV pmax pmax
comp=N,9.0nm,0.6s
ZALV MLR MLR
comp=Z,11μm,18.3s,MS5.8
ALBI Allahabad 41.57 278 *e*PKP **P 07 49 52.5 -2.4**
SMY Shemya 42.08 41 *e*P **P 07 49 58.9 +0.3**
SMY pmax pmax
comp=Z,546nm,1.7s,mb5.9
SMY Shemya 42.08 41 *e*P **P 07 49 58.9 +0.3**
comp=Z,546nm,1.7s,mb5.9
PTH Pithoragarh 42.11 285 *e*x x 07 50 50.0
NVS Novosibirsk 42.47 323⇓ *i*P **P 07 50 01.1 -0.7**
NVS pmax pmax
comp=Z,167nm,1.2s,mb5.5
NVS pmax pmax
comp=N,53nm,1.0s
NVS pmax pmax
comp=E,127nm,1.0s
VIS Vishakhapatnam 42.51 266⇑ *i*P **P 07 50 02.3 -0.3**
VIS AMb AMB 07 50 06.0
comp=Z,177nm,0.6s,mb5.9
KNA Kununurra 43.05 179 P **P 07 50 05.5 -1.4**
comp=Z,2μm,1.1s,mb6.8
COEN Coen 43.70 159 *e*P **P 07 50 11.3 -0.8**
comp=Z,2μm,1.3s,mb6.8
COEN *e*pP pP 07 50 24.4 -1.0
COEN Coen 43.70 159 P **P 07 50 11.7 -0.4**
comp=Z,850nm,1.4s,mb6.3
DDI Dehra Dun 43.83 286 *e*PKP **P 07 50 13.6 +0.4**
DDI *e*x x 07 52 12.4
KURK Kurchatov 43.95 316 P **P 07 50 12.9 -0.9**
comp=Z,2μm,0.7s,mb6.9
KURK Kurchatov 43.95 316 *e*P **P 07 50 12.9 -0.9**
KURK pmax pmax
comp=Z,193nm,0.8s,mb5.9
KURK MLR MLR
comp=Z,15μm,19.0s,MS5.9
KURK Kurchatov 43.95 316 *e*P **P 07 50 12.9 -0.9**
comp=Z,194nm,0.8s,mb5.9
KURK LR LR
comp=Z,15μm,19.0s,MS5.9
AAA Alma-Ata 44.06 305 *i*P **P 07 50 15.4 +0.6**
AAA *i*S **S 07 56 48.0 +4.4**
AAA pmax pmax
comp=Z,2μm,4.2s
AAA smax
comp=E,3μm,8.5s
AAA MLR MLR
comp=Z,7μm,16.0s,MS5.7
TIXI Tiksi 44.13 0 *e*P **P 07 50 11.3 -3.7**
TIXI *e* 07 51 58.4
TIXI *e*S **S 07 56 38.2 -5.8**
TIXI *e* 08 00 02.6
TIXI pmax pmax
comp=Z,83nm,1.0s,mb5.4
TIXI MLR MLR
comp=Z,8μm,18.0s,MS5.7
TIXI Tiksi 44.13 0 *e*P **P 07 50 15.2 +0.2**
comp=Z,81nm,1.0s,mb5.4
TIXI *e*PcP PcP 07 51 59.2 0.0
TIXI LR LR
comp=Z,10μm,22.0s,MS5.7
ULHL Ulahol 44.53 303 P **P 07 50 20.3 +1.7**
SNR=6.5
SDNR Sundarnagar 44.57 288 *e*PKP **P 07 50 18.7 -0.4**
KSH Kashi 44.71 299 P **P 07 50 23.0 +2.9**
KSH pP pP 07 50 35.7 +2.3
KSH sP sP 07 50 40.6 +1.3
KSH PcP PcP 07 52 05.2 +3.4
KSH PP PP 07 52 09.6 +4.5
KSH ScP ScP 07 55 52.4 +2.4
KSH PcS PcS 07 55 57.6 +2.3
KSH S **S 07 56 55.2 +2.0**
KSH sS sS 07 57 17.3 +1.7
KSH ScS ScS 08 00 14.3 +1.0
KSH pmax pmax
comp=Z,110nm,0.7s,mb5.8
KSH pmax pmax
comp=Z,1μm,9.3s
KSH LR LR
comp=N,4μm,13.7s,MS5.7
KSH LR LR
comp=E,6μm,15.7s,MS5.7
KSH LR LR
comp=Z,11μm,17.1s,MS5.8
AMKA Amchitka 44.82 44 *e*P **P 07 50 20.1 -0.6**
comp=Z,189nm,1.0s,mb5.9
NDI New Delhi 44.85 284 *e*PKP **P 07 50 20.0 -1.3**
NDI *e*x x 07 56 50.0
BHK Bhakra 45.05 288 *e*x **P 07 50 19.8 -3.1**
NGP Nagpur 45.15 273 *e*PKP **P 07 50 22.9 -0.9**
NGP *e*x x 07 57 03.2
KZA Kyzart 45.26 303 P **P 07 50 27.1 +2.7**
SNR=25
FITZ Fitzroy Crossi 45.47 184 *e*P **P 07 50 24.5 -1.7**
comp=Z,204nm,0.8s,mb6.0
FITZ *e*pP pP 07 50 38.5 -1.1
FITZ *e* 07 52 24.8
FITZ *e*S **S 07 57 00.9 -3.4**
FITZ Fitzroy Crossi 45.47 184 *e*P **P 07 50 24.6 -1.6**
comp=Z,224nm,1.1s,mb5.9
FITZ *e*pP pP 07 50 38.6 -1.0
FITZ Fitzroy Crossi 45.47 184 P **P 07 50 25.0 -1.2**
comp=Z,7μmcomp=Z,466nm,1.3s,mb6.2
THN Thein Dam 45.49 289 *e*PKP **P 07 50 24.8 -1.6**
THN *e*x x 07 56 15.0
KBK Karagaybulak 45.50 304 P **P 07 50 28.1 +1.8**
SNR=54
CHMS Chumysh 45.65 304 P **P 07 50 28.8 +1.4**
SNR=71
FRU Bishkek 45.74 304⇓ *i*P **P 07 50 30.0 +1.8**
FRU *i* pP 07 50 45.0 +3.4
FRU *e* 07 52 14.0
FRU *e*S **S 07 57 08.0 -0.1**
FRU *e* 08 00 27.0
FRU pmax pmax
comp=Z,240nm,1.8s,mb5.8
FRU MLR MLR
comp=E,9μm,18.0s
AAK Ala-Archa 45.83 304 P **P 07 50 30.2 +1.3**
comp=E,526nm,0.9s,mb6.5,SNR=25
AAK Ala-Archa 45.83 304 P **P 07 50 30.3 +1.4**
SNR=5.6
AAK Ala-Archa 45.83 304 PFAKE 07 50 40.0 +11
AAK LR LR
comp=Z,6μm,20.0s,MS5.5
USP Ospenovka 45.84 305 P **P 07 50 30.1 +1.1**
SNR=64
BHPL Bhopal 45.97 277⇑ *i*P **P 07 50 28.8 -1.4**
BHPL AMb AMB 07 50 31.0
comp=Z,75nm,0.3s,mb6.1
EKS2 Erkin-Say 46.36 304 P **P 07 50 34.3 +1.3**
SNR=63
EKS2 Erkin-Say 46.36 304 *e*P **P 07 50 34.0 +1.0**
comp=Z,47nm,0.8s,mb5.5
EKS2 *e*PcP PcP 07 52 07.3 -0.1
EKS2 LR LR
comp=Z,6μm,20.0s,MS5.5
BILL Bilibino 46.37 19*c i*P **P 07 50 31.3 -1.5**
BILL *i* 07 52 06.4
BILL *i* 07 52 19.2
BILL pmax pmax
comp=Z,153nm,1.0s,mb5.9
BILL MLR MLR
comp=Z,2μm,16.0s,MS5.2
BILL Bilibino 46.37 19 *e*P **P 07 50 31.8 -0.9**
comp=Z,139nm,1.0s,mb5.8
BILL *e*PcP PcP 07 52 07.5 +0.5
BILL LR LR
comp=Z,8μm,20.0s,MS5.7
HYB Hyderabad 46.86 268 *i* P **P 07 50 37.0 -0.3**
comp=Z,80nm,1.0s,mb5.6
HYB *e*PP PP 07 52 28.0 -0.1
HYB *e*S **S 07 57 24.0 -0.6**
HYB LR LR 08 10 00.0
comp=Z,8.3nm,28.0s
MDRS Chennai 47.09 262 *e*x x 07 51 04.9
AKL Akola 47.10 273⇓ *i*P **P 07 50 38.7 -0.4**
AKL *e*x x 07 50 40.8
comp=Z,314nm,0.6s
AKL *i* x x 07 57 25.0
ADK Adak 47.37 44 *e*P **P 07 50 39.0 -1.8**
ADK pmax pmax
comp=Z,192nm,0.9s,mb6.0
ADK Adak 47.37 44 *e*P **P 07 50 39.0 -1.8**
comp=Z,192nm,0.9s,mb6.0
AJM Ajmer 47.56 282⇑ *i*P **P 07 50 42.4 -0.3**
AJM AMb AMB 07 50 43.2
comp=Z,121nm,0.4s,mb6.2
WRAB Tennant Creek 47.56 172 P **P 07 50 41.0 -1.6**
comp=Z,2μm,1.2s,mb6.9,SNR=24
WRAB Tennant Creek 47.56 172 *e*P **P 07 50 40.8 -1.8**
WRAB *e**PP pP 07 50 54.6 -1.5
WRAB *e*S **S 07 57 31.5 -2.8**
WRAB pmax pmax
comp=Z,533nm,1.3s,mb6.4
WRAB MLR MLR
comp=Z,5μm,20.0s,MS5.5
WRAB Tennant Creek 47.56 172 *e*P **P 07 50 40.8 -1.8**
comp=Z,533nm,1.3s,mb6.4
WRAB *e*pP pP 07 50 54.6 -1.5
WRAB *e*S **S 07 57 31.5 -2.8**
WRAB LR LR
comp=Z,5μm,20.0s,MS5.5
WRAB Tennant Creek 47.56 172 P **P 07 50 40.9 -1.7**
comp=Z,6μmcomp=Z,333nm,1.4s,mb6.2
WRA Warramunga Arr 47.57 172 P **P 07 50 40.7 -1.9**
comp=Z,43nm,0.6s,mb5.7,baz=354,slow=8.4,SNR=231
WRA pP pP 07 50 54.5 -1.6
comp=Z,257nm,1.1s,baz=355,slow=8.8,SNR=19
WRA PcP PcP 07 52 10.8 -1.1
comp=Z,16nm,0.7s,baz=350,slow=4.0,SNR=2.3
WRA LR LR 08 09 11.5
comp=Z,4μm,21.0s,MS5.4,baz=5.0,slow=34
WRA Warramunga Arr 47.57 172 P **P 07 50 40.7 -1.9**
WRA *PP pP 07 50 54.5 -1.6
WRA 07 52 10.8
WRA pmax pmax
comp=Z,43nm,0.6s
WRA pmax pmax
comp=Z,257nm,1.2s
WRA pmax pmax
comp=Z,16nm,0.7s
WRA Warramunga Arr 47.57 172 P **P 07 50 40.7 -1.9**
WRA pP pP 07 50 54.5 -1.6
WRA PcP PcP 07 52 10.8 -1.1
WRA LR LR 08 09 11.5
MIDW Midway 47.61 76 PFAKE 07 50 50.0 +6.9
MIDW LR LR
comp=Z,3μm,19.0s,MS5.2
HNR Honiara 47.83 136 PFAKE 07 51 00.0 +15
HNR LR LR
comp=Z,3μm,21.0s,MS5.3
LATR Latur 48.27 271 *e*PKP **P 07 50 48.5 +0.2**
KK31 Karatay Array 48.76 304 *i* P **P 07 50 52.2 +0.5**
MBWA Marble Bar 49.15 191 *e*P **P 07 50 52.7 -2.1**
comp=Z,310nm,1.4s,mb6.2
MBWA *e*pP pP 07 51 06.4 -1.9
MBWA LR LR
comp=Z,2μm,19.0s,MS5.1
MBWA Marble Bar 49.15 191 P **P 07 50 53.1 -1.7**
comp=Z,3μmcomp=Z,163nm,1.4s,mb5.9
MBWA Marble Bar 49.15 191 P sP 07 51 06.4 -7.7
SNR=5.0
BVAR Borovoye Array 49.38 318 P **P 07 50 55.0 -1.2**
comp=Z,133nm,0.7s,mb6.1,baz=102,slow=10.0,SNR=331
BVAR PcP PcP 07 52 17.8 -0.3
comp=Z,56nm,0.7s,baz=114,slow=3.2,SNR=7.0

BVAR ScP ScP 07 56 10.0 +0.8
comp=Z,3.5nm,0.8s,baz=162,slow=0.9,SNR=2.9
BVAR LR LR 08 13 51.6
comp=Z,509nm,18.0s,MS4.6,baz=105,slow=38
BVAR Borovoye Array 49.38 318 P **P 07 50 55.0 -1.2**
BVAR 07 52 17.8
BVAR pmax pmax
comp=Z,133nm,0.7s
BVAR pmax pmax
comp=Z,56nm,0.7s
BVAR pmax pmax
comp=N,4.0nm,0.8s
BVAR MLR MLR
comp=Z,509nm,18.0s
PALK Pallekele 49.39 255 P **P 07 50 58.1 +1.3**
comp=Z,632nm,0.6s,mb6.8,SNR=10
BRVK Borovoye 49.45 318 P **P 07 50 56.7 0.0**
comp=Z,2μm,0.8s,mb7.2,SNR=66
BRVK Borovoye 49.45 318 *c iP* **P 07 50 55.7 -1.0**
BRVK pmax pmax
comp=Z,456nm,1.2s,mb6.4
BRVK Borovoye 49.45 318 *eP* **P 07 50 56.5 -0.3**
comp=Z,253nm,0.8s,mb6.3
BRVK LR LR
comp=Z,35μm,19.0s,MS6.4
BRVK Borovoye 49.45 318 P **P 07 50 56.6 -0.2**
SNR=98
COCO West Island 49.97 222 PFAKE 07 51 10.0 +8.9
COCO LR LR
comp=Z,2μm,22.0s,MS5.1
COCO West Island 49.97 222 P **P 07 51 00.1 -1.0**
comp=Z,172nm,1.9s,mb5.8
ZRNK Zerenda 50.20 317 *i* P **P 07 51 01.8 -0.7**
ZRNK pmax pmax
comp=Z,164nm,0.7s,mb6.2
CTA Charters Tower 50.43 158 *eP* **P 07 51 03.3 -1.2**
comp=Z,42nm,0.8s,mb5.5
CTA *ep*P pP 07 51 16.2 -1.9
CTA *e*S **S 07 58 12.4 -2.2**
CTAO Charters Tower 50.43 158 *eP* **P 07 51 03.5 -1.0**
CTAO *e**PP pP 07 51 16.1 -2.0
CTAO pmax pmax
comp=Z,641nm,1.0s,mb6.6
CTAO MLR MLR
comp=Z,4μm,20.0s,MS5.4
CTAO Charters Tower 50.43 158 *eP* **P 07 51 03.5 -1.1**
comp=Z,641nm,1.0s,mb6.6
CTAO *ep*P pP 07 51 16.1 -2.0
CTAO LR LR
comp=Z,4μm,20.0s,MS5.4
CTAO Charters Tower 50.43 158 P **P 07 51 03.4 -1.1**
comp=Z,5μmcomp=Z,592nm,1.1s,mb6.5
POO Poona 50.64 272⇑ *iP* **P 07 51 05.0 -1.3**
comp=Z,300nm,1.0s,mb6.2
POO *e*PKP 07 51 06.4
POO AMb AMB 07 51 09.7
comp=Z,323nm,1.6s,mb6.0
KBL Kabul 50.69 293 *eP* **P 07 51 07.3 +0.8**
KBL pmax pmax
comp=Z,461nm,0.6s,mb6.6
KBL Kabul 50.69 293 *eP* **P 07 51 07.2 +0.8**
comp=Z,461nm,0.6s,mb6.6
KAD Karad 50.78 270 *e*PKP **P 07 51 07.0 -0.4**
ASAR Alice Springs 51.20 173 P **P 07 51 08.8 -1.4**
comp=Z,42nm,0.7s,mb5.5,baz=3.8,slow=9.3,SNR=189
ASAR pP pP 07 51 22.0 -1.9
comp=Z,126nm,0.8s,baz=360,slow=9.4,SNR=23
ASAR PcP PcP 07 52 23.6 -1.5
comp=Z,28nm,1.0s,baz=345,slow=3.7,SNR=2.2
ASAR *p*PcP 07 52 38.5
comp=Z,17nm,0.7s,baz=350,slow=2.7,SNR=1.4
ASAR Alice Springs 51.20 173 P **P 07 51 08.9 -1.4**
ASAR *PP pP 07 51 22.0 -1.9
ASAR 07 52 23.6
ASAR pmax pmax
comp=Z,42nm,0.7s
ASAR pmax pmax
comp=Z,126nm,0.8s
ASAR pmax pmax
comp=Z,28nm,1.0s
ASAR pmax pmax
comp=Z,17nm,0.7s
SPIA Saint Paul Isl 51.86 37 *eP* **P 07 51 15.3 +0.4**
TRD Trivandrum 52.02 259⇑ *ex* pP 07 51 24.5 -5.9
GAMB Gambell 52.41 29 *eP* **P 07 51 19.0 +0.2**
comp=Z,168nm,1.0s,mb5.9
GAMB *ep*P pP 07 51 33.0 +0.5
BHJ Bhuj 52.80 279 *e*PKP **P 07 51 22.6 +0.2**
BHJ AMb AMB 07 51 24.4
comp=Z,228nm,0.4s,mb6.5
UNV Unalaska Valle 53.70 42 *eP* **P 07 51 26.1 -2.4**
comp=Z,65nm,0.8s,mb5.6
AKUT Akutan 54.14 41 *eP* **P 07 51 29.3 -2.4**
comp=Z,161nm,1.0s,mb5.9
TNA Tin City 54.40 27 *eP* **P 07 51 33.9 +0.5**
comp=Z,570nm,0.9s,mb6.5
SVE Sverdlovsk 55.30 322⇑ *eP* **P 07 51 39.9 -0.1**
SVE *e* 07 52 40.2
SVE *e* 07 53 43.3
SVE *e*PPP 07 55 00.0
SVE *e*S **S 07 59 23.4 +3.3**
SVE pmax pmax
comp=Z,216nm,0.8s,mb6.2
SVE MLR MLR
comp=Z,16μm,16.0s,MS6.2
MNCY Minicoy 55.57 261 *i* x **P 07 51 45.0 +2.4**
MNCY *i* x x 07 52 36.0
AB31 Akbulak array 55.84 313 *i* P **P 07 51 43.2 -0.9**
ABKAR Akbulak array 55.84 313 *eP* **P 07 51 43.0 -1.1**
comp=Z,143nm,0.7s,mb6.1
ARU Arti 56.44 321 P **P 07 51 47.6 -0.6**
comp=Z,2μm,0.8s,mb7.2,SNR=43
ARU Arti 56.44 321 *c iP* **P 07 51 47.0 -1.2**
ARU *PP pP 07 52 02.9 +0.9
ARU *e* 07 52 41.9
ARU *e* 07 53 54.5
ARU *e*PPP 07 55 07.1
ARU S **S 07 59 36.4 +1.1**
ARU 08 01 28.8
ARU pmax pmax
comp=Z,281nm,0.8s,mb6.3
ARU MLR MLR
comp=Z,12μm,15.0s,MS6.1
ARU Arti 56.44 321 *eP* **P 07 51 47.3 -0.9**
comp=Z,297nm,0.8s,mb6.4
ARU LR LR
comp=Z,9μm,19.0s,MS5.9
EIDS Eidsvold 56.99 155 *eP* **P 07 51 52.3 -0.2**
comp=Z,313nm,1.3s,mb6.2
EIDS *ep*P pP 07 52 03.3 -2.9
SDPT Sand Point 57.21 40 *eP* **P 07 51 51.8 -1.9**
comp=Z,114nm,0.8s,mb6.0
SOKR Solikamsk 57.39 325 *c iP* **P 07 51 54.8 -0.1**
SOKR 07 53 58.7
SOKR S **S 07 59 44.9 -2.9**
SOKR pmax pmax
comp=Z,120nm,0.8s,mb6.0
SOKR MLR MLR
comp=Z,10μm,22.0s,MS5.9
JOHN Johnston Islan 58.01 87 PFAKE 07 52 10.0 +10
JOHN LR LR
comp=Z,3μm,20.0s,MS5.4
FORT Forrest 58.01 180 *eP* **P 07 51 58.7 -0.8**
comp=Z,135nm,0.8s,mb6.0
FORT *ep*P pP 07 52 11.3 -2.1
FORT Forrest 58.01 180 *eP* **P 07 51 58.1 -1.4**
comp=Z,291nm,0.8s,mb6.4
FORT *ep*P pP 07 52 12.6 -0.8
ISRO Mashad 58.03 297 *eP* **P 07 52 01.3 +1.5**
IMOG Moghan 58.18 297 *eP* **P 07 52 03.1 +2.2**
CHGN Chignik 58.33 39 *eP* **P 07 51 59.9 -1.7**
IAKL Akhelmad 58.53 298 *eP* **P 07 52 04.6 +1.3**
IDAH Dahanechah 58.54 293 *eP* **P 07 52 04.6 +1.2**
IKRD Kardeh 58.68 298 *eP* **P 07 52 00.0 -4.4**
ABKT Ailbek 58.74 299 P **P 07 52 05.4 +0.7**
comp=Z,543nm,0.7s,mb6.7,SNR=25
ISFR Sfrayin 59.02 298 *eP* **P 07 52 07.6 +0.9**
ISHV Shirvan 59.15 299 *eP* **P 07 52 09.2 +1.6**
TTA Tatalina 59.33 31 *eP* **P 07 52 09.5 +1.2**
ITEG Tejag 59.41 294 *eP* **P 07 52 10.7 +1.2**
SVW2 Sparrevohn 59.58 33 *eP* **P 07 52 10.2 +0.1**
comp=Z,174nm,0.9s,mb6.1
KLBR Kellerberrin 59.69 190 *eP* **P 07 52 09.6 -1.5**
comp=Z,68nm,0.9s,mb5.7
KLBR *ep*P pP 07 52 21.8 -3.2

STKA Stephens Creek 60.43 167 *eP* **P 07 52 14.4 -1.8**
comp=Z,34nm,0.7s,mb5.5
STKA *ep*P pP 07 52 27.7 -2.4
STKA *e*S **S 08 00 23.6 -4.1**
STKA Stephens Creek 60.43 167 P **P 07 52 14.7 -1.6**
comp=Z,38nm,0.7s,mb5.6,baz=343,slow=6.8,SNR=65
STKA LR LR 08 19 22.4
comp=Z,3μm,18.8s,MS5.4,baz=344,slow=37
STKA PKP2bc 08 21 43.3
comp=Z,2.5nm,0.8s,baz=300,slow=3.0,SNR=3.0
STKA Stephens Creek 60.43 167 *eP* **P 07 52 14.4 -1.8**
comp=Z,43nm,1.0s,mb5.4
STKA *ep*P pP 07 52 27.8 -2.4
FUNA Funafuti 60.86 119 PFAKE 07 52 30.0 +10
FUNA LR LR
comp=Z,14μm,19.0s,MS6.1
RSO Redoubt South 61.01 34 *eP* **P 07 52 19.7 -0.2**
OHAK Old Harbor 61.07 37 *eP* **P 07 52 18.1 -2.2**
comp=Z,226nm,1.2s,mb6.2
PPLA Purkeypile 61.08 31 *eP* **P 07 52 20.8 +0.5**
comp=Z,349nm,1.1s,mb6.4
PPLA *ep*P pP 07 52 34.9 +0.7
NWAO Narrogin (SRO) 61.08 191 PFAKE 07 52 30.0 +9.4
NWAO LR LR
comp=Z,1μm,20.0s,MS5.0
KDAK Kodiak Island 61.38 37 P **P 07 52 22.0 -0.4**
comp=Z,474nm,0.8s,mb6.7,baz=285,slow=3.0,SNR=329
KDAK LR LR 08 15 27.4
comp=Z,1μm,21.1s,MS5.0,baz=254,slow=32
KDAK Kodiak Island 61.38 37 *eP* **P 07 52 21.8 -0.7**
comp=Z,537nm,0.9s,mb6.7
KDAK LR LR
comp=Z,2μm,22.0s,MS5.2
NOUC Port Laguerre 61.49 140 *eP* **P 07 52 23.2 -0.4**
BPAW Bear Paw Mtn. 61.52 30 *eP* **P 07 52 23.4 +0.1**
comp=Z,183nm,1.0s,mb6.2
DZM Mont Dzumac 61.55 139 *eP* **P 07 52 24.2 +0.2**
comp=Z,106nm,0.9s,mb6.0
DZM *e*S **S 08 00 44.2 +1.9**
comp=Z,10μm,33.9s
DZM *e*LR LR 08 10 43.4
comp=Z,12μm,23.1s
DZM Mont Dzumac 61.55 139 *eP* **P 07 52 20.8 -3.2**
COLD Coldfoot 61.61 26 *eP* **P 07 52 24.3 +0.4**
comp=Z,173nm,0.9s,mb6.2
COLD *ep*P pP 07 52 39.6 +1.8
ARMA Armidale 61.79 157 *eP* **P 07 52 24.5 -0.9**
ARMA *ep*P pP 07 52 37.7 -1.7
ARMA *e*S **S 08 00 39.0 -6.0**
ARMA Armidale 61.79 157 *eP* **P 07 52 24.8 -0.6**
comp=Z,415nm,1.3s,mb6.4
ARMA *ep*P pP 07 52 37.8 -1.6
TRF Thorofare Moun 61.89 30 *eP* **P 07 52 25.8 0.0**
comp=Z,96nm,0.9s,mb5.9
WBK Wadi Bani Khal 62.32 282 P **P 07 52 30.8 +1.4**
SNR=11
IBAF Bafgh 62.36 293 *eP* **P 07 52 30.2 +0.7**
IGLO Ghaloghah 62.41 299 *eP* **P 07 52 30.8 +1.1**
RC01 Rabbit Creek A 62.41 33 *eP* **P 07 52 28.8 -0.5**
comp=Z,283nm,1.1s,mb6.3
RC01 *ep*P pP 07 52 42.7 -0.6
MCK McKinley 62.46 30 *eP* **P 07 52 29.5 -0.1**
MCK pmax pmax
comp=Z,449nm,1.1s,mb6.5
MCK McKinley 62.46 30 *eP* **P 07 52 29.5 -0.1**
comp=Z,449nm,1.1s,mb6.5
IKIA Kiasar 62.60 299 *eP* **P 07 52 32.4 +1.4**
IANJ Anjilo 62.61 298 *eP* **P 07 52 32.3 +1.2**
PMR Palmer 62.64 32 *eP* **P 07 52 29.1 -1.7**
PMR pmax pmax
comp=Z,336nm,1.2s,mb6.3
PMR Palmer 62.64 32 *eP* **P 07 52 29.1 -1.7**
comp=Z,336nm,1.2s,mb6.3
COLA College 62.79 29⇑ *iP* **P 07 52 31.5 -0.3**
COLA College 62.79 29 *eP* **P 07 52 31.8 +0.1**
comp=Z,116nm,0.8s,mb6.1
COLA LR LR
comp=Z,1μm,21.0s,MS5.1
SMDO Samad 62.97 283 P **P 07 52 34.7 +1.1**
SNR=26
ISHM Shahmirzad 63.01 298 *eP* **P 07 52 34.8 +1.0**
ICHK Chekchek 63.12 294 *eP* **P 07 52 35.1 +0.5**
JMDO Jabal Madar 63.16 282 P **P 07 52 35.8 +0.8**
SNR=16
IMEH Mehriz 63.20 293 *eP* **P 07 52 34.9 -0.2**
IALA Alasht 63.31 299 *eP* **P 07 52 36.4 +0.6**
ILAS Lasjerd 63.39 298 *eP* **P 07 52 37.3 +1.0**
HOQ Hoqain 63.42 284 P **P 07 52 37.7 +1.0**
SNR=33
IFIR Firoozkooh 63.48 298 *eP* **P 07 52 38.5 +1.6**
IPRN Peran 63.63 299 *eP* **P 07 52 37.7 -0.2**
ISAD Sadrabad 63.80 294 *eP* **P 07 52 39.2 +0.1**
BSY Bisya 63.81 283 P **P 07 52 39.9 +0.7**
SNR=26
HATD Hatta, Dubai 64.01 286 P **P 07 52 42.2 +1.6**
SNR=9.2
IDMV Damavand 64.06 298 *eP* **P 07 52 41.5 +0.8**
ASHO Ashiyiah 64.12 286 P **P 07 52 42.5 +1.2**
SNR=15
ARQ Araqi 64.19 284 P **P 07 52 42.6 +0.9**
SNR=14
ISFB Sefidab 64.24 297 *eP* **P 07 52 42.2 +0.3**
DGAR Diego Garcia 64.25 246 PFAKE 07 52 50.0 +7.8
DGAR LR LR
comp=Z,3μm,20.0s,MS5.5
DIV Divide 64.31 32 *eP* **P 07 52 41.9 +0.1**
comp=Z,395nm,0.9s,mb6.4
NAZ Nazwa, Dubai 64.36 286 P **P 07 52 43.5 +0.7**
SNR=14
IVRN Varamin 64.46 298 *eP* **P 07 52 42.9 -0.5**
IVRN *ep* 07 52 43.3
IZEF Zefreh 64.60 295 *eP* **P 07 52 43.9 -0.4**
RIV Riverview 64.76 159 *eP* **P 07 52 45.3 +0.2**
RIV *ep*P pP 07 52 58.1 -1.0
ASUD Al Ashush, Dub 64.77 286 P **P 07 52 46.7 +1.3**
SNR=12
IR3 Iran Long-Peri 64.88 298 *eP* **P 07 52 45.8 -0.2**
BMRM Bremner River 64.90 33 *eP* **P 07 52 45.4 -0.3**
comp=Z,435nm,1.0s,mb6.4
BMRM *ep*P pP 07 53 01.5 +1.8
MENT Mentasta 64.91 30 *eP* **P 07 52 46.1 +0.3**
IPAR Pars 64.96 292 *eP* **P 07 52 47.4 +0.7**
IGAR Gharneh 64.98 295 *eP* **P 07 52 47.6 +0.8**
IKLH Kolahrood 65.08 296 *eP* **P 07 52 47.9 +0.5**
MAK Makhachkala 65.42 307 *eP* **P 07 52 46.6 -2.8**
MAK *e* 07 53 17.9
MAK *e* 07 55 09.7
MAK *i* S S 08 01 26.5 -3.7
MAK pmax pmax
comp=Z,213nm,1.5s,mb6.0
MAK pmax pmax
comp=N,61nm,0.5s
MAK pmax pmax
comp=E,87nm,0.6s
MAK pmax pmax
comp=Z,1μm,3.2s
MAK smax
comp=E,3μm,11.6s
MAK smax
comp=N,2μm,9.3s
MAK MLR MLR
comp=Z,5μm,16.0s,MS5.8
MAK MLR MLR
comp=N,4μm,17.0s,MS5.8
MAK MLR MLR
comp=E,2μm,12.0s,MS5.8
MAK Makhachkala 65.42 307 *eP* **P 07 52 49.8 +0.4**
CAN Canberra 65.51 162 *eP* **P 07 52 49.4 -0.5**
CAN *e**PP pP 07 53 02.5 -1.4
CAN pmax pmax
comp=Z,485nm,1.4s,mb6.3
CAN MLR MLR
comp=Z,4μm,22.0s,MS5.5
CAN Canberra 65.51 162 *eP* **P 07 52 49.4 -0.5**
comp=Z,485nm,1.4s,mb6.3
CAN *ep*P pP 07 53 02.5 -1.4
CAN LR LR
comp=Z,4μm,22.0s,MS5.5
CNB Canberra Magne 65.60 161 *eP* **P 07 52 50.0 -0.5**
CNB *ep*P pP 07 53 03.3 -1.3
CNB *e*S S 08 01 33.2 +0.9
EGAK Eagle 65.62 28 *eP* **P 07 52 50.2 -0.2**
comp=Z,126nm,0.8s,mb6.0
EGAK LR LR
comp=Z,1μm,22.0s,MS5.1

IRAZ Razeghan 65.75 299 *eP* **P 07 52 52.2 +0.5**
IPIR Pirpir 65.82 296 *eP* **P 07 52 53.7 +1.5**
MSVF Nonsavu 65.91 127 *eP* **P 07 52 53.5 +0.6**
comp=Z,134nm,1.1s,mb5.9
MSVF *ep*P pP 07 53 07.3 +0.5
MSVF LR LR
comp=Z,3μm,20.0s,MS5.5
LVZ Lovozero 66.16 336⇑ *iP* **P 07 52 53.5 -0.2**
LVZ MLR MLR
comp=Z,4μm,22.0s,MS5.6
KIP Kipapa 66.39 77 *eP* **P 07 52 55.5 -0.5**
KIP *e**PP pP 07 53 09.0 -1.1
KIP pmax pmax
comp=Z,83nm,0.9s,mb5.8
KIP MLR MLR
comp=Z,5μm,22.0s,MS5.7
KIP Kipapa 66.39 77 *eP* **P 07 52 55.5 -0.5**
comp=Z,84nm,0.9s,mb5.8
KIP *ep*P pP 07 53 09.0 -1.0
KIP LR LR
comp=Z,5μm,22.0s,MS5.7
DAWY Dawson 66.54 29 *eP* **P 07 52 56.2 -0.1**
APA Apatity 66.70 335⇓ *iP* **P 07 52 57.0 -0.2**
APA *i* pP 07 53 12.0 +0.7
APA *i* 07 55 24.0
APA *i* S S 08 01 46.0 +1.0
APA *i* PS 08 02 10.0
APA *i* 08 02 48.0
APA pmax pmax
comp=Z,195nm,1.0s,mb6.1
APA MLR MLR
comp=Z,2μm,22.0s,MS5.2
TOO Toolangi 66.75 165 *eP* **P 07 52 57.0 -0.8**
TOO *ep*P pP 07 53 10.6 -1.3
TOO *e*S S 08 01 44.9 -1.2
IHRS Heris 67.08 302 *eP* **P 07 53 00.5 +0.3**
DGRG David-gareji 67.37 306 P **P 07 53 03.0 +1.1**
DGRG S SKSac 08 02 40.6 -15
SPITS Spitsbergen Ar 67.56 348 LR LR 08 26 55.3
comp=Z,5μm,19.4s,MS5.8,baz=50,slow=40
INK Inuvik 67.62 23 P **P 07 53 02.3 -0.7**
comp=Z,126nm,0.9s,mb6.0,baz=295,slow=6.1,SNR=125
INK sP sP 07 53 19.4 -3.4
comp=Z,129nm,1.0s,baz=272,slow=7.8,SNR=6.9
INK PcP PcP 07 53 28.5 -1.3
comp=Z,36nm,0.8s,baz=275,slow=3.3,SNR=4.4
INK LR LR 08 24 11.0
comp=Z,2μm,21.1s,MS5.2,baz=274,slow=37
INK Inuvik 67.62 23 P **P 07 53 02.3 -0.7**
INK *SP sP 07 53 19.5 -3.3
INK 07 53 28.5
INK pmax pmax
comp=Z,126nm,0.9s
INK pmax pmax
comp=Z,129nm,1.0s
INK pmax pmax
comp=Z,36nm,0.8s
INK MLR MLR
comp=Z,2μm,21.1s
INK Inuvik 67.62 23 *eP* **P 07 53 02.8 -0.2**
comp=Z,254nm,1.1s,mb6.2
MTA Mtatsminda 67.71 306 P **P 07 53 04.0 -0.1**
PNL Peninsula 67.73 33 *eP* **P 07 53 04.0 +0.2**
comp=Z,315nm,0.8s,mb6.4
TBLG Delisi 67.74 307 *eP* **P 07 53 05.9 +1.7**
TBLG Delisi 67.74 307 P **P 07 53 05.9 +1.7**
ITBZ Tabriz 67.78 303 *eP* **P 07 53 02.7 -1.9**
KBS Kingsbay 67.97 349⇑ *iP* **P 07 53 04.1 -1.0**
KBS *e*S S 08 02 00.2 +0.3
KBS AMS AMS 08 23 22.9
comp=Z,5μm,21.5s,MS5.7
KBS Kingsbay 67.97 349 *c iP* **P 07 53 04.4 -0.7**
KBS pmax pmax
comp=Z,46nm,0.6s,mb5.7
KBS Kingsbay 67.97 349 *eP* **P 07 53 04.2 -0.9**
comp=Z,53nm,0.7s,mb5.7
KBS LR LR
comp=Z,5μm,21.0s,MS5.8
ZEI Tsey 68.02 308 *eP* **P 07 53 04.8 -1.2**
ZEI *e* 07 55 35.2
ZEI *e*PPP 07 57 12.5
ZEI *e*S S 08 02 01.6 0.0
ZEI *e* 08 02 57.5
ZEI *e*SS SS 08 06 25.2 +1.2
ZEI pmax pmax
comp=Z,183nm,0.9s,mb6.1
ZEI pmax pmax
comp=N,134nm,1.0s
ZEI pmax pmax
comp=E,174nm,0.8s
ZEI MLR MLR
comp=Z,5μm,21.0s,MS5.7
MOS Moscow 68.10 322 *eP* **P 07 53 03.4 -2.9**
MOS *e* 07 53 29.9
MOS *e* 08 02 28.2
MOS pmax pmax
comp=Z,271nm,0.8s,mb6.3
MOS pmax pmax
comp=Z,400nm,1.0s,mb6.4
MOS MLR MLR
comp=N,6μm,17.0s,MS6.3
MOS MLR MLR
comp=E,14μm,17.0s,MS6.3
MOS MLR MLR
comp=Z,16μm,17.0s,MS6.3
MOS Moscow 68.10 322 *eP* **P 07 53 02.8 -3.5**
GOR Gori 68.11 307 P **P 07 53 08.0 +1.4**
KEH Kehvi 68.13 307 P **P 07 53 06.4 -0.3**
ISHB Shabestar 68.16 303 *eP* **P 07 53 07.7 +0.7**
GNI Garni 68.22 305 *c iP* **P 07 53 08.4 +1.1**
GNI pmax pmax
comp=Z,227nm,1.7s
GNI Garni 68.22 305 *eP* **P 07 53 08.7 +1.4**
comp=Z,74nm,0.8s,mb5.8
GNI LR LR
comp=Z,4μm,21.0s,MS5.6
GNI Garni 68.22 305 P **P 07 53 08.6 +1.3**
SNR=23
KEV Kevo 68.25 338 *eP* **P 07 53 05.9 -1.1**
KEV pmax pmax
comp=Z,385nm,0.8s,mb6.5
KEV Kevo 68.25 338 *eP* **P 07 53 05.9 -1.1**
comp=Z,385nm,0.8s,mb6.5
KEV Kevo 68.25 338 *ep* **P 07 53 05.9 -1.1**
comp=Z,385nm,0.8s,mb6.5
RBK Rabkut 68.37 279 P **P 07 53 09.3 +0.7**
SNR=9.7
ONI Oni 68.39 308 P **P 07 53 08.3 0.0**
ONI S S 08 01 58.8 -7.2
IVIS Veis 68.43 299 *eP* **P 07 53 07.9 -0.8**
KIV Kislovodsk 68.50 309 P **P 07 53 09.6 +0.6**
comp=Z,2μm,1.4s,mb6.9,SNR=40
KIV Kislovodsk 68.50 309 *c iP* **P 07 53 09.1 +0.1**
KIV *e*S S 08 02 09.6 +2.3
KIV pmax pmax
comp=Z,392nm,1.1s,mb6.3
KIV pmax pmax
comp=Z,342nm,3.1s
KIV MLR MLR
comp=Z,3μm,19.0s,MS5.6
KIV Kislovodsk 68.50 309 *eP* **P 07 53 09.7 +0.8**
comp=Z,503nm,1.2s,mb6.4
KIV LR LR
comp=Z,4μm,21.0s,MS5.6
KIV Kislovodsk 68.50 309 P **P 07 53 10.4 +1.4**
SNR=76
VORD Divnogorie 68.56 317 *eP* **P 07 53 08.5 -0.7**
VORD *e**PP pP 07 53 18.7 -4.6
VORD *e* 07 55 38.4
VORD *e*PPP 07 57 21.2
VORD *e*S S 08 02 05.4 -2.4
VORD pmax pmax
comp=Z,110nm,1.2s,mb5.7
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,190nm,1.2s
VORD pmax pmax
comp=Z,50nm,1.8s,mb5.1
VORD pmax pmax
comp=N,130nm,0.9s
VORD pmax pmax
comp=E,70nm,0.9s
VORD smax
comp=E,30nm,0.6s

VORD smax
comp=Z,140nm,3.3s
VORD smax
comp=N,20nm,0.8s
VORD MLR MLR
comp=N,3µm,20.0s,MS6.0
VORD MLR MLR
comp=E,8µm,20.0s,MS6.0
VORD MLR MLR
comp=Z,12µm,20.0s,MS6.1
VSR Storozhevoye 68.56 317 *c iP* **P 07 53 08.6 -0.6**
VSR *e**PP pP 07 53 17.9 -5.4
VSR *e**SP sP 07 53 21.7 -7.3
VSR *e* 07 55 39.1
VSR *e*PPP 07 57 19.8
VSR *e*S S 08 02 05.5 -2.3
VSR *e*SSS 08 09 38.0
VSR pmax pmax
comp=Z,110nm,0.5s,mb6.0
VSR pmax pmax
comp=N,80nm,1.0s
VSR pmax pmax
comp=E,160nm,1.0s
VSR pmax pmax
comp=N,100nm,1.0s
VSR pmax pmax
comp=E,200nm,1.0s
VSR pmax pmax
comp=Z,320nm,1.0s,mb6.2
VSR pmax pmax
comp=Z,120nm,2.3s,mb5.4
VSR pmax pmax
comp=N,60nm,1.1s
VSR pmax pmax
comp=E,50nm,1.1s
VSR smax
comp=E,40nm,1.6s
VSR smax
comp=Z,90nm,3.3s
VSR smax
comp=N,20nm,0.8s
VSR MLR MLR
comp=Z,15µm,21.0s,MS6.2
WHFO Wadi Hawf 68.58 280 P **P 07 53 10.1 +0.2**
SNR=11
BJO Bjornoya 68.60 344 *e*P **P 07 53 09.2 +0.1**
BJO AMS AMS 08 24 30.5
comp=Z,4µm,19.9s,MS5.6
BJO1 Bjornoya 68.65 344 *e*P **P 07 53 09.2 -0.2**
BJO1 LR LR
comp=Z,4µm,19.9s,MS5.6
IGHG Ghaleghazi 68.71 298 *e*P **P 07 53 08.7 -1.8**
IDHR Dehrash 68.73 299 *e*P **P 07 53 10.4 -0.2**
ARCES ARCESS Array B 68.82 338 P **P 07 53 09.9 -0.6**
comp=Z,185nm,0.8s,mb6.1,baz=52,slow=8.1,SNR=205
ARCES PcP PcP 07 53 33.8 -1.0
comp=Z,28nm,0.7s,baz=348,slow=5.1,SNR=5.8
ARCES LR LR 08 29 13.2
comp=Z,4µm,18.1s,MS5.7,baz=245,slow=41
ARCES ARCESS Array B 68.82 338 P **P 07 53 09.9 -0.6**
ARCES 07 53 33.8
ARCES pmax pmax
comp=Z,185nm,0.8s
ARCES pmax pmax
comp=Z,28nm,0.7s
ARE0 ARCESS Array S 68.82 338 *e*P **P 07 53 09.5 -1.0**
OBN Obninsk 68.86 322 ⇑*iP* **P 07 53 10.4 -0.6**
OBN *i* 07 53 39.3
OBN *e* 07 55 44.0
OBN *i* S S 08 02 15.2 +4.0
OBN *i* SS SS 08 06 38.9 +2.4
OBN pmax pmax
comp=Z,87nm,0.8s,mb5.7
OBN MLR MLR
comp=Z,18µm,20.0s,MS6.3
OBN Obninsk 68.86 322 *e*P **P 07 53 10.2 -0.8**
comp=Z,106nm,0.7s,mb5.9
OBN LR LR
comp=Z,15µm,19.0s,MS6.2
JOF Joensuu 68.95 331 *e*P **P 07 53 10.4 -1.0**
JOF pmax pmax
comp=Z,144nm,0.7s,mb6.0
JOF Joensuu 68.95 331 *ep* **P 07 53 10.4 -1.0**
comp=Z,144nm,0.7s,mb6.0
CLDR Caldiran 69.14 304 *e*P **P 07 53 13.6 +0.6**
POHA Pohakuloa 69.17 78 *e*P **P 07 53 13.7 +0.1**
comp=Z,289nm,0.8s,mb6.3
POHA *e*pP pP 07 53 27.4 -0.2
POHA LR LR
comp=Z,3µm,21.0s,MS5.5
ABTO Aybut 69.22 279 P **P 07 53 14.5 +0.7**
SNR=8.9
KHU Kahuku 69.29 79 *e*P **P 07 53 14.0 -0.3**
KHU *e**PP pP 07 53 28.1 -0.3
KBD Kabd 69.58 293 *e*P **P 07 53 15.8 -0.2**
KBD AMb AMB 07 53 16.7
comp=Z,219nm,0.7s,mb6.2
AGRB Hanur-Agry 69.68 305 *e*P **P 07 53 16.6 +0.2**
VANB Van 69.71 304 *e*P **P 07 53 17.1 +0.5**
SKAG Skagway 69.76 33 *e*P **P 07 53 17.2 +0.7**
comp=Z,259nm,1.2s,mb6.0
KTK1 Kautokeino 69.77 338 *e*P **P 07 53 16.0 -0.4**
RDF Al-Radifah 69.78 293 *e*P **P 07 53 16.9 -0.3**
RDF AMb AMB 07 53 19.9
comp=Z,572nm,0.8s,mb6.5
HKR Hakkari 69.79 303 *e*P **P 07 53 18.2 +1.1**
HAKT HAKKARI 69.82 303 ⇓*iP* **P 07 53 14.9 -2.4**
ARTV Artvin 69.91 307 ⇑*iP* **P 07 53 18.6 +0.8**
NAY Al-Naaiem 69.92 293 *e*P **P 07 53 17.3 -0.7**
NAY AMb AMB 07 53 19.4
comp=Z,431nm,0.7s,mb6.5
DAGI Agillar 69.96 307 ⇑*iP* **P 07 53 18.9 +0.9**
CUKT Cukurca 70.00 302 *e*P **P 07 53 18.2 -0.2**
ALE Alert 70.02 1 P **P 07 53 17.0 -0.8**
comp=Z,2µm,0.8s,mb7.0,SNR=96
BCA Borcka 70.05 307 *e*P **P 07 53 18.0 -0.5**
DBOC Borcka 70.05 307 ⇑*iP* **P 07 53 19.4 +0.8**
HOMI Horasan 70.31 306 ⇑*iP* **P 07 53 22.1 +1.8**
PUL Pulkovo 70.49 328 ⇓*eP* **P 07 53 21.2 +0.2**
PUL pmax pmax
comp=Z,376nm,0.7s,mb6.4
SIT Sitka 70.60 35 *e*P **P 07 53 22.7 +1.1**
SIT pmax pmax
comp=Z,344nm,1.6s,mb6.0
SIT Sitka 70.60 35 *e*P **P 07 53 22.7 +1.1**
comp=Z,344nm,1.6s,mb6.0
SOC Sochi 70.65 310 *c iP* **P 07 53 22.4 +0.1**
SOC *e**PP pP 07 53 31.7 -4.7
SOC *e*S S 08 02 32.0 -0.6
SOC *e**SS sS 08 02 54.4 -2.0
SOC *e* 08 03 19.3
SOC pmax pmax
comp=Z,295nm,0.7s,mb6.3
SOC pmax pmax
comp=Z,520nm,0.9s,mb6.5
SOC MLR MLR
comp=Z,6µm,14.0s,MS6.0
SOC Sochi 70.65 310 *i P* **P 07 53 21.6 -0.7**
EZM Erzurum 70.75 306 *e*P **P 07 53 24.6 +1.6**
BHD Baghdad 70.79 298 *ex* x 07 53 18.0
BHD *ex* x 07 53 39.0
BHD *ex* x 07 55 57.0
BHD *ex* x 08 02 30.0
TRO Tromso 70.88 340 ⇑*iP* **P 07 53 22.1 -1.0**
TRO AMb AMB 07 53 24.2
comp=Z,187nm,1.1s,mb5.9
TRO AMS AMS 08 28 58.7
comp=Z,6µm,21.3s,MS5.8
TRO Tromso 70.88 340 ⇑*iP* **P 07 53 22.1 -1.0**
comp=Z,187nm,1.1s,mb5.9
TRO LR LR
comp=Z,6µm,21.3s,MS5.8
AFI Afiamalu 71.15 117 P **P 07 53 25.4 -0.2**
comp=Z,36nm,0.9s,mb5.3,baz=211,slow=23,SNR=2.8
AFI pP pP 07 53 38.2 -1.6
comp=Z,61nm,0.9s,baz=251,slow=12,SNR=4.4
AFI Afiamalu 71.15 117 P **P 07 53 25.4 -0.2**
AFI *PP pP 07 53 38.2 -1.6
AFI pmax pmax
comp=Z,36nm,1.0s,mb5.3
AFI pmax pmax
comp=Z,61nm,0.9s,mb5.5
AFI Afiamalu 71.15 117 *e*P **P 07 53 25.3 -0.3**
comp=Z,292nm,1.4s,mb6.0
AFI *e*pP pP 07 53 37.7 -2.1
AFI LR LR
comp=Z,2µm,19.0s,MS5.4
BNGL BINGOL 71.24 305 ⇑*iP* **P 07 53 27.6 +1.8**
KOPT Kop Dagi 71.34 306 ⇓*iP* **P 07 53 28.7 +2.2**
KAF Kangasniemi 71.40 331 *e*P **P 07 53 25.2 -1.2**
KAF pmax pmax
comp=Z,166nm,0.8s,mb6.0
KAF Kangasniemi 71.40 331 *e*P **P 07 53 25.2 -1.2**
comp=Z,166nm,0.8s,mb6.0
KAF Kangasniemi 71.40 331 *ep* **P 07 53 25.2 -1.2**
comp=Z,166nm,0.8s,mb6.0
ANN Anapa 71.77 311 *e*P **P 07 53 28.0 -1.0**
ANN *e**PP pP 07 53 40.2 -3.0
ANN *e* pP 07 53 45.1 +1.9
ANN *e* 07 56 17.5
ANN *e*PPP 07 57 52.4
ANN *e*S S 08 02 43.1 -2.4
ANN *e* 08 03 27.0
ANN *e*SS SS 08 07 20.6 -1.0
ANN pmax pmax
comp=Z,389nm,0.7s,mb6.4
ANN MLR MLR
comp=N,4µm,21.0s,MS5.8
ANN MLR MLR
comp=E,3µm,21.0s,MS5.8
ANN MLR MLR
comp=Z,5µm,21.0s,MS5.8
ANN Anapa 71.77 311 *i* P **P 07 53 27.9 -1.1**
FINES FINESS Array B 71.78 330 P **P 07 53 28.1 -0.6**
comp=Z,131nm,0.7s,mb6.0,baz=67,slow=6.4,SNR=219
FINES LR LR 08 28 48.6
comp=Z,10µm,19.3s,MS6.1,baz=68,slow=39
FINES FINESS Array B 71.78 330 P **P 07 53 28.1 -0.6**
FINES pmax pmax
comp=Z,131nm,0.7s
FINES MLR MLR
comp=Z,10µm,19.3s
MOO Moorlands 71.78 165 *e*P **P 07 53 28.5 -0.3**
MOO *e*pP pP 07 53 41.6 -1.4
MOO *e*S S 08 02 44.4 -0.8
MARD Mardin 72.09 303 ⇑*iP* **P 07 53 32.1 +1.0**
EZC Erzincan 72.25 306 *e*P **P 07 53 33.8 +1.9**
CRAG Craig 72.33 36 *e*P **P 07 53 32.6 +0.5**
comp=Z,196nm,0.8s,mb6.1
CRAG *e*pP pP 07 53 42.0 -4.4
DLBC Dease Lake 72.69 33 P **P 07 53 34.4 +0.2**
comp=Z,67nm,0.9s,mb5.6,baz=295,slow=7.3,SNR=109
DLBC Dease Lake 72.69 33 *e*P **P 07 53 34.9 +0.7**
DLBC *e*pP pP 07 53 49.3 +0.9
VSU Vasula 72.70 327 ⇑*iP* **P 07 53 34.2 -0.1**
STEI Steigen 72.89 339 *e*P **P 07 53 34.2 -1.0**
STEI AMb AMB 07 53 36.3
comp=Z,272nm,0.8s,mb6.2
ELZG Elazig 72.98 305 ⇓*iP* **P 07 53 37.8 +1.5**
KEMA Kemaliye 73.05 306 ⇓*iP* **P 07 53 38.2 +1.5**
URFA Urfa 73.49 304 *e*P **P 07 53 40.1 +0.8**
DARE Darende-Malaty 73.66 306 *e*P **P 07 53 43.4 +3.1**
ERBA Erbaa 73.75 308 ⇓*iP* **P 07 53 41.4 +0.6**
MICGM Minsk 73.77 323 ⇓*iP* **P 07 53 39.0 -1.7**
MNK Minsk 73.79 323 *c iP* **P 07 53 39.0 -1.8**
MNK *e* 07 53 58.0
MNK *e* 07 56 24.0
MNK *e*PPP 07 58 16.0
MNK *e*S S 08 03 02.0 -6.2
MNK *e*PS 08 03 44.0
MNK pmax pmax
comp=Z,460nm,0.8s,mb6.5
MNK pmax pmax
comp=E,300nm,1.4s
MNK MLR MLR
comp=Z,31µm,16.0s,MS6.7
MNK MLR MLR
comp=E,14µm,16.0s,MS6.4
MNK MLR MLR
comp=N,7µm,16.0s,MS6.4
AKCD Akcadag 73.83 305 ⇑*iP* **P 07 53 42.5 +1.1**
SVSK Karacayir 73.87 307 *e*P **P 07 53 42.4 +0.8**
SIM Simferopol' 73.91 313 *c iP* **P 07 53 43.1 +1.5**
SIM *e* 07 53 50.0
SIM *e*PPP 07 58 09.0
SIM *e*S S 08 03 09.0 -0.8
SIM pmax pmax
comp=Z,403nm,0.7s,mb6.5
SIM MLR MLR
comp=Z,6µm,19.8s,MS5.9
IDID Didziasalis 74.02 324 *e*P **P 07 53 42.6 +0.5**
IDID AMB AMB 07 53 43.9
comp=Z,67nm,0.9s,mb5.6
TOKT Tokat 74.04 307 *e*P **P 07 53 43.4 +0.9**
MOR8 Moi Rana 74.09 337 *e*P **P 07 53 40.2 -2.1**
MOR8 AMb AMB 07 53 42.4
comp=Z,202nm,1.0s,mb6.0
MOR8 Moi Rana 74.09 337 *e*P **P 07 53 40.2 -2.1**
comp=Z,202nm,1.0s,mb6.0
IZAR Zarasai 74.09 325 *e*P **P 07 53 42.9 +0.4**
IZAR AMB AMB 07 53 44.2
comp=Z,41nm,1.0s,mb5.3
KVT Kavak 74.10 308 *e*P **P 07 53 43.4 +0.6**
NACGM Naroch 74.18 324 *e*P **P 07 53 40.0 -3.0**
RES Resolute Bay 74.22 11 LR LR 08 27 30.0
comp=Z,1µm,21.5s,MS5.2,baz=319,slow=37
RES Resolute Bay 74.22 11 *e*P **P 07 53 42.6 -0.4**
RES pmax pmax
comp=Z,493nm,0.8s,mb6.5
RES Resolute Bay 74.22 11 *e*P **P 07 53 42.6 -0.3**
comp=Z,493nm,0.8s,mb6.5
ISAL Salakas 74.23 325 *e*P **P 07 53 43.6 +0.3**
ISAL AMB AMB 07 53 45.1
comp=Z,42nm,0.9s,mb5.4
IIGN Ignalina 74.27 325 *e*P **P 07 53 44.0 +0.4**
IIGN AMB AMB 07 53 45.3
comp=Z,38nm,1.1s,mb5.2
KONS Konsvik 74.35 338 *e*P **P 07 53 43.4 -0.5**
FLOS Flostrand 74.36 338 *e*P **P 07 53 42.9 -1.0**
DIKM Dikmen 74.42 309 *e*P **P 07 53 45.0 +0.2**
GZT Gaziantep 74.45 304 ⇑*iP* **P 07 53 46.4 +1.4**
SARI SarD1z-Kayseri 74.57 306 *e*P **P 07 53 47.4 +1.8**
AKASG Malin Array Be 74.61 319 P **P 07 53 44.0 -1.6**
comp=Z,100nm,0.7s,mb5.9,baz=56,slow=6.2,SNR=242
AKASG LR LR 08 29 23.0
comp=Z,19µm,18.7s,MS6.4,baz=70,slow=38
AKASG Malin Array Be 74.61 319 P **P 07 53 44.0 -1.6**
AKASG pmax pmax
comp=Z,100nm,0.7s
AKASG MLR MLR
comp=Z,19µm,18.7s
AKBB Malin Array Si 74.61 319 *e*P **P 07 53 44.5 -1.1**
KIEV Kiev 74.62 319 *e*P **P 07 53 44.4 -1.3**
KIEV pmax pmax
comp=Z,93nm,0.8s,mb5.8
KIEV MLR MLR
comp=Z,18µm,19.0s,MS6.4
KIEV Kiev 74.62 319 *e*P **P 07 53 44.4 -1.3**
comp=Z,93nm,0.8s,mb5.8
KIEV LR LR
comp=Z,18µm,19.0s,MS6.4
PINB Pinarbasi 74.78 306 ⇓*iP* **P 07 53 48.3 +1.5**
KMRS Kahramanmaras 74.88 305 *e*P **P 07 53 48.5 +1.0**
XMAS Kiritimati 75.04 96 PFAKE 07 54 00.0 +11
XMAS LR LR
comp=Z,3µm,21.0s,MS5.5
KUZU Kuzuini 75.04 304 ⇓*iP* **P 07 53 49.1 +0.7**
CTKT Corum 75.15 308 ⇑*iP* **P 07 53 49.9 +1.0**
BZK Bozkurt 75.16 310 *e*P **P 07 53 48.7 -0.3**
YOZ Yozgat 75.17 307 *e*P **P 07 53 49.3 +0.2**
CORM Corum 75.44 308 *e*P **P 07 53 51.2 +0.6**
TOS Tosya 75.52 309 *e*P **P 07 53 51.9 +0.8**
OUZ Omahuta 75.66 143 *e*P **P 07 53 51.5 -0.2**
comp=Z,372nm,1.4s,mb6.1
OUZ *e*pP pP 07 54 04.9 -1.1
ILGA Ilgaz 75.73 309 ⇓*iP* **P 07 53 53.3 +1.0**
COBT Iskenderun 75.75 304 ⇑*iP* **P 07 53 53.4 +0.9**
CDAG Cicekdag 75.85 307 ⇓*iP* **P 07 53 53.4 +0.4**
NSS Namsos 75.86 336 *e*P **P 07 53 50.7 -1.9**
NSS AMb AMB 07 53 52.5
comp=Z,232nm,0.7s,mb6.2
NSS Namsos 75.86 336 *e*P **P 07 53 50.7 -1.9**
comp=Z,232nm,0.7s,mb6.2
CEYT Ceyhan 75.92 304 *e*P **P 07 53 54.6 +1.1**
CANT Cankiri 75.97 309 *e*P **P 07 53 53.4 -0.3**
HTY Hatay 75.99 304 *e*P **P 07 53 56.4 +2.5**
YAYL Yayladag 76.05 303 ⇓*iP* **P 07 53 54.6 +0.5**
YURE YUREGIR 76.08 304 ⇓*iP* **P 07 53 55.2 +0.9**
ELDT Eldivan 76.16 309 ⇓*iP* **P 07 53 55.0 +0.3**
BR131 Keskin Array S 76.32 308 *e*P **P 07 53 55.7 0.0**
comp=Z,162nm,0.8s,mb6.0
BR131 LR LR
comp=Z,2µm,21.0s,MS5.3
BRTR Keskin Array B 76.32 308 P **P 07 53 55.2 -0.4**
comp=Z,196nm,0.8s,mb6.1,baz=100,slow=4.9,SNR=499
BRTR LR LR 08 33 09.1
comp=Z,2µm,20.8s,MS5.4,baz=246,slow=40
SAFT Safranbolu 76.36 309 *e*P **P 07 53 56.1 +0.3**
RAO Raoul Island 76.38 134 PFAKE 07 54 10.0 +14
RAO LR LR
comp=Z,4µm,21.0s,MS5.7
BBB Bella Bella 76.41 38 P **P 07 53 55.6 -0.3**
comp=Z,59nm,0.9s,mb5.5,baz=99,slow=4.3,SNR=18
BBB pP pP 07 54 10.3 0.0
comp=Z,42nm,1.0s,baz=341,slow=5.3,SNR=4.8
BBB Bella Bella 76.41 38 P **P 07 53 55.6 -0.3**
BBB pP pP 07 54 10.3 0.0
KIS Kishinev 76.43 316 ⇑*iP* **P 07 53 55.0 -1.1**
comp=Z,800nm,2.0s,mb6.3
KIS Kishinev 76.43 316 *e*PP PP 07 56 47.0 -0.9
KIS Kishinev 76.43 316 ⇑*iP* **P 07 53 55.0 -1.1**
KIS *e* 07 56 48.0
KIS *e*PPP 07 58 40.0
KIS *e*S SKSac 08 04 06.0 +2.6
KIS pmax pmax
comp=Z,800nm,2.0s,mb6.3
KIS pmax pmax
comp=Z,1µm,10.0s
KIS MLR MLR
comp=N,4µm,19.0s,MS5.9
KIS MLR MLR
comp=Z,5µm,19.0s,MS5.8
KIS MLR MLR
comp=E,5µm,18.0s,MS5.9
KIS MLR MLR
comp=Z,6µm,16.0s
KIS Kishinev 76.43 316 P **P 07 53 55.8 -0.3**
SUW Suwalki 76.46 324 *e*P **P 07 53 55.5 -0.6**
SUW *e*PcP PcP 07 54 04.2 -3.4
SUW *e*PP PP 07 56 45.6 -2.3
SUW *e*S S 08 03 37.8 0.0
SUW LMZ 08 31 07.4
comp=Z,12µm,17.4s
SUW Suwalki 76.46 324 ⇑*eP* **P 07 53 55.5 -0.6**
SUW *e*PcP PcP 07 54 04.2 -3.5
SUW *e*PP PP 07 56 45.6 -2.3
SUW *e*S S 08 03 37.8 0.0
GULE Gulek 76.52 305 ⇓*iP* **P 07 53 57.7 +0.9**
WCZ Waipu Caves 76.60 143 PN **P 07 53 56.6 -0.4**
WCZ pP pP 07 54 09.9 -1.4
BBAL Bala 76.76 308 ⇑*iP* **P 07 53 58.5 +0.3**
LOD Lodumlu 76.87 308 *e*P **P 07 53 58.4 -0.4**
MERS Mersin 76.87 305 *e*P **P 07 53 58.0 -0.8**
HWQ Hawqa 76.89 302 *e*P **P 07 53 58.7 -0.2**
LEOM Leova 77.01 316 P **P 07 53 59.7 +0.3**
LEOM Leova 77.01 316 ⇑*iP* **P 07 53 59.5 +0.1**
SGKT Sivrigoynuk 77.07 309 ⇑*iP* **P 07 54 00.8 +0.9**
MSEY Mahe Island 77.11 258 PFAKE 07 54 10.0 +9.5
MSEY LR LR
comp=Z,1µm,22.0s,MS5.3
JMIC Jan Mayen 77.15 347 *e*P **P 07 54 00.3 +0.6**
JMIC AMb AMB 07 54 02.5
comp=Z,462nm,1.0s,mb6.4
JMIC AMS AMS 08 27 27.3
comp=Z,2µm,21.4s,MS5.4
JMIC Jan Mayen 77.15 347 *e*P **P 07 54 00.3 +0.6**
comp=Z,462nm,1.0s,mb6.4
JMIC LR LR
comp=Z,2µm,21.4s,MS5.4
KDZE Karadeniz Ereo 77.18 310 *e*P **P 07 53 59.0 -1.4**
TLCR 77.22 314 ⇑P **P 07 54 00.6 0.0**
TLCR 77.22 314 ⇑*iP* **P 07 54 00.6 0.0**
YKA Yellowknife Ar 77.27 25 P **P 07 53 59.7 -0.8**
comp=Z,162nm,0.9s,mb5.9,baz=298,slow=5.5,SNR=235
YKA PKKPbc PKKPbc 08 13 02.6 -4.3
comp=Z,2.6nm,0.7s,baz=125,slow=2.7,SNR=7.5
YKA Yellowknife Ar 77.27 25 P **P 07 53 59.7 -0.9**
YKA pmax pmax
comp=Z,162nm,0.9s
YKA pmax pmax
comp=Z,3.0nm,0.7s
YKA Yellowknife Ar 77.27 25 P **P 07 53 59.7 -0.8**
YKA PKKPbc PKKPbc 08 13 02.6 -4.3
RCY Rachaya 77.31 301 *e*P **P 07 54 01.9 +0.6**
CFR Carcaliu 77.66 315 ⇑P **P 07 54 03.0 -0.1**
CFR Carcaliu 77.66 315 ⇑*iP* **P 07 54 03.0 -0.1**
EREN Erenkoy 77.69 304 *e*P **P 07 54 02.6 -0.9**
MDU Mudurnu 77.70 309 *e*P **P 07 54 03.9 +0.5**
IKL Isikli 77.75 304 *e*P **P 07 54 03.0 -0.8**
HENT Hendek 77.76 310 ⇑*iP* **P 07 54 03.1 -0.6**
TIRR Tirgusor 77.81 314 ⇓P **P 07 54 03.8 -0.1**
TIRR Tirgusor 77.81 314 *e*P **P 07 54 03.1 -0.7**
comp=Z,98nm,0.9s,mb5.7
TIRR Tirgusor 77.81 314 ⇓*iP* **P 07 54 03.8 -0.1**
MMAI Mount Meron Ar 77.83 301 P **P 07 54 04.7 +0.4**
comp=Z,75nm,0.7s,mb5.7,baz=71,slow=8.0,SNR=91
MMAI LR LR 08 34 17.7
comp=Z,3µm,20.7s,MS5.5,baz=45,slow=40
LADK Ladik-KONYA 77.87 307 *e*P **P 07 54 03.9 -0.4**
KIZT Kizilcal 77.92 308 *e*P **P 07 54 04.7 +0.1**
SVRH Sivrihisar-ESK 77.92 308 *e*P **P 07 54 04.6 -0.1**
KONT Konya--Tatoy 77.98 306 *e*P **P 07 54 04.9 -0.1**
PETR 77.98 315 ⇑P **P 07 54 06.4 +1.6**
PETR 77.98 315 ⇑*iP* **P 07 54 06.4 +1.5**
TESR 77.98 316 ⇓P **P 07 54 04.7 -0.1**
TESR 77.98 316 ⇓*iP* **P 07 54 04.7 -0.1**
LVV L'vov 77.98 320 ⇓*iP* **P 07 54 04.4 -0.4**
LVV *e*S S 08 03 49.4 -5.1
LVV *e* 08 04 34.6
LVV pmax pmax
comp=Z,400nm,1.5s,mb6.1
LVV MLR MLR
comp=Z,14µm,19.0s,MS6.3
LVV MLR MLR
comp=N,3µm,20.0s,MS6.3
LVV MLR MLR
comp=E,13µm,19.0s,MS6.3
HARR Harsova 78.01 314 ⇑*iP* **P 07 54 10.8 +5.8**
DHBB Dhamar BB 78.16 280 ⇑*eP* **P 07 54 06.1 -0.2**
NB2 NORSAR Subarra 78.18 334 P **P 07 54 04.8 -0.9**
comp=Z,347nm,0.8s,mb6.3,baz=51,slow=5.6
NB2 NORSAR Subarra 78.18 334 P **P 07 54 04.8 -0.9**
baz=51,slow=5.6
NB2 NORSAR Subarra 78.18 334 P **P 07 54 04.8 -0.9**
NB2 NORSAR Subarra 78.18 334 P **P 07 54 04.8 -0.9**
NOA NORSAR Array B 78.18 334 P **P 07 54 04.7 -0.9**
comp=Z,315nm,0.8s,mb6.3,baz=51,slow=5.5,SNR=916
NOA LR LR 08 33 34.2
comp=Z,4µm,18.4s,MS5.7,baz=45,slow=39
NOA NORSAR Array B 78.18 334 P **P 07 54 04.7 -1.0**
NOA pmax pmax
comp=Z,315nm,0.8s
NOA MLR MLR
comp=Z,4µm,18.4s
NOA NORSAR Array B 78.18 334 P **P 07 54 04.7 -0.9**
NOA LR LR 08 33 34.2
VRI Vrincioaia 78.23 316 ⇓P **P 07 54 06.8 +0.6**
VRI Vrincioaia 78.23 316 ⇓*iP* **P 07 54 06.8 +0.6**
LFK Lefkose 78.27 304 *e*P **P 07 54 06.8 +0.1**
PLOR Plostina 78.28 316 ⇓P **P 07 54 07.6 +1.1**
PLOR Plostina 78.28 316 ⇓*iP* **P 07 54 07.6 +1.1**
GRER 78.30 315 ⇓P **P 07 54 08.1 +1.5**
GRER 78.30 315 ⇓*iP* **P 07 54 08.1 +1.5**
PSN Preselentsi 78.30 313 *i P* **P 07 54 07.0 +0.3**
HDMB Hadim 78.31 306 *e*P **P 07 54 06.5 -0.4**
BUR08 Bucovina Ar. S 78.33 318 *e*P **P 07 54 06.8 +0.1**
BURAR Bucovina Array 78.34 318 ⇓P **P 07 54 07.1 +0.3**
BURAR Bucovina Array 78.34 318 ⇓*iP* **P 07 54 07.1 +0.3**
ESKT Eskisehir 78.36 308 *e*P **P 07 54 06.5 -0.6**
ESKT Eskisehir 78.36 308 ⇑*iP* **P 07 54 06.9 -0.2**
AMRR Amara 78.42 314 ⇓P **P 07 54 08.4 +1.1**
AMRR Amara 78.42 314 ⇓*iP* **P 07 54 08.4 +1.1**
NAO01 NORSAR Array S 78.43 334 *e*P **P 07 54 05.8 -1.2**
comp=Z,121nm,0.8s,mb5.9
NAO01 LR LR
comp=Z,5µm,20.0s,MS5.9
WAR Warsaw 78.46 323 *e*P **P 07 54 08.1 +0.7**
WAR LMZ 08 32 08.2
comp=Z,15µm,18.0s
WAR Warsaw 78.46 323 *e*P **P 07 54 08.1 +0.8**
WAR LR LR
comp=Z,15µm,18.0s,MS6.4
SILT Sile 78.47 310 *e*P **P 07 54 07.8 +0.2**

BORA Eskisehir 78.48 309⇓*i*P P 07 54 07.6 -0.1
MAMC Mammari 78.55 304 P P 07 54 07.8 -0.4
CSS Prodhromos 78.56 303 ⇓P P 07 54 08.1 -0.1
comp=Z,3.2nm,0.7s
CSS Prodhromos 78.56 303 ⇑P P 07 54 08.1 -0.1
CSS LR LR
comp=Z,3μm,22.0s,MS5.6
MOL Molde 78.63 336 *e*P **P 07 54 08.2 +0.1**
MOL AMS AMS 08 34 41.1
comp=Z,7μm,18.0s,MS6.0
ADVT Abdulvahap 78.72 310 *e*P **P 07 54 07.8 -1.2**
GAZI Gazipasa 78.75 305⇓*i*P **P 07 54 08.6 -0.7**
CAVI Cavuskoy 78.75 309 *e*P **P 07 54 08.3 -1.0**
HIZ Hauiti 78.80 145 PN **P 07 54 09.0 -0.3**
HIZ pP pP 07 54 22.5 -1.2
LEF Lefka 78.81 304 *e*P **P 07 54 09.5 -0.1**
KLYT Kilyos 78.83 311 *e*P **P 07 54 08.0 -1.6**
KWP Kalwaria Pacla 78.83 320 *e*P **P 07 54 10.2 +0.8**
KWP *e*PcP PcP 07 54 13.5 -4.5
KWP *e*pP pP 07 54 18.9 -4.9
KWP LMZ 08 31 22.3
comp=Z,18μm,21.4s
KWP Kalwaria Pacla 78.83 320⇑*e*P **P 07 54 10.2 +0.8**
KWP *e*PcP PcP 07 54 13.5 -4.6
KWP *e*pP pP 07 54 18.9 -4.9
KWP Kalwaria Pacla 78.83 320⇑*i*P P 07 54 10.2 +0.8
MLR Muntele Rosu 78.89 316⇓P **P 07 54 10.1 +0.2**
MLR Muntele Rosu 78.89 316⇓*i*P **P 07 54 10.1 +0.2**
ISK Istanbul-Kandi 78.90 311 *e*P **P 07 54 09.3 -0.7**
YLV Yalova 78.91 310 *e*P **P 07 54 09.6 -0.5**
SHUT Suhut-Afyon 79.00 308 *e*P **P 07 54 10.8 +0.2**
ALFC Alevga 79.01 304⇓P **P 07 54 10.0 -0.7**
comp=Z,5.6nm,0.7s,mb4.6
ALFC Alevga 79.01 304⇑P P 07 54 10.0 -0.7
PRD Provadia 79.03 313 *i*P **P 07 54 11.3 +0.6**
OSL Oslo 79.04 333 *e*P **P 07 54 10.2 -0.1**
OSL AMb AMB 07 54 12.0
comp=Z,603nm,0.8s,mb6.6
OSL Oslo 79.04 333 *e*P **P 07 54 10.2 -0.1**
comp=Z,603nm,0.8s,mb6.6
BGKT Bogazkoy 79.04 311 *e*P **P 07 54 09.9 -0.9**
SULR 79.08 315⇑P P 07 54 12.0 +1.1
SULR 79.08 315⇑*i*P P 07 54 12.0 +1.1
ALT Altintas 79.08 308 *e*P **P 07 54 10.8 -0.3**
SUTC Sutluce-Ispart 79.15 307 *e*P **P 07 54 10.9 -0.6**
CTKS Kestanelik-??a 79.19 311 *e*P **P 07 54 09.8 -1.8**
ARMT Armutlu 79.26 310 *e*P **P 07 54 11.6 -0.4**
ULDT Uludag 79.27 310⇑*i*P P 07 54 12.4 +0.4
PPCY Paphos 79.32 304 P **P 07 54 11.6 -0.8**
BMR Baia Mare 79.33 318⇑P P 07 54 13.2 +1.0
BMR Baia Mare 79.33 318⇑*i*P P 07 54 13.2 +1.0
ISP Isparta 79.34 307 *e*P **P 07 54 11.9 -0.6**
ISP Isparta 79.34 307⇑P P 07 54 12.2 -0.3
ISP Isparta 79.34 307 P **P 07 54 11.6 -0.9**
ISP Isparta 79.34 307 P **P 07 54 11.6 -0.9**
ISP Isparta 79.34 307⇑*i*P P 07 54 12.1 -0.4
SLVT Silivri 79.40 311 *e*P **P 07 54 11.8 -0.9**
BCK Bucak 79.45 307 *e*P **P 07 54 09.3 -3.8**
VOIR 79.47 316⇓P **P 07 54 12.9 -0.1**
VOIR 79.47 316⇓*i*P **P 07 54 12.9 -0.1**
GDZ Gediz 79.50 309⇓*i*P **P 07 54 13.4 0.0**
MDB Medias 79.54 317 P **P 07 54 14.8 +1.4**
UZH Uzhgorod 79.56 320⇑*i*P P 07 54 14.8 +1.3
UZH *e* pP 07 54 28.0 +0.1
UZH *e* 07 57 15.2
UZH *e* 07 59 07.4
UZH *e*S S 08 04 10.8 -0.6
UZH *e* 08 04 26.2
UZH *e* 08 04 35.0
UZH *e* 08 04 54.0
UZH *e* 08 09 15.8
UZH *e* 08 12 40.0
UZH MLR MLR
comp=N,2μm,20.0s,MS6.2
UZH MLR MLR
comp=E,12μm,20.0s,MS6.2
UZH MLR MLR
comp=Z,5μm,20.0s,MS5.9
KONO Kongsberg 79.66 333 *e*P **P 07 54 13.2 -0.6**
KONO *e*S S 08 04 11.2 -0.9
KONO AMS AMS 08 33 37.3
comp=Z,6μm,21.3s,MS5.9
KONO Kongsberg 79.66 333 *e*P **P 07 54 13.5 -0.3**
KONO pmax pmax
comp=Z,175nm,0.8s,mb6.0
KONO MLR MLR
comp=Z,7μm,20.0s,MS6.0
KONO Kongsberg 79.66 333 *e*P **P 07 54 13.5 -0.3**
comp=Z,175nm,0.8s,mb6.0
KONO LR LR
comp=Z,7μm,20.0s,MS6.0
TRPA Tarpa 79.67 319*i*P **P 07 54 14.4 +0.4**
SUMG Summit 79.72 356 *e*P **P 07 54 14.5 +0.6**
comp=Z,592nm,0.9s,mb6.5
SUMG Summit 79.72 356⇑*i*P P 07 54 14.2 +0.3
comp=Z,431nm,0.8s,mb6.4
SUMG *i*S S 08 04 11.8 -0.5
STHS Stebnicka Huta 79.76 321 *e*P **P 07 54 14.9 +0.4**
STHS pmax pmax
comp=Z,44nm,1.0s,mb5.3
STHS Stebnicka Huta 79.76 321 *e*P **P 07 54 14.9 +0.4**
comp=Z,44nm,1.0s,mb5.3
STHS Stebnicka Huta 79.76 321 *e*P **P 07 54 14.9 +0.4**
URZ Urewera 79.80 143 *e*P **P 07 54 12.2 -2.5**
comp=Z,661nm,1.6s,mb6.3
URZ *e*pP pP 07 54 24.7 -4.5
KHAL Karahalli 79.82 308⇑*i*P P 07 54 14.5 -0.5
GKP Gorka Klasztor 79.88 325 *e*P **P 07 54 15.8 +0.7**
GKP *e*PcP PcP 07 54 20.4 -2.1
GKP *e*S S 08 04 16.1 +1.5
GKP LMZ 08 33 39.9
comp=Z,19μm,17.0s
GKP Gorka Klasztor 79.88 325⇑*e*P P 07 54 15.8 +0.7
GKP *e*PcP PcP 07 54 20.4 -2.2
GKP *e*S S 08 04 16.1 +1.5
GKP LR LR
comp=Z,19μm,17.0s,MS6.5
CRVS Cervenica-Dubn 79.90 320 *e*P **P 07 54 15.8 +0.5**
CRVS pmax pmax
comp=Z,388nm,2.3s,mb5.9
CRVS Cervenica-Dubn 79.90 320 *e*P **P 07 54 15.8 +0.5**
comp=Z,388nm,2.3s,mb5.9
CRVS *e*S S 08 04 12.9 -2.0
CRVS Cervenica-Dubn 79.90 320 *e*P **P 07 54 15.8 +0.5**
CRVS *e*S S 08 04 12.9 -2.0
JMB Yambol 79.90 313 P **P 07 54 16.1 +0.7**
JMB Yambol 79.90 313 P **P 07 54 16.1 +0.7**
JMB Yambol 79.90 313 *i*P **P 07 54 16.0 +0.6**
SZH Strazhica 79.94 314 *i*P **P 07 54 16.0 +0.3**
SCO Scoresbysund 79.97 350⇑*i*P P 07 54 15.0 -0.3
SCO *i*S S 08 04 13.6 -1.3
SCO pmax pmax
comp=Z,220nm,1.0s,mb6.0
SCO Scoresbysund 79.97 350⇑*i*P P 07 54 15.0 -0.3
comp=Z,222nm,1.0s,mb6.0
SCO *i*S S 08 04 13.6 -1.3
BNT Bandirma 80.00 310 *e*P **P 07 54 15.8 -0.2**
BSD Bornholm Skovb 80.00 328⇑*i*P P 07 54 15.7 0.0
BSD pmax pmax
comp=Z,400nm,0.8s,mb6.4
BSD Bornholm Skovb 80.00 328⇑*i*P P 07 54 15.7 0.0
comp=Z,396nm,0.8s,mb6.4
HYA Hoyanger 80.02 335 *e*P **P 07 54 16.9 +1.2**
HYA AMb AMB 07 54 18.8
comp=Z,269nm,1.2s,mb6.0
HYA Hoyanger 80.02 335 *e*P **P 07 54 16.9 +1.2**
comp=Z,269nm,1.2s,mb6.0
DEMI Demirci 80.05 309⇑*i*P P 07 54 16.6 +0.2
EDRB Edirne 80.09 312 *e*P **P 07 54 16.5 0.0**
ZIMR 80.12 314⇓P **P 07 54 17.7 +1.1**
ZIMR 80.12 314⇓*i*P **P 07 54 17.7 +1.1**
OJC Ojcow 80.15 322 *e*P **P 07 54 14.5 -2.1**
OJC *e* 07 54 23.3
OJC *e* 07 57 16.3
OJC *e*S S 08 04 11.9 -5.6
OJC MLR MLR
comp=Z,12μm,17.7s,MS6.3
FOO Floro 80.16 336 *e*P **P 07 54 15.2 -1.3**
FOO AMb AMB 07 54 17.4
comp=Z,238nm,2.1s,mb5.7
FOO AMS AMS 08 35 22.9
comp=Z,6μm,18.1s,MS6.0
FOO Floro 80.16 336 *e*P **P 07 54 15.2 -1.3**
comp=Z,238nm,2.1s,mb5.8
FOO LR LR
comp=Z,6μm,18.1s,MS6.0
DRGR 80.23 318⇑P P 07 54 17.5 +0.4
DRGR 80.23 318⇑*i*P P 07 54 17.5 +0.4
ELL Elmali 80.26 306 *e*P **P 07 54 17.7 +0.2**
NIE Niedzica 80.28 321 *e*P **P 07 54 18.4 +1.1**
GOLH Golhisar 80.29 307⇑P P 07 54 16.2 -1.4
FOZ Fox Glacier 80.29 151 PN **P 07 54 17.0 -0.2**
FOZ pP pP 07 54 29.2 -2.5
THZ Tophouse 80.32 148 *e*PN **P 07 54 16.5 -1.0**
THZ pP pP 07 54 27.9 -4.0
KULA Kula-Manisa 80.33 308 *e*P **P 07 54 17.8 -0.1**
SART Tekirdag 80.34 311⇓*i*P **P 07 54 18.1 +0.3**
RKY Sarkoy-Tekirda 80.34 311 *e*P **P 07 54 17.8 -0.1**
BALB Balikesir 80.35 310 *e*P **P 07 54 17.1 -0.8**
PVL Pavlikeni 80.35 314 *i*P **P 07 54 18.4 +0.5**
DENT Denizli 80.42 308 *e*P **P 07 54 18.3 -0.1**
DNZL Cakiroluk 80.44 307⇑*i*P P 07 54 18.6 +0.1
BALY Balya 80.48 310⇑*i*P P 07 54 18.4 -0.3
DEV Deva 80.57 317⇑P P 07 54 20.2 +1.3
DEV Deva 80.57 317⇑*i*P P 07 54 20.2 +1.3
SUE Sulen 80.62 336 *e*P **P 07 54 18.6 -0.3**
ODD1 Odda 80.67 334 *e*P **P 07 54 19.4 +0.2**
ODD1 AMB AMB 07 54 20.9
comp=Z,323nm,0.9s,mb6.2
KECS Kecovo 80.67 320 *e*P **P 07 54 19.9 +0.5**
KECS pmax pmax
comp=Z,35nm,0.7s,mb5.4
KECS Kecovo 80.67 320 *e*P **P 07 54 19.9 +0.5**
comp=Z,35nm,0.7s,mb5.4
KECS Kecovo 80.67 320 *e*P **P 07 54 19.9 +0.5**
AKAS Kas 80.71 306⇓*i*P **P 07 54 18.8 -1.1**
PGC Sidney 80.75 40 *e*P **P 07 54 19.7 -0.1**
comp=Z,14nm,1.3s,mb4.7
PGC *e*pP pP 07 54 33.5 -0.8
AKHS Akhisar 80.75 309⇑*i*P P 07 54 20.2 +0.1
LPK Lapseki 80.77 311 *e*P **P 07 54 20.2 0.0**
ERIK Erikli-Kesan 80.80 311 *e*P **P 07 54 20.3 0.0**
COP Copenhagen 80.83 329⇑*i*P P 07 54 20.7 +0.5
COP pmax pmax
comp=Z,270nm,0.9s,mb6.2
COP Copenhagen 80.83 329⇑*i*P P 07 54 20.7 +0.5
comp=Z,269nm,0.9s,mb6.2
ASK Askoy 80.84 335 *e*P **P 07 54 18.8 -1.3**
ATD Arta Tunnel 80.84 278 LR LR 08 32 47.0
comp=Z,931nm,19.9s,MS5.1,baz=69,slow=38
SNZO South Karori 80.84 146 PFAKE 07 54 30.0 +10
SNZO LR LR
comp=Z,3μm,19.0s,MS5.6
BER Bergen 80.85 335⇑*i*P P 07 54 19.5 -0.7
BER *e*S S 08 04 25.0 +0.5
BER AMS AMS 08 35 35.6
comp=Z,7μm,9.3s
GZR Gura Zlata 80.89 317⇑P P 07 54 21.0 +0.3
GZR Gura Zlata 80.89 317⇑*i*P P 07 54 21.0 +0.3
EGD Espegrend 80.97 335 *e*P **P 07 54 19.9 -0.8**
ALN Alexandroupoli 81.00 311 P **P 07 54 20.8 -0.6**
ALN Alexandroupoli 81.00 311 *e*P **P 07 54 21.0 -0.4**
ALN Alexandroupoli 81.00 311 P **P 07 54 20.8 -0.6**
ENEZ Enez 81.00 311 *e*P **P 07 54 21.4 0.0**
RPZ Rata Peaks 81.01 150 *e*P **P 07 54 19.1 -2.0**
comp=Z,222nm,0.9s,mb6.1
RPZ *e*pP pP 07 54 32.2 -3.3
RPZ Rata Peaks 81.01 150 PN **P 07 54 19.2 -1.8**
RPZ pP pP 07 54 32.6 -2.9
BLS5 Blasjo 81.05 334 *e*P **P 07 54 21.4 +0.2**
BLS5 AMb AMB 07 54 23.1
comp=Z,176nm,0.9s,mb6.0
BLS5 Blasjo 81.05 334 *e*P **P 07 54 21.4 +0.2**
comp=Z,176nm,0.9s,mb6.0
RGN Rugen 81.08 328 *e*P **P 07 54 22.2 +0.7**
comp=Z,502nm,1.0s,mb6.4
RGN Rugen 81.08 328 *e*P **P 07 54 22.4 +0.9**
comp=Z,421nm,0.9s,mb6.4
RAC Raciborz 81.10 322 *e*P **P 07 54 22.3 +0.6**
RAC MLR MLR
comp=Z,8μm,17.0s,MS6.1
KHZ Kahutara 81.13 148 *e*P **P 07 54 21.7 -0.1**
comp=Z,138nm,1.2s,mb5.8
KHZ *e*pP pP 07 54 32.0 -4.2
TURN Turunc 81.13 307⇑*i*P P 07 54 23.7 +1.5
LIKS Likavka 81.15 321 *e*P **P 07 54 23.1 +1.1**
LIKS pmax pmax
comp=Z,77nm,0.9s,mb5.6
LIKS Likavka 81.15 321 *e*P **P 07 54 23.1 +1.1**
comp=Z,76nm,0.9s,mb5.6
LIKS Likavka 81.15 321 *e*P **P 07 54 23.1 +1.1**
NLWA Neilton Lookou 81.16 41⇓P **P 07 54 22.6 +0.5**
baz=81
NLWA Neilton Lookou 81.16 41 *e*P **P 07 54 22.6 +0.6**
comp=Z,88nm,0.9s,mb5.7
NLWA *e*pP pP 07 54 35.8 -0.7
NLWA LR LR
comp=Z,1μm,22.0s,MS5.2
YER Yerkesik 81.24 307 *e*P **P 07 54 22.9 +0.2**
OKC Ostrava-Krasne 81.26 322 *e*P **P 07 54 23.2 +0.6**
OKC *e* 07 57 28.9
OKC *e*S S 08 04 28.6 -0.5
OKC MLR MLR
comp=Z,10μm,16.7s,MS6.2
OKC Ostrava-Krasne 81.26 322 *e*P **P 07 54 23.2 +0.6**
OKC *e*PP PP 07 57 28.9 +0.9
OKC *e* 08 01 10.9
OKC *e*S S 08 04 28.6 -0.5
OKC *e*SS SS 08 10 46.3 +62
OKC *e* 08 14 33.8
OKC Ostrava-Krasne 81.26 322 *e*P **P 07 54 23.2 +0.6**
OKC *e*PP PP 07 57 28.9 +0.9
OKC *e*x x 08 01 10.9
OKC *e*S S 08 04 28.6 -0.5
OKC *e*x x 08 10 46.3
OKC *e*x x 08 14 33.8
OKC AMS AMS 08 33 30.0
comp=Z,10μm,16.7s
AYDN Tasoluk 81.28 308⇓*i*P **P 07 54 23.6 +0.7**
PLD Plovdiv 81.30 313 P **P 07 54 22.9 0.0**
PLD Plovdiv 81.30 313 P **P 07 54 22.9 0.0**
PLD Plovdiv 81.30 313 P **P 07 54 23.4 +0.5**
PSZ Piszkesteto 81.30 320⇑P P 07 54 23.3 +0.5
PSZ Piszkesteto 81.30 320 *e*P **P 07 54 23.2 +0.4**
comp=Z,74nm,1.0s,mb5.6
PSZ LR LR
comp=Z,12μm,20.0s,MS6.2
PSZ Piszkesteto 81.30 320⇑*i*P P 07 54 23.3 +0.5
AYVA Ayvalik 81.32 310⇑*i*P P 07 54 23.2 +0.1
A05A Maple Falls 81.33 39⇓P **P 07 54 22.8 -0.2**
baz=81
KDAG Bornova 81.36 309⇑*i*P P 07 54 23.5 +0.2
PGB Panagyurishte 81.43 314 *i*P **P 07 54 24.0 +0.4**
BZS Buzias 81.48 317⇓P **P 07 54 23.5 -0.3**
BZS Buzias 81.48 317⇓*i*P **P 07 54 23.5 -0.3**
RZN Rozhen 81.49 313 *i*P **P 07 54 24.0 0.0**
BLCB Balcova 81.52 309 *e*P **P 07 54 23.6 -0.5**
BLCB Balcova 81.52 309 P **P 07 54 23.7 -0.5**
BLCB Balcova 81.52 309 P **P 07 54 23.7 -0.5**
VYHS Vyhne 81.60 321 *e*P **P 07 54 25.0 +0.6**
VYHS *e*S S 08 04 32.3 -0.4
VYHS pmax pmax
comp=Z,110nm,0.9s,mb5.8
VYHS Vyhne 81.60 321 *e*P **P 07 54 25.0 +0.6**
comp=Z,110nm,0.9s,mb5.8
VYHS *e*S S 08 04 32.3 -0.4
VYHS Vyhne 81.60 321 *e*P **P 07 54 25.0 +0.6**
VYHS Vyhne 81.60 321 *e*S S 08 04 32.3 -0.4
MORC Moravsky Berou 81.62 322⇓P **P 07 54 25.0 +0.5**
MORC Moravsky Berou 81.62 322 *e*P **P 07 54 24.5 0.0**
comp=Z,87nm,0.8s,mb5.7
MORC Moravsky Berou 81.62 322⇓*i*P **P 07 54 25.0 +0.5**
PRK Paraskevi 81.64 310 P **P 07 54 24.5 -0.3**
PRK Paraskevi 81.64 310 *e*P **P 07 54 24.0 -0.8**
PRK Paraskevi 81.64 310 P **P 07 54 24.5 -0.3**
KMY Karmoy 81.66 334 *e*P **P 07 54 24.2 -0.2**
STAV Stavanger 81.66 334 *e*P **P 07 54 24.2 -0.3**
GNW Green Mountain 81.67 40 *e*P **P 07 54 25.4 +0.7**
comp=Z,50nm,1.0s,mb5.4
GNW *e*pP pP 07 54 38.8 -0.4
KSP Ksiaz 81.70 324 *e*P **P 07 54 25.8 +1.0**
KSP *e*S S 08 04 35.5 +1.9
KSP LMZ 08 34 25.1
comp=Z,24μm,17.4s
KSP Ksiaz 81.70 324⇑*e*P P 07 54 24.8 -0.1
KSP *e*pP pP 07 54 40.8 +1.5
KSP *e*PP PP 07 57 29.0 -2.6
KSP *e*S S 08 04 30.0 -3.7
KSP *e*PPS 08 05 53.0
KSP LR LR
comp=Z,27μm,17.4s,MS6.7
GCAM G?zelcaml? 81.71 308⇓*i*P **P 07 54 25.3 +0.1**
ARG Arkhangelos 81.78 306 P **P 07 54 25.4 -0.2**
ARG Arkhangelos 81.78 306 *e*P **P 07 54 25.5 -0.1**
ARG Arkhangelos 81.78 306 P **P 07 54 25.4 -0.2**
KOLL Kolacno 81.80 321 *e*P **P 07 54 26.4 +1.0**
KOLL Kolacno 81.80 321 *e*P **P 07 54 26.4 +1.0**
MUD Monsted U'grnd 81.82 331⇑*i*P P 07 54 25.6 +0.2
MUD pmax pmax
comp=Z,360nm,0.8s,mb6.3
MUD Monsted U'grnd 81.82 331⇑*i*P P 07 54 25.6 +0.2
comp=Z,361nm,0.8s,mb6.3
URLA Izmir 81.84 309⇑*i*P P 07 54 25.0 -0.9
JCW Jim Creek 81.85 40 P **P 07 54 26.1 +0.4**
BDRM Kayabasi 81.86 307⇓*i*P **P 07 54 25.5 -0.5**
B06A Marblemount 81.92 39 ⇑P P 07 54 26.0 -0.1
baz=82
DAT Datca 81.93 307 *e*P **P 07 54 25.9 -0.5**
RPW Rockport 81.94 39 P **P 07 54 26.2 0.0**
BODT Bodrum 81.96 308 *e*P **P 07 54 25.2 -1.3**
DPC Dobruska-Polom 81.96 323 *e*P **P 07 54 27.2 +0.9**
DPC *e*PP pP 07 54 43.1 +2.4
DPC *e* 07 57 31.9
DPC *e*S S 08 04 35.8 -0.6
DPC MLR MLR
comp=Z,12μm,17.6s,MS6.3
DPC Dobruska-Polom 81.96 323 *e*P **P 07 54 27.2 +0.9**
DPC *e*pP pP 07 54 43.1 +2.4
DPC *e*PP PP 07 57 31.9 -1.9
DPC *e* 08 01 03.8
DPC *e*S S 08 04 35.8 -0.6
DPC *e*SS SS 08 10 43.3 +48
DPC *e* 08 14 47.0
DPC LR LR
comp=Z,12μm,17.6s,MS6.3
DPC Dobruska-Polom 81.96 323 *e*P **P 07 54 27.2 +0.9**
DPC *e*sP sP 07 54 43.1 -3.2
DPC *e*PP PP 07 57 31.9 -1.9
DPC *e*x x 08 01 03.8
DPC *e*S S 08 04 35.8 -0.6
DPC *e*x x 08 10 43.3
DPC *e*x x 08 14 47.0
DPC AMS AMS 08 34 20.0
comp=Z,12μm,17.6s
KAVA Kavala 81.97 312 P **P 07 54 26.0 -0.5**
SMG Samos 81.98 308 *e*P **P 07 54 26.0 -0.6**
VTS Vitosha 82.02 314⇓P **P 07 54 27.4 +0.7**
VTS Vitosha 82.02 314 P **P 07 54 27.0 +0.3**
VTS Vitosha 82.02 314 P **P 07 54 27.0 +0.3**
VTS Vitosha 82.02 314 *i*P **P 07 54 26.6 -0.1**
VTS Vitosha 82.02 314⇓*i*P **P 07 54 27.4 +0.7**
BUD Budapest 82.03 320⇓*e*P P 07 54 23.2 -3.5
UPC Upice 82.04 323 *e*P **P 07 54 27.3 +0.7**
UPC *e*sP sP 07 54 43.0 -3.7
LIA Limnos Island 82.06 311 P **P 07 54 26.1 -0.9**
LIA Limnos Island 82.06 311 *e*P **P 07 54 26.0 -1.0**
LIA Limnos Island 82.06 311 P **P 07 54 26.1 -0.9**
RUE Ruedersdorf 82.06 326 *e*P **P 07 54 27.1 +0.4**
comp=Z,747nm,1.4s,mb6.4
RUE Ruedersdorf 82.06 326 *e*P **P 07 54 27.5 +0.8**
comp=Z,315nm,0.9s,mb6.2
F03A Seaside 82.10 42⇓P **P 07 54 27.5 +0.4**
baz=82
MMB Musomiste 82.19 313 *i*P **P 07 54 27.6 0.0**
CHOS Chios island 82.20 309 *e*P **P 07 54 27.5 -0.2**
CHOS Chios island 82.20 309 P **P 07 54 27.2 -0.5**
NVR Nevrokopi 82.22 313 *e*P **P 07 54 27.5 -0.3**
D05A Enumclaw 82.35 40⇓P **P 07 54 28.9 +0.5**
baz=82
SMOL Smolenice 82.37 321 *e*P **P 07 54 29.6 +1.2**
SMOL Smolenice 82.37 321 *e*P **P 07 54 29.6 +1.2**
VRAC Vranov 82.39 322⇓P **P 07 54 29.3 +0.8**
VRAC Vranov 82.39 322⇓*i*P **P 07 54 29.3 +0.8**
KKB Krupnik 82.47 313 *i*P **P 07 54 28.7 -0.4**
OUR Ouranopolis 82.64 312 P **P 07 54 28.9 -1.1**
OUR Ouranopolis 82.64 312 P **P 07 54 28.9 -1.1**
LON Longmire 82.69 41 *e*P **P 07 54 30.1 0.0**
LON pmax pmax
comp=Z,67nm,1.0s,mb5.6
LON Longmire 82.69 41 *e*P **P 07 54 30.1 -0.1**
comp=Z,67nm,1.0s,mb5.6
ZST Bratislava 82.73 321 *e*P **P 07 54 30.9 +0.6**
ZST *e*S S 08 04 44.5 +0.2
ZST pmax pmax
comp=Z,101nm,0.8s,mb5.9
ZST Bratislava 82.73 321 *e*P **P 07 54 30.9 +0.6**
comp=Z,101nm,0.8s,mb5.9
ZST *e*S S 08 04 44.5 +0.2
ZST Bratislava 82.73 321 *e*P **P 07 54 30.9 +0.6**
F04A Amboy 82.78 42⇓P **P 07 54 30.7 +0.1**
baz=83
KARP Karpathos 82.79 306 *e*P **P 07 54 30.5 -0.4**
PVCC Panska Ves 82.79 324 *e*P **P 07 54 31.5 +1.0**
PVCC *e*PP pP 07 54 49.2 +4.2
PVCC *e* 07 57 42.2
PVCC MLR MLR
comp=Z,13μm,16.9s,MS6.4
PVCC Panska Ves 82.79 324 *e*P **P 07 54 31.5 +1.0**
PVCC *e*pP pP 07 54 49.2 +4.2
PVCC *e*PP PP 07 57 42.2 +1.7
PVCC *e* 08 15 12.0
PVCC LR LR
comp=Z,13μm,16.9s,MS6.4
PVCC Panska Ves 82.79 324 *e*P **P 07 54 31.5 +1.0**
PVCC *e*sP sP 07 54 49.2 -1.4
PVCC *e*PP PP 07 57 42.2 +1.7
PVCC *e*x x 08 15 12.0
PVCC AMS AMS 08 34 50.0
comp=Z,13μm,16.9s
NLW Nelson Butte 82.81 39 P **P 07 54 31.0 +0.3**
SOH Sokhos 82.81 312 P **P 07 54 29.5 -1.4**
SOH Sokhos 82.81 312 *e*P **P 07 54 30.5 -0.4**
SOH Sokhos 82.81 312 P **P 07 54 29.5 -1.4**
BSEG Bad Segeberg 82.86 328 *e*P **P 07 54 31.0 +0.1**
comp=Z,592nm,0.9s,mb6.6
BSEG *e*S S 08 04 46.6 +1.2
BRG Berggiesshubel 82.91 324 *e*P **P 07 54 31.4 +0.2**
comp=Z,88nm,0.9s,mb5.8
BRG *e*pP pP 07 54 47.7 +2.0
BRG *e*S S 08 04 48.1 +2.1
BRG Berggiesshubel 82.91 324 *i*P **P 07 54 31.8 +0.6**
comp=Z,74nm,0.9s,mb5.7
BRG *i*pP pP 07 54 47.6 +1.9
comp=Z,71nm,0.9s
BRG *i*sP sP 07 54 51.4 +0.2
comp=Z,78nm,1.3s
BRG PP PP 07 57 41.0 -0.5
BRG S S 08 04 45.0 -1.0
BRG PS 08 05 56.0
BRG SS SS 08 10 53.0 +44
BRG
comp=N,7μm,18.3s
BRG
comp=E,9μm,16.2s
BRG
comp=Z,14μm,16.9s
PKSM Moragy 82.93 319⇑P P 07 54 31.4 0.0
PKSM Moragy 82.93 319⇑*i*P P 07 54 31.4 0.0
COR Corvallis 82.96 43 *e*P **P 07 54 33.1 +1.5**
COR *e*PP pP 07 54 46.3 +0.2
COR pmax pmax
comp=Z,229nm,0.8s,mb6.3
COR MLR MLR
comp=Z,1μm,21.0s,MS5.3
COR Corvallis 82.96 43 *e*P **P 07 54 33.1 +1.6**
comp=Z,229nm,0.8s,mb6.3
COR *e*pP pP 07 54 46.3 +0.2
COR LR LR
comp=Z,1μm,21.0s,MS5.3
PLG Polygyros 82.98 312 P **P 07 54 30.9 -0.9**
PLG Polygyros 82.98 312 *e*P **P 07 54 31.5 -0.3**
PLG Polygyros 82.98 312 P **P 07 54 30.9 -0.9**
TREC Trest 83.00 323 *e*P **P 07 54 32.4 +0.7**
TREC *e*PP pP 07 54 50.0 +3.8
TREC *e* 07 57 43.2
TREC *e*S S 08 04 53.0 +6.0
TREC MLR MLR
comp=Z,10μm,17.3s,MS6.2
TREC Trest 83.00 323 *e*P **P 07 54 32.4 +0.7**

TREC *e*sP sP 07 54 50.0 -1.7
TREC *e*PP PP 07 57 43.2 +0.9
TREC *e*S S 08 04 53.0 +6.0
TREC *e*x x 08 15 13.9
TREC AMS AMS 08 34 50.0
comp=Z,10µm,17.3s
TWW Teanaway 83.02 40 P **P 07 54 32.8 +0.9**
PAIG Paliouri 83.05 311 P **P 07 54 31.2 -0.9**
PAIG Paliouri 83.05 311 P **P 07 54 31.2 -0.9**
ETW Entiat 83.07 39 P **P 07 54 32.3 +0.2**
VAY Valandovo 83.07 313 P **P 07 54 31.2 -1.0**
VAY Valandovo 83.07 313 ⇓*i*P **P 07 54 31.5 -0.7**
VAY Valandovo 83.07 313 P **P 07 54 31.2 -1.0**
HORT Hortiatis 83.09 312 P **P 07 54 31.2 -1.2**
HORT Hortiatis 83.09 312 P **P 07 54 31.2 -1.2**
PRU Pruhonice 83.11 324 *e*P **P 07 54 33.2 +1.0**
PRU *e* 07 57 44.8
PRU *e*S S 08 04 52.4 +4.3
PRU MLR MLR
comp=Z,11µm,17.0s,MS6.3
PRU Pruhonice 83.11 324 *e*P **P 07 54 33.2 +1.0**
PRU *e*PP PP 07 57 44.8 +1.6
PRU *e* 08 01 17.0
PRU *e*S S 08 04 52.4 +4.3
PRU *e*SS SS 08 10 53.5 +42
PRU *e* 08 15 05.8
PRU LR LR
comp=Z,11µm,17.0s,MS6.3
PRU Pruhonice 83.11 324 *e*P **P 07 54 33.2 +1.0**
PRU *e*PP PP 07 57 44.8 +1.6
PRU *e*x x 08 01 17.0
PRU *e*S S 08 04 52.4 +4.3
PRU *e*x x 08 10 53.5
PRU *e*x x 08 15 05.8
PRU AMS AMS 08 35 10.0
comp=Z,11µm,17.0s
PRA Prague 83.12 324 P **P 07 54 32.0 -0.3**
PRA AMS AMS 08 35 17.0
G04A Mulino 83.13 42 ⇓P **P 07 54 32.5 0.0**
baz=83
CLL Collm 83.14 325 *e*P **P 07 54 32.1 -0.3**
comp=Z,339nm,0.8s,mb6.4
CLL *e*pP pP 07 54 48.5 +1.7
CLL *e*S S 08 04 48.7 +0.4
CLL Collm 83.14 325 *i* P **P 07 54 32.7 +0.3**
CLL *e**PP pP 07 54 43.0 -3.8
CLL *e*S S 08 04 52.0 +3.7
CLL pmax pmax
comp=Z,338nm,0.8s,mb6.4
CLL Collm 83.14 325 *i* P **P 07 54 32.7 +0.3**
comp=Z,338nm,0.8s,mb6.4
CLL *e*pP pP 07 54 43.0 -3.8
CLL *e*S S 08 04 52.0 +3.7
CLL Collm 83.14 325 *i* P **P 07 54 32.7 +0.3**
comp=Z,338nm,0.8s,mb6.4
CLL *e*pP pP 07 54 43.0 -3.8
CLL *i*sP sP 07 54 48.4 -4.0
CLL *e*PP PP 07 57 45.0 +1.6
CLL *e*(PPP) 07 59 24.0
CLL *e* 08 01 30.0
CLL *e* 08 04 08.0
CLL *e*S S 08 04 52.0 +3.7
CLL *e*PPS 08 06 03.0
CLL *e* 08 11 06.0
CLL *e* 08 15 06.0
CLL *e* 08 16 54.0
APE Apeiranthos 83.20 308 *e*P **P 07 54 30.1 -2.9**
APE Apeiranthos 83.20 308 ⇓P **P 07 54 31.4 -1.6**
APE Apeiranthos 83.20 308 ⇓*i*P **P 07 54 31.4 -1.6**
B08A Colville Reser 83.21 38 ⇓P **P 07 54 32.7 -0.1**
baz=83
WTV Waterville 83.23 39 P **P 07 54 33.1 +0.2**
DIVS Divibare 83.26 316 P **P 07 54 32.5 -0.6**
AOS Alonnisos 83.29 311 P **P 07 54 32.5 -0.9**
AOS Alonnisos 83.29 311 P **P 07 54 32.5 -0.9**
LRW Lerwick 83.37 337 P **P 07 54 32.1 -1.2**
LRW AMb AMB 07 54 34.9
comp=Z,222nm,1.7s,mb5.9
LRW AMS AMS 08 37 18.0
comp=Z,5µm,16.6s
LRW Lerwick 83.37 337 *e*P **P 07 54 32.1 -1.2**
LRW AMb AMB 07 54 34.9
comp=Z,222nm,1.7s,mb5.9
LRW AMS AMS 08 37 18.0
comp=Z,5µm,16.6s,MS6.0
EDM Edmonton 83.41 32 *e*P **P 07 54 33.8 +0.1**
SKO Skopje 83.47 314 P **P 07 54 34.8 +0.6**
SKO Skopje 83.47 314 ⇓*i*P **P 07 54 35.7 +1.4**
SKO Skopje 83.47 314 P **P 07 54 34.8 +0.6**
HOOD Mount Hood Mea 83.56 42 *e*P **P 07 54 35.5 +0.9**
comp=Z,705nm,1.2s,mb6.7
CONA Conrad Observa 83.57 321 *i* PcP PcP 07 54 35.2 -3.6
comp=Z,138nm,0.7s,SNR=119
H04A Detroit Lake 83.58 43 ⇓P **P 07 54 34.7 -0.1**
baz=83
XOR Xorichti 83.66 311 P **P 07 54 33.6 -1.7**
XOR Xorichti 83.66 311 P **P 07 54 33.6 -1.7**
NEO Neokhori 83.67 311 *e*P **P 07 54 34.5 -0.8**
ZKR Zakros 83.67 306 P **P 07 54 34.8 -0.6**
ZKR Zakros 83.67 306 P **P 07 54 34.8 -0.6**
SOFL Sornfelli, Far 83.76 341 AMS AMS 08 33 29.3
comp=Z,4µm,17.2s,MS5.8
HLG Helgoland 83.83 329 *e*P **P 07 54 36.1 +0.3**
comp=Z,483nm,0.9s,mb6.6
DESE Dese 83.84 279 *e*P **P 07 54 39.7 +3.1**
PTL Penteli 83.87 310 *e*P **P 07 54 35.5 -0.9**
KRUS Krusevo 83.90 314 ⇓*i*P **P 07 54 35.4 -1.1**
E07A Sunnyside 83.92 40 ⇓P **P 07 54 36.9 +0.4**
baz=84
TANN Tannenbergstha 83.94 325 *e*P **P 07 54 36.6 +0.1**
comp=Z,222nm,1.1s,mb6.2
TANN *e*pP pP 07 54 53.0 +2.0
TANN *e*S S 08 04 57.4 +0.9
MDW Midway 83.95 40 P **P 07 54 37.4 +0.8**
ATHU Athens Univers 83.96 310 P **P 07 54 35.2 -1.7**
IVA Berane 83.97 315 ⇑*i*P **P 07 54 37.1 +0.3**
IVA Berane 83.97 315 ⇑*i*P **P 07 54 37.2 +0.4**
WERD Werda 84.00 325 *e*P **P 07 54 36.9 +0.1**
comp=Z,252nm,1.1s,mb6.3
ATH Athens Observa 84.00 310 P **P 07 54 35.2 -1.9**
ATH Athens Observa 84.00 310 *e*P **P 07 54 36.5 -0.6**
NPS Neapolis 84.03 307 *e*P **P 07 54 36.5 -0.8**
PLE Pljevlja 84.03 316 ⇑*i*P **P 07 54 35.9 -1.2**
PLE Pljevlja 84.03 316 ⇑*i*P **P 07 54 36.0 -1.1**
GUNZ Gunzen 84.04 325 *e*P **P 07 54 37.2 +0.2**
KSXB Camp Six Broad 84.06 46 P **P 07 54 37.9 +0.6**
NKC Novy Kostel 84.06 324 *e*P **P 07 54 37.9 +0.8**
NKC *e**PP pP 07 54 54.1 +2.5
NKC MLR MLR
comp=Z,14µm,16.7s,MS6.4
NKC Novy Kostel 84.06 324 *e*P **P 07 54 37.9 +0.8**
NKC *e*pP pP 07 54 54.1 +2.5
NKC *e* 08 15 20.1
NKC Novy Kostel 84.06 324 *e*P **P 07 54 37.9 +0.8**
NKC *e*sP sP 07 54 54.1 -3.1
NKC *e*x x 08 15 20.1
NKC AMS AMS 08 35 50.0
comp=Z,14µm,16.7s
PVY Plav 84.06 315 ⇑*i*P **P 07 54 37.7 +0.4**
PVY Plav 84.06 315 ⇑*i*P **P 07 54 37.7 +0.4**
OD2 Odessa Site #2 84.10 39 *e*P **P 07 54 37.3 -0.1**
comp=Z,194nm,0.9s,mb6.2
OD2 *e*pP pP 07 54 50.9 -0.9
ATAL Atalanti 84.11 311 P **P 07 54 35.8 -1.8**
KZN Kozani 84.11 313 P **P 07 54 36.4 -1.2**
KZN Kozani 84.11 313 *e*P **P 07 54 36.5 -1.1**
KZN Kozani 84.11 313 P **P 07 54 36.4 -1.2**
KHC Kasperske Hory 84.12 323 *e*P **P 07 54 38.0 +0.6**
KHC *e**PP pP 07 54 53.7 +1.8
KHC *e* 07 57 52.8
KHC *e*S S 08 04 55.8 -2.5
KHC MLR MLR
comp=Z,13µm,17.2s,MS6.4
KHC Kasperske Hory 84.12 323 *e*P **P 07 54 38.0 +0.6**
KHC *e*pP pP 07 54 53.7 +1.8
KHC *e*PP PP 07 57 52.8 +1.3
KHC *e* 08 01 30.6
KHC *e*S S 08 04 55.8 -2.5
KHC *e*SS SS 08 10 57.9 +31
KHC *e* 08 15 28.5
KHC LR LR
comp=Z,13µm,17.2s,MS6.4
KHC Kasperske Hory 84.12 323 *e*P **P 07 54 38.0 +0.6**
KHC *e*sP sP 07 54 53.7 -3.8
KHC *e*PP PP 07 57 52.8 +1.3
KHC *e*x x 08 01 30.6
KHC *e*SKS 08 04 55.8
KHC *e*x x 08 10 57.9
KHC *e*x x 08 15 28.5
KHC AMS AMS 08 35 40.0
comp=Z,13µm,17.2s
FNA Florina 84.12 313 P **P 07 54 36.4 -1.2**
FNA Florina 84.12 313 P **P 07 54 36.4 -1.2**
ARSA Arzberg 84.14 321 *i* P **P 07 54 37.7 +0.1**
comp=Z,81nm,1.1s,mb5.8,SNR=22
LKR Lokris 84.15 311 P **P 07 54 36.0 -1.8**
LKR Lokris 84.15 311 *e*P **P 07 54 36.5 -1.3**
LKR Lokris 84.15 311 P **P 07 54 36.0 -1.8**
RSW Rattlesnake Hi 84.17 40 *e*P **P 07 54 38.1 +0.4**
comp=Z,179nm,1.0s,mb6.2
RSW *e*pP pP 07 54 52.6 +0.4
D08A Wollman Farm, 84.17 39 ⇓P **P 07 54 37.7 -0.1**
baz=84
LAST Lasithi 84.17 307 P **P 07 54 37.6 -0.4**
LAST Lasithi 84.17 307 P **P 07 54 37.6 -0.4**
HAWA Hanford 84.20 40 *e*P **P 07 54 38.0 +0.1**
comp=Z,148nm,1.0s,mb6.1
HAWA LR LR
comp=Z,971nm,19.0s,MS5.2
G06A Carlson Farm, 84.21 42 ⇓P **P 07 54 37.9 0.0**
baz=84
HUMO Hull Mountain 84.23 45 *e*P **P 07 54 38.6 +0.5**
comp=Z,85nm,0.9s,mb5.9
HUMO *e*pP pP 07 54 53.5 +0.9
HUMO LR LR
comp=Z,894nm,21.0s,MS5.1
MOX Moxa 84.24 325 *e*P **P 07 54 38.4 +0.4**
comp=Z,505nm,2.0s,mb6.3
MOX *e*PP PP 07 57 56.0 +3.6
MOX *e*S S 08 04 58.0 -1.4
MOX
comp=Z,8µm,18.0s
MOX Moxa 84.24 325 *e*P **P 07 54 38.0 0.0**
comp=Z,541nm,1.7s,mb6.4
MOX *e*S S 08 04 59.0 -0.4
MOX Moxa 84.24 325 *e*P **P 07 54 38.4 +0.4**
MOX *e* 07 57 56.0
MOX *e*S S 08 04 58.0 -1.4
MOX pmax pmax
comp=Z,505nm,2.0s,mb6.3
MOX MLR MLR
comp=Z,8µm,18.0s,MS6.1
F07A Phinny Hill Vi 84.25 41 ⇓P **P 07 54 38.2 0.0**
baz=84
NAIG Nisos Aigina 84.27 310 *e*P **P 07 54 36.5 -1.9**
WIW Wooded Island 84.32 40 P **P 07 54 39.3 +0.8**
OHR Ohrid 84.33 314 *e*P **P 07 54 36.9 -1.7**
OHR Ohrid 84.33 314 ⇓*i*P **P 07 54 37.9 -0.8**
OHR Ohrid 84.33 314 P **P 07 54 36.9 -1.7**
THL Klokotos Trika 84.34 312 *e*P **P 07 54 37.0 -1.7**
THL Klokotos Trika 84.34 312 P **P 07 54 36.7 -2.0**
UPM Unac-Piva 84.40 316 ⇑*i*P **P 07 54 37.7 -1.3**
UPM Unac-Piva 84.40 316 ⇑*i*P **P 07 54 37.7 -1.3**
AGG Agios Georgios 84.41 311 P **P 07 54 37.2 -1.9**
AGG Agios Georgios 84.41 311 *e*P **P 07 54 37.0 -2.1**
AGG Agios Georgios 84.41 311 P **P 07 54 37.2 -1.9**
E08A Dider Farm, El 84.42 40 ⇑P **P 07 54 39.1 +0.1**
baz=84
NEW Newport 84.47 38 *e*P **P 07 54 39.3 +0.1**
NEW pmax pmax
comp=Z,235nm,0.9s
NEW MLR MLR
comp=Z,969nm,22.0s
NEW Newport 84.47 38 *e*P **P 07 54 39.3 0.0**
comp=Z,235nm,0.9s,mb6.3
NEW LR LR
comp=Z,969nm,22.0s,MS5.1
WET Wettzell 84.48 323 *e*P **P 07 54 39.7 +0.4**
comp=Z,292nm,1.5s,mb6.2
WET *e*S S 08 05 01.2 -0.7
LTK Loutraki 84.49 310 *e*P **P 07 54 37.0 -2.5**
LTK Loutraki 84.49 310 P **P 07 54 36.9 -2.6**
MOA Molln 84.50 322 ⇑*i*PcP PcP 07 54 39.7 -3.2
comp=Z,143nm,1.0s,SNR=24
NEST Nestorio 84.53 313 P **P 07 54 38.9 -0.8**
NKY Niksic 84.56 316 ⇑*i*P **P 07 54 39.2 -0.6**
NKY Niksic 84.56 316 ⇑*i*P **P 07 54 39.2 -0.6**
DID Didima 84.57 310 *e*P **P 07 54 37.0 -3.0**
DID Didima 84.57 310 P **P 07 54 37.3 -2.7**
DSF Desfina 84.59 311 P **P 07 54 37.7 -2.3**
TTG Podgorica 84.60 315 *e*P **P 07 54 39.8 -0.2**
TTG Podgorica 84.60 315 *e*P **P 07 54 39.9 -0.1**
RAR Rarotonga 84.69 117 P **P 07 54 41.1 +0.4**
comp=Z,25nm,0.6s,mb5.5,baz=214,slow=4.7,SNR=3.8
RAR pP pP 07 54 55.6 +0.4
comp=Z,57nm,0.9s,baz=240,slow=7.0,SNR=4.5
RAR Rarotonga 84.69 117 P **P 07 54 41.1 +0.4**
RAR *PP pP 07 54 55.6 +0.4
RAR pmax pmax
comp=Z,25nm,0.6s
RAR pmax pmax
comp=Z,57nm,0.9s
SOKA Soboth 84.75 321 ⇑*i*P **P 07 54 40.7 0.0**
comp=Z,145nm,1.0s,mb6.0
BRY Bratogost 84.79 316 ⇑*i*P **P 07 54 40.1 -0.8**
BRY Bratogost 84.79 316 ⇑*i*P **P 07 54 40.2 -0.8**
TIR Tirane 84.80 314 *e*P **P 07 54 41.5 +0.5**
TIR pmax pmax
comp=Z,965nm,1.4s,mb6.7
TIR MLR MLR
comp=Z,5µm,19.0s,MS5.9
TIR Tirane 84.80 314 *e*P **P 07 54 41.5 +0.5**
comp=Z,965nm,1.4s,mb6.7
TIR LR LR
comp=Z,5µm,19.0s,MS5.9
YBH Yreka Blue Hor 84.85 45 P **P 07 54 41.2 -0.1**
comp=Z,76nm,0.9s,mb5.8,baz=281,slow=3.6,SNR=88
YBH pP pP 07 54 56.0 +0.2
comp=Z,83nm,1.0s,baz=254,slow=20,SNR=14
YBH LR LR 08 27 23.0
comp=Z,1µm,22.0s,MS5.2,baz=293,slow=32
YBH Yreka Blue Hor 84.85 45 *e*P **P 07 54 42.1 +0.8**
YBH *e**PP pP 07 54 55.6 -0.2
YBH pmax pmax
comp=Z,121nm,1.1s
YBH MLR MLR
comp=Z,1µm,22.0s
YBH Yreka Blue Hor 84.85 45 *e*P **P 07 54 42.1 +0.8**
comp=Z,121nm,1.1s,mb5.9
YBH *e*pP pP 07 54 55.6 -0.2
YBH LR LR
comp=Z,1µm,22.0s,MS5.2
ULC Ulcinj 84.86 315 ⇓*i*P **P 07 54 40.9 -0.4**
ULC Ulcinj 84.86 315 ⇓*i*P **P 07 54 40.9 -0.4**
KALE Kalithea 84.86 311 P **P 07 54 39.5 -1.9**
A12A Yaak River Ran 84.86 37 ⇑P **P 07 54 41.8 +0.6**
baz=85,SNR=92
ZAVS Zavodnje 84.89 320 *e*P **P 07 54 41.1 -0.3**
BUM Brajici-Budva 84.89 315 ⇑*i*P **P 07 54 41.8 +0.3**
BUM Brajici-Budva 84.89 315 ⇑*i*P **P 07 54 41.9 +0.4**
TRIZ Trizonia 84.92 311 P **P 07 54 39.7 -2.0**
E09A Wood Farm, Sta 84.92 39 ⇑P **P 07 54 41.6 +0.1**
baz=85,SNR=75
UBBA Unterbreizbach 84.94 326 *e*P **P 07 54 41.6 +0.1**
comp=Z,279nm,1.3s,mb6.2
UBBA *e*S S 08 05 08.1 +1.7
GUR Goura 84.96 310 *e*P **P 07 54 40.5 -1.4**
GUR Goura 84.96 310 P **P 07 54 40.0 -1.9**
VAM Vamos 84.96 307 *e*P **P 07 54 42.5 +0.5**
EFP Efpalio 85.00 311 *e*P **P 07 54 41.0 -1.1**
EFP Efpalio 85.00 311 P **P 07 54 41.0 -1.1**
BORG Borgarnes 85.01 347 P **P 07 54 43.6 +2.0**
comp=Z,499nm,1.2s,mb6.5,SNR=5.7
BORG Borgarnes 85.01 347 *e*P **P 07 54 42.4 +0.8**
BORG pmax pmax
comp=Z,114nm,1.1s
BORG MLR MLR
comp=Z,2µm,22.0s
BORG Borgarnes 85.01 347 *e*P **P 07 54 42.4 +0.7**
comp=Z,114nm,1.1s,mb5.9
BORG LR LR
comp=Z,2µm,22.0s,MS5.5
GRF Grafenberg Arr 85.02 325 *e*P **P 07 54 42.4 +0.4**
comp=Z,832nm,1.4s,mb6.7
GRF *e*pP pP 07 54 59.5 +3.0
GRF *e*PP PP 07 58 00.4 +1.7
GRF *e*L 08 36 50.9
comp=Z,13µm,18.4s
GRF Grafenberg Arr 85.02 325 *e*P **P 07 54 42.4 +0.4**
GRF *e**PP pP 07 54 59.5 +3.0
GRF *e* 07 58 00.4
GRF pmax pmax
comp=Z,832nm,1.4s,mb6.7
GRF MLR MLR
comp=Z,13µm,18.4s,MS6.3
LAKA Lakka 85.05 311 P **P 07 54 40.9 -1.4**
JAN Janina 85.06 312 *e*P **P 07 54 42.0 -0.4**
HCY Herceg Novi 85.06 316 ⇑*i*P **P 07 54 42.6 +0.3**
HCY Herceg Novi 85.06 316 ⇑*i*P **P 07 54 42.7 +0.3**
IBBN Ibbenburen 85.09 328 *e*P **P 07 54 42.1 -0.1**
comp=Z,674nm,1.0s,mb6.7
OBKA Obir 85.12 321 ⇑*i*P **P 07 54 42.3 -0.2**
comp=Z,113nm,0.9s,mb6.0,SNR=13
PDKS Podkum 85.12 320 *i* P **P 07 54 42.7 +0.1**
G08A Pilot Rock 85.15 41 ⇑P **P 07 54 43.0 +0.3**
baz=85
G08A ⇑S S 08 05 08.6 -0.1
baz=85
B12A Libby 85.17 37 ⇓P **P 07 54 43.2 +0.4**
baz=85,SNR=31
VLI Veliai 85.18 309 *e*P **P 07 54 40.5 -2.5**
LNOR Lincton Mounta 85.21 40 *e*P **P 07 54 43.5 +0.5**
LNOR pmax pmax
comp=Z,57nm,0.9s,mb5.7
LNOR Lincton Mounta 85.21 40 *e*P **P 07 54 43.5 +0.5**
comp=Z,57nm,0.9s,mb5.7
VLX Vlachokerasia 85.22 310 P **P 07 54 41.6 -1.6**
WIT Witteveen 85.27 329 ⇑*e*P **P 07 54 43.7 +0.6**
WIT Witteveen 85.27 329 *ex* sP 07 54 59.9 -3.3
RER Riviere de l'E 85.28 243 *e*P **P 07 54 43.8 +0.1**
comp=Z,177nm,0.9s,mb6.2
RER *e*pP pP 07 54 59.5 +1.4
RER LR LR
comp=Z,1µm,21.0s,MS5.3
BOJS Bojanci 85.30 320 *i* P **P 07 54 43.5 +0.1**
BOJS *e*pP pP 07 54 59.8 +1.8
BOJS *e*PP PP 07 58 02.8 +1.6
BOJS *e*SKSac SKSac 08 05 01.8 -2.5
BOJS *e*S S 08 05 27.9 +18
BOJS *e*PS 08 06 24.6
GVD Gavdhos 85.33 307 *e*P **P 07 54 43.0 -0.8**
comp=Z,1µm,0.9s,mb7.1
KYTH Kithira 85.33 309 *e*P **P 07 54 42.5 -1.3**
VISS Visnje 85.36 320 *e*P **P 07 54 43.5 -0.3**
RJOB Jochberg 85.36 322 *e*P **P 07 54 44.1 +0.4**
comp=Z,353nm,1.0s,mb6.5
RJOB *e*S S 08 05 13.5 +2.8
LJU Ljubljana 85.40 320 *i* P **P 07 54 43.5 -0.4**
LJU *i **PP pP 07 55 00.0 +1.5
LJU *e* 07 58 03.3
LJU *e*S S 08 05 14.8 +3.7
LJU Ljubljana 85.40 320 *i* P **P 07 54 43.5 -0.5**
LJU *i*pP pP 07 55 00.0 +1.6
LJU *e*PP PP 07 58 03.3 +1.3
LJU *e*SKSac SKSac 08 05 01.1 -3.8
LJU *e*S S 08 05 14.8 +3.7
LJU *e* 08 05 34.4
K05A Summer Lake 85.44 44 ⇓P **P 07 54 44.7 +0.5**
baz=85
K05A ⇑S S 08 05 12.2 +0.5
baz=85
KBA Koelnbreinsper 85.45 322 ⇑*i*PcP PcP 07 54 44.3 -2.8
comp=Z,128nm,1.2s,SNR=16
RLS Riolos of Patr 85.49 311 *e*P **P 07 54 44.0 -0.5**
A13A Flathead Natio 85.51 36 ⇑P **P 07 54 44.7 +0.3**
baz=85,SNR=60
MYKA Terra Mystica 85.56 321 ⇑*i*P **P 07 54 44.1 -0.6**
comp=Z,97nm,0.8s,mb6.1
WDC Whiskeytown Da 85.58 46 *e*P **P 07 54 45.3 +0.4**
WDC *e**PP pP 07 54 58.5 -1.0
WDC pmax pmax
comp=Z,135nm,0.9s,mb6.2
WDC MLR MLR
comp=Z,901nm,19.0s,MS5.2
WDC Whiskeytown Da 85.58 46 *e*P **P 07 54 45.2 +0.3**
comp=Z,135nm,0.9s,mb6.2
WDC *e*pP pP 07 54 58.5 -1.0
WDC LR LR
comp=Z,901nm,19.0s,MS5.2
ITM Ithomi 85.63 310 P **P 07 54 43.9 -1.4**
ITM Ithomi 85.63 310 P **P 07 54 43.9 -1.4**
CEY Cerknica 85.63 320 *i* P **P 07 54 44.9 -0.2**
CEY *i*pP pP 07 55 00.3 +0.6
CEY *e*PP PP 07 58 03.1 -0.7
CEY *e*SKSac SKSac 08 05 02.9 -3.5
LKD2 Lefkada island 85.64 312 P **P 07 54 44.3 -1.0**
C12B Naegeli Ranch, 85.69 37 ⇑P **P 07 54 45.5 +0.1**
baz=86,SNR=92
WALA Waterton Lakes 85.70 36 *e*P **P 07 54 45.7 +0.3**
comp=Z,3.9nm,0.8s,mb4.7
WALA *e*pP pP 07 54 59.5 -0.3
KEK Kerkira 85.71 313 P **P 07 54 44.6 -1.0**
KEK Kerkira 85.71 313 P **P 07 54 44.6 -1.0**
JAVS Javornik 85.75 320 *i* P **P 07 54 45.1 -0.6**
JAVS *i*pP pP 07 55 00.5 +0.3
JAVS *e*SKSac SKSac 08 05 05.5 -1.6
JAVS *e*S S 08 05 18.4 +3.8
F10A Beach Ranch, E 85.75 40 ⇑P **P 07 54 45.9 +0.2**
baz=86,SNR=100
WTSB Winterswijk 85.76 328 ⇑*e*P **P 07 54 44.2 -1.4**
comp=Z,315nm,2.4s,mb6.1
WTSB Winterswijk 85.76 328 *ex* sP 07 55 02.3 -3.4
H08A Prairie City 85.76 41 ⇓P **P 07 54 46.1 +0.4**
baz=86
VOY Vojsko 85.77 321 *e*P **P 07 54 44.2 -1.6**
VOY *i* 07 54 45.4
VOY *e* 07 55 41.5
B13A Whitefish 85.83 37 ⇑P **P 07 54 46.4 +0.4**
baz=86,SNR=182
G09A Cove 85.84 40 ⇑P **P 07 54 46.2 +0.1**
baz=86,SNR=141
BUG Bochum--Univer 85.88 328 *e*P **P 07 54 46.0 -0.2**
comp=Z,199nm,1.1s,mb6.3
BUG *e*pP pP 07 55 02.3 +1.6
BUG *e*S S 08 05 17.1 +1.5
PYL PYLOS 85.91 310 P **P 07 54 45.0 -1.6**
KFL Anninata 85.91 311 P **P 07 54 46.0 -0.7**
FUR Furstenfeldbru 85.92 323 *e*P **P 07 54 47.0 +0.5**
comp=Z,534nm,1.1s,mb6.7
FUR *e*pP pP 07 55 03.3 +2.3
FUR *e*S S 08 05 17.4 +1.2
BSMT Bassoo Peak 85.97 37 *e*P **P 07 54 47.7 +0.9**
comp=Z,202nm,0.8s,mb6.4
BSMT *e*pP pP 07 55 01.8 +0.5
MCD Coleburn Disti 85.98 336 P **P 07 54 45.1 -1.5**
MCD Coleburn Disti 85.98 336 *e*P **P 07 54 45.1 -1.5**
A14A Double T Ranch 86.00 36 ⇓P **P 07 54 47.3 +0.4**
baz=86,SNR=406
VLS Valsamata 86.01 311 P **P 07 54 46.2 -0.9**
VLS Valsamata 86.01 311 P **P 07 54 46.2 -0.9**
TRI Trieste 86.03 320 *e*P **P 07 54 46.4 -0.7**
TRI pmax pmax
comp=Z,167nm,1.3s,mb6.1
TRI MLR MLR
comp=Z,8µm,22.0s,MS6.0
TRI Trieste 86.03 320 *e*P **P 07 54 46.4 -0.7**
comp=Z,167nm,1.3s,mb6.1
TRI LR LR
comp=Z,8µm,22.0s,MS6.0
MVH1 Achvaich 86.05 337 P **P 07 54 45.5 -1.4**
MVH1 Achvaich 86.05 337 *e*P **P 07 54 45.5 -1.4**
NVLJ Novalja 86.06 319 P **P 07 54 45.8 -1.5**
RSC Scourie 86.07 337 P **P 07 54 46.1 -0.9**
RSC Scourie 86.07 337 *e*P **P 07 54 46.1 -0.9**
MME1 Meikle Cairn 86.08 336 P **P 07 54 45.8 -1.3**
MME1 Meikle Cairn 86.08 336 *e*P **P 07 54 45.8 -1.3**
HOPS Hopland 86.08 48 *e*P **P 07 54 46.4 -1.1**
comp=Z,76nm,1.0s,mb5.9
HOPS *e*pP pP 07 55 00.4 -1.6
HOPS LR LR
comp=Z,1µm,20.0s,MS5.4
TNS Taunus Mts 86.09 326 *e*P **P 07 54 47.1 -0.2**
comp=Z,231nm,1.3s,mb6.2
TNS *e*S S 08 05 19.1 +1.4
ABTA Abfaltersbach 86.11 322 ⇑*i*P **P 07 54 46.6 -0.9**
comp=Z,137nm,1.0s,mb6.2,SNR=17
D12A Red Ives Fores 86.15 38 ⇓P **P 07 54 47.6 0.0**
baz=86
G10A Bishop Farm, J 86.21 40 ⇑P **P 07 54 48.0 0.0**
baz=86,SNR=243

MOD Modoc 86.26 44 *e*P **P 07 54 48.8 +0.5**
comp=Z,277nm,0.9s,mb6.5
MOD *e*pP pP 07 55 02.5 -0.4
MOD LR LR
comp=Z,692nm,20.0s,MS5.0
WATA Walderalm 86.27 323⇓*i*PcP PcP 07 54 47.9 -2.8
comp=Z,62nm,0.7s,SNR=13
WTTA Wattenberg 86.28 322 *i* PcP PcP 07 54 48.2 -2.6
comp=Z,170nm,0.9s,SNR=40
TOD Tromm 86.30 325 *e*P **P 07 54 48.0 -0.3**
JTMT Jette 86.31 37 *e*P **P 07 54 48.8 +0.4**
comp=Z,101nm,1.0s,mb6.0
A15A Johnson Ranch, 86.36 35⇓P **P 07 54 48.4 -0.2**
baz=86,SNR=211
BMO Blue Mountains 86.36 41 *e*P **P 07 54 49.0 +0.3**
BMO *e**PP pP 07 55 02.8 -0.5
BMO pmax pmax
comp=Z,85nm,1.0s,mb5.9
BMO Blue Mountains 86.36 41 *e*P **P 07 54 49.0 +0.2**
comp=Z,85nm,1.0s,mb5.9
BMO *e*pP pP 07 55 02.8 -0.5
YBMT Yellow Bay 86.38 37 *e*P **P 07 54 49.1 +0.4**
comp=Z,44nm,0.9s,mb5.7
F11A Grangeville 86.41 39⇑P **P 07 54 48.5 -0.5**
baz=86,SNR=91
B14A Marquette Ranc 86.46 36⇑P **P 07 54 49.6 +0.5**
baz=86,SNR=425
B14A ⇑S S 08 05 22.5 +1.0
baz=86
MDO Dochfour 86.48 337 P **P 07 54 47.2 -1.9**
MDO Dochfour 86.48 337 *e*P **P 07 54 47.2 -1.9**
MOTA Moosalm 86.52 323⇑*i*PcP PcP 07 54 49.1 -2.7
comp=Z,180nm,0.9s,SNR=37
J08A Circle Bar Ran 86.55 42⇓P **P 07 54 50.0 +0.3**
baz=86,SNR=160
C14A Swan Lake 86.58 37⇑P **P 07 54 49.8 0.0**
baz=86
SWMT Swartz Lake 86.61 37 *e*P **P 07 54 49.9 0.0**
comp=Z,119nm,0.9s,mb6.1
RETA Reutte 86.61 323⇑*i*PcP PcP 07 54 49.6 -2.6
comp=Z,58nm,0.8s,SNR=13
D13A Huson 86.61 38⇑P **P 07 54 49.5 -0.4**
baz=86,SNR=45
I09A Lost Marbles R 86.62 41⇑P **P 07 54 50.3 +0.3**
baz=86,SNR=137
STU Stuttgart 86.63 325 *e*P **P 07 54 49.8 -0.2**
comp=Z,160nm,1.1s,mb6.2
STU *e*S S 08 05 24.0 +0.9
STU Stuttgart 86.63 325 *e*P **P 07 54 49.4 -0.6**
STU pmax pmax
comp=Z,121nm,1.0s,mb6.1
STU Stuttgart 86.63 325 *e*P **P 07 54 49.4 -0.6**
comp=Z,121nm,1.0s,mb6.1
G11A Walters Elk Ra 86.63 40⇑P **P 07 54 49.4 -0.7**
baz=86,SNR=189
RRR Rubha Reidh 86.67 337 P **P 07 54 48.8 -1.2**
RRR Rubha Reidh 86.67 337 *e*P **P 07 54 48.8 -1.2**
MCCM Marconi Confer 86.67 48 *e*P **P 07 54 49.3 -1.1**
comp=Z,161nm,0.8s,mb6.3
MCCM *e*pP pP 07 55 03.3 -1.6
MCCM LR LR
comp=Z,1μm,20.0s,MS5.3
ABH Alteburg 86.75 326 *e*P **P 07 54 50.3 -0.2**
KAC Achnashellach 86.77 337 P **P 07 54 49.5 -1.0**
KAC Achnashellach 86.77 337⇑*e*P **P 07 54 49.5 -1.0**
H10A Noah's Angus R 86.84 40⇓P **P 07 54 50.8 -0.3**
baz=87,SNR=354
KTD Kalmit 86.85 326 *e*P **P 07 54 51.8 +0.8**
B15A Bradely Ranch, 86.86 36⇑P **P 07 54 51.1 0.0**
baz=87,SNR=205
RRH Rhenigidale 86.92 338 P **P 07 54 50.0 -1.1**
RRH Rhenigidale 86.92 338 *e*P **P 07 54 50.0 -1.1**
FETA Feichten 86.92 323 *i* PcP PcP 07 54 51.2 -2.4
comp=Z,85nm,0.9s,SNR=55
HGN Heimansgroeve 86.96 328⇑*e*P **P 07 54 49.6 -2.0**
comp=Z,154nm,2.5s,mb5.8
HGN Heimansgroeve 86.96 328 *e*PP PP 07 58 15.7 +1.3
APPI Appiano 86.98 322 P **P 07 54 50.9 -0.8**
WVOR Wild Horse Val 86.98 43 *e*P **P 07 54 52.1 +0.3**
WVOR pmax pmax
comp=Z,92nm,0.9s,mb6.0
WVOR MLR MLR
comp=Z,974nm,22.0s,MS5.2
WVOR Wild Horse Val 86.98 43 *e*P **P 07 54 52.1 +0.3**
comp=Z,92nm,0.9s,mb6.0
WVOR LR LR
comp=Z,974nm,22.0s,MS5.2
ESY Stoneypath 86.99 335 P **P 07 54 50.4 -1.1**
ESY Stoneypath 86.99 335⇑*e*P **P 07 54 50.4 -1.1**
F12A Elk City 86.99 39⇓P **P 07 54 51.2 -0.5**
baz=87,SNR=505
KPL Plockton 87.01 337 P **P 07 54 50.7 -1.0**
KPL AMb AMB 07 54 51.5
comp=Z,191nm,3.3s
KPL AMS AMS 08 37 41.3
comp=Z,3μm,21.2s
KPL Plockton 87.01 337 *e*P **P 07 54 50.7 -1.0**
KPL AMb AMB 07 54 51.5
comp=Z,191nm,3.3s
KPL AMS AMS 08 37 41.3
comp=Z,3μm,21.2s,MS5.7
MEM Membach 87.03 327 P **P 07 54 51.4 -0.4**
KSB Sheil Bridge 87.03 337 P **P 07 54 50.5 -1.2**
KSB Sheil Bridge 87.03 337 *e*P **P 07 54 50.5 -1.2**
SLMT Seeley Lake 87.04 37 *e*P **P 07 54 51.9 -0.1**
comp=Z,286nm,0.8s,mb6.5
FCC Fort Churchill 87.05 21 *e*P **P 07 54 51.1 -0.7**
comp=Z,9.6nm,1.0s,mb5.0
MSO Missoula 87.06 38 *e*P **P 07 54 51.5 -0.6**
comp=Z,65nm,1.0s,mb5.8
MSO LR LR
comp=Z,797nm,20.0s,MS5.1
BEBN Eben Emael 87.06 328 P **P 07 54 52.7 +0.7**
EBH Black Hill 87.08 335 P **P 07 54 50.8 -1.2**
EBH Black Hill 87.08 335 *e*P **P 07 54 50.8 -1.2**
I10A Payette 87.11 41⇑P **P 07 54 52.2 -0.1**
baz=87,SNR=44
D14A Greenough 87.13 37⇓P **P 07 54 52.1 -0.4**
baz=87,SNR=187
E13A Victor 87.16 38⇑P **P 07 54 51.8 -0.8**
baz=87,SNR=46
C15A Salmond Ranch, 87.18 36⇑P **P 07 54 52.6 0.0**
baz=87,SNR=499
H11A Donnelly 87.19 40⇓P **P 07 54 52.3 -0.5**
baz=87,SNR=89
EDI Edinburgh 87.20 335 AMS AMS 08 34 28.9
comp=Z,4μm,23.4s,MS5.7
DAVA Damuels 87.20 323 *i* PcP **P 07 54 52.7 -0.1**
comp=Z,150nm,0.7s,mb6.3,SNR=50
LANF Langenberg 87.21 325 *e*P **P 07 54 52.5 -0.3**
B16A M & M Farms, S 87.24 35⇓P **P 07 54 52.4 -0.5**
baz=87,SNR=250
EBL Broad Law 87.26 335 P **P 07 54 52.1 -0.8**
EBL Broad Law 87.26 335⇑*e*P **P 07 54 52.1 -0.8**
SPAK Spaichingen-Ko 87.27 324 *e*P **P 07 54 52.3 -0.8**
RGNG Rignano Grg 87.29 316 P **P 07 54 53.5 +0.2**
FFC Flin Flon 87.35 27 P **P 07 54 52.9 -0.4**
comp=Z,4μm,0.8s
FFC Flin Flon 87.35 27 *e*P **P 07 54 53.1 -0.2**
FFC pmax pmax
comp=Z,548nm,0.8s,mb6.8
FFC MLR MLR
comp=Z,1μm,21.0s,MS5.3
FFC Flin Flon 87.35 27 *e*P **P 07 54 53.1 -0.2**
comp=Z,548nm,0.8s,mb6.8
FFC LR LR
comp=Z,1μm,21.0s,MS5.3
BFO Black Forest 87.36 325 P **P 07 54 53.8 +0.3**
comp=Z,438nm,1.1s,mb6.6,SNR=12
BFO Black Forest 87.36 325 *e*P **P 07 54 53.4 -0.1**
comp=Z,149nm,1.3s,mb6.1
BFO *e*pP pP 07 55 10.0 +1.9
BFO *e*S S 08 05 29.8 -0.3
BFO Black Forest 87.36 325 *e*P **P 07 54 53.0 -0.5**
BFO pmax pmax
comp=Z,122nm,1.2s,mb6.0
BFO MLR MLR
comp=Z,7μm,19.0s,MS6.1
BFO Black Forest 87.36 325 *e*P **P 07 54 53.0 -0.5**
comp=Z,122nm,1.2s,mb6.0
BFO LR LR
comp=Z,7μm,19.0s,MS6.1
EAU Auchinoon 87.36 335 P **P 07 54 52.5 -0.8**
EAU Auchinoon 87.36 335⇑*e*P **P 07 54 52.5 -0.8**
CHMT Chamberlain Mo 87.37 37 *e*P **P 07 54 53.2 -0.4**
comp=Z,49nm,1.0s,mb5.7

KAR1 Arisaig 87.40 337 P **P 07 54 52.6 -0.9**
KAR1 Arisaig 87.40 337⇑*e*P **P 07 54 52.6 -0.9**
EAB Aberfoyle 87.43 336 P **P 07 54 52.4 -1.2**
EAB Aberfoyle 87.43 336 *e*P **P 07 54 52.4 -1.2**
F13A Darby 87.48 38⇑P **P 07 54 53.4 -0.7**
baz=87,SNR=83
BCLA Clavier 87.49 328 P **P 07 54 53.9 -0.2**
J10A Berg Farm, Mel 87.52 41⇓P **P 07 54 54.2 -0.2**
baz=87,SNR=14
E14A Clinton 87.55 38⇑P **P 07 54 54.2 -0.3**
baz=87,SNR=97
WLF Walferdange 87.58 327 P **P 07 54 55.1 +0.6**
WLF Walferdange 87.58 327 *e*P **P 07 54 54.3 -0.2**
comp=Z,97nm,0.9s,mb6.0
WLF *e*S S 08 05 32.7 +0.5
WLF Walferdange 87.58 327 *e*P **P 07 54 54.6 +0.1**
WLF pmax pmax
comp=Z,90nm,0.8s,mb6.0
WLF MLR MLR
comp=Z,4μm,20.0s,MS5.8
WLF Walferdange 87.58 327 *e*P **P 07 54 54.6 +0.1**
comp=Z,90nm,0.8s,mb6.0
WLF LR LR
comp=Z,4μm,20.0s,MS5.8
C16A Fuhringer Ranc 87.61 36⇓P **P 07 54 54.4 -0.3**
baz=87,SNR=224
XAL Allendale 87.62 334 P **P 07 54 53.2 -1.4**
XAL Allendale 87.62 334 *e*P **P 07 54 53.2 -1.4**
MABI Malga Bissina 87.63 322 P **P 07 54 54.2 -0.7**
ESK Eskdalemuir 87.66 335 P **P 07 54 53.3 -1.5**
comp=Z,312nm,0.7s,mb6.7,SNR=12
ESK Eskdalemuir 87.66 335 P **P 07 54 53.1 -1.7**
ESK AMb AMB 07 54 54.5
comp=Z,152nm,3.3s
ESK AMS AMS 08 38 03.2
comp=Z,4μm,19.2s
ESK Eskdalemuir 87.66 335 *e*P **P 07 54 53.1 -1.7**
ESK AMb AMB 07 54 54.5
comp=Z,152nm,3.3s
ESK AMS AMS 08 38 03.2
comp=Z,4μm,19.2s,MS5.9
ESK Eskdalemuir 87.66 335 *e*P **P 07 54 53.6 -1.2**
ESK *e**PP pP 07 55 07.0 -2.4
ESK pmax pmax
comp=Z,118nm,1.3s,mb6.0
ESK MLR MLR
comp=Z,5μm,20.0s,MS6.0
ESK Eskdalemuir 87.66 335 *e*P **P 07 54 53.6 -1.2**
comp=Z,118nm,1.3s,mb6.0
ESK *e*pP pP 07 55 07.0 -2.4
ESK LR LR
comp=Z,5μm,20.0s,MS6.0
ORI Oriolo Calabro 87.67 315 P **P 07 54 56.7 +1.5**
D15A Lincoln 87.68 37⇓P **P 07 54 54.9 -0.2**
baz=88,SNR=59
I11A Placerville 87.70 41⇑P **P 07 54 54.9 -0.3**
baz=88,SNR=154
FG5 Orsara di Pugl 87.71 316 P **P 07 54 55.9 +0.5**
FG5 pmax pmax
comp=Z,90nm,0.8s,mb6.0
FG5 Orsara di Pugl 87.71 316 P **P 07 54 55.9 +0.5**
comp=Z,90nm,0.8s,mb6.0
ECK Cauldkaine Hil 87.73 335 P **P 07 54 54.3 -0.9**
ECK Cauldkaine Hil 87.73 335⇑*e*P **P 07 54 54.3 -0.9**
PGBU Glenifferbraes 87.77 336 P **P 07 54 54.5 -0.8**
PGBU AMb AMB 07 54 56.7
comp=Z,162nm,1.9s,mb5.9
PGBU AMS AMS 08 36 42.8
comp=Z,4μm,21.8s
PGBU Glenifferbraes 87.77 336 *e*P **P 07 54 54.5 -0.8**
PGBU AMb AMB 07 54 56.7
comp=Z,162nm,1.9s,mb5.9
PGBU AMS AMS 08 36 42.8
comp=Z,4μm,21.8s,MS5.7
B17A L&G Farms, Che 87.78 35⇑P **P 07 54 55.3 -0.2**
baz=88,SNR=464
FELD Feldberg im Sc 87.81 324 *e*P **P 07 54 54.8 -0.9**
K10A MacKenzie Ranc 87.84 42⇓P **P 07 54 56.3 +0.4**
baz=88,SNR=72
CDF Champ du Feu 87.84 325 *e*P **P 07 54 55.4 -0.4**
comp=Z,117nm,0.9s,mb5.8
CDF Champ du Feu 87.84 325 *e*P **P 07 54 55.4 -0.4**
CDF pmax pmax
comp=Z,59nm,0.9s,mb5.8
CDF Champ du Feu 87.84 325 *e*P **P 07 54 55.4 -0.4**
comp=Z,59nm,0.9s,mb5.8
LIBD Limburg 87.84 325 *e*P **P 07 54 55.6 -0.2**
A18A Metzger Ranch, 87.85 34⇓P **P 07 54 55.5 -0.4**
baz=88,SNR=294
SNF Seneffe 87.91 328 P **P 07 54 55.7 -0.4**
GIVF Givet 87.93 328 *e*P **P 07 54 55.7 -0.5**
H12A Diamond D Ranc 87.95 40⇑P **P 07 54 56.4 0.0**
baz=88,SNR=302
SNTG Esanatoglia 87.96 319 P **P 07 54 56.5 0.0**
comp=Z,3μm,3.0s
G13A Cobalt 87.96 39⇓P **P 07 54 55.7 -0.7**
baz=88,SNR=74
F14A Wisdom 88.00 38⇑P **P 07 54 56.2 -0.4**
baz=88,SNR=91
TUE Stuetta 88.00 323 *e*P **P 07 54 56.4 -0.2**
comp=Z,140nm,0.8s,mb6.2
TUE LR LR
comp=Z,16μm,19.0s,MS6.5
E15A Deer Lodge 88.01 37⇑P **P 07 54 56.5 -0.2**
baz=88,SNR=137
ECH Echery 88.03 325 *e*P **P 07 54 55.8 -0.9**
ECH pmax pmax
comp=Z,39nm,1.0s,mb5.6
ECH MLR MLR
comp=Z,6μm,19.0s,MS6.0
ECH Echery 88.03 325 *e*P **P 07 54 55.8 -0.9**
comp=Z,39nm,1.0s,mb5.6
ECH LR LR
comp=Z,6μm,19.0s,MS6.0
DOU Dourbes 88.04 328 P **P 07 54 56.4 -0.3**
WCN Washoe City 88.07 46⇑P **P 07 54 57.0 0.0**
baz=88,SNR=63
MFID Camas Ranch 88.07 41⇓P **P 07 54 57.1 +0.1**
baz=88,SNR=118
RNI2 Rionero Sannit 88.15 317 P **P 07 54 58.5 +1.1**
MURB Monte Urbino 88.19 319 P **P 07 54 58.1 +0.5**
D16A Dana Ranch, Ca 88.20 36⇑P **P 07 54 57.4 -0.1**
baz=88,SNR=249
AQU L'Aquila 88.22 318 *e*P **P 07 54 58.7 +1.0**
comp=Z,178nm,1.0s,mb6.2
AQU LR LR
comp=Z,12μm,19.0s,MS6.3
AQU L'Aquila 88.22 318⇑*i*P **P 07 54 58.1 +0.4**
B18A Beardsley Farm 88.23 35⇑P **P 07 54 57.4 -0.2**
baz=88,SNR=142
I12A Atlanta 88.25 40⇓P **P 07 54 58.1 +0.3**
baz=88,SNR=74
BAIF Baives 88.25 328 *e*P **P 07 54 57.2 -0.5**
comp=Z,33nm,0.7s,mb5.3
BAIF Baives 88.25 328 *e*P **P 07 54 57.2 -0.5**
BAIF pmax pmax
comp=Z,17nm,0.7s,mb5.4
BAIF Baives 88.25 328 *e*P **P 07 54 57.2 -0.5**
comp=Z,17nm,0.7s,mb5.4
HRY Holter Researc 88.26 37 *e*P **P 07 54 58.1 +0.3**
comp=Z,174nm,0.8s,mb6.3
HRY *e*pP pP 07 55 12.4 0.0
H13A Challis 88.28 39⇑P **P 07 54 57.9 -0.1**
baz=88,SNR=261
MOF Molkenrain 88.28 325 *e*P **P 07 54 56.6 -1.3**
GCD Castle Douglas 88.28 335 P **P 07 54 56.4 -1.4**
GCD Castle Douglas 88.28 335 *e*P **P 07 54 56.4 -1.4**
BBS Basel-Blauen 88.34 324 *e*P **P 07 54 57.4 -0.8**
K11A Parker Ranch, 88.34 42⇑P **P 07 54 58.4 +0.1**
baz=88,SNR=52
CMB Columbia Colle 88.37 47 *e*P **P 07 54 58.7 +0.1**
CMB *e**PP pP 07 55 11.9 -1.3
CMB pmax pmax
comp=Z,152nm,1.1s,mb6.1
CMB MLR MLR
comp=Z,1μm,22.0s,MS5.3
CMB Columbia Colle 88.37 47 *e*P **P 07 54 58.7 +0.2**
comp=Z,152nm,1.1s,mb6.1
CMB *e*pP pP 07 55 11.8 -1.3
CMB LR LR
comp=Z,1μm,22.0s,MS5.3
SAO San Andreas Ge 88.38 49 *e*P **P 07 54 57.9 -0.7**
SAO pmax pmax
comp=Z,93nm,1.3s,mb5.8
SAO MLR MLR
comp=Z,1μm,19.0s,MS5.3

SAO San Andreas Ge 88.38 49 *e*P **P 07 54 57.9 -0.7**
comp=Z,93nm,1.3s,mb5.8
SAO LR LR
comp=Z,1μm,19.0s,MS5.3
XDE Dent Fell 88.38 334 P **P 07 54 57.3 -0.9**
XDE Dent Fell 88.38 334 *e*P **P 07 54 57.3 -0.9**
HINF Hinteralfeld 88.44 325 *e*P **P 07 54 57.7 -1.0**
comp=Z,59nm,0.7s,mb5.6
HINF Hinteralfeld 88.44 325 *e*P **P 07 54 57.7 -1.0**
HINF pmax pmax
comp=Z,29nm,0.7s,mb5.6
HINF Hinteralfeld 88.44 325 *e*P **P 07 54 57.7 -1.0**
comp=Z,30nm,0.7s,mb5.6
E16A East Helena 88.45 37⇓P **P 07 54 58.8 +0.1**
baz=88,SNR=92
F15A Butte 88.46 38⇑P **P 07 54 59.0 +0.2**
baz=88,SNR=74
EGMT Eagleton 88.49 35⇑P **P 07 54 58.6 -0.3**
baz=88,SNR=82
EGMT Eagleton 88.49 35 *e*P **P 07 54 58.9 0.0**
comp=Z,250nm,1.0s,mb6.4
EGMT LR LR
comp=Z,1μm,20.0s,MS5.3
LRM Limekiln Ridge 88.49 38 *e*P **P 07 54 59.8 +0.8**
comp=Z,392nm,0.8s,mb6.7
L10A Juniper Basin 88.49 42⇓P **P 07 54 59.4 +0.3**
baz=88,SNR=81
KBI1 Birley Grange 88.53 333 P **P 07 54 58.5 -0.4**
KBI1 Birley Grange 88.53 333 *e*P **P 07 54 58.5 -0.4**
GAL1 Galloway 88.57 335 P **P 07 54 58.0 -1.1**
GAL1 AMb AMB 07 54 58.7
comp=Z,128nm,3.4s
GAL1 AMS AMS 08 35 19.5
comp=Z,4μm,23.9s
GAL1 Galloway 88.57 335 *e*P **P 07 54 58.0 -1.1**
GAL1 AMb AMB 07 54 58.7
comp=Z,128nm,3.4s
GAL1 AMS AMS 08 35 19.5
comp=Z,4μm,23.9s,MS5.7
D17A Six Diamond Ra 88.58 36⇑P **P 07 54 59.4 0.0**
baz=88,SNR=205
HAU Haudompre 88.58 325 *e*P **P 07 54 58.4 -0.9**
comp=Z,51nm,0.9s,mb5.6
HAU *e*MLR MLR
comp=Z,8μm,17.8s,MS5.9
HAU Haudompre 88.58 325 *e*P **P 07 54 58.4 -0.9**
HAU pmax pmax
comp=Z,26nm,0.9s,mb5.6
HAU MLR MLR
comp=Z,8μm,17.8s,MS6.2
HAU Haudompre 88.58 325 *e*P **P 07 54 58.4 -0.9**
comp=Z,26nm,0.9s,mb5.6
HAU LR LR
comp=Z,8μm,17.8s,MS6.2
J12A Stokes Ranch, 88.60 41⇓P **P 07 55 00.0 +0.5**
baz=88,SNR=37
DLMT Dillon 88.70 38 *e*P **P 07 55 00.6 +0.7**
comp=Z,261nm,0.9s,mb6.6
CERT Cerreto 88.71 318 P **P 07 54 59.8 -0.3**
H14A Leadore 88.74 39⇑P **P 07 55 00.2 0.0**
baz=88,SNR=49
I13A Wildhorse Cree 88.75 40⇓P **P 07 55 00.8 +0.6**
baz=89,SNR=259
LOMF Lomont 88.76 325 *e*P **P 07 54 59.6 -0.6**
M10A I.L. Ranch, Tu 88.78 43⇓P **P 07 55 01.0 +0.6**
baz=89,SNR=84
HLID Hailey 88.80 40⇓P **P 07 55 01.0 +0.6**
baz=89,SNR=323
HLID Hailey 88.80 40 *e*P **P 07 55 01.4 +0.9**
comp=Z,142nm,0.9s,mb6.3
HLID *e*pP pP 07 55 15.9 +0.8
HLID LR LR
comp=Z,860nm,20.0s,MS5.2
CWF Charnwood Fore 88.81 332 P **P 07 54 58.6 -1.7**
CWF AMb AMB 07 55 01.5
comp=Z,119nm,4.0s
CWF AMS AMS 08 34 23.1
comp=Z,3μm,27.4s
CWF Charnwood Fore 88.81 332 *e*P **P 07 54 58.6 -1.7**
CWF AMb AMB 07 55 01.5
comp=Z,119nm,4.0s
CWF AMS AMS 08 34 23.1
comp=Z,3μm,27.4s,MS5.6
L11A Cat Creek Ranc 88.87 42⇓P **P 07 55 01.1 +0.3**
baz=89,SNR=237
VLC Villacollemand 88.88 321 P **P 07 55 01.5 +0.7**
VLC LR LR
comp=Z,9μm,20.0s,MS6.2
G15A Dillon 88.89 38⇑P **P 07 55 01.0 +0.2**
baz=89,SNR=346
MEZF Maizieres J'vi 88.89 326 *e*P **P 07 55 00.5 -0.3**
comp=Z,69nm,0.9s,mb5.7
MEZF Maizieres J'vi 88.89 326 *e*P **P 07 55 00.5 -0.3**
comp=Z,69nm,0.9s,mb6.0
MCMT McKenzie Canyo 88.90 39 *e*P **P 07 55 01.1 +0.2**
comp=Z,11nm,0.8s,mb5.2
ELSH Elham, Standar 88.91 330 P **P 07 54 58.8 -2.0**
ELSH Elham, Standar 88.91 330 *e*P **P 07 54 58.8 -2.0**
E17A Martinsdale 88.93 36⇑P **P 07 55 01.5 +0.5**
baz=89,SNR=32
F16A Kennard Place, 88.96 37⇑P **P 07 55 01.2 0.0**
baz=89,SNR=59
D18A Linhart Farms, 89.01 35⇑P **P 07 55 01.6 +0.3**
baz=89,SNR=73
BMN Battle Mountai 89.01 44 *e*P **P 07 55 02.5 +1.0**
BMN *e**PP pP 07 55 15.9 -0.2
BMN pmax pmax
comp=Z,121nm,1.1s,mb6.1
BMN MLR MLR
comp=Z,964nm,22.0s,MS5.2
BMN Battle Mountai 89.01 44 *e*P **P 07 55 02.5 +1.0**
comp=Z,121nm,1.1s,mb6.1
BMN *e*pP pP 07 55 15.9 -0.2
BMN LR LR
comp=Z,964nm,22.0s,MS5.2
J13A Cove Ranch, Pi 89.04 40⇓P **P 07 55 02.2 +0.6**
baz=89,SNR=176
BOZ Bozeman (W) 89.05 37⇓P **P 07 55 02.0 +0.4**
baz=89,SNR=63
BOZ Bozeman (W) 89.05 37 *e*P **P 07 55 02.3 +0.7**
BOZ *e**PP pP 07 55 16.1 -0.1
BOZ pmax pmax
comp=Z,72nm,1.0s,mb6.0
BOZ MLR MLR
comp=Z,1μm,20.0s,MS5.3
BOZ Bozeman (W) 89.05 37 *e*P **P 07 55 02.3 +0.7**
comp=Z,72nm,1.0s,mb6.0
BOZ *e*pP pP 07 55 16.1 -0.1
BOZ LR LR
comp=Z,1μm,20.0s,MS5.3
CEL Celeste 89.05 313 *e*P **P 07 55 01.2 -0.5**
comp=Z,109nm,0.8s,mb6.2
CEL LR LR
comp=Z,2μm,20.0s,MS5.5
K12A Draper Farm, C 89.08 41⇑P **P 07 55 02.3 +0.5**
baz=89,SNR=53
I14A Mackay 89.12 40⇓P **P 07 55 02.9 +0.9**
baz=89,SNR=305
G16A Moss Hill, Enn 89.22 38⇑P **P 07 55 02.7 +0.3**
baz=89,SNR=40
ORO Oropa 89.27 323 P **P 07 55 01.7 -0.9**
ORO pmax pmax
comp=Z,70nm,0.9s,mb6.0
ORO Oropa 89.27 323 P **P 07 55 01.7 -0.9**
comp=Z,70nm,0.9s,mb6.0
N10A Dunphy 89.28 43⇓P **P 07 55 03.5 +0.7**
baz=89
M11A Holland Ranch, 89.29 43⇓P **P 07 55 03.7 +0.9**
baz=89,SNR=70
L12A House Creek Ra 89.32 42⇑P **P 07 55 03.6 +0.7**
baz=89,SNR=135
E18A Harlowton 89.36 36⇓P **P 07 55 03.6 +0.5**
baz=89,SNR=228
F17A Fitzpatrick Pl 89.40 37⇓P **P 07 55 03.6 +0.4**
baz=89,SNR=17
J14A Carey 89.46 40⇓P **P 07 55 04.6 +1.1**
baz=89,SNR=147
NVAR Mina Array Bea 89.50 46 P **P 07 55 04.0 +0.2**
comp=Z,24nm,0.8s,mb5.6,baz=276,slow=5.3,SNR=154
NVAR pP pP 07 55 18.7 +0.3
comp=Z,28nm,0.9s,baz=290,slow=3.8,SNR=12
GMM Mts of Mourne 89.52 335 P **P 07 55 01.9 -1.6**
GMM Mts of Mourne 89.52 335 *e*P **P 07 55 01.9 -1.6**
WME Myndd Eilian 89.53 334 P **P 07 55 02.6 -1.1**
WME Myndd Eilian 89.53 334 *e*P **P 07 55 02.6 -1.1**
O10A Cortez Mining, 89.54 44⇑P **P 07 55 04.7 +0.7**
baz=89,SNR=14

K13A Stover Farm, H 89.55 41 ⇑P P 07 55 04.9 +0.9
baz=89,SNR=128
MLAC Mammoth Lakes 89.61 47 ⇑P P 07 55 04.9 +0.5
baz=89,SNR=15
I15A Monteview 89.62 39 ⇑P P 07 55 05.0 +0.7
baz=89,SNR=18
CABF La Chapelle 89.63 324 eP P 07 55 03.5 -0.8
comp=Z,48nm,1.0s,mb5.5
CABF La Chapelle 89.63 324 eP P 07 55 03.5 -0.8
CABF pmax pmax
comp=Z,24nm,1.0s,mb5.5
CABF La Chapelle 89.63 324 eP P 07 55 03.5 -0.8
comp=Z,24nm,1.0s,mb5.5
QLMT Earthquake Lak 89.68 38 eP P 07 55 05.9 +1.3
comp=Z,49nm,0.9s,mb5.8
N11A Elko Archery C 89.69 43 ⇓P P 07 55 05.5 +0.8
baz=90,SNR=41
G17A Pierce Place, 89.73 37 ⇓P P 07 55 05.5 +0.7
baz=90,SNR=20
YRC Rhoscolyn 89.75 334 P P 07 55 03.7 -1.0
YRC Rhoscolyn 89.75 334 eP P 07 55 03.7 -1.0
M12A Wells 89.82 42 ⇓P P 07 55 06.2 +1.0
baz=90,SNR=156
H16A Russell Place, 89.86 38 ⇑P P 07 55 06.1 +0.7
baz=90,SNR=56
F18A Big Timber 89.90 36 ⇓P P 07 55 05.6 0.0
baz=90,SNR=30
P10A Eureka 89.96 44 ⇑P P 07 55 06.4 +0.4
baz=90
L13A Double Diamond 89.98 41 ⇑P P 07 55 07.0 +0.9
baz=90,SNR=100
GCMT Greycliff 90.00 36 eP P 07 55 06.9 +0.8
comp=Z,85nm,0.9s,mb6.1
GCMT epP pP 07 55 20.8 +0.1
LPL La Plagne 90.01 323 eP P 07 55 05.8 -0.3
comp=Z,51nm,0.8s,mb5.6
LPL La Plagne 90.01 323 eP P 07 55 05.8 -0.3
LPL pmax pmax
comp=Z,26nm,0.8s,mb5.6
LPL La Plagne 90.01 323 eP P 07 55 05.8 -0.3
comp=Z,26nm,0.8s,mb5.6
LPG La Plagne 90.01 323 eP P 07 55 05.9 -0.2
comp=Z,63nm,0.7s,mb5.8
LPG La Plagne 90.01 323 eP P 07 55 05.9 -0.2
LPG pmax pmax
comp=Z,32nm,0.7s,mb5.8
LPG La Plagne 90.01 323 eP P 07 55 05.9 -0.2
comp=Z,32nm,0.7s,mb5.8
J15A Blackfoot 90.03 40 ⇓P P 07 55 07.1 +0.9
baz=90,SNR=34
ELK Elko 90.03 43 LR LR 08 32 21.1
comp=Z,975nm,21.6s,MS5.2,baz=280,slow=33
ELK Elko 90.03 43 eP P 07 55 06.8 +0.5
ELK pmax pmax
comp=Z,56nm,0.9s
ELK MLR MLR
comp=Z,1μm,20.0s
ELK Elko 90.03 43 eP P 07 55 06.8 +0.5
comp=Z,56nm,0.9s,mb5.9
ELK LR LR
comp=Z,1μm,20.0s,MS5.3
YMR Madison River 90.03 38 eP P 07 55 07.7 +1.5
comp=Z,140nm,0.9s,mb6.3
YMR epP pP 07 55 21.8 +1.0
MCH1 Michaelchurch 90.06 332 P P 07 55 05.3 -0.9
MCH1 AMb AMB 07 55 07.6
comp=Z,160nm,1.9s,mb6.0
MCH1 AMS AMS 08 40 49.8
comp=Z,3μm,18.5s
MCH1 Michaelchurch 90.06 332 eP P 07 55 05.3 -0.9
MCH1 AMb AMB 07 55 07.6
comp=Z,160nm,1.9s,mb6.0
MCH1 AMS AMS 08 40 49.8
comp=Z,3μm,18.5s,MS5.7
N12A Clover Valley, 90.09 43 ⇓P P 07 55 07.3 +0.8
baz=90,SNR=148
N12A Clover Valley, 90.09 43 eP P 07 55 07.6 +1.0
comp=Z,172nm,1.1s,mb6.3
N12A epP pP 07 55 21.8 +0.6
RCTC Rector, Farmer 90.10 48 ⇑P P 07 55 05.9 -0.8
baz=90,SNR=10
HTR Trewern Hill 90.11 333 P P 07 55 05.2 -1.2
HTR Trewern Hill 90.11 333⇑eP P 07 55 05.2 -1.2
K14A Jones Ranch, D 90.14 41 ⇑P P 07 55 07.4 +0.6
baz=90,SNR=112
O11A Cowboy Ranch, 90.15 44 ⇓P P 07 55 07.5 +0.7
baz=90
SMMC Simmler 90.16 49 ⇑P P 07 55 07.3 +0.3
baz=90,SNR=8.0
YNR Norris Junctio 90.16 38 eP P 07 55 09.0 +2.2
comp=Z,138nm,1.3s,mb6.1
YFT Old Faithful 90.25 38 eP P 07 55 10.0 +2.8
comp=Z,214nm,1.1s,mb6.4
HGH Gray Hill 90.25 332 P P 07 55 06.7 -0.4
HGH Gray Hill 90.25 332 eP P 07 55 06.7 -0.4
I16A Newdale 90.26 39 ⇑P P 07 55 08.4 +1.1
baz=90,SNR=36
M13A Montello 90.30 42 ⇑P P 07 55 08.0 +0.5
baz=90,SNR=169
M13A Montello 90.30 42 eP P 07 55 08.4 +0.9
comp=Z,97nm,0.9s,mb6.1
M13A epP pP 07 55 21.9 -0.2
LOR Lormes 90.32 326 eP P 07 55 06.5 -1.0
comp=Z,19nm,0.8s,mb5.2
LOR eMLR MLR
comp=Z,5μm,20.0s,MS5.7
LOR Lormes 90.32 326 eP P 07 55 06.5 -1.0
LOR pmax pmax
comp=Z,9.0nm,0.8s,mb5.2
LOR MLR MLR
comp=Z,5μm,20.0s,MS6.0
LOR Lormes 90.32 326 eP P 07 55 06.5 -1.0
comp=Z,9.4nm,0.8s,mb5.2
LOR LR LR
comp=Z,5μm,20.0s,MS6.0
TIN Tinemaha 90.34 47 ⇑P P 07 55 07.8 0.0
baz=90,SNR=8.8
BNI Bardonecchia 90.34 323 eP P 07 55 08.6 +1.0
BNI pmax pmax
comp=Z,40nm,0.9s,mb5.8
BNI MLR MLR
comp=Z,18μm,19.0s,MS6.5
BNI Bardonecchia 90.34 323 eP P 07 55 08.6 +0.9
comp=Z,40nm,0.9s,mb5.8
BNI LR LR
comp=Z,18μm,19.0s,MS6.5
G18A Lazy EL Ranch, 90.37 37 ⇓P P 07 55 07.4 -0.4
baz=90,SNR=11
TPH Tonopah 90.39 46 PFAKE 07 55 20.0 +12
TPH LR LR
comp=Z,981nm,19.0s,MS5.3
LKWY Lake 90.41 38 eP P 07 55 10.8 +2.8
LKWY e*PP pP 07 55 24.7 +2.1
LKWY pmax pmax
comp=Z,178nm,1.0s,mb6.3
LKWY MLR MLR
comp=Z,2μm,20.0s,MS5.5
LKWY Lake 90.41 38 eP P 07 55 10.8 +2.8
comp=Z,178nm,1.0s,mb6.3
LKWY epP pP 07 55 24.7 +2.1
LKWY LR LR
comp=Z,2μm,20.0s,MS5.5
H17A Grant Village 90.42 38 ⇓P P 07 55 10.1 +2.1
baz=90
L14A Malta 90.43 41 ⇓P P 07 55 08.8 +0.7
baz=90,SNR=73
K15A Arbon 90.43 40 ⇑P P 07 55 08.8 +0.7
baz=90,SNR=40
P11A Circle Ranch, 90.44 44 ⇑P P 07 55 08.5 +0.3
baz=90,SNR=26
HVZN Vizzini 90.44 313 P P 07 55 08.4 +0.1
Q10A Clear Creek Ra 90.47 45 ⇑P P 07 55 08.6 +0.2
baz=90,SNR=83
MBDF Montbardon 90.51 323 eP P 07 55 07.4 -1.0
comp=Z,52nm,0.9s,mb5.6
MBDF Montbardon 90.51 323 eP P 07 55 07.4 -1.0
MBDF pmax pmax
comp=Z,26nm,0.9s,mb5.6
MBDF Montbardon 90.51 323 eP P 07 55 07.4 -1.0
comp=Z,26nm,0.9s,mb5.6
PKM Peak Mountain 90.52 50 ⇓P P 07 55 08.9 +0.3
baz=90,SNR=12
IMW Indian Meadow 90.55 38 eP P 07 55 09.8 +1.2
comp=Z,95nm,1.0s,mb6.1
SAOF Saorge 90.56 322 eP P 07 55 08.8 +0.1
J16A Bone 90.57 39 ⇓P P 07 55 09.6 +0.8
baz=90,SNR=84

DCID1 Drake Creek 90.61 39 eP P 07 55 10.3 +1.4
comp=Z,65nm,0.8s,mb6.0
DCID1 epP pP 07 55 22.9 -0.6
O12A Currie 90.62 43 ⇑P P 07 55 09.7 +0.7
baz=90,SNR=260
AUTN L'Aution 90.63 322 eP P 07 55 11.2 +2.2
SSF Saint Saulge 90.64 326 eP P 07 55 08.7 -0.3
comp=Z,26nm,0.9s,mb5.3
SSF Saint Saulge 90.64 326 eP P 07 55 08.7 -0.3
SSF pmax pmax
comp=Z,13nm,0.9s,mb5.3
SSF Saint Saulge 90.64 326 eP P 07 55 08.7 -0.3
comp=Z,13nm,0.9s,mb5.3
RLMT Red Lodge 90.65 37 ⇓P P 07 55 09.7 +0.6
baz=90,SNR=62
RLMT Red Lodge 90.65 37 eP P 07 55 10.0 +0.9
comp=Z,98nm,0.9s,mb6.1
RLMT epP pP 07 55 24.2 +0.5
RLMT LR LR
comp=Z,1μm,21.0s,MS5.3
RRI2 Red Ridge 90.69 39 eP P 07 55 10.6 +1.3
comp=Z,57nm,0.8s,mb6.0
SBF Sospel 90.71 322 eP P 07 55 08.5 -0.9
comp=Z,93nm,0.7s,mb5.9
SBF Sospel 90.71 322 eP P 07 55 08.5 -0.9
SBF pmax pmax
comp=Z,47nm,0.7s,mb5.9
SBF Sospel 90.71 322 eP P 07 55 08.5 -0.9
comp=Z,46nm,0.7s,mb5.9
TOUF Mont Tournerai 90.71 322 eP P 07 55 09.6 +0.2
I17A Pilgrim Ck. 90.73 38 ⇓P P 07 55 10.8 +1.3
baz=90,SNR=23
LUCF Luceram 90.74 322 eP P 07 55 08.2 -1.3
SMF Signal de Mont 90.75 325 eP P 07 55 08.5 -1.0
comp=Z,48nm,0.8s,mb5.5
SMF Signal de Mont 90.75 325 eP P 07 55 08.5 -1.0
SMF pmax pmax
comp=Z,24nm,0.8s,mb5.6
SMF Signal de Mont 90.75 325 eP P 07 55 08.5 -1.0
comp=Z,24nm,0.8s,mb5.6
TPAW Teton Pass 90.80 39 eP P 07 55 10.7 +0.8
comp=Z,88nm,1.0s,mb6.0
TPAW epP pP 07 55 24.9 +0.5
REVF Revere 90.83 322 eP P 07 55 08.7 -1.2
MVIF Mont Vial 90.84 322 eP P 07 55 07.2 -2.8
SBC Santa Barbara 90.84 50 ⇓P P 07 55 10.3 +0.1
baz=91
R10A Warm Springs 90.85 45 ⇑P P 07 55 10.5 +0.3
baz=91,SNR=44
HVU Hansel Valley 90.86 41 eP P 07 55 11.3 +1.2
HVU pmax pmax
comp=Z,120nm,0.9s,mb6.2
HVU Hansel Valley 90.86 41 eP P 07 55 11.3 +1.2
comp=Z,120nm,0.9s,mb6.2
ORIF Oris-en-Rattie 90.86 323 eP P 07 55 10.3 +0.3
comp=Z,40nm,0.7s,mb5.6
ORIF eMLR MLR
comp=Z,11μm,17.0s,MS6.1
ORIF Oris-en-Rattie 90.86 323 eP P 07 55 10.3 +0.3
ORIF pmax pmax
comp=Z,20nm,0.7s,mb5.6
ORIF Oris-en-Rattie 90.86 323 eP P 07 55 10.3 +0.3
comp=Z,20nm,0.7s,mb5.6
K16A Soda Springs 90.87 40 ⇑P P 07 55 10.9 +0.8
baz=91,SNR=82
S10A Tonopah Range, 90.88 46 ⇑P P 07 55 10.4 +0.1
baz=91,SNR=108
DGMT Dagmar 90.89 32 ⇑P P 07 55 10.0 -0.1
baz=91,SNR=102
DGMT Dagmar 90.89 32 eP P 07 55 10.4 +0.3
comp=Z,326nm,0.9s,mb6.7
DGMT LR LR
comp=Z,2μm,21.0s,MS5.5
AVF Avril sur Loir 90.90 326 eP P 07 55 09.1 -1.1
comp=Z,37nm,0.9s,mb5.4
AVF Avril sur Loir 90.90 326 eP P 07 55 09.1 -1.1
AVF pmax pmax
comp=Z,19nm,0.9s,mb5.4
AVF Avril sur Loir 90.90 326 eP P 07 55 09.1 -1.1
comp=Z,19nm,0.9s,mb5.4
LOHW Long Hollow 90.92 39 eP P 07 55 11.5 +1.2
comp=Z,43nm,1.0s,mb5.7
LOHW epP pP 07 55 25.7 +0.8
Q11A Duckwater 90.92 45 ⇑P P 07 55 10.5 0.0
baz=91,SNR=32
GRAC Grapevine Rang 90.93 47 ⇓P P 07 55 10.7 +0.2
baz=91,SNR=42
SNOW Snow King Moun 90.93 39 eP P 07 55 11.7 +1.2
comp=Z,72nm,1.0s,mb6.0
SNOW epP pP 07 55 26.0 +1.0
L15A Malad City 90.94 41 ⇑P P 07 55 10.9 +0.4
baz=91,SNR=99
REDW Red Top Meadow 90.94 39 eP P 07 55 11.1 +0.6
comp=Z,100nm,1.4s,mb6.0
ISA Isabella 90.98 48 ⇑P P 07 55 10.0 -0.8
baz=91,SNR=29
ISA Isabella 90.98 48 eP P 07 55 09.9 -0.9
ISA pmax pmax
comp=Z,19nm,0.8s,mb5.5
ISA Isabella 90.98 48 eP P 07 55 09.9 -0.9
comp=Z,19nm,0.8s,mb5.5
P12A McGill 91.01 44 ⇑P P 07 55 11.4 +0.6
baz=91
J17A Brown Place, J 91.02 39 ⇑P P 07 55 11.4 +0.6
baz=91,SNR=31
ARVC Arvin 91.05 49 ⇓P P 07 55 10.7 -0.5
baz=91,SNR=8.8
ABPO Ambohimpanom 91.13 249 eP P 07 55 11.4 -0.3
ABPO pmax pmax
comp=Z,71nm,0.9s,mb6.0
ABPO MLR MLR
comp=Z,2μm,22.0s,MS5.4
ABPO Ambohimpanom 91.13 249 eP P 07 55 11.4 -0.2
comp=Z,71nm,0.9s,mb6.0
ABPO LR LR
comp=Z,2μm,22.0s,MS5.4
BSC Santa Cruz Isl 91.15 50 ⇓P P 07 55 11.6 0.0
baz=91
LAO LASA Array 91.16 34 eP P 07 55 12.1 +0.6
comp=Z,270nm,1.0s,mb6.5
LAO epP pP 07 55 26.2 +0.2
LAO LR LR
comp=Z,1μm,20.0s,MS5.3
O13A Hicks Ranch, I 91.17 43 ⇑P P 07 55 12.2 +0.6
baz=91,SNR=59
AHID Auburn Hatcher 91.19 39 eP P 07 55 12.0 +0.4
comp=Z,56nm,0.9s,mb5.9
AHID LR LR
comp=Z,812nm,19.0s,MS5.2
N14A Grayback Hills 91.19 42 ⇑P P 07 55 12.2 +0.6
baz=91,SNR=216
PPT Papeete 91.20 109 eP P 07 55 14.0 +2.0
PPT epP pP 07 55 27.8 +1.2
comp=Z,76nm,1.2s
PPT eSP SP 08 07 07.9 -7.4
comp=Z,2μm,29.5s
PPT eSS SS 08 12 14.1 +1.4
comp=Z,1μm,33.0s
PPT eLQ 08 20 13.1
comp=Z,4μm,34.5s
PPT eLR LR 08 24 17.6
comp=Z,5μm,24.2s,baz=290
PPT Papeete 91.20 109 pP pP 07 55 27.4 +0.8
comp=Z,76nm,1.1s,baz=37,slow=9.4,SNR=3.3
PPT LR LR 08 33 17.6
comp=Z,2μm,19.3s,MS5.5,baz=295,slow=34
PPT Papeete 91.20 109 eP P 07 55 14.0 +2.0
PPT e*PP pP 07 55 27.8 +1.2
PPT eSS SS 08 12 14.1 +1.4
PPT Papeete 91.20 109 eP P 07 55 14.0 +2.0
PPT epP pP 07 55 27.8 +1.2
PPT eSP SP 08 07 07.9 -7.4
PPT eSS SS 08 12 14.1 +1.4
PPT eLQ 08 20 13.1
DAC Darwin (Calif) 91.21 48 PFAKE 07 55 20.0 +8.2
DAC LR LR
comp=Z,981nm,20.0s,MS5.2
BGU Big Grassy Mou 91.24 42 eP P 07 55 12.5 +0.6
comp=Z,54nm,0.9s,mb5.9
M15A Larsen Ranch, 91.25 41 ⇑P P 07 55 12.3 +0.3
baz=91,SNR=74
R11A Troy Canyon, C 91.27 45 ⇓P P 07 55 12.3 +0.2
baz=91,SNR=166
I18A Diamond G Ranc 91.29 38 ⇑P P 07 55 13.0 +0.9
baz=91
K17A Gardner Place, 91.30 39 ⇓P P 07 55 12.5 +0.4
baz=91,SNR=16

LDF La Druitiere 91.30 329 eP P 07 55 11.1 -0.9
comp=Z,47nm,0.8s,mb5.6
LDF La Druitiere 91.30 329 eP P 07 55 11.1 -0.9
LDF pmax pmax
comp=Z,24nm,0.8s,mb5.6
LDF La Druitiere 91.30 329 eP P 07 55 11.1 -0.9
comp=Z,24nm,0.8s,mb5.6
BGF Bois d'Agland 91.31 326 eP P 07 55 11.9 -0.2
Q12A Willow Creek R 91.32 44 ⇑P P 07 55 12.7 +0.4
baz=91,SNR=68
SSB Saint Sauveur 91.32 324 eP P 07 55 10.9 -1.3
SSB pmax pmax
comp=Z,13nm,0.8s,mb5.3
SSB MLR MLR
comp=Z,2μm,19.0s,MS5.6
SSB Saint Sauveur 91.32 324 eP P 07 55 10.8 -1.3
comp=Z,13nm,0.8s,mb5.3
SSB LR LR
comp=Z,2μm,19.0s,MS5.6
WDD Wield Dalam 91.33 312 PFAKE 07 55 20.0 +7.6
WDD LR LR
comp=Z,889nm,20.0s,MS5.2
PLDF La Plantade 91.33 325 eP P 07 55 12.8 +0.6
FRF La Foret Royal 91.34 322 eP P 07 55 11.4 -0.9
comp=Z,45nm,0.8s,mb5.5
FRF La Foret Royal 91.34 322 eP P 07 55 11.4 -0.9
FRF pmax pmax
comp=Z,22nm,0.8s,mb5.5
FRF La Foret Royal 91.34 322 eP P 07 55 11.4 -0.9
comp=Z,22nm,0.8s,mb5.5
TIAR Tiarei 91.39 109 eP P 07 55 14.8 +1.9
comp=Z,94nm,1.0s,mb6.1
OCF Saint Nazaire 91.39 323 eP P 07 55 12.4 -0.1
OG26 St.-Nazaire-De 91.39 323 eP P 07 55 12.4 -0.1
MPMC Manual Prospec 91.40 48 ⇓P P 07 55 12.7 0.0
baz=91,SNR=82
PMOR Pomariorio Ree 91.42 106 eP P 07 55 14.6 +1.6
comp=Z,114nm,0.9s,mb6.2
PMOR epP pP 07 55 28.3 +0.6
comp=Z,333nm,0.9s
OSI Osito Adit 91.42 49 ⇑P P 07 55 12.9 +0.1
baz=91,SNR=6.5
OSI Osito Adit 91.42 49 eP P 07 55 13.4 +0.6
comp=Z,42nm,0.8s,mb5.8
HTL Hartland 91.43 332 P P 07 55 10.8 -1.8
HTL AMb AMB 07 55 14.2
comp=Z,153nm,2.4s,mb5.9
HTL AMS AMS 08 40 10.9
comp=Z,4μm,24.9s
HTL Hartland 91.43 332 eP P 07 55 10.8 -1.8
HTL AMb AMB 07 55 14.2
comp=Z,153nm,2.4s,mb5.9
HTL AMS AMS 08 40 10.9
comp=Z,4μm,24.9s,MS5.7
BLG Laguna Peak 91.47 50 ⇓P P 07 55 12.7 -0.4
baz=91
L16A Fish Haven 91.48 40 ⇑P P 07 55 13.8 +0.8
baz=91,SNR=50
J18A Kendall Valley 91.50 39 ⇓P P 07 55 13.7 +0.6
baz=91,SNR=140
KMBO Kilima Mbogo 91.51 270 P P 07 55 14.1 +0.5
comp=Z,29nm,0.9s,mb5.6,baz=13,slow=17,SNR=16
KMBO LR LR 08 37 58.6
comp=Z,690nm,21.6s,MS5.1,baz=90,slow=37
KMBO Kilima Mbogo 91.51 270 P P 07 55 14.1 +0.5
KMBO pmax pmax
comp=Z,29nm,0.9s
KMBO MLR MLR
comp=Z,690nm,21.6s
KMBO Kilima Mbogo 91.51 270 eP P 07 55 14.1 +0.5
comp=Z,32nm,1.0s,mb5.6
KMBO LR LR
comp=Z,922nm,20.0s,MS5.2
AGO Saint Agoulin 91.52 325 eP P 07 55 13.4 +0.3
VIVF Saint-Julien-I 91.54 324 eP P 07 55 12.3 -0.9
comp=Z,35nm,1.0s,mb5.3
VIVF Saint-Julien-I 91.54 324 eP P 07 55 12.3 -0.9
VIVF pmax pmax
comp=Z,17nm,1.0s,mb5.3
VIVF Saint-Julien-I 91.54 324 eP P 07 55 12.3 -0.9
comp=Z,17nm,1.0s,mb5.3
P13A Bates Ranch, G 91.56 43 ⇓P P 07 55 14.0 +0.6
baz=91,SNR=148
LMR La Mourre 91.56 322 eP P 07 55 12.7 -0.6
comp=Z,160nm,1.2s,mb5.9
LMR La Mourre 91.56 322 eP P 07 55 12.7 -0.6
LMR pmax pmax
comp=Z,80nm,1.2s,mb5.9
LMR La Mourre 91.56 322 eP P 07 55 12.7 -0.6
comp=Z,80nm,1.2s,mb5.9
N15A Stansbury Isla 91.56 42 ⇑P P 07 55 14.1 +0.7
baz=91,SNR=51
FURC Furnace Creek, 91.57 47 ⇓P P 07 55 13.7 +0.2
baz=91,SNR=125
S11A Rachel 91.59 46 ⇓P P 07 55 13.7 +0.2
baz=91,SNR=66
LRMC Laurel Mountai 91.61 48 ⇑P P 07 55 13.5 -0.2
baz=91,SNR=49
DYA Yadsworthy 91.62 332 P P 07 55 12.5 -0.9
DYA AMb AMB 07 55 13.1
comp=Z,116nm,3.3s
DYA AMS AMS 08 41 44.8
comp=Z,4μm,17.5s
DYA Yadsworthy 91.62 332 eP P 07 55 12.5 -0.9
DYA AMb AMB 07 55 13.1
comp=Z,116nm,3.3s
DYA AMS AMS 08 41 44.8
comp=Z,4μm,17.5s,MS5.9
SMRF Simiane la Rot 91.65 323 eP P 07 55 13.3 -0.4
comp=Z,22nm,0.8s,mb5.2
SMRF Simiane la Rot 91.65 323 eP P 07 55 13.3 -0.4
comp=Z,22nm,0.8s,mb5.5
SNCC San Nicolas Is 91.65 51 ⇑P P 07 55 13.7 -0.2
baz=92
SNCC San Nicolas Is 91.65 51 eP P 07 55 13.9 0.0
comp=Z,58nm,0.9s,mb5.9
HWUT Hardware Ranch 91.67 40 eP P 07 55 14.5 +0.6
comp=Z,147nm,1.0s,mb6.3
HWUT epP pP 07 55 29.0 +0.5
HWUT LR LR
comp=Z,1μm,20.0s,MS5.3
L17A Cokeville 91.75 40 ⇓P P 07 55 14.5 +0.3
baz=92,SNR=37
EDW2 Edwards Air Fo 91.76 49 ⇓P P 07 55 14.5 +0.1
baz=92,SNR=46
GRR Gorron 91.79 329 eP P 07 55 13.7 -0.6
comp=Z,103nm,0.8s,mb5.9
GRR Gorron 91.79 329 eP P 07 55 13.7 -0.6
GRR pmax pmax
comp=Z,52nm,0.8s,mb5.9
GRR Gorron 91.79 329 eP P 07 55 13.7 -0.6
comp=Z,52nm,0.8s,mb5.9
PYM Petit Puy Mans 91.79 325 eP P 07 55 14.3 0.0
JSA Saint Aubin 91.80 330 AMS AMS 08 41 16.6
comp=Z,5μm,19.8s,MS6.0
TCF Toulx Ste Croi 91.82 326 eP P 07 55 13.9 -0.6
DUG Dugway 91.83 42 ⇓P P 07 55 15.2 +0.5
baz=92,SNR=143
DUG Dugway 91.83 42 eP P 07 55 15.2 +0.6
DUG e*PP pP 07 55 30.1 +0.8
DUG pmax pmax
comp=Z,99nm,0.9s,mb6.1
DUG MLR MLR
comp=Z,855nm,19.0s,MS5.2
DUG Dugway 91.83 42 eP P 07 55 15.2 +0.6
comp=Z,100nm,0.9s,mb6.1
DUG epP pP 07 55 30.1 +0.8
DUG LR LR
comp=Z,855nm,19.0s,MS5.2
K18A Toltan Ranch, 91.86 39 ⇑P P 07 55 15.3 +0.5
baz=92,SNR=29
Q13A Wheeler Ranch, 91.87 44 ⇑P P 07 55 15.3 +0.5
baz=92,SNR=112
R12A Pony Springs, 91.89 45 ⇑P P 07 55 15.4 +0.4
baz=92,SNR=113
DECC Green Verdugo 91.89 50 ⇓P P 07 55 14.6 -0.5
baz=92,SNR=6.0
U10A Ash Meadows, A 91.95 47 ⇑P P 07 55 15.8 +0.6
baz=92,SNR=94
NOQ North Oquirrh 91.95 41 eP P 07 55 16.4 +1.2
comp=Z,176nm,1.0s,mb6.3
O15A The Old Anders 91.98 42 ⇑P P 07 55 16.1 +0.8
baz=92,SNR=40
LBL Lubilhac 92.02 325 eP P 07 55 13.4 -2.0
PASC Pasadena Art C 92.03 50 eP P 07 55 15.5 -0.3
comp=Z,169nm,1.0s,mb6.3
PASC epP pP 07 55 29.3 -1.0

BW06 Boulder Array 92.05 39 ⇓P **P 07 55 15.6 0.0**
baz=92,SNR=106
BW06 Boulder Array 92.05 39 *e*P **P 07 55 15.3 -0.3**
comp=Z,76nm,1.0s,mb6.0
BW06 *e*pP pP 07 55 30.2 -0.1
BW06 LR LR
comp=Z,1µm,21.0s,MS5.3
PDAR Pinedale Array 92.05 39 P **P 07 55 14.9 -0.7**
comp=Z,50nm,0.8s,mb5.9,baz=318,slow=0.5,SNR=274
PDAR pP pP 07 55 30.0 -0.2
comp=Z,52nm,0.9s,baz=328,slow=1.9,SNR=14
PDAR PP PP 07 58 53.9 -1.2
comp=Z,4.7nm,1.0s,baz=333,slow=7.1,SNR=4.9
PDAR PKKP PKKPbc 08 12 30.5 -1.4
comp=Z,2.9nm,0.8s,baz=118,slow=3.5,SNR=20
PDAR PKP2bc 08 20 34.3
comp=Z,0.5nm,0.8s,baz=102,slow=6.2,SNR=3.9
PDAR Pinedale Array 92.05 39 P **P 07 55 14.9 -0.7**
PDAR pP pP 07 55 30.0 -0.2
PDAR PP PP 07 58 53.9 -1.2
PDAR PKKP PKKPbc 08 12 30.5 -1.4
PDAR ⇑*e* 08 20 34.3
P14A Drum Mountains 92.05 43 ⇓P **P 07 55 16.1 +0.5**
baz=92,SNR=196
MWC Mount Wilson 92.09 49 *e*P **P 07 55 16.1 +0.1**
MWC *e**PP pP 07 55 30.2 -0.4
MWC pmax pmax
comp=Z,97nm,1.2s,mb6.0
MWC Mount Wilson 92.09 49 *e*P **P 07 55 16.1 +0.1**
comp=Z,97nm,1.2s,mb6.0
MWC *e*pP pP 07 55 30.2 -0.4
CTU Camp Tracy 92.14 41 *e*P **P 07 55 16.9 +0.9**
comp=Z,57nm,0.9s,mb5.9
S12A Delamar Landin 92.18 45 ⇑P **P 07 55 17.0 +0.7**
baz=92,SNR=45
N16A Rees Ranch, Co 92.20 41 ⇑P **P 07 55 17.0 +0.6**
baz=92,SNR=20
FMP Fort Macarthur 92.23 50 ⇑P **P 07 55 16.4 -0.2**
baz=92
M17A Scullys Gap (B 92.27 40 ⇑P **P 07 55 16.9 +0.2**
baz=92,SNR=52
SHOC Shoshone 92.29 47 ⇓P **P 07 55 16.8 0.0**
baz=92,SNR=26
GSC Goldstone 92.30 48 ⇑P **P 07 55 16.9 0.0**
baz=92,SNR=129
GSC Goldstone 92.30 48 *e*P **P 07 55 17.1 +0.2**
GSC *e**PP pP 07 55 31.1 -0.4
GSC pmax pmax
comp=Z,123nm,0.9s,mb6.2
GSC Goldstone 92.30 48 *e*P **P 07 55 17.1 +0.2**
comp=Z,123nm,0.9s,mb6.2
GSC *e*pP pP 07 55 31.1 -0.5
Q14A Sevier Lake (B 92.30 43 ⇑P **P 07 55 17.3 +0.5**
baz=92,SNR=250
CIS Catalina Islan 92.33 50 ⇓P **P 07 55 16.7 -0.3**
baz=92,SNR=6.4
L18A Fontenelle, Gr 92.33 40 ⇑P **P 07 55 17.3 +0.4**
baz=92,SNR=27
BFSC Mount Baldy Ra 92.35 49 ⇑P **P 07 55 16.7 -0.5**
baz=92,SNR=37
CCA1 Carnmenellis 92.35 332 P **P 07 55 15.9 -1.0**
CCA1 AMS AMS 08 42 52.6
comp=Z,3µm,16.5s
CCA1 Carnmenellis 92.35 332 *e*P **P 07 55 15.9 -1.0**
CCA1 AMS AMS 08 42 52.6
comp=Z,3µm,16.5s,MS5.8
JLU Jordanelle 92.38 41 *e*P **P 07 55 17.9 +0.7**
comp=Z,43nm,1.0s,mb5.7
VSL Villasalto 92.38 317 PFAKE 07 55 30.0 +13
VSL LR LR
comp=Z,5µm,19.0s,MS6.0
R13A O'Grain Ranch, 92.38 44 ⇑P **P 07 55 17.6 +0.4**
baz=92,SNR=31
PAF Port-aux-Franc 92.40 214 PFAKE 07 55 30.0 +13
PAF LR LR
comp=Z,2µm,20.0s,MS5.5
K19A Absolon Red Bu 92.40 38 ⇑P **P 07 55 16.7 -0.5**
baz=92,SNR=28
RRX Edison Barstow 92.42 48 ⇓P **P 07 55 17.7 +0.2**
baz=92,SNR=5.6
NLU North Lily Min 92.42 42 *e*P **P 07 55 18.3 +0.9**
comp=Z,87nm,0.9s,mb6.1
SCI San Clemente I 92.47 51 ⇑P **P 07 55 17.5 -0.3**
baz=92
LASF Ste Croix 92.50 324 *e*P **P 07 55 17.0 -0.6**
comp=Z,96nm,1.5s,mb5.6
N17A Moffit Pass 92.52 41 ⇓P **P 07 55 18.2 +0.4**
baz=92,SNR=27
P15A Leamington 92.54 42 ⇓P **P 07 55 18.5 +0.5**
baz=92,SNR=77
U11A Corn Creek 92.55 46 ⇑P **P 07 55 18.4 +0.3**
baz=92,SNR=16
O16A Springville 92.60 42 ⇓P **P 07 55 18.6 +0.4**
baz=92
L19A Farson 92.60 39 ⇓P **P 07 55 18.4 +0.3**
baz=92,SNR=114
DAU Daniels Canyon 92.61 41 *e*P **P 07 55 19.1 +0.9**
DAU pmax pmax
comp=Z,96nm,1.1s,mb6.1
DAU Daniels Canyon 92.61 41 *e*P **P 07 55 19.1 +0.9**
comp=Z,96nm,1.1s,mb6.1
M18A Lyman 92.64 40 ⇑P **P 07 55 18.5 +0.1**
baz=92,SNR=27
MPU Maple Canyon 92.64 42 *e*P **P 07 55 19.2 +0.8**
comp=Z,120nm,1.1s,mb6.2
MPU *e*pP pP 07 55 33.8 +0.8
SGMF Saint Gilles 92.66 330 *e*P **P 07 55 17.2 -1.1**
comp=Z,158nm,1.0s,mb6.1
SGMF Saint Gilles 92.66 330 *e*P **P 07 55 17.2 -1.1**
SGMF pmax pmax
comp=Z,79nm,1.0s,mb6.1
SGMF Saint Gilles 92.66 330 *e*P **P 07 55 17.2 -1.1**
comp=Z,79nm,1.0s,mb6.1
MFF Saint Martin d 92.75 327 *e*P **P 07 55 18.1 -0.6**
comp=Z,62nm,0.9s,mb5.7
MFF Saint Martin d 92.75 327 *e*P **P 07 55 18.1 -0.6**
MFF pmax pmax
comp=Z,31nm,0.9s,mb5.7
MFF Saint Martin d 92.75 327 *e*P **P 07 55 18.1 -0.6**
comp=Z,31nm,0.9s,mb5.7
K20A Yellowstone Ra 92.79 38 ⇑P **P 07 55 18.5 -0.5**
baz=93,SNR=62
TUQ Turquoise Moun 92.80 47 ⇓P **P 07 55 19.3 +0.1**
baz=93,SNR=27
T12A Moapa 92.80 46 ⇓P **P 07 55 19.5 +0.3**
baz=93,SNR=28
S13A Holt Ranch, En 92.81 45 ⇓P **P 07 55 19.7 +0.5**
baz=93,SNR=199
BBRC Big Bear Solar 92.83 49 ⇓P **P 07 55 19.2 -0.2**
baz=93,SNR=42
Q15A Fillmore 92.84 43 ⇑P **P 07 55 19.6 +0.3**
baz=93,SNR=81
CAF Calviac 92.84 325 *e*P **P 07 55 18.9 -0.3**
comp=Z,37nm,0.9s,mb5.5
CAF Calviac 92.84 325 *e*P **P 07 55 18.9 -0.3**
CAF pmax pmax
comp=Z,19nm,0.9s,mb5.5
CAF Calviac 92.84 325 *e*P **P 07 55 18.9 -0.3**
comp=Z,19nm,0.9s,mb5.5
RJF Les Rejaudoux 92.85 326 *e*P **P 07 55 18.7 -0.6**
comp=Z,47nm,0.9s,mb5.6
RJF *e*MLR MLR
comp=Z,7µm,19.5s,MS5.8
RJF Les Rejaudoux 92.85 326 *e*P **P 07 55 18.7 -0.6**
RJF pmax pmax
comp=Z,23nm,0.9s,mb5.6
RJF MLR MLR
comp=Z,7µm,19.5s,MS6.1
RJF Les Rejaudoux 92.85 326 *e*P **P 07 55 18.7 -0.6**
comp=Z,23nm,0.9s,mb5.6
RJF LR LR
comp=Z,7µm,19.5s,MS6.1
V11A Goodsprings 92.88 47 ⇓P **P 07 55 19.7 +0.1**
baz=93,SNR=26
P16A Fountain Green 92.89 42 ⇑P **P 07 55 20.2 +0.7**
baz=93,SNR=33
R14A James Farms, M 92.89 44 ⇓P **P 07 55 19.9 +0.3**
baz=93,SNR=29
HEC Hector,Ludlow 92.89 48 ⇓P **P 07 55 19.7 0.0**
baz=93,SNR=89
ROSF Rostrenen 92.92 330 *e*P **P 07 55 19.0 -0.5**
comp=Z,275nm,1.2s,mb6.2
ROSF Rostrenen 92.92 330 *e*P **P 07 55 19.0 -0.5**
ROSF pmax pmax
comp=Z,138nm,1.2s,mb6.3
ROSF Rostrenen 92.92 330 *e*P **P 07 55 19.0 -0.5**
comp=Z,138nm,1.2s,mb6.3

ARUT Antelope Range 92.95 44 *e*P **P 07 55 20.6 +0.7**
ARUT pmax pmax
comp=Z,40nm,0.8s,mb5.9
ARUT Antelope Range 92.95 44 *e*P **P 07 55 20.6 +0.7**
comp=Z,40nm,0.8s,mb5.9
MURC Murrieta 93.03 50 ⇓P **P 07 55 20.0 -0.3**
baz=93,SNR=31
O17A Robinson Place 93.05 41 ⇓P **P 07 55 21.0 +0.7**
baz=93,SNR=58
U12A Valley of Fire 93.09 46 ⇑P **P 07 55 20.9 +0.4**
baz=93,SNR=50
M19A Rock Springs 93.11 39 ⇑P **P 07 55 20.5 0.0**
baz=93,SNR=16
T13A Saint George 93.13 45 ⇑P **P 07 55 21.4 +0.7**
baz=93,SNR=156
S14A Cedar City 93.13 44 ⇓P **P 07 55 21.1 +0.4**
baz=93,SNR=28
CCUT Cedar City 93.14 45 *e*P **P 07 55 22.0 +1.2**
comp=Z,27nm,0.9s,mb5.7
N18A Larsen Ranch, 93.16 40 ⇑P **P 07 55 20.8 0.0**
baz=93,SNR=38
ULM Lac du Bonnet 93.18 27 P **P 07 55 20.1 -0.5**
comp=Z,208nm,0.8s,mb6.6,baz=322,slow=4.9,SNR=117
ULM PKKP PKKPbc 08 12 26.8 -2.5
comp=Z,4.2nm,0.8s,baz=143,slow=3.1,SNR=3.3
ULM LR LR 08 41 55.3
comp=Z,834nm,19.4s,MS5.2,baz=327,slow=38
ULM Lac du Bonnet 93.18 27 *e*P **P 07 55 20.0 -0.6**
comp=Z,187nm,0.8s,mb6.6
ULM LR LR
comp=Z,1µm,20.0s,MS5.3
QUIF Quistinic 93.18 330 *e*P **P 07 55 19.9 -0.8**
comp=Z,93nm,1.0s,mb5.9
QUIF Quistinic 93.18 330 *e*P **P 07 55 19.9 -0.8**
QUIF pmax pmax
comp=Z,47nm,1.0s,mb5.9
QUIF Quistinic 93.18 330 *e*P **P 07 55 19.9 -0.8**
comp=Z,47nm,1.0s,mb5.9
L20A Wamsutter 93.23 39 ⇓P **P 07 55 21.3 +0.3**
baz=93,SNR=34
MVU Marysvale 93.25 43 PFAKE 07 55 30.0 +8.7
MVU LR LR
comp=Z,808nm,20.0s,MS5.2
MSU Marysvale 93.27 43 *e*P **P 07 55 22.6 +1.3**
MSU *e**PP pP 07 55 37.1 +1.1
MSU pmax pmax
comp=Z,110nm,1.2s,mb6.2
MSU Marysvale 93.27 43 *e*P **P 07 55 22.6 +1.3**
comp=Z,110nm,1.2s,mb6.2
MSU *e*pP pP 07 55 37.1 +1.2
V12A Nelson 93.32 47 ⇓P **P 07 55 21.9 +0.3**
baz=93,SNR=108
TMUT Trail Mountain 93.35 42 *e*P **P 07 55 22.2 +0.5**
comp=Z,26nm,0.9s,mb5.7
GMRC Granite Mounta 93.36 48 ⇓P **P 07 55 22.1 +0.3**
baz=93,SNR=98
R15A Junction 93.40 43 ⇑P **P 07 55 22.8 +0.9**
baz=93,SNR=83
O18A Roosevelt 93.43 41 ⇑P **P 07 55 22.7 +0.7**
baz=93,SNR=37
U13A Pakoon Wash 93.47 46 ⇓P **P 07 55 22.6 +0.4**
baz=93,SNR=67
N19A John Jarvie Ra 93.50 40 ⇓P **P 07 55 22.2 -0.1**
baz=93,SNR=32
LFF La Frestale 93.50 326 *e*P **P 07 55 21.7 -0.5**
comp=Z,40nm,0.8s,mb5.6
LFF La Frestale 93.50 326 *e*P **P 07 55 21.7 -0.5**
LFF pmax pmax
comp=Z,20nm,0.8s,mb5.6
LFF La Frestale 93.50 326 *e*P **P 07 55 21.7 -0.5**
comp=Z,20nm,0.8s,mb5.6
109C Camp Elliot, M 93.51 50 ⇑P **P 07 55 22.4 -0.2**
baz=93,SNR=22
P17A Butcher Ranch, 93.52 42 ⇓P **P 07 55 22.9 +0.5**
baz=93,SNR=21
PFO Pinyon Flat Ob 93.53 49 P **P 07 55 23.0 +0.4**
comp=Z,1µm,0.9s,mb7.3,SNR=75
PFO Pinyon Flat Ob 93.53 49 ⇓P **P 07 55 22.7 +0.1**
baz=93,SNR=134
PFO Pinyon Flat Ob 93.53 49 *e*P **P 07 55 22.7 +0.1**
PFO *e**PP pP 07 55 36.6 -0.7
PFO pmax pmax
comp=Z,178nm,0.9s,mb6.5
PFO MLR MLR
comp=Z,2µm,20.0s,MS5.5
PFO Pinyon Flat Ob 93.53 49 *e*P **P 07 55 22.7 +0.1**
comp=Z,178nm,0.9s,mb6.5
PFO *e*pP pP 07 55 36.5 -0.7
PFO LR LR
comp=Z,2µm,20.0s,MS5.5
LDFC Landfair 93.54 47 *e*P **P 07 55 23.1 +0.4**
comp=Z,246nm,1.1s,mb6.5
LDFC *e*pP pP 07 55 36.4 -0.9
W12A Cal Nev Ari 93.56 47 ⇓P **P 07 55 22.9 +0.1**
baz=93,SNR=16
BELC Belle Mtn. Jos 93.60 49 ⇑P **P 07 55 22.9 0.0**
baz=93,SNR=66
Q16A Castle Valley 93.62 42 ⇑P **P 07 55 23.6 +0.7**
baz=93,SNR=23
T14A Hurricane 93.62 45 ⇓P **P 07 55 23.3 +0.4**
baz=93,SNR=45
M20A Sweetwater, Wa 93.66 39 ⇑P **P 07 55 23.5 +0.4**
baz=94,SNR=29
S15A Panguitch 93.68 44 ⇓P **P 07 55 24.1 +0.9**
baz=94,SNR=59
P18A Preston Nutter 93.71 41 ⇓P **P 07 55 23.9 +0.6**
baz=94,SNR=41
L21A Rawlins 93.79 38 ⇓P **P 07 55 23.7 +0.1**
baz=94
V13A Grand Canyon W 93.80 46 ⇑P **P 07 55 24.0 +0.2**
baz=94,SNR=68
R16A Teasdale 93.84 43 ⇓P **P 07 55 24.7 +0.8**
baz=94,SNR=38
MTLF Montolieu 93.87 324 *e*P **P 07 55 22.3 -1.7**
comp=Z,104nm,1.7s,mb5.7
MTLF Montolieu 93.87 324 *e*P **P 07 55 22.3 -1.7**
MTLF pmax pmax
comp=Z,52nm,1.7s,mb5.7
MTLF Montolieu 93.87 324 *e*P **P 07 55 22.3 -1.7**
comp=Z,52nm,1.7s,mb5.7
SRU San Rafael 93.88 42 ⇑P **P 07 55 24.3 +0.2**
baz=94,SNR=43
SRU San Rafael 93.88 42 *e*P **P 07 55 24.2 +0.1**
SRU pmax pmax
comp=Z,51nm,0.8s,mb6.0
SRU San Rafael 93.88 42 *e*P **P 07 55 24.2 +0.1**
comp=Z,51nm,0.8s,mb6.0
O19A Miners Draw (B 93.92 40 ⇑P **P 07 55 23.9 -0.4**
baz=94,SNR=16
BAR Barrett 93.93 50 *e*P **P 07 55 24.6 +0.1**
comp=Z,112nm,0.9s,mb6.3
BAR *e*pP pP 07 55 37.5 -1.7
U14A Mt Trumbull 93.96 45 ⇑P **P 07 55 25.0 +0.4**
baz=94,SNR=50
MONP Monument Peak 93.98 50 ⇓P **P 07 55 24.8 +0.1**
baz=94,SNR=89
M21A Separation Pea 94.04 38 ⇑P **P 07 55 24.7 -0.1**
baz=94,SNR=36
NEE2 Needles Airpor 94.05 47 ⇑P **P 07 55 24.7 -0.3**
baz=94,SNR=5.4
N20A Spence Gulch, 94.06 39 ⇑P **P 07 55 25.3 +0.5**
baz=94,SNR=54
RSSD Black Hills 94.06 35 *e*P **P 07 55 25.0 +0.2**
RSSD pmax pmax
comp=Z,78nm,1.1s,mb6.0
RSSD MLR MLR
comp=Z,1µm,21.0s,MS5.3
RSSD Black Hills 94.06 35 *e*P **P 07 55 25.0 +0.1**
comp=Z,78nm,1.1s,mb6.0
RSSD LR LR
comp=Z,1µm,21.0s,MS5.3
RWWY Rawlins 94.06 38 *e*P **P 07 55 25.3 +0.4**
comp=Z,35nm,0.8s,mb5.8
RWWY *e*pP pP 07 55 38.1 -1.5
IRM Iron Mountain 94.07 48 ⇑P **P 07 55 25.4 +0.3**
baz=94,SNR=122
T15A Red Dirt Ranch 94.08 44 ⇓P **P 07 55 25.3 +0.2**
baz=94,SNR=34
Q18A Rafter H Ranch 94.12 42 ⇑P **P 07 55 24.9 -0.4**
baz=94,SNR=17
S16A Weppner Ranch, 94.12 43 ⇑P **P 07 55 25.6 +0.3**
baz=94,SNR=26
BC3 Big Chuckawall 94.17 49 ⇑P **P 07 55 25.6 +0.1**
baz=94,SNR=135
R17A Hanksville Air 94.22 43 ⇑P **P 07 55 25.8 +0.1**
baz=94,SNR=64
L22A Ellis Ranch, M 94.26 38 ⇓P **P 07 55 26.0 +0.3**
baz=94

W13A Hualapai Mount 94.33 47 ⇑P **P 07 55 26.4 +0.2**
baz=94,SNR=73
DVTC Desert V Tower 94.33 50 ⇑P **P 07 55 26.3 0.0**
baz=94,SNR=55
DRV Dumont d'Urvil 94.34 175 P **P 07 55 30.0 +4.7**
DRV S SKSac 08 05 51.0 -4.6
DRV SS SS 08 12 48.0 -8.0
DRV R 08 27 00.0
SWSC Sam W. Stewart 94.37 49 ⇓P **P 07 55 26.0 -0.5**
baz=94,SNR=34
P19A Cripple Cowboy 94.44 41 ⇓P **P 07 55 26.8 +0.1**
baz=94,SNR=66
V14A Boquillas Ranc 94.50 46 ⇑P **P 07 55 27.5 +0.5**
baz=94,SNR=76
U15A North Rim 94.51 45 ⇑P **P 07 55 27.6 +0.5**
baz=94,SNR=62
N21A Black Mountain 94.52 39 ⇓P **P 07 55 27.4 +0.4**
baz=94,SNR=29
CASY Casey 94.53 187 *e*P **P 07 55 25.0 -1.2**
CASY *e*pP pP 07 55 39.2 -1.6
CASY Casey 94.53 187 *e*P **P 07 55 24.5 -1.7**
comp=Z,45nm,0.9s,mb5.9
CASY LR LR
comp=Z,1µm,22.0s,MS5.3
O20A White River Ci 94.53 40 ⇑P **P 07 55 27.0 -0.1**
baz=94,SNR=23
PDMCI Parker Dam,Lak 94.65 47 ⇑P **P 07 55 27.6 -0.2**
baz=94,SNR=50
T16A Glen Canyon Da 94.65 44 ⇓P **P 07 55 27.2 -0.5**
baz=94,SNR=8.9
S17A Black Ridge (B 94.66 43 ⇑P **P 07 55 27.6 -0.1**
baz=94,SNR=56
AGMN Agassiz Nation 94.71 28 *e*P **P 07 55 26.7 -1.0**
comp=Z,38nm,0.9s,mb5.8
AGMN LR LR
comp=Z,1µm,19.0s,MS5.3
Q19A Hogan Spring (94.72 41 ⇑P **P 07 55 27.9 -0.1**
baz=94,SNR=37
R18A Canyonlands Na 94.72 42 ⇓P **P 07 55 27.9 -0.2**
baz=94,SNR=49
KEST Kesra 94.76 314 P **P 07 55 27.7 -0.5**
comp=Z,7.3nm,0.8s,mb5.2,baz=124,slow=1.0,SNR=19
KEST LR LR 08 44 33.8
comp=Z,1µm,18.9s,MS5.3,baz=147,slow=40
KEST Kesra 94.76 314 *e*P **P 07 55 28.1 -0.2**
W14A Seligman 94.77 46 ⇑P **P 07 55 28.6 +0.3**
baz=95,SNR=46
P20A De Beque 94.87 41 ⇑P **P 07 55 28.7 +0.1**
baz=95,SNR=13
O21A Pagoda 94.92 39 ⇑P **P 07 55 29.0 +0.1**
baz=95,SNR=11
GLA Glamis 94.95 49 ⇑P **P 07 55 29.4 +0.2**
baz=95,SNR=28
GLA Glamis 94.95 49 *e*P **P 07 55 29.7 +0.5**
GLA *e**PP pP 07 55 43.2 -0.6
GLA pmax pmax
comp=Z,136nm,0.9s,mb6.4
GLA Glamis 94.95 49 *e*P **P 07 55 29.7 +0.5**
comp=Z,136nm,0.9s,mb6.4
GLA *e*pP pP 07 55 43.2 -0.6
V15A Kaibab Nationa 94.97 45 ⇓P **P 07 55 29.6 +0.4**
baz=95,SNR=53
EPF Esparros 95.06 325 *e*P **P 07 55 26.9 -2.5**
T17A Navajo Res., N 95.07 44 ⇑P **P 07 55 29.5 -0.1**
baz=95,SNR=21
N22A Wattenberg Ran 95.09 39 ⇓P **P 07 55 30.2 +0.6**
baz=95,SNR=14
S18A Hurst Farm, Bl 95.12 43 ⇑P **P 07 55 29.8 0.0**
baz=95,SNR=22
R19A Curley Farm, L 95.16 42 ⇑P **P 07 55 30.2 +0.2**
baz=95,SNR=33
PV10 Paradox Valley 95.24 42 *e*P **P 07 55 31.2 +0.8**
comp=Z,2µm,1.0s,mb7.5
PV10 *e*pP pP 07 55 45.7 +0.7
PHWY Pilot Hill 95.29 38 *e*P **P 07 55 30.8 +0.3**
comp=Z,24nm,1.0s,mb5.6
Q20A Ridgley Place, 95.29 41 ⇓P **P 07 55 30.8 +0.2**
baz=95,SNR=55
PV04 Paradox Valley 95.31 42 *e*P **P 07 55 31.6 +0.9**
W15A Williams 95.31 46 ⇑P **P 07 55 31.4 +0.6**
baz=95,SNR=24
X14A Yava 95.36 47 ⇓P **P 07 55 31.6 +0.6**
baz=95,SNR=42
CMAH Djebel Manchou 95.39 316 P **P 07 55 31.4 +0.3**
U17A Shonto 95.42 44 ⇓P **P 07 55 31.7 +0.5**
baz=95,SNR=37
112A Yuma 95.43 49 ⇑P **P 07 55 31.6 +0.2**
baz=95,SNR=11
O22A Kremmling 95.47 39 ⇑P **P 07 55 31.6 +0.2**
baz=95,SNR=36
T18A Mexican Hat 95.55 43 ⇓P **P 07 55 31.5 -0.3**
baz=95,SNR=43
ABSA Djebel Ababsia 95.58 316 P **P 07 55 32.9 +0.9**
S19A Harvey Farm, M 95.59 42 ⇓P **P 07 55 31.7 -0.3**
baz=95,SNR=17
Y14A Wickenburg 95.61 47 ⇓P **P 07 55 32.2 0.0**
baz=95,SNR=32
ETSF Etsaut 95.61 325 *e*P **P 07 55 30.1 -1.9**
comp=Z,34nm,0.9s,mb5.5
ETSF Etsaut 95.61 325 *e*P **P 07 55 30.1 -1.9**
ETSF pmax pmax
comp=Z,17nm,0.9s,mb5.5
ETSF Etsaut 95.61 325 *e*P **P 07 55 30.1 -1.9**
comp=Z,17nm,0.9s,mb5.5
Z13A Yuma Proving G 95.64 48 ⇑P **P 07 55 32.3 0.0**
baz=96,SNR=78
WUAZ Wupatki 95.67 45 ⇑P **P 07 55 32.7 +0.3**
baz=96,SNR=37
WUAZ Wupatki 95.67 45 *e*P **P 07 55 33.2 +0.8**
comp=Z,40nm,1.0s,mb5.8
WUAZ LR LR
comp=Z,729nm,20.0s,MS5.2
PV01 Paradox Valley 95.67 42 *e*P **P 07 55 32.8 +0.5**
comp=Z,4µm,1.2s
R20A Redvale 95.75 41 ⇑P **P 07 55 32.8 +0.1**
baz=96,SNR=32
X15A Humboldt 95.77 46 ⇑P **P 07 55 33.4 +0.5**
baz=96,SNR=47
SJPF Ste Jean 95.80 325 *e*P **P 07 55 30.6 -2.2**
113A Mohawk Valley, 95.83 48 ⇑P **P 07 55 33.1 -0.1**
baz=96,SNR=37
W16A Flagstaff 95.83 45 ⇓P **P 07 55 33.6 +0.5**
baz=96,SNR=13
SMCO Snowmass 95.90 40 *e*P **P 07 55 34.0 +0.7**
comp=Z,19nm,0.8s,mb5.6
V17A Tonalea, Kykot 95.96 45 ⇑P **P 07 55 34.1 +0.4**
baz=96,SNR=86
S20A Disappointment 96.00 42 ⇓P **P 07 55 34.0 +0.1**
baz=96,SNR=17
Z14A Wintersburg 96.01 48 ⇓P **P 07 55 34.0 0.0**
baz=96,SNR=7.8
U18A Rough Rock, Ch 96.02 44 ⇑P **P 07 55 34.3 +0.3**
baz=96,SNR=64
Y15A Casa Rosa Ranc 96.04 47 ⇑P **P 07 55 34.4 +0.3**
baz=96,SNR=40
R21A Cimarron 96.11 41 ⇑P **P 07 55 34.9 +0.6**
baz=96,SNR=22
Q22A Crested Butte, 96.15 40 ⇑P **P 07 55 35.2 +0.7**
baz=96,SNR=36
CASM Ain Smara 96.20 316 P **P 07 55 35.9 +1.1**
ISCO Idaho Springs 96.24 39 *e*P **P 07 55 35.6 +0.7**
ISCO pmax pmax
comp=Z,15nm,0.9s,mb5.4
ISCO MLR MLR
comp=Z,1µm,21.0s,MS5.3
ISCO Idaho Springs 96.24 39 *e*P **P 07 55 35.6 +0.7**
comp=Z,15nm,0.9s,mb5.4
ISCO LR LR
comp=Z,1µm,21.0s,MS5.3
T19A Beclabito 96.26 43 ⇓P **P 07 55 35.1 0.0**
baz=96,SNR=28
X16A Lo Mia Camp, P 96.32 46 ⇓P **P 07 55 35.8 +0.4**
baz=96,SNR=36
MVCO Mesa Verde 96.33 42 ⇓P **P 07 55 35.4 +0.1**
baz=96,SNR=12
MVCO Mesa Verde 96.33 42 *e*P **P 07 55 36.0 +0.6**
comp=Z,22nm,1.1s,mb5.5
MVCO LR LR
comp=Z,935nm,22.0s,MS5.2
W17A Winslow 96.36 45 ⇓P **P 07 55 35.7 +0.1**
baz=96
DFRA Djebel Bou Aff 96.39 317 P **P 07 55 36.8 +1.2**
P23A Jefferson 96.41 39 ⇓P **P 07 55 35.8 +0.2**
baz=96,SNR=23
114A Black Gap (USA 96.43 48 ⇓P **P 07 55 36.2 +0.3**
baz=96,SNR=17
V18A Ganado 96.44 44 ⇓P **P 07 55 36.1 +0.2**

baz=96,SNR=40
S21A Coal Bank Pass 96.45 42 ⇓P P 07 55 36.3 +0.4
baz=96,SNR=21
U19A Dine' College, 96.51 43 ⇑P P 07 55 36.4 +0.2
baz=96,SNR=27
Z15A Gila River Ind 96.57 47 ⇑P P 07 55 36.1 -0.4
baz=96
Y16A Circle Bar Ran 96.64 46 ⇑P P 07 55 37.1 +0.3
baz=96,SNR=19
R22A Saguache, Gunn 96.67 41 ⇓P P 07 55 37.5 +0.6
baz=96,SNR=23
Q23A Hartsel 96.73 40 ⇓P P 07 55 37.2 +0.1
baz=96
EYMN Ely 96.74 26 *eP* **P 07 55 36.1 -0.9**
comp=Z,68nm,0.8s,mb6.1
EYMN LR LR
comp=Z,1μm,20.0s,MS5.4
X17A Forest Lakes 96.78 46 ⇓P P 07 55 37.9 +0.5
baz=97,SNR=21
P24A Kohler Place, 96.83 39 ⇓P P 07 55 37.7 +0.2
baz=97
U20A Newcomb 96.87 43 ⇓P P 07 55 37.9 +0.1
baz=97,SNR=8.2
115A Sonoran Desert 96.89 48 ⇑P P 07 55 38.0 0.0
baz=97,SNR=9.0
SET Setif 96.91 317 P P 07 55 38.0 0.0
SCHQ Schefferville 96.91 9 P P 07 55 37.4 -0.2
comp=Z,33nm,0.9s,mb5.8,baz=357,slow=4.7,SNR=21
SCHQ LR LR 08 42 35.5
comp=Z,3μm,20.6s,MS5.8,baz=340,slow=37
SCHQ Schefferville 96.91 9 *eP* **P 07 55 36.5 -1.1**
comp=Z,42nm,0.9s,mb5.9
SCHQ LR LR
comp=Z,4μm,21.0s,MS5.9
W18A Petrified Fore 96.95 45 ⇓P P 07 55 38.3 +0.1
baz=97
S22A 4UR Ranch, Cre 96.95 41 ⇑P P 07 55 38.6 +0.4
baz=97,SNR=19
214A Organ Pipe Nat 96.97 49 ⇓P P 07 55 38.4 0.0
baz=97,SNR=20
V19A Window Rock 96.98 44 ⇑P P 07 55 38.5 +0.1
baz=97
Z16A Peralta Trail, 97.01 47 ⇑P P 07 55 38.4 -0.1
baz=97,SNR=7.0
T21A Navajo Lake 97.05 42 ⇓P P 07 55 38.7 0.0
baz=97
MBAR Mbarara 97.05 273 *eP* **P 07 55 38.7 -0.3**
Q24A Divide 97.08 39 ⇑P P 07 55 38.6 -0.1
baz=97,SNR=7.7
Y17A Roosevelt 97.16 46 ⇓P P 07 55 39.3 +0.1
baz=97,SNR=27
W19A Sanders 97.17 44 ⇓P P 07 55 39.2 +0.1
baz=97
X18A Snowflake 97.19 45 ⇓P P 07 55 39.2 -0.1
baz=97
P25A Willow Gulch B 97.24 38 ⇓P P 07 55 39.0 -0.4
baz=97,SNR=8.1
V20A Brimhall 97.28 43 ⇑P P 07 55 39.3 -0.4
baz=97,SNR=21
116A Eloy 97.32 48 ⇑P P 07 55 39.9 -0.1
baz=97
U21A Nageezi 97.35 42 ⇑P P 07 55 40.0 0.0
baz=97,SNR=11
OGNE Ogallala 97.36 36 *eP* **P 07 55 39.2 -0.7**
comp=Z,32nm,0.9s,mb5.8
OGNE *eP*P pP 07 55 52.9 -1.7
OGNE LR LR
comp=Z,1μm,20.0s,MS5.3
T22A Edith 97.41 42 ⇑P P 07 55 40.4 +0.2
baz=97,SNR=26
S23A Nye Farm, Mont 97.46 41 ⇓P P 07 55 40.6 +0.2
baz=97
MIR Mirnyy 97.59 194 ⇓*iP* **P 07 55 39.2 -0.9**
MIR *i* pP 07 55 54.0 -0.8
MIR *i* 07 59 49.0
MIR pmax pmax
comp=Z,58nm,1.4s,mb5.9
R24A Sanders Place, 97.61 40 ⇑P P 07 55 41.2 +0.1
baz=97,SNR=5.3
Q25A Bedland, Calha 97.62 39 ⇑P P 07 55 40.6 -0.6
baz=97,SNR=16
Y18A Canyon Day Jun 97.63 46 ⇓P P 07 55 41.5 +0.2
baz=97,SNR=13
Z17A San Carlos Hig 97.66 46 ⇑P P 07 55 41.6 +0.2
baz=98,SNR=12
X19A St. Johns 97.67 45 ⇑P P 07 55 41.7 +0.2
baz=98,SNR=17
W20A Ramah 97.71 44 ⇓P P 07 55 41.6 0.0
baz=98,SNR=13
SDCO Great Sand Dun 97.72 40 *eP* **P 07 55 42.2 +0.6**
comp=Z,5.4nm,0.8s,mb5.1
SDCO LR LR
comp=Z,864nm,21.0s,MS5.2
V21A Milan 97.78 43 ⇑P P 07 55 41.9 0.0
baz=98,SNR=13
216A Three Points, 97.84 48 ⇓P P 07 55 42.3 0.0
baz=98
U22A Llaves 97.86 42 ⇓P P 07 55 42.6 +0.3
baz=98
T23A Casias Ranch, 97.90 41 ⇓P P 07 55 42.6 +0.2
baz=98,SNR=20
ECSD EROS Data Cent 97.94 31 *eP* **P 07 55 41.8 -0.7**
comp=Z,19nm,0.9s,mb5.6
ECSD LR LR
comp=Z,1μm,22.0s,MS5.3
117A Oracle 97.95 47 ⇑P P 07 55 42.9 +0.1
baz=98,SNR=9.3
S24A Houchin Ranch, 97.96 40 ⇓P P 07 55 42.8 +0.1
baz=98
Y19A Nutrioso 98.00 45 ⇓P P 07 55 43.6 +0.6
baz=98,SNR=8.2
Z18A Geronimo 98.07 46 ⇓P P 07 55 43.3 0.0
baz=98
TUC Tucson 98.08 47 *eP* **P 07 55 43.3 -0.1**
TUC pmax pmax
comp=Z,13nm,1.0s,mb5.4
TUC MLR MLR
comp=Z,1μm,20.0s,MS5.4
TUC Tucson 98.08 47 *eP* **P 07 55 43.3 -0.1**
comp=Z,13nm,1.0s,mb5.4
TUC LR LR
comp=Z,1μm,20.0s,MS5.4
X20A Quemado 98.09 44 ⇓P P 07 55 43.6 +0.2
baz=98,SNR=27
V22A San Miguel Ran 98.14 42 ⇓P P 07 55 43.7 +0.1
baz=98,SNR=12
W21A San Fidel 98.23 43 ⇓P P 07 55 44.1 +0.1
baz=98
U23A El Rito 98.29 42 ⇑P P 07 55 44.7 +0.5
baz=98,SNR=55
S25A Robets Cordova 98.39 40 ⇑P P 07 55 44.5 -0.1
baz=98
118A Homack Ranch, 98.40 47 ⇓P P 07 55 45.1 +0.3
baz=98,SNR=16
217A Green Valley 98.40 48 ⇓P P 07 55 45.1 +0.3
baz=98,SNR=13
Z19A T-Link Ranch, 98.43 46 ⇑P P 07 55 44.8 -0.1
baz=98
Y20A Horse Springs, 98.58 45 ⇓P P 07 55 46.1 +0.5
baz=98,SNR=31
X21A Alamocita Cree 98.60 44 ⇓P P 07 55 45.9 +0.3
baz=98,SNR=32
V23A Ortiz Mt. (NFS 98.69 42 ⇓P P 07 55 46.8 +0.7
baz=98,SNR=18
W22A Albuquerque 98.74 43 ⇑P P 07 55 46.9 +0.7
baz=98,SNR=7.2
119A Ashpeak Ranch, 98.75 46 ⇑P P 07 55 46.4 0.0
baz=99,SNR=10
T25A Trinidad 98.77 40 ⇓P P 07 55 46.4 0.0
baz=99
218A Dragoon 98.78 47 ⇑P P 07 55 46.8 +0.4
baz=99,SNR=14
Y21A Point of Rocks 98.95 44 ⇓P P 07 55 47.5 +0.2
baz=99,SNR=17
Z20A Nine Sixteen R 98.97 45 ⇑P P 07 55 47.6 +0.2
baz=99,SNR=44
LAZ Ladron 99.02 44 *eP* **P 07 55 48.8 +1.2**
comp=Z,3.9nm,0.8s,mb5.0
X22A Bernardo 99.03 43 ⇑P P 07 55 47.6 +0.1
baz=99
ANMO Albuquerque 99.07 43 P P 07 55 48.8 +1.1
comp=Z,12nm,0.8s,mb5.5,baz=285,slow=4.3,SNR=31
ANMO PP PP 07 59 48.4 -1.3
comp=Z,5.0nm,1.2s,baz=336,slow=7.7,SNR=4.6
ANMO Albuquerque 99.07 43 ⇑*iP* **P 07 55 48.3 +0.6**
ANMO Albuquerque 99.07 43 P P 07 55 48.8 +1.1
ANMO PP PP 07 59 48.4 -1.3
ANMO LR LR
comp=Z,853nm,21.0s,MS5.2
W23A Werner Place, 99.11 43 ⇓P P 07 55 48.1 +0.2
baz=99,SNR=16
318A Bisbee 99.16 47 ⇑P P 07 55 48.1 -0.1
baz=99,SNR=12
V24A Rampart Ranch, 99.25 42 ⇓P P 07 55 48.8 +0.3
baz=99,SNR=6.0
219A White Tail Can 99.27 47 ⇓P P 07 55 48.7 0.0
baz=99,SNR=17
LENM Lemitar 99.28 44 *eP* **P 07 55 49.9 +1.2**
comp=Z,5.0nm,0.8s,mb5.1
U25A Circle Dot Ran 99.28 41 ⇑P P 07 55 48.7 0.0
baz=99,SNR=13
120A U Bar Ranch, L 99.32 46 ⇓P P 07 55 49.2 +0.3
baz=99,SNR=7.7
Y22D IRIS PASSCAL I 99.38 44 ⇑P P 07 55 49.3 +0.2
baz=99
Z21A St. Cloud Mine 99.42 45 ⇓P P 07 55 49.4 +0.1
baz=99,SNR=20
Y22A Socorro 99.44 44 ⇓P P 07 55 49.5 +0.1
baz=99,SNR=14
X23A Hourglass Bar 99.48 43 ⇓P P 07 55 49.7 +0.1
baz=99,SNR=8.2
BNM Barren Site 99.50 44 *eP* **P 07 55 50.3 +0.6**
comp=Z,7.2nm,0.8s,mb5.2
W24A Lazy 6 Ranch, 99.52 42 ⇓P Pdif 07 55 50.1 +0.7
baz=99,SNR=28
V25A Rancho No Teng 99.55 41 ⇑P Pdif 07 55 50.2 +0.6
baz=99,SNR=13
319A Douglas 99.66 47 ⇓P Pdif 07 55 50.5 +0.4
baz=100,SNR=5.5
U26A Atchley Ranch, 99.67 40 ⇑P Pdif 07 55 50.5 +0.4
baz=100,SNR=13
ESDC Sonseca Array 99.72 325 P Pdif 07 55 49.9 -0.5
comp=Z,5.5nm,0.7s,baz=34,slow=4.0,SNR=15
ESDC PKKP PKKPbc 08 12 25.5 +14
comp=Z,0.6nm,0.5s,baz=268,slow=2.0,SNR=5.6
ESDC LR LR 08 46 16.5
comp=Z,5μm,18.5s,MS6.0,baz=50,slow=39
ESLA Sonseca Array 99.72 325 *eP* Pdif 07 55 49.6 -0.7
comp=Z,24nm,1.7s
ESLA LR LR
comp=Z,27μm,19.0s,MS6.8
220A Playas Peak, P 99.81 46 ⇓P Pdif 07 55 51.1 +0.3
baz=100,SNR=9.9
121A Cookes Peak, D 99.86 45 ⇓P Pdif 07 55 51.7 +0.7
baz=100,SNR=15
Z22A Elephant Butte 99.90 44 ⇓P Pdif 07 55 51.6 +0.4
baz=100,SNR=18
X24A Lazy VL Ranch, 99.95 43 ⇓P Pdif 07 55 51.8 +0.4
baz=100
Y23A Lovelace Mesa, 100.00 43 ⇓P Pdif 07 55 51.7 +0.1
baz=100,SNR=15
PAB San Pablo 100.01 325 PFAKE 07 56 00.0 +8.4
PAB LR LR
comp=Z,6μm,20.0s,MS6.1
V26A Tequesquite Ra 100.06 41 ⇓P Pdif 07 55 52.4 +0.6
baz=100,SNR=8.5
W25A X Bar L Ranch, 100.08 42 ⇑P Pdif 07 55 52.3 +0.4
baz=100,SNR=12
MVO Moncorvo 100.11 327 *eP*dif Pdif 07 55 52.0 -0.1
MVO Moncorvo 100.11 327 *eP*P PP 08 00 00.5 +3.2
MVO *e*SKS 08 06 52.6
MVO *eP* 08 15 18.3
MVO *eL*Q 08 34 32.5
MVO *eL*R LR 08 38 03.2
comp=Z,6μm,17.1s
CBKS Cedar Bluff 100.13 36 PFAKE 07 56 00.0 +7.9
CBKS LR LR
comp=Z,1μm,20.0s,MS5.4
320A Kipp Ranch, An 100.17 47 ⇓P Pdif 07 55 52.9 +0.6
baz=100,SNR=5.3
221A Mesquite Ranch 100.22 46 ⇑P Pdif 07 55 52.2 -0.3
baz=100
122A Conniff Cattle 100.25 45 ⇓P Pdif 07 55 53.0 +0.3
baz=100
Z23A Rita Site, Whi 100.35 44 ⇑P Pdif 07 55 52.8 -0.3
baz=100
Y24A Capitan 100.38 43 ⇑P Pdif 07 55 53.5 +0.2
baz=100
X25A Clemmons Ranch 100.43 42 ⇑P Pdif 07 55 53.8 +0.3
baz=100,SNR=11
W26A Owens Ranch, T 100.57 41 ⇓P Pdif 07 55 54.6 +0.5
baz=100
222A Williams Famil 100.58 45 ⇓P Pdif 07 55 54.5 +0.3
baz=100,SNR=6.4
123A Bell Site, Whi 100.75 44 ⇓P Pdif 07 55 54.8 -0.2
baz=101
Y25A Mesa, Roswell 100.83 43 ⇑P Pdif 07 55 55.6 +0.3
baz=101,SNR=6.1
Z24A Sheeppen Canyo 100.83 43 ⇑P Pdif 07 55 55.5 +0.2
baz=101,SNR=6.0
SCIA State Center 100.92 30 *eP*dif Pdif 07 55 56.7 +1.1
comp=Z,15nm,0.8s
SCIA LR LR
comp=Z,612nm,20.0s,MS5.1
X26A CR and CF Fran 100.92 42 ⇑P Pdif 07 55 55.7 0.0
baz=101,SNR=11
MTE Manteigas 100.95 327 *eP*dif Pdif 07 55 56.1 +0.3
MTE Manteigas 100.95 327 *eP*P PP 08 00 07.7 +4.1
MTE *e*SKS 08 06 54.3
MTE *eP* 08 15 28.3
MTE *eL*Q 08 35 06.1
MTE *eL*R LR 08 37 53.8
comp=Z,6μm,20.5s
MTE Manteigas 100.95 327 *eP*dif Pdif 07 55 55.8 0.0
comp=Z,17nm,1.0s
MTE LR LR
comp=Z,6μm,20.0s,MS6.1
W27A Bowe Ranch, En 101.00 41 ⇑P Pdif 07 55 56.1 +0.1
baz=101,SNR=13
223A Chaparral, Ant 101.07 45 ⇓P Pdif 07 55 57.1 +0.7
baz=101
124A Stringfield Ra 101.21 44 ⇓P Pdif 07 55 57.2 +0.2
baz=101,SNR=8.7
Z25A Roswell 101.26 43 ⇓P Pdif 07 55 57.4 +0.2
baz=101,SNR=17
X27A F and S Farms, 101.27 41 ⇓P Pdif 07 55 57.5 +0.3
baz=101
JFWS Jewell Farm 101.38 28 *eP* Pdif 07 55 57.2 -0.5
JFWS pmax pmax
comp=Z,11nm,0.8s
JFWS MLR MLR
comp=Z,1μm,21.0s,MS5.3
JFWS Jewell Farm 101.38 28 *eP*dif Pdif 07 55 57.2 -0.6
comp=Z,11nm,0.8s
JFWS LR LR
comp=Z,1μm,21.0s,MS5.3
KSU1 Kansas State U 101.51 34 *eP*dif Pdif 07 55 57.2 -1.1
comp=Z,6.4nm,0.6s
KSU1 LR LR
comp=Z,2μm,20.0s,MS5.5
224A Cornudas Mount 101.59 44 ⇑P Pdif 07 55 59.2 +0.5
baz=101,SNR=7.6
PMRV Marv??o 101.63 327 *eP*dif Pdif 07 55 58.9 +0.1
PMRV Marv??o 101.63 327 *eP*P PP 08 00 13.0 +4.2
PMRV *e*SKS 08 06 55.8
PMRV *eP* 08 15 38.4
PMRV *eL*Q 08 35 23.8
PMRV *eL*R LR 08 38 12.9
comp=Z,7μm,19.0s
Z26A Caprock 101.71 43 ⇑P Pdif 07 55 59.3 +0.1
baz=102,SNR=20
125A Gardner Draw, 101.72 43 ⇑P Pdif 07 55 59.3 0.0
baz=102,SNR=15
Y27A Causey 101.77 42 ⇑P Pdif 07 55 59.5 +0.1
baz=102
AMTX Amarillo 101.92 40 *eP*dif Pdif 07 56 00.3 +0.2
comp=Z,13nm,0.8s
AMTX LR LR
comp=Z,1μm,22.0s,MS5.3
MNTX Cornudas Mount 101.93 45 *eP*dif Pdif 07 56 00.8 +0.6
comp=Z,6.1nm,1.1s
MNTX *eP*P PP 08 00 09.1 -2.4
MNTX LR LR
comp=Z,848nm,21.0s,MS5.2
225A Deer Hill, Car 102.00 44 ⇑P Pdif 07 56 01.1 +0.6
baz=102
324A Moseley Ranch, 102.04 45 ⇓P Pdif 07 56 00.8 +0.1
baz=102
126A Clayton Basin, 102.12 43 ⇑P Pdif 07 56 01.4 +0.3
baz=102,SNR=5.0
Z27A Tatum 102.14 42 ⇓P Pdif 07 56 01.1 0.0
baz=102
PESTR Estremoz 102.16 326 *eP*dif Pdif 07 56 02.7 +1.5
PESTR Estremoz 102.16 326 *eP*P PP 08 00 16.6 +3.8
PESTR *e*SKS 08 07 01.0
PESTR *eP* 08 15 47.2
PESTR *eL*Q 08 35 54.9
PESTR *eL*R LR 08 39 02.2
comp=Z,4μm,21.3s
GDL2 Guadalupe Moun 102.22 44 *eP*dif Pdif 07 56 02.4 +0.9
comp=Z,12nm,0.9s
GDL2 *eP*P PP 08 00 12.5 -1.1
GDL2 *eP*KPdf PKiKP 08 00 23.1 -0.7
325A Bean Ranch, Si 102.41 45 ⇓P Pdif 07 56 02.7 +0.3
baz=102
PBAR Barrancos 102.42 325 *eP*dif Pdif 07 56 01.9 -0.4
PBAR Barrancos 102.42 325 *eP*P PP 08 00 18.6 +3.8
PBAR *e*SKS 08 07 01.1
PBAR *eP* 08 15 52.1
PBAR *eL*Q 08 36 29.1
PBAR *eL*R LR 08 41 24.1
comp=Z,3μm,21.1s
226A Malaga, Loving 102.48 44 ⇑P Pdif 07 56 02.8 +0.2
baz=102,SNR=7.1
127A Arkansas Junct 102.50 43 ⇓P Pdif 07 56 02.7 0.0
baz=102
EVO Evora 102.63 326 *eP*dif Pdif 07 56 04.4 +1.1
EVOP Sao Brissos 102.69 326 *eP* Pdif 07 56 03.3 -0.2
EVOP *eP*P PP 08 00 17.9 +1.2
EVOP *eS* SKSac 08 06 39.0 -0.5
EVOP AMS AMS 08 48 23.9
comp=Z,5μm,17.9s,MS6.1
EVOP Sao Brissos 102.69 326 *eP* Pdif 07 56 03.2 -0.3
EVOP *e* 08 00 17.9
EVOP *eS* SKSac 08 06 39.0 -0.5
425A Indio Mountain 102.80 45 ⇑P Pdif 07 56 04.1 +0.1
baz=103
PMAFR Mafra 102.91 327 *eP*dif Pdif 07 56 02.6 -1.9
PMAFR Mafra 102.91 327 *eP*P PP 08 00 22.4 +4.0
PMAFR *e*SKS 08 07 03.6
PMAFR *eP* 08 15 56.2
PMAFR *eL*Q 08 37 15.4
PMAFR *eL*R LR 08 41 22.0
comp=Z,10μm,19.6s
227A Bennet, Jal 103.00 43 ⇓P Pdif 07 56 05.4 +0.5
baz=103
LIS Lisbon 103.04 327 *eP* Pdif 07 56 05.0 -0.1
LIS *eP*P PP 08 00 20.1 +0.8
LIS AMS AMS 08 48 42.8
comp=Z,10μm,19.3s,MS6.3
LIS Lisbon 103.04 327 *eP*P PP 08 00 20.1 +0.7
LIS A 08 48 42.8
comp=Z,10μm,19.3s
LIS Lisbon 103.04 327 *eP* Pdif 07 56 04.9 -0.2
LIS *e* 08 00 20.1
326A Caldwell Ranch 103.07 44 ⇑P Pdif 07 56 05.6 +0.3
baz=103
MESJ Messejana 103.27 326 *eP* Pdif 07 56 06.3 +0.1
MESJ *eP*P PP 08 00 21.7 +0.6
MESJ AMS AMS 08 50 59.6
comp=Z,3μm,19.6s,MS5.9
MESJ Messejana 103.27 326 *eP*P PP 08 00 21.7 +0.6
MESJ A 08 50 59.6
comp=Z,3μm,19.6s
MESJ Messejana 103.27 326 *eP* Pdif 07 56 06.2 +0.1
MESJ *e* 08 00 21.7
SFS San Fernando 103.30 324 PFAKE 07 56 20.0 +14
SFS LR LR
comp=Z,5μm,19.0s,MS6.1
327A Balmorhea Ranc 103.33 44 ⇓P Pdif 07 56 06.7 +0.3
baz=103
PCVE Castro Verde 103.34 326 *eP*dif Pdif 07 56 06.6 +0.2
PCVE Castro Verde 103.34 326 *eP*P PP 08 00 26.7 +5.0
PCVE *e*SKS 08 07 06.0
PCVE *eP* 08 16 04.1
PCVE *eL*Q 08 34 35.3
PCVE *eL*R LR 08 41 23.0
comp=Z,3μm,19.0s
PVAQ Vaqueiros 103.36 325 *eP*dif Pdif 07 56 06.2 -0.3
PVAQ Vaqueiros 103.36 325 *eP*P PP 08 00 23.6 +1.8
PVAQ *e*SKS 08 07 06.3
PVAQ *eL*Q 08 34 27.3
PVAQ *eL*R LR 08 41 30.3
comp=Z,5μm,18.4s
426A McDonald Obser 103.48 45 ⇓P Pdif 07 56 07.1 +0.1
baz=103
PBDV Barranco-do-Ve 103.59 325 *eP*dif Pdif 07 56 09.6 +2.1
PBDV Barranco-do-Ve 103.59 325 *eP*P PP 08 00 27.6 +4.1
PBDV *e*SKS 08 07 07.9
PBDV *eP* 08 16 02.0
PBDV *eL*Q 08 34 45.4
PBDV *eL*R LR 08 41 27.2
comp=Z,6μm,19.1s
WMOK Wichita Mounta 103.66 38 *eP* Pdif 07 56 06.8 -1.0
WMOK pmax pmax
comp=Z,7.0nm,0.9s
WMOK MLR MLR
comp=Z,911nm,20.0s,MS5.3
WMOK Wichita Mounta 103.66 38 *eP*dif Pdif 07 56 06.8 -1.0
comp=Z,6.6nm,0.9s
WMOK LR LR
comp=Z,911nm,20.0s,MS5.3
HDIL Hopedale 103.73 29 PFAKE 07 56 20.0 +12
HDIL LR LR
comp=Z,949nm,20.0s,MS5.3
328A Wristen Ranch, 103.74 43 ⇑P Pdif 07 56 08.4 +0.2
baz=104
427A Hayter Ranch, 103.75 44 ⇑P Pdif 07 56 08.6 +0.3
baz=104
526A Mary Lane Ranc 103.86 45 ⇑P Pdif 07 56 09.3 +0.6
baz=104
MORF Marmelete 103.90 326 *eP*dif Pdif 07 56 10.8 +1.9
MORF Marmelete 103.90 326 *eP*P PP 08 00 29.9 +4.1
MORF *e*SKS 08 07 08.5
MORF *eP* 08 16 21.9
MORF *eL*Q 08 36 55.9
MORF *eL*R LR 08 41 13.7
comp=Z,4μm,18.7s
MORF Marmelete 103.90 326 *eP* Pdif 07 56 09.1 +0.2
MORF *e* 08 00 26.7
MORF *eS* SKSac 08 06 44.1 -1.1
527A Woodward Ranch 104.10 45 ⇓P Pdif 07 56 10.7 +0.9
baz=104
PFVI Vila Bisbo 104.12 326 *eP*dif Pdif 07 56 12.0 +2.1
PFVI Vila Bisbo 104.12 326 *eP*P PP 08 00 32.7 +5.2
PFVI *e*SKS 08 07 09.9
PFVI *eP* 08 16 18.4
PFVI *eL*Q 08 36 48.4
PFVI *eL*R LR 08 41 20.9
comp=Z,4μm,18.7s
626A Big Bend Ranch 104.18 45 ⇑P Pdif 07 56 10.5 +0.3
baz=104
428A Kincaid Ranch, 104.27 44 ⇓P Pdif 07 56 11.4 +0.9
baz=104
AAM Ann Arbor 104.46 24 PFAKE 07 56 20.0 +8.6
AAM LR LR
comp=Z,2μm,20.0s,MS5.6
528A Cox Ranch, San 104.60 44 ⇑P Pdif 07 56 12.8 +0.7
baz=104
TXAR Lajitas Array 104.63 45 Pdiff Pdif 07 56 10.8 -1.3
comp=Z,1.7nm,0.9s,baz=80,slow=8.0,SNR=28
TXAR pPdiff 07 56 27.9
comp=Z,5.1nm,0.9s,baz=298,slow=2.7,SNR=6.2
TXAR PP PP 08 00 23.5 -8.1
comp=Z,3.3nm,0.8s,baz=304,slow=4.5,SNR=6.5
TXAR PKKPbc PKKPbc 08 11 57.0 +0.1
comp=Z,1.7nm,0.8s,baz=151,slow=5.4,SNR=12
TXAR Lajitas Array 104.63 45 P Pdif 07 56 10.8 -1.4
TXAR pmax pmax
comp=Z,2.0nm,0.9s
TXAR pmax pmax
comp=Z,5.0nm,0.9s
TXAR pmax pmax
comp=Z,3.0nm,0.8s
TXAR pmax pmax
comp=Z,2.0nm,0.8s
TXAR Lajitas Array 104.63 45 Pdif Pdif 07 56 10.8 -1.3
TXAR PP PP 08 00 23.5 -8.1
TXAR PKKPbc PKKPbc 08 11 57.0 +0.1
627A Terlingua Ranc 104.72 45 ⇓P Pdif 07 56 13.2 +0.6
baz=104
CCM Cathedral Cave 104.91 31 *eP* Pdif 07 56 12.9 -0.5
CCM *e* 08 00 32.3
CCM pmax pmax
comp=Z,9.0nm,0.8s
CCM MLR MLR
comp=Z,1μm,20.0s,MS5.4
CCM Cathedral Cave 104.91 31 *eP*dif Pdif 07 56 12.8 -0.6
comp=Z,9.5nm,0.8s

CCM				*e*PP	PP	08 00 32.3	-1.0
CCM				LR	LR		
	comp=Z,1μm,20.0s,MS5.4						
628A	**Black Gap, Mar**	**105.01**	**45**	||P	Pdif	07 56 14.5	+0.6
	baz=105						
LONY	**Lake Ozonia**	**105.17**	**17**	*e*PP	PP	08 00 36.1	+1.3
LONY				LR	LR		
	comp=Z,1μm,21.0s,MS5.4						
TAM	**Tamanrasset**	**105.50**	**306**	PFAKE		08 00 40.0	+10
TAM				LR	LR		
	comp=Z,2μm,19.0s,MS5.7						
OLIL	**Olney**	**105.76**	**29**	*e*PP	PP	08 00 40.1	+0.7
PKME	**Peaks-Kenny Pk**	**105.76**	**13**	PFAKE		08 00 40.0	+10
PKME				LR	LR		
	comp=Z,3μm,20.0s,MS5.8						
LSZ	**Lusaka**	**105.78**	**261**	*e*Pdif	Pdif	07 56 17.2	-0.1
	comp=Z,6.9nm,0.8s						
LSZ				*e*PKPdf	PKiKP	08 00 31.3	+0.7
LSZ				*e*PP	PP	08 00 41.7	+0.3
LSZ				LR	LR		
	comp=Z,2μm,22.0s,MS5.6						
NCB	**Newcomb**	**105.87**	**17**	PFAKE		08 00 40.0	+10
NCB				LR	LR		
	comp=Z,1μm,20.0s,MS5.5						
ERPA	**Erie**	**105.89**	**22**	PFAKE		08 00 40.0	+10
ERPA				LR	LR		
	comp=Z,2μm,21.0s,MS5.6						
RKT	**Rikitea**	**105.92**	**108**	*e*SKSac	SKSac	08 06 54.0	-0.5
	comp=Z,520nm,29.2s						
RKT				*e*SP	SP	08 09 39.3	-15
	comp=Z,670nm,31.5s						
RKT				*e*SS	SS	08 15 47.1	+7.8
	comp=Z,1μm,32.2s						
RKT				*e*LQ		08 26 29.4	
	comp=Z,2μm,39.8s						
RKT				*e*LR	LR	08 31 10.0	
	comp=Z,5μm,29.0s,baz=293						
LBNH	**Lisbon**	**106.17**	**15**	PFAKE		08 00 40.0	+9.4
LBNH				LR	LR		
	comp=Z,2μm,22.0s,MS5.7						
JCT	**Junction City**	**106.19**	**42**	*e*Pdif	Pdif	07 56 22.3	+3.2
	comp=Z,6.6nm,0.9s						
JCT				*e*PKPdf	PKiKP	08 00 30.5	-0.6
JCT				*e*PP	PP	08 00 42.2	-0.9
JCT				LR	LR		
	comp=Z,1μm,21.0s,MS5.4						
MAW	**Mawson**	**106.50**	**201**	*e*P	Pdif	07 56 19.1	-1.4
	comp=Z,3.2nm,0.9s						
MAW	**Mawson**	**106.50**	**201**	Pdiff	Pdif	07 56 19.2	-1.3
	comp=Z,3.6nm,0.9s,baz=47,slow=4.9,SNR=6.8						
MAW				pPdiff		07 56 33.4	
	comp=Z,2.8nm,0.8s,baz=85,slow=11,SNR=3.5						
MAW				PKiKP	PKiKP	08 00 28.9	-1.5
	comp=Z,3.2nm,0.7s,baz=37,slow=4.3,SNR=3.9						
MAW	**Mawson**	**106.50**	**201**	*e*Pdif	Pdif	07 56 20.0	-0.5
	comp=Z,1.4nm,1.3s						
MAW				PKPdf	PKiKP	08 00 28.9	-1.5
ACSO	**Alum Creek Sta**	**106.52**	**25**	PFAKE		08 00 40.0	+8.6
ACSO				LR	LR		
	comp=Z,2μm,19.0s,MS5.6						
MIAR	**Mount Ida**	**106.58**	**35**	*e*Pdif	Pdif	07 56 21.0	+0.2
	comp=Z,8.9nm,1.0s						
MIAR				*e*PKPdf	PKiKP	08 00 31.5	-0.2
MIAR				*e*PP	PP	08 00 46.3	+0.6
MIAR				LR	LR		
	comp=Z,1μm,22.0s,MS5.5						
WCI	**Wyandotte Cave**	**106.95**	**28**	PFAKE		08 00 40.0	+7.8
WCI				LR	LR		
	comp=Z,863nm,19.0s,MS5.3						
BINY	**Binghamton**	**107.04**	**19**	PFAKE		08 00 40.0	+7.7
BINY				LR	LR		
	comp=Z,2μm,20.0s,MS5.7						
SBA	**Scott Base**	**107.60**	**172**	*e*PKPdf	PKiKP	08 00 32.1	-0.1
SBA				LR	LR		
	comp=Z,2μm,22.0s,MS5.6						
SSPA	**Standing Stone**	**107.90**	**21**	*e*PKPdf	PKiKP	08 00 32.6	-1.4
SSPA				*e*PP	PP	08 00 55.9	+0.9
SSPA				LR	LR		
	comp=Z,2μm,22.0s,MS5.6						
WVT	**Waverly**	**108.05**	**30**	*e*Pdif	Pdif	07 56 27.4	+0.1
	comp=Z,3.0nm,0.7s						
WVT				*e*PKPdf	PKiKP	08 00 33.2	-1.2
WVT				*e*PP	PP	08 00 55.9	-0.5
WVT				LR	LR		
	comp=Z,1μm,19.0s,MS5.5						
MCWV	**Mont Chateau**	**108.14**	**23**	PFAKE		08 00 50.0	+16
MCWV				LR	LR		
	comp=Z,2μm,20.0s,MS5.6						
NATX	**Nacogdoches**	**108.16**	**38**	PFAKE		08 00 50.0	+15
NATX				LR	LR		
	comp=Z,936nm,21.0s,MS5.3						
OXF	**Oxford**	**108.66**	**32**	PFAKE		08 00 50.0	+14
OXF				LR	LR		
	comp=Z,1μm,20.0s,MS5.4						
HKT	**Hockley**	**108.89**	**40**	PFAKE		08 00 50.0	+14
HKT				LR	LR		
	comp=Z,1μm,21.0s,MS5.4						
KVTX	**Kingsville**	**109.47**	**43**	PFAKE		08 00 50.0	+13
KVTX				LR	LR		
	comp=Z,865nm,20.0s,MS5.3						
VBMS	**Vicksburg**	**109.97**	**34**	PFAKE		08 00 50.0	+12
VBMS				LR	LR		
	comp=Z,1μm,19.0s,MS5.5						
BLA	**Blacksburg**	**110.12**	**24**	PFAKE		08 00 50.0	+12
BLA				LR	LR		
	comp=Z,2μm,21.0s,MS5.6						
TKL	**Tuckaleechee C**	**110.19**	**27**	*e*PKiKP	PKiKP	08 00 37.3	-1.1
TKL				*e*		08 01 11.9	
CBN	**Corbin**	**110.28**	**21**	PFAKE		08 00 50.0	+12
CBN				LR	LR		
	comp=Z,1μm,20.0s,MS5.5						
CMLA	**Cha da Macela**	**110.56**	**338**	PFAKE		08 00 50.0	+11
CMLA				LR	LR		
	comp=Z,2μm,20.0s,MS5.7						
PTCN	**Pitcairn Islan**	**110.79**	**108**	PFAKE		08 00 50.0	+10
PTCN				LR	LR		
	comp=Z,3μm,20.0s,MS5.9						
LRAL	**Lakeview Retre**	**111.00**	**31**	PFAKE		08 00 50.0	+10
LRAL				LR	LR		
	comp=Z,880nm,19.0s,MS5.4						
LBTB	**Lobatse**	**111.82**	**252**	*e*PKiKP	PKiKP	08 00 41.0	-0.6
LBTB				MLR	MLR		
	comp=Z,2μm,22.0s,MS5.6						
GOGA	**Godfrey**	**112.25**	**28**	*e*PKiKP	PKiKP	08 00 41.4	-1.0
GOGA				MLR	MLR		
	comp=Z,1μm,21.0s,MS5.5						
BRAL	**Brewton**	**112.65**	**33**	*e*PKPdf	PKiKP	08 00 42.5	-0.7
BRAL				LR	LR		
	comp=Z,1μm,21.0s,MS5.4						
CNNC	**Cliffs of the**	**112.79**	**23**	PFAKE		08 00 50.0	+6.7
CNNC				LR	LR		
	comp=Z,2μm,21.0s,MS5.7						
BOSA	**Boshof**	**113.36**	**249**	PKiKP	PKiKP	08 00 43.7	-0.8
	comp=Z,10.0nm,0.7s,baz=70,slow=1.6,SNR=8.6						
BOSA	**Boshof**	**113.36**	**249**	*i* PKiKP	PKiKP	08 00 43.7	-0.8
BOSA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NHSC	**New Hope**	**113.85**	**26**	PFAKE		08 01 00.0	+15
NHSC				LR	LR		
	comp=Z,1μm,20.0s,MS5.5						
TOA0	**Torodi Ar. Sit**	**114.37**	**301**	*e*PKPdf	PKiKP	08 00 45.4	-1.5
TORD	**Torodi Ar. Bea**	**114.37**	**301**	PKP	PKiKP	08 00 39.9	-7.0
	comp=Z,1.1nm,0.8s,baz=40,slow=4.7,SNR=3.6						
TORD				PKiKP	PKiKP	08 00 45.5	-1.4
	comp=Z,14nm,0.7s,baz=20,slow=2.7,SNR=57						
TORD				PP	PP	08 01 44.4	+1.7
	comp=Z,9.2nm,0.9s,baz=56,slow=6.5,SNR=6.8						
TORD				PKKPbc	PKKPbc	08 11 25.4	-0.1
	comp=Z,5.0nm,0.8s,baz=244,slow=3.2,SNR=14						
TORD	**Torodi Ar. Bea**	**114.37**	**301**	PKPdf	PKiKP	08 00 45.5	-1.4
TORD				PP	PP	08 01 44.4	+1.7
TORD				PKKPbc	PKKPbc	08 11 25.4	-0.1
SYO	**Syowa Base**	**114.99**	**203**	‖ *e*PKPdf	PKiKP	08 00 44.0	-2.3
TSUM	**Tsumeb**	**116.63**	**261**	*e*PKPdf	PKPdf	08 00 50.6	-0.4
TSUM				LR	LR		
	comp=Z,2μm,19.0s,MS5.7						
QSPA	**South Pole Qui**	**117.33**	**180**	*e*PKPdf	PKPdf	08 00 49.5	-1.1
QSPA				LR	LR		
	comp=Z,2μm,21.0s,MS5.7						
DWPF	**Disney**	**117.70**	**30**	PFAKE		08 01 00.0	+7.0
DWPF				LR	LR		
	comp=Z,1μm,20.0s,MS5.5						
SUR	**Sutherland**	**118.16**	**246**	PFAKE		08 01 10.0	+16
SUR				LR	LR		
	comp=Z,2μm,22.0s,MS5.7						
BBSR	**BB Station**	**119.12**	**13**	PFAKE		08 01 10.0	+14
BBSR				LR	LR		
	comp=Z,1μm,20.0s,MS5.5						
TEIG	**Tepich**	**120.71**	**41**	PFAKE		08 01 10.0	+11
TEIG				LR	LR		
	comp=Z,798nm,20.0s,MS5.4						
DBIC	**Dimbokro**	**123.43**	**300**	PKP	PKPdf	08 01 03.4	-0.9
	comp=Z,27nm,0.7s,baz=23,slow=2.8,SNR=25						
DBIC	**Dimbokro**	**123.43**	**300**	PKiKP	PKPdf	08 01 03.4	-0.9
DBIC				pmax	pmax		
	comp=Z,27nm,0.7s						
DBIC	**Dimbokro**	**123.43**	**300**	*e*PKPdf	PKPdf	08 01 03.3	-1.0
DBIC				LR	LR		
	comp=Z,2μm,19.0s,MS5.7						
KIC	**Kosan Boka**	**123.54**	**299**	*e*PKIKP	PKPdf	08 01 03.6	-0.9
	comp=Z,57nm,0.7s						
TIC	**Toumodi**	**123.57**	**300**	*e*PKIKP	PKPdf	08 01 03.5	-1.1
	comp=Z,43nm,0.7s						
LIC	**Lamto**	**123.84**	**300**	*e*PKIKP	PKPdf	08 01 04.3	-0.8
	comp=Z,80nm,0.8s						
LIC				*e*MLR	MLR		
	comp=Z,2μm,19.5s,MS5.5						
LIC	**Lamto**	**123.84**	**300**	*e*PKIKP	PKPdf	08 01 04.1	-1.0
	comp=Z,122nm,0.8s						
LIC	**Lamto**	**123.84**	**300**	*e*PKPdf	PKPdf	08 01 04.3	-0.8
LIC				LR	LR		
	comp=Z,1μm,19.5s,MS5.5						
MAIT	**Maitri**	**124.48**	**201**	*e*PKPdif	PKPdf	08 01 04.4	-0.2
MAIT				*e*		08 01 18.0	
TGUH	**Tegucigalpa,Un**	**126.09**	**44**	*e*PKPdf	PKPdf	08 01 08.5	-0.9
TGUH				LR	LR		
	comp=Z,813nm,20.0s,MS5.4						
GTBY	**Guantanamo Bay**	**127.60**	**28**	PFAKE		08 01 20.0	+7.8
GTBY				LR	LR		
	comp=Z,910nm,22.0s,MS5.4						
GRTK	**Grand Turk**	**127.70**	**23**	PFAKE		08 01 20.0	+7.7
GRTK				LR	LR		
	comp=Z,1μm,22.0s,MS5.5						
MTDJ	**Mount Denham**	**128.02**	**32**	PFAKE		08 01 20.0	+7.0
MTDJ				LR	LR		
	comp=Z,948nm,19.0s,MS5.5						
RPN	**Rapa Nui**	**129.16**	**104**	PFAKE		08 01 30.0	+15
RPN				LR	LR		
	comp=Z,2μm,21.0s,MS5.7						
SACV	**Santiago Islan**	**129.74**	**324**	PFAKE		08 01 30.0	+14
SACV				LR	LR		
	comp=Z,2μm,21.0s,MS5.8						
SDDR	**Presa de Saban**	**129.97**	**25**	PFAKE		08 01 30.0	+13
SDDR				LR	LR		
	comp=Z,2μm,21.0s,MS5.8						
VCR	**Vista de Mar**	**130.11**	**46**	*e*P	PKPdf	08 01 17.2	+0.1
JTS	**JuntasAbangare**	**130.42**	**45**	PKP	PKPdf	08 01 17.4	-0.3
	comp=Z,16nm,0.9s,baz=299,slow=3.2,SNR=4.7						
JTS	**JuntasAbangare**	**130.42**	**45**	PKP	PKPdf	08 01 17.4	-0.3
JTS				LR	LR		
	comp=Z,2μm,19.0s,MS5.9						
VNA1	**Neumayer--Stat**	**130.47**	**198**	*e*PKPdf	PKPdf	08 01 15.1	-0.9
URSC	**Urasca**	**131.50**	**44**	*e*P	PKPdf	08 01 15.1	-4.6
BUS	**Buena Vista**	**131.73**	**45**	*e*P	PKPdf	08 01 18.0	-2.1
BAR1		**132.25**	**44**	*e*P	PKPdf	08 01 22.0	+0.8
SJG	**San Juan**	**132.47**	**19**	PKP	PKPdf	08 01 21.9	+0.5
	comp=Z,7.9nm,0.5s,baz=339,slow=3.1,SNR=3.3						
SJG	**San Juan**	**132.47**	**19**	PKP	PKPdf	08 01 21.9	+0.5
SJG				LR	LR		
	comp=Z,3μm,19.0s,MS6.0						
ACR	**Cerro Adams**	**132.79**	**45**	*e*P	PKPdf	08 01 18.8	-3.3
ANWB	**Willy Bob**	**133.97**	**14**	PFAKE		08 01 40.0	+16
ANWB				LR	LR		
	comp=Z,1μm,19.0s,MS5.6						
PAYG	**Puerto Ayora**	**134.31**	**61**	PFAKE		08 01 40.0	+15
PAYG				LR	LR		
	comp=Z,5μm,19.0s,MS6.2						
BCIP	**Isla Barro Col**	**134.40**	**41**	PFAKE		08 01 40.0	+15
BCIP				LR	LR		
	comp=Z,7μm,20.0s,MS6.4						
SHEL	**Horse Pasture**	**136.08**	**275**	PFAKE		08 01 40.0	+12
SHEL				LR	LR		
	comp=Z,921nm,21.0s,MS5.5						
FDF	**Fort de France**	**136.96**	**14**	*e*PKIKP	PKPdf	08 01 29.2	-0.7
FDF				MLR	MLR		
	comp=Z,7μm,19.0s,MS6.4						
BBGH	**Gun Hill**	**138.81**	**12**	PFAKE		08 01 40.0	+6.7
BBGH				LR	LR		
	comp=Z,9μm,21.0s,MS6.5						
SDV	**Santo Domingo**	**139.36**	**30**	*e*PKPpre	PKPpre	08 01 24.9	
SDV				*e*PKPdf	PKPdf	08 01 33.7	-0.6
SDV				LR	LR		
	comp=Z,4μm,19.0s,MS6.2						
GRGR	**Grenville**	**139.36**	**15**	PFAKE		08 01 50.0	+16
GRGR				LR	LR		
	comp=Z,7μm,22.0s,MS6.3						
PCRV	**Puerto La Cruz**	**140.43**	**20**	PKhKP	PKPpre	08 01 28.0	
	comp=Z,27nm,0.8s,baz=69,slow=4.9,SNR=5.4						
PCRV				PKP	PKPdf	08 01 34.0	-2.3
	comp=Z,27nm,0.8s,baz=70,slow=5.6,SNR=8.6						
PCRV	**Puerto La Cruz**	**140.43**	**20**	PKP	PKPdf	08 01 34.0	-2.3
ROSC	**El Rosal**	**141.02**	**38**	PKP	PKPdf	08 01 34.5	-2.9
	comp=Z,40nm,1.0s,baz=103,slow=7.9,SNR=23						
ROSC	**El Rosal**	**141.02**	**38**	*e*PKPdf	PKPdf	08 01 34.2	-3.2
OTAV	**Otavalo**	**142.22**	**47**	*e*PKPdf	PKPdf	08 01 35.1	-4.4
OTAV				LR	LR		
	comp=Z,16μm,19.0s,MS6.8						
ATAH	**Atahualpa**	**147.50**	**56**	PKPbc	PKPbc	08 01 49.8	-1.4
	comp=Z,114nm,1.0s,baz=353,slow=2.5,SNR=28						
ATAH				PKPab	PKPab	08 01 51.8	-1.5
	comp=Z,114nm,1.0s,baz=353,slow=2.5,SNR=35						
NNA	**Nana**	**151.75**	**62**	PKP	PKPdf	08 01 55.6	+0.3
	comp=Z,34nm,0.8s,baz=321,slow=4.3,SNR=14						
NNA				PKPbc	PKPbc	08 02 00.9	-0.7
	comp=Z,230nm,0.8s,baz=305,slow=4.2,SNR=67						
NNA				PKPab	PKPab	08 02 08.7	-2.0
	comp=Z,41nm,0.7s,baz=212,slow=13,SNR=5.8						
NNA				pPKPbc	pPKPbc	08 02 14.9	-1.8
	comp=Z,150nm,0.9s,baz=348,slow=2.7,SNR=6.7						
NNA				pPKPab	pPKPab	08 02 24.8	-0.6
	comp=Z,56nm,0.8s,baz=232,slow=6.0,SNR=2.4						
NNA	**Nana**	**151.75**	**62**	*e*PKPdf	PKPdf	08 01 54.7	-0.6
NNA				*e*PKPbc	PKPbc	08 02 00.5	-1.1
NNA				LR	LR		
	comp=Z,5μm,20.0s,MS6.3						
PLCA	**Paso Flores**	**159.61**	**135**	PKP	PKPdf	08 02 05.0	0.0
	comp=Z,8.7nm,1.0s,baz=48,slow=3.3,SNR=6.6						
PLCA	**Paso Flores**	**159.61**	**135**	*e*PKPdf	PKPdf	08 02 05.3	+0.3
PLCA				LR	LR		
	comp=Z,6μm,19.0s,MS6.4						
LPAZ	**La Paz**	**161.04**	**57**	PKP	PKPdf	08 02 08.6	+1.3
	comp=Z,22nm,0.9s,baz=339,slow=3.2,SNR=45						
LPAZ	**La Paz**	**161.04**	**57**	PKiKP	PKPdf	08 02 08.6	+1.3
LPAZ				pmax	pmax		
	comp=Z,22nm,0.9s						
LPAZ	**La Paz**	**161.04**	**57**	*e*PKPdf	PKPdf	08 02 08.3	+1.0
LPAZ				LR	LR		
	comp=Z,24μm,19.0s						
MNMC	**Miæe Miæ**	**161.50**	**67**	*e*P	PKPdf	08 02 08.5	+0.8
HMBC	**Humberston**	**161.81**	**70**	*e*P	PKPdf	08 02 08.1	+0.1
PB01	**Plate Boundary**	**162.48**	**72**	*e*P	PKPdf	08 02 06.2	-2.4
LCO	**Las Campanas**	**163.13**	**99**	*e*PKPdf	PKPdf	08 02 09.0	-0.1
LCO				*e*PKPab	PKPab	08 02 59.9	+0.5
LCO				LR	LR		
	comp=Z,8μm,20.0s						
SIV	**San Ignacio**	**165.53**	**39**	PKP	PKPdf	08 02 11.1	-0.5
	comp=Z,32nm,0.8s,baz=135,slow=0.4,SNR=130						
SIV				PKPab	PKPab	08 03 08.7	-1.3
	comp=Z,10nm,0.8s,baz=359,slow=2.5,SNR=5.9						
SIV				PP	PP	08 06 56.9	+0.6
	comp=Z,19nm,0.9s,baz=341,slow=4.8,SNR=9.4						
TRQA	**Tornquist**	**166.40**	**143**	*e*PKPdf	PKPdf	08 02 10.4	-1.2
TRQA				LR	LR		
	comp=Z,10μm,21.0s						
LPA	**La Plata**	**170.90**	**145**	*ce*P	PKPdf	08 02 15.0	+0.3
SPB	**Sao Paulo**	**174.53**	**315**	*e*PKPdf	PKPdf	08 02 16.8	+0.3
SPB				LR	LR		
	comp=Z,4μm,20.0s						
CPUP	**Villa Florida**	**174.76**	**78**	PKP	PKPdf	08 02 16.4	-0.1
	comp=Z,20nm,0.8s,baz=353,slow=0.5,SNR=53						
CPUP				PKPab	PKPab	08 03 50.0	-1.0
	comp=Z,8.1nm,0.8s,baz=250,slow=5.6,SNR=6.3						
CPUP				PP	PP	08 07 48.8	+4.9
	comp=Z,5.3nm,0.9s,baz=343,slow=5.5,SNR=4.6						
CPUP	**Villa Florida**	**174.76**	**78**	PKiKP	PKPdf	08 02 16.5	0.0
CPUP						08 03 50.0	
CPUP						08 07 48.8	
CPUP				pmax	pmax		
	comp=Z,20nm,0.8s						
CPUP				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CPUP				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CPUP	**Villa Florida**	**174.76**	**78**	PKP	PKPdf	08 02 16.4	-0.1
CPUP				PKPab	PKPab	08 03 50.0	-1.0
CPUP				PP	PP	08 07 48.8	+4.9
CPUP				LR	LR		
	comp=Z,2μm,20.0s						

IDC 08 08:14:13.5±2.5, 10°.68N×91°.69E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.6/22, mbtmp3.9/4, MS5.1/1, Ms1 5.3/1, ms1mx3.5/29, Error ellipse: s-maj=152.8km s-min=23.5km az=56.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.44**	**41**	LR	LR	08 21 09.9	
	comp=Z,11μm,21.7s,baz=316,slow=40						
GYA	**Guiyang**	**21.13**	**40**	*e*P	P	08 19 06.5	+6.5
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MKAR	**Makanchi Array**	**36.87**	**349**	P	P	08 21 23.8	+0.2
	comp=Z,1.8nm,0.8s,baz=169,slow=8.0,SNR=10						
WRA	**Warramunga Arr**	**51.85**	**126**	P	P	08 23 23.7	-0.1
	comp=Z,1.9nm,0.6s,baz=307,slow=8.2,SNR=7.3						
ASAR	**Alice Springs**	**53.56**	**130**	P	P	08 23 36.5	+0.1
	comp=Z,1.1nm,0.8s,baz=307,slow=7.2,SNR=6.2						
STKA	**Stephens Creek**	**63.78**	**133**	P	P	08 24 52.1	+4.6
	comp=Z,2.2nm,0.8s,baz=307,slow=5.1,SNR=4.7						
FINES	**FINESS Array B**	**69.12**	**332**	P	P	08 25 21.1	-0.1
	comp=Z,1.2nm,0.7s,baz=92,slow=7.4,SNR=4.9						

*ISCJB **08** 08:26:53.3±0.7, 24°.38N±0°.05×122°.49E±0°.02, h69km±9km, Error ellipse: s-maj=7.8km s-min=3.8km az=177.4*
*JMA **08** 08:26:53.3±0.2, 24°.58N×122°.54E, h75km±1km*
*TAP **08** 08:26:53.6, 24°.42N×122°.45E, h70km±2km, ML3.2, D*
ISC 08 08:26:53.8±0.7, 24°.39N±0°.05×122°.49E±0°.02, h67km±10km, n24, σ0°.49/43, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.48**	**81**	P	**Pn**	**08 27 06.0**	**-0.1**
YOJ				S	**Sn**	**08 27 15.6**	**+0.4**
TWC	**Suao**	**0.63**	**291**	P	**Pn**	**08 27 07.5**	**-0.2**
	baz=289						
TWC				S	**Sn**	**08 27 17.7**	**-0.2**
	baz=289						
ENA	**Nanau**	**0.69**	**273**	*e*P	**Pn**	**08 27 08.5**	**+0.1**
	baz=270						
ENA				*e*S	**Sn**	**08 27 19.5**	**+0.4**
	baz=270						
TWB1	**Santiao Chiao**	**0.77**	**323**	P	**Pn**	**08 27 09.2**	**-0.2**
	baz=324						
TWB1				*e*S	**Sn**	**08 27 20.4**	**-0.3**
	baz=324						
TWE	**Neicheng**	**0.82**	**294**	*e*P	**Pn**	**08 27 09.5**	**-0.4**
	baz=293						
TWE				*e*S	**Sn**	**08 27 22.2**	**+0.4**
	baz=293						
TWD	**Chiawan**	**0.88**	**250**	*e*P	**Pn**	**08 27 11.1**	**+0.5**
	baz=246						
TWD				*e*S	**Sn**	**08 27 22.2**	**-0.8**
	baz=246						
ENTT	**Nioudou**	**0.88**	**287**	*e*P	**Pn**	**08 27 10.8**	**+0.1**
	baz=285						
ENTT				*e*S	**Sn**	**08 27 23.4**	**+0.3**
	baz=285						
HWA	**Hwalien**	**0.91**	**243**	*e*P	**Pn**	**08 27 11.6**	**+0.6**
	baz=240						
HWA				*e*S	**Sn**	**08 27 24.2**	**+0.5**
	baz=240						
NWF	**Wu-fen Shan**	**0.94**	**317**	*e*P	**Pn**	**08 27 11.2**	**-0.2**
	baz=316						
NWF				*e*S	**Sn**	**08 27 24.3**	**-0.2**
	baz=316						
NNS	**Nan Shan**	**1.02**	**273**	*e*P	**Pn**	**08 27 13.1**	**+0.6**
	baz=271						
NSK	**Sanguang**	**1.07**	**286**	*e*P	**Pn**	**08 27 12.8**	**-0.2**
	baz=284						
NSK				*e*S	**Sn**	**08 27 27.4**	**0.0**
	baz=284						
ESL	**Shilin**	**1.12**	**240**	*e*P	**Pn**	**08 27 13.9**	**+0.2**
	baz=236						
ESL				*e*S	**Sn**	**08 27 27.4**	**-1.2**
	baz=236						
WHF	**Hehuan Shan**	**1.15**	**258**	*e*P	**Pn**	**08 27 14.3**	**+0.2**
	baz=255						
WHF				*e*S	**Sn**	**08 27 29.0**	**-0.1**
	baz=255						
TWS1	**Kuangyinshan**	**1.21**	**306**	*e*P	**Pn**	**08 27 14.5**	**-0.3**
	baz=306						
TWT	**Tachien**	**1.21**	**264**	*e*P	**Pn**	**08 27 15.5**	**+0.7**
	baz=261						
TWT				*e*S	**Sn**	**08 27 30.9**	**+0.3**
	baz=261						
HATJ	**Hateruma jima**	**1.24**	**105**	P	**Pn**	**08 27 15.5**	**+0.2**
HATJ				S	**Sn**	**08 27 32.1**	**+0.8**
NSTT	**Nanjuang**	**1.38**	**280**	*e*P	**Pn**	**08 27 17.3**	**+0.2**
	baz=279						
EHY	**Hungye**	**1.39**	**231**	*e*P	**Pn**	**08 27 17.6**	**+0.5**
	baz=228						
JKRS	**Kuro-shima**	**1.39**	**96**	P	**Pn**	**08 27 17.4**	**+0.2**
JKRS				S	**Sn**	**08 27 34.8**	**0.0**
TWF1	**Yuli**	**1.50**	**227**	*e*P	**Pn**	**08 27 17.9**	**-0.8**
	baz=224						
JIJ	**Ishigaki jima**	**1.50**	**91**	P	**Pn**	**08 27 18.4**	**-0.3**
JIJ				S	**Sn**	**08 27 36.1**	**-1.4**
SMLT	**Sun Moon Lake**	**1.54**	**251**	*e*P	**Pn**	**08 27 19.5**	**+0.3**
	baz=249						
SMLT				*e*S	**Sn**	**08 27 38.1**	**-0.2**
	baz=249						
TYC	**Yuchr**	**1.57**	**252**	*e*P	**Pn**	**08 27 20.0**	**+0.3**
	baz=250						
TYC				*e*S	**Sn**	**08 27 38.2**	**-0.9**
	baz=250						

*BGS **08** 09:12:54.7±1.7, 18°.50S×72°.83W, h123km, mb5.6*
*DJA **08** 09:12:55, 16°.19S×71°.82W, h10km, mb6.1/9*
*MOS **08** 09:13:04.6±1.0, 15°.80S×71°.84W, h102km, mb6.0/107, MS5.4/11, Error ellipse: s-maj=6.9km s-min=4.6km az=81.4*
*ISCJB **08** 09:13:06.0±0.1, 15°.91S±0°.03×71°.84W±0°.02, h121km, mb5.8/391, Error ellipse: s-maj=3.9km s-min=2.3km az=24.8*
*GUC **08** 09:13:06.1±0.7, 16°.57S×72°.26W, h80km, mb6.0, MS5.7*
*NEIC **08** 09:13:07.5±0.1, 15°.99S×71°.75W, h123km, mb5.8/294, ME6.3, MW6.2, MW6.2, Error ellipse: s-maj=3.6km s-min=2.9km az=46.0 Broadband fault plane solution: P waves. NP1:ϕ_s285.00000°, δ75.00000°, λ-105.00000°. NP2:ϕ_s151.00000°, δ21.00000°, λ-46.00000°. Principal axes: T Plg28.0000°, Azm27.0000°; N Plg0.0000°, Azm0.0000°; P Plg57.0000°, Azm175.0000°; Moment Tensor Solution. s94 Moment tensor: Scale 10^{18} Nm; M_{rr}-0.75; $M_{\theta\theta}$0.49; $M_{\phi\phi}$0.27; $M_{r\theta}$1.53; $M_{\theta\phi}$-1.12; $M_{\phi r}$-0.81; Best double couple: $M_0$2.20000×10^{18} NP1:ϕ_s164.00000°, δ22.00000°, λ-43.00000°. NP2:ϕ_s295.00000°, δ75.00000°, λ-106.00000°. Principal axes: T 2.4100, Plg28.0000°, Azm38.0000°; N -0.6200, Plg15.0000°, Azm299.0000°; P -1.7900, Plg56.0000°, Azm183.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC One person killed and several buildings damaged [V] at Arequipa. Felt [V] at Aplao and Sihuas; [IV] at Chivay, Chuquibamba and Pampacolca. Felt at Ilo. Also felt [IV] at Arica and Putre; [III] at Alcerreca and Tacora; [II] at Alto Hospicio, Camina, Huara, Iquique, Pica and Pozo Almonte, Chile.
*IDC **08** 09:13:07.4±0.4, 16°.02S×71°.77W, h123km±2km, mb5.3/27, mb1 5.4/29, mb1mx5.4/29, mbtmp5.3/29, MS5.3/11, Ms1 5.3/11, ms1mx5.1/23 Error ellipse: s-maj=12.1km s-min=7.9km az=74.0*
*LDG **08** 09:13:08.0±0.4, 15°.70S×71°.41W, h117km, Mb5.8/41, Ms5.2/9, Error ellipse: s-maj=25.8km s-min=11.4km az=52.0*
*GCMT **08** 09:13:10.0±0.1, 16°.26S×72°.00W, h126km, MW6.2, Moment Tensor Solution. s117,c265; s79,c109; Moment tensor: Scale 10^{18}Nm; M_{rr}-1.08±.02; $M_{\theta\theta}$0.37±.02; $M_{\phi\phi}$0.72±.02; $M_{r\theta}$1.51±.02; $M_{\theta\phi}$-1.93±.02; $M_{\phi r}$-0.35±.02; Best double couple: $M_0$2.60000×10^{18} NP1:ϕ_s177.00000°, δ44.00000°, λ-23.00000°. NP2: ϕ_s284.00000°, δ74.00000°, λ-132.00000°. Principal axes: T 2.9100, Plg19.0000°, Azm44.0000°; N -0.6200, Plg40.0000°, Azm297.0000°; P -2.2900, Plg44.0000°, Azm153.0000°; Data Used: II IU CN IC G. Surface waves: sta=115, comp=273, per= 50.*

ISC 08 09:13:07.6±0.1, 15°.99S±0°.03×71°.75W±0°.02, h123km, h123km±1.0km: pP-P, n1539, σ0°77/1271, mb5.8/387, 333C-247D, Southern Peru

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ARE	**Arequipa**	**0.53**	**152**	⇑*iP*		**Pn**	**Pn**	**09 13 23.5**	**-2.6**
ARE				*eS*		**Sn**	**Sn**	**09 13 36.0**	**-4.0**
LPAZ	**La Paz**	**3.49**	**95**	P		**Pn**	**Pn**	**09 14 04.8**	**+4.4**
	774nm,0.3s,baz=281,slow=9.7,SNR=5671								
LPAZ				S			**Sn**	**09 14 44.1**	**+2.9**
	342nm,0.3s,baz=264,slow=9.4,SNR=5.6								
LPAZ				LR		LR		09 15 27.4	
	comp=Z,20μm,18.5s,baz=265,slow=40								
LPAZ	**La Paz**	**3.49**	**95**	P		**Pn**	**Pn**	**09 14 04.8**	**+4.4**
LPAZ				S			**Sn**	**09 14 44.2**	**+2.9**
LPAZ				pmax		pmax			
	comp=Z,774nm,0.3s								
LPAZ				smax					
	comp=N,342nm,0.3s								
LPAZ				MLR		MLR			
	comp=Z,20μm,18.5s								
LPAZ	**La Paz**	**3.49**	**95**	⇑*iPn*		**Pn**	**Pn**	**09 14 04.9**	**+4.5**
LPAZ				*e*Sn		**Sn**	**Sn**	**09 14 43.0**	**+1.7**
MNMC	**Miæe Miæ**	**3.74**	**147**	*e*P		**Pn**	**Pn**	**09 14 01.4**	**-2.4**
MNMC				*e*S		**Sn**	**Sn**	**09 14 43.4**	**-3.8**
PSGC	**Pisagua**	**3.91**	**157**	⇓*e*P		**Pn**	**Pn**	**09 14 01.8**	**-4.2**
PSGC				*e*S		**Sn**	**Sn**	**09 14 43.8**	**-7.5**
HMBC	**Humberston**	**4.62**	**158**	⇓*e*P		**Pn**	**Pn**	**09 14 11.0**	**-4.5**
HMBC				*e*S		**Sn**	**Sn**	**09 15 01.0**	**-7.3**
PB01	**Plate Boundary**	**5.47**	**157**	⇓*e*P		**Pn**	**Pn**	**09 14 22.2**	**-4.7**
PB01				*e*S		**Sn**	**Sn**	**09 15 19.6**	**-9.1**
NNA	**Nana**	**6.34**	**308**	P		**Pn**	**Pn**	**09 14 33.8**	**-5.0**
	comp=Z,273nm,0.3s,baz=138,slow=10,SNR=431								
NNA				S			**Sn**	**09 15 44.9**	**-5.0**
	comp=Z,519nm,0.3s,baz=23,slow=18,SNR=5.0								
NNA				LR		LR		09 16 55.8	
	comp=Z,23μm,19.9s,baz=157,slow=36								
NNA	**Nana**	**6.34**	**308**	*e*Pn		**Pn**	**Pn**	**09 14 32.4**	**-6.4**
NNA				*e*Sn		**Sn**	**Sn**	**09 15 51.5**	**+1.6**
PB04	**Plate Boundary**	**6.60**	**161**	⇓*e*P		**Pn**	**Pn**	**09 14 34.9**	**-7.4**
PB04				*e*S		**Sn**	**Sn**	**09 15 41.7**	**-14**
MECH	**Mejillones**	**7.19**	**170**	*e*P		**Pn**	**Pn**	**09 14 44.8**	**-5.3**
MECH				*i* S		**Sn**	**Sn**	**09 16 00.1**	**-10**
SIV	**San Ignacio**	**10.27**	**91**	P		**Pn**	**Pn**	**09 15 29.9**	**-1.8**
	comp=Z,19nm,0.3s,baz=277,slow=12,SNR=233								
SIV				S			**Sn**	**09 17 25.2**	**+0.2**
	baz=268,slow=16,SNR=2.3								
SIV				PcP		PcP		09 21 26.4	-1.9
	comp=Z,2.8nm,0.3s,baz=245,slow=22,SNR=1.6								
ATAH	**Atahualpa**	**10.94**	**323**	P		**Pn**	**Pn**	**09 15 36.2**	**-4.5**
	comp=Z,8.3nm,0.3s,baz=246,slow=1.6,SNR=31								
LCO	**Las Campanas**	**13.00**	**176**	*e*Pn		**Pn**	**Pn**	**09 16 05.6**	**-2.1**
	comp=Z,385nm,0.8s								
LCO				*e*Sn		**Sn**	**Sn**	**09 18 22.7**	**-8.3**
LCO	**Las Campanas**	**13.00**	**176**	*e*P		**Pn**	**Pn**	**09 16 03.9**	**-3.8**
TLL	**Tololo Astrono**	**14.14**	**177**	P		**Pn**	**Pn**	**09 16 19.2**	**-3.2**
TLL	**Tololo Astrono**	**14.14**	**177**	*e*P		**Pn**	**Pn**	**09 16 19.2**	**-3.2**
TLL				AMb		AMB	AMB	09 16 27.5	
	comp=Z,782nm,1.5s								
CFAA	**Coronel Fontan**	**15.87**	**169**	P		**Pn**	**Pn**	**09 16 42.2**	**-1.9**
	comp=Z,1.1nm,0.3s,baz=345,slow=12,SNR=199								
CFAA	**Coronel Fontan**	**15.87**	**169**	P		**Pn**	**Pn**	**09 16 42.2**	**-1.9**
CPUP	**Villa Florida**	**16.92**	**130**	P		**Pn**	**Pn**	**09 16 54.0**	**-3.1**
	comp=Z,8.2nm,0.3s,baz=290,slow=12,SNR=69								
CPUP	**Villa Florida**	**16.92**	**130**	P		**Pn**	**Pn**	**09 16 54.0**	**-3.0**
CPUP				pmax		pmax			
	comp=Z,8.0nm,0.3s								
PEL	**Peldehue**	**17.11**	**177**	AMb		AMB	AMB	09 16 59.1	
	comp=Z,2μm,1.8s								
PEL				AMS		AMS		09 21 04.8	
	comp=E,42μm,16.9s								
FCH	**Farellones**	**17.32**	**176**	AMb		AMB	AMB	09 17 04.5	
	comp=Z,1μm,1.4s								
OTAV	**Otavalo**	**17.43**	**337**	*e*P		**Pn**	**Pn**	**09 17 03.8**	**+0.5**
	comp=Z,1μm,1.4s								
LMEL	**Las Melosas**	**17.84**	**176**	AMb		AMB	AMB	09 17 11.4	
	comp=Z,2μm,1.5s								
CCHI	**Chillan**	**20.54**	**181**	AMb		AMB	AMB	09 17 38.5	
	comp=Z,1μm,1.5s								
ROSC	**El Rosal**	**20.86**	**353**	P		**P**	**P**	**09 17 40.2**	**+0.2**
	comp=Z,119nm,0.7s,baz=197,slow=2.3,SNR=55								
ROSC	**El Rosal**	**20.86**	**353**	*e*P		**P**	**P**	**09 17 40.1**	**+0.1**
LPA	**La Plata**	**22.55**	**149**	*d iP*		**P**	**P**	**09 17 56.0**	**-1.7**
LPA				*e*PCP		PcP	PcP	09 21 51.0	+4.3
LPA				*e*S		**S**	**S**	**09 22 01.0**	**+5.4**
TRQA	**Tornquist**	**23.61**	**160**	*e*P		**P**	**P**	**09 18 05.3**	**-2.1**
	comp=Z,1μm,1.4s,mb6.0								
PAYG	**Puerto Ayora**	**23.79**	**308**	*e*P		**P**	**P**	**09 18 10.6**	**+1.4**
	comp=Z,241nm,1.1s,mb5.4								
SPB	**Sao Paulo**	**24.07**	**112**	*e*P		**P**	**P**	**09 18 11.3**	**-0.5**
	comp=Z,262nm,0.8s,mb5.6								
SPB				*e*S		**S**	**S**	**09 22 29.6**	**+9.1**
PLCA	**Paso Flores**	**24.68**	**178**	P		**P**	**P**	**09 18 15.5**	**-1.6**
	comp=Z,762nm,1.1s,mb6.0,baz=351,slow=9.8,SNR=156								
PLCA	**Paso Flores**	**24.68**	**178**	*e*P		**P**	**P**	**09 18 14.9**	**-2.1**
PLCA				pmax		pmax			
	comp=Z,2μm,1.4s								
PLCA	**Paso Flores**	**24.68**	**178**	*e*P		**P**	**P**	**09 18 14.8**	**-2.2**
	comp=Z,2μm,1.4s,mb6.4								
SDV	**Santo Domingo**	**24.74**	**3**	*e*P		**P**	**P**	**09 18 17.0**	**-0.8**
	comp=Z,1μm,1.1s,mb6.2								
BCIP	**Isla Barro Col**	**26.24**	**342**	*e*P		**P**	**P**	**09 18 32.3**	**+0.9**
	comp=Z,2μm,1.8s,mb6.1								
PCRV	**Puerto La Cruz**	**26.93**	**16**	P		**P**	**P**	**09 18 37.1**	**-0.4**
	comp=Z,146nm,0.9s,mb5.5,baz=191,slow=4.6,SNR=43								
PCRV				LR		LR		09 31 02.8	
	comp=Z,16μm,21.3s,baz=358,slow=40								
BUAY	**Buenos Aires**	**27.77**	**22**	*e*P		**P**		**09 18 48.0**	**+2.9**
BUAY	**Buenos Aires**	**27.77**	**22**	*e*P		**P**		**09 18 48.0**	**+2.9**
ALNG	**Atlantic LNG**	**27.84**	**22**	*e*P		**P**		**09 18 48.9**	**+3.1**
ALNG	**Atlantic LNG**	**27.84**	**22**	*e*P		**P**		**09 18 48.9**	**+3.1**
TPP	**Pointe-a-Pierr**	**28.05**	**22**	*e*P		**P**		**09 18 49.5**	**+1.9**
TPP	**Pointe-a-Pierr**	**28.05**	**22**	*e*P		**P**		**09 18 49.5**	**+1.9**
TCE	**Chacachacare**	**28.30**	**21**	*e*P		**P**		**09 18 51.0**	**+1.2**
TCE	**Chacachacare**	**28.30**	**21**	*e*P		**P**		**09 18 51.0**	**+1.2**
TBH	**Brigand Hill**	**28.34**	**23**	*e*P		**P**		**09 18 51.7**	**+1.5**
TBH	**Brigand Hill**	**28.34**	**23**	*e*P		**P**		**09 18 51.7**	**+1.5**
TRN	**Trinidad (W)**	**28.38**	**22**	*e*P		**P**		**09 18 50.8**	**+0.3**
TRN	**Trinidad (W)**	**28.38**	**22**	*e*P		**P**		**09 18 50.8**	**+0.4**
TPR	**Prospect**	**29.10**	**23**	*e*P		**P**		**09 18 57.4**	**+0.5**
TPR	**Prospect**	**29.10**	**23**	*e*P		**P**		**09 18 57.4**	**+0.5**
BOT	**Bacolet**	**29.10**	**23**	*e*P		**P**		**09 18 58.0**	**+1.0**
BOT	**Bacolet**	**29.10**	**23**	*e*P		**P**		**09 18 58.0**	**+1.0**
JTS	**JuntasAbangare**	**29.20**	**333**	P		**P**		**09 18 58.6**	**+0.9**
	comp=Z,24nm,1.0s,mb4.8,baz=149,slow=5.0,SNR=14								
JTS	**JuntasAbangare**	**29.20**	**333**	P		**P**		**09 18 58.7**	**+0.9**
JTS				pmax		pmax			
	comp=Z,24nm,1.0s								
GRGR	**Grenville**	**29.67**	**20**	*e*P		**P**		**09 19 00.4**	**-1.5**
	comp=Z,4μm,1.3s,mb6.9								
GRGR				*e*S		**S**		**09 23 55.6**	**+6.8**
GRW	**Mount Saint Ca**	**29.69**	**20**	*e*P		**P**		**09 19 01.7**	**-0.4**
GRW	**Mount Saint Ca**	**29.69**	**20**	*e*P		**P**		**09 19 01.7**	**-0.4**
GRHS	**Sauteurs**	**29.76**	**20**	*e*P		**P**		**09 19 03.0**	**+0.3**
GRHS	**Sauteurs**	**29.76**	**20**	*e*P		**P**		**09 19 03.0**	**+0.3**
GRIC	**Isle de Caille**	**29.84**	**20**	*e*P		**P**		**09 19 03.7**	**+0.3**
GRSS	**Sisters**	**29.84**	**20**	*e*P		**P**		**09 19 04.2**	**+0.8**
GRSS	**Sisters**	**29.84**	**20**	*e*P		**P**		**09 19 04.2**	**+0.8**
SVV	**Soufriere Volc**	**30.92**	**20**	*e*P		**P**		**09 19 13.3**	**+0.3**
SVV	**Soufriere Volc**	**30.92**	**20**	*e*P		**P**		**09 19 13.3**	**+0.3**
SSV	**Crater Summit**	**30.94**	**20**	*e*P		**P**		**09 19 13.1**	**0.0**
SSV	**Crater Summit**	**30.94**	**20**	*e*P		**P**		**09 19 13.1**	**0.0**
BBGH	**Gun Hill**	**31.35**	**23**	*e*P		**P**		**09 19 18.5**	**+1.8**
	comp=Z,3μm,1.4s,mb6.8								
SLB	**Belfond**	**31.46**	**20**	*e*P		**P**		**09 19 17.3**	**-0.4**
SLB	**Belfond**	**31.46**	**20**	*e*P		**P**		**09 19 17.3**	**-0.4**
BIM	**Bigot**	**32.09**	**20**	*e*P		**P**		**09 19 21.1**	**-2.1**
FDF	**Fort de France**	**32.27**	**19**	*e*P		**P**		**09 19 22.2**	**-2.6**
FDF				pmax		pmax			
	comp=Z,443nm,0.9s,mb6.2								
FDF	**Fort de France**	**32.27**	**19**	*e*P		**P**		**09 19 22.2**	**-2.5**
	comp=Z,443nm,0.9s,mb6.2								
FDF	**Fort de France**	**32.27**	**19**	*e*P		**P**		**09 19 22.2**	**-2.6**
DSHT	**Scott's Head**	**32.65**	**19**	*e*P		**P**		**09 19 26.7**	**-1.4**
DSHT	**Scott's Head**	**32.65**	**19**	*e*P		**P**		**09 19 26.7**	**-1.4**
DFBT	**Forest Bistro**	**32.68**	**19**	*e*P		**P**		**09 19 26.8**	**-1.6**
DFBT	**Forest Bistro**	**32.68**	**19**	*e*P		**P**		**09 19 26.8**	**-1.6**
DSTT	**Stowe**	**32.70**	**19**	*e*P		**P**		**09 19 27.1**	**-1.5**
DSTT	**Stowe**	**32.70**	**19**	*e*P		**P**		**09 19 27.1**	**-1.5**
MDN	**Morne-Daniel**	**32.74**	**19**	*e*P		**P**		**09 19 27.4**	**-1.5**
TBG	**Guadaloupe-3**	**33.17**	**18**	*e*P		**P**		**09 19 30.2**	**-2.4**
HMG	**Houelmont**	**33.28**	**18**	*e*P		**P**		**09 19 31.0**	**-2.6**
PHG	**Guadaloupe-2**	**33.32**	**18**	*e*P		**P**		**09 19 31.6**	**-2.4**
SCG	**Saint Claude**	**33.33**	**18**	*e*P		**P**		**09 19 31.6**	**-2.3**
MGG	**Marie-Galante**	**33.33**	**18**	*e*P		**P**		**09 19 32.0**	**-2.0**
LZG	**Guadaloupe-1**	**33.41**	**18**	*e*P		**P**		**09 19 31.6**	**-3.1**
TGUH	**Tegucigalpa,Un**	**33.56**	**332**	*e*P		**P**		**09 19 36.5**	**+0.5**
	comp=Z,84nm,0.9s,mb5.6								
SFG	**Saint Francois**	**33.68**	**18**	*e*P		**P**		**09 19 34.5**	**-2.5**
SEG	**Port Louis**	**33.73**	**18**	*e*P		**P**		**09 19 35.6**	**-1.8**
DEG	**La Desirade**	**33.78**	**19**	*e*P		**P**		**09 19 34.5**	**-3.5**
PCJ	**Portland Cotta**	**33.94**	**351**	⇓*iP*		**P**		**09 19 39.9**	**+0.6**
ICM	**Isla Caja Muer**	**34.06**	**9**	*e*P		**P**		**09 19 39.3**	**-1.0**
CRPR	**Cabo Rojo, PR**	**34.09**	**8**	*e*P		**P**		**09 19 39.8**	**-0.8**
	comp=Z,342nm,1.4s,mb6.0								
HOJ	**Hope**	**34.13**	**351**	⇑*iP*		**P**		**09 19 41.6**	**+0.6**
HOJ	**Hope**	**34.13**	**351**	⇓*iP*		**P**		**09 19 41.9**	**+1.0**
OBIP	**Obispado Ponce**	**34.19**	**9**	*e*P		**P**		**09 19 39.6**	**-1.9**
	comp=Z,381nm,1.1s,mb6.1								
GWJ	**Greenwich**	**34.20**	**352**	⇑*iP*		**P**		**09 19 41.4**	**-0.1**
MCJ	**Malvern**	**34.20**	**350**	⇓*iP*		**P**		**09 19 42.6**	**+1.1**
CMJ	**Castle Mountai**	**34.21**	**352**	⇓*iP*		**P**		**09 19 41.6**	**0.0**
CMJ	**Castle Mountai**	**34.21**	**352**	⇑*iP*		**P**		**09 19 41.9**	**+0.3**
STH	**Stony Hill**	**34.21**	**351**	⇑*iP*		**P**		**09 19 41.5**	**-0.1**
STH	**Stony Hill**	**34.21**	**351**	*i P*		**P**		**09 19 42.0**	**+0.4**
CDVI	**St. Croix**	**34.22**	**12**	*e*P		**P**		**09 19 40.2**	**-1.5**
	comp=Z,216nm,0.6s,mb6.2								
CELP	**Cerrillos**	**34.23**	**9**	*e*P		**P**		**09 19 40.3**	**-1.4**
LSP	**Las Mesas**	**34.26**	**8**	*e*P		**P**		**09 19 41.0**	**-1.0**
MPR	**Mayaguez**	**34.28**	**8**	*e*P		**P**		**09 19 40.8**	**-1.4**
SJG	**San Juan**	**34.33**	**9**	P		**P**		**09 19 40.8**	**-1.8**
	comp=Z,180nm,0.9s,mb5.9,baz=207,slow=2.8,SNR=24								
SJG				pP		pP		09 20 10.4	+0.8
	comp=Z,154nm,1.0s,baz=175,slow=8.0,SNR=3.3								
SJG				sP		sP		09 20 25.0	+1.4
	comp=Z,254nm,1.1s,baz=197,slow=3.3,SNR=3.3								
SJG	**San Juan**	**34.33**	**9**	P		**P**		**09 19 40.8**	**-1.8**
SJG				pmax		pmax			
	comp=Z,180nm,0.9s								
SJG				pmax		pmax			
	comp=Z,154nm,1.0s								
SJG				pmax		pmax			
	comp=Z,254nm,1.1s								
SJG	**San Juan**	**34.33**	**9**	*e*P		**P**		**09 19 40.5**	**-2.1**
	comp=Z,220nm,1.0s,mb5.9								
HUMP	**Col San Antoni**	**34.41**	**10**	*e*P		**P**		**09 19 41.7**	**-1.6**
	comp=Z,138nm,0.9s,mb5.8								
MTP	**Monte Pirata**	**34.41**	**10**	*e*P		**P**		**09 19 41.2**	**-2.1**
	comp=Z,216nm,0.9s,mb6.0								
AOPR	**Arecibo Observ**	**34.47**	**8**	*e*P		**P**		**09 19 42.3**	**-1.5**
	comp=Z,102nm,0.6s,mb5.8								
MTDJ	**Mount Denham**	**34.47**	**350**	*e*P		**P**		**09 19 44.6**	**+0.8**
	comp=Z,1μm,1.7s,mb6.5								
CBYP	**Canovanas**	**34.53**	**10**	*e*P		**P**		**09 19 42.6**	**-1.8**
	comp=Z,180nm,0.7s,mb6.0								
BBJ	**Bamboo Saint A**	**34.58**	**351**	⇑*iP*		**P**		**09 19 44.9**	**+0.1**
NEJ	**Negril**	**34.63**	**349**	⇓*iP*		**P**		**09 19 46.3**	**+1.0**
SDDR	**Presa de Saban**	**34.75**	**1**	*e*P		**P**		**09 19 45.2**	**-1.0**
	comp=Z,536nm,1.8s,mb6.1								
STVI	**Saint Thomas**	**34.77**	**11**	*e*P		**P**		**09 19 44.0**	**-2.4**
	comp=Z,214nm,1.4s,mb5.8								
ANWB	**Willy Bob**	**34.85**	**17**	*e*P		**P**		**09 19 44.1**	**-3.0**
	comp=Z,830nm,0.7s,mb6.7								
GTBY	**Guantanamo Bay**	**35.84**	**355**	*e*P		**P**		**09 19 55.3**	**-0.3**
	comp=Z,444nm,1.7s,mb6.1								
APG	**El Apazote**	**35.91**	**328**	P		**P**		**09 19 56.8**	**+0.5**
	comp=Z,87nm,0.8s,mb5.8,baz=162,slow=6.5,SNR=60								
APG				pP		pP		09 20 23.5	0.0
	comp=Z,31nm,1.0s,baz=25,slow=23,SNR=1.0								
RPN	**Rapa Nui**	**36.54**	**246**	P		**P**		**09 20 00.3**	**-1.3**
	comp=Z,123nm,1.0s,mb5.8,baz=78,slow=4.8,SNR=4.7								
RPN				LR		LR		09 31 04.4	
	comp=Z,10μm,20.8s,baz=88,slow=30								
RPN	**Rapa Nui**	**36.54**	**246**	P		**P**		**09 20 00.3**	**-1.3**
RPN				LR		LR		09 31 04.4	
GRTK	**Grand Turk**	**37.27**	**1**	*e*P		**P**		**09 20 07.3**	**-0.4**
	comp=Z,1μm,1.5s,mb6.5								
USHA	**Ushuaia**	**38.85**	**177**	P		**P**		**09 20 19.8**	**-0.8**
	comp=Z,271nm,0.9s,mb6.1,baz=350,slow=6.0,SNR=81								
TEIG	**Tepich**	**39.48**	**335**	*e*P		**P**		**09 20 26.0**	**-0.3**
	comp=Z,295nm,1.5s,mb5.9								
CMIG	**Matias Romero**	**40.01**	**324**	P		**P**		**09 20 30.4**	**-0.2**
	comp=Z,54nm,0.8s,mb5.4,baz=136,slow=6.6,SNR=28								
DWPF	**Disney**	**44.83**	**348**	*e*P		**P**		**09 21 09.6**	**+0.1**
	comp=Z,127nm,0.7s,mb5.8								
BBSR	**BB Station**	**48.55**	**8**	*e*P		**P**		**09 21 36.6**	**-1.8**
BRAL	**Brewton**	**48.99**	**343**	*e*P		**P**		**09 21 42.1**	**+0.3**
	comp=Z,686nm,1.4s,mb6.4								
PMSA	**Palmer Station**	**49.02**	**176**	P		**P**		**09 21 40.9**	**-0.7**
	comp=Z,265nm,1.1s,mb6.1,baz=9.9,slow=8.0,SNR=18								
PMSA	**Palmer Station**	**49.02**	**176**	*e*P		**P**		**09 21 41.9**	**+0.3**
	comp=Z,1μm,1.5s,mb6.6								
NHSC	**New Hope**	**49.48**	**351**	*e*P		**P**		**09 21 45.7**	**+0.3**
KVTX	**Kingsville**	**50.15**	**329**	*e*P		**P**		**09 21 51.7**	**+0.9**
	comp=Z,243nm,0.9s,mb6.1								
GOGA	**Godfrey**	**50.38**	**347**	*e*P		**P**		**09 21 51.2**	**-1.1**
JSC	**Jenkinsville**	**50.80**	**350**	*e*P		**P**		**09 21 55.1**	**-0.3**
LRAL	**Lakeview Retre**	**50.88**	**343**	*e*P		**P**		**09 21 54.6**	**-1.4**
	comp=Z,211nm,1.4s,mb6.0								
VBMS	**Vicksburg**	**51.19**	**340**	*e*P		**P**		**09 21 57.5**	**-0.9**
	comp=Z,696nm,1.8s,mb6.4								
HKT	**Hockley**	**51.23**	**333**	*e*P		**P**		**09 21 58.5**	**-0.3**
HKT				pmax		pmax			
	comp=Z,185nm,1.6s,mb5.9								
HKT	**Hockley**	**51.23**	**333**	*e*P		**P**		**09 21 58.5**	**-0.2**
	comp=Z,185nm,1.6s,mb5.9								
CNNC	**Cliffs of the**	**51.27**	**354**	*e*P		**P**		**09 21 59.0**	**0.0**
	comp=Z,1μm,1.4s,mb6.7								
NATX	**Nacogdoches**	**52.31**	**335**	*e*P		**P**		**09 22 07.4**	**+0.7**
	comp=Z,178nm,1.1s,mb6.0								
CPCT	**Cooper Cave**	**52.57**	**347**	*e*P		**P**		**09 22 07.6**	**-1.0**
TKL	**Tuckaleechee C**	**52.61**	**348**	*e*P		**P**		**09 22 07.6**	**-1.3**
SWET	**Sewanee**	**52.67**	**345**	*e*P		**P**		**09 22 07.9**	**-1.4**
OXF	**Oxford**	**52.95**	**342**	*e*P		**P**		**09 22 09.8**	**-1.6**
OXF				*e*		pP		09 22 39.2	-1.1
OXF				pmax		pmax			
	comp=Z,402nm,1.3s,mb6.3								
OXF	**Oxford**	**52.95**	**342**	*e*P		**P**		**09 22 09.8**	**-1.6**
	comp=Z,402nm,1.3s,mb6.3								
OXF				*e*		pP		09 22 39.1	-1.2
VWCC	**Virginia Weste**	**53.51**	**352**	*e*P		**P**		**09 22 15.4**	**0.0**
JCT	**Junction City**	**53.51**	**330**	*e*P		**P**		**09 22 14.6**	**-1.0**
JCT				pmax		pmax			
	comp=Z,107nm,1.0s,mb5.8								
JCT	**Junction City**	**53.51**	**330**	*e*P		**P**		**09 22 14.6**	**-1.0**
	comp=Z,107nm,1.0s,mb5.8								
BLA	**Blacksburg**	**53.54**	**351**	*e*P		**P**		**09 22 15.7**	**+0.1**
BLA				pmax		pmax			
	comp=Z,480nm,1.4s,mb6.3								
BLA	**Blacksburg**	**53.54**	**351**	*e*P		**P**		**09 22 15.7**	**0.0**
	comp=Z,480nm,1.4s,mb6.3								
ELN	**Prospectdale**	**53.60**	**351**	*e*P		**P**		**09 22 16.2**	**+0.1**
JSRW	**J. Sargeant Re**	**53.70**	**354**	*e*P		**P**		**09 22 16.7**	**-0.1**
WVT	**Waverly**	**54.02**	**344**	*e*P		**P**		**09 22 16.3**	**-2.9**
WVT				pmax		pmax			
	comp=Z,173nm,1.4s,mb5.9								
WVT	**Waverly**	**54.02**	**344**	*e*P		**P**		**09 22 16.3**	**-2.8**
	comp=Z,173nm,1.4s,mb5.9								
UALR	**University of**	**54.14**	**339**	*e*P		**P**		**09 22 19.0**	**-1.1**
CBN	**Corbin**	**54.16**	**355**	*e*P		**P**		**09 22 20.3**	**+0.1**
628A	**Black Gap, Mar**	**54.29**	**326**	⇓P		**P**		**09 22 21.0**	**-0.2**
	baz=54,SNR=166								
HBAR	**Harrisburg**	**54.30**	**341**	*e*P		**P**		**09 22 19.9**	**-1.4**
MIAR	**Mount Ida**	**54.37**	**338**	*e*P		**P**		**09 22 20.8**	**-0.9**
MIAR				pmax		pmax			
	comp=Z,270nm,1.1s,mb6.2								
MIAR	**Mount Ida**	**54.37**	**338**	*e*P		**P**		**09 22 20.8**	**-1.0**
	comp=Z,270nm,1.1s,mb6.2								
GNAR	**Gosnell**	**54.48**	**

Y27A	Causey	57.93	329	⇑P	P	09 22 45.8	-1.2
	baz=58,SNR=188						
BINY	Binghamton	58.02	356	eP	P	09 22 47.7	+0.2
	comp=Z,667nm,1.0s,mb6.6						
AMTX	Amarillo	58.03	331	eP	P	09 22 46.4	-1.4
	comp=Z,116nm,1.1s,mb5.8						
223A	Chaparral, Ant	58.16	325	⇓P	P	09 22 47.8	-0.8
	baz=58						
124A	Stringfield Ra	58.16	327	⇓P	P	09 22 48.2	-0.6
	baz=58,SNR=194						
Z25A	Roswell	58.23	328	⇑P	P	09 22 48.1	-1.1
	baz=58,SNR=221						
ERPA	Erie	58.31	353	eP	P	09 22 49.2	-0.3
	comp=Z,294nm,0.9s,mb6.3						
X27A	F and S Farms,	58.51	330	⇓P	P	09 22 50.0	-1.1
	baz=59,SNR=66						
123A	Bell Site, Whi	58.55	326	⇑P	P	09 22 50.5	-0.8
	baz=59						
HDIL	Hopedale	58.57	344	eP	P	09 22 49.3	-2.0
	comp=Z,190nm,0.8s,mb6.2						
222A	Williams Famil	58.60	325	⇑P	P	09 22 51.4	-0.4
	baz=59,SNR=149						
Z24A	Sheeppen Canyo	58.61	327	⇓P	P	09 22 50.9	-0.9
	baz=59,SNR=352						
Y25A	Mesa, Roswell	58.73	328	⇑P	P	09 22 51.4	-1.2
	baz=59,SNR=89						
X26A	CR and CF Fran	58.78	329	⇑P	P	09 22 52.1	-0.9
	baz=59,SNR=119						
W27A	Bowe Ranch, En	58.83	330	⇓P	P	09 22 52.2	-1.1
	baz=59,SNR=61						
320A	Kipp Ranch, An	58.83	323	⇓P	P	09 22 53.1	-0.3
	baz=59,SNR=82						
221A	Mesquite Ranch	58.91	324	⇑P	P	09 22 53.9	0.0
	baz=59,SNR=21						
122A	Conniff Cattle	59.00	325	⇑P	P	09 22 54.4	-0.1
	baz=59,SNR=28						
Z23A	Rita Site, Whi	59.01	326	⇓P	P	09 22 54.1	-0.5
	baz=59,SNR=35						
AAM	Ann Arbor	59.02	350	eP	P	09 22 53.4	-1.1
AAM				pmax	pmax		
	comp=Z,119nm,1.1s,mb5.8						
AAM	Ann Arbor	59.02	350	eP	P	09 22 53.4	-1.1
	comp=Z,118nm,1.1s,mb5.8						
Y24A	Capitan	59.11	327	⇑P	P	09 22 54.1	-1.1
	baz=59,SNR=37						
X25A	Clemmons Ranch	59.19	329	⇑P	P	09 22 54.6	-1.2
	baz=59,SNR=13						
W26A	Owens Ranch, T	59.19	330	⇑P	P	09 22 55.0	-0.8
	baz=59,SNR=53						
220A	Playas Peak, P	59.25	324	⇓P	P	09 22 56.0	-0.3
	baz=59,SNR=153						
319A	Douglas	59.30	323	⇑P	P	09 22 56.4	-0.2
	baz=59,SNR=92						
121A	Cookes Peak, D	59.30	325	⇓P	P	09 22 56.6	0.0
	baz=60,SNR=100						
Z22A	Elephant Butte	59.40	326	⇑P	P	09 22 57.2	-0.1
	baz=60,SNR=123						
Y23A	Lovelace Mesa,	59.44	327	⇑P	P	09 22 56.9	-0.6
	baz=60,SNR=80						
KSU1	Kansas State U	59.53	338	eP	P	09 22 56.7	-1.3
	comp=Z,126nm,0.9s,mb6.0						
X24A	Lazy VL Ranch,	59.61	328	⇑P	P	09 22 57.8	-0.9
	baz=60,SNR=71						
RKT	Rikitea	59.62	252	eP	P	09 22 59.1	0.0
	comp=Z,94nm,1.0s,mb5.8						
RKT				epP	pP	09 23 28.3	-0.3
	comp=Z,145nm,1.0s						
RKT				eS	S	09 30 59.8	-0.3
	comp=Z,9μm,25.0s						
RKT				eLQ		09 38 16.0	
	comp=Z,3μm,29.2s						
RKT				eLR	LR	09 40 46.4	
	comp=Z,8μm,28.5s						
RKT	Rikitea	59.62	252	eP	P	09 22 59.1	0.0
RKT				e*PP	pP	09 23 28.3	-0.3
RKT				eS	S	09 30 59.8	-0.3
RKT				pmax	pmax		
	comp=Z,94nm,1.0s,mb5.8						
RKT	Rikitea	59.62	252	eP	P	09 22 59.1	0.0
	comp=Z,94nm,1.0s,mb5.8						
RKT				epP	pP	09 23 28.3	-0.3
RKT				eS	S	09 30 59.8	-0.3
RKT				eLQ		09 38 16.0	
W25A	X Bar L Ranch,	59.63	329	⇑P	P	09 22 57.9	-0.9
	baz=60,SNR=92						
NCB	Newcomb	59.70	358	eP	P	09 22 59.1	0.0
	comp=Z,351nm,1.3s,mb6.2						
219A	White Tail Can	59.74	323	⇓P	P	09 22 59.3	-0.3
	baz=60,SNR=113						
318A	Bisbee	59.76	322	⇓P	P	09 22 59.4	-0.4
	baz=60,SNR=180						
V26A	Tequesquite Ra	59.77	330	⇓P	P	09 22 59.1	-0.7
	baz=60,SNR=281						
120A	U Bar Ranch, L	59.79	324	⇑P	P	09 22 59.7	-0.2
	baz=60,SNR=55						
Z21A	St. Cloud Mine	59.82	325	⇓P	P	09 23 00.2	0.0
	baz=60,SNR=149						
BNM	Barren Site	59.91	327	eP	P	09 22 59.7	-1.0
	comp=Z,63nm,1.1s,mb5.6						
Y22A	Socorro	59.92	326	⇓P	P	09 23 00.8	0.0
	baz=60,SNR=8.7						
LBNH	Lisbon	59.93	360	eP	P	09 23 01.0	+0.3
LBNH				pmax	pmax		
	comp=Z,380nm,1.1s,mb6.3						
LBNH	Lisbon	59.93	360	eP	P	09 23 00.9	+0.3
	comp=Z,380nm,1.1s,mb6.3						
Y22D	IRIS PASSCAL I	60.00	326	⇑P	P	09 23 01.3	-0.1
	baz=60						
X23A	Hourglass Bar	60.01	327	⇑P	P	09 23 00.9	-0.5
	baz=60,SNR=61						
LENM	Lemitar	60.10	327	eP	P	09 23 02.3	+0.3
	comp=Z,48nm,1.1s,mb5.4						
W24A	Lazy 6 Ranch,	60.10	328	⇓P	P	09 23 01.0	-1.0
	baz=60,SNR=73						
218A	Dragoon	60.18	323	⇑P	P	09 23 02.1	-0.5
	baz=60,SNR=6.4						
Z20A	Nine Sixteen R	60.19	325	⇑P	P	09 23 02.7	0.0
	baz=60,SNR=116						
V25A	Rancho No Teng	60.21	329	⇓P	P	09 23 02.2	-0.6
	baz=60,SNR=141						
U26A	Atchley Ranch,	60.23	330	⇓P	P	09 23 02.3	-0.6
	baz=60,SNR=182						
119A	Ashpeak Ranch,	60.33	324	⇑P	P	09 23 03.2	-0.4
	baz=60,SNR=31						
Y21A	Point of Rocks	60.35	326	⇑P	P	09 23 04.1	+0.4
	baz=60,SNR=245						
LONY	Lake Ozonia	60.37	358	eP	P	09 23 03.4	-0.2
	comp=Z,351nm,1.2s,mb6.3						
LAZ	Ladron	60.37	327	eP	P	09 23 04.0	+0.1
	comp=Z,86nm,1.2s,mb5.7						
X22A	Bernardo	60.38	327	⇑P	P	09 23 04.3	+0.3
	baz=61,SNR=28						
ANMO	Albuquerque	60.44	327	P	P	09 23 04.0	-0.3
	comp=Z,37nm,0.8s,mb5.5,baz=133,slow=7.1,SNR=96						
ANMO				PcP	PcP	09 23 49.6	+1.6
	comp=Z,16nm,0.8s,baz=167,slow=8.5,SNR=4.3						
ANMO	Albuquerque	60.44	327	P	P	09 23 04.1	-0.2
ANMO						09 23 49.6	
ANMO				pmax	pmax		
	comp=Z,37nm,0.8s						
ANMO				pmax	pmax		
	comp=Z,17nm,0.8s						
V24A	Rampart Ranch,	60.44	329	⇓P	P	09 23 03.5	-0.8
	baz=61,SNR=40						
W23A	Werner Place,	60.44	328	⇑P	P	09 23 03.9	-0.4
	baz=61,SNR=68						
CBKS	Cedar Bluff	60.48	335	eP	P	09 23 04.1	-0.5
CBKS				pmax	pmax		
	comp=Z,254nm,1.2s,mb6.1						
CBKS	Cedar Bluff	60.48	335	eP	P	09 23 04.1	-0.4
	comp=Z,254nm,1.2s,mb6.1						
217A	Green Valley	60.49	322	⇑P	P	09 23 04.3	-0.4
	baz=61,SNR=89						
U25A	Circle Dot Ran	60.55	330	⇑P	P	09 23 04.5	-0.6
	baz=61,SNR=153						
118A	Homack Ranch,	60.62	323	⇓P	P	09 23 05.2	-0.4
	baz=61,SNR=75						
Y20A	Horse Springs,	60.66	325	⇑P	P	09 23 05.9	0.0
	baz=61,SNR=79						
Z19A	T-Link Ranch,	60.70	324	⇓P	P	09 23 06.0	-0.1
	baz=61,SNR=16						
W22A	Albuquerque	60.74	327	⇓P	P	09 23 06.4	0.0
	baz=61,SNR=25						
X21A	Alamocita Cree	60.75	326	⇑P	P	09 23 06.7	+0.3
	baz=61,SNR=94						
TUC	Tucson	60.85	322	eP	P	09 23 06.2	-1.0
TUC				pmax	pmax		
	comp=Z,65nm,1.3s,mb5.5						
TUC	Tucson	60.85	322	eP	P	09 23 06.2	-1.0
	comp=Z,65nm,1.3s,mb5.5						
V23A	Ortiz Mt. (NFS	60.91	328	⇑P	P	09 23 07.5	0.0
	baz=61,SNR=78						
SCIA	State Center	60.92	342	eP	P	09 23 06.2	-1.3
	comp=Z,105nm,0.8s,mb5.9						
Z18A	Geronimo	60.98	323	⇓P	P	09 23 07.6	-0.4
	baz=61,SNR=9.6						
PKME	Peaks-Kenny Pk	61.00	2	eP	P	09 23 08.1	+0.2
	comp=Z,367nm,1.0s,mb6.4						
117A	Oracle	61.02	323	⇓P	P	09 23 08.0	-0.3
	baz=61,SNR=74						
JFWS	Jewell Farm	61.03	345	eP	P	09 23 06.7	-1.4
JFWS				pmax	pmax		
	comp=Z,53nm,0.6s,mb5.8						
JFWS	Jewell Farm	61.03	345	eP	P	09 23 06.7	-1.4
	comp=Z,53nm,0.6s,mb5.8						
216A	Three Points,	61.03	322	⇓P	P	09 23 08.0	-0.4
	baz=61,SNR=29						
T25A	Trinidad	61.15	331	⇑P	P	09 23 09.2	+0.1
	baz=61,SNR=102						
Y19A	Nutrioso	61.18	325	⇓P	P	09 23 09.8	+0.4
	baz=61,SNR=198						
W21A	San Fidel	61.19	327	⇑P	P	09 23 09.5	+0.1
	baz=61,SNR=13						
X20A	Quemado	61.20	326	⇑P	P	09 23 09.6	+0.1
	baz=61,SNR=76						
U23A	El Rito	61.37	329	⇓P	P	09 23 10.7	+0.1
	baz=62,SNR=122						
Z17A	San Carlos Hig	61.38	323	⇓P	P	09 23 10.3	-0.5
	baz=62,SNR=28						
V22A	San Miguel Ran	61.41	328	⇑P	P	09 23 11.1	+0.2
	baz=62,SNR=198						
Y18A	Canyon Day Jun	61.49	324	⇑P	P	09 23 11.3	-0.1
	baz=62,SNR=47						
X19A	St. Johns	61.55	325	⇓P	P	09 23 12.0	+0.1
	baz=62,SNR=81						
116A	Eloy	61.58	322	⇑P	P	09 23 11.9	-0.2
	baz=62,SNR=36						
S25A	Robets Cordova	61.58	331	⇓P	P	09 23 11.8	-0.2
	baz=62,SNR=69						
W20A	Ramah	61.65	326	⇓P	P	09 23 12.7	+0.2
	baz=62,SNR=78						
V21A	Milan	61.71	327	⇑P	P	09 23 13.0	+0.1
	baz=62,SNR=8.4						
U22A	Laves	61.74	328	⇑P	P	09 23 13.5	+0.4
	baz=62,SNR=52						
214A	Organ Pipe Nat	61.82	321	⇓P	P	09 23 13.4	-0.3
	baz=62,SNR=71						
T23A	Casias Ranch,	61.85	329	⇑P	P	09 23 13.9	0.0
	baz=62,SNR=71						
Y17A	Roosevelt	61.89	323	⇓P	P	09 23 14.1	-0.1
	baz=62,SNR=51						
S24A	Houchin Ranch,	61.93	330	⇑P	P	09 23 14.6	+0.3
	baz=62,SNR=150						
Z16A	Peralta Trail,	61.97	323	⇓P	P	09 23 14.6	-0.1
	baz=62,SNR=45						
115A	Sonoran Desert	61.99	322	⇑P	P	09 23 14.8	0.0
	baz=62,SNR=24						
X18A	Snowflake	61.99	325	⇓P	P	09 23 15.0	+0.2
	baz=62,SNR=111						
W19A	Sanders	62.11	325	⇓P	P	09 23 15.6	0.0
	baz=62,SNR=8.3						
V20A	Brimhall	62.14	327	⇑P	P	09 23 15.6	-0.1
	baz=62,SNR=31						
SDCO	Great Sand Dun	62.15	330	eP	P	09 23 15.9	+0.1
	comp=Z,205nm,1.1s,mb6.1						
U21A	Nageezi	62.19	328	⇑P	P	09 23 16.1	0.0
	baz=62,SNR=134						
T22A	Edith	62.26	329	⇑P	P	09 23 16.7	+0.1
	baz=62,SNR=103						
W18A	Petrified Fore	62.31	325	⇑P	P	09 23 16.9	0.0
	baz=62,SNR=51						
X17A	Fort Lakes	62.33	324	⇑P	P	09 23 17.6	+0.6
	baz=62,SNR=277						
R24A	Sanders Place,	62.35	331	⇓P	P	09 23 17.2	0.0
	baz=63,SNR=35						
Z15A	Gila River Ind	62.36	322	⇓P	P	09 23 17.3	0.0
	baz=62,SNR=32						
S23A	Nye Farm, Mont	62.36	330	⇓P	P	09 23 17.5	+0.3
	baz=63,SNR=11						
V19A	Window Rock	62.38	326	⇓P	P	09 23 17.3	0.0
	baz=63,SNR=20						
Y16A	Circle Bar Ran	62.38	323	⇑P	P	09 23 17.7	+0.3
	baz=62,SNR=100						
114A	Black Gap (USA	62.41	321	⇑P	P	09 23 17.6	-0.1
	baz=63,SNR=102						
Q25A	Bedland, Calha	62.51	332	⇑P	P	09 23 17.6	-0.6
	baz=63,SNR=49						
T21A	Navajo Lake	62.56	328	⇑P	P	09 23 18.5	-0.1
	baz=63,SNR=34						
U20A	Newcomb	62.60	327	⇑P	P	09 23 18.6	-0.3
	baz=63,SNR=41						
X16A	Lo Mia Camp, P	62.75	324	⇓P	P	09 23 20.1	+0.2
	baz=63,SNR=233						
S22A	4UR Ranch, Cre	62.80	329	⇓P	P	09 23 20.4	+0.2
	baz=63,SNR=81						
W17A	Winslow	62.82	325	⇓P	P	09 23 20.3	0.0
	baz=63,SNR=12						
V18A	Ganado	62.86	326	⇓P	P	09 23 20.2	-0.4
	baz=63,SNR=38						
Z14A	Wintersburg	62.88	322	⇑P	P	09 23 20.5	-0.3
	baz=63,SNR=33						
U19A	Dine' College,	62.90	326	⇑P	P	09 23 20.1	-0.7
	baz=63,SNR=44						
Y15A	Casa Rosa Ranc	62.93	323	⇑P	P	09 23 21.1	0.0
	baz=63,SNR=119						
P25A	Willow Gulch B	62.96	332	⇑P	P	09 23 21.2	+0.1
	baz=63,SNR=72						
113A	Mohawk Valley,	62.96	321	⇓P	P	09 23 20.9	-0.4
	baz=63,SNR=69						
Q24A	Divide	62.96	331	⇑P	P	09 23 21.1	0.0
	baz=63,SNR=41						
R22A	Saguache, Gunn	63.14	330	⇑P	P	09 23 22.6	+0.2
	baz=63,SNR=35						
Z13A	Yuma Proving G	63.19	321	⇑P	P	09 23 22.9	0.0
	baz=63,SNR=53						
T19A	Beclabito	63.21	327	⇑P	P	09 23 22.4	-0.4
	baz=63,SNR=82						
S21A	Coal Bank Pass	63.21	328	⇑P	P	09 23 23.0	+0.1
	baz=63,SNR=63						
OGNE	Ogallala	63.22	335	eP	P	09 23 22.5	-0.4
	comp=Z,298nm,1.3s,mb6.1						
MVCO	Mesa Verde	63.23	328	⇑P	P	09 23 22.7	-0.3
	baz=63,SNR=99						
MVCO	Mesa Verde	63.23	328	eP	P	09 23 22.4	-0.5
	comp=Z,166nm,1.2s,mb5.8						
Q23A	Hartsel	63.23	331	⇓P	P	09 23 22.7	-0.2
	baz=63						
X15A	Humboldt	63.26	323	⇑P	P	09 23 23.3	+0.1
	baz=63,SNR=89						
V17A	Tonalea, Kykot	63.26	325	⇓P	P	09 23 23.4	+0.2
	baz=63						
W16A	Flagstaff	63.29	324	⇓P	P	09 23 23.9	+0.4
	baz=64,SNR=113						
P24A	Kohler Place,	63.29	332	⇓P	P	09 23 23.4	+0.1
	baz=64,SNR=16						
112A	Yuma	63.30	320	⇓P	P	09 23 23.5	-0.1
	baz=63,SNR=6.5						
Y14A	Wickenburg	63.32	322	⇓P	P	09 23 23.6	0.0
	baz=64,SNR=77						
U18A	Rough Rock, Ch	63.35	326	⇓P	P	09 23 23.8	0.0
	baz=64,SNR=73						
WUAZ	Wupatki	63.51	324	⇓P	P	09 23 25.2	+0.4
	baz=64,SNR=202						
WUAZ	Wupatki	63.51	324	eP	P	09 23 25.2	+0.4
	comp=Z,254nm,1.1s,mb6.0						
P23A	Jefferson	63.61	331	⇑P	P	09 23 25.8	+0.4
	baz=64,SNR=44						
X14A	Yava	63.62	323	⇓P	P	09 23 25.8	+0.1
	baz=64,SNR=60						
S20A	Disappointment	63.63	328	⇑P	P	09 23 25.9	+0.3
	baz=64,SNR=222						
ECSD	EROS Data Cent	63.64	340	eP	P	09 23 24.5	-1.0
	comp=Z,410nm,1.3s,mb6.1						
R21A	Cimarron	63.64	329	⇓P	P	09 23 25.7	+0.1
	baz=64,SNR=51						
Q22A	Crested Butte,	63.71	330	⇑P	P	09 23 26.4	+0.3
	baz=64,SNR=52						
W15A	Williams	63.77	324	⇑P	P	09 23 26.8	+0.2
	baz=64,SNR=26						
GLA	Glamis	63.80	320	⇑P	P	09 23 26.6	-0.2
	baz=64,SNR=7.0						
GLA	Glamis	63.80	320	eP	P	09 23 27.5	+0.6
GLA				pmax	pmax		
	comp=Z,73nm,1.3s,mb5.3						
GLA	Glamis	63.80	320	eP	P	09 23 27.5	+0.6
	comp=Z,73nm,1.3s,mb5.3						
ISCO	Idaho Springs	63.85	331	eP	P	09 23 27.0	0.0
ISCO				pmax	pmax		
	comp=Z,137nm,1.3s,mb5.6						
ISCO	Idaho Springs	63.85	331	eP	P	09 23 26.9	0.0
	comp=Z,137nm,1.3s,mb5.6						
T18A	Mexican Hat	63.89	327	⇑P	P	09 23 26.9	-0.4
	baz=64,SNR=110						
U17A	Shonto	63.91	326	⇑P	P	09 23 27.7	+0.2
	baz=64,SNR=27						
R20A	Redvale	63.91	328	⇓P	P	09 23 27.9	+0.4
	baz=64,SNR=180						
S19A	Harvey Farm, M	63.96	328	⇓P	P	09 23 27.6	-0.2
	baz=64,SNR=121						
PV01	Paradox Valley	63.97	328	eP	P	09 23 28.1	+0.3
	comp=Z,208nm,0.8s,mb6.0						
SMCO	Snowmass	63.99	330	eP	P	09 23 28.4	+0.5
	comp=Z,65nm,0.8s,mb5.5						
V15A	Kaibab Nationa	64.17	324	⇓P	P	09 23 29.7	+0.4
	baz=64,SNR=81						
PDMCI	Parker Dam,Lak	64.24	322	⇑P	P	09 23 29.9	+0.2
	baz=64,SNR=14						
W14A	Seligman	64.26	323	⇑P	P	09 23 30.0	+0.2
	baz=64,SNR=89						
T17A	Navajo Res., N	64.28	326	⇓P	P	09 23 30.3	+0.4
	baz=64,SNR=112						
SWSC	Sam W. Stewart	64.33	320	⇑P	P	09 23 30.7	+0.4
	baz=64,SNR=18						
DVTC	Desert V Tower	64.33	319	⇓P	P	09 23 30.7	+0.4
	baz=64,SNR=24						
PV04	Paradox Valley	64.34	328	eP	P	09 23 30.1	-0.1
S18A	Hurst Farm, Bl	64.37	327	⇑P	P	09 23 30.5	+0.1
	baz=64,SNR=200						
R19A	Curley Farm, L	64.44	328	⇑P	P	09 23 30.6	-0.3
	baz=65,SNR=90						
Q20A	Ridgley Place,	64.46	329	⇓P	P	09 23 30.7	-0.4
	baz=65,SNR=38						
O22A	Kremmling	64.57	331	⇑P	P	09 23 31.5	-0.2
	baz=65,SNR=90						
V14A	Boquillas Ranc	64.57	323	⇓P	P	09 23 32.2	+0.4
	baz=65,SNR=151						
BC3	Big Chuckawall	64.60	320	⇓P	P	09 23 32.0	0.0
	baz=65,SNR=59						
W13A	Hualapai Mount	64.65	323	⇑P	P	09 23 32.9	+0.6
	baz=65,SNR=57						
T16A	Glen Canyon Da	64.65	325	⇑P	P	09 23 32.5	+0.2
	baz=65,SNR=24						
U15A	North Rim	64.68	325	⇓P	P	09 23 33.1	+0.6
	baz=65,SNR=217						
MONP	Monument Peak	64.69	319	⇑P	P	09 23 32.9	+0.3
	baz=65,SNR=32						
BAR	Barrett	64.71	319	eP	P	09 23 32.9	+0.2
	comp=Z,102nm,1.0s,mb5.6						
S17A	Black Ridge (B	64.75	326	⇑P	P	09 23 33.1	+0.2
	baz=65,SNR=80						
IRM	Iron Mountain	64.75	321	⇑P	P	09 23 33.0	-0.1
	baz=65,SNR=85						
R18A	Canyonlands Na	64.84	328	⇑P	P	09 23 33.2	-0.3
	baz=65,SNR=97						
NEE2	Needles Airpor	64.85	322	⇓P	P	09 23 33.3	-0.3
	baz=65						
P20A	De Beque	64.93	329	⇓P	P	09 23 34.0	-0.1
	baz=65,SNR=46						
Q19A	Hogan Spring (	64.95	328	⇑P	P	09 23 34.1	-0.1
	baz=65,SNR=114						
PHWY	Pilot Hill	64.98	333	eP	P	09 23 34.3	0.0
	comp=Z,118nm,1.4s,mb5.5						
N22A	Wattenberg Ran	65.03	332	⇓P	P	09 23 35.1	+0.4
	baz=65,SNR=96						
O21A	Pagoda	65.04	330	⇓P	P	09 23 35.5	+0.7
	baz=65,SNR=20						
109C	Camp Elliot, M	65.12	319	⇓P	P	09 23 35.5	+0.1
	baz=65,SNR=12						
T15A	Red Dirt Ranch	65.16	325	⇑P	P	09 23 36.2	+0.6
	baz=65,SNR=88						
BELC	Belle Mtn. Jos	65.16	320	⇓P	P	09 23 36.1	+0.4
	baz=65,SNR=36						
U14A	Mt Trumbull	65.17	324	⇓P	P	09 23 36.2	+0.6
	baz=65,SNR=232						
PFO	Pinyon Flat Ob	65.19	320	⇓P	P	09 23 36.2	+0.4
	baz=65,SNR=40						
PFO	Pinyon Flat Ob	65.19	320	i P	P	09 23 37.4	+1.6
PFO	Pinyon Flat Ob	65.19	320	eP	P	09 23 37.1	+1.3
	comp=Z,75nm,1.2s,mb5.4						
V13A	Grand Canyon W	65.23	323	⇓P	P	09 23 36.4	+0.3
	baz=65,SNR=110						
S16A	Weppner Ranch,	65.24	326	⇑P	P	09 23 36.1	+0.1
	baz=65,SNR=211						
R17A	Hanksville Air	65.28	327	⇓P	P	09 23 36.2	-0.1
	baz=66,SNR=262						
P19A	Cripple Cowboy	65.32	329	⇑P	P	09 23 36.6	0.0
	baz=66,SNR=152						
O20A	White River Ci	65.35	330	⇑P	P	09 23 36.9	+0.1
	baz=66,SNR=57						
LDFC	Landfair	65.36	322	eP	P	09 23 38.9	+2.0
	comp=Z,221nm,1.4s,mb5.8						
W12A	Cal Nev Ari	65.37	322	⇓P	P	09 23 36.9	0.0
	baz=66,SNR=59						
GMRC	Granite Mounta	65.48	321	⇑P	P	09 23 38.0	+0.3
	baz=66,SNR=85						
N21A	Black Mountain	65.49	331	⇓P	P	09 23 38.3	+0.6
	baz=66,SNR=63						
Q18A	Rafter H Ranch	65.50	328	⇑P	P	09 23 37.8	+0.1
	baz=66,SNR=65						
T14A	Hurricane	65.58	325	⇓P	P	09 23 38.9	+0.6
	baz=66,SNR=31						
R16A	Teasdale	65.59	326	⇑P	P	09 23 38.5	+0.2
	baz=66,SNR=106						
U13A	Pakoon Wash	65.62	323	⇑P	P	09 23 38.9	+0.4
	baz=66,SNR=118						
S15A	Panguitch	65.62	325	⇓P	P	09 23 39.1	+0.5
	baz=66,SNR=26						
MURC	Murrieta	65.64	319	⇑P	P	09 23 39.2	+0.4
	baz=66,SNR=16						
V12A	Nelson	65.65	322	⇓P	P	09 23 39.0	+0.3
	baz=66,SNR=99						
SRU	San Rafael	65.70	328	⇓P	P	09 23 39.0	0.0
	baz=66,SNR=107						
SRU	San Rafael	65.70	328	eP	P	09 23 39.1	0.0
SRU				pmax	pmax		
	comp=Z,81nm,0.9s,mb5.5						
SRU	San Rafael	65.70	328	eP	P	09 23 39.1	0.0
	comp=Z,80nm,0.9s,mb5.5						
Q16A	Castle Valley	65.90	327

baz=66,SNR=5.9
ARUT Antelope Range 66.29 325 *e*P **P 09 23 43.7 +0.8**
ARUT pmax pmax
comp=Z,224nm,1.1s,mb5.9
ARUT Antelope Range 66.29 325 *e*P **P 09 23 43.7 +0.9**
comp=Z,224nm,1.1s,mb5.9
O18A Roosevelt 66.31 329 ⇓P **P 09 23 43.2 +0.3**
baz=66,SNR=50
VNA1 Neumayer--Stat 66.35 161 *e*P **P 09 23 42.0 -0.7**
VNA1 *e* 09 24 21.5
BFSC Mount Baldy Ra 66.35 319 ⇓P **P 09 23 43.6 +0.3**
baz=66,SNR=24
RRX Edison Barstow 66.37 320 ⇑P **P 09 23 43.6 +0.2**
baz=66
L21A Rawlins 66.37 332 ⇓P **P 09 23 43.0 -0.2**
baz=67,SNR=58
M20A Sweetwater, Wa 66.38 331 ⇓P **P 09 23 43.3 0.0**
baz=67,SNR=30
S13A Holt Ranch, En 66.38 324 ⇑P **P 09 23 44.4 +1.0**
baz=66,SNR=254
N19A John Jarvie Ra 66.39 330 ⇑P **P 09 23 43.1 -0.3**
baz=67,SNR=79
FMP Fort Macarthur 66.41 319 ⇑P **P 09 23 43.8 +0.1**
baz=66
R14A James Farms, M 66.43 326 ⇓P **P 09 23 44.5 +0.7**
baz=67,SNR=23
U11A Corn Creek 66.44 323 ⇑P **P 09 23 44.6 +0.8**
baz=67
GSC Goldstone 66.53 321 ⇑P **P 09 23 44.7 +0.3**
baz=67,SNR=61
GSC Goldstone 66.53 321 *e*P **P 09 23 45.1 +0.7**
GSC pmax pmax
comp=Z,163nm,1.4s,mb5.7
GSC Goldstone 66.53 321 *e*P **P 09 23 45.1 +0.7**
comp=Z,162nm,1.4s,mb5.7
MWC Mount Wilson 66.59 319 *e*P **P 09 23 45.4 +0.6**
MWC pmax pmax
comp=Z,106nm,1.2s,mb5.5
MWC Mount Wilson 66.59 319 *e*P **P 09 23 45.4 +0.5**
comp=Z,106nm,1.2s,mb5.5
Q15A Fillmore 66.59 326 ⇓P **P 09 23 45.0 +0.3**
baz=67,SNR=70
SHOC Shoshone 66.61 322 ⇓P **P 09 23 45.1 +0.2**
baz=67,SNR=59
O17A Robinson Place 66.63 328 ⇓P **P 09 23 45.3 +0.4**
baz=67,SNR=122
PASC Pasadena Art C 66.64 319 *e*P **P 09 23 46.6 +1.5**
comp=Z,654nm,1.5s,mb6.2
P16A Fountain Green 66.66 327 ⇓P **P 09 23 45.8 +0.6**
baz=67,SNR=32
RSSD Black Hills 66.69 335 *e*P **P 09 23 45.5 +0.3**
RSSD pmax pmax
comp=Z,112nm,1.4s,mb5.5
RSSD Black Hills 66.69 335 *e*P **P 09 23 45.5 +0.2**
comp=Z,112nm,1.4s,mb5.5
N18A Larsen Ranch, 66.69 330 ⇓P **P 09 23 45.3 0.0**
baz=67,SNR=86
DECC Green Verdugo 66.78 319 ⇓P **P 09 23 46.1 +0.1**
baz=67,SNR=6.8
M19A Rock Springs 66.85 330 ⇓P **P 09 23 45.9 -0.4**
baz=67,SNR=18
L20A Wamsutter 66.85 331 ⇑P **P 09 23 46.2 -0.1**
baz=67,SNR=47
R13A O'Grain Ranch, 66.87 325 ⇓P **P 09 23 47.5 +1.0**
baz=67,SNR=150
SNCC San Nicolas Is 66.90 318 ⇑P **P 09 23 46.5 -0.3**
baz=67
TAOE Nuku Hiva Isla 66.94 267 *e*LR LR 09 44 06.6
comp=Z,6μm,28.7s
MPU Maple Canyon 66.95 328 *e*P **P 09 23 47.2 +0.2**
comp=Z,216nm,1.4s,mb5.8
S12A Delamar Landin 66.96 324 ⇑P **P 09 23 47.8 +0.7**
baz=67,SNR=38
P15A Leamington 66.96 327 ⇓P **P 09 23 47.3 +0.3**
baz=67,SNR=29
EDW2 Edwards Air Fo 66.98 320 ⇑P **P 09 23 47.1 -0.2**
baz=67,SNR=42
U10A Ash Meadows, A 67.00 322 ⇑P **P 09 23 47.9 +0.5**
baz=67,SNR=67
DAU Daniels Canyon 67.05 328 *e*P **P 09 23 48.3 +0.7**
DAU pmax pmax
comp=Z,267nm,1.5s,mb5.8
DAU Daniels Canyon 67.05 328 *e*P **P 09 23 48.3 +0.7**
comp=Z,267nm,1.5s,mb5.8
Q14A Sevier Lake (B 67.07 326 ⇓P **P 09 23 48.6 +0.9**
baz=67,SNR=216
NLU North Lily Min 67.13 327 *e*P **P 09 23 48.7 +0.5**
comp=Z,131nm,1.3s,mb5.6
BLG Laguna Peak 67.15 319 ⇓P **P 09 23 48.8 +0.4**
baz=67
LRMC Laurel Mountai 67.18 320 ⇑P **P 09 23 48.7 +0.1**
baz=67,SNR=55
M18A Lyman 67.23 330 ⇓P **P 09 23 48.2 -0.5**
baz=67,SNR=30
N17A Moffit Pass 67.24 329 ⇓P **P 09 23 49.2 +0.4**
baz=67,SNR=90
OSI Osito Adit 67.26 319 ⇓P **P 09 23 48.7 -0.4**
baz=67
JLU Jordanelle 67.29 328 *e*P **P 09 23 49.3 +0.2**
comp=Z,122nm,1.0s,mb5.7
R12A Pony Springs, 67.33 325 ⇓P **P 09 23 50.3 +0.9**
baz=68,SNR=334
FURC Furnace Creek, 67.34 322 ⇑P **P 09 23 50.1 +0.5**
baz=68,SNR=156
K20A Yellowstone Ra 67.36 332 ⇓P **P 09 23 49.0 -0.5**
baz=68,SNR=77
P14A Drum Mountains 67.39 326 ⇓P **P 09 23 50.6 +0.9**
baz=68,SNR=199
L19A Farson 67.40 331 ⇓P **P 09 23 49.9 +0.1**
baz=68,SNR=87
BSC Santa Cruz Isl 67.44 318 ⇑P **P 09 23 50.0 -0.2**
baz=68
Q13A Wheeler Ranch, 67.45 325 ⇓P **P 09 23 50.6 +0.5**
baz=68,SNR=144
MPMC Manual Prospec 67.45 321 ⇑P **P 09 23 50.2 0.0**
baz=68,SNR=70
S11A Rachel 67.50 323 ⇑P **P 09 23 51.2 +0.8**
baz=68,SNR=70
N16A Rees Ranch, Co 67.50 328 ⇑P **P 09 23 50.8 +0.4**
baz=68,SNR=55
AGMN Agassiz Nation 67.51 343 *e*P **P 09 23 49.6 -0.8**
comp=Z,131nm,0.7s,mb5.9
CTU Camp Tracy 67.51 328 *e*P **P 09 23 50.9 +0.3**
comp=Z,42nm,0.9s,mb5.3
M17A Scullys Gap (B 67.56 329 ⇓P **P 09 23 50.3 -0.4**
baz=68,SNR=29
O15A The Old Anders 67.58 327 ⇓P **P 09 23 51.5 +0.6**
baz=68,SNR=59
L18A Fontenelle, Gr 67.59 330 ⇓P **P 09 23 50.9 -0.1**
baz=68,SNR=97
HOR Horta 67.61 35 *e*P **P 09 23 51.2 0.0**
PCED Cedros 67.64 35 *e*P **P 09 23 52.2 +0.8**
comp=Z,87nm,0.7s,mb5.7
PCAN Candelaria 67.65 36 *e*P **P 09 23 51.8 +0.4**
comp=Z,1μm,1.5s,mb6.5
ARVC Arvin 67.66 320 ⇓P **P 09 23 51.9 +0.3**
baz=68,SNR=7.5
NOQ North Oquirrh 67.67 328 *e*P **P 09 23 51.6 +0.1**
comp=Z,54nm,1.0s,mb5.3
DUG Dugway 67.69 327 ⇑P **P 09 23 52.2 +0.5**
baz=68,SNR=215
DUG Dugway 67.69 327 *e*P **P 09 23 52.2 +0.5**
DUG pmax pmax
comp=Z,214nm,1.2s,mb5.8
DUG Dugway 67.69 327 *e*P **P 09 23 52.2 +0.6**
comp=Z,214nm,1.2s,mb5.8
K19A Absolon Red Bu 67.73 331 ⇓P **P 09 23 51.2 -0.6**
baz=68,SNR=83
ISA Isabella 67.79 320 ⇓P **P 09 23 52.8 +0.4**
baz=68,SNR=73
ISA Isabella 67.79 320 *e*P **P 09 23 52.6 +0.2**
ISA pmax pmax
comp=Z,85nm,1.0s,mb5.5
ISA Isabella 67.79 320 *e*P **P 09 23 52.6 +0.2**
comp=Z,85nm,1.0s,mb5.5
P13A Bates Ranch, G 67.80 326 ⇑P **P 09 23 53.0 +0.7**
baz=68,SNR=132
PID Ribeirinha 67.84 36 *e*P **P 09 23 51.6 -1.0**
CHIE El Hierro 67.85 51 P **P 09 23 53.1 +0.2**
comp=Z,42nm,0.7s,mb5.4
R11A Troy Canyon, C 67.89 324 ⇑P **P 09 23 53.6 +0.6**
baz=68,SNR=162
Q12A Willow Creek R 67.95 325 ⇑P **P 09 23 53.8 +0.5**
baz=68,SNR=85
ROSA Rosais 67.96 36 *e*P **P 09 23 52.4 -1.0**
PMAN Manadas 67.99 36 *e*P **P 09 23 54.0 +0.5**
comp=Z,528nm,1.6s,mb6.1
GRAC Grapevine Rang 68.00 322 ⇑P **P 09 23 54.2 +0.5**
baz=68,SNR=50
BW06 Boulder Array 68.01 331 ⇓P **P 09 23 53.1 -0.5**
baz=68,SNR=68
BW06 Boulder Array 68.01 331 *e*P **P 09 23 52.7 -0.9**
comp=Z,15nm,0.7s,mb4.9
PDAR Pinedale Array 68.01 331 P **P 09 23 52.9 -0.7**
comp=Z,36nm,1.1s,mb5.1,baz=134,slow=6.4,SNR=110
PDAR sP sP 09 24 37.6 +0.6
comp=Z,15nm,0.8s,baz=142,slow=7.5,SNR=3.7
PDAR PKP2bc 09 52 08.3
comp=Z,4.1nm,1.2s,baz=318,slow=2.0,SNR=9.2
PDAR Pinedale Array 68.01 331 P **P 09 23 52.9 -0.7**
PDAR sP sP 09 24 37.6 +0.6
PDAR ⇑*e* 09 52 08.3
N15A Stansbury Isla 68.05 328 ⇓P **P 09 23 53.7 -0.2**
baz=68
HWUT Hardware Ranch 68.10 329 *e*P **P 09 23 53.8 -0.3**
comp=Z,130nm,1.1s,mb5.7
L17A Cokeville 68.13 330 ⇑P **P 09 23 53.8 -0.6**
baz=68,SNR=33
PKM Peak Mountain 68.13 319 ⇑P **P 09 23 54.4 -0.1**
baz=68,SNR=25
K18A Toltan Ranch, 68.14 330 ⇑P **P 09 23 54.6 +0.2**
baz=68,SNR=100
S10A Tonopah Range, 68.17 323 ⇓P **P 09 23 55.4 +0.7**
baz=68,SNR=184
R10A Warm Springs 68.26 324 ⇑P **P 09 23 56.4 +1.1**
baz=68,SNR=56
O13A Hicks Ranch, I 68.27 326 ⇓P **P 09 23 55.8 +0.5**
baz=68
Q11A Duckwater 68.27 324 ⇑P **P 09 23 55.9 +0.6**
baz=68,SNR=146
P12A McGill 68.30 325 ⇓P **P 09 23 56.2 +0.7**
baz=68
L16A Fish Haven 68.34 329 ⇓P **P 09 23 55.3 -0.4**
baz=68,SNR=33
BGU Big Grassy Mou 68.34 327 *e*P **P 09 23 55.4 -0.3**
comp=Z,76nm,1.1s,mb5.4
N14A Grayback Hills 68.37 327 ⇑P **P 09 23 56.0 +0.1**
baz=68,SNR=68
EHIG Higuera 68.42 50 P **P 09 23 55.7 -0.7**
comp=Z,442nm,1.6s,mb6.0
M15A Larsen Ranch, 68.44 328 ⇓P **P 09 23 56.0 -0.3**
baz=69,SNR=27
SMMC Simmler 68.51 319 ⇓P **P 09 23 56.9 0.0**
baz=69,SNR=32
TIN Tinemaha 68.55 321 ⇓P **P 09 23 56.8 -0.3**
baz=69,SNR=11
J18A Kendall Valley 68.57 331 ⇓P **P 09 23 56.7 -0.4**
baz=69,SNR=84
PSMA Santa Maria 68.60 39 *e*P **P 09 23 56.3 -1.1**
comp=Z,316nm,1.7s,mb5.9
EGOM La Gomera 68.64 51 P **P 09 23 57.3 -0.5**
comp=Z,110nm,0.7s,mb5.8
K17A Gardner Place, 68.65 330 ⇑P **P 09 23 57.2 -0.4**
baz=69,SNR=13
Q10A Clear Creek Ra 68.68 324 ⇓P **P 09 23 58.6 +0.8**
baz=69,SNR=103
RCTC Rector, Farmer 68.68 320 ⇑P **P 09 23 57.1 -0.8**
baz=69,SNR=29
AHID Auburn Hatcher 68.74 330 *e*P **P 09 23 58.3 +0.1**
comp=Z,61nm,0.9s,mb5.4
O12A Currie 68.77 326 ⇑P **P 09 23 58.8 +0.4**
baz=69,SNR=297
PDA Ponta Delgada 68.78 38 *e*P **P 09 23 56.7 -1.8**
PSET Sete Cidades 68.80 38 *e*P **P 09 23 59.1 +0.5**
comp=Z,159nm,1.8s,mb5.5
L15A Malad City 68.81 329 ⇓P **P 09 23 58.2 -0.3**
baz=69,SNR=114
P11A Circle Ranch, 68.82 325 ⇓P **P 09 23 59.2 +0.5**
baz=69,SNR=22
HVU Hansel Valley 68.84 328 *e*P **P 09 23 58.6 -0.1**
HVU pmax pmax
comp=Z,222nm,1.3s,mb5.8
HVU Hansel Valley 68.84 328 *e*P **P 09 23 58.6 -0.1**
comp=Z,222nm,1.3s,mb5.8
I18A Diamond G Ranc 68.85 331 ⇓P **P 09 23 59.0 +0.2**
baz=69,SNR=91
GRON Grota Negra 68.87 38 *e*P **P 09 24 00.8 +1.8**
comp=Z,119nm,1.3s,mb5.6
CMLA Cha da Macela 68.87 38 *e*P **P 09 23 58.9 -0.2**
comp=Z,168nm,1.6s,mb5.6
CMLA Cha da Macela 68.87 38 P **P 09 23 59.0 -0.1**
comp=Z,1μm,1.0s,mb6.6,SNR=7.7
CMLA Cha da Macela 68.87 38 *e*P **P 09 24 00.0 +0.9**
CMLA pmax pmax
comp=Z,254nm,1.1s,mb6.0
CMLA Cha da Macela 68.87 38 *e*P **P 09 24 00.0 +1.0**
comp=Z,254nm,1.1s,mb6.0
N13A Wendover, West 68.90 327 ⇓P **P 09 23 59.4 +0.2**
baz=69
N13A Wendover, West 68.90 327 *e*P **P 09 23 59.0 -0.2**
comp=Z,146nm,1.2s,mb5.7
M14A Sheep Mountain 68.92 328 ⇑P **P 09 23 59.4 +0.1**
baz=69
J17A Brown Place, J 69.01 331 ⇑P **P 09 23 60.0 +0.2**
baz=69,SNR=75
K16A Soda Springs 69.03 330 ⇓P **P 09 24 00.3 +0.3**
baz=69,SNR=77
REDW Red Top Meadow 69.08 330 *e*P **P 09 24 00.2 0.0**
comp=Z,117nm,1.4s,mb5.5
BART Pico Bartolome 69.09 38 *e*P **P 09 24 00.8 +0.4**
comp=Z,698nm,1.5s,mb6.3
SNOW Snow King Moun 69.11 331 *e*P **P 09 23 59.8 -0.6**
comp=Z,46nm,0.9s,mb5.3
CCAN Las Canadas 69.12 51 P **P 09 24 00.4 -0.5**
comp=Z,44nm,0.8s,mb5.3
LOHW Long Hollow 69.15 331 *e*P **P 09 24 00.7 +0.1**
comp=Z,45nm,1.0s,mb5.2
O11A Cowboy Ranch, 69.17 325 ⇓P **P 09 24 01.5 +0.6**
baz=69
TPAW Teton Pass 69.22 331 *e*P **P 09 24 00.8 -0.2**
comp=Z,36nm,0.8s,mb5.2
M13A Montello 69.25 327 ⇓P **P 09 24 00.9 -0.4**
baz=69,SNR=54
M13A Montello 69.25 327 *e*P **P 09 24 00.9 -0.4**
comp=Z,41nm,1.0s,mb5.2
L14A Malta 69.26 328 ⇓P **P 09 24 01.0 -0.3**
baz=69,SNR=96
ULM Lac du Bonnet 69.29 344 P **P 09 24 00.2 -1.2**
comp=Z,91nm,0.8s,mb5.7,baz=154,slow=5.8,SNR=56
ULM sP sP 09 24 45.7 +0.9
comp=Z,88nm,1.1s,baz=164,slow=6.7,SNR=4.2
ULM PKP2ab 09 52 06.9
comp=Z,14nm,1.1s,baz=330,slow=3.2,SNR=7.6
ULM Lac du Bonnet 69.29 344 *e*P **P 09 24 00.1 -1.3**
comp=Z,242nm,1.3s,mb5.9
RRI2 Red Ridge 69.29 330 *e*P **P 09 24 01.9 +0.4**
comp=Z,151nm,0.9s,mb5.8
MLAC Mammoth Lakes 69.30 322 ⇑P **P 09 24 02.5 +0.8**
baz=69,SNR=25
N12A Clover Valley, 69.34 326 ⇓P **P 09 24 01.9 0.0**
baz=70,SNR=26
N12A Clover Valley, 69.34 326 *e*P **P 09 24 01.9 0.0**
comp=Z,58nm,1.2s,mb5.3
I17A Pilgrim Ck. 69.37 331 ⇓P **P 09 24 02.6 +0.6**
baz=70,SNR=25
J16A Bone 69.37 330 ⇑P **P 09 24 02.2 +0.2**
baz=70,SNR=40
ELK Elko 69.38 326 *e*P **P 09 24 02.7 +0.6**
ELK pmax pmax
comp=Z,63nm,1.0s
ELK Elko 69.38 326 *e*P **P 09 24 02.7 +0.6**
comp=Z,63nm,1.0s,mb5.4
K15A Arbon 69.38 329 ⇑P **P 09 24 01.9 -0.2**
baz=70,SNR=59
DCID1 Drake Creek 69.41 330 *e*P **P 09 24 03.0 +0.8**
comp=Z,161nm,1.1s,mb5.8
EBAJ Bajamar 69.49 51 P **P 09 24 03.2 +0.1**
comp=Z,69nm,1.1s,mb5.4
NVAR Mina Array Bea 69.51 323 P **P 09 24 03.4 +0.4**
comp=Z,31nm,0.8s,mb5.2,baz=151,slow=6.8,SNR=126
NVAR PcP PcP 09 24 26.4 +1.0
comp=Z,17nm,0.9s,baz=153,slow=6.1,SNR=6.4
NVAR PKP2bc 09 52 05.7
comp=Z,6.8nm,1.2s,baz=251,slow=3.4,SNR=17
NVAR Mina Array Bea 69.51 323 P **P 09 24 03.4 +0.4**
NVAR PcP PcP 09 24 26.4 +1.0
NVAR ⇑*e* 09 52 05.7
IMW Indian Meadow 69.53 331 *e*P **P 09 24 03.3 +0.3**
comp=Z,105nm,1.1s,mb5.6
K14A Jones Ranch, D 69.60 329 ⇑P **P 09 24 03.2 -0.2**
baz=70,SNR=71
LIC Lamto 69.61 77⇑*i*P **P 09 24 03.5 -0.6**
comp=Z,362nm,0.9s,mb5.9
LIC *e*MLR MLR
comp=Z,4μm,22.8s
LIC Lamto 69.61 77 *e*P **P 09 24 03.0 -1.1**
comp=Z,984nm,1.5s,mb6.4
LIC Lamto 69.61 77⇑*i*P **P 09 24 03.5 -0.6**
comp=Z,181nm,0.9s,mb5.9
LIC LR LR
comp=Z,2μm,22.8s
L13A Double Diamond 69.66 328 ⇓P **P 09 24 03.9 +0.1**
baz=70,SNR=131
LAO LASA Array 69.68 335 *e*P **P 09 24 04.1 +0.3**
comp=Z,199nm,1.3s,mb5.8
M12A Wells 69.68 327 ⇑P **P 09 24 03.8 -0.2**
baz=70,SNR=50
N11A Elko Archery C 69.69 326 ⇓P **P 09 24 04.1 +0.1**
baz=70,SNR=22
RLMT Red Lodge 69.71 333 ⇓P **P 09 24 04.2 +0.1**
baz=70,SNR=42
RLMT Red Lodge 69.71 333 *e*P **P 09 24 04.2 +0.2**
comp=Z,149nm,1.4s,mb5.6
H17A Grant Village 69.74 331 ⇑P **P 09 24 05.4 +1.1**
baz=70
O10A Cortez Mining, 69.75 325 ⇑P **P 09 24 05.1 +0.7**
baz=70,SNR=52
TIC Toumodi 69.75 77 *e*P **P 09 24 04.2 -0.8**
comp=Z,713nm,1.4s,mb6.3
TIC Toumodi 69.75 77 *e*P **P 09 24 04.2 -0.8**
TIC pmax pmax
comp=Z,713nm,1.4s,mb6.3
I16A Newdale 69.77 330 ⇓P **P 09 24 04.6 +0.2**
baz=70,SNR=48
LKWY Lake 69.79 332 *e*P **P 09 24 06.3 +1.8**
LKWY pmax pmax
comp=Z,114nm,1.0s,mb5.7
LKWY Lake 69.79 332 *e*P **P 09 24 06.3 +1.8**
comp=Z,114nm,1.0s,mb5.7
EOSO Osorio 69.83 51 P **P 09 24 05.8 +0.6**
comp=Z,40nm,0.8s,mb5.3
J15A Blackfoot 69.86 330 ⇓P **P 09 24 05.3 +0.2**
baz=70,SNR=76
DBIC Dimbokro 69.92 77 P **P 09 24 05.7 -0.3**
comp=Z,190nm,0.7s,mb6.0,baz=229,slow=6.7,SNR=153
DBIC pP pP 09 24 36.1 -0.2
comp=Z,54nm,0.6s,baz=219,slow=8.8,SNR=3.1
DBIC LR LR 09 53 26.1
comp=Z,3μm,18.8s,baz=226,slow=35
DBIC Dimbokro 69.92 77 P **P 09 24 05.7 -0.3**
DBIC *PP pP 09 24 36.1 -0.2
DBIC pmax pmax
comp=Z,190nm,0.7s
DBIC pmax pmax
comp=Z,54nm,0.6s
DBIC Dimbokro 69.92 77 *e*P **P 09 24 05.6 -0.5**
comp=Z,201nm,0.7s,mb6.1
DBIC *e*pP pP 09 24 35.2 -1.1
DBIC Dimbokro 69.92 77⇑*i*P **P 09 24 05.8 -0.2**
KIC Kosan Boka 69.92 77 *e*P **P 09 24 04.9 -1.2**
comp=Z,452nm,0.6s,mb6.5
G18A Lazy EL Ranch, 69.99 333 ⇑P **P 09 24 05.9 +0.1**
baz=70,SNR=81
N10A Dunphy 70.05 325 ⇓P **P 09 24 06.3 0.0**
baz=70
YMR Madison River 70.12 331 *e*P **P 09 24 08.1 +1.5**
comp=Z,130nm,1.1s,mb5.7
K13A Stover Farm, H 70.14 328 ⇑P **P 09 24 06.9 +0.2**
baz=70,SNR=53
M11A Holland Ranch, 70.16 326 ⇓P **P 09 24 07.2 +0.3**
baz=70,SNR=47
BMN Battle Mountai 70.24 325 *e*P **P 09 24 08.1 +0.7**
BMN pmax pmax
comp=Z,65nm,1.4s,mb5.3
BMN Battle Mountai 70.24 325 *e*P **P 09 24 08.1 +0.6**
comp=Z,65nm,1.4s,mb5.3
L12A House Creek Ra 70.25 327 ⇑P **P 09 24 07.8 +0.4**
baz=70,SNR=135
H16A Russell Place, 70.28 331 ⇑P **P 09 24 08.3 +0.8**
baz=70,SNR=44
I15A Monteview 70.34 330 ⇓P **P 09 24 08.4 +0.5**
baz=70,SNR=13
SAO San Andreas Ge 70.34 319 *e*P **P 09 24 09.4 +1.3**
SAO pmax pmax
comp=Z,121nm,1.6s,mb5.5
SAO San Andreas Ge 70.34 319 *e*P **P 09 24 09.4 +1.3**
comp=Z,120nm,1.6s,mb5.5
J14A Carey 70.34 329 ⇑P **P 09 24 08.5 +0.6**
baz=70,SNR=121
DGMT Dagmar 70.37 338 ⇑P **P 09 24 08.4 +0.4**
baz=71,SNR=46
DGMT Dagmar 70.37 338 *e*P **P 09 24 08.5 +0.4**
comp=Z,365nm,1.3s,mb6.0
GCMT Greycliff 70.41 333 *e*P **P 09 24 07.9 -0.4**
comp=Z,98nm,1.3s,mb5.5
QLMT Earthquake Lak 70.46 331 *e*P **P 09 24 10.1 +1.4**
comp=Z,78nm,1.6s,mb5.3
CMB Columbia Colle 70.49 321 *e*P **P 09 24 09.2 +0.2**
CMB pmax pmax
comp=Z,48nm,1.2s,mb5.2
CMB Columbia Colle 70.49 321 *e*P **P 09 24 09.2 +0.2**
comp=Z,48nm,1.2s,mb5.2
F18A Big Timber 70.52 333 ⇑P **P 09 24 09.1 +0.1**
baz=71,SNR=122
G17A Pierce Place, 70.52 332 ⇑P **P 09 24 09.6 +0.6**
baz=71,SNR=12
K12A Draper Farm, C 70.54 328 ⇓P **P 09 24 09.8 +0.6**
baz=71,SNR=158
M10A I.L. Ranch, Tu 70.62 326 ⇑P **P 09 24 10.2 +0.5**
baz=71,SNR=42
L11A Cat Creek Ranc 70.65 327 ⇓P **P 09 24 10.4 +0.5**
baz=71,SNR=126
SCHQ Schefferville 70.66 3 P **P 09 24 09.4 -0.2**
comp=Z,154nm,0.9s,mb5.8,baz=182,slow=5.0,SNR=80
SCHQ pP pP 09 24 40.4 +0.4
comp=Z,81nm,0.9s,baz=215,slow=0.7,SNR=4.7
SCHQ LR LR 09 52 42.2
comp=Z,2μm,21.8s,baz=28,slow=34
SCHQ Schefferville 70.66 3 *e*P **P 09 24 09.1 -0.5**
comp=Z,266nm,1.0s,mb6.0
J13A Cove Ranch, Pi 70.72 329 ⇓P **P 09 24 10.6 +0.4**
baz=71,SNR=91
I14A Mackay 70.75 329 ⇑P **P 09 24 11.2 +0.7**
baz=71,SNR=34
F17A Fitzpatrick Pl 70.93 332 ⇑P **P 09 24 11.9 +0.4**
baz=71,SNR=61
WCN Washoe City 70.94 322 ⇑P **P 09 24 12.5 +0.8**
baz=71,SNR=57
G16A Moss Hill, Enn 70.94 331 ⇑P **P 09 24 11.7 +0.1**
baz=71,SNR=37
HLID Hailey 70.96 329 ⇑P **P 09 24 12.4 +0.7**
baz=71,SNR=112
HLID Hailey 70.96 329 *e*P **P 09 24 12.0 +0.3**
comp=Z,70nm,1.1s,mb5.4
L10A Juniper Basin 70.97 326 ⇑P **P 09 24 12.3 +0.5**
baz=71,SNR=157
I13A Wildhorse Cree 71.07 329 ⇓P **P 09 24 13.1 +0.7**
baz=71,SNR=100
J12A Stokes Ranch, 71.08 328 ⇑P **P 09 24 12.8 +0.3**
baz=71,SNR=35
E18A Harlowton 71.12 333 ⇑P **P 09 24 12.7 +0.2**
baz=71,SNR=60
CFTV Fuerteventura 71.12 52 P **P 09 24 12.8 -0.2**
comp=Z,71nm,2.0s,mb5.2
MCMT McKenzie Canyo 71.13 330 *e*P **P 09 24 13.2 +0.5**
comp=Z,58nm,1.4s,mb5.2
BOZ Bozeman (W) 71.17 332 ⇑P **P 09 24 12.7 -0.2**
baz=71,SNR=56
G15A Dillon 71.21 331 ⇓P **P 09 24 13.4 +0.3**
baz=71,SNR=38
H14A Leadore 71.22 330 ⇓P **P 09 24 13.7 +0.4**
baz=71,SNR=70
K11A Parker Ranch, 71.23 327 ⇓P **P 09 24 13.7 +0.4**
baz=71,SNR=76
F16A Kennard Place, 71.28 332 ⇑P **P 09 24 13.5 -0.1**
baz=72,SNR=25
PMAR Madeira 71.36 47 *e*P **P 09 24 14.6 +0.3**
comp=Z,414nm,1.7s,mb6.0
DLMT Dillon 71.41 331 *e*P **P 09 24 14.6 +0.2**
comp=Z,103nm,1.4s,mb5.5
E17A Martinsdale 71.45 333 ⇓P **P 09 24 14.8 +0.2**
baz=72,SNR=64
I12A Atlanta 71.49 328 ⇑P **P 09 24 15.4 +0.5**
baz=72,SNR=70
D18A Linhart Farms, 71.56 334 ⇓P **P 09 24 15.4 +0.2**
baz=72,SNR=51
MFID Camas Ranch 71.58 328 ⇓P **P 09 24 16.1 +0.7**
baz=72,SNR=202
H13A Challis 71.61 329 ⇑P **P 09 24 16.0 +0.4**
baz=72,SNR=60
K10A MacKenzie Ranc 71.67 327 ⇑P **P 09 24 16.4 +0.4**
baz=72,SNR=135
LRM Limekiln Ridge 71.68 331 *e*P **P 09 24 16.3 +0.3**
comp=Z,382nm,1.4s,mb6.0

F15A	**Butte**	71.72	331	⇓P	P	09 24 16.3	+0.1
	baz=72,SNR=24						
E16A	**East Helena**	71.87	332	⇓P	P	09 24 17.2	+0.1
	baz=72,SNR=9.4						
H12A	**Diamond D Ranc**	71.90	329	⇑P	P	09 24 17.7	+0.4
	baz=72,SNR=49						
EFAM	**Famara**	71.90	51	P	P	09 24 17.9	+0.2
	comp=Z,90nm,1.2s,mb5.5						
D17A	**Six Diamond Ra**	71.91	333	⇓P	P	09 24 17.5	+0.2
	baz=72,SNR=110						
PMPS	**Porto Santo**	71.95	47	*e*P	P	09 24 18.4	+0.5
PMPS	comp=Z,518nm,1.9s,mb6.0			*i* P		09 25 12.0	
G13A	**Cobalt**	71.99	330	⇓P	P	09 24 18.2	+0.4
	baz=72,SNR=107						
I11A	**Placerville**	71.99	328	⇓P	P	09 24 17.9	0.0
	baz=72,SNR=84						
J10A	**Berg Farm, Mel**	72.07	327	⇓P	P	09 24 18.3	-0.1
	baz=72,SNR=16						
HRY	**Holter Researc**	72.07	332	*e*P	P	09 24 18.4	+0.1
	comp=Z,26nm,0.9s,mb5.1						
MCCM	**Marconi Confer**	72.09	320	*e*P	P	09 24 20.1	+1.5
	comp=Z,111nm,0.9s,mb5.7						
F14A	**Wisdom**	72.11	331	⇑P	P	09 24 19.0	+0.5
	baz=72,SNR=28						
EGMT	**Eagleton**	72.19	334	⇓P	P	09 24 18.8	-0.2
	baz=72,SNR=50						
EGMT	**Eagleton**	72.19	334	*e*P	P	09 24 18.2	-0.8
	comp=Z,66nm,0.9s,mb5.5						
D16A	**Dana Ranch, Ca**	72.19	333	⇓P	P	09 24 19.5	+0.5
	baz=72,SNR=80						
E15A	**Deer Lodge**	72.22	332	⇑P	P	09 24 19.3	+0.1
	baz=72,SNR=34						
WVOR	**Wild Horse Val**	72.38	325	*e*P	P	09 24 20.1	-0.2
WVOR				pmax	pmax		
	comp=Z,72nm,1.3s,mb5.3						
WVOR	**Wild Horse Val**	72.38	325	*e*P	P	09 24 20.1	-0.2
	comp=Z,72nm,1.3s,mb5.3						
B18A	**Beardsley Farm**	72.49	334	⇑P	P	09 24 20.8	0.0
	baz=73,SNR=108						
MEH	**Mehetia**	72.53	256	*e*P	P	09 24 22.7	+1.0
	comp=Z,79nm,1.0s,mb5.5						
MEH				*e*pP	pP	09 24 52.1	-0.1
	comp=Z,159nm,1.1s						
F13A	**Darby**	72.54	330	⇓P	P	09 24 21.4	+0.3
	baz=73,SNR=86						
I10A	**Payette**	72.55	328	⇓P	P	09 24 21.3	+0.1
	baz=73,SNR=18						
H11A	**Donnelly**	72.58	329	⇓P	P	09 24 21.1	-0.3
	baz=73,SNR=32						
E14A	**Clinton**	72.61	331	⇓P	P	09 24 22.0	+0.5
	baz=73,SNR=70						
D15A	**Lincoln**	72.63	332	⇓P	P	09 24 22.1	+0.5
	baz=73,SNR=41						
TBI	**Tubuai**	72.78	250	*e*P	P	09 24 24.0	+0.8
	comp=Z,175nm,1.2s,mb5.8						
TBI				*e*pP	pP	09 24 52.8	-0.9
	comp=Z,199nm,1.1s						
B17A	**L&G Farms, Che**	72.83	334	⇑P	P	09 24 22.4	-0.3
	baz=73,SNR=24						
LBCM	**Butte Creek Ri**	72.86	323	P	P	09 24 23.2	+0.1
C16A	**Fuhringer Ranc**	72.86	333	⇓P	P	09 24 23.1	+0.2
	baz=73,SNR=64						
CHMT	**Chamberlain Mo**	72.87	332	*e*P	P	09 24 23.5	+0.5
	comp=Z,47nm,1.4s,mb5.1						
H10A	**Noah's Angus R**	72.87	328	⇓P	P	09 24 22.7	-0.4
	baz=73,SNR=28						
MAIT	**Maitri**	72.88	160	*e*P	P	09 24 22.7	-0.1
MAIT				*e*	pP	09 24 50.6	-2.7
J08A	**Circle Bar Ran**	72.92	326	⇑P	P	09 24 23.5	+0.1
	baz=73,SNR=41						
A18A	**Metzger Ranch,**	72.93	335	⇓P	P	09 24 23.0	-0.3
	baz=73,SNR=113						
MOD	**Modoc**	72.95	324	*e*P	P	09 24 24.2	+0.6
	comp=Z,179nm,1.1s,mb5.8						
E13A	**Victor**	72.95	331	⇑P	P	09 24 24.0	+0.5
	baz=73,SNR=82						
I09A	**Lost Marbles R**	72.96	327	⇑P	P	09 24 23.5	-0.2
	baz=73,SNR=52						
F12A	**Elk City**	72.96	330	⇓P	P	09 24 23.7	+0.1
	baz=73,SNR=57						
PMOR	**Pomariorio Ree**	72.97	259	*e*P	P	09 24 25.6	+1.3
	comp=Z,217nm,1.0s,mb5.9						
PMOR				*e*pP	pP	09 24 54.7	-0.2
	comp=Z,384nm,1.2s						
D14A	**Greenough**	73.11	332	⇑P	P	09 24 24.6	+0.2
	baz=73,SNR=56						
MSO	**Missoula**	73.12	331	*e*P	P	09 24 24.5	0.0
	comp=Z,91nm,1.3s,mb5.5						
G11A	**Walters Elk Ra**	73.20	329	⇓P	P	09 24 25.1	+0.1
	baz=73,SNR=101						
SLMT	**Seeley Lake**	73.22	332	*e*P	P	09 24 25.1	0.0
	comp=Z,82nm,1.3s,mb5.4						
C15A	**Salmond Ranch,**	73.22	333	⇓P	P	09 24 25.8	+0.7
	baz=73,SNR=106						
B16A	**M & M Farms, S**	73.32	333	⇑P	P	09 24 25.3	-0.4
	baz=74,SNR=33						
BMO	**Blue Mountains**	73.34	328	*e*P	P	09 24 25.8	-0.1
BMO				pmax	pmax		
	comp=Z,39nm,0.9s,mb5.2						
BMO	**Blue Mountains**	73.34	328	*e*P	P	09 24 25.8	-0.1
	comp=Z,39nm,0.9s,mb5.2						
WDC	**Whiskeytown Da**	73.40	322	*e*P	P	09 24 25.1	-1.2
WDC				pmax	pmax		
	comp=Z,43nm,1.0s,mb5.2						
WDC	**Whiskeytown Da**	73.40	322	*e*P	P	09 24 25.1	-1.2
	comp=Z,43nm,1.0s,mb5.2						
F11A	**Grangeville**	73.50	329	⇑P	P	09 24 26.5	-0.3
	baz=74,SNR=71						
G10A	**Bishop Farm, J**	73.56	328	⇑P	P	09 24 27.7	+0.6
	baz=74,SNR=189						
D13A	**Huson**	73.56	331	⇓P	P	09 24 27.4	+0.3
	baz=74,SNR=53						
B15A	**Bradely Ranch,**	73.61	333	⇑P	P	09 24 27.1	-0.3
	baz=74,SNR=62						
SWMT	**Swartz Lake**	73.65	332	*e*P	P	09 24 28.1	+0.5
	comp=Z,38nm,1.0s,mb5.1						
H08A	**Prairie City**	73.82	327	⇑P	P	09 24 29.3	+0.7
	baz=74,SNR=106						
K05A	**Summer Lake**	73.82	325	⇓P	P	09 24 29.6	+0.8
	baz=74,SNR=47						
G09A	**Cove**	73.88	328	⇓P	P	09 24 29.7	+0.7
	baz=74,SNR=101						
YBMT	**Yellow Bay**	73.92	332	*e*P	P	09 24 29.7	+0.5
	comp=Z,20nm,0.8s,mb4.9						
JTMT	**Jette**	73.96	332	*e*P	P	09 24 30.1	+0.7
	comp=Z,25nm,0.9s,mb4.9						
B14A	**Marquette Ranc**	73.96	333	⇓P	P	09 24 29.3	-0.1
	baz=74,SNR=59						
HOG	**Hogback Mounta**	73.97	324	P	P	09 24 30.4	+0.8
PAE	**Paea**	73.99	256	*e*P	P	09 24 31.5	+1.2
	comp=Z,23nm,1.0s,mb4.9						
PAE				*e*pP	pP	09 25 00.2	-0.7
	comp=Z,26nm,1.0s						
PAE	**Paea**	73.99	256	*e*P	P	09 24 31.5	+1.2
PAE				*e**PP	pP	09 25 00.2	-0.7
PAE				pmax	pmax		
	comp=Z,23nm,1.0s,mb4.9						
PPT	**Papeete**	74.00	256	*e*P	P	09 24 31.3	+0.9
	comp=Z,86nm,1.5s,mb5.3						
PPT				*e*pP	pP	09 25 00.7	-0.3
	comp=Z,95nm,1.3s						
PPT				*e*S	S	09 33 53.9	+0.5
	comp=Z,5µm,28.8s						
PPT				*e*SS	SS	09 38 42.7	+2.2
	comp=Z,2µm,25.2s						
PPT				*e*LQ		09 44 15.7	
	comp=Z,3µm,23.5s						
PPT				*e*LR	LR	09 47 19.9	
	comp=Z,5µm,25.0s						
PPT	**Papeete**	74.00	256	P	P	09 24 30.8	+0.4
	comp=Z,34nm,0.9s,mb5.1,baz=27,slow=1.9,SNR=4.7						
PPT				LR	LR	09 49 06.7	
	comp=Z,2µm,21.6s,baz=100,slow=29						
F10A	**Beach Ranch, E**	74.09	329	⇑P	P	09 24 30.4	+0.3
	baz=74,SNR=87						
QSPA	**South Pole Qui**	74.17	180	P	P	09 24 30.1	-0.1
	comp=Z,202nm,1.0s,mb5.8,baz=151,slow=2.6,SNR=430						
QSPA	**South Pole Qui**	74.17	180	*e*P	P	09 24 29.8	-0.5
	comp=Z,0.4nm,0.5s						
A15A	**Johnson Ranch,**	74.19	333	⇓P	P	09 24 30.1	-0.6
	baz=74,SNR=32						
YBH	**Yreka Blue Hor**	74.22	323	*e*P	P	09 24 30.1	-1.0
YBH				pmax	pmax		
	comp=Z,73nm,1.1s						
YBH	**Yreka Blue Hor**	74.22	323	*e*P	P	09 24 30.1	-0.9
	comp=Z,73nm,1.1s,mb5.3						
BSMT	**Bassoo Peak**	74.27	331	*e*P	P	09 24 31.9	+0.7
	comp=Z,41nm,1.1s,mb5.1						
C12B	**Naegeli Ranch,**	74.48	331	⇑P	P	09 24 32.9	+0.4
	baz=75,SNR=19						
A14A	**Double T Ranch**	74.48	333	⇑P	P	09 24 32.1	-0.3
	baz=75,SNR=45						
G08A	**Pilot Rock**	74.49	327	⇓P	P	09 24 33.0	+0.4
	baz=75,SNR=34						
B13A	**Whitefish**	74.50	332	⇑P	P	09 24 32.9	+0.4
	baz=75,SNR=22						
LNOR	**Lincton Mounta**	74.55	328	*e*P	P	09 24 32.9	+0.1
LNOR				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.0						
LNOR	**Lincton Mounta**	74.55	328	*e*P	P	09 24 32.9	+0.1
	comp=Z,26nm,0.9s,mb5.0						
WALA	**Waterton Lakes**	74.76	333	*e*P	P	09 24 34.0	0.0
	comp=Z,3.3nm,1.0s						
A13A	**Flathead Natio**	74.89	332	⇑P	P	09 24 35.4	+0.7
	baz=75						
HUMO	**Hull Mountain**	74.91	323	*e*P	P	09 24 34.6	-0.5
	comp=Z,59nm,1.3s,mb5.2						
E09A	**Wood Farm, Sta**	74.92	329	⇑P	P	09 24 34.9	-0.1
	baz=75,SNR=20						
BBOR	**Butler Butte**	74.93	324	P	P	09 24 34.8	-0.4
FFC	**Flin Flon**	74.98	342	*i* P	P	09 24 34.7	-0.4
FFC	**Flin Flon**	74.98	342	*e*P	P	09 24 34.3	-0.8
	comp=Z,75nm,1.5s,mb5.2						
B12A	**Libby**	75.08	332	⇑P	P	09 24 36.5	+0.7
	baz=75,SNR=42						
G06A	**Carlson Farm,**	75.33	327	⇑P	P	09 24 38.1	+0.7
	baz=76,SNR=22						
E08A	**Dider Farm, El**	75.36	328	⇓P	P	09 24 37.5	0.0
	baz=76,SNR=12						
A12A	**Yaak River Ran**	75.45	332	⇑P	P	09 24 38.6	+0.6
	baz=76,SNR=27						
HAWA	**Hanford**	75.54	328	*e*P	P	09 24 39.4	+0.9
	comp=Z,214nm,1.4s,mb5.7						
RSW	**Rattlesnake Hi**	75.57	328	P	P	09 24 39.9	+1.2
NEW	**Newport**	75.65	331	*e*P	P	09 24 39.2	+0.1
NEW				pmax	pmax		
	comp=Z,18nm,0.9s						
NEW	**Newport**	75.65	331	*e*P	P	09 24 39.2	+0.1
	comp=Z,18nm,0.9s,mb4.8						
D08A	**Wollman Farm,**	75.68	329	⇑P	P	09 24 39.7	+0.3
	baz=76,SNR=23						
H04A	**Detroit Lake**	75.81	325	⇑P	P	09 24 39.9	-0.2
	baz=76,SNR=34						
OD2	**Odessa Site #2**	75.81	329	*e*P	P	09 24 40.2	+0.2
	comp=Z,206nm,1.1s,mb5.8						
E07A	**Sunnyside**	75.81	328	⇓P	P	09 24 40.6	+0.5
	baz=76						
HOOD	**Mount Hood Mea**	75.93	326	*e*P	P	09 24 42.8	+2.0
	comp=Z,385nm,1.1s,mb6.0						
G04A	**Mulino**	76.30	326	⇑P	P	09 24 42.9	0.0
	baz=76,SNR=20						
COR	**Corvallis**	76.36	325	*e*P	P	09 24 44.5	+1.3
COR				pmax	pmax		
	comp=Z,130nm,0.9s,mb5.7						
COR	**Corvallis**	76.36	325	*e*P	P	09 24 44.5	+1.3
	comp=Z,130nm,0.9s,mb5.7						
F04A	**Amboy**	76.74	326	⇓P	P	09 24 45.5	+0.1
	baz=77,SNR=37						
ETW	**Entiat**	76.76	329	P	P	09 24 46.1	+0.7
B08A	**Colville Reser**	76.78	330	⇓P	P	09 24 45.4	-0.1
	baz=77,SNR=29						
LON	**Longmire**	76.95	327	*e*P	P	09 24 46.6	+0.1
LON				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.0						
LON	**Longmire**	76.95	327	*e*P	P	09 24 46.6	+0.1
	comp=Z,29nm,0.9s,mb5.0						
HEBO	**Mount Hebo**	77.00	325	*e*P	P	09 24 48.2	+1.4
	comp=Z,337nm,1.3s,mb5.9						
D05A	**Enumclaw**	77.33	327	⇓P	P	09 24 48.8	+0.2
	baz=78,SNR=38						
F03A	**Seaside**	77.35	326	⇑P	P	09 24 48.9	+0.2
	baz=78						
EDM	**Edmonton**	77.66	336	*e*P	P	09 24 49.4	-0.9
RPW	**Rockport**	77.91	329	P	P	09 24 51.6	-0.2
B06A	**Marblemount**	77.94	329	⇓P	P	09 24 51.6	-0.4
	baz=78,SNR=15						
JCW	**Jim Creek**	77.95	328	P	P	09 24 51.7	-0.4
GNW	**Green Mountain**	78.00	327	*e*P	P	09 24 52.0	-0.3
	comp=Z,72nm,1.4s,mb5.2						
NLWA	**Neilton Lookou**	78.44	327	⇑P	P	09 24 55.5	+0.7
	baz=79,SNR=25						
NLWA	**Neilton Lookou**	78.44	327	*e*P	P	09 24 55.7	+1.0
	comp=Z,224nm,1.3s,mb5.7						
A05A	**Maple Falls**	78.56	329	⇓P	P	09 24 55.4	0.0
	baz=79,SNR=31						
PGC	**Sidney**	79.02	328	*e*P	P	09 24 58.7	+0.8
	comp=Z,11nm,1.3s,mb4.5						
PFVI	**Vila Bisbo**	79.31	46	*i* P	P	09 25 01.1	+1.3
	comp=Z,325nm,1.9s,mb5.8						
PFVI				*e*pP	pP	09 25 31.2	+0.4
PFVI				*i* P		09 25 57.4	
PFVI				*e*S	S	09 34 54.4	+4.0
PFVI	**Vila Bisbo**	79.31	46	P	P	09 25 00.4	+0.6
MORF	**Marmelete**	79.52	46	*i* P	P	09 25 02.3	+1.4
	comp=Z,515nm,1.6s,mb6.1						
MORF				*e*pP	pP	09 25 30.7	-1.2
MORF				*i* P		09 25 58.8	
MORF				*e*S	S	09 34 56.0	+3.5
MORF	**Marmelete**	79.52	46	*e*P	P	09 25 00.9	0.0
MORF				*e*S	S	09 34 52.5	0.0
PTEO	**Sao Teotonio**	79.59	46	*e*P	P	09 25 02.8	+1.5
	comp=Z,724nm,1.4s,mb6.3						
PTEO				*i* P		09 25 59.0	
LIS	**Lisbon**	79.88	45	*e*P	P	09 25 02.8	0.0
LIS				*e*S	S	09 34 56.2	+0.1
LIS				*e*S	S	09 34 56.4	+0.3
LIS				AMS	AMS	09 58 31.4	
	comp=Z,2µm,23.7s						
LIS	**Lisbon**	79.88	45	*e*P	P	09 25 02.8	0.0
LIS				*e*S	S	09 34 56.3	+0.1
LIS				A		09 58 31.4	
	comp=Z,2µm,23.7s						
LIS	**Lisbon**	79.88	45	*e*P	P	09 25 02.8	0.0
LIS				*e*S	S	09 34 56.4	+0.2
PMAFR	**Mafra**	79.90	45	*e*P	P	09 25 04.0	+1.1
	comp=Z,193nm,1.4s,mb5.7						
PMAFR				*i* P		09 26 00.2	
PMAFR				*e*S	S	09 35 00.2	+3.7
PBDV	**Barranco-do-Ve**	79.99	47	*i* P	P	09 25 05.0	+1.5
	comp=Z,279nm,1.6s,mb5.8						
PBDV				*e*pP	pP	09 25 34.5	0.0
PBDV				*i* P		09 26 01.2	
PBDV				*e*S	S	09 35 03.2	+5.7
MESJ	**Messejana**	80.08	46	*e*P	P	09 25 03.9	0.0
MESJ				*e*S	S	09 34 58.3	-0.1
MESJ				*e*S	S	09 34 58.4	0.0
MESJ				AMS	AMS	09 59 35.0	
	comp=Z,2µm,20.6s						
MESJ	**Messejana**	80.08	46	*e*P	P	09 25 03.9	0.0
MESJ				*e*S	S	09 34 58.3	-0.1
MESJ				A		09 59 35.0	
	comp=Z,2µm,20.6s						
MESJ	**Messejana**	80.08	46	*e*P	P	09 25 03.8	-0.1
MESJ				*e*S	S	09 34 58.2	-0.2
PCVE	**Castro Verde**	80.11	46	*i* P	P	09 25 05.4	+1.3
	comp=Z,266nm,1.4s,mb5.9						
PCVE				*e*pP	pP	09 25 34.7	-0.4
PCVE				*i* P		09 26 01.6	
PCVE				*e*S	S	09 35 02.5	+3.8
PVAQ	**Vaqueiros**	80.22	47	*i* P	P	09 25 05.8	+1.1
	comp=Z,258nm,1.9s,mb5.7						
PVAQ				*e*pP	pP	09 25 38.1	+2.4
PVAQ				*i* P		09 26 02.5	
PVAQ				*e*S	S	09 35 03.4	+3.5
PBEJ	**Beja**	80.42	46	*i* P	P	09 25 07.0	+1.3
	comp=Z,225nm,1.5s,mb5.8						
PBEJ				*i* P		09 26 03.1	
EGRO	**El Granado**	80.45	47	P	P	09 25 06.1	+0.2
	comp=Z,33nm,0.8s,mb5.2						
EVOP	**Sao Brissos**	80.48	45	*e*P	P	09 25 06.1	+0.1
EVOP				*e*S	S	09 35 02.4	-0.2
EVOP				*e*S	S	09 35 02.5	-0.1
EVOP				AMS	AMS	09 58 09.5	
	comp=Z,3µm,20.5s						
EVOP	**Sao Brissos**	80.48	45	*e*P	P	09 25 06.1	+0.1
EVOP				*e*S	S	09 35 02.3	-0.2
EVO	**Evora**	80.56	45	⇑*i*P	P	09 25 07.1	+0.6
	comp=Z,221nm,1.0s,mb5.6						
EVO				*e*MLR	MLR		
	comp=Z,4µm,21.0s						
EVO	**Evora**	80.56	45	*i* P	P	09 25 07.4	+0.9
	comp=Z,220nm,1.7s,mb5.7						
EVO				*e*pP	pP	09 25 38.5	+1.0
EVO				*i* P		09 26 03.7	
SBA	**Scott Base**	80.73	191	*e*P	P	09 25 06.7	-0.1
SBA				pmax	pmax		
	comp=Z,296nm,1.4s,mb5.9						
SBA	**Scott Base**	80.73	191	*e*P	P	09 25 06.7	-0.1
	comp=Z,296nm,1.4s,mb5.9						
PESTR	**Estremoz**	81.01	45	*i* P	P	09 25 09.8	+0.9
	comp=Z,232nm,1.8s,mb5.7						
PESTR				*e*pP	pP	09 25 42.3	+2.3
PESTR				*i* P		09 26 06.1	
PESTR				*e*S	S	09 35 10.7	+2.7
PBAR	**Barrancos**	81.06	46	*i* P	P	09 25 10.1	+1.0
	comp=Z,149nm,1.6s,mb5.6						
PBAR				*i* P		09 26 06.4	
PBAR				*e*S	S	09 35 10.7	+2.1
EMIN	**Mina Concepcio**	81.12	47	P	P	09 25 08.8	-0.7
	comp=Z,71nm,1.1s,mb5.4						
ESPR	**Espera**	81.28	48	P	P	09 25 10.5	+0.2
	comp=Z,35nm,0.9s,mb5.2						
EJIF	**Jimena Fronter**	81.37	48	P	P	09 25 11.6	+0.8
EJIF				pmax	pmax		
	comp=Z,209nm,1.3s,mb5.8						
EJIF	**Jimena Fronter**	81.37	48	P	P	09 25 11.6	+0.8
	comp=Z,209nm,1.3s,mb5.8						
PMRV	**Marv??o**	81.42	45	*e*P	P	09 25 11.4	+0.4
	comp=Z,59nm,1.5s,mb5.2						
PMRV				*e*S	S	09 35 14.4	+2.2
PCBR	**Castelo Branco**	81.56	45	*i* P	P	09 25 12.2	+0.5
	comp=Z,134nm,1.4s,mb5.6						
PCBR				*e*pP	pP	09 25 44.6	+1.7
PCBR				*i* P		09 26 08.3	
KOMG	**Komaggas**	81.58	119	⇓*i*P	P	09 25 12.8	+0.6
KOMG				AMb	AMB	09 25 15.2	
	comp=Z,218nm,1.4s,mb5.8						
PVIS	**Viseu**	81.70	44	*e*P	P	09 25 13.1	+0.6
	comp=Z,174nm,1.7s,mb5.6						
PVIS				*i* P		09 26 09.2	
MTE	**Manteigas**	81.78	44	*i* P	P	09 25 13.4	+0.5
	comp=Z,159nm,1.6s,mb5.6						
MTE				*e*pP	pP	09 25 46.0	+2.0
MTE				*i* P		09 26 09.9	
MTE				*e*S	S	09 35 18.1	+2.2
MTE	**Manteigas**	81.78	44	*e*P	P	09 25 12.5	-0.4
	comp=Z,164nm,1.3s,mb5.7						
EMIJ	**Mijas**	81.92	48	P	P	09 25 12.9	-0.8
	comp=Z,52nm,0.7s,mb5.5						
PVRL	**Vila Real**	82.09	43	*e*P	P	09 25 15.3	+0.8
PVRL				*e*pP	pP	09 25 47.9	+2.2
PVRL				*i* P		09 26 11.5	
PCAB	**Cabril**	82.10	43	*i* P	P	09 25 15.1	+0.6
	comp=Z,228nm,1.6s,mb5.8						
PCAB				*i* P		09 26 11.3	
EMAZ	**Mazaricos**	82.11	41	P	P	09 25 13.9	-0.6
	comp=Z,33nm,0.8s,mb5.2						
ELOB	**Lobios**	82.16	43	P	P	09 25 14.0	-0.8
	comp=Z,94nm,1.2s,mb5.5						
ELIM	**Elim**	82.30	124	*e*P	P	09 25 16.0	+0.1
ELIM				AMb	AMB	09 25 18.3	
	comp=Z,9µm,1.7s,mb7.3						
STS	**Santiago**	82.35	41	P	P	09 25 15.8	0.0
STS				pmax	pmax		
	comp=Z,85nm,1.0s,mb5.5						
STS	**Santiago**	82.35	41	P	P	09 25 15.8	0.0
	comp=Z,85nm,1.0s,mb5.5						
MVO	**Moncorvo**	82.49	44	*i* P	P	09 25 17.4	+0.8
	comp=Z,217nm,1.6s,mb5.7						
MVO				*e*pP	pP	09 25 49.5	+1.7
MVO				*i* P		09 26 13.8	
MVO				*e*S	S	09 35 26.0	+2.8
MVO	**Moncorvo**	82.49	44	P	P	09 25 16.8	+0.2
RAR	**Rarotonga**	82.57	250	P	P	09 25 17.0	-0.5
	comp=Z,30nm,0.9s,mb5.1,baz=170,slow=7.9,SNR=2.6						
RAR	**Rarotonga**	82.57	250	P	P	09 25 17.0	-0.5
RAR				pmax	pmax		
	comp=Z,30nm,0.9s						
SYO	**Syowa Base**	82.58	160	⇑*i*P	P	09 25 14.6	-2.0
EPLA	**Plasencia**	82.61	45	P	P	09 25 16.9	-0.3
EPLA				pmax	pmax		
	comp=Z,138nm,1.1s,mb5.7						
EPLA	**Plasencia**	82.61	45	P	P	09 25 16.9	-0.3
	comp=Z,138nm,1.1s,mb5.7						
ELOJ	**Sierra Loja**	82.63	48	P	P	09 25 18.7	+1.3
ELOJ				pmax	pmax		
	comp=Z,183nm,0.8s,mb6.0						
ELOJ	**Sierra Loja**	82.63	48	P	P	09 25 18.7	+1.3
	comp=Z,183nm,0.8s,mb6.0						
ELUQ	**Luque**	82.73	48	P	P	09 25 18.9	+1.0
ELUQ				pmax	pmax		
	comp=Z,707nm,2.5s,mb6.0						
ELUQ	**Luque**	82.73	48	P	P	09 25 18.9	+1.0
	comp=Z,707nm,2.5s,mb6.0						
EADA	**Adamuz**	82.78	47	P	P	09 25 17.7	-0.5
	comp=Z,28nm,0.6s,mb5.3						
ERON	**Agron**	82.82	48	P	P	09 25 19.3	+0.9
	comp=Z,56nm,0.6s,mb5.6						
EALB	**Alboran**	82.91	50	P	P	09 25 18.5	-0.4
	comp=Z,94nm,0.6s,mb5.8						
EGUA	**Guajares**	82.91	49	P	P	09 25 18.4	-0.4
EGUA				pmax	pmax		
	comp=Z,374nm,1.0s,mb6.2						
EGUA	**Guajares**	82.91	49	P	P	09 25 18.4	-0.5
	comp=Z,374nm,1.0s,mb6.2						
PBRG	**Braganca**	82.99	43	*e*P	P	09 25 20.1	+1.0
	comp=Z,286nm,1.9s,mb5.8						
PBRG				*i* P		09 26 16.1	
ERUA	**La Rua**	83.01	42	P	P	09 25 19.3	+0.1
ERUA				pmax	pmax		
	comp=Z,271nm,1.1s,mb6.0						
ERUA	**La Rua**	83.01	42	P	P	09 25 19.3	+0.1
	comp=Z,270nm,1.1s,mb6.0					

comp=Z,88nm,0.6s,mb5.8
GUD Guadarrama 84.18 45 P **P 09 25 26.1 +0.9**
comp=Z,88nm,0.6s,mb5.8
TSUM Tsumeb 84.26 108 *e*P **P 09 25 26.8 +0.6**
comp=Z,317nm,1.1s,mb6.1
EVIA Vianos 84.45 47 P **P 09 25 27.3 +0.7**
EVIA pmax pmax
comp=Z,145nm,0.6s,mb6.0
EVIA Vianos 84.45 47 P **P 09 25 27.3 +0.6**
comp=Z,145nm,0.6s,mb6.0
USTO Oran 84.66 51 P **P 09 25 34.5 +6.7**
EARI Arriondas 84.69 42 P **P 09 25 27.2 -0.5**
comp=Z,43nm,0.9s,mb5.4
TAM Tamanrasset 84.83 65 *e*P **P 09 25 30.5 +1.6**
TAM pmax pmax
comp=Z,267nm,1.3s,mb6.0
TAM Tamanrasset 84.83 65 *e*P **P 09 25 30.5 +1.6**
comp=Z,267nm,1.3s,mb6.0
EMUR La Murta 85.02 49 P **P 09 25 28.8 -0.8**
comp=Z,24nm,0.6s,mb5.3
UPI Upington 85.13 118⇓*i*P **P 09 25 31.2 +0.8**
UPI AMb AMB 09 25 33.4
comp=Z,696nm,1.5s,mb6.4
YKA Yellowknife Ar 85.13 342 P **P 09 25 28.5 -0.9**
comp=Z,40nm,0.6s,mb5.5,baz=136,slow=5.1,SNR=86
ETOB Tobarra 85.13 48 P **P 09 25 29.3 -0.8**
comp=Z,116nm,0.8s,mb5.9
OJGS Djebel Guires 85.54 51 P **P 09 25 34.0 +1.8**
OKGL Djebel Kef Gue 85.67 51 P **P 09 25 35.0 +2.2**
ETOR Torete 85.69 46 P **P 09 25 33.2 +0.4**
ETOR pmax pmax
comp=Z,99nm,0.5s,mb6.0
ETOR Torete 85.69 46 P **P 09 25 33.2 +0.4**
comp=Z,99nm,0.5s,mb6.0
ELAN Lanestosa 85.81 43 P **P 09 25 33.4 0.0**
comp=Z,53nm,1.0s,mb5.4
ETRT Tiaret 85.91 52 P **P 09 25 35.4 +1.4**
EANR 'Ain N'Sour 85.98 51 P **P 09 25 35.7 +1.4**
VAL Valentia 86.03 33⇓*i*P **P 09 25 37.4 +3.2**
VAL Valentia 86.03 33⇓*i*S S 09 35 52.8 -5.2
PKA Prieska 86.04 120⇓*i*P **P 09 25 34.5 -0.4**
PKA AMb AMB 09 25 37.4
comp=Z,89nm,1.8s,mb5.4
EBEN Beniarda 86.10 48 P **P 09 25 34.5 -0.4**
comp=Z,20nm,0.7s,mb5.2
ECHA Ech Chlef 86.25 51 P **P 09 25 37.0 +1.3**
EBNR Beni Rached 86.43 51 P **P 09 25 37.9 +1.4**
EMOS Mosqueruela 86.60 46 P **P 09 25 37.7 +0.5**
comp=Z,17nm,0.6s,mb5.2
EALK Alkurruntz 87.08 44 P **P 09 25 39.7 +0.2**
comp=Z,64nm,1.3s,mb5.4
ESAC San Caprasio 87.16 45 P **P 09 25 40.4 +0.4**
comp=Z,86nm,0.7s,mb5.8
SJPF Ste Jean 87.22 44⇑*i*P **P 09 25 40.9 +0.7**
comp=Z,89nm,0.8s,mb5.4
SJPF Ste Jean 87.22 44⇑*i*P **P 09 25 40.9 +0.7**
SJPF pmax pmax
comp=Z,44nm,0.8s,mb5.4
SJPF Ste Jean 87.22 44⇑*i*P **P 09 25 40.9 +0.7**
comp=Z,44nm,0.8s,mb5.5
EIBI Ibiza 87.35 48 P **P 09 25 41.3 +0.4**
comp=Z,41nm,0.7s,mb5.5
LARF Larrau 87.35 44 *e*P **P 09 25 41.7 +0.9**
ERTA Horta de San J 87.40 46 P **P 09 25 41.4 +0.3**
comp=Z,34nm,0.8s,mb5.3
EMHD Djebel Mahouad 87.46 51 P **P 09 25 41.5 0.0**
SOE Somerset East 87.48 123⇓*i*P **P 09 25 42.1 +0.3**
SOE AMb AMB 09 25 43.3
comp=Z,145nm,1.3s,mb5.8
ETSF Etsaut 87.58 44⇑*i*P **P 09 25 42.6 +0.7**
comp=Z,144nm,0.8s,mb5.8
ETSF Etsaut 87.58 44⇑*i*P **P 09 25 42.6 +0.7**
ETSF pmax pmax
comp=Z,72nm,0.8s,mb5.8
ETSF Etsaut 87.58 44⇑*i*P **P 09 25 42.6 +0.7**
comp=Z,72nm,0.8s,mb5.8
BST Brest 87.70 38 *e*P **P 09 25 42.4 0.0**
ABA Alger-Bouzarea 87.74 51 P **P 09 25 43.1 +0.2**
REYF Montagne du Re 87.76 44 *e*P **P 09 25 43.4 +0.6**
ADJB Djebel Djouab 87.81 52 P **P 09 25 44.2 +1.0**
CRAG Craig 87.86 330 *e*P **P 09 25 44.4 +1.5**
comp=Z,119nm,1.4s,mb5.7
EBIE Bielsa 87.96 45 P **P 09 25 43.8 +0.1**
comp=Z,101nm,0.6s,mb6.0
VIEF Viey 87.96 44 *e*P **P 09 25 44.5 +0.8**
HVD Gariep Dam 88.05 121⇓*i*P **P 09 25 44.7 +0.1**
HVD AMb AMB 09 25 47.1
comp=Z,248nm,1.4s,mb6.0
GRM Grahamstown 88.06 124 *e*P **P 09 25 42.9 -1.6**
GRM AMb AMB 09 25 45.2
comp=Z,113nm,1.4s,mb5.7
LABF Labassere 88.06 44 *e*P **P 09 25 44.8 +0.6**
QUIF Quistinic 88.07 39⇑*i*P **P 09 25 43.7 -0.4**
comp=Z,215nm,1.3s,mb5.7
QUIF *e*pP pP 09 26 14.5 -1.2
QUIF Quistinic 88.07 39⇑*i*P **P 09 25 43.7 -0.4**
QUIF *e**PP pP 09 26 14.5 -1.2
QUIF pmax pmax
comp=Z,108nm,1.3s,mb5.7
QUIF Quistinic 88.07 39⇑*i*P **P 09 25 43.7 -0.4**
comp=Z,108nm,1.3s,mb5.7
QUIF *e*pP pP 09 26 14.5 -1.2
EPOB Poblet 88.07 46 P **P 09 25 44.4 +0.1**
comp=Z,23nm,0.9s,mb5.2
DLBC Dease Lake 88.10 333 *e*P **P 09 25 44.6 +0.6**
AKET Djebel Ketaf 88.10 52 P **P 09 25 45.6 +1.0**
RESF Ens 88.14 44 *e*P **P 09 25 45.6 +1.0**
ROSF Rostrenen 88.19 38⇑*i*P **P 09 25 44.4 -0.3**
comp=Z,229nm,1.2s,mb5.8
ROSF Rostrenen 88.19 38⇑*i*P **P 09 25 44.4 -0.3**
ROSF pmax pmax
comp=Z,114nm,1.2s,mb5.8
ROSF Rostrenen 88.19 38⇑*i*P **P 09 25 44.4 -0.3**
comp=Z,114nm,1.2s,mb5.8
EPF Esparros 88.23 44⇑*i*P **P 09 25 45.6 +0.6**
comp=Z,102nm,0.9s,mb5.5
EPF Esparros 88.23 44⇑*i*P **P 09 25 45.6 +0.6**
EPF pmax pmax
comp=Z,51nm,0.9s,mb5.5
EPF Esparros 88.23 44⇑*i*P **P 09 25 45.6 +0.6**
comp=Z,51nm,0.9s,mb5.5
ATAF Djebel Tarf 88.34 52 P **P 09 25 46.0 +0.3**
BOSA Boshof 88.44 119 P **P 09 25 46.5 0.0**
comp=Z,65nm,0.9s,mb5.7,baz=258,slow=4.7,SNR=38
BOSA LR LR 10 01 40.4
comp=Z,1μm,20.2s,baz=254,slow=33
BOSA Boshof 88.44 119 *e*P **P 09 25 46.4 0.0**
BOSA pmax pmax
comp=Z,131nm,1.2s,mb5.8
BOSA Boshof 88.44 119 *e*P **P 09 25 46.4 0.0**
comp=Z,131nm,1.2s,mb5.8
BOSA Boshof 88.44 119⇓*i*P **P 09 25 45.9 -0.6**
BOSA AMb AMB 09 25 47.8
comp=Z,128nm,1.1s,mb5.8
MELF Melles 88.45 45 *e*P **P 09 25 47.0 +0.9**
CSOR Sort 88.51 45 P **P 09 25 45.9 -0.5**
comp=Z,69nm,0.8s,mb5.7
SGMF Saint Gilles 88.58 39⇑*i*P **P 09 25 46.1 -0.4**
comp=Z,132nm,1.3s,mb5.5
SGMF Saint Gilles 88.58 39⇑*i*P **P 09 25 46.1 -0.4**
SGMF pmax pmax
comp=Z,66nm,1.3s,mb5.5
SGMF Saint Gilles 88.58 39⇑*i*P **P 09 25 46.1 -0.4**
comp=Z,66nm,1.3s,mb5.5
EMIR Miracle 88.60 46 P **P 09 25 46.4 -0.4**
comp=Z,31nm,0.8s,mb5.4
ETOS Mallorca 88.69 48 P **P 09 25 46.4 -0.8**
comp=Z,26nm,0.8s,mb5.3
SALF Salau 88.70 45 *e*P **P 09 25 48.3 +1.1**
MLS Moulis 88.71 45 *e*P **P 09 25 46.5 -0.8**
AKF Akfadou 88.83 51 P **P 09 25 49.5 +1.5**
SWZ Schweizer 88.92 118⇓*i*P **P 09 25 48.6 -0.2**
SWZ AMb AMB 09 25 50.2
comp=Z,115nm,1.4s,mb5.7
BORG Borgarnes 89.10 19 *e*P **P 09 25 50.8 +2.2**
BORG pmax pmax
comp=Z,532nm,1.8s
BORG Borgarnes 89.10 19 *e*P **P 09 25 50.8 +2.2**
comp=Z,532nm,1.8s,mb6.3
CLLI Llivia 89.12 45 P **P 09 25 48.7 -0.5**
VALF Valcebollere 89.12 45 *e*P **P 09 25 50.0 +0.8**
CFON Fontmartina 89.17 46 P **P 09 25 49.2 -0.2**
comp=Z,25nm,0.8s,mb5.3
LFF La Frestale 89.26 43⇑*i*P **P 09 25 49.7 -0.1**
comp=Z,272nm,0.9s,mb6.0
LFF *e*pP pP 09 26 20.5 -0.9

LFF La Frestale 89.26 43⇑*i*P **P 09 25 49.7 -0.1**
LFF *e**PP pP 09 26 20.5 -0.9
LFF pmax pmax
comp=Z,136nm,0.9s,mb6.0
LFF La Frestale 89.26 43⇑*i*P **P 09 25 49.7 -0.1**
comp=Z,136nm,0.9s,mb6.0
LFF *e*pP pP 09 26 20.5 -0.9
CARF Carcanieres 89.30 45 *e*P **P 09 25 50.6 +0.5**
MFF Saint Martin d 89.36 41⇑*i*P **P 09 25 50.1 -0.1**
comp=Z,112nm,0.8s,mb5.7
MFF Saint Martin d 89.36 41⇑*i*P **P 09 25 50.1 -0.1**
MFF pmax pmax
comp=Z,56nm,0.8s,mb5.7
MFF Saint Martin d 89.36 41⇑*i*P **P 09 25 50.1 -0.1**
comp=Z,56nm,0.8s,mb5.7
GMM Mts of Mourne 89.43 32 P **P 09 25 50.2 -0.1**
GMM Mts of Mourne 89.43 32⇑*e*P **P 09 25 50.2 -0.1**
FILF Fillols 89.56 45 *e*P **P 09 25 51.4 +0.2**
MTLF Montolieu 89.62 45⇑*i*P **P 09 25 51.4 -0.1**
comp=Z,111nm,0.9s,mb5.7
MTLF Montolieu 89.62 45⇑*i*P **P 09 25 51.4 -0.1**
MTLF pmax pmax
comp=Z,56nm,0.9s,mb5.7
MTLF Montolieu 89.62 45⇑*i*P **P 09 25 51.4 -0.1**
comp=Z,56nm,0.9s,mb5.7
GRR Gorron 89.66 39⇑*i*P **P 09 25 51.1 -0.5**
comp=Z,157nm,0.8s,mb5.9
GRR Gorron 89.66 39⇑*i*P **P 09 25 51.1 -0.5**
GRR pmax pmax
comp=Z,79nm,0.8s,mb5.9
GRR Gorron 89.66 39⇑*i*P **P 09 25 51.1 -0.5**
comp=Z,79nm,0.8s,mb5.9
YRC Rhoscolyn 89.69 34 P **P 09 25 50.9 -0.7**
YRC Rhoscolyn 89.69 34 *e*P **P 09 25 50.9 -0.7**
EJON La Jonquera 89.74 46 P **P 09 25 51.0 -1.1**
comp=Z,39nm,1.0s,mb5.5
DFRA Djebel Bou Aff 89.79 52 P **P 09 25 43.5 -9.0**
DFRA P 09 25 53.5
LBTB Lobatse 89.80 116 *e*P **P 09 25 53.4 +0.5**
LBTB pmax pmax
comp=Z,157nm,1.2s,mb6.0
LBTB Lobatse 89.80 116 *e*P **P 09 25 53.4 +0.5**
comp=Z,157nm,1.2s,mb6.0
LBTB Lobatse 89.80 116⇓*i*P **P 09 25 53.0 +0.1**
LBTB AMb AMB 09 25 55.4
comp=Z,189nm,1.6s,mb6.0
HTR Trewern Hill 89.86 35 P **P 09 25 51.9 -0.5**
HTR Trewern Hill 89.86 35⇑*e*P **P 09 25 51.9 -0.5**
RJF Les Rejaudoux 89.91 43⇑*i*P **P 09 25 52.6 -0.2**
comp=Z,107nm,0.8s,mb5.7
RJF *e*pP pP 09 26 23.2 -1.3
RJF *e*MLR MLR
comp=Z,2μm,19.2s
RJF Les Rejaudoux 89.91 43⇑*i*P **P 09 25 52.6 -0.2**
RJF *e**PP pP 09 26 23.2 -1.3
RJF pmax pmax
comp=Z,54nm,0.8s,mb5.7
RJF MLR MLR
comp=Z,2μm,19.3s
RJF Les Rejaudoux 89.91 43⇑*i*P **P 09 25 52.6 -0.2**
comp=Z,54nm,0.8s,mb5.7
RJF *e*pP pP 09 26 23.2 -1.3
RJF LR LR
comp=Z,2μm,19.3s
HGH Gray Hill 89.92 36 P **P 09 25 52.1 -0.6**
HGH Gray Hill 89.92 36 *e*P **P 09 25 52.1 -0.6**
MCH1 Michaelchurch 89.98 35 P **P 09 25 52.3 -0.7**
MCH1 AMb AMB 09 25 54.5
comp=Z,108nm,3.1s
MCH1 Michaelchurch 89.98 35⇑*e*P **P 09 25 52.3 -0.7**
MCH1 AMb AMB 09 25 54.5
comp=Z,108nm,3.1s
CTEI Djebel Teioual 90.03 52 P **P 09 25 54.4 +0.8**
WPM1 Penmaenmawr 90.05 34 P **P 09 25 52.2 -1.1**
WPM1 Penmaenmawr 90.05 34 *e*P **P 09 25 52.2 -1.1**
CAF Calviac 90.12 43⇑*i*P **P 09 25 53.8 0.0**
comp=Z,106nm,0.8s,mb5.7
CAF Calviac 90.12 43⇑*i*P **P 09 25 53.8 0.0**
CAF pmax pmax
comp=Z,53nm,0.8s,mb5.7
CAF Calviac 90.12 43⇑*i*P **P 09 25 53.8 0.0**
comp=Z,53nm,0.8s,mb5.7
CASM Ain Smara 90.16 52 P **P 09 25 54.8 +0.6**
LDF La Druitiere 90.19 39⇑*i*P **P 09 25 53.6 -0.5**
comp=Z,80nm,0.8s,mb5.6
LDF *e*pP pP 09 26 24.3 -1.4
LDF La Druitiere 90.19 39⇑*i*P **P 09 25 53.6 -0.5**
LDF *e**PP pP 09 26 24.3 -1.4
LDF pmax pmax
comp=Z,40nm,0.8s,mb5.6
LDF La Druitiere 90.19 39⇑*i*P **P 09 25 53.6 -0.5**
comp=Z,40nm,0.8s,mb5.6
LDF *e*pP pP 09 26 24.3 -1.4
MAW Mawson 90.35 164 *e*P **P 09 25 54.2 -0.4**
comp=Z,130nm,1.4s,mb5.9
MAW *e*pP pP 09 26 25.5 -0.7
MAW *e*SKS 09 36 11.8
MAW Mawson 90.35 164 P **P 09 25 54.2 -0.3**
comp=Z,124nm,0.9s,mb6.1,baz=218,slow=5.9,SNR=162
MAW pP pP 09 26 24.2 -2.0
comp=Z,23nm,0.7s,baz=217,slow=6.9,SNR=2.4
MAW PKPPKP 09 51 28.6
comp=Z,2.1nm,0.9s,baz=57,slow=2.6,SNR=3.5
MAW LR LR 10 08 14.8
comp=Z,1μm,18.5s,baz=222,slow=37
MAW Mawson 90.35 164 P **P 09 25 54.2 -0.4**
MAW *PP pP 09 26 24.2 -2.0
MAW pmax pmax
comp=Z,124nm,0.9s
MAW pmax pmax
comp=Z,23nm,0.7s
MAW pmax pmax
comp=Z,2.0nm,0.9s
MAW MLR MLR
comp=Z,1μm,18.5s
MAW Mawson 90.35 164 *e*P **P 09 25 54.2 -0.4**
comp=Z,70nm,1.2s,mb5.7
GAL1 Galloway 90.37 32 P **P 09 25 54.2 -0.5**
GAL1 AMb AMB 09 25 55.1
comp=Z,63nm,1.6s,mb5.5
GAL1 Galloway 90.37 32 *e*P **P 09 25 54.2 -0.5**
GAL1 AMb AMB 09 25 55.1
comp=Z,63nm,1.6s,mb5.5
CKFL Kef-Lekhel 90.38 52 P **P 09 25 56.3 +1.1**
CAEH 'Ain El Ouahch 90.60 52 P **P 09 25 58.5 +2.2**
FRNF Fournols 90.62 43 *e*P **P 09 25 56.3 +0.2**
KSR Koster 90.66 117 *e*P **P 09 25 58.0 +1.0**
KSR AMb AMB 09 26 01.4
comp=Z,39nm,1.7s,mb5.3
TCF Toulx Ste Croi 90.74 42⇑*i*P **P 09 25 56.2 -0.5**
comp=Z,109nm,0.9s,mb5.7
TCF *e*pP pP 09 26 27.0 -1.3
TCF Toulx Ste Croi 90.74 42⇑*i*P **P 09 25 56.2 -0.5**
TCF *e**PP pP 09 26 27.0 -1.3
TCF pmax pmax
comp=Z,55nm,0.9s,mb5.7
TCF Toulx Ste Croi 90.74 42⇑*i*P **P 09 25 56.2 -0.5**
comp=Z,55nm,0.9s,mb5.7
TCF *e*pP pP 09 26 27.0 -1.3
GCD Castle Douglas 90.76 32 P **P 09 25 55.4 -1.2**
GCD Castle Douglas 90.76 32 *e*P **P 09 25 55.4 -1.2**
XDE Dent Fell 90.83 33 P **P 09 25 56.8 -0.1**
XDE Dent Fell 90.83 33 *e*P **P 09 25 56.8 -0.1**
RRH Rhenigidale 90.86 29 P **P 09 25 56.8 -0.1**
RRH Rhenigidale 90.86 29⇑*e*P **P 09 25 56.8 -0.1**
SKAG Skagway 90.96 333 *e*P **P 09 25 57.8 +0.4**
comp=Z,168nm,1.6s,mb5.9
CMAH Djebel Manchou 90.98 52 P **P 09 25 58.3 +0.3**
LASF Ste Croix 91.00 44⇑*i*P **P 09 25 58.3 +0.4**
comp=Z,158nm,1.3s,mb5.7
LASF *e*pP pP 09 26 29.1 -0.5
LBL Lubilhac 91.01 43 *e*P **P 09 25 59.4 +1.4**
PYM Petit Puy Mans 91.05 43 *e*P **P 09 25 59.4 +1.3**
KPL Plockton 91.07 30 P **P 09 25 57.5 -0.4**
KPL AMb AMB 09 25 58.3
comp=Z,99nm,1.1s,mb5.8
KPL Plockton 91.07 30 *e*P **P 09 25 57.5 -0.4**
KPL AMb AMB 09 25 58.3
comp=Z,99nm,1.1s,mb5.8
SUMG Summit 91.08 10 *e*P **P 09 25 58.9 +1.3**
comp=Z,437nm,1.0s,mb6.5
SUMG Summit 91.08 10 *i*P **P 09 25 58.8 +1.2**
SUMG *i* pP 09 26 30.8 +1.5
SUMG *i* 09 36 17.5
SUMG

comp=Z,900nm,19.0s
KSB Sheil Bridge 91.12 30 P **P 09 25 56.9 -1.2**
KSB Sheil Bridge 91.12 30 *e*P **P 09 25 56.9 -1.2**
CWF Charnwood Fore 91.23 35 P **P 09 25 57.9 -0.8**
CWF AMb AMB 09 25 59.3
comp=Z,74nm,1.1s,mb5.7
CWF Charnwood Fore 91.23 35 *e*P **P 09 25 57.9 -0.8**
CWF AMb AMB 09 25 59.3
comp=Z,74nm,1.1s,mb5.7
AGO Saint Agoulin 91.24 42 *e*P **P 09 25 59.9 +0.9**
RRR Rubha Reidh 91.24 29 P **P 09 25 57.9 -0.8**
RRR Rubha Reidh 91.24 29 *e*P **P 09 25 57.9 -0.8**
BGF Bois d'Agland 91.25 42⇑*i*P **P 09 25 58.8 -0.2**
comp=Z,222nm,0.9s,mb6.0
BGF *e*pP pP 09 26 29.5 -1.2
BGF Bois d'Agland 91.25 42⇑*i*P **P 09 25 58.8 -0.2**
BGF *e**PP pP 09 26 29.5 -1.2
BGF pmax pmax
comp=Z,111nm,0.9s,mb6.0
BGF Bois d'Agland 91.25 42⇑*i*P **P 09 25 58.8 -0.2**
comp=Z,111nm,0.9s,mb6.0
BGF *e*pP pP 09 26 29.5 -1.2
KSD Kokstad 91.28 122⇓*i*P **P 09 25 59.6 -0.1**
KSD AMb AMB 09 26 01.6
comp=Z,263nm,1.1s,mb6.3
KAC Achnashellach 91.31 30 P **P 09 25 58.7 -0.3**
KAC Achnashellach 91.31 30⇑*e*P **P 09 25 58.7 -0.3**
ECK Cauldkaine Hil 91.32 32 P **P 09 25 58.3 -0.8**
ECK Cauldkaine Hil 91.32 32⇑*e*P **P 09 25 58.3 -0.8**
KBI1 Birley Grange 91.33 34 P **P 09 25 59.0 -0.2**
KBI1 Birley Grange 91.33 34⇑*e*P **P 09 25 59.0 -0.2**
ESK Eskdalemuir 91.34 32 P **P 09 25 57.8 -1.5**
ESK AMb AMB 09 26 00.2
comp=Z,68nm,2.3s,mb5.4
ESK Eskdalemuir 91.34 32 *e*P **P 09 25 57.8 -1.5**
ESK AMb AMB 09 26 00.2
comp=Z,68nm,2.3s,mb5.4
ESK Eskdalemuir 91.34 32 *i*P **P 09 25 59.5 +0.3**
ESK Eskdalemuir 91.34 32 *e*P **P 09 25 58.9 -0.4**
comp=Z,344nm,2.3s,mb6.1
PLDF La Plantade 91.53 42 *e*P **P 09 26 01.5 +1.2**
EBH Black Hill 91.61 31 P **P 09 26 00.1 -0.3**
EBH Black Hill 91.61 31 *e*P **P 09 26 00.1 -0.3**
EBL Broad Law 91.63 32 P **P 09 26 00.8 +0.3**
EBL Broad Law 91.63 32 *e*P **P 09 26 00.8 +0.3**
RES Resolute Bay 91.65 354 *e*P **P 09 26 00.8 +0.5**
RES pmax pmax
comp=Z,38nm,1.1s,mb5.5
RES Resolute Bay 91.65 354 *e*P **P 09 26 00.8 +0.6**
comp=Z,38nm,1.1s,mb5.5
XAL Allendale 91.66 33 P **P 09 25 59.7 -1.0**
XAL Allendale 91.66 33 *e*P **P 09 25 59.7 -1.0**
AVF Avril sur Loir 91.66 42⇑*i*P **P 09 26 00.3 -0.6**
comp=Z,58nm,0.8s,mb5.6
AVF *e*pP pP 09 26 31.1 -1.5
AVF Avril sur Loir 91.66 42⇑*i*P **P 09 26 00.3 -0.6**
AVF *e**PP pP 09 26 31.1 -1.5
AVF pmax pmax
comp=Z,29nm,0.8s,mb5.6
AVF Avril sur Loir 91.66 42⇑*i*P **P 09 26 00.3 -0.6**
comp=Z,29nm,0.8s,mb5.6
AVF *e*pP pP 09 26 31.1 -1.5
ERPM east rand prop 91.66 118 *e*P **P 09 26 02.2 +0.7**
ERPM AMb AMB 09 26 04.1
comp=Z,133nm,1.5s,mb6.0
MDO Dochfour 91.73 30 P **P 09 26 00.7 -0.3**
MDO Dochfour 91.73 30⇑*e*P **P 09 26 00.7 -0.3**
VIVF Saint-Julien-I 91.82 44⇑*i*P **P 09 26 02.2 +0.5**
comp=Z,210nm,1.3s,mb5.9
VIVF Saint-Julien-I 91.82 44⇑*i*P **P 09 26 02.2 +0.5**
VIVF pmax pmax
comp=Z,105nm,1.3s,mb5.9
VIVF Saint-Julien-I 91.82 44⇑*i*P **P 09 26 02.2 +0.5**
comp=Z,105nm,1.3s,mb5.9
SSF Saint Saulge 91.86 41⇑*i*P **P 09 26 01.1 -0.7**
comp=Z,99nm,1.1s,mb5.7
SSF *e*pP pP 09 26 31.9 -1.6
SSF Saint Saulge 91.86 41⇑*i*P **P 09 26 01.1 -0.7**
SSF *e**PP pP 09 26 31.9 -1.6
SSF pmax pmax
comp=Z,49nm,1.1s,mb5.7
SSF Saint Saulge 91.86 41⇑*i*P **P 09 26 01.1 -0.7**
comp=Z,49nm,1.1s,mb5.7
SSF *e*pP pP 09 26 31.9 -1.6
SSB Saint Sauveur 91.88 43 *e*P **P 09 26 02.3 +0.3**
SSB Saint Sauveur 91.88 43 *e*P **P 09 26 02.8 +0.8**
SSB pmax pmax
comp=Z,35nm,1.1s,mb5.5
SSB Saint Sauveur 91.88 43 *e*P **P 09 26 02.8 +0.8**
comp=Z,36nm,1.1s,mb5.5
SLR Silverton 91.89 117⇓*i*P **P 09 26 02.9 +0.3**
SLR AMb AMB 09 26 04.6
comp=Z,200nm,1.4s,mb6.2
SMF Signal de Mont 91.92 42⇑*i*P **P 09 26 01.8 -0.3**
comp=Z,274nm,1.1s,mb6.1
SMF Signal de Mont 91.92 42⇑*i*P **P 09 26 01.8 -0.3**
SMF pmax pmax
comp=Z,137nm,1.1s,mb6.1
SMF Signal de Mont 91.92 42⇑*i*P **P 09 26 01.8 -0.3**
comp=Z,137nm,1.1s,mb6.1
MVH1 Achvaich 92.04 30 P **P 09 26 02.2 -0.2**
MVH1 Achvaich 92.04 30⇑*e*P **P 09 26 02.2 -0.2**
SMRF Simiane la Rot 92.12 45⇑*i*P **P 09 26 03.9 +0.8**
comp=Z,187nm,1.3s,mb5.8
SMRF *e*pP pP 09 26 34.6 -0.2
SMRF Simiane la Rot 92.12 45⇑*i*P **P 09 26 03.9 +0.8**
comp=Z,187nm,1.3s,mb6.2
SMRF *e*pP pP 09 26 34.6 -0.2
OCF Saint Nazaire 92.14 44 *e*P **P 09 26 03.9 +0.7**
OG26 St.-Nazaire-De 92.14 44 *e*P **P 09 26 03.9 +0.7**
LOR Lormes 92.15 41⇑*i*P **P 09 26 02.5 -0.7**
comp=Z,98nm,1.2s,mb5.6
LOR *e*MLR MLR
comp=Z,1μm,21.5s
LOR Lormes 92.15 41⇑*i*P **P 09 26 02.5 -0.7**
LOR pmax pmax
comp=Z,49nm,1.2s,mb5.6
LOR MLR MLR
comp=Z,1μm,21.5s
LOR Lormes 92.15 41⇑*i*P **P 09 26 02.5 -0.7**
comp=Z,49nm,1.2s,mb5.6
LOR LR LR
comp=Z,1μm,21.5s
KEST Kesra 92.18 54 P **P 09 26 04.3 +0.7**
comp=Z,5.8nm,0.6s,mb5.0,baz=262,slow=3.7,SNR=21
KEST LR LR 10 08 13.1
comp=Z,626nm,19.5s,baz=183,slow=36
KEST Kesra 92.18 54 *e*P **P 09 26 04.3 +0.7**
MCD Coleburn Disti 92.33 30 P **P 09 26 02.8 -1.0**
MCD Coleburn Disti 92.33 30⇑*e*P **P 09 26 02.8 -1.0**
LMR La Mourre 92.54 46⇑*i*P **P 09 26 05.3 +0.2**
comp=Z,142nm,1.2s,mb5.9
LMR La Mourre 92.54 46⇑*i*P **P 09 26 05.3 +0.2**
LMR pmax pmax
comp=Z,71nm,1.2s,mb5.9
LMR La Mourre 92.54 46⇑*i*P **P 09 26 05.3 +0.2**
comp=Z,71nm,1.2s,mb5.9
ORIF Oris-en-Rattie 92.65 44⇑*i*P **P 09 26 06.4 +0.9**
comp=Z,145nm,0.9s,mb6.0
ORIF *e*pP pP 09 26 37.2 0.0
ORIF *e*MLR MLR
comp=Z,4μm,20.2s
ORIF Oris-en-Rattie 92.65 44⇑*i*P **P 09 26 06.4 +0.9**
ORIF *e**PP pP 09 26 37.2 0.0
ORIF pmax pmax
comp=Z,73nm,0.9s,mb6.0
ORIF Oris-en-Rattie 92.65 44⇑*i*P **P 09 26 06.4 +0.9**
comp=Z,73nm,0.9s,mb6.0
ORIF *e*pP pP 09 26 37.2 0.0
FRF La Foret Royal 92.71 45⇑*i*P **P 09 26 06.1 +0.2**
SCO Scoresbysund 92.81 15 *i*P **P 09 26 06.1 +0.4**
SCO *i* pP 09 26 38.1 +0.7
SCO MLR MLR
comp=Z,1μm,21.0s
SCO Scoresbysund 92.81 15 *i*P **P 09 26 06.1 +0.4**
SCO *i* pP 09 26 38.1 +0.7
SCO *i* 09 36 36.1
SCO
comp=Z,1μm,21.0s
CALN Calern 92.94 45 *e*P **P 09 26 07.7 +0.8**
MVIF Mont Vial 93.17 45 *e*P **P 09 26 08.2 +0.2**
MBDF Montbardon 93.18 44 *e*P **P 09 26 08.7 +0.7**
comp=Z,131nm,1.3s,mb5.8
MBDF Montbardon 93.18 44 *e*P **P 09 26 08.7 +0.7**

MBDF pmax pmax
comp=Z,66nm,1.3s,mb5.8
MBDF Montbardon 93.18 44 *e*P **P 09 26 08.7 +0.7**
comp=Z,66nm,1.3s,mb5.8
BNI Bardonecchia 93.23 44 *e*P **P 09 26 09.3 +1.1**
BNI pmax pmax
comp=Z,18nm,1.0s,mb5.4
BNI Bardonecchia 93.23 44 *e*P **P 09 26 09.3 +1.1**
comp=Z,18nm,1.0s,mb5.4
TOUF Mont Tournerai 93.27 45 *e*P **P 09 26 08.2 -0.2**
LUCF Luceram 93.30 45 *e*P **P 09 26 08.4 -0.2**
PZZ Stroppo 93.34 45 P **P 09 26 09.7 +1.0**
MEZF Maizieres J'vi 93.34 40⇑*i*P **P 09 26 08.5 -0.1**
comp=Z,250nm,1.2s,mb6.1
MEZF Maizieres J'vi 93.34 40⇑*i*P **P 09 26 08.5 -0.1**
comp=Z,250nm,1.2s,mb6.4
SBF Sospel 93.35 45 *e*P **P 09 26 09.0 +0.2**
comp=Z,84nm,0.9s,mb5.8
SBF Sospel 93.35 45 *e*P **P 09 26 09.0 +0.2**
SBF pmax pmax
comp=Z,42nm,0.9s,mb5.8
SBF Sospel 93.35 45 *e*P **P 09 26 09.0 +0.2**
comp=Z,42nm,0.9s,mb5.8
CABF La Chapelle 93.36 42⇑*i*P **P 09 26 08.8 0.0**
comp=Z,56nm,1.0s,mb5.5
CABF *e*pP pP 09 26 39.5 -0.9
CABF La Chapelle 93.36 42⇑*i*P **P 09 26 08.8 0.0**
CABF *e**PP pP 09 26 39.5 -0.9
CABF pmax pmax
comp=Z,28nm,1.0s,mb5.5
CABF La Chapelle 93.36 42⇑*i*P **P 09 26 08.8 0.0**
comp=Z,28nm,1.0s,mb5.5
CABF *e*pP pP 09 26 39.5 -0.9
BAIF Baives 93.37 39⇑*i*P **P 09 26 08.5 -0.2**
comp=Z,60nm,1.1s,mb5.5
BAIF Baives 93.37 39⇑*i*P **P 09 26 08.5 -0.2**
BAIF pmax pmax
comp=Z,30nm,1.1s,mb5.5
BAIF Baives 93.37 39⇑*i*P **P 09 26 08.5 -0.2**
comp=Z,30nm,1.1s,mb5.5
AUTN L'Aution 93.39 45 *e*P **P 09 26 10.0 +1.0**
LPL La Plagne 93.42 44⇑*i*P **P 09 26 10.0 +0.9**
comp=Z,96nm,0.9s,mb5.8
LPL *e*pP pP 09 26 40.8 +0.1
LPL La Plagne 93.42 44⇑*i*P **P 09 26 10.0 +0.9**
LPL *e**PP pP 09 26 40.8 +0.1
LPL pmax pmax
comp=Z,48nm,0.9s,mb5.8
LPL La Plagne 93.42 44⇑*i*P **P 09 26 10.0 +0.9**
comp=Z,48nm,0.9s,mb5.8
LPL *e*pP pP 09 26 40.8 +0.1
LPG La Plagne 93.42 44⇑*i*P **P 09 26 10.2 +1.1**
comp=Z,128nm,1.0s,mb5.9
LPG La Plagne 93.42 44⇑*i*P **P 09 26 10.2 +1.1**
LPG pmax pmax
comp=Z,64nm,1.0s,mb5.9
LPG La Plagne 93.42 44⇑*i*P **P 09 26 10.2 +1.1**
comp=Z,64nm,1.0s,mb5.9
SAOF Saorge 93.47 45 *e*P **P 09 26 08.5 -0.9**
SNF Seneffe 93.58 38 P **P 09 26 09.5 -0.1**
comp=Z,48nm,1.8s,mb5.5
SNF AP pP 09 26 42.5 +1.1
DOU Dourbes 93.62 39 P **P 09 26 09.9 +0.1**
comp=Z,66nm,1.9s,mb5.6
RSP Reno Superiore 93.65 44 P **P 09 26 11.1 +1.0**
RSP pmax pmax
comp=Z,157nm,1.6s,mb6.1
RSP Reno Superiore 93.65 44 P **P 09 26 11.1 +1.0**
comp=Z,157nm,1.6s,mb6.1
LSD Lago del Serru 93.66 44 P **P 09 26 11.8 +1.6**
LSD pmax pmax
comp=Z,97nm,1.8s,mb5.8
LSD Lago del Serru 93.66 44 P **P 09 26 11.8 +1.6**
comp=Z,97nm,1.8s,mb5.8
GIVF Givet 93.76 39⇑*i*P **P 09 26 10.4 -0.1**
comp=Z,149nm,1.1s,mb5.9
GIVF Givet 93.76 39⇑*i*P **P 09 26 10.4 -0.1**
GIVF pmax pmax
comp=Z,74nm,1.1s,mb5.9
GIVF Givet 93.76 39⇑*i*P **P 09 26 10.4 -0.1**
comp=Z,74nm,1.1s,mb5.9
THEF They Montfort 93.83 41 *e*P **P 09 26 10.6 -0.3**
HAU Haudompre 93.99 41⇑*i*P **P 09 26 11.3 -0.3**
HAU *e*pP pP 09 26 41.9 -1.4
HAU *e*MLR MLR
comp=Z,2μm,20.8s
HAU Haudompre 93.99 41⇑*i*P **P 09 26 11.3 -0.3**
HAU *e*pP pP 09 26 41.9 -1.4
HAU LR LR
comp=Z,2μm,20.8s
LOMF Lomont 94.08 42 *e*P **P 09 26 11.8 -0.3**
BCLA Clavier 94.16 39 P **P 09 26 12.2 -0.1**
comp=Z,53nm,2.0s,mb5.5
POGA Pongola 94.16 120 *e*P **P 09 26 11.6 -1.4**
POGA AMb AMB 09 26 18.8
comp=Z,88nm,1.5s,mb5.9
HINF Hinteralfeld 94.25 41⇑*i*P **P 09 26 12.3 -0.5**
comp=Z,44nm,1.0s,mb5.5
HINF Hinteralfeld 94.25 41⇑*i*P **P 09 26 12.3 -0.5**
HINF pmax pmax
comp=Z,22nm,1.0s,mb5.4
HINF Hinteralfeld 94.25 41⇑*i*P **P 09 26 12.3 -0.5**
comp=Z,22nm,1.0s,mb5.5
DRV Dumont d'Urvil 94.29 192 P **P 09 26 04.0 -8.8**
DRV Dumont d'Urvil 94.29 192 PP PP 09 30 10.0 +9.5
DRV S SKSac 09 36 40.0 +3.8
DRV L 09 51 00.0
WLF Walferdange 94.42 40 P **P 09 26 14.3 +0.8**
comp=Z,98nm,1.9s,mb5.8
WLF Walferdange 94.42 40 *e*P **P 09 26 13.8 +0.2**
comp=Z,126nm,1.4s,mb6.0
WLF *e*pP pP 09 26 46.6 +1.3
WLF *e*SKSac SKSac 09 36 39.7 +2.5
WLF *e*SP SP 09 38 31.7 +0.6
WLF Walferdange 94.42 40 *e*P **P 09 26 14.0 +0.4**
WLF pmax pmax
comp=Z,182nm,1.6s,mb6.2
WLF Walferdange 94.42 40 *e*P **P 09 26 14.0 +0.5**
comp=Z,182nm,1.6s,mb6.2
MOF Molkenrain 94.44 42 *e*P **P 09 26 13.0 -0.7**
MSNA Messina 94.48 115⇓*i*P **P 09 26 16.1 +1.5**
MSNA AMb AMB 09 26 18.2
comp=Z,225nm,1.5s,mb6.3
BEBN Eben Emael 94.51 38 P **P 09 26 14.5 +0.6**
comp=Z,31nm,1.8s,mb5.4
BBS Basel-Blauen 94.55 42 *e*P **P 09 26 14.1 -0.1**
ECH Echery 94.57 41 *e*P **P 09 26 13.7 -0.6**
ECH Echery 94.57 41 *e*P **P 09 26 13.5 -0.8**
ECH pmax pmax
comp=Z,69nm,1.3s,mb5.9
ECH Echery 94.57 41 *e*P **P 09 26 13.5 -0.8**
comp=Z,69nm,1.3s,mb5.9
MEM Membach 94.64 39 P **P 09 26 15.1 +0.5**
comp=Z,34nm,2.0s,mb5.4
MEM AP pP 09 26 47.6 +1.3
HGN Heimansgroeve 94.65 38 *e*P **P 09 26 10.7 -3.9**
comp=Z,54nm,2.2s,mb5.6
HGN Heimansgroeve 94.65 38 *e*x sP 09 27 09.6 +10
HGN Heimansgroeve 94.65 38 *e*S SKSac 09 36 44.5 +6.1
HGN Heimansgroeve 94.65 38 *e*SP SP 09 38 35.6 +2.0
CDF Champ du Feu 94.71 41⇑*i*P **P 09 26 14.7 -0.2**
comp=Z,110nm,1.2s,mb5.9
CDF Champ du Feu 94.71 41⇑*i*P **P 09 26 14.7 -0.2**
CDF pmax pmax
comp=Z,55nm,1.2s,mb5.9
CDF Champ du Feu 94.71 41⇑*i*P **P 09 26 14.7 -0.2**
comp=Z,55nm,1.2s,mb5.9
DAWY Dawson 94.87 336 *e*P **P 09 26 14.5 -0.7**
INK Inuvik 94.87 341 *e*P **P 09 26 14.6 -0.6**
INK pmax pmax
comp=Z,48nm,1.2s
INK Inuvik 94.87 341 *e*P **P 09 26 14.6 -0.6**
comp=Z,48nm,1.2s,mb5.8
FELD Feldberg im Sc 95.00 42 *e*P **P 09 26 15.8 -0.5**
LSZ Lusaka 95.08 107 *e*P **P 09 26 18.9 +1.5**
LSZ pmax pmax
comp=Z,67nm,1.7s,mb5.8
LSZ Lusaka 95.08 107 *e*P **P 09 26 18.9 +1.5**
comp=Z,67nm,1.7s,mb5.8
LSZ Lusaka 95.08 107 *e*P **P 09 26 18.2 +0.8**
LSZ AMb AMB 09 26 28.8
comp=Z,388nm,1.6s,mb6.6
LSZ Lusaka 95.08 107 P **P 09 26 19.5 +2.1**
SNR=5.7
LANF Langenberg 95.22 41 *e*P **P 09 26 17.0 -0.2**

MOPA Mopani 95.29 116⇓*i*P **P 09 26 19.0 +0.7**
MOPA AMb AMB 09 26 20.9
comp=Z,125nm,1.2s,mb6.2
ABH Alteburg 95.34 40 *e*P **P 09 26 17.4 -0.4**
BFO Black Forest 95.35 41 *e*P **P 09 26 17.4 -0.4**
comp=Z,18nm,1.1s,mb5.4
BFO *e*sP sP 09 27 02.0 -0.5
BFO *e*PP PP 09 30 02.2 -7.9
BFO *e*SKSac SKSac 09 36 45.3 +3.1
BFO *e*SP SP 09 38 43.0 +1.6
BFO Black Forest 95.35 41 *e*P **P 09 26 17.8 0.0**
BFO pmax pmax
comp=Z,19nm,1.0s,mb5.5
BFO Black Forest 95.35 41 *e*P **P 09 26 17.8 -0.1**
comp=Z,19nm,1.0s,mb5.5
TUE Stuetta 95.45 43 *e*P **P 09 26 18.7 +0.4**
comp=Z,41nm,1.1s,mb5.8
KTD Kalmit 95.50 40 *e*P **P 09 26 18.4 -0.1**
WTSB Winterswijk 95.56 38 *e*P **P 09 26 18.3 -0.4**
comp=Z,88nm,1.3s,mb6.0
SPAK Spaichingen-Ko 95.57 42 *e*P **P 09 26 18.4 -0.5**
AFI Afiamalu 95.58 254 P **P 09 26 21.0 +1.2**
comp=Z,26nm,0.8s,mb5.7,baz=308,slow=13,SNR=3.6
AFI Afiamalu 95.58 254 P **P 09 26 21.0 +1.3**
AFI pmax pmax
comp=Z,26nm,0.8s,mb5.7
GSCL Gusciola 95.66 46 P **P 09 26 20.1 +0.7**
comp=Z,268nm,1.9s,mb6.3
BUG Bochum--Univer 95.67 38 *e*P **P 09 26 19.2 0.0**
comp=Z,114nm,1.3s,mb6.1
BUG *e*PP PP 09 30 07.0 -5.4
BUG *e*SKSac SKSac 09 36 46.7 +2.9
BUG *e*SP SP 09 38 46.5 +1.8
EGAK Eagle 95.88 336 *e*P **P 09 26 19.1 -0.7**
comp=Z,26nm,1.0s,mb5.6
URZ Urewera 95.99 228 P **P 09 26 21.1 -0.1**
comp=Z,15nm,1.0s,mb5.4,baz=142,slow=6.2,SNR=3.4
TNS Taunus Mts 96.00 40 *e*P **P 09 26 20.9 +0.1**
comp=Z,94nm,1.2s,mb6.1
TNS *e*pP pP 09 26 53.2 +0.7
TNS *e*sP sP 09 27 04.7 -0.7
TNS *e*SKSac SKSac 09 36 50.6 +5.0
STU Stuttgart 96.03 41 *e*P **P 09 26 20.7 -0.2**
comp=Z,85nm,1.4s,mb6.0
STU *e*PP PP 09 30 12.3 -3.0
STU *e*SKSac SKSac 09 36 49.3 +3.5
STU *e*SP SP 09 38 50.7 +1.9
STU Stuttgart 96.03 41 *e*P **P 09 26 21.2 +0.3**
STU pmax pmax
comp=Z,35nm,0.8s,mb5.8
STU Stuttgart 96.03 41 *e*P **P 09 26 21.2 +0.3**
comp=Z,35nm,0.8s,mb5.8
DAVA Damuels 96.03 43⇑*i*P **P 09 26 21.2 +0.2**
comp=Z,71nm,1.1s,mb6.0,SNR=12
TOD Tromm 96.03 40 *e*P **P 09 26 20.2 -0.7**
BRMO Bormio 96.12 44 P **P 09 26 21.9 +0.5**
comp=Z,97nm,1.8s,mb5.9
MENT Mentasta 96.16 334 *e*P **P 09 26 20.9 -0.2**
IBBN Ibbenburen 96.23 37 *e*P **P 09 26 21.8 +0.1**
comp=Z,124nm,1.3s,mb6.2
IBBN *e*SKSac SKSac 09 36 50.3 +3.6
FETA Feichten 96.51 43⇑*i*PcP PcP 09 26 23.6 +0.3
comp=Z,39nm,1.2s,SNR=13
RETA Reutte 96.67 43⇓*i*P **P 09 26 24.0 +0.1**
comp=Z,54nm,1.2s,mb5.9,SNR=11
JMIC Jan Mayen 96.70 17 *e*P **P 09 26 21.6 -1.9**
JMIC *e*PP PP 09 30 19.4 -0.5
JMIC *e*SKS 09 36 49.3
JMIC AMS AMS 10 01 59.7
comp=Z,1μm,23.9s
MOTA Moosalm 96.85 43⇓*i*PcP PcP 09 26 24.9 +0.2
comp=Z,45nm,1.0s,SNR=15
FIAM Fiamignano 96.86 48 P **P 09 26 25.3 +0.4**
HLG Helgoland 96.87 36 *e*PP PP 09 30 18.7 -3.0
MIR Mirnyy 96.92 174 *e*P **P 09 26 23.0 -1.8**
MIR *e*S SKSac 09 36 48.0 -2.1
MIR pmax pmax
comp=Z,26nm,1.2s,mb5.5
MIR smax
comp=N,880nm,10.0s
AQU L'Aquila 97.09 48 *e*P **P 09 26 26.8 +0.9**
AQU pmax pmax
comp=Z,45nm,0.9s,mb5.9
AQU L'Aquila 97.09 48 *e*P **P 09 26 26.8 +0.9**
comp=Z,45nm,0.9s,mb5.9
UBBA Unterbreizbach 97.12 39 *e*P **P 09 26 25.8 0.0**
comp=Z,61nm,1.5s,mb5.8
UBBA *e*PP PP 09 30 19.6 -4.1
UBBA *e*SKSac SKSac 09 36 56.8 +5.4
UBBA *e*SP SP 09 39 03.3 +2.7
WATA Walderalm 97.16 43⇓*i*PcP PcP 09 26 26.3 +0.1
comp=Z,22nm,0.8s
WTTA Wattenberg 97.18 43⇓*i*PcP PcP 09 26 26.5 +0.3
comp=Z,107nm,1.2s,SNR=20
FUR Furstenfeldbru 97.19 42 *e*P **P 09 26 26.6 +0.4**
comp=Z,121nm,1.3s,mb6.2
FUR *e*sP sP 09 27 10.7 -0.1
FUR *e*PP PP 09 30 21.2 -3.0
FUR *e*SKSac SKSac 09 36 55.0 +3.2
BER Bergen 97.51 29 *e*pP pP 09 26 59.4 +0.3
BER *e*SKS 09 36 55.8
GRF Grafenberg Arr 97.57 41 *e*P **P 09 26 28.1 +0.2**
comp=Z,97nm,1.4s,mb6.1
GRF *e*pP pP 09 27 01.8 +2.2
GRF *e*PP PP 09 30 23.5 -3.6
GRF *e*SKSac SKSac 09 36 59.1 +5.4
GRF *e*Sdiff S 09 37 44.7 +2.5
GRF *e*SP SP 09 39 06.9 +1.4
GRF Grafenberg Arr 97.57 41 *e*P **P 09 26 28.1 +0.2**
GRF *e**PP pP 09 27 01.8 +2.2
GRF *e* 09 30 23.5
GRF *e* 09 36 59.1
GRF *e*SP SP 09 39 06.9 +1.4
GRF pmax pmax
comp=Z,97nm,1.4s,mb6.1
ABTA Abfaltersbach 97.62 44 *i* PcP PcP 09 26 28.3 +0.1
comp=Z,58nm,1.2s,SNR=15
CLZ Clausthal 97.63 38 *e*P **P 09 26 28.5 +0.4**
comp=Z,88nm,1.2s,mb6.2
CLZ *e*pP pP 09 27 00.4 +0.5
CLZ *e*PP PP 09 30 24.4 -3.2
CLZ *e*SKSac SKSac 09 36 59.3 +5.3
CLZ *e*SP SP 09 39 08.0 +1.9
FOO Floro 97.78 28 *e*P **P 09 26 28.0 -0.5**
FOO *e*SKS 09 36 56.2
FOO Floro 97.78 28 *e*P **P 09 26 28.2 -0.3**
CASY Casey 97.96 181 *e*P **P 09 26 28.7 -0.7**
CASY *e*pP pP 09 26 58.2 -3.0
CASY Casey 97.96 181 *e*P **P 09 26 29.3 -0.2**
comp=Z,101nm,1.8s,mb6.0
RJOB Jochberg 98.06 43 *e*P **P 09 26 30.3 +0.2**
comp=Z,30nm,1.0s,mb5.8
RJOB *e*pP pP 09 27 03.5 +1.6
RJOB *e*PP PP 09 30 26.7 -4.2
RJOB *e*SKSac SKSac 09 36 59.0 +2.7
RJOB *e*Sdiff S 09 37 47.9 +1.4
RJOB *e*SP SP 09 39 11.1 +0.2
MOX Moxa 98.06 40 *e*P **P 09 26 30.8 +0.7**
comp=Z,110nm,2.2s,mb6.0
MOX *e* pP 09 27 04.7 +2.9
MOX *e*PP PP 09 30 22.0 -8.9
MOX *e*SKS 09 37 03.0
MOX
comp=Z,2μm,22.0s
MOX Moxa 98.06 40 *e*P **P 09 26 29.9 -0.2**
comp=Z,44nm,1.6s,mb5.7
MOX *e*pP pP 09 27 03.5 +1.7
MOX *e*PP PP 09 30 28.1 -2.8
MOX *e*SKSac SKSac 09 37 02.4 +6.2
MOX *e*Sdiff S 09 37 49.4 +3.0
MOX *e*SP SP 09 39 11.1 +0.3
MOX Moxa 98.06 40 *e*P **P 09 26 30.8 +0.7**
MOX *e* pP 09 27 04.7 +2.9
MOX *e* 09 37 03.0
MOX pmax pmax
comp=Z,110nm,2.2s,mb6.0
MOX MLR MLR
comp=Z,2μm,22.0s
BSEG Bad Segeberg 98.18 36 *e*P **P 09 26 30.8 +0.3**
comp=Z,56nm,1.0s,mb6.0
BSEG *e*pP pP 09 27 02.7 +0.4
BSEG *e*PP PP 09 30 29.6 -2.0
BSEG *e*SKSac SKSac 09 37 01.1 +4.5
BSEG *e*Sdiff S 09 37 49.8 +2.6

MUD Monsted U'grnd 98.24 34 *i* P **P 09 26 31.3 +0.6**
MUD *e* 09 27 13.8
MUD MLR MLR
comp=Z,1μm,21.0s
MUD Monsted U'grnd 98.24 34 *i* P **P 09 26 31.3 +0.6**
MUD *e* 09 27 13.8
MUD
comp=Z,1μm,21.0s
MYKA Terra Mystica 98.34 44⇑*i*Pdiff **P 09 26 31.7 +0.3**
comp=Z,28nm,1.2s,mb5.7
VOY Vojsko 98.36 45 *e* pP 09 27 00.2 -3.1
VOY *e* 09 27 17.1
VOY *e* 09 30 30.2
GUNZ Gunzen 98.43 40 *e*P **P 09 26 32.3 +0.6**
comp=Z,25nm,1.3s,mb5.6
GUNZ *e*pP pP 09 27 05.6 +2.1
GUNZ *e*PP PP 09 30 32.1 -1.6
WERD Werda 98.44 40 *e*P **P 09 26 32.2 +0.4**
comp=Z,32nm,1.2s,mb5.7
WERD *e*PP PP 09 30 30.8 -3.0
JAVS Javornik 98.44 45 *e* pP 09 27 06.0 +2.3
JAVS *e*SKSac SKSac 09 37 02.3 +3.9
JAVS *e*S S 09 37 53.4 +3.6
JAVS *e* 09 39 17.7
WET Wettzell 98.47 41 *e*P **P 09 26 32.2 +0.3**
comp=Z,70nm,1.6s,mb5.9
WET *e*pP pP 09 27 05.0 +1.3
WET *e*PP PP 09 30 31.0 -3.0
WET *e*SKSac SKSac 09 37 02.6 +4.3
WET *e*Sdiff S 09 37 52.1 +2.2
WET *e*SP SP 09 39 15.4 +0.1
NKC Novy Kostel 98.47 40 *e*Pdif **P 09 26 32.9 +1.0**
NKC *e*pP sP 09 27 28.3 +12
NKC *e*PP PP 09 30 32.0 -2.0
NKC *e*SKS 09 37 04.4
NKC *e*S S 09 37 56.2 +6.3
NKC *e*SP SP 09 39 17.6 +2.3
NKC Novy Kostel 98.47 40 *e*PDIFF **P 09 26 32.9 +1.0**
NKC *e*x x 09 27 28.3
NKC *e*PP PP 09 30 32.0 -2.0
NKC *e*SKS 09 37 04.4
NKC *e*S S 09 37 56.2 +6.3
NKC *e*SP SP 09 39 17.6 +2.3
NKC AMS AMS 10 00 20.0
TANN Tannenbergstha 98.53 40 *e*P **P 09 26 32.9 +0.8**
comp=Z,61nm,1.5s,mb5.9
TANN *e*PP PP 09 30 31.3 -3.1
TANN *e*SKSac SKSac 09 37 04.7 +6.2
TANN *e*Sdiff S 09 37 53.6 +3.3
TANN *e*SP SP 09 39 16.5 +0.6
COLA College 98.56 335 *e*P **P 09 26 31.3 -0.7**
COLA pmax pmax
comp=Z,20nm,0.9s,mb5.7
COLA College 98.56 335 *e*P **P 09 26 31.3 -0.6**
comp=Z,20nm,0.9s,mb5.7
CEY Cerknica 98.65 45 *e* pP 09 27 05.3 +0.7
CEY *e*SKSac SKSac 09 37 02.9 +3.5
CEY *e*S S 09 37 53.5 +1.9
CEY *e*SP SP 09 39 20.8 +3.3
OHAK Old Harbor 98.78 327 *e*P **P 09 26 32.6 -0.6**
comp=Z,40nm,1.4s,mb5.8
KHC Kasperske Hory 98.91 42 *e*P **P 09 26 34.4 +0.5**
KHC *e* 09 30 34.2
KHC *e* 09 37 04.6
KHC *e*S S 09 38 00.8 +7.2
KHC *e*SP SP 09 39 18.8 -1.3
KHC Kasperske Hory 98.91 42 *e*PDIFF **P 09 26 34.4 +0.5**
KHC *e*x x 09 27 27.8
KHC *e*PP PP 09 30 34.2 -3.2
KHC *e*SKS 09 37 04.6
KHC *e*S S 09 38 00.8 +7.2
KHC *e*SP SP 09 39 18.8 -1.3
KHC AMS AMS 10 01 40.0
MOA Molln 99.05 43⇑*i*Pdiff **P 09 26 34.5 -0.1**
comp=Z,18nm,0.8s,mb5.6,SNR=6.7
CLL Collm 99.08 39 *e*P **P 09 26 35.0 +0.4**
comp=Z,48nm,1.5s,mb5.8
CLL *e*PP PP 09 30 36.0 -2.6
CLL *e*SKSac SKSac 09 37 05.9 +4.6
CLL *e*Sdiff S 09 37 58.1 +3.2
CLL *e*SP SP 09 39 21.9 +0.1
CLL Collm 99.08 39 *i* P **P 09 26 34.8 +0.2**
CLL *e* 09 30 33.0
CLL *e* 09 37 08.0
CLL pmax pmax
comp=Z,48nm,1.5s,mb5.8
CLL Collm 99.08 39 *i* Pdif **P 09 26 34.8 +0.2**
comp=Z,48nm,1.5s,mb5.8
CLL *e*PP PP 09 30 33.0 -5.6
CLL *e*SKS 09 37 08.0
CLL Collm 99.08 39⇑*i*Pdif **P 09 26 34.8 +0.2**
comp=Z,48nm,1.5s,mb5.8
CLL *e*pPdif pP 09 27 06.0 -0.4
CLL *e*sPdif 09 27 19.0
comp=Z,20nm,1.3s
CLL *i* 09 27 29.7
comp=Z,97nm,1.7s
CLL *e*PP PP 09 30 33.0 -5.6
CLL *e*sPP 09 31 17.0
CLL *e* 09 31 31.0
CLL *e*SKSac SKSac 09 37 08.0 +6.7
CLL *e*SKKSac SKKSac 09 37 40.0 +7.0
CLL *e*Sdif S 09 38 05.0 +10
CLL *e*SP SP 09 39 26.0 +4.2
CLL *e*pPPS 09 40 36.0
CLL *e*SS SS 09 44 50.0 +3.9
CLL *e*SSS 09 48 42.0
CLL *e* 09 53 46.0
CLL *e* 09 56 12.0
CLL Lm 10 07 00.0
comp=Z,2μm,21.7s
TRF Thorofare Moun 99.13 334 *e*P **P 09 26 34.6 +0.1**
comp=Z,6.7nm,0.8s,mb5.2
BOJS Bojanci 99.16 45 *e* pP 09 27 06.0 -0.9
BOJS *e*SKSac SKSac 09 37 05.5 +3.5
BOJS *e*S S 09 37 52.9 -3.0
BOJS *e*SP SP 09 39 26.8 +3.9
MOL Molde 99.20 27 *e* **P 09 26 36.9 +2.0**
MOL *e*SKS 09 37 04.1
MOL AMS AMS 10 07 05.4
comp=Z,3μm,28.1s
SOKA Soboth 99.28 44⇑*i*Pdiff 09 26 35.5
comp=Z,8.5nm,1.0s
KONO Kongsberg 99.34 31 *e*PP PP 09 30 43.2 +2.9
KONO *e*SKS 09 37 06.8
BRG Berggiesshubel 99.55 40 *e*P Pdif 09 26 37.3 +0.5
comp=Z,64nm,1.6s
BRG *e*pP pP 09 27 10.7 +2.2
BRG *e*PP PP 09 30 39.3 -2.9
BRG *e*SKSac SKSac 09 37 08.2 +4.6
BRG *e*SP SP 09 39 27.4 +0.5
BRG Berggiesshubel 99.55 40 *e*P Pdif 09 26 37.1 +0.3
comp=Z,30nm,1.2s
BRG *e* 09 27 09.0
comp=Z,21nm,1.4s
BRG *i* 09 27 17.9
comp=Z,18nm,1.3s
BRG *i* 09 27 31.7
comp=Z,80nm,1.5s
BRG PP PP 09 30 36.0 -6.2
BRG SKS 09 37 09.0
BRG S S 09 37 57.0 -1.9
BRG PS PS 09 39 27.0 -15
BRG *e* 09 43 24.7
comp=Z,18nm,1.9s
BRG *e* 09 44 14.9
comp=Z,14nm,1.4s
BRG SS SS 09 44 41.0 -12
BRG *e*PKPPKP 09 51 15.3
comp=Z,11nm,1.6s
BRG
comp=N,596nm,19.8s
BRG
comp=E,2μm,19.0s
BRG
comp=Z,3μm,19.8s
PRA Prague 99.67 41 PDIFF Pdif 09 26 38.0 +0.7
PRU Pruhonice 99.72 41 *e*Pdif Pdif 09 26 38.9 +1.3
PRU *e*pP sP 09 27 34.1 +12
PRU *e*PP PP 09 30 41.8 -1.7
PRU *e*SKS 09 37 09.6
PRU *e*S Sdif 09 38 02.6 +2.1
PRU *e*SP SP 09 39 26.8 -1.9

PRU	**Pruhonice**	**99.72**	**41**	*e*PDIFF	Pdif	09 26 38.9	+1.3
PRU				*ex*	x	09 27 34.1	
PRU				*e*PP	PP	09 30 41.8	-1.7
PRU				*e*SKS		09 37 09.6	
PRU				*e*S	Sdif	09 38 02.6	+2.1
PRU				*e*SP	SP	09 39 26.8	-1.9
PRU				AMS	AMS	10 02 00.0	
ARSA	**Arzberg**	**99.74**	**44**	*i*Pdiff	Pdif	09 26 37.7	+0.1
	comp=Z,13nm,1.2s						
PPLA	**Purkeypile**	**99.80**	**333**	*e*Pdif	Pdif	09 26 38.1	+0.2
	comp=Z,47nm,1.3s						
RUE	**Ruedersdorf**	**99.83**	**38**	*e*PP	PP	09 30 42.2	-2.0
PVCC	**Panska Ves**	**99.86**	**40**	*ex*	x	09 27 35.1	
PVCC				*e*SKS		09 37 09.4	
PVCC				*e*SP	SP	09 39 27.8	-2.4
PVCC				AMS	AMS	10 02 10.0	
CONA	**Conrad Observa**	**100.11**	**43**	*i* Pdiff	Pdif	09 26 39.5	+0.2
	comp=Z,18nm,1.2s,SNR=8.0						
TREC	**Trest**	**100.17**	**42**	*e*P	Pdif	09 26 40.3	+0.8
TREC				*e*		09 37 11.2	
TREC				*e*S	Sdif	09 38 00.9	-3.3
TREC				*e*SP	SP	09 39 35.6	+2.1
TREC	**Trest**	**100.17**	**42**	*e*PDIFF	Pdif	09 26 40.3	+0.8
TREC				*ex*	x	09 27 34.9	
TREC				*e*SKS		09 37 11.2	
TREC				*e*S	Sdif	09 38 00.9	-3.3
TREC				*e*SP	SP	09 39 35.6	+2.1
TREC				AMS	AMS	10 01 20.0	
NB2	**NORSAR Subarra**	**100.47**	**29**	P	Pdif	09 26 41.2	+0.3
	comp=Z,22nm,1.2s,baz=252,slow=4.3						
NOA	**NORSAR Array B**	**100.47**	**29**	P	Pdif	09 26 41.6	+0.7
	comp=Z,3.6nm,0.8s,baz=252,slow=4.3,SNR=9.4						
NOA				PP	PP	09 30 44.8	-4.1
	comp=Z,9.7nm,1.1s,baz=255,slow=7.5,SNR=5.1						
NOA	**NORSAR Array B**	**100.47**	**29**	P	Pdif	09 26 41.6	+0.7
NOA						09 30 44.8	
NOA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NOA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
UPC	**Upice**	**100.76**	**41**	*e*Pdif	Pdif	09 26 43.3	+1.1
UPC				*e*pP		09 27 26.8	
UPC				*e*PP	PP	09 30 47.8	-3.5
UPC	**Upice**	**100.76**	**41**	*e*PDIFF	Pdif	09 26 43.3	+1.1
UPC				*e*sP		09 27 26.8	
UPC				*e*PP	PP	09 30 47.8	-3.5
DPC	**Dobruska-Polom**	**100.92**	**41**	*e*Pdif	Pdif	09 26 44.2	+1.3
DPC				*e*pP		09 27 39.9	
DPC				*e*PP	PP	09 30 49.8	-2.8
DPC				*e*SKS		09 37 14.9	
DPC				*e*S	Sdif	09 38 10.4	-0.1
DPC				*e*SP	SP	09 39 38.6	-2.9
DPC	**Dobruska-Polom**	**100.92**	**41**	*e*PDIFF	Pdif	09 26 44.2	+1.3
DPC				*ex*	x	09 27 39.9	
DPC				*e*PP	PP	09 30 49.8	-2.8
DPC				*e*SKS		09 37 14.9	
DPC				*e*S	Sdif	09 38 10.4	-0.1
DPC				*e*SP	SP	09 39 38.6	-2.9
DPC				AMS	AMS	10 01 50.0	
ZST	**Bratislava**	**100.98**	**43**	*e*P	Pdif	09 26 43.2	0.0
ZST				pmax	pmax		
	comp=Z,15nm,1.0s						
ZST	**Bratislava**	**100.98**	**43**	*e*P	Pdif	09 26 43.2	0.0
	comp=Z,14nm,1.0s						
ZST				*e*PP	PP	09 30 47.7	-5.4
ZST	**Bratislava**	**100.98**	**43**	PDIF	Pdif	09 26 43.2	0.0
ZST				*e*PP	PP	09 30 47.7	-5.4
KSP	**Ksiaz**	**101.00**	**40**	*e*Pdiff	Pdif	09 26 44.1	+0.9
KSP				*e*PP	PP	09 30 51.4	-1.8
KSP				*e*SKSac	SKSac	09 37 15.9	+5.2
KSP				*e*Sdiff	Sdif	09 38 13.3	+2.2
KSP				*e*SP	SP	09 39 43.5	+1.2
KSP	**Ksiaz**	**101.00**	**40**	*e*P	Pdif	09 26 44.1	+0.9
KSP				*e*		09 30 48.0	
KSP				*e*		09 37 15.0	
KSP				*e*S	Sdif	09 38 05.0	-6.2
KSP				*e*SP	SP	09 39 42.0	-0.3
KSP	**Ksiaz**	**101.00**	**40**	*e*Pdif	Pdif	09 26 44.1	+0.9
KSP				*e*		09 27 16.2	
KSP				*e*PP	PP	09 30 48.0	-5.2
KSP				*e*SKS		09 37 15.0	
KSP				*e*Sdif	Sdif	09 38 05.0	-6.2
KSP				*e*SP	SP	09 39 42.0	-0.3
KSP				LR	LR		
	comp=Z,4μm,19.9s						
NSS	**Namsos**	**101.61**	**26**	*e*SKS	SKSac	09 37 17.4	+4.3
OKC	**Ostrava-Krasne**	**101.97**	**41**	*e*Pdif	Pdif	09 26 48.9	+1.3
OKC				*e*pP		09 27 44.6	
OKC				*e*PP	PP	09 30 53.8	-6.7
OKC				*e*SKS		09 37 19.9	
OKC				*e*S	Sdif	09 38 14.0	-5.3
OKC				*e*SP	SP	09 39 52.3	-0.4
OKC	**Ostrava-Krasne**	**101.97**	**41**	*e*PDIFF	Pdif	09 26 48.9	+1.3
OKC				*ex*	x	09 27 44.6	
OKC				*e*PP	PP	09 30 53.8	-6.7
OKC				*e*SKS		09 37 19.9	
OKC				*e*S	Sdif	09 38 14.0	-5.3
OKC				*e*SP	SP	09 39 52.3	-0.4
OKC				AMS	AMS	10 03 20.0	
VYHS	**Vyhne**	**102.17**	**43**	*e*P	Pdif	09 26 48.7	+0.2
VYHS				pmax	pmax		
	comp=Z,65nm,2.5s						
VYHS	**Vyhne**	**102.17**	**43**	*e*P	Pdif	09 26 48.7	+0.2
	comp=Z,64nm,2.5s						
VYHS	**Vyhne**	**102.17**	**43**	PDIF	Pdif	09 26 48.7	+0.2
OJC	**Ojcow**	**103.09**	**41**	*e*P	Pdif	09 26 51.0	-1.5
OJC				*e*		09 37 21.8	
OJC				*e*S	Sdif	09 38 20.6	-8.0
OJC	**Ojcow**	**103.09**	**41**	*e*P	Pdif	09 26 51.0	-1.5
OJC				*e*PP	PP	09 31 03.3	-5.5
OJC				*e*SKSac	SKSac	09 37 21.8	+1.2
OJC				*e*S	Sdif	09 38 20.6	-8.0
OJC				*e*SP	SP	09 39 57.7	-6.8
OJC				*e*SS	SS	09 45 19.8	-22
OJC				LR	LR		
	comp=Z,1μm,22.1s						
KECS	**Kecovo**	**103.25**	**43**	*e*P	Pdif	09 26 54.3	+1.0
KECS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KECS	**Kecovo**	**103.25**	**43**	*e*P	Pdif	09 26 54.3	+1.0
	comp=Z,3.5nm,1.0s						
KECS	**Kecovo**	**103.25**	**43**	PDIF	Pdif	09 26 54.3	+1.0
CRVS	**Cervenica-Dubn**	**103.96**	**43**	*e*P	Pdif	09 26 57.6	+1.2
CRVS				*e*		09 37 29.3	
CRVS				pmax	pmax		
	comp=Z,8.0nm,1.3s						
CRVS	**Cervenica-Dubn**	**103.96**	**43**	*e*P	Pdif	09 26 57.6	+1.2
	comp=Z,7.8nm,1.3s						
CRVS				*e*		09 37 29.3	
CRVS	**Cervenica-Dubn**	**103.96**	**43**	PDIF	Pdif	09 26 57.6	+1.2
KBS	**Kingsbay**	**104.36**	**11**	*e*PP	PP	09 31 17.0	-0.6
KBS				*e*SKS		09 37 33.0	
KBS				AMS	AMS	10 06 20.4	
	comp=Z,1μm,33.0s						
UZH	**Uzhgorod**	**104.46**	**43**	*e*P	Pdif	09 26 59.0	+0.4
UZH				*e*		09 31 23.0	
UZH				*e*		09 37 29.2	
UZH				*e*S	Sdif	09 38 34.5	-5.6
UZH				*e*		09 40 13.8	
UZH				MLR	MLR		
	comp=N,420nm,17.0s						
UZH				MLR	MLR		
	comp=E,880nm,17.0s						
UZH				MLR	MLR		
	comp=Z,440nm,17.0s						
KWP	**Kalwaria Pacla**	**104.86**	**42**	*e*Pdiff	Pdif	09 27 02.0	+1.6
KWP				*e*SKSac	SKSac	09 37 33.4	+4.6
KWP	**Kalwaria Pacla**	**104.86**	**42**	*e*Pdif	Pdif	09 27 02.0	+1.6
KWP				*e*SKSac	SKSac	09 37 33.4	+4.6
TRO	**Tromso**	**105.09**	**21**	*e*SKS	SKSac	09 37 29.8	+0.8
TRO				*e*SS	SS	09 46 08.4	+0.3
TRO	**Tromso**	**105.09**	**21**	*e*P	PKiKP	09 31 13.2	-1.6
TRO				*i*		09 40 28.5	
BJO	**Bjornoya**	**105.54**	**16**	*e*SKS	SKSac	09 37 34.1	+3.2
BUR08	**Bucovina Ar. S**	**106.28**	**44**	*e*Pdif	Pdif	09 27 08.7	+1.9
ARCES	**ARCESS Array B**	**107.39**	**21**	Pdiff	Pdif	09 27 12.9	+1.3
	comp=Z,3.3nm,0.9s,baz=22,slow=1.3,SNR=4.1						
ARCES	**ARCESS Array B**	**107.39**	**21**	P	Pdif	09 27 12.9	+1.2
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
FINES	**FINESS Array B**	**107.64**	**30**	PP	PP	09 31 37.5	-4.6
	comp=Z,22nm,1.3s,baz=298,slow=5.4,SNR=7.5						
KIS	**Kishinev**	**108.68**	**45**	*e*PP	PP	09 31 48.0	-2.1
KIS	**Kishinev**	**108.68**	**45**	*i* PS	SP	09 41 05.0	+2.7
KIS				LRM		10 17 20.0	
	comp=Z,700nm,20.0s						
AKASG	**Malin Array Be**	**109.13**	**41**	PKiKP	PKiKP	09 31 21.6	-1.2
	comp=Z,2.3nm,0.5s,baz=261,slow=2.8,SNR=5.4						
DZM	**Mont Dzumac**	**111.59**	**238**	*e*PP	PP	09 32 10.2	-1.0
	comp=Z,1μm,26.6s						
DZM	**Mont Dzumac**	**111.59**	**238**	*e*PS	PS	09 41 43.7	-1.8
	comp=Z,2μm,29.7s						
DZM				*e*SS	SS	09 47 35.2	-1.9
	comp=Z,1μm,29.9s						
DZM				*e*LR	LR	10 04 50.8	
	comp=Z,5μm,34.4s						
BR131	**Keskin Array S**	**111.78**	**53**	*e*Pdif	PKiKP	09 31 28.9	+0.7
BRTR	**Keskin Array B**	**111.78**	**53**	PKiKP	PKiKP	09 31 28.8	+0.6
	comp=Z,3.3nm,0.8s,baz=190,slow=3.8,SNR=8.7						
BRTR	**Keskin Array B**	**111.78**	**53**	*i* PKIKP	PKiKP	09 31 28.8	+0.6
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MMAI	**Mount Meron Ar**	**112.75**	**61**	PKiKP	PKiKP	09 31 30.8	+0.6
	comp=Z,3.9nm,0.5s,baz=56,slow=3.1,SNR=5.2						
OBN	**Obninsk**	**113.43**	**36**	*i* PKIKP	PKiKP	09 31 29.4	-1.4
OBN				*i*		09 32 20.3	
OBN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,2μm,19.0s						
OBN	**Obninsk**	**113.43**	**36**	*e*PKP	PKiKP	09 31 29.4	-1.4
ANN	**Anapa**	**114.66**	**48**	*i* PKIKP	PKiKP	09 31 29.1	-4.4
ANN				*e*		09 31 52.0	
ANN				*e*		09 38 10.5	
ANN				*e*SS	SS	09 48 27.8	+10
ANN				pmax	pmax		
	comp=Z,41nm,1.7s						
VSR	**Storozhevoye**	**115.39**	**41**	*e*PKIKP	PKPdf	09 31 33.8	-0.9
VSR				pmax	pmax		
	comp=N,80nm,3.6s						
VSR				pmax	pmax		
	comp=E,120nm,3.6s						
VSR				pmax	pmax		
	comp=Z,160nm,3.6s						
VSR				pmax	pmax		
	comp=Z,60nm,0.9s						
VSR				pmax	pmax		
	comp=N,40nm,1.9s						
VSR				pmax	pmax		
	comp=E,60nm,0.9s						
SOC	**Sochi**	**116.34**	**49**	*i* PKIKP	PKPdf	09 31 37.0	+0.2
SOC				*e*		09 32 43.0	
SOC				*e*		09 38 18.8	
SOC				*e*PS	PS	09 42 24.3	-4.3
SOC				*e*SS	SS	09 48 34.2	-5.4
SOC				*e*SSS		09 53 03.5	
SOC				MLR	MLR		
	comp=Z,700nm,18.0s						
BILL	**Bilibino**	**116.44**	**339**	*i* PKIKP	PKPdf	09 31 36.3	+0.1
BILL				*i* SS	SS	09 48 52.3	+13
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BILL	**Bilibino**	**116.44**	**339**	*e*PKP	PKPdf	09 31 36.4	+0.2
ARMA	**Armidale**	**117.78**	**222**	*e*P	PKPdf	09 31 39.4	-0.7
KIV	**Kislovodsk**	**118.47**	**48**	*i* PKIKP	PKPdf	09 31 41.8	+0.9
KIV				*e*		09 32 56.3	
KIV				*e*		09 38 28.0	
KIV				*e*PS	PS	09 42 46.0	-1.7
KIV				*e*SS	SS	09 49 11.3	+4.2
KIV				pmax	pmax		
	comp=Z,13nm,1.2s						
KIV				MLR	MLR		
	comp=Z,700nm,20.0s						
KIV	**Kislovodsk**	**118.47**	**48**	*e*PKP	PKPdf	09 31 41.8	+0.9
ONI	**Oni**	**119.14**	**50**	P	Pdif	09 28 10.6	+6.7
ZEI	**Tsey**	**119.45**	**50**	*e*PKIKP	PKPdf	09 31 43.4	+0.6
ZEI				pmax	pmax		
	comp=Z,16nm,0.8s						
TBLG	**Delisi**	**120.17**	**51**	P	Pdif	09 28 08.0	-0.4
MTA	**Mtatsminda**	**120.21**	**51**	P	Pdif	09 28 08.1	-0.5
BHD	**Baghdad**	**120.28**	**61**	*ex*	x	09 31 44.0	
BHD				*ex*	x	09 33 11.0	
BHD				*ex*	x	09 35 08.0	
BHD				*ex*	x	09 35 20.0	
BHD				*ex*	x	09 38 30.0	
BHD				*ex*	x	09 39 59.0	
BHD				*ex*	x	09 42 47.0	
GNI	**Garni**	**120.31**	**53**	*i* PKIKP	PKPdf	09 31 43.2	-1.3
GNI				pmax	pmax		
	comp=Z,18nm,0.8s						
GNI	**Garni**	**120.31**	**53**	*e*PKPdf	PKPdf	09 31 44.5	0.0
MAK	**Makhachkala**	**122.06**	**49**	*i* PKIKP	PKPdf	09 31 59.8	+12
MAK				*e*		09 33 29.3	
MAK				*e*		09 38 35.0	
MAK				*e*PS	PS	09 43 18.0	-1.8
MAK				MLR	MLR		
	comp=Z,1μm,28.0s						
STKA	**Stephens Creek**	**122.67**	**214**	*e*PKP	PKPdf	09 31 48.8	-0.6
	comp=Z,10nm,0.6s						
STKA				*e*pPKP	pPKPdf	09 32 19.3	-3.2
STKA	**Stephens Creek**	**122.67**	**214**	PKP	PKPdf	09 31 48.8	-0.6
	comp=Z,11nm,0.6s,baz=104,slow=2.4,SNR=32						
STKA				PKKPbc	PKKPbc	09 41 42.2	-1.6
	comp=Z,1.6nm,0.6s,baz=308,slow=7.2,SNR=6.3						
STKA	**Stephens Creek**	**122.67**	**214**	*e*PKPdf	PKPdf	09 31 48.9	-0.5
SOKR	**Solikamsk**	**122.73**	**28**	*i* PKIKP	PKPdf	09 31 49.5	+0.9
SOKR						09 33 25.9	
SOKR						09 50 00.9	
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
TIXI	**Tiksi**	**123.01**	**352**	*i* PKIKP	PKPdf	09 31 50.0	+1.2
TIXI				*e*		09 33 26.1	
TIXI				*e*		09 38 38.2	
TIXI				*e*SP	SP	09 43 09.0	-2.4
TIXI				pmax	pmax		
	comp=Z,12nm,0.9s						
TIXI				MLR	MLR		
	comp=Z,975nm,19.0s						
TIXI	**Tiksi**	**123.01**	**352**	*i* PKP	PKPdf	09 31 50.9	+2.1
SEY	**Seymchan**	**124.00**	**337**	*e*PKIKP	PKPdf	09 31 51.2	+0.3
ARU	**Arti**	**124.98**	**31**	*i* PKIKP	PKPdf	09 31 53.7	+0.7
ARU						09 38 48.9	
ARU				PS	SP	09 43 25.6	-4.0
ARU				MLR	MLR		
	comp=Z,1μm,20.0s						
ARU	**Arti**	**124.98**	**31**	*e*PKPdf	PKPdf	09 31 53.9	+0.9
SVE	**Sverdlovsk**	**125.81**	**30**	*e*PKIKP	PKPdf	09 31 56.1	+1.5
PETK	**Petropavlovsk-**	**126.54**	**325**	PKP	PKPdf	09 31 56.4	+0.3
	comp=Z,20nm,0.9s,baz=92,slow=5.9,SNR=13						
PETK				pPKP	pPKPdf	09 32 28.7	-0.5
	comp=Z,22nm,1.0s,baz=64,slow=6.8,SNR=4.8						
PETK				sPKP		09 32 41.9	
	comp=Z,21nm,0.8s,baz=113,slow=5.7,SNR=7.1						
PETK	**Petropavlovsk-**	**126.54**	**325**	PKIKP	PKPdf	09 31 56.4	+0.3
PETK						09 32 28.7	
PETK				pmax	pmax		
	comp=Z,21nm,0.9s						
PETK				pmax	pmax		
	comp=Z,22nm,1.0s						
PETK				pmax	pmax		
	comp=Z,21nm,0.9s						
CTA	**Charters Tower**	**128.24**	**227**	*e*PKP	PKPdf	09 31 59.6	-0.8
	comp=Z,21nm,1.6s						
CTA				*e*pPKP	pPKPdf	09 32 30.1	-3.3
CTAO	**Charters Tower**	**128.24**	**227**	*e*PKPdf	PKPdf	09 32 00.3	-0.1
CTAO	**Charters Tower**	**128.24**	**227**	P	PKPdf	09 32 00.2	-0.2
ABKAR	**Akbulak array**	**128.75**	**39**	*e*PKPdf	PKPdf	09 32 01.6	+1.2
FORT	**Forrest**	**129.75**	**202**	*e*PKP	PKPdf	09 32 01.7	-1.3
	comp=Z,42nm,0.6s						
FORT				*e*pPKP	pPKPdf	09 32 36.0	-0.1
FORT	**Forrest**	**129.75**	**202**	*e*PKPdf	PKPdf	09 32 02.0	-1.0
NWAO	**Narrogin (SRO)**	**130.61**	**190**	PKP	PKPdf	09 32 04.6	0.0
	comp=Z,33nm,1.1s,baz=195,slow=7.5,SNR=4.9						
NWAO	**Narrogin (SRO)**	**130.61**	**190**	PKIKP	PKPdf	09 32 04.6	0.0
NWAO				pmax	pmax		
	comp=Z,33nm,1.1s						
YAK	**Yakutsk**	**131.57**	**347**	*e*PKIKP	PKPdf	09 32 04.8	-0.6
YAK				*e*		09 46 05.2	
YAK				pmax	pmax		
	comp=N,8.0nm,1.5s						
YAK				pmax	pmax		
	comp=Z,43nm,1.0s						
YAK				pmax	pmax		
	comp=Z,923nm,12.8s						
YAK				pmax	pmax		
	comp=E,232nm,17.9s						
YAK				pmax	pmax		
	comp=N,134nm,8.4s						
YAK	**Yakutsk**	**131.57**	**347**	*i* PKP	PKPdf	09 32 05.9	+0.5
KLBR	**Kellerberrin**	**131.82**	**191**	*e*PKP	PKPdf	09 32 05.9	-1.0
	comp=N,38nm,0.8s						
KLBR				*e*pPKP	pPKPdf	09 32 35.6	-4.4
SMDO	**Samad**	**132.35**	**73**	PKPdf	PKPdf	09 32 09.5	+1.5
	SNR=7.2						
BRVK	**Borovoye**	**132.52**	**30**	*c i* PKIKP	PKPdf	09 32 08.1	+0.7
BRVK				pmax	pmax		
	comp=Z,21nm,1.2s						
BRVK	**Borovoye**	**132.52**	**30**	*e*PKPdf	PKPdf	09 32 08.5	+1.0
BRVK	**Borovoye**	**132.52**	**30**	PKPdf	PKPdf	09 32 09.0	+1.6
	SNR=9.4						
BVAR	**Borovoye Array**	**132.59**	**30**	PKhKP	PKPpre	09 32 03.7	
	comp=Z,1.3nm,0.7s,baz=336,slow=3.3,SNR=4.6						
BVAR				PKP	PKPdf	09 32 08.8	+1.2
	comp=Z,7.8nm,0.6s,baz=248,slow=1.6,SNR=22						
BVAR				pPKP	pPKPdf	09 32 42.2	+1.6
	comp=Z,11nm,0.9s,baz=264,slow=1.5,SNR=4.5						
BVAR	**Borovoye Array**	**132.59**	**30**	*i* PKIKP	PKPpre	09 32 03.7	
BVAR						09 32 42.2	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BVAR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BVAR				pmax	pmax		
	comp=Z,11nm,0.9s						
ASAR	**Alice Springs**	**133.29**	**213**	PKhKP	PKPpre	09 31 52.0	
	comp=Z,0.8nm,0.4s,baz=135,slow=2.6,SNR=16						
ASAR				PKP	PKPdf	09 32 08.7	-1.2
	comp=Z,16nm,0.6s,baz=135,slow=2.0,SNR=54						
ASAR				pPKP	pPKPdf	09 32 42.4	-0.6
	comp=Z,14nm,0.8s,baz=144,slow=1.5,SNR=4.4						
ASAR	**Alice Springs**	**133.29**	**213**	*i* PKHKP	PKPpre	09 31 52.0	
ASAR						09 32 08.7	
ASAR						09 32 42.4	
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ASAR				pmax	pmax		
	comp=Z,17nm,0.6s						
ASAR				pmax	pmax		
	comp=Z,14nm,0.8s						
ASAR	**Alice Springs**	**133.29**	**213**	PKP	PKPdf	09 32 08.7	-1.2
ASAR				pPKP	pPKPdf	09 32 42.4	-0.6
COEN	**Coen**	**134.43**	**231**	P	PKPdf	09 32 13.0	+0.8
WRA	**Warramunga Arr**	**136.04**	**217**	PKhKP	PKPpre	09 31 59.0	
	comp=Z,2.0nm,0.5s,baz=135,slow=2.9,SNR=23						
WRA				PKP	PKPdf	09 32 14.3	-0.8
	comp=Z,23nm,0.6s,baz=136,slow=1.7,SNR=66						
WRA				pPKP	pPKPdf	09 32 45.2	-2.9
	comp=Z,20nm,0.7s,baz=149,slow=1.5,SNR=4.8						
WRA	**Warramunga Arr**	**136.04**	**217**	*i* PKHKP	PKPpre	09 31 59.1	
WRA						09 32 14.3	
WRA						09 32 45.3	
WRA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
WRA				pmax	pmax		
	comp=Z,23nm,0.6s						
WRA				pmax	pmax		
	comp=Z,20nm,0.7s						
WRA	**Warramunga Arr**	**136.04**	**217**	PKP	PKPdf	09 32 14.3	-0.8
WRA				pPKP	pPKPdf	09 32 45.2	-2.9
WRAB	**Tennant Creek**	**136.04**	**217**	*e*PKPdf	PKPdf	09 32 14.7	-0.4
WRAB	**Tennant Creek**	**136.04**	**217**	P	PKPdf	09 32 15.0	-0.1
NVS	**Novosibirsk**	**136.67**	**21**	*e*PKIKP	PKPdf	09 32 15.7	+0.5
NVS				pmax	pmax		
	comp=Z,44nm,1.0s						
CLNS	**Chul'man**	**137.32**	**347**	*e*PKIKP	PKPdf	09 32 15.7	-0.6
CLNS				pmax	pmax		
	comp=Z,16nm,1.4s						
CLNS				pmax	pmax		
	comp=N,8.0nm,1.0s						
CLNS				pmax	pmax		
	comp=E,10.0nm,0.9s						
YSS	**Yuzh-Sakhalins**	**137.93**	**325**	*i* PKIKP	PKPdf	09 32 16.0	-1.7
YSS				*e*		09 32 50.0	
YSS				*e*SS	SS	09 53 08.0	+1.1
YSS				pmax	pmax		
	comp=Z,60nm,1.0s						
YSS	**Yuzh-Sakhalins**	**137.93**	**325**	*e*PKPdf	PKPdf	09 32 17.5	-0.2
ZALV	**Zalesovo Beam**	**137.94**	**21**	PKhKP	PKPpre	09 32 09.1	
	comp=Z,2.8nm,0.5s,baz=327,slow=4.4,SNR=7.7						
ZALV				PKP	PKPdf	09 32 18.3	+0.8
	comp=Z,77nm,0.7s,baz=296,slow=2.4,SNR=41						
ZALV				pPKP	pPKPdf	09 32 49.3	-1.3
	comp=Z,25nm,0.7s,baz=294,slow=1.5,SNR=2.3						
ZALV	**Zalesovo Beam**	**137.94**	**21**	*i* PKHKP	PKPpre	09 32 09.1	
ZALV						09 32 18.3	
ZALV						09 32 49.3	
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ZALV				pmax	pmax		
	comp=Z,77nm,0.7s						
ZALV				pmax	pmax		
	comp=Z,25nm,0.7s						
ZALV	**Zalesovo Beam**	**137.94**	**21**	PKP	PKPdf	09 32 18.3	+0.7
ZALV				pPKP	pPKPdf	09 32 49.3	-1.3
KURK	**Kurchatov**	**137.97**	**28**	*d i* PKIKP	PKPdf	09 32 18.6	+0.9
KURK	**Kurchatov**	**137.97**	**28**	*e*PKPdf	PKPdf	09 32 18.9	+1.2
KURK	**Kurchatov**	**137.97**	**28**	PKPdf	PKPdf	09 32 19.1	+1.4
	SNR=14						
ASAJ	**Asahikawa**	**139.63**	**321**	PKhKP	PKPpre	09 32 13.3	
	comp=Z,11nm,1.2s,baz=264,slow=12,SNR=3.8						
ASAJ				PKP	PKPdf	09 32 21.6	+0.6
	comp=Z,39nm,1.0s,baz=268,slow=8.2,SNR=12						
ASAJ				pPKP	pPKPdf	09 32 54.3	+0.3
	comp=Z,32nm,1.0s,baz=282,slow=9.0,SNR=3.8						
ASAJ	**Asahikawa**	**139.63**	**321**	*i* PKHKP	PKPpre	09 32 13.3	
ASAJ						09 32 21.6	
ASAJ						09 32 54.3	
ASAJ				pmax	pmax		
	comp=Z,11nm,1.2s						
ASAJ				pmax	pmax		
	comp=Z,39nm,1.0s						
ASAJ				pmax	pmax		
	comp=Z,32nm,1.0s						
EKS2	**Erkin-Say**	**140.32**	**41**	*e*PKPdf	PKPdf	09 32 21.5	-0.7
KBL	**Kabul**	**140.33**	**55**	*e*PKIKP	PKPdf	09 32 23.6	+1.1
ERM	**Erimo**	**140.38

KAKA	Kakadu	142.78	221	P	PKPdf	09 32 25.6	-1.9
KSH	Kashi	143.37	44	PKP	PKPdf	09 32 26.4	-1.4
KSH				PP	PP	09 35 45.0	+5.0
KSH				PKS		09 36 00.8	
KSH				SKS	SKSdf	09 39 24.9	-1.3
KSH				SKKS	SKKSac	09 42 23.3	+2.0
KSH				AMB	AMB		
	comp=Z,460nm,5.7s						
KSH				LR	LR		
	comp=N,520nm,18.8s						
KSH				LR	LR		
	comp=E,740nm,19.7s						
KSH				LR	LR		
	comp=Z,1μm,25.0s						
IRK	Irkutsk	143.69	4	*e*PKIKP	PKPdf	09 32 25.7	-2.2
IRK				*e*		09 35 40.5	
IRK				pmax	pmax		
	comp=Z,95nm,1.6s						
JASL	Jaisalmer	143.70	66	*e*PKP	PKPdf	09 32 27.4	-1.4
MOY	Mondy	143.94	8	*e*PKIKP	PKPdf	09 32 27.6	-0.8
MOY				pmax	pmax		
	comp=Z,159nm,1.5s						
TLY	Talaya	144.20	5	*i* PKIKP	PKPdf	09 32 27.2	-1.6
TLY				*e*		09 33 00.6	
TLY				*e*		09 35 43.0	
TLY				*e*		09 39 17.8	
TLY				*e*SSS		09 59 48.6	
TLY				pmax	pmax		
	comp=Z,132nm,1.3s						
TLY	Talaya	144.20	5	*e*PKPdf	PKPdf	09 32 28.8	-0.1
TLY	Talaya	144.20	5	PKPdf	PKPdf	09 32 28.8	0.0
	SNR=53						
GUMO	Guam	144.54	271	*e*PKPdf	PKPdf	09 32 28.0	-2.5
GUMO	Guam	144.54	271	P	PKPdf	09 32 28.7	-1.8
MDJ	Mudanjiang	146.24	332	PKPbc	PKPbc	09 32 32.2	-1.7
MDJ				pPKP	pPKPdf	09 33 04.8	-0.9
MDJ				sPKP		09 33 17.2	
MDJ				PKS		09 36 10.2	
MDJ				SKS	SKSdf	09 39 30.8	+0.6
MDJ				SS	SS	09 54 41.1	-1.4
MDJ				LR	LR		
	comp=Z,1μm,31.2s						
VLA	Vladivostok	146.26	328	⇓*e*PKIKP	PKPdf	09 32 30.8	-1.9
VLA	Vladivostok	146.26	328	⇓*e*P	PKPdf	09 32 30.9	-1.8
THN	Thein Dam	146.28	55	*e*PKP	PKPdf	09 32 32.1	-1.0
MAJO	Matsushiro	146.44	313	*e*PKP2	PKPbc	09 32 33.6	-1.1
MAT	Matsushiro	146.44	313	PKP	PKPdf	09 32 32.9	-0.3
MJAR	Matsushiro Arr	146.44	313	PKPbc	PKPbc	09 32 33.0	-1.7
	comp=Z,144nm,0.9s,baz=96,slow=0.6,SNR=119						
MJAR				pPKPbc	pPKPbc	09 33 06.7	-0.7
	comp=Z,46nm,0.9s,baz=90,slow=1.8,SNR=4.0						
MJAR	Matsushiro Arr	146.44	313	PKIKP	PKPbc	09 32 33.0	-1.7
MJAR						09 33 06.7	
MJAR				pmax	pmax		
	comp=Z,144nm,1.0s						
MJAR				pmax	pmax		
	comp=Z,47nm,0.9s						
CBIJ	Chichi jima	146.66	295	PKPbc	PKPbc	09 32 34.6	-1.0
	comp=Z,258nm,0.9s,baz=274,slow=5.4,SNR=7.9						
JHJ	Hachijo jima 2	146.81	307	PKPbc	PKPbc	09 32 34.2	-1.7
	comp=Z,62nm,0.5s,baz=252,slow=9.8,SNR=5.1						
AJM	Ajmer	147.07	66	*e*PKP	PKPdf	09 32 33.2	-1.3
POO	Poona	147.08	81	*e*PKP	PKPdf	09 32 34.1	-0.7
BHK	Bhakra	147.20	56	*e*PKP	PKPdf	09 32 33.2	-1.4
BHK				*ex*	x	09 33 06.0	
WMQ	Urumqi	147.22	28	PKPbc	PKPdf	09 32 34.7	+0.5
WMQ				PP	PP	09 36 06.7	+4.5
WMQ				SKS	SKSdf	09 39 31.9	+0.2
WMQ				SKKS	SKKSac	09 42 45.1	+2.4
WMQ				SS	SS	09 54 58.4	+4.9
WMQ				AMB	AMB		
	comp=Z,4μm,6.1s						
WMQ				LR	LR		
	comp=N,980nm,22.3s						
WMQ				LR	LR		
	comp=E,1μm,22.3s						
WMQ				LR	LR		
	comp=Z,2μm,24.4s						
KAD	Karad	147.36	83	*ex*	PKPdf	09 32 35.5	+0.3
TLE	Tual	147.61	230	P	PKPab	09 32 40.0	-1.1
SDNR	Sundarnagar	147.61	56	*ex*	PKPbc	09 32 38.5	+0.3
BAKI	Biak	147.62	241	P	PKPdf	09 32 36.4	+0.5
KHET	Khetri	147.71	63	*e*PKP	PKPdf	09 32 35.5	-0.1
RTK	Rohtak	147.96	61	*e*PKP	PKPdf	09 32 33.9	-2.0
KKR	Kurukshetra	148.02	59	*e*PKP	PKPdf	09 32 34.3	-1.7
ULN	Ulaanbaatar	148.20	2	*i* PKIKP	PKPdf	09 32 36.5	+0.8
ULN	Ulaanbaatar	148.20	2	*e*PKPbc	PKPdf	09 32 36.7	+1.0
ULN	Ulaanbaatar	148.20	2	P	PKPdf	09 32 37.3	+1.6
ULN	Ulaanbaatar	148.20	2	PKPdf	PKPdf	09 32 36.8	+1.1
	SNR=72						
SONM	Songino Array	148.21	2	PKP	PKPdf	09 32 36.9	+1.2
	comp=Z,76nm,0.7s,baz=338,slow=1.0,SNR=47						
SONM				PKPbc	PKPbc	09 32 40.2	+1.0
	comp=Z,76nm,0.7s,baz=310,slow=1.2,SNR=71						
SONM				pPKPbc	pPKPbc	09 33 12.0	0.0
	comp=Z,60nm,0.9s,baz=356,slow=1.0,SNR=3.8						
SONM	Songino Array	148.21	2	PKIKP	PKPdf	09 32 36.9	+1.1
SONM						09 32 40.2	
SONM						09 33 12.0	
SONM				pmax	pmax		
	comp=Z,76nm,0.7s						
SONM				pmax	pmax		
	comp=Z,76nm,0.7s						
SONM				pmax	pmax		
	comp=Z,60nm,0.9s						
KLP	Kalpa	148.62	55	*e*PKP	PKPdf	09 32 36.9	0.0
CN2	Changchun	148.66	336	*e*PKPbc	PKPdf	09 32 33.8	-2.8
CN2				PP	PP	09 36 11.2	+0.7
CN2				*e*SS	SS	09 55 10.5	+1.0
CN2				LR	LR		
	comp=N,800nm,20.0s						
CN2				LR	LR		
	comp=E,700nm,20.0s						
CN2				LR	LR		
	comp=Z,400nm,20.0s						
AYAN	Aya Nagar	148.72	61	*e*PKP	PKPdf	09 32 37.5	+0.3
NDI	New Delhi	148.74	61	*e*PKP	PKPdf	09 32 36.0	-1.2
NDI				*ex*	x	09 36 20.0	
SONA	Sohna	148.75	62	*e*PKP	PKPdf	09 32 35.6	-1.7
DDI	Dehra Dun	148.90	57	*e*PKP	PKPdf	09 32 37.6	+0.1
BISR	Bishrakh	148.96	61	*e*PKP	PKPdf	09 32 37.1	-0.5
LATR	Latur	149.65	81	*e*PKP	PKPdf	09 32 36.5	-2.5
COCO	West Island	149.81	157	*i* PKIKP	PKPbc	09 32 45.5	+1.3
COCO	West Island	149.81	157	P	PKPbc	09 32 44.8	+0.6
AKL	Akola	150.01	76	⇓*ix*	PKPbc	09 32 45.2	+0.7
AKL				*ex*	x	09 32 47.8	
	comp=Z,308nm,1.4s						
AKL				*i* x	x	09 44 20.3	
JOSI	Joshimath	150.03	56	*e*PKP	PKPdf	09 32 39.8	+0.5
BHPL	Bhopal	150.12	71	*e*PKP	PKPdf	09 32 39.0	-0.5
PTH	Pithoragarh	150.93	57	*ex*	PKPbc	09 32 47.6	+1.1
SNY	Shenyang	151.06	336	⇓PKPbc	PKPdf	09 32 40.7	+0.2
SNY				SKS	SKSdf	09 39 38.5	+1.6
SNY				AMB	AMB		
	comp=Z,800nm,19.2s						
SNY				LR	LR		
	comp=N,590nm,21.0s						
SNY				LR	LR		
	comp=E,440nm,36.6s						
SNY				LR	LR		
	comp=Z,880nm,22.8s						
HYB	Hyderabad	151.53	83	*i* PKP	PKPdf	09 32 42.0	+0.1
	comp=Z,70nm,1.0s						
HYB				*e*		09 45 40.0	
HYB				*e*SS	SS	09 55 44.0	-0.9
SWI	Sorong	151.78	236	P	PKPdf	09 32 42.3	-0.1
MMRI	Maumere	151.89	210	P	PKPbc	09 32 47.5	-1.6
	comp=Z,316nm,1.5s,comp=Z,5μm						
MMRI	Maumere	151.89	210	P	PKPbc	09 32 48.2	-0.9
KSRS	Korea Array	152.44	325	PKP	PKPdf	09 32 42.9	+0.2
	comp=Z,18nm,1.1s,baz=45,slow=0.8,SNR=52						
KSRS				PKPbc	PKPbc	09 32 49.7	0.0
	comp=Z,103nm,0.9s,baz=19,slow=1.7,SNR=42						
KSRS				pPKPbc	pPKPbc	09 33 22.1	-0.5
	comp=Z,75nm,1.0s,baz=5.5,slow=2.5,SNR=5.7						
KSRS	Korea Array	152.44	325	PKIKP	PKPdf	09 32 42.9	+0.2
KSRS						09 33 22.1	
KSRS				pmax	pmax		
	comp=Z,18nm,1.1s						
KSRS				pmax	pmax		
	comp=Z,103nm,0.9s						
KSRS				pmax	pmax		
	comp=Z,75nm,1.0s						
MDRS	Chennai	152.74	92	*ex*	x	09 33 11.2	
MDRS				*ex*	x	09 36 14.2	
INCN	Inchon	153.12	326	*e*PKPdf	PKPdf	09 32 45.0	+1.3
INCN				*e*PKPbc	PKPbc	09 32 50.9	-0.2
INCN				*e*PKPab	PKPab	09 33 03.2	+0.1
DL2	Dalian	154.33	335	PKPbc	PKPdf	09 32 44.9	-0.5
DL2				LR	LR		
	comp=N,280nm,21.4s						
DL2				LR	LR		
	comp=E,240nm,21.4s						
KOLN	Koldanda	154.35	59	*e*P	PKPdf	09 32 45.0	-0.7
KHKI	Kahang-Kahang	154.73	197	P	PKPab	09 33 07.3	-3.2
	comp=E,81nm,1.7s						
BJI	Beijing	155.06	345	PKP	PKPdf	09 32 46.6	+0.3
BJI				pPKP	pPKPdf	09 33 18.4	-1.1
BJI				sPKP		09 33 30.8	
BJI				PP	PP	09 36 48.9	+2.2
BJI				LR	LR		
	comp=N,540nm,29.2s						
BJI				LR	LR		
	comp=E,700nm,24.9s						
HHC	Hu-ho-hao-te	155.06	354	*e*PKP	PKPdf	09 32 47.0	+0.7
HHC				pPKP	pPKPdf	09 33 19.6	+0.1
HHC				sPKP		09 33 33.1	
HHC				PKS		09 36 19.7	
HHC				PP	PP	09 36 50.3	+3.8
HHC				SKS	SKSdf	09 39 42.3	+0.7
HHC				SKKS	SKKSac	09 43 28.5	+2.9
HHC				SS	SS	09 56 23.0	+3.7
HHC				AMB	AMB		
	comp=Z,500nm,9.7s						
HHC				LR	LR		
	comp=N,1μm,20.6s						
HHC				LR	LR		
	comp=E,2μm,20.7s						
HHC				LR	LR		
	comp=Z,1μm,21.0s						
GKN	Gorkha	155.10	57	*e*P	PKPdf	09 32 46.4	-0.4
GMJI	Gumukmas	155.35	192	P	PKPab	09 33 13.0	-0.1
	comp=Z,190nm,1.4s						
GTA	Gaotai	155.52	16	⇓PKP	PKPdf	09 32 48.0	+1.0
GTA				pPKP	pPKPdf	09 33 14.7	-5.5
GTA				PKS		09 36 20.9	
GTA				PP	PP	09 36 54.5	+5.2
GTA				SKS	SKSdf	09 39 42.7	+0.5
GTA				SKKS	SKKSac	09 43 31.0	+2.8
GTA				SS	SS	09 56 31.4	+6.9
GTA				AMB	AMB		
	comp=Z,470nm,9.0s						
GTA				LR	LR		
	comp=N,700nm,19.8s						
GTA				LR	LR		
	comp=E,610nm,21.0s						
GTA				LR	LR		
	comp=Z,1μm,22.2s						
DMN	Daman	155.64	58	*e*P	PKPdf	09 32 47.3	-0.2
KRKI	Karangkates	155.65	190	P	PKPab	09 33 14.0	-0.4
KKN	Kakani	155.71	57	*e*P	PKPdf	09 32 47.4	-0.2
PCJI	Pacitan	155.80	187	P	PKPab	09 33 16.0	+1.0
PWJI	Pagerwojo	155.89	189	P	PKPdf	09 32 52.0	+3.8
PKI	Pulchoki	155.90	58	*e*P	PKPdf	09 32 47.0	-0.9
	comp=Z,126nm,1.0s						
GUN	Gumba	156.14	56	*e*P	PKPdf	09 32 48.2	0.0
	comp=Z,399nm,0.8s						
SJI	Sawahan	156.18	189	P	PKPab	09 33 16.9	+0.3
KAPI	Kappang	156.23	210	PKP	PKPdf	09 32 47.6	-1.1
	comp=Z,21nm,1.0s,baz=209,slow=9.1,SNR=3.8						
KAPI				PKPbc	PKPdf	09 32 57.9	+9.1
KAPI	Kappang	156.23	210	PKP	PKPdf	09 32 47.6	-1.1
KAPI				PKPbc	PKPdf	09 32 57.9	+9.1
JIRN	Jiri	156.50	57	*e*P	PKPdf	09 32 48.8	+0.2
RAMN	Ramite	157.12	58	*e*P	PKPdf	09 32 49.2	-0.3
ODAN	Odare	157.80	57	*e*P	PKPdf	09 32 49.4	-0.9
TAPN	Taplejung	157.85	56	*e*P	PKPdf	09 32 50.0	-0.3
TIY	Taiyuan	158.04	351	*e*PKP	PKPdf	09 32 51.3	+1.0
TIY				LR	LR		
	comp=N,1μm,23.3s						
TIY				LR	LR		
	comp=E,440nm,20.9s						
TIY				LR	LR		
	comp=Z,2μm,22.4s						
LSA	Lhasa	159.19	46	PKP	PKPdf	09 32 50.2	-1.7
MDSI	Maura Dua	159.26	168	P	PKPdf	09 32 50.8	-1.7
LZH	Lanzhou	159.60	10	PKP	PKPdf	09 32 54.0	+1.8
LZH				pPKP	pPKPdf	09 33 25.8	+0.4
LZH				PP	PP	09 37 12.3	+0.8
LZH				SKKS	SKKSac	09 43 50.0	+0.2
LZH				SS	SS	09 57 06.2	-1.6
LZH				AMB	AMB		
	comp=Z,740nm,7.5s						
LZH				LR	LR		
	comp=N,2μm,19.0s						
LZH				LR	LR		
	comp=Z,2μm,20.4s						
CAL	Calcutta	160.11	68	*ex*	x	09 34 02.9	
CAL				*ex*	x	09 44 01.3	
SSE	Sheshan	160.88	324	PKP	PKPdf	09 32 52.4	-1.3
SSE				PP	PP	09 37 19.2	+0.1
SSE				SS	SS	09 57 25.4	+2.8
SSE				LR	LR		
	comp=N,810nm,23.7s						
SSE				LR	LR		
	comp=E,380nm,23.9s						
SSE				LR	LR		
	comp=Z,960nm,30.9s						
NJ2	Nanjing	161.32	331	*e*PKP	PKPdf	09 32 51.1	-3.1
NJ2				PKPab	PKPab	09 33 39.6	+1.0
NJ2				PP	PP	09 37 20.2	-1.1
NJ2				SS	SS	09 57 22.0	-4.8
NJ2				AMB	AMB		
	comp=Z,920nm,8.2s						
NJ2				LR	LR		
	comp=N,960nm,23.3s						
NJ2				LR	LR		
	comp=E,1μm,17.1s						
NJ2				LR	LR		
	comp=Z,4μm,20.8s						
PDSI	Padang	161.53	155	P	PKPdf	09 32 54.7	-0.3
PPBI	Pangkal Pinang	161.85	173	P	PKPdf	09 32 56.6	+1.3
SDSI	Sungai Dareh	161.89	158	P	PKPdf	09 32 54.1	-1.2
PPI	Padang Panjang	161.91	154	P	PKPdf	09 32 54.8	-0.6
XAN	Xi'an	162.01	358	PKP	PKPdf	09 32 54.9	+0.1
XAN				PKS		09 36 25.8	
XAN				SKS	SKSdf	09 39 48.3	-0.3
XAN				SS	SS	09 57 28.8	-4.1
XAN				AMB	AMB		
	comp=Z,120nm,10.6s						
XAN				LR	LR		
	comp=N,800nm,31.6s						
XAN				LR	LR		
	comp=E,590nm,31.6s						
XAN				LR	LR		
	comp=Z,330nm,31.6s						
TPTI		163.31	138	P	PKPdf	09 32 56.4	-0.3
PSI	Prapat	164.00	144	PKP	PKPdf	09 32 56.6	-0.7
	comp=Z,25nm,1.1s,baz=219,slow=5.2,SNR=15						
PSI				PKPab	PKPab	09 33 50.4	-0.4
	comp=Z,70nm,1.0s,baz=210,slow=6.4,SNR=14						
PSI	Prapat	164.00	144	PKIKP	PKPdf	09 32 56.7	-0.7
PSI						09 33 50.4	
PSI				pmax	pmax		
	comp=Z,25nm,1.1s						
PSI				pmax	pmax		
	comp=Z,70nm,1.0s						
WHN	Wuhan	164.47	340	⇓PKP	PKPdf	09 32 57.3	0.0
WHN				LR	LR		
	comp=N,1μm,17.5s						
WHN				LR	LR		
	comp=E,1μm,21.8s						
WHN				LR	LR		
	comp=Z,2μm,23.4s						
CD2	Chengdu	164.59	15	PKP	PKPdf	09 32 58.2	+0.8
CD2				pPKP	pPKPdf	09 33 25.2	-5.4
CD2				PKPab	PKPab	09 33 56.2	+3.4
CD2				PKS		09 36 30.0	
CD2				PP	PP	09 37 43.2	+5.1
CD2				SKS	SKSdf	09 39 51.0	+0.3
CD2				SKKS	SKKSac	09 44 18.2	+2.7
CD2				SS	SS	09 58 04.2	+4.5
CD2				AMB	AMB		
	comp=Z,790nm,10.1s						
CD2				LR	LR		
	comp=N,740nm,22.6s						
CD2				LR	LR		
	comp=Z,1μm,21.4s						
MYKOM	Kota Tinggi	165.24	162	P	PKPdf	09 32 58.7	+0.2
KSM	Kuching	165.44	188	*e*PKPdf	PKPdf	09 32 58.2	-0.4
KSM	Kuching	165.44	188	P	PKPdf	09 32 58.6	0.0
SSLB	Suanglung	165.76	305	*e*PKPdf	PKPdf	09 32 59.1	+0.6
SBUM	Sibu	165.99	197	P	PKPdf	09 32 59.3	+0.2
TWG	Pinlang	166.13	301	*e*PKPdf	PKPdf	09 33 02.5	+3.6
TPUB	Ta-pu	166.26	304	*e*PKPdf	PKPdf	09 33 00.1	+1.2
IPM	Ipoh	166.54	147	P	PKPdf	09 32 59.5	0.0
QZH	Quanzhou	166.84	314	PKP	PKPdf	09 32 57.6	-1.8
QZH				pPKP	pPKPdf	09 33 32.0	-0.6
QZH				SS	SS	09 58 24.0	-0.7
QZH				LR	LR		
	comp=Z,2μm,21.4s						
KULM	Kulim	167.01	144	*e*PKPdf	PKPdf	09 32 57.7	-2.1
KKM	Kota Kinabalu	167.41	219	P	PKPdf	09 33 00.3	+0.2
KKM	Kota Kinabalu	167.41	219	*e*PKPdf	PKPdf	09 33 00.5	+0.4
KKM	Kota Kinabalu	167.41	219	P	PKPdf	09 33 00.7	+0.6
GYA	Guiyang	169.47	8	*i* PKP	PKPdf	09 33 01.4	+0.3
GYA				pPKP	pPKPdf	09 33 34.0	-0.4
GYA				sPKP		09 33 46.9	
GYA				PKPab	PKPab	09 34 15.8	+1.3
GYA				PKS		09 36 31.0	
GYA				SKKS	SKKSac	09 44 38.0	-1.8
GYA				SS	SS	09 58 44.9	-3.9
GYA				AMB	AMB		
	comp=Z,460nm,6.5s						
GYA				LR	LR		
	comp=N,300nm,20.5s						
GYA				LR	LR		
	comp=E,340nm,23.3s						
GYA				LR	LR		
	comp=Z,540nm,23.9s						
KMI	Kunming	169.55	29	PKP	PKPdf	09 33 00.5	-0.7
KMI				pPKP	pPKPdf	09 33 34.0	-0.5
KMI				sPKP		09 33 46.7	
KMI				PKPab	PKPab	09 34 15.4	+0.4
KMI				PP	PP	09 38 05.7	+1.8
KMI				SKKS	SKKSac	09 44 39.1	-1.3
KMI				SS	SS	09 58 49.0	-1.5
KMI				LR	LR		
	comp=N,290nm,27.6s						
KMI				LR	LR		
	comp=E,580nm,21.7s						
CHG	Chiang Mai	170.68	71	⇓P	PKPdf	09 33 01.2	-0.8
	comp=E,25nm,1.2s						
CHTO	Chiang Mai	170.68	71	*e*PKIKP	PKPdf	09 33 01.6	-0.4
CHTO	Chiang Mai	170.68	71	P	PKPdf	09 33 01.8	-0.2
CHTO	Chiang Mai	170.68	71	PKPdf	PKPdf	09 33 02.5	+0.5
	SNR=5.5						
CMAR	Chiang Mai Arr	170.77	73	PKP	PKPdf	09 33 01.9	-0.1
	comp=E,5.2nm,0.6s						
CMAR	Chiang Mai Arr	170.77	73	PKIKP	PKPdf	09 33 01.9	-0.1
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BDT	Bhumibol Dam	171.05	81	P	PKPdf	09 33 02.0	-0.2
CHRT	Chiangrai	171.06	63	P	pPKPdf	09 33 33.0	-2.5
	comp=Z,237nm,1.1s						
NST	Nakhon Sawan	172.18	91	P	pPKPdf	09 33 34.8	-1.3
QIZ	Qiongzhong	176.61	334	PKP	PKPdf	09 33 03.4	-0.7
QIZ				pPKP	pPKPdf	09 33 36.4	-1.1
QIZ				sPKP		09 33 49.0	
QIZ				PP	PP	09 38 39.3	+1.0
QIZ				SKKS	SKKSac	09 45 15.4	+1.1
QIZ				SS	SS	09 59 56.9	-1.9
QIZ				AMB	AMB		
	comp=Z,2μm,8.1s						

KRSC 08 09:37:56.7±1.7, 54°.98N×162°.30E, h33km±32km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.54	218	*e*P	Pb	09 38 07.9	+0.1
MKZ				*i* S	Sb	09 38 16.2	+0.7
KBTR	Krutoberegovo	1.27	13	*e*P	Pn	09 38 18.6	+0.6
KBTR				*i* S	Sn	09 38 35.0	+1.1
NLC	Nalytchevo	2.51	225	*e*P	Pn	09 38 37.2	+2.0
NLC				*i* S	Sn	09 39 06.7	+2.1
AVH	Avacha	2.71	232	P	Pn	09 38 39.0	+1.1
GNL	Ganaly	2.86	245	*e*P	Pn	09 38 42.9	+3.0
PET	Petropavlovsk	2.91	229	P	Pn	09 38 42.5	+1.9
PET				*i* S	Sn	09 39 15.8	+1.4

*ISCJB **08** 10:33:40.4±0.7, 37°.00N±0°.04×29°.24E±0°.04, h7km±6km, Error ellipse: s-maj=6.6km s-min=5.6km az=175.9*
*DDA **08** 10:33:40.4, 37°.00N×29°.17E, h7km±6km, Md3.0*
*CSEM **08** 10:33:40.3±0.1, 37°.00N×29°.24E, h5km, MD3.0, Error ellipse: s-maj=2.2km s-min=1.8km az=10.0*
*ISK **08** 10:33:40.2, 37°.03N×29°.23E, h7km, MD3.0*

ISC 08 10:33:40.7±0.7, 37°.00N±0°.04×29°.23E±0°.04, h9km±5km, n32, σ0°66/44, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.26	54	*e*PG	Pg	10 33 45.6	-0.4
GLHS				*e*SG	Sg	10 33 50.4	+0.9
GLHS	Glhisar (BURDU	0.26	54	*e*Pg	Pg	10 33 45.6	-0.4
GLHS				*e*Sg	Sg	10 33 50.4	+0.9
TURN	Turunc	0.52	256	*i* P	Pg	10 33 54.6	+3.8
TURN				*i* S	Sg	10 34 06.6	+9.0
TURN	Turunc	0.52	256	*i* P	Pg	10 33 54.6	+3.8
ELL	Elmali	0.60	115	*e*PG	Pg	10 33 52.0	-0.2
ELL	Elmali	0.60	115	*e*Pg	Pg	10 33 52.1	-0.2
DNZL	Cakiroluk	0.70	348	*i* P	Pg	10 33 53.2	-1.1
DNZL				*i* S	Sg	10 34 04.7	+1.2
DNZL	Cakiroluk	0.70	348	*i* P	Pg	10 33 53.2	-1.1
DNZL				*i* S	Sg	10 34 04.7	+1.2
DENT	Denizli	0.77	348	*e*PG	Pg	10 33 54.1	-1.4
DENT	Denizli	0.77	348	*e*Pg	Pg	10 33 54.1	-1.4
YER	Yerkesik	0.77	280	*e*PG	Pg	10 33 55.8	+0.2
YER	Yerkesik	0.77	280	*e*Pg	Pg	10 33 55.8	+0.2
AKAS	Kas	0.82	159	*i* P	Pg	10 33 56.0	-0.6
AKAS				*i* S	Sg	10 34 12.3	+5.0
AKAS	Kas	0.82	159	*i* P	Pg	10 33 56.0	-0.6
MLSB	Milas	1.20	285	*e*PN	Pn	10 34 03.3	-0.5
MLSB	Milas	1.20	285	*e*Pn	Pn	10 34 03.3	-0.4
AYDN	Tasoluk	1.26	302	*i* P	Pn	10 34 04.2	-0.4
AYDN				*i* S	Sb	10 34 20.9	-0.3
AYDN	Tasoluk	1.26	302	*i* P	Pn	10 34 04.2	-0.4
AYDN				*i* S	Sb	10 34 20.9	-0.2
ISP	Isparta	1.31	51	*e*PN	Pn	10 34 05.8	+0.5
ISP	Isparta	1.31	51	*e*Pn	Pn	10 34 05.8	+0.5
DAT	Datca	1.36	259	*e*PN	Pn	10 34 06.3	+0.5
DAT	Datca	1.36	259	*e*Pn	Pn	10 34 06.3	+0.5
KHAL	Karahalli	1.38	8	*i* P	Pn	10 34 06.2	0.0
KHAL				*i* S	Sb	10 34 24.1	-0.4
KHAL	Karahalli	1.38	8	*i* P	Pn	10 34 06.2	0.0
KHAL				*i* S	Sb	10 34 24.1	-0.4
BDRM	Kayabasi	1.43	273	*i* P	Pn	10 34 07.0	+0.1
BDRM				*i* S	Sn	10 34 26.3	+0.5
BDRM	Kayabasi	1.43	273	*i* P	Pn	10 34 07.0	+0.1
BDRM				*i* S	Sn	10 34 26.3	+0.4
SUTC	Sutluce-Ispart	1.49	71	*e*PN	Pn	10 34 07.7	0.0
SUTC	S

TURN *i* S **Sg** **10 38 28.7 +11**
TURN Turunc 0.47 255 *i* P **Pg** **10 38 17.2 +5.0**
ELL Elmali 0.65 112 *e*PG **Pg** **10 38 16.1 +0.4**
ELL Elmali 0.65 112 *e*Pg **Pg** **10 38 16.1 +0.4**
DNZL Cakiroluk 0.70 352 *i* P **Pg** **10 38 15.6 -1.0**
DNZL *i* S **Sg** **10 38 25.6 0.0**
DNZL Cakiroluk 0.70 352 *i* P **Pg** **10 38 15.6 -1.0**
DNZL *i* S **Sg** **10 38 25.6 0.0**
YER Yerkesik 0.72 281 *e*PG **Pg** **10 38 17.1 +0.1**
YER *e*SG **Sg** **10 38 28.1 +1.8**
YER Yerkesik 0.72 281 *e*Pg **Pg** **10 38 17.1 +0.1**
YER *e*Sg **Sg** **10 38 28.1 +1.8**
DENT Denizli 0.76 352 *e*PG **Pg** **10 38 16.8 -1.1**
DENT *e*SG **Sg** **10 38 27.4 -0.3**
DENT Denizli 0.76 352 *e*Pg **Pg** **10 38 16.8 -1.1**
DENT *e*Sg **Sg** **10 38 27.4 -0.3**
AKAS Kas 0.84 155 *i* P **Pg** **10 38 19.1 -0.2**
AKAS *i* S **Sg** **10 38 35.4 +5.1**
AKAS Kas 0.84 155 *i* P **Pg** **10 38 19.1 -0.3**
AYDN Tasoluk 1.22 303 *i* P **Pg** **10 38 26.5 -0.1**
AYDN *i* S **Sg** **10 38 42.6 +0.2**
AYDN Tasoluk 1.22 303 *i* P **Pg** **10 38 26.5 -0.1**
AYDN *i* S **Sg** **10 38 42.6 +0.2**
DAT Datca 1.30 259 *e*PN **Pn** **10 38 28.8 +0.3**
DAT Datca 1.30 259 *e*Pn **Pn** **10 38 28.8 +0.3**
BDRM Kayabasi 1.38 273 *i* P **Pn** **10 38 29.9 +0.3**
BDRM *i* S **Sg** **10 38 46.2 -1.3**
BDRM Kayabasi 1.38 273 *i* P **Pn** **10 38 29.9 +0.4**
BDRM *i* S **Sg** **10 38 46.2 -1.3**
KHAL Karahalli 1.39 11 *i* P **Pn** **10 38 29.7 -0.1**
KHAL *i* S **Sg** **10 38 48.9 +0.8**
KHAL Karahalli 1.39 11 *i* P **Pn** **10 38 29.7 -0.1**
KHAL *i* S **Sg** **10 38 48.8 +0.7**
SUTC Sutluce-Ispart 1.54 71 *e*PN **Pn** **10 38 31.4 -0.4**
SUTC Sutluce-Ispart 1.54 71 *e*Pn **Pn** **10 38 31.4 -0.4**

GUC 08 10:51:59.3±0.8, 23°.02S×69°.95W, h32km±6km, ML3.7, 2C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**0.44**	**212**	⇑*i*P	Pb	10 52 11.5	+2.6
CEN1				*i* S	Sb	10 52 20.8	+5.4
CEN1				AML	AML	10 52 22.0	
	comp=E,6μm,0.6s						
MECH	**Mejillones**	**0.47**	**259**	⇓*i*P	Pb	10 52 09.1	-0.2
MECH				*i* S	Sb	10 52 15.5	-0.6
MECH				AML	AML	10 52 23.0	
	comp=N,11μm,0.4s						
ANCH	**Antofagasta**	**0.79**	**212**	⇓*i*P	Pn	10 52 13.5	-0.7
ANCH				*i* S	Sn	10 52 24.1	-0.8
ANCH				AML	AML	10 52 24.8	
	comp=N,6μm,0.1s						
PB04	**Plate Boundary**	**0.86**	**30**	⇑*i*P	Pn	10 52 13.6	-1.6
PB04				*i* S	Sn	10 52 23.6	-3.1
PB04				AML	AML	10 52 24.4	
	comp=N,7μm,0.7s						
PB01	**Plate Boundary**	**2.01**	**12**	⇓*i*P	Pn	10 52 32.8	+1.8
PB01				*i* S	Sn	10 52 58.6	+3.5
PB01				AML	AML	10 53 03.5	
	comp=E,1μm,0.4s						
PSGC	**Pisagua**	**3.41**	**357**	*e*P	Pn	10 52 49.1	-1.1
PSGC				*e*S	Sn	10 53 29.4	-0.1

IDC 08 10:59:11.2±2.9, 50°.10S×112°.27E, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.9/15, mbtmp4.0/4, Error ellipse: s-maj=147.2km s-min=23.5km az=107.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**31.33**	**41**	P	P	11 05 33.0	-0.1
	0.8nm,1.0s,baz=210,slow=8.5,SNR=7.0						
FITZ	**Fitzroy Crossi**	**33.68**	**23**	P	P	11 05 54.0	+0.2
	2.4nm,0.8s,baz=92,slow=20,SNR=7.5						
WRA	**Warramunga Arr**	**34.83**	**38**	P	P	11 06 03.5	-0.3
	3.1nm,0.8s,baz=206,slow=8.4,SNR=8.3						
QSPA	**South Pole Qui**	**40.03**	**180**	P	P	11 06 47.2	0.0
	2.5nm,1.0s,baz=328,slow=5.8,SNR=8.5						
TXAR	**Lajitas Array**	**145.91**	**114**	PKPbc	PKPbc	11 18 52.5	+0.2
	0.5nm,1.0s,baz=168,slow=6.4,SNR=3.8						

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*IDC **08** 11:06:20.1±0.6, 15°.23N×122°.44E, h0km, mb4.4/16, mb1 4.5/16, mb1mx4.3/25, mbtmp4.4/16, MS3.9/4, Ms1 3.9/4, ms1mx3.4/30, Error ellipse: s-maj=30.3km s-min=11.3km az=78.0*
*MAN **08** 11:06:22, 15°.40N×122°.40E, h2km, mb5.0, ML3.9, MS4.0*
MAN INTENSITY III - QUEZON CITY.
*ISCJB **08** 11:06:25.7±0.5, 15°.32N±0°.03×122°.42E±0°.05, h53km±5km, mb4.6/22, MS4.2/4, Error ellipse: s-maj=8.5km s-min=4.3km az=164.4*
*NEIC **08** 11:06:26.6±1.5, 15°.25N×122°.55E, h46km±14km, mb4.9/6, Error ellipse: s-maj=12.8km s-min=5.4km az=73.0*
NEIC Felt [III PIVS] at Quezon City, Luzon.
*BJI **08** 11:06:28.3, 15°.26N×122°.03E, h33km, mB4.5/2, mb4.4/5, Ms4.2/2, Ms7 4.0/2*
ISC 08 11:06:26.8±0.5, 15°.34N±0°.03×122°.43E±0°.05, h46km±6km, n67, σ1§25/70, mb4.6/22, MS4.2/4, 1C-3D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**0.77**	**218**	*e*P	**Pn**	**11 06 37.7**	**-3.7**
POLP				*e*S	**Sn**	**11 06 48.5**	**-3.4**
BALP	**Baler**	**0.92**	**296**	*e*P	**Pn**	**11 06 40.3**	**-3.0**
PCPH	**Palayan**	**1.31**	**280**	⇓*e*P	**Pn**	**11 06 46.1**	**-2.5**
PCPH				*e*S	**Sn**	**11 07 04.6**	**-0.4**
PALP	**Palanan**	**1.72**	**360**	*e*P	**Pn**	**11 06 51.5**	**-2.7**
PALP				*e*S	**Sn**	**11 07 13.2**	**-1.8**
TGY	**Tagaytay City**	**1.90**	**230**	Pn	**Pn**	**11 06 57.8**	**+1.1**
	2μm,0.3s,baz=60,slow=2.7,SNR=240						
TGY				Sn	**Sn**	**11 07 23.4**	**+4.0**
	1μm,0.3s,baz=296,slow=24,SNR=5.8						
BOAC	**Boac**	**1.95**	**197**	*e*P	**Pn**	**11 06 58.2**	**+0.7**
BOAC				*e*S	**Sn**	**11 07 20.1**	**-0.7**
AUQP	**San Andres**	**2.02**	**173**	*e*P	**Pn**	**11 07 00.3**	**+1.9**
BCPH	**Baguio City Da**	**2.06**	**300**	⇑*i*P	**Pn**	**11 06 58.4**	**-0.6**
BCPH				*i* S	**Sn**	**11 07 23.7**	**+0.2**
PGP	**Puerto Galera**	**2.32**	**218**	⇓*e*P	**Pn**	**11 07 02.5**	**0.0**
PVCP	**Virac**	**2.40**	**136**	*e*P	**Pn**	**11 07 05.1**	**+1.4**
SCZP	**Santa Cruz**	**2.47**	**281**	*e*P	**Pn**	**11 07 05.3**	**+0.7**
BOLP	**Bolinao**	**2.64**	**294**	*e*P	**Pn**	**11 07 06.6**	**-0.3**
LUBP	**Lubang**	**2.65**	**233**	*e*P	**Pn**	**11 07 07.1**	**0.0**
APYP	**Conner**	**2.76**	**336**	*e*P	**Pn**	**11 07 08.7**	**+0.2**
ABRA	**Dolores**	**2.83**	**325**	*e*P	**Pn**	**11 07 09.9**	**+0.3**
OTRP	**Odiongan**	**2.98**	**188**	*e*P	**Pn**	**11 07 12.1**	**+0.4**
SJMP	**San Jose**	**3.13**	**204**	*e*P	**Pn**	**11 07 15.2**	**+1.5**
PIP	**Pasuquin**	**3.44**	**330**	⇓*e*P	**Pn**	**11 07 19.4**	**+1.5**
PIP				*e*S	**Sn**	**11 08 01.9**	**+4.5**
CNP	**Catarman**	**3.55**	**142**	*e*P	**Pn**	**11 07 21.8**	**+2.3**
BUSP	**Coron**	**3.96**	**213**	*e*P	**Pn**	**11 07 25.4**	**+0.3**
CUYO	**Cuyo Island**	**4.67**	**197**	*e*P	**Pn**	**11 07 34.2**	**-0.6**
GUIM	**Jordan**	**4.69**	**178**	*e*P	**Pn**	**11 07 36.8**	**+1.7**
BBP	**Basco**	**5.09**	**355**	*e*P	**Pn**	**11 07 37.7**	**-2.9**
BUKP	**Musuan**	**7.85**	**161**	*e*P	**Pn**	**11 08 21.4**	**+2.9**
DAV	**Davao City (W)**	**8.78**	**159**	LR	LR	11 13 13.8	
	comp=Z,593nm,18.9s,baz=18,slow=48						
KAPI	**Kappang**	**20.39**	**188**	P	**P**	**11 10 58.1**	**-1.9**
	9.9nm,0.6s,baz=338,slow=4.5,SNR=5.3						
KMI	**Kunming**	**20.86**	**301**	P	**P**	**11 11 05.8**	**+0.8**
KMI				pmax	pmax		
	comp=Z,6.0nm,1.7s						
CBIJ	**Chichi jima**	**21.78**	**54**	LR	LR	11 17 16.0	
	comp=Z,255nm,21.4s,MS3.6,baz=196,slow=30						
KS15	**Wonju Array Si**	**22.54**	**11**	*e*P	**P**	**11 11 22.1**	**-0.8**
KSRS	**Korea Array**	**22.56**	**11**	P	**P**	**11 11 22.1**	**-1.0**
	comp=Z,3.6nm,0.7s,mb3.9,baz=194,slow=10,SNR=25						
CMAR	**Chiang Mai Arr**	**22.68**	**281**	LR	LR	11 19 29.7	
	comp=Z,10μm,20.1s,MS5.3,baz=136,slow=35						
MJAR	**Matsushiro Arr**	**25.37**	**31**	P	**P**	**11 11 49.8**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=207,slow=5.3,SNR=4.0						
KAKA	**Kakadu**	**29.58**	**160**	*e*P	**P**	**11 12 26.0**	**-1.6**
	comp=Z,28nm,0.6s,mb5.2						
KAKA	**Kakadu**	**29.58**	**160**	*e*P	**P**	**11 12 26.0**	**-1.6**
	comp=Z,59nm,0.6s,mb5.5						
FITZ	**Fitzroy Crossi**	**33.38**	**174**	*e*P	**P**	**11 12 59.6**	**-1.4**
	comp=Z,19nm,1.1s,mb5.0						
FITZ	**Fitzroy Crossi**	**33.38**	**174**	P	**P**	**11 12 59.1**	**-1.8**
	comp=Z,17nm,1.1s,mb4.9,baz=15,slow=8.5,SNR=14						
FITZ	**Fitzroy Crossi**	**33.38**	**174**	*e*P	**P**	**11 12 59.8**	**-1.2**
ULN	**Ulaanbaatar**	**34.84**	**342**	*e*P	**P**	**11 13 14.7**	**+1.3**
	comp=Z,3.0nm,0.8s,mb4.3						
SONM	**Songino Array**	**35.02**	**341**	P	**P**	**11 13 14.8**	**-0.1**
	comp=Z,0.9nm,0.6s,mb3.9,baz=168,slow=12,SNR=4.9						
SONM				LR	LR	11 28 17.3	
	comp=Z,256nm,21.4s,MS3.9,baz=262,slow=38						
WRAB	**Tennant Creek**	**36.96**	**161**	*e*P	**P**	**11 13 29.7**	**-2.1**
	comp=Z,25nm,0.9s,mb5.0						
WRA	**Warramunga Arr**	**36.96**	**161**	P	**P**	**11 13 29.3**	**-2.5**
	comp=Z,20nm,0.7s,mb5.1,baz=344,slow=9.1,SNR=84						
ASAR	**Alice Springs**	**40.35**	**164**	P	**P**	**11 13 58.9**	**-1.4**
	comp=Z,6.2nm,0.7s,mb4.5,baz=340,slow=7.0,SNR=63						
CTA	**Charters Tower**	**42.28**	**146**	*e*P	**P**	**11 14 16.4**	**+0.3**
	comp=Z,9.4nm,1.0s,mb4.4						
CTA	**Charters Tower**	**42.28**	**146**	P	**P**	**11 14 15.9**	**-0.2**
	comp=Z,9.5nm,0.8s,mb4.5,baz=330,slow=8.7,SNR=7.2						
CTAO	**Charters Tower**	**42.28**	**146**	*e*P	**P**	**11 14 16.4**	**+0.3**
MK31	**Makanchi Array**	**45.75**	**322**	*e*P	**P**	**11 14 45.2**	**+1.5**
MKAR	**Makanchi Array**	**45.75**	**322**	P	**P**	**11 14 44.1**	**+0.4**
	comp=Z,2.4nm,0.8s,mb4.2,baz=116,slow=8.1,SNR=14						
FORT	**Forrest**	**46.17**	**173**	*e*P	**P**	**11 14 45.8**	**-1.3**
	comp=Z,19nm,0.6s,mb5.2						
PETK	**Petropavlovsk-**	**46.79**	**29**	P	**P**	**11 14 52.6**	**+0.9**
	comp=Z,3.6nm,0.9s,mb4.3,baz=310,slow=2.6,SNR=3.1						
NWAO	**Narrogin (SRO)**	**48.25**	**186**	P	**P**	**11 15 02.1**	**-1.1**
	comp=Z,12nm,0.6s,mb5.1,baz=6.8,slow=7.1,SNR=9.9						
ZAA0	**Zalesovo Array**	**48.41**	**331**	*e*P	**P**	**11 15 04.7**	**+0.4**
ZALV	**Zalesovo Beam**	**48.41**	**331**	P	**P**	**11 15 04.7**	**+0.5**
	comp=Z,2.0nm,0.6s,mb4.3,baz=116,slow=6.8,SNR=8.8						
ZALV	**Zalesovo Beam**	**48.41**	**331**	P	**P**	**11 15 04.7**	**+0.4**
AAK	**Ala-Archa**	**49.13**	**314**	LR	LR	11 37 02.5	
	comp=Z,190nm,19.6s,MS4.1,baz=39,slow=37						
KURK	**Kurchatov**	**49.80**	**325**	*e*P	**P**	**11 15 16.2**	**+1.2**
	comp=Z,34nm,1.0s,mb5.3						
STKA	**Stephens Creek**	**50.41**	**159**	*e*P	**P**	**11 15 18.9**	**-0.9**
	comp=Z,4.6nm,0.6s,mb4.7						
STKA	**Stephens Creek**	**50.41**	**159**	P	**P**	**11 15 18.4**	**-1.4**
	comp=Z,6.9nm,0.7s,mb4.8,baz=334,slow=6.9,SNR=12						
STKA	**Stephens Creek**	**50.41**	**159**	*e*P	**P**	**11 15 19.0**	**-0.8**
BVAR	**Borovoye Array**	**55.39**	**325**	P	**P**	**11 15 57.1**	**+0.8**
	comp=Z,1.4nm,0.6s,mb4.2,baz=114,slow=10,SNR=9.7						
BRVK	**Borovoye**	**55.47**	**325**	*e*P	**P**	**11 15 57.7**	**+0.9**
	comp=Z,22nm,1.0s,mb5.2						
TIXI	**Tiksi**	**56.43**	**2**	*e*P	**P**	**11 16 03.6**	**+0.2**
	comp=Z,4.2nm,0.6s,mb4.7						
TOO	**Toolangi**	**56.92**	**158**	*e*P	**P**	**11 16 07.1**	**-0.2**
ABKAR	**Akbulak array**	**60.62**	**318**	*e*P	**P**	**11 16 34.0**	**+1.0**
	comp=Z,4.4nm,0.8s,mb4.6						
ARCES	**ARCESS Array B**	**78.16**	**339**	P	**P**	**11 18 21.4**	**+0.5**
	comp=Z,1.9nm,1.0s,mb4.0,baz=171,slow=38,SNR=2.9						
BUR08	**Bucovina Ar. S**	**83.60**	**318**	*e*P	**P**	**11 18 52.1**	**+1.7**
NB2	**NORSAR Subarra**	**86.58**	**333**	P	**P**	**11 19 05.0**	**0.0**
	comp=Z,3.5nm,0.9s,mb4.6,baz=69,slow=4.8						
NOA	**NORSAR Array B**	**86.58**	**333**	P	**P**	**11 19 05.5**	**+0.5**
	comp=Z,1.0nm,0.6s,mb4.2,baz=63,slow=4.9,SNR=5.8						

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*GUC **08** 12:08:39.7±0.6, 30°.88S×71°.64W, h27km±3km, ML4.8*
*NEIC **08** 12:08:39.7, 30°.88S×71°.64W, h27km, ML4.8(GUC), After GUC.*
*ISCJB **08** 12:08:40.4±0.7, 30°.82S±0°.03×71°.53W±0°.09, h47km±6km, mb3.9/5, Error ellipse: s-maj=13.0km s-min=4.7km az=1.8*
*IDC **08** 12:08:44.5±2.8, 30°.81S×71°.46W, h72km±23km, mb3.7/5, mb1 3.9/10, mb1mx3.8/17, mbtmp3.7/10, MS3.6/1, Ms1 3.6/1, ms1mx2.8/24, Error ellipse: s-maj=28.8km s-min=20.7km az=82.0*
ISC 08 12:08:41.2±0.8, 30°.82S±0°.03×71°.59W±0°.09, h38km±8km, n46, σ1§04/58, mb3.9/5, 11C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OVCH	**Ovalle**	**0.39**	**58**	⇓*i*P	**Pn**	**12 08 49.3**	**-1.2**
OVCH				*i* S	**Sn**	**12 08 56.4**	**-0.6**
OVCH	**Ovalle**	**0.39**	**58**	⇓*i*P	**Pn**	**12 08 49.3**	**-1.2**
OVCH				*i* S	**Sn**	**12 08 56.4**	**-0.6**
OVCH				AML	AML	12 08 56.7	
	comp=N,106μm,0.5s						
CMCH	**Combarbala**	**0.62**	**125**	⇑*i*P	**Pn**	**12 08 51.7**	**-1.8**
CMCH				*i* S	**Sn**	**12 09 00.9**	**-1.4**
CMCH	**Combarbala**	**0.62**	**125**	⇑*i*P	**Pn**	**12 08 51.7**	**-1.8**
CMCH				*i* S	**Sn**	**12 09 00.9**	**-1.4**
CMCH				AML	AML	12 09 02.4	
	comp=N,102μm,0.5s						
CHNG	**Los Chungos**	**1.06**	**176**	⇑*i*P	**Pn**	**12 08 57.4**	**-2.3**
CHNG				*i* S	**Sn**	**12 09 11.1**	**-2.1**
LCO	**Las Campanas**	**1.96**	**23**	*e*Pn	**Pn**	**12 09 12.2**	**+0.2**
LCO				*e*Sn	**Sn**	**12 09 38.2**	**+2.9**
JACH	**Jahuel**	**2.04**	**156**	*e*P	**Pn**	**12 09 13.5**	**+0.4**
JACH	**Jahuel**	**2.04**	**156**	*e*P	**Pn**	**12 09 13.5**	**+0.4**
ROCH	**El Roble**	**2.20**	**167**	*e*P	**Pn**	**12 09 15.8**	**+0.5**
ROCH	**El Roble**	**2.20**	**167**	*e*P	**Pn**	**12 09 15.8**	**+0.5**
PEL	**Peldehue**	**2.44**	**162**	⇓*i*P	**Pn**	**12 09 18.6**	**0.0**
PEL				*i* S	**Sn**	**12 09 48.6**	**+1.3**
PEL				AML	AML	12 10 01.0	
	comp=E,7μm,0.5s						
CLCH	**Cerro Calan**	**2.72**	**161**	*e*P	**Pn**	**12 09 22.8**	**+0.3**
CLCH				*i* S	**Sn**	**12 09 55.1**	**+1.0**
CLCH				AML	AML	12 10 08.9	
	comp=E,4μm,0.5s						
FCH	**Farellones**	**2.73**	**157**	*e*P	**Pn**	**12 09 23.0**	**+0.4**
FCH	**Farellones**	**2.73**	**157**	*e*P	**Pn**	**12 09 23.0**	**+0.4**
ANTU	**Antumapu**	**2.86**	**164**	*e*P	**Pn**	**12 09 23.7**	**-0.6**
ANTU				*i* S	**Sn**	**12 09 58.1**	**+0.6**
ANTU	**Antumapu**	**2.86**	**164**	*e*P	**Pn**	**12 09 23.7**	**-0.6**
ANTU				*i* S	**Sn**	**12 09 58.1**	**+0.6**
ANTU				AML	AML	12 10 11.8	
	comp=E,3μm,0.4s						
TACH	**Talagante**	**2.88**	**169**	⇑*i*P	**Pn**	**12 09 24.2**	**-0.4**
TACH				*e*S	**Sn**	**12 09 58.0**	**-0.1**
TACH	**Talagante**	**2.88**	**169**	⇑*i*P	**Pn**	**12 09 24.2**	**-0.4**
TACH				*e*S	**Sn**	**12 09 58.0**	**-0.1**
PCH	**Pirque**	**2.94**	**162**	*e*P	**Pn**	**12 09 25.6**	**+0.1**
PCH	**Pirque**	**2.94**	**162**	*e*P	**Pn**	**12 09 25.6**	**+0.1**
CFAA	**Coronel Fontan**	**2.98**	**106**	P	**Pn**	**12 09 28.7**	**+2.8**
	comp=E,12nm,0.3s,baz=306,slow=12,SNR=238						
CFAA				S	**Sn**	**12 10 10.3**	**+10**
	comp=E,38nm,0.3s,baz=199,slow=20,SNR=9.5						
CFAA	**Coronel Fontan**	**2.98**	**106**	P	**Pn**	**12 09 28.7**	**+2.8**
CFAA				S	**Sn**	**12 10 10.3**	**+10**
CHCH	**Chadas Angostu**	**3.21**	**166**	⇑*i*P	**Pn**	**12 09 29.1**	**0.0**
CHCH	**Chadas Angostu**	**3.21**	**166**	⇑*i*P	**Pn**	**12 09 29.1**	**0.0**
LMEL	**Las Melosas**	**3.24**	**159**	⇑*i*P	**Pn**	**12 09 30.2**	**+0.6**
LMEL				*i* S	**Sn**	**12 10 07.7**	**+0.8**
LMEL	**Las Melosas**	**3.24**	**159**	⇑*i*P	**Pn**	**12 09 30.2**	**+0.6**
LMEL				*i* S	**Sn**	**12 10 07.7**	**+0.8**
LMEL				AML	AML	12 10 20.7	
	comp=N,2μm,0.5s						
CACH	**El Canelo**	**3.40**	**166**	⇑*i*P	**Pn**	**12 09 32.0**	**+0.4**
CACH	**El Canelo**	**3.40**	**166**	⇑*i*P	**Pn**	**12 09 32.0**	**+0.4**
PLCA	**Paso Flores**	**9.93**	**175**	P	**Pn**	**12 11 04.8**	**+3.4**
	comp=N,0.6nm,0.3s,baz=352,slow=14,SNR=8.0						
TRQA	**Tornquist**	**10.72**	**135**	*e*Pn	**Pn**	**12 11 12.7**	**+0.5**
	comp=N,36nm,1.0s						
TRQA				*e*Sn	**Sn**	**12 13 11.0**	**+0.1**
CPUP	**Villa Florida**	**13.30**	**74**	P	**Pn**	**12 11 48.1**	**+0.6**
	comp=N,1.7nm,0.3s,baz=214,slow=13,SNR=9.9						
CPUP				LR	LR	12 17 24.5	
	comp=N,253nm,20.6s,baz=246,slow=39						
CPUP	**Villa Florida**	**13.30**	**74**	P	**Pn**	**12 11 48.1**	**+0.6**
CPUP				LR	LR	12 17 24.5	
LPAZ	**La Paz**	**14.80**	**13**	P	**Pn**	**12 12 08.9**	**+0.9**
	comp=N,0.2nm,0.3s,baz=185,slow=9.1,SNR=19						
LPAZ	**La Paz**	**14.80**	**13**	P	**Pn**	**12 12 08.9**	**+0.9**
LPAZ				*e*Pn	**Pn**	**12 12 09.3**	**+1.3**
SIV	**San Ignacio**	**17.61**	**35**	P	**Pn**	**12 12 43.0**	**-0.8**
	comp=N,0.2nm,0.3s,baz=229,slow=13,SNR=15						
TXAR	**Lajitas Array**	**67.17**	**330**	P	**P**	**12 19 31.9**	**+0.7**
	comp=N,0.1nm,0.5s,mb3.1,baz=148,slow=7.4,SNR=3.4						
DBIC	**Dimbokro**	**73.81**	**72**	P	**P**	**12 20 10.6**	**-1.6**
	comp=N,4.1nm,0.6s,mb4.6,baz=192,slow=5.2,SNR=11						
MAW	**Mawson**	**76.12**	**164**	P	**P**	**12 20 23.9**	**-0.7**
	comp=N,2.0nm,0.9s,mb4.1,baz=197,slow=8.6,SNR=6.0						
PDAR	**Pinedale Array**	**81.11**	**333**	P	**P**	**12 20 51.7**	**-0.5**
	comp=N,0.2nm,0.5s,mb3.3,baz=165,slow=3.7,SNR=3.3						
BOSA	**Boshof**	**81.22**	**118**	P	**P**	**12 20 53.1**	**-0.3**
	comp=N,2.9nm,0.9s,mb4.2,baz=257,slow=12,SNR=3.3						
WRA	**Warramunga Arr**	**123.72**	**210**	PKP	PKPdf	12 27 33.4	-2.0
	comp=N,0.7nm,0.8s,baz=150,slow=1.6,SNR=3.9						
WRA				pPKP	pPKPdf	12 27 44.0	-3.8
	comp=N,0.5nm,0.5s,baz=164,slow=1.6,SNR=8.0						
BVAR	**Borovoye Array**	**144.65**	**40**	PKP	PKPdf	12 28 11.7	-1.5
	comp=N,1.6nm,0.5s,baz=318,slow=2.0,SNR=8.5						
BVAR				pPKPbc		12 28 21.7	
	comp=N,3.2nm,0.6s,baz=297,slow=3.2,SNR=13						
KURK	**Kurchatov**	**150.24**	**40**	PKPbc	PKPbc	12 28 25.0	-2.7
	comp=N,1.0nm,0.8s,baz=301,slow=3.1,SNR=4.7						
KURK				PKPab	PKPab	12 28 33.9	-0.1
	comp=N,1.5nm,0.8s,baz=298,slow=3.2,SNR=6.4						
ZAA0	**Zalesovo Array**	**151.31**	**30**	*e*PKPbc	PKPbc	12 28 29.1	-1.0
ZAA0				*e*PKPab	PKPab	12 28 39.0	+0.7
ZALV	**Zalesovo Beam**	**151.31**	**30**	PKPbc	PKPbc	12 28 29.1	-1.0
	comp=N,1.3nm,0.4s,baz=298,slow=3.2,SNR=7.9						
ZALV				PKPab	PKPab	12 28 38.2	0.0
	comp=N,4.4nm,0.7s,baz=304,slow=3.1,SNR=11						
ZALV	**Zalesovo Beam**	**151.31**	**30**	PKPbc	PKPbc	12 28 29.1	-1.0
ZALV				PKPab	PKPab	12 28 38.2	0.0

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*IDC **08** 12:12:56.3±0.5, 31°.33N×103°.98E, h0km, mb4.5/22, mb1 4.6/23, mb1mx4.5/30, mbtmp4.5/23, ML3.7/1, MS3.8/14, Ms1 3.8/14, ms1mx3.6/35, Error ellipse: s-maj=14.0km s-min=10.2km az=38.0*
*BJI **08** 12:12:58.7, 31°.38N×104°.11E, h16km, mB4.7/20, mb4.8/33, ML4.7/25, Ms4.6/48, Ms7 4.4/46*
*NEIC **08** 12:12:58.8±0.3, 31°.46N×103°.95E, h10km, mb4.8/24, Error ellipse: s-maj=9.7km s-min=7.0km az=51.0*
*ISCJB **08** 12:12:59.1±0.7, 31°.32N±0°.03×104°.06E±0°.03, h30km±5km, mb4.7/52, MS3.9/23, Error ellipse: s-maj=4.7km s-min=4.2km az=23.6*
*MOS **08** 12:12:59.6±1.0, 31°.32N×104°.08E, h33km, mb4.9/35, Error ellipse: s-maj=10.4km s-min=6.0km az=101.2*
ISC 08 12:12:59.2±0.8, 31°.36N±0°.02×104°.04E±0°.03, h15km±5km, n154, σ1§20/174, mb4.7/52, MS3.9/23, 3C-11D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.51**	**208**	Pg	**Pg**	**12 13 08.3**	**-1.0**
CD2				Sg	**Sg**	**12 13 16.1**	**0.0**
CD2				smax			
	comp=N,28μm,1.1s						
LZH	**Lanzhou**	**4.71**	**358**	Pn	**Pn**	**12 14 12.4**	**+2.6**
LZH				Pg	**Pg**	**12 14 26.9**	**-2.6**
LZH				Sn	**Sn**	**12 15 12.7**	**+8.5**
LZH				Sg	**Sg**	**12 15 31.8**	**+1.2**
LZH				smax			
	comp=N,580nm,0.6s						
LZH				smax			
	comp=E,870nm,0.6s						
LZH				LR	LR		
	comp=E,2μm,4.2s						
LZH				LR	LR		
	comp=Z,4μm,5.4s						
XAN	**Xi'an**	**4.91**	**56**	Pn	**Pn**	**12 14 12.8**	**+0.4**
XAN				Sn	**Sn**	**12 15 08.9**	**-0.1**
XAN				Sg	**Sg**	**12 15 30.1**	**-6.7**
XAN				smax			
	comp=N,2μm,0.7s						
XAN				smax			
	comp=E,1μm,1.0s						
GYA	**Guiyang**	**5.40**	**154**	Pn	**Pn**	**12 14 20.1**	**+0.8**
GYA				Pg	**Pg**	**12 14 36.2**	**-6.5**
GYA				Sn	**Sn**	**12 15 21.8**	**+0.6**
GYA				smax			
	comp=N,1μm,1.2s						
GYA				smax			
	comp=E,2μm,1.3s						
GYA				LR	LR		
	comp=N,4μm,5.7s						
GYA				LR	LR		
	comp=E,4μm,6.4s						
GYA				LR	LR		
	comp=Z,3μm,5.9s						
KMI	**Kunming**	**6.32**	**191**	Pn	**Pn**	**12 14 32.7**	**+0.8**
KMI				Sn	**Sn**	**12 15 45.5**	**+1.7**
KMI				smax			
	comp=N,120nm,1.3s						
KMI				smax			
	comp=E,130nm,2.1s						
KMI				LR	LR		
	comp=N,2μm,10.0s						
KMI				LR	LR		
	comp=E,3μm,6.9s						
KMI			

QIZ LR LR
comp=Z,1μm,10.1s
CM31 Chiang Mai Arr 13.65 201 *e*Pn **Pn 12 16 16.8 +4.4**
QZH Quanzhou 14.34 113 *e*P **Pn 12 16 25.4 +3.7**
QZH *e*S **Sn 12 19 06.6 +6.1**
QZH LR LR
comp=N,3μm,7.9s
QZH LR LR
comp=E,4μm,10.4s
QZH LR LR
comp=Z,5μm,11.2s
SSE Sheshan 14.68 87 P **Pn 12 16 24.7 -1.6**
SSE S **Sn 12 19 06.0 -2.8**
SSE pmax pmax
comp=Z,27nm,0.8s
SSE pmax pmax
comp=Z,67nm,4.2s
SSE LR LR
comp=N,2μm,10.6s
SSE LR LR
comp=E,770nm,10.6s
SSE LR LR
comp=Z,2μm,11.2s
TAPN Taplejung 14.79 258 *e*P **Pn 12 16 30.6 +2.8**
RAMN Ramite 15.85 258 *e*P **Pn 12 16 42.9 +1.0**
comp=Z,21nm,0.6s
GUN Gumba 16.16 262 *e*P **Pn 12 16 43.5 -2.3**
comp=Z,91nm,0.8s
SONM Songino Array 16.55 6 Pn **Pn 12 16 51.0 +0.3**
comp=Z,0.3nm,0.3s,baz=186,slow=14,SNR=26
SONM LR LR 12 24 14.9
comp=Z,240nm,18.7s,baz=98,slow=41
ULN Ulaanbaatar 16.64 7 *e*P **Pn 12 16 52.7 +0.9**
ULN pmax pmax
comp=Z,8.0nm,0.8s
ULN Ulaanbaatar 16.64 7 *e*P **Pn 12 16 52.7 +0.8**
comp=Z,8.5nm,0.8s
PKI Pulchoki 16.66 262 *e*P **Pn 12 16 49.4 -2.8**
comp=Z,37nm,0.6s
PKIN Phulchoki 16.66 262 *e*P **Pn 12 16 49.5 -2.8**
YHNB Yeheng 16.69 109 *e*P **Pn 12 16 58.6 +6.0**
comp=Z,40nm,1.0s
KKN Kakani 16.70 262 *e*P **Pn 12 16 50.0 -2.7**
comp=Z,62nm,0.7s
TPUB Ta-pu 16.78 115 *e*P **Pn 12 16 57.1 +3.4**
comp=Z,28nm,1.0s
SSLB Suanglung 16.78 113 *e*P **Pn 12 16 59.0 +5.3**
comp=Z,108nm,1.1s
DMN Daman 16.90 262 *e*P **Pn 12 16 51.7 -3.6**
comp=Z,97nm,1.0s
GKN Gorkha 17.19 264 *e*P **Pn 12 16 54.1 -4.7**
comp=Z,63nm,0.8s
WMQ Urumqi 17.91 319 P **Pn 12 17 07.6 -0.1**
WMQ pP pP 12 17 11.2 -1.3
WMQ sP sP 12 17 14.6 +0.2
WMQ PP 12 17 22.2
WMQ S **Sn 12 20 22.6 -4.6**
WMQ SS 12 20 44.6
WMQ PcP PcP 12 21 46.5 +3.1
WMQ pmax pmax
comp=Z,22nm,1.4s
WMQ pmax pmax
comp=Z,180nm,4.6s
WMQ LR LR
comp=N,2μm,10.0s
WMQ LR LR
comp=E,1μm,10.5s
WMQ LR LR
comp=Z,2μm,10.0s
KOLN Koldanda 18.13 264 *e*P **Pn 12 17 04.0 -6.6**
comp=Z,19nm,0.5s
SNY Shenyang 18.81 51 ⇓P **Pn 12 17 19.6 +0.9**
SNY S **Sn 12 20 49.0 +0.2**
SNY pmax pmax
comp=Z,9.0nm,1.5s
SNY LR LR
comp=N,250nm,11.1s
SNY LR LR
comp=E,610nm,15.0s
SNY LR LR
comp=Z,600nm,15.6s
INCN Inchon 19.59 66 *e*P **Pn 12 17 29.1 +0.9**
comp=Z,64nm,1.3s
TLY Talaya 20.30 359 *e*P **P 12 17 36.7 +2.3**
TLY *e*S **S 12 21 10.4 -11**
TLY *e*SS 12 21 41.9
TLY pmax pmax
comp=Z,7.0nm,1.0s
TLY MLR MLR
comp=Z,466nm,12.0s,MS4.1
MOY Mondy 20.41 355 *e*P **P 12 17 37.7 +2.1**
KSRS Korea Array 20.60 66 P **P 12 17 38.0 +0.3**
comp=Z,17nm,0.6s,baz=257,slow=10,SNR=121
KSRS S **S 12 21 30.2 +2.6**
comp=Z,0.7nm,0.7s,baz=256,slow=15,SNR=4.3
KSRS LR LR 12 25 30.2
comp=Z,175nm,18.6s,MS3.5,baz=100,slow=37
KSRS Korea Array 20.60 66 P **P 12 17 38.1 +0.4**
KSRS S **S 12 21 30.3 +2.7**
KSRS pmax pmax
comp=Z,17nm,0.6s
KSRS smax
comp=N,1.0nm,0.7s
KSRS MLR MLR
comp=Z,175nm,18.6s,MS3.5
IRK Irkutsk 20.86 0 *e*P **P 12 17 42.6 +2.1**
IRK pmax pmax
comp=Z,91nm,1.1s
CN2 Changchun 20.96 48 ⇑P **P 12 17 42.7 +1.2**
CN2 *e*pP 12 17 46.7
CN2 *e*sP sP 12 17 49.8 +2.1
CN2 *e*S **S 12 21 29.5 -5.1**
CN2 pmax pmax
comp=Z,20nm,0.6s
CN2 LR LR
comp=N,300nm,15.0s,MS4.0
CN2 LR LR
comp=E,400nm,15.0s,MS4.0
CN2 LR LR
comp=Z,200nm,15.0s,MS3.6
MK31 Makanchi Array 22.75 319 *e*P **P 12 18 01.3 +0.6**
MKAR Makanchi Array 22.75 319 P **P 12 18 00.7 0.0**
comp=Z,20nm,1.1s,mb4.5,baz=117,slow=11,SNR=35
MKAR ScP ScP 12 25 28.9 -0.6
comp=Z,0.3nm,0.7s,baz=123,slow=4.5,SNR=4.1
MKAR LR LR 12 27 46.0
comp=Z,448nm,19.0s,MS3.9,baz=124,slow=39
MDJ Mudanjiang 23.98 49 P **P 12 18 13.4 +0.3**
MDJ pP 12 18 16.6
MDJ sP sP 12 18 17.8 -1.6
MDJ PcP PcP 12 21 55.9 +1.0
MDJ S **S 12 22 28.7 -0.6**
MDJ ScP ScP 12 25 34.2 +1.3
MDJ PcS PcS 12 25 36.0 +1.6
MDJ ScS ScS 12 29 21.0 +1.3
MDJ pmax pmax
comp=Z,53nm,1.3s,mb4.8
MDJ LR LR
comp=N,240nm,12.4s,MS3.9
MDJ LR LR
comp=E,150nm,15.2s,MS3.9
MDJ LR LR
comp=Z,290nm,15.2s,MS3.9
KSH Kashi 24.20 297 *e*P **P 12 18 22.2 +7.1**
KSH pP 12 18 26.6
KSH sP sP 12 18 29.3 +7.9
KSH PP 12 18 58.8
KSH PcP PcP 12 21 59.6 +4.1
KSH S **S 12 22 41.9 +9.0**
KSH sS sS 12 22 48.3 +8.0
KSH ScP ScP 12 25 36.5 +2.9
KSH PcS PcS 12 25 38.5 +3.3
KSH ScS ScS 12 29 24.0 +3.2
KSH pmax pmax
comp=Z,11nm,1.3s,mb4.1
KSH pmax pmax
comp=Z,140nm,3.6s
KSH LR LR
comp=N,650nm,9.8s
KSH LR LR
comp=E,640nm,11.4s
KSH LR LR
comp=Z,600nm,18.4s
ORY Orie 24.47 348 *e*P **P 12 18 19.1 +1.7**
VLA Vladivostok 24.97 54 *de*P **P 12 18 22.5 +0.4**
VLA pmax pmax
comp=Z,42nm,0.7s,mb5.1
KRAR Krasnoyarsk 25.86 346 ⇓*e*P **P 12 18 31.2 +1.2**
FRU Bishkek 25.98 304 *e*P pP 12 18 44.0 +8.3
AAK Ala-Archa 26.01 304 LR LR 12 30 50.8
comp=Z,523nm,18.6s,MS4.1,baz=28,slow=41
AAK Ala-Archa 26.01 304 *e*P **P 12 18 33.0 +1.4**
AAK pmax pmax
comp=Z,4.0nm,0.8s,mb4.0
AAK Ala-Archa 26.01 304 *e*P **P 12 18 33.0 +1.4**
comp=Z,3.8nm,0.8s,mb4.0
ZAA0 Zalesovo Array 26.46 334 *e*P **P 12 18 35.0 -0.6**
ZALV Zalesovo Beam 26.46 334 P **P 12 18 35.2 -0.3**
comp=Z,13nm,0.7s,mb4.6,baz=132,slow=9.4,SNR=49
ZALV LR LR 12 29 53.6
comp=Z,222nm,19.6s,MS3.7,baz=179,slow=38
ZALV Zalesovo Beam 26.46 334 P **P 12 18 35.2 -0.3**
ZALV pmax pmax
comp=Z,13nm,0.7s,mb4.6
ZALV MLR MLR
comp=Z,222nm,19.6s,MS3.7
ZALV Zalesovo Beam 26.46 334 P **P 12 18 35.2 -0.3**
ZALV LR LR 12 29 53.6
KURK Kurchatov 27.00 323 P **P 12 18 40.2 -0.2**
comp=Z,7.1nm,0.6s,mb4.4,baz=128,slow=9.2,SNR=22
KURK Kurchatov 27.00 323 *de*P **P 12 18 40.7 +0.3**
KURK pmax pmax
comp=Z,25nm,1.7s,mb4.5
KURK Kurchatov 27.00 323 *e*P **P 12 18 41.6 +1.2**
comp=Z,28nm,1.1s,mb4.7
KLR Kul'dur 27.43 41 *e*P **P 12 18 40.7 -3.6**
KLR pmax pmax
comp=E,62nm,1.6s
KLR pmax pmax
comp=Z,45nm,1.6s,mb4.8
MAJO Matsushiro 28.72 70 *e*P **P 12 18 55.4 -0.5**
MAJO pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
MAJO Matsushiro 28.72 70 *e*P **P 12 18 55.4 -0.5**
comp=Z,5.5nm,0.6s,mb4.5
MAT Matsushiro 28.72 70 P **P 12 18 55.0 -0.9**
MAT S **S 12 23 55.0 +10**
MJAR Matsushiro Arr 28.72 70 P **P 12 18 54.9 -1.0**
comp=Z,2.4nm,0.5s,mb4.2,baz=280,slow=10,SNR=14
MJAR LR LR 12 30 42.7
comp=Z,124nm,19.1s,MS3.5,baz=205,slow=37
MJAR Matsushiro Arr 28.72 70 P **P 12 18 54.9 -1.0**
MJAR pmax pmax
comp=Z,2.0nm,0.5s
MJAR MLR MLR
comp=Z,124nm,19.1s
HABR Khabarovsk 29.02 45 *e*P **P 12 18 56.2 -2.2**
HABR *e**PP pP 12 19 05.8 +2.8
HABR *e**SP sP 12 19 10.1 +5.3
HABR *e* 12 19 48.5
HABR *e* 12 22 04.0
HABR S **S 12 23 45.6 -3.5**
HABR *e**SS sS 12 24 02.0 +5.5
HABR *e*SS SS 12 25 10.9 -41
HABR 12 29 36.5
HABR pmax pmax
comp=Z,29nm,2.0s,mb4.7
HABR pmax pmax
comp=E,33nm,2.5s
HABR pmax pmax
comp=N,21nm,2.5s
HABR MLR MLR
comp=Z,275nm,16.0s,MS4.0
BVAR Borovoye Array 32.55 322 P **P 12 19 28.8 -0.8**
comp=Z,2.0nm,0.7s,mb4.2,baz=108,slow=9.5,SNR=7.8
BVAR PcP PcP 12 22 14.6 -1.2
comp=Z,1.4nm,0.6s,baz=174,slow=1.5,SNR=4.8
BVAR Borovoye Array 32.55 322 P **P 12 19 28.8 -0.8**
BVAR 12 22 14.6
BVAR pmax pmax
comp=Z,2.0nm,0.7s
BVAR pmax pmax
comp=Z,1.0nm,0.6s
BRVK Borovoye 32.62 322 ⇓*e*P **P 12 19 31.2 +1.0**
BRVK pmax pmax
comp=Z,18nm,1.7s,mb4.7
BRVK Borovoye 32.62 322 *e*P **P 12 19 30.9 +0.7**
comp=Z,7.9nm,0.8s,mb4.7
ASAJ Asahikawa 32.75 56 P **P 12 19 31.1 -0.2**
comp=Z,3.4nm,0.5s,mb4.5,baz=267,slow=19,SNR=11
ASAJ LR LR 12 32 13.6
comp=Z,135nm,19.7s,MS3.6,baz=98,slow=35
ASAJ Asahikawa 32.75 56 P **P 12 19 31.2 -0.2**
ASAJ pmax pmax
comp=Z,3.0nm,0.5s
ASAJ MLR MLR
comp=Z,135nm,19.7s
YSS Yuzh-Sakhalins 33.44 51 ⇓*i*P **P 12 19 37.9 +0.5**
YSS MLR MLR
comp=Z,400nm,18.0s,MS4.2
YSS MLR MLR
comp=N,400nm,16.0s
YSS Yuzh-Sakhalins 33.44 51 *e*P **P 12 19 37.9 +0.5**
comp=N,42nm,1.3s,mb5.2
CBIJ Chichi jima 33.45 87 LR LR 12 33 02.5
comp=N,150nm,19.3s,MS3.7,baz=284,slow=36
ABKAR Akbulak array 37.46 311 *e*P **P 12 20 11.7 -0.3**
comp=N,2.6nm,0.6s,mb4.2
AKTK Aktyubinsk 38.92 313 P **P 12 20 23.8 -0.5**
AKTO Aktyubinsk 38.92 313 P **P 12 20 23.8 -0.5**
comp=N,2.3nm,0.5s,mb4.2,baz=81,slow=10.0,SNR=14
AKTO Aktyubinsk 38.92 313 P **P 12 20 23.8 -0.4**
AKTO pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
KAPI Kappang 39.16 155 P **P 12 20 25.6 -1.0**
comp=Z,8.6nm,0.5s,mb4.8,baz=328,slow=7.4,SNR=5.3
SVE Sverdlovsk 39.26 323 ⇓*e*P **P 12 20 28.6 +1.7**
SVE *e* 12 22 08.0
SVE pmax pmax
comp=Z,25nm,1.3s,mb4.8
SVE MLR MLR
comp=Z,185nm,11.0s,MS4.2
ARU Arti 40.19 322 *d i*P **P 12 20 35.2 +0.5**
ARU S **S 12 26 42.1 +1.2**
ARU SS SS 12 29 36.5 -2.2
ARU pmax pmax
comp=Z,17nm,1.0s,mb4.7
ARU Arti 40.19 322 *e*P **P 12 20 35.0 +0.3**
comp=Z,15nm,0.9s,mb4.7
SOKR Solikamsk 42.15 326 *d i*P **P 12 20 52.0 +1.2**
SOKR pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
SOKR MLR MLR
comp=Z,190nm,15.0s,MS4.1
TIXI Tiksi 42.51 11 *e*P **P 12 20 52.6 -1.0**
TIXI pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
TIXI Tiksi 42.51 11 *e*P **P 12 20 52.6 -1.0**
comp=Z,5.7nm,0.6s,mb4.5
PETK Petropavlovsk- 44.05 44 P **P 12 21 05.9 -0.3**
comp=Z,3.4nm,0.7s,mb4.2,baz=313,slow=1.8,SNR=6.0
PETK LR LR 12 41 27.3
comp=Z,154nm,19.5s,MS3.9,baz=148,slow=39
PETK Petropavlovsk- 44.05 44 P **P 12 21 05.9 -0.3**
PETK pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
PETK MLR MLR
comp=Z,154nm,19.5s,MS3.9
KIV Kislovodsk 49.12 303 *e*P **P 12 21 47.4 +1.2**
KIV pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
KIV MLR MLR
comp=Z,142nm,16.0s,MS4.1
VSR Storozhevoye 50.87 313 *e*P **P 12 21 59.5 +0.2**
VSR pmax pmax
comp=N,10.0nm,1.1s
VSR pmax pmax
comp=E,10.0nm,1.1s
VSR pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
BILL Bilibino 50.97 25 *d i*P **P 12 21 59.8 0.0**
BILL pmax pmax
comp=Z,18nm,1.6s,mb4.8
BILL MLR MLR
comp=Z,200nm,16.0s,MS4.2
BILL Bilibino 50.97 25 *e*P **P 12 21 58.5 -1.3**
comp=Z,5.3nm,0.8s,mb4.5
KAKA Kakadu 51.61 144 *e*P **P 12 22 04.9 -0.3**
comp=Z,40nm,1.4s,mb5.2
OBN Obninsk 52.25 318 *e*P **P 12 22 09.6 0.0**
OBN pmax pmax
comp=Z,36nm,2.5s,mb4.9
OBN MLR MLR
comp=Z,200nm,16.0s,MS4.2
FITZ Fitzroy Crossi 53.38 154 *e*P **P 12 22 17.1 -1.2**
comp=Z,12nm,0.9s,mb4.8
FITZ Fitzroy Crossi 53.38 154 P **P 12 22 17.9 -0.4**
comp=Z,6.0nm,0.9s,mb4.5,baz=95,slow=15,SNR=10
JOF Joensuu 54.78 328 *e*P **P 12 22 26.8 -1.2**
JOF pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
JOF Joensuu 54.78 328 *e*p **P 12 22 26.8 -1.2**
comp=Z,7.5nm,0.6s,mb4.9
KEV Kevo 56.47 336 *e*P **P 12 22 38.5 -1.6**
KEV pmax pmax
comp=Z,8.0nm,0.5s,mb5.0
KEV Kevo 56.47 336 *e*P **P 12 22 38.5 -1.6**
comp=Z,8.2nm,0.5s,mb5.0
KEV Kevo 56.47 336 *e*p **P 12 22 38.5 -1.6**
comp=Z,8.2nm,0.5s,mb5.0
BRTR Keskin Array B 56.56 299 P **P 12 22 41.3 +0.1**
comp=Z,1.2nm,0.8s,mb4.0,baz=106,slow=9.1,SNR=5.3
BRTR Keskin Array B 56.56 299 *ce*P **P 12 22 44.7 +3.5**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
ARCES ARCESS Array B 57.00 336 P **P 12 22 43.6 -0.2**
comp=Z,6.0nm,0.7s,mb4.7,baz=87,slow=9.0,SNR=20
ARCES PcP PcP 12 23 38.2 -0.7
comp=Z,1.3nm,0.5s,baz=93,slow=6.1,SNR=5.0
ARCES LR LR 12 49 24.7
comp=Z,120nm,18.0s,MS4.0,baz=335,slow=38
ARCES ARCESS Array B 57.00 336 P **P 12 22 43.7 -0.1**
ARCES 12 23 38.2
ARCES pmax pmax
comp=Z,6.0nm,0.7s
ARCES pmax pmax
comp=Z,1.0nm,0.5s
ARCES MLR MLR
comp=Z,120nm,18.0s
ARCES ARCESS Array B 57.00 336 P **P 12 22 43.6 -0.2**
ARCES PcP PcP 12 23 38.2 -0.7
ARCES LR LR 12 49 24.7
MMAI Mount Meron Ar 57.13 291 LR LR 12 51 34.7
comp=Z,49nm,21.6s,MS3.6,baz=30,slow=41
KAF Kangasniemi 57.14 327 *e*P **P 12 22 42.8 -2.1**
KAF pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
KAF Kangasniemi 57.14 327 *e*P **P 12 22 42.8 -2.1**
comp=Z,5.1nm,0.6s,mb4.7
KAF Kangasniemi 57.14 327 *e*p **P 12 22 42.8 -2.1**
comp=Z,5.1nm,0.6s,mb4.7
AKASG Malin Array Be 57.17 313 P **P 12 22 44.3 -1.0**
comp=Z,0.8nm,0.5s,mb4.0,baz=69,slow=6.8,SNR=3.8
AKASG Malin Array Be 57.17 313 P **P 12 22 44.3 -1.0**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
FINES FINESS Array B 57.32 326 P **P 12 22 45.5 -0.7**
comp=Z,9.6nm,0.8s,mb4.8,baz=77,slow=6.8,SNR=9.4
FINES FINESS Array B 57.32 326 P **P 12 22 45.6 -0.6**
FINES pmax pmax
comp=Z,10.0nm,0.9s
VSU Vasula 57.36 322 ⇑*e*P **P 12 22 46.4 -0.1**
VSU pmax pmax
comp=Z,18nm,1.0s,mb5.1
WRAB Tennant Creek 58.72 146 *e*P **P 12 22 56.3 -0.2**
WRAB pmax pmax
comp=Z,28nm,0.8s,mb5.3
WRAB Tennant Creek 58.72 146 *e*P **P 12 22 56.3 -0.2**
comp=Z,28nm,0.8s,mb5.3
WRA Warramunga Arr 58.72 146 P **P 12 22 56.2 -0.2**
comp=Z,14nm,0.6s,mb5.2,baz=339,slow=7.9,SNR=247
WRA Warramunga Arr 58.72 146 P **P 12 22 56.3 -0.2**
WRA pmax pmax
comp=Z,14nm,0.6s
ASAR Alice Springs 61.74 149 P **P 12 23 17.1 0.0**
comp=Z,2.9nm,0.4s,mb4.7,baz=332,slow=6.9,SNR=58
ASAR Alice Springs 61.74 149 P **P 12 23 17.2 +0.1**
ASAR pmax pmax
comp=Z,3.0nm,0.4s
NB2 NORSAR Subarra 64.41 327 P **P 12 23 32.8 -1.6**
comp=Z,2.5nm,0.6s,mb4.4,baz=74,slow=6.9
NOA NORSAR Array B 64.41 327 P **P 12 23 33.1 -1.3**
comp=Z,6.5nm,0.9s,mb4.7,baz=74,slow=6.7,SNR=13
NOA LR LR 12 51 13.6
comp=Z,54nm,18.5s,MS3.8,baz=75,slow=36
CTA Charters Tower 65.25 136 *e*P **P 12 23 40.7 +0.3**
comp=Z,3.1nm,0.4s,mb4.7
CTA Charters Tower 65.25 136 P **P 12 23 40.2 -0.2**
comp=Z,3.8nm,0.5s,mb4.7,baz=328,slow=6.4,SNR=11
CTA Charters Tower 65.25 136 P **P 12 23 40.2 -0.2**
CTA pmax pmax
comp=Z,4.0nm,0.5s
COLD Coldfoot 67.26 24 *e*P **P 12 23 52.5 -0.2**
comp=Z,11nm,1.0s,mb4.8
PPLA Purkeypile 68.47 29 *e*P **P 12 24 00.5 +0.1**
comp=Z,15nm,0.8s,mb5.1
COLA College 69.22 26 *e*P **P 12 24 05.0 0.0**
COLA pmax pmax
comp=Z,16nm,0.9s,mb5.0
COLA College 69.22 26 *e*P **P 12 24 05.0 0.0**
comp=Z,16nm,0.9s,mb5.0
PMR Palmer 70.34 29 *e*P **P 12 24 12.1 +0.1**
OHAK Old Harbor 70.58 34 *e*P **P 12 24 13.1 -0.4**
comp=Z,11nm,0.6s,mb5.0
KDAK Kodiak Island 70.65 34 P **P 12 24 13.5 -0.4**
comp=Z,6.3nm,0.4s,mb4.9,baz=283,slow=3.1,SNR=9.9
KDAK Kodiak Island 70.65 34 P **P 12 24 13.5 -0.5**
KDAK pmax pmax
comp=Z,6.0nm,0.4s,mb4.9
KDAK Kodiak Island 70.65 34 P **P 12 24 13.5 -0.4**
CDF Champ du Feu 71.39 316 *e*P **P 12 24 18.0 -0.6**
EGAK Eagle 71.69 24 *e*P **P 12 24 20.6 +0.5**
INK Inuvik 71.93 19 *e*P **P 12 24 21.3 -0.2**
STKA Stephens Creek 72.25 147 *e*P **P 12 24 23.3 -0.6**
comp=Z,3.5nm,0.8s,mb4.3
STKA Stephens Creek 72.25 147 P **P 12 24 22.8 -1.1**
comp=Z,3.3nm,0.6s,mb4.4,baz=348,slow=9.0,SNR=6.4
BMRM Bremner River 72.54 28 *e*P **P 12 24 25.4 +0.2**
comp=Z,21nm,1.0s,mb5.0
DAWY Dawson 72.73 24 *e*P **P 12 24 26.0 -0.3**
LPG La Plagne 73.03 313 *e*P **P 12 24 28.3 -0.2**
LPL La Plagne 73.03 313 *e*P **P 12 24 28.2 -0.3**
comp=Z,8.2nm,0.5s,mb4.6
LPL La Plagne 73.03 313 *e*P **P 12 24 28.2 -0.3**
LPL pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
LPL La Plagne 73.03 313 *e*P **P 12 24 28.2 -0.3**
comp=Z,4.1nm,0.5s,mb4.6
SUMG Summit 73.18 349 *e*P **P 12 24 29.1 +0.2**
comp=Z,12nm,0.1s,mb5.8
SMF Signal de Mont 74.27 315 *e*P **P 12 24 35.0 -0.8**
YKA Yellowknife Ar 81.46 17 P **P 12 25 14.8 -0.6**
comp=Z,3.0nm,0.6s,mb4.4,baz=329,slow=5.7,SNR=6.9
YKA Yellowknife Ar 81.46 17 P **P 12 25 14.8 -0.6**
YKA pmax pmax
comp=Z,3.0nm,0.6s
YBH Yreka Blue Hor 95.47 33 LR LR 13 07 01.2
comp=Z,51nm,20.7s,MS4.0,baz=111,slow=34
ULM Lac du Bonnet 96.85 13 LR LR 13 12 10.7
comp=Z,60nm,20.7s,MS4.1,baz=302,slow=37
TXAR Lajitas Array 114.14 26 PKP PKiKP 12 31 37.9 -0.5
comp=Z,0.2nm,0.5s,baz=99,slow=1.4,SNR=5.1

NEIC ***08*** *12:28:35.3, 58°.86N×136°.43W, h10km, mb3.7/1, ML3.9(PGC), ML3.5(AEIC), ML3.9(PMR), After PGC.*

PGC 08 12:28:35.3±0.6, 58°.86N×136°.43W, h10km, ML3.9/5, 5D, 74km Wsw of Haines, Ak Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLBC	**Pleasant Camp**	**0.60**	**3**	P	Pg	12 28 45.9	-1.0
PLBC				⇓S	Sg	12 28 54.0	-0.7
SKAG	**Skagway**	**0.83**	**43**	P	Pg	12 28 49.9	-1.3
BESE	**Bessie Mountai**	**0.87**	**108**	P	Pg	12 28 50.6	-1.4
BESE				S	Sg	12 29 03.0	-0.3
PNL	**Peninsula**	**1.73**	**299**	*e*Pn	Pn	12 29 03.7	-1.6
PNL				S	Sn	12 29 26.4	-1.0
PNL				*e*Sn	Sn	12 29 26.6	-0.7
YKU2	**Yakutat**	**1.79**	**293**	P	Pn	12 29 05.0	-1.2
SIT	**Sitka**	**1.90**	**161**	P	Pn	12 29 06.3	-1.4
SIT				S	Sn	12 29 32.6	+0.9
WHY	**Whitehorse**	**1.97**	**23**	P	Pn	12 29 08.1	-0.5
WHY	**Whitehorse**	**1.97**	**23**	⇓Pn	Pn	12 29 08.1	-0.6
WHY				⇑Pg	Pg	12 29 10.6	-2.4
WHY				⇑Sg	Sg	12 29 36.6	-1.8
HYT	**Haines Junctio**	**2.04**	**345**	⇑Pn	Pn	12 29 09.1	-0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HYT				⇓Pg	Pg	12 29 11.9	-2.6
HYT				⇓Sn	Sn	12 29 35.7	+0.5
HYT				⇑Sg	Sg	12 29 38.5	-2.4
DLBC	**Dease Lake**	**3.37**	**94**	P	Pn	12 29 27.2	-0.7
DLBC	**Dease Lake**	**3.37**	**94**	Pn	Pn	12 29 27.4	-0.5
DLBC				⇑Sn	Sn	12 30 06.9	-1.0
DLBC				⇓Sg	Sg	12 30 20.2	-3.3
CRAG	**Craig**	**3.85**	**151**	*e*Pn	Pn	12 29 33.1	-1.3
CRAG				*e*Sg	Sg	12 30 37.1	-1.6
BMRM	**Bremner River**	**4.62**	**301**	*e*Pn	Pn	12 29 44.6	-0.4
BMRM				*e*Sn	Sn	12 30 39.7	+0.9
BCA3	**Beaver Creek A**	**4.96**	**331**	P	Pn	12 29 48.5	-1.2
NDB	**Naden**	**5.29**	**157**	⇑Pn	Pn	12 29 53.4	-0.8
DAWY	**Dawson**	**5.41**	**346**	P	Pn	12 29 55.4	-0.5
MENT	**Mentasta**	**5.42**	**322**	*e*Pn	Pn	12 29 55.2	-0.8
MENT				*e*Sg	Sg	12 31 28.6	-0.4
EGAK	**Eagle**	**6.34**	**341**	P	Pn	12 30 09.0	+0.3
SML	**Sawmill**	**6.61**	**302**	P	Pn	12 30 12.8	+0.5
PMR	**Palmer**	**6.89**	**299**	*e*P	Pn	12 30 17.1	+0.9
RC01	**Rabbit Creek A**	**7.04**	**294**	P	Pn	12 30 18.2	0.0
TRF	**Thorofare Moun**	**8.12**	**310**	*e*Pn	Pn	12 30 33.4	+0.4
	4.7nm,0.4s						
OHAK	**Old Harbor**	**9.09**	**267**	P	Pn	12 30 44.1	-2.2
BM3	**Burnt Mountain**	**9.34**	**340**	P	Pn	12 30 50.9	+1.2
EGMT	**Eagleton**	**19.10**	**113**	*e*P	Pn	12 32 56.3	-2.3
	5.2nm,1.0s						

IDC 08 12:46:48.1±3.2, 23°.53S×179°.98E, h498km±32km, mb3.3/6, mb1 3.5/7, mb1mx3.2/16, mbtmp3.3/7, Error ellipse: s-maj=50.4km s-min=28.5km az=175.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.89**	**189**	P	P	12 49 56.3	-0.7
	1.2nm,0.3s,baz=313,slow=20,SNR=10.0						
CTA	**Charters Tower**	**31.46**	**270**	P	P	12 52 29.3	+1.0
	7.0nm,0.4s,baz=92,slow=12,SNR=16						
STKA	**Stephens Creek**	**34.84**	**248**	P	P	12 52 57.0	+0.2
	3.4nm,1.0s,baz=99,slow=14,SNR=2.9						
ASAR	**Alice Springs**	**42.08**	**260**	P	P	12 53 55.5	-0.3
	1.4nm,0.4s,baz=97,slow=7.6,SNR=50						
ASAR				ScP	ScP	12 58 41.6	-0.4
	0.4nm,0.6s,baz=118,slow=4.1,SNR=8.2						
WRA	**Warramunga Arr**	**42.42**	**266**	P	P	12 53 57.8	-0.7
	2.3nm,0.3s,baz=95,slow=8.5,SNR=62						
FITZ	**Fitzroy Crossi**	**50.84**	**265**	P	P	12 55 02.4	-0.1
	2.5nm,0.8s,baz=101,slow=11,SNR=4.2						
TXAR	**Lajitas Array**	**90.25**	**58**	P	P	12 58 55.6	+0.3
	0.2nm,0.9s,baz=216,slow=5.6,SNR=3.8						

*ISCJB **08** 12:53:16.4±0.4, 19°.45S±0°.03×69°.42W±0°.07, h93km±4km, mb4.0/7, Error ellipse: s-maj=11.1km s-min=5.5km az=176.2*
*GUC **08** 12:53:17.8±0.4, 19°.51S×69°.54W, h86km±3km, ML4.5*
*NEIC **08** 12:53:17.0, 19°.51S×69°.54W, h86km, MG4.5(GUC), After GUC.*
*IDC **08** 12:53:17.7±3.3, 19°.44S×69°.34W, h89km±31km, mb3.6/6, mb1 3.9/9, mb1mx3.8/17, mbtmp3.6/9, Error ellipse: s-maj=28.7km s-min=22.7km az=96.0*
ISC 08 12:53:17.6±0.4, 19°.46S±0°.03×69°.42W±0°.07, h86km±4km, n27, σ0s95/28, mb4.0/7, 4C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MNMC	**Miæe Miæ**	**0.36**	**333**	⇓*i*P	**Pn**	**12 53 31.8**	**+0.8**
MNMC				*i* S	**Sn**	**12 53 42.5**	**+1.6**
MNMC				AML	AML	12 53 43.2	
	comp=E,54μm,0.5s						
PSGC	**Pisagua**	**0.67**	**258**	⇑*i*P	**Pn**	**12 53 32.6**	**-1.0**
PSGC				*i* S	**Sn**	**12 53 44.0**	**-1.4**
PSGC				AML	AML	12 53 44.6	
	comp=N,11μm,0.2s						
HMBC	**Humberston**	**0.93**	**208**	⇑*i*P	**Pn**	**12 53 35.6**	**-0.7**
HMBC				*i* S	**Sn**	**12 53 49.2**	**-0.9**
HMBC				AML	AML	12 53 51.6	
	comp=N,16μm,0.2s						
PB01	**Plate Boundary**	**1.58**	**182**	⇑*i*P	**Pn**	**12 53 44.2**	**-0.1**
PB01				*i* S	**Sn**	**12 54 04.4**	**0.0**
PB01				AML	AML	12 54 06.3	
	comp=E,10μm,0.5s						
PB04	**Plate Boundary**	**2.79**	**181**	*e*P	**Pn**	**12 54 01.7**	**+1.4**
PB04				*i* S	**Sn**	**12 54 35.3**	**+2.2**
PB04				AML	AML	12 54 46.2	
	comp=E,4μm,0.7s						
LPAZ	**La Paz**	**3.38**	**22**	P	**Pn**	**12 54 12.7**	**+4.4**
	comp=E,21nm,0.3s,baz=198,slow=6.4,SNR=514						
LPAZ	**La Paz**	**3.38**	**22**	⇑*i*Pn	**Pn**	**12 54 12.7**	**+4.4**
LPAZ				*e*Sn	**Sn**	**12 54 47.5**	**0.0**
ARE	**Arequipa**	**3.57**	**326**	*e*P	**Pn**	**12 54 11.0**	**+0.2**
ARE				*e*S	**Sn**	**12 54 52.0**	**0.0**
CEN1	**Los Morros**	**3.98**	**190**	*e*P	**Pn**	**12 54 15.5**	**-0.8**
CEN1				*i* S	**Sn**	**12 55 07.6**	**+5.8**
SIV	**San Ignacio**	**8.67**	**68**	P	**Pn**	**12 55 19.5**	**-0.8**
	comp=E,14nm,0.3s,baz=266,slow=10,SNR=267						
CFAA	**Coronel Fontan**	**12.14**	**175**	P	**Pn**	**12 56 08.2**	**+0.7**
	comp=E,0.1nm,0.3s,baz=348,slow=12,SNR=6.5						
CPUP	**Villa Florida**	**13.07**	**124**	P	**Pn**	**12 56 18.4**	**-1.5**
	comp=E,0.7nm,0.3s,baz=292,slow=12,SNR=3.7						
PLCA	**Paso Flores**	**21.23**	**182**	P	**P**	**12 57 56.8**	**+0.3**
	comp=E,6.0nm,0.7s,mb4.0,baz=354,slow=11,SNR=13						
PLCA	**Paso Flores**	**21.23**	**182**	P	**P**	**12 57 56.8**	**+0.3**
PLCA				*e*P		12 57 58.8	
BLA	**Blacksburg**	**57.31**	**350**	*e*P	**P**	**13 02 56.8**	**+0.3**
	comp=E,8.2nm,0.4s,mb5.1						
TXAR	**Lajitas Array**	**58.69**	**325**	P	**P**	**13 03 05.1**	**-1.1**
	comp=E,0.3nm,0.7s,mb3.5,baz=142,slow=15,SNR=3.6						
DBIC	**Dimbokro**	**68.63**	**74**	P	**P**	**13 04 11.2**	**-0.8**
	comp=E,5.1nm,0.9s,mb4.4,baz=215,slow=8.0,SNR=6.0						
PDAR	**Pinedale Array**	**72.11**	**330**	P	**P**	**13 04 33.4**	**+0.8**
	comp=E,0.2nm,0.4s,mb3.3,baz=117,slow=0.7,SNR=3.0						
NVAR	**Mina Array Bea**	**73.59**	**322**	P	**P**	**13 04 42.8**	**+1.2**
	comp=E,0.7nm,0.8s,mb3.4,baz=156,slow=7.0,SNR=5.0						
YKA	**Yellowknife Ar**	**89.11**	**341**	P	**P**	**13 06 02.6**	**-0.2**
	comp=E,2.8nm,0.8s,mb4.4,baz=133,slow=4.6,SNR=6.6						
ASAR	**Alice Springs**	**131.47**	**209**	PKP	PKPdf	13 12 19.9	-1.0
	comp=E,0.6nm,0.7s,baz=119,slow=1.2,SNR=5.9						
WRA	**Warramunga Arr**	**134.44**	**212**	PKP	PKPdf	13 12 26.3	-0.3
	comp=E,0.4nm,0.4s,baz=139,slow=1.5,SNR=9.2						
ZALV	**Zalesovo Beam**	**140.30**	**24**	PKP	PKPdf	13 12 37.2	+0.9
	comp=E,0.9nm,0.3s,baz=288,slow=9.5,SNR=3.8						
MKAR	**Makanchi Array**	**144.24**	**34**	PKP	PKPdf	13 12 42.9	-0.6
	comp=E,0.4nm,0.6s,baz=313,slow=3.4,SNR=5.4						
MKAR	**Makanchi Array**	**144.24**	**34**	PKP	PKPdf	13 12 42.9	-0.6
MJAR	**Matsushiro Arr**	**150.40**	**311**	PKPbc	PKPbc	13 12 57.8	-1.6
	comp=E,0.7nm,0.4s,baz=288,slow=14,SNR=5.6						
SONM	**Songino Array**	**151.49**	**6**	PKPbc	PKPbc	13 13 02.0	+0.5
	comp=E,1.1nm,0.4s,baz=289,slow=1.2,SNR=5.9						
SONM				pPKPbc	pPKPbc	13 13 27.2	+1.6
	comp=E,0.7nm,0.4s,baz=191,slow=0.6,SNR=3.0						

*ISCJB **08** 13:24:47.9±0.8, 49°.13N±0°.10×154°.2E±0°.1, h156km±7km, mb3.5/11, Error ellipse: s-maj=20.4km s-min=8.3km az=139.2*
*MOS **08** 13:24:48.2±1.4, 49°.15N×154°.16E, h163km, mb3.8/5, Error ellipse: s-maj=21.4km s-min=12.9km az=65.7*
*NEIC **08** 13:24:48.7±0.9, 49°.05N×154°.11E, h150km±8km, mb4.0/1, Error ellipse: s-maj=15.4km s-min=8.1km az=143.0*
*IDC **08** 13:24:49.4±2.0, 49°.11N×154°.10E, h153km±17km, mb3.2/10, mb1 3.4/12, mb1mx3.3/25, mbtmp3.2/12, Error ellipse: s-maj=20.9km s-min=13.2km az=142.0*
ISC 08 13:24:48.8±0.8, 49°.09N±0°.10×154°.2E±0°.1, h147km±7km, n25, σ0s94/28, mb3.5/11, Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.03**	**38**	*e*PN	**Pn**	**13 25 23.5**	**-0.5**
SKR				*e*S	**Sn**	**13 25 50.0**	**-1.2**
SKR				pmax	pmax		
	comp=N,70nm,0.4s						
SKR				pmax	pmax		
	comp=Z,120nm,0.4s						
SKR				smax			
	comp=N,240nm,0.4s						
SKR				smax			
	comp=E,200nm,0.4s						
PEA0B	**Petropavlovsk-**	**4.59**	**28**	*e*P	**Pn**	**13 25 57.1**	**+0.4**
PETK	**Petropavlovsk-**	**4.59**	**28**	P	**Pn**	**13 25 56.9**	**+0.2**
	comp=E,0.5nm,0.3s,baz=183,slow=10,SNR=20						
PETK				S	**Sn**	**13 26 50.4**	**+0.9**
	comp=E,0.2nm,0.3s,baz=155,slow=14,SNR=3.1						
PETK	**Petropavlovsk-**	**4.59**	**28**	PN	**Pn**	**13 25 56.9**	**+0.2**
PETK				S	**Sn**	**13 26 50.4**	**+0.8**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
YSS	**Yuzh-Sakhalins**	**7.95**	**259**	*e*PN	**Pn**	**13 26 42.6**	**+1.2**
ASAJ	**Asahikawa**	**9.39**	**242**	P	**Pn**	**13 27 02.2**	**+1.5**
	comp=Z,1.8nm,0.3s,baz=76,slow=13,SNR=23						
ASAJ	**Asahikawa**	**9.39**	**242**	PN	**Pn**	**13 27 02.2**	**+1.5**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ERM	**Erimo**	**10.47**	**232**	*e*PN	**Pn**	**13 27 13.0**	**-2.0**
YAK	**Yakutsk**	**18.81**	**323**	*e*P	**P**	**13 28 56.5**	**-0.2**
KSRS	**Korea Array**	**22.25**	**248**	P	**P**	**13 29 35.0**	**+1.2**
	comp=Z,0.4nm,0.4s,mb3.2,baz=48,slow=10,SNR=4.9						
COLA	**College**	**33.88**	**41**	P	**P**	**13 31 17.0**	**+0.1**
COLA				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
COLA	**College**	**33.88**	**41**	P	**P**	**13 31 17.0**	**+0.1**
	comp=Z,2.0nm,0.6s,mb4.0						
MKAR	**Makanchi Array**	**46.53**	**296**	P	**P**	**13 33 00.3**	**-0.8**
	comp=Z,0.1nm,0.4s,mb2.8,baz=80,slow=11,SNR=3.4						
BVAR	**Borovoye Array**	**49.94**	**308**	P	**P**	**13 33 26.4**	**-0.8**
	comp=Z,0.5nm,0.4s,mb3.5,baz=81,slow=9.5,SNR=4.5						
BVAR				PcP	PcP	13 34 44.9	-0.2
	comp=Z,0.6nm,0.4s,baz=76,slow=1.8,SNR=3.7						
BVAR	**Borovoye Array**	**49.94**	**308**	P	**P**	**13 33 26.4**	**-0.8**
BVAR						13 34 44.9	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ARCES	**ARCESS Array B**	**55.88**	**341**	P	**P**	**13 34 10.1**	**-0.3**
	comp=Z,1.6nm,0.8s,mb3.9,baz=39,slow=7.9,SNR=2.7						
ARCES	**ARCESS Array B**	**55.88**	**341**	P	**P**	**13 34 10.1**	**-0.3**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NVAR	**Mina Array Bea**	**60.74**	**64**	P	**P**	**13 34 45.7**	**+1.0**
	comp=Z,0.2nm,0.5s,mb3.2,baz=180,slow=37,SNR=3.0						
FINES	**FINESS Array B**	**62.22**	**335**	P	**P**	**13 34 53.9**	**-0.4**
	comp=Z,1.0nm,0.5s,mb3.9,baz=32,slow=7.1,SNR=5.6						
FINES	**FINESS Array B**	**62.22**	**335**	P	**P**	**13 34 53.9**	**-0.3**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
PDAR	**Pinedale Array**	**62.81**	**55**	P	**P**	**13 34 59.3**	**+0.9**
	comp=Z,1.1nm,0.8s,mb3.7,baz=336,slow=3.3,SNR=8.8						
NOA	**NORSAR Array B**	**66.24**	**341**	P	**P**	**13 35 19.9**	**-0.5**
	comp=Z,0.6nm,0.7s,mb3.5,baz=30,slow=6.6,SNR=2.4						
NOA	**NORSAR Array B**	**66.24**	**341**	P	**P**	**13 35 19.9**	**-0.5**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	**Warramunga Arr**	**70.96**	**200**	P	**P**	**13 35 48.5**	**-1.6**
	comp=Z,0.2nm,0.7s,mb2.9,baz=21,slow=6.2,SNR=3.2						
TXAR	**Lajitas Array**	**75.74**	**62**	P	**P**	**13 36 18.8**	**+0.6**
	comp=Z,0.4nm,0.5s,mb3.3,baz=295,slow=4.1,SNR=9.2						

*ATH **08** 13:28:50.3, 36°.44N×21°.86E, h14km±1km, MD3.3/12*
*NEIC **08** 13:28:50.3, 36°.44N×21°.86E, h14km, MD3.3(ATH), After ATH.*
*CSEM **08** 13:28:51.0±0.3, 36°.47N×21°.92E, h2km, ML3.6/4, Error ellipse: s-maj=5.7km s-min=3.3km az=30.0*
*ISCJB **08** 13:28:52.7±0.8, 36°.53N±0°.04×21°.90E±0°.05, h10km, Error ellipse: s-maj=6.8km s-min=4.2km az=43.6*
*THE **08** 13:28:53.1, 36°.55N×21°.95E, h2km±1km, ML3.6/4, Error ellipse: s-maj=1.6km s-min=1.0km az=6.0*
ISC 08 13:28:52.0±1.1, 36°.51N±0°.04×21°.94E±0°.05, h1km±6km, n55, σ0s86/78, Southern Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.41**	**338**	*e*PB	**Pg**	**13 28 59.4**	**-0.5**
PYL				*e*SB	**Sg**	**13 29 06.3**	**+1.0**
PYL	**PYLOS**	**0.41**	**338**	P	**Pg**	**13 28 59.5**	**-0.4**
PYL				S	**Sg**	**13 29 06.4**	**+1.1**
PYL	**PYLOS**	**0.41**	**338**	P	**Pg**	**13 28 59.5**	**-0.4**
PYL				*e*Sb	**Sg**	**13 29 06.3**	**+1.0**
ITM	**Ithomi**	**0.67**	**359**	*e*Pg	**Pg**	**13 29 04.2**	**-0.6**
ITM				*e*Sb	**Sg**	**13 29 15.3**	**+1.9**
ITM	**Ithomi**	**0.67**	**359**	*e*PG	**Pg**	**13 29 04.2**	**-0.6**
ITM				*e*SB	**Sg**	**13 29 15.3**	**+1.9**
ITM	**Ithomi**	**0.67**	**359**	P	**Pg**	**13 29 04.6**	**-0.2**
ITM				S	**Sg**	**13 29 14.4**	**+1.0**
ITM	**Ithomi**	**0.67**	**359**	*e*Pg	**Pg**	**13 29 04.2**	**-0.6**
ITM	**Ithomi**	**0.67**	**359**	P	**Pg**	**13 29 04.6**	**-0.2**
ITM				S	**Sg**	**13 29 14.4**	**+1.0**
ITM				*e*Sb	**Sg**	**13 29 15.3**	**+1.9**
VLI	**Veliai**	**0.83**	**75**	*e*Pg	**Pg**	**13 29 07.6**	**-0.3**
VLI				*e*Sb	**Sb**	**13 29 20.6**	**-0.2**
VLI	**Veliai**	**0.83**	**75**	*e*PG	**Pg**	**13 29 07.6**	**-0.3**
VLI				*e*SB	**Sb**	**13 29 20.6**	**-0.2**
VLI	**Veliai**	**0.83**	**75**	*e*Pg	**Pg**	**13 29 07.6**	**-0.3**
VLI				*e*Sb	**Sb**	**13 29 20.6**	**-0.2**
KYTH	**Kithira**	**0.91**	**104**	*e*Pb	**Pb**	**13 29 08.9**	**-1.7**
KYTH	**Kithira**	**0.91**	**104**	*e*PB	**Pb**	**13 29 08.9**	**-1.7**
KYTH	**Kithira**	**0.91**	**104**	*e*Pb	**Pb**	**13 29 08.9**	**-1.7**
VLX	**Vlachokerasia**	**0.93**	**22**	*e*PB	**Pb**	**13 29 09.7**	**-1.1**
VLX	**Vlachokerasia**	**0.93**	**22**	P	**Pg**	**13 29 09.3**	**-0.5**
VLX				S	**Sg**	**13 29 22.4**	**+0.6**
VLX	**Vlachokerasia**	**0.93**	**22**	P	**Pg**	**13 29 09.3**	**-0.5**
VLX	**Vlachokerasia**	**0.93**	**22**	*e*Pb	**Pb**	**13 29 09.7**	**-1.1**
VLX				S	**Sg**	**13 29 22.4**	**+0.6**
DID	**Didima**	**1.44**	**46**	*e*PB	**Pb**	**13 29 19.1**	**-0.4**
DID	**Didima**	**1.44**	**46**	P	**Pn**	**13 29 18.9**	**-0.2**
DID				S	**Sg**	**13 29 38.7**	**+0.5**
DID	**Didima**	**1.44**	**46**	*e*Pb	**Pb**	**13 29 19.1**	**-0.4**
DID				S	**Sg**	**13 29 38.7**	**+0.5**
GUR	**Goura**	**1.46**	**13**	*e*PB	**Pb**	**13 29 19.6**	**-0.3**
GUR	**Goura**	**1.46**	**13**	P	**Pn**	**13 29 18.8**	**-0.6**
GUR				S	**Sg**	**13 29 38.8**	**-0.1**
GUR	**Goura**	**1.46**	**13**	P	**Pn**	**13 29 18.8**	**-0.6**
GUR	**Goura**	**1.46**	**13**	*e*Pb	**Pb**	**13 29 19.6**	**-0.3**
GUR				S	**Sg**	**13 29 38.8**	**-0.1**
RLS	**Riolos of Patr**	**1.59**	**346**	*e*Pb	**Pb**	**13 29 21.8**	**-0.3**
RLS	**Riolos of Patr**	**1.59**	**346**	*e*PB	**Pb**	**13 29 21.8**	**-0.3**
RLS	**Riolos of Patr**	**1.59**	**346**	*e*Pb	**Pb**	**13 29 21.8**	**-0.3**
LTK	**Loutraki**	**1.72**	**28**	*e*PG	**Pg**	**13 29 24.3**	**-0.6**
LTK	**Loutraki**	**1.72**	**28**	P	**Pn**	**13 29 23.3**	**+0.3**
LTK	**Loutraki**	**1.72**	**28**	P	**Pn**	**13 29 23.3**	**+0.3**
LTK	**Loutraki**	**1.72**	**28**	*e*Pg	**Pg**	**13 29 24.3**	**-0.6**
NAIG	**Nisos Aigina**	**1.76**	**44**	*e*Pn	**Pn**	**13 29 23.5**	**0.0**
NAIG	**Nisos Aigina**	**1.76**	**44**	*e*PN	**Pn**	**13 29 23.5**	**0.0**
NAIG	**Nisos Aigina**	**1.76**	**44**	*e*Pn	**Pn**	**13 29 23.5**	**0.0**
KFL	**Anninata**	**1.84**	**330**	P	**Pn**	**13 29 24.3**	**-0.4**
KFL				S	**Sn**	**13 29 48.7**	**+0.1**
KFL	**Anninata**	**1.84**	**330**	P	**Pn**	**13 29 24.3**	**-0.4**
KFL				S	**Sn**	**13 29 48.7**	**+0.1**
DSF	**Desfina**	**1.95**	**14**	P	**Pn**	**13 29 25.8**	**-0.4**
DSF				S	**Sn**	**13 29 51.3**	**-0.1**
DSF	**Desfina**	**1.95**	**14**	P	**Pn**	**13 29 25.8**	**-0.4**
DSF				S	**Sn**	**13 29 51.3**	**-0.1**
VLS	**Valsamata**	**1.98**	**328**	*e*Pn	**Pn**	**13 29 26.1**	**-0.5**
VLS	**Valsamata**	**1.98**	**328**	*e*PN	**Pn**	**13 29 26.1**	**-0.5**
VLS	**Valsamata**	**1.98**	**328**	*e*Pn	**Pn**	**13 29 26.1**	**-0.5**
VLY	**Voula,Athens**	**2.00**	**47**	*e*Pn	**Pn**	**13 29 27.2**	**+0.4**
VLY	**Voula,Athens**	**2.00**	**47**	*e*PN	**Pn**	**13 29 27.2**	**+0.4**
VLY	**Voula,Athens**	**2.00**	**47**	*e*Pn	**Pn**	**13 29 27.2**	**+0.4**
ATHU	**Athens Univers**	**2.07**	**45**	P	**Pn**	**13 29 28.0**	**+0.2**
ATHU				S	**Sn**	**13 29 54.2**	**0.0**
ATHU	**Athens Univers**	**2.07**	**45**	P	**Pn**	**13 29 28.0**	**+0.2**
ATHU				S	**Sn**	**13 29 54.2**	**0.0**
VAM	**Vamos**	**2.14**	**120**	P	**Pn**	**13 29 31.6**	**+2.8**
VAM	**Vamos**	**2.14**	**120**	P	**Pn**	**13 29 31.6**	**+2.8**
LKR	**Lokris**	**2.30**	**21**	P	**Pn**	**13 29 34.4**	**+3.5**
LKR	**Lokris**	**2.30**	**21**	P	**Pn**	**13 29 34.4**	**+3.5**
GVD	**Gavdhos**	**2.42**	**133**	*e*P	**Pn**	**13 29 35.2**	**+2.6**
GVD	**Gavdhos**	**2.42**	**133**	*e*P	**Pn**	**13 29 35.2**	**+2.6**
IDI	**Anoyia**	**2.69**	**116**	P	**Pn**	**13 29 40.5**	**+4.2**
IDI	**Anoyia**	**2.69**	**116**	P	**Pn**	**13 29 40.5**	**+4.2**

*IDC **08** 13:39:36.1±2.7, 18°.92S×175°.39W, h144km±35km, mb3.8/5, mb1 3.8/6, mb1mx3.5/17, mbtmp3.7/6, Error ellipse: s-maj=49.5km s-min=20.0km az=115.0*
*ISCJB **08** 13:39:39.9±1.7, 18°.8S±0°.2×175°.0W±0°.2, h240km±23km, mb3.8/5, Error ellipse: s-maj=36.2km s-min=17.1km az=147.8*
*NEIC **08** 13:39:40.1±1.3, 18°.83S×174°.94W, h228km±17km, mb4.0/1, Error ellipse: s-maj=24.6km s-min=16.3km az=151.0*
ISC 08 13:39:40.1±1.5, 18°.8S±0°.2×174°.9W±0°.2, h227km±22km, n10, σ0s53/11, mb3.8/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.74**	**32**	P	**Pn**	**13 41 04.9**	**+0.3**
	0.8nm,0.3s,baz=48,slow=15,SNR=2.1						
AFI				S	**S**	**13 42 11.6**	**-0.2**
	8.3nm,0.3s,baz=204,slow=21,SNR=8.0						
MSVF	**Nonsavu**	**6.76**	**278**	*e*P	**Pn**	**13 41 17.5**	**0.0**
MSVF				*e*		13 41 58.5	
URZ	**Urewera**	**20.58**	**198**	P	**P**	**13 44 01.4**	**-0.3**
	2.3nm,0.4s,baz=329,slow=20,SNR=8.7						
URZ	**Urewera**	**20.58**	**198**	*e*P	**P**	**13 44 01.3**	**-0.3**
STKA	**Stephens Creek**	**41.13**	**243**	P	**P**	**13 47 04.0**	**+1.7**
	2.0nm,0.9s,mb3.6,baz=94,slow=12,SNR=8.2						
STKA	**Stephens Creek**	**41.13**	**243**	*e*P	**P**	**13 47 02.9**	**+0.7**
WRAB	**Tennant Creek**	**47.72**	**260**	*e*P	**P**	**13 47 53.8**	**-0.6**
	2.9nm,0.4s,mb4.0						
WRA	**Warramunga Arr**	**47.73**	**260**	P	**P**	**13 47 54.4**	**-0.2**
	3.4nm,0.4s,mb4.0,baz=97,slow=5.7,SNR=95						
WRA				PcP	PcP	13 49 23.2	+3.2
	0.4nm,0.4s,baz=94,slow=3.3,SNR=3.2						
ASAR	**Alice Springs**	**47.74**	**255**	P	**P**	**13 47 54.5**	**-0.1**
	4.9nm,0.7s,mb4.0,baz=84,slow=8.2,SNR=92						
ASAR				pP	pP	13 48 20.9	-23
	3.6nm,0.4s,baz=84,slow=8.5,SNR=27						
ASAR				PcP	PcP	13 49 23.4	+3.4
	0.6nm,0.5s,baz=110,slow=3.9,SNR=7.2						
KSRS	**Korea Array**	**77.60**	**317**	P	**P**	**13 51 16.6**	**+5.4**
	0.7nm,0.6s,mb3.5,baz=128,slow=4.9,SNR=6.3						

CASC 08 13:52:40.2±1.4, 8°.38N×82°.94W, h3km, MD3.5, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.35**	**321**	*e*P	Pg	13 52 47.5	+0.5
ACR				*e*S	Sg	13 52 55.0	+3.4
BRU2	**Volcan**	**0.48**	**31**	*e*P	Pg	13 52 41.9	-7.6
BRU2				*e*S	Sg	13 52 59.3	+3.6
BAR1		**0.93**	**337**	*e*P	Pg	13 52 57.9	-0.3
BAR1				*e*S	Sg	13 53 11.7	+1.5
BUS	**Buena Vista**	**1.42**	**325**	*e*P	Pn	13 53 06.2	-0.7
BUS				*e*S	Sb	13 53 26.6	+0.8
URSC	**Urasca**	**1.67**	**330**	*e*P	Pn	13 53 09.6	-0.8
URSC				*e*S	Sn	13 53 32.9	+0.6
PRS1	**Puriscal**	**2.09**	**320**	*e*P	Pn	13 53 16.0	-0.2

IDC 08 14:00:51.3±7.9, 10°.24N×91°.06E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/22, mbtmp3.5/3, Error ellipse: s-maj=392.7km s-min=29.7km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**37.19**	**350**	P	P	14 08 04.0	0.0
	0.4nm,0.6s,baz=171,slow=7.9,SNR=4.4						
WRA	**Warramunga Arr**	**52.10**	**125**	P	P	14 10 02.9	-0.6
	0.4nm,0.6s,baz=299,slow=10,SNR=5.7						
ASAR	**Alice Springs**	**53.76**	**129**	P	P	14 10 16.2	+0.5
	0.5nm,0.7s,baz=306,slow=7.0,SNR=10.0						

*IDC **08** 14:06:32.2±1.3, 4°.76N×73°.46W, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.6/19, mbtmp3.8/2, MS3.0/1, Ms1 3.2/1, ms1mx2.5/29, Error ellipse: s-maj=24.6km s-min=12.5km az=11.0*
*ISCJB **08** 14:06:36.6±1.0, 4°.49N±0°.10×74°.0W±0°.1, h33km, mb3.6/2, Error ellipse: s-maj=19.6km s-min=13.4km az=20.5*
*NEIC **08** 14:06:38.1±2.7, 4°.53N×74°.09W, h33km±21km, Error ellipse: s-maj=16.3km s-min=10.8km az=107.0*
ISC 08 14:06:38.7±0.9, 4°.55N±0°.10×74°.1W±0°.1, h35km, n9, σ0s63/6, mb3.7/2, Colombia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**0.39**	**322**	Pg	**Pn**	**14 06 48.5**	**+0.6**
	104nm,0.3s,baz=95,slow=22,SNR=81						
ROSC				Lg		14 07 01.2	
	176nm,0.3s,baz=316,slow=23,SNR=18						
ROSC	**El Rosal**	**0.39**	**322**	*e*Pg	**Pn**	**14 06 48.3**	**+0.4**
ROSC				Lg		14 07 01.2	
SDV	**Santo Domingo**	**5.51**	**38**	*e*Pg	**Pn**	**14 07 58.0**	**-0.3**
	20nm,0.4s						
OTAV	**Otavalo**	**6.11**	**226**	P	**Pn**	**14 08 06.1**	**-0.5**
LPAZ	**La Paz**	**21.52**	**164**	P	**P**	**14 11 25.5**	**+0.5**
	0.7nm,0.7s,mb3.2,baz=355,slow=13,SNR=4.3						
LPAZ				LR	LR	14 20 04.3	
	comp=Z,40nm,18.3s,baz=136,slow=38						
YKA	**Yellowknife Ar**	**65.06**	**341**	P	**P**	**14 17 15.1**	**-0.2**
	1.1nm,0.5s,mb4.2,baz=131,slow=6.3,SNR=6.4						
ASAR	**Alice Springs**	**146.99**	**232**	PKPbc	PKPbc	14 26 18.9	+0.4
	0.3nm,0.7s,baz=115,slow=3.3,SNR=5.1						
WRAB	**Tennant Creek**	**148.37**	**239**	*e*PKPbc	PKPbc	14 26 22.2	-0.2
WRA	**Warramunga Arr**	**148.37**	**239**	PKPbc	PKPbc	14 26 21.2	-1.2
	1.3nm,0.6s,baz=111,slow=2.4,SNR=15						

*ISCJB **08** 14:24:49.8±0.8, 10°.35N±0°.04×60°.45W±0°.06, h97km±6km, Error ellipse: s-maj=10.4km s-min=6.2km az=27.9*
*FUNV **08** 14:24:49.9, 10°.41N×60°.23W, h36km, MW3.5*
*TRN **08** 14:24:51.3, 10°.33N×60°.29W, h64km, MD3.4*
*NEIC **08** 14:24:51.7, 10°.34N×60°.33W, h65km, MD3.4(TRN), After TRN.*
ISC 08 14:24:51.1±0.9, 10°.34N±0°.04×60°.44W±0°.06, h87km±8km, n34, σ0s92/53, 1C-1D, Trinidad

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TBH	**Brigand Hill**	**0.63**	**283**	*e*P	**Pn**	**14 25 06.6**	**0.0**
TBH				*e*S	**Sn**	**14 25 17.9**	**-0.3**
TBH	**Brigand Hill**	**0.63**	**283**	*e*P	**Pn**	**14 25 06.6**	**0.0**
TBH				*e*S	**Sn**	**14 25 17.9**	**-0.3**
BOT	**Bacolet**	**0.86**	**342**	*e*P	**Pn**	**14 25 09.2**	**+0.1**
BOT				*e*S	**Sn**	**14 25 22.1**	**-0.3**
BOT	**Bacolet**	**0.86**	**342**	*e*P	**Pn**	**14 25 09.2**	**+0.1**
BOT				*e*S	**Sn**	**14 25 22.1**	**-0.3**
TPR	**Prospect**	**0.90**	**338**	*e*P	**Pn**	**14 25 09.9**	**+0.4**
TPR				*e*S	**Sn**	**14 25 22.0**	**-1.2**
TPR	**Prospect**	**0.90**	**338**	*e*P	**Pn**	**14 25 09.9**	**+0.4**
TPR				*e*S	**Sn**	**14 25 22.0**	**-1.2**
TOSP	**Speyside**	**0.95**	**354**	*e*P	**Pn**	**14 25 08.8**	**-1.2**
TOSP				*e*S	**Sn**	**14 25 23.5**	**-0.8**
TRN	**Trinidad (W)**	**0.99**	**288**	*e*P	**Pn**	**14 25 11.1**	**+0.6**
TRN				*e*S	**Sn**	**14 25 24.6**	**-0.4**
TRN	**Trinidad (W)**	**0.99**	**288**	*e*P	**Pn**	**14 25 11.1**	**+0.6**
TRN				*e*S	**Sn**	**14 25 26.3**	**+1.3**
TPP	**Pointe-a-Pierr**	**1.00**	**269**	*e*P	**Pn**	**14 25 12.1**	**+1.6**
TPP	**Pointe-a-Pierr**	**1.00**	**269**	*e*P	**Pn**	**14 25 12.1**	**+1.6**
TCE	**Chacachacare**	**1.34**	**285**	*e*P	**Pn**	**14 25 15.7**	**+1.1**
TCE				*e*S	**Sn**	**14 25 34.9**	**+2.4**
TCE	**Chacachacare**	**1.34**	**285**	*e*P	**Pn**	**14 25 15.7**	**+1.1**
TCE				*e*S	**Sn**	**14 25 34.9**	**+2.4**
GUIV	**Guiria**	**1.78**	**280**	*e*P	**Pn**	**14 25 20.2**	**-0.1**
GUIV				*e*S	**Sn**	**14 25 42.1**	**-0.4**
GRGR	**Grenville**	**2.14**	**326**	*e*Pn	**Pn**	**14 25 26.6**	**+1.5**
GRW	**Mount Saint Ca**	**2.17**	**327**	*e*P	**Pn**	**14 25 27.6**	**+2.2**
GRW	**Mount Saint Ca**	**2.17**	**327**	*e*P	**Pn**	**14 25 27.6**	**+2.2**
GUNV	**Guanoco**	**2.47**	**266**	⇓*e*P	**Pn**	**14 25 30.7**	**+1.3**
GUNV				*e*S	**Sn**	**14 25 59.4**	**+0.6**
RIOV	**Rio Grande**	**2.63**	**211**	*e*P	**Pn**	**14 25 31.1**	**-0.6**
RIOV				*e*S	**Sn**	**14 26 01.8**	**-1.0**
CRUV	**Carupano**	**2.77**	**277**	⇑*i*P	**Pn**	**14 25 32.8**	**-0.7**
CRUV				*e*S	**Sn**	**14 26 04.2**	**-1.8**
ITEV	**Isla Los Testi**	**2.83**	**291**	*e*P	**Pn**	**14 25 33.7**	**-0.5**
ITEV				*e*S	**Sn**	**14 26 06.9**	**-0.6**
SVB	**Belmont**	**3.02**	**345**	*e*P	**Pn**	**14 25 37.9**	**+1.1**
SVB				*e*S	**Sn**	**14 26 11.3**	**-0.7**
SVB	**Belmont**	**3.02**	**345**	*e*P	**Pn**	**14 25 37.9**	**+1.1**
SVB				*e*S	**Sn**	**14 26 11.3**	**-0.7**
ORIV	**Oritupano**	**3.19**	**247**	*e*P	**Pn**	**14 25 39.9**	**+0.8**
ORIV				*e*S	**Sn**	**14 26 16.6**	**+0.5**
GURV	**El Guri**	**3.66**	**226**	*e*P	**Pn**	**14 25 45.8**	**+0.3**
PCRV	**Puerto La Cruz**	**4.13**	**268**	*e*P	**Pn**	**14 25 51.7**	**-0.2**
IBAV	**Isla La Blanqu**	**4.32**	**290**	*e*P	**Pn**	**14 25 54.0**	**-0.4**
PRGV	**PARIAGUAN**	**4.44**	**250**	*e*P	**Pn**	**14 25 56.4**	**+0.4**
CUPV	**Cœpira**	**5.27**	**267**	*e*P	**Pn**	**14 26 07.0**	**-0.4**
BIRV	**Birongo**	**5.74**	**272**	*e*P	**Pn**	**14 26 13.2**	**-0.6**
CAOV	**Caicara del Or**	**6.54**	**243**	*e*P	**Pn**	**14 26 24.2**	**-0.5**
TURV	**Turiamo**	**7.28**	**272**	*e*P	**Pn**	**14 26 34.4**	**-0.4**
BAUV	**El Baul**	**7.62**	**260**	*e*P	**Pn**	**14 26 38.1**	**-1.4**

MAPV Macapo 7.91 267 *eP* **Pn 14 26 43.1 -0.3**

NIED ***08*** *14:34:00, 29.°50N×130.°70E, h29km, Mw4.6 Best double couple: M0:9.90000×1015 NP1:φ=21.00000°, δ=84.00000°, λ=76.00000°. NP2:φ=269.00000°, δ=15.00000°, λ=157.00000°.*
MOS ***08*** *14:34:16.8±1.0, 29.°45N×130.°57E, h33km, mb4.8/12, Error ellipse: s-maj=14.4km s-min=8.5km az=102.6*
BJI ***08*** *14:34:16.8, 29.°24N×130.°94E, h60km, mB4.4/11, mb4.5/22, Ms4.2/15, Ms7 4.0/15*
JMA ***08*** *14:34:18.7, 29.°48N×130.°67E, h58km±3km, M4.0*
ISCJB ***08*** *14:34:19.0±0.5, 29.°49N±0.°03×130.°66E±0.°05, h54km±3km, mb4.5/30, MS4.1/19, Error ellipse: s-maj=7.2km s-min=3.7km az=28.5*
NEIC ***08*** *14:34:21.8±1.0, 29.°60N×130.°62E, h60km±9km, mb4.7/7, MW4.6(NIED), Error ellipse: s-maj=10.2km s-min=8.8km az=122.0*
IDC ***08*** *14:34:21.5±3.3, 29.°51N×130.°54E, h56km±30km, mb3.8/15, mb1 3.8/18, mb1mx3.8/29, mbtmp3.8/18, ML3.4/3, MS3.9/16, Ms1 3.9/16, ms1mx3.7/32, Error ellipse: s-maj=26.1km s-min=14.8km az=60.0*
ISC 08 14:34:20.4±0.4, 29.°51N±0.°03×130.°58E±0.°04, h46km±4km, h62km±1.4km; pP-P, n94, σ0=97/100, mb4.5/30, MS4.1/19, 7C-2D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JNN	**Nakanoshima**	**0.70**	**298**	P		**Pn**	**14 34 34.0**	**0.0**
JNN				*e*S		**Sn**	**14 34 45.8**	**+2.0**
JKC	**Kuchinoerabu**	**1.00**	**341**	P		**Pn**	**14 34 37.8**	**-0.3**
JKC				S		**Sn**	**14 34 52.0**	**+0.8**
JTN	**Tanegashima 3**	**1.19**	**17**	P		**Pn**	**14 34 39.6**	**-1.1**
JTN				S		**Sn**	**14 34 54.5**	**-1.2**
JZK	**Kikaishima**	**1.30**	**204**	P		**Pn**	**14 34 41.5**	**-0.7**
JZK				S		**Sn**	**14 34 57.3**	**-1.2**
JAM	**Amami Oshima**	**1.39**	**218**	P		**Pn**	**14 34 42.4**	**-0.9**
JAM				S		**Sn**	**14 35 01.5**	**+1.0**
JTSR	**Tashiro 2**	**1.68**	**10**	P		**Pn**	**14 34 47.0**	**-0.3**
JTSR				S		**Sn**	**14 35 07.2**	**-0.4**
JSU	**Suzuyama**	**1.99**	**357**	P		**Pn**	**14 34 50.9**	**-0.7**
JNAR	**Kushima--Naru**	**2.10**	**16**	P		**Pn**	**14 34 52.5**	**-0.6**
JNAR				S		**Sn**	**14 35 18.9**	**+1.0**
JTK	**Tokunoshima**	**2.24**	**220**	P		**Pn**	**14 34 54.3**	**-0.7**
JTK				*e*S		**Sn**	**14 35 20.6**	**-0.7**
JTZ	**Takazaki**	**2.42**	**10**	P		**Pn**	**14 34 57.7**	**+0.2**
KSRS	**Korea Array**	**8.23**	**345**	P		**Pn**	**14 36 19.6**	**+2.5**
	0.2nm,0.3s,baz=156,slow=15,SNR=22							
KSRS				LR		LR	14 39 45.4	
	comp=Z,654nm,18.9s,baz=43,slow=39							
SSE	**Sheshan**	**8.27**	**283**	P		**Pn**	**14 36 17.7**	**-0.1**
SSE				S		**Sn**	**14 37 47.9**	**-2.0**
SSE				pmax		pmax		
	comp=Z,15nm,0.6s							
SSE				pmax		pmax		
	comp=Z,25nm,4.8s							
SSE				LR		LR		
	comp=N,510nm,14.1s							
SSE				LR		LR		
	comp=E,690nm,14.1s							
SSE				LR		LR		
	comp=Z,970nm,13.6s							
JHJ	**Hachijo jima 2**	**8.66**	**63**	LR		LR	14 39 24.3	
	comp=Z,336nm,18.9s,baz=144,slow=35							
MAJO	**Matsushiro**	**9.49**	**40**	*eP*		**Pn**	**14 36 33.9**	**-0.6**
MAJO				pmax		pmax		
	comp=Z,4.0nm,0.4s							
MAJO	**Matsushiro**	**9.49**	**40**	*eP*		**Pn**	**14 36 33.9**	**-0.6**
	comp=Z,4.2nm,0.4s							
MAT	**Matsushiro**	**9.49**	**40**	P		**Pn**	**14 36 35.0**	**+0.5**
MAT				S		**Sn**	**14 38 20.0**	**+0.2**
MJAR	**Matsushiro Arr**	**9.49**	**40**	P		**Pn**	**14 36 34.5**	**0.0**
	comp=Z,0.7nm,0.3s,baz=238,slow=15,SNR=6.2							
MJAR	**Matsushiro Arr**	**9.49**	**40**	P		**Pn**	**14 36 34.5**	**0.0**
MJAR				pmax		pmax		
	comp=Z,1.0nm,0.3s							
YHNB	**Yeheng**	**9.51**	**242**	*eP*		**Pn**	**14 36 38.0**	**+3.2**
NJ2	**Nanjing**	**10.40**	**287**	*eP*		**Pn**	**14 36 48.7**	**+1.8**
NJ2				PP			14 36 57.3	
NJ2				sP			14 37 05.9	
NJ2				S		**Sn**	**14 38 41.8**	**-0.2**
NJ2				pmax		pmax		
	comp=Z,20nm,1.1s							
NJ2				LR		LR		
	comp=N,220nm,14.0s							
NJ2				LR		LR		
	comp=E,1μm,13.2s							
NJ2				LR		LR		
	comp=Z,3μm,15.1s							
CBIJ	**Chichi jima**	**10.51**	**100**	LR		LR	14 40 11.4	
	comp=Z,329nm,20.9s,baz=246,slow=33							
CN2	**Changchun**	**14.84**	**345**	*eP*		**Pn**	**14 37 53.0**	**+5.8**
CN2				pmax		pmax		
	comp=Z,20nm,1.0s							
CN2				LR		LR		
	comp=N,900nm,14.0s							
CN2				LR		LR		
	comp=E,600nm,14.0s							
CN2				LR		LR		
	comp=Z,200nm,14.0s							
BJI	**Beijing**	**15.80**	**315**	P		**Pn**	**14 38 05.8**	**+6.1**
BJI				S		**S**	**14 41 04.7**	**-1.7**
BJI				pmax		pmax		
	comp=Z,14nm,0.9s							
BJI				pmax		pmax		
	comp=Z,110nm,5.5s							
BJI				LR		LR		
	comp=N,880nm,14.0s							
BJI				LR		LR		
	comp=E,720nm,11.8s							
BJI				LR		LR		
	comp=Z,380nm,15.2s							
ASAJ	**Asahikawa**	**17.44**	**30**	P		**Pn**	**14 38 20.2**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=247,slow=13,SNR=3.5							
ASAJ				LR		LR	14 45 13.5	
	comp=Z,231nm,20.7s,baz=191,slow=37							
HHC	**Hu-ho-hao-te**	**19.18**	**311**	*eP*		**Pn**	**14 38 41.9**	**+0.5**
HHC				PP			14 39 00.7	
HHC				S		**S**	**14 42 09.0**	**-6.0**
HHC				PcP		PcP	14 43 04.7	+2.5
HHC				ScP		ScP	14 46 32.9	-1.4
HHC				PcS		PcS	14 46 40.4	+1.2
HHC				pmax		pmax		
	comp=Z,16nm,0.5s							
HHC				pmax		pmax		
	comp=Z,79nm,4.9s							
HHC				LR		LR		
	comp=N,290nm,11.2s							
HHC				LR		LR		
	comp=E,490nm,11.2s							
HHC				LR		LR		
	comp=Z,560nm,11.5s							
HABR	**Khabarovsk**	**19.25**	**9**	*eP*		**Pn**	**14 38 38.1**	**-4.0**
HABR				S		**S**	**14 42 09.5**	**-6.6**
HABR				pmax		pmax		
	comp=N,12nm,2.3s							
HABR				pmax		pmax		
	comp=E,26nm,3.4s							
HABR				pmax		pmax		
	comp=Z,17nm,2.0s							
HABR				MLR		MLR		
	comp=Z,229nm,18.0s							
KLR	**Kul'dur**	**19.71**	**2**	*eP*		**Pn**	**14 38 40.8**	**-6.8**
YSS	**Yuzh-Sakhalins**	**19.83**	**25**	*eP*		**Pn**	**14 38 40.2**	**-8.8**
BTO	**Baotou**	**20.09**	**309**	*eP*		**P**	**14 38 54.1**	**+4.0**
QIZ	**Qiongzhong**	**21.56**	**246**	P		**P**	**14 39 07.5**	**+1.5**
QIZ				S		**S**	**14 43 04.6**	**+2.2**
QIZ				LR		LR		
	comp=N,390nm,13.3s							
QIZ				LR		LR		
	comp=Z,380nm,15.4s,MS3.9							
DAV	**Davao City (W)**	**22.81**	**193**	LR		LR	14 47 03.7	
	comp=Z,105nm,21.3s,MS3.2,baz=214,slow=33							
LZH	**Lanzhou**	**23.37**	**293**	P		**P**	**14 39 25.8**	**+0.8**
LZH				LR		LR		
	comp=E,110nm,5.4s							
LZH				LR		LR		
	comp=Z,150nm,6.2s							
KMI	**Kunming**	**25.09**	**267**	P		**P**	**14 39 41.7**	**+0.9**
KMI				pmax		pmax		
	comp=Z,24nm,0.9s,mb4.7							
ULN	**Ulaanbaatar**	**25.78**	**322**	*eP*		**P**	**14 39 46.2**	**-0.6**
ULN				pmax		pmax		
	comp=Z,12nm,1.2s,mb4.3							
ULN	**Ulaanbaatar**	**25.78**	**322**	*eP*		**P**	**14 39 46.2**	**-0.6**
	comp=Z,12nm,1.2s,mb4.3							
SONM	**Songino Array**	**26.12**	**321**	P		**P**	**14 39 50.5**	**+0.7**
	comp=Z,3.4nm,0.8s,mb3.9,baz=135,slow=11,SNR=14							
SONM				LR		LR	14 51 24.2	
	comp=Z,358nm,21.3s,MS3.9,baz=67,slow=39							
SONM	**Songino Array**	**26.12**	**321**	P		**P**	**14 39 50.5**	**+0.7**
SONM				pmax		pmax		
	comp=Z,3.0nm,0.9s							
SONM				MLR		MLR		
	comp=Z,358nm,21.3s							
PETK	**Petropavlovsk-**	**30.82**	**32**	LR		LR	14 53 21.2	
	comp=Z,80nm,19.8s,MS3.4,baz=329,slow=37							
SEY	**Seymchan**	**36.29**	**17**	*eP*		**P**	**14 41 19.5**	**+0.4**
JIRN	**Jiri**	**38.85**	**278**	*eP*		**P**	**14 41 41.6**	**+0.4**
	comp=Z,10nm,0.3s,mb5.0							
GUN	**Gumba**	**39.06**	**279**	*eP*		**P**	**14 41 43.3**	**+0.4**
	comp=Z,129nm,0.9s,mb5.6							
PKI	**Pulchoki**	**39.54**	**279**	*eP*		**P**	**14 41 46.7**	**-0.3**
KKN	**Kakani**	**39.60**	**279**	*eP*		**P**	**14 41 46.9**	**-0.6**
	comp=Z,63nm,0.8s,mb5.4							
DMN	**Daman**	**39.79**	**279**	*eP*		**P**	**14 41 48.2**	**-0.9**
GKN	**Gorkha**	**40.10**	**279**	*eP*		**P**	**14 41 51.1**	**-0.6**
	comp=Z,34nm,0.8s,mb5.1							
ZAA0	**Zalesovo Array**	**41.00**	**320**	*eP*		**P**	**14 41 57.2**	**-1.5**
ZALV	**Zalesovo Beam**	**41.00**	**320**	P		**P**	**14 41 57.8**	**-0.8**
	comp=Z,1.5nm,0.6s,mb3.8,baz=101,slow=7.7,SNR=10							
ZALV				PcP		PcP	14 43 58.1	+0.1
	comp=Z,0.5nm,0.3s,baz=66,slow=3.6,SNR=4.6							
ZALV				LR		LR	15 00 54.0	
	comp=Z,230nm,18.4s,MS4.1,baz=245,slow=39							
ZALV	**Zalesovo Beam**	**41.00**	**320**	P		**P**	**14 41 57.8**	**-0.8**
ZALV							14 43 58.1	
ZALV				pmax		pmax		
	comp=Z,2.0nm,0.6s,mb3.9							
ZALV				pmax		pmax		
	comp=Z,1.0nm,0.3s,mb3.9							
ZALV				MLR		MLR		
	comp=Z,230nm,18.4s,MS4.1							
MKAR	**Makanchi Array**	**41.01**	**309**	P		**P**	**14 41 59.3**	**+0.4**
	comp=Z,3.3nm,0.7s,mb4.1,baz=97,slow=10,SNR=14							
MKAR	**Makanchi Array**	**41.01**	**309**	P		**P**	**14 41 59.3**	**+0.4**
MKAR				pmax		pmax		
	comp=Z,3.0nm,0.7s							
KOLN	**Koldanda**	**41.05**	**279**	*eP*		**P**	**14 41 59.1**	**-0.4**
	comp=Z,24nm,0.7s,mb4.9							
BILL	**Bilibino**	**43.91**	**18**	*c iP*		**P**	**14 42 22.1**	**-0.1**
BILL				pmax		pmax		
	comp=Z,17nm,2.5s,mb4.3							
BILL				MLR		MLR		
	comp=Z,100nm,14.0s,MS3.9							
BILL	**Bilibino**	**43.91**	**18**	P		**P**	**14 42 21.7**	**-0.5**
	comp=Z,29nm,1.7s,mb4.7							
KURK	**Kurchatov**	**43.96**	**314**	P		**P**	**14 42 23.4**	**+0.5**
	comp=Z,3.8nm,0.4s,mb4.5,baz=102,slow=32,SNR=22							
KURK				LR		LR	15 02 24.9	
	comp=Z,406nm,19.0s,MS4.4,baz=110,slow=38							
KURK	**Kurchatov**	**43.96**	**314**	⇑*eP*		**P**	**14 42 22.6**	**-0.2**
KURK				*i* *PP		pP	14 42 38.8	+3.4
KURK				pmax		pmax		
	comp=Z,17nm,1.7s,mb4.5							
KURK	**Kurchatov**	**43.96**	**314**	*eP*		**P**	**14 42 21.4**	**-1.4**
	comp=Z,8.1nm,1.1s,mb4.4							
KURK				LR		LR	15 02 24.9	
BVAR	**Borovoye Array**	**49.28**	**316**	P		**P**	**14 43 04.5**	**+0.1**
	comp=Z,4.9nm,0.5s,mb4.8,baz=91,slow=8.9,SNR=42							
BVAR	**Borovoye Array**	**49.28**	**316**	P		**P**	**14 43 04.5**	**+0.1**
BVAR				pmax		pmax		
	comp=Z,5.0nm,0.5s							
WRA	**Warramunga Arr**	**49.30**	**175**	P		**P**	**14 43 04.5**	**-0.3**
	comp=Z,1.0nm,0.7s,mb4.0,baz=353,slow=8.0,SNR=6.7							
WRA	**Warramunga Arr**	**49.30**	**175**	P		**P**	**14 43 04.5**	**-0.3**
WRA				pmax		pmax		
	comp=Z,1.0nm,0.7s							
WRA	**Warramunga Arr**	**49.30**	**175**	P		**P**	**14 43 04.5**	**-0.3**
BRVK	**Borovoye**	**49.35**	**316**	*c iP*		**P**	**14 43 04.8**	**-0.1**
BRVK				*e*PP		pP	14 43 20.3	+2.6
BRVK				pmax		pmax		
	comp=Z,17nm,1.0s,mb5.0							
BRVK	**Borovoye**	**49.35**	**316**	P		**P**	**14 43 05.1**	**+0.1**
	comp=Z,16nm,0.9s,mb5.1							
ASAR	**Alice Springs**	**52.97**	**176**	P		**P**	**14 43 32.6**	**+0.4**
	comp=Z,0.6nm,0.7s,mb3.6,baz=5.9,slow=12,SNR=9.2							
ASAR	**Alice Springs**	**52.97**	**176**	P		**P**	**14 43 32.7**	**+0.4**
ASAR				pmax		pmax		
	comp=Z,1.0nm,0.7s							
SVE	**Sverdlovsk**	**54.99**	**321**	⇑*eP*		**P**	**14 43 47.2**	**+0.5**
SVE				pmax		pmax		
	comp=Z,18nm,1.0s,mb5.1							
SVE				MLR		MLR		
	comp=Z,699nm,18.0s,MS4.8							
ABKAR	**Akbulak array**	**55.97**	**312**	*eP*		**P**	**14 43 54.0**	**+0.1**
	comp=Z,9.8nm,0.8s,mb4.9							
ARU	**Arti**	**56.15**	**320**	*d iP*		**P**	**14 43 55.0**	**-0.1**
ARU				*PP		pP	14 44 10.6	+2.5
ARU				*e*			14 45 56.1	
ARU				S		**S**	**14 51 38.7**	**-2.0**
ARU				SS		SS	14 55 21.6	-5.6
ARU				pmax		pmax		
	comp=Z,21nm,1.0s,mb5.1							
ARU				MLR		MLR		
	comp=Z,455nm,16.0s,MS4.7							
ARU	**Arti**	**56.15**	**320**	*eP*		**P**	**14 43 54.6**	**-0.5**
	comp=Z,19nm,1.0s,mb5.1							
AKTK	**Aktyubinsk**	**57.06**	**313**	P		**P**	**14 44 01.9**	**+0.2**
AKTO	**Aktyubinsk**	**57.06**	**313**	P		**P**	**14 44 01.9**	**+0.2**
	comp=Z,4.0nm,0.9s,mb4.4,baz=79,slow=9.9,SNR=10							
AKTO	**Aktyubinsk**	**57.06**	**313**	P		**P**	**14 44 01.9**	**+0.3**
AKTO				pmax		pmax		
	comp=Z,4.0nm,0.9s,mb4.5							
STKA	**Stephens Creek**	**61.94**	**169**	P		**P**	**14 44 35.5**	**+0.2**
	comp=Z,2.4nm,1.1s,mb4.2,baz=80,slow=17,SNR=3.0							
ARCES	**ARCESS Array B**	**67.73**	**338**	LR		LR	15 19 59.3	
	comp=Z,167nm,19.2s,MS4.3,baz=102,slow=40							
ZEI	**Tsey**	**68.36**	**308**	*eP*		**P**	**14 45 16.6**	**-0.5**
ZEI				pmax		pmax		
	comp=Z,6.0nm,0.5s,mb4.9							
OBN	**Obninsk**	**68.53**	**322**	*eP*		**P**	**14 45 18.1**	**+0.3**
OBN				*e*			14 45 42.8	
OBN				pmax		pmax		
	comp=Z,6.0nm,1.2s,mb4.4							
OBN				MLR		MLR		
	comp=Z,200nm,15.0s,MS4.5							
GNI	**Garni**	**68.70**	**305**	⇑*eP*		**P**	**14 45 21.5**	**+2.3**
GNI				pmax		pmax		
	comp=Z,11nm,1.2s							
KIV	**Kislovodsk**	**68.77**	**309**	*eP*		**P**	**14 45 20.4**	**+0.8**
KIV				pmax		pmax		
	comp=Z,14nm,1.2s,mb4.8							
KIV				MLR		MLR		
	comp=Z,46nm,18.0s,MS3.8							
FINES	**FINESS Array B**	**71.04**	**331**	LR		LR	15 21 18.6	
	comp=Z,84nm,19.3s,MS4.0,baz=334,slow=40							
AKASG	**Malin Array Be**	**74.39**	**320**	P		**P**	**14 45 51.4**	**-1.9**
	comp=Z,0.3nm,0.3s,mb3.8,baz=50,slow=7.3,SNR=4.7							
BR131	**Keskin Array S**	**76.66**	**308**	*eP*		**P**	**14 46 06.5**	**0.0**
	comp=Z,0.9nm,0.6s,mb3.9							
BRTR	**Keskin Array B**	**76.66**	**308**	P		**P**	**14 46 06.8**	**+0.3**
	comp=Z,2.4nm,0.8s,mb4.2,baz=93,slow=5.3,SNR=11							
BRTR	**Keskin Array B**	**76.66**	**308**	*ceP*		**P**	**14 46 07.5**	**+1.0**
BRTR				pmax		pmax		
	comp=Z,2.0nm,0.8s							
HFS	**Hagfors**	**76.88**	**333**	P		**P**	**14 46 06.2**	**-1.1**
	comp=Z,0.7nm,0.5s,mb3.8,baz=108,slow=4.8,SNR=4.7							
HFS	**Hagfors**	**76.88**	**333**	P		**P**	**14 46 06.2**	**-1.1**
HFS				pmax		pmax		
	comp=Z,1.0nm,0.5s							
NOA	**NORSAR Array B**	**77.29**	**334**	P		**P**	**14 46 09.0**	**-0.6**
	comp=Z,0.4nm,0.4s,mb3.7,baz=50,slow=5.7,SNR=3.1							
NOA				LR		LR	15 26 00.0	
	comp=Z,84nm,19.5s,MS4.1,baz=10.0,slow=40							
RPZ	**Rata Peaks**	**81.76**	**152**	LR		LR	15 17 27.9	
	comp=Z,135nm,19.7s,MS4.3,baz=3.6,slow=32							
CLL	**Collm**	**82.64**	**326**	*eP*		**P**	**14 46 37.0**	**-1.7**
CLL				*e*			14 46 42.0	
CLL				MLR		MLR		
	comp=Z,200nm,17.4s,MS4.5							
FFC	**Flin Flon**	**84.74**	**28**	*ceP*		**P**	**14 46 51.0**	**+1.6**
NVAR	**Mina Array Bea**	**86.75**	**47**	P		**P**	**14 47 01.1**	**+1.4**
	comp=Z,0.8nm,0.8s,mb4.0,baz=278,slow=4.3,SNR=6.6							
PDAR	**Pinedale Array**	**89.32**	**40**	P		**P**	**14 47 13.2**	**+1.4**
	comp=Z,0.8nm,0.8s,mb4.1,baz=353,slow=3.4,SNR=7.0							
PPT	**Papeete**	**90.02**	**110**	LR		LR	15 29 05.4	
	comp=Z,113nm,18.0s,MS4.3,baz=175,slow=36							
SCHQ	**Schefferville**	**94.68**	**10**	LR		LR	15 28 21.7	
	comp=Z,75nm,21.6s,MS4.1,baz=148,slow=34							
ESDC	**Sonseca Array**	**99.22**	**326**	LR		LR	15 39 58.1	
	comp=Z,73nm,19.8s,MS4.2,baz=40,slow=40							

GUC 08 14:47:04.5±1.2, 21.°87S×70.°31W, h50km±38km, ML3.7, 5C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MACH	**Maria Elena**	**0.61**	**122**	⇓*iP*		Pn	14 47 18.1	+1.0
MACH				*i* S		Sn	14 47 27.6	+1.4
PB04	**Plate Boundary**	**0.86**	**117**	⇓*iP*		Pn	14 47 17.6	-2.8
PB04				*i* S		Sn	14 47 26.5	-5.5
PB04				AML		AML	14 47 27.1	
	comp=N,21μm,0.3s							
PB01	**Plate Boundary**	**1.13**	**43**	⇑*iP*		Pn	14 47 24.9	+0.9
PB01				*i* S		Sn	14 47 39.4	+1.0
PB01				AML		AML	14 47 40.0	
	comp=E,8μm,0.2s							
CEN1	**Los Morros**	**1.52**	**176**	⇓*iP*		Pn	14 47 32.7	+3.5
CEN1				*i* S		Sn	14 47 53.6	+5.8
CEN1				AML		AML	14 47 57.5	
	comp=E,548nm,0.6s							
HMBC	**Humberston**	**1.63**	**14**	⇑*iP*		Pn	14 47 31.5	+0.6
HMBC				AML		AML	14 47 59.0	
	comp=E,1μm,0.3s							
ANCH	**Antofagasta**	**1.81**	**183**	⇑*iP*		Pn	14 47 32.9	-0.3
ANCH				*e*S		Sn	14 47 54.7	-0.2
ANCH				AML		AML	14 47 56.4	
	comp=E,797nm,0.1s							
PSGC	**Pisagua**	**2.27**	**5**	⇑*iP*		Pn	14 47 39.8	+0.2
PSGC				AML		AML	14 48 07.7	
	comp=E,651nm,0.4s							
MNMC	**Miæe Miæ**	**2.81**	**14**	⇑*iP*		Pn	14 47 47.6	+0.7

NNC ***08*** *15:00:24.5±1.4, 42.°14N×72.°09E, h0km, mb3.3, mpv3.3, Error ellipse: s-maj=18.4km s-min=5.3km az=17.0*
ISC 08 15:00:30.7±2.2, 42.°2N±0.°3×72.°1E±0.°1, h35km, n11, σ1=19/11, 1C-1D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EKS2	**Erkin-Say**	**1.34**	**71**	P		**Pn**	**15 00 50.2**	**-2.7**
	SNR=92							
KK31	**Karatay Array**	**1.44**	**308**	P		**Pn**	**15 00 52.0**	**-2.3**
	14nm,0.3s,baz=131,slow=17,SNR=270							
KK31				S		**Sn**	**15 01 12.8**	**+0.9**
	24nm,0.2s,baz=127,slow=28,SNR=17							
AAK	**Ala-Archa**	**1.85**	**77**	P		**Pn**	**15 00 59.0**	**-0.8**
	SNR=19							
USP	**Ospenovka**	**2.07**	**59**	P		**Pn**	**15 01 03.0**	**0.0**
	SNR=46							
CHMS	**Chumysh**	**2.13**	**68**	P		**Pn**	**15 01 03.7**	**-0.1**
	SNR=12							
KBK	**Karagaybulak**	**2.18**	**78**	P		**Pn**	**15 01 04.8**	**+0.4**
	SNR=37							
KZA	**Kyzart**	**2.38**	**93**	P		**Pn**	**15 01 08.3**	**+1.2**
	SNR=68							
ULHL	**Ulahol**	**3.10**	**88**	P		**Pn**	**15 01 20.8**	**+3.7**
	SNR=8.6							
MK31	**Makanchi Array**	**8.62**	**55**	Pn		**Pn**	**15 02 33.5**	**+0.7**
	0.3nm,0.3s,baz=235,slow=13,SNR=5.9							
MK31				⇓Lg			15 04 52.0	
	1.6nm,0.7s,baz=237,slow=28,SNR=4.2							
VOSK	**Vostochnaya**	**10.53**	**356**	⇑Lg			15 06 03.4	
	2.1nm,0.8s							
AB31	**Akbulak array**	**11.00**	**314**	Pn		**Pn**	**15 03 05.8**	**+0.5**
	0.3nm,0.6s,baz=123,slow=12,SNR=4.1							

ISCJB ***08*** *15:51:38.8±4.6, 10.°9N±0.°1×91.°2E±0.°2, h13km±30km, mb3.8/13, MS4.2/3, Error ellipse: s-maj=35.4km s-min=14.2km az=157.9*
IDC ***08*** *15:51:40.5±1.2, 11.°14N×91.°61E, h0km, mb3.6/10, mb1 3.7/10, mb1mx3.7/23, mbtmp3.6/10, MS4.2/3, Ms1 4.2/3, ms1mx3.3/32, Error ellipse: s-maj=42.1km s-min=17.1km az=59.0*
NEIC ***08*** *15:51:40.1±0.7, 10.°90N×91.°10E, h10km, mb4.0/1, Error ellipse: s-maj=35.3km s-min=9.6km az=63.0*
ISC 08 15:51:42.3±5.2, 10.°9N±0.°1×91.°1E±0.°2, h24km±38km, n18, σ0=84/15, mb3.8/13, MS4.2/3, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MDRS	**Chennai**	**10.86**	**282**	*ex*		x	15 54 22.2	
MDRS				*ex*		x	16 00 38.2	
MDRS				*ex*		x	16 06 54.2	
HHC	**Hu-ho-hao-te**	**34.84**	**28**	*eP*		**P**	**15 58 33.1**	**+1.5**
HHC				S		**S**	**16 04 01.3**	**+0.1**
HHC				pmax		pmax		
	comp=Z,10.0nm,0.6s,mb4.9							
HHC				pmax		pmax		
	comp=Z,59nm,5.3s							
MKAR	**Makanchi Array**	**36.54**	**350**	P		**P**	**15 58 46.0**	**0.0**
	comp=Z,0.8nm,0.8s,mb3.6,baz=163,slow=7.8,SNR=9.0							
SONM	**Songino Array**	**38.98**	**16**	P		**P**	**15 59 07.0**	**+0.4**
	comp=Z,0.2nm,0.4s,mb3.2,baz=152,slow=40,SNR=2.5							
KURK	**Kurchatov**	**41.00**	**348**	P		**P**	**15 59 22.4**	**-1.0**
	comp=Z,0.5nm,0.7s,mb3.3,baz=165,slow=6.6,SNR=4.5							
KSRS	**Korea Array**	**42.28**	**45**	P		**P**	**15 59 32.2**	**-1.9**
	comp=Z,0.2nm,0.3s,mb3.2,baz=232,slow=35,SNR=3.3							
ZALV	**Zalesovo Beam**	**43.22**	**355**	P		**P**	**15 59 40.5**	**-1.0**
	comp=Z,0.3nm,0.3s,mb3.5,baz=193,slow=6.1,SNR=3.5							
BVAR	**Borovoye Array**	**45.19**	**342**	P		**P**	**15 59 58.2**	**+0.9**
	comp=Z,0.2nm,0.4s,mb3.3,baz=232,slow=45,SNR=2.3							
ABKAR	**Akbulak array**	**46.16**	**332**	P		**P**	**16 00 05.5**	**+0.5**
	comp=Z,1.3nm,0.8s,mb3.9							
GNI	**Garni**	**50.20**	**314**	LR		LR	16 25 38.7	
	comp=Z,424nm,18.7s,MS4.5,baz=267,slow=40							
WRA	**Warramunga Arr**	**52.

ANCH *i* S Sn 15 55 54.0 -2.9
ANCH AML AML 15 55 57.2
comp=N,8µm,1.0s
HMBC Humberston 4.05 310 ⇓*i*P Pn 15 55 18.8 +0.3
HMBC *i* S Sn 15 56 04.5 -2.2
PSGC Pisagua 4.67 314 ⇑*i*P Pn 15 55 26.0 -0.5
PSGC *i* S Sn 15 56 17.6 -3.6
MNMC Miæe Miæ 4.70 322 ⇑*i*P Pn 15 55 28.4 +1.5
MNMC *i* S Sn 15 56 21.2 -0.6
LPAZ La Paz 6.75 347 P Pn 15 55 56.6 +3.1
comp=N,5.8nm,0.3s,baz=162,slow=7.6,SNR=4.1
LPAZ S Sn 15 57 10.6 +0.5
baz=254,slow=25,SNR=3.6
LPAZ La Paz 6.75 347 ⇓*i*Pn Pn 15 55 56.8 +3.2
comp=N,60nm,0.6s
LCO Las Campanas 7.12 211 *e*Pn Pn 15 55 56.3 -2.2
comp=N,30nm,0.5s
LCO *e*Sn Sn 15 57 01.9 -17
ARE Arequipa 7.91 323 *e*P Pn 15 56 08.0 -0.9
ARE *e*S Sn 15 57 31.0 -6.7
SIV San Ignacio 8.61 38 P Pn 15 56 20.0 +1.9
comp=N,15nm,0.3s,baz=223,slow=12,SNR=255
SIV S Sn 15 57 47.5 -7.0
baz=209,slow=16,SNR=3.3
CFAA Coronel Fontan 8.79 189 P Pn 15 56 19.7 -0.6
comp=N,0.6nm,0.3s,baz=340,slow=9.9,SNR=67
CFAA S Sn 15 57 51.4 -7.1
comp=N,1.4nm,0.3s,baz=244,slow=18,SNR=11
CFAA Coronel Fontan 8.79 189 P Pn 15 56 19.7 -0.6
CFAA S Sn 15 57 51.4 -7.1
CPUP Villa Florida 9.07 114 P Pn 15 56 27.1 +3.1
comp=N,1.2nm,0.3s,baz=269,slow=11,SNR=18
NNA Nana 14.62 316 P Pn 15 57 34.7 -0.5
comp=N,1.7nm,0.3s,baz=145,slow=10,SNR=4.7
NNA Nana 14.62 316 P Pn 15 57 34.7 -0.5
TRQA Tornquist 15.61 166 *e*Pn Pn 15 57 46.7 -0.4
comp=N,6.6nm,0.7s
SPB Sao Paulo 17.60 96 *e*P Pn 15 58 11.7 +0.5
comp=N,46nm,0.8s
PLCA Paso Flores 18.09 190 P P 15 58 14.8 +0.2
comp=N,2.3nm,0.3s,baz=11,slow=12,SNR=52
PLCA Paso Flores 18.09 190 *e*P P 15 58 14.4 -0.2
comp=N,39nm,0.8s
PCRV Puerto La Cruz 32.93 4 P P 16 00 33.6 -0.6
comp=N,15nm,0.7s,mb4.9
FDF Fort de France 37.78 9 *e*P P 16 01 14.2 -1.3
comp=N,68nm,0.8s,mb5.3
VNA1 Neumayer--Stat 58.24 161 *e*P P 16 03 53.2 +1.6
CPCT Cooper Cave 60.48 343 *e*P P 16 04 06.0 -1.3
TKL Tuckaleechee C 60.48 344 *e*P P 16 04 05.8 -1.5
JCT Junction City 61.93 328 *e*P P 16 04 16.0 -1.2
comp=N,8.7nm,0.8s,mb4.6
MIAR Mount Ida 62.63 335 *e*P P 16 04 19.3 -2.5
comp=N,16nm,1.2s,mb4.7
628A Black Gap, Mar 62.73 324 ⇑P P 16 04 21.9 -0.6
baz=63,SNR=5.9
627A Terlingua Ranc 62.97 324 ⇑P P 16 04 23.3 -0.9
baz=63
TXAR Lajitas Array 63.03 324 P P 16 04 22.4 -2.2
comp=N,0.8nm,0.7s,mb3.6,baz=151,slow=8.0,SNR=12
528A Cox Ranch, San 63.20 325 ⇓P P 16 04 24.8 -0.9
baz=63
626A Big Bend Ranch 63.45 324 ⇑P P 16 04 26.8 -0.5
baz=64,SNR=7.0
527A Woodward Ranch 63.63 324 ⇑P P 16 04 27.6 -0.9
baz=64
526A Mary Lane Ranc 63.82 324 ⇓P P 16 04 29.1 -0.6
baz=64,SNR=6.3
427A Hayter Ranch, 64.07 325 ⇑P P 16 04 30.6 -0.8
baz=64
426A McDonald Obser 64.26 324 ⇓P P 16 04 32.0 -0.6
baz=64,SNR=5.9
FVM French Village 64.58 339 *e*P P 16 04 32.4 -2.1
comp=N,12nm,1.4s,mb4.5
ACSO Alum Creek Sta 64.65 346 *e*P P 16 04 33.1 -1.8
comp=N,8.1nm,0.7s,mb4.7
326A Caldwell Ranch 64.74 325 ⇑P P 16 04 34.8 -0.9
baz=65
425A Indio Mountain 64.87 324 ⇓P P 16 04 35.9 -0.6
baz=65,SNR=9.5
CCM Cathedral Cave 64.92 339 *e*P P 16 04 34.8 -1.8
comp=N,21nm,0.6s,mb5.2
325A Bean Ranch, Si 65.31 324 ⇑P P 16 04 38.8 -0.6
baz=66,SNR=16
BINY Binghamton 65.36 352 *e*P P 16 04 39.0 -0.5
comp=N,28nm,0.9s,mb5.1
226A Malaga, Loving 65.39 325 ⇑P P 16 04 39.5 -0.4
baz=66
324A Moseley Ranch, 65.65 324 ⇑P P 16 04 40.1 -1.5
baz=66,SNR=6.4
MNTX Cornudas Mount 65.79 324 *e*P P 16 04 40.5 -1.9
comp=N,2.8nm,1.0s,mb4.0
126A Clayton Basin, 65.81 326 ⇓P P 16 04 41.9 -0.6
baz=66
225A Deer Hill, Car 65.81 325 ⇓P P 16 04 41.9 -0.6
baz=66
Z27A Tatum 65.92 327 ⇑P P 16 04 42.1 -1.1
baz=66,SNR=8.1
125A Gardner Draw, 66.15 325 ⇑P P 16 04 43.6 -1.1
baz=66
224A Cornudas Mount 66.16 324 ⇑P P 16 04 43.9 -0.8
baz=66,SNR=9.1
MSTX Muleshoe 66.23 328 ⇑P P 16 04 44.1 -1.0
baz=66,SNR=10
Z26A Caprock 66.28 326 ⇓P P 16 04 44.9 -0.6
baz=66,SNR=6.7
Y27A Causey 66.35 327 ⇑P P 16 04 44.7 -1.3
baz=67
124A Stringfield Ra 66.60 325 ⇓P P 16 04 46.7 -0.8
baz=67,SNR=5.8
Z25A Roswell 66.67 326 ⇓P P 16 04 47.2 -0.7
baz=67
LIC Lamto 66.72 72 *e*P P 16 04 48.3 -0.5
comp=N,92nm,1.6s,mb5.4
TIC Toumodi 66.93 72 *e*P P 16 04 48.3 -1.8
comp=N,6.1nm,0.2s,mb5.1
KIC Kosan Boka 67.04 72 *e*P P 16 04 49.8 -1.0
comp=N,28nm,0.8s,mb5.2
Z24A Sheeppen Canyo 67.04 325 ⇑P P 16 04 50.0 -0.4
baz=67
DBIC Dimbokro 67.08 72 P P 16 04 50.0 -1.0
comp=N,15nm,0.9s,mb4.8,baz=215,slow=4.0,SNR=10.0
DBIC Dimbokro 67.08 72 *e*P P 16 04 49.9 -1.2
Y25A Mesa, Roswell 67.16 326 ⇓P P 16 04 49.8 -1.2
baz=67,SNR=5.4
X26A CR and CF Fran 67.21 327 ⇓P P 16 04 50.7 -0.6
baz=67,SNR=9.7
W27A Bowe Ranch, En 67.25 328 ⇓P P 16 04 50.7 -0.9
baz=68
Z23A Rita Site, Whi 67.45 325 ⇓P P 16 04 53.1 +0.2
baz=68
LONY Lake Ozonia 67.59 354 *e*P P 16 04 52.9 -0.7
comp=N,20nm,1.0s,mb4.8
W26A Owens Ranch, T 67.61 328 ⇑P P 16 04 53.7 -0.1
baz=68
X25A Clemmons Ranch 67.62 327 ⇓P P 16 04 53.0 -0.9
baz=68
220A Playas Peak, P 67.69 322 ⇑P P 16 04 54.4 0.0
baz=68
121A Cookes Peak, D 67.74 323 ⇓P P 16 04 55.2 +0.4
baz=68
Z22A Elephant Butte 67.84 324 ⇑P P 16 04 55.6 +0.3
baz=68,SNR=14
Y23A Lovelace Mesa, 67.87 325 ⇑P P 16 04 55.8 +0.3
baz=68
W25A X Bar L Ranch, 68.06 327 ⇑P P 16 04 56.0 -0.6
baz=68,SNR=7.0
219A White Tail Can 68.17 322 ⇓P P 16 04 57.4 0.0
baz=68
V26A Tequesquite Ra 68.19 328 ⇓P P 16 04 56.8 -0.6
baz=68,SNR=6.1
318A Bisbee 68.19 321 ⇑P P 16 04 57.7 +0.1
baz=68
120A U Bar Ranch, L 68.22 322 ⇓P P 16 04 58.1 +0.3
baz=68
218A Dragoon 68.61 321 ⇑P P 16 05 00.3 +0.1
baz=69
Z20A Nine Sixteen R 68.62 323 ⇑P P 16 05 00.4 +0.2
baz=69
V25A Rancho No Teng 68.63 327 ⇓P P 16 04 59.7 -0.5
baz=69,SNR=6.7
U26A Atchley Ranch, 68.64 328 ⇑P P 16 04 59.9 -0.4
baz=69,SNR=8.2
Y21A Point of Rocks 68.80 324 ⇓P P 16 05 02.1 +0.8
baz=69,SNR=5.3
CBKS Cedar Bluff 68.81 333 *e*P P 16 05 00.5 -0.8
comp=N,7.1nm,0.7s,mb4.5
V24A Rampart Ranch, 68.87 327 ⇓P P 16 05 01.4 -0.2
baz=69
217A Green Valley 68.91 320 ⇑P P 16 05 02.3 +0.3
baz=69
U25A Circle Dot Ran 68.97 328 ⇑P P 16 05 02.2 -0.1
baz=69,SNR=5.7
SCIA State Center 69.04 339 *e*P P 16 05 01.1 -1.5
comp=N,11nm,0.5s,mb4.8
118A Homack Ranch, 69.05 322 ⇓P P 16 05 03.1 +0.2
baz=69
Y20A Horse Springs, 69.10 324 ⇓P P 16 05 03.6 +0.4
baz=69
Z19A T-Link Ranch, 69.13 323 ⇓P P 16 05 03.7 +0.3
baz=69
X21A Alamocita Cree 69.19 324 ⇑P P 16 05 04.0 +0.3
baz=69,SNR=7.0
117A Oracle 69.44 321 ⇑P P 16 05 05.6 +0.3
baz=70
216A Three Points, 69.45 320 ⇓P P 16 05 05.5 +0.2
baz=70
T25A Trinidad 69.56 328 ⇑P P 16 05 06.3 +0.4
baz=70
Y19A Nutrioso 69.62 323 ⇑P P 16 05 07.3 +1.0
baz=70
W21A San Fidel 69.62 325 ⇑P P 16 05 06.7 +0.4
baz=70
V22A San Miguel Ran 69.85 326 ⇓P P 16 05 08.0 +0.3
baz=70
S25A Robets Cordova 69.98 329 ⇓P P 16 05 08.7 +0.2
baz=70,SNR=8.8
W20A Ramah 70.08 324 ⇓P P 16 05 09.7 +0.6
baz=70
V21A Milan 70.14 325 ⇑P P 16 05 10.3 +0.8
baz=70
U22A Llaves 70.18 326 ⇑P P 16 05 10.4 +0.8
baz=70
Y17A Roosevelt 70.32 322 ⇑P P 16 05 11.1 +0.5
baz=70
S24A Houchin Ranch, 70.34 328 ⇑P P 16 05 11.5 +0.9
baz=71
U21A Nageezi 70.63 326 ⇓P P 16 05 13.1 +0.7
baz=71
T22A Edith 70.69 327 ⇓P P 16 05 13.2 +0.4
baz=71
R24A Sanders Place, 70.76 329 ⇓P P 16 05 13.6 +0.4
baz=71
X17A Forest Lakes 70.77 322 ⇑P P 16 05 13.9 +0.6
baz=71
Y16A Circle Bar Ran 70.82 322 ⇑P P 16 05 14.4 +0.8
baz=71
V19A Window Rock 70.82 324 ⇑P P 16 05 14.2 +0.6
baz=71
U20A Newcomb 71.04 325 ⇓P P 16 05 15.3 +0.4
baz=71
X16A Lo Alia Camp, P 71.19 322 ⇓P P 16 05 16.7 +0.9
baz=71
S22A 4UR Ranch, Cre 71.22 327 ⇑P P 16 05 16.5 +0.5
baz=72
P25A Willow Gulch B 71.34 330 ⇑P P 16 05 17.0 +0.4
baz=72
Q24A Divide 71.36 329 ⇓P P 16 05 16.9 +0.1
baz=72,SNR=5.6
Y15A Casa Rosa Ranc 71.36 321 ⇑P P 16 05 16.8 -0.1
baz=72
S21A Coal Bank Pass 71.64 327 ⇓P P 16 05 18.8 +0.3
baz=72
T19A Beclabito 71.65 325 ⇓P P 16 05 18.6 +0.1
baz=72,SNR=5.7
MVCO Mesa Verde 71.66 326 ⇓P P 16 05 18.8 +0.2
baz=72
X15A Humboldt 71.69 322 ⇓P P 16 05 19.5 +0.6
baz=72
W16A Flagstaff 71.73 322 ⇓P P 16 05 19.8 +0.8
baz=72
Y14A Wickenburg 71.74 321 ⇑P P 16 05 19.2 +0.1
baz=72
ECSD EROS Data Cent 71.82 338 *e*P P 16 05 17.6 -1.7
comp=N,11nm,1.2s,mb4.5
WUAZ Wupatki 71.95 323 ⇓P P 16 05 21.2 +0.9
baz=72
S20A Disappointment 72.06 326 ⇓P P 16 05 21.4 +0.4
baz=72
R21A Cimarron 72.06 327 ⇓P P 16 05 21.6 +0.7
baz=72
T18A Mexican Hat 72.33 325 ⇑P P 16 05 22.8 +0.2
baz=72,SNR=7.9
R20A Redvale 72.34 327 ⇑P P 16 05 23.1 +0.4
baz=73
U17A Shonto 72.35 324 ⇓P P 16 05 23.3 +0.6
baz=73
S19A Harvey Farm, M 72.40 326 ⇓P P 16 05 23.3 +0.3
baz=73
PV01 Paradox Valley 72.40 326 P P 16 05 21.8 -1.2
comp=N,236nm,0.6s
V15A Kaibab Nationa 72.61 323 ⇓P P 16 05 25.0 +0.8
baz=73
X13A Yucca 72.69 321 ⇓P P 16 05 24.8 +0.1
baz=73
W14A Seligman 72.69 322 ⇓P P 16 05 25.4 +0.7
baz=73
T17A Navajo Res., N 72.72 324 ⇓P P 16 05 25.6 +0.7
baz=73,SNR=5.2
S18A Hurst Farm, Bl 72.80 325 ⇓P P 16 05 25.8 +0.5
baz=73,SNR=8.6
R19A Curley Farm, L 72.87 326 ⇑P P 16 05 26.0 +0.2
baz=73
O22A Kremmling 72.97 329 ⇓P P 16 05 26.4 +0.2
baz=73,SNR=5.1
BC3 Big Chuckawall 73.00 319 ⇑P P 16 05 26.8 +0.1
baz=73
V14A Boquillas Ranc 73.01 322 ⇓P P 16 05 27.5 +0.9
baz=73
MONP Monument Peak 73.08 318 ⇓P P 16 05 27.6 +0.5
baz=73
U15A North Rim 73.12 323 ⇑P P 16 05 28.0 +0.8
baz=73,SNR=6.2
R18A Canyonlands Na 73.27 326 ⇑P P 16 05 28.2 +0.1
baz=74
Q19A Hogan Spring (73.38 327 ⇑P P 16 05 28.9 +0.2
baz=74
N22A Wattenberg Ran 73.43 329 ⇓P P 16 05 29.5 +0.5
baz=74,SNR=5.7
PFO Pinyon Flat Ob 73.58 318 ⇑P P 16 05 30.6 +0.5
baz=74
U14A Mt Trumbull 73.61 322 ⇑P P 16 05 30.8 +0.7
baz=74,SNR=6.0
R17A Hanksville Air 73.72 325 ⇓P P 16 05 31.3 +0.6
baz=74,SNR=6.1
P19A Cripple Cowboy 73.75 327 ⇑P P 16 05 31.4 +0.6
baz=74
O20A White River Ci 73.77 328 ⇑P P 16 05 31.5 +0.6
baz=74
GMRC Granite Mounta 73.90 320 ⇓P P 16 05 32.7 +0.9
baz=74
Q18A Rafter H Ranch 73.93 326 ⇑P P 16 05 31.9 0.0
baz=74
T14A Hurricane 74.02 323 ⇑P P 16 05 33.2 +0.8
baz=74
V12A Nelson 74.08 321 ⇑P P 16 05 33.5 +0.7
baz=74
SRU San Rafael 74.14 326 ⇑P P 16 05 33.6 +0.5
baz=74
SRU San Rafael 74.14 326 *e*P P 16 05 32.5 -0.6
comp=N,5.9nm,0.7s,mb4.4
N20A Spence Gulch, 74.31 328 ⇑P P 16 05 34.3 +0.2
baz=75
O19A Miners Draw (B 74.33 328 ⇑P P 16 05 34.4 +0.2
baz=75
P18A Preston Nutter 74.38 326 ⇑P P 16 05 34.9 +0.3
baz=75,SNR=10
U12A Valley of Fire 74.39 322 ⇑P P 16 05 35.2 +0.6
baz=75
SYO Syowa Base 74.42 159 ⇑*e*P P 16 05 32.6 -1.8
SYO Syowa Base 74.42 159 ⇑*e*PcP PcP 16 05 44.8 -3.3
M21A Separation Pea 74.48 329 ⇑P P 16 05 35.1 +0.1
baz=75
CCUT Cedar City 74.52 323 *e*P P 16 05 36.5 +1.2
comp=N,5.1nm,0.8s,mb4.2
P17A Butcher Ranch, 74.52 326 ⇓P P 16 05 35.5 +0.2
baz=75
MSU Marysvale 74.57 324 *e*P P 16 05 36.1 +0.5
comp=N,3.7nm,0.8s,mb4.1
L21A Rawlins 74.77 330 ⇓P P 16 05 36.1 -0.6
baz=75
M20A Sweetwater, Wa 74.78 329 ⇑P P 16 05 36.8 +0.1
baz=75
S13A Holt Ranch, En 74.82 323 ⇑P P 16 05 37.6 +0.5
baz=75
O17A Robinson Place 75.06 326 ⇑P P 16 05 38.7 +0.3
baz=75,SNR=6.6
L20A Wamsutter 75.25 329 ⇑P P 16 05 39.7 +0.2
baz=76
Q14A Sevier Lake (B 75.51 324 ⇑P P 16 05 41.4 +0.4
baz=76,SNR=6.2
N17A Moffit Pass 75.66 327 ⇑P P 16 05 42.3 +0.5
baz=76,SNR=5.1
K20A Yellowstone Ra 75.76 330 ⇓P P 16 05 41.6 -0.7
baz=76,SNR=5.2
R12A Pony Springs, 75.77 323 ⇓P P 16 05 43.3 +0.8
baz=76
FURC Furnace Creek, 75.77 320 ⇓P P 16 05 42.9 +0.4
baz=76
L19A Farson 75.81 329 ⇑P P 16 05 42.8 +0.2
baz=76
P14A Drum Mountains 75.83 325 ⇓P P 16 05 43.3 +0.5
baz=76,SNR=5.9
MPMC Manual Prospec 75.86 320 ⇓P P 16 05 43.2 +0.1
baz=76
Q13A Wheeler Ranch, 75.89 324 ⇑P P 16 05 43.5 +0.4
baz=76
K19A Absolon Red Bu 76.12 329 ⇓P P 16 05 44.0 -0.4
baz=76
P13A Bates Ranch, G 76.24 324 ⇑P P 16 05 45.8 +0.7
baz=76
R11A Troy Canyon, C 76.33 322 ⇑P P 16 05 46.1 +0.4
baz=76
PDAR Pinedale Array 76.42 329 P P 16 05 45.5 -0.6
comp=N,1.9nm,0.7s,mb3.8,baz=129,slow=8.6,SNR=16
PKM Peak Mountain 76.52 317 ⇑P P 16 05 47.6 +0.8
baz=77
HWUT Hardware Ranch 76.53 327 *e*P P 16 05 46.2 -0.4
comp=N,3.7nm,0.8s,mb4.1
K18A Toltan Ranch, 76.55 329 ⇓P P 16 05 47.2 +0.5
baz=77
S10A Tonopah Range, 76.61 321 ⇓P P 16 05 47.8 +0.6
baz=77
R10A Warm Springs 76.69 322 ⇑P P 16 05 48.6 +0.9
baz=77
P12A McGill 76.74 324 ⇑P P 16 05 48.6 +0.7
baz=77
K17A Gardner Place, 77.06 328 ⇑P P 16 05 50.0 +0.4
baz=77
O12A Currie 77.21 324 ⇓P P 16 05 51.1 +0.5
baz=77
L15A Malad City 77.23 327 ⇑P P 16 05 50.5 -0.1
baz=78,SNR=5.6
ULM Lac du Bonnet 77.32 341 P P 16 05 48.9 -2.0
comp=N,4.0nm,0.5s,mb4.3,baz=112,slow=1.5,SNR=3.3
M14A Sheep Mountain 77.36 326 ⇑P P 16 05 51.5 +0.1
baz=78
SCHQ Schefferville 77.42 360 P P 16 05 50.9 -0.4
comp=N,5.3nm,0.7s,mb4.3,baz=182,slow=5.7,SNR=5.4
K16A Soda Springs 77.45 328 ⇑P P 16 05 52.5 +0.7
baz=78
LOHW Long Hollow 77.56 329 *e*P P 16 05 52.4 0.0
comp=N,3.7nm,0.7s,mb4.1
TSUM Tsumeb 77.57 106 *e*P P 16 05 53.0 -0.1
TPAW Teton Pass 77.63 329 *e*P P 16 05 52.6 -0.2
comp=N,14nm,1.3s,mb4.4
L14A Malta 77.69 326 ⇑P P 16 05 53.0 -0.1
baz=78
I17A Pilgrim Ck. 77.77 329 ⇑P P 16 05 53.9 +0.4
baz=78
K15A Arbon 77.81 327 ⇑P P 16 05 54.0 +0.3
baz=78
IMW Indian Meadow 77.93 329 *e*P P 16 05 54.5 0.0
comp=N,11nm,1.0s,mb4.5
NVAR Mina Array Bea 77.94 321 P P 16 05 53.7 -0.9
comp=N,0.8nm,0.8s,mb3.4,baz=155,slow=6.9,SNR=6.0
NVAR Mina Array Bea 77.94 321 P P 16 05 53.7 -0.9
RLMT Red Lodge 78.08 331 ⇑P P 16 05 55.4 +0.1
baz=78
L13A Double Diamond 78.09 326 ⇓P P 16 05 55.6 +0.3
baz=78
M12A Wells 78.12 325 ⇑P P 16 05 55.8 +0.3
baz=78
I16A Newdale 78.18 329 ⇑P P 16 05 56.0 +0.2
baz=78
J15A Blackfoot 78.28 328 ⇓P P 16 05 56.8 +0.4
baz=78
G18A Lazy EL Ranch, 78.37 331 ⇓P P 16 05 56.8 0.0
baz=79
M11A Holland Ranch, 78.59 324 ⇑P P 16 05 58.8 +0.7
baz=79
DGMT Dagmar 78.63 336 ⇓P P 16 05 57.9 -0.3
baz=79
H16A Russell Place, 78.68 329 ⇑P P 16 05 59.0 +0.5
baz=79
GCMT Greycliff 78.78 331 *e*P P 16 05 58.8 -0.3
comp=N,6.4nm,0.9s,mb4.2
F18A Big Timber 78.89 331 ⇑P P 16 05 59.6 0.0
baz=79,SNR=14
K12A Draper Farm, C 78.98 326 ⇑P P 16 06 01.2 +1.0
baz=79
L11A Cat Creek Ranc 79.09 325 ⇑P P 16 06 01.2 +0.4
baz=79
J13A Cove Ranch, Pi 79.15 327 ⇓P P 16 06 02.0 +0.9
baz=79
I14A Mackay 79.17 328 ⇑P P 16 06 02.0 +0.8
baz=79
F17A Fitzpatrick Pl 79.31 330 ⇑P P 16 06 02.3 +0.4
baz=80
G16A Moss Hill, Enn 79.34 329 ⇓P P 16 06 02.2 +0.1
baz=80
HLID Hailey 79.39 327 ⇑P P 16 06 03.3 +0.9
baz=80
HLID Hailey 79.39 327 *e*P P 16 06 03.0 +0.5
comp=N,18nm,1.2s,mb4.6
L10A Juniper Basin 79.41 325 ⇓P P 16 06 03.1 +0.5
baz=80
E18A Harlowton 79.48 331 ⇑P P 16 06 02.7 -0.1
baz=80
I13A Wildhorse Cree 79.50 327 ⇑P P 16 06 03.9 +0.9
baz=80
J12A Stokes Ranch, 79.52 326 ⇓P P 16 06 03.8 +0.7
baz=80
MCMT McKenzie Canyo 79.54 328 *e*P P 16 06 03.8 +0.6
comp=N,4.3nm,0.8s,mb4.1
BOZ Bozeman (W) 79.57 330 ⇑P P 16 06 03.3 0.0
baz=80
G15A Dillon 79.61 329 ⇓P P 16 06 04.0 +0.4
baz=80
H14A Leadore 79.63 328 ⇓P P 16 06 04.5 +0.8
baz=80
K11A Parker Ranch, 79.66 325 ⇓P P 16 06 03.9 0.0
baz=80
DLMT Dillon 79.81 329 *e*P P 16 06 04.7 0.0
comp=N,14nm,1.4s,mb4.4
E17A Martinsdale 79.83 331 ⇑P P 16 06 04.8 +0.1
baz=80
D18A Linhart Farms, 79.92 332 ⇓P P 16 06 05.1 0.0
baz=80
I12A Atlanta 79.92 327 ⇓P P 16 06 05.8 +0.5
baz=80
MFID Camas Ranch 80.01 326 ⇓P P 16 06 06.0 +0.3
baz=80
H13A Challis 80.03 328 ⇑P P 16 06 06.5 +0.6
baz=80
K10A MacKenzie Ranc 80.11 325 ⇑P P 16 06 06.6 +0.3
baz=80
F15A Butte 80.11 329 ⇓P P 16 06 06.6 +0.4
baz=80
D17A Six Diamond Ra 80.27 331 ⇑P P 16 06 06.9 -0.1
baz=80
H12A Diamond D Ranc 80.32 327 ⇓P P 16 06 07.8 +0.4
baz=80
G13A Cobalt 80.40 328 ⇑P P 16 06 08.6 +0.8
baz=81
F14A Wisdom 80.51 329 ⇓P P 16 06 09.0 +0.6
baz=81
EGMT Eagleton 80.53 332 ⇓P P 16 06 08.2 -0.2
baz=81
D16A Dana Ranch, Ca 80.57 331 ⇓P P 16 06 09.1 +0.5
baz=81
E15A Deer Lodge 80.62 330 ⇑P P 16 06 09.0 +0.1
baz=81
B18A Beardsley Farm 80.83 332 ⇑P P 16 06 10.0 0.0
baz=81
BOSA Boshof 80.88 117 P P 16 06 10.4 -0.5
comp=N,2.5nm,0.4s,mb4.2,baz=270,slow=6.0,SNR=14
BOSA Boshof 80.88 117 *e*P P 16 06 10.6 -0.4
comp=N,1.7nm,0.4s,mb4.0
F13A Darby 80.95 328 ⇓P P 16 06 11.0 +0.3
baz=81
E14A Clinton 81.01 329 ⇓P P 16 06 11.3 +0.3
baz=81

H11A Donnelly 81.01 327 ⇓P P 16 06 11.0 -0.1
baz=81
B17A L&G Farms, Che 81.19 332 ⇓P P 16 06 11.5 -0.4
baz=81
C16A Fuhringer Ranc 81.23 331 ⇑P P 16 06 11.8 -0.4
baz=82
A18A Metzger Ranch, 81.26 333 ⇓P P 16 06 11.8 -0.5
baz=82
H10A Noah's Angus R 81.31 326 ⇓P P 16 06 12.6 0.0
baz=82
E13A Victor 81.36 329 ⇓P P 16 06 13.1 +0.3
baz=82
J08A Circle Bar Ran 81.36 325 ⇑P P 16 06 13.1 +0.2
baz=82
F12A Elk City 81.38 328 ⇓P P 16 06 12.9 -0.1
baz=82
I09A Lost Marbles R 81.39 325 ⇓P P 16 06 13.4 +0.3
baz=82
D14A Greenough 81.50 330 ⇑P P 16 06 13.3 -0.2
baz=82
C15A Salmond Ranch, 81.60 331 ⇓P P 16 06 14.2 +0.1
baz=82
G11A Walters Elk Ra 81.63 327 ⇑P P 16 06 14.5 +0.2
baz=82
BMO Blue Mountains 81.77 326 eP P 16 06 14.9 -0.2
comp=N,7.2nm,1.3s,mb4.1
F11A Grangeville 81.92 328 ⇓P P 16 06 15.7 -0.1
baz=82
D13A Huson 81.96 329 ⇑P P 16 06 16.1 +0.1
baz=82
B15A Bradely Ranch, 81.98 331 ⇑P P 16 06 15.4 -0.6
baz=82
G10A Bishop Farm, J 81.98 327 ⇑P P 16 06 16.7 +0.5
baz=82
E12A Beaver Dam Sad 82.00 328 ⇓P P 16 06 16.1 -0.1
baz=82
SWMT Swartz Lake 82.05 330 eP P 16 06 15.5 -0.9
C14A Swan Lake 82.12 330 ⇑P P 16 06 16.8 0.0
baz=82
H08A Prairie City 82.25 325 ⇑P P 16 06 17.8 +0.2
baz=82
K05A Summer Lake 82.26 323 ⇑P P 16 06 18.2 +0.6
baz=82
G09A Cove 82.31 326 ⇓P P 16 06 17.8 -0.1
baz=82
MAW Mawson 82.36 163 P P 16 06 16.6 -1.3
comp=N,1.9nm,0.7s,mb3.8,baz=250,slow=6.5,SNR=5.9
F10A Beach Ranch, E 82.51 327 ⇓P P 16 06 19.7 +0.8
baz=83
BSMT Bassoo Peak 82.66 330 eP P 16 06 19.4 -0.2
comp=N,2.5nm,0.7s,mb4.0
A14A Double T Ranch 82.85 331 ⇑P P 16 06 19.8 -0.7
baz=83
C12B Naegeli Ranch, 82.88 329 ⇓P P 16 06 19.8 -1.0
baz=83
B13A Whitefish 82.89 330 ⇑P P 16 06 20.3 -0.5
baz=83
G08A Pilot Rock 82.93 326 ⇑P P 16 06 20.7 -0.3
baz=83
C11A Tepee Creek (N 83.34 329 ⇓P P 16 06 22.9 -0.2
baz=84
TAM Tamanrasset 83.54 62 eP P 16 06 25.0 +0.3
comp=N,23nm,1.1s,mb4.8
OD2 Odessa Site #2 84.23 327 eP P 16 06 26.7 -0.9
comp=N,22nm,1.3s,mb4.7
ETW Entiat 85.19 327 eP P 16 06 31.8 -0.6
comp=N,9.4nm,0.7s,mb4.6
ESDC Sonseca Array 85.33 43 P P 16 06 32.1 -1.2
comp=N,0.7nm,0.3s,mb3.8,baz=232,slow=5.5,SNR=11
LSZ Lusaka 88.42 106 eP P 16 06 49.8 +1.0
comp=N,17nm,1.3s,mb4.7
KEST Kesra 92.43 52 P P 16 07 07.2 +0.2
comp=N,1.3nm,0.8s,mb4.0,baz=218,slow=2.9,SNR=4.1
YKA Yellowknife Ar 93.24 340 P P 16 07 08.8 -1.2
comp=N,2.4nm,0.7s,mb4.5,baz=132,slow=4.7,SNR=5.6
ASAR Alice Springs 129.61 205 PKP PKPdf 16 13 03.5 -1.2
comp=N,0.5nm,0.3s,baz=126,slow=1.6,SNR=28
ASAR SKPbc 16 16 05.4
comp=N,0.8nm,0.9s,baz=136,slow=3.8,SNR=4.7
WRA Warramunga Arr 132.78 207 PKP PKPdf 16 13 09.4 -1.4
comp=N,0.5nm,0.3s,baz=150,slow=2.0,SNR=5.3
WRA SKPbc SKPbc 16 16 17.1 -4.2
comp=N,1.9nm,0.8s,baz=156,slow=3.7,SNR=8.1
MKAR Makanchi Array 145.43 39 PKPbc PKPbc 16 13 32.2 -1.1
comp=N,13nm,0.7s,baz=339,slow=2.4,SNR=7.3
MKAR Makanchi Array 145.43 39 PKPbc PKPbc 16 13 32.2 -1.1
WMQ Urumqi 150.26 39 ePKPbc PKPbc 16 13 40.0 -6.3
KSRS Korea Array 160.87 323 PKPab PKPab 16 14 38.1 -0.5
comp=N,0.6nm,0.6s,baz=57,slow=4.6,SNR=5.4
HHC Hu-ho-hao-te 162.04 5 ePKP PKPdf 16 13 54.2 -2.2
HHC PP PP 16 18 29.3 +2.3
HHC SS SS 16 38 32.4 +1.8
HHC AMB AMB
comp=Z,66nm,9.5s
LZH Lanzhou 164.45 30 PKP PKPdf 16 14 01.0 +2.2
NJ2 Nanjing 169.70 333 ePKP PKPdf 16 14 07.5 +4.7
KMI Kunming 169.98 75 PKP PKPdf 16 14 00.9 -2.3
GYA Guiyang 172.90 59 ePKP PKPdf 16 14 02.0 -2.6
GYA pPKP pPKPdf 16 14 54.2 +1.9
GYA sPKP 16 15 14.0
GYA PKPab PKPab 16 15 33.0 +0.8
GYA PKS 16 17 34.8
GYA PP PP 16 19 25.0 +0.9
GYA AMB AMB
comp=Z,70nm,7.0s

ATH 08 16:02:54.6, 38.40N×21.42E, h32km±1km, MD2.8/6
ISCJB 08 16:02:55.6±0.5, 38.41N±0.04×21.45E±0.03, h30km±4km, Error ellipse: s-maj=7.0km s-min=4.1km az=176.0
CSEM 08 16:02:55.2±0.2, 38.41N×21.45E, h30km, MD2.8, Error ellipse: s-maj=5.6km s-min=3.3km az=179.0
THE 08 16:02:56.0, 38.42N×21.46E, h16km±2km, ML2.5/6, Error ellipse: s-maj=3.0km s-min=0.6km az=174.0
ISC 08 16:02:55.6±0.5, 38.42N±0.04×21.45E±0.03, h30km±4km, n25, σ0°79/50, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
UPR University Cam 0.30 117 ePB Pb 16 03 02.4 -0.6
UPR eSB Sb 16 03 08.5 +0.5
UPR University Cam 0.30 117 ePb Pb 16 03 02.4 -0.6
UPR eSb Sb 16 03 08.5 +0.5
EFP Efpalio 0.36 89 ePB Pb 16 03 03.0 -0.8
EFP eSB Sb 16 03 09.6 +0.2
EFP Efpalio 0.36 89 P Pb 16 03 03.1 -0.7
EFP S Sb 16 03 09.5 +0.1
EFP Efpalio 0.36 89 P Pb 16 03 03.1 -0.7
EFP S Sb 16 03 09.5 +0.1
RLS Riolos of Patr 0.36 178 ePB Pb 16 03 03.1 -0.8
RLS eSB Sb 16 03 09.4 -0.1
RLS Riolos of Patr 0.36 178 ePb Pb 16 03 03.1 -0.8
RLS eSb Sb 16 03 09.4 -0.1
LAKA Lakka 0.45 113 P Pb 16 03 04.4 -0.8
LAKA S Sb 16 03 11.3 -0.5
LAKA Lakka 0.45 113 P Pb 16 03 04.4 -0.8
LAKA S Sb 16 03 11.3 -0.5
TRIZ Trizonia 0.49 96 P Pb 16 03 05.2 -0.7
TRIZ S Sb 16 03 13.3 +0.4
TRIZ Trizonia 0.49 96 P Pb 16 03 05.2 -0.7
TRIZ S Sb 16 03 13.3 +0.4
KALE Kalithea 0.54 93 P Pb 16 03 05.9 -0.8
KALE S Sb 16 03 15.0 +0.8
KALE Kalithea 0.54 93 P Pb 16 03 05.9 -0.8
KALE S Sb 16 03 15.0 +0.8
EVR Evrytania 0.57 29 ePN Pn 16 03 07.3 -0.4
EVR eSN Sn 16 03 16.1 0.0
EVR Evrytania 0.57 29 ePn Pn 16 03 07.3 -0.4
EVR eSn Sn 16 03 16.1 0.0
KFL Anninata 0.60 240 P Pb 16 03 07.5 -0.2
KFL S Sb 16 03 17.6 +1.6
KFL Anninata 0.60 240 P Pb 16 03 07.5 -0.2
KFL S Sb 16 03 17.6 +1.6
VLS Valsamata 0.72 251 ePN Pn 16 03 08.4 -1.3
VLS eSN Sn 16 03 19.8 +0.1
VLS Valsamata 0.72 251 ePn Pn 16 03 08.4 -1.3
VLS eSn Sn 16 03 19.8 +0.1
LKD2 Lefkada island 0.72 301 P Pb 16 03 09.1 -0.6
LKD2 S Sb 16 03 20.6 +1.3
LKD2 Lefkada island 0.72 301 P Pb 16 03 09.1 -0.6
LKD2 S Sb 16 03 20.6 +1.3
DSF Desfina 0.85 90 P Pn 16 03 12.2 +0.7
DSF S Sb 16 03 24.1 +1.3
DSF Desfina 0.85 90 P Pn 16 03 12.2 +0.7
DSF S Sb 16 03 24.1 +1.3
GUR Goura 0.85 124 ePN Pn 16 03 11.2 -0.4
GUR eSN Sn 16 03 24.2 +1.2
GUR Goura 0.85 124 ePn Pn 16 03 11.2 -0.4
GUR eSn Sn 16 03 24.3 +1.3

ISCJB 08 16:04:51.4±0.4, 23.84N±0.02×122.08E±0.02, h25km±3km, Error ellipse: s-maj=3.9km s-min=2.4km az=139.8
TAP 08 16:04:52.4, 23.88N×122.02E, h37km, ML3.1, C
JMA 08 16:04:52.7±0.4, 23.87N×122.10E, h62km
ISC 08 16:04:51.6±0.5, 23.85N±0.02×122.07E±0.02, h22km±4km, n45, σ0°68/86, 3C, Taiwan region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
HWA Hwalien 0.44 287 eP Pb 16 05 01.3 +0.6
baz=278
HWA eS Sb 16 05 07.5 +0.5
baz=278
TWD Chiawan 0.49 298 ⇑iP Pb 16 05 01.9 +0.4
baz=292
TWD eS Sb 16 05 08.9 +0.6
baz=292
ESL Shilin 0.58 267 ⇑iP Pb 16 05 03.1 0.0
baz=256
ESL S Sb 16 05 11.2 +0.3
baz=256
ENA Nanau 0.65 333 ⇑iP Pb 16 05 04.5 +0.2
baz=325
ENA eS Sb 16 05 13.7 +0.8
baz=325
EHY Hungye 0.77 244 P Pb 16 05 06.0 -0.1
baz=253
EHY eS Sb 16 05 16.3 +0.1
baz=253
TWC Suao 0.78 345 iP Pb 16 05 06.7 +0.2
baz=348
TWC S Sb 16 05 17.1 +0.4
baz=348
WHF Hehuan Shan 0.79 292 iP Pb 16 05 06.3 -0.3
baz=283
WHF eS Sb 16 05 17.1 +0.1
baz=283
TWF1 Yuli 0.86 235 P Pb 16 05 07.7 -0.2
baz=245
TWF1 eS Sb 16 05 19.0 0.0
baz=245
NNS Nan Shan 0.87 313 P Pb 16 05 07.8 -0.1
baz=313
NNS eS Sb 16 05 19.1 0.0
baz=313
TWT Tachien 0.91 296 P Pb 16 05 08.7 0.0
baz=295
TWT S Sb 16 05 20.8 +0.5
baz=295
ENTT Nioudou 0.91 330 eP Pb 16 05 08.4 -0.3
baz=331
ENTT S Sb 16 05 20.3 -0.1
baz=331
TWE Neicheng 0.94 337 P Pb 16 05 09.1 -0.2
baz=339
TWE S Sb 16 05 21.4 +0.1
baz=339
NSK Sanguang 1.05 322 eP Pn 16 05 10.6 -0.4
baz=312
NSK eS Sb 16 05 23.2 -1.2
baz=312
YOJ Yonaguni jima 1.05 54 P Pn 16 05 11.3 +0.2
YOJ eS Sb 16 05 24.7 +0.2
SMLT Sun Moon Lake 1.07 272 iP Pn 16 05 10.8 -0.5
baz=270
SMLT eS Sb 16 05 24.1 -0.8
baz=270
YUS Yu-Shan 1.08 251 P Pn 16 05 11.6 +0.1
baz=248
YUS eS Sb 16 05 24.8 -0.6
baz=248
TYC Yuchr 1.11 273 eP Pn 16 05 11.4 -0.4
baz=271
TYC eS Sb 16 05 25.4 -0.7
baz=271
TWB1 Santiao Chiao 1.16 356 P Pn 16 05 12.0 -0.4
baz=359
TWB1 eS Sb 16 05 26.4 -1.1
baz=359
ELDTW Lidau 1.17 236 eP Pn 16 05 11.7 -1.0
baz=223
ELDTW eS Sb 16 05 25.8 -2.0
baz=223
ALS Alishan 1.21 254 P Pn 16 05 13.5 +0.4
baz=251
ALS eS Sn 16 05 28.0 -0.9
baz=251
TWA Mucha 1.21 339 eP Pn 16 05 13.5 +0.3
baz=340
TWA eS Sn 16 05 28.1 -0.8
baz=340
NWF Wu-fen Shan 1.25 348 eP Pn 16 05 13.7 +0.1
baz=349
NWF eS Sn 16 05 29.3 -0.5
baz=349
NSTT Nanjuang 1.25 309 eP Pn 16 05 13.4 -0.3
baz=309
NSTT eS Sn 16 05 29.1 -0.8
baz=309
WNT Mingjian 1.27 272 eP Pn 16 05 14.6 +0.6
baz=270
CHN5 Tsauling 1.30 259 eP Pn 16 05 14.9 +0.5
baz=249
CHN5 eS Sn 16 05 30.7 -0.4
baz=249
TCU Taichung 1.31 283 eP Pn 16 05 15.7 +1.1
baz=282
NSY Sanyi 1.32 296 eP Pn 16 05 15.4 +0.7
baz=295
TWG Pinlang 1.37 222 eP Pn 16 05 15.1 -0.4
baz=229
TWG eS Sn 16 05 30.9 -2.0
baz=229
TTN Taitung 1.38 218 eP Pn 16 05 15.8 +0.3
baz=207
TTN eS Sn 16 05 31.6 -1.5
baz=207
TWS1 Kuangyinshan 1.38 335 eP Pn 16 05 15.5 -0.1
baz=336
TWS1 eS Sn 16 05 32.7 -0.4
baz=336
STYT Tauyuan 1.38 241 eP Pn 16 05 15.7 +0.1
baz=230
STYT eS Sn 16 05 32.3 -0.9
baz=230
WGK Gukeng 1.39 264 eP Pn 16 05 15.8 +0.1
baz=261
WGK eS Sn 16 05 34.3 +1.0
baz=261
CHN4 Tsaushan 1.44 250 eP Pn 16 05 17.4 +1.1
baz=248
CHN4 eS Sn 16 05 36.6 +2.0
baz=248
WTP Ta-pu 1.46 246 eP Pn 16 05 17.2 +0.5
baz=243
WTP eS Sn 16 05 35.8 +0.7
baz=243
CHN1 Nanshi 1.56 245 eP Pn 16 05 19.3 +1.2
baz=243
CHN1 eS Sn 16 05 38.1 +0.5
baz=243
TWK Hsinying 1.56 249 eP Pn 16 05 18.2 +0.2
baz=246
TWK eS Sn 16 05 38.4 +0.7
baz=246
SGST Jiashian 1.56 241 eP Pn 16 05 17.8 -0.2
baz=228
SGST eS Sn 16 05 38.9 +1.2
baz=228
IRIF Iriomote-Funau 1.59 72 P Pn 16 05 18.9 +0.4
IRIF S Sn 16 05 38.6 +0.2
HATJ Hateruma jima 1.60 82 P Pn 16 05 18.6 0.0
SSD Sandimen 1.72 231 eP Pn 16 05 21.5 +1.4
baz=223
SSD eS Sn 16 05 41.5 +0.1
baz=223
JKRS Kuro-shima 1.82 77 P Pn 16 05 22.0 +0.5
JKRS eS Sn 16 05 44.5 +0.6
EAST Anshuo 1.84 218 eP Pn 16 05 21.6 -0.3
baz=215
EAST eS Sn 16 05 43.8 -0.8
baz=215
JIJ Ishigaki jima 1.96 74 P Pn 16 05 23.2 -0.4
JIJ S Sn 16 05 46.2 -1.3
SCZT Fangliau 1.98 223 eP Pn 16 05 24.7 +0.9
baz=217
SCZT eS Sn 16 05 47.5 -0.5
baz=217
JTJ Tarama 2.53 71 P Pn 16 05 31.6 +0.3
JTJ eS Sn 16 06 01.3 -0.2

MDD 08 16:05:33.5±2.2, 36.82N×10.99W, h0km, mbLg2.0/8, Error ellipse: s-maj=28.2km s-min=18.6km az=157.0
NEIC 08 16:05:33.6, 36.93N×11.00W, h0km, MG3.9(MDD), After MDD.
INMG 08 16:05:34.2±0.9, 36.70N×11.07W, h10km, ML1.6, Error ellipse: s-maj=10.8km s-min=6.1km az=141.0
CSEM 08 16:05:34.2±0.4, 36.80N×10.91W, h10km, ML2.6/6, Error ellipse: s-maj=12.0km s-min=6.5km az=150.0
ISC 08 16:05:33.7±1.5, 36.93N±0.08×11.00W±0.10, h10km, n49, σ0°80/87, Azores-Cape St. Vincent Ridge

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PFVI Vila Bisbo 1.75 83 ePn Pn 16 06 03.6 -0.5
PFVI eSn Sn 16 06 26.3 -0.1
PFVI A 16 06 27.9
3.4nm,0.2s
PFVI Vila Bisbo 1.75 83 P Pn 16 06 03.6 -0.4
PFVI S Sn 16 06 25.6 -0.8
PFVI Vila Bisbo 1.75 83 P Pn 16 06 03.6 -0.4
2.9nm,0.1s,SNR=7.9
PFVI S Sn 16 06 25.6 -0.8
1.7nm,0.1s,SNR=7.9
PFVI Vila Bisbo 1.75 83 P Pn 16 06 03.6 -0.4
2.9nm,0.1s,SNR=7.9
PFVI S Sn 16 06 25.6 -0.8
1.7nm,0.1s,SNR=7.9
PFVI Vila Bisbo 1.75 83 P Pn 16 06 03.6 -0.5
2.9nm,0.1s,SNR=7.9
PFVI S Sn 16 06 25.6 -0.8
1.7nm,0.1s,SNR=7.9
PFVI eSn Sn 16 06 26.3 -0.1
3.4nm,0.2s
MORF Marmelete 1.91 78 ePn Pn 16 06 06.3 0.0
MORF eSn Sn 16 06 31.0 +0.5
MORF A 16 06 32.9
4.2nm,0.1s
MORF Marmelete 1.91 78 P Pn 16 06 06.3 0.0
MORF S Sn 16 06 31.0 +0.5
4.2nm,0.1s
MORF Marmelete 1.91 78 P Pn 16 06 06.3 0.0
MORF S Sn 16 06 31.0 +0.5
4.2nm,0.1s
MORF Marmelete 1.91 78 ePn Pn 16 06 06.3 0.0
MORF eSn Sn 16 06 31.0 +0.5
4.2nm,0.1s
PTEO Sao Teotonio 1.92 71 ePn Pn 16 06 06.6 +0.2
PTEO eSn Sn 16 06 31.7 +1.2
PTEO Sao Teotonio 1.92 71 P Pn 16 06 06.6 +0.2
PTEO S Sn 16 06 31.7 +1.2
PTEO Sao Teotonio 1.92 71 P Pn 16 06 06.6 +0.2
PTEO S Sn 16 06 31.7 +1.2
PTEO Sao Teotonio 1.92 71 ePn Pn 16 06 06.6 +0.2
PTEO eSn Sn 16 06 31.7 +1.2
PCVE Castro Verde 2.46 73 ePn Pn 16 06 14.0 +0.1
PCVE eSn Sn 16 06 44.6 +0.6
PCVE A 16 06 48.0
1.3nm,0.3s
PCVE Castro Verde 2.46 73 P Pn 16 06 14.0 +0.1
PCVE S Sn 16 06 44.6 +0.6
1.3nm,0.3s
PCVE Castro Verde 2.46 73 P Pn 16 06 14.0 +0.1
PCVE S Sn 16 06 44.6 +0.6
1.3nm,0.3s
PCVE Castro Verde 2.46 73 ePn Pn 16 06 14.0 +0.1
PCVE eSn Sn 16 06 44.6 +0.6
1.3nm,0.3s
MOE Montemor 2.63 52 eSn Sn 16 06 49.8 +1.6
MOE Montemor 2.63 52 eSn Sn 16 06 49.8 +1.6
PVAQ Vaqueiros 2.66 79 ePn Pn 16 06 16.7 +0.1
PVAQ eSn Sn 16 06 48.7 -0.3
PVAQ A 16 06 54.8
1.8nm,0.1s
PVAQ Vaqueiros 2.66 79 P Pn 16 06 16.7 +0.1
PVAQ S Sn 16 06 48.7 -0.3
1.8nm,0.1s
PVAQ Vaqueiros 2.66 79 P Pn 16 06 16.7 +0.1
PVAQ S Sn 16 06 48.7 -0.3
1.8nm,0.1s
PVAQ Vaqueiros 2.66 79 ePn Pn 16 06 16.7 +0.1
PVAQ eSn Sn 16 06 48.7 -0.3
1.8nm,0.1s
EGRO El Granado 2.87 77 P Pn 16 06 20.1 +0.7
EGRO S Sn 16 06 53.2 -0.8
EGRO El Granado 2.87 77 P Pn 16 06 20.1 +0.7
0.5nm,0.1s,SNR=7.9
EGRO S Sn 16 06 53.2 -0.8
0.6nm,0.1s,SNR=7.9
EGRO El Granado 2.87 77 P Pn 16 06 20.1 +0.7
0.5nm,0.1s,SNR=7.9
EGRO S Sn 16 06 53.2 -0.8
0.6nm,0.1s,SNR=7.9
EGRO El Granado 2.87 77 P Pn 16 06 20.1 +0.6
0.5nm,0.1s,SNR=7.9
EGRO S Sn 16 06 53.2 -0.9
0.6nm,0.1s,SNR=7.9
PBAR Barrancos 3.38 67 ePn Pn 16 06 27.5 +1.0
PBAR eSn Sn 16 07 06.9 +0.2
PBAR A 16 07 07.7
1.1nm,0.4s
PBAR Barrancos 3.38 67 P Pn 16 06 27.5 +1.0
PBAR S Sn 16 07 06.9 +0.2
1.1nm,0.4s
PBAR Barrancos 3.38 67 P Pn 16 06 27.5 +1.0
PBAR S Sn 16 07 06.9 +0.2
1.1nm,0.4s
PBAR Barrancos 3.38 67 ePn Pn 16 06 27.5 +1.0
PBAR eSn Sn 16 07 06.9 +0.2
1.1nm,0.4s
EMIN Mina Concepcio 3.55 75 P Pn 16 06 28.8 0.0
EMIN S Sn 16 07 09.9 -0.9
EMIN Mina Concepcio 3.55 75 P Pn 16 06 28.8 0.0
0.7nm,0.1s,SNR=7.9
EMIN S Sn 16 07 09.9 -0.9
1.0nm,0.2s,SNR=7.9
EMIN Mina Concepcio 3.55 75 P Pn 16 06 28.8 0.0
0.7nm,0.1s,SNR=7.9
EMIN S Sn 16 07 09.9 -0.9
1.0nm,0.2s,SNR=7.9
EMIN Mina Concepcio 3.55 75 P Pn 16 06 28.8 0.0
0.7nm,0.1s,SNR=7.9
EMIN S Sn 16 07 09.9 -0.9
1.0nm,0.2s,SNR=7.9
PMRV Marv??o 3.78 48 eSn Sn 16 07 16.8 +0.3
PMRV A 16 07 20.0
1.0nm,0.2s
PMRV Marv??o 3.78 48 S Sn 16 07 16.8 +0.3
1.0nm,0.2s
PMRV Marv??o 3.78 48 S Sn 16 07 16.8 +0.3
1.0nm,0.2s
PMRV Marv??o 3.78 48 eSn Sn 16 07 16.8 +0.3
1.0nm,0.2s
ESPR Espera 4.12 89 P Pn 16 06 36.1 -0.6
ESPR Espera 4.12 89 P Pn 16 06 36.1 -0.6
1.5nm,0.1s,SNR=7.9
ESPR Espera 4.12 89 P Pn 16 06 36.1 -0.6
1.5nm,0.1s,SNR=7.9
ESPR Espera 4.12 89 P Pn 16 06 36.1 -0.6
1.5nm,0.1s,SNR=7.9
EADA Adamuz 5.25 74 P Pn 16 06 52.1 -0.1
EADA S Sn 16 07 51.5 -1.3
EADA Adamuz 5.25 74 P Pn 16 06 52.1 -0.1
0.3nm,0.1s,SNR=7.9
EADA S Sn 16 07 51.5 -1.3
0.5nm,0.1s,SNR=7.9
EADA Adamuz 5.25 74 P Pn 16 06 52.1 -0.1
0.3nm,0.1s,SNR=7.9
EADA S Sn 16 07 51.5 -1.3
0.5nm,0.1s,SNR=7.9
EADA Adamuz 5.25 74 P Pn 16 06 52.1 -0.1
0.3nm,0.1s,SNR=7.9
EADA S Sn 16 07 51.5 -1.2
0.5nm,0.1s,SNR=7.9

ELOB Lobios 5.43 24 S **Sn 16 07 55.0 -2.1**
1.1nm,0.2s,SNR=7.9
ELOB Lobios 5.43 24 S **Sn 16 07 55.0 -2.1**
1.1nm,0.2s,SNR=7.9

BJI ***08*** *16:05:56.8, 10.79N×91.28E, h15km, mB4.5/3, mb4.5/6, Ms4.6/2, Ms7 4.3/2*
IDC ***08*** *16:05:57.4±1.1, 10.70N×91.77E, h0km, mb4.0/6, mb1 4.1/6, mb1mx4.0/22, mbtmp4.0/6, MS3.6/1, Ms1 3.6/1, ms1mx2.7/32, Error ellipse: s-maj=31.6km s-min=25.0km az=91.0*
NEIC ***08*** *16:05:58.6±0.9, 10.73N×91.83E, h10km, mb4.6/1, Error ellipse: s-maj=23.5km s-min=14.1km az=109.0*
ISCJB ***08*** *16:05:59.9±0.6, 10.81N±0.07×91.81E±0.08, h33km, mb4.1/7, Error ellipse: s-maj=13.3km s-min=7.6km az=147.1*
ISC 08 16:05:59.2±3.3, 10.79N±0.07×91.81E±0.09, h14km±21km, n26, σ0995/26, mb4.1/7, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	**10.28**	**41**	Pn	**Pn**	**16 08 25.4**	**-1.1**
CHTO	**Chiang Mai**	**10.55**	**40**	Pn	**Pn**	**16 08 31.3**	**+1.2**
PSI	**Prapat**	**10.62**	**138**	LR	LR	16 13 23.9	
	comp=Z,261nm,18.0s,baz=217,slow=42						
VIS	**Vishakhapatnam**	**10.72**	**311**	*i* P	**Pn**	**16 08 31.6**	**-0.8**
VIS				*i* S	**Sn**	**16 10 21.2**	**-11**
BOK	**Bokaro**	**14.11**	**337**	*e*PKP	**Pn**	**16 09 16.9**	**-1.9**
BOK				AMb	AMB	16 09 19.1	
	comp=Z,12nm,0.6s						
BOK				*ex*	x	16 11 47.8	
HYB	**Hyderabad**	**14.44**	**299**	*i* P	**Pn**	**16 09 31.5**	**+8.2**
ODAN	**Odare**	**16.52**	**346**	*e*P	**Pn**	**16 09 49.6**	**-1.0**
	comp=Z,20nm,0.7s						
RAMN	**Ramite**	**16.81**	**344**	*e*P	**Pn**	**16 09 54.8**	**+0.5**
TAPN	**Taplejung**	**16.92**	**347**	*e*P	**Pn**	**16 09 54.8**	**-0.9**
	comp=Z,45nm,1.0s						
PKI	**Pulchoki**	**17.74**	**341**	*e*P	**Pn**	**16 10 06.2**	**+0.2**
	comp=Z,44nm,0.9s						
DMN	**Daman**	**17.88**	**340**	*e*P	**Pn**	**16 10 07.9**	**+0.3**
	comp=Z,39nm,0.7s						
KKN	**Kakani**	**17.99**	**341**	*e*P	**Pn**	**16 10 09.1**	**+0.1**
GKN	**Gorkha**	**18.40**	**340**	*e*P	**Pn**	**16 10 14.1**	**+0.1**
BHPL	**Bhopal**	**18.48**	**314**	*e*PKP	**Pn**	**16 10 16.4**	**+1.3**
BHPL				AMb	AMB	16 10 22.9	
	comp=Z,10nm,0.9s						
KOLN	**Koldanda**	**18.57**	**337**	*e*P	**Pn**	**16 10 16.4**	**+0.3**
	comp=Z,29nm,0.5s						
LSA	**Lhasa**	**18.82**	**358**	P	**Pn**	**16 10 19.6**	**+0.4**
HHC	**Hu-ho-hao-te**	**34.65**	**27**	*e*P	**P**	**16 12 49.3**	**+1.1**
HHC				PP	PP	16 14 06.5	-0.3
HHC				PcP	PcP	16 15 23.1	+0.7
HHC				S	**S**	**16 18 16.1**	**-1.3**
HHC				ScP	ScP	16 19 04.4	-3.1
HHC				PcS	PcS	16 19 08.4	-0.4
HHC				SS	SS	16 20 30.1	-18
HHC				ScS	ScS	16 23 06.4	-4.0
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC				pmax	pmax		
	comp=Z,79nm,6.4s						
HHC				LR	LR		
	comp=N,590nm,13.2s						
HHC				LR	LR		
	comp=E,440nm,13.2s						
HHC				LR	LR		
	comp=Z,460nm,13.5s						
SONM	**Songino Array**	**38.91**	**16**	P	**P**	**16 13 25.9**	**+1.5**
	comp=Z,2.7nm,0.9s,mb4.0,baz=204,slow=6.9,SNR=15						
KSRS	**Korea Array**	**41.90**	**45**	P	**P**	**16 13 49.6**	**+0.3**
	comp=Z,0.3nm,0.3s,mb3.5,baz=240,slow=9.9,SNR=5.7						
FITZ	**Fitzroy Crossi**	**44.04**	**130**	*e*P	**P**	**16 14 06.1**	**-0.9**
WRA	**Warramunga Arr**	**51.83**	**126**	P	**P**	**16 15 06.6**	**-0.6**
	comp=Z,0.4nm,0.3s,mb3.8,baz=300,slow=10.0,SNR=6.2						
WRAB	**Tennant Creek**	**51.83**	**126**	*e*P	**P**	**16 15 06.1**	**-1.1**
	comp=Z,3.6nm,0.5s,mb4.6						
ASAR	**Alice Springs**	**53.54**	**130**	P	**P**	**16 15 19.4**	**-0.5**
	comp=Z,2.2nm,0.9s,mb4.1,baz=308,slow=7.0,SNR=20						
STKA	**Stephens Creek**	**63.77**	**134**	P	**P**	**16 16 33.1**	**+2.1**
	comp=Z,3.2nm,0.8s,mb4.4,baz=300,slow=13,SNR=3.8						
BOSA	**Boshof**	**75.22**	**237**	P	**P**	**16 17 42.2**	**+0.3**
	comp=Z,2.7nm,0.7s,mb4.3,baz=79,slow=14,SNR=4.5						
CPUP	**Villa Florida**	**147.03**	**238**	PKPbc	PKPbc	16 25 41.3	-1.1
	comp=Z,2.1nm,0.8s,baz=72,slow=5.9,SNR=4.8						

BGS ***08*** *16:08:08.2±2.0, 37.07N×76.22E, h40km, mb4.9, MS5.1*
LDG ***08*** *16:08:26.8±0.1, 39.37N×73.18E, h10km, Mb5.3/42, Ms4.4/8*
ISCJB ***08*** *16:08:29.8±0.7, 39.46N±0.02×73.11E±0.02, h18km±4km, mb5.1/294, MS4.7/84, Error ellipse: s-maj=3.2km s-min=2.3km az=25.9*
MOS ***08*** *16:08:30.5±1.1, 39.47N×73.13E, h25km, mb5.4/113, MS4.7/44, Error ellipse: s-maj=5.3km s-min=3.2km az=131.4*
BJI ***08*** *16:08:31.7, 39.58N×73.27E, h33km, mB5.1/25, mb5.0/36, ML4.8/4, Ms4.8/41, Ms7 4.5/37*
NNC ***08*** *16:08:31.4±3.1, 39.62N×72.93E, h14km±15km, mb5.6, mpv5.5, Error ellipse: s-maj=29.4km s-min=13.6km az=21.0*
GCMT ***08*** *16:08:31.3±0.2, 39.47N×72.89E, h12km, MW5.0, Moment Tensor Solution. s32,c40; s86,c152; Moment tensor: Scale 10^{16}Nm; M_{rr}3.43±.08; $M_{\theta\theta}$-2.53±.08; $M_{\phi\phi}$-0.90±.07; $M_{r\theta}$1.82±.30; $M_{\theta\phi}$-2.00±.06; $M_{\phi r}$-0.52±.28; Best double couple: $M_0$4.10000×10^{16} NP1:φ_s216.00000°, δ39.00000°, λ57.00000°. NP2:φ_s76.00000°, δ58.00000°, λ114.00000°. Principal axes: T 4.1700, Plg67.0000°, Azm35.0000°; N -0.0900, Plg20.0000°, Azm243.0000°; P -4.0900, Plg10.0000°, Azm149.0000°; Data Used: II IU IC G CN.*
SZGRF ***08*** *16:08:31.8, 39.49N×73.36E, h33km, mb5.1, MS4.6, Tajikistan-Xinjiang border region*
IDC ***08*** *16:08:31.6±2.6, 39.50N×73.16E, h20km±16km, mb4.9/36, mb1 4.9/42, mb1mx4.9/42, mbtmp4.9/42, ML4.4/6, MS4.5/26, Ms1 4.5/26, ms1mx4.3/35, Error ellipse: s-maj=8.3km s-min=7.3km az=140.0*
NEIC ***08*** *16:08:35.3±0.6, 39.52N×73.18E, h49km±5km, mb5.2/164, MS4.7/8, Error ellipse: s-maj=4.6km s-min=2.8km az=178.0*
DJA ***08*** *16:08:38, 39.42N×72.98E, h54km, mb5.4/26*
ISC 08 16:08:33.7±0.6, 39.51N±0.02×73.14E±0.02, h33km±4km, h43km±2.3km:pP-P, n954, σ1§01/996, mb5.1/294, MS4.7/84, 104C-80D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**2.19**	**89**	P	**Pn**	**16 09 03.9**	**-3.9**
KSH				S	**Sn**	**16 09 27.4**	**-6.4**
KSH				smax			
	comp=N,9μm,0.8s						
KSH				smax			
	comp=E,8μm,0.8s						
AML	**Almayashu**	**2.65**	**9**	P	**Pn**	**16 09 17.2**	**+3.1**
	SNR=11						
AML	**Almayashu**	**2.65**	**9**	*e*P	**Pn**	**16 09 16.5**	**+2.4**
UCH	**Uchtor**	**2.91**	**21**	P	**Pn**	**16 09 19.9**	**+2.2**
	SNR=12						
UCH	**Uchtor**	**2.91**	**21**	*e*P	**Pn**	**16 09 19.7**	**+2.1**
KZA	**Kyzart**	**3.03**	**31**	P	**Pn**	**16 09 20.6**	**+1.4**
	SNR=463						
EKS2	**Erkin-Say**	**3.19**	**9**	P	**Pn**	**16 09 23.3**	**+1.8**
	SNR=145						
EKS2	**Erkin-Say**	**3.19**	**9**	*e*P	**Pn**	**16 09 23.4**	**+1.9**
AAK	**Ala-Archa**	**3.29**	**18**	Pn	**Pn**	**16 09 24.2**	**+1.4**
	comp=E,16μm,0.7s						
AAK	**Ala-Archa**	**3.29**	**18**	P	**Pn**	**16 09 24.6**	**+1.8**
	SNR=911						
AAK	**Ala-Archa**	**3.29**	**18**	Pn	**Pn**	**16 09 25.0**	**+2.1**
	comp=E,208nm,0.3s,baz=179,slow=6.3,SNR=227						
AAK				Lg		16 10 09.6	
	comp=E,108nm,0.3s,baz=343,slow=21,SNR=8.8						
KBK	**Karagaybulak**	**3.43**	**23**	P	**Pn**	**16 09 26.7**	**+1.9**
	SNR=383						
FRU	**Bishkek**	**3.50**	**18**	⇑*i*PN	**Pn**	**16 09 28.0**	**+2.2**
FRU				*e*		16 10 14.0	
FRU				*i*		16 10 18.0	
FRU				pmax	pmax		
	comp=E,2μm,2.0s						
FRU				pmax	pmax		
	comp=E,12μm,3.0s						
ULHL	**Ulahol**	**3.61**	**40**	P	**Pn**	**16 09 28.9**	**+1.6**
	SNR=90						
CHMS	**Chumysh**	**3.69**	**19**	P	**Pn**	**16 09 30.1**	**+1.7**
	SNR=696						
USP	**Ospenovka**	**3.89**	**15**	P	**Pn**	**16 09 32.6**	**+1.4**
	SNR=66						
KK31	**Karatay Array**	**4.10**	**332**	⇑Pn	**Pn**	**16 09 34.6**	**+0.6**
	comp=E,632nm,0.9s,baz=148,slow=12,SNR=3031						
KK31				⇓Pg	**Pn**	**16 09 43.2**	**+9.2**
	comp=E,891nm,0.7s,baz=131,slow=17,SNR=5.6						
KK31				⇑Sn	**Sn**	**16 10 23.7**	**+2.9**
	comp=E,1μm,0.6s,baz=159,slow=25,SNR=3.5						
KK31				⇑Lg		16 10 37.3	
	comp=E,1μm,0.7s,baz=159,slow=25,SNR=3.5						
KNDC	**Almaty**	**4.69**	**37**	⇑Pn	**Pn**	**16 09 45.0**	**+2.8**
	comp=E,2μm,1.0s						
KNDC				⇓Lg		16 10 59.2	
	comp=E,6μm,1.2s						
AAA	**Alma-Ata**	**4.73**	**36**	*i* PN	**Pn**	**16 09 45.9**	**+3.3**
CEP	**Cherat**	**5.76**	**190**	⇑P	**Pn**	**16 09 59.1**	**+2.2**
CEP				S	**Sn**	**16 11 11.0**	**+9.2**
KBL	**Kabul**	**5.94**	**215**	*e*PN	**Pn**	**16 10 00.7**	**+1.3**
KBL				pmax	pmax		
	comp=Z,428nm,1.1s						
KBL	**Kabul**	**5.94**	**215**	*e*P	**Pn**	**16 10 00.7**	**+1.4**
	comp=Z,428nm,1.1s						
JMU	**Jammu**	**6.93**	**168**	*ex*	**Sn**	**16 11 35.0**	**+4.5**
DLH	**Dalhousie**	**7.32**	**161**	*ex*	**Pn**	**16 10 21.0**	**+2.7**
DLH				*ex*	x	16 11 49.0	
THN	**Thein Dam**	**7.36**	**163**	*e*PKP	**Pn**	**16 10 17.0**	**-1.9**
THN				*ex*	x	16 11 44.0	
SARP	**Sargodha**	**7.58**	**183**	P	**Pn**	**16 10 21.5**	**-0.4**
BHK	**Bhakra**	**8.50**	**161**	*e*PKP	**Pn**	**16 10 33.8**	**-0.7**
BHK				*ex*	x	16 12 10.6	
SDNR	**Sundarnagar**	**8.58**	**157**	*ex*	**Pn**	**16 10 37.5**	**+1.9**
SDNR				*ex*	**Sn**	**16 12 12.5**	**+1.3**
KLP	**Kalpa**	**8.98**	**151**	*e*PKP	**Pn**	**16 10 40.6**	**-0.5**
KLP				*ex*	x	16 12 17.9	
KLP				AML	AML	16 12 36.3	
	comp=N,646nm,1.0s						
KLP				AML	AML	16 12 36.7	
	comp=E,880nm,0.6s						
SMLA	**Simla**	**8.98**	**157**	*i* P	**Pn**	**16 10 41.0**	**-0.1**
SMLA				*i* x	x	16 12 20.3	
SMLA				⇓		16 12 29.0	
	comp=N,2μm,0.6s						
SMLA				⇓		16 12 29.3	
	comp=E,3μm,0.5s						
MK31	**Makanchi Array**	**9.88**	**40**	Pn	**Pn**	**16 10 54.6**	**+1.3**
	comp=E,104nm,1.1s,baz=224,slow=14,SNR=425						
MK31				⇓Lg		16 13 52.2	
	comp=E,348nm,1.6s						
MK31	**Makanchi Array**	**9.88**	**40**	*e*P	**Pn**	**16 10 54.5**	**+1.1**
MKAR	**Makanchi Array**	**9.88**	**40**	Pn	**Pn**	**16 10 55.0**	**+1.7**
	comp=E,0.8nm,0.3s,baz=238,slow=11,SNR=51						
MKAR				Sn	**Sn**	**16 12 41.9**	**-1.1**
	baz=232,slow=15,SNR=2.3						
MKAR				Lg		16 13 43.4	
	comp=E,1.4nm,0.3s,baz=226,slow=25,SNR=3.3						
DDI	**Dehra Dun**	**10.01**	**155**	*e*PKP	**Pn**	**16 10 54.3**	**-0.9**
DDI				*ex*	x	16 12 49.5	
JOSI	**Joshimath**	**10.36**	**148**	*e*S	**Sn**	**16 12 45.5**	**-10**
JOSI				AML	AML	16 13 04.1	
	comp=N,1μm,0.5s						
JOSI				AML	AML	16 13 04.6	
	comp=E,3μm,0.5s						
QUE	**Quetta**	**10.59**	**211**	*e*P	Px	16 11 13.0	
QUE				*e*S	Sx	16 13 17.0	
NDI	**New Delhi**	**11.31**	**161**	*ex*	**Pn**	**16 11 10.0**	**-3.0**
NDI				*ex*	**Sn**	**16 13 13.0**	**-5.3**
AYAN	**Aya Nagar**	**11.48**	**162**	*e*PKP	**Pn**	**16 11 14.6**	**-0.8**
PTH	**Pithoragarh**	**11.52**	**147**	*e*PKP	**Pn**	**16 11 15.0**	**-0.8**
KHET	**Khetri**	**11.62**	**168**	*e*PKP	**Pn**	**16 11 14.8**	**-2.3**
KHET				*e*S	**Sn**	**16 13 12.2**	**-14**
SONA	**Sohna**	**11.70**	**163**	*e*PKP	**Pn**	**16 11 18.8**	**+0.5**
SONA				*e*S	**Sn**	**16 13 16.2**	**-11**
WMQ	**Urumqi**	**11.71**	**64**	P	**Pn**	**16 11 17.1**	**-1.2**
WMQ				PP		16 11 27.3	
WMQ				sP		16 11 31.9	
WMQ				S	**Sn**	**16 13 27.3**	**-0.5**
WMQ				SS		16 13 42.1	
WMQ				PcP	PcP	16 17 03.6	-2.7
WMQ				ScS	ScS	16 24 06.1	-5.9
WMQ				pmax	pmax		
	comp=Z,91nm,0.7s						
ABKT	**Ailbek**	**11.84**	**267**	Pn	**Pn**	**16 11 20.4**	**+0.2**
	comp=Z,2μm,0.8s,SNR=42						
VAN	**Vannovskaya**	**11.84**	**267**	*e*P	**Pn**	**16 11 17.3**	**-2.9**
KURK	**Kurchatov**	**11.85**	**17**	Pn	**Pn**	**16 11 19.3**	**-1.0**
	comp=Z,226nm,0.8s,SNR=6.8						
KURK	**Kurchatov**	**11.85**	**17**	⇓Pn	**Pn**	**16 11 18.9**	**-1.3**
	comp=Z,61nm,1.5s						
KURK				⇓Lg		16 14 42.8	
	comp=Z,712nm,1.4s						
KURK	**Kurchatov**	**11.85**	**17**	Pn	**Pn**	**16 11 16.7**	**-3.5**
	comp=Z,1.0nm,0.3s,baz=210,slow=13,SNR=9.8						
KURK				Sn	**Sn**	**16 13 21.6**	**-10**
	comp=Z,0.2nm,0.3s,baz=130,slow=37,SNR=3.0						
KURK				Lg		16 14 37.9	
	comp=Z,0.7nm,0.3s,baz=334,slow=20,SNR=4.4						
KURK				LR	LR	16 16 05.8	
	comp=Z,2μm,19.2s,baz=210,slow=39						
KURK	**Kurchatov**	**11.85**	**17**	*d*iP	**Pn**	**16 11 19.0**	**-1.3**
KURK				pmax	pmax		
	comp=Z,64nm,1.7s						
KURK	**Kurchatov**	**11.85**	**17**	*e*P	**Pn**	**16 11 17.9**	**-2.4**
	comp=Z,46nm,1.0s						
KURK	**Kurchatov**	**11.85**	**17**	Pn	**Pn**	**16 11 19.6**	**-0.7**
	SNR=22						
JASL	**Jaisalmer**	**12.69**	**189**	*e*PKP	**Pn**	**16 11 30.1**	**-1.7**
AGRA	**Agra**	**12.88**	**160**	*e*PKP	**Pn**	**16 11 32.2**	**-2.3**
AGRA				*e*S	**Sn**	**16 13 43.7**	**-13**
AJM	**Ajmer**	**13.05**	**174**	*e*PKP	**Pn**	**16 11 37.4**	**+0.6**
VOSK	**Vostochnaya**	**13.30**	**354**	⇓Pn	**Pn**	**16 11 37.4**	**-2.7**
	comp=Z,60nm,1.0s						
VOSK				⇓Lg		16 15 29.7	
	comp=Z,739nm,2.6s						
AB31	**Akbulak array**	**13.54**	**320**	Pn	**Pn**	**16 11 38.9**	**-4.5**
	comp=Z,42nm,0.6s,baz=125,slow=14,SNR=774						
AB31				⇓Sn	**Sn**	**16 14 02.8**	**-10**
	comp=Z,45nm,0.8s,baz=121,slow=24,SNR=3.7						
ABKAR	**Akbulak array**	**13.54**	**320**	*e*P	**Pn**	**16 11 38.7**	**-4.7**
	comp=Z,70nm,0.6s						
BVAR	**Borovoye Array**	**13.65**	**353**	Pn	**Pn**	**16 11 42.4**	**-2.4**
	comp=Z,2.2nm,0.3s,baz=159,slow=13,SNR=70						
BVAR				Sn	**Sn**	**16 14 07.0**	**-8.2**
	comp=Z,1.0nm,0.3s,baz=181,slow=28,SNR=2.7						
BVAR				Lg		16 15 38.8	
	comp=Z,1.4nm,0.3s,baz=157,slow=27,SNR=3.8						
BRVK	**Borovoye**	**13.69**	**353**	Pn	**Pn**	**16 11 43.4**	**-2.0**
	comp=Z,779nm,0.8s,SNR=23						
BRVK	**Borovoye**	**13.69**	**353**	⇑Pn	**Pn**	**16 11 43.7**	**-1.7**
	comp=Z,208nm,1.0s						
BRVK				⇓Lg		16 15 39.5	
	comp=Z,743nm,1.8s						
BRVK	**Borovoye**	**13.69**	**353**	*d*iP	**Pn**	**16 11 43.0**	**-2.4**
BRVK				pmax	pmax		
	comp=Z,140nm,1.7s						
BRVK	**Borovoye**	**13.69**	**353**	*e*P	**Pn**	**16 11 42.6**	**-2.7**
	comp=Z,108nm,0.8s						
BRVK	**Borovoye**	**13.69**	**353**	Pn	**Pn**	**16 11 43.5**	**-1.9**
	SNR=52						
ZRNK	**Zerenda**	**13.74**	**349**	⇑Pn	**Pn**	**16 11 43.4**	**-2.7**
	comp=Z,53nm,0.8s						
ZRNK				⇓Lg		16 15 42.5	
	comp=Z,1μm,2.6s						
KOLN	**Koldanda**	**14.58**	**140**	*e*P	**Pn**	**16 11 52.2**	**-5.4**
	comp=Z,137nm,0.6s						
GKN	**Gorkha**	**14.92**	**137**	*e*P	**Pn**	**16 11 56.5**	**-5.7**
	comp=Z,142nm,0.5s						
AKTK	**Aktyubinsk**	**15.26**	**321**	Pn	**Pn**	**16 12 02.5**	**-4.0**
AKTK				Sn	**Sn**	**16 14 44.9**	**-9.4**
AKTK				Lg		16 16 35.6	
AKTK				LR	LR	16 18 25.9	
AKTO	**Aktyubinsk**	**15.26**	**321**	Pn	**Pn**	**16 12 02.5**	**-4.0**
	comp=Z,2.7nm,0.3s,baz=125,slow=14,SNR=83						
AKTO				Sn	**Sn**	**16 14 44.9**	**-9.4**
	comp=Z,1.1nm,0.3s,baz=276,slow=15,SNR=2.7						
AKTO				Lg		16 16 35.6	
	baz=44,slow=18,SNR=2.3						
AKTO				LR	LR	16 18 25.9	
	comp=E,6μm,18.0s,baz=143,slow=39						
AKTO	**Aktyubinsk**	**15.26**	**321**	P	**Pn**	**16 12 02.6**	**-3.9**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.3s						
AKTO				MLR	MLR		
	comp=Z,6μm,18.0s						
KKN	**Kakani**	**15.44**	**136**	*e*P	**Pn**	**16 12 03.5**	**-5.5**
	comp=Z,169nm,0.7s						
DMN	**Daman**	**15.48**	**136**	*e*P	**Pn**	**16 12 04.3**	**-5.3**
	comp=Z,195nm,0.7s						
GUN	**Gumba**	**15.67**	**134**	*e*P	**Pn**	**16 12 06.3**	**-5.7**
	comp=Z,154nm,0.7s						
PKI	**Pulchoki**	**15.68**	**136**	*e*P	**Pn**	**16 12 06.7**	**-5.4**
	comp=Z,193nm,0.8s						
JIRN	**Jiri**	**16.04**	**134**	*e*P	**Pn**	**16 12 10.9**	**-5.9**
	comp=Z,110nm,0.5s						
ZAA0	**Zalesovo Array**	**16.48**	**25**	*e*P	**Pn**	**16 12 20.4**	**-1.8**
ZALV	**Zalesovo Beam**	**16.48**	**25**	Pn	**Pn**	**16 12 20.4**	**-1.8**
	comp=Z,1.4nm,0.3s,baz=208,slow=12,SNR=63						
ZALV				LR	LR	16 18 57.5	
	comp=Z,861nm,19.3s,baz=216,slow=38						
ZALV	**Zalesovo Beam**	**16.48**	**25**	P	**Pn**	**16 12 20.5**	**-1.7**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV				MLR	MLR		
	comp=Z,861nm,19.3s						
BHPL	**Bhopal**	**16.62**	**166**	*e*PKP	**Pn**	**16 12 23.2**	**-1.0**
NVS	**Novosibirsk**	**16.77**	**21**	⇑*i*P	**Pn**	**16 12 24.1**	**-1.8**
NVS				pmax	pmax		
	comp=N,523nm,1.5s						
NVS				pmax	pmax		
	comp=Z,448nm,1.5s						
NVS				pmax	pmax		
	comp=E,94nm,1.2s						
RAMN	**Ramite**	**16.82**	**134**	*e*P	**Pn**	**16 12 19.4**	**-7.3**
	comp=E,276nm,0.7s						
TAPN	**Taplejung**	**17.15**	**131**	*e*P	**Pn**	**16 12 23.6**	**-7.2**
	comp=E,216nm,0.8s						
ODAN	**Odare**	**17.33**	**132**	*e*P	**Pn**	**16 12 25.5**	**-7.6**
	comp=E,479nm,0.7s						
LSA	**Lhasa**	**17.74**	**118**	P	**Pn**	**16 12 39.1**	**+1.0**
LSA				LR	LR		
	comp=N,590nm,13.6s						
LSA				LR	LR		
	comp=E,930nm,15.4s						
LSA				LR	LR		
	comp=Z,780nm,11.7s						
NGP	**Nagpur**	**18.99**	**163**	*ex*	**Pn**	**16 12 48.3**	**-5.0**
NGP				*ex*	x	16 16 16.5	
BOK	**Bokaro**	**19.02**	**142**	*e*PKP	**Pn**	**16 12 54.1**	**+0.4**
SVE	**Sverdlovsk**	**19.18**	**339**	*e*P	**Pn**	**16 12 53.5**	**-1.8**
SVE				*e*S	**Sn**	**16 16 31.7**	**+2.7**
SVE				pmax	pmax		
	comp=Z,141nm,1.1s						
SVE				MLR	MLR		
	comp=Z,4μm,11.0s						
ARU	**Arti**	**19.47**	**335**	P	**Pn**	**16 12 58.9**	**+0.1**
	comp=Z,1μm,0.8s,SNR=45						
ARU	**Arti**	**19.47**	**335**	*d*iP	**Pn**	**16 12 57.3**	**-1.5**
ARU				S	**Sn**	**16 16 35.5**	**-0.6**
ARU				pmax	pmax		
	comp=Z,194nm,0.8s						
ARU				MLR	MLR		
	comp=Z,4μm,17.0s						
ARU	**Arti**	**19.47**	**335**	*e*P	**Pn**	**16 12 57.4**	**-1.5**
	comp=Z,230nm,1.0s						
MAK	**Makhachkala**	**19.56**	**288**	*c* iP	**Pn**	**16 12 59.9**	**-0.1**
MAK				*i* S	**Sn**	**16 16 37.0**	**-1.5**
MAK				MLR	MLR		
	comp=Z,2μm,14.0s						
POO	**Poona**	**20.91**	**178**	*e*PKP	**P**	**16 13 13.0**	**-0.4**
SHL	**Shillong**	**20.99**	**126**	*e*PKP	**P**	**16 13 13.0**	**-1.2**
SHL				*ex*	x	16 17 28.0	
KRAR	**Krasnoyarsk**	**21.06**	**32**	⇓*i*P	**P**	**16 13 15.7**	**+1.0**
KRAR				*i*		16 17 21.7	
DGRG	**David-gareji**	**21.18**	**284**	P	**P**	**16 13 16.3**	**+0.2**
DGRG				S	**S**	**16 17 12.4**	**+2.6**
LATR	**Latur**	**21.23**	**171**	*ex*	**P**	**16 13 16.3**	**-0.5**
CAL	**Calcutta**	**21.29**	**138**	*e*PKP	**P**	**16 13 17.6**	**+0.1**
CAL				*ex*	x	16 17 21.2	
JMDO	**Jabal Madar**	**21.35**	**221**	P	**P**	**16 13 18.3**	**+0.2**
	SNR=5.5						
ORY	**Orie**	**21.37**	**36**	⇓*i*P	**P**	**16 13 20.7**	**+2.6**
MTA	**Mtatsminda**	**21.59**	**285**	P	**P**	**16 13 19.7**	**-0.9**
MTA				S	**S**	**16 17 17.7**	**-0.2**
TBLG	**Delisi**	**21.63**	**285**	*e*P	**P**	**16 13 19.8**	**-1.2**
TBLG	**Delisi**	**21.63**	**285**	P	**P**	**16 13 19.8**	**-1.2**
GNI	**Garni**	**21.78**	**281**	*e*P	**P**	**16 13 22.8**	**+0.1**
GNI	**Garni**	**21.78**	**281**	P	**P**	**16 13 23.6**	**+1.0**
	comp=Z,107nm,0.7s,mb5.4,baz=9.2,slow=3.0,SNR=34						
GNI	**Garni**	**21.78**	**281**	*d*iP	**P**	**16 13 23.5**	**+0.8**
GNI				pmax	pmax		
	comp=Z,254nm,0.8s						
GNI	**Garni**	**21.78**	**281**	*e*P	**P**	**16 13 23.0**	**+0.4**
	comp=Z,413nm,1.1s,mb5.8						
GNI	**Garni**	**21.78**	**281**	P	**P**	**16 13 24.1**	**+1.4**
	SNR=79						
GOR	**Gori**	**22.09**	**286**	P	**P**	**16 13 26.0**	**+0.1**
KAD	**Karad**	**22.14**	**177**	*ex*	**P**	**16 13 26.4**	**-0.1**
KAD				*ex*	x	16 13 27.9	
KEH	**Kehvi**	**22.20**	**287**	P	**P**	**16 13 26.0**	**-1.1**
ZEI	**Tsey**	**22.21**	**288**	*e*P	**P**	**16 13 24.6**	**-2.6**
ZEI				*e*S	**S**	**16 17 21.8**	**-8.1**
ZEI				pmax	pmax		
	comp=Z,32nm,0.6s,mb4.9						
HYB	**Hyderabad**	**22.51**	**166**	*i* P	**P**	**16 13 29.5**	**-1.0**
HYB				*e*		16 14 10.0	
ONI	**Oni**	**22.55**	**287**	P	**P**	**16 13 31.6**	**+0.9**
ONI				S	**S**	**16 17 40.9**	**+4.7**
CLDR	**Caldiran**	**22.57**	**278**	*e*P	**P**	**16 13 31.7**	**+0.7**
SOKR	**Solikamsk**	**22.59**	**338**	*d*iP	**P**	**16 13 31.5**	**+0.5**
SOKR				S	**S**	**16 17 40

LZH pmax pmax
comp=Z,53nm,1.0s,mb4.9
LZH pmax pmax
comp=Z,260nm,4.0s
LZH LR LR
comp=N,2µm,15.3s
LZH LR LR
comp=Z,3µm,16.9s,MS4.8
IRK Irkutsk 24.92 49 *e*P **P 16 13 55.1 +1.6**
IRK pmax pmax
comp=Z,57nm,1.1s,mb5.0
SOC Sochi 25.24 290*c i*P **P 16 13 55.0 -1.5**
SOC *e**PP pP 16 14 08.4 +2.4
SOC *e* 16 14 30.5
SOC *e*S **S 16 18 14.8 -5.0**
SOC pmax pmax
comp=Z,36nm,1.1s,mb4.8
SOC MLR MLR
comp=Z,937nm,19.0s,MS4.3
SONM Songino Array 25.30 60 P **P 16 13 57.8 +0.8**
comp=Z,29nm,1.0s,mb4.8,baz=266,slow=8.9,SNR=25
SONM ScP ScP 16 21 08.3 +2.4
comp=Z,1.4nm,0.9s,baz=236,slow=2.6,SNR=11
SONM LR LR 16 24 46.0
comp=Z,920nm,19.0s,MS4.3,baz=249,slow=38
SONM Songino Array 25.30 60 P **P 16 13 57.8 +0.8**
SONM pmax pmax
comp=Z,29nm,1.0s
SONM pmax pmax
comp=N,1.0nm,0.9s
SONM MLR MLR
comp=Z,920nm,19.0s
SONM Songino Array 25.30 60 P **P 16 13 57.8 +0.8**
SONM ScP ScP 16 21 08.3 +2.4
SONM LR LR 16 24 46.0
GUMT Gumushane 25.72 283 *e*P **P 16 14 02.9 +2.0**
ULN Ulaanbaatar 25.74 60⇑*i*P **P 16 14 00.8 -0.2**
ULN Ulaanbaatar 25.74 60 *e*P **P 16 14 00.9 -0.1**
comp=Z,31nm,0.8s,mb4.9
ULN Ulaanbaatar 25.74 60 P **P 16 14 01.6 +0.6**
comp=Z,622nmcomp=Z,48nm,0.9s,mb5.0
ULN Ulaanbaatar 25.74 60 P **P 16 14 01.7 +0.7**
SNR=21
EZC Erzincan 25.94 281 *e*P **P 16 14 01.0 -1.9**
PTK Pertek 26.07 280 *e*P **P 16 14 06.1 +2.0**
VORD Divnogorie 26.21 307 *e*P **P 16 14 04.6 -0.6**
VORD pmax pmax
comp=N,100nm,0.9s
VORD pmax pmax
comp=E,170nm,0.9s
VORD pmax pmax
comp=Z,100nm,0.9s,mb5.3
VORD MLR MLR
comp=N,2µm,17.0s,MS4.8
VORD MLR MLR
comp=E,1µm,17.0s,MS4.8
VORD MLR MLR
comp=Z,2µm,17.0s,MS4.6
VSR Storozhevoye 26.34 308 *e*P **P 16 14 05.6 -0.8**
VSR *e**PP pP 16 14 17.8 +1.9
VSR *e* 16 14 47.6
VSR *e*S **S 16 18 38.8 +1.7**
VSR pmax pmax
comp=N,40nm,1.2s
VSR pmax pmax
comp=E,270nm,1.2s
VSR pmax pmax
comp=Z,180nm,1.2s,mb5.5
VSR pmax pmax
comp=N,70nm,1.5s
VSR pmax pmax
comp=E,180nm,1.5s
VSR pmax pmax
comp=Z,160nm,1.5s,mb5.3
VSR smax
comp=N,50nm,1.1s
VSR smax
comp=E,40nm,1.1s
VSR smax
comp=Z,10.0nm,1.1s
VSR MLR MLR
comp=N,800nm,17.0s,MS4.8
VSR MLR MLR
comp=E,2µm,17.0s,MS4.8
VSR MLR MLR
comp=Z,3µm,17.0s,MS4.9
CD2 Chengdu 26.35 99 PKPbc **P 16 13 59.3 -7.4**
CD2 Chengdu 26.35 99 P **P 16 14 09.4 +2.7**
CD2 S **S 16 18 36.8 -0.8**
CD2 pmax pmax
comp=Z,80nm,1.1s,mb5.2
CD2 pmax pmax
comp=Z,210nm,4.7s
CD2 LR LR
comp=N,2µm,14.3s
CD2 LR LR
comp=Z,2µm,13.7s,MS4.7
ANN Anapa 26.85 293 *e*P **P 16 14 10.6 -0.4**
ANN *e**PP pP 16 14 24.2 +3.7
ANN *e*S **S 16 18 42.6 -2.6**
ANN *e*SS 16 19 58.0
ANN pmax pmax
comp=Z,113nm,1.3s,mb5.2
ANN Anapa 26.85 293 *i* P **P 16 14 10.9 -0.1**
MOS Moscow 28.51 317 *e*P **P 16 14 25.0 -0.8**
MOS *e* 16 15 15.3
MOS pmax pmax
comp=Z,213nm,1.4s,mb5.7
MOS pmax pmax
comp=Z,300nm,1.5s,mb5.8
MOS MLR MLR
comp=Z,3µm,16.0s,MS5.0
MOS MLR MLR
comp=E,3µm,18.0s
KMI Kunming 28.68 111 P **P 16 14 28.7 +1.1**
KMI pP pP 16 14 37.8 +0.6
KMI sP sP 16 14 41.6 +0.4
KMI PP PP 16 15 21.9 -11
KMI S **S 16 19 14.6 +0.2**
KMI sS sS 16 19 30.8 +0.6
KMI pmax pmax
comp=Z,11nm,1.7s,mb4.3
KMI pmax pmax
comp=Z,110nm,3.5s
KMI LR LR
comp=N,790nm,17.1s,MS4.4
KMI LR LR
comp=E,510nm,21.7s,MS4.4
OBN Obninsk 28.88 315*d i*P **P 16 14 28.7 -0.4**
OBN *e* 16 15 25.3
OBN *e* 16 17 37.3
OBN *i* S **S 16 19 18.2 +1.2**
OBN pmax pmax
comp=Z,143nm,1.6s,mb5.5
OBN MLR MLR
comp=Z,1µm,16.0s,MS4.5
OBN Obninsk 28.88 315 *e*P **P 16 14 27.2 -1.9**
comp=Z,236nm,1.5s,mb5.7
SIM Simferopol' 29.20 294 *e*P **P 16 14 34.0 +2.0**
SIM *e* 16 15 23.0
SIM *e*S **S 16 19 27.0 +4.8**
SIM 16 25 06.0
SIM pmax pmax
comp=Z,67nm,0.9s,mb5.4
HHC Hu-ho-hao-te 29.24 75 *e*P **P 16 14 32.0 -0.4**
HHC pP pP 16 14 45.0 +3.0
HHC sP sP 16 14 51.1 +5.1
HHC PP PP 16 15 27.5 -11
HHC PcP PcP 16 17 38.3 -0.5
HHC S **S 16 19 19.5 -3.4**
HHC sS sS 16 19 41.5 +2.8
HHC SS SS 16 20 49.7 -38
HHC ScP ScP 16 21 15.4 -2.5
HHC PcS PcS 16 21 20.2 -1.4
HHC ScS ScS 16 25 08.8 -3.3
HHC pmax pmax
comp=Z,21nm,0.5s,mb5.1
HHC pmax pmax
comp=Z,160nm,5.0s
HHC LR LR
comp=N,1µm,12.4s,MS4.7
HHC LR LR
comp=E,600nm,12.4s,MS4.7
HHC LR LR
comp=Z,590nm,12.4s,MS4.4

ASF Jabal al Asfar 30.13 267 P **P 16 14 41.9 +1.6**
comp=Z,4.8nm,0.9s,mb4.2,baz=10,slow=2.6,SNR=7.3
ASF PP PP 16 15 34.1 -14
comp=Z,2.4nm,0.7s,baz=209,slow=5.8,SNR=4.1
ASF LR LR 16 27 59.9
comp=Z,270nm,21.3s,MS3.9,baz=126,slow=39
ASF Jabal al Asfar 30.13 267 P **P 16 14 41.9 +1.5**
ASF 16 15 34.1
ASF pmax pmax
comp=Z,5.0nm,0.9s
ASF pmax pmax
comp=Z,2.0nm,0.7s
ASF MLR MLR
comp=Z,270nm,21.3s
CHRT Chiangrai 30.13 123 P **P 16 14 39.0 -1.5**
comp=Z,263nm,0.7s,mb6.1
BR131 Keskin Array S 30.26 283 *e*P **P 16 14 41.2 -0.3**
comp=Z,12nm,0.7s,mb4.8
BRTR Keskin Array B 30.26 283 P **P 16 14 41.0 -0.5**
comp=Z,23nm,0.9s,mb4.9,baz=97,slow=5.2,SNR=88
BRTR Keskin Array B 30.26 283 P **P 16 14 41.0 -0.5**
BRTR pmax pmax
comp=Z,23nm,0.9s
CHG Chiang Mai 30.36 125⇓P **P 16 14 41.9 -0.7**
comp=Z,14nm,0.7s,mb4.8
CHTO Chiang Mai 30.36 125 *e*P **P 16 14 41.1 -1.5**
CHTO pmax pmax
comp=Z,13nm,0.9s,mb4.7
CHTO Chiang Mai 30.36 125 *e*P **P 16 14 41.1 -1.4**
comp=Z,13nm,0.9s,mb4.7
CHTO Chiang Mai 30.36 125 P **P 16 14 46.1 +3.5**
comp=Z,17nm,0.9s,mb4.8
CIT Chita 30.44 52 *e*P **P 16 14 44.4 +1.5**
CM31 Chiang Mai Arr 30.63 126 *e*P **P 16 14 43.2 -1.7**
comp=Z,12nm,0.8s,mb4.8
CMAR Chiang Mai Arr 30.63 126 P **P 16 14 45.0 +0.1**
comp=Z,0.7nm,0.3s,mb3.9,baz=312,slow=8.3,SNR=56
CMAR Chiang Mai Arr 30.63 126 P **P 16 14 45.0 +0.1**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
GYA Guiyang 30.80 105⇑*i*P **P 16 14 47.2 +0.8**
GYA PP PP 16 15 50.4 -5.8
GYA S **S 16 19 47.3 -0.4**
GYA ScP ScP 16 21 22.4 -0.8
GYA SS SS 16 21 31.0 -29
GYA pmax pmax
comp=Z,30nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,150nm,4.9s
GYA LR LR
comp=N,800nm,15.5s,MS4.6
GYA LR LR
comp=E,740nm,16.3s,MS4.6
GYA LR LR
comp=Z,840nm,15.9s,MS4.5
MMAI Mount Meron Ar 30.94 270 P **P 16 14 48.1 +0.5**
comp=Z,2.0nm,0.7s,mb4.1,baz=64,slow=13,SNR=3.7
MMAI PcP PcP 16 17 43.4 0.0
comp=Z,12nm,0.9s,baz=68,slow=5.5,SNR=6.9
MMAI LR LR 16 29 49.7
comp=Z,271nm,18.0s,MS4.0,baz=40,slow=41
BDT Bhumibol Dam 31.58 127 P **P 16 14 53.0 -0.3**
AKASG Malin Array Be 32.50 305 P **P 16 15 00.4 -0.6**
comp=Z,6.9nm,0.4s,mb4.8,baz=83,slow=7.2,SNR=34
AKASG PcP PcP 16 17 46.8 -0.4
comp=Z,3.9nm,0.6s,baz=84,slow=2.6,SNR=6.4
AKASG LR LR 16 30 40.4
comp=Z,916nm,19.1s,MS4.5,baz=75,slow=41
AKASG Malin Array Be 32.50 305 P **P 16 15 00.4 -0.6**
AKASG 16 17 46.8
AKASG pmax pmax
comp=Z,7.0nm,0.4s
AKASG pmax pmax
comp=Z,4.0nm,0.6s
AKASG MLR MLR
comp=Z,916nm,19.1s
AKASG Malin Array Be 32.50 305 P **P 16 15 00.4 -0.6**
AKASG PcP PcP 16 17 46.8 -0.4
AKASG LR LR 16 30 40.4
AKBB Malin Array Si 32.50 305 *e*P **P 16 14 59.0 -2.0**
KIEV Kiev 32.51 305 *e*P **P 16 14 58.9 -2.2**
KIEV pmax pmax
comp=Z,36nm,0.8s,mb5.3
KIEV Kiev 32.51 305 *e*P **P 16 14 58.9 -2.2**
comp=Z,36nm,0.8s,mb5.3
EIL Elat 32.72 264 P **P 16 15 04.8 +1.5**
comp=Z,12nm,0.9s,mb4.8,baz=15,slow=4.2,SNR=7.8
EIL LR LR 16 31 00.2
comp=Z,787nm,18.6s,MS4.4,baz=270,slow=41
KIS Kishinev 32.77 298 *e*P **P 16 15 01.0 -2.5**
KIS *e*S **S 16 20 20.0 +1.9**
KIS LRM 16 32 20.0
comp=Z,2µm,16.0s
KIS Kishinev 32.77 298 *e*P **P 16 15 01.0 -2.5**
KIS *e* 16 16 10.0
KIS *e*S **S 16 20 20.0 +1.9**
KIS MLR MLR
comp=Z,1µm,15.0s,MS4.8
KIS MLR MLR
comp=E,1µm,17.0s
KIS MLR MLR
comp=Z,2µm,16.0s
BJI Beijing 32.85 75 P **P 16 15 04.1 -0.1**
BJI pP pP 16 15 14.6 +0.8
BJI sP sP 16 15 19.3 +1.5
BJI PcP PcP 16 17 49.2 +0.8
BJI S **S 16 20 19.3 0.0**
BJI sS sS 16 20 37.5 +2.3
BJI ScP ScP 16 21 29.4 -0.5
BJI pmax pmax
comp=Z,38nm,0.7s,mb5.4
BJI LR LR
comp=N,960nm,18.8s,MS4.6
BJI LR LR
comp=E,470nm,19.9s,MS4.6
BJI LR LR
comp=Z,300nm,17.7s,MS4.0
ISP Isparta 33.09 281 *e*P **P 16 15 07.7 +1.3**
ISP Isparta 33.09 281 *e*P **P 16 15 07.7 +1.3**
CFR Carcaliu 33.40 295⇑P **P 16 15 09.8 +0.8**
CFR Carcaliu 33.40 295⇑*i*P **P 16 15 09.8 +0.8**
NST Nakhon Sawan 33.47 128 P **P 16 15 10.0 +0.1**
PUL Pulkovo 33.52 321⇓*e*P **P 16 15 10.2 +0.3**
PUL pmax pmax
comp=Z,262nm,0.8s,mb6.2
PUL Pulkovo 33.52 321⇓*e*P **P 16 15 10.3 +0.4**
MICGM Minsk 33.66 312 *e* **P 16 15 10.0 -1.1**
MNK Minsk 33.69 312 *e*P **P 16 15 10.0 -1.4**
MNK MLR MLR
comp=Z,5µm,14.0s,MS5.4
JOF Joensuu 34.18 327 *e*P **P 16 15 14.1 -1.5**
JOF pmax pmax
comp=Z,78nm,0.9s,mb5.6
JOF Joensuu 34.18 327 *e*p **P 16 15 14.1 -1.5**
comp=Z,78nm,0.9s,mb5.6
TESR 34.30 297⇓*i*P **P 16 15 17.3 +0.5**
VRI Vrincioaia 34.31 296⇑P **P 16 15 17.8 +0.9**
VRI Vrincioaia 34.31 296 P **P 16 15 18.1 +1.2**
VRI Vrincioaia 34.31 296⇑*i*P **P 16 15 17.8 +0.9**
PLOR Plostina 34.37 296⇑P **P 16 15 17.9 +0.5**
PLOR Plostina 34.37 296⇑*i*P **P 16 15 17.9 +0.5**
IDID Didziasalis 34.42 313 *e*P **P 16 15 17.9 +0.2**
IDID AMB AMB 16 15 20.2
comp=Z,18nm,1.3s,mb4.8
WHN Wuhan 34.66 92⇑P **P 16 15 22.3 +2.2**
WHN LR LR
comp=N,1µm,14.5s,MS4.9
WHN LR LR
comp=E,580nm,12.2s,MS4.9
WHN LR LR
comp=Z,2µm,16.2s,MS4.9
IIGN Ignalina 34.72 313 *e*P **P 16 15 20.5 +0.2**
IZAR Žarasai 34.76 314 *e*P **P 16 15 20.7 +0.1**
IZAR AMB AMB 16 15 24.7
comp=Z,30nm,1.4s,mb5.0
ISAL Salakas 34.80 313 *e*P **P 16 15 20.9 -0.2**
ISAL AMB AMB 16 15 23.6
comp=Z,21nm,1.5s,mb4.8
MLR Muntele Rosu 34.90 296 P **P 16 15 23.7 +1.7**
comp=Z,42nm,0.8s,mb5.4,baz=90,slow=4.7,SNR=44
MLR PP PP 16 16 36.9 -4.4
comp=Z,22nm,1.1s,baz=44,slow=9.4,SNR=3.7
MLR Muntele Rosu 34.90 296 P **P 16 15 23.7 +1.7**
MLR 16 16 36.9
MLR pmax pmax
comp=Z,42nm,0.8s
MLR pmax pmax
comp=Z,22nm,1.1s
MLR Muntele Rosu 34.90 296 P **P 16 15 23.8 +1.8**
MLR Muntele Rosu 34.90 296⇑*i*P **P 16 15 22.6 +0.6**
JMB Yambol 34.93 290 *i* P **P 16 15 23.4 +1.1**
VSU Vasula 34.97 318 *i* P **P 16 15 22.0 -0.4**
VSU Vasula 34.97 318 *i* P **P 16 15 22.0 -0.4**
BUR01 Bucovina Ar. S 35.18 299 P **P 16 15 25.0 +0.6**
BUR4R Bucovina Array 35.18 299⇑P **P 16 15 25.1 +0.7**
BUR4R Bucovina Array 35.18 299⇑*i*P **P 16 15 25.1 +0.7**
BUR08 Bucovina Ar. S 35.19 299 *e*P **P 16 15 23.4 -1.1**
SZH Strazhica 35.25 292 *i* P **P 16 15 34.8 +10**
LVZ Lovozero 35.34 336 P **P 16 15 26.5 +1.0**
comp=Z,907nm,0.9s,SNR=9.6
LVZ Lovozero 35.34 336*d i*P **P 16 15 25.5 0.0**
LVZ pmax pmax
comp=Z,162nm,1.0s,mb5.9
LVZ Lovozero 35.34 336 *i* P **P 16 15 25.6 +0.1**
VOIR 35.53 296⇑P **P 16 15 27.9 +0.5**
VOIR 35.53 296 P **P 16 15 28.4 +1.0**
VOIR 35.53 296⇑*i*P **P 16 15 27.9 +0.5**
APA Apatity 35.57 335⇓*i*P **P 16 15 29.8 +2.4**
APA *i* 16 16 52.0
APA *e* 16 17 52.0
APA *e*S **S 16 20 58.0 -2.7**
APA *e*SS SS 16 23 22.0 -14
APA pmax pmax
comp=Z,18nm,1.2s,mb4.9
APA MLR MLR
comp=Z,5µm,12.0s,MS5.5
NNT Nongplab 35.65 131 P **P 16 15 30.5 +1.8**
ALN Alexandroupoli 35.66 288 P **P 16 15 29.2 +0.6**
ALN Alexandroupoli 35.66 288 P **P 16 15 29.2 +0.6**
LVV L'vov 35.83 303⇑*i*P **P 16 15 29.6 -0.3**
LVV *e* 16 16 45.6
LVV *e*S **S 16 21 00.0 -5.1**
LVV MLR MLR
comp=Z,2µm,16.0s,MS4.9
LVV MLR MLR
comp=N,300nm,15.0s,MS4.9
LVV MLR MLR
comp=E,2µm,16.0s,MS4.9
PRK Paraskevi 35.91 285 *e*P **P 16 15 30.5 -0.2**
SMG Samos 35.92 282 *e*P sP 16 15 50.5 +6.0
RDO Rodhopi 35.97 288 P **P 16 15 32.0 +0.7**
RDO Rodhopi 35.97 288 *e*P **P 16 15 30.5 -0.8**
RDO Rodhopi 35.97 288 P **P 16 15 32.0 +0.7**
FINES FINESS Array B 36.01 323 P **P 16 15 30.2 -1.1**
comp=E,57nm,0.8s,mb5.6,baz=108,slow=8.6,SNR=52
FINES LR LR 16 31 06.2
comp=E,2µm,18.8s,MS5.0,baz=110,slow=38
FINES FINESS Array B 36.01 323 P **P 16 15 30.2 -1.1**
FINES pmax pmax
comp=Z,57nm,0.8s
FINES MLR MLR
comp=Z,2µm,18.8s
KAF Kangasniemi 36.09 324 *e*P **P 16 15 31.4 -0.6**
KAF pmax pmax
comp=Z,51nm,0.9s,mb5.5
KAF Kangasniemi 36.09 324 *e*P **P 16 15 31.4 -0.6**
comp=Z,51nm,0.9s,mb5.5
KAF Kangasniemi 36.09 324 *e*p **P 16 15 31.4 -0.6**
comp=Z,51nm,0.9s,mb5.5
CHOS Chios island 36.31 284 P **P 16 15 34.9 +0.7**
BMR Baia Mare 36.33 300 P **P 16 15 35.5 +1.3**
SUW Suwalki 36.36 310 *e*P **P 16 15 35.8 +1.4**
SUW *e*PP PP 16 16 58.9 +1.6
SUW *e*S **S 16 21 07.8 -5.4**
SUW LMZ 16 31 25.7
comp=Z,2µm,19.1s
SUW Suwalki 36.36 310⇑*e*P **P 16 15 35.8 +1.4**
SUW *e*PP PP 16 16 58.9 +1.6
SUW *e*S **S 16 21 07.8 -5.4**
RZN Rozhen 36.45 289 *i* P **P 16 15 36.3 +1.0**
LIA Limnos Island 36.54 286 P **P 16 15 36.5 +0.3**
LIA Limnos Island 36.54 286 *e*P **P 16 15 36.5 +0.3**
LIA Limnos Island 36.54 286 P **P 16 15 36.5 +0.3**
PGB Panagyurishte 36.66 291 *i* P **P 16 15 38.3 +1.2**
KWP Kalwaria Pacla 36.69 303 *e*P **P 16 15 38.0 +0.7**
KWP *e*PP PP 16 16 54.8 -6.2
KWP *e*S **S 16 21 13.8 -4.5**
KWP LMZ 16 33 57.0
comp=Z,2µm,16.0s
KWP Kalwaria Pacla 36.69 303 *e*P **P 16 15 38.0 +0.7**
KWP *e*PP PP 16 16 54.8 -6.2
KWP *e*S **S 16 21 13.8 -4.6**
KWP Kalwaria Pacla 36.69 303⇑*i*P **P 16 15 37.7 +0.4**
TRPA Tarpa 36.93 300⇓*i*P **P 16 15 39.8 +0.5**
DRGR 36.96 298⇑P **P 16 15 40.3 +0.7**
DRGR 36.96 298 P **P 16 15 40.7 +1.1**
DRGR 36.96 298⇑*i*P **P 16 15 40.3 +0.7**
UZH Uzhgorod 37.04 301⇓*i*P **P 16 15 40.6 +0.3**
UZH *e* 16 17 07.4
UZH *e*S **S 16 21 21.0 -2.7**
UZH *e* 16 23 50.8
UZH MLR MLR
comp=N,300nm,15.0s,MS4.8
UZH MLR MLR
comp=E,1µm,15.0s,MS4.8
UZH MLR MLR
comp=Z,870nm,15.0s,MS4.7
APE Apeiranthos 37.11 282⇑*i*P **P 16 15 39.5 -1.5**
APE Apeiranthos 37.11 282⇑*i*P **P 16 15 41.5 +0.5**
GZR Gura Zlata 37.12 296 P **P 16 15 41.7 +0.7**
GZR Gura Zlata 37.12 296⇑*i*P **P 16 15 41.6 +0.6**
NVR Nevrokopi 37.15 289 *e*P **P 16 15 42.0 +0.7**
MMB Musomiste 37.19 290 *i* P **P 16 15 42.4 +0.7**
VTS Vitosha 37.34 291⇑P **P 16 15 43.4 +0.5**
VTS Vitosha 37.34 291 P **P 16 15 43.6 +0.7**
VTS Vitosha 37.34 291 P **P 16 15 43.6 +0.7**
VTS Vitosha 37.34 291 *i* P **P 16 15 43.4 +0.5**
VTS Vitosha 37.34 291⇑*i*P **P 16 15 43.4 +0.5**
NJ2 Nanjing 37.50 87 *e*P **P 16 15 45.2 +0.8**
NJ2 pP pP 16 15 57.1 +3.0
NJ2 sP sP 16 16 02.9 +4.8
NJ2 S **S 16 21 31.0 -0.1**
NJ2 sS sS 16 21 48.0 +1.0
NJ2 pmax pmax
comp=Z,20nm,0.8s,mb4.9
NJ2 pmax pmax
comp=Z,100nm,3.6s
NJ2 LR LR
comp=N,550nm,14.6s,MS4.6
NJ2 LR LR
comp=E,520nm,13.6s,MS4.6
NJ2 LR LR
comp=Z,630nm,16.5s,MS4.5
CRVS Cervenica-Dubn 37.56 302 *e*P **P 16 15 46.1 +1.4**
CRVS pmax pmax
comp=Z,11nm,1.0s,mb4.5
CRVS Cervenica-Dubn 37.56 302 *e*P **P 16 15 46.1 +1.4**
comp=Z,11nm,1.0s,mb4.5
CRVS *e*PP PP 16 16 58.0 -13
CRVS Cervenica-Dubn 37.56 302 *e*P **P 16 15 46.1 +1.4**
CRVS *e* 16 16 58.0
QIZ Qiongzhong 37.62 112 P **P 16 15 45.2 -0.3**
QIZ S **S 16 21 33.7 +0.7**
QIZ LR LR
comp=N,610nm,13.9s,MS4.6
QIZ LR LR
comp=E,280nm,14.7s,MS4.6
QIZ LR LR
comp=Z,940nm,14.7s,MS4.7
WAR Warsaw 37.64 307 *e*P **P 16 15 46.6 +1.2**
WAR Warsaw 37.64 307 *e*P **P 16 15 46.6 +1.3**
STHS Stebnicka Huta 37.66 303 *e*P **P 16 15 44.5 -1.0**
STHS *e* 16 17 20.1
STHS pmax pmax
comp=Z,12nm,0.7s,mb4.7
STHS Stebnicka Huta 37.66 303 *e*P **P 16 15 44.5 -1.0**
comp=Z,12nm,0.7s,mb4.7
STHS *e*PP PP 16 17 20.1 +8.4
STHS Stebnicka Huta 37.66 303 *e*P **P 16 15 44.5 -1.0**
STHS *e*PP PP 16 17 20.1 +8.4
PLG Polygyros 37.70 288 *e*P **P 16 15 46.5 +0.5**
SNY Shenyang 37.89 70⇑P **P 16 15 49.4 +1.9**
SNY S **S 16 21 38.6 +1.9**
SNY pmax pmax
comp=Z,19nm,0.5s,mb5.1
SNY LR LR
comp=N,250nm,11.4s,MS4.6
SNY LR LR

comp=E,520nm,12.3s,MS4.6
SNY LR LR

comp=Z,640nm,13.8s,MS4.6
BZS Buzias 37.89 297 ⇓P **P 16 15 47.9 +0.4**
BZS Buzias 37.89 297 P **P 16 15 48.1 +0.6**
BZS Buzias 37.89 297 ⇓*i*P **P 16 15 47.9 +0.4**
NEO Neokhori 38.16 286 *e*P **P 16 15 50.5 +0.6**
XOR Xorichti 38.17 286 P **P 16 15 50.3 +0.4**
XOR Xorichti 38.17 286 P **P 16 15 50.3 +0.4**
VLY Voula,Athens 38.17 284 *e*P **P 16 15 50.5 +0.5**
KECS Kecovo 38.25 301 *e*P **P 16 15 50.9 +0.4**
KECS pmax pmax

comp=Z,12nm,1.0s,mb4.6
KECS Kecovo 38.25 301 *e*P **P 16 15 50.9 +0.4**

comp=Z,12nm,1.0s,mb4.6
KECS Kecovo 38.25 301 *e*P **P 16 15 50.9 +0.4**
NIE Niedzica 38.27 303 *e*P **P 16 15 51.1 +0.5**
LKR Lokris 38.52 285 *e*P **P 16 15 53.0 +0.1**
OJC Ojcow 38.52 304 *e*P **P 16 15 50.1 -2.7**
OJC *e* 16 17 20.1
OJC *e*S **S 16 21 48.7 +2.6**
OJC MLR MLR

comp=Z,600nm,23.0s,MS4.3
KEV Kevo 38.68 336 *e*P **P 16 15 52.9 -1.0**
KEV pmax pmax

comp=Z,50nm,0.8s,mb5.3
KEV Kevo 38.68 336 *e*P **P 16 15 52.9 -1.0**

comp=Z,50nm,0.8s,mb5.3
KEV Kevo 38.68 336 *e*p **P 16 15 52.9 -1.0**

comp=Z,50nm,0.8s,mb5.3
PSZ Piszkesteto 38.71 300 ⇑P **P 16 15 54.7 +0.3**
PSZ Piszkesteto 38.71 300 *e*P **P 16 15 54.2 -0.2**

comp=Z,27nm,1.0s,mb4.9
PSZ Piszkesteto 38.71 300 ⇑*i*P **P 16 15 54.7 +0.3**
CN2 Changchun 38.78 66 *e*P **P 16 15 54.5 -0.5**
CN2 pmax pmax

comp=Z,10.0nm,0.6s,mb4.7
CN2 Changchun 38.78 66 *e*P **P 16 15 55.3 +0.3**
CN2 *e*pP pP 16 16 08.0 +3.2
CN2 *e*S **S 16 21 48.1 -2.1**
CN2 pmax pmax

comp=Z,10.0nm,0.5s,mb4.8
CN2 LR LR

comp=N,500nm,13.0s,MS4.7
CN2 LR LR

comp=E,500nm,13.0s,MS4.7
CN2 LR LR

comp=Z,400nm,16.0s,MS4.3
KARN Karanos 38.90 280 P **P 16 15 56.9 +0.8**
THL Klokotos Trika 38.98 287 *e*P **P 16 15 55.5 -1.3**
THL Klokotos Trika 38.98 287 P **P 16 15 56.5 -0.3**
ARCES ARCESS Array B 39.06 336 P **P 16 15 56.3 -0.7**

comp=Z,64nm,0.8s,mb5.4,baz=101,slow=6.3,SNR=82
ARCES LR LR 16 32 59.7

comp=Z,1μm,21.7s,MS4.6,baz=289,slow=38
ARCES ARCESS Array B 39.06 336 P **P 16 15 56.3 -0.7**
ARCES pmax pmax

comp=Z,64nm,0.8s
ARCES MLR MLR

comp=Z,1μm,21.7s
ARCES ARCESS Array B 39.06 336 P **P 16 15 56.3 -0.7**
ARCES LR LR 16 32 59.6
ARE0 ARCESS Array S 39.06 336 *e*P **P 16 15 56.5 -0.5**
FNA Florina 39.11 289 P **P 16 15 57.6 -0.2**
FNA Florina 39.11 289 P **P 16 15 57.6 -0.2**
DIVS Divibare 39.31 294 P **P 16 15 58.7 -0.7**
VYHS Vyhne 39.34 302 *e*P **P 16 16 00.0 +0.4**
VYHS *e* 16 17 34.0
VYHS pmax pmax

comp=Z,18nm,1.2s,mb4.7
VYHS Vyhne 39.34 302 *e*P **P 16 16 00.0 +0.4**

comp=Z,18nm,1.2s,mb4.7
VYHS *e*PP PP 16 17 34.0 +4.0
VYHS Vyhne 39.34 302 *e*P **P 16 16 00.0 +0.4**
VYHS *e*PP PP 16 17 34.0 +4.0
BUD Budapest 39.36 300⇓*e*P **P 16 15 55.0 -4.8**
VLX Vlachokerasia 39.39 284 *e*P **P 16 15 58.5 -1.7**
LAKA Lakka 39.41 285 P **P 16 16 00.1 -0.2**
UPR University Cam 39.54 285 *e*P **P 16 16 03.0 +1.6**
KOLL Kolacno 39.61 302 *e*P **P 16 16 02.4 +0.5**
KOLL Kolacno 39.61 302 *e*P **P 16 16 02.4 +0.5**
OKC Ostrava-Krasne 39.62 304 *e*P **P 16 16 02.1 +0.1**
OKC MLR MLR

comp=Z,800nm,15.6s,MS4.7
OKC Ostrava-Krasne 39.62 304 *e*P **P 16 16 02.1 +0.1**
OKC *e*PP PP 16 17 28.9 -4.2
OKC *e*S S 16 22 42.1 +39
OKC Ostrava-Krasne 39.62 304 *e*P **P 16 16 02.1 +0.1**
OKC *e*PP PP 16 17 28.9 -4.2
OKC *ex* x 16 22 42.1
OKC AMS AMS 16 35 40.0

comp=Z,800nm,15.6s
IVA Berane 39.65 293⇑*i*P **P 16 16 04.1 +1.8**
IVA Berane 39.65 293⇑*i*P **P 16 16 04.1 +1.8**
PVY Plav 39.67 292⇑*i*P **P 16 16 03.4 +1.0**
PVY Plav 39.67 292⇑*i*P **P 16 16 03.5 +1.0**
PKSM Moragy 39.83 298 ⇓P **P 16 16 04.0 +0.3**
PKSM Moragy 39.83 298⇓*i*P **P 16 16 04.0 +0.3**
GKP Gorka Klasztor 39.90 309 *e*P **P 16 16 04.5 +0.3**
GKP *e*PP PP 16 17 34.3 -1.8
GKP *e*S **S 16 22 01.6 -5.2**
GKP LMZ 16 35 26.2

comp=Z,3μm,18.0s
GKP Gorka Klasztor 39.90 309 *e*P **P 16 16 04.5 +0.2**
GKP *e*PP PP 16 17 34.3 -1.8
GKP *e*S **S 16 22 01.6 -5.2**
GKP LR LR

comp=Z,3μm,18.0s,MS5.2
PLE Pljevlja 39.90 293⇑*i*P **P 16 16 06.0 +1.6**
PLE Pljevlja 39.90 293⇑*i*P **P 16 16 06.0 +1.6**
MORC Moravsky Berou 40.02 304 ⇑P **P 16 16 05.5 +0.2**
MORC Moravsky Berou 40.02 304 *e*P **P 16 16 04.5 -0.7**

comp=Z,28nm,0.9s,mb5.0
MORC Moravsky Berou 40.02 304⇑*i*P **P 16 16 05.5 +0.2**
TTG Podgorica 40.22 292⇑*i*P **P 16 16 07.7 +0.7**
TTG Podgorica 40.22 292⇑*i*P **P 16 16 07.8 +0.7**
UPM Unac-Piva 40.28 293⇑*i*P **P 16 16 07.8 +0.3**
UPM Unac-Piva 40.28 293⇑*i*P **P 16 16 07.8 +0.3**
NKY Niksic 40.31 293⇑*i*P **P 16 16 07.8 0.0**
NKY Niksic 40.31 293⇑*i*P **P 16 16 07.9 +0.1**
ULC Ulcinj 40.34 291⇑*i*P **P 16 16 08.8 +0.7**
ULC Ulcinj 40.34 291⇑*i*P **P 16 16 08.8 +0.8**
BUM Brajici-Budva 40.51 292⇑*i*P **P 16 16 09.7 +0.3**
BUM Brajici-Budva 40.51 292⇑*i*P **P 16 16 09.8 +0.4**
ZST Bratislava 40.53 301 *e*P **P 16 16 10.2 +0.7**
ZST *e* 16 17 45.5
ZST pmax pmax

comp=Z,16nm,0.9s,mb4.7
ZST Bratislava 40.53 301 *e*P **P 16 16 10.2 +0.7**

comp=Z,16nm,0.9s,mb4.7
ZST *e*PP PP 16 17 45.5 +2.5
ZST Bratislava 40.53 301 *e*P **P 16 16 10.2 +0.7**
ZST *e*PP PP 16 17 45.5 +2.5
YAK Yakutsk 40.55 37 *e*P **P 16 16 07.9 -1.6**
YAK *e**PP pP 16 16 15.1 -4.1
YAK *e* 16 17 41.3
YAK *e* 16 18 08.8
YAK *e*PPP 16 18 10.0
YAK *e*S **S 16 22 16.8 +0.6**
YAK *e* 16 26 09.5
YAK pmax pmax

comp=N,2.0nm,1.2s
YAK pmax pmax

comp=Z,88nm,0.9s,mb5.4
YAK pmax pmax

comp=E,16nm,0.9s
YAK pmax pmax

comp=Z,80nm,3.2s
YAK smax

comp=E,136nm,4.3s
YAK smax

comp=N,59nm,2.9s
YAK MLR MLR

comp=N,107nm,13.0s,MS4.2
YAK MLR MLR

comp=Z,374nm,16.0s,MS4.3
YAK MLR MLR

comp=E,215nm,13.0s,MS4.2
YAK Yakutsk 40.55 37 *e*P **P 16 16 08.2 -1.3**

comp=E,91nm,0.9s,mb5.4
BRY Bratogost 40.61 293⇑*i*P **P 16 16 09.9 -0.4**
BRY Bratogost 40.61 293⇑*i*P **P 16 16 10.0 -0.3**
KSP Ksiaz 40.69 305 *e*P **P 16 16 10.9 +0.1**
KSP LMZ 16 36 17.8

comp=E,2μm,17.6s
KSP Ksiaz 40.69 305 *e*P **P 16 16 10.7 -0.1**
KSP *e* 16 17 41.0
KSP MLR MLR

comp=Z,2μm,17.6s,MS5.1
KSP Ksiaz 40.69 305 *e*P **P 16 16 10.7 -0.1**
KSP *e*PP PP 16 17 41.0 -3.7
KSP *e*S **S 16 22 06.5 -12**
KSP LR LR

comp=Z,2μm,17.6s,MS5.1
VRAC Vranov 40.69 303 P **P 16 16 11.7 +0.9**

comp=Z,22nm,0.8s,mb4.8,baz=75,slow=9.6,SNR=20
VRAC LR LR 16 35 01.1

comp=Z,606nm,21.5s,MS4.4,baz=82,slow=39
VRAC Vranov 40.69 303 ⇓P **P 16 16 11.1 +0.3**
VRAC Vranov 40.69 303⇓*i*P **P 16 16 11.1 +0.3**
DPC Dobruska-Polom 40.73 305 *e*P **P 16 16 10.4 -0.7**
DPC *e*S **S 16 22 27.2 +8.0**
DPC MLR MLR

comp=Z,800nm,18.2s,MS4.6
DPC Dobruska-Polom 40.73 305 *e*P **P 16 16 10.4 -0.7**
DPC *e*PP PP 16 17 36.1 -9.0
DPC *e*S **S 16 22 27.2 +8.0**
DPC LR LR

comp=Z,800nm,18.2s,MS4.6
DPC Dobruska-Polom 40.73 305 *e*P **P 16 16 10.4 -0.7**
DPC *e*PP PP 16 17 36.1 -9.0
DPC *e*S **S 16 22 27.2 +8.0**
DPC AMS AMS 16 36 10.0

comp=Z,800nm,18.2s
HCY Herceg Novi 40.76 292⇑*i*P **P 16 16 12.5 +1.0**
HCY Herceg Novi 40.76 292⇑*i*P **P 16 16 12.6 +1.1**
UPC Upice 40.91 305 *e*P **P 16 16 12.3 -0.3**
UPC *e*PP PP 16 17 40.4 -6.6
UPC Upice 40.91 305 *e*P **P 16 16 12.3 -0.3**
UPC *e*PP PP 16 17 40.4 -6.6
CONA Conrad Observa 41.39 301⇑*i*P **P 16 16 16.9 +0.3**

comp=Z,52nm,0.9s,mb5.2,SNR=24
INCN Inchon 41.41 75 *e*P **P 16 16 16.2 -0.6**

comp=Z,26nm,0.6s,mb5.0
TREC Trest 41.41 303 *e*P **P 16 16 17.4 +0.7**
TREC MLR MLR

comp=Z,1μm,17.6s,MS4.8
TREC Trest 41.41 303 *e*P **P 16 16 17.4 +0.7**
TREC AMS AMS 16 37 00.0

comp=Z,1μm,17.6s
MDJ Mudanjiang 41.51 64 P **P 16 16 17.1 -0.5**
MDJ pP pP 16 16 28.5 +1.1
MDJ sP sP 16 16 33.7 +2.3
MDJ PP PP 16 17 52.3 -1.4
MDJ PcP PcP 16 18 15.0 +0.3
MDJ ScP ScP 16 22 01.2 -1.0
MDJ PcS PcS 16 22 05.9 0.0
MDJ S **S 16 22 27.0 -3.9**
MDJ SS SS 16 25 34.2 -1.7
MDJ ScS ScS 16 26 17.5 -0.9
MDJ pmax pmax

comp=Z,9.0nm,1.3s,mb4.2
MDJ pmax pmax

comp=Z,70nm,4.8s
MDJ LR LR

comp=N,510nm,17.3s
MDJ LR LR

comp=E,260nm,10.5s
MDJ LR LR

comp=Z,360nm,13.6s,MS4.4
ARSA Arzberg 41.74 300⇑*i*P **P 16 16 19.5 0.0**

comp=Z,27nm,0.9s,mb4.9,SNR=11
HFS Hagfors 41.80 320 P **P 16 16 18.4 -1.4**

comp=Z,88nm,0.9s,mb5.4,baz=98,slow=11,SNR=53
HFS LR LR 16 34 35.5

comp=Z,2μm,18.8s,MS5.1,baz=98,slow=37
HFS Hagfors 41.80 320 P **P 16 16 18.4 -1.4**
HFS pmax pmax

comp=Z,88nm,0.9s
HFS MLR MLR

comp=Z,2μm,18.8s
PVCC Panska Ves 41.82 305 *e*P **P 16 16 20.4 +0.4**
PVCC *e* 16 17 54.3
PVCC MLR MLR

comp=Z,1μm,16.7s,MS4.8
PVCC Panska Ves 41.82 305 *e*P **P 16 16 20.4 +0.4**
PVCC *e*PP PP 16 17 54.3 -2.6
PVCC LR LR

comp=Z,1μm,16.7s,MS4.8
PVCC Panska Ves 41.82 305 *e*P **P 16 16 20.4 +0.4**
PVCC *e*PP PP 16 17 54.3 -2.6
PVCC AMS AMS 16 37 10.0

comp=Z,1μm,16.7s
PRU Pruhonice 41.91 304 *e*P **P 16 16 21.2 +0.4**
PRU *e* 16 18 01.2
PRU *e*S **S 16 22 45.3 +8.6**
PRU MLR MLR

comp=Z,1μm,15.4s,MS4.8
PRU Pruhonice 41.91 304 *e*P **P 16 16 21.2 +0.4**
PRU *e*PP PP 16 18 01.2 +3.3
PRU *e*S **S 16 22 45.3 +8.6**
PRU LR LR

comp=Z,1μm,15.4s,MS4.8
PRU Pruhonice 41.91 304 *e*P **P 16 16 21.2 +0.4**
PRU *e*PP PP 16 18 01.2 +3.3
PRU *ex* x 16 22 45.3
PRU AMS AMS 16 36 50.0

comp=Z,1μm,15.4s
KLR Kul'dur 42.04 57 *e*P **P 16 16 17.0 -4.9**
KLR pmax pmax

comp=E,40nm,1.6s
KLR pmax pmax

comp=Z,45nm,1.6s,mb4.8
KLR MLR MLR

comp=N,500nm,13.5s
KLR MLR MLR

comp=Z,700nm,13.5s,MS4.7
KULM Kulim 42.16 137 *e*P **P 16 16 23.4 +0.1**

comp=Z,27nm,1.0s,mb4.8
BRG Berggiesshubel 42.16 306 *e*P **P 16 16 22.3 -0.6**

comp=Z,35nm,1.0s,mb4.9
BRG *e*PP PP 16 18 04.2 +3.6
BRG Berggiesshubel 42.16 306 *i*P **P 16 16 22.7 -0.2**

comp=Z,27nm,0.8s,mb4.9
BRG *e* 16 16 42.1

comp=Z,10.0nm,1.0s
BRG PP PP 16 17 58.0 -2.6
BRG S **S 16 22 44.0 +3.6**
BRG SS SS 16 25 52.0 +3.5
BRG

comp=N,600nm,16.4s
BRG

comp=E,2μm,16.4s
BRG

comp=Z,1μm,18.6s
SOKA Soboth 42.19 299⇑*i*P **P 16 16 23.2 +0.1**

comp=Z,53nm,0.9s,mb5.2
BOJS Bojanci 42.29 298 *i*P **P 16 16 24.3 +0.3**
BOJS *i* 16 18 18.7
TIXI Tiksi 42.35 23 *e*P **P 16 16 23.6 -0.6**
TIXI *e*S **S 16 22 40.9 -1.8**
TIXI pmax pmax

comp=Z,33nm,0.7s,mb5.1
TIXI MLR MLR

comp=Z,587nm,17.0s,MS4.5
TIXI Tiksi 42.35 23 *e*P **P 16 16 23.6 -0.6**

comp=Z,32nm,0.8s,mb5.0
KSRS Korea Array 42.38 75 P **P 16 16 23.5 -1.3**

comp=Z,7.7nm,0.8s,mb4.4,baz=286,slow=7.4,SNR=25
KSRS PcP PcP 16 18 17.4 -0.3

comp=Z,2.8nm,0.9s,baz=296,slow=4.1,SNR=6.1
KSRS Korea Array 42.38 75 P **P 16 16 23.5 -1.3**
KSRS 16 18 17.4
KSRS pmax pmax

comp=Z,8.0nm,0.8s,mb4.4
KSRS pmax pmax

comp=Z,3.0nm,0.9s,mb3.9
MOA Molln 42.46 301⇑*i*P **P 16 16 24.9 -0.4**

comp=Z,28nm,0.9s,mb4.9,SNR=17
VISS Visnje 42.51 298 *i*P **P 16 16 26.0 +0.3**
VISS *i* 16 18 19.4
LJU Ljubljana 42.67 299 *e*P **P 16 16 26.8 -0.2**
LJU *e* 16 16 31.6
LJU *e* 16 16 41.5
KHC Kasperske Hory 42.67 303 *e*P **P 16 16 26.5 -0.5**
KHC *e*S **S 16 22 48.7 +0.8**
KHC MLR MLR

comp=Z,1μm,15.6s,MS4.8
KHC Kasperske Hory 42.67 303 *e*P **P 16 16 26.5 -0.5**
KHC *e*PP PP 16 17 59.8 -6.4
KHC *e*S **S 16 22 48.7 +0.8**
KHC LR LR

comp=Z,1μm,15.6s,MS4.8
KHC Kasperske Hory 42.67 303 *e*P **P 16 16 26.5 -0.5**
KHC *e*PP PP 16 17 59.8 -6.4
KHC *e*S **S 16 22 48.7 +0.8**
KHC AMS AMS 16 37 40.0

comp=Z,1μm,15.6s
CLL Collm 42.69 307 *e*P **P 16 16 25.9 -1.2**

comp=Z,29nm,1.0s,mb5.0
CLL *e*PP PP 16 18 08.4 +2.1
CLL Collm 42.69 307 *e*P **P 16 16 26.0 -1.1**
CLL *e**PP pP 16 16 39.0 +2.1
CLL *e*S **S 16 22 52.0 +3.9**
CLL pmax pmax

comp=Z,29nm,1.0s,mb5.0
CLL MLR MLR

comp=Z,2μm,19.7s,MS5.1
CLL Collm 42.69 307 *e*P **P 16 16 26.0 -1.1**

comp=Z,29nm,1.0s,mb5.0
CLL *e*pP pP 16 16 39.0 +2.1
CLL *e* 16 18 03.0
CLL *e*PP PP 16 18 08.0 +1.7

comp=Z,37nm,1.1s
CLL *e*pPP 16 18 18.0
CLL *e*S **S 16 22 52.0 +3.9**
CLL *e*SS SS 16 26 02.0 +3.1
CLL Lm 16 37 00.0

comp=Z,2μm,19.7s
CEY Cerknica 42.80 298 *i*P **P 16 16 28.4 +0.3**
JAVS Javornik 43.01 299 *i*P **P 16 16 30.0 +0.2**
JAVS *i* 16 18 18.6
IPM Ipoh 43.04 137 P **P 16 16 30.5 +0.1**

comp=Z,80nm,1.0s,mb5.4
NB2 NORSAR Subarra 43.05 321 P **P 16 16 28.3 -1.6**

comp=Z,68nm,0.8s,mb5.4,baz=90,slow=8.6
NOA NORSAR Array B 43.05 321 P **P 16 16 28.4 -1.5**

comp=Z,62nm,0.9s,mb5.3,baz=91,slow=8.1,SNR=51
NOA PP PP 16 18 10.1 +0.1

comp=Z,10nm,0.8s,baz=92,slow=11,SNR=5.2
NOA LR LR 16 35 14.3

comp=Z,2μm,19.6s,MS5.0,baz=90,slow=37
NOA NORSAR Array B 43.05 321 P **P 16 16 28.4 -1.5**
NOA 16 18 10.1
NOA pmax pmax

comp=Z,62nm,0.9s
NOA pmax pmax

comp=Z,10.0nm,0.8s
NOA MLR MLR

comp=Z,2μm,19.7s
VOY Vojsko 43.10 299 *e*P **P 16 16 29.6 -0.9**
VOY *e* 16 16 42.3
SSLB Suanglung 43.11 97 P **P 16 16 31.5 +0.6**
WET Wettzell 43.12 303 *e*P **P 16 16 30.0 -0.7**

comp=Z,38nm,1.0s,mb5.1
MYKA Terra Mystica 43.13 300⇓*i*P **P 16 16 30.6 -0.2**

comp=Z,19nm,0.9s,mb4.8
TANN Tannenbergstha 43.16 305 *e*P **P 16 16 30.7 -0.3**

comp=Z,24nm,1.1s,mb4.8
TANN *e*PP PP 16 18 14.0 +2.6
NKC Novy Kostel 43.20 305 *e*P **P 16 16 32.1 +0.8**
NKC *e* 16 18 14.2
NKC MLR MLR

comp=Z,1μm,16.0s,MS4.9
NKC Novy Kostel 43.20 305 *e*P **P 16 16 32.1 +0.8**
NKC *e*PP PP 16 18 14.2 +2.4
NKC Novy Kostel 43.20 305 *e*P **P 16 16 32.1 +0.8**
NKC *e*PP PP 16 18 14.2 +2.4
NKC AMS AMS 16 37 50.0

comp=Z,1μm,16.0s
NAO01 NORSAR Array S 43.21 321 *e*P **P 16 16 30.4 -0.8**

comp=Z,54nm,0.8s,mb5.3
KBA Koelnbreinsper 43.23 300⇑*i*P **P 16 16 30.8 -0.8**

comp=Z,34nm,0.9s,mb5.1,SNR=10
GUNZ Gunzen 43.26 305 *e*P **P 16 16 31.5 -0.2**

comp=Z,23nm,1.1s,mb4.8
WERD Werda 43.26 305 *e*P **P 16 16 31.7 0.0**

comp=Z,24nm,1.1s,mb4.8
TRI Trieste 43.26 298 *e*P **P 16 16 31.3 -0.6**
TRI pmax pmax

comp=Z,110nm,0.9s,mb5.6
TRI Trieste 43.26 298 *e*P **P 16 16 31.3 -0.5**

comp=Z,110nm,0.9s,mb5.6
MRLC Muro Lucano 43.40 291 P **P 16 16 34.6 +1.5**
PSI Prapat 43.40 141 P **P 16 16 33.0 -0.3**

comp=Z,20nm,0.9s,mb4.8,baz=329,slow=6.8,SNR=15
PSI Prapat 43.40 141 P **P 16 16 33.0 -0.3**
PSI pmax pmax

comp=Z,20nm,0.9s,mb4.8
RJOB Jochberg 43.46 301 *e*P **P 16 16 32.6 -0.8**

comp=Z,23nm,1.2s,mb4.8
RJOB *e*PP PP 16 18 15.5 +0.9
VLA Vladivostok 43.50 65⇓*e*P **P 16 16 33.0 -0.8**
VLA pmax pmax

comp=Z,30nm,1.0s,mb5.0
VLA Vladivostok 43.50 65⇓*e*P **P 16 16 33.1 -0.7**
MOX Moxa 43.66 306 *e*P **P 16 16 34.2 -0.8**

comp=Z,1.0nm,18.0s
MOX *e*PP PP 16 18 20.6 +3.9
MOX

comp=Z,1μm,18.0s
MOX Moxa 43.66 306 *e*P **P 16 16 34.4 -0.6**

comp=Z,25nm,1.0s,mb4.9
MOX *e*PP PP 16 18 17.2 +0.5
FVI Forni Avoltri 43.72 300 P **P 16 16 35.8 +0.3**
KONO Kongsberg 43.87 319 *e*P **P 16 16 35.7 -0.9**
KONO pmax pmax

comp=Z,32nm,0.8s,mb5.1
KONO Kongsberg 43.87 319 *e*P **P 16 16 35.7 -0.9**

comp=Z,32nm,0.8s,mb5.1
CEL Celeste 43.92 287 *e*P **P 16 16 36.6 -0.7**

comp=Z,100nm,1.1s,mb5.5
BSEG Bad Segeberg 43.95 311 *e*P **P 16 16 36.6 -0.7**

comp=Z,60nm,1.4s,mb5.1
GRF Grafenberg Arr 44.08 305 *e*P **P 16 16 37.9 -0.5**

comp=Z,70nm,0.9s,mb5.4
GRF *e*L 16 37 24.1

comp=Z,689nm,18.8s
GRF Grafenberg Arr 44.08 305 *e*P **P 16 16 37.9 -0.5**
GRF pmax pmax

comp=Z,70nm,0.9s,mb5.4
GRF MLR MLR

comp=Z,700nm,18.8s,MS4.6
CLZ Clausthal 44.23 308 *e*P **P 16 16 39.4 -0.1**

comp=Z,19nm,1.2s,mb4.7
CLZ *e*PP PP 16 18 23.5 +0.8
CING Cingoli 44.26 295 P **P 16 16 40.6 +0.7**
WTTA Wattenberg 44.33 301⇑*i*P **P 16 16 39.8 -0.6**

comp=Z,61nm,1.1s,mb5.2,SNR=8.6
HABR Khabarovsk 44.33 57 *de*P **P 16 16 39.3 -1.1**
HABR *e* 16 18 22.3
HABR *e* 16 18 23.2
HABR *e*S **S 16 23 09.8 -2.4**
HABR *e**SS sS 16 23 33.8 +5.5
HABR *e*SS SS 16 26 31.0 0.0
HABR *e*SSS 16 27 14.7
HABR pmax pmax

comp=Z,35nm,1.6s,mb4.8
HABR pmax pmax

comp=E,37nm,1.9s
HABR pmax pmax

comp=N,22nm,1.8s
HABR MLR MLR

comp=Z,227nm,17.0s,MS4.2
FUR Furstenfeldbru 44.36 302 *e*P **P 16 16 41.1 +0.5**

comp=Z,90nm,0.9s,mb5.5
FUR *e*PP PP 16 18 23.6 -0.6
AQU L'Aquila 44.41 294 *e*P **P 16 16 41.4 +0.3**
AQU pmax pmax

comp=Z,62nm,1.0s,mb5.3
AQU L'Aquila 44.41 294 *e*P **P 16 16 41.4 +0.3**

comp=Z,62nm,1.0s,mb5.3
FSSB Fossombrone 44.46 296 P **P 16 16 42.2 +0.7**

comp=Z,32nm,0.9s,mb5.0
NRCA Norcia 44.47 295 P **P 16 16 43.1 +1.5**

comp=Z,56nm,1.0s,mb5.2
SNTG Esanatoglia 44.47 295 P **P 16 16 42.5 +0.9**

comp=Z,48nm,0.8s,mb5.3
UBBA Unterbreizbach 44.64 306 *e*P P **16 16 42.5 -0.3**
comp=Z,68nm,1.9s,mb5.2
UBBA *e*PP PP 16 18 25.0 -2.1
MOTA Moosalm 44.66 301 ‖ *i*P **P 16 16 41.5 -1.5**
comp=Z,33nm,0.9s,mb5.2,SNR=13
ASS Assisi 44.73 295 P **P 16 16 45.7 +2.0**
ASS pmax pmax
comp=Z,52nm,1.0s,mb5.3
ASS Assisi 44.73 295 P **P 16 16 45.7 +2.0**
comp=Z,52nm,1.0s,mb5.3
MURB Monte Urbino 44.76 295 P **P 16 16 45.9 +2.0**
BADI Badiali 44.89 296 P **P 16 16 46.9 +2.0**
SPITS Spitsbergen Ar 44.97 346 P **P 16 16 45.0 -0.1**
comp=Z,12nm,0.6s,mb4.9,baz=104,slow=10,SNR=27
SPITS Spitsbergen Ar 44.97 346 P **P 16 16 45.0 -0.2**
SPITS pmax pmax
comp=Z,12nm,0.6s
FETA Feichten 44.99 301 ⇑ *i*P **P 16 16 45.0 -0.7**
comp=Z,24nm,1.1s,mb5.0,SNR=9.0
VAE Valguarnera 45.30 287 P **P 16 16 49.3 +1.0**
comp=Z,12nm,0.3s,mb5.2,baz=213,slow=8.3,SNR=3.0
VAE Valguarnera 45.30 287 P **P 16 16 49.3 +1.0**
SEI Scarperia 45.35 297 P **P 16 16 51.3 +2.7**
comp=Z,226nm,0.8s,mb6.0
MNSI Mandailing Nat 45.46 141 P **P 16 16 49.8 0.0**
comp=Z,82nm,0.8s,mb5.6
DAVA Damuels 45.48 301 ⇑ *i*P **P 16 16 49.1 -0.5**
comp=Z,109nm,1.1s,mb5.6,SNR=17
STU Stuttgart 45.58 304 *e*P **P 16 16 50.2 -0.1**
comp=Z,42nm,0.9s,mb5.4
STU Stuttgart 45.58 304 *e*P **P 16 16 50.4 +0.1**
STU pmax pmax
comp=Z,42nm,0.9s,mb5.4
STU Stuttgart 45.58 304 *e*P **P 16 16 50.4 +0.1**
comp=Z,42nm,0.9s,mb5.4
DAVOX Davos/Dischmat 45.61 301 P **P 16 16 50.6 0.0**
comp=Z,30nm,0.6s,mb5.4,baz=100,slow=3.9,SNR=32
DAVOX LR LR 16 40 14.7
comp=Z,580nm,18.2s,MS4.6,baz=86,slow=42
TOD Tromm 45.64 305 *e*P **P 16 16 51.4 +0.6**
TNS Taunus Mts 45.73 306 *e*P **P 16 16 51.2 -0.3**
comp=Z,19nm,1.1s,mb4.9
IBBN Ibbenburen 45.73 309 *e*P **P 16 16 51.0 -0.5**
comp=Z,61nm,1.2s,mb5.4
VLC Villacollemand 45.99 297 *e*P **P 16 16 55.0 +1.4**
comp=Z,84nm,0.9s,mb5.7
SPAK Spaichingen-Ko 46.00 303 *e*P **P 16 16 54.4 +0.8**
TUE Stuetta 46.05 301 *e*P **P 16 16 52.8 -1.2**
comp=Z,25nm,0.9s,mb5.2
KBS Kingsbay 46.07 346 *d i*P **P 16 16 54.5 +0.6**
KBS pmax pmax
comp=Z,59nm,1.0s,mb5.5
KBS Kingsbay 46.07 346 *e*P **P 16 16 54.3 +0.5**
comp=Z,101nm,1.3s,mb5.6
BUG Bochum-Univer 46.20 308 *e*P **P 16 16 54.9 -0.3**
comp=Z,40nm,1.2s,mb5.2
BFO Black Forest 46.24 303 P **P 16 16 55.0 -0.5**
comp=Z,138nm,1.0s,mb6.3,SNR=8.1
BFO Black Forest 46.24 303 *e*P **P 16 16 54.7 -0.8**
comp=Z,27nm,1.0s,mb5.1
LANF Langenberg 46.42 304 *e*P **P 16 16 56.8 -0.1**
FELD Feldberg im Sc 46.56 303 *e*P **P 16 16 58.2 +0.1**
BKNI Bangkinang 46.59 140 P **P 16 16 59.0 +0.4**
comp=Z,82nm,0.9s,mb5.6
MYKOM Kota Tinggi 46.81 136 P **P 16 17 01.9 +1.6**
comp=Z,42nm,1.1s,mb5.3
CDF Champ du Feu 46.90 304 *e*P **P 16 17 00.2 -0.5**
comp=Z,43nm,0.9s,mb5.1
CDF Champ du Feu 46.90 304 *e*P **P 16 17 00.2 -0.5**
CDF pmax pmax
comp=Z,21nm,0.9s,mb5.1
CDF Champ du Feu 46.90 304 *e*P **P 16 17 00.2 -0.5**
comp=Z,21nm,0.9s,mb5.1
PPI Padang Panjang 46.95 141 P **P 16 17 01.7 +0.3**
comp=Z,3µmcomp=Z,37nm,1.1s,mb5.2
ECH Echery 47.02 303 *e*P **P 16 17 01.7 0.0**
ECH Echery 47.02 303 *e*P **P 16 17 01.0 -0.7**
ECH pmax pmax
comp=Z,22nm,1.3s,mb4.9
ECH Echery 47.02 303 *e*P **P 16 17 01.0 -0.6**
comp=Z,22nm,1.3s,mb4.9
MOF Molkenrain 47.14 303 *e*P **P 16 17 01.9 -0.7**
MEM Membach 47.16 307 P **P 16 17 03.6 +0.8**
comp=Z,15nm,1.5s,mb4.7
WLF Walferdange 47.30 306 P **P 16 17 04.5 +0.7**
comp=Z,34nm,1.3s,mb5.1
WLF Walferdange 47.30 306 *e*P **P 16 17 02.7 -1.1**
comp=Z,55nm,1.1s,mb5.4
WLF Walferdange 47.30 306 *e*P **P 16 17 02.9 -0.9**
WLF pmax pmax
comp=Z,113nm,1.4s,mb5.6
WLF Walferdange 47.30 306 *e*P **P 16 17 02.9 -1.0**
comp=Z,114nm,1.4s,mb5.6
BEBN Eben Emael 47.32 307 P **P 16 17 04.7 +0.8**
HINF Hinteralfeld 47.33 303 *e*P **P 16 17 03.5 -0.6**
comp=Z,59nm,1.0s,mb5.2
HINF Hinteralfeld 47.33 303 *e*P **P 16 17 03.5 -0.6**
HINF pmax pmax
comp=Z,29nm,1.0s,mb5.2
HINF Hinteralfeld 47.33 303 *e*P **P 16 17 03.5 -0.6**
comp=Z,29nm,1.0s,mb5.2
PDSI Padang 47.37 141 P **P 16 17 04.8 0.0**
comp=Z,93nm,1.1s,mb5.6
HAU Haudompre 47.60 303 *e*P **P 16 17 05.7 -0.5**
comp=Z,57nm,0.9s,mb5.3
HAU *e*MLR MLR
comp=Z,960nm,18.0s,MS4.5
HAU Haudompre 47.60 303 *e*P **P 16 17 05.7 -0.5**
HAU pmax pmax
comp=Z,29nm,0.9s,mb5.3
HAU MLR MLR
comp=Z,960nm,18.0s,MS4.8
HAU Haudompre 47.60 303 *e*P **P 16 17 05.7 -0.5**
comp=Z,29nm,0.9s,mb5.3
HAU LR LR
comp=Z,960nm,18.0s,MS4.8
BCLA Clavier 47.64 307 P **P 16 17 07.0 +0.5**
THEF They Montfort 47.78 304 *e*P **P 16 17 08.0 +0.5**
SAOF Saorge 47.98 298 *e*P **P 16 17 09.3 +0.1**
GIVF Givet 48.02 306 *e*P **P 16 17 09.4 0.0**
comp=Z,50nm,1.0s,mb5.2
GIVF Givet 48.02 306 *e*P **P 16 17 09.4 0.0**
GIVF pmax pmax
comp=Z,25nm,1.0s,mb5.2
GIVF Givet 48.02 306 *e*P **P 16 17 09.4 0.0**
comp=Z,25nm,1.0s,mb5.2
LPG La Plagne 48.06 300 *e*P **P 16 17 09.8 +0.1**
comp=Z,38nm,0.7s,mb5.2
LPG La Plagne 48.06 300 *e*P **P 16 17 09.8 +0.1**
LPG pmax pmax
comp=Z,19nm,0.7s,mb5.2
LPG La Plagne 48.06 300 *e*P **P 16 17 09.8 +0.1**
comp=Z,19nm,0.7s,mb5.2
LPL La Plagne 48.06 300 *e*P **P 16 17 09.8 0.0**
comp=Z,84nm,0.8s,mb5.5
LPL La Plagne 48.06 300 *e*P **P 16 17 09.8 0.0**
LPL pmax pmax
comp=Z,42nm,0.8s,mb5.5
LPL La Plagne 48.06 300 *e*P **P 16 17 09.8 0.0**
comp=Z,42nm,0.8s,mb5.5
AUTN L'Aution 48.07 298 *e*P **P 16 17 10.0 +0.2**
SBF Sospel 48.10 298 *e*P **P 16 17 10.1 0.0**
comp=Z,260nm,1.0s,mb5.9
SBF Sospel 48.10 298 *e*P **P 16 17 10.1 0.0**
SBF pmax pmax
comp=Z,130nm,1.0s,mb5.9
SBF Sospel 48.10 298 *e*P **P 16 17 10.1 0.0**
comp=Z,130nm,1.0s,mb5.9
LUCF Luceram 48.16 298 *e*P **P 16 17 11.1 +0.6**
DOU Dourbes 48.16 306 P **P 16 17 10.6 +0.1**
CABF La Chapelle 48.17 302 *e*P **P 16 17 11.0 +0.4**
comp=Z,76nm,1.2s,mb5.3
CABF La Chapelle 48.17 302 *e*P **P 16 17 11.0 +0.4**
CABF pmax pmax
comp=Z,38nm,1.2s,mb5.3
CABF La Chapelle 48.17 302 *e*P **P 16 17 11.0 +0.4**
comp=Z,38nm,1.2s,mb5.3
TOUF Mont Tournerai 48.18 298 *e*P **P 16 17 11.5 +0.8**
BNI Bardonecchia 48.24 299 *e*P **P 16 17 10.2 -1.0**
BNI pmax pmax
comp=Z,60nm,1.0s,mb5.6
BNI Bardonecchia 48.24 299 *e*P **P 16 17 10.2 -1.0**
comp=Z,60nm,1.0s,mb5.6
MBDF Montbardon 48.28 299 *e*P **P 16 17 11.8 +0.3**
comp=Z,87nm,0.8s,mb5.5
MBDF Montbardon 48.28 299 *e*P **P 16 17 11.8 +0.3**
MBDF pmax pmax
comp=Z,43nm,0.8s,mb5.5
MBDF Montbardon 48.28 299 *e*P **P 16 17 11.8 +0.3**
comp=Z,44nm,0.8s,mb5.5
MVIF Mont Vial 48.29 298 *e*P **P 16 17 12.5 +1.0**
MEZF Maizieres J'vi 48.30 304 *e*P **P 16 17 11.6 0.0**
comp=Z,87nm,0.9s,mb5.5
MEZF Maizieres J'vi 48.30 304 *e*P **P 16 17 11.6 0.0**
comp=Z,87nm,0.9s,mb5.8
BAIF Baives 48.41 306 *e*P **P 16 17 12.5 +0.1**
comp=Z,102nm,1.2s,mb5.4
BAIF Baives 48.41 306 *e*P **P 16 17 12.5 +0.1**
BAIF pmax pmax
comp=Z,51nm,1.2s,mb5.4
BAIF Baives 48.41 306 *e*P **P 16 17 12.5 +0.1**
comp=Z,51nm,1.2s,mb5.4
FRF La Foret Royal 48.74 298 *e*P **P 16 17 14.5 -0.6**
comp=Z,149nm,1.1s,mb5.6
FRF La Foret Royal 48.74 298 *e*P **P 16 17 14.5 -0.6**
FRF pmax pmax
comp=Z,74nm,1.1s,mb5.6
FRF La Foret Royal 48.74 298 *e*P **P 16 17 14.5 -0.6**
comp=Z,74nm,1.1s,mb5.6
ORIF Oris-en-Rattie 48.82 299 *e*P **P 16 17 15.7 0.0**
comp=Z,50nm,0.9s,mb5.2
ORIF *e*MLR MLR
comp=Z,1µm,17.2s,MS4.6
ORIF Oris-en-Rattie 48.82 299 *e*P **P 16 17 15.7 0.0**
ORIF pmax pmax
comp=Z,25nm,0.9s,mb5.2
ORIF Oris-en-Rattie 48.82 299 *e*P **P 16 17 15.7 0.0**
comp=Z,25nm,0.9s,mb5.2
LMR La Mourre 48.91 297 *e*P **P 16 17 15.9 -0.5**
comp=Z,83nm,1.1s,mb5.4
LMR La Mourre 48.91 297 *e*P **P 16 17 15.9 -0.5**
LMR pmax pmax
comp=Z,42nm,1.1s,mb5.4
LMR La Mourre 48.91 297 *e*P **P 16 17 15.9 -0.5**
comp=Z,42nm,1.1s,mb5.4
OCF Saint Nazaire 49.32 299 *e*P **P 16 17 20.1 +0.6**
OG26 St.-Nazaire-De 49.32 299 *e*P **P 16 17 20.1 +0.6**
SMRF Simiane la Rot 49.34 298 *e*P **P 16 17 19.3 -0.3**
comp=Z,74nm,1.0s,mb5.4
SMRF Simiane la Rot 49.34 298 *e*P **P 16 17 19.3 -0.3**
comp=Z,74nm,1.0s,mb5.7
LOR Lormes 49.43 303 *e*P **P 16 17 19.1 -1.1**
comp=Z,30nm,0.9s,mb5.0
LOR *e*MLR MLR
comp=Z,619nm,17.5s,MS4.4
LOR Lormes 49.43 303 *e*P **P 16 17 19.1 -1.1**
LOR pmax pmax
comp=Z,15nm,0.9s,mb5.0
LOR MLR MLR
comp=Z,620nm,17.5s,MS4.7
LOR Lormes 49.43 303 *e*P **P 16 17 19.1 -1.1**
comp=Z,15nm,0.9s,mb5.0
LOR LR LR
comp=Z,620nm,17.5s,MS4.7
TREF Trevaresse 49.59 298 *e*P **P 16 17 22.7 +1.2**
SSB Saint Sauveur 49.60 300 *e*P **P 16 17 20.2 -1.4**
SSB Saint Sauveur 49.60 300 *e*P **P 16 17 21.0 -0.6**
SSB pmax pmax
comp=Z,29nm,1.0s,mb5.3
SSB Saint Sauveur 49.60 300 *e*P **P 16 17 21.0 -0.6**
comp=Z,29nm,1.0s,mb5.3
SMF Signal de Mont 49.63 302 *e*P **P 16 17 21.0 -0.8**
comp=Z,60nm,1.0s,mb5.3
SMF Signal de Mont 49.63 302 *e*P **P 16 17 21.0 -0.8**
SMF pmax pmax
comp=Z,30nm,1.0s,mb5.3
SMF Signal de Mont 49.63 302 *e*P **P 16 17 21.0 -0.8**
comp=Z,30nm,1.0s,mb5.3
GELF Grande-Etoile 49.64 298 *e*P **P 16 17 22.9 +1.0**
VIVF Saint-Julien-l 49.66 300 *e*P **P 16 17 21.7 -0.3**
comp=Z,50nm,0.9s,mb5.2
VIVF Saint-Julien-l 49.66 300 *e*P **P 16 17 21.7 -0.3**
VIVF pmax pmax
comp=Z,25nm,0.9s,mb5.2
VIVF Saint-Julien-l 49.66 300 *e*P **P 16 17 21.7 -0.3**
comp=Z,25nm,0.9s,mb5.2
SSF Saint Saulge 49.72 303 *e*P **P 16 17 21.5 -1.0**
comp=Z,42nm,1.0s,mb5.1
SSF Saint Saulge 49.72 303 *e*P **P 16 17 21.5 -1.0**
SSF pmax pmax
comp=Z,21nm,1.0s,mb5.1
SSF Saint Saulge 49.72 303 *e*P **P 16 17 21.5 -1.0**
comp=Z,21nm,1.0s,mb5.1
KEST Kesra 49.73 287 P **P 16 17 23.7 +1.0**
comp=Z,15nm,1.1s,mb4.9,baz=331,slow=1.1,SNR=22
KEST LR LR 16 44 32.5
comp=Z,94nm,18.1s,MS3.8,baz=197,slow=43
KEST Kesra 49.73 287 *e*P **P 16 17 23.1 +0.4**
YSS Yuzh-Sakhalins 49.75 57 *e*P **P 16 17 21.2 -1.5**
YSS pmax pmax
comp=Z,30nm,0.8s,mb5.4
YSS MLR MLR
comp=E,300nm,12.0s
YSS MLR MLR
comp=Z,300nm,12.0s,MS4.5
YSS Yuzh-Sakhalins 49.75 57 *e*P **P 16 17 22.0 -0.7**
comp=Z,21nm,0.8s,mb5.2
AVF Avril sur Loir 49.91 303 *e*P **P 16 17 23.1 -0.8**
comp=Z,126nm,1.0s,mb5.6
AVF Avril sur Loir 49.91 303 *e*P **P 16 17 23.1 -0.8**
AVF pmax pmax
comp=Z,63nm,1.0s,mb5.6
AVF Avril sur Loir 49.91 303 *e*P **P 16 17 23.1 -0.8**
comp=Z,63nm,1.0s,mb5.6
PLDF La Plantade 49.99 301 *e*P **P 16 17 24.6 0.0**
HYF Humbligny 50.22 303 *e*P **P 16 17 25.9 -0.3**
AGO Saint Agoulin 50.29 302 *e*P **P 16 17 26.4 -0.4**
BGF Bois d'Agland 50.31 302 *e*P **P 16 17 26.1 -0.9**
comp=Z,62nm,1.0s,mb5.3
BGF Bois d'Agland 50.31 302 *e*P **P 16 17 26.1 -0.9**
BGF pmax pmax
comp=Z,31nm,1.0s,mb5.3
BGF Bois d'Agland 50.31 302 *e*P **P 16 17 26.1 -0.9**
comp=Z,31nm,1.0s,mb5.3
MAJO Matsushiro 50.34 72 *e*P **P 16 17 25.6 -1.7**
MAJO pmax pmax
comp=Z,17nm,0.8s,mb5.1
MAJO Matsushiro 50.34 72 *e*P **P 16 17 25.6 -1.7**
comp=Z,16nm,0.8s,mb5.1
MAT Matsushiro 50.34 72 P **P 16 17 25.4 -1.9**
MJAR Matsushiro Arr 50.34 72 P **P 16 17 26.4 -1.0**
comp=Z,14nm,1.0s,mb4.9,baz=289,slow=9.6,SNR=19
MJAR ScP ScP 16 22 42.6 +3.6
comp=Z,0.3nm,0.5s,baz=286,slow=5.1,SNR=4.8
LASF Ste Croix 50.47 299 *e*P **P 16 17 28.1 -0.1**
comp=Z,118nm,1.0s,mb5.6
PYM Petit Puy Mans 50.47 301 *e*P **P 16 17 27.3 -0.9**
LBL Lubilhac 50.48 301 *e*P **P 16 17 27.2 -1.1**
KSM Kuching 50.77 129 *e*P **P 16 17 30.1 -0.7**
comp=Z,49nm,1.6s,mb5.2
KSM Kuching 50.77 129 P **P 16 17 32.5 +1.7**
comp=Z,17nm,1.2s,mb4.8
KSI Kapahiang 50.79 141 P **P 16 17 31.4 +0.5**
comp=Z,105nm,1.0s,mb5.7
MCD Coleburn Disti 50.81 318 P **P 16 17 29.1 -1.4**
MCD Coleburn Disti 50.81 318 *e*P **P 16 17 29.1 -1.4**
TCF Toulx Ste Croi 50.81 302 *e*P **P 16 17 30.4 -0.4**
comp=Z,68nm,1.0s,mb5.2
TCF Toulx Ste Croi 50.81 302 *e*P **P 16 17 30.4 -0.4**
TCF pmax pmax
comp=Z,34nm,1.0s,mb5.2
TCF Toulx Ste Croi 50.81 302 *e*P **P 16 17 30.4 -0.4**
comp=Z,34nm,1.0s,mb5.2
ESY Stoneypath 50.88 315 P **P 16 17 30.4 -0.7**
ESY Stoneypath 50.88 315 *e*P **P 16 17 30.4 -0.7**
SEY Seymchan 50.99 35 ⇑ *i*P **P 16 17 31.6 -0.2**
CWF Charnwood Fore 51.01 311 AMS AMS 16 43 38.4
comp=Z,786nm,15.9s,MS4.8
EBL Broad Law 51.16 315 P **P 16 17 32.7 -0.5**
EBL Broad Law 51.16 315 *e*P **P 16 17 32.7 -0.5**
SBUM Sibu 51.18 126 P **P 16 17 36.2 +2.3**
comp=Z,19nm,1.7s,mb4.8
EDI Edinburgh 51.19 315 AMS AMS 16 40 47.0
comp=Z,1µm,17.0s,MS5.0
EKA Eskdalemuir Ar 51.34 315 P **P 16 17 33.2 -1.4**
comp=Z,19nm,0.9s,mb5.0,baz=84,slow=7.9,SNR=25
EKA Eskdalemuir Ar 51.34 315 P **P 16 17 33.2 -1.4**
EKA pmax pmax
comp=Z,19nm,0.9s
EAU Auchinoon 51.36 315 P **P 16 17 34.3 -0.4**
EAU Auchinoon 51.36 315 *e*P **P 16 17 34.3 -0.4**
ECK Cauldkaine Hil 51.36 314 P **P 16 17 32.9 -1.8**
ECK Cauldkaine Hil 51.36 314 *e*P **P 16 17 32.9 -1.8**
ESK Eskdalemuir 51.37 315 AMS AMS 16 41 24.0
comp=Z,2µm,17.8s,MS5.1
ESK Eskdalemuir 51.37 315 *e*P **P 16 17 34.4 -0.4**
ESK pmax pmax
comp=Z,24nm,0.9s,mb5.1
ESK Eskdalemuir 51.37 315 *e*P **P 16 17 34.4 -0.4**
comp=Z,24nm,0.9s,mb5.1
CAF Calviac 51.38 301 *e*P **P 16 17 34.9 -0.1**
comp=Z,71nm,1.0s,mb5.2
CAF Calviac 51.38 301 *e*P **P 16 17 34.9 -0.1**
CAF pmax pmax
comp=Z,36nm,1.0s,mb5.3
CAF Calviac 51.38 301 *e*P **P 16 17 34.9 -0.1**
comp=Z,36nm,1.0s,mb5.2
WOL Wolverton 51.38 309 AMS AMS 16 41 51.0
comp=Z,2µm,17.9s,MS5.1
MDO Dochfour 51.42 318 P **P 16 17 34.2 -1.0**
MDO Dochfour 51.42 318 *e*P **P 16 17 34.2 -1.0**
LDF La Druitiere 51.55 306 *e*P **P 16 17 35.3 -1.0**
comp=Z,51nm,1.1s,mb5.1
LDF La Druitiere 51.55 306 *e*P **P 16 17 35.3 -1.0**
LDF pmax pmax
comp=Z,26nm,1.1s,mb5.1
LDF La Druitiere 51.55 306 *e*P **P 16 17 35.3 -1.0**
comp=Z,26nm,1.1s,mb5.1
RJF Les Rejaudoux 51.61 301 *e*P **P 16 17 36.8 +0.1**
comp=Z,53nm,1.0s,mb5.1
RJF *e*MLR MLR
comp=Z,531nm,18.5s,MS4.3
RJF Les Rejaudoux 51.61 301 *e*P **P 16 17 36.8 +0.1**
RJF pmax pmax
comp=Z,27nm,1.0s,mb5.1
RJF MLR MLR
comp=Z,530nm,18.5s,MS4.6
RJF Les Rejaudoux 51.61 301 *e*P **P 16 17 36.8 +0.1**
comp=Z,27nm,1.0s,mb5.1
RJF LR LR
comp=Z,530nm,18.5s,MS4.6
RSC Scourie 51.61 319 P **P 16 17 34.9 -1.6**
RSC Scourie 51.61 319 *e*P **P 16 17 34.9 -1.6**
SWN1 Swindon 51.66 310 AMS AMS 16 43 16.9
comp=Z,1µm,18.2s,MS5.0
EJON La Jonquera 51.71 297 P **P 16 17 37.6 0.0**
EAB Aberfoyle 51.75 316 P **P 16 17 37.0 -0.5**
EAB Aberfoyle 51.75 316 *e*P **P 16 17 37.0 -0.5**
MTLF Montolieu 51.84 299 *e*P **P 16 17 38.3 -0.2**
comp=Z,50nm,1.1s,mb5.1
MTLF Montolieu 51.84 299 *e*P **P 16 17 38.3 -0.2**
MTLF pmax pmax
comp=Z,25nm,1.1s,mb5.1
MTLF Montolieu 51.84 299 *e*P **P 16 17 38.3 -0.2**
comp=Z,25nm,1.1s,mb5.1
KAC Achnashellach 51.90 318 P **P 16 17 36.6 -2.0**
KAC Achnashellach 51.90 318 *e*P **P 16 17 36.6 -2.0**
FILF Fillols 51.90 298 *e*P **P 16 17 39.2 +0.3**
PGBU Glenifferbraes 51.93 316 AMS AMS 16 41 07.4
comp=Z,1µm,18.4s,MS4.9
KSB Sheil Bridge 52.04 317 P **P 16 17 38.8 -1.0**
KSB Sheil Bridge 52.04 317 *e*P **P 16 17 38.8 -1.0**
RRR Rubha Reidh 52.06 318 P **P 16 17 39.5 -0.4**
RRR Rubha Reidh 52.06 318 *e*P **P 16 17 39.5 -0.4**
GRR Gorron 52.08 306 *e*P **P 16 17 39.2 -1.0**
comp=Z,106nm,1.1s,mb5.4
GRR Gorron 52.08 306 *e*P **P 16 17 39.2 -1.0**
GRR pmax pmax
comp=Z,53nm,1.1s,mb5.4
GRR Gorron 52.08 306 *e*P **P 16 17 39.2 -1.0**
comp=Z,53nm,1.1s,mb5.4
KMBO Kilima Mbogo 52.10 228 P **P 16 17 40.8 +0.1**
comp=Z,17nm,1.0s,mb4.9,baz=25,slow=10,SNR=8.9
KMBO Kilima Mbogo 52.10 228 *i* P **P 16 17 42.0 +1.3**
KMBO pmax pmax
comp=Z,17nm,1.0s
KMBO Kilima Mbogo 52.10 228 *e*P **P 16 17 41.7 +0.9**
comp=Z,21nm,1.1s,mb5.0
KMBO Kilima Mbogo 52.10 228 P **P 16 17 42.1 +1.4**
SNR=5.8
KPL Plockton 52.12 318 P **P 16 17 38.2 -2.2**
KPL AMb AMB 16 17 42.0
comp=Z,69nm,3.3s
KPL AMS AMS 16 40 55.8
comp=Z,934nm,14.8s
KPL Plockton 52.12 318 *e*P **P 16 17 38.2 -2.2**
KPL AMb AMB 16 17 42.0
comp=Z,69nm,3.3s
KPL AMS AMS 16 40 55.8
comp=Z,934nm,14.8s,MS5.0
MCH1 Michaelchurch 52.22 311 P **P 16 17 40.2 -1.0**
MCH1 AMb AMB 16 17 44.8
comp=Z,69nm,2.0s,mb5.2
MCH1 AMS AMS 16 44 22.1
comp=Z,2µm,16.6s
MCH1 Michaelchurch 52.22 311 *e*P **P 16 17 40.2 -1.0**
MCH1 AMb AMB 16 17 44.8
comp=Z,69nm,2.0s,mb5.2
MCH1 AMS AMS 16 44 22.1
comp=Z,2µm,16.6s,MS5.1
MFF Saint Martin d 52.24 303 *e*P **P 16 17 40.4 -1.0**
comp=Z,70nm,1.1s,mb5.2
MFF Saint Martin d 52.24 303 *e*P **P 16 17 40.4 -1.0**
MFF pmax pmax
comp=Z,35nm,1.1s,mb5.2
MFF Saint Martin d 52.24 303 *e*P **P 16 17 40.4 -1.0**
comp=Z,35nm,1.1s,mb5.2
LFF La Frestale 52.25 301 *e*P **P 16 17 41.3 -0.2**
comp=Z,99nm,1.0s,mb5.4
LFF La Frestale 52.25 301 *e*P **P 16 17 41.3 -0.2**
LFF pmax pmax
comp=Z,50nm,1.0s,mb5.4
LFF La Frestale 52.25 301 *e*P **P 16 17 41.3 -0.2**
comp=Z,50nm,1.0s,mb5.4
CFON Fontmartina 52.29 297 P **P 16 17 42.7 +0.9**
comp=Z,1.4nm,0.2s,mb4.5
GAL1 Galloway 52.33 314 P **P 16 17 40.0 -1.9**
GAL1 AMb AMB 16 17 44.2
comp=Z,53nm,2.3s,mb5.1
GAL1 AMS AMS 16 41 53.5
comp=Z,2µm,16.8s
GAL1 Galloway 52.33 314 *e*P **P 16 17 40.0 -1.9**
GAL1 AMb AMB 16 17 44.2
comp=Z,53nm,2.3s,mb5.1
GAL1 AMS AMS 16 41 53.5
comp=Z,2µm,16.8s,MS5.1
CLLI Llivia 52.33 298 P **P 16 17 43.4 +1.2**
VALF Valcebollere 52.33 298 *e*P **P 16 17 42.0 -0.1**
KAR1 Arisaig 52.33 317 P **P 16 17 41.1 -0.8**
KAR1 Arisaig 52.33 317 *e*P **P 16 17 41.1 -0.8**
DAG Danmarks Havn 52.34 343 ⇑ *i*P **P 16 17 42.5 +0.8**
DAG pmax pmax
comp=Z,28nm,0.6s,mb5.4
DAG Danmarks Havn 52.34 343 ⇑ *i*P **P 16 17 42.5 +0.8**
comp=Z,28nm,0.6s,mb5.4
HTR Trewern Hill 52.35 311 P **P 16 17 40.6 -1.5**
HTR Trewern Hill 52.35 311 *e*P **P 16 17 40.6 -1.5**
RRH Rhenigidale 52.50 319 P **P 16 17 41.9 -1.2**
RRH Rhenigidale 52.50 319 *e*P **P 16 17 41.9 -1.2**
STKI Sintang 52.59 129 P **P 16 17 47.1 +2.7**
comp=Z,28nm,1.1s,mb5.1
WLF1 Llynfaes 52.63 312 AMS AMS 16 44 55.8
comp=Z,3µm,14.6s,MS5.4
JSA Saint Aubin 52.63 307 AMS AMS 16 42 19.9
comp=Z,644nm,14.7s,MS4.8
MLS Moulis 52.75 299 *e*P **P 16 17 43.8 -1.4**
KLSI 52.75 139 P **P 16 17 43.7 -1.8**
comp=Z,44nm,1.0s,mb5.3
ETOS Mallorca 52.81 294 P **P 16 17 46.8 +1.1**
comp=Z,0.4nm,0.2s,mb4.0
EMIR Miracle 52.85 297 P **P 16 17 47.4 +1.3**
comp=Z,0.9nm,0.2s,mb4.3
CSOR Sort 52.94 298 P **P 16 17 47.0 +0.3**
comp=Z,0.8nm,0.3s,mb4.1
SGMF Saint Gilles 53.19 306 *e*P **P 16 17 47.6 -0.8**
comp=Z,202nm,1.3s,mb5.6
SGMF Saint Gilles 53.19 306 *e*P **P 16 17 47.6 -0.8**
SGMF pmax pmax
comp=Z,101nm,1.3s,mb5.6
SGMF Saint Gilles 53.19 306 *e*P **P 16 17 47.6 -0.8**
comp=Z,101nm,1.3s,mb5.6
EPF Esparros 53.23 299 *e*P **P 16 17 47.5 -1.3**
comp=Z,31nm,1.1s,mb4.9
EPF Esparros 53.23 299 *e*P **P 16 17 47.5 -1.3**
EPF pmax pmax
comp=Z,15nm,1.1s,mb4.8
EPF Esparros 53.23 299 *e*P **P 16 17 47.5 -1.3**
comp=Z,15nm,1.1s,mb4.8

MYLDM **Lahad Datu** 53.26 118 P P 16 17 58.1 +8.8
comp=Z,31nm,1.6s,mb5.0
DYA **Yadsworthy** 53.28 309 AMS AMS 16 43 01.3
comp=Z,2µm,19.5s,MS5.1
RESF **Ens** 53.32 299 eP P 16 17 50.2 +0.8
EPOB **Poblet** 53.38 297 P P 16 17 50.8 +0.8
comp=Z,0.8nm,0.3s,mb4.1
HTL **Hartland** 53.42 310 AMS AMS 16 45 00.0
comp=Z,1µm,17.9s,MS5.1
EBIE **Bielsa** 53.50 299 P P 16 17 51.5 +0.7
comp=Z,0.4nm,0.2s,mb4.0
VIEF **Viey** 53.50 299 eP P 16 17 51.0 +0.2
ROSF **Rostrenen** 53.61 306 eP P 16 17 50.6 -0.9
comp=Z,47nm,1.0s,mb5.1
ROSF **Rostrenen** 53.61 306 eP P 16 17 50.6 -0.9
ROSF pmax pmax
comp=Z,23nm,1.0s,mb5.1
ROSF **Rostrenen** 53.61 306 eP P 16 17 50.6 -0.9
comp=Z,24nm,1.0s,mb5.1
QUIF **Quistinic** 53.70 306 eP P 16 17 51.3 -0.8
comp=Z,100nm,1.4s,mb5.3
QUIF **Quistinic** 53.70 306 eP P 16 17 51.3 -0.8
QUIF pmax pmax
comp=Z,50nm,1.4s,mb5.2
QUIF **Quistinic** 53.70 306 eP P 16 17 51.3 -0.8
comp=Z,50nm,1.4s,mb5.2
ETSF **Etsaut** 53.89 299 eP P 16 17 53.4 -0.2
comp=Z,68nm,0.9s,mb5.3
ETSF **Etsaut** 53.89 299 eP P 16 17 53.4 -0.2
ETSF pmax pmax
comp=Z,34nm,0.9s,mb5.3
ETSF **Etsaut** 53.89 299 eP P 16 17 53.4 -0.2
comp=Z,34nm,0.9s,mb5.3
ERTA **Horta de San J** 54.06 297 P P 16 17 55.2 +0.3
comp=Z,11nm,0.4s,mb5.1
SJPF **Ste Jean** 54.25 300 eP P 16 17 56.1 -0.2
comp=Z,33nm,1.0s,mb4.9
SJPF **Ste Jean** 54.25 300 eP P 16 17 56.1 -0.2
SJPF pmax pmax
comp=Z,16nm,1.0s,mb4.9
SJPF **Ste Jean** 54.25 300 eP P 16 17 56.1 -0.2
comp=Z,16nm,1.0s,mb4.9
ESAC **San Caprasio** 54.30 298 P P 16 17 58.4 +1.7
comp=Z,1.9nm,0.2s,mb4.7
EALK **Alkurruntz** 54.40 300 P P 16 17 57.9 +0.5
comp=Z,0.5nm,0.2s,mb4.1
EMOS **Mosqueruela** 54.86 296 P P 16 18 02.2 +1.4
comp=Z,0.2nm,0.2s,mb3.8
SCO **Scoresbysund** 54.99 336 i P P 16 18 02.2 +1.0
SCO pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
SCO **Scoresbysund** 54.99 336 i P P 16 18 02.2 +1.0
comp=Z,6.8nm,1.0s,mb4.6
BILL **Biiibino** 55.17 27 d iP P 16 18 03.3 +0.8
BILL i 16 19 05.2
BILL e 16 20 05.8
BILL pmax pmax
comp=Z,12nm,0.8s,mb5.0
BILL MLR MLR
comp=Z,700nm,17.0s,MS4.8
BILL **Biiibino** 55.17 27 eP P 16 18 02.3 -0.2
comp=Z,8.3nm,0.8s,mb4.8
MBAR **Mbarara** 55.62 235⇑ eP P 16 18 05.6 -0.9
ELAN **Lanestosa** 55.68 301 P P 16 18 07.3 +0.7
comp=Z,0.7nm,0.3s,mb4.2
ETOR **Torete** 55.76 297 P P 16 18 06.5 -0.7
ETOR pmax pmax
comp=Z,3.0nm,0.1s,mb5.3
ETOR **Torete** 55.76 297 P P 16 18 06.5 -0.7
comp=Z,2.5nm,0.1s,mb5.2
ETOB **Tobarra** 56.35 295 P P 16 18 12.8 +1.3
comp=Z,0.4nm,0.2s,mb4.1
EMUR **La Murta** 56.49 294 P P 16 18 13.6 +1.1
comp=Z,3.6nm,0.3s,mb4.9
PETK **Petropavlovsk-** 56.65 46 P P 16 18 14.1 +0.7
comp=Z,2.7nm,0.6s,mb4.5,baz=290,slow=3.3,SNR=4.0
PETK LR LR 16 43 09.8
comp=Z,163nm,20.0s,MS4.1,baz=292,slow=37
PETK **Petropavlovsk-** 56.65 46 P P 16 18 14.1 +0.7
PETK pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
PETK MLR MLR
comp=Z,163nm,20.0s,MS4.1
EARI **Arriondas** 56.83 301 P P 16 18 15.2 +0.4
comp=Z,0.2nm,0.2s,mb3.8
EVIA **Vianos** 57.02 295 P P 16 18 17.7 +1.5
EVIA pmax pmax
comp=Z,1.0nm,0.2s,mb4.5
EVIA **Vianos** 57.02 295 P P 16 18 17.7 +1.4
comp=Z,0.6nm,0.2s,mb4.3
ENIJ **Nijar** 57.57 293 P P 16 18 21.6 +1.4
ENIJ pmax pmax
comp=Z,5.0nm,0.2s,mb5.2
ENIJ **Nijar** 57.57 293 P P 16 18 21.6 +1.5
comp=Z,5.1nm,0.2s,mb5.2
ESDC **Sonseca Array** 57.57 297 P P 16 18 19.9 -0.3
comp=Z,13nm,0.8s,mb5.0,baz=56,slow=7.6,SNR=22
ESDC LR LR 16 48 57.3
comp=Z,255nm,18.1s,MS4.4,baz=60,slow=42
ESDC **Sonseca Array** 57.57 297 P P 16 18 19.9 -0.3
comp=Z,12nm,0.8s,mb5.0
ESLA **Sonseca Array** 57.57 297 eP P 16 18 19.0 -1.1
comp=Z,5.9nm,1.0s,mb4.6
EQES **Quesada** 57.80 295 P P 16 18 22.2 +0.4
comp=Z,39nm,1.0s,mb5.4
PAB **San Pablo** 57.90 297 eP P 16 18 22.3 -0.1
PAB pmax pmax
comp=Z,15nm,1.0s,mb5.0
PAB **San Pablo** 57.90 297 eP P 16 18 22.3 -0.1
comp=Z,15nm,1.0s,mb5.0
EPON **Pontenova** 58.10 302 P P 16 18 23.6 -0.1
comp=Z,0.3nm,0.2s,mb4.0
EBAN **Banos Encina** 58.14 295 P P 16 18 25.0 +0.9
EBAN pmax pmax
comp=Z,1.0nm,0.2s,mb4.5
EBAN **Banos Encina** 58.14 295 P P 16 18 25.0 +0.9
comp=Z,1.2nm,0.2s,mb4.6
ECOG **Cogollos-Vega** 58.40 294 P P 16 18 26.7 +0.8
ECOG pmax pmax
comp=Z,1.0nm,0.1s,mb4.8
ECOG **Cogollos-Vega** 58.40 294 P P 16 18 26.7 +0.8
comp=Z,0.9nm,0.1s,mb4.8
ECAL **Calabor** 58.44 300 P P 16 18 26.6 +0.5
comp=Z,0.2nm,0.2s,mb3.8
EGUA **Guajares** 58.60 294 P P 16 18 26.9 -0.4
EGUA pmax pmax
comp=Z,4.0nm,0.3s,mb4.9
EGUA **Guajares** 58.60 294 P P 16 18 26.9 -0.4
comp=Z,3.5nm,0.3s,mb4.9
PCI **Palu** 58.63 122 P P 16 18 30.0 +2.2
comp=Z,523nmcomp=Z,42nm,1.2s,mb5.3
EADA **Adamuz** 58.69 296 P P 16 18 27.8 -0.1
comp=Z,0.2nm,0.2s,mb3.8
SUMG **Summit** 58.77 341 eP P 16 18 28.9 +0.9
comp=Z,81nm,1.1s,mb5.7
SUMG **Summit** 58.77 341 i P P 16 18 29.7 +1.7
comp=Z,45nm,0.9s,mb5.5
EPLA **Plasencia** 58.85 298 P P 16 18 28.7 -0.3
comp=Z,0.2nm,0.2s,mb3.8
ELOJ **Sierra Loja** 58.87 294 P P 16 18 30.5 +1.3
ELOJ pmax pmax
comp=Z,2.0nm,0.2s,mb4.8
ELOJ **Sierra Loja** 58.87 294 P P 16 18 30.5 +1.3
comp=Z,1.8nm,0.2s,mb4.8
TAM **Tamanrasset** 58.94 275 eP P 16 18 30.0 +0.1
TAM pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
TAM **Tamanrasset** 58.94 275 eP P 16 18 30.0 +0.1
comp=Z,4.8nm,0.8s,mb4.6
MVO **Moncorvo** 58.99 300 eP P 16 18 29.8 -0.2
comp=Z,36nm,1.4s,mb5.2
MVO **Moncorvo** 58.99 300 P P 16 18 30.5 +0.6
MRSI **Marisa** 59.02 119 P P 16 18 32.4 +1.9
comp=Z,638nmcomp=Z,90nm,0.9s,mb5.8
ECAB **El Cabril** 59.32 296 P P 16 18 32.2 -0.1
comp=Z,16nm,1.0s,mb5.0
ELOB **Lobios** 59.35 301 P P 16 18 31.6 -0.9
comp=Z,0.3nm,0.2s,mb4.0
PCAB **Cabril** 59.40 301 eP P 16 18 33.1 +0.3
comp=Z,89nm,1.2s,mb5.7
EMIJ **Mijas** 59.58 294 P P 16 18 33.8 -0.4
comp=Z,2.2nm,0.2s,mb4.8
MTE **Manteigas** 59.69 299 eP P 16 18 35.9 +1.1
comp=Z,55nm,1.3s,mb5.4
MTE **Manteigas** 59.69 299 eP P 16 18 34.6 -0.2
comp=Z,42nm,1.2s,mb5.3
PVIS **Viseu** 59.77 300 eP P 16 18 36.1 +0.7
comp=Z,47nm,1.5s,mb5.3
PMRV **Marv??o** 60.04 298 eP P 16 18 37.5 +0.3
comp=Z,44nm,0.9s,mb5.5
ESPR **Espera** 60.20 295 P P 16 18 38.0 -0.4
comp=Z,0.5nm,0.2s,mb4.2
TTSI **Tana Toraja** 60.23 123 P P 16 18 40.3 +1.5
comp=Z,38nm,1.0s,mb5.4
EMIN **Mina Concepcio** 60.34 296 P P 16 18 39.6 +0.3
comp=Z,0.9nm,0.4s,mb4.2
PBAR **Barrancos** 60.39 297 eP P 16 18 39.8 +0.1
comp=Z,44nm,1.1s,mb5.4
ABJI **Asem Bagus** 60.51 132 P P 16 18 44.2 +3.5
comp=Z,8µm,0.8s
EVO **Evora** 60.89 298 eP P 16 18 42.9 -0.2
EVO eMLR MLR
comp=Z,301nm,18.0s,MS4.2
EGRO **El Granado** 61.01 296 P P 16 18 44.3 +0.4
comp=Z,0.5nm,0.3s,mb4.1
PBEJ **Beja** 61.04 297 eP P 16 18 44.3 +0.2
comp=Z,29nm,1.0s,mb5.4
PVAQ **Vaqueiros** 61.24 296 eP P 16 18 45.4 0.0
comp=Z,48nm,1.3s,mb5.5
PBDV **Barranco-do-Ve** 61.47 296 eP P 16 18 47.1 +0.1
comp=Z,56nm,1.1s,mb5.6
TNTI **Ternate** 62.57 114 P P 16 18 58.0 +3.3
comp=Z,1µmcomp=Z,100nm,1.2s,mb5.8
OPO **Ambohidratompo** 62.66 208 P P 16 18 54.2 -0.8
comp=Z,3.6nm,0.8s,mb4.5,baz=342,slow=6.2,SNR=5.4
RES **Resolute Bay** 65.81 357 eP P 16 19 16.4 +1.3
RES pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
RES **Resolute Bay** 65.81 357 eP P 16 19 16.4 +1.3
comp=Z,6.5nm,0.8s,mb4.7
COLD **Coldfoot** 68.62 17 eP P 16 19 32.1 -0.9
comp=Z,29nm,0.9s,mb5.2
LSZ **Lusaka** 68.75 227 P P 16 19 33.1 -1.2
comp=Z,14nm,0.8s,mb5.0,baz=34,slow=6.2,SNR=28
LSZ **Lusaka** 68.75 227 P P 16 19 33.1 -1.3
LSZ pmax pmax
comp=Z,15nm,0.8s,mb5.0
LSZ **Lusaka** 68.75 227 eP P 16 19 31.4 -3.0
comp=Z,15nm,0.8s,mb5.0
INK **Inuvik** 70.66 10 eP P 16 19 44.5 -1.0
INK pmax pmax
comp=Z,58nm,0.9s
INK **Inuvik** 70.66 10 eP P 16 19 44.5 -1.0
comp=Z,58nm,0.9s,mb5.5
BPAW **Bear Paw Mtn.** 71.01 19 eP P 16 19 46.8 -0.9
comp=Z,16nm,1.0s,mb4.9
COLA **College** 71.12 17 eP P 16 19 47.1 -1.2
COLA pmax pmax
comp=Z,39nm,0.9s,mb5.3
COLA **College** 71.12 17 eP P 16 19 47.1 -1.2
comp=Z,39nm,0.9s,mb5.3
PPLA **Purkeypile** 71.69 20 eP P 16 19 50.6 -1.2
comp=Z,18nm,0.8s,mb5.1
TRF **Thorofare Moun** 71.73 19 eP P 16 19 50.4 -1.6
comp=Z,11nm,0.9s,mb4.8
MCK **McKinley** 71.83 18 P P 16 19 53.0 +0.4
MCK pmax pmax
comp=Z,11nm,0.9s,mb4.8
MCK **McKinley** 71.83 18 P P 16 19 53.0 +0.4
comp=Z,11nm,0.9s,mb4.8
EGAK **Eagle** 72.62 15 eP P 16 19 56.5 -0.8
comp=Z,15nm,0.9s,mb4.9
DAWY **Dawson** 73.61 14 eP P 16 20 01.4 -1.7
RC01 **Rabbit Creek A** 73.84 20 eP P 16 20 03.6 -1.0
comp=Z,28nm,0.9s,mb5.2
MBWA **Marble Bar** 74.41 135 P P 16 20 10.2 +1.8
comp=Z,55nm,1.1s,mb5.4
DIV **Divide** 74.82 18 eP P 16 20 10.0 -0.3
comp=Z,22nm,1.0s,mb5.0
BMRM **Bremner River** 75.24 18 eP P 16 20 11.4 -1.3
comp=Z,31nm,1.0s,mb5.2
FITZ **Fitzroy Crossi** 75.39 129 P P 16 20 14.1 -0.1
comp=Z,18nm,0.9s,mb5.0,baz=32,slow=6.1,SNR=9.8
FITZ LR LR 16 58 41.5
comp=Z,101nm,20.8s,MS4.1,baz=347,slow=40
FITZ **Fitzroy Crossi** 75.39 129 eP P 16 20 14.7 +0.6
comp=Z,16nm,0.9s,mb5.0
FITZ **Fitzroy Crossi** 75.39 129 P P 16 20 15.0 +0.9
comp=Z,48nm,1.6s,mb5.2
KNA **Kununurra** 75.54 125 P P 16 20 17.3 +2.3
comp=Z,1µmcomp=Z,166nm,0.9s,mb6.0
KDAK **Kodiak Island** 75.78 23 P P 16 20 16.1 +0.3
comp=Z,143nm,0.6s,mb6.1,SNR=5.3
KDAK **Kodiak Island** 75.78 23 eP P 16 20 15.2 -0.6
KDAK pmax pmax
comp=Z,15nm,0.7s,mb5.0
KDAK **Kodiak Island** 75.78 23 eP P 16 20 15.2 -0.6
comp=Z,15nm,0.7s,mb5.0
DBIC **Dimbokro** 76.53 268 P P 16 20 19.1 -1.7
comp=Z,11nm,0.8s,mb4.8,baz=51,slow=4.2,SNR=7.1
DBIC LR LR 16 54 46.4
comp=Z,190nm,19.7s,MS4.4,baz=158,slow=36
DBIC **Dimbokro** 76.53 268 P P 16 20 19.1 -1.7
DBIC pmax pmax
comp=Z,11nm,0.8s
DBIC MLR MLR
comp=Z,190nm,19.7s
KIC **Kosan Boka** 76.63 267 eP P 16 20 21.1 -0.3
comp=Z,53nm,1.0s,mb5.4
TIC **Toumodi** 76.67 268 eP P 16 20 21.3 -0.3
comp=Z,82nm,1.2s,mb5.5
TIC **Toumodi** 76.67 268 eP P 16 20 21.3 -0.3
TIC pmax pmax
comp=Z,82nm,1.2s,mb5.5
LIC **Lamto** 76.94 267 eP P 16 20 22.6 -0.6
comp=Z,74nm,1.3s,mb5.2
LIC eMLR MLR
comp=Z,270nm,19.5s,MS4.3
LIC **Lamto** 76.94 267 eP P 16 20 22.9 -0.3
comp=Z,76nm,1.3s,mb5.5
LIC **Lamto** 76.94 267 eP P 16 20 22.6 -0.6
comp=Z,37nm,1.3s,mb5.2
LIC LR LR
comp=Z,140nm,19.5s,MS4.3
PNL **Peninsula** 77.59 16 eP P 16 20 18.8 -7.3
comp=Z,38nm,0.9s,mb5.3
LBTB **Lobatse** 78.03 223 eP P 16 20 27.9 -1.0
LBTB pmax pmax
comp=Z,47nm,0.9s,mb5.4
LBTB **Lobatse** 78.03 223 eP P 16 20 27.9 -1.0
comp=Z,47nm,0.9s,mb5.4
TSUM **Tsumeb** 78.09 233 eP P 16 20 29.4 +0.1
comp=Z,12nm,1.0s,mb4.8
YKA **Yellowknife Ar** 78.16 4 P P 16 20 28.4 -0.7
comp=Z,18nm,0.9s,mb5.0,baz=347,slow=5.6,SNR=26
YKA **Yellowknife Ar** 78.16 4 P P 16 20 28.4 -0.7
YKA pmax pmax
comp=Z,18nm,0.9s
SCHQ **Schefferville** 79.97 338 P P 16 20 38.5 -0.8
comp=Z,16nm,0.9s,mb4.9,baz=48,slow=5.5,SNR=11
SCHQ LR LR 16 55 58.6
comp=Z,531nm,18.2s,MS4.9,baz=289,slow=36
SCHQ **Schefferville** 79.97 338 eP P 16 20 39.4 +0.2
comp=Z,19nm,0.9s,mb5.0
DLBC **Dease Lake** 80.52 12 eP P 16 20 42.5 +0.4
BOSA **Boshof** 81.12 221 P P 16 20 46.2 +0.6
comp=Z,9.6nm,0.8s,mb4.8,baz=46,slow=5.5,SNR=9.8
BOSA LR LR 16 55 10.4
comp=Z,148nm,21.6s,MS4.3,baz=240,slow=34
BOSA **Boshof** 81.12 221 P P 16 20 46.2 +0.6
BOSA pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
BOSA MLR MLR
comp=Z,148nm,21.6s,MS4.3
BOSA **Boshof** 81.12 221 P P 16 20 46.2 +0.6
BOSA LR LR 16 55 10.4
FCC **Fort Churchill** 81.51 353 eP P 16 20 48.0 +0.7
comp=Z,0.9nm,1.0s,mb3.6
WRA **Warramunga Arr** 82.20 124 P P 16 20 50.0 -1.5
comp=Z,13nm,0.7s,mb5.0,baz=325,slow=5.2,SNR=34
WRA **Warramunga Arr** 82.20 124 P P 16 20 50.0 -1.5
WRA pmax pmax
comp=Z,13nm,0.7s
WRAB **Tennant Creek** 82.20 124 eP P 16 20 50.1 -1.4
WRAB pmax pmax
comp=Z,14nm,0.6s,mb5.1
WRAB **Tennant Creek** 82.20 124 eP P 16 20 50.1 -1.4
comp=Z,14nm,0.6s,mb5.1
WRAB **Tennant Creek** 82.20 124 P P 16 20 53.2 +1.7
ASAR **Alice Springs** 84.64 127 P P 16 21 02.0 -1.9
comp=Z,3.5nm,0.7s,mb4.6,baz=316,slow=4.8,SNR=25
ASAR **Alice Springs** 84.64 127 P P 16 21 02.1 -1.8
ASAR pmax pmax
comp=Z,4.0nm,0.7s
FFC **Flin Flon** 86.05 357 P P 16 21 11.4 +0.8
comp=Z,137nm,1.0s,mb6.1,SNR=8.4
FFC **Flin Flon** 86.05 357 eP P 16 21 10.0 -0.6
FFC pmax pmax
comp=Z,24nm,1.0s,mb5.4
FFC **Flin Flon** 86.05 357 eP P 16 21 09.9 -0.7
comp=Z,24nm,1.0s,mb5.4
EDM **Edmonton** 87.47 4 eP P 16 21 15.8 -1.8
ULM **Lac du Bonnet** 90.10 353 P P 16 21 29.7 -0.4
comp=Z,11nm,1.0s,mb5.2,baz=20,slow=3.2,SNR=4.5
ULM LR LR 17 04 50.1
comp=Z,544nm,20.3s,MS5.0,baz=36,slow=38
CTA **Charters Tower** 90.30 116 LR LR 17 06 18.7
comp=Z,128nm,18.2s,MS4.4,baz=231,slow=38
PNT **Penticton** 90.84 8 P P 16 21 34.2 +0.7
A05A **Maple Falls** 90.85 10 ⇓P P 16 21 33.5 0.0
baz=90
LBNH **Lisbon** 90.88 336 eP P 16 21 35.1 +1.3
LBNH pmax pmax
comp=Z,34nm,1.4s,mb5.5
LBNH **Lisbon** 90.88 336 eP P 16 21 35.1 +1.2
comp=Z,34nm,1.4s,mb5.5
LONY **Lake Ozonia** 91.35 338 eP P 16 21 34.5 -1.5
comp=Z,29nm,1.0s,mb5.6
CMW **Cultus Mountai** 91.41 10 P P 16 21 37.3 +1.1
RPW **Rockport** 91.47 10 P P 16 21 36.6 +0.1
WALA **Waterton Lakes** 91.59 5 eP P 16 21 33.0 -4.1
comp=Z,0.4nm,0.9s,mb3.8
A12A **Yaak River Ran** 91.59 6 ⇓P P 16 21 36.7 -0.3
baz=91
JCW **Jim Creek** 91.66 10 P P 16 21 37.0 -0.4
A14A **Double T Ranch** 91.71 4 ⇑P P 16 21 37.5 -0.1
baz=91
A15A **Johnson Ranch,** 91.74 4 ⇑P P 16 21 37.2 -0.6
baz=91
B08A **Colville Reser** 91.82 8 ⇓P P 16 21 37.9 -0.2
baz=92
EYMN **Ely** 91.86 350 eP P 16 21 38.6 +0.3
comp=Z,26nm,1.0s,mb5.5
A18A **Metzger Ranch,** 91.91 2 ⇑P P 16 21 38.1 -0.4
baz=92,SNR=19
AGMN **Agassiz Nation** 92.03 353 eP P 16 21 38.6 -0.5
comp=Z,12nm,0.9s,mb5.2
NEW **Newport** 92.14 7 eP P 16 21 39.9 +0.3
NEW pmax pmax
comp=Z,16nm,0.9s
NEW **Newport** 92.14 7 eP P 16 21 39.9 +0.3
comp=Z,16nm,0.9s,mb5.3
GNW **Green Mountain** 92.15 11 eP P 16 21 40.6 +1.0
comp=Z,11nm,1.1s,mb5.1
NLWA **Neilton Lookou** 92.16 11 ⇓P P 16 21 39.9 +0.2
baz=92
B13A **Whitefish** 92.24 5 ⇑P P 16 21 40.3 +0.3
baz=92
B14A **Marquette Ranc** 92.33 4 ⇑P P 16 21 40.1 -0.3
baz=92,SNR=15
B16A **M & M Farms, S** 92.36 3 ⇓P P 16 21 39.8 -0.8
baz=92
B15A **Bradely Ranch,** 92.41 4 ⇑P P 16 21 40.3 -0.6
baz=92,SNR=26
B18A **Beardsley Farm** 92.44 2 ⇑P P 16 21 40.9 -0.1
baz=92,SNR=5.3
B17A **L&G Farms, Che** 92.51 3 ⇑P P 16 21 41.1 -0.2
baz=92
C11A **Tepee Creek (N** 92.63 6 ⇓P P 16 21 41.7 -0.2
baz=92
D05A **Enumclaw** 92.64 10 ⇓P P 16 21 41.8 -0.1
baz=92
BSMT **Bassoo Peak** 92.74 5 eP P 16 21 42.2 -0.2
comp=Z,16nm,0.9s,mb5.5
EGMT **Eagleton** 92.81 2 ⇑P P 16 21 42.8 +0.2
baz=92
C12B **Naegeli Ranch,** 92.83 6 ⇓P P 16 21 42.9 +0.2
baz=92
OD2 **Odessa Site #2** 92.84 8 eP P 16 21 41.7 -1.2
comp=Z,12nm,1.1s,mb5.2
JTMT **Jette** 92.88 5 eP P 16 21 43.2 +0.2
comp=Z,11nm,1.0s,mb5.2
C14A **Swan Lake** 92.89 5 ⇑P P 16 21 42.8 -0.2
baz=92
C15A **Salmond Ranch,** 92.95 4 ⇓P P 16 21 43.0 -0.3
baz=93,SNR=9.3
C16A **Fuhringer Ranc** 92.96 3 ⇓P P 16 21 43.1 -0.3
baz=93
LON **Longmire** 93.09 10 eP P 16 21 44.1 +0.1
LON pmax pmax
comp=Z,6.0nm,0.7s,mb5.1
LON **Longmire** 93.09 10 eP P 16 21 44.1 +0.1
comp=Z,5.8nm,0.7s,mb5.1
SWMT **Swartz Lake** 93.13 5 eP P 16 21 45.5 +1.4
comp=Z,8.4nm,1.0s,mb5.1
D08A **Wollman Farm,** 93.15 8 ⇓P P 16 21 44.4 +0.1
baz=93
NAC **Naches** 93.24 10 P P 16 21 45.6 +1.0
COWI **Conover** 93.31 348 eP P 16 21 45.1 +0.1
comp=Z,15nm,1.0s,mb5.4
SLMT **Seeley Lake** 93.43 5 eP P 16 21 44.6 -0.9
comp=Z,15nm,0.8s,mb5.5
HNR **Honiara** 93.48 99 LR LR 17 04 06.5
comp=Z,82nm,18.9s,MS4.2,baz=190,slow=36
D13A **Huson** 93.51 5 ⇓P P 16 21 45.7 -0.2
baz=93
D14A **Greenough** 93.59 5 ⇓P P 16 21 45.9 -0.4
baz=93,SNR=7.8
D18A **Linhart Farms,** 93.64 2 ⇓P P 16 21 46.0 -0.5
baz=93
D17A **Six Diamond Ra** 93.65 3 ⇓P P 16 21 46.7 +0.1
baz=93,SNR=11
LVP **Lakeview Peak** 93.67 11 P P 16 21 48.2 +1.5
D15A **Lincoln** 93.68 4 ⇓P P 16 21 46.4 -0.4
baz=93
E08A **Dider Farm, El** 93.69 8 ⇓P P 16 21 46.5 -0.2
baz=93
D16A **Dana Ranch, Ca** 93.74 3 ⇓P P 16 21 47.2 +0.3
baz=93,SNR=6.8
E09A **Wood Farm, Sta** 93.77 8 ⇑P P 16 21 47.5 +0.4
baz=93,SNR=6.2
CHMT **Chamberlain Mo** 93.77 4 eP P 16 21 46.4 -0.8
comp=Z,5.1nm,0.7s,mb5.1
F04A **Amboy** 93.81 11 ⇓P P 16 21 47.2 -0.1
baz=94
HRY **Holter Researc** 94.05 3 eP P 16 21 48.7 +0.3
comp=Z,7.6nm,0.6s,mb5.3
E12A **Beaver Dam Sad** 94.11 6 ⇓P P 16 21 48.4 -0.3
baz=94
E13A **Victor** 94.18 5 ⇑P P 16 21 48.8 -0.3
baz=94
E16A **East Helena** 94.23 3 ⇓P P 16 21 48.9 -0.4
baz=94
E14A **Clinton** 94.25 5 ⇑P P 16 21 49.5 +0.1
baz=94
E18A **Harlowton** 94.26 2 ⇓P P 16 21 50.4 +1.0
baz=94,SNR=7.3
E15A **Deer Lodge** 94.29 4 ⇑P P 16 21 49.0 -0.5
baz=94
E17A **Martinsdale** 94.34 3 ⇑P P 16 21 50.5 +0.7
baz=94,SNR=8.0
F10A **Beach Ranch, E** 94.39 7 ⇓P P 16 21 49.9 -0.1
baz=94
G04A **Mulino** 94.51 11 ⇓P P 16 21 50.9 +0.3
baz=94
F11A **Grangeville** 94.58 6 ⇓P P 16 21 50.6 -0.3
baz=94
G06A **Carlson Farm,** 94.73 10 ⇑P P 16 21 51.6 0.0
baz=94
F12A **Elk City** 94.78 6 ⇓P P 16 21 51.0 -0.8
baz=94,SNR=6.1
F13A **Darby** 94.82 5 ⇑P P 16 21 51.7 -0.3
baz=94,SNR=11
F14A **Wisdom** 94.86 5 ⇑P P 16 21 51.9 -0.3
baz=94
F15A **Butte** 94.88 4 ⇓P P 16 21 52.0 -0.3
baz=94,SNR=6.4
F17A **Fitzpatrick Pl** 94.90 3 ⇓P P 16 21 53.0 +0.7
baz=94,SNR=9.1
LRM **Limekiln Ridge** 94.90 4 eP P 16 21 52.3 0.0
comp=Z,45nm,1.1s,mb5.8
LCCM **Lewis and Clar** 94.92 4 P P 16 21 53.5 +1.1
F18A **Big Timber** 94.93 2 ⇓P P 16 21 53.2 +0.7
baz=95,SNR=7.6
F16A **Kennard Place,** 94.98 3 ⇑P P 16 21 53.0 +0.3
baz=95
G09A **Cove** 95.03 8 ⇑P P 16 21 53.0 +0.1
baz=95,SNR=7.2
GCMT **Greycliff** 95.05 2 eP P 16 21 54.2 +1.2
comp=Z,7.9nm,1.0s,mb5.1
G11A **Walters Elk Ra** 95.05 7 ⇓P P 16 21 52.9 -0.2
baz=95,SNR=7.4

H04A	Detroit Lake	95.06	11	⇓P	P	16 21 53.0	0.0
	baz=95						
G10A	Bishop Farm, J	95.08	7	⇑P	P	16 21 53.4	+0.2
	baz=95						
BOZ	Bozeman (W)	95.12	3	⇑P	P	16 21 53.4	+0.1
	baz=95,SNR=7.5						
BOZ	Bozeman (W)	95.12	3	eP	P	16 21 54.4	+1.1
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.8						
BOZ	Bozeman (W)	95.12	3	eP	P	16 21 54.4	+1.0
	comp=Z,2.9nm,0.8s,mb4.8						
STKA	Stephens Creek	95.24	127	P	P	16 21 54.8	+0.8
	comp=Z,2.1nm,0.8s,mb4.6,baz=341,slow=6.4,SNR=3.0						
STKA				LR	LR	17 09 17.7	
	comp=Z,174nm,21.5s,MS4.5,baz=255,slow=38						
DLMT	Dillon	95.36	4	eP	P	16 21 54.7	+0.2
	comp=Z,9.8nm,1.1s,mb5.2						
BMO	Blue Mountains	95.50	7	eP	P	16 21 54.6	-0.5
BMO				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.6						
BMO	Blue Mountains	95.50	7	eP	P	16 21 54.6	-0.5
	comp=Z,1.0nm,0.4s,mb4.6						
G13A	Cobalt	95.52	5	⇑P	P	16 21 54.6	-0.6
	baz=95,SNR=15						
G16A	Moss Hill, Enn	95.53	4	⇓P	P	16 21 55.3	+0.1
	baz=95						
G15A	Dillon	95.56	4	⇓P	P	16 21 55.4	+0.1
	baz=95						
H08A	Prairie City	95.68	8	⇓P	P	16 21 56.0	+0.1
	baz=95						
RLMT	Red Lodge	95.72	2	⇓P	P	16 21 56.0	-0.1
	baz=95						
RLMT	Red Lodge	95.72	2	eP	P	16 21 56.5	+0.4
	comp=Z,4.3nm,0.6s,mb5.1						
H11A	Donnelly	95.77	7	⇑P	P	16 21 56.2	-0.1
	baz=95,SNR=6.4						
H10A	Noah's Angus R	95.81	7	⇑P	P	16 21 56.3	-0.2
	baz=96						
MCMT	McKenzie Canyo	95.87	4	eP	P	16 21 56.6	-0.2
	comp=Z,1.8nm,0.7s,mb4.6						
H13A	Challis	96.05	5	⇑P	P	16 21 57.6	0.0
	baz=96						
H14A	Leadore	96.05	5	⇑P	P	16 21 57.4	-0.2
	baz=96,SNR=9.4						
I10A	Payette	96.31	7	⇑P	P	16 21 58.8	0.0
	baz=96						
JFWS	Jewell Farm	96.59	348	P	P	16 22 00.3	+0.2
JFWS				pmax	pmax		
	comp=Z,13nm,0.7s,mb5.5						
JFWS	Jewell Farm	96.59	348	P	P	16 22 00.3	+0.2
	comp=Z,13nm,0.7s,mb5.5						
ECSD	EROS Data Cent	96.62	353	eP	P	16 21 58.9	-1.4
	comp=Z,12nm,1.0s,mb5.3						
RSSD	Black Hills	96.71	358	eP	P	16 22 01.7	+1.1
RSSD				pmax	pmax		
	comp=Z,11nm,1.2s,mb5.2						
RSSD	Black Hills	96.71	358	eP	P	16 22 01.7	+1.1
	comp=Z,11nm,1.2s,mb5.2						
IMW	Indian Meadow	96.90	3	eP	P	16 22 03.6	+2.1
	comp=Z,8.6nm,1.1s,mb5.1						
J12A	Stokes Ranch,	97.29	6	⇓P	P	16 22 02.7	-0.5
	baz=97,SNR=6.5						
PDAR	Pinedale Array	98.07	2	P	P	16 22 07.6	+0.8
	comp=Z,0.8nm,0.7s,mb4.3,baz=29,slow=3.4,SNR=5.8						
PDAR				LR	LR	17 11 13.8	
	comp=Z,355nm,18.5s,MS4.9,baz=14,slow=38						
K20A	Yellowstone Ra	98.20	1	⇓P	P	16 22 07.7	+0.3
	baz=98						
L19A	Farson	98.74	2	⇑P	P	16 22 10.0	+0.2
	baz=98						
HWUT	Hardware Ranch	99.15	4	eP	P	16 22 13.3	+1.6
	comp=Z,5.5nm,0.9s,mb5.1						
M14A	Sheep Mountain	99.15	5	⇑P	P	16 22 12.4	+0.8
	baz=99						
M13A	Montello	99.24	6	⇓P	P	16 22 13.2	+1.1
	baz=99						
M13A	Montello	99.24	6	eP	P	16 22 13.1	+1.0
	comp=Z,5.6nm,1.0s,mb5.0						
NVAR	Mina Array Bea	101.73	9	P	Pdif	16 22 23.9	+0.7
	comp=Z,0.6nm,0.8s,baz=48,slow=2.2,SNR=3.4						
NVAR	Mina Array Bea	101.73	9	P	Pdif	16 22 23.9	+0.7
TXAR	Lajitas Array	111.45	357	PP	PP	16 27 47.5	+3.4
	comp=Z,1.0nm,1.0s,baz=70,slow=1.5,SNR=4.0						
ROSC	El Rosal	126.63	318	PKP	PKPdf	16 27 34.7	+0.6
	comp=Z,5.1nm,0.5s,baz=73,slow=23,SNR=4.4						
CPUP	Villa Florida	136.90	272	PKP	PKPdf	16 27 52.6	-0.4
	comp=Z,5.8nm,0.8s,baz=355,slow=1.3,SNR=10						
CPUP	Villa Florida	136.90	272	PKIKP	PKPdf	16 27 52.6	-0.4
CPUP				pmax	pmax		
	comp=Z,6.0nm,0.8s						
LPAZ	La Paz	139.13	293	PKP	PKPdf	16 27 58.5	+1.2
	comp=Z,2.9nm,0.9s,baz=44,slow=4.4,SNR=7.2						
LPAZ	La Paz	139.13	293	PKIKP	PKPdf	16 27 58.6	+1.2
LPAZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TRQA	Tornquist	145.25	258	ePKP	PKPdf	16 28 06.4	-1.2
LCO	Las Campanas	148.52	278	ePKPbc	PKPbc	16 28 15.8	-1.3
PLCA	Paso Flores	152.33	256	PKP	PKPdf	16 28 19.8	+0.8
	comp=Z,2.7nm,1.0s,baz=183,slow=22,SNR=3.4						
PLCA				PKPbc	PKPbc	16 28 26.7	+0.9
	comp=Z,4.5nm,0.9s,baz=60,slow=6.2,SNR=5.7						
PLCA				PKPab	PKPab	16 28 35.0	-1.0
	comp=Z,9.5nm,1.0s,baz=78,slow=5.1,SNR=5.7						
PLCA	Paso Flores	152.33	256	PKIKP	PKPdf	16 28 19.8	+0.8
PLCA						16 28 26.7	
PLCA						16 28 35.0	
PLCA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PLCA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PLCA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PLCA	Paso Flores	152.33	256	PKP	PKPdf	16 28 19.8	+0.8
PLCA				ePKPbc	PKPbc	16 28 25.1	-0.7
PLCA				PKPbc	PKPbc	16 28 26.7	+0.9
PLCA				PKPab	PKPab	16 28 35.0	-1.0

FUNV 08 16:15:15.0, 6°.84N×73°.14W, h172km, MW3.8, 5C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	Capacho	1.31	39	⇑iP	Pn	16 15 44.0	-0.5
CAPV				eS	Sn	16 16 05.2	-2.0
VIGV	El Vigia	2.65	41	⇑iP	Pn	16 15 58.5	-0.6
VIGV				eS	Sn	16 16 30.2	-3.1
SOCV	Socops	2.68	58	⇑eP	Pn	16 15 58.5	-0.9
SOCV				eS	Sn	16 16 30.0	-3.8
ELOV	Elorza	3.63	87	eP	Pn	16 16 09.9	-1.3
ELOV				eS	Sn	16 16 51.3	-3.7
VIRV	Villa del Rosa	3.71	11	⇑iP	Pn	16 16 10.8	-1.4
VIRV				eS	Sn	16 16 51.7	-5.2
QARV	Quebrada Arrib	4.23	38	⇑iP	Pn	16 16 18.3	-0.5
QARV				eS	Sn	16 17 03.5	-5.2
SANV	Sanarito	4.44	53	eP	Pn	16 16 20.4	-1.1
SANV				eS	Sn	16 17 08.7	-4.9
CURV	Curarigua	4.45	45	eP	Pn	16 16 20.1	-1.6
DABV	Dabajuro	4.75	31	eP	Pn	16 16 24.9	-0.6
SIQV	Siquisique	5.02	41	eP	Pn	16 16 27.5	-1.6
SIQV				eS	Sn	16 17 21.0	-6.0
BAUV	El Baul	5.47	67	eP	Pn	16 16 32.9	-2.1
MONV	Montecano	5.97	31	eP	Pn	16 16 39.8	-1.7
CAOV	Caicara del Or	6.79	86	eP	Pn	16 16 49.3	-3.0
CUPV	Cœpira	7.94	66	eP	Pn	16 17 04.6	-3.0

CASC 08 16:20:49.9±2.2, 8°.42N×82°.89W, h10km±7km, MD4.0, 2C-2D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	Volcan	0.43	28	⇓iP	Pg	16 20 59.2	+0.9
BRU2				iSg	Sg	16 21 07.2	+3.2
BAR1		0.92	333	⇓iP	Pg	16 21 06.6	-1.1
CNI	Changuinola	1.06	20	eP	Pg	16 21 09.6	-0.8
BUS	Buena Vista	1.42	323	eP	Pn	16 21 14.5	-1.3
URSC	Urasca	1.66	328	⇑eP	Pn	16 21 17.9	-1.2
URSC				eP		16 21 18.1	
URSC				eS	Sn	16 21 42.0	+1.4
LAJ	Bijagual	1.88	320	eP	Pn	16 21 23.6	+1.4
LAJ				eS	Sn	16 21 53.5	+7.4
PRS1	Puriscal	2.10	318	⇑eP	Pn	16 21 23.9	-1.2
PRS1				eS	Sn	16 21 51.6	+0.3
CGA2	Cerro Gallo 2	2.22	316	eP	Pn	16 21 26.4	-0.5
CGA2				eS	Sn	16 21 56.6	+2.1
JCR	Jicaral	2.61	303	eP	Pn	16 21 32.6	+0.4
BCIP	Isla Barro Col	3.11	76	eP	Pn	16 21 39.7	+0.6
BCIP				eS	Sn	16 22 17.2	+0.8

KRSC 08 16:21:39.0±0.8, 55°.91N×164°.51E, h17km±17km, ML3.8, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.99	288	eP	Pb	16 21 56.5	-1.2
KBTR				eS	Sb	16 22 08.5	-2.0
BKI	Bering	1.09	130	iP	Pb	16 21 58.8	-0.6
BKI				iS	Sb	16 22 12.7	-0.6
SMKR	Semkarok	1.83	293	eP	Pn	16 22 10.3	+0.7
SMKR				eS	Sn	16 22 33.0	+0.7
BDR	Baidarnaya	1.96	291	eP	Pn	16 22 12.6	+1.2
BDR				eS	Sn	16 22 37.2	+1.7
ZLN	Zelenaya	2.09	274	eP	Pn	16 22 14.6	+1.5
ZLN				eS	Sn	16 22 40.4	+1.7
MKZ	Mys Kozlova	2.09	231	eP	Pn	16 22 13.3	+0.1
MKZ				eS	Sn	16 22 38.4	-0.4
KLY	Klyuchi	2.20	282	eP	Pn	16 22 14.2	-0.5
KLY				eS	Sn	16 22 40.0	-1.4
KRSR	Krestovskiy	2.23	280	P	Pn	16 22 16.3	+1.2
KRSR				S	Sn	16 22 43.0	+0.7
BZMR	Bezymyannaya	2.26	272	eP	Pn	16 22 16.7	+1.2
BZMR				eS	Sn	16 22 44.8	+1.8
KPT	Kopyto	2.41	273	eP	Pn	16 22 19.2	+1.6
KPT				eS	Sn	16 22 48.5	+1.8
KMNR	Kamenistaya	2.42	268	S	Sn	16 22 50.3	+3.5
KOZ	Kozyrevsk	2.61	275	eP	Pn	16 22 22.6	+2.3
KOZ				eS	Sn	16 22 54.4	+2.8
SRDR	Sredinnyy	2.71	281	eP	Pn	16 22 24.2	+2.4
SRDR				eS	Sn	16 22 57.2	+3.0
NLC	Nalytchevo	4.07	230	eP	Pn	16 22 42.7	+2.3
NLC				eS	Sn	16 23 28.9	+1.3
AVH	Avacha	4.28	234	P	Pn	16 22 45.4	+2.2
GNL	Ganaly	4.40	242	eP	Pn	16 22 47.1	+2.2
PET	Petropavlovsk	4.48	232	eP	Pn	16 22 47.8	+1.9
PET				eS	Sn	16 23 38.5	+0.9

GUC 08 16:32:39.7±0.3, 42°.08S×72°.49W, h6km±1km, ML3.5, 1C, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILCA	Isla Las Cabra	0.04	299	⇑iP	Pg	16 32 40.8	-0.2
ILCA				iS	Sg	16 32 41.8	-0.1
ILCA				AML	AML	16 32 42.8	
	comp=E,30µm,0.6s						
HOCH	HornopirØn	0.18	19	eP	Pg	16 32 43.5	+0.1
HOCH				iS	Sg	16 32 46.2	+0.4
PUEL	Puelo Alto	0.44	19	eP	Pg	16 32 48.2	0.0
PMCH	Puerto Montt	0.66	333	iS	Sg	16 33 01.8	+0.8

MEX 08 16:59:45.4±0.8, 15°.69N×93°.95W, h28km±50km, MD4.2, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		0.70	89	iP	Pb	16 59 56.4	-2.7
PCIG				iS	Sb	17 00 06.3	-2.2
TGIG		1.34	36	iP	Pn	17 00 06.0	-2.2
TGIG				iS	Sn	17 00 22.0	-3.1
SCX	San Cristobal	1.63	50	iP	Pn	17 00 11.0	-1.3
SCX				iS	Sn	17 00 29.8	-2.6
HUIG	Huatulco	2.08	272	eP	Pn	17 00 16.6	-1.8
HUIG				iS	Sn	17 00 39.6	-3.9
TUIG	Tuzandepetl	2.37	349	iP	Pn	17 00 21.2	-1.2
TUIG				iS	Sn	17 00 47.0	-3.6
SCIG	Sabancuy	4.19	39	eP	Pn	17 00 44.9	-2.5
UTMO	Huajuapan	4.26	300	iP	Pn	17 00 48.8	+0.3
UTMO				iS	Sn	17 01 36.4	-0.8
CAIG	El Cayaco	6.21	283	iP	Pn	17 01 15.5	+0.2

JMA 08 17:05:10.4±0.2, 43°.19N×139°.10E, h30km±3km, M3.6, 2C, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSH	Shimam	0.88	128	⇑P	Pn	17 05 26.5	-0.2
JSH				eS	Sn	17 05 37.7	-0.8
JSK	Shakotan	1.02	80	⇑P	Pn	17 05 28.6	0.0
JSK				eS	Sn	17 05 41.0	-0.9
JOSM	Okushiri--Mats	1.14	166	P	Pn	17 05 30.2	-0.1
JOSM				eS	Sn	17 05 44.4	-0.5
JYM2	Yakumo 2	1.42	138	P	Pn	17 05 34.7	+0.5
JNB	Noboribetsu	1.60	116	P	Pn	17 05 37.4	+0.8
JNB				eS	Sn	17 05 57.1	+0.9
JEW	Eniwo	1.76	101	P	Pn	17 05 40.4	+1.6
JSR	Shiriuchi	1.93	149	P	Pn	17 05 42.3	+1.2
JKB	Kayabe	1.93	132	P	Pn	17 05 42.3	+1.1
JHR	Hokuryu	1.99	73	P	Pn	17 05 43.4	+1.4
JHR				eS	Sn	17 06 08.0	+2.2
JYG	Yagishiri	2.09	53	P	Pn	17 05 44.3	+1.0
JYG				eS	Sn	17 06 09.3	+1.0

*ISCJB **08** 17:14:15.3±0.5, 31°.96N±0°.04×104°.74E±0°.06, h10km, mb3.8/8, Error ellipse: s-maj=8.5km s-min=4.4km az=37.2*
*IDC **08** 17:14:16.4±1.0, 32°.01N×104°.59E, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.7/25, mbtmp3.8/8, ML3.3/1, Error ellipse: s-maj=43.2km s-min=17.9km az=59.0*
*NEIC **08** 17:14:17.6±0.5, 31°.97N×104°.48E, h10km, mb4.0/1, Error ellipse: s-maj=15.4km s-min=8.6km az=77.0*
*BJI **08** 17:14:19.3, 32°.12N×104°.48E, h18km, mB4.4/1, ML3.3/11, Ms3.3/2, Ms7 3.2/2*

ISC 08 17:14:17.6±0.5, 32°.01N±0°.04×104°.60E±0°.06, h10km, n18, σ1°14/24, mb3.8/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.31	214	Pg	Pg	17 14 42.4	-0.3
CD2				Sg	Sg	17 14 59.8	+0.1
CD2				smax			
	comp=N,2µm,0.7s						
LZH	Lanzhou	4.12	351	Pn	Pn	17 15 23.8	+3.2
LZH				Pg	Pg	17 15 33.9	-2.6
LZH				Sn	Sn	17 16 09.8	+1.0
LZH				Sg	Sg	17 16 27.4	-2.5
LZH				smax			
	comp=N,92nm,0.8s						
LZH				smax			
	comp=E,93nm,0.8s						
LZH				LR	LR		
	comp=N,250nm,5.2s						
LZH				LR	LR		
	comp=Z,320nm,6.0s						
XAN	Xi'an	4.16	60	Pg	Pg	17 15 35.5	-1.8
XAN				Sg	Sg	17 16 30.3	-0.8
XAN				smax			
	comp=N,73nm,0.5s						
XAN				smax			
	comp=E,34nm,0.5s						
HHC	Hu-ho-hao-te	10.45	30	eP	Pn	17 16 48.1	+0.6
HHC				S	Sn	17 18 46.9	+2.3
HHC				pmax	pmax		
	comp=Z,54nm,4.7s						
CM31	Chiang Mai Arr	14.42	202	ePn	Pn	17 17 40.9	-1.0
SONM	Songino Array	15.87	4	Pn	Pn	17 18 02.9	+1.9
	comp=Z,0.1nm,0.3s,baz=170,slow=8.8,SNR=2.8						
MK31	Makanchi Array	22.59	317	eP	P	17 19 18.2	+0.1
MKAR	Makanchi Array	22.59	317	P	P	17 19 18.6	+0.4
	comp=Z,0.5nm,0.6s,mb3.1,baz=118,slow=11,SNR=8.3						
ZAA0	Zalesovo Array	26.11	333	eP	P	17 19 50.5	-0.9
ZALV	Zalesovo Beam	26.11	333	P	P	17 19 51.5	+0.2
	comp=Z,1.4nm,0.5s,mb3.7,baz=128,slow=10,SNR=9.7						
KURK	Kurchatov	26.79	322	P	P	17 19 58.0	+0.4
	comp=Z,0.5nm,0.2s,mb3.7,baz=126,slow=10,SNR=4.3						
KURK	Kurchatov	26.79	322	P	P	17 19 56.5	-1.1
ARU	Arti	39.99	322	P	P	17 21 51.7	-0.4
	comp=Z,2.7nm,0.7s,mb4.1						
PETK	Petropavlovsk-	43.25	45	P	P	17 22 19.1	+0.1
	comp=Z,1.5nm,0.5s,mb4.0,baz=169,slow=2.7,SNR=5.5						
ARCES	ARCESS Array B	56.62	336	P	P	17 24 00.1	-0.2
	comp=Z,2.0nm,0.9s,mb4.2,baz=90,slow=8.5,SNR=5.6						
WRA	Warramunga Arr	58.99	147	P	P	17 24 18.4	+0.9
	comp=Z,1.0nm,0.5s,mb4.1,baz=338,slow=7.6,SNR=3.7						
ASAR	Alice Springs	62.04	149	P	P	17 24 38.6	+0.3
	comp=Z,0.4nm,0.8s,mb3.6,baz=326,slow=6.0,SNR=8.0						
CLL	Collm	66.69	317	eP	P	17 25 09.0	+0.5

IDC 08 17:29:14.1±3.3, 39°.35N×110°.65E, h0km, mb3.7/3, mb1 3.6/5, mb1mx3.4/25, mbtmp3.6/5, ML3.1/2, Error ellipse: s-maj=82.9km s-min=37.0km az=16.0, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	Songino Array	9.02	341	Pn	Pn	17 31 25.8	+0.2
	0.1nm,0.3s,baz=155,slow=12,SNR=13						
SONM				Lg		17 34 05.3	
	0.2nm,0.3s,baz=152,slow=25,SNR=7.7						
KSRS	Korea Array	13.68	93	Pn	Pn	17 32 29.2	-0.1
	0.2nm,0.3s,baz=279,slow=13,SNR=5.8						
KSRS				Lg		17 36 37.5	
	0.1nm,0.3s,baz=240,slow=30,SNR=4.7						
MKAR	Makanchi Array	21.93	299	P	P	17 34 09.6	+0.7
	1.1nm,0.8s,baz=101,slow=12,SNR=11						
KURK	Kurchatov	25.13	307	P	P	17 34 40.3	-0.2
	0.5nm,0.2s,baz=108,slow=11,SNR=4.2						
BVAR	Borovoye Array	30.61	310	P	P	17 35 29.5	0.0
	0.4nm,0.7s,baz=92,slow=12,SNR=3.7						

*ISCJB **08** 17:50:54.5±0.2, 37°.46N±0°.02×114°.60W±0°.02, h10km, Error ellipse: s-maj=2.4km s-min=2.0km az=44.2*
*NEIC **08** 17:50:54.5, 37°.45N×114°.59W, h2km, ML3.5(REN), After REN.*

ISC 08 17:50:54.2±0.2, 37°.46N±0°.01×114°.60W±0°.02, h10km, n52, σ1°20/89, 20C-26D, Southern Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
S12A	Delamar Landin	0.25	307	⇓P	Pg	17 50 59.3	0.0
	baz=0.3,SNR=1000						
S12A				⇓S	Sg	17 51 03.5	+0.8
	baz=0.3						
T11A	Corn Creek, Al	0.54	247	P	Pg	17 51 04.8	+0.1
	baz=0.5,SNR=439						
T11A				⇑S	Sg	17 51 12.2	+0.4
	baz=0.5						
S13A	Holt Ranch, En	0.60	78	⇓P	Pg	17 51 05.9	+0.1
	baz=0.6,SNR=592						
S13A				⇓S	Sg	17 51 14.0	+0.4
	baz=0.6						
T13A	Saint George	0.70	128	P	Pg	17 51 07.8	+0.1
	baz=0.7,SNR=211						
T13A				⇑S	Sg	17 51 17.4	+0.5
	baz=0.7						
T12A	Moapa	0.74	187	⇑P	Pg	17 51 08.2	-0.2
	baz=0.7,SNR=41						
R12A	Pony Springs,	0.87	359	⇑P	Pg	17 51 10.4	-0.5
	baz=0.9,SNR=68						
R12A				⇑S	Sg	17 51 21.6	-0.7
	baz=0.9						
R13A	O'Grain Ranch,	0.88	34	P	Pg	17 51 10.9	-0.1
	baz=0.9,SNR=294						
S11A	Rachel	0.93	282	⇓P	Pg	17 51 12.0	-0.1
	baz=0.9,SNR=200						
S11A				⇑S	Sg	17 51 24.7	+0.4
	baz=0.9						
ARUT	Antelope Range	0.97	70	ePg	Pg	17 51 12.8	-0.1
ARUT				eSg	Sg	17 51 25.5	-0.1
CCUT	Cedar City	0.98	84	ePg	Pg	17 51 12.6	-0.5
CCUT				eSg	Sg	17 51 26.1	+0.2
U12A	Valley of Fire	1.02	177	⇓P	Pg	17 51 13.7	-0.2
	baz=1.0						
U12A				⇑S	Sg	17 51 27.9	+0.8
	baz=1.0						
U13A	Pakoon Wash	1.16	154	P	Pb	17 51 16.2	0.0
	baz=1.1,SNR=526						
U13A				⇓S	Sb	17 51 31.4	+0.1
	baz=1.1						
S14A	Cedar City	1.17	75	⇓P	Pb	17 51 16.3	-0.2
	baz=1.2,SNR=14						
S14A				⇓S	Sb	17 51 32.1	+0.3
	baz=1.2						
R11A	Troy Canyon, C	1.19	319	⇑P	Pb	17 51 16.1	-0.6
	baz=1.2,SNR=1000						
R11A				⇓S	Sb	17 51 32.2	+0.1
	baz=1.2						
U11A	Corn Creek	1.21	212	⇓P	Pn	17 51 17.1	0.0
	baz=1.2,SNR=126						
T14A	Hurricane	1.27	108	⇓P	Pn	17 51 17.8	-0.1
	baz=1.3,SNR=165						
T14A				⇓S	Sb	17 51 34.9	+0.4
	baz=1.3						
U14A	Mt Trumbull	1.54	132	⇓Pb	Pb	17 51 22.7	0.0
	baz=1.5,SNR=199						
Q13A	Wheeler Ranch,	1.56	17	⇑P	Pn	17 51 21.9	-0.1
	baz=1.6						
Q13A				⇓Sb	Sb	17 51 44.1	+1.1
	baz=1.6						
R10A	Warm Springs	1.58	302	⇑P	Pn	17 51 22.2	-0.1
	baz=1.6,SNR=86						
Q12A	Willow Creek R	1.59	353	Pb	Pb	17 51 23.5	-0.1
	baz=1.6,SNR=53						
Q11A	Duckwater	1.62	329	⇓Pb	Pb	17 51 23.8	-0.3
	baz=1.6,SNR=39						
Q11A				⇓Sb	Sb	17 51 45.3	+0.8
	baz=1.6						
S10A	Tonopah Range,	1.65	287	⇓P	Pn	17 51 22.8	-0.4
	baz=1.7,SNR=119						
S10A				⇑Sb	Sb	17 51 46.8	+1.2
	baz=1.7						
V12A	Nelson	1.74	187	⇑P	Pn	17 51 24.6	+0.2
	baz=1.7,SNR=18						
T15A	Red Dirt Ranch	1.82	103	⇓Pb	Pb	17 51 27.4	-0.2
	baz=1.8,SNR=21						
Q14A	Sevier Lake (B	1.85	34	⇑P	Pn	17 51 25.9	0.0
	baz=1.9						
Q10A	Clear Creek Ra	1.97	314	⇓P	Pn	17 51 27.7	+0.1
	baz=2.0,SNR=64						
Q10A				⇓Sb	Sb	17 51 56.2	+1.5
	baz=2.0						
R15A	Junction	1.98	67	⇑Sb	Sb	17 51 57.0	+2.0
	baz=2.0						
P12A	McGill	2.03	353	⇑P	Pn	17 51 28.4	0.0
	baz=2.0,SNR=16						
P12A				⇑S	Sn	17 51 54.7	+1.0
	baz=2.0						
P13A	Bates Ranch, G	2.04	13	⇑Sb	Sb	17 51 58.0	+1.1
	baz=2.1						
MSU	Marysvale	2.18	60	ePn	Pn	17 51 33.4	+3.0
MSU				eSn	Sn	17 52 03.9	+6.4
V14A	Boquillas Ranc	2.18	146	⇑Sb	Sb	17 52 02.2	+1.5
	baz=2.2						
P11A	Circle Ranch,	2.28	337	⇓S	Sn	17 51 60.0	0.0
	baz=2.3						
TUQ	Turquoise Moun	2.29	208	⇓Sb	Sb	17 52 06.4	+2.6
	baz=2.3						
Q15A	Fillmore	2.33	48	⇑Sb	Sb	17 52 07.3	+2.3
	baz=2.3						
LDFC	Landfair

BGU	Big Grassy Mou	3.67	19	*e*Pn	Pn	17 51 56.6	+5.7
BGU				*e*Sg	Sg	17 52 48.8	-3.2
M13A	Montello	3.91	5	*e*Pn	Pn	17 51 57.2	+3.0
M13A				*e*Pg	Pg	17 52 06.1	-3.0
M13A				*e*Sg	Sg	17 52 54.6	-5.1
PV04	Paradox Valley	4.59	77	*e*Pn	Pn	17 52 07.0	+3.4
PV04				*e*Pg	Pg	17 52 20.1	-2.1
PV04				*e*Sg	Sg	17 53 18.4	-3.3
MVCO	Mesa Verde	4.87	91	*e*Pg	Pg	17 52 25.4	-1.9
MVCO				*e*Sg	Sg	17 53 25.9	-4.4

ISCJB ***08*** *18:03:01.0±0.5, 43°.75N×0°.05×105°.21W±0°.05, h0km, Error ellipse: s-maj=6.8km s-min=5.2km az=156.1*
NEIC ***08*** *18:03:02.8±0.4, 43°.74N×105°.22W, h0km, ML3.1, Error ellipse: s-maj=6.3km s-min=4.3km az=157.0, Suspected Mining explosion.*
NEIC 65 km [40 miles] SSE of Gillette.
IDC ***08*** *18:03:04.4±1.5, 44°.17N×105°.84W, h0km, mb3.8/1, mb1 3.9/4, mb1mx3.5/25, mbtmp3.7/4, ML3.6/3, Error ellipse: s-maj=56.2km s-min=8.0km az=145.0*

ISC 08 18:03:02.9±0.4, 43°.74N±0°.05×105°.22W±0°.05, h0km, n36, σ0§96/36, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.94	66	*e*Pg	Pg	18 03 22.1	+1.3
PHWY	Pilot Hill	2.44	184	*e*Pn	Pn	18 03 43.8	-0.2
RWWY	Rawlins	2.52	216	*e*Pn	Pn	18 03 45.6	+0.5
LAO	LASA Array	3.03	347	*e*Pn	Pn	18 03 52.3	+0.3
RLMT	Red Lodge	3.21	297	*e*Pn	Pn	18 03 53.3	-1.3
BW06	Boulder Array	3.32	254	*e*Pn	Pn	18 03 55.8	-0.2
PDAR	Pinedale Array	3.32	254	Pn	Pn	18 03 56.0	0.0
	3.9nm,0.3s,baz=70,slow=15,SNR=70						
PDAR				Lg		18 04 40.4	
	17nm,0.3s,baz=63,slow=34,SNR=9.3						
OGNE	Ogallala	3.66	139	*e*Pn	Pn	18 04 01.5	+0.8
GCMT	Greycliff	3.77	304	*e*Pn	Pn	18 04 02.7	+0.5
LOHW	Long Hollow	3.91	270	*e*Pn	Pn	18 04 05.3	+1.2
SNOW	Snow King Moun	4.03	268	*e*Pn	Pn	18 04 07.2	+1.4
REDW	Red Top Meadow	4.11	267	*e*Pn	Pn	18 04 08.2	+1.3
IMW	Indian Meadow	4.14	274	*e*Pn	Pn	18 04 08.9	+1.6
TPAW	Teton Pass	4.17	269	*e*Pn	Pn	18 04 08.0	+0.3
RRI2	Red Ridge	4.45	267	*e*Pn	Pn	18 04 12.1	+0.5
QLMT	Earthquake Lak	4.59	286	Pn	Pn	18 04 18.6	+5.1
DGMT	Dagmar	4.78	8	*e*Pn	Pn	18 04 17.6	+1.4
BOZ	Bozeman (W)	4.95	295	*e*Pn	Pn	18 04 17.6	-0.9
EGMT	Eagleton	5.33	325	*e*Pn	Pn	18 04 23.1	-0.5
	18nm,0.4s						
HRY	Holter Researc	5.53	305	*e*Pn	Pn	18 04 26.6	+0.1
	11nm,0.5s						
LRM	Limekiln Ridge	5.55	295	*e*Pn	Pn	18 04 26.6	-0.1
	16nm,0.4s						
MCMT	McKenzie Canyo	5.58	284	Pn	Pn	18 04 24.9	-2.2
	1.4nm,0.4s						
DAU	Daniels Canyon	5.59	236	*e*Pn	Pn	18 04 26.8	-0.4
	6.1nm,0.4s						
HVU	Hansel Valley	5.90	253	*e*Pn	Pn	18 04 30.7	-0.7
	4.6nm,0.5s						
SRU	San Rafael	6.11	223	*e*Pn	Pn	18 04 33.5	-0.9
	12nm,0.4s						
ECSD	EROS Data Cent	6.23	87	*e*Pn	Pn	18 04 36.7	+0.6
	3.8nm,0.3s						
BGU	Big Grassy Mou	6.44	247	*e*Pn	Pn	18 04 38.8	-0.1
CHMT	Chamberlain Mo	6.49	302	*e*Pn	Pn	18 04 39.5	-0.1
	1.3nm,0.4s						
DUG	Dugway	6.68	241	*e*Pn	Pn	18 04 41.0	-1.1
	2.8nm,0.4s						
MSU	Marysvale	7.41	228	*e*Pn	Pn	18 04 51.0	-1.2
	2.2nm,0.4s						
AGMN	Agassiz Nation	7.95	52	*e*Pn	Pn	18 04 57.1	-2.4
	9.4nm,0.5s						
ELK	Elko	8.01	251	Pn	Pn	18 05 01.9	+1.4
	0.2nm,0.3s,baz=49,slow=17,SNR=3.5						
ULM	Lac du Bonnet	9.11	41	Pn	Pn	18 05 15.3	-0.3
ULM				Lg		18 07 45.8	
ULM	Lac du Bonnet	9.11	41	Pn	Pn	18 05 15.3	-0.3
	3.5nm,0.3s,baz=231,slow=11,SNR=11						
ULM				Lg		18 07 45.8	
	0.5nm,0.3s,baz=142,slow=19,SNR=1.8						
EYMN	Ely	10.46	62	Pn	Pn	18 05 32.9	-1.0
ARCES	ARCESS Array B	61.41	18	P	P	18 13 19.7	-0.5
	0.7nm,0.6s,baz=338,slow=6.8,SNR=7.4						

ISCJB ***08*** *18:15:26.8±0.8, 1°.68N±0°.05×99°.1E±0°.1, h10km, mb3.5/5, Error ellipse: s-maj=15.7km s-min=7.2km az=171.6*
IDC ***08*** *18:15:26.1±3.0, 1°.47N×99°.08E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.5/20, mbtmp3.6/5, MS3.2/1, Ms1 3.2/1, ms1mx2.7/19, Error ellipse: s-maj=175.9km s-min=21.2km az=55.0*
DJA ***08*** *18:15:31, 1°.58N×99°.22E, h20km, MLv3.9/7*
NEIC ***08*** *18:15:31.9±1.2, 1°.64N×99°.34E, h35km, Error ellipse: s-maj=36.7km s-min=15.5km az=66.0*

ISC 08 18:15:29.2±0.6, 1°.66N±0°.05×99°.24E±0°.09, h10km, n17, σ1§13/18, mb3.5/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	Mandailing Nat	0.92	158	P	Pg	18 15 43.2	-3.8
BKNI	Bangkinang	2.23	126	P	Pn	18 16 06.9	+0.6
PPI	Padang Panjang	2.40	151	P	Pn	18 16 11.4	+2.8
TPTI		2.60	308	P	Pn	18 16 12.9	+1.6
PDSI	Padang	2.83	154	P	Pn	18 16 14.0	-0.5
SISI	Saibi	2.97	183	P	Pn	18 16 16.1	-0.3
IPM	Ipoh	3.32	32	P	Pn	18 16 22.4	+1.1
SDSI	Sungai Dareh	3.38	140	P	Pn	18 16 22.8	+0.7
KULM	Kulim	3.87	21	*e*Pn	Pn	18 16 28.6	-0.3
KULM				*e*Pg	Pg	18 16 43.0	-0.5
KULM				*e*S	Sg	18 17 26.7	-7.0
MYKOM	Kota Tinggi	4.61	88	P	Pn	18 16 39.6	+0.6
WRA	Warramunga Arr	40.57	124	P	P	18 23 08.4	-0.8
	0.4nm,0.3s,mb3.5,baz=304,slow=9.1,SNR=4.6						
ASAR	Alice Springs	42.07	129	P	P	18 23 19.1	-2.4
	0.4nm,0.8s,mb3.1,baz=300,slow=7.2,SNR=4.3						
ASAR				PcP	PcP	18 25 14.8	-1.6
	0.5nm,1.0s,baz=320,slow=3.6,SNR=4.7						
SONM	Songino Array	46.41	7	PcP	PcP	18 25 30.3	-0.4
	0.9nm,0.8s,baz=202,slow=4.0,SNR=6.1						
MKAR	Makanchi Array	47.32	344	P	P	18 24 02.0	-1.0
	1.0nm,0.9s,mb3.7,baz=170,slow=8.6,SNR=5.0						
MKAR				LR	LR	18 46 10.9	
	comp=Z,27nm,19.3s,baz=184,slow=39						
ZALV	Zalesovo Beam	53.46	349	P	P	18 24 50.0	+0.6
	0.5nm,0.4s,mb3.8,baz=166,slow=6.0,SNR=4.4						
ZALV	Zalesovo Beam	53.46	349	P	P	18 24 50.0	+0.6
BVAR	Borovoye Array	56.51	340	P	P	18 25 10.4	-1.1
	0.4nm,0.5s,mb3.7,baz=146,slow=9.6,SNR=3.7						

ISCJB ***08*** *18:22:59.3±0.5, 60°.07S±0°.08×18°.6W±0°.2, h10km, mb4.5/17, MS4.3/15, Error ellipse: s-maj=14.4km s-min=10.5km az=142.4*
IDC ***08*** *18:22:59.4±0.6, 60°.10S×18°.67W, h0km, mb4.2/9, mb1 4.3/9, mb1mx4.2/18, mbtmp4.2/9, MS4.3/15, Ms1 4.3/15, ms1mx4.3/15, Error ellipse: s-maj=23.2km s-min=17.3km az=27.0*
NEIC ***08*** *18:23:00.5±0.3, 60°.07S×18°.71W, h10km, mb4.8/9, Error ellipse: s-maj=12.5km s-min=10.2km az=212.0*
GCMT ***08*** *18:23:03.5±0.2, 60°.49S×18°.42W, h12km, MW5.1, Moment Tensor Solution. s38,c54; s65,c100; Moment tensor: Scale 10^16 Nm; Mrr-3.36±.18; Mθθ-2.94±.21; Mφφ6.30±.14; Mrθ-2.63±.54; Mθφ-0.33±.13; Mφr0.27±.39; Best double couple: Mo6.10000×10^16 NP1:φs32.00000°, δ57.00000°, λ-36.00000°. NP2:φs144.00000°, δ61.00000°, λ-141.00000°. Principal axes: T 6.3300, Plg2.0000°, Azm267.0000°; N -0.5400, Plg43.0000°, Azm175.0000°; P -5.7900, Plg47.0000°, Azm360.0000°; Data Used: II IU IC G CN.*

ISC 08 18:23:01.1±0.5, 60°.12S±0°.08×18°.6W±0°.2, h10km, n50, σ1§02/24, mb4.5/17, MS4.3/15, 1C, East of South Sandwich Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	11.39	162	*e*	Pn	18 25 41.8	-1.7
MAIT	Maitri	16.28	143	*e*P	Pn	18 26 47.8	-1.6
MAIT				*e*S	Sn	18 29 24.3	-26
PMSA	Palmer Station	21.15	238	LR	LR	18 34 14.7	
	comp=Z,781nm,19.4s,MS4.1,baz=72,slow=32						
SYO	Syowa Base	25.51	135⇑	*e*P	P	18 28 29.6	+0.5
USHA	Ushuaia	26.76	259	LR	LR	18 36 45.3	
	comp=Z,2μm,21.1s,MS4.7,baz=58,slow=31						
QSPA	South Pole Qui	30.12	180	P	P	18 29 11.6	+1.4
	7.7nm,0.6s,mb4.7,baz=208,slow=3.8,SNR=83						
QSPA				LR	LR	18 41 44.1	
	comp=Z,162nm,18.3s,MS3.7,baz=31,slow=37						
MAW	Mawson	34.11	137	P	P	18 29 46.6	+1.4
	4.3nm,0.7s,mb4.5,baz=232,slow=6.9,SNR=15						
MAW				LR	LR	18 41 19.5	
	comp=Z,602nm,21.5s,MS4.3,baz=250,slow=32						
MAW	Mawson	34.11	137	*e*P	P	18 29 45.8	+0.5
	2.9nm,1.1s,mb4.1						
MAW				LR	LR	18 41 19.5	
PLCA	Paso Flores	37.13	278	LR	LR	18 43 29.8	
	comp=Z,271nm,20.6s,MS4.0,baz=119,slow=33						
SBA	Scott Base	42.24	182	*e*P	P	18 30 56.0	+2.4
	73nm,2.0s,mb5.0						
CPUP	Villa Florida	42.91	304	LR	LR	18 46 48.4	
	comp=Z,334nm,20.9s,MS4.2,baz=139,slow=33						
BOSA	Boshof	43.13	63	P	P	18 31 02.2	+0.8
	3.4nm,0.8s,mb4.2,baz=193,slow=10,SNR=6.2						
BOSA				LR	LR	18 45 06.8	
	comp=Z,919nm,19.6s,MS4.7,baz=206,slow=31						
BOSA	Boshof	43.13	63	P	P	18 31 02.1	+0.7
	8.2nm,0.9s,mb4.5						
BOSA				LR	LR	18 45 06.8	
CFAA	Coronel Fontan	43.27	288	P	P	18 31 01.6	-0.9
	0.5nm,0.4s,mb3.6,baz=148,slow=7.2,SNR=3.1						
LBTB	Lobatse	46.40	61	P	P	18 31 27.9	+0.4
	2.2nm,0.7s,mb4.2,baz=211,slow=5.9,SNR=3.3						
TSUM	Tsumeb	48.33	48	P	P	18 31 42.3	-0.1
	0.9nm,0.3s,mb4.3,baz=255,slow=14,SNR=3.5						
CASY	Casey	48.41	155	*e*P	P	18 31 43.6	+1.0
	13nm,0.9s,mb5.0						
SIV	San Ignacio	53.68	306	P	P	18 32 22.3	-0.5
	1.4nm,0.5s,mb4.1,baz=178,slow=10,SNR=7.3						
SIV				PcP	PcP	18 33 29.3	+0.3
	2.1nm,0.7s,baz=132,slow=8.5,SNR=4.4						
LSZ	Lusaka	56.12	58	*e*P	P	18 32 40.0	-0.4
	1.2nm,0.8s,mb4.0						
LPAZ	La Paz	56.40	299	P	P	18 32 43.8	+1.3
	3.2nm,0.7s,mb4.5,baz=162,slow=5.8,SNR=17						
LPAZ				LR	LR	18 54 05.6	
	comp=Z,104nm,21.7s,MS3.9,baz=343,slow=33						
LPAZ	La Paz	56.40	299	*e*P	P	18 32 42.8	+0.3
	13nm,1.0s,mb4.9						
LPAZ				LR	LR	18 54 05.6	
OPO	Ambohidratompo	62.05	78	P	P	18 33 25.5	+4.0
	1.8nm,0.8s,mb4.2,baz=165,slow=7.1,SNR=2.7						
DBIC	Dimbokro	67.47	15	LR	LR	18 56 47.2	
	comp=Z,58nm,18.4s,MS3.8,baz=157,slow=30						
DBIC	Dimbokro	67.47	15	P	P	18 33 56.5	-0.3
	5.4nm,0.8s,mb4.6						
ATAH	Atahualpa	69.09	293	P	P	18 34 13.6	+6.5
	4.7nm,0.6s,mb4.6,baz=135,slow=11,SNR=3.5						
KMBO	Kilima Mbogo	72.67	60	LR	LR	19 02 49.1	
	comp=Z,757nm,21.1s,MS4.9,baz=90,slow=33						
OTAV	Otavalo	75.64	297	*e*P	P	18 34 46.5	+0.4
	59nm,1.9s,mb5.2						
ROSC	El Rosal	77.98	303	LR	LR	19 09 03.3	
	comp=Z,233nm,20.1s,MS4.5,baz=24,slow=36						
SDV	Santo Domingo	80.12	308	*e*P	P	18 35 10.3	-0.7
	18nm,1.3s,mb4.8						
STKA	Stephens Creek	86.90	163	LR	LR	19 10 57.5	
	comp=Z,326nm,21.6s,MS4.7,baz=314,slow=33						
MBWA	Marble Bar	92.21	142	P	P	18 36 10.0	-0.9
PPT	Papeete	93.06	226	LR	LR	19 13 36.4	
	comp=Z,193nm,18.1s,MS4.6,baz=155,slow=33						
ASAR	Alice Springs	93.54	155	P	P	18 36 16.1	-0.8
	0.5nm,0.7s,mb4.1,baz=182,slow=4.8,SNR=8.0						
KEST	Kesra	98.25	23	LR	LR	19 16 02.2	
	comp=Z,70nm,19.8s,MS4.2,baz=193,slow=32						
EIL	Elat	99.64	45	LR	LR	19 18 31.3	
	comp=Z,386nm,20.5s,MS4.9,baz=100,slow=33						
FINES	FINESS Array B	126.02	25	PKP	PKPdf	18 42 00.7	-1.0
	1.6nm,0.8s,baz=18,slow=6.3,SNR=4.3						
AKTK	Aktyubinsk	126.26	50	PKP	PKPdf	18 42 02.0	-0.4
AKTO	Aktyubinsk	126.26	50	PKP	PKPdf	18 42 02.0	-0.4
	0.5nm,0.7s,baz=178,slow=5.0,SNR=4.1						
PDAR	Pinedale Array	126.28	294	PKP	PKPdf	18 42 01.8	-1.1
	0.3nm,0.7s,baz=185,slow=5.1,SNR=2.6						
NVAR	Mina Array Bea	127.02	284	PKP	PKPdf	18 42 05.3	+1.0
	0.1nm,0.2s,baz=224,slow=2.5,SNR=2.8						
BVAR	Borovoye Array	133.20	56	PKP	PKPdf	18 42 15.3	-0.3
	0.4nm,0.6s,baz=222,slow=2.0,SNR=3.8						
MKAR	Makanchi Array	133.95	70	PKP	PKPdf	18 42 15.6	-1.6
	0.3nm,0.7s,baz=257,slow=2.1,SNR=3.7						
ZALV	Zalesovo Beam	140.08	64	PKhKP		18 42 18.7	
	0.2nm,0.3s,baz=210,slow=5.0,SNR=2.4						
DLBC	Dease Lake	146.34	298	*e*PKPbc	PKPbc	18 42 40.2	-0.2
SONM	Songino Array	146.43	86	PKPbc	PKPbc	18 42 41.0	-0.1
	6.4nm,0.8s,baz=219,slow=3.6,SNR=39						
ULN	Ulaanbaatar	146.78	87	*e*PKPdf	PKPdf	18 42 39.5	-0.8
ULN				*e*PKPbc	PKPbc	18 42 41.9	-0.2
KSRS	Korea Array	148.93	122	PKPbc	PKPbc	18 42 48.0	-0.2
	2.0nm,0.8s,baz=208,slow=1.9,SNR=15						
INK	Inuvik	151.88	314	*e*PKPbc	PKPbc	18 42 51.5	-2.7
MJAR	Matsushiro Arr	152.11	137	PKPbc	PKPbc	18 42 54.1	-1.7
	1.0nm,0.6s,baz=206,slow=3.1,SNR=4.0						
MJAR				PKPab	PKPab	18 43 03.2	-2.2
	1.7nm,0.9s,baz=160,slow=3.6,SNR=5.2						
EGAK	Eagle	153.84	305	*e*PKPdf	PKPdf	18 42 48.9	-1.9

ISCJB ***08*** *18:24:01.9±0.8, 30°.41S±0°.06×66°.89W±0°.06, h36km±14km, mb4.0/3, Error ellipse: s-maj=10.0km s-min=7.7km az=146.8*
NEIC ***08*** *18:24:04.2±0.6, 30°.43S×66°.94W, h41km±7km, MD4.0(SJA), Error ellipse: s-maj=8.3km s-min=7.2km az=121.0*
NEIC Felt [III] in Valle Fertil.
IDC ***08*** *18:24:04.5±0.8, 30°.43S×66°.95W, h40km±7km, mb3.8/3, mb1 3.8/6, mb1mx3.7/16, mbtmp3.6/6, ML4.1/3, Error ellipse: s-maj=28.8km s-min=6.6km az=133.0*

ISC 08 18:24:04.3±0.6, 30°.42S±0°.05×66°.96W±0°.06, h40km±12km, n20, σ0§56/21, mb4.0/3, La Rioja Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	Coronel Fontan	1.61	223	P	Pn	18 24 30.8	+0.6
	8.2nm,0.3s,baz=47,slow=18,SNR=368						
CFAA				S	Sn	18 24 50.1	+0.4
	71nm,0.3s,baz=298,slow=20,SNR=63						
LCO	Las Campanas	3.55	292	*e*Pn	Pn	18 24 56.7	-0.1
LCO				*e*Sn	Sn	18 25 37.1	-0.4
CMCH	Combarbala	3.56	257	*e*P	Pn	18 24 57.5	+0.5
CMCH	Combarbala	3.56	257	*e*P	Pn	18 24 57.5	+0.5
FCH	Farellones	4.05	224	*e*P	Pn	18 25 03.8	0.0
CHNG	Los Chungos	4.16	248	*e*P	Pn	18 25 04.0	-1.2
PEL	Peldehue	4.17	229	*e*P	Pn	18 25 06.3	+0.9
CLCH	Cerro Calan	4.25	225	*e*P	Pn	18 25 05.7	-0.8
TRQA	Tornquist	8.65	153	*e*Pn	Pn	18 26 06.3	-0.6
CPUP	Villa Florida	9.41	67	P	Pn	18 26 17.6	+0.3
	1.9nm,0.3s,baz=224,slow=10,SNR=16						
CPUP				S	Sn	18 28 01.6	-0.2
	4.4nm,0.3s,baz=237,slow=9.4,SNR=3.0						
CPUP	Villa Florida	9.41	67	*e*Pn	Pn	18 26 17.0	-0.3
CPUP				S	Sn	18 28 01.6	-0.2
PLCA	Paso Flores	10.69	195	S	Sn	18 28 26.6	-6.6
	0.2nm,0.3s,baz=98,slow=18,SNR=2.4						
LPAZ	La Paz	14.11	355	P	Pn	18 27 22.6	+0.9
	0.1nm,0.3s,baz=190,slow=11,SNR=2.8						
LPAZ				pP		18 27 30.1	
	0.3nm,0.3s,baz=152,slow=8.4,SNR=8.6						
SIV	San Ignacio	15.35	22	P	Pn	18 27 38.0	0.0
	0.2nm,0.3s,baz=223,slow=17,SNR=3.2						
QSPA	South Pole Qui	59.81	180	P	P	18 34 05.2	+0.3
	1.9nm,1.0s,mb4.1,baz=147,slow=1.6,SNR=4.1						
BOSA	Boshof	77.84	116	P	P	18 35 58.1	+0.2
	2.3nm,0.7s,mb4.2,baz=248,slow=5.4,SNR=4.1						
PDAR	Pinedale Array	82.68	330	P	P	18 36 23.0	-0.4
	0.4nm,0.6s,mb3.6,baz=123,slow=6.6,SNR=3.2						
ZALV	Zalesovo Beam	148.90	33	PKPbc	PKPbc	18 43 47.4	+0.2
	1.8nm,0.8s,baz=299,slow=3.0,SNR=6.7						
ZALV				pPKPbc	pPKPbc	18 43 59.4	-0.4
	1.0nm,0.5s,baz=294,slow=4.6,SNR=3.3						
ZALV	Zalesovo Beam	148.90	33	PKPbc	PKPbc	18 43 47.4	+0.2
ZALV				pPKPbc	pPKPbc	18 43 59.4	-0.4
MKAR	Makanchi Array	151.18	47	PKPbc	PKPbc	18 43 52.8	-0.1
	1.1nm,0.7s,baz=312,slow=3.1,SNR=9.7						
MKAR				PKPab	PKPab	18 44 01.6	+0.7
	1.8nm,1.0s,baz=273,slow=2.5,SNR=4.3						
MKAR				pPKPbc	pPKPbc	18 44 05.8	+0.3
	1.7nm,1.0s,baz=306,slow=2.9,SNR=6.5						

IDC ***08*** *18:54:49.4±0.9, 31°.37N×103°.94E, h0km, mb3.7/10, mb1 3.8/11, mb1mx3.7/24, mbtmp3.7/11, ML3.4/1, MS3.0/2, Ms1 3.0/2, ms1mx2.4/36, Error ellipse: s-maj=42.2km s-min=16.9km az=53.0*
NEIC ***08*** *18:54:50.9±0.6, 31°.41N×104°.02E, h10km, mb3.8/1, Error ellipse: s-maj=24.2km s-min=9.7km az=60.0*
BJI ***08*** *18:54:52.5, 31°.45N×104°.06E, h20km, ML3.6/14, Ms3.4/2, Ms7 3.3/2*

ISC 08 18:54:51.0±2.6, 31°.41N±0°.07×103°.92E±0°.07, h9km±15km, n22, σ0§81/24, mb3.8/9, MS2.8/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	Lanzhou	4.67	359	Pn	Pn	18 56 03.8	+2.1
LZH				Sn	Sn	18 56 54.8	-1.2
LZH				Sg	Sg	18 57 20.3	-0.6
LZH				smax			
	comp=N,110nm,1.1s						
LZH				smax			
	comp=E,120nm,1.0s						
LZH				LR	LR		
	comp=N,290nm,5.7s						
LZH				LR	LR		
	comp=Z,560nm,6.8s						
XAN	Xi'an	4.96	57	Pg	Pb	18 56 17.2	-0.9
XAN				Sg	Sb	18 57 19.2	+1.3
XAN				smax			
	comp=N,120nm,0.7s						
XAN				smax			
	comp=E,65nm,0.9s						
SONM	Songino Array	16.52	6	Pn	Pn	18 58 42.7	-0.1
	comp=E,0.1nm,0.3s,baz=185,slow=16,SNR=5.8						
SONM	Songino Array	16.52	6	Pn	Pn	18 58 42.6	-0.1
KSRS	Korea Array	20.67	66	P	P	18 59 30.8	-0.4
	comp=E,0.5nm,0.4s,baz=254,slow=11,SNR=4.5						
CN2	Changchun	21.00	48	*e*P	P	18 59 26.2	-8.5
MK31	Makanchi Array	22.65	319	*e*P	P	18 59 53.1	+0.8
MKAR	Makanchi Array	22.65	319	P	P	18 59 53.0	+0.7
	comp=E,1.4nm,0.8s,mb3.5,baz=116,slow=11,SNR=14						
MKAR				LR	LR	19 10 22.4	
	comp=E,23nm,18.2s,MS2.6,baz=47,slow=41						
MKAR	Makanchi Array	22.65	319	P	P	18 59 53.0	+0.7
MKAR				LR	LR	19 10 22.4	
AAK	Ala-Archa	25.90	304	LR	LR	19 12 13.3	
	comp=E,41nm,19.2s,MS3.0,baz=50,slow=40						
ZAA0	Zalesovo Array	26.38	334	*e*P	P	19 00 27.3	-0.2
ZALV	Zalesovo Beam	26.38	334	P	P	19 00 27.8	+0.3
	comp=E,4.3nm,0.8s,mb4.0,baz=136,slow=9.7,SNR=20						
ZALV	Zalesovo Beam	26.38	334	P	P	19 00 27.8	+0.3
KURK	Kurchatov	26.91	323	P	P	19 00 32.5	+0.3
	comp=E,2.0nm,0.8s,mb3.7,baz=127,slow=9.2,SNR=19						
KURK	Kurchatov	26.91	323	*e*P	P	19 00 32.3	0.0
	comp=E,2.2nm,1.0s,mb3.6						
BVAR	Borovoye Array	32.46	322	P	P	19 01 22.3	+0.9
	comp=E,0.2nm,0.4s,mb3.3,baz=128,slow=12,SNR=4.2						
ARU	Arti	40.10	322	P	P	19 02 26.6	-0.1
ARCES	ARCESS Array B	56.92	336	P	P	19 04 36.4	+0.4
	comp=E,4.1nm,1.0s,mb4.4,baz=74,slow=10,SNR=3.9						
FINES	FINESS Array B	57.23	326	P	P	19 04 37.8	-0.5
	comp=E,0.7nm,0.6s,mb3.9,baz=93,slow=7.8,SNR=7.7						
WRA	Warramunga Arr	58.81	146	P	P	19 04 49.5	-0.4
	comp=E,0.7nm,0.6s,mb3.8,baz=339,slow=7.8,SNR=4.5						
ASAR	Alice Springs	61.83	149	P	P	19 05 10.1	-0.4
	comp=E,0.3nm,0.8s,mb3.5,baz=345,slow=6.8,SNR=4.2						
NOA	NORSAR Array B	64.32	327	P	P	19 05 25.4	-1.3
	comp=E,0.3nm,0.4s,mb3.6,baz=71,slow=5.5,SNR=3.2						

GUC 08 18:55:55.1±0.8, 23°.22S×67°.24W, h250km, ML3.9, 4C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	Plate Boundary	2.28	294⇑	*i*P	Pn	18 56 48.7	+8.5
PB04				*i*S	S	18 57 28.8	+13
PB04				AML	AML	18 57 34.8	
	comp=E,144nm,0.1s						
CEN1	Los Morros	2.73	266	*e*P	Pn	18 56 50.0	+5.3
CEN1				*i*S	S	18 57 30.5	+6.7
CEN1				AML	AML	18 57 34.0	
	comp=N,80nm,0.4s						
ANCH	Antofagasta	2.95	260⇑	*i*P	Pn	18 56 49.1	+2.1
ANCH				*i*S	S	18 57 29.8	+1.8
PB01	Plate Boundary	3.01	316⇑	*i*P	Pn	18 56 50.5	+2.8
PB01				*i*S	S	18 57 31.8	+2.5
PB01				AML	AML	18 57 34.8	
	comp=E,147nm,0.2s						
HMBC	Humberston	3.83	319	*e*P	Pn	18 56 59.6	+2.7
HMBC				*i*S	S	18 57 49.2	+3.2
PSGC	Pisagua	4.50	323⇓	*i*P	Pn	18 57 07.1	+2.2

YHNB	**Yeheng**	5.93	6	*e*Pn		**Pn**	19 09 48.6	-4.0
YHNB				*e*Sn		**Sn**	19 10 51.8	-7.4
KSRS	**Korea Array**	19.70	17	P		**Pn**	19 12 51.2	-0.4
	0.2nm,0.3s,baz=197,slow=11,SNR=8.8							
CBIJ	**Chichi jima**	21.48	63	LR		LR	19 21 12.7	
	comp=Z,44nm,18.2s,baz=112,slow=35							
LZH	**Lanzhou**	22.77	323	*e*P		**P**	19 13 25.5	+3.3
LZH				pP			19 13 30.5	
LZH				sP		sP	19 13 31.5	-20
LZH				pmax		pmax		
	comp=Z,20nm,1.1s,mb4.4							
LZH				pmax		pmax		
	comp=Z,98nm,5.0s							
MJAR	**Matsushiro Arr**	23.51	38	P		**P**	19 13 31.8	+2.6
	comp=Z,0.7nm,0.7s,mb3.1,baz=239,slow=11,SNR=4.0							
SONM	**Songino Array**	31.26	341	P		**P**	19 14 39.1	+0.7
	comp=Z,0.4nm,0.6s,mb3.4,baz=163,slow=5.6,SNR=3.3							
WRAB	**Tennant Creek**	40.72	160	*e*P		**P**	19 15 58.2	-1.1
	comp=Z,6.8nm,0.9s,mb4.5							
WRA	**Warramunga Arr**	40.72	160	P		**P**	19 15 58.1	-1.3
	comp=Z,2.1nm,1.0s,mb3.9,baz=341,slow=8.9,SNR=4.1							
MKAR	**Makanchi Array**	42.05	320	P		**P**	19 16 10.0	0.0
	comp=Z,0.4nm,0.7s,mb3.2,baz=116,slow=8.2,SNR=2.8							
ASAR	**Alice Springs**	44.09	162	P		**P**	19 16 26.1	-0.6
	comp=Z,3.9nm,0.8s,mb4.2,baz=341,slow=7.0,SNR=35							
ZALV	**Zalesovo Beam**	44.62	330	P		**P**	19 16 29.9	-0.6
	comp=Z,0.7nm,0.6s,mb3.6,baz=96,slow=9.1,SNR=3.7							
KURK	**Kurchatov**	46.05	324	P		**P**	19 16 42.0	0.0
	comp=Z,1.1nm,0.6s,mb3.7,baz=123,slow=7.9,SNR=16							
KURK	**Kurchatov**	46.05	324	*e*P		**P**	19 16 41.6	-0.4
	comp=Z,4.0nm,0.9s,mb4.2							
BVAR	**Borovoye Array**	51.65	324	P		**P**	19 17 24.7	-0.1
	comp=Z,0.4nm,0.6s,mb3.6,baz=130,slow=6.6,SNR=3.7							
STKA	**Stephens Creek**	54.19	158	P		**P**	19 17 44.1	+0.5
	comp=Z,3.3nm,0.7s,mb4.5,baz=338,slow=3.7,SNR=4.8							
ABKAR	**Akbulak array**	56.97	317	*e*P		**P**	19 18 03.6	+0.2
	comp=Z,0.7nm,0.6s,mb3.9							
ARU	**Arti**	59.20	325	P		**P**	19 18 19.4	+0.5
	comp=Z,2.6nm,0.6s,mb4.4							

IDC ***08*** *19:27:15.5±2.0, 35°.63N×142°.69E, h0km, mb3.4/2, mb1 3.8/6, mb1mx3.5/27, mbtmp3.9/6, ML3.9/4, MS2.7/1, Ms1 2.7/1, ms1mx2.1/17, Error ellipse: s-maj=45.2km s-min=27.0km az=82.0*
ISCJB ***08*** *19:27:18.4±1.0, 35°.69N±0°.05×142°.55E±0°.08, h41km±15km, mb3.7/2, Error ellipse: s-maj=11.4km s-min=8.0km az=177.8*
JMA ***08*** *19:27:22.1±0.2, 35°.75N×142°.17E, h78km±4km, M3.3*
ISC 08 19:27:19.3±2.2, 35°.67N±0°.05×142°.51E±0°.08, h27km±22km, n20, σ0°78/24, mb3.7/2, Off east of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	1.34	272	P	**Pn**	19 27 42.3	0.0
CHOJ				*e*S	**Sn**	19 27 57.0	-2.2
BSO1	**Boso 1**	1.61	231	P	**Pn**	19 27 46.3	+0.3
JHO	**Hitachi**	1.83	301	P	**Pn**	19 27 48.1	-0.8
BSO3	**Boso 3**	1.85	243	P	**Pn**	19 27 49.9	+0.6
JFK	**Kawauchi**	2.14	323	P	**Pn**	19 27 52.9	-0.4
JFK				*e*S	**Sn**	19 28 15.9	-3.0
JMM	**Marumori**	2.58	328	P	**Pn**	19 27 59.1	-0.3
JMM				*e*S	Sx	19 28 27.4	
JAG	**Ashikaga**	2.59	288	P	**Pn**	19 27 58.8	-0.6
JAG				*e*S	Sx	19 28 26.1	
JOD2	**Odawara 2**	2.82	263	P	**Pn**	19 28 02.3	-0.3
JOD2				*e*S	Sx	19 28 32.0	
JRY	**Ryogami san**	2.95	278	P	**Pn**	19 28 04.5	+0.1
JYN	**Shimob**	3.24	268	P	**Pn**	19 28 08.2	-0.1
JHJ2	**Mitsune**	3.39	222	P	**Pn**	19 28 10.3	-0.1
JHJ2				*e*S	Sx	19 28 46.5	
JHJ	**Hachijo jima 2**	3.40	222	Pn	**Pn**	19 28 10.3	-0.3
	48nm,0.3s,baz=358,slow=5.0,SNR=72						
JHJ				Sn	Sx	19 28 45.7	
	39nm,0.3s,baz=91,slow=23,SNR=8.6						
JMK	**Ichinoseki**	3.43	343	P	**Pn**	19 28 11.2	+0.2
JMK				*e*S	Sx	19 28 48.8	
MJAR	**Matsushiro Arr**	3.59	285	Pn	**Pn**	19 28 13.5	+0.4
	3.2nm,0.3s,baz=99,slow=10,SNR=36						
MJAR				Sn	**Sn**	19 28 56.0	+1.3
	1.2nm,0.3s,baz=139,slow=18,SNR=5.2						
MAT	**Matsushiro**	3.59	285	P	**Pn**	19 28 14.2	+1.0
MAT				S	**Sn**	19 28 55.7	+1.0
JYK	**Kaneyama**	3.66	333	P	**Pn**	19 28 14.5	+0.3
JYK				*e*S	Sx	19 28 55.0	
ASAJ	**Asahikawa**	8.43	0	Pn	**Pn**	19 29 20.1	+0.5
	2.7nm,0.3s,baz=222,slow=11,SNR=17						
ASAJ				Sn	Sx	19 30 49.2	
	0.5nm,0.3s,baz=289,slow=18,SNR=2.5						
ASAJ				LR	LR	19 32 33.8	
	comp=Z,48nm,21.6s,baz=168,slow=38						
CBIJ	**Chichi jima**	8.56	182	Pn	**Pn**	19 29 20.9	-0.6
	4.5nm,0.3s,baz=284,slow=23,SNR=26						
CBIJ				Sn	Sx	19 30 50.6	
	3.8nm,0.3s,baz=90,slow=20,SNR=5.7						
WRA	**Warramunga Arr**	55.85	189	P	**P**	19 36 54.6	+0.2
	0.3nm,0.3s,mb3.8,baz=7.3,slow=7.4,SNR=5.1						
ASAR	**Alice Springs**	59.58	189	P	**P**	19 37 20.8	+0.2
	0.4nm,0.8s,mb3.5,baz=27,slow=8.2,SNR=5.0						

IDC 08 19:35:21.5±4.4, 23°.56S×179°.05W, h0km, mb4.2/3, mb1 4.4/3, mb1mx3.8/14, mbtmp4.2/3, MS3.7/1, Ms1 3.7/1, ms1mx3.0/17, Error ellipse: s-maj=181.8km s-min=46.4km az=145.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	5.76	170	LR	LR	19 38 08.3	
	comp=Z,745nm,21.0s,baz=169,slow=29						
STKA	**Stephens Creek**	35.66	248	P	P	19 42 20.9	-0.5
	2.4nm,0.8s,baz=63,slow=8.3,SNR=5.5						
ASAR	**Alice Springs**	42.95	260	P	P	19 43 22.3	-0.2
	1.0nm,0.3s,baz=94,slow=7.1,SNR=59						
WRA	**Warramunga Arr**	43.30	265	P	P	19 43 25.6	+0.2
	2.9nm,0.3s,baz=101,slow=8.0,SNR=12						
AKASG	**Malin Array Be**	145.15	328	PKPbc	PKPbc	19 54 58.6	-1.8
	0.5nm,0.3s,baz=45,slow=4.6,SNR=4.5						
BRTR	**Keskin Array B**	148.06	308	PKPbc	PKPbc	19 55 10.4	+1.1
	0.4nm,0.5s,baz=56,slow=5.4,SNR=3.0						

IDC ***08*** *19:35:30.9±1.9, 24°.37S×67°.99W, h151km±17km, mb1 3.6/2, mb1mx3.3/15, mbtmp3.4/2, Error ellipse: s-maj=41.6km s-min=15.1km az=90.0*
ISCJB ***08*** *19:35:31.9±1.1, 24°.26S±0°.06×67°.9W±0°.2, h238km±27km, Error ellipse: s-maj=29.6km s-min=9.3km az=174.2*
GUC ***08*** *19:35:33.2±1.0, 24°.16S×67°.63W, h180km, ML4.2*
NEIC ***08*** *19:35:33.2, 24°.16S×67°.63W, h180km, MG4.2(GUC), After GUC.*
ISC 08 19:35:34.2±1.2, 24°.14S±0°.07×67°.8W±0°.2, h216km±30km, n19, σ0°73/24, 2C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	2.34	288	⇑*i*P	**Pn**	19 36 19.0	+1.6
CEN1				*i*S	**S**	19 36 52.2	+1.1
CEN1				AML	AML	19 36 55.0	
	comp=N,514nm,0.8s						
PB04	**Plate Boundary**	2.44	320	⇓*i*P	**Pn**	19 36 23.3	+4.8
PB04				*i*S	**S**	19 37 01.2	+8.1
PB04				AML	AML	19 37 04.8	
	comp=N,437nm,0.4s						
ANCH	**Antofagasta**	2.45	280	*e*P	**Pn**	19 36 18.2	-0.4
ANCH				*i*S	**S**	19 36 52.6	-0.7
ANCH	**Antofagasta**	2.45	280	*e*P	**Pn**	19 36 18.2	-0.4
ANCH				*i*S	**S**	19 36 52.6	-0.7
ANCH				AML	AML	19 36 56.8	
	comp=N,773nm,0.5s						
MACH	**Maria Elena**	2.66	316	⇑*i*P	**Pn**	19 36 21.4	+0.5
MACH				*e*S	**S**	19 36 57.3	-0.2
TOCH	**Tocopilla**	3.02	312	*i*S	**S**	19 37 04.4	-0.4
TOCH				AML	AML	19 37 07.7	
	comp=E,445nm,0.1s						
PB01	**Plate Boundary**	3.46	333	⇓*i*P	**Pn**	19 36 30.0	-0.2
PB01				*i*S	**S**	19 37 13.9	-0.3
PB01				AML	AML	19 37 17.3	
	comp=E,129nm,0.8s						
HMBC	**Humberston**	4.31	333	*e*P	**Pn**	19 36 39.7	-0.8
HMBC				*e*S	**S**	19 37 32.1	-0.7
PSGC	**Pisagua**	5.02	334	*e*P	**Pn**	19 36 48.3	-1.0
MNMC	**Miaee Miaè**	5.26	341	*e*P	**Pn**	19 36 52.2	-0.2
MNMC				*i*S	**S**	19 37 54.6	+0.2

CFAA	**Coronel Fontan**	7.45	183	P		**Pn**	19 37 14.5	-5.8
	comp=E,0.1nm,0.3s,baz=18,slow=8.5,SNR=3.4							
CFAA				S		**S**	19 38 33.5	-11
	comp=E,0.1nm,0.3s,baz=247,slow=20,SNR=7.1							
LPAZ	**La Paz**	7.82	358	P		**Pn**	19 37 26.4	+1.1
	comp=E,2.1nm,0.3s,baz=170,slow=6.6,SNR=47							
LPAZ				S		**S**	19 38 54.8	+0.8
	comp=E,0.1nm,0.3s,baz=78,slow=19,SNR=2.5							
CPUP	**Villa Florida**	9.71	105	P		**Pn**	19 37 49.1	-0.4
	comp=E,0.5nm,0.3s,baz=268,slow=13,SNR=6.9							
SIV	**San Ignacio**	10.27	39	P		**Pn**	19 37 51.8	-5.0
	comp=E,0.2nm,0.3s,baz=238,slow=13,SNR=4.5							
ASAR	**Alice Springs**	128.03	205	PKP	PKPdf		19 54 19.3	+4.3
	comp=E,0.3nm,0.8s,baz=149,slow=2.0,SNR=4.1							
WRA	**Warramunga Arr**	131.17	208	PKP	PKPdf		19 54 25.4	+4.3
	comp=E,0.3nm,0.4s,baz=177,slow=1.4,SNR=3.4							
ZALV	**Zalesovo Beam**	143.85	27	PKP	PKPdf		19 54 46.1	+2.8
	comp=E,0.4nm,0.4s,baz=298,slow=3.1,SNR=2.6							
MKAR	**Makanchi Array**	147.09	39	PKPbc	PKPbc		19 54 55.6	+4.1
	comp=E,1.4nm,0.6s,baz=301,slow=3.5,SNR=16							
SONM	**Songino Array**	155.91	10	PKPab	PKPab		19 55 35.4	+5.1
	comp=E,0.3nm,0.9s,baz=349,slow=1.5,SNR=3.7							

CASC 08 20:04:06.9±2.7, 8°.40N×82°.95W, h4km±16km, MD3.7, 2D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	0.47	33	⇓*i*P	Pg	20 04 17.4	+1.5
BRU2				*e*S	Sg	20 04 25.5	+3.5
BAR1		0.91	337	⇓*e*P	Pg	20 04 24.4	0.0
BAR1				*e*S	Sg	20 04 37.3	+1.0
BUS	**Buena Vista**	1.40	325	*e*P	Pn	20 04 32.4	-0.9
BUS				*e*S	Sb	20 04 52.6	+0.7
URSC	**Urasca**	1.65	330	*e*P	Pn	20 04 36.3	-0.4
URSC				*e*S	Sn	20 04 58.1	-0.2
PRS1	**Puriscal**	2.07	320	*e*P	Pn	20 04 44.2	+1.7
PRS1				*e*S	Sn	20 05 10.5	+1.6

IDC ***08*** *20:23:25.4±0.8, 7°.84S×130°.04E, h0km, mb4.1/8, mb1 4.2/8, mb1mx4.1/15, mbtmp4.1/8, ML5.2/1, MS3.0/1, Ms1 3.0/1, ms1mx2.2/20, Error ellipse: s-maj=43.8km s-min=16.5km az=84.0*
NEIC ***08*** *20:23:25.7±0.5, 7°.93S×130°.17E, h10km, mb4.3/3, Error ellipse: s-maj=16.7km s-min=8.5km az=80.0*
DJA ***08*** *20:23:32, 7°.95S×130°.15E, h107km, mb4.8/4*
ISC 08 20:23:24.6±3.8, 7°.87S±0°.05×130°.29E±0°.07, h1km±24km, n33, σ1°12/32, mb4.3/12, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	3.29	48	P	**Pn**	20 24 23.6	+6.2
KAKA	**Kakadu**	5.25	156	*e*P	**Pn**	20 24 48.3	+3.9
	43nm,0.2s						
KAKA				*e*S	**Sn**	20 25 45.2	-0.5
KAKA	**Kakadu**	5.25	156	*e*Pn	**Pn**	20 24 48.1	+3.7
	359nm,0.4s						
KAKA				*e*Sn	**Sn**	20 25 45.0	-0.7
KAKA	**Kakadu**	5.25	156	P	**Pn**	20 24 48.3	+3.9
	1.7nm7μm87nm,0.5s						
KNA	**Kununurra**	7.97	191	P	**Pn**	20 25 23.3	+1.6
	1.8nm9μm235nm,0.4s						
MMRI	**Maumere**	8.01	264	S	**Sn**	20 26 54.0	+0.4
KAPI	**Kappang**	10.85	285	LR	LR	20 31 11.3	
	comp=Z,81nm,18.7s,baz=92,slow=44						
FITZ	**Fitzroy Crossi**	11.13	204	*e*P	**Pn**	20 26 04.1	-1.0
	30nm,0.2s						
FITZ				*e*S	Sx	20 27 59.7	
FITZ	**Fitzroy Crossi**	11.13	204	Pn	**Pn**	20 26 04.4	-0.7
	13nm,0.3s,baz=36,slow=11,SNR=220						
FITZ				Sn	Sx	20 28 00.8	
	7.4nm,0.3s,baz=110,slow=19,SNR=9.0						
FITZ	**Fitzroy Crossi**	11.13	204	P	**Pn**	20 26 04.2	-0.9
	49nm,1.8s						
WRAB	**Tennant Creek**	12.62	162	*e*Pn	**Pn**	20 26 24.4	-1.0
	5.5nm,0.4s						
WRA	**Warramunga Arr**	12.62	162	Pn	**Pn**	20 26 24.2	-1.3
	2.6nm,0.3s,baz=334,slow=13,SNR=35						
WRA				Sn	Sx	20 28 37.0	
	4.4nm,0.3s,baz=326,slow=25,SNR=7.1						
COEN	**Coen**	14.02	117	*e*Pn	**Pn**	20 26 45.8	+1.3
COEN				*e*Sn	Sx	20 29 12.5	
COEN	**Coen**	14.02	117	P	**Pn**	20 26 46.2	+1.6
ASAR	**Alice Springs**	16.08	168	Pn	**Pn**	20 27 10.9	-1.2
	1.8nm,0.3s,baz=338,slow=8.4,SNR=105						
ASAR				Sn	Sx	20 30 01.9	
	1.1nm,0.3s,baz=359,slow=28,SNR=6.4						
MBWA	**Marble Bar**	16.69	217	*e*Pn	**Pn**	20 27 16.2	-3.7
MBWA				*e*Sn	Sx	20 30 08.0	
FORT	**Forrest**	22.89	185	*e*P	**P**	20 28 31.9	+2.1
	15nm,0.6s,mb4.7						
STKA	**Stephens Creek**	26.10	158	*e*P	**P**	20 29 02.3	+2.2
	3.1nm,0.6s,mb4.1						
STKA	**Stephens Creek**	26.10	158	P	**P**	20 29 01.4	+1.3
	1.1nm,0.4s,mb3.8,baz=318,slow=12,SNR=3.7						
NWAO	**Narrogin (SRO)**	27.72	204	P	**P**	20 29 14.4	-0.3
	6.4nm,0.9s,mb4.5,baz=34,slow=11,SNR=4.2						
MAJO	**Matsushiro**	44.80	9	*e*P	**P**	20 31 37.9	-2.3
	5.0nm,0.7s,mb4.5						
MJAR	**Matsushiro Arr**	44.80	9	P	**P**	20 31 39.9	-0.3
	1.9nm,0.7s,mb4.2,baz=188,slow=9.4,SNR=9.6						
KSRS	**Korea Array**	45.14	357	P	**P**	20 31 43.5	+0.6
	0.5nm,0.4s,mb3.8,baz=171,slow=8.6,SNR=4.2						
ULN	**Ulaanbaatar**	59.18	342	*e*P	**P**	20 33 27.8	+0.7
	1.3nm,0.6s,mb4.1						
SONM	**Songino Array**	59.35	342	P	**P**	20 33 28.8	+0.4
	0.8nm,0.6s,mb4.0,baz=160,slow=6.2,SNR=5.9						
MKAR	**Makanchi Array**	69.11	327	P	**P**	20 34 33.0	+0.6
	2.3nm,0.4s,mb4.8,baz=118,slow=8.6,SNR=46						
ZALV	**Zalesovo Beam**	72.49	334	P	**P**	20 34 52.5	-0.4
	3.1nm,0.5s,mb4.7,baz=134,slow=5.3,SNR=14						
ZALV	**Zalesovo Beam**	72.49	334	P	**P**	20 34 52.5	-0.4
KURK	**Kurchatov**	73.41	329	*e*P	**P**	20 34 57.1	-1.3
	1.6nm,0.6s,mb4.3						
BVAR	**Borovoye Array**	78.95	328	P	**P**	20 35 29.9	-0.1
	0.4nm,0.4s,mb3.8,baz=127,slow=11,SNR=7.1						
TIXI	**Tiksi**	79.36	360	*e*P	**P**	20 35 31.9	+0.1
CPUP	**Villa Florida**	145.21	168	PKPbc	PKPbc	20 43 06.2	+1.6
	0.9nm,0.4s,baz=127,slow=5.1,SNR=2.9						
LPAZ	**La Paz**	149.85	143	PKPbc	PKPbc	20 43 20.5	+2.8
	1.3nm,0.4s,baz=358,slow=5.2,SNR=11						

BJI ***08*** *20:39:29.1, 2°.80S×99°.82E, h25km, mB4.8/4, mb4.8/7*
IDC ***08*** *20:39:31.3±1.3, 2°.20S×99°.46E, h0km, mb4.2/11, mb1 4.3/12, mb1mx4.0/22, mbtmp4.2/12, ML3.4/1, MS3.8/2, Ms1 3.8/2, ms1mx2.9/26, Error ellipse: s-maj=48.9km s-min=14.9km az=57.0*
ISCJB ***08*** *20:39:34.4±1.1, 2°.27S±0°.05×99°.34E±0°.07, h39km±9km, mb4.3/16, MS3.9/2, Error ellipse: s-maj=13.5km s-min=5.9km az=151.6*
DJA ***08*** *20:39:36, 2°.23S×99°.42E, h51km, MLv4.4/12*
NEIC ***08*** *20:39:36.7±0.8, 2°.11S×99°.56E, h35km, mb4.4/5, Error ellipse: s-maj=33.7km s-min=8.3km az=56.0*
ISC 08 20:39:34.6±1.5, 2°.26S±0°.04×99°.36E±0°.06, h23km±11km, n35, σ0°86/37, mb4.3/16, MS3.9/2, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	0.82	128	P	**Pb**	20 39 50.5	+0.2
PDSI	**Padang**	1.73	40	P	**Pn**	20 40 02.8	-0.6
PPI	**Padang Panjang**	2.07	30	P	**Pn**	20 40 07.6	-0.4
PPI				S	**Sn**	20 40 33.0	-0.1
KRJI	**Kerinci**	2.11	86	P	**Pn**	20 40 07.5	-1.0
KRJI				S	**Sn**	20 40 34.1	0.0
SDSI	**Sungai Dareh**	2.45	58	P	**Pn**	20 40 14.1	+0.8
SDSI				S		20 40 14.4	
MNSI	**Mandailing Nat**	3.04	4	P	**Pn**	20 40 20.9	-0.5
MNSI				S	**Sn**	20 40 57.8	+0.7
BKNI	**Bangkinang**	3.07	33	P	**Pn**	20 40 22.2	+0.5
KSI	**Kapahiang**	3.52	113	P	**Pn**	20 40 29.0	+1.1
KSI				S	**Sn**	20 41 09.3	+0.5
MNAI	**Manna**	4.16	120	P	**Pn**	20 40 36.6	-0.1
PSI	**Prapat**	5.04	355	Pn	**Pn**	20 40 45.2	-3.7
	1.5nm,0.3s,baz=171,slow=11,SNR=8.6						
LWLI	**Liwa**	5.43	120	P	**Pn**	20 40 55.7	+1.4
KLSI		5.88	114	P	**Pn**	20 41 00.8	+0.4
	0.2nm64nm,1.0s						
TPTI		5.90	338	P	**Pn**	20 41 01.7	+1.1
	0.2nm28nm,1.1s						
MYKOM	**Kota Tinggi**	6.03	48	P	**Pn**	20 41 03.1	+0.6
	0.1nm22nm,1.1s						

KULM	**Kulim**	7.61	10	P		**Pn**	20 41 22.2	-2.0
	0.1nm17nm,2.1s							
CGJI	**Cibinong**	7.66	125	P		**Pn**	20 41 22.6	-2.2
MBWA	**Marble Bar**	27.33	135	P		**P**	20 45 17.5	-0.5
	16nm,1.2s,mb4.4							
FITZ	**Fitzroy Crossi**	30.20	123	P		**P**	20 45 42.2	-1.4
	5.4nm,1.2s,mb4.2,baz=297,slow=11,SNR=2.6							
WRA	**Warramunga Arr**	38.42	120	P		**P**	20 46 54.6	-0.1
	2.4nm,0.6s,mb4.1,baz=302,slow=9.1,SNR=8.5							
WRAB	**Tennant Creek**	38.43	120	*e*P		**P**	20 46 55.0	+0.2
	5.2nm,0.9s,mb4.3							
ASAR	**Alice Springs**	39.62	125	P		**P**	20 47 04.7	-0.1
	0.7nm,0.4s,mb3.7,baz=296,slow=7.6,SNR=10							
KSRS	**Korea Array**	47.57	31	P		**P**	20 48 07.8	-0.8
	2.0nm,0.8s,mb4.2,baz=222,slow=9.0,SNR=15							
STKA	**Stephens Creek**	49.46	131	P		**P**	20 48 24.2	+0.9
	2.9nm,0.7s,mb4.4,baz=308,slow=5.7,SNR=5.7							
STKA	**Stephens Creek**	49.46	131	P		**P**	20 48 24.2	+0.9
SONM	**Songino Array**	50.26	6	P		**P**	20 48 29.9	+0.9
	5.7nm,0.8s,mb4.7,baz=187,slow=9.2,SNR=28							
EKS2	**Erkin-Say**	50.33	336	*e*P		**P**	20 48 31.0	+1.4
	2.5nm,0.7s,mb4.3							
MKAR	**Makanchi Array**	51.11	345	P		**P**	20 48 36.0	+0.6
	4.5nm,0.6s,mb4.5,baz=150,slow=8.2,SNR=56							
MKAR				LR		LR	21 14 15.7	
	comp=Z,33nm,18.3s,MS3.4,baz=21,slow=41							
MJAR	**Matsushiro Arr**	52.88	39	P		**P**	20 48 47.9	-0.9
	1.5nm,0.9s,mb3.9,baz=223,slow=7.1,SNR=4.9							
KURK	**Kurchatov**	55.67	344	*e*P		**P**	20 49 08.9	0.0
	4.2nm,0.8s,mb4.5							
ZALV	**Zalesovo Beam**	57.30	350	P		**P**	20 49 20.8	+0.4
	4.7nm,0.5s,mb4.8,baz=178,slow=5.4,SNR=34							
BVAR	**Borovoye Array**	60.20	340	P		**P**	20 49 40.1	-0.5
	1.5nm,0.7s,mb4.1,baz=140,slow=7.7,SNR=14							
ABKAR	**Akbulak array**	61.56	332	*e*P		**P**	20 49 49.0	-0.9
	2.3nm,0.8s,mb4.4							
RPZ	**Rata Peaks**	75.26	135	LR		LR	21 24 54.4	
	comp=Z,156nm,19.1s,MS4.3,baz=85,slow=36							
FINES	**FINESS Array B**	84.04	332	P		**P**	20 52 03.3	+0.2
	1.0nm,0.7s,mb4.0,baz=116,slow=8.7,SNR=4.0							
TXAR	**Lajitas Array**	145.29	37	PKPbc	PKPbc		20 59 10.1	-1.0
	2.9nm,0.7s,baz=262,slow=0.6,SNR=30							

CSEM ***08*** *21:04:52.9±0.4, 38°.08N×20°.39E, h2km, ML2.8/4, Error ellipse: s-maj=8.8km s-min=4.9km az=49.0*
ISCJB ***08*** *21:04:53.4±1.1, 38°.09N±0°.05×20°.38E±0°.06, h10km, Error ellipse: s-maj=9.0km s-min=4.8km az=38.2*
ATH ***08*** *21:04:53.3, 38°.15N×20°.37E, h10km±3km, MD3.2/7*
THE ***08*** *21:04:53.7, 38°.10N×20°.42E, h2km±1km, ML2.8/4, Error ellipse: s-maj=2.3km s-min=1.1km az=41.0*
NEIC ***08*** *21:04:53.3, 38°.15N×20°.37E, h10km, MD3.2(ATH), After ATH.*
ISC 08 21:04:52.4±1.4, 38°.06N±0°.05×20°.36E±0°.06, h2km±6km, n35, σ0°63/55, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	0.22	57	*e*Pg	**Pg**	21 04 57.4	+0.8
VLS				*e*Sg	**Sg**	21 04 59.7	+0.2
VLS	**Valsamata**	0.22	57	*e*PG	**Pg**	21 04 57.4	+0.8
VLS				*e*SG	**Sg**	21 04 59.7	+0.2
VLS	**Valsamata**	0.22	57	P	**Pg**	21 04 57.3	+0.7
VLS				S	**Sg**	21 04 59.6	+0.1
VLS	**Valsamata**	0.22	57	P	**Pg**	21 04 57.3	+0.7
VLS				*e*Sg	**Sg**	21 04 59.7	+0.2
KFL	**Anninata**	0.35	81	P	**Pg**	21 04 59.0	0.0
KFL				S	**Sg**	21 05 02.9	-0.6
KFL	**Anninata**	0.35	81	P	**Pg**	21 04 59.0	0.0
KFL				S	**Sg**	21 05 02.9	-0.6
LKD2	**Lefkada island**	0.77	18	P	**Pg**	21 05 06.3	-0.8
LKD2				S	**Sg**	21 05 17.5	+0.5
LKD2	**Lefkada island**	0.77	18	P	**Pg**	21 05 06.3	-0.8
LKD2				S	**Sg**	21 05 17.5	+0.5
RLS	**Riolos of Patr**	0.88	90	*

EZN	Ezine	0.85	262	ePG	Pg	21 10 33.3	0.0
EZN	Ezine	0.85	262	ePg	Pg	21 10 33.3	+0.1
GELI	Tayfur-Gelibol	0.85	302	ePG	Pg	21 10 32.5	-0.8
GELI	Tayfur-Gelibol	0.85	302	ePg	Pg	21 10 32.5	-0.8
ERIK	Erikli-Kesan	1.00	316	ePG	Pg	21 10 35.2	-0.9
ERIK	Erikli-Kesan	1.00	316	ePg	Pg	21 10 35.2	-0.9
AKS	Akhisar	1.11	164	ePN	Pn	21 10 37.5	-1.1
AKS	Akhisar	1.11	164	ePn	Pn	21 10 37.5	-1.0
AKHS	Akhisar	1.11	164	i P	Pg	21 10 37.5	-0.7
AKHS				i S	Sg	21 10 53.5	+0.9
AKHS	Akhisar	1.11	164	i P	Pg	21 10 37.5	-0.6
AKHS				i S	Sg	21 10 53.5	+1.0
PRK	Paraskevi	1.13	232	ePb	Pb	21 10 38.2	-0.4
PRK				eSb	Sb	21 10 52.3	-1.1
PRK	Paraskevi	1.13	232	ePB	Pb	21 10 38.2	-0.4
PRK				eSB	Sb	21 10 52.3	-1.1
PRK	Paraskevi	1.13	232	P	Pb	21 10 38.2	-0.4
PRK				S	Sg	21 10 53.4	+0.1
PRK	Paraskevi	1.13	232	P	Pb	21 10 38.2	-0.4
PRK				eSb	Sb	21 10 52.3	-1.1
PRK				S	Sg	21 10 53.4	+0.1
GADA	Gvkgeada	1.19	282	ePN	Pn	21 10 38.9	-0.8
GADA	Gvkgeada	1.19	282	ePn	Pn	21 10 38.9	-0.8
CRLT	Corlu	1.20	11	ePN	Pn	21 10 39.0	-0.8
CRLT	Corlu	1.20	11	ePn	Pn	21 10 39.0	-0.9
ENEZ	Enez	1.25	309	ePN	Pn	21 10 39.8	-0.6
ENEZ	Enez	1.25	309	ePn	Pn	21 10 39.8	-0.7
ARMT	Armutlu	1.26	60	ePN	Pn	21 10 40.5	-0.2
ARMT	Armutlu	1.26	60	ePn	Pn	21 10 40.5	-0.2
ULDT	Uludag	1.33	81	i P	Pn	21 10 41.5	0.0
ULDT				i S	Sb	21 11 01.0	+1.9
ULDT	Uludag	1.33	81	i P	Pn	21 10 41.5	-0.1
ULDT				i S	Sb	21 11 01.0	+1.9
DEMI	Demirci	1.35	132	i P	Pn	21 10 41.7	-0.1
DEMI				i S	Sb	21 10 59.7	+0.1
DEMI	Demirci	1.35	132	i P	Pn	21 10 41.7	-0.1
DEMI				i S	Sb	21 10 59.7	+0.1
SLVT	Silivri	1.41	25	ePN	Pn	21 10 42.4	-0.3
SLVT	Silivri	1.41	25	ePn	Pn	21 10 42.4	-0.3
ALN	Alexandroupoli	1.42	313	ePb	Pb	21 10 42.8	-0.6
ALN	Alexandroupoli	1.42	313	ePB	Pb	21 10 42.8	-0.6
ALN	Alexandroupoli	1.42	313	P	Pn	21 10 42.7	-0.1
ALN				S	Sn	21 11 03.2	+1.7
ALN	Alexandroupoli	1.42	313	P	Pn	21 10 42.7	-0.1
ALN				S	Sn	21 11 03.2	+1.7
SIGR	SIGRI	1.42	239	P	Pn	21 10 42.2	-0.6
SIGR				S	Sn	21 11 01.2	-0.3
SIGR	SIGRI	1.42	239	P	Pn	21 10 42.2	-0.6
SIGR				S	Sn	21 11 01.2	-0.3
CTKS	Kestanelik-??a	1.53	32	ePN	Pn	21 10 44.1	-0.2
CTKS	Kestanelik-??a	1.53	32	ePn	Pn	21 10 44.1	-0.2
IZM	Izmir	1.55	185	ePN	Pn	21 10 44.8	+0.2
IZM	Izmir	1.55	185	ePn	Pn	21 10 44.8	+0.2
BLCB	Balcova	1.59	191	ePN	Pn	21 10 45.5	+0.4
BLCB	Balcova	1.59	191	P	Pn	21 10 45.4	+0.3
BLCB	Balcova	1.59	191	P	Pn	21 10 45.4	+0.3
YLV	Yalova	1.62	67	ePN	Pn	21 10 45.3	-0.2
YLV	Yalova	1.62	67	ePn	Pn	21 10 45.3	-0.2
LIA	Limnos Island	1.72	269	ePb	Pn	21 10 47.1	+0.1
LIA	Limnos Island	1.72	269	ePB	Pn	21 10 47.1	+0.1
LIA	Limnos Island	1.72	269	P	Pn	21 10 47.0	0.0
LIA				S	Sn	21 11 09.2	+0.1
LIA	Limnos Island	1.72	269	P	Pn	21 10 47.0	0.0
LIA				S	Sn	21 11 09.2	+0.1
KULA	Kula-Manisa	1.73	146	ePN	Pn	21 10 46.4	-0.6
KULA	Kula-Manisa	1.73	146	ePn	Pn	21 10 46.4	-0.6
ADVT	Abdulvahap	1.84	74	ePN	Pn	21 10 48.7	+0.2
ADVT	Abdulvahap	1.84	74	ePn	Pn	21 10 48.7	+0.1
RDO	Rodhopi	1.87	310	ePg	Pn	21 10 49.4	+0.4
RDO	Rodhopi	1.87	310	ePG	Pn	21 10 49.4	+0.4
RDO	Rodhopi	1.87	310	P	Pn	21 10 49.5	+0.5
RDO				S	Sn	21 11 13.9	+1.2
RDO	Rodhopi	1.87	310	P	Pn	21 10 49.5	+0.5
RDO				S	Sn	21 11 13.9	+1.2
CHOS	Chios island	1.89	215	ePN	Pg	21 10 53.7	+0.7
CHOS	Chios island	1.89	215	P	Pn	21 10 48.4	-0.8
CHOS				S	Sn	21 11 13.5	+0.4
CHOS	Chios island	1.89	215	P	Pn	21 10 48.4	-0.8
CHOS	Chios island	1.89	215	ePn	Pg	21 10 53.7	+0.7
CHOS				S	Sn	21 11 13.5	+0.4
EDRB	Edirne	1.97	345	ePN	Pn	21 10 50.2	-0.1
EDRB	Edirne	1.97	345	ePn	Pn	21 10 50.3	0.0
ALT	Altintas	2.26	112	ePN	Pn	21 10 54.7	+0.3
ALT	Altintas	2.26	112	ePn	Pn	21 10 54.7	+0.3
SMG	Samos	2.28	192	ePN	Pg	21 11 01.4	+0.8
SMG				eSn	Sg	21 11 31.2	+1.1
SMG	Samos	2.28	192	ePN	Pg	21 11 01.4	+0.8
GULT	Gulveren	2.42	77	ePN	Pn	21 10 57.0	+0.5
GULT	Gulveren	2.42	77	ePn	Pn	21 10 57.0	+0.5

*ISCJB **08** 21:18:49.7±1.2, 23°.53S±0°.07×179°.9E±0°.1, h538km±15km, mb4.2/15, Error ellipse: s-maj=15.1km s-min=10.8km az=11.8*
*IDC **08** 21:18:49.6±2.0, 23°.48S×179°.93E, h525km±20km, mb3.6/10, mb1 3.8/11, mb1mx3.6/17, mbtmp3.6/11, Error ellipse: s-maj=19.1km s-min=16.6km az=166.0*
*NEIC **08** 21:18:50.4±0.8, 23°.54S×179°.91E, h538km±9km, mb4.3/7, Error ellipse: s-maj=11.0km s-min=9.2km az=129.0*

ISC 08 21:18:49.8±1.1, 23°.62S±0°.07×179°.9E±0°.1, h526km±14km, n36, σ0°83/28, mb4.2/15, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.11	343	eP	P	21 20 28.8	+0.3
	19nm,0.7s						
URZ	Urewera	14.79	189	P	P	21 21 56.7	-0.6
	6.0nm,0.3s,baz=54,slow=2.4,SNR=21						
URZ				S	S	21 24 29.6	-2.0
	2.1nm,0.3s,baz=209,slow=19,SNR=7.8						
URZ	Urewera	14.79	189	eP	P	21 21 56.5	-0.7
	25nm,0.4s						
URZ				S	S	21 24 29.6	-2.0
RPZ	Rata Peaks	21.33	198	P	P	21 23 00.9	+2.1
	9.4nm,0.8s,mb4.5,baz=324,slow=3.8,SNR=7.1						
EIDS	Eidsvold	26.27	260	eP	P	21 23 43.7	+0.5
	5.0nm,0.4s,mb4.5						
CTA	Charters Tower	31.39	270	eP	P	21 24 28.4	+0.6
	23nm,0.4s,mb5.0						
CTA	Charters Tower	31.39	270	P	P	21 24 28.5	+0.7
	27nm,0.4s,mb5.2,baz=96,slow=11,SNR=47						
CTAO	Charters Tower	31.39	270	eP	P	21 24 28.4	+0.7
	28nm,0.4s,mb5.1						
MCQ	Macquarie Isla	34.59	202	P	P	21 24 55.2	+0.9
STKA	Stephens Creek	34.75	248	P	P	21 24 56.5	+0.5
	1.6nm,0.4s,mb3.9,baz=106,slow=12,SNR=13						
ASAR	Alice Springs	42.00	260	P	P	21 25 54.9	-0.1
	4.1nm,0.4s,mb4.3,baz=96,slow=7.1,SNR=76						
ASAR				ScP	ScP	21 30 39.5	+1.1
	1.5nm,0.7s,baz=114,slow=4.5,SNR=13						
WRAB	Tennant Creek	42.34	266	eP	P	21 25 56.8	-0.9
	8.5nm,0.3s,mb4.8						
WRA	Warramunga Arr	42.34	266	P	P	21 25 57.1	-0.7
	8.6nm,0.4s,mb4.6,baz=102,slow=8.4,SNR=31						
FITZ	Fitzroy Crossi	50.77	265	eP	P	21 27 02.0	+0.4
	14nm,1.7s,mb4.0						
FITZ	Fitzroy Crossi	50.77	265	eP	P	21 27 01.5	-0.1
	3.2nm,0.6s,mb3.8						
DAV	Davao City (W)	61.18	293	P	P	21 28 13.2	-0.5
RPN	Rapa Nui	63.25	110	P	P	21 28 27.2	+0.2
QSPA	South Pole Qui	66.46	180	P	P	21 28 47.5	+1.2
	1.3nm,0.5s,mb3.7,baz=89,slow=1.5,SNR=9.2						
QSPA	South Pole Qui	66.46	180	eP	P	21 28 47.1	+0.8
	1.0nm,0.4s,mb3.7						
ADK	Adak	75.23	2	eP	P	21 29 36.9	-1.4
	61nm,1.1s,mb5.0						
PETK	Petropavlovsk-	78.81	347	P	P	21 29 57.4	-0.3
	2.0nm,0.6s,mb3.6,baz=109,slow=7.9,SNR=3.3						
GSC	Goldstone	83.80	47	eP	P	21 30 24.1	+0.3
	3.4nm,0.9s,mb3.9						
NVAR	Mina Array Bea	84.61	44	P	P	21 30 27.8	+0.1
	0.5nm,0.4s,mb3.4,baz=221,slow=9.5,SNR=3.9						
NVAR	Mina Array Bea	84.61	44	P	P	21 30 27.8	+0.1
TXAR	Lajitas Array	90.35	58	P	P	21 30 55.1	+0.1
	1.3nm,0.7s,mb3.9,baz=212,slow=6.6,SNR=16						
PDAR	Pinedale Array	92.55	44	P	P	21 31 04.3	-0.4
	0.8nm,0.7s,mb3.9,baz=218,slow=1.7,SNR=8.3						
MKAR	Makanchi Array	111.90	313	PKiKP	PKiKP	21 36 23.1	-1.7
	0.3nm,0.6s,baz=196,slow=0.5,SNR=4.9						
BVAR	Borovoye Array	120.18	319	PKP	PKPdf	21 36 38.8	-1.7
	0.8nm,0.4s,baz=113,slow=2.1,SNR=10						
ARCES	ARCESS Array B	131.60	348	PKP	PKPdf	21 37 00.3	-1.5
	0.7nm,0.5s,baz=70,slow=1.4,SNR=9.0						
FINES	FINESS Array B	138.16	341	PKhKP		21 37 07.3	
	0.4nm,0.4s,baz=304,slow=4.1,SNR=5.8						
FINES				PKP	PKPdf	21 37 13.1	-1.2
	0.6nm,0.5s,baz=90,slow=1.9,SNR=5.7						
FINES				SKPbc	SKPbc	21 39 57.4	-1.6
	1.1nm,0.7s,baz=48,slow=2.8,SNR=4.3						
FINES	FINESS Array B	138.16	341	PKP		21 37 07.3	
FINES				PKP	PKPdf	21 37 13.1	-1.2
FINES				SKPbc	SKPbc	21 39 57.4	-1.6
NB2	NORSAR Subarra	141.79	351	PKP		21 37 15.1	
	comp=Z,0.6nm,0.5s,baz=13,slow=3.2						
NOA	NORSAR Array B	141.79	351	PKhKP		21 37 15.4	
	comp=Z,1.1nm,0.7s,baz=16,slow=4.7,SNR=5.5						
AKASG	Malin Array Be	144.69	327	PKP	PKPdf	21 37 24.9	-1.4
	comp=Z,2.0nm,0.5s,baz=44,slow=3.7,SNR=16						
BRTR	Keskin Array B	147.34	307	PKPbc	PKPbc	21 37 33.2	-1.2
	comp=Z,0.7nm,0.6s,baz=132,slow=4.7,SNR=4.6						
MMAI	Mount Meron Ar	147.51	295	PKPbc	PKPbc	21 37 35.0	0.0
	comp=Z,2.9nm,0.5s,baz=70,slow=7.4,SNR=12						

MAN 08 21:26:22, 6°.94N×125°.41E, h17km, mb4.8, ML3.7, MS3.8, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCP	Kidapawan	0.32	283	⇓eP	Pg	21 26 30.0	+1.1
KCP				i S	Sg	21 26 35.4	+1.8
MATI	Mati	0.84	89	eP	Pb	21 26 37.9	-0.3
MATI				eS	Sb	21 26 46.5	-2.8
GSPH	General Santos	0.96	208	⇓iP	Pb	21 26 38.0	-2.2
GSPH				i S	Sb	21 26 57.1	+4.5
BUKP	Musuan	1.00	340	eP	Pb	21 26 40.9	0.0
BUKP				eS	Sb	21 26 55.5	+1.8
CGP	Cagayan de Oro	1.67	335	⇑iP	Pn	21 26 51.0	+0.6

*ISCJB **08** 21:35:37.9±0.5, 43°.23N±0°.01×15°.42E±0°.02, h6km±3km, Error ellipse: s-maj=3.0km s-min=2.1km az=8.0*
*NEIC **08** 21:35:38.0, 43°.22N×15°.52E, h10km, ML3.0(ROM), After ROM.*
*ROM **08** 21:35:38.0±0.3, 43°.22N×15°.52E, h10km, Ml3.0/39, Error ellipse: s-maj=5.7km s-min=2.0km az=48.0*
*CSEM **08** 21:35:40.2±0.1, 43°.14N×15°.24E, h10km, ML3.0, Ms3.1, Error ellipse: s-maj=3.3km s-min=2.6km az=86.0*
*SZGRF **08** 21:35:41.0, 43°.09N×15°.37E, h10km, mb3.4, Adriatic Sea*
*VIE **08** 21:35:41.4±0.4, 43°.21N×15°.15E, h10km±2km, mb2.8/14, ML3.1/14, Ms3.1/1, Error ellipse: s-maj=3.3km s-min=1.7km az=111.0 112 km WSW of Split*
*LDG **08** 21:35:42.0±0.2, 43°.24N×15°.13E, h10km, Ml3.4/8, Error ellipse: s-maj=4.2km s-min=3.1km az=71.0*
*BEO **08** 21:35:42.0±1.1, 43°.27N×15°.38E, h3km±5km, ML3.0/6*
*PRU **08** 21:36:02.2, 45°.54N×17°.13E, h0km*

ISC 08 21:35:38.4±0.5, 43°.18N±0°.01×15°.35E±0°.03, h0km±4km, n241, σ1°20/318, 16C-12D, Adriatic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRTR	Tortoreto Alta	1.12	251	Pn	Pn	21 36 02.2	+1.0
TRTR	Tortoreto Alta	1.12	251	Pn	Pn	21 36 02.2	+1.0
CAFR	Castel Frentan	1.21	218	Pn	Pn	21 36 03.2	+0.7
	1μm,0.8s						
CAFR	Castel Frentan	1.21	218	Pn	Pn	21 36 03.2	+0.7
	1μm,0.8s						
OFFI	Offida	1.25	259	Pn	Pn	21 36 03.9	+0.9
OFFI				Sn	Sn	21 36 22.3	+1.9
	1μm,0.5s						
OFFI	Offida	1.25	259	Pn	Pn	21 36 03.9	+0.9
OFFI				Sn	Sn	21 36 22.3	+1.9
	1μm,0.5s						
FRES	Fresagrandinar	1.31	203	Pn	Pn	21 36 03.5	-0.4
	600nm,0.9s						
FRES	Fresagrandinar	1.31	203	Pn	Pn	21 36 03.5	-0.4
	600nm,0.9s						
AOI	Ancona	1.33	287	Pn	Pn	21 36 04.5	+0.4
AOI	Ancona	1.33	287	Pn	Pn	21 36 04.5	+0.4
	222nm,0.5s						
AOI	Ancona	1.33	287	Pn	Pn	21 36 04.5	+0.4
	222nm,0.5s						
FG2	Serracapriola	1.39	186	Pn	Pn	21 36 04.2	-0.7
FG2	Serracapriola	1.39	186	Pn	Pn	21 36 04.2	-0.7
	207nm,0.3s						
FG2	Serracapriola	1.39	186	Pn	Pn	21 36 04.2	-0.7
	207nm,0.3s						
TERO	Teramo	1.40	247	Pn	Pn	21 36 05.0	-0.1
TERO	Teramo	1.40	247	Pn	Pn	21 36 05.0	-0.1
	171nm,0.4s						
TERO	Teramo	1.40	247	Pn	Pn	21 36 05.0	-0.1
	171nm,0.4s						
NVLJ	Novalja	1.42	346	i Pn	Pg	21 36 05.5	-0.1
NVLJ				Sn	Sg	21 36 25.9	+1.9
NVLJ	Novalja	1.42	346	i Pn	Pg	21 36 05.4	-0.2
NVLJ				Sn	Sg	21 36 25.9	+1.8
LPEL	Lama dei Pelig	1.43	218	Pn	Pn	21 36 05.4	-0.1
	147nm,0.4s						
LPEL	Lama dei Pelig	1.43	218	Pn	Pn	21 36 05.4	-0.1
	147nm,0.4s						
SGRT	San Giovanni R	1.46	168	Pn	Pn	21 36 05.4	-0.5
	295nm,0.8s						
SGRT	San Giovanni R	1.46	168	Pn	Pn	21 36 05.4	-0.5
	295nm,0.8s						
MELA	Melanico ??? S	1.49	186	Pn	Pn	21 36 05.9	-0.4
	408nm,0.8s						
MELA	Melanico ??? S	1.49	186	Pn	Pn	21 36 05.9	-0.4
	408nm,0.8s						
RGNG	Rignano Grg	1.52	173	Pn	Pn	21 36 06.1	-0.6
RGNG	Rignano Grg	1.52	173	Pn	Pn	21 36 06.1	-0.6
RGNG	Rignano Grg	1.52	173	Pn	Pn	21 36 06.1	-0.6
MSAG	Monte S. Angel	1.53	164	Pn	Pn	21 36 06.5	-0.4
	345nm,0.6s						
MSAG	Monte S. Angel	1.53	164	Pn	Pn	21 36 06.5	-0.4
	345nm,0.6s						
TRIV	Trivento	1.54	203	Pn	Pn	21 36 06.7	-0.3
	201nm,0.8s						
TRIV	Trivento	1.54	203	Pn	Pn	21 36 06.7	-0.3
	201nm,0.8s						
MS1	Monte Sant'Ang	1.54	163	ePn	Pg	21 36 08.2	+0.3
CIGN	Sant'Elia a Pi	1.56	192	Pn	Pn	21 36 07.2	-0.2
CIGN	Sant'Elia a Pi	1.56	192	Pn	Pn	21 36 07.2	-0.2
	134nm,0.5s						
CIGN	Sant'Elia a Pi	1.56	192	Pn	Pn	21 36 07.2	-0.2
	134nm,0.5s						
CAMP	Campotosto	1.57	246	Pn	Pn	21 36 07.5	+0.1
	19nm,0.5s						
CAMP	Campotosto	1.57	246	Pn	Pn	21 36 07.5	+0.1
	19nm,0.5s						
CING	Cingoli	1.58	278	Pn	Pn	21 36 07.8	+0.1
CING	Cingoli	1.58	278	Pn	Pn	21 36 07.8	+0.1
	159nm,0.6s						
CING	Cingoli	1.58	278	Pn	Pn	21 36 07.8	+0.1
	159nm,0.6s						
FAGN	Fagnano	1.59	235	Pn	Pn	21 36 07.6	-0.1
	378nm,0.4s						
FAGN	Fagnano	1.59	235	Pn	Pn	21 36 07.6	-0.1
	378nm,0.4s						
AQU	L'Aquila	1.66	241	ePn	Pn	21 36 03.0	-5.6
AQU				eSn	Sn	21 36 30.1	-0.4
FDMO	Fiordimonte	1.66	266	Pn	Pn	21 36 08.8	+0.1
	133nm,0.8s						
FDMO	Fiordimonte	1.66	266	Pn	Pn	21 36 08.8	+0.1
	133nm,0.8s						
NRCA	Norcia	1.68	259	Pn	Pn	21 36 09.1	+0.2
NRCA	Norcia	1.68	259	Pn	Pn	21 36 09.1	+0.2
	58nm,0.4s						
NRCA	Norcia	1.68	259	Pn	Pn	21 36 09.1	+0.2
	58nm,0.4s						
RNI2	Rionero Sannit	1.73	211	Pn	Pn	21 36 10.9	+1.3
RNI2	Rionero Sannit	1.73	211	Pn	Pn	21 36 10.9	+1.3
	207nm,0.9s						
RNI2	Rionero Sannit	1.73	211	Pn	Pn	21 36 10.9	+1.3
	207nm,0.9s						
BSSO	Busso	1.73	199	Pn	Pn	21 36 09.4	-0.2
	172nm,0.6s						
BSSO	Busso	1.73	199	Pn	Pn	21 36 09.4	-0.2
	172nm,0.6s						
MIDA	Miranda	1.74	208	Pn	Pn	21 36 09.2	-0.6
MIDA	Miranda	1.74	208	Pn	Pn	21 36 09.2	-0.6
	115nm,0.4s						
MIDA	Miranda	1.74	208	Pn	Pn	21 36 09.2	-0.6
	115nm,0.4s						
STON	Ston	1.75	99	⇑iPn	Pg	21 36 10.8	-1.1
STON				Sn	Sg	21 36 34.4	-0.2
SNTG	Esanatoglia	1.76	273	Pn	Pn	21 36 10.1	0.0
SNTG	Esanatoglia	1.76	273	Pn	Pn	21 36 10.1	0.0
	43nm,0.3s						
SNTG	Esanatoglia	1.76	273	Pn	Pn	21 36 10.1	0.0
	43nm,0.3s						
ARVD	Arcevia	1.79	281	Pn	Pn	21 36 10.7	+0.3
	85nm,0.6s						
ARVD	Arcevia	1.79	281	Pn	Pn	21 36 10.7	+0.3
	85nm,0.6s						
LNSS	Leonessa	1.79	252	Pn	Pn	21 36 11.0	+0.5
LNSS	Leonessa	1.79	252	Pn	Pn	21 36 11.0	+0.5
CESI	CESI - Serrava	1.80	265	Pn	Pn	21 36 10.9	+0.3
	76nm,0.6s						
CESI	CESI - Serrava	1.80	265	Pn	Pn	21 36 10.9	+0.3
	76nm,0.6s						
MOCO	Biccari - m.te	1.82	185	Pn	Pn	21 36 11.1	+0.2
	109nm,0.7s						
VVLD	Villa Vallelon	1.83	225	Pn	Pn	21 36 11.0	0.0
VVLD	Villa Vallelon	1.83	225	Pn	Pn	21 36 11.0	0.0
	189nm,0.6s						
VVLD	Villa Vallelon	1.83	225	Pn	Pn	21 36 11.0	0.0
	189nm,0.6s						
SACR	S. Croce Del S	1.85	195	Pn	Pn	21 36 10.8	-0.5
	94nm,0.7s						
SACR	S. Croce Del S	1.85	195	Pn	Pn	21 36 10.8	-0.5
	94nm,0.7s						
FIAM	Fiamignano	1.88	242	Pn	Pn	21 36 12.5	+0.8
FIAM	Fiamignano	1.88	242	Pn	Pn	21 36 12.5	+0.8
	190nm,0.9s						
FIAM	Fiamignano	1.88	242	Pn	Pn	21 36 12.5	+0.8
	190nm,0.9s						
FG5	Orsara di Pugl	1.90	182	Pn	Pn	21 36 11.6	-0.4
FG5	Orsara di Pugl	1.90	182	Pn	Pn	21 36 11.6	-0.4
FG5	Orsara di Pugl	1.90	182	Pn	Pn	21 36 11.6	-0.4
POFI	Posta Fibreno	1.90	220	Pn	Pn	21 36 12.0	0.0
	71nm,0.7s						
POFI	Posta Fibreno	1.90	220	Pn	Pn	21 36 12.0	0.0
	71nm,0.7s						
SGG	Gregorio Mates	1.94	202	Pn	Pn	21 36 12.8	+0.3
SGG	Gregorio Mates	1.94	202	Pn	Pn	21 36 12.8	+0.3
	89nm,0.5s						
SGG	Gregorio Mates	1.94	202	Pn	Pn	21 36 12.8	+0.3
	89nm,0.5s						
VAGA	Valle Agricola	1.95	205	Pn	Pn	21 36 13.4	+0.7
	100nm,0.6s						
VAGA	Valle Agricola	1.95	205	Pn	Pn	21 36 13.4	+0.7
	100nm,0.6s						
ASS	Assisi	1.98	267	Pn	Pn	21 36 13.5	+0.4
ASS	Assisi	1.98	267	Pn	Pn	21 36 13.5	+0.4
ASS	Assisi	1.98	267	Pn	Pn	21 36 13.5	+0.4
SGTA	Sant Agata di	2.05	180	Pn	Pn	21 36 13.5	-0.5
	178nm,1.0s						
SGTA	Sant Agata di	2.05	180	Pn	Pn	21 36 13.5	-0.5
	178nm,1.0s						
BLY	Banja Luka	2.05	40	ePn	Pg	21 36 17.0	-0.6
BLY				eSg	Sg	21 36 45.3	+1.1
MURB	Monte Urbino	2.07	273	Pn	Pn	21 36 15.2	+0.9
MURB	Monte Urbino	2.07	273	Pn	Pn	21 36 15.2	+0.9
	451nm,0.8s						
MURB	Monte Urbino	2.07	273	Pn	Pn	21 36 15.2	+0.9
	451nm,0.8s						
MNS	Montasola	2.12	249	Pn	Pn	21 36 15.5	+0.5
MNS	Montasola	2.12	249	Pn	Pn	21 36 15.5	+0.5
	90nm,0.5s						
MNS	Montasola	2.12	249	Pn	Pn	21 36 15.5	+0.5
	90nm,0.5s						
CDT	Castel del Mon	2.21	162	ePn	Pn	21 36 15.1	-1.1
MTCE	Montecelio	2.25	240	Pn	Pn	21 36 16.7	-0.1
MTCE	Montecelio	2.25	240	Pn	Pn	21 36 16.7	-0.1
	93nm,0.9s						
MTCE	Montecelio	2.25	240	Pn	Pn	21 36 16.7	-0.1
	93nm,0.9s						
TREB	Trebinje	2.25	101	ePn	Pg	21 36 19.9	-1.6
TREB				eSg	Sg	21 36 52.9	+2.2
TREB	Trebinje	2.25	101	ePn	Pg	21 36 19.9	-1.6
TREB				eSg	Sg	21 36 52.9	+2.2
BADI	Badiali	2.29	279	Pn	Pn	21 36 18.6	+1.3
BADI	Badiali	2.29	279	Pn	Pn	21 36 18.6	+1.3
	214μm,37.0s						
BADI	Badiali	2.29	279	Pn	Pn	21 36 18.6	+1.3
	214μm,37.0s						
PARC	Parchiule	2.31	283	Pn	Pn	21 36 18.4	+0.7
	80nm,0.8s						
PARC	Parchiule	2.31	283	Pn	Pn	21 36 18.4	+0.7
	80nm,0.8s						
BOJS	Bojanci	2.32	358	i Pn	Pg	21 36 20.1	-2.8
BOJS				i Sn	Sg	21 36 49.5	-3.4
BOJS	Bojanci	2.32	358	i Pn	Pg	21 36 20.0	-2.8
BOJS				i Sn	Sg	21 36 49.5	-3.4
MGAB	Montegabbione	2.39	265	Pn	Pn	21 36 19.3	+0.6
MGAB	Montegabbione	2.39	265	Pn	Pn	21 36 19.3	+0.6
	73nm,0.4s						
MGAB	Montegabbione	2.39	265	Pn	Pn	21 36 19.3	+0.6
	73nm,0.4s				

CTI	**Castel Tesino**	**3.90**	**319**	Pn	**Pn**	**21 36 39.7**	**+0.3**
	219nm,5.1s						
CTI	**Castel Tesino**	**3.90**	**319**	Pn	**Pn**	**21 36 39.7**	**+0.3**
	219nm,5.1s						
PKS9	**Tamasi**	**3.99**	**30**	*e*Pn	**Pn**	**21 36 41.4**	**+0.7**
PKS9				*e*Sn	**Sb**	**21 37 33.1**	**-5.1**
ARSA	**Arzberg**	**4.07**	**2**	*e*Pn	**Pn**	**21 36 43.1**	**+1.3**
ARSA	**Arzberg**	**4.07**	**2**	*e*Pn	**Pn**	**21 36 43.3**	**+1.5**
ARSA				*e*Sn	**Sn**	**21 37 29.3**	**-0.7**
ARSA	**Arzberg**	**4.07**	**2**	⇓*i*Pn	**Pn**	**21 36 43.4**	**+1.6**
ARSA				⇑*i*Sn	**Sn**	**21 37 30.5**	**+0.4**
ARSA	**Arzberg**	**4.07**	**2**	*e*Pn	**Pn**	**21 36 43.3**	**+1.5**
ARSA				Sn	**Sn**	**21 37 30.5**	**+0.5**
ABTA	**Abfaltersbach**	**4.09**	**332**	⇑*i*Pn	**Pn**	**21 36 43.1**	**+1.0**
ABTA				⇑*i*Sn	**Sn**	**21 37 30.9**	**+0.3**
ABTA	**Abfaltersbach**	**4.09**	**332**	Pn	**Pn**	**21 36 43.1**	**+1.0**
ABTA				Sn	**Sn**	**21 37 30.9**	**+0.2**
KBA	**Koelnbreinsper**	**4.14**	**341**	*e*Pn	**Pn**	**21 36 44.5**	**+1.7**
KBA	**Koelnbreinsper**	**4.14**	**341**	⇓*i*Pn	**Pn**	**21 36 44.5**	**+1.7**
	SNR=10						
KBA				⇓*i*Sn	**Sn**	**21 37 33.4**	**+1.5**
KBA	**Koelnbreinsper**	**4.14**	**341**	Pn	**Pn**	**21 36 44.5**	**+1.7**
	SNR=10						
KBA				Sn	**Sn**	**21 37 33.4**	**+1.5**
MOA	**Molln**	**4.73**	**351**	*e*Pn	**Pn**	**21 36 53.0**	**+2.2**
MOA				*e*Sn	**Sn**	**21 37 47.6**	**+1.3**
MOA	**Molln**	**4.73**	**351**	⇑*i*Pn	**Pn**	**21 36 51.9**	**+1.1**
	SNR=12						
MOA				⇓*i*Sn	**Sn**	**21 37 46.8**	**+0.5**
MOA	**Molln**	**4.73**	**351**	Pn	**Pn**	**21 36 51.9**	**+1.1**
	SNR=12						
MOA				Sn	**Sn**	**21 37 46.8**	**+0.5**
BARS	**Barje**	**4.76**	**92**	*e*Pn	**Pn**	**21 36 53.1**	**+1.9**
BARS	**Barje**	**4.76**	**92**	*e*Pn	**Pn**	**21 36 53.1**	**+1.9**
CONA	**Conrad Observa**	**4.76**	**4**	⇑*i*Pn	**Pn**	**21 36 53.0**	**+1.8**
CONA				⇓*i*Sn	**Sn**	**21 37 48.4**	**+1.3**
CONA	**Conrad Observa**	**4.76**	**4**	Pn	**Pn**	**21 36 53.0**	**+1.8**
CONA				Sn	**Sn**	**21 37 48.4**	**+1.4**
WTTA	**Wattenberg**	**4.85**	**329**	*e*Pn	**Pn**	**21 36 54.1**	**+1.6**
WTTA	**Wattenberg**	**4.85**	**329**	⇓*i*Pn	**Pn**	**21 36 53.5**	**+1.0**
WTTA				⇓*i*Sn	**Sn**	**21 37 49.5**	**+0.2**
WTTA	**Wattenberg**	**4.85**	**329**	Pn	**Pn**	**21 36 53.5**	**+1.0**
WTTA				Sn	**Sn**	**21 37 49.5**	**+0.2**
FETA	**Feichten**	**5.04**	**321**	⇑*i*Pn	**Pn**	**21 36 55.8**	**+0.7**
FETA				⇑*i*Sn	**Sn**	**21 37 54.1**	**+0.1**
FETA	**Feichten**	**5.04**	**321**	Pn	**Pn**	**21 36 55.8**	**+0.7**
FETA				Sn	**Sn**	**21 37 54.1**	**+0.1**
MOTA	**Moosalm**	**5.13**	**326**	⇓*i*Pn	**Pn**	**21 36 56.8**	**+0.5**
MOTA				⇑*i*Sn	**Sn**	**21 37 56.5**	**+0.4**
MOTA	**Moosalm**	**5.13**	**326**	Pn	**Pn**	**21 36 56.8**	**+0.5**
MOTA				Sn	**Sn**	**21 37 56.5**	**+0.4**
ZST	**Bratislava**	**5.16**	**13**	*e*PN	**Pn**	**21 36 58.4**	**+1.6**
ZST	**Bratislava**	**5.16**	**13**	*e*Pn	**Pn**	**21 36 58.4**	**+1.6**
ZAPS	**Zavoj**	**5.32**	**87**	*e*Pn	**Pn**	**21 37 01.8**	**+2.8**
ZAPS				*e*Sn	**Sn**	**21 37 59.8**	**-1.2**
SMOL	**Smolenice**	**5.52**	**15**	*e*SN	**Sn**	**21 38 03.7**	**-2.2**
DAVA	**Damuels**	**5.63**	**319**	⇓*i*Pn	**Pn**	**21 37 03.8**	**+0.6**
DAVA				⇑*i*Sn	**Sn**	**21 38 07.6**	**-1.0**
DAVA	**Damuels**	**5.63**	**319**	Pn	**Pn**	**21 37 03.8**	**+0.5**
DAVA				Sn	**Sn**	**21 38 07.6**	**-1.0**
SBF	**Sospel**	**5.79**	**279**	*e*Pn	**Pn**	**21 37 05.5**	**0.0**
SBF	**Sospel**	**5.79**	**279**	*e*Pn	**Pn**	**21 37 05.5**	**0.0**
KOLL	**Kolacno**	**5.80**	**20**	*e*PN	**Pn**	**21 37 07.6**	**+2.0**
KOLL				*e*SN	**Sn**	**21 38 11.7**	**-1.0**
KOLL	**Kolacno**	**5.80**	**20**	*e*Pn	**Pn**	**21 37 07.6**	**+2.0**
KOLL				*e*Sn	**Sn**	**21 38 11.7**	**-1.0**
VYHS	**Vyhne**	**5.84**	**23**	*e*PN	**Pn**	**21 37 08.4**	**+2.3**
VYHS				*e*SN	**Sn**	**21 38 13.3**	**-0.4**
VYHS	**Vyhne**	**5.84**	**23**	*e*Pn	**Pn**	**21 37 08.4**	**+2.3**
VYHS				*e*Sn	**Sn**	**21 38 13.3**	**-0.4**
KHC	**Kasperske Hory**	**6.07**	**349**	*e*Pn	**Pn**	**21 37 09.7**	**+0.4**
KHC				*e*		21 37 18.0	
KHC				*e*Sg	**Sn**	**21 38 17.7**	**-1.8**
KHC	**Kasperske Hory**	**6.07**	**349**	*e*PN	**Pn**	**21 37 09.7**	**+0.4**
KHC				*ex*		21 37 18.0	
KHC				*e*SG	**Sn**	**21 38 17.7**	**-1.8**
WET	**Wettzell**	**6.20**	**345**	*e*Pn	**Pn**	**21 37 11.7**	**+0.6**
WET				*e*Sn	**Sn**	**21 38 20.2**	**-2.4**
FRF	**La Foret Royal**	**6.36**	**276**	*e*Pn	**Pn**	**21 37 12.2**	**-1.0**
FRF	**La Foret Royal**	**6.36**	**276**	*e*Pn	**Pn**	**21 37 12.2**	**-1.0**
MBDF	**Montbardon**	**6.38**	**287**	*e*Pn	**Pn**	**21 37 12.5**	**-1.1**
MBDF				*e*Sn	**Sn**	**21 38 18.5**	**-8.6**
	4.1nm,0.4s						
MBDF	**Montbardon**	**6.38**	**287**	*e*Pn	**Pn**	**21 37 12.5**	**-1.1**
LMR	**La Mourre**	**6.46**	**274**	*e*Pn	**Pn**	**21 37 14.5**	**-0.1**
LMR	**La Mourre**	**6.46**	**274**	*e*Pn	**Pn**	**21 37 14.5**	**-0.1**
LPG	**La Plagne**	**6.58**	**294**	*e*Pn	**Pn**	**21 37 14.2**	**-2.1**
LPG				*e*Sn	**Sn**	**21 38 22.4**	**-10**
	6.3nm,0.4s						
LPG	**La Plagne**	**6.58**	**294**	*e*Pn	**Pn**	**21 37 14.2**	**-2.1**
LPL	**La Plagne**	**6.60**	**294**	*e*Pn	**Pn**	**21 37 15.5**	**-1.1**
LPL				*e*Sn	**Sn**	**21 38 21.0**	**-12**
	7.3nm,0.4s						
LPL	**La Plagne**	**6.60**	**294**	*e*Pn	**Pn**	**21 37 15.5**	**-1.1**
PRU	**Pruhonice**	**6.83**	**356**	*e*Pn	**Pn**	**21 37 14.8**	**-4.9**
PRU				*e*Sg	**Sn**	**21 38 34.7**	**-3.3**
PRU	**Pruhonice**	**6.83**	**356**	*e*PN	**Pn**	**21 37 14.8**	**-4.9**
PRU				*e*SG	**Sn**	**21 38 34.7**	**-3.3**
ORIF	**Oris-en-Rattie**	**7.04**	**288**	*e*Pn	**Pn**	**21 37 21.2**	**-1.4**
ORIF				*e*Sn	**Sn**	**21 38 33.7**	**-10**
	2.5nm,0.3s						
ORIF	**Oris-en-Rattie**	**7.04**	**288**	*e*Pn	**Pn**	**21 37 21.2**	**-1.4**
SMRF	**Simiane la Rot**	**7.14**	**280**	*e*Pn	**Pn**	**21 37 23.2**	**-0.8**
SMRF	**Simiane la Rot**	**7.14**	**280**	*e*Pn	**Pn**	**21 37 23.2**	**-0.8**
NKC	**Novy Kostel**	**7.33**	**345**	*e*SG	**Sn**	**21 39 02.4**	**+12**
CABF	**La Chapelle**	**7.42**	**301**	*e*Pn	**Pn**	**21 37 26.2**	**-1.5**
CABF	**La Chapelle**	**7.42**	**301**	*e*Pn	**Pn**	**21 37 26.2**	**-1.5**
STHS	**Stebnicka Huta**	**7.45**	**31**	*e*PN	**Pn**	**21 37 38.7**	**+11**
STHS				*e*SN	**Sn**	**21 38 51.2**	**-2.1**
HINF	**Hinteralfeld**	**7.55**	**311**	*e*Pn	**Pn**	**21 37 28.7**	**-0.9**
HINF				*e*Sn	**Sn**	**21 38 46.5**	**-9.4**
	6.3nm,0.6s						
HINF	**Hinteralfeld**	**7.55**	**311**	*e*Pn	**Pn**	**21 37 28.7**	**-0.9**
ECH	**Echery**	**7.63**	**314**	*e*Pn	**Pn**	**21 37 29.9**	**-0.7**
ECH				*e*Sn	**Sn**	**21 38 52.9**	**-4.8**
ECH	**Echery**	**7.63**	**314**	*e*Pn	**Pn**	**21 37 29.9**	**-0.7**
ECH				*e*Sn	**Sn**	**21 38 52.9**	**-4.8**
CDF	**Champ du Feu**	**7.69**	**316**	*e*Pn	**Pn**	**21 37 29.5**	**-2.0**
CDF	**Champ du Feu**	**7.69**	**316**	*e*Pn	**Pn**	**21 37 29.5**	**-2.0**
BRG	**Berggiesshubel**	**7.75**	**353**	*e*PKP	**Pn**	**21 37 41.3**	**+8.9**
	5.8nm,0.5s						
BRG	**Berggiesshubel**	**7.75**	**353**	SG	**Sg**	**21 39 53.0**	**+5.8**
	10.0nm,1.5s						
VIVF	**Saint-Julien-l**	**7.88**	**286**	*e*Pn	**Pn**	**21 37 33.2**	**-0.9**
VIVF	**Saint-Julien-l**	**7.88**	**286**	*e*Pn	**Pn**	**21 37 33.2**	**-0.9**
MOX	**Moxa**	**7.89**	**342**	*e*PN	**Pn**	**21 37 33.9**	**-0.3**
MOX				*e*SN	**Sn**	**21 39 00.6**	**-3.5**
MOX	**Moxa**	**7.89**	**342**	*e*Pn	**Pn**	**21 37 33.9**	**-0.3**
HAU	**Haudompre**	**7.94**	**310**	*e*Pn	**Pn**	**21 37 34.0**	**-0.9**
HAU				*e*Sn	**Sn**	**21 38 56.3**	**-9.1**
	7.4nm,0.5s						
HAU	**Haudompre**	**7.94**	**310**	*e*Pn	**Pn**	**21 37 34.0**	**-0.9**
CLL	**Collm**	**8.28**	**350**	⇑*i*P	**Pn**	**21 37 41.1**	**+1.5**
	9.0nm,0.8s						
CLL				*e*Sn	**Sb**	**21 39 43.0**	**+1.4**
CLL				*e*Sg	**Sg**	**21 40 05.0**	**+0.8**
CLL	**Collm**	**8.28**	**350**	*e*(Sn)	**Sn**	**21 39 11.0**	**-2.8**
CLL				*e*Sb	**Sb**	**21 39 43.0**	**+1.4**
CLL				*e*Sg	**Sg**	**21 40 05.0**	**+0.8**
CLL	**Collm**	**8.28**	**350**	⇑*i*P	**Pn**	**21 37 41.1**	**+1.5**
	9.0nm,0.8s						
SMF	**Signal de Mont**	**8.87**	**297**	*e*Pn	**Pn**	**21 37 44.2**	**-3.5**
SMF				*e*Sn	**Sn**	**21 39 17.6**	**-11**
	1.9nm,0.3s						
SMF	**Signal de Mont**	**8.87**	**297**	*e*Pn	**Pn**	**21 37 44.2**	**-3.5**
LOR	**Lormes**	**9.08**	**301**	*e*Pn	**Pn**	**21 37 48.7**	**-1.8**
LOR				*e*Sn	**Sn**	**21 39 23.2**	**-10**
	5.7nm,0.3s						
LOR	**Lormes**	**9.08**	**301**	*e*Pn	**Pn**	**21 37 48.7**	**-1.8**
AVF	**Avril sur Loir**	**9.23**	**297**	*e*Pn	**Pn**	**21 37 51.2**	**-1.5**
AVF	**Avril sur Loir**	**9.23**	**297**	*e*Pn	**Pn**	**21 37 51.2**	**-1.5**
BGF	**Bois d'Agland**	**9.50**	**295**	*e*Pn	**Pn**	**21 37 54.1**	**-2.2**
BGF	**Bois d'Agland**	**9.50**	**295**	*e*Pn	**Pn**	**21 37 54.1**	**-2.2**
MTLF	**Montolieu**	**9.59**	**275**	*e*Pn	**Pn**	**21 37 55.4**	**-2.1**
MTLF	**Montolieu**	**9.59**	**275**	*e*Pn	**Pn**	**21 37 55.4**	**-2.1**
CAF	**Calviac**	**9.72**	**285**	*e*Pn	**Pn**	**21 37 57.0**	**-2.4**
CAF	**Calviac**	**9.72**	**285**	*e*Pn	**Pn**	**21 37 57.0**	**-2.4**

*SKO **08** 21:49:15.7, 40.°54N×22.°91E, h0km, M1.9, ML2.3*
*CSEM **08** 21:49:17.3±0.2, 40.°59N×22.°78E, h15km, ML2.8/9, Error ellipse: s-maj=4.5km s-min=3.9km az=166.0*
*NEIC **08** 21:49:17.0, 40.°61N×22.°77E, h23km, MD3.3(ATH), After ATH.*
*ATH **08** 21:49:17.0, 40.°61N×22.°77E, h23km±2km, MD3.3/9*

THE 08 21:49:17.1, 40.°60N×22.°78E, h8km, ML2.8/9, Error ellipse: s-maj=0.7km s-min=0.3km az=14.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THE	**Thessaloniki**	**0.15**	**76**	P	Pg	21 49 20.5	+0.2
THE				S	Sg	21 49 22.8	+0.3
THE	**Thessaloniki**	**0.15**	**76**	P	Pg	21 49 20.5	+0.2
THE				S	Sg	21 49 22.8	+0.3
HORT	**Hortiatis**	**0.25**	**90**	P	Pg	21 49 22.1	+0.1
HORT				S	Sg	21 49 25.5	+0.1
HORT	**Hortiatis**	**0.25**	**90**	P	Pg	21 49 22.1	+0.1
HORT				S	Sg	21 49 25.5	+0.1
SOH	**Sokhos**	**0.49**	**63**	*e*Pb	Pg	21 49 27.0	+0.3
SOH				*e*Sb	Sg	21 49 35.4	+2.2
SOH	**Sokhos**	**0.49**	**63**	*e*PB	Pg	21 49 27.0	+0.3
SOH				*e*SB	Sg	21 49 35.4	+2.2
SOH	**Sokhos**	**0.49**	**63**	P	Pg	21 49 26.9	+0.2
SOH				S	Sg	21 49 34.3	+1.1
SOH	**Sokhos**	**0.49**	**63**	P	Pg	21 49 26.9	+0.2
SOH				S	Sg	21 49 34.3	+1.1
SOH				*e*Sb	Sg	21 49 35.4	+2.2
PLG	**Polygyros**	**0.56**	**113**	*e*Pn	Pg	21 49 27.9	0.0
PLG				*e*Sn	Sg	21 49 36.0	+0.8
PLG	**Polygyros**	**0.56**	**113**	*e*PN	Pg	21 49 27.9	0.0
PLG				*e*SN	Sg	21 49 36.0	+0.8
PLG	**Polygyros**	**0.56**	**113**	P	Pg	21 49 27.8	-0.1
PLG				S	Sg	21 49 35.6	+0.4
PLG	**Polygyros**	**0.56**	**113**	P	Pg	21 49 27.8	-0.1
PLG				S	Sg	21 49 35.6	+0.4
VAY	**Valandovo**	**0.74**	**348**	*e*Pg	Pg	21 49 31.0	-0.4
VAY				*e*Sg	Sg	21 49 41.6	+0.6
VAY				*e*Lg		21 49 41.9	
	comp=E,77nm,0.4s						
VAY				*e*Lg		21 49 42.3	
	comp=N,75nm,0.5s						
VAY	**Valandovo**	**0.74**	**348**	P	Pg	21 49 31.1	-0.3
VAY				S	Sg	21 49 41.4	+0.4
VAY	**Valandovo**	**0.74**	**348**	P	Pg	21 49 31.1	-0.3
VAY				S	Sg	21 49 41.4	+0.4
KZN	**Kozani**	**0.82**	**250**	*e*Pb	Pb	21 49 32.3	-1.2
KZN				*e*Sn	Sn	21 49 45.2	-1.9
KZN	**Kozani**	**0.82**	**250**	*e*PB	Pb	21 49 32.3	-1.2
KZN				*e*SN	Sn	21 49 45.2	-1.9
KZN	**Kozani**	**0.82**	**250**	P	Pg	21 49 32.5	-0.4
KZN				S	Sg	21 49 44.2	+0.7
KZN	**Kozani**	**0.82**	**250**	P	Pg	21 49 32.5	-0.4
KZN				S	Sg	21 49 44.2	+0.7
KZN				*e*Sn	Sn	21 49 45.2	-1.9
OUR	**Ouranopolis**	**0.96**	**106**	P	Pg	21 49 35.3	-0.2
OUR				S	Sg	21 49 48.6	+0.7
OUR	**Ouranopolis**	**0.96**	**106**	P	Pg	21 49 35.3	-0.2
OUR				S	Sg	21 49 48.6	+0.7
PAIG	**Paliouri**	**0.96**	**134**	P	Pg	21 49 34.9	-0.7
PAIG				S	Sg	21 49 49.1	+1.0
PAIG	**Paliouri**	**0.96**	**134**	P	Pg	21 49 34.9	-0.7
PAIG				S	Sg	21 49 49.1	+1.0
FNA	**Florina**	**1.08**	**280**	P	Pg	21 49 37.3	-0.5
FNA				S	Sg	21 49 52.8	+0.9
FNA	**Florina**	**1.08**	**280**	P	Pg	21 49 37.3	-0.5
FNA				S	Sg	21 49 52.8	+0.9
NVR	**Nevrokopi**	**1.11**	**47**	*e*Pn	Pn	21 49 38.3	-0.6
NVR				*e*Sn	Sn	21 49 53.7	-0.7
NVR	**Nevrokopi**	**1.11**	**47**	*e*PN	Pn	21 49 38.3	-0.6
NVR				*e*SN	Sn	21 49 53.7	-0.7
NVR	**Nevrokopi**	**1.11**	**47**	*e*Pn	Pn	21 49 38.3	-0.6
NVR				*e*Sn	Sn	21 49 53.7	-0.7
THL	**Klokotos Trika**	**1.19**	**210**	*e*PN	Pn	21 49 39.4	-0.5
THL				*e*SN	Sn	21 49 56.8	+0.7
THL	**Klokotos Trika**	**1.19**	**210**	P	Pb	21 49 39.3	-0.5
THL				S	Sb	21 49 56.2	+1.0
THL	**Klokotos Trika**	**1.19**	**210**	*e*Pn	Pn	21 49 39.4	-0.5
THL				S	Sb	21 49 56.2	+1.0
THL				*e*Sn	Sn	21 49 56.8	+0.7
XOR	**Xorichti**	**1.27**	**165**	P	Pn	21 49 39.9	-1.2
XOR	**Xorichti**	**1.27**	**165**	P	Pn	21 49 39.9	-1.2
NEO	**Neokhori**	**1.33**	**165**	*e*Pb	Pb	21 49 40.8	-1.5
NEO	**Neokhori**	**1.33**	**165**	*e*PB	Pb	21 49 40.8	-1.5
NEO	**Neokhori**	**1.33**	**165**	*e*Pb	Pb	21 49 40.8	-1.5
KAVA	**Kavala**	**1.38**	**73**	P	Pn	21 49 41.6	-0.9
KAVA				S	Sb	21 50 00.7	-0.1
KAVA	**Kavala**	**1.38**	**73**	P	Pn	21 49 41.6	-0.9
KAVA				S	Sb	21 50 00.7	-0.1
AGG	**Agios Georgios**	**1.61**	**192**	*e*Pn	Pn	21 49 47.2	+1.5
AGG	**Agios Georgios**	**1.61**	**192**	*e*PN	Pn	21 49 47.2	+1.5
AGG	**Agios Georgios**	**1.61**	**192**	*e*Pn	Pn	21 49 47.2	+1.5
LIA	**Limnos Island**	**1.97**	**110**	*e*Pn	Pn	21 49 51.6	+0.9
LIA	**Limnos Island**	**1.97**	**110**	*e*PN	Pn	21 49 51.6	+0.9
LIA	**Limnos Island**	**1.97**	**110**	*e*Pn	Pn	21 49 51.6	+0.9
VTS	**Vitosha**	**2.02**	**9**	*e*Pn	Pn	21 49 52.5	+1.1
RDO	**Rodhopi**	**2.17**	**74**	*e*Pb	Pb	21 49 54.4	-2.1
RDO	**Rodhopi**	**2.17**	**74**	*e*PB	Pb	21 49 54.4	-2.1
RDO	**Rodhopi**	**2.17**	**74**	P	Pn	21 49 52.8	-0.6
RDO				S	Sn	21 50 21.0	+0.7
RDO	**Rodhopi**	**2.17**	**74**	P	Pn	21 49 52.8	-0.6
RDO	**Rodhopi**	**2.17**	**74**	*e*Pb	Pb	21 49 54.4	-2.1
RDO				S	Sn	21 50 21.0	+0.7
BARS	**Barje**	**2.33**	**342**	*e*Pn	Pn	21 49 55.6	-0.1
ALN	**Alexandroupoli**	**2.50**	**82**	*e*Pn	Pn	21 49 58.0	0.0
ALN	**Alexandroupoli**	**2.50**	**82**	*e*PN	Pn	21 49 58.0	0.0
ALN	**Alexandroupoli**	**2.50**	**82**	*e*Pn	Pn	21 49 58.0	0.0

MAN 08 22:01:52, 18.°40N×121.°05E, h1km, mb4.0, ML2.8, MS2.5, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**0.42**	**260**	⇓*e*P	Pg	22 02 01.1	+1.0
APYP	**Conner**	**0.56**	**161**	*e*P	Pg	22 02 02.9	+0.1
ABRA	**Dolores**	**0.81**	**204**	*e*P	Pg	22 02 05.6	-2.0
SGCP	**Mt. Cagua**	**0.96**	**99**	*e*P	Pg	22 02 11.8	+1.5
BALP	**Baler**	**2.69**	**169**	*e*P	Pn	22 02 38.2	+1.8

*NEIC **08** 22:17:01.7, 58.°78N×137.°58W, h1km, ML2.7(PGC), ML2.5(AEIC), After PGC.*

PGC 08 22:17:01.7±0.1, 58.°78N×137.°58W, h1km, ML2.7/4, 7D, 122km Ese of Yakutat, Ak Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLBC	**Pleasant Camp**	**0.92**	**42**	P	Pg	22 17 18.2	-1.1
PLBC				S	Sg	22 17 30.2	-1.1
PLBC	**Pleasant Camp**	**0.92**	**42**	⇓P	Pg	22 17 18.2	-1.1
PLBC				⇓S	Sg	22 17 30.2	-1.1
PNL	**Peninsula**	**1.29**	**314**	P	Pg	22 17 25.2	-1.1
PNL				S	Sg	22 17 44.8	+1.8
SKAG	**Skagway**	**1.35**	**59**	P	Pg	22 17 25.5	-2.0
SKAG				S	Sg	22 17 42.9	-2.0
BESE	**Bessie Mountai**	**1.44**	**97**	P	Pn	22 17 26.5	-2.3
HYT	**Haines Junctio**	**2.05**	**1**	Pn	Pn	22 17 37.0	-0.3
HYT				Pg	Pg	22 17 38.1	-2.8
HYT				Sg	Sg	22 18 04.8	-2.7
HYT	**Haines Junctio**	**2.05**	**1**	⇑Pn	Pn	22 17 37.0	-0.3
HYT				⇓Pg	Pg	22 17 38.1	-2.8
HYT				⇓Sg	Sg	22 18 04.8	-2.7
SIT	**Sitka**	**2.11**	**144**	P	Pn	22 17 36.0	-2.0
SIT				S	Sn	22 18 04.7	-0.2
WHY	**Whitehorse**	**2.33**	**35**	P	Pn	22 17 41.0	0.0
WHY				Sg	Sg	22 18 14.1	-2.3
WHY	**Whitehorse**	**2.33**	**35**	⇓Pn	Pn	22 17 40.8	-0.2
WHY				⇑Pg	Pg	22 17 43.2	-3.0
WHY				⇓Sg	Sg	22 18 14.1	-2.3
DLBC	**Dease Lake**	**3.97**	**92**	Pn	Pn	22 18 03.0	-0.6
DLBC				Sn	Sn	22 18 48.0	-2.7
DLBC				Sg	Sg	22 19 03.6	-5.4
DLBC	**Dease Lake**	**3.97**	**92**	⇓Pn	Pn	22 18 03.0	-0.6
DLBC				⇑Sn	Sn	22 18 48.0	-2.7
DLBC				⇓Sg	Sg	22 19 03.6	-5.4
DAWY	**Dawson**	**5.37**	**351**	P	Pn	22 18 22.7	-0.1

*NEIC **08** 22:21:35.5, 36.°43N×21.°53E, h5km, MD3.6(ATH), ML3.6(THE), After ATH.*
*ATH **08** 22:21:35.5, 36.°43N×21.°53E, h5km±1km, MD3.6/12*
*CSEM **08** 22:21:35.9±0.8, 36.°46N×21.°58E, h2km, ML3.6/3, Error ellipse: s-maj=14.6km s-min=9.2km az=54.0*
*THE **08** 22:21:37.7, 36.°64N×21.°41E, h3km, ML3.6/3, Error ellipse: s-maj=2.3km s-min=0.9km az=137.0*

ISC 08 22:21:35.5±1.0, 36.°46N±0.°04×21.°51E±0.°07, h10km, n45, σ1§01/66, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.48**	**23**	*e*PB	**Pg**	**22 21 44.8**	**0.0**
PYL	**PYLOS**	**0.48**	**23**	P	**Pg**	**22 21 44.7**	**-0.1**
PYL				S	**Sg**	**22 21 50.6**	**-0.5**
PYL	**PYLOS**	**0.48**	**23**	P	**Pg**	**22 21 44.7**	**-0.1**
PYL				S	**Sg**	**22 21 50.6**	**-0.5**
ITM	**Ithomi**	**0.80**	**25**	*e*Pb	**Pg**	**22 21 50.9**	**+0.1**
ITM				*e*Sb	**Sb**	**22 22 03.0**	**+0.7**
ITM	**Ithomi**	**0.80**	**25**	*e*PB	**Pg**	**22 21 50.9**	**+0.1**
ITM				*e*SB	**Sb**	**22 22 03.0**	**+0.7**
ITM	**Ithomi**	**0.80**	**25**	P	**Pg**	**22 21 50.5**	**-0.3**
ITM				S	**Sg**	**22 22 00.4**	**-0.9**
ITM	**Ithomi**	**0.80**	**25**	P	**Pg**	**22 21 50.5**	**-0.3**
ITM	**Ithomi**	**0.80**	**25**	*e*Pb	**Pg**	**22 21 50.9**	**+0.1**
ITM				S	**Sg**	**22 22 00.4**	**-0.9**
ITM				*e*Sb	**Sb**	**22 22 03.0**	**+0.7**
VLX	**Vlachokerasia**	**1.15**	**37**	*e*PB	**Pg**	**22 21 57.3**	**-0.3**
VLX				*e*SB	**Sg**	**22 22 12.8**	**+0.3**
VLX	**Vlachokerasia**	**1.15**	**37**	P	**Pg**	**22 21 57.3**	**-0.3**
VLX				S	**Sg**	**22 22 12.8**	**+0.3**
VLX	**Vlachokerasia**	**1.15**	**37**	P	**Pg**	**22 21 57.3**	**-0.3**
VLX				S	**Sg**	**22 22 12.8**	**+0.3**
VLI	**Veliai**	**1.18**	**77**	*e*Pb	**Pg**	**22 21 57.6**	**-0.5**
VLI				*e*Sb	**Sg**	**22 22 14.3**	**+0.9**
VLI	**Veliai**	**1.18**	**77**	*e*PB	**Pg**	**22 21 57.6**	**-0.5**
VLI				*e*SB	**Sg**	**22 22 14.3**	**+0.9**
VLI	**Veliai**	**1.18**	**77**	*e*Pb	**Pg**	**22 21 57.6**	**-0.5**
VLI				*e*Sb	**Sg**	**22 22 14.3**	**+0.9**
KYTH	**Kithira**	**1.24**	**98**	*e*Pb	**Pb**	**22 21 58.6**	**-0.4**
KYTH	**Kithira**	**1.24**	**98**	*e*PB	**Pb**	**22 21 58.6**	**-0.4**
KYTH	**Kithira**	**1.24**	**98**	*e*Pb	**Pb**	**22 21 58.6**	**-0.4**
RLS	**Riolos of Patr**	**1.60**	**359**	*e*Pb	**Pb**	**22 22 06.6**	**+1.5**
RLS	**Riolos of Patr**	**1.60**	**359**	*e*PB	**Pb**	**22 22 06.6**	**+1.5**
RLS	**Riolos of Patr**	**1.60**	**359**	*e*Pb	**Pb**	**22 22 06.6**	**+1.5**
GUR	**Goura**	**1.62**	**24**	*e*PG	**Pn**	**22 22 05.6**	**+1.5**
GUR	**Goura**	**1.62**	**24**	P	**Pn**	**22 22 04.5**	**+0.4**
GUR				S	**Sn**	**22 22 25.3**	**+0.3**
GUR	**Goura**	**1.62**	**24**	P	**Pn**	**22 22 04.5**	**+0.4**
GUR	**Goura**	**1.62**	**24**	*e*Pg	**Pn**	**22 22 05.6**	**+1.5**
GUR				S	**Sn**	**22 22 25.3**	**+0.3**
DID	**Didima**	**1.74**	**52**	*e*PG	**Pg**	**22 22

*DJA **08** 23:11:10,0°.29N×96°.33E,h15km,MLv3.9/5*
*IDC **08** 23:11:12.5±1.7,0°.20N×96°.13E,h0km,mb3.8/7,mb1 3.9/7, mb1mx3.7/22,mbtmp3.8/7,Error ellipse: s-maj=77.8km s-min=25.0km az=48.0*
*ISCJB **08** 23:11:14.6±1.0,0°.3N±0°.1×96°.7E±0°.1,h33km,mb3.8/7, Error ellipse: s-maj=24.9km s-min=9.0km az=40.2*
ISC 08 23:11:16.9±1.0,0°.3N±0°.2×96°.7E±0°.1,h35km,n15, σ0ˢ89/14,mb3.8/7,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**2.87**	**124**	P	**Pn**	**23 11 58.9**	**-1.3**
MNSI	**Mandailing Nat**	**2.90**	**80**	P	**Pn**	**23 12 00.8**	**+0.1**
TPTI		**2.97**	**9**	P	**Pn**	**23 11 58.4**	**-3.2**
PDSI	**Padang**	**3.94**	**108**	P	**Pn**	**23 12 15.0**	**+0.1**
SDSI	**Sungai Dareh**	**4.87**	**105**	P	**Pn**	**23 12 28.9**	**+1.2**
	0.1nm9.9nm,0.7s						
RGRI	**Rengat**	**5.66**	**97**	P	**Pn**	**23 12 33.6**	**-4.9**
MDSI	**Maura Dua**	**8.84**	**123**	P	**Pn**	**23 13 22.1**	**-0.2**
WRA	**Warramunga Arr**	**41.98**	**121**	P	**P**	**23 19 09.3**	**+4.4**
	2.3nm,1.2s,mb3.7,baz=302,slow=8.9,SNR=2.6						
MKAR	**Makanchi Array**	**47.99**	**347**	P	**P**	**23 19 53.2**	**+0.9**
	0.9nm,0.7s,mb3.9,baz=157,slow=8.4,SNR=10						
KURK	**Kurchatov**	**52.53**	**346**	P	**P**	**23 20 26.8**	**+0.2**
	0.5nm,0.7s,mb3.6,baz=167,slow=7.3,SNR=6.3						
ZALV	**Zalesovo Beam**	**54.36**	**351**	P	**P**	**23 20 40.8**	**+0.8**
	2.3nm,0.5s,mb4.4,baz=169,slow=6.8,SNR=16						
BVAR	**Borovoye Array**	**56.93**	**341**	P	**P**	**23 20 58.5**	**+0.1**
	0.3nm,0.5s,mb3.6,baz=142,slow=4.9,SNR=2.6						
BRTR	**Keskin Array B**	**69.36**	**313**	P	**P**	**23 22 20.4**	**-0.8**
	0.2nm,0.4s,mb3.4,baz=150,slow=6.1,SNR=2.5						
ARCES	**ARCESS Array B**	**83.21**	**340**	P	**P**	**23 23 39.5**	**+0.2**
	2.8nm,1.1s,mb4.2,baz=91,slow=6.3,SNR=4.7						
TXAR	**Lajitas Array**	**144.68**	**32**	PKPbc	PKPdf	23 30 51.3	+0.6
	0.1nm,0.4s,baz=330,slow=8.4,SNR=3.2						

*ISCJB **08** 23:23:44.4±0.7, 11°.09N±0°.03×61°.67W±0°.03,h66km±9km, Error ellipse: s-maj=6.2km s-min=4.5km az=143.9*
*NEIC **08** 23:23:45.3, 11°.23N×61°.57W,h8km,MD2.9(TRN),After TRN.*
*TRN **08** 23:23:45.3, 11°.23N×61°.59W,h8km,MD2.9*
*FUNV **08** 23:23:46.1, 11°.08N×61°.62W,h37km,MW2.6*
ISC 08 23:23:45.3±0.6,11°.10N±0°.03×61°.67W±0°.03,h58km±10km, n24,σ0ˢ79/43,4C,Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TCE	**Chacachacare**	**0.41**	**192**	*e*P	**Pn**	**23 23 56.3**	**+0.1**
TCE				*e*S	**Sn**	**23 24 04.1**	**+0.1**
TCE	**Chacachacare**	**0.41**	**192**	*e*P	**Pn**	**23 23 56.3**	**+0.1**
TCE				*e*S	**Sn**	**23 24 04.1**	**+0.1**
TRN	**Trinidad (W)**	**0.52**	**150**↑	*e*P	**Pn**	**23 23 57.1**	**-0.2**
TRN				*e*S	**Sn**	**23 24 05.6**	**-0.5**
TRN	**Trinidad (W)**	**0.52**	**150**↑	*e*P	**Pn**	**23 23 57.1**	**-0.2**
TRN				*e*S	**Sn**	**23 24 05.6**	**-0.5**
GUIV	**Guiria**	**0.71**	**230**	*e*P	**Pn**	**23 23 59.3**	**-0.3**
GUIV				*e*S	**Sn**	**23 24 10.2**	**+0.3**
TBH	**Brigand Hill**	**0.85**	**136**↑	*e*P	**Pn**	**23 24 03.1**	**+1.8**
TBH				*e*S	**Sn**	**23 24 15.8**	**+2.7**
TBH	**Brigand Hill**	**0.85**	**136**↑	*e*P	**Pn**	**23 24 03.1**	**+1.8**
TBH				*e*S	**Sn**	**23 24 15.8**	**+2.7**
TPR	**Prospect**	**0.88**	**85**	*e*P	**Pn**	**23 24 00.9**	**-0.8**
TPR				*e*S	**Sn**	**23 24 12.9**	**-0.8**
TPR	**Prospect**	**0.88**	**85**	*e*P	**Pn**	**23 24 00.9**	**-0.8**
TPR				*e*S	**Sn**	**23 24 12.9**	**-0.8**
BOT	**Bacolet**	**0.93**	**86**	*e*P	**Pn**	**23 24 01.2**	**-1.2**
BOT				*e*S	**Sn**	**23 24 14.6**	**-0.4**
BOT	**Bacolet**	**0.93**	**86**	*e*P	**Pn**	**23 24 01.2**	**-1.2**
BOT				*e*S	**Sn**	**23 24 14.6**	**-0.4**
GRW	**Mount Saint Ca**	**1.05**	**0**	*e*P	**Pn**	**23 24 03.8**	**-0.1**
GRW				*e*S	**Sn**	**23 24 16.6**	**-1.1**
GRW	**Mount Saint Ca**	**1.05**	**0**	*e*P	**Pn**	**23 24 03.8**	**-0.1**
GRW				*e*S	**Sn**	**23 24 16.6**	**-1.1**
TOSP	**Speyside**	**1.13**	**80**	*e*P	**Pn**	**23 24 05.2**	**+0.3**
TOSP				*e*S	**Sn**	**23 24 20.2**	**+0.6**
GRSS	**Sisters**	**1.19**	**3**	*e*P	**Pn**	**23 24 06.2**	**+0.5**
GRSS				*e*S	**Sn**	**23 24 21.1**	**+0.1**
GRSS	**Sisters**	**1.19**	**3**	*e*P	**Pn**	**23 24 06.2**	**+0.5**
GRSS				*e*S	**Sn**	**23 24 21.1**	**+0.1**
ITEV	**Isla Los Testi**	**1.46**	**280**	*e*P	**Pn**	**23 24 10.0**	**+0.7**
ITEV				*e*S	**Sn**	**23 24 28.0**	**+0.5**
GUNV	**Guanoco**	**1.56**	**233**	*e*P	**Pn**	**23 24 11.2**	**+0.4**
GUNV				*e*S	**Sn**	**23 24 29.6**	**-0.5**
CRUV	**Carupano**	**1.60**	**255**	*e*P	**Pn**	**23 24 11.2**	**-0.1**
CRUV				*e*S	**Sn**	**23 24 30.0**	**-0.8**
SVB	**Belmont**	**2.19**	**11**	*e*S	**Sn**	**23 24 46.4**	**+1.0**
PCRV	**Puerto La Cruz**	**3.06**	**253**	*e*P	**Pn**	**23 24 31.6**	**+0.4**
GURV	**El Guri**	**3.60**	**203**	*e*P	**Pn**	**23 24 39.0**	**+0.3**
LUEV	**Luepa**	**5.23**	**178**	*e*P	**Pn**	**23 24 59.4**	**-1.6**
CAOV	**Caicara del Or**	**5.93**	**231**	*e*P	**Pn**	**23 25 10.4**	**-0.2**

IGQ 08 23:44:57.0,1°.04S×78°.32W,h9km±1km,Mb4.0,Ms3.8, 16C-12D,Error ellipse: s-maj=1.4km s-min=0.3km az=1.7,Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BMOR	**Cotopaxi Volca**	**0.33**	**336**	↑P	Pg	23 45 04.5	+0.9
MOV1	**Cotopaxi Vol s**	**0.34**	**340**	P	Pg	23 45 04.5	+0.8
TAMB	**Tambo**	**0.34**	**352**	↑P	Pg	23 45 04.4	+0.7
BTAM	**Cotopaxi Volca**	**0.37**	**348**	↑P	Pg	23 45 05.1	+0.9
COV1	**Cotopaxi Volc**	**0.37**	**357**	↓S	Sg	23 45 11.5	+2.2
COV1	**Cotopaxi Volc**	**0.37**	**357**	↓P	Pg	23 45 05.7	+1.4
BREF	**Cotopaxi Volca**	**0.38**	**342**	↑S	Sg	23 45 11.8	+2.2
BREF	**Cotopaxi Volca**	**0.38**	**342**	↑P	Pg	23 45 05.6	+1.1
BVC2	**Cotopaxi Volca**	**0.39**	**347**	↑P	Pg	23 45 05.5	+0.9
RUN5	**Runtun**	**0.39**	**195**	↑S	Sg	23 45 10.2	+0.3
RUN5	**Runtun**	**0.39**	**195**	↑P	Pg	23 45 05.2	+0.6
BRUN	**Tungurahua Vol**	**0.39**	**193**	↓S	Sg	23 45 10.3	+0.4
BRUN	**Tungurahua Vol**	**0.39**	**193**	↓P	Pg	23 45 05.2	+0.5
BNAS	**Cotopaxi Volca**	**0.40**	**336**	↓P	Pg	23 45 05.7	+0.9
VC1	**Cotopaxi 1**	**0.40**	**348**	↓P	Pg	23 45 05.7	+0.9
JUI6	**Juive**	**0.41**	**201**	↑S	Sg	23 45 10.8	+0.2
JUI6	**Juive**	**0.41**	**201**	↑P	Pg	23 45 05.3	+0.3
ULBA	**Ulba**	**0.42**	**192**	S	Sg	23 45 10.8	0.0
ULBA	**Ulba**	**0.42**	**192**	P	Pg	23 45 05.7	+0.5
RETU	**Refugio**	**0.43**	**197**	P	Pg	23 45 06.0	+0.6
BIL2	**Estacion Bilba**	**0.45**	**203**	P	Pg	23 45 06.4	+0.6
ARRY	**Arrayan**	**0.49**	**196**	↓P	Pg	23 45 06.6	+0.1
PITA	**Cotopaxi Volc**	**0.49**	**347**	↑P	Pg	23 45 07.2	+0.8
BMAS	**Trigal station**	**0.49**	**199**	↑S	Sg	23 45 13.7	+0.7
BMAS	**Trigal station**	**0.49**	**199**	↑P	Pg	23 45 06.8	+0.2
ANTI	**Antisana**	**0.60**	**15**	↑P	Pg	23 45 08.7	0.0
JUA2	**San Juan 2**	**0.86**	**341**	↑P	Pg	23 45 14.4	+0.7
GGP	**Refugio Guagua**	**0.90**	**342**	↓P	Pg	23 45 14.9	+0.7
TERV	**Terraza Guagua**	**0.90**	**342**	P	Pg	23 45 14.9	+0.5
PINO	**Pino**	**0.92**	**342**	P	Pg	23 45 15.3	+0.7
YANA	**Yana**	**0.94**	**345**	P	Pg	23 45 16.2	+1.0
CAYR	**Refugio Cayamb**	**1.09**	**17**	P	Pg	23 45 18.5	+0.5
CHAR	**Charly**	**1.15**	**35**	↓S	Sg	23 45 36.2	+2.3
CHAR	**Charly**	**1.15**	**35**	↓P	Pb	23 45 19.7	+0.8
CAYA	**Cayambe**	**1.15**	**17**	↑P	Pb	23 45 19.3	+0.3
LAV3	**Lava3-Reventad**	**1.16**	**36**	S	Sb	23 45 35.3	+1.0
LAV3	**Lava3-Reventad**	**1.16**	**36**	P	Pb	23 45 19.4	+0.2
CONE	**Cono NE Rev Vo**	**1.18**	**35**	↓S	Sb	23 45 36.1	+1.3
CONE	**Cono NE Rev Vo**	**1.18**	**35**	↓P	Pb	23 45 19.8	+0.3
OTAV	**Otavalo**	**1.27**	**354**	P	Pn	23 45 21.0	+0.1

*ISCJB **08** 23:47:20.8±0.9,36°.22N±0°.04×21°.32E±0°.06,h6km±6km, Error ellipse: s-maj=8.3km s-min=5.8km az=155.1*
*CSEM **08** 23:47:21.2±0.4,36°.21N×21°.31E,h2km,ML3.5/8,Error ellipse: s-maj=8.2km s-min=5.7km az=51.0*
*NEIC **08** 23:47:23.4,36°.29N×21°.36E,h32km±4km,MD3.7(ATH), ML3.5(THE),After ATH.*
*ATH **08** 23:47:23.4,36°.29N×21°.36E,h32km±4km,MD3.7/17*
*THE **08** 23:47:24.5,36°.27N×21°.53E,h8km±1km,ML3.5/8,Error ellipse: s-maj=1.5km s-min=0.8km az=250.0*
ISC 08 23:47:21.4±1.1,36°.21N±0°.04×21°.34E±0°.06,h4km±5km, n94,σ0ˢ97/119,1D,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.76**	**25**	*e*PN	**Pn**	**23 47 37.2**	**-1.7**
PYL				*e*SN	**Sg**	**23 47 47.5**	**+1.7**
PYL	**PYLOS**	**0.76**	**25**	P	**Pg**	**23 47 36.9**	**+1.0**
PYL				S	**Sg**	**23 47 45.6**	**-0.2**
PYL	**PYLOS**	**0.76**	**25**	*e*Pn	**Pn**	**23 47 37.3**	**-1.6**
PYL				S	**Sg**	**23 47 45.6**	**-0.2**
ITM	**Ithomi**	**1.08**	**26**	*e*Pn	**Pn**	**23 47 42.3**	**-1.0**
ITM	**Ithomi**	**1.08**	**26**	*e*PN	**Pn**	**23 47 42.3**	**-1.0**
ITM	**Ithomi**	**1.08**	**26**	P	**Pg**	**23 47 42.5**	**+0.4**
ITM				S	**Sg**	**23 47 56.2**	**+0.1**
ITM	**Ithomi**	**1.08**	**26**	P	**Pg**	**23 47 42.5**	**+0.4**
ITM				S	**Sg**	**23 47 56.2**	**+0.1**
KYTH	**Kithira**	**1.37**	**86**	*e*Pn	**Pn**	**23 47 48.8**	**+1.5**
KYTH	**Kithira**	**1.37**	**86**	*e*PN	**Pn**	**23 47 48.8**	**+1.5**
KYTH	**Kithira**	**1.37**	**86**	*e*Pn	**Pn**	**23 47 48.8**	**+1.5**
VLI	**Veliai**	**1.39**	**68**	*e*Pn	**Pn**	**23 47 48.5**	**+1.0**
VLI	**Veliai**	**1.39**	**68**	*e*PN	**Pn**	**23 47 48.5**	**+1.0**
VLI	**Veliai**	**1.39**	**68**	*e*Pn	**Pn**	**23 47 48.5**	**+1.0**
VLX	**Vlachokerasia**	**1.43**	**35**	*e*PN	**Pn**	**23 47 48.2**	**+0.1**
VLX	**Vlachokerasia**	**1.43**	**35**	P	**Pn**	**23 47 48.1**	**0.0**
VLX	**Vlachokerasia**	**1.43**	**35**	P	**Pn**	**23 47 48.1**	**0.0**
RLS	**Riolos of Patr**	**1.85**	**3**	*e*Pb	**Pb**	**23 47 54.1**	**-1.7**
RLS	**Riolos of Patr**	**1.85**	**3**	*e*PB	**Pb**	**23 47 54.1**	**-1.7**
RLS	**Riolos of Patr**	**1.85**	**3**	*e*Pb	**Pb**	**23 47 54.1**	**-1.7**
GUR	**Goura**	**1.90**	**25**	*e*PB	**Pb**	**23 47 55.2**	**-1.5**
GUR	**Goura**	**1.90**	**25**	P	**Pn**	**23 47 55.1**	**+0.5**
GUR				S	**Sn**	**23 48 18.7**	**-0.4**
GUR	**Goura**	**1.90**	**25**	P	**Pn**	**23 47 55.1**	**+0.5**
GUR				S	**Sn**	**23 48 18.7**	**-0.4**
DID	**Didima**	**2.00**	**49**	*e*PN	**Pn**	**23 47 55.8**	**-0.2**
DID	**Didima**	**2.00**	**49**	P	**Pn**	**23 47 55.8**	**-0.2**
DID				S	**Sn**	**23 48 19.9**	**-1.5**
DID	**Didima**	**2.00**	**49**	P	**Pn**	**23 47 55.8**	**-0.2**
DID				S	**Sn**	**23 48 19.9**	**-1.5**
VLS	**Valsamata**	**2.06**	**343**	*e*Pn	**Pn**	**23 47 55.5**	**-1.2**
VLS	**Valsamata**	**2.06**	**343**	*e*PN	**Pn**	**23 47 55.5**	**-1.2**
VLS	**Valsamata**	**2.06**	**343**	*e*Pn	**Pn**	**23 47 55.5**	**-1.2**
LAKA	**Lakka**	**2.09**	**14**	P	**Pn**	**23 47 58.0**	**+0.8**
LAKA				S	**Sn**	**23 48 24.1**	**+0.4**
LAKA	**Lakka**	**2.09**	**14**	P	**Pn**	**23 47 58.0**	**+0.8**
LAKA				S	**Sn**	**23 48 24.1**	**+0.4**
LTK	**Loutraki**	**2.23**	**35**	*e*PN	**Pn**	**23 47 59.0**	**-0.1**
LTK	**Loutraki**	**2.23**	**35**	P	**Pn**	**23 47 59.0**	**-0.1**
LTK	**Loutraki**	**2.23**	**35**	P	**Pn**	**23 47 59.0**	**-0.1**
TRIZ	**Trizonia**	**2.23**	**15**	P	**Pn**	**23 48 00.0**	**+0.8**
TRIZ				S	**Sn**	**23 48 27.9**	**+0.7**
TRIZ	**Trizonia**	**2.23**	**15**	P	**Pn**	**23 48 00.0**	**+0.8**
TRIZ				S	**Sn**	**23 48 27.9**	**+0.7**
KARN	**Karanos**	**2.24**	**110**	P	**Pn**	**23 48 00.1**	**+0.8**
KARN				S	**Sn**	**23 48 26.7**	**-0.8**
KARN	**Karanos**	**2.24**	**110**	P	**Pn**	**23 48 00.1**	**+0.8**
KARN				S	**Sn**	**23 48 26.7**	**-0.8**
EFP	**Efpalio**	**2.26**	**11**	*e*PB	**Pb**	**23 48 00.7**	**-2.1**
EFP	**Efpalio**	**2.26**	**11**	P	**Pn**	**23 48 00.6**	**+1.0**
EFP				S	**Sn**	**23 48 28.2**	**+0.3**
EFP	**Efpalio**	**2.26**	**11**	P	**Pn**	**23 48 00.6**	**+1.0**
EFP				S	**Sn**	**23 48 28.2**	**+0.3**
DSF	**Desfina**	**2.40**	**23**	P	**Pn**	**23 48 01.8**	**+0.4**
DSF				S	**Sn**	**23 48 30.9**	**-0.3**
DSF	**Desfina**	**2.40**	**23**	P	**Pn**	**23 48 01.8**	**+0.4**
DSF				S	**Sn**	**23 48 30.9**	**-0.3**
VAM	**Vamos**	**2.46**	**108**	*e*Pn	**Pn**	**23 48 03.1**	**+0.8**
VAM	**Vamos**	**2.46**	**108**	*e*PN	**Pn**	**23 48 03.1**	**+0.8**
VAM	**Vamos**	**2.46**	**108**	*e*Pn	**Pn**	**23 48 03.1**	**+0.8**
VLY	**Voula,Athens**	**2.56**	**49**	*e*Pn	**Pn**	**23 48 02.9**	**-0.8**
VLY	**Voula,Athens**	**2.56**	**49**	*e*PN	**Pn**	**23 48 02.9**	**-0.8**
VLY	**Voula,Athens**	**2.56**	**49**	*e*Pn	**Pn**	**23 48 02.9**	**-0.8**
LKD2	**Lefkada island**	**2.63**	**348**	P	**Pn**	**23 48 05.5**	**+0.8**
LKD2				S	**Sn**	**23 48 38.9**	**+1.8**
LKD2	**Lefkada island**	**2.63**	**348**	P	**Pn**	**23 48 05.5**	**+0.8**
LKD2				S	**Sn**	**23 48 38.9**	**+1.8**
PTL	**Penteli**	**2.73**	**47**	*e*Pn	**Pn**	**23 48 05.5**	**-0.5**
PTL	**Penteli**	**2.73**	**47**	*e*PN	**Pn**	**23 48 05.5**	**-0.5**
PTL	**Penteli**	**2.73**	**47**	*e*Pn	**Pn**	**23 48 05.5**	**-0.5**
EVR	**Evrytania**	**2.73**	**8**	*e*Pb	**Pb**	**23 48 07.3**	**-3.5**
EVR	**Evrytania**	**2.73**	**8**	*e*PB	**Pb**	**23 48 07.2**	**-3.6**
EVR	**Evrytania**	**2.73**	**8**	*e*Pb	**Pb**	**23 48 07.3**	**-3.5**
LKR	**Lokris**	**2.77**	**28**	*e*Pn	**Pn**	**23 48 06.1**	**-0.5**
LKR	**Lokris**	**2.77**	**28**	*e*PN	**Pn**	**23 48 06.1**	**-0.5**
LKR	**Lokris**	**2.77**	**28**	*e*Pn	**Pn**	**23 48 06.1**	**-0.5**
AGG	**Agios Georgios**	**2.92**	**15**	P	**Pn**	**23 48 09.4**	**+0.8**
AGG				S	**Sn**	**23 48 44.4**	**+0.3**
AGG	**Agios Georgios**	**2.92**	**15**	P	**Pn**	**23 48 09.4**	**+0.8**
AGG				S	**Sn**	**23 48 44.4**	**+0.3**
AGG	**Agios Georgios**	**2.92**	**15**	P	**Pn**	**23 48 09.4**	**+0.8**
AGG				S	**Sn**	**23 48 44.4**	**+0.3**
THL	**Klokotos Trika**	**3.39**	**9**	*e*PN	**Pn**	**23 48 15.4**	**+0.3**
THL	**Klokotos Trika**	**3.39**	**9**	*e*Pn	**Pn**	**23 48 15.4**	**+0.3**
NEO	**Neokhori**	**3.44**	**25**	*e*Pn	**Pn**	**23 48 16.0**	**+0.3**
NEO	**Neokhori**	**3.44**	**25**	*e*PN	**Pn**	**23 48 16.0**	**+0.3**
NEO	**Neokhori**	**3.44**	**25**	*e*Pn	**Pn**	**23 48 16.0**	**+0.3**
APE	**Apeiranthos**	**3.48**	**74**	P	**Pn**	**23 48 15.9**	**-0.4**
APE	**Apeiranthos**	**3.48**	**74**	P	**Pn**	**23 48 15.9**	**-0.4**
XOR	**Xorichti**	**3.48**	**24**	P	**Pn**	**23 48 17.6**	**+1.3**
XOR	**Xorichti**	**3.48**	**24**	P	**Pn**	**23 48 16.5**	**+0.2**
XOR	**Xorichti**	**3.48**	**24**	P	**Pn**	**23 48 16.5**	**+0.2**
KZN	**Kozani**	**4.11**	**5**	P	**Pn**	**23 48 27.3**	**+2.4**
KZN	**Kozani**	**4.11**	**5**	P	**Pn**	**23 48 27.3**	**+2.4**
PAIG	**Paliouri**	**4.15**	**26**	P	**Pn**	**23 48 27.0**	**+1.5**
PAIG	**Paliouri**	**4.15**	**26**	P	**Pn**	**23 48 27.0**	**+1.5**
PLG	**Polygyros**	**4.48**	**21**	P	**Pn**	**23 48 30.6**	**+0.6**
PLG	**Polygyros**	**4.48**	**21**	P	**Pn**	**23 48 30.6**	**+0.6**
FNA	**Florina**	**4.57**	**0**	P	**Pn**	**23 48 30.9**	**-0.4**
FNA	**Florina**	**4.57**	**0**	P	**Pn**	**23 48 30.9**	**-0.4**
HORT	**Hortiatis**	**4.60**	**17**	P	**Pn**	**23 48 32.3**	**+0.7**
HORT	**Hortiatis**	**4.60**	**17**	P	**Pn**	**23 48 32.3**	**+0.7**
CEL	**Celeste**	**4.80**	**297**	P	**Pn**	**23 48 33.8**	**-0.7**
CEL	**Celeste**	**4.80**	**297**	P	**Pn**	**23 48 33.8**	**-0.7**
SOH	**Sokhos**	**4.87**	**18**	P	**Pn**	**23 48 35.5**	**+0.1**
SOH	**Sokhos**	**4.87**	**18**	P	**Pn**	**23 48 35.5**	**+0.1**
NVR	**Nevrokopi**	**5.50**	**20**	P	**Pn**	**23 48 44.2**	**+0.1**
NVR	**Nevrokopi**	**5.50**	**20**	P	**Pn**	**23 48 44.2**	**+0.1**
MMB	**Musomiste**	**5.69**	**18**	*i* P	**Pn**	**23 48 45.7**	**-0.9**
RZN	**Rozhen**	**6.07**	**25**	*i* P	**Pn**	**23 48 51.3**	**-0.6**
VTS	**Vitosha**	**6.54**	**12**	P	**Pn**	**23 48 56.5**	**-1.8**
BARS	**Barje**	**6.61**	**3**	↓*i*Pn	**Pn**	**23 48 57.9**	**-1.4**
STON	**Ston**	**7.22**	**338**	*e*Pn	**Pn**	**23 49 02.8**	**-5.0**
STON				Sn	**Sn**	**23 50 18.8**	**-11**

*ISCJB **08** 23:59:32.0±0.4,51°.48N±0°.02×16°.04E±0°.03,h0km,Error ellipse: s-maj=3.4km s-min=2.2km az=15.4*
*CSEM **08** 23:59:32.6±0.2,51°.56N×16°.05E,h2km,ML3.6/11,Error ellipse: s-maj=4.2km s-min=2.4km az=26.0*
*IPEC **08** 23:59:33.1±0.3,51°.58N×16°.03E,h2km±1km,ML2.8/4, Error ellipse: s-maj=1.6km s-min=0.8km az=17.0*
*BGR **08** 23:59:34.3±0.4,51°.46N×16°.03E,h1km,ML3.2,Error ellipse: s-maj=6.7km s-min=3.3km az=15.0*
*WAR **08** 23:59:34.3,51°.54N×16°.02E,ML2.9,Mining Induced*
*LDG **08** 23:59:34.3±0.4,51°.38N×16°.03E,h1km,Ml3.5/3,Error ellipse: s-maj=11.8km s-min=3.5km az=10.0,Suspected Mining induced.*
*NEIC **08** 23:59:34.3,51°.46N×16°.03E,h1km,ML3.2(SZGRF), ML3.1(PRU),After SZGRF.*
*PRU **08** 23:59:36.3,51°.46N×16°.06E,h0km*
*VIE **08** 23:59:36.4±0.6,51°.26N×16°.21E,h0km,mb2.6/6,ML3.0/6, Error ellipse: s-maj=3.4km s-min=2.7km az=175.0 58 km WNW of Wroclaw Suspected Mining induced.*
ISC 08 23:59:32.7±0.4,51°.55N±0°.02×16°.04E±0°.02,h0km,n102, σ1ˢ02/186,8C-7D,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.73**	**167**	*e*Pg	**Pg**	**23 59 47.2**	**+0.7**
KSP				*e*Sg	**Sg**	**23 59 56.9**	**+0.9**
KSP	**Ksiaz**	**0.73**	**167**	↓*i*Pg	**Pg**	**23 59 47.4**	**+0.8**
KSP				*e*Sg	**Sg**	**23 59 56.9**	**+0.9**
KSP				*e*		00 00 01.2	
KSP	**Ksiaz**	**0.73**	**167**	*i* Pg	**Pg**	**23 59 47.4**	**+0.8**
KSP				*e*Sg	**Sg**	**23 59 57.0**	**+1.0**
KSP	**Ksiaz**	**0.73**	**167**	Pg	**Pg**	**23 59 47.2**	**+0.6**
KSP				Sg	**Sg**	**23 59 56.9**	**+0.9**
UPC	**Upice**	**1.05**	**181**	*e*Pg	**Pg**	**23 59 53.2**	**+0.5**
UPC	**Upice**	**1.05**	**181**	*e*PG	**Pg**	**23 59 53.2**	**+0.5**
UPC	**Upice**	**1.05**	**181**	Pg	**Pg**	**23 59 53.2**	**+0.5**
UPC				*e*Sg	**Sg**	**00 00 07.9**	**+1.7**
	baz=0.6						
DPC	**Dobruska-Polom**	**1.22**	**171**	*e*Pn	**Pn**	**23 59 56.2**	**-0.7**
DPC				*e*Sg	**Sg**	**00 00 12.4**	**+0.7**
DPC	**Dobruska-Polom**	**1.22**	**171**	*e*PG	**Pg**	**23 59 56.1**	**+0.2**
DPC				*e*SG	**Sg**	**00 00 12.4**	**+0.7**
	comp=Z,117nm,0.4s						
DPC	**Dobruska-Polom**	**1.22**	**171**	Sg	**Sg**	**00 00 12.4**	**+0.7**
	comp=Z,117nm,0.4s						
DPC	**Dobruska-Polom**	**1.22**	**171**	Pg	**Pg**	**23 59 56.1**	**+0.2**
PVCC	**Panska Ves**	**1.38**	**223**	*e*Pg	**Pg**	**23 59 59.4**	**+0.3**
PVCC	**Panska Ves**	**1.38**	**223**	*e*PG	**Pg**	**23 59 59.4**	**+0.3**
PVCC	**Panska Ves**	**1.38**	**223**	Pg	**Pg**	**23 59 59.4**	**+0.3**
PVCC				*e*Sg	**Sg**	**00 00 18.0**	**+1.0**
	baz=41						
BRG	**Berggiesshubel**	**1.48**	**244**	*e*Pn	**Pn**	**00 00 01.2**	**+0.7**
BRG				*e*Sg	**Sg**	**00 00 21.1**	**+0.9**
BRG	**Berggiesshubel**	**1.48**	**244**	PN	**Pn**	**00 00 01.4**	**+0.9**
BRG				SG	**Sg**	**00 00 21.1**	**+0.9**
	comp=Z,319nm,0.5s						
BRG	**Berggiesshubel**	**1.48**	**244**	Sg	**Sg**	**00 00 21.1**	**+0.9**
BRG	**Berggiesshubel**	**1.48**	**244**	*e*Pn	**Pn**	**00 00 01.0**	**+0.5**
	baz=61						
RUE	**Ruedersdorf**	**1.68**	**305**	*e*Pn	**Pn**	**00 00 02.7**	**-0.5**
	baz=122						
PRU	**Pruhonice**	**1.83**	**212**	*e*Pn	**Pn**	**00 00 05.9**	**+0.6**
PRU				*e*Pg	**Pg**	**00 00 07.6**	**-0.1**
PRU				*e*Sg	**Sg**	**00 00 31.5**	**+0.1**
PRU	**Pruhonice**	**1.83**	**212**	*e*PN	**Pn**	**00 00 05.9**	**+0.6**
PRU				*e*PG	**Pg**	**00 00 07.6**	**-0.1**
PRU				*e*SG	**Sg**	**00 00 31.5**	**+0.1**
	comp=Z,84nm,0.3s						
PRU	**Pruhonice**	**1.83**	**212**	Pg	**Pg**	**00 00 07.6**	**-0.1**
PRU				Sg	**Sg**	**00 00 31.5**	**+0.1**
	comp=Z,84nm,0.3s						
PRU	**Pruhonice**	**1.83**	**212**	*e*Pn	**Pn**	**00 00 05.6**	**+0.3**
	baz=30						
GKP	**Gorka Klasztor**	**1.87**	**23**	*e*Pn	**Pn**	**00 00 12.4**	**+6.5**
GKP				*e*Pg	**Pg**	**00 00 14.8**	**+6.3**
GKP				*e*Sn	**Sn**	**00 00 36.2**	**+6.0**
GKP	**Gorka Klasztor**	**1.87**	**23**	*e*Pn	**Pn**	**00 00 12.4**	**+6.5**
GKP				*e*Pg	**Pg**	**00 00 14.8**	**+6.3**
GKP				*e*Sn	**Sn**	**00 00 36.2**	**+6.0**
CLL	**Collm**	**1.91**	**264**	*e*Pn	**Pn**	**00 00 06.2**	**-0.3**
CLL				*e*Pg	**Pg**	**00 00 09.0**	**-0.3**
CLL				*e*Sg	**Sg**	**00 00 34.2**	**+0.1**
CLL	**Collm**	**1.91**	**264**	*e*Pn	**Pn**	**00 00 06.0**	**-0.5**
CLL				*e*Pg	**Pg**	**00 00 09.0**	**-0.3**
CLL				*e*Sg	**Sg**	**00 00 34.0**	**-0.1**
CLL	**Collm**	**1.91**	**264**	*e*Pn	**Pn

CONA	Conrad Observa	3.63	182	⇑iPn		Pn	00 00 31.1	+1.1
	SNR=6.5							
CONA				⇓iSg		Sg	00 01 26.6	-2.5
	comp=Z,31nm,0.5s							
CONA	Conrad Observa	3.63	182	Pn		Pn	00 00 31.1	+1.1
	SNR=6.5							
BSD	Bornholm Skovb	3.63	350	iP		Pn	00 00 29.6	-0.5
BSD				eS		Sn	00 01 08.9	-4.7
MOA	Molln	3.88	198	⇑iPn		Pn	00 00 34.1	+0.7
	SNR=13							
MOA				⇓iSg		Sg	00 01 37.4	+0.1
	comp=Z,33nm,0.5s							
MOA	Molln	3.88	198	Pn		Pn	00 00 34.2	+0.7
	SNR=13							
MOA				Sg		Sg	00 01 37.4	+0.2
	comp=Z,33nm,0.5s							
STHS	Stebnicka Huta	3.95	121	ePN		Pn	00 00 34.7	+0.2
STHS				e			00 00 48.6	
STHS				e			00 01 42.8	
KECS	Kecovo	4.20	135	ePN		Pn	00 00 36.5	-1.4
ARSA	Arzberg	4.32	185	⇑iPn		Pn	00 00 39.5	0.0
ARSA				⇑iSg		Sg	00 01 49.5	-1.8
	comp=Z,18nm,0.6s							
ARSA	Arzberg	4.32	185	Pn		Pn	00 00 39.5	0.0
CRVS	Cervenica-Dubn	4.38	125	ePN		Pn	00 00 41.6	+1.3
CRVS				eSG		Sg	00 01 54.5	+1.3
PSZ	Piszkesteto	4.41	144	⇑iP		Pn	00 00 41.7	+0.9
KWP	Kalwaria Pacla	4.67	112	⇓iP		Pn	00 00 44.4	+0.1
KBA	Koelnbreinsper	4.81	202	⇓iPn		Pn	00 00 47.1	+0.9
KBA				⇑iSg		Sg	00 02 08.3	+1.2
	comp=Z,13nm,0.5s							
KBA	Koelnbreinsper	4.81	202	Pn		Pn	00 00 47.1	+0.8
KBA				Sg		Sg	00 02 08.3	+1.2
	comp=Z,13nm,0.5s							
PKSM	Moragy	5.61	161	⇓iP		Pn	00 00 57.9	+0.6
CDF	Champ du Feu	6.46	244	ePn		Pn	00 01 07.4	-1.6
CDF				eSg		Sg	00 02 53.2	-6.9
	comp=Z,14nm,0.7s							
CDF	Champ du Feu	6.46	244	ePn		Pn	00 01 07.4	-1.6
HINF	Hinteralfeld	7.03	241	ePn		Pn	00 01 14.9	-1.9
HINF				eSg		Sg	00 03 11.4	-7.0
	comp=Z,14nm,0.6s							
HINF	Hinteralfeld	7.03	241	ePn		Pn	00 01 14.9	-1.9
BURAR	Bucovina Array	7.15	120	⇑iP		Pn	00 01 18.7	+0.3
HAU	Haudompre	7.21	244	ePn		Pn	00 01 16.8	-2.3
HAU				eSg		Sg	00 03 15.8	-8.1
	comp=Z,15nm,0.9s							
LOR	Lormes	9.02	246	ePn		Pn	00 01 42.9	-1.1
	baz=70							
LOR	Lormes	9.02	246	ePn		Pn	00 01 42.9	-1.1
BGF	Bois d'Agland	9.99	245	ePn		Pn	00 01 55.8	-1.5
BGF	Bois d'Agland	9.99	245	ePn		Pn	00 01 55.8	-1.5

*IDC **09** 00:09:15.5±0.7, 31°.16N×103°.60E, h0km, mb4.0/14, mb1 4.2/15, mb1mx4.0/25, mbtmp4.0/15, ML3.8/1, MS2.8/3, Ms1 2.8/3, ms1mx2.4/26, Error ellipse: s-maj=32.8km s-min=13.7km az=52.0*
*BJI **09** 00:09:17.9, 31°.24N×103°.80E, h15km, mB4.4/5, mb4.3/12, ML4.0/20, Ms3.7/10, Ms7 3.5/9*
*NEIC **09** 00:09:17.2±2.9, 31°.16N×103°.59E, h12km±19km, mb3.8/6, Error ellipse: s-maj=7.7km s-min=5.6km az=63.0*
ISC 09 00:09:17.2±0.8, 31°.24N±0°.03×103°.62E±0°.04, h9km±5km, n48, σ0s93/61, mb4.0/16, MS2.8/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.35	160	Pg	Pg	00 09 24.4	+0.3
CD2				Sg	Sg	00 09 30.2	+1.5
CD2				smax			
	comp=N,23μm,0.5s						
LZH	Lanzhou	4.84	2	Pn	Pn	00 10 35.5	+5.3
LZH				Pg	Pg	00 10 49.6	-0.3
LZH				Sn	Sn	00 11 30.4	+4.1
LZH				Sg	Sg	00 11 52.1	-0.5
LZH				smax			
	comp=N,180nm,1.0s						
LZH				smax			
	comp=E,170nm,1.1s						
LZH				LR	LR		
	comp=E,800nm,7.2s						
LZH				LR	LR		
	comp=Z,810nm,9.3s						
ENH	Enshi	5.14	99	ePn	Pn	00 10 34.2	-0.1
	comp=Z,80nm,0.6s						
ENH				ePg	Pg	00 10 53.2	-2.5
ENH				eSn	Sn	00 11 33.0	-0.8
XAN	Xi'an	5.27	57	Pn	Pn	00 10 35.0	-1.1
XAN				Pg	Pg	00 10 51.3	-6.9
XAN				Sn	Sb	00 11 47.5	-5.4
XAN				Sg	Sg	00 12 07.1	+0.6
XAN				smax			
	comp=N,160nm,1.1s						
XAN				smax			
	comp=E,88nm,1.1s						
XAN				LR	LR		
	comp=N,300nm,7.5s						
XAN				LR	LR		
	comp=E,60nm,7.7s						
XAN	Xi'an	5.27	57	Pn	Pn	00 10 35.0	-1.1
XAN				Pg	Pg	00 10 51.3	-6.9
XAN				Sg	Sg	00 12 07.1	+0.6
XAN				smax			
	comp=N,160nm,1.1s						
XAN				smax			
	comp=E,88nm,1.1s						
XAN				LR	LR		
	comp=N,300nm,7.5s						
XAN				LR	LR		
	comp=E,60nm,7.7s						
KMI	Kunming	6.14	187	Pn	Pn	00 10 49.5	+1.4
KMI				Sn	Sn	00 12 00.1	+1.6
KMI				smax			
	comp=N,47nm,1.1s						
KMI				smax			
	comp=E,40nm,1.4s						
KMI				LR	LR		
	comp=N,530nm,9.8s						
KMI				LR	LR		
	comp=E,670nm,10.3s						
KMI				LR	LR		
	comp=Z,280nm,9.8s						
GTA	Gaotai	8.72	340	eP	Pn	00 11 26.4	+2.9
GTA				pP		00 11 29.5	
GTA				sP		00 11 32.9	
GTA				S	Sn	00 13 06.5	+4.5
GTA				sS		00 13 12.2	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				LR	LR		
	comp=N,190nm,11.9s						
GTA				LR	LR		
	comp=E,200nm,8.3s						
GTA				LR	LR		
	comp=Z,190nm,6.5s						
HHC	Hu-ho-hao-te	11.54	32	eP	Pn	00 12 02.5	+0.4
HHC				PP		00 12 11.8	
HHC				S	Sn	00 14 12.1	+1.1
HHC				SS		00 14 25.9	
HHC				PcS	PcS	00 21 27.2	-0.2
HHC				pmax	pmax		
	comp=Z,7.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,68nm,4.3s						
HHC				LR	LR		
	comp=N,160nm,8.4s						
HHC				LR	LR		
	comp=E,120nm,8.4s						
HHC				LR	LR		
	comp=Z,180nm,8.5s						
CHTO	Chiang Mai	13.07	200	ePn	Pn	00 12 21.2	-2.0
TAPN	Taplejung	14.41	258	eP	Pn	00 12 40.4	-1.0
KKN	Kakani	16.33	262	eP	Pn	00 13 06.3	-0.4
DMN	Daman	16.53	262	eP	Pn	00 13 08.5	-0.8
	comp=Z,28nm,0.7s						
SONM	Songino Array	16.71	7	Pn	Pn	00 13 11.2	-0.2
	comp=Z,0.4nm,0.3s,baz=195,slow=11,SNR=4.3						
ULN	Ulaanbaatar	16.81	8	ePn	Pn	00 13 15.1	+2.4
	comp=Z,3.4nm,0.9s						
GKN	Gorkha	16.82	264	eP	Pn	00 13 14.3	+1.4
	comp=Z,36nm,0.6s						
KOLN	Koldanda	17.77	264	eP	Pn	00 13 21.7	-3.1
	comp=Z,14nm,0.7s						
TLY	Talaya	20.43	0	eP	P	00 13 54.8	+0.3
	comp=Z,1.6nm,0.6s						
KSRS	Korea Array	20.97	66	P	P	00 14 01.0	+0.4
	comp=Z,4.2nm,0.6s,baz=261,slow=10,SNR=32						
KSRS				LR	LR	00 23 33.0	
	comp=Z,13nm,19.2s,MS2.3,baz=255,slow=41						
HIA	Hailar	21.73	29	P	P	00 14 08.3	-0.3
MK31	Makanchi Array	22.61	319	eP	P	00 14 17.5	-0.5
MKAR	Makanchi Array	22.61	319	P	P	00 14 19.1	+1.1
	comp=Z,2.4nm,0.7s,mb3.8,baz=122,slow=12,SNR=19						
EKS2	Erkin-Say	26.30	304	eP	P	00 14 52.9	-0.2
ZAA0	Zalesovo Array	26.42	335	eP	P	00 14 54.0	0.0
ZALV	Zalesovo Beam	26.42	335	P	P	00 14 54.9	+0.9
	comp=Z,5.0nm,0.9s,mb4.0,baz=133,slow=8.7,SNR=19						
KURK	Kurchatov	26.89	324	P	P	00 14 59.2	+0.9
	comp=Z,3.5nm,0.8s,mb4.0,baz=126,slow=9.8,SNR=29						
KURK	Kurchatov	26.89	324	eP	P	00 14 58.1	-0.1
	comp=Z,2.8nm,0.8s,mb3.8						
BVAR	Borovoye Array	32.43	322	P	P	00 15 47.3	-0.1
	comp=Z,1.0nm,0.5s,mb3.9,baz=260,slow=41,SNR=4.7						
BVAR				PcP	PcP	00 18 34.1	-0.3
	comp=Z,1.2nm,0.7s,baz=157,slow=5.6,SNR=6.4						
ABKAR	Akbulak array	37.27	312	eP	P	00 16 29.2	0.0
	comp=Z,0.6nm,0.5s,mb3.7						
AKTK	Aktyubinsk	38.74	313	P	P	00 16 41.5	-0.1
AKTK				LR	LR	00 33 02.5	
AKTO	Aktyubinsk	38.74	313	P	P	00 16 41.5	-0.1
	comp=Z,0.9nm,0.5s,mb3.8,baz=76,slow=13,SNR=6.1						
AKTO				LR	LR	00 33 02.5	
	comp=Z,24nm,21.7s,MS3.0,baz=122,slow=37						
ARU	Arti	40.07	322	eP	P	00 16 52.8	+0.2
	comp=Z,2.6nm,0.6s,mb4.1						
PETK	Petropavlovsk-	44.38	44	LR	LR	00 38 25.1	
	comp=Z,17nm,20.1s,MS3.0,baz=76,slow=39						
GNI	Garni	47.87	298	P	P	00 17 55.5	+0.1
KIV	Kislovodsk	48.89	303	eP	P	00 18 02.7	-0.6
BRTR	Keskin Array B	56.31	299	P	P	00 18 58.2	-0.1
	comp=Z,0.5nm,0.7s,mb3.6,baz=104,slow=7.9,SNR=5.1						
ARCES	ARCESS Array B	56.97	336	P	P	00 19 02.9	+0.4
	comp=Z,2.3nm,0.8s,mb4.2,baz=76,slow=7.6,SNR=8.0						
ARCES				PcP	PcP	00 19 56.7	-0.9
	comp=Z,0.9nm,0.4s,baz=96,slow=4.9,SNR=12						
ARCES	ARCESS Array B	56.97	336	P	P	00 19 02.9	+0.4
ARCES				PcP	PcP	00 19 56.7	-0.9
FINES	FINESS Array B	57.23	326	P	P	00 19 04.8	+0.4
	comp=Z,1.5nm,0.8s,mb4.1,baz=104,slow=7.0,SNR=6.8						
WRA	Warramunga Arr	58.82	146	P	P	00 19 15.4	-0.6
	comp=Z,2.7nm,0.4s,mb4.6,baz=328,slow=9.0,SNR=15						
KWP	Kalwaria Pacla	61.31	313	P	P	00 19 32.3	-0.6
ASAR	Alice Springs	61.82	148	P	P	00 19 36.5	0.0
	comp=Z,1.2nm,0.5s,mb4.3,baz=343,slow=7.0,SNR=13						
NOA	NORSAR Array B	64.32	327	P	P	00 19 51.8	-1.0
	comp=Z,0.9nm,0.7s,mb3.9,baz=72,slow=6.7,SNR=3.4						
MORC	Moravsky Berou	64.48	314	P	P	00 19 53.7	-0.3
PPLA	Purkeypile	68.74	28	eP	P	00 20 21.1	+0.1
	comp=Z,3.2nm,0.5s,mb4.5						
STKA	Stephens Creek	72.35	147	P	P	00 20 42.4	-0.9
	comp=Z,2.2nm,0.8s,mb4.2,baz=333,slow=4.5,SNR=4.5						
STKA	Stephens Creek	72.35	147	P	P	00 20 42.4	-0.9
YKA	Yellowknife Ar	81.69	17	P	P	00 21 35.1	-0.4
	comp=Z,0.5nm,0.5s,mb3.7,baz=233,slow=18,SNR=4.0						
YKA	Yellowknife Ar	81.69	17	P	P	00 21 35.1	-0.4

*ATH **09** 00:09:31.5, 36°.17N×21°.73E, h26km±3km, MD3.8/14*
*CSEM **09** 00:09:31.7±0.9, 36°.20N×21°.63E, h20km, ML3.6/3, Error ellipse: s-maj=22.9km s-min=9.3km az=56.0*
*NEIC **09** 00:09:31.5, 36°.17N×21°.73E, h26km, MD3.8(ATH), ML3.6(THE), After ATH.*
*ISCJB **09** 00:09:33.8±1.2, 36°.29N±0°.05×21°.84E±0°.09, h27km±7km, Error ellipse: s-maj=13.6km s-min=6.5km az=151.2*
*THE **09** 00:09:35.4, 36°.33N×21°.89E, h32km±32km, ML3.6/3, Error ellipse: s-maj=32.4km s-min=1.1km az=264.0*
ISC 09 00:09:32.6±1.1, 36°.25N±0°.05×21°.67E±0°.08, h28km±7km, n49, σ1s44/66, 1D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.64	5	ePN	Pn	00 09 45.8	0.0
PYL				eSN	Sn	00 09 56.1	+1.0
PYL	PYLOS	0.64	5	P	Pb	00 09 46.0	+0.7
PYL				S	Sb	00 09 55.1	+1.2
PYL	PYLOS	0.64	5	P	Pb	00 09 46.0	+0.7
PYL				S	Sb	00 09 55.1	+1.2
PYL				eSn	Sn	00 09 56.1	+1.0
ITM	Ithomi	0.95	13	ePn	Pn	00 09 50.6	+0.6
ITM	Ithomi	0.95	13	ePN	Pn	00 09 50.6	+0.6
ITM	Ithomi	0.95	13	P	Pn	00 09 50.6	+0.6
ITM				S	Sn	00 10 02.6	0.0
ITM	Ithomi	0.95	13	P	Pn	00 09 50.6	+0.6
ITM				S	Sn	00 10 02.6	0.0
VLI	Veliai	1.12	65	ePn	Pn	00 09 53.8	+1.4
VLI				eSn	Sn	00 10 08.5	+1.5
VLI	Veliai	1.12	65	ePN	Pn	00 09 53.8	+1.4
VLI				eSN	Sn	00 10 08.5	+1.5
VLI	Veliai	1.12	65	ePn	Pn	00 09 53.8	+1.4
VLI				eSn	Sn	00 10 08.5	+1.5
VLX	Vlachokerasia	1.25	27	ePN	Pn	00 09 56.0	+1.8
VLX	Vlachokerasia	1.25	27	P	Pn	00 09 54.6	+0.4
VLX				S	Sn	00 10 08.0	-2.1
VLX	Vlachokerasia	1.25	27	P	Pn	00 09 54.6	+0.4
VLX	Vlachokerasia	1.25	27	ePn	Pn	00 09 56.0	+1.8
GUR	Goura	1.76	18	ePN	Pn	00 10 03.4	+2.2
GUR	Goura	1.76	18	P	Pn	00 10 01.9	+0.7
GUR				S	Sn	00 10 21.7	-1.0
GUR	Goura	1.76	18	P	Pn	00 10 01.9	+0.7
GUR	Goura	1.76	18	ePn	Pn	00 10 03.4	+2.2
GUR				S	Sn	00 10 21.7	-1.0
DID	Didima	1.77	45	ePN	Pn	00 10 02.9	+1.5
DID	Didima	1.77	45	P	Pn	00 10 01.3	-0.1
DID				S	Sn	00 10 20.9	-2.1
DID	Didima	1.77	45	P	Pn	00 10 01.3	-0.1
DID	Didima	1.77	45	ePn	Pn	00 10 02.9	+1.5
RLS	Riolos of Patr	1.81	355	ePb	Pb	00 10 03.9	-1.1
RLS	Riolos of Patr	1.81	355	ePB	Pb	00 10 03.9	-1.1
RLS	Riolos of Patr	1.81	355	ePb	Pb	00 10 03.9	-1.1
KARN	Karanos	2.02	114	P	Pn	00 10 04.9	+0.2
KARN				S	Sn	00 10 28.1	-0.9
KARN	Karanos	2.02	114	P	Pn	00 10 04.9	+0.2
KARN				S	Sn	00 10 28.1	-0.9
LTK	Loutraki	2.05	30	ePB	Pb	00 10 07.5	-1.6
LTK	Loutraki	2.05	30	ePb	Pb	00 10 07.5	-1.6
EFP	Efpalio	2.18	5	ePN	Pn	00 10 09.5	+2.6
EFP	Efpalio	2.18	5	ePn	Pn	00 10 09.5	+2.6
VAM	Vamos	2.23	112	ePn	Pn	00 10 07.5	-0.1
VAM	Vamos	2.23	112	ePN	Pn	00 10 07.5	-0.1
VAM	Vamos	2.23	112	ePn	Pn	00 10 07.5	-0.1
VLY	Voula,Athens	2.33	46	ePb	Pb	00 10 12.3	-1.6
VLY	Voula,Athens	2.33	46	ePB	Pb	00 10 12.3	-1.6
VLY	Voula,Athens	2.33	46	ePb	Pb	00 10 12.3	-1.6
EVR	Evrytania	2.66	2	ePn	Pn	00 10 16.4	+2.8
EVR	Evrytania	2.66	2	ePN	Pn	00 10 16.4	+2.8
EVR	Evrytania	2.66	2	ePn	Pn	00 10 16.4	+2.8
AGG	Agios Georgios	2.81	11	ePn	Pn	00 10 19.0	+3.3
AGG	Agios Georgios	2.81	11	ePN	Pn	00 10 19.0	+3.3
AGG	Agios Georgios	2.81	11	ePn	Pn	00 10 19.0	+3.3
THL	Klokotos Trika	3.32	5	ePN	Pn	00 10 23.8	+1.2
THL	Klokotos Trika	3.32	5	ePn	Pn	00 10 23.8	+1.2
BARS	Barje	6.55	1	ePn	Pn	00 11 07.2	+0.2
STON	Ston	7.28	336	⇓iPn	Pn	00 11 13.8	-3.3
STON				Sn	Sn	00 12 29.8	-9.0
DIVS	Divibare	7.94	351	ePn	Pn	00 11 24.0	-2.0
NVLJ	Novalja	9.78	330	ePn	Pn	00 11 48.9	-2.4
NVLJ				Sn	Sn	00 13 31.7	-8.3

*CSEM **09** 00:12:09.2, 36°.28N×22°.01E, h5km, MD3.5, After ATH*
*NEIC **09** 00:12:09.2, 36°.28N×22°.01E, h5km, MD3.5(ATH), After ATH.*
ATH 09 00:12:09.2, 36°.28N×22°.01E, h5km, MD3.5/7, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.65	341	ePG	Pg	00 12 21.4	-0.3
PYL				eSB	Sb	00 12 31.1	-1.3
PYL	PYLOS	0.65	341	ePg	Pg	00 12 21.4	-0.3
PYL				eSb	Sb	00 12 31.1	-1.3
KYTH	Kithira	0.83	90	ePb	Pb	00 12 25.1	-1.0
KYTH	Kithira	0.83	90	ePB	Pb	00 12 25.1	-1.0
KYTH	Kithira	0.83	90	ePb	Pb	00 12 25.1	-1.0
VLI	Veliai	0.87	59	ePb	Pb	00 12 26.3	-0.4
VLI				eSb	Sb	00 12 38.2	-0.4
VLI	Veliai	0.87	59	ePB	Pb	00 12 26.3	-0.4
VLI				eSB	Sb	00 12 38.2	-0.4
VLI	Veliai	0.87	59	ePb	Pb	00 12 26.3	-0.4
VLI				eSb	Sb	00 12 38.2	-0.4
ITM	Ithomi	0.90	356	ePb	Pb	00 12 26.3	-1.0
ITM				eSb	Sb	00 12 39.3	-0.3
ITM	Ithomi	0.90	356	ePB	Pb	00 12 26.3	-1.0
ITM				eSB	Sb	00 12 39.3	-0.3
ITM	Ithomi	0.90	356	ePb	Pb	00 12 26.3	-1.0
ITM				eSb	Sb	00 12 39.3	-0.3
DID	Didima	1.57	38	ePB	Pb	00 12 38.9	+0.2
DID	Didima	1.57	38	ePb	Pb	00 12 38.9	+0.2
GUR	Goura	1.67	9	ePB	Pb	00 12 41.0	+0.5
GUR	Goura	1.67	9	ePb	Pb	00 12 41.0	+0.5
RLS	Riolos of Patr	1.83	346	ePn	Pn	00 12 44.7	+3.5
RLS	Riolos of Patr	1.83	346	ePN	Pn	00 12 44.7	+3.5
RLS	Riolos of Patr	1.83	346	ePn	Pn	00 12 44.7	+3.5
EFP	Efpalio	2.15	358	ePG	Pg	00 12 49.1	-1.2
EFP	Efpalio	2.15	358	ePg	Pg	00 12 49.1	-1.2

*ATH **09** 00:20:36.8, 36°.33N×21°.76E, h16km±2km, MD3.5/9*
*CSEM **09** 00:20:37.6±0.7, 36°.34N×21°.86E, h9km, ML3.2/4, Error ellipse: s-maj=15.3km s-min=7.4km az=57.0*
*THE **09** 00:20:38.5, 36°.39N×21°.83E, h9km, ML3.2/4, Error ellipse: s-maj=2.1km s-min=1.1km az=270.0*
ISC 09 00:20:37.3±1.6, 36°.34N±0°.06×21°.8E±0°.1, h10km±7km, n28, σ0s83/45, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.56	354	ePN	Pg	00 20 47.6	-0.7
PYL				eSN	Sg	00 20 55.8	+0.1
PYL	PYLOS	0.56	354	P	Pg	00 20 47.6	-0.7
PYL				S	Sg	00 20 56.2	+0.5
PYL	PYLOS	0.56	354	P	Pg	00 20 47.6	-0.7
PYL				S	Sg	00 20 56.2	+0.5
ITM	Ithomi	0.85	6	ePN	Pg	00 20 53.2	-0.5
ITM				eSN	Sn	00 21 05.7	-2.1
ITM	Ithomi	0.85	6	P	Pg	00 20 53.2	-0.5
ITM				S	Sg	00 21 04.9	+0.2
ITM	Ithomi	0.85	6	P	Pg	00 20 53.2	-0.5
ITM				S	Sg	00 21 04.9	+0.2
ITM				eSn	Sn	00 21 05.7	-2.1
VLI	Veliai	0.98	67	ePN	Pn	00 20 56.1	-1.0
VLI	Veliai	0.98	67	ePn	Pn	00 20 56.1	-1.0
KYTH	Kithira	0.99	93	ePN	Pn	00 20 56.8	-0.4
KYTH	Kithira	0.99	93	ePn	Pn	00 20 56.8	-0.4
VLX	Vlachokerasia	1.13	23	ePB	Pb	00 20 57.8	-1.1
VLX				eSN	Sn	00 21 14.6	-0.1
VLX	Vlachokerasia	1.13	23	P	Pb	00 20 58.4	-0.5
VLX				S	Sb	00 21 14.3	+0.7
VLX	Vlachokerasia	1.13	23	ePb	Pb	00 20 57.8	-1.1
VLX	Vlachokerasia	1.13	23	P	Pb	00 20 58.4	-0.5
VLX				S	Sb	00 21 14.3	+0.7
VLX				eSn	Sn	00 21 14.6	-0.1
DID	Didima	1.63	44	ePN	Pn	00 21 07.3	+1.2
DID	Didima	1.63	44	P	Pn	00 21 05.8	-0.3
DID				S	Sn	00 21 27.7	+0.6
DID	Didima	1.63	44	P	Pn	00 21 05.8	-0.3
DID	Didima	1.63	44	ePn	Pn	00 21 07.3	+1.2
DID				S	Sn	00 21 27.7	+0.6
GUR	Goura	1.65	15	ePN	Pn	00 21 07.3	+0.9
GUR	Goura	1.65	15	P	Pn	00 21 06.6	+0.2
GUR				S	Sn	00 21 27.4	-0.3
GUR	Goura	1.65	15	P	Pn	00 21 06.6	+0.2
GUR	Goura	1.65	15	ePn	Pn	00 21 07.3	+0.9
GUR				S	Sn	00 21 27.4	-0.3
LAKA	Lakka	1.91	4	P	Pn	00 21 10.2	+0.3
LAKA				S	Sn	00 21 33.8	-0.1
LAKA	Lakka	1.91	4	P	Pn	00 21 10.2	+0.3
LAKA				S	Sn	00 21 33.8	-0.1
LTK	Loutraki	1.92	28	ePN	Pn	00 21 11.3	+1.2
LTK	Loutraki	1.92	28	ePn	Pn	00 21 11.3	+1.2
EFP	Efpalio	2.09	2	ePN	Pn	00 21 13.8	+1.4
EFP	Efpalio	2.09	2	ePn	Pn	00 21 13.8	+1.4

WEL 09 00:59:37.2±0.3, 37°.29S×177°.06E, h142km±2km, ML3.6/8, Error ellipse: s-maj=4.2km s-min=3.1km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	0.97	178	PN	Pn	01 00 00.7	-0.2
URZ				SN	Sn	01 00 18.9	0.0
MXZ	Matakaoa Point	1.03	106	PN	Pn	01 00 01.5	+0.1
MXZ				SN	Sn	01 00 20.2	+0.4
MWZ	Matawai	1.10	161	PN	Pn	01 00 02.2	+0.1
MWZ				SN	Sn	01 00 21.5	+0.3
PUZ	Puketiti	1.23	130	PN	Pn	01 00 03.1	-0.2
PUZ				SN	Sn	01 00 22.2	-1.0
CNGZ	Carnagh Statio	1.50	143	PN	Pn	01 00 06.4	+0.3
KNZ	Kokohu	1.79	165	PN	Pn	01 00 09.1	-0.3
BKZ	Black Stump Fm	1.93	193	PN	Pn	01 00 10.6	-0.3
BKZ				SN	Sn	01 00 35.9	-1.0
MHGZ	Mahia Peninsul	1.98	161	PN	Pn	01 00 11.6	+0.1
WNVZ	Wahianoa	2.34	209	PN	Pn	01 00 16.2	+0.4
MOVZ	Moawhango	2.35	206	PN	Pn	01 00 15.5	-0.5
PNHZ	Pukenui	2.71	194	PN	Pn	01 00 19.3	-1.2
TSZ	Takapari Road	2.90	197	PN	Pn	01 00 21.0	-1.8
PRHZ	Porangahau	2.99	186	PN	Pn	01 00 22.6	-1.5
DVHZ	Dannevirke	3.08	193	PN	Pn	01 00 23.2	-2.0
POWZ	Post Office Ro	3.26	198	PN	Pn	01 00 25.4	-2.1
BFZ	Birch Farm	3.44	190	PN	Pn	01 00 27.6	-2.3
MRZ	Mangatainoka R	3.56	198	PN	Pn	01 00 29.0	-2.4
TIWZ	Tintock	3.60	194	PN	Pn	01 00 29.6	-2.3
HOWZ	Holdsworth Sta	3.80	198	PN	Pn	01 00 31.7	-2.8
OGWZ	Otaki Gorge	3.82	202	PN	Pn	01 00 32.2	-2.6
TMWZ	Te Maipa	3.92	193	PN	Pn	01 00 33.2	-2.9
MTW	Mount Morrison	4.05	197	PN	Pn	01 00 34.4	-3.4
CAW	Cannon Point	4.11	202	PN	Pn	01 00 35.5	-3.1
P

GLHS	**Glhisar (BURDU**	**0.25**	**61**	*e*Pg	**Pg**	**02 07 13.4**	**-1.1**
GLHS				*e*Sg	**Sg**	**02 07 17.6**	**-0.4**
GOLH	**Golhisar**	**0.34**	**53**	*i* P	**Pg**	**02 07 15.2**	**-0.9**
GOLH				*i* S	**Sg**	**02 07 22.1**	**+1.5**
GOLH	**Golhisar**	**0.34**	**53**	*i* P	**Pg**	**02 07 15.1**	**-0.9**
GOLH				*i* S	**Sg**	**02 07 22.1**	**+1.5**
TURN	**Turunc**	**0.52**	**252**	*i* P	**Pg**	**02 07 22.1**	**+2.7**
TURN				*i* S	**Sg**	**02 07 34.3**	**+8.0**
TURN	**Turunc**	**0.52**	**252**	*i* P	**Pg**	**02 07 22.1**	**+2.7**
ELL	**Elmali**	**0.62**	**117**	*e*PG	**Pg**	**02 07 20.8**	**-0.6**
ELL				*e*SG	**Sg**	**02 07 30.4**	**+0.9**
ELL	**Elmali**	**0.62**	**117**	*e*Pg	**Pg**	**02 07 20.8**	**-0.5**
ELL				*e*Sg	**Sg**	**02 07 30.4**	**+0.9**
DNZL	**Cakiroluk**	**0.67**	**348**	*i* P	**Pg**	**02 07 22.5**	**+0.3**
DNZL				*i* S	**Sg**	**02 07 36.3**	**+5.3**
DNZL	**Cakiroluk**	**0.67**	**348**	*i* P	**Pg**	**02 07 22.5**	**+0.3**
YER	**Yerkesik**	**0.76**	**278**	*e*PG	**Pg**	**02 07 22.4**	**-1.4**
YER	**Yerkesik**	**0.76**	**278**	*e*Pg	**Pg**	**02 07 22.4**	**-1.5**
AKAS	**Kas**	**0.86**	**159**	*i* P	**Pg**	**02 07 24.6**	**-1.2**
AKAS				*i* S	**Sg**	**02 07 38.9**	**+2.0**
AKAS	**Kas**	**0.86**	**159**	*i* P	**Pg**	**02 07 24.6**	**-1.2**
AKAS				*i* S	**Sg**	**02 07 38.9**	**+1.9**
ANTB	**Antalya**	**1.16**	**96**	*e*PN	**Pn**	**02 07 30.8**	**-0.4**
ANTB	**Antalya**	**1.16**	**96**	*e*Pn	**Pn**	**02 07 30.8**	**-0.4**
BCK	**Bucak**	**1.17**	**68**	*e*PN	**Pn**	**02 07 30.7**	**-0.7**
BCK	**Bucak**	**1.17**	**68**	*e*Pn	**Pn**	**02 07 30.7**	**-0.7**
MLSB	**Milas**	**1.18**	**283**	*e*PN	**Pn**	**02 07 30.2**	**-1.3**
MLSB	**Milas**	**1.18**	**283**	*e*Pn	**Pn**	**02 07 30.2**	**-1.4**
AYDN	**Tasoluk**	**1.24**	**301**	*i* P	**Pn**	**02 07 32.1**	**-0.3**
AYDN				*i* S	**Sb**	**02 07 50.3**	**+1.8**
AYDN	**Tasoluk**	**1.24**	**301**	*i* P	**Pn**	**02 07 32.1**	**-0.2**
AYDN				*i* S	**Sb**	**02 07 50.3**	**+1.8**
KHAL	**Karahalli**	**1.35**	**9**	*i* P	**Pn**	**02 07 34.0**	**+0.1**
KHAL				*i* S	**Sb**	**02 07 54.8**	**+3.1**
KHAL	**Karahalli**	**1.35**	**9**	*i* P	**Pn**	**02 07 34.0**	**+0.1**
KHAL				*i* S	**Sb**	**02 07 54.8**	**+3.1**
DAT	**Datca**	**1.35**	**257**	*e*PN	**Pn**	**02 07 33.3**	**-0.6**
DAT	**Datca**	**1.35**	**257**	*e*Pn	**Pn**	**02 07 33.3**	**-0.6**
BDRM	**Kayabasi**	**1.42**	**272**	*i* P	**Pn**	**02 07 34.9**	**0.0**
BDRM				*i* S	**Sn**	**02 07 54.2**	**+0.8**
BDRM	**Kayabasi**	**1.42**	**272**	*i* P	**Pn**	**02 07 34.9**	**0.0**
BDRM				*i* S	**Sn**	**02 07 54.2**	**+0.7**
SUTC	**Sutluce-Ispart**	**1.49**	**72**	*e*PN	**Pn**	**02 07 35.3**	**-0.5**
SUTC	**Sutluce-Ispart**	**1.49**	**72**	*e*Pn	**Pn**	**02 07 35.3**	**-0.5**
BODT	**Bodrum**	**1.53**	**272**	*e*PN	**Pn**	**02 07 35.6**	**-0.7**
BODT	**Bodrum**	**1.53**	**272**	*e*Pn	**Pn**	**02 07 35.6**	**-0.7**
KULA	**Kula-Manisa**	**1.54**	**343**	*e*PN	**Pn**	**02 07 35.7**	**-0.9**
KULA	**Kula-Manisa**	**1.54**	**343**	*e*Pn	**Pn**	**02 07 35.7**	**-0.8**
SHUT	**Suhut-Afyon**	**1.85**	**34**	*e*PN	**Pn**	**02 07 40.3**	**-0.4**
SHUT	**Suhut-Afyon**	**1.85**	**34**	*e*Pn	**Pn**	**02 07 40.3**	**-0.4**
HDMB	**Hadim**	**2.62**	**91**	*e*PN	**Pn**	**02 07 51.8**	**+0.5**
HDMB	**Hadim**	**2.62**	**91**	*e*Pn	**Pn**	**02 07 51.8**	**+0.5**
KONT	**Konya--Tatoy**	**2.66**	**69**	*e*PN	**Pn**	**02 07 52.4**	**+0.5**
KONT	**Konya--Tatoy**	**2.66**	**69**	*e*Pn	**Pn**	**02 07 52.4**	**+0.5**
LADK	**Ladik-KONYA**	**2.75**	**64**	*e*PN	**Pn**	**02 07 53.7**	**+0.5**
LADK	**Ladik-KONYA**	**2.75**	**64**	*e*Pn	**Pn**	**02 07 53.7**	**+0.5**

IDC 09 02:08:37.5±5.4, 49°.91S×111°.92E, h0km, mb3.8/2, mb1 4.1/2, mb1mx3.8/13, mbtmp3.8/2, MS3.6/2, Ms1 3.5/2, ms1mx2.9/19, Error ellipse: s-maj=269.5km s-min=47.8km az=112.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAW	**Mawson**	**29.89**	**216**	LR	LR	02 24 30.2	
	comp=Z,68nm,19.4s,baz=252,slow=32						
ASAR	**Alice Springs**	**31.33**	**41**	P	P	02 14 59.2	-0.2
	0.5nm,0.7s,baz=210,slow=9.1,SNR=5.0						
WRA	**Warramunga Arr**	**34.82**	**39**	P	P	02 15 30.2	+0.3
	0.8nm,0.6s,baz=206,slow=8.6,SNR=5.2						
BOSA	**Boshof**	**66.64**	**253**	LR	LR	02 41 28.7	
	comp=Z,75nm,21.9s,baz=9.4,slow=30						
TXAR	**Lajitas Array**	**146.20**	**114**	PKPbc	PKPbc	02 28 18.8	-0.6
	0.3nm,0.8s,baz=199,slow=6.5,SNR=4.8						
PDAR	**Pinedale Array**	**150.79**	**88**	PKPbc	PKPbc	02 28 31.0	0.0
	0.4nm,0.9s,baz=146,slow=2.9,SNR=4.0						

*IDC **09** 02:10:29.6±0.9, 5°.10N×125°.47E, h0km, mb4.1/12, mb1 4.2/12, mb1mx4.0/23, mbtmp4.1/12, MS3.4/8, Ms1 3.4/8, ms1mx3.1/35, Error ellipse: s-maj=66.1km s-min=15.1km az=73.0*

*MAN **09** 02:10:29, 4°.82N×126°.52E, h77km, mb5.2, ML4.1, MS4.3*

*ISCJB **09** 02:10:36.2±0.7, 5°.23N±0°.04×126°.26E±0°.09, h76km±6km, mb4.0/18, Error ellipse: s-maj=14.7km s-min=6.2km az=175.2*

*NEIC **09** 02:10:37.1±1.6, 5°.14N×125°.82E, h59km±18km, mb4.3/5, Error ellipse: s-maj=59.0km s-min=9.7km az=74.0*

*DJA **09** 02:10:53, 4°.35N×125°.35E, h20km, mb4.6/6*

ISC 09 02:10:38.2±0.7, 5°.18N±0°.03×126°.30E±0°.10, h79km±6km, **n43,** σ1**s44/42, mb4.0**/18, **1C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**1.62**	**304⇑**	*e*P	**Pn**	**02 11 00.8**	**-4.2**
GSPH				*i* S	**Sn**	**02 11 21.5**	**-3.8**
SGSI	**Sangihe**	**1.67**	**207**	P	**Pn**	**02 11 04.1**	**-1.6**
MATI	**Mati**	**1.75**	**359**	*e*P	**Pn**	**02 11 04.4**	**-2.5**
MATI				*e*S	**Sn**	**02 11 30.0**	**+1.4**
DAV	**Davao City (W)**	**2.01**	**339**	Pn	**Pn**	**02 11 07.6**	**-2.6**
	110nm,0.3s,baz=215,slow=3.3,SNR=5.3						
DAV				LR	LR	02 12 06.6	
	comp=Z,1μm,19.2s,baz=213,slow=49						
DAV	**Davao City (W)**	**2.01**	**339**	P	**Sn**	**02 11 36.8**	**+2.2**
DMPH	**Davao City--Mi**	**2.05**	**338⇓**	*e*P	**Pn**	**02 11 06.9**	**-3.8**
DMPH				*i* S	Sx	02 11 47.6	
KCP	**Kidapawan**	**2.18**	**327⇓**	*e*P	**Pn**	**02 11 15.4**	**+3.0**
KCP				*i* S	Sx	02 11 47.6	
BUKP	**Musuan**	**2.95**	**335**	*e*P	**Pn**	**02 11 21.8**	**-1.0**
BUKP				*e*S	**Sn**	**02 11 58.1**	**+0.9**
CGP	**Cagayan de Oro**	**3.62**	**334**	*e*P	**Pn**	**02 11 29.9**	**-2.1**
TNTI	**Ternate**	**4.51**	**166**	P	**Pn**	**02 11 43.2**	**-0.8**
KMSI	**Cibinong**	**5.13**	**207**	P	**Pn**	**02 11 51.7**	**-0.8**
LBMI	**Labuha**	**5.90**	**168**	P	**Pn**	**02 12 12.1**	**+9.0**
	0.4nm84nm,1.5s						
MRSI	**Marisa**	**6.38**	**223**	P	**Pn**	**02 12 10.0**	**+0.4**
	0.4nm2μm109nm,1.0s						
LUWI	**Luwuk**	**7.11**	**210**	P	**Pn**	**02 12 19.5**	**-0.1**
	0.6nm148nm,0.8s						
APSI	**Ampana**	**7.63**	**218**	P	**Pn**	**02 12 30.0**	**+3.4**
MYLDM	**Lahad Datu**	**7.76**	**270**	P	**Pn**	**02 12 30.9**	**+2.4**
	0.2nm52nm,1.1s						
TTSI	**Tana Toraja**	**10.42**	**219**	P	**Pn**	**02 13 07.9**	**+3.1**
	24nm,1.4s						
SBUM	**Sibu**	**14.30**	**260**	P	**Pn**	**02 13 57.2**	**+0.2**
FITZ	**Fitzroy Crossi**	**23.14**	**182**	P	**P**	**02 15 38.4**	**+0.6**
	3.0nm,0.8s,mb3.7,baz=28,slow=19,SNR=11						
WRA	**Warramunga Arr**	**26.19**	**163**	P	**P**	**02 16 07.4**	**+1.9**
	2.3nm,0.7s,mb3.7,baz=343,slow=10,SNR=4.7						
CBIJ	**Chichi jima**	**26.54**	**33**	LR	LR	02 26 21.7	
	comp=Z,35nm,19.6s,baz=109,slow=35						
ASAR	**Alice Springs**	**29.61**	**166**	P	**P**	**02 16 37.2**	**+1.2**
	1.2nm,0.6s,mb3.7,baz=344,slow=6.5,SNR=8.4						
KSRS	**Korea Array**	**32.16**	**2**	P	**P**	**02 17 00.5**	**+2.1**
	1.5nm,0.6s,mb3.9,baz=182,slow=9.7,SNR=6.9						
KSRS				LR	LR	02 29 57.7	
	comp=Z,35nm,19.6s,baz=185,slow=36						
MJAR	**Matsushiro Arr**	**33.07**	**18**	LR	LR	02 28 47.8	
	comp=Z,72nm,20.3s,baz=255,slow=33						
LZH	**Lanzhou**	**37.04**	**329**	*e*P	**P**	**02 17 40.5**	**0.0**
LZH				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.8						
GTA	**Gaotai**	**41.64**	**329**	*e*P	**P**	**02 18 24.0**	**+5.3**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.9						
ULN	**Ulaanbaatar**	**45.62**	**342**	*e*P	**P**	**02 18 51.8**	**+1.3**
	comp=Z,3.1nm,0.7s,mb4.2						
SONM	**Songino Array**	**45.79**	**341**	P	**P**	**02 18 51.9**	**0.0**
	comp=Z,1.3nm,0.7s,mb3.8,baz=147,slow=7.4,SNR=6.4						
MK31	**Makanchi Array**	**56.13**	**325**	*e*P	**P**	**02 20 09.2**	**-0.3**
MKAR	**Makanchi Array**	**56.13**	**325**	P	**P**	**02 20 09.1**	**-0.3**
	comp=Z,1.7nm,0.8s,mb4.1,baz=127,slow=7.9,SNR=15						
MKAR				ScP	ScP	02 25 06.4	+7.5
	comp=Z,0.4nm,0.7s,baz=176,slow=1.9,SNR=3.8						
MKAR				LR	LR	02 44 55.2	
	comp=Z,57nm,21.8s,baz=164,slow=37						
ZALV	**Zalesovo Beam**	**59.11**	**333**	P	**P**	**02 20 29.7**	**-0.5**
	comp=Z,0.5nm,0.3s,mb4.0,baz=136,slow=9.4,SNR=2.2						
ZALV				LR	LR	02 46 27.8	
	comp=Z,19nm,21.5s,baz=114,slow=37						
EKS2	**Erkin-Say**	**59.50**	**317**	*e*P	**P**	**02 20 34.0**	**+0.9**
	comp=Z,36nm,1.1s,mb4.3						
KURK	**Kurchatov**	**60.29**	**327**	P	**P**	**02 20 36.8**	**-1.6**
	comp=Z,3.3nm,0.9s,mb4.3,baz=121,slow=7.3,SNR=14						
KURK	**Kurchatov**	**60.29**	**327**	*e*P	**P**	**02 20 37.9**	**-0.5**
	comp=Z,6.1nm,1.0s,mb4.6						
BVAR	**Borovoye Array**	**65.88**	**327**	P	**P**	**02 21 14.9**	**-0.5**
	comp=Z,1.1nm,0.7s,mb3.8,baz=119,slow=9.2,SNR=7.8						
BRVK	**Borovoye**	**65.95**	**327**	*e*P	**P**	**02 21 15.2**	**-0.7**
	comp=Z,3.0nm,0.8s,mb4.2						
ABKAR	**Akbulak array**	**70.76**	**321**	*e*P	**P**	**02 21 45.3**	**-0.7**
	comp=Z,1.4nm,0.8s,mb3.8						
AKTK	**Aktyubinsk**	**72.26**	**321**	P	**P**	**02 21 53.2**	**-1.8**
AKTK				LR	LR	02 53 12.2	
AKTO	**Aktyubinsk**	**72.26**	**321**	P	**P**	**02 21 53.2**	**-1.8**
	comp=Z,1.3nm,0.7s,mb3.9,baz=86,slow=5.1,SNR=9.6						
AKTO				LR	LR	02 53 12.2	
	comp=Z,34nm,20.7s,baz=35,slow=36						
BRTR	**Keskin Array B**	**88.77**	**310**	LR	LR	03 08 21.3	
	comp=Z,26nm,19.7s,baz=282,slow=39						
ARCES	**ARCESS Array B**	**88.95**	**340**	P	**P**	**02 23 26.6**	**+3.0**
	comp=Z,2.2nm,0.9s,mb4.2,baz=90,slow=6.1,SNR=6.0						
FINES	**FINESS Array B**	**90.36**	**332**	P	**P**	**02 23 29.4**	**-0.9**
	comp=Z,2.0nm,0.9s,mb4.2,baz=40,slow=11,SNR=3.9						
NOA	**NORSAR Array B**	**97.31**	**334**	LR	LR	03 11 35.4	
	comp=Z,25nm,18.7s,baz=55,slow=38						

*MOS **09** 02:34:40.6±1.1, 12°.42S×166°.43E, h33km, mb5.0/17, Error ellipse: s-maj=11.6km s-min=10.1km az=145.0*

*ISCJB **09** 02:34:42.7±0.1, 12°.46S±0°.04×166°.49E±0°.03, h50km, mb5.2/94, MS4.2/30, Error ellipse: s-maj=5.3km s-min=3.5km az=164.7*

*NEIC **09** 02:34:43.5±0.2, 12°.41S×166°.46E, mb5.1/47, Error ellipse: s-maj=8.4km s-min=6.1km az=154.0*

*IDC **09** 02:34:43.0±0.6, 12°.42S×166°.52E, h43km±5km, mb4.5/18, mb1 4.6/18, mb1mx4.6/19, mbtmp4.5/18, MS4.1/18, Ms1 4.1/18, ms1mx4.0/25, Error ellipse: s-maj=16.1km s-min=14.2km az=106.0*

*NOU **09** 02:34:45.1±1.8, 12°.25S×165°.66E, h30km, MD4.2, MS2.4*

*BJI **09** 02:34:46.5, 11°.76S×166°.54E, h62km, mB5.0/27, mb5.2/45, Ms4.7/24, Ms7 4.5/28*

*GCMT **09** 02:34:46.7±0.3, 12°.46S×166°.17E, h43km±1km, MW5.0, Moment Tensor Solution. s59,c76; s54,c67; Moment tensor: Scale 10^{16}Nm; M_{rr}3.86±.17; $M_{\theta\theta}$-0.08±.16; $M_{\phi\phi}$-3.79±.13; $M_{r\theta}$-0.02±.13; $M_{\theta\phi}$0.89±.13; $M_{\phi r}$1.36±.11; Best double couple: $M_0$4.20000×10^{16} NP1:ϕ_s163.00000°, δ36.00000°, λ83.00000°. NP2:ϕ_s351.00000°, δ54.00000°, λ95.00000°. Principal axes: T 4.1000, Plg80.0000°, Azm281.0000°; N 0.1100, Plg4.0000°, Azm168.0000°; P -4.2100, Plg9.0000°, Azm78.0000°; Data Used: II IU IC G CN.*

*DJA **09** 02:34:51, 12°.49S×166°.65E, h111km, mb5.4/23*

ISC 09 02:34:44.5±0.1, 12°.47S±0°.03×166°.55E±0°.03, h52km, **h52**km±2.4km**: pP-P, n402,** σ0**s79**/323, **mb5.2**/94, **MS4.2**/30, **75C-80D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.15**	**294**	*e*P	**Pn**	**02 36 27.4**	**+0.8**
HNR				*e*		02 37 47.3	
HNR				pmax	pmax		
	comp=Z,2μm,1.1s						
HNR	**Honiara**	**7.15**	**294**	*e*Pn	**Pn**	**02 36 27.4**	**+0.9**
	comp=Z,2μm,1.1s						
HNR				*e*Sn	**Sn**	**02 37 47.3**	**+0.8**
DZM	**Mont Dzumac**	**9.54**	**181**	*e*Pn	**Pn**	**02 37 02.2**	**+2.9**
	comp=Z,46nm,0.3s						
DZM				*e*Sn	**Sn**	**02 38 44.9**	**-0.3**
	comp=Z,46nm,0.3s						
DZM				*e*LR	LR	02 39 12.3	
	comp=Z,3μm,25.5s						
DZM	**Mont Dzumac**	**9.54**	**181**	*e*P	**Pn**	**02 37 01.6**	**+2.3**
DZM				*e*S	**Sn**	**02 38 44.4**	**-0.8**
DZM				AMP		02 39 13.3	
	comp=Z,936nm,5.7s						
DZM	**Mont Dzumac**	**9.54**	**181**	*e*Pn	**Pn**	**02 37 01.5**	**+2.2**
DZM				*e*Sn	**Sn**	**02 38 44.3**	**-0.9**
NOUC	**Port Laguerre**	**9.58**	**181**	*e*P	**Pn**	**02 37 02.8**	**+3.1**
NOUC				*e*S	**Sn**	**02 38 44.8**	**-1.1**
NOUC				AMP		02 39 16.2	
	comp=Z,38nm,13.2s						
BAYA	**Yate Dam**	**9.63**	**178**	*e*P	**Pn**	**02 37 05.4**	**+5.0**
MSVF	**Nonsavu**	**12.27**	**117**	*e*P	**Pn**	**02 37 41.6**	**+5.0**
MSVF				pmax	pmax		
	comp=Z,129nm,1.3s						
MSVF	**Nonsavu**	**12.27**	**117**	*e*Pn	**Pn**	**02 37 41.5**	**+4.9**
	comp=Z,129nm,1.3s						
FUNA	**Funafuti**	**13.04**	**74**	*e*Pn	**Pn**	**02 37 48.4**	**+1.3**
	comp=Z,291nm,1.0s						
EIDS	**Eidsvold**	**19.43**	**226**	*e*P	**Pn**	**02 39 08.6**	**+0.3**
	comp=Z,50nm,0.6s						
CTA	**Charters Tower**	**20.89**	**246**	*e*P	**P**	**02 39 24.7**	**+2.2**
	comp=Z,15nm,0.9s						
CTA	**Charters Tower**	**20.89**	**246**	P	**P**	**02 39 23.1**	**+0.6**
	comp=Z,18nm,0.9s,baz=90,slow=11,SNR=7.3						
CTA				LR	LR	02 46 33.3	
	comp=Z,744nm,19.8s,MS4.1,baz=74,slow=34						
CTAO	**Charters Tower**	**20.89**	**246**	*e*P	**P**	**02 39 23.1**	**+0.6**
CTAO				pmax	pmax		
	comp=Z,23nm,0.9s						
CTAO	**Charters Tower**	**20.89**	**246**	*e*P	**P**	**02 39 23.1**	**+0.6**
	comp=Z,23nm,0.9s						
CTAO	**Charters Tower**	**20.89**	**246**	P	**P**	**02 39 25.9**	**+3.4**
	comp=Z,32nm,1.1s						
AFI	**Afiamalu**	**21.15**	**96**	P	**P**	**02 39 27.1**	**+1.7**
	comp=Z,39nm,0.8s,mb4.8,baz=354,slow=4.8,SNR=4.1						
AFI				LR	LR	02 45 25.7	
	comp=Z,568nm,21.6s,MS3.9,baz=283,slow=30						
AFI	**Afiamalu**	**21.15**	**96**	P	**P**	**02 39 27.1**	**+1.7**
AFI				LR	LR	02 45 25.7	
ARMA	**Armidale**	**22.57**	**215⇑**	*i*P	**P**	**02 39 40.7**	**+0.2**
ARMA	**Armidale**	**22.57**	**215**	*e*P	**P**	**02 39 40.9**	**+0.5**
	comp=Z,152nm,1.6s,mb5.2						
COEN	**Coen**	**22.80**	**264**	*e*P	**P**	**02 39 43.5**	**+0.5**
	comp=Z,151nm,0.8s,mb5.5						
RIV	**Riverview**	**25.47**	**211**	*e*P	**P**	**02 40 08.5**	**+0.7**
URZ	**Urewera**	**27.35**	**162**	P	**P**	**02 40 25.7**	**+1.1**
	comp=Z,5.3nm,0.4s,mb4.5,baz=338,slow=11,SNR=6.4						
URZ				LR	LR	02 49 17.0	
	comp=Z,513nm,21.4s,MS4.1,baz=161,slow=32						
URZ	**Urewera**	**27.35**	**162**	*e*P	**P**	**02 40 25.2**	**+0.6**
CNB	**Canberra Magne**	**27.55**	**211**	*e*P	**P**	**02 40 26.9**	**+0.4**
SMPI	**Sarmi**	**29.48**	**288**	P	**P**	**02 40 44.3**	**+0.4**
	comp=Z,1μmcomp=Z,149nm,1.1s,mb5.6						
STKA	**Stephens Creek**	**29.98**	**226⇑**	*i*P	**P**	**02 40 48.7**	**+0.5**
	comp=Z,14nm,0.6s,mb4.9						
STKA	**Stephens Creek**	**29.98**	**226**	P	**P**	**02 40 48.7**	**+0.5**
	comp=Z,16nm,0.7s,mb4.9,baz=44,slow=7.5,SNR=24						
STKA				LR	LR	02 52 12.4	
	comp=Z,586nm,21.3s,MS4.2,baz=141,slow=35						
STKA	**Stephens Creek**	**29.98**	**226**	*e*P	**P**	**02 40 48.9**	**+0.7**
STKA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
STKA	**Stephens Creek**	**29.98**	**226**	*e*P	**P**	**02 40 48.9**	**+0.7**
	comp=Z,3.8nm,0.8s,mb4.2						
TOO	**Toolangi**	**31.29**	**213**	*e*P	**P**	**02 41 00.1**	**+0.5**
RPZ	**Rata Peaks**	**31.37**	**174**	P	**P**	**02 40 59.7**	**-0.5**
	comp=Z,35nm,0.6s,mb5.3,baz=282,slow=1.6,SNR=34						
RPZ				LR	LR	02 51 23.0	
	comp=Z,795nm,21.9s,MS4.3,baz=74,slow=32						
RPZ	**Rata Peaks**	**31.37**	**174**	*e*P	**P**	**02 40 59.5**	**-0.7**
	comp=Z,38nm,0.7s,mb5.3						
WRAB	**Tennant Creek**	**31.75**	**252**	*e*P	**P**	**02 41 02.6**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.6						
WRAB	**Tennant Creek**	**31.75**	**252**	*e*P	**P**	**02 41 02.6**	**-1.4**
	comp=Z,6.6nm,1.0s,mb4.4						
WRA	**Warramunga Arr**	**31.77**	**252**	P	**P**	**02 41 03.1**	**-0.9**
	comp=Z,2.8nm,0.5s,mb4.3,baz=80,slow=9.0,SNR=13						
WRA				LR	LR	02 53 06.1	
	comp=Z,280nm,19.2s,MS4.0,baz=65,slow=35						
ASAR	**Alice Springs**	**32.89**	**246**	P	**P**	**02 41 12.6**	**-1.3**
	comp=Z,12nm,0.8s,mb4.9,baz=75,slow=9.5,SNR=58						
ASAR				ScP	ScP	02 47 37.8	+0.2
	comp=Z,1.4nm,0.8s,baz=77,slow=3.5,SNR=6.4						
KAKA	**Kakadu**	**33.28**	**266**	*e*P	**P**	**02 41 17.4**	**+0.1**
	comp=Z,15nm,0.6s,mb5.1						
MOO	**Moorlands**	**34.27**	**206**	*e*P	**P**	**02 41 25.1**	**-0.5**
KNA	**Kununurra**	**36.76**	**260**	P	**P**	**02 41 48.4**	**+1.1**
	comp=Z,123nm,1.1s,mb5.7						
SWI	**Sorong**	**36.84**	**286**	P	**P**	**02 41 48.5**	**+0.5**
	comp=Z,103nm,1.0s,mb5.6						
FITZ	**Fitzroy Crossi**	**39.80**	**257**	*e*P	**P**	**02 42 12.3**	**-0.6**
	comp=Z,35nm,0.9s,mb5.1						
FITZ	**Fitzroy Crossi**	**39.80**	**257**	*e*P	**P**	**02 42 12.4**	**-0.4**
	comp=Z,27nm,1.1s,mb4.9						
FITZ	**Fitzroy Crossi**	**39.80**	**257**	P	**P**	**02 42 13.5**	**+0.6**
	comp=Z,76nm,1.2s,mb5.3						
FORT	**Forrest**	**39.90**	**237**	*e*P	**P**	**02 42 13.0**	**-0.5**
	comp=Z,40nm,0.8s,mb5.2						
FORT	**Forrest**	**39.90**	**237**	*e*P	**P**	**02 42 13.0**	**-0.5**
	comp=Z,44nm,0.8s,mb5.2						
LBMI	**Labuha**	**40.46**	**284**	P	**P**	**02 42 24.6**	**+6.2**
PPT	**Papeete**	**42.61**	**102**	*e*S	**S**	**02 49 10.3**	**+15**
	comp=Z,128nm,26.8s						
PPT				*e*LQ		02 52 44.6	
	comp=Z,532nm,30.2s						
PPT				*e*LR	LR	02 54 34.2	
	comp=Z,1μm,29.0s,baz=269						
PPT	**Papeete**	**42.61**	**102**	LR	LR	02 56 32.8	
	comp=Z,271nm,18.7s,MS4.2,baz=291,slow=31						
TBI	**Tubuai**	**43.08**	**111**	*e*LQ		02 53 12.7	
	comp=Z,341nm,32.5s						
TBI				*e*LR	LR	02 54 47.8	
	comp=Z,512nm,31.2s,baz=301						
MBWA	**Marble Bar**	**45.50**	**253**	*e*P	**P**	**02 42 59.2**	**0.0**
	comp=Z,54nm,1.0s,mb5.4						
MBWA	**Marble Bar**	**45.50**	**253**	P	**P**	**02 43 00.3**	**+1.2**
	comp=Z,53nm,1.1s,mb5.4						
BNSI	**Bone**	**46.57**	**276**	P	**P**	**02 43 08.6**	**+0.9**
	comp=Z,89nm,0.9s,mb5.7						
PCI	**Palu**	**47.70**	**280**	P	**P**	**02 43 18.9**	**+2.4**
	comp=Z,79nm,1.1s,mb5.7						
KLBR	**Kellerberrin**	**48.63**	**239**	*e*P	**P**	**02 43 22.1**	**-1.3**
	comp=Z,44nm,1.3s,mb5.3						
MYLDM	**Lahad Datu**	**50.87**	**287**	P	**P**	**02 43 43.0**	**+2.3**
	comp=Z,37nm,0.9s,mb5.3						
KKM	**Kota Kinabalu**	**53.30**	**287**	*e*P	**P**	**02 43 59.1**	**+0.4**
	comp=Z,69nm,0.9s,mb5.6						
KKM	**Kota Kinabalu**	**53.30**	**287**	P	**P**	**02 43 58.9**	**+0.2**
	comp=Z,706nmcomp=Z,94nm,1.0s,mb5.7						
MJAR	**Matsushiro Arr**	**55.59**	**332**	P	**P**	**02 44 12.8**	**-2.1**
	comp=Z,2.1nm,0.6s,mb4.3,baz=167,slow=8.9,SNR=5.7						
MAT	**Matsushiro**	**55.59**	**332**	P	**P**	**02 44 13.5**	**-1.4**
SBUM	**Sibu**	**55.95**	**282**	P	**P**	**02 44 18.8**	**+0.8**
	comp=Z,2μmcomp=Z,21nm,1.1s,mb5.1						
RKT	**Rikitea**	**56.36**	**110**	*e*LR	LR	03 00 56.7	
	comp=Z,383nm,28.5s,baz=270						
YULB	**Yu-li**	**56.84**	**309**	*e*P	**P**	**02 44 23.5**	**-0.5**
	comp=Z,39nm,1.2s,mb5.3						
TPUB	**Ta-pu**	**57.30**	**308**	*e*P	**P**	**02 44 26.5**	**-0.8**
	comp=Z,65nm,0.9s,mb5.7						
SSLB	**Suanglung**	**57.30**	**209**	*e*P	**P**	**02 44 26.8**	**-0.6**
	comp=Z,16nm,0.8s,mb5.1						
LEM	**Lembang**	**58.27**	**270**	P	**P**	**02 44 35.3**	**+0.9**
	comp=Z,152nm,0.8s,mb6.1						
CGJI	**Cibinong**	**60.19**	**269**	P	**P**	**02 44 46.8**	**-0.9**
	comp=Z,3μmcomp=Z,152nm,0.8s,mb6.1						
KSRS	**Korea Array**	**61.49**	**326**	P	**P**	**02 44 56.0**	**0.0**
	comp=Z,4.9nm,0.7s,mb4.7,baz=139,slow=7.5,SNR=25						
KSRS				pP	pP	02 45 07.0	-3.4
	comp=Z,2.1nm,0.8s,baz=

comp=N,140nm,23.0s,MS4.3
BJI LR LR
comp=E,120nm,21.9s,MS4.3
BJI LR LR
comp=Z,190nm,25.4s,MS4.2
XAN Xi'an 71.66 312 P **P** **02 46 01.1 +0.1**
XAN pmax pmax
comp=Z,20nm,0.8s,mb5.1
XAN pmax pmax
comp=Z,19nm,8.9s
KMI Kunming 72.53 301 P **P** **02 46 08.0 +1.6**
KMI pP pP 02 46 21.2 +0.1
KMI sP sP 02 46 28.3 +1.4
KMI PP PP 02 48 51.7 +3.3
KMI S S 02 55 25.8 -1.5
KMI sS sS 02 55 55.1 +3.1
KMI pmax pmax
comp=Z,67nm,1.0s,mb5.5
KMI LR LR
comp=N,100nm,16.0s,MS4.3
KMI LR LR
comp=E,110nm,19.1s,MS4.3
KMI LR LR
comp=Z,91nm,25.8s
HHC Hu-ho-hao-te 73.42 320 *e*P **P** **02 46 12.0 +0.7**
HHC PcP PcP 02 46 27.2 -0.1
HHC pP pP 02 46 30.1 +4.1
HHC sP sP 02 46 38.1 +6.3
HHC S S 02 55 35.3 -1.5
HHC SKS 02 56 08.1
HHC ScS ScS 02 56 12.6 -3.3
HHC pmax pmax
comp=Z,19nm,0.6s,mb5.2
HHC pmax pmax
comp=Z,67nm,6.6s
HHC LR LR
comp=N,100nm,17.6s,MS4.5
HHC LR LR
comp=E,190nm,17.2s,MS4.5
HHC LR LR
comp=Z,230nm,17.1s,MS4.5
CHTO Chiang Mai 73.52 294 *e*P **P** **02 46 12.9 +0.6**
CHTO pmax pmax
comp=Z,23nm,1.0s,mb5.1
CHTO Chiang Mai 73.52 294 *e*P **P** **02 46 12.9 +0.6**
comp=Z,24nm,1.0s,mb5.1
CHTO Chiang Mai 73.52 294 P **P** **02 46 12.9 +0.6**
comp=Z,33nm,1.4s,mb5.1
CD2 Chengdu 74.09 307 P **P** **02 46 15.8 +0.4**
CD2 pP pP 02 46 32.4 +2.2
CD2 sP sP 02 46 39.3 +3.3
CD2 PP PP 02 49 03.6 +2.0
CD2 S S 02 55 42.6 -2.1
CD2 sS sS 02 56 11.7 +2.2
CD2 SS SS 03 00 30.8 -0.1
CD2 pmax pmax
comp=Z,80nm,0.9s,mb5.7
CD2 pmax pmax
comp=Z,140nm,6.9s
CD2 LR LR
comp=N,200nm,4.9s
CD2 LR LR
comp=Z,120nm,8.3s
SEY Seymchan 75.97 353⇑ *e*P **P** **02 46 26.9 +1.4**
SEY *j**PP pP 02 46 40.5 +0.2
LZH Lanzhou 76.30 312 ⇑P **P** **02 46 29.6 +1.6**
LZH pP pP 02 46 40.5 -2.3
LZH *e*S S 02 56 11.0 +2.0
LZH sS sS 02 56 28.5 -5.3
LZH pmax pmax
comp=Z,49nm,1.5s,mb5.2
LZH pmax pmax
comp=Z,120nm,6.5s
LZH LR LR
comp=N,390nm,15.2s
LZH LR LR
comp=Z,510nm,18.0s,MS4.9
QSPA South Pole Qui 77.54 180 *e*P **P** **02 46 33.6 -0.6**
comp=Z,41nm,1.0s,mb5.3
QSPA *e*pP pP 02 46 45.6 -3.6
KDAK Kodiak Island 77.62 21 LR LR 03 15 26.0
comp=Z,243nm,19.4s,MS4.5,baz=132,slow=32
ULN Ulaanbaatar 79.91 324 *e*P **P** **02 46 48.0 +0.2**
ULN pmax pmax
comp=Z,22nm,0.7s,mb5.2
ULN Ulaanbaatar 79.91 324 *e*P **P** **02 46 48.0 +0.3**
comp=Z,22nm,0.7s,mb5.2
ULN Ulaanbaatar 79.91 324 P **P** **02 46 47.9 +0.1**
SONM Songino Array 80.28 324 P **P** **02 46 49.9 +0.1**
comp=Z,4.4nm,0.3s,mb4.8,baz=140,slow=6.2,SNR=39
SONM LR LR 03 17 59.2
comp=Z,69nm,21.2s,MS4.0,baz=240,slow=32
BILL Bilibino 80.30 360⇓ *e*P **P** **02 46 48.1 -1.3**
BILL *e* pP 02 47 03.9 -0.4
BILL pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
GTA Gaotai 80.61 314 ⇑P **P** **02 46 52.8 +1.1**
GTA pP pP 02 47 11.1 +4.5
GTA sP sP 02 47 18.0 +5.6
GTA S S 02 56 54.2 -0.8
GTA SKS 02 57 01.7
GTA sS sS 02 57 23.4 +3.3
GTA pmax pmax
comp=Z,25nm,1.0s,mb5.1
GTA pmax pmax
comp=Z,100nm,5.3s
GTA LR LR
comp=N,78nm,17.5s,MS4.3
GTA LR LR
comp=E,92nm,17.2s,MS4.3
GTA LR LR
comp=Z,150nm,19.9s,MS4.3
SHL Shillong 81.89 298 *e*PKP **P** **02 46 59.5 +0.7**
TRF Thorofare Moun 82.62 18 *e*P **P** **02 47 01.8 0.0**
comp=Z,4.3nm,0.8s,mb4.5
MCK McKinley 83.24 18 *e*P **P** **02 47 05.2 +0.2**
MCK pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
MCK McKinley 83.24 18 *e*P **P** **02 47 05.2 +0.2**
comp=Z,3.0nm,0.6s,mb4.5
MAW Mawson 83.70 202⇑ *i*P **P** **02 47 06.7 -0.7**
comp=Z,11nm,0.9s,mb5.0
MAW Mawson 83.70 202 P **P** **02 47 06.8 -0.7**
comp=Z,14nm,0.8s,mb5.1,baz=105,slow=7.0,SNR=29
MAW LR LR 03 17 32.4
comp=Z,72nm,18.9s,MS4.1,baz=318,slow=31
MAW Mawson 83.70 202 *e*P **P** **02 47 06.5 -0.9**
MAW pmax pmax
comp=Z,3.0nm,0.9s
MAW Mawson 83.70 202 *e*P **P** **02 47 06.5 -0.9**
comp=Z,3.3nm,0.9s,mb4.5
TLY Talaya 83.74 326 *e*P **P** **02 47 07.8 0.0**
TLY pmax pmax
comp=Z,13nm,0.8s,mb5.1
TLY Talaya 83.74 326 *e*P **P** **02 47 07.8 0.0**
comp=Z,13nm,0.8s,mb5.1
LSA Lhasa 83.78 302 P **P** **02 47 09.8 +1.3**
LSA Lhasa 83.78 302 *e*P **P** **02 47 09.7 +1.2**
LSA pmax pmax
comp=Z,18nm,0.6s,mb5.4
LSA Lhasa 83.78 302 *e*P **P** **02 47 09.7 +1.2**
comp=Z,18nm,0.6s,mb5.4
YBH Yreka Blue Hor 84.33 45 *e*P **P** **02 47 13.1 +2.0**
YBH pmax pmax
comp=Z,7.0nm,0.8s
YBH Yreka Blue Hor 84.33 45 *e*P **P** **02 47 13.1 +2.0**
comp=Z,6.5nm,0.8s,mb4.8
COLA College 84.39 18 *e*P **P** **02 47 10.9 +0.1**
COLA *e**PP pP 02 47 22.6 -3.2
COLA pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
COLA College 84.39 18 *e*P **P** **02 47 10.9 +0.1**
comp=Z,5.2nm,0.8s,mb4.7
COLA *e*pP pP 02 47 22.6 -3.3
HUMO Hull Mountain 84.49 44 *e*P **P** **02 47 12.9 +1.1**
comp=Z,7.7nm,0.9s,mb4.8
CMB Columbia Colle 84.66 49 *e*P **P** **02 47 12.3 -0.5**
CMB pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
CMB Columbia Colle 84.66 49 *e*P **P** **02 47 12.3 -0.5**
comp=Z,6.1nm,0.8s,mb4.8
BBB Bella Bella 85.31 34 LR LR 03 19 51.9
comp=Z,178nm,18.7s,MS4.5,baz=34,slow=32
ISA Isabella 85.32 52 ⇓P **P** **02 47 15.6 -0.6**
baz=86
ISA Isabella 85.32 52 *e*P **P** **02 47 17.7 +1.5**

EDW2 Edwards Air Fo 85.44 53 ⇑P **P** **02 47 16.9 +0.1**
baz=86
BFSC Mount Baldy Ra 85.50 54 ⇑P **P** **02 47 16.3 -0.8**
baz=86
WAKR Walker 85.53 49 *e*P **P** **02 47 18.2 +1.1**
G04A Mulino 85.80 42 ⇓P **P** **02 47 18.1 -0.2**
baz=86
MTUM Tungsten Hills 85.80 50 *e*P **P** **02 47 20.0 +1.5**
LRMC Laurel Mountai 85.87 52 ⇓P **P** **02 47 18.4 -0.5**
baz=86
CWC Cottonwood Cre 85.87 51 ⇓P **P** **02 47 18.9 0.0**
baz=86
K05A Summer Lake 85.95 45 ⇓P **P** **02 47 19.3 +0.2**
baz=86
TAPN Taplejung 85.98 299 *e*P **P** **02 47 18.9 -0.8**
comp=Z,90nm,1.2s,mb5.9
MOD Modoc 86.07 46 *e*P **P** **02 47 21.3 +1.5**
MONP Monument Peak 86.08 55 ⇑P **P** **02 47 20.1 +0.1**
baz=86
ODAN Odare 86.12 298 *e*P **P** **02 47 19.6 -0.8**
comp=Z,121nm,0.8s,mb6.2
MPMC Manual Prospec 86.20 52 ⇓P **P** **02 47 20.6 0.0**
baz=86
PFO Pinyon Flat Ob 86.26 55 ⇑P **P** **02 47 20.5 -0.4**
baz=86
NVAR Mina Array Bea 86.34 50 P **P** **02 47 21.4 +0.2**
comp=Z,3.4nm,0.7s,mb4.7,baz=231,slow=6.2,SNR=26
EGAK Eagle 86.44 20 *e*P **P** **02 47 19.8 -1.2**
comp=Z,5.3nm,0.8s,mb4.8
GRAC Grapevine Rang 86.59 51 ⇓P **P** **02 47 22.1 -0.4**
baz=87
BELC Belle Mtn. Jos 86.74 54 ⇑P **P** **02 47 23.6 +0.3**
baz=87,SNR=5.1
FURC Furnace Creek, 86.81 52 ⇓P **P** **02 47 23.3 -0.2**
baz=87
RAMN Ramite 86.82 298 *e*P **P** **02 47 23.1 -0.7**
comp=Z,40nm,0.7s,mb5.8
BC3 Big Chuckawall 87.08 55 ⇑P **P** **02 47 24.6 -0.3**
baz=87
U10A Ash Meadows, A 87.21 52 ⇑P **P** **02 47 25.5 +0.1**
baz=87
GMRC Granite Mounta 87.24 54 ⇓P **P** **02 47 25.7 0.0**
baz=87,SNR=5.9
DLBC Dease Lake 87.29 28 LR LR 03 20 00.5
comp=Z,80nm,20.0s,MS4.1,baz=274,slow=31
JIRN Jiri 87.36 299 *e*P **P** **02 47 25.2 -1.2**
GLA Glamis 87.40 56 ⇓P **P** **02 47 26.5 +0.1**
baz=88
WVOR Wild Horse Val 87.41 46 *e*P **P** **02 47 27.5 +1.2**
WVOR pmax pmax
comp=Z,3.0nm,0.8s,mb4.6
WVOR Wild Horse Val 87.41 46 *e*P **P** **02 47 27.5 +1.2**
comp=Z,2.6nm,0.8s,mb4.5
S10A Tonopah Range, 87.46 50 ⇓P **P** **02 47 26.4 -0.2**
baz=88
IRM Iron Mountain 87.46 54 ⇓P **P** **02 47 26.5 -0.3**
baz=88
GUN Gumba 87.70 299 *e*P **P** **02 47 27.2 -0.8**
V11A Goodsprings 87.73 53 ⇓P **P** **02 47 27.6 -0.4**
baz=88
LDFC Landfair 87.76 54 *e*P **P** **02 47 29.4 +1.3**
comp=Z,16nm,0.8s,mb5.3
J08A Circle Bar Ran 87.83 45 ⇑P **P** **02 47 28.2 -0.1**
baz=88
PKI Pulchoki 88.01 299 *e*P **P** **02 47 28.5 -1.0**
comp=Z,78nm,0.6s,mb6.1
PKI Pulchoki 88.01 299 *e*P **P** **02 47 28.8 -0.7**
comp=Z,71nm,0.7s,mb6.0
PKIN Phulchoki 88.02 299 *e*P **P** **02 47 28.8 -0.8**
comp=Z,71nm,0.7s,mb6.0
H08A Prairie City 88.08 44 ⇓P **P** **02 47 29.1 -0.3**
baz=88
G08A Pilot Rock 88.15 43 ⇑P **P** **02 47 30.1 +0.4**
baz=88
V12A Nelson 88.15 53 ⇓P **P** **02 47 30.0 0.0**
baz=88
KKN Kakani 88.18 299 *e*P **P** **02 47 29.1 -1.2**
comp=Z,99nm,0.7s,mb6.2
DMN Daman 88.28 299 *e*P **P** **02 47 30.0 -0.8**
comp=Z,186nm,0.7s
T11A Corn Creek, Al 88.30 51 ⇓P **P** **02 47 30.2 -0.5**
baz=88
PDMCI Parker Dam,Lak 88.30 54 ⇑P **P** **02 47 30.3 -0.4**
baz=88
R11A Troy Canyon, C 88.35 50 ⇓P **P** **02 47 31.2 +0.3**
baz=88
Z13A Yuma Proving G 88.39 56 ⇑P **P** **02 47 30.7 -0.4**
baz=89
Y13A Salome 88.42 55 ⇓P **P** **02 47 31.3 0.0**
baz=89
Q11A Duckwater 88.44 50 ⇓P **P** **02 47 31.6 +0.3**
baz=89,SNR=5.4
X13A Yucca 88.63 54 ⇑P **P** **02 47 32.6 +0.3**
baz=89
W13A Hualapai Mount 88.73 54 ⇑P **P** **02 47 32.7 0.0**
baz=89
214A Organ Pipe Nat 88.74 57 ⇑P **P** **02 47 32.8 0.0**
baz=89
K10A MacKenzie Ranc 88.76 46 ⇓P **P** **02 47 32.7 +0.1**
baz=89
GKN Gorkha 88.78 299 *e*P **P** **02 47 31.6 -1.5**
comp=Z,138nm,0.7s
O11A Cowboy Ranch, 88.82 49 ⇑P **P** **02 47 33.2 +0.1**
baz=89
L10A Juniper Basin 88.82 47 ⇑P **P** **02 47 33.0 0.0**
baz=89
U13A Pakoon Wash 89.03 52 ⇑P **P** **02 47 33.9 -0.2**
baz=89,SNR=5.3
R12A Pony Springs, 89.08 51 ⇓P **P** **02 47 33.7 -0.6**
baz=89
M11A Holland Ranch, 89.11 47 ⇑P **P** **02 47 34.1 -0.2**
baz=89
T13A Saint George 89.24 52 ⇓P **P** **02 47 34.6 -0.5**
baz=89
K11A Parker Ranch, 89.34 46 ⇓P **P** **02 47 35.0 -0.4**
baz=90
X14A Yava 89.34 55 ⇓P **P** **02 47 35.1 -0.6**
baz=90
L11A Cat Creek Ranc 89.36 47 ⇑P **P** **02 47 34.7 -0.8**
baz=90,SNR=7.7
G10A Bishop Farm, J 89.38 43 ⇓P **P** **02 47 35.0 -0.5**
baz=90,SNR=11
W14A Seligman 89.39 54 ⇓P **P** **02 47 35.2 -0.7**
baz=90
H10A Noah's Angus R 89.41 44 ⇑P **P** **02 47 35.4 -0.3**
baz=90,SNR=6.9
S13A Holt Ranch, En 89.43 51 ⇓P **P** **02 47 35.4 -0.6**
baz=90
N12A Clover Valley, 89.48 48 ⇓P **P** **02 47 36.0 -0.1**
baz=90
N12A Clover Valley, 89.48 48 *e*P **P** **02 47 36.1 0.0**
comp=Z,14nm,0.9s,mb5.3
V14A Boquillas Ranc 89.49 53 ⇓P **P** **02 47 35.6 -0.7**
baz=90
R13A O'Grain Ranch, 89.52 51 ⇓P **P** **02 47 35.8 -0.6**
baz=90
O12A Currie 89.53 49 ⇓P **P** **02 47 35.7 -0.6**
baz=90
KOLN Koldanda 89.61 298 *e*P **P** **02 47 35.2 -1.8**
comp=Z,53nm,0.7s,mb6.0
U14A Mt Trumbull 89.64 53 ⇑P **P** **02 47 36.2 -0.8**
baz=90
MFID Camas Ranch 89.68 45 ⇓P **P** **02 47 36.4 -0.6**
baz=90,SNR=6.2
Q13A Wheeler Ranch, 89.70 50 ⇑P **P** **02 47 36.6 -0.6**
baz=90,SNR=8.5
M12A Wells 89.74 47 ⇑P **P** **02 47 36.8 -0.5**
baz=90,SNR=13
I11A Placerville 89.74 45 ⇓P **P** **02 47 36.7 -0.5**
baz=90
CCUT Cedar City 89.81 52 *e*P **P** **02 47 39.6 +1.9**
comp=Z,3.6nm,0.8s,mb4.8
P13A Bates Ranch, G 89.84 50 ⇑P **P** **02 47 37.5 -0.3**
baz=90,SNR=9.4
X15A Humboldt 89.87 55 ⇑P **P** **02 47 37.8 -0.3**
baz=90
L12A House Creek Ra 89.88 47 ⇑P **P** **02 47 37.7 -0.2**
baz=90
T14A Hurricane 89.89 52 ⇑P **P** **02 47 37.6 -0.5**
baz=90,SNR=6.7
H11A Donnelly 89.94 44 ⇓P **P** **02 47 37.6 -0.5**
baz=90
G11A Walters Elk Ra 89.98 43 ⇑P **P** **02 47 38.2 -0.1**
baz=90
O13A Hicks Ranch, I 90.05 49 ⇑P **P** **02 47 39.1 +0.3**
baz=90
N13A Wendover, West 90.09 48 ⇑P **P** **02 47 39.2 +0.2**
baz=90

N13A Wendover, West 90.09 48 *e*P **P** **02 47 40.5 +1.5**
K12A Draper Farm, C 90.10 46 ⇓P **P** **02 47 39.2 +0.3**
baz=90
J12A Stokes Ranch, 90.14 46 ⇑P **P** **02 47 38.4 -0.7**
baz=90,SNR=6.6
M13A Montello 90.26 48 ⇓P **P** **02 47 39.4 -0.4**
baz=90,SNR=28
M13A Montello 90.26 48 *e*P **P** **02 47 39.4 -0.4**
comp=Z,17nm,0.7s,mb5.5
Q14A Sevier Lake (B 90.26 50 ⇑P **P** **02 47 39.4 -0.4**
baz=90,SNR=12
V15A Kaibab Nationa 90.27 53 ⇓P **P** **02 47 39.6 -0.3**
baz=90
I12A Atlanta 90.27 45 ⇓P **P** **02 47 39.4 -0.3**
baz=90,SNR=6.8
NEW Newport 90.31 40 *e*P **P** **02 47 40.3 +0.5**
NEW pmax pmax
comp=Z,3.0nm,0.8s
NEW Newport 90.31 40 *e*P **P** **02 47 40.3 +0.5**
comp=Z,2.7nm,0.8s,mb4.6
217A Green Valley 90.33 58 ⇓P **P** **02 47 39.4 -0.9**
baz=90
U15A North Rim 90.33 53 ⇓P **P** **02 47 40.0 -0.2**
baz=90,SNR=18
T15A Red Dirt Ranch 90.42 52 ⇑P **P** **02 47 40.1 -0.5**
baz=91,SNR=5.2
X16A Lo Mia Camp, P 90.49 55 ⇑P **P** **02 47 40.3 -0.7**
baz=91
TUC Tucson 90.49 57 *e*P **P** **02 47 41.6 +0.6**
TUC pmax pmax
comp=Z,1.0nm,0.6s,mb4.3
TUC Tucson 90.49 57 *e*P **P** **02 47 41.6 +0.5**
comp=Z,1.4nm,0.6s,mb4.5
G12A Big Creek, Yel 90.53 44 ⇑P **P** **02 47 40.2 -0.8**
baz=91,SNR=9.4
P14A Drum Mountains 90.58 50 ⇓P **P** **02 47 40.6 -0.7**
baz=91,SNR=8.2
W16A Flagstaff 90.59 54 ⇑P **P** **02 47 41.9 +0.5**
baz=91
117A Oracle 90.59 57 ⇓P **P** **02 47 42.0 +0.4**
baz=91
L13A Double Diamond 90.62 47 ⇑P **P** **02 47 41.9 +0.5**
baz=91
SYO Syowa Base 90.65 197⇓ *e*X **P** **02 47 37.8 -3.3**
WMQ Urumqi 90.66 315 P **P** **02 47 41.7 +0.2**
WMQ pP pP 02 47 58.8 +2.2
WMQ sP sP 02 48 05.5 +3.1
WMQ PP PP 02 51 19.5 +2.0
WMQ pmax pmax
comp=Z,23nm,1.0s,mb5.5
WMQ pmax pmax
comp=Z,72nm,4.8s
WMQ LR LR
comp=N,40nm,19.8s
WMQ LR LR
comp=Z,76nm,21.2s,MS4.1
K13A Stover Farm, H 90.68 46 ⇑P **P** **02 47 42.2 +0.5**
baz=91
HLID Hailey 90.71 46 ⇓P **P** **02 47 41.2 -0.6**
baz=91,SNR=8.9
HLID Hailey 90.71 46 *e*P **P** **02 47 43.0 +1.2**
comp=Z,3.7nm,0.7s,mb4.8
C11A Tepee Creek (N 90.73 41 ⇓P **P** **02 47 41.8 0.0**
baz=91
E12A Beaver Dam Sad 90.75 43 ⇓P **P** **02 47 42.0 +0.1**
baz=91
F12A Elk City 90.77 43 ⇑P **P** **02 47 41.0 -1.0**
baz=91,SNR=8.4
Y17A Roosevelt 90.79 56 ⇑P **P** **02 47 42.2 -0.1**
baz=91
WUAZ Wupatki 90.82 54 ⇑P **P** **02 47 42.1 -0.4**
baz=91,SNR=5.4
WUAZ Wupatki 90.82 54 *e*P **P** **02 47 44.1 +1.6**
J13A Cove Ranch, Pi 90.83 46 ⇑P **P** **02 47 42.2 -0.1**
baz=91
N14A Grayback Hills 90.83 48 ⇓P **P** **02 47 42.2 -0.2**
baz=91
M14A Sheep Mountain 90.89 48 ⇑P **P** **02 47 42.0 -0.7**
baz=91,SNR=9.3
DUG Dugway 90.93 49 ⇓P **P** **02 47 43.1 +0.2**
baz=91
DUG Dugway 90.93 49 *e*P **P** **02 47 44.4 +1.5**
318A Bisbee 90.93 58 ⇓P **P** **02 47 42.7 -0.5**
baz=91
MSU Marysvale 90.96 51 *e*P **P** **02 47 44.8 +1.7**
BGU Big Grassy Mou 90.97 48 *e*P **P** **02 47 43.8 +0.7**
comp=Z,3.0nm,0.8s,mb4.7
X17A Forest Lakes 90.98 55 ⇑P **P** **02 47 44.0 +0.7**
baz=91
I13A Wildhorse Cree 91.01 45 ⇓P **P** **02 47 42.6 -0.6**
baz=91,SNR=7.9
D12A Red Ives Fores 91.08 42 ⇓P **P** **02 47 43.5 +0.1**
baz=91
H13A Challis 91.10 45 ⇓P **P** **02 47 43.5 -0.1**
baz=91
L14A Malta 91.11 47 ⇑P **P** **02 47 43.6 -0.1**
baz=91
S16A Weppner Ranch, 91.20 52 ⇑P **P** **02 47 44.1 -0.2**
baz=91
118A Homack Ranch, 91.24 57 ⇓P **P** **02 47 44.7 +0.2**
baz=91
G13A Cobalt 91.26 44 ⇑P **P** **02 47 43.7 -0.6**
baz=91,SNR=6.0
K14A Jones Ranch, D 91.30 47 ⇓P **P** **02 47 44.4 -0.1**
baz=92,SNR=5.3
V17A Tonalea, Kykot 91.30 54 ⇓P **P** **02 47 44.0 -0.7**
baz=92
N15A Stansbury Isla 91.33 48 ⇓P **P** **02 47 44.6 -0.1**
baz=92,SNR=6.0
F13A Darby 91.39 43 ⇓P **P** **02 47 44.4 -0.5**
baz=92,SNR=10
NLU North Lily Min 91.42 49 *e*P **P** **02 47 47.0 +1.8**
R16A Teasdale 91.43 51 ⇓P **P** **02 47 45.4 +0.1**
baz=92
Y18A Canyon Day Jun 91.46 56 ⇓P **P** **02 47 45.2 -0.3**
baz=92
I14A Mackay 91.48 45 ⇑P **P** **02 47 45.5 +0.1**
baz=92
SPUT South Promonto 91.49 48 *e*P **P** **02 47 47.6 +2.1**
319A Douglas 91.51 58 ⇑P **P** **02 47 45.9 +0.1**
baz=92
M15A Larsen Ranch, 91.53 48 ⇓P **P** **02 47 45.2 -0.4**
baz=92,SNR=7.3
T17A Navajo Res., N 91.63 53 ⇓P **P** **02 47 46.0 -0.2**
baz=92
X18A Snowflake 91.71 55 ⇓P **P** **02 47 46.7 +0.1**
baz=92
H14A Leadore 91.72 45 ⇑P **P** **02 47 46.4 -0.1**
baz=92
S17A Black Ridge (B 91.79 52 ⇑P **P** **02 47 46.9 -0.1**
baz=92
119A Ashpeak Ranch, 91.82 57 ⇓P **P** **02 47 47.4 +0.2**
baz=92
J15A Blackfoot 92.05 46 ⇓P **P** **02 47 48.2 +0.2**
baz=92
R17A Hanksville Air 92.05 51 ⇓P **P** **02 47 48.2 +0.1**
baz=92
320A Kipp Ranch, An 92.13 59 ⇓P **P** **02 47 49.1 +0.5**
baz=92
Y19A Nutrioso 92.13 56 ⇓P **P** **02 47 48.6 -0.1**
baz=92
H15A Lima 92.22 45 ⇓P **P** **02 47 48.4 -0.4**
baz=92,SNR=5.1
T18A Mexican Hat 92.39 53 ⇓P **P** **02 47 49.1 -0.6**
baz=93
S18A Hurst Farm, Bl 92.43 52 ⇑P **P** **02 47 49.9 0.0**
baz=93
DLMT Dillon 92.45 44 *e*P **P** **02 47 51.5 +1.7**
G15A Dillon 92.47 44 ⇓P **P** **02 47 50.3 +0.4**
baz=93
Z20A Nine Sixteen R 92.48 57 ⇑P **P** **02 47 51.0 +0.8**
baz=93
R18A Canyonlands Na 92.67 51 ⇓P **P** **02 47 51.2 +0.2**
baz=93
P18A Preston Nutter 92.70 50 ⇓P **P** **02 47 51.4 +0.3**
baz=93
U19A Dine' College, 92.71 54 ⇓P **P** **02 47 51.6 +0.4**
baz=93
121A Cookes Peak, D 93.01 58 ⇑P **P** **02 47 53.5 +0.7**
baz=93
Z21A St. Cloud Mine 93.27 57 ⇑P **P** **02 47 54.5 +0.6**
baz=93
R20A Redvale 93.78 52 ⇓P **P** **02 47 56.2 0.0**
baz=94
Z22A Elephant Butte 93.84 57 ⇓P **P** **02 47 56.9 +0.4**
baz=94
PDAR Pinedale Array 93.94 47 P **P** **02 47 58.5 +1.7**
comp=Z,0.3nm,0.4s,mb4.0,baz=274,slow=2.4,SNR=4.1

PDAR LR LR 03 21 12.2
comp=Z,69nm,19.9s,MS4.1,baz=99,slow=30
U21A Nageezi 93.96 54 ⇑P **P 02 47 57.2 +0.2**
baz=94
S21A Coal Bank Pass 94.12 53 ⇓P **P 02 47 58.1 +0.4**
baz=94
O20A White River Ci 94.31 50 ⇑P **P 02 47 59.0 +0.4**
baz=94
MNTX Cornudas Mount 94.83 59 *e*P **P 02 48 01.4 +0.3**
comp=Z,0.7nm,0.7s,mb4.2
Q22A Crested Butte, 95.05 51 ⇑P **P 02 48 02.6 +0.6**
baz=95
MK31 Makanchi Array 95.09 317 *e*P **P 02 48 01.1 -0.8**
MK31 *e**PP pP 02 48 16.3 -0.8
MKAR Makanchi Array 95.09 317 P **P 02 48 01.6 -0.4**
comp=Z,19nm,0.7s,mb5.6,baz=95,slow=6.4,SNR=168
MKAR pP pP 02 48 13.6 -3.5
comp=Z,9.6nm,0.8s,baz=101,slow=6.3,SNR=11
MKAR PKKP PKKPbc 03 04 53.5 -4.6
comp=Z,0.5nm,0.7s,baz=277,slow=2.8,SNR=5.6
MKAR LR LR 03 29 40.9
comp=Z,54nm,20.8s,MS4.0,baz=270,slow=35
MKAR Makanchi Array 95.09 317 P **P 02 48 01.6 -0.3**
MKAR *PP pP 02 48 13.6 -3.5
ZAA0 Zalesovo Array 95.17 324 *e*P **P 02 48 00.3 -1.8**
ZAA0 *e*pP pP 02 48 14.7 -2.5
ZALV Zalesovo Beam 95.17 324 P **P 02 48 00.7 -1.4**
comp=Z,4.8nm,0.7s,mb5.0,baz=116,slow=4.5,SNR=18
ZALV pP pP 02 48 14.9 -2.3
comp=Z,3.3nm,0.8s,baz=100,slow=5.0,SNR=4.4
ZALV LR LR 03 28 38.6
comp=Z,60nm,21.8s,MS4.0,baz=85,slow=34
ZALV Zalesovo Beam 95.17 324 P **P 02 48 00.7 -1.4**
ZALV *PP pP 02 48 14.9 -2.3
626A Big Bend Ranch 95.46 61 ⇓P **P 02 48 03.6 -0.4**
baz=96
TXAR Lajitas Array 95.82 61 P **P 02 48 03.9 -1.8**
comp=Z,1.1nm,0.7s,mb4.4,baz=266,slow=7.0,SNR=18
TXAR pP pP 02 48 18.9 -1.9
comp=Z,0.4nm,0.8s,baz=244,slow=5.0,SNR=3.5
TXAR PP PP 02 52 11.7 +13
comp=Z,0.2nm,0.7s,baz=234,slow=4.3,SNR=3.5
TXAR LR LR 03 21 24.5
comp=Z,100nm,20.5s,MS4.3,baz=180,slow=29
TXAR Lajitas Array 95.82 61 P **P 02 48 03.9 -1.8**
TXAR *PP pP 02 48 18.9 -1.9
TXAR Lajitas Array 95.82 61 P **P 02 48 03.9 -1.8**
TXAR pP pP 02 48 18.9 -1.9
TXAR PP PP 02 52 11.7 +13
TXAR LR LR 03 21 24.5
YKA Yellowknife Ar 95.87 27 P **P 02 48 03.4 -1.7**
comp=Z,0.6nm,0.7s,mb4.1,baz=259,slow=5.3,SNR=4.3
YKA Yellowknife Ar 95.87 27 P **P 02 48 03.4 -1.7**
KURK Kurchatov 98.23 320 P **P 02 48 14.5 -1.5**
comp=Z,1.6nm,0.7s,mb4.7,baz=96,slow=4.3,SNR=9.9
KURK PP PP 02 52 12.0 -4.3
comp=Z,0.4nm,0.6s,baz=101,slow=8.3,SNR=5.1
KURK Kurchatov 98.23 320 *e*P **P 02 48 14.4 -1.7**
KURK pmax pmax
comp=Z,1.0nm,0.5s,mb4.6
KURK Kurchatov 98.23 320 *e*P **P 02 48 14.4 -1.6**
comp=Z,1.2nm,0.5s,mb4.7
BVAR Borovoye Array 103.55 322 Pdiff Pdif 02 48 38.4 -1.4
comp=Z,0.7nm,0.6s,baz=35,slow=5.3,SNR=5.2
ARCES ARCESS Array B 117.91 346 PKP PKPdf 02 53 23.3 -1.4
comp=Z,3.9nm,0.5s,baz=74,slow=2.0,SNR=111
ARCES ARCESS Array B 117.91 346 PKP PKPdf 02 53 23.3 -1.4
LPAZ La Paz 118.85 117 PKP PKPdf 02 53 26.5 -1.6
comp=Z,0.3nm,0.4s,baz=268,slow=5.9,SNR=3.9
JOF Joensuu 120.55 338 *e*PKIKP PKPdf 02 53 25.4 -4.5
JOF Joensuu 120.55 338 *e*p PKPdf 02 53 25.4 -4.5
comp=Z,2.7nm,0.6s
VRHR Novokhopersk 121.28 323 *e*PKIKP PKPdf 02 53 29.6 -2.1
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,4.0nm,0.7s
VRHR pmax pmax
comp=Z,10.0nm,0.7s
GNI Garni 122.17 310 PKP PKPdf 02 53 33.9 +0.1
comp=Z,2.8nm,0.3s,baz=69,slow=8.0,SNR=3.3
GNI Garni 122.17 310 ⇓PKIKP PKPdf 02 53 33.7 -0.1
GNI Garni 122.17 310 *e*PKPdf PKPdf 02 53 33.9 +0.1
ZEI Tsey 122.22 313 *e*PKIKP PKPdf 02 53 31.7 -2.1
ZEI pmax pmax
comp=Z,6.0nm,0.5s
CPUP Villa Florida 122.49 132 PKP PKPdf 02 53 33.4 -1.4
comp=Z,0.6nm,0.5s,baz=194,slow=1.1,SNR=5.1
CPUP Villa Florida 122.49 132 PKP PKPdf 02 53 33.4 -1.4
VSR Storozhevoye 122.67 324 *e*PKIKP PKPdf 02 53 33.3 -1.1
VSR *e* 02 53 49.1
VSR pmax pmax
comp=Z,10.0nm,0.8s
VSR pmax pmax
comp=N,4.0nm,0.4s
VSR pmax pmax
comp=E,1.0nm,0.2s
KIV Kislovodsk 122.79 314 *i* PKIKP PKPdf 02 53 31.7 -3.1
KIV pmax pmax
comp=Z,4.0nm,1.1s
KAF Kangasniemi 122.85 339 *e*PKIKP PKPdf 02 53 32.2 -2.2
KAF Kangasniemi 122.85 339 *e*p PKPdf 02 53 32.2 -2.2
comp=Z,3.9nm,0.6s
FINES FINESS Array B 123.38 339 PKP PKPdf 02 53 33.8 -1.6
comp=Z,2.2nm,0.7s,baz=58,slow=1.4,SNR=9.8
NB2 NORSAR Subarra128.28 345 PKPdf PKPdf 02 53 43.9 -0.9
comp=Z,2.3nm,1.1s,baz=31,slow=1.9
NOA NORSAR Array B 128.28 345 PKP PKPdf 02 53 43.7 -1.1
comp=Z,1.4nm,0.7s,baz=31,slow=2.0,SNR=6.0
NOA pPKP pPKPdf 02 53 57.7 -2.8
comp=Z,2.0nm,0.9s,baz=35,slow=1.9,SNR=4.8
NOA NORSAR Array B 128.28 345 PKP PKPdf 02 53 43.7 -1.1
NOA pPKP pPKPdf 02 53 57.7 -2.8
HFS Hagfors 128.38 343 PKP PKPdf 02 53 44.2 -0.8
comp=Z,1.9nm,0.8s,baz=94,slow=6.2,SNR=6.5
AKASG Malin Array Be 128.48 327 PKP PKPdf 02 53 44.0 -1.5
comp=Z,1.3nm,0.7s,baz=67,slow=2.0,SNR=5.4
AKASG pPKP pPKPdf 02 53 59.3 -1.8
comp=Z,5.6nm,1.0s,baz=64,slow=1.6,SNR=4.3
BRTR Keskin Array B 130.50 312 PKP PKPdf 02 53 49.2 -0.5
comp=Z,0.9nm,0.8s,baz=139,slow=12,SNR=4.3
BRTR SKPbc SKPbc 02 57 11.1 +2.1
comp=Z,1.1nm,0.7s,baz=49,slow=3.8,SNR=4.8
EIL Elat 132.07 299 PKP PKPdf 02 53 52.8 -0.2
comp=Z,2.2nm,0.8s,baz=8.8,slow=7.2,SNR=4.0
BUR08 Bucovina Ar. S 132.37 325 *e*PKPdf PKPdf 02 53 53.6 +0.6
BURAR Bucovina Array 132.38 325 ⇑*i*P PKPdf 02 53 53.7 +0.7
MLR Muntele Rosu 133.12 322 PKP PKPdf 02 53 53.5 -1.0
comp=Z,1.1nm,0.5s,baz=256,slow=12,SNR=3.9
CLL Collm 135.72 336 *e*pPKiKP pPKPdf 02 54 16.0 +1.2
CLL LmV 03 57 00.0
comp=Z,100nm,18.5s
EKA Eskdalemuir Ar 136.49 351 PKP PKPdf 02 53 59.8 -0.7
comp=Z,0.8nm,0.5s,baz=356,slow=1.5,SNR=8.7
PKSM Moragy 136.81 327 ⇓*i*P PKPdf 02 54 00.1 -1.2
DAVOX Davos/Dischmat 140.56 335 PKP PKPdf 02 54 08.1 -0.1
comp=Z,2.4nm,0.5s,baz=341,slow=18,SNR=3.9
SSF Saint Saulge 142.69 341 *e*PKP1 PKPdf 02 54 10.4 -1.6
comp=Z,12nm,0.9s
LPL La Plagne 142.86 336 *e*PKP1 PKPdf 02 54 08.8 -3.6
comp=Z,12nm,0.8s
LPG La Plagne 142.87 336 *e*PKP1 PKPdf 02 54 08.9 -3.5
comp=Z,11nm,0.8s
BNI Bardonecchia 143.27 336 *e*PKIKP PKPdf 02 54 10.5 -2.6
BGF Bois d'Agland 143.34 341 *e*PKP1 PKPdf 02 54 11.2 -2.0
MBDF Montbardon 143.50 336 ⇑*i*PKP1 PKPdf 02 54 09.7 -3.8
comp=Z,11nm,0.7s
PLDF La Plantade 143.61 340 *e*P PKPdf 02 54 10.5 -3.2
ORIF Oris-en-Rattie 143.69 337 *e*PKP1 PKPdf 02 54 10.9 -2.9
comp=Z,39nm,0.7s
ORIF *e*MLR MLR
comp=Z,74nm,22.2s,MS4.1
TCF Toulx Ste Croi 143.78 342 *e*PKP1 PKPdf 02 54 10.8 -3.2
SBF Sospel 143.93 334 *e*PKP1 PKPdf 02 54 11.0 -3.3
comp=Z,71nm,0.9s
PYM Petit Puy Mans 144.01 340 *e*P PKPdf 02 54 17.5 +3.1
MFF Saint Martin d 144.18 344 *e*PKP1 PKPdf 02 54 12.0 -2.6
comp=Z,24nm,0.7s
OG26 St.-Nazaire-De 144.20 337 *e*P PKPdf 02 54 12.9 -1.8
VIVF Saint-Julien-l 144.20 338 *e*PKP1 PKPdf 02 54 12.5 -2.2
comp=Z,26nm,0.8s
LBL Lubilhac 144.38 340 *e*P PKPdf 02 54 13.9 -1.1
FRF La Foret Royal 144.50 335 ⇑*i*PKP1 PKPdf 02 54 13.0 -2.3
comp=Z,58nm,0.8s
SMRF Simiane la Rot 144.60 336 ⇑*i*PKP1 PKPdf 02 54 13.9 -1.6
comp=Z,33nm,0.8s
LMR La Mourre 144.75 334 ⇑*i*PKP1 PKPdf 02 54 13.9 -1.8
comp=Z,53nm,0.7s
VAE Valguarnera 144.78 320 PKP PKPdf 02 54 15.3 -0.6
comp=Z,9.4nm,0.9s,baz=74,slow=10,SNR=2.9
RJF Les Rejaudoux 144.88 342 ⇑*i*PKP1 PKPdf 02 54 14.6 -1.3
comp=Z,20nm,0.8s
RJF *e*MLR MLR
comp=Z,74nm,21.5s,MS4.1
RJF Les Rejaudoux 144.88 342 ⇑*i*PKP PKPdf 02 54 14.6 -1.3
RJF LR LR
comp=Z,70nm,21.5s,MS4.4
CAF Calviac 145.05 341 ⇑*i*PKP1 PKPbc 02 54 15.4 -0.2
comp=Z,24nm,0.9s
LASF Ste Croix 145.17 338 ⇑*i*PKP1 PKPbc 02 54 15.8 -0.3
comp=Z,38nm,0.9s
LFF La Frestale 145.45 342 *e*PKP1 PKPbc 02 54 16.3 -0.6
MTLF Montolieu 146.40 339 ⇑*i*PKP1 PKPbc 02 54 19.4 -0.5
comp=Z,16nm,0.8s
EPF Esparros 147.30 341 *e*PKP1 PKPbc 02 54 21.4 -1.0
comp=Z,9.7nm,0.8s
KEST Kesra 149.02 322 PKPbc PKPbc 02 54 26.8 -0.5
comp=Z,7.2nm,0.7s,baz=232,slow=2.1,SNR=33
KEST Kesra 149.02 322 *e*PKPbc PKPbc 02 54 26.6 -0.6
DFRA Djebel Bou Aff 150.40 327 P PKPbc 02 54 30.7 +0.1
PCAB Cabril 150.49 352 *e*PKPdf PKPbc 02 54 30.0 -0.6
PCAB Cabril 150.49 352 *e*PKPab PKPab 02 54 45.9 +8.7
MVO Moncorvo 150.87 350 *e*PKPdf PKPbc 02 54 31.1 -0.5
MVO Moncorvo 150.87 350 *e*PKPab PKPab 02 54 47.1 +8.3
PVRL Vila Real 150.87 351 *e*PKPdf PKPbc 02 54 31.1 -0.4
PVRL Vila Real 150.87 351 *e*PKPab PKPab 02 54 47.5 +8.7
SET Setif 150.91 327 P PKPbc 02 54 32.0 +0.2
PVIS Viseu 151.45 351 *e*PKPdf PKPbc 02 54 32.3 -0.6
PVIS Viseu 151.45 351 *e*PKPab PKPab 02 54 48.3 +7.1
ESDC Sonseca Array 151.64 344 PKPbc PKPbc 02 54 32.5 -0.8
comp=Z,2.7nm,0.8s,baz=14,slow=3.1,SNR=13
MTE Manteigas 151.70 350 *e*PKPdf PKPbc 02 54 33.2 -0.3
MTE Manteigas 151.70 350 *e*PKPab PKPab 02 54 49.3 +7.0
MTE Manteigas 151.70 350 *e*PKPbc PKPbc 02 54 32.8 -0.7
PAB San Pablo 151.86 345 *e*PKIKP PKPbc 02 54 32.9 -1.0
PCBR Castelo Branco 152.24 350 *e*PKPdf PKPbc 02 54 33.9 -0.8
PCBR Castelo Branco 152.24 350 *e*PKPab PKPab 02 54 50.6 +6.1
PMRV Marv??o 152.62 350 *e*PKPdf PKPbc 02 54 35.0 -0.6
PMRV Marv??o 152.62 350 *e*PKPab PKPab 02 54 51.4 +5.2

*ISCJB **09** 03:01:26.5±0.4, 32°.26N±0°.02×115°.29W±0°.02, h12km±3km, Error ellipse: s-maj=3.4km s-min=3.3km az=43.1*
*ECX **09** 03:01:28.2±0.6, 32°.24N×115°.32W, h4km, MD3.8, ML3.9*
*NEIC **09** 03:01:28.2, 32°.24N×115°.32W, h4km, mb3.7/1, ML3.9(ECX), ML3.7(PAS), After ECX.*
*IDC **09** 03:01:32.1±2.4, 32°.37N×114°.78W, h0km, mb1 3.5/5, mb1mx3.4/26, mbtmp3.1/5, ML3.6/4, Error ellipse: s-maj=37.0km s-min=11.7km az=46.0*
ISC 09 03:01:27.1±0.3, 32°.25N±0°.02×115°.38W±0°.02, h7km±3km, n45, σ1§22/75, 13C-1D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.18**	**20**	⇑*e*P			**Pg**	**03 01 30.3**	**-0.4**
CPBX				*e*S			**Sg**	**03 01 33.2**	**-0.1**
EMX	**El Mayor**	**0.28**	**156**	⇑*e*P			**Pg**	**03 01 32.7**	**+0.1**
EMX				*e*S			**Sg**	**03 01 36.7**	**+0.3**
SGL	**Mount Signal**	**0.50**	**324**	⇑*i*P			**Pg**	**03 01 37.5**	**+0.8**
RDX	**Rancho Dawling**	**0.58**	**237**	⇑*e*P			**Pg**	**03 01 38.9**	**+0.7**
RDX				⇑*e*				03 01 49.8	
comp=N,5μm,0.4s									
YUH	**Yuha Desert**	**0.61**	**311**	⇑*i*P			**Pg**	**03 01 39.4**	**+0.5**
COA	**Coachella**	**0.65**	**19**	*e*P			**Pg**	**03 01 39.7**	**+0.1**
COK	**Cook Ranch**	**0.67**	**334**	*e*P			**Pg**	**03 01 40.7**	**+0.7**
RMX	**La Rumorosa**	**0.69**	**301**	⇑*e*P			**Pg**	**03 01 40.8**	**+0.4**
YMD	**Yuma Desert**	**0.77**	**66**	⇓*i*P			**Pg**	**03 01 41.0**	**-0.8**
ECBX	**El Chinero**	**0.82**	**160**	⇑*e*P			**Pg**	**03 01 42.3**	**-0.5**
ECBX				*e*S			**Sg**	**03 01 53.2**	**-0.3**
GLA	**Glamis**	**0.93**	**30**	*e*Pg			**Pg**	**03 01 43.3**	**-1.6**
GLA				*e*Sg			**Sg**	**03 01 56.1**	**-0.8**
CBX	**Cerro Bola**	**1.09**	**274**	⇑*e*P			**Pg**	**03 01 48.1**	**+0.1**
CBX				*e*S			**Sg**	**03 02 03.6**	**+1.3**
BAR	**Barrett**	**1.18**	**292**	*e*Pn			**Pn**	**03 01 49.2**	**-0.8**
BAR				*e*Sn			**Sn**	**03 02 04.8**	**-1.5**
ECNX	**Esteban Cantu**	**1.19**	**241**	⇑*e*P			**Pg**	**03 01 49.6**	**-0.4**
ECNX				⇑*e*P				03 01 49.1	
ECNX				*e*S			**Sg**	**03 02 05.1**	**-0.4**
ECNX				*e*S			**Sg**	**03 02 06.5**	**+1.1**
SPX	**San Pedro Mart**	**1.20**	**184**	⇑*e*P			**Pg**	**03 01 49.0**	**-1.1**
SPX				*e*S			**Sg**	**03 02 05.8**	**+0.1**
PBX	**Punta Banda**	**1.25**	**247**	⇑*e*P			**Pn**	**03 01 50.5**	**-0.5**
PBX				*e*S			**Sg**	**03 02 08.0**	**+0.7**
PFO	**Pinyon Flat Ob**	**1.63**	**327**	*e*Pn			**Pn**	**03 01 54.0**	**-2.2**
LDFC	**Landfair**	**2.83**	**4**	*e*Pn			**Pn**	**03 02 12.5**	**-0.2**
LDFC				*e*Pg			**Pg**	**03 02 23.6**	**+2.2**
LDFC				*e*Sg			**Sg**	**03 03 02.1**	**+4.0**
MWC	**Mount Wilson**	**2.99**	**312**	*e*Pn			**Pn**	**03 02 15.4**	**+0.5**
MWC				*e*Pg			**Pg**	**03 02 24.2**	**-0.1**
MWC				*e*Sg			**Sg**	**03 02 60.0**	**-3.2**
PASC	**Pasadena Art C**	**3.04**	**310**	*e*Pn			**Pn**	**03 02 12.9**	**-2.6**
PASC				*e*Pg			**Pg**	**03 02 22.5**	**-2.8**
PASC				*e*Sg			**Sg**	**03 03 01.0**	**-3.6**
GSC	**Goldstone**	**3.27**	**339**	*e*Pn			**Pn**	**03 02 19.4**	**+0.7**
GSC				*e*Pg			**Pg**	**03 02 31.9**	**+2.1**
TUC	**Tucson**	**3.89**	**88**	*e*Pn			**Pn**	**03 02 24.9**	**-2.4**
TUC				*e*Pg			**Pg**	**03 02 37.3**	**-4.3**
TUC				*e*Sg			**Sg**	**03 03 33.8**	**+1.8**
ISA	**Isabella**	**4.27**	**324**	*e*Pn			**Pn**	**03 02 33.6**	**+1.0**
ISA				*e*Pg			**Pg**	**03 02 46.2**	**-2.7**
ISA				*e*Sg			**Sg**	**03 03 50.1**	**+5.9**
WUAZ	**Wupatki**	**4.66**	**44**	*e*Pn			**Pn**	**03 02 38.5**	**+0.7**
WUAZ				*e*Pg			**Pg**	**03 02 56.2**	**-0.1**
WUAZ				*e*Sg			**Sg**	**03 03 53.5**	**-3.3**
CCUT	**Cedar City**	**5.54**	**17**	*e*Pn			**Pn**	**03 02 50.4**	**+0.4**
comp=N,12nm,0.7s									
CCUT				*e*Pg			**Pg**	**03 03 13.8**	**+0.6**
ARUT	**Antelope Range**	**5.75**	**15**	*e*Pn			**Pn**	**03 02 55.3**	**+2.5**
comp=N,12nm,0.5s									
NVAR	**Mina Array Bea**	**6.62**	**340**	Pn			**Pn**	**03 03 12.8**	**+8.1**
comp=N,0.1nm,0.3s,baz=161,slow=17,SNR=3.3									
NVAR				Pg			**Pg**	**03 03 30.8**	**-3.0**
comp=N,0.1nm,0.3s,baz=164,slow=17,SNR=3.6									
NVAR	**Mina Array Bea**	**6.62**	**340**	Pn			**Pn**	**03 03 12.8**	**+8.1**
NVAR				Pg			**Pg**	**03 03 30.8**	**-3.0**
MSU	**Marysvale**	**6.77**	**22**	*e*Pn			**Pn**	**03 03 10.9**	**+4.0**
MSU				*e*Pg			**Pg**	**03 03 36.4**	**-0.5**
MSU				*e*Sg			**Sg**	**03 05 03.7**	**-0.8**
LAZ	**Ladron**	**7.22**	**70**	*e*Pn			**Pn**	**03 03 13.0**	**0.0**
comp=N,0.9nm,0.4s									
LENM	**Lemitar**	**7.30**	**73**	*e*Pn			**Pn**	**03 03 14.3**	**+0.2**
MVCO	**Mesa Verde**	**7.52**	**47**	*e*Pn			**Pn**	**03 03 18.7**	**+1.6**
comp=N,11nm,0.5s									
MVCO				*e*Sg			**Sg**	**03 05 24.1**	**-4.4**
BNM	**Barren Site**	**7.57**	**73**	*e*Pn			**Pn**	**03 03 17.6**	**-0.3**
comp=N,5.2nm,0.4s									
LPM	**Los Pinos Moun**	**7.61**	**72**	*e*Pn			**Pn**	**03 03 18.4**	**+0.1**
SRU	**San Rafael**	**7.90**	**29**	*e*Pn			**Pn**	**03 03 23.2**	**+0.8**
comp=N,20nm,0.9s									
ANMO	**Albuquerque**	**7.91**	**68**	Pn			**Pn**	**03 03 22.5**	**-0.1**
comp=N,0.1nm,0.3s,baz=262,slow=7.1,SNR=2.2									
ANMO				Lg				03 05 37.7	
comp=N,0.1nm,0.3s,baz=342,slow=20,SNR=3.1									
ANMO	**Albuquerque**	**7.91**	**68**	Pn			**Pn**	**03 03 22.5**	**0.0**
ANMO				Lg				03 05 37.7	
PV01	**Paradox Valley**	**8.09**	**42**	*e*Pn			**Pn**	**03 03 26.2**	**+1.2**
comp=N,846nm,0.9s									
PV04	**Paradox Valley**	**8.10**	**39**	*e*Pn			**Pn**	**03 03 27.4**	**+2.3**
ELK	**Elko**	**8.48**	**1**	Pn			**Pn**	**03 03 36.4**	**+6.0**
comp=N,0.1nm,0.3s,baz=179,slow=13,SNR=2.1									
ELK				Pg			Pn	03 04 07.9	+38
comp=N,0.0nm,0.3s,baz=192,slow=12,SNR=2.4									
ELK				Lg				03 05 56.4	
comp=N,0.0nm,0.3s,baz=250,slow=12,SNR=2.0									
MNTX	**Cornudas Mount**	**8.51**	**91**	*e*Pn			**Pn**	**03 03 29.5**	**-1.2**
comp=N,1.6nm,0.6s									
MNTX				*e*Sn			**Sn**	**03 05 04.1**	**-2.9**
SDCO	**Great Sand Dun**	**9.78**	**53**	*e*Pn			**Pn**	**03 03 50.2**	**+2.1**
comp=N,5.3nm,1.3s									
TXAR	**Lajitas Array**	**10.48**	**103**	Pn			**Pn**	**03 03 58.3**	**+0.5**
comp=N,0.7nm,0.3s,baz=278,slow=12,SNR=34									
TXAR				Lg				03 06 50.7	
comp=N,0.0nm,0.3s,baz=283,slow=28,SNR=2.5									
PDAR	**Pinedale Array**	**11.47**	**22**	Pn			**Pn**	**03 04 15.8**	**+4.5**
comp=N,0.1nm,0.3s,baz=200,slow=10,SNR=3.1									
WVT	**Waverly**	**23.08**	**73**	*e*P			**P**	**03 06 32.8**	**-0.5**
comp=N,1.5nm,0.7s									

*ISCJB **09** 03:23:03.0±0.7, 13°.97N±0°.10×91°.82W±0°.05, h82km±14km, Error ellipse: s-maj=17.3km s-min=4.6km az=24.2*
*NEIC **09** 03:23:06.4, 13°.80N×92°.16W, h20km, MD4.0(MEX), After MEX.*
*MEX **09** 03:23:06.4±1.1, 13°.80N×92°.16W, h20km±40km, MD4.0*
*CASC **09** 03:23:06.0±2.5, 13°.97N×91°.65W, h62km±34km, MD3.7*
ISC 09 03:23:04.2±0.7, 13°.96N±0°.09×91°.81W±0°.05, h71km±18km, n25, σ1§15/41, 5C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.39**	**25**	⇑*i*P			**Pn**	**03 23 17.5**	**+1.4**
THIG		**1.04**	**335**	*i* P			**Pn**	**03 23 22.9**	**-0.3**
THIG				*i* S			**Sn**	**03 23 36.9**	**-0.5**
FUG	**Fuego 3**	**1.05**	**63**	⇑*i*P			**Pn**	**03 23 23.5**	**+0.2**
FG6		**1.07**	**56**	⇑*e*P			**Pn**	**03 23 24.0**	**+0.4**
FG6				*e*S			**Sn**	**03 23 36.9**	**-1.3**
TP2	**Tecpan 2**	**1.11**	**43**	⇑*e*P			**Pn**	**03 23 24.9**	**+0.8**
TP2				*e*S			**Sn**	**03 23 39.0**	**-0.1**
PCG	**Pacaya**	**1.24**	**70**	⇑*e*P			**Pn**	**03 23 26.4**	**+0.6**
PCG				*e*S			**Sn**	**03 23 40.8**	**-1.1**
NBG	**Las Nubes**	**1.54**	**66**	*e*P			**Pn**	**03 23 31.7**	**+1.9**
NBG				*e*S			**Sn**	**03 23 51.3**	**+2.3**
RBDL	**Robledal**	**2.06**	**86**	*e*P			**Pn**	**03 23 36.6**	**-0.1**
RBDL				*e*S			**Sn**	**03 24 00.0**	**-1.4**
RTR	**El Retiro**	**2.10**	**92**	*e*P			**Pn**	**03 23 36.7**	**-0.5**
SBLS	**San Blas**	**2.12**	**93**	*e*P			**Pn**	**03 23 38.2**	**+0.7**
SNJE	**San Jose**	**2.14**	**92**	*e*P			**Pn**	**03 23 37.3**	**-0.4**
PCIG		**2.21**	**322**	*i* P			**Pn**	**03 23 39.2**	**+0.5**
PCIG				*i* S			**Sn**	**03 24 03.9**	**-1.0**
MRL	**Marmol**	**2.32**	**62**	*e*P			**Pn**	**03 23 40.7**	**+0.5**
LFRS	**El Faro**	**2.69**	**97**	*e*S			**Sn**	**03 24 14.8**	**-1.8**
SNVI	**San Vicente**	**2.90**	**97**	*e*P			**Pn**	**03 23 47.3**	**-0.8**
TGIG		**3.07**	**336**	*e*P			**Pn**	**03 23 52.5**	**+2.1**
TGIG				*i* S			**Sn**	**03 24 26.8**	**+0.8**
CMIG	**Matias Romero**	**4.30**	**317**	*e*P			**Pn**	**03 24 06.1**	**-1.0**
CMIG				*i* S			**Sn**	**03 24 53.5**	**-2.5**
CMIG	**Matias Romero**	**4.30**	**317**	*e*P			**Pn**	**03 24 06.1**	**-1.0**
CMIG				*i* S			**Sn**	**03 24 53.5**	**-2.5**
HUIG	**Huatulco**	**4.53**	**294**	*i* P			**Pn**	**03 24 08.3**	**-2.0**
HUIG				*i* S			**Sn**	**03 24 54.3**	**-7.4**
HUIG	**Huatulco**	**4.53**	**294**	*i* P			**Pn**	**03 24 08.3**	**-2.0**
HUIG				*i* S			**Sn**	**03 24 54.3**	**-7.4**
VHO	**Vista Hermosa**	**5.67**	**304**	*e*P			**Pn**	**03 24 27.3**	**+1.5**
VHO				*i* S			**Sn**	**03 25 28.4**	**-1.2**
VHO	**Vista Hermosa**	**5.67**	**304**	*e*P			**Pn**	**03 24 27.3**	**+1.5**
VHO				*i* S			**Sn**	**03 25 28.4**	**-1.2**
PNIG	**Pinotepa**	**6.56**	**292**	*i* P			**Pn**	**03 24 39.2**	**+1.1**
PNIG				*i* S			**Sn**	**03 25 43.9**	**-7.7**
PNIG	**Pinotepa**	**6.56**	**292**	*i* P			**Pn**	**03 24 39.2**	**+1.1**
PNIG				*i* S			**Sn**	**03 25 43.9**	**-7.7**
UTMO	**Huajuapan**	**6.93**	**304**	*e*P			**Pn**	**03 24 44.0**	**+0.9**

*IDC **09** 03:25:24.6±0.9, 11°.81S×75°.03W, h0km, mb3.7/7, mb1 4.0/8, mb1mx3.9/17, mbtmp3.7/8, ML3.7/1, Error ellipse: s-maj=20.8km s-min=15.5km az=4.0*
*ISCJB **09** 03:25:30.3±1.1, 11°.93S±0°.08×75°.1W±0°.1, h60km±12km, mb4.0/11, Error ellipse: s-maj=19.9km s-min=9.8km az=149.6*
*NEIC **09** 03:25:31.4±0.9, 11°.92S×75°.19W, h46km±9km, mb4.1/7, Error ellipse: s-maj=14.0km s-min=7.4km az=64.0*
NEIC Felt [II] at Concepcion and Jauja.
ISC 09 03:25:32.4±1.0, 11°.96S±0°.08×75°.2W±0°.1, h57km±11km, n26, σ0§93/22, mb4.0/11, Central Peru

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NNA	**Nana**	**1.62**	**269**	Pn			**Pn**	**03 25 57.6**	**-1.0**
44nm,0.3s,baz=90,slow=14,SNR=72									
NNA				Lg				03 26 20.6	
104nm,0.3s,baz=16,slow=17,SNR=10									
NNA				Rg				03 26 28.8	
1μm,0.9s,baz=316,slow=12,SNR=19									
ATAH	**Atahualpa**	**5.74**	**326**	Pn			**Pn**	**03 26 56.6**	**+1.5**
5.5nm,0.3s,baz=152,slow=5.9,SNR=44									
ATAH				Lg				03 28 29.4	
1.6nm,0.3s,baz=308,slow=15,SNR=5.4									
LPAZ	**La Paz**	**8.09**	**123**	Pn			**Pn**	**03 27 27.7**	**+0.5**
0.3nm,0.3s,baz=314,slow=12,SNR=12									
LPAZ				Lg				03 29 43.1	
0.7nm,0.3s,baz=39,slow=22,SNR=5.3									
LPAZ	**La Paz**	**8.09**	**123**	Pn			**Pn**	**03 27 27.7**	**+0.5**
LPAZ				Lg				03 29 43.1	
OTAV	**Otavalo**	**12.55**	**345**	*e*Pn			**Pn**	**03 28 27.9**	**-0.3**
SIV	**San Ignacio**	**14.27**	**108**	Pn			**Pn**	**03 28 46.3**	**-5.3**
0.2nm,0.3s,baz=291,slow=14,SNR=3.2									
SIV				Lg				03 32 52.1	
0.6nm,0.3s,baz=221,slow=22,SNR=4.1									
LCO	**Las Campanas**	**17.47**	**167**	*e*P			**Pn**	**03 29 31.6**	**-0.5**
20nm,1.1s									
CFAA	**Coronel Fontan**	**20.57**	**163**	P			**P**	**03 30 06.8**	**+0.3**
0.4nm,0.7s,baz=347,slow=9.4,SNR=7.0				

TBH				eS	Sg	03 55 54.7	+1.3
ITEV	**Isla Los Testi**	**1.35**	**320**	⇑iP	**Pn**	**03 55 40.9**	**+0.2**
ITEV				eS	**Sb**	**03 55 59.1**	**+0.5**
ORIV	**Oritupano**	**1.68**	**223**	eP	**Pn**	**03 55 46.1**	**+1.0**
ORIV				eS	**Sn**	**03 56 08.4**	**+1.5**
TPR	**Prospect**	**1.69**	**59**	eP	**Pn**	**03 55 45.5**	**+0.1**
TPR				eS	**Sn**	**03 56 07.6**	**+0.3**
TPR	**Prospect**	**1.69**	**59**	eP	**Pn**	**03 55 45.5**	**+0.1**
TPR				eS	**Sn**	**03 56 07.6**	**+0.3**
BOT	**Bacolet**	**1.73**	**60**	eP	**Pn**	**03 55 46.4**	**+0.5**
BOT				eS	**Sn**	**03 56 08.7**	**+0.4**
BOT	**Bacolet**	**1.73**	**60**	eP	**Pn**	**03 55 46.4**	**+0.5**
BOT				eS	**Sn**	**03 56 08.7**	**+0.4**
TOSP	**Speyside**	**1.95**	**60**	eP	**Pn**	**03 55 48.9**	**-0.1**
TOSP				eS	**Sn**	**03 56 13.3**	**-0.4**
RIOV	**Rio Grande**	**2.27**	**169**	eP	**Pn**	**03 55 52.7**	**-0.6**
RIOV				eS	**Sn**	**03 56 21.1**	**-0.3**
PCRV	**Puerto La Cruz**	**2.35**	**267**	eP	**Pn**	**03 55 54.5**	**+0.1**
GURV	**El Guri**	**2.66**	**198**	eP	**Pn**	**03 55 58.8**	**+0.1**
CUPV	**Cœpira**	**3.49**	**266**	eP	**Pn**	**03 56 10.0**	**-0.1**
BIRV	**Birongo**	**3.95**	**273**	eP	**Pn**	**03 56 16.4**	**-0.1**
LUEV	**Luepa**	**4.50**	**170**	eP	**Pn**	**03 56 22.5**	**-1.6**
CAOV	**Caicara del Or**	**4.99**	**234**	eP	**Pn**	**03 56 29.6**	**-1.2**
BAUV	**El Baul**	**5.87**	**257**	eP	**Pn**	**03 56 42.0**	**-0.8**

DMN 09 03:57:50.9±0.9, 28°59N×87°00E, h10km, MI4.5/7, Error ellipse: s-maj=21.0km s-min=9.1km az=20.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIRN	**Jiri**	**1.17**	**218**	ePn	Pn	03 58 10.5	-2.8
JIRN				eSn	Sn	03 58 26.3	-3.0
	2μm,0.2s						
GUN	**Gumba**	**1.20**	**236**	ePn	Pn	03 58 10.4	-3.3
GUN				eSn	Sn	03 58 26.2	-3.8
	2μm,0.3s						
TAPN	**Taplejung**	**1.38**	**153**	ePn	Pn	03 58 13.9	-2.3
TAPN				eSn	Sn	03 58 33.5	-1.0
	660nm,0.5s						
RAMN	**Ramite**	**1.67**	**192**	ePn	Pn	03 58 19.6	-0.6
RAMN				eSn	Sn	03 58 39.4	-2.2
	713nm,0.4s						
KKN	**Kakani**	**1.71**	**243**	ePn	Pn	03 58 19.3	-1.5
KKN				eSn	Sn	03 58 40.7	-2.1
PKI	**Pulchoki**	**1.73**	**235**	ePn	Pn	03 58 20.3	-0.8
PKIN	**Phulchoki**	**1.74**	**235**	ePn	Pn	03 58 20.5	-0.6
PKIN				eSn	Sn	03 58 41.4	-2.0
ODAN	**Odare**	**1.75**	**169**	ePn	Pn	03 58 20.7	-0.6
DMN	**Daman**	**1.94**	**240**	ePn	Pn	03 58 23.9	0.0
DMN				eSn	Sn	03 58 46.2	-2.1
	643nm,0.3s						
GKN	**Gorkha**	**2.17**	**255**	ePn	Pn	03 58 26.0	-1.0
GKN				eSn	Sn	03 58 50.6	-3.3
	673nm,0.3s						
KOLN	**Koldanda**	**3.11**	**256**	ePn	Pn	03 58 38.2	-1.8
KOLN				eSn	Sn	03 59 12.9	-4.4
	397nm,0.4s						
SHL	**Shillong**	**5.29**	**124**	ePN	Pn	03 59 09.0	-1.0
SHL				eSN	Sn	04 00 09.0	-2.0

*ISCJB **09** 04:08:40.9±0.3, 24°24N±0°02×122°11E±0°02, h45km±9km, Error ellipse: s-maj=4.4km s-min=2.7km az=151.3*
*TAP **09** 04:08:40.9, 24°27N×122°07E, h48km, ML3.3, C*
*JMA **09** 04:08:40.7±0.2, 24°49N×122°14E, h72km, M2.5*
ISC 09 04:08:41.5±0.3, 24°25N±0°02×122°11E±0°02, h39km±12km, n39, σ0°65/73, 3C-2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.38**	**298**	⇓iP	**Pn**	**04 08 50.5**	**0.0**
ENA				eS	**Sn**	**04 08 57.4**	**+0.5**
	baz=302						
TWC	**Suao**	**0.42**	**327**	P	**Pn**	**04 08 51.0**	**-0.2**
TWC				S	**Sn**	**04 08 57.8**	**-0.1**
	baz=334						
TWD	**Chiawan**	**0.50**	**250**	⇓iP	**Pn**	**04 08 51.6**	**-0.6**
TWD				S	**Sn**	**04 08 59.8**	**+0.2**
	baz=238						
HWA	**Hwalien**	**0.53**	**239**	P	**Pn**	**04 08 52.3**	**-0.3**
HWA				eS	**Sn**	**04 09 00.5**	**+0.1**
	baz=228						
TWE	**Neicheng**	**0.61**	**319**	⇑iP	**Pn**	**04 08 53.6**	**-0.1**
TWE				S	**Sn**	**04 09 02.6**	**+0.2**
	baz=321						
ENTT	**Nioudou**	**0.62**	**308**	⇑iP	**Pn**	**04 08 53.6**	**-0.3**
ENTT				S	**Sn**	**04 09 02.5**	**-0.1**
	baz=309						
NNS	**Nan Shan**	**0.69**	**286**	P	**Pn**	**04 08 54.3**	**-0.5**
NNS				eS	**Sn**	**04 09 04.2**	**-0.1**
	baz=285						
ESL	**Shilin**	**0.76**	**235**	eP	**Pn**	**04 08 54.6**	**-1.0**
ESL				eS	**Sn**	**04 09 05.5**	**-0.4**
	baz=243						
TWB1	**Santiao Chiao**	**0.76**	**352**	P	**Pn**	**04 08 55.1**	**-0.6**
TWB1				eS	**Sn**	**04 09 04.3**	**-1.7**
	baz=354						
WHF	**Hehuan Shan**	**0.78**	**262**	P	**Pn**	**04 08 55.7**	**-0.2**
WHF				S	**Sn**	**04 09 06.2**	**-0.1**
	baz=250						
NSK	**Sanguang**	**0.80**	**302**	iP	**Pn**	**04 08 56.0**	**-0.3**
NSK				eS	**Sn**	**04 09 06.8**	**-0.2**
	baz=302						
TWT	**Tachien**	**0.85**	**270**	eP	**Pn**	**04 08 57.2**	**+0.3**
TWT				eS	**Sn**	**04 09 08.5**	**+0.4**
	baz=268						
YOJ	**Yonaguni jima**	**0.85**	**76**	P	**Pn**	**04 08 57.0**	**0.0**
YOJ				S	**Sn**	**04 09 09.0**	**+0.8**
NWF	**Wu-fen Shan**	**0.87**	**340**	eP	**Pn**	**04 08 57.2**	**0.0**
NWF				eS	**Sn**	**04 09 08.5**	**-0.1**
	baz=353						
TWA	**Mucha**	**0.87**	**327**	P	**Pn**	**04 08 57.4**	**+0.2**
TWA				eS	**Sn**	**04 09 09.3**	**+0.7**
	baz=328						
EHY	**Hungye**	**1.03**	**224**	eP	**Pn**	**04 08 58.3**	**-1.1**
TWS1	**Kuangyinshan**	**1.05**	**324**	eP	**Pn**	**04 08 59.6**	**-0.1**
	baz=231						
NSTT	**Nanjuang**	**1.07**	**291**	eP	**Pn**	**04 09 00.3**	**+0.3**
NSTT				eS	**Sn**	**04 09 14.0**	**+0.2**
	baz=290						
TWY	**Chenhua**	**1.12**	**336**	eP	**Pn**	**04 09 00.5**	**-0.1**
TWY				eS	**Sn**	**04 09 15.2**	**+0.4**
	baz=337						
SMLT	**Sun Moon Lake**	**1.16**	**252**	eP	**Pn**	**04 09 01.7**	**+0.5**
SMLT				eS	**Sn**	**04 09 16.2**	**+0.3**
	baz=243						
TWF1	**Yuli**	**1.16**	**220**	eP	**Pn**	**04 09 00.1**	**-1.1**
TWF1				eS	**Sn**	**04 09 14.8**	**-1.1**
	baz=229						
TYC	**Yuchr**	**1.19**	**253**	eP	**Pn**	**04 09 01.8**	**+0.2**
TYC				eS	**Sn**	**04 09 16.7**	**+0.1**
	baz=244						
YUS	**Yu-Shan**	**1.30**	**234**	⇑P	**Pn**	**04 09 03.6**	**+0.5**
YUS				S	**Sn**	**04 09 19.2**	**-0.1**
	baz=224						
TCU	**Taichung**	**1.31**	**266**	eP	**Pn**	**04 09 03.8**	**+0.6**
TCU				eS	**Sn**	**04 09 20.8**	**+1.2**
	baz=277						
ALS	**Alishan**	**1.40**	**238**	eP	**Pn**	**04 09 05.5**	**+1.0**
ALS				eS	**Sn**	**04 09 22.5**	**+0.7**
	baz=227						
ELDTW	**Lidau**	**1.46**	**224**	eP	**Pn**	**04 09 04.4**	**-0.9**
ELDTW				eS	**Sn**	**04 09 22.4**	**-0.8**
	baz=216						
CHN5	**Tsauling**	**1.46**	**244**	eP	**Pn**	**04 09 05.7**	**+0.4**
CHN5				eS	**Sn**	**04 09 24.3**	**+1.0**
	baz=232						
IRIF	**Iriomote-Funau**	**1.48**	**87**	P	**Pn**	**04 09 05.3**	**-0.3**
IRIF				S	**Sn**	**04 09 24.1**	**+0.3**
HATJ	**Hateruma jima**	**1.56**	**97**	S	**Sn**	**04 09 26.7**	**+0.9**
STYT	**Tauyuan**	**1.65**	**229**	eP	**Pn**	**04 09 08.3**	**+0.4**
	baz=218						
TWG	**Pinlang**	**1.71**	**214**	eP	**Pn**	**04 09 08.8**	**0.0**
TWG				eS	**Sn**	**04 09 27.6**	**-1.8**
	baz=213						
JKRS	**Kuro-shima**	**1.74**	**90**	P	**Pn**	**04 09 09.5**	**+0.4**
JKRS				S	**Sn**	**04 09 31.2**	**+1.1**
TWK	**Hsinying**	**1.78**	**237**	eP	**Pn**	**04 09 09.8**	**+0.1**
TWK				eS	**Sn**	**04 09 32.4**	**+1.3**
	baz=226						
CHN1	**Nanshi**	**1.79**	**234**	eP	**Pn**	**04 09 10.3**	**+0.3**
CHN1				eS	**Sn**	**04 09 33.0**	**+1.5**
	baz=223						
SGST	**Jiashian**	**1.82**	**230**	eP	**Pn**	**04 09 10.3**	**+0.1**
SGST				eS	**Sn**	**04 09 33.1**	**+1.0**
	baz=220						
JIJ	**Ishigaki jima**	**1.86**	**86**	P	**Pn**	**04 09 10.6**	**-0.2**
JIJ				S	**Sn**	**04 09 32.3**	**-0.8**
EAST	**Anshuo**	**2.19**	**212**	eP	**Pn**	**04 09 15.0**	**-0.4**
EAST				eS	**Sn**	**04 09 41.3**	**0.0**
	baz=212						
JTJ	**Tarama**	**2.40**	**80**	S	**Sn**	**04 09 46.3**	**-0.1**
PNG	**Penghu**	**2.43**	**254**	eP	**Pn**	**04 09 17.6**	**-1.1**
PNG				eS	**Sn**	**04 09 46.0**	**-1.2**
	baz=252						

*ISCJB **09** 04:17:45.8±0.3, 60°42S±0°06×45°6W±0°1, h10km, mb4.7/25, MS4.0/12, Error ellipse: s-maj=10.7km s-min=7.7km az=137.0*
*IDC **09** 04:17:45.4±0.4, 60°43S×45°56W, h0km, mb4.6/13, mb1 4.6/15, mb1mx4.6/18, mbtmp4.6/15, ML4.5/2, MS4.1/11, Ms1 4.0/11, ms1mx3.9/19, Error ellipse: s-maj=19.4km s-min=13.8km az=49.0*
*NEIC **09** 04:17:47.1±0.2, 60°45S×45°47W, h10km, mb5.1/14, Error ellipse: s-maj=7.9km s-min=6.4km az=220.0*
ISC 09 04:17:47.8±0.3, 60°42S±0°06×45°6W±0°1, h10km, n84, σ0°81/35, mb4.8/24, MS4.0/12, Scotia Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**9.55**	**235**	Pn	**Pn**	**04 20 04.7**	**-0.5**
PMSA				LR	LR	04 23 01.7	
	3.0nm,0.3s,baz=51,slow=11,SNR=15						
USHA	**Ushuaia**	**13.42**	**284**	Pn	**Pn**	**04 20 57.6**	**-0.4**
USHA				LR	LR	04 25 04.5	
	0.3nm,0.3s,baz=105,slow=14,SNR=3.3						
VNA1	**Neumayer--Stat**	**18.18**	**140**	e	**Pn**	**04 22 00.7**	**+0.9**
VNA1				e		04 25 13.0	
TRQA	**Tornquist**	**24.67**	**328**	eP	**P**	**04 23 09.5**	**+1.1**
	comp=Z,548nm,20.8s,baz=250,slow=33						
	73nm,0.9s,mb5.2						
MAIT	**Maitri**	**24.78**	**138**	eP	**P**	**04 23 10.8**	**+1.7**
PLCA	**Paso Flores**	**25.02**	**311**	eP	**P**	**04 23 11.5**	**-0.1**
	20nm,0.8s,mb4.7,baz=151,slow=8.8,SNR=28						
PLCA	**Paso Flores**	**25.02**	**311**	eP	**P**	**04 23 12.0**	**+0.4**
	20nm,0.8s,mb4.7						
QSPA	**South Pole Qui**	**29.82**	**180**	P	**P**	**04 23 54.6**	**+0.3**
	18nm,0.9s,mb4.8,baz=180,slow=4.1,SNR=41						
QSPA				PcP	PcP	04 26 56.5	-0.6
	3.4nm,0.7s,baz=79,slow=1.4,SNR=5.4						
CFAA	**Coronel Fontan**	**32.49**	**322**	P	**P**	**04 24 17.6**	**-0.6**
	1.9nm,0.7s,mb4.0,baz=166,slow=8.2,SNR=31						
CFAA				PcP	PcP	04 27 04.0	-0.9
	0.8nm,0.7s,baz=184,slow=3.3,SNR=6.4						
CFAA				LR	LR	04 38 24.5	
	comp=Z,20nm,18.0s,MS2.9,baz=174,slow=38						
CPUP	**Villa Florida**	**35.02**	**341**	P	**P**	**04 24 40.5**	**+0.3**
	2.2nm,0.6s,mb4.2,baz=156,slow=7.3,SNR=12						
CPUP				ScP	ScP	04 30 55.4	-2.0
	0.8nm,0.6s,baz=166,slow=2.6,SNR=4.0						
CPUP				LR	LR	04 38 43.6	
	comp=Z,65nm,18.2s,MS3.4,baz=156,slow=36						
CPUP	**Villa Florida**	**35.02**	**341**	eP	**P**	**04 24 40.0**	**-0.2**
	10nm,0.6s,mb4.9						
CPUP				ScP	ScP	04 30 55.4	-2.0
CPUP				LR	LR	04 38 43.6	
LCO	**Las Campanas**	**35.67**	**320**	eP	**P**	**04 24 46.5**	**+0.7**
	28nm,0.6s,mb5.4						
SBA	**Scott Base**	**40.56**	**190**	eP	**P**	**04 25 28.2**	**+1.7**
	14nm,1.1s,mb4.5						
MAW	**Mawson**	**42.12**	**147**	P	**P**	**04 25 39.3**	**-0.1**
	2.0nm,0.8s,mb3.8,baz=220,slow=9.1,SNR=4.3						
MAW				PcP	PcP	04 27 32.3	-1.3
	2.8nm,0.6s,baz=249,slow=0.9,SNR=6.3						
MAW				LR	LR	04 42 57.6	
	comp=Z,318nm,18.2s,MS4.2,baz=231,slow=36						
LPAZ	**La Paz**	**46.99**	**330**	P	**P**	**04 26 19.1**	**+0.3**
	5.7nm,0.7s,mb4.6,baz=137,slow=6.5,SNR=24						
LPAZ				PcP	PcP	04 27 50.9	-0.2
	5.1nm,0.6s,baz=129,slow=3.0,SNR=4.5						
LPAZ				LR	LR	04 44 15.5	
	comp=Z,73nm,20.2s,MS3.6,baz=222,slow=34						
LPAZ	**La Paz**	**46.99**	**330**	eP	**P**	**04 26 18.7**	**-0.2**
LPAZ				PcP	PcP	04 27 50.9	-0.2
LPAZ				ePcP	PcP	04 27 52.3	+1.2
LPAZ				LR	LR	04 44 15.5	
SUR	**Sutherland**	**50.88**	**88**	P	**P**	**04 26 48.6**	**0.0**
	4.9nm,0.8s,mb4.5,baz=90,slow=8.1,SNR=2.8						
NNA	**Nana**	**53.55**	**321**	eP	**P**	**04 27 08.4**	**-0.1**
	9.9nm,0.4s,mb5.1						
BOSA	**Boshof**	**56.16**	**89**	P	**P**	**04 27 26.6**	**-0.7**
	3.5nm,0.8s,mb4.4,baz=190,slow=6.4,SNR=5.2						
BOSA				LR	LR	04 45 58.3	
	comp=Z,195nm,18.4s,MS4.2,baz=147,slow=30						
BOSA	**Boshof**	**56.16**	**89**	eP	**P**	**04 27 26.9**	**-0.5**
	9.6nm,0.8s,mb4.9						
BOSA				LR	LR	04 45 58.3	
LBTB	**Lobatse**	**59.31**	**87**	P	**P**	**04 27 49.2**	**-0.4**
	5.6nm,0.7s,mb4.7,baz=212,slow=15,SNR=6.9						
LBTB	**Lobatse**	**59.31**	**87**	P	**P**	**04 27 49.2**	**-0.4**
OTAV	**Otavalo**	**65.59**	**323**	eP	**P**	**04 28 33.2**	**+1.6**
	39nm,1.3s,mb5.3						
LSZ	**Lusaka**	**68.83**	**84**	LR	LR	04 54 25.8	
	comp=Z,148nm,21.1s,MS4.2,baz=320,slow=32						
LSZ	**Lusaka**	**68.83**	**84**	eP	**P**	**04 28 52.1**	**-0.1**
	7.9nm,0.9s,mb4.6						
ROSC	**El Rosal**	**68.87**	**329**	eP	**P**	**04 28 52.6**	**+0.2**
LIC	**Lamto**	**73.66**	**42**	eP	**P**	**04 29 21.0**	**-0.3**
	162nm,1.7s,mb5.7						
KIC	**Kosan Boka**	**73.88**	**43**	eP	**P**	**04 29 22.0**	**-0.6**
	14nm,0.8s,mb5.0						
TIC	**Toumodi**	**74.05**	**42**	eP	**P**	**04 29 23.6**	**0.0**
	125nm,1.8s,mb5.5						
DBIC	**Dimbokro**	**74.13**	**42**	P	**P**	**04 29 23.8**	**-0.3**
	3.9nm,0.7s,mb4.4,baz=150,slow=8.4,SNR=5.0						
DBIC				LR	LR	04 54 38.1	
	comp=Z,133nm,20.4s,MS4.2,baz=124,slow=30						
DBIC	**Dimbokro**	**74.13**	**42**	P	**P**	**04 29 23.8**	**-0.3**
DBIC				LR	LR	04 54 38.1	
TBI	**Tubuai**	**76.54**	**247**	eLR	LR	04 53 18.1	
	247nm,22.5s,baz=151						
JTS	**JuntasAbangare**	**77.09**	**320**	eP	**P**	**04 29 41.0**	**0.0**
	12nm,0.9s,mb4.8						
PPT	**Papeete**	**81.61**	**249**	eS	S	04 40 15.6	-2.2
	37nm,23.8s						
PPT				eLR	LR	04 55 38.5	
	197nm,23.5s						
PPT	**Papeete**	**81.61**	**249**	LR	LR	04 56 20.6	
	comp=Z,164nm,19.5s,MS4.4,baz=160,slow=28						
MBAR	**Mbarara**	**82.73**	**78**	eP	**P**	**04 30 11.8**	**+0.1**
	1.1nm,0.9s,mb3.9						
STKA	**Stephens Creek**	**87.86**	**186**	P	**P**	**04 30 35.0**	**-2.1**
	2.3nm,0.8s,mb4.5,baz=172,slow=7.9,SNR=3.7						
FORT	**Forrest**	**88.99**	**175**	eP	**P**	**04 30 41.8**	**-0.7**
	19nm,0.7s,mb5.5						
AFI	**Afiamalu**	**94.43**	**232**	LR	LR	05 08 26.3	
	comp=Z,95nm,18.0s,MS4.3,baz=82,slow=32						
ASAR	**Alice Springs**	**96.22**	**180**	P	**P**	**04 31 14.3**	**-1.7**
	1.8nm,0.6s,mb4.7,baz=171,slow=4.4,SNR=15						
ATD	**Arta Tunnel**	**99.15**	**83**	LR	LR	05 14 37.3	
	comp=Z,90nm,20.0s,MS4.3,baz=229,slow=34						
WRA	**Warramunga Arr**	**99.93**	**180**	P	Pdif	04 31 30.6	-2.3
	0.2nm,0.3s,baz=180,slow=4.1,SNR=5.1						
TXAR	**Lajitas Array**	**101.19**	**311**	P	Pdif	04 31 37.8	-0.6
	0.2nm,0.7s,baz=153,slow=4.8,SNR=3.2						
DUG	**Dugway**	**114.27**	**309**	ePKP	PKiKP	04 36 26.3	-0.2
NVAR	**Mina Array Bea**	**114.94**	**304**	PKP	PKiKP	04 36 27.3	-0.6
	0.2nm,0.4s,baz=168,slow=2.1,SNR=4.5						
NVAR	**Mina Array Bea**	**114.94**	**304**	PKP	PKiKP	04 36 27.3	-0.6
HWUT	**Hardware Ranch**	**115.02**	**311**	ePKP	PKiKP	04 36 27.7	-0.2
BW06	**Boulder Array**	**115.28**	**313**	ePKP	PKiKP	04 36 27.5	-0.8
PDAR	**Pinedale Array**	**115.28**	**313**	PKP	PKiKP	04 36 27.2	-1.2
	0.6nm,0.6s,baz=135,slow=5.0,SNR=7.0						
LOHW	**Long Hollow**	**116.40**	**313**	ePKPdf	PKPdf	04 36 30.7	+0.2
HLID	**Hailey**	**117.77**	**310**	ePKPdf	PKPdf	04 36 33.4	+0.2
WVOR	**Wild Horse Val**	**118.46**	**306**	ePKPdf	PKPdf	04 36 34.9	+0.4
BOZ	**Bozeman (W)**	**118.52**	**313**	ePKPdf	PKPdf	04 36 34.4	-0.1
BRTR	**Keskin Array B**	**118.75**	**60**	PKP	PKPdf	04 36 33.2	-2.0
	0.5nm,0.5s,baz=310,slow=2.8,SNR=3.2						
NEW	**Newport**	**122.75**	**311**	ePKPdf	PKPdf	04 36 41.8	-0.8
LON	**Longmire**	**123.31**	**307**	ePKPdf	PKPdf	04 36 43.1	-0.6
RPW	**Rockport**	**124.58**	**308**	ePKPdf	PKPdf	04 36 45.6	-0.4
AKASG	**Malin Array Be**	**125.97**	**49**	PKP	PKPdf	04 36 46.7	-1.9
	2.3nm,0.7s,baz=126,slow=5.5,SNR=4.3						
NOA	**NORSAR Array B**	**128.77**	**31**	PKP	PKPdf	04 36 52.7	-0.9
	0.8nm,0.8s,baz=184,slow=1.2,SNR=2.8						
FINES	**FINESS Array B**	**133.34**	**39**	PKP	PKPdf	04 37 00.3	-2.0
	2.0nm,0.8s,baz=107,slow=4.6,SNR=4.9						
FINES				SKPbc	SKPbc	04 40 26.0	-4.2
	1.1nm,0.5s,baz=253,slow=2.0,SNR=4.9						
FINES	**FINESS Array B**	**133.34**	**39**	PKP	PKPdf	04 37 00.3	-2.0
FINES				SKPbc	SKPbc	04 40 26.0	-4.2
YKA	**Yellowknife Ar**	**133.35**	**323**	PKP	PKPdf	04 37 02.0	-0.2
	1.7nm,0.6s,baz=148,slow=1.6,SNR=5.9						
YKA				SKPbc	SKPbc	04 40 28.4	-1.7
	1.6nm,0.7s,baz=135,slow=3.2,SNR=7.7						
YKA	**Yellowknife Ar**	**133.35**	**323**	PKP	PKPdf	04 37 02.0	-0.2
YKA				SKPbc	SKPbc	04 40 28.4	-1.7
DLBC	**Dease Lake**	**135.49**	**312**	PKP	PKPdf	04 37 07.1	+0.7
	1.3nm,0.2s,baz=28,slow=5.9,SNR=2.8						
DLBC				SKPbc	SKPbc	04 40 35.8	-1.5
	5.7nm,1.0s,baz=173,slow=2.1,SNR=5.9						
ARCES	**ARCESS Array B**	**139.12**	**31**	PKhKP		04 37 02.1	
	0.7nm,0.5s,baz=132,slow=1.8,SNR=14						
ARCES				SKPbc	SKPbc	04 40 43.1	-4.5
	1.1nm,0.8s,baz=110,slow=1.4,SNR=3.7						
EKS2	**Erkin-Say**	**139.96**	**88**	ePKPpre		04 37 08.6	
EKS2				ePKPdf	PKPdf	04 37 15.8	+0.7
KDAK	**Kodiak Island**	**144.18**	**299**	PKP	PKPdf	04 37 20.2	-2.0
	2.5nm,0.5s,baz=156,slow=7.3,SNR=5.4						
BRVK	**Borovoye**	**145.37**	**73**	ePKPbc	PKPbc	04 37 24.0	-0.4
BVAR	**Borovoye Array**	**145.40**	**73**	PKPbc	PKPbc	04 37 23.0	-1.5
	17nm,0.8s,baz=242,slow=3.2,SNR=74						
BVAR				SKP		04 40 58.4	
	0.8nm,0.5s,baz=297,slow=0.5,SNR=4.8						
ENH	**Enshi**	**145.56**	**140**	ePKPbc	PKPbc	04 37 24.0	-1.7
MCK	**McKinley**	**145.95**	**309**	ePKPbc	PKPbc	04 37 25.8	-0.1
COLA	**College**	**146.11**	**312**	ePKPbc	PKPbc	04 37 25.9	-0.4
MK31	**Makanchi Array**	**147.15**	**91**	ePKPbc	PKPbc	04 37 28.6	-1.3
MKAR	**Makanchi Array**	**147.15**	**91**	PKPbc	PKPbc	04 37 28.4	-1.5
	12nm,0.6s,baz=236,slow=2.2,SNR=136						
MKAR	**Makanchi Array**	**147.15**	**91**	PKPbc	PKPbc	04 37 28.4	-1.5
WHN	**Wuhan**	**147.26**	**147**	PKPbc	PKPbc	04 37 29.7	-1.0
WHN				pPKP	pPKPdf	04 37 35.0	+3.2
WMQ	**Urumqi**	**147.70**	**100**	PKPbc	PKPbc	04 37 31.0	-0.5
WMQ				LR	LR		
	comp=N,70nm,25.4s						
WMQ				LR	LR		
	comp=Z,54nm,23.0s,MS4.3						
KURK	**Kurchatov**	**147.94**	**82**	PKPbc	PKPbc	04 37 30.9	-1.0
	comp=Z,6.5nm,0.7s,baz=234,slow=3.3,SNR=24						
LZH	**Lanzhou**	**148.78**	**127**	ePKPbc	PKPbc	04 37 34.1	-0.5
LZH				pPKP	pPKPdf	04 37 38.5	+4.4
GTA	**Gaotai**	**149.93**	**119**	PKPbc	PKPbc	04 37 36.6	-0.7
GTA				LR	LR		
	comp=N,81nm,22.3s,MS4.7						
GTA				LR	LR		
	comp=E,100nm,19.9s,MS4.7						
GTA				LR	LR		
	comp=Z,51nm,16.1s,MS4.4						
ZALV	**Zalesovo Beam**	**152.92**	**81**	PKPbc	PKPbc	04 37 41.9	-1.9
	comp=Z,2.5nm,0.7s,baz=242,slow=3.8,SNR=8.0						
KSRS	**Korea Array**	**156.65**	**167**	PKP	PKPdf	04 37 41.4	-0.8
	comp=Z,0.7nm,0.4s,baz=195,slow=3.8,SNR=3.0						
KSRS				PKPab	PKPab	04 38 10.7	-0.7
	comp=Z,0.8nm,0.6s,baz=189,slow=4.4,SNR=5.7						
SONM	**Songino Array**	**159.50**	**115**	PKPab	PKPab	04 38 23.3	-0.2
	comp=Z,1.1nm,0.5s,baz=234,slow=3.1,SNR=8.3						
PETK	**Petropavlovsk-**	**165.35**	**250**	PKPab	PKPab	04 38 49.7	+0.7
	comp=Z,1.2nm,0.5s,baz=117,slow=8.3,SNR=3.4						

DJA 09 04:18:55.0±0.75S×123°36E, h10km, MLv3.7/8, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.66**	**244**	P	Pg	04 19 06.3	-1.4
LUWI				S	Sg	04 19 15.5	-0.8
APSI	**Ampana**	**1.72**	**265**	P	Pn	04 19 25.7	+0.7
APSI				S	Sn	04 19 47.3	+0.3
MRSI	**Marisa**	**1.87**	**311**	P	Pn	04 19 28.7	+1.6
MNI	**Manado**	**2.63**	**34**	P	Pn	04 19 37.2	-0.4
KDI	**Kendari**	**3.27**	**193**	P	Pn	04 19 47.4	+1.0
MPSI	**Mapaga**	**3.63**	**287**	P	Pn	04 19 52.5	+1.2
TNTI	**Ternate**	**4.28**	**69**	P	Pn	04 20 00.7	+0.4
SPSI	**Sidrap Palu**	**4.80**	**228**	P	Pn	04 20 08.5	+1.1

*IDC **09** 04:23:07.8±1.2, 15°31N×122°78E, h0km, mb3.7/4, mb

0.3nm,0.7s,baz=123,slow=7.4,SNR=3.6

*IDC **09** 04:50:33.8±0.8, 7.°56S×106.°89E, h0km, mb4.2/14, mb1 4.3/14, mb1mx4.2/22, mbtmp4.2/14, MS3.7/13, Ms1 3.6/13, ms1mx3.4/24, Error ellipse: s-maj=34.4km s-min=15.4km az=48.0*

*DJA **09** 04:50:39, 8.°09S×106.°79E, h18km, MLv4.9/18*

*ISCJB **09** 04:50:42.7±0.7, 7.°70S±0.°09×107.°00E±0.°06, h90km±5km, mb4.2/19, Error ellipse: s-maj=17.6km s-min=5.5km az=30.7*

*NEIC **09** 04:50:42.3±2.7, 7.°85S×106.°75E, h67km±23km, mb4.5/9, Error ellipse: s-maj=21.6km s-min=8.9km az=53.0*

ISC 09 04:50:44.0±0.7, 7.°69S±0.°09×107.°00E±0.°06, h82km±5km, n65, σ0°94/48, mb4.2/19, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.81**	**327**	P	**Pn**	**04 50 59.2**	**-1.8**
SKJI				S	**Sn**	**04 51 14.3**	**+0.7**
LEM	**Lembang**	**1.05**	**35**	P	**Pn**	**04 51 04.6**	**+0.8**
TNG	**Tangerang**	**1.55**	**347**	P	**Pn**	**04 51 10.5**	**+0.5**
TNG				P		04 51 10.1	
CGJI	**Cibinong**	**1.68**	**309**	P	**Pn**	**04 51 08.8**	**-2.9**
JCJI	**Jatiwangi**	**1.73**	**47**	P	**Pn**	**04 51 11.5**	**-0.9**
SBJI	**Serang**	**1.78**	**331**	P	**Pn**	**04 51 12.8**	**-0.3**
CLJI	**Cilicap**	**1.99**	**91**	P	**Pn**	**04 51 14.5**	**-1.3**
RBSI	**Rajabasa**	**2.22**	**326**	P	**Pn**	**04 51 18.7**	**-0.2**
KASI	**Kota Agung**	**3.29**	**311**	P	**Pn**	**04 51 33.2**	**-0.1**
UGM	**Wanagama**	**3.50**	**94**	P	**Pn**	**04 51 35.4**	**-0.7**
KLI	**Kotabumi**	**3.53**	**323**	P	**Pn**	**04 51 37.6**	**+1.1**
KLSI		**3.74**	**323**	P	**Pn**	**04 51 40.9**	**+1.5**
LWLI	**Liwa**	**3.95**	**312**	P	**Pn**	**04 51 42.2**	**-0.1**
MDSI	**Maura Dua**	**4.24**	**318**	P	**Pn**	**04 51 46.2**	**-0.1**
SJI	**Sawahan**	**4.72**	**91**	P	**Pn**	**04 51 53.4**	**+0.6**
PWJI	**Pagerwojo**	**4.77**	**94**	P	**Pn**	**04 51 52.5**	**-0.9**
PPBI	**Pangkal Pinang**	**5.56**	**351**	P	**Pn**	**04 52 07.3**	**+3.1**
	0.6nm5μm48nm,1.0s						
KSI	**Kapahiang**	**5.95**	**312**	P	**Pn**	**04 52 10.1**	**+0.6**
	3.0nm194nm,0.8s						
GMJI	**Gumukmas**	**6.41**	**96**	P	**Pn**	**04 52 16.4**	**+0.6**
SRBI	**Singaraja**	**8.14**	**93**	P	**Pn**	**04 52 40.7**	**+1.2**
	90nm,1.0s						
PPSI	**Pulau Pagai**	**8.51**	**305**	P	**Pn**	**04 52 40.1**	**-4.4**
SISI	**Saibi**	**10.11**	**308**	P	**Pn**	**04 53 01.9**	**-4.4**
KAPI	**Kappang**	**12.95**	**79**	LR	LR	04 59 10.1	
	comp=Z,364nm,20.8s,baz=34,slow=40						
PSI	**Prapat**	**13.17**	**322**	LR	LR	04 59 41.6	
	comp=Z,230nm,18.1s,baz=252,slow=42						
KKM	**Kota Kinabalu**	**16.45**	**34**	*e*Pn	**Pn**	**04 54 34.5**	**+4.6**
	50nm,1.4s						
MBWA	**Marble Bar**	**18.18**	**139**	*e*P	**Pn**	**04 54 50.3**	**-0.7**
	27nm,1.3s						
FITZ	**Fitzroy Crossi**	**20.89**	**122**	P	**P**	**04 55 19.7**	**0.0**
	8.1nm,1.0s,baz=276,slow=6.3,SNR=7.7						
FITZ				LR	LR	05 03 03.2	
	comp=Z,180nm,21.6s,baz=298,slow=36						
WRA	**Warramunga Arr**	**29.15**	**118**	P	**P**	**04 56 37.8**	**+0.3**
	1.4nm,0.6s,mb3.8,baz=292,slow=9.4,SNR=4.4						
WRAB	**Tennant Creek**	**29.16**	**117**	*e*P	**P**	**04 56 37.6**	**0.0**
	10nm,1.1s,mb4.4						
ASAR	**Alice Springs**	**30.29**	**125**	P	**P**	**04 56 48.9**	**+1.2**
	1.3nm,0.7s,mb3.7,baz=303,slow=8.5,SNR=6.1						
STKA	**Stephens Creek**	**40.18**	**132**	P	**P**	**04 58 13.0**	**+0.6**
	1.8nm,0.3s,mb4.3,baz=296,slow=12,SNR=4.5						
STKA				LR	LR	05 15 49.1	
	comp=Z,145nm,19.3s,baz=322,slow=38						
CBIJ	**Chichi jima**	**48.55**	**43**	LR	LR	05 21 54.2	
	comp=Z,338nm,20.2s,baz=114,slow=39						
KSRS	**Korea Array**	**48.98**	**22**	P	**P**	**04 59 22.4**	**+0.2**
	2.0nm,0.9s,mb4.1,baz=208,slow=9.8,SNR=12						
JHJ	**Hachijo jima 2**	**51.17**	**36**	LR	LR	05 20 12.0	
	comp=Z,22nm,19.9s,baz=149,slow=35						
MJAR	**Matsushiro Arr**	**52.85**	**32**	LR	LR	05 23 03.0	
	comp=Z,63nm,18.3s,baz=330,slow=37						
KBL	**Kabul**	**55.24**	**322**	*e*P	**P**	**05 00 08.3**	**-0.5**
	4.6nm,0.6s,mb4.7						
SONM	**Songino Array**	**55.28**	**360**	P	**P**	**05 00 06.7**	**-2.1**
	0.9nm,0.8s,mb3.9,baz=167,slow=6.9,SNR=5.7						
SONM				LR	LR	05 26 59.4	
	comp=Z,125nm,18.8s,baz=225,slow=40						
AML	**Almayashu**	**58.18**	**331**	*e*P	**P**	**05 00 29.9**	**+0.5**
	2.5nm,0.6s,mb4.4						
AAK	**Ala-Archa**	**58.19**	**332**	LR	LR	05 30 57.6	
	comp=Z,87nm,18.3s,baz=309,slow=42						
MKAR	**Makanchi Array**	**58.53**	**340**	P	**P**	**05 00 30.8**	**-1.0**
	3.5nm,0.7s,mb4.5,baz=146,slow=6.8,SNR=28						
EKS2	**Erkin-Say**	**58.54**	**332**	*e*P	**P**	**05 00 31.2**	**-0.8**
	2.1nm,0.8s,mb4.2						
KURK	**Kurchatov**	**63.14**	**340**	P	**P**	**05 01 02.5**	**-0.5**
	2.5nm,0.6s,mb4.3,baz=148,slow=5.9,SNR=5.3						
ZALV	**Zalesovo Beam**	**64.20**	**346**	P	**P**	**05 01 09.0**	**-0.8**
	1.2nm,0.3s,mb4.2,baz=153,slow=6.7,SNR=4.8						
ZALV				LR	LR	05 30 08.7	
	comp=Z,42nm,21.3s,baz=158,slow=37						
ZALV	**Zalesovo Beam**	**64.20**	**346**	P	**P**	**05 01 09.0**	**-0.8**
ZALV				LR	LR	05 30 08.7	
MAW	**Mawson**	**66.71**	**197**	LR	LR	05 23 14.4	
	comp=Z,65nm,21.5s,baz=174,slow=29						
BVAR	**Borovoye Array**	**68.00**	**337**	P	**P**	**05 01 33.2**	**-1.0**
	3.4nm,0.5s,mb4.4,baz=143,slow=9.0,SNR=24						
BRVK	**Borovoye**	**68.06**	**337**	*e*P	**P**	**05 01 34.9**	**+0.2**
	3.2nm,0.4s,mb4.5						
ABKAR	**Akbulak array**	**70.00**	**329**	*e*P	**P**	**05 01 46.7**	**0.0**
	11nm,0.7s,mb4.8						
LSZ	**Lusaka**	**77.27**	**256**	P	**P**	**05 02 30.7**	**+0.6**
	0.9nm,0.5s,mb3.7,baz=114,slow=7.3,SNR=4.1						
LSZ	**Lusaka**	**77.27**	**256**	P	**P**	**05 02 30.7**	**+0.6**
BR131	**Keskin Array S**	**82.29**	**312**	*e*P	**P**	**05 02 57.3**	**+0.6**
	2.5nm,0.8s,mb4.1						
BRTR	**Keskin Array B**	**82.29**	**312**	P	**P**	**05 02 56.7**	**0.0**
	1.5nm,0.7s,mb3.9,baz=125,slow=5.7,SNR=9.3						
BRTR				LR	LR	05 39 56.5	
	comp=Z,38nm,20.0s,baz=355,slow=36						
FINES	**FINESS Array B**	**92.38**	**332**	P	**P**	**05 03 46.8**	**+1.7**
	0.9nm,0.6s,mb4.2,baz=117,slow=4.8,SNR=2.8						
ARCES	**ARCESS Array B**	**94.18**	**340**	P	**P**	**05 03 53.7**	**+0.4**
	1.9nm,1.0s,mb4.4,baz=101,slow=5.1,SNR=5.9						
ARCES				LR	LR	05 52 31.5	
	comp=Z,47nm,20.9s,baz=154,slow=40						
HWUT	**Hardware Ranch**	**132.00**	**39**	*e*PKPdf	PKPdf	05 09 49.6	+1.2
RSSD	**Black Hills**	**134.73**	**32**	*e*PKPdf	PKPdf	05 09 54.7	+1.3
TXAR	**Lajitas Array**	**144.01**	**49**	PKP	PKPdf	05 10 11.4	+0.7
	0.7nm,0.8s,baz=282,slow=1.2,SNR=11						
WMOK	**Wichita Mounta**	**144.13**	**38**	*e*PKPdf	PKPdf	05 10 10.4	-0.4
CCM	**Cathedral Cave**	**145.55**	**26**	*e*PKPbc	PKPbc	05 10 14.3	+0.9
JCT	**Junction City**	**146.18**	**44**	*e*PKPbc	PKPbc	05 10 17.8	+2.3
MIAR	**Mount Ida**	**147.24**	**32**	*e*PKPbc	PKPbc	05 10 19.9	+1.5
WCI	**Wyandotte Cave**	**147.31**	**20**	*e*PKPbc	PKPbc	05 10 19.6	+1.1
WVT	**Waverly**	**148.61**	**23**	*e*PKPbc	PKPbc	05 10 23.3	+1.2
HKT	**Hockley**	**149.18**	**41**	*e*PKPbc	PKPbc	05 10 26.2	+2.5
SWET	**Sewanee**	**150.14**	**22**	*e*PKPbc	PKPbc	05 10 26.3	+0.4

*SOF **09** 04:54:37.9, 39.°30N×28.°66E, h2km, MD3.0*

*ISCJB **09** 04:54:47.9±0.3, 40.°43N±0.°01×28.°71E±0.°02, h4km±3km, Error ellipse: s-maj=2.6km s-min=2.3km az=40.6*

*DDA **09** 04:54:48.1, 40.°42N×28.°74E, h13km±1km, Md3.4*

*ISK **09** 04:54:48.0, 40.°44N×28.°72E, h6km, ML3.6*

*NEIC **09** 04:54:48.0, 40.°47N×28.°72E, h3km, ML3.6(ISK), After ISK.*

*THE **09** 04:54:48.9, 40.°34N×28.°83E, h13km±10km, ML4.3/4, Error ellipse: s-maj=13.6km s-min=2.0km az=85.0*

*CSEM **09** 04:54:48.4±0.1, 40.°42N×28.°71E, h5km, ML3.6, Error ellipse: s-maj=1.9km s-min=1.7km az=7.0*

ISC 09 04:54:48.6±0.3, 40.°43N±0.°01×28.°72E±0.°02, h6km±2km, n168, σ0°92/218, 8C-3D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARMT	**Armutlu**	**0.18**	**39**	PG	**Pg**	**04 54 52.7**	**+0.6**
ARMT				*e*SG	**Sg**	**04 54 55.1**	**+0.6**
ARMT	**Armutlu**	**0.18**	**39**	*i* Pg	**Pg**	**04 54 52.7**	**+0.6**
ARMT				*e*Sg	**Sg**	**04 54 55.1**	**+0.6**
GEMT	**Gemlik**	**0.36**	**89**	PG	**Pg**	**04 54 55.8**	**+0.2**
GEMT				*e*SG	**Sg**	**04 55 01.0**	**+0.7**
GEMT	**Gemlik**	**0.36**	**89**	*i* Pg	**Pg**	**04 54 55.8**	**+0.2**
GEMT				*e*Sg	**Sg**	**04 55 01.0**	**+0.7**
YLV	**Yalova**	**0.52**	**74**	PG	**Pg**	**04 54 58.6**	**0.0**
YLV	**Yalova**	**0.52**	**74**	*i* Pg	**Pg**	**04 54 58.6**	**0.0**
BNT	**Bandirma**	**0.61**	**263**	PG	**Pg**	**04 55 00.6**	**+0.2**
EDC	**Edincik**	**0.66**	**263**	*e*PG	**Pg**	**04 55 00.7**	**-0.5**
EDC	**Edincik**	**0.66**	**263**	*e*Pg	**Pg**	**04 55 00.7**	**-0.5**
ISK	**Istanbul-Kandi**	**0.69**	**22**	*e*PG	**Pg**	**04 55 01.9**	**0.0**
ISK	**Istanbul-Kandi**	**0.69**	**22**	*e*Pg	**Pg**	**04 55 01.9**	**+0.1**
ELBA	**Catalca**	**0.75**	**343**	*i* P	**Pg**	**04 55 02.1**	**-0.9**
ELBA				*i* S	**Sg**	**04 55 13.2**	**+0.4**
ELBA	**Catalca**	**0.75**	**343**	*i* P	**Pg**	**04 55 02.1**	**-0.9**
ELBA				*i* S	**Sg**	**04 55 13.1**	**+0.4**
BGKT	**Bogazkoy**	**0.75**	**3**	*e*PG	**Pg**	**04 55 03.1**	**0.0**
BGKT				*e*SG	**Sg**	**04 55 13.2**	**+0.3**
BGKT	**Bogazkoy**	**0.75**	**3**	*e*Pg	**Pg**	**04 55 03.1**	**0.0**
BGKT				*e*Sg	**Sg**	**04 55 13.2**	**+0.3**
ADVT	**Abdulvahap**	**0.78**	**89**	*e*PG	**Pg**	**04 55 03.4**	**-0.2**
ADVT	**Abdulvahap**	**0.78**	**89**	*e*Pg	**Pg**	**04 55 03.4**	**-0.2**
CTKS	**Kestanelik-??a**	**0.82**	**349**	*e*PG	**Pg**	**04 55 04.4**	**0.0**
CTKS				*e*SG	**Sg**	**04 55 15.2**	**+0.1**
CTKS	**Kestanelik-??a**	**0.82**	**349**	*e*Pg	**Pg**	**04 55 04.4**	**0.0**
CTKS				*e*Sg	**Sg**	**04 55 15.2**	**+0.1**
HRT	**Hereke**	**0.82**	**61**	*e*PG	**Pg**	**04 55 03.7**	**-0.8**
HRT	**Hereke**	**0.82**	**61**	*e*Pg	**Pg**	**04 55 03.7**	**-0.7**
DURS	**Dursunbey**	**0.85**	**193**	*i* P	**Pg**	**04 55 04.7**	**-0.2**
DURS				*i* S	**Sg**	**04 55 16.6**	**+0.8**
DURS	**Dursunbey**	**0.85**	**193**	*i* P	**Pg**	**04 55 04.7**	**-0.1**
DURS				*i* S	**Sg**	**04 55 16.6**	**+0.8**
KLYT	**Kilyos**	**0.86**	**17**	*e*PG	**Pg**	**04 55 05.1**	**0.0**
KLYT	**Kilyos**	**0.86**	**17**	*e*Pg	**Pg**	**04 55 05.1**	**0.0**
GONE	**Gonen-Balikesi**	**0.88**	**245**	*e*PG	**Pg**	**04 55 05.3**	**-0.1**
GONE	**Gonen-Balikesi**	**0.88**	**245**	*e*Pg	**Pg**	**04 55 05.3**	**-0.1**
SLVT	**Silivri**	**0.89**	**335**	*e*PG	**Pg**	**04 55 05.8**	**+0.2**
SLVT	**Silivri**	**0.89**	**335**	*e*Pg	**Pg**	**04 55 05.8**	**+0.2**
CAVI	**Cavuskoy**	**0.89**	**104**	*e*PG	**Pg**	**04 55 05.1**	**-0.6**
CAVI	**Cavuskoy**	**0.89**	**104**	*e*Pg	**Pg**	**04 55 05.1**	**-0.6**
SILT	**Sile**	**1.01**	**44**	*e*PG	**Pg**	**04 55 07.6**	**-0.4**
SILT	**Sile**	**1.01**	**44**	*e*Pg	**Pg**	**04 55 07.6**	**-0.4**
BALB	**Balikesir**	**1.02**	**219**	*e*PG	**Pg**	**04 55 08.1**	**+0.1**
BALB	**Balikesir**	**1.02**	**219**	*e*Pg	**Pg**	**04 55 08.1**	**0.0**
CRLT	**Corlu**	**1.02**	**314**	*e*PG	**Pg**	**04 55 07.9**	**-0.3**
CRLT	**Corlu**	**1.02**	**314**	*e*Pg	**Pg**	**04 55 07.9**	**-0.3**
TKR	**Tekirdag**	**1.06**	**302**	*e*PG	**Pg**	**04 55 08.7**	**-0.2**
TKR				*e*SG	**Sg**	**04 55 23.8**	**+1.2**
TKR	**Tekirdag**	**1.06**	**302**	*e*Pg	**Pg**	**04 55 08.7**	**-0.2**
TKR				*e*Sg	**Sg**	**04 55 23.8**	**+1.2**
KRBG	**Karabiga-Canak**	**1.08**	**269**	*e*PN	**Pn**	**04 55 08.9**	**-1.4**
KRBG				*e*SN	**Sn**	**04 55 24.6**	**-1.0**
KRBG	**Karabiga-Canak**	**1.08**	**269**	*e*Pn	**Pn**	**04 55 08.9**	**-1.4**
KRBG				*e*Sn	**Sn**	**04 55 24.7**	**-1.0**
BALY	**Balya**	**1.09**	**231**	*i* P	**Pg**	**04 55 09.0**	**-0.4**
BALY				*i* S	**Sg**	**04 55 24.0**	**+0.5**
BALY	**Balya**	**1.09**	**231**	*i* P	**Pg**	**04 55 09.0**	**-0.4**
BALY				*i* S	**Sg**	**04 55 24.0**	**+0.5**
CTYL	**Yal??k??y-??at**	**1.09**	**343**	*e*PN	**Pn**	**04 55 09.2**	**-1.3**
CTYL	**Yal??k??y-??at**	**1.09**	**343**	*e*Pn	**Pn**	**04 55 09.2**	**-1.3**
MFT	**Murefte**	**1.15**	**289**	*e*PN	**Pn**	**04 55 09.9**	**-1.3**
MFT	**Murefte**	**1.15**	**289**	*e*Pn	**Pn**	**04 55 10.0**	**-1.2**
SART	**Tekirdag**	**1.20**	**283**	*i* P	**Pg**	**04 55 11.5**	**-0.1**
SART				*i* S	**Sg**	**04 55 28.6**	**+1.5**
SART	**Tekirdag**	**1.20**	**283**	*i* P	**Pg**	**04 55 11.5**	**-0.1**
SART				*i* S	**Sg**	**04 55 28.6**	**+1.5**
RKY	**Sarkoy-Tekirda**	**1.20**	**283**	*e*PN	**Pn**	**04 55 11.1**	**-0.8**
RKY				*e*SN	**Sn**	**04 55 28.7**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.20**	**283**	*e*Pn	**Pn**	**04 55 11.1**	**-0.8**
RKY				*e*Sn	**Sn**	**04 55 28.7**	**+0.2**
GPA	**Golpazari**	**1.23**	**96**	*e*PN	**Pn**	**04 55 11.8**	**-0.5**
SPNC	**Sapanca-Adapaz**	**1.24**	**78**	*e*PN	**Pn**	**04 55 12.0**	**-0.5**
SPNC				*e*SN	**Sn**	**04 55 29.7**	**+0.2**
SPNC	**Sapanca-Adapaz**	**1.24**	**78**	*e*Pn	**Pn**	**04 55 12.0**	**-0.5**
SPNC				*e*Sn	**Sn**	**04 55 29.7**	**+0.2**
GULT	**Gulveren**	**1.37**	**89**	*e*PN	**Pn**	**04 55 13.8**	**-0.5**
GULT	**Gulveren**	**1.37**	**89**	*e*Pn	**Pn**	**04 55 13.9**	**-0.4**
DEMI	**Demirci**	**1.38**	**180**	*i* P	**Pn**	**04 55 14.2**	**-0.3**
DEMI				*i* S	**Sb**	**04 55 33.4**	**+0.6**
DEMI	**Demirci**	**1.38**	**180**	*i* P	**Pn**	**04 55 14.1**	**-0.4**
DEMI				*i* S	**Sb**	**04 55 33.4**	**+0.6**
BORA	**Eskisehir**	**1.44**	**112**	*i* P	**Pn**	**04 55 14.5**	**-0.7**
BORA	**Eskisehir**	**1.44**	**112**	*i* P	**Pn**	**04 55 14.5**	**-0.7**
GDZ	**Gediz**	**1.46**	**156**	*i* P	**Pn**	**04 55 15.3**	**-0.2**
GDZ				*i* S	**Sn**	**04 55 34.7**	**-0.3**
GDZ	**Gediz**	**1.46**	**156**	*i* P	**Pn**	**04 55 15.3**	**-0.2**
GDZ				*i* S	**Sn**	**04 55 34.7**	**-0.3**
LPK	**Lapseki**	**1.49**	**268**	*e*PN	**Pn**	**04 55 15.5**	**-0.4**
LPK	**Lapseki**	**1.49**	**268**	*e*Pn	**Pn**	**04 55 15.5**	**-0.5**
ERIK	**Erikli-Kesan**	**1.70**	**279**	*e*PN	**Pn**	**04 55 18.9**	**+0.2**
ERIK	**Erikli-Kesan**	**1.70**	**279**	*e*Pn	**Pn**	**04 55 18.9**	**+0.2**
AKHS	**Akhisar**	**1.70**	**205**	*i* P	**Pn**	**04 55 18.1**	**-0.7**
AKHS				*i* S	**Sn**	**04 55 43.2**	**+2.4**
AKHS	**Akhisar**	**1.70**	**205**	*i* P	**Pn**	**04 55 18.1**	**-0.7**
AKHS				*i* S	**Sn**	**04 55 43.2**	**+2.4**
AKS	**Akhisar**	**1.70**	**205**	*e*PN	**Pn**	**04 55 18.9**	**+0.2**
AKS	**Akhisar**	**1.70**	**205**	*e*Pn	**Pn**	**04 55 18.9**	**+0.1**
GELI	**Tayfur-Gelibol**	**1.71**	**270**	*e*PN	**Pn**	**04 55 19.1**	**+0.1**
GELI	**Tayfur-Gelibol**	**1.71**	**270**	*e*Pn	**Pn**	**04 55 19.1**	**+0.1**
ALT	**Altintas**	**1.74**	**141**	*e*PN	**Pn**	**04 55 19.1**	**-0.3**
ALT	**Altintas**	**1.74**	**141**	*e*Pn	**Pn**	**04 55 19.1**	**-0.3**
ESKT	**Eskisehir**	**1.87**	**118**	*e*PN	**Pn**	**04 55 20.8**	**-0.4**
ESKT	**Eskisehir**	**1.87**	**118**	*e*Pn	**Pn**	**04 55 20.8**	**-0.4**
MDU	**Mudurnu**	**1.91**	**88**	*e*PN	**Pn**	**04 55 22.0**	**+0.3**
MDU	**Mudurnu**	**1.91**	**88**	*e*Pn	**Pn**	**04 55 22.0**	**+0.3**
KULA	**Kula-Manisa**	**1.91**	**181**	*e*PN	**Pn**	**04 55 22.3**	**+0.5**
KULA	**Kula-Manisa**	**1.91**	**181**	*e*Pn	**Pn**	**04 55 22.3**	**+0.6**
AYVA	**Ayvalik**	**1.92**	**235**	*i* P	**Pg**	**04 55 24.8**	**-0.5**
AYVA				*i* S	**Sg**	**04 55 50.7**	**+0.5**
AYVA	**Ayvalik**	**1.92**	**235**	*i* P	**Pg**	**04 55 24.8**	**-0.6**
AYVA				*i* S	**Sg**	**04 55 50.7**	**+0.5**
EZN	**Ezine**	**1.93**	**253**	*e*PN	**Pn**	**04 55 22.4**	**+0.5**
EZN	**Ezine**	**1.93**	**253**	*e*Pn	**Pn**	**04 55 22.4**	**+0.4**
ENEZ	**Enez**	**1.98**	**280**	*e*PN	**Pn**	**04 55 23.1**	**+0.5**
ENEZ	**Enez**	**1.98**	**280**	*e*Pn	**Pn**	**04 55 23.1**	**+0.5**
EDRB	**Edirne**	**2.06**	**314**	*e*PN	**Pn**	**04 55 23.8**	**+0.1**
EDRB	**Edirne**	**2.06**	**314**	*e*Pn	**Pn**	**04 55 23.8**	**+0.1**
ALN	**Alexandroupoli**	**2.08**	**284**	*e*P	**Pn**	**04 55 23.5**	**-0.6**
ALN	**Alexandroupoli**	**2.08**	**284**	P	**Pn**	**04 55 23.3**	**-0.8**
ALN				S	**Sn**	**04 55 51.1**	**+0.7**
ALN	**Alexandroupoli**	**2.08**	**284**	P	**Pn**	**04 55 23.3**	**-0.8**
ALN				S	**Sn**	**04 55 51.1**	**+0.7**
KHAL	**Karahalli**	**2.14**	**163**	*i* P	**Pn**	**04 55 24.7**	**-0.2**
KHAL				*i* S	**Sg**	**04 55 56.8**	**-0.6**
KHAL	**Karahalli**	**2.14**	**163**	*i* P	**Pn**	**04 55 24.7**	**-0.2**
GADA	**Gvkgeada**	**2.17**	**265**	*e*PN	**Pn**	**04 55 26.6**	**+1.4**
GADA	**Gvkgeada**	**2.17**	**265**	*e*Pn	**Pn**	**04 55 26.6**	**+1.4**
KHL	**Karahalli**	**2.19**	**163**	*e*PN	**Pn**	**04 55 26.2**	**+0.6**
KHL	**Karahalli**	**2.19**	**163**	*e*Pn	**Pn**	**04 55 26.2**	**+0.6**
PRK	**Paraskevi**	**2.22**	**239**	*e*P	**Pn**	**04 55 25.1**	**-0.9**
PRK	**Paraskevi**	**2.22**	**239**	P	**Pn**	**04 55 25.1**	**-0.9**
PRK				S	**Sn**	**04 55 53.4**	**-0.3**
PRK	**Paraskevi**	**2.22**	**239**	P	**Pn**	**04 55 25.1**	**-0.9**
PRK				S	**Sn**	**04 55 53.4**	**-0.3**
KDZE	**Karadeniz Ereo**	**2.25**	**66**	*e*PN	**Pn**	**04 55 27.6**	**+1.3**
KDZE	**Karadeniz Ereo**	**2.25**	**66**	*e*Pn	**Pn**	**04 55 27.6**	**+1.2**
IZM	**Izmir**	**2.32**	**209**	*e*PN	**Pn**	**04 55 28.3**	**+1.0**
IZM	**Izmir**	**2.32**	**209**	*e*Pn	**Pn**	**04 55 28.3**	**+1.0**
SHUT	**Suhut-Afyon**	**2.35**	**142**	*e*PN	**Pn**	**04 55 28.0**	**+0.3**
SHUT	**Suhut-Afyon**	**2.35**	**142**	*e*Pn	**Pn**	**04 55 28.0**	**+0.2**
SVRH	**Sivrihisar-ESK**	**2.37**	**114**	*e*PN	**Pn**	**04 55 29.0**	**+1.0**
SVRH	**Sivrihisar-ESK**	**2.37**	**114**	*e*Pn	**Pn**	**04 55 29.0**	**+1.0**
BLCB	**Balcova**	**2.42**	**213**	*e*PN	**Pn**	**04 55 29.6**	**+0.9**
BLCB	**Balcova**	**2.42**	**213**	*e*Pn	**Pn**	**04 55 29.6**	**+0.9**
BOLV	**Bolvadin**	**2.43**	**134**	*i* P	**Pn**	**04 55 28.8**	**0.0**
BOLV	**Bolvadin**	**2.43**	**134**	*i* P	**Pn**	**04 55 28.8**	**0.0**
RDO	**Rodhopi**	**2.52**	**288**	*e*P	**Pn**	**04 55 29.5**	**-0.5**
RDO	**Rodhopi**	**2.52**	**288**	P	**Pn**	**04 55 29.7**	**-0.3**
RDO				S	**Sn**	**04 56 02.0**	**+0.9**
RDO	**Rodhopi**	**2.52**	**288**	P	**Pn**	**04 55 29.7**	**-0.3**
RDO				S	**Sn**	**04 56 02.0**	**+0.9**
JMB	**Yambol**	**2.59**	**322**	P	**Pn**	**04 55 31.6**	**+0.5**
JMB	**Yambol**	**2.59**	**322**	P	**Pg**	**04 55 42.1**	**+3.8**
JMB	**Yambol**	**2.59**	**322**	P	**Pn**	**04 55 31.6**	**+0.5**
URLA	**Izmir**	**2.64**	**219**	*i* P	**Pn**	**04 55 31.3**	**-0.4**
URLA				*i* S	**Sg**	**04 56 11.2**	**-2.1**
URLA	**Izmir**	**2.64**	**219**	*i* P	**Pn**	**04 55 31.3**	**-0.4**
DNZL	**Cakiroluk**	**2.75**	**175**	*i* P	**Pn**	**04 55 33.0**	**-0.2**
DNZL				*i* S	**Sg**	**04 56 18.9**	**+2.1**
DNZL	**Cakiroluk**	**2.75**	**175**	*i* P	**Pn**	**04 55 33.0**	**-0.2**
LIA	**Limnos Island**	**2.76**	**260**	*e*P	**Pn**	**04 55 31.0**	**-2.4**
LIA	**Limnos Island**	**2.76**	**260**	P	**Pn**	**04 55 32.6**	**-0.8**
LIA				S	**Sn**	**04 56 07.8**	**+0.8**
LIA	**Limnos Island**	**2.76**	**260**	P	**Pn**	**04 55 32.6**	**-0.8**
LIA				S	**Sn**	**04 56 07.8**	**+0.8**
KDZ	**Kurdzhali**	**2.78**	**297**	P	**Pn**	**04 55 34.5**	**+0.9**
KDZ	**Kurdzhali**	**2.78**	**297**	P	**Pn**	**04 55 34.5**	**+0.9**
AYDN	**Tasoluk**	**2.84**	**194**	*i* P	**Pn**	**04 55 32.9**	**-1.6**
AYDN	**Tasoluk**	**2.84**	**194**	*i* P	**Pn**	**04 55 32.9**	**-1.6**
KIZT	**Kizilcal**	**2.89**	**121**	*e*PN	**Pn**	**04 55 35.0**	**-0.2**
KIZT	**Kizilcal**	**2.89**	**121**	*e*Pn	**Pn**	**04 55 35.0**	**-0.2**
DIM	**Dimitrovgrad**	**2.90**	**305**	P	**Pn**	**04 55 35.7**	**+0.5**
DIM	**Dimitrovgrad**	**2.90**	**305**	P	**Pn**	**04 55 35.7**	**+0.5**
CHOS	**Chios island**	**2.90**	**226**	*e*P	**Pn**	**04 55 38.0**	**+2.7**
CHOS	**Chios island**	**2.90**	**226**	P	**Pn**	**04 55 34.5**	**-0.8**
CHOS				S	**Sn**	**04 56 08.1**	**-2.4**
CHOS	**Chios island**	**2.90**	**226**	P	**Pn**	**04 55 34.5**	**-0.8**
CHOS				S	**Sn**	**04 56 08.1**	**-2.4**
PRD	**Provadia**	**2.94**	**341**	*e*P	**Pg**	**04 55 42.0**	**-2.9**
SMG	**Samos**	**3.08**	**209**	*e*P	**Pg**	**04 55 44.5**	**-3.2**
SAFT	**Safranbolu**	**3.12**	**74**	*e*PN	**Pn**	**04 55 39.3**	**+1.0**
SAFT	**Safranbolu**	**3.12**	**74**	*e*Pn	**Pn**	**04 55 39.3**	**+1.0**
RZN	**Rozhen**	**3.28**	**294**	P	**Pn**	**04 55 40.2**	**-0.3**
RZN	**Rozhen**	**3.28**	**294**	P	**Pn**	**04 55 40.2**	**-0.3**
SUTC	**Sutluce-Ispart**	**3.44**	**148**	*e*PN	**Pn**	**04 55 43.9**	**+1.1**
SUTC	**Sutluce-Ispart**	**3.44**	**148**	*e*Pn	**Pn**	**04 55 43.9**	**+1.1**
BODT	**Bodrum**	**3.54**	**199**	*e*PN	**Pn**	**04 55 45.2**

ARCES	**ARCESS Array B**	**61.42**	**338**	P	**P**	**05 13 25.9**	**+1.5**
ARCES				pP	pP	05 13 51.7	+0.9
NOA	**NORSAR Array B**	**66.94**	**328**	P	**P**	**05 14 01.4**	**+0.9**
	comp=Z,0.8nm,0.7s,mb3.7,baz=84,slow=6.4,SNR=3.9						
NOA	**NORSAR Array B**	**66.94**	**328**	P	**P**	**05 14 01.4**	**+0.9**
TXAR	**Lajitas Array**	**125.52**	**19**	PKP	PKPdf	05 22 08.3	-0.7
	comp=Z,0.3nm,0.7s,baz=154,slow=2.5,SNR=5.3						
TXAR	**Lajitas Array**	**125.52**	**19**	PKP	PKPdf	05 22 08.3	-0.7
ROSC	**El Rosal**	**150.32**	**336**	PKPbc	PKPbc	05 22 59.9	+0.4
	comp=Z,7.0nm,0.8s,baz=145,slow=6.9,SNR=5.1						
CPUP	**Villa Florida**	**153.71**	**256**	PKPbc	PKPbc	05 23 06.7	-0.1
	comp=Z,0.6nm,0.5s,baz=117,slow=2.6,SNR=5.3						
CPUP	**Villa Florida**	**153.71**	**256**	PKPbc	PKPbc	05 23 06.7	-0.1

*IDC **09** 05:04:23.2±1.4, 3°.04S×136°.58E, h0km, mb4.0/3, mb1 4.2/4, mb1mx3.8/13, mbtmp4.0/4, ML4.1/1, Error ellipse: s-maj=72.4km s-min=26.8km az=78.0*
*NEIC **09** 05:04:24.8±0.7, 3°.05S×136°.55E, h10km, Error ellipse: s-maj=21.7km s-min=10.2km az=82.0*
*ISCJB **09** 05:04:26.1±1.2, 3°.1S±0°.1×136°.6E±0°.2, h33km, mb3.9/2, Error ellipse: s-maj=33.0km s-min=14.6km az=169.1*

ISC 09 05:04:28.4±1.2, 3°.1S±0°.1×136°.6E±0°.2, h35km, n9, σ0s34/7, mb3.9/2, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**10.37**	**203**	*e*Pn	**Pn**	**05 06 54.2**	**-0.5**
COEN	**Coen**	**12.60**	**149**	Pn	**Pn**	**05 07 25.1**	**-0.2**
WRAB	**Tennant Creek**	**16.85**	**187**	*e*Pn	**Pn**	**05 08 22.1**	**+0.3**
WRA	**Warramunga Arr**	**16.86**	**187**	Pn	**Pn**	**05 08 22.1**	**+0.3**
	0.7nm,0.3s,baz=9.0,slow=13,SNR=8.6						
ASAR	**Alice Springs**	**20.59**	**187**	P	**P**	**05 09 04.7**	**+0.2**
	6.4nm,0.7s,baz=19,slow=11,SNR=25						
MKAR	**Makanchi Array**	**68.81**	**323**	P	**P**	**05 15 29.6**	**+0.4**
	0.7nm,0.6s,mb3.8,baz=111,slow=8.0,SNR=6.4						
BVAR	**Borovoye Array**	**78.42**	**326**	P	**P**	**05 16 25.0**	**-0.4**
	1.2nm,0.6s,mb4.0,baz=123,slow=10,SNR=4.6						
LPAZ	**La Paz**	**148.90**	**129**	PKPbc	PKPbc	05 24 14.5	+1.0
	1.5nm,0.9s,baz=213,slow=5.0,SNR=6.2						
LPAZ	**La Paz**	**148.90**	**129**	PKPbc	PKPbc	05 24 14.5	+1.0

*ISCJB **09** 05:06:41.6±0.8, 31°.80N±0°.05×140°.7E±0°.1, h80km±8km, mb3.6/8, Error ellipse: s-maj=15.7km s-min=7.6km az=173.6*
*IDC **09** 05:06:42.4±1.5, 31°.73N×140°.32E, h68km±14km, mb3.5/8, mb1 3.6/10, mb1mx3.4/25, mbtmp3.5/10, Error ellipse: s-maj=50.1km s-min=13.2km az=74.0*
*JMA **09** 05:06:43.0±0.2, 31°.97N×140°.77E, h19km, M3.9*
*NEIC **09** 05:06:43.1, 31°.97N×140°.77E, h19km, MG3.9(JMA), After JMA.*

ISC 09 05:06:43.0±0.8, 31°.80N±0°.05×140°.7E±0°.1, h76km±8km, n30, σ1s17/41, mb3.6/8, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**1.48**	**332**	P	**Pn**	**05 07 07.7**	**-0.2**
JHJ2				*e*S	**Sn**	**05 07 25.8**	**-1.0**
JHJ	**Hachijo jima 2**	**1.50**	**331**	P	**Pn**	**05 07 07.8**	**-0.4**
	29nm,0.3s,baz=61,slow=22,SNR=20						
JHJ				S	**Sn**	**05 07 24.6**	**-2.6**
	97nm,0.3s,baz=75,slow=22,SNR=12						
JKO	**Kozu shima**	**2.70**	**332**	P	**Pn**	**05 07 24.8**	**+0.7**
JKO				*e*S	**Sn**	**05 07 58.2**	**+2.5**
BSO1	**Boso 1**	**2.85**	**5**	P	**Pn**	**05 07 25.7**	**-0.6**
BSO2	**Boso 2**	**2.94**	**2**	*e*S	**Sn**	**05 08 01.4**	**-0.3**
BSO3	**Boso 3**	**2.99**	**358**	P	**Pn**	**05 07 28.5**	**+0.4**
BSO3				*e*S	**Sn**	**05 08 03.3**	**+0.4**
JIM2	**Oshima 3**	**3.08**	**341**	P	**Pn**	**05 07 30.6**	**+1.3**
JIM2				*e*S	**Sn**	**05 08 04.6**	**-0.5**
BSO4	**Boso 4**	**3.19**	**355**	P	**Pn**	**05 07 32.1**	**+1.3**
BSO4				*e*S	**Sn**	**05 08 07.4**	**-0.3**
JYO	**Yokosk**	**3.51**	**347**	*e*S	**Sn**	**05 08 16.0**	**+0.5**
JHU	**Hanno**	**4.20**	**345**	*e*S	**Sn**	**05 08 30.5**	**-1.8**
JNY	**Yasuok**	**4.24**	**327**	P	**Pn**	**05 07 48.4**	**+3.3**
JAG	**Ashikaga**	**4.72**	**348**	P	**Pn**	**05 07 54.0**	**+2.4**
JAG				S	**Sn**	**05 08 46.9**	**+1.9**
CBIJ	**Chichi jima**	**4.88**	**164**	P	**Pn**	**05 07 53.4**	**-0.5**
	4.0nm,0.3s,baz=103,slow=18,SNR=4.2						
CBIJ				S	**Sn**	**05 08 42.9**	**-6.1**
	4.3nm,0.3s,baz=253,slow=19,SNR=4.3						
CBIJ	**Chichi jima**	**4.88**	**164**	S	**Sn**	**05 08 43.8**	**-5.2**
JNG	**Nsakai**	**5.06**	**336**	P	**Pn**	**05 08 02.4**	**+6.2**
JNG				*e*S	**Sn**	**05 08 58.8**	**+5.5**
MJAR	**Matsushiro Arr**	**5.14**	**337**	P	**Pn**	**05 07 56.0**	**-1.4**
	0.3nm,0.3s,baz=144,slow=10,SNR=2.6						
MAJO	**Matsushiro**	**5.14**	**337**	*e*Pn	**Pn**	**05 07 57.2**	**-0.3**
JFT	**Otama**	**5.71**	**357**	P	**Pn**	**05 08 05.8**	**+0.7**
JFT				*e*S	**Sn**	**05 09 08.3**	**-0.9**
JMM	**Marumori**	**6.05**	**1**	P	**Pn**	**05 08 09.9**	**+0.1**
JMM				S	**Sn**	**05 09 15.6**	**-2.0**
KSRS	**Korea Array**	**11.90**	**302**	P	**Pn**	**05 09 30.4**	**+0.8**
	0.4nm,0.3s,baz=114,slow=15,SNR=3.0						
MKAR	**Makanchi Array**	**46.54**	**306**	P	**P**	**05 15 00.6**	**-2.2**
	0.2nm,0.4s,mb3.2,baz=90,slow=7.5,SNR=3.8						
MKAR	**Makanchi Array**	**46.54**	**306**	P	**P**	**05 15 00.6**	**-2.2**
WRA	**Warramunga Arr**	**51.80**	**188**	P	**P**	**05 15 40.7**	**-2.4**
	0.2nm,0.4s,mb3.5,baz=4.9,slow=7.7,SNR=2.8						
ASAR	**Alice Springs**	**55.53**	**188**	P	**P**	**05 16 10.5**	**+0.1**
	0.2nm,0.7s,mb3.3,baz=7.8,slow=7.5,SNR=2.8						
STKA	**Stephens Creek**	**63.34**	**179**	P	**P**	**05 17 04.5**	**+0.6**
	2.0nm,0.6s,mb4.2,baz=332,slow=16,SNR=3.2						
FINES	**FINESS Array B**	**73.16**	**333**	P	**P**	**05 18 05.3**	**+0.3**
	0.9nm,0.4s,mb3.9,baz=45,slow=6.5,SNR=5.7						
AKASG	**Malin Array Be**	**78.06**	**323**	P	**P**	**05 18 33.5**	**+0.2**
	0.3nm,0.3s,mb3.5,baz=51,slow=5.1,SNR=3.3						
BRTR	**Keskin Array B**	**81.86**	**312**	P	**P**	**05 18 54.1**	**+0.2**
	1.0nm,0.6s,mb3.8,baz=104,slow=5.3,SNR=4.9						
TXAR	**Lajitas Array**	**93.82**	**52**	P	**P**	**05 19 52.7**	**+0.7**
	0.2nm,0.6s,mb3.6,baz=300,slow=2.8,SNR=4.6						
TXAR				pP	pP	05 20 14.1	+1.3
	0.1nm,0.4s,baz=284,slow=5.0,SNR=3.8						
TXAR	**Lajitas Array**	**93.82**	**52**	P	**P**	**05 19 52.7**	**+0.7**
TXAR				pP	pP	05 20 14.1	+1.3

*NEIC **09** 05:25:43.1, 16°.68N×99°.76W, h8km, MD3.5(MEX), After MEX.*

MEX 09 05:25:43.1±0.3, 16°.68N×99°.76W, h8km±2km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.21**	**334**	*i*P	Pg	05 25 47.5	+0.2
ACX				*i*S	Sg	05 25 51.0	+0.8
ACX	**Acapulco**	**0.21**	**334**	*i*P	Pg	05 25 47.5	+0.2
ACX				*i*S	Sg	05 25 51.0	+0.8
CAIG	**El Cayaco**	**0.60**	**307**	*i*P	Pg	05 25 53.9	-0.8
CAIG				*i*S	Sg	05 26 02.3	-0.4
CAIG	**El Cayaco**	**0.60**	**307**	*i*P	Pg	05 25 53.9	-0.8
CAIG				*i*S	Sg	05 26 02.3	-0.4
MEIG	**Mezcala**	**1.24**	**6**	*i*P	Pn	05 26 03.2	-3.6
MEIG				*i*S	Sb	05 26 18.1	-5.0
PNIG	**Pinotepa**	**1.59**	**100**	*i*P	Pn	05 26 08.1	-3.6
PNIG				*i*S	Sn	05 26 27.4	-5.0
PNIG	**Pinotepa**	**1.59**	**100**	*i*P	Pn	05 26 08.1	-3.6
PNIG				*i*S	Sn	05 26 27.4	-5.0
UTMO	**Huajuapan**	**2.19**	**58**	*e*P	Pn	05 26 17.3	-2.6
UTMO				*i*S	Sn	05 26 42.8	-4.4
MZVM		**2.54**	**11**	*e*P	Pn	05 26 22.8	-1.9
MZVM				*i*S	Sn	05 26 52.0	-3.9
VHO	**Vista Hermosa**	**2.93**	**82**	*e*P	Pn	05 26 27.4	-2.6
VHO				*i*S	Sn	05 27 02.6	-2.7
VHO	**Vista Hermosa**	**2.93**	**82**	*e*P	Pn	05 26 27.4	-2.6
VHO				*i*S	Sn	05 27 02.6	-2.7

*IDC **09** 06:00:49.8±0.8, 19°.69S×70°.90W, h0km, mb4.1/8, mb1 4.3/12, mb1mx4.3/18, mbtmp4.2/12, ML3.9/4, MS3.9/16, Ms1 3.8/16, ms1mx3.8/21, Error ellipse: s-maj=29.3km s-min=17.8km az=72.0*
*ISCJB **09** 06:00:52.1±1.2, 19°.58S±0°.05×70°.84W±0°.05, h25km±8km, mb4.4/24, MS4.0/13, Error ellipse: s-maj=8.6km s-min=6.8km az=137.2*
*GUC **09** 06:00:53.3±0.7, 19°.58S×70°.78W, h38km±5km, ML4.4*
*NEIC **09** 06:01:01.6±0.9, 19°.56S×70°.31W, h100km±10km, mb4.4/18, Error ellipse: s-maj=13.2km s-min=7.7km az=70.0*
*BJI **09** 06:01:04.6, 19°.60S×70°.30W, h99km*

ISC 09 06:00:51.8±1.3, 19°.64S±0°.04×70°.83W±0°.04, h10km±8km, n67, σ1s04/56, mb4.4/24, MS4.0/13, 2C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.67**	**87**	⇓*i*P	**Pg**	**06 01 05.3**	**+0.5**
PSGC				*i*S	**Sg**	**06 01 14.1**	**+0.5**
PSGC				AML	AML	06 01 15.9	
	comp=N,9μm,0.3s						
HMBC	**Humberston**	**1.09**	**126**	⇓*i*P	**Pb**	**06 01 12.9**	**+0.1**
HMBC				*e*S	**Sb**	**06 01 27.7**	**+0.6**
HMBC				AML	AML	06 01 32.6	
	comp=E,18μm,0.5s						
MNMC	**Miaee Miäe**	**1.27**	**67**	⇓*i*P	**Pn**	**06 01 15.1**	**-0.5**
MNMC				*e*S	**Sb**	**06 01 30.8**	**-1.4**
MNMC				AML	AML	06 01 35.4	
	comp=N,21μm,0.7s						
PB01	**Plate Boundary**	**1.88**	**138**	⇑*i*P	**Pn**	**06 01 24.9**	**+0.9**
PB01				*i*S	**Sn**	**06 01 49.2**	**+1.3**
PB01				AML	AML	06 01 53.5	
	comp=N,5μm,0.4s						
PB04	**Plate Boundary**	**2.90**	**155**	⇑*i*P	**Pn**	**06 01 36.0**	**-2.0**
PB04				AML	AML	06 02 35.6	
	comp=N,2μm,0.5s						
LPAZ	**La Paz**	**4.21**	**38**	Pn	**Pn**	**06 01 59.0**	**+3.0**
	comp=N,1.6nm,0.3s,baz=213,slow=7.5,SNR=90						
LPAZ				Lg		06 03 04.5	
	comp=N,1.1nm,0.3s,baz=53,slow=20,SNR=1.6						
LPAZ				LR	LR	06 03 42.1	
	comp=N,2μm,18.1s,baz=218,slow=40						
LPAZ	**La Paz**	**4.21**	**38**	*e*Pn	**Pn**	**06 01 59.7**	**+3.7**
LCO	**Las Campanas**	**9.33**	**179**	*e*Pn	**Pn**	**06 03 14.7**	**+8.3**
NNA	**Nana**	**9.55**	**322**	Pn	**Pn**	**06 03 09.9**	**+0.5**
	comp=N,1.0nm,0.3s,baz=185,slow=17,SNR=2.9						
NNA				Sn	**Sn**	**06 04 48.0**	**-8.9**
	comp=N,4.3nm,0.3s,baz=282,slow=9.0,SNR=8.1						
NNA				LR	LR	06 07 35.3	
	comp=N,280nm,19.2s,baz=147,slow=42						
NNA	**Nana**	**9.55**	**322**	*e*Pn	Px	06 03 20.3	
NNA				Sn	**Sn**	**06 04 48.0**	**-8.9**
NNA				LR	LR	06 07 35.3	
SIV	**San Ignacio**	**9.98**	**70**	Pn	**Pn**	**06 03 14.0**	**-1.2**
	comp=N,1.4nm,0.3s,baz=264,slow=11,SNR=37						
SIV				Sn	**Sn**	**06 05 08.2**	**+0.9**
	baz=174,slow=19,SNR=3.4						
CFAA	**Coronel Fontan**	**12.14**	**169**	Pn	**Pn**	**06 03 43.2**	**-1.6**
	comp=N,0.0nm,0.3s,baz=3.9,slow=14,SNR=4.8						
CFAA				LR	LR	06 08 25.2	
	comp=N,37nm,19.5s,baz=333,slow=38						
CPUP	**Villa Florida**	**14.10**	**121**	Pn	**Pn**	**06 04 12.5**	**+0.9**
	comp=N,0.2nm,0.3s,baz=287,slow=12,SNR=17						
CPUP	**Villa Florida**	**14.10**	**121**	*e*Pn	**Pn**	**06 04 12.2**	**+0.6**
ATAH	**Atahualpa**	**14.43**	**328**	LR	LR	06 10 21.5	
	comp=N,317nm,19.4s,baz=347,slow=40						
TRQA	**Tornquist**	**19.91**	**159**	*e*P	**Pn**	**06 05 23.4**	**-1.7**
	comp=N,22nm,0.9s						
PLCA	**Paso Flores**	**21.03**	**179**	P	**P**	**06 05 35.9**	**+0.2**
	comp=N,5.3nm,0.9s,mb3.9,baz=0.4,slow=12,SNR=7.7						
PLCA				LR	LR	06 12 39.6	
	comp=N,141nm,20.4s,MS3.3,baz=285,slow=34						
PLCA	**Paso Flores**	**21.03**	**179**	*e*P	**P**	**06 05 36.7**	**+1.0**
	comp=N,16nm,1.1s,mb4.3						
OTAV	**Otavalo**	**21.12**	**338**	*e*P	**P**	**06 05 42.7**	**+5.9**
	comp=N,18nm,1.3s,mb4.2						
SPB	**Sao Paulo**	**22.10**	**104**	P	**P**	**06 05 46.4**	**-0.9**
ROSC	**El Rosal**	**24.58**	**352**	P	**P**	**06 06 13.2**	**+1.2**
	comp=N,9.5nm,0.5s,mb4.5,baz=116,slow=5.5,SNR=7.4						
ROSC	**El Rosal**	**24.58**	**352**	*e*P	**P**	**06 06 13.1**	**+1.0**
SWET	**Sewanee**	**56.40**	**345**	*e*P	**P**	**06 10 31.6**	**-1.7**
WVT	**Waverly**	**57.75**	**344**	*e*P	**P**	**06 10 40.7**	**-2.2**
	comp=N,5.5nm,0.7s,mb4.7						
MIAR	**Mount Ida**	**58.06**	**338**	*e*P	**P**	**06 10 44.2**	**-0.9**
	comp=N,6.6nm,0.9s,mb4.7						
TXAR	**Lajitas Array**	**58.08**	**326**	P	**P**	**06 10 45.0**	**-0.3**
	comp=N,0.4nm,0.7s,mb3.6,baz=152,slow=9.0,SNR=6.3						
TXAR				LR	LR	06 33 29.2	
	comp=N,37nm,18.5s,MS3.5,baz=185,slow=34						
FVM	**French Village**	**60.20**	**342**	*e*P	**P**	**06 10 58.8**	**-1.1**
	comp=N,6.8nm,0.8s,mb4.7						
LAZ	**Ladron**	**63.88**	**327**	*e*P	**P**	**06 11 25.4**	**+0.6**
	comp=N,2.1nm,1.2s,mb4.0						
SDCO	**Great Sand Dun**	**65.74**	**330**	*e*P	**P**	**06 11 37.6**	**+0.8**
	comp=N,3.3nm,0.9s,mb4.4						
ECSD	**EROS Data Cent**	**67.35**	**340**	*e*P	**P**	**06 11 46.1**	**-0.8**
	comp=N,17nm,1.7s,mb4.8						
ISCO	**Idaho Springs**	**67.45**	**332**	*e*P	**P**	**06 11 48.3**	**+0.7**
	comp=N,39nm,2.8s,mb4.9						
PV01	**Paradox Valley**	**67.52**	**329**	*e*P	**P**	**06 11 48.4**	**+0.3**
	comp=N,500nm,1.5s						
SMCO	**Snowmass**	**67.58**	**330**	*e*P	**P**	**06 11 49.0**	**+0.6**
	comp=N,34nm,2.6s,mb4.9						
SRU	**San Rafael**	**69.24**	**328**	*e*P	**P**	**06 11 59.3**	**+0.4**
	comp=N,3.3nm,0.9s,mb4.3						
MSU	**Marysvale**	**69.64**	**326**	*e*P	**P**	**06 12 02.3**	**+0.9**
ARUT	**Antelope Range**	**69.77**	**325**	*e*P	**P**	**06 12 03.2**	**+1.0**
	comp=N,4.2nm,0.7s,mb4.5						
DBIC	**Dimbokro**	**69.96**	**75**	LR	LR	06 40 22.9	
	comp=N,74nm,18.3s,MS4.0,baz=58,slow=34						
QSPA	**South Pole Qui**	**70.55**	**180**	*e*P	**P**	**06 12 08.0**	**+1.6**
	comp=N,5.5nm,1.0s,mb4.4						
JLU	**Jordanelle**	**70.84**	**328**	*e*P	**P**	**06 12 08.6**	**0.0**
	comp=N,3.8nm,0.9s,mb4.3						
PDAR	**Pinedale Array**	**71.61**	**331**	P	**P**	**06 12 13.6**	**+0.3**
	comp=N,0.7nm,0.8s,mb3.6,baz=108,slow=4.8,SNR=6.9						
PDAR				LR	LR	06 46 03.1	
	comp=N,49nm,18.9s,MS3.8,baz=245,slow=38						
HWUT	**Hardware Ranch**	**71.66**	**329**	*e*P	**P**	**06 12 13.7**	**0.0**
TBI	**Tubuai**	**72.40**	**251**	*e*LR	LR	06 34 43.8	
	comp=N,154nm,26.8s						
TPAW	**Teton Pass**	**72.81**	**331**	*e*P	**P**	**06 12 20.7**	**+0.2**
	comp=N,14nm,1.9s,mb4.6						
NVAR	**Mina Array Bea**	**72.92**	**323**	P	**P**	**06 12 21.8**	**+0.5**
	comp=N,0.6nm,0.7s,mb3.6,baz=148,slow=6.9,SNR=5.9						
ULM	**Lac du Bonnet**	**73.02**	**343**	P	**P**	**06 12 19.7**	**-1.8**
	comp=N,2.8nm,0.5s,mb4.4,baz=117,slow=4.5,SNR=3.0						
ULM	**Lac du Bonnet**	**73.02**	**343**	P	**P**	**06 12 19.7**	**-1.8**
PPT	**Papeete**	**74.00**	**257**	*e*S	S	06 22 25.0	+24
	comp=N,48nm,24.5s						
PPT				*e*LR	LR	06 35 30.8	
	comp=N,102nm,24.5s						
PPT	**Papeete**	**74.00**	**257**	LR	LR	06 36 41.0	
	comp=N,156nm,18.2s,MS4.3,baz=105,slow=29						
QLMT	**Earthquake Lak**	**74.06**	**331**	*e*P	**P**	**06 12 30.6**	**+2.8**
SCHQ	**Schefferville**	**74.24**	**2**	LR	LR	06 43 53.4	
	comp=N,70nm,18.4s,MS4.0,baz=57,slow=35						
HLID	**Hailey**	**74.52**	**329**	*e*P	**P**	**06 12 31.3**	**+0.8**
	comp=N,10nm,1.4s,mb4.6						
MCMT	**McKenzie Canyo**	**74.72**	**330**	*e*P	**P**	**06 12 32.0**	**+0.4**
	comp=N,1.1nm,0.9s,mb3.8						
EGMT	**Eagleton**	**75.84**	**334**	*e*P	**P**	**06 12 38.5**	**+0.5**
YBH	**Yreka Blue Hor**	**77.64**	**323**	LR	LR	06 43 31.7	
	comp=N,50nm,20.4s,MS3.8,baz=159,slow=33						
EDM	**Edmonton**	**81.32**	**336**	*e*P	**P**	**06 13 07.3**	**-0.8**
ESDC	**Sonseca Array**	**85.79**	**45**	LR	LR	06 52 24.7	
	comp=N,46nm,19.6s,MS3.9,baz=190,slow=36						
BOSA	**Boshof**	**85.91**	**119**	LR	LR	06 48 30.5	
	comp=N,131nm,18.5s,MS4.4,baz=16,slow=33						
MAW	**Mawson**	**86.62**	**164**	P	**P**	**06 13 34.0**	**-1.1**
	comp=N,2.1nm,0.9s,mb4.4,baz=221,slow=11,SNR=4.0						
MAW				LR	LR	06 51 24.9	
	comp=N,40nm,21.6s,MS3.8,baz=321,slow=35						
YKA	**Yellowknife Ar**	**88.84**	**341**	P	**P**	**06 13 44.7**	**-0.9**
	comp=N,2.7nm,0.7s,mb4.7,baz=136,slow=4.7,SNR=11						
KEST	**Kesra**	**93.63**	**53**	LR	LR	06 59 52.6	
	comp=N,28nm,20.3s,MS3.7,baz=267,slow=38						
URZ	**Urewera**	**94.17**	**227**	LR	LR	06 46 52.6	
	comp=N,201nm,18.2s,MS4.6,baz=167,slow=29						
AFI	**Afiamalu**	**95.39**	**253**	LR	LR	06 45 22.3	
	comp=N,75nm,19.6s,MS4.2,baz=74,slow=28						
ASAR	**Alice Springs**	**130.66**	**210**	PKP	PKPdf	06 20 03.1	-0.7
	comp=N,0.6nm,0.6s,baz=141,slow=2.3,SNR=4.9						
WRA	**Warramunga Arr**	**133.57**	**214**	PKP	PKPdf	06 20 09.2	-0.2
	comp=N,1.1nm,0.7s,baz=173,slow=1.8,SNR=6.1						
ZALV	**Zalesovo Beam**	**140.99**	**23**	PKP	PKPdf	06 20 21.7	-0.3
	comp=N,0.7nm,0.4s,baz=316,slow=4.0,SNR=3.3						
MKAR	**Makanchi Array**	**145.12**	**33**	PKPbc	PKPbc	06 20 28.3	-0.6
	comp=N,5.2nm,0.7s,baz=324,slow=4.0,SNR=35						
SONM	**Songino Array**	**151.78**	**4**	PKPbc	PKPbc	06 20 46.5	-0.2
	comp=N,1.7nm,0.6s,baz=17,slow=1.5,SNR=6.1						

*ISCJB **09** 06:04:05.1±0.5, 51°.51N±0°.03×16°.10E±0°.03, h0km, Error ellipse: s-maj=3.9km s-min=2.3km az=20.6*
*CSEM **09** 06:04:06.5±0.2, 51°.54N×16°.06E, h2km, ML3.7/9, Error ellipse: s-maj=3.2km s-min=2.1km az=26.0*
*PRU **09** 06:04:07.0, 51°.56N×16°.11E, h0km*
*BGR **09** 06:04:07.1±0.4, 51°.50N×16°.07E, h1km, ML3.3, Error ellipse: s-maj=5.6km s-min=3.3km az=14.0*
*IPEC **09** 06:04:07.8±0.2, 51°.54N×16°.06E, h9km±1km, ML2.8/4, Error ellipse: s-maj=1.6km s-min=0.6km az=26.0*
*WAR **09** 06:04:08.0, 51°.54N×16°.03E, ML3.1, Mining Induced*
*VIE **09** 06:04:10.5±0.5, 51°.25N×16°.06E, h0km, mb2.5/4, ML3.3/4, Error ellipse: s-maj=2.9km s-min=2.6km az=173.0 68 km WNW of Wroclaw Suspected Mining induced.*

ISC 09 06:04:06.1±0.5, 51°.56N±0°.02×16°.08E±0°.03, h0km, n68, σ0s85/122, 4C, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.73**	**169**	*e*Pg	**Pg**	**06 04 21.1**	**+1.1**
KSP				*e*		06 04 23.4	
KSP				*e*Sg	**Sg**	**06 04 30.6**	**+1.2**
KSP				*e*		06 04 35.1	
KSP	**Ksiaz**	**0.73**	**169**	*e*Pn	**Pg**	**06 04 21.0**	**+0.9**
KSP				*e*Sg	**Sg**	**06 04 30.9**	**+1.5**
KSP	**Ksiaz**	**0.73**	**169**	*e*Pg	**Pg**	**06 04 21.1**	**+1.1**
KSP				*e*Sg	**Sg**	**06 04 30.6**	**+1.2**
KSP				e		06 04 34.1	
KSP	**Ksiaz**	**0.73**	**169**	*e*Pg	**Pg**	**06 04 20.8**	**+0.8**
	baz=348						
KSP				*e*Sg	**Sg**	**06 04 30.5**	**+1.1**
	baz=348						
UPC	**Upice**	**1.05**	**182**	*e*PG	**Pg**	**06 04 26.9**	**+0.7**
UPC	**Upice**	**1.05**	**182**	*e*Pg	**Pg**	**06 04 26.8**	**+0.6**
	baz=1.5						
UPC				*e*Sg	**Sg**	**06 04 40.8**	**+1.0**
	baz=1.5						
DPC	**Dobruska-Polom**	**1.22**	**173**	*e*Pn	**Pn**	**06 04 29.8**	**-0.6**
DPC				*e*Sg	**Sg**	**06 04 45.7**	**+0.5**
DPC	**Dobruska-Polom**	**1.22**	**173**	*e*PG	**Pg**	**06 04 29.9**	**+0.5**
DPC				*e*SG	**Sg**	**06 04 45.6**	**+0.4**
	comp=Z,180nm,0.6s						
DPC	**Dobruska-Polom**	**1.22**	**173**	Pg	**Pg**	**06 04 29.9**	**+0.5**
DPC				Sg	**Sg**	**06 04 45.6**	**+0.4**
	comp=Z,180nm,0.6s						
PVCC	**Panska Ves**	**1.40**	**223**	*e*PG	**Pg**	**06 04 33.2**	**+0.2**
PVCC	**Panska Ves**	**1.40**	**223**	*e*Pn	**Pn**	**06 04 33.3**	**+0.4**
	baz=42						
PVCC				*e*Sg	**Sg**	**06 04 52.3**	**+1.1**
	baz=42						
BRG	**Berggiesshubel**	**1.51**	**244**	*e*Pn	**Pn**	**06 04 34.5**	**+0.1**
BRG				*e*Sg	**Sg**	**06 04 55.1**	**+0.6**
BRG	**Berggiesshubel**	**1.51**	**244**	PN	**Pn**	**06 04 34.3**	**-0.1**
BRG				PG	**Pg**	**06 04 35.3**	**+0.3**
BRG				SG	**Sg**	**06 04 55.1**	**+0.6**
	comp=Z,149nm,0.6s						
BRG	**Berggiesshubel**	**1.51**	**244**	Pn	**Pn**	**06 04 34.5**	**+0.1**
BRG				*e*Sg	**Sg**	**06 04 54.5**	**0.0**
	baz=63						
PRU	**Pruhonice**	**1.85**	**213**	*e*PN	**Pn**	**06 04 40.1**	**+1.1**
PRU				*e*PG	**Pg**	**06 04 41.4**	**-0.1**
PRU				*e*SG	**Sg**	**06 05 05.6**	**+0.1**
	comp=Z,78nm,0.5s						
PRU	**Pruhonice**	**1.85**	**213**	*e*Pn	**Pn**	**06 04 39.7**	**+0.7**
	baz=31						
PRU	**Pruhonice**	**1.85**	**213**	Pg	**Pg**	**06 04 41.4**	**-0.1**
PRU				Sg	**Sg**	**06 05 05.6**	**+0.1**
	comp=Z,78nm,0.5s						
CLL	**Collm**	**1.94**	**264**	*e*Pn	**Pn**	**06 04 39.7**	**-0.6**
CLL				*e*Pg	**Pg**	**06 04 43.0**	**-0.3**
CLL				*e*Sg	**Sg**	**06 05 08.4**	**-0.1**
CLL	**Collm**	**1.94**	**264**	*e*Pn	**Pn**	**06 04 40.0**	**-0.3**
CLL				*e*Pg	**Pg**	**06 04 43.0**	**-0.3**
CLL				*e*		06 04 46.0

comp=Z,66nm,0.5s
MOA Molln 3.89 198 ⇑*i*Pn **Pn 06 05 07.6 +0.5**
MOA ⇑*i*Sg **Sg 06 06 09.4 -1.6**
comp=Z,51nm,0.7s
MOA Molln 3.89 198 Pn **Pn 06 05 07.6 +0.5**
MOA Sg **Sg 06 06 09.4 -1.7**
comp=Z,51nm,0.7s
CRVS Cervenica-Dubn 4.36 125 *e*PN **Pn 06 05 13.6 +0.1**
CRVS Cervenica-Dubn 4.36 125 *e*Pn **Pn 06 05 13.6 +0.1**

*ISCJB **09** 06:34:44.6±0.6, 43°.55N±0°.03×17°.83E±0°.04, h1km±5km, Error ellipse: s-maj=5.0km s-min=3.6km az=140.3*
*PDG **09** 06:34:45.2±0.2, 43°.47N×17°.76E, h2km, ML2.8/10, Error ellipse: s-maj=0.7km s-min=1.1km az=0.0*
*BEO **09** 06:34:46.5±0.3, 43°.61N×17°.95E, h0km, ML2.8/4*
*CSEM **09** 06:34:46.7±0.2, 43°.61N×17°.98E, h2km, ML2.8/10, Error ellipse: s-maj=4.9km s-min=3.1km az=43.0*
*NEIC **09** 06:34:47.7±1.1, 43°.37N×17°.93E, h10km, ML2.8(PDG), Error ellipse: s-maj=15.2km s-min=9.6km az=45.0*
ISC 09 06:34:45.0±0.5, 43°.55N±0°.03×17°.78E±0°.03, h3km±4km, n52, σ1°.35/86, 14C-9D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
STON	**Ston**	**0.68**	**185**	*i* Pg		**Pg**	**Pg**	**06 34 56.0**	**-2.0**
STON					Sg		**Sg**	**06 35 06.2**	**-0.5**
BRY	**Bratogost**	**0.86**	**139**	⇓*i*Pg		**Pg**	**Pg**	**06 34 59.5**	**-1.9**
BRY					*e*Sg		**Sg**	**06 35 12.8**	**+0.3**
UPM	**Unac-Piva**	**0.90**	**112**	⇑*i*Pg		**Pg**	**Pg**	**06 35 01.2**	**-0.9**
UPM					*e*Sg		**Sg**	**06 35 15.5**	**+1.7**
UPM	**Unac-Piva**	**0.90**	**112**	⇑*i*Pg		**Pg**	**Pg**	**06 35 01.2**	**-0.9**
TREB	**Trebinje**	**0.93**	**153**	⇑*i*Pg		**Pg**	**Pg**	**06 35 01.8**	**-1.0**
TREB					*e*Sg		**Sg**	**06 35 16.4**	**+1.6**
TREB	**Trebinje**	**0.93**	**153**	⇑*i*Pg		**Pg**	**Pg**	**06 35 01.8**	**-1.0**
TREB					*e*Sg		**Sg**	**06 35 16.4**	**+1.6**
NKY	**Niksic**	**1.16**	**129**	⇓*i*Pg		**Pg**	**Pg**	**06 35 06.0**	**-1.1**
NKY					*e*Sg		**Sg**	**06 35 23.4**	**+1.3**
NKY	**Niksic**	**1.16**	**129**	⇓*i*Pg		**Pg**	**Pg**	**06 35 06.0**	**-1.1**
NKY					*e*Sg		**Sg**	**06 35 23.4**	**+1.3**
PLE	**Pljevlja**	**1.20**	**100**	⇓*i*Pg		**Pg**	**Pg**	**06 35 07.2**	**-0.8**
PLE					*e*Sg		**Sg**	**06 35 26.0**	**+2.5**
PLE	**Pljevlja**	**1.20**	**100**	⇓*i*Pg		**Pg**	**Pg**	**06 35 07.2**	**-0.8**
HCY	**Herceg Novi**	**1.22**	**154**	⇓*i*Pg		**Pg**	**Pg**	**06 35 06.2**	**-2.2**
HCY					*e*Sg		**Sg**	**06 35 24.7**	**+0.5**
BBLS	**Lazići**	**1.22**	**74**	⇑*i*Pg		**Pg**	**Pg**	**06 35 07.7**	**-0.7**
BBLS					*e*Sg		**Sg**	**06 35 22.3**	**-2.0**
BBLS	**Lazići**	**1.22**	**74**	⇑*i*Pg		**Pg**	**Pg**	**06 35 07.7**	**-0.7**
BBLS					*e*Sg		**Sg**	**06 35 22.3**	**-2.0**
BLY	**Banja Luka**	**1.27**	**341**	*e*Pg		**Pn**	**Pg**	**06 35 09.4**	**-0.3**
BLY					*e*Sg		**Sg**	**06 35 28.2**	**+2.2**
BLY	**Banja Luka**	**1.27**	**341**	*e*Pg		**Pn**	**Pg**	**06 35 09.4**	**-0.3**
BUM	**Brajici-Budva**	**1.49**	**146**	⇑*i*Pg		**Pg**	**Pg**	**06 35 12.1**	**-1.5**
BUM					*e*Sg		**Sg**	**06 35 34.3**	**+1.3**
PDG	**Podgorica**	**1.56**	**135**	*e*Sg		**Sg**	**Sg**	**06 35 37.0**	**+1.9**
TTG	**Podgorica**	**1.56**	**135**	⇑*i*Pg		**Pn**	**Pg**	**06 35 12.4**	**-1.2**
TTG					*e*Sg		**Sg**	**06 35 37.0**	**+1.9**
TTG	**Podgorica**	**1.56**	**135**	⇑*i*Pg		**Pn**	**Pg**	**06 35 12.4**	**-1.2**
TTG					*e*Sg		**Sg**	**06 35 37.0**	**+1.9**
SJES	**Sjenica**	**1.63**	**99**	*e*Pn		**Pn**	**Pn**	**06 35 14.6**	**+0.1**
SJES					*e*Sg		**Sn**	**06 35 34.0**	**-1.9**
BEY	**Berane**	**1.69**	**113**	⇓*i*Pn		**Pn**	**Pn**	**06 35 16.4**	**+1.0**
IVA	**Berane**	**1.69**	**113**	⇓*i*Pn		**Pn**	**Pn**	**06 35 16.4**	**+1.0**
IVA					*e*Sn		**Sg**	**06 35 41.4**	**+2.1**
IVA	**Berane**	**1.69**	**113**	⇓*i*Pn		**Pn**	**Pn**	**06 35 16.4**	**+1.0**
IVA					*e*Sn		**Sg**	**06 35 41.4**	**+2.1**
DIVS	**Divibare**	**1.70**	**70**	*e*Pn		**Pn**	**Pn**	**06 35 16.0**	**+0.5**
DIVS					*e*Sg		**Sn**	**06 35 36.2**	**-1.5**
DIVS	**Divibare**	**1.70**	**70**	*e*Pn		**Pn**	**Pn**	**06 35 16.0**	**+0.5**
DIVS					*e*Sg		**Sn**	**06 35 36.2**	**-1.5**
PVY	**Plav**	**1.87**	**120**	⇑*i*Pn		**Pn**	**Pn**	**06 35 18.7**	**+0.8**
PVY					*e*Sn		**Sg**	**06 35 45.7**	**+0.6**
PVY	**Plav**	**1.87**	**120**	⇑*i*Pn		**Pn**	**Pn**	**06 35 18.7**	**+0.8**
ULC	**Ulcinj**	**1.92**	**145**	*e*Pn		**Pn**	**Pn**	**06 35 19.2**	**+0.7**
ULC					*e*Sn		**Sg**	**06 35 45.9**	**-0.7**
ULC	**Ulcinj**	**1.92**	**145**	*e*Pn		**Pn**	**Pn**	**06 35 19.2**	**+0.7**
ULC					*e*Sn		**Sg**	**06 35 45.9**	**-0.7**
TRUS	**Trudelj**	**2.02**	**70**	*e*Pn		**Pn**	**Pn**	**06 35 19.2**	**-0.7**
TRUS					*e*Sg		**Sn**	**06 35 45.0**	**-0.6**
TRUS	**Trudelj**	**2.02**	**70**	*e*Pn		**Pn**	**Pn**	**06 35 19.2**	**-0.7**
TRUS					*e*Sg		**Sn**	**06 35 45.0**	**-0.6**
GRUS	**Gruza**	**2.16**	**80**	*e*Pn		**Pn**	**Pn**	**06 35 21.0**	**-0.8**
GRUS					*e*Sg		**Sn**	**06 35 51.4**	**+2.3**
GRUS	**Gruza**	**2.16**	**80**	*e*Pn		**Pn**	**Pn**	**06 35 21.0**	**-0.8**
GRUS					*e*Sg		**Sn**	**06 35 51.4**	**+2.3**
FGSL	**Fruska Gora**	**2.17**	**41**	*e*Sg		**Sn**	**Sn**	**06 35 49.5**	**+0.1**
FRGS	**Fruska Gora**	**2.17**	**41**	⇑*i*Pn		**Pn**	**Sn**	**06 35 20.2**	**-1.8**
FRGS					*e*Sg		**Sn**	**06 35 49.5**	**+0.1**
NVLJ	**Novalja**	**2.33**	**297**	*e*Pn		**Pg**	**Pg**	**06 35 27.8**	**-1.8**
NVLJ					Sn		**Sg**	**06 35 59.1**	**-0.7**
NVLJ	**Novalja**	**2.33**	**297**	*e*Pn		**Pg**	**Pg**	**06 35 27.8**	**-1.8**
NVLJ					Sn		**Sg**	**06 35 59.0**	**-0.8**
PKSM	**Moragy**	**2.73**	**13**	*e*Pn		**Pn**	**Pn**	**06 35 30.6**	**+0.9**
PKSM	**Moragy**	**2.73**	**13**	*e*Pn		**Pn**	**Pn**	**06 35 30.6**	**+0.9**
CRES	**Cresnjev**	**2.82**	**325**	*e*Pn		**Pn**	**Pn**	**06 35 33.8**	**+2.9**
CRES	**Cresnjev**	**2.82**	**325**	*e*Pn		**Pn**	**Pn**	**06 35 33.8**	**+2.9**
BARS	**Barje**	**3.04**	**102**	⇑*i*Pn		**Pn**	**Pn**	**06 35 35.2**	**+1.2**
BARS	**Barje**	**3.04**	**102**	⇑*i*Pn		**Pn**	**Pn**	**06 35 35.2**	**+1.2**
CEY	**Cerknica**	**3.24**	**314**	*e*Pn		**Pn**	**Pn**	**06 35 39.2**	**+2.5**
CEY	**Cerknica**	**3.24**	**314**	*e*Pn		**Pn**	**Pn**	**06 35 39.2**	**+2.5**
BZS	**Buzias**	**3.44**	**52**	*e*Pn		**Pn**	**Pn**	**06 35 40.2**	**+0.8**
BZS					*e*Sn		**Sn**	**06 36 19.0**	**-1.6**
BZS	**Buzias**	**3.44**	**52**	*e*Pn		**Pn**	**Pn**	**06 35 40.2**	**+0.8**
BZS					*e*Sn		**Sn**	**06 36 19.0**	**-1.6**
ZAPS	**Zavoj**	**3.55**	**93**	*e*Pn		**Pn**	**Pn**	**06 35 41.2**	**+0.2**
ZAPS					*e*Sn		**Sn**	**06 36 21.9**	**-1.5**
VOY	**Vojsko**	**3.72**	**313**	*e*Pn		**Pn**	**Pn**	**06 35 47.2**	**+4.0**
VOY					*e*Sn		**Sg**	**06 36 54.3**	**+10**
VOY	**Vojsko**	**3.72**	**313**	*e*Pn		**Pn**	**Pn**	**06 35 47.2**	**+4.0**
MOA	**Molln**	**4.96**	**331**	*e*Pn		**Pn**	**Pn**	**06 36 01.9**	**+1.6**
MOA	**Molln**	**4.96**	**331**	*e*Pn		**Pn**	**Pn**	**06 36 01.9**	**+1.6**

*ISCJB **09** 07:01:43.6±3.0, 10°.27S±0°.04×75°.40W±0°.06, h12km±19km, mb4.6/51, MS3.9/7, Error ellipse: s-maj=10.1km s-min=6.9km az=164.8*
*IDC **09** 07:01:43.2±0.6, 10°.30S×75°.42W, h0km, mb4.4/10, mb1 4.5/13, mb1mx4.4/21, mbtmp4.3/13, ML4.0/1, MS3.4/7, Ms1 3.4/7, ms1mx3.2/23, Error ellipse: s-maj=17.2km s-min=12.3km az=101.0*
*NEIC **09** 07:01:45.6±2.1, 10°.31S×75°.37W, h15km±13km, mb4.7/40, ML4.3(LIM), Error ellipse: s-maj=8.2km s-min=4.3km az=59.0*
NEIC Felt [II] at Huancabamba.
*BJI **09** 07:01:46.6, 10°.30S×75°.40W, h15km, mB5.1/8, Ms5.0/8, Ms7 4.9/9*
ISC 09 07:01:46.4±3.2, 10°.34S±0°.04×75°.35W±0°.06, h18km±19km, n393, σ0°.49/374, mb4.6/51, MS3.9/7, 142C-142D, Central Peru

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.20**	**222**	Pn		**Pn**	**Pn**	**07 02 20.6**	**-1.3**
152nm,0.3s,baz=35,slow=18,SNR=223									
NNA					Sn		**Sn**	**07 02 47.6**	**-1.1**
71nm,0.3s,baz=310,slow=21,SNR=4.3									
NNA					LR		LR	07 02 49.5	
comp=Z,627nm,19.7s,baz=321,slow=30									
NNA					Lg			07 02 53.7	
567nm,0.3s,baz=166,slow=17,SNR=20									
NNA	**Nana**	**2.20**	**222**	*e*Pn		**Pn**	**Pn**	**07 02 21.2**	**-0.8**
NNA					*e*Sn		**Sn**	**07 02 47.6**	**-1.2**
ATAH	**Atahualpa**	**4.38**	**316**	Pn		**Pn**	**Pn**	**07 02 55.0**	**+2.9**
16nm,0.3s,baz=123,slow=11,SNR=68									
ATAH					Lg			07 03 53.9	
12nm,0.3s,baz=90,slow=19,SNR=2.8									
ATAH					LR		LR	07 04 33.4	
comp=Z,155nm,21.0s,baz=143,slow=40									
LPAZ	**La Paz**	**9.18**	**131**	Pn		**Pn**	**Pn**	**07 04 02.1**	**+4.2**
0.2nm,0.3s,baz=330,slow=12,SNR=15									
LPAZ					Lg			07 06 34.2	
0.8nm,0.3s,baz=200,slow=12,SNR=5.0									
LPAZ	**La Paz**	**9.18**	**131**	*e*Pn		**Pn**	**Pn**	**07 03 59.9**	**+2.0**
OTAV	**Otavalo**	**10.95**	**343**	*e*Pn		**Pn**	**Pn**	**07 04 21.0**	**-1.3**
SIV	**San Ignacio**	**14.99**	**114**	Pn		**Pn**	**Pn**	**07 05 16.6**	**-0.8**
0.3nm,0.3s,baz=311,slow=13,SNR=9.6									
SIV					Lg			07 09 34.6	
1.1nm,0.3s,baz=234,slow=22,SNR=6.3									
ROSC	**El Rosal**	**15.13**	**4**	Pn		**Pn**	**Pn**	**07 05 19.6**	**+0.3**
0.4nm,0.3s,baz=100,slow=18,SNR=2.6									
ROSC					Lg			07 09 45.6	
0.3nm,0.3s,baz=104,slow=19,SNR=2.5									
CFAA	**Coronel Fontan**	**22.16**	**164**	P		**P**	**P**	**07 06 41.7**	**+0.4**
0.2nm,0.5s,baz=341,slow=9.9,SNR=7.2									
CFAA	**Coronel Fontan**	**22.16**	**164**	P		**P**	**P**	**07 06 41.7**	**+0.4**
PCRV	**Puerto La Cruz**	**23.00**	**28**	LR		LR	LR	07 16 50.5	
comp=Z,278nm,18.0s,MS3.8,baz=199,slow=39									
CPUP	**Villa Florida**	**23.31**	**135**	P		**P**	**P**	**07 06 53.4**	**-0.1**
2.7nm,0.7s,mb3.8,baz=291,slow=11,SNR=13									
CPUP					LR		LR	07 17 49.6	
comp=Z,73nm,19.5s,MS3.1,baz=330,slow=41									
SJG	**San Juan**	**29.69**	**18**	LR		LR	LR	07 20 48.0	
comp=Z,32nm,20.9s,MS2.9,baz=95,slow=39									
LRAL	**Lakeview Retre**	**44.54**	**346**	*e*P		**P**	**P**	**07 09 56.0**	**-1.1**
6.1nm,1.0s,mb4.4									
NATX	**Nacogdoches**	**45.76**	**337**	*e*P		**P**	**P**	**07 10 07.0**	**+0.1**
OXF	**Oxford**	**46.56**	**344**	*e*P		**P**	**P**	**07 10 12.3**	**-0.8**
22nm,1.1s,mb5.0									
628A	**Black Gap, Mar**	**47.67**	**327**	⇑P		**P**	**P**	**07 10 22.1**	**+0.2**
baz=48,SNR=9.5									
UALR	**University of**	**47.67**	**341**	*e*P		**P**	**P**	**07 10 21.2**	**-0.6**
21nm,1.3s,mb5.0									
WVT	**Waverly**	**47.69**	**346**	*e*P		**P**	**P**	**07 10 19.8**	**-2.1**
MIAR	**Mount Ida**	**47.87**	**340**	*e*P		**P**	**P**	**07 10 23.4**	**+0.1**
8.7nm,1.1s,mb4.7									
627A	**Terlingua Ranc**	**47.92**	**326**	⇑P		**P**	**P**	**07 10 23.9**	**+0.2**
baz=48,SNR=6.7									
TXAR	**Lajitas Array**	**47.98**	**326**	P		**P**	**P**	**07 10 23.4**	**-0.8**
3.3nm,1.0s,mb4.3,baz=153,slow=7.7,SNR=21									
TXAR					PcP		PcP	07 11 52.5	+0.2
0.5nm,0.8s,baz=144,slow=5.2,SNR=3.6									
528A	**Cox Ranch, San**	**48.15**	**328**	⇑P		**P**	**P**	**07 10 25.9**	**+0.3**
baz=48,SNR=7.4									
626A	**Big Bend Ranch**	**48.40**	**326**	⇓P		**P**	**P**	**07 10 27.7**	**+0.1**
baz=48,SNR=24									
527A	**Woodward Ranch**	**48.58**	**327**	⇓P		**P**	**P**	**07 10 28.5**	**-0.4**
baz=49,SNR=6.4									
526A	**Mary Lane Ranc**	**48.77**	**326**	⇓P		**P**	**P**	**07 10 30.4**	**0.0**
baz=49,SNR=7.6									
427A	**Hayter Ranch,**	**49.02**	**328**	⇓P		**P**	**P**	**07 10 32.0**	**-0.2**
baz=49									
328A	**Wristen Ranch,**	**49.13**	**329**	⇓P		**P**	**P**	**07 10 32.7**	**-0.4**
baz=49,SNR=5.2									
426A	**McDonald Obser**	**49.21**	**327**	⇑P		**P**	**P**	**07 10 33.4**	**-0.3**
baz=49,SNR=6.9									
SIUC	**Southern Illin**	**49.54**	**346**	*e*P		**P**	**P**	**07 10 34.8**	**-1.3**
13nm,0.9s,mb5.0									
326A	**Caldwell Ranch**	**49.69**	**327**	⇑P		**P**	**P**	**07 10 37.3**	**0.0**
baz=50									
425A	**Indio Mountain**	**49.82**	**326**	⇓P		**P**	**P**	**07 10 38.0**	**-0.3**
baz=50,SNR=18									
227A	**Bennet, Jal**	**49.88**	**329**	⇓P		**P**	**P**	**07 10 38.7**	**-0.1**
baz=50									
WMOK	**Wichita Mounta**	**50.03**	**335**	*e*P		**P**	**P**	**07 10 39.4**	**-0.5**
3.5nm,1.0s,mb4.3									
FVM	**French Village**	**50.10**	**344**	*e*P		**P**	**P**	**07 10 39.3**	**-1.0**
15nm,1.1s,mb4.9									
325A	**Bean Ranch, Si**	**50.26**	**327**	⇑P		**P**	**P**	**07 10 41.3**	**-0.4**
baz=50,SNR=12									
226A	**Malaga, Loving**	**50.34**	**328**	⇓P		**P**	**P**	**07 10 42.4**	**+0.1**
baz=50,SNR=7.6									
127A	**Arkansas Junct**	**50.44**	**329**	⇑P		**P**	**P**	**07 10 42.9**	**-0.1**
baz=50									
GDL2	**Guadalupe Moun**	**50.58**	**328**	*e*P		**P**	**P**	**07 10 44.8**	**+0.6**
2.8nm,0.9s,mb4.2									
324A	**Moseley Ranch,**	**50.59**	**326**	⇓P		**P**	**P**	**07 10 43.5**	**-0.8**
baz=51,SNR=13									
MNTX	**Cornudas Mount**	**50.74**	**327**	*e*P		**P**	**P**	**07 10 44.6**	**-0.7**
8.9nm,1.3s,mb4.5									
MNTX					*e*PcP		PcP	07 12 01.0	-1.4
225A	**Deer Hill, Car**	**50.76**	**327**	⇓P		**P**	**P**	**07 10 45.4**	**0.0**
baz=51,SNR=11									
126A	**Clayton Basin,**	**50.76**	**328**	⇓P		**P**	**P**	**07 10 45.3**	**-0.1**
baz=51									
ACSO	**Alum Creek Sta**	**50.81**	**352**	*e*P		**P**	**P**	**07 10 44.6**	**-1.1**
14nm,0.9s,mb4.9									
Z27A	**Tatum**	**50.88**	**330**	⇓P		**P**	**P**	**07 10 45.6**	**-0.7**
baz=51,SNR=9.1									
CPRX	**Cap Rock**	**50.98**	**329**	*e*P		**P**	**P**	**07 10 47.1**	**0.0**
13nm,1.1s,mb4.8									
125A	**Gardner Draw,**	**51.10**	**328**	⇓P		**P**	**P**	**07 10 47.6**	**-0.4**
baz=51,SNR=6.5									
MSTX	**Muleshoe**	**51.19**	**331**	⇑P		**P**	**P**	**07 10 48.2**	**-0.5**
baz=51									
Z26A	**Caprock**	**51.23**	**329**	⇑P		**P**	**P**	**07 10 48.7**	**-0.3**
baz=51,SNR=8.6									
Y27A	**Causey**	**51.31**	**330**	⇓P		**P**	**P**	**07 10 48.9**	**-0.7**
baz=51,SNR=7.2									
124A	**Stringfield Ra**	**51.55**	**327**	⇑P		**P**	**P**	**07 10 51.1**	**-0.3**
baz=52,SNR=8.4									
Z25A	**Roswell**	**51.62**	**328**	⇑P		**P**	**P**	**07 10 51.2**	**-0.6**
baz=52,SNR=7.1									
X27A	**F and S Farms,**	**51.90**	**331**	⇓P		**P**	**P**	**07 10 53.3**	**-0.6**
baz=52,SNR=6.4									
Z24A	**Sheeppen Canyo**	**51.99**	**328**	⇑P		**P**	**P**	**07 10 54.5**	**-0.2**
baz=52,SNR=17									
222A	**Williams Famil**	**51.99**	**325**	⇑P		**P**	**P**	**07 10 54.9**	**+0.2**
baz=52,SNR=8.2									
Y25A	**Mesa, Roswell**	**52.11**	**329**	⇑P		**P**	**P**	**07 10 55.0**	**-0.5**
baz=52,SNR=5.7									
X26A	**CR and CF Fran**	**52.17**	**330**	⇓P		**P**	**P**	**07 10 55.5**	**-0.4**
baz=52,SNR=9.5									
W27A	**Bowe Ranch, En**	**52.22**	**331**	⇑P		**P**	**P**	**07 10 55.8**	**-0.5**
baz=52,SNR=9.1									
320A	**Kipp Ranch, An**	**52.24**	**324**	⇓P		**P**	**P**	**07 10 56.7**	**+0.2**
baz=52,SNR=7.1									
HDIL	**Hopedale**	**52.26**	**347**	*e*P		**P**	**P**	**07 10 55.2**	**-1.3**
32nm,0.3s,mb5.7									
Y24A	**Capitan**	**52.49**	**328**	⇑P		**P**	**P**	**07 10 58.6**	**+0.2**
baz=52									
220A	**Playas Peak, P**	**52.65**	**324**	⇓P		**P**	**P**	**07 10 59.7**	**+0.1**
baz=53,SNR=13									
121A	**Cookes Peak, D**	**52.69**	**325**	⇓P		**P**	**P**	**07 11 00.1**	**+0.2**
baz=53,SNR=7.0									
319A	**Douglas**	**52.71**	**323**	⇑P		**P**	**P**	**07 11 00.2**	**+0.2**
baz=53,SNR=7.6									
Z22A	**Elephant Butte**	**52.78**	**327**	⇓P		**P**	**P**	**07 11 00.6**	**0.0**
baz=53,SNR=9.2									
Y23A	**Lovelace Mesa,**	**52.82**	**328**	⇓P		**P**	**P**	**07 11 00.5**	**-0.3**
baz=53,SNR=5.9									
X24A	**Lazy VL Ranch,**	**52.99**	**329**	⇑P		**P**	**P**	**07 11 02.0**	**-0.1**
baz=53									
W25A	**X Bar L Ranch,**	**53.02**	**330**	⇑P		**P**	**P**	**07 11 01.5**	**-0.8**
baz=53,SNR=8.0									
219A	**White Tail Can**	**53.14**	**324**	⇓P		**P**	**P**	**07 11 03.3**	**+0.1**
baz=53,SNR=9.2									
V26A	**Tequesquite Ra**	**53.16**	**331**	⇑P		**P**	**P**	**07 11 02.9**	**-0.3**
baz=53,SNR=9.0									
318A	**Bisbee**	**53.17**	**323**	⇑P		**P**	**P**	**07 11 03.5**	**0.0**
baz=53,SNR=5.6									
120A	**U Bar Ranch, L**	**53.18**	**325**	⇑P		**P**	**P**	**07 11 03.6**	**+0.1**
baz=53									
Z21A	**St. Cloud Mine**	**53.21**	**326**	⇑P		**P**	**P**	**07 11 04.1**	**+0.4**
baz=53,SNR=8.2									
BNM	**Barren Site**	**53.29**	**328**	*e*P		**P**	**P**	**07 11 04.5**	**+0.2**
4.5nm,1.2s,mb4.3									
Y22A	**Socorro**	**53.30**	**327**	⇓P		**P**	**P**	**07 11 04.6**	**+0.2**
baz=53									
W24A	**Lazy 6 Ranch,**	**53.49**	**329**	⇑P		**P**	**P**	**07 11 05.1**	**-0.6**
baz=54,SNR=5.6									
Z20A	**Nine Sixteen R**	**53.58**	**325**	⇑P		**P**	**P**	**07 11 06.8**	**+0.4**
baz=54,SNR=11									
218A	**Dragoon**	**53.59**	**323**	⇓P		**P**	**P**	**07 11 06.6**	**+0.1**
baz=54,SNR=5.1									
V25A	**Rancho No Teng**	**53.59**	**330**	⇓P		**P**	**P**	**07 11 06.2**	**-0.3**
baz=54,SNR=16									
U26A	**Atchley Ranch,**	**53.62**	**332**	⇓P		**P**	**P**	**07 11 06.2**	**-0.4**
baz=54,SNR=6.6									
Y21A	**Point of Rocks**	**53.74**	**327**	⇑P		**P**	**P**	**07 11 08.0**	**+0.4**
baz=54									
LAZ	**Ladron**	**53.75**	**327**	*e*P		**P**	**P**	**07 11 07.6**	**0.0**
4.0nm,1.2s,mb4.2									
W23A	**Werner Place,**	**53.82**	**329**	⇑P		**P**	**P**	**07 11 08.2**	**0.0**
baz=54									
V24A	**Rampart Ranch,**	**53.83**	**330**	⇓P		**P**	**P**	**07 11 07.5**	**-0.6**
baz=54,SNR=6.2									
CBKS	**Cedar Bluff**	**53.93**	**336**	*e*P		**P**	**P**	**07 11 08.3**	**-0.5**
30nm,1.3s,mb5.1									
U25A	**Circle Dot Ran**	**53.94**	**331**	⇑P		**P**	**P**	**07 11 08.7**	**-0.3**
baz=54,SNR=9.7									
118A	**Homack Ranch,**	**54.02**	**324**	⇑P		**P**	**P**	**07 11 09.7**	**0.0**
baz=54									
Y20A	**Horse Springs,**	**54.05**	**326**	⇑P		**P**	**P**	**07 11 10.3**	**+0.5**
baz=54,SNR=7.7									
X21A	**Alamocita Cree**	**54.13**	**327**	⇓P		**P**	**P**	**07 11 11.1**	**+0.7**
baz=54,SNR=9.5									
TUC	**Tucson**	**54.27**	**323**	*e*P		**P**	**P**	**07 11 11.3**	**-0.1**
4.1nm,1.0s,mb4.3									
V23A	**Ortiz Mt. (NFS**	**54.30**	**329**	⇑P		**P**	**P**	**07 11 11.9**	**+0.3**
baz=54									
117A	**Oracle**	**54.42**	**323**	⇑P		**P**	**P**	**07 11 12.2**	**-0.4**
baz=54									
216A	**Three Points,**	**54.45**	**322**	⇓P		**P**	**P**	**07 11 12.8**	**-0.1**
baz=54,SNR=5.5									
T25A	**Trinidad**	**54.54**	**332**	⇑P		**P**	**P**	**07 11 13.6**	**+0.2**
baz=55,SNR=8.9									
Y19A	**Nutrioso**	**54.57**	**325**	⇑P		**P**	**P**	**07 11 14.2**	**+0.6**
baz=55,SNR=6.7									
X20A	**Quemado**	**54.59**	**326**	⇑P		**P**	**P**	**07 11 14.0**	**+0.3**
baz=55									
U23A	**El Rito**	**54.76**	**330**	⇑P		**P**	**P**	**07 11 14.9**	**-0.1**
baz=55,SNR=5.3									
V22A	**San Miguel Ran**	**54.80**	**329**	⇓P		**P**	**P**	**07 11 15.5**	**+0.2**
baz=55,SNR=7.1									
Y18A	**Canyon Day Jun**	**54.88**	**325**	⇓P		**P**	**P**	**07 11 15.9**	**0.0**
baz=55									
X19A	**St. Johns**	**54.94**	**326**	⇓P		**P**	**P**	**07 11 16.7**	**+0.4**
baz=55									
S25A	**Robets Cordova**	**54.98**	**332**	⇑P		**P**	**P**	**07 11 16.4**	**-0.1**
baz=55,SNR=7.8									
116A	**Eloy**	**54.99**	**322**	⇓P		**P**	**P**	**07 11 16.5**	**-0.2**
baz=55									
W20A	**Ramah**	**55.03**	**327**	⇓P		**P**	**P**	**07 11 17.5**	**+0.5**
baz=55									
U22A	**Llaves**	**55.13**	**329**	⇓P		**P**	**P**	**07 11 18.1**	**+0.5**
baz=55									
T23A	**Casias Ranch,**	**55.24**	**330**	⇓P		**P**	**P**	**07 11 19.0**	**+0.6**
baz=55									
214A	**Organ Pipe Nat**	**55.25**	**321**	⇑P		**P**	**P**	**07 11 19.0**	**+0.3**
baz=55,SNR=7.8									
Y17A	**Roosevelt**	**55.29**	**324**	⇑P		**P**	**P**	**07 11 18.9**	**+0.1**
baz=55									
S24A	**Houchin Ranch,**	**55.32**	**331**	⇑P		**P**	**P**	**07 11 19.4**	**+0.4**
baz=55									

T14A	Hurricane	58.97	325	⇓P	P	07 11 44.7 -0.1
	baz=59					
R16A	Teasdale	58.98	327	⇑P	P	07 11 45.1 +0.2
	baz=59,SNR=6.2					
S15A	Panguitch	59.01	326	⇑P	P	07 11 45.6 +0.4
	baz=59					
U13A	Pakoon Wash	59.02	324	⇓P	P	07 11 45.4 +0.2
	baz=59					
V12A	Nelson	59.06	323	⇓P	P	07 11 45.5 0.0
	baz=59,SNR=7.5					
SRU	San Rafael	59.09	329	⇑P	P	07 11 45.2 -0.4
	baz=59,SNR=6.2					
SRU	San Rafael	59.09	329	eP	P	07 11 45.5 -0.1
	12nm,1.3s,mb4.8					
N20A	Spence Gulch,	59.29	331	⇑P	P	07 11 47.0 0.0
	baz=59					
P18A	Preston Nutter	59.34	329	⇓P	P	07 11 47.9 +0.6
	baz=59					
R15A	Junction	59.35	327	⇑P	P	07 11 48.0 +0.6
	baz=59					
BBRC	Big Bear Solar	59.35	320	⇓P	P	07 11 47.9 +0.3
	baz=59					
HEC	Hector,Ludlow	59.36	321	⇑P	P	07 11 47.7 +0.1
	baz=59					
U12A	Valley of Fire	59.36	324	⇓P	P	07 11 47.8 +0.2
	baz=59					
T13A	Saint George	59.41	325	⇓P	P	07 11 48.6 +0.7
	baz=59					
P17A	Butcher Ranch,	59.47	329	⇓P	P	07 11 48.4 +0.1
	baz=60					
V11A	Goodsprings	59.48	323	⇑P	P	07 11 48.1 -0.3
	baz=60					
M21A	Separation Pea	59.49	333	⇑P	P	07 11 48.7 +0.4
	baz=60					
MSU	Marysvale	59.52	327	eP	P	07 11 49.2 +0.6
ARUT	Antelope Range	59.69	326	eP	P	07 11 50.6 +0.8
	8.9nm,1.3s,mb4.6					
O18A	Roosevelt	59.70	330	⇓P	P	07 11 50.0 +0.2
	baz=60,SNR=6.0					
M20A	Sweetwater, Wa	59.77	332	⇑P	P	07 11 50.8 +0.5
	baz=60					
L21A	Rawlins	59.77	333	⇑P	P	07 11 50.7 +0.4
	baz=60					
S13A	Holt Ranch, En	59.77	325	⇑P	P	07 11 50.9 +0.5
	baz=60,SNR=9.9					
N19A	John Jarvie Ra	59.78	331	⇑P	P	07 11 50.3 0.0
	baz=60					
BFSC	Mount Baldy Ra	59.80	320	⇑P	P	07 11 50.4 -0.3
	baz=60					
GSC	Goldstone	59.96	321	⇑P	P	07 11 51.7 0.0
	baz=60					
GSC	Goldstone	59.96	321	eP	P	07 11 52.4 +0.6
	5.2nm,1.0s,mb4.5					
Q15A	Fillmore	59.98	327	⇓P	P	07 11 52.2 +0.4
	baz=60					
O17A	Robinson Place	60.01	329	⇓P	P	07 11 52.3 +0.3
	baz=60,SNR=9.8					
SHOC	Shoshone	60.03	322	⇑P	P	07 11 52.7 +0.5
	baz=60					
P16A	Fountain Green	60.05	328	⇑P	P	07 11 52.8 +0.6
	baz=60					
R13A	O'Grain Ranch,	60.26	325	⇓P	P	07 11 54.4 +0.7
	baz=60					
T11A	Corn Creek, Al	60.31	324	⇓P	P	07 11 54.0 -0.1
	baz=60					
P15A	Leamington	60.34	328	⇑P	P	07 11 54.6 +0.3
	baz=60					
O16A	Springville	60.41	329	⇓P	P	07 11 55.3 +0.6
	baz=60					
U10A	Ash Meadows, A	60.41	323	⇑P	P	07 11 55.0 +0.2
	baz=60					
EDW2	Edwards Air Fo	60.42	320	⇓P	P	07 11 54.6 -0.3
	baz=60					
DAU	Daniels Canyon	60.44	329	eP	P	07 11 55.0 +0.1
Q14A	Sevier Lake (B	60.45	327	⇓P	P	07 11 55.4 +0.4
	baz=60,SNR=10					
LRMC	Laurel Mountai	60.62	321	⇓P	P	07 11 56.4 +0.1
	baz=61					
N17A	Moffit Pass	60.62	330	⇓P	P	07 11 57.3 +1.2
	baz=61					
JLU	Jordanelle	60.68	329	eP	P	07 11 56.9 +0.4
	10nm,1.0s,mb4.9					
R12A	Pony Springs,	60.72	325	⇓P	P	07 11 57.1 +0.3
	baz=61,SNR=10.0					
FURC	Furnace Creek,	60.76	322	⇑P	P	07 11 57.2 0.0
	baz=61,SNR=6.9					
P14A	Drum Mountains	60.77	327	⇑P	P	07 11 57.7 +0.5
	baz=61,SNR=7.3					
L19A	Farson	60.80	332	⇓P	P	07 11 57.3 +0.1
	baz=61					
Q13A	Wheeler Ranch,	60.83	326	⇑P	P	07 11 57.7 +0.1
	baz=61,SNR=9.2					
MPMC	Manual Prospec	60.88	322	⇓P	P	07 11 57.6 -0.4
	baz=61,SNR=5.7					
N16A	Rees Ranch, Co	60.88	329	⇓P	P	07 11 58.4 +0.5
	baz=61					
S11A	Rachel	60.90	324	⇓P	P	07 11 58.1 0.0
	baz=61					
M17A	Scullys Gap (B	60.94	330	⇓P	P	07 11 58.8 +0.5
	baz=61					
O15A	The Old Anders	60.96	328	⇓P	P	07 11 59.0 +0.6
	baz=61					
DUG	Dugway	61.08	328	⇓P	P	07 11 59.4 +0.2
	baz=61,SNR=15					
DUG	Dugway	61.08	328	eP	P	07 11 59.1 -0.2
	5.9nm,0.9s,mb4.7					
AGMN	Agassiz Nation	61.14	345	eP	P	07 11 58.6 -0.9
	6.6nm,0.8s,mb4.8					
P13A	Bates Ranch, G	61.19	326	⇑P	P	07 12 00.3 +0.3
	baz=61,SNR=6.5					
R11A	Troy Canyon, C	61.29	325	⇑P	P	07 12 00.9 +0.2
	baz=61,SNR=10					
Q12A	Willow Creek R	61.34	326	⇑P	P	07 12 01.4 +0.4
	baz=61					
BW06	Boulder Array	61.41	332	⇓P	P	07 12 01.6 +0.2
	baz=62,SNR=6.3					
BW06	Boulder Array	61.41	332	eP	P	07 12 01.3 -0.1
PDAR	Pinedale Array	61.41	332	P	P	07 12 00.8 -0.7
	2.8nm,1.1s,mb4.3,baz=142,slow=7.5,SNR=17					
N15A	Stansbury Isla	61.44	329	⇑P	P	07 12 01.5 -0.2
	baz=62					
HWUT	Hardware Ranch	61.48	330	eP	P	07 12 01.8 -0.2
L17A	Cokeville	61.52	331	⇓P	P	07 12 01.9 -0.3
	baz=62					
K18A	Toltan Ranch,	61.53	331	⇑P	P	07 12 02.1 -0.2
	baz=62,SNR=10					
S10A	Tonopah Range,	61.58	324	⇑P	P	07 12 02.8 +0.1
	baz=62,SNR=9.2					
PKM	Peak Mountain	61.60	319	⇑P	P	07 12 03.4 +0.4
	baz=62					
O13A	Hicks Ranch, I	61.65	327	⇑P	P	07 12 03.8 +0.6
	baz=62					
R10A	Warm Springs	61.66	324	⇓P	P	07 12 03.8 +0.6
	baz=62					
Q11A	Duckwater	61.67	325	⇑P	P	07 12 03.6 +0.3
	baz=62,SNR=16					
P12A	McGill	61.69	326	⇑P	P	07 12 03.6 +0.2
	baz=62,SNR=8.6					
SPUT	South Promonto	61.71	329	eP	P	07 12 04.2 +0.8
N14A	Grayback Hills	61.75	328	⇓P	P	07 12 03.4 -0.4
	baz=62,SNR=8.6					
M15A	Larsen Ranch,	61.82	329	⇑P	P	07 12 03.8 -0.5
	baz=62,SNR=6.6					
J18A	Kendall Valley	61.97	332	⇓P	P	07 12 04.5 -0.7
	baz=62,SNR=5.8					
K17A	Gardner Place,	62.03	331	⇓P	P	07 12 05.3 -0.4
	baz=62					
Q10A	Clear Creek Ra	62.08	325	⇓P	P	07 12 06.2 +0.2
	baz=62,SNR=6.9					
O12A	Currie	62.16	327	⇓P	P	07 12 06.2 -0.4
	baz=62,SNR=12					
L15A	Malad City	62.19	329	⇓P	P	07 12 06.6 -0.1
	baz=62,SNR=8.2					
HVU	Hansel Valley	62.22	329	eP	P	07 12 07.4 +0.5
I18A	Diamond G Ranc	62.25	332	⇑P	P	07 12 07.2 +0.1
	baz=62					
M14A	Sheep Mountain	62.31	329	⇓P	P	07 12 07.0 -0.5
	baz=62,SNR=12					
MTUM	Tungsten Hills	62.37	322	eP	P	07 12 08.8 +0.7
J17A	Brown Place, J	62.40	332	⇓P	P	07 12 08.5 +0.4
	baz=62					
K16A	Soda Springs	62.42	331	⇓P	P	07 12 08.8 +0.6
	baz=62					
REDW	Red Top Meadow	62.47	331	eP	P	07 12 09.1 +0.5
O11A	Cowboy Ranch,	62.56	326	⇓P	P	07 12 09.2 -0.1
	baz=63					
M13A	Montello	62.63	328	⇓P	P	07 12 09.7 0.0
	baz=63					
M13A	Montello	62.63	328	eP	P	07 12 08.9 -0.8
	2.0nm,1.0s,mb4.2					
L14A	Malta	62.64	329	⇑P	P	07 12 09.1 -0.7
	baz=63,SNR=7.5					
RRI2	Red Ridge	62.68	331	eP	P	07 12 10.0 0.0
J16A	Bone	62.76	331	⇓P	P	07 12 10.2 -0.3
	baz=63					
K15A	Arbon	62.77	330	⇓P	P	07 12 10.1 -0.4
	baz=63					
IMW	Indian Meadow	62.92	332	eP	P	07 12 12.0 +0.4
NVAR	Mina Array Bea	62.92	323	P	P	07 12 12.0 +0.4
	1.5nm,0.8s,mb4.2,baz=153,slow=7.3,SNR=16					
NVAR	Mina Array Bea	62.92	323	P	P	07 12 12.0 +0.3
ULM	Lac du Bonnet	62.94	345	P	P	07 12 10.4 -1.1
	6.6nm,0.7s,mb4.9,baz=159,slow=5.5,SNR=5.0					
K14A	Jones Ranch, D	62.98	329	⇓P	P	07 12 11.9 -0.1
	baz=63					
L13A	Double Diamond	63.04	329	⇓P	P	07 12 12.0 -0.4
	baz=63,SNR=6.6					
M12A	Wells	63.06	327	⇓P	P	07 12 12.5 -0.1
	baz=63					
RLMT	Red Lodge	63.12	334	eP	P	07 12 12.3 -0.5
	1.8nm,0.8s,mb4.2					
I16A	Newdale	63.16	331	⇑P	P	07 12 13.4 +0.3
	baz=63					
J15A	Blackfoot	63.25	331	⇑P	P	07 12 13.5 -0.3
	baz=63,SNR=6.9					
G18A	Lazy EL Ranch,	63.40	334	⇓P	P	07 12 14.6 -0.2
	baz=64					
M11A	Holland Ranch,	63.54	327	⇑P	P	07 12 16.0 +0.2
	baz=64					
L12A	House Creek Ra	63.64	328	⇑P	P	07 12 16.1 -0.3
	baz=64,SNR=5.9					
WAKR	Walker	63.64	322	eP	P	07 12 17.5 +1.0
H16A	Russell Place,	63.68	332	⇓P	P	07 12 16.5 -0.1
	baz=64,SNR=6.6					
J14A	Carey	63.73	330	⇑P	P	07 12 16.8 -0.1
	baz=64					
DGMT	Dagmar	63.87	339	⇓P	P	07 12 18.1 +0.4
	baz=64,SNR=5.2					
DGMT	Dagmar	63.87	339	eP	P	07 12 17.7 0.0
CMB	Columbia Colle	63.92	322	eP	P	07 12 17.9 -0.4
	3.7nm,1.0s,mb4.4					
K12A	Draper Farm, C	63.93	328	⇑P	P	07 12 17.9 -0.4
	baz=64,SNR=8.2					
F18A	Big Timber	63.93	334	⇑P	P	07 12 17.8 -0.4
	baz=64,SNR=9.6					
L11A	Cat Creek Ranc	64.04	328	⇑P	P	07 12 18.9 -0.1
	baz=64,SNR=7.6					
J13A	Cove Ranch, Pi	64.11	329	⇑P	P	07 12 19.3 -0.1
	baz=64,SNR=5.4					
I14A	Mackay	64.14	330	⇓P	P	07 12 19.9 +0.3
	baz=64					
H15A	Lima	64.26	331	⇑P	P	07 12 20.6 +0.2
	baz=64,SNR=6.1					
G16A	Moss Hill, Enn	64.33	332	⇑P	P	07 12 20.9 0.0
	baz=64					
F17A	Fitzpatrick Pl	64.34	333	⇓P	P	07 12 20.8 0.0
	baz=64					
HLID	Hailey	64.35	329	⇑P	P	07 12 20.7 -0.3
	baz=64,SNR=6.3					
HLID	Hailey	64.35	329	eP	P	07 12 21.4 +0.5
	3.7nm,1.1s,mb4.3					
WCN	Washoe City	64.35	323	⇓P	P	07 12 21.0 -0.1
	baz=64,SNR=5.4					
L10A	Juniper Basin	64.36	327	⇑P	P	07 12 20.9 -0.2
	baz=64,SNR=5.6					
PAHR	Pah Rah Range	64.39	324	eP	P	07 12 22.7 +1.3
I13A	Wildhorse Cree	64.46	330	⇑P	P	07 12 21.4 -0.3
	baz=64,SNR=7.2					
E18A	Harlowton	64.53	334	⇑P	P	07 12 21.7 -0.4
	baz=65,SNR=7.6					
BOZ	Bozeman (W)	64.58	333	⇑P	P	07 12 21.6 -0.8
	baz=65,SNR=5.5					
BOZ	Bozeman (W)	64.58	333	eP	P	07 12 22.2 -0.2
	2.5nm,0.9s,mb4.2					
G15A	Dillon	64.60	332	⇓P	P	07 12 22.6 0.0
	baz=65					
H14A	Leadore	64.61	331	⇓P	P	07 12 22.4 -0.3
	baz=65,SNR=6.3					
K11A	Parker Ranch,	64.61	328	⇓P	P	07 12 22.2 -0.5
	baz=65,SNR=5.3					
DLMT	Dillon	64.80	332	eP	P	07 12 24.5 +0.6
E17A	Martinsdale	64.86	334	⇓P	P	07 12 23.6 -0.7
	baz=65,SNR=6.2					
I12A	Atlanta	64.88	329	⇑P	P	07 12 24.4 0.0
	baz=65					
MFID	Camas Ranch	64.96	329	⇑P	P	07 12 24.8 -0.1
	baz=65,SNR=15					
D18A	Linhart Farms,	64.98	335	⇓P	P	07 12 24.6 -0.4
	baz=65,SNR=8.3					
H13A	Challis	65.00	330	⇑P	P	07 12 24.6 -0.6
	baz=65,SNR=5.8					
K10A	MacKenzie Ranc	65.06	327	⇓P	P	07 12 25.2 -0.4
	baz=65,SNR=8.6					
E16A	East Helena	65.28	333	⇓P	P	07 12 27.0 +0.1
	baz=65					
H12A	Diamond D Ranc	65.28	330	⇓P	P	07 12 26.3 -0.7
	baz=65,SNR=5.9					
D17A	Six Diamond Ra	65.32	334	⇑P	P	07 12 26.6 -0.7
	baz=65,SNR=8.3					
G13A	Cobalt	65.38	331	⇑P	P	07 12 27.9 +0.3
	baz=65					
I11A	Placerville	65.38	329	⇑P	P	07 12 27.2 -0.4
	baz=65,SNR=9.5					
OHCM	Honcut	65.40	322	eP	P	07 12 27.0 -1.0
F14A	Wisdom	65.50	332	⇑P	P	07 12 28.8 +0.3
	baz=66					
D16A	Dana Ranch, Ca	65.60	334	⇓P	P	07 12 28.5 -0.6
	baz=66,SNR=6.3					
EGMT	Eagleton	65.62	335	⇓P	P	07 12 28.4 -0.7
	baz=66,SNR=6.6					
EGMT	Eagleton	65.62	335	eP	P	07 12 28.6 -0.6
	7.0nm,0.9s,mb4.7					
C17A	Wharram Farm,	65.73	335	⇑P	P	07 12 29.7 -0.2
	baz=66					
WVOR	Wild Horse Val	65.77	326	eP	P	07 12 29.9 -0.4
	6.3nm,1.4s,mb4.5					
B18A	Beardsley Farm	65.92	336	⇑P	P	07 12 30.6 -0.5
	baz=66,SNR=6.5					
F13A	Darby	65.93	331	⇓P	P	07 12 31.0 -0.2
	baz=66					
H11A	Donnelly	65.97	329	⇓P	P	07 12 31.3 -0.2
	baz=66					
E14A	Clinton	66.01	332	⇑P	P	07 12 31.7 0.0
	baz=66					
H10A	Noah's Angus R	66.26	329	⇑P	P	07 12 33.2 -0.1
	baz=66					
C16A	Fuhringer Ranc	66.28	334	⇓P	P	07 12 34.0 +0.5
	baz=66					
J08A	Circle Bar Ran	66.31	327	⇓P	P	07 12 33.7 0.0
	baz=66					
E13A	Victor	66.35	332	⇑P	P	07 12 33.5 -0.4
	baz=66,SNR=5.0					
MOD	Modoc	66.35	325	eP	P	07 12 33.2 -0.8
	9.5nm,1.1s,mb4.7					
F12A	Elk City	66.35	331	⇑P	P	07 12 34.0 +0.1
	baz=66					
A18A	Metzger Ranch,	66.36	336	⇑P	P	07 12 33.7 -0.3
	baz=66,SNR=8.4					
G11A	Walters Elk Ra	66.59	330	⇑P	P	07 12 35.1 -0.4
	baz=67					
C15A	Salmond Ranch,	66.63	334	⇓P	P	07 12 35.6 -0.1
	baz=67,SNR=10.0					
F11A	Grangeville	66.88	330	⇓P	P	07 12 36.8 -0.5
	baz=67,SNR=6.6					
G10A	Bishop Farm, J	66.94	329	⇓P	P	07 12 37.8 +0.1
	baz=67,SNR=5.4					
D13A	Huson	66.95	332	⇓P	P	07 12 37.8 0.0
	baz=67					
E12A	Beaver Dam Sad	66.98	331	⇑P	P	07 12 37.8 -0.1
	baz=67					
B15A	Bradely Ranch,	67.02	334	⇓P	P	07 12 38.2 0.0
	baz=67					
C14A	Swan Lake	67.13	333	⇑P	P	07 12 38.6 -0.3
	baz=67					
H08A	Prairie City	67.20	328	⇓P	P	07 12 39.5 +0.1
	baz=67,SNR=13					
K05A	Summer Lake	67.22	325	⇑P	P	07 12 39.7 +0.2
	baz=67					
G09A	Cove	67.26	329	⇑P	P	07 12 39.7 -0.1
	baz=67,SNR=13					
D12A	Red Ives Fores	67.34	332	⇑P	P	07 12 40.4 +0.2
	baz=67					
JTMT	Jette	67.36	333	eP	P	07 12 39.0 -1.2
B14A	Marquette Ranc	67.37	334	⇓P	P	07 12 40.3 0.0
	baz=67,SNR=6.7					
F10A	Beach Ranch, E	67.47	330	⇑P	P	07 12 41.5 +0.5
	baz=68					
BSMT	Bassoo Peak	67.66	332	eP	P	07 12 42.7 +0.4
G08A	Pilot Rock	67.88	328	⇓P	P	07 12 44.1 +0.4
	baz=68					
A14A	Double T Ranch	67.90	334	⇑P	P	07 12 43.8 +0.1
	baz=68					
WALA	Waterton Lakes	68.17	334	eP	P	07 12 45.5 0.0
A13A	Flathead Natio	68.30	333	⇓P	P	07 12 46.5 +0.3
	baz=68					
C11A	Tepee Creek (N	68.33	332	⇑P	P	07 12 46.3 -0.1
	baz=68					
A12A	Yaak River Ran	68.85	333	⇑P	P	07 12 50.7 +1.1
	baz=69					
NEW	Newport	69.04	332	eP	P	07 12 51.7 +0.9
OD2	Odessa Site #2	69.19	330	eP	P	07 12 52.0 +0.2
YKA	Yellowknife Ar	78.71	343	P	P	07 13 45.6 -1.5
	4.6nm,1.0s,mb4.4,baz=136,slow=6.5,SNR=12					
QSPA	South Pole Qui	79.78	180	P	P	07 13 53.7 +0.7
	3.5nm,1.1s,mb4.2,baz=110,slow=4.5,SNR=7.5					
TORD	Torodi Ar. Bea	79.94	75	P	P	07 13 55.2 +0.2
	7.6nm,0.9s,mb4.6,baz=271,slow=5.2,SNR=8.3					
DLBC	Dease Lake	81.51	334	eP	P	07 14 02.1 -0.3
ESDC	Sonseca Array	82.59	48	P	P	07 14 09.9 +1.4
	0.5nm,0.4s,mb3.9,baz=252,slow=5.4,SNR=6.7					
TAM	Tamanrasset	85.68	66	eP	P	07 14 25.1 +0.5
	2.8nm,0.8s,mb4.5					
SUMG	Summit	86.16	10	iP	P	07 14 26.1 +0.2
	11nm,1.0s,mb5.0					
DAWY	Dawson	88.33	337	eP	P	07 14 35.3 -1.2
INK	Inuvik	88.43	342	eP	P	07 14 36.6 -0.4
	18nm,1.0s,mb5.2					
BMRM	Bremner River	89.18	333	eP	P	07 14 40.0 -0.6
	20nm,1.5s,mb5.2					
EGAK	Eagle	89.33	337	eP	P	07 14 40.4 -0.9
	12nm,1.0s,mb5.2					
TSUM	Tsumeb	89.39	109	P	P	07 14 43.2 +0.6
	9.3nm,1.1s,mb5.0,baz=203,slow=7.2,SNR=5.0					
COLA	College	92.00	336	eP	P	07 14 53.2 -0.5
	7.6nm,1.1s,mb4.9					
PPLA	Purkeypile	93.20	333	eP	P	07 14 58.9 -0.3
	8.7nm,1.2s,mb5.1					
BOSA	Boshof	94.26	120	LR	LR	07 55 39.1
	comp=Z,57nm,18.8s,MS4.1,baz=346,slow=34					
MAW	Mawson	96.69	165	LR	LR	08 00 47.1
	comp=Z,35nm,18.9s,MS3.9,baz=195,slow=37					
BVAR	Borovoye Array	129.30	26	PKP	PKPdf	07 20 54.1 +0.5
	0.7nm,0.7s,baz=290,slow=4.4,SNR=5.4					
ZALV	Zalesovo Beam	133.71	16	PKP	PKPdf	07 21 02.1 +0.2
	1.0nm,0.4s,baz=273,slow=2.8,SNR=6.5					
ASAR	Alice Springs	135.72	220	PKP	PKPdf	07 21 05.3 -1.3
	1.5nm,0.9s,baz=96,slow=2.1,SNR=8.8					
WRA	Warramunga Arr	138.05	224	PKP	PKPdf	07 21 09.1 -2.0
	2.2nm,0.9s,baz=151,slow=1.3,SNR=5.6					
WRA	Warramunga Arr	138.05	224	PKP	PKPdf	07 21 09.1 -2.0
MKAR	Makanchi Array	139.01	23	PKP	PKPdf	07 21 10.9 -1.1
	0.9nm,0.8s,baz=299,slow=2.5,SNR=5.3					
MDJ	Mudanjiang	139.64	332	PKP	PKPdf	07 21 11.8 -1.4
CN2	Changchun	142.10	335	ePKP	PKPdf	07 21 15.3 -2.4
WMQ	Urumqi	143.54	21	ePKP	PKPdf	07 21 20.5 +0.3
KSRS	Korea Array	145.83	326	PKPbc	PKPbc	07 21 24.1 -0.8
	14nm,1.1s,baz=43,slow=3.4,SNR=43					
HHC	Hu-ho-hao-te	149.00	350	ePKPbc	PKPdf	07 21 28.6 -1.0
HHC				PKS		07 25 02.0
HHC				PP	PP	07 25 06.4 +3.2
HHC				SKS	SKSdf	07 28 35.1 -2.0
HHC				SKKS	SKKSac	07 31 55.5 +0.6
HHC				SS	SS	07 44 15.1 +2.1
HHC				AMB	AMB	
	comp=Z,56nm,9.3s					
HHC				LR	LR	
	comp=N,97nm,20.5s,MS4.8					
HHC				LR	LR	
	comp=E,130nm,20.1s,MS4.8					
HHC				LR	LR	
	comp=Z,70nm,20.8s,MS4.4					
GTA	Gaotai	150.73	8	PKPbc	PKPbc	07 21 37.8 -0.1
GTA				pPKP	pPKPdf	07 21 42.8 +4.2
LZH	Lanzhou	154.36	2	ePKPbc	PKPdf	07 21 32.7 -5.1
LZH				pPKP	pPKPdf	07 21 37.6 -6.5
LZH				sPKP		07 21 39.3
LZH				LR	LR	
	comp=N,150nm,18.3s					
LZH				LR	LR	
	comp=Z,200nm,20.2s,MS4.9					
NJ2	Nanjing	154.72	331	ePKPbc	PKPdf	07 21 35.1 -3.3
CD2	Chengdu	159.51	2	PKP	PKPdf	07 21 46.0 +1.5
CD2				PKPab	PKPab	07 22 26.0 +3.7
CD2				PKS		07 25 18.1
CD2				PP	PP	07 26 07.9 +5.7
CD2				SKS	SKSdf	07 28 50.0 +0.6
CD2				SKKS	SKKSac	07 32 55.0 +3.2
CD2				SS	SS	07 46 13.0 +5.8
CD2				AMB	AMB	
	comp=Z,110nm,5.9s					
CD2				LR	LR	
	comp=N,200nm,7.4s					
CD2				LR	LR	
	comp=Z,430nm,7.1s					
GYA	Guiyang	163.85	354	PKP	PKPdf	07 21 49.0 -0.2
GYA				PKPab	PKPab	07 22 44.2 +2.8
GYA				PKS		07 25 20.8
GYA				PP	PP	07 26 28.6 +3.2
GYA				SKS	SKSdf	07 28 49.7 -3.4
GYA				SKKS	SKKSac	07 33 14.2 0.0
GYA				SS	SS	07 46 53.0 +0.4
GYA				SS	SS	07 46 53.7 +1.1
GYA				AMB	AMB	
	comp=Z,120nm,8.0s					
GYA				LR	LR	
	comp=N,140nm,24.5s					
GYA				LR	LR	
	comp=E,110nm,25.3s					
GYA				LR	LR	
	comp=Z,120nm,24.9s					
KMI	Kunming	165.19	7	PKP	PKPdf	07 21 49.7 -0.7
KMI				pPKP	pPKPdf	07 21 55.3 -1.3
KMI				sPKP		07 21 57.1
KMI				LR	LR	
	comp=N,98nm,19.9s					
KMI				LR	LR	
	comp=E,95nm,19.9s					
KMI				LR	LR	
	comp=Z,130nm,15.9s					

IDC 09 07:07:01.4±2.5,2°83S×136°09E,h0km,mb3.7/3, mb1 3.9/4,mb1mx3.7/15,mbtmp3.7/4,ML3.5/1,1D,Error ellipse: s-maj=114.1km s-min=27.4km az=81.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.09	186	P	Pn	07 11 03.6	+1.7
	0.2nm,0.3s,baz=6.0,slow=12,SNR=7.9						
ASAR	Alice Springs	20.82	186	P	P	07 11 43.9	-0.7
	1.2nm,0.7s,baz=25,slow=9.8,SNR=11						
PIP	Pasuquin	25.96	325	eP	P	07 12 39.5	+3.7
MKAR	Makanchi Array	68.30	323	P	P	07 18 05.3	+1.0
	0.7nm,0.6s,baz=112,slow=8.1,SNR=5.7						
BVAR	Borovoye Array	77.92	326	P	P	07 19 00.4	-0.8
	0.7nm,0.5s,baz=101,slow=7.5,SNR=4.6						

*IDC 09 07:11:21.2±2.1,53°58N×87°80E,h0km,mb1 3.6/3, mb1mx3.3/28,mbtmp3.6/

1.6nm,0.7s,baz=28,slow=13,SNR=20
MK31 ⇑Sn **Sn** **07 14 40.7 0.0**
4.3nm,0.9s,baz=26,slow=22,SNR=6.6
MK31 ⇓Lg 07 15 19.9
4.8nm,0.8s,baz=37,slow=29,SNR=7.0
MKAR Makanchi Array 7.54 208 Pn **Pn** **07 13 15.0 -0.3**
0.4nm,0.3s,baz=29,slow=12,SNR=26
MKAR Sn **Sn** **07 14 40.6 -0.1**
0.2nm,0.3s,baz=29,slow=25,SNR=12
MKAR Lg 07 15 23.1
0.2nm,0.3s,baz=34,slow=30,SNR=9.2
BVAR Borovoye Array 10.17 274 Pn **Pn** **07 13 50.9 -0.4**
0.2nm,0.3s,baz=72,slow=15,SNR=4.4
BVAR Sn **Sn** **07 15 44.9 -0.5**
0.3nm,0.3s,baz=77,slow=23,SNR=6.3

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*DDA **09** 07:24:41.7, 40°.79N×30°.84E, h16km±1km, Md3.3*
*ISK **09** 07:24:41.7, 40°.82N×30°.88E, h6km, ML3.4*
*ISCJB **09** 07:24:42.5±0.4, 40°.80N±0°.03×30°.86E±0°.03, h7km±3km, Error ellipse: s-maj=4.7km s-min=3.6km az=16.2*
*CSEM **09** 07:24:42.4±0.1, 40°.80N×30°.88E, h6km±1km, MD3.3, Error ellipse: s-maj=2.9km s-min=2.3km az=15.0*
ISC 09 07:24:42.8±0.4, 40°.80N±0°.03×30°.88E±0°.03, h8km±3km, n55, σ0s68/79, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
HENT	**Hendek**	**0.03**	**29**	*i* P		**Pg**	**07 24 44.7**	**+0.4**
HENT				*i* S		**Sg**	**07 24 46.5**	**+1.2**
HENT	**Hendek**	**0.03**	**29**	*i* P		**Pg**	**07 24 44.7**	**+0.5**
HENT				*i* S		**Sg**	**07 24 46.5**	**+1.2**
MDU	**Mudurnu**	**0.42**	**142**	PG		**Pg**	**07 24 50.4**	**-0.4**
MDU	**Mudurnu**	**0.42**	**142**	*i* Pg		**Pg**	**07 24 50.4**	**-0.5**
SPNC	**Sapanca-Adapaz**	**0.45**	**256**	*e*PG		**Pg**	**07 24 51.0**	**-0.4**
SPNC				*e*SG		**Sg**	**07 24 57.8**	**+0.5**
SPNC	**Sapanca-Adapaz**	**0.45**	**256**	*e*Pg		**Pg**	**07 24 51.0**	**-0.4**
SPNC				*e*Sg		**Sg**	**07 24 57.8**	**+0.5**
GULT	**Gulveren**	**0.46**	**217**	*e*PG		**Pg**	**07 24 51.1**	**-0.5**
GULT	**Gulveren**	**0.46**	**217**	*e*Pg		**Pg**	**07 24 51.1**	**-0.5**
GPA	**Golpazari**	**0.67**	**221**	*e*PG		**Pg**	**07 24 54.9**	**-0.7**
GPA				*e*SG		**Sg**	**07 25 05.8**	**+1.5**
GPA	**Golpazari**	**0.67**	**221**	*e*Pg		**Pg**	**07 24 54.9**	**-0.7**
GPA				*e*Sg		**Sg**	**07 25 05.8**	**+1.5**
KDZE	**Karadeniz Ereo**	**0.67**	**39**	*e*PG		**Pg**	**07 24 54.8**	**-0.8**
KDZE	**Karadeniz Ereo**	**0.67**	**39**	*e*Pg		**Pg**	**07 24 54.8**	**-0.9**
HRT	**Hereke**	**0.92**	**272**	*e*PG		**Pg**	**07 24 59.7**	**-0.7**
HRT				*e*SG		**Sg**	**07 25 13.0**	**+0.7**
HRT	**Hereke**	**0.92**	**272**	*e*Pg		**Pg**	**07 24 59.7**	**-0.7**
HRT				*e*Sg		**Sg**	**07 25 13.0**	**+0.6**
SGKT	**Sivrigoynuk**	**0.92**	**104**	*i* P		**Pg**	**07 25 00.1**	**-0.4**
SGKT				*i* S		**Sg**	**07 25 07.7**	**-4.8**
SGKT	**Sivrigoynuk**	**0.92**	**104**	*i* P		**Pg**	**07 25 00.1**	**-0.4**
BORA	**Eskisehir**	**0.97**	**200**	*i* P		**Pg**	**07 25 01.0**	**-0.4**
BORA				*i* S		**Sg**	**07 25 13.8**	**-0.2**
BORA	**Eskisehir**	**0.97**	**200**	*i* P		**Pg**	**07 25 01.0**	**-0.4**
BORA				*i* S		**Sg**	**07 25 13.8**	**-0.2**
CAVI	**Cavuskoy**	**0.99**	**233**	*e*PG		**Pg**	**07 25 01.3**	**-0.4**
CAVI	**Cavuskoy**	**0.99**	**233**	*e*Pg		**Pg**	**07 25 01.3**	**-0.4**
SILT	**Sile**	**1.00**	**291**	*e*PG		**Pg**	**07 25 01.2**	**-0.8**
SILT				*e*SG		**Sg**	**07 25 14.8**	**-0.1**
SILT	**Sile**	**1.00**	**291**	*e*Pg		**Pg**	**07 25 01.2**	**-0.8**
SILT				*e*Sg		**Sg**	**07 25 14.9**	**-0.1**
YLV	**Yalova**	**1.17**	**259**	*e*PN		**Pn**	**07 25 04.7**	**-0.7**
YLV	**Yalova**	**1.17**	**259**	*e*Pn		**Pn**	**07 25 04.7**	**-0.7**
ESKT	**Eskisehir**	**1.27**	**181**	*e*PN		**Pn**	**07 25 07.1**	**+0.3**
ESKT	**Eskisehir**	**1.27**	**181**	*i* P		**Pn**	**07 25 06.0**	**-0.9**
ESKT				*i* S		**Sb**	**07 25 22.8**	**-0.8**
ESKT	**Eskisehir**	**1.27**	**181**	*e*Pn		**Pn**	**07 25 07.1**	**+0.2**
SEYT	**Eskypehyr**	**1.27**	**181**	*i* P		**Pn**	**07 25 06.0**	**-0.9**
SEYT				*i* S		**Sb**	**07 25 22.8**	**-0.7**
GEMT	**Gemlik**	**1.34**	**255**	*e*PN		**Pn**	**07 25 06.9**	**-0.8**
GEMT	**Gemlik**	**1.34**	**255**	*e*Pn		**Pn**	**07 25 06.9**	**-0.8**
ISK	**Istanbul-Kandi**	**1.41**	**282**	*e*PN		**Pn**	**07 25 08.0**	**-0.7**
ISK	**Istanbul-Kandi**	**1.41**	**282**	*e*Pn		**Pn**	**07 25 08.0**	**-0.7**
SVRH	**Sivrihisar-ESK**	**1.44**	**160**	*e*PN		**Pn**	**07 25 09.2**	**+0.1**
SVRH				*e*SN		**Sn**	**07 25 29.1**	**+1.0**
SVRH	**Sivrihisar-ESK**	**1.44**	**160**	*e*Pn		**Pn**	**07 25 09.2**	**+0.1**
SVRH				*e*Sn		**Sn**	**07 25 29.1**	**+1.0**
SAFT	**Safranbolu**	**1.44**	**71**	*e*PN		**Pn**	**07 25 08.9**	**-0.2**
SAFT	**Safranbolu**	**1.44**	**71**	*e*Pn		**Pn**	**07 25 08.9**	**-0.2**
KLYT	**Kilyos**	**1.46**	**289**	*e*PN		**Pn**	**07 25 09.0**	**-0.5**
KLYT				*e*SN		**Sn**	**07 25 28.8**	**0.0**
KLYT	**Kilyos**	**1.46**	**289**	*e*Pn		**Pn**	**07 25 09.0**	**-0.5**
KLYT				*e*Sn		**Sn**	**07 25 28.8**	**0.0**
BGKT	**Bogazkoy**	**1.64**	**284**	*e*PN		**Pn**	**07 25 11.1**	**-0.8**
BGKT				*e*SN		**Sn**	**07 25 33.5**	**+0.3**
BGKT	**Bogazkoy**	**1.64**	**284**	*e*Pn		**Pn**	**07 25 11.1**	**-0.8**
BGKT				*e*Sn		**Sn**	**07 25 33.5**	**+0.3**
CTKS	**Kestanelik-??a**	**1.85**	**285**	*e*PN		**Pn**	**07 25 15.1**	**+0.3**
CTKS				*e*SN		**Sn**	**07 25 38.8**	**+0.5**
CTKS	**Kestanelik-??a**	**1.85**	**285**	*e*Pn		**Pn**	**07 25 15.1**	**+0.3**
CTKS				*e*Sn		**Sn**	**07 25 38.8**	**+0.5**
BALT	**Daday**	**2.03**	**68**	*i* P		**Pn**	**07 25 17.6**	**+0.3**
BALT				*i* S		**Sn**	**07 25 46.5**	**+3.7**
BALT	**Daday**	**2.03**	**68**	*i* P		**Pn**	**07 25 17.5**	**+0.2**
KIZT	**Kizilcal**	**2.06**	**158**	*e*PN		**Pn**	**07 25 18.6**	**+0.9**
KIZT	**Kizilcal**	**2.06**	**158**	*e*Pn		**Pn**	**07 25 18.6**	**+0.9**
SLVT	**Silivri**	**2.07**	**283**	*e*PN		**Pn**	**07 25 17.7**	**-0.1**
SLVT	**Silivri**	**2.07**	**283**	*e*Pn		**Pn**	**07 25 17.7**	**-0.1**
SHUT	**Suhut-Afyon**	**2.25**	**187**	*e*PN		**Pn**	**07 25 20.8**	**+0.4**
SHUT	**Suhut-Afyon**	**2.25**	**187**	*e*Pn		**Pn**	**07 25 20.8**	**+0.5**
BNT	**Bandirma**	**2.30**	**260**	*e*PN		**Pn**	**07 25 21.6**	**+0.7**
KRBG	**Karabiga-Canak**	**2.76**	**263**	*e*PN		**Pn**	**07 25 28.2**	**+1.0**
KRBG	**Karabiga-Canak**	**2.76**	**263**	*e*Pn		**Pn**	**07 25 28.3**	**+1.0**
EDRB	**Edirne**	**3.29**	**290**	*e*PN		**Pn**	**07 25 35.3**	**+0.8**
EDRB	**Edirne**	**3.29**	**290**	*e*Pn		**Pn**	**07 25 35.3**	**+0.8**

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*ISK **09** 07:38:51.6, 38°.95N×26°.80E, h10km, MD2.8*
*CSEM **09** 07:38:52.9±0.2, 38°.90N×26°.83E, h17km±2km, ML2.9/2, Error ellipse: s-maj=3.4km s-min=2.7km az=19.0*
*DDA **09** 07:38:52.8, 38°.88N×26°.85E, h7km±5km, Md3.0*
*THE **09** 07:38:53.2, 38°.84N×26°.79E, h3km±16km, ML2.9/2, Error ellipse: s-maj=16.2km s-min=0.7km az=70.0*
*ISCJB **09** 07:38:53.4±0.4, 38°.88N±0°.03×26°.83E±0°.03, h24km±6km, Error ellipse: s-maj=6.1km s-min=3.9km az=22.6*
*ATH **09** 07:38:53.0, 38°.96N×26°.75E, h43km±31km, MD3.0/3*
ISC 09 07:38:53.1±0.5, 38°.89N±0°.03×26°.83E±0°.03, h16km±5km, n48, σ0s74/72, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
BLCB	**Balcova**	**0.53**	**162**	*e*PG		**Pg**	**07 39 03.1**	**-0.4**
BLCB	**Balcova**	**0.53**	**162**	P		**Pg**	**07 39 03.2**	**-0.3**
BLCB				S		**Sg**	**07 39 09.7**	**-0.9**
BLCB	**Balcova**	**0.53**	**162**	P		**Pg**	**07 39 03.2**	**-0.3**
BLCB				S		**Sg**	**07 39 09.7**	**-0.9**
PRK	**Paraskevi**	**0.56**	**309**	*e*P		**Pg**	**07 39 04.6**	**+0.4**
PRK				*e*S		**Sg**	**07 39 11.7**	**-0.1**
PRK	**Paraskevi**	**0.56**	**309**	P		**Pg**	**07 39 04.5**	**+0.3**
PRK				S		**Sg**	**07 39 12.7**	**+0.9**
PRK	**Paraskevi**	**0.56**	**309**	*e*P		**Pg**	**07 39 04.6**	**+0.4**
PRK				S		**Sg**	**07 39 12.7**	**+0.9**
KDAG	**Bornova**	**0.59**	**145**	*i* P		**Pg**	**07 39 04.4**	**-0.3**
KDAG				*i* S		**Sg**	**07 39 13.3**	**+0.7**
KDAG	**Bornova**	**0.59**	**145**	*i* P		**Pg**	**07 39 04.4**	**-0.3**
KDAG				*i* S		**Sg**	**07 39 13.3**	**+0.7**
IZM	**Izmir**	**0.59**	**145**	*e*PG		**Pg**	**07 39 05.5**	**+0.8**
IZM	**Izmir**	**0.59**	**145**	*e*Pg		**Pg**	**07 39 05.5**	**+0.7**
AKS	**Akhisar**	**0.76**	**90**	*e*PG		**Pg**	**07 39 07.3**	**-0.7**
AKS				*e*SG		**Sg**	**07 39 18.5**	**+0.5**
AKS	**Akhisar**	**0.76**	**90**	*e*Pg		**Pg**	**07 39 07.3**	**-0.7**
AKS				*e*Sg		**Sg**	**07 39 18.5**	**+0.4**
AKHS	**Akhisar**	**0.77**	**90**	*i* P		**Pb**	**07 39 07.8**	**-0.1**
AKHS				*i* S		**Sb**	**07 39 18.7**	**+0.7**
AKHS	**Akhisar**	**0.77**	**90**	*i* P		**Pb**	**07 39 07.8**	**-0.1**
AKHS				*i* S		**Sb**	**07 39 18.7**	**+0.6**
CHOS	**Chios island**	**0.79**	**231**	*e*P		**Pb**	**07 39 08.8**	**+0.5**
CHOS				*e*S		**Sb**	**07 39 20.5**	**+1.7**
CHOS	**Chios island**	**0.79**	**231**	P		**Pb**	**07 39 07.5**	**-0.8**
CHOS				S		**Sb**	**07 39 18.3**	**-0.5**
CHOS	**Chios island**	**0.79**	**231**	*e*P		**Pb**	**07 39 08.8**	**+0.5**
CHOS				S		**Sb**	**07 39 18.3**	**-0.5**
SIGR	**SIGRI**	**0.83**	**293**	P		**Pb**	**07 39 09.2**	**+0.2**
SIGR				S		**Sb**	**07 39 20.7**	**+0.8**
SIGR	**SIGRI**	**0.83**	**293**	P		**Pb**	**07 39 09.2**	**+0.2**
SIGR				S		**Sb**	**07 39 20.7**	**+0.8**
BALY	**Balya**	**1.05**	**35**	*i* P		**Pb**	**07 39 13.0**	**+0.2**
BALY				*i* Sn		**Sn**	**07 39 28.2**	**+1.0**
BALY	**Balya**	**1.05**	**35**	*i* P		**Pb**	**07 39 13.0**	**+0.3**
BALB	**Balikesir**	**1.11**	**47**	*e*PN		**Pn**	**07 39 13.1**	**-0.8**
BALB				*e*SN		**Sn**	**07 39 28.4**	**-0.3**
BALB	**Balikesir**	**1.11**	**47**	*e*Pn		**Pn**	**07 39 13.1**	**-0.7**
BALB				*e*Sn		**Sn**	**07 39 28.4**	**-0.3**
BOZC	**Bozcaada**	**1.13**	**328**	*i* P		**Pn**	**07 39 14.1**	**0.0**
BOZC				*i* S		**Sb**	**07 39 31.7**	**+3.1**
SMG	**Samos**	**1.18**	**180**	*e*P		**Pn**	**07 39 14.9**	**+0.1**
SMG	**Samos**	**1.18**	**180**	*e*P		**Pn**	**07 39 14.9**	**+0.1**
GONE	**Gonen-Balikesi**	**1.33**	**29**	*e*PN		**Pn**	**07 39 16.2**	**-0.7**
GONE				*e*SN		**Sn**	**07 39 34.4**	**+0.1**
GONE	**Gonen-Balikesi**	**1.33**	**29**	*e*Pn		**Pn**	**07 39 16.2**	**-0.7**
GONE				*e*Sn		**Sn**	**07 39 34.4**	**+0.1**
DURS	**Dursunbey**	**1.46**	**60**	*i* P		**Pn**	**07 39 19.0**	**+0.3**
DURS				*i* S		**Sn**	**07 39 38.0**	**+0.6**
DURS	**Dursunbey**	**1.46**	**60**	*i* P		**Pn**	**07 39 19.0**	**+0.3**
DURS				*i* S		**Sn**	**07 39 38.0**	**+0.6**
DEMI	**Demirci**	**1.48**	**83**	*i* P		**Pn**	**07 39 20.0**	**+1.1**
DEMI	**Demirci**	**1.48**	**83**	*i* P		**Pn**	**07 39 20.0**	**+1.1**
KULA	**Kula-Manisa**	**1.48**	**104**	*e*PN		**Pn**	**07 39 19.1**	**+0.2**
KULA	**Kula-Manisa**	**1.48**	**104**	*e*Pn		**Pn**	**07 39 19.1**	**+0.2**
LPK	**Lapseki**	**1.48**	**358**	*e*PN		**Pn**	**07 39 17.8**	**-1.2**
LPK	**Lapseki**	**1.48**	**358**	*e*Pn		**Pn**	**07 39 17.8**	**-1.2**
GADA	**Gvkgeada**	**1.49**	**331**	*e*PN		**Pn**	**07 39 17.8**	**-1.3**
GADA	**Gvkgeada**	**1.49**	**331**	*e*Pn		**Pn**	**07 39 17.8**	**-1.3**
GELI	**Tayfur-Gelibol**	**1.53**	**350**	*e*PN		**Pn**	**07 39 18.6**	**-1.1**
GELI	**Tayfur-Gelibol**	**1.53**	**350**	*e*Pn		**Pn**	**07 39 18.6**	**-1.1**
KRBG	**Karabiga-Canak**	**1.54**	**13**	*e*PN		**Pn**	**07 39 18.9**	**-0.9**
KRBG	**Karabiga-Canak**	**1.54**	**13**	*e*Pn		**Pn**	**07 39 19.0**	**-0.9**
BNT	**Bandirma**	**1.69**	**29**	*e*PN		**Pn**	**07 39 21.3**	**-0.6**
BNT	**Bandirma**	**1.69**	**29**	*e*Pn		**Pn**	**07 39 21.3**	**-0.5**
RKY	**Sarkoy-Tekirda**	**1.82**	**8**	*e*PN		**Pn**	**07 39 23.1**	**-0.5**
RKY	**Sarkoy-Tekirda**	**1.82**	**8**	*e*Pn		**Pn**	**07 39 23.1**	**-0.5**
MFT	**Murefte**	**1.93**	**10**	*e*PN		**Pn**	**07 39 25.2**	**+0.1**
MFT	**Murefte**	**1.93**	**10**	*e*Pn		**Pn**	**07 39 25.2**	**+0.1**

CASC 09 07:48:53.2±1.6, 8°.41N×83°.00W, h2km, MD3.6, 1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.49**	**39**	⇓*i*P		Pg	07 49 04.1	+1.5
BRU2				*e*S		Sg	07 49 12.7	+3.6
BAR1		**0.88**	**340**	*e*P		Pg	07 49 10.7	+0.6
BAR1				*e*S		Sg	07 49 22.6	+1.0
CNI	**Changuinola**	**1.11**	**26**	*e*P		Pg	07 49 14.3	-0.2
CNI				*e*S		Sg	07 49 30.2	+1.2
BUS	**Buena Vista**	**1.36**	**327**	*e*P		Pn	07 49 18.9	-0.3
BUS				*e*S		Sg	07 49 38.3	+1.3
URSC	**Urasca**	**1.61**	**332**	*e*P		Pn	07 49 23.0	+0.4
URSC				*e*S		Sn	07 49 44.2	+0.1
PRS1	**Puriscal**	**2.03**	**321**	*e*P		Pn	07 49 29.3	+0.9

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*ISCJB **09** 07:55:31.7±0.6, 31°.74N±0°.04×104°.48E±0°.08, h10km, mb3.5/5, Error ellipse: s-maj=10.1km s-min=5.9km az=17.0*
*IDC **09** 07:55:31.4±1.1, 31°.68N×104°.29E, h0km, mb3.5/6, mb1 3.6/7, mb1mx3.5/26, mbtmp3.5/7, ML3.7/1, Error ellipse: s-maj=43.9km s-min=18.8km az=56.0*
*NEIC **09** 07:55:33.0±0.6, 31°.73N×104°.37E, h10km, Error ellipse: s-maj=20.8km s-min=8.7km az=47.0*
*BJI **09** 07:55:36.1, 31°.76N×104°.30E, h15km, ML3.5/9, Ms3.1/2, Ms7 3.1/2*
ISC 09 07:55:33.5±0.6, 31°.74N±0°.04×104°.42E±0°.08, h10km, n12, σ0s76/16, mb3.5/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.00**	**214**	Pg		**Pg**	**07 55 52.8**	**0.0**
CD2				Sg		**Sg**	**07 56 06.7**	**+0.8**
CD2				smax				
	comp=N,2μm,0.7s							
LZH	**Lanzhou**	**4.36**	**354**	Pn		**Pn**	**07 56 41.3**	**+1.5**
LZH				Pg		**Pg**	**07 56 53.0**	**-4.0**
LZH				Sn		**Sn**	**07 57 31.6**	**+1.0**
LZH				Sg		**Sg**	**07 57 48.7**	**-4.8**
LZH				smax				
	comp=N,55nm,1.0s							
LZH				smax				
	comp=E,63nm,1.0s							
LZH				LR	LR			
	comp=E,240nm,5.8s							
LZH				LR	LR			
	comp=Z,240nm,7.0s							
ENH	**Enshi**	**4.59**	**107**	Pn		**Pn**	**07 56 43.2**	**+0.1**
SONM	**Songino Array**	**16.14**	**5**	Pn		**Pn**	**07 59 20.2**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=193,slow=12,SNR=2.7							
KSRS	**Korea Array**	**20.15**	**67**	P		**P**	**08 00 08.4**	**+0.5**
	comp=Z,0.5nm,0.4s,baz=257,slow=10,SNR=4.3							
MK31	**Makanchi Array**	**22.68**	**318**	*e*P		**P**	**08 00 34.7**	**-0.3**
MKAR	**Makanchi Array**	**22.68**	**318**	P		**P**	**08 00 33.8**	**-1.2**
	comp=Z,0.5nm,0.8s,mb3.0,baz=116,slow=11,SNR=6.7							
ZALV	**Zalesovo Beam**	**26.27**	**333**	P		**P**	**08 01 08.0**	**-0.8**
	comp=Z,0.7nm,0.5s,mb3.4,baz=111,slow=7.9,SNR=2.5							
KURK	**Kurchatov**	**26.90**	**322**	P		**P**	**08 01 14.6**	**0.0**
	comp=Z,0.8nm,0.3s,mb3.7,baz=120,slow=8.5,SNR=3.5							
KURK	**Kurchatov**	**26.90**	**322**	P		**P**	**08 01 14.6**	**0.0**
WRA	**Warramunga Arr**	**58.86**	**147**	P		**P**	**08 05 32.3**	**-0.2**
	comp=Z,0.3nm,0.4s,mb3.7,baz=326,slow=9.4,SNR=6.8							
ASAR	**Alice Springs**	**61.90**	**149**	P		**P**	**08 05 52.5**	**-0.7**
	comp=Z,0.7nm,1.1s,mb3.7,baz=328,slow=5.8,SNR=3.3							

JMA 09 07:59:37.5±0.4, 27°.62N×140°.64E, h167km, M3.6, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.47**	**110**	P		Pn	08 00 08.3	+0.2
CBIJ				S		Sn	08 00 31.3	-0.2
JHHJ	**Haha-jima-NKT**	**1.69**	**125**	P		Pn	08 00 10.3	0.0
JHHJ				S		Sn	08 00 35.9	+0.4
BSO1	**Boso 1**	**7.02**	**2**	P		Pn	08 01 17.9	+0.2
BSO1				*e*S		Sn	08 02 33.0	-3.7
BSO3	**Boso 3**	**7.16**	**359**	P		Pn	08 01 19.3	-0.3

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*IDC **09** 08:01:32.3±1.7, 19°.71S×70°.87W, h0km, mb4.0/1, mb1 4.0/4, mb1mx3.7/18, mbtmp3.9/4, ML4.0/3, MS2.9/3, Ms1 2.9/3, ms1mx2.6/26, Error ellipse: s-maj=50.1km s-min=18.5km az=123.0*
*ISCJB **09** 08:01:33.2±1.2, 19°.58S±0°.04×70°.89W±0°.06, h25km±9km, Error ellipse: s-maj=9.3km s-min=6.9km az=153.0*
*NEIC **09** 08:01:33.8±0.9, 19°.68S×70°.86W, h10km, Error ellipse: s-maj=16.0km s-min=11.2km az=73.0*
*GUC **09** 08:01:34.5±0.6, 19°.57S×70°.81W, h41km±4km, ML4.0*
ISC 09 08:01:33.1±1.3, 19°.59S±0°.04×70°.86W±0°.05, h10km±7km, n15, σ1s07/21, 1C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.70**	**90**	⇓*i*P		**Pg**	**08 01 47.0**	**+0.3**
PSGC				*i* S		**Sg**	**08 01 56.2**	**+0.4**
PSGC				AML	AML		08 01 56.7	
	comp=N,4μm,0.5s							
HMBC	**Humberston**	**1.14**	**127**	⇓*i*P		**Pb**	**08 01 54.6**	**-0.4**
HMBC				*i* S		**Sg**	**08 02 10.3**	**+0.3**
HMBC				AML	AML		08 02 14.4	
	comp=E,7μm,0.4s							
MNMC	**Miæe Miæ**	**1.28**	**69**	⇓*i*P		**Pn**	**08 01 56.7**	**-0.4**
MNMC				*i* S		**Sb**	**08 02 13.3**	**-0.6**
MNMC				AML	AML		08 02 17.2	
	comp=N,13μm,0.4s							
PB01	**Plate Boundary**	**1.94**	**138**	⇑*i*P		**Pn**	**08 02 06.4**	**+0.3**
PB01				*i* S		**Sn**	**08 02 30.3**	**-0.3**
PB01				AML	AML		08 02 36.5	
	comp=E,2μm,0.5s							
PB04	**Plate Boundary**	**2.95**	**154**	⇓*i*P		**Pn**	**08 02 17.7**	**-2.4**
ARE	**Arequipa**	**3.17**	**349**	*e*P		**Pn**	**08 02 25.0**	**+1.9**
ARE				*e*S		**Sn**	**08 02 59.0**	**-2.0**
LPAZ	**La Paz**	**4.19**	**39**	Pn		**Pn**	**08 02 41.1**	**+4.0**
	comp=E,3.4nm,0.3s,baz=217,slow=8.8,SNR=43							
LPAZ				Pg		**Pg**	**08 02 52.4**	**-1.1**
	comp=E,4.3nm,0.3s,baz=214,slow=11,SNR=16							
LPAZ				Lg			08 03 49.1	
	comp=E,1.0nm,0.3s,baz=332,slow=10,SNR=1.5							
LPAZ				LR	LR		08 04 23.5	
	comp=E,204nm,19.0s,baz=234,slow=40							
LPAZ	**La Paz**	**4.19**	**39**	Pn		**Pn**	**08 02 41.1**	**+4.0**
LPAZ				Pg		**Pg**	**08 02 52.4**	**-1.1**
LPAZ				Lg			08 03 49.1	
LCO	**Las Campanas**	**9.38**	**179**	*e*Pn		**Pn**	**08 03 48.0**	**-0.4**
NNA	**Nana**	**9.50**	**322**	Pn		**Pn**	**08 03 51.3**	**+1.2**
SIV	**San Ignacio**	**9.99**	**71**	Pn		**Pn**	**08 03 56.1**	**-0.8**
	comp=E,1.5nm,0.3s,baz=256,slow=18,SNR=33							
SIV				Sn		**Sn**	**08 05 50.7**	**+1.7**
	comp=E,0.2nm,0.3s,baz=175,slow=22,SNR=3.1							
CPUP	**Villa Florida**	**14.15**	**121**	Pn		**Pn**	**08 04 54.0**	**+0.3**
	comp=E,0.2nm,0.3s,baz=292,slow=9.7,SNR=5.5							
CPUP				LR	LR		08 10 18.6	
	comp=E,28nm,20.1s,baz=61,slow=37							
ATAH	**Atahualpa**	**14.38**	**328**	LR	LR		08 11 11.3	
	comp=E,44nm,18.4s,baz=163,slow=40							
QSPA	**South Pole Qui**	**70.59**	**180**	P		**P**	**08 12 49.2**	**+1.1**
	comp=E,0.8nm,0.5s,baz=120,slow=2.3,SNR=14							
MKAR	**Makanchi Array**	**145.10**	**33**	PKPbc	PKPbc		08 21 09.5	-0.8
	comp=E,1.1nm,0.7s,baz=320,slow=3.7,SNR=15							

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*IDC **09** 08:06:41.5±1.0, 31°.20N×103°.79E, h0km, mb3.8/7, mb1 4.0/8, mb1mx3.7/24, mbtmp3.8/8, ML3.9/1, MS3.1/1, Ms1 3.1/1, ms1mx2.2/37, Error ellipse: s-maj=41.9km s-min=17.9km az=56.0*
*NEIC **09** 08:06:43.1±0.6, 31°.19N×103°.73E, h10km, Error ellipse: s-maj=19.2km s-min=8.6km az=49.0*
*BJI **09** 08:06:45.5, 31°.14N×103°.85E, h14km, ML3.5/16, Ms3.3/2, Ms7 3.3/3*
ISC 09 08:06:42.8±0.8, 31°.26N±0°.03×103°.84E±0°.05, h6km±5km, n16, σ1s01/23, mb3.8/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.36**	**192**	Pg		**Pg**	**08 06 49.8**	**+0.1**
CD2				Sg		**Sg**	**08 06 55.4**	**+1.0**
CD2				smax				
	comp=N,16μm,0.4s							
LZH	**Lanzhou**	**4.81**	**0**	Pg		**Pg**	**08 08 15.1**	**+0.1**
LZH				Sg		**Sg**	**08 09 16.9**	**-0.4**
LZH				smax				
	comp=N,110nm,1.0s							
LZH				smax				
	comp=E,57nm,0.9s							
LZH				LR	LR			
	comp=E,410nm,7.9s							
LZH				LR	LR			
	comp=Z,420nm,8.6s							
ENH	**Enshi**	**4.96**	**100**	*e*Pn		**Pn**	**08 07 59.6**	**+1.9**
	comp=Z,48nm,0.7s							
XAN	**Xi'an**	**5.10**	**56**	Pn		**Pn**	**08 08 03.3**	**+3.6**
XAN				Pg		**Pg**	**08 08 18.8**	**-1.7**
XAN				Sn		**Sb**	**08 09 13.4**	**-0.5**
XAN				Sg		**Sg**	**08 09 28.1**	**+1.5**
XAN				smax				
	comp=N,19nm,0.9s							
XAN				smax				
	comp=E,26nm,0.9s							
GYA	**Guiyang**	**5.39**	**152**	Pn		**Pn**	**08 08 06.7**	**+3.1**
GYA				Pg		**Pg**	**08 08 23.8**	**-2.2**
GYA				Sn		**Sn**	**08 09 05.4**	**-0.5**
GYA				Sg		**Sg**	**08 09 30.8**	**-5.0**
GYA				smax				
	comp=N,110nm,0.8s							
GYA				smax				
	comp=E,120nm,0.8s							
SONM	**Songino Array**	**16.67**	**6**	Pn		**Pn**	**08 10 37.1**	**+0.3**
	comp=E,0.4nm,0.3s,baz=188,slow=17,SNR=3.3							
KSRS	**Korea Array**	**20.79**	**66**	P		**P**	**08 11 24.9**	**+0.3**
	comp=E,1.6nm,0.6s,baz=262,slow=9.9

λ-116.00000°. Principal axes: T 1.7500, Plg1.0000°, Azm242.0000°; N -0.3300, Plg19.0000°, Azm151.0000°; P -1.4100, Plg71.0000°, Azm334.0000°; Data Used: II IU IC G CN. Surface waves: sta=103, comp=191, per= 50.
DJA **09** 08:24:18,20.′95S×168.′83E, h50km, Mw6.0/25
SZGRF **09** 08:24:19.4, 19.′83S×170.′82E, h44km, mb5.0, Vanuatu Islands
ISC 09 08:24:17.5±0.1,**20.′94S**±0.′03×**168.′72E**±0.′02,**h44**km, **h44**km±.9km:**pP-P,n1139,**σ0.9**79**/591,**mb5.5**/120,**MS4.9**/220, **180C-236D,Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.09**	**235**	*eP*		**Pn**		**08 24 46.5**	**-3.6**
BAYA				*eS*		**Sn**		**08 25 14.7**	**-0.3**
BAYA				AMP				08 25 18.3	
	comp=Z,639nm,1.4s								
PLUM	**Mont Dore**	**2.35**	**235**	*eP*		**Pn**		**08 24 50.8**	**-2.8**
PLUM				*eS*		**Sn**		**08 25 21.2**	**0.0**
PLUM				AMP				08 25 24.6	
	comp=Z,7μm,0.0s								
DZM	**Mont Dzumac**	**2.40**	**242**	*e*Pn		**Pn**		**08 24 50.8**	**-3.6**
DZM				*e*Sn		**Sn**		**08 25 20.9**	**-1.7**
	comp=Z,5μm,0.3s								
DZM	**Mont Dzumac**	**2.40**	**242**	*eP*		**Pn**		**08 24 51.1**	**-3.2**
DZM				AMP				08 25 36.6	
	comp=Z,34μm,6.1s								
DZM	**Mont Dzumac**	**2.40**	**242**	*e*Pn		**Pn**		**08 24 50.9**	**-3.5**
DZM				*e*Sn		**Sn**		**08 25 19.6**	**-3.0**
LASL	**Noumea**	**2.40**	**237**	*eP*		**Pn**		**08 24 51.7**	**-2.7**
LASL				*eS*		**Sn**		**08 25 21.0**	**-1.6**
LASL				AMP				08 25 22.4	
	comp=Z,13μm,2.4s								
MVNO	**Noumea**	**2.50**	**238**	*eP*		**Pn**		**08 24 53.0**	**-2.7**
MVNO				*eS*		**Sn**		**08 25 22.3**	**-2.7**
ONTRN	**Noumea**	**2.51**	**237**	*eP*		**Pn**		**08 24 53.1**	**-2.8**
ONTRN				*eS*		**Sn**		**08 25 24.0**	**-1.2**
ONTRN				AMP				08 25 28.2	
	comp=Z,12μm,0.9s								
NOUC	**Port Laguerre**	**2.53**	**242**	*eP*		**Pn**		**08 24 53.3**	**-2.8**
NOUC				*eS*		**Sn**		**08 25 23.5**	**-2.3**
NOUC				AMP				08 25 37.0	
	comp=Z,3μm,11.8s								
MSVF	**Nonsavu**	**9.37**	**72**	*e*Pn		**Pn**		**08 26 27.4**	**-2.5**
	comp=Z,1μm,1.8s								
HNR	**Honiara**	**14.23**	**322**	Pn		**Pn**		**08 27 35.2**	**-1.3**
	comp=Z,10nm,0.3s,baz=157,slow=4.5,SNR=6.1								
HNR				LR		LR		08 32 00.7	
	comp=Z,2μm,18.7s,baz=132,slow=33								
HNR	**Honiara**	**14.23**	**322**	*eP*		**Pn**		**08 27 36.5**	**0.0**
HNR				pmax		pmax			
	comp=Z,546nm,1.3s								
HNR	**Honiara**	**14.23**	**322**	*e*Pn		**Pn**		**08 27 36.5**	**0.0**
	comp=Z,546nm,1.3s								
RAO	**Raoul Island**	**14.65**	**127**	LR		LR		08 32 09.0	
	comp=Z,3μm,20.7s,baz=197,slow=32								
OUZ	**Omahuta**	**14.86**	**164**	*e*Pn		**Pn**		**08 27 45.3**	**+0.6**
	comp=Z,58nm,1.0s								
EIDS	**Eidsvold**	**16.81**	**251**	*eP*		**Pn**		**08 28 11.0**	**+1.2**
	comp=Z,214nm,1.4s								
ARMA	**Armidale**	**18.05**	**235**	*eP*		**Pn**		**08 28 25.9**	**+0.8**
ARMA	**Armidale**	**18.05**	**235**	*e*Pn		**Pn**		**08 28 26.2**	**+1.2**
	comp=Z,1μm,2.5s								
HIZ	**Hauiti**	**18.29**	**165**	P		**Pn**		**08 28 32.4**	**+4.4**
URZ	**Urewera**	**18.72**	**159**	P		**Pn**		**08 28 33.0**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=329,slow=9.7,SNR=6.4								
URZ				LR		LR		08 34 44.1	
	comp=Z,4μm,18.8s,baz=345,slow=33								
URZ	**Urewera**	**18.72**	**159**	*e*Pn		**Pn**		**08 28 34.0**	**+0.9**
	comp=Z,116nm,1.1s								
PUZ	**Puketiti**	**18.96**	**156**	PN		**Pn**		**08 28 36.8**	**+0.8**
BKZ	**Black Stump Fm**	**19.35**	**162**	P		**Pn**		**08 28 43.7**	**+3.0**
AFI	**Afiamalu**	**19.86**	**73**	P		**Pn**		**08 28 46.1**	**-0.9**
	comp=Z,1.9nm,0.3s,baz=285,slow=8.4,SNR=3.5								
AFI	**Afiamalu**	**19.86**	**73**	*eP*		**Pn**		**08 28 46.5**	**-0.5**
AFI				pmax		pmax			
	comp=Z,109nm,1.0s								
AFI	**Afiamalu**	**19.86**	**73**	*eP*		**Pn**		**08 28 46.5**	**-0.5**
	comp=Z,109nm,1.0s								
QRZ	**Quartz Range**	**20.09**	**172**	P		**P**		**08 28 50.7**	**+3.4**
RIV	**Riverview**	**20.16**	**227**	*eP*		**P**		**08 28 50.0**	**+1.8**
RIV				*eS*		sP		08 29 02.6	-1.8
MRZ	**Mangatainoka R**	**20.51**	**165**	PN		**P**		**08 28 51.4**	**-0.4**
NNZ	**Nelson**	**20.60**	**170**	PN		**P**		**08 28 54.1**	**+1.3**
DSZ	**Denniston Nort**	**20.90**	**174**	PN		**P**		**08 28 56.6**	**+0.5**
SNZO	**South Karori**	**20.93**	**167**	PFAKE				08 29 10.0	+14
SNZO				LR		LR			
	comp=Z,3μm,19.0s,MS4.6								
THZ	**Tophouse**	**21.06**	**171**	PN		**P**		**08 28 58.3**	**+0.5**
CTA	**Charters Tower**	**21.06**	**268**	*eP*		**P**		**08 28 59.5**	**+1.5**
	comp=Z,54nm,0.9s,mb4.9								
CTA				*eS*		**S**		**08 32 55.7**	**+5.5**
CTA	**Charters Tower**	**21.06**	**268**	P		**P**		**08 28 58.9**	**+0.8**
	comp=Z,93nm,1.0s,mb5.1,baz=86,slow=13,SNR=18								
CTA				LR		LR		08 36 29.5	
	comp=Z,4μm,18.8s,MS4.8,baz=92,slow=35								
CTAO	**Charters Tower**	**21.06**	**268**	*eP*		**P**		**08 28 59.6**	**+1.6**
CTAO				pmax		pmax			
	comp=Z,309nm,1.5s,mb5.4								
CTAO				MLR		MLR			
	comp=Z,3μm,20.0s,MS4.7								
CTAO	**Charters Tower**	**21.06**	**268**	*e*Pn		**P**		**08 28 59.6**	**+1.5**
	comp=Z,310nm,1.5s,mb5.4								
CTAO				LR		LR			
	comp=Z,3μm,20.0s,MS4.7								
CTAO	**Charters Tower**	**21.06**	**268**	P		**P**		**08 29 01.0**	**+3.0**
	comp=Z,3μmcomp=Z,134nm,2.0s,mb4.9								
KHZ	**Kahutara**	**21.79**	**170**	*eP*		**P**		**08 29 05.5**	**-0.1**
	comp=Z,151nm,1.1s,mb5.3								
KHZ				*e*pP				08 29 16.2	
CNB	**Canberra Magne**	**22.23**	**226**	*eP*		**P**		**08 29 12.4**	**+2.0**
CNB				*e*pP				08 29 24.1	
CNB				*eS*		**S**		**08 33 20.9**	**+8.3**
CAN	**Canberra**	**22.47**	**226**	*eP*		**P**		**08 29 14.3**	**+1.3**
CAN				pmax		pmax			
	comp=Z,158nm,1.1s,mb5.4								
CAN				MLR		MLR			
	comp=Z,2μm,21.0s,MS4.6								
CAN	**Canberra**	**22.47**	**226**	*eP*		**P**		**08 29 14.3**	**+1.3**
	comp=Z,158nm,1.1s,mb5.4								
CAN				LR		LR			
	comp=Z,2μm,21.0s,MS4.6								
RPZ	**Rata Peaks**	**22.79**	**176**	P		**P**		**08 29 17.3**	**+1.0**
	comp=Z,45nm,1.1s,mb4.8,baz=37,slow=2.5,SNR=8.7								
RPZ				LR		LR		08 37 17.5	
	comp=Z,999nm,18.2s,MS4.3,baz=339,slow=34								
RPZ	**Rata Peaks**	**22.79**	**176**	*eP*		**P**		**08 29 16.4**	**+0.2**
	comp=Z,210nm,1.2s,mb5.4								
RPZ				*e*pP				08 29 27.8	
JCZ	**Jackson Bay**	**23.07**	**180**	PN		**P**		**08 29 20.0**	**+0.8**
PMG	**Port Moresby**	**23.73**	**296**	P		**P**		**08 29 26.0**	**+0.2**
PMG	**Port Moresby**	**23.73**	**296**	P		**P**		**08 29 25.6**	**-0.2**
	comp=Z,5μmcomp=Z,258nm,1.6s,mb5.4								
TUZ	**Tuapeka**	**24.96**	**178**	PN		**P**		**08 29 37.0**	**+0.2**
COEN	**Coen**	**25.32**	**282**	*eP*		**P**		**08 29 40.0**	**-0.4**
	comp=Z,1μm,1.6s,mb6.2								
COEN				*e*pP		pP		08 29 51.9	-0.1
COEN	**Coen**	**25.32**	**282**	P		**P**		**08 29 39.6**	**-0.7**
	comp=Z,248nm,2.4s,mb5.3								
SYZ	**Scrubby Hill**	**25.53**	**179**	PN		**P**		**08 29 43.0**	**+1.1**
TOO	**Toolangi**	**26.07**	**225**	*eP*		**P**		**08 29 48.6**	**+1.7**
TOO				*e*pP		pP		08 30 00.3	+1.6
TOO				*eS*		**S**		**08 34 20.8**	**+5.7**
STKA	**Stephens Creek**	**26.55**	**240**	*eP*		**P**		**08 29 51.8**	**+0.4**
	comp=Z,35nm,1.5s,mb4.7								
STKA				*e*pP		pP		08 30 04.0	+0.9
STKA				*eS*		**S**		**08 34 26.9**	**+4.0**
STKA	**Stephens Creek**	**26.55**	**240**	P		**P**		**08 29 52.0**	**+0.7**
	comp=Z,23nm,0.7s,mb4.8,baz=62,slow=8.0,SNR=33								
STKA				LR		LR		08 39 50.0	
	comp=Z,3μm,19.5s,MS4.9,baz=76,slow=35								
STKA	**Stephens Creek**	**26.55**	**240**	*eP*		**P**		**08 29 52.1**	**+0.7**
	comp=Z,42nm,1.4s,mb4.8								
RAR	**Rarotonga**	**29.37**	**96**	LR		LR		08 39 28.9	
	comp=Z,1μm,21.9s,MS4.4,baz=258,slow=31								
WRAB	**Tennant Creek**	**32.19**	**266**	P		**P**		**08 30 40.0**	**-1.5**
	comp=Z,316nm,1.2s,mb6.0,SNR=6.1								
WRAB	**Tennant Creek**	**32.19**	**266**	*eP*		**P**		**08 30 39.4**	**-2.1**
WRAB				pmax		pmax			
	comp=Z,111nm,1.3s,mb5.5								
WRAB				MLR		MLR			
	comp=Z,4μm,19.0s,MS5.1								
WRAB	**Tennant Creek**	**32.19**	**266**	*eP*		**P**		**08 30 39.9**	**-1.6**
	comp=Z,111nm,1.3s,mb5.5								
WRAB				LR		LR			
	comp=Z,4μm,19.0s,MS5.1								
WRAB	**Tennant Creek**	**32.19**	**266**	P		**P**		**08 30 39.9**	**-1.6**
	comp=Z,72nm,1.7s,mb5.2								
WRA	**Warramunga Arr**	**32.20**	**266**	P		**P**		**08 30 40.4**	**-1.2**
	comp=Z,22nm,1.0s,mb5.0,baz=95,slow=8.8,SNR=32								
WRA				pP		pP		08 30 50.9	-2.6
	comp=Z,42nm,1.2s,baz=96,slow=8.6,SNR=15								
WRA				S		**S**		**08 35 50.3**	**-1.4**
	comp=Z,3.5nm,1.1s,baz=95,slow=14,SNR=4.5								
WRA				PKiKP		PKiKP		08 40 56.9	-0.7
	comp=Z,2.4nm,0.8s,baz=62,slow=0.8,SNR=5.3								
WRA				LR		LR		08 43 08.6	
	comp=Z,3μm,20.0s,MS5.0,baz=90,slow=35								
WRA	**Warramunga Arr**	**32.20**	**266**	P		**P**		**08 30 40.4**	**-1.2**
WRA				pP		pP		08 30 50.9	-2.6
WRA				S		**S**		**08 35 50.3**	**-1.4**
ASAR	**Alice Springs**	**32.28**	**259**	P		**P**		**08 30 41.8**	**-0.5**
	comp=Z,36nm,0.8s,mb5.3,baz=83,slow=9.0,SNR=117								
ASAR				pP		pP		08 30 52.2	-2.0
	comp=Z,88nm,0.9s,baz=86,slow=8.9,SNR=24								
ASAR				PKiKP		PKiKP		08 40 56.5	-1.2
	comp=Z,0.7nm,0.9s,baz=86,slow=6.0,SNR=4.2								
ASAR	**Alice Springs**	**32.28**	**259**	P		**P**		**08 30 41.8**	**-0.5**
ASAR				pP		pP		08 30 52.2	-2.0
KAKA	**Kakadu**	**35.62**	**277**	*eP*		**P**		**08 31 12.3**	**+1.0**
	comp=Z,31nm,1.1s,mb5.2								
FORT	**Forrest**	**37.70**	**246**	*eP*		**P**		**08 31 29.0**	**+0.1**
	comp=Z,92nm,1.3s,mb5.3								
FORT				*e*pP		pP		08 31 42.1	+1.1
FORT	**Forrest**	**37.70**	**246**	*eP*		**P**		**08 31 28.5**	**-0.4**
	comp=Z,186nm,1.0s,mb5.8								
KNA	**Kununurra**	**38.21**	**271**	P		**P**		**08 31 33.1**	**-0.2**
KNA	**Kununurra**	**38.21**	**271**	P		**P**		**08 31 32.6**	**-0.7**
	comp=Z,2μmcomp=Z,226nm,1.2s,mb5.8								
TBI	**Tubuai**	**38.71**	**102**	*eS*		**S**		**08 37 34.7**	**+3.1**
	comp=Z,375nm,27.8s								
TBI				*e*LQ				08 40 27.4	
	comp=Z,5μm,30.5s								
TBI				*e*LR		LR		08 42 23.4	
	comp=Z,2μm,28.8s,baz=261								
TBI	**Tubuai**	**38.71**	**102**	*eS*		**S**		**08 37 34.7**	**+3.1**
TBI				*e*LQ				08 40 27.4	
PPT	**Papeete**	**39.43**	**92**	*eS*		**S**		**08 37 50.9**	**+8.3**
	comp=Z,658nm,25.5s								
PPT				*e*LQ				08 41 02.1	
	comp=Z,7μm,27.8s								
PPT				*e*LR		LR		08 42 44.7	
	comp=Z,3μm,30.2s,baz=253								
PPT	**Papeete**	**39.43**	**92**	LR		LR		08 44 08.4	
	comp=Z,693nm,21.3s,MS4.5,baz=259,slow=30								
WAKE	**Wake Island**	**40.03**	**357**	PFAKE				08 32 00.0	+12
WAKE				LR		LR			
	comp=Z,1μm,20.0s,MS4.8								
XMAS	**Kiritimati**	**40.24**	**59**	PFAKE				08 32 00.0	+10
XMAS				LR		LR			
	comp=Z,762nm,22.0s,MS4.5								
FITZ	**Fitzroy Crossi**	**40.62**	**266**	*eP*		**P**		**08 31 53.4**	**0.0**
	comp=Z,103nm,0.8s,mb5.5								
FITZ				*e*pP		pP		08 32 04.8	-0.7
FITZ	**Fitzroy Crossi**	**40.62**	**266**	LR		LR		08 48 18.4	
	comp=Z,2μm,20.2s,MS5.0,baz=100,slow=36								
FITZ	**Fitzroy Crossi**	**40.62**	**266**	*eP*		**P**		**08 31 53.2**	**-0.2**
	comp=Z,257nm,1.3s,mb5.7								
FITZ				*e*pP		pP		08 32 04.4	-1.1
FITZ	**Fitzroy Crossi**	**40.62**	**266**	P		**P**		**08 31 54.8**	**+1.4**
	comp=Z,5μmcomp=Z,365nm,1.2s,mb5.9								
GUMO	**Guam**	**41.56**	**324**	PFAKE				08 32 10.0	+8.9
GUMO				LR		LR			
	comp=Z,768nm,19.0s,MS4.6								
SWI	**Sorong**	**41.65**	**294**	P		**P**		**08 32 01.5**	**-0.5**
SWI	**Sorong**	**41.65**	**294**	P		**P**		**08 32 02.2**	**+0.2**
	comp=Z,3μmcomp=Z,156nm,1.0s,mb5.6								
JOHN	**Johnston Islan**	**43.09**	**31**	PFAKE				08 32 20.0	+6.5
JOHN				LR		LR			
	comp=Z,1μm,22.0s,MS4.7								
NLAI	**Namlea**	**44.15**	**288**	P		**P**		**08 32 21.4**	**-0.8**
	comp=Z,3μmcomp=Z,106nm,1.6s,mb5.3								
LBMI	**Labuha**	**45.01**	**291**	P		**P**		**08 32 31.4**	**+2.3**
	comp=Z,3μmcomp=Z,129nm,2.1s,mb5.4								
MBWA	**Marble Bar**	**45.57**	**261**	*eP*		**P**		**08 32 33.2**	**-0.3**
MBWA				*e*pP		pP		08 32 44.8	-0.9
MBWA	**Marble Bar**	**45.57**	**261**	*eP*		**P**		**08 32 33.2**	**-0.2**
	comp=Z,286nm,1.1s,mb6.1								
MBWA				*e*pP		pP		08 32 44.4	-1.3
MBWA				LR		LR			
	comp=Z,4μm,19.0s,MS5.4								
MBWA	**Marble Bar**	**45.57**	**261**	P		**P**		**08 32 35.2**	**+1.7**
	comp=Z,3μmcomp=Z,302nm,1.1s,mb6.1								
KLBR	**Kellerberrin**	**46.56**	**246**	*eP*		**P**		**08 32 40.2**	**-0.9**
	comp=Z,90nm,1.1s,mb5.6								
KLBR				*e*pP		pP		08 32 51.6	-1.8
NWAO	**Narrogin (SRO)**	**47.02**	**244**	LR		LR		08 52 31.2	
	comp=Z,22nm,18.9s,baz=165,slow=36								
NWAO	**Narrogin (SRO)**	**47.02**	**244**	*eP*		**P**		**08 32 43.4**	**-1.3**
NWAO				pmax		pmax			
	comp=Z,158nm,1.0s								
NWAO				MLR		MLR			
	comp=Z,3μm,20.0s								
NWAO	**Narrogin (SRO)**	**47.02**	**244**	*eP*		**P**		**08 32 43.4**	**-1.3**
	comp=Z,158nm,1.0s,mb5.9								
NWAO				LR		LR			
	comp=Z,3μm,20.0s,MS5.3								
LUWI	**Luwuk**	**48.99**	**288**	P		**P**		**08 33 00.0**	**-0.1**
	comp=Z,4μmcomp=Z,227nm,1.1s,mb6.1								
DRV	**Dumont d'Urvil**	**49.27**	**195**	S		**S**		**08 40 19.0**	**+15**
DRV				SS		SS		08 43 40.0	+4.2
DRV				L				08 45 00.0	
APSI	**Ampana**	**50.05**	**287**	P		**P**		**08 33 09.7**	**+1.5**
	comp=Z,7μmcomp=Z,164nm,1.3s,mb5.9								
MRSI	**Marisa**	**50.42**	**289**	P		**P**		**08 33 10.8**	**-0.2**
SPSI	**Sidrap Palu**	**50.45**	**283**	P		**P**		**08 33 10.6**	**-0.7**
MIDW	**Midway**	**50.68**	**16**	PFAKE				08 33 20.0	+7.3
MIDW				LR		LR			
	comp=Z,766nm,19.0s,MS4.7								
DAV	**Davao City (W)**	**50.70**	**299**	PFAKE				08 33 30.0	+17
DAV				LR		LR			
	comp=Z,508nm,21.0s,MS4.5								
DAV	**Davao City (W)**	**50.70**	**299**	⇑*eP*		**P**		**08 33 10.0**	**-3.1**
TTSI	**Tana Toraja**	**50.78**	**284**	P		**P**		**08 33 12.7**	**-1.0**
PCI	**Palu**	**51.67**	**286**	P		**P**		**08 33 22.3**	**+1.8**
PCI	**Palu**	**51.67**	**286**	P		**P**		**08 33 23.8**	**+3.3**
	comp=Z,5μmcomp=Z,407nm,1.1s,mb6.2								
RKT	**Rikitea**	**51.96**	**103**	*eS*		**S**		**08 40 48.7**	**+5.9**
	comp=Z,656nm,29.0s								
RKT				*e*LQ				08 46 32.0	
	comp=Z,847nm,28.8s								
RKT				*e*LR		LR		08 48 27.6	
	comp=Z,995nm,31.8s								
KHKI	**Kahang-Kahang**	**52.66**	**275**	P		**P**		**08 33 29.8**	**+2.0**
	comp=Z,84nm,1.1s,mb5.6								
KIP	**Kipapa**	**53.19**	**40**	*eP*		**P**		**08 33 29.3**	**-2.1**
POHA	**Pohakuloa**	**53.48**	**43**	PFAKE				08 33 50.0	+16
POHA				LR		LR			
	comp=Z,894nm,20.0s,MS4.8								
CBIJ	**Chichi jima**	**54.23**	**331**	P		**P**		**08 33 38.0**	**-1.0**
	comp=Z,355nm,0.9s,mb6.3,baz=104,slow=1.2,SNR=13								
CBIJ	**Chichi jima**	**54.23**	**331**	P		**P**		**08 33 38.8**	**-0.2**
MYLDM	**Lahad Datu**	**55.68**	**292**	P		**P**		**08 33 52.8**	**+3.0**
	comp=Z,2μmcomp=Z,96nm,1.7s,mb5.5								
TSM	**Tawau**	**55.80**	**291**	P		**P**		**08 33 51.2**	**+0.6**
PWJI	**Pagerwojo**	**56.32**	**274**	P		**P**		**08 33 54.1**	**-0.3**
	comp=Z,117nm,1.7s,mb5.6								
SJI	**Sawahan**	**56.45**	**275**	P		**P**		**08 33 56.1**	**+0.8**
	comp=Z,5μmcomp=Z,85nm,1.1s,mb5.7								
PCJI	**Pacitan**	**56.85**	**274**	P		**P**		**08 33 59.5**	**+1.4**
SBA	**Scott Base**	**56.96**	**180**	*eP*		**P**		**08 33 59.4**	**+1.4**
SBA				pmax		pmax			
	comp=Z,107nm,1.2s,mb5.8								
SBA				MLR		MLR			
	comp=Z,1μm,19.0s,MS5.0								
SBA	**Scott Base**	**56.96**	**180**	*eP*		**P**		**08 33 59.4**	**+1.4**
	comp=Z,107nm,1.2s,mb5.8								
SBA				LR		LR			
	comp=Z,1μm,19.0s,MS5.0								
SDKM	**Sandakan**	**57.04**	**292**	P		**P**		**08 33 59.4**	**-0.1**
KDM	**Kudat**	**57.98**	**293**	P		**P**		**08 34 06.8**	**+0.8**
KKM	**Kota Kinabalu**	**58.09**	**292**	P		**P**		**08 34 07.5**	**+0.7**
KKM	**Kota Kinabalu**	**58.09**	**292**	*eP*		**P**		**08 34 07.5**	**+0.7**
	comp=Z,198nm,1.3s,mb6.0								
KKM	**Kota Kinabalu**	**58.09**	**292**	P		**P**		**08 34 07.8**	**+1.0**
	comp=Z,2μmcomp=Z,134nm,1.4s,mb5.8								
CASY	**Casey**	**58.38**	**204**	*eP*		**P**		**08 34 07.6**	**-0.4**
	comp=Z,109nm,1.4s,mb5.7								
CASY				LR		LR			
	comp=Z,612nm,20.0s,MS4.7								
BTM	**Bintulu**	**59.53**	**287**	P		**P**		**08 34 17.7**	**+0.8**
STKI	**Sintang**	**59.65**	**283**	P		**P**		**08 34 17.5**	**-0.2**
	comp=Z,128nm,1.1s,mb5.9								
SBUM	**Sibu**	**59.98**	**286**	P		**P**		**08 34 20.7**	**+0.7**
SBUM	**Sibu**	**59.98**	**286**	P		**P**		**08 34 19.8**	**-0.2**
	comp=Z,2μmcomp=Z,45nm,2.1s,mb5.1								
LEM	**Lembang**	**60.63**	**274**	P		**P**		**08 34 25.3**	**+0.9**
LEM	**Lembang**	**60.63**	**274**	P		**P**		**08 34 25.8**	**+1.4**
	comp=Z,218nm,1.1s,mb6.2								
KSM	**Kuching**	**61.29**	**284**	P		**P**		**08 34 29.3**	**+0.4**
KSM	**Kuching**	**61.29**	**284**	*eP*		**P**		**08 34 29.1**	**+0.2**
	comp=Z,83nm,0.9s,mb5.9								
KSM	**Kuching**	**61.29**	**284**	P		**P**		**08 34 28.6**	**-0.3**
	comp=Z,1μmcomp=Z,102nm,1.0s,mb5.9								
JOW	**Kunigami**	**61.57**	**319**	P		**P**		**08 34 32.2**	**+1.7**
CGJI	**Cibinong**	**62.50**	**273**	P		**P**		**08 34 37.8**	**+0.8**
	comp=Z,3μmcomp=Z,198nm,1.5s,mb6.0								
TWG	**Pinlang**	**63.64**	**310**	*eP*		**P**		**08 34 44.7**	**+0.3**
	comp=Z,81nm,1.3s,mb5.6								
YULB	**Yu-li**	**63.85**	**311**	*eP*		**P**		**08 34 45.0**	**-0.8**
	comp=Z,40nm,1.1s,mb5.4								
KASI	**Kota Agung**	**63.99**	**274**	P		**P**		**08 34 46.5**	**-0.4**
	comp=Z,2μmcomp=Z,143nm,1.1s,mb5.9								
MJAR	**Matsushiro Arr**	**64.03**	**333**	P		**P**		**08 34 46.7**	**0.0**
	comp=Z,45nm,0.9s,mb5.5,baz=169,slow=7.1,SNR=128								
MJAR				LR		LR		09 01 17.6	
	comp=Z,280nm,18.5s,MS4.5,baz=160,slow=35								
MJAR				PKP2bc				09 03 42.0	
	comp=Z,0.5nm,0.5s,baz=357,slow=2.5,SNR=4.4								
MJAR	**Matsushiro Arr**	**64.03**	**333**	P		**P**		**08 34 46.7**	**0.0**
MJAR				LR		LR		09 01 17.6	
MJAR				⇑*e*				09 03 42.0	
MAJO	**Matsushiro**	**64.03**	**333**	*eP*		**P**		**08 34 46.8**	**+0.1**
MAJO				pmax		pmax			
	comp=Z,113nm,1.1s,mb5.8								
MAJO				MLR		MLR			
	comp=Z,330nm,19.0s,MS4.5								
MAJO	**Matsushiro**	**64.03**	**333**	*eP*		**P**		**08 34 46.8**	**+0.1**
	comp=Z,113nm,1.1s,mb5.8								
MAJO				LR		LR			
	comp=Z,330nm,19.0s,MS4.5								
MAT	**Matsushiro**	**64.03**	**333**	P		**P**		**08 34 46.8**	**+0.1**
MAT				S		**S**		**08 43 18.0**	**-1.9**
KLSI		**64.06**	**275**	P		**P**		**08 34 50.2**	**+2.8**
	comp=Z,2μmcomp=Z,74nm,2.1s,mb5.3								
NACB	**Ninganchiao**	**64.14**	**312**	*eP*		**P**		**08 34 46.9**	**-0.8**
	comp=Z,149nm,1.4s,mb5.8								
TPUB	**Ta-pu**	**64.26**	**311**	*eP*		**P**		**08 34 47.8**	**-0.6**
	comp=Z,179nm,1.0s,mb6.0								
TPUB				*e*pP		pP		08 35 01.2	0.0
SSLB	**Suanglung**	**64.34**	**311**	*eP*		**P**		**08 34 48.4**	**-0.6**
	comp=Z,76nm,1.0s,mb5.7								
YHNB	**Yeheng**	**64.61**	**312**	*eP*		**P**		**08 34 50.7**	**0.0**
	comp=Z,121nm,1.0s,mb5.9								
YHNB				LR		LR			
	comp=Z,657nm,21.0s,MS4.8								
MDSI	**Maura Dua**	**64.65**	**275**	P		**P**		**08 34 49.4**	**-1.9**
	comp=Z,1μmcomp=Z,72nm,2.1s,mb5.3								
TATO	**Taipei**	**64.73**	**313**	*eP*		**P**		**08 34 52.1**	**+0.6**
	comp=Z,125nm,1.0s,mb5.9								
TATO			

comp=Z,220nm,12.5s,MS4.6
YSS Yuzh-Sakhalins 71.53 342κ *i*P **P 08 35 35.0 +1.4**
YSS *e**PP pP 08 35 48.0 +1.4
YSS *e**SP sP 08 35 54.0 +2.4
YSS *e*S S 08 44 47.0 -2.2
YSS *e*PPS 08 45 25.0
YSS pmax pmax
comp=Z,70nm,0.8s,mb5.6
YSS pmax pmax
comp=Z,700nm,5.0s
YSS Yuzh-Sakhalins 71.53 342 *e*P **P 08 35 35.5 +1.9**
comp=Z,75nm,0.8s,mb5.7
YSS LR LR
comp=Z,326nm,20.0s,MS4.6
KULM Kulim 71.64 283 PFAKE 08 35 50.0 +15
KULM LR LR
comp=Z,632nm,21.0s,MS4.9
SKR Severo-Kuril's 72.17 352 *e*P **P 08 35 36.0 -1.4**
SKR *e* pP 08 35 50.0 -0.4
SKR *e*PPP 08 40 04.0
SKR *e*S S 08 45 03.0 +6.6
SKR *e* 08 45 22.0
SKR pmax pmax
comp=N,1μm,4.0s
SKR pmax pmax
comp=E,1μm,4.0s
SKR pmax pmax
comp=Z,1μm,4.0s
SKR pmax pmax
comp=Z,400nm,1.5s,mb6.1
SKR pmax pmax
comp=N,1μm,10.0s
SKR pmax pmax
comp=Z,1μm,10.0s
SKR MLR MLR
comp=N,1μm,16.0s,MS5.4
SKR MLR MLR
comp=E,1μm,16.0s,MS5.4
SKR MLR MLR
comp=Z,1μm,16.0s,MS5.2
VLA Vladivostok 72.19 333 *i*P **P 08 35 38.8 +1.1**
VLA Vladivostok 72.19 333 *i*P **P 08 35 38.8 +1.1**
PSI Prapat 72.23 280 P **P 08 35 37.7 -1.0**
comp=Z,8.2nm,0.7s,mb4.8,baz=178,slow=7.2,SNR=6.5
WHN Wuhan 73.14 313 ⇓P **P 08 35 44.2 +0.6**
WHN pP pP 08 35 56.9 +0.3
WHN S S 08 45 16.2 +7.9
WHN LR LR
comp=Z,890nm,19.1s,MS5.1
SMY Shemya 73.51 3 *e*P **P 08 35 44.0 -1.3**
SMY pmax pmax
comp=Z,255nm,1.3s,mb6.0
SMY Shemya 73.51 3 *e*P **P 08 35 44.0 -1.2**
comp=Z,255nm,1.3s,mb6.0
ADK Adak 73.63 9 *e*P **P 08 35 45.1 -0.9**
ADK pmax pmax
comp=Z,195nm,1.3s,mb5.9
ADK MLR MLR
comp=Z,514nm,22.0s,MS4.8
ADK Adak 73.63 9 *e*P **P 08 35 45.1 -0.9**
comp=Z,195nm,1.3s,mb5.9
ADK LR LR
comp=Z,514nm,22.0s,MS4.8
RPN Rapa Nui 73.86 113 LR LR 09 00 30.6
comp=Z,278nm,20.9s,MS4.5,baz=267,slow=29
DL2 Dalian 74.08 324⇓*i*P **P 08 35 50.1 +1.1**
DL2 *e*S S 08 45 21.4 +2.8
DL2 pmax pmax
comp=Z,60nm,1.2s,mb5.4
DL2 pmax pmax
comp=Z,210nm,4.8s
DL2 LR LR
comp=N,270nm,17.6s,MS4.7
DL2 LR LR
comp=E,200nm,17.8s,MS4.7
DL2 LR LR
comp=Z,420nm,20.5s,MS4.7
PET Petropavlovsk 74.17 354*c i*P **P 08 35 49.8 +0.7**
PET *e* pP 08 36 03.1 +0.9
PET *e*S S 08 45 22.4 +3.4
PET *e*PS 08 46 00.6
PET *e*SS SS 08 50 06.6 +1.0
PET pmax pmax
comp=Z,64nm,1.5s,mb5.3
PET pmax pmax
comp=Z,300nm,7.4s
PET pmax pmax
comp=Z,500nm,4.9s
PET Petropavlovsk 74.17 354 *e*P **P 08 35 49.5 +0.4**
PET LR LR
comp=Z,659nm,19.0s,MS4.9
PEA0B Petropavlovsk- 74.36 353 *e*P **P 08 35 50.1 -0.1**
PETK Petropavlovsk- 74.36 353 P **P 08 35 50.8 +0.6**
comp=Z,69nm,1.1s,mb5.5,baz=126,slow=6.3,SNR=40
PETK pP pP 08 36 03.1 -0.1
comp=Z,51nm,1.2s,baz=103,slow=3.2,SNR=5.1
PETK PKiKP PKiKP 08 41 38.9 -4.4
comp=Z,0.5nm,0.4s,baz=174,slow=7.3,SNR=4.0
PETK LR LR 09 04 31.5
comp=Z,526nm,20.1s,MS4.8,baz=165,slow=32
PETK Petropavlovsk- 74.36 353 P **P 08 35 50.8 +0.6**
PETK pP pP 08 36 03.1 -0.1
MDJ Mudanjiang 74.39 332 P **P 08 35 51.7 +1.1**
MDJ PcP PcP 08 36 05.7 +0.6
MDJ PP PP 08 38 37.0 -0.6
MDJ S S 08 45 25.9 +4.1
MDJ pmax pmax
comp=Z,110nm,1.4s,mb5.6
MDJ pmax pmax
comp=Z,400nm,6.7s
MDJ LR LR
comp=N,220nm,22.9s,MS4.5
MDJ LR LR
comp=E,180nm,21.3s,MS4.5
MDJ LR LR
comp=Z,330nm,20.5s,MS4.6
MDJ Mudanjiang 74.39 332 *e*P **P 08 35 51.7 +1.1**
comp=Z,116nm,1.0s,mb5.8
MDJ LR LR
comp=Z,337nm,19.0s,MS4.7
SNY Shenyang 75.13 327 ⇓P **P 08 35 55.7 +0.7**
SNY S S 08 45 33.6 +3.5
SNY pmax pmax
comp=Z,40nm,0.7s,mb5.5
SNY pmax pmax
comp=Z,520nm,6.0s
SNY LR LR
comp=N,180nm,16.1s,MS4.6
SNY LR LR
comp=E,210nm,19.8s,MS4.6
SNY LR LR
comp=Z,330nm,17.7s,MS4.7
HABR Khabarovsk 75.38 338*de*P **P 08 35 56.4 +0.2**
HABR pP 08 36 08.1 -1.2
HABR *e**SP sP 08 36 14.7 +0.4
HABR S S 08 45 31.3 -1.3
HABR *e**SS sS 08 45 53.6 -0.8
HABR 08 46 02.6
HABR pmax pmax
comp=Z,110nm,1.6s,mb5.5
HABR pmax pmax
comp=E,33nm,1.0s
HABR pmax pmax
comp=N,23nm,1.1s
HABR MLR MLR
comp=Z,159nm,15.0s,MS4.4
CN2 Changchun 75.66 329⇓*i*P **P 08 35 58.9 +0.9**
CN2 *e*S S 08 45 39.0 +3.1
CN2 pmax pmax
comp=Z,20nm,1.0s,mb5.0
ENH Enshi 76.39 310 *e*P **P 08 36 02.8 +0.3**
comp=Z,117nm,1.1s,mb5.7
ENH LR LR
comp=Z,358nm,22.0s,MS4.6
GYA Guiyang 76.40 305⇓*i*P **P 08 36 03.3 +0.7**
GYA pmax pmax
comp=Z,30nm,0.9s,mb5.2
NST Nakhon Sawan 76.51 293 P **P 08 36 02.5 -0.9**
MAW Mawson 76.68 202 *e*P **P 08 36 03.8 +0.3**
comp=Z,11nm,0.8s,mb4.8
MAW *e*pP pP 08 36 16.1 -0.5
MAW Mawson 76.68 202 P **P 08 36 03.9 +0.4**
comp=Z,13nm,0.8s,mb4.9,baz=116,slow=6.9,SNR=22
MAW pP pP 08 36 16.1 -0.5
comp=Z,22nm,1.0s,baz=110,slow=7.9,SNR=11
MAW LR LR 09 07 31.9
comp=Z,417nm,18.3s,MS4.8,baz=341,slow=34
MAW Mawson 76.68 202 *e*P **P 08 36 04.0 +0.4**
KLR Kul'dur 77.22 336⇑*i*P **P 08 36 04.0 -2.7**
KLR *e*S S 08 45 55.5 +2.7
KLR pmax pmax
comp=E,70nm,1.8s
KLR pmax pmax
comp=Z,200nm,1.8s,mb5.8
KLR pmax pmax
comp=Z,900nm,6.0s
UNV Unalaska Valle 77.49 15 *e*P **P 08 36 06.9 -1.2**
comp=Z,110nm,0.8s,mb5.8
BJT Baijiatuau 77.94 321 *e*P **P 08 36 11.5 +0.6**
BJT pmax pmax
comp=Z,50nm,1.1s
BJT MLR MLR
comp=Z,329nm,19.0s
BJT Baijiatuau 77.94 321 *e*P **P 08 36 11.5 +0.6**
comp=Z,50nm,1.1s,mb5.4
BJT LR LR
comp=Z,329nm,19.0s,MS4.7
BJI Beijing 77.95 321 P **P 08 36 11.8 +0.8**
BJI S S 08 46 08.0 +6.8
BJI pmax pmax
comp=Z,51nm,1.2s,mb5.3
BJI pmax pmax
comp=Z,510nm,6.5s
BJI LR LR
comp=N,300nm,17.4s,MS4.7
BJI LR LR
comp=E,140nm,16.6s,MS4.7
BJI LR LR
comp=Z,190nm,38.6s
CHRT Chiangrai 78.69 296 ⇓P **P 08 36 17.0 +1.5**
comp=Z,290nm,1.0s,mb6.2
CM31 Chiang Mai Arr 78.77 295 *e*P **P 08 36 18.1 +2.2**
KMI Kunming 78.77 302 P **P 08 36 18.1 +2.3**
KMI pP pP 08 36 30.7 +1.8
KMI PP PP 08 39 16.9 +2.1
KMI S S 08 46 09.9 -0.6
KMI SS SS 08 51 18.8 +2.6
KMI pmax pmax
comp=Z,76nm,1.2s,mb5.5
KMI pmax pmax
comp=Z,570nm,4.4s
KMI LR LR
comp=N,150nm,16.1s,MS4.6
KMI LR LR
comp=E,200nm,17.4s,MS4.6
KMI LR LR
comp=Z,290nm,18.2s,MS4.7
XAN Xi'an 78.91 313 P **P 08 36 17.3 +0.9**
XAN sP sP 08 36 26.6 -7.9
XAN pP pP 08 36 30.9 +1.4
XAN PP PP 08 39 15.6 -0.2
XAN S S 08 46 18.2 +6.6
XAN SKS 08 46 25.3
XAN pmax pmax
comp=Z,12nm,1.4s,mb4.6
XAN pmax pmax
comp=Z,120nm,7.7s
XAN LR LR
comp=N,65nm,19.7s,MS4.3
XAN LR LR
comp=E,140nm,20.5s,MS4.3
XAN LR LR
comp=Z,140nm,18.1s,MS4.3
CHG Chiang Mai 78.92 295 ⇓P **P 08 36 18.3 +1.5**
comp=Z,54nm,0.9s,mb5.5
CHTO Chiang Mai 78.92 295 *e*P **P 08 36 18.2 +1.4**
CHTO pmax pmax
comp=Z,45nm,1.0s,mb5.3
CHTO MLR MLR
comp=Z,232nm,21.0s,MS4.5
CHTO Chiang Mai 78.92 295 *e*P **P 08 36 18.2 +1.4**
comp=Z,45nm,1.0s,mb5.4
CHTO LR LR
comp=Z,232nm,21.0s,MS4.5
CHTO Chiang Mai 78.92 295 P **P 08 36 18.2 +1.4**
comp=Z,1μmcomp=Z,69nm,1.1s,mb5.5
CHTO Chiang Mai 78.92 295 P **P 08 36 18.6 +1.8**
SNR=11
SDPT Sand Point 80.39 17 *e*P **P 08 36 22.1 -1.8**
comp=Z,97nm,0.8s,mb5.8
CD2 Chengdu 80.89 308 P **P 08 36 29.2 +2.0**
CD2 PP PP 08 39 37.4 +5.0
CD2 SKS 08 46 38.3
CD2 SS SS 08 51 51.2 +3.4
CD2 pmax pmax
comp=Z,50nm,0.6s,mb5.6
CD2 pmax pmax
comp=Z,430nm,7.1s
CD2 LR LR
comp=N,400nm,15.5s
CD2 LR LR
comp=Z,270nm,17.8s,MS4.7
HHC Hu-ho-hao-te 81.20 320⇓*i*P **P 08 36 30.1 +1.5**
HHC PP PP 08 39 38.2 +3.5
HHC S S 08 46 34.9 -0.5
HHC SKS 08 46 39.3
HHC SS SS 08 51 55.3 +3.2
HHC pmax pmax
comp=Z,83nm,0.8s,mb5.7
HHC pmax pmax
comp=Z,520nm,6.9s
HHC LR LR
comp=N,610nm,17.2s,MS5.2
HHC LR LR
comp=E,620nm,17.2s,MS5.2
HHC LR LR
comp=Z,650nm,17.1s,MS5.0
BTO Baotou 81.99 319 *e*P **P 08 36 33.7 +0.9**
HIA Hailar 82.33 330 *i*P **P 08 36 34.9 +0.5**
HIA Hailar 82.33 330 *e*P **P 08 36 34.2 -0.2**
comp=Z,56nm,1.1s,mb5.4
HIA LR LR
comp=Z,283nm,22.0s,MS4.6
SYO Syowa Base 83.17 196⇑*e*P **P 08 36 36.4 -2.2**
SYO Syowa Base 83.17 196⇓*e*PcP PcP 08 36 39.6 -3.5
LZH Lanzhou 83.51 312 ⇓P **P 08 36 43.0 +2.2**
LZH *e*S S 08 47 01.0 +1.7
LZH SS SS 08 52 31.2 +4.6
LZH pmax pmax
comp=Z,180nm,1.2s,mb6.1
LZH pmax pmax
comp=Z,640nm,7.1s
LZH LR LR
comp=N,590nm,15.0s
LZH LR LR
comp=Z,960nm,17.6s,MS5.2
SEY Seymchan 84.58 353⇓*i*P **P 08 36 44.9 -0.7**
KDAK Kodiak Island 84.79 20 P **P 08 36 46.6 -0.2**
comp=Z,368nm,1.7s,mb6.2,SNR=11
KDAK Kodiak Island 84.79 20 P **P 08 36 46.9 +0.2**
comp=Z,31nm,0.8s,mb5.5,baz=224,slow=1.8,SNR=22
KDAK Kodiak Island 84.79 20 *i*P **P 08 36 46.7 -0.1**
KDAK Kodiak Island 84.79 20 PFAKE 08 37 00.0 +13
KDAK LR LR
comp=Z,542nm,19.0s,MS5.0
CLNS Chul'man 85.77 338 *e*P **P 08 36 53.1 +1.4**
CLNS pmax pmax
comp=Z,45nm,1.1s,mb5.6
CLNS pmax pmax
comp=N,33nm,1.2s
CLNS pmax pmax
comp=E,7.0nm,1.1s
SVW2 Sparrevohn 86.66 16 *e*P **P 08 36 56.1 +0.1**
comp=E,49nm,1.3s,mb5.6
SVW2 LR LR
comp=Z,300nm,19.0s,MS4.7
MCCM Marconi Confer 86.97 47 *e*P **P 08 36 58.0 0.0**
MCCM LR LR
comp=Z,386nm,22.0s,MS4.8
SNCC San Nicolas Is 87.06 53 ⇓P **P 08 36 58.3 -0.3**
baz=87
CIT Chita 87.10 329 *e*P **P 08 36 59.0 +0.6**
CIT pmax pmax
comp=Z,232nm,1.8s,mb6.1
MAIT Maitri 87.12 187 *e*P **P 08 36 57.7 -0.6**
MAIT *e* pP 08 37 09.8 -1.8
HOPS Hopland 87.26 46 PFAKE 08 37 10.0 +11
HOPS LR LR
comp=Z,593nm,19.0s,MS5.0
SAO San Andreas Ge 87.30 49 PFAKE 08 37 10.0 +10
SAO LR LR
comp=Z,640nm,20.0s,MS5.0
BSC Santa Cruz Isl 87.32 52 ⇓P **P 08 37 00.2 +0.4**
baz=88
SBC Santa Barbara 87.46 52 ⇓P **P 08 37 01.1 +0.5**
baz=88
PKM Peak Mountain 87.59 51 ⇓P **P 08 37 01.9 +0.8**
baz=88,SNR=11
SMMC Simmler 87.65 51 ⇑P **P 08 37 02.2 +0.8**
baz=88,SNR=9.0
SCI San Clemente I 87.67 53 ⇓P **P 08 37 01.0 -0.6**
baz=88
SHL Shillong 87.72 298 *e*PKP **P 08 37 03.5 +1.5**
BLG Laguna Peak 87.79 52 ⇓P **P 08 37 02.1 0.0**
baz=88
ULN Ulaanbaatar 87.94 324 *i*P **P 08 37 03.9 +1.4**
ULN Ulaanbaatar 87.94 324 PFAKE 08 37 10.0 +7.5
ULN LR LR
comp=Z,278nm,21.0s,MS4.7
ULN Ulaanbaatar 87.94 324 P **P 08 37 04.8 +2.3**
ULN Ulaanbaatar 87.94 324 P **P 08 37 04.0 +1.5**
SNR=84
GTA Gaotai 87.94 314 ⇓P **P 08 37 04.1 +1.4**
GTA PP PP 08 40 32.5 +2.8
GTA SKS 08 47 25.1
GTA S S 08 47 40.5 -2.2
GTA SS SS 08 53 35.3 +3.7
GTA pmax pmax
comp=Z,53nm,1.1s,mb5.7
GTA pmax pmax
comp=Z,310nm,6.2s
GTA LR LR
comp=N,130nm,20.8s,MS4.6
GTA LR LR
comp=E,210nm,19.9s,MS4.6
GTA LR LR
comp=Z,250nm,18.7s,MS4.7
CIS Catalina Islan 87.96 53 ⇓P **P 08 37 03.0 +0.1**
baz=88
OSI Osito Adit 88.27 52 ⇑P **P 08 37 04.7 +0.3**
baz=88
SONM Songino Array 88.29 323 P **P 08 37 05.3 +1.1**
comp=Z,63nm,0.9s,mb5.9,baz=141,slow=5.4,SNR=181
SONM PKKP PKKPbc 08 54 48.2 -1.2
comp=Z,0.8nm,0.5s,baz=270,slow=4.3,SNR=5.2
SONM LR LR 09 16 47.5
comp=Z,258nm,19.2s,MS4.7,baz=141,slow=36
RC01 Rabbit Creek A 88.31 19 *e*P **P 08 37 01.9 -2.0**
comp=Z,19nm,1.0s,mb5.3
YAK Yakutsk 88.34 343 *e*P **P 08 37 03.9 -0.1**
YAK *e**PP pP 08 37 16.1 -1.2
YAK *e*PPP 08 42 26.8
YAK *e*S SKSac 08 47 29.1 +0.3
YAK *e* 08 47 52.6
YAK *e*SSS 08 57 08.5
YAK pmax pmax
comp=Z,23nm,0.9s,mb5.4
YAK pmax pmax
comp=N,7.0nm,1.1s
YAK pmax pmax
comp=E,3.0nm,1.3s
YAK pmax pmax
comp=Z,14nm,0.8s,mb5.2
YAK pmax pmax
comp=N,8.0nm,0.9s
YAK pmax pmax
comp=E,7.0nm,1.3s
YAK smax
comp=N,221nm,6.0s
YAK smax
comp=E,278nm,6.0s
YAK MLR MLR
comp=Z,545nm,18.0s,MS5.0
YAK MLR MLR
comp=E,230nm,17.0s,MS4.8
YAK MLR MLR
comp=N,253nm,18.0s,MS4.8
YAK Yakutsk 88.34 343 *i*P **P 08 37 03.9 -0.1**
YAK LR LR
comp=Z,566nm,19.0s,MS5.0
DECC Green Verdugo 88.39 52 ⇑P **P 08 37 05.1 +0.2**
baz=89
WDC Whiskeytown Da 88.40 45 PFAKE 08 37 20.0 +15
WDC LR LR
comp=Z,438nm,19.0s,MS4.9
ARVC Arvin 88.42 51 ⇓P **P 08 37 05.1 0.0**
baz=89,SNR=13
VNA1 Neumayer--Stat 88.63 181 *e*P **P 08 37 04.5 -1.0**
VNA1 *e* pP 08 37 20.0 +1.2
VNA1 *e* 08 37 28.7
CMB Columbia Colle 88.65 48 PFAKE 08 37 20.0 +14
CMB LR LR
comp=Z,440nm,21.0s,MS4.8
RCTC Rector, Farmer 88.66 50 ⇑P **P 08 37 05.9 -0.3**
baz=89,SNR=6.6
109C Camp Elliot, M 88.71 54 ⇑P **P 08 37 06.5 0.0**
baz=89,SNR=8.1
BILL Bilibino 88.74 359⇓*i*P **P 08 37 05.6 -0.2**
BILL *i* pP 08 37 18.9 -0.2
BILL *e* 08 40 32.7
BILL pmax pmax
comp=Z,86nm,1.4s,mb5.9
BILL Bilibino 88.74 359 *e*P **P 08 37 05.5 -0.2**
comp=Z,69nm,1.2s,mb5.9
BILL *e*pP pP 08 37 18.7 -0.4
BILL LR LR
comp=Z,263nm,21.0s,MS4.6
YBH Yreka Blue Hor 88.85 44 PFAKE 08 37 20.0 +13
YBH LR LR
comp=Z,466nm,21.0s,MS4.9
BFSC Mount Baldy Ra 88.89 53 ⇑P **P 08 37 07.2 -0.1**
baz=89,SNR=18
ISA Isabella 88.92 51 ⇓P **P 08 37 07.6 +0.1**
baz=89,SNR=35
EDW2 Edwards Air Fo 88.93 52 ⇑P **P 08 37 07.6 +0.1**
baz=89,SNR=26
MURC Murrieta 88.95 53 ⇑P **P 08 37 07.5 -0.1**
baz=89,SNR=11
PPLA Purkeypile 89.06 17 *e*P **P 08 37 06.1 -1.3**
comp=Z,7.8nm,0.9s,mb5.0
HUMO Hull Mountain 89.12 43 PFAKE 08 37 20.0 +12
HUMO LR LR
comp=Z,517nm,20.0s,MS5.0
MONP Monument Peak 89.23 54 ⇓P **P 08 37 09.4 +0.4**
baz=89,SNR=36
RNO Roman Nose 89.28 42 P **P 08 37 10.1 +1.2**
DVTC Desert V Tower 89.38 55 ⇓P **P 08 37 10.0 +0.4**
baz=90,SNR=14
LRMC Laurel Mountai 89.41 52 ⇓P **P 08 37 10.0 +0.3**
baz=90,SNR=24
BBRC Big Bear Solar 89.45 53 ⇑P **P 08 37 10.1 +0.2**
baz=90,SNR=8.6
PFO Pinyon Flat Ob 89.51 54 P **P 08 37 10.5 +0.2**
comp=Z,149nm,1.0s,mb6.3,SNR=12
PFO Pinyon Flat Ob 89.51 54 ⇑P **P 08 37 10.3 0.0**
baz=90,SNR=20
PFO Pinyon Flat Ob 89.51 54 PFAKE 08 37 20.0 +10
PFO LR LR
comp=Z,381nm,19.0s,MS4.8
MLAC Mammoth Lakes 89.55 49 ⇓P **P 08 37 10.9 +0.6**
baz=90,SNR=8.5
CWC Cottonwood Cre 89.56 51 ⇓P **P 08 37 10.8 +0.4**
baz=90
WCN Washoe City 89.67 47 ⇓P **P 08 37 11.2 +0.4**
baz=90,SNR=23
TIN Tinemaha 89.72 50 ⇓P **P 08 37 11.6 +0.4**
baz=90,SNR=8.9
SWSC Sam W. Stewart 89.73 54 ⇓P **P 08 37 11.4 +0.1**
baz=90,SNR=11
MPMC Manual Prospec 89.81 51 ⇓P **P 08 37 11.8 +0.2**
baz=90,SNR=65
DAC Darwin (Calif) 89.83 51 PFAKE 08 37 20.0 +8.3
DAC LR LR
comp=Z,493nm,19.0s,MS5.0
BMRM Bremner River 89.85 21 *e*P **P 08 37 09.8 -1.3**
comp=Z,32nm,1.1s,mb5.6
COR Corvallis 89.89 41 PFAKE 08 37 20.0 +8.3
COR LR LR
comp=Z,384nm,19.0s,MS4.8
HEBO Mount Hebo 89.93 41 *e*P **P 08 37 12.6 +0.8**
HEBO *e*pP pP 08 37 24.5 -0.7
GSC Goldstone 89.98 52 ⇑P **P 08 37 12.5 +0.1**
baz=90,SNR=17
LSA Lhasa 90.01 302 P **P 08 37 13.0 +0.3**
LSA Lhasa 90.01 302 PFAKE 08 37 20.0 +7.3
LSA LR LR
comp=Z,211nm,21.0s,MS4.5
TRF Thorofare Moun 90.02 17 *e*P **P 08 37 10.0 -1.9**

comp=Z,13nm,0.8s,mb5.3
BELC Belle Mtn. Jos 90.03 53 ⇓P P 08 37 13.0 +0.4
baz=90,SNR=66
HEC Hector,Ludlow 90.13 53 ⇓P P 08 37 13.2 +0.1
baz=90,SNR=12
NVAR Mina Array Bea 90.28 49 P P 08 37 14.1 +0.3
comp=Z,24nm,0.8s,mb5.6,baz=225,slow=8.9,SNR=205
NVAR pP pP 08 37 26.0 -1.1
comp=Z,15nm,0.9s,baz=215,slow=7.2,SNR=9.1
BC3 Big Chuckawall 90.29 54 ⇑P P 08 37 14.2 +0.4
baz=90,SNR=18
GRAC Grapevine Rang 90.31 50 ⇑P P 08 37 14.2 +0.3
baz=90,SNR=19
F03A Seaside 90.41 40 ⇓P P 08 37 14.7 +0.6
baz=91,SNR=11
FURC Furnace Creek, 90.45 51 ⇑P P 08 37 14.7 +0.1
baz=91,SNR=42
GLA Glamis 90.51 55 ⇓P P 08 37 15.6 +0.6
baz=91,SNR=12
MOD Modoc 90.51 45 PFAKE 08 37 30.0 +15
MOD LR LR
comp=Z,376nm,20.0s,MS4.8
K05A Summer Lake 90.51 44 ⇓P P 08 37 15.2 +0.6
baz=91,SNR=26
GMRC Granite Mounta 90.61 53 ⇑P P 08 37 15.6 +0.2
baz=91,SNR=26
SHOC Shoshone 90.63 52 ⇑P P 08 37 15.2 -0.2
baz=91,SNR=17
H04A Detroit Lake 90.63 42 ⇑P P 08 37 15.0 -0.1
baz=91,SNR=18
G04A Mulino 90.71 41 ⇑P P 08 37 15.8 +0.3
baz=91,SNR=22
E03A Lebam 90.71 40 ⇑P P 08 37 16.0 +0.5
baz=91,SNR=20
IRM Iron Mountain 90.73 54 ⇑P P 08 37 16.4 +0.4
baz=91,SNR=17
U10A Ash Meadows, A 90.81 51 ⇓P P 08 37 16.8 +0.5
baz=91,SNR=54
TPH Tonopah 90.89 49 PFAKE 08 37 30.0 +13
TPH LR LR
comp=Z,435nm,21.0s,MS4.9
OOW Octopus West 90.95 38 P P 08 37 17.8 +1.2
NLWA Neilton Lookou 90.96 39 ⇓P P 08 37 17.3 +0.7
baz=91,SNR=19
NLWA Neilton Lookou 90.96 39 PFAKE 08 37 30.0 +13
NLWA LR LR
comp=Z,485nm,19.0s,MS5.0
F04A Amboy 91.10 41 ⇓P P 08 37 17.3 0.0
baz=91,SNR=18
V11A Goodsprings 91.23 52 ⇑P P 08 37 18.5 +0.3
baz=91,SNR=24
S10A Tonopah Range, 91.27 50 ⇓P P 08 37 18.8 +0.5
baz=92,SNR=56
VLL Laurance Lake 91.32 41 P P 08 37 19.1 +0.7
NEE2 Needles Airpor 91.38 53 ⇓P P 08 37 19.4 +0.4
baz=92,SNR=7.7
W12A Cal Nev Ari 91.42 53 ⇓P P 08 37 19.5 +0.5
baz=92,SNR=7.2
Z13A Yuma Proving G 91.47 55 ⇓P P 08 37 19.9 +0.6
baz=92,SNR=32
U11A Corn Creek 91.51 51 ⇓P P 08 37 19.9 +0.5
baz=92,SNR=7.7
CROR Criterion Ridg 91.52 42 P P 08 37 19.5 +0.2
PDMCI Parker Dam,Lak 91.55 54 ⇓P P 08 37 19.9 +0.2
baz=92,SNR=18
MENT Mentasta 91.57 20 *e*P **P 08 37 17.9 -1.2**
Y13A Salome 91.59 54 ⇓P P 08 37 20.4 +0.5
baz=92,SNR=21
V12A Nelson 91.61 52 ⇓P P 08 37 20.3 +0.4
baz=92,SNR=22
214A Organ Pipe Nat 91.62 56 ⇓P P 08 37 20.5 +0.4
baz=92,SNR=12
R10A Warm Springs 91.64 49 ⇑P P 08 37 20.6 +0.5
baz=92,SNR=40
GNW Green Mountain 91.66 39 P P 08 37 20.2 +0.4
S11A Rachel 91.76 50 ⇓P P 08 37 20.9 +0.3
baz=92,SNR=9.4
Q10A Clear Creek Ra 91.80 49 ⇓P P 08 37 20.9 +0.1
baz=92,SNR=18
COLA College 91.80 17 *e*P **P 08 37 18.1 -2.0**
COLA pmax pmax
comp=Z,26nm,1.1s,mb5.5
COLA MLR MLR
comp=Z,351nm,19.0s,MS4.8
COLA College 91.80 17 *e*P **P 08 37 18.1 -2.0**
comp=Z,26nm,1.1s,mb5.5
COLA LR LR
comp=Z,351nm,19.0s,MS4.8
WVOR Wild Horse Val 91.86 45 *e*P **P 08 37 21.0 +0.1**
WVOR *e**PP pP 08 37 33.9 -0.4
WVOR pmax pmax
comp=Z,41nm,1.1s,mb5.7
WVOR MLR MLR
comp=Z,303nm,19.0s,MS4.8
WVOR Wild Horse Val 91.86 45 *e*P **P 08 37 21.0 +0.1**
comp=Z,41nm,1.1s,mb5.7
WVOR *e*pP pP 08 37 33.9 -0.4
WVOR LR LR
comp=Z,303nm,19.0s,MS4.8
114A Black Gap (USA 91.88 56 ⇑P P 08 37 21.4 +0.1
baz=92,SNR=17
TLY Talaya 91.88 326 P P 08 37 21.1 +0.3
comp=Z,267nm,1.1s,mb6.5,SNR=15
TLY Talaya 91.88 326 ⇓*i*P P 08 37 21.4 +0.6
TLY *e*S SKSac 08 47 49.8 -0.1
TLY pmax pmax
comp=Z,69nm,1.2s,mb5.9
TLY Talaya 91.88 326 PFAKE 08 37 30.0 +9.2
TLY LR LR
comp=Z,182nm,20.0s,MS4.5
TLY Talaya 91.88 326 P P 08 37 21.7 +0.9
SNR=39
X13A Yucca 91.90 54 ⇓P P 08 37 21.6 +0.2
baz=92,SNR=28
BMN Battle Mountai 91.92 47 PFAKE 08 37 30.0 +8.7
BMN LR LR
comp=Z,446nm,20.0s,MS4.9
T11A Corn Creek, Al 91.97 51 ⇓P P 08 37 22.2 +0.6
baz=92
D05A Enumclaw 91.97 40 ⇓P P 08 37 21.7 +0.4
baz=92,SNR=21
WPW White Pass 92.00 40 P P 08 37 21.9 +0.4
W13A Hualapai Mount 92.07 53 ⇓P P 08 37 22.5 +0.4
baz=92,SNR=23
Z14A Wintersburg 92.08 55 ⇑P P 08 37 22.5 +0.3
baz=92,SNR=10
P10A Eureka 92.09 48 ⇑P P 08 37 22.4 +0.3
baz=92
T12A Moapa 92.12 51 ⇑P P 08 37 22.5 +0.2
baz=92
U12A Valley of Fire 92.13 52 ⇑P P 08 37 22.6 +0.3
baz=92,SNR=20
R11A Troy Canyon, C 92.17 50 ⇓P P 08 37 22.5 0.0
baz=92,SNR=21
Y14A Wickenburg 92.26 55 ⇑P P 08 37 23.3 +0.3
baz=92,SNR=16
Q11A Duckwater 92.33 49 ⇓P P 08 37 23.5 +0.3
baz=92,SNR=29
O10A Cortez Mining, 92.36 48 ⇓P P 08 37 23.6 +0.3
baz=92,SNR=6.8
115A Sonoran Desert 92.37 56 ⇓P P 08 37 23.9 +0.4
baz=92
J08A Circle Bar Ran 92.38 44 ⇓P P 08 37 23.6 +0.3
baz=93,SNR=32
S12A Delamar Landin 92.39 51 ⇑P P 08 37 24.3 +0.8
baz=93,SNR=58
JBO Jordan Butte 92.47 42 P P 08 37 23.8 +0.2
U13A Pakoon Wash 92.54 52 ⇓P P 08 37 24.6 +0.4
baz=93,SNR=17
P11A Circle Ranch, 92.56 49 ⇑P P 08 37 24.5 +0.3
baz=93
X14A Yava 92.56 54 ⇑P P 08 37 25.0 +0.6
baz=93,SNR=30
F07A Phinny Hill Vi 92.61 41 ⇓P P 08 37 24.8 +0.5
baz=93
Z15A Gila River Ind 92.65 55 ⇑P P 08 37 24.8 -0.1
baz=93,SNR=6.3
216A Three Points, 92.69 57 ⇑P P 08 37 25.7 +0.6
baz=93,SNR=8.2
W14A Seligman 92.71 53 ⇓P P 08 37 25.7 +0.6
baz=93,SNR=18
116A Eloy 92.72 56 ⇑P P 08 37 25.4 +0.2
baz=93,SNR=18
H08A Prairie City 92.77 43 ⇑P P 08 37 25.0 -0.1
baz=93,SNR=11
Y15A Casa Rosa Ranc 92.78 55 ⇑P P 08 37 25.7 +0.3
baz=93,SNR=37

A05A Maple Falls 92.79 38 ⇑P P 08 37 24.9 -0.2
baz=93,SNR=7.6
T13A Saint George 92.83 51 ⇓P P 08 37 25.9 +0.3
baz=93,SNR=24
M10A I.L. Ranch, Tu 92.86 46 ⇑P P 08 37 26.0 +0.4
baz=93,SNR=20
R12A Pony Springs, 92.86 50 ⇑P P 08 37 26.1 +0.4
baz=93,SNR=20
V14A Boquillas Ranc 92.87 53 ⇓P P 08 37 26.4 +0.6
baz=93,SNR=17
O11A Cowboy Ranch, 92.87 48 ⇑P P 08 37 26.2 +0.5
baz=93
B06A Marblemount 92.91 39 ⇑P P 08 37 25.2 -0.4
baz=93
G08A Pilot Rock 92.94 42 ⇓P P 08 37 25.8 -0.1
baz=93,SNR=34
Q12A Willow Creek R 93.00 49 ⇓P P 08 37 26.4 +0.1
baz=93,SNR=13
COLD Coldfoot 93.04 15 *e*P **P 08 37 25.6 -0.2**
comp=Z,34nm,1.0s,mb5.7
COLD *e*pP pP 08 37 38.5 -0.6
X15A Humboldt 93.06 54 ⇑P P 08 37 27.2 +0.5
baz=93,SNR=31
HAWA Hanford 93.08 41 PFAKE 08 37 40.0 +14
HAWA LR LR
comp=Z,374nm,20.0s,MS4.8
S13A Holt Ranch, En 93.09 51 ⇓P P 08 37 27.2 +0.4
baz=93,SNR=20
N11A Elko Archery C 93.11 47 ⇓P P 08 37 26.7 -0.1
baz=93
217A Green Valley 93.11 57 ⇑P P 08 37 27.4 +0.4
baz=93,SNR=9.2
P12A McGill 93.12 49 ⇑P P 08 37 27.1 +0.2
baz=93,SNR=12
U14A Mt Trumbull 93.12 52 ⇑P P 08 37 27.4 +0.5
baz=93,SNR=24
I09A Lost Marbles R 93.13 44 ⇑P P 08 37 26.4 -0.4
baz=93,SNR=13
L10A Juniper Basin 93.14 46 ⇑P P 08 37 26.9 0.0
baz=93,SNR=18
K10A MacKenzie Ranc 93.18 45 ⇑P P 08 37 27.0 0.0
baz=93,SNR=22
Z16A Peralta Trail, 93.24 56 ⇑P P 08 37 27.8 +0.3
baz=93,SNR=9.6
R13A O'Grain Ranch, 93.26 50 ⇑P P 08 37 28.0 +0.5
baz=93,SNR=8.2
W15A Williams 93.31 54 ⇑P P 08 37 28.9 +1.0
baz=94
M11A Holland Ranch, 93.33 47 ⇓P P 08 37 28.3 +0.5
baz=94,SNR=7.0
TUC Tucson 93.34 57 PFAKE 08 37 40.0 +12
TUC LR LR
comp=Z,330nm,19.0s,MS4.8
Y16A Circle Bar Ran 93.41 55 ⇓P P 08 37 28.7 +0.4
baz=94,SNR=28
E08A Dider Farm, El 93.42 41 ⇓P P 08 37 28.0 -0.1
baz=94,SNR=6.2
ELK Elko 93.42 48 *e*P **P 08 37 28.5 +0.3**
ELK pmax pmax
comp=Z,9.0nm,0.8s
ELK MLR MLR
comp=Z,438nm,19.0s
ELK Elko 93.42 48 *e*P **P 08 37 28.5 +0.3**
comp=Z,8.8nm,0.8s,mb5.2
ELK LR LR
comp=Z,438nm,19.0s,MS4.9
T14A Hurricane 93.45 52 ⇓P P 08 37 28.7 +0.2
baz=94,SNR=9.7
117A Oracle 93.47 57 ⇑P P 08 37 29.1 +0.4
baz=94,SNR=9.0
H09A Durkee 93.48 43 ⇑P P 08 37 28.2 -0.2
baz=94,SNR=8.2
ARUT Antelope Range 93.48 51 *e*P **P 08 37 29.1 +0.5**
ARUT pmax pmax
comp=Z,41nm,1.6s,mb5.6
ARUT Antelope Range 93.48 51 *e*P **P 08 37 29.1 +0.5**
comp=Z,42nm,1.6s,mb5.6
J10A Berg Farm, Mel 93.53 45 ⇑P P 08 37 28.6 0.0
baz=94
Q13A Wheeler Ranch, 93.54 50 ⇓P P 08 37 28.9 +0.1
baz=94,SNR=24
O12A Currie 93.56 48 ⇑P P 08 37 29.2 +0.3
baz=94
N12A Clover Valley, 93.60 48 ⇑P P 08 37 29.1 +0.1
baz=94,SNR=9.8
318A Bisbee 93.63 58 ⇑P P 08 37 29.9 +0.5
baz=94,SNR=12
V15A Kaibab Nationa 93.64 53 ⇓P P 08 37 30.0 +0.7
baz=94,SNR=16
X16A Lo Mia Camp, P 93.64 55 ⇑P P 08 37 29.9 +0.5
baz=94,SNR=24
L11A Cat Creek Ranc 93.67 46 ⇑P P 08 37 29.6 +0.3
baz=94,SNR=17
S14A Cedar City 93.67 51 ⇓P P 08 37 29.9 +0.5
baz=94
G09A Cove 93.68 43 ⇓P P 08 37 29.0 -0.3
baz=94,SNR=11
EGAK Eagle 93.68 19 PFAKE 08 37 40.0 +11
EGAK LR LR
comp=Z,312nm,19.0s,MS4.8
K11A Parker Ranch, 93.73 46 ⇑P P 08 37 30.0 +0.4
baz=94,SNR=12
P13A Bates Ranch, G 93.75 49 ⇓P P 08 37 30.0 +0.3
baz=94,SNR=19
D08A Wollman Farm, 93.76 41 ⇑P P 08 37 29.6 0.0
baz=94
DLBC Dease Lake 93.77 28 P P 08 37 29.3 0.0
comp=Z,30nm,1.0s,mb5.7,baz=230,slow=5.7,SNR=30
I10A Payette 93.79 44 ⇑P P 08 37 30.0 +0.2
baz=94,SNR=8.4
U15A North Rim 93.79 53 ⇑P P 08 37 30.6 +0.6
baz=94,SNR=23
218A Dragoon 93.79 57 ⇓P P 08 37 30.5 +0.3
baz=94,SNR=15
Y17A Roosevelt 93.82 55 ⇓P P 08 37 30.4 +0.2
baz=94,SNR=9.3
W16A Flagstaff 93.84 54 ⇓P P 08 37 30.5 +0.2
baz=94
M12A Wells 93.92 47 ⇓P P 08 37 30.5 0.0
baz=94,SNR=6.8
Z17A San Carlos Hig 93.96 56 ⇓P P 08 37 31.0 +0.2
baz=94
E09A Wood Farm, Sta 93.99 41 ⇓P P 08 37 30.6 0.0
baz=94
H10A Noah's Angus R 94.04 44 ⇓P P 08 37 30.2 -0.8
baz=94,SNR=16
O13A Hicks Ranch, I 94.04 49 ⇑P P 08 37 31.3 +0.2
baz=94
Q14A Sevier Lake (B 94.08 50 ⇑P P 08 37 31.4 +0.1
baz=94,SNR=16
X17A Forest Lakes 94.10 55 ⇑P P 08 37 32.2 +0.7
baz=94,SNR=10
118A Homack Ranch, 94.10 57 ⇓P P 08 37 31.9 +0.4
baz=94,SNR=13
G10A Bishop Farm, J 94.10 43 ⇓P P 08 37 30.8 -0.4
baz=94,SNR=23
WUAZ Wupatki 94.12 54 ⇓P P 08 37 31.8 +0.3
baz=94,SNR=9.9
WUAZ Wupatki 94.12 54 PFAKE 08 37 40.0 +8.5
WUAZ LR LR
comp=Z,299nm,20.0s,MS4.8
MFID Camas Ranch 94.14 45 ⇑P P 08 37 31.2 -0.2
baz=94,SNR=7.6
L12A House Creek Ra 94.15 46 ⇓P P 08 37 31.8 +0.2
baz=94,SNR=17
319A Douglas 94.17 58 ⇑P P 08 37 32.3 +0.4
baz=94,SNR=14
S15A Panguitch 94.22 51 ⇓P P 08 37 32.3 +0.3
baz=94
I11A Placerville 94.26 45 ⇑P P 08 37 31.7 -0.3
baz=94,SNR=23
F10A Beach Ranch, E 94.33 42 ⇓P P 08 37 31.6 -0.7
baz=94,SNR=13
M13A Montello 94.41 47 ⇑P P 08 37 32.7 -0.1
baz=95,SNR=17
219A White Tail Can 94.42 58 ⇓P P 08 37 33.2 +0.2
baz=95,SNR=13
K12A Draper Farm, C 94.43 46 ⇑P P 08 37 32.7 -0.1
baz=95,SNR=8.7
P14A Drum Mountains 94.47 49 ⇑P P 08 37 33.0 -0.1
baz=95,SNR=9.4
Y18A Canyon Day Jun 94.48 56 ⇑P P 08 37 33.7 +0.4
baz=95,SNR=17
R15A Junction 94.50 51 ⇑P P 08 37 33.5 +0.3
baz=95
J12A Stokes Ranch, 94.56 45 ⇑P P 08 37 33.3 0.0
baz=95,SNR=11
H11A Donnelly 94.56 44 ⇓P P 08 37 32.9 -0.4

baz=95,SNR=24
V17A Tonalea, Kykot 94.59 54 ⇓P P 08 37 33.8 +0.1
baz=95,SNR=13
MVU Marysvale 94.66 51 PFAKE 08 37 50.0 +16
MVU LR LR
comp=Z,394nm,20.0s,MS4.9
119A Ashpeak Ranch, 94.67 57 ⇑P P 08 37 34.1 -0.1
baz=95
G11A Walters Elk Ra 94.69 43 ⇑P P 08 37 33.1 -0.9
baz=95,SNR=28
Q15A Fillmore 94.73 50 ⇓P P 08 37 34.2 0.0
baz=95,SNR=11
320A Kipp Ranch, An 94.76 58 ⇑P P 08 37 35.2 +0.6
baz=95,SNR=14
I12A Atlanta 94.76 45 ⇓P P 08 37 34.4 +0.2
baz=95
S16A Weppner Ranch, 94.80 52 ⇑P P 08 37 34.7 +0.1
baz=95
X18A Snowflake 94.83 55 ⇑P P 08 37 35.0 +0.2
baz=95,SNR=6.5
L13A Double Diamond 94.86 47 ⇑P P 08 37 35.0 +0.3
baz=95
N14A Grayback Hills 94.89 48 ⇑P P 08 37 34.6 -0.3
baz=95
DUG Dugway 94.89 49 ⇓P P 08 37 34.7 -0.3
baz=95,SNR=6.1
DUG Dugway 94.89 49 PFAKE 08 37 50.0 +15
DUG LR LR
comp=Z,437nm,19.0s,MS4.9
220A Playas Peak, P 94.97 58 ⇓P P 08 37 35.2 -0.3
baz=95
K13A Stover Farm, H 94.99 46 ⇓P P 08 37 35.6 +0.3
baz=95,SNR=7.3
P15A Leamington 95.02 50 ⇓P P 08 37 35.9 +0.3
baz=95
BGU Big Grassy Mou 95.03 48 *e*P **P 08 37 35.3 -0.3**
comp=Z,5.6nm,1.2s,mb4.9
M14A Sheep Mountain 95.03 48 ⇑P P 08 37 35.4 -0.2
baz=95,SNR=14
R16A Teasdale 95.10 51 ⇑P P 08 37 36.6 +0.6
baz=95,SNR=14
T17A Navajo Res., N 95.11 52 ⇑P P 08 37 36.3 +0.2
baz=95,SNR=9.4
120A U Bar Ranch, L 95.11 57 ⇓P P 08 37 35.9 -0.3
baz=95
HLID Hailey 95.14 45 ⇓P P 08 37 36.0 0.0
baz=95,SNR=12
HLID Hailey 95.14 45 PFAKE 08 37 50.0 +14
HLID LR LR
comp=Z,327nm,19.0s,MS4.8
Y19A Nutrioso 95.15 56 ⇑P P 08 37 36.9 +0.6
baz=95,SNR=11
O15A The Old Anders 95.17 49 ⇓P P 08 37 36.4 +0.2
baz=95
J13A Cove Ranch, Pi 95.23 46 ⇓P P 08 37 36.4 0.0
baz=95,SNR=9.0
H12A Diamond D Ranc 95.25 44 ⇓P P 08 37 36.0 -0.5
baz=95,SNR=18
X19A St. Johns 95.29 55 ⇑P P 08 37 37.1 +0.1
baz=96,SNR=7.6
L14A Malta 95.32 47 ⇑P P 08 37 36.7 -0.2
baz=96,SNR=12
S17A Black Ridge (B 95.35 52 ⇑P P 08 37 36.7 -0.5
baz=96,SNR=9.9
Z20A Nine Sixteen R 95.35 57 ⇓P P 08 37 36.3 -1.0
baz=96
N15A Stansbury Isla 95.37 48 ⇑P P 08 37 36.8 -0.4
baz=96,SNR=8.3
NEW Newport 95.38 40 *e*P **P 08 37 35.7 -1.3**
NEW pmax pmax
comp=Z,4.0nm,0.9s
NEW MLR MLR
comp=Z,341nm,19.0s
NEW Newport 95.38 40 *e*P **P 08 37 35.7 -1.3**
comp=Z,3.6nm,0.9s,mb4.8
NEW LR LR
comp=Z,341nm,19.0s,MS4.8
I13A Wildhorse Cree 95.48 45 ⇑P P 08 37 37.5 -0.1
baz=96,SNR=11
F12A Elk City 95.49 43 ⇓P P 08 37 36.7 -0.9
baz=96,SNR=22
E12A Beaver Dam Sad 95.56 42 ⇓P P 08 37 37.4 -0.5
baz=96
K14A Jones Ranch, D 95.56 47 ⇓P P 08 37 37.8 -0.1
baz=96,SNR=12
Q16A Castle Valley 95.57 51 ⇓P P 08 37 37.7 -0.4
baz=96
M15A Larsen Ranch, 95.64 48 ⇑P P 08 37 38.6 +0.2
baz=96
J14A Carey 95.64 46 ⇓P P 08 37 38.4 +0.1
baz=96
H13A Challis 95.65 44 ⇑P P 08 37 38.1 -0.2
baz=96,SNR=9.2
R17A Hanksville Air 95.71 51 ⇑P P 08 37 38.7 -0.1
baz=96,SNR=11
C11A Tepee Creek (N 95.73 41 ⇑P P 08 37 38.3 -0.3
baz=96
121A Cookes Peak, D 95.78 58 ⇑P P 08 37 38.6 -0.7
baz=96
Y20A Horse Springs, 95.81 56 ⇑P P 08 37 39.4 +0.1
baz=96
Q16A Springville 95.82 49 ⇑P P 08 37 39.1 -0.1
baz=96
T18A Mexican Hat 95.85 53 ⇓P P 08 37 39.4 0.0
baz=96,SNR=17
G13A Cobalt 95.88 44 ⇑P P 08 37 38.9 -0.4
baz=96,SNR=8.5
L15A Malad City 95.89 47 ⇑P P 08 37 39.0 -0.5
baz=96,SNR=5.6
I14A Mackay 95.92 45 ⇑P P 08 37 39.5 -0.1
baz=96,SNR=15
X20A Quemado 95.94 55 ⇑P P 08 37 39.2 -0.8
baz=96
D12A Red Ives Fores 95.96 42 ⇓P P 08 37 39.2 -0.5
baz=96
U19A Dine' College, 96.04 54 ⇓P P 08 37 40.2 -0.1
baz=96,SNR=8.0
K15A Arbon 96.06 47 ⇑P P 08 37 39.6 -0.6
baz=96
F13A Darby 96.09 43 ⇑P P 08 37 39.4 -0.9
baz=96,SNR=13
SRU San Rafael 96.11 51 ⇓P P 08 37 40.1 -0.5
baz=96,SNR=12
N16A Rees Ranch, Co 96.12 49 ⇓P P 08 37 40.4 -0.2
baz=96
Z21A St. Cloud Mine 96.14 57 ⇑P P 08 37 40.9 0.0
baz=96
W20A Ramah 96.15 55 ⇑P P 08 37 41.1 +0.2
baz=96,SNR=6.3
H14A Leadore 96.25 45 ⇓P P 08 37 40.9 -0.2
baz=96,SNR=13
R18A Canyonlands Na 96.30 51 ⇑P P 08 37 40.9 -0.5
baz=96,SNR=8.7
TIXI Tiksi 96.30 348 *e*P **P 08 37 39.0 -1.7**
TIXI MLR MLR
comp=Z,356nm,19.0s,MS4.9
HWUT Hardware Ranch 96.31 48 PFAKE 08 37 50.0 +8.6
HWUT LR LR
comp=Z,353nm,19.0s,MS4.9
O17A Robinson Place 96.36 49 ⇓P P 08 37 42.0 +0.4
baz=96,SNR=22
T19A Beclabito 96.37 53 ⇑P P 08 37 41.8 0.0
baz=96
Q18A Rafter H Ranch 96.39 51 ⇓P P 08 37 41.2 -0.6
baz=97,SNR=7.3
Y21A Point of Rocks 96.39 56 ⇑P P 08 37 41.5 -0.5
baz=96
J15A Blackfoot 96.40 46 ⇑P P 08 37 42.0 +0.2
baz=97,SNR=10
E13A Victor 96.44 43 ⇓P P 08 37 42.4 +0.5
baz=97,SNR=5.8
X21A Alamocita Cree 96.46 56 ⇓P P 08 37 41.7 -0.6
baz=97
P18A Preston Nutter 96.50 50 ⇓P P 08 37 42.1 -0.3
baz=97
D13A Huson 96.53 42 ⇑P P 08 37 42.0 -0.3
baz=97
L16A Fish Haven 96.55 48 ⇑P P 08 37 42.2 -0.3
baz=97
I15A Monteview 96.59 45 ⇓P P 08 37 43.0 +0.4
baz=97
S19A Harvey Farm, M 96.62 52 ⇓P P 08 37 42.6 -0.3
baz=97,SNR=7.1
MCMT McKenzie Canyo 96.67 45 *e*P **P 08 37 43.0 0.0**
comp=Z,3.3nm,1.0s,mb4.7
Z22A Elephant Butte 96.68 57 ⇑P P 08 37 43.0 -0.3
baz=97
R19A Curley Farm, L 96.72 52 ⇑P P 08 37 43.4 0.0

baz=97,SNR=6.6
H15A Lima 96.73 45 ⇑P **P 08 37 43.1 -0.1**
baz=97,SNR=13
K16A Soda Springs 96.75 47 ⇑P **P 08 37 43.2 -0.2**
baz=97,SNR=7.5
MSO Missoula 96.75 42 PFAKE 08 37 50.0 +6.7
MSO LR LR
comp=Z,270nm,19.0s,MS4.8
E14A Clinton 96.88 43 ⇑P **P 08 37 43.3 -0.5**
baz=97
MVCO Mesa Verde 96.90 53 PFAKE 08 38 00.0 +16
MVCO LR LR
comp=Z,322nm,19.0s,MS4.8
O18A Roosevelt 96.90 50 ⇑P **P 08 37 44.4 +0.3**
baz=97
J16A Bone 96.91 46 ⇓P **P 08 37 44.0 0.0**
baz=97,SNR=17
JTMT Jette 96.91 41 *e*P **P 08 37 42.5 -1.5**
Y22A Socorro 96.92 56 ⇓P **P 08 37 44.0 -0.3**
baz=97
Q19A Hogan Spring (96.96 51 ⇑P **P 08 37 44.6 +0.1**
baz=97
L17A Cokeville 96.97 48 ⇓P **P 08 37 43.3 -1.0**
baz=97
G15A Dillon 97.04 44 ⇑P **P 08 37 44.1 -0.5**
baz=97,SNR=9.7
B13A Whitefish 97.04 41 ⇓P **P 08 37 43.7 -0.8**
baz=97
AHID Auburn Hatcher 97.06 47 PFAKE 08 38 00.0 +15
AHID LR LR
comp=Z,281nm,19.0s,MS4.8
D14A Greenough 97.13 42 ⇓P **P 08 37 43.8 -1.2**
baz=97
PV01 Paradox Valley 97.18 52 *e*P **P 08 37 45.5 +0.1**
comp=Z,225nm,0.8s,mb6.7
I16A Newdale 97.22 46 ⇓P **P 08 37 45.3 -0.1**
baz=97
S20A Disappointment 97.22 52 ⇓P **P 08 37 45.3 -0.4**
baz=97
324A Moseley Ranch, 97.23 59 ⇓P **P 08 37 45.1 -0.8**
baz=97
BNM Barren Site 97.25 56 *e*P **P 08 37 45.2 -0.6**
comp=Z,8.3nm,1.5s,mb4.9
U21A Nageezi 97.25 54 ⇓P **P 08 37 45.7 -0.1**
baz=97,SNR=11
M18A Lyman 97.28 49 ⇓P **P 08 37 45.6 -0.2**
baz=98
F15A Butte 97.30 44 ⇓P **P 08 37 45.1 -0.6**
baz=98,SNR=7.7
A13A Flathead Natio 97.30 40 ⇑P **P 08 37 45.9 +0.2**
baz=98
MNTX Cornudas Mount 97.40 59 *e*P **P 08 37 46.0 -0.6**
comp=Z,6.6nm,1.3s,mb4.9
MNTX LR LR
comp=Z,262nm,19.0s,MS4.7
425A Indio Mountain 97.41 60 ⇑P **P 08 37 45.9 -0.8**
baz=98
P19A Cripple Cowboy 97.41 51 ⇓P **P 08 37 46.0 -0.5**
baz=98
E15A Deer Lodge 97.42 43 ⇓P **P 08 37 45.6 -0.7**
baz=98
G16A Moss Hill, Enn 97.51 44 ⇓P **P 08 37 46.6 -0.1**
baz=98
O19A Miners Draw (B 97.55 50 ⇑P **P 08 37 46.7 -0.3**
baz=98,SNR=5.1
J17A Brown Place, J 97.55 47 ⇑P **P 08 37 46.8 -0.2**
baz=98
PLCA Paso Flores 97.58 139 PKKPbc PKKPbc 08 54 24.2 0.0
comp=Z,2.8nm,0.9s,baz=239,slow=5.0,SNR=4.8
S21A Coal Bank Pass 97.59 53 ⇓P **P 08 37 46.7 -0.6**
baz=98
325A Bean Ranch, Si 97.62 59 ⇓P **P 08 37 46.8 -0.8**
baz=98
Y23A Lovelace Mesa, 97.62 57 ⇓P **P 08 37 46.9 -0.7**
baz=98
ANMO Albuquerque 97.66 56 *e*P **P 08 37 46.9 -0.8**
ANMO pmax pmax
comp=Z,2.0nm,0.8s
ANMO MLR MLR
comp=Z,238nm,19.0s
ANMO Albuquerque 97.66 56 *e*P **P 08 37 46.9 -0.8**
comp=Z,1.6nm,0.8s,mb4.6
ANMO LR LR
comp=Z,238nm,19.0s,MS4.7
Q20A Ridgley Place, 97.67 51 ⇓P **P 08 37 47.6 0.0**
baz=98
124A Stringfield Ra 97.68 58 ⇑P **P 08 37 47.6 -0.2**
baz=98
H16A Russell Place, 97.68 45 ⇑P **P 08 37 47.4 -0.1**
baz=98
626A Big Bend Ranch 97.69 61 ⇑P **P 08 37 47.6 -0.3**
baz=98
D15A Lincoln 97.73 43 ⇓P **P 08 37 47.1 -0.6**
baz=98
K18A Toltan Ranch, 97.74 47 ⇓P **P 08 37 47.6 -0.2**
baz=98
X23A Hourglass Bar 97.74 56 ⇓P **P 08 37 48.1 0.0**
baz=98
B14A Marquette Ranc 97.77 41 ⇓P **P 08 37 47.3 -0.5**
baz=98
BOZ Bozeman (W) 97.78 44 ⇓P **P 08 37 47.5 -0.4**
baz=98,SNR=7.3
BOZ Bozeman (W) 97.78 44 PFAKE 08 38 00.0 +12
BOZ LR LR
comp=Z,416nm,19.0s,MS4.9
P20A De Beque 97.79 51 ⇑P **P 08 37 47.6 -0.5**
baz=98
526A Mary Lane Ranc 97.89 61 ⇓P **P 08 37 48.5 -0.3**
baz=98
A14A Double T Ranch 97.91 41 ⇑P **P 08 37 47.9 -0.5**
baz=98
M19A Rock Springs 97.95 49 ⇓P **P 08 37 48.7 -0.1**
baz=98
C15A Salmond Ranch, 97.96 42 ⇓P **P 08 37 48.0 -0.7**
baz=98,SNR=17
J18A Kendall Valley 97.96 47 ⇑P **P 08 37 48.6 -0.3**
baz=98,SNR=6.4
225A Deer Hill, Car 97.98 59 ⇓P **P 08 37 49.1 -0.1**
baz=98
TXAR Lajitas Array 98.00 62 P **P 08 37 49.7 +0.3**
comp=Z,2.0nm,0.9s,mb4.7,baz=211,slow=4.4,SNR=12
TXAR PP PP 08 41 47.6 -1.3
comp=Z,0.4nm,0.9s,baz=235,slow=4.4,SNR=3.8
TXAR PKKPbc PKKPbc 08 54 23.9 +0.8
comp=Z,0.6nm,0.9s,baz=120,slow=7.5,SNR=4.6
TXAR LR LR 09 17 42.2
comp=Z,372nm,18.5s,MS4.9,baz=300,slow=33
TXAR Lajitas Array 98.00 62 P **P 08 37 49.7 +0.3**
TXAR 08 41 47.6
TXAR Lajitas Array 98.00 62 P **P 08 37 49.7 +0.3**
TXAR PP PP 08 41 47.6 -1.3
TXAR PKKPbc PKKPbc 08 54 23.9 +0.8
TXAR LR LR 09 17 42.2
R21A Cimarron 98.01 52 ⇑P **P 08 37 49.0 -0.2**
baz=98
L19A Farson 98.02 48 ⇑P **P 08 37 48.9 -0.3**
baz=98,SNR=8.5
WMQ Urumqi 98.03 314 P **P 08 37 49.8 +0.7**
WMQ PP PP 08 41 52.1 +3.3
WMQ SKS 08 48 21.0
WMQ *e*S S 08 49 07.9 -4.7
WMQ SS SS 08 55 54.9 -1.1
WMQ pmax pmax
comp=Z,21nm,1.0s,mb5.6
WMQ pmax pmax
comp=Z,200nm,3.7s
WMQ LR LR
comp=N,660nm,26.0s,MS5.1
WMQ LR LR
comp=E,340nm,23.6s,MS5.1
WMQ LR LR
comp=Z,260nm,21.0s,MS4.7
E16A East Helena 98.08 43 ⇓P **P 08 37 48.7 -0.6**
baz=98,SNR=6.3
Y24A Capitan 98.11 57 ⇓P **P 08 37 48.9 -0.8**
baz=98
O20A White River Ci 98.12 50 ⇑P **P 08 37 49.3 -0.3**
baz=98
BW06 Boulder Array 98.12 47 ⇓P **P 08 37 49.0 -0.6**
baz=98
BW06 Boulder Array 98.12 47 PFAKE 08 38 00.0 +10
BW06 LR LR
comp=Z,271nm,21.0s,MS4.7
PDAR Pinedale Array 98.12 47 P **P 08 37 48.8 -0.8**
comp=Z,1.5nm,0.7s,mb4.6,baz=201,slow=2.5,SNR=9.5
PDAR PP PP 08 41 46.9 -2.7
comp=Z,0.4nm,0.9s,baz=270,slow=7.4,SNR=2.2
PDAR PKKPbc PKKPbc 08 54 25.3 +2.0
comp=Z,0.2nm,0.6s,baz=145,slow=16,SNR=2.4
PDAR LR LR 09 20 43.9
comp=Z,226nm,18.2s,MS4.7,baz=246,slow=34
426A McDonald Obser 98.14 60 ⇓P **P 08 37 49.1 -0.8**
baz=98
Q21A Lamborn Mesa, 98.15 52 ⇑P **P 08 37 48.9 -0.9**
baz=98,SNR=5.1
B15A Bradely Ranch, 98.19 41 ⇑P **P 08 37 48.7 -1.0**
baz=98,SNR=11
LKWY Lake 98.19 45 PFAKE 08 38 00.0 +10
LKWY LR LR
comp=Z,449nm,19.0s,MS5.0
627A Terlingua Ranc 98.27 62 ⇓P **P 08 37 50.0 -0.6**
baz=98
INK Inuvik 98.31 19 P **P 08 37 48.9 -0.9**
comp=Z,18nm,1.1s,mb5.5,baz=225,slow=6.4,SNR=20
527A Woodward Ranch 98.31 61 ⇓P **P 08 37 50.4 -0.4**
baz=98
S22A 4UR Ranch, Cre 98.33 53 ⇓P **P 08 37 50.7 +0.1**
baz=98
U23A El Rito 98.33 54 ⇑P **P 08 37 50.4 -0.3**
baz=98
A15A Johnson Ranch, 98.34 41 ⇓P **P 08 37 49.8 -0.6**
baz=98,SNR=8.4
D16A Dana Ranch, Ca 98.35 43 ⇑P **P 08 37 50.0 -0.4**
baz=98
N20A Spence Gulch, 98.35 50 ⇑P **P 08 37 50.6 0.0**
baz=98
C16A Fuhringer Ranc 98.51 42 ⇑P **P 08 37 50.4 -0.8**
baz=99,SNR=8.8
F17A Fitzpatrick Pl 98.51 44 ⇓P **P 08 37 50.7 -0.5**
baz=99
226A Malaga, Loving 98.55 59 ⇓P **P 08 37 51.3 -0.5**
baz=99
R22A Saguache, Gunn 98.55 52 ⇑P **P 08 37 51.7 +0.1**
baz=99
W24A Lazy 6 Ranch, 98.56 56 ⇑P **P 08 37 51.0 -0.7**
baz=99
M20A Sweetwater, Wa 98.63 49 ⇓P **P 08 37 51.9 0.0**
baz=99
K19A Absolon Red Bu 98.63 48 ⇑P **P 08 37 50.9 -0.9**
baz=99
628A Black Gap, Mar 98.69 62 ⇓P **P 08 37 51.2 -1.3**
baz=99
Y25A Mesa, Roswell 98.69 57 ⇑P **P 08 37 51.1 -1.3**
baz=99
L20A Wamsutter 98.70 48 ⇑P **P 08 37 51.5 -0.6**
baz=99
427A Hayter Ranch, 98.71 60 ⇓P **P 08 37 52.2 -0.4**
baz=99
B16A M & M Farms, S 98.76 42 ⇓P **P 08 37 51.9 -0.4**
baz=99
K20A Yellowstone Ra 98.92 48 ⇑P **P 08 37 52.5 -0.6**
baz=99
D17A Six Diamond Ra 98.94 43 ⇑P **P 08 37 52.9 -0.2**
baz=99,SNR=8.1
Z26A Caprock 99.04 58 ⇑P **P 08 37 53.3 -0.6**
baz=99
C17A Wharram Farm, 99.06 42 ⇑P **P 08 37 53.2 -0.5**
baz=99,SNR=6.4
F18A Big Timber 99.12 44 ⇓P **P 08 37 53.4 -0.6**
baz=99
RLMT Red Lodge 99.15 45 ⇑P **P 08 37 53.9 -0.2**
baz=99
RLMT Red Lodge 99.15 45 PFAKE 08 38 00.0 +5.9
RLMT LR LR
comp=Z,536nm,21.0s,MS5.0
E18A Harlowton 99.23 44 ⇓P **P 08 37 54.4 0.0**
baz=99
M21A Separation Pea 99.25 49 ⇑P **P 08 37 54.5 -0.2**
baz=99
B17A L&G Farms, Che 99.28 42 ⇑P **P 08 37 53.9 -0.7**
baz=100,SNR=12
W25A X Bar L Ranch, 99.29 56 ⇑P **P 08 37 54.4 -0.6**
baz=99
SDCO Great Sand Dun 99.32 53 PFAKE 08 38 10.0 +15
SDCO LR LR
comp=Z,302nm,20.0s,MS4.8
O22A Kremmling 99.35 51 ⇑P **P 08 37 54.7 -0.4**
baz=100
L21A Rawlins 99.36 49 ⇓P **P 08 37 54.5 -0.7**
baz=100
V25A Rancho No Teng 99.37 55 ⇑P **P 08 37 54.3 -1.1**
baz=100
D18A Linhart Farms, 99.52 43 ⇓P **P 08 37 55.1 -0.6**
baz=100
N22A Wattenberg Ran 99.63 50 ⇓P Pdif 08 37 56.5 +0.2
baz=100
EGMT Eagleton 99.84 42 ⇓P Pdif 08 37 56.8 -0.4
baz=100
EGMT Eagleton 99.84 42 PFAKE 08 38 10.0 +13
EGMT LR LR
comp=Z,404nm,19.0s,MS5.0
Y27A Causey 99.88 58 ⇓P Pdif 08 37 56.9 -0.5
baz=100
ISCO Idaho Springs 99.91 51 PFAKE 08 38 10.0 +12
ISCO LR LR
comp=Z,332nm,19.0s,MS4.9
B18A Beardsley Farm 99.95 42 ⇑P Pdif 08 37 56.7 -0.9
baz=100,SNR=14
A18A Metzger Ranch, 100.09 41 ⇓P Pdif 08 37 57.2 -1.2
baz=100,SNR=5.9
S25A Robets Cordova 100.10 54 ⇑P Pdif 08 37 57.2 -1.1
baz=100
AMTX Amarillo 101.35 57 PFAKE 08 38 20.0 +16
AMTX LR LR
comp=Z,383nm,20.0s,MS4.9
JCT Junction City 101.54 62 PFAKE 08 38 20.0 +15
JCT LR LR
comp=Z,346nm,19.0s,MS4.9
LAO LASA Array 101.67 44 PFAKE 08 38 20.0 +15
LAO LR LR
comp=Z,450nm,19.0s,MS5.0
KVTX Kingsville 102.27 65 PFAKE 08 38 20.0 +12
KVTX LR LR
comp=Z,365nm,19.0s,MS4.9
YKA Yellowknife Ar 102.39 28 P Pdif 08 38 07.4 -1.2
comp=Z,3.2nm,0.7s,baz=254,slow=5.0,SNR=8.6
YKA Yellowknife Ar 102.39 28 P Pdif 08 38 07.4 -1.2
MK31 Makanchi Array 102.61 315 *e*P Pdif 08 38 09.9 +0.4
MKAR Makanchi Array 102.61 315 P Pdif 08 38 08.9 -0.6
comp=Z,4.4nm,0.8s,baz=101,slow=6.3,SNR=36
MKAR PP PP 08 42 22.4 -1.0
comp=Z,2.5nm,1.0s,baz=104,slow=10,SNR=5.7
MKAR PKKPbc PKKPbc 08 54 07.9 -2.6
comp=Z,1.3nm,0.8s,baz=277,slow=4.2,SNR=7.8
MKAR Makanchi Array 102.61 315 P Pdif 08 38 08.9 -0.6
MKAR 08 42 22.5
OGNE Ogallala 102.86 51 PFAKE 08 38 20.0 +9.4
OGNE LR LR
comp=Z,298nm,19.0s,MS4.8
ZAA0 Zalesovo Array 103.18 323 *e*Pdif Pdif 08 38 11.5 -0.5
ZALV Zalesovo Beam 103.18 323 Pdiff Pdif 08 38 11.3 -0.7
comp=Z,4.2nm,0.8s,baz=108,slow=4.8,SNR=10
ZALV Zalesovo Beam 103.18 323 Pdif Pdif 08 38 11.3 -0.7
DGMT Dagmar 103.50 43 PFAKE 08 38 20.0 +6.5
DGMT LR LR
comp=Z,543nm,19.0s,MS5.1
WMOK Wichita Mounta 103.60 58 PFAKE 08 38 30.0 +16
WMOK LR LR
comp=Z,226nm,19.0s,MS4.7
CBKS Cedar Bluff 103.97 54 PFAKE 08 38 30.0 +14
CBKS LR LR
comp=Z,230nm,20.0s,MS4.7
LCO Las Campanas 104.18 129 PFAKE 08 38 30.0 +13
LCO LR LR
comp=Z,302nm,19.0s,MS4.8
CFAA Coronel Fontan 104.45 132 Pdiff Pdif 08 38 17.4 -0.3
comp=Z,0.2nm,0.2s,baz=237,slow=19,SNR=19
CFAA Coronel Fontan 104.45 132 Pdif Pdif 08 38 17.4 -0.3
HKT Hockley 104.68 63 PFAKE 08 38 30.0 +11
HKT LR LR
comp=Z,335nm,19.0s,MS4.9
KSH Kashi 105.06 307 *e*PKPbc PKiKP 08 42 37.6 +2.5
KSH sPKP 08 43 15.2
KSH PP PP 08 43 20.3 +38
KSH PKS 08 46 12.4
KSH SKS 08 49 39.2
KSH SKKS SKKSac 08 50 03.4 +21
KSH SS SS 08 58 38.6 +65
KSH AMB AMB
comp=Z,87nm,4.8s
KSH LR LR
comp=N,340nm,13.4s,MS5.2
KSH LR LR
comp=E,190nm,10.5s,MS5.2
KSH LR LR
comp=Z,260nm,12.0s,MS5.0
NIL Nilore 105.68 300 PFAKE 08 42 50.0 +14
NIL LR LR
comp=Z,107nm,21.0s,MS4.4
KURK Kurchatov 105.98 319 Pdiff Pdif 08 38 23.4 -1.1
comp=Z,1.4nm,0.8s,baz=103,slow=3.6,SNR=6.8
KURK PKiKP PKiKP 08 42 36.7 +0.3
comp=Z,1.8nm,0.8s,baz=107,slow=1.6,SNR=7.1
KURK Kurchatov 105.98 319 Pdif Pdif 08 38 23.4 -1.1
KURK PKPdf PKiKP 08 42 36.7 +0.3
KURK LR LR
comp=Z,236nm,19.0s,MS4.8
NATX Nacogdoches 106.13 62 PFAKE 08 42 50.0 +13
NATX LR LR
comp=Z,335nm,19.0s,MS4.9
KSU1 Kansas State U 106.40 54 PFAKE 08 42 50.0 +12
KSU1 LR LR
comp=Z,346nm,19.0s,MS4.9
FFC Flin Flon 106.43 37 PFAKE 08 42 50.0 +13
FFC LR LR
comp=Z,427nm,19.0s,MS5.0
UCH Uchtor 106.79 309 PFAKE 08 42 50.0 +12
UCH LR LR
comp=Z,40nm,22.0s,MS3.9
AAK Ala-Archa 106.90 310 PKiKP PKiKP 08 42 36.9 -1.4
comp=Z,1.1nm,0.3s,baz=1.9,slow=21,SNR=3.0
AAK Ala-Archa 106.90 310 PKPdf PKiKP 08 42 36.9 -1.4
AAK LR LR
comp=Z,327nm,20.0s,MS4.9
AML Almayashu 107.36 309 *e*PKPdf PKiKP 08 42 39.9 +0.6
AML LR LR
comp=Z,165nm,20.0s,MS4.6
EKS2 Erkin-Say 107.42 310 *e*PKPdf PKiKP 08 42 39.7 +0.3
EKS2 LR LR
comp=Z,319nm,20.0s,MS4.9
ECSD EROS Data Cent 107.45 49 PFAKE 08 42 50.0 +11
ECSD LR LR
comp=Z,368nm,21.0s,MS4.9
MIAR Mount Ida 107.70 59 PFAKE 08 42 50.0 +10
MIAR LR LR
comp=Z,299nm,20.0s,MS4.8
TGUH Tegucigalpa,Un 107.77 81 PFAKE 08 42 50.0 +9.2
TGUH LR LR
comp=Z,209nm,19.0s,MS4.7
TEIG Tepich 108.64 75 PFAKE 08 42 50.0 +7.7
TEIG LR LR
comp=Z,232nm,20.0s,MS4.7
JTS JuntasAbangare 108.76 86 PFAKE 08 42 50.0 +7.3
JTS LR LR
comp=Z,248nm,20.0s,MS4.8
AGMN Agassiz Nation 108.87 45 PFAKE 08 42 50.0 +8.1
AGMN LR LR
comp=Z,404nm,21.0s,MS5.0
ULM Lac du Bonnet 109.20 43 PFAKE 08 42 50.0 +7.6
ULM LR LR
comp=Z,520nm,20.0s,MS5.1
KBL Kabul 109.29 300 *e*PKPdf PKiKP 08 42 43.6 +0.5
SCIA State Center 109.53 52 PFAKE 08 42 50.0 +6.7
SCIA LR LR
comp=Z,365nm,19.0s,MS5.0
VBMS Vicksburg 109.66 62 PFAKE 08 43 00.0 +16
VBMS LR LR
comp=Z,533nm,22.0s,MS5.1
MSEY Mahe Island 109.81 257 PFAKE 08 43 00.0 +15
MSEY LR LR
comp=Z,779nm,20.0s,MS5.3
CCM Cathedral Cave 110.28 56 PFAKE 08 43 00.0 +15
CCM LR LR
comp=Z,384nm,19.0s,MS5.0
ABPO Ambohimpanom 110.30 239 PFAKE 08 43 00.0 +14
ABPO LR LR
comp=Z,726nm,20.0s,MS5.2
OXF Oxford 111.05 60 PFAKE 08 43 00.0 +14
OXF LR LR
comp=Z,378nm,20.0s,MS5.0
OTAV Otavalo 111.35 98 PFAKE 08 43 00.0 +12
OTAV LR LR
comp=Z,187nm,19.0s,MS4.7
BVAR Borovoye Array 111.41 320 Pdiff Pdif 08 38 48.2 -0.4
comp=Z,2.7nm,0.9s,baz=123,slow=5.5,SNR=9.5
BVAR PKiKP PKiKP 08 42 45.8 -0.7
comp=Z,3.4nm,0.8s,baz=98,slow=3.0,SNR=11
BVAR PP PP 08 43 21.1 -6.7
comp=Z,0.6nm,0.5s,baz=3.3,slow=36,SNR=2.7
BVAR Borovoye Array 111.41 320 P Pdif 08 38 48.2 -0.4
BVAR 08 42 45.8
BRVK Borovoye 111.48 320 ⇓ *i*PKIKP PKiKP 08 42 46.3 -0.3
BRVK MLR MLR
comp=Z,261nm,19.0s,MS4.8
EYMN Ely 111.70 45 PFAKE 08 43 00.0 +13
EYMN LR LR
comp=Z,519nm,19.0s,MS5.1
JFWS Jewell Farm 111.87 51 PFAKE 08 43 00.0 +12
JFWS LR LR
comp=Z,346nm,19.0s,MS5.0
HDIL Hopedale 112.21 54 PFAKE 08 43 00.0 +12
HDIL LR LR
comp=Z,412nm,19.0s,MS5.0
BRAL Brewton 112.29 64 PFAKE 08 43 00.0 +11
BRAL LR LR
comp=Z,292nm,21.0s,MS4.8
WVT Waverly 112.62 59 PFAKE 08 43 00.0 +11
WVT LR LR
comp=Z,205nm,19.0s,MS4.7
LRAL Lakeview Retre 112.73 62 PFAKE 08 43 00.0 +10
LRAL LR LR
comp=Z,290nm,21.0s,MS4.8
LPAZ La Paz 113.07 119 PFAKE 08 43 00.0 +9.2
LPAZ LR LR
comp=Z,278nm,19.0s,MS4.9
WCI Wyandotte Cave 114.16 56 PFAKE 08 43 00.0 +7.8
WCI LR LR
comp=Z,390nm,19.0s,MS5.0
CPUP Villa Florida 115.18 134 PKKPbc PKKPbc 08 53 28.4 -1.4
comp=Z,2.1nm,0.8s,baz=282,slow=3.7,SNR=3.1
GOGA Godfrey 115.71 62 PFAKE 08 43 10.0 +15
GOGA LR LR
comp=Z,396nm,21.0s,MS5.0
DWPF Disney 116.54 68 PFAKE 08 43 10.0 +13
DWPF LR LR
comp=Z,252nm,21.0s,MS4.8
AAM Ann Arbor 116.63 52 PFAKE 08 43 10.0 +13
AAM LR LR
comp=Z,322nm,19.0s,MS5.0
ACSO Alum Creek Sta 116.95 55 PFAKE 08 43 10.0 +12
ACSO LR LR
comp=Z,308nm,19.0s,MS4.9
ABKAR Akbulak array 117.75 315 *e*PKPdf PKPdf 08 42 58.1 -0.7
ARU Arti 118.32 324 *i* PKIKP PKPdf 08 42 59.3 -0.3
ARU 08 44 13.2
ARU 08 49 48.3
ARU SS SS 09 00 24.8 -4.4
ARU Arti 118.32 324 ⇓ *i*PKP PKPdf 08 42 59.6 0.0
ARU LR LR
comp=Z,275nm,20.0s,MS4.9
NHSC New Hope 118.40 63 PFAKE 08 43 10.0 +9.4
NHSC LR LR
comp=Z,282nm,22.0s,MS4.8
BLA Blacksburg 118.66 58 PFAKE 08 43 10.0 +9.1
BLA LR LR
comp=Z,324nm,21.0s,MS4.9
SIV San Ignacio 118.89 123 PP PP 08 44 19.0 -1.7
comp=Z,0.9nm,0.9s,baz=249,slow=14,SNR=3.1
SOKR Solikamsk 118.92 327 *i* PKIKP PKPdf 08 43 01.2 +0.5
SOKR pmax pmax
comp=Z,10.0nm,1.1s
AKTK Aktyubinsk 118.98 317 PKP PKPdf 08 43 01.0 -0.1
AKTK PKKPbc PKKPbc 08 53 17.2 +0.4
AKTO Aktyubinsk 118.98 317 PKP PKPdf 08 43 01.0 -0.1
comp=Z,8.9nm,0.8s,baz=103,slow=3.4,SNR=36
AKTO PKKPbc PKKPbc 08 53 17.2 +0.4
comp=Z,1.4nm,0.8s,baz=273,slow=3.5,SNR=4.6
MCWV Mont Chateau 119.31 55 PFAKE 08 43 10.0 +7.9
MCWV LR LR
comp=Z,506nm,19.0s,MS5.2
ERPA Erie 119.33 53 PFAKE 08 43 10.0 +7.9
ERPA LR LR
comp=Z,306nm,19.0s,MS5.0
BOSA Boshof 119.41 217 PKKPbc PKKPbc 08 53 13.2 -1.7
comp=Z,3.9nm,0.9s,baz=296,slow=13,SNR=3.0
CNNC Cliffs of the 120.52 61 PFAKE 08 43 20.0 +15
CNNC LR LR
comp=Z,526nm,21.0s,MS5.2
SSPA Standing Stone 120.86 54 PFAKE 08 43 20.0 +15

SSPA LR LR
comp=Z,222nm,21.0s,MS4.8
KBS Kingsbay 120.98 355 PFAKE 08 43 20.0 +16
KBS LR LR
comp=Z,155nm,19.0s,MS4.7
CBN Corbin 121.15 57 PFAKE 08 43 20.0 +14
CBN LR LR
comp=Z,286nm,19.0s,MS4.9
SDV Santo Domingo 121.69 92 PFAKE 08 43 20.0 +13
SDV LR LR
comp=Z,138nm,20.0s,MS4.6
BINY Binghamton 122.31 53 PFAKE 08 43 20.0 +12
BINY LR LR
comp=Z,610nm,19.0s,MS5.3
LONY Lake Ozonia 123.27 50 PFAKE 08 43 20.0 +10
LONY LR LR
comp=Z,644nm,19.0s,MS5.3
SPB Sao Paulo 123.43 140 PFAKE 08 43 20.0 +9.4
SPB LR LR
comp=Z,290nm,19.0s,MS5.0
NCB Newcomb 123.56 51 PFAKE 08 43 20.0 +10
NCB LR LR
comp=Z,461nm,19.0s,MS5.2
SDDR Presa de Saban 123.85 81 PFAKE 08 43 20.0 +8.6
SDDR LR LR
comp=Z,429nm,21.0s,MS5.1
GRTK Grand Turk 124.52 78 PFAKE 08 43 20.0 +7.4
GRTK LR LR
comp=Z,387nm,19.0s,MS5.1
LVZ Lovozero 125.10 341 PFAKE 08 43 20.0 +7.7
LVZ LR LR
comp=Z,451nm,21.0s,MS5.1
LBNH Lisbon 125.19 50 PFAKE 08 43 20.0 +6.8
LBNH LR LR
comp=Z,527nm,19.0s,MS5.2
APA Apatity 125.68 341⇑*i*PKIKP PKPdf 08 43 08.4 -5.1
APA *i* 08 45 04.0
APA *e*PPP 08 47 44.0
APA *e* 08 50 10.0
APA *e*PS PS 08 55 00.0 -7.9
APA pmax pmax
comp=Z,13nm,1.0s
APA MLR MLR
comp=Z,700nm,19.0s,MS5.3
KEV Kevo 126.05 345 PFAKE 08 43 30.0 +16
KEV LR LR
comp=Z,290nm,21.0s,MS4.9
RDF Al-Radifah 126.52 291 *e*P PKPdf 08 43 16.8 +0.5
RDF AMb AMB 08 43 18.4
comp=Z,117nm,1.0s
SCHQ Schefferville 126.56 36 PFAKE 08 43 30.0 +14
SCHQ LR LR
comp=Z,921nm,19.0s,MS5.5
ARCES ARCESS Array B 126.58 345 PKP PKPdf 08 43 15.2 +0.1
comp=Z,4.9nm,0.8s,baz=352,slow=2.5,SNR=16
ARE0 ARCESS Array S 126.58 345 *e*PKPdf PKPdf 08 43 14.6 -0.5
MAK Makhachkala 126.65 309 *e*PKIKP PKPdf 08 43 16.5 +0.4
MAK *e* 08 43 32.3
MAK *i* 08 45 14.2
MAK *e* 08 50 27.3
MAK *e*PS PS 08 55 18.8 +1.2
MAK *e*SSS 09 06 51.1
MAK pmax pmax
comp=Z,102nm,0.9s
NAY Al-Naaiem 126.82 291 *e*P PKPdf 08 43 16.6 -0.2
NAY AMb AMB 08 43 18.3
comp=Z,35nm,1.1s
PKME Peaks-Kenny Pk 126.96 49 PFAKE 08 43 30.0 +13
PKME LR LR
comp=Z,370nm,19.0s,MS5.1
LSZ Lusaka 127.11 230 *e*PKIKP PKPdf 08 43 18.3 +0.5
LSZ MLR MLR
comp=Z,694nm,19.0s,MS5.4
KMBO Kilima Mbogo 127.73 251 PFAKE 08 43 30.0 +11
KMBO LR LR
comp=Z,303nm,19.0s,MS5.0
SJG San Juan 128.41 83 *e*PKIKP PKPdf 08 43 18.6 -1.6
SJG *e* 08 43 33.1
SJG MLR MLR
comp=Z,196nm,22.0s
GNI Garni 128.95 305*d i*PKIKP PKPdf 08 43 21.5 +0.9
GNI pmax pmax
comp=Z,62nm,1.7s
GNI Garni 128.95 305 *e*PKPdf PKPdf 08 43 22.0 +1.5
GNI LR LR
comp=Z,185nm,20.0s,MS4.8
GNI Garni 128.95 305 PKPdf PKPdf 08 43 22.6 +2.0
SNR=7.6
VRHR Novokhopersk 129.15 320 *e*PKIKP PKPdf 08 43 20.5 -0.1
VRHR pmax pmax
comp=Z,10.0nm,0.4s
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.6s
ZEI Tsey 129.31 309 *i* PKIKP PKPdf 08 43 22.5 +1.3
ZEI pmax pmax
comp=Z,20nm,0.9s
MOS Moscow 129.83 326 *e*PKIKP PKPdf 08 43 20.4 -1.3
MOS *e* 08 43 33.0
MOS pmax pmax
comp=Z,44nm,1.1s
KIV Kislovodsk 130.01 310 *e*P Pdif 08 40 14.1 +2.8
KIV *i* 08 43 22.9
KIV *e* 08 45 34.8
KIV *e*PS PS 08 55 49.5 +2.7
KIV *e*SS SS 09 02 56.3 -1.1
KIV pmax pmax
comp=Z,23nm,1.2s
KIV Kislovodsk 130.01 310 *e*PKPdf PKPdf 08 43 22.9 +0.4
KIV LR LR
comp=Z,225nm,19.0s,MS4.9
KIV Kislovodsk 130.01 310 PKPdf PKPdf 08 43 23.3 +0.9
SNR=7.9
VSR Storozhevoye 130.59 320 *e*PKIKP PKPdf 08 43 23.3 0.0
VSR pmax pmax
comp=Z,60nm,1.5s
VSR pmax pmax
comp=N,5.0nm,0.5s
VSR pmax pmax
comp=E,5.0nm,0.4s
VORD Divnogorie 130.59 320 *e*PKIKP PKPdf 08 43 23.0 -0.3
VORD pmax pmax
comp=Z,50nm,1.8s
VORD pmax pmax
comp=N,10.0nm,0.9s
VORD pmax pmax
comp=E,20nm,1.8s
OBN Obninsk 130.64 326⇓*i*PKIKP PKPdf 08 43 23.0 -0.3
OBN *i* 08 43 37.0
OBN *e* 08 45 36.4
OBN pmax pmax
comp=Z,27nm,1.0s
OBN MLR MLR
comp=Z,300nm,19.0s,MS5.0
OBN Obninsk 130.64 326 *e*PKPdf PKPdf 08 43 22.5 -0.8
OBN LR LR
comp=Z,312nm,21.0s,MS5.0
GRGR Grenville 131.08 92 PFAKE 08 43 40.0 +15
GRGR LR LR
comp=Z,351nm,21.0s,MS5.0
TSUM Tsumeb 131.11 217 PFAKE 08 43 40.0 +15
TSUM LR LR
comp=Z,591nm,20.0s,MS5.3
BBSR BB Station 131.35 65 PFAKE 08 43 40.0 +15
BBSR LR LR
comp=Z,282nm,21.0s,MS4.9
FINES FINESS Array B 131.96 337 PKP PKPdf 08 43 25.2 -0.3
comp=Z,2.6nm,0.8s,baz=75,slow=8.1,SNR=4.6
SOC Sochi 132.19 310 *e*PKHKP PKPpre 08 42 58.8
SOC *i* 08 43 24.0
SOC *e* 08 45 54.6
SOC *e*PS PS 08 56 03.3 -2.4
ANN Anapa 133.53 312 *i* PKIKP PKPdf 08 43 29.9 +0.8
ANN *e* 08 43 46.0
ANN *e* 08 45 56.7
ANN pmax pmax
comp=Z,40nm,1.2s
MBAR Mbarara 133.69 248 PFAKE 08 43 40.0 +10
MBAR LR LR
comp=Z,736nm,20.0s,MS5.4
AKASG Malin Array Be 136.57 323 PKhKP PKPpre 08 43 27.2
comp=Z,2.3nm,0.8s,baz=69,slow=2.2,SNR=7.8
AKASG PKP PKPdf 08 43 34.1 -0.4
comp=Z,9.1nm,0.9s,baz=72,slow=1.8,SNR=19
AKASG Malin Array Be 136.57 323*c i*PKIKP PKPdf 08 43 35.5 +0.9
AKASG pmax pmax
comp=Z,9.0nm,0.9s
AKASG Malin Array Be 136.57 323 PKP PKPdf 08 43 34.1 -0.4
KIEV Kiev 136.58 323 PFAKE 08 43 50.0 +15
KIEV LR LR
comp=Z,223nm,19.0s,MS4.9
NB2 NORSAR Subarra136.95 344 PKPdf PKPdf 08 43 26.7 -8.2
comp=Z,4.8nm,1.2s,baz=31,slow=1.9
NOA NORSAR Array B 136.95 344 PKP PKPdf 08 43 36.3 +1.3
comp=Z,1.6nm,0.8s,baz=31,slow=2.0,SNR=6.7
MMAI Mount Meron Ar 137.01 296 PKP PKPdf 08 43 36.3 +0.3
comp=Z,24nm,0.9s,baz=64,slow=3.8,SNR=16
BR131 Keskin Array S 137.45 306 *e*PKPdf PKPdf 08 43 35.1 -1.4
BR131 LR LR
comp=Z,233nm,19.0s,MS4.9
BRTR Keskin Array B 137.45 306 PKP PKPdf 08 43 35.6 -0.9
comp=Z,13nm,1.0s,baz=143,slow=3.4,SNR=21
BRTR PP PP 08 46 22.3 -0.4
comp=Z,1.3nm,0.7s,baz=119,slow=14,SNR=5.3
KIS Kishinev 138.46 318 *e*PKP PKPdf 08 43 47.0 +8.8
KIS *e*L 09 40 40.0
KIS LRM 09 45 04.0
comp=Z,400nm,22.0s
KIS Kishinev 138.46 318 *e*PKIKP PKPdf 08 43 47.0 +8.8
KIS MLR MLR
comp=Z,400nm,22.0s,MS5.1
KIS MLR MLR
comp=Z,400nm,22.0s
CSS Prodhromos 138.53 299 *e*PKPdf PKPdf 08 43 38.1 -0.6
CSS LR LR
comp=Z,323nm,19.0s,MS5.1
KONO Kongsberg 138.56 344 PFAKE 08 43 50.0 +12
KONO LR LR
comp=Z,391nm,19.0s,MS5.2
LVV L'vov 139.89 324 *e*PKIKP PKPdf 08 43 41.0 +0.3
TESR 140.01 319⇑P PKPdf 08 43 37.6 -3.4
TESR 140.01 319⇑*i*P PKPdf 08 43 37.6 -3.4
BUR08 Bucovina Ar. S 140.36 321 *e*PKPdf PKPdf 08 43 41.7 +0.1
BURAR Bucovina Array 140.36 321⇑PKIKP PKPdf 08 43 40.9 -0.7
BURAR Bucovina Array 140.36 321⇑*i*P PKPdf 08 43 40.9 -0.7
KWP Kalwaria Pacla 140.71 325 PFAKE 08 43 50.0 +7.8
KWP LR LR
comp=Z,288nm,19.0s,MS5.0
MLR Muntele Rosu 140.91 318⇑PKIKP PKPdf 08 43 38.2 -4.5
MLR Muntele Rosu 140.91 318⇑*i*P PKPdf 08 43 38.2 -4.5
VOIR 141.50 318⇓PKIKP PKPdf 08 43 43.9 +0.2
VOIR 141.50 318⇓*i*P PKPdf 08 43 43.9 +0.2
UZH Uzhgorod 141.50 324 *e*PKIKP PKPdf 08 43 40.0 -3.6
UZH *e* 08 43 47.2
STHS Stebnicka Huta 141.61 326 *e*PKIKP PKPdf 08 43 40.1 -3.7
STHS Stebnicka Huta 141.61 326 *e*PKP PKPdf 08 43 40.0 -3.8
CRVS Cervenica-Dubn 141.80 325 *e*PKIKP PKPdf 08 43 40.6 -3.6
CRVS Cervenica-Dubn 141.80 325 *e*PKP PKPdf 08 43 40.6 -3.6
OJC Ojcow 141.87 328 *e*PKIKP PKPdf 08 43 42.7 -1.6
NIE Niedzica 142.10 326 *e*PKPdf PKPdf 08 43 41.7 -3.0
DRGR 142.25 321⇓PKIKP PKPdf 08 43 41.3 -3.7
DRGR 142.25 321⇓*i*P PKPdf 08 43 41.3 -3.7
ALN Alexandroupoli 142.68 311 *e*P PKPdf 08 43 41.5 -4.5
KDZ Kurdzhali 142.84 312 P PKPdf 08 43 41.5 -4.8
GZR Gura Zlata 142.92 319⇓P PKPdf 08 43 43.4 -2.8
GZR Gura Zlata 142.92 319⇓*i*P PKPdf 08 43 43.4 -2.9
OKC Ostrava-Krasne 142.94 328 *e*PKIKP PKPdf 08 43 43.6 -2.6
OKC *e* 08 43 57.1
OKC MLR MLR
comp=Z,400nm,23.3s,MS5.1
OKC Ostrava-Krasne 142.94 328 *e*PKP PKPdf 08 43 43.6 -2.6
OKC *e* 08 43 57.1
OKC *e*P'P' 09 12 24.6
OKC Ostrava-Krasne 142.94 328 *e*PKP PKPdf 08 43 43.6 -2.6
OKC *e*pPKP pPKPdf 08 43 57.1 -2.8
OKC *e*x x 09 12 24.6
OKC AMS AMS 09 48 40.0
comp=Z,400nm,23.3s
KSP Ksiaz 143.14 331 *e*PKP PKPdf 08 43 43.9 -2.6
KSP Ksiaz 143.14 331 *e*PKIKP PKPdf 08 43 43.6 -2.9
KSP *e* 08 43 56.6
KSP *e* 08 46 53.0
KSP MLR MLR
comp=Z,1μm,21.1s,MS5.5
KSP Ksiaz 143.14 331 *e*PKP PKPdf 08 43 43.6 -2.9
KSP *e*pPKP pPKPdf 08 43 56.6 -3.7
KSP *e*PP PP 08 46 53.0 -3.7
KSP LR LR
comp=Z,1μm,21.1s,MS5.5
PLD Plovdiv 143.16 313 P PKPdf 08 43 44.0 -2.8
BSEG Bad Segeberg 143.18 339 *e*PKPbc PKPdf 08 43 42.6 -3.8
BSEG *e*pPKPbc 08 43 56.7
PSZ Piszkesteto 143.22 324⇓PKIKP PKPdf 08 43 44.3 -2.4
PSZ Piszkesteto 143.22 324 *e*PKPdf PKPdf 08 43 44.2 -2.6
PSZ LR LR
comp=Z,438nm,20.0s,MS5.2
PSZ Piszkesteto 143.22 324⇓*i*P PKPdf 08 43 44.3 -2.4
MORC Moravsky Berou 143.27 328⇓P PKPdf 08 43 44.9 -1.9
MORC Moravsky Berou 143.27 328⇓*i*P PKPdf 08 43 44.8 -2.0
RZN Rozhen 143.31 313 P PKPdf 08 43 44.1 -3.0
PGB Panagyurishte 143.34 314 P PKPdf 08 43 44.8 -2.3
VYHS Vyhne 143.44 326 *e*PKIKP PKPdf 08 43 44.3 -2.8
VYHS Vyhne 143.44 326 *e*PKP PKPdf 08 43 44.3 -2.8
DPC Dobruska-Polom 143.47 330 *e*PKIKP PKPdf 08 43 44.8 -2.3
DPC *e* 08 43 57.3
DPC MLR MLR
comp=Z,400nm,20.2s,MS5.2
DPC Dobruska-Polom 143.47 330 *e*PKP PKPdf 08 43 44.8 -2.3
DPC *e* 08 43 57.3
DPC *e*P'P' 09 13 02.1
DPC LR LR
comp=Z,400nm,20.2s,MS5.2
DPC Dobruska-Polom 143.47 330 *e*PKP PKPdf 08 43 44.8 -2.3
DPC *e*pPKP pPKPdf 08 43 57.3 -3.6
DPC *e*x x 09 13 02.1
DPC AMS AMS 09 48 10.0
comp=Z,400nm,20.2s
CHOS Chios island 143.50 307 *e*P PKPdf 08 43 44.5 -3.0
UPC Upice 143.50 331 *e*PKP PKPdf 08 43 45.2 -1.9
UPC *e*pPKP pPKPdf 08 43 57.6 -3.3
BZS Buzias 143.51 320⇓P PKPdf 08 43 44.9 -2.5
BZS Buzias 143.51 320⇓*i*P PKPdf 08 43 44.9 -2.4
KOLL Kolacno 143.61 326 *e*PKIKP PKPdf 08 43 46.0 -1.4
KOLL Kolacno 143.61 326 *e*PKP PKPdf 08 43 46.0 -1.4
LIA Limnos Island 143.65 310 *e*P PKPdf 08 43 43.5 -4.2
BUD Budapest 143.95 324⇓*e*PKP PKPdf 08 43 44.0 -4.0
VTS Vitosha 143.96 315⇓PKIKP PKPdf 08 43 47.1 -1.1
VTS Vitosha 143.96 315 P PKPdf 08 43 46.5 -1.7
VTS Vitosha 143.96 315 P PKPdf 08 43 46.5 -1.7
VTS Vitosha 143.96 315 P PKPdf 08 43 46.9 -1.3
VTS Vitosha 143.96 315⇓*i*P PKPdf 08 43 47.1 -1.1
MMB Musomiste 144.03 313 P PKPdf 08 43 46.8 -1.6
NVR Nevrokopi 144.03 312 *e*P PKPdf 08 43 46.0 -2.4
VRAC Vranov 144.05 329⇓P PKPdf 08 43 47.1 -1.0
VRAC Vranov 144.05 329⇓*i*P PKPdf 08 43 47.1 -1.0
PVCC Panska Ves 144.14 332 *e*PKIKP PKPdf 08 43 47.5 -0.8
PVCC *e* 08 44 00.0
PVCC MLR MLR
comp=Z,300nm,21.2s,MS5.0
PVCC Panska Ves 144.14 332 *e*PKP PKPdf 08 43 47.5 -0.8
PVCC *e* 08 44 00.0
PVCC *e*P'P' 09 13 14.3
PVCC LR LR
comp=Z,300nm,21.2s,MS5.0
PVCC Panska Ves 144.14 332 *e*PKP PKPdf 08 43 47.5 -0.8
PVCC *e*pPKP pPKPdf 08 44 00.0 -2.0
PVCC *e*x x 09 13 14.3
PVCC AMS AMS 09 48 40.0
comp=Z,300nm,21.2s
BRG Berggiesshubel 144.16 333 *e*PKPbc PKPdf 08 43 46.6 -1.7
BRG *e*pPKPbc 08 43 59.7
BRG Berggiesshubel 144.16 333 *i* PKP PKPdf 08 43 47.0 -1.3
comp=Z,109nm,1.0s
BRG *i* 08 43 59.3
comp=Z,118nm,1.4s
BRG *e* 08 47 24.0
BRG *i* 08 51 09.0
comp=Z,8.9nm,0.6s
BRG
comp=N,254nm,26.6s
BRG
comp=E,132nm,20.7s
BRG
comp=Z,244nm,17.2s
CLL Collm 144.24 334 *e*PKPbc PKPdf 08 43 46.3 -2.1
CLL *e*pPKPbc 08 43 59.7
CLL Collm 144.24 334⇓*i*PKIKP PKPdf 08 43 46.7 -1.7
CLL *i* 08 43 59.9
CLL *e* 08 46 59.0
CLL MLR MLR
comp=Z,200nm,21.3s,MS4.9
CLL Collm 144.24 334⇓*i*PKP PKPdf 08 43 46.7 -1.7
CLL *i*pPKP pPKPdf 08 43 59.9 -2.3
CLL *e*PP PP 08 46 59.0 -4.2
CLL LR LR
comp=Z,200nm,21.3s,MS4.9
CLL Collm 144.24 334⇓*i*PKPdf PKPdf 08 43 46.7 -1.7
comp=Z,80nm,0.9s
CLL *i*pPKPdf pPKPdf 08 43 59.9 -2.3
CLL *e*sPKPdf 08 44 06.0
CLL *e*PP PP 08 46 59.0 -4.2
CLL *e*PPP 08 50 21.0
CLL *e*PPPP 08 52 48.0
CLL *e*PPPrev 08 58 24.0
CLL *e*PPS 08 59 48.0
CLL *e* 09 05 18.0
CLL *e*SS SS 09 05 48.0 +3.1
CLL *e* 09 08 12.0
CLL LmV 09 51 00.0
comp=Z,200nm,21.3s
APE Apeiranthos 144.28 305⇓PKIKP pPKPdf 08 44 02.3 -0.4
APE Apeiranthos 144.28 305⇓*i*P pPKPdf 08 44 02.3 -0.4
OUR Ouranopolis 144.35 311 PKIKP PKPdf 08 43 47.9 -1.1
OUR Ouranopolis 144.35 311 P PKPdf 08 43 47.9 -1.1
KKB Krupnik 144.35 314 P PKPdf 08 43 47.9 -1.0
NRDL Niedersach Rie 144.43 337 *e*PKPbc PKPdf 08 43 46.1 -2.6
ZST Bratislava 144.52 327 *e*PKIKP PKPdf 08 43 49.3 +0.3
ZST Bratislava 144.52 327 *e*PKP PKPdf 08 43 49.3 +0.3
PRA Prague 144.53 331 PKP PKPdf 08 43 48.0 -0.9
PRA pPKP pPKPdf 08 44 01.0 -1.7
PRA PP PP 08 47 06.0 +1.0
PRU Pruhonice 144.54 331 *e*PKIKP PKPdf 08 43 48.9 -0.1
PRU *e* 08 44 01.9
PRU MLR MLR
comp=Z,300nm,23.4s,MS5.0
PRU Pruhonice 144.54 331 *e*PKP PKPdf 08 43 48.9 -0.1
PRU *e* 08 44 01.9
PRU *e*P'P' 09 12 55.7
PRU LR LR
comp=Z,300nm,23.4s,MS5.0
PRU Pruhonice 144.54 331 *e*PKP PKPdf 08 43 48.9 -0.1
PRU *e*pPKP pPKPdf 08 44 01.9 -0.8
PRU *e*x x 09 12 55.7
PRU AMS AMS 09 47 00.0
comp=Z,300nm,23.4s
TREC Trest 144.59 329 *e*PKIKP PKPdf 08 43 48.8 -0.3
TREC *e* 08 44 01.6
TREC MLR MLR
comp=Z,400nm,24.7s,MS5.1
TREC Trest 144.59 329 *e*PKP PKPdf 08 43 48.8 -0.3
TREC *e*pPKP pPKPdf 08 44 01.6 -1.2
TREC *e*x x 09 12 21.3
TREC AMS AMS 09 48 40.0
comp=Z,400nm,24.7s
EAU Auchinoon 144.66 352 P PKPdf 08 43 47.5 -1.5
EAU Auchinoon 144.66 352⇑*e*P PKPdf 08 43 47.5 -1.5
EBL Broad Law 144.68 352 P PKPdf 08 43 47.5 -1.6
EBL Broad Law 144.68 352⇑*e*P PKPdf 08 43 47.5 -1.6
NPS Neapolis 144.69 302 *e*P PKPdf 08 43 49.0 -0.7
PLG Polygyros 144.71 311 PKIKP PKPdf 08 43 48.2 -1.4
PLG Polygyros 144.71 311 *e*P PKPdf 08 43 48.0 -1.6
PLG Polygyros 144.71 311 P PKPdf 08 43 48.2 -1.4
PAIG Paliouri 144.71 310 P PKPdf 08 43 49.1 -0.5
PAIG Paliouri 144.71 310 P PKPdf 08 43 49.1 -0.5
CLZ Clausthal 144.85 337 *e*PKPbc PKPdf 08 43 49.0 -0.4
HORT Hortiatis 144.86 312 P PKPdf 08 43 49.5 -0.3
HORT Hortiatis 144.86 312 P PKPdf 08 43 49.5 -0.3
PKSM Moragy 144.91 323⇓P PKPdf 08 43 50.0 +0.2
PKSM Moragy 144.91 323⇓*i*P PKPdf 08 43 50.0 +0.3
VAY Valandovo 144.93 313 P PKPdf 08 43 49.5 -0.4
VAY Valandovo 144.93 313⇑*i*P PKPdf 08 43 49.0 -0.9
VAY Valandovo 144.93 313 P PKPdf 08 43 49.5 -0.4
TANN Tannenbergstha 145.14 333 *e*PKPbc PKPbc 08 43 49.9 +0.3
TANN *e*pPKPbc pPKPbc 08 44 03.2 0.0
ESK Eskdalemuir 145.14 352 *e*PKP2 PKPab 08 43 48.5 -1.0
ESK MLR MLR
comp=Z,205nm,19.0s,MS4.9
PTL Penteli 145.24 307 *e*P PKPbc 08 43 49.5 -0.8
ECK Cauldkaine Hil 145.27 352 P PKPbc 08 43 49.3 -0.5
ECK Cauldkaine Hil 145.27 352⇑*e*P PKPbc 08 43 49.3 -0.5
XOR Xorichti 145.27 310 P PKPbc 08 43 50.7 +0.3
XOR Xorichti 145.27 310 P PKPbc 08 43 50.7 +0.3
NKC Novy Kostel 145.28 333 *e*PKIKP PKPdf 08 43 51.1 +0.9
NKC *e* 08 44 03.9
NKC MLR MLR
comp=Z,300nm,18.5s,MS5.1
NKC Novy Kostel 145.28 333 *e*PKP PKPdf 08 43 51.1 +0.9
NKC *e* 08 44 03.9
NKC *e*P'P' 09 13 27.2
NKC Novy Kostel 145.28 333 *e*PKP PKPdf 08 43 51.1 +0.9
NKC *e*pPKP pPKPdf 08 44 03.9 -0.1
NKC *e*x x 09 13 27.2
NKC AMS AMS 09 52 20.0
comp=Z,300nm,18.5s
DIVS Divibare 145.29 319 P PKPbc 08 43 51.7 +1.4
WIT Witteveen 145.30 341 *e*PKP PKPdf 08 43 51.5 +1.3
comp=Z,398nm,0.8s
WIT Witteveen 145.30 341 *e*x pPKPdf 08 44 04.5 +0.6
comp=Z,726nm,1.3s
MOX Moxa 145.31 334 *e*PKP PKPdf 08 43 50.8 +0.5
comp=Z,179nm,1.5s
MOX *e* 08 44 03.6
comp=Z,184nm,1.4s
MOX
comp=Z,200nm,19.0s
MOX Moxa 145.31 334 *e*PKPbc PKPbc 08 43 50.3 +0.2
ATHU Athens Univers 145.33 307 P PKPbc 08 43 51.6 +1.0
CSNA Conrad Observa 145.33 327⇓*i*PKPdf PKPdf 08 43 50.5 +0.1
comp=Z,4.3nm,1.1s
CSNA Conrad Observa 145.33 327 P PKPbc 08 43 51.6 +1.3
comp=Z,266nm,1.4s
VLY Voula,Athens 145.36 307 *e*P PKPbc 08 43 49.5 -1.2
ATH Athens Observa 145.38 307 PKIKP PKPdf 08 43 51.6 +0.8
IBBN Ibbenburen 145.39 339 *e*PKPbc PKPbc 08 43 50.4 +0.1
IBBN *e*pPKPbc pPKPbc 08 44 03.5 -0.4
SKO Skopje 145.41 315⇓*i*P PKPdf 08 43 52.2 +1.4
XAL Allendale 145.45 351 P PKPdf 08 43 49.4 -1.0
XAL Allendale 145.45 351 *e*P PKPdf 08 43 49.4 -1.0
KHC Kasperske Hory 145.59 331 *e*PKIKP PKPdf 08 43 50.9 +0.1
KHC *e* 08 44 04.9
KHC MLR MLR
comp=Z,300nm,16.0s,MS5.2
KHC Kasperske Hory 145.59 331 *e*PKP PKPdf 08 43 50.9 +0.1
KHC *e*pPKP pPKPdf 08 44 04.9 +0.3
KHC *e*x x 09 12 37.2
KHC AMS AMS 09 47 40.0
comp=Z,300nm,16.0s
NAIG Nisos Aigina 145.62 307 *e*P PKPdf 08 43 49.5 -1.7
ATAL Atalanti 145.64 309 P PKPdf 08 43 51.8 +0.6
LKR Lokris 145.67 309 P PKPdf 08 43 52.3 +1.0
LKR Lokris 145.67 309 *e*P PKPdf 08 43 50.0 -1.3
LKR Lokris 145.67 309 P PKPdf 08 43 52.3 +1.0
GCD Castle Douglas 145.68 352 P PKPdf 08 43 49.8 -1.0
GCD Castle Douglas 145.68 352⇑*e*P PKPdf 08 43 49.8 -1.0
GAL1 Galloway 145.77 353 P PKPdf 08 43 49.8 -1.1
GAL1 Galloway 145.77 353 P PKPdf 08 43 50.3 -0.6
GAL1 Galloway 145.77 353 *e*P PKPdf 08 43 49.8 -1.1
GAL1 ⇑*e*P 08 43 50.3
VAM Vamos 145.77 303 *e*P PKPdf 08 43 52.0 +0.4
KRUS Krusevo 145.81 314⇑*i*P PKPdf 08 43 51.9 +0.5
UBBA Unterbreizbach 145.81 336 *e*PKPbc PKPbc 08 43 51.5 -0.2
UBBA *e*pPKPbc pPKPbc 08 44 04.8 -0.5
DID Didima 145.89 307 *e*P PKPdf 08 43 51.0 -0.7
DID Didima 145.89 307 P PKPdf 08 43 52.0 +0.3
WET Wettzell 145.90 331 *e*PKPbc PKPbc 08 43 52.6 +0.6
WET *e*pPKPbc pPKPbc 08 44 05.6 0.0
KZN Kozani 145.91 312 *e*P PKPdf 08 43 51.5 -0.1
LTK Loutraki 145.92 308 *e*P PKPdf 08 43 51.5 -0.2
LTK Loutraki 145.92 308 P PKPdf 08 43 52.4 +0.7
ARSA Arzberg 145.95 327⇓*i*PKPdf PKPdf 08 43 50.6 -0.9
comp=Z,3.5nm,1.0s,SNR=33
ARSA Arzberg 145.95 327 P PKPab 08 43 52.9 +0.2
comp=Z,130nm,1.7s
FNA Florina 145.98 313 PKP2 PKPab 08 43 53.5 +0.4
FNA Florina 145.98 313 P PKPab 08 43 53.5 +0.4
IVA Berane 145.98 317⇓*i*PKP PKPab 08 43 53.3 +0.3
IVA Berane 145.98 317 P PKPab 08 43 53.0 0.0
WTSB Winterswijk 145.99 340 *e*PKP PKPdf 08 43 52.3 +0.9
comp=Z,108nm,1.7s

WTSB Winterswijk 145.99 340 *ex* pPKPdf 08 44 05.5 +0.3
comp=Z,178nm,1.4s
AGG Agios Georgios 146.02 310 PKP2 PKPab 08 43 52.9 -0.4
AGG Agios Georgios 146.02 310 *e*P PKPdf 08 43 51.5 -0.4
AGG Agios Georgios 146.02 310 P PKPdf 08 43 52.9 +1.0
THL Klokotos Trika 146.04 311 *e*P PKPdf 08 43 50.5 -1.4
THL Klokotos Trika 146.04 311 P PKPab 08 43 53.6 +0.2
PLE Pljevlja 146.06 318 ⇓*i*PKP PKPab 08 43 54.0 +0.7
PVY Plav 146.07 317 ⇓*i*PKP PKPab 08 43 54.2 +0.8
PVY Plav 146.07 317 ⇓*i*PKP PKPab 08 43 54.2 +0.9
KOGS Kog 146.09 325 *e*PKPbc PKPbc 08 43 53.1 +0.4
KOGS *e*pPKPbc pPKPbc 08 44 05.7 -0.6
KOGS *e* 08 44 13.9
DSF Desfina 146.10 308 P PKPdf 08 43 53.1 +1.1
MOA Molln 146.17 329 ⇓*i*PKPdf PKPdf 08 43 51.3 -0.5
comp=Z,3.4nm,1.1s,SNR=30
MOA Molln 146.17 329 P PKPab 08 43 53.8 +0.2
comp=Z,99nm,1.2s
GRF Grafenberg Arr 146.21 333 *e*PKPbc PKPbc 08 43 53.6 +0.7
GRF *e*PP PP 08 47 16.9 +2.0
GRF *e*L 09 52 41.9
comp=Z,240nm,21.4s
GRF Grafenberg Arr 146.21 333 *e*PKP2 PKPab 08 43 53.6 -0.1
GRF *e* 08 47 16.9
GRF MLR MLR
comp=Z,200nm,21.4s,MS4.9
GRF Grafenberg Arr 146.21 333 *e*PKP PKPdf 08 43 53.6 +1.8
GRF *e*PP PP 08 47 16.9 +2.0
GRF LR LR
comp=Z,200nm,21.4s,MS4.9
OHR Ohrid 146.23 314 P PKPdf 08 43 53.8 +1.6
OHR Ohrid 146.23 314 ⇑*i*P PKPdf 08 43 53.5 +1.3
OHR Ohrid 146.23 314 P PKPdf 08 43 53.8 +1.6
BUG Bochum--Univer 146.28 339 *e*PKPbc PKPbc 08 43 53.1 0.0
GIM North Isle of 146.30 353 P PKPdf 08 43 51.8 -0.1
GIM North Isle of 146.30 353 *e*P PKPdf 08 43 51.8 -0.1
NEST Nestorio 146.36 313 P PKPab 08 43 54.8 +0.2
VLI Veliai 146.37 305 *e*P PKPdf 08 43 53.0 +0.5
KALE Kalithea 146.40 309 P PKPab 08 43 54.7 -0.1
GUR Goura 146.41 308 *e*P PKPdf 08 43 52.5 -0.1
GUR Goura 146.41 308 P PKPdf 08 43 54.4 +1.8
KYTH Kithira 146.43 305 *e*P PKPdf 08 43 53.5 +0.8
UPM Unac-Piva 146.43 318 ⇓*i*PKP PKPdf 08 43 54.0 +1.6
TRIZ Trizonia 146.45 309 P PKPab 08 43 55.1 +0.1
GMM Mts of Mourne 146.51 354 P PKPdf 08 43 53.1 +0.9
GMM Mts of Mourne 146.51 354 *e*P PKPdf 08 43 53.1 +0.9
EFP Efpalio 146.55 309 *e*P PKPdf 08 43 54.5 +1.7
EFP Efpalio 146.55 309 P PKPab 08 43 56.9 +1.5
LAKA Lakka 146.57 308 P PKPab 08 43 55.5 0.0
SOKA Soboth 146.58 326 ⇑*i*PKPdf PKPdf 08 43 52.1 -0.5
comp=Z,6.5nm,1.1s
SOKA Soboth 146.58 326 P PKPdf 08 43 54.5 +1.9
comp=Z,81nm,1.2s
NKY Niksic 146.58 318 ⇓*i*PKP PKPdf 08 43 54.3 +1.6
NKY Niksic 146.58 318 ⇓*i*PKP PKPdf 08 43 54.4 +1.7
VLX Vlachokerasia 146.58 307 *e*P PKPdf 08 43 54.5 +1.6
VLX Vlachokerasia 146.58 307 P PKPab 08 43 55.5 0.0
TTG Podgorica 146.61 317 ⇓*i*PKP PKPdf 08 43 54.7 +1.9
TIR Tirane 146.74 315 *e*PKP2 PKPab 08 43 55.1 -0.9
TIR MLR MLR
comp=Z,408nm,22.0s,MS5.2
BRY Bratogost 146.82 318 ⇓*i*PKP PKPdf 08 43 54.2 +1.1
BRY Bratogost 146.82 318 ⇓*i*PKP PKPdf 08 43 54.3 +1.2
JAN Janina 146.82 311 *e*P PKPbc 08 43 55.5 +0.4
ULC Ulcinj 146.85 316 ⇓*i*PKP PKPdf 08 43 54.8 +1.6
ULC Ulcinj 146.85 316 ⇓*i*PKP PKPdf 08 43 54.9 +1.7
TNS Taunus Mts 146.88 337 *e*PKPbc PKPbc 08 43 55.0 +0.1
TNS *e*pPKPbc pPKPbc 08 44 08.4 -0.1
BUM Brajici-Budva 146.90 317 ⇓*i*PKP PKPdf 08 43 55.1 +1.8
BUM Brajici-Budva 146.90 317 ⇓*i*PKP PKPdf 08 43 55.2 +1.9
RJOB Jochberg 146.96 330 *e*PKPbc PKPbc 08 43 55.6 +0.4
ITM Ithomi 146.98 307 P PKPab 08 43 56.6 -0.5
ITM Ithomi 146.98 307 P PKPab 08 43 56.6 -0.5
RLS Riolos of Patr 147.01 308 *e*P PKPdf 08 43 55.5 +1.9
HCY Herceg Novi 147.08 317 ⇓*i*PKP PKPbc 08 43 55.8 +0.1
HCY Herceg Novi 147.08 317 ⇓*i*PKP PKPbc 08 43 55.8 +0.1
KBA Koelnbreinsper 147.16 328 ⇓*i*PKPdf PKPdf 08 43 52.5 -1.0
comp=Z,11nm,1.4s,SNR=14
KBA Koelnbreinsper 147.16 328 P PKPbc 08 43 55.8 +0.1
comp=Z,68nm,1.4s
WME Myndd Eilian 147.16 352 P PKPbc 08 43 55.1 -0.4
WME Myndd Eilian 147.16 352 *e*P PKPbc 08 43 55.1 -0.4
PYL PYLOS 147.22 306 *e*P PKPbc 08 43 55.5 -0.8
BOJS Bojanci 147.22 325 *i*PKPdf PKPdf 08 43 54.0 +0.3
BOJS *i*PKPbc PKPbc 08 43 57.0 +1.0
TOD Tromm 147.25 336 PKP PKPbc 08 43 56.4 +0.5
WPM1 Penmaenmawr 147.25 352 P PKPbc 08 43 55.1 -0.7
WPM1 Penmaenmawr 147.25 352 *e*P PKPbc 08 43 55.1 -0.7
LJU Ljubljana 147.26 326 *i*PKIKP PKPdf 08 43 53.7 0.0
LJU *i* 08 43 56.7
LJU *i* 08 44 09.4
LJU Ljubljana 147.26 326 *i*PKPdf PKPdf 08 43 53.7 -0.1
LJU *i*PKPbc PKPbc 08 43 56.7 +0.6
LJU *i*pPKPbc pPKPbc 08 44 09.4 -0.3
LJU *i* 08 44 17.5
HGN Heimansgroeve 147.30 340 *e*PKP PKPdf 08 43 55.5 +1.8
comp=Z,80nm,1.4s
HGN Heimansgroeve 147.30 340 *ex* pPKPdf 08 44 08.1 +0.7
comp=Z,84nm,1.4s
LKD2 Lefkada island 147.31 310 P PKPbc 08 43 57.9 +1.4
MYKA Terra Mystica 147.32 327 ⇓*i*PKPdf PKPdf 08 43 52.7 -1.1
comp=Z,8.0nm,1.4s
MYKA Terra Mystica 147.32 327 P PKPbc 08 43 56.2 -0.1
comp=Z,39nm,1.1s
CWF Charnwood Fore 147.34 349 P PKPbc 08 43 55.8 -0.3
CWF Charnwood Fore 147.34 349 *e*P PKPbc 08 43 55.8 -0.3
YRC Rhoscolyn 147.34 353 P PKPdf 08 43 53.7 +0.1
YRC Rhoscolyn 147.34 353 *e*P PKPdf 08 43 53.7 +0.1
FUR Furstenfeldbru 147.34 332 *e*PKPbc PKPbc 08 43 57.0 +0.8
BEBN Eben Emael 147.36 340 PKP PKPbc 08 43 56.1 -0.1
BEBN APKP 08 44 10.5
STON Ston 147.36 319 P PKPdf 08 43 54.1 +0.1
MEM Membach 147.41 339 PKP PKPbc 08 43 56.6 +0.2
ABH Alteburg 147.49 337 PKP PKPbc 08 43 57.1 +0.5
KEK Kerkira 147.53 312 P PKPab 08 43 59.0 -0.2
KEK Kerkira 147.53 312 *e*P PKPbc 08 43 57.0 0.0
KEK Kerkira 147.53 312 P PKPab 08 43 59.0 -0.2
CADS Cadrg 147.54 327 *e*PKPdf PKPdf 08 43 53.6 -0.6
CADS *e*PKPbc PKPbc 08 43 56.7 -0.2
VOY Vojsko 147.60 326 ⇓*e* PKPbc 08 43 57.2 +0.2
VOY *e* 08 44 09.6
PTCC Patocco-Chiusa 147.62 327 PKP PKPbc 08 43 56.8 -0.2
KTD Kalmit 147.75 336 PKP2 PKPbc 08 43 57.7 +0.4
STU Stuttgart 147.76 334 *e*PKPbc PKPbc 08 43 57.6 +0.3
STU Stuttgart 147.76 334 *e*PKP2 PKPbc 08 43 57.6 +0.3
STU Stuttgart 147.76 334 *e*PKPbc PKPbc 08 43 57.6 +0.3
ABTA Abfaltersbach 147.80 329 ⇓*i*PKPdf PKPdf 08 43 53.4 -1.2
comp=Z,9.5nm,0.8s,SNR=11
ABTA Abfaltersbach 147.80 329 P PKPbc 08 43 57.3 -0.2
comp=Z,49nm,0.8s
BCLA Clavier 147.80 340 PKP PKPbc 08 43 57.6 +0.2
BCLA APKP 08 44 10.8
WTTA Wattenberg 147.84 330 ⇓*i*PKPdf PKPdf 08 43 54.5 -0.2
comp=Z,7.6nm,0.8s
WTTA Wattenberg 147.84 330 P PKPbc 08 43 58.0 +0.4
comp=Z,87nm,1.2s,SNR=8.0
TRI Trieste 147.88 326 *e*PKP2 PKPbc 08 43 57.7 -0.1
TRI MLR MLR
comp=Z,239nm,22.0s,MS4.9
NVLJ Novalja 148.03 323 P PKPdf 08 43 54.1 -1.0
MOTA Moosalm 148.03 331 ⇓*i*PKPdf PKPdf 08 43 55.1 +0.2
comp=Z,7.4nm,0.9s,SNR=21
MOTA Moosalm 148.03 331 P PKPbc 08 43 58.5 +0.4
comp=Z,58nm,0.8s
MOTA Moosalm 148.03 331 P pPKPdf 08 44 11.5 +2.8
comp=Z,67nm,0.9s
SNF Seneffe 148.04 341 PKP PKPbc 08 43 58.5 +0.4
SNF APKP 08 44 12.5
RETA Reutte 148.08 331 ⇓*i*PKPdf PKPdf 08 43 54.8 -0.2
comp=Z,4.2nm,1.2s
RETA Reutte 148.08 331 P PKPbc 08 43 58.5 +0.3
comp=Z,30nm,0.9s,SNR=9.0
LANF Langenberg 148.14 336 PKP PKPbc 08 43 58.6 +0.3
WLF Walferdange 148.17 338 PKP PKPbc 08 43 59.5 +1.1
WLF APKP 08 44 12.3
WLF Walferdange 148.17 338 *e*PKPbc PKPbc 08 43 59.0 +0.6
WLF *e*pPKPbc pPKPbc 08 44 12.5 +0.4
WLF Walferdange 148.17 338 *e*PKP2 PKPbc 08 43 59.1 +0.7
WLF MLR MLR
comp=Z,302nm,20.0s,MS5.1
WLF Walferdange 148.17 338 *e*PKPbc PKPbc 08 43 59.1 +0.7
WLF LR LR
comp=Z,302nm,20.0s,MS5.1
GIVF Givet 148.23 340 *e*PKP1 PKPbc 08 43 58.1 -0.5
comp=Z,152nm,1.2s
HTR Trewern Hill 148.30 351 P PKPdf 08 43 56.8 +1.6
HTR Trewern Hill 148.30 351 *e*P PKPdf 08 43 56.8 +1.6
DOU Dourbes 148.31 340 PKP PKPbc 08 43 59.2 +0.5
DOU APKP 08 44 12.2
FETA Feichten 148.44 331 ⇓*i*PKPdf PKPdf 08 43 55.6 -0.1
comp=Z,6.9nm,1.0s
FETA Feichten 148.44 331 P PKPbc 08 43 59.8 +0.6
comp=Z,66nm,0.9s,SNR=26
SPAK Spaichingen-Ko 148.46 334 PKP PKPbc 08 43 59.4 +0.2
BFO Black Forest 148.46 335 *e*PKPbc PKPbc 08 43 59.1 -0.1
BFO *e*pPKPbc pPKPbc 08 44 12.6 -0.3
BFO Black Forest 148.46 335 *e*PKP2 PKPbc 08 43 59.1 -0.1
BFO MLR MLR
comp=Z,231nm,21.0s,MS5.0
BFO Black Forest 148.46 335 *e*PKPbc PKPbc 08 43 59.1 -0.1
BFO LR LR
comp=Z,231nm,21.0s,MS5.0
BAIF Baives 148.46 341 *e*PKP1 PKPbc 08 43 58.9 -0.3
comp=Z,180nm,1.4s
MENF Mencas 148.60 343 PKP PKPbc 08 43 59.4 -0.1
APPI Appiano 148.61 329 PKP PKPbc 08 43 59.1 -0.6
DAVA Damuels 148.62 332 ⇑*i*PKPdf PKPdf 08 43 56.0 +0.1
comp=Z,9.2nm,1.2s
DAVA Damuels 148.62 332 P PKPbc 08 44 00.3 +0.6
comp=Z,75nm,1.2s,SNR=14
CTI Castel Tesino 148.71 329 PKP2 PKPbc 08 44 00.1 +0.2
CDF Champ du Feu 148.80 336 *e*PKP1 PKPbc 08 43 59.6 -0.5
comp=Z,121nm,1.1s
LIBD Limburg 148.89 335 PKP2 PKPbc 08 44 00.5 +0.2
FELD Feldberg im Sc 148.95 334 PKP PKPbc 08 44 01.0 +0.5
ECH Echery 149.01 336 PKP PKPbc 08 44 00.5 -0.1
ECH Echery 149.01 336 *e*PKP2 PKPbc 08 44 00.5 -0.1
ECH MLR MLR
comp=Z,149nm,20.0s,MS4.8
ECH Echery 149.01 336 *e*PKPbc PKPbc 08 44 00.5 -0.1
ECH LR LR
comp=Z,149nm,20.0s,MS4.8
MABI Malga Bissina 149.25 330 PKP PKPbc 08 44 01.1 -0.2
MOF Molkenrain 149.32 335 PKP PKPbc 08 44 01.3 -0.1
RGNG Rignano Grg 149.32 318 PKP PKPbc 08 44 02.1 +0.5
THEF They Montfort 149.44 337 PKP PKPbc 08 44 01.7 0.0
HINF Hinteralfeld 149.46 336 *e*PKP1 PKPbc 08 44 01.1 -0.6
comp=Z,128nm,1.4s
TUE Stuetta 149.48 331 *e*PKPbc PKPbc 08 44 02.1 +0.3
TUE LR LR
comp=Z,329nm,22.0s,MS5.1
BBS Basel-Blauen 149.48 335 PKP PKPbc 08 44 01.8 0.0
HAU Haudompre 149.49 336 *e*PKP1 PKPbc 08 44 01.3 -0.5
comp=Z,104nm,1.0s
HAU *e*MLR MLR
comp=Z,254nm,22.2s,MS4.7
HAU Haudompre 149.49 336 *e*PKP PKPbc 08 44 01.3 -0.5
HAU LR LR
comp=Z,250nm,22.3s,MS5.0
MEZF Maizieres J'vi 149.54 338 *e*PKP1 PKPbc 08 44 01.9 0.0
comp=Z,213nm,1.1s
LOMF Lomont 149.85 335 PKP PKPbc 08 44 03.4 +0.7
AQU L'Aquila 150.24 321 ⇓PKIKP PKPbc 08 44 05.5 +1.7
AQU L'Aquila 150.24 321 *e*PKPbc PKPbc 08 44 04.6 +0.8
AQU LR LR
comp=Z,385nm,20.0s,MS5.2
AQU L'Aquila 150.24 321 ⇓*i*P PKPbc 08 44 05.5 +1.7
CRE Caprese Michel 150.24 325 PKIKP PKPbc 08 44 03.6 -0.2
VLC Villacollemand 150.69 327 PFAKE 08 44 10.0 +11
VLC LR LR
comp=Z,324nm,20.0s,MS5.1
CABF La Chapelle 150.74 335 *e*PKP1 PKPbc 08 44 04.9 0.0
comp=Z,103nm,1.0s
FLN La Foliniere 150.93 345 *e*PKP1 PKPbc 08 44 04.3 -0.9
comp=Z,70nm,1.0s
FLN *e*MLR MLR
comp=Z,371nm,22.8s,MS4.8
FLN La Foliniere 150.93 345 *e*PKP PKPbc 08 44 04.3 -0.9
FLN LR LR
comp=Z,370nm,22.8s,MS5.1
LDF La Druitiere 151.00 345 *e*PKP1 PKPbc 08 44 04.3 -1.1
comp=Z,15nm,0.7s
LOR Lormes 151.01 338 *e*PKP1 PKPbc 08 44 04.9 -0.6
comp=Z,76nm,1.1s
LOR *e*MLR MLR
comp=Z,220nm,20.2s,MS4.7
SSF Saint Saulge 151.31 339 *e*PKP1 PKPbc 08 44 05.6 -0.6
comp=Z,72nm,1.0s
GRR Gorron 151.37 345 *e*PKP1 PKPbc 08 44 05.5 -0.8
comp=Z,67nm,1.1s
LPL La Plagne 151.37 333 *e*PKP1 PKPbc 08 44 06.4 0.0
comp=Z,46nm,0.8s
LPG La Plagne 151.37 333 *e*PKP1 PKPbc 08 44 06.5 +0.1
comp=Z,71nm,1.0s
SMF Signal de Mont 151.55 338 *e*PKP1 PKPbc 08 44 05.9 -0.9
comp=Z,45nm,1.1s
AVF Avril sur Loir 151.60 339 *e*PKP1 PKPbc 08 44 05.9 -1.0
comp=Z,20nm,0.9s
BNI Bardonecchia 151.76 332 *e*PKIKP PKPbc 08 44 08.0 +0.7
BNI MLR MLR
comp=Z,283nm,20.0s,MS5.1
SGMF Saint Gilles 151.86 348 *e*PKP1 PKPbc 08 44 06.2 -1.2
ROSF Rostrenen 151.92 349 *e*PKP1 PKPbc 08 44 06.1 -1.5
comp=Z,31nm,0.9s
BGF Bois d'Agland 151.97 339 *e*PKP1 PKPbc 08 44 07.0 -0.7
comp=Z,61nm,1.1s
MBDF Montbardon 151.97 332 *e*PKP1 PKPbc 08 44 07.2 -0.6
comp=Z,34nm,1.0s
SAOF Saorge 152.19 330 PKP PKPbc 08 44 06.8 -1.5
ORIF Oris-en-Rattie 152.21 333 *e*PKP1 PKPbc 08 44 07.9 -0.4
comp=Z,47nm,0.8s
ORIF *e*MLR MLR
comp=Z,313nm,21.5s,MS4.8
AUTN L'Aution 152.25 330 PKP PKPbc 08 44 08.4 0.0
TOUF Mont Tournerai 152.31 330 PKP PKPbc 08 44 08.9 +0.3
TCF Toulx Ste Croi 152.42 340 *e*PKP1 PKPbc 08 44 07.0 -1.7
comp=Z,38nm,1.0s
MVIF Mont Vial 152.45 330 PKP PKPbc 08 44 09.6 +0.7
SSB Saint Sauveur 152.45 335 PKP PKPbc 08 44 09.5 +0.6
SSB Saint Sauveur 152.45 335 *e*PKIKP PKPbc 08 44 08.8 -0.1
SSB *e* 08 44 19.9
SSB MLR MLR
comp=Z,215nm,19.0s,MS5.0
SSB Saint Sauveur 152.45 335 *e*PKPbc PKPbc 08 44 08.8 -0.1
SSB *e*PKPab PKPab 08 44 19.9 +0.8
SSB LR LR
comp=Z,215nm,19.0s,MS5.0
PYM Petit Puy Mans 152.62 338 PKP PKPbc 08 44 10.4 +1.2
CALN Calern 152.68 331 PKP PKPbc 08 44 09.8 +0.4
OG26 St.-Nazaire-De 152.72 334 PKP PKPbc 08 44 10.5 +1.0
VIVF Saint-Julien-l 152.75 335 *e*PKP1 PKPbc 08 44 09.1 -0.4
comp=Z,41nm,1.0s
MFF Saint Martin d 152.84 343 *e*PKP1 PKPbc 08 44 08.8 -0.9
comp=Z,49nm,1.2s
FRF La Foret Royal 152.94 331 *e*PKP1 PKPbc 08 44 09.2 -0.8
comp=Z,30nm,0.8s
WDD Wield Dalam 152.98 309 PFAKE 08 44 10.0 +7.0
WDD LR LR
comp=Z,217nm,19.0s,MS5.0
SMRF Simiane la Rot 153.09 332 *e*PKP1 PKPbc 08 44 10.1 -0.2
comp=Z,75nm,1.2s
LMR La Mourre 153.18 330 *e*PKP1 PKPbc 08 44 09.7 -0.8
comp=Z,40nm,1.1s
RJF Les Rejaudoux 153.51 339 *e*PKP1 PKPbc 08 44 10.6 -0.6
RJF *e*MLR MLR
comp=Z,352nm,18.5s,MS4.9
LASF Ste Croix 153.72 335 *e*PKP1 PKPbc 08 44 11.2 -0.5
VSL Villasalto 154.41 321 *e*PKPbc PKPbc 08 44 13.5 +0.2
VSL LR LR
comp=Z,177nm,20.0s,MS4.9
MTLF Montolieu 154.98 336 *e*PKP1 PKPbc 08 44 13.8 -0.6
KEST Kesra 156.69 314 PKPbc PKPdf 08 44 19.2 +11
comp=Z,4.4nm,1.0s,baz=187,slow=0.8,SNR=7.6
KEST PKPab PKPab 08 44 38.0 +0.4
comp=Z,5.4nm,0.8s,baz=338,slow=10,SNR=7.1
KEST Kesra 156.69 314 *e*PKPdf PKPdf 08 44 07.6 -0.6
PVRL Vila Real 159.51 352 *e*PKPab PKPab 08 44 49.3 -0.1
MVO Moncorvo 159.52 351 *e*PKPab PKPab 08 44 49.3 -0.2
PVIS Viseu 160.08 352 *e*PKPab PKPab 08 44 52.5 +0.6
ESLA Sonseca Array 160.31 343 PFAKE 08 44 20.0 +7.6
ESLA LR LR
comp=Z,2μm,22.0s
MTE Manteigas 160.35 352 *e*PKPab PKPab 08 44 53.9 +0.8
MTE Manteigas 160.35 352 PFAKE 08 44 20.0 +7.6
MTE LR LR
comp=Z,280nm,21.0s
PAB San Pablo 160.53 344 PFAKE 08 44 20.0 +7.4
PAB LR LR
comp=Z,330nm,22.0s
PCBR Castelo Branco 160.88 351 *e*PKPab PKPab 08 44 55.1 -0.3
LIS Lisbon 162.19 355 *e*P PKPdf 08 44 13.1 -1.3
LIS *e*PP PP 08 48 45.4 +1.2
EVO Evora 162.25 352 *e*PKIKP PKPdf 08 44 13.7 -0.7
EVO *e*MLR MLR
comp=Z,390nm,19.8s
EVOP Sao Brissos 162.26 352 *e*P PKPdf 08 44 14.3 -0.2
PBAR Barrancos 162.44 349 *e*PKPab PKPab 08 45 02.5 +0.2
PBEJ Beja 162.72 351 *e*PKPab PKPab 08 45 04.0 +0.5
MESJ Messejana 162.95 352 *e*P PKPdf 08 44 15.1 -0.1
MESJ *e*PP PP 08 48 49.0 +0.7
MESJ Messejana 162.95 352 *e*PP PP 08 48 49.0 +0.7
PCVE Castro Verde 163.13 351 *i*PKPab PKPab 08 45 05.3 0.0
PVAQ Vaqueiros 163.31 350 *e*PKPab PKPab 08 45 06.4 +0.3
MORF Marmelete 163.53 353 *e*PKPab PKPab 08 45 05.8 -1.3
SFS San Fernando 163.91 345 PFAKE 08 44 30.0 +14
SFS LR LR
comp=Z,760nm,20.0s
LIC Lamto 164.16 203 *e*P PKPab 08 45 10.9 +0.4
comp=Z,148nm,1.2s
LIC Lamto 164.16 203 *e*PKIKP PKPdf 08 44 16.1 -0.9
comp=Z,82nm,1.2s
LIC *e*MLR MLR
comp=Z,675nm,20.5s
LIC Lamto 164.16 203 *e*PKPdf PKPdf 08 44 16.1 -0.9
LIC LR LR
comp=Z,340nm,20.5s
KIC Kosan Boka 164.18 205 *e*P PKPab 08 45 09.8 -0.8
comp=Z,39nm,1.1s
TAM Tamanrasset 164.29 280 *e*PKIKP PKPdf 08 44 17.7 +0.8
TAM MLR MLR
comp=Z,386nm,22.0s
DBIC Dimbokro 164.51 205 PKP PKPdf 08 44 17.1 -0.2
comp=Z,11nm,0.8s,baz=93,slow=5.1,SNR=4.7
DBIC Dimbokro 164.51 205 PKP PKPdf 08 44 17.1 -0.2
DBIC LR LR
comp=Z,531nm,20.0s
TIC Toumodi 164.55 204 *e*P PKPab 08 45 12.5 +0.3
comp=Z,90nm,1.1s

BYKL ***09*** *08:24:47.9±0.3, 55°.41N×110°.38E*
MOS 09 08:24:48.2±1.9, 55°.40N×110°.39E, h9km, mb4.3/1, 10C-4D,
Error ellipse: s-maj=32.6km s-min=18.9km az=58.7,
Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NIZ	**Nizh Angarsk**	**0.61**	**308**	⇑*i*PG		Pg	08 24 59.1	-0.9
NIZ				*e*			08 25 07.9	
NIZ					pmax	pmax		
NIZ	comp=Z,166nm,0.5s				smax			
NIZ	comp=N,426nm,0.7s **Nizh Angarsk**	**0.61**	**308**	⇑*i*Pg		Pg	08 24 59.1	-0.9
NIZ				*e*Pb		Pb	08 25 04.8	+3.8
NIZ				*i*Sg		Sg	08 25 07.8	-0.2
NIZ					Pmax			
NIZ	comp=N,54nm,0.5s				Smax			
KMO	comp=N,428nm,0.6s **Kumora**	**0.67**	**43**	*e*PG		Pg	08 24 59.7	-1.4
KMO				*e*			08 25 07.8	
KMO					pmax	pmax		
KMO	comp=Z,36nm,0.3s				smax			
KMO	comp=N,698nm,0.9s **Kumora**	**0.67**	**43**	⇑*i*Pg		Pg	08 24 59.6	-1.5
KMO				⇑*i*Pb		Pb	08 25 02.0	0.0
KMO				*i*Sg		Sg	08 25 08.3	-1.6
KMO					max			
KMO	comp=N,114nm,0.3s				Smax			
YOA	comp=N,696nm,1.0s **Uoyan**	**1.05**	**45**	*e*Pg		Pg	08 25 07.2	-1.2
YOA				*e*			08 25 10.3	
YOA				*i*Sg		Sg	08 25 21.5	-0.6
YOA					max			
YOA	comp=N,185nm,0.2s				Smax			
SVKR	comp=N,910nm,0.9s **Severomuysk**	**1.93**	**67**	*e*Sg		Sg	08 25 49.6	-0.6
MXMB	**Maximikha**	**2.35**	**205**	*e*Pn		Pn	08 25 26.7	-0.2
MXMB				⇑*i*Pg		Pg	08 25 30.7	-2.5
MXMB				*e*			08 25 58.5	
MXMB				*i*Sg		Sg	08 26 02.7	-0.9
MXMB					Pmax			
MXMB	comp=N,74nm,1.0s				Smax			
OGRR	comp=N,728nm,0.8s **Ongureny**	**2.40**	**224**	*e*PN		Pn	08 25 29.1	+1.5
OGRR				*e*			08 25 32.3	
OGRR				*e*			08 26 02.5	
OGRR					pmax	pmax		
OGRR	comp=Z,37nm,0.8s				smax			
OGRR	comp=E,281nm,0.3s **Ongureny**	**2.40**	**224**	*e*Pn		Pn	08 25 26.6	-1.0
OGRR				⇑*e*Pn		Pn	08 25 29.1	+1.5
OGRR				⇑*i*Pg		Pg	08 25 30.6	-3.5
OGRR				*i*Sg		Sg	08 26 02.4	-2.8
OGRR					Pmax			
OGRR	comp=E,47nm,0.3s				Smax			
NLYR	comp=E,284nm,0.2s **Nelyaty**	**3.18**	**68**	⇓*i*Pn		Pn	08 25 39.0	+0.7
NLYR				*e*Pg		Pg	08 25 45.1	-4.0
NLYR				*e*Sn		Sn	08 26 17.0	+0.7
NLYR				*i*Sg		Sg	08 26 26.3	-4.0
NLYR					Pmax			
NLYR	comp=E,24nm,0.7s				Smax			
ZRHB	comp=E,147nm,1.3s **Zarechye**	**3.43**	**215**	*e*Pg		Pg	08 25 49.9	-4.0
ZRHB				*e*PgPg			08 25 52.4	
ZRHB				*e*			08 26 24.2	
ZRHB				*i*Sg		Sg	08 26 35.8	-2.6
ZRHB					max			
ZRHB	comp=E,84nm,0.9s				Smax			
TRG	comp=E,295nm,1.5s **Tyrgan**	**3.56**	**224**	⇑*i*Pn		Pn	08 25 44.6	+1.1
TRG				*e*Pg		Pg	08 25 51.2	-5.1
TRG				*e*Sn		Sn	08 26 26.4	+0.8
TRG				*e*Sg		Sg	08 26 37.7	-4.7
TRG				*e*SgSg			08 26 45.0	
TRG					Pmax			
TRG	comp=E,18nm,0.9s				Smax			
CIT	comp=E,106nm,0.7s **Chita**	**3.87**	**150**	*e*		Sn	08 26 28.2	-5.1
CIT				*e*Sg		Sg	08 26 48.6	-3.8
CIT					Smax			
UUDB	comp=E,185nm,0.3s **Ulan-Yde**	**3.89**	**206**	*e*Pg		Pg	08 25 57.7	-5.0
UUDB				*e*			08 26 26.4	
UUDB				*i*Sg		Sg	08 26 49.5	-3.6
UUDB					Pmax			
UUDB	comp=E,16nm,0.7s				Smax			
FFNB	comp=E,124nm,1.6s **Fofonovo**	**3.99**	**214**	*e*Pg		Pg	08 25 59.2	-5.4
FFNB				*e*			08 26 33.2	
FFNB				*e*Sg		Sg	08 26 50.6	-5.6
FFNB					Smax			
KAB	comp=E,208nm,0.9s **Kabansk**	**4.02**	**215**	*e*Sg		Sg	08 26 53.0	-4.3
KAB					Smax			
HRMR	comp=E,225nm,0.4s **Khuramsha**	**4.30**	**210**	Pn		Pn	08 25 53.7	0.0
HRMR				*e*			08 25 56.7	
HRMR				⇓*i*Pg		Pg	08 26 04.1	-6.4
HRMR				*e*			08 26 38.8	
HRMR				*i*Sg		Sg	08 27 00.5	-5.6
HRMR					Pmax			
HRMR	comp=E,25nm,0.7s				Smax			
IRK	comp=E,308nm,0.8s **Irkutsk**	**4.81**	**231**	*e*Sg		Sg	08 27 16.2	-6.3
IRK					Smax			
LSTR	comp=E,434nm,0.4s **Listvyanka**	**4.84**	**225**	*e*Pn		Pn	08 26 01.0	-0.2

LSTR			*e*			08 26 15.8	
LSTR			*e*			08 26 59.2	
LSTR			*e*Sg		Sg	08 27 17.0	-6.6
LSTR	comp=E,4.0nm,0.4s		max				
LSTR	comp=E,117nm,1.8s		Smax				
TLY	**Talaya**	**5.48 230**	*e*PN		Pn	08 26 09.8	-0.1
TLY			*e*			08 26 25.3	
TLY			*e*S		Sn	08 27 10.0	-3.0
TLY	**Talaya**	**5.48 230**	*e*Pn		Pn	08 26 09.9	0.0
TLY			*e*Pg		Pg	08 26 25.4	-7.7
TLY			*i* Sn		Sn	08 27 12.3	-0.7
TLY			*e*Sg		Sg	08 27 35.8	-8.2
TLY	comp=E,9.0nm,0.7s		Pmax				
TLY	comp=E,75nm,1.4s		Smax				
TUP	**Tupik**	**5.60 96**	*e*PN		Pn	08 26 11.7	+0.1
TUP			*e*			08 26 28.5	
TUP			*e*			08 27 41.5	
TUP			pmax	pmax			
TUP	comp=Z,6.0nm,0.6s		smax				
TUP	comp=N,76nm,0.9s **Tupik**	**5.60 96**	⇑*i*Pn		Pn	08 26 11.4	-0.2
TUP			⇓*i*Pn		Pn	08 26 20.3	+8.7
TUP			*e*Pg		Pg	08 26 27.2	-8.2
TUP			*e*			08 27 04.4	
TUP			*e*Sn		Sn	08 27 13.7	-2.3
TUP			*i* Sg		Sg	08 27 41.4	-6.5
TUP	comp=N,7.0nm,0.9s		Pmax				
TUP	comp=N,75nm,1.0s		Smax				
KPC	**Khapcheranga**	**5.83 167**	*e*PN		Pn	08 26 14.2	-0.6
KPC			⇓*e*Pn		Pn	08 26 23.0	+8.2
KPC			*e*Pg		Pg	08 26 32.5	-7.3
KPC			*e*Sn		Sn	08 27 18.1	-3.6
KPC			*e*			08 27 33.6	
KPC			*e*Sg		Sg	08 27 47.7	-7.6
KPC	comp=N,6.0nm,0.6s		Pmax				
KPC	comp=N,50nm,1.4s		Smax				
ARS	**Arshan**	**5.88 237**	*e*PN		Pg	08 26 34.5	-6.2
ARS			*e*			08 27 49.7	
ARS			pmax	pmax			
ARS	comp=Z,19nm,0.3s		smax				
ORL	comp=E,208nm,0.5s **Orlik**	**6.87 250**	*e*PN		Pn	08 26 30.2	+1.3
ORL			*e*			08 26 52.2	
ORL			*e*			08 28 21.0	
ORL			smax				
ORL	comp=N,78nm,1.7s **Orlik**	**6.87 250**	⇑*i*Pn		Pn	08 26 30.6	+1.7
ORL			*e*			08 26 40.4	
ORL			*i* Sn		Sn	08 27 46.8	-0.3
ORL			*i* Sg		Sg	08 28 21.1	-7.3
ORL	comp=N,19nm,1.4s		max				
ORL	comp=N,78nm,1.5s		Smax				
TDJR	**Todzha**	**8.96 256**	*e*Pn		Pn	08 26 59.3	+1.7
TDJR			*e*Pg		Pn	08 27 28.1	+31
TDJR			*e*Sg		Sn	08 29 23.3	+45

*IDC **09** 08:25:57.2±2.6, 19°.66S×70°.86W, h0km, mb1 3.9/3, mb1mx3.7/17, mbtmp3.8/3, ML4.1/3, Error ellipse: s-maj=50.8km s-min=27.7km az=126.0*
*GUC **09** 08:26:00.3±0.5, 19°.58S×70°.81W, h34km±4km, ML4.1*
ISC 09 08:25:56.0±1.9, **19°.58S**±0°.05×**70°.97W**±0°.09, **h1**km±8km, **n9,** σ1°**07/14, 1C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.80**	**91**	⇓*i*P	**Pg**	**08 26 12.6**	**+1.3**
PSGC				*i* S	**Sg**	**08 26 21.9**	**+0.2**
PSGC				AML	AML	08 26 22.9	
	comp=N,6μm,0.4s						
HMBC	**Humberston**	**1.23**	**124**	⇓*i*P	**Pg**	**08 26 20.2**	**+0.5**
HMBC				*i* S	**Sg**	**08 26 35.6**	**0.0**
HMBC				AML	AML	08 26 39.4	
	comp=E,9μm,0.5s						
MNMC	**Miæe Miæ**	**1.37**	**71**	⇓*i*P	**Pn**	**08 26 22.4**	**+0.1**
MNMC				*i* S	**Sg**	**08 26 39.1**	**-1.0**
MNMC				AML	AML	08 26 44.1	
	comp=N,16μm,0.6s						
PB01	**Plate Boundary**	**2.02**	**137**	⇑*i*P	**Pn**	**08 26 32.0**	**+0.9**
PB01				*i* S	**Sn**	**08 26 55.9**	**-1.1**
PB01				AML	AML	08 27 02.0	
	comp=N,3μm,0.3s						
PB04	**Plate Boundary**	**3.01**	**153**	*e*P	**Pn**	**08 26 43.1**	**-1.7**
PB04				AML	AML	08 27 34.9	
	comp=N,1μm,0.7s						
LPAZ	**La Paz**	**4.25**	**40**	Pn	**Pn**	**08 27 04.9**	**+3.1**
	comp=N,3.1nm,0.3s,baz=212,slow=6.8,SNR=35						
LPAZ				Pg	**Pg**	**08 27 16.1**	**-1.3**
	comp=N,3.1nm,0.3s,baz=208,slow=14,SNR=16						
LPAZ				Lg		08 28 11.6	
	comp=N,1.4nm,0.3s,baz=74,slow=23,SNR=1.2						
SIV	**San Ignacio**	**10.08**	**71**	Pn	**Pn**	**08 28 20.9**	**-1.1**
	comp=N,1.5nm,0.3s,baz=278,slow=10,SNR=21						
SIV				Sn	**Sn**	**08 30 16.4**	**+0.7**
	comp=N,0.2nm,0.3s,baz=306,slow=16,SNR=3.3						
CPUP	**Villa Florida**	**14.24**	**121**	Pn	**Pn**	**08 29 19.9**	**+1.1**
	comp=N,0.3nm,0.3s,baz=290,slow=15,SNR=5.3						
MKAR	**Makanchi Array**	**145.15**	**33**	PKPbc	PKPbc	08 45 35.1	+0.4
	comp=N,1.2nm,0.7s,baz=323,slow=3.1,SNR=8.7						

*IDC **09** 08:32:24.8±1.6, 22°.17S×179°.58W, h576km±17km, mb3.7/13, mb1 3.9/14, mb1mx3.8/19, mbtmp3.7/14, Error ellipse: s-maj=15.3km s-min=13.1km az=143.0*
*ISCJB **09** 08:32:25.0±1.0, 22°.23S±0°.07×179°.6W±0°.1, h595km±12km, mb4.3/18, Error ellipse: s-maj=14.9km s-min=11.1km az=8.8*
*NEIC **09** 08:32:25.2±0.9, 22°.19S×179°.58W, h589km±9km, mb4.6/2, Error ellipse: s-maj=12.3km s-min=10.6km az=116.0*
ISC 09 08:32:25.8±1.1, **22°.28S**±0°.08×**179°.6W**±0°.1, **h591**km±12km, **n49,** σ0°**96/39, mb4.3**/18, **2C-3D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.04**	**333**	*e*P	**P**	**08 33 57.4**	**-1.2**
NOUC	**Port Laguerre**	**13.09**	**268**	*e*P	**P**	**08 35 16.8**	**+1.3**
URZ	**Urewera**	**16.19**	**189**	P	**P**	**08 35 43.5**	**-1.5**
	2.3nm,0.3s,baz=357,slow=7.0,SNR=13						
URZ				S	**S**	**08 38 25.7**	**-1.6**
	0.9nm,0.3s,baz=277,slow=24,SNR=7.0						
RPZ	**Rata Peaks**	**22.75**	**198**	*e*P	**P**	**08 36 44.0**	**-0.2**
ARMA	**Armidale**	**27.00**	**246**	*e*P	**P**	**08 37 23.0**	**+1.0**
CNB	**Canberra Magne**	**30.03**	**237**	*e*P	**P**	**08 37 49.8**	**+1.6**
CTA	**Charters Tower**	**31.90**	**267**	*e*P	**P**	**08 38 04.6**	**+0.3**
	13nm,0.3s,mb5.0						
CTA	**Charters Tower**	**31.90**	**267**	P	**P**	**08 38 04.8**	**+0.4**
	24nm,0.5s,mb5.1,baz=96,slow=11,SNR=41						
CTAO	**Charters Tower**	**31.90**	**267**	*e*P	**P**	**08 38 03.9**	**-0.5**
TOO	**Toolangi**	**33.68**	**235**	*e*P	**P**	**08 38 20.0**	**+0.9**
STKA	**Stephens Creek**	**35.72**	**246**	⇓*i*P	**P**	**08 38 37.0**	**+0.9**
	12nm,0.6s,mb4.6						
STKA	**Stephens Creek**	**35.72**	**246**	P	**P**	**08 38 37.0**	**+1.0**
	14nm,0.5s,mb4.7,baz=89,slow=9.0,SNR=38						
ASAR	**Alice Springs**	**42.71**	**259**	P	**P**	**08 39 32.4**	**+0.1**
	29nm,0.8s,mb4.9,baz=99,slow=7.9,SNR=138						
ASAR				ScP	ScP	08 44 09.1	+3.6
	0.8nm,0.8s,baz=102,slow=4.6,SNR=4.0						
ASAR				S	**S**	**08 45 12.7**	**-1.5**
	1.1nm,0.8s,baz=90,slow=18,SNR=4.8						
ASAR	**Alice Springs**	**42.71**	**259**	P	**P**	**08 39 32.4**	**+0.1**
ASAR				ScP	ScP	08 44 09.1	+3.6
ASAR				S	**S**	**08 45 12.7**	**-1.5**
WRAB	**Tennant Creek**	**42.93**	**264**	*e*P	**P**	**08 39 32.9**	**-1.1**
WRA	**Warramunga Arr**	**42.94**	**264**	P	**P**	**08 39 33.5**	**-0.6**
	9.8nm,0.3s,mb4.8,baz=93,slow=8.0,SNR=297						
WRA				ScP	ScP	08 44 10.0	+3.5
	3.0nm,1.0s,baz=100,slow=4.0,SNR=5.9						
WRA	**Warramunga Arr**	**42.94**	**264**	P	**P**	**08 39 33.5**	**-0.6**
WRA				ScP	ScP	08 44 10.0	+3.5
KAKA	**Kakadu**	**46.58**	**273**	*e*P	**P**	**08 40 02.4**	**+0.4**
	10nm,0.4s,mb4.7						

FORT	**Forrest**	**47.26**	**248**	*e*P	**P**	**08 40 06.8**	**-0.1**
	35nm,0.6s,mb5.1						
FITZ	**Fitzroy Crossi**	**51.37**	**264**	*e*P	**P**	**08 40 37.1**	**-0.1**
	29nm,1.6s,mb4.5						
FITZ	**Fitzroy Crossi**	**51.37**	**264**	P	**P**	**08 40 37.4**	**+0.2**
	5.5nm,0.3s,mb4.5,baz=43,slow=5.2,SNR=23						
KLBR	**Kellerberrin**	**55.99**	**246**	*e*P	**P**	**08 41 09.4**	**-0.2**
	12nm,0.8s,mb4.2						
MBWA	**Marble Bar**	**56.06**	**259**	*e*P	**P**	**08 41 09.8**	**-0.4**
MBWA	**Marble Bar**	**56.06**	**259**	*e*P	**P**	**08 41 09.5**	**-0.7**
	22nm,0.7s,mb4.5						
MORW	**Morawa**	**57.81**	**249**	*e*P	**P**	**08 41 21.9**	**-0.2**
QSPA	**South Pole Qui**	**67.80**	**180**	P	**P**	**08 42 27.0**	**+1.8**
	8.9nm,0.8s,mb4.2,baz=12,slow=0.5,SNR=43						
MJAR	**Matsushiro Arr**	**70.79**	**325**	P	**P**	**08 42 43.1**	**-0.6**
	2.8nm,0.6s,mb4.0,baz=161,slow=6.1,SNR=10						
TPUB	**Ta-pu**	**73.73**	**304**	*e*P	**P**	**08 42 59.4**	**-1.5**
ASAJ	**Asahikawa**	**74.60**	**333**	P	**P**	**08 43 06.5**	**+1.2**
	4.4nm,0.7s,mb4.1,baz=233,slow=9.3,SNR=8.7						
KSRS	**Korea Array**	**77.26**	**320**	P	**P**	**08 43 20.8**	**+0.7**
	1.3nm,0.6s,mb3.5,baz=135,slow=5.8,SNR=6.9						
PETK	**Petropavlovsk-**	**77.62**	**346**	P	**P**	**08 43 20.4**	**-1.3**
	6.9nm,0.7s,mb4.2,baz=127,slow=7.1,SNR=14						
NVAR	**Mina Array Bea**	**83.31**	**44**	P	**P**	**08 43 52.1**	**+0.6**
	0.7nm,0.9s,mb3.2,baz=214,slow=10,SNR=3.5						
PLCA	**Paso Flores**	**89.11**	**134**	P	**P**	**08 44 20.3**	**+1.1**
	1.0nm,0.9s,mb3.6,baz=203,slow=5.0,SNR=4.4						
PLCA	**Paso Flores**	**89.11**	**134**	P	**P**	**08 44 20.3**	**+1.1**
TXAR	**Lajitas Array**	**89.24**	**58**	P	**P**	**08 44 19.6**	**-0.3**
	0.8nm,0.8s,mb3.6,baz=218,slow=6.2,SNR=6.0						
CHTO	**Chiang Mai**	**89.48**	**290**	*e*P	**P**	**08 44 21.0**	**-0.2**
	7.8nm,0.8s,mb4.6						
MKAR	**Makanchi Array**	**111.34**	**313**	PKiKP	PKiKP	08 49 52.1	-1.2
	0.3nm,0.5s,baz=199,slow=1.9,SNR=3.7						
BVAR	**Borovoye Array**	**119.48**	**319**	PKP	PKPdf	08 50 07.7	-1.0
	1.4nm,0.4s,baz=110,slow=2.7,SNR=6.4						
AKTK	**Aktyubinsk**	**127.39**	**317**	PKP	PKPdf	08 50 24.1	+0.1
AKTO	**Aktyubinsk**	**127.39**	**317**	PKP	PKPdf	08 50 24.1	+0.1
	0.6nm,0.6s,baz=47,slow=22,SNR=3.9						
ARCES	**ARCESS Array B**	**130.38**	**349**	PKP	PKPdf	08 50 28.0	-1.1
	0.8nm,0.5s,baz=78,slow=1.7,SNR=9.7						
FINES	**FINESS Array B**	**137.03**	**342**	PKP	PKPdf	08 50 40.9	-0.9
	0.7nm,0.4s,baz=103,slow=6.1,SNR=4.4						
FINES				SKPbc	SKPbc	08 53 20.4	+0.5
	0.5nm,0.4s,baz=5.4,slow=4.0,SNR=3.7						
NOA	**NORSAR Array B**	**140.54**	**352**	SKPbc	SKPbc	08 53 30.6	+1.1
	0.9nm,0.7s,baz=14,slow=4.2,SNR=4.5						
AKASG	**Malin Array Be**	**143.81**	**329**	PKP	PKPdf	08 50 52.2	-2.0
	4.3nm,0.4s,baz=39,slow=4.6,SNR=29						
AKASG	**Malin Array Be**	**143.81**	**329**	PKP	PKPdf	08 50 52.2	-2.0
BRTR	**Keskin Array B**	**146.89**	**309**	PKPbc	PKPbc	08 51 02.0	-0.8
	1.9nm,0.5s,baz=133,slow=4.1,SNR=9.0						
MMAI	**Mount Meron Ar**	**147.36**	**297**	PKPbc	PKPbc	08 51 05.0	+0.8
	4.0nm,0.4s,baz=69,slow=4.6,SNR=7.7						
CLL	**Collm**	**149.41**	**344**	⇓*i*PKP	PKPbc	08 51 08.4	-0.3
CLL				⇑*i*PKP	PKPab	08 51 15.5	-0.6
CLL	**Collm**	**149.41**	**344**	⇓*i*PKPbc	PKPbc	08 51 08.4	-0.3
	comp=Z,11nm,0.7s						
CLL				⇑*i*PKPab	PKPab	08 51 15.5	-0.6
	comp=Z,8.0nm,0.7s						
CLL				*e*pPKPbc	pPKPbc	08 53 22.0	-2.3

*ISCJB **09** 08:42:43.6±1.4, 6°.65S±0°.08×128°.2E±0°.1, h275km±14km, mb3.8/8, Error ellipse: s-maj=20.0km s-min=10.6km az=158.6*
*NEIC **09** 08:42:46.6±1.3, 6°.71S×128°.21E, h289km±13km, mb4.3/4, Error ellipse: s-maj=13.0km s-min=10.5km az=225.0*
*IDC **09** 08:42:47.5±3.1, 6°.79S×128°.11E, h300km±33km, mb3.6/8, mb1 3.7/11, mb1mx3.5/20, mbtmp3.6/11, Error ellipse: s-maj=36.6km s-min=11.3km az=68.0*
ISC 09 08:42:46.7±1.2, **6°.77S**±0°.07×**128°.3E**±0°.1, **h290**km±13km, **n20,** σ0°**93/23, mb3.8/8, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**7.18**	**146**	*e*Pn	**Pn**	**08 44 31.1**	**+0.9**
	59nm,0.6s						
KAKA				*e*Sn	**S**	**08 45 51.4**	**-2.4**
FITZ	**Fitzroy Crossi**	**11.56**	**193**	P	**Pn**	**08 45 23.6**	**-0.4**
	2.3nm,0.3s,baz=37,slow=9.1,SNR=41						
FITZ				S	**S**	**08 47 39.3**	**+6.2**
	1.1nm,0.3s,baz=250,slow=5.2,SNR=3.7						
WRAB	**Tennant Creek**	**14.35**	**156**	*e*P	**Pn**	**08 45 57.5**	**-0.3**
	4.6nm,0.6s						
WRA	**Warramunga Arr**	**14.35**	**156**	P	**Pn**	**08 45 57.6**	**-0.3**
	1.0nm,0.3s,baz=337,slow=12,SNR=21						
WRA				S	**S**	**08 48 34.4**	**-1.0**
	0.4nm,0.3s,baz=338,slow=21,SNR=5.7						
COEN	**Coen**	**16.28**	**117**	*e*P	**P**	**08 46 19.0**	**+0.5**
	202nm,0.4s						
MBWA	**Marble Bar**	**16.53**	**209**	*e*P	**P**	**08 46 22.1**	**+1.0**
	6.3nm,0.4s						
ASAR	**Alice Springs**	**17.64**	**163**	P	**P**	**08 46 34.9**	**+1.7**
	3.2nm,0.3s,baz=343,slow=11,SNR=227						
ASAR				S	**S**	**08 49 40.6**	**-0.6**
	baz=352,slow=26,SNR=5.5						
CTA	**Charters Tower**	**21.89**	**129**	P	**P**	**08 47 18.0**	**+1.4**
	6.1nm,0.8s,mb4.0,baz=192,slow=2.7,SNR=5.1						
CTA	**Charters Tower**	**21.89**	**129**	P	**P**	**08 47 18.0**	**+1.4**
CTAO	**Charters Tower**	**21.89**	**129**	*e*P	**P**	**08 47 18.0**	**+1.3**
	5.4nm,0.6s,mb4.0						
STKA	**Stephens Creek**	**27.90**	**155**	P	**P**	**08 48 10.8**	**+0.4**
	2.3nm,0.6s,mb3.8,baz=330,slow=17,SNR=7.1						
KSRS	**Korea Array**	**43.99**	**360**	P	**P**	**08 50 25.1**	**-0.9**
	1.3nm,0.3s,mb3.6,baz=178,slow=9.6,SNR=7.6						
RPZ	**Rata Peaks**	**52.46**	**142**	P	**P**	**08 51 31.5**	**+1.2**
	4.7nm,0.6s,mb4.0,baz=300,slow=0.3,SNR=3.5						
RPZ	**Rata Peaks**	**52.46**	**142**	P	**P**	**08 51 31.5**	**+1.2**
SONM	**Songino Array**	**57.70**	**343**	P	**P**	**08 52 07.3**	**-0.1**
	1.3nm,0.7s,mb3.5,baz=152,slow=6.6,SNR=5.0						
PAF	**Port-aux-Franc**	**64.40**	**218**	P	**P**	**08 52 52.2**	**-0.1**
MKAR	**Makanchi Array**	**67.11**	**328**	P	**P**	**08 53 09.1**	**-0.3**
	2.2nm,0.6s,mb4.1,baz=123,slow=8.0,SNR=18						
ZALV	**Zalesovo Beam**	**70.64**	**334**	P	**P**	**08 53 29.8**	**-1.1**
	1.4nm,0.5s,mb3.9,baz=132,slow=2.2,SNR=4.8						
QSPA	**South Pole Qui**	**83.20**	**180**	P	**P**	**08 54 40.0**	**-0.3**
	0.8nm,0.6s,mb3.7,baz=79,slow=1.7,SNR=7.9						
CPUP	**Villa Florida**	**146.65**	**171**	PKPbc	PKPbc	09 01 55.4	+0.2
	0.2nm,0.3s,baz=157,slow=10,SNR=2.8						

*ISCJB **09** 08:52:38.6±0.7, 7°.02S±0°.08×71°.67W±0°.09, h538km±11km, mb3.9/44, Error ellipse: s-maj=16.3km s-min=7.3km az=140.4*
*NEIC **09** 08:52:38.5±0.5, 7°.01S×71°.62W, h521km±7km, mb4.0/36, Error ellipse: s-maj=12.0km s-min=6.2km az=53.0*
*IDC **09** 08:52:39.7±1.0, 7°.26S×71°.79W, h548km±11km, mb3.3/10, mb1 3.6/14, mb1mx3.4/21, mbtmp3.4/14, Error ellipse: s-maj=18.2km s-min=13.0km az=48.0*
ISC 09 08:52:38.6±0.6, **6°.99S**±0°.07×**71°.62W**±0°.08, **h517**km±10km, **n67,** σ0°**78/67, mb3.9/44, Western Brazil**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**6.72**	**268**	P	**P**	**08 54 24.5**	**+1.7**
	4.3nm,0.3s,baz=118,slow=6.5,SNR=27						
ATAH				S	**S**	**08 55 47.5**	**-0.4**
	1.9nm,0.3s,baz=162,slow=17,SNR=4.4						
NNA	**Nana**	**7.15**	**226**	P	**P**	**08 54 26.1**	**-0.8**
	4.9nm,0.3s,baz=45,slow=11,SNR=14						
NNA				S	**S**	**08 55 55.3**	**-0.4**
	18nm,0.3s,baz=163,slow=20,SNR=6.4						
NNA	**Nana**	**7.15**	**226**	*e*Pn	**P**	**08 54 26.1**	**-0.9**
NNA				*e*Sn	**S**	**08 55 55.0**	**-0.7**
LPAZ	**La Paz**	**9.85**	**160**	P	**P**	**08 54 55.3**	**+0.7**
	0.8nm,0.3s,baz=328,slow=10.0,SNR=48						
LPAZ				S	**S**	**08 56 42.8**	**-3.6**
	baz=185,slow=22,SNR=2.1						
LPAZ	**La Paz**	**9.85**	**160**	*e*Pn	**P**	**08 54 55.1**	**+0.5**
LPAZ				*e*Sn	**S**	**08 56 46.5**	**+0.1**
OTAV	**Otavalo**	**9.90**	**316**	*e*Pn	**P**	**08 54 55.9**	**+0.7**
OTAV				*e*Sn	**S**	**08 56 46.7**	**-0.7**
SIV	**San Ignacio**	**13.66**	**132**	P	**P**	**08 55 35.3**	**+0.7**
	5.1nm,0.3s,baz=316,slow=10,SNR=128						
SIV				S	**S**	**08 57 59.8**	**0.0**
	0.1nm,0.3s,baz=58,slow=22,SNR=3.3						
SDV	**Santo Domingo**	**15.80**	**4**	*e*Pn	**P**	**08 55 57.2**	**+0.2**
	6.1nm,0.3s						
APG	**El Apazote**	**28.75**	**320**	P	**P**	**08 57 55.3**	**+1.1**
	1.0nm,0.4s,mb3.8,baz=278,slow=16,SNR=4.8						
TRQA	**Tornquist**	**32.14**	**166**	P	**P**	**08 58 21.8**	**-1.4**
GOGA	**Godfrey**	**41.72**	**345**	*e*P	**P**	**08 59 41.6**	**-0.4**
	6.7nm,0.5s,mb4.4						
SWET	**Sewanee**	**44.10**	**343**	*e*P	**P**	**08 59 59.6**	**-1.0**

WVT	**Waverly**	**45.52**	**342**	*e*P	**P**	**09 00 09.7**	**-1.9**
	3.8nm,0.5s,mb4.2						
WCI	**Wyandotte Cave**	**47.02**	**344**	*e*P	**P**	**09 00 21.8**	**-1.1**
	5.7nm,0.5s,mb4.4						
SIUC	**Southern Illin**	**47.41**	**341**	*e*P	**P**	**09 00 24.8**	**-1.0**
	8.8nm,0.6s,mb4.5						
TXAR	**Lajitas Array**	**47.49**	**321**	P	**P**	**09 00 26.6**	**+0.1**
	0.9nm,0.6s,mb3.5,baz=136,slow=8.4,SNR=14						
TXAR				PcP	PcP	09 01 46.0	-0.7
	0.3nm,0.6s,baz=149,slow=5.0,SNR=4.9						
CCM	**Cathedral Cave**	**48.40**	**339**	*e*P	**P**	**09 00 31.5**	**-1.8**
	5.6nm,0.8s,mb4.2						
WMOK	**Wichita Mounta**	**48.79**	**330**	*e*P	**P**	**09 00 35.9**	**-0.4**
	2.8nm,0.8s,mb3.8						
GDL2	**Guadalupe Moun**	**49.93**	**323**	*e*P	**P**	**09 00 45.5**	**+0.8**
MNTX	**Cornudas Mount**	**50.19**	**322**	*e*P	**P**	**09 00 45.7**	**-0.9**
	1.9nm,0.8s,mb3.6						
CPRX	**Cap Rock**	**50.23**	**324**	*e*P	**P**	**09 00 47.1**	**+0.2**
	3.4nm,0.9s,mb3.8						
AMTX	**Amarillo**	**50.40**	**328**	*e*P	**P**	**09 00 47.5**	**-0.6**
	5.3nm,0.6s,mb4.2						
ANMO	**Albuquerque**	**53.11**	**324**	*e*P	**P**	**09 01 07.0**	**-0.6**
	1.5nm,0.6s,mb3.5						
SDCO	**Great Sand Dun**	**54.58**	**327**	*e*P	**P**	**09 01 18.8**	**+0.8**
	3.1nm,0.6s,mb3.7						
MVCO	**Mesa Verde**	**55.87**	**325**	*e*P	**P**	**09 01 27.6**	**+0.6**
	5.9nm,0.6s,mb4.0						
ISCO	**Idaho Springs**	**56.15**	**329**	*e*P	**P**	**09 01 29.7**	**+0.7**
	4.0nm,0.8s,mb3.7						
SMCO	**Snowmass**	**56.41**	**327**	*e*P	**P**	**09 01 31.9**	**+1.2**
	2.8nm,0.8s,mb3.5						
WUAZ	**Wupatki**	**56.45**	**321**	*e*P	**P**	**09 01 31.8**	**+0.7**
	5.8nm,0.8s,mb3.9						
SRU	**San Rafael**	**58.33**	**325**	*e*P	**P**	**09 01 44.0**	**+0.2**
	4.6nm,0.7s,mb3.8						
MSU	**Marysvale**	**58.89**	**323**	*e*P	**P**	**09 01 48.5**	**+0.9**
	4.3nm,0.8s,mb3.7						
CCUT	**Cedar City**	**58.98**	**322**	*e*P	**P**	**09 01 49.4**	**+1.1**
	19nm,2.4s,mb3.9						
AGMN	**Agassiz Nation**	**59.04**	**341**	*e*P	**P**	**09 01 47.4**	**-1.1**
	7.3nm,0.7s,mb4.0						
DAU	**Daniels Canyon**	**59.63**	**326**	*e*P	**P**	**09 01 53.5**	**+1.0**
JLU	**Jordanelle**	**59.86**	**326**	*e*P	**P**	**09 01 54.1**	**0.0**
	16nm,1.8s,mb4.1						
BW06	**Boulder Array**	**60.35**	**329**	*e*P	**P**	**09 01 57.2**	**0.0**
	7.0nm,1.4s,mb3.8						
PDAR	**Pinedale Array**	**60.35**	**329**	P	**P**	**09 01 57.1**	**-0.2**
	1.5nm,0.5s,mb3.5,baz=123,slow=9.3,SNR=25						
PDAR				PcP	PcP	09 02 34.5	-1.6
	0.7nm,0.5s,baz=134,slow=4.3,SNR=5.0						
DUG	**Dugway**	**60.37**	**325**	*e*P	**P**	**09 01 58.0**	**+0.6**
	4.2nm,0.8s,mb3.8						
HWUT	**Hardware Ranch**	**60.61**	**326**	*e*P	**P**	**09 01 58.8**	**-0.2**
	4.9nm,0.7s,mb4.0						
ULM	**Lac du Bonnet**	**60.77**	**342**	P	**P**	**09 01 58.5**	**-1.3**
	8.0nm,0.3s,mb4.5,baz=152,slow=6.7,SNR=8.3						
ULM				PcP	PcP	09 02 36.9	-0.7
	3.2nm,0.6s,baz=213,slow=5.0,SNR=2.9						
ULM	**Lac du Bonnet**	**60.77**	**342**	*e*P	**P**	**09 01 58.8**	**-1.1**
	9.6nm,0.9s,mb4.1						
REDW	**Red Top Meadow**	**61.44**	**328**	*e*P	**P**	**09 02 04.6**	**+0.1**
	18nm,2.0s,mb4.1						
SNOW	**Snow King Moun**	**61.46**	**328**	*e*P	**P**	**09 02 05.1**	**+0.5**
	2.6nm,0.6s,mb3.7						
LOHW	**Long Hollow**	**61.49**	**329**	*e*P	**P**	**09 02 05.2**	**+0.5**
	3.3nm,0.8s,mb3.7						
TPAW	**Teton Pass**	**61.58**	**328**	*e*P	**P**	**09 02 05.5**	**+0.1**
	2.3nm,0.8s,mb3.7						
RRI2	**Red Ridge**	**61.67**	**328**	*e*P	**P**	**09 02 06.7**	**+0.7**
	7.1nm,0.7s,mb4.2						
SCHQ	**Schefferville**	**61.72**	**3**	P	**P**	**09 02 06.0**	**-0.1**
	3.0nm,0.9s,mb3.7,baz=244,slow=14,SNR=3.8						
IMW	**Indian Meadow**	**61.86**	**329**	*e*P	**P**	**09 02 07.8**	**+0.6**
	4.0nm,0.9s,mb3.9						
NVAR	**Mina Array Bea**	**62.61**	**320**	P	**P**	**09 02 12.2**	**0.0**
	0.3nm,0.4s,mb3.0,baz=120,slow=7.1,SNR=6.3						
NVAR				PcP	PcP	09 02 44.0	-1.4
	0.5nm,0.5s,baz=123,slow=4.9,SNR=5.7						
BOZ	**Bozeman (W)**	**63.44**	**330**	*e*P	**P**	**09 02 17.3**	**0.0**
	4.5nm,1.3s,mb3.7						
HLID	**Hailey**	**63.48**	**327**	*e*P	**P**	**09 02 18.4**	**+0

n313, σ1$35/382, **mb4.3**/29, **MS3.2**/2, **20C-24D, Southern Greece**

Code	Station Name	Δ°	ΔZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.75**	**31**	*e*PN		**Pn**		**09 03 06.3**	**-0.4**
PYL				*e*SN		**Sn**		**09 03 17.7**	**+0.3**
PYL	**PYLOS**	**0.75**	**31**	P		**Pb**		**09 03 06.9**	**+1.0**
PYL				S		**Sb**		**09 03 16.5**	**+0.8**
PYL	**PYLOS**	**0.75**	**31**	*e*Pn		**Pn**		**09 03 06.3**	**-0.4**
PYL	**PYLOS**	**0.75**	**31**	P		**Pb**		**09 03 06.9**	**+1.0**
PYL				S		**Sb**		**09 03 16.5**	**+0.8**
PYL				*e*Sn		**Sn**		**09 03 17.7**	**+0.3**
ITM	**Ithomi**	**1.07**	**30**	P		**Pn**		**09 03 11.9**	**+0.8**
ITM				S		**Sb**		**09 03 25.6**	**+0.7**
ITM	**Ithomi**	**1.07**	**30**	*e*PN		**Pn**		**09 03 11.6**	**+0.5**
ITM				*e*SN		**Sn**		**09 03 27.4**	**+2.1**
ITM	**Ithomi**	**1.07**	**30**	P		**Pn**		**09 03 11.9**	**+0.8**
ITM				S		**Sb**		**09 03 25.6**	**+0.7**
ITM	**Ithomi**	**1.07**	**30**	*e*Pn		**Pn**		**09 03 11.6**	**+0.5**
ITM	**Ithomi**	**1.07**	**30**	P		**Pn**		**09 03 11.9**	**+0.8**
ITM				S		**Sb**		**09 03 25.6**	**+0.7**
ITM				*e*Sn		**Sn**		**09 03 27.4**	**+2.1**
VLI	**Veliai**	**1.43**	**71**	*e*Pn		**Pb**		**09 03 17.4**	**-0.1**
VLI				*e*Sn		**Sb**		**09 03 36.1**	**+0.8**
VLI	**Veliai**	**1.43**	**71**	*e*PN		**Pb**		**09 03 17.4**	**-0.1**
VLI				*e*SN		**Sb**		**09 03 36.1**	**+0.8**
VLI	**Veliai**	**1.43**	**71**	*e*Pn		**Pb**		**09 03 17.4**	**-0.1**
VLI				*e*Sn		**Sb**		**09 03 36.1**	**+0.8**
VLX	**Vlachokerasia**	**1.43**	**39**	*e*PN		**Pb**		**09 03 17.2**	**-0.3**
VLX	**Vlachokerasia**	**1.43**	**39**	P		**Pb**		**09 03 17.0**	**-0.5**
VLX				S		**Sn**		**09 03 34.0**	**-0.3**
VLX	**Vlachokerasia**	**1.43**	**39**	*e*Pn		**Pb**		**09 03 17.2**	**-0.3**
VLX				S		**Sn**		**09 03 34.0**	**-0.3**
KYTH	**Kithira**	**1.44**	**88**	*e*Pn		**Pb**		**09 03 17.8**	**+0.2**
KYTH	**Kithira**	**1.44**	**88**	*e*PN		**Pb**		**09 03 17.8**	**+0.2**
KYTH	**Kithira**	**1.44**	**88**	*e*Pn		**Pb**		**09 03 17.8**	**+0.2**
RLS	**Riolos of Patr**	**1.81**	**5**	P		**Pb**		**09 03 23.6**	**-0.3**
RLS	**Riolos of Patr**	**1.81**	**5**	P		**Pb**		**09 03 23.6**	**-0.3**
KFL	**Anninata**	**1.89**	**349**	P		**Pb**		**09 03 24.2**	**-1.1**
KFL				S		**Sb**		**09 03 47.5**	**-0.9**
KFL	**Anninata**	**1.89**	**349**	P		**Pb**		**09 03 24.2**	**-1.1**
KFL				S		**Sb**		**09 03 47.5**	**-0.9**
GUR	**Goura**	**1.89**	**27**	*e*PB		**Pb**		**09 03 24.4**	**-0.9**
GUR	**Goura**	**1.89**	**27**	P		**Pb**		**09 03 23.7**	**-1.6**
GUR				S		**Sn**		**09 03 45.9**	**+0.3**
GUR	**Goura**	**1.89**	**27**	P		**Pb**		**09 03 23.7**	**-1.6**
GUR	**Goura**	**1.89**	**27**	*e*Pb		**Pb**		**09 03 24.4**	**-0.9**
GUR				S		**Sn**		**09 03 45.9**	**+0.3**
VLS	**Valsamata**	**1.99**	**345**	P		**Pb**		**09 03 25.3**	**-1.7**
VLS				S		**Sb**		**09 03 49.7**	**-1.6**
VLS	**Valsamata**	**1.99**	**345**	*e*PN		**Pb**		**09 03 25.0**	**-2.0**
VLS	**Valsamata**	**1.99**	**345**	P		**Pb**		**09 03 25.3**	**-1.7**
VLS				S		**Sb**		**09 03 49.7**	**-1.6**
VLS	**Valsamata**	**1.99**	**345**	*e*Pn		**Pb**		**09 03 25.0**	**-2.0**
VLS	**Valsamata**	**1.99**	**345**	P		**Pb**		**09 03 25.3**	**-1.7**
VLS				S		**Sb**		**09 03 49.7**	**-1.6**
DID	**Didima**	**2.02**	**51**	*e*PN		**Pn**		**09 03 24.9**	**+0.7**
DID	**Didima**	**2.02**	**51**	P		**Pn**		**09 03 25.0**	**+0.8**
DID				S		**Sn**		**09 03 48.6**	**-0.2**
DID	**Didima**	**2.02**	**51**	*e*Pn		**Pn**		**09 03 24.9**	**+0.7**
DID				S		**Sn**		**09 03 48.6**	**-0.2**
LAKA	**Lakka**	**2.06**	**16**	P		**Pb**		**09 03 26.5**	**-1.8**
LAKA				S		**Sn**		**09 03 51.1**	**+1.3**
LAKA	**Lakka**	**2.06**	**16**	P		**Pb**		**09 03 26.5**	**-1.8**
LAKA				S		**Sn**		**09 03 51.1**	**+1.3**
TRIZ	**Trizonia**	**2.21**	**17**	P		**Pb**		**09 03 28.4**	**-2.3**
TRIZ	**Trizonia**	**2.21**	**17**	P		**Pb**		**09 03 28.4**	**-2.3**
EFP	**Efpalio**	**2.23**	**13**	*e*PB		**Pb**		**09 03 29.5**	**-1.6**
EFP	**Efpalio**	**2.23**	**13**	P		**Pb**		**09 03 28.9**	**-2.2**
EFP	**Efpalio**	**2.23**	**13**	P		**Pb**		**09 03 28.9**	**-2.2**
EFP	**Efpalio**	**2.23**	**13**	*e*Pb		**Pb**		**09 03 29.5**	**-1.6**
LTK	**Loutraki**	**2.23**	**37**	*e*PN		**Pn**		**09 03 27.6**	**+0.5**
LTK	**Loutraki**	**2.23**	**37**	P		**Pn**		**09 03 27.9**	**+0.8**
LTK				S		**Sn**		**09 03 54.5**	**+0.5**
LTK	**Loutraki**	**2.23**	**37**	*e*Pn		**Pn**		**09 03 27.6**	**+0.5**
LTK	**Loutraki**	**2.23**	**37**	P		**Pn**		**09 03 27.9**	**+0.8**
LTK				S		**Sn**		**09 03 54.5**	**+0.5**
KALE	**Kalithea**	**2.25**	**18**	P		**Pb**		**09 03 29.1**	**-2.3**
KALE				S		**Sn**		**09 03 55.2**	**+0.9**
KALE	**Kalithea**	**2.25**	**18**	P		**Pb**		**09 03 29.1**	**-2.3**
KALE				S		**Sn**		**09 03 55.2**	**+0.9**
NAIG	**Nisos Aigina**	**2.33**	**49**	*e*Pn		**Pn**		**09 03 29.3**	**+0.8**
NAIG	**Nisos Aigina**	**2.33**	**49**	*e*PN		**Pn**		**09 03 29.3**	**+0.8**
NAIG	**Nisos Aigina**	**2.33**	**49**	*e*Pn		**Pn**		**09 03 29.3**	**+0.8**
DSF	**Desfina**	**2.38**	**25**	P		**Pn**		**09 03 30.4**	**+1.3**
DSF				S		**Sn**		**09 03 57.6**	**0.0**
DSF	**Desfina**	**2.38**	**25**	P		**Pn**		**09 03 30.4**	**+1.3**
DSF				S		**Sn**		**09 03 57.6**	**0.0**
VAM	**Vamos**	**2.54**	**109**	P		**Pb**		**09 03 35.7**	**-0.7**
VAM	**Vamos**	**2.54**	**109**	P		**Pb**		**09 03 35.7**	**-0.7**
LKD2	**Lefkada island**	**2.57**	**350**	P		**Pn**		**09 03 33.4**	**+1.6**
LKD2	**Lefkada island**	**2.57**	**350**	P		**Pn**		**09 03 33.4**	**+1.6**
VLY	**Voula,Athens**	**2.58**	**51**	*e*Pn		**Pn**		**09 03 31.9**	**0.0**
VLY	**Voula,Athens**	**2.58**	**51**	*e*PN		**Pn**		**09 03 31.9**	**0.0**
VLY	**Voula,Athens**	**2.58**	**51**	*e*Pn		**Pn**		**09 03 31.9**	**0.0**
ATH	**Athens Observa**	**2.61**	**48**	P		**Pn**		**09 03 33.1**	**+0.8**
ATH				S		**Sn**		**09 04 03.4**	**+0.1**
ATH	**Athens Observa**	**2.61**	**48**	*e*PN		**Pn**		**09 03 32.7**	**+0.4**
ATH	**Athens Observa**	**2.61**	**48**	*e*Pn		**Pn**		**09 03 32.7**	**+0.4**
ATHU	**Athens Univers**	**2.65**	**49**	P		**Pn**		**09 03 33.1**	**+0.3**
ATHU				S		**Sn**		**09 04 03.4**	**-0.8**
ATHU	**Athens Univers**	**2.65**	**49**	P		**Pn**		**09 03 33.1**	**+0.3**
ATHU				S		**Sn**		**09 04 03.4**	**-0.8**
EVR	**Evrytania**	**2.69**	**9**	*e*Pb		**Pb**		**09 03 36.7**	**-2.3**
EVR	**Evrytania**	**2.69**	**9**	*e*PB		**Pb**		**09 03 36.7**	**-2.3**
EVR	**Evrytania**	**2.69**	**9**	*e*Pb		**Pb**		**09 03 36.7**	**-2.3**
PTL	**Penteli**	**2.75**	**49**	*e*Pn		**Pn**		**09 03 34.1**	**-0.1**
PTL	**Penteli**	**2.75**	**49**	*e*PN		**Pn**		**09 03 34.1**	**-0.1**
PTL	**Penteli**	**2.75**	**49**	*e*Pn		**Pn**		**09 03 34.1**	**-0.1**
LKR	**Lokris**	**2.77**	**30**	P		**Pn**		**09 03 35.1**	**+0.7**
LKR	**Lokris**	**2.77**	**30**	*e*PN		**Pn**		**09 03 35.0**	**+0.6**
LKR	**Lokris**	**2.77**	**30**	P		**Pn**		**09 03 35.1**	**+0.7**
LKR	**Lokris**	**2.77**	**30**	P		**Pn**		**09 03 35.1**	**+0.7**
ATAL	**Atalanti**	**2.81**	**30**	P		**Pn**		**09 03 36.1**	**+1.0**
ATAL				S		**Sn**		**09 04 08.0**	**-0.2**
ATAL	**Atalanti**	**2.81**	**30**	P		**Pn**		**09 03 36.1**	**+1.0**
ATAL				S		**Sn**		**09 04 08.0**	**-0.2**
AGG	**Agios Georgios**	**2.89**	**17**	P		**Pn**		**09 03 38.0**	**+1.8**
AGG				S		**Sn**		**09 04 10.9**	**+0.7**
AGG	**Agios Georgios**	**2.89**	**17**	P		**Pn**		**09 03 38.0**	**+1.8**
AGG				S		**Sn**		**09 04 10.9**	**+0.7**
AGG	**Agios Georgios**	**2.89**	**17**	P		**Pn**		**09 03 38.0**	**+1.8**
AGG				S		**Sn**		**09 04 10.9**	**+0.7**
IDI	**Anoyia**	**3.11**	**107**	P		**Pn**		**09 03 39.7**	**+0.5**
IDI	**Anoyia**	**3.11**	**107**	P		**Pn**		**09 03 39.7**	**+0.5**
THL	**Klokotos Trika**	**3.36**	**10**	*e*PN		**Pn**		**09 03 44.3**	**+1.7**
THL	**Klokotos Trika**	**3.36**	**10**	P		**Pn**		**09 03 44.5**	**+1.9**
THL				S		**Sn**		**09 04 22.5**	**+0.7**
THL	**Klokotos Trika**	**3.36**	**10**	*e*Pn		**Pn**		**09 03 44.3**	**+1.7**
THL				S		**Sn**		**09 04 22.5**	**+0.7**
JAN	**Janina**	**3.41**	**355**	*e*P		**Pn**		**09 03 45.5**	**+2.2**
JAN	**Janina**	**3.41**	**355**	*e*PN		**Pn**		**09 03 45.5**	**+2.2**
JAN	**Janina**	**3.41**	**355**	*e*Pn		**Pn**		**09 03 45.5**	**+2.2**
NEO	**Neokhori**	**3.42**	**27**	P		**Pn**		**09 03 46.3**	**+2.8**
NEO	**Neokhori**	**3.42**	**27**	P		**Pn**		**09 03 46.3**	**+2.8**
XOR	**Xorichti**	**3.46**	**26**	P		**Pn**		**09 03 45.5**	**+1.4**
XOR	**Xorichti**	**3.46**	**26**	P		**Pn**		**09 03 45.5**	**+1.4**
XOR	**Xorichti**	**3.46**	**26**	P		**Pn**		**09 03 45.5**	**+1.4**
APE	**Apeiranthos**	**3.53**	**75**	⇓*i*P		**Pn**		**09 03 45.1**	**+0.1**
APE	**Apeiranthos**	**3.53**	**75**	⇓*i*P		**Pn**		**09 03 45.1**	**+0.1**
AOS	**Alonnisos**	**3.58**	**35**	P		**Pn**		**09 03 46.8**	**+1.2**
AOS	**Alonnisos**	**3.58**	**35**	P		**Pn**		**09 03 46.8**	**+1.2**
KEK	**Kerkira**	**3.64**	**342**	*e*Pn		**Pn**		**09 03 48.3**	**+1.9**
KEK	**Kerkira**	**3.64**	**342**	*e*PN		**Pn**		**09 03 48.3**	**+1.9**
KEK	**Kerkira**	**3.64**	**342**	*e*Pn		**Pn**		**09 03 48.3**	**+1.9**
SRN	**Sarande**	**3.75**	**345**	*i* PN		**Pn**		**09 03 51.4**	**+3.4**
SRN				*i* SN		**Sn**		**09 04 25.9**	**-5.5**
SRN	**Sarande**	**3.75**	**345**	*i* Pn		**Pn**		**09 03 51.4**	**+3.4**
SRN				*i* Sn		**Sn**		**09 04 25.9**	**-5.5**
KZN	**Kozani**	**4.07**	**6**	P		**Pn**		**09 03 54.4**	**+2.1**
KZN	**Kozani**	**4.07**	**6**	P		**Pn**		**09 03 54.4**	**+2.1**
KZN	**Kozani**	**4.07**	**6**	P		**Pn**		**09 03 54.4**	**+2.1**
PAIG	**Paliouri**	**4.13**	**27**	P		**Pn**		**09 03 55.0**	**+1.7**
PAIG	**Paliouri**	**4.13**	**27**	P		**Pn**		**09 03 55.0**	**+1.7**
PAIG	**Paliouri**	**4.13**	**27**	P		**Pn**		**09 03 55.0**	**+1.7**
KBN	**Korca**	**4.38**	**355**	*i* PN		**Pn**		**09 03 56.7**	**+0.1**
KBN				*i* SN		Sn		09 04 22.1	-25
KBN	**Korca**	**4.38**	**355**	*i* Pn		**Pn**		**09 03 56.7**	**+0.1**
KBN				*i* Sn		Sn		09 04 22.1	-25
CHOS	**Chios island**	**4.38**	**60**	P		**Pn**		**09 03 57.4**	**+0.8**
CHOS	**Chios island**	**4.38**	**60**	P		**Pn**		**09 03 57.4**	**+0.8**
PLG	**Polygyros**	**4.46**	**22**	P		**Pn**		**09 03 58.5**	**+0.8**
PLG	**Polygyros**	**4.46**	**22**	P		**Pn**		**09 03 58.5**	**+0.8**
FNA	**Florina**	**4.52**	**1**	P		**Pn**		**09 04 00.6**	**+2.0**
FNA	**Florina**	**4.52**	**1**	P		**Pn**		**09 04 00.6**	**+2.0**
FNA	**Florina**	**4.52**	**1**	P		**Pn**		**09 04 00.6**	**+2.0**
HORT	**Hortiatis**	**4.57**	**18**	P		**Pn**		**09 04 01.3**	**+2.0**
HORT	**Hortiatis**	**4.57**	**18**	P		**Pn**		**09 04 01.3**	**+2.0**
HORT	**Hortiatis**	**4.57**	**18**	P		**Pn**		**09 04 01.3**	**+2.0**
OUR	**Ouranopolis**	**4.60**	**27**	P		**Pn**		**09 04 01.3**	**+1.6**
OUR	**Ouranopolis**	**4.60**	**27**	P		**Pn**		**09 04 01.3**	**+1.6**
OUR	**Ouranopolis**	**4.60**	**27**	P		**Pn**		**09 04 01.3**	**+1.6**
SMG	**Samos**	**4.70**	**70**	P		**Pn**		**09 04 03.3**	**+2.3**
SMG	**Samos**	**4.70**	**70**	P		**Pn**		**09 04 03.3**	**+2.3**
LTBQ	**Tobruq**	**4.74**	**151**	*i* P		**Pn**		**09 04 03.6**	**+2.0**
	SNR=76								
BIA	**Bitola**	**4.76**	**1**	*e*Pn		**Pn**		**09 04 03.0**	**+1.2**
BIA				*e*Sn		**Sn**		**09 04 53.6**	**-2.6**
SOH	**Sokhos**	**4.85**	**19**	P		**Pn**		**09 04 04.5**	**+1.4**
SOH	**Sokhos**	**4.85**	**19**	P		**Pn**		**09 04 04.5**	**+1.4**
SOH	**Sokhos**	**4.85**	**19**	P		**Pn**		**09 04 04.5**	**+1.4**
KARP	**Karpathos**	**4.85**	**97**	P		**Pn**		**09 04 04.9**	**+1.8**
KARP	**Karpathos**	**4.85**	**97**	P		**Pn**		**09 04 04.9**	**+1.8**
OHR	**Ohrid**	**4.86**	**356**	⇓*i*Pn		**Pn**		**09 04 04.4**	**+1.1**
OHR				*e*Sn		**Sn**		**09 04 56.5**	**-2.3**
OHR				*e*Lg				09 04 57.1	
	comp=E,93nm,0.6s								
OHR				*e*Lg				09 04 58.2	
	comp=N,80nm,0.8s								
KRUS	**Krusevo**	**5.11**	**360**	⇓*i*Pn		**Pn**		**09 04 07.1**	**+0.5**
KRUS				*e*Sn		**Sn**		**09 05 03.0**	**-1.9**
KRUS				*e*Lg				09 05 03.2	
	comp=E,10nm,0.3s								
KRUS				*e*Lg				09 05 06.2	
	comp=N,14nm,0.4s								
VAY	**Valandovo**	**5.16**	**11**	⇓*i*Pn		**Pn**		**09 04 08.3**	**+0.9**
VAY				*e*Sn		**Sn**		**09 05 04.7**	**-1.6**
VAY				*e*Lg				09 05 04.9	
	comp=E,52nm,0.9s								
VAY				*e*Lg				09 05 05.5	
	comp=N,153nm,1.8s								
TIR	**Tirane**	**5.20**	**348**	*e*P		**Pn**		**09 04 09.1**	**+1.2**
TIR				*e*				09 05 07.9	
TIR				pmax	pmax				
	comp=Z,48nm,0.5s								
TIR	**Tirane**	**5.20**	**348**	*e*Pn		**Pn**		**09 04 09.1**	**+1.3**
	comp=Z,48nm,0.5s								
TIR				*e*Sn		**Sn**		**09 05 07.9**	**+0.8**
TIR	**Tirane**	**5.20**	**348**	*e*P		**Pn**		**09 04 09.1**	**+1.2**
	comp=Z,48nm,0.5s								
TIR				*e*S		**Sn**		**09 05 07.9**	**+0.8**
TAR1	**Taranto**	**5.28**	**325**	*e*Pn		**Pn**		**09 04 06.7**	**-2.3**
KAVA	**Kavala**	**5.38**	**27**	P		**Pn**		**09 04 12.5**	**+2.2**
KAVA	**Kavala**	**5.38**	**27**	P		**Pn**		**09 04 12.5**	**+2.2**
LJBD	**Adjabya**	**5.40**	**190**	*i* P		**Pn**		**09 04 10.8**	**+0.1**
	SNR=70								
PHP	**Peshkopia**	**5.46**	**354**	*i* PN		**Pn**		**09 04 15.2**	**+3.8**
PHP	**Peshkopia**	**5.46**	**354**	*i* Pn		**Pn**		**09 04 15.2**	**+3.8**
WDD	**Wield Dalam**	**5.47**	**268**	*e*Pn		**Pn**		**09 04 13.3**	**+1.8**
	comp=Z,129nm,0.8s								
WDD				*e*Sn		**Sn**		**09 05 12.0**	**-1.7**
WDD	**Wield Dalam**	**5.47**	**268**	*e*Pn		**Pn**		**09 04 13.3**	**+1.7**
	comp=Z,129nm,0.8s								
NVR	**Nevrokopi**	**5.48**	**21**	P		**Pn**		**09 04 12.8**	**+1.1**
NVR	**Nevrokopi**	**5.48**	**21**	P		**Pn**		**09 04 12.8**	**+1.1**
VAE	**Valguarnera**	**5.62**	**285**	Pn		**Pn**		**09 04 17.5**	**+3.8**
	comp=Z,1.7nm,0.3s,baz=309,slow=4.5,SNR=5.2								
VAE				Sn		**Sn**		**09 05 19.5**	**+2.0**
	comp=Z,11nm,0.3s,baz=236,slow=8.6,SNR=3.6								
VAE	**Valguarnera**	**5.62**	**285**	Pn		**Pn**		**09 04 17.5**	**+3.8**
VAE				Sn		**Sn**		**09 05 19.5**	**+2.0**
VAE	**Valguarnera**	**5.62**	**285**	Pn		**Pn**		**09 04 17.5**	**+3.8**
VAE				Sn		**Sn**		**09 05 19.5**	**+2.0**
MMB	**Musomiste**	**5.66**	**19**	P		**Pn**		**09 04 14.5**	**+0.2**
SLUM		**5.78**	**144**	P		**Pn**		**09 04 10.7**	**-5.3**
	baz=145								
SLUM				S		**Sn**		**09 05 14.2**	**-7.3**
	baz=145								
KKB	**Krupnik**	**5.78**	**14**	P		**Pn**		**09 04 16.3**	**+0.4**
PUK	**Puka**	**5.88**	**350**	*i* PN		**Pn**		**09 04 20.3**	**+3.1**
PUK	**Puka**	**5.88**	**350**	*i* Pn		**Pn**		**09 04 20.3**	**+3.1**
ULC	**Ulcinj**	**5.91**	**345**	⇑*i*Pn		**Pn**		**09 04 16.9**	**-0.7**
ULC				*e*Sn		**Sn**		**09 05 18.5**	**-6.1**
ULC	**Ulcinj**	**5.91**	**345**	⇑*i*Pn		**Pn**		**09 04 16.9**	**-0.7**
ALN	**Alexandroupoli**	**5.96**	**38**	P		**Pn**		**09 04 20.1**	**+1.7**
ALN	**Alexandroupoli**	**5.96**	**38**	P		**Pn**		**09 04 20.1**	**+1.7**
RZN	**Rozhen**	**6.06**	**25**	P		**Pn**		**09 04 20.4**	**+0.7**
BCI	**Bajram Curri**	**6.17**	**352**	*i* PN		**Pn**		**09 04 20.5**	**-0.7**
BCI				*i* SN		**Sn**		**09 05 29.3**	**-1.8**
BCI	**Bajram Curri**	**6.17**	**352**	*i* Pn		**Pn**		**09 04 20.5**	**-0.7**
BCI				*i* Sn		**Sn**		**09 05 29.3**	**-1.8**
KDZ	**Kurdzhali**	**6.29**	**30**	P		**Pn**		**09 04 22.4**	**-0.4**
BUM	**Brajici-Budva**	**6.31**	**344**	⇓*i*Pn		**Pn**		**09 04 22.4**	**-0.7**
BUM				*e*Sn		**Sn**		**09 05 28.5**	**-5.9**
BUM	**Brajici-Budva**	**6.31**	**344**	⇓*i*Pn		**Pn**		**09 04 22.4**	**-0.7**
PDG	**Podgorica**	**6.36**	**347**	⇑*i*Pn		**Pn**		**09 04 23.0**	**-0.8**
TTG	**Podgorica**	**6.36**	**347**	⇑*i*Pn		**Pn**		**09 04 23.0**	**-0.8**
TTG				*e*Sn		**Sn**		**09 05 29.8**	**-5.8**
TTG	**Podgorica**	**6.36**	**347**	*i* P		**Pn**		**09 04 23.0**	**-0.8**
MRLC	**Muro Lucano**	**6.37**	**317**	Pn		**Pn**		**09 04 25.9**	**+1.9**
	comp=Z,58nm,0.5s								
MRLC	**Muro Lucano**	**6.37**	**317**	Pn		**Pn**		**09 04 25.9**	**+1.9**
	comp=Z,58nm,0.5s								
PVY	**Plav**	**6.41**	**352**	⇓*i*Pn		**Pn**		**09 04 24.9**	**+0.4**
PVY				*e*Sn		**Sn**		**09 05 32.9**	**-4.0**
PVY	**Plav**	**6.41**	**352**	⇓*i*Pn		**Pn**		**09 04 24.9**	**+0.4**
VTS	**Vitosha**	**6.51**	**13**	⇑P		**Pn**		**09 04 27.5**	**+1.7**
VTS	**Vitosha**	**6.51**	**13**	P		**Pn**		**09 04 27.0**	**+1.2**
VTS	**Vitosha**	**6.51**	**13**	⇑*i*P		**Pn**		**09 04 27.5**	**+1.7**
VTS	**Vitosha**	**6.51**	**13**	P		**Pn**		**09 04 27.5**	**+1.7**
HCY	**Herceg Novi**	**6.54**	**342**	⇓*i*Pn		**Pn**		**09 04 25.0**	**-1.3**
HCY				*e*Sn		**Sn**		**09 05 33.5**	**-6.7**
BARS	**Barje**	**6.57**	**4**	⇑*i*Pn		**Pn**		**09 04 26.6**	**-0.1**
BEY	**Berane**	**6.69**	**351**	⇑*i*Pn		**Pn**		**09 04 28.1**	**-0.3**
IVA	**Berane**	**6.69**	**351**	⇑*i*Pn		**Pn**		**09 04 28.1**	**-0.3**
IVA				*e*Sn		**Sn**		**09 05 39.1**	**-4.7**
IVA	**Berane**	**6.69**	**351**	⇑*i*Pn		**Pn**		**09 04 28.1**	**-0.3**
NKY	**Niksic**	**6.78**	**346**	⇓*i*Pn		**Pn**		**09 04 28.5**	**-1.0**
NKY				*e*Sn		**Sn**		**09 05 39.9**	**-6.1**
BRY	**Bratogost**	**6.96**	**343**	*e*Pn		**Pn**		**09 04 30.5**	**-1.5**
BRY				*e*Sn		**Sn**		**09 05 43.9**	**-6.5**
SJES	**Sjenica**	**7.07**	**352**	*e*Pn		**Pn**		**09 04 33.6**	**+0.1**
STON	**Ston**	**7.15**	**339**	*e*Pn		**Pn**		**09 04 33.4**	**-1.3**
STON				Sn		**Sn**		**09 05 47.2**	**-8.0**
UPM	**Unac-Piva**	**7.17**	**346**	⇓*i*Pn		**Pn**		**09 04 34.8**	**-0.1**
UPM				*e*Sn		**Sn**		**09 05 50.0**	**-5.6**
UPM	**Unac-Piva**	**7.17**	**346**	⇓*i*Pn		**Pn**		**09 04 34.8**	**-0.1**
PLE	**Pljevlja**	**7.21**	**349**	⇓*i*Pn		**Pn**		**09 04 35.9**	**+0.4**
PLE				*e*Sn		**Sn**		**09 05 51.4**	**-5.2**
PLE	**Pljevlja**	**7.21**	**349**	⇓*i*Pn		**Pn**		**09 04 35.9**	**+0.4**
CIGN	**Sant'Elia a Pi**	**7.31**	**319**	Pn		**Pn**		**09 04 38.6**	**+1.7**
	comp=Z,66nm,0.9s								
CIGN	**Sant'Elia a Pi**	**7.31**	**319**	Pn		**Pn**		**09 04 38.6**	**+1.7**
	comp=Z,66nm,0.9s								
BBLS	**Lazići**	**7.73**	**350**	*e*Pn		**Pn**		**09 04 41.7**	**-0.9**
SWA2		**7.84**	**152**	AMP				09 06 00.0	
	comp=N,80μm,0.5s,logA/T=5.2,baz=153								
VOIR		**9.61**	**16**	⇑P		**Pn**		**09 05 10.0**	**+1.6**
VOIR		**9.61**	**16**	⇑*i*P		**Pn**		**09 05 10.0**	**+1.6**
VOIR		**9.61**	**16**	P		**Pn**		**09 05 10.0**	**+1.6**
NVLJ	**Novalja**	**9.62**	**332**	*e*Pn		**Pn**		**09 05 09.3**	**+0.8**
NVLJ				Sn		**Sn**		**09 06 47.8**	**-8.0**
NVLJ	**Novalja**	**9.62**	**332**	*e*Pn		**Pn**		**09 05 09.3**	**+0.8**
KEST	**Kesra**	**9.66**	**270**	Pn		**Pn**		**09 05 10.8**	**+1.6**
	comp=N,0.2nm,0.3s,baz=169,slow=23,SNR=8.3								
KEST				Sn		**Sn**		**09 06 53.4**	**-3.7**
	comp=N,0.0nm,0.3s,baz=227,slow=23,SNR=4.0								
KEST	**Kesra**	**9.66**	**270**	*e*Pn		**Pn**		**09 05 10.8**	**+1.6**
KEST	**Kesra**	**9.66**	**270**	*e*Pn		**Pn**		**09 05 10.8**	**+1.6**
BOJS	**Bojanci**	**10.29**	**336**	*e*Sn		**Sn**		**09 07 05.4**	**-6.9**
PLOR	**Plostina**	**10.41**	**21**	⇑P		**Pn**		**09 05 19.8**	**+0.4**
PLOR	**Plostina**	**10.41**	**21**	⇑*i*P		**Pn**		**09 05 19.8**	**+0.4**
PLOR	**Plostina**	**10.41**	**21**	⇑*i*P		**Pn**		**09 05 19.8**	**+0.4**
VRI	**Vrincioaia**	**10.45**	**22**	⇓P		**Pn**		**09 05 19.4**	**-0.5**
VRI	**Vrincioaia**	**10.45**	**22**	⇓*i*P		**Pn**		**09 05 19.4**	**-0.5**
VRI	**Vrincioaia**	**10.45**	**22**	⇓*i*P		**Pn**		**09 05 19.4**	**-0.5**
SKDS	**Skadanscina**	**10.77**	**332**	*e*Sn		**Sn**		**09 07 16.8**	**-7.3**
HFRF	**Wahat Farafira**	**10.88**	**145**	P		**Pn**		**09 05 22.7**	**-3.2**
	baz=145								
AMAG	**Maghara**	**11.44**	**116**	P		**Pn**		**09 05 30.6**	**-2.9**
	baz=116								
BURAR	**Bucovina Array**	**11.72**	**13**	⇓P		**Pn**		**09 05 39.1**	**+1.8**
BURAR	**Bucovina Array**	**11.72**	**13**	⇓*i*P		**Pn**		**09 05 39.1**	**+1.8**
BURAR	**Bucovina Array**	**11.72**	**13**	⇓P		**Pn**		**09 05 39.1**	**+1.8**
MMAI	**Mount Meron Ar**	**12.09**	**101**	Pn		**Pn**		**09 05 40.7**	**-1.7**
	comp=N,0.4nm,0.3s,baz=304,slow=14,SNR=2.8								
**

ARU pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
ARCES ARCESS Array B 33.42 3 P **P 09 09 27.9 -0.2**
comp=Z,2.4nm,0.7s,mb4.2,baz=188,slow=9.6,SNR=19
ARCES ARCESS Array B 33.42 3 P **P 09 09 27.9 -0.2**
ARCES pmax pmax
comp=Z,2.0nm,0.7s
BRVK Borovoye 37.88 48 ↓*iP* **P 09 10 04.8 -1.7**
BRVK pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
BVAR Borovoye Array 37.94 48 P **P 09 10 05.4 -1.6**
comp=Z,3.0nm,0.5s,mb4.2,baz=269,slow=6.3,SNR=23
BVAR Borovoye Array 37.94 48 P **P 09 10 05.4 -1.6**
BVAR pmax pmax
comp=Z,3.0nm,0.5s
KBL Kabul 38.68 78 *eP* **P 09 10 13.8 +0.2**
KBL pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
KBL Kabul 38.68 78 *eP* **P 09 10 13.8 +0.2**
comp=Z,4.0nm,0.6s,mb4.3
KMBO Kilima Mbogo 40.06 155 *ceP* **P 09 10 27.6 +2.4**
KMBO pmax pmax
comp=Z,567nm,0.5s
EKS2 Erkin-Say 40.51 64 *eP* **P 09 10 28.4 -0.3**
comp=Z,8.3nm,0.6s,mb4.5
AML Almayashu 40.53 65 *eP* **P 09 10 29.3 +0.4**
comp=Z,3.2nm,0.6s,mb4.1
SPITS Spitsbergen Ar 42.08 358 P **P 09 10 41.6 +0.5**
comp=Z,4.2nm,0.5s,mb4.3,baz=157,slow=12,SNR=9.6
SPITS Spitsbergen Ar 42.08 358 P **P 09 10 41.6 +0.5**
SPITS pmax pmax
comp=Z,4.0nm,0.5s
KURK Kurchatov 42.98 52 ⇑*iP* **P 09 10 47.1 -1.7**
KURK pmax pmax
comp=Z,13nm,2.5s,mb4.2
NVS Novosibirsk 45.58 46 *eP* **P 09 11 08.3 -1.2**
NVS pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
MKAR Makanchi Array 45.83 57 P **P 09 11 10.3 -1.4**
comp=Z,3.6nm,0.5s,mb4.6,baz=270,slow=8.5,SNR=16
MKAR Makanchi Array 45.83 57 P **P 09 11 10.3 -1.4**
MKAR pmax pmax
comp=Z,4.0nm,0.5s
MKAR Makanchi Array 45.83 57 P **P 09 11 10.3 -1.4**
ZALV Zalesovo Beam 46.56 47 P **P 09 11 15.4 -1.8**
comp=Z,9.2nm,0.5s,mb4.9,baz=275,slow=8.7,SNR=32
ZALV Zalesovo Beam 46.56 47 P **P 09 11 15.4 -1.8**
ZALV pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
NDI New Delhi 47.26 82 *e*PKP **P 09 11 20.5 -2.6**
GTA Gaotai 60.23 61 ⇑P **P 09 12 57.4 -0.5**
GTA pP pP 09 13 09.4 +4.4
GTA sP sP 09 13 15.4 +7.7
GTA pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
SCHQ Schefferville 60.27 318 P **P 09 12 58.9 +1.0**
comp=Z,2.6nm,0.5s,mb4.5,baz=70,slow=10,SNR=9.5
SONM Songino Array 61.23 50 P **P 09 13 03.5 -1.1**
comp=Z,2.6nm,0.7s,mb4.5,baz=282,slow=8.0,SNR=11
SONM Songino Array 61.23 50 P **P 09 13 03.5 -1.1**
SONM pmax pmax
comp=Z,3.0nm,0.7s
SEY Seymchan 73.72 21 *eP* **P 09 14 23.4 +0.2**
YKA Yellowknife Ar 75.39 340 P **P 09 14 34.1 +1.1**
comp=Z,1.3nm,0.7s,mb4.0,baz=39,slow=5.1,SNR=4.0
YKA Yellowknife Ar 75.39 340 P **P 09 14 34.1 +1.1**
YKA pmax pmax
comp=Z,1.0nm,0.7s
KSRS Korea Array 80.09 51 P **P 09 14 59.0 -0.6**
comp=Z,1.8nm,0.6s,mb4.2,baz=310,slow=5.4,SNR=10.0
KSRS Korea Array 80.09 51 P **P 09 14 59.1 -0.5**
KSRS pmax pmax
comp=Z,2.0nm,0.6s,mb4.2

*ISCJB **09** 09:03:33.7±0.5, 40°.83N±0°.02×33°.79E±0°.03, h1km±4km,*
Error ellipse: s-maj=3.6km s-min=3.5km az=170.8
*DDA **09** 09:03:33.6, 40°.81N×33°.78E, h15km±1km, Md3.3, Ml3.5*
*ISK **09** 09:03:33.4, 40°.83N×33°.76E, h5km, MD3.4, ML3.4*
*CSEM **09** 09:03:33.8±0.1, 40°.84N×33°.76E, h2km, ML3.5, Error*
ellipse: s-maj=3.4km s-min=3.1km az=156.0
ISC 09 09:03:34.2±0.4, **40°.83N**±0°.02×**33°.78E**±0°.03, **h1**km±4km,
n55, σ1§01/76, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILGA	**Ilgaz**	**0.23**	**348**	*i* P	**Pg**	**09 03 39.1**	**+0.6**
ILGA				*i* S	**Sg**	**09 03 42.8**	**+1.2**
ILGA	**Ilgaz**	**0.23**	**348**	*i* P	**Pg**	**09 03 39.1**	**+0.5**
ILGA				*i* S	**Sg**	**09 03 42.8**	**+1.3**
CANT	**Cankiri**	**0.26**	**209**	*e*PG	**Pg**	**09 03 39.2**	**+0.1**
CANT				*e*SG	**Sg**	**09 03 42.8**	**+0.4**
TOS	**Tosya**	**0.28**	**42**	*e*PG	**Pg**	**09 03 39.9**	**+0.4**
TOS	**Tosya**	**0.28**	**42**	*e*Pg	**Pg**	**09 03 39.9**	**+0.4**
ELDT	**Eldivan**	**0.43**	**219**	*i* P	**Pg**	**09 03 42.0**	**-0.5**
ELDT				*i* S	**Sg**	**09 03 48.5**	**+0.4**
ELDT	**Eldivan**	**0.43**	**219**	*i* P	**Pg**	**09 03 42.0**	**-0.5**
ELDT				*i* S	**Sg**	**09 03 48.5**	**+0.4**
BALT	**Daday**	**0.76**	**337**	*i* P	**Pg**	**09 03 48.9**	**0.0**
BALT				*i* S	**Sg**	**09 03 59.1**	**+0.4**
BALT	**Daday**	**0.76**	**337**	*i* P	**Pg**	**09 03 48.9**	**+0.1**
BALT				*i* S	**Sg**	**09 03 59.1**	**+0.3**
CTKT	**Corum**	**0.79**	**105**	*i* P	**Pg**	**09 03 49.2**	**-0.2**
CTKT				*i* S	**Sg**	**09 04 00.2**	**+0.6**
CTKT	**Corum**	**0.79**	**105**	*i* P	**Pg**	**09 03 49.2**	**-0.2**
CTKT				*i* S	**Sg**	**09 04 00.2**	**+0.5**
CORM	**Corum**	**0.92**	**135**	*e*PG	**Pg**	**09 03 51.4**	**-0.4**
CORM				*e*SG	**Sg**	**09 04 05.2**	**+1.5**
CORM	**Corum**	**0.92**	**135**	*e*Pg	**Pg**	**09 03 51.4**	**-0.4**
CORM				*e*Sg	**Sg**	**09 04 05.2**	**+1.5**
SAFT	**Safranbolu**	**0.92**	**297**	*e*PG	**Pg**	**09 03 51.1**	**-0.8**
SAFT	**Safranbolu**	**0.92**	**297**	*e*Pg	**Pg**	**09 03 51.2**	**-0.7**
BYBT	**Boyabat**	**0.98**	**49**	*e*PG	**Pg**	**09 03 52.5**	**-0.5**
BYBT	**Boyabat**	**0.98**	**49**	*e*Pg	**Pg**	**09 03 52.5**	**-0.5**
BOYT	**Boyabat**	**1.03**	**55**	*i* P	**Pg**	**09 03 53.2**	**-0.8**
BOYT				*i* S	**Sg**	**09 04 08.0**	**+0.6**
BOYT	**Boyabat**	**1.03**	**55**	*i* P	**Pg**	**09 03 53.2**	**-0.8**
BOYT				*i* S	**Sg**	**09 04 08.0**	**+0.6**
BZK	**Bozkurt**	**1.14**	**8**	*e*PN	**Pn**	**09 03 55.5**	**-1.8**
BZK	**Bozkurt**	**1.14**	**8**	*e*Pn	**Pn**	**09 03 55.5**	**-1.8**
LOD	**Lodumlu**	**1.22**	**220**	*e*PN	**Pn**	**09 03 56.9**	**-1.4**
LOD	**Lodumlu**	**1.22**	**220**	*e*Pn	**Pn**	**09 03 56.9**	**-1.4**
CDAG	**Cicekdag**	**1.29**	**159**	*i* P	**Pg**	**09 03 57.0**	**-1.9**
CDAG				*i* S	**Sg**	**09 04 12.3**	**-3.2**
CDAG	**Cicekdag**	**1.29**	**159**	*i* P	**Pg**	**09 03 57.0**	**-1.9**
SGKT	**Sivrigoynuk**	**1.34**	**260**	*i* P	**Pg**	**09 03 58.8**	**-1.1**
SGKT				*i* S	**Sg**	**09 04 18.7**	**+1.6**
SGKT	**Sivrigoynuk**	**1.34**	**260**	*i* P	**Pg**	**09 03 58.8**	**-1.0**
DIKM	**Dikmen**	**1.38**	**53**	*e*PN	**Pn**	**09 03 59.8**	**-0.8**
DIKM	**Dikmen**	**1.38**	**53**	*e*Pn	**Pn**	**09 03 59.8**	**-0.8**
YOZ	**Yozgat**	**1.67**	**135**	*e*PN	**Pn**	**09 04 04.5**	**-0.1**
YOZ	**Yozgat**	**1.67**	**135**	*e*Pn	**Pn**	**09 04 04.5**	**-0.1**
KVT	**Kavak**	**1.73**	**81**	*e*PN	**Pn**	**09 04 05.3**	**-0.1**
KVT	**Kavak**	**1.73**	**81**	*e*Pn	**Pn**	**09 04 05.3**	**-0.1**
MDU	**Mudurnu**	**1.99**	**260**	*e*PN	**Pn**	**09 04 08.3**	**-0.6**
MDU	**Mudurnu**	**1.99**	**260**	*e*Pn	**Pn**	**09 04 08.3**	**-0.6**
HENT	**Hendek**	**2.19**	**271**	*e*P	**Pn**	**09 04 13.5**	**+1.8**
HENT				*e*S	**Sn**	**09 04 42.6**	**+3.2**
HENT	**Hendek**	**2.19**	**271**	*e*P	**Pn**	**09 04 13.5**	**+1.8**
AVNT	**Avonos**	**2.21**	**158**	*i* P	**Pn**	**09 04 12.8**	**+0.9**
AVNT				*i* S	**Sn**	**09 04 41.3**	**+1.4**
AVNT	**Avonos**	**2.21**	**158**	*i* P	**Pn**	**09 04 12.8**	**+0.8**
AVNT				*i* S	**Sn**	**09 04 41.3**	**+1.4**
SVRH	**Sivrihisar-ESK**	**2.21**	**232**	*e*PN	**Pn**	**09 04 11.8**	**-0.3**
SVRH	**Sivrihisar-ESK**	**2.21**	**232**	*e*Pn	**Pn**	**09 04 11.8**	**-0.2**
KIZT	**Kizilcal**	**2.44**	**218**	*e*PN	**Pn**	**09 04 13.7**	**-1.3**
KIZT	**Kizilcal**	**2.44**	**218**	*e*Pn	**Pn**	**09 04 13.7**	**-1.4**
GULT	**Gulveren**	**2.52**	**262**	*e*PN	**Pn**	**09 04 15.8**	**-0.4**
GULT	**Gulveren**	**2.52**	**262**	*e*Pn	**Pn**	**09 04 15.8**	**-0.4**
ESKT	**Eskisehir**	**2.60**	**241**	*i* P	**Pn**	**09 04 15.6**	**-1.7**
ESKT				*e*S	**Sn**	**09 04 50.6**	**+1.1**
SEYT	**Eskypehyr**	**2.60**	**241**	*i* P	**Pn**	**09 04 15.6**	**-1.7**
SEYT				*e*S	**Sn**	**09 04 50.7**	**+1.2**
SVSK	**Karacayir**	**2.62**	**109**	*e*PN	**Pn**	**09 04 17.9**	**+0.2**
SVSK	**Karacayir**	**2.62**	**109**	*e*Pn	**Pn**	**09 04 17.9**	**+0.3**
SULT	**Sultanhani-AKS**	**2.64**	**185**	*e*PN	**Pn**	**09 04 17.5**	**-0.3**
SULT	**Sultanhani-AKS**	**2.64**	**185**	*e*Pn	**Pn**	**09 04 17.5**	**-0.3**
PINB	**Pinarbasi**	**2.95**	**136**	*e*P	**Pn**	**09 04 22.8**	**+0.7**
PINB				*i* S	**Sn**	**09 05 03.1**	**+4.9**
PINB	**Pinarbasi**	**2.95**	**136**	*e*P	**Pn**	**09 04 22.8**	**+0.6**
SARI	**SarD1z-Kayseri**	**3.11**	**133**	*e*PN	**Pn**	**09 04 25.3**	**+1.0**
SARI	**SarD1z-Kayseri**	**3.11**	**133**	*e*Pn	**Pn**	**09 04 25.3**	**+1.0**

*IDC **09** 09:12:54.5±0.4, 3°.48N×126°.82E, h0km, mb4.6/26,*
mb1 4.6/26, mb1mx4.5/30, mbtmp4.6/26, MS4.0/8,
Ms1 4.0/8, ms1mx3.5/28, Error ellipse: s-maj=23.8km
s-min=8.5km az=77.0
*MOS **09** 09:12:57.8±1.1, 3°.46N×126°.84E, h33km, mb5.3/27, Error*
ellipse: s-maj=17.6km s-min=7.1km az=107.7
*GCMT **09** 09:13:00.8±0.3, 3°.67N×127°.08E, h25km±1km, MW5.0,*
Moment Tensor Solution. s19,c23; s61,c95; Moment
tensor: Scale 10^16Nm; Mrr0.39±.19; Mθθ3.09±.14;
Mφφ-3.48±.15; Mrθ-0.85±.27; Mθφ-1.40±.14; Mφr-0.65±.36;
Best double couple: M0 3.70000×10^16 NP1:φ327.00000°,
δ73.00000°, λ2.00000°. NP2:φ236.00000°, δ88.00000°,
λ163.00000°. Principal axes: T 3.5400, Plg13.0000°,
Azm190.0000°; N 0.3800, Plg73.0000°, Azm51.0000°; P
-3.9200, Plg11.0000°, Azm283.0000°; Data Used: II IU
CN IC G.
*BJI **09** 09:13:01.1, 3°.53N×126°.82E, h42km, mB5.0/25, mb4.8/37,*
Ms4.3/26, Ms7 4.2/26
*ISCJB **09** 09:13:01.1±0.5, 3°.54N±0°.02×127°.16E±0°.04, h60km±4km,*
mb4.9/94, MS4.2/23, Error ellipse: s-maj=6.6km
s-min=3.6km az=162.5
*NEIC **09** 09:13:01.7±1.1, 3°.43N×126°.79E, h50km±10km, mb5.0/34,*
Error ellipse: s-maj=10.6km s-min=5.0km az=76.0
*DJA **09** 09:13:07, 3°.25N×127°.18E, h67km, mb5.1/31*
ISC 09 09:13:03.2±0.4, **3°.52N**±0°.02×**127°.08E**±0°.04, **h63**km±4km,
h48km±2.5km; **pP-P, n206**, σ1§**42**/209, **mb4.9**/94, **7C-5D,**
Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.56**	**276**	P	**Pn**	**09 13 26.5**	**-2.3**
TNTI	**Ternate**	**2.74**	**174**	P	**Pn**	**09 13 43.5**	**-1.4**
MNI	**Manado**	**3.04**	**227**	P	**Pn**	**09 13 49.1**	**+0.1**
GSPH	**General Santos**	**3.32**	**320**	⇑*iP*	**Pn**	**09 13 49.8**	**-3.1**
GSPH				*i* S	**Sn**	**09 14 34.0**	**+2.9**
MATI	**Mati**	**3.50**	**346**	*e*P	**Pn**	**09 13 57.5**	**+2.2**
MATI				*e*S	**Sn**	**09 14 28.4**	**-7.2**
DAV	**Davao City (W)**	**3.83**	**337**	Pn	**Pn**	**09 13 58.4**	**-1.5**
DAV				Sn	**Sn**	**09 14 38.4**	**-5.3**
DAV	**Davao City (W)**	**3.83**	**337**	*e*Pn	**Pn**	**09 13 59.7**	**-0.1**
DAV				*e*Sn	**Sn**	**09 14 44.9**	**+1.2**
DAV	**Davao City (W)**	**3.83**	**337**	P	**Pn**	**09 14 06.7**	**+6.9**
DMPH	**Davao City--Mi**	**3.87**	**336**	*e*P	**Pn**	**09 13 59.7**	**-0.7**
KCP	**Kidapawan**	**4.00**	**330**	⇑*e*P	**Pn**	**09 14 05.2**	**+3.2**
KCP				*i* S	Sx	09 15 01.2	
LBMI	**Labuha**	**4.15**	**174**	P	**Pn**	**09 14 04.5**	**+0.4**
CTBH	**Cotabato--PC H**	**4.64**	**323**	⇑*e*P	**Pn**	**09 14 09.0**	**-1.9**
CTBH				*i* S	**Sn**	**09 15 04.2**	**+0.8**
BUKP	**Musuan**	**4.78**	**335**	*e*P	**Pn**	**09 14 12.3**	**-0.4**
BUKP				*e*S	Sx	09 14 52.7	
CGP	**Cagayan de Oro**	**5.45**	**334**	*e*P	**Pn**	**09 14 18.2**	**-3.8**
PAGZ	**Pagadian**	**5.66**	**320**	*e*P	**Pn**	**09 14 23.9**	**-1.0**
MRSI	**Marisa**	**5.96**	**240**	P	**Pn**	**09 14 32.1**	**+3.2**
MRSI	3μm293nm,0.7s			S	Sx	09 15 39.2	
SWI	3μm293nm,0.7s **Sorong**	**6.03**	**136**	P	**Pn**	**09 14 28.9**	**-1.0**
SWI	3μm257nm,0.8s			S	**Sn**	**09 15 37.8**	**+0.2**
ZMPH	**Zamboanga City**	**6.05**	**305**	⇓*e*P	**Pn**	**09 14 25.7**	**-4.5**
ZMPH				*e*S	Sx	09 15 20.2	
LUWI	**Luwuk**	**6.25**	**224**	P	**Pn**	**09 14 36.4**	**+3.5**
NLAI	1.8nm6μm547nm,0.9s **Namlea**	**6.71**	**180**	P	**Pn**	**09 14 40.0**	**+0.8**
NLAI	1.0nm3μm294nm,0.8s			S	**Sn**	**09 15 53.2**	**-1.1**
TBP	1.0nm3μm294nm,0.8s **Tagbilaran**	**6.92**	**333**	*e*P	**Pn**	**09 14 45.4**	**+3.3**
APSI	**Ampana**	**6.99**	**231**	P	**Pn**	**09 14 46.1**	**+3.1**
PCI	1.8nm9μm594nm,0.9s **Palu**	**8.47**	**239**	P	**Pn**	**09 15 07.8**	**+4.5**
KDI	106nm,1.0s **Kendari**	**8.66**	**211**	P	**Pn**	**09 15 06.7**	**+0.8**
MYLDM	113nm,0.9s **Lahad Datu**	**8.71**	**281**	P	Px	09 15 13.2	
TTSI	157nm,1.0s,1μm0.4nm **Tam Toraja**	**9.75**	**228**	P	**Pn**	**09 15 24.8**	**+3.9**
BNSI	2μm145nm,1.0s **Bone**	**10.51**	**222**	P	**Pn**	**09 15 33.3**	**+2.1**
KKM	54nm,1.0s **Kota Kinabalu**	**11.12**	**283**	*e*Pn	**Pn**	**09 15 36.2**	**-3.3**
KKM	30nm,0.8s **Kota Kinabalu**	**11.12**	**283**	P	**Pn**	**09 15 42.0**	**+2.5**
BKSI	714nm40nm,1.3s **Bulukumba**	**11.20**	**218**	P	**Pn**	**09 15 43.2**	**+2.6**
KAPI	33nm,0.7s **Kappang**	**11.20**	**221**	Pn	**Pn**	**09 15 37.6**	**-3.0**
KAPI	1.2nm,0.3s,baz=60,slow=23,SNR=4.7 **Kappang**	**11.20**	**221**	Pn	**Pn**	**09 15 37.6**	**-3.0**
SMPI	**Sarmi**	**12.85**	**115**	P	**Pn**	**09 16 05.8**	**+2.7**
SBUM	99nm,1.4s **Sibu**	**14.88**	**266**	P	Px	09 16 36.2	
KHKI	49nm,0.9s **Kahang-Kahang**	**16.44**	**224**	P	**Pn**	**09 16 51.6**	**+1.6**
SRBI	84nm,1.2s **Singaraja**	**16.52**	**226**	P	**Pn**	**09 16 56.6**	**+5.6**
PBKI	**Pangkalan Bun**	**16.60**	**248**	P	**Pn**	**09 16 52.4**	**+0.4**
KSM	168nm,0.7s **Kuching**	**16.88**	**264**	Pn	**Pn**	**09 16 49.0**	**-6.5**
KSM	60nm,1.1s **Kuching**	**16.88**	**264**	P	**Pn**	**09 16 56.6**	**+1.1**
KAKA	591nm51nm,1.1s **Kakadu**	**16.98**	**162**	*e*P	**Pn**	**09 16 58.8**	**+2.1**
KAKA	43nm,0.7s **Kakadu**	**16.98**	**162**	Pn	**Pn**	**09 16 55.1**	**-1.5**
TWG	159nm,0.8s **Pinlang**	**20.05**	**344**	*e*P	**P**	**09 17 28.7**	**-2.7**
TPI	**Tanjungpandan**	**20.39**	**252**	P	Px	09 17 42.0	
YULB	50nm,1.5s **Yu-li**	**20.54**	**345**	*e*P	**P**	**09 17 32.5**	**-4.0**
TPUB	42nm,0.9s **Ta-pu**	**20.63**	**343**	*e*P	**P**	**09 17 34.9**	**-2.8**
SSLB	88nm,0.6s **Suanglung**	**21.00**	**344**	*e*P	**P**	**09 17 38.7**	**-2.9**
NACB	57nm,0.8s,mb5.0 **Ninganchiao**	**21.21**	**346**	P	**P**	**09 17 42.5**	**-1.3**
FITZ	**Fitzroy Crossi**	**21.53**	**184**	*e*P	**P**	**09 17 45.7**	**-1.6**
FITZ	34nm,0.7s,mb4.9 **Fitzroy Crossi**	**21.53**	**184**	P	**P**	**09 17 45.5**	**-1.8**
FITZ	29nm,1.0s,mb4.7,baz=27,slow=9.0,SNR=15 **Fitzroy Crossi**	**21.53**	**184**	*e*P	**P**	**09 17 45.1**	**-2.1**
FITZ	50nm,1.1s,mb4.9 **Fitzroy Crossi**	**21.53**	**184**	P	**P**	**09 17 46.4**	**-0.9**
YHNB	94nm,1.6s,mb5.0 **Yeheng**	**21.74**	**346**	*e*P	**P**	**09 17 48.6**	**-0.9**
CBJI	27nm,0.6s,mb4.9 **Citeko**	**22.48**	**244**	P	**P**	**09 18 00.9**	**+3.4**
QIZ	192nm,0.3s,mb6.0 **Qiongzhong**	**22.84**	**314**	P	**P**	**09 18 00.5**	**-0.7**
QIZ				pP		09 18 10.6	
QIZ				S	**S**	**09 22 02.8**	**-3.3**
QIZ	comp=Z,27nm,1.8s,mb4.4			pmax	pmax		
QIZ	comp=N,410nm,19.6s			LR	LR		
QIZ	comp=Z,470nm,19.6s			LR	LR		
KLSI	**Kelasi**	**23.77**	**250**	P	**P**	**09 18 11.8**	**+1.5**
MDSI	comp=Z,100nm,1.0s,mb5.2 **Maura Dua**	**24.22**	**251**	P	**P**	**09 18 16.9**	**+2.5**
KASI	comp=Z,31nm,0.9s,mb4.7 **Kota Agung**	**24.28**	**248**	P	**P**	**09 18 17.3**	**+2.4**
WRAB	comp=Z,83nm,1.1s,mb5.1 **Tennant Creek**	**24.37**	**163**	P	**P**	**09 18 15.6**	**0.0**
WRAB	comp=Z,414nm,0.9s,mb5.9,SNR=14 **Tennant Creek**	**24.37**	**163**	*e*P	**P**	**09 18 14.2**	**-1.4**
WRAB				pmax	pmax		
WRAB	comp=Z,52nm,0.8s,mb5.0 **Tennant Creek**	**24.37**	**163**	*e*P	**P**	**09 18 14.2**	**-1.4**
WRAB	comp=Z,52nm,0.8s,mb5.0 **Tennant Creek**	**24.37**	**163**	P	**P**	**09 18 15.4**	**-0.2**
WRA	comp=Z,81nm,1.1s,mb5.1 **Warramunga Arr**	**24.38**	**163**	P	**P**	**09 18 14.7**	**-1.0**
WRA	comp=Z,28nm,0.7s,mb4.8,baz=346,slow=11,SNR=149			S	**S**	**09 22 35.5**	**+4.6**
MBWA	comp=Z,5.8nm,1.0s,baz=343,slow=19,SNR=6.6 **Marble Bar**	**25.56**	**196**	*e*P	**P**	**09 18 25.4**	**-1.0**
MBWA	**Marble Bar**	**25.56**	**196**	*e*P	**P**	**09 18 24.6**	**-1.8**
MBWA	comp=Z,33nm,0.9s,mb4.9 **Marble Bar**	**25.56**	**196**	P	**P**	**09 18 25.5**	**-0.9**
IPM	comp=Z,41nm,1.3s,mb4.8 **Ipoh**	**26.01**	**273**	P	**P**	**09 18 37.3**	**+6.7**
CBIJ	comp=Z,23nm,1.4s,mb4.5 **Chichi jima**	**27.54**	**30**	P	**P**	**09 18 43.1**	**-1.1**
CBIJ	comp=Z,44nm,0.8s,mb5.2,baz=284,slow=21,SNR=2.8			LR	LR	09 29 42.1	
MNSI	comp=Z,201nm,19.7s,baz=241,slow=36 **Mandailing Nat**	**27.61**	**265**	P	Px	09 18 54.6	
ASAR	**Alice Springs**	**27.82**	**167**	P	**P**	**09 18 46.1**	**-0.6**
ASAR	comp=Z,6.0nm,0.7s,mb4.4,baz=342,slow=6.5,SNR=82			S	**S**	**09 23 30.3**	**+4.8**
NJ2	comp=Z,2.4nm,1.0s,baz=358,slow=29,SNR=4.2 **Nanjing**	**29.42**	**346**	*e*P	**P**	**09 19 06.6**	**+5.7**
NJ2				S	**S**	**09 23 55.0**	**+4.5**
NJ2	comp=Z,20nm,0.6s,mb5.0			pmax	pmax		
NJ2	comp=Z,100nm,9.6s			pmax	pmax		
NJ2	comp=N,430nm,23.9s			LR	LR		
NJ2	comp=E,280nm,23.9s			LR	LR		
NJ2	comp=Z,400nm,23.9s			LR	LR		
CTA	**Charters Tower**	**30.08**	**142**	P	**P**	**09 19 06.6**	**-0.2**
MEEK	comp=Z,6.4nm,1.0s,mb4.3,baz=283,slow=14,SNR=1.9 **Meekatharra**	**31.07**	**195**	*e*P	**P**	**09 19 15.0**	**-0.5**
ENH	**Enshi**	**31.39**	**330**	*e*P	**P**	**09 19 16.7**	**-1.6**
CHTO	comp=Z,25nm,0.8s,mb5.1 **Chiang Mai**	**31.43**	**301**	*e*P	**P**	**09 19 16.8**	**-2.0**
CHTO				pmax	pmax		
CHTO	comp=Z,13nm,1.1s,mb4.7 **Chiang Mai**	**31.43**	**301**	*e*P	**P**	**09 19 16.8**	**-2.0**
CHTO	comp=Z,13nm,1.1s,mb4.7 **Chiang Mai**	**31.43**	**301**	P	**P**	**09 19 26.0**	**+7.2**
KMI	comp=Z,14nm,1.1s,mb4.7 **Kunming**	**31.78**	**315**	P	**P**	**09 19 23.7**	**+1.9**
KMI				pP	pP	09 19 35.9	-1.3
KMI				PP	PP	09 20 29.5	-5.1
KMI				S	**S**	**09 24 28.4**	**+0.8**
KMI				pmax	pmax		
KMI	comp=Z,12nm,0.8s,mb4.8			pmax	pmax		
KMI	comp=Z,140nm,4.3s			LR	LR		
KMI	comp=N,210nm,19.4s			LR	LR		
KMI	comp=E,230nm,18.6s			LR	LR		
KMI	comp=Z,260nm,22.2s			LR	LR		
KSRS	**Korea Array**	**33.78**	**1**	P	**P**	**09 19 38.5**	**-0.6**
KSRS	comp=Z,4.6nm,0.8s,mb4.5,baz=178,slow=10,SNR=13			LR	LR	09 32 27.8	
FORT	comp=Z,191nm,20.6s,baz=201,slow=35 **Forrest**	**34.12**	**178**	*e*P	**P**	**09 19 41.1**	**-1.0**
FORT	comp=Z,25nm,0.6s,mb5.3 **Forrest**	**34.12**	**178**	*e*P	**P**	**09 19 41.1**	**-0.9**
MAJO	comp=Z,42nm,0.9s,mb5.4 **Matsushiro**	**34.43**	**16**	*e*P	**P**	**09 19 42.3**	**-2.4**
MAJO				pmax	pmax		
MAJO	comp=Z,7.0nm,0.7s,mb4.7 **Matsushiro**	**34.43**	**16**	*e*P	**P**	**09 19 42.3**	**-2.4**
MAT	comp=Z,7.3nm,0.7s,mb4.7 **Matsushiro**	**34.43**	**16**	P	**P**	**09 19 42.9**	**-1.8**
MJAR	**Matsushiro Arr**	**34.43**	**16**	P	**P**	**09 19 44.2**	**-0.5**
CD2	comp=Z,0.9nm,0.4s,mb4.0,baz=216,slow=6.8,SNR=5.3 **Chengdu**	**35.02**	**324**	P	**P**	**09 19 51.1**	**+1.2**
CD2				PP	PP	09 21 10.3	-0.2
CD2				S	**S**	**09 25 19.1**	**+1.4**
CD2				pmax	pmax		
CD2	comp=Z,20nm,0.5s,mb5.3			LR	LR		
CD2	comp=N,340nm,17.2s			LR	LR		
KMBL	comp=Z,310nm,11.9s **Kambalda**	**35.04**	**188**	*e*P	**P**	**09 19 49.3**	**-0.7**
HNR	comp=Z,98nm,0.5s,mb6.0 **Honiara**	**35.19**	**112**	LR	LR	09 31 39.4	
DL2	comp=Z,230nm,21.9s,baz=286,slow=32 **Dalian**	**35.57**	**353**	P	**P**	**09 19 58.2**	**+3.7**
DL2				pmax	pmax		
KLBR	comp=Z,20nm,0.8s,mb5.1 **Kellerberrin**	**36.02**	**194**	*e*P	**P**	**09 19 58.0**	**-0.5**
EIDS	comp=Z,14nm,0.6s,mb5.0 **Eidsvold**	**36.97**	**142**	*e*P	**P**	**09 20 06.9**	**+0.2**
BBOO	comp=Z,16nm,1.0s,mb4.8 **Buckleboo**	**37.12**	**167**	*e*P	**P**	**09 20 07.0**	**-0.8**
NWAO	comp=Z,18nm,1.0s,mb4.9 **Narrogin (SRO)**	**37.42**	**194**	P	**P**	**09 20 08.9**	**-1.5**
BJT	comp=Z,18nm,1.0s,mb4.8,baz=32,slow=8.4,SNR=6.0 **Baijiatuau**	**37.66**	**346**	*e*P	**P**	**09 20 12.1**	**-0.1**
BJT				pmax	pmax		
BJT	comp=Z,87nm,0.8s **Baijiatuau**	**37.66**	**346**	*e*P	**P**	**09 20 12.1**	**-0.1**
BJI	comp=Z,87nm,0.8s,mb5.5 **Beijing**	**37.67**	**346**	P	**P**	**09 20 12.2**	**-0.2**
BJI				pP	pP	09 20 26.1	-2.0
BJI				sP	sP	09 20 31.0	-4.5
BJI				S	**S**	**09 26 04.1**	**+6.1**
BJI				pmax	pmax		
BJI	comp=Z,54nm,0.8s,mb5.3			pmax	pmax		
BJI	comp=Z,290nm,6.8s			LR	LR		
BJI	comp=N,180nm,22.8s			LR	LR		
BJI	comp=E,320nm,28.7s			LR	LR		
STKA	comp=Z,150nm,20.0s **Stephens Creek**	**37.81**	**160**	*e*P	**P**	**09 20 12.8**	**-0.8**
STKA	comp=Z,23nm,0.8s,mb5.0 **Stephens Creek**	**37.81**	**160**	P	**P**	**09 20 13.5**	**-0.1**
STKA	comp=Z,14nm,0.7s,mb4.8,baz=338,slow=8.0,SNR=37 **Stephens Creek**	**37.81**	**160**	*e*P	**P**	**09 20 12.9**	**-0.7**
SNY	comp=Z,6.1nm,0.8s,mb4.4 **Shenyang**	**38.27**	**356**	⇑P	**P**	**09 20 19.2**	**+1.8**
SNY				S	**S**	**09 26 12.3**	**+5.4**
SNY				pmax	pmax		
SNY	comp=Z,11nm,0.8s,mb4.6			pmax	pmax		
SNY	comp=Z,240nm,12.0s			LR	LR		
SNY	comp=N,190nm,20.1s			LR	LR		
SNY	comp=Z,210nm,21.1s			LR	LR		
LZH	**Lanzhou

comp=Z,310nm,15.7s
CN2 Changchun 40.14 358 *e*P **P** **09 20 37.3 +4.3**
CN2 *e*S **S** **09 26 42.2 +7.2**
CN2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.8
CN2 LR LR
comp=N,300nm,13.0s
CN2 LR LR
comp=E,400nm,13.0s
CN2 LR LR
comp=Z,500nm,15.0s
SHL Shillong 40.28 306 *e*PKP **P** **09 20 32.5 -2.0**
MDJ Mudanjiang 40.99 3 P **P** **09 20 42.2 +2.2**
MDJ pP pP 09 20 53.3 -2.5
MDJ sP sP 09 20 58.5 -4.6
MDJ S **S** **09 26 53.5 +5.9**
MDJ pmax pmax
comp=Z,11nm,0.9s,mb4.5
MDJ pmax pmax
comp=Z,96nm,7.2s
MDJ LR LR
comp=N,150nm,25.6s
MDJ LR LR
comp=E,140nm,27.8s
MDJ LR LR
comp=Z,140nm,22.7s
MDJ Mudanjiang 40.99 3 *e*P **P** **09 20 43.1 +3.1**
comp=Z,16nm,0.8s,mb4.7
ARMA Armidale 41.10 147 *e*P **P** **09 20 42.0 +0.9**
ARMA Armidale 41.10 147 *e*P **P** **09 20 42.0 +1.0**
comp=Z,21nm,0.9s,mb4.8
ASAJ Asahikawa 42.69 17 P **P** **09 20 54.3 +0.4**
comp=Z,2.1nm,0.4s,mb4.2,baz=233,slow=13,SNR=5.2
ASAJ LR LR 09 38 46.3
comp=Z,331nm,20.4s,baz=67,slow=36
LSA Lhasa 42.84 311 P **P** **09 20 54.8 -0.5**
LSA Lhasa 42.84 311 *e*P **P** **09 20 55.2 -0.1**
LSA pmax pmax
comp=Z,18nm,0.6s,mb5.0
LSA Lhasa 42.84 311 *e*P **P** **09 20 55.1 -0.2**
comp=Z,18nm,0.6s,mb5.0
GTA Gaotai 43.46 329 *e*P **P** **09 20 59.4 -0.8**
GTA pP pP 09 21 12.5 -3.6
GTA sP sP 09 21 17.9 -5.5
GTA S **S** **09 27 24.8 +0.7**
GTA pmax pmax
comp=Z,5.0nm,1.1s,mb4.2
GTA pmax pmax
comp=Z,100nm,3.6s
GTA LR LR
comp=N,380nm,22.9s
GTA LR LR
comp=E,340nm,23.8s
GTA LR LR
comp=Z,410nm,20.5s
HABR Khabarovsk 45.31 7 *e*P pP 09 21 25.4 -5.4
HABR *e**SS sS 09 28 13.2 -4.7
HABR MLR MLR
comp=Z,148nm,16.0s
YSS Yuzh-Sakhalins 45.35 15 *e*P **P** **09 21 20.0 +4.9**
YSS Yuzh-Sakhalins 45.35 15 P **P** **09 21 16.5 +1.4**
comp=Z,20nm,0.9s,mb4.9
KLR Kul'dur 45.72 4 *e*P **P** **09 21 15.8 -2.2**
HIA Hailar 46.01 353 *e*P **P** **09 21 23.2 +2.9**
HIA pmax pmax
comp=Z,19nm,0.8s
HIA Hailar 46.01 353 *e*P **P** **09 21 23.2 +2.9**
comp=Z,20nm,0.8s,mb5.1
ULN Ulaanbaatar 47.43 342 *e*P **P** **09 21 31.7 +0.3**
ULN pmax pmax
comp=Z,29nm,0.9s,mb5.2
ULN Ulaanbaatar 47.43 342 *e*P **P** **09 21 31.7 +0.3**
comp=Z,29nm,0.9s,mb5.2
ULN Ulaanbaatar 47.43 342 P **P** **09 21 31.7 +0.3**
SONM Songino Array 47.61 341 P **P** **09 21 32.2 -0.6**
comp=Z,3.8nm,0.6s,mb4.6,baz=157,slow=9.1,SNR=20
SONM PP PP 09 23 13.7 -11
comp=Z,3.9nm,0.8s,baz=169,slow=3.9,SNR=4.8
SONM LR LR 09 44 16.5
comp=Z,198nm,21.1s,baz=153,slow=40
TLY Talaya 51.84 342 *e*P **P** **09 22 05.5 +0.6**
TLY pmax pmax
comp=Z,21nm,0.8s,mb5.1
WMQ Urumqi 53.10 325 P **P** **09 22 15.4 +1.1**
WMQ pP pP 09 22 28.0 -2.8
WMQ sP sP 09 22 33.3 -4.6
WMQ PcP PcP 09 23 23.6 +1.6
WMQ PP PP 09 24 17.0 +2.2
WMQ *e*S **S** **09 29 40.2 +0.2**
WMQ ScS ScS 09 31 57.7 -0.6
WMQ SS SS 09 33 18.9 -1.4
WMQ pmax pmax
comp=Z,19nm,1.0s,mb5.0
WMQ pmax pmax
comp=Z,160nm,5.6s
WMQ LR LR
comp=N,670nm,25.8s
WMQ LR LR
comp=E,510nm,28.0s
WMQ LR LR
comp=Z,280nm,26.8s
PEA0B Petropavlovsk- 55.49 22 *e*P **P** **09 22 34.3 +2.7**
PETK Petropavlovsk- 55.49 22 P **P** **09 22 32.0 +0.4**
comp=Z,7.9nm,0.8s,mb4.8,baz=184,slow=5.6,SNR=13
PET Petropavlovsk 55.79 22 *e*P pP 09 22 43.9 -6.3
PET pmax pmax
comp=Z,50nm,1.2s,mb5.4
PET Petropavlovsk 55.79 22 *e*P pP 09 22 42.7 -7.5
comp=Z,50nm,1.1s
MK31 Makanchi Array 57.93 325 *c*e*P **P** **09 22 49.8 +0.8**
MK31 pmax pmax
comp=Z,12nm,0.6s,mb5.1
MK31 Makanchi Array 57.93 325 *e*P **P** **09 22 47.5 -1.4**
MKAR Makanchi Array 57.93 325 P **P** **09 22 47.6 -1.4**
comp=Z,4.6nm,0.5s,mb4.8,baz=111,slow=8.4,SNR=19
MKAR LR LR 09 48 02.7
comp=Z,152nm,20.1s,baz=104,slow=36
MKAR Makanchi Array 57.93 325 P **P** **09 22 47.6 -1.4**
MKAR LR LR 09 48 02.7
YAK Yakutsk 58.41 1 *e*P **P** **09 22 52.6 +0.6**
YAK *e* 09 23 01.3
YAK *e* pP 09 23 11.5 +2.8
YAK pmax pmax
comp=Z,20nm,0.9s,mb5.2
YAK pmax pmax
comp=N,3.0nm,1.4s
YAK pmax pmax
comp=E,2.0nm,1.5s
YAK Yakutsk 58.41 1 *e*P **P** **09 22 53.6 +1.6**
comp=E,72nm,0.8s,mb5.8
KSH Kashi 58.44 315 P **P** **09 22 57.9 +5.2**
KSH pP pP 09 23 09.9 +0.5
KSH PcP PcP 09 23 46.5 +3.7
KSH PP PP 09 25 08.6 +5.9
KSH ScP ScP 09 27 41.7 +3.8
KSH PcS PcS 09 27 46.4 +2.0
KSH S **S** **09 30 56.7 +5.4**
KSH ScS ScS 09 32 39.2 +2.2
KSH SS SS 09 34 50.7 +6.1
KSH pmax pmax
comp=Z,4.0nm,0.4s,mb4.8
KSH pmax pmax
comp=Z,75nm,4.1s
KSH LR LR
comp=N,140nm,6.1s
KSH LR LR
comp=E,98nm,5.1s
KSH LR LR
comp=Z,220nm,12.8s
ZAA0 Zalesovo Array 60.94 333 *e*P **P** **09 23 09.2 -0.4**
ZALV Zalesovo Beam 60.94 333 P **P** **09 23 09.3 -0.2**
comp=Z,8.3nm,0.8s,mb4.9,baz=112,slow=6.7,SNR=15
ZALV LR LR 09 51 26.0
comp=Z,101nm,20.7s,baz=144,slow=38
AML Almayashu 61.08 317 *e*P **P** **09 23 11.4 +0.6**
EKS2 Erkin-Say 61.24 318 *e*P **P** **09 23 12.0 +0.2**
RPZ Rata Peaks 61.39 145 P **P** **09 23 14.5 +1.7**
comp=Z,12nm,1.2s,mb4.9,baz=7.1,slow=8.1,SNR=2.6
KURK Kurchatov 62.11 327 P **P** **09 23 16.7 -0.8**
comp=Z,313nm,0.8s,SNR=6.3
KURK Kurchatov 62.11 327 *d i*P **P** **09 23 16.2 -1.3**
KURK pmax pmax
comp=Z,12nm,1.0s,mb5.0
KURK Kurchatov 62.11 327 *e*P **P** **09 23 16.3 -1.2**
comp=Z,45nm,0.8s,mb5.7
SEY Seymchan 62.16 13⇑ *i*P **P** **09 23 18.7 +1.1**
NVS Novosibirsk 62.22 333 *e*P **P** **09 23 18.1 -0.1**
NVS pmax pmax
comp=N,10.0nm,0.8s
NVS pmax pmax
comp=E,17nm,0.8s
NVS pmax pmax
comp=Z,12nm,0.8s,mb5.1
VOSK Vostochnaya 67.23 327 P **P** **09 23 49.4 -1.5**
VOSK pmax pmax
comp=Z,14nm,0.8s,mb5.0
BVAR Borovoye Array 67.69 327 P **P** **09 23 52.3 -1.4**
comp=Z,12nm,0.9s,mb4.9,baz=132,slow=8.8,SNR=16
BRVK Borovoye 67.76 327 *e*P **P** **09 23 53.5 -0.7**
BRVK pmax pmax
comp=Z,36nm,1.1s,mb5.3
BRVK Borovoye 67.76 327 *e*P **P** **09 23 53.5 -0.7**
comp=Z,36nm,1.1s,mb5.3
TIXI Tiksi 68.05 1 *e*P **P** **09 23 57.2 +1.5**
TIXI pmax pmax
comp=Z,25nm,1.5s,mb5.0
TIXI Tiksi 68.05 1 *e*P **P** **09 23 57.8 +2.1**
ZRNK Zerenda 68.42 326 *i*P **P** **09 23 56.6 -1.7**
ZRNK pmax pmax
comp=Z,26nm,0.9s,mb5.3
BILL Bilibino 69.67 15 *e*P **P** **09 24 07.8 +2.0**
BILL pmax pmax
comp=Z,10.0nm,1.6s,mb4.5
AB31 Akbulak array 72.54 321 *i*P **P** **09 24 22.1 -1.4**
AB31 pmax pmax
comp=Z,4.0nm,0.4s,mb4.7
ABKAR Akbulak array 72.54 321 *e*P **P** **09 24 22.3 -1.2**
comp=Z,5.8nm,0.6s,mb4.7
AKTK Aktyubinsk 74.04 322 P **P** **09 24 31.3 -1.1**
AKTO Aktyubinsk 74.04 322 P **P** **09 24 31.3 -1.1**
comp=Z,4.1nm,0.6s,mb4.5,baz=105,slow=9.3,SNR=13
SVE Sverdlovsk 74.33 328⇓ *e*P **P** **09 24 40.6 +6.8**
SVE pmax pmax
comp=Z,28nm,0.8s,mb5.2
ARU Arti 75.30 328 *d i*P **P** **09 24 38.7 -0.8**
ARU S S 09 34 15.7 +1.7
ARU SS SS 09 39 01.9 -3.0
ARU pmax pmax
comp=Z,12nm,0.8s,mb4.9
ARU Arti 75.30 328 *e*P **P** **09 24 38.6 -0.9**
MAK Makhachkala 79.98 313 P **P** **09 25 00.9 -5.0**
MAK *e*S S 09 35 03.8 -1.3
MAK *i* 09 35 24.8
MAK pmax pmax
comp=Z,15nm,0.2s,mb5.6
MAK MLR MLR
comp=Z,186nm,17.0s
KDAK Kodiak Island 81.88 32 P **P** **09 25 16.4 +0.7**
comp=Z,5.1nm,0.8s,mb4.5,baz=248,slow=9.0,SNR=3.0
ZEI Tsey 82.62 313 *e*P PcP 09 25 28.1 +3.4
ZEI pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
PPLA Purkeypile 82.66 27 *e*P **P** **09 25 21.4 +1.8**
comp=Z,11nm,0.8s,mb4.9
BPAW Bear Paw Mtn. 83.33 26 *e*P **P** **09 25 24.7 +1.7**
comp=Z,11nm,0.8s,mb4.9
TRF Thorofare Moun 83.57 27 *e*P **P** **09 25 25.3 +0.9**
comp=Z,17nm,1.0s,mb5.1
RC01 Rabbit Creek A 83.64 29 *e*P **P** **09 25 25.3 +0.6**
comp=Z,19nm,1.1s,mb5.1
MAW Mawson 83.68 200 P **P** **09 25 23.3 -1.4**
comp=Z,1.9nm,0.6s,mb4.4,baz=252,slow=10,SNR=7.7
COLD Coldfoot 83.95 23 *e*P **P** **09 25 28.1 +1.9**
comp=Z,16nm,0.9s,mb5.2
PMR Palmer 83.96 29 *e*P **P** **09 25 27.0 +0.6**
MCK McKinley 84.20 26 *e*P **P** **09 25 28.5 +1.0**
MCK pmax pmax
comp=Z,25nm,1.0s,mb5.3
MCK McKinley 84.20 26 *e*P **P** **09 25 28.5 +1.0**
comp=Z,25nm,1.0s,mb5.3
VRHR Novokhopersk 84.42 321 *e*P **P** **09 25 31.1 +2.2**
VRHR pmax pmax
comp=N,10.0nm,0.9s
VRHR pmax pmax
comp=E,7.0nm,0.9s
VRHR pmax pmax
comp=Z,20nm,0.9s,mb5.2
DIV Divide 85.56 29 *e*P **P** **09 25 36.8 +2.4**
VSR Storozhevoye 85.97 321 *e*P **P** **09 25 35.6 -1.1**
VSR pmax pmax
comp=N,3.0nm,0.4s
VSR pmax pmax
comp=E,1.0nm,0.4s
VSR pmax pmax
comp=Z,10.0nm,0.4s,mb5.4
BMRM Bremner River 86.13 29 *e*P **P** **09 25 38.4 +1.2**
comp=Z,16nm,0.9s,mb5.3
MOS Moscow 86.81 325 *e*P **P** **09 25 45.9 +5.2**
ANN Anapa 87.30 315 *e*P pP 09 25 52.6 -8.3
ANN pmax pmax
comp=Z,33nm,1.0s,mb5.5
OBN Obninsk 87.44 325⇑ *e*P **P** **09 25 43.6 -0.1**
OBN *i* 09 25 54.9
OBN pmax pmax
comp=Z,12nm,0.9s,mb5.1
APA Apatity 88.18 337⇓ *e*P Px 09 25 57.0
APA MLR MLR
comp=Z,300nm,18.0s
DAWY Dawson 88.41 26 *e*P **P** **09 25 56.3 +8.2**
INK Inuvik 90.23 22 P **P** **09 25 56.5 -0.1**
comp=Z,2.3nm,1.0s,mb4.5,baz=280,slow=7.8,SNR=3.0
BR131 Keskin Array S 90.43 310 *e*P **P** **09 25 57.9 -0.3**
BRTR Keskin Array B 90.43 310 P **P** **09 25 58.5 +0.3**
comp=Z,3.4nm,0.9s,mb4.7,baz=114,slow=5.5,SNR=4.9
ARCES ARCESS Array B 90.77 340 P **P** **09 25 58.0 -1.1**
comp=Z,2.6nm,0.6s,mb4.7,baz=83,slow=6.9,SNR=11
ARCES ARCESS Array B 90.77 340 P **P** **09 25 58.0 -1.1**
FINES FINESS Array B 92.19 332 P **P** **09 26 05.0 -0.8**
comp=Z,1.9nm,0.9s,mb4.4,baz=331,slow=15,SNR=3.0
AKASG Malin Array Be 92.28 321 P **P** **09 26 04.9 -1.6**
comp=Z,0.5nm,0.3s,mb4.3,baz=73,slow=5.1,SNR=5.8
VSU Vasula 92.43 329 *e*P **P** **09 26 05.7 -1.3**
VSU pmax pmax
comp=Z,7.0nm,0.9s,mb5.0
BUR08 Bucovina Ar. S 95.40 318 P **P** **09 26 15.7 -5.2**
UZH Uzhgorod 97.09 320 *e*P **P** **09 26 29.6 +1.1**
UZH *i* 09 26 39.4
CRVS Cervenica-Dubn 97.56 320 *e*P pP 09 26 42.1 -6.3
CRVS pmax pmax
comp=Z,6.0nm,0.9s,mb5.1
CRVS Cervenica-Dubn 97.56 320 *e*pP pP 09 26 42.0 -6.4
HFS Hagfors 98.37 332 P **P** **09 26 34.7 +0.7**
comp=Z,1.2nm,0.7s,mb4.5,baz=68,slow=16,SNR=3.2
NB2 NORSAR Subarra 99.13 334 P **P** **09 26 37.2 -0.2**
comp=Z,2.1nm,0.8s,mb4.7,baz=65,slow=4.6
NOA NORSAR Array B 99.13 334 P **P** **09 26 36.1 -1.4**
comp=Z,0.5nm,0.6s,mb4.2,baz=66,slow=4.6,SNR=3.2
NOA LR LR 10 16 34.1
comp=Z,73nm,20.6s,baz=45,slow=39
TXAR Lajitas Array 121.45 52 PKP PKPdf 09 31 53.1 +2.9
comp=Z,0.1nm,0.5s,baz=228,slow=43,SNR=3.4
PLCA Paso Flores 139.68 159 PKP PKPdf 09 32 24.7 +0.4
comp=Z,1.1nm,0.8s,baz=226,slow=11,SNR=3.2
CFAA Coronel Fontan 148.56 154 PKPbc PKPbc 09 32 43.8 +0.2
comp=Z,0.4nm,0.7s,baz=235,slow=4.3,SNR=9.9
CPUP Villa Florida 156.92 170 PKPbc PKPdf 09 33 02.1 +10
comp=Z,0.6nm,0.6s,baz=26,slow=5.7,SNR=3.1
CPUP PKPab PKPab 09 33 24.1 +1.8
comp=Z,1.7nm,0.7s,baz=167,slow=4.9,SNR=5.2
CPUP Villa Florida 156.92 170 PKP2 PKPab 09 33 24.2 +1.9
LPAZ La Paz 160.39 131 PKP PKPdf 09 32 59.4 +2.6
comp=Z,0.8nm,0.7s,baz=259,slow=5.2,SNR=3.2
LPAZ PKPab PKPab 09 33 41.1 +3.4
comp=Z,1.8nm,1.0s,baz=223,slow=4.8,SNR=2.5

CASC 09 09:20:47.7±1.7, 8°37N×82°97W, h18km±10km, MD3.6, 1C-1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.50**	**33**	⇓ *i*P	Pg	09 20 57.8	0.0
BRU2				*e*S	Sg	09 21 05.1	+0.5
BAR1		**0.93**	**338**	*e*P	Pb	09 21 04.3	-0.9
BAR1				*e*S	Sb	09 21 17.3	+0.1
CNI	**Changuinola**	**1.13**	**23**	*e*P	Pn	09 21 08.1	-0.4
BUS	**Buena Vista**	**1.41**	**326**	*e*P	Pn	09 21 12.6	+0.2
BUS				*e*S	Sn	09 21 32.2	+1.7
URSC	**Urasca**	**1.66**	**331**⇑	*e*P	Pn	09 21 15.2	-0.7
PRS1	**Puriscal**	**2.08**	**320**	*e*P	Pn	09 21 22.9	+1.3

NEIC ***09*** *09:41:35.4±3.3, 6°49S×130°23E, h122km×33km, Error ellipse: s-maj=37.6km s-min=26.1km az=60.0*
IDC ***09*** *09:41:40.6±5.5, 6°74S×130°00E, h175km±52km, mb3.7/1, mb1 3.2/4, mb1mx3.0/17, mbtmp3.1/4, MS3.0/1, Ms1 3.0/1, ms1mx2.2/29, Error ellipse: s-maj=63.5km s-min=23.1km az=71.0*

ISC 09 09:41:38.1±1.9, 6°7S±0°1×130°2E±0°1, h146km±17km, n7, σ0°77/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.36**	**160**	*e*Pn	**Pn**	**09 43 09.5**	**-0.1**
	72nm,0.5s						
KAKA				*e*Sn	**Sn**	**09 44 20.2**	**-1.0**
KAPI	**Kappang**	**10.54**	**279**	LR	LR	09 48 57.0	
	comp=Z,74nm,18.6s,baz=152,slow=42						
FITZ	**Fitzroy Crossi**	**12.17**	**201**	P	**Pn**	**09 44 27.5**	**+0.8**
	0.8nm,0.3s,baz=59,slow=15,SNR=14						
FITZ				S	**Sn**	**09 46 40.8**	**-0.5**
	0.7nm,0.3s,baz=217,slow=16,SNR=5.7						
WRAB	**Tennant Creek**	**13.75**	**163**	*e*Pn	**Pn**	**09 44 47.4**	**+0.4**
WRAB				*e*Sn	**Sn**	**09 47 12.2**	**-7.1**
WRA	**Warramunga Arr**	**13.75**	**163**	P	**Pn**	**09 44 47.5**	**+0.4**
	0.2nm,0.3s,baz=343,slow=12,SNR=14						
WRA				S	**Sn**	**09 47 12.9**	**-6.5**
	0.5nm,0.3s,baz=326,slow=21,SNR=8.4						
ASAR	**Alice Springs**	**17.23**	**168**	P	**Pn**	**09 45 31.4**	**+1.4**
	0.1nm,0.3s,baz=345,slow=8.7,SNR=5.6						
ASAR				S	**S**	**09 48 40.9**	**-0.3**
	0.2nm,0.3s,baz=355,slow=25,SNR=7.6						
MKAR	**Makanchi Array**	**68.09**	**327**	P	**P**	**09 52 21.0**	**-1.1**
	1.0nm,0.4s,baz=130,slow=7.8,SNR=10						

ISCJB ***09*** *09:47:20.2±0.2, 42°52N±0°02×13°25E±0°02, h14km±2km, Error ellipse: s-maj=3.1km s-min=2.6km az=139.7*
VIE ***09*** *09:47:20.9±0.2, 42°55N×13°38E, h10km, mb2.9/4, ML3.2/4, Error ellipse: s-maj=6.0km s-min=1.8km az=81.0 104 km NE of Rome*
CSEM ***09*** *09:47:20.5±0.1, 42°52N×13°22E, h8km, ML3.9/11, Error ellipse: s-maj=2.7km s-min=2.1km az=50.0*
ROM ***09*** *09:47:20.6±0.1, 42°51N×13°27E, h11km±1km, Ml3.1/40, Error ellipse: s-maj=1.2km s-min=1.1km az=37.0*
NEIC ***09*** *09:47:20.6, 42°51N×13°27E, h11km, ML3.1(ROM), After ROM.*

ISC 09 09:47:21.0±0.2, 42°52N±0°02×13°24E±0°02, h9km±2km, n126, σ0°82/170, 20C-8D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.12**	**81**⇑	*i*Pg	**Pg**	**09 47 23.9**	**+0.1**
CAMP				Sg	**Sg**	**09 47 26.1**	**+0.3**
	5μm,0.4s						
CAMP	**Campotosto**	**0.12**	**81**⇑	*i*Pg	**Pg**	**09 47 23.9**	**+0.1**
CAMP				Sg	**Sg**	**09 47 26.1**	**+0.3**
	5μm,0.4s						
AQU	**L'Aquila**	**0.20**	**144**⇓	*i*Pg	**Pg**	**09 47 25.3**	**+0.2**
AQU				Sg	**Sg**	**09 47 28.6**	**+0.7**
AQU	**L'Aquila**	**0.20**	**144**⇓	*i*Pg	**Pg**	**09 47 25.3**	**+0.2**
AQU				Sg	**Sg**	**09 47 28.6**	**+0.7**
	8μm,0.5s						
AQU	**L'Aquila**	**0.20**	**144**⇓	*i*Pg	**Pg**	**09 47 25.3**	**+0.2**
AQU				Sg	**Sg**	**09 47 28.6**	**+0.7**
	8μm,0.5s						
FIAM	**Fiamignano**	**0.27**	**201**⇑	*i*Pg	**Pg**	**09 47 26.7**	**+0.4**
FIAM				Sg	**Sg**	**09 47 31.2**	**+1.3**
FIAM	**Fiamignano**	**0.27**	**201**⇑	*i*Pg	**Pg**	**09 47 26.7**	**+0.4**
FIAM				Sg	**Sg**	**09 47 31.2**	**+1.3**
	6μm,0.5s						
FIAM	**Fiamignano**	**0.27**	**201**⇑	*i*Pg	**Pg**	**09 47 26.7**	**+0.4**
FIAM				Sg	**Sg**	**09 47 31.2**	**+1.3**
	6μm,0.5s						
TERO	**Teramo**	**0.29**	**68**⇑	*i*Pg	**Pg**	**09 47 26.1**	**-0.6**
TERO				Sg	**Sg**	**09 47 30.2**	**-0.3**
TERO	**Teramo**	**0.29**	**68**⇑	*i*Pg	**Pg**	**09 47 26.1**	**-0.6**
TERO				Sg	**Sg**	**09 47 30.2**	**-0.3**
	5μm,0.4s						
TERO	**Teramo**	**0.29**	**68**⇑	*i*Pg	**Pg**	**09 47 26.1**	**-0.6**
TERO				Sg	**Sg**	**09 47 30.2**	**-0.3**
	5μm,0.4s						
NRCA	**Norcia**	**0.33**	**343**⇑	*i*Pg	**Pg**	**09 47 27.6**	**+0.1**
NRCA	**Norcia**	**0.33**	**343**⇑	*i*Pg	**Pg**	**09 47 27.6**	**+0.1**
NRCA	**Norcia**	**0.33**	**343**⇑	*i*Pg	**Pg**	**09 47 27.6**	**+0.1**
FAGN	**Fagnano**	**0.36**	**135**	Pg	**Pg**	**09 47 27.8**	**-0.2**
FAGN				Sg	**Sg**	**09 47 33.3**	**+0.6**
	7μm,0.4s						
FAGN	**Fagnano**	**0.36**	**135**	Pg	**Pg**	**09 47 27.8**	**-0.2**
FAGN				Sg	**Sg**	**09 47 33.3**	**+0.6**
	7μm,0.4s						
MNS	**Montasola**	**0.44**	**253**⇑	*i*Pg	**Pg**	**09 47 29.7**	**+0.2**
MNS				Sg	**Sg**	**09 47 36.8**	**+1.5**
MNS	**Montasola**	**0.44**	**253**⇑	*i*Pg	**Pg**	**09 47 29.7**	**+0.2**
MNS				Sg	**Sg**	**09 47 36.8**	**+1.5**
	2μm,0.3s						
MNS	**Montasola**	**0.44**	**253**⇑	*i*Pg	**Pg**	**09 47 29.7**	**+0.2**
MNS				Sg	**Sg**	**09 47 36.8**	**+1.5**
	2μm,0.3s						
VCEL	**Villa Celiera**	**0.46**	**105**	Pg	**Pg**	**09 47 29.5**	**-0.4**
VCEL				Sg	**Sg**	**09 47 36.8**	**+0.9**
VCEL	**Villa Celiera**	**0.46**	**105**	Pg	**Pg**	**09 47 29.5**	**-0.4**
VCEL				Sg	**Sg**	**09 47 36.8**	**+0.9**
OFFI	**Offida**	**0.53**	**38**⇑	*i*Pg	**Pg**	**09 47 31.3**	**+0.1**
OFFI				Sg	**Sg**	**09 47 40.4**	**+2.2**
	4μm,0.4s						
OFFI	**Offida**	**0.53**	**38**⇑	*i*Pg	**Pg**	**09 47 31.3**	**+0.1**
OFFI				Sg	**Sg**	**09 47 40.4**	**+2.2**
	4μm,0.4s						
FDMO	**Fiordimonte**	**0.53**	**348**	Pg	**Pg**	**09 47 30.9**	**-0.4**
FDMO				Sg	**Sg**	**09 47 39.1**	**+0.8**
	1μm,0.2s						
FDMO	**Fiordimonte**	**0.53**	**348**	Pg	**Pg**	**09 47 30.9**	**-0.4**
FDMO				Sg	**Sg**	**09 47 39.1**	**+0.8**
	1μm,0.2s						
CESI	**CESI - Serrava**	**0.55**	**333**⇓	*i*Pg	**Pg**	**09 47 31.5**	**-0.1**
CESI				Sg	**Sg**	**09 47 40.2**	**+1.4**
	1μm,0.3s						
CESI	**CESI - Serrava**	**0.55**	**333**⇓	*i*Pg	**Pg**	**09 47 31.5**	**-0.1**
CESI				Sg	**Sg**	**09 47 40.2**	**+1.4**
	1μm,0.3s						
TRTR	**Tortoreto Alta**	**0.57**	**59**	Pg	**Pg**	**09 47 32.1**	**0.0**
	4μm,0.9s						
TRTR	**Tortoreto Alta**	**0.57**	**59**	Pg	**Pg**	**09 47 32.1**	**0.0**
	4μm,0.9s						
CERT	**Cerreto**	**0.60**	**199**⇑	*i*Pg	**Pg**	**09 47 32.1**	**-0.5**
CERT				Sg	**Sg**	**09 47 41.4**	**+1.0**
CERT	**Cerreto**	**0.60**	**199**⇑	*i*Pg	**Pg**	**09 47 32.1**	**-0.5**
CERT				Sg	**Sg**	**09 47 41.4**	**+1.0**
	2μm,0.4s						
CERT	**Cerreto**	**0.60**	**199**⇑	*i*Pg	**Pg**	**09 47 32.1**	**-0.5**
CERT				Sg	**Sg**	**09 47 41.4**	**+1.0**
	2μm,0.4s						
MTCE	**Montecelio**	**0.62**	**217**	Pg	**Pg**	**09 47 32.4**	**-0.5**
MTCE	**Montecelio**	**0.62**	**217**	Pg	**Pg**	**09 47 32.4**	**-0.5**
	622nm,0.5s						
MTCE	**Montecelio**	**0.62**	**217**	Pg	**Pg**	**09 47 32.4**	**-0.5**
	622nm,0.5s						
VVLD	**Villa Vallelon**	**0.70**	**156**	Pg	**Pg**	**09 47 34.0**	**-0.5**
VVLD	**Villa Vallelon**	**0.70**	**156**	Pg	**Pg**	**09 47 34.0**	**-0.5**
	675nm,0.6s						
VVLD	**Villa Vallelon**	**0.70**	**156**	Pg	**Pg**	**09 47 34.0**	**-0.5**
	675nm,0.6s						
SNTG	**Esanatoglia**	**0.77**	**343**	Pg	**Pg**	**09 47 35.3**	**-0.5**
SNTG	**Esanatoglia**	**0.77**	**343**	Pg	**Pg**	**09 47 35.3**	**-0.5**
SNTG	**Esanatoglia**	**0.77**	**343**	Pg	**Pg**	**09 47 35.3**	**-0.5**
LPEL	**Lama dei Pelig**	**0.84**	**124**	Pg	**Pg**	**09 47 35.2**	**-1.9**
	652nm,0.2s						
LPEL	**Lama dei Pelig**	**0.84**	**124**	Pg	**Pg**	**09 47 35.2**	**-1.9**
	652nm,0.2s						
CING	**Cingoli**	**0.86**	**358**	Pg	**Pg**	**09 47 36.7**	**-0.8**
CING				Sg	**Sg**	**09 47 50.1**	**+1.4**
CING	**Cingoli**	**0.86**	**358**	Pg	**Pg**	**09 47 36.7**	**-0.8**
CING				Sg	**Sg**	**09 47 50.1**	**+1.4**
	703nm,0.6s						
CING	**Cingoli**	**0.86**	**358**	Pg	**Pg**	**09 47 36.7**	**-0.8**
CING				Sg	**Sg**	**09 47 50.1**	**+1.4**
	703nm,0.6s						
CAFR	**Castel Frentan**	**0.87**	**109**	Pg	**Pg**	**09 47 36.3**	**-1.4**
CAFR	**Castel Frentan**	**0.87**	**109**	Pg	**Pg**	**09 47 36.3**	**-1.4**
POFI	**Posta Fibreno**	**0.87**	**156**	Pg	**Pg**	**09 47 37.2**	**-0.5**
	237nm,0.6s						
POFI	**Posta Fibreno**	**0.87**	**156**	Pg	**Pg**	**09 47 37.2**	**-0.5**
	237nm,0.6s						

MURB	Monte Urbino	0.91	325	Pg		Pg	09 47 38.2 -0.4
MURB	Monte Urbino 2μm,0.3s	0.91	325	Pg		Pg	09 47 38.2 -0.4
MURB	Monte Urbino 2μm,0.3s	0.91	325	Pg		Pg	09 47 38.2 -0.4
MGAB	Montegabbione	0.92	296	Pg		Pg	09 47 38.3 -0.4
MGAB	Montegabbione 1μm,0.5s	0.92	296	Pg		Pg	09 47 38.3 -0.4
MGAB	Montegabbione 1μm,0.5s	0.92	296	Pg		Pg	09 47 38.3 -0.4
ARVD	Arcevia 557nm,0.7s	1.00	347	Pg		Pg	09 47 39.5 -0.8
ARVD	Arcevia 557nm,0.7s	1.00	347	Pg		Pg	09 47 39.5 -0.8
TOLF	Tolfa	1.03	244	Pg		Pg	09 47 40.0 -0.7
TOLF	Tolfa 430nm,0.8s	1.03	244	Pg		Pg	09 47 40.0 -0.7
TOLF	Tolfa 430nm,0.8s	1.03	244	Pg		Pg	09 47 40.0 -0.7
SACS	San Casciano d 354nm,0.7s	1.04	289	Pg		Pg	09 47 40.6 -0.3
AOI	Ancona	1.06	14	Pg		Pg	09 47 40.5 -0.9
AOI	Ancona 402nm,0.4s	1.06	14	Pg		Pg	09 47 40.5 -0.9
AOI	Ancona 402nm,0.4s	1.06	14	Pg		Pg	09 47 40.5 -0.9
LATE	Laterza 66nm,0.6s	1.07	276	Pg		Pg	09 47 41.3 -0.2
LATE	Laterza 66nm,0.6s	1.07	276	Pg		Pg	09 47 41.3 -0.2
CERA	Filignano 368nm,0.6s	1.08	148	Pg		Pg	09 47 40.0 -1.8
CERA	Filignano 368nm,0.6s	1.08	148	Pg		Pg	09 47 40.0 -1.8
MIDA	Miranda	1.15	139	Pg		Pg	09 47 42.8 -0.3
MIDA	Miranda 208nm,0.7s	1.15	139	Pg		Pg	09 47 42.8 -0.3
MIDA	Miranda 208nm,0.7s	1.15	139	Pg		Pg	09 47 42.8 -0.3
FRES	Fresagrandinar 325nm,0.6s	1.19	117	Pg		Pg	09 47 44.2 +0.4
FRES	Fresagrandinar 325nm,0.6s	1.19	117	Pg		Pg	09 47 44.2 +0.4
FSSB	Fossombrone	1.22	344	Pg		Pg	09 47 43.3 -1.2
FSSB	Fossombrone 824nm,0.5s	1.22	344	Pg		Pg	09 47 43.3 -1.2
FSSB	Fossombrone 824nm,0.5s	1.22	344	Pg		Pg	09 47 43.3 -1.2
BADI	Badiali	1.23	324	Pg		Pg	09 47 44.6 -0.1
BADI	Badiali 230nm,0.9s	1.23	324	Pg		Pg	09 47 44.6 -0.1
BADI	Badiali 230nm,0.9s	1.23	324	Pg		Pg	09 47 44.6 -0.1
CAFI	Castiglion Fio 155nm,0.5s	1.24	311	Pg		Pg	09 47 44.0 -0.8
CAFI	Castiglion Fio 155nm,0.5s	1.24	311	Pg		Pg	09 47 44.0 -0.8
ARCI	Arcidosso 58nm,0.6s	1.35	285	Pg		Pg	09 47 46.4 -0.4
ARCI	Arcidosso 58nm,0.6s	1.35	285	Pg		Pg	09 47 46.4 -0.4
PARC	Parchiule 282nm,0.6s	1.35	327	Pg		Pg	09 47 46.4 -0.5
PARC	Parchiule 282nm,0.6s	1.35	327	Pg		Pg	09 47 46.4 -0.5
CRE	Caprese Michel	1.45	320	Pg		Pn	09 47 47.2 -0.2
CRE	Caprese Michel 61nm,0.5s	1.45	320	Pg		Pn	09 47 47.2 -0.2
CRE	Caprese Michel 61nm,0.5s	1.45	320	Pg		Pn	09 47 47.2 -0.2
MAON	Monte Argentar	1.57	267	Pg		Pn	09 47 48.5 -0.4
MAON	Monte Argentar 83nm,0.5s	1.57	267	Pg		Pn	09 47 48.5 -0.4
MAON	Monte Argentar 83nm,0.5s	1.57	267	Pg		Pn	09 47 48.5 -0.4
ASQU	Asqua 86nm,0.5s	1.66	321	Pg		Pn	09 47 49.7 -0.6
SFI	Santa Sofia	1.72	324	Pg		Pn	09 47 51.0 -0.1
SFI	Santa Sofia 63nm,0.6s	1.72	324	Pg		Pn	09 47 51.0 -0.1
SFI	Santa Sofia	1.72	324	Pg		Pn	09 47 51.0 -0.1
SGRT	San Giovanni R 141nm,0.6s	2.01	111	Pg		Pn	09 47 55.5 +0.5
NVLJ	Novalja	2.36	29	*e*Pn		Pn	09 47 59.4 -0.5
NVLJ				Sn		Sn	09 48 28.2 -0.8
NVLJ	Novalja	2.36	29	*e*Pn		Pn	09 47 59.4 -0.5
NVLJ				Sn		Sn	09 48 28.1 -0.9
PZZT	Monte Pizzetto 42nm,0.5s	2.37	314	Pg		Pn	09 48 00.0 0.0
STON	Ston	3.30	82	*i* Pn		Pn	09 48 12.8 0.0
STON				Sn		Sn	09 48 51.0 -1.2
STON	Ston	3.30	82	*i* Pn		Pn	09 48 12.8 0.0
STON				Sn		Sn	09 48 50.9 -1.3
JAVS	Javornik	3.43	10	*e*Pn		Pn	09 48 14.3 -0.2
JAVS				*e*Sn		Sn	09 48 55.1 -0.1
JAVS	Javornik	3.43	10	Pn		Pn	09 48 14.3 -0.2
JAVS				*e*Sn		Sn	09 48 55.1 -0.1
VOJS	Vojsko	3.54	7	*e*Pn		Pn	09 48 16.4 +0.2
VOJS				*e*Sn		Sn	09 48 58.8 +0.7
VOJS	Vojsko	3.54	7	*e*Pn		Pn	09 48 16.4 +0.3
VOJS				*e*Sn		Sn	09 48 58.8 +0.7
CADS	Cadrg	3.73	5	*e*Pn		Pn	09 48 17.4 -1.3
CADS				*e*Sn		Sn	09 49 01.4 -1.2
CADS	Cadrg	3.73	5	*e*Pn		Pn	09 48 17.4 -1.2
CADS				*e*Sn		Sn	09 49 01.4 -1.2
MAGA	Magasa 70nm,0.4s	3.76	331	Pg		Pn	09 48 19.3 +0.2
PTCC	Patocco-Chiusa	3.89	1	Pg		Pn	09 48 21.2 +0.4
PTCC	Patocco-Chiusa 12nm,0.5s	3.89	1	Pg		Pn	09 48 21.2 +0.4
PTCC	Patocco-Chiusa	3.89	1	Pg		Pn	09 48 21.2 +0.4
MABI	Malga Bissina	4.04	332	Pg		Pn	09 48 23.4 +0.4
MABI	Malga Bissina 9.0nm,0.4s	4.04	332	Pg		Pn	09 48 23.4 +0.4
MABI	Malga Bissina	4.04	332	Pg		Pn	09 48 23.4 +0.4
ABTA	Abfaltersbach	4.26	353	⇓*i*Pn		Pn	09 48 26.3 +0.3
ABTA				⇓*i*Sn		Sn	09 49 15.6 -0.1
ABTA	Abfaltersbach	4.26	353	Pn		Pn	09 48 26.3 +0.3
ABTA				Sn		Sn	09 49 15.6 -0.2
BBLS	Lazići	4.70	71	*e*Pn		Pn	09 48 33.2 +1.2
FETA	Feichten	4.85	339	⇓*i*Pn		Pn	09 48 34.6 +0.6
FETA				⇓*i*Sn		Sn	09 49 32.6 +2.4
FETA	Feichten	4.85	339	Pn		Pn	09 48 34.6 +0.6
FETA				Sn		Sn	09 49 32.6 +2.4
PUK	Puka	4.96	93	*i* PN		Pn	09 48 37.0 +1.5
PUK	Puka	4.96	93	*i* Pn		Pn	09 48 37.0 +1.5
BCI	Bajram Curri	5.05	89	*i* PN		Pn	09 48 38.2 +1.4
BCI	Bajram Curri	5.05	89	*i* Pn		Pn	09 48 38.2 +1.4
DIVS	Divibare	5.17	70	*e*Pn		Pn	09 48 39.4 +0.9
BARS	Barje	6.33	84	*e*Pn		Pn	09 48 55.1 +0.8

ISC 09 09:49:53.7±1.9, 39°.6N±0°.1×75°.2E±0°.1, h10km, n10, σ0$62/12, 2C, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	0.62	102	Pg	Pg	09 50 04.9	-0.8
KSH				Sg	Sg	09 50 14.6	+0.7
KSH	comp=N,260nm,0.3s			smax			
KSH	comp=E,470nm,0.3s			smax			
KZA	Kyzart SNR=8.8	2.43	1	P	Pn	09 50 32.6	-0.8
AML	Almayashu SNR=10	2.73	336	P	Pn	09 50 37.5	-0.1
KBK	Karagaybulak SNR=5.7	3.02	357	P	Pn	09 50 42.1	+0.6
AAK	Ala-Archa SNR=9.7	3.03	350	P	Pn	09 50 42.1	+0.4
EKS2	Erkin-Say SNR=5.4	3.20	341	P	Pn	09 50 45.1	+1.2
TKM2	Tokmak 2 comp=E,8.4nm,0.3s	3.29	5	⇑P	Pn	09 50 44.7	-0.6
TKM2				⇑S	Sn	09 51 24.4	0.0
TKM2	Tokmak 2 SNR=29	3.29	5	P	Pn	09 50 44.8	-0.4
CHMS	Chumysh SNR=5.3	3.37	355	P	Pn	09 50 46.0	-0.3
USP	Ospenovka SNR=5.7	3.66	352	P	Pn	09 50 50.0	-0.3

BJI ***09*** *10:02:23.8, 13°.18S×167°.33E, h193km, mB4.6/8, mb4.7/21*
IDC ***09*** *10:02:24.6±1.9, 13°.76S×167°.06E, h199km±16km, mb4.1/15, mb1 4.1/15, mb1mx4.1/19, mbtmp4.1/15, Error ellipse: s-maj=20.3km s-min=10.3km az=131.0*
ISCJB ***09*** *10:02:24.9±1.7, 13°.70S±0°.08×167°.2E±0°.1, h219km±19km, mb4.6/38, Error ellipse: s-maj=19.6km s-min=10.3km az=33.3*
NEIC ***09*** *10:02:24.7±0.4, 13°.69S×167°.13E, h200km, mb4.7/14, Error ellipse: s-maj=13.4km s-min=7.4km az=114.0*
MOS ***09*** *10:02:28.4±1.0, 13°.54S×166°.71E, h232km, mb4.8/9, Error ellipse: s-maj=12.1km s-min=11.4km az=68.2*
LDG ***09*** *10:02:33.9±0.3, 14°.66S×166°.08E, h290km, Mb4.7/4, Error ellipse: s-maj=43.2km s-min=12.2km az=79.0*

ISC 09 10:02:26.1±1.5, 13°.77S±0°.08×167°.2E±0°.1, h218km±17km, n126, σ0$95/72, mb4.6/37, 3C-1D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac 14nm,0.4s	8.29	185	*e*Pn	Pn	10 04 23.2	+0.1
DZM				*e*Sn	S	10 05 55.9	-0.9
EIDS	Eidsvold	19.05	230	*e*P	P	10 06 33.1	+0.9
CTA	Charters Tower 4.5nm,0.5s	20.99	250	*e*P	P	10 06 52.7	-0.2
CTA	Charters Tower 6.4nm,0.6s,baz=78,slow=12,SNR=11	20.99	250	P	P	10 06 52.8	-0.1
CTAO	Charters Tower	20.99	250	*e*P	P	10 06 52.7	-0.2
CTAO	comp=Z,8.0nm,0.8s			pmax	pmax		
CTAO	Charters Tower comp=Z,8.0nm,0.8s	20.99	250	*e*P	P	10 06 52.7	-0.3
RMQ	Roma comp=Z,70nm,0.7s,mb5.3	21.41	231	*e*P	P	10 06 57.6	+0.3
ARMA	Armidale	21.93	218	*e*P	P	10 07 03.4	+1.3
ARMA	Armidale comp=Z,10nm,0.6s,mb4.5	21.93	218	*e*P	P	10 07 03.2	+1.0
MTSU	Mount Surprise comp=Z,19nm,0.6s,mb4.8	22.42	256	*e*P	P	10 07 07.5	+0.7
COEN	Coen comp=Z,154nm,1.2s,mb5.4	23.33	267	*e*P	P	10 07 16.3	+1.1
CAN	Canberra	27.01	214	P	P	10 07 50.2	+2.1
CAN	comp=Z,83nm,1.6s,mb5.1			pmax	pmax		
CAN	Canberra comp=Z,83nm,1.6s,mb5.1	27.01	214	P	P	10 07 50.2	+2.1
STKA	Stephens Creek comp=Z,3.7nm,0.3s,mb4.5	29.57	228	*e*P	P	10 08 11.1	+0.3
STKA	Stephens Creek comp=Z,5.3nm,0.4s,mb4.5,baz=53,slow=8.7,SNR=30	29.57	228	P	P	10 08 11.3	+0.5
STKA				PcP	PcP	10 11 10.0	-0.1
STKA	comp=Z,4.8nm,1.0s,baz=76,slow=4.2,SNR=3.6						
STKA	Stephens Creek	29.57	228	P	P	10 08 11.3	+0.5
STKA				PcP	PcP	10 11 10.0	-0.1
WRAB	Tennant Creek	32.00	254	*e*P	P	10 08 31.2	-1.0
WRAB	comp=Z,39nm,1.8s,mb4.6			pmax	pmax		
WRAB	Tennant Creek comp=Z,39nm,1.8s,mb4.6	32.00	254	*e*P	P	10 08 31.2	-1.1
WRA	Warramunga Arr comp=Z,2.0nm,0.5s,mb3.9,baz=85,slow=9.5,SNR=34	32.01	254	P	P	10 08 30.4	-2.0
WRA				PcP	PcP	10 11 17.1	+0.2
WRA	comp=Z,2.3nm,0.9s,baz=78,slow=3.5,SNR=8.2			S	S	10 13 29.3	+1.5
WRA	comp=Z,1.4nm,1.0s,baz=82,slow=14,SNR=3.5			ScP	ScP	10 14 42.8	+3.2
WRA	comp=Z,1.4nm,1.1s,baz=87,slow=3.8,SNR=4.9						
WRA	Warramunga Arr	32.01	254	P	P	10 08 30.4	-1.9
WRA						10 11 17.1	
WRA				S	S	10 13 29.3	+1.5
ASAR	Alice Springs comp=Z,3.4nm,0.5s,mb4.2,baz=74,slow=9.4,SNR=76	32.97	248	P	P	10 08 39.2	-1.4
ASAR				PcP	PcP	10 11 19.0	-0.5
ASAR	comp=Z,1.3nm,0.6s,baz=63,slow=2.8,SNR=7.4						
ASAR				S	S	10 13 40.2	-2.4
ASAR	comp=Z,1.9nm,1.1s,baz=84,slow=16,SNR=6.2			ScP	ScP	10 14 46.5	+3.6
ASAR	comp=Z,1.6nm,0.9s,baz=99,slow=2.9,SNR=6.4						
ASAR	Alice Springs	32.97	248	P	P	10 08 39.3	-1.3
ASAR						10 11 19.0	
ASAR				S	S	10 13 40.2	-2.4
KAKA	Kakadu comp=Z,48nm,1.5s,mb4.8	33.84	268	*e*P	P	10 08 49.2	+0.9
NWAO	Narrogin (SRO) comp=Z,9.4nm,0.7s,mb4.2,baz=92,slow=10,SNR=5.9	49.19	238	P	P	10 10 51.6	-0.8
MJAR	Matsushiro Arr	57.03	332	P	P	10 11 48.8	-0.6
MJAR	comp=Z,5.4nm,0.7s,mb4.3,baz=168,slow=8.8,SNR=19						
MAJO	Matsushiro	57.03	332	*e*P	P	10 11 48.9	-0.5
MAJO	comp=Z,6.0nm,0.4s,mb4.6			pmax	pmax		
MAJO	Matsushiro comp=Z,5.8nm,0.4s,mb4.6	57.03	332	*e*P	P	10 11 48.9	-0.6
MAT	Matsushiro	57.03	332	P	P	10 11 48.7	-0.7
YHNB	Yeheng comp=Z,25nm,0.8s,mb4.9	58.82	310	*e*P	P	10 12 01.4	-0.6
ERM	Erimo	59.77	339	*e*P	P	10 12 08.2	0.0
ERM	comp=Z,13nm,1.2s,mb4.4			pmax	pmax		
KSRS	Korea Array comp=Z,3.9nm,0.8s,mb4.1,baz=138,slow=7.0,SNR=27	62.92	326	P	P	10 12 29.6	+0.2
YSS	Yuzh-Sakhalins	64.31	342	*e*P	P	10 12 38.8	+0.6
YSS	comp=Z,40nm,1.0s,mb5.0			pmax	pmax		
YSS	Yuzh-Sakhalins comp=Z,29nm,0.9s,mb4.9	64.31	342	*e*P	P	10 12 39.3	+1.1
PEA0B	Petropavlovsk-	67.11	354	*e*P	P	10 12 57.0	+1.1
PETK	Petropavlovsk- comp=Z,11nm,0.8s,mb4.5,baz=138,slow=8.3,SNR=20	67.11	354	P	P	10 12 56.6	+0.6
MDJ	Mudanjiang	67.41	332	P	P	10 12 58.6	+0.5
MDJ	comp=Z,18nm,1.0s,mb4.7			pmax	pmax		
MDJ	comp=Z,61nm,7.9s			pmax	pmax		
MDJ	Mudanjiang comp=Z,14nm,0.9s,mb4.6	67.41	332	*e*P	P	10 12 58.6	+0.5
HABR	Khabarovsk	68.23	338	*de*P	P	10 13 02.7	-0.4
HABR				*e*S	S	10 22 01.8	+16
HABR				*SS	sS	10 22 19.3	-55
HABR	comp=Z,42nm,16.0s			MLR	MLR		
CN2	Changchun	68.80	329	*e*P	P	10 13 07.2	+0.5
CN2	comp=Z,10.0nm,0.8s,mb4.5			pmax	pmax		
PSI	Prapat	69.66	278	P	P	10 13 11.8	-0.9
PSI	comp=Z,3.5nm,0.6s,mb4.2,baz=94,slow=17,SNR=4.2 Prapat	69.66	278	P	P	10 13 11.8	-0.9
KLR	Kul'dur	70.11	336	*e*P	P	10 13 11.7	-2.9
ENH	Enshi	70.71	309	*e*P	P	10 13 18.3	-0.4
KMI	Kunming	73.75	302	P	P	10 13 38.1	+1.3
KMI	comp=Z,20nm,1.2s,mb4.6			pmax	pmax		
CHTO	Chiang Mai	74.63	294	*e*P	P	10 13 42.9	+0.9
CHTO	comp=Z,15nm,1.3s,mb4.5			pmax	pmax		
CHTO	Chiang Mai comp=Z,15nm,1.3s,mb4.5	74.63	294	*e*P	P	10 13 42.9	+0.9
HHC	Hu-ho-hao-te	74.82	320	*e*P	P	10 13 43.3	+0.7
HHC				PcP	PcP	10 13 55.7	+0.2
HHC				PP	PP	10 16 36.4	+3.0
HHC				S	S	10 23 06.0	+4.7
HHC				SKS		10 23 29.6	
HHC				ScS	ScS	10 23 34.7	+0.8
HHC	comp=Z,13nm,0.6s,mb4.7			pmax	pmax		
HHC	comp=Z,54nm,6.6s			pmax	pmax		
HHC	comp=N,87nm,17.4s			LR	LR		
HHC	comp=E,68nm,17.6s			LR	LR		
HHC	comp=Z,80nm,17.8s			LR	LR		
SEY	Seymchan	77.33	353	⇑*i*P	P	10 13 56.4	+0.2
LZH	Lanzhou	77.63	312	*e*P	P	10 14 00.5	+1.9
LZH	comp=Z,19nm,1.6s,mb4.5			pmax	pmax		
YAK	Yakutsk	81.10	343	*e*P	P	10 14 15.2	-1.5
YAK	comp=Z,33nm,1.1s,mb4.9			pmax	pmax		
YAK	comp=N,11nm,1.5s			pmax	pmax		
YAK	comp=E,6.0nm,1.3s			pmax	pmax		
ULN	Ulaanbaatar	81.33	324	*e*P	P	10 14 18.9	+0.7
ULN				pmax	pmax		
ULN	Ulaanbaatar comp=Z,2.5nm,0.3s,mb4.3	81.33	324	*e*P	P	10 14 18.9	+0.7
BILL	Bilibino	81.59	360	⇑*i*P	P	10 14 18.9	-0.2
BILL	comp=Z,13nm,1.0s,mb4.5			pmax	pmax		
BILL	Bilibino comp=Z,17nm,1.0s,mb4.6	81.59	360	*e*P	P	10 14 18.8	-0.3
SONM	Songino Array	81.69	324	P	P	10 14 20.7	+0.6
SONM	comp=Z,1.7nm,0.5s,mb3.9,baz=139,slow=5.3,SNR=13						
GTA	Gaotai	81.96	314	⇑P	P	10 14 22.8	+1.1
GTA	comp=Z,7.0nm,1.0s,mb4.2			pmax	pmax		
MAW	Mawson comp=Z,4.0nm,0.6s,mb4.3,baz=113,slow=5.0,SNR=17	82.74	202	P	P	10 14 25.7	+0.5
NVAR	Mina Array Bea comp=Z,0.3nm,0.6s,baz=222,slow=7.4,SNR=5.0	86.70	49	P	P	10 14 45.5	0.0
ODAN	Odare	87.30	298	*e*P	P	10 14 48.0	-0.7
PKI	Pulchoki comp=Z,38nm,0.8s,mb5.2	89.19	299	*e*P	P	10 14 56.7	-0.8
KKN	Kakani comp=Z,19nm,0.8s,mb5.0	89.36	299	*e*P	P	10 14 57.2	-1.1
DMN	Daman comp=Z,35nm,0.9s,mb5.2	89.46	298	*e*P	P	10 14 58.2	-0.6
GKN	Gorkha	89.96	299	*e*P	P	10 14 59.7	-1.5
MK31	Makanchi Array	96.47	316	*e*P	P	10 15 30.7	+0.1
MKAR	Makanchi Array comp=Z,4.6nm,0.7s,mb4.8,baz=93,slow=6.4,SNR=60	96.47	316	P	P	10 15 30.7	+0.1
MKAR	Makanchi Array	96.47	316	P	P	10 15 30.7	+0.1
ZALV	Zalesovo Beam comp=Z,2.9nm,0.7s,mb4.6,baz=103,slow=4.7,SNR=12	96.59	324	P	P	10 15 30.1	-0.9
KURK	Kurchatov comp=Z,0.4nm,0.6s,baz=92,slow=5.1,SNR=3.3	99.63	320	P	Pdif	10 15 44.0	-0.8
ARCES	ARCESS Array B comp=Z,3.2nm,0.5s,baz=92,slow=1.6,SNR=38	119.32	346	PKP	PKPdf	10 20 48.5	-0.3
FINES	FINESS Array B comp=Z,4.2nm,0.9s,baz=83,slow=6.3,SNR=7.1	124.82	338	PKP	PKPdf	10 20 59.5	-0.1
NB2	NORSAR Subarra comp=Z,1.0nm,0.6s,baz=32,slow=1.8	129.69	345	PKPdf	PKPdf	10 21 09.0	+0.1
NOA	NORSAR Array B comp=Z,1.1nm,0.6s,baz=29,slow=2.0,SNR=6.6	129.69	345	PKP	PKPdf	10 21 09.3	+0.4
NOA	NORSAR Array B comp=Z,0.8nm,0.5s,baz=55,slow=1.4,SNR=6.1	129.69	345	PKP	PKPdf	10 21 09.3	+0.4
AKASG	Malin Array Be comp=Z,0.8nm,0.5s,baz=55,slow=1.4,SNR=6.1	129.91	326	PKP	PKPdf	10 21 09.8	+0.2
AKASG	Malin Array Be	129.91	326	PKP	PKPdf	10 21 09.8	+0.2
BRTR	Keskin Array B comp=Z,0.6nm,0.6s,baz=48,slow=4.3,SNR=3.3	131.84	311	PKP	PKPdf	10 21 13.7	+0.1
BRTR	Keskin Array B	131.84	311	PKP	PKPdf	10 21 13.7	+0.1
BUR08	Bucovina Ar. S	133.79	325	*e*PKPdf	PKPdf	10 21 19.2	+2.2
CDF	Champ du Feu	141.67	338	*e*PKP1	PKPdf	10 21 25.6	-5.9
HAU	Haudompre comp=Z,9.2nm,0.8s	142.34	339	*e*PKP1	PKPdf	10 21 27.9	-4.8
CABF	La Chapelle comp=Z,51nm,1.3s	143.62	338	*e*PKP1	PKPdf	10 21 35.1	+0.1
LDF	La Druitiere	143.73	346	*e*PKP1	PKPdf	10 21 32.0	-3.1
GRR	Gorron	144.09	346	*e*PKP1	PKPdf	10 21 33.2	-2.6
SSF	Saint Saulge comp=Z,28nm,1.0s	144.12	341	*e*PKP1	PKPdf	10 21 34.5	-1.4
LPL	La Plagne comp=Z,17nm,0.8s	144.30	336	*e*PKP1	PKPdf	10 21 35.6	-0.6
LPG	La Plagne comp=Z,19nm,0.7s	144.31	336	*e*PKP1	PKPdf	10 21 35.7	-0.6
SMF	Signal de Mont comp=Z,30nm,0.9s	144.37	340	*e*PKP1	PKPdf	10 21 35.2	-1.1
AVF	Avril sur Loir comp=Z,34nm,0.9s	144.40	341	*e*PKP1	PKPdf	10 21 35.1	-1.3
SGMF	Saint Gilles comp=Z,43nm,0.7s	144.59	348	*e*PKP1	PKPdf	10 21 35.7	-0.9
ROSF	Rostrenen comp=Z,40nm,0.8s	144.65	349	*e*PKP1	PKPdf	10 21 35.7	-1.0
BNI	Bardonecchia	144.71	336	*e*PKIKP	PKPdf	10 21 37.2	+0.2
BGF	Bois d'Agland comp=Z,48nm,0.7s	144.77	341	*e*PKP1	PKPdf	10 21 36.6	-0.4
BST	Brest	144.82	350	PKP	PKPdf	10 21 34.0	-3.0
MBDF	Montbardon comp=Z,28nm,0.8s	144.94	335	*e*PKP1	PKPdf	10 21 37.1	-0.3
QUIF	Quistinic comp=Z,72nm,1.0s	145.03	349	*e*PKP1	PKPbc	10 21 36.9	-0.4
PLDF	La Plantade	145.04	340	PKP	PKPbc	10 21 39.1	+1.7
ORIF	Oris-en-Rattie comp=Z,79nm,0.9s	145.13	337	*e*PKP1	PKPbc	10 21 38.2	+0.5
TCF	Toulx Ste Croi comp=Z,36nm,0.9s	145.21	342	*e*PKP1	PKPbc	10 21 38.1	+0.2
SAOF	Saorge	145.21	334	PKP	PKPdf	10 21 38.0	+0.1
AUTN	L'Aution	145.26	334	PKP	PKPdf	10 21 38.2	+0.2
SSB	Saint Sauveur	145.32	338	PKP	PKPdf	10 21 38.8	+0.8
TOUF	Mont Tournerai	145.32	334	PKP	PKPdf	10 21 38.4	+0.3
SBF	Sospel comp=Z,62nm,0.8s	145.37	334	*e*PKP1	PKPbc	10 21 38.4	-0.1
LUCF	Luceram	145.38	334	PKP	PKPdf	10 21 37.5	-0.7
PYM	Petit Puy Mans	145.44	340	PKP	PKPbc	10 21 40.5	+1.9
MVIF	Mont Vial	145.46	334	PKP	PKPbc	10 21 39.4	+0.7
MFF	Saint Martin d comp=Z,25nm,0.8s	145.59	345	*e*PKP1	PKPbc	10 21 39.1	0.0
OCF	Saint Nazaire	145.64	337	PKP	PKPbc	10 21 39.9	+0.6
OG26	St.-Nazaire-De	145.64	337	PKP	PKPbc	10 21 39.9	+0.6
VIVF	Saint-Julien-l comp=Z,24nm,0.9s	145.64	338	*e*PKP1	PKPbc	10 21 39.7	+0.4
CALN	Calern	145.69	334	PKP	PKPdf	10 21 39.4	+0.7
LBL	Lubilhac	145.81	340	PKP	PKPbc	10 21 41.3	+1.5
FRF	La Foret Royal comp=Z,57nm,0.7s	145.94	334	*e*PKP1	PKPbc	10 21 40.1	-0.1
SMRF	Simiane la Rot comp=Z,36nm,0.7s	146.04	336	*e*PKP1	PKPbc	10 21 41.0	+0.5
LMR	La Mourre comp=Z,69nm,1.0s	146.19	334	*e*PKP1	PKPbc	10 21 40.8	-0.1
RJF	Les Rejaudoux comp=Z,9.9nm,0.6s	146.31	342	*e*PKP1	PKPbc	10 21 41.5	+0.3
CAF	Calviac comp=Z,12nm,0.9s	146.47	341	*e*PKP1	PKPbc	10 21 42.1	+0.4
LASF	Ste Croix comp=Z,28nm,0.8s	146.61	338	*e*PKP1	PKPbc	10 21 42.6	+0.5
LFF	La Frestale comp=Z,17nm,0.6s	146.87	342	*e*PKP1	PKPbc	10 21 43.1	+0.3
MTLF	Montolieu comp=Z,24nm,0.7s	147.83	339	*e*PKP1	PKPbc	10 21 45.8	+0.3
EPF	Esparros	148.72	341	*e*PKP1	PKPbc	10 21 48.4	+0.6
SJPF	Ste Jean comp=Z,15nm,1.0s	149.11	343	*e*PKP1	PKPbc	10 21 49.3	+0.5
ETSF	Etsaut comp=Z,12nm,0.7s	149.12	342	*e*PKP1	PKPbc	10 21 49.6	+0.8
KEST	Kesra comp=Z,7.0nm,0.7s,baz=159,slow=0.8,SNR=23	150.43	322	PKPbc	PKPbc	10 21 52.9	+0.6
KEST				PKPab	PKPab	10 22 00.6	+1.2
KEST	Kesra comp=Z,1.3nm,0.5s,baz=299,slow=10.0,S

PYZ				S*		Sg	10 03 24.5	-0.4
WHZ	**Wether Hill Ro**	**0.87**	**105**	⇓P*		Pb	10 03 24.8	-1.0
WHZ				S*		Sb	10 03 35.5	-1.8
WHZ	**Wether Hill Ro**	**0.87**	**105**	P		Pg	10 03 24.4	-1.1
MLZ	**Mavora Lakes**	**1.06**	**72**	⇓P*		Pb	10 03 27.8	-1.1
MLZ				S*		Sb	10 03 41.3	-1.4
MLZ	**Mavora Lakes**	**1.06**	**72**	P		Pb	10 03 27.4	-1.5
MSZ	**Milford Sound**	**1.31**	**40**	PN		Pn	10 03 31.3	-1.4
MSZ	**Milford Sound**	**1.31**	**40**	P		Pn	10 03 31.3	-1.4
APZ	**The Paps**	**1.45**	**144**	PN		Pn	10 03 33.9	-0.7
APZ				SN		Sn	10 03 51.8	-1.7
APZ	**The Paps**	**1.45**	**144**	P		Pn	10 03 34.0	-0.6
WKZ	**Wanaka**	**1.82**	**63**	PN		Pn	10 03 40.9	+1.2
WKZ	**Wanaka**	**1.82**	**63**	P		Pn	10 03 40.9	+1.2
EAZ	**Earnscleugh**	**1.86**	**77**	PN		Pn	10 03 41.7	+1.4
EAZ	**Earnscleugh**	**1.86**	**77**	P		Pn	10 03 41.6	+1.3
SYZ	**Scrubby Hill**	**1.88**	**118**	⇑PN		Pn	10 03 41.0	+0.4
SYZ				SN		Sn	10 04 04.2	+0.1
SYZ	**Scrubby Hill**	**1.88**	**118**	P		Pn	10 03 41.0	+0.4
TUZ	**Tuapeka**	**2.04**	**99**	PN		Pn	10 03 44.1	+1.3
TUZ	**Tuapeka**	**2.04**	**99**	P		Pn	10 03 43.8	+1.0
JCZ	**Jackson Bay**	**2.15**	**43**	P		Pn	10 03 46.3	+2.0
RPZ	**Rata Peaks**	**3.65**	**59**	*e*Pn		Pn	10 04 04.3	-0.6
LTZ	**Lake Taylor**	**4.91**	**56**	P		Pn	10 04 21.9	-0.4

IDC 09 10:08:10.8±3.2, 20°.13S×70°.50W, h0km, mb3.5/1, mb1 3.5/2, mb1mx3.4/16, mbtmp3.4/2, ML3.4/1, Error ellipse: s-maj=134.2km s-min=28.4km az=114.0, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**4.44**	**31**	Pn	Pn	10 09 21.6	+2.3
	1.3nm,0.3s,baz=203,slow=9.3,SNR=25						
LPAZ				Pg	Pg	10 09 32.6	-3.2
	0.8nm,0.3s,baz=198,slow=6.4,SNR=11						
LPAZ				Lg		10 10 30.2	
	baz=176,slow=24,SNR=2.0						
TORD	**Torodi Ar. Bea**	**78.31**	**71**	P	P	10 20 13.5	+0.1
	0.5nm,0.9s,baz=245,slow=6.4,SNR=2.3						
MKAR	**Makanchi Array**	**145.36**	**34**	PKPbc	PKPbc	10 27 49.0	-1.4
	0.3nm,0.7s,baz=313,slow=4.8,SNR=3.1						

WEL 09 10:26:55.9±0.3, 45°.69S×166°.77E, h12km, ML3.5/8, 1C-2D, Error ellipse: s-maj=3.4km s-min=1.7km az=90.0, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.34**	**53**	⇓P*		Pg	10 27 03.1	+0.3
DCZ				S*		Sg	10 27 07.2	-0.2
PYZ	**Puysegur Point**	**0.48**	**187**	⇑P*		Pg	10 27 05.5	0.0
PYZ				S*		Sg	10 27 11.4	-0.5
WHZ	**Wether Hill Ro**	**0.85**	**105**	⇓P*		Pb	10 27 11.6	-1.0
WHZ				S*		Sb	10 27 22.5	-1.5
MLZ	**Mavora Lakes**	**1.05**	**72**	P*		Pb	10 27 14.4	-1.5
MLZ				S*		Sb	10 27 28.5	-1.0
MSZ	**Milford Sound**	**1.30**	**39**	PN		Pn	10 27 18.3	-1.6
APZ	**The Paps**	**1.43**	**144**	PN		Pn	10 27 21.1	-0.5
APZ				SN		Sn	10 27 38.5	-1.7
EAZ	**Earnscleugh**	**1.85**	**77**	PN		Pn	10 27 28.7	+1.4
SYZ	**Scrubby Hill**	**1.86**	**118**	PN		Pn	10 27 27.9	+0.4
SYZ				SN		Sn	10 27 51.0	+0.1
TUZ	**Tuapeka**	**2.02**	**99**	PN		Pn	10 27 31.0	+1.2
TUZ				SN		Sn	10 27 56.5	+1.6
JCZ	**Jackson Bay**	**2.15**	**42**	PN		Pn	10 27 33.8	+2.4

*ISCJB **09** 10:38:04.2±0.5, 24°.35N±0°.05×122°.95E±0°.02, h48km±8km, Error ellipse: s-maj=8.1km s-min=3.2km az=0.5*
*TAP **09** 10:38:04.3, 24°.47N×122°.85E, h84km±2km, ML2.9, C*
*JMA **09** 10:38:05.1±0.1, 24°.38N×123°.00E, h47km±1km, M2.3*

ISC 09 10:38:04.7±0.4, 24°.37N±0°.05×122°.96E±0°.02, h45km±9km, n25, σ0°79/48, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.11**	**26**	P	**Pn**	**10 38 12.5**	**+0.5**
YOJ				S	**Sn**	**10 38 17.8**	**+0.6**
IRIF	**Iriomote-Funau**	**0.70**	**92**	P	**Pn**	**10 38 18.1**	**-0.2**
IRIF				S	**Sn**	**10 38 27.9**	**-0.3**
HATJ	**Hateruma jima**	**0.83**	**111**	P	**Pn**	**10 38 20.2**	**+0.1**
HATJ				*e*S	**Sn**	**10 38 30.4**	**-0.8**
JKRS	**Kuro-shima**	**0.97**	**97**	P	**Pn**	**10 38 22.1**	**+0.2**
JKRS				S	**Sn**	**10 38 33.8**	**-0.7**
TWC	**Suao**	**1.04**	**284**	P	**Pn**	**10 38 22.5**	**-0.4**
	baz=284						
TWC				S	**Sn**	**10 38 35.5**	**-0.8**
	baz=284						
JIJ	**Ishigaki jima**	**1.08**	**90**	P	**Pn**	**10 38 23.2**	**-0.2**
JIJ				S	**Sn**	**10 38 36.5**	**-0.8**
TWB1	**Santiao Chiao**	**1.09**	**306**	*e*P	**Pn**	**10 38 23.3**	**-0.3**
	baz=298						
TWB1				*e*S	**Sn**	**10 38 36.3**	**-1.2**
	baz=298						
ENA	**Nanau**	**1.11**	**273**	*e*P	**Pn**	**10 38 24.1**	**+0.2**
	baz=267						
ENA				*e*S	**Sn**	**10 38 37.9**	**-0.1**
	baz=267						
TWE	**Neicheng**	**1.23**	**287**	*e*P	**Pn**	**10 38 26.0**	**+0.5**
	baz=283						
TWE				S	**Sn**	**10 38 39.8**	**-1.1**
	baz=283						
TWD	**Chiawan**	**1.28**	**257**	*e*P	**Pn**	**10 38 26.9**	**+0.8**
	baz=251						
TWD				S	**Sn**	**10 38 41.7**	**-0.3**
	baz=251						
ENTT	**Nioudou**	**1.30**	**282**	*e*P	**Pn**	**10 38 27.0**	**+0.6**
	baz=278						
ENTT				*e*S	**Sn**	**10 38 42.4**	**-0.2**
	baz=278						
NNS	**Nan Shan**	**1.45**	**273**	*e*P	**Pn**	**10 38 30.3**	**+1.9**
	baz=260						
NSK	**Sanguang**	**1.49**	**282**	*e*P	**Pn**	**10 38 30.2**	**+1.2**
	baz=278						
NSK				*e*S	**Sn**	**10 38 47.3**	**0.0**
	baz=278						
ESL	**Shilin**	**1.50**	**249**	*e*P	**Pn**	**10 38 28.6**	**-0.6**
	baz=237						
ESL				*e*S	**Sn**	**10 38 46.9**	**-0.6**
	baz=237						
WHF	**Hehuan Shan**	**1.56**	**262**	*e*P	**Pn**	**10 38 31.5**	**+1.5**
	baz=250						
WHF				*e*S	**Sn**	**10 38 47.8**	**-1.2**
	baz=250						
JTJ	**Tarama**	**1.61**	**80**	P	**Pn**	**10 38 31.3**	**+0.6**
JTJ				*e*S	**Sn**	**10 38 50.3**	**0.0**
EHY	**Hungye**	**1.72**	**241**	*e*P	**Pn**	**10 38 32.0**	**-0.2**
	baz=243						
EHY				*e*S	**Sn**	**10 38 52.7**	**-0.4**
	baz=243						
NSTT	**Nanjuang**	**1.80**	**279**	*e*P	**Pn**	**10 38 33.3**	**0.0**
	baz=275						
TWF1	**Yuli**	**1.82**	**237**	*e*P	**Pn**	**10 38 33.5**	**-0.1**
	baz=242						
TWF1				*e*S	**Sn**	**10 38 54.8**	**-0.7**
	baz=242						
YUS	**Yu-Shan**	**2.03**	**245**	*e*P	**Pn**	**10 38 37.9**	**+1.4**
	baz=234						
YUS				*e*S	**Sn**	**10 38 59.7**	**-0.9**
	baz=234						
ALS	**Alishan**	**2.15**	**247**	*e*P	**Pn**	**10 38 39.6**	**+1.6**
	baz=236						
ALS				*e*S	**Sn**	**10 39 03.4**	**0.0**
	baz=236						
CHN5	**Tsauling**	**2.22**	**250**	*e*P	**Pn**	**10 38 38.9**	**-0.1**
	baz=239						
CHN5				*e*S	**Sn**	**10 39 05.2**	**-0.1**
	baz=239						
STYT	**Tauyuan**	**2.34**	**240**	*e*P	**Pn**	**10 38 41.3**	**+0.6**
	baz=235						
STYT				*e*S	**Sn**	**10 39 07.6**	**-0.7**
	baz=235						
CHN4	**Tsaushan**	**2.39**	**245**	*e*P	**Pn**	**10 38 39.6**	**-1.8**
	baz=234						
CHN4				*e*S	**Sn**	**10 39 09.8**	**+0.4**
	baz=234						
CHN1	**Nanshi**	**2.52**	**243**	*e*P	**Pn**	**10 38 44.5**	**+1.4**
	baz=239						
CHN1				*e*S	**Sn**	**10 39 13.9**	**+1.3**
	baz=239						

*IDC **09** 10:42:13.9±3.5, 5°.75S×146°.59E, h0km, mb3.6/2, mb1 3.9/4, mb1mx3.5/17, mbtmp3.8/4, ML3.5/1, Error ellipse: s-maj=74.7km s-min=49.7km az=108.0*
*NEIC **09** 10:42:27.2±7.1, 5°.94S×146°.35E, h104km±32km, mb4.2/2, Error ellipse: s-maj=86.5km s-min=31.7km az=205.0*

ISC 09 10:42:32.5±2.9, 6°.5S±0°.2×146°.4E±0°.2, h141km±30km, n11, σ0°82/12, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.03**	**166**	*e*Pn	**Pn**	**10 43 19.2**	**-0.6**
PMG				*e*Sn	**Sn**	**10 43 57.1**	**+0.6**
COEN	**Coen**	**8.12**	**203**	*e*Pn	**Pn**	**10 44 28.8**	**+1.2**
	138nm,0.6s						
COEN				*e*Sn	**Sn**	**10 45 57.4**	**-0.4**
CTA	**Charters Tower**	**13.56**	**181**	Pn	**Pn**	**10 45 37.4**	**-1.8**
	0.2nm,0.3s,baz=8.7,slow=13,SNR=2.0						
CTA	**Charters Tower**	**13.56**	**181**	Pn	**Pn**	**10 45 37.4**	**-1.8**
CTAO	**Charters Tower**	**13.56**	**181**	Pn	**Pn**	**10 45 43.8**	**+4.6**
KAKA	**Kakadu**	**15.12**	**245**	*e*Pn	**Pn**	**10 45 58.7**	**-0.2**
	16nm,0.5s						
WRAB	**Tennant Creek**	**17.81**	**220**	*e*Pn	**Pn**	**10 46 31.1**	**-0.5**
	7.6nm,1.3s						
WRA	**Warramunga Arr**	**17.82**	**220**	P	**Pn**	**10 46 31.1**	**-0.7**
	0.2nm,0.3s,baz=42,slow=11,SNR=16						
ASAR	**Alice Springs**	**20.93**	**214**	P	**P**	**10 47 05.2**	**+1.1**
	1.3nm,0.8s,baz=54,slow=8.9,SNR=9.3						
FITZ	**Fitzroy Crossi**	**23.34**	**238**	P	**P**	**10 47 28.9**	**+0.5**
	3.6nm,1.0s,baz=52,slow=13,SNR=3.3						
TORD	**Torodi Ar. Bea**	**144.64**	**284**	PKP	PKPdf	11 01 53.9	+0.4
	0.7nm,0.9s,baz=77,slow=2.6,SNR=3.1						

*ISCJB **09** 10:51:05.3±1.6, 18°.19N±0°.10×145°.3E±0°.2, h303km±17km, mb3.7/14, Error ellipse: s-maj=32.0km s-min=15.3km az=174.3*
*NEIC **09** 10:51:05.7±1.5, 18°.20N×145°.45E, h295km±15km, mb3.7/2, Error ellipse: s-maj=23.8km s-min=13.4km az=78.0*
*IDC **09** 10:51:08.4±6.0, 18°.17N×145°.37E, h320km±61km, mb3.4/12, mb1 3.5/12, mb1mx3.4/24, mbtmp3.4/12, Error ellipse: s-maj=26.4km s-min=14.3km az=79.0*

ISC 09 10:51:06.1±1.6, 18°.18N±0°.10×145°.4E±0°.2, h297km±17km, n19, σ0°98/18, mb3.7/14, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.59**	**186**	*e*P	**Pn**	**10 52 18.6**	**-0.3**
KSRS	**Korea Array**	**24.56**	**325**	P	**P**	**10 55 58.2**	**-1.3**
	1.0nm,0.6s,mb3.4,baz=147,slow=9.7,SNR=6.8						
ASAJ	**Asahikawa**	**25.96**	**355**	P	**P**	**10 56 13.4**	**+1.5**
	1.8nm,0.3s,mb4.0,baz=224,slow=16,SNR=6.3						
WRAB	**Tennant Creek**	**39.39**	**196**	*e*P	**P**	**10 58 08.3**	**+0.5**
	5.9nm,1.1s,mb3.9						
WRA	**Warramunga Arr**	**39.40**	**196**	P	**P**	**10 58 07.5**	**-0.4**
	0.5nm,0.6s,mb3.1,baz=20,slow=8.9,SNR=6.5						
WRA	**Warramunga Arr**	**39.40**	**196**	P	**P**	**10 58 07.5**	**-0.4**
ASAR	**Alice Springs**	**43.07**	**195**	P	**P**	**10 58 38.0**	**+0.5**
	0.4nm,0.7s,mb2.8,baz=18,slow=8.0,SNR=4.2						
SONM	**Songino Array**	**43.36**	**322**	P	**P**	**10 58 41.0**	**+1.5**
	1.7nm,0.6s,mb3.5,baz=133,slow=8.2,SNR=7.6						
ZALV	**Zalesovo Beam**	**58.24**	**323**	P	**P**	**11 00 29.7**	**0.0**
	1.4nm,0.4s,mb3.7,baz=101,slow=7.7,SNR=9.2						
MK31	**Makanchi Array**	**58.60**	**314**	*e*P	**P**	**11 00 32.6**	**+0.2**
MKAR	**Makanchi Array**	**58.60**	**314**	P	**P**	**11 00 33.5**	**+1.1**
	1.9nm,0.5s,mb3.8,baz=89,slow=8.2,SNR=33						
KURK	**Kurchatov**	**61.45**	**318**	P	**P**	**11 00 52.0**	**+0.4**
	5.1nm,0.4s,mb4.4,baz=94,slow=7.2,SNR=42						
KURK	**Kurchatov**	**61.45**	**318**	P	**P**	**11 00 52.0**	**+0.4**
BVAR	**Borovoye Array**	**66.68**	**321**	P	**P**	**11 01 24.9**	**-0.4**
	5.0nm,0.6s,mb4.4,baz=89,slow=7.4,SNR=15						
INK	**Inuvik**	**69.97**	**23**	P	**P**	**11 01 44.4**	**-0.9**
	1.8nm,0.8s,mb3.9,baz=65,slow=4.4,SNR=4.4						
ABKAR	**Akbulak array**	**73.51**	**317**	*e*P	**P**	**11 02 04.9**	**-1.7**
	0.8nm,0.7s,mb3.5						
ARCES	**ARCESS Array B**	**82.89**	**342**	P	**P**	**11 02 55.7**	**-1.7**
	1.1nm,0.9s,mb3.7,baz=57,slow=6.6,SNR=3.0						
NVAR	**Mina Array Bea**	**83.70**	**52**	P	**P**	**11 03 02.9**	**+0.7**
	1.3nm,0.7s,mb3.9,baz=265,slow=5.9,SNR=17						
LPAZ	**La Paz**	**147.97**	**92**	PKPbc	PKPbc	11 10 17.9	+0.6
	0.6nm,0.5s,baz=196,slow=9.9,SNR=5.2						

*ISCJB **09** 11:02:38.6±0.7, 30°.09N±0°.07×139°.7E±0°.2, h411km±11km, mb2.8/2, Error ellipse: s-maj=34.7km s-min=6.5km az=166.5*
*IDC **09** 11:02:38.7±2.4, 29°.75N×138°.77E, h349km±65km, mb2.6/2, mb1 2.8/5, mb1mx2.6/25, mbtmp2.8/5, Error ellipse: s-maj=149.1km s-min=13.3km az=70.0*
*JMA **09** 11:02:38.6±0.2, 30°.11N×139°.81E, h420km±3km, M3.4*

ISC 09 11:02:39.7±0.7, 30°.12N±0°.07×139°.9E±0°.2, h401km±10km, n15, σ0°95/22, mb2.8/2, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.98**	**359**	P	**Pn**	**11 03 43.9**	**+1.2**
JHJ2				*e*S	**S**	**11 04 35.1**	**+1.3**
JHJ	**Hachijo jima 2**	**2.99**	**359**	P	**Pn**	**11 03 44.0**	**+1.3**
	8.6nm,0.3s,baz=234,slow=16,SNR=11						
JHJ				S	**S**	**11 04 33.6**	**-0.3**
	4.9nm,0.3s,baz=84,slow=22,SNR=2.6						
CBIJ	**Chichi jima**	**3.65**	**145**	P	**Pn**	**11 03 48.4**	**-0.3**
	9.9nm,0.3s,baz=300,slow=21,SNR=6.2						
CBIJ				S	**S**	**11 04 43.5**	**-1.0**
	31nm,0.3s,baz=266,slow=21,SNR=17						
CBIJ	**Chichi jima**	**3.65**	**145**	P	**Pn**	**11 03 48.9**	**+0.2**
CBIJ				S	**S**	**11 04 44.0**	**-0.4**
JHHJ	**Haha-jima-NKT**	**4.04**	**149**	P	**Pn**	**11 03 52.5**	**+0.2**
JHHJ				S	**S**	**11 04 50.5**	**-0.6**
BSO1	**Boso 1**	**4.62**	**12**	P	**Pn**	**11 03 58.7**	**+1.0**
BSO1				*e*S	**S**	**11 05 02.6**	**+1.4**
BSO3	**Boso 3**	**4.70**	**7**	P	**Pn**	**11 03 58.6**	**+0.1**
BSO3				*e*S	**S**	**11 05 02.2**	**-0.5**
BSO4	**Boso 4**	**4.87**	**5**	*e*S	**S**	**11 05 05.1**	**-0.8**
JIE	**Ise**	**5.02**	**329**	P	**Pn**	**11 04 01.6**	**-0.3**
JOD2	**Odawara 2**	**5.17**	**353**	*e*S	**S**	**11 05 10.4**	**-1.0**
JYT	**Yasato**	**6.09**	**3**	*e*S	**S**	**11 05 27.5**	**-2.0**
JHO	**Hitachi**	**6.50**	**5**	P	**Pn**	**11 04 18.5**	**+0.8**
MJAR	**Matsushiro Arr**	**6.55**	**348**	P	**Pn**	**11 04 16.7**	**-1.5**
	0.2nm,0.3s,baz=165,slow=10,SNR=3.1						
WRA	**Warramunga Arr**	**50.06**	**187**	P	**P**	**11 10 55.1**	**-0.6**
	0.7nm,0.7s,mb3.1,baz=6.8,slow=7.9,SNR=12						
ASAR	**Alice Springs**	**53.79**	**187**	P	**P**	**11 11 23.6**	**+0.7**
	0.1nm,0.3s,mb2.5,baz=22,slow=10,SNR=10						

*IDC **09** 11:09:56.2±2.3, 7°.23S×129°.88E, h0km, mb3.7/1, mb1 3.7/4, mb1mx3.5/17, mbtmp3.6/4, ML3.4/3, Error ellipse: s-maj=99.0km s-min=27.8km az=77.0*
*ISCJB **09** 11:09:59.7±1.4, 7°.54S±0°.09×129°.5E±0°.1, h33km, Error ellipse: s-maj=18.9km s-min=12.4km az=163.2*
*NEIC **09** 11:10:11.3±3.9, 7°.87S×129°.68E, h146km±44km, Error ellipse: s-maj=38.5km s-min=33.7km az=218.0*

ISC 09 11:10:01.8±1.4, 7°.47S±0°.09×129°.5E±0°.1, h35km, n7, σ0°65/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**5.95**	**151**	*e*Pn	**Pn**	**11 11 31.8**	**+4.3**
KAKA				*e*Sn	**Sn**	**11 12 34.5**	**0.0**
FITZ	**Fitzroy Crossi**	**11.21**	**199**	Pn	**Pn**	**11 12 43.3**	**+3.6**
	0.2nm,0.3s,baz=24,slow=11,SNR=13						
FITZ				Sn	**Sn**	**11 14 43.6**	**-0.3**
	0.4nm,0.3s,baz=170,slow=11,SNR=6.2						
WRAB	**Tennant Creek**	**13.24**	**160**	*e*Pn	**Pn**	**11 13 07.8**	**+0.3**
WRAB				*e*Sn	**Sn**	**11 15 25.0**	**-8.6**
WRA	**Warramunga Arr**	**13.25**	**160**	Pn	**Pn**	**11 13 07.1**	**-0.5**
	0.3nm,0.3s,baz=338,slow=14,SNR=20						
WRA				Sn	**Sn**	**11 15 26.3**	**-7.4**
	0.3nm,0.3s,baz=335,slow=21,SNR=7.1						
WRA	**Warramunga Arr**	**13.25**	**160**	Pn	**Pn**	**11 13 07.1**	**-0.5**
WRA				Sn	**Sn**	**11 15 26.3**	**-7.4**
ASAR	**Alice Springs**	**16.64**	**166**	Pn	**Pn**	**11 13 52.5**	**0.0**
	0.1nm,0.3s,baz=342,slow=8.9,SNR=14						
MKAR	**Makanchi Array**	**68.35**	**327**	P	**P**	**11 20 59.5**	**-0.2**
	0.3nm,0.4s,baz=132,slow=6.5,SNR=8.1						

JMA 09 11:15:35.9±0.2, 28°.10N×140°.55E, h385km, M3.5, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.76**	**124**	P	Pn	11 16 29.0	0.0
CBIJ				*e*S	S	11 17 10.5	-1.3
JHHJ	**Haha-jima-NKT**	**2.06**	**135**	P	Pn	11 16 31.0	+0.1
JHHJ				*e*S	S	11 17 15.3	+0.1
BSO1	**Boso 1**	**6.54**	**3**	P	Pn	11 17 15.0	+1.2
BSO1				*e*S	S	11 18 34.0	+0.3
JRY	**Ryogami san**	**8.02**	**350**	P	Pn	11 17 31.6	+1.0
JYT	**Yasato**	**8.11**	**358**	P	Pn	11 17 32.3	+0.6
JAG	**Ashikaga**	**8.35**	**354**	P	Pn	11 17 34.4	-0.1
JAG				S	S	11 19 06.9	-4.8
JHO	**Hitachi**	**8.49**	**0**	P	Pn	11 17 37.2	+1.1
JKSM	**Kasumi**	**8.99**	**328**	P	Pn	11 17 42.6	+0.7
JFK	**Kawauchi**	**9.24**	**2**	P	Pn	11 17 47.0	+2.1

*ISCJB **09** 11:19:41.9±1.0, 33°.41N±0°.05×35°.58E±0°.06, h15km±4km, Error ellipse: s-maj=9.4km s-min=5.7km az=137.7*
*CSEM **09** 11:19:41.8±0.3, 33°.43N×35°.58E, h12km, ML3.1, Error ellipse: s-maj=6.6km s-min=4.2km az=55.0*
*GRAL **09** 11:19:42.7±0.3, 33°.42N×35°.61E, h9km±1km, MD3.1*
*NSSC **09** 11:19:43, 33°.30N×35°.66E, h6km±4km*

ISC 09 11:19:41.9±1.0, 33°.42N±0°.05×35°.59E±0°.06, h18km±4km, n18, σ0°67/31, 7D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCY	**Rachaya**	**0.20**	**72**	*e*P	**Pg**	**11 19 46.7**	**-0.2**
RCY				*e*S	**Sg**	**11 19 49.8**	**-0.5**
RCY	**Rachaya**	**0.20**	**72**	*e*P	**Pg**	**11 19 46.7**	**-0.2**
RCY				*e*S	**Sg**	**11 19 49.8**	**-0.4**
MATL	**Matarih**	**0.23**	**287**	*e*P	**Pg**	**11 19 47.3**	**0.0**
MATL	**Matarih**	**0.23**	**287**	*e*P	**Pg**	**11 19 47.3**	**0.0**
BRBR	**Barbar**	**0.30**	**92**	⇓P	**Pg**	**11 19 48.0**	**-0.5**
BRBR				⇓S	**Sg**	**11 19 53.0**	**+0.1**
BRBR	**Barbar**	**0.30**	**92**	⇓*i*P	**Pg**	**11 19 48.5**	**0.0**
BRBR				⇓*i*S	**Sg**	**11 19 53.5**	**+0.6**
BHL	**Bhannes**	**0.48**	**6**	*e*P	**Pg**	**11 19 51.6**	**-0.1**
BHL				*e*S	**Sg**	**11 19 58.1**	**-0.2**
BHL	**Bhannes**	**0.48**	**6**	*e*P	**Pg**	**11 19 51.6**	**-0.1**
BHL				*e*S	**Sg**	**11 19 58.1**	**-0.2**
QASN	**Qassioun**	**0.58**	**79**	⇑P	**Pg**	**11 19 54.0**	**+0.5**
QASN				⇑S	**Sg**	**11 20 02.0**	**+0.6**
QASN	**Qassioun**	**0.58**	**79**	⇑*i*P	**Pg**	**11 19 54.2**	**+0.7**
TOTH	**TOTAH**	**0.70**	**95**	⇓P	**Pb**	**11 19 56.0**	**+0.3**
TOTH				⇓S	**Sb**	**11 20 05.0**	**-0.1**
TOTH	**TOTAH**	**0.70**	**95**	⇓*i*P	**Pb**	**11 19 56.1**	**+0.4**
HWQ	**Hawqa**	**0.91**	**19**	*e*P	**Pb**	**11 19 58.8**	**-0.3**
HWQ				*e*S	**Sb**	**11 20 10.6**	**-0.3**
HWQ	**Hawqa**	**0.91**	**19**	*e*P	**Pb**	**11 19 58.8**	**-0.3**
HWQ				*e*S	**Sb**	**11 20 10.6**	**-0.2**
SALA	**Sala**	**1.19**	**126**	⇑P	**Pn**	**11 20 04.0**	**+0.3**
SALA				⇑S	**Sb**	**11 20 17.0**	**-2.1**
SALA	**Sala**	**1.19**	**126**	⇑*i*P	**Pn**	**11 20 04.1**	**+0.4**
ZALF	**Zalf**	**1.55**	**108**	⇑P	**Pn**	**11 20 10.0**	**+1.4**
ZALF				⇑S	**Sn**	**11 20 28.0**	**-0.2**
ZALF	**Zalf**	**1.55**	**108**	⇑*i*P	**Pn**	**11 20 10.2**	**+1.6**
ZALF				⇑*i*S	**Sn**	**11 20 28.5**	**+0.3**

*IDC **09** 11:31:57.1±0.7, 8°.58S×112°.38E, h0km, mb4.4/15, mb1 4.5/16, mb1mx4.4/22, mbtmp4.4/16, ML3.3/1, MS3.5/3, Ms1 3.5/3, ms1mx2.8/25, Error ellipse: s-maj=28.6km s-min=14.1km az=56.0*
*BJI **09** 11:31:59.4, 8°.90S×112°.20E, h35km, mB4.9/6, mb4.8/8*
*MOS **09** 11:32:00.9±0.8, 8°.44S×112°.49E, h33km, mb4.8/8, Error ellipse: s-maj=23.9km s-min=11.1km az=121.4*
*NEIC **09** 11:32:01.4±0.3, 8°.86S×112°.19E, h35km, mb4.6/9, Error ellipse: s-maj=15.1km s-min=5.7km az=56.0*
NEIC Felt [II] at Karangkates, Lumajang and Turen.
*ISCJB **09** 11:32:07.0±0.4, 8°.78S±0°.05×112°.47E±0°.02, h95km±3km, mb4.5/24, Error ellipse: s-maj=8.0km s-min=3.5km az=12.6*
*DJA **09** 11:32:07, 8°.90S×112°.50E, h27km, mb4.9/26*

ISC 09 11:32:08.0±0.4, 8°.79S±0°.05×112°.46E±0°.02, h88km±3km, n106, σ1°35/106, mb4.5/24, 4C-1D, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRKI	**Karangkates**	**0.62**	**359**	P	**Pn**	**11 32 21.8**	**-1.8**
KRKI				S	**Sn**	**11 32 32.7**	**-2.6**
PWJI	**Pagerwojo**	**1.00**	**319**	P	**Pn**	**11 32 25.6**	**-2.0**
PWJI				S	**Sn**	**11 32 39.3**	**-2.9**
GMJI	**Gumukmas**	**1.10**	**62**	P	**Pn**	**11 32 26.1**	**-2.6**
SJI	**Sawahan**	**1.25**	**327**	P	**Pn**	**11 32 29.4**	**-1.2**
PCJI	**Pacitan**	**1.40**	**295**	P	**Pn**	**11 32 31.0**	**-1.4**
PCJI				S	**Sn**	**11 32 49.5**	**-1.3**
NGJI	**Ngawi**	**1.72**	**325**	P	**Pn**	**11 32 37.8**	**+1.3**
NGJI				S	**Sn**	**11 33 02.9**	**+4.7**
GRJI	**Gresik**	**1.86**	**1**	S	**Sn**	**11 33 01.1**	**-0.3**
BYJI	**Banyuwangi**	**1.96**	**73**	P	**Pn**	**11 32 40.4**	**+0.8**
BYJI				S	**Sn**	**11 33 04.8**	**+1.1**
ABJI	**Asem Bagus**	**2.01**	**61**	P	**Pn**	**11 32 40.5**	**+0.2**
UGM	**Wanagama**	**2.

0.1nm,0.3s,baz=253,slow=22,SNR=3.2
FITZ Sn **Sn** **11 38 29.8 -10**
0.8nm,0.3s,baz=33,slow=22,SNR=6.3
FITZ LR LR 11 41 32.6
comp=Z,100nm,18.9s,baz=357,slow=36
FITZ Fitzroy Crossi 15.80 127 *e*P **Pn** **11 35 43.5 -1.9**
18nm,1.0s
FITZ Fitzroy Crossi 15.80 127 P **Pn** **11 35 44.5 -0.9**
45nm,1.1s
KNA Kununurra 17.36 115 *e*P **Pn** **11 36 04.7 0.0**
22nm,0.9s
KNA Kununurra 17.36 115 P **Pn** **11 36 05.0 +0.3**
78nm,0.9s
TNTI Ternate 17.63 58 P **Pn** **11 36 08.3 +0.3**
80nm,0.9s
MEEK Meekatharra 18.69 163 *e*P **Pn** **11 36 21.0 +0.4**
MEEK *e*S Sx 11 39 31.9
KAKA Kakadu 20.01 103 *e*P **P** **11 36 33.9 +0.1**
9.7nm,0.5s
KAKA Kakadu 20.01 103 *e*P **P** **11 36 33.5 -0.3**
23nm,0.6s
KAKA *e*S **S** **11 40 15.9 +1.8**
MORW Morawa 20.45 171 *e*P **P** **11 36 43.1 +4.6**
MORW *e*S **S** **11 40 13.6 -9.0**
WRA Warramunga Arr 23.89 120 P **P** **11 37 13.8 +0.2**
13nm,0.5s,mb4.5,baz=297,slow=11,SNR=126
WRAB Tennant Creek 23.89 120 *e*P **P** **11 37 14.0 +0.4**
WRAB pmax pmax
comp=Z,11nm,0.6s,mb4.4
WRAB Tennant Creek 23.89 120 *e*P **P** **11 37 14.0 +0.4**
comp=Z,11nm,0.6s,mb4.4
WRAB Tennant Creek 23.89 120 P **P** **11 37 14.0 +0.4**
ASAR Alice Springs 25.30 128 P **P** **11 37 27.2 +0.9**
comp=Z,8.1nm,0.7s,mb4.3,baz=303,slow=9.0,SNR=49
ASAR PcP PcP 11 40 59.1 +1.7
comp=Z,1.7nm,0.7s,baz=322,slow=2.0,SNR=6.0
CTA Charters Tower 34.52 113 LR LR 11 51 28.2
comp=Z,64nm,19.8s,baz=137,slow=34
STKA Stephens Creek 35.48 134 P **P** **11 38 57.7 +1.5**
comp=Z,26nm,0.6s,mb5.3,baz=311,slow=8.4,SNR=72
STKA PcP PcP 11 41 25.6 +1.6
comp=Z,6.3nm,0.5s,baz=129,slow=22,SNR=8.2
STKA LR LR 11 53 56.9
comp=Z,130nm,19.3s,baz=360,slow=37
STKA Stephens Creek 35.48 134 *e*P **P** **11 38 57.6 +1.4**
STKA pmax pmax
comp=Z,5.0nm,0.6s
STKA Stephens Creek 35.48 134 *e*P **P** **11 38 57.6 +1.4**
comp=Z,5.1nm,0.6s,mb4.5
KSRS Korea Array 48.22 17 P **P** **11 40 39.7 -0.1**
comp=Z,2.6nm,0.7s,mb4.2,baz=202,slow=9.3,SNR=12
HHC Hu-ho-hao-te 49.39 359 *e*P **P** **11 40 50.6 +1.9**
HHC S **S** **11 47 50.6 +1.7**
HHC pmax pmax
comp=Z,12nm,0.6s,mb5.0
HHC pmax pmax
comp=Z,64nm,6.3s
MJAR Matsushiro Arr 51.17 27 P **P** **11 41 00.2 -2.0**
comp=Z,2.5nm,0.6s,mb4.4,baz=208,slow=8.6,SNR=8.8
MJAR Matsushiro Arr 51.17 27 P **P** **11 41 00.2 -2.0**
SONM Songino Array 56.63 355 P **P** **11 41 41.3 -0.4**
comp=Z,2.0nm,0.6s,mb4.3,baz=176,slow=8.5,SNR=9.9
SONM PcP PcP 11 42 36.5 -0.5
comp=Z,1.4nm,0.7s,baz=171,slow=6.5,SNR=3.9
ASAJ Asahikawa 59.31 25 P **P** **11 41 59.4 -1.1**
comp=Z,1.5nm,0.6s,mb4.2,baz=246,slow=15,SNR=5.5
MK31 Makanchi Array 61.52 337 *e*P **P** **11 42 14.4 -1.1**
MK31 *e*pP pP 11 42 33.6 -4.2
MKAR Makanchi Array 61.52 337 P **P** **11 42 14.4 -1.1**
comp=Z,3.4nm,0.6s,mb4.6,baz=151,slow=7.3,SNR=18
MKAR Makanchi Array 61.52 337 *c*e**P** **P** **11 42 14.3 -1.2**
MKAR pmax pmax
comp=Z,3.0nm,0.6s
AML Almayashu 61.85 328 *e*P **P** **11 42 17.2 -0.6**
AML *e* 11 42 59.3
AML pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
AML Almayashu 61.85 328 *e*P **P** **11 42 17.2 -0.6**
comp=Z,4.8nm,0.7s,mb4.6
AML *e*pP pP 11 42 37.7 -2.5
AML *e*PcP PcP 11 42 59.3 +1.3
EKS2 Erkin-Say 62.18 329 *e*P **P** **11 42 19.5 -0.6**
EKS2 pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
EKS2 Erkin-Say 62.18 329 *e*P **P** **11 42 19.5 -0.5**
comp=Z,5.8nm,0.9s,mb4.6
KURK Kurchatov 66.12 337⇑ *i*P **P** **11 42 45.0 -0.7**
KURK pmax pmax
comp=Z,3.0nm,1.0s,mb4.1
KURK Kurchatov 66.12 337 *e*P **P** **11 42 44.3 -1.3**
comp=Z,6.0nm,1.1s,mb4.3
KRAR Krasnoyarsk 66.58 348 *e*P **P** **11 42 47.3 -1.2**
KRAR pmax pmax
comp=Z,13nm,0.6s,mb4.9
ZALV Zalesovo Beam 66.72 343 P **P** **11 42 47.8 -1.7**
comp=Z,3.4nm,0.6s,mb4.3,baz=158,slow=5.0,SNR=11
BVAR Borovoye Array 71.20 335 P **P** **11 43 16.0 -1.2**
comp=Z,1.3nm,0.7s,mb3.9,baz=142,slow=7.5,SNR=5.6
PETK Petropavlovsk- 72.63 27 P **P** **11 43 25.4 -0.4**
comp=Z,2.6nm,0.6s,mb4.2,baz=220,slow=2.6,SNR=9.8
ABKAR Akbulak array 73.77 327 *e*P **P** **11 43 31.6 -1.0**
comp=Z,8.6nm,0.7s,mb4.6
SEY Seymchan 77.77 17⇑ *i*P **P** **11 43 54.9 -0.1**
ZEI Tsey 80.60 316 *e*P **P** **11 44 07.2 -3.7**
ZEI pmax pmax
comp=Z,6.0nm,0.4s,mb4.8
MMAI Mount Meron Ar 84.05 305 P **P** **11 44 29.8 +0.6**
comp=Z,6.6nm,0.9s,mb4.5,baz=87,slow=5.9,SNR=3.4
BRTR Keskin Array B 87.07 311 P **P** **11 44 44.2 +0.2**
comp=Z,2.9nm,0.8s,mb4.3,baz=129,slow=7.0,SNR=16
BRTR Keskin Array B 87.07 311 *c*e**P** **P** **11 44 44.2 +0.2**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
BRTR Keskin Array B 87.07 311 P **P** **11 44 44.2 +0.2**
OBN Obninsk 89.19 326⇓ *i*P **P** **11 44 53.5 -0.1**
OBN pmax pmax
comp=Z,15nm,1.0s,mb5.0
AKASG Malin Array Be 92.47 321 P **P** **11 45 08.5 -0.5**
comp=Z,0.3nm,0.3s,mb4.0,baz=68,slow=6.6,SNR=4.4
FINES FINESS Array B 95.92 331 P **P** **11 45 24.5 -0.1**
comp=Z,0.8nm,0.6s,mb4.3,baz=95,slow=4.6,SNR=2.4
NVAR Mina Array Bea 125.80 49 PKP PKPdf 11 51 02.1 +2.3
comp=Z,0.7nm,0.8s,baz=225,slow=3.7,SNR=6.4
TXAR Lajitas Array 140.45 54 PKhKP PKPpre 11 51 20.4
comp=Z,0.2nm,0.6s,baz=298,slow=2.7,SNR=3.5
TXAR PKP PKPdf 11 51 28.5 +0.9
comp=Z,0.2nm,0.6s,baz=268,slow=2.3,SNR=3.6
TXAR Lajitas Array 140.45 54 PKP PKPpre 11 51 20.4
TXAR PKP PKPdf 11 51 28.5 +0.9
CPUP Villa Florida 143.71 196 PKP PKPdf 11 51 33.5 0.0
comp=Z,1.3nm,0.5s,baz=136,slow=3.1,SNR=7.7
MIAR Mount Ida 144.96 39 *e*PKIKP PKPdf 11 51 35.3 -0.1
ACSO Alum Creek Sta 145.79 21 *e*PKPbc PKPbc 11 51 37.8 +0.5
BINY Binghamton 145.90 11 *e*PKPbc PKPbc 11 51 38.0 +0.5
WCI Wyandotte Cave 146.16 27 *e*PKP2 PKPab 11 51 38.7 -0.5
WVT Waverly 147.10 31 *e*PKPdf PKPdf 11 51 39.7 +0.7
WVT *e*PKPbc PKPbc 11 51 41.8 +0.5
WVT *e*PKPab PKPab 11 51 43.5 +0.6
OXF Oxford 147.46 35 *e*PKIKP PKPdf 11 51 40.5 +0.8
OXF *e* 11 51 42.7
CPCT Cooper Cave 149.25 28 *e*PKPbc PKPbc 11 51 47.4 +0.5
ELN Prospectdale 149.26 21 *e*PKPdf PKPdf 11 51 42.0 -0.6
ELN *e*PKPbc PKPbc 11 51 47.0 +0.1
ELN *e*PKPab PKPab 11 51 51.8 +0.3
TKL Tuckaleechee C 149.42 27 *e*PKP2 PKPbc 11 51 48.0 +0.7
LRAL Lakeview Retre 149.90 34 *e*PKPbc PKPbc 11 51 49.0 +0.4
LPAZ La Paz 155.08 179 PKP PKPdf 11 51 57.3 +5.6
comp=Z,0.7nm,0.3s,baz=242,slow=19,SNR=7.5
LPAZ PKPab PKPab 11 52 19.3 +3.0
comp=Z,1.4nm,0.7s,baz=144,slow=5.8,SNR=5.8
LPAZ La Paz 155.08 179 PKP PKPdf 11 51 57.3 +5.6
LPAZ PKPab PKPab 11 52 19.3 +3.0

*IDC **09** 11:32:59.6±0.9, 19°.50N×121°.24E, h0km, mb3.8/10, mb1 3.9/11,mb1mx3.8/23,mbtmp3.8/11,ML4.0/1,MS3.3/9, Ms1 3.3/9,ms1mx3.1/28, Error ellipse: s-maj=31.4km s-min=17.8km az=72.0*
*ISCJB **09** 11:33:02.2±0.7, 19°.48N±0°.07×120°.97E±0°.07, h33km, mb3.8/12,MS3.2/8, Error ellipse: s-maj=11.0km s-min=8.6km az=44.6*
*BJI **09** 11:33:02.0, 19°.24N×121°.64E, h53km, mB4.5/4, mb4.3/6, Ms3.9/2, Ms7 3.4/2*
*NEIC **09** 11:33:03.8±0.7, 19°.49N×121°.09E, mb4.4/3, Error ellipse: s-maj=15.1km s-min=10.4km az=95.0*
ISC 09 11:33:04.3±0.7, 19°.49N±0°.07×121°.06E±0°.07, h35km, n27, σ1§26/24, mb3.8/12, MS3.2/8, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**3.31**	**0**	Pn	**Pn**	**11 33 52.8**	**-0.9**
TPUB	**Ta-pu**	**3.81**	**354**	*e*Pn	**Pn**	**11 33 59.1**	**-1.4**
YULB	**Yu-li**	**3.88**	**3**	*e*Pn	**Pn**	**11 34 00.2**	**-1.3**
SSLB	**Suanglung**	**4.27**	**359**	*e*Pn	**Pn**	**11 34 07.4**	**+0.5**
YHNB	**Yeheng**	**5.16**	**3**	*e*Pn	**Pn**	**11 34 19.7**	**+0.7**
	42nm,0.7s						
QIZ	**Qiongzhong**	**10.60**	**269**	*e*Pn	**Pn**	**11 35 32.2**	**-1.5**
QIZ				*e*Sn	**Sn**	**11 37 30.5**	**-0.8**
DAV	**Davao City (W)**	**13.11**	**160**	LR	LR	11 42 32.1	
	comp=Z,98nm,18.1s,baz=181,slow=44						
KSRS	**Korea Array**	**18.87**	**17**	P	**Pn**	**11 37 19.8**	**-2.5**
	0.5nm,0.3s,baz=200,slow=11,SNR=17						
KSRS				LR	LR	11 46 06.1	
	comp=Z,68nm,18.9s,baz=185,slow=42						
CBIJ	**Chichi jima**	**20.81**	**65**	LR	LR	11 43 56.0	
	comp=Z,42nm,20.1s,MS2.8,baz=293,slow=32						
BJT	**Baijiatuau**	**20.88**	**349**	*e*P	**P**	**11 37 43.2**	**-0.2**
	30nm,0.8s						
BJT				*e*pP		11 37 53.0	
BJI	**Beijing**	**20.90**	**349**	P	**P**	**11 37 46.4**	**+2.8**
BJI				pmax	pmax		
	comp=Z,23nm,0.8s						
BJI				LR	LR		
	comp=N,93nm,16.4s,MS3.6						
BJI				LR	LR		
	comp=E,180nm,17.9s,MS3.6						
BJI				LR	LR		
	comp=Z,39nm,17.9s,MS2.8						
MJAR	**Matsushiro Arr**	**22.69**	**38**	P	**P**	**11 38 00.8**	**-2.0**
	comp=Z,0.7nm,0.6s,mb3.3,baz=231,slow=45,SNR=2.8						
ASAJ	**Asahikawa**	**30.44**	**31**	LR	LR	11 49 48.4	
	comp=Z,64nm,21.9s,MS3.2,baz=347,slow=33						
SONM	**Songino Array**	**30.68**	**340**	P	**P**	**11 39 15.5**	**0.0**
	comp=Z,1.0nm,0.6s,mb3.8,baz=162,slow=9.4,SNR=5.2						
SONM				LR	LR	11 52 38.7	
	comp=Z,64nm,18.6s,MS3.3,baz=82,slow=38						
WRA	**Warramunga Arr**	**41.30**	**161**	P	**P**	**11 40 46.2**	**-0.3**
	comp=Z,0.9nm,0.7s,mb3.5,baz=342,slow=8.8,SNR=3.7						
MK31	**Makanchi Array**	**41.72**	**320**	*e*P	**P**	**11 40 51.1**	**+1.4**
MKAR	**Makanchi Array**	**41.72**	**320**	P	**P**	**11 40 50.1**	**+0.3**
	comp=Z,1.2nm,0.7s,mb3.6,baz=112,slow=9.8,SNR=16						
PETK	**Petropavlovsk-**	**43.86**	**31**	P	**P**	**11 41 08.0**	**+0.9**
	comp=Z,2.9nm,0.9s,mb4.0,baz=266,slow=5.9,SNR=3.7						
PETK				LR	LR	11 57 27.9	
	comp=Z,21nm,21.3s,MS3.0,baz=64,slow=34						
ZALV	**Zalesovo Beam**	**44.16**	**330**	P	**P**	**11 41 09.4**	**-0.1**
	comp=Z,0.4nm,0.3s,mb3.6,baz=30,slow=28,SNR=2.8						
ZALV				LR	LR	12 00 01.0	
	comp=Z,20nm,19.1s,MS3.1,baz=149,slow=37						
ASAR	**Alice Springs**	**44.69**	**163**	P	**P**	**11 41 13.6**	**-0.4**
	comp=Z,1.3nm,0.8s,mb3.8,baz=340,slow=7.4,SNR=5.6						
KURK	**Kurchatov**	**45.68**	**323**	*e*P	**P**	**11 41 22.4**	**+0.8**
	comp=Z,3.4nm,1.0s,mb4.2						
KURK				*e*pP	pP	11 41 30.2	-1.7
BVAR	**Borovoye Array**	**51.28**	**323**	P	**P**	**11 42 06.3**	**+1.7**
	comp=Z,0.5nm,0.4s,mb3.8,baz=194,slow=33,SNR=3.0						
ABKAR	**Akbulak array**	**56.69**	**317**	*e*P	**P**	**11 42 53.5**	**+9.3**
	comp=Z,0.7nm,0.7s,mb3.8						
ARCES	**ARCESS Array B**	**73.83**	**339**	P	**P**	**11 44 37.0**	**+2.1**
	comp=Z,1.4nm,0.9s,mb3.9,baz=49,slow=4.2,SNR=2.9						
HFS	**Hagfors**	**81.59**	**331**	LR	LR	12 24 37.6	
	comp=Z,32nm,18.7s,MS3.7,baz=343,slow=38						
NB2	**NORSAR Subarra**	**82.30**	**332**	P	**P**	**11 45 28.7**	**+6.6**
	comp=Z,0.8nm,0.7s,mb3.8,baz=63,slow=5.1						
NOA	**NORSAR Array B**	**82.30**	**332**	P	**P**	**11 45 25.4**	**+3.3**
	comp=Z,0.9nm,0.7s,mb3.8,baz=64,slow=5.0,SNR=3.3						
NOA				LR	LR	12 25 22.9	
	comp=Z,29nm,18.0s,MS3.7,baz=60,slow=38						

*DDA **09** 11:54:42.6, 38°.29N×36°.81E, h8km±7km, Md3.0*
*CSEM **09** 11:54:43.1±0.1, 38°.22N×36°.92E, h5km, MD2.9, Error ellipse: s-maj=3.7km s-min=3.0km az=77.0*
ISK 09 11:54:42.9, 38°.25N×36°.96E, h4km, MD2.9, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SARI	**SarD1z-Kayseri**	**0.47**	**334**	*e*PG	Pg	11 54 52.5	+0.5
SARI				*e*SG	Sg	11 54 59.4	+1.2
SARI	**SarD1z-Kayseri**	**0.47**	**334**	*e*Pg	Pg	11 54 52.5	+0.5
SARI				*e*Sg	Sg	11 54 59.4	+1.2
PINB	**Pinarbasi**	**0.61**	**314**	*i*P	Pg	11 54 55.1	+0.4
PINB				*i*S	Sg	11 55 07.7	+5.1
PINB	**Pinarbasi**	**0.61**	**314**	*i*P	Pg	11 54 55.1	+0.5
PINB				*i*S	Sg	11 55 07.7	+5.2
AKCD	**Akcadag**	**0.76**	**86**	*i*P	Pg	11 54 57.9	+0.4
AKCD				*i*S	Sg	11 55 10.0	+2.7
AKCD	**Akcadag**	**0.76**	**86**	*i*P	Pg	11 54 57.9	+0.5
AKCD				*i*S	Sg	11 55 10.0	+2.7
DARE	**Darende-Malaty**	**0.96**	**43**	*e*PG	Pg	11 54 53.4	-7.9
DARE				*e*SG	Sg	11 55 01.6	-12
DARE	**Darende-Malaty**	**0.96**	**43**	*e*Pg	Pg	11 54 53.4	-8.0
DARE				*e*Sg	Sg	11 55 01.6	-12
GZT	**Gaziantep**	**1.01**	**152**	*i*P	Pg	11 55 03.7	+1.3
GZT				*i*S	Sg	11 55 20.3	+4.8
GAZ	**Gaziantep**	**1.10**	**169**	*e*PN	Pn	11 55 04.5	-0.5
GAZ				*e*SN	Sn	11 55 20.3	-0.3
GAZ	**Gaziantep**	**1.10**	**169**	*e*Pn	Pn	11 55 04.5	-0.5
GAZ				*e*Sn	Sn	11 55 20.3	-0.3
MYA	**Malataya**	**1.16**	**86**	*e*PN	Pn	11 55 05.6	-0.2
MYA	**Malataya**	**1.16**	**86**	*e*Pn	Pn	11 55 05.6	-0.2
KOZT	**Kozan**	**1.18**	**230**	*e*PN	Pn	11 55 06.2	0.0
KOZT				*e*SN	Sn	11 55 23.0	+0.3
KUZU	**Kuzuini**	**1.48**	**176**	*i*P	Pn	11 55 10.0	-0.3
KUZU				*i*S	Sn	11 55 33.5	+3.5
KUZU	**Kuzuini**	**1.48**	**176**	*i*P	Pn	11 55 10.0	-0.3
KUZU				*i*S	Sn	11 55 33.5	+3.5
KEMA	**Kemaliye**	**1.57**	**49**	*i*P	Pn	11 55 12.8	+1.3
KEMA				*i*S	Sn	11 55 37.0	+4.7
KEMA	**Kemaliye**	**1.57**	**49**	*i*P	Pn	11 55 12.8	+1.3
KEMA				*i*S	Sn	11 55 37.0	+4.7
SVSK	**Karacayir**	**1.66**	**1**	*e*PN	Pn	11 55 13.7	+0.9
SVSK	**Karacayir**	**1.66**	**1**	*e*Pn	Pn	11 55 13.7	+0.9
URFA	**Urfa**	**1.68**	**118**	*e*PN	Pn	11 55 13.9	+0.9
URFA	**Urfa**	**1.68**	**118**	*e*Pn	Pn	11 55 13.9	+0.9
SVRC	**Sivrice-ELAZID**	**1.85**	**85**	*e*PN	Pn	11 55 16.3	+1.0
SVRC	**Sivrice-ELAZID**	**1.85**	**85**	*e*Pn	Pn	11 55 16.3	+0.9
PTK	**Pertek**	**2.01**	**71**	*e*PN	Pn	11 55 18.8	+1.2
PTK	**Pertek**	**2.01**	**71**	*e*Pn	Pn	11 55 18.8	+1.2

*ISCJB **09** 11:57:36.8±0.6, 15°.31N±0°.04×90°.04W±0°.03, h10km, Error ellipse: s-maj=6.2km s-min=3.9km az=20.1*
*NEIC **09** 11:57:37.3, 14°.36N×90°.08W, h75km, MD4.1(MEX), After MEX.*
*MEX **09** 11:57:37.3±0.5, 14°.36N×90°.08W, h75km±68km, MD4.1*
*CASC **09** 11:57:37.4±2.6, 15°.24N×90°.17W, h0km±11km, MD3.5*
ISC 09 11:57:39.3±0.6, 15°.17N±0°.04×90°.09W±0°.03, h10km, n23, σ1§20/36, 2C-1D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRL	**Marmol**	**0.40**	**105**⇑	*i*P	**Pg**	**11 57 45.7**	**-1.5**
NBG	**Las Nubes**	**0.63**	**203**	*e*P	**Pg**	**11 57 51.4**	**-0.2**
FG6		**0.98**	**232**	*e*P	**Pg**	**11 57 57.3**	**-0.9**
FG6				*e*S	**Sg**	**11 58 11.8**	**+0.8**
TP2	**Tecpan 2**	**0.98**	**247**⇓	*e*P	**Pg**	**11 57 56.5**	**-1.7**
TP2				*e*S	**Sg**	**11 58 10.5**	**-0.5**
FUG	**Fuego 3**	**1.02**	**225**⇑	*e*P	**Pg**	**11 57 58.0**	**-1.0**
FUG				*e*S	**Sg**	**11 58 13.8**	**+1.4**
RBDL	**Robledal**	**1.12**	**160**	*e*P	**Pb**	**11 57 59.9**	**-1.0**
SNJE	**San Jose**	**1.38**	**160**	*e*P	**Pn**	**11 58 04.5**	**-0.1**
SBLS	**San Blas**	**1.40**	**161**	*e*P	**Pn**	**11 58 05.0**	**+0.1**
BOQS	**Boqueron**	**1.63**	**151**	*e*P	**Pn**	**11 58 08.3**	**+0.2**
LFRS	**El Faro**	**1.83**	**147**	*e*P	**Pn**	**11 58 11.6**	**+0.7**
LFRS				*e*S	**Sg**	**11 58 38.6**	**+0.3**
THIG		**2.12**	**263**	*i*P	**Pn**	**11 58 10.1**	**-4.7**
THIG				*i*S	**Sn**	**11 58 36.2**	**-4.9**
CAHU	**Cacacuatique**	**2.29**	**127**	*e*P	**Pn**	**11 58 19.4**	**+2.2**
CNCH	**Conchagua**	**2.89**	**130**	*e*P	**Pn**	**11 58 28.5**	**+3.1**
SCX	**San Cristobal**	**2.90**	**303**	*i*P	**Pn**	**11 58 27.8**	**+2.2**
SCX				*i*S	**Sg**	**11 59 05.9**	**-6.6**
SCX	**San Cristobal**	**2.90**	**303**	*i*P	**Pn**	**11 58 27.8**	**+2.2**
SCX				*i*S	**Sg**	**11 59 05.9**	**-6.6**
TGUH	**Tegucigalpa,Un**	**2.94**	**112**	*e*Pn	**Pg**	**11 58 31.5**	**-4.3**
TGUH				*e*Sn	**Sg**	**11 59 13.3**	**-0.7**
PCIG		**3.06**	**280**	*i*P	**Pn**	**11 58 25.4**	**-2.3**
PCIG				*i*S	**Sn**	**11 59 03.9**	**-0.7**
TGIG		**3.33**	**299**	*i*P	**Pn**	**11 58 33.0**	**+1.6**
TGIG				*i*S	**Sn**	**11 59 15.6**	**+4.7**
TEIG	**Tepich**	**5.31**	**19**	*e*Pn	**Pn**	**11 58 55.3**	**-3.4**
	20nm,0.3s						
VHO	**Vista Hermosa**	**6.66**	**287**	*e*P	**Pn**	**11 59 17.2**	**0.0**
VHO				*i*S	**Sn**	**12 00 39.4**	**+6.2**
VHO	**Vista Hermosa**	**6.66**	**287**	*e*P	**Pn**	**11 59 17.2**	**0.0**
VHO				*i*S	**Sn**	**12 00 39.4**	**+6.2**
UTMO	**Huajuapan**	**7.86**	**291**	*e*P	**Pn**	**11 59 33.4**	**-0.3**
UTMO				*i*S	**Sn**	**12 01 03.3**	**+0.5**
TKL	**Tuckaleechee C**	**21.17**	**14**	*e*P	**P**	**12 02 30.3**	**+5.5**

*NEIC **09** 12:17:53.6, 16°.09N×95°.82W, h16km, MD3.9(MEX), After MEX.*
MEX 09 12:17:53.6±1.2, 16°.09N×95°.82W, h16km±14km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.42**	**221**	*i*P	Pg	12 18 00.4	-1.8
HUIG				*i*S	Sg	12 18 06.7	-1.1
HUIG	**Huatulco**	**0.42**	**221**	*i*P	Pg	12 18 00.4	-1.8
HUIG				*i*S	Sg	12 18 06.7	-1.1
VHO	**Vista Hermosa**	**1.31**	**318**	*i*P	Pn	12 18 13.6	-3.7
VHO				*i*S	Sn	12 18 29.4	-5.0
VHO	**Vista Hermosa**	**1.31**	**318**	*i*P	Pn	12 18 13.6	-3.7
VHO				*i*S	Sn	12 18 29.4	-5.0
OXX	**Oaxaca**	**1.31**	**319**	*i*P	Pn	12 18 13.6	-3.7
OXX				*i*S	Sn	12 18 29.4	-5.1
OXX	**Oaxaca**	**1.31**	**319**	*i*P	Pn	12 18 13.6	-3.7
OXX				*i*S	Sn	12 18 29.4	-5.1
PNIG	**Pinotepa**	**2.23**	**278**	*i*P	Pn	12 18 28.2	-1.7
PNIG				*i*S	Sn	12 18 51.0	-6.2
PNIG	**Pinotepa**	**2.23**	**278**	*i*P	Pn	12 18 28.2	-1.7
PNIG				*i*S	Sn	12 18 51.0	-6.2
PCIG		**2.54**	**98**	*i*P	Pn	12 18 30.8	-3.3
PCIG				*i*S	Sn	12 19 00.3	-4.4
UTMO	**Huajuapan**	**2.57**	**313**	*i*P	Pn	12 18 32.0	-2.5
UTMO				*i*S	Sn	12 19 01.9	-3.6
TGIG		**2.68**	**75**	*e*P	Pn	12 18 33.4	-2.7
TGIG				*i*S	Sn	12 19 04.7	-3.5
TPIG	**Tehuac#an**	**2.75**	**328**	*i*S	Sn	12 19 03.2	-6.7
ACX	**Acapulco**	**3.95**	**282**	*e*P	Pn	12 18 56.5	+3.0
ACX				*i*S	Sn	12 19 39.0	-0.6
ACX	**Acapulco**	**3.95**	**282**	*e*P	Pn	12 18 56.5	+3.0
ACX				*i*S	Sn	12 19 39.0	-0.6
PPM	**Popocatepetl**	**3.99**	**318**	*i*P	Pn	12 18 48.3	-5.8
PPM				*i*S	Sn	12 19 38.3	-2.3
PPM	**Popocatepetl**	**3.99**	**318**	*i*P	Pn	12 18 48.3	-5.8
PPM				*i*S	Sn	12 19 38.3	-2.3

*NIED **09** 12:27:00, 36°.00N×138°.90E, h145km, Mw4.4 Best double couple: M0=4.05000×10^15 NP1:φs=136.00000°, δ71.00000°, λ-55.00000°. NP2:φs=250.00000°, δ39.00000°, λ-149.00000°.*
*ISCJB **09** 12:27:27.6±0.2, 35°.96N±0°.04×138°.91E±0°.04, h138km±2km, mb4.0/34, Error ellipse: s-maj=6.8km s-min=5.1km az=43.4*
*JMA **09** 12:27:28.6±0.1, 35°.95N×138°.97E, h135km±1km, M4.2 Broadband fault plane solution: P waves. NP1: φs=246.00000°, δ41.00000°, λ-131.00000°. NP2: φs=115.00000°, δ61.00000°, λ-60.00000°. Principal axes: T Plg11.0000°, Azm184.0000°; N Plg25.0000°, Azm279.0000°; P Plg62.0000°, Azm73.0000°;*
JMA Felt I J1.
*IDC **09** 12:27:28.1±0.5, 35°.91N×138°.80E, h132km±3km, mb3.8/18, mb1 4.0/20, mb1mx3.9/27, mbtmp3.8/20 Error ellipse: s-maj=15.8km s-min=7.9km az=66.0*
*NEIC **09** 12:27:28.7, 35°.95N×138°.97E, h135km, mb4.2/14, After JMA.*
NEIC Recorded [1 JMA] in Gumma, Ibaraki, Kanagawa, Nagano, Saitama and Tochigi.
ISC 09 12:27:28.7±0.2, 35°.97N±0°.04×138°.92E±0°.04, h135km±2km, n66, σ0§82/80, mb4.0/34, 1C-8D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRY	**Ryogami san**	**0.05**	**348**	⇓P	**Pn**	**12 27 47.3**	**+0.4**
JRY				S	**Sn**	**12 28 01.1**	**+0.4**
JHU	**Hanno**	**0.32**	**111**	⇓P	**Pn**	**12 27 47.8**	**+0.4**
JHU				S	**Sn**	**12 28 01.9**	**+0.3**
JYN	**Shimob**	**0.56**	**213**	⇓P	**Pn**	**12 27 48.5**	**-0.1**
JYN				S	**Sn**	**12 28 03.9**	**+0.3**
JAG	**Ashikaga**	**0.63**	**43**	⇓P	**Pn**	**12 27 49.0**	**-0.1**
JAG				S	**Sn**	**12 28 04.3**	**-0.3**
JOD2	**Odawara 2**	**0.71**	**169**	⇓P	**Pn**	**12 27 49.3**	**-0.4**
JOD2				*e*S	**Sn**	**12 28 05.1**	**-0.4**
MJAR	**Matsushiro Arr**	**0.81**	**315**	P	**Pn**	**12 27 49.9**	**-0.5**
	267nm,0.3s,baz=157,slow=8.3,SNR=3292						
MJAR				S	**Sn**	**12 28 06.0**	**-0.8**
	104nm,0.3s,baz=120,slow=36,SNR=22						
MAJO	**Matsushiro**	**0.81**	**315**	*e*Pn	**Pn**	**12 27 50.4**	**0.0**
MAJO				*e*Sn	**Sn**	**12 28 07.0**	**+0.1**
MAT	**Matsushiro**	**0.81**	**315**	P	**Pn**	**12 27 50.3**	**-0.1**
MAT				S	**Sn**	**12 28 06.4**	**-0.5**
MAT	**Matsushiro**	**0.81**	**315**	P	**Pn**	**12 27 50.5**	**+0.1**
MAT				S	**Sn**	**12 28 06.6**	**-0.3**
JGM	**Miyama**	**1.81**	**262**	⇓P	**Pn**	**12 28 01.2**	**+0.6**
JGM				*e*S	**Sn**	**12 28 25.3**	**+0.4**
JNS	**Sasagawa**	**1.88**	**10**	⇑P	**Pn**	**12 28 02.0**	**+0.6**
JNS				*e*S	**Sn**	**12 28 27.5**	**+1.0**
JSZ	**Suzu**	**1.94**	**320**	⇓P	**Pn**	**12 28 02.2**	**+0.1**
JSZ				*e*S	**Sn**	**12 28 27.4**	**-0.4**
JKG	**Kaga**	**2.12**	**279**	⇓P	**Pn**	**12 28 05.3**	**+

SUMG	**Summit**	**71.74**	**359**	*e*P	**P**	**12 38 36.2**	**+0.6**
	9.3nm,1.2s,mb4.4						
OD2	**Odessa Site #2**	**71.89**	**44**	*e*P	**P**	**12 38 37.7**	**+0.8**
	3.0nm,0.6s,mb4.2						
AKASG	**Malin Array Be**	**73.89**	**321**	P	**P**	**12 38 47.9**	**-0.8**
	1.5nm,0.6s,mb3.9,baz=45,slow=5.7,SNR=6.5						
BMO	**Blue Mountains**	**74.12**	**46**	*e*P	**P**	**12 38 50.8**	**+0.6**
	2.2nm,0.9s,mb3.9						
JTMT	**Jette**	**74.15**	**42**	*e*P	**P**	**12 38 51.2**	**+1.0**
	2.3nm,0.7s,mb4.0						
NB2	**NORSAR Subarra**	**74.38**	**336**	P	**P**	**12 38 50.7**	**-0.6**
	comp=Z,2.5nm,0.7s,mb4.0,baz=40,slow=6.2						
NOA	**NORSAR Array B**	**74.38**	**336**	P	**P**	**12 38 51.1**	**-0.2**
	comp=Z,2.6nm,0.7s,mb4.1,baz=41,slow=5.8,SNR=10						
CMB	**Columbia Colle**	**76.12**	**53**	*e*P	**P**	**12 39 02.6**	**+0.9**
	comp=Z,2.3nm,1.0s,mb3.8						
LRM	**Limekiln Ridge**	**76.31**	**43**	*e*P	**P**	**12 39 03.9**	**+1.3**
	comp=Z,29nm,1.0s,mb4.9						
EGMT	**Eagleton**	**76.39**	**40**	*e*P	**P**	**12 39 03.5**	**+0.5**
	comp=Z,3.2nm,0.9s,mb4.0						
BOZ	**Bozeman (W)**	**76.87**	**43**	*e*P	**P**	**12 39 07.0**	**+1.2**
	comp=Z,1.4nm,1.0s,mb3.5						
NVAR	**Mina Array Bea**	**77.23**	**52**	P	**P**	**12 39 09.5**	**+1.5**
	comp=Z,2.8nm,0.8s,mb4.0,baz=282,slow=5.0,SNR=28						
BRTR	**Keskin Array B**	**78.03**	**310**	P	**P**	**12 39 12.6**	**+0.2**
	comp=Z,0.7nm,0.6s,mb3.5,baz=90,slow=3.7,SNR=4.6						
IMW	**Indian Meadow**	**78.35**	**44**	*e*P	**P**	**12 39 14.9**	**+0.9**
	comp=Z,2.9nm,0.9s,mb3.9						
PDAR	**Pinedale Array**	**79.84**	**44**	P	**P**	**12 39 22.9**	**+0.7**
	comp=Z,1.2nm,0.7s,mb3.6,baz=320,slow=2.2,SNR=12						
BRG	**Berggiesshubel**	**80.92**	**328**	*e*P	pP	12 40 02.0	+0.5
	comp=Z,2.2nm,0.5s						
CLL	**Collm**	**81.00**	**329**	*e*P	**P**	**12 39 28.0**	**-0.2**
	comp=Z,7.0nm,1.0s,mb4.2						
SRU	**San Rafael**	**81.62**	**47**	*e*P	**P**	**12 39 32.9**	**+1.2**
	comp=Z,2.2nm,0.6s,mb4.0						
PV04	**Paradox Valley**	**83.05**	**47**	*e*P	**P**	**12 39 39.3**	**+0.2**
WUAZ	**Wupatki**	**83.40**	**51**	*e*P	**P**	**12 39 42.4**	**+1.4**
	comp=Z,2.3nm,0.6s,mb4.1						
PV01	**Paradox Valley**	**83.42**	**47**	*e*P	**P**	**12 39 41.8**	**+0.8**
	comp=Z,297nm,1.0s						
ANMO	**Albuquerque**	**86.80**	**48**	*e*P	**P**	**12 39 57.5**	**-0.4**
SCHQ	**Schefferville**	**86.90**	**15**	P	**P**	**12 39 57.2**	**-0.8**
	comp=Z,5.3nm,0.9s,mb4.4,baz=251,slow=5.7,SNR=4.4						
SCHQ	**Schefferville**	**86.90**	**15**	P	**P**	**12 39 57.2**	**-0.8**
TXAR	**Lajitas Array**	**92.36**	**51**	P	**P**	**12 40 24.3**	**+0.2**
	comp=Z,0.8nm,0.7s,mb3.9,baz=302,slow=5.4,SNR=11						
HBAR	**Harrisburg**	**95.19**	**39**	*e*P	**P**	**12 40 35.1**	**-1.9**
LPAZ	**La Paz**	**148.97**	**58**	PKPbc	PKPbc	12 47 02.0	+0.8
	comp=Z,2.4nm,0.8s,baz=23,slow=12,SNR=11						
SIV	**San Ignacio**	**153.30**	**47**	PKPbc	PKPbc	12 47 10.7	-0.6
	comp=Z,0.8nm,0.7s,baz=340,slow=7.4,SNR=4.9						
SIV				PKPab	PKPab	12 47 23.3	-0.3
	comp=Z,1.4nm,0.8s,baz=305,slow=2.8,SNR=6.2						

KRSC ***09*** *12:29:37.0±0.5, 48°.66N×152°.28E, h318km±22km, ML5.5*
SKHL ***09*** *12:29:38.8±2.5, 48°.85N×151°.72E, h272km±26km, mb6.2/6, mbh6.3/4, Ms4.7/4, msh6.1/6*
ISCJB ***09*** *12:29:39.7±0.1, 49°.19N±0°.02×151°.38E±0°.02, h284km, mb4.9/350, Error ellipse: s-maj=3.0km s-min=1.4km az=159.3*
MOS ***09*** *12:29:39.7±0.9, 49°.26N×151°.43E, h283km, mb5.0/116, Error ellipse: s-maj=6.1km s-min=3.9km az=89.6*
SZGRF ***09*** *12:29:40.7, 49°.62N×153°.17E, h292km, mb5.1, Kuril Islands, Russia*
IDC ***09*** *12:29:40.5±0.4, 49°.19N×151°.50E, h282km±3km, mb4.5/33, mb1 4.6/37, mb1mx4.6/38, mbtmp4.6/37, Error ellipse: s-maj=7.4km s-min=5.5km az=139.0*
BJI ***09*** *12:29:41.5, 49°.43N×151°.29E, h285km, mB4.7/30, mb4.9/54*
NEIC ***09*** *12:29:41.1±0.1, 49°.26N×151°.34E, mb4.9/238, Error ellipse: s-maj=4.9km s-min=2.4km az=174.0*
GCMT ***09*** *12:29:43.6±0.2, 49°.09N×151°.62E, h289km±1km, MW5.2, Moment Tensor Solution. s67,c103; s90,c131; Moment tensor: Scale 10^{16}Nm; M_{rr}-6.08±.16; $M_{\theta\theta}$2.19±.19; $M_{\phi\phi}$3.89±.18; $M_{r\theta}$-1.99±.18; $M_{\theta\phi}$-3.73±.14; $M_{\phi r}$-4.05±.17; Best double couple: $M_0$7.80000×10^{16} NP1:ϕ_s118.00000°, δ42.00000°,λ-132.00000°. NP2:ϕ_s348.00000°, δ60.00000°,λ-59.00000°. Principal axes: T 7.2000, Plg10.0000°, Azm56.0000°; N 1.2900, Plg27.0000°, Azm151.0000°; P -8.4800, Plg61.0000°, Azm308.0000°; Data Used: II IU IC G CN.*
DJA ***09*** *12:29:52, 49°.19N×151°.34E, h407km, mb4.9/13*
ISC 09 12:29:41.3±0.1, 49°.19N±0°.02×151°.36E±0°.02, h286km, h286km±.9km:pP-P,n1212,σ0s82/1261, mb4.9/350, 207C-206D, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**3.18**	**57**	*i* P	**Pn**	**12 30 35.1**	**-2.7**
ALID				*i* S	**S**	**12 31 16.2**	**-6.7**
SKR	**Severo-Kuril's**	**3.42**	**62**	*e*PN	**Pn**	**12 30 38.8**	**-1.5**
SKR				*i* S	**S**	**12 31 23.5**	**-3.9**
SKR	comp=N,560nm,0.6s			pmax	pmax		
SKR	comp=E,670nm,0.6s			pmax	pmax		
SKR	comp=Z,3μm,0.6s			pmax	pmax		
SKR	comp=N,2μm,2.0s			pmax	pmax		
SKR	comp=E,2μm,2.0s			pmax	pmax		
SKR	comp=Z,9μm,2.0s			smax			
SKR	comp=N,30μm,4.0s			smax			
SKR	comp=E,26μm,4.0s			smax			
SKR	comp=N,740nm,0.5s			smax			
SKR	comp=E,3μm,0.5s			MLR	MLR		
SKR	comp=N,4μm,8.0s			MLR	MLR		
SKR	comp=E,4μm,8.0s			MLR	MLR		
SKR	comp=Z,3μm,8.0s						
SKR	**Severo-Kuril's**	**3.42**	**62**	*e*P	**Pn**	**12 30 38.8**	**-1.5**
SKR	comp=Z,9μm,2.0s			AMB	AMB	12 30 40.0	
SKR	comp=Z,10μm,2.0s			AMB	AMB	12 30 40.0	
SKR	comp=Z,2μm,2.0s			AMB	AMB	12 30 40.0	
SKR	comp=Z,2μm,2.0s			AMB	AMB	12 30 40.0	
SKR	comp=E,560nm,0.6s			AMB	AMB	12 30 40.0	
SKR	comp=E,670nm,0.6s			AMB	AMB	12 30 40.0	
SKR	comp=Z,3μm,0.6s			AMB	AMB	12 30 40.0	
SKR				*i* S	**S**	**12 31 23.5**	**-3.9**
SKR	comp=Z,30μm,4.0s			A		12 31 26.0	
SKR	comp=Z,26μm,4.0s			A		12 31 26.0	
SKR	comp=Z,9μm,4.0s			A		12 31 26.0	
SKR	comp=Z,30μm,4.0s			A		12 31 26.0	
SKR	comp=Z,26μm,4.0s			A		12 31 26.0	
SKR	comp=Z,10μm,4.0s			A		12 31 26.0	
SKR	comp=Z,820nm,0.9s			A		12 31 34.0	
SKR	comp=Z,740nm,0.5s			A		12 31 34.0	
SKR	comp=Z,3μm,0.5s			A		12 31 34.0	
SKR	comp=Z,3μm,8.0s			AMS	AMS	12 32 23.0	
SKR	comp=Z,4μm,8.0s			AMS	AMS	12 32 23.0	
SKR	comp=Z,3μm,8.0s			AMS	AMS	12 32 23.0	
SKR	comp=Z,4μm,8.0s			AMS	AMS	12 32 23.0	
SKR	comp=Z,4μm,8.0s			AMS	AMS	12 32 23.0	
MIPR	**Malaya Ipel'ka**	**4.61**	**46**	*i* P	**Pn**	**12 30 52.2**	**-1.4**
MIPR				*i* S	**S**	**12 31 46.9**	**-4.6**
KUR	**Kuril'sk**	**4.62**	**212**	*b i* PN	**Pn**	**12 30 48.3**	**-5.6**
KUR	comp=N,6μm,1.8s			pmax	pmax		
KUR	comp=E,7μm,1.8s			pmax	pmax		
KUR	comp=Z,12μm,1.8s			pmax	pmax		
KUR	comp=N,280nm,0.9s			pmax	pmax		
KUR	comp=E,710nm,0.9s			pmax	pmax		
KUR	comp=Z,2μm,0.9s			pmax	pmax		
KUR	comp=N,3μm,8.0s			MLR	MLR		
KUR	comp=E,4μm,8.0s			MLR	MLR		
KUR	comp=Z,4μm,8.0s			MLR	MLR		
KUR	**Kuril'sk**	**4.62**	**212**	⇑ *i* P	**Pn**	**12 30 48.3**	**-5.6**
KUR	comp=Z,6μm,1.8s			AMB	AMB	12 30 49.0	
KUR	comp=Z,7μm,1.8s			AMB	AMB	12 30 49.0	
KUR	comp=Z,12μm,1.8s			AMB	AMB	12 30 49.0	
KUR	comp=Z,280nm,0.9s			AMB	AMB	12 30 50.0	
KUR	comp=Z,710nm,0.9s			AMB	AMB	12 30 50.0	
KUR	comp=Z,2μm,0.9s			AMB	AMB	12 30 50.0	
KUR				*i* S	**S**	**12 31 45.0**	**-7.0**
KUR	comp=Z,9μm,3.0s			A		12 31 46.0	
KUR	comp=Z,12μm,3.0s			A		12 31 46.0	
KUR	comp=Z,3μm,0.9s			A		12 31 59.0	
KUR	comp=Z,2μm,0.9s			A		12 31 59.0	
KUR	comp=Z,3μm,8.0s			AMS	AMS	12 33 28.0	
KUR	comp=Z,4μm,8.0s			AMS	AMS	12 33 28.0	
KUR	comp=Z,4μm,8.0s			AMS	AMS	12 33 28.0	
GRL	**Gorelyy**	**5.42**	**49**	*i* P	**Pn**	**12 31 02.0**	**-1.1**
GRL				*i* S	**S**	**12 32 03.1**	**-5.7**
PEA0B	**Petropavlovsk-**	**5.59**	**43**	*e*Pn	**Pn**	**12 31 03.7**	**-1.4**
PETK	**Petropavlovsk-**	**5.59**	**43**	P	**Pn**	**12 31 03.6**	**-1.6**
PETK	comp=Z,54nm,0.3s,baz=220,slow=7.8,SNR=1752 baz=218,slow=16,SNR=1.6			S	**S**	**12 32 09.7**	**-2.9**
PETK	**Petropavlovsk-**	**5.59**	**43**	PN	**Pn**	**12 31 03.6**	**-1.6**
PETK				S	**S**	**12 32 09.7**	**-2.8**
PETK	comp=Z,54nm,0.3s			pmax	pmax		
PET	**Petropavlovsk**	**5.98**	**47**	⇑ *i* PN	**Pn**	**12 31 07.3**	**-2.6**
PET				*e*S	**S**	**12 32 16.0**	**-5.1**
PET	comp=Z,4μm,1.8s			pmax	pmax		
PET	comp=Z,1μm,0.8s			pmax	pmax		
PET	comp=N,642nm,0.5s			smax			
PET	comp=E,939nm,0.5s			smax			
PET	comp=Z,1μm,15.0s			MLR	MLR		
PET	comp=Z,2μm,17.0s			MLR	MLR		
PET	**Petropavlovsk**	**5.98**	**47**	*i* P	**Pn**	**12 31 08.0**	**-1.9**
PET				*i* S	**S**	**12 32 13.9**	**-7.2**
PET	**Petropavlovsk**	**5.98**	**47**	*e*Pn	**Pn**	**12 31 07.4**	**-2.5**
GNL	**Ganaly**	**6.10**	**40**	*i* P	**Pn**	**12 31 10.3**	**-1.0**
UGL	**Uglegorsk**	**6.10**	**272**	⇑ *i* PN	**Pn**	**12 31 14.0**	**+2.6**
UGL	comp=Z,990nm,1.2s			pmax	pmax		
UGL	comp=N,500nm,3.0s			pmax	pmax		
UGL	comp=E,2μm,4.0s			pmax	pmax		
UGL	**Uglegorsk**	**6.10**	**272**	⇑ *i* P	**Pn**	**12 31 14.0**	**+2.6**
UGL	comp=E,990nm,1.2s			AMB	AMB	12 31 15.5	
UGL	comp=E,500nm,3.0s			AMB	AMB	12 31 17.0	
UGL	comp=E,2μm,4.0s			AMB	AMB	12 31 17.0	
UGL				⇓ *i* S	**S**	**12 32 29.0**	**+5.1**
UGL				*e*S	**S**	**12 32 29.0**	**+5.1**
UGL	comp=E,1μm,1.8s			A		12 32 31.5	
UGL	comp=E,987nm,1.8s			A		12 32 31.5	
UGL	comp=E,6μm,4.0s			A		12 32 32.0	
UGL	comp=E,6μm,5.0s			A		12 32 32.0	
YSS	**Yuzh-Sakhalins**	**6.19**	**252**	α *i* PN	**Pn**	**12 31 13.8**	**+1.3**
YSS				*e*S	**S**	**12 32 27.3**	**+1.5**
YSS	comp=Z,710nm,1.0s			pmax	pmax		
YSS	comp=Z,2μm,4.0s			pmax	pmax		
YSS	comp=N,400nm,1.6s			smax			
YSS	comp=N,2μm,7.0s			smax			
YSS	comp=Z,600nm,13.0s			MLR	MLR		
YSS	**Yuzh-Sakhalins**	**6.19**	**252**	*i* P	**Pn**	**12 31 14.2**	**+1.7**
YSS				*i* S	**S**	**12 32 24.4**	**-1.4**
YSS	**Yuzh-Sakhalins**	**6.19**	**252**	*e*Pn	**Pn**	**12 31 14.3**	**+1.8**
YSS	**Yuzh-Sakhalins**	**6.19**	**252**	⇑ *i* P	**Pn**	**12 31 13.8**	**+1.3**
YSS				⇑ *i* P		12 31 13.8	
YSS	comp=Z,710nm,1.0s			AMB	AMB	12 31 15.0	
YSS	comp=Z,2μm,4.0s			AMB	AMB	12 31 16.0	
YSS				*e*S	**S**	**12 32 27.3**	**+1.5**
YSS	comp=Z,400nm,1.6s			A		12 32 30.2	
YSS	comp=Z,2μm,7.0s			A		12 32 34.0	
YSS	comp=Z,600nm,13.0s			AMS	AMS	12 34 43.0	
SDLR	**Sedlovina**	**6.25**	**46**	*i* P	**Pn**	**12 31 11.9**	**-1.2**
SDLR				*i* S	**S**	**12 32 21.2**	**-5.8**
YUK	**Yuzh-Kuril'sk**	**6.40**	**218**	*i* PN	**Pn**	**12 31 12.5**	**-2.6**
YUK				*i* S	**S**	**12 32 25.7**	**-4.9**
YUK	comp=Z,8μm,0.8s			pmax	pmax		
YUK	comp=N,2μm,0.5s			pmax	pmax		
YUK	comp=E,4μm,0.5s			pmax	pmax		
YUK	comp=Z,7μm,0.5s			smax			
YUK	comp=N,2μm,0.7s			smax			
YUK	comp=E,2μm,0.7s			smax			
YUK	comp=E,2μm,0.8s			smax			
YUK	comp=N,10μm,2.4s						
YUK	**Yuzh-Kuril'sk**	**6.40**	**218**	⇑ *i* P	**Pn**	**12 31 12.5**	**-2.6**
YUK				AMB	AMB	12 31 14.6	
YUK	comp=N,8μm,1.0s			AMB	AMB	12 31 14.6	
YUK	comp=N,4μm,1.0s			AMB	AMB	12 31 14.6	
YUK	comp=N,15μm,1.0s			AMB	AMB	12 31 14.6	
YUK	comp=N,1μm,0.5s			AMB	AMB	12 31 14.6	
YUK	comp=N,3μm,0.5s			AMB	AMB	12 31 14.6	
YUK	comp=N,6μm,0.5s						
YUK				*i* S	**S**	**12 32 25.7**	**-4.9**
YUK	comp=N,8μm,2.0s			A		12 32 30.5	
YUK	comp=N,5μm,1.0s			A		12 32 30.5	
YUK	comp=N,3μm,0.6s			A		12 32 34.2	
YUK	comp=N,2μm,0.6s			A		12 32 34.2	
SPN	**Mys Shipunski**	**6.71**	**51**	*e*P	**Pn**	**12 31 15.2**	**-3.5**
SPN				*i* S	**S**	**12 32 25.3**	**-12**
KII	**Karymskiy**	**6.99**	**43**	*i* P	**Pn**	**12 31 20.0**	**-2.1**
KII				*i* S	**S**	**12 32 36.7**	**-6.8**
JWK2	**Keihoku**	**7.51**	**243**	P	**Pn**	**12 31 31.2**	**+2.5**
JMP	**Maruseppu**	**7.56**	**230**	P	**Pn**	**12 31 30.0**	**+0.6**
NKL	**Nikolayevsk**	**7.80**	**305**	*i* P	**Pn**	**12 31 31.8**	**-0.3**
NKL				AMB	AMB	12 31 32.0	
NKL	comp=N,300nm,2.0s			AMB	AMB	12 31 33.0	
NKL	comp=N,20nm,0.8s			AMB	AMB	12 31 33.0	
NKL	comp=N,30nm,0.8s			AMB	AMB	12 31 33.0	
NKL	comp=N,60nm,0.8s			*e*S	**S**	**12 33 03.5**	**+1.8**
NKL				A		12 33 07.0	
NKL	comp=N,200nm,1.8s			A		12 33 08.0	
NKL	comp=N,2μm,6.0s			*e*L		12 34 12.0	
NKL				AMS	AMS	12 35 16.0	
ASAJ	**Asahikawa**	**7.88**	**233**	P	**Pn**	**12 31 34.3**	**+1.1**
ASAJ	comp=N,107nm,0.3s,baz=59,slow=11,SNR=322 **Asahikawa**	**7.88**	**233**	PN	**Pn**	**12 31 34.3**	**+1.1**
ASAJ	comp=Z,107nm,0.3s			pmax	pmax		
ASAJ	**Asahikawa**	**7.88**	**233**	P	**Pn**	**12 31 34.4**	**+1.2**
ASAJ				*e*S	**S**	**12 33 06.6**	**+2.8**
MKZ	**Mys Kozlova**	**8.36**	**46**	*e*P	**Pn**	**12 31 35.2**	**-3.8**
MKZ				*i* S	**S**	**12 33 01.0**	**-13**
KMNR	**Kamenistaya**	**8.51**	**36**	*i* P	**Pn**	**12 31 41.0**	**+0.1**
KOZ	**Kozyrevsk**	**8.60**	**34**	*i* P	**Pn**	**12 31 41.3**	**-0.7**
KOZR	**Kozyr**	**8.62**	**34**	PN	**Pn**	**12 31 41.3**	**-0.9**
SRDR	**Sredinnyy**	**8.75**	**32**	*i* P	**Pn**	**12 31 43.8**	**0.0**
SRDR				*e*S	**S**	**12 33 16.5**	**-6.7**
BZGR	**Bezymyannyi-Gr**	**8.83**	**36**	*i* P	**Pn**	**12 31 44.0**	**-0.7**
ZLN	**Zelenaya**	**8.92**	**36**	*i* P	**Pn**	**12 31 45.6**	**-0.4**
KRSR	**Krestovskiy**	**8.98**	**35**	*i* P	**Pn**	**12 31 45.6**	**-1.0**
KLY	**Klyuchi**	**9.08**	**35**	*i* P	**Pn**	**12 31 48.0**	**+0.1**
ERM	**Erimo**	**9.19**	**222**	Pn	**Pn**	**12 31 45.1**	**-4.4**
ERM	comp=Z,6μm,0.4s **Erimo**	**9.19**	**222**	*e*Pn	**Pn**	**12 31 45.7**	**-3.8**
ERM				*e*S	**S**	**12 33 17.6**	**-16**
JEM	**Erimo**	**9.19**	**222**	P	**Pn**	**12 31 45.3**	**-4.2**
JEM				*e*S	**S**	**12 33 22.6**	**-11**
JEW	**Eniwo**	**9.37**	**231**	P	**Pn**	**12 31 50.2**	**-1.5**
JEW				*e*S	**S**	**12 33 34.7**	**-3.0**
SRKR	**Sorokina**	**9.53**	**35**	*i* P	**Pn**	**12 31 52.6**	**-0.8**
SRKR				*e*S	**S**	**12 33 32.2**	**-8.8**
KBTR	**Krutoberegovo**	**9.88**	**40**	*e*P	**Pn**	**12 31 54.0**	**-3.7**
KBTR				*i* S	**S**	**12 33 36.2**	**-13**
JSH	**Shimam**	**10.24**	**235**	P	**Pn**	**12 32 01.4**	**-1.1**
JOT	**Ohata**	**10.66**	**227**	P	**Pn**	**12 32 01.9**	**-5.7**
JOT				*e*S	**S**	**12 33 53.1**	**-14**
HABR	**Khabarovsk**	**10.78**	**272**	*c i* PN	**Pn**	**12 32 11.5**	**+2.5**
HABR				*e*S	**S**	**12 34 14.0**	**+4.2**
HABR	comp=Z,236nm,1.4s			pmax	pmax		
HABR	comp=E,160nm,1.0s			pmax	pmax		
HABR	comp=N,31nm,1.0s			pmax	pmax		
HABR	comp=Z,308nm,14.0s			MLR	MLR		
BKI	**Bering**	**10.79**	**51**	*i* P	**Pn**	**12 32 05.2**	**-3.8**
BKI				*i* S	**S**	**12 33 54.7**	**-15**
TEY	**Ternei**	**10.88**	**253**	*i* P	**Pn**	**12 32 12.0**	**+1.7**
TEY				AMB	AMB	12 32 13.0	
TEY	comp=Z,368nm,0.9s			AMB	AMB	12 32 13.0	
TEY	comp=Z,318nm,0.9s			AMB	AMB	12 32 13.5	
TEY	comp=Z,100nm,1.0s			AMB	AMB	12 32 13.5	
TEY	comp=Z,800nm,1.0s			AMB	AMB	12 32 13.5	
TEY	comp=Z,2μm,1.8s			AMS	AMS	12 34 16.6	
TEY	comp=Z,800nm,1.0s			AMS	AMS	12 34 16.6	
TEY	comp=Z,2μm,10.0s			AMS	AMS	12 34 16.6	
TEY	comp=Z,4μm,7.0s						
JTM	**Tenmabayashi**	**11.12**	**225**	P	**Pn**	**12 32 07.1**	**-6.1**
JTM				*e*S	**S**	**12 34 01.3**	**-16**
JOM	**Ohasama**	**12.09**	**220**	P	**Pn**	**12 32 17.8**	**-7.3**
JOM				*e*S	**S**	**12 34 24.2**	**-15**
KLR	**Kul'dur**	**12.83**	**278**	⇓ *i* PN	**Pn**	**12 32 34.3**	**+0.3**
KLR				*i* S	**S**	**12 34 57.0**	**+0.9**
KLR	comp=E,400nm,1.8s			pmax	pmax		
KLR	comp=Z,270nm,1.8s			pmax	pmax		
KLR	comp=N,3μm,13.0s			smax			
KLR	comp=E,2μm,13.0s			smax			
JYA	**Atsumi**	**13.50**	**223**	P	**Pn**	**12 32 38.3**	**-4.0**
JYA				*e*S	**S**	**12 34 57.1**	**-14**
JMM	**Marumori**	**13.65**	**218**	P	**Pn**	**12 32 40.4**	**-3.7**
JMM				*e*S	**S**	**12 35 00.3**	**-15**
SEY	**Seymchan**	**13.79**	**2**	*c i* P	**Pn**	**12 32 47.0**	**+1.6**
JSD	**Sado**	**14.62**	**225**	P	**Pn**	**12 32 52.5**	**-3.1**
JSD				*e*S	**S**	**12 35 27.7**	**-7.7**
SMY	**Shemya**	**14.74**	**67**	*e*P	**Pn**	**12 32 55.5**	**-1.4**
SMY				*e*S	**S**	**12 35 34.4**	**-3.2**
VLA	**Vladivostok**	**14.78**	**253**	*e*P	**Pn**	**12 32 56.3**	**-1.1**
VLA	comp=Z,26nm,1.0s			pmax	pmax		
JYT	**Yasato**	**15.31**	**216**	P	**Pn**	**12 33 01.4**	**-2.4**
MDJ	**Mudanjiang**	**15.55**	**261**	P	**Pn**	**12 33 04.9**	**-1.6**
MDJ				sP	sP	12 34 17.7	-6.6
MDJ				S	**S**	**12 35 51.0**	**-3.1**
MDJ				PcP	PcP	12 37 48.3	+0.4
MDJ				ScP	ScP	12 40 54.3	0.0
MDJ				ScS	ScS	12 44 33.0	+0.3
MDJ	comp=Z,210nm,1.0s			pmax	pmax		
MDJ	comp=Z,140nm,7.2s			pmax	pmax		
MDJ	**Mudanjiang**	**15.55**	**261**	*e*P	**Pn**	**12 33 04.6**	**-1.9**
ZEA	comp=Z,160nm,0.8s **Zeya**	**15.67**	**296**	⇓ *e*P	**Pn**	**12 33 05.3**	**-2.5**
ZEA				AMB	AMB	12 33 08.7	
ZEA	comp=Z,230nm,1.4s			AMB	AMB	12 33 09.0	
ZEA	comp=Z,600nm,3.0s			AMB	AMB	12 33 09.0	
ZEA	comp=Z,400nm,3.0s			*e*S	**S**	**12 35 57.5**	**+1.2**
ZEA				A		12 36 03.0	
MAJO	comp=Z,1μm,5.0s **Matsushiro**	**15.87**	**222**	*e*P	**Pn**	**12 33 08.7**	**-1.6**
MAJO				pmax	pmax		
MAJO	comp=Z,409nm,1.1s **Matsushiro**	**15.87**	**222**	*e*P	**Pn**	**12 33 08.7**	**-1.7**
MJAR	comp=Z,409nm,1.1s **Matsushiro Arr**	**15.87**	**222**	P	**Pn**	**12 33 08.8**	**-1.5**
MJAR	comp=Z,23nm,0.3s,baz=24,slow=11,SNR=96 baz=310,slow=40,SNR=3.6			S	**S**	**12 36 01.2**	**+0.5**
MJAR	comp=Z,0.3nm,0.3s,baz=106,slow=1.2,SNR=5.8			ScP	ScP	12 40 53.6	-1.5
MAT	**Matsushiro**	**15.87**	**222**	P	**Pn**	**12 33 08.7**	**-1.6**
MAT				S	**S**	**12 35 59.0**	**-1.7**
MAT	**Matsushiro**	**15.87**	**222**	P	**Pn**	**12 33 08.6**	**-1.7**
MAT				*e*S	**S**	**12 36 00.9**	**+0.2**
JRY	**Ryogami san**	**16.02**	**219**	P	**P**	**12 33 10.0**	**-0.2**
JRY				*e*S	**S**	**12 36 01.5**	**-2.1**
JOD2	**Odawara 2**	**16.59**	**218**	P	**P**	**12 33 14.9**	**-1.5**
JOD2				*e*S	**S**	**12 36 12.7**	**-2.4**
JGF	**Kuroka**	**17.03**	**222**	P	**P**	**12 33 21.2**	**0.0**
JSG	**Sagara**	**17.47**	**219**	P	**P**	**12 33 27.0**	**+1.1**
CLNS	**Chul'man**	**17.58**	**306**	*e*P	**P**	**12 33 29.5**	**+2.6**
CLNS				*e*S	**S**	**12 36 40.3**	**+6.0**
CLNS				pmax	pmax		

comp=Z,156nm,1.1s
CLNS pmax pmax
comp=E,119nm,1.2s
CLNS pmax pmax
comp=N,118nm,1.3s
CLNS smax
comp=E,79nm,9.3s
CLNS smax
comp=N,71nm,9.6s
YAK Yakutsk 17.64 325 *e*P P 12 33 27.9 +0.4
YAK *e*S **S 12 36 38.1 +2.8**
YAK pmax pmax
comp=Z,173nm,1.0s
YAK pmax pmax
comp=N,81nm,1.2s
YAK pmax pmax
comp=E,107nm,1.3s
YAK smax
comp=N,568nm,2.5s
YAK smax
comp=E,668nm,2.7s
YAK Yakutsk 17.64 325 *e*P P 12 33 27.9 +0.4
comp=E,324nm,1.0s
AMKA Amchitka 17.95 72 *e*P P 12 33 29.4 -1.5
comp=E,257nm,0.8s
JWT Wachi 18.19 226 P P 12 33 32.8 -0.9
JWT *e*S **S 12 36 46.9 +0.2**
JHJ2 Mitsune 18.23 212 P P 12 33 34.2 0.0
JHJ Hachijo jima 2 18.23 213 P P 12 33 34.4 +0.1
comp=E,40nm,0.3s,baz=209,slow=4.5,SNR=15
JHJ S **S 12 36 48.4 +0.8**
comp=E,2.9nm,0.3s,baz=78,slow=18,SNR=2.4
JIE Ise 18.34 222 P P 12 33 34.9 -0.4
CN2 Changchun 18.59 263 *e*P P 12 33 36.4 -1.5
CN2 *e*sP sP 12 34 54.6 -3.4
CN2 *e*S **S 12 36 48.4 -6.0**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,200nm,4.0s
JWZ Kozaga 19.50 222 P P 12 33 47.4 -0.3
JHS Saijyo 19.54 230 P P 12 33 48.0 0.0
JHS *e*S **S 12 37 11.8 -0.9**
JMN Monobe 20.18 227 P P 12 33 55.6 +0.7
BILL Bilibino 20.32 16⇑ *i*P P 12 33 53.6 -2.4
BILL *i* S **S 12 37 26.0 0.0**
BILL pmax pmax
comp=Z,12nm,0.7s
BILL Bilibino 20.32 16 *e*P P 12 33 53.7 -2.3
comp=Z,26nm,0.9s
HIA Hailar 20.58 282 *e*P P 12 33 58.1 -0.7
HIA pmax pmax
comp=Z,27nm,0.6s
HIA Hailar 20.58 282 *e*P P 12 33 58.0 -0.8
comp=Z,27nm,0.6s
KSRS Korea Array 20.61 244 P P 12 33 59.5 +0.3
comp=Z,37nm,0.9s,baz=45,slow=10,SNR=104
KSRS S **S 12 37 34.3 +3.1**
comp=Z,1.0nm,0.7s,baz=51,slow=9.6,SNR=3.2
KSRS PcP PcP 12 37 56.2 -0.4
comp=Z,8.3nm,0.7s,baz=15,slow=1.0,SNR=18
KSRS ScP ScP 12 41 05.1 -0.2
comp=Z,3.1nm,0.9s,baz=20,slow=0.7,SNR=13
KSRS Korea Array 20.61 244 P P 12 33 59.6 +0.3
KSRS S **S 12 37 34.3 +3.0**
KSRS 12 37 56.3
KSRS pmax pmax
comp=Z,37nm,0.9s
KSRS smax
comp=N,1.0nm,0.7s
SNY Shenyang 20.74 260 ⇓P P 12 34 00.6 0.0
SNY sP sP 12 35 20.8 -0.8
SNY S **S 12 37 28.3 -5.0**
SNY pmax pmax
comp=Z,31nm,1.3s
SNY pmax pmax
comp=Z,180nm,5.1s
SNY LR LR
comp=N,330nm,8.4s
SNY LR LR
comp=E,310nm,14.7s
SNY LR LR
comp=Z,340nm,14.5s
JTU Tsushima 21.85 236 P P 12 34 10.9 0.0
JNU Nakatsue 22.15 231 P P 12 34 12.7 -1.0
CBIJ Chichi jima 23.18 201 P P 12 34 22.2 -0.8
comp=Z,50nm,0.6s,mb5.0,baz=270,slow=20,SNR=4.2
CBIJ Chichi jima 23.18 201 P P 12 34 22.0 -1.0
DL2 Dalian 23.57 255 P P 12 34 25.4 -1.1
DL2 S **S 12 38 17.6 -1.4**
DL2 pmax pmax
comp=Z,30nm,1.4s,mb4.4
DL2 pmax pmax
comp=Z,110nm,8.2s
JFU Fukue jima 2 23.63 234 P P 12 34 27.2 +0.1
JSU Suzuyama 23.66 229 P P 12 34 27.6 +0.2
TIXI Tiksi 24.79 343 *i* P P 12 34 36.7 -0.4
TIXI *e**SP sP 12 36 02.4 -2.5
TIXI *e* 12 38 03.4
TIXI *e*S **S 12 38 36.0 -1.5**
TIXI *e* 12 45 02.9
TIXI pmax pmax
comp=Z,120nm,1.5s,mb5.1
TIXI Tiksi 24.79 343 *e*P P 12 34 36.8 -0.3
comp=Z,91nm,1.2s,mb5.1
BJI Beijing 26.46 263 P P 12 34 53.9 +1.5
BJI pP pP 12 35 44.8 -2.2
BJI PcP PcP 12 38 09.5 +0.4
BJI S **S 12 39 04.0 -0.5**
BJI sS sS 12 40 38.8 -5.3
BJI pmax pmax
comp=Z,36nm,0.9s,mb4.8
BJT Baijiatuau 26.48 263 *e*P P 12 34 53.2 +0.6
BJT pmax pmax
comp=Z,23nm,0.3s
BJT Baijiatuau 26.48 263 *e*P P 12 34 53.2 +0.7
comp=Z,23nm,0.3s,mb5.1
JAM Amami Oshima 26.62 227 P P 12 34 54.4 +0.4
JOW Kunigami 28.59 227 P P 12 35 11.1 -0.3
HHC Hu-ho-hao-te 29.06 269 *e*P P 12 35 15.7 +0.3
HHC pP pP 12 36 09.9 -0.7
HHC sP sP 12 36 43.0 -0.8
HHC PcP PcP 12 38 16.3 +0.8
HHC S **S 12 39 44.1 -1.2**
HHC sS sS 12 41 21.3 -4.1
HHC ScP ScP 12 41 29.2 0.0
HHC PcS PcS 12 41 58.1 -0.4
HHC ScS ScS 12 45 22.1 -1.6
HHC pmax pmax
comp=Z,55nm,1.0s,mb4.9
HHC pmax pmax
comp=Z,200nm,5.7s
ULN Ulaanbaatar 29.06 284 *e*P P 12 35 16.0 +0.7
ULN pmax pmax
comp=Z,25nm,0.9s,mb4.6
ULN Ulaanbaatar 29.06 284 *e*P P 12 35 16.0 +0.7
comp=Z,25nm,0.9s,mb4.6
ULN Ulaanbaatar 29.06 284 P P 12 35 16.3 +1.0
SNR=18
SONM Songino Array 29.49 285 P P 12 35 19.1 0.0
comp=Z,5.9nm,0.6s,mb4.2,baz=69,slow=7.3,SNR=47
SONM PcP PcP 12 38 16.9 +0.5
comp=Z,4.4nm,0.5s,baz=96,slow=1.8,SNR=11
SONM ScP ScP 12 41 31.3 +0.8
comp=Z,1.6nm,0.6s,baz=101,slow=2.1,SNR=4.7
IRK Irkutsk 29.56 294 *e*P P 12 35 20.5 +0.8
IRK pmax pmax
comp=Z,72nm,1.5s,mb5.0
NJ2 Nanjing 29.73 247 *e*P P 12 35 21.6 +0.2
NJ2 pP pP 12 36 17.3 +0.6
NJ2 sP sP 12 36 50.4 +0.6
NJ2 S **S 12 39 54.0 -1.9**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.5
NJ2 pmax pmax
comp=Z,40nm,6.6s
NJ2 LR LR
comp=N,600nm,27.3s
NJ2 LR LR
comp=E,620nm,17.0s
NJ2 LR LR
comp=Z,1μm,18.3s
TLY Talaya 30.07 293 P P 12 35 25.2 +1.0
comp=Z,329nm,1.0s,mb5.8,SNR=9.9
TLY Talaya 30.07 293 *e*P P 12 35 25.8 +1.6

TLY *e* 12 36 49.8
TLY *e*S **S 12 40 02.1 +1.3**
TLY pmax pmax
comp=Z,76nm,1.4s,mb5.0
TLY Talaya 30.07 293 *e*P P 12 35 25.5 +1.4
comp=Z,55nm,1.1s,mb5.0
TLY Talaya 30.07 293 P P 12 35 25.8 +1.7
SNR=15
SVW2 Sparrevohn 31.66 48 *e*P P 12 35 38.0 +0.1
comp=Z,18nm,0.8s,mb4.7
MOY Mondy 31.67 294 *e*P P 12 35 38.9 +0.8
MOY *e* 12 37 01.2
MOY pmax pmax
comp=Z,70nm,1.9s,mb4.9
PPLA Purkeypile 33.18 44 *e*P P 12 35 51.5 +0.4
comp=Z,56nm,1.2s,mb5.0
PPLA *e*PcP PcP 12 38 25.2 -1.0
OHAK Old Harbor 33.26 55 *e*P P 12 35 50.1 -1.7
comp=Z,36nm,0.7s,mb5.0
WHN Wuhan 33.53 250 ⇓P P 12 35 54.0 -0.5
WHN PcP PcP 12 38 28.1 +0.3
WHN S **S 12 40 53.3 -1.5**
KDAK Kodiak Island 33.54 54 P P 12 35 52.0 -2.1
comp=Z,158nm,0.5s,mb5.8,SNR=13
KDAK Kodiak Island 33.54 54 P P 12 35 52.3 -1.8
comp=Z,9.7nm,0.3s,mb4.8,baz=257,slow=4.6,SNR=22
KDAK PcP PcP 12 38 26.6 -0.7
comp=Z,14nm,0.6s,baz=158,slow=2.6,SNR=5.6
KDAK Kodiak Island 33.54 54 P P 12 35 52.3 -1.9
KDAK 12 38 26.6
KDAK pmax pmax
comp=Z,10.0nm,0.3s,mb4.8
KDAK Kodiak Island 33.54 54 *e*P P 12 35 52.5 -1.7
comp=Z,26nm,0.8s,mb4.8
BPAW Bear Paw Mtn. 33.68 42 *e*P P 12 35 55.3 0.0
comp=Z,2μm,0.6s
TRF Thorofare Moun 34.01 43 *e*P P 12 35 58.0 -0.2
comp=Z,29nm,0.4s,mb5.2
TRF *e*PcP PcP 12 38 28.3 -0.2
COLD Coldfoot 34.02 36 *e*P P 12 35 58.1 0.0
comp=Z,44nm,0.9s,mb5.0
RC01 Rabbit Creek A 34.48 47 *e*P P 12 36 00.6 -1.6
comp=Z,18nm,0.7s,mb4.7
RC01 *e*PcP PcP 12 38 29.8 -0.2
MCK McKinley 34.60 43 *e*P P 12 36 02.9 -0.3
MCK pmax pmax
comp=Z,15nm,0.8s,mb4.6
MCK McKinley 34.60 43 *e*P P 12 36 02.9 -0.3
comp=Z,14nm,0.8s,mb4.6
PMR Palmer 34.71 46 *e*P P 12 36 03.1 -1.1
PMR pmax pmax
comp=Z,4.0nm,0.4s,mb4.3
PMR Palmer 34.71 46 *e*P P 12 36 03.1 -1.1
comp=Z,4.4nm,0.4s,mb4.3
COLA College 35.00 41 *e*P P 12 36 06.6 +0.1
COLA pmax pmax
comp=Z,33nm,0.6s,mb5.0
COLA College 35.00 41 *e*P P 12 36 06.6 0.0
comp=Z,33nm,0.6s,mb5.0
KRAR Krasnoyarsk 35.21 304 *e*P P 12 36 09.3 +0.8
KRAR pmax pmax
comp=Z,68nm,1.2s,mb5.0
DIV Divide 36.38 47 *e*P P 12 36 18.1 -0.2
comp=Z,24nm,0.5s,mb5.0
LZH Lanzhou 36.73 267 ⇓P P 12 36 22.5 +1.0
LZH pP pP 12 37 19.4 +1.1
LZH sP sP 12 37 52.3 +1.2
LZH PP PP 12 37 55.6 +3.8
LZH PcP PcP 12 38 38.7 +1.6
LZH *e*S **S 12 41 43.0 -0.3**
LZH sS sS 12 43 25.5 +0.1
LZH SS SS 12 44 32.5 -4.8
LZH ScS ScS 12 46 04.0 +0.3
LZH pmax pmax
comp=Z,95nm,1.2s,mb5.1
LZH pmax pmax
comp=Z,220nm,4.1s
ENH Enshi 36.76 255 *e*P P 12 36 21.7 -0.2
comp=Z,16nm,0.5s,mb4.7
BMRM Bremner River 36.97 47 *e*P P 12 36 23.1 -0.1
comp=Z,13nm,0.4s,mb4.7
BMRM *e*PcP PcP 12 38 38.0 +0.6
MENT Mentasta 37.03 43 *e*P P 12 36 23.7 0.0
MENT *e*S **S 12 41 50.2 +3.0**
GTA Gaotai 37.51 275 ⇓P P 12 36 29.2 +1.2
GTA pP pP 12 37 27.4 +2.4
GTA sP sP 12 37 59.0 +1.3
GTA PcP PcP 12 38 40.4 +0.9
GTA S **S 12 41 55.9 +0.9**
GTA ScP ScP 12 41 59.8 +1.0
GTA PcS PcS 12 42 29.8 +1.4
GTA sS sS 12 43 37.7 +0.4
GTA SS SS 12 44 46.7 -6.0
GTA ScS ScS 12 46 08.8 +0.8
GTA pmax pmax
comp=Z,43nm,1.1s,mb4.8
GTA pmax pmax
comp=Z,240nm,4.2s
GTA LR LR
comp=N,230nm,13.1s
GTA LR LR
comp=E,210nm,14.0s
GTA LR LR
comp=Z,250nm,14.6s
EGAK Eagle 37.85 40 *e*P P 12 36 29.8 -0.8
comp=Z,26nm,0.3s,mb5.1
DAWY Dawson 38.73 41 *e*P P 12 36 37.4 -0.5
PNL Peninsula 39.80 48 *e*P P 12 36 46.5 -0.2
comp=Z,4μm,1.2s
CD2 Chengdu 40.01 261 P P 12 36 49.7 +1.0
CD2 pP pP 12 37 48.2 +1.8
CD2 sP sP 12 38 20.5 +1.6
CD2 PP PP 12 38 31.0 +3.6
CD2 S **S 12 42 33.7 +1.3**
CD2 SS SS 12 45 36.0 -6.2
CD2 pmax pmax
comp=Z,40nm,1.2s,mb4.6
CD2 pmax pmax
comp=Z,100nm,3.7s
INK Inuvik 40.25 34 P P 12 36 50.5 +0.3
comp=Z,18nm,0.3s,mb4.9,baz=302,slow=7.7,SNR=239
INK PcP PcP 12 38 47.0 -0.7
comp=Z,10nm,0.8s,baz=262,slow=3.5,SNR=3.8
INK S **S 12 42 33.9 -1.2**
comp=Z,3.7nm,0.8s,baz=247,slow=24,SNR=6.8
INK Inuvik 40.25 34 P P 12 36 50.5 +0.3
INK 12 38 47.0
INK S **S 12 42 33.9 -1.1**
INK pmax pmax
comp=Z,18nm,0.3s
INK smax
comp=N,4.0nm,0.8s
INK Inuvik 40.25 34 *e*P P 12 36 50.5 +0.3
comp=N,27nm,0.8s,mb4.6
ZAA0 Zalesovo Array 40.26 303 *e*P P 12 36 50.7 +0.2
ZALV Zalesovo Beam 40.26 303 P P 12 36 50.7 +0.2
comp=N,21nm,0.8s,mb4.5,baz=64,slow=6.8,SNR=56
ZALV PcP PcP 12 38 48.0 +0.1
comp=N,35nm,0.3s,baz=87,slow=2.9,SNR=69
ZALV ScP ScP 12 42 10.2 +1.1
comp=N,1.8nm,0.7s,baz=64,slow=6.6,SNR=4.1
HYT Haines Junctio 40.37 46 *e*P P 12 36 52.3 +1.0
NVS Novosibirsk 40.80 305 ⇓ *i*P P 12 36 55.4 +0.5
NVS *e* 12 38 39.6
NVS pmax pmax
comp=Z,282nm,1.9s,mb5.2
NVS pmax pmax
comp=N,137nm,1.7s
NVS pmax pmax
comp=E,208nm,1.7s
WMQ Urumqi 43.00 288 P P 12 37 14.0 +1.3
WMQ pP pP 12 38 13.2 +2.0
WMQ sP sP 12 38 45.3 +1.8
WMQ PP PP 12 39 00.8 +1.9
WMQ ScP ScP 12 42 21.6 +1.3
WMQ S **S 12 43 17.4 +1.5**
WMQ SS SS 12 46 31.6 -7.0
WMQ ScS ScS 12 46 40.5 -0.4
WMQ pmax pmax
comp=Z,61nm,1.1s,mb4.7
WMQ pmax pmax
comp=Z,380nm,4.6s
WMQ LR LR
comp=N,89nm,16.8s
WMQ LR LR

comp=Z,92nm,20.2s
KMI Kunming 44.62 256 P P 12 37 26.1 +0.3
KMI pP pP 12 38 24.0 -0.7
KMI sP sP 12 38 55.2 -1.7
KMI PP PP 12 39 16.1 +0.1
KMI S **S 12 43 38.8 -0.9**
KMI sS sS 12 45 22.9 -1.8
KMI SS SS 12 47 00.1 -5.6
KMI pmax pmax
comp=Z,19nm,0.8s,mb4.4
KMI pmax pmax
comp=Z,98nm,3.7s
KMI LR LR
comp=N,180nm,16.7s
KMI LR LR
comp=E,110nm,18.7s
KMI LR LR
comp=Z,160nm,15.7s
DLBC Dease Lake 44.76 47 *e*P P 12 37 27.3 +0.9
MK31 Makanchi Array 44.82 294 *e*P P 12 37 27.5 +0.5
MK31 *e* 12 39 03.7
MK31 Makanchi Array 44.82 294 *e*P P 12 37 27.5 +0.5
MK31 *e*PcP PcP 12 39 03.7 +0.3
MK31 *e*ScP ScP 12 42 28.8 +1.1
MKAR Makanchi Array 44.82 294 P P 12 37 27.4 +0.4
comp=Z,19nm,0.4s,mb4.6,baz=64,slow=8.2,SNR=177
MKAR PcP PcP 12 39 03.5 +0.2
comp=Z,14nm,0.3s,baz=63,slow=5.0,SNR=26
MKAR ScP ScP 12 42 28.6 +0.9
comp=Z,3.1nm,0.7s,baz=54,slow=4.9,SNR=6.7
QIZ Qiongzhong 44.82 243 P P 12 37 27.7 +0.3
QIZ pP pP 12 38 25.5 -0.9
QIZ S **S 12 43 45.1 +2.5**
QIZ sS sS 12 45 26.9 -0.9
QIZ pmax pmax
comp=Z,12nm,1.2s,mb4.0
QIZ pmax pmax
comp=Z,140nm,4.6s
KURK Kurchatov 45.07 301 P P 12 37 29.9 +1.0
comp=Z,1μm,0.7s,mb6.2,SNR=75
KURK Kurchatov 45.07 301 P P 12 37 29.5 +0.6
comp=Z,122nm,0.8s,mb5.2,baz=65,slow=8.2,SNR=109
KURK PcP PcP 12 39 03.9 -0.3
comp=Z,16nm,0.6s,baz=62,slow=3.6,SNR=10
KURK ScP ScP 12 42 30.1 +1.5
comp=Z,1.9nm,0.3s,baz=68,slow=3.6,SNR=3.1
KURK S **S 12 43 49.0 +3.6**
comp=Z,0.8nm,0.3s,baz=216,slow=29,SNR=4.3
KURK Kurchatov 45.07 301 P P 12 37 29.5 +0.6
KURK 12 39 03.9
KURK S **S 12 43 49.0 +3.6**
KURK pmax pmax
comp=Z,122nm,0.8s,mb5.2
KURK Kurchatov 45.07 301 *e*P P 12 37 29.3 +0.4
comp=Z,317nm,1.1s,mb5.5
KURK *e*PcP PcP 12 39 04.2 +0.1
KURK Kurchatov 45.07 301 P P 12 37 29.7 +0.8
SNR=107
VOSK Vostochnaya 48.26 307 P P 12 37 53.9 +0.4
VOSK pmax pmax
comp=Z,168nm,1.1s,mb5.3
BVAR Borovoye Array 48.42 307 P P 12 37 55.2 +0.5
comp=Z,35nm,0.3s,mb5.1,baz=56,slow=7.9,SNR=169
BVAR PcP PcP 12 39 16.1 +0.1
comp=Z,6.5nm,0.3s,baz=82,slow=4.3,SNR=10
BVAR ScP ScP 12 42 43.3 +0.6
comp=Z,3.2nm,0.6s,baz=70,slow=4.0,SNR=6.6
BVAR S **S 12 44 34.9 +2.2**
comp=Z,3.1nm,0.9s,baz=68,slow=21,SNR=6.4
BVAR Borovoye Array 48.42 307 P P 12 37 55.2 +0.5
BVAR 12 39 16.1
BVAR S **S 12 44 34.9 +2.2**
BVAR pmax pmax
comp=Z,35nm,0.3s
BVAR smax
comp=N,3.0nm,0.9s
BRVK Borovoye 48.46 307 P P 12 37 55.9 +0.9
comp=N,694nm,0.7s,mb6.1,SNR=49
BRVK Borovoye 48.46 307 *d* *i*P P 12 37 55.5 +0.5
BRVK pmax pmax
comp=Z,148nm,1.2s,mb5.2
BRVK Borovoye 48.46 307 *e*P P 12 37 55.5 +0.5
comp=Z,121nm,0.9s,mb5.2
BRVK *e*PcP PcP 12 39 16.1 -0.1
BRVK Borovoye 48.46 307 P P 12 37 55.9 +0.9
SNR=93
RES Resolute Bay 48.90 19 *e*P P 12 37 57.8 -0.3
comp=Z,23nm,1.0s,mb4.5
LSA Lhasa 49.03 270 P P 12 38 01.2 +1.5
LSA Lhasa 49.03 270 *e*P P 12 38 01.7 +2.0
LSA pmax pmax
comp=Z,111nm,1.4s,mb5.0
LSA Lhasa 49.03 270 *e*P P 12 38 01.7 +2.0
comp=Z,111nm,1.4s,mb5.0
ZRNK Zerenda 49.18 308 *i*P P 12 38 00.9 +0.4
ZRNK pmax pmax
comp=Z,174nm,1.1s,mb5.3
YKA Yellowknife Ar 49.68 37 P P 12 38 03.6 -0.5
comp=Z,40nm,0.7s,mb4.9,baz=300,slow=6.9,SNR=27
YKA PcP PcP 12 39 20.8 +0.3
comp=Z,14nm,0.8s,baz=302,slow=3.9,SNR=13
YKA ScP ScP 12 42 48.3 +0.4
comp=Z,3.6nm,1.1s,baz=297,slow=4.7,SNR=4.7
YKA Yellowknife Ar 49.68 37 P P 12 38 03.6 -0.5
YKA 12 39 20.8
YKA pmax pmax
comp=Z,40nm,0.7s
YKA Yellowknife Ar 49.68 37 P P 12 38 03.6 -0.5
YKA PcP PcP 12 39 20.8 +0.3
YKA ScP ScP 12 42 48.4 +0.4
KBS Kingsbay 49.90 351 *e*P P 12 38 05.8 +0.3
SPITS Spitsbergen Ar 50.00 349 P P 12 38 04.9 -1.4
comp=Z,4.2nm,0.4s,mb4.1,baz=61,slow=8.7,SNR=9.6
SPITS PcP PcP 12 39 20.6 -0.9
comp=Z,3.2nm,0.3s,baz=110,slow=7.2,SNR=6.3
SPITS Spitsbergen Ar 50.00 349 P P 12 38 04.9 -1.3
SPITS 12 39 20.6
SPITS pmax pmax
comp=Z,4.0nm,0.4s
ULHL Ulahol 50.91 292 P P 12 38 14.7 +1.3
SNR=14
TKM2 Tokmak 2 50.91 293 P P 12 38 14.6 +1.1
SNR=35
TKM2 Tokmak 2 50.91 293 *e*P P 12 38 14.3 +0.8
TKM2 pmax pmax
comp=Z,20nm,0.4s,mb4.8
TKM2 Tokmak 2 50.91 293 *e*P P 12 38 14.3 +0.8
comp=Z,20nm,0.4s,mb4.8
TKM2 *e*ScP ScP 12 42 55.0 +1.4
SVE Sverdlovsk 51.26 315⇑ *e*P P 12 38 16.5 +0.7
SVE pmax pmax
comp=Z,207nm,1.1s,mb5.4
SHL Shillong 51.33 265 *e*PKP P 12 38 17.5 +0.7
POHA Pohakuloa 51.35 105 *e*P P 12 38 16.5 -0.6
comp=Z,33nm,0.6s,mb4.8
USP Ospenovka 51.37 294 P P 12 38 17.9 +1.0
SNR=68
CHMS Chumysh 51.37 294 P P 12 38 17.9 +0.9
SNR=19
KBK Karagaybulak 51.45 294 P P 12 38 18.6 +1.1
SNR=11
SOKR Solikamsk 51.47 320 *d* *i*P P 12 38 17.2 -0.1
SOKR pmax pmax
comp=Z,70nm,0.9s,mb5.0
KZA Kyzart 51.60 293 P P 12 38 20.5 +1.9
SNR=74
CHTO Chiang Mai 51.62 253 *e*P P 12 38 19.5 +0.5
CHTO pmax pmax
comp=Z,24nm,0.6s,mb4.7
CHTO Chiang Mai 51.62 253 *e*P P 12 38 19.5 +0.5
comp=Z,24nm,0.6s,mb4.7
CHTO Chiang Mai 51.62 253 P P 12 38 19.6 +0.6
comp=Z,638nmcomp=Z,36nm,0.8s,mb4.7
CHTO Chiang Mai 51.62 253 P P 12 38 20.0 +1.0
SNR=6.2
AAK Ala-Archa 51.74 294 P P 12 38 20.4 +0.8
comp=Z,250nm,0.7s,mb5.7,SNR=14
AAK Ala-Archa 51.74 294 P P 12 38 20.6 +1.0
comp=Z,12nm,0.3s,mb4.7,baz=102,slow=4.0,SNR=63
AAK Ala-Archa 51.74 294 P P 12 38 20.6 +1.0
AAK pmax pmax
comp=Z,12nm,0.3s,mb4.7
MYLDM Lahad Datu 51.94 223 P P 12 38 20.9 -0.5
comp=Z,27nm,1.4s,mb4.4
EKS2 Erkin-Say 52.15 294 P P 12 38 23.7 +1.0
SNR=46

EKS2	Erkin-Say	52.15	294	eP	P	12 38 23.3 +0.6
	comp=Z,106nm,0.6s,mb5.3					
KKM	Kota Kinabalu	52.23	226	P	P	12 38 23.9 +0.3
	comp=Z,24nm,1.6s,mb4.3					
ARU	Arti	52.43	316	P	P	12 38 24.2 -0.3
	comp=Z,1µm,0.7s,mb6.3,SNR=46					
ARU	Arti	52.43	316	d iP	P	12 38 24.6 +0.1
ARU				e	pP	12 39 30.3 +4.8
ARU				*SP	sP	12 39 56.0 -1.2
ARU				e		12 40 25.5
ARU				ePPP		12 41 38.3
ARU				S	S	12 45 30.7 +3.2
ARU				*SS	sS	12 47 13.8 -1.8
ARU						12 47 44.2
ARU				SS	SS	12 49 06.0 -2.9
ARU				pmax	pmax	
	comp=Z,308nm,1.2s,mb5.5					
ARU	Arti	52.43	316	eP	P	12 38 24.5 +0.1
	comp=Z,276nm,1.0s,mb5.5					
AML	Almayashu	52.51	294	P	P	12 38 26.6 +1.4
	SNR=696					
KSH	Kashi	52.68	290	P	P	12 38 30.8 +4.3
KSH				pP	pP	12 39 31.2 +3.6
KSH				PcP	PcP	12 39 36.1 +3.9
KSH				sP	sP	12 40 00.2 +1.0
KSH				PP	PP	12 40 36.6 +7.9
KSH				ScP	ScP	12 43 05.2 +3.9
KSH				PcS	PcS	12 43 33.0 +1.9
KSH				S	S	12 45 35.4 +4.0
KSH				SS	SS	12 49 21.6 +8.1
KSH				pmax	pmax	
	comp=Z,370nm,2.3s,mb5.3					
KSH				LR	LR	
	comp=N,240nm,10.7s					
KSH				LR	LR	
	comp=E,300nm,14.4s					
KSH				LR	LR	
	comp=Z,130nm,7.0s					
TAPN	Taplejung	52.85	270	eP	P	12 38 28.0 0.0
NST	Nakhon Sawan	53.25	250	P	P	12 38 31.0 0.0
ODAN	Odare	53.39	270	eP	P	12 38 31.6 -0.3
NLWA	Neilton Lookou	53.53	57	⇓P	P	12 38 32.8 +0.2
	baz=53					
JIRN	Jiri	53.64	272	eP	P	12 38 33.6 -0.1
	comp=Z,35nm,0.4s,mb5.1					
GUN	Gumba	53.68	272	eP	P	12 38 33.9 -0.1
	comp=Z,60nm,0.4s,mb5.3					
KK31	Karatay Array	53.83	296	i P	P	12 38 35.0 +0.2
RAMN	Ramite	53.85	271	eP	P	12 38 34.1 -1.1
LVZ	Lovozero	54.06	335	eP	P	12 38 33.0 -3.1
LVZ				pmax	pmax	
	comp=Z,39nm,1.3s,mb4.6					
JCW	Jim Creek	54.12	56	eP	P	12 38 36.9 0.0
	comp=Z,12nm,0.8s,mb4.3					
JCW				ePP	PP	12 40 49.5 +8.1
KKN	Kakani	54.15	272	eP	P	12 38 37.3 -0.1
B06A	Marblemount	54.17	55	⇑P	P	12 38 36.8 -0.4
	baz=54					
RPW	Rockport	54.20	55	P	P	12 38 37.0 -0.3
E03A	Lebam	54.20	58	⇓P	P	12 38 37.6 +0.2
	baz=54					
PKI	Pulchoki	54.21	272	eP	P	12 38 37.4 -0.4
PKIN	Phulchoki	54.22	272	eP	P	12 38 38.2 +0.4
DMN	Daman	54.39	272	eP	P	12 38 39.1 +0.1
GKN	Gorkha	54.43	273	eP	P	12 38 39.3 -0.1
	comp=Z,140nm,0.6s,mb5.5					
F03A	Seaside	54.57	59	⇓P	P	12 38 40.5 +0.5
	baz=54					
APA	Apatity	54.63	335	⇓iP	P	12 38 38.0 -2.2
APA				pmax	pmax	
	comp=Z,36nm,1.2s,mb4.7					
APA				MLR	MLR	
	comp=Z,100nm,12.0s					
KEV	Kevo	54.65	339	eP	P	12 38 38.3 -2.0
KEV				pmax	pmax	
	comp=Z,7.0nm,0.5s,mb4.3					
KEV	Kevo	54.65	339	eP	P	12 38 38.3 -2.0
	comp=Z,7.2nm,0.5s,mb4.4					
KEV	Kevo	54.65	339	ep	P	12 38 38.3 -2.0
	comp=Z,7.2nm,0.5s,mb4.4					
D05A	Enumclaw	54.69	57	⇑P	P	12 38 41.2 +0.3
	baz=54					
WRW	Wenatchee Ridg	54.89	55	P	P	12 38 42.4 +0.1
LON	Longmire	55.05	57	eP	P	12 38 43.2 -0.3
LON				e	pP	12 39 41.2 -3.9
LON				pmax	pmax	
	comp=Z,4.0nm,0.7s,mb4.0					
LON	Longmire	55.05	57	eP	P	12 38 43.1 -0.3
	comp=Z,4.4nm,0.7s,mb4.0					
LON				ePcP	PcP	12 39 41.2 +0.1
ARCES	ARCESS Array B	55.16	340	P	P	12 38 43.5 -0.5
	comp=Z,7.1nm,0.3s,mb4.5,baz=21,slow=7.6,SNR=135					
ARCES				PcP	PcP	12 39 40.9 -0.3
	comp=Z,3.3nm,0.3s,baz=55,slow=4.8,SNR=9.8					
ARCES	ARCESS Array B	55.16	340	P	P	12 38 43.5 -0.4
ARCES					pP	12 39 40.9 -4.7
ARCES				pmax	pmax	
	comp=Z,7.0nm,0.4s					
ARE0	ARCESS Array S	55.16	340	eP	P	12 38 43.5 -0.4
F04A	Amboy	55.20	58	⇑P	P	12 38 44.7 +0.1
	baz=55					
MTMW	Mount Mitchell	55.26	58	P	P	12 38 45.7 +0.7
TWW	Teanaway	55.33	56	P	P	12 38 46.2 +0.7
ETW	Entiat	55.34	55	eP	P	12 38 45.3 -0.2
	comp=Z,21nm,0.6s,mb4.7					
ETW				e	pP	12 39 42.9 -4.3
ETW				ePP	PP	12 40 54.2 +2.0
ETW				eScP	ScP	12 43 15.0 +2.2
EDM	Edmonton	55.48	47	eP	P	12 38 46.3 -0.2
EDM				e		12 39 43.0
G04A	Mulino	55.61	59	⇓P	P	12 38 47.6 +0.1
	baz=55					
AB31	Akbulak array	55.98	308	i P	P	12 38 50.3 +0.3
AB31				pmax	pmax	
	comp=Z,20nm,0.3s,mb5.0					
ABKAR	Akbulak array	55.98	308	eP	P	12 38 50.3 +0.2
	comp=Z,24nm,0.4s,mb5.0					
HOOD	Mount Hood Mea	56.00	58	eP	P	12 38 50.5 +0.3
	comp=Z,51nm,0.7s,mb5.1					
JOSI	Joshimath	56.05	279	ePKP	P	12 38 51.1 +0.2
JOSI				AMb	AMB	12 38 54.1
	comp=Z,272nm,1.5s,mb5.5					
KTK1	Kautokeino	56.08	340	eP	P	12 38 49.9 -0.5
KTK1				AMb	AMB	12 38 51.0
	comp=N,17nm,2.0s					
KTK1	Kautokeino	56.08	340	eP	P	12 38 49.9 -0.5
	comp=N,17nm,2.0s,mb4.1					
H04A	Detroit Lake	56.09	59	⇑P	P	12 38 51.0 +0.1
	baz=56,SNR=5.3					
AKTK	Aktyubinsk	56.24	310	P	P	12 38 51.9 +0.1
AKTK				PcP	PcP	12 39 45.5 -0.1
AKTO	Aktyubinsk	56.24	310	P	P	12 38 51.9 +0.1
	comp=N,33nm,0.9s,mb4.8,baz=54,slow=6.7,SNR=76					
AKTO				PcP	PcP	12 39 45.5 -0.1
	comp=N,4.6nm,0.4s,baz=244,slow=3.6,SNR=3.9					
AKTO	Aktyubinsk	56.24	310	P	P	12 38 51.9 +0.1
AKTO						12 39 45.6
AKTO				pmax	pmax	
	comp=Z,33nm,0.9s,mb4.8					
KLP	Kalpa	56.25	281	ePKP	P	12 38 53.1 +0.9
KLP				AMb	AMB	12 38 55.3
	comp=Z,72nm,1.1s,mb5.0					
OD2	Odessa Site #2	56.34	55	P	P	12 38 52.0 -0.5
D08A	Wollman Farm,	56.43	55	⇓P	P	12 38 53.0 -0.3
	baz=56					
RSW	Rattlesnake Hi	56.48	56	eP	P	12 38 53.4 -0.1
	comp=Z,11nm,0.6s,mb4.5					
RSW				ePcP	PcP	12 39 47.8 +1.1
BOK	Bokaro	56.48	268	ex	PcP	12 39 48.3 +1.2
BOK				AMb	AMB	12 39 49.4
	comp=Z,48nm,1.1s,mb4.8					
F07A	Phinny Hill Vi	56.60	57	⇑P	P	12 38 54.7 +0.2
	baz=56,SNR=9.6					
BKCOR	Black Crater	56.60	59	P	P	12 38 55.4 +0.8
NEW	Newport	56.64	53	eP	P	12 38 54.3 -0.4
NEW				e		12 39 47.2
NEW				pmax	pmax	
	comp=Z,15nm,0.8s					
NEW	Newport	56.64	53	eP	P	12 38 54.3 -0.4
	comp=Z,15nm,0.8s,mb4.5					
NEW				ePcP	PcP	12 39 47.2 -0.1
E08A	Dider Farm, El	56.70	56	⇑P	P	12 38 55.0 -0.2
	baz=56					
HUMO	Hull Mountain	56.94	61	eP	P	12 38 57.4 +0.6
	comp=Z,3.8nm,0.6s,mb4.0					
HUMO				ePcP	PcP	12 39 49.2 +0.7
A12A	Yaak River Ran	56.99	52	⇓P	P	12 38 57.1 0.0
	baz=57					
DDI	Dehra Dun	57.18	280	ex	P	12 39 00.0 +1.3
E09A	Wood Farm, Sta	57.19	55	⇓P	P	12 38 58.3 -0.2
	baz=57,SNR=10.0					
SBUM	Sibu	57.29	229	P	P	12 39 00.6 +1.0
	comp=Z,1µmcomp=Z,29nm,1.6s,mb4.5					
G08A	Pilot Rock	57.51	57	⇑P	P	12 39 00.8 0.0
	baz=57,SNR=8.0					
LNOR	Lincton Mounta	57.51	56	eP	P	12 39 00.9 +0.1
LNOR				e		12 39 51.4
LNOR				pmax	pmax	
	comp=Z,5.0nm,0.6s,mb4.1					
LNOR	Lincton Mounta	57.51	56	eP	P	12 39 00.9 +0.1
	comp=Z,5.1nm,0.6s,mb4.1					
LNOR				ePcP	PcP	12 39 51.4 +0.6
YBH	Yreka Blue Hor	57.63	62	eP	P	12 39 02.5 +0.8
YBH				e		12 39 52.0
YBH				e		12 41 12.8
YBH				pmax	pmax	
	comp=Z,11nm,0.6s					
YBH	Yreka Blue Hor	57.63	62	eP	P	12 39 02.5 +0.8
	comp=Z,11nm,0.6s,mb4.5					
YBH				ePcP	PcP	12 39 52.0 +0.7
YBH				ePP	PP	12 41 12.8 +0.1
WALA	Waterton Lakes	57.80	51	eP	P	12 39 02.6 -0.1
	comp=Z,1.5nm,0.6s,mb3.6					
WALA				ePcP	PcP	12 39 52.4 +0.5
WALA				eScP	ScP	12 43 27.5 +3.9
C12B	Naegeli Ranch,	57.85	53	⇓P	P	12 39 03.3 +0.1
	baz=58,SNR=10					
B13A	Whitefish	57.95	52	⇑P	P	12 39 03.9 +0.1
	baz=58,SNR=11					
F10A	Beach Ranch, E	58.02	55	⇑P	P	12 39 04.1 -0.2
	baz=58,SNR=8.4					
K05A	Summer Lake	58.05	60	⇓P	P	12 39 05.6 +1.0
	baz=58,SNR=9.4					
A14A	Double T Ranch	58.10	51	⇓P	P	12 39 04.5 -0.3
	baz=58,SNR=18					
BSMT	Bassoo Peak	58.12	52	eP	P	12 39 05.5 +0.6
	comp=Z,36nm,0.9s,mb4.8					
BSMT				ePcP	PcP	12 39 54.1 +0.9
H08A	Prairie City	58.16	57	⇑P	P	12 39 05.7 +0.5
	baz=58,SNR=13					
G09A	Cove	58.16	56	⇑P	P	12 39 05.6 +0.3
	baz=58,SNR=12					
D12A	Red Ives Fores	58.33	53	⇑P	P	12 39 06.2 -0.3
	baz=58					
SUMG	Summit	58.34	3	eP	P	12 39 05.8 -0.4
	comp=Z,21nm,0.8s,mb4.6					
SUMG				ePcP	PcP	12 39 54.2 +0.6
SUMG	Summit	58.34	3	i P	P	12 39 04.3 -1.8
	comp=Z,16nm,0.8s,mb4.5					
JTMT	Jette	58.45	52	eP	P	12 39 07.7 +0.5
	comp=Z,19nm,0.6s,mb4.7					
JTMT				ePcP	PcP	12 39 55.0 +0.5
A15A	Johnson Ranch,	58.45	50	⇓P	P	12 39 06.6 -0.6
	baz=58,SNR=26					
WDC	Whiskeytown Da	58.46	63	eP	P	12 39 07.5 0.0
WDC				pmax	pmax	
	comp=Z,14nm,0.8s,mb4.4					
WDC	Whiskeytown Da	58.46	63	eP	P	12 39 07.5 0.0
	comp=Z,14nm,0.8s,mb4.5					
G10A	Bishop Farm, J	58.51	56	⇑P	P	12 39 07.8 +0.1
	baz=58,SNR=12					
YBMT	Yellow Bay	58.51	52	eP	P	12 39 08.1 +0.4
	comp=Z,20nm,0.7s,mb4.7					
YBMT				eScP	ScP	12 43 25.6 -1.3
B14A	Marquette Ranc	58.57	51	⇓P	P	12 39 08.0 0.0
	baz=58,SNR=12					
H09A	Durkee	58.62	57	⇓P	P	12 39 09.0 +0.6
	baz=58,SNR=29					
JOF	Joensuu	58.62	332	eP	P	12 39 07.0 -1.2
JOF				pmax	pmax	
	comp=Z,10.0nm,0.4s,mb4.6					
JOF	Joensuu	58.62	332	ep	P	12 39 07.0 -1.2
	comp=Z,10nm,0.4s,mb4.6					
BMO	Blue Mountains	58.69	56	eP	P	12 39 09.2 +0.2
BMO				pmax	pmax	
	comp=Z,8.0nm,0.6s,mb4.3					
BMO	Blue Mountains	58.69	56	eP	P	12 39 09.2 +0.2
	comp=Z,7.9nm,0.6s,mb4.3					
BMO				ePcP	PcP	12 39 55.7 +0.2
SWMT	Swartz Lake	58.75	52	eP	P	12 39 09.7 +0.4
	comp=Z,22nm,0.8s,mb4.6					
SWMT				ePcP	PcP	12 39 56.2 +0.5
D13A	Huson	58.77	53	⇑P	P	12 39 09.3 -0.2
	baz=58,SNR=13					
NDI	New Delhi	58.81	279	ePKP	P	12 39 08.5 -1.5
G11A	Walters Elk Ra	58.90	55	⇑P	P	12 39 10.4 0.0
	baz=59,SNR=11					
MOD	Modoc	58.91	61	eP	P	12 39 10.8 +0.3
	comp=Z,26nm,0.6s,mb4.8					
B15A	Bradely Ranch,	58.97	51	⇑P	P	12 39 10.4 -0.4
	baz=59,SNR=5.7					
AYAN	Aya Nagar	59.01	279	ePKP	P	12 39 11.4 +0.1
AYAN				AMb	AMB	12 39 13.7
	comp=Z,45nm,1.0s,mb4.8					
J08A	Circle Bar Ran	59.01	58	⇓P	P	12 39 11.6 +0.5
	baz=59,SNR=11					
I09A	Lost Marbles R	59.02	57	⇑P	P	12 39 11.5 +0.3
	baz=59,SNR=14					
KSM	Kuching	59.08	230	eP	P	12 39 12.7 +0.7
	comp=Z,60nm,1.3s,mb4.9					
KSM	Kuching	59.08	230	P	P	12 39 13.1 +1.1
	comp=Z,34nm,1.3s,mb4.6					
H10A	Noah's Angus R	59.17	56	⇑P	P	12 39 12.4 +0.2
	baz=59,SNR=31					
SLMT	Seeley Lake	59.18	52	eP	P	12 39 12.5 +0.3
	comp=Z,61nm,0.6s,mb5.2					
SLMT				ePcP	PcP	12 39 57.6 +0.2
SLMT				eScP	ScP	12 43 32.3 +2.5
SONA	Sohna	59.19	279	ePKP	P	12 39 12.7 +0.1
SONA				AMb	AMB	12 39 14.9
	comp=Z,60nm,0.9s,mb5.0					
MSO	Missoula	59.22	53	eP	P	12 39 12.7 +0.2
	comp=Z,26nm,0.8s,mb4.7					
MSO				ePcP	PcP	12 39 57.6 0.0
F12A	Elk City	59.22	54	⇑P	P	12 39 12.9 +0.4
	baz=59,SNR=29					
D14A	Greenough	59.28	52	⇑P	P	12 39 13.0 +0.1
	baz=59,SNR=50					
C15A	Salmond Ranch,	59.29	51	⇑P	P	12 39 13.5 +0.5
	baz=59,SNR=37					
AGRA	Agra	59.32	277	ePKP	P	12 39 13.7 +0.2
AGRA				AMb	AMB	12 39 14.9
	comp=Z,62nm,0.4s,mb5.4					
B16A	M & M Farms, S	59.33	50	⇓P	P	12 39 12.8 -0.4
	baz=59,SNR=19					
E13A	Victor	59.34	53	⇑P	P	12 39 13.2 -0.2
	baz=59,SNR=16					
I10A	Payette	59.46	57	⇑P	P	12 39 14.8 +0.6
	baz=59,SNR=14					
H11A	Donnelly	59.49	56	⇑P	P	12 39 14.5 +0.1
	baz=59,SNR=24					
WVOR	Wild Horse Val	59.51	59	eP	P	12 39 15.1 +0.5
WVOR				e		12 39 59.7
WVOR				pmax	pmax	
	comp=Z,23nm,0.8s,mb4.8					
WVOR	Wild Horse Val	59.51	59	eP	P	12 39 15.1 +0.5
	comp=Z,23nm,0.8s,mb4.8					
WVOR				ePcP	PcP	12 39 59.6 +0.8
CHMT	Chamberlain Mo	59.52	52	eP	P	12 39 14.6 0.0
	comp=Z,19nm,0.6s,mb4.8					
CHMT				ePcP	PcP	12 39 58.5 -0.2
FFC	Flin Flon	59.63	40	P	P	12 39 15.5 +0.4
	comp=Z,663nm,0.6s,mb6.3,SNR=25					
FFC	Flin Flon	59.63	40	eP	P	12 39 15.3 +0.2
FFC				e		12 39 58.7
FFC				pmax	pmax	
	comp=Z,27nm,1.0s,mb4.7					
FFC	Flin Flon	59.63	40	eP	P	12 39 15.3 +0.1
	comp=Z,27nm,1.0s,mb4.7					
FFC				ePcP	PcP	12 39 58.7 -0.4
F13A	Darby	59.69	54	⇑P	P	12 39 15.4 -0.3
	baz=59,SNR=16					
C16A	Fuhringer Ranc	59.71	51	⇓P	P	12 39 15.9 +0.1
	baz=59,SNR=46					
STKI	Sintang	59.72	228	P	P	12 39 17.5 +1.2
	comp=Z,61nm,0.7s,mb5.2					
E14A	Clinton	59.72	53	⇓P	P	12 39 16.0 0.0
	baz=59,SNR=20					
D15A	Lincoln	59.82	52	⇓P	P	12 39 16.7 +0.2
	baz=60,SNR=14					
FCC	Fort Churchill	59.87	33	eP	P	12 39 16.3 -0.4
	comp=Z,1.7nm,0.8s,mb3.6					
FCC				ePcP	PcP	12 39 59.6 -0.3
B17A	L&G Farms, Che	59.87	50	⇑P	P	12 39 16.8 -0.1
	baz=60,SNR=7.2					
J10A	Berg Farm, Mel	59.91	57	⇓P	P	12 39 17.2 -0.1
	baz=60					
A18A	Metzger Ranch,	59.93	49	⇓P	P	12 39 16.8 -0.5
	baz=60,SNR=9.7					
I11A	Placerville	60.04	56	⇓P	P	12 39 18.2 +0.1
	baz=60					
KBL	Kabul	60.11	289	eP	P	12 39 18.4 -0.4
KBL				pmax	pmax	
	comp=Z,82nm,1.2s,mb5.1					
KBL	Kabul	60.11	289	eP	P	12 39 18.4 -0.3
	comp=Z,82nm,1.2s,mb5.1					
KHET	Khetri	60.14	279	ePKP	P	12 39 18.5 -0.5
E15A	Deer Lodge	60.16	52	⇓P	P	12 39 18.9 0.0
	baz=60,SNR=13					
F14A	Wisdom	60.18	53	⇑P	P	12 39 19.2 +0.1
	baz=60,SNR=5.7					
G13A	Cobalt	60.20	54	⇓P	P	12 39 18.9 -0.2
	baz=60,SNR=26					
K10A	MacKenzie Ranc	60.28	58	⇑P	P	12 39 20.2 +0.4
	baz=60,SNR=18					
B18A	Beardsley Farm	60.31	49	⇓P	P	12 39 20.0 +0.1
	baz=60,SNR=16					
D16A	Dana Ranch, Ca	60.32	51	⇑P	P	12 39 20.3 +0.4
	baz=60,SNR=20					
C17A	Wharram Farm,	60.32	50	⇑P	P	12 39 19.8 -0.2
	baz=60,SNR=37					
KONS	Konsvik	60.32	342	eP	P	12 39 19.7 0.0
MOR8	Moi Rana	60.34	341	eP	P	12 39 17.4 -2.4
MOR8				AMb	AMB	12 39 18.4
	comp=Z,26nm,1.0s,mb4.7					
MOR8	Moi Rana	60.34	341	eP	P	12 39 17.4 -2.4
	comp=Z,26nm,1.0s,mb4.7					
HRY	Holter Researc	60.39	52	eP	P	12 39 20.9 +0.4
	comp=Z,58nm,0.7s,mb5.2					
HRY				ePcP	PcP	12 40 03.0 +0.8
MFID	Camas Ranch	60.44	57	⇑P	P	12 39 21.1 +0.2
	baz=60,SNR=7.8					
STOK	Stokkvaagen	60.49	342	eP	P	12 39 22.8 +2.0
H13A	Challis	60.53	55	⇓P	P	12 39 21.5 +0.1
	baz=60,SNR=32					
SCO	Scoresbysund	60.54	357	i P	P	12 39 20.1 -1.0
SCO	Scoresbysund	60.54	357	i P	P	12 39 20.1 -1.0
	comp=Z,6.2nm,0.9s,mb4.1					
I12A	Atlanta	60.56	56	⇑P	P	12 39 22.0 +0.3
	baz=60,SNR=24					
EGMT	Eagleton	60.57	50	⇑P	P	12 39 21.6 -0.1
	baz=60,SNR=14					
EGMT	Eagleton	60.57	50	eP	P	12 39 21.6 0.0
	comp=Z,48nm,1.0s,mb5.0					
EGMT				ePcP	PcP	12 40 03.1 +0.1
E16A	East Helena	60.59	52	⇓P	P	12 39 22.2 +0.5
	baz=60,SNR=14					
F15A	Butte	60.62	53	⇑P	P	12 39 22.2 +0.2
	baz=60,SNR=13					
LRM	Limekiln Ridge	60.66	53	eP	P	12 39 22.5 +0.3
	comp=Z,177nm,0.7s,mb5.7					
D17A	Six Diamond Ra	60.68	51	⇑P	P	12 39 22.5 +0.1
	baz=60,SNR=19					
KAF	Kangasniemi	60.73	334	eP	P	12 39 20.9 -1.6
KAF				pmax	pmax	
	comp=Z,7.0nm,0.4s,mb4.5					
KAF	Kangasniemi	60.73	334	ep	P	12 39 20.9 -1.6
	comp=Z,7.2nm,0.4s,mb4.6					
K11A	Parker Ranch,	60.75	57	⇑P	P	12 39 23.2 +0.3
	baz=60,SNR=11					
DLMT	Dillon	60.89	53	eP	P	12 39 24.9 +1.1
	comp=Z,33nm,1.0s,mb4.8					
WCN	Washoe City	60.92	63	⇑P	P	12 39 24.2 0.0
	baz=61,SNR=19					
L10A	Juniper Basin	60.96	58	⇓P	P	12 39 24.7 +0.3
	baz=61					
H14A	Leadore	60.97	54	⇑P	P	12 39 24.2 -0.2
	baz=61,SNR=16					
I13A	Wildhorse Cree	61.04	55	⇓P	P	12 39 25.4 +0.5
	baz=61,SNR=38					
E17A	Martinsdale	61.06	52	⇓P	P	12 39 25.5 +0.6
	baz=61,SNR=27					
G15A	Dillon	61.07	53	⇑P	P	12 39 25.3 +0.2
	baz=61,SNR=22					
D18A	Linhart Farms,	61.10	50	⇓P	P	12 39 25.4 +0.2
	baz=61,SNR=8.1					
MCMT	McKenzie Canyo	61.11	54	eP	P	12 39 25.6 +0.3
	comp=Z,7.2nm,0.8s,mb4.2					
HLID	Hailey	61.11	56	⇓P	P	12 39 25.7 +0.3
	baz=61,SNR=20					
HLID	Hailey	61.11	56	eP	P	12 39 25.9 +0.6
	comp=Z,8.5nm,0.7s,mb4.4					
HLID				ePcP	PcP	12 40 06.4 +1.1
HLID				eScP	ScP	12 43 41.4 +3.0
F16A	Kennard Place,	61.11	52	⇑P	P	12 39 25.5 +0.2
	baz=61,SNR=17					
BOZ	Bozeman (W)	61.20	53	⇑P	P	12 39 26.5 +0.6
	baz=61,SNR=40					
BOZ	Bozeman (W)	61.20	53	eP	P	12 39 26.7 +0.8
BOZ				e		12 40 06.0
BOZ				e*PP	pP	12 40 30.8 +1.8
BOZ				pmax	pmax	
	comp=Z,32nm,0.6s,mb5.0					
BOZ	Bozeman (W)	61.20	53	eP	P	12 39 26.6 +0.7
	comp=Z,32nm,0.6s,mb5.0					
BOZ				ePcP	PcP	12 40 06.0 +0.4
BOZ				epP	pP	12 40 30.8 +1.9
M10A	I.L. Ranch, Tu	61.29	59	⇑P	P	12 39 27.3 +0.7
	baz=61,SNR=12					
L11A	Cat Creek Ranc	61.30	58	⇓P	P	12 39 27.2 +0.6
	baz=61,SNR=23					
FINES	FINESS Array B	61.33	333	P	P	12 39 25.8 -0.7
	comp=Z,16nm,0.3s,mb5.0,baz=34,slow=7.4,SNR=123					
FINES				PcP	PcP	12 40 05.3 -0.5
	comp=Z,7.3nm,0.3s,baz=58,slow=3.5,SNR=11					
FINES	FINESS Array B	61.33	333	P	P	12 39 25.8 -0.7
FINES						12 40 05.3
FINES				pmax	pmax	
	comp=Z,16nm,0.3s					
FINES	FINESS Array B	61.33	333	P	P	12 39 25.8 -0.7
FINES				PcP	PcP	12 40 05.3 -0.5
J13A	Cove Ranch, Pi	61.35	56	⇑P	P	12 39 27.4 +0.5
	baz=61,SNR=16					
H15A	Lima	61.36	54	⇓P	P	12 39 26.9 0.0
	baz=61					
CMB	Columbia Colle	61.39	64	eP	P	12 39 27.4 +0.1
CMB				pmax	pmax	
	comp=Z,17nm,0.8s,mb4.6					
CMB	Columbia Colle	61.39	64	eP	P	12 39 27.4 +0.1
	comp=Z,17nm,0.8s,mb4.6					
G16A	Moss Hill, Enn	61.39	53	⇓P	P	12 39 27.5 +0.4
	baz=61,SNR=33					
K12A	Draper Farm, C	61.46	57	⇓P	P	12 39 28.1 +0.4
	baz=61,SNR=12					
E18A	Harlowton	61.47	51	⇓P	P	12 39 28.3 +0.7
	baz=61,SNR=8.9					
F17A	Fitzpatrick Pl	61.53	52	⇑P	P	12 39 28.5 +0.4
	baz=61,SNR=18					
SAO	San Andreas Ge	61.60	66	eP	P	12 39 28.2 -0.5
SAO				pmax	pmax	
	comp=Z,7.0nm,0.8s,mb4.3					
SAO	San Andreas Ge	61.60	66	eP	P	12 39 28.2 -0.5
	comp=Z,6.8nm,0

baz=62
M12A Wells 62.27 58 ⇑P P 12 39 33.9 +0.9
baz=62,SNR=10
J15A Blackfoot 62.29 55 ⇓P P 12 39 33.9 +0.7
baz=62,SNR=14
NVAR Mina Array Bea 62.34 62 P P 12 39 34.1 +0.5
comp=Z,19nm,0.7s,mb4.8,baz=285,slow=7.0,SNR=88
NVAR PcP PcP 12 40 10.3 -0.1
comp=Z,4.3nm,0.7s,baz=301,slow=4.3,SNR=5.5
NVAR pP pP 12 40 35.9 -1.0
comp=Z,2.9nm,0.8s,baz=285,slow=7.1,SNR=2.3
NVAR PKP2bc 13 08 36.9
comp=Z,0.4nm,0.9s,baz=182,slow=4.3,SNR=3.8
NVAR Mina Array Bea 62.34 62 P P 12 39 34.1 +0.5
NVAR PcP PcP 12 40 10.3 -0.1
NVAR pP pP 12 40 35.9 -1.0
NVAR ⇑e 13 08 36.9
L13A Double Diamond 62.35 57 ⇑P P 12 39 34.4 +0.8
baz=62,SNR=10
BHPL Bhopal 62.41 274 *e*PKP **P 12 39 34.2 -0.1**
BHPL AMb AMB 12 39 36.9
comp=Z,58nm,0.8s,mb5.2
YFT Old Faithful 62.42 53 *e*P **P 12 39 36.1 +2.1**
comp=Z,44nm,0.8s,mb5.1
K14A Jones Ranch, D 62.47 56 ⇑P P 12 39 35.2 +0.9
baz=62,SNR=22
I16A Newdale 62.47 54 ⇓P P 12 39 35.0 +0.7
baz=62
G18A Lazy EL Ranch, 62.50 52 ⇓P P 12 39 34.6 +0.1
baz=62,SNR=7.4
LKWY Lake 62.58 53 *e*P **P 12 39 37.2 +2.2**
LKWY pmax pmax
comp=Z,29nm,0.8s,mb5.0
LKWY Lake 62.58 53 *e*P **P 12 39 37.2 +2.2**
comp=Z,29nm,0.8s,mb5.0
N12A Clover Valley, 62.58 59 ⇓P P 12 39 35.7 +0.6
baz=62,SNR=20
N12A Clover Valley, 62.58 59 *e*P **P 12 39 35.9 +0.8**
comp=Z,18nm,0.6s,mb4.9
N12A *e*pP pP 12 40 38.7 +0.3
H17A Grant Village 62.60 53 ⇓P P 12 39 36.9 +1.7
baz=62,SNR=16
OBN Obninsk 62.64 324 ⇓*i*P **P 12 39 34.3 -0.9**
OBN *i* 12 40 08.3
OBN *e**PP pP 12 40 41.4 +2.8
OBN *i* 12 41 55.3
OBN *e*S **S 12 47 43.0 +3.3**
OBN pmax pmax
comp=Z,54nm,1.1s,mb5.1
OBN Obninsk 62.64 324 *e*P **P 12 39 34.4 -0.9**
comp=Z,14nm,0.4s,mb5.0
O11A Cowboy Ranch, 62.72 59 ⇓P P 12 39 36.5 +0.5
baz=62,SNR=8.4
K15A Arbon 62.72 56 ⇓P P 12 39 36.9 +0.9
baz=62,SNR=36
M13A Montello 62.72 58 ⇓P P 12 39 36.6 +0.5
baz=62
M13A Montello 62.72 58 *e*P **P 12 39 36.7 +0.7**
comp=Z,24nm,1.1s,mb4.7
IMW Indian Meadow 62.75 54 *e*P **P 12 39 37.3 +1.2**
comp=Z,16nm,0.9s,mb4.7
IMW *e*PcP PcP 12 40 12.7 +0.8
IMW *e*pP pP 12 40 41.3 +1.7
L14A Malta 62.78 57 ⇑P P 12 39 37.2 +0.8
baz=62,SNR=25
RLMT Red Lodge 62.78 52 ⇑P P 12 39 37.0 +0.7
baz=62,SNR=17
RLMT Red Lodge 62.78 52 *e*P **P 12 39 37.1 +0.8**
comp=Z,27nm,1.0s,mb4.8
RLMT *e*PcP PcP 12 40 11.8 -0.2
RLMT *e*pP pP 12 40 41.1 +1.3
J16A Bone 62.81 55 ⇓P P 12 39 37.6 +1.0
baz=62,SNR=19
NGP Nagpur 62.82 271 *e*PKP **P 12 39 35.3 -1.6**
DCID1 Drake Creek 62.82 54 P P 12 39 38.1 +1.4
comp=Z,36nm,1.0s,mb5.0
RRI2 Red Ridge 62.92 54 *e*P **P 12 39 38.6 +1.3**
comp=Z,55nm,0.7s,mb5.3
RRI2 *e*pP pP 12 40 42.1 +1.3
I17A Pilgrim Ck. 62.92 53 ⇑P P 12 39 38.9 +1.6
baz=63
DGMT Dagmar 62.97 46 ⇑P P 12 39 37.6 0.0
baz=63,SNR=21
DGMT Dagmar 62.97 46 *e*P **P 12 39 37.8 +0.2**
comp=Z,86nm,0.7s,mb5.5
DGMT *e*PcP PcP 12 40 13.2 +0.4
TPAW Teton Pass 63.02 54 *e*P **P 12 39 39.1 +1.1**
comp=Z,35nm,0.8s,mb5.0
N13A Wendover, West 63.04 58 ⇑P P 12 39 38.6 +0.5
baz=63,SNR=12
N13A Wendover, West 63.04 58 *e*P **P 12 39 38.8 +0.7**
comp=Z,34nm,0.8s,mb5.0
N13A *e*PcP PcP 12 40 14.3 +1.1
P11A Circle Ranch, 63.05 60 ⇓P P 12 39 38.6 +0.3
baz=63,SNR=7.7
M14A Sheep Mountain 63.08 57 ⇑P P 12 39 38.8 +0.4
baz=63,SNR=11
LOHW Long Hollow 63.12 54 *e*P **P 12 39 39.6 +1.0**
comp=Z,22nm,0.9s,mb4.8
LOHW *e*pP pP 12 40 43.6 +1.5
LOHW *e*sP sP 12 41 17.7 +4.6
K16A Soda Springs 63.13 55 ⇓P P 12 39 39.7 +1.1
baz=63,SNR=12
O12A Currie 63.14 59 ⇓P P 12 39 39.2 +0.4
baz=63,SNR=19
SNOW Snow King Moun 63.14 54 *e*P **P 12 39 39.3 +0.6**
comp=Z,13nm,0.6s,mb4.8
SNOW *e*PcP PcP 12 40 14.5 +1.0
SNOW *e*pP pP 12 40 42.5 +0.2
REDW Red Top Meadow 63.16 54 *e*P **P 12 39 40.0 +1.1**
comp=Z,26nm,0.9s,mb4.9
Q10A Clear Creek Ra 63.18 61 ⇓P P 12 39 39.2 +0.1
baz=63,SNR=8.6
HVU Hansel Valley 63.20 56 *e*P **P 12 39 39.6 +0.4**
HVU *e**PP pP 12 40 43.2 +0.5
HVU pmax pmax
comp=Z,16nm,0.8s,mb4.7
HVU Hansel Valley 63.20 56 *e*P **P 12 39 39.6 +0.4**
comp=Z,16nm,0.8s,mb4.7
HVU *e*pP pP 12 40 43.2 +0.6
J17A Brown Place, J 63.23 54 ⇓P P 12 39 40.2 +0.9
baz=63,SNR=10
LAO LASA Array 63.24 49 *e*P **P 12 39 39.4 +0.1**
comp=Z,40nm,0.9s,mb5.0
LAO *e*PcP PcP 12 40 14.2 +0.3
LAO *e*pP pP 12 40 45.1 +2.3
L15A Malad City 63.26 56 ⇓P P 12 39 40.0 +0.4
baz=63,SNR=14
COEN Coen 63.28 189 P P 12 39 39.9 0.0
comp=Z,145nm,1.2s,mb5.5
TIN Tinemaha 63.32 64 ⇑P P 12 39 40.5 +0.5
baz=63
SMMC Simmler 63.45 66 ⇑P P 12 39 40.8 -0.1
baz=63
I18A Diamond G Ranc 63.47 53 ⇓P P 12 39 41.8 +0.9
baz=63,SNR=18
VSU Vasula 63.51 331 *e*P **P 12 39 39.6 -1.3**
VSU pmax pmax
comp=Z,42nm,1.2s,mb4.9
VRHR Novokhopersk 63.51 318 *e*P **P 12 39 39.3 -1.7**
VRHR pmax pmax
comp=N,80nm,1.5s
VRHR pmax pmax
comp=E,70nm,1.5s
VRHR pmax pmax
comp=Z,70nm,1.5s,mb5.1
P12A McGill 63.59 60 ⇓P P 12 39 41.9 +0.2
baz=63,SNR=10
Q11A Duckwater 63.59 61 ⇑P P 12 39 41.8 0.0
baz=63,SNR=5.6
M15A Larsen Ranch, 63.60 57 ⇓P P 12 39 41.9 +0.2
baz=63,SNR=12
R10A Warm Springs 63.60 61 ⇑P P 12 39 42.0 +0.2
baz=63,SNR=6.4
N14A Grayback Hills 63.61 57 ⇓P P 12 39 42.2 +0.4
baz=63,SNR=5.7
BGU Big Grassy Mou 63.65 57 *e*P **P 12 39 42.2 +0.1**
comp=Z,6.5nm,0.7s,mb4.4
S10A Tonopah Range, 63.68 62 ⇑P P 12 39 42.3 0.0
baz=63,SNR=17
J18A Kendall Valley 63.70 54 ⇓P P 12 39 42.9 +0.5
baz=63,SNR=11
L16A Fish Haven 63.77 56 ⇓P P 12 39 43.4 +0.5
baz=64,SNR=8.1
PKM Peak Mountain 63.84 66 ⇑P P 12 39 43.6 +0.2
baz=64
GRAC Grapevine Rang 63.86 63 ⇑P P 12 39 43.8 +0.3
baz=64,SNR=24
KAKA Kakadu 63.86 201 *e*P **P 12 39 41.1 -2.6**
comp=Z,47nm,1.4s,mb4.9
KAKA Kakadu 63.86 201 P **P 12 39 44.5 +0.8**
Q12A Willow Creek R 63.93 60 ⇑P P 12 39 44.3 +0.4
baz=64,SNR=12
N15A Stansbury Isla 63.95 57 ⇓P P 12 39 44.5 +0.4
baz=64,SNR=7.0
R11A Troy Canyon, C 63.97 61 ⇑P P 12 39 44.2 0.0
baz=64,SNR=24
HWUT Hardware Ranch 63.98 56 *e*P **P 12 39 44.9 +0.6**
comp=Z,26nm,0.6s,mb5.0
L17A Cokeville 64.02 55 ⇑P P 12 39 44.9 +0.5
baz=64,SNR=29
JASL Jaisalmer 64.09 282 *e*PKP **P 12 39 45.6 +0.5**
K18A Toltan Ranch, 64.09 54 ⇓P P 12 39 45.6 +0.6
baz=64,SNR=31
P13A Bates Ranch, G 64.10 59 ⇑P P 12 39 45.2 +0.1
baz=64,SNR=15
ISA Isabella 64.12 65 ⇑P P 12 39 44.2 -1.0
baz=64,SNR=13
ISA Isabella 64.12 65 *e*P **P 12 39 44.1 -1.1**
ISA pmax pmax
comp=Z,11nm,0.8s,mb4.5
ISA Isabella 64.12 65 *e*P **P 12 39 44.1 -1.1**
comp=Z,11nm,0.8s,mb4.5
BW06 Boulder Array 64.26 54 ⇓P P 12 39 46.1 +0.1
baz=64,SNR=56
PDAR Pinedale Array 64.26 54 P P 12 39 46.3 +0.3
comp=Z,33nm,0.6s,mb5.1,baz=289,slow=1.4,SNR=215
PDAR pP pP 12 40 49.2 -0.5
comp=Z,6.9nm,0.8s,baz=336,slow=3.3,SNR=5.3
PDAR PKP2bc 13 08 32.4
comp=Z,1.4nm,1.1s,baz=102,slow=3.6,SNR=6.8
PDAR Pinedale Array 64.26 54 P P 12 39 46.3 +0.3
PDAR pP pP 12 40 49.2 -0.5
PDAR ⇑e 13 08 32.4
DUG Dugway 64.27 58 ⇑P P 12 39 46.6 +0.5
baz=64,SNR=25
DUG Dugway 64.27 58 *e*P **P 12 39 46.8 +0.7**
DUG pmax pmax
comp=Z,31nm,0.7s,mb5.0
DUG Dugway 64.27 58 *e*P **P 12 39 46.8 +0.6**
comp=Z,31nm,0.7s,mb5.0
NOQ North Oquirrh 64.34 57 *e*P **P 12 39 47.2 +0.7**
comp=Z,23nm,0.5s,mb5.1
S11A Rachel 64.36 62 ⇓P P 12 39 47.0 +0.2
baz=64,SNR=8.4
ABKT Ailbek 64.37 299 P P 12 39 48.9 +2.1
comp=Z,171nm,0.5s,mb5.9,SNR=5.4
O15A The Old Anders 64.40 58 ⇑P P 12 39 47.5 +0.5
baz=64,SNR=8.1
MPMC Manual Prospec 64.43 64 ⇓P P 12 39 47.4 +0.1
baz=64,SNR=23
Q13A Wheeler Ranch, 64.44 59 ⇓P P 12 39 47.6 +0.3
baz=64,SNR=34
AKL Akola 64.47 273 *e*PKP **P 12 39 47.6 -0.2**
VSR Storozhevoye 64.48 320 *e*P **P 12 39 46.8 -0.5**
VSR pmax pmax
comp=N,40nm,1.4s
VSR pmax pmax
comp=E,40nm,1.4s
VSR pmax pmax
comp=Z,80nm,1.4s,mb5.2
CTU Camp Tracy 64.51 57 *e*P **P 12 39 48.2 +0.5**
comp=Z,19nm,0.8s,mb4.8
CTU *e*PcP PcP 12 40 19.9 +0.7
FURC Furnace Creek, 64.52 63 ⇑P P 12 39 48.0 +0.2
baz=64,SNR=32
P14A Drum Mountains 64.54 58 ⇓P P 12 39 48.2 +0.3
baz=64,SNR=19
R12A Pony Springs, 64.54 60 ⇓P P 12 39 48.1 +0.1
baz=64
N16A Rees Ranch, Co 64.55 56 ⇓P P 12 39 48.4 +0.5
baz=64,SNR=7.8
M17A Scullys Gap (B 64.56 56 ⇑P P 12 39 48.1 +0.1
baz=64,SNR=12
L18A Fontenelle, Gr 64.59 55 ⇓P P 12 39 48.4 +0.2
baz=64,SNR=6.1
K19A Absolon Red Bu 64.59 53 ⇓P P 12 39 47.6 -0.5
baz=64,SNR=11
VORD Divnogorie 64.61 320 *e*P **P 12 39 47.6 -0.5**
VORD pmax pmax
comp=Z,20nm,0.8s,mb4.8
VORD pmax pmax
comp=N,50nm,1.5s
VORD pmax pmax
comp=E,30nm,1.5s
JLU Jordanelle 64.74 57 *e*P **P 12 39 48.9 -0.2**
comp=E,12nm,0.8s,mb4.6
JLU *e*PcP PcP 12 40 20.6 +0.5
JLU *e*pP pP 12 40 52.3 -0.6
L19A Farson 64.83 54 ⇓P P 12 39 49.7 0.0
baz=64,SNR=9.8
N17A Moffit Pass 64.84 56 ⇑P P 12 39 50.1 +0.3
baz=64,SNR=16
Q14A Sevier Lake (B 64.84 59 ⇑P P 12 39 50.3 +0.4
baz=65,SNR=35
NLU North Lily Min 64.84 58 *e*P **P 12 39 50.0 +0.1**
comp=E,30nm,0.8s,mb5.0
U10A Ash Meadows, A 64.86 63 ⇑P P 12 39 50.2 +0.2
baz=65,SNR=7.1
S12A Delamar Landin 64.90 61 ⇑P P 12 39 50.7 +0.5
baz=65,SNR=27
M18A Lyman 64.92 55 ⇓P P 12 39 50.3 +0.1
baz=65,SNR=9.3
T11A Corn Creek, Al 64.94 62 ⇑P P 12 39 50.6 +0.1
baz=65,SNR=30
EDW2 Edwards Air Fo 64.94 65 ⇓P P 12 39 50.4 -0.1
baz=65,SNR=22
DAU Daniels Canyon 64.98 57 *e*P **P 12 39 51.7 +1.0**
DAU pmax pmax
comp=Z,18nm,0.6s,mb4.9
DAU Daniels Canyon 64.98 57 *e*P **P 12 39 51.6 +1.0**
comp=Z,18nm,0.6s,mb4.9
O16A Springville 64.98 57 ⇑P P 12 39 51.0 +0.2
baz=65,SNR=15
P15A Leamington 65.00 58 ⇑P P 12 39 51.2 +0.4
baz=65,SNR=17
R13A O'Grain Ranch, 65.01 60 ⇓P P 12 39 51.1 +0.2
baz=65,SNR=5.7
MPU Maple Canyon 65.05 57 *e*P **P 12 39 51.6 +0.5**
comp=Z,38nm,0.7s,mb5.1
MPU *e*pP pP 12 40 54.9 -0.1
SHOC Shoshone 65.25 63 ⇑P P 12 39 52.3 -0.2
baz=65
Q15A Fillmore 65.34 58 ⇓P P 12 39 53.2 +0.2
baz=65,SNR=15
M19A Rock Springs 65.35 55 ⇓P P 12 39 52.6 -0.4
baz=65
GSC Goldstone 65.35 64 ⇑P P 12 39 52.9 -0.3
baz=65,SNR=13
GSC Goldstone 65.35 64 *e*P **P 12 39 53.1 -0.1**
GSC *e* 12 40 23.2
GSC pmax pmax
comp=Z,15nm,0.8s,mb4.7
GSC Goldstone 65.35 64 *e*P **P 12 39 53.1 -0.1**
comp=Z,15nm,0.8s,mb4.7
GSC *e*PcP PcP 12 40 23.2 +0.4
MNSI Mandailing Nat 65.40 240 P P 12 39 53.0 -0.7
O17A Robinson Place 65.41 57 ⇓P P 12 39 53.7 +0.2
baz=65,SNR=7.7
L20A Wamsutter 65.43 54 ⇓P P 12 39 53.6 0.0
baz=65,SNR=12
ULM Lac du Bonnet 65.44 41 P P 12 39 52.2 -1.2
comp=Z,21nm,0.7s,mb4.9,baz=318,slow=7.2,SNR=18
ULM PcP PcP 12 40 22.4 -0.4
comp=Z,5.4nm,0.6s,baz=294,slow=3.5,SNR=3.1
ULM Lac du Bonnet 65.44 41 *e*P **P 12 39 52.7 -0.8**
comp=Z,14nm,0.7s,mb4.7
ULM *e*PcP PcP 12 40 22.5 -0.4
S13A Holt Ranch, En 65.49 60 ⇑P P 12 39 54.2 +0.3
baz=65,SNR=14
NB2 NORSAR Subarra 65.53 340 P P 12 39 53.5 -0.4
comp=Z,126nm,2.0s,mb5.3,baz=24,slow=6.5
NB2 NORSAR Subarra 65.53 340 P P 12 39 53.5 -0.4
baz=24,slow=6.5
NB2 NORSAR Subarra 65.53 340 P P 12 39 53.5 -0.4
NB2 NORSAR Subarra 65.53 340 P P 12 39 53.5 -0.4
NOA NORSAR Array B 65.53 340 P P 12 39 53.3 -0.6
comp=Z,12nm,0.9s,mb4.6,baz=26,slow=6.3,SNR=52
NOA PcP PcP 12 40 22.3 -0.7
comp=Z,5.9nm,0.9s,baz=28,slow=3.2,SNR=5.1
NOA pP pP 12 40 58.5 +0.6
comp=Z,7.0nm,1.0s,baz=27,slow=6.5,SNR=4.2
NOA NORSAR Array B 65.53 340 P P 12 39 53.3 -0.6
NOA 12 40 22.3
NOA *PP pP 12 40 58.5 +0.7
NOA pmax pmax
comp=Z,12nm,0.9s
ARUT Antelope Range 65.58 60 *e*P **P 12 39 55.0 +0.4**
ARUT pmax pmax
comp=Z,12nm,0.8s,mb4.7
ARUT Antelope Range 65.58 60 *e*P **P 12 39 55.0 +0.4**
comp=Z,12nm,0.8s,mb4.7
BFSC Mount Baldy Ra 65.58 65 ⇓P P 12 39 54.1 -0.6
baz=65,SNR=8.8
S14A Cedar City 65.75 60 ⇓P P 12 39 55.8 +0.1
baz=66,SNR=6.8
O18A Roosevelt 65.76 56 ⇑P P 12 39 56.4 +0.7
baz=66,SNR=21
N19A John Jarvie Ra 65.77 55 ⇑P P 12 39 55.6 -0.1
baz=66
TMUT Trail Mountain 65.78 58 *e*P **P 12 39 56.4 +0.6**
comp=Z,38nm,0.7s,mb5.2
NAO01 NORSAR Array S 65.78 340 *e*P **P 12 39 54.8 -0.7**
comp=Z,2.3nm,0.3s,mb4.4
NAO01 *e*PcP PcP 12 40 23.7 -0.4
MSU Marysvale 65.79 59 *e*P **P 12 39 56.7 +0.8**
MSU *e* 12 40 25.7
MSU pmax pmax
comp=Z,13nm,0.7s,mb4.8
MSU Marysvale 65.79 59 *e*P **P 12 39 56.7 +0.8**
comp=Z,13nm,0.7s,mb4.8
MSU *e*PcP PcP 12 40 25.7 +1.2
V11A Goodsprings 65.79 63 ⇑P P 12 39 55.8 -0.2
baz=66,SNR=6.9
CCUT Cedar City 65.79 60 *e*P **P 12 39 56.1 +0.2**
comp=Z,10nm,0.7s,mb4.7
CCUT *e*pP pP 12 40 59.0 -0.9
SDSI Sungai Dareh 65.79 237 P P 12 39 56.9 +0.7
comp=Z,27nm,1.5s,mb4.7
T13A Saint George 65.85 61 ⇓P P 12 39 56.8 +0.5
baz=66,SNR=8.8
IZAR Zarasai 65.85 330 *e*P **P 12 39 55.9 -0.1**
IZAR AMB AMB 12 39 56.5
comp=Z,8.7nm,0.8s,mb4.5
M20A Sweetwater, Wa 65.88 54 ⇑P P 12 39 56.7 +0.3
baz=66,SNR=12
U12A Valley of Fire 65.89 62 ⇓P P 12 39 56.8 +0.2
baz=66,SNR=5.0
P17A Butcher Ranch, 65.92 57 ⇑P P 12 39 57.0 +0.3
baz=66,SNR=17
R15A Junction 65.94 59 ⇑P P 12 39 57.6 +0.7
baz=66
HEC Hector,Ludlow 65.96 64 ⇓P P 12 39 56.8 -0.3
baz=66,SNR=24
L21A Rawlins 65.97 53 ⇓P P 12 39 56.8 -0.2
baz=66,SNR=13
BBRC Big Bear Solar 66.00 65 ⇓P P 12 39 57.2 -0.2
baz=66,SNR=7.4
ISAL Salakas 66.04 329 *e*P **P 12 39 57.2 0.0**
ISAL AMB AMB 12 39 57.9
comp=Z,14nm,1.2s,mb4.6
IDID Didziasalis 66.04 329 *e*P **P 12 39 57.1 -0.1**
IDID AMB AMB 12 39 57.9
comp=Z,8.7nm,0.7s,mb4.6
Q16A Castle Valley 66.07 58 ⇓P P 12 39 58.1 +0.4
baz=66,SNR=7.4
P18A Preston Nutter 66.08 57 ⇑P P 12 39 58.2 +0.5
baz=66,SNR=32
RSSD Black Hills 66.14 50 *e*P **P 12 39 58.0 0.0**
RSSD pmax pmax
comp=Z,31nm,0.8s,mb5.1
RSSD Black Hills 66.14 50 *e*P **P 12 39 58.0 0.0**
comp=Z,31nm,0.8s,mb5.1
IIGN Ignalina 66.18 329 *e*P **P 12 39 58.1 0.0**
IIGN AMB AMB 12 39 58.9
comp=Z,15nm,1.2s,mb4.6
V12A Nelson 66.20 63 ⇑P P 12 39 58.6 0.0
baz=66,SNR=6.0
O19A Miners Draw (B 66.22 56 ⇓P P 12 39 58.4 -0.1
baz=66,SNR=26
M21A Separation Pea 66.23 53 ⇑P P 12 39 58.4 -0.2
baz=66,SNR=9.5
U13A Pakoon Wash 66.24 61 ⇓P P 12 39 59.2 +0.5
baz=66,SNR=28
RWWY Rawlins 66.25 53 *e*P **P 12 39 58.9 +0.1**
comp=Z,18nm,1.0s,mb4.8
RWWY *e*pP pP 12 41 01.4 -1.4
BORG Borgarnes 66.26 357 P P 12 39 58.5 0.0
comp=Z,14nm,0.8s,mb4.8,baz=18,slow=4.3,SNR=6.7
BORG PcP PcP 12 40 26.7 +0.7
comp=Z,14nm,0.8s,baz=318,slow=0.4,SNR=5.0
BORG Borgarnes 66.26 357 P P 12 39 58.5 +0.1
BORG 12 40 26.7
BORG pmax pmax
comp=Z,14nm,0.8s
S15A Panguitch 66.27 59 ⇑P P 12 39 59.8 +0.8
baz=66,SNR=9.6
SRU San Rafael 66.29 57 ⇑P P 12 39 59.1 +0.1
baz=66,SNR=71
SRU San Rafael 66.29 57 *e*P **P 12 39 59.4 +0.3**
SRU pmax pmax
comp=Z,21nm,0.7s,mb5.0
SRU San Rafael 66.29 57 *e*P **P 12 39 59.4 +0.3**
comp=Z,22nm,0.7s,mb5.0
T14A Hurricane 66.29 60 ⇑P P 12 39 59.4 +0.3
baz=66,SNR=14
N20A Spence Gulch, 66.30 55 ⇓P P 12 39 59.8 +0.7
baz=66
R16A Teasdale 66.34 58 ⇑P P 12 40 00.1 +0.7
baz=66,SNR=38
GMRC Granite Mounta 66.39 64 ⇑P P 12 39 59.5 -0.3
baz=66,SNR=12
L22A Ellis Ranch, M 66.42 53 ⇑P P 12 40 00.1 +0.3
baz=66,SNR=17
LDFC Landfair 66.51 63 *e*P **P 12 40 00.2 -0.3**
comp=Z,30nm,0.8s,mb5.1
Q18A Rafter H Ranch 66.51 57 ⇓P P 12 40 00.2 -0.2
baz=66,SNR=21
S16A Weppner Ranch, 66.67 59 ⇑P P 12 40 02.0 +0.5
baz=66,SNR=51
R17A Hanksville Air 66.67 58 ⇑P P 12 40 01.4 -0.1
baz=66,SNR=68
U14A Mt Trumbull 66.69 61 ⇑P P 12 40 01.9 +0.3
baz=66,SNR=19
BELC Belle Mtn. Jos 66.73 65 ⇑P P 12 40 01.3 -0.7
baz=66,SNR=8.5
N21A Black Mountain 66.75 54 ⇓P P 12 40 02.0 0.0
baz=66,SNR=6.6
P19A Cripple Cowboy 66.77 56 ⇑P P 12 40 01.8 -0.3
baz=66,SNR=29
O20A White River Ci 66.81 55 ⇑P P 12 40 02.2 -0.1
baz=66,SNR=14
AGMN Agassiz Nation 66.91 42 *e*P **P 12 40 02.0 -0.8**
comp=Z,74nm,1.5s,mb5.2
Q19A Hogan Spring (67.09 57 ⇓P P 12 40 03.8 -0.3
baz=67,SNR=74
IRM Iron Mountain 67.12 64 ⇓P P 12 40 04.1 -0.2
baz=67,SNR=15
R18A Canyonlands Na 67.15 57 ⇓P P 12 40 04.0 -0.4
baz=67,SNR=37
O21A Pagoda 67.17 55 ⇑P P 12 40 04.5 -0.1
baz=67,SNR=8.4
S17A Black Ridge (B 67.18 59 ⇓P P 12 40 04.8 +0.2
baz=67,SNR=115
KLSI 67.19 232 P P 12 40 04.0 -1.0
comp=Z,71nm,1.9s,mb5.1
U15A North Rim 67.19 60 ⇓P P 12 40 05.1 +0.4
baz=67,SNR=26
W13A Hualapai Mount 67.21 62 ⇓P P 12 40 04.8 0.0
baz=67,SNR=5.0
T16A Glen Canyon Da 67.24 60 ⇓P P 12 40 04.5 -0.5
baz=67,SNR=5.4
V14A Boquillas Ranc 67.28 62 ⇑P P 12 40 05.7 +0.4
baz=67,SNR=33
N22A Wattenberg Ran 67.28 54 ⇑P P 12 40 05.7 +0.4
baz=67,SNR=16
BC3 Big Chuckawall 67.30 65 ⇑P P 12 40 04.7 -0.8
baz=67
PHWY Pilot Hill 67.45 53 *e*P **P 12 40 05.9 -0.4**
comp=Z,2.3nm,0.6s,mb4.1
PHWY *e*PcP PcP 12 40 31.6 +0.1
R19A Curley Farm, L 67.57 57 ⇑P P 12 40 07.0 -0.1
baz=67,SNR=26
S18A Hurst Farm, Bl 67.59 58 ⇓P P 12 40 07.1 -0.1
baz=67,SNR=52
W14A Seligman 67.59 62 ⇓P P 12 40 07.6 +0.3
baz=67,SNR=40
X13A Yucca 67.59 63 ⇓P P 12 40 07.1 -0.2
baz=67,SNR=14
SWSC Sam W. Stewart 67.60 65 ⇓P P 12 40 06.3 -1.1
baz=67

PDMCI **Parker Dam,Lak** 67.62 63 ⇑P P 12 40 07.0 -0.4
baz=67
Q20A **Ridgley Place,** 67.62 56 ⇑P P 12 40 06.9 -0.6
baz=67,SNR=12
T17A **Navajo Res., N** 67.63 59 ⇓P P 12 40 06.9 -0.6
baz=67,SNR=14
V15A **Kaibab Nationa** 67.69 61 ⇑P P 12 40 08.2 +0.3
baz=67,SNR=16
PV04 **Paradox Valley** 67.69 57 *e*P P 12 40 08.2 +0.3
PV04 *ep*P pP 12 41 11.3 -1.0
O22A **Kremmling** 67.70 54 ⇓P P 12 40 08.0 +0.1
baz=67,SNR=12
U17A **Shonto** 67.99 59 ⇑P P 12 40 10.0 +0.3
baz=68,SNR=23
S19A **Harvey Farm, M** 68.03 57 ⇓P P 12 40 09.8 -0.1
baz=68,SNR=66
T18A **Mexican Hat** 68.05 58 ⇑P P 12 40 09.7 -0.4
baz=68,SNR=35
PV01 **Paradox Valley** 68.06 57 *e*P P 12 40 10.3 +0.1
comp=Z,1µm,0.6s
PV01 *ep*P pP 12 41 16.1 +1.5
PV01 *es*P sP 12 41 45.0 -0.4
W15A **Williams** 68.09 61 ⇓P P 12 40 11.1 +0.7
baz=68,SNR=5.9
GLA **Glamis** 68.10 65 ⇓P P 12 40 10.1 -0.3
baz=68,SNR=5.2
GLA **Glamis** 68.10 65 *e*P P 12 40 10.3 -0.1
GLA pmax pmax
comp=Z,6.0nm,0.5s,mb4.6
GLA **Glamis** 68.10 65 *e*P P 12 40 10.3 -0.2
comp=Z,6.5nm,0.5s,mb4.6
Q21A **Lamborn Mesa,** 68.10 56 ⇓P P 12 40 10.5 +0.2
baz=68,SNR=8.7
R20A **Redvale** 68.12 57 ⇓P P 12 40 10.5 0.0
baz=68,SNR=8.4
Y13A **Salome** 68.14 63 ⇓P P 12 40 10.7 -0.1
baz=68,SNR=7.0
SMCO **Snowmass** 68.18 55 *e*P P 12 40 11.3 +0.5
comp=Z,21nm,0.6s,mb5.0
SMCO *ep*P pP 12 41 15.4 +0.1
X14A **Yava** 68.23 62 ⇑P P 12 40 11.4 +0.1
baz=68,SNR=12
KIV **Kislovodsk** 68.27 313 P P 12 40 12.3 +1.0
comp=Z,508nm,1.1s,mb6.2,SNR=12
KIV **Kislovodsk** 68.27 313 *e*P P 12 40 11.0 -0.3
KIV *e* 12 40 36.2
KIV *e**PP pP 12 41 15.4 -0.4
KIV *e*S S 12 48 51.4 +3.3
KIV pmax pmax
comp=Z,25nm,2.4s,mb4.5
KIV pmax pmax
comp=Z,105nm,1.1s,mb5.5
KIV MLR MLR
comp=Z,47nm,19.0s
KIV **Kislovodsk** 68.27 313 *e*P P 12 40 12.8 +1.5
comp=Z,137nm,1.2s,mb5.6
KIV **Kislovodsk** 68.27 313 P P 12 40 13.0 +1.7
SNR=35
SUW **Suwalki** 68.29 330 *e*P P 12 40 10.7 -0.5
SUW *e*PcP PcP 12 40 33.9 -0.8
SUW **Suwalki** 68.29 330 *e*P P 12 40 10.7 -0.6
SUW *e*PcP PcP 12 40 33.9 -0.8
WUAZ **Wupatki** 68.36 61 ⇓P P 12 40 12.4 +0.3
baz=68,SNR=12
WUAZ **Wupatki** 68.36 61 *e*P P 12 40 12.5 +0.5
comp=Z,30nm,1.2s,mb4.9
WUAZ *e*PcP PcP 12 40 35.9 +0.5
S20A **Disappointment** 68.39 57 ⇓P P 12 40 12.3 +0.1
baz=68,SNR=14
Q22A **Crested Butte,** 68.44 55 ⇑P P 12 40 12.9 +0.5
baz=68,SNR=8.8
R21A **Cimarron** 68.45 56 ⇓P P 12 40 13.0 +0.4
baz=68,SNR=23
ISCO **Idaho Springs** 68.45 54 *e*P P 12 40 13.1 +0.6
ISCO pmax pmax
comp=Z,18nm,1.0s,mb4.8
ISCO **Idaho Springs** 68.45 54 *e*P P 12 40 13.1 +0.6
comp=Z,18nm,1.0s,mb4.8
Y14A **Wickenburg** 68.54 63 ⇑P P 12 40 12.9 -0.2
baz=68,SNR=11
ZEI **Tsey** 68.55 311 *e*P P 12 40 13.2 +0.1
ZEI pmax pmax
comp=Z,81nm,1.3s,mb5.3
U18A **Rough Rock, Ch** 68.56 59 ⇑P P 12 40 13.4 +0.1
baz=68,SNR=13
W16A **Flagstaff** 68.57 61 ⇓P P 12 40 13.8 +0.5
baz=68,SNR=11
X15A **Humboldt** 68.59 62 ⇓P P 12 40 13.9 +0.4
baz=68,SNR=19
V17A **Tonalea, Kykot** 68.61 60 ⇑P P 12 40 14.4 +0.8
baz=68,SNR=81
Z13A **Yuma Proving G** 68.68 64 ⇑P P 12 40 14.0 0.0
baz=68,SNR=12
T19A **Beclabito** 68.74 58 ⇑P P 12 40 14.5 +0.1
baz=68,SNR=22
MVCO **Mesa Verde** 68.76 57 ⇓P P 12 40 14.6 +0.2
baz=68,SNR=29
MVCO **Mesa Verde** 68.76 57 *e*P P 12 40 14.7 +0.2
comp=Z,36nm,0.7s,mb5.2
KAD **Karad** 68.76 272 *e*PKP P 12 40 14.8 +0.1
KAD AMb AMB 12 40 29.7
comp=Z,54nm,1.3s,mb5.1
DGRG **David-gareji** 68.79 309 P P 12 40 15.0 +0.5
S21A **Coal Bank Pass** 68.83 57 ⇑P P 12 40 15.4 +0.6
baz=68,SNR=31
AKASG **Malin Array Be** 68.87 325 P P 12 40 13.8 -1.1
comp=Z,5.1nm,0.3s,mb4.7,baz=34,slow=6.3,SNR=35
AKASG **Malin Array Be** 68.87 325 P P 12 40 13.8 -1.1
AKASG pmax pmax
comp=Z,5.0nm,0.3s
AKBB **Malin Array Si** 68.87 325 *e*P P 12 40 14.1 -0.8
AKBB *e* 12 40 36.6
KIEV **Kiev** 68.88 325 *e*P P 12 40 13.6 -1.4
KIEV pmax pmax
comp=Z,21nm,1.0s,mb4.8
KIEV **Kiev** 68.88 325 *e*P P 12 40 13.6 -1.3
comp=Z,21nm,1.0s,mb4.8
MTA **Mtatsminda** 68.90 310 P P 12 40 16.9 +1.6
TBLG **Delisi** 68.90 310 *e*P P 12 40 16.7 +1.4
TBLG **Delisi** 68.90 310 P P 12 40 16.7 +1.5
ONI **Oni** 68.91 311 P P 12 40 16.0 +0.7
Y15A **Casa Rosa Ranc** 68.92 62 ⇓P P 12 40 15.8 +0.3
baz=69,SNR=11
R22A **Saguache, Gunn** 68.98 56 ⇑P P 12 40 16.7 +0.9
baz=69,SNR=12
U19A **Dine' College,** 69.03 59 ⇓P P 12 40 16.5 +0.4
baz=69,SNR=31
P24A **Kohler Place,** 69.03 54 ⇑P P 12 40 16.8 +0.7
baz=69
W17A **Winslow** 69.05 60 ⇑P P 12 40 16.5 +0.2
baz=69,SNR=5.3
EYMN **Ely** 69.06 40 *e*P P 12 40 15.5 -0.6
comp=Z,51nm,0.8s,mb5.3
X16A **Lo Mia Camp, P** 69.10 61 ⇓P P 12 40 17.1 +0.5
baz=69,SNR=32
CTA **Charters Tower** 69.11 185 *e*P P 12 40 16.1 -0.5
comp=Z,7.7nm,1.0s,mb4.4
S22A **4UR Ranch, Cre** 69.29 56 ⇑P P 12 40 18.4 +0.7
baz=69,SNR=25
Q24A **Divide** 69.31 54 ⇓P P 12 40 18.0 +0.2
baz=69,SNR=9.8
U20A **Newcomb** 69.35 58 ⇑P P 12 40 18.1 0.0
baz=69,SNR=6.9
P25A **Willow Gulch B** 69.42 53 ⇑P P 12 40 18.8 +0.3
baz=69,SNR=8.9
T21A **Navajo Lake** 69.45 57 ⇓P P 12 40 19.0 +0.3
baz=69
114A **Black Gap (USA** 69.46 64 ⇓P P 12 40 19.0 +0.2
baz=69,SNR=8.2
Y16A **Circle Bar Ran** 69.47 62 ⇑P P 12 40 19.2 +0.3
baz=69,SNR=6.7
OGNE **Ogallala** 69.47 51 *e*P P 12 40 18.6 -0.1
comp=Z,104nm,0.6s,mb5.7
X17A **Forest Lakes** 69.53 61 ⇑P P 12 40 19.9 +0.7
baz=69,SNR=7.9
V19A **Window Rock** 69.53 59 ⇑P P 12 40 19.7 +0.5
baz=69,SNR=5.0
S23A **Nye Farm, Mont** 69.77 56 ⇑P P 12 40 21.4 +0.8
baz=70,SNR=6.2
W19A **Sanders** 69.78 60 ⇑P P 12 40 21.3 +0.6
baz=70
T22A **Edith** 69.78 57 ⇑P P 12 40 21.4 +0.7
baz=70,SNR=33
U21A **Nageezi** 69.79 58 ⇑P P 12 40 21.0 +0.2
baz=70,SNR=12
V20A **Brimhall** 69.80 58 ⇓P P 12 40 20.8 0.0
baz=70,SNR=9.1

Q25A **Bedland, Calha** 69.82 54 ⇑P P 12 40 20.8 -0.1
baz=70,SNR=9.0
R24A **Sanders Place,** 69.87 55 ⇓P P 12 40 21.7 +0.5
baz=70,SNR=19
X18A **Snowflake** 69.88 60 ⇓P P 12 40 21.7 +0.4
baz=70,SNR=15
Z16A **Peralta Trail,** 69.88 62 ⇑P P 12 40 21.4 0.0
baz=70
SOC **Sochi** 69.97 314 *e*P P 12 40 21.8 +0.1
SOC *e**PP pP 12 41 22.2 -4.3
SOC *e* 12 43 01.1
SOC *e*PPP 12 44 47.3
SOC *e*S S 12 49 11.5 +3.6
SOC *e* 12 49 51.9
SOC *e*SS SS 12 53 38.5 -3.8
SOC pmax pmax
comp=Z,90nm,1.4s,mb5.3
Y17A **Roosevelt** 69.97 62 ⇓P P 12 40 21.9 0.0
baz=70,SNR=12
SDCO **Great Sand Dun** 70.01 55 *e*P P 12 40 22.4 +0.3
comp=Z,16nm,1.1s,mb4.7
ECSD **EROS Data Cent** 70.03 46 *e*P P 12 40 21.5 -0.6
comp=Z,78nm,0.7s,mb5.5
214A **Organ Pipe Nat** 70.07 64 ⇑P P 12 40 22.4 -0.2
baz=70
GNI **Garni** 70.07 309 *e*P P 12 40 23.9 +1.5
GNI **Garni** 70.07 309 P P 12 40 23.3 +0.9
comp=Z,17nm,0.6s,mb5.0,baz=2.8,slow=4.1,SNR=26
GNI **Garni** 70.07 309 *d i*P P 12 40 23.8 +1.4
GNI pmax pmax
comp=Z,99nm,1.6s
GNI **Garni** 70.07 309 *e*P P 12 40 24.5 +2.1
comp=Z,151nm,1.4s,mb5.5
GNI **Garni** 70.07 309 P P 12 40 24.8 +2.4
SNR=28
ANN **Anapa** 70.09 316 *e*P P 12 40 21.7 -0.7
ANN pmax pmax
comp=Z,99nm,2.0s,mb5.2
T23A **Casias Ranch,** 70.24 56 ⇑P P 12 40 23.9 +0.4
baz=70,SNR=6.1
S24A **Houchin Ranch,** 70.24 55 ⇓P P 12 40 23.9 +0.4
baz=70,SNR=11
W20A **Ramah** 70.27 59 ⇓P P 12 40 23.8 +0.1
baz=70,SNR=26
U22A **Llaves** 70.27 57 ⇑P P 12 40 23.9 +0.2
baz=70,SNR=15
116A **Eloy** 70.28 63 ⇓P P 12 40 23.7 -0.1
baz=70
X19A **St. Johns** 70.33 60 ⇓P P 12 40 24.5 +0.4
baz=70,SNR=28
Y18A **Canyon Day Jun** 70.37 61 ⇓P P 12 40 24.6 +0.3
baz=70,SNR=19
WRAB **Tennant Creek** 70.46 197 P P 12 40 24.0 -0.8
comp=Z,220nm,1.0s,mb5.8,SNR=14
WRAB **Tennant Creek** 70.46 197 *e*P P 12 40 23.9 -0.9
WRAB *e* 12 40 43.9
WRAB pmax pmax
comp=Z,53nm,1.1s,mb5.2
WRAB **Tennant Creek** 70.46 197 *e*P P 12 40 23.9 -0.9
comp=Z,53nm,1.1s,mb5.2
WRAB *e*PcP PcP 12 40 43.9 -0.3
WRAB **Tennant Creek** 70.46 197 P P 12 40 24.3 -0.5
comp=Z,50nm,1.2s,mb5.1
Z17A **San Carlos Hig** 70.47 62 ⇑P P 12 40 25.1 +0.2
baz=70
WRA **Warramunga Arr** 70.47 197 P P 12 40 24.1 -0.8
comp=Z,30nm,1.0s,mb5.0,baz=12,slow=5.3,SNR=101
WRA PcP PcP 12 40 43.8 -0.5
comp=Z,12nm,0.8s,baz=11,slow=4.9,SNR=11
WRA pP pP 12 41 27.2 -2.7
comp=Z,16nm,0.9s,baz=17,slow=6.9,SNR=4.5
WRA PKiKP PKiKP 12 46 31.1 -1.4
comp=Z,0.3nm,0.6s,baz=336,slow=1.6,SNR=6.1
WRA PKP2bc 13 08 17.9
comp=Z,1.5nm,0.9s,baz=197,slow=2.6,SNR=5.6
WRA **Warramunga Arr** 70.47 197 P P 12 40 24.1 -0.8
WRA 12 40 43.8
WRA *PP pP 12 41 27.2 -2.7
WRA pmax pmax
comp=Z,30nm,1.0s
WRA **Warramunga Arr** 70.47 197 P P 12 40 24.1 -0.8
WRA PcP PcP 12 40 43.8 -0.5
WRA pP pP 12 41 27.2 -2.7
V22A **San Miguel Ran** 70.58 57 ⇑P P 12 40 25.5 0.0
baz=70,SNR=11
S25A **Robets Cordova** 70.64 55 ⇑P P 12 40 25.8 -0.1
baz=70,SNR=22
BCA **Borcka** 70.67 311 *e*P P 12 40 26.1 +0.1
U23A **El Rito** 70.67 57 ⇓P P 12 40 26.6 +0.5
baz=70,SNR=32
Y19A **Nutrioso** 70.69 60 ⇑P P 12 40 27.0 +0.8
baz=70,SNR=6.6
X20A **Quemado** 70.69 59 ⇓P P 12 40 27.0 +0.8
baz=70,SNR=31
FITZ **Fitzroy Crossi** 70.79 206 *e*P P 12 40 26.7 -0.1
comp=Z,38nm,1.0s,mb5.0
FITZ *e* pP 12 41 33.8 +1.9
FITZ **Fitzroy Crossi** 70.79 206 P P 12 40 26.8 0.0
comp=Z,70nm,1.6s,mb5.0
DAGI **Agillar** 70.80 311 *i*P P 12 40 28.5 +1.8
216A **Three Points,** 70.83 63 ⇓P P 12 40 26.9 -0.2
baz=71,SNR=9.8
117A **Oracle** 70.84 62 ⇑P P 12 40 27.2 +0.1
baz=71,SNR=7.2
TUC **Tucson** 71.00 63 *e*P P 12 40 28.2 +0.1
TUC pmax pmax
comp=Z,9.0nm,1.2s,mb4.3
TUC **Tucson** 71.00 63 *e*P P 12 40 28.2 +0.1
comp=Z,9.1nm,1.2s,mb4.3
DDEM **Demirkent** 71.02 311 *i*P P 12 40 28.8 +0.7
T25A **Trinidad** 71.04 55 ⇓P P 12 40 28.3 0.0
baz=71,SNR=19
V23A **Ortiz Mt. (NFS** 71.11 57 ⇓P P 12 40 29.7 +1.0
baz=71,SNR=16
X21A **Alamocita Cree** 71.17 59 ⇑P P 12 40 29.7 +0.6
baz=71,SNR=38
Z19A **T-Link Ranch,** 71.17 61 ⇑P P 12 40 29.4 +0.3
baz=71
Y20A **Horse Springs,** 71.22 60 ⇓P P 12 40 30.2 +0.7
baz=71,SNR=20
118A **Homack Ranch,** 71.23 62 ⇑P P 12 40 29.8 +0.3
baz=71,SNR=24
CLDR **Caldiran** 71.25 308 *e*P P 12 40 31.7 +2.2
217A **Green Valley** 71.37 63 ⇑P P 12 40 30.7 +0.3
baz=71
AGRB **Hanur-Agry** 71.39 309 *e*P P 12 40 31.7 +1.4
SIM **Simferopol'** 71.45 318 *e*P P 12 40 32.0 +1.4
SIM pmax pmax
comp=Z,18nm,0.8s,mb4.8
COWI **Conover** 71.50 40 *e*P P 12 40 30.1 -0.8
comp=Z,30nm,0.9s,mb4.9
SCHQ **Schefferville** 71.50 22 P P 12 40 30.4 -0.3
comp=Z,18nm,0.5s,mb4.9,baz=344,slow=5.7,SNR=34
SCHQ **Schefferville** 71.50 22 *e*P P 12 40 30.1 -0.7
comp=Z,56nm,1.2s,mb5.1
119A **Ashpeak Ranch,** 71.53 61 ⇑P P 12 40 31.4 +0.1
baz=71,SNR=6.2
ANMO **Albuquerque** 71.54 58 *e*P P 12 40 31.1 -0.2
ANMO *e**PP pP 12 41 35.7 -0.7
Y21A **Point of Rocks** 71.55 59 ⇓P P 12 40 32.2 +0.9
baz=71,SNR=13
W23A **Werner Place,** 71.55 57 ⇓P P 12 40 31.9 +0.5
baz=71,SNR=14
X22A **Bernardo** 71.56 59 ⇓P P 12 40 32.4 +1.0
baz=71,SNR=21
LAZ **Ladron** 71.56 59 *e*P P 12 40 32.4 +1.0
comp=Z,9.5nm,0.8s,mb4.5
U25A **Circle Dot Ran** 71.59 56 ⇓P P 12 40 31.3 -0.3
baz=71,SNR=25
V24A **Rampart Ranch,** 71.62 57 ⇑P P 12 40 32.2 +0.5
baz=71,SNR=20
218A **Dragoon** 71.67 62 ⇑P P 12 40 32.6 +0.4
baz=71,SNR=13
Z20A **Nine Sixteen R** 71.68 61 ⇓P P 12 40 32.6 +0.4
baz=71,SNR=12
LENM **Lemitar** 71.83 59 *e*P P 12 40 33.6 +0.6
comp=Z,10nm,1.2s,mb4.3
LENM *ep*P pP 12 41 38.2 0.0
V25A **Rancho No Teng** 71.89 56 ⇓P P 12 40 33.6 +0.2
baz=72,SNR=12
W24A **Lazy 6 Ranch,** 71.93 57 ⇑P P 12 40 34.5 +0.9
baz=72,SNR=23
VANB **Van** 71.93 308 *e*P P 12 40 35.5 +2.0
U26A **Atchley Ranch,** 71.95 55 ⇓P P 12 40 33.5 -0.2
baz=72,SNR=9.3
X23A **Hourglass Bar** 71.96 58 ⇑P P 12 40 34.4 +0.6
baz=72,SNR=8.4

EZM **Erzurum** 71.96 311 *e*P P 12 40 36.5 +2.8
Y22A **Socorro** 72.00 59 ⇑P P 12 40 34.5 +0.4
baz=72,SNR=12
KIS **Kishinev** 72.02 323 *e*UNK P 12 40 32.0 -1.9
KIS XM 12 40 33.0
comp=Z,100nm,2.3s
BNM **Barren Site** 72.03 59 *e*P P 12 40 34.5 +0.3
comp=Z,8.4nm,0.8s,mb4.4
BNM *ep*P pP 12 41 39.1 -0.3
120A **U Bar Ranch, L** 72.07 61 ⇑P P 12 40 34.9 +0.5
baz=72,SNR=22
318A **Bisbee** 72.10 63 ⇑P P 12 40 34.7 +0.1
baz=72,SNR=21
219A **White Tail Can** 72.11 62 ⇑P P 12 40 34.9 +0.2
baz=72,SNR=21
KWP **Kalwaria Pacla** 72.13 328 *e*P P 12 40 34.4 -0.1
KWP **Kalwaria Pacla** 72.13 328 *e*P P 12 40 34.4 -0.1
CBKS **Cedar Bluff** 72.24 51 *e*P P 12 40 34.4 -0.9
CBKS pmax pmax
comp=Z,23nm,0.9s,mb4.8
CBKS **Cedar Bluff** 72.24 51 *e*P P 12 40 34.4 -1.0
comp=Z,23nm,0.9s,mb4.8
V26A **Tequesquite Ra** 72.38 56 ⇑P P 12 40 35.7 -0.5
baz=72,SNR=10
X24A **Lazy VL Ranch,** 72.39 57 ⇑P P 12 40 37.0 +0.7
baz=72,SNR=10
W25A **X Bar L Ranch,** 72.44 56 ⇑P P 12 40 36.6 0.0
baz=72,SNR=33
Z22A **Elephant Butte** 72.50 59 ⇑P P 12 40 37.3 +0.3
baz=72,SNR=23
Y23A **Lovelace Mesa,** 72.51 58 ⇑P P 12 40 37.5 +0.4
baz=72,SNR=36
HAKT **HAKKARI** 72.55 307 *i*P P 12 40 34.4 -2.8
319A **Douglas** 72.56 62 ⇓P P 12 40 37.5 +0.2
baz=72,SNR=19
121A **Cookes Peak, D** 72.57 60 ⇓P P 12 40 37.9 +0.5
baz=72,SNR=15
220A **Playas Peak, P** 72.60 61 ⇓P P 12 40 37.9 +0.2
baz=72,SNR=9.5
OJC **Ojcow** 72.62 330 ⇓*i*P P 12 40 34.8 -2.6
STHS **Stebnicka Huta** 72.82 328 *e*P P 12 40 38.8 +0.3
STHS pmax pmax
comp=Z,13nm,1.3s,mb4.4
STHS **Stebnicka Huta** 72.82 328 *e*P P 12 40 38.8 +0.3
comp=Z,12nm,1.3s,mb4.4
STHS **Stebnicka Huta** 72.82 328 *e*P P 12 40 38.8 +0.3
CUKT **Cukurca** 72.83 307 *e*P P 12 40 39.9 +1.1
X25A **Clemmons Ranch** 72.84 57 ⇓P P 12 40 39.5 +0.5
baz=72,SNR=26
Y24A **Capitan** 72.86 58 ⇑P P 12 40 39.5 +0.4
baz=73,SNR=41
BUR08 **Bucovina Ar. S** 72.89 325 *e*P P 12 40 38.7 -0.3
122A **Conniff Cattle** 72.89 60 ⇑P P 12 40 39.7 +0.4
baz=73,SNR=7.4
BURAR **Bucovina Array** 72.91 325 ⇑P P 12 40 38.9 -0.2
BURAR **Bucovina Array** 72.91 325 ⇑*i*P P 12 40 38.9 -0.2
Z23A **Rita Site, Whi** 72.91 59 ⇑P P 12 40 39.5 +0.1
baz=73,SNR=9.6
W26A **Owens Ranch, T** 72.92 56 ⇓P P 12 40 39.4 0.0
baz=73,SNR=5.2
221A **Mesquite Ranch** 72.96 61 ⇓P P 12 40 39.8 +0.2
baz=73,SNR=5.7
320A **Kipp Ranch, An** 73.02 62 ⇑P P 12 40 40.2 +0.1
baz=73,SNR=5.5
SCIA **State Center** 73.02 45 *e*P P 12 40 39.7 -0.2
comp=Z,159nm,0.7s,mb5.8
CRVS **Cervenica-Dubn** 73.18 328 *e*P P 12 40 40.6 -0.1
CRVS pmax pmax
comp=Z,151nm,3.3s
CRVS **Cervenica-Dubn** 73.18 328 *e*P P 12 40 40.6 -0.1
comp=Z,150nm,3.3s
CRVS **Cervenica-Dubn** 73.18 328 *e*P P 12 40 40.6 -0.1
KSP **Ksiaz** 73.19 332 *e*P P 12 40 40.3 -0.4
KSP **Ksiaz** 73.19 332 ⇓*e*P P 12 40 40.3 -0.4
KSP *e**PP pP 12 41 47.6 +1.4
222A **Williams Famil** 73.27 60 ⇓P P 12 40 41.5 0.0
baz=73,SNR=7.1
Y25A **Mesa, Roswell** 73.28 57 ⇓P P 12 40 41.4 -0.1
baz=73,SNR=26
X26A **CR and CF Fran** 73.29 56 ⇑P P 12 40 41.6 0.0
baz=73,SNR=13
W27A **Bowe Ranch, En** 73.31 56 ⇓P P 12 40 41.7 0.0
baz=73,SNR=6.7
TRPA **Tarpa** 73.45 327 ⇓*i*P P 12 40 42.2 -0.1
NRDL **Niedersach Rie** 73.48 336 *e*P P 12 40 41.8 -0.6
NRDL *ep*P pP 12 41 48.6 +0.7
OKC **Ostrava-Krasne** 73.49 331 *e*P P 12 40 42.3 -0.1
OKC *ep*P pP 12 41 50.3 +2.4
DIKM **Dikmen** 73.54 315 *e*P P 12 40 44.4 +1.5
JFWS **Jewell Farm** 73.57 42 *e*P P 12 40 41.8 -1.2
JFWS pmax pmax
comp=Z,14nm,0.6s,mb4.8
JFWS **Jewell Farm** 73.57 42 *e*P P 12 40 41.8 -1.2
comp=Z,14nm,0.6s,mb4.8
UPC **Upice** 73.57 332 *e*P P 12 40 43.1 +0.2
UPC *ex* x 12 40 51.2
KSU1 **Kansas State U** 73.59 49 *e*P P 12 40 41.8 -1.4
comp=Z,56nm,0.9s,mb5.2
X27A **F and S Farms,** 73.61 56 ⇑P P 12 40 43.6 +0.2
baz=73,SNR=15
DPC **Dobruska-Polom** 73.62 332 *e*P P 12 40 43.5 +0.3
DPC *ex* x 12 40 51.5
DPC *ep*P pP 12 41 51.0 +2.3
EKA **Eskdalemuir Ar** 73.68 345 P P 12 40 42.6 -0.8
comp=Z,1.8nm,0.3s,mb4.1,baz=20,slow=5.2,SNR=13
EKA **Eskdalemuir Ar** 73.68 345 P P 12 40 42.7 -0.8
EKA pmax pmax
comp=Z,2.0nm,0.3s
PTK **Pertek** 73.72 311 *e*P P 12 40 45.5 +1.5
MORC **Moravsky Berou** 73.73 331 ⇓P P 12 40 43.6 -0.3
MORC **Moravsky Berou** 73.73 331 *e*P P 12 40 43.9 0.0
comp=Z,16nm,1.0s,mb4.6
MORC **Moravsky Berou** 73.73 331 ⇓*i*P P 12 40 43.5 -0.4
Z25A **Roswell** 73.74 58 ⇓P P 12 40 44.1 -0.1
baz=74,SNR=8.3
Y26A **Elida** 73.75 57 ⇑P P 12 40 44.3 0.0
baz=74,SNR=14
CLL **Collm** 73.76 334 *e*P P 12 40 43.4 -0.6
comp=Z,24nm,0.9s,mb4.8
CLL *ep*P pP 12 41 50.6 +1.1
CLL **Collm** 73.76 334 ⇓*i*P P 12 40 43.1 -0.9
CLL *i* *PP pP 12 41 50.5 +1.0
CLL pmax pmax
comp=Z,24nm,0.9s,mb4.8
CLL **Collm** 73.76 334 ⇓*i*P P 12 40 43.1 -0.9
comp=Z,24nm,0.9s,mb4.8
CLL *i* pP pP 12 41 50.5 +1.0
CLL **Collm** 73.76 334 ⇓*i*P P 12 40 43.1 -0.9
comp=Z,24nm,0.9s,mb4.8
CLL *i* pP pP 12 41 50.5 +1.0
comp=Z,19nm,1.2s
CLL *es*P sP 12 42 18.0 -2.1
CLL *ep*P pP 12 43 32.0 0.0
124A **Stringfield Ra** 73.76 59 ⇓P P 12 40 44.3 0.0
baz=74,SNR=12
VRI **Vrincioaia** 73.78 323 ⇓P P 12 40 49.6 +5.4
VRI **Vrincioaia** 73.78 323 ⇓*i*P P 12 40 49.6 +5.4
CFR **Carcaliu** 73.78 322 ⇓P P 12 40 46.6 +2.3
CFR **Carcaliu** 73.78 322 ⇓*i*P P 12 40 46.6 +2.3
KEMA **Kemaliye** 73.87 312 *i*P P 12 40 45.3 +0.5
BRG **Berggiesshubel** 73.87 333 *e*P P 12 40 44.0 -0.6
comp=Z,13nm,1.4s,mb4.4
BRG **Berggiesshubel** 73.87 333 *i* P 12 40 44.4 -0.3
comp=Z,6.0nm,0.9s,mb4.2
KECS **Kecovo** 73.87 328 *e*P P 12 40 44.2 -0.5
KECS pmax pmax
comp=Z,6.0nm,1.2s,mb4.1
KECS **Kecovo** 73.87 328 *e*P P 12 40 44.2 -0.5
comp=Z,6.1nm,1.2s,mb4.1
KECS **Kecovo** 73.87 328 *e*P P 12 40 44.2 -0.5
PVCC **Panska Ves** 73.99 333 *e*P P 12 40 45.4 +0.1
CLZ **Clausthal** 74.00 336 *e*P P 12 40 45.5 +0.1
comp=Z,41nm,1.4s,mb4.9
CLZ *ep*P pP 12 41 52.6 +1.6
SVSK **Karacayir** 74.09 313 *e*P P 12 40 46.9 +0.8
Y27A **Causey** 74.15 56 ⇑P P 12 40 46.4 -0.1
baz=74,SNR=10
Z26A **Caprock** 74.16 57 ⇑P P 12 40 46.5 -0.1
baz=74,SNR=99
SVRC **Sivrice-ELAZID** 74.16 311 *e*P P 12 40 47.2 +0.7
ASAR **Alice Springs** 74.18 197 P P 12 40 47.0 +0.4
comp=Z,9.6nm,0.3s,mb4.9,baz=7.9,slow=5.8,SNR=333
ASAR pP pP 12 41 49.9 -2.5
comp=Z,8.5nm,0.8s,baz=15,slow=6.1,SNR=7.2
ASAR **Alice Springs** 74.18 197 P P 12 40 47.0 +0.4

ASAR *PP pP 12 41 49.9 -2.5
ASAR pmax pmax
comp=Z,10.0nm,0.3s
AMTX Amarillo 74.19 55 eP **P 12 40 46.8 0.0**
comp=Z,54nm,0.8s,mb5.2
AMTX epP pP 12 41 50.7 -1.7
125A Gardner Draw, 74.24 58 ⇓P **P 12 40 47.0 -0.1**
baz=74,SNR=30
MSTX Muleshoe 74.30 56 ⇑P **P 12 40 46.9 -0.5**
baz=74,SNR=10
MLR Muntele Rosu 74.40 323 ⇑P **P 12 40 47.7 -0.1**
MLR Muntele Rosu 74.40 323 ⇑iP **P 12 40 47.7 -0.1**
CPRX Cap Rock 74.40 57 eP **P 12 40 48.1 +0.1**
comp=Z,23nm,0.6s,mb5.0
VYHS Vyhne 74.42 329 eP **P 12 40 47.9 0.0**
VYHS pmax pmax
comp=Z,8.0nm,1.1s,mb4.3
VYHS Vyhne 74.42 329 eP **P 12 40 47.9 0.0**
comp=Z,7.5nm,1.1s,mb4.2
VYHS Vyhne 74.42 329 eP **P 12 40 47.9 0.0**
VRAC Vranov 74.44 331 ⇓P **P 12 40 48.0 0.0**
VRAC Vranov 74.44 331 ⇓iP **P 12 40 48.0 0.0**
PRU Pruhonice 74.48 333 eP **P 12 40 48.8 +0.7**
PRU ex x 12 40 55.5
PRU epP pP 12 41 56.4 +2.6
BALT Daday 74.49 317 iP **P 12 40 49.3 +1.0**
DRGR 74.53 326 P **P 12 40 48.9 +0.4**
Z27A Tatum 74.55 57 ⇑P **P 12 40 48.5 -0.3**
baz=74,SNR=59
MNTX Cornudas Mount 74.55 59 eP **P 12 40 48.7 -0.2**
comp=Z,15nm,0.8s,mb4.7
225A Deer Hill, Car 74.56 59 ⇑P **P 12 40 48.9 0.0**
baz=74,SNR=13
126A Clayton Basin, 74.60 58 ⇓P **P 12 40 48.8 -0.4**
baz=74,SNR=8.7
324A Moseley Ranch, 74.68 60 ⇓P **P 12 40 49.3 -0.4**
baz=74,SNR=11
TANN Tannenbergstha 74.71 334 eP **P 12 40 49.1 -0.3**
comp=Z,11nm,1.2s,mb4.4
TANN epP pP 12 41 56.8 +1.6
MOX Moxa 74.74 335 eP **P 12 40 49.6 0.0**
comp=Z,29nm,1.6s,mb4.7
MOX Moxa 74.74 335 eP **P 12 40 49.1 -0.5**
comp=Z,20nm,1.3s,mb4.6
MOX epP pP 12 41 56.5 +1.1
MOX Moxa 74.74 335 eP **P 12 40 49.6 0.0**
MOX pmax pmax
comp=Z,29nm,1.6s,mb4.7
GDL2 Guadalupe Moun 74.75 58 eP **P 12 40 49.4 -0.6**
comp=Z,21nm,0.8s,mb4.8
VOIR 74.79 324 ⇓P **P 12 40 50.6 +0.6**
VOIR 74.79 324 P **P 12 40 50.3 +0.2**
VOIR 74.79 324 ⇓iP **P 12 40 50.6 +0.6**
NKC Novy Kostel 74.88 334 eP **P 12 40 50.5 +0.1**
NKC epP pP 12 41 58.0 +1.8
127A Arkansas Junct 74.95 57 ⇑P **P 12 40 50.8 -0.3**
baz=75
CLNB Carlsbad 74.97 58 eP **P 12 40 49.4 -1.9**
comp=Z,11nm,0.5s,mb4.7
CORM Corum 75.00 315 eP **P 12 40 52.9 +1.6**
226A Malaga, Loving 75.00 58 ⇑P **P 12 40 51.2 -0.2**
baz=75,SNR=24
325A Bean Ranch, Si 75.03 59 ⇓P **P 12 40 51.2 -0.4**
baz=75,SNR=17
UBBA Unterbreizbach 75.03 336 eP **P 12 40 50.4 -0.9**
comp=Z,22nm,1.6s,mb4.5
SAFT Safranbolu 75.04 317 eP **P 12 40 52.5 +1.0**
CANT Cankiri 75.12 316 eP **P 12 40 54.2 +2.2**
URFA Urfa 75.13 310 eP **P 12 40 53.6 +1.6**
BUG Bochum--Univer 75.17 338 epP pP 12 41 59.5 +1.6
SARI SarD1z-Kayseri 75.20 313 eP **P 12 40 55.3 +2.9**
BUD Budapest 75.23 329 ⇓eP **P 12 40 48.5 -4.0**
ZST Bratislava 75.25 330 eP **P 12 40 52.6 0.0**
ZST pmax pmax
comp=Z,30nm,1.7s,mb4.7
ZST Bratislava 75.25 330 eP **P 12 40 52.6 0.0**
comp=Z,30nm,1.7s,mb4.6
ZST Bratislava 75.25 330 eP **P 12 40 52.6 0.0**
425A Indio Mountain 75.46 60 ⇓P **P 12 40 54.2 +0.2**
baz=75,SNR=45
MBWA Marble Bar 75.49 210 eP **P 12 40 53.7 -0.4**
comp=Z,40nm,1.4s,mb4.8
MBWA Marble Bar 75.49 210 P **P 12 40 53.2 -0.9**
comp=Z,34nm,1.2s,mb4.8
KHC Kasperske Hory 75.53 333 eP **P 12 40 54.5 +0.4**
KHC e 12 41 00.7
KHC e*PP pP 12 42 01.3 +1.3
KHC Kasperske Hory 75.53 333 eP **P 12 40 54.5 +0.4**
KHC ex x 12 41 00.7
KHC epP pP 12 42 01.3 +1.3
326A Caldwell Ranch 75.63 59 ⇓P **P 12 40 54.8 -0.2**
baz=75,SNR=36
GZR Gura Zlata 75.69 325 P **P 12 40 55.2 +0.1**
GRF Grafenberg Arr 75.71 335 eP **P 12 40 55.1 0.0**
comp=Z,29nm,1.0s,mb4.9
GRF epP pP 12 42 03.2 +2.1
GRF esP sP 12 42 31.2 -0.3
GRF ePP PP 12 43 49.0 +0.6
GRF Grafenberg Arr 75.71 335 eP **P 12 40 55.1 0.0**
GRF e*PP pP 12 42 03.2 +2.1
GRF e*SP sP 12 42 31.2 -0.3
GRF e 12 43 49.0
GRF pmax pmax
comp=Z,29nm,1.0s,mb4.9
WET Wettzell 75.72 333 eP **P 12 40 55.5 +0.3**
comp=Z,40nm,1.7s,mb4.8
WET epP pP 12 42 02.9 +1.7
BR131 Keskin Array S 75.82 315 eP **P 12 40 56.1 +0.2**
comp=Z,43nm,1.0s,mb5.0
BRTR Keskin Array B 75.82 315 P **P 12 40 56.0 +0.1**
comp=Z,26nm,0.9s,mb4.9,baz=66,slow=4.2,SNR=61
BRTR PP PP 12 43 54.0 +4.4
comp=Z,4.1nm,1.0s,baz=35,slow=4.5,SNR=4.3
BRTR Keskin Array B 75.82 315 P **P 12 40 56.1 +0.2**
BRTR 12 43 54.0
BRTR pmax pmax
comp=Z,26nm,0.9s
BRTR pmax pmax
comp=Z,4.0nm,1.0s
GZT Gaziantep 75.82 311 iP **P 12 40 57.0 +1.1**
WMOK Wichita Mounta 75.84 53 eP **P 12 40 55.9 -0.3**
WMOK e*PP pP 12 42 02.2 +0.1
WMOK pmax pmax
comp=Z,24nm,0.9s,mb4.8
WMOK Wichita Mounta 75.84 53 eP **P 12 40 55.9 -0.3**
comp=Z,24nm,0.9s,mb4.8
WMOK epP pP 12 42 02.2 0.0
SGKT Sivrigoynuk 75.86 317 iP **P 12 40 57.4 +1.2**
HDIL Hopedale 75.89 43 eP **P 12 40 55.8 -0.5**
comp=Z,105nm,1.1s,mb5.4
CONA Conrad Observa 75.89 331 ⇑iP **P 12 40 56.4 +0.2**
comp=Z,22nm,1.7s,mb4.5
BZS Buzias 75.93 326 ⇓P **P 12 40 57.0 +0.6**
BZS Buzias 75.93 326 P **P 12 40 56.2 -0.2**
BZS Buzias 75.93 326 ⇓iP **P 12 40 57.0 +0.6**
TNS Taunus Mts 75.98 336 eP **P 12 40 56.2 -0.5**
TNS epP pP 12 42 04.3 +1.7
AVNT Avonos 76.00 314 iP **P 12 40 57.7 +0.7**
KMRS Kahramanmaras 76.03 312 eP **P 12 40 58.0 +0.9**
426A McDonald Obser 76.09 59 ⇓P **P 12 40 57.3 -0.3**
baz=76,SNR=24
HGN Heimansgroeve 76.12 338 eP **P 12 40 59.8 +2.4**
comp=Z,24nm,1.2s,mb4.7
GAZ Gaziantep 76.14 311 eP **P 12 40 59.4 +1.7**
328A Wristen Ranch, 76.23 58 ⇓P **P 12 40 58.2 -0.2**
baz=76
MEM Membach 76.25 338 P **P 12 40 58.2 0.0**
comp=Z,11nm,1.3s,mb4.3
427A Hayter Ranch, 76.30 59 ⇑P **P 12 40 58.7 -0.1**
baz=76,SNR=20
526A Mary Lane Ranc 76.51 60 ⇓P **P 12 41 00.1 +0.1**
baz=76,SNR=43
KUZU Kuzuini 76.52 311 iP **P 12 41 00.5 +0.6**
KOZT Kozan 76.57 312 eP **P 12 41 00.7 +0.5**
BCLA Clavier 76.59 338 P **P 12 41 00.2 +0.1**
comp=Z,14nm,1.6s,mb4.4
ARSA Arzberg 76.59 331 ⇓iP **P 12 41 00.3 +0.2**
comp=Z,7.5nm,1.1s,mb4.3
GULT Gulveren 76.66 318 eP **P 12 41 00.8 +0.2**
KBD Kabd 76.68 299 eP **P 12 41 01.0 +0.1**
527A Woodward Ranch 76.72 59 ⇑P **P 12 41 00.9 -0.3**
baz=76,SNR=16
SNF Seneffe 76.75 339 P **P 12 41 00.7 -0.2**
comp=Z,17nm,1.9s,mb4.5
626A Big Bend Ranch 76.87 60 ⇑P **P 12 41 01.8 -0.2**
baz=77,SNR=46
NAY Al-Naaiem 76.88 300 eP **P 12 41 01.6 -0.5**
NAY AMb AMB 12 41 04.0
comp=Z,53nm,0.6s,mb5.5
RDF Al-Radifah 76.95 299 eP **P 12 41 02.6 +0.1**
RDF AMb AMB 12 41 06.0
comp=Z,156nm,1.3s,mb5.6
CCM Cathedral Cave 77.00 46 eP **P 12 41 01.9 -0.7**
CCM pmax pmax
comp=Z,36nm,0.8s,mb5.2
CCM Cathedral Cave 77.00 46 eP **P 12 41 01.9 -0.7**
comp=Z,36nm,0.8s,mb5.2
GIVF Givet 77.00 339 eP **P 12 41 01.4 -1.0**
comp=Z,41nm,1.0s,mb4.8
GIVF Givet 77.00 339 eP **P 12 41 01.4 -1.0**
GIVF pmax pmax
comp=Z,20nm,1.0s,mb4.8
GIVF Givet 77.00 339 eP **P 12 41 01.4 -1.0**
comp=Z,20nm,1.0s,mb4.8
SLM Saint Louis 77.00 45 eP **P 12 41 02.1 -0.5**
SLM pmax pmax
comp=Z,111nm,0.8s,mb5.6
SLM Saint Louis 77.00 45 eP **P 12 41 02.1 -0.5**
comp=Z,111nm,0.8s,mb5.6
RJOB Jochberg 77.01 333 eP **P 12 41 02.5 +0.1**
comp=Z,13nm,1.3s,mb4.5
DOU Dourbes 77.06 339 P **P 12 41 03.1 +0.4**
comp=Z,15nm,2.2s,mb4.3
SULT Sultanhani-AKS 77.10 314 eP **P 12 41 04.5 +1.4**
STU Stuttgart 77.11 335 epP pP 12 42 11.1 +2.0
CAVI Cavuskoy 77.14 318 eP **P 12 41 03.2 -0.1**
528A Cox Ranch, San 77.17 59 ⇑P **P 12 41 03.8 +0.2**
baz=77
BAIF Baives 77.19 339 eP **P 12 41 02.6 -0.8**
GULE Gulek 77.23 313 iP **P 12 41 04.4 +0.6**
GEMT Gemlik 77.24 319 eP **P 12 41 03.7 -0.2**
SOKA Soboth 77.26 331 ⇑iP **P 12 41 03.7 -0.2**
comp=Z,24nm,1.5s,mb4.7
LANF Langenberg 77.29 336 eP **P 12 41 03.6 -0.4**
GROS Grobnik 77.30 330 eP **P 12 41 03.6 -0.5**
GROS epP pP 12 42 11.3 +1.0
TXAR Lajitas Array 77.30 60 P **P 12 41 02.1 -2.3**
comp=Z,10.0nm,0.6s,mb4.7,baz=236,slow=22,SNR=83
TXAR pP pP 12 42 08.8 -1.8
comp=Z,11nm,0.8s,baz=298,slow=4.4,SNR=9.8
TXAR Lajitas Array 77.30 60 P **P 12 41 02.1 -2.3**
TXAR *PP pP 12 42 08.9 -1.7
TXAR pmax pmax
comp=Z,10.0nm,0.6s
KIZT Kizilcal 77.31 316 eP **P 12 41 04.6 +0.4**
627A Terlingua Ranc 77.37 60 ⇑P **P 12 41 04.7 -0.1**
baz=77,SNR=20
FVM French Village 77.44 46 eP **P 12 41 04.5 -0.5**
FVM pmax pmax
comp=Z,49nm,0.8s,mb5.3
FVM French Village 77.44 46 eP **P 12 41 04.5 -0.5**
comp=Z,49nm,0.8s,mb5.3
OBKA Obir 77.56 331 ⇓iP **P 12 41 05.2 -0.3**
comp=Z,5.1nm,0.8s,mb4.3
YAYL Yayladag 77.58 311 iP **P 12 41 06.3 +0.5**
MERS Mersin 77.69 313 eP **P 12 41 06.9 +0.6**
BFO Black Forest 77.75 336 eP **P 12 41 05.5 -1.0**
comp=Z,19nm,1.1s,mb4.7
BFO Black Forest 77.75 336 eP **P 12 41 06.3 -0.2**
BFO pmax pmax
comp=Z,22nm,1.3s,mb4.7
BFO Black Forest 77.75 336 eP **P 12 41 06.3 -0.2**
comp=Z,22nm,1.3s,mb4.7
WTTA Wattenberg 77.78 333 iP **P 12 41 07.2 +0.5**
comp=Z,24nm,1.0s,mb4.9,SNR=7.2
PDKS Podkum 77.82 331 eP **P 12 41 06.2 -0.7**
KONT Konya--Tatoy 77.84 315 eP **P 12 41 07.3 0.0**
MOTA Moosalm 77.86 334 ⇑iP **P 12 41 07.2 0.0**
comp=Z,24nm,1.0s,mb4.9,SNR=6.3
CRES Cresnjev 77.88 330 eP **P 12 41 06.6 -0.7**
CRES epP pP 12 42 14.3 +0.8
VTS Vitosha 77.90 324 ⇓P **P 12 41 07.1 -0.4**
VTS Vitosha 77.90 324 ⇓iP **P 12 41 07.1 -0.4**
OLIL Olney 77.90 44 eP **P 12 41 07.5 -0.1**
comp=Z,22nm,0.6s,mb5.1
CDF Champ du Feu 77.95 336 eP **P 12 41 06.9 -0.7**
comp=Z,39nm,1.1s,mb4.7
CDF epP pP 12 42 14.2 +0.3
CDF Champ du Feu 77.95 336 eP **P 12 41 06.9 -0.7**
CDF e*PP pP 12 42 14.2 +0.3
CDF pmax pmax
comp=Z,20nm,1.1s,mb4.8
CDF Champ du Feu 77.95 336 eP **P 12 41 06.9 -0.7**
comp=Z,20nm,1.1s,mb4.8
CDF epP pP 12 42 14.2 +0.3
ALT Altintas 77.96 317 eP **P 12 41 07.3 -0.6**
ECH Echery 78.16 336 eP **P 12 41 08.2 -0.6**
ECH Echery 78.16 336 eP **P 12 41 08.6 -0.2**
ECH e*PP pP 12 42 16.3 +1.2
ECH pmax pmax
comp=Z,11nm,1.0s,mb4.5
ECH Echery 78.16 336 eP **P 12 41 08.6 -0.2**
comp=Z,11nm,1.0s,mb4.5
ECH epP pP 12 42 16.3 +1.2
SHUT Suhut-Afyon 78.17 317 eP **P 12 41 09.3 +0.3**
SIUC Southern Illin 78.22 45 eP **P 12 41 09.0 -0.3**
comp=Z,102nm,1.0s,mb5.5
BLO Bloomington 78.25 42 eP **P 12 41 09.0 -0.4**
BLO pmax pmax
comp=Z,17nm,0.6s,mb5.0
BLO Bloomington 78.25 42 eP **P 12 41 09.0 -0.4**
comp=Z,17nm,0.6s,mb5.0
FELD Feldberg im Sc 78.25 336 eP **P 12 41 09.0 -0.3**
FETA Feichten 78.27 334 ⇓iP **P 12 41 09.1 -0.3**
comp=Z,28nm,1.4s,mb4.8,SNR=11
DAVA Damuels 78.27 334 ⇓iP **P 12 41 09.4 0.0**
comp=Z,20nm,1.0s,mb4.8
LONY Lake Ozonia 78.32 32 eP **P 12 41 08.8 -0.9**
comp=Z,36nm,1.1s,mb5.0
THEF They Montfort 78.45 337 eP **P 12 41 10.2 -0.2**
ERPA Erie 78.50 36 eP **P 12 41 10.4 -0.3**
comp=Z,131nm,1.3s,mb5.5
MOF Molkenrain 78.50 336 eP **P 12 41 09.0 -1.6**
HAU Haudompre 78.57 337 eP **P 12 41 10.0 -1.0**
HDMB Hadim 78.58 314 eP **P 12 41 11.7 +0.4**
JCT Junction City 78.58 56 eP **P 12 41 11.0 -0.4**
JCT e*PP pP 12 42 18.9 +1.1
JCT pmax pmax
comp=Z,31nm,0.8s,mb5.1
JCT Junction City 78.58 56 eP **P 12 41 11.0 -0.4**
comp=Z,32nm,0.8s,mb5.1
JCT epP pP 12 42 18.9 +1.1
IKL Isikli 78.59 313 eP **P 12 41 09.7 -1.6**
HINF Hinteralfeld 78.61 336 eP **P 12 41 09.8 -1.4**
MIAR Mount Ida 78.66 50 eP **P 12 41 11.4 -0.4**
MIAR e*PP pP 12 42 19.4 +1.2
MIAR pmax pmax
comp=Z,29nm,0.7s,mb5.1
MIAR Mount Ida 78.66 50 eP **P 12 41 11.4 -0.4**
comp=Z,29nm,0.7s,mb5.1
MIAR epP pP 12 42 19.4 +1.2
DAVOX Davos/Dischmat 78.73 334 P **P 12 41 12.3 +0.4**
comp=Z,15nm,0.8s,mb4.8,baz=358,slow=6.4,SNR=6.5
DAVOX pP pP 12 42 19.1 +0.8
comp=Z,5.3nm,0.9s,baz=22,slow=12,SNR=2.4
PARMO Parma 78.82 46 eP **P 12 41 12.6 0.0**
SUTC Sutluce-Ispart 78.85 316 eP **P 12 41 12.1 -0.6**
ACSO Alum Creek Sta 78.89 39 eP **P 12 41 12.4 -0.5**
comp=Z,64nm,1.2s,mb5.2
NCB Newcomb 79.01 32 eP **P 12 41 12.9 -0.6**
comp=Z,51nm,1.1s,mb5.2
LOMF Lomont 79.05 336 eP **P 12 41 10.9 -2.7**
WCI Wyandotte Cave 79.13 43 eP **P 12 41 13.9 -0.3**
WCI pmax pmax
comp=Z,88nm,0.9s,mb5.5
WCI Wyandotte Cave 79.13 43 eP **P 12 41 13.9 -0.3**
comp=Z,88nm,0.9s,mb5.5
TUE Stuetta 79.16 334 eP **P 12 41 14.5 +0.2**
comp=Z,42nm,1.3s,mb5.0
TUE epP pP 12 42 22.5 +1.7
ARMA Armidale 79.25 180 eP **P 12 41 15.2 +0.5**
GNAR Gosnell 79.26 46 eP **P 12 41 15.0 0.0**
comp=Z,672nm,0.6s
GLAT Glass 79.36 46 eP **P 12 41 15.8 +0.3**
LFK Lefkose 79.44 313 eP **P 12 41 15.9 0.0**
FLN La Foliniere 79.45 341 eP **P 12 41 14.9 -0.8**
PKME Peaks-Kenny Pk 79.47 28 eP **P 12 41 15.7 -0.2**
comp=Z,39nm,1.0s,mb5.1
LDF La Druitiere 79.53 341 eP **P 12 41 15.2 -1.0**
comp=Z,9.6nm,0.5s,mb4.5
LDF La Druitiere 79.53 341 eP **P 12 41 15.2 -1.0**
LDF pmax pmax
comp=Z,5.0nm,0.5s,mb4.5
LDF La Druitiere 79.53 341 eP **P 12 41 15.2 -1.0**
comp=Z,4.8nm,0.5s,mb4.5
LBNH Lisbon 79.55 30 eP **P 12 41 16.6 +0.3**
LBNH pmax pmax
comp=Z,29nm,0.9s,mb5.0
LBNH Lisbon 79.55 30 eP **P 12 41 16.6 +0.3**
comp=Z,29nm,0.9s,mb5.0
CSS Prodhromos 79.79 313 eP **P 12 41 16.9 -0.9**
comp=Z,34nm,0.8s,mb5.1
LOR Lormes 79.88 338 eP **P 12 41 17.2 -0.8**
comp=Z,52nm,0.9s,mb5.0
LOR epP pP 12 42 24.3 -0.4
LOR Lormes 79.88 338 eP **P 12 41 17.2 -0.8**
LOR e*PP pP 12 42 24.3 -0.4
LOR pmax pmax
comp=Z,26nm,0.9s,mb5.0
LOR Lormes 79.88 338 eP **P 12 41 17.2 -0.8**
comp=Z,26nm,0.9s,mb5.0
LOR epP pP 12 42 24.3 -0.4
GRR Gorron 79.88 342 eP **P 12 41 17.5 -0.6**
comp=Z,23nm,0.5s,mb4.8
GRR epP pP 12 42 24.5 -0.2
GRR Gorron 79.88 342 eP **P 12 41 17.5 -0.6**
GRR e*PP pP 12 42 24.5 -0.2
GRR pmax pmax
comp=Z,11nm,0.5s,mb4.8
GRR Gorron 79.88 342 eP **P 12 41 17.5 -0.6**
comp=Z,11nm,0.5s,mb4.9
GRR epP pP 12 42 24.5 -0.2
CABF La Chapelle 79.92 336 eP **P 12 41 17.7 -0.6**
CABF epP pP 12 42 24.9 -0.1
BINY Binghamton 79.94 34 eP **P 12 41 18.0 -0.5**
comp=Z,66nm,1.3s,mb5.2
WVT Waverly 80.15 45 eP **P 12 41 19.4 -0.3**
WVT pmax pmax
comp=Z,31nm,0.8s,mb5.1
WVT Waverly 80.15 45 eP **P 12 41 19.4 -0.3**
comp=Z,31nm,0.8s,mb5.1
SSF Saint Saulge 80.16 338 eP **P 12 41 18.8 -0.7**
comp=Z,36nm,0.9s,mb4.8
SSF Saint Saulge 80.16 338 eP **P 12 41 18.8 -0.7**
SSF pmax pmax
comp=Z,18nm,0.9s,mb4.8
SSF Saint Saulge 80.16 338 eP **P 12 41 18.8 -0.7**
comp=Z,18nm,0.9s,mb4.8
NATX Nacogdoches 80.32 52 eP **P 12 41 21.1 +0.4**
comp=Z,178nm,1.2s,mb5.7
NATX epP pP 12 42 28.6 +1.2
MMAI Mount Meron Ar 80.33 310 P **P 12 41 21.5 +0.8**
comp=Z,12nm,0.4s,mb5.0,baz=45,slow=6.3,SNR=30
SGMF Saint Gilles 80.35 343 eP **P 12 41 20.1 -0.5**
comp=Z,16nm,0.4s,mb4.8
SGMF Saint Gilles 80.35 343 eP **P 12 41 20.1 -0.5**
SGMF pmax pmax
comp=Z,8.0nm,0.4s,mb4.8
SGMF Saint Gilles 80.35 343 eP **P 12 41 20.1 -0.5**
comp=Z,7.8nm,0.4s,mb4.8
ROSF Rostrenen 80.41 343 eP **P 12 41 20.4 -0.5**
comp=Z,67nm,1.0s,mb5.0
ROSF Rostrenen 80.41 343 eP **P 12 41 20.4 -0.5**
ROSF pmax pmax
comp=Z,33nm,1.0s,mb5.0
ROSF Rostrenen 80.41 343 eP **P 12 41 20.4 -0.5**
comp=Z,33nm,1.0s,mb5.0
AVF Avril sur Loir 80.44 338 eP **P 12 41 20.5 -0.6**
AVF epP pP 12 42 27.8 0.0
SMF Signal de Mont 80.46 338 eP **P 12 41 20.5 -0.7**
comp=Z,96nm,1.0s,mb5.2
SMF epP pP 12 42 27.9 0.0
SMF Signal de Mont 80.46 338 eP **P 12 41 20.5 -0.7**
SMF e*PP pP 12 42 27.9 0.0
SMF pmax pmax
comp=Z,48nm,1.0s,mb5.2
SMF Signal de Mont 80.46 338 eP **P 12 41 20.5 -0.7**
comp=Z,48nm,1.0s,mb5.2
SMF epP pP 12 42 27.9 0.0
SSPA Standing Stone 80.58 36 eP **P 12 41 21.5 -0.5**
comp=Z,99nm,1.5s,mb5.3
MCWV Mont Chateau 80.65 38 eP **P 12 41 22.4 +0.1**
comp=Z,66nm,1.0s,mb5.3
OXF Oxford 80.73 47 eP **P 12 41 22.2 -0.6**
OXF pmax pmax
comp=Z,181nm,1.3s,mb5.6
OXF Oxford 80.73 47 eP **P 12 41 22.2 -0.6**
comp=Z,181nm,1.3s,mb5.6
LPL La Plagne 80.76 336 eP **P 12 41 22.9 +0.1**
LPG La Plagne 80.78 336 eP **P 12 41 23.2 +0.3**
comp=Z,43nm,0.9s,mb4.9
LPG epP pP 12 42 30.6 +1.0
LPG La Plagne 80.78 336 eP **P 12 41 23.2 +0.3**
LPG e*PP pP 12 42 30.6 +1.0
LPG pmax pmax
comp=Z,22nm,0.9s,mb4.9
LPG La Plagne 80.78 336 eP **P 12 41 23.2 +0.3**
comp=Z,22nm,0.9s,mb4.9
LPG epP pP 12 42 30.6 +1.0
BGF Bois d'Agland 80.78 339 eP **P 12 41 22.4 -0.5**
QUIF Quistinic 80.79 343 eP **P 12 41 22.5 -0.4**
comp=Z,132nm,1.5s,mb5.1
QUIF Quistinic 80.79 343 eP **P 12 41 22.5 -0.4**
QUIF pmax pmax
comp=Z,66nm,1.5s,mb5.1
QUIF Quistinic 80.79 343 eP **P 12 41 22.5 -0.4**
comp=Z,66nm,1.5s,mb5.1
PLDF La Plantade 81.15 338 eP **P 12 41 25.0 +0.2**
STKA Stephens Creek 81.17 188 eP **P 12 41 24.5 -0.4**
comp=Z,9.6nm,1.0s,mb4.5
STKA Stephens Creek 81.17 188 P **P 12 41 24.7 -0.1**
comp=Z,6.0nm,0.6s,mb4.5,baz=358,slow=9.8,SNR=13
STKA pP pP 12 42 32.4 +0.6
comp=Z,6.6nm,0.9s,baz=341,slow=8.9,SNR=3.7
STKA Stephens Creek 81.17 188 P **P 12 41 24.7 -0.1**
STKA pP pP 12 42 32.4 +0.6
TCF Toulx Ste Croi 81.19 339 eP **P 12 41 24.6 -0.4**
comp=Z,66nm,1.1s,mb5.0
TCF epP pP 12 42 31.9 0.0
TCF Toulx Ste Croi 81.19 339 eP **P 12 41 24.6 -0.4**
TCF e*PP pP 12 42 31.9 0.0
TCF pmax pmax
comp=Z,33nm,1.1s,mb5.0
TCF Toulx Ste Croi 81.19 339 eP **P 12 41 24.6 -0.4**
comp=Z,33nm,1.1s,mb5.0
TCF epP pP 12 42 31.9 0.0
AGO Saint Agoulin 81.19 338 eP **P 12 41 25.3 +0.3**
MFF Saint Martin d 81.43 341 eP **P 12 41 26.0 -0.3**
comp=Z,143nm,1.3s,mb5.2
MFF epP pP 12 42 33.2 0.0
MFF Saint Martin d 81.43 341 eP **P 12 41 26.0 -0.3**
MFF e*PP pP 12 42 33.2 0.0
MFF pmax pmax
comp=Z,72nm,1.3s,mb5.2
MFF Saint Martin d 81.43 341 eP **P 12 41 26.0 -0.3**
comp=Z,72nm,1.3s,mb5.2
MFF epP pP 12 42 33.2 0.0
MBDF Montbardon 81.48 335 eP **P 12 41 26.1 -0.5**
PYM Petit Puy Mans 81.50 338 eP **P 12 41 26.6 -0.1**
ORIF Oris-en-Rattie 81.55 336 eP **P 12 41 26.9 0.0**
SSB Saint Sauveur 81.56 337 eP **P 12 41 27.3 +0.3**
SSB pmax pmax
comp=Z,26nm,1.2s,mb4.8
SSB Saint Sauveur 81.56 337 eP **P 12 41 27.3 +0.3**
comp=Z,26nm,1.2s,mb4.8
SWET Sewanee 81.78 44 eP **P 12 41 27.6 -0.7**
VIVF Saint-Julien-l 81.92 337 eP **P 12 41 28.7 -0.1**
comp=Z,42nm,1.0s,mb4.8
VIVF epP pP 12 42 36.3 +0.5
VIVF Saint-Julien-l 81.92 337 eP **P 12 41 28.7 -0.1**
VIVF e*PP pP 12 42 36.3 +0.5
VIVF pmax pmax
comp=Z,21nm,1.0s,mb4.8
VIVF Saint-Julien-l 81.92 337 eP **P 12 41 28.7 -0.1**
comp=Z,21nm,1.0s,mb4.8
VIVF epP pP 12 42 36.3 +0.5
LBL Lubilhac 81.93 338 eP **P 12 41 29.3 +0.4**
OCF Saint Nazaire 82.02 336 eP **P 12 41 31.1 +1.8**
OG26 St.-Nazaire-De 82.02 336 eP **P 12 41 31.1 +1.8**
SBF Sospel 82.09 335 eP **P 12 41 29.7 -0.1**
comp=Z,170nm,1.4s,mb5.3
SBF Sospel 82.09 335 eP **P 12 41 29.7 -0.1**
SBF pmax pmax
comp=Z,85nm,1.4s,mb5.3
SBF Sospel 82.09 335 eP **P 12 41 29.7 -0.1**

comp=Z,85nm,1.4s,mb5.3
CPCT Cooper Cave 82.22 43 *e*P **P 12 41 30.0 -0.6**
RJF Les Rejaudoux 82.28 339 *e*P **P 12 41 30.3 -0.4**
comp=Z,178nm,1.3s,mb5.3
RJF Les Rejaudoux 82.28 339 *e*P **P 12 41 30.3 -0.4**
RJF pmax pmax
comp=Z,89nm,1.3s,mb5.3
RJF Les Rejaudoux 82.28 339 *e*P **P 12 41 30.3 -0.4**
comp=Z,89nm,1.3s,mb5.3
ELN Prospectdale 82.35 39 *e*P **P 12 41 30.4 -0.8**
TKL Tuckaleechee C 82.38 42 *e*P **P 12 41 30.8 -0.6**
SMRF Simiane la Rot 82.50 336 *e*P **P 12 41 32.3 +0.4**
comp=Z,75nm,1.3s,mb5.1
SMRF Simiane la Rot 82.50 336 *e*P **P 12 41 32.3 +0.4**
comp=Z,75nm,1.3s,mb5.4
BLA Blacksburg 82.51 39 *e*P **P 12 41 31.2 -0.8**
BLA pmax pmax
comp=Z,35nm,1.1s,mb5.1
BLA Blacksburg 82.51 39 *e*P **P 12 41 31.2 -0.9**
comp=Z,35nm,1.1s,mb5.1
CAF Calviac 82.51 339 *e*P **P 12 41 32.1 +0.2**
comp=Z,185nm,1.4s,mb5.4
CAF *e*pP pP 12 42 39.6 +0.6
CAF Calviac 82.51 339 *e*P **P 12 41 32.1 +0.2**
CAF *e**PP pP 12 42 39.6 +0.6
CAF pmax pmax
comp=Z,93nm,1.4s,mb5.4
CAF Calviac 82.51 339 *e*P **P 12 41 32.1 +0.2**
comp=Z,93nm,1.4s,mb5.4
CAF *e*pP pP 12 42 39.6 +0.6
FRF La Foret Royal 82.59 335 *e*P **P 12 41 32.0 -0.3**
comp=Z,120nm,1.5s,mb5.2
FRF La Foret Royal 82.59 335 *e*P **P 12 41 32.0 -0.3**
FRF pmax pmax
comp=Z,60nm,1.5s,mb5.2
FRF La Foret Royal 82.59 335 *e*P **P 12 41 32.0 -0.3**
comp=Z,60nm,1.5s,mb5.2
LFF La Frestale 82.81 339 *e*P **P 12 41 33.2 -0.2**
comp=Z,212nm,1.3s,mb5.5
LFF La Frestale 82.81 339 *e*P **P 12 41 33.2 -0.2**
LFF pmax pmax
comp=Z,106nm,1.3s,mb5.5
LFF La Frestale 82.81 339 *e*P **P 12 41 33.2 -0.2**
comp=Z,106nm,1.3s,mb5.5
LMR La Mourre 82.84 335 *e*P **P 12 41 32.8 -0.8**
comp=Z,90nm,1.2s,mb5.2
LMR *e*pP pP 12 42 40.5 -0.3
LMR La Mourre 82.84 335 *e*P **P 12 41 32.8 -0.8**
LMR *e**PP pP 12 42 40.5 -0.3
LMR pmax pmax
comp=Z,45nm,1.2s,mb5.2
LMR La Mourre 82.84 335 *e*P **P 12 41 32.8 -0.8**
comp=Z,45nm,1.2s,mb5.2
LMR *e*pP pP 12 42 40.5 -0.3
LASF Ste Croix 82.86 337 *e*P **P 12 41 33.9 +0.2**
comp=Z,123nm,1.5s,mb5.2
LRAL Lakeview Retre 83.09 46 *e*P **P 12 41 34.0 -1.0**
comp=Z,9.9nm,0.7s,mb4.8
MTLF Montolieu 83.96 338 *e*P **P 12 41 39.2 -0.1**
comp=Z,69nm,1.5s,mb5.0
MTLF *e*pP pP 12 42 47.0 +0.4
MTLF Montolieu 83.96 338 *e*P **P 12 41 39.2 -0.1**
MTLF *e**PP pP 12 42 47.0 +0.4
MTLF pmax pmax
comp=Z,35nm,1.5s,mb5.0
MTLF Montolieu 83.96 338 *e*P **P 12 41 39.2 -0.1**
comp=Z,34nm,1.5s,mb5.0
MTLF *e*pP pP 12 42 47.0 +0.4
LRDF Laroque-de-Fa 84.26 338 *e*P **P 12 41 41.5 +0.7**
GOGA Godfrey 84.40 43 *e*P **P 12 41 41.3 -0.4**
GOGA pmax pmax
comp=Z,13nm,0.7s,mb4.9
GOGA Godfrey 84.40 43 *e*P **P 12 41 41.3 -0.4**
comp=Z,13nm,0.7s,mb4.9
EJON La Jonquera 84.63 337 P **P 12 41 42.7 0.0**
comp=Z,8.7nm,0.9s,mb4.6
JSC Jenkinsville 84.64 41 *e*P **P 12 41 42.6 -0.3**
EPF Esparros 84.70 339 *e*P **P 12 41 41.7 -1.3**
CLLI Llivia 84.83 338 P **P 12 41 42.6 -1.0**
VALF Valcebollere 84.89 338 *e*P **P 12 41 44.6 +0.6**
RESF Ens 84.92 339 *e*P **P 12 41 44.7 +0.6**
EALK Alkurruntz 84.94 340 P **P 12 41 42.5 -1.7**
comp=Z,8.3nm,0.6s,mb4.7
SJPF Ste Jean 84.98 340 *e*P **P 12 41 43.5 -0.9**
ETSF Etsaut 85.04 340 *e*P **P 12 41 43.8 -0.9**
comp=Z,15nm,0.9s,mb4.5
ETSF Etsaut 85.04 340 *e*P **P 12 41 43.8 -0.9**
ETSF pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
ETSF Etsaut 85.04 340 *e*P **P 12 41 43.8 -0.9**
comp=Z,7.4nm,0.9s,mb4.5
EBIE Bielsa 85.08 339 P **P 12 41 43.9 -1.0**
comp=Z,12nm,0.8s,mb4.8
CSOR Sort 85.14 338 P **P 12 41 44.8 -0.3**
comp=Z,11nm,0.8s,mb4.7
ELAN Lanestosa 85.34 342 P **P 12 41 44.4 -1.8**
comp=Z,27nm,1.0s,mb5.0
CFON Fontmartina 85.39 337 P **P 12 41 45.8 -0.6**
comp=Z,5.5nm,0.5s,mb4.6
EMIR Miracle 85.47 338 P **P 12 41 45.8 -1.0**
comp=Z,18nm,0.9s,mb4.9
EARI Arriondas 85.63 343 P **P 12 41 44.7 -2.9**
comp=Z,21nm,1.1s,mb4.9
KLBR Kellerberrin 85.82 208 *e*P **P 12 41 47.6 -0.8**
comp=Z,43nm,0.9s,mb5.3
EPON Pontenova 85.96 344 P **P 12 41 45.8 -3.4**
comp=Z,44nm,1.0s,mb5.2
EPOB Poblet 86.11 338 P **P 12 41 48.2 -1.8**
comp=Z,14nm,0.9s,mb4.8
ESAC San Caprasio 86.14 339 P **P 12 41 49.5 -0.6**
comp=Z,32nm,0.9s,mb5.2
TOO Toolangi 86.54 185 *e*P **P 12 41 51.6 -0.1**
EMAZ Mazaricos 86.63 346 P **P 12 41 50.0 -2.5**
comp=Z,5.8nm,1.0s,mb4.4
ETOS Mallorca 87.17 336 P **P 12 41 54.5 -0.5**
comp=Z,21nm,1.2s,mb4.8
NWAO Narrogin (SRO) 87.22 208 *e*P **P 12 41 54.9 -0.2**
NWAO pmax pmax
comp=Z,35nm,1.0s
NWAO Narrogin (SRO) 87.22 208 *e*P **P 12 41 54.9 -0.2**
comp=Z,35nm,1.0s,mb5.1
ECAL Calabor 87.23 344 P **P 12 41 52.2 -3.1**
comp=Z,8.1nm,1.0s,mb4.5
ETOR Torete 87.36 340 P **P 12 41 54.3 -1.6**
ETOR pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
ETOR Torete 87.36 340 P **P 12 41 54.3 -1.6**
comp=Z,10.0nm,0.8s,mb4.7
ELOB Lobios 87.53 345 P **P 12 41 54.2 -2.5**
comp=Z,14nm,1.0s,mb4.8
MVO Moncorvo 88.03 344 *e*P **P 12 41 58.0 -1.1**
comp=Z,30nm,1.3s,mb5.0
PVRL Vila Real 88.05 344 *e*P **P 12 41 58.1 -1.1**
comp=Z,46nm,1.7s,mb5.0
EIBI Ibiza 88.24 337 P **P 12 41 58.9 -1.3**
comp=Z,29nm,1.2s,mb5.0
PVIS Viseu 88.62 344 *e*P **P 12 42 01.0 -0.9**
comp=Z,27nm,1.2s,mb5.0
ESDC Sonseca Array 88.87 341 P **P 12 42 02.0 -1.1**
comp=Z,4.9nm,0.8s,mb4.4,baz=9.1,slow=4.4,SNR=25
ESDC Sonseca Array 88.87 341 P **P 12 42 01.3 -1.8**
comp=Z,12nm,1.1s,mb4.7
ESLA Sonseca Array 88.87 341 *e*P **P 12 42 02.0 -1.1**
comp=Z,23nm,1.8s,mb4.7
MTE Manteigas 88.87 344 *e*P **P 12 42 02.0 -1.0**
comp=Z,27nm,1.3s,mb4.9
MTE Manteigas 88.87 344 *e*P **P 12 42 01.3 -1.8**
comp=Z,26nm,0.9s,mb5.0
EPLA Plasencia 88.92 343 P **P 12 42 01.1 -2.2**
EPLA pmax pmax
comp=Z,18nm,0.9s,mb4.9
EPLA Plasencia 88.92 343 P **P 12 42 01.1 -2.2**
comp=Z,18nm,0.9s,mb4.9
EBEN Beniarda 88.94 338 P **P 12 42 02.6 -0.8**
comp=Z,6.8nm,0.9s,mb4.5
KEST Kesra 88.97 330 P **P 12 42 03.4 -0.2**
comp=Z,2.4nm,0.7s,mb4.1,baz=175,slow=1.2,SNR=8.8
KEST pP pP 12 43 10.8 -0.9
comp=Z,3.2nm,1.0s,baz=225,slow=0.8,SNR=3.5
KEST Kesra 88.97 330 *e*P **P 12 42 03.6 0.0**
KEST *e*pP pP 12 43 12.0 +0.3
ETOB Tobarra 89.31 339 P **P 12 42 04.2 -0.9**
comp=Z,2.6nm,0.6s,mb4.2
PCBR Castelo Branco 89.40 344 *e*P **P 12 42 04.2 -1.3**
PMRV Marv??o 89.78 344 *e*P **P 12 42 05.7 -1.6**
comp=Z,26nm,1.6s,mb4.8
PESTR Estremoz 90.36 344 *e*P **P 12 42 08.7 -1.3**
comp=Z,14nm,1.3s,mb4.6
EADA Adamuz 90.44 341 P **P 12 42 08.1 -2.3**
comp=Z,5.2nm,1.0s,mb4.3
EQES Quesada 90.47 340 P **P 12 42 08.7 -1.9**
comp=Z,5.4nm,1.0s,mb4.3
ECAB El Cabril 90.71 342 P **P 12 42 10.1 -1.6**
comp=Z,2.0nm,0.7s,mb4.1
EVO Evora 90.77 344 *e*P **P 12 42 10.6 -1.3**
comp=Z,23nm,1.1s,mb4.6
PBAR Barrancos 90.93 343 *e*P **P 12 42 10.8 -1.9**
PBEJ Beja 91.23 344 *e*P **P 12 42 13.0 -1.1**
comp=Z,22nm,1.3s,mb4.8
EMIN Mina Concepcio 91.26 343 P **P 12 42 11.3 -2.9**
comp=Z,9.5nm,0.9s,mb4.6
EBER Berja 91.29 340 P **P 12 42 12.5 -1.9**
comp=Z,5.3nm,0.8s,mb4.4
EGRO El Granado 91.64 343 P **P 12 42 13.5 -2.5**
comp=Z,5.2nm,0.9s,mb4.5
PCVE Castro Verde 91.64 344 *e*P **P 12 42 15.0 -1.0**
comp=Z,42nm,1.0s,mb5.3
CMIG Matias Romero 91.85 61 P **P 12 42 16.8 -0.4**
baz=340,slow=5.2
ESPR Espera 91.96 342 P **P 12 42 15.6 -1.9**
comp=Z,7.2nm,1.0s,mb4.6
PBDV Barranco-do-Ve 92.00 344 *e*P **P 12 42 16.2 -1.4**
comp=Z,57nm,1.9s,mb5.2
MORF Marmelete 92.07 344 *e*P **P 12 42 16.9 -1.1**
comp=Z,37nm,1.4s,mb5.1
EJIF Jimena Fronter 92.28 341 P **P 12 42 16.0 -3.0**
EJIF pmax pmax
comp=Z,2.0nm,0.3s,mb4.5
EJIF Jimena Fronter 92.28 341 P **P 12 42 16.0 -2.9**
comp=Z,2.3nm,0.3s,mb4.6
CMLA Cha da Macela 93.38 358 *e*LQ 13 08 07.3
CMLA *e*LR LR 13 13 02.1
DBIC Dimbokro 120.62 332 PKP PKPdf 12 47 58.6 -0.7
comp=Z,7.2nm,0.5s,baz=32,slow=1.3,SNR=13
DBIC Dimbokro 120.62 332 PKIKP PKPdf 12 47 58.6 -0.7
DBIC pmax pmax
comp=Z,7.0nm,0.5s
TIC Toumodi 120.69 332 *e*PKIKP PKPdf 12 47 58.8 -0.7
comp=Z,11nm,0.3s
KIC Kosan Boka 120.87 332 *e*PKIKP PKPdf 12 47 59.1 -0.7
comp=Z,21nm,0.7s
LIC Lamto 121.09 332 *e*PKIKP PKPdf 12 47 59.5 -0.7
comp=Z,56nm,1.0s
LSZ Lusaka 122.96 286 *e*PKIKP PKPdf 12 48 03.7 +0.1
NNA Nana 125.70 64 PKP PKPdf 12 48 08.1 -0.8
comp=Z,6.8nm,0.6s,baz=210,slow=21,SNR=3.6
LBTB Lobatse 131.70 280 PKP PKPdf 12 48 20.3 +0.2
comp=Z,8.3nm,0.7s,baz=102,slow=1.8,SNR=9.6
LBTB SKPbc SKPbc 12 51 18.3 0.0
comp=Z,11nm,1.0s,baz=123,slow=5.8,SNR=5.0
LBTB Lobatse 131.70 280 PKIKP PKPdf 12 48 20.3 +0.2
LBTB pmax pmax
comp=Z,8.0nm,0.7s
LBTB pmax pmax
comp=N,11nm,1.0s
MAW Mawson 133.67 212 PKP PKPdf 12 48 22.1 -0.3
comp=N,2.7nm,0.9s,baz=321,slow=6.6,SNR=4.6
MAW SKPbc SKPbc 12 51 22.5 -1.1
comp=N,5.4nm,0.8s,baz=341,slow=6.0,SNR=8.1
MAW Mawson 133.67 212 PKIKP PKPdf 12 48 22.1 -0.3
MAW pmax pmax
comp=Z,3.0nm,0.9s
MAW pmax pmax
comp=N,5.0nm,0.8s
LPAZ La Paz 134.15 58 PKP PKPdf 12 48 25.6 +0.8
comp=N,3.2nm,0.7s,baz=355,slow=5.7,SNR=8.0
LPAZ SKPbc SKPbc 12 51 26.1 -0.7
comp=N,2.8nm,1.1s,baz=38,slow=2.2,SNR=4.1
LPAZ La Paz 134.15 58 PKIKP PKPdf 12 48 25.7 +0.8
LPAZ pmax pmax
comp=Z,3.0nm,0.7s
LPAZ pmax pmax
comp=N,3.0nm,1.1s
BOSA Boshof 134.38 276 PKP PKPdf 12 48 25.6 +0.6
comp=N,8.1nm,0.9s,baz=311,slow=5.1,SNR=5.4
BOSA Boshof 134.38 276 PKIKP PKPdf 12 48 25.6 +0.6
BOSA pmax pmax
comp=Z,8.0nm,0.9s
SIV San Ignacio 137.66 50 PKhKP PKPpre 12 48 18.4
comp=Z,1.7nm,0.6s,baz=321,slow=4.3,SNR=7.7
SIV PKP PKPdf 12 48 30.9 -0.5
comp=Z,11nm,1.0s,baz=286,slow=2.2,SNR=17
SIV SKPbc SKPbc 12 51 36.8 -0.7
comp=Z,1.9nm,0.9s,baz=331,slow=6.8,SNR=4.6
SIV San Ignacio 137.66 50 PKP PKPdf 12 48 30.9 -0.5
SIV SKPbc SKPbc 12 51 36.8 -0.7
QSPA South Pole Qui 138.93 180 SKPbc SKPbc 12 51 37.3 -1.7
comp=Z,3.9nm,0.6s,baz=268,slow=1.2,SNR=13
QSPA South Pole Qui 138.93 180 *e*PKPdf PKPdf 12 48 30.6 -1.3
SYO Syowa Base 142.34 213‖ *e*X PKPpre 12 48 32.8
SYO Syowa Base 142.34 213‖ *e*PKiKP PKiKP 12 48 44.6 +3.2
CPUP Villa Florida 148.15 55 PKP PKPdf 12 48 48.6 -0.9
comp=Z,25nm,0.6s,baz=314,slow=4.0,SNR=8.7
CPUP PKPbc PKPbc 12 48 52.3 -0.9
comp=Z,25nm,0.6s,baz=309,slow=2.1,SNR=63
CPUP pPKPbc pPKPbc 12 50 02.4 -2.0
comp=Z,10nm,0.9s,baz=306,slow=3.1,SNR=2.5
PLCA Paso Flores 149.49 90 PKP PKPdf 12 48 50.2 -1.0
comp=Z,3.8nm,0.9s,baz=129,slow=2.9,SNR=6.5
PLCA PKPbc PKPbc 12 48 56.0 -0.1
comp=Z,46nm,0.7s,baz=293,slow=2.9,SNR=121
PLCA pPKPbc pPKPbc 12 50 05.5 -2.1
comp=Z,8.4nm,0.9s,baz=257,slow=3.6,SNR=2.5
PLCA Paso Flores 149.49 90 PKP PKPdf 12 48 50.2 -1.0
PLCA PKPbc PKPbc 12 48 56.0 -0.1
PLCA pPKPbc pPKPbc 12 50 05.5 -2.1
SPB Sao Paulo 150.47 37 *e*PKPbc PKPbc 12 48 59.2 +0.2
VNA1 Neumayer--Stat 156.43 197 *e*PKPdf PKPab 12 49 29.5 -1.2
VNA1 *e* 12 50 40.0

TAP 09 12:35:36.8, 23°.45N×120°.58E, h8km, ML2.2, 4C, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHN4	**Tsaushan**	**0.10**	**172**	⇑ *i*P	Pg	12 35 39.7	+0.6
	baz=170						
CHN4				S	Sg	12 35 42.0	+1.4
	baz=170						
CHN5	**Tsauling**	**0.18**	**31**	P	Pg	12 35 41.0	+0.5
	baz=31						
CHN5				S	Sg	12 35 44.3	+1.4
	baz=31						
TWK	**Hsinying**	**0.20**	**205**	P	Pg	12 35 41.6	+0.8
	baz=201						
TWK				*e*S	Sg	12 35 45.4	+1.9
	baz=201						
WTP	**Ta-pu**	**0.20**	**171**	P	Pg	12 35 41.7	+0.9
	baz=168						
WTP				S	Sg	12 35 45.7	+2.1
	baz=168						
ALS	**Alishan**	**0.22**	**73**	⇑ *i*P	Pg	12 35 42.4	+1.2
	baz=73						
ALS				*i*S	Sg	12 35 46.5	+2.4
	baz=73						
WGK	**Gukeng**	**0.24**	**356**	*e*P	Pg	12 35 42.3	+0.7
	baz=358						
WGK				*e*S	Sg	12 35 47.3	+2.4
	baz=358						
CHN1	**Nanshi**	**0.26**	**190**	⇑ *i*P	Pg	12 35 43.0	+1.0
	baz=189						
CHN1				S	Sg	12 35 47.6	+2.1
	baz=189						
STYT	**Tauyuan**	**0.33**	**150**	*e*P	Pg	12 35 44.1	+0.9
	baz=148						
YUS	**Yu-Shan**	**0.35**	**83**	⇑ *i*P	Pg	12 35 45.1	+1.5
	baz=83						
YUS				S	Sg	12 35 51.0	+2.8
	baz=83						
CHN8	**Yiju**	**0.35**	**254**	*e*P	Pg	12 35 44.7	+1.0
	baz=253						
CHN8				*e*S	Sg	12 35 51.1	+2.8
	baz=253						
SGST	**Jiashian**	**0.36**	**179**	*e*P	Pg	12 35 45.0	+1.1
	baz=178						
SGST				*e*S	Sg	12 35 51.4	+2.8
	baz=178						
WSF	**Szhu**	**0.38**	**301**	*e*P	Pg	12 35 45.2	+1.0
	baz=300						
WSF				*e*S	Sg	12 35 51.5	+2.3
	baz=300						
SCLT	**Jiali**	**0.44**	**233**	*e*P	Pg	12 35 46.1	+0.7
	baz=231						
SCLT				*e*S	Sg	12 35 54.8	+3.5
	baz=231						
ELDTW	**Lidau**	**0.48**	**122**	*i*P	Pg	12 35 47.0	+1.0
	baz=121						
ELDTW				S	Sg	12 35 54.4	+2.1
	baz=121						
WTCT	**Ta-ch'eng**	**0.50**	**327**	*e*P	Pg	12 35 46.8	+0.3
	baz=327						
SMLT	**Sun Moon Lake**	**0.53**	**34**	*e*P	Pg	12 35 48.4	+1.4
	baz=34						
SMLT				*e*S	Sg	12 35 56.7	+2.8
	baz=34						
TWM1	**Shoushan**	**0.64**	**193**	*e*P	Pg	12 35 52.0	+2.9
	baz=192						
TWF1	**Yuli**	**0.67**	**98**	*e*P	Pg	12 35 50.9	+1.2
	baz=97						
TWF1				*e*S	Sg	12 36 00.1	+1.8
	baz=97						
EHY	**Hungye**	**0.69**	**85**	*e*P	Pg	12 35 51.1	+1.1
	baz=85						
EHY				*e*S	Sg	12 36 01.1	+2.1
	baz=85						
SSD	**Sandimen**	**0.70**	**176**	*e*P	Pg	12 35 51.6	+1.4
	baz=175						
SSD				*e*S	Sg	12 36 01.8	+2.5
	baz=175						
TWG	**Pinlang**	**0.77**	**144**	*e*P	Sg	12 36 04.0	+2.4
	33nm,0.6s						
TWG	**Pinlang**	**0.77**	**144**	*e*P	Pg	12 35 53.3	+1.6
	baz=143						
TWG				*e*S	Sg	12 36 03.7	+2.1
	baz=143						
ESL	**Shilin**	**0.87**	**65**	*e*P	Pg	12 35 54.5	+1.0
	baz=65						
WHF	**Hehuan Shan**	**0.94**	**42**	*e*P	Pg	12 35 55.9	+1.0
	baz=42						
WHF				*e*S	Sg	12 36 09.4	+2.3
	baz=42						
TWT	**Tachien**	**0.97**	**34**	*e*P	Pg	12 35 56.6	+1.1
	baz=33						
TWT				*e*S	Sg	12 36 09.7	+1.5
	baz=33						
EAST	**Anshuo**	**1.09**	**167**	*e*P	Pg	12 35 58.5	+0.8
	baz=166						
EAST				*e*S	Sg	12 36 14.3	+2.5
	baz=166						
NSK	**Sanguang**	**1.42**	**30**	*e*P	Pn	12 36 01.4	-1.5
	baz=30						
NSK				*e*S	Sb	12 36 22.4	+0.6
	baz=30						
ENTT	**Nioudou**	**1.49**	**37**	*e*P	Pn	12 36 04.7	+0.7
	baz=37						
ENTT				*e*S	Sn	12 36 24.4	+0.8
	baz=37						

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*NEIC **09** 12:36:19.5, 15°.15N×94°.46W, h16km, MD4.1(MEX), After MEX.*

MEX 09 12:36:19.5±0.8, 15°.15N×94°.46W, h16km±57km, MD4.1, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.31**	**65**	*i*P	Pn	12 36 39.6	-3.6
PCIG				*i*S	Sn	12 36 54.6	-5.7
HUIG	**Huatulco**	**1.71**	**291**	*i*P	Pn	12 36 45.8	-2.8
HUIG				*i*S	Sn	12 37 04.2	-5.9
HUIG	**Huatulco**	**1.71**	**291**	*i*P	Pn	12 36 45.8	-2.8
HUIG				*i*S	Sn	12 37 04.2	-5.9
TGIG		**2.06**	**38**	*i*P	Pn	12 36 50.3	-3.2
TGIG				*i*S	Sn	12 37 14.6	-4.3
THIG		**2.13**	**96**	*e*P	Pn	12 36 50.6	-3.8
THIG				*i*S	Sn	12 37 15.8	-4.7
SCX	**San Cristobal**	**2.36**	**48**	*i*P	Pn	12 36 57.2	-0.3
SCX				*i*S	Sn	12 37 22.4	-3.7
SCX	**San Cristobal**	**2.36**	**48**	*i*P	Pn	12 36 57.2	-0.3
SCX				*i*S	Sn	12 37 22.4	-3.7
VHO	**Vista Hermosa**	**2.91**	**311**	*i*P	Pn	12 37 02.5	-2.5
VHO				*i*S	Sn	12 37 36.3	-3.4
VHO	**Vista Hermosa**	**2.91**	**311**	*i*P	Pn	12 37 02.5	-2.5
VHO				*i*S	Sn	12 37 36.3	-3.4
PNIG	**Pinotepa**	**3.75**	**290**	*e*P	Pn	12 37 13.8	-2.8
PNIG				*i*S	Sn	12 37 56.6	-3.8
PNIG	**Pinotepa**	**3.75**	**290**	*e*P	Pn	12 37 13.8	-2.8
PNIG				*i*S	Sn	12 37 56.6	-3.8
UTMO	**Huajuapan**	**4.17**	**310**	*e*P	Pn	12 37 20.4	-2.2
UTMO				*i*S	Sn	12 38 07.8	-3.2
PPM	**Popocatepetl**	**5.57**	**315**	*e*P	Pn	12 37 40.0	-1.8
PPM				*i*S	Sn	12 38 48.5	+3.0
PPM	**Popocatepetl**	**5.57**	**315**	*e*P	Pn	12 37 40.0	-1.8
PPM				*i*S	Sn	12 38 48.5	+3.0

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*ISCJB **09** 12:42:31.6±0.7, 32°.15N±0°.04×104°.96E±0°.09, h10km, mb3.6/3, Error ellipse: s-maj=10.6km s-min=6.0km az=10.9*

*IDC **09** 12:42:32.3±1.3, 32°.06N×105°.01E, h0km, mb3.5/3, mb1 3.6/5, mb1mx3.4/25, mbtmp3.4/5, ML3.2/2, Error ellipse: s-maj=43.7km s-min=24.6km az=60.0*

*BJI **09** 12:42:36.5, 32°.22N×104°.84E, h16km, ML3.5/11, Ms3.4/2, Ms7 3.3/2*

ISC 09 12:42:33.4±0.7, 32°.17N±0°.04×104°.92E±0°.08, h10km, n8, σ1§50/14, mb3.6/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.60**	**219**	Pg	**Pg**	**12 43 02.6**	**-1.5**
CD2				Sg	**Sg**	**12 43 24.7**	**-0.1**
CD2				smax			
	comp=N,2μm,0.6s						
LZH	**Lanzhou**	**4.01**	**347**	Pn	**Pn**	**12 43 37.0**	**+2.1**
LZH				Pg	**Pg**	**12 43 47.3**	**-2.9**
LZH				Sn	**Sn**	**12 44 22.0**	**+0.1**
LZH				Sg	**Sg**	**12 44 37.2**	**-5.0**
LZH				smax			
	comp=N,190nm,1.0s						
LZH				smax			
	comp=E,230nm,1.0s						
LZH				LR	LR		
	comp=E,430nm,6.8s						
LZH				LR	LR		
	comp=Z,430nm,8.0s						
GYA	**Guiyang**	**5.89**	**165**	Pn	**Pn**	**12 44 05.0**	**+4.2**
GYA				Sn	**Sn**	**12 45 11.0**	**+2.7**
GYA				Sg	**Sg**	**12 45 42.3**	**-0.3**
GYA				smax			
	comp=N,80nm,0.7s						
GYA				smax			
	comp=E,80nm,0.8s						
SONM	**Songino Array**	**15.69**	**4**	Pn	**Pn**	**12 46 18.2**	**+3.8**
	comp=E,0.1nm,0.3s,baz=178,slow=9.7,SNR=2.0						
KSRS	**Korea Array**	**19.59**	**68**	P	**Pn**	**12 47 00.7**	**-2.4**
	comp=E,0.1nm,0.3s,baz=251,slow=9.3,SNR=3.1						
MKAR	**Makanchi Array**	**22.66**	**317**	P	**P**	**12 47 36.0**	**+1.3**
	comp=E,0.4nm,0.7s,mb3.0,baz=130,slow=13,SNR=2.3						
WRA	**Warramunga Arr**	**58.98**	**147**	P	**P**	**12 52 32.9**	**-0.4**
	comp=E,1.8nm,0.9s,mb4.1,baz=339,slow=7.8,SNR=13						
ASAR	**Alice Springs**	**62.05**	**150**	P	**P**	**12 52 54.0**	**-0.2**
	comp=E,0.3nm,0.4s,mb3.7,baz=332,slow=6.5,SNR=9.3						

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*ISCJB **09** 12:43:12.0±0.7, 6°.92N±0°.06×72°.97W±0°.06, h175km±6km, mb3.8/8, Error ellipse: s-maj=10.9km s-min=9.0km az=142.4*

*FUNV **09** 12:43:12.6, 6°.78N×73°.06W, h173km, MW3.6*

*IDC **09** 12:43:12.3±1.3, 6°.76N×73°.11W, h163km±13km, mb3.5/6, mb1 3.8/8, mb1mx3.5/20, mbtmp3.5/8, MS3.3/1, Ms1 3.3/1, ms1mx2.3/21, Error ellipse: s-maj=25.2km s-min=17.5km az=121.0*

*NEIC **09** 12:43:12.7±0.9, 6°.74N×73°.06W, h174km±9km, mb4.2/2, Error ellipse: s-maj=17.4km s-min=13.3km az=137.0*

ISC 09 12:43:12.5±0.6, 6°.87N±0°.06×72°.97W±0°.06, h166km±5km, n40, σ1§08/47, mb3.8/8, 11C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.19**	**33**	‖ *i*P	**Pn**	**12 43 41.4**	**+1.1**
CAPV				*e*S	**Sn**	**12 44 02.7**	**+0.9**
ROSC	**El Rosal**	**2.41**	**214**	P	**Pn**	**12 43 53.2**	**-0.2**
	68nm,0.3s,baz=287,slow=9.6,SNR=54						
ROSC				S	**Sn**	**12 44 22.1**	**-2.9**
	63nm,0.3s,baz=96,slow=21,SNR=14						

VIGV El Vigia 2.53 39⇑*i*P Pn 12 43 55.8 +1.1
VIGV *e*S **Sn** **12 44 27.9 +0.4**
SOCV Socops 2.53 56⇑*i*P Pn 12 43 56.0 +1.2
SOCV *e*S **Sn** **12 44 27.7 +0.3**
SDV Santo Domingo 3.07 49 *e*Pn Pn 12 44 02.8 +1.4
SDV *e*Sn **Sn** **12 44 39.7 +0.5**
ELOV Elorza 3.47 88⇑*i*P Pn 12 44 07.4 +1.0
VIRV Villa del Rosa 3.66 9 *i*P Pn 12 44 08.4 -0.4
VIRV *e*S **Sn** **12 44 51.1 -1.6**
QARV Quebrada Arrib 4.11 36⇑*i*P Pn 12 44 15.6 +1.0
QARV *e*S **Sn** **12 45 01.9 -1.2**
SANV Sanarito 4.29 52⇑*i*P Pn 12 44 17.4 +0.4
SANV *e*S **Sn** **12 45 05.3 -2.0**
CURV Curarigua 4.32 43⇓*i*P Pn 12 44 18.4 +1.1
CURV *e*S **Sn** **12 45 05.9 -2.0**
DABV Dabajuro 4.64 30 *e*P Pn 12 44 21.7 +0.1
TEPV Terepaima 4.84 50⇑*i*P Pn 12 44 24.9 +0.7
SIQV Siquisique 4.89 40⇑*i*P Pn 12 44 25.0 +0.3
BAUV El Baul 5.30 67⇑*i*P Pn 12 44 29.4 -0.8
BAUV *e*S **Sn** **12 45 26.5 -4.5**
MAPV Macapo 5.35 56⇑*i*P Pn 12 44 31.0 +0.2
IMOV Isla Los Monje 5.83 20 *e*P Pn 12 44 36.8 -0.3
MONV Montecano 5.86 30⇓*e*P Pn 12 44 36.5 -1.1
TURV Turiamo 6.20 55 *e*P Pn 12 44 41.7 -0.3
CAOV Caicara del Or 6.62 86⇑*i*P Pn 12 44 46.2 -1.3
MERV Las Mercedes 7.02 70 *e*P Pn 12 44 52.0 -0.9
BIRV Birongo 7.54 61 *e*P Pn 12 44 59.0 -0.7
CUPV Cœpira 7.78 65⇑*i*P Pn 12 45 02.2 -0.8
PCRV Puerto La Cruz 8.88 68 P Pn 12 45 19.4 +1.9
1.8nm,0.3s,baz=228,slow=7.9,SNR=9.3
PCRV Puerto La Cruz 8.88 68 *e*P Pn 12 45 17.7 +0.2
MTDJ Mount Denham 12.13 339 *e*Pn Pn 12 46 03.1 +3.0
MTDJ *e*Sn **Sn** **12 48 05.0 -10**
CCM Cathedral Cave 35.19 335 *e*P P 12 49 50.7 0.0
4.0nm,0.8s,mb4.1
TXAR Lajitas Array 36.54 312 P P 12 50 01.1 -1.2
0.2nm,0.4s,mb3.1,baz=128,slow=9.0,SNR=5.8
TXAR PcP PcP 12 52 24.0 +1.7
0.3nm,0.6s,baz=138,slow=4.6,SNR=4.3
CPRX Cap Rock 38.72 316 *e*P P 12 50 17.6 -3.0
3.5nm,0.7s,mb4.1
SCHQ Schefferville 48.08 5 P P 12 51 36.7 +1.6
2.6nm,0.5s,mb4.1,baz=199,slow=7.6,SNR=5.5
SCHQ Schefferville 48.08 5 P P 12 51 36.7 +1.5
PDAR Pinedale Array 48.13 324 P P 12 51 36.6 +0.9
0.7nm,0.6s,mb3.5,baz=127,slow=8.9,SNR=8.2
NVAR Mina Array Bea 51.55 315 P P 12 52 01.5 -0.2
0.5nm,0.7s,mb3.2,baz=125,slow=7.8,SNR=5.1
NVAR PcP PcP 12 53 14.4 +1.1
0.3nm,0.6s,baz=142,slow=4.5,SNR=2.9
YBH Yreka Blue Hor 56.09 316 LR LR 13 19 07.8
comp=Z,26nm,18.0s,baz=270,slow=38
YKA Yellowknife Ar 63.27 340 P P 12 53 23.4 +0.3
2.4nm,0.6s,mb4.2,baz=132,slow=6.7,SNR=12
YKA Yellowknife Ar 63.27 340 P P 12 53 23.4 +0.3
ARCES ARCESS Array B 86.58 20 P P 12 55 37.2 +0.6
1.5nm,1.0s,mb3.8,baz=63,slow=0.5,SNR=4.0
ARCES ARCESS Array B 86.58 20 P P 12 55 37.2 +0.6
MKAR Makanchi Array 122.23 20 PKP PKPdf 13 01 47.6 -0.2
0.3nm,0.4s,baz=304,slow=2.0,SNR=6.8
ASAR Alice Springs 149.26 234 PKPbc PKPbc 13 02 41.5 -0.9
1.6nm,0.5s,baz=119,slow=3.3,SNR=27
WRA Warramunga Arr 150.49 241 PKPbc PKPbc 13 02 44.8 -0.7
1.6nm,0.4s,baz=107,slow=2.7,SNR=62
WRA pPKPbc pPKPbc 13 03 25.2 -3.6
0.5nm,0.5s,baz=110,slow=2.5,SNR=5.3

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*NOU **09** 12:47:31.5±1.3, 20.°99S×169.°84E, h10km, MD3.0, ML3.4*
*ISCJB **09** 12:47:32.5±3.0, 23.°2S±0.°3×169.°6E±0.°1, h17km±22km, mb4.0/5, Error ellipse: s-maj=44.8km s-min=10.0km az=18.5*
*IDC **09** 12:47:33.6±2.6, 22.°30S×169.°31E, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.9/14, mbtmp3.9/5, MS3.7/1, Ms1 3.7/1, ms1mx2.7/25, Error ellipse: s-maj=116.9km s-min=29.5km az=160.0*
ISC 09 12:47:32.6±3.0, 23.°1S±0.°3×169.°60E±0.°10, h6km±21km, n13, σ0.°70/17, mb4.0/5, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.66**	**289**	*e*S	**Sn**	**12 48 49.1**	**+0.4**
PLUM	**Mont Dore**	**2.84**	**285**	*e*P	**Pn**	**12 48 18.8**	**+0.3**
PLUM				*e*S	**Sn**	**12 48 54.5**	**+1.5**
NORM	**Noumea**	**2.99**	**285**	*e*P	**Pn**	**12 48 20.8**	**+0.2**
NORM				*e*S	**Sn**	**12 48 56.1**	**-0.7**
MVNO	**Noumea**	**3.02**	**284**	*e*P	**Pn**	**12 48 20.7**	**-0.2**
MVNO				*e*S	**Sn**	**12 48 57.8**	**+0.3**
DZM	**Mont Dzumac**	**3.07**	**288**	*e*P	**Pn**	**12 48 21.4**	**-0.3**
DZM				*e*S	**Sn**	**12 48 57.6**	**-1.3**
DZM				AMP		12 49 06.4	
comp=Z,1μm,1.0s							
NOUC	**Port Laguerre**	**3.19**	**287**	*e*P	**Pn**	**12 48 23.4**	**+0.1**
NOUC				*e*S	**Sn**	**12 49 01.7**	**+0.1**
NOUC				AMP		12 49 07.7	
comp=Z,56nm,4.4s							
RAO	**Raoul Island**	**12.80**	**121**	LR	LR	12 54 40.2	
comp=Z,376nm,20.9s,baz=110,slow=32							
CTA	**Charters Tower**	**21.90**	**273**	P	**P**	**12 52 27.1**	**+0.5**
comp=Z,4.6nm,0.9s,mb3.9,baz=110,slow=13,SNR=4.1							
ASAR	**Alice Springs**	**32.72**	**262**	P	**P**	**12 54 06.5**	**+0.2**
comp=Z,1.4nm,0.7s,mb4.0,baz=93,slow=10,SNR=17							
WRA	**Warramunga Arr**	**32.90**	**269**	P	**P**	**12 54 07.0**	**-0.9**
comp=Z,0.4nm,0.4s,mb3.7,baz=98,slow=8.4,SNR=13							
SONM	**Songino Array**	**90.45**	**323**	P	**P**	**13 00 34.0**	**-1.0**
comp=Z,0.3nm,0.3s,mb4.0,baz=134,slow=4.2,SNR=3.5							
SONM	**Songino Array**	**90.45**	**323**	P	**P**	**13 00 34.0**	**-1.0**
NVAR	**Mina Array Bea**	**91.07**	**48**	P	**P**	**13 00 39.0**	**+0.9**
comp=Z,0.7nm,0.7s,mb4.1,baz=235,slow=9.7,SNR=6.6							

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*ISCJB **09** 12:49:59.7±0.3, 44.°60N±0.°01×7.°22E±0.°03, h14km±2km, Error ellipse: s-maj=3.5km s-min=2.3km az=165.8*
*CSEM **09** 12:50:00.2±0.1, 44.°60N×7.°25E, h12km, ML2.8/20, Error ellipse: s-maj=2.1km s-min=1.3km az=77.0*
*ROM **09** 12:50:00.3±0.2, 44.°58N×7.°20E, h13km±4km, Md2.3/9, Ml2.3/7, Error ellipse: s-maj=3.6km s-min=2.5km az=48.0*
*LDG **09** 12:50:00.6±0.1, 44.°60N×7.°28E, h2km, Md2.7/2, Ml2.8/12, Error ellipse: s-maj=1.9km s-min=0.9km az=77.0*
*STR **09** 12:50:00.5±0.3, 44.°60N×7.°26E, h5km, Ml2.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*NEIC **09** 12:50:00.3, 44.°58N×7.°20E, h13km, ML2.8(LDG), ML2.4(STR), ML2.3(ROM), After ROM.*
ISC 09 12:50:00.4±0.3, 44.°60N±0.°01×7.°24E±0.°03, h13km±2km, n82, σ0.°59/154, 6C, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOI	**San Damiano**	**0.10**	**175**	Pg	**Pg**	**12 50 03.7**	**+0.4**
DOI				Sg	**Sg**	**12 50 05.3**	**-0.1**
DOI	**San Damiano**	**0.10**	**175**	Pg	**Pg**	**12 50 03.7**	**+0.4**
DOI				Sg	**Sg**	**12 50 05.3**	**-0.1**
3μm,0.3s							
DOI	**San Damiano**	**0.10**	**175**	Pg	**Pg**	**12 50 03.7**	**+0.4**
DOI				Sg	**Sg**	**12 50 05.3**	**-0.1**
3μm,0.3s							
PZZ	**Stroppo**	**0.13**	**222**⇑	*i*Pg	**Pg**	**12 50 03.8**	**+0.1**
PZZ				Sg	**Sg**	**12 50 05.7**	**-0.3**
PZZ	**Stroppo**	**0.13**	**222**⇑	*i*Pg	**Pg**	**12 50 03.8**	**+0.1**
PZZ				Sg	**Sg**	**12 50 05.7**	**-0.3**
3μm,0.2s							
PZZ	**Stroppo**	**0.13**	**222**⇑	*i*Pg	**Pg**	**12 50 03.8**	**+0.1**
PZZ				Sg	**Sg**	**12 50 05.7**	**-0.3**
3μm,0.2s							
SURF	**Saint Ours**	**0.33**	**249**	Pg	**Pg**	**12 50 07.0**	**0.0**
SURF				Sg	**Sg**	**12 50 12.3**	**+0.9**
SURF	**Saint Ours**	**0.33**	**249**	Pg	**Pg**	**12 50 07.0**	**0.0**
SURF				Sg	**Sg**	**12 50 12.3**	**+0.9**
MBDF	**Montbardon**	**0.35**	**291**	*e*Pg	**Pg**	**12 50 08.0**	**+0.5**
MBDF				*e*Sg	**Sg**	**12 50 12.7**	**+0.4**
240nm,0.2s,SNR=1.0							
MBDF	**Montbardon**	**0.35**	**291**	*e*Pg	**Pg**	**12 50 08.0**	**+0.5**
MBDF				*e*Sg	**Sg**	**12 50 12.7**	**+0.4**
120nm,0.2s,SNR=1.0							
STV	**Sant Anna di V**	**0.36**	**170**	Pg	**Pg**	**12 50 07.7**	**+0.1**
STV				Sg	**Sg**	**12 50 12.3**	**-0.2**
STV	**Sant Anna di V**	**0.36**	**170**	Pg	**Pg**	**12 50 07.7**	**+0.1**
STV				Sg	**Sg**	**12 50 12.3**	**-0.2**
294nm,0.2s							
STV	**Sant Anna di V**	**0.36**	**170**	Pg	**Pg**	**12 50 07.7**	**+0.1**
STV				Sg	**Sg**	**12 50 12.3**	**-0.2**
294nm,0.2s							
RSP	**Reno Superiore**	**0.55**	**2**	Pg	**Pg**	**12 50 11.3**	**+0.2**
RSP				Sg	**Sg**	**12 50 18.5**	**+0.1**
RSP	**Reno Superiore**	**0.55**	**2**	Pg	**Pg**	**12 50 11.3**	**+0.2**
RSP				Sg	**Sg**	**12 50 18.5**	**+0.1**
63nm,0.2s							
RSP	**Reno Superiore**	**0.55**	**2**	Pg	**Pg**	**12 50 11.3**	**+0.2**
RSP				Sg	**Sg**	**12 50 18.5**	**+0.1**
63nm,0.2s							
TOUF	**Mont Tournerai**	**0.59**	**179**	Pg	**Pg**	**12 50 11.7**	**-0.1**
TOUF	**Mont Tournerai**	**0.59**	**179**	Pg	**Pg**	**12 50 11.7**	**-0.1**
BNI	**Bardonecchia**	**0.60**	**319**	*e*Pg	**Pg**	**12 50 12.6**	**+0.5**
BNI				Sg	**Sg**	**12 50 20.1**	**0.0**
BNI				*e*Sg	**Sg**	**12 50 20.5**	**+0.4**
BNI	**Bardonecchia**	**0.60**	**319**	Pg	**Pg**	**12 50 12.6**	**+0.5**
BNI				Sg	**Sg**	**12 50 20.1**	**0.0**
34nm,0.5s							
BNI	**Bardonecchia**	**0.60**	**319**	Pg	**Pg**	**12 50 12.6**	**+0.5**
BNI				Sg	**Sg**	**12 50 20.1**	**0.0**
34nm,0.5s							
AUTN	**L'Aution**	**0.62**	**167**	Pg	**Pg**	**12 50 12.4**	**-0.1**
AUTN				Sg	**Sg**	**12 50 20.8**	**+0.2**
AUTN	**L'Aution**	**0.62**	**167**	Pg	**Pg**	**12 50 12.4**	**-0.1**
AUTN				Sg	**Sg**	**12 50 20.8**	**+0.2**
SAOF	**Saorge**	**0.66**	**159**	Pg	**Pg**	**12 50 12.3**	**-0.8**
SAOF				Sg	**Sg**	**12 50 22.3**	**+0.5**
SAOF	**Saorge**	**0.66**	**159**	Pg	**Pg**	**12 50 12.3**	**-0.8**
SAOF				Sg	**Sg**	**12 50 22.3**	**+0.5**
MONC	**Moncucco Torin**	**0.68**	**46**	Pg	**Pg**	**12 50 15.0**	**+1.3**
MONC	**Moncucco Torin**	**0.68**	**46**	Pg	**Pg**	**12 50 15.0**	**+1.3**
MVIF	**Mont Vial**	**0.71**	**185**	Pg	**Pg**	**12 50 13.9**	**-0.2**
MVIF				Sg	**Sg**	**12 50 23.3**	**-0.1**
MVIF	**Mont Vial**	**0.71**	**185**	Pg	**Pg**	**12 50 13.9**	**-0.2**
MVIF				Sg	**Sg**	**12 50 23.3**	**-0.1**
LUCF	**Luceram**	**0.71**	**174**	Pg	**Pg**	**12 50 13.8**	**-0.4**
LUCF				Sg	**Sg**	**12 50 23.6**	**+0.1**
LUCF	**Luceram**	**0.71**	**174**	Pg	**Pg**	**12 50 13.8**	**-0.4**
LUCF				Sg	**Sg**	**12 50 23.6**	**+0.1**
SBF	**Sospel**	**0.75**	**169**	*e*Pn	**Pn**	**12 50 16.5**	**-0.1**
SBF				*e*Sg	**Sg**	**12 50 24.2**	**-0.6**
58nm,0.3s,SNR=1.0							
SBF	**Sospel**	**0.75**	**169**	*e*Pg	**Pg**	**12 50 14.5**	**-0.4**
SBF				*e*Pn	**Pn**	**12 50 16.5**	**-0.1**
SBF				*e*Sg	**Sg**	**12 50 24.2**	**-0.6**
SBF	**Sospel**	**0.75**	**169**	*e*Pg	**Pg**	**12 50 14.5**	**-0.4**
SBF				*e*Pn	**Pn**	**12 50 16.5**	**-0.1**
SBF				*e*Sg	**Sg**	**12 50 24.2**	**-0.6**
29nm,0.3s,SNR=1.0							
LSD	**Lago del Serru**	**0.86**	**355**	Pg	**Pg**	**12 50 17.0**	**-0.1**
LSD	**Lago del Serru**	**0.86**	**355**	Pg	**Pg**	**12 50 17.0**	**-0.1**
81nm,0.2s							
LSD	**Lago del Serru**	**0.86**	**355**	Pg	**Pg**	**12 50 17.0**	**-0.1**
81nm,0.2s							
CALN	**Calern**	**0.88**	**196**	Pg	**Pg**	**12 50 17.7**	**+0.3**
CALN				Sg	**Sg**	**12 50 29.8**	**+0.8**
CALN	**Calern**	**0.88**	**196**	Pg	**Pg**	**12 50 17.7**	**+0.3**
CALN				Sg	**Sg**	**12 50 29.8**	**+0.8**
PCP	**Piancastagn**	**0.94**	**93**⇑	*i*Pg	**Pg**	**12 50 18.4**	**-0.1**
PCP				Sg	**Sg**	**12 50 31.0**	**+0.3**
PCP	**Piancastagn**	**0.94**	**93**⇑	*i*Pg	**Pg**	**12 50 18.4**	**-0.1**
PCP				Sg	**Sg**	**12 50 31.0**	**+0.3**
37nm,0.4s							
PCP	**Piancastagn**	**0.94**	**93**⇑	*i*Pg	**Pg**	**12 50 18.4**	**-0.1**
PCP				Sg	**Sg**	**12 50 31.0**	**+0.3**
37nm,0.4s							
LPG	**La Plagne**	**0.96**	**339**	*e*Pn	**Pn**	**12 50 19.9**	**+0.4**
SNR=1.0							
LPG				*e*Sg	**Sg**	**12 50 31.9**	**+0.4**
35nm,0.3s,SNR=1.0							
LPG	**La Plagne**	**0.96**	**339**	*e*Pg	**Pg**	**12 50 18.4**	**-0.5**
LPG				*e*Pn	**Pn**	**12 50 19.9**	**+0.4**
LPG				*e*Sg	**Sg**	**12 50 31.9**	**+0.4**
LPG	**La Plagne**	**0.96**	**339**	*e*Pg	**Pg**	**12 50 18.4**	**-0.5**
SNR=1.0							
LPG	**La Plagne**	**0.96**	**339**	*e*Pn	**Pn**	**12 50 19.9**	**+0.4**
SNR=1.0							
LPG				*e*Sg	**Sg**	**12 50 31.9**	**+0.4**
18nm,0.3s,SNR=1.0							
TRAV	**Traversella**	**0.98**	**22**	Pg	**Pg**	**12 50 18.0**	**-1.3**
TRAV	**Traversella**	**0.98**	**22**	Pg	**Pg**	**12 50 18.0**	**-1.3**
TRAV	**Traversella**	**0.98**	**22**	Pg	**Pg**	**12 50 18.0**	**-1.3**
LPL	**La Plagne**	**0.98**	**339**	*e*Pn	**Pn**	**12 50 19.9**	**+0.1**
SNR=1.0							
LPL				*e*Sg	**Sg**	**12 50 32.4**	**+0.2**
28nm,0.2s,SNR=1.0							
LPL	**La Plagne**	**0.98**	**339**	*e*Pg	**Pg**	**12 50 19.4**	**0.0**
LPL				*e*Pn	**Pn**	**12 50 19.9**	**+0.1**
LPL				*e*Sg	**Sg**	**12 50 32.4**	**+0.2**
LPL	**La Plagne**	**0.98**	**339**	*e*Pg	**Pg**	**12 50 19.4**	**0.0**
SNR=1.0							
LPL	**La Plagne**	**0.98**	**339**	*e*Pn	**Pn**	**12 50 19.9**	**+0.1**
SNR=1.0							
LPL				*e*Sg	**Sg**	**12 50 32.4**	**+0.2**
14nm,0.2s,SNR=1.0							
ORIF	**Oris-en-Rattie**	**1.02**	**289**	*e*Pn	**Pn**	**12 50 19.9**	**-0.4**
SNR=1.0							
ORIF				*e*Sg	**Sg**	**12 50 32.5**	**-0.7**
32nm,0.2s							
ORIF	**Oris-en-Rattie**	**1.02**	**289**	*e*Pn	**Pn**	**12 50 19.9**	**-0.4**
SNR=1.0							
ORIF				*e*Sg	**Sg**	**12 50 32.5**	**-0.7**
16nm,0.2s							
FRF	**La Foret Royal**	**1.12**	**202**	*e*Pg	**Pg**	**12 50 21.6**	**-0.4**
FRF				*e*Sg	**Sg**	**12 50 35.8**	**-0.8**
85nm,0.2s							
FRF	**La Foret Royal**	**1.12**	**202**	*e*Pg	**Pg**	**12 50 21.6**	**-0.4**
FRF				*e*Sg	**Sg**	**12 50 35.8**	**-0.8**
43nm,0.2s							
SMRF	**Simiane la Rot**	**1.35**	**243**	*e*Pg	**Pg**	**12 50 26.9**	**+0.7**
SNR=1.0							
SMRF				*e*Sg	**Sg**	**12 50 44.3**	**+0.6**
67nm,0.4s,SNR=1.0							
SMRF	**Simiane la Rot**	**1.35**	**243**	*e*Pn	**Pn**	**12 50 25.9**	**+1.1**
SMRF				*e*Pg	**Pg**	**12 50 26.9**	**+0.7**
SMRF				*e*Sg	**Sg**	**12 50 44.3**	**+0.6**
SMRF	**Simiane la Rot**	**1.35**	**243**	*e*Pn	**Pn**	**12 50 25.9**	**+1.1**
SNR=1.0							
SMRF	**Simiane la Rot**	**1.35**	**243**	*e*Pg	**Pg**	**12 50 26.9**	**+0.7**
SNR=1.0							
SMRF				*e*Sg	**Sg**	**12 50 44.3**	**+0.6**
34nm,0.4s,SNR=1.0							
LMR	**La Mourre**	**1.37**	**203**	*e*Pn	**Pn**	**12 50 24.9**	**-0.2**
SNR=1.0							
LMR				*e*Sg	**Sg**	**12 50 43.8**	**-0.7**
126nm,0.3s							
LMR	**La Mourre**	**1.37**	**203**	*e*Pn	**Pn**	**12 50 24.9**	**-0.2**
SNR=1.0							
LMR				*e*Sg	**Sg**	**12 50 43.8**	**-0.7**
63nm,0.3s							
VIVF	**Saint-Julien-l**	**1.84**	**279**	*e*Pg	**Pg**	**12 50 36.3**	**+0.6**
VIVF				*e*Sn	**Sn**	**12 50 55.2**	**+0.4**
SNR=1.0							
VIVF				*e*Sg	**Sg**	**12 51 00.0**	**+0.3**
12nm,0.4s,SNR=1.0							
VIVF	**Saint-Julien-l**	**1.84**	**279**	*e*Pn	**Pn**	**12 50 32.8**	**+1.1**
VIVF				*e*Pg	**Pg**	**12 50 36.3**	**+0.6**
VIVF				*e*Sn	**Sn**	**12 50 55.2**	**+0.4**
VIVF				*e*Sg	**Sg**	**12 51 00.0**	**+0.3**
VIVF	**Saint-Julien-l**	**1.84**	**279**	*e*Pn	**Pn**	**12 50 32.8**	**+1.1**
SNR=1.0							
VIVF	**Saint-Julien-l**	**1.84**	**279**	*e*Pg	**Pg**	**12 50 36.3**	**+0.6**
VIVF				*e*Sn	**Sn**	**12 50 55.2**	**+0.4**
SNR=1.0							
VIVF				*e*Sg	**Sg**	**12 51 00.0**	**+0.3**
5.8nm,0.4s,SNR=1.0							
CABF	**La Chapelle**	**2.17**	**339**	*e*Pg	**Pg**	**12 50 41.0**	**-0.9**
CABF				*e*Sg	**Sg**	**12 51 09.1**	**-0.9**
3.7nm,0.3s							
CABF	**La Chapelle**	**2.17**	**339**	*e*Pn	**Pn**	**12 50 36.3**	**+0.2**
CABF				*e*Pg	**Pg**	**12 50 41.0**	**-0.9**
CABF				*e*Sg	**Sg**	**12 51 09.1**	**-0.9**
CABF	**La Chapelle**	**2.17**	**339**	*e*Pn	**Pn**	**12 50 36.3**	**+0.2**
SNR=1.0							
CABF	**La Chapelle**	**2.17**	**339**	*e*Pg	**Pg**	**12 50 41.0**	**-0.9**
CABF				*e*Sg	**Sg**	**12 51 09.1**	**-0.9**
1.9nm,0.3s							
LASF	**Ste Croix**	**2.48**	**259**	*e*Pn	**Pn**	**12 50 40.8**	**+0.4**
LASF				*e*Sn	**Sn**	**12 51 10.1**	**-0.4**
3.8nm,0.4s							
LASF	**Ste Croix**	**2.48**	**259**	*e*Pn	**Pn**	**12 50 40.8**	**+0.4**
LASF				*e*Sn	**Sn**	**12 51 10.1**	**-0.4**
1.9nm,0.4s							
SMF	**Signal de Mont**	**3.14**	**312**	*e*Sn	**Sn**	**12 51 26.0**	**-0.8**
SNR=1.0							
SMF				*e*Sg	**Sg**	**12 51 40.2**	**-1.0**
3.7nm,0.3s							
SMF	**Signal de Mont**	**3.14**	**312**	*e*Sn	**Sn**	**12 51 26.0**	**-0.8**
SNR=1.0							
SMF				*e*Sg	**Sg**	**12 51 40.2**	**-1.0**
1.9nm,0.3s							
AVF	**Avril sur Loir**	**3.49**	**310**	*e*Pn	**Pn**	**12 50 55.0**	**+0.7**
SNR=1.0							
AVF				*e*Sg	**Sg**	**12 51 51.7**	**-0.8**
1.9nm,0.3s,SNR=1.0							
AVF	**Avril sur Loir**	**3.49**	**310**	*e*Pn	**Pn**	**12 50 55.0**	**+0.7**
SNR=1.0							
AVF				*e*Sg	**Sg**	**12 51 51.7**	**-0.8**
0.9nm,0.3s,SNR=1.0							
BGF	**Bois d'Agland**	**3.65**	**304**	*e*Pn	**Pn**	**12 50 57.5**	**+1.0**
SNR=1.0							
BGF	**Bois d'Agland**	**3.65**	**304**	*e*Pn	**Pn**	**12 50 57.5**	**+1.0**
SNR=1.0							
MTLF	**Montolieu**	**3.83**	**253**	*e*Sn	**Sn**	**12 51 42.5**	**-1.4**
2.1nm,0.4s							
MTLF	**Montolieu**	**3.83**	**253**	*e*Sn	**Sn**	**12 51 42.5**	**-1.4**
1.0nm,0.4s							

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*IDC **09** 13:19:48.6±1.5, 11.°82N×126.°57E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.6/22, mbtmp3.7/7, Error ellipse: s-maj=114.4km s-min=17.8km az=70.0*
*MAN **09** 13:19:59, 11.°60N×125.°44E, h27km, mb4.8, ML3.7, MS3.7*
ISC 09 13:19:52.2±3.1, 11.°64N±0.°10×126.°0E±0.°2, h17km±17km, n13, σ1.°06/13, mb3.7/7, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.58**	**266**	*e*P	**Pg**	**13 20 03.6**	**-0.1**
OCLP	**Ormoc**	**1.51**	**247**	*e*P	**Pn**	**13 20 18.2**	**-0.2**
CNP	**Catarman**	**1.59**	**303**	*e*P	**Pn**	**13 20 18.2**	**-1.3**
MSLP	**Maasin**	**1.89**	**218**	*e*P	**Pn**	**13 20 25.7**	**+2.1**
PVCP	**Virac**	**2.67**	**317**	*e*P	**Pn**	**13 20 37.5**	**+3.1**
GUIM	**Jordan**	**3.52**	**254**	*e*P	**Pn**	**13 20 45.2**	**-1.0**
FITZ	**Fitzroy Crossi**	**29.56**	**181**	P	**P**	**13 25 56.3**	**+0.2**
5.3nm,1.1s,mb4.2,baz=0.0,slow=8.1,SNR=3.9							
WRA	**Warramunga Arr**	**32.43**	**165**	P	**P**	**13 26 21.2**	**-0.3**
0.5nm,0.9s,mb3.4,baz=351,slow=8.7,SNR=5.5							
ASAR	**Alice Springs**	**35.93**	**168**	P	**P**	**13 26 52.5**	**+0.7**
0.2nm,0.3s,mb3.5,baz=354,slow=8.1,SNR=5.8							
STKA	**Stephens Creek**	**45.77**	**161**	P	**P**	**13 28 11.0**	**-1.9**
1.7nm,0.5s,mb4.2,baz=333,slow=11,SNR=4.7							
MKAR	**Makanchi Array**	**50.80**	**322**	P	**P**	**13 28 51.7**	**+0.1**
0.1nm,0.3s,mb3.2,baz=111,slow=8.0,SNR=3.5							
KURK	**Kurchatov**	**54.81**	**325**	P	**P**	**13 29 21.3**	**+0.1**
0.4nm,0.5s,mb3.8,baz=126,slow=7.2,SNR=3.2							
ARCES	**ARCESS Array B**	**82.83**	**340**	P	**P**	**13 32 15.7**	**+0.4**
1.6nm,1.1s,mb4.0,baz=89,slow=6.7,SNR=5.7							

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*ISCJB **09** 13:30:23.9±0.2, 23.°85N±0.°01×121.°02E±0.°02, h10km±2km, Error ellipse: s-maj=2.7km s-min=1.6km az=30.1*
*TAP **09** 13:30:23.1, 23.°85N×120.°99E, h14km, ML3.7, B*
*NEIC **09** 13:30:23.1±1.0, 23.°87N×120.°99E, h7km±21km, MG3.0(JMA), Error ellipse: s-maj=14.1km s-min=5.6km az=108.0*
ISC 09 13:30:24.0±0.2, 23.°85N±0.°01×121.°01E±0.°02, h11km±2km, n61, σ0.°91/108, 23C-1D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSLB	**Suanglung**	**0.09**	**220**	*e*P	**Pg**	**13 30 25.2**	**-1.3**
SSLB				*e*S	**Sg**	**13 30 27.9**	**-0.5**
SMLT	**Sun Moon Lake**	**0.11**	**286**⇓	*i*P	**Pg**	**13 30 26.6**	**-0.2**
baz=293							
WNT	**Mingjian**	**0.30**	**275**⇑	*i*P	**Pg**	**13 30 30.2**	**+0.1**
baz=276							
WNT				S	**Sg**	**13 30 35.5**	**+1.2**
baz=276							
YUS	**Yu-Shan**	**0.37**	**189**⇑	*i*P	**Pg**	**13 30 31.3**	**0.0**
baz=178							
YUS				*e*S	**Sg**	**13 30 36.5**	**+0.3**
baz=178							
WHF	**Hehuan Shan**	**0.37**	**38**⇑	*i*P	**Pg**	**13 30 31.7**	**+0.3**
baz=47							
WHF				*i* S	**Sg**	**13 30 37.2**	**+0.8**
baz=47							
ESL	**Shilin**	**0.39**	**96**⇑	*i*P	**Pg**	**13 30 31.9**	**+0.2**
baz=95							
ESL				S	**Sg**	**13 30 38.1**	**+1.3**
baz=95							
ALS	**Alishan**	**0.39**	**209**⇑	*i*P	**Pg**	**13 30 31.7**	**0.0**
baz=199							
ALS				S	**Sg**	**13 30 37.5**	**+0.5**
baz=199							
CHN5	**Tsauling**	**0.40**	**230**⇑	*i*P	**Pg**	**13 30 31.8**	**-0.1**
baz=229							
CHN5				*i* S	**Sg**	**13 30 38.5**	**+1.2**
baz=229							
TWT	**Tachien**	**0.42**	**20**

SGST	Jiashian	0.86	207⇑	eP		Pg	13 30 40.2 -0.5
	baz=216						
SGST				S		Sg	13 30 52.5 +0.6
	baz=216						
ENA	Nanau	0.88	49	P		Pg	13 30 40.2 -0.7
	baz=50						
ENA				eS		Sg	13 30 51.4 -0.9
	baz=50						
NSK	Sanguang	0.88	21	⇑P		Pg	13 30 39.9 -1.0
	baz=22						
NSK				eS		Sg	13 30 50.6 -1.8
	baz=22						
YHNB	Yeheng	0.88	22	eP		Pg	13 30 39.6 -1.3
CHN8	Yiju	0.89	236	eP		Pg	13 30 39.9 -1.4
	baz=235						
CHN8				eS		Sg	13 30 53.4 +0.4
	baz=235						
ENTT	Nioudou	0.93	33	⇑P		Pg	13 30 40.9 -1.1
	baz=28						
HSN	Hsinchu	0.94	358	eP		Pg	13 30 43.9 +1.6
	baz=1.0						
HSN				eS		Sg	13 30 56.7 +2.1
	baz=1.0						
CHN3	Shinhua	0.98	218	eP		Pg	13 30 42.3 -0.5
	baz=228						
CHN3				eS		Sg	13 30 57.7 +2.1
	baz=228						
SCLT	Jiali	1.01	228	eP		Pg	13 30 42.9 -0.6
	baz=227						
SCLT				eS		Sg	13 30 58.0 +1.3
	baz=227						
TWG	Pinlang	1.03	177	eP		Pb	13 30 42.9 -0.9
TWG				eS		Sg	13 30 58.0 +0.7
TWG	Pinlang	1.03	177	eP		Pb	13 30 43.4 -0.4
	baz=166						
TWG				eS		Sg	13 30 58.4 +1.1
	baz=166						
TWE	Neicheng	1.05	34	P		Pb	13 30 43.3 -0.9
	baz=46						
TWE				eS		Sg	13 31 00.3 +2.4
	baz=46						
TWC	Suao	1.07	45	i P		Pb	13 30 43.8 -0.8
	baz=46						
TWC				S		Sb	13 30 58.4 -0.1
	baz=46						
TAI1	Yung-k'ang	1.08	222	eP		Pb	13 30 44.5 -0.3
	baz=231						
TAI1				eS		Sb	13 30 59.6 +0.7
	baz=231						
TTN	Taitung	1.10	174	eP		Pb	13 30 44.6 -0.4
	baz=171						
NCU	National Centr	1.12	8	eP		Pb	13 30 43.9 -1.5
	baz=9.0						
NCU				eS		Sb	13 31 00.5 +0.5
	baz=9.0						
ILA	Ilan	1.13	36	eP		Pb	13 30 44.9 -0.6
	baz=38						
SSD	Sandimen	1.16	198	eP		Pb	13 30 45.4 -0.6
	baz=187						
SSD				eS		Sb	13 31 01.0 0.0
	baz=187						
TWM1	Shoushan	1.16	208	eP		Pb	13 30 46.2 +0.2
	baz=207						
TATO	Taipei	1.20	21	eP		Pn	13 30 46.2 -0.5
TWA	Mucha	1.24	25	eP		Pn	13 30 47.4 +0.2
	baz=26						
TWA				eS		Sb	13 31 04.7 +1.4
	baz=26						
TAP1	Taipei	1.27	21	eP		Pn	13 30 47.5 -0.2
	baz=23						
TWS1	Kuangyinshan	1.29	16	eP		Pn	13 30 47.4 -0.6
	baz=2.0						
PNG	Penghu	1.37	258⇑	i P		Pn	13 30 47.0 -2.0
	baz=251						
PNG				eS		Sb	13 31 04.4 -2.6
	baz=251						
NWF	Wu-fen Shan	1.40	30	P		Pn	13 30 50.9 +1.5
	baz=15						
NWF				eS		Sn	13 31 10.2 +2.3
	baz=15						
TWB1	Santiao Chiao	1.45	37	eP		Pn	13 30 51.2 +1.0
	baz=48						
TWB1				eS		Sn	13 31 10.4 +1.2
	baz=48						
EAST	Anshuo	1.47	186	P		Pn	13 30 50.5 0.0
	baz=177						
EAST				eS		Sn	13 31 09.8 +0.1
	baz=177						
TAW	Tawu	1.49	184	eP		Pn	13 30 51.3 +0.5
	baz=199						
TAW				eS		Sn	13 31 11.5 +1.3
	baz=199						
TWY	Chenhua	1.51	21	eP		Pn	13 30 51.7 +0.7
	baz=23						
SCZT	Fangliau	1.52	194	eP		Pn	13 30 50.8 -0.3
	baz=203						
SCZT				eS		Sn	13 31 10.7 -0.2
	baz=203						
TWK1	Hengchun	1.91	186	eP		Pn	13 30 56.0 -0.5
	baz=202						
KNM	Kinmen	2.42	284	eP		Pn	13 31 03.5 0.0
	baz=283						
QZH	Quanzhou	2.46	297	Pn		Pn	13 31 01.6 -2.4
QZH				Sn		Sn	13 31 28.7 -5.4
QZH				smax			
	comp=N,110nm,0.4s						
QZH				smax			
	comp=E,110nm,0.4s						

*ISCJB **09** 14:07:47.4±2.3, 53°.3N±0°.1×163°.36W±0°.06, h24km±15km, mb3.9/17, MS3.2/5, Error ellipse: s-maj=17.6km s-min=6.0km az=174.7*

*IDC **09** 14:07:49.7±1.7, 53°.95N×163°.77W, h0km, mb3.8/15, mb1 3.9/16, mb1mx3.8/30, mbtmp3.8/16, ML3.8/1, MS3.2/4, Ms1 3.2/4, ms1mx2.8/36, Error ellipse: s-maj=44.4km s-min=18.3km az=171.0*

*NEIC **09** 14:07:53.0±2.5, 53°.74N×163°.59W, h29km±15km, mb4.1/3, ML3.5(AEIC), Error ellipse: s-maj=24.9km s-min=6.3km az=170.0*

ISC 09 14:07:48.6±2.5, 53°.4N±0°.1×163°.45W±0°.07, h15km±16km, n34, σ0s85/37, mb3.9/17, MS3.2/5, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKUT	Akutan	1.58	301	P	Pn	14 08 15.9	-0.1
AKUT				S	Sn	14 08 36.7	+0.4
AKLV	Akutan Long Va	1.69	300	P	Pn	14 08 17.4	-0.2
AKLV				S	Sn	14 08 39.3	+0.4
AKGG	Akutan Green G	1.73	300	P	Pn	14 08 18.0	0.0
UNV	Unalaska Valle	1.88	286	P	Pn	14 08 20.1	-0.1
UNV				S	Sn	14 08 42.8	-0.8
SDPT	Sand Point	2.65	40	P	Pn	14 08 31.7	+1.0
SDPT				S	Sn	14 09 02.4	-0.2
CHGN	Chignik	4.15	43	eP	Pn	14 08 52.4	+1.1
SPIA	Saint Paul Isl	5.45	317	P	Pn	14 09 10.2	+1.0
OHAK	Old Harbor	6.98	52	P	Pn	14 09 29.6	-0.5
KDAK	Kodiak Island	7.59	50	Pn	Pn	14 09 38.0	-0.5
	1.4nm,0.3s,baz=238,slow=9.7,SNR=8.5						
KDAK				Sn	Sn	14 10 57.6	-6.5
	0.6nm,0.3s,baz=348,slow=23,SNR=5.7						
KDAK	Kodiak Island	7.59	50	P	Pn	14 09 37.8	-0.7
EGAK	Eagle	16.08	36	P	Pn	14 11 32.3	-1.5
	12nm,1.4s						
DAWY	Dawson	16.35	40	eP	Pn	14 11 41.2	+4.0
INK	Inuvik	20.58	32	P	P	14 12 25.4	-1.1
	1.6nm,0.6s,baz=252,slow=14,SNR=5.5						
PETK	Petropavlovsk-	23.07	285	P	P	14 12 52.5	-0.6
	1.8nm,0.5s,mb3.8,baz=79,slow=14,SNR=23						
YKA	Yellowknife Ar	26.87	51	P	P	14 13 30.1	+1.9
	0.6nm,0.6s,mb3.3,baz=268,slow=7.5,SNR=3.6						
YBH	Yreka Blue Hor	29.46	97	LR	LR	14 22 42.7	
	comp=Z,30nm,20.8s,MS2.9,baz=92,slow=30						
MDJ	Mudanjiang	43.30	287	P	P	14 15 47.6	-1.8
MDJ				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
MDJ				pmax	pmax		
	comp=Z,21nm,4.7s						
MDJ				LR	LR		
	comp=N,23nm,21.8s,MS3.1						
MDJ				LR	LR		
	comp=E,11nm,23.7s,MS3.1						
MDJ				LR	LR		
	comp=Z,24nm,21.8s,MS3.1						
KSRS	Korea Array	48.81	280	P	P	14 16 34.1	+1.3
	comp=Z,0.6nm,0.7s,mb3.7,baz=44,slow=11,SNR=4.7						
KSRS				LR	LR	14 36 23.3	
	comp=Z,12nm,19.1s,MS2.9,baz=250,slow=35						
TXAR	Lajitas Array	49.19	95	P	P	14 16 41.2	+5.3
	comp=Z,0.1nm,0.4s,mb3.2,baz=255,slow=3.5,SNR=3.1						
ULN	Ulaanbaatar	53.47	303	eP	P	14 17 07.8	+0.1
	comp=Z,1.4nm,0.6s,mb4.1						
SONM	Songino Array	53.81	303	P	P	14 17 10.9	+0.7
	comp=Z,0.7nm,0.5s,mb3.9,baz=30,slow=8.0,SNR=4.7						
ARCES	ARCESS Array B	57.25	356	P	P	14 17 33.6	-1.0
	comp=Z,0.3nm,0.4s,mb3.7,baz=26,slow=7.6,SNR=7.4						
BVAR	Borovoye Array	64.90	327	P	P	14 18 27.4	+0.6
	comp=Z,1.7nm,0.7s,mb4.2,baz=62,slow=6.9,SNR=9.9						
FINES	FINESS Array B	65.30	355	P	P	14 18 28.4	-0.8
	comp=Z,1.4nm,0.7s,mb4.1,baz=337,slow=9.1,SNR=4.1						
FINES				LR	LR	14 44 53.7	
	comp=Z,15nm,20.9s,MS3.2,baz=209,slow=34						
FINES	FINESS Array B	65.30	355	P	P	14 18 28.4	-0.8
FINES				LR	LR	14 44 53.7	
MKAR	Makanchi Array	65.65	317	P	P	14 18 31.3	-0.4
	comp=Z,0.3nm,0.3s,mb3.8,baz=48,slow=7.7,SNR=10						
NOA	NORSAR Array B	65.88	3	P	P	14 18 33.2	+0.2
	comp=Z,1.1nm,0.8s,mb3.9,baz=356,slow=6.7,SNR=3.3						
HFS	Hagfors	66.84	2	P	P	14 18 38.7	-0.5
	comp=Z,1.4nm,0.4s,mb4.4,baz=46,slow=4.3,SNR=17						
AFI	Afiamalu	67.37	189	LR	LR	14 41 40.7	
	comp=Z,103nm,20.3s,MS4.0,baz=162,slow=30						
EKA	Eskdalemuir Ar	70.46	12	P	P	14 19 02.0	+0.2
	comp=Z,0.6nm,0.5s,mb3.8,baz=338,slow=4.9,SNR=3.3						
ABKAR	Akbulak array	71.38	332	eP	P	14 19 08.1	+0.6
	comp=Z,1.5nm,0.4s,mb4.3						
AKASG	Malin Array Be	75.77	352	P	P	14 19 32.6	-0.7
	comp=Z,0.7nm,0.3s,mb4.0,baz=12,slow=6.3,SNR=3.8						
AKASG	Malin Array Be	75.77	352	P	P	14 19 32.6	-0.7
BRTR	Keskin Array B	86.12	347	P	P	14 20 29.9	+1.2
	comp=Z,0.3nm,0.4s,mb3.8,baz=33,slow=5.5,SNR=3.6						

*ISCJB **09** 14:10:53.2±1.2, 24°.65S±0°.08×179°.2W±0°.2, h383km±15km, mb3.6/6, Error ellipse: s-maj=32.5km s-min=12.6km az=171.8*

*IDC **09** 14:10:53.2±2.6, 24°.56S×179°.18W, h372km±27km, mb3.3/5, mb1 3.5/6, mb1mx3.3/15, mbtmp3.4/6, Error ellipse: s-maj=27.2km s-min=23.0km az=42.0*

*NEIC **09** 14:10:53.9±1.0, 24°.66S×179°.06W, h389km±11km, mb4.0/1, Error ellipse: s-maj=22.8km s-min=14.2km az=78.0*

ISC 09 14:10:54.4±1.1, 24°.68S±0°.08×179°.2W±0°.2, h378km±14km, n15, σ0s71/15, mb3.5/6, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	4.71	166	P	Pn	14 12 11.5	-0.6
	85nm,0.3s,baz=103,slow=21,SNR=5.4						
MSVF	Nonsavu	7.36	339	eP	Pn	14 12 42.5	+0.8
	55nm,0.8s						
AFI	Afiamalu	12.80	35	S	S	14 15 49.7	-14
	5.4nm,0.3s,baz=191,slow=19,SNR=6.2						
URZ	Urewera	13.90	192	P	P	14 13 55.3	-0.3
	7.4nm,0.3s,baz=344,slow=1.1,SNR=40						
URZ				S	S	14 16 26.2	+0.5
	2.5nm,0.3s,baz=220,slow=23,SNR=15						
URZ	Urewera	13.90	192	eP	P	14 13 55.2	-0.4
URZ				S	S	14 16 26.2	+0.5
CTAO	Charters Tower	32.19	271	eP	P	14 16 49.9	+0.9
	6.3nm,0.7s,mb4.0						
STKA	Stephens Creek	35.10	249	P	P	14 17 14.3	+0.6
	2.5nm,1.0s,mb3.4,baz=86,slow=15,SNR=3.1						
STKA	Stephens Creek	35.10	249	eP	P	14 17 14.3	+0.6
ASAR	Alice Springs	42.61	261	P	P	14 18 14.8	-0.5
	1.6nm,0.8s,mb3.2,baz=97,slow=7.9,SNR=19						
WRAB	Tennant Creek	43.06	267	P	P	14 18 18.0	-0.9
WRA	Warramunga Arr	43.06	267	P	P	14 18 18.1	-0.9
	1.6nm,0.6s,mb3.3,baz=105,slow=8.1,SNR=31						
QSPA	South Pole Qui	65.41	180	P	P	14 20 58.2	+0.9
	1.1nm,0.8s,mb3.5,baz=219,slow=1.4,SNR=7.7						
PETK	Petropavlovsk-	80.02	346	P	P	14 22 21.9	-0.5
	1.4nm,0.7s,mb3.8,baz=107,slow=5.9,SNR=6.4						
ARCES	ARCESS Array B	132.78	348	PKP	PKPdf	14 29 22.4	-1.7
	0.8nm,0.8s,baz=11,slow=0.9,SNR=4.1						
HFS	Hagfors	143.44	349	PKP	PKPdf	14 29 40.4	-3.5
	1.0nm,0.6s,baz=90,slow=4.4,SNR=5.4						

*ISCJB **09** 14:17:15.5±0.9, 36°.2S±0°.1×101°.3W±0°.2, h10km, mb4.1/11, MS4.0/14, Error ellipse: s-maj=22.2km s-min=18.0km az=137.0*

*IDC **09** 14:17:15.0±0.9, 36°.22S×101°.35W, h0km, mb4.2/8, mb1 4.5/8, mb1mx4.3/18, mbtmp4.2/8, MS4.0/15, Ms1 4.0/15, ms1mx3.8/24, Error ellipse: s-maj=24.0km s-min=22.5km az=46.0*

*NEIC **09** 14:17:16.6±0.8, 36°.12S×101°.37W, h10km, mb4.6/3, Error ellipse: s-maj=22.9km s-min=21.1km az=224.0*

*GCMT **09** 14:17:19.4±0.3, 36°.15S×101°.26W, h23km±1km, MW4.9, Moment Tensor Solution. s34,c43; s64,c88; Moment tensor: Scale 10^{16}Nm; M_{rr}-0.38±.15; $M_{\theta\theta}$-0.36±.13; $M_{\phi\phi}$0.74±.13; $M_{r\theta}$0.41±.19; $M_{r\phi}$-3.13±.12; $M_{\theta\phi}$0.20±.18; Best double couple: $M_0$3.20000×10^{16} NP1:ϕ_s185.00000°, δ82.00000°, λ-6.00000°. NP2:ϕ_s275.00000°, δ85.00000°, λ-172.00000°. Principal axes: T 3.3700, Plg2.0000°, Azm50.0000°; N -0.3100, Plg80.0000°, Azm310.0000°; P -3.0600, Plg9.0000°, Azm140.0000°; Data Used: II IU G IC CN.*

ISC 09 14:17:17.6±0.9, 36°.2S±0°.1×101°.2W±0°.2, h10km, n32, σ1s25/15, mb4.1/11, MS4.0/14, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	Rapa Nui	11.35	320	LR	LR	14 23 03.5	
	comp=Z,901nm,19.6s,baz=135,slow=31						
PLCA	Paso Flores	24.39	110	P	P	14 22 36.1	+0.2
	4.2nm,0.8s,mb3.9,baz=282,slow=8.2,SNR=9.4						
PLCA				LR	LR	14 29 29.1	
	comp=Z,218nm,21.5s,MS3.6,baz=92,slow=30						
PLCA	Paso Flores	24.39	110	eP	P	14 22 38.7	+2.8
PLCA				LR	LR	14 29 29.1	
CFAA	Coronel Fontan	27.69	90	P	P	14 23 05.3	-0.5
	0.2nm,0.4s,mb3.1,baz=213,slow=2.6,SNR=3.9						
CFAA				LR	LR	14 30 39.6	
	comp=Z,13nm,18.9s,baz=254,slow=29						
USHA	Ushuaia	29.21	140	LR	LR	14 32 25.8	
	comp=Z,613nm,18.1s,MS4.3,baz=51,slow=31						
LPAZ	La Paz	35.44	65	P	P	14 24 15.4	+1.4
	20nm,1.2s,mb4.9,baz=221,slow=7.4,SNR=21						
LPAZ				LR	LR	14 35 38.7	
	comp=Z,92nm,19.8s,MS3.5,baz=51,slow=31						
LPAZ	La Paz	35.44	65	eP	P	14 24 14.9	+0.8
	27nm,1.2s,mb5.0						
LPAZ				LR	LR	14 35 38.7	
ATAH	Atahualpa	35.66	41	P	P	14 24 17.3	+1.4
	2.7nm,0.5s,mb4.5,baz=263,slow=3.4,SNR=4.8						
PMSA	Palmer Station	36.18	154	LR	LR	14 34 35.5	
	comp=Z,383nm,20.3s,MS4.2,baz=350,slow=29						
CPUP	Villa Florida	38.52	88	LR	LR	14 38 35.8	
	comp=Z,76nm,20.6s,MS3.5,baz=52,slow=33						
SIV	San Ignacio	40.92	71	P	P	14 24 58.4	-1.8
	2.6nm,1.0s,mb3.8,baz=250,slow=10,SNR=8.3						
OTAV	Otavalo	41.96	35	P	P	14 25 07.5	-1.3
TBI	Tubuai	43.37	273	eLR	LR	14 37 08.7	
	233nm,27.2s						
PPT	Papeete	46.42	280	eLR	LR	14 38 38.9	
	129nm,25.0s						
PPT	Papeete	46.42	280	LR	LR	14 39 17.8	
	comp=Z,121nm,19.8s,MS3.9,baz=144,slow=28						
ROSC	El Rosal	47.96	37	LR	LR	14 42 44.8	
	comp=Z,164nm,18.9s,MS4.0,baz=231,slow=32						
QSPA	South Pole Qui	54.04	180	P	P	14 26 41.3	-0.2
	1.4nm,0.8s,mb3.9,baz=24,slow=1.9,SNR=6.5						
QSPA	South Pole Qui	54.04	180	eP	P	14 26 41.5	0.0
URZ	Urewera	62.95	241	LR	LR	14 47 56.8	
	comp=Z,136nm,20.0s,MS4.1,baz=106,slow=29						
RAO	Raoul Island	63.35	252	LR	LR	14 48 02.0	
	comp=Z,509nm,20.2s,MS4.7,baz=138,slow=29						
TXAR	Lajitas Array	65.20	358	P	P	14 27 60.0	+1.1
	0.3nm,0.8s,mb3.4,baz=184,slow=12,SNR=3.6						
TXAR				LR	LR	14 50 30.7	
	comp=Z,58nm,18.6s,MS3.8,baz=5.0,slow=31						
MAW	Mawson	75.85	174	LR	LR	15 00 13.7	
	comp=Z,78nm,19.0s,MS4.0,baz=63,slow=34						
NVAR	Mina Array Bea	75.89	346	P	P	14 29 03.9	-0.1
	3.2nm,0.9s,mb4.2,baz=175,slow=8.8,SNR=16						
PDAR	Pinedale Array	78.93	354	P	P	14 29 19.4	-1.5
	3.5nm,0.9s,mb4.3,baz=163,slow=5.4,SNR=18						
DZM	Mont Dzumac	79.10	251	eLR	LR	14 54 00.6	
	275nm,27.8s						
MOD	Modoc	79.64	346	eP	P	14 29 26.8	+2.0
	5.1nm,0.9s,mb4.5						
HLID	Hailey	80.26	350	P	P	14 29 27.0	-1.1
	5.8nm,1.0s,mb4.5						
STKA	Stephens Creek	90.32	229	LR	LR	15 01 07.6	
	comp=Z,200nm,19.8s,MS4.5,baz=29,slow=29						
SCHQ	Schefferville	95.33	19	LR	LR	15 07 00.9	
	comp=Z,106nm,20.7s,MS4.3,baz=208,slow=31						
BOSA	Boshof	98.23	134	LR	LR	15 08 32.8	
	comp=Z,69nm,18.1s,MS4.2,baz=67,slow=31						
BRTR	Keskin Array B	144.52	70	PKP	PKPdf	14 36 51.9	-2.1
	2.5nm,0.9s,baz=223,slow=2.9,SNR=9.4						
CMAR	Chiang Mai Arr	154.94	231	PKPab	PKPab	14 37 33.1	-2.0
	0.9nm,0.6s,baz=156,slow=4.0,SNR=5.4						

DJA 09 14:32:03, 4°.93N×124°.72E, h20km, MLv4.0/5, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	Sangihe	1.48	147	P	Pn	14 32 27.5	-1.0
SGSI				S	Sn	14 32 44.7	-2.5
DAV	Davao City (W)	2.29	22	P	Pn	14 32 39.3	-0.4
MNI	Manado	3.46	178	P	Pn	14 33 00.9	+5.1
TNTI	Ternate	4.90	147	P	Pn	14 33 15.9	+0.3
MRSI	Marisa	5.22	212	P	Pn	14 33 16.5	-3.5
	0.1nm18nm,0.6s						
LBMI	Labuha	6.19	153	P	Pn	14 33 35.7	+2.4

*ISCJB **09** 14:32:21.1±1.0, 16°.8S±0°.2×174°.9W±0°.2, h323km±18km, mb3.7/5, Error ellipse: s-maj=42.2km s-min=19.5km az=154.0*

*NEIC **09** 14:32:22.1±1.0, 16°.89S×174°.92W, h314km±15km, Error ellipse: s-maj=32.9km s-min=17.6km az=159.0*

*IDC **09** 14:32:23.1±2.0, 16°.65S×174°.23W, h382km±126km, mb3.5/5, mb1 3.6/6, mb1mx3.2/18, mbtmp3.5/6, Error ellipse: s-maj=166.1km s-min=32.3km az=71.0*

ISC 09 14:32:21.7±1.1, 16°.8S±0°.3×174°.9W±0°.2, h314km±19km, n9, σ0s70/11, mb3.8/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	4.17	46	P	Pn	14 33 31.8	+1.3
	7.5nm,0.3s,baz=288,slow=6.3,SNR=12						
AFI				S	S	14 34 25.0	-0.8
	31nm,0.3s,baz=215,slow=24,SNR=14						
AFI	Afiamalu	4.17	46	ePn	Pn	14 33 31.8	+1.3
AFI				S	S	14 34 25.0	-0.8
MSVF	Nonsavu	6.82	261	eP	Pn	14 34 01.0	-0.2
URZ	Urewera	22.47	197	P	P	14 36 54.4	-0.4
	6.7nm,0.7s,mb4.1,baz=178,slow=20,SNR=7.9						
STKA	Stephens Creek	42.10	241	P	P	14 39 44.5	+0.6
	2.6nm,0.7s,mb3.5,baz=94,slow=15,SNR=2.7						
STKA	Stephens Creek	42.10	241	P	P	14 39 44.5	+0.6
WRA	Warramunga Arr	48.15	258	P	P	14 40 31.5	+0.2
	0.4nm,0.5s,mb3.0,baz=97,slow=7.2,SNR=15						
ASAR	Alice Springs	48.33	253	P	P	14 40 33.0	+0.4
	8.1nm,0.5s,mb4.3,baz=88,slow=8.5,SNR=284						
FITZ	Fitzroy Crossi	56.54	259	P	P	14 41 31.5	-1.0
	6.1nm,1.1s,mb3.9,baz=106,slow=7.4,SNR=2.1						

*MOS **09** 14:33:26.8±0.8, 44°.02N×42°.90E, h33km, mb4.0/1, Error ellipse: s-maj=21.0km s-min=9.1km az=132.6*

*ISCJB **09** 14:33:27.9±0.7, 43°.96N±0°.07×43°.00E±0°.06, h27km±5km, Error ellipse: s-maj=11.1km s-min=7.1km az=2.8*

ISC 09 14:33:28.2±0.7, 43°.95N±0°.07×43°.01E±0°.06, h24km±5km, n15, σ0s86/23, 5C-3D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYA	Pyatigorsk	0.09	22⇓	iPG	Pb	14 33 32.2	-0.5
PYA				i S	Sb	14 33 35.7	0.0
KIV	Kislovodsk	0.24	271⇑	ePG	Pb	14 33 34.6	+0.3
KIV				i S	Sb	14 33 39.7	+1.3
LSNR	Lesken	0.89	139⇑	iPG	Pb	14 33 43.9	-1.1
LSNR				i S	Sb	14 33 55.9	-0.6
PRTR	Priterechnaya	0.94	102⇓	iPG	Pn	14 33 45.3	-0.6
PRTR				i S	Sb	14 33 58.8	+1.0
KMSR	Komsomolskaya	1.09	122⇓	iPG	Pn	14 33 48.2	+0.2
KMSR				eS	Sn	14 34 03.3	+1.0
DIGR	Digorskoe uzhe	1.13	158⇑	iPG	Pn	14 33 47.2	-1.3
KORR	Kora	1.16	138⇑	iPG	Pn	14 33 48.0	-0.8
ARNR	Ardon	1.20	129	ePG	Pn	14 33 48.9	-0.5
BTKR	Batakoyurt	1.25	117	ePG	Pn	14 33 50.2	+0.1
TRKR	Terskaya	1.27	100	ePG	Pn	14 33 50.8	+0.5
TRKR				eS	Sn	14 34 07.7	+1.2
ZEI	Tsey	1.35	151	ePG	Pn	14 33 50.2	-1.2
ONI	Oni	1.40	167	P	Pn	14 33 52.4	+0.2
ONI				S	Sn	14 34 10.3	+0.5
LACR	Lac	1.46	140⇑	iPG	Pn	14 33 52.4	-0.7
SNJR	Sundja	1.58	123	ePN	Pn	14 33 54.3	-0.3
KEH	Kehvi	1.78	157	P	Pn	14 33 56.9	-0.5
KEH				S	Sn	14 34 21.6	+2.4

*IDC **09** 14:51:47.4±3.8, 15°.84N×97°.94W, h0km, mb3.9/6, mb1 4.1/7, mb1mx3.9/21, mbtmp3.8/7, ML3.2/1, MS3.3/1, Ms1 3.3/1, ms1mx2.7/23, Error ellipse: s-maj=81.3km s-min=48.4km az=39.0*

*ISCJB **09** 14:51:49.6±1.0, 16°.00N±0°.04×98°.47W±0°.03, h28km±7km, mb3.9/8, Error ellipse: s-maj=7.7km s-min=4.2km az=17.2*

*MEX **09** 14:51:50.6±0.8, 15°.97N×98°.52W, h13km±11km, MD4.4*

*NEIC **09** 14:51:50.6, 15°.97N×98°.52W, h13km, mb3.8/5, MD4.4(MEX), After MEX.*

ISC 09 14:51:50.3±1.0, 16°.01N±0°.05×98°.45W±0°.03, h18km±5km, n57, σ1s37/92, mb3.9/8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.49	39	i P	Pg	14 51 60.0	-0.2
PNIG				i S	Sg	14 52 07.4	+0.6
PNIG	Pinotepa	0.49	39	i P	Pg	14 51 60.0	-0.2
PNIG				i S	Sg	14 52 07.4	+0.6
ACX	Acapulco	1.60	302	eP	Pn	14 52 15.3	-2.4
ACX				i S	Sn	14 52 34.8	-3.1
ACX	Acapulco	1.60	302	eP	Pn	14 52 15.3	-2.4
ACX				i S	Sn	14 52 34.8	-3.1
UTMO	Huajuapan	1.91	19	eP	Pn	14 52 21.2	-0.7
UTMO				i S	Sn	14 52 44.6	-1.0
VHO	Vista Hermosa	1.95	57	i P	Pn	14 52 21.3	-1.2
VHO				i S	Sn	14 52 46.4	-0.2
VHO	Vista Hermosa	1.95	57	i P	Pn	14 52 21.3	-1.2
VHO				i S	Sn	14 52 46.4	-0.2
OX

PBVM *i* S **Sn** **14 53 23.9 0.0**
IIO Organos 3.57 356 *e*P **Pn** **14 52 43.5 -1.3**
IIO *i* S **Sn** **14 53 25.8 -0.7**
IIO Organos 3.57 356 *e*P **Pn** **14 52 43.5 -1.3**
IIO *i* S **Sn** **14 53 25.8 -0.7**
PTVM Pico Tres Padr 3.62 350 *e*P **Pn** **14 52 44.4 -1.1**
PTVM *i* S **Sn** **14 53 32.3 +4.6**
PTVM Pico Tres Padr 3.62 350 *e*P **Pn** **14 52 44.4 -1.1**
PTVM *i* S **Sn** **14 53 32.3 +4.6**
LVIG Laguna Verde 4.17 27 *e*P **Pn** **14 52 52.7 -0.3**
LVIG *i* S **Sn** **14 53 40.4 -0.8**
LVIG Laguna Verde 4.17 27 *e*P **Pn** **14 52 52.7 -0.3**
LVIG *i* S **Sn** **14 53 40.4 -0.8**
DEIG Demacu 4.30 353 *e*P **Pn** **14 53 03.5 +8.6**
MOIG Morelia 4.49 325 *i* S **Sn** **14 53 54.4 +5.2**
MOIG Morelia 4.49 325 *i* S **Sn** **14 53 54.4 +5.2**
PCIG 5.04 93 *e*P **Pn** **14 53 06.4 +1.4**
PCIG *i* S **Sn** **14 54 04.2 +1.4**
TGIG 5.17 81 *e*P **Pn** **14 53 07.4 +0.7**
TGIG *i* S **Sn** **14 54 05.0 -0.9**
MMIG Aquila 5.20 297 *e*P **Pn** **14 53 13.3 +6.1**
MMIG *i* S **Sn** **14 54 06.2 -0.6**
SFJM Santa Fe 6.23 316 *e*P **Pn** **14 53 19.1 -2.3**
SFJM *i* S **Sn** **14 54 32.4 +0.1**
SFJM Santa Fe 6.23 316 *e*P **Pn** **14 53 19.1 -2.3**
SFJM *i* S **Sn** **14 54 32.4 +0.1**
LNIG Linares 8.89 354 *e*P **Pn** **14 54 07.7 +10**
LNIG *i* S **Sn** **14 55 39.9 +2.2**
TEIG Tepich 10.54 65 *e*P **Pn** **14 54 16.8 -3.7**
TXAR Lajitas Array 14.11 341 Pn **Pn** **14 55 13.6 +4.3**
0.0nm,0.3s,baz=151,slow=17,SNR=3.1
TXAR Lg 14 59 26.0
0.0nm,0.3s,baz=152,slow=38,SNR=3.3
MIAR Mount Ida 18.97 12 *e*P **Pn** **14 56 11.5 +0.1**
4.1nm,0.7s
LAZ Ladron 19.91 338 *e*P **Pn** **14 56 25.4 +2.8**
3.3nm,1.4s
ANMO Albuquerque 20.18 341 P **P** **14 56 28.2 +4.3**
1.5nm,0.7s,baz=142,slow=13,SNR=5.7
ANMO Albuquerque 20.18 341 *e*P **P** **14 56 27.8 +3.9**
SDCO Great Sand Dun 22.53 345 *e*P **P** **14 56 50.8 +1.7**
2.9nm,1.0s,mb3.7
WUAZ Wupatki 22.60 332 P **P** **14 56 55.0 +5.0**
4.2nm,0.8s,mb3.9
PV01 Paradox Valley 23.78 340 *e*P **P** **14 57 05.7 +3.8**
ISCO Idaho Springs 24.51 347 *e*P **P** **14 57 12.6 +4.0**
6.4nm,0.9s,mb4.2
PDAR Pinedale Array 28.31 343 P **P** **14 57 44.7 +1.9**
1.5nm,1.1s,mb3.5,baz=155,slow=15,SNR=8.0
NVAR Mina Array Bea 28.35 326 P **P** **14 57 47.7 +4.5**
0.6nm,0.8s,mb3.3,baz=156,slow=11,SNR=4.2
NVAR Mina Array Bea 28.35 326 P **P** **14 57 47.7 +4.5**
ELK Elko 28.63 333 LR LR 15 10 20.7
comp=Z,65nm,21.1s,baz=106,slow=38
SCHQ Schefferville 45.78 25 P **P** **15 00 10.7 0.0**
3.5nm,0.8s,mb4.3,baz=235,slow=16,SNR=3.7
YKA Yellowknife Ar 47.81 350 P **P** **15 00 28.6 +2.2**
1.7nm,0.9s,mb4.1,baz=152,slow=7.0,SNR=3.8
YKA Yellowknife Ar 47.81 350 P **P** **15 00 28.6 +2.2**
INK Inuvik 56.83 345 P **P** **15 01 35.3 +2.0**
2.8nm,0.9s,mb4.3,baz=112,slow=8.3,SNR=3.9

*ISCJB **09** 14:56:47.5±1.2,21°.21S±0°.06×68°.3W±0°.3,h124km±29km, Error ellipse: s-maj=49.1km s-min=7.0km az=9.6*
*NEIC **09** 14:56:47.5±1.2,21°.26S×68°.69W,h114km±12km, Error ellipse: s-maj=57.9km s-min=11.9km az=95.0*
*GUC **09** 14:56:48.6±0.9,21°.17S×68°.70W,h140km, ML4.0*
*IDC **09** 14:56:49.0±3.1,21°.16S×68°.70W,h123km±30km, mb1 3.5/2, mb1mx3.2/15, mbtmp3.3/2, Error ellipse: s-maj=163.6km s-min=24.5km az=98.0*
ISC 09 14:56:48.8±1.1,21°.21S±0°.07×68°.4W±0°.3,h117km±29km, n14,σ0°93/18,3C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**1.08**	**279**	⇓*i*P	**Pn**	**14 57 10.6**	**-0.7**
PB01				*i* S	**Sn**	**14 57 27.6**	**-0.7**
PB01				AML	AML	14 57 29.1	
	comp=E,2μm,0.2s						
PB04	**Plate Boundary**	**1.49**	**225**	⇑*i*P	**Pn**	**14 57 21.4**	**+5.5**
PB04				*i* S	**Sn**	**14 57 45.9**	**+9.3**
PB04				AML	AML	14 57 54.0	
	comp=N,1μm,0.6s						
MACH	**Maria Elena**	**1.64**	**233**	⇑*i*P	**Pn**	**14 57 17.5**	**-0.1**
MACH				*i* S	**Sn**	**14 57 39.3**	**-0.3**
MNMC	**Miæe Miæ**	**2.38**	**330**	⇑*i*P	**Pn**	**14 57 26.5**	**-0.4**
MNMC				*i* S	**Sn**	**14 57 55.8**	**-0.4**
MNMC				AML	AML	14 57 57.0	
	comp=E,2μm,0.4s						
CEN1	**Los Morros**	**2.77**	**218**	⇓*i*P	**Pn**	**14 57 32.7**	**+0.8**
CEN1				*i* S	**Sn**	**14 58 07.3**	**+2.2**
CEN1				AML	AML	14 58 13.2	
	comp=N,280nm,0.7s						
LPAZ	**La Paz**	**4.90**	**2**	P	**Pn**	**14 58 01.6**	**+1.2**
	comp=N,3.9nm,0.3s,baz=185,slow=7.4,SNR=88						
LPAZ				S	**Sn**	**14 58 56.9**	**+0.8**
	comp=N,0.3nm,0.3s,baz=229,slow=11,SNR=1.8						
LPAZ	**La Paz**	**4.90**	**2**	*e*Pn	**Pn**	**14 58 01.1**	**+0.7**
LPAZ				S	**Sn**	**14 58 56.9**	**+0.8**
LCO	**Las Campanas**	**8.05**	**195**	*e*Pn	**Pn**	**14 58 39.1**	**-3.9**
LCO				*e*Sn	**Sn**	**15 00 05.9**	**-6.5**
TRQA	**Tornquist**	**17.67**	**163**	*e*P	**Pn**	**15 00 46.1**	**-1.3**
PLCA	**Paso Flores**	**19.55**	**185**	P	**P**	**15 01 07.1**	**-0.1**
	comp=N,0.1nm,0.3s,baz=9.3,slow=10,SNR=3.4						
ASAR	**Alice Springs**	**130.41**	**207**	PKP	PKPdf	15 15 45.0	-1.3
	comp=N,0.2nm,0.5s,baz=131,slow=1.7,SNR=6.3						
WRA	**Warramunga Arr**	**133.47**	**210**	PKP	PKPdf	15 15 51.3	-0.7
	comp=N,0.3nm,0.5s,baz=157,slow=1.7,SNR=5.1						
MK31	**Makanchi Array**	**145.09**	**36**	*e*PKP	PKPdf	15 16 11.2	-1.1
MKAR	**Makanchi Array**	**145.09**	**36**	PKPbc	PKPbc	15 16 11.2	-0.8
	comp=N,2.3nm,0.7s,baz=325,slow=3.5,SNR=19						

*IDC **09** 15:02:49.5±1.0,56°.05N×153°.37W,h0km, mb3.8/16, mb1 4.0/17, mb1mx3.9/29, mbtmp3.8/17, ML3.4/1, MS3.0/1, Ms1 3.0/1, ms1mx2.5/40, Error ellipse: s-maj=24.7km s-min=17.0km az=24.0*
*ISCJB **09** 15:02:51.1±2.1,56°.01N±0°.07×153°.4W±0°.1, h27km±14km, mb3.8/16, Error ellipse: s-maj=12.7km s-min=9.7km az=145.7*
*NEIC **09** 15:02:52.7,55°.95N×153°.14W,h26km, mb4.1/1, ML3.4(AEIC), After AEIC.*
ISC 09 15:02:52.6±2.1,56°.03N±0°.07×153°.4W±0°.1,h21km±14km, n41,σ0°92/42,mb3.8/16,Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**1.20**	**4**	P	**Pn**	**15 03 13.4**	**-0.6**
OHAK				S	**Sb**	**15 03 29.9**	**+0.4**
KDAK	**Kodiak Island**	**1.82**	**15**	Pn	**Pn**	**15 03 21.7**	**-0.8**
	24nm,0.3s,baz=206,slow=7.7,SNR=23						
KDAK				Sn	**Sn**	**15 03 43.5**	**-1.4**
	29nm,0.3s,baz=221,slow=20,SNR=10						
KDAK	**Kodiak Island**	**1.82**	**15**	P	**Pn**	**15 03 21.8**	**-0.8**
KDAK				S	**Sn**	**15 03 43.9**	**-1.0**
CHGN	**Chignik**	**2.79**	**278**	*e*Pn	**Pn**	**15 03 35.5**	**-0.4**
RSO	**Redoubt South**	**4.46**	**4**	*e*P	**Pn**	**15 03 59.3**	**+0.5**
SLKM	**Skilak Lake**	**4.80**	**19**	P	**Pn**	**15 04 02.6**	**-0.9**
RC01	**Rabbit Creek A**	**5.43**	**19**	P	**Pn**	**15 04 11.6**	**-0.5**
BMRM	**Bremner River**	**6.77**	**39**	*e*P	**Pn**	**15 04 23.1**	**-7.5**
8.7nm,0.5s							
PPLA	**Purkeypile**	**6.91**	**5**	*e*P	**Pn**	**15 04 34.5**	**+2.0**
11nm,0.9s							
TRF	**Thorofare Moun**	**7.61**	**11**	P	**Pn**	**15 04 40.8**	**-1.2**
UNV	**Unalaska Valle**	**7.83**	**259**	*e*Pn	**Pn**	**15 04 43.5**	**-1.6**
MCK	**McKinley**	**8.05**	**14**	*e*P	**Pn**	**15 04 49.6**	**+1.6**
5.6nm,0.5s							
PNL	**Peninsula**	**8.33**	**58**	P	**Pn**	**15 04 47.8**	**-4.1**
COLA	**College**	**9.28**	**15**	*e*P	**Pn**	**15 05 05.4**	**+0.4**
6.6nm,0.6s							
DIB	**Dawson Inlet,**	**12.47**	**94**	T		15 18 07.1	
SNR=3.9							
INK	**Inuvik**	**15.32**	**29**	Pn	**Pn**	**15 06 28.1**	**+1.1**
0.1nm,0.3s,baz=234,slow=8.3,SNR=2.6							
INK				LR	LR	15 13 03.9	
	comp=Z,65nm,20.5s,baz=256,slow=40						
INK	**Inuvik**	**15.32**	**29**	P	**Pn**	**15 06 28.2**	**+1.1**
INK				LR	LR	15 13 03.9	
YKA	**Yellowknife Ar**	**20.61**	**56**	P	**P**	**15 07 29.6**	**-0.4**
0.8nm,0.5s,baz=268,slow=8.8,SNR=4.7							
YKA	**Yellowknife Ar**	**20.61**	**56**	P	**P**	**15 07 29.6**	**-0.4**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BILL	**Bilibino**	**21.89**	**319**	*e*P	**P**	**15 07 44.1**	**+0.4**
11nm,1.4s,mb4.1							
PETK	**Petropavlovsk-**	**28.00**	**285**	P	**P**	**15 08 42.8**	**+1.2**
2.3nm,0.8s,mb3.9,baz=71,slow=12,SNR=7.4							
NVAR	**Mina Array Bea**	**29.22**	**112**	P	**P**	**15 08 52.7**	**+0.2**
0.5nm,0.7s,mb3.4,baz=309,slow=8.0,SNR=4.8							
NVAR	**Mina Array Bea**	**29.22**	**112**	P	**P**	**15 08 52.7**	**+0.2**
PDAR	**Pinedale Array**	**30.93**	**97**	P	**P**	**15 09 07.2**	**-0.3**
0.3nm,0.7s,mb3.2,baz=324,slow=4.5,SNR=3.0							
TXAR	**Lajitas Array**	**43.96**	**106**	P	**P**	**15 10 58.4**	**+0.5**
0.6nm,0.7s,mb3.4,baz=302,slow=9.5,SNR=4.9							
MDJ	**Mudanjiang**	**47.95**	**290**	P	**P**	**15 11 28.9**	**-0.3**
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MDJ				pmax	pmax		
	comp=Z,33nm,6.0s						
MDJ				LR	LR		
	comp=N,40nm,19.9s						
MDJ				LR	LR		
	comp=E,24nm,20.5s						
MDJ				LR	LR		
	comp=Z,36nm,19.2s						
ARCES	**ARCESS Array B**	**54.73**	**0**	P	**P**	**15 12 19.0**	**-0.6**
comp=Z,0.6nm,0.6s,mb3.8,baz=10,slow=7.5,SNR=4.8							
ARCES	**ARCESS Array B**	**54.73**	**0**	P	**P**	**15 12 19.0**	**-0.6**
SONM	**Songino Array**	**56.98**	**308**	P	**P**	**15 12 37.2**	**+1.2**
comp=Z,1.0nm,0.8s,mb3.9,baz=33,slow=8.9,SNR=4.7							
ZALV	**Zalesovo Beam**	**60.46**	**325**	P	**P**	**15 12 59.8**	**-0.3**
comp=Z,1.0nm,0.7s,mb4.0,baz=45,slow=6.5,SNR=4.0							
NB2	**NORSAR Subarra**	**62.64**	**8**	P	**P**	**15 13 15.1**	**+0.3**
comp=Z,1.9nm,0.8s,mb4.3,baz=350,slow=6.9							
NOA	**NORSAR Array B**	**62.64**	**8**	P	**P**	**15 13 15.2**	**+0.4**
comp=Z,1.4nm,0.8s,mb4.1,baz=350,slow=6.7,SNR=5.5							
HFS	**Hagfors**	**63.73**	**7**	P	**P**	**15 13 21.7**	**-0.2**
comp=Z,0.9nm,0.6s,mb4.0,baz=324,slow=9.0,SNR=4.1							
KURK	**Kurchatov**	**65.20**	**326**	P	**P**	**15 13 33.3**	**+1.6**
comp=Z,0.3nm,0.2s,mb3.9,baz=34,slow=7.3,SNR=2.9							
BVAR	**Borovoye Array**	**65.48**	**333**	P	**P**	**15 13 34.0**	**+0.5**
comp=Z,1.3nm,0.7s,mb4.1,baz=30,slow=7.5,SNR=7.6							
EKA	**Eskdalemuir Ar**	**66.38**	**18**	P	**P**	**15 13 39.7**	**+0.4**
comp=Z,1.6nm,0.9s,mb4.0,baz=354,slow=6.7,SNR=4.0							
MKAR	**Makanchi Array**	**67.41**	**322**	P	**P**	**15 13 46.8**	**+0.9**
comp=Z,0.5nm,0.8s,mb3.6,baz=46,slow=8.3,SNR=4.0							
AKTK	**Aktyubinsk**	**70.73**	**339**	P	**P**	**15 14 05.0**	**-1.5**
AKTO	**Aktyubinsk**	**70.73**	**339**	P	**P**	**15 14 05.0**	**-1.5**
comp=Z,0.4nm,0.4s,mb3.7,baz=18,slow=5.2,SNR=4.5							
AKASG	**Malin Array Be**	**73.61**	**358**	P	**P**	**15 14 23.5**	**-0.2**
comp=Z,0.2nm,0.3s,mb3.6,baz=358,slow=5.6,SNR=3.4							
OPO	**Ambohidratompo**	**139.49**	**329**	PKP	PKPdf	15 22 17.6	-0.5
comp=Z,2.8nm,0.9s,baz=46,slow=4.0,SNR=3.1							

*ISK **09** 15:10:57.4,37°.44N×28°.38E,h6km, MD2.8*
*CSEM **09** 15:11:00.6±0.3,37°.24N×28°.28E,h17km±3km, MD2.8, Error ellipse: s-maj=8.0km s-min=5.4km az=25.0*
*ISCJB **09** 15:11:01.1±0.7,37°.26N±0°.05×28°.26E±0°.05,h3km±14km, Error ellipse: s-maj=9.2km s-min=5.3km az=40.8*
*DDA **09** 15:11:01.2,37°.25N×28°.23E,h7km±4km, Md2.9*
ISC 09 15:11:01.2±0.7,37°.25N±0°.05×28°.27E±0°.05,h12km±10km, n21,σ0°96/28,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.12**	**173**	*e*PG	**Pg**	**15 11 03.8**	**-0.5**
YER	**Yerkesik**	**0.12**	**173**	*e*Pg	**Pg**	**15 11 03.8**	**-0.5**
MLSB	**Milas**	**0.39**	**277**	*e*PG	**Pg**	**15 11 08.2**	**-0.8**
MLSB				*e*SG	**Sg**	**15 11 14.8**	**+0.6**
MLSB	**Milas**	**0.39**	**277**	*e*Pg	**Pg**	**15 11 08.2**	**-0.8**
MLSB				*e*Sg	**Sg**	**15 11 14.8**	**+0.5**
TURN	**Turunc**	**0.47**	**144**	*i* P	**Pg**	**15 11 09.7**	**-0.7**
TURN				*i* S	**Sg**	**15 11 17.3**	**+0.8**
TURN	**Turunc**	**0.47**	**144**	*i* P	**Pg**	**15 11 09.7**	**-0.7**
TURN				*i* S	**Sg**	**15 11 17.3**	**+0.8**
AYDN	**Tasoluk**	**0.51**	**323**	*i* P	**Pg**	**15 11 11.1**	**-0.1**
AYDN				*i* S	**Sg**	**15 11 18.4**	**+0.3**
AYDN	**Tasoluk**	**0.51**	**323**	*i* P	**Pg**	**15 11 11.1**	**-0.1**
AYDN				*i* S	**Sg**	**15 11 18.4**	**+0.4**
BDRM	**Kayabasi**	**0.68**	**254**	*i* P	**Pg**	**15 11 14.8**	**+0.4**
BDRM	**Kayabasi**	**0.68**	**254**	*i* P	**Pg**	**15 11 14.8**	**+0.4**
DAT	**Datca**	**0.76**	**227**	*e*PG	**Pg**	**15 11 16.2**	**+0.3**
DAT	**Datca**	**0.76**	**227**	*e*Pg	**Pg**	**15 11 16.2**	**+0.3**
DNZL	**Cakiroluk**	**0.76**	**55**	*i* P	**Pg**	**15 11 16.4**	**+0.5**
DNZL	**Cakiroluk**	**0.76**	**55**	*i* P	**Pg**	**15 11 16.4**	**+0.5**
BODT	**Bodrum**	**0.79**	**256**	*e*PG	**Pg**	**15 11 15.8**	**-0.6**
BODT	**Bodrum**	**0.79**	**256**	*e*Pg	**Pg**	**15 11 15.8**	**-0.6**
KULA	**Kula-Manisa**	**1.30**	**14**	*e*PN	**Pn**	**15 11 18.5**	**-6.6**
ELL	**Elmali**	**1.41**	**110**	*e*PN	**Pn**	**15 11 24.3**	**-2.3**
ELL	**Elmali**	**1.41**	**110**	*e*Pn	**Pn**	**15 11 24.3**	**-2.3**
AKAS	**Kas**	**1.48**	**133**	*i* P	**Pn**	**15 11 30.5**	**+2.9**
AKAS				*i* S	**Sn**	**15 11 56.4**	**+10**
AKAS	**Kas**	**1.48**	**133**	*i* P	**Pn**	**15 11 30.5**	**+2.9**

*ISCJB **09** 15:14:03.7±2.4,55°.99N±0°.06×153°.2W±0°.1, h11km±16km, mb3.7/9, MS3.4/11, Error ellipse: s-maj=11.7km s-min=9.1km az=25.6*
*IDC **09** 15:14:04.5±1.1,56°.03N×153°.41W,h0km, mb3.6/9, mb1 3.8/9, mb1mx3.6/25, mbtmp3.7/9, MS3.4/12, Ms1 3.4/12, ms1mx3.2/41, Error ellipse: s-maj=25.7km s-min=21.2km az=14.0*
*NEIC **09** 15:14:06.5,55°.91N×153°.09W,h20km, ML3.5(AEIC), After AEIC.*
ISC 09 15:14:07.0±3.0,56°.05N±0°.06×153°.3W±0°.1,h18km±20km, n36,σ0°88/30,mb3.7/9,MS3.4/11,Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**1.17**	**1**	P	**Pn**	**15 14 28.0**	**-0.6**
OHAK				S	**Sb**	**15 14 44.6**	**+0.9**
KDAK	**Kodiak Island**	**1.78**	**13**	Pn	**Pn**	**15 14 36.4**	**-0.6**
	47nm,0.3s,baz=201,slow=7.3,SNR=280						
KDAK				Sn	**Sn**	**15 14 58.4**	**-0.8**
	46nm,0.3s,baz=36,slow=22,SNR=15						
KDAK	**Kodiak Island**	**1.78**	**13**	P	**Pn**	**15 14 36.2**	**-0.7**
KDAK				S	**Sn**	**15 14 57.9**	**-1.3**
CHGN	**Chignik**	**2.85**	**277**	P	**Pn**	**15 14 51.0**	**-0.5**
RSO	**Redoubt South**	**4.43**	**4**	*e*P	**Pn**	**15 15 14.2**	**+0.9**
SLKM	**Skilak Lake**	**4.76**	**19**	P	**Pn**	**15 15 17.5**	**-0.3**
FIB	**Fire Island**	**5.39**	**17**	P	**Pn**	**15 15 26.2**	**-0.3**
RC01	**Rabbit Creek A**	**5.39**	**19**	*e*P	**Pn**	**15 15 27.8**	**+1.3**
12nm,0.4s							
EYAK	**Cordova Ski Ar**	**6.03**	**38**	P	**Pn**	**15 15 33.8**	**-1.4**
SML	**Sawmill**	**6.33**	**22**	P	**Pn**	**15 15 39.3**	**0.0**
BMRM	**Bremner River**	**6.72**	**39**	P	**Pn**	**15 15 44.0**	**-0.7**
9.1nm,0.5s							
TRF	**Thorofare Moun**	**7.58**	**10**	P	**Pn**	**15 15 56.7**	**+0.3**
MCK	**McKinley**	**8.02**	**14**	*e*P	**Pn**	**15 16 04.2**	**+1.8**
7.7nm,0.4s							
PNL	**Peninsula**	**8.27**	**58**	P	**Pn**	**15 16 03.8**	**-2.2**
IM3	**Indian Mountai**	**9.97**	**359**	P	**Pn**	**15 16 28.1**	**-1.0**
EGAK	**Eagle**	**10.60**	**29**	*e*P	**Pn**	**15 16 39.2**	**+1.4**
DIB	**Dawson Inlet,**	**12.41**	**95**	T		15 29 46.4	
SNR=9.5							
DLBC	**Dease Lake**	**12.83**	**70**	LR	LR	15 21 30.2	
comp=Z,163nm,18.9s,baz=148,slow=35							
INK	**Inuvik**	**15.27**	**29**	LR	LR	15 23 36.1	
comp=Z,76nm,18.0s,baz=238,slow=37							
YKA	**Yellowknife Ar**	**20.55**	**56**	P	**P**	**15 18 44.8**	**+0.6**
0.9nm,0.6s,baz=272,slow=8.7,SNR=4.3							
YBH	**Yreka Blue Hor**	**24.46**	**113**	LR	LR	15 26 28.4	
comp=Z,91nm,18.9s,MS3.3,baz=302,slow=30							
PETK	**Petropavlovsk-**	**28.05**	**285**	P	**P**	**15 19 57.3**	**+0.3**
1.4nm,0.6s,mb3.8,baz=72,slow=12,SNR=6.8							
PETK				LR	LR	15 32 03.5	
comp=Z,51nm,19.2s,MS3.1,baz=252,slow=38							
RES	**Resolute Bay**	**28.83**	**28**	LR	LR	15 32 28.2	
comp=Z,78nm,19.8s,MS3.3,baz=297,slow=38							
ELK	**Elko**	**29.12**	**106**	LR	LR	15 30 26.5	
comp=Z,47nm,19.3s,MS3.1,baz=269,slow=34							
NVAR	**Mina Array Bea**	**29.17**	**112**	P	**P**	**15 20 07.6**	**+0.6**
0.2nm,0.5s,mb3.1,baz=318,slow=6.1,SNR=3.7							
TXAR	**Lajitas Array**	**43.91**	**106**	P	**P**	**15 22 13.2**	**+0.7**
0.2nm,0.6s,mb3.0,baz=316,slow=6.3,SNR=2.4							
TXAR				LR	LR	15 39 57.8	
comp=Z,45nm,19.1s,MS3.4,baz=285,slow=35							
SCHQ	**Schefferville**	**45.98**	**53**	LR	LR	15 43 03.4	
comp=Z,33nm,21.3s,MS3.2,baz=9,slow=38							
MDJ	**Mudanjiang**	**48.00**	**291**	P	**P**	**15 22 43.3**	**-1.3**
MDJ				pmax	pmax		
	comp=Z,4.0nm,1.9s,mb4.1						
MDJ				pmax	pmax		
	comp=Z,36nm,4.2s						
MDJ				LR	LR		
	comp=N,48nm,22.8s,MS3.5						
MDJ				LR	LR		
	comp=E,32nm,24.1s,MS3.5						
MDJ				LR	LR		
	comp=Z,46nm,22.2s,MS3.4						
KSRS	**Korea Array**	**53.95**	**285**	P	**P**	**15 23 29.8**	**+0.4**
comp=Z,0.9nm,0.9s,mb3.7,baz=42,slow=7.0,SNR=4.1							
KSRS				LR	LR	15 44 35.0	
comp=Z,21nm,20.0s,MS3.2,baz=235,slow=34							
ARCES	**ARCESS Array B**	**54.72**	**0**	P	**P**	**15 23 34.7**	**+0.2**
comp=Z,0.9nm,0.8s,mb3.9,baz=12,slow=6.7,SNR=8.9							
ARCES	**ARCESS Array B**	**54.72**	**0**	P	**P**	**15 23 34.7**	**+0.2**
SONM	**Songino Array**	**57.02**	**308**	LR	LR	15 50 43.2	
comp=Z,95nm,18.4s,MS3.9,baz=218,slow=39							
NOA	**NORSAR Array B**	**62.62**	**8**	P	**P**	**15 24 29.9**	**+0.3**
comp=Z,0.4nm,0.6s,mb3.7,baz=350,slow=6.8,SNR=3.9							
NOA				LR	LR	15 53 41.3	
comp=Z,19nm,19.0s,MS3.3,baz=355,slow=38							
HFS	**Hagfors**	**63.70**	**7**	P	**P**	**15 24 37.0**	**+0.2**
comp=Z,0.6nm,0.4s,mb4.0,baz=352,slow=3.0,SNR=6.5							
BVAR	**Borovoye Array**	**65.49**	**333**	P	**P**	**15 24 48.4**	**-0.2**
comp=Z,0.4nm,0.4s,mb3.8,baz=46,slow=8.5,SNR=4.0							
EIL	**Elat**	**94.33**	**353**	LR	LR	16 20 07.6	
comp=Z,32nm,20.4s,MS3.8,baz=276,slow=42							

*ISCJB **09** 15:24:40.9±1.0,5°.6N±0°.2×93°.3E±0°.1,h30km, mb4.2/10, Error ellipse: s-maj=29.2km s-min=7.7km az=43.8*
*NEIC **09** 15:24:41.4±0.9,5°.40N×92°.97E,mb4.6/1, Error ellipse: s-maj=23.5km s-min=9.4km az=52.0*
*IDC **09** 15:24:42.8±2.0,5°.63N×93°.27E,h30km±6km, mb3.9/8, mb1 3.9/9, mb1mx3.7/24, mbtmp3.8/9, ML3.4/1, Error ellipse: s-maj=80.4km s-min=14.7km az=56.0*
ISC 09 15:24:42.9±1.0,5°.6N±0°.2×93°.3E±0°.1,h32km, h32km±,4km:pP-P,n17,σ0°81/20,mb4.2/10,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**6.30**	**116**	Pn	**Pn**	**15 26 16.0**	**+2.2**
0.9nm,0.3s,baz=325,slow=19,SNR=3.1							
PSI				Sn	**Sn**	**15 27 23.2**	**-1.5**
1.7nm,0.3s,baz=82,slow=15,SNR=4.0							
KULM	**Kulim**	**7.37**	**92**	*e*Pn	**Pn**	**15 26 29.3**	**+1.0**
KULM				*e*Sn	**Sn**	**15 27 45.4**	**-5.5**
CHTO	**Chiang Mai**	**14.24**	**22**	*e*P	**Pn**	**15 28 07.8**	**+5.3**
LSA	**Lhasa**	**24.04**	**355**	P	**P**	**15 29 55.1**	**-0.1**
HHC	**Hu-ho-hao-te**	**38.73**	**22**	*e*P	**P**	**15 32 08.0**	**+3.9**
HHC				S	**S**	**15 38 05.7**	**+6.5**
HHC				pmax	pmax		
	comp=Z,17nm,0.7s,mb4.9						
HHC				pmax	pmax		
	comp=Z,64nm,6.2s						
FITZ	**Fitzroy Crossi**	**39.70**	**127**	P	**P**	**15 32 12.4**	**-0.2**
MK31	**Makanchi Array**	**42.10**	**349**	*e*P	**P**	**15 32 31.9**	**-0.1**
MKAR	**Makanchi Array**	**42.10**	**349**	P	**P**	**15 32 31.6**	**-0.4**
comp=Z,0.6nm,0.4s,mb3.6,baz=174,slow=9.5,SNR=8.1							
MKAR				pP	pP	15 32 40.5	-0.9
comp=Z,0.5nm,0.6s,baz=162,slow=7.4,SNR=3.1							
SONM	**Songino Array**	**43.54**	**13**	P	**P**	**15 32 42.8**	**-0.9**
comp=Z,1.1nm,0.5s,mb3.8,baz=197,slow=8.1,SNR=6.0							
KURK	**Kurchatov**	**46.59**	**347**	P	**P**	**15 33 07.5**	**-0.3**
comp=Z,1.1nm,0.3s,mb4.3,baz=169,slow=7.1,SNR=3.9							
KURK	**Kurchatov**	**46.59**	**347**	*e*P	**P**	**15 33 08.0**	**+0.2**
WRA	**Warramunga Arr**	**47.72**	**123**	P	**P**	**15 33 17.2**	**+0.2**
comp=Z,3.4nm,0.7s,mb4.5,baz=302,slow=9.1,SNR=24							
WRA				pP	pP	15 33 26.1	-0.4
comp=Z,1.6nm,0.5s,baz=302,slow=9.1,SNR=6.0							
WRAB	**Tennant Creek**	**47.72**	**123**	*e*P	**P**	**15 33 17.4**	**+0.3**
comp=Z,3.3nm,0.5s,mb4.6							
ZALV	**Zalesovo Beam**	**48.67**	**353**	P	**P**	**15 33 24.3**	**+0.4**
comp=Z,1.6nm,0.5s,mb4.3,baz=166,slow=6.6,SNR=12							
ZALV				pP	pP	15 33 33.6	+0.2
comp=Z,0.7nm,0.5s,baz=166,slow=7.6,SNR=2.4							
ASAR	**Alice Springs**	**49.19**	**128**	P	**P**	**15 33 27.6**	**-0.7**
comp=Z,1.1nm,0.7s,mb4.0,baz=299,slow=8.0,SNR=13							
BVAR	**Borovoye Array**	**50.85**

mb1mx2.8/27, mbtmp2.8/4, ML2.8/4, Error ellipse: s-maj=36.6km s-min=14.3km az=28.0

ISC 09 15:37:48.6±4.0, 47°.42N±0°.10×73°.2E±0°.1, h20km±31km, n5, σ0.9±84/8, 2C-1D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**4.72**	**205**	⇑Pn	**Pn**	**15 38 59.4**	**+0.8**
	0.4nm,0.2s,baz=23,slow=14,SNR=11						
KK31				⇑Sn	**Sn**	**15 39 51.9**	**-0.8**
	0.4nm,0.3s,baz=24,slow=25,SNR=5.1						
KK31				⇓Lg		15 40 11.6	
	2.9nm,0.8s,baz=20,slow=28,SNR=4.1						
KURK	**Kurchatov**	**4.85**	**45**	Pn	**Pn**	**15 38 59.9**	**-0.5**
	0.1nm,0.3s,baz=233,slow=14,SNR=4.3						
KURK				Pg	**Pb**	**15 39 12.1**	**-0.6**
	0.1nm,0.3s,baz=231,slow=16,SNR=5.4						
KURK				Lg		15 40 16.4	
	0.3nm,0.3s,baz=218,slow=28,SNR=8.8						
BVAR	**Borovoye Array**	**5.90**	**343**	Pn	**Pn**	**15 39 15.4**	**+0.7**
	0.2nm,0.3s,baz=163,slow=17,SNR=5.4						
MKAR	**Makanchi Array**	**6.23**	**92**	Pn	**Pn**	**15 39 19.7**	**+0.4**
	0.2nm,0.3s,baz=269,slow=14,SNR=2.7						
MKAR				Sn	**Sn**	**15 40 30.2**	**+0.4**
	0.1nm,0.3s,baz=273,slow=19,SNR=2.7						
MKAR				Lg		15 41 02.9	
	0.3nm,0.3s,baz=268,slow=32,SNR=6.3						
ZALV	**Zalesovo Beam**	**9.84**	**44**	Pn	**Pn**	**15 40 08.4**	**-0.4**
	0.2nm,0.3s,baz=235,slow=14,SNR=3.6						

WEL 09 15:48:08.3±0.5, 37°.55S×176°.39E, h175km±4km, ML3.5/16, Error ellipse: s-maj=7.2km s-min=5.7km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.91**	**141**	PN	Pn	15 48 34.9	+0.1
URZ				SN	Sn	15 48 55.5	+0.3
MWZ	**Matawai**	**1.19**	**131**	PN	Pn	15 48 37.1	+0.1
MWZ				SN	Sn	15 48 59.3	+0.2
RAHZ	**Arahi**	**1.47**	**158**	PN	Pn	15 48 40.3	+0.8
MXZ	**Matakaoa Point**	**1.52**	**91**	PN	Pn	15 48 40.1	+0.1
PUZ	**Puketiti**	**1.57**	**110**	PN	Pn	15 48 40.2	-0.3
NMHZ	**Naumai**	**1.58**	**168**	PN	Pn	15 48 41.6	+1.0
BKZ	**Black Stump Fm**	**1.62**	**177**	PN	Pn	15 48 40.8	-0.2
BKZ				SN	Sn	15 49 05.6	-0.7
CNGZ	**Carnagh Statio**	**1.71**	**124**	PN	Pn	15 48 42.4	+0.5
KNZ	**Kokohu**	**1.78**	**146**	PN	Pn	15 48 42.5	-0.1
PRGZ	**Paritu Road**	**1.81**	**140**	PN	Pn	15 48 42.8	-0.1
TUVZ	**Tukino**	**1.81**	**198**	PN	Pn	15 48 43.2	+0.3
WNVZ	**Wahianoa**	**1.88**	**199**	PN	Pn	15 48 43.9	+0.2
MCHZ	**McNeill Hill**	**1.91**	**173**	PN	Pn	15 48 44.2	+0.2
MTVZ	**Mangateitei**	**1.97**	**201**	PN	Pn	15 48 44.6	0.0
MHGZ	**Mahia Peninsul**	**2.00**	**144**	PN	Pn	15 48 44.8	-0.1
KAHZ	**Kahuranaki**	**2.27**	**171**	PN	Pn	15 48 47.6	-0.5
PNHZ	**Pukenui**	**2.37**	**184**	PN	Pn	15 48 48.1	-1.0
WAZ	**Wanganui**	**2.46**	**206**	PN	Pn	15 48 49.7	-0.5
PXZ	**Pawanui**	**2.50**	**172**	PN	Pn	15 48 49.5	-1.2
WPHZ	**Waipukurau**	**2.51**	**179**	PN	Pn	15 48 49.8	-1.0
TSZ	**Takapari Road**	**2.53**	**187**	PN	Pn	15 48 49.6	-1.4
DVHZ	**Dannevirke**	**2.75**	**184**	PN	Pn	15 48 51.8	-1.8
POWZ	**Post Office Ro**	**2.88**	**190**	PN	Pn	15 48 53.1	-2.0
BFZ	**Birch Farm**	**3.13**	**182**	PN	Pn	15 48 55.8	-2.4
MRZ	**Mangatainoka R**	**3.17**	**191**	PN	Pn	15 48 56.1	-2.7
TIWZ	**Tintock**	**3.25**	**187**	PN	Pn	15 48 57.1	-2.6
OGWZ	**Otaki Gorge**	**3.40**	**196**	PN	Pn	15 48 58.9	-2.7
HOWZ	**Holdsworth Sta**	**3.41**	**191**	PN	Pn	15 48 58.7	-3.1
KIW	**Kapiti Island**	**3.50**	**199**	PN	Pn	15 48 59.9	-3.0
TMWZ	**Te Maipa**	**3.57**	**186**	PN	Pn	15 49 01.0	-2.8
MTW	**Mount Morrison**	**3.67**	**191**	PN	Pn	15 49 01.4	-3.6
CAW	**Cannon Point**	**3.70**	**196**	PN	Pn	15 49 02.1	-3.3
MSWZ	**Moikau Station**	**3.96**	**193**	PN	Pn	15 49 04.9	-3.7
TCW	**Tory Channel**	**4.01**	**203**	PN	Pn	15 49 06.1	-3.2
PLWZ	**Palliser**	**4.11**	**192**	PN	Pn	15 49 06.6	-4.0
TUWZ	**Tuamarina**	**4.31**	**205**	PN	Pn	15 49 09.6	-3.6
QRZ	**Quartz Range**	**4.44**	**221**	PN	Pn	15 49 11.0	-3.8
THZ	**Tophouse**	**4.99**	**212**	PN	Pn	15 49 19.2	-2.8
LTZ	**Lake Taylor**	**6.10**	**210**	PN	Pn	15 49 31.8	-4.7

GUC 09 15:51:00.7±0.6, 32°.02S×71°.49W, h37km±1km, MD3.9, ML3.4, 4C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.13**	**356**	⇓*i*P	Pn	15 51 07.1	-0.1
CHNG				*i* S	Sn	15 51 11.7	+0.2
CMCH	**Combarbala**	**0.94**	**26**	⇑*i*P	Pn	15 51 17.8	+0.4
CMCH				*i* S	Sn	15 51 30.8	+1.2
CMCH				AML	AML	15 51 32.2	
	comp=N,4μm,0.5s						
JACH	**Jahuel**	**1.01**	**131**	*e*P	Pn	15 51 19.2	+0.9
JACH				*i* S	Sn	15 51 32.9	+1.6
IHA	**Instituto Hidr**	**1.01**	**187**	*e*P	Pn	15 51 18.6	+0.2
IHA				*i* S	Sn	15 51 32.7	+1.3
ROCH	**El Roble**	**1.03**	**157**	⇑*i*P	Pn	15 51 19.4	+0.7
ROCH				*i* S	Sn	15 51 34.5	+2.5
PEL	**Peldehue**	**1.31**	**149**	⇑*i*P	Pn	15 51 23.5	+1.0
PEL				*i* S	Sn	15 51 41.3	+2.5
PEL				AML	AML	15 51 42.5	
	comp=N,2μm,0.3s						
OVCH	**Ovalle**	**1.43**	**10**	*e*P	Pn	15 51 25.5	+1.4
OVCH				*i* S	Sn	15 51 44.3	+2.7
OVCH				AML	AML	15 51 48.6	
	comp=N,508nm,0.5s						
CLCH	**Cerro Calan**	**1.59**	**150**	⇓*i*P	Pn	15 51 27.9	+1.5
CLCH				*i* S	Sn	15 51 48.4	+2.6
CLCH				AML	AML	15 51 50.0	
	comp=N,1μm,0.5s						
SAN	**Santiago**	**1.59**	**154**	*e*P	Pn	15 51 27.5	+1.1
SAN				AML	AML	15 51 50.4	
	comp=N,297nm,0.3s						
FCH	**Farellones**	**1.65**	**143**	⇑*i*P	Pn	15 51 29.7	+2.5
FCH				*i* S	Sn	15 51 52.8	+5.6
FCH				AML	AML	15 51 53.9	
	comp=N,409nm,0.2s						
TACH	**Talagante**	**1.70**	**164**	*e*P	Pn	15 51 29.0	+1.2
TACH				*i* S	Sn	15 51 50.6	+2.3
ANTU	**Antumapu**	**1.71**	**155**	*i* S	Sn	15 51 51.0	+2.5
ANTU				AML	AML	15 51 57.6	
	comp=E,563nm,0.6s						
PCH	**Pirque**	**1.80**	**153**	*e*P	Pn	15 51 30.7	+1.5
PCH				*i* S	Sn	15 51 53.4	+2.6
CHCH	**Chadas Angostu**	**2.04**	**160**	*e*P	Pn	15 51 34.1	+1.6
LMEL	**Las Melosas**	**2.12**	**150**	*e*P	Pn	15 51 35.8	+2.1
LMEL				*i* S	Sn	15 52 03.3	+4.5
CACH	**El Canelo**	**2.22**	**161**	*e*P	Pn	15 51 37.3	+2.2

*IDC **09** 16:04:16.7±0.7, 35°.20N×81°.39E, h0km, mb4.2/15, mb1 4.3/20, mb1mx4.2/27, mbtmp4.2/20, ML3.6/5, MS3.7/12, Ms1 3.8/12, ms1mx3.4/30, Error ellipse: s-maj=18.1km s-min=13.5km az=37.0*

*NEIC **09** 16:04:20.1±2.5, 35°.26N×81°.57E, h26km±17km, mb4.4/10, Error ellipse: s-maj=10.0km s-min=7.9km az=198.0*

*BJI **09** 16:04:20.1, 35°.43N×81°.26E, h20km, mB4.4/10, mb4.2/12, ML4.5/5, Ms4.1/11, Ms7 3.9/10*

*MOS **09** 16:04:20.3±1.3, 35°.38N×81°.41E, h33km, mb4.4/20, Error ellipse: s-maj=12.3km s-min=6.8km az=110.2*

*ISCJB **09** 16:04:21.1±0.7, 35°.42N±0°.03×81°.41E±0°.05, h35km±7km, mb4.2/28, MS3.8/13, Error ellipse: s-maj=6.5km s-min=4.4km az=172.4*

ISC 09 16:04:24.0±0.5, 35°.43N±0°.03×81°.45E±0°.04, h46km±5km, n117, σ1.9±19/120, mb4.2/28, MS3.8/13, 2C-1D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLP	**Kalpa**	**4.71**	**215**	*e*PKP	**Pn**	**16 05 34.0**	**+1.4**
KLP				*e*S	**Sn**	**16 06 25.0**	**-0.9**
JOSI	**Joshimath**	**5.11**	**199**	*e*PKP	**Pn**	**16 05 42.8**	**+4.8**
JOSI				*e*S	**Sn**	**16 06 36.8**	**+1.1**
JOSI				AML	AML	16 06 46.0	
	comp=N,210nm,0.6s						
JOSI				AML	AML	16 06 52.0	
	comp=E,165nm,0.8s						
DLH	**Dalhousie**	**5.39**	**239**	*e*PKP	**Pn**	**16 05 47.0**	**+5.3**
DLH				*e*S	**Sn**	**16 06 42.0**	**-0.4**
SDNR	**Sundarnagar**	**5.42**	**225**	*e*PKP	**Pn**	**16 05 45.0**	**+2.8**
SDNR				*ex*	x	16 06 06.4	
THN	**Thein Dam**	**5.62**	**240**	*e*PKP	**Pn**	**16 05 48.0**	**+3.0**
BHK	**Bhakra**	**5.80**	**228**	*ex*	x	16 05 42.1	
DDI	**Dehra Dun**	**5.84**	**210**	*e*PKP	**Pn**	**16 05 47.5**	**-0.4**
DDI				*ex*	x	16 07 25.0	
PTH	**Pithoragarh**	**5.95**	**190**	*e*PKP	**Pn**	**16 05 49.0**	**-0.5**
KSH	**Kashi**	**5.97**	**315**	Pn	**Pn**	**16 05 49.1**	**-0.6**
KSH				*e*Sn	**Sn**	**16 06 56.6**	**0.0**
KSH				smax			
	comp=N,310nm,1.1s						
KSH				smax			
	comp=E,270nm,0.7s						
NDI	**New Delhi**	**7.62**	**209**	*e*PKP	**Pn**	**16 06 10.0**	**-2.4**
NDI				*ex*	x	16 08 01.0	
AYAN	**Aya Nagar**	**7.84**	**209**	*e*S	**Sn**	**16 07 37.4**	**-5.3**
KZA	**Kyzart**	**8.21**	**326**	P	**Pn**	**16 06 19.4**	**-1.0**
	SNR=15						
AGRA	**Agra**	**8.70**	**201**	*e*PKP	**Pn**	**16 06 25.6**	**-1.6**
AGRA				*e*S	**Sn**	**16 07 55.5**	**-8.6**
AGRA				AML	AML	16 08 09.8	
	comp=N,46nm,0.3s						
AGRA				AML	AML	16 08 13.1	
	comp=E,51nm,0.3s						
TKM2	**Tokmak 2**	**8.75**	**331**	P	**Pn**	**16 06 29.2**	**+1.4**
	SNR=16						
TKM2	**Tokmak 2**	**8.75**	**331**	*e*P	**Pn**	**16 06 28.9**	**+1.1**
TKM2				pmax	pmax		
	comp=Z,40nm,1.0s						
TKM2	**Tokmak 2**	**8.75**	**331**	*e*P	**Pn**	**16 06 28.9**	**+1.1**
	comp=Z,40nm,1.0s						
KBK	**Karagaybulak**	**8.81**	**327**	P	**Pn**	**16 06 30.4**	**+1.8**
	SNR=9.5						
AAK	**Ala-Archa**	**9.00**	**325**	Pn	**Pn**	**16 06 32.5**	**+1.3**
	comp=Z,0.6nm,0.3s,baz=170,slow=3.2,SNR=14						
AAK				Pg	Pn	16 07 03.4	+32
	comp=Z,1.7nm,0.3s,baz=154,slow=17,SNR=8.1						
AAK				Lg		16 09 02.1	
	comp=Z,2.6nm,0.3s,baz=327,slow=20,SNR=4.0						
AAK				LR	LR	16 10 04.0	
	comp=Z,261nm,22.0s,baz=137,slow=38						
AAK	**Ala-Archa**	**9.00**	**325**	Pn	**Pn**	**16 06 32.5**	**+1.3**
AAK				Pg	Pn	16 07 03.4	+32
AAK				Lg		16 09 02.1	
AAK				LR	LR	16 10 04.0	
AML	**Almayashu**	**9.02**	**320**	P	**Pn**	**16 06 33.1**	**+1.6**
	SNR=28						
AML	**Almayashu**	**9.02**	**320**	*e*P	**Pn**	**16 06 31.6**	**+0.1**
	comp=Z,92nm,0.9s						
FRU	**Bishkek**	**9.10**	**326**	*e*P	**Pn**	**16 06 33.0**	**+0.4**
FRU				pmax	pmax		
	comp=Z,120nm,1.2s						
CHMS	**Chumysh**	**9.17**	**328**	P	**Pn**	**16 06 34.7**	**+1.2**
	SNR=9.4						
EKS2	**Erkin-Say**	**9.36**	**323**	P	**Pn**	**16 06 37.7**	**+1.5**
	SNR=20						
EKS2	**Erkin-Say**	**9.36**	**323**	*e*P	**Pn**	**16 06 37.4**	**+1.2**
	comp=Z,33nm,1.0s						
WMQ	**Urumqi**	**9.66**	**28**	P	**Pn**	**16 06 39.7**	**-0.6**
LSA	**Lhasa**	**9.98**	**122**	P	**Pn**	**16 06 47.0**	**+2.3**
LSA				S	**Sn**	**16 08 46.1**	**+11**
LSA				LR	LR		
	comp=N,570nm,18.1s						
LSA				LR	LR		
	comp=E,660nm,17.0s						
LSA				LR	LR		
	comp=Z,200nm,11.9s						
KBL	**Kabul**	**10.22**	**269**	*e*P	**Pn**	**16 06 46.9**	**-1.0**
KBL				pmax	pmax		
	comp=Z,23nm,0.9s						
KBL	**Kabul**	**10.22**	**269**	*e*P	**Pn**	**16 06 46.9**	**-1.1**
	comp=Z,23nm,0.9s						
AJM	**Ajmer**	**10.66**	**215**	*e*PKP	**Pn**	**16 06 53.0**	**-1.0**
AJM				*i* x	x	16 08 50.0	
MK31	**Makanchi Array**	**11.37**	**3**	*e*P	**Pn**	**16 07 02.0**	**-1.6**
MKAR	**Makanchi Array**	**11.37**	**3**	Pn	**Pn**	**16 07 02.2**	**-1.4**
	comp=Z,1.0nm,0.3s,baz=180,slow=12,SNR=88						
MKAR				Sn	**Sn**	**16 09 07.2**	**-2.0**
	comp=Z,1.7nm,0.3s,baz=175,slow=19,SNR=4.1						
MKAR	**Makanchi Array**	**11.37**	**3**	P	**Pn**	**16 07 02.2**	**-1.4**
MKAR						16 09 07.2	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR				smax			
	comp=N,2.0nm,0.3s						
MKAR	**Makanchi Array**	**11.37**	**3**	Pn	**Pn**	**16 07 02.2**	**-1.4**
MKAR				Sn	**Sn**	**16 09 07.2**	**-2.0**
CAL	**Calcutta**	**14.18**	**153**	*ex*	**Sn**	**16 10 18.3**	**+0.3**
GTA	**Gaotai**	**15.12**	**69**	*e*P	**Pn**	**16 08 00.3**	**+5.9**
GTA				pP	pP	16 08 05.6	-4.0
GTA				sP	sP	16 08 08.9	-6.6
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,80nm,4.5s						
GTA				LR	LR		
	comp=N,450nm,14.9s						
GTA				LR	LR		
	comp=E,280nm,13.1s						
GTA				LR	LR		
	comp=Z,350nm,10.4s						
KURK	**Kurchatov**	**15.42**	**353**	Pn	**Pn**	**16 07 53.3**	**-4.8**
	comp=Z,0.0nm,0.3s,baz=174,slow=12,SNR=30						
KURK				LR	LR	16 14 40.1	
	comp=Z,221nm,19.1s,baz=185,slow=40						
ZAA0	**Zalesovo Array**	**18.67**	**6**	*e*P	**Pn**	**16 08 36.8**	**-1.8**
ZALV	**Zalesovo Beam**	**18.67**	**6**	P	**Pn**	**16 08 37.0**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=193,slow=10,SNR=33						
BVAR	**Borovoye Array**	**19.25**	**339**	P	**Pn**	**16 08 44.9**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=143,slow=11,SNR=37						
BVAR	**Borovoye Array**	**19.25**	**339**	P	**Pn**	**16 08 44.9**	**-0.7**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	**Borovoye**	**19.31**	**339**	*c iP*	**Pn**	**16 08 45.6**	**-0.7**
BRVK	**Borovoye**	**19.31**	**339**	*e*P	**Pn**	**16 08 44.8**	**-1.5**
	comp=Z,16nm,0.9s						
NVS	**Novosibirsk**	**19.45**	**3**	*e*P	**Pn**	**16 08 45.1**	**-2.9**
NVS				pmax	pmax		
	comp=Z,13nm,1.7s						
ABKAR	**Akbulak array**	**20.96**	**318**	*e*P	**P**	**16 09 02.4**	**-0.5**
	comp=Z,15nm,0.9s						
KMI	**Kunming**	**21.02**	**113**	P	**P**	**16 09 03.4**	**-0.3**
KMI				pP		16 09 11.1	
KMI				sP	sP	16 09 15.4	-5.2
KMI				PP		16 09 27.9	
KMI				S	**S**	**16 12 54.0**	**-1.3**
KMI				sS	sS	16 13 07.2	-5.9
KMI				SS		16 13 29.1	
KMI				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.1						
KMI				pmax	pmax		
	comp=Z,65nm,3.7s						
KMI				LR	LR		
	comp=N,170nm,9.5s						
KMI				LR	LR		
	comp=E,220nm,11.6s						
KMI				LR	LR		
	comp=Z,220nm,13.1s,MS3.7						
MOY	**Mondy**	**21.44**	**35**	*e*P	**P**	**16 09 13.0**	**+5.1**
SONM	**Songino Array**	**22.28**	**49**	P	**P**	**16 09 19.3**	**+2.4**
	comp=Z,3.8nm,0.9s,mb3.9,baz=244,slow=9.7,SNR=17						
SONM				LR	LR	16 18 40.2	
	comp=Z,164nm,19.7s,MS3.5,baz=241,slow=38						
SONM	**Songino Array**	**22.28**	**49**	P	**P**	**16 09 19.3**	**+2.3**
SONM				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SONM				MLR	MLR		
	comp=Z,164nm,19.7s						
XAN	**Xi'an**	**22.60**	**86**	P	**P**	**16 09 24.4**	**+3.9**
XAN				pP		16 09 32.1	
XAN				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.4						
AKTK	**Aktyubinsk**	**22.65**	**319**	P	**P**	**16 09 21.4**	**+0.5**
AKTK				LR	LR	16 18 20.6	
AKTO	**Aktyubinsk**	**22.65**	**319**	P	**P**	**16 09 21.4**	**+0.5**
	comp=Z,3.2nm,0.6s,mb3.9,baz=110,slow=11,SNR=15						
AKTO				LR	LR	16 18 20.6	
	comp=Z,139nm,18.5s,MS3.4,baz=310,slow=37						
AKTO	**Aktyubinsk**	**22.65**	**319**	P	**P**	**16 09 21.4**	**+0.5**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb3.9						
AKTO				MLR	MLR		
	comp=Z,139nm,18.5s,MS3.4						
CHTO	**Chiang Mai**	**22.66**	**132**	P	**P**	**16 09 15.6**	**-5.7**
CHTO				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.1						
CHTO	**Chiang Mai**	**22.66**	**132**	P	**P**	**16 09 15.6**	**-5.7**
	comp=Z,8.1nm,1.0s,mb4.1						
ULN	**Ulaanbaatar**	**22.70**	**49**	*e*P	**P**	**16 09 22.2**	**+0.8**
ULN				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.2						
ULN	**Ulaanbaatar**	**22.70**	**49**	*e*P	**P**	**16 09 22.2**	**+0.8**
	comp=Z,10nm,1.1s,mb4.2						
HHC	**Hu-ho-hao-te**	**24.23**	**68**	*e*P	**P**	**16 09 39.5**	**+3.2**
HHC				sP	sP	16 09 52.4	-1.6
HHC				PP		16 10 15.1	
HHC				PcP	PcP	16 13 21.0	+5.4
HHC				S	**S**	**16 13 52.2**	**+0.6**
HHC				sS	sS	16 14 08.0	-3.9
HHC				SS		16 14 45.6	
HHC				ScP	ScP	16 16 55.6	+5.3
HHC				PcS	PcS	16 16 59.1	+3.8
HHC				pmax	pmax		
	comp=Z,15nm,0.5s,mb4.7						
HHC				pmax	pmax		
	comp=Z,100nm,5.2s						
HHC				LR	LR		
	comp=N,200nm,11.7s,MS4.0						
HHC				LR	LR		
	comp=E,210nm,11.0s,MS4.0						
HHC				LR	LR		
	comp=Z,240nm,11.6s,MS3.9						
ARU	**Arti**	**26.12**	**331**	*e*P	**P**	**16 09 53.6**	**+0.3**
ARU				*e*		16 10 38.2	
ARU				SS		16 15 44.2	
ARU				MLR	MLR		
	comp=Z,148nm,14.0s,MS3.7						
ARU	**Arti**	**26.12**	**331**	*e*P	**P**	**16 09 54.2**	**+0.9**
	comp=Z,4.3nm,0.9s,mb4.0						
KSRS	**Korea Array**	**37.15**	**73**	P	**P**	**16 11 30.2**	**0.0**
	comp=Z,4.1nm,0.9s,mb4.2,baz=123,slow=37,SNR=7.7						
KSRS				PcP	PcP	16 13 49.6	0.0
	comp=Z,1.1nm,0.8s,baz=263,slow=2.8,SNR=7.3						
KSRS				LR	LR	16 27 42.3	
	comp=Z,120nm,19.3s,MS3.7,baz=292,slow=38						
KSRS	**Korea Array**	**37.15**	**73**	P	**P**	**16 11 30.2**	**-0.1**
KSRS						16 13 49.7	
KSRS				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.7						
KSRS				MLR	MLR		
	comp=Z,120nm,19.3s,MS3.7						
MDJ	**Mudanjiang**	**37.52**	**61**	P	**P**	**16 11 37.0**	**+3.7**
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.7s,mb4.2						
MDJ				pmax	pmax		
	comp=Z,40nm,5.1s						
BRTR	**Keskin Array B**	**37.78**	**291**	P	**P**	**16 11 35.7**	**+0.2**
	comp=Z,0.7nm,0.7s,mb3.5,baz=86,slow=7.8,SNR=3.4						
BRTR	**Keskin Array B**	**37.78**	**291**	P	**P**	**16 11 35.7**	**+0.2**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**40.23**	**309**	P	**P**	**16 11 55.2**	**-0.6**
	comp=Z,2.5nm,0.5s,mb4.2,baz=78,slow=7.9,SNR=13						
AKASG	**Malin Array Be**	**40.23**	**309**	P	**P**	**16 11 55.2**	**-0.6**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.5s						
JOF	**Joensuu**	**41.18**	**328**	*e*P	**P**	**16 12 02.2**	**-1.3**
JOF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.3						
JOF	**Joensuu**	**41.18**	**328**	*e*p	**P**	**16 12 02.2**	**-1.3**
	comp=Z,8.3nm,0.9s,mb4.4						
MLR	**Muntele Rosu**	**42.65**	**301**	⇑*i*P	**P**	**16 12 17.5**	**+1.8**
BURAR	**Bucovina Array**	**42.94**	**304**	⇓*i*P	**P**	**16 12 18.4**	**+0.3**
FINES	**FINESS Array B**	**43.19**	**325**	P	**P**	**16 12 20.3**	**+0.4**
	comp=Z,4.8nm,0.6s,mb4.4,baz=101,slow=9.9,SNR=18						
FINES				LR	LR	16 31 21.5	
	comp=Z,158nm,18.4s,MS4.0,baz=111,slow=38						
FINES	**FINESS Array B**	**43.19**	**325**	P	**P**	**16 12 20.3**	**+0.4**
FINES				pmax	pmax		
	comp=Z,5.0nm,0.6s						
FINES				MLR	MLR		
	comp=Z,159nm,18.4s						
FINES	**FINESS Array B**	**43.19**	**325**	P	**P**	**16 12 20.3**	**+0.4**
FINES				LR	LR	16 31 21.4	
MJAR	**Matsushiro Arr**	**45.36**	**71**	P	**P**	**16 12 37.7**	**0.0**
	comp=Z,2.6nm,0.7s,mb4.2,baz=290,slow=10,SNR=9.7						
MJAR				LR	LR	16 33 13.2	
	comp=Z,70nm,19.4s,MS3.6,baz=60,slow=38						
MJAR	**Matsushiro Arr**	**45.36**	**71**	P	**P**	**16 12 37.7**	**+0.1**
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MJAR				MLR	MLR		
	comp=Z,71nm,19.4s						
ARCES	**ARCESS Array B**	**45.49**	**336**	P	**P**	**16 12 39.2**	**+1.1**
	comp=Z,1.8nm,0.7s,mb4.0,baz=99,slow=8.0,SNR=8.9						
ARCES				LR	LR	16 33 09.0	
	comp=Z,118nm,18.6s,MS3.9,baz=284,slow=38						
ARCES	**ARCESS Array B**	**45.49**	**336**	P	**P**	**16 12 39.2**	**+1.1**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARCES				MLR	MLR		
	comp=Z,118nm,18.6s						
ARCES	**ARCESS Array B**	**45.49**	**336**	P	**P**	**16 12 39.2**	**+1.1**
ARCES				LR	LR	16 33 09.0	
ASAJ	**Asahikawa**	**46.83**	**60**	P	**P**	**16 12 50.0**	**+0.9**
	comp=Z,1.5nm,0.7s,mb4.0,baz=229,slow=11,SNR=3.0						
ASAJ	**Asahikawa**	**46.83**	**60**	P	**P**	**16 12 50.0**	**+0.9**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NB2	**NORSAR Subarra**	**50.32**	**323**	P	**P**	**16 13 15.8**	**+0.2**
	comp=Z,3.6nm,0.7s,mb4.5,baz=88,slow=7.9						
NOA	**NORSAR Array B**	**50.32**	**323**	P	**P**	**16 13 15.8**	**+0.2**
	comp=Z,3.2nm,0.7s,mb4.5,baz=88,slow=7.5,SNR=22						
NOA				LR	LR	16 35 20.8	
	comp=Z,117nm,19.1s,MS3.9,baz=90,slow=37						
NOA	**NORSAR Array B**	**50.32**	**323**	P	**P**	**16 13 15.8**	**+0.2**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NOA				M

comp=Z,6.7nm,1.0s,mb4.5,baz=46,slow=8.1,SNR=4.8
YKA Yellowknife Ar 81.56 7 P P 16 16 36.4 +0.1
comp=Z,1.4nm,0.7s,mb4.0,baz=340,slow=5.3,SNR=4.0
YKA Yellowknife Ar 81.56 7 P P 16 16 36.4 +0.1
YKA pmax pmax
comp=Z,1.0nm,0.7s
BOSA Boshof 82.84 227 P P 16 16 41.9 -1.5
comp=Z,12nm,0.9s,mb4.9,baz=95,slow=5.2,SNR=8.9
BOSA Boshof 82.84 227 P P 16 16 41.9 -1.5
BOSA pmax pmax
comp=Z,12nm,0.9s,mb4.9
STKA Stephens Creek 87.56 132 LR LR 16 58 50.4
comp=Z,121nm,19.8s,MS4.3,baz=205,slow=37
SADO Sadowa 98.26 346 LR LR 17 06 43.4
comp=Z,37nm,19.1s,MS3.9,baz=271,slow=38
CPUP Villa Florida 143.69 273 PKhKP PKPpre 16 23 49.6
comp=Z,0.9nm,0.6s,baz=42,slow=4.5,SNR=5.2
LPAZ La Paz 146.84 297 PKPbc PKPbc 16 24 01.0 -0.5
comp=Z,1.7nm,0.7s,baz=55,slow=3.1,SNR=7.4
LPAZ La Paz 146.84 297 PKP2 PKPbc 16 24 01.0 -0.5
LPAZ pmax pmax
comp=Z,2.0nm,0.7s

*NEIC **09** 16:05:43.1, 37.°00N×56.°98E, h7km, MN4.1(TEH), After TEH.*
CSEM 09 16:05:41.7±0.1, 36.°95N×57.°00E, h2km, ML3.9, Error ellipse: s-maj=4.8km s-min=2.8km az=170.0, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISHV	**Shirvan**	**0.81**	**44**	Pg	Pg	16 05 57.4	+0.2
ISHV	**Shirvan**	**0.81**	**44**	Pg	Pg	16 05 57.4	+0.2
ISFR	**Sfrayin**	**0.81**	**83**	Pg	Pg	16 05 57.2	0.0
ISFR	**Sfrayin**	**0.81**	**83**	Pg	Pg	16 05 57.2	0.0
BJRD	**Bojnurd**	**0.81**	**24**	*e*Pg	Pg	16 05 57.5	+0.2
BJRD				*e*Sg	Sg	16 06 10.0	+2.1
MRVT	**Maraveh tapeh**	**1.01**	**314**	*e*Pg	Pg	16 06 01.4	+0.3
MRVT				*e*Sg	Sg	16 06 16.6	+2.4
IQHU	**Qucahn**	**1.24**	**84**	Pg	Pg	16 06 05.5	+0.1
IQHU	**Qucahn**	**1.24**	**84**	Pg	Pg	16 06 05.5	+0.1
IEMG	**Emamgholi**	**1.40**	**70**	Pg	Pg	16 06 08.3	-0.2
IEMG	**Emamgholi**	**1.40**	**70**	Pg	Pg	16 06 08.3	-0.2
IAKL	**Akhelmad**	**1.45**	**103**	Pn	Pn	16 06 07.8	-1.2
IAKL				Sg	Sg	16 06 28.0	-0.4
IPAY	**Payeh**	**1.68**	**107**	Pn	Pn	16 06 12.7	+0.6
IPAY				Sg	Sg	16 06 36.4	+0.7
IPAY	**Payeh**	**1.68**	**107**	Pn	Pn	16 06 12.7	+0.6
IPAY				Sg	Sg	16 06 36.4	+0.7
IMOG	**Moghan**	**2.06**	**113**	Pn	Pn	16 06 18.7	+1.3
IMOG				Sg	Sg	16 06 48.4	+0.3
IMOG	**Moghan**	**2.06**	**113**	Pn	Pn	16 06 18.7	+1.3
IMOG				Sg	Sg	16 06 48.4	+0.3
IMYA	**Miami**	**2.57**	**103**	Pn	Pn	16 06 26.1	+1.8
IMYA	**Miami**	**2.57**	**103**	Pn	Pn	16 06 26.1	+1.8
IGLO	**Ghaloghah**	**2.58**	**261**	Pn	Pn	16 06 25.8	+1.3
IGLO	**Ghaloghah**	**2.58**	**261**	Pn	Pn	16 06 25.8	+1.3
IANJ	**Anjilo**	**2.90**	**240**	Pn	Pn	16 06 29.7	+0.8
IANJ	**Anjilo**	**2.90**	**240**	Pn	Pn	16 06 29.7	+0.8
ISHM	**Shahmirzad**	**3.20**	**250**	Pn	Pn	16 06 33.3	+0.3
ISHM	**Shahmirzad**	**3.20**	**250**	Pn	Pn	16 06 33.3	+0.3
IALA	**Alasht**	**3.48**	**257**	Pn	Pn	16 06 38.2	+1.3
IALA	**Alasht**	**3.48**	**257**	Pn	Pn	16 06 38.2	+1.3
ILAS	**Lasjerd**	**3.62**	**246**	Pn	Pn	16 06 39.3	+0.5
ILAS	**Lasjerd**	**3.62**	**246**	Pn	Pn	16 06 39.3	+0.5
IFIR	**Firoozkooh**	**3.67**	**250**	Pn	Pn	16 06 39.7	+0.2
IFIR	**Firoozkooh**	**3.67**	**250**	Pn	Pn	16 06 39.7	+0.2
IPRN	**Peran**	**3.82**	**261**	Pn	Pn	16 06 42.8	+1.3
IPRN	**Peran**	**3.82**	**261**	Pn	Pn	16 06 42.8	+1.3
IDMV	**Damavand**	**4.24**	**253**	Pn	Pn	16 06 47.9	+0.6
IDMV	**Damavand**	**4.24**	**253**	Pn	Pn	16 06 47.9	+0.6
DAMV	**Damavand**	**4.27**	**253**	*e*Pn	Pn	16 06 47.4	-0.3
ISFB	**Sefidab**	**4.66**	**238**	Pn	Pn	16 06 53.7	+0.6
ISFB	**Sefidab**	**4.66**	**238**	Pn	Pn	16 06 53.7	+0.6
THKV	**Tehran--Karaj**	**5.04**	**260**	*e*Pn	Pn	16 06 58.2	-0.1
ICHK	**Chekchek**	**5.16**	**205**	Pn	Pn	16 07 00.3	+0.3
ICHK	**Chekchek**	**5.16**	**205**	Pn	Pn	16 07 00.3	+0.3
NASN	**Na'in**	**5.39**	**221**	*e*Pn	Pn	16 07 01.7	-1.4
IBAF	**Bafgh**	**5.48**	**193**	Pn	Pn	16 07 05.2	+0.9
IBAF	**Bafgh**	**5.48**	**193**	Pn	Pn	16 07 05.2	+0.9
IZEF	**Zefreh**	**5.58**	**225**	Pn	Pn	16 07 06.1	+0.4
IZEF	**Zefreh**	**5.58**	**225**	Pn	Pn	16 07 06.1	+0.4
IKLH	**Kolahrood**	**5.73**	**232**	Pn	Pn	16 07 08.3	+0.5
IKLH	**Kolahrood**	**5.73**	**232**	Pn	Pn	16 07 08.3	+0.5
IMEH	**Mehriz**	**5.89**	**200**	Pn	Pn	16 07 10.8	+0.8
IMEH	**Mehriz**	**5.89**	**200**	Pn	Pn	16 07 10.8	+0.8
IRAZ	**Razeghan**	**5.92**	**257**	Pn	Pn	16 07 10.4	0.0
IRAZ	**Razeghan**	**5.92**	**257**	Pn	Pn	16 07 10.4	0.0
ZNJK	**Zanjan**	**6.68**	**270**	*e*Pn	Pn	16 07 21.0	+0.2
ISRB	**Sarab**	**7.48**	**279**	Pn	Pn	16 07 31.3	-0.5
ISRB	**Sarab**	**7.48**	**279**	Pn	Pn	16 07 31.3	-0.5
IHRS	**Heris**	**8.02**	**283**	Pn	Pn	16 07 38.1	-1.0
IAZR	**Azarshahr**	**8.81**	**278**	Pn	Pn	16 07 49.4	-0.6
IAZR	**Azarshahr**	**8.81**	**278**	Pn	Pn	16 07 49.4	-0.6

*IDC **09** 16:06:05.4±0.9, 35.°13N×81.°36E, h0km, mb3.9/10, mb1 4.1/13, mb1mx3.9/22, mbtmp3.9/13, ML3.3/3, MS3.5/1, Ms1 3.5/1, ms1mx2.4/28, Error ellipse: s-maj=24.9km s-min=16.8km az=43.0*
*NEIC **09** 16:06:07.7±1.5, 35.°25N×81.°27E, h10km, mb3.9/2, Error ellipse: s-maj=28.3km s-min=13.9km az=187.0*
*ISCJB **09** 16:06:08.7±0.7, 35.°3N±0.°1×81.°3E±0.°1, h33km, mb4.0/12, Error ellipse: s-maj=15.5km s-min=11.0km az=29.2*
ISC 09 16:06:09.6±4.6, 35.°3N±0.°1×81.°4E±0.°1, h27km±31km, n20, σ0°90/20, mb4.0/12, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**15.56**	**353**	Pn	Pn	16 09 41.9	-5.1
	0.0nm,0.3s,baz=179,slow=12,SNR=3.0						
ZAA0	**Zalesovo Array**	**18.83**	**6**	*e*P	Pn	16 10 28.0	+0.2
ZALV	**Zalesovo Beam**	**18.83**	**6**	P	Pn	16 10 26.9	-0.9
	0.1nm,0.3s,baz=197,slow=13,SNR=3.3						
ZALV	**Zalesovo Beam**	**18.83**	**6**	P	Pn	16 10 26.9	-0.9
BVAR	**Borovoye Array**	**19.38**	**340**	P	Pn	16 10 33.2	-1.1
	0.1nm,0.3s,baz=148,slow=8.5,SNR=2.9						
BRVK	**Borovoye**	**19.43**	**340**	*e*P	Pn	16 10 34.3	-0.8
	7.6nm,0.9s						
ABKAR	**Akbulak array**	**21.03**	**318**	P	P	16 10 50.4	-0.7
	3.8nm,0.7s,mb3.8						
SONM	**Songino Array**	**22.43**	**48**	P	P	16 11 08.7	+2.5
	4.9nm,1.0s,mb3.9,baz=252,slow=8.3,SNR=9.4						
HHC	**Hu-ho-hao-te**	**24.35**	**68**	*e*P	P	16 11 25.5	+0.3
HHC				S	S	16 15 41.8	-1.1
HHC				pmax	pmax		
	comp=Z,11nm,0.5s,mb4.5						
HHC				pmax	pmax		
	comp=Z,92nm,5.3s						
GNI	**Garni**	**29.24**	**291**	LR	LR	16 24 40.6	
	comp=Z,97nm,19.6s,baz=100,slow=38						
KSRS	**Korea Array**	**37.26**	**73**	P	P	16 13 18.3	-0.8
	comp=Z,0.3nm,0.5s,mb3.4,baz=281,slow=11,SNR=3.5						
AKASG	**Malin Array Be**	**40.27**	**309**	P	P	16 13 44.2	+0.2
	comp=Z,0.7nm,0.5s,mb3.7,baz=77,slow=8.9,SNR=4.4						
FINES	**FINESS Array B**	**43.28**	**325**	P	P	16 14 09.5	+1.0
	comp=Z,4.1nm,0.7s,mb4.2,baz=106,slow=9.4,SNR=7.4						
MJAR	**Matsushiro Arr**	**45.48**	**71**	P	P	16 14 26.8	+0.3
	comp=Z,1.0nm,0.7s,mb3.8,baz=285,slow=8.4,SNR=4.3						
ARCES	**ARCESS Array B**	**45.60**	**336**	P	P	16 14 28.3	+1.3
	comp=Z,1.7nm,0.8s,mb4.0,baz=78,slow=8.4,SNR=3.3						
NB2	**NORSAR Subarra**	**50.40**	**324**	P	P	16 15 05.0	+0.8
	comp=Z,1.2nm,0.7s,mb4.0,baz=87,slow=7.9						
NOA	**NORSAR Array B**	**50.40**	**324**	P	P	16 15 05.3	+1.1
	comp=Z,1.7nm,0.7s,mb4.2,baz=87,slow=7.4,SNR=5.5						
WRA	**Warramunga Arr**	**74.42**	**129**	P	P	16 17 45.5	+0.2
	comp=Z,1.5nm,1.1s,mb3.8,baz=315,slow=7.3,SNR=3.2						
ASAR	**Alice Springs**	**76.89**	**132**	P	P	16 17 58.5	-0.9
	comp=Z,0.7nm,1.1s,mb3.5,baz=322,slow=5.9,SNR=4.2						
BOSA	**Boshof**	**82.69**	**227**	P	P	16 18 30.4	-0.3
	comp=Z,9.1nm,1.2s,mb4.7,baz=133,slow=2.6,SNR=3.6						

IDC 09 16:30:19.6±5.3, 5.°56S×146.°77E, h0km, mb3.5/3, mb1 3.8/4, mb1mx3.5/15, mbtmp3.6/4, ML3.8/1, Error ellipse: s-maj=153.9km s-min=30.9km az=105.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.72**	**219**	P	Pn	16 34 41.5	+1.2
	0.3nm,0.3s,baz=39,slow=11,SNR=25						
ASAR	**Alice Springs**	**21.86**	**213**	P	P	16 35 14.2	+0.2
	0.7nm,0.5s,baz=49,slow=8.6,SNR=23						
FITZ	**Fitzroy Crossi**	**24.11**	**237**	P	P	16 35 35.9	-1.4
	5.2nm,1.1s,baz=63,slow=14,SNR=4.3						
MKAR	**Makanchi Array**	**77.01**	**320**	P	P	16 42 14.9	+0.5
	0.2nm,0.8s,baz=109,slow=7.8,SNR=2.8						

*IDC **09** 16:38:24.9±1.7, 0.°03N×97.°29E, h0km, mb3.5/7, mb1 3.6/8, mb1mx3.5/22, mbtmp3.5/8, ML3.9/2, Error ellipse: s-maj=49.1km s-min=20.9km az=60.0*
*ISCJB **09** 16:38:27.8±0.7, 0.°07N±0.°04×97.°33E±0.°05, h33km, mb3.5/7, Error ellipse: s-maj=8.8km s-min=4.3km az=148.5*
*NEIC **09** 16:38:30.4±0.8, 0.°12N×97.°40E, h35km, mb3.5/1, Error ellipse: s-maj=16.4km s-min=10.0km az=65.0*
*DJA **09** 16:38:31, 0.°22N×97.°52E, h77km, MLv4.2/11*
ISC 09 16:38:30.2±0.7, 0.°10N±0.°04×97.°37E±0.°06, h35km, n32, σ0°93/40, mb3.5/7, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**2.23**	**130**	P	Pn	16 39 04.6	0.0
SISI				S	Sn	16 39 30.2	-0.7
MNSI	**Mandailing Nat**	**2.31**	**73**	P	Pn	16 39 06.2	+0.3
MNSI				S	Sn	16 39 33.2	+0.1
PPI	**Padang Panjang**	**3.07**	**100**	P	Pn	16 39 16.9	+0.6
PPI				S	Sn	16 39 51.3	-0.6
PSI	**Prapat**	**3.10**	**30**	Pn	Pn	16 39 14.7	-2.0
	9.9nm,0.3s,baz=183,slow=17,SNR=26						
TPTI		**3.15**	**356**	P	Pn	16 39 16.3	-1.0
TPTI				S	Sn	16 39 51.5	-2.2
PDSI	**Padang**	**3.25**	**108**	P	Pn	16 39 19.8	+1.1
PDSI				S	Sn	16 39 55.0	-1.2
TSI	**Tuntungan**	**3.58**	**19**	P	Pn	16 39 24.0	+0.6
TSI				S	Sn	16 40 07.1	+2.6
BKNI	**Bangkinang**	**3.67**	**86**	P	Pn	16 39 24.4	-0.2
PPSI	**Pulau Pagai**	**3.88**	**137**	P	Pn	16 39 26.0	-1.4
SDSI	**Sungai Dareh**	**4.18**	**104**	P	Pn	16 39 33.0	+1.4
IPM	**Ipoh**	**5.68**	**40**	P	Pn	16 39 53.1	+0.9
	0.1nm18nm,0.6s						
IPM				S	Sn	16 40 50.1	-6.1
	0.1nm18nm,0.6s						
KULM	**Kulim**	**6.11**	**32**	*e*P	Pn	16 39 57.9	-0.2
	54nm,0.7s						
KULM	**Kulim**	**6.11**	**32**	P	Pn	16 39 58.0	-0.1
	0.3nm88nm,0.8s						
KULM				S	Sn	16 40 56.4	-10
	0.3nm88nm,0.8s						
KSI	**Kapahiang**	**6.41**	**126**	P	Pn	16 40 02.9	+0.7
	0.4nm2μm100nm,0.9s						
MYKOM	**Kota Tinggi**	**6.69**	**75**	P	Pn	16 40 06.7	+0.6
	0.1nm10nm,1.4s						
MNAI	**Manna**	**7.12**	**129**	P	Pn	16 40 13.2	+1.2
	1.6nm289nm,1.0s						
MDSI	**Maura Dua**	**8.18**	**124**	P	Pn	16 40 26.3	-0.3
	822nm49nm,0.7s						
LWLI	**Liwa**	**8.39**	**127**	P	Pn	16 40 29.1	-0.3
	67nm,0.6s						
KLSI		**8.75**	**123**	P	Pn	16 40 34.0	-0.4
CM31	**Chiang Mai Arr**	**18.31**	**5**	*e*P	Pn	16 42 42.0	+0.4
	2.5nm,0.7s						
CMAR	**Chiang Mai Arr**	**18.31**	**5**	P	Pn	16 42 41.8	+0.2
	0.2nm,0.3s,baz=194,slow=11,SNR=16						
CHTO	**Chiang Mai**	**18.66**	**5**	*e*P	Pn	16 42 44.8	-1.1
KKM	**Kota Kinabalu**	**19.71**	**72**	*e*P	Pn	16 42 57.9	-0.7
WRA	**Warramunga Arr**	**41.31**	**121**	P	P	16 46 12.3	-0.6
	0.4nm,0.5s,mb3.3,baz=303,slow=9.0,SNR=5.7						
WRA	**Warramunga Arr**	**41.31**	**121**	P	P	16 46 12.3	-0.6
ASAR	**Alice Springs**	**42.60**	**126**	P	P	16 46 23.8	+0.5
	0.2nm,0.6s,mb3.0,baz=304,slow=7.6,SNR=4.1						
ASAR	**Alice Springs**	**42.60**	**126**	P	P	16 46 23.8	+0.5
KSRS	**Korea Array**	**46.66**	**34**	P	P	16 46 57.0	+1.6
	0.7nm,0.6s,mb3.7,baz=218,slow=9.6,SNR=4.7						
SONM	**Songino Array**	**48.19**	**8**	P	P	16 47 06.9	-0.2
	0.3nm,0.5s,mb3.6,baz=175,slow=7.1,SNR=3.4						
MKAR	**Makanchi Array**	**48.34**	**346**	P	P	16 47 08.8	+0.5
	0.2nm,0.6s,mb3.4,baz=159,slow=7.3,SNR=3.8						
ZALV	**Zalesovo Beam**	**54.66**	**351**	P	P	16 47 55.6	+0.1
	0.4nm,0.3s,mb3.9,baz=190,slow=7.3,SNR=3.0						
BVAR	**Borovoye Array**	**57.34**	**341**	P	P	16 48 15.1	+0.4
	0.4nm,0.6s,mb3.6,baz=152,slow=6.5,SNR=2.5						

*DDA **09** 16:38:54.8, 37.°53N×35.°73E, h7km±5km, Md2.8*
*ISCJB **09** 16:38:55.4±0.7, 37.°54N±0.°04×35.°71E±0.°05, h12km±5km, Error ellipse: s-maj=7.0km s-min=7.0km az=1.3*
*CSEM **09** 16:38:55.4±0.1, 37.°54N×35.°70E, h12km, MD2.7, Error ellipse: s-maj=2.8km s-min=2.3km az=12.0*
*ISK **09** 16:38:55.2, 37.°51N×35.°70E, h14km, MD2.7*
ISC 09 16:38:55.6±0.7, 37.°54N±0.°05×35.°71E±0.°05, h14km±5km, n20, σ0°38/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.11**	**121**	*e*PG	Pg	16 38 58.9	+0.1
KOZT				*e*SG	Sg	16 39 01.0	-0.1
CEYT	**Ceyhan**	**0.53**	**177**	*e*PG	Pg	16 39 05.6	-0.3
CEYT	**Ceyhan**	**0.53**	**177**	*e*Pg	Pg	16 39 05.6	-0.3
KARA	**Karaisali**	**0.59**	**243**	*e*PG	Pg	16 39 06.7	-0.4
KARA				*e*SG	Sg	16 39 15.3	+0.3
KARA	**Karaisali**	**0.59**	**243**	*e*Pg	Pg	16 39 06.7	-0.4
KARA				*e*Sg	Sg	16 39 15.3	+0.3
YURE	**YUREGIR**	**0.71**	**185**	*i* P	Pg	16 39 09.8	+0.4
YURE				*i* S	Sg	16 39 18.2	-0.5
YURE	**YUREGIR**	**0.71**	**185**	*i* P	Pg	16 39 09.9	+0.5
YURE				*i* S	Sg	16 39 18.2	-0.6
GULE	**Gulek**	**0.79**	**252**	*i* P	Pg	16 39 10.4	-0.4
GULE				*i* S	Sg	16 39 21.7	+0.6
GULE	**Gulek**	**0.79**	**252**	*i* P	Pg	16 39 10.4	-0.4
GULE				*i* S	Sg	16 39 21.7	+0.5
KMRS	**Kahramanmaras**	**0.95**	**91**	*e*PG	Pg	16 39 14.0	+0.2
KMRS	**Kahramanmaras**	**0.95**	**91**	*e*Pg	Pg	16 39 14.0	+0.1
MERS	**Mersin**	**1.16**	**235**	*e*PN	Pn	16 39 17.0	-0.3
MERS	**Mersin**	**1.16**	**235**	*e*Pn	Pn	16 39 17.0	-0.3
SARI	**SarD1z-Kayseri**	**1.38**	**34**	*e*PG	Pg	16 39 16.3	-5.8
AVNT	**Avonos**	**1.41**	**332**	*i* P	Pn	16 39 21.2	+0.4
AVNT				*i* S	Sn	16 39 38.7	-0.5
AVNT	**Avonos**	**1.41**	**332**	*i* P	Pn	16 39 21.2	+0.4
AVNT				*i* S	Sn	16 39 38.7	-0.5
YAYL	**Yayladag**	**1.53**	**168**	*i* P	Pn	16 39 22.9	+0.5
YAYL	**Yayladag**	**1.53**	**168**	*i* P	Pn	16 39 23.0	+0.6
IKL	**Isikli**	**2.08**	**232**	*e*PN	Pn	16 39 30.0	+0.1
IKL	**Isikli**	**2.08**	**232**	*e*Pn	Pn	16 39 30.0	+0.1

*IDC **09** 17:31:55.0±0.7, 26.°41S×176.°31W, h0km, mb4.1/10, mb1 4.3/10, mb1mx4.2/16, mbtmp4.1/10, ML5.3/1, MS3.6/6, Ms1 3.6/6, ms1mx3.3/25, Error ellipse: s-maj=26.8km s-min=18.6km az=124.0*
*NEIC **09** 17:31:56.5±0.5, 26.°25S×176.°45W, h10km, mb4.5/1, Error ellipse: s-maj=18.6km s-min=11.2km az=118.0*
*ISCJB **09** 17:31:58.8±0.6, 26.°30S±0.°07×176.°5W±0.°1, h33km, mb4.0/11, MS3.7/5, Error ellipse: s-maj=19.6km s-min=8.9km az=19.9*
ISC 09 17:32:00.7±0.6, 26.°28S±0.°07×176.°5W±0.°1, h35km, n30, σ1°05/16, mb4.0/11, MS3.7/5, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.22**	**203**	Pn	Pn	17 32 46.8	-1.9
	381nm,0.3s,baz=79,slow=12,SNR=20						
RAO				Sn	Sn	17 33 27.1	+1.3
	140nm,0.3s,baz=54,slow=23,SNR=3.6						
RAO				LR	LR	17 33 46.7	
	comp=Z,296nm,20.8s,baz=137,slow=35						
URZ	**Urewera**	**13.11**	**203**	*e*P	Pn	17 35 04.8	+0.5
DZM	**Mont Dzumac**	**16.14**	**281**	*e*LR	LR	17 39 34.1	
	583nm,24.6s						
TBI	**Tubuai**	**24.68**	**89**	*e*LR	LR	17 43 14.7	
	239nm,25.0s						
PPT	**Papeete**	**26.38**	**76**	*e*LQ		17 42 37.9	
	280nm,23.8s						
PPT				*e*LR	LR	17 43 56.3	
	259nm,25.2s,baz=245						
PPT	**Papeete**	**26.38**	**76**	LR	LR	17 45 13.5	
	comp=Z,120nm,21.2s,MS3.4,baz=260,slow=30						
HNR	**Honiara**	**27.92**	**303**	LR	LR	17 47 16.2	
	comp=Z,213nm,19.3s,MS3.7,baz=267,slow=33						
CTA	**Charters Tower**	**34.72**	**272**	LR	LR	17 50 51.5	
	comp=Z,164nm,18.7s,MS3.8,baz=52,slow=33						
CTAO	**Charters Tower**	**34.72**	**272**	*e*P	P	17 38 45.6	-2.0
	6.0nm,0.8s,mb4.6						
ASAR	**Alice Springs**	**44.84**	**262**	P	P	17 40 10.7	-0.9
	0.8nm,0.4s,mb3.9,baz=94,slow=7.2,SNR=19						
WRA	**Warramunga Arr**	**45.46**	**267**	P	P	17 40 17.2	+0.6
	1.1nm,0.5s,mb3.9,baz=106,slow=6.3,SNR=17						
WRA	**Warramunga Arr**	**45.46**	**267**	P	P	17 40 17.2	+0.6
FITZ	**Fitzroy Crossi**	**53.84**	**266**	P	P	17 41 20.6	+0.1
	3.2nm,1.0s,mb4.2,baz=108,slow=6.4,SNR=3.3						
QSPA	**South Pole Qui**	**63.81**	**180**	P	P	17 42 28.5	-0.3
	2.7nm,1.0s,mb4.2,baz=8.7,slow=4.1,SNR=11						
MJAR	**Matsushiro Arr**	**75.68**	**324**	LR	LR	18 10 43.2	
	comp=Z,87nm,20.4s,MS4.0,baz=70,slow=31						
MAW	**Mawson**	**76.62**	**200**	P	P	17 43 47.4	+0.1
	2.3nm,0.6s,mb4.3,baz=113,slow=7.7,SNR=7.8						
KSRS	**Korea Array**	**82.13**	**318**	P	P	17 44 19.2	+1.6
	0.6nm,0.6s,mb3.7,baz=137,slow=6.3,SNR=5.1						
PETK	**Petropavlovsk-**	**82.19**	**345**	P	P	17 44 19.1	+1.4
	2.5nm,0.8s,mb4.2,baz=139,slow=7.7,SNR=4.4						
PETK				LR	LR	18 15 20.6	
	comp=Z,31nm,20.1s,MS3.7,baz=74,slow=32						
NVAR	**Mina Array Bea**	**84.31**	**42**	P	P	17 44 29.4	+0.4
	0.9nm,0.7s,mb4.0,baz=223,slow=8.8,SNR=7.8						
TXAR	**Lajitas Array**	**89.02**	**57**	P	P	17 44 50.8	-1.4
	0.1nm,0.3s,mb3.6,baz=214,slow=4.2,SNR=4.7						
PDAR	**Pinedale Array**	**92.22**	**43**	P	P	17 45 06.7	0.0
	0.5nm,0.7s,mb4.0,baz=180,slow=2.7,SNR=5.3						
HHC	**Hu-ho-hao-te**	**94.36**	**314**	*e*P	P	17 45 16.8	+0.2
HHC				S	S	17 56 25.7	-0.2
HHC				pmax	pmax		
	comp=Z,22nm,0.8s						
HHC				pmax	pmax		
	comp=Z,44nm,7.1s						
ARCES	**ARCESS Array B**	**134.84**	**349**	PKP	PKPdf	17 51 14.8	-0.2
	comp=Z,0.6nm,0.6s,baz=87,slow=3.1,SNR=3.6						
NB2	**NORSAR Subarra**	**144.86**	**354**	PKP	PKPdf	17 51 33.0	-0.3
	comp=Z,1.8nm,1.0s,baz=10,slow=3.2						
NOA	**NORSAR Array B**	**144.86**	**354**	PKPbc	PKPdf	17 51 32.2	-1.1
	comp=Z,1.1nm,0.7s,baz=15,slow=2.4,SNR=3.9						
NOA	**NORSAR Array B**	**144.86**	**354**	PKPbc	PKPdf	17 51 32.2	-1.1
AKASG	**Malin Array Be**	**148.69**	**328**	PKPbc	PKPbc	17 51 42.8	-1.1
	comp=Z,0.6nm,0.5s,baz=45,slow=3.4,SNR=3.7						
BR131	**Keskin Array S**	**151.56**	**306**	*e*PKPbc	PKPbc	17 51 52.1	+0.9
BRTR	**Keskin Array B**	**151.56**	**306**	PKPbc	PKPbc	17 51 51.0	-0.2
	comp=Z,0.4nm,0.5s,baz=159,slow=4.3,SNR=2.7						
BRTR	**Keskin Array B**	**151.56**	**306**	PKPbc	PKPbc	17 51 51.0	-0.2

IDC 09 17:36:18.1±4.7, 49.°39S×107.°86E, h0km, mb3.8/2, mb1 4.1/2, mb1mx3.7/12, mbtmp3.8/2, MS3.6/3, Ms1 3.5/3, ms1mx3.1/20, Error ellipse: s-maj=220.7km s-min=49.2km az=117.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAW	**Mawson**	**28.80**	**214**	LR	LR	17 50 52.6	
	comp=Z,77nm,20.0s,baz=264,slow=30						
ASAR	**Alice Springs**	**32.81**	**48**	P	P	17 42 53.1	0.0
	1.0nm,0.8s,baz=209,slow=8.8,SNR=7.2						
FITZ	**Fitzroy Crossi**	**34.35**	**31**	LR	LR	17 56 49.2	
	comp=Z,102nm,19.6s,baz=329,slow=36						
WRA	**Warramunga Arr**	**36.21**	**45**	P	P	17 43 22.4	-0.2
	1.0nm,0.7s,baz=210,slow=8.0,SNR=4.5						
KAPI	**Kappang**	**45.35**	**17**	LR	LR	18 00 26.5	
	comp=Z,84nm,21.1s,baz=1.3,slow=32						
NVAR	**Mina Array Bea**	**145.49**	**91**	PKPbc	PKPbc	17 55 58.3	+0.7
	0.5nm,0.7s,baz=228,slow=4.3,SNR=4.0						
TXAR	**Lajitas Array**	**148.79**	**118**	PKPbc	PKPbc	17 56 06.0	-1.2
	0.4nm,0.8s,baz=206,slow=5.4,SNR=4.8						

*ISCJB **09** 17:39:08.3±0.6, 38.°69N±0.°02×20.°49E±0.°04, h1km±4km, Error ellipse: s-maj=5.8km s-min=3.8km az=5.1*
*CSEM **09** 17:39:09.0±0.3, 38.°69N×20.°53E, h2km, MD3.1, Error ellipse: s-maj=6.1km s-min=4.5km az=72.0*
*THE **09** 17:39:09.2, 38.°69N×20.°52E, h5km±1km, ML3.1/6, Error ellipse:

THL			*e*Sb	**Sb**	**17 39 55.8**	**+0.2**
DSF	**Desfina**	**1.59 100**	P	**Pn**	**17 39 37.6**	**-0.6**
DSF	**Desfina**	**1.59 100**	P	**Pn**	**17 39 37.6**	**-0.6**
GUR	**Goura**	**1.61 117**	*e*PB	**Pb**	**17 39 39.3**	**-0.4**
GUR			*e*SB	**Sb**	**17 40 00.6**	**+0.3**
GUR	**Goura**	**1.61 117**	*e*Pb	**Pb**	**17 39 39.3**	**-0.4**
GUR			*e*Sb	**Sb**	**17 40 00.6**	**+0.3**
ITM	**Ithomi**	**1.87 143**	*e*Pg	**Pg**	**17 39 43.5**	**-1.8**
ITM	**Ithomi**	**1.87 143**	*e*PG	**Pg**	**17 39 43.5**	**-1.8**
ITM	**Ithomi**	**1.87 143**	*e*Pg	**Pg**	**17 39 43.5**	**-1.8**
VLX	**Vlachokerasia**	**1.97 132**	*e*PN	**Pn**	**17 39 44.0**	**+0.6**
VLX			*e*SN	**Sn**	**17 40 10.0**	**+1.5**
VLX	**Vlachokerasia**	**1.97 132**	*e*Pn	**Pn**	**17 39 44.0**	**+0.6**
VLX			*e*Sn	**Sn**	**17 40 10.0**	**+1.5**
LTK	**Loutraki**	**2.03 108**	*e*PN	**Pn**	**17 39 45.5**	**+1.2**
LTK			*e*SN	**Sn**	**17 40 11.6**	**+1.6**
LTK	**Loutraki**	**2.03 108**	*e*Pn	**Pn**	**17 39 45.5**	**+1.2**
LTK			*e*Sn	**Sn**	**17 40 11.6**	**+1.6**
DID	**Didima**	**2.44 118**	*e*PN	**Pn**	**17 39 51.3**	**+1.4**
DID			*e*SN	**Sn**	**17 40 21.6**	**+1.5**
DID	**Didima**	**2.44 118**	P	**Pn**	**17 39 49.7**	**-0.2**
DID	**Didima**	**2.44 118**	P	**Pn**	**17 39 49.7**	**-0.2**
DID	**Didima**	**2.44 118**	*e*Pn	**Pn**	**17 39 51.3**	**+1.4**
DID			*e*Sn	**Sn**	**17 40 21.6**	**+1.5**
VLI	**Veliai**	**2.74 135**	*e*Pn	**Pn**	**17 39 56.0**	**+1.9**
VLI	**Veliai**	**2.74 135**	*e*PN	**Pn**	**17 39 56.0**	**+1.9**
VLI	**Veliai**	**2.74 135**	*e*Pn	**Pn**	**17 39 56.0**	**+1.9**

*CSEM **09** 17:43:31.8±0.2,39°.03N×16°.15E, h15km, ML3.9/4, Error ellipse: s-maj=5.8km s-min=3.7km az=95.0*
ROM 09 17:43:32.7±0.1,38°.97N×16°.23E,h10km,Md3.0/18, Ml3.2/21,4C-4D,Error ellipse: s-maj=1.7km s-min=1.4km az=93.0,Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRI	**Girifalco**	**0.21 134**	⇑	*i*Pg	Pg	17 43 37.9	+0.8
GRI				Sg	Sg	17 43 40.9	+0.9
13μm,0.2s							
GRI	**Girifalco**	**0.21 134**	⇑	*i*Pg	Pg	17 43 37.9	+0.8
GRI				Sg	Sg	17 43 40.9	+0.9
13μm,0.2s							
CARO	**Carolei**	**0.29 359**	⇑	*i*Pg	Pg	17 43 39.9	+1.4
CARO				Sg	Sg	17 43 44.5	+2.1
9μm,0.3s							
CARO	**Carolei**	**0.29 359**	⇑	*i*Pg	Pg	17 43 39.9	+1.4
CARO				Sg	Sg	17 43 44.5	+2.1
9μm,0.3s							
SERS	**Sersale**	**0.36 79**	⇓	*i*Pg	Pg	17 43 40.7	+0.8
SERS				Sg	Sg	17 43 46.0	+1.2
2μm,0.4s							
SERS	**Sersale**	**0.36 79**	⇓	*i*Pg	Pg	17 43 40.7	+0.8
SERS				Sg	Sg	17 43 46.0	+1.2
2μm,0.4s							
JOPP	**Joppolo**	**0.45 217**	⇓	*i*Pg	Pg	17 43 42.4	+0.9
JOPP				Sg	Sg	17 43 49.0	+1.6
1μm,0.2s							
JOPP	**Joppolo**	**0.45 217**	⇓	*i*Pg	Pg	17 43 42.4	+0.9
JOPP				Sg	Sg	17 43 49.0	+1.6
1μm,0.2s							
PLAC	**Placanica**	**0.54 162**		Pg	Pg	17 43 43.8	+0.5
PLAC				Sg	Sg	17 43 51.2	+0.8
1μm,0.6s							
PLAC	**Placanica**	**0.54 162**		Pg	Pg	17 43 43.8	+0.5
PLAC				Sg	Sg	17 43 51.2	+0.8
1μm,0.6s							
LADO	**San Nicola del**	**0.66 61**		Pg	Pg	17 43 45.9	+0.3
962nm,0.6s							
LADO	**San Nicola del**	**0.66 61**		Pg	Pg	17 43 45.9	+0.3
962nm,0.6s							
MSRU	**Castanea**	**0.90 219**		Pg	Pg	17 43 49.7	-0.4
1μm,0.4s							
MSRU	**Castanea**	**0.90 219**		Pg	Pg	17 43 49.7	-0.4
1μm,0.4s							
SOI	**Samo**	**0.91 189**		Pg	Pg	17 43 50.0	-0.1
365nm,0.5s							
SOI	**Samo**	**0.91 189**		Pg	Pg	17 43 50.0	-0.1
365nm,0.5s							
MPAZ	**Palizzi**	**1.03 190**		Pg	Pg	17 43 52.1	-0.4
479nm,0.6s							
MPAZ	**Palizzi**	**1.03 190**		Pg	Pg	17 43 52.1	-0.4
479nm,0.6s							
MILZ	**Milazzo**	**1.05 229**		Pg	Pg	17 43 51.7	-1.1
737nm,0.4s							
MILZ	**Milazzo**	**1.05 229**		Pg	Pg	17 43 51.7	-1.1
737nm,0.4s							
LLI	**Lipari**	**1.13 243**		Pg	Pg	17 43 53.8	-0.6
2μm,0.5s							
LLI	**Lipari**	**1.13 243**		Pg	Pg	17 43 53.8	-0.6
2μm,0.5s							
VPL	**Vulcano Piano**	**1.14 239**		Pg	Pg	17 43 53.5	-1.1
844nm,0.4s							
VPL	**Vulcano Piano**	**1.14 239**		Pg	Pg	17 43 53.5	-1.1
844nm,0.4s							
SIRI	**Monte Sirino -**	**1.24 347**		Pg	Pg	17 43 54.9	-1.7
378nm,0.3s							
SIRI	**Monte Sirino -**	**1.24 347**		Pg	Pg	17 43 54.9	-1.7
378nm,0.3s							
MMME	**Mongiuffi-Meli**	**1.28 217**		Pg	Pg	17 43 56.2	-1.1
276nm,0.8s							
MMME	**Mongiuffi-Meli**	**1.28 217**		Pg	Pg	17 43 56.2	-1.1
276nm,0.8s							
BULG	**Bulgheria - Ca**	**1.29 330**		Pg	Pg	17 43 56.2	-1.3
376nm,0.4s							
BULG	**Bulgheria - Ca**	**1.29 330**		Pg	Pg	17 43 56.2	-1.3
376nm,0.4s							
MTSN	**Montesano sull**	**1.35 344**		Pg	Pg	17 43 56.6	-2.0
321nm,0.5s							
MTSN	**Montesano sull**	**1.35 344**		Pg	Pg	17 43 56.6	-2.0
321nm,0.5s							
MCEL	**Monticello**	**1.40 346**		Pg	Pg	17 43 57.5	-2.0
315nm,0.9s							
MCEL	**Monticello**	**1.40 346**		Pg	Pg	17 43 57.5	-2.0
315nm,0.9s							
CMPR	**Campora**	**1.53 332**		Pg	Pg	17 43 59.2	-2.8
153nm,0.6s							
CMPR	**Campora**	**1.53 332**		Pg	Pg	17 43 59.2	-2.8
153nm,0.6s							
CDRU	**Civita di Ruta**	**1.68 335**		Pg	Pg	17 44 01.3	-3.6
93nm,0.4s							
CDRU	**Civita di Ruta**	**1.68 335**		Pg	Pg	17 44 01.3	-3.6
93nm,0.4s							
LTRZ	**Laterza**	**1.70 15**		Pg	Pg	17 44 03.7	-1.5
83nm,0.4s							
LTRZ	**Laterza**	**1.70 15**		Pg	Pg	17 44 03.7	-1.5
83nm,0.4s							
TAR1	**Taranto**	**1.76 27**	*e*Pn		Pn	17 44 02.7	-0.4
MRLC	**Muro Lucano**	**1.88 343**		Pg	Pg	17 44 06.3	-2.4
59nm,0.5s							
MRLC	**Muro Lucano**	**1.88 343**		Pg	Pg	17 44 06.3	-2.4
59nm,0.5s							
MRVN	**Minervino Murg**	**2.09 359**		Pg	Pg	17 44 08.2	-4.6
MRVN	**Minervino Murg**	**2.09 359**		Pg	Pg	17 44 08.2	-4.6

*IDC **09** 17:45:21.9±1.4,5°.43S×152°.19E, h0km, mb4.1/9, mb1 4.3/9, mb1mx4.1/16, mbtmp4.1/9, Error ellipse: s-maj=47.1km s-min=20.6km az=113.0*
*NEIC **09** 17:45:23.8±0.7,5°.40S×152°.13E, h10km, mb4.4/1, Error ellipse: s-maj=25.2km s-min=13.1km az=110.0*
*ISCJB **09** 17:45:26.0±0.9,5°.4S±0°.1×152°.1E±0°.2, h33km, mb4.2/11, Error ellipse: s-maj=28.4km s-min=15.8km az=24.8*
ISC 09 17:45:27.7±0.9,5°.4S±0°.1×152°.1E±0°.2,h35km,n14, σ0°.72/14,mb4.2/11,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**20.73 248**		*e*P	**P**	**17 50 06.2**	**+0.8**
18nm,0.6s							
WRA	**Warramunga Arr**	**22.52 229**		P	**P**	**17 50 24.6**	**0.0**
3.1nm,0.6s,mb3.9,baz=52,slow=9.8,SNR=30							
KNA	**Kununurra**	**25.11 244**		*e*P	**P**	**17 50 53.9**	**+4.4**
37nm,0.7s,mb5.0							
ASAR	**Alice Springs**	**25.23 222**		P	**P**	**17 50 50.2**	**-0.3**
7.1nm,0.7s,mb4.3,baz=58,slow=7.7,SNR=50							
STKA	**Stephens Creek**	**28.09 199**		P	**P**	**17 51 15.8**	**-0.4**
3.6nm,0.9s,mb4.0,baz=45,slow=11,SNR=2.4							
STKA	**Stephens Creek**	**28.09 199**		*e*P	**P**	**17 51 16.2**	**-0.1**
FITZ	**Fitzroy Crossi**	**28.77 242**		*e*P	**P**	**17 51 21.6**	**-0.8**
28nm,1.4s,mb4.8							
FITZ	**Fitzroy Crossi**	**28.77 242**		P	**P**	**17 51 21.6**	**-0.8**
3.7nm,0.5s,mb4.4,baz=77,slow=8.2,SNR=15							
SONM	**Songino Array**	**66.50 328**		P	**P**	**17 56 15.0**	**+1.2**
1.6nm,0.6s,mb4.2,baz=145,slow=3.7,SNR=3.8							
MKAR	**Makanchi Array**	**80.36 319**		P	**P**	**17 57 35.4**	**-0.1**
1.1nm,0.9s,mb3.8,baz=130,slow=5.5,SNR=8.3							
ZALV	**Zalesovo Beam**	**81.30 327**		P	**P**	**17 57 40.3**	**-0.1**
0.7nm,0.4s,mb3.9,baz=124,slow=5.9,SNR=6.2							
QSPA	**South Pole Qui**	**84.53 180**		*e*P	**P**	**17 57 57.7**	**+1.0**
2.8nm,1.1s,mb4.3							
BVAR	**Borovoye Array**	**89.34 323**		P	**P**	**17 58 19.2**	**-1.3**
0.8nm,0.8s,mb4.1,baz=111,slow=8.1,SNR=4.5							
NVAR	**Mina Array Bea**	**93.00 52**		P	**P**	**17 58 37.6**	**-0.2**
0.1nm,0.3s,mb3.7,baz=264,slow=5.0,SNR=2.9							

*ISCJB **09** 17:59:16.1±0.5,29°.76N±0°.04×141°.8E±0°.1, h62km±7km, mb3.9/12, Error ellipse: s-maj=22.1km s-min=4.2km az=167.8*
*IDC **09** 17:59:16.5±1.2,29°.91N×142°.33E, h66km±7km, mb3.4/10, mb1 3.5/14, mb1mx3.5/25, mbtmp3.5/14, Error ellipse: s-maj=45.1km s-min=12.2km az=74.0*
*JMA **09** 17:59:16.2,29°.70N×141°.42E, h46km, M4.3*
*NEIC **09** 17:59:18.5±2.4,29°.96N×142°.27E, h82km±19km, mb4.5/1, Error ellipse: s-maj=49.0km s-min=16.4km az=75.0*
ISC 09 17:59:17.8±0.5,29°.76N±0°.04×141°.9E±0°.1, h66km±6km, h66km±3.4km;pP-P,n44,σ1°.17/58,mb3.8/12,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.67 174**		P	**Pn**	**17 59 58.0**	**-0.5**
27nm,0.3s,baz=302,slow=9.5,SNR=19							
CBIJ				S	**Sn**	**18 00 28.0**	**-1.7**
70nm,0.3s,baz=275,slow=22,SNR=9.6							
CBIJ	**Chichi jima**	**2.67 174**		P	**Pn**	**17 59 57.8**	**-0.7**
CBIJ				S	**Sn**	**18 00 29.1**	**-0.6**
JHHJ	**Haha-jima-NKT**	**3.13 175**		P	**Pn**	**18 00 05.1**	**+0.3**
JHHJ				S	**Sn**	**18 00 39.3**	**-1.7**
JHJ2	**Mitsune**	**3.77 333**		P	**Pn**	**18 00 11.8**	**-1.7**
JHJ2				*e*S	**Sn**	**18 00 52.7**	**-3.9**
JHJ	**Hachijo jima 2**	**3.79 332**		P	**Pn**	**18 00 11.9**	**-1.8**
8.4nm,0.3s,baz=82,slow=14,SNR=11							
JHJ				S	**Sn**	**18 00 51.1**	**-6.0**
18nm,0.3s,baz=64,slow=16,SNR=4.2							
JMY	**Miyakejima3**	**4.74 336**		*e*S	**Sn**	**18 01 19.5**	**-0.9**
BSO1	**Boso 1**	**4.94 351**		P	**Pn**	**18 00 30.2**	**+0.8**
BSO1				S	**Sn**	**18 01 25.7**	**+0.6**
JKO	**Kozu shima**	**4.99 333**		P	**Pn**	**18 00 30.5**	**+0.4**
BSO3	**Boso 3**	**5.16 347**		P	**Pn**	**18 00 32.4**	**0.0**
JIM2	**Oshima 3**	**5.36 338**		P	**Pn**	**18 00 35.0**	**-0.1**
TATJ	**Tateyama 2**	**5.51 343**		P	**Pn**	**18 00 38.2**	**+0.9**
TATJ				*e*S	**Sn**	**18 01 39.1**	**-0.2**
JOD2	**Odawara 2**	**5.97 337**		P	**Pn**	**18 00 45.2**	**+1.7**
JOD2				S	**Sn**	**18 01 51.8**	**+1.4**
CHOJ	**Chosi**	**5.99 352**		P	**Pn**	**18 00 45.5**	**+1.8**
JHU	**Hanno**	**6.45 341**		P	**Pn**	**18 00 50.7**	**+0.6**
JYT	**Yasato**	**6.60 348**		P	**Pn**	**18 00 53.1**	**+1.0**
JRY	**Ryogami san**	**6.72 339**		P	**Pn**	**18 00 54.9**	**+1.2**
JHO	**Hitachi**	**6.92 351**		P	**Pn**	**18 00 56.7**	**+0.3**
JHO				S	**Sn**	**18 02 10.6**	**-3.1**
JAG	**Ashikaga**	**6.95 344**		P	**Pn**	**18 00 57.6**	**+0.7**
JAG				S	**Sn**	**18 02 13.0**	**-1.4**
ONAJ	**Iwakimizuishiy**	**7.37 353**		P	**Pn**	**18 01 02.7**	**0.0**
MJAR	**Matsushiro Arr**	**7.43 337**		P	**Pn**	**18 01 02.8**	**-0.6**
1.8nm,0.3s,baz=156,slow=15,SNR=20							
MJAR				S	**Sn**	**18 02 25.1**	**-1.0**
0.2nm,0.3s,baz=260,slow=25,SNR=3.1							
MAJO	**Matsushiro**	**7.43 336**		*e*P	**Pn**	**18 01 04.9**	**+1.4**
5.2nm,0.4s							
MAT	**Matsushiro**	**7.43 336**		P	**Pn**	**18 01 05.5**	**+2.1**
MAT				*e*S	**Sn**	**18 02 21.1**	**-5.1**
JFK	**Kawauchi**	**7.63 354**		P	**Pn**	**18 01 05.9**	**-0.3**
JFK				S	**Sn**	**18 02 27.3**	**-3.8**
JFT	**Otama**	**7.84 351**		P	**Pn**	**18 01 09.2**	**+0.1**
JFT				*e*S	**Sn**	**18 02 32.6**	**-3.7**
JMM	**Marumori**	**8.13 354**		P	**Pn**	**18 01 13.3**	**+0.2**
JMM				*e*S	**Sn**	**18 02 39.5**	**-3.9**
KSRS	**Korea Array**	**13.92 307**		P	**Pn**	**18 02 34.9**	**+3.1**
0.1nm,0.3s,baz=109,slow=12,SNR=4.5							
ASAJ	**Asahikawa**	**14.34 2**		P	**Pn**	**18 02 36.8**	**-0.4**
0.4nm,0.3s,baz=152,slow=15,SNR=4.4							
HHC	**Hu-ho-hao-te**	**26.97 302**		*e*P	**P**	**18 04 54.1**	**+0.9**
HHC				S	**S**	**18 09 25.0**	**-0.7**
HHC				pmax	pmax		
comp=Z,15nm,0.5s,mb4.8							
HHC				pmax	pmax		
comp=Z,99nm,5.6s							
SONM	**Songino Array**	**32.65 314**		P	**P**	**18 05 42.3**	**-1.0**
comp=Z,0.2nm,0.5s,mb3.2,baz=110,slow=8.4,SNR=2.6							
TLY	**Talaya**	**35.73 319**		*e*P	**P**	**18 06 09.0**	**-1.0**
comp=Z,4.9nm,0.8s,mb4.5							
ZALV	**Zalesovo Beam**	**47.32 318**		P	**P**	**18 07 43.9**	**-0.7**
comp=Z,0.3nm,0.5s,mb3.3,baz=96,slow=8.9,SNR=2.4							
MKAR	**Makanchi Array**	**48.60 308**		P	**P**	**18 07 53.7**	**-1.0**
comp=Z,0.1nm,0.4s,mb3.1,baz=87,slow=10,SNR=3.7							
WRAB	**Tennant Creek**	**49.94 189**		*e*P	**P**	**18 08 07.8**	**+2.8**
WRA	**Warramunga Arr**	**49.95 189**		P	**P**	**18 08 04.5**	**-0.6**
comp=Z,0.9nm,0.3s,mb4.1,baz=4.5,slow=7.5,SNR=20							
WRA				pP	pP	18 08 22.2	+0.2
comp=Z,0.8nm,0.5s,baz=5.7,slow=7.7,SNR=3.7							
WRA	**Warramunga Arr**	**49.95 189**		P	**P**	**18 08 04.5**	**-0.6**
WRA				pP	pP	18 08 22.2	+0.2
ASAR	**Alice Springs**	**53.67 189**		P	**P**	**18 08 33.5**	**+0.8**
comp=Z,0.3nm,0.5s,mb3.6,baz=2.2,slow=5.5,SNR=9.4							
BVAR	**Borovoye Array**	**55.92 316**		P	**P**	**18 08 49.1**	**+0.3**
comp=Z,0.6nm,0.4s,mb3.9,baz=86,slow=8.0,SNR=7.0							
ARCES	**ARCESS Array B**	**70.94 341**		P	**P**	**18 10 25.4**	**-2.3**
comp=Z,1.2nm,0.8s,mb3.8,baz=70,slow=8.7,SNR=3.8							
FINES	**FINESS Array B**	**75.45 333**		P	**P**	**18 10 54.0**	**-0.3**
comp=Z,1.6nm,0.7s,mb3.9,baz=84,slow=6.3,SNR=4.6							
FINES				pP	pP	18 11 10.6	-1.6
comp=Z,4.5nm,1.1s,baz=81,slow=6.0,SNR=2.1							
FINES	**FINESS Array B**	**75.45 333**		P	**P**	**18 10 54.0**	**-0.3**
FINES				pP	pP	18 11 10.6	-1.6
AKASG	**Malin Array Be**	**80.32 323**		P	**P**	**18 11 22.5**	**+1.0**
comp=Z,0.4nm,0.5s,mb3.5,baz=52,slow=5.9,SNR=3.8							
BRTR	**Keskin Array B**	**84.00 313**		P	**P**	**18 11 42.6**	**+1.6**
comp=Z,1.1nm,0.6s,mb3.9,baz=90,slow=4.1,SNR=8.1							
BRTR				pP	pP	18 12 00.8	+1.6
comp=Z,0.9nm,0.7s,baz=85,slow=3.0,SNR=3.2							
LPAZ	**La Paz**	**149.41 71**		PKPbc	PKPbc	18 18 57.2	-2.8
comp=Z,2.0nm,1.0s,baz=108,slow=3.2,SNR=4.4							
LPAZ	**La Paz**	**149.41 71**		PKPbc	PKPbc	18 18 57.2	-2.8

*BJI **09** 18:24:50.9,3°.53N×128°.30E, h141km, mB4.7/4, mb4.5/14*
*ISCJB **09** 18:24:50.5±0.7,3°.88N±0°.03×128°.03E±0°.06, h114km±5km, mb4.6/43, Error ellipse: s-maj=9.8km s-min=4.3km az=169.8*
*IDC **09** 18:24:51.9±0.7,3°.86N×127°.99E, h111km±6km, mb4.1/18, mb1 4.2/20, mb1mx4.1/27, mbtmp4.1/20, MS3.1/1, Ms1 3.1/1, ms1mx2.0/35, Error ellipse: s-maj=22.1km s-min=8.7km az=79.0*
*NEIC **09** 18:24:51.7±0.3,3°.87N×127°.99E, mb4.5/15, Error ellipse: s-maj=11.9km s-min=5.1km az=77.0*
*DJA **09** 18:24:55,3°.72N×127°.81E, h102km, Mw5.3/9*
*MAN **09** 18:25:03,4°.67N×127°.28E, h173km, mb5.5, ML4.5, MS4.9*
ISC 09 18:24:51.7±0.6,3°.87N±0°.03×128°.01E±0°.06,h107km±5km, h114km±2.2km;pP-P,n107,σ1°.04/114,mb4.6/43,3C,North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**3.14 192**		P	**Pn**	**18 25 41.2**	**+1.6**
MATI	**Mati**	**3.52 330**		*e*P	**Pn**	**18 25 45.9**	**+1.3**
MATI				*e*S	**Sn**	**18 26 19.4**	**-6.1**
GSPH	**General Santos**	**3.76 306**	⇑	*i*P	**Pn**	**18 25 46.2**	**-1.7**
GSPH				*e*S	**Sn**	**18 26 28.6**	**-2.7**
MNI	**Manado**	**3.98 233**		P	**Pn**	**18 25 50.4**	**-0.4**
DAV	**Davao City (W)**	**4.00 323**		P	**Pn**	**18 25 51.1**	**+0.1**
58nm,0.3s,baz=122,slow=19,SNR=3.7							
DAV				S	**Sn**	**18 26 41.4**	**+4.5**
136nm,0.3s,baz=7.1,slow=19,SNR=4.5							
DMPH	**Davao City--Mi**	**4.05 322**		*e*P	**Pn**	**18 25 52.4**	**+0.7**
KCP	**Kidapawan**	**4.26 317**	⇑	*e*P	**Pn**	**18 25 58.0**	**+3.4**
KCP				*i* S	**Sn**	**18 26 45.5**	**+2.1**
BUKP	**Musuan**	**4.95 324**		*e*P	**Pn**	**18 26 04.6**	**+0.7**
BUTP	**Butuan**	**5.59 335**		*e*P	**Pn**	**18 26 14.4**	**+1.8**
CGP	**Cagayan de Oro**	**5.62 324**		*e*P	**Pn**	**18 26 13.5**	**+0.5**
PAGZ	**Pagadian**	**6.07 311**		*e*P	**Pn**	**18 26 17.9**	**-1.1**
IPIL	**Ipil**	**6.67 306**		*e*P	**Pn**	**18 26 26.8**	**-0.3**
ZMPH	**Zamboanga City**	**6.67 298**	⇑	*i*P	**Pn**	**18 26 23.6**	**-3.5**
ZMPH				*e*S	**Sn**	**18 27 27.6**	**-14**
MRSI	**Marisa**	**6.94 241**		P	**Pn**	**18 26 30.7**	**-0.1**
2.5nm725nm,0.6s							
MSLP	**Maasin**	**6.96 333**		*e*P	**Pn**	**18 26 32.0**	**+0.8**
NLAI	**Namlea**	**7.12 187**		P	**Pn**	**18 26 34.0**	**+0.7**
1.2nm7μm146nm,0.7s							
APSI	**Ampana**	**7.94 233**		P	**Pn**	**18 26 40.1**	**-4.3**
CNP	**Catarman**	**9.20 339**		*e*P	**Pn**	**18 26 60.0**	**-1.6**
PCI	**Palu**	**9.45 240**		P	**Pn**	**18 27 06.7**	**+1.8**
697nm85nm,0.9s							
KDI	**Kendari**	**9.46 215**		P	**Pn**	**18 27 04.4**	**-0.7**
3μm275nm,0.7s							
MYLDM	**Lahad Datu**	**9.57 278**		P	**Pn**	**18 27 08.2**	**+1.5**
MYLDM	**Lahad Datu**	**9.57 278**		P	**Pn**	**18 27 08.1**	**+1.5**
1μm142nm,0.9s							
CUYO	**Cuyo Island**	**9.80 315**		*e*P	**Pn**	**18 27 07.8**	**-2.1**
TSM	**Tawau**	**10.12 273**		P	**Pn**	**18 27 13.7**	**-0.4**
PVCP	**Virac**	**10.39 339**		*e*P	**Pn**	**18 27 16.1**	**-1.6**
TLE	**Tual**	**10.56 153**		P	**Pn**	**18 27 24.4**	**+4.3**
441nm,1.6s							
TTSI	**Tana Toraja**	**10.69 230**		P	**Pn**	**18 27 20.7**	**-1.1**
109nm,0.6s							
SDKM	**Sandakan**	**10.92 280**		P	**Pn**	**18 27 25.6**	**+0.6**
SPSI	**Sidrap Palu**	**11.33 227**		P	**Pn**	**18 27 30.4**	**0.0**
KKM	**Kota Kinabalu**	**11.95 281**		P	**Pn**	**18 27 39.8**	**+1.1**
KAPI	**Kappang**	**12.08 223**		P	**Pn**	**18 27 38.7**	**-1.7**
2.6nm,0.3s,baz=33,slow=8,SNR=11							
KAPI				S	**Sn**	**18 29 47.3**	**-6.1**
1.1nm,0.3s,baz=252,slow=20,SNR=4.2							
APYP	**Conner**	**15.40 335**		*e*P	**Pn**	**18 28 26.3**	**+3.0**
SBUM	**Sibu**	**15.83 265**		P	**Pn**	**18 28 28.4**	**-0.2**
SBUM	**Sibu**	**15.83 265**		P	**Pn**	**18 28 28.2**	**-0.5**
912nm105nm,1.0s							
STKI	**Sintang**	**16.95 257**		P	**Pn**	**18 28 42.7**	**+0.2**
37nm,1.2s							
KAKA	**Kakadu**	**17.05 165**		*e*P	**Pn**	**18 28 43.5**	**-0.2**
43nm,0.7s							
KAKA	**Kakadu**	**17.05 165**		*e*P	**Pn**	**18 28 43.1**	**-0.5**
36nm,0.6s							
KSM	**Kuching**	**17.84 263**		P	**Pn**	**18 28 53.0**	**-0.3**
KSM	**Kuching**	**17.84 263**		*e*P	**Pn**	**18 28 52.7**	**-0.6**
17nm,0.6s							
KSM	**Kuching**	**17.84 263**		P	**Pn**	**18 28 53.0**	**-0.3**
583nm29nm,1.1s							
KNA	**Kununurra**	**19.51 178**		*e*P	**P**	**18 29 10.9**	**+0.2**
37nm,0.6s							
KNA	**Kununurra**	**19.51 178**		P	**P**	**18 29 12.1**	**+1.4**
2μm196nm,0.7s							
KRKI	**Karangkates**	**19.59 232**		P	**P**	**18 29 17.6**	**+6.0**
YULB	**Yu-li**	**20.46 342**		*e*P	**P**	**18 29 19.2**	**-1.8**
9.5nm,0.4s							
TPUB	**Ta-pu**	**20.59 340**		*e*P	**P**	**18 29 20.1**	**-2.2**
19nm,0.6s							
SSLB	**Suanglung**	**20.94 342**		*e*P	**P**	**18 29 24.9**	**-1.2**
24nm,0.8s							
YHNB	**Yeheng**	**21.64 343**		*e*P	**P**	**18 29 33.6**	**+0.1**
FITZ	**Fitzroy Crossi**	**21.96 186**		*e*P	**P**	**18 29 35.3**	**-1.6**
42nm,1.1s,mb4.7							
FITZ	**Fitzroy Crossi**	**21.96 186**		P	**P**	**18 29 35.5**	**-1.4**
8.3nm,0.4s,mb4.4,baz=21,slow=8.0,SNR=46							
FITZ	**Fitzroy Crossi**	**21.96 186**		P	**P**	**18 29 39.5**	**+2.6**
52nm,1.1s,mb4.8							
MYKOM	**Kota Tinggi**	**24.22 266**		P	**P**	**18 29 58.6**	**-0.1**
MYKOM	**Kota Tinggi**	**24.22 266**		P	**P**	**18 29 59.1**	**+0.3**
18nm,1.1s,mb4.3							
WRAB	**Tennant Creek**	**24.46 165**		*e*P	**P**	**18 30 00.4**	**-0.5**
WRAB	**Tennant Creek**	**24.46 165**		P	**P**	**18 30 00.9**	**+0.1**
WRA	**Warramunga Arr**	**24.47 165**		P	**P**	**18 30 00.5**	**-0.4**
30nm,0.4s,mb4.9,baz=345,slow=10,SNR=272							
MBWA	**Marble Bar**	**26.16 198**		*e*P	**P**	**18 30 16.0**	**-0.2**
ASAR	**Alice Springs**	**27.96 168**		P	**P**	**18 30 32.1**	**-0.2**
8.5nm,0.5s,mb4.6,baz=356,slow=8.2,SNR=192							
ASAR				pP	pP	18 30 55.6	-0.3
4.3nm,0.5s,baz=334,slow=8.9,SNR=5.9							
MEEK	**Meekatharra**	**31.66 196**		*e*P	**P**	**18 31

comp=Z,5.7nm,0.6s,mb4.8
BVAR Borovoye Array 67.90 327 P **P 18 35 38.5 -0.2**
comp=Z,1.3nm,0.6s,mb3.9,baz=131,slow=8.2,SNR=12
BVAR pP pP 18 36 07.1 +1.7
comp=Z,2.6nm,0.8s,baz=148,slow=3.3,SNR=5.1
BRVK Borovoye 67.97 327 *e*P **P 18 35 39.0 -0.1**
comp=Z,2.3nm,0.8s,mb4.1
BRVK *e*PcP PcP 18 36 03.0 -1.7
ABKAR Akbulak array 72.85 321 *e*P **P 18 36 08.4 -0.5**
comp=Z,3.0nm,0.7s,mb4.2
ARU Arti 75.50 328 *e*P **P 18 36 21.6 -2.6**
comp=Z,5.2nm,0.6s,mb4.4
MAW Mawson 84.33 200 P **P 18 37 11.8 +0.3**
comp=Z,0.9nm,0.6s,mb3.8,baz=63,slow=11,SNR=2.8
ARCES ARCESS Array B 90.76 340 P **P 18 37 40.9 -1.5**
comp=Z,0.3nm,0.4s,mb3.8,baz=90,slow=7.2,SNR=3.1
AKASG Malin Array Be 92.59 321 P **P 18 37 51.9 +0.6**
comp=Z,0.6nm,0.5s,mb4.2,baz=68,slow=5.2,SNR=2.7
QSPA South Pole Qui 93.77 180 P **P 18 37 57.2 +1.1**
comp=Z,1.9nm,1.0s,mb4.4,baz=294,slow=2.4,SNR=4.0

*CSEM **09** 18:36:23.1±0.4, 50.°44N×18.°93E, h2km, ML2.5/4, Error ellipse: s-maj=11.2km s-min=3.6km az=6.0*
*PRU **09** 18:36:24.0, 50.°38N×18.°89E, h0km*
WAR 09 18:36:22.8, 50.°24N×18.°92E, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.56**	**92**	*e*Pg	Pg	18 36 34.1	+0.5
OJC				*e*Sg	Sg	18 36 42.4	+1.6
OKC	**Ostrava-Krasne**	**0.64**	**231**	*e*PG	Pg	18 36 38.1	+3.0
OKC				*e*SG	Sg	18 36 48.5	+5.1
	comp=Z,8.0nm,0.3s						
OKC	**Ostrava-Krasne**	**0.64**	**231**	Pg	Pg	18 36 38.1	+3.0
OKC				Sg	Sg	18 36 48.5	+5.1
	comp=Z,8.0nm,0.3s						
MORC	**Moravsky Berou**	**1.00**	**243**	*e*Pg	Pg	18 36 44.4	+2.4
NIE	**Niedzica**	**1.22**	**132**	*e*Pg	Pg	18 36 49.5	+3.3
NIE				*e*Sg	Sg	18 37 07.1	+5.2
NIE	**Niedzica**	**1.22**	**132**	*e*Pg	Pg	18 36 49.5	+3.3
NIE				*e*Sg	Sg	18 37 07.1	+5.2
DPC	**Dobruska-Polom**	**1.67**	**275**	*e*PG	Pg	18 36 55.2	+0.4
DPC				*e*SG	Sg	18 37 17.5	+1.0
	comp=Z,22nm,1.3s						
DPC	**Dobruska-Polom**	**1.67**	**275**	Pg	Pg	18 36 55.2	+0.4
DPC				Sg	Sg	18 37 17.5	+1.0
	comp=Z,22nm,1.3s						
VRAC	**Vranov**	**1.78**	**239**	*e*Pn	Pn	18 36 57.6	+2.9
VRAC				*e*Sg	Sg	18 37 19.6	-0.2
KSP	**Ksiaz**	**1.78**	**291**	*e*Pg	Pg	18 36 58.5	+1.6
KSP				*e*Sg	Sg	18 37 21.7	+1.7
PRU	**Pruhonice**	**2.83**	**267**	*e*SG	Sg	18 37 54.1	+0.4
	comp=Z,2.5nm,0.5s						
PRU	**Pruhonice**	**2.83**	**267**	Sg	Sg	18 37 54.1	+0.4
	comp=Z,2.5nm,0.5s						
KHC	**Kasperske Hory**	**3.64**	**254**	*e*PG	Pg	18 37 30.4	-2.2
KHC				*e*SG	Sg	18 38 20.5	+0.7
	comp=Z,2.7nm,0.4s						
KHC	**Kasperske Hory**	**3.64**	**254**	Sg	Sg	18 38 20.5	+0.7
	comp=Z,2.7nm,0.4s						

MAN 09 18:38:37, 13.°58N×120.°74E, h110km, mb4.5, ML3.3, MS3.2, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.22**	**111**	⇓*e*P	Pn	18 38 54.3	+1.8
LUBP	**Lubang**	**0.50**	**288**	*e*P	Pn	18 38 55.9	+2.0
BOAC	**Boac**	**1.08**	**96**	*e*P	Pn	18 39 00.3	+1.3
BOAC				*e*S	Sn	18 39 16.0	+0.3
SJMP	**San Jose**	**1.17**	**162**	*e*P	Pn	18 39 01.4	+1.4
SJMP				*e*S	Sn	18 39 11.9	-5.6
POLP	**Polilio Island**	**1.63**	**45**	*e*P	Pn	18 39 07.4	+2.0
BUSP	**Coron**	**1.66**	**199**	*e*P	Pn	18 39 06.6	+0.9
BUSP				*e*S	Sn	18 39 16.2	-11
BALP	**Baler**	**2.29**	**21**	*e*P	Pn	18 39 15.4	+1.6
SCZP	**Santa Cruz**	**2.33**	**340**	*e*P	Pn	18 39 14.6	+0.4
SCZP				*e*S	Sn	18 39 32.7	-10
ENPP	**El Nido**	**2.69**	**209**	*e*P	Pn	18 39 20.2	+1.3
CUYO	**Cuyo Island**	**2.73**	**174**	*e*P	Pn	18 39 20.2	+0.8
BOLP	**Bolinao**	**2.90**	**344**	*e*P	Pn	18 39 22.3	+0.6
PVCP	**Virac**	**3.32**	**89**	*e*P	Pn	18 39 28.4	+1.1

*IDC **09** 18:45:52.3±0.6, 4.°75S×102.°93E, h0km, mb4.6/19, mb1 4.7/19, mb1mx4.6/23, mbtmp4.6/19, MS3.2/1, Ms1 3.2/1, ms1mx2.4/30, Error ellipse: s-maj=28.3km s-min=11.8km az=51.0*
*MOS **09** 18:45:55.8±0.9, 4.°61S×103.°13E, h33km, mb5.1/13, Error ellipse: s-maj=14.8km s-min=8.0km az=112.3*
*BJI **09** 18:46:00.6, 4.°70S×103.°00E, h63km, mB4.8/6, mb4.9/14, Ms4.2/1, Ms7 3.9/1*
*ISCJB **09** 18:46:00.6±0.4, 4.°87S±0.°05×103.°03E±0.°04, h82km±3km, mb4.7/49, Error ellipse: s-maj=9.4km s-min=4.1km az=41.0*
*NEIC **09** 18:46:00.7±2.8, 4.°75S×103.°03E, h63km±25km, mb4.9/7, Error ellipse: s-maj=16.2km s-min=5.6km az=53.0*
*DJA **09** 18:46:02, 4.°93S×103.°02E, h39km, Mw4.9/5*
ISC 09 18:46:02.0±0.4, 4.°85S±0.°05×103.°05E±0.°04, h76km±3km, n117, σ0.°86/115, mb4.7/49, 7C, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.49**	**349**	P	**Pn**	**18 46 13.6**	**-1.7**
MNAI				S	**Sn**	**18 46 23.1**	**-2.0**
LWLI	**Liwa**	**1.02**	**100**	P	**Pn**	**18 46 20.2**	**-0.8**
LWLI				S	**Sn**	**18 46 34.1**	**-1.1**
LHSI	**Lahat**	**1.12**	**25**	P	**Pn**	**18 46 22.5**	**+0.2**
MDSI	**Maura Dua**	**1.18**	**72**	P	**Pn**	**18 46 22.6**	**-0.4**
MDSI				S	**Sn**	**18 46 39.2**	**+0.4**
KSI	**Kapahiang**	**1.27**	**339**	P	**Pn**	**18 46 23.7**	**-0.5**
KSI				S	**Sn**	**18 46 41.6**	**+0.7**
KASI	**Kota Agung**	**1.59**	**115**	P	**Pn**	**18 46 27.4**	**-0.9**
KLSI		**1.68**	**85**	P	**Pn**	**18 46 29.6**	**+0.1**
KLI	**Kotabumi**	**1.80**	**91**	P	**Pn**	**18 46 31.1**	**0.0**
BLSI	**Bandar Lampung**	**2.25**	**103**	P	**Pn**	**18 46 37.2**	**+0.2**
PMBI	**Palembang**	**2.57**	**42**	P	**Pn**	**18 46 43.1**	**+1.7**
RBSI	**Rajabasa**	**2.86**	**110**	P	**Pn**	**18 46 45.1**	**-0.2**
CGJI	**Cibinong**	**3.16**	**124**	P	**Pn**	**18 46 48.7**	**-0.7**
KRJI	**Kerinci**	**3.17**	**330**	P	**Pn**	**18 46 51.2**	**+1.7**
PPSI	**Pulau Pagai**	**3.67**	**304**	P	**Pn**	**18 46 56.3**	**-0.1**
SDSI	**Sungai Dareh**	**4.21**	**337**	P	**Pn**	**18 47 04.3**	**+0.5**
RGRI	**Rengat**	**4.53**	**351**	P	**Pn**	**18 47 09.1**	**+1.0**
PDSI	**Padang**	**4.69**	**326**	P	**Pn**	**18 47 10.4**	**+0.1**
LEM	**Lembang**	**4.95**	**114**	P	**Pn**	**18 47 14.0**	**+0.2**
TPI	**Tanjungpandan**	**5.04**	**66**	P	**Pn**	**18 47 15.1**	**0.0**
	0.3nm853nm46nm,1.4s						
PPI	**Padang Panjang**	**5.10**	**329**	P	**Pn**	**18 47 18.7**	**+2.7**
	0.5nm1μm62nm,0.6s						
SISI	**Saibi**	**5.28**	**311**	P	**Pn**	**18 47 17.9**	**-0.5**
	3μm103nm,0.8s						
BKNI	**Bangkinang**	**5.52**	**339**	P	**Pn**	**18 47 22.8**	**+1.2**
	0.7nm1μm109nm,1.2s						
MNSI	**Mandailing Nat**	**6.59**	**328**	P	**Pn**	**18 47 37.7**	**+1.4**
	0.2nm931nm31nm,0.6s						
MYKOM	**Kota Tinggi**	**6.64**	**7**	P	**Pn**	**18 47 38.9**	**+1.9**
UGM	**Wanagama**	**8.03**	**113**	P	**Pn**	**18 47 56.8**	**+0.9**
PSI	**Prapat**	**8.64**	**331**	LR	LR	18 51 31.5	
	comp=Z,155nm,19.8s,baz=312,slow=40						
PCJI	**Pacitan**	**8.73**	**113**	P	**Pn**	**18 48 05.6**	**+0.1**
COCO	**West Island**	**9.54**	**220**	*i* P	**Pn**	**18 48 16.9**	**+0.4**
FITZ	**Fitzroy Crossi**	**25.71**	**123**	*e*P	**P**	**18 51 25.7**	**+0.4**
	13nm,0.4s,mb4.7						
FITZ	**Fitzroy Crossi**	**25.71**	**123**	P	**P**	**18 51 25.8**	**+0.4**
	6.3nm,0.5s,mb4.3,baz=314,slow=6.4,SNR=36						
KNA	**Kununurra**	**27.48**	**115**	*e*P	**P**	**18 51 40.5**	**-0.8**
	24nm,1.1s,mb4.6						
NWAO	**Narrogin (SRO)**	**30.91**	**156**	P	**P**	**18 52 12.6**	**+1.0**
	6.6nm,0.7s,mb4.5,baz=326,slow=11,SNR=4.8						
WRA	**Warramunga Arr**	**33.94**	**119**	P	**P**	**18 52 38.6**	**+0.4**
	6.4nm,0.4s,mb4.8,baz=302,slow=9.2,SNR=126						
WRA				PcP	PcP	18 55 15.8	+0.6
	1.3nm,0.4s,baz=304,slow=2.1,SNR=7.4						
WRAB	**Tennant Creek**	**33.95**	**119**	*e*P	**P**	**18 52 38.5**	**+0.2**
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.4s,mb4.9						
WRAB	**Tennant Creek**	**33.95**	**119**	*e*P	**P**	**18 52 38.5**	**+0.2**
	comp=Z,7.9nm,0.4s,mb4.9						
ODAN	**Odare**	**34.97**	**335**	*e*P	**P**	**18 52 46.5**	**-0.5**
	comp=Z,12nm,0.4s,mb5.1						
ASAR	**Alice Springs**	**35.13**	**125**	P	**P**	**18 52 49.4**	**+1.0**
	comp=Z,3.3nm,0.3s,mb4.7,baz=297,slow=7.8,SNR=230						
ASAR				PcP	PcP	18 55 19.9	+1.3
	comp=Z,2.3nm,0.5s,baz=306,slow=2.5,SNR=14						
TAPN	**Taplejung**	**35.27**	**336**	*e*P	**P**	**18 52 49.3**	**-0.3**
	comp=Z,8.0nm,0.4s,mb4.9						
JIRN	**Jiri**	**36.19**	**334**	*e*P	**P**	**18 52 57.1**	**-0.2**
PKI	**Pulchoki**	**36.45**	**333**	*e*P	**P**	**18 52 58.6**	**-1.0**
GUN	**Gumba**	**36.54**	**334**	*e*P	**P**	**18 53 00.1**	**-0.3**
DMN	**Daman**	**36.62**	**333**	*e*P	**P**	**18 53 00.2**	**-0.9**
KKN	**Kakani**	**36.70**	**333**	*e*P	**P**	**18 53 01.0**	**-0.7**
	comp=Z,19nm,0.5s,mb5.3						
GKN	**Gorkha**	**37.18**	**332**	*e*P	**P**	**18 53 05.2**	**-0.6**
	comp=Z,15nm,0.4s,mb5.2						
NDI	**New Delhi**	**41.59**	**325**	*e*PKP	**P**	**18 53 41.0**	**-1.5**
MTSU	**Mount Surprise**	**42.42**	**112**	*e*P	**P**	**18 53 50.3**	**+0.8**
	comp=Z,18nm,0.3s,mb5.3						
GTA	**Gaotai**	**44.14**	**356**	P	**P**	**18 54 03.2**	**+0.3**
GTA				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.6						
CTA	**Charters Tower**	**44.65**	**114**	*e*P	**P**	**18 54 08.4**	**+1.0**
	comp=Z,12nm,0.9s,mb4.6						
CTA	**Charters Tower**	**44.65**	**114**	P	**P**	**18 54 08.3**	**+0.9**
	comp=Z,16nm,0.8s,mb4.8,baz=278,slow=9.9,SNR=10						
CTA	**Charters Tower**	**44.65**	**114**	P	**P**	**18 54 08.3**	**+0.9**
STKA	**Stephens Creek**	**44.99**	**131**	*e*P	**P**	**18 54 11.2**	**+1.3**
	comp=Z,6.5nm,0.5s,mb4.6						
STKA	**Stephens Creek**	**44.99**	**131**	P	**P**	**18 54 11.2**	**+1.3**
	comp=Z,7.6nm,0.5s,mb4.7,baz=307,slow=7.3,SNR=21						
HHC	**Hu-ho-hao-te**	**46.14**	**9**	*e*P	**P**	**18 54 19.5**	**+0.7**
HHC				S	**S**	**19 01 00.2**	**+1.1**
HHC				pmax	pmax		
	comp=Z,17nm,0.7s,mb4.9						
HHC				pmax	pmax		
	comp=Z,67nm,6.1s						
KSRS	**Korea Array**	**48.04**	**27**	P	**P**	**18 54 33.8**	**+0.2**
	comp=Z,2.9nm,0.6s,mb4.3,baz=231,slow=7.4,SNR=24						
KSRS				PcP	PcP	18 56 01.0	+0.5
	comp=Z,1.2nm,0.9s,baz=217,slow=2.2,SNR=5.2						
SONM	**Songino Array**	**52.54**	**3**	P	**P**	**18 55 07.9**	**+0.5**
	comp=Z,7.3nm,0.5s,mb4.9,baz=183,slow=9.4,SNR=82						
SONM				PcP	PcP	18 56 17.3	+0.5
	comp=Z,1.5nm,0.3s,baz=190,slow=4.1,SNR=13						
MJAR	**Matsushiro Ar**	**52.67**	**36**	P	**P**	**18 55 07.5**	**-1.1**
	comp=Z,3.0nm,0.8s,mb4.4,baz=218,slow=7.2,SNR=12						
KZA	**Kyzart**	**53.12**	**334**	P	**P**	**18 55 12.6**	**+0.8**
	SNR=5.2						
TKM2	**Tokmak 2**	**53.66**	**335**	P	**P**	**18 55 16.2**	**+0.4**
	SNR=10						
TKM2	**Tokmak 2**	**53.66**	**335**	*e*P	**P**	**18 55 15.5**	**-0.2**
TKM2				pmax	pmax		
	comp=Z,24nm,0.4s,mb5.6						
TKM2	**Tokmak 2**	**53.66**	**335**	*e*P	**P**	**18 55 15.5**	**-0.3**
	comp=Z,24nm,0.4s,mb5.6						
KBK	**Karagaybulak**	**53.72**	**334**	P	**P**	**18 55 16.9**	**+0.7**
	SNR=12						
AML	**Almayashu**	**53.85**	**333**	P	**P**	**18 55 17.6**	**+0.5**
	SNR=10						
AML	**Almayashu**	**53.85**	**333**	*e*P	**P**	**18 55 17.1**	**0.0**
AML				pmax	pmax		
	comp=Z,142nm,0.6s						
AML	**Almayashu**	**53.85**	**333**	*e*P	**P**	**18 55 17.1**	**0.0**
	comp=Z,142nm,0.6s						
EKS2	**Erkin-Say**	**54.23**	**334**	P	**P**	**18 55 20.4**	**+0.5**
	SNR=17						
EKS2	**Erkin-Say**	**54.23**	**334**	*e*P	**P**	**18 55 20.2**	**+0.3**
EKS2				pmax	pmax		
	comp=Z,12nm,0.7s,mb5.0						
EKS2	**Erkin-Say**	**54.23**	**334**	*e*P	**P**	**18 55 20.2**	**+0.3**
	comp=Z,12nm,0.7s,mb5.0						
USP	**Ospenovka**	**54.41**	**335**	P	**P**	**18 55 21.0**	**-0.2**
	SNR=7.0						
MK31	**Makanchi Array**	**54.60**	**343**	*i* P	**P**	**18 55 21.9**	**-0.6**
MK31				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
MKAR	**Makanchi Array**	**54.60**	**343**	P	**P**	**18 55 21.9**	**-0.6**
	comp=Z,5.9nm,0.6s,mb4.8,baz=145,slow=7.9,SNR=82						
MKAR	**Makanchi Array**	**54.60**	**343**	*c e*P	**P**	**18 55 21.8**	**-0.7**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MKAR	**Makanchi Array**	**54.60**	**343**	P	**P**	**18 55 21.9**	**-0.6**
KK31	**Karatay Array**	**56.08**	**332**	*i* P	**P**	**18 55 33.2**	**0.0**
KK31				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
KURK	**Kurchatov**	**59.20**	**342**	*c i* P	**P**	**18 55 54.4**	**-0.6**
KURK				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.8						
KLR	**Kul'dur**	**59.36**	**21**	*e*P	**P**	**18 55 51.2**	**-4.9**
HABR	**Khabarovsk**	**60.02**	**24**	*e*P	**P**	**18 55 57.7**	**-2.9**
HABR				*e*PP	pP	18 56 07.6	-13
HABR				*e*SP	sP	18 56 11.8	-17
HABR				*e*S	**S**	**19 04 07.7**	**+0.2**
HABR				*e*S	**S**	**19 04 19.3**	**+12**
HABR				*e*SS	sS	19 04 24.3	-16
HABR				*e*SS	SS	19 08 04.7	-0.8
HABR				pmax	pmax		
	comp=N,11nm,1.4s						
HABR				pmax	pmax		
	comp=Z,28nm,2.5s,mb4.8						
HABR				pmax	pmax		
	comp=E,14nm,1.5s						
HABR				MLR	MLR		
	comp=Z,28nm,18.0s						
ZALV	**Zalesovo Beam**	**60.55**	**348**	P	**P**	**18 56 03.3**	**-0.9**
	comp=Z,7.1nm,0.4s,mb5.0,baz=160,slow=4.7,SNR=46						
KBD	**Kabd**	**62.96**	**306**	*e*P	**P**	**18 56 21.9**	**+1.0**
KBD				AMb	AMB	18 56 22.5	
	comp=Z,16nm,0.5s,mb5.2						
RDF	**Al-Radifah**	**62.98**	**306**	*e*P	**P**	**18 56 22.1**	**+1.1**
RDF				AMb	AMB	18 56 23.6	
	comp=Z,30nm,1.1s,mb5.1						
NAY	**Al-Naaiem**	**63.35**	**306**	*e*P	**P**	**18 56 24.0**	**+0.6**
NAY				AMb	AMB	18 56 24.8	
	comp=Z,18nm,0.5s,mb5.2						
VOSK	**Vostochnaya**	**63.45**	**339**	P	**P**	**18 56 22.4**	**-1.2**
VOSK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
BVAR	**Borovoye Array**	**63.91**	**339**	P	**P**	**18 56 25.8**	**-0.8**
	comp=Z,7.5nm,0.5s,mb4.8,baz=144,slow=9.2,SNR=71						
BRVK	**Borovoye**	**63.97**	**339**	*e*P	**P**	**18 56 26.2**	**-0.8**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.5						
BRVK	**Borovoye**	**63.97**	**339**	*e*P	**P**	**18 56 26.2**	**-0.8**
	comp=Z,4.7nm,0.6s,mb4.5						
ZRNK	**Zerenda**	**64.36**	**338**	P	**P**	**18 56 28.3**	**-1.3**
ZRNK				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
AB31	**Akbulak array**	**65.59**	**331**	*i* P	**P**	**18 56 37.1**	**-0.6**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.5						
ABKAR	**Akbulak array**	**65.59**	**331**	*e*P	**P**	**18 56 36.9**	**-0.8**
	comp=Z,5.0nm,0.5s,mb4.6						
YAK	**Yakutsk**	**69.76**	**13**	*e*P	**P**	**18 57 01.4**	**-2.2**
YAK				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.6						
YAK				pmax	pmax		
	comp=N,2.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.3s						
RPZ	**Rata Peaks**	**70.83**	**135**	*e*P	**P**	**18 57 10.8**	**+0.2**
ARU	**Arti**	**71.03**	**336**	*c i* P	**P**	**18 57 11.1**	**-0.4**
ARU				S	S	19 06 23.8	+2.3
ARU				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.5						
ARU	**Arti**	**71.03**	**336**	*e*P	**P**	**18 57 11.3**	**-0.2**
	comp=Z,5.3nm,0.7s,mb4.5						
PETK	**Petropavlovsk-**	**73.70**	**31**	P	**P**	**18 57 28.1**	**+0.6**
	comp=Z,0.9nm,0.6s,mb3.7,baz=282,slow=7.2,SNR=3.1						
MMAI	**Mount Meron Ar**	**74.17**	**306**	P	**P**	**18 57 30.9**	**+0.3**
	comp=Z,2.7nm,0.5s,mb4.2,baz=88,slow=7.6,SNR=5.2						
VRHR	**Novokhopersk**	**76.39**	**325**	*e*P	**P**	**18 57 44.3**	**+1.3**
VRHR				pmax	pmax		
	comp=Z,8.0nm,0.4s,mb4.8						
VRHR				pmax	pmax		
	comp=N,50nm,0.9s						
VRHR				pmax	pmax		
	comp=E,2.0nm,0.3s						
SEY	**Seymchan**	**77.15**	**21**	*c e*P	**P**	**18 57 46.9**	**-0.1**
BRTR	**Keskin Array B**	**77.48**	**312**	P	**P**	**18 57 49.5**	**+0.2**
	comp=E,3.4nm,0.7s,mb4.2,baz=133,slow=6.9,SNR=22						
BRTR	**Keskin Array B**	**77.48**	**312**	*c e*P	**P**	**18 57 49.5**	**+0.1**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
VSR	**Storozhevoye**	**77.84**	**325**	*e*P	**P**	**18 57 50.7**	**-0.4**
VSR				pmax	pmax		
	comp=Z,9.0nm,0.4s,mb4.8						
VSR				pmax	pmax		
	comp=N,1.0nm,0.3s						
VSR				pmax	pmax		
	comp=E,7.0nm,0.5s						
OBN	**Obninsk**	**80.81**	**328**	⇑*i* P	**P**	**18 58 07.4**	**+0.2**
OBN				pmax	pmax		
	comp=Z,14nm,1.6s,mb4.5						
AKASG	**Malin Array Be**	**83.59**	**322**	P	**P**	**18 58 21.5**	**-0.3**
	comp=Z,2.2nm,0.6s,mb4.2,baz=84,slow=5.0,SNR=11						
AKASG	**Malin Array Be**	**83.59**	**322**	*c e*P	**P**	**18 58 21.7**	**-0.1**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
JOF	**Joensuu**	**86.08**	**334**	*e*P	**P**	**18 58 34.1**	**0.0**
JOF	**Joensuu**	**86.08**	**334**	*e*p	**P**	**18 58 34.1**	**0.0**
	comp=Z,5.3nm,0.6s,mb4.7						
FINES	**FINESS Array B**	**88.03**	**332**	P	**P**	**18 58 43.9**	**+0.4**
	comp=Z,3.8nm,0.4s,mb4.8,baz=117,slow=5.7,SNR=42						
KAF	**Kangasniemi**	**88.09**	**333**	*e*P	**P**	**18 58 43.8**	**0.0**
KAF				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb5.0						
KAF	**Kangasniemi**	**88.09**	**333**	*e*P	**P**	**18 58 43.8**	**0.0**
	comp=Z,8.2nm,0.5s,mb5.0						
KAF	**Kangasniemi**	**88.09**	**333**	*e*p	**P**	**18 58 43.8**	**0.0**
	comp=Z,8.2nm,0.5s,mb5.0						
ARCES	**ARCESS Array B**	**90.17**	**340**	P	**P**	**18 58 53.5**	**+0.1**
	comp=Z,2.4nm,0.6s,mb4.5,baz=101,slow=5.1,SNR=15						
NOA	**NORSAR Array B**	**95.10**	**331**	P	**P**	**18 59 15.1**	**-1.2**
	comp=Z,0.5nm,0.7s,mb4.0,baz=91,slow=6.6,SNR=3.1						
NVAR	**Mina Array Bea**	**129.75**	**42**	PKP	PKPdf	19 05 03.9	+1.0
	comp=Z,0.4nm,0.5s,baz=327,slow=1.5,SNR=3.6						
PDAR	**Pinedale Array**	**132.45**	**33**	PKP	PKPdf	19 05 08.3	+0.5
	comp=Z,0.3nm,0.5s,baz=176,slow=2.3,SNR=4.1						
WMOK	**Wichita Mounta**	**144.04**	**31**	*e*PKIKP	PKPdf	19 05 26.1	-3.2
TXAR	**Lajitas Array**	**144.90**	**43**	PKP	PKPdf	19 05 30.5	-0.5
	comp=Z,3.6nm,0.6s,baz=249,slow=1.7,SNR=44						
TXAR	**Lajitas Array**	**144.90**	**43**	PKP	PKPdf	19 05 30.5	-0.5
JCT	**Junction City**	**146.62**	**38**	*e*PKP2	PKPab	19 05 34.6	-2.1
MIAR	**Mount Ida**	**146.67**	**25**	*e*PKP2	PKPab	19 05 35.6	-1.1
WVT	**Waverly**	**147.30**	**16**	*e*PKP2	PKPab	19 05 37.0	-2.1

*ISCJB **09** 18:50:17.8±0.5, 10.°90N±0.°03×62.°33W±0.°03, h100km±5km, Error ellipse: s-maj=4.9km s-min=4.0km az=135.6*
*FUNV **09** 18:50:19.3, 10.°95N×62.°27W, h92km, MW3.5*
*TRN **09** 18:50:20.4, 10.°96N×62.°26W, h87km, MD3.5*
*NEIC **09** 18:50:20.4, 10.°96N×62.°26W, h87km, MD3.5(TRN), After TRN.*
ISC 09 18:50:18.6±0.6, 10.°91N±0.°03×62.°33W±0.°03, h96km±6km, n34, σ0.°84/64, 9C-7D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.28**	**159**	⇑*e*P	**Pn**	**18 50 32.6**	**0.0**
GUIV				*e*S	**Sn**	**18 50 42.7**	**-0.4**
TCE	**Chacachacare**	**0.60**	**111**	⇑*e*P	**Pn**	**18 50 35.5**	**+0.8**
TCE				*e*S	**Sn**	**18 50 47.0**	**+0.2**
TCE	**Chacachacare**	**0.60**	**111**	⇑*e*P	**Pn**	**18 50 35.5**	**+0.8**
TCE				*e*S	**Sn**	**18 50 47.0**	**+0.2**
ITEV	**Isla Los Testi**	**0.90**	**299**	⇓*i* P	**Pn**	**18 50 38.0**	**+0.3**
ITEV				*e*S	**Sn**	**18 50 52.1**	**+0.1**
CRUV	**Carupano**	**0.92**	**255**	*e*P	**Pn**	**18 50 38.5**	**+0.6**
CRUV				*i* S	**Sn**	**18 50 51.9**	**-0.4**
TRN	**Trinidad (W)**	**0.95**	**106**	⇑*i* P	**Pn**	**18 50 39.0**	**+0.8**
TRN				*e*S	**Sn**	**18 50 51.6**	**-1.2**
TRN	**Trinidad (W)**	**0.95**	**106**	⇑*i* P	**Pn**	**18 50 39.0**	**+0.8**
TRN				*e*S	**Sn**	**18 50 51.6**	**-1.2**
GUNV	**Guanoco**	**0.96**	**219**	*e*P	**Pn**	**18 50 39.5**	**+1.2**
GUNV				*e*S	**Sn**	**18 50 54.7**	**+1.7**
TPP	**Pointe-a-Pierr**	**1.04**	**124**	*e*P	**Pn**	**18 50 41.0**	**+1.8**
TPP				*e*S	**Sn**	**18 50 54.6**	**-0.1**
TPP	**Pointe-a-Pierr**	**1.04**	**124**	*e*P	**Pn**	**18 50 41.0**	**+1.8**
TPP				*e*S	**Sn**	**18 50 54.6**	**-0.1**
TBH	**Brigand Hill**	**1.31**	**109**	⇓*e*P	**Pn**	**18 50 43.3**	**+1.0**
TBH				*e*S	**Sn**	**18 50 59.9**	**-0.4**
TBH	**Brigand Hill**	**1.31**	**109**	⇓*e*P	**Pn**	**18 50 43.3**	**+1.0**
TBH				*e*S	**Sn**	**18 50 59.9**	**-0.4**
GRGR	**Grenville**	**1.38**	**28**	*e*P	**Pn**	**18 50 42.2**	**-1.0**
GRW	**Mount Saint Ca**	**1.40**	**28**	*e*P	**Pn**	**18 50 44.2**	**+0

PXZ	Pawanui	4.19 197	PN	Pn	19 02 12.1	-1.1
PNHZ	Pukenui	4.28 204	PN	Pn	19 02 13.1	-1.2
POWZ	Post Office Ro	4.85 205	PN	Pn	19 02 20.7	-0.8
MRZ	Mangatainoka R	5.16 205	PN	Pn	19 02 23.0	-2.3
MRZ	Mangatainoka R	5.16 205	P	Pn	19 02 23.0	-2.3
TIWZ	Tintock	5.16 203	PN	Pn	19 02 24.0	-1.4
HOWZ	Holdsworth Sta	5.39 205	PN	Pn	19 02 26.1	-2.2
OGWZ	Otaki Gorge	5.44 208	PN	Pn	19 02 26.6	-2.3
KIW	Kapiti Island	5.58 209	PN	Pn	19 02 28.5	-2.3
KIW	Kapiti Island	5.58 209	P	Pn	19 02 28.5	-2.2
MTW	Mount Morrison	5.63 204	PN	Pn	19 02 28.8	-2.5
CAW	Cannon Point	5.73 207	PN	Pn	19 02 30.1	-2.6
CAW	Cannon Point	5.73 207	P	Pn	19 02 30.1	-2.6
TCW	Tory Channel	6.13 211	PN	Pn	19 02 34.9	-3.0
TCW	Tory Channel	6.13 211	P	Pn	19 02 34.9	-2.9
TUWZ	Tuamarina	6.45 212	PN	Pn	19 02 39.0	-2.9
NNZ	Nelson	6.54 216	PN	Pn	19 02 40.2	-2.9
NNZ	Nelson	6.54 216	P	Pn	19 02 40.2	-2.9
QRZ	Quartz Range	6.69 223	PN	Pn	19 02 41.5	-3.6
THZ	Tophouse	7.19 216	PN	Pn	19 02 48.9	-2.6
KHZ	Kahutara	7.44 210	PN	Pn	19 02 52.2	-2.6
KHZ	Kahutara	7.44 210	P	Pn	19 02 52.2	-2.6

*IDC **09** 19:02:33.3±5.5, 38°.32N×22°.13E, h0km, mb3.4/5, mb1 3.4/6, mb1mx3.3/25, mbtmp3.4/6, ML2.9/1, MS3.3/1, Ms1 3.2/1, ms1mx2.2/25, Error ellipse: s-maj=110.6km s-min=26.7km az=23.0*

*ATH **09** 19:02:35.9, 38°.34N×22°.37E, h25km, ML3.6*

*CSEM **09** 19:02:36.2±0.1, 38°.35N×22°.36E, h10km, ML4.0/15, Error ellipse: s-maj=2.4km s-min=2.3km az=86.0*

*ISCJB **09** 19:02:36.3±0.3, 38°.35N±0°.01×22°.37E±0°.02, h14km±2km, mb3.4/5, Error ellipse: s-maj=2.3km s-min=2.2km az=15.2*

*THE **09** 19:02:36.7, 38°.34N×22°.38E, h8km, ML4.0/15, Error ellipse: s-maj=0.7km s-min=0.4km az=205.0*

*NEIC **09** 19:02:37.0, 38°.35N×22°.37E, h5km, ML3.2(ATH), After ATH.*

ISC 09 19:02:36.7±0.3, 38°.35N±0°.01×22°.37E±0°.02, h13km±2km, n193, σ0°.94/282, mb3.4/5, 1C, Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DSF	Desfina	0.14	62	P		Pg		19 02 40.2	-0.1
DSF				S		Sg		19 02 42.4	-0.4
DSF	Desfina	0.14	62	P		Pg		19 02 40.2	-0.1
DSF				S		Sg		19 02 42.4	-0.4
KALE	Kalithea	0.18	285	P		Pg		19 02 40.9	0.0
KALE				S		Sg		19 02 44.0	+0.2
KALE	Kalithea	0.18	285	P		Pg		19 02 40.9	0.0
KALE				S		Sg		19 02 44.0	+0.2
TRIZ	Trizonia	0.23	275	P		Pg		19 02 41.6	-0.1
TRIZ				S		Sg		19 02 45.1	0.0
TRIZ	Trizonia	0.23	275	P		Pg		19 02 41.6	-0.1
TRIZ				S		Sg		19 02 45.1	0.0
LAKA	Lakka	0.32	251	P		Pg		19 02 43.4	+0.1
LAKA				S		Sg		19 02 48.1	+0.4
LAKA	Lakka	0.32	251	P		Pg		19 02 43.4	+0.1
LAKA				S		Sg		19 02 48.1	+0.4
EFP	Efpalio	0.37	283	ePB		Pg		19 02 43.9	-0.3
EFP				eSB		Sg		19 02 50.0	+0.8
EFP	Efpalio	0.37	283	P		Pg		19 02 43.9	-0.3
EFP				S		Sg		19 02 49.7	+0.5
EFP	Efpalio	0.37	283	P		Pg		19 02 43.9	-0.3
EFP				S		Sg		19 02 49.7	+0.5
EFP				eSb		Sg		19 02 50.0	+0.8
GUR	Goura	0.41	183	ePB		Pg		19 02 44.7	-0.2
GUR				eSB		Sg		19 02 50.9	+0.5
GUR	Goura	0.41	183	P		Pg		19 02 44.7	-0.2
GUR				S		Sg		19 02 50.1	-0.3
GUR	Goura	0.41	183	P		Pg		19 02 44.7	-0.2
GUR				S		Sg		19 02 50.1	-0.3
GUR				eSb		Sg		19 02 50.9	+0.5
UPR	University Cam	0.46	263	P		Pg		19 02 45.9	+0.1
UPR				S		Sg		19 02 52.2	+0.2
UPR	University Cam	0.46	263	P		Pg		19 02 45.9	+0.1
UPR				S		Sg		19 02 52.2	+0.2
LTK	Loutraki	0.57	124	ePN		Pg		19 02 47.9	0.0
LTK				eSN		Sg		19 02 56.5	+1.0
LTK	Loutraki	0.57	124	P		Pg		19 02 47.8	-0.1
LTK				S		Sg		19 02 55.7	+0.2
LTK	Loutraki	0.57	124	P		Pg		19 02 47.8	-0.1
LTK				S		Sg		19 02 55.7	+0.2
LKR	Lokris	0.58	58	ePn		Pg		19 02 47.4	-0.8
LKR				eSn		Sg		19 02 56.4	+0.5
LKR	Lokris	0.58	58	ePN		Pg		19 02 47.4	-0.8
LKR				eSN		Sg		19 02 56.4	+0.5
LKR	Lokris	0.58	58	P		Pg		19 02 47.4	-0.8
LKR				S		Sg		19 02 55.9	0.0
LKR	Lokris	0.58	58	P		Pg		19 02 47.4	-0.8
LKR				S		Sg		19 02 55.9	0.0
ATAL	Atalanti	0.62	56	P		Pg		19 02 48.2	-0.7
ATAL				S		Sg		19 02 57.3	+0.2
ATAL	Atalanti	0.62	56	P		Pg		19 02 48.2	-0.7
ATAL				S		Sg		19 02 57.3	+0.2
AGG	Agios Georgios	0.68	358	ePn		Pg		19 02 49.0	-0.9
AGG				eSn		Sg		19 02 59.6	+0.7
AGG	Agios Georgios	0.68	358	ePN		Pg		19 02 49.0	-0.9
AGG				eSN		Sg		19 02 59.6	+0.7
AGG	Agios Georgios	0.68	358	P		Pg		19 02 49.0	-0.9
AGG				S		Sg		19 02 59.5	+0.6
AGG	Agios Georgios	0.68	358	P		Pg		19 02 49.0	-0.9
AGG				S		Sg		19 02 59.5	+0.6
EVR	Evrytania	0.72	323	ePn		Pg		19 02 50.4	-2.2
EVR				eSn		Sg		19 02 59.9	-0.3
EVR	Evrytania	0.72	323	ePN		Pn		19 02 50.4	-2.2
EVR				eSN		Sg		19 02 59.9	-0.3
EVR	Evrytania	0.72	323	ePn		Pn		19 02 50.4	-2.2
RLS	Riolos of Patr	0.76	248	ePn		Pn		19 02 51.1	-2.1
RLS				eSn		Sn		19 03 02.0	-2.5
RLS	Riolos of Patr	0.76	248	ePN		Pn		19 02 51.1	-2.1
RLS				eSN		Sn		19 03 02.0	-2.5
RLS	Riolos of Patr	0.76	248	ePn		Pn		19 02 51.1	-2.1
RLS				eSn		Sn		19 03 02.0	-2.5
VLX	Vlachokerasia	0.97	179	ePN		Pn		19 02 54.6	-1.5
VLX				eSN		Sn		19 03 07.9	-1.8
VLX	Vlachokerasia	0.97	179	P		Pb		19 02 54.4	-1.0
VLX				S		Sb		19 03 08.5	+0.3
VLX	Vlachokerasia	0.97	179	P		Pb		19 02 54.4	-1.0
VLX				eSn		Sn		19 03 07.9	-1.8
VLX				S		Sb		19 03 08.5	+0.3
DID	Didima	1.08	140	P		Pb		19 02 56.7	-0.6
DID				S		Sb		19 03 12.8	+1.4
DID	Didima	1.08	140	P		Pb		19 02 56.7	-0.6
DID				S		Sb		19 03 12.8	+1.4
ATH	Athens Observa	1.13	109	ePn		Pn		19 02 58.0	-0.2
ATH				eSn		Sn		19 03 13.2	-0.3
ATH	Athens Observa	1.13	109	ePN		Pn		19 02 58.0	-0.2
ATH				eSN		Sn		19 03 13.2	-0.3
ATH	Athens Observa	1.13	109	ePn		Pn		19 02 58.0	-0.2
ATH				eSn		Sn		19 03 13.2	-0.3
NEO	Neokhori	1.17	35	ePn		Pn		19 02 58.5	-0.3
NEO				eSn		Sn		19 03 14.2	-0.4
NEO	Neokhori	1.17	35	ePN		Pn		19 02 58.5	-0.3
NEO				eSN		Sn		19 03 14.2	-0.4
NEO	Neokhori	1.17	35	ePn		Pn		19 02 58.5	-0.3
NEO				eSn		Sn		19 03 14.2	-0.4
ATHU	Athens Univers	1.18	108	P		Pn		19 02 58.7	-0.2
ATHU				S		Sb		19 03 15.7	+1.5
ATHU	Athens Univers	1.18	108	P		Pn		19 02 58.7	-0.2
ATHU				S		Sb		19 03 15.7	+1.5
XOR	Xorichti	1.21	32	P		Pn		19 02 59.0	-0.3
XOR	Xorichti	1.21	32	P		Pn		19 02 58.7	-0.6
XOR				S		Sb		19 03 15.8	+0.9
XOR	Xorichti	1.21	32	P		Pn		19 02 59.0	-0.3
XOR				S		Sb		19 03 15.8	+0.9
ITM	Ithomi	1.21	197	ePn		Pn		19 02 59.0	-0.4
ITM				eSn		Sn		19 03 16.0	+0.4
ITM	Ithomi	1.21	197	ePN		Pn		19 02 59.0	-0.4
ITM				eSN		Sn		19 03 16.0	+0.4
ITM	Ithomi	1.21	197	P		Pn		19 02 58.7	-0.7
ITM				S		Sb		19 03 16.5	+1.4
ITM	Ithomi	1.21	197	P		Pn		19 02 58.7	-0.7
ITM	Ithomi	1.21	197	ePn		Pn		19 02 59.0	-0.4
ITM				eSn		Sn		19 03 16.0	+0.4
ITM				S		Sb		19 03 16.5	+1.4
PTL	Penteli	1.22	104	ePn		Pn		19 02 59.1	-0.3
PTL				eSn		Sn		19 03 15.3	-0.5
PTL	Penteli	1.22	104	ePN		Pn		19 02 59.1	-0.3
PTL				eSN		Sn		19 03 15.3	-0.5
PTL	Penteli	1.22	104	ePn		Pn		19 02 59.1	-0.3
PTL				eSn		Sn		19 03 15.3	-0.5
VLY	Voula,Athens	1.23	113	ePn		Pn		19 02 59.1	-0.5
VLY				eSn		Sn		19 03 16.2	+0.2
VLY	Voula,Athens	1.23	113	ePN		Pn		19 02 59.1	-0.5
VLY				eSN		Sn		19 03 16.2	+0.2
VLY	Voula,Athens	1.23	113	ePn		Pn		19 02 59.1	-0.5
VLY				eSn		Sn		19 03 16.2	+0.2
THL	Klokotos Trika	1.25	347	ePN		Pn		19 03 00.1	+0.2
THL				eSN		Sn		19 03 16.8	+0.3
THL	Klokotos Trika	1.25	347	P		Pn		19 03 00.0	+0.1
THL				S		Sb		19 03 17.0	+0.9
THL	Klokotos Trika	1.25	347	P		Pn		19 03 00.0	+0.1
THL				eSn		Sn		19 03 16.8	+0.3
KFL	Anninata	1.26	260	P		Pn		19 02 59.0	-1.1
KFL	Anninata	1.26	260	P		Pn		19 02 59.0	-1.1
LKD	Levkas	1.39	286	ePn		Pn		19 03 02.3	+0.5
LKD				eSn		Sn		19 03 20.7	+0.6
LKD	Levkas	1.39	286	ePN		Pn		19 03 02.3	+0.5
LKD				eSN		Sn		19 03 20.7	+0.6
LKD	Levkas	1.39	286	ePn		Pn		19 03 02.3	+0.5
LKD				eSn		Sn		19 03 20.7	+0.6
VLS	Valsamata	1.41	264	ePn		Pn		19 03 02.0	0.0
VLS				eSn		Sn		19 03 21.8	+1.4
VLS	Valsamata	1.41	264	ePN		Pn		19 03 02.0	0.0
VLS				eSN		Sn		19 03 21.8	+1.4
VLS	Valsamata	1.41	264	P		Pn		19 03 02.0	0.0
VLS				S		Sn		19 03 21.8	+1.4
VLS	Valsamata	1.41	264	P		Pn		19 03 02.0	0.0
VLS				S		Sn		19 03 21.8	+1.4
LKD2	Lefkada island	1.41	289	P		Pn		19 03 02.9	+0.8
LKD2				S		Sn		19 03 21.8	+1.3
LKD2	Lefkada island	1.41	289	P		Pn		19 03 02.9	+0.8
LKD2				S		Sn		19 03 21.8	+1.3
AOS	Alonnisos	1.44	55	P		Pn		19 03 02.2	-0.3
AOS	Alonnisos	1.44	55	P		Pn		19 03 01.9	-0.6
AOS				S		Sn		19 03 22.3	+1.0
AOS	Alonnisos	1.44	55	P		Pn		19 03 02.2	-0.3
AOS				S		Sn		19 03 22.3	+1.0
PYL	PYLOS	1.53	199	ePN		Pn		19 03 04.2	+0.5
PYL				eSN		Sn		19 03 23.6	+0.2
PYL	PYLOS	1.53	199	P		Pn		19 03 04.2	+0.5
PYL	PYLOS	1.53	199	P		Pn		19 03 04.2	+0.5
PYL				eSn		Sn		19 03 23.6	+0.2
VLI	Veliai	1.69	164	ePb		Pn		19 03 05.4	-0.5
VLI				eSn		Sn		19 03 27.4	+0.1
VLI	Veliai	1.69	164	ePB		Pn		19 03 05.4	-0.5
VLI				eSN		Sn		19 03 27.4	+0.1
VLI	Veliai	1.69	164	ePb		Pn		19 03 05.4	-0.5
VLI				eSn		Sn		19 03 27.4	+0.1
JAN	Janina	1.76	318	P		Pn		19 03 09.8	+2.9
JAN	Janina	1.76	318	P		Pn		19 03 09.8	+2.9
PAIG	Paliouri	1.88	32	P		Pn		19 03 07.6	-1.0
PAIG	Paliouri	1.88	32	P		Pn		19 03 07.8	-0.8
PAIG	Paliouri	1.88	32	P		Pn		19 03 07.8	-0.8
IGT	Igoumenitsa	1.98	307	P		Pn		19 03 10.3	+0.4
IGT	Igoumenitsa	1.98	307	P		Pn		19 03 10.3	+0.4
KZN	Kozani	2.01	347	ePn		Pn		19 03 11.2	+0.8
KZN	Kozani	2.01	347	ePN		Pn		19 03 11.2	+0.8
KZN	Kozani	2.01	347	P		Pn		19 03 11.2	+0.8
KZN	Kozani	2.01	347	P		Pn		19 03 11.2	+0.8
PLG	Polygyros	2.19	22	ePn		Pn		19 03 12.2	-0.6
PLG				eSn		Sn		19 03 39.2	-0.6
PLG	Polygyros	2.19	22	ePN		Pn		19 03 12.2	-0.6
PLG				eSN		Sn		19 03 39.2	-0.6
PLG	Polygyros	2.19	22	P		Pn		19 03 12.2	-0.6
PLG	Polygyros	2.19	22	P		Pn		19 03 12.2	-0.6
PLG				eSn		Sn		19 03 39.2	-0.6
HORT	Hortiatis	2.32	14	P		Pn		19 03 14.5	-0.1
HORT	Hortiatis	2.32	14	P		Pn		19 03 14.1	-0.5
HORT	Hortiatis	2.32	14	P		Pn		19 03 14.5	-0.1
THE	Thessaloniki	2.33	11	P		Pn		19 03 16.1	+1.4
THE	Thessaloniki	2.33	11	P		Pn		19 03 14.4	-0.3
THE	Thessaloniki	2.33	11	P		Pn		19 03 14.4	-0.3
OUR	Ouranopolis	2.35	32	P		Pn		19 03 14.1	-0.9
OUR	Ouranopolis	2.35	32	P		Pn		19 03 14.2	-0.8
OUR	Ouranopolis	2.35	32	P		Pn		19 03 14.2	-0.8
KEK	Kerkira	2.42	305	ePb		Pn		19 03 17.0	+1.0
KEK	Kerkira	2.42	305	ePB		Pn		19 03 17.0	+1.0
KEK	Kerkira	2.42	305	ePb		Pn		19 03 17.0	+1.0
FNA	Florina	2.55	343	P		Pn		19 03 18.3	+0.5
FNA	Florina	2.55	343	P		Pn		19 03 18.5	+0.7
FNA	Florina	2.55	343	P		Pn		19 03 18.3	+0.5
SOH	Sokhos	2.59	17	ePn		Pn		19 03 18.5	+0.2
SOH				eSn		Sn		19 03 49.9	+0.3
SOH	Sokhos	2.59	17	ePN		Pn		19 03 18.5	+0.2
SOH				eSN		Sn		19 03 49.9	+0.3
SOH	Sokhos	2.59	17	P		Pn		19 03 18.5	+0.2
SOH	Sokhos	2.59	17	P		Pn		19 03 18.5	+0.2
SOH				eSn		Sn		19 03 49.9	+0.3
LIA	Limnos Island	2.69	54	ePn		Pn		19 03 19.8	+0.2
LIA	Limnos Island	2.69	54	ePN		Pn		19 03 19.8	+0.2
LIA	Limnos Island	2.69	54	P		Pn		19 03 19.2	-0.4
LIA	Limnos Island	2.69	54	P		Pn		19 03 19.2	-0.4
LIA	Limnos Island	2.69	54	ePn		Pn		19 03 19.8	+0.2
BIA	Bitola	2.79	344	ePn		Pn		19 03 23.7	+2.7
APE	Apeiranthos	2.81	116	ePn		Pn		19 03 21.8	+0.4
APE	Apeiranthos	2.81	116	ePN		Pn		19 03 21.8	+0.4
APE	Apeiranthos	2.81	116	P		Pn		19 03 21.9	+0.5
APE	Apeiranthos	2.81	116	ePn		Pn		19 03 21.8	+0.4
CHOS	Chios island	2.90	88	ePN		Pn		19 03 23.1	+0.5
CHOS	Chios island	2.90	88	P		Pn		19 03 22.9	+0.3
CHOS	Chios island	2.90	88	P		Pn		19 03 22.9	+0.3
VAY	Valandovo	2.98	3	ePn		Pn		19 03 23.7	+0.1
VAY	Valandovo	2.98	3	P		Pn		19 03 23.0	-0.6
VAY	Valandovo	2.98	3	P		Pn		19 03 23.0	-0.6
OHR	Ohrid	3.02	337	ePn		Pn		19 03 24.9	+0.7
OHR	Ohrid	3.02	337	P		Pn		19 03 24.7	+0.6
OHR	Ohrid	3.02	337	P		Pn		19 03 24.7	+0.6
KRUS	Krusevo	3.14	344	ePn		Pn		19 03 26.9	+1.1
KARN	Karanos	3.19	157	P		Pn		19 03 26.6	0.0
KARN	Karanos	3.19	157	P		Pn		19 03 26.6	0.0
NVR	Nevrokopi	3.21	21	P		Pn		19 03 27.3	+0.4
NVR	Nevrokopi	3.21	21	P		Pn		19 03 27.3	+0.4
VAM	Vamos	3.28	153	ePn		Pn		19 03 27.8	0.0
VAM	Vamos	3.28	153	ePN		Pn		19 03 27.8	0.0
VAM	Vamos	3.28	153	ePn		Pn		19 03 27.8	0.0
MMB	Musomiste	3.41	17	P		Pn		19 03 28.0	-1.5
MMB	Musomiste	3.41	17	P		Pn		19 03 28.0	-1.5
KKB	Krupnik	3.56	9	eP		Pn		19 03 35.2	+3.6
KKB	Krupnik	3.56	9	eP		Pn		19 03 35.2	+3.6
TIR	Tirane	3.56	328	ePg		Pg		19 03 44.2	-0.8
TIR	Tirane	3.56	328	ePg		Pg		19 03 44.2	-0.8
SMG	Samos	3.59	99	ePn		Pn		19 03 32.5	+0.5
SMG	Samos	3.59	99	ePN		Pn		19 03 32.5	+0.5
SMG	Samos	3.59	99	ePn		Pn		19 03 32.5	+0.5
IDI	Anoyia	3.66	146	P		Pn		19 03 34.6	+1.6
IDI	Anoyia	3.66	146	P		Pn		19 03 34.6	+1.6
RDO	Rodhopi	3.72	40	P		Pn		19 03 35.4	+1.6
RDO	Rodhopi	3.72	40	P		Pn		19 03 35.4	+1.6
RZN	Rozhen	3.80	28	P		Pn		19 03 34.7	-0.2
RZN	Rozhen	3.80	28	P		Pn		19 03 34.7	-0.2
ALN	Alexandroupoli	3.82	47	P		Pn		19 03 34.7	-0.5
ALN	Alexandroupoli	3.82	47	P		Pn		19 03 34.7	-0.5
LAST	Lasithi	4.04	141	P		Pn		19 03 38.8	+0.5
LAST	Lasithi	4.04	141	P		Pn		19 03 38.8	+0.5
KDZ	Kurdzhali	4.05	34	P		Pn		19 03 35.9	-2.4
KDZ	Kurdzhali	4.05	34	P		Pn		19 03 35.9	-2.4
VTS	Vitosha	4.29	8	P		Pn		19 03 44.8	+3.1
VTS	Vitosha	4.29	8	P		Pn		19 03 42.7	+1.0
VTS	Vitosha	4.29	8	P		Pn		19 03 42.5	+0.8
VTS	Vitosha	4.29	8	P		Pn		19 03 42.7	+1.0
BARS	Barje	4.49	355	ПPn		Pn		19 03 44.9	+0.5
STON	Ston	5.75	323	ePn		Pn		19 04 01.1	-0.6
STON				Sn		Sn		19 05 04.7	-2.8
STON	Ston	5.75	323	ePn		Pn		19 04 01.0	-0.7
BBLS	Lazići	5.95	339	ePn		Pn		19 04 04.8	+0.3
DIVS	Divibare	6.02	343	ePn		Pn		19 04 07.1	+1.7
NVLJ	Novalja	8.38	320	ePn		Pn		19 04 36.7	-1.1
NVLJ				Sn		Sn		19 06 06.4	-5.8
NVLJ	Novalja	8.38	320	ePn		Pn		19 04 36.7	-1.1
BRTR	Keskin Array B	8.88	78	Pn		Pn		19 04 47.4	+2.6
	0.1nm,0.3s,baz=266,slow=13,SNR=4.4								
BRTR	Keskin Array B	8.88	78	Pn		Pn		19 04 47.3	+2.6
HFS	Hagfors	22.49	349	P		P		19 07 34.3	-1.3
	0.9nm,0.7s,mb3.3,baz=148,slow=11,SNR=3.1								
HFS	Hagfors	22.49	349	P		P		19 07 34.3	-1.3
NOA	NORSAR Array B	23.77	346	P		P		19 07 47.0	-1.7
	0.4nm,0.6s,mb3.0,baz=146,slow=9.6,SNR=2.7								
NOA	NORSAR Array B	23.77	346	P		P		19 07 47.0	-1.7
NOA	NORSAR Array B	23.77	346	P		P		19 07 47.0	-1.7
EKA	Eskdalemuir Ar	24.15	323	P		P		19 07 50.1	-2.1
	1.7nm,1.0s,mb3.4,baz=116,slow=9.6,SNR=4.2								
EKA	Eskdalemuir Ar	24.15	323	P		P		19 07 50.1	-2.1
DBIC	Dimbokro	40.02	225	LR		LR		19 28 18.6	
	comp=Z,39nm,20.7s,baz=134,slow=39								
MK31	Makanchi Array	43.98	59	ePn		P		19 10 43.8	+0.3
MK31	Makanchi Array	43.98	59	ePn		P		19 10 43.8	+0.3
MKAR	Makanchi Array	43.98	59	P		P		19 10 43.1	-0.3
	0.3nm,0.4s,mb3.4,baz=274,slow=7.9,SNR=12								
ZALV	Zalesovo Beam	44.50	48	P		P		19 10 46.8	-0.7
	0.6nm,0.4s,mb3.6,baz=280,slow=8.4,SNR=3.1								
ZALV	Zalesovo Beam	44.50	48	P		P		19 10 46.8	-0.7

*BJI **09** 19:19:01.1, 30°.99N×103°.64E, h16km, ML2.9/7*

*IDC **09** 19:19:07.4±26.0, 30°.37N×104°.85E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/22, mbtmp3.2/3, Error ellipse: s-maj=619.1km s-min=45.2km az=120.0*

ISC 09 19:19:00.4±1.8, 31°.23N±0°.07×103°.7E±0°.2, h10km, n5, σ0°.97/7, mb3.3/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CD2	Chengdu	0.33	164	Pn		Pg		19 19 06.6	-0.3
CD2				Sg		Sg		19 19 11.5	+0.2
CD2				smax					
	comp=N,3μm,0.5s								
XAN	Xi'an	5.25	56	Pg		Pg		19 20 39.3	-1.8
XAN				Sg		Sg		19 21 49.5	+0.4
XAN				smax					
	comp=N,16nm,1.1s								
XAN				smax					
	comp=E,9.0nm,0.8s								
KSRS	Korea Array	20.95	66	P		P		19 23 45.4	+1.9
	comp=E,0.4nm,0.4s,baz=262,slow=11,SNR=4.2								
WRA	Warramunga Arr	58.79	146	P		P		19 28 58.8	-0.2
	comp=E,0.2nm,0.7s,mb3.2,baz=338,slow=7.5,SNR=5.0								
ASAR	Alice Springs	61.80	148	P		P		19 29 19.4	-0.1
	comp=E,0.2nm,0.8s,mb3.3,baz=332,slow=7.0,SNR=2.9								

*NEIC **09** 19:30:39.0, 38°.82N×25°.94E, h8km, MD3.3(ISK), MD3.2(ATH), After ISK.*

*ISK **09** 19:30:40.1, 38°.83N×25°.96E, h8km, MD3.3*

*DDA **09** 19:30:41.6, 38°.88N×26°.09E, h26km±1km, Md3.1*

*ISCJB **09** 19:30:41.8±0.5, 38°.85N±0°.02×26°.03E±0°.03, h11km±3km, Error ellipse: s-maj=4.0km s-min=2.6km az=157.1*

*ATH **09** 19:30:41.7, 38°.88N×26°.16E, h31km±1km, MD3.2/6*

*CSEM **09** 19:30:42.1±0.1, 38°.84N×26°.06E, h10km, MD3.2, Error ellipse: s-maj=2.9km s-min=2.1km az=62.0*

*THE **09** 19:30:42.5, 38°.87N×26°.10E, h8km±1km, ML3.5/4, Error ellipse: s-maj=1.5km s-min=0.6km az=84.0*

ISC 09 19:30:42.1±0.5, 38°.85N±0°.02×26°.05E±0°.03, h9km±3km, n104, σ0°.83/142, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SIGR	SIGRI	0.39	338	P		Pg		19 30 50.3	+0.5
SIGR				S		Sg		19 30 55.5	+0.5
SIGR	SIGRI	0.39	338	P		Pg		19 30 50.3	+0.5
SIGR				S		Sg		19 30 55.5	+0.5
PRK	Paraskevi	0.43	24	ePb		Pg		19 30 50.6	0.0
PRK				eSb		Sg		19 30 56.5	+0.2
PRK	Paraskevi	0.43	24	ePB		Pg		19 30 50.6	0.0
PRK				eSB		Sg		19 30 56.5	+0.2
PRK	Paraskevi	0.43	24	P		Pg		19 30 50.6

SART *i* S **Sn** **19 31 44.6 +2.6**
SART Tekirdag 2.03 25 *i* P **Pn** **19 31 17.4 +0.9**
SART *i* S **Sn** **19 31 44.6 +2.6**
BODT Bodrum 2.04 150 *e*PN **Pn** **19 31 15.9 -0.7**
BODT Bodrum 2.04 150 *e*Pn **Pn** **19 31 16.0 -0.6**
ALN Alexandroupoli 2.04 360 *e*Pb **Pb** **19 31 16.0 -3.4**
ALN Alexandroupoli 2.04 360 *e*PB **Pb** **19 31 16.0 -3.4**
ALN Alexandroupoli 2.04 360 P **Pn** **19 31 16.1 -0.5**
ALN Alexandroupoli 2.04 360 P **Pn** **19 31 16.1 -0.5**
MLSB Milas 2.07 138 *e*PN **Pn** **19 31 16.3 -0.7**
MLSB Milas 2.07 138 *e*Pn **Pn** **19 31 16.3 -0.6**
KULA Kula-Manisa 2.07 98 *e*PN **Pn** **19 31 16.8 -0.2**
KULA Kula-Manisa 2.07 98 *e*Pn **Pn** **19 31 16.8 -0.2**
BNT Bandirma 2.09 43 *e*PN **Pn** **19 31 17.2 0.0**
PAIG Paliouri 2.13 301 P **Pn** **19 31 17.5 -0.3**
PAIG Paliouri 2.13 301 P **Pn** **19 31 17.5 -0.3**
MFT Murefte 2.16 26 *e*PN **Pn** **19 31 18.3 +0.1**
MFT Murefte 2.16 26 *e*Pn **Pn** **19 31 18.3 +0.1**
OUR Ouranopolis 2.18 314 P **Pn** **19 31 18.2 -0.3**
OUR Ouranopolis 2.18 314 P **Pn** **19 31 18.2 -0.3**
RDO Rodhopi 2.33 350 *e*Pn **Pn** **19 31 20.3 -0.2**
RDO Rodhopi 2.33 350 *e*PN **Pn** **19 31 20.3 -0.2**
RDO Rodhopi 2.33 350 P **Pn** **19 31 20.2 -0.3**
RDO Rodhopi 2.33 350 *e*Pn **Pn** **19 31 20.3 -0.2**
KAVA Kavala 2.45 332 P **Pn** **19 31 21.9 -0.3**
KAVA Kavala 2.45 332 P **Pn** **19 31 21.9 -0.3**
PLG Polygyros 2.52 308 *e*Pn **Pn** **19 31 23.2 0.0**
PLG Polygyros 2.52 308 *e*PN **Pn** **19 31 23.2 0.0**
PLG Polygyros 2.52 308 *e*Pn **Pn** **19 31 23.2 0.0**
DID Didima 2.59 240 P **Pn** **19 31 24.3 +0.2**
DID Didima 2.59 240 P **Pn** **19 31 24.3 +0.2**
ULDT Uludag 2.72 61 *i* P **Pn** **19 31 29.1 +3.3**
ULDT Uludag 2.72 61 *i* P **Pn** **19 31 29.1 +3.2**
ARMT Armutlu 2.77 51 *e*PN **Pn** **19 31 27.3 +0.8**
ARMT Armutlu 2.77 51 *e*Pn **Pn** **19 31 27.3 +0.8**
CTKS Kestanelik-??a 3.04 38 *e*PN **Pn** **19 31 31.0 +0.7**
CTKS Kestanelik-??a 3.04 38 *e*Pn **Pn** **19 31 31.0 +0.7**
EDRB Edirne 3.04 10 *e*PN **Pn** **19 31 30.6 +0.2**
EDRB Edirne 3.04 10 *e*Pn **Pn** **19 31 30.6 +0.3**
THL Klokotos Trika 3.21 284 P **Pn** **19 31 33.6 +0.9**
THL Klokotos Trika 3.21 284 P **Pn** **19 31 33.6 +0.9**
BARS Barje 5.10 322 *i* Pn **Pn** **19 31 59.6 +1.0**

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*BJI **09** 19:32:22.1,5.′64S×147.°23E, h224km, mB4.6/22, mb4.4/33*
*MOS **09** 19:32:23.4±0.9,5.′29S×146.°81E, h207km, mb4.5/10, Error ellipse: s-maj=14.6km s-min=7.6km az=91.2*
*ISCJB **09** 19:32:24.6±0.8,5.′35S±0.′04×146.°95E±0.′05, h222km±8km, mb4.3/47, Error ellipse: s-maj=9.1km s-min=5.5km az=20.8*
*IDC **09** 19:32:26.2±0.7,5.′42S×146.°79E, h221km±6km, mb4.0/15, mb1 4.1/18, mb1mx4.1/20, mbtmp4.0/18, Error ellipse: s-maj=14.4km s-min=7.7km az=100.0*
*NEIC **09** 19:32:26.1±0.2,5.′37S×146.°90E, mb4.6/24, Error ellipse: s-maj=6.6km s-min=4.4km az=92.0*
ISC 09 19:32:27.0±0.8,5.′44S±0.′04×146.°85E±0.′05, h229km±8km, h224km±.8km:pP-P,n111,σ0:91/119, mb4.3/47, 5C,
Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.96**	**176**	*e*P	**Pn**	**19 33 27.6**	**-1.8**
PMG				pmax	pmax		
	comp=Z,940nm,1.2s						
COEN	**Coen**	**9.21**	**203**	*e*P	**Pn**	**19 34 36.7**	**+0.9**
COEN	**Coen**	**9.21**	**203**	*e*P	**Pn**	**19 34 36.8**	**+1.0**
	comp=Z,744nm,0.8s						
COEN				*e*S	**S**	**19 36 17.6**	**-2.0**
MTSU	**Mount Surprise**	**12.86**	**191**	*e*P	**Pn**	**19 35 23.3**	**+1.5**
	comp=Z,100nm,0.8s						
HNR	**Honiara**	**13.57**	**108**	P	**Pn**	**19 35 29.9**	**-0.8**
	comp=Z,11nm,0.3s,baz=242,slow=9.1,SNR=5.2						
HNR	**Honiara**	**13.57**	**108**	*e*P	**Pn**	**19 35 29.1**	**-1.6**
HNR				pmax	pmax		
	comp=Z,70nm,0.8s						
HNR	**Honiara**	**13.57**	**108**	*e*P	**Pn**	**19 35 29.1**	**-1.6**
	comp=Z,70nm,0.8s						
CTA	**Charters Tower**	**14.57**	**182**	*e*P	**Pn**	**19 35 44.3**	**+1.4**
	comp=Z,10.0nm,0.5s						
CTA	**Charters Tower**	**14.57**	**182**	P	**Pn**	**19 35 44.1**	**+1.2**
	comp=Z,0.9nm,0.3s,baz=0.2,slow=12,SNR=8.4						
CTAO	**Charters Tower**	**14.57**	**182**	*e*P	**Pn**	**19 35 44.1**	**+1.2**
CTAO				pmax	pmax		
	comp=Z,14nm,0.6s						
CTAO	**Charters Tower**	**14.57**	**182**	*e*P	**Pn**	**19 35 44.1**	**+1.2**
	comp=Z,14nm,0.6s						
KAKA	**Kakadu**	**15.96**	**242**	*e*P	**Pn**	**19 36 00.5**	**+0.9**
	comp=Z,142nm,0.6s						
KAKA	**Kakadu**	**15.96**	**242**	*e*P	**Pn**	**19 36 00.2**	**+0.7**
	comp=Z,384nm,0.6s						
KAKA				*e*S	**S**	**19 38 53.3**	**-1.3**
WRAB	**Tennant Creek**	**18.86**	**219**	*e*P	**P**	**19 36 30.5**	**+0.3**
WRAB				*e*S	**S**	**19 39 51.0**	**-1.4**
WRAB				pmax	pmax		
	comp=Z,56nm,0.6s						
WRAB	**Tennant Creek**	**18.86**	**219**	*e*P	**P**	**19 36 30.5**	**+0.2**
	comp=Z,56nm,0.6s						
WRAB				*e*S	**S**	**19 39 51.0**	**-1.4**
WRA	**Warramunga Arr**	**18.87**	**219**	P	**P**	**19 36 30.9**	**+0.5**
	comp=Z,6.4nm,0.3s,baz=40,slow=10,SNR=383						
WRA				S	**S**	**19 39 51.9**	**-0.7**
	comp=Z,0.8nm,0.3s,baz=38,slow=20,SNR=9.6						
WRA				PcP	PcP	19 40 46.9	+0.3
	comp=Z,0.5nm,0.3s,baz=30,slow=1.8,SNR=5.7						
WRA	**Warramunga Arr**	**18.87**	**219**	P	**P**	**19 36 30.9**	**+0.5**
WRA				S	**S**	**19 39 51.9**	**-0.7**
GUMO	**Guam**	**19.00**	**354**	*e*P	**P**	**19 36 32.2**	**+0.4**
GUMO				pmax	pmax		
	comp=Z,102nm,1.1s						
GUMO	**Guam**	**19.00**	**354**	*e*P	**P**	**19 36 32.2**	**+0.3**
	comp=Z,102nm,1.1s						
EIDS	**Eidsvold**	**20.23**	**169**	*e*P	**P**	**19 36 45.2**	**+0.4**
KNA	**Kununurra**	**20.50**	**239**	*e*P	**P**	**19 36 49.9**	**+2.1**
	comp=Z,87nm,1.0s						
ASAR	**Alice Springs**	**22.00**	**213**	P	**P**	**19 37 03.7**	**+0.9**
	comp=Z,37nm,0.8s,mb5.0,baz=39,slow=7.4,SNR=248						
ASAR				S	**S**	**19 40 49.1**	**+0.2**
	comp=Z,13nm,0.9s,baz=29,slow=17,SNR=13						
FITZ	**Fitzroy Crossi**	**24.25**	**237**	*e*P	**P**	**19 37 23.5**	**+0.2**
	comp=Z,241nm,0.4s						
FITZ	**Fitzroy Crossi**	**24.25**	**237**	P	**P**	**19 37 23.7**	**+0.4**
	comp=Z,124nm,0.5s,baz=65,slow=7.9,SNR=219						
ARMA	**Armidale**	**25.25**	**170**	*e*P	**P**	**19 37 32.7**	**+0.5**
STKA	**Stephens Creek**	**26.76**	**190**	P	**P**	**19 37 45.4**	**-0.3**
	comp=Z,7.7nm,1.1s,mb4.3,baz=9.4,slow=12,SNR=4.6						
STKA	**Stephens Creek**	**26.76**	**190**	P	**P**	**19 37 46.7**	**+1.0**
STKA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
STKA	**Stephens Creek**	**26.76**	**190**	P	**P**	**19 37 46.7**	**+1.0**
	comp=Z,2.6nm,0.7s,mb4.0						
MBWA	**Marble Bar**	**30.59**	**237**	*e*P	**P**	**19 38 20.0**	**+0.3**
MBWA	**Marble Bar**	**30.59**	**237**	*e*P	**P**	**19 38 19.8**	**0.0**
	comp=Z,21nm,0.7s,mb4.9						
FORT	**Forrest**	**30.79**	**213**	*e*P	**P**	**19 38 21.7**	**+0.4**
	comp=Z,43nm,0.8s,mb5.1						
MEEK	**Meekatharra**	**34.21**	**229**	*e*P	**P**	**19 38 51.4**	**+0.3**
KMBL	**Kambalda**	**34.84**	**219**	*e*P	**P**	**19 38 56.6**	**+0.1**
	comp=Z,56nm,0.5s,mb5.3						
MORW	**Morawa**	**37.44**	**228**	*e*P	**P**	**19 39 18.6**	**+0.1**
KLBR	**Kellerberrin**	**37.68**	**223**	*e*P	**P**	**19 39 20.1**	**-0.4**
	comp=Z,14nm,0.6s,mb4.7						
NWAO	**Narrogin (SRO)**	**38.85**	**222**	P	**P**	**19 39 30.4**	**+0.2**
	comp=Z,12nm,0.9s,mb4.4,baz=40,slow=13,SNR=5.3						
NWAO	**Narrogin (SRO)**	**38.85**	**222**	P	**P**	**19 39 30.4**	**+0.2**
YHNB	**Yeheng**	**38.87**	**321**	*e*P	**P**	**19 39 30.3**	**-0.1**
	comp=Z,38nm,0.9s,mb4.9						
MJAR	**Matsushiro Arr**	**42.53**	**350**	P	**P**	**19 39 59.7**	**-0.4**
	comp=Z,2.2nm,0.8s,mb3.6,baz=177,slow=8.2,SNR=10						
MAJO	**Matsushiro**	**42.54**	**350**	*e*P	**P**	**19 39 59.6**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.0						
MAJO	**Matsushiro**	**42.54**	**350**	*e*P	**P**	**19 39 59.6**	**-0.6**
	comp=Z,7.2nm,1.0s,mb4.1						
MAT	**Matsushiro**	**42.54**	**350**	P	**P**	**19 39 59.5**	**-0.7**
URZ	**Urewera**	**42.69**	**144**	P	**P**	**19 40 01.7**	**+0.2**
	comp=Z,5.1nm,0.4s,mb4.3,baz=264,slow=1.0,SNR=10						
URZ	**Urewera**	**42.69**	**144**	*e*P	**P**	**19 40 01.1**	**-0.3**
	comp=Z,73nm,1.5s,mb4.9						
RPZ	**Rata Peaks**	**43.68**	**155**	P	**P**	**19 40 09.6**	**+0.4**
	comp=Z,9.7nm,0.7s,mb4.3,baz=25,slow=8.9,SNR=5.9						
NJ2	**Nanjing**	**45.83**	**326**	*e*P	**P**	**19 40 27.1**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.3						
KSRS	**Korea Array**	**46.18**	**339**	P	**P**	**19 40 29.6**	**+0.6**
	comp=Z,7.0nm,0.8s,mb4.0,baz=157,slow=9.0,SNR=32						
KSRS				pP	pP	19 41 16.4	-1.6
	comp=Z,1.9nm,0.9s,baz=156,slow=9.9,SNR=2.9						
KSRS				PcP	PcP	19 42 00.7	-0.1
	comp=Z,1.0nm,0.8s,baz=154,slow=3.5,SNR=5.2						
KULM	**Kulim**	**47.35**	**282**	*e*P	**P**	**19 40 37.2**	**-1.3**
	comp=Z,4.1nm,0.6s,mb3.9						
GYA	**Guiyang**	**50.20**	**311**	P	**P**	**19 41 01.0**	**+1.1**
GYA				pP	pP	19 41 50.7	+0.9
GYA				sP	sP	19 42 15.0	-0.3
GYA				PcP	PcP	19 42 17.9	+2.3
GYA				PP	PP	19 43 01.2	+3.5
GYA				ScP	ScP	19 45 50.9	+1.4
GYA				PcS	PcS	19 46 12.2	-1.0
GYA				S	**S**	**19 47 55.3**	**+1.1**
GYA				sS	sS	19 49 21.8	-0.3
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.1						
GYA				pmax	pmax		
	comp=Z,80nm,4.9s						
MDJ	**Mudanjiang**	**52.19**	**344**	P	**P**	**19 41 14.6**	**+0.4**
MDJ				pP	pP	19 42 03.3	-1.2
MDJ				S	**S**	**19 48 27.1**	**+6.4**
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb3.9						
MDJ				pmax	pmax		
	comp=Z,38nm,4.9s						
YSS	**Yuzh-Sakhalins**	**52.29**	**356**	P	**P**	**19 41 12.0**	**-2.9**
KMI	**Kunming**	**52.54**	**307**	P	**P**	**19 41 18.1**	**+0.9**
KMI				pP	pP	19 42 07.3	-0.3
KMI				sP	sP	19 42 31.9	-1.1
KMI				PP	PP	19 43 22.2	+3.4
KMI				S	**S**	**19 48 27.7**	**+1.5**
KMI				sS	sS	19 49 53.9	-0.9
KMI				SS	SS	19 52 08.7	+0.8
KMI				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb3.9						
KMI				pmax	pmax		
	comp=Z,40nm,5.5s						
KMI				LR	LR		
	comp=N,81nm,15.4s						
KMI				LR	LR		
	comp=E,68nm,14.9s						
KMI				LR	LR		
	comp=Z,71nm,8.8s						
CN2	**Changchun**	**52.68**	**341**	*e*P	**P**	**19 41 20.2**	**+2.3**
CM31	**Chiang Mai Arr**	**52.86**	**298**	P	**P**	**19 41 19.4**	**-0.3**
	comp=Z,1.6nm,0.6s,mb3.6						
CHTO	**Chiang Mai**	**52.99**	**298**	*e*P	**P**	**19 41 20.7**	**+0.1**
CHTO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.4						
CHTO	**Chiang Mai**	**52.99**	**298**	*e*P	**P**	**19 41 20.6**	**0.0**
	comp=Z,1.2nm,0.6s,mb3.5						
XAN	**Xi'an**	**53.16**	**320**	P	**P**	**19 41 21.4**	**-0.2**
XAN				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb3.8						
BJI	**Beijing**	**53.34**	**331**	P	**P**	**19 41 22.9**	**+0.1**
BJI				sP	sP	19 42 32.7	-5.9
BJI				S	**S**	**19 48 40.9**	**+4.4**
BJI				sS	sS	19 50 00.1	-5.2
BJI				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.3						
BJI				pmax	pmax		
	comp=Z,54nm,6.0s						
HABR	**Khabarovsk**	**54.67**	**350**	*e*P	**P**	**19 41 31.1**	**-1.1**
HABR				*e*PP	pP	19 42 21.4	-1.6
HABR				*e*		19 42 30.4	
HABR				PPP		19 44 51.7	
HABR				*e*S	**S**	**19 48 53.6**	**-0.4**
HABR				*e*		19 50 55.9	
HABR				SS	SS	19 52 41.7	+1.0
HABR				pmax	pmax		
	comp=Z,40nm,2.5s,mb4.5						
HABR				pmax	pmax		
	comp=E,7.0nm,0.8s						
HABR				pmax	pmax		
	comp=N,7.0nm,1.0s						
HABR				MLR	MLR		
	comp=Z,25nm,16.0s						
CD2	**Chengdu**	**54.78**	**314**	P	**P**	**19 41 33.6**	**+0.3**
CD2				pP	pP	19 42 23.4	-0.7
CD2				sP	sP	19 42 48.0	-1.4
CD2				PP	PP	19 43 40.6	+1.8
CD2				S	**S**	**19 48 55.9**	**-0.2**
CD2				sS	sS	19 50 23.5	-1.8
CD2				SS	SS	19 52 42.7	-0.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.6						
CD2				pmax	pmax		
	comp=Z,90nm,5.3s						
KLR	**Kul'dur**	**56.01**	**348**	*e*P	**P**	**19 41 38.4**	**-3.3**
HHC	**Hu-ho-hao-te**	**56.28**	**328**	*e*P	**P**	**19 41 44.3**	**+0.5**
HHC				pP	pP	19 42 34.0	-0.9
HHC				PcP	PcP	19 42 38.9	+0.5
HHC				sP	sP	19 42 58.7	-1.4
HHC				PP	PP	19 43 53.9	+1.9
HHC				ScP	ScP	19 46 14.5	-1.1
HHC				PcS	PcS	19 46 37.6	-1.5
HHC				S	**S**	**19 49 15.9**	**+0.3**
HHC				sS	sS	19 50 43.1	-2.2
HHC				ScS	ScS	19 51 07.0	-2.5
HHC				SS	SS	19 53 07.6	+1.3
HHC				pmax	pmax		
	comp=Z,21nm,0.6s,mb4.8						
HHC				pmax	pmax		
	comp=Z,140nm,6.0s						
HHC				LR	LR		
	comp=N,86nm,16.4s						
HHC				LR	LR		
	comp=E,90nm,16.0s						
HHC				LR	LR		
	comp=Z,90nm,16.5s						
LZH	**Lanzhou**	**57.69**	**319**	⇑P	**P**	**19 41 55.0**	**+1.2**
LZH				pP	pP	19 42 45.6	+0.5
LZH				sP	sP	19 43 10.2	-0.1
LZH				PP	PP	19 44 07.5	+2.9
LZH				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.5						
LZH				pmax	pmax		
	comp=Z,120nm,6.2s						
PETK	**Petropavlovsk-**	**59.04**	**8**	P	**P**	**19 42 03.5**	**+0.8**
	comp=Z,3.8nm,0.7s,mb4.1,baz=172,slow=5.2,SNR=5.2						
GTA	**Gaotai**	**62.22**	**320**	*e*P	**P**	**19 42 25.8**	**+1.3**
GTA				pP	pP	19 43 17.3	+0.7
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.1						
ULN	**Ulaanbaatar**	**63.55**	**331**	*e*P	**P**	**19 42 33.8**	**+0.8**
ULN				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
ULN	**Ulaanbaatar**	**63.55**	**331**	*e*P	**P**	**19 42 33.8**	**+0.8**
	comp=Z,9.3nm,0.8s,mb4.5						
SONM	**Songino Array**	**63.84**	**331**	P	**P**	**19 42 35.7**	**+0.8**
	comp=Z,6.6nm,0.9s,mb4.3,baz=148,slow=7.1,SNR=33						
CASY	**Casey**	**65.76**	**195**	*e*P	**P**	**19 42 46.8**	**-0.2**
	comp=Z,28nm,1.0s,mb4.8						
JIRN	**Jiri**	**67.10**	**303**	*e*P	**P**	**19 42 56.2**	**0.0**
GUN	**Gumba**	**67.44**	**303**	*e*P	**P**	**19 42 58.0**	**-0.4**
KKN	**Kakani**	**67.90**	**303**	*e*P	**P**	**19 43 00.8**	**-0.4**
DMN	**Daman**	**67.99**	**303**	*e*P	**P**	**19 43 01.0**	**-0.8**
	comp=Z,11nm,0.7s,mb4.6						
SEY	**Seymchan**	**68.31**	**3**	⇑*i*P	**P**	**19 43 03.5**	**+0.5**
GKN	**Gorkha**	**68.51**	**303**	*e*P	**P**	**19 43 03.9**	**-1.1**
YAK	**Yakutsk**	**68.56**	**351**	*e*P	**P**	**19 43 04.7**	**+0.1**
YAK				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.5						
YAK				pmax	pmax		
	comp=N,5.0nm,1.1s						
YAK	**Yakutsk**	**68.56**	**351**	*e*P	**P**	**19 43 04.8**	**+0.2**
	comp=N,8.5nm,0.6s,mb4.5						
MOY	**Mondy**	**69.01**	**331**	*e*P	**P**	**19 43 08.1**	**+0.5**
MIR	**Mirnyy**	**71.26**	**200**	⇑*i*P	**P**	**19 43 21.8**	**+0.8**
MIR				pmax	pmax		
	comp=Z,41nm,1.0s,mb5.0						
WMQ	**Urumqi**	**72.27**	**319**	*e*P	**P**	**19 43 27.3**	**-0.1**
WMQ				PcP	PcP	19 43 44.5	+0.3
WMQ				pP	pP	19 44 20.0	-1.1
WMQ				sP	sP	19 44 43.7	-2.0
WMQ				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.2						
WMQ				pmax	pmax		
	comp=Z,100nm,5.2s						
SBA	**Scott Base**	**73.13**	**176**	*e*P	**P**	**19 43 32.7**	**+0.8**
SBA				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.4						
SBA	**Scott Base**	**73.13**	**176**	*e*P	**P**	**19 43 32.7**	**+0.8**
	comp=Z,11nm,1.1s,mb4.4						
BILL	**Bilibino**	**74.58**	**7**	⇑*i*P	**P**	**19 43 40.8**	**+0.5**
BILL				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.4						
BILL	**Bilibino**	**74.58**	**7**	*e*P	**P**	**19 43 40.5**	**+0.2**
	comp=Z,9.8nm,0.9s,mb4.4						
MK31	**Makanchi Array**	**76.97**	**320**	*e*P	**P**	**19 43 53.8**	**-0.5**
MK31				*e*PP	pP	19 44 46.6	-2.1
MKAR	**Makanchi Array**	**76.97**	**320**	P	**P**	**19 43 54.1**	**-0.2**
	comp=Z,1.8nm,0.6s,mb3.9,baz=98,slow=7.8,SNR=26						
MKAR				pP	pP	19 44 47.1	-1.6
	comp=Z,2.3nm,1.0s,baz=100,slow=6.8,SNR=5.1						
ZAA0	**Zalesovo Array**	**78.46**	**328**	*e*P	**P**	**19 44 00.9**	**-1.4**
ZAA0				*e*pP	pP	19 44 53.6	-3.4
ZALV	**Zalesovo Beam**	**78.46**	**328**	P	**P**	**19 44 01.3**	**-1.1**
	comp=Z,3.2nm,0.5s,mb4.2,baz=112,slow=6.0,SNR=15						
ZALV				pP	pP	19 44 54.0	-3.0
	comp=Z,2.1nm,0.6s,baz=104,slow=6.3,SNR=3.5						
NVS	**Novosibirsk**	**79.68**	**328**	*e*P	**P**	**19 44 08.2**	**-0.8**
NVS				*i*	pP	19 45 03.6	-0.1
NVS				pmax	pmax		
	comp=N,16nm,2.3s						
NVS				pmax	pmax		
	comp=Z,26nm,2.3s,mb4.5						
NVS				pmax	pmax		
	comp=E,18nm,2.0s						
KURK	**Kurchatov**	**80.67**	**323**	P	**P**	**19 44 13.7**	**-0.6**
	comp=E,1.4nm,0.7s,mb3.7,baz=115,slow=4.3,SNR=8.9						
KURK	**Kurchatov**	**80.67**	**323**	*e*P	**P**	**19 44 12.8**	**-1.6**
KURK				*e*PP	pP	19 45 07.3	-1.9
KURK				pmax	pmax		
	comp=Z,12nm,1.4s,mb4.3						
KURK	**Kurchatov**	**80.67**	**323**	*e*P	**P**	**19 44 12.8**	**-1.5**
	comp=Z,12nm,1.4s,mb4.3						
KURK				*e*pP	pP	19 45 07.3	-1.9
MAW	**Mawson**	**82.71**	**203**	P	**P**	**19 44 24.5**	**-0.2**
	comp=Z,4.5nm,0.6s,mb4.4,baz=91,slow=5.8,SNR=15						
MAW	**Mawson**	**82.71**	**203**	*e*P	**P**	**19 44 24.3**	**-0.4**
MAW				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MAW	**Mawson**	**82.71**	**203**	*e*P	**P**	**19 44 24.3**	**-0.3**
	comp=Z,0.7nm,0.6s,mb3.6						
MCK	**McKinley**	**83.77**	**24**	*e*P	**P**	**19 44 29.1**	**-1.0**
MCK				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.6						
MCK	**McKinley**	**83.77**	**24**	*e*P	**P**	**19 44 29.1**	**-1.0**
	comp=Z,13nm,1.0s,mb4.6						
COLA	**College**	**84.69**	**23**	*e*P	**P**	**19 44 33.8**	**-0.9**
BVAR	**Borovoye Array**	**86.23**	**324**	P	**P**	**19 44 41.4**	**-1.2**
	comp=Z,1.4nm,0.6s,mb3.9,baz=103,slow=6.7,SNR=10						
BVAR				pP	pP	19 45 35.0	-3.1
	comp=Z,1.7nm,0.9s,baz=116,slow=6.8,SNR=3.9						
BRVK	**Borovoye**	**86.30**	**324**	*e*P	**P**	**19 44 41.3**	**-1.6**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
BRVK	**Borovoye**	**86.30**	**324**	*e*P	**P**	**19 44 41.3**	**-1.6**
	comp=Z,4.5nm,1.0s,mb4.2						
EGAK	**Eagle**	**87.31**	**24**	*e*P	**P**	**19 44 47.0**	**-0.5**
	comp=Z,10nm,1.1s,mb4.5						
DAWY	**Dawson**	**87.83**	**25**	P	**P**	**19 44 50.0**	**+0.1**
DAWY				*e*pP	pP	19 45 43.9	-1.9
NVAR	**Mina Array Bea**	**97.14**	**52**	P	**P**	**19 45 35.0**	**+1.5**
	comp=Z,0.9nm,0.7s,mb4.1,baz=255,slow=6.5,SNR=8.6						
NVAR	**Mina Array Bea**	**97.14**	**52**	P	**P**	**19 45 35.0**	**+1.5**
PDAR	**Pinedale Array**	**103.64**	**47**	Pdiff	Pdif	19 46 02.9	+0.7
	comp=Z,0.5nm,0.7s,baz=285,slow=2.9,SNR=5.4						
ARCES	**ARCESS Array B**	**105.68**	**342**	Pdiff	Pdif	19 46 09.6	-1.6
	comp=Z,1.6nm,0.8s,baz=52,slow=7.9,SNR=5.0						
ARCES				PKiKP	PKiKP	19 50 21.2	-1.3
	comp=Z,0.9nm,0.9s,baz=111,slow=2.0,SNR=3.8						
FINES	**FINESS Array B**	**109.11**	**334**	PKiKP	PKiKP	19 50 27.6	-1.5
	comp=Z,2.2nm,1.0s,baz=57,slow=5.1,SNR=3.3						
PLCA	**Paso Flores**	**122.67**	**147**	PKP	PKPdf	19 50 56.3	+0.5
	comp=Z,3.8nm,0.6s,baz=166,slow=5.2,SNR=7.0						
CPUP	**Villa Florida**	**140.67**	**145**	PKP	PKPdf	19 51 30.5	+0.5
	comp=Z,2.5nm,0.7s,baz=11,slow=0.9,SNR=9.9						
CPUP	**Villa Florida**	**140.67**	**145**	PKP	PKPdf	19 51 30.5	+0.5

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*ISCJB **09** 19:58:39.0±0.6,23.°01S±0.′04×70.°03W±0.′06, h47km±5km, mb4.5/31, MS3.8/11, Error ellipse: s-maj=8.7km s-min=5.8km az=11.1*
*NEIC **09** 19:58:40.3±0.7,23.°07S×70.°11W, h44km±7km, mb4.6/23, Error ellipse: s-maj=8.8km s-min=6.5km az=81.0*
NEIC Felt [III] at Mejillones and Tocopilla; [II] at Maria Elena.
*GUC **09** 19:58:40.8±0.7,22.°95S×70.°10W, h35km±14km, ML4.8*
*IDC **09** 19:58:40.4±0.6,23.°01S×70.°08W, h42km±4km, mb4.1/13, mb1 4.3/17, mb1mx4.3/22, mbtmp4.2/17, ML4.4/3, MS3.6/17, Ms1 3.6/17, ms1mx3.5/26, Error ellipse: s-maj=18.9km s-min=13.8km az=60.0*
*BJI **09** 19:58:42.3,23.°10S×70.°10W, h44km, mB5.1/6, Ms5.6/5, Ms7 4.9/5*
ISC 09 19:58:40.7±0.5,23.°05S±0.′03×70.°10W±0.′06, h46km±5km, h41km±.7km:pP-P,n105,σ0:96/73, mb4.5/31, MS3.8/11,
1C-7D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**0.35**	**196**	⇑*i*P	**Pn**	**19 58 53.6**	**+3.7**
CEN1				*i* S	**Sn**	**19 59 02.7**	**+6.3**
CEN1				AML	AML	19 59 03.

comp=N,107nm,21.1s,baz=165,slow=34
SPB Sao Paulo 20.82 96 *eP* **P 20 03 19.2 +0.8**
comp=N,41nm,1.2s
SPB *e* 20 03 34.8
OTAV Otavalo 24.54 340 P **P 20 03 57.7 +1.5**
ROSC El Rosal 28.05 351 LR LR 20 16 14.9
comp=N,120nm,21.4s,MS3.5,baz=7.7,slow=38
RPN Rapa Nui 35.67 255 LR LR 20 15 26.7
comp=N,86nm,18.3s,MS3.5,baz=253,slow=28
CMIG Matias Romero 46.68 327 LR LR 20 22 45.9
comp=N,59nm,21.0s,MS3.5,baz=253,slow=31
VNA1 Neumayer--Stat 59.20 160 *eP* **P 20 08 37.1 +0.4**
TKL Tuckaleechee C 59.81 347 P **P 20 08 40.3 -1.0**
comp=N,5.0nm,0.8s,mb4.6,baz=159,slow=6.7,SNR=7.2
SWET Sewanee 59.86 345 *eP* **P 20 08 40.0 -1.7**
SWET *e* pP 20 08 51.3 -3.3
JCT Junction City 60.38 331 *eP* **P 20 08 45.1 -0.2**
comp=N,7.4nm,0.7s,mb4.8
JCT *e* pP 20 08 56.4 -1.9
WVT Waverly 61.20 344 *eP* **P 20 08 48.8 -2.0**
comp=N,7.3nm,0.7s,mb4.9
TXAR Lajitas Array 61.29 327 P **P 20 08 52.0 +0.4**
comp=N,0.5nm,0.7s,mb3.8,baz=157,slow=6.8,SNR=8.9
TXAR pP pP 20 09 03.2 -1.3
comp=N,0.9nm,0.7s,baz=151,slow=5.7,SNR=8.5
TXAR LR LR 20 32 03.1
comp=N,29nm,19.0s,MS3.5,baz=0.0,slow=33
TXAR Lajitas Array 61.29 327 P **P 20 08 52.0 +0.4**
TXAR pP pP 20 09 03.2 -1.3
TXAR LR LR 20 32 03.1
MIAR Mount Ida 61.47 338 *eP* **P 20 08 51.4 -1.2**
comp=N,1.6nm,0.6s,mb4.3
MIAR *e* pP 20 09 03.2 -2.4
FVM French Village 63.65 342 *eP* **P 20 09 06.0 -1.0**
comp=N,6.8nm,0.6s,mb4.8
FVM *e* pP 20 09 17.6 -2.5
ANMO Albuquerque 67.22 328 P **P 20 09 30.7 +0.5**
comp=N,1.7nm,0.6s,mb4.2,baz=32,slow=1.4,SNR=4.5
ANMO Albuquerque 67.22 328 *eP* **P 20 09 30.6 +0.4**
comp=N,2.7nm,1.1s,mb4.2
ANMO *e* pP 20 09 42.8 -0.5
SADO Sadowa 68.00 353 P **P 20 09 34.0 -0.8**
comp=N,5.2nm,0.7s,mb4.7,baz=177,slow=6.8,SNR=3.5
SDCO Great Sand Dun 69.03 331 *eP* **P 20 09 42.3 +0.7**
comp=N,2.9nm,0.8s,mb4.3
SDCO *e* pP 20 09 54.2 -0.5
LIC Lamto 69.88 74 *eP* **P 20 09 47.1 -0.2**
comp=N,82nm,1.5s,mb5.5
TIC Toumodi 70.07 73 *eP* **P 20 09 48.5 0.0**
comp=N,4.9nm,0.2s,mb5.1
KIC Kosan Boka 70.19 74 *eP* **P 20 09 49.3 0.0**
comp=N,22nm,0.7s,mb5.2
DBIC Dimbokro 70.23 73 P **P 20 09 49.0 -0.4**
comp=N,12nm,0.7s,mb5.0,baz=196,slow=4.0,SNR=17
DBIC LR LR 20 37 11.0
comp=N,45nm,19.2s,MS3.7,baz=156,slow=33
DBIC Dimbokro 70.23 73 *eP* **P 20 09 48.9 -0.5**
comp=N,17nm,0.8s,mb5.0
SRU San Rafael 72.49 328 *eP* **P 20 10 03.2 +0.7**
comp=N,4.6nm,0.7s,mb4.5
SRU *e* pP 20 10 14.4 -1.4
CCUT Cedar City 72.73 325 *eP* **P 20 10 06.2 +2.1**
comp=N,5.5nm,0.8s,mb4.5
CCUT *e* pP 20 10 17.5 +0.2
PPT Papeete 73.90 257 LR LR 20 33 52.2
comp=N,122nm,19.4s,MS4.2,baz=352,slow=29
SBA Scott Base 74.11 191 P **P 20 10 12.3 +0.7**
comp=N,4.9nm,1.0s,mb4.4
AGMN Agassiz Nation 74.69 342 *eP* **P 20 10 14.5 -0.8**
comp=N,5.3nm,0.8s,mb4.5
PDAR Pinedale Array 74.91 331 P **P 20 10 16.7 0.0**
comp=N,0.4nm,0.5s,mb3.6,baz=130,slow=5.0,SNR=6.1
PDAR pP pP 20 10 29.5 -0.5
comp=N,0.6nm,0.8s,baz=124,slow=7.4,SNR=3.8
HWUT Hardware Ranch 74.93 329 P **P 20 10 17.5 +0.7**
SYO Syowa Base 75.44 159 ⇓*iP* **P 20 10 19.0 -0.4**
NVAR Mina Array Bea 76.05 323 P **P 20 10 24.7 +1.4**
comp=N,1.0nm,0.8s,mb3.8,baz=150,slow=6.2,SNR=7.0
NVAR pP pP 20 10 36.3 -0.3
comp=N,1.1nm,0.8s,baz=156,slow=6.3,SNR=6.0
ELK Elko 76.08 326 P **P 20 10 24.5 +1.1**
comp=N,1.2nm,0.8s,mb3.9,baz=131,slow=3.4,SNR=5.9
ELK Elko 76.08 326 P **P 20 10 24.5 +1.1**
ULM Lac du Bonnet 76.47 343 LR LR 20 46 41.6
comp=N,52nm,20.2s,MS3.8,baz=53,slow=38
DGMT Dagmar 77.47 338 P **P 20 10 31.4 +0.4**
comp=N,8.9nm,0.7s,mb4.8
SCHQ Schefferville 77.62 2 P **P 20 10 30.8 -0.9**
comp=N,1.5nm,0.6s,mb4.1,baz=209,slow=10,SNR=3.9
SCHQ LR LR 20 43 50.6
comp=N,38nm,19.7s,MS3.7,baz=99,slow=35
HLID Hailey 77.78 329 *eP* **P 20 10 34.2 +1.3**
comp=N,3.1nm,0.7s,mb4.3
HLID *e* pP 20 10 46.4 +0.1
BOZ Bozeman (W) 78.10 332 *eP* **P 20 10 32.2 -2.5**
comp=N,2.4nm,1.3s,mb4.0
BMO Blue Mountains 80.13 328 *eP* **P 20 10 46.4 +0.6**
comp=N,1.2nm,0.6s,mb4.0
TSUM Tsumeb 80.65 107 *eP* **P 20 10 49.0 -0.2**
comp=N,9.2nm,0.9s,mb4.7
YBH Yreka Blue Hor 80.77 323 P **P 20 10 48.8 -0.5**
comp=N,1.3nm,0.6s,mb4.0,baz=176,slow=14,SNR=3.2
WALA Waterton Lakes 81.72 333 *eP* **P 20 10 54.3 +0.1**
comp=N,0.2nm,0.8s
OD2 Odessa Site #2 82.64 329 *eP* **P 20 10 59.4 +0.5**
comp=N,8.3nm,0.7s,mb4.9
OD2 *e* pP 20 11 10.4 -2.1
MAW Mawson 83.16 164 P **P 20 11 01.8 +0.3**
comp=N,9.1nm,0.8s,mb4.9,baz=209,slow=7.3,SNR=13
MAW Mawson 83.16 164 *eP* **P 20 11 01.9 +0.3**
comp=N,1.8nm,0.8s,mb4.2
BOSA Boshof 83.69 118 P **P 20 11 05.5 +0.5**
comp=N,9.1nm,0.8s,mb5.0,baz=280,slow=3.8,SNR=18
BOSA LR LR 20 46 01.6
comp=N,72nm,19.0s,MS4.1,baz=356,slow=34
FCC Fort Churchill 83.90 348 *eP* **P 20 11 04.7 -0.5**
comp=N,0.1nm,0.8s
LBTB Lobatse 85.36 115 *eP* **P 20 11 13.8 +0.2**
LSZ Lusaka 91.50 107 LR LR 20 48 00.4
comp=N,65nm,18.3s,MS4.1,baz=267,slow=32
YKA Yellowknife Ar 92.28 341 P **P 20 11 44.9 -0.4**
comp=N,3.6nm,0.7s,mb4.8,baz=139,slow=4.4,SNR=14
YKA pP pP 20 11 57.7 -1.3
comp=N,1.7nm,0.6s,baz=137,slow=4.2,SNR=4.3
YKA Yellowknife Ar 92.28 341 P **P 20 11 44.9 -0.4**
YKA pP pP 20 11 57.7 -1.3
RAO Raoul Island 93.27 236 LR LR 20 42 41.1
comp=N,103nm,21.2s,MS4.2,baz=144,slow=28
CHGN Chignik 107.95 324 *eP* Pdif 20 12 57.5 +1.2
BRTR Keskin Array B 114.62 55 PKP PKiKP 20 17 15.8 -0.2
comp=N,0.5nm,0.8s,baz=173,slow=2.8,SNR=3.6
ASAR Alice Springs 128.03 208 PKP PKPdf 20 17 42.1 -0.2
comp=N,2.2nm,0.7s,baz=129,slow=1.9,SNR=23
ASAR pPKP pPKPdf 20 17 54.8 -1.7
comp=N,1.2nm,0.8s,baz=128,slow=2.3,SNR=6.3
WRA Warramunga Arr 131.06 211 PKP PKPdf 20 17 48.4 +0.2
comp=N,1.5nm,0.6s,baz=147,slow=1.7,SNR=20
WRA pPKP pPKPdf 20 18 01.3 -0.9
comp=N,1.6nm,1.0s,baz=155,slow=1.7,SNR=4.4
BVAR Borovoye Array 137.69 35 PKP PKPdf 20 18 00.2 +0.7
comp=N,0.8nm,0.7s,baz=180,slow=0.9,SNR=5.8
BVAR pPKP pPKPdf 20 18 12.4 -1.2
comp=N,0.7nm,0.7s,baz=270,slow=3.0,SNR=4.1
ZAA0 Zalesovo Array 143.82 25 *e*PKPdf PKPdf 20 18 09.5 -1.1
ZALV Zalesovo Beam 143.82 25 PKP PKPdf 20 18 08.2 -2.4
comp=N,4.2nm,0.7s,baz=304,slow=5.6,SNR=17
EKS2 Erkin-Say 144.26 48 P PKPdf 20 18 11.7 +0.1
SNR=6.3
EKS2 Erkin-Say 144.26 48 *e*PKPdf PKPdf 20 18 10.9 -0.8
EKS2 *e* 20 18 23.6
AML Almayashu 144.40 49 P PKPdf 20 18 12.0 +0.1
SNR=12
CHMS Chumysh 144.80 47 P PKPdf 20 18 12.8 +0.2
SNR=8.8
KBK Karagaybulak 145.06 48 P PKPbc 20 18 14.4 +1.8
SNR=12
TKM2 Tokmak 2 145.40 47 P PKPbc 20 18 15.0 +1.4
SNR=12
KSH Kashi 146.92 52 PKPbc PKPbc 20 18 17.8 -0.5
KSH pPKP pPKPdf 20 18 27.6 -2.8
KSH sPKP 20 18 31.3
KSH PP PP 20 21 46.0 +3.0
KSH PKS 20 21 50.3
KSH SKS SKSdf 20 25 21.7 +0.3
KSH SKKS SKKSac 20 28 30.8 -0.3
KSH SS SS 20 40 36.7 -3.4
KSH LR LR
comp=N,200nm,7.9s
KSH LR LR
comp=E,140nm,8.3s
KSH LR LR
comp=Z,85nm,7.4s
MK31 Makanchi Array 147.53 36 *e*PKPdf PKPdf 20 18 17.4 +0.3
MK31 *e*PKPbc PKPbc 20 18 19.9 +0.2
MK31 *e* 20 18 33.0
MKAR Makanchi Array 147.53 36 PKPbc PKPbc 20 18 17.7 -2.0
comp=Z,6.0nm,0.7s,baz=336,slow=1.5,SNR=42
MKAR pPKPbc pPKPbc 20 18 33.1 -0.6
comp=Z,5.9nm,0.9s,baz=308,slow=2.9,SNR=9.5
THN Thein Dam 148.45 65 *ex* PKPdf 20 18 18.9 -0.2
SONA Sohna 150.02 73 *ex* PKPbc 20 18 25.4 -1.3
HYB Hyderabad 150.09 95 *i* PKP PKPbc 20 18 28.0 +0.8
MJAR Matsushiro Arr 152.12 305 PKPbc PKPbc 20 18 31.5 +0.2
comp=Z,2.2nm,0.7s,baz=101,slow=1.2,SNR=8.6
MJAR PKPab PKPab 20 18 40.8 -0.3
comp=Z,2.0nm,0.9s,baz=78,slow=3.7,SNR=4.2
MAJO Matsushiro 152.12 305 *e*PKPbc PKPbc 20 18 31.0 -0.3
MAT Matsushiro 152.12 305 PKP PKPbc 20 18 31.1 -0.3
WMQ Urumqi 152.36 36 *e*PKPbc PKPdf 20 18 25.6 +0.8
SONM Songino Array 155.11 6 PKP PKPdf 20 18 29.4 +0.8
comp=Z,0.8nm,0.8s,baz=291,slow=2.0,SNR=5.9
SONM PKPbc PKPdf 20 18 37.4 +8.8
comp=Z,1.0nm,0.8s,baz=282,slow=3.3,SNR=4.8
SONM PKPab PKPab 20 18 53.4 +0.1
comp=Z,0.9nm,0.6s,baz=323,slow=2.4,SNR=5.3
ULN Ulaanbaatar 155.14 5 *e*PKPab PKPab 20 18 53.4 0.0
CN2 Changchun 155.66 332 *e*PKP PKPdf 20 18 30.9 +1.4
KSRS Korea Array 158.88 317 PKPab PKPab 20 19 09.9 +0.1
comp=Z,0.9nm,0.7s,baz=54,slow=4.4,SNR=5.6
HHC Hu-ho-hao-te 162.20 356 *e*PKP PKPdf 20 18 33.7 -3.6
HHC PP PP 20 23 08.5 +1.2
HHC SS SS 20 43 23.0 -0.5
HHC AMB AMB
comp=Z,51nm,9.5s
NJ2 Nanjing 168.03 320 *e*PKP PKPdf 20 18 43.6 +1.1
CD2 Chengdu 170.45 34 PKP PKPdf 20 18 44.1 +0.1
KMI Kunming 173.14 71 PKP PKPdf 20 18 45.7 +0.2
KMI pPKP pPKPdf 20 18 58.7 -0.9
KMI sPKP 20 19 05.6
KMI PKPab PKPab 20 20 15.8 +2.6
KMI PP PP 20 24 06.9 +1.7
KMI SKKS SKKSac 20 30 47.3 -0.8
KMI SS SS 20 45 14.8 -2.4
KMI AMB AMB
comp=Z,80nm,4.6s
KMI LR LR
comp=N,80nm,16.5s
KMI LR LR
comp=E,56nm,17.2s
KMI LR LR
comp=Z,86nm,14.6s
GYA Guiyang 175.51 40 *e*PKP PKPdf 20 18 45.3 -0.9
GYA sPKP 20 19 05.0
GYA PKPab PKPab 20 20 25.7 +2.2
GYA PKS 20 22 15.4
GYA PP PP 20 24 18.8 +3.2
GYA AMB AMB
comp=Z,80nm,8.4s

IDC 09 20:06:42.6±4.7, 23°.47S×175°.23W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/16, mbtmp3.8/3, Error ellipse: s-maj=225.0km s-min=64.9km az=157.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**35.85**	**268**	P	P	20 13 45.2	+0.8
	2.5nm,0.6s,baz=103,slow=11,SNR=5.0						
ASAR	**Alice Springs**	**46.41**	**259**	P	P	20 15 11.0	-0.2
	0.3nm,0.7s,baz=95,slow=8.5,SNR=5.2						
WRA	**Warramunga Arr**	**46.80**	**264**	P	P	20 15 13.8	-0.6
	0.7nm,0.6s,baz=103,slow=8.3,SNR=13						
BRTR	**Keskin Array B**	**150.72**	**310**	PKPbc	PKPbc	20 26 36.9	0.0
	0.5nm,0.7s,baz=67,slow=3.9,SNR=3.3						

IDC 09 20:24:43.0±3.9, 6°.81S×155°.30E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.5/17, mbtmp3.6/5, Error ellipse: s-maj=122.9km s-min=32.1km az=115.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.29**	**120**	Sn	Sn	20 26 45.3	-20
	8.0nm,0.3s,baz=37,slow=15,SNR=3.5						
WRA	**Warramunga Arr**	**24.17**	**235**	P	P	20 30 00.9	-0.3
	0.3nm,0.5s,baz=63,slow=9.7,SNR=5.9						
ASAR	**Alice Springs**	**26.52**	**229**	P	P	20 30 23.8	+1.2
	0.3nm,0.8s,baz=59,slow=9.7,SNR=3.0						
MKAR	**Makanchi Array**	**83.46**	**319**	P	P	20 37 13.2	+0.5
	1.4nm,0.7s,baz=96,slow=6.0,SNR=11						
ZALV	**Zalesovo Beam**	**84.19**	**326**	P	P	20 37 15.6	-0.6
	0.9nm,0.6s,baz=120,slow=5.2,SNR=4.0						
KURK	**Kurchatov**	**86.87**	**322**	P	P	20 37 29.3	-0.4
	0.3nm,0.6s,baz=104,slow=3.0,SNR=2.6						

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*IDC **09** 20:28:47.6±5.9, 24°.87N×62°.71E, h0km, mb3.8/10, mb1 3.8/10, mb1mx3.6/29, mbtmp3.8/10, MS3.1/1, Ms1 3.1/1, ms1mx2.2/30, Error ellipse: s-maj=109.4km s-min=28.5km az=179.0*
*CSEM **09** 20:28:55.9, 25°.29N×62°.85E, h35km, mb4.1/3, After NEIC*
*NEIC **09** 20:28:55.9±3.6, 25°.29N×62°.85E, h35km, mb4.1/3, Error ellipse: s-maj=64.2km s-min=17.0km az=175.0*
ISC 09 20:28:57.9±2.9, 25°.5N±0°.3×63°.0E±0°.1, h35km, n32, σ1°27/32, mb3.8/11, Southwestern Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	**13.09**	**55**	*e*PKP	**Pn**	**20 31 59.8**	**-1.4**
KSH	**Kashi**	**17.70**	**35**	P	**Pn**	**20 32 59.2**	**-2.3**
KSH				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,110nm,4.1s						
AML	**Almayashu**	**18.76**	**25**	*eP*	**Pn**	**20 33 14.4**	**-0.1**
AML	**Almayashu**	**18.76**	**25**	*eP*	**Pn**	**20 33 14.4**	**-0.1**
EKS2	**Erkin-Say**	**19.25**	**25**	*eP*	**Pn**	**20 33 18.4**	**-1.9**
	comp=Z,6.2nm,0.6s						
EKS2	**Erkin-Say**	**19.25**	**25**	*eP*	**Pn**	**20 33 18.4**	**-1.9**
	comp=Z,6.2nm,0.6s						
AAK	**Ala-Archa**	**19.50**	**26**	P	**Pn**	**20 33 24.8**	**+1.5**
	comp=Z,1.5nm,0.4s,baz=196,slow=15,SNR=4.1						
AAK				LR	LR	20 42 40.2	
	comp=Z,50nm,18.3s,baz=8.7,slow=41						
AAK	**Ala-Archa**	**19.50**	**26**	P	**Pn**	**20 33 24.8**	**+1.5**
GNI	**Garni**	**21.09**	**318**	P	**P**	**20 33 38.5**	**-0.7**
	comp=Z,1.6nm,0.3s,mb3.8,baz=135,slow=6.3,SNR=4.8						
GNI	**Garni**	**21.09**	**318**	P	**P**	**20 33 38.5**	**-0.6**
ABKAR	**Akbulak array**	**23.80**	**355**	*eP*	**P**	**20 34 08.6**	**+1.3**
	comp=Z,3.5nm,1.0s,mb3.7						
ABKAR	**Akbulak array**	**23.80**	**355**	*eP*	**P**	**20 34 08.6**	**+1.4**
	comp=Z,3.5nm,1.0s,mb3.7						
KIV	**Kislovodsk**	**24.70**	**323**	*eP*	**P**	**20 34 16.6**	**+1.0**
	comp=Z,13nm,0.9s,mb4.5						
KIV	**Kislovodsk**	**24.70**	**323**	*eP*	**P**	**20 34 16.6**	**+1.0**
	comp=Z,13nm,0.9s,mb4.5						
AKTK	**Aktyubinsk**	**25.15**	**353**	P	**P**	**20 34 20.2**	**+0.6**
AKTK	**Aktyubinsk**	**25.15**	**353**	P	**P**	**20 34 20.2**	**+0.6**
AKTO	**Aktyubinsk**	**25.15**	**353**	P	**P**	**20 34 20.2**	**+0.6**
	comp=Z,1.6nm,0.6s,mb3.8,baz=154,slow=12,SNR=6.8						
MK31	**Makanchi Array**	**26.19**	**31**	*eP*	**P**	**20 34 29.9**	**+0.8**
MK31	**Makanchi Array**	**26.19**	**31**	*eP*	**P**	**20 34 29.9**	**+0.9**
MKAR	**Makanchi Array**	**26.19**	**31**	P	**P**	**20 34 29.9**	**+0.9**
	comp=Z,1.5nm,0.8s,mb3.6,baz=214,slow=9.3,SNR=13						
KURK	**Kurchatov**	**27.87**	**22**	P	**P**	**20 34 43.8**	**-0.2**
	comp=Z,0.5nm,0.6s,mb3.3,baz=217,slow=8.5,SNR=3.4						
KURK	**Kurchatov**	**27.87**	**22**	P	**P**	**20 34 43.8**	**-0.3**
BVAR	**Borovoye Array**	**28.01**	**10**	P	**P**	**20 34 46.7**	**+1.3**
	comp=Z,0.3nm,0.5s,mb3.2,baz=170,slow=10,SNR=4.6						
BVAR	**Borovoye Array**	**28.01**	**10**	P	**P**	**20 34 46.7**	**+1.4**
ZALV	**Zalesovo Beam**	**32.70**	**24**	P	**P**	**20 35 26.9**	**+0.2**
	comp=Z,1.4nm,0.5s,mb4.1,baz=226,slow=10,SNR=8.6						
ZALV	**Zalesovo Beam**	**32.70**	**24**	P	**P**	**20 35 26.9**	**+0.2**
AKASG	**Malin Array Be**	**36.05**	**323**	P	**P**	**20 35 53.5**	**-2.2**
	comp=Z,2.4nm,0.6s,mb4.3,baz=125,slow=7.4,SNR=10						
AKASG	**Malin Array Be**	**36.05**	**323**	P	**P**	**20 35 53.5**	**-2.3**
SONM	**Songino Array**	**40.62**	**45**	P	**P**	**20 36 35.4**	**+1.1**
	comp=Z,1.0nm,0.8s,mb3.5,baz=248,slow=7.8,SNR=6.5						
SONM	**Songino Array**	**40.62**	**45**	P	**P**	**20 36 35.4**	**+1.1**
NOA	**NORSAR Array B**	**49.71**	**330**	P	**P**	**20 37 44.1**	**-2.1**
	comp=Z,0.3nm,0.5s,mb3.6,baz=111,slow=7.5,SNR=2.5						
NOA	**NORSAR Array B**	**49.71**	**330**	P	**P**	**20 37 44.1**	**-2.1**

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*IDC **09** 20:32:23.2±1.5, 37°.98N×71°.56E, h0km, mb3.7/5, mb1 3.7/10, mb1mx3.5/28, mbtmp3.6/10, ML3.1/5, Error ellipse: s-maj=24.4km s-min=18.5km az=140.0*
*ISCJB **09** 20:32:30.7±1.1, 38°.35N±0°.07×71°.48E±0°.08, h64km±13km, mb3.5/5, Error ellipse: s-maj=10.8km s-min=10.4km az=179.2*
*NEIC **09** 20:32:32.8±1.0, 38°.34N×71°.43E, h67km±12km, Error ellipse: s-maj=16.4km s-min=10.2km az=122.0*
ISC 09 20:32:32.4±1.0, 38°.34N±0°.07×71°.48E±0°.08, h65km±12km, n20, σ1°10/24, mb3.5/5, 1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**3.70**	**70**	Pn	**Pn**	**20 33 25.7**	**-1.3**
KSH				Sn	**Sn**	**20 34 08.5**	**-0.8**
KSH				smax			
	comp=N,170nm,0.6s						
KSH				smax			
	comp=E,130nm,0.7s						
AML	**Almayashu**	**4.15**	**23**	*eP*	**Pn**	**20 33 34.1**	**+0.9**
KBL	**Kabul**	**4.27**	**208**	*eP*	**Pn**	**20 33 35.2**	**+0.4**
KK31	**Karatay Array**	**4.82**	**352**	Pn	**Pn**	**20 33 41.5**	**-0.9**
	comp=E,1.6nm,0.3s,baz=178,slow=13,SNR=74						
KK31				⇓Sn	**Sn**	**20 34 37.0**	**+0.2**
	comp=E,8.9nm,0.5s,baz=175,slow=23,SNR=4.7						
AAK	**Ala-Archa**	**4.87**	**27**	Pn	**Pn**	**20 33 44.9**	**+1.8**
	comp=E,0.6nm,0.3s,baz=184,slow=7.9,SNR=2.9						
AAK				Sn	**Sn**	**20 34 48.3**	**+10**
	comp=E,0.8nm,0.3s,baz=319,slow=21,SNR=5.6						
AAK	**Ala-Archa**	**4.87**	**27**	Pn	**Pn**	**20 33 44.9**	**+1.8**
AAK				Sn	**Sn**	**20 34 48.3**	**+10**
TKM2	**Tokmak 2**	**5.55**	**33**	*eP*	**Pn**	**20 33 54.3**	**+1.9**
	comp=E,4.7nm,0.4s						
MK31	**Makanchi Array**	**11.61**	**40**	*eP*	**Pn**	**20 35 15.6**	**+0.5**
MKAR	**Makanchi Array**	**11.61**	**40**	Pn	**Pn**	**20 35 15.4**	**+0.3**
	comp=E,0.1nm,0.3s,baz=227,slow=12,SNR=7.2						
BVAR	**Borovoye Array**	**14.71**	**357**	Pn	**Pn**	**20 35 55.0**	**-1.7**
	comp=E,0.1nm,0.3s,baz=171,slow=9.8,SNR=3.5						
AKTK	**Aktyubinsk**	**15.43**	**326**	Pn	**Pn**	**20 36 04.2**	**-1.7**
AKTO	**Aktyubinsk**	**15.43**	**326**	Pn	**Pn**	**20 36 04.2**	**-1.7**
	comp=E,0.1nm,0.3s,baz=114,slow=13,SNR=2.0						
ZALV	**Zalesovo Beam**	**18.09**	**26**	P	**P**	**20 36 38.9**	**-0.1**
	comp=E,0.2nm,0.3s,baz=223,slow=9.5,SNR=4.6						
BRTR	**Keskin Array B**	**29.29**	**285**	P	**P**	**20 38 29.4**	**+0.9**
	comp=E,0.6nm,0.9s,mb3.3,baz=95,slow=7.2,SNR=2.7						
FINES	**FINESS Array B**	**36.20**	**325**	P	**P**	**20 39 29.3**	**+0.9**
	comp=E,0.8nm,0.5s,mb3.9,baz=132,slow=8.3,SNR=3.4						
ARCES	**ARCESS Array B**	**39.61**	**337**	P	**P**	**20 39 58.0**	**+0.9**
	comp=E,0.5nm,0.6s,mb3.5,baz=108,slow=7.8,SNR=5.9						
CN2	**Changchun**	**40.45**	**64**	*eP*	**P**	**20 40 09.3**	**+4.9**
NOA	**NORSAR Array B**	**43.16**	**322**	P	**P**	**20 40 26.7**	**+0.4**
	comp=E,0.6nm,0.7s,mb3.5,baz=96,slow=8.2,SNR=2.8						
NOA	**NORSAR Array B**	**43.16**	**322**	P	**P**	**20 40 26.7**	**+0.4**
WRA	**Warramunga Arr**	**82.64**	**122**	P	**P**	**20 44 47.8**	**-1.0**
	comp=E,0.7nm,1.0s,mb3.6,baz=330,slow=5.5,SNR=5.1						

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*NEIC **09** 20:42:51.6, 18°.43N×69°.27W, h92km, MD3.6(RSPR), After RSPR.*
RSPR 09 20:42:51.6, 18°.43N×69°.27W, h92km±8km, MD3.6/3, MD3.6/3, 3C-1D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**0.85**	**84**	*eS*	Sn	20 43 22.8	-0.6
LSP	**Las Mesas**	**2.09**	**97**⇑	*eP*	Pn	20 43 25.0	-0.1
CRPR	**Cabo Rojo, PR**	**2.10**	**101**⇑	*eP*	Pn	20 43 25.6	+0.4
AOPR	**Arecibo Observ**	**2.39**	**92**⇑	*eP*	Pn	20 43 28.6	-0.5
MTP	**Monte Pirata**	**3.55**	**95**⇓	*eP*	Pn	20 43 43.9	-0.7

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*NEIC **09** 20:50:15.1, 18°.27N×68°.01W, h101km, MD3.3(RSPR), After RSPR.*
RSPR 09 20:50:15.1, 18°.27N×68°.01W, h101km±1km, MD3.3/8, MD3.3/8, 5C-6D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMO	**Isla Mona**	**0.18**	**150**⇓	*eP*	Pn	20 50 29.2	-0.2
PCDR	**Punta Cana, DR**	**0.43**	**304**⇑	*eP*	Pn	20 50 29.2	-1.3
PCDR	**Punta Cana, DR**	**0.43**	**304**	*eS*	Sn	20 50 41.5	-0.6
AGPR	**Aguadilla, PR**	**0.87**	**77**⇑	*eP*	Pn	20 50 34.0	-0.3
AGPR				*eS*	Sn	20 50 49.0	+0.3
LSP	**Las Mesas**	**0.88**	**96**⇓	*eP*	Pn	20 50 34.3	0.0
LSP				*eS*	Sn	20 50 50.0	+1.2
CRPR	**Cabo Rojo, PR**	**0.89**	**107**⇓	*eP*	Pn	20 50 34.3	-0.1
CRPR				*eS*	Sn	20 50 48.7	-0.4
LRS	**Lares**	**1.10**	**89**⇑	*iP*	Pn	20 50 36.5	-0.3
LRS				*eS*	Sn	20 50 53.1	0.0
AOPR	**Arecibo Observ**	**1.19**	**86**⇑	*eP*	Pn	20 50 37.3	-0.4
AOPR				*eS*	Sn	20 50 54.4	-0.5
OBIP	**Obispado Ponce**	**1.35**	**99**⇑	*eP*	Pn	20 50 39.3	-0.3
OBIP				*eS*	Sn	20 50 57.9	-0.2
CELP	**Cerrillos**	**1.37**	**98**⇓	*eP*	Pn	20 50 39.8	-0.1
CELP				*eS*	Sn	20 50 58.7	+0.1
ICM	**Isla Caja Muer**	**1.46**	**105**	*eS*	Sn	20 50 59.7	-0.9
SJG	**San Juan**	**1.77**	**95**	*eS*	Sn	20 51 06.8	-0.6
SJG	**San Juan**	**1.77**	**95**	*eS*	Sn	20 51 07.2	-0.2
CBYP	**Canovanas**	**2.04**	**90**⇓	*eP*	Pn	20 50 47.3	-1.0
CBYP				*eS*	Sn	20 51 12.8	-0.8
HUMP	**Col San Antoni**	**2.05**	**93**⇓	*eP*	Pn	20 50 47.8	-0.6
HUMP				*eS*	Sn	20 51 13.0	-0.9
MTP	**Monte Pirata**	**2.34**	**94**⇑	*eP*	Pn	20 50 52.1	0.0
SDDR	**Presa de Saban**	**3.19**	**283**	*eP*	Pn	20 51 05.0	+1.5

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*IDC **09** 20:56:18.8±6.2, 36°.15N×81°.96E, h0km, mb2.8/1, mb1 3.2/5, mb1mx3.1/26, mbtmp3.2/5, ML2.9/4, MS2.6/1, Ms1 2.6/1, ms1mx2.2/9, Error ellipse: s-maj=81.1km s-min=31.4km az=30.0*
ISC 09 20:56:20.9±3.0, 36°.2N±0°.2×82°.0E±0°.1, h10km±24km, n9, σ1°16/10, 3C-1D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**5.79**	**307**	Pn	**Pn**	**20 57 47.7**	**+0.9**
KSH				*e*Sn	**Sn**	**20 58 52.9**	**-0.3**
KSH				smax			
	comp=N,140nm,1.9s						
KSH				smax			
	comp=E,39nm,1.1s						
TKM2	**Tokmak 2**	**8.32**	**326**	⇑Pg	**Pb**	**20 58 45.5**	**+0.4**
	comp=E,5.5nm,1.6s						
TKM2				⇑Lg		21 00 44.2	
	comp=E,7.6nm,1.4s						
AAK	**Ala-Archa**	**8.64**	**320**	Pg	Px	20 58 54.8	
	comp=E,0.4nm,0.3s,baz=193,slow=18,SNR=3.3						
AAK				Lg		21 00 56.0	
	comp=E,0.5nm,0.3s,

n17,σ1°08/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANT	**Van**	**0.43**	**18**	*e*PG	**Pg**	**21 02 34.2**	**+1.9**
VANT				*e*SG	**Sg**	**21 02 41.8**	**+3.8**
TVAN	**Van**	**0.57**	**25**	*i* P	**Pg**	**21 02 34.2**	**-0.8**
TVAN	**Van**	**0.57**	**25**	*i* P	**Pg**	**21 02 34.2**	**-0.8**
VANB	**Van**	**0.63**	**21**	*e*PG	**Pg**	**21 02 36.4**	**+0.3**
VANB				*e*SG	**Sg**	**21 02 44.4**	**+0.1**
VANB	**Van**	**0.63**	**21**	*e*Pg	**Pg**	**21 02 36.4**	**+0.3**
VANB				*e*Sg	**Sg**	**21 02 44.4**	**+0.2**
HAKT	**HAKKARI**	**0.66**	**133**	*i* P	**Pg**	**21 02 35.0**	**-1.6**
HAKT				*i* S	**Sg**	**21 02 45.6**	**+0.3**
HAKT	**HAKKARI**	**0.66**	**133**	*i* P	**Pg**	**21 02 35.0**	**-1.7**
HAKT				*i* S	**Sg**	**21 02 45.6**	**+0.3**
TATV	**Tatvan**	**0.82**	**308**	*i* P	**Pg**	**21 02 39.1**	**-0.6**
TATV				*i* S	**Sg**	**21 02 50.5**	**+0.1**
TATV	**Tatvan**	**0.82**	**308**	*i* P	**Pg**	**21 02 39.1**	**-0.6**
TATV				*i* S	**Sg**	**21 02 50.5**	**+0.1**
CUKT	**Cukurca**	**0.86**	**152**	*e*PG	**Pg**	**21 02 41.6**	**+1.1**
CUKT	**Cukurca**	**0.86**	**152**	*e*Pg	**Pg**	**21 02 41.6**	**+1.1**
CLDR	**Caldiran**	**1.30**	**29**	*e*PG	**Pg**	**21 02 46.3**	**-2.6**
CLDR	**Caldiran**	**1.30**	**29**	*e*Pg	**Pg**	**21 02 46.3**	**-2.6**
TUTA	**Tutak**	**1.41**	**351**	*i* P	**Pn**	**21 02 50.3**	**+0.4**
TUTA				*i* S	**Sb**	**21 03 07.9**	**-0.7**
TUTA	**Tutak**	**1.41**	**351**	*i* P	**Pn**	**21 02 50.3**	**+0.4**
TUTA				*i* S	**Sb**	**21 03 07.9**	**-0.7**
AGRB	**Hanur-Agry**	**1.56**	**357**	*e*PN	**Pn**	**21 02 52.8**	**+0.7**
AGRB	**Hanur-Agry**	**1.56**	**357**	*e*Pn	**Pn**	**21 02 52.8**	**+0.7**

*ISCJB **09** 21:20:29.7±0.4, 32°.17N±0°.04×104°.89E±0°.05, h10km, mb3.5/5, Error ellipse: s-maj=5.9km s-min=5.0km az=39.2*
*IDC **09** 21:20:29.6±1.0, 32°.10N×104°.83E, h0km, mb3.5/5, mb1 3.6/8, mb1mx3.4/27, mbtmp3.4/8, ML3.4/2, Error ellipse: s-maj=37.5km s-min=18.7km az=58.0*
*NEIC **09** 21:20:31.0±0.4, 32°.14N×104°.79E, h10km, mb3.9/1, Error ellipse: s-maj=11.2km s-min=7.2km az=63.0*
*BJI **09** 21:20:33.4, 32°.30N×104°.81E, h13km, ML3.3/13, Ms3.0/2, Ms7 2.7/2*

ISC 09 21:20:31.2±0.4, 32°.19N±0°.03×104°.92E±0°.04, h10km, n19, σ1°16/26, mb3.5/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.62**	**218**	Pg	**Pg**	**21 21 01.7**	**-0.5**
CD2				Sg	**Sg**	**21 21 24.5**	**+1.3**
CD2	comp=N,1μm,0.5s			smax			
XAN	**Xi'an**	**3.83**	**60**	Pg	**Pb**	**21 21 39.8**	**+0.9**
XAN				Sn	**Sb**	**21 22 24.6**	**-0.7**
XAN	comp=N,100nm,0.6s			smax			
XAN	comp=E,47nm,0.6s			smax			
XAN	comp=N,78nm,6.8s			LR	LR		
XAN	comp=E,15nm,3.3s			LR	LR		
XAN	comp=Z,46nm,8.8s			LR	LR		
LZH	**Lanzhou**	**3.98**	**347**	Pn	**Pn**	**21 21 34.8**	**+2.5**
LZH				Pg	**Pg**	**21 21 45.2**	**-2.3**
LZH				Sn	**Sn**	**21 22 20.6**	**+1.6**
LZH				Sg	**Sg**	**21 22 35.3**	**-3.8**
LZH	comp=N,100nm,1.0s			smax			
LZH	comp=E,210nm,1.0s			smax			
ENH	**Enshi**	**4.36**	**115**	*e*Pn	**Pn**	**21 21 39.0**	**+1.5**
ENH				*e*Pg	**Pg**	**21 21 52.5**	**-2.2**
ENH				*e*Sn	**Sn**	**21 22 29.3**	**+1.0**
GYA	**Guiyang**	**5.92**	**165**	Pn	**Pn**	**21 22 04.4**	**+5.5**
GYA	comp=N,60nm,0.8s			smax			
GYA	comp=E,60nm,0.7s			smax			
CMAR	**Chiang Mai Arr**	**14.70**	**203**	Pn	**Pn**	**21 23 57.3**	**-1.9**
	comp=E,0.1nm,0.3s,baz=10.0,slow=9.6,SNR=3.0						
SONM	**Songino Array**	**15.66**	**4**	Pn	**Pn**	**21 24 12.1**	**+0.3**
	comp=E,0.1nm,0.3s,baz=187,slow=10.0,SNR=2.9						
ULN	**Ulaanbaatar**	**15.74**	**5**	*e*Pn	**Pn**	**21 24 13.6**	**+0.8**
KSRS	**Korea Array**	**19.59**	**68**	P	**Pn**	**21 25 00.6**	**-0.1**
	comp=E,0.2nm,0.3s,baz=255,slow=10,SNR=6.4						
MK31	**Makanchi Array**	**22.64**	**317**	*e*P	**P**	**21 25 30.8**	**-1.3**
MKAR	**Makanchi Array**	**22.64**	**317**	P	**P**	**21 25 33.0**	**+0.8**
	comp=E,0.4nm,0.6s,mb3.0,baz=119,slow=11,SNR=5.2						
ZALV	**Zalesovo Beam**	**26.06**	**332**	P	**P**	**21 26 04.2**	**-0.3**
	comp=E,0.5nm,0.5s,mb3.3,baz=140,slow=11,SNR=2.7						
AAK	**Ala-Archa**	**26.19**	**302**	P	**P**	**21 26 05.3**	**-0.5**
EKS2	**Erkin-Say**	**26.71**	**302**	P	**P**	**21 26 10.9**	**+0.3**
KURK	**Kurchatov**	**26.81**	**321**	P	**P**	**21 26 11.8**	**+0.5**
	comp=E,0.3nm,0.3s,mb3.4,baz=125,slow=9.6,SNR=4.8						
KURK	**Kurchatov**	**26.81**	**321**	*e*P	**P**	**21 26 10.9**	**-0.5**
	comp=E,3.5nm,1.1s,mb3.8						
BR131	**Keskin Array S**	**56.81**	**299**	P	**P**	**21 30 15.5**	**-0.2**
WRA	**Warramunga Arr**	**59.00**	**147**	P	**P**	**21 30 30.6**	**-0.5**
	comp=E,0.7nm,0.7s,mb3.8,baz=339,slow=7.8,SNR=13						
ASAR	**Alice Springs**	**62.07**	**150**	P	**P**	**21 30 52.1**	**0.0**
	comp=E,0.4nm,0.5s,mb3.8,baz=328,slow=6.7,SNR=6.7						

KRSC 09 21:31:23.3±0.2, 53°.56N×160°.82E, h40km±29km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.67**	**226**	*e*P	Pn	21 31 36.6	+0.4
SPN				*i* S	Sn	21 31 45.7	+0.2
KII	**Karymskiy**	**0.94**	**301**	*i* P	Pn	21 31 39.8	-0.2
KII				*e*S	Sn	21 31 51.4	-0.9
MKZ	**Mys Kozlova**	**1.13**	**28**	*e*P	Pn	21 31 42.6	0.0
MKZ				*e*S	Sn	21 31 56.1	-0.8
AVH	**Avacha**	**1.28**	**257**	*e*P	Pn	21 31 45.5	+0.9
AVH				*e*S	Sn	21 32 01.4	+0.8
PET	**Petropavlovsk**	**1.41**	**248**	P	Pn	21 31 47.0	+0.6
PET				*e*S	Sn	21 32 03.7	0.0
GNL	**Ganaly**	**1.72**	**276**	*e*P	Pn	21 31 51.8	+1.1
GNL				S	Sn	21 32 12.4	+1.0
KMNR	**Kamenistaya**	**2.23**	**351**	P	Pn	21 31 59.6	+2.0
KMNR				S	Sn	21 32 25.2	+1.3
KPT	**Kopyto**	**2.44**	**352**	P	Pn	21 32 04.4	+3.9
KLY	**Klyuchi**	**2.76**	**358**	S	Sn	21 32 39.6	+2.6
SRDR	**Sredinnyy**	**2.84**	**347**	*e*P	Pn	21 32 07.5	+1.5
KBTR	**Krutoberegovo**	**2.89**	**23**	*e*P	Pn	21 32 08.4	+1.6
KBTR				*e*S	Sn	21 32 42.1	+1.8
BKI	**Bering**	**3.43**	**59**	*e*P	Pn	21 32 14.9	+0.7
BKI				*e*S	Sn	21 32 51.1	-2.5

IDC 09 21:34:27.1±28.0, 39°.61N×62°.70E, h0km, mb3.2/1, mb1 3.1/3, mb1mx2.9/25, mbtmp3.1/3, ML3.1/2, 2C-1D, Error ellipse: s-maj=341.7km s-min=66.0km az=43.0, Turkmenistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.84**	**57**	⇑Pn	Pn	21 36 02.3	-6.3
KK31	0.2nm,0.3s,baz=244,slow=17,SNR=4.8			⇓Pg	Pg	21 36 21.8	-16
KK31	0.6nm,0.5s,baz=240,slow=18,SNR=5.3			⇑Lg		21 37 37.1	
BVAR	**Borovoye Array**	**14.42**	**19**	Pn	Pn	21 37 48.0	-4.3
	0.2nm,0.3s,baz=202,slow=7.2,SNR=4.4						
MKAR	**Makanchi Array**	**15.97**	**57**	Pn	Pn	21 38 07.9	-5.1
	0.0nm,0.3s,baz=250,slow=12,SNR=2.6						
ZALV	**Zalesovo Beam**	**20.74**	**39**	P	P	21 39 09.1	+0.1
	0.7nm,0.5s,baz=244,slow=9.5,SNR=4.1						

*IDC **09** 21:46:37.0±2.0, 6°.01S×154°.08E, h0km, mb3.9/6, mb1 4.1/7, mb1mx3.8/18, mbtmp3.9/7, MS3.2/2, Ms1 3.2/2, ms1mx2.8/27, Error ellipse: s-maj=61.3km s-min=22.2km az=107.0*
*ISCJB **09** 21:46:37.8±1.9, 6°.2S±0°.1×154°.5E±0°.3, h33km, mb4.0/9, Error ellipse: s-maj=50.9km s-min=12.6km az=16.1*
*NEIC **09** 21:46:39.1±1.4, 6°.23S×154°.63E, h35km, mb4.3/4, Error ellipse: s-maj=38.6km s-min=9.8km az=106.0*

ISC 09 21:46:39.3±2.0, 6°.3S±0°.1×154°.6E±0°.4, h35km, n21, σ0°64/20, mb4.0/9, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**15.99**	**210**	Pn	**Pn**	**21 50 22.1**	**+0.4**
	baz=27,slow=14,SNR=2.0						
CTA	comp=Z,78nm,20.8s,baz=238,slow=34			LR	LR	21 55 42.6	
WRAB	**Tennant Creek**	**23.95**	**233**	*e*P	**P**	**21 51 50.7**	**+0.2**
	12nm,1.1s,mb4.2						
WRA	**Warramunga Arr**	**23.96**	**233**	P	**P**	**21 51 50.5**	**0.0**
	2.5nm,0.7s,mb3.8,baz=54,slow=9.7,SNR=22						
WRA				PcP	PcP	21 55 34.6	+2.2
	0.6nm,0.6s,baz=60,slow=2.3,SNR=7.3						
ASAR	**Alice Springs**	**26.41**	**227**	P	**P**	**21 52 13.6**	**+0.8**
	1.7nm,0.6s,mb3.8,baz=59,slow=8.5,SNR=22						
ASAR				PcP	PcP	21 55 40.0	+2.1
	1.0nm,0.6s,baz=57,slow=2.4,SNR=12						
STKA	**Stephens Creek**	**28.26**	**204**	LR	LR	22 03 56.2	
	comp=Z,68nm,21.6s,baz=25,slow=37						
FITZ	**Fitzroy Crossi**	**30.64**	**245**	P	**P**	**21 52 49.8**	**-0.7**
	9.1nm,1.1s,mb4.5,baz=57,slow=9.2,SNR=3.7						
FITZ	**Fitzroy Crossi**	**30.64**	**245**	*e*P	**P**	**21 52 49.0**	**-1.6**
	18nm,1.4s,mb4.7						
KKM	**Kota Kinabalu**	**40.24**	**287**	P	**P**	**21 54 13.7**	**+0.5**
KSRS	**Korea Array**	**50.11**	**332**	P	**P**	**21 55 31.5**	**+0.4**
	0.3nm,0.4s,mb3.7,baz=156,slow=6.6,SNR=3.0						
ENH	**Enshi**	**56.47**	**313**	*e*P	**P**	**21 56 18.0**	**0.0**
COCO	**West Island**	**57.27**	**260**	*e*P	**P**	**21 56 22.6**	**-1.4**
CM31	**Chiang Mai Arr**	**60.14**	**295**	*e*P	**P**	**21 56 44.0**	**+0.2**
ULN	**Ulaanbaatar**	**68.18**	**328**	*e*P	**P**	**21 57 36.8**	**+0.7**
	3.3nm,1.4s,mb4.2						
SONM	**Songino Array**	**68.52**	**327**	P	**P**	**21 57 38.1**	**-0.1**
	0.7nm,0.7s,mb3.7,baz=137,slow=4.0,SNR=2.4						
LSA	**Lhasa**	**70.56**	**304**	*e*P	**P**	**21 57 52.3**	**+1.2**
	1.5nm,0.6s,mb4.1						
MK31	**Makanchi Array**	**82.61**	**319**	P	**P**	**21 58 58.4**	**-0.5**
MKAR	**Makanchi Array**	**82.61**	**319**	P	**P**	**21 58 59.2**	**+0.3**
	0.4nm,0.6s,mb3.6,baz=97,slow=7.0,SNR=5.2						
TKM2	**Tokmak 2**	**86.24**	**314**	*e*P	**P**	**21 59 17.0**	**-0.5**
EKS2	**Erkin-Say**	**87.50**	**313**	P	**P**	**21 59 23.0**	**-0.6**
KBL	**Kabul**	**89.88**	**305**	P	**P**	**21 59 34.8**	**-0.2**
BRVK	**Borovoye**	**91.55**	**323**	P	**P**	**21 59 41.9**	**-0.5**

MEX 09 21:53:28.7±0.4, 16°.05N×90°.81W, h43km±58km, MD3.9, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.81**	**231**	*i* P	Pn	21 53 56.0	-1.4
THIG				*i* S	Sn	21 54 16.8	-2.3
SCX	**San Cristobal**	**1.88**	**292**	*i* P	Pn	21 53 57.3	-1.1
SCX				*i* S	Sn	21 54 19.5	-1.5
TGIG		**2.34**	**288**	*i* P	Pn	21 54 03.0	-1.6
TGIG				*i* S	Sn	21 54 30.5	-1.7
PCIG		**2.35**	**262**	*i* P	Pn	21 54 03.6	-1.2
PCIG				*i* S	Sn	21 54 30.3	-2.1

*ISCJB **09** 22:03:38.5±0.9, 29°.4S±0°.1×179°.0W±0°.2, h328km±11km, mb3.5/5, Error ellipse: s-maj=24.7km s-min=16.7km az=14.9*
*IDC **09** 22:03:39.7±0.9, 29°.42S×179°.01W, h323km±10km, mb3.4/3, mb1 3.6/4, mb1mx3.3/16, mbtmp3.5/4, Error ellipse: s-maj=25.6km s-min=21.8km az=50.0*
*NEIC **09** 22:03:39.5±0.6, 29°.42S×178°.94W, h327km±7km, mb3.6/3, Error ellipse: s-maj=15.7km s-min=10.5km az=112.0*

ISC 09 22:03:39.5±0.9, 29°.4S±0°.1×179°.0W±0°.2, h321km±11km, n19, σ0°48/18, mb3.5/5, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.98**	**80**	P	**Pn**	**22 04 22.6**	**+0.5**
	389nm,0.3s,baz=253,slow=20,SNR=28						
URZ	**Urewera**	**9.38**	**199**	P	**Pn**	**22 05 48.3**	**-1.6**
	3.2nm,0.3s,baz=324,slow=12,SNR=13						
URZ				S	**S**	**22 07 28.4**	**-7.8**
	1.8nm,0.3s,baz=126,slow=20,SNR=7.6						
URZ	**Urewera**	**9.38**	**199**	*e*Pn	**Pn**	**22 05 49.2**	**-0.6**
URZ				*e*S	**S**	**22 07 24.4**	**-12**
AFI	**Afiamalu**	**16.84**	**25**	*e*P	**P**	**22 07 15.1**	**-0.6**
	49nm,0.9s						
STKA	**Stephens Creek**	**33.84**	**256**	P	**P**	**22 09 52.5**	**-0.1**
ASAR	**Alice Springs**	**42.28**	**266**	P	**P**	**22 11 02.5**	**-0.1**
	0.9nm,0.5s,mb3.2,baz=103,slow=6.7,SNR=17						
WRAB	**Tennant Creek**	**43.17**	**272**	*e*P	**P**	**22 11 09.9**	**+0.2**
	2.5nm,0.6s,mb3.5						
WRA	**Warramunga Arr**	**43.17**	**272**	P	**P**	**22 11 09.9**	**+0.1**
	2.0nm,0.4s,mb3.6,baz=110,slow=6.5,SNR=60						
SBA	**Scott Base**	**48.94**	**184**	*e*P	**P**	**22 11 53.7**	**+0.2**
	3.6nm,0.9s,mb3.6						
FITZ	**Fitzroy Crossi**	**51.47**	**270**	P	**P**	**22 12 13.9**	**+0.7**
QSPA	**South Pole Qui**	**60.68**	**180**	P	**P**	**22 13 17.8**	**+0.9**
	1.3nm,0.6s,mb3.5,baz=55,slow=12,SNR=14						
QSPA	**South Pole Qui**	**60.68**	**180**	*e*P	**P**	**22 13 17.2**	**+0.3**
	1.1nm,0.6s,mb3.5						
MAW	**Mawson**	**72.90**	**201**	P	**P**	**22 14 33.7**	**0.0**
YHNB	**Yeheng**	**78.54**	**307**	P	**P**	**22 15 05.8**	**-0.2**
COCO	**West Island**	**79.07**	**262**	P	**P**	**22 15 08.8**	**-0.4**
MDJ	**Mudanjiang**	**87.32**	**326**	P	**P**	**22 15 50.1**	**-0.2**
FINES	**FINESS Array B**	**143.93**	**340**	PKP	PKPdf	22 22 33.6	-2.5
	2.4nm,0.5s,baz=51,slow=3.3,SNR=29						
NOA	**NORSAR Array B**	**147.66**	**351**	PKPbc	PKPbc	22 22 44.7	-0.9
	0.3nm,0.6s,baz=22,slow=4.8,SNR=3.8						
MMAI	**Mount Meron Ar**	**150.42**	**286**	PKPbc	PKPbc	22 22 54.0	+0.6
	0.8nm,0.4s,baz=63,slow=3.5,SNR=8.1						

*BJI **09** 22:17:32.9, 2°.74S×100°.70E, h53km, mB4.9/36, mb4.9/47, Ms5.3/33, Ms7 5.1/46*
*DJA **09** 22:17:36, 2°.11S×100°.55E, h5km, Mw5.5/19*
*MOS **09** 22:17:37.5±1.6, 1°.78S×101°.22E, h33km, mb5.4/58, MS4.8/21, Error ellipse: s-maj=10.2km s-min=4.7km az=118.6*
*IDC **09** 22:17:39.0±1.5, 1°.97S×100°.97E, h41km±12km, mb4.7/26, mb1 4.8/28, mb1mx4.7/29, mbtmp4.7/28, ML4.5/2, MS4.8/24, Ms1 4.8/24, ms1mx4.6/35, Error ellipse: s-maj=15.7km s-min=8.3km az=51.0*
*GCMT **09** 22:17:39.5±0.2, 2°.06S×100°.61E, h13km, MW5.3, Moment Tensor Solution. s60,c92; s92,c170; Moment tensor: Scale 10^{17}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{r\phi}$0.00; Best double couple: $M_0$1.10000×10^{17} NP1:ϕ_s118.00000°, δ66.00000°, λ-10.00000°. NP2: ϕ_s212.00000°, δ81.00000°, λ-155.00000°. Principal axes: T 1.1400, Plg10.0000°, Azm343.0000°; N -0.1400, Plg64.0000°, Azm232.0000°; P -1.0000, Plg24.0000°, Azm77.0000°; Data Used: II IU IC G CN.*
*ISCJB **09** 22:17:40.5±0.4, 1°.92S±0°.03×100°.95E±0°.03, h61km±3km, mb5.2/165 Error ellipse: s-maj=5.5km s-min=3.1km az=141.3*
*NEIC **09** 22:17:41.1±1.2, 1°.83S×101°.14E, h54km±10km, mb5.2/73, MS4.8/6, Error ellipse: s-maj=8.8km s-min=5.0km az=47.0*
NEIC Felt [III] at Padang and Painan; [II] at Bengkulu, Kapahiang, Mukomuko and Padangpanjang. Also felt [II] on Nias.
*SZGRF **09** 22:17:44.7, 1°.50S×100°.50E, h33km, mb5.2, MS5.1, Southern Sumatera, Indonesia*

ISC 09 22:17:42.8±0.3, 1°.89S±0°.03×100°.99E±0°.03, h65km±3km, h73km±1.9km: pP-P, n527, σ1°47/525, mb5.2/164, 39C-26D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**0.51**	**113**	P	**Pn**	**22 17 52.6**	**-2.6**
KRJI				S	**Sn**	**22 18 05.9**	**+1.6**
SDSI	**Sungai Dareh**	**1.05**	**25**	P	**Pn**	**22 18 02.5**	**+0.9**
SDSI				S	**Sn**	**22 18 25.3**	**+11**
PDSI	**Padang**	**1.11**	**331**	P	**Pn**	**22 17 57.9**	**-4.5**
PDSI				S	**Sn**	**22 18 15.2**	**-1.0**
PPSI	**Pulau Pagai**	**1.31**	**229**	P	Px	22 17 53.2	
PPSI				S	Sx	22 18 06.1	
PPI	**Padang Panjang**	**1.54**	**337**	P	**Pn**	**22 18 05.4**	**-2.8**
PPI				S	**Sn**	**22 18 28.3**	**+1.4**
SISI	**Saibi**	**1.98**	**286**	P	**Pn**	**22 18 06.1**	**-8.0**
RGRI	**Rengat**	**2.03**	**41**	P	**Pn**	**22 18 16.6**	**+1.8**
BKNI	**Bangkinang**	**2.20**	**1**	P	**Pn**	**22 18 16.9**	**-0.2**
BKNI				S	**Sn**	**22 18 49.9**	**+6.8**
KSI	**Kapahiang**	**2.37**	**138**	P	**Pn**	**22 18 16.3**	**-3.0**
MNSI	**Mandailing Nat**	**3.02**	**332**	P	**Pn**	**22 18 25.0**	**-3.2**
MNAI	**Manna**	**3.14**	**141**	P	**Pn**	**22 18 27.9**	**-2.0**
LHSI	**Lahat**	**3.18**	**127**	P	**Pn**	**22 18 36.0**	**+5.7**
PMBI	**Palembang**	**3.91**	**105**	P	Px	22 18 51.3	
MDSI	**Maura Dua**	**4.09**	**129**	P	**Pn**	**22 18 41.4**	**-1.5**
LWLI	**Liwa**	**4.36**	**136**	P	**Pn**	**22 18 46.2**	**-0.3**
KGM	**Kluang**	**4.52**	**31**	P	**Pn**	**22 18 50.8**	**+2.1**
MYKOM	**Kota Tinggi**	**4.64**	**38**	P	**Pn**	**22 18 52.7**	**+2.3**
MYKOM	**Kota Tinggi**	**4.64**	**38**	P	**Pn**	**22 18 51.9**	**+1.5**
	5.2nm438nm,0.9s						
KLSI		**4.65**	**127**	P	**Pn**	**22 18 49.1**	**-1.5**
KLI	**Kotabumi**	**4.86**	**128**	P	**Pn**	**22 18 53.7**	**+0.4**
	19nm2μm,0.7s						
PSI	**Prapat**	**5.10**	**336**	P	**Pn**	**22 18 52.3**	**-4.4**
	6.8nm,0.3s,baz=152,slow=9.3,SNR=24						
PSI				LR	LR	22 21 16.8	
	comp=Z,19μm,18.3s,baz=264,slow=43						
BLSI	**Bandar Lampung**	**5.47**	**129**	P	**Pn**	**22 19 01.6**	**-0.2**
	2.9nm8μm717nm,0.8s						
TSI	**Tuntungan**	**5.88**	**336**	P	**Pn**	**22 19 05.8**	**-1.5**
RBSI	**Rajabasa**	**6.16**	**130**	P	**Pn**	**22 19 11.9**	**+0.8**
	4.0nm1μm,1.0s						
IPM	**Ipoh**	**6.33**	**0**	P	**Pn**	**22 19 15.0**	**+1.5**
CGJI	**Cibinong**	**6.63**	**135**	P	**Pn**	**22 19 14.0**	**-3.6**
	2.1nm7μm561nm,0.8s						
TPI	**Tanjungpandan**	**6.71**	**97**	P	**Pn**	**22 19 18.8**	**+0.1**
	2.5nm2μm86nm,0.7s						
KULM	**Kulim**	**7.14**	**357**	P	**Pn**	**22 19 25.7**	**+1.1**
KULM	**Kulim**	**7.14**	**357**	⇑*e*Pn	**Pn**	**22 19 25.3**	**+0.7**
	150nm,0.8s						
KULM				S	**Sn**	**22 20 50.3**	**+5.9**
KTGM	**Kuala Trenggan**	**7.48**	**17**	P	**Pn**	**22 19 32.7**	**+3.5**
LEM	**Lembang**	**8.23**	**127**	P	**Pn**	**22 19 40.0**	**+0.5**
	5μm304nm,1.0s						
JCJI	**Jatiwangi**	**8.58**	**122**	P	**Pn**	**22 19 46.3**	**+2.0**
	7μm389nm,0.7s						
KSM	**Kuching**	**9.89**	**70**	⇓*e*Pn	**Pn**	**22 20 06.4**	**+4.1**
	685nm,1.5s						
KSM				Sn	**Sn**	**22 21 47.9**	**-4.0**
KSM	**Kuching**	**9.89**	**70**	P	**Pn**	**22 20 04.9**	**+2.6**
	638nm29nm,1.8s						
STKI	**Sintang**	**10.66**	**80**	P	**Pn**	**22 20 16.5**	**+3.7**
	58nm,0.9s						
SMRI	**Semarang**	**10.72**	**119**	P	**Pn**	**22 20 15.0**	**+1.4**
	632nm,1.0s						
YOGI	**Yogyakarta**	**10.98**	**123**	P	**Pn**	**22 20 17.1**	**0.0**
	8μm505nm,1.8s						
COCO	**West Island**	**11.03**	**202**	P	Px	22 20 06.9	
	279nm,1.8s						
UGM	**Wanagama**	**11.22**	**123**	P	**Pn**	**22 20 20.9**	**+0.5**
	380nm,1.9s						
NGJI	**Ngawi**	**11.77**	**118**	P	**Pn**	**22 20 28.4**	**+0.6**
	300nm,0.9s						
PCJI	**Pacitan**	**11.92**	**122**	P	**Pn**	**22 20 26.8**	**-3.1**
	6μm165nm,1.3s						
SBUM	**Sibu**	**12.02**	**69**	P	**Pn**	**22 20 37.9**	**+6.5**
SBUM	**Sibu**	**12.02**	**69**	P	**Pn**	**22 20 36.2**	**+4.8**
	3μm125nm,2.4s						
SJI	**Sawahan**	**12.20**	**119**	P	**Pn**	**22 20 33.0**	**-0.8**
	259nm,0.8s						
PWJI	**Pagerwojo**	**12.37**	**120**	P	**Pn**	**22 20 36.3**	**+0.2**
	3μm260nm,0.9s						
KRKI	**Karangkates**	**13.00**	**119**	P	**Pn**	**22 20 44.7**	**0.0**
	336nm,0.8s						
BTM	**Bintulu**	**13.10**	**67**	P	**Pn**	**22 20 53.1**	**+7.0**
KMMI	**Kalianget**	**13.91**	**112**	P	**Pn**	**22 20 59.3**	**+2.4**
	4μm325nm,1.1s						
GMJI	**Gumukmas**	**13.93**	**118**	P	**Pn**	**22 20 57.9**	**+0.8**
	86nm,2.2s						
NBBI	**Negara**	**15.02**	**116**	P	**Pn**	**22 21 16.8**	**+5.5**
	287nm,1.3s						
KBKI	**Kotabaru**	**15.22**	**96**	P	**Pn**	**22 21 15.9**	**+1.9**
	2μm113nm,1.4s						
SRBI	**Singaraja**	**15.44**	**114**	P	**Pn**	**22 21 20.1**	**+3.3**
	165nm,0.7s						
KHKI	**Kahang-Kahang**	**15.91**	**114**	P	**Pn**	**22 21 26.5**	**+3.8**
	186nm,0.8s						
KKM	**Kota Kinabalu**	**17.12**	**62**	P	**Pn**	**22 21 45.8**	**+7.9**
KKM	**Kota Kinabalu**	**17.12**	**62**	*e*Pn	**Pn**	**22 21 34.4**	**-3.5**
	184nm,1.4s						
NST	**Nakhon Sawan**	**17.47**	**357**	P	**Pn**	**22 21 37.5**	**-4.6**
UBT	**Ubonrachathani**	**17.48**	**13**	P	**Pn**	**22 21 47.0**	**+4.7**
SDKM	**Sandakan**	**17.83**	**65**	P	**Pn**	**22 21 50.5**	**+4.0**
TSM	**Tawau**	**17.95**	**70**	P	**Pn**	**22 21 51.9**	**+3.8**
KDM	**Kudat**	**18.07**	**61**	P	**Pn**	**22 21 53.2**	**+3.7**
TTSI	**Tana Toraja**	**18.84**	**94**	P	**Pn**	**22 22 00.2**	**+1.3**
	3μm255nm,1.1s						
MYLDM	**Lahad Datu**	**18.85**	**68**	P	**Pn**	**22 22 02.6**	**+3.8**
MYLDM	**Lahad Datu**	**18.85**	**68**	P	**Pn**	**22 22 01.8**	**+2.9**
PCI	**Palu**	**18.86**	**87**	P	**Pn**	**22 22 00.5**	**+1.4**
	5μm294nm,1.6s						
SPSI	**Sidrap Palu**	**18.86**	**97**	P	**Pn**	**22 21 58.7**	**-0.4**
	1μm181nm,0.9s						
KAPI	**Kappang**	**18.98**	**100**	Pn	**Pn**	**22 21 59.3**	**-1.2**
	2μm,0.8s,SNR=9.7						
KAPI	**Kappang**	**18.98**	**100**	P	**Pn**	**22 21 58.8**	**-1.7**
	4.3nm,0.3s,baz=277,slow=11,SNR=15						
KAPI				LR	LR	22 30 12.3	
	comp=Z

FITZ LR LR 22 36 55.2
comp=Z,945nm,19.2s,baz=317,slow=40
FITZ Fitzroy Crossi 29.06 125 *e*P **P 22 23 35.4 -1.8**
comp=Z,34nm,0.9s,mb5.1
HYB Hyderabad 29.28 312 *i* P **P 22 23 41.0 +1.8**
BOK Bokaro 29.46 331 *e*PKP **P 22 23 40.2 -0.4**
BOK AMb AMB 22 23 47.9
comp=Z,89nm,1.1s,mb5.4
ODAN Odare 31.45 336 *e*P **P 22 23 56.6 -1.6**
comp=Z,210nm,0.7s,mb6.0
TPUB Ta-pu 31.51 36 P **P 22 23 56.1 -2.7**
QZH Quanzhou 31.67 32 *e*P **P 22 23 54.0 -6.1**
QZH S **S 22 28 46.1 -19**
QZH LR LR
comp=N,5μm,13.2s
QZH LR LR
comp=E,10μm,14.3s
QZH LR LR
comp=Z,3μm,16.4s
TAPN Taplejung 31.76 337 *e*P **P 22 24 00.0 -0.9**
comp=Z,335nm,0.8s,mb6.2
RAMN Ramite 31.86 335 *e*P **P 22 24 00.4 -1.3**
KAD Karad 32.60 307 *e*PKP **P 22 24 06.6 -1.8**
KAD AMb AMB 22 24 13.5
comp=Z,48nm,1.6s,mb5.2
JIRN Jiri 32.65 335 *e*P **P 22 24 07.6 -1.1**
comp=Z,438nm,1.0s,mb6.3
CD2 Chengdu 32.72 4 P **P 22 24 10.2 +0.9**
CD2 pP pP 22 24 28.1 +3.0
CD2 PP PP 22 25 22.2 -2.2
CD2 S **S 22 29 20.7 -0.6**
CD2 sS sS 22 29 51.6 +3.3
CD2 pmax pmax
comp=Z,20nm,0.5s,mb5.3
CD2 pmax pmax
comp=Z,80nm,5.9s
CD2 LR LR
comp=Z,4μm,15.5s
LSA Lhasa 32.79 344 *e*P **P 22 24 10.1 +0.2**
LSA S **S 22 29 22.5 +0.1**
LSA pmax pmax
comp=Z,41nm,0.9s,mb5.4
LSA Lhasa 32.79 344 *e*P **P 22 24 10.1 +0.2**
comp=Z,41nm,0.9s,mb5.3
LSA S **S 22 29 22.5 +0.1**
PKI Pulchoki 32.91 334 *e*P **P 22 24 09.1 -1.9**
PKIN Phulchoki 32.92 334 *e*P **P 22 24 09.7 -1.4**
KAKA Kakadu 32.95 111 *e*P **P 22 24 10.1 -1.4**
comp=Z,30nm,1.0s,mb5.2
KAKA Kakadu 32.95 111 *e*P **P 22 24 09.5 -2.0**
comp=Z,76nm,1.0s,mb5.6
ENH Enshi 32.99 14 *e*P **P 22 24 11.0 -0.6**
comp=Z,17nm,0.7s,mb5.1
GUN Gumba 33.00 335 *e*P **P 22 24 10.4 -1.4**
comp=Z,205nm,0.6s,mb6.2
DMN Daman 33.08 334 *e*P **P 22 24 10.6 -1.8**
comp=Z,129nm,1.0s,mb5.8
KKN Kakani 33.15 334 *e*P **P 22 24 11.4 -1.7**
KLBR Kellerberrin 33.51 154 *e*P **P 22 24 14.1 -2.1**
comp=Z,37nm,1.0s,mb5.3
GKN Gorkha 33.62 333 *e*P **P 22 24 15.2 -2.0**
comp=Z,165nm,0.9s,mb6.0
BHPL Bhopal 33.92 319 *e*PKP **P 22 24 18.4 -1.5**
BHPL AMb AMB 22 24 25.0
comp=Z,27nm,1.0s,mb5.1
NWAO Narrogin (SRO) 34.44 155 P **P 22 24 23.0 -1.2**
comp=Z,50nm,0.8s,mb5.5,baz=322,slow=10,SNR=27
NWAO LR LR 22 38 56.3
comp=Z,16nm,18.7s,baz=270,slow=37
NWAO Narrogin (SRO) 34.44 155 *e*P **P 22 24 24.2 0.0**
NWAO pmax pmax
comp=Z,54nm,0.9s
NWAO Narrogin (SRO) 34.44 155 *e*P **P 22 24 24.2 0.0**
comp=Z,54nm,0.9s,mb5.5
WHN Wuhan 34.67 21 *e*P **P 22 24 28.0 +1.7**
WHN S **S 22 29 54.1 +2.5**
WHN LR LR
comp=Z,6μm,15.5s
AGRA Agra 36.49 324 *e*PKP **P 22 24 39.7 -2.2**
AGRA AMb AMB 22 24 55.1
comp=Z,48nm,0.6s,mb5.6
XAN Xi'an 36.51 11 P **P 22 24 41.0 -0.9**
XAN pmax pmax
comp=Z,5.0nm,0.5s,mb4.6
PTH Pithoragarh 37.04 329 *e*PKP **P 22 24 46.0 -0.6**
WRA Warramunga Arr 37.20 121 P **P 22 24 45.6 -2.4**
comp=Z,21nm,0.8s,mb5.0,baz=299,slow=9.7,SNR=89
WRA S **S 22 30 29.4 -1.0**
comp=Z,4.9nm,1.1s,baz=294,slow=16,SNR=4.3
WRA LR LR 22 42 08.9
comp=Z,1μm,21.1s,baz=315,slow=40
WRA Warramunga Arr 37.20 121 P **P 22 24 45.6 -2.4**
WRA S **S 22 30 29.5 -1.0**
WRAB Tennant Creek 37.20 121 P **P 22 24 46.9 -1.2**
comp=Z,206nm,0.5s,mb6.2,SNR=20
WRAB Tennant Creek 37.20 121 *e*P **P 22 24 46.5 -1.6**
WRAB *e*S **S 22 30 30.1 -0.5**
WRAB pmax pmax
comp=Z,30nm,0.9s,mb5.1
WRAB Tennant Creek 37.20 121 *e*P **P 22 24 46.5 -1.6**
comp=Z,30nm,0.9s,mb5.1
WRAB *e*S **S 22 30 30.1 -0.4**
WB2 Warramunga Arr 37.21 121 *e*P **P 22 24 46.3 -1.8**
SONA Sohna 37.75 324 *e*PKP **P 22 24 50.4 -2.2**
LZH Lanzhou 37.87 4 *e*P **P 22 24 55.0 +1.5**
LZH pP pP 22 25 13.2 +3.7
LZH PP PP 22 26 27.0 +5.8
LZH *e*S **S 22 30 41.2 +1.0**
LZH sS sS 22 31 12.5 +5.0
LZH pmax pmax
comp=Z,31nm,1.1s,mb5.0
LZH pmax pmax
comp=Z,140nm,6.8s
LZH LR LR
comp=N,2μm,14.5s
LZH LR LR
comp=Z,4μm,16.0s
AYAN Aya Nagar 37.90 325 *e*PKP **P 22 24 51.7 -2.2**
AJM Ajmer 37.98 320 *e*PKP **P 22 24 53.8 -0.8**
AJM AMb AMB 22 25 02.0
comp=Z,33nm,1.3s,mb4.9
NDI New Delhi 38.00 325 *ex* x 22 24 46.0
SSE Sheshan 38.02 29 P **P 22 24 52.6 -2.2**
SSE S **S 22 30 42.3 -0.3**
SSE pmax pmax
comp=Z,16nm,0.6s,mb4.9
SSE pmax pmax
comp=Z,51nm,4.1s
SSE LR LR
comp=Z,3μm,13.2s
KHET Khetri 38.38 323 *e*PKP **P 22 24 55.6 -2.3**
FORT Forrest 38.49 141 *e*P **P 22 25 01.9 +3.1**
comp=Z,55nm,0.7s,mb5.4
FORT Forrest 38.49 141 *e*P **P 22 24 58.9 0.0**
comp=Z,67nm,0.8s,mb5.4
ASAR Alice Springs 38.52 127 P **P 22 24 57.8 -1.4**
comp=Z,59nm,0.8s,mb5.4,baz=300,slow=7.6,SNR=319
ASAR S **S 22 30 49.8 -0.7**
comp=Z,13nm,1.1s,baz=300,slow=15,SNR=11
DDI Dehra Dun 38.79 327 *ex* **P 22 25 02.0 +0.7**
KKR Kurukshetra 39.19 326 *e*PKP **P 22 25 03.1 -1.5**
KLP Kalpa 39.64 329 *e*PKP **P 22 25 07.8 -0.5**
KLP AMb AMB 22 25 18.6
comp=Z,56nm,1.0s,mb5.2
GTA Gaotai 41.11 359 *e*P **P 22 25 21.8 +1.4**
GTA pP pP 22 25 37.9 +1.3
GTA PP PP 22 26 58.8 +2.4
GTA S **S 22 31 27.3 -1.4**
GTA sS sS 22 31 53.5 -2.7
GTA ScS ScS 22 35 19.2 +0.4
GTA pmax pmax
comp=Z,5.0nm,1.4s,mb4.0
GTA pmax pmax
comp=Z,120nm,5.6s
GTA LR LR
comp=N,2μm,15.5s
GTA LR LR
comp=E,3μm,15.7s
GTA LR LR
comp=Z,3μm,17.5s
THN Thein Dam 41.69 327 *ex* **P 22 25 21.8 -3.4**
HHC Hu-ho-hao-te 43.62 12 *e*P **P 22 25 44.8 +4.1**
HHC PP PP 22 27 28.6 +5.3
HHC ScP ScP 22 31 14.9 +1.6
HHC S **S 22 32 08.0 +2.5**
HHC ScS ScS 22 35 34.4 +0.2
HHC pmax pmax
comp=Z,20nm,0.6s,mb5.0
HHC pmax pmax
comp=Z,94nm,6.3s
HHC LR LR
comp=N,2μm,14.8s
HHC LR LR
comp=E,2μm,14.8s
HHC LR LR
comp=Z,2μm,14.5s
BJT Baijiatuau 43.96 17 P **P 22 25 42.2 -1.3**
BJT pmax pmax
comp=Z,34nm,1.0s
BJT Baijiatuau 43.96 17 P **P 22 25 42.2 -1.3**
comp=Z,34nm,1.0s,mb5.0
BJI Beijing 43.98 17 P **P 22 25 43.9 +0.2**
BJI pP pP 22 25 59.6 -0.4
BJI sP sP 22 26 06.4 -1.1
BJI S **S 22 32 15.0 +4.1**
BJI sS sS 22 32 39.6 +1.0
BJI pmax pmax
comp=Z,11nm,1.1s,mb4.5
BJI pmax pmax
comp=Z,140nm,3.9s
BJI LR LR
comp=Z,2μm,16.8s
KSRS Korea Array 46.42 30 P **P 22 26 03.0 -0.1**
comp=Z,5.8nm,0.9s,mb4.5,baz=223,slow=8.8,SNR=15
KBL Kabul 47.03 323 *e*P **P 22 26 07.9 0.0**
KBL pmax pmax
comp=Z,15nm,0.8s,mb5.0
KBL Kabul 47.03 323 *e*P **P 22 26 07.9 0.0**
comp=Z,15nm,0.8s,mb5.0
WMQ Urumqi 47.04 347 P **P 22 26 07.4 -0.4**
WMQ pP pP 22 26 24.4 +0.1
WMQ PcP PcP 22 27 39.0 0.0
WMQ PP PP 22 27 58.7 -0.4
WMQ S **S 22 32 52.4 -2.5**
WMQ sS sS 22 33 24.6 +1.8
WMQ ScS ScS 22 35 51.6 -4.5
WMQ pmax pmax
comp=Z,76nm,1.0s,mb5.6
WMQ pmax pmax
comp=Z,340nm,4.2s
WMQ LR LR
comp=N,930nm,18.0s
WMQ LR LR
comp=E,760nm,10.8s
WMQ LR LR
comp=Z,570nm,18.6s
KSH Kashi 47.17 334 P **P 22 26 06.6 -2.3**
KSH pP pP 22 26 25.4 0.0
KSH PcP PcP 22 27 39.6 0.0
KSH PP PP 22 27 57.3 -3.1
KSH ScP ScP 22 31 24.6 -3.5
KSH PcS PcS 22 31 32.7 -2.0
KSH S **S 22 32 51.4 -5.4**
KSH sS sS 22 33 22.9 -1.9
KSH ScS ScS 22 35 51.5 -5.6
KSH pmax pmax
comp=Z,61nm,0.9s,mb5.5
KSH LR LR
comp=N,680nm,11.5s
KSH LR LR
comp=E,590nm,14.2s
KSH LR LR
comp=Z,870nm,21.8s
CTA Charters Tower 47.75 116 *e*P **P 22 26 12.2 -1.5**
comp=Z,14nm,0.8s,mb5.0
CTA Charters Tower 47.75 116 P **P 22 26 12.1 -1.6**
comp=Z,11nm,0.7s,mb5.0,baz=283,slow=11,SNR=6.0
CTA LR LR 22 49 03.9
comp=Z,1μm,19.1s,baz=283,slow=40
CTAO Charters Tower 47.75 116 *e*P **P 22 26 12.6 -1.1**
CTAO pmax pmax
comp=Z,20nm,0.8s,mb5.2
CTAO Charters Tower 47.75 116 *e*P **P 22 26 12.6 -1.1**
comp=Z,20nm,0.8s,mb5.2
SNY Shenyang 48.09 23 ⇓P **P 22 26 21.0 +5.0**
SNY S **S 22 33 10.6 +0.8**
SNY pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
SNY LR LR
comp=N,3μm,16.7s
SNY LR LR
comp=E,2μm,17.7s
SNY LR LR
comp=Z,2μm,15.7s
STKA Stephens Creek 48.49 132 *e*P **P 22 26 18.0 -1.2**
comp=Z,29nm,0.6s,mb5.5
STKA Stephens Creek 48.49 132 P **P 22 26 18.4 -0.8**
comp=Z,23nm,0.7s,mb5.3,baz=304,slow=8.2,SNR=32
STKA LR LR 22 48 40.3
comp=Z,2μm,18.4s,baz=300,slow=38
STKA Stephens Creek 48.49 132 *e*P **P 22 26 18.2 -1.0**
comp=Z,7.7nm,0.8s,mb4.8
SMDO Samad 48.62 303 P **P 22 26 23.4 +3.1**
SNR=5.5
ULHL Ulahol 49.31 336 P **P 22 26 25.3 +0.1**
SNR=18
KZA Kyzart 49.58 335 P **P 22 26 28.8 +1.5**
SNR=18
SONM Songino Array 49.74 5 P **P 22 26 28.7 +0.2**
comp=Z,16nm,1.0s,mb5.0,baz=189,slow=9.5,SNR=26
SONM ScP ScP 22 31 41.9 +3.1
comp=Z,1.8nm,1.0s,baz=177,slow=3.0,SNR=4.1
SONM LR LR 22 50 43.9
comp=Z,1μm,20.5s,baz=184,slow=40
ULN Ulaanbaatar 49.83 5 *e*P **P 22 26 28.5 -0.7**
ULN Ulaanbaatar 49.83 5 *e*P **P 22 26 27.6 -1.6**
comp=Z,16nm,1.0s,mb5.0
ULN Ulaanbaatar 49.83 5 P **P 22 26 30.7 +1.6**
SNR=11
TKM2 Tokmak 2 50.13 336 P **P 22 26 31.1 -0.4**
SNR=80
TKM2 Tokmak 2 50.13 336 *e*P **P 22 26 31.0 -0.5**
TKM2 pmax pmax
comp=Z,98nm,0.8s,mb5.9
TKM2 Tokmak 2 50.13 336 *e*P **P 22 26 31.0 -0.6**
comp=Z,98nm,0.8s,mb5.9
KBK Karagaybulak 50.18 335 P **P 22 26 32.2 +0.3**
SNR=14
AML Almayashu 50.30 334 P **P 22 26 34.1 +1.3**
SNR=12
AAK Ala-Archa 50.36 335 P **P 22 26 33.8 +0.6**
comp=Z,254nm,1.4s,mb6.1,SNR=15
AAK Ala-Archa 50.36 335 *e*P **P 22 26 33.2 0.0**
AAK pmax pmax
comp=Z,54nm,1.0s,mb5.5
AAK Ala-Archa 50.36 335 *e*P **P 22 26 33.1 -0.1**
comp=Z,54nm,1.0s,mb5.5
FRU Bishkek 50.47 335 *i* P **P 22 26 38.0 +3.9**
FRU *e* 22 33 46.0
FRU pmax pmax
comp=Z,240nm,1.6s,mb6.0
CN2 Changchun 50.49 23 *e*P **P 22 26 38.0 +3.8**
CN2 *e*S **S 22 33 45.0 +1.6**
CN2 pmax pmax
comp=Z,20nm,0.8s,mb5.2
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,3μm,18.0s
CN2 LR LR
comp=E,2μm,18.0s
CN2 LR LR
comp=Z,3μm,20.0s
JHJ Hachijo jima 2 50.51 43 LR LR 22 44 09.1
comp=Z,336nm,21.6s,baz=233,slow=31
CHMS Chumysh 50.55 335 P **P 22 26 33.5 -1.1**
SNR=12
EKS2 Erkin-Say 50.69 334 P **P 22 26 36.5 +0.7**
SNR=16
EKS2 Erkin-Say 50.69 334 *e*P **P 22 26 35.6 -0.2**
comp=Z,146nm,0.9s,mb5.9
EKS2 *e*PcP PcP 22 27 52.7 +0.5
USP Osponovka 50.87 335 P **P 22 26 36.3 -0.8**
SNR=17
MK31 Makanchi Array 51.20 344 *e*P **P 22 26 38.6 -0.9**
MK31 *e* 22 26 43.6
MKAR Makanchi Array 51.20 344 P **P 22 26 38.4 -1.1**
comp=Z,24nm,0.6s,mb5.3,baz=148,slow=7.6,SNR=273
MKAR LR LR 22 50 50.7
comp=Z,448nm,19.1s,baz=264,slow=39
MAJO Matsushiro 51.57 38 *e*P **P 22 26 40.2 -2.3**
MAJO pmax pmax
comp=Z,11nm,1.0s,mb4.7
MAJO Matsushiro 51.57 38 *e*P **P 22 26 40.2 -2.2**
comp=Z,11nm,1.0s,mb4.8
MAT Matsushiro 51.57 38 P **P 22 26 41.8 -0.7**
MAT *e*S **S 22 34 07.0 +8.5**
MJAR Matsushiro Arr 51.57 38 P **P 22 26 42.2 -0.2**
comp=Z,7.8nm,1.0s,mb4.6,baz=220,slow=7.9,SNR=17
MJAR LR LR 22 50 37.9
comp=Z,502nm,18.4s,baz=245,slow=38
MJAR Matsushiro Arr 51.57 38 P **P 22 26 42.2 -0.2**
MJAR LR LR 22 50 37.9
KK31 Karatay Array 52.52 332 P **P 22 26 50.8 +1.4**
KK31 pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
MDJ Mudanjiang 52.86 25 P **P 22 26 51.0 -0.9**
MDJ pP pP 22 27 11.5 +2.9
MDJ PP PP 22 28 51.6 -0.4
MDJ S **S 22 34 19.7 +3.8**
MDJ pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
MDJ pmax pmax
comp=Z,76nm,5.3s
MDJ LR LR
comp=N,2μm,15.4s
MDJ LR LR
comp=E,3μm,16.2s
MDJ LR LR
comp=Z,1μm,14.6s
MOY Mondy 53.35 0 *e*P **P 22 27 00.4 +5.0**
TLY Talaya 53.42 2 *e*P **P 22 26 56.2 +0.4**
TLY *e* 22 28 58.6
TLY *e* 22 34 32.9
TLY *e*SS SS 22 38 01.4 -2.8
TLY pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
TLY MLR MLR
comp=Z,1μm,16.0s
TLY Talaya 53.42 2 *e*P **P 22 26 53.6 -2.2**
comp=Z,6.9nm,0.9s,mb4.6
HIA Hailar 53.47 15 *e*P **P 22 26 54.2 -2.1**
HIA *e* 22 28 01.8
HIA pmax pmax
comp=Z,18nm,1.1s
HIA Hailar 53.47 15 *e*P **P 22 26 54.2 -2.1**
comp=Z,18nm,1.1s,mb4.9
HIA *e*PcP PcP 22 28 01.8 -0.7
EIDS Eidsvold 53.55 120 *e*P **P 22 26 56.6 -0.8**
comp=Z,88nm,1.6s,mb5.4
ARMA Armidale 55.66 126 *e*P **P 22 27 12.8 +0.2**
ARMA Armidale 55.66 126 *e*P **P 22 27 12.6 0.0**
comp=Z,48nm,1.4s,mb5.3
KURK Kurchatov 55.79 343 P **P 22 27 12.7 -0.3**
comp=Z,752nm,0.8s,SNR=49
KURK Kurchatov 55.79 343 P **P 22 27 11.4 -1.6**
comp=Z,62nm,1.0s,mb5.6,baz=160,slow=6.8,SNR=76
KURK Kurchatov 55.79 343 *e*P **P 22 27 11.9 -1.1**
KURK *e* 22 28 11.6
KURK *e*S **S 22 34 55.9 +0.8**
KURK pmax pmax
comp=Z,76nm,0.7s,mb5.8
KURK Kurchatov 55.79 343 *e*P **P 22 27 11.9 -1.1**
comp=Z,76nm,0.7s,mb5.8
KURK *e*PcP PcP 22 28 11.6 +0.2
KURK *e*S **S 22 34 55.9 +0.9**
KURK Kurchatov 55.79 343 P **P 22 27 12.3 -0.7**
SNR=59
ABKT Ailbek 56.00 320 P **P 22 27 16.3 +1.5**
comp=Z,206nm,1.0s,mb6.1,SNR=11
ZAA0 Zalesovo Array 57.25 349 *e*P **P 22 27 21.9 -1.4**
ZAA0 PcP PcP 22 28 19.3 +2.2
ZALV Zalesovo Beam 57.25 349 P **P 22 27 22.1 -1.3**
comp=Z,80nm,0.9s,mb5.8,baz=184,slow=7.0,SNR=73
ZALV LR LR 22 55 16.9
comp=Z,757nm,18.6s,baz=327,slow=39
KLR Kul'dur 57.43 23 *e*P **P 22 27 20.1 -4.6**
KRAR Krasnoyarsk 58.09 355 *e*P **P 22 27 28.4 -0.8**
KRAR pmax pmax
comp=Z,33nm,1.3s,mb5.2
HABR Khabarovsk 58.23 26 *e*P **P 22 27 26.7 -3.6**
HABR *e**PP pP 22 27 36.6 -11
HABR 22 29 36.1
HABR *e*S **S 22 35 25.3 -2.0**
HABR *e**SS sS 22 35 42.8 -13
HABR *e* 22 37 12.8
HABR *e*SS SS 22 39 18.9 -1.2
HABR pmax pmax
comp=Z,18nm,0.8s,mb5.2
HABR pmax pmax
comp=N,10.0nm,0.7s
HABR pmax pmax
comp=E,18nm,0.7s
HABR MLR MLR
comp=Z,1μm,19.0s
NVS Novosibirsk 58.41 348 ⇑*i* P **P 22 27 30.8 -0.6**
NVS *i* S **S 22 35 29.8 +0.4**
NVS *i* 22 37 18.6
NVS pmax pmax
comp=Z,50nm,1.1s,mb5.5
NVS pmax pmax
comp=N,31nm,1.3s
NVS pmax pmax
comp=E,22nm,1.3s
NVS smax
comp=N,36nm,1.5s
NVS smax
comp=E,26nm,1.4s
ASAJ Asahikawa 58.96 34 P **P 22 27 35.1 -0.4**
comp=E,5.0nm,0.5s,mb4.8,baz=266,slow=16,SNR=4.2
HNR Honiara 59.08 100 P **P 22 27 35.5 -1.4**
HNR pmax pmax
comp=Z,172nm,1.0s,mb6.0
HNR Honiara 59.08 100 P **P 22 27 35.5 -1.4**
comp=Z,172nm,1.0s,mb6.0
KBD Kabd 59.57 306 *e*P **P 22 27 37.7 -2.4**
KBD AMb AMB 22 27 43.0
comp=Z,76nm,1.1s,mb5.6
VOSK Vostochnaya 59.97 339 P **P 22 27 41.1 -1.2**
VOSK pmax pmax
comp=Z,67nm,1.5s,mb5.5
BVAR Borovoye Array 60.43 339 P **P 22 27 44.1 -1.3**
comp=Z,12nm,0.5s,mb5.1,baz=140,slow=9.5,SNR=69
BRVK Borovoye 60.49 339 P **P 22 27 44.9 -0.9**
comp=Z,186nm,1.2s,mb6.0,SNR=6.2
BRVK Borovoye 60.49 339⇑*e*P **P 22 27 45.1 -0.7**
BRVK pmax pmax
comp=Z,43nm,1.2s,mb5.3
BRVK Borovoye 60.49 339 *e*P **P 22 27 44.0 -1.9**
comp=Z,45nm,1.0s,mb5.5
BRVK Borovoye 60.49 339 P **P 22 27 49.4 +3.5**
SNR=22
YSS Yuzh-Sakhalins 60.87 31 *e*P **P 22 27 52.2 +3.7**
YSS pmax pmax
comp=Z,40nm,1.0s,mb5.5
YSS MLR MLR
comp=Z,500nm,16.0s
YSS MLR MLR
comp=N,1μm,15.0s
YSS MLR MLR
comp=E,1μm,16.0s
YSS Yuzh-Sakhalins 60.87 31 *e*P **P 22 27 47.4 -1.2**
ZRNK Zerenda 60.87 338 P **P 22 27 47.2 -1.2**
ZRNK pmax pmax
comp=Z,19nm,0.8s,mb5.3
AB31 Akbulak array 62.02 331 *i* P **P 22 27 54.2 -2.1**
AB31 pmax pmax
comp=Z,17nm,0.5s,mb5.4
ABKAR Akbulak array 62.02 331 *e*P **P 22 27 54.2 -2.0**
comp=Z,34nm,0.8s,mb5.5
KMBO Kilima Mbogo 63.72 270 LR LR 22 51 31.9
comp=Z,666nm,19.6s,baz=90,slow=32
KMBO Kilima Mbogo 63.72 270 *e*P **P 22 28 08.8 +0.5**
KMBO pmax pmax
comp=Z,23nm,1.3s
KMBO Kilima Mbogo 63.72 270 *e*P **P 22 28 08.8 +0.5**
comp=Z,23nm,1.3s,mb5.0
MIR Mirnyy 64.78 184 *e*P **P 22 28 17.0 +2.8**
MIR pmax pmax
comp=Z,29nm,1.4s,mb5.1
MAK Makhachkala 65.52 320 *e*P **P 22 28 16.3 -3.1**
MAK *i* 22 28 49.1
MAK *e*S S 22 36 57.3 -2.4
MAK *i* 22 38 11.3
MAK pmax pmax
comp=Z,88nm,1.5s,mb5.6

MAK MLR MLR
comp=Z,567nm,21.0s
HAKT HAKKARI 65.83 313 *i* P **P 22 28 15.1 -6.5**
GNI Garni 66.14 316 *e*P **P 22 28 23.7 +0.2**
GNI pmax pmax
comp=Z,38nm,1.4s
GNI Garni 66.14 316 *e*P **P 22 28 24.0 +0.6**
comp=Z,32nm,1.0s,mb5.3
GNI Garni 66.14 316 P **P 22 28 27.1 +3.6**
SNR=9.0
DGRG David-gareji 66.25 317 P **P 22 28 23.5 -0.7**
DZM Mont Dzumac 66.58 113 *e*S S 22 37 22.9 +10
comp=Z,4μm,26.9s
DZM *e*LR LR 22 48 35.2
comp=Z,1μm,27.3s
MTA Mtatsminda 66.75 317 P **P 22 28 26.2 -1.1**
MTA S S 22 37 15.5 +0.9
TBLG Delisi 66.81 317 *e*P **P 22 28 26.7 -1.0**
TBLG Delisi 66.81 317 P **P 22 28 26.8 -0.9**
SVE Sverdlovsk 66.96 337 *e*P **P 22 28 28.1 -0.2**
SVE *e*S S 22 37 19.3 +2.7
SVE *e* 22 38 22.3
SVE *e*SS SS 22 41 46.3 +10
SVE pmax pmax
comp=Z,56nm,1.4s,mb5.4
SVE MLR MLR
comp=Z,689nm,20.0s
GOR Gori 67.34 317 P **P 22 28 32.0 +0.9**
YAK Yakutsk 67.39 14 *e*P **P 22 28 32.3 +1.4**
YAK *e**PP pP 22 28 41.7 -6.6
YAK *e* 22 29 02.3
YAK *e* 22 30 58.7
YAK *e*S S 22 37 20.8 -0.7
YAK *e* 22 38 27.0
YAK pmax pmax
comp=Z,26nm,1.0s,mb5.2
YAK pmax pmax
comp=N,9.0nm,1.0s
YAK pmax pmax
comp=E,8.0nm,1.1s
YAK pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
YAK smax
comp=E,105nm,4.2s
YAK MLR MLR
comp=Z,1μm,16.0s
YAK MLR MLR
comp=N,881nm,16.0s
YAK MLR MLR
comp=E,783nm,17.0s
YAK Yakutsk 67.39 14 *e*P **P 22 28 29.4 -1.6**
ARU Arti 67.50 336 P **P 22 28 30.7 -1.1**
comp=E,93nm,1.5s,mb5.6,SNR=7.8
ARU Arti 67.50 336 *d i*P **P 22 28 30.8 -1.0**
ARU 22 28 58.5
ARU *e*PPP 22 32 36.0
ARU S S 22 37 25.5 +2.4
ARU 22 38 25.3
ARU pmax pmax
comp=Z,12nm,1.2s,mb4.8
ARU MLR MLR
comp=Z,656nm,20.0s
ARU Arti 67.50 336 *e*P **P 22 28 30.6 -1.2**
comp=Z,24nm,1.1s,mb5.1
KEH Kehvi 67.59 318 P **P 22 28 30.3 -2.4**
ZEI Tsey 67.81 318 *e*P **P 22 28 32.5 -1.5**
ZEI *e*S S 22 37 31.6 +4.3
ZEI pmax pmax
comp=Z,25nm,0.7s,mb5.3
ONI Oni 68.03 318 P **P 22 28 38.2 +2.8**
ONI S S 22 37 35.1 +5.1
ARTV Artvin 68.51 316 *i* P **P 22 28 39.1 +0.7**
DDEM Demirkent 68.52 316 *i* P **P 22 28 36.4 -2.1**
KIV Kislovodsk 69.11 319 P **P 22 28 42.8 +0.7**
comp=Z,183nm,1.0s,mb6.0,SNR=8.8
KIV Kislovodsk 69.11 319 *e*P **P 22 28 42.2 +0.1**
KIV pmax pmax
comp=Z,29nm,0.9s,mb5.2
KIV Kislovodsk 69.11 319 *e*P **P 22 28 42.2 +0.1**
comp=Z,29nm,0.9s,mb5.2
KIV Kislovodsk 69.11 319 P **P 22 28 43.0 +0.9**
SNR=16
MBAR Mbarara 70.25 270 *e*P **P 22 28 49.6 -0.1**
KEMA Kemaliye 70.27 313 *i* P **P 22 28 47.5 -1.8**
SOKR Solikamsk 70.33 338 *e*P **P 22 28 49.4 +0.1**
SOKR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
SOKR MLR MLR
comp=Z,780nm,26.0s
GZT Gaziantep 70.34 311 *i* P **P 22 28 48.0 -1.8**
MAW Mawson 70.64 195 *e*P **P 22 28 49.9 -1.1**
comp=Z,15nm,1.0s,mb4.9
MAW Mawson 70.64 195 P **P 22 28 50.2 -0.8**
comp=Z,20nm,0.9s,mb5.0,baz=24,slow=7.3,SNR=19
MAW LR LR 22 52 43.8
comp=Z,872nm,21.1s,baz=37,slow=30
MAW Mawson 70.64 195 *e*P **P 22 28 49.8 -1.2**
MAW pmax pmax
comp=Z,8.0nm,1.1s
MAW Mawson 70.64 195 *e*P **P 22 28 49.8 -1.2**
comp=Z,7.7nm,1.1s,mb4.5
MMAI Mount Meron Ar 70.78 306 P **P 22 28 51.6 -1.0**
comp=Z,22nm,0.7s,mb5.2,baz=96,slow=7.8,SNR=21
MMAI LR LR 23 01 49.0
comp=Z,898nm,18.0s,baz=95,slow=37
SOC Sochi 70.94 318 *e*P **P 22 28 52.5 -0.8**
SOC *e**PP pP 22 29 02.1 -8.7
SOC *e**SP sP 22 29 05.4 -13
SOC *e* pP 22 29 11.9 +1.1
SOC *e* 22 31 28.8
SOC *e*PPP 22 33 10.7
SOC *e*S S 22 38 02.4 -1.7
SOC *e* 22 38 52.8
SOC *e*SS SS 22 42 37.4 -0.8
SOC pmax pmax
comp=Z,36nm,0.7s,mb5.4
SOC pmax pmax
comp=Z,251nm,3.4s
PETK Petropavlovsk- 72.26 32 P **P 22 29 01.0 -0.1**
comp=Z,1.8nm,0.7s,mb4.1,baz=224,slow=8.1,SNR=3.3
PETK LR LR 23 02 04.5
comp=Z,379nm,19.6s,baz=238,slow=37
PET Petropavlovsk 72.73 32 *e*P **P 22 29 07.6 +3.7**
PET *e*S S 22 38 26.2 +1.9
PET pmax pmax
comp=Z,100nm,7.6s
PET pmax pmax
comp=Z,20nm,0.6s,mb5.2
PET MLR MLR
comp=Z,800nm,19.0s
PET Petropavlovsk 72.73 32 *e*P **P 22 29 02.9 -1.0**
VRHR Novokhopersk 72.80 325 *e*P **P 22 29 04.5 +0.2**
VRHR pmax pmax
comp=N,20nm,0.8s
VRHR pmax pmax
comp=E,20nm,0.8s
VRHR pmax pmax
comp=Z,60nm,0.8s,mb5.6
AVNT Avonos 72.81 312 *i* P **P 22 29 05.6 +1.0**
ANN Anapa 72.91 318 *e*P **P 22 29 05.7 +0.6**
ANN *e*S S 22 38 29.9 +3.2
ANN pmax pmax
comp=Z,31nm,1.3s,mb5.1
LSZ Lusaka 72.92 255 *e*P **P 22 29 05.6 -0.1**
LSZ pmax pmax
comp=Z,29nm,1.1s,mb5.1
LSZ Lusaka 72.92 255 *e*P **P 22 29 05.6 -0.2**
comp=Z,29nm,1.1s,mb5.1
CSS Prodhromos 72.94 307 *e*P **P 22 29 05.8 +0.3**
comp=Z,58nm,1.0s,mb5.5
CDAG Cicekdag 73.41 312 *i* P **P 22 29 06.3 -1.9**
BR131 Keskin Array S 73.98 312 *e*P **P 22 29 08.7 -2.8**
comp=Z,9.7nm,0.7s,mb4.8
BRTR Keskin Array B 73.98 312 P **P 22 29 09.1 -2.5**
comp=Z,11nm,0.8s,mb4.8,baz=128,slow=7.0,SNR=22
BRTR LR LR 23 03 14.6
comp=Z,286nm,20.6s,baz=294,slow=37
BRTR Keskin Array B 73.98 312 P **P 22 29 09.1 -2.5**
BRTR ⇑*e*P 22 29 12.1
BRTR LR LR 23 03 14.7
VSR Storozhevoye 74.26 325 *e*P **P 22 29 13.5 +0.6**
VSR pmax pmax
comp=N,2.0nm,0.6s
VSR pmax pmax
comp=E,7.0nm,0.6s
VSR pmax pmax
comp=Z,30nm,0.6s,mb5.4
RPZ Rata Peaks 74.35 135 P **P 22 29 12.3 -1.4**
comp=Z,7.9nm,0.6s,mb4.8,baz=30,slow=7.0,SNR=7.1
RPZ LR LR 23 00 33.1
comp=Z,2μm,21.7s,baz=222,slow=35
RPZ Rata Peaks 74.35 135 *e*P **P 22 29 12.8 -0.9**
comp=Z,28nm,0.8s,mb5.2
BALT Daday 74.68 314 *i* P **P 22 29 12.4 -3.1**
SEY Seymchan 75.16 22 *e*P **P 22 29 17.3 -0.5**
SIM Simferopol' 75.19 318 *e*P **P 22 29 22.0 +3.6**
SIM *e*S S 22 38 53.0 +0.7
SIM pmax pmax
comp=Z,22nm,0.7s,mb5.2
SIM MLR MLR
comp=Z,280nm,19.4s
TIXI Tiksi 75.59 9 *e*P **P 22 29 18.2 -2.0**
TIXI *e*S S 22 38 48.6 -7.2
TIXI pmax pmax
comp=Z,33nm,1.4s,mb5.1
TIXI MLR MLR
comp=Z,2μm,19.0s
TIXI Tiksi 75.59 9 *e*P **P 22 29 18.7 -1.5**
comp=Z,12nm,0.6s,mb5.0
LBTB Lobatse 75.97 245 *e*P **P 22 29 24.0 +0.7**
LBTB pmax pmax
comp=Z,79nm,1.5s,mb5.4
LBTB Lobatse 75.97 245 *e*P **P 22 29 24.0 +0.6**
comp=Z,79nm,1.5s,mb5.4
AKAS Kas 76.19 308 *i* P **P 22 29 25.7 +1.4**
BOSA Boshof 76.58 241 P **P 22 29 25.8 -1.0**
comp=Z,17nm,0.8s,mb5.0,baz=93,slow=5.3,SNR=26
BOSA LR LR 22 59 27.6
comp=Z,423nm,18.0s,baz=89,slow=33
BOSA Boshof 76.58 241 *e*P **P 22 29 26.4 -0.3**
BOSA pmax pmax
comp=Z,26nm,0.9s,mb5.2
BOSA Boshof 76.58 241 *e*P **P 22 29 26.4 -0.3**
comp=Z,26nm,0.9s,mb5.2
MOS Moscow 76.92 329 *e*P **P 22 29 29.7 +1.7**
MOS *e* 22 32 21.1
MOS *e*S S 22 39 10.9 +0.1
MOS pmax pmax
comp=Z,53nm,0.8s,mb5.5
OBN Obninsk 77.23 328 ⇑*i*P **P 22 29 28.8 -0.9**
OBN *e* 22 32 25.9
OBN *i* S S 22 39 14.0 -0.2
OBN *e*SS SS 22 44 18.9 +5.5
OBN pmax pmax
comp=Z,46nm,1.6s,mb5.2
OBN Obninsk 77.23 328 *e*P **P 22 29 27.9 -1.9**
comp=Z,45nm,1.0s,mb5.3
SYO Syowa Base 78.29 199 ⇓*e*P **P 22 29 35.2 -0.2**
BALY Balya 78.48 311 *i* P **P 22 29 37.7 +0.6**
PSN Preselentsi 78.94 315 P **P 22 29 42.0 +2.5**
TIRR Tirgusor 78.96 316 ⇑P **P 22 29 40.2 +0.6**
TIRR Tirgusor 78.96 316 *e*P **P 22 29 38.6 -1.0**
comp=Z,25nm,0.9s,mb5.1
TIRR P 22 29 42.4
TIRR Tirgusor 78.96 316 ⇑*i*P **P 22 29 40.2 +0.6**
KIS Kishinev 79.31 318 *e*P **P 22 29 42.0 +0.6**
KIS *e*S S 22 39 39.0 +2.1
KIS *i* ScS ScS 22 39 54.0 -5.0
KIS LRM 23 14 02.0
comp=Z,300nm,17.0s
KIS Kishinev 79.31 318 *e*P **P 22 29 42.0 +0.6**
KIS *e* 22 29 49.0
KIS *e*S S 22 39 39.0 +2.1
KIS *i* 22 39 54.0
KIS MLR MLR
comp=Z,300nm,17.0s
KIS MLR MLR
comp=Z,300nm,17.0s
CFR Carcaliu 79.33 317 ⇓P **P 22 29 43.1 +1.5**
CFR Carcaliu 79.33 317 ⇓*i*P **P 22 29 43.1 +1.5**
PRD Provadia 79.39 314 P **P 22 29 44.6 +2.6**
LEOM Leova 79.56 318 ⇓P **P 22 29 45.8 +3.0**
LEOM Leova 79.56 318 ⇓*i*P **P 22 29 45.8 +3.0**
AKASG Malin Array Be 80.00 322 P **P 22 29 43.2 -1.9**
comp=Z,4.9nm,0.6s,mb4.6,baz=87,slow=5.0,SNR=22
AKASG Malin Array Be 80.00 322 *c e*P **P 22 29 46.5 +1.4**
AKASG pmax pmax
comp=Z,5.0nm,0.6s
AKBB Malin Array Si 80.00 322 *e*P **P 22 29 45.1 0.0**
KIEV Kiev 80.01 322 *e*P **P 22 29 45.5 +0.3**
KIEV pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
KIEV Kiev 80.01 322 *e*P **P 22 29 45.5 +0.3**
comp=Z,9.2nm,0.8s,mb4.8
GRER 80.17 317 ⇑P PcP 22 29 56.8 +3.5
GRER 80.17 317 ⇑*i*P PcP 22 29 56.8 +3.6
VRI Vrincioaia 80.45 317 ⇑P **P 22 29 47.2 -0.4**
VRI P 22 29 49.3
VRI Vrincioaia 80.45 317 ⇑*i*P **P 22 29 47.2 -0.4**
SZH Strazhica 80.45 314 P **P 22 29 49.9 +2.2**
PLOR Plostina 80.50 317 ⇑P **P 22 29 51.6 +3.7**
PLOR Plostina 80.50 317 ⇑*i*P **P 22 29 51.5 +3.6**
DIM Dimitrovgrad 80.50 313 P **P 22 29 50.6 +2.6**
SULR 80.52 316 ⇑P **P 22 29 53.9 +5.9**
SULR 80.52 316 ⇑*i*P **P 22 29 53.9 +5.9**
TESR 80.64 318 ⇓P **P 22 29 47.7 -0.9**
TESR P 22 29 49.5
TESR 80.64 318 ⇓*i*P **P 22 29 47.7 -0.9**
SUR Sutherland 80.70 238 *e*P **P 22 29 50.6 +1.3**
comp=Z,36nm,0.8s,mb5.3
MLR Muntele Rosu 80.90 317 ⇑P **P 22 29 49.5 -0.5**
MLR P 22 29 52.6
MLR Muntele Rosu 80.90 317 ⇑*i*P **P 22 29 49.5 -0.6**
RZN Rozhen 81.03 313 P **P 22 29 53.2 +2.4**
BUR01 Bucovina Ar. S 81.83 319 P **P 22 29 57.1 +2.1**
BURAR Bucovina Array 81.83 319 ⇓P **P 22 29 55.0 +0.1**
BURAR Bucovina Array 81.83 319 ⇓*i*P **P 22 29 55.0 +0.1**
BUR08 Bucovina Ar. S 81.85 319 *e*P **P 22 29 54.6 -0.5**
MDB Medias 82.10 317 ⇑P **P 22 29 52.7 -3.7**
MDB Medias 82.10 317 ⇑*i*P **P 22 29 52.7 -3.7**
KKB Krupnik 82.27 313 P **P 22 29 58.6 +1.3**
VTS Vitosha 82.29 313 ⇓P **P 22 29 56.3 -1.2**
VTS Vitosha 82.29 313 P **P 22 29 58.7 +1.2**
VTS Vitosha 82.29 313 ⇓*i*P **P 22 29 56.3 -1.2**
NACGM Naroch 82.51 326 *e* **P 22 30 02.0 +3.7**
JOF Joensuu 82.55 334 *e*P **P 22 29 57.5 -0.8**
JOF Joensuu 82.55 334 *e*p **P 22 29 57.5 -0.8**
comp=Z,14nm,0.8s,mb5.0
IDID Didziasalis 82.64 326 *e*P **P 22 29 58.6 -0.4**
IDID AMB AMB 22 30 06.8
comp=Z,16nm,0.9s,mb5.1
BILL Bilibino 82.71 20 *e*P **P 22 29 59.5 +0.4**
IIGN Ignalina 82.93 326 *e*P **P 22 30 00.1 -0.3**
IIGN AMB AMB 22 30 07.4
comp=Z,20nm,1.1s,mb5.1
BMR Baia Mare 82.99 318 ⇓P **P 22 30 03.2 +2.3**
BMR P 22 30 04.0
BMR Baia Mare 82.99 318 ⇓*i*P **P 22 30 03.2 +2.3**
IZAR Zarasai 83.01 327 *e*P **P 22 30 00.5 -0.4**
IZAR AMB AMB 22 30 05.2
comp=Z,8.2nm,0.6s,mb4.9
ISAL Salakas 83.04 326 *e*P **P 22 30 00.6 -0.4**
ISAL AMB AMB 22 30 08.9
comp=Z,11nm,1.0s,mb4.8
LVV L'vov 83.04 321 *e*P **P 22 30 02.6 +1.4**
DEV Deva 83.07 316 ⇑P **P 22 30 06.1 +4.7**
DEV Deva 83.07 316 ⇑*i*P **P 22 30 06.1 +4.7**
GZR Gura Zlata 83.07 316 P **P 22 30 03.3 +1.9**
GZR ⇓P 22 30 05.9
GZR Gura Zlata 83.07 316 ⇓*i*P **P 22 30 05.9 +4.5**
TSUM Tsumeb 83.16 251 *e*P **P 22 30 04.0 +1.6**
comp=Z,13nm,1.1s,mb4.9
SBA Scott Base 83.17 169 *e*P **P 22 30 00.9 -0.4**
SBA pmax pmax
comp=Z,28nm,1.3s,mb5.1
SBA Scott Base 83.17 169 *e*P **P 22 30 00.9 -0.4**
comp=Z,28nm,1.3s,mb5.1
SBA *e*PcP PcP 22 30 05.6 -0.1
APA Apatity 83.34 339 ⇑*e*P **P 22 30 08.0 +5.7**
APA pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
APA MLR MLR
comp=Z,800nm,24.0s
DRGR 83.36 317 P **P 22 30 04.2 +1.3**
DRGR ⇓P 22 30 04.7
DRGR 83.36 317 ⇓*i*P **P 22 30 04.7 +1.8**
VSU Vasula 83.42 329 *e*P **P 22 30 02.4 -0.5**
VSU pmax pmax
comp=Z,42nm,1.4s,mb5.3
TRPA Tarpa 83.70 319 ⇓*i*P **P 22 30 05.2 +0.6**
KWP Kalwaria Pacla 83.85 320 *e*P **P 22 30 08.2 +2.8**
KWP Kalwaria Pacla 83.85 320 ⇓P **P 22 30 05.9 +0.6**
KWP Kalwaria Pacla 83.85 320 *e*P **P 22 30 08.2 +2.9**
KWP Kalwaria Pacla 83.85 320 ⇓*i*P **P 22 30 05.9 +0.6**
BZS Buzias 83.92 316 ⇓P **P 22 30 08.9 +3.1**
BZS Buzias 83.92 316 ⇓*i*P **P 22 30 08.9 +3.1**
UZH Uzhgorod 83.95 319 *e*P **P 22 30 08.5 +2.6**
UZH *i* 22 30 16.7
UZH *i* pP 22 30 27.0 +3.2
UZH *i* S S 22 40 26.3 +1.6
SUW Suwalki 84.37 325 *e*P **P 22 30 10.1 +2.3**
SUW Suwalki 84.37 325 *e*P **P 22 30 07.0 -0.9**
SUW pmax pmax
comp=Z,142nm,0.9s,mb6.1
SUW Suwalki 84.37 325 *e*P **P 22 30 07.0 -0.9**
comp=Z,142nm,0.9s,mb6.1
SUW *e*P 22 30 10.1
FINES FINESS Array B 84.48 332 P **P 22 30 07.4 -0.8**
comp=Z,4.8nm,0.6s,mb4.8,baz=95,slow=5.7,SNR=22
FINES LR LR 23 15 56.9
comp=Z,509nm,18.3s,baz=110,slow=41
CRVS Cervenica-Dubn 84.54 319 *e*P **P 22 30 12.1 +3.3**
CRVS pmax pmax
comp=Z,17nm,1.2s,mb5.0
CRVS Cervenica-Dubn 84.54 319 *e*P **P 22 30 12.1 +3.3**
comp=Z,17nm,1.2s,mb5.0
CRVS Cervenica-Dubn 84.54 319 *e*P **P 22 30 12.1 +3.3**
KAF Kangasniemi 84.54 333 *e*P **P 22 30 08.0 -0.5**
KAF pmax pmax
comp=Z,25nm,0.7s,mb5.5
KAF Kangasniemi 84.54 333 *e*P **P 22 30 08.0 -0.5**
comp=Z,25nm,0.7s,mb5.5
KAF Kangasniemi 84.54 333 *e*p **P 22 30 08.0 -0.5**
comp=Z,25nm,0.7s,mb5.5
STHS Stebnicka Huta 84.76 320 *e*P **P 22 30 13.4 +3.5**
STHS pmax pmax
comp=Z,12nm,0.9s,mb5.0
STHS Stebnicka Huta 84.76 320 *e*P **P 22 30 13.4 +3.5**
comp=Z,12nm,0.9s,mb5.0
STHS Stebnicka Huta 84.76 320 *e*P **P 22 30 13.4 +3.5**
KECS Kecovo 85.11 319 *e*P **P 22 30 15.2 +3.5**
KECS pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
KECS Kecovo 85.11 319 *e*P **P 22 30 15.2 +3.5**
comp=Z,6.5nm,1.0s,mb4.7
KECS Kecovo 85.11 319 *e*P **P 22 30 15.2 +3.5**
PSZ Piszkesteto 85.42 318 *e*P **P 22 30 12.6 -0.7**
PSZ ⇑P 22 30 16.1
PSZ Piszkesteto 85.42 318 ⇑*i*P **P 22 30 16.1 +2.8**
OJC Ojcow 85.80 320 *e*P **P 22 30 13.9 -1.2**
OJC *e*PcP PcP 22 30 16.2 -1.6
OJC *e*SKSac SKSac 22 40 35.6 +0.4
OJC LR LR
comp=Z,400nm,19.7s
BUD Budapest 85.95 318 ⇑*e*P **P 22 30 16.8 +0.9**
PKSM Moragy 86.05 316 ⇑P **P 22 30 15.3 -1.1**
PKSM P 22 30 19.0
PKSM Moragy 86.05 316 ⇑*i*P **P 22 30 15.4 -1.1**
VYHS Vyhne 86.20 319 *e*P **P 22 30 18.3 +1.2**
VYHS Vyhne 86.20 319 *e*P **P 22 30 18.3 +1.2**
KEV Kevo 86.26 340 *e*P **P 22 30 16.4 -0.6**
KEV pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
KEV Kevo 86.26 340 *e*P **P 22 30 16.4 -0.6**
comp=Z,6.3nm,0.9s,mb4.8
KEV Kevo 86.26 340 *e*p **P 22 30 16.4 -0.6**
comp=Z,6.3nm,0.9s,mb4.8
KOLL Kolacno 86.50 319 *e*P **P 22 30 21.8 +3.2**
KOLL Kolacno 86.50 319 *e*P **P 22 30 21.8 +3.2**
ARCES ARCESS Array B 86.71 340 P **P 22 30 18.6 -0.5**
comp=Z,2.8nm,0.4s,mb4.8,baz=101,slow=4.7,SNR=34
ARCES PP PP 22 33 40.9 -1.2
comp=Z,1.7nm,0.7s,baz=95,slow=10,SNR=3.5
ARCES LR LR 23 13 19.1
comp=Z,651nm,19.2s,baz=108,slow=38
ARCES ARCESS Array B 86.71 340 P **P 22 30 18.6 -0.6**
ARCES 22 33 40.9
OKC Ostrava-Krasne 86.81 320 *e*P **P 22 30 23.7 +3.6**
OKC *e*S S 22 40 59.3 +6.5
OKC Ostrava-Krasne 86.81 320 *e*P **P 22 30 23.7 +3.6**
OKC *e*S S 22 40 59.3 +6.5
OKC AMS AMS 23 14 50.0
comp=Z,300nm,17.5s
MORC Moravsky Berou 87.19 320 *e*P **P 22 30 21.5 -0.5**
MORC pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
MORC Moravsky Berou 87.19 320 *e*P **P 22 30 21.4 -0.5**
comp=Z,10nm,0.9s,mb5.1
MORC ⇑P 22 30 25.0
MORC Moravsky Berou 87.19 320 ⇑*i*P **P 22 30 25.0 +3.0**
ZST Bratislava 87.31 318 *e*P **P 22 30 25.6 +3.0**
ZST pmax pmax
comp=Z,10.0nm,1.0s,mb5.0
ZST Bratislava 87.31 318 *e*P **P 22 30 25.6 +3.0**
comp=Z,9.5nm,1.0s,mb5.0
ZST Bratislava 87.31 318 *e*P **P 22 30 25.6 +3.0**
ACER Acerenza 87.47 311 P **P 22 30 26.8 +3.3**
comp=Z,99nm,1.4s,mb5.8
KOGS Kog 87.73 316 *e*P **P 22 30 26.8 +2.2**
GKP Gorka Klasztor 87.76 323 *e*P **P 22 30 28.2 +3.6**
GKP Gorka Klasztor 87.76 323 *e*P **P 22 30 28.2 +3.6**
DPC Dobruska-Polom 88.03 320 *e*P **P 22 30 30.4 +4.4**
DPC *e*S S 22 41 06.7 +2.2
DPC MLR MLR
comp=Z,400nm,20.3s
DPC Dobruska-Polom 88.03 320 *e*P **P 22 30 30.4 +4.4**
DPC *e*S S 22 41 06.7 +2.2
DPC LR LR
comp=Z,400nm,20.3s
DPC Dobruska-Polom 88.03 320 *e*P **P 22 30 30.4 +4.4**
DPC *e*S S 22 41 06.7 +2.2
DPC AMS AMS 23 18 00.0
comp=Z,400nm,20.3s
QSPA South Pole Qui 88.07 180 *e*P **P 22 30 24.3 -1.3**
comp=Z,29nm,1.5s,mb5.3
KSP Ksiaz 88.10 321 *e*P **P 22 30 28.8 +2.6**
CSSN Cassano Irpino 88.17 311 P **P 22 30 29.2 +2.4**
comp=Z,78nm,1.6s,mb5.7
GROS Grobnik 88.24 316 *e*P **P 22 30 29.2 +2.1**
UPC Upice 88.24 320 *e*P **P 22 30 30.9 +4.0**
ARSA Arzberg 88.29 317 ⇑*i*P **P 22 30 26.2 -1.1**
comp=Z,15nm,1.2s,mb5.1
TREC Trest 88.48 319 *e*P **P 22 30 31.6 +3.5**
TREC *e*S S 22 41 16.7 +7.9
TREC MLR MLR
comp=Z,300nm,21.6s
TREC Trest 88.48 319 *e*P **P 22 30 31.6 +3.5**
TREC *e*S S 22 41 16.7 +7.9
TREC AMS AMS 23 15 30.0
comp=Z,300nm,21.6s
SOKA Soboth 88.58 317 ⇑*i*PcP **P 22 30 29.6 +0.9**
comp=Z,23nm,1.1s,mb5.4
LJU Ljubljana 88.89 316 *e*P **P 22 30 31.5 +1.4**
LJU *e* 22 30 34.0
LJU *e* 22 30 40.4
SDI San Donato 89.14 312 P **P 22 30 34.5 +3.1**
PRU Pruhonice 89.14 320 *e*P **P 22 30 35.4 +4.2**
PRU *e*S S 22 41 22.5 +7.5
PRU MLR MLR
comp=Z,400nm,17.3s
PRU Pruhonice 89.14 320 *e*P **P 22 30 35.4 +4.2**
PRU *e*S S 22 41 22.5 +7.5
PRU LR LR
comp=Z,400nm,17.3s
PRU Pruhonice 89.14 320 *e*P **P 22 30 35.4 +4.2**
PRU *e*S S 22 41 22.5 +7.5
PRU AMS AMS 23 18 40.0
comp=Z,400nm,17.3s
PVCC Panska Ves 89.17 320 *e*P **P 22 30 35.2 +3.9**
PVCC MLR MLR
comp=Z,400nm,18.3s
PVCC Panska Ves 89.17 320 *e*P **P 22 30 35.2 +3.9**
PVCC LR LR
comp=Z,400nm,18.3s
PVCC Panska Ves 89.17 320 *e*P **P 22 30 35.2 +3.9**
PVCC AMS AMS 23 18 20.0
comp=Z,400nm,18.3s
CADS Cadrg 89.45 316 *e*P **P 22 30 33.3 +0.6**
AQU L'Aquila 89.47 312 ⇑P **P 22 30 33.8 +0.9**
AQU L'Aquila 89.47 312 *e*P **P 22 30 33.2 +0.3**
AQU L'Aquila 89.47 312 ⇑*i*P **P 22 30 33.8 +0.9**
BRG Berggiesshubel 89.58 321 *e*P **P 22 30 34.3 +1.1**

comp=Z,17nm,1.0s,mb5.3
BRG Berggiesshubel 89.58 321 *e*P **P 22 30 35.5 +2.3**
comp=Z,16nm,1.0s,mb5.3
BRG *e* 22 36 12.3
comp=Z,2.8nm,1.0s
BRG S SKSac 22 41 02.0 +4.0
BRG
comp=N,284nm,19.8s
BRG
comp=E,251nm,15.0s
BRG
comp=Z,242nm,17.1s
CING Cingoli 89.68 313 P **P 22 30 35.5 +1.6**
comp=Z,24nm,1.2s,mb5.4
NRCA Norcia 89.71 313 P **P 22 30 35.3 +1.3**
comp=Z,12nm,0.8s,mb5.3
KHC Kasperske Hory 89.72 319 *e*P **P 22 30 37.5 +3.6**
KHC *e*S S 22 41 28.0 +7.6
KHC MLR MLR
comp=Z,400nm,21.7s
KHC Kasperske Hory 89.72 319 *e*P **P 22 30 34.0 +0.1**
comp=Z,3.8nm,0.9s,mb4.7
KHC Kasperske Hory 89.72 319 *e*P **P 22 30 37.5 +3.6**
KHC *e*S S 22 41 28.0 +7.6
KHC AMS AMS 23 16 40.0
comp=Z,400nm,21.7s
PTCC Patocco-Chiusa 89.72 316 P **P 22 30 34.7 +0.7**
comp=Z,14nm,0.8s,mb5.3
RUE Ruedersdorf 89.78 322 *e*P **P 22 30 37.6 +3.5**
comp=Z,64nm,1.2s,mb5.8
RUE Ruedersdorf 89.78 322 *e*P **P 22 30 33.0 -1.1**
FSSB Fossombrone 90.00 314 P **P 22 30 37.4 +2.1**
comp=Z,63nm,1.5s,mb5.7
RJOB Jochberg 90.17 318 *e*P **P 22 30 37.9 +1.9**
comp=Z,11nm,1.2s,mb5.1
WET Wettzell 90.18 319 *e*P **P 22 30 38.0 +1.9**
comp=Z,23nm,1.3s,mb5.3
CLL Collm 90.20 321 *e*P **P 22 30 37.9 +1.8**
comp=Z,13nm,1.2s,mb5.1
CLL Collm 90.20 321 *i* P **P 22 30 38.2 +2.1**
CLL *e* 22 41 04.0
CLL *e*S S 22 41 17.0 -7.8
CLL pmax pmax
comp=Z,11nm,1.1s,mb5.1
CLL MLR MLR
comp=Z,400nm,18.6s
CLL Collm 90.20 321 *i* P **P 22 30 38.2 +2.1**
comp=Z,11nm,1.1s,mb5.1
CLL *e*SKS 22 41 04.0
CLL *e*S S 22 41 17.0 -7.8
CLL LR LR
comp=Z,400nm,18.6s
CLL Collm 90.20 321 *e*P **P 22 30 35.0 -1.1**
CLL *i* Pmax 22 30 38.2
comp=Z,11nm,1.1s
CLL *i* (pPcP) pP 22 30 54.5 +0.3
CLL *e*SKSac SKSac 22 41 04.0 +2.4
CLL *e*S S 22 41 25.0 +0.2
CLL *e*SP SP 22 42 33.0 +2.0
CLL *e*(SSS) 22 51 48.0
CLL *e*SSSS 22 54 30.0
CLL LmH 23 16 00.0
comp=N,400nm,18.9s
CLL LmH 23 16 00.0
comp=E,300nm,19.3s
CLL LmV 23 19 00.0
comp=Z,400nm,18.6s
RSM Repubblica di 90.25 314 P **P 22 30 40.1 +3.6**
RSM pmax pmax
comp=Z,47nm,1.6s,mb5.6
RSM Repubblica di 90.25 314 P **P 22 30 40.1 +3.6**
comp=Z,47nm,1.6s,mb5.6
ABTA Abfaltersbach 90.32 317⇑ *i*PcP **P 22 30 39.6 +2.9**
comp=Z,7.7nm,1.0s,mb5.0
TANN Tannenbergstha 90.50 320 *e*P **P 22 30 41.2 +3.7**
comp=Z,8.0nm,1.2s,mb4.9
NKC Novy Kostel 90.50 320 *e*P **P 22 30 40.7 +3.2**
NKC *e*S S 22 41 33.9 +6.3
NKC Novy Kostel 90.50 320 *e*P **P 22 30 40.7 +3.2**
NKC *e*S S 22 41 33.9 +6.3
NKC AMS AMS 23 19 00.0
comp=Z,400nm,21.9s
GUNZ Gunzen 90.58 320 *e*P **P 22 30 41.6 +3.7**
comp=Z,29nm,1.7s,mb5.3
WERD Werda 90.60 320 *e*P **P 22 30 41.5 +3.5**
comp=Z,7.0nm,1.0s,mb5.0
SFI Santa Sofia 90.68 314 P **P 22 30 42.9 +4.4**
SFI pmax pmax
comp=Z,39nm,1.6s,mb5.5
SFI Santa Sofia 90.68 314 P **P 22 30 42.9 +4.4**
comp=Z,39nm,1.6s,mb5.5
WTTA Wattenberg 90.94 317⇑ *i*PcP **P 22 30 41.4 +1.8**
comp=Z,19nm,0.9s,mb5.4,SNR=5.5
MOX Moxa 91.05 320 *e*P **P 22 30 42.5 +2.4**
comp=Z,12nm,1.3s,mb5.1
MOX
comp=Z,300nm,18.0s
MOX Moxa 91.05 320 *e*P **P 22 30 42.3 +2.2**
comp=Z,13nm,1.4s,mb5.1
MOX Moxa 91.05 320 *e*P **P 22 30 42.5 +2.4**
MOX pmax pmax
comp=Z,12nm,1.3s,mb5.1
MOX MLR MLR
comp=Z,300nm,18.0s
GRF Grafenberg Arr 91.28 319 *e*P **P 22 30 42.3 +1.1**
comp=Z,36nm,1.6s,mb5.5
GRF *e*S S 22 41 44.1 +9.4
GRF *e*L 23 22 16.4
comp=Z,613nm,18.0s
GRF Grafenberg Arr 91.28 319 *e*P **P 22 30 42.3 +1.1**
GRF *e*S S 22 41 44.1 +9.4
GRF pmax pmax
comp=Z,36nm,1.6s,mb5.5
GRF MLR MLR
comp=Z,600nm,18.0s
MOTA Moosalm 91.30 317⇓ *i*PcP **P 22 30 43.4 +2.1**
comp=Z,13nm,0.9s,mb5.3,SNR=8.0
NB2 NORSAR Subarra 91.53 331 P **P 22 30 41.4 -0.7**
comp=Z,4.1nm,0.7s,mb4.9,baz=93,slow=4.6
NB2 NORSAR Subarra 91.53 331 P **P 22 30 41.4 -0.7**
baz=93,slow=4.6
NB2 NORSAR Subarra 91.53 331 P **P 22 30 41.4 -0.7**
NB2 NORSAR Subarra 91.53 331 P **P 22 30 41.4 -0.7**
NOA NORSAR Array B 91.53 331 P **P 22 30 41.1 -1.0**
comp=Z,1.5nm,0.6s,mb4.5,baz=95,slow=5.0,SNR=7.6
NOA PP PP 22 34 19.4 -1.3
comp=Z,1.0nm,0.8s,baz=96,slow=7.5,SNR=3.6
NOA LR LR 23 16 47.0
comp=Z,264nm,21.5s,baz=0.0,slow=39
NOA NORSAR Array B 91.53 331 P **P 22 30 41.1 -1.0**
NOA 22 34 19.4
RETA Reutte 91.53 317⇑ *i*PcP PcP 22 30 44.4 +1.2
comp=Z,14nm,0.8s,SNR=7.2
GSCL Gusciola 91.60 314 P **P 22 30 47.4 +4.6**
CLZ Clausthal 91.86 322 *e*P **P 22 30 45.9 +2.1**
comp=Z,41nm,2.0s,mb5.4
BSEG Bad Segeberg 91.91 324 *e*P **P 22 30 46.3 +2.3**
comp=Z,37nm,2.0s,mb5.4
NRDL Niedersach Rie 92.03 322 *e*P **P 22 30 45.6 +1.0**
comp=Z,28nm,1.6s,mb5.3
UBBA Unterbreizbach 92.08 321 *e*P **P 22 30 46.7 +1.9**
comp=Z,10.0nm,1.4s,mb5.0
DAVA Damuels 92.13 317⇑ *i*PcP PcP 22 30 47.3 +1.4
comp=Z,30nm,1.1s,SNR=9.5
KEST Kesra 92.43 306 P **P 22 30 47.9 +1.0**
comp=Z,6.4nm,0.9s,mb5.0,baz=104,slow=0.6,SNR=18
KEST LR LR 23 14 03.2
comp=Z,143nm,19.0s,baz=342,slow=37
KEST Kesra 92.43 306 *e*P **P 22 30 47.7 +0.9**
VSL Villasalto 92.44 309 P **P 22 30 47.1 +0.3**
STU Stuttgart 92.60 319 P **P 22 30 47.1 -0.2**
TNS Taunus Mts 93.07 320 *e*P **P 22 30 52.2 +2.8**
comp=Z,24nm,1.0s,mb5.6
BFO Black Forest 93.17 318 *e*P **P 22 30 52.9 +2.9**
comp=Z,6.0nm,1.0s,mb5.0
BFO Black Forest 93.17 318 *e*P **P 22 30 50.2 +0.2**
BFO pmax pmax
comp=Z,5.0nm,0.9s,mb4.9
BFO Black Forest 93.17 318 *e*P **P 22 30 50.2 +0.3**
comp=Z,4.5nm,0.9s,mb4.9
LPG La Plagne 94.32 315 *e*P **P 22 30 53.9 -1.4**
comp=Z,8.8nm,0.7s,mb5.0
LPG La Plagne 94.32 315 *e*P **P 22 30 53.9 -1.4**
LPG pmax pmax
comp=Z,4.0nm,0.7s,mb5.0
LPG La Plagne 94.32 315 *e*P **P 22 30 53.9 -1.4**
comp=Z,4.4nm,0.7s,mb5.0
MBDF Montbardon 94.33 315 *e*P **P 22 30 52.9 -2.4**
LPL La Plagne 94.33 315 *e*P **P 22 30 53.9 -1.4**
comp=Z,7.1nm,0.7s,mb4.9
LPL La Plagne 94.33 315 *e*P **P 22 30 53.9 -1.4**
LPL pmax pmax
comp=Z,4.0nm,0.7s,mb5.0
LPL La Plagne 94.33 315 *e*P **P 22 30 53.9 -1.4**
HAU Haudompre 94.51 318 *e*P **P 22 30 54.2 -1.9**
comp=Z,43nm,1.3s,mb5.4
HAU Haudompre 94.51 318 *e*P **P 22 30 54.2 -1.9**
HAU pmax pmax
comp=Z,22nm,1.3s,mb5.4
HAU Haudompre 94.51 318 *e*P **P 22 30 54.2 -1.9**
comp=Z,22nm,1.3s,mb5.4
WLF Walferdange 94.57 319 P **P 22 30 55.9 -0.4**
TAM Tamanrasset 95.77 293 P **P 22 31 03.3 +0.9**
TAM pmax pmax
comp=Z,5.0nm,1.5s,mb4.7
TAM Tamanrasset 95.77 293 P **P 22 31 03.3 +0.9**
comp=Z,5.3nm,1.5s,mb4.8
SMF Signal de Mont 96.28 317 *e*P **P 22 31 02.3 -1.9**
comp=Z,18nm,1.1s,mb5.1
SMF Signal de Mont 96.28 317 *e*P **P 22 31 02.3 -1.9**
SMF pmax pmax
comp=Z,9.0nm,1.0s,mb5.2
SMF Signal de Mont 96.28 317 *e*P **P 22 31 02.3 -1.9**
comp=Z,8.9nm,1.0s,mb5.2
BPAW Bear Paw Mtn. 99.51 25 *e*P Pdif 22 31 18.0 -0.6
comp=Z,5.4nm,1.0s
TBI Tubuai 107.12 115 *e*LR LR 23 07 27.0
comp=Z,769nm,24.2s
PPT Papeete 107.90 109 *e*LR LR 23 07 45.9
comp=Z,831nm,25.5s
RKT Rikitea 120.15 118 *e*LR LR 23 13 28.1
comp=Z,552nm,27.0s
WVOR Wild Horse Val 126.29 36 PKIKP PKPdf 22 36 39.6 +1.2
NVAR Mina Array Bea 128.88 40 PKP PKPdf 22 36 44.2 +0.7
comp=Z,0.4nm,0.4s,baz=292,slow=4.0,SNR=4.3
NVAR SKPbc 22 40 01.2
comp=Z,0.4nm,0.5s,baz=229,slow=3.5,SNR=4.0
PDAR Pinedale Array 131.00 30 PKP PKPdf 22 36 46.9 -0.5
comp=Z,0.2nm,0.4s,baz=254,slow=0.7,SNR=3.4
PDAR SKPbc SKPbc 22 40 08.4 +2.1
comp=Z,0.8nm,0.6s,baz=349,slow=1.5,SNR=5.8
ANMO Albuquerque 138.35 35 SKPbc SKPbc 22 40 32.9 +2.5
comp=Z,0.4nm,0.4s,baz=343,slow=6.0,SNR=2.7
MNTX Cornudas Mount 141.30 37 *e*PKPpre PKPpre 22 37 01.3
MNTX *e*PKPdf PKPdf 22 37 06.6 -0.2
WMOK Wichita Mounta 142.48 27 PKHKP PKPpre 22 37 03.0
TXAR Lajitas Array 144.01 38 PKP PKPdf 22 37 10.2 -1.5
comp=Z,24nm,1.1s,baz=309,slow=1.2,SNR=65
TXAR SKPbc SKPbc 22 40 47.4 +2.2
comp=Z,0.8nm,0.8s,baz=333,slow=3.2,SNR=3.5
MIAR Mount Ida 144.78 21 *e*PKIKP PKPdf 22 37 11.0 -1.9
CPUP Villa Florida 144.99 215 PKP PKPdf 22 37 11.7 -1.8
comp=Z,22nm,0.7s,baz=128,slow=2.3,SNR=25
CPUP Villa Florida 144.99 215 *e*PKP PKPdf 22 37 11.6 -1.9
UALR University of 145.00 19 *e*PKPdf PKPdf 22 37 11.2 -2.0
JCT Junction City 145.40 33 *e*PKIKP PKPdf 22 37 13.6 -0.5
TKL Tuckaleechee C 146.11 7 *e*PKIKP PKPdf 22 37 14.1 -1.0
OXF Oxford 146.12 16 *e*PKP2 PKPdf 22 37 14.8 -0.4
CPCT Cooper Cave 146.22 8 *e*PKPdf PKPdf 22 37 14.8 -0.5
SWET Sewanee 146.22 10 *e*PKPdf PKPdf 22 37 14.4 -0.9
NATX Nacogdoches 146.82 25 PKPdf PKPdf 22 37 16.3 -0.2
HKT Hockley 147.84 28 *e*PKP2 PKPbc 22 37 20.9 -0.2
LRAL Lakeview Retre 148.12 13 *e*PKPdf PKPdf 22 37 19.1 +0.5
GOGA Godfrey 148.37 7 *e*PKIKP PKPdf 22 37 18.8 -0.1
LPAZ La Paz 158.99 210 PKP PKPdf 22 37 34.6 +0.2
comp=Z,8.4nm,1.2s,baz=63,slow=2.3,SNR=7.8
LPAZ La Paz 158.99 210 *e*PKPdf PKPdf 22 37 35.1 +0.7

*IDC **09** 22:32:37.0±7.5, 1°.90S×100°.93E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.4/22, mbtmp3.6/5, MS3.9/2, Ms1 3.8/2, ms1mx3.2/35, Error ellipse: s-maj=400.1km s-min=22.2km az=53.0*
*DJA **09** 22:32:39.2°.10S×100°.59E, h20km, MLv3.7/6*
ISC 09 22:32:39.1±2.7, 2°.10S±0°.07×100°.61E±0°.07, h19km±21km, n15, σ0s84/13, mb3.6/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**0.85**	**89**	P	**Pb**	**22 32 54.5**	**-0.9**
PPSI	**Pulau Pagai**	**0.89**	**222**	P	**Pb**	**22 32 55.6**	**-0.3**
PDSI	**Padang**	**1.19**	**353**	P	**Pn**	**22 33 00.1**	**-0.7**
SDSI	**Sungai Dareh**	**1.42**	**35**	P	**Pn**	**22 33 04.5**	**+0.5**
PPI	**Padang Panjang**	**1.65**	**353**	P	**Pn**	**22 33 07.0**	**-0.1**
SISI	**Saibi**	**1.70**	**297**	P	**Pn**	**22 33 07.7**	**-0.1**
MNSI	**Mandailing Nat**	**3.06**	**340**	P	**Pn**	**22 33 27.8**	**+1.3**
MNAI	**Manna**	**3.24**	**134**	P	**Pn**	**22 33 31.5**	**+2.5**
PSI	**Prapat**	**5.16**	**341**	LR	LR	22 35 56.4	
comp=Z,633nm,20.2s,baz=156,slow=40							
WRA	**Warramunga Arr**	**37.42**	**121**	P	**P**	**22 39 50.7**	**-0.7**
0.4nm,0.9s,mb3.2,baz=298,slow=10,SNR=3.4							
ASAR	**Alice Springs**	**38.70**	**126**	P	**P**	**22 40 01.9**	**-0.3**
0.6nm,0.6s,mb3.5,baz=301,slow=7.7,SNR=7.8							
MKAR	**Makanchi Array**	**51.29**	**344**	P	**P**	**22 41 42.5**	**+0.5**
0.5nm,0.5s,mb3.7,baz=150,slow=8.2,SNR=8.1							
KURK	**Kurchatov**	**55.88**	**343**	P	**P**	**22 42 14.7**	**-0.8**
0.5nm,0.6s,mb3.7,baz=160,slow=7.4,SNR=4.1							
ZALV	**Zalesovo Beam**	**57.38**	**349**	P	**P**	**22 42 26.1**	**0.0**
0.4nm,0.4s,mb3.9,baz=164,slow=5.8,SNR=3.2							
MAW	**Mawson**	**70.33**	**194**	LR	LR	23 10 02.8	
comp=Z,122nm,18.5s,baz=226,slow=32							

*IDC **09** 22:33:09.9±2.8, 1°.97S×100°.87E, h0km, mb4.0/8, mb1 4.1/8, mb1mx3.7/22, mbtmp4.0/8, Error ellipse: s-maj=167.1km s-min=18.7km az=51.0*
*ISCJB **09** 22:33:13.4±1.0, 1°.8S±0°.2×101°.0E±0°.2, h33km, mb4.0/10, Error ellipse: s-maj=44.2km s-min=11.2km az=140.3*
*NEIC **09** 22:33:14.8±0.7, 1°.99S×100°.92E, h35km, mb4.2/4, Error ellipse: s-maj=32.0km s-min=7.7km az=52.0*
ISC 09 22:33:15.5±1.0, 1°.9S±0°.2×101°.0E±0°.2, h35km, n21, σ0s48/20, mb4.0/10, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**37.20**	**121**	P	**P**	**22 40 23.1**	**-0.5**
0.4nm,0.4s,mb3.6,baz=303,slow=8.9,SNR=7.6							
WRAB	**Tennant Creek**	**37.20**	**121**	*e*P	**P**	**22 40 22.7**	**-1.0**
1.8nm,0.6s,mb4.1							
WB2	**Warramunga Arr**	**37.21**	**121**	*e*P	**P**	**22 40 24.4**	**+0.7**
ASAR	**Alice Springs**	**38.52**	**127**	P	**P**	**22 40 35.4**	**+0.7**
1.8nm,0.6s,mb4.0,baz=301,slow=7.9,SNR=16							
BJT	**Baijiatuau**	**43.96**	**17**	P	**P**	**22 41 19.1**	**-0.1**
TKM2	**Tokmak 2**	**50.13**	**336**	*e*P	**P**	**22 42 07.7**	**+0.4**
1.9nm,0.9s,mb4.1							
AAK	**Ala-Archa**	**50.36**	**335**	P	**P**	**22 42 08.7**	**-0.3**
EKS2	**Erkin-Say**	**50.69**	**334**	*e*P	**P**	**22 42 11.3**	**-0.2**
MK31	**Makanchi Array**	**51.20**	**344**	*e*P	**P**	**22 42 15.4**	**+0.1**
MKAR	**Makanchi Array**	**51.20**	**344**	P	**P**	**22 42 15.8**	**+0.6**
1.4nm,0.6s,mb4.1,baz=148,slow=8.1,SNR=16							
MKAR	**Makanchi Array**	**51.20**	**344**	P	**P**	**22 42 15.8**	**+0.5**
MDJ	**Mudanjiang**	**52.86**	**25**	P	**P**	**22 42 27.9**	**+0.2**
KURK	**Kurchatov**	**55.79**	**343**	P	**P**	**22 42 48.6**	**-0.3**
1.0nm,0.6s,mb4.0,baz=162,slow=7.2,SNR=7.5							
KURK	**Kurchatov**	**55.79**	**343**	*e*P	**P**	**22 42 48.5**	**-0.4**
2.0nm,0.7s,mb4.3							
ZALV	**Zalesovo Beam**	**57.25**	**349**	P	**P**	**22 42 59.4**	**+0.2**
1.7nm,0.7s,mb4.2,baz=176,slow=5.9,SNR=6.6							
ZALV	**Zalesovo Beam**	**57.25**	**349**	P	**P**	**22 42 59.4**	**+0.2**
BVAR	**Borovoye Array**	**60.43**	**339**	P	**P**	**22 43 20.6**	**-0.8**
0.6nm,0.5s,mb3.9,baz=147,slow=8.3,SNR=5.1							
BRVK	**Borovoye**	**60.49**	**339**	P	**P**	**22 43 21.5**	**-0.3**
FINES	**FINESS Array B**	**84.48**	**332**	P	**P**	**22 45 44.6**	**+0.2**
1.1nm,0.7s,mb4.1,baz=104,slow=5.9,SNR=3.4							
ARCES	**ARCESS Array B**	**86.71**	**340**	P	**P**	**22 45 55.8**	**+0.4**
1.4nm,1.0s,mb4.2,baz=106,slow=4.3,SNR=5.5							
TXAR	**Lajitas Array**	**144.01**	**38**	PKP	PKPdf	22 52 47.3	-0.7
0.3nm,0.5s,baz=174,slow=0.2,SNR=5.0							

IDC 09 22:35:10.6±9.3, 1°.75S×101°.18E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/21, mbtmp3.4/3, Error ellipse: s-maj=505.2km s-min=28.3km az=53.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**37.11**	**121**	P	P	22 42 23.7	+0.5
0.3nm,0.6s,baz=300,slow=10,SNR=3.1							
ASAR	**Alice Springs**	**38.46**	**127**	P	P	22 42 34.1	-0.4
0.4nm,0.6s,baz=305,slow=8.4,SNR=4.9							
MKAR	**Makanchi Array**	**51.11**	**343**	P	P	22 44 15.0	0.0
0.3nm,0.7s,baz=148,slow=8.4,SNR=4.4							

*SZGRF **09** 22:36:05.9, 22°.42S×170°.24E, h33km, Southeast of Loyalty Islands*
*ISCJB **09** 22:36:11.0±1.0, 21°.76S±0°.06×170°.22E±0°.05, h71km±8km, mb4.5/25, Error ellipse: s-maj=10.1km s-min=7.8km az=178.8*
*NOU **09** 22:36:11.6±1.0, 20°.39S×169°.83E, h10km, MD2.7, ML4.1*
*IDC **09** 22:36:13.6±6.2, 21°.75S×170°.32E, h83km±54km, mb4.1/12, mb1 4.3/14, mb1mx4.3/19, mbtmp4.2/14, ML4.4/2, MS3.5/2, Ms1 3.5/2, ms1mx3.2/18, Error ellipse: s-maj=25.5km s-min=19.5km az=99.0*
*NEIC **09** 22:36:14.0±1.0, 21°.76S×170°.30E, h85km±9km, mb4.7/14, Error ellipse: s-maj=7.7km s-min=7.0km az=192.0*
ISC 09 22:36:12.5±0.9, 21°.76S±0°.06×170°.22E±0°.05, h68km±7km, n115, σ0s86/64, mb4.5/25, 4C, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.12**	**262**	*e*P	**Pn**	**22 36 59.3**	**0.0**
BAYA				*e*S	**Sn**	**22 37 35.6**	**+0.1**
BAYA				AMP		22 37 38.4	
comp=Z,137nm,1.4s							
DZM	**Mont Dzumac**	**3.52**	**264**	*e*P	**Pn**	**22 37 05.0**	**+0.1**
DZM				*e*S	**Sn**	**22 37 43.0**	**-2.3**
DZM				AMP		22 37 47.4	
comp=Z,22μm,2.3s							
ONTRN	**Noumea**	**3.54**	**260**	*e*P	**Pn**	**22 37 05.0**	**0.0**
ONTRN				*e*S	**Sn**	**22 37 44.7**	**-1.0**
NOUC	**Port Laguerre**	**3.65**	**264**	*e*P	**Pn**	**22 37 06.6**	**0.0**
NOUC				*e*S	**Sn**	**22 37 47.6**	**-0.9**
NOUC				AMP		22 37 54.0	
comp=Z,729nm,3.5s							
MSVF	**Nonsavu**	**8.39**	**63**	*e*Pn	**Pn**	**22 38 12.6**	**+1.1**
comp=Z,56nm,1.0s							
RAO	**Raoul Island**	**13.04**	**127**	LR	LR	22 43 16.6	
comp=Z,135nm,20.3s,baz=194,slow=33							
HNR	**Honiara**	**15.74**	**320**	P	**Pn**	**22 39 50.5**	**+0.3**
comp=Z,4.4nm,0.3s,baz=141,slow=6.5,SNR=2.4							
HNR	**Honiara**	**15.74**	**320**	Pn	**Pn**	**22 39 50.7**	**+0.4**
URZ	**Urewera**	**17.48**	**162**	P	**Pn**	**22 40 11.5**	**-0.2**
comp=Z,0.4nm,0.3s,baz=7.7,slow=9.2,SNR=5.3							
URZ				LR	LR	22 45 42.9	
comp=Z,265nm,18.4s,baz=146,slow=33							
URZ	**Urewera**	**17.48**	**162**	*e*Pn	**Pn**	**22 40 11.6**	**-0.1**
comp=Z,21nm,0.9s							
URZ				LR	LR	22 45 42.9	
EIDS	**Eidsvold**	**17.91**	**255**	*e*P	**Pn**	**22 40 19.0**	**+2.0**
comp=Z,10nm,0.6s							
ARMA	**Armidale**	**18.77**	**239**	*e*P	**Pn**	**22 40 29.0**	**+1.6**
ARMA	**Armidale**	**18.77**	**239**	*e*P	**Pn**	**22 40 29.1**	**+1.7**
comp=Z,31nm,0.8s							
RPZ	**Rata Peaks**	**21.91**	**178**	*e*P	**P**	**22 40 60.0**	**0.0**
comp=Z,62nm,1.5s,mb4.7							
CTA	**Charters Tower**	**22.45**	**270**	P	**P**	**22 41 08.0**	**+2.1**
comp=Z,3.5nm,0.5s,mb4.0,baz=76,slow=10,SNR=4.0							
CNB	**Canberra Magne**	**22.70**	**229**	*e*P	**P**	**22 41 10.1**	**+1.6**
TOO	**Toolangi**	**26.53**	**228**	*e*P	**P**	**22 41 44.6**	**+0.8**
STKA	**Stephens Creek**	**27.39**	**242**	*e*P	**P**	**22 41 52.4**	**+0.8**
comp=Z,16nm,0.7s,mb4.7							
STKA	**Stephens Creek**	**27.39**	**242**	P	**P**	**22 41 52.3**	**+0.7**
comp=Z,18nm,0.7s,mb4.7,baz=89,slow=10,SNR=23							
STKA	**Stephens Creek**	**27.39**	**242**	*e*P	**P**	**22 41 52.5**	**+0.9**
comp=Z,4.1nm,0.8s,mb4.0							
RAR	**Rarotonga**	**27.91**	**94**	P	**P**	**22 41 55.1**	**-1.2**
MOO	**Moorlands**	**28.23**	**218**	*e*P	**P**	**22 41 59.7**	**+0.8**
ASAR	**Alice Springs**	**33.50**	**260**	P	**P**	**22 42 45.6**	**0.0**
comp=Z,2.7nm,0.7s,mb4.2,baz=86,slow=9.5,SNR=18							
WB2	**Warramunga Arr**	**33.52**	**266**	*e*P	**P**	**22 42 45.8**	**-0.1**
WRAB	**Tennant Creek**	**33.53**	**266**	*e*P	**P**	**22 42 45.8**	**-0.1**
comp=Z,8.6nm,1.0s,mb4.5							
WRA	**Warramunga Arr**	**33.54**	**266**	P	**P**	**22 42 45.6**	**-0.4**
comp=Z,13nm,1.2s,mb4.6,baz=99,slow=8.4,SNR=29							
KAKA	**Kakadu**	**37.11**	**278**	*e*P	**P**	**22 43 18.1**	**+1.4**
comp=Z,13nm,0.6s,mb5.0							
KAKA	**Kakadu**	**37.11**	**278**	*e*P	**P**	**22 43 18.2**	**+1.5**
comp=Z,28nm,0.5s,mb5.5							
FITZ	**Fitzroy Crossi**	**41.96**	**267**	*e*P	**P**	**22 43 57.9**	**+0.8**
comp=Z,23nm,0.8s,mb5.0							
FITZ	**Fitzroy Crossi**	**41.96**	**267**	P	**P**	**22 43 58.0**	**+0.9**
comp=Z,12nm,0.8s,mb4.7,baz=110,slow=8.6,SNR=14							
FITZ	**Fitzroy Crossi**	**41.96**	**267**	*e*P	**P**	**22 43 57.1**	**0.0**
comp=Z,8.4nm,0.6s,mb4.7							
MBWA	**Marble Bar**	**46.82**	**261**	*e*P	**P**	**22 44 35.8**	**0.0**
comp=Z,29nm,1.1s,mb4.9							
KLBR	**Kellerberrin**	**47.51**	**247**	*e*P	**P**	**22 44 40.3**	**-0.8**
comp=Z,42nm,1.3s,mb5.1							
NWAO	**Narrogin (SRO)**	**47.93**	**245**	P	**P**	**22 44 44.1**	**-0.1**
comp=Z,20nm,0.8s,mb5.0,baz=116,slow=13,SNR=9.3							
SBA	**Scott Base**	**56.17**	**181**	*e*P	**P**	**22 45 44.4**	**-0.4**
comp=Z,9.1nm,0.9s,mb4.8							
CASY	**Casey**	**58.20**	**204**	P	**P**	**22 45 58.9**	**-0.4**
KSM	**Kuching**	**62.84**	**284**	*e*P	**P**	**22 46 31.6**	**-0.1**
MJAR	**Matsushiro Arr**	**65.40**	**332**	P	**P**	**22 46 47.5**	**-0.5**
comp=Z,2.0nm,0.6s,mb4.2,baz=168,slow=7.7,SNR=12							
MJAR	**Matsushiro Arr**	**65.40**	**332**	P	**P**	**22 46 47.5**	**-0.5**
MAJO	**Matsushiro**	**65.40**	**332**	*e*P	**P**	**22 46 47.6**	**-0.3**
comp=Z,3.9nm,0.5s,mb4.5							
SSLB	**Suanglung**	**65.93**	**311**	*e*P	**P**	**22 46 50.6**	**-1.0**
YHNB	**Yeheng**	**66.20**	**312**	*e*P	**P**	**22 46 53.0**	**-0.4**
comp=Z,12nm,0.6s,mb4.9							
QSPA	**South Pole Qui**	**68.31**	**180**	*e*P	**P**	**22 47 04.2**	**-1.6**
comp=Z,10.0nm,1.0s,mb4.6							
KSRS	**Korea Array**	**71.10**	**326**	P	**P**	**22 47 23.7**	**+0.1**
comp=Z,2.7nm,0.8s,mb4.1,baz=147,slow=5.8,SNR=14							
KULM	**Kulim**	**73.18**	**283**	P	**P**	**22 47 36.4**	**-0.2**
PETK	**Petropavlovsk-**	**75.34**	**352**	P	**P**	**22 47 47.7**	**-0.5**
comp=Z,2.9nm,0.8s,mb4.0,baz=134,slow=6.2,SNR=4.3							
PETK	**Petropavlovsk-**	**75.34**	**352**	P	**P**	**22 47 47.7**	**-0.5**
MAW	**Mawson**	**76.45**	**202**	*e*P	**P**	**22 47 54.0**	**-0.5**
comp=Z,7.3nm,0.8s,mb4.5							
MAW	**Mawson**	**76.45**	**202**	P	**P**	**22 47 54.3**	**-0.2**
comp=Z,9.2nm,0.8s,mb4.6,baz=107,slow=8.4,SNR=17							
ENH	**Enshi**	**77.98**	**310**	*e*P	**P**	**22 48 03.1**	**-0.6**
KMI	**Kunming**	**80.38**	**302**	P	**P**	**22 48 16.7**	**-0.2**
KMI				pmax	pmax		
comp=Z,8.0nm,1.4s,mb4.4							
XAN	**Xi'an**	**80.48**	**312**	P	**P**	**22 48 17.8**	**+0.6**
XAN				pmax	pmax		
comp=Z,3.0nm,0.9s,mb4.1							
CHTO	**Chiang Mai**	**80.53**	**295**	*e*P	**P**	**22 48 18.3**	**+0.6**
comp=Z,7.6nm,0.9s,mb4.5							
SYO	**Syowa Base**	**82.78**	**196**⇑	*e*P	**P**	**22 48 25.2**	**-3.6**
PMSA	**Palmer Station**	**84.24**	**160**	P	**P**	**22 48 35.5**	**-0.8**
LZH	**Lanzhou**	**85.09**	**312**	*e*P	**P**	**22 48 42.5**	**+1.5**
LZH				pmax	pmax		
comp=Z,17nm,1.1s,mb4.9							
SONM	**Songino Array**	**89.78**	**323**	P	**P**	**22 49 02.3**	**-1.0**
comp=Z,1.2nm,0.7s,mb4.1,baz=138,slow=4.7,SNR=8.6							
NVAR	**Mina Array Bea**	**89.78**	**48**	P	**P**	**22 49 03.0**	**-0.6**
comp=Z,0.2nm,0.6s,mb3.5,baz=231,slow=5.7,SNR=3.0							
NVAR	**Mina Array B

CLL	**Collm**	**145.58 335**	*e*PKPbc	PKPbc	22 55 42.1	-0.9
CLL	**Collm**	**145.58 335** ⇑	*i*P	PKPdf	22 55 42.1	-0.6
CLL			*i*		22 55 44.8	
CLL			*i*		22 56 01.0	
CLL	**Collm**	**145.58 335** ⇑	*i*PKPbc	PKPbc	22 55 42.1	-0.9
	comp=Z,16nm,0.8s					
CLL			*i* (PKiKP)		22 55 44.8	
CLL			*i* pPKPbc	pPKPbc	22 56 01.0	-1.5
SMOL	**Smolenice**	**145.59 327**	*e*PKP	PKPdf	22 55 43.5	+0.7
SMOL	**Smolenice**	**145.59 327**	*e*PKP	PKPdf	22 55 43.5	+0.7
PRU	**Pruhonice**	**145.93 332**	*e*P	PKPdf	22 55 44.1	+0.7
PRU	**Pruhonice**	**145.93 332**	*e*PKP	PKPdf	22 55 44.1	+0.7
ZST	**Bratislava**	**145.97 327**	*e*PKP	PKPdf	22 55 45.1	+1.6
ZST	**Bratislava**	**145.97 327**	*e*PKP	PKPdf	22 55 45.0	+1.5
NEUB	**Neuenburg**	**146.14 335**	*e*PKPbc	PKPbc	22 55 44.0	-0.7
CLZ	**Clausthal**	**146.15 337**	*e*PKPbc	PKPbc	22 55 44.1	-0.7
TANN	**Tannenbergstha**	**146.49 334**	*e*PKPbc	PKPbc	22 55 45.2	-0.6
WERD	**Werda**	**146.53 334**	*e*PKPbc	PKPbc	22 55 45.4	-0.5
PLN	**Plauen**	**146.56 334**	*e*PKPbc	PKPbc	22 55 45.4	-0.6
GUNZ	**Gunzen**	**146.58 334**	*e*PKPbc	PKPbc	22 55 45.5	-0.6
NKC	**Novy Kostel**	**146.63 334**	*e*PKPbc	PKPbc	22 55 45.6	-0.6
NKC	**Novy Kostel**	**146.63 334**	*e*PKP	PKPdf	22 55 46.0	+1.4
IBBN	**Ibbenburen**	**146.64 340**	*e*PKPbc	PKPbc	22 55 45.4	-0.8
MOX	**Moxa**	**146.65 335**	*e*PKP	PKPdf	22 55 45.7	+1.1
MOX	**Moxa**	**146.65 335**	*e*PKPbc	PKPbc	22 55 45.3	-1.0
KHC	**Kasperske Hory**	**146.98 331**	*e*PKP	PKPdf	22 55 46.6	+1.4
KHC			*e*pPKP	pPKPdf	22 56 06.4	+1.5
UBBA	**Unterbreizbach**	**147.12 337**	*e*PKPbc	PKPbc	22 55 46.2	-1.4
WET	**Wettzell**	**147.28 332**	*e*PKPbc	PKPbc	22 55 47.3	-0.8
GRF	**Grafenberg Arr**	**147.55 334**	*e*PKPbc	PKPbc	22 55 47.2	-1.6
RJOB	**Jochberg**	**148.36 330**	*e*PKPbc	PKPbc	22 55 50.0	-1.0
LJU	**Ljubljana**	**148.71 326**	*i*PKPbc	PKPbc	22 55 51.1	-0.9
LJU			*i*		22 55 54.6	
CRNS	**Crni Vrh**	**148.82 327**	*i*PKPbc	PKPbc	22 55 51.0	-1.3
CRNS			*e*		22 55 54.5	
CEY	**Cerknica**	**148.97 326**	*i*PKPbc	PKPbc	22 55 51.7	-1.0
WLF	**Walferdange**	**149.43 339**	*e*PKPbc	PKPbc	22 55 53.4	-0.3
FETA	**Feichten**	**149.83 332** ⇑	*i*PKPbc	PKPbc	22 55 53.2	-1.5
	comp=Z,4.8nm,0.9s					
CDF	**Champ du Feu**	**150.11 337**	*e*PKP1	PKPbc	22 55 54.4	-1.0
	comp=Z,5.1nm,0.8s					
HINF	**Hinteralfeld**	**150.76 337**	*e*PKP1	PKPbc	22 55 55.6	-1.3
HAU	**Haudompre**	**150.79 338**	*e*PKP1	PKPbc	22 55 55.9	-1.1
	comp=Z,10nm,0.9s					
LPL	**La Plagne**	**152.72 334**	*e*PKP1	PKPbc	22 56 00.8	-0.7
LPG	**La Plagne**	**152.72 334**	*e*PKP1	PKPbc	22 56 00.8	-0.7

DJA 09 22:37:30, 2°10S×100°60E, h8km, MLv3.5/3, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**0.86**	**89**	P	Pg	22 37 45.5	-1.1
KRJI				S	Sg	22 37 59.1	+1.3
PPSI	**Pulau Pagai**	**0.88**	**222**	P	Pg	22 37 46.9	-0.1
PPSI				S	Sg	22 37 59.7	+1.2
PDSI	**Padang**	**1.19**	**353**	P	Pb	22 37 51.5	-1.3
PDSI				S	Sg	22 38 08.3	0.0
PPI	**Padang Panjang**	**1.65**	**353**	P	Pn	22 37 59.4	+0.2
PPI				S	Sn	22 38 21.7	+1.1
SISI	**Saibi**	**1.69**	**297**	P	Pn	22 37 59.3	-0.6
RGRI	**Rengat**	**2.46**	**45**	P	Pn	22 38 01.7	-8.7

*ISK **09** 22:46:44.8, 37°21N×28°32E, h6km, MD2.6*
*ISCJB **09** 22:46:45.6±0.6, 37°18N±0°04×28°32E±0°05, h6km±9km, Error ellipse: s-maj=7.0km s-min=6.0km az=41.9*
*CSEM **09** 22:46:45.4±0.1, 37°21N×28°32E, h5km, MD2.6, Error ellipse: s-maj=2.6km s-min=1.7km az=173.0*
*DDA **09** 22:46:45.9, 37°15N×28°27E, h7km±7km, Md2.6*
ISC 09 22:46:45.9±0.5, 37°17N±0°04×28°33E±0°04, h6km±6km, n24, σ0°87/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.06**	**225**	*e*PG	**Pg**	**22 46 47.1**	**-0.3**
YER				*e*SG	**Sg**	**22 46 48.3**	**-0.2**
YER	**Yerkesik**	**0.06**	**225**	*e*Pg	**Pg**	**22 46 47.1**	**-0.3**
YER				*e*Sg	**Sg**	**22 46 48.3**	**-0.2**
TURN	**Turunc**	**0.37**	**144**	*i*P	**Pg**	**22 46 53.1**	**0.0**
TURN	**Turunc**	**0.37**	**144**	*i*P	**Pg**	**22 46 53.1**	**0.0**
MLSB	**Milas**	**0.46**	**285**	*e*PG	**Pg**	**22 46 53.8**	**-1.0**
MLSB	**Milas**	**0.46**	**285**	*e*Pg	**Pg**	**22 46 53.8**	**-1.0**
AYDN	**Tasoluk**	**0.60**	**324**	*i*P	**Pg**	**22 46 58.6**	**+1.0**
AYDN				*i*S	**Sg**	**22 47 06.8**	**+1.4**
AYDN	**Tasoluk**	**0.60**	**324**	*i*P	**Pg**	**22 46 58.6**	**+1.0**
AYDN				*i*S	**Sg**	**22 47 06.8**	**+1.3**
BDRM	**Kayabasi**	**0.72**	**262**	*i*P	**Pg**	**22 46 58.1**	**-1.7**
BDRM	**Kayabasi**	**0.72**	**262**	*i*P	**Pg**	**22 46 58.1**	**-1.6**
DAT	**Datca**	**0.75**	**234**	*e*PG	**Pg**	**22 47 00.2**	**-0.1**
DAT				*e*SG	**Sg**	**22 47 11.1**	**+1.0**
DAT	**Datca**	**0.75**	**234**	*e*Pg	**Pg**	**22 47 00.2**	**-0.1**
DAT				*e*Sg	**Sg**	**22 47 11.1**	**+1.0**
DNZL	**Cakiroluk**	**0.77**	**48**	*i*P	**Pg**	**22 47 00.2**	**-0.5**
DNZL	**Cakiroluk**	**0.77**	**48**	*i*P	**Pg**	**22 47 00.2**	**-0.5**
BODT	**Bodrum**	**0.82**	**262**	*e*PG	**Pg**	**22 47 01.3**	**-0.5**
BODT				*e*SG	**Sg**	**22 47 13.1**	**+0.6**
BODT	**Bodrum**	**0.82**	**262**	*e*Pg	**Pg**	**22 47 01.3**	**-0.5**
BODT				*e*Sg	**Sg**	**22 47 13.1**	**+0.6**
GOLH	**Golhisar**	**0.98**	**86**	*i*P	**Pg**	**22 47 05.4**	**+0.6**
GOLH	**Golhisar**	**0.98**	**86**	*i*P	**Pg**	**22 47 05.4**	**+0.6**
ELL	**Elmali**	**1.33**	**108**	*e*PN	**Pn**	**22 47 11.2**	**+0.1**
ELL	**Elmali**	**1.33**	**108**	*e*Pn	**Pn**	**22 47 11.2**	**+0.1**
KULA	**Kula-Manisa**	**1.36**	**11**	*e*PN	**Pn**	**22 47 10.2**	**-1.2**
KULA	**Kula-Manisa**	**1.36**	**11**	*e*Pn	**Pn**	**22 47 10.3**	**-1.2**
AKAS	**Kas**	**1.39**	**132**	*i*P	**Pn**	**22 47 11.8**	**0.0**
AKAS				*i*S	**Sb**	**22 47 33.8**	**+3.5**
AKAS	**Kas**	**1.39**	**132**	*i*P	**Pn**	**22 47 11.8**	**0.0**
AKAS				*i*S	**Sb**	**22 47 33.8**	**+3.6**

*NEIC **09** 23:00:48.1, 17°47N×101°19W, h10km, MD4.1(MEX), After MEX.*
MEX 09 23:00:48.9±0.6, 17°29N×101°26W, h16km±10km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.98**	**104**	*i*P	Pb	23 01 03.9	-3.6
CAIG				*e*S	Sb	23 01 16.1	-4.1
CAIG	**El Cayaco**	**0.98**	**104**	*i*P	Pb	23 01 03.9	-3.6
CAIG				*e*S	Sb	23 01 16.1	-4.1
MMIG	**Aquila**	**2.22**	**297**	*i*P	Pn	23 01 22.0	-3.1
MMIG				*e*S	Sn	23 01 47.9	-4.3
MOIG	**Morelia**	**2.38**	**2**	*i*P	Pn	23 01 25.6	-1.7
MOIG				*i*S	Sn	23 01 51.9	-4.3
PPM	**Popocatepetl**	**3.07**	**54**	*i*P	Pn	23 01 32.1	-4.6
PPM				*e*S	Sn	23 02 06.0	-7.1
PPM	**Popocatepetl**	**3.07**	**54**	*i*P	Pn	23 01 35.3	-1.4
PPM				*i*S	Sn	23 02 10.0	-3.1
PNIG	**Pinotepa**	**3.13**	**106**	*i*P	Pn	23 01 35.2	-2.4
PNIG				*e*S	Sn	23 02 11.7	-3.0
PNIG	**Pinotepa**	**3.13**	**106**	*i*P	Pn	23 01 35.2	-2.4
PNIG				*e*S	Sn	23 02 11.7	-3.0
VHO	**Vista Hermosa**	**4.33**	**92**	*i*P	Pn	23 01 51.4	-2.8
VHO				*e*S	Sn	23 02 41.2	-3.2
VHO	**Vista Hermosa**	**4.33**	**92**	*i*P	Pn	23 01 51.4	-2.8
VHO				*e*S	Sn	23 02 41.2	-3.2
ANIG	**Ahuacatlan**	**4.85**	**321**	*i*P	Pn	23 01 56.6	-4.7

*CSEM **09** 23:08:26.8±0.2, 39°03N×16°14E, h2km, ML3.8/4, Error ellipse: s-maj=5.9km s-min=3.6km az=96.0*
*ISCJB **09** 23:08:27.2±0.3, 38°95N±0°03×16°20E±0°04, h14km±4km, Error ellipse: s-maj=6.2km s-min=3.9km az=25.9*
*ROM **09** 23:08:27.2±0.2, 38°97N×16°23E, h9km±2km, Ml3.2/24, Error ellipse: s-maj=1.9km s-min=1.6km az=79.0*
*NEIC **09** 23:08:27.2, 38°97N×16°23E, h9km, ML3.2(ROM), After ROM.*
ISC 09 23:08:27.7±0.3, 38°96N±0°03×16°20E±0°04, h14km±4km, n63, σ0°83/77, 4C-4D, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRI	**Girifalco**	**0.22**	**128** ⇑	*i*Pg	**Pg**	**23 08 32.5**	**0.0**
GRI				Sg	**Sg**	**23 08 35.5**	**-0.3**
GRI	**Girifalco**	**0.22**	**128** ⇑	*i*Pg	**Pg**	**23 08 32.5**	**0.0**
GRI				Sg	**Sg**	**23 08 35.5**	**-0.3**
	14μm,0.4s						
GRI	**Girifalco**	**0.22**	**128** ⇑	*i*Pg	**Pg**	**23 08 32.5**	**0.0**
GRI				Sg	**Sg**	**23 08 35.5**	**-0.3**
	14μm,0.4s						
CARO	**Carolei**	**0.30**	**3** ⇑	*i*Pg	**Pg**	**23 08 34.4**	**+0.4**
CARO				Sg	**Sg**	**23 08 39.0**	**+0.9**
	9μm,0.4s						
SERS	**Sersale**	**0.39**	**78** ⇓	*i*Pg	**Pg**	**23 08 35.3**	**-0.3**
SERS				Sg	**Sg**	**23 08 40.6**	**-0.2**
	2μm,0.4s						
SERS	**Sersale**	**0.39**	**78** ⇓	*i*Pg	**Pg**	**23 08 35.3**	**-0.3**
SERS				Sg	**Sg**	**23 08 40.6**	**-0.2**
	2μm,0.4s						
JOPP	**Joppolo**	**0.43**	**215** ⇓	*i*Pg	**Pg**	**23 08 37.0**	**+0.8**
JOPP				Sg	**Sg**	**23 08 43.4**	**+1.4**
	1μm,0.3s						
JOPP	**Joppolo**	**0.43**	**215** ⇓	*i*Pg	**Pg**	**23 08 37.0**	**+0.8**
JOPP				Sg	**Sg**	**23 08 43.4**	**+1.4**
	1μm,0.3s						
PLAC	**Placanica**	**0.54**	**160**	Pg	**Pg**	**23 08 38.3**	**0.0**
PLAC				Sg	**Sg**	**23 08 45.8**	**+0.3**
	2μm,0.7s						
PLAC	**Placanica**	**0.54**	**160**	Pg	**Pg**	**23 08 38.3**	**0.0**
PLAC				Sg	**Sg**	**23 08 45.8**	**+0.3**
	2μm,0.7s						
LADO	**San Nicola del**	**0.69**	**61**	Pg	**Pg**	**23 08 40.4**	**-0.8**
	1μm,0.5s						
LADO	**San Nicola del**	**0.69**	**61**	Pg	**Pg**	**23 08 40.4**	**-0.8**
	1μm,0.5s						
MSRU	**Castanea**	**0.88**	**218**	Pg	**Pg**	**23 08 44.3**	**-0.4**
	1μm,0.5s						
MSRU	**Castanea**	**0.88**	**218**	Pg	**Pg**	**23 08 44.3**	**-0.4**
	1μm,0.5s						
SOI	**Samo**	**0.89**	**187**	Pg	**Pg**	**23 08 44.5**	**-0.5**
SOI	**Samo**	**0.89**	**187**	Pg	**Pg**	**23 08 44.5**	**-0.5**
	406nm,0.5s						
SOI	**Samo**	**0.89**	**187**	Pg	**Pg**	**23 08 44.5**	**-0.5**
	406nm,0.5s						
MPAZ	**Palizzi**	**1.01**	**189**	Pg	**Pg**	**23 08 46.8**	**-0.5**
	479nm,0.6s						
MPAZ	**Palizzi**	**1.01**	**189**	Pg	**Pg**	**23 08 46.8**	**-0.5**
	479nm,0.6s						
MILZ	**Milazzo**	**1.02**	**228**	Pg	**Pg**	**23 08 46.7**	**-0.8**
	737nm,0.5s						
MILZ	**Milazzo**	**1.02**	**228**	Pg	**Pg**	**23 08 46.7**	**-0.8**
	737nm,0.5s						
VPL	**Vulcano Piano**	**1.11**	**239**	Pg	**Pg**	**23 08 48.4**	**-0.8**
	975nm,0.5s						
VPL	**Vulcano Piano**	**1.11**	**239**	Pg	**Pg**	**23 08 48.4**	**-0.8**
	975nm,0.5s						
ORI	**Oriolo Calabro**	**1.12**	**10**	Pg	**Pg**	**23 08 49.2**	**-0.2**
ORI	**Oriolo Calabro**	**1.12**	**10**	Pg	**Pg**	**23 08 49.2**	**-0.2**
	561nm,0.4s						
ORI	**Oriolo Calabro**	**1.12**	**10**	Pg	**Pg**	**23 08 49.2**	**-0.2**
	561nm,0.4s						
SIRI	**Monte Sirino -**	**1.25**	**348**	Pg	**Pn**	**23 08 49.6**	**-1.2**
	494nm,0.5s						
SIRI	**Monte Sirino -**	**1.25**	**348**	Pg	**Pn**	**23 08 49.6**	**-1.2**
	494nm,0.5s						
MMME	**Mongiuffi-Meli**	**1.26**	**216**	Pg	**Pn**	**23 08 51.0**	**+0.1**
	311nm,0.9s						
MMME	**Mongiuffi-Meli**	**1.26**	**216**	Pg	**Pn**	**23 08 51.0**	**+0.1**
	311nm,0.9s						
BULG	**Bulgheria - Ca**	**1.29**	**331**	Pg	**Pn**	**23 08 50.7**	**-0.6**
	339nm,0.3s						
BULG	**Bulgheria - Ca**	**1.29**	**331**	Pg	**Pn**	**23 08 50.7**	**-0.6**
	339nm,0.3s						
IFIL	**Filicudi I Eol**	**1.34**	**253**	Pg	**Pn**	**23 08 51.9**	**-0.1**
	418nm,0.5s						
IFIL	**Filicudi I Eol**	**1.34**	**253**	Pg	**Pn**	**23 08 51.9**	**-0.1**
	418nm,0.5s						
MTSN	**Montesano sull**	**1.35**	**345**	Pg	**Pn**	**23 08 51.2**	**-1.0**
	290nm,0.4s						
MTSN	**Montesano sull**	**1.35**	**345**	Pg	**Pn**	**23 08 51.2**	**-1.0**
	290nm,0.4s						
MCEL	**Monticello**	**1.40**	**347**	Pg	**Pn**	**23 08 52.0**	**-0.9**
	247nm,0.8s						
MCEL	**Monticello**	**1.40**	**347**	Pg	**Pn**	**23 08 52.0**	**-0.9**
	247nm,0.8s						
CMPR	**Campora**	**1.53**	**333**	Pg	**Pn**	**23 08 53.8**	**-0.8**
CMPR	**Campora**	**1.53**	**333**	Pg	**Pn**	**23 08 53.8**	**-0.8**
MIGL	**Miglionico**	**1.66**	**6**	Pg	**Pg**	**23 08 58.8**	**-0.8**
	771nm,0.9s						
MIGL	**Miglionico**	**1.66**	**6**	Pg	**Pg**	**23 08 58.8**	**-0.8**
	771nm,0.9s						
CDRU	**Civita di Ruta**	**1.68**	**336**	Pg	**Pn**	**23 08 56.0**	**-0.7**
	67nm,0.4s						
CDRU	**Civita di Ruta**	**1.68**	**336**	Pg	**Pn**	**23 08 56.0**	**-0.7**
	67nm,0.4s						
LTRZ	**Laterza**	**1.71**	**16**	Pg	**Pn**	**23 08 58.1**	**+0.9**
LTRZ	**Laterza**	**1.71**	**16**	Pg	**Pn**	**23 08 58.1**	**+0.9**
	88nm,0.5s						
LTRZ	**Laterza**	**1.71**	**16**	Pg	**Pn**	**23 08 58.1**	**+0.9**
	88nm,0.5s						
TAR1	**Taranto**	**1.78**	**28**	*e*Pn	**Pn**	**23 08 58.4**	**+0.4**
MRLC	**Muro Lucano**	**1.88**	**343**	Pg	**Pn**	**23 09 00.8**	**+1.4**
MRLC	**Muro Lucano**	**1.88**	**343**	Pg	**Pn**	**23 09 00.8**	**+1.4**
	30nm,0.4s						
MRLC	**Muro Lucano**	**1.88**	**343**	Pg	**Pn**	**23 09 00.8**	**+1.4**
	30nm,0.4s						
SG1	**Sgolgore (BA)**	**1.92**	**11**	*e*Pn	**Pn**	**23 09 01.2**	**+1.2**
NOCI	**Noci**	**1.95**	**20**	Pg	**Pn**	**23 09 01.2**	**+0.8**
NOCI	**Noci**	**1.95**	**20**	Pg	**Pn**	**23 09 01.2**	**+0.8**
AMUR	**Altamura**	**1.97**	**9**	Pg	**Pn**	**23 09 01.3**	**+0.6**
	63nm,0.6s						
AMUR	**Altamura**	**1.97**	**9**	Pg	**Pn**	**23 09 01.3**	**+0.6**
	63nm,0.6s						
MCRV	**Calabrutti - M**	**1.99**	**337**	Pg	**Pn**	**23 09 01.3**	**+0.3**
	200nm,0.9s						
MCRV	**Calabrutti - M**	**1.99**	**337**	Pg	**Pn**	**23 09 01.3**	**+0.3**
	200nm,0.9s						
CDT	**Castel del Mon**	**2.12**	**2**	*e*Pn	**Pn**	**23 09 04.5**	**+1.7**
STON	**Ston**	**4.07**	**16**	*e*Pn	**Pn**	**23 09 30.4**	**+0.8**
STON				Sn	**Sn**	**23 10 16.4**	**-0.6**
STON	**Ston**	**4.07**	**16**	*e*Pn	**Pn**	**23 09 30.3**	**+0.7**
STON				Sn	**Sn**	**23 10 16.4**	**-0.7**
NVLJ	**Novalja**	**5.69**	**350**	*e*Pn	**Pn**	**23 09 53.5**	**+1.7**
NVLJ				Sn	**Sn**	**23 10 55.2**	**-1.7**
NVLJ	**Novalja**	**5.69**	**350**	*e*Pn	**Pn**	**23 09 53.4**	**+1.6**
NVLJ				Sn	**Sn**	**23 10 55.1**	**-1.8**

*IDC **09** 23:12:23.5±1.2, 38°27N×20°78E, h0km, mb4.0/11, mb1 3.9/16, mb1mx3.8/32, mbtmp3.9/16, ML3.6/6, Error ellipse: s-maj=27.4km s-min=14.4km az=177.0*
*ISCJB **09** 23:12:25.1±0.3, 38°19N±0°02×20°64E±0°02, h11km±2km, mb3.9/16, Error ellipse: s-maj=2.8km s-min=1.8km az=24.2*
*CSEM **09** 23:12:25.9±0.1, 38°20N×20°70E, h5km, ML3.7, Ms3.4, Error ellipse: s-maj=3.7km s-min=2.2km az=25.0*
*NEIC **09** 23:12:26.0, 38°21N×20°69E, h14km, mb3.9/4, ML3.8(THE), ML3.7(ATH), After ATH.*
*THE **09** 23:12:26.8, 38°23N×20°76E, h3km±1km, ML4.3/12, Error ellipse: s-maj=1.0km s-min=0.6km az=185.0*
*PDG **09** 23:12:26.5±0.5, 38°20N×20°69E, h13km±1km, ML3.9/10, Error ellipse: s-maj=1.1km s-min=0.7km az=90.0*
*ATH **09** 23:12:26.0, 38°21N×20°69E, h14km, ML3.7*
*MOS **09** 23:12:27.3±1.3, 38°21N×20°68E, h33km, mb4.1/1, Error ellipse: s-maj=5.8km s-min=4.1km az=88.6*
*VIE **09** 23:12:31.8±0.9, 38°84N×20°98E, h10km, mb3.4/5, Ms3.4/3, Error ellipse: s-maj=14.0km s-min=7.0km az=58.0 94 km NW of Patras*
ISC 09 23:12:26.3±0.3, 38°19N±0°01×20°68E±0°02, h8km±2km, n355, σ1°35/490, mb3.9/16, 21C-10D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.07**	**258**	*e*Pg	**Pg**	**23 12 29.1**	**+0.8**
VLS				*e*Sg	**Sg**	**23 12 31.8**	**+2.1**
VLS	**Valsamata**	**0.07**	**258**	*e*PG	**Pg**	**23 12 29.1**	**+0.8**
VLS				*e*SG	**Sg**	**23 12 31.8**	**+2.1**
VLS	**Valsamata**	**0.07**	**258**	P	**Pg**	**23 12 29.1**	**+0.8**
VLS				S	**Sg**	**23 12 31.8**	**+2.1**
VLS	**Valsamata**	**0.07**	**258**	P	**Pg**	**23 12 29.1**	**+0.8**
VLS				S	**Sg**	**23 12 31.8**	**+2.1**
KFL	**Anninata**	**0.12**	**134**	P	**Pg**	**23 12 29.8**	**+0.9**
KFL				S	**Sg**	**23 12 31.6**	**+0.8**
KFL	**Anninata**	**0.12**	**134**	P	**Pg**	**23 12 29.8**	**+0.9**
KFL				S	**Sg**	**23 12 31.6**	**+0.8**
LKD	**Levkas**	**0.52**	**357**	*e*Pb	**Pg**	**23 12 36.1**	**-0.2**
LKD				*e*Sb	**Sg**	**23 12 42.9**	**-0.1**
LKD	**Levkas**	**0.52**	**357**	*e*PB	**Pg**	**23 12 36.1**	**-0.2**
LKD				*e*SB	**Sg**	**23 12 42.9**	**-0.1**
LKD	**Levkas**	**0.52**	**357**	*e*Pb	**Pg**	**23 12 36.1**	**-0.2**
LKD				*e*Sb	**Sg**	**23 12 42.9**	**-0.1**
LKD2	**Lefkada island**	**0.60**	**358**	P	**Pg**	**23 12 37.1**	**-0.7**
LKD2				S	**Sg**	**23 12 46.3**	**+0.7**
LKD2	**Lefkada island**	**0.60**	**358**	P	**Pg**	**23 12 37.1**	**-0.7**
LKD2				S	**Sg**	**23 12 46.3**	**+0.7**
RLS	**Riolos of Patr**	**0.63**	**102**	*e*Pb	**Pg**	**23 12 38.1**	**-0.4**
RLS				*e*Sb	**Sg**	**23 12 47.5**	**+0.7**
RLS	**Riolos of Patr**	**0.63**	**102**	*e*PB	**Pg**	**23 12 38.1**	**-0.4**
RLS				*e*SB	**Sg**	**23 12 47.5**	**+0.7**
RLS	**Riolos of Patr**	**0.63**	**102**	*e*Pb	**Pg**	**23 12 38.1**	**-0.4**
RLS				*e*Sb	**Sg**	**23 12 47.5**	**+0.7**
UPR	**University Cam**	**0.88**	**84**	*e*PB	**Pg**	**23 12 42.8**	**-0.3**
UPR				*e*SB	**Sg**	**23 12 54.1**	**-0.4**
UPR	**University Cam**	**0.88**	**84**	P	**Pg**	**23 12 42.5**	**-0.6**
UPR				S	**Sg**	**23 12 53.6**	**-0.9**
UPR	**University Cam**	**0.88**	**84**	P	**Pg**	**23 12 42.5**	**-0.6**
UPR	**University Cam**	**0.88**	**84**	*e*Pb	**Pg**	**23 12 42.8**	**-0.3**
UPR				S	**Sg**	**23 12 53.6**	**-0.9**
UPR				*e*Sb	**Sg**	**23 12 54.1**	**-0.4**
EFP	**Efpalio**	**0.99**	**76**	*e*PG	**Pg**	**23 12 43.9**	**-1.4**
EFP				*e*SB	**Sg**	**23 12 57.5**	**-0.7**
EFP	**Efpalio**	**0.99**	**76**	P	**Pg**	**23 12 43.8**	**-1.5**
EFP				S	**Sg**	**23 12 58.0**	**-0.2**
EFP	**Efpalio**	**0.99**	**76**	*e*Pg	**Pg**	**23 12 43.9**	**-1.4**
EFP				*e*Sb	**Sg**	**23 12 57.5**	**-0.7**
EFP				S	**Sg**	**23 12 58.0**	**-0.2**
LAKA	**Lakka**	**1.02**	**87**	P	**Pg**	**23 12 44.6**	**-1.3**
LAKA				S	**Sg**	**23 12 59.4**	**+0.2**
LAKA	**Lakka**	**1.02**	**87**	P	**Pg**	**23 12 44.6**	**-1.3**
LAKA				S	**Sg**	**23 12 59.4**	**+0.2**
TRIZ	**Trizonia**	**1.11**	**81**	P	**Pg**	**23 12 45.8**	**-1.8**
TRIZ				S	**Sg**	**23 13 01.2**	**-0.8**
TRIZ	**Trizonia**	**1.11**	**81**	P	**Pg**	**23 12 45.8**	**-1.8**
TRIZ				S	**Sg**	**23 13 01.2**	**-0.8**
EVR	**Evrytania**	**1.14**	**50**	*e*Pg	**Pg**	**23 12 46.8**	**-1.4**
EVR				*e*Sb	**Sg**	**23 13 01.9**	**-1.1**
EVR	**Evrytania**	**1.14**	**50**	*e*PG	**Pg**	**23 12 46.8**	**-1.4**
EVR				*e*SB	**Sg**	**23 13 01.9**	**-1.1**
EVR	**Evrytania**	**1.14**	**50**	*e*Pg	**Pg**	**23 12 46.8**	**-1.4**
EVR				*e*Sb	**Sg**	**23 13 01.9**	**-1.1**
KALE	**Kalithea**	**1.17**	**80**	P	**Pb**	**23 12 46.6**	**-2.0**
KALE				S	**Sg**	**23 13 03.1**	**-0.7**
KALE	**Kalithea**	**1.17**	**80**	P	**Pb**	**23 12 46.6**	**-2.0**
KALE				S	**Sg**	**23 13 03.1**	**-0.7**
GUR	**Goura**	**1.34**	**101**	*e*PN	**Pn**	**23 12 49.9**	**-1.3**
GUR				*e*SB	**Sb**	**23 13 08.9**	**+0.1**
GUR	**Goura**	**1.34**	**101**	P	**Pn**	**23 12 50.0**	**-1.2**
GUR				S	**Sb**	**23 13 10.1**	**+1.3**
GUR	**Goura**	**1.34**	**101**	P	**Pn**	**23 12 50.0**	**-1.2**
GUR				*e*Sb	**Sb**	**23 13 08.9**	**+0.1**
GUR				S	**Sb**	**23 13 10.1**	**+1.3**
IGT	**Igoumenitsa**	**1.37**	**349**	P	**Pn**	**23 12 51.2**	**-0.4**
IGT				S	**Sb**	**23 13 10.0**	**+0.4**
IGT	**Igoumenitsa**	**1.37**	**349**	P	**Pn**	**23 12 51.2**	**-0.4**
IGT				S	**Sb**	**23 13 10.0**	**+0.4**
IGT	**Igoumenitsa**	**1.37**	**349**	P	**Pn**	**23 12 51.2**	**-0.4**
IGT				S	**Sb**	**23 13 10.0**	**+0.4**
ITM	**Ithomi**	**1.41**	**135**	*e*Pb	**Pb**	**23 12 53.4**	**+0.6**
ITM				*e*Sb	**Sb**	**23 13 12.3**	**+1.3**
ITM	**Ithomi**	**1.41**	**135**	*e*PB	**Pb**	**23 12 53.4**	**+0.6**
ITM				*e*SB	**Sb**	**23 13 12.3**	**+1.3**
ITM	**Ithomi**	**1.41**	**135**	P	**Pn**	**23 12 52.8**	**+0.6**
ITM	**Ithomi**	**1.41**	**135**	P	**Pn**	**23 12 52.8**	**+0.6**
ITM	**Ithomi**	**1.41**	**135**	*e*Pb	**Pb**	**23 12 53.4**	**+0.6**
ITM				*e*Sb	**Sb**	**23 13 12.3**	**+1.3**
JAN	**Janina**	**1.47**	**5**	*e*Pg	**Pg**	**23 12 52.8**	**-1.6**
JAN				*e*Sb	**Sb**	**23 13 13.4**	**+0.8**
JAN	**Janina**	**1.47**	**5**	*e*PG	**Pg**	**23 12 52.8**	**-

VLY	Voula,Athens	2.48	97	*e*PB	Pb	23 13 07.9	-3.2
VLY				*e*SN	Sn	23 13 39.1	+1.7
PTL	Penteli	2.52	92	*e*Pn	Pn	23 13 08.2	+0.8
PTL	Penteli	2.52	92	*e*Pn	Pn	23 13 08.2	+0.8
PTL	Penteli	2.52	92	*e*Pn	Pn	23 13 08.2	+0.8
FNA	Florina	2.64	12	P	Pn	23 13 09.5	+0.4
FNA	Florina	2.64	12	P	Pn	23 13 09.5	+0.4
AOS	Alonnisos	2.69	68	P	Pn	23 13 10.2	+0.5
AOS	Alonnisos	2.69	68	P	Pn	23 13 10.2	+0.5
BIA	Bitola	2.87	10	P	Pn	23 13 12.6	+0.4
BIA	Bitola	2.87	10	*e*Pn	Pn	23 13 14.6	+2.4
BIA	Bitola	2.87	10	*e*Pn	Pn	23 13 17.2	+5.0
BIA	Bitola	2.87	10	P	Pn	23 13 12.6	+0.4
PAIG	Paliouri	2.91	52	P	Pn	23 13 13.1	+0.3
PAIG	Paliouri	2.91	52	P	Pn	23 13 13.1	+0.3
OHR	Ohrid	2.92	2	P	Pn	23 13 12.9	0.0
OHR	Ohrid	2.92	2	*e*Pn	Pn	23 13 15.4	+2.5
OHR	Ohrid	2.92	2	*e*Pn	Pn	23 13 14.5	+1.6
OHR	Ohrid	2.92	2	P	Pn	23 13 12.9	0.0
THE	Thessaloniki	3.01	35	P	Pn	23 13 17.0	+2.8
THE	Thessaloniki	3.01	35	P	Pn	23 13 17.0	+2.8
HORT	Hortiatis	3.05	37	P	Pn	23 13 15.6	+0.9
HORT	Hortiatis	3.05	37	P	Pn	23 13 15.6	+0.9
PLG	Polygyros	3.06	44	*e*P	Pn	23 13 14.9	+0.1
PLG	Polygyros	3.06	44	*e*PN	Pn	23 13 14.9	+0.1
PLG	Polygyros	3.06	44	*e*Pn	Pn	23 13 14.9	+0.1
KRUS	Krusevo	3.20	8	*e*Pn	Pn	23 13 18.3	+1.5
KRUS	Krusevo	3.20	8	*e*Pn	Pn	23 13 17.7	+0.8
TIR	Tirane	3.21	349	*e*Pn	Pn	23 13 14.1	-2.9
TIR				*e*Sn	Sn	23 13 52.2	-3.2
TIR	Tirane	3.21	349	*e*P	Pn	23 13 14.1	-2.9
TIR				*e*S	Sn	23 13 52.2	-3.2
OUR	Ouranopolis	3.34	49	P	Pn	23 13 18.9	+0.2
OUR	Ouranopolis	3.34	49	P	Pn	23 13 18.9	+0.2
SOH	Sokhos	3.34	37	P	Pn	23 13 19.7	+1.0
SOH	Sokhos	3.34	37	P	Pn	23 13 19.7	+1.0
GRI	Girifalco	3.40	282	P	Pn	23 13 19.9	+0.3
GRI	Girifalco	3.40	282	P	Pn	23 13 19.9	+0.3
VAY	Valandovo	3.45	24	*e*Pn	Pn	23 13 22.8	+2.6
VAY	Valandovo	3.45	24	*e*Pn	Pn	23 13 25.8	+5.6
TAR1	Taranto	3.52	313	*e*Pn	Pn	23 13 21.9	+0.8
PE1	Pezze di Greco	3.63	317	*e*Pn	Pn	23 13 23.0	+0.3
PE1				*e*Sn	Sn	23 14 06.2	+0.6
SOI	Samo	3.65	270	P	Pn	23 13 22.7	-0.3
SOI	Samo	3.65	270	P	Pn	23 13 22.7	-0.3
KARN	Karanos	3.81	136	*e*PN	Pn	23 13 26.5	+1.3
KARN	Karanos	3.81	136	*e*Pn	Pn	23 13 26.5	+1.3
LTRZ	Laterza	3.84	310	Pn	Pn	23 13 25.8	+0.2
LTRZ	Laterza	3.84	310	Pn	Pn	23 13 25.8	+0.2
PUK	Puka	3.89	351	*e*PN	Pn	23 13 27.8	+1.5
PUK				*i* SN	Sn	23 14 11.2	-1.0
PUK	Puka	3.89	351	*e*Pn	Pn	23 13 27.8	+1.5
PUK				*i* Sn	Sn	23 14 11.2	-1.0
LIA	Limnos Island	3.90	63	*e*Pn	Pn	23 13 27.4	+1.0
LIA	Limnos Island	3.90	63	*e*PN	Pn	23 13 27.4	+1.0
LIA	Limnos Island	3.90	63	*e*Pn	Pn	23 13 27.4	+1.0
ULC	Ulcinj	3.92	344	⇑*i*Pn	Pn	23 13 26.6	-0.1
ULC				*e*Sn	Sn	23 14 13.9	+1.0
ULC	Ulcinj	3.92	344	⇑*i*Pn	Pn	23 13 26.6	-0.1
ULC				*e*Sn	Sn	23 14 13.9	+1.0
VAM	Vamos	3.96	133	*e*P	Pn	23 13 28.8	+1.5
VAM	Vamos	3.96	133	*e*PN	Pn	23 13 28.8	+1.5
VAM	Vamos	3.96	133	*e*Pn	Pn	23 13 28.8	+1.5
NVR	Nevrokopi	3.99	37	P	Pn	23 13 28.9	+1.2
NVR	Nevrokopi	3.99	37	P	Pn	23 13 28.9	+1.2
APE	Apeiranthos	4.01	105	P	Pn	23 13 28.2	+0.3
APE	Apeiranthos	4.01	105	P	Pn	23 13 28.2	+0.3
SG1	Sgolgore (BA)	4.07	312	*e*Pn	Pn	23 13 29.5	+0.8
SG1				*e*Sn	Sn	23 14 13.4	-3.1
BAI	Bari	4.13	316	*e*Pn	Pn	23 13 30.2	+0.6
BAI				*e*Sn	Sn	23 14 17.7	-0.4
BCI	Bajram Curri	4.20	354	*e*PN	Pn	23 13 31.7	+1.2
BCI				*i* SN	Sn	23 14 20.0	+0.4
BCI	Bajram Curri	4.20	354	*e*Pn	Pn	23 13 31.7	+1.2
BCI				*i* Sn	Sn	23 14 20.0	+0.4
PTRP	Pietrapertosa	4.27	304	Pn	Pn	23 13 32.7	+1.2
PTRP	Pietrapertosa	4.27	304	Pn	Pn	23 13 32.7	+1.2
BUM	Brajici-Budva	4.32	342	⇓*i*Pn	Pn	23 13 33.0	+0.8
BUM				*e*Sn	Sn	23 14 23.7	+0.9
BUM	Brajici-Budva	4.32	342	⇓*i*Pn	Pn	23 13 33.0	+0.8
BUM				*e*Sn	Sn	23 14 23.7	+0.9
GVD	Gavdhos	4.33	140	P	Pn	23 13 32.3	0.0
GVD	Gavdhos	4.33	140	P	Pn	23 13 32.3	0.0
PDG	Podgorica	4.37	346	⇑*i*Pn	Pn	23 13 33.0	+0.1
PDG				*e*Sn	Sn	23 14 23.9	0.0
TTG	Podgorica	4.37	346	⇑*i*Pn	Pn	23 13 33.0	+0.1
TTG				*e*Sn	Sn	23 14 23.9	0.0
TTG	Podgorica	4.37	346	*i* P	Pn	23 13 33.0	+0.1
TTG				*e*S	Sn	23 14 23.9	0.0
PVY	Plav	4.43	353	⇓*i*Pn	Pn	23 13 34.4	+0.7
PVY				*e*Sn	Sn	23 14 26.9	+1.5
PVY	Plav	4.43	353	⇓*i*Pn	Pn	23 13 34.4	+0.7
PVY				*e*Sn	Sn	23 14 26.9	+1.5
CDT	Castel del Mon	4.46	312	*e*Pn	Pn	23 13 34.3	+0.2
CDT				*e*Sn	Sn	23 14 23.8	-2.4
ACER	Acerenza	4.49	307	Pn	Pn	23 13 34.9	+0.4
ACER	Acerenza	4.49	307	Pn	Pn	23 13 34.9	+0.4
PRK	Paraskevi	4.50	75	P	Pn	23 13 35.4	+0.8
PRK	Paraskevi	4.50	75	P	Pn	23 13 35.4	+0.8
HCY	Herceg Novi	4.57	339	⇓*i*Pn	Pn	23 13 36.0	+0.4
HCY				*e*Sn	Sn	23 14 28.7	-0.1
HCY	Herceg Novi	4.57	339	⇓*i*Pn	Pn	23 13 36.0	+0.4
HCY				*e*Sn	Sn	23 14 28.7	-0.1
HAVL	Avola	4.58	256	Pn	Pn	23 13 33.4	-2.4
HAVL	Avola	4.58	256	Pn	Pn	23 13 33.4	-2.4
BARS	Barje	4.70	10	⇑*i*Pn	Pn	23 13 36.7	-0.7
BEY	Berane	4.71	353	⇑*i*Pn	Pn	23 13 38.1	+0.5
BEY				*e*Sn	Sn	23 14 33.1	+0.7
IVA	Berane	4.71	353	⇑*i*Pn	Pn	23 13 38.1	+0.5
IVA				*e*Sn	Sn	23 14 33.1	+0.7
IVA	Berane	4.71	353	⇑*i*Pn	Pn	23 13 38.1	+0.5
IVA				*e*Sn	Sn	23 14 33.1	+0.7
MRLC	Muro Lucano	4.76	304	Pn	Pn	23 13 38.8	+0.5
MRLC	Muro Lucano	4.76	304	Pn	Pn	23 13 38.8	+0.5
RDO	Rodhopi	4.77	50	P	Pn	23 13 38.6	+0.2
RDO	Rodhopi	4.77	50	P	Pn	23 13 38.6	+0.2
NKY	Niksic	4.79	345	⇓*i*Pn	Pn	23 13 39.9	+1.3
NKY				*e*Sn	Sn	23 14 34.3	0.0
NKY	Niksic	4.79	345	⇓*i*Pn	Pn	23 13 39.9	+1.3
NKY				*e*Sn	Sn	23 14 34.3	0.0
VTS	Vitosha	4.80	23	P	Pn	23 13 39.8	+1.0
VTS	Vitosha	4.80	23	P	Pn	23 13 39.8	+1.0
HVZN	Vizzini	4.84	260	Pn	Pn	23 13 37.5	-1.8
HVZN	Vizzini	4.84	260	Pn	Pn	23 13 37.5	-1.8
HMDC	Modica	4.84	257	Pn	Pn	23 13 37.1	-2.3
HMDC	Modica	4.84	257	Pn	Pn	23 13 37.1	-2.3
LAST	Lasithi	4.90	127	P	Pn	23 13 40.4	+0.2
LAST	Lasithi	4.90	127	P	Pn	23 13 40.4	+0.2
ALN	Alexandroupoli	4.95	55	P	Pn	23 13 40.7	-0.1
ALN	Alexandroupoli	4.95	55	P	Pn	23 13 40.7	-0.1
BRY	Bratogost	4.98	342	⇑*i*Pn	Pn	23 13 41.9	+0.7
BRY				*e*Sn	Sn	23 14 39.3	+0.4
BRY	Bratogost	4.98	342	⇑*i*Pn	Pn	23 13 41.9	+0.7
BRY				*e*Sn	Sn	23 14 39.3	+0.4
VAE	Valguarnera	5.01	264	Pn	Pn	23 13 42.3	+0.6
	1.9nm,0.3s,baz=58,slow=9.5,SNR=6.0						
VAE				Sn	Sn	23 14 36.4	-3.4
	2.0nm,0.3s,baz=61,slow=17,SNR=2.2						
VAE	Valguarnera	5.01	264	Pn	Pn	23 13 42.3	+0.6
VAE				Sn	Sn	23 14 36.4	-3.4
VAE	Valguarnera	5.01	264	Pn	Pn	23 13 42.3	+0.6
VAE				Sn	Sn	23 14 36.4	-3.4
MS1	Monte Sant'Ang	5.06	315	*e*Pn	Pn	23 13 42.7	+0.4
MS1				*e*Sn	Sn	23 14 38.9	-1.9
RAFF	Raffo Rosso	5.10	261	Pn	Pn	23 13 41.4	-1.5
RAFF	Raffo Rosso	5.10	261	Pn	Pn	23 13 41.4	-1.5
CSSN	Cassano Irpino	5.12	303	Pn	Pn	23 13 45.1	+1.9
	24nm,0.2s						
CSSN	Cassano Irpino	5.12	303	Pn	Pn	23 13 45.1	+1.9
	24nm,0.2s						
UPM	Unac-Piva	5.18	346	⇑*i*Pn	Pn	23 13 45.3	+1.3
UPM				*e*Sn	Sn	23 14 45.1	+1.1
UPM	Unac-Piva	5.18	346	⇑*i*Pn	Pn	23 13 45.3	+1.3
UPM				*e*Sn	Sn	23 14 45.1	+1.1
FG5	Orsara di Pugl	5.19	308	P	Pn	23 13 45.6	+1.5
FG5				pmax	pmax		
	comp=Z,23nm,0.3s						
FG5	Orsara di Pugl	5.19	308	Pn	Pn	23 13 45.6	+1.5
	comp=Z,23nm,0.3s						
FG5	Orsara di Pugl	5.19	308	P	Pn	23 13 45.6	+1.5
	comp=Z,23nm,0.3s						
STON	Ston	5.20	335	*e*Pn	Pn	23 13 42.9	-1.4
STON				Sn	Sn	23 14 38.3	-6.0
STON	Ston	5.20	335	*e*Pn	Pn	23 13 42.8	-1.4
PLE	Pljevlja	5.22	350	⇑*i*Pn	Pn	23 13 45.7	+1.1
PLE				*e*Sn	Sn	23 14 45.0	0.0
PLE	Pljevlja	5.22	350	⇑*i*Pn	Pn	23 13 45.7	+1.1
PLE				*e*Sn	Sn	23 14 45.0	0.0
RGNG	Rignano Grg	5.24	313	Pn	Pn	23 13 44.9	+0.1
RGNG	Rignano Grg	5.24	313	Pn	Pn	23 13 44.9	+0.1
MRB1	Monte Rocchett	5.29	305	Pn	Pn	23 13 47.1	+1.6
	comp=Z,83nm,0.6s						
MRB1	Monte Rocchett	5.29	305	Pn	Pn	23 13 47.1	+1.6
	comp=Z,83nm,0.6s						
WDD	Wield Dalam	5.45	247	*e*Pn	Pn	23 13 46.9	-0.7
	comp=Z,136nm,0.6s						
WDD				*e*Sn	Sn	23 14 50.1	-0.4
WDD	Wield Dalam	5.45	247	*e*Pn	Pn	23 13 46.9	-0.8
	comp=Z,136nm,0.6s						
WDD				*e*Sn	Sn	23 14 50.1	-0.4
CIGN	Sant'Elia a Pi	5.63	310	Pn	Pn	23 13 51.5	+1.4
	comp=Z,43nm,0.6s						
CIGN	Sant'Elia a Pi	5.63	310	Pn	Pn	23 13 51.5	+1.4
	comp=Z,43nm,0.6s						
GRUS	Gruza	5.69	0	*e*Pn	Pn	23 13 49.3	-1.7
BBLS	Lazići	5.75	351	⇑*i*Pn	Pn	23 13 53.0	+1.2
SGG	Gregorio Mates	5.81	305	Pn	Pn	23 13 54.8	+2.2
	comp=Z,56nm,0.5s						
SGG	Gregorio Mates	5.81	305	Pn	Pn	23 13 54.8	+2.2
	comp=Z,56nm,0.5s						
DIVS	Divibare	5.92	355	⇑*i*Pn	Pn	23 13 52.4	-1.8
RFI	Roccamonfina	6.02	303	Pn	Pn	23 13 57.0	+1.4
	comp=Z,3.5nm,1.0s						
RFI	Roccamonfina	6.02	303	Pn	Pn	23 13 57.0	+1.4
	comp=Z,3.5nm,1.0s						
MIDA	Miranda	6.02	307	Pn	Pn	23 13 57.3	+1.7
	comp=Z,42nm,0.9s						
MIDA	Miranda	6.02	307	Pn	Pn	23 13 57.3	+1.7
	comp=Z,42nm,0.9s						
RNI2	Rionero Sannit	6.12	307	Pn	Pn	23 13 59.7	+2.8
	comp=Z,39nm,0.5s						
RNI2	Rionero Sannit	6.12	307	Pn	Pn	23 13 59.7	+2.8
	comp=Z,39nm,0.5s						
AQU	L'Aquila	6.95	309	*e*P	Pn	23 14 06.9	-1.3
AQU						23 15 26.3	
AQU				pmax	pmax		
	comp=Z,11nm,0.5s						
AQU	L'Aquila	6.95	309	*e*Pn	Pn	23 14 06.9	-1.3
	comp=Z,11nm,0.5s						
AQU				Sn	Sn	23 15 26.3	-1.1
AQU	L'Aquila	6.95	309	*e*P	Pn	23 14 06.9	-1.3
	comp=Z,11nm,0.5s						
AQU				S	Sn	23 15 26.3	-1.1
TERO	Teramo	6.98	312	Pn	Pn	23 14 10.2	+1.5
	comp=Z,22nm,0.4s						
TERO	Teramo	6.98	312	Pn	Pn	23 14 10.2	+1.5
	comp=Z,22nm,0.4s						
NRCA	Norcia	7.40	311	Pn	Pn	23 14 15.9	+1.5
	comp=Z,5.2nm,0.7s						
NRCA	Norcia	7.40	311	Pn	Pn	23 14 15.9	+1.5
	comp=Z,5.2nm,0.7s						
NVLJ	Novalja	7.72	327	*i* Pn	Pn	23 14 17.5	-1.3
NVLJ				Sn	Sn	23 15 41.3	-5.0
NVLJ	Novalja	7.72	327	*i* Pn	Pn	23 14 17.5	-1.3
BOJS	Bojanci	8.35	333	*e*Pn	Pn	23 14 29.2	+1.7
BOJS	Bojanci	8.35	333	*e*Pn	Pn	23 14 29.2	+1.7
BOJS				*e*Sn	Sn	23 15 55.6	-6.4
BOJS	Bojanci	8.35	333	*e*Pn	Pn	23 14 29.2	+1.7
TIRR	Tirgusor	8.54	40	*e*P	Pn	23 14 28.7	-1.4
TIRR	Tirgusor	8.54	40	*e*P	Pn	23 14 28.7	-1.4
CRES	Cresnjev	8.56	335	*e*Pn	Pn	23 14 28.8	-1.6
CRES	Cresnjev	8.56	335	*e*Pn	Pn	23 14 28.8	-1.6
CRES				*e*Sn	Sn	23 15 57.9	-9.1
CRES	Cresnjev	8.56	335	*e*Pn	Pn	23 14 28.8	-1.6
VSL	Villasalto	8.92	282	*e*Pn	Pn	23 14 33.4	-1.9
VSL	Villasalto	8.92	282	*e*Pn	Pn	23 14 33.4	-1.9
VOY	Vojsko	9.31	329	*e*Pn	Pn	23 14 41.3	+0.6
VOY				*e*Sn	Sn	23 16 18.7	-6.8
VOY	Vojsko	9.31	329	*e*Pn	Pn	23 14 41.3	+0.6
KEST	Kesra	9.40	258	Pn	Pn	23 14 42.5	+0.5
	comp=Z,0.1nm,0.3s,baz=78,slow=14,SNR=6.2						
SOKA	Soboth	9.45	336	⇑*i*Pn	Pn	23 14 41.6	-1.0
SOKA	Soboth	9.45	336	Pn	Pn	23 14 41.6	-1.0
OBKA	Obir	9.47	333	⇑*i*Pn	Pn	23 14 42.1	-0.7
OBKA				⇓*i*Sn	Sn	23 16 26.0	-3.3
OBKA	Obir	9.47	333	Pn	Pn	23 14 42.1	-0.7
VLC	Villacollemand	9.78	311	Pn	Pn	23 14 46.4	-0.7
VLC	Villacollemand	9.78	311	Pn	Pn	23 14 46.4	-0.7
BR131	Keskin Array S	10.21	77	*e*Pn	Pn	23 14 50.8	-2.3
BR131	Keskin Array S	10.21	77	*e*Pn	Pn	23 14 50.8	-2.2
BRTR	Keskin Array B	10.21	77	Pn	Pn	23 14 50.7	-2.3
	comp=Z,0.1nm,0.3s,baz=263,slow=12,SNR=2.9						
ABTA	Abfaltersbach	10.46	327	⇑*i*Pn	Pn	23 14 56.1	-0.2
ABTA				⇑*i*Sn	Sn	23 16 49.5	-4.1
ABTA	Abfaltersbach	10.46	327	Pn	Pn	23 14 56.1	-0.3
MOA	Molln	10.73	336	⇓*i*Pn	Pn	23 14 58.7	-1.4
MOA				⇑*i*Sn	Sn	23 16 55.0	-5.3
MOA	Molln	10.73	336	Pn	Pn	23 14 58.7	-1.4
DAVOX	Davos/Dischmat	11.70	321	Pn	Pn	23 15 12.6	-0.8
	comp=Z,0.2nm,0.3s,baz=143,slow=20,SNR=2.6						
DAVOX				Sn	Sn	23 17 16.2	-8.0
	comp=Z,0.2nm,0.3s,baz=162,slow=20,SNR=2.6						
DAVOX	Davos/Dischmat	11.70	321	P	Pn	23 15 12.6	-0.8
BNI	Bardonecchia	12.51	308	P	Pn	23 15 23.7	-0.7
BNI	Bardonecchia	12.51	308	P	Pn	23 15 23.7	-0.7
LPG	La Plagne	12.68	310	*e*P	Pn	23 15 29.5	+2.7
	comp=Z,3.8nm,0.5s						
LPG	La Plagne	12.68	310	*e*P	Pn	23 15 29.5	+2.7
LPG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
LPG	La Plagne	12.68	310	*e*P	Pn	23 15 29.5	+2.7
	comp=Z,1.9nm,0.5s						
LPG	La Plagne	12.68	310	*e*P	Pn	23 15 29.5	+2.7
	comp=Z,1.9nm,0.5s						
LPL	La Plagne	12.70	310	*e*P	Pn	23 15 29.9	+2.8
LPL	La Plagne	12.70	310	*e*P	Pn	23 15 29.9	+2.8
MMAI	Mount Meron Ar	13.04	109	Pn	Pn	23 15 29.3	-2.4
	comp=Z,0.5nm,0.3s,baz=317,slow=12,SNR=4.1						
HINF	Hinteralfeld	13.94	318	*e*P	Pn	23 15 45.5	+1.6
	comp=Z,1.8nm,0.3s						
HINF	Hinteralfeld	13.94	318	*e*P	Pn	23 15 45.5	+1.6
HINF				pmax	pmax		
	comp=Z,1.0nm,0.3s						
HINF	Hinteralfeld	13.94	318	*e*P	Pn	23 15 45.5	+1.6
	comp=Z,0.9nm,0.3s						
HINF	Hinteralfeld	13.94	318	*e*P	Pn	23 15 45.5	+1.6
	comp=Z,0.9nm,0.3s						
CDF	Champ du Feu	14.11	321	*e*P	Pn	23 15 47.5	+1.3
CDF	Champ du Feu	14.11	321	*e*P	Pn	23 15 47.5	+1.3
HAU	Haudompre	14.32	318	*e*P	Pn	23 15 50.0	+0.8
	comp=Z,2.0nm,0.2s						
HAU	Haudompre	14.32	318	*e*P	Pn	23 15 50.0	+0.8
HAU				pmax	pmax		
	comp=Z,1.0nm,0.2s						
HAU	Haudompre	14.32	318	*e*P	Pn	23 15 50.0	+0.8
	comp=Z,1.0nm,0.2s						
EIL	Elat	14.57	121	Pn	Pn	23 15 54.5	+1.9
	comp=Z,0.2nm,0.3s,baz=333,slow=2.3,SNR=3.3						
EIL				Sn	Sn	23 18 25.1	-9.2
	comp=Z,0.2nm,0.3s,baz=336,slow=20,SNR=3.1						
EIL	Elat	14.57	121	Pn	Pn	23 15 54.5	+1.9
LOR	Lormes	15.31	312	*e*P	Pn	23 16 04.1	+1.7
SUW	Suwalki	15.92	5	*e*P	Pn	23 16 08.4	-2.0
SUW	Suwalki	15.92	5	*e*Pn	Pn	23 16 08.4	-2.0
KIV	Kislovodsk	17.54	64	*e*P	Pn	23 16 32.1	+1.1
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIV	Kislovodsk	17.54	64	*e*Pn	Pn	23 16 30.1	-0.9
	comp=Z,4.7nm,0.9s						
KIV	Kislovodsk	17.54	64	*e*Pn	Pn	23 16 30.1	-0.9
	comp=Z,4.7nm,0.9s						
KIV	Kislovodsk	17.54	64	*e*P	Pn	23 16 32.1	+1.1
	comp=Z,7.0nm,1.0s						
ZEI	Tsey	18.23	68	*e*P	Pn	23 16 41.2	+1.7
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.4s						
ZEI	Tsey	18.23	68	*e*P	Pn	23 16 41.2	+1.7
	comp=Z,5.0nm,0.4s						
GNI	Garni	18.75	76	*e*P	Pn	23 16 44.4	-1.4
GNI	Garni	18.75	76	*e*P	Pn	23 16 44.4	-1.4
ESDC	Sonseca Array	19.22	282	P	Pn	23 16 49.6	-1.9
	comp=Z,0.3nm,0.3s,baz=89,slow=11,SNR=6.2						
ESDC	Sonseca Array	19.22	282	P	Pn	23 16 49.6	-1.9
MDT	Midelt	21.25	263	P	P	23 17 11.7	-1.1
	comp=Z,2.8nm,0.9s,mb3.6,baz=45,slow=5.7,SNR=3.5						
MDT	Midelt	21.25	263	P	P	23 17 11.7	-1.1
HFS	Hagfors	22.41	351	P	P	23 17 23.3	-1.6
	comp=Z,3.3nm,0.4s,mb4.1,baz=156,slow=11,SNR=31						
HFS	Hagfors	22.41	351	P	P	23 17 23.3	-1.6
EKA	Eskdalemuir Ar	23.49	325	P	P	23 17 34.3	-2.1
	comp=Z,1.2nm,0.7s,mb3.4,baz=123,slow=9.1,SNR=3.8						
EKA	Eskdalemuir Ar	23.49	325	P	P	23 17 34.3	-2.1
NAO01	NORSAR Array S	23.50	348	*e*P	P	23 17 35.6	-0.8
NAO01	NORSAR Array S	23.50	348	*e*P	P	23 17 35.6	-0.8
FINES	FINESS Array B	23.52	7	P	P	23 17 33.4	-3.2
	comp=Z,1.9nm,0.5s,mb3.8,baz=181,slow=8.7,SNR=17						
NB2	NORSAR Subarra	23.63	348	P	P	23 17 35.7	-2.0
	comp=Z,0.3nm,0.5s,mb3.0,baz=154,slow=10						
NB2	NORSAR Subarra	23.63	348	P	P	23 17 35.7	-2.0
	comp=Z,0.3nm,0.5s,mb3.0,SNR=4.0						
NOA	NORSAR Array B	23.63	348	P	P	23 17 35.5	-2.1
	comp=Z,2.2nm,0.6s,mb3.8,baz=157,slow=9.1,SNR=14						
KAF	Kangasniemi	24.20	6	*e*P	P	23 17 40.1	-2.8
KAF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb3.9						
KAF	Kangasniemi	24.20	6	*e*P	P	23 17 40.1	-2.8
	comp=Z,2.9nm,0.6s,mb3.9						
KAF	Kangasniemi	24.20	6	*e*p	P	23 17 40.1	-2.8
	comp=Z,2.9nm,0.6s,mb3.9						
JOF	Joensuu	25.59	11	*e*P	P	23 17 52.4	-3.1
JOF	Joensuu	25.59	11	*e*p	P	23 17 52.4	-3.1
	comp=Z,2.0nm,0.5s,mb3.9						
AKTK	Aktyubinsk	29.07	53	P	P	23 18 24.8	-2.0
AKTK	Aktyubinsk	29.07	53	P	P	23 18 24.8	-2.1
AKTO	Aktyubinsk	29.07	53	P	P	23 18 24.8	-2.1
	comp=Z,1.3nm,0.3s,mb4.1,baz=260,slow=9.5,SNR=9.9						
ABKAR	Akbulak array	30.13	56	*e*P	P	23 18 33.8	-2.5
	comp=Z,0.6nm,0.4s,mb3.7						
ARU	Arti	30.97	42	*e*P	P	23 18 40.9	-2.7
ARU	Arti	30.97	42	*e*P	P	23 18 40.9	-2.7
ARCES	ARCESS Array B	31.51	3	P	P	23 18 46.3	-1.9
	comp=Z,1.6nm,0.6s,mb4.0,baz=188,slow=11,SNR=13						
ARCES	ARCESS Array B	31.51	3	P	P	23 18 46.3	-1.9
ARE0	ARCESS Array S	31.51	3	*e*P	P	23 18 47.4	-0.8
ARE0	ARCESS Array S	31.51	3	*e*P	P	23 18 47.4	-0.8
BRVK	Borovoye	36.95	50	P	P	23 19 34.0	-1.5
BRVK	Borovoye	36.95	50	P	P	23 19 34.0	-1.5
BVAR	Borovoye Array	37.01	50	P	P	23 19 33.9	-2.2
	comp=Z,1.6nm,0.6s,mb4.0,baz=263,slow=7.4,SNR=15						
BVAR	Borovoye Array	37.01	50	P	P	23 19 33.9	-2.2
EKS2	Erkin-Say	40.12	66	*e*P	P	23 20 01.1	-1.2
	comp=Z,2.9nm,0.9s,mb4.0						
EKS2	Erkin-Say	40.12	66	*e*P	P	23 20 01.1	-1.2
	com

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**2.50**	**234**	*e*PKP	**Pn**	**23 18 53.0**	**-10**
IMP				*e*S	**Sn**	**23 19 24.0**	**-11**
SHL	**Shillong**	**3.92**	**261**	*e*PN	**Pn**	**23 19 23.0**	**+1.9**
SHL				*e*SN	**Sn**	**23 20 10.0**	**+2.9**
LSA	**Lhasa**	**5.61**	**309**	Pn	**Pn**	**23 19 43.4**	**0.0**
LSA				smax			
	comp=N,20nm,0.9s						
LSA				smax			
	comp=E,40nm,0.8s						
LSA	**Lhasa**	**5.61**	**309**	*e*Pn	**Pn**	**23 19 43.9**	**+0.4**
	comp=E,36nm,0.4s						
LSA				*e*Sn	**Sn**	**23 20 47.5**	**+0.5**
TAPN	**Taplejung**	**7.64**	**280**	*e*Pn	**Pn**	**23 20 10.0**	**-0.5**
TAPN				*e*Sn	**Sn**	**23 21 36.8**	**+1.0**
	comp=E,39nm,0.4s						
CHTO	**Chiang Mai**	**7.84**	**160**	*e*Pn	**Pn**	**23 20 17.9**	**+4.6**
ODAN	**Odare**	**7.88**	**276**	*e*Pn	**Pn**	**23 20 14.0**	**+0.1**
ODAN				*e*Sn	**Sn**	**23 21 42.9**	**+1.2**
	comp=E,36nm,0.4s						
CMAR	**Chiang Mai Arr**	**8.18**	**161**	Pn	**Pn**	**23 20 17.4**	**-0.4**
	comp=E,1.2nm,0.3s,baz=338,slow=13,SNR=10						
RAMN	**Ramite**	**8.59**	**277**	*e*Pn	**Pn**	**23 20 23.5**	**+0.2**
JIRN	**Jiri**	**9.01**	**281**	*e*Pn	**Pn**	**23 20 29.1**	**+0.2**
JIRN				*e*Sn	**Sn**	**23 22 09.0**	**+0.1**
	comp=E,44nm,0.3s						
GUN	**Gumba**	**9.32**	**282**	*e*Pn	**Pn**	**23 20 32.7**	**-0.3**
GUN				*e*Sn	**Sn**	**23 22 15.6**	**-0.7**
	comp=E,38nm,0.5s						
PKI	**Pulchoki**	**9.69**	**280**	*e*Pn	**Pn**	**23 20 37.1**	**-0.9**
PKIN	**Phulchoki**	**9.71**	**280**	*e*Pn	**Pn**	**23 20 38.1**	**0.0**
PKIN				*e*Sn	**Sn**	**23 22 25.5**	**-0.1**
	comp=E,16nm,0.4s						
KKN	**Kakani**	**9.83**	**281**	*e*Pn	**Pn**	**23 20 39.1**	**-0.7**
KKN				*e*Sn	**Sn**	**23 22 28.1**	**-0.5**
	comp=E,24nm,0.4s						
DMN	**Daman**	**9.96**	**280**	*e*Pn	**Pn**	**23 20 40.6**	**-1.0**
DMN				*e*Sn	**Sn**	**23 22 31.1**	**-0.8**
	comp=E,15nm,0.5s						
GKN	**Gorkha**	**10.42**	**282**	*e*Pn	**Pn**	**23 20 46.6**	**-1.0**
GKN				*e*Sn	**Sn**	**23 22 41.3**	**-1.5**
	comp=E,22nm,0.3s						
SONM	**Songino Array**	**22.99**	**18**	P	**P**	**23 23 10.9**	**-2.7**
	comp=E,0.4nm,0.5s,mb3.1,baz=190,slow=12,SNR=3.1						
MK31	**Makanchi Array**	**23.27**	**335**	*e*P	**P**	**23 23 15.7**	**-0.5**
MKAR	**Makanchi Array**	**23.27**	**335**	P	**P**	**23 23 19.5**	**+3.3**
	comp=E,0.6nm,0.5s,mb3.3,baz=142,slow=9.2,SNR=8.6						
KBL	**Kabul**	**24.76**	**296**	P	**P**	**23 23 33.1**	**+3.2**
KURK	**Kurchatov**	**27.88**	**336**	P	**P**	**23 24 00.4**	**+2.7**
	comp=E,0.3nm,0.6s,mb3.2,baz=145,slow=9.8,SNR=2.6						
BRVK	**Borovoye**	**33.02**	**331**	*e*P	**P**	**23 24 42.6**	**-0.3**
	comp=E,0.7nm,0.4s,mb3.7						

IDC ***09*** *23:19:49.8±0.6, 32°.24N×105°.05E, h0km, mb4.3/20, mb1 4.3/23, mb1mx4.2/33, mbtmp4.2/23, ML3.7/3, MS3.8/2, Ms1 3.8/2, ms1mx2.9/31, Error ellipse: s-maj=20.0km s-min=13.4km az=35.0*

NEIC ***09*** *23:19:51.2±0.3, 32°.26N×105°.06E, h10km, mb4.6/20, Error ellipse: s-maj=7.1km s-min=5.8km az=70.0*

BJI ***09*** *23:19:52.1, 32°.24N×105°.12E, h19km, mB4.6/13, mb4.4/19, ML4.2/22, Ms4.1/16, Ms7 3.9/21*

MOS ***09*** *23:19:52.5±0.9, 32°.22N×105°.04E, h33km, mb4.8/19, Error ellipse: s-maj=10.6km s-min=6.4km az=109.5*

ISC 09 23:19:50.0±0.7, 32°.25N±0°.02×105°.07E±0°.03, h2km±4km, n117, σ1§01/133, mb4.4/49, MS3.8/2, 2C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.74**	**220**	Pg	**Pg**	**23 20 21.9**	**-1.5**
CD2				Sg	**Sg**	**23 20 45.3**	**-0.6**
CD2				smax			
	comp=N,8μm,0.6s						
XAN	**Xi'an**	**3.69**	**60**	Pn	**Pn**	**23 20 51.3**	**+3.2**
XAN				Pg	**Pg**	**23 20 58.3**	**-2.5**
XAN				Sn	**Sn**	**23 21 41.4**	**+9.1**
XAN				Sg	**Sg**	**23 21 50.8**	**+2.1**
XAN				smax			
	comp=N,920nm,0.7s						
XAN				smax			
	comp=E,480nm,0.8s						
XAN				LR	LR		
	comp=N,560nm,8.3s						
XAN				LR	LR		
	comp=E,400nm,8.0s						
XAN				LR	LR		
	comp=Z,480nm,8.1s						
LZH	**Lanzhou**	**3.96**	**346**	Pn	**Pn**	**23 20 55.3**	**+3.5**
LZH				Pg	**Pg**	**23 21 05.2**	**-0.7**
LZH				Sn	**Sn**	**23 21 40.5**	**+1.7**
LZH				Sg	**Sg**	**23 21 56.0**	**-1.3**
LZH				smax			
	comp=N,1μm,1.0s						
LZH				smax			
	comp=E,1μm,1.0s						
LZH				LR	LR		
	comp=E,3μm,7.3s						
LZH				LR	LR		
	comp=Z,3μm,8.6s						
ENH	**Enshi**	**4.27**	**116**	*e*Pn	**Pn**	**23 21 00.7**	**+4.7**
ENH				*e*Pg	**Pg**	**23 21 11.9**	**+0.1**
ENH				*e*Sg	**Sg**	**23 22 07.5**	**+0.3**
GYA	**Guiyang**	**5.94**	**166**	Pn	**Pn**	**23 21 21.2**	**+2.2**
GYA				Sn	**Sn**	**23 22 26.3**	**-1.3**
GYA				Sg	**Sg**	**23 22 56.6**	**-4.1**
GYA				smax			
	comp=N,370nm,0.8s						
GYA				smax			
	comp=E,420nm,0.9s						
KMI	**Kunming**	**7.39**	**197**	Pn	**Pn**	**23 21 41.2**	**+2.3**
KMI				Sn	**Sn**	**23 23 04.0**	**+0.6**
KMI				smax			
	comp=N,38nm,1.6s						
KMI				smax			
	comp=E,40nm,1.6s						
KMI				LR	LR		
	comp=N,690nm,8.5s						
KMI				LR	LR		
	comp=E,570nm,8.5s						
KMI				LR	LR		
	comp=Z,350nm,9.2s						
WHN	**Wuhan**	**8.12**	**100**	P	**Pn**	**23 21 53.5**	**+4.6**
WHN				S	**Sn**	**23 23 18.0**	**-3.2**
WHN				LR	LR		
	comp=Z,2μm,5.5s						
GTA	**Gaotai**	**8.32**	**331**	*e*P	**Pn**	**23 21 53.1**	**+1.4**
GTA				pP		23 21 56.2	
GTA				S	**Sn**	**23 23 27.0**	**+0.8**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				LR	LR		
	comp=N,620nm,8.3s						
GTA				LR	LR		
	comp=E,580nm,6.8s						
GTA				LR	LR		
	comp=Z,540nm,10.7s						
HHC	**Hu-ho-hao-te**	**10.04**	**29**	*e*P	**Pn**	**23 22 14.5**	**-0.8**
HHC				sP		23 22 25.4	
HHC				S	**Sn**	**23 24 05.5**	**-3.1**
HHC				PcS	PcS	23 31 57.4	-2.2
HHC				pmax	pmax		
	comp=Z,13nm,0.5s						
HHC				pmax	pmax		
	comp=Z,87nm,4.9s						
HHC				LR	LR		
	comp=N,610nm,8.4s						
HHC				LR	LR		
	comp=E,680nm,8.4s						
HHC				LR	LR		
	comp=Z,400nm,8.5s						
NJ2	**Nanjing**	**11.69**	**87**	*e*P	**Pn**	**23 22 39.1**	**+1.2**
NJ2				pP		23 22 42.4	
NJ2				sP		23 22 45.5	
NJ2				PP		23 22 48.7	
NJ2				S	**Sn**	**23 24 48.0**	**-1.0**
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,110nm,3.5s						
NJ2				LR	LR		
	comp=N,310nm,7.4s						
NJ2				LR	LR		
	comp=E,380nm,6.0s						
NJ2				LR	LR		
	comp=Z,390nm,7.5s						
CHTO	**Chiang Mai**	**14.47**	**204**	*e*Pn	**Pn**	**23 23 17.0**	**+1.1**
CHTO	**Chiang Mai**	**14.47**	**204**	*e*Pn	**Pn**	**23 23 16.9**	**+1.1**
CMAR	**Chiang Mai Arr**	**14.80**	**203**	Pn	**Pn**	**23 23 21.4**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=13,slow=12,SNR=5.4						
SONM	**Songino Array**	**15.60**	**3**	Pn	**Pn**	**23 23 32.3**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=182,slow=13,SNR=13						
ULN	**Ulaanbaatar**	**15.67**	**5**	*e*P	**Pn**	**23 23 32.6**	**+0.8**
ULN						23 26 25.6	
ULN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ULN	**Ulaanbaatar**	**15.67**	**5**	*e*Pn	**Pn**	**23 23 32.6**	**+0.8**
	comp=Z,7.7nm,0.9s						
ULN				Sn	**Sn**	**23 26 25.6**	**-0.4**
KSRS	**Korea Array**	**19.45**	**68**	P	**Pn**	**23 24 18.7**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=253,slow=10,SNR=26						
MOY	**Mondy**	**19.63**	**352**	*e*P	**Pn**	**23 24 25.2**	**+4.1**
MK31	**Makanchi Array**	**22.69**	**316**	*e*P	**P**	**23 24 53.0**	**+0.3**
MKAR	**Makanchi Array**	**22.69**	**316**	P	**P**	**23 24 53.5**	**+0.8**
	comp=Z,6.9nm,0.9s,mb4.1,baz=116,slow=11,SNR=24						
KSH	**Kashi**	**24.59**	**295**	P	**P**	**23 25 15.6**	**+4.1**
KSH				pmax	pmax		
	comp=Z,150nm,5.9s						
TKM2	**Tokmak 2**	**25.55**	**303**	*e*P	**P**	**23 25 18.6**	**-1.5**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.0						
TKM2	**Tokmak 2**	**25.55**	**303**	*e*P	**P**	**23 25 18.6**	**-1.5**
	comp=Z,3.2nm,0.6s,mb4.0						
ZAA0	**Zalesovo Array**	**26.07**	**332**	*e*P	**P**	**23 25 24.4**	**-0.4**
ZALV	**Zalesovo Beam**	**26.07**	**332**	P	**P**	**23 25 25.3**	**+0.6**
	comp=Z,4.7nm,0.6s,mb4.2,baz=131,slow=11,SNR=11						
KLR	**Kul'dur**	**26.19**	**42**	*e*P	**P**	**23 25 22.8**	**-3.1**
AAK	**Ala-Archa**	**26.27**	**302**	LR	LR	23 36 49.6	
	comp=Z,92nm,18.3s,MS3.4,baz=302,slow=39						
AML	**Almayashu**	**26.74**	**301**	*e*P	**P**	**23 25 31.1**	**+0.2**
	comp=Z,7.1nm,1.0s,mb4.2						
EKS2	**Erkin-Say**	**26.79**	**302**	*e*P	**P**	**23 25 29.4**	**-2.0**
	comp=Z,2.2nm,0.9s,mb3.7						
KURK	**Kurchatov**	**26.85**	**321**	P	**P**	**23 25 32.4**	**+0.7**
	comp=Z,4.4nm,0.8s,mb4.0,baz=130,slow=8.5,SNR=26						
KURK				PcP	PcP	23 28 53.8	-0.5
	comp=Z,1.9nm,0.6s,baz=117,slow=2.0,SNR=7.5						
KURK	**Kurchatov**	**26.85**	**321**	P	**P**	**23 25 32.4**	**+0.6**
KURK						23 28 53.8	
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.0						
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.8						
KURK	**Kurchatov**	**26.85**	**321**	*e*P	**P**	**23 25 32.2**	**+0.4**
	comp=Z,10nm,1.0s,mb4.3						
KURK				PcP	PcP	23 28 53.8	-0.5
MJAR	**Matsushiro Arr**	**27.60**	**72**	P	**P**	**23 25 39.2**	**+0.4**
	comp=Z,0.7nm,0.3s,mb3.7,baz=275,slow=10,SNR=4.6						
KBL	**Kabul**	**30.07**	**284**	*e*P	**P**	**23 26 01.2**	**+0.5**
YSS	**Yuzh-Sakhalins**	**32.20**	**52**	*e*P	**P**	**23 26 20.0**	**+0.7**
YSS				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.9						
BVAR	**Borovoye Array**	**32.42**	**320**	P	**P**	**23 26 21.9**	**+0.7**
	comp=Z,2.3nm,0.7s,mb4.1,baz=119,slow=8.6,SNR=14						
BVAR				PcP	PcP	23 29 08.0	-0.5
	comp=Z,1.5nm,0.6s,baz=120,slow=2.9,SNR=8.6						
BRVK	**Borovoye**	**32.49**	**320**	*e*P	**P**	**23 26 22.5**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.2						
BRVK	**Borovoye**	**32.49**	**320**	*e*P	**P**	**23 26 22.0**	**+0.2**
	comp=Z,4.0nm,0.9s,mb4.2						
ABKAR	**Akbulak array**	**37.54**	**310**	*e*P	**P**	**23 27 06.2**	**+0.7**
	comp=Z,3.5nm,0.8s,mb4.1						
AKTK	**Aktyubinsk**	**38.97**	**312**	P	**P**	**23 27 18.2**	**+0.7**
AKTK				PcP	PcP	23 29 27.6	-0.2
AKTO	**Aktyubinsk**	**38.97**	**312**	P	**P**	**23 27 18.2**	**+0.7**
	comp=Z,2.0nm,0.6s,mb4.0,baz=99,slow=11,SNR=7.0						
AKTO				PcP	PcP	23 29 27.6	-0.2
	comp=Z,1.3nm,0.6s,baz=116,slow=9.0,SNR=4.1						
SVE	**Sverdlovsk**	**39.08**	**322**	*e*P	**P**	**23 27 19.6**	**+1.3**
SVE				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.5						
ARU	**Arti**	**40.04**	**321**	*c i*P	**P**	**23 27 26.9**	**+0.6**
ARU				*e*		23 28 57.3	
ARU				S	**S**	**23 33 31.7**	**-1.1**
ARU				SS	SS	23 36 18.1	-11
ARU				pmax	pmax		
	comp=Z,21nm,1.2s,mb4.7						
ARU	**Arti**	**40.04**	**321**	*e*P	**P**	**23 27 26.6**	**+0.2**
	comp=Z,19nm,1.1s,mb4.7						
SEY	**Seymchan**	**42.69**	**30**	*e*P	**P**	**23 27 48.2**	**+0.2**
PETK	**Petropavlovsk-**	**42.80**	**45**	P	**P**	**23 27 49.2**	**+0.2**
	comp=Z,7.1nm,0.7s,mb4.5,baz=230,slow=2.9,SNR=11						
PETK	**Petropavlovsk-**	**42.80**	**45**	P	**P**	**23 27 49.2**	**+0.2**
GNI	**Garni**	**48.50**	**297**	P	**P**	**23 28 34.3**	**0.0**
KIV	**Kislovodsk**	**49.38**	**303**	*e*P	**P**	**23 28 42.1**	**+1.1**
KIV				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
KIV	**Kislovodsk**	**49.38**	**303**	*e*P	**P**	**23 28 42.0**	**+1.0**
	comp=Z,8.2nm,1.0s,mb4.7						
BILL	**Bilibino**	**49.79**	**26**	*e*P	**P**	**23 28 44.0**	**+0.2**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
OBN	**Obninsk**	**52.19**	**317**	*e*P	**P**	**23 29 01.9**	**-0.1**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
OBN	**Obninsk**	**52.19**	**317**	*e*P	**P**	**23 29 00.2**	**-1.8**
ANN	**Anapa**	**52.95**	**304**	*e*P	**P**	**23 29 06.9**	**-0.9**
ANN				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.0						
JOF	**Joensuu**	**54.51**	**327**	*e*P	**P**	**23 29 18.4**	**-0.5**
JOF	**Joensuu**	**54.51**	**327**	*e*p	**P**	**23 29 18.4**	**-0.5**
	comp=Z,4.3nm,0.7s,mb4.6						
MBWA	**Marble Bar**	**54.93**	**163**	*e*P	**P**	**23 29 21.1**	**-1.3**
KEV	**Kevo**	**56.02**	**336**	*e*P	**P**	**23 29 27.5**	**-2.3**
KEV				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
KEV	**Kevo**	**56.02**	**336**	*e*P	**P**	**23 29 27.5**	**-2.3**
	comp=Z,5.0nm,0.6s,mb4.7						
KEV	**Kevo**	**56.02**	**336**	*e*p	**P**	**23 29 27.5**	**-2.3**
	comp=Z,5.0nm,0.6s,mb4.7						
ARCES	**ARCESS Array B**	**56.56**	**336**	P	**P**	**23 29 32.9**	**-0.7**
	comp=Z,2.8nm,0.6s,mb4.4,baz=79,slow=7.5,SNR=13						
ARE0	**ARCESS Array S**	**56.56**	**336**	*e*P	**P**	**23 29 33.4**	**-0.2**
ASF	**Jabal al Asfar**	**56.73**	**290**	P	**P**	**23 29 34.9**	**-0.5**
	comp=Z,2.5nm,0.8s,mb4.3,baz=45,slow=1.4,SNR=4.4						
KAF	**Kangasniemi**	**56.89**	**327**	*e*P	**P**	**23 29 35.2**	**-0.8**
KAF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
KAF	**Kangasniemi**	**56.89**	**327**	*e*P	**P**	**23 29 35.2**	**-0.8**
	comp=Z,4.7nm,0.7s,mb4.6						
KAF	**Kangasniemi**	**56.89**	**327**	*e*p	**P**	**23 29 35.2**	**-0.8**
	comp=Z,4.7nm,0.7s,mb4.6						
BR131	**Keskin Array S**	**56.90**	**299**	*e*P	**P**	**23 29 36.4**	**0.0**
BRTR	**Keskin Array B**	**56.90**	**299**	P	**P**	**23 29 36.5**	**0.0**
	comp=Z,1.5nm,0.9s,mb4.0,baz=87,slow=6.4,SNR=9.1						
FINES	**FINESS Array B**	**57.08**	**326**	P	**P**	**23 29 37.4**	**0.0**
	comp=Z,5.2nm,0.8s,mb4.6,baz=114,slow=9.2,SNR=10.0						
FINES	**FINESS Array B**	**57.08**	**326**	P	**P**	**23 29 37.4**	**0.0**
FINES				pmax	pmax		
	comp=Z,5.0nm,0.8s						
FINES	**FINESS Array B**	**57.08**	**326**	P	**P**	**23 29 37.4**	**0.0**
VSU	**Vasula**	**57.19**	**322**	*e*P	**P**	**23 29 38.2**	**0.0**
VSU				pmax	pmax		
	comp=Z,22nm,1.3s,mb5.0						
AKASG	**Malin Array Be**	**57.21**	**313**	P	**P**	**23 29 38.6**	**+0.1**
	comp=Z,0.6nm,0.4s,mb4.0,baz=71,slow=6.7,SNR=4.2						
AKASG	**Malin Array Be**	**57.21**	**313**	P	**P**	**23 29 38.6**	**+0.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**57.21**	**313**	P	**P**	**23 29 38.6**	**+0.1**
IDID	**Didziasalis**	**57.74**	**319**	*e*P	**P**	**23 29 42.3**	**+0.1**
IDID				AMB	AMB	23 29 47.4	
	comp=Z,2.3nm,1.0s,mb4.2						
IZAR	**Zarasai**	**57.94**	**319**	*e*P	**P**	**23 29 43.4**	**-0.1**
IZAR				AMB	AMB	23 29 47.5	
	comp=Z,2.7nm,0.7s,mb4.4						
IIGN	**Ignalina**	**58.03**	**319**	*e*P	**P**	**23 29 44.4**	**+0.2**
IIGN				AMB	AMB	23 29 49.6	
	comp=Z,2.0nm,1.3s,mb4.0						
ISAL	**Salakas**	**58.04**	**319**	*e*P	**P**	**23 29 43.9**	**-0.4**
ISAL				AMB	AMB	23 29 49.6	
	comp=Z,2.1nm,1.5s,mb3.9						
CSS	**Prodhromos**	**58.60**	**294**	P	**P**	**23 29 48.2**	**-0.3**
WRAB	**Tennant Creek**	**58.98**	**148**	*e*P	**P**	**23 29 51.5**	**+0.3**
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
WRAB	**Tennant Creek**	**58.98**	**148**	*e*P	**P**	**23 29 51.5**	**+0.3**
	comp=Z,5.4nm,0.6s,mb4.8						
WRA	**Warramunga Arr**	**58.98**	**148**	P	**P**	**23 29 51.4**	**+0.2**
	comp=Z,5.8nm,0.7s,mb4.7,baz=338,slow=7.7,SNR=20						
EIL	**Elat**	**59.18**	**288**	P	**P**	**23 29 52.8**	**+0.2**
	comp=Z,2.8nm,0.8s,mb4.3,baz=11,slow=10,SNR=2.8						
EIL	**Elat**	**59.18**	**288**	P	**P**	**23 29 52.8**	**+0.2**
KWP	**Kalwaria Pacla**	**61.53**	**313**	*e*P	**P**	**23 30 08.4**	**0.0**
KWP				pmax	pmax		
	comp=Z,11nm,0.9s,mb5.0						
KWP	**Kalwaria Pacla**	**61.53**	**313**	*e*P	**P**	**23 30 08.4**	**0.0**
	comp=Z,11nm,0.9s,mb5.0						
ASAR	**Alice Springs**	**62.05**	**150**	P	**P**	**23 30 12.4**	**+0.3**
	comp=Z,2.7nm,0.7s,mb4.5,baz=334,slow=6.6,SNR=14						
HFS	**Hagfors**	**63.28**	**326**	P	**P**	**23 30 19.1**	**-0.9**
	comp=Z,1.5nm,0.5s,mb4.4,baz=104,slow=4.9,SNR=7.4						
NB2	**NORSAR Subarra**	**64.14**	**327**	P	**P**	**23 30 24.3**	**-1.3**
	comp=Z,1.4nm,0.5s,mb4.2,baz=72,slow=6.5						
NOA	**NORSAR Array B**	**64.14**	**327**	P	**P**	**23 30 24.9**	**-0.6**
	comp=Z,1.8nm,0.6s,mb4.3,baz=71,slow=6.6,SNR=12						
NOA	**NORSAR Array B**	**64.14**	**327**	P	**P**	**23 30 24.9**	**-0.6**
CTAO	**Charters Tower**	**65.29**	**137**	P	**P**	**23 30 31.6**	**-2.0**
BPAW	**Bear Paw Mtn.**	**67.21**	**28**	*e*P	**P**	**23 30 45.7**	**+0.3**
	comp=Z,2μm,0.8s						
COLA	**College**	**68.04**	**26**	*e*P	**P**	**23 30 50.3**	**-0.3**
COLA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
COLA	**College**	**68.04**	**26**	*e*P	**P**	**23 30 50.3**	**-0.3**
	comp=Z,5.4nm,0.8s,mb4.6						
KDAK	**Kodiak Island**	**69.43**	**34**	P	**P**	**23 30 59.5**	**+0.1**
	comp=Z,9.5nm,0.8s,mb4.8,baz=297,slow=6.0,SNR=5.7						
INK	**Inuvik**	**70.81**	**20**	*e*P	**P**	**23 31 07.4**	**-0.2**
INK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
INK	**Inuvik**	**70.81**	**20**	*e*P	**P**	**23 31 07.4**	**-0.3**
	comp=Z,6.1nm,1.1s,mb4.4						
BMRM	**Bremner River**	**71.34**	**29**	*e*P	**P**	**23 31 11.0**	**0.0**
	comp=Z,13nm,0.8s,mb4.9						
DAWY	**Dawson**	**71.56**	**25**	*e*P	**P**	**23 31 12.3**	**0.0**
KMBO	**Kilima Mbogo**	**71.97**	**257**	*e*P	**P**	**23 31 18.5**	**+2.9**
LPG	**La Plagne**	**73.06**	**313**	*e*P	**P**	**23 31 21.0**	**-0.6**
	comp=Z,11nm,0.8s,mb4.5						
LPG	**La Plagne**	**73.06**	**313**	*e*P	**P**	**23 31 21.0**	**-0.6**
LPG				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
LPG	**La Plagne**	**73.07**	**313**	*e*P	**P**	**23 31 21.0**	**-0.6**
	comp=Z,5.3nm,0.8s,mb4.5						
LPL	**La Plagne**	**73.07**	**313**	*e*P	**P**	**23 31 20.9**	**-0.7**
	comp=Z,8.4nm,0.6s,mb4.5						
LPL	**La Plagne**	**73.07**	**313**	*e*P	**P**	**23 31 20.9**	**-0.7**
LPL				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
LPL	**La Plagne**	**73.07**	**313**	*e*P	**P**	**23 31 20.9**	**-0.7**
	comp=Z,4.2nm,0.6s,mb4.5						
EKA	**Eskdalemuir Ar**	**73.48**	**326**	P	**P**	**23 31 24.2**	**+0.3**
	comp=Z,0.6nm,0.6s,mb3.7,baz=41,slow=5.6,SNR=2.4						
PNL	**Peninsula**	**74.21**	**28**	*e*P	**P**	**23 31 28.5**	**+0.4**
	comp=Z,16nm,1.0s,mb4.9						
SMF	**Signal de Mont**	**74.26**	**315**	*e*P	**P**	**23 31 27.0**	**-1.6**
YKA	**Yellowknife Ar**	**80.36**	**17**	P	**P**	**23 32 02.6**	**+0.1**
	comp=Z,2.1nm,0.6s,mb4.3,baz=329,slow=5.2,SNR=7.9						
YKA	**Yellowknife Ar**	**80.36**	**17**	P	**P**	**23 32 02.6**	**+0.1**
FCC	**Fort Churchill**	**87.93**	**10**	*e*P	**P**	**23 32 41.1**	**0.0**
	comp=Z,0.1nm,0.9s						
FFC	**Flin Flon**	**90.30**	**15**	*e*P	**P**	**23 32 51.8**	**-0.5**
FFC				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.8						
FFC	**Flin Flon**	**90.30**	**15**	*e*P	**P**	**23 32 51.8**	**-0.6**
	comp=Z,4.4nm,0.8s,mb4.8						
SCHQ	**Schefferville**	**93.00**	**355**	LR	LR	00 17 03.8	
	comp=Z,96nm,18.1s,MS4.3,baz=58,slow=37						

CSEM 09 23:22:01.4±1.6, 25°.82N×59°.41E, h2km, ML3.8, Error ellipse: s-maj=42.9km s-min=19.2km az=158.0, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**3.30**	**299**	*e*Pn	Pn	23 22 56.1	+2.0
BNDS				*e*Sg	Sg	23 23 45.4	-2.0
ZHSF	**Zahedan**	**3.96**	**17**	*e*Pn	Pn	23 23 02.4	-0.8
KRBR	**Kerman**	**4.76**	**331**	*e*Pn	Pn	23 23 14.9	+0.7
KBD	**Kabd**	**10.93**	**290**	*e*P	Pn	23 24 38.3	-0.5
RDF	**Al-Radifah**	**10.99**	**289**	*e*P	Pn	23 24 39.6	0.0
UMR	**Umm Al-Rimmam**	**11.01**	**292**	*e*P	Pn	23 24 39.6	-0.4
MIB	**Mutribah**	**11.40**	**293**	*e*P	Pn	23 24 44.9	-0.4
ASAO	**Ashtian**	**11.89**	**319**	*e*Pn	Pn	23 24 53.8	+1.8

GUC 09 23:25:07.5±1.7, 33°.04S×68°.88W, h19km±999km, MD3.6, ML3.1, 3D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FCH	**Farellones**	**1.22**	**256**	*i*P	Pn	23 25 25.5	-4.0
FCH				*i* S	Sb	23 25 40.6	-4.7
FCH				AML	AML	23 25 41.5	
	comp=N,474nm,0.3s						
LMEL	**Las Melosas**	**

PLCA	Paso Flores	30.71	175	P	P	23 48 26.5	+0.3
TXAR	Lajitas Array	48.38	325	P	P	23 50 52.1	-1.1
	0.4nm,0.5s,mb3.7,baz=153,slow=8.1,SNR=6.8						
PDAR	Pinedale Array	61.70	331	P	P	23 52 30.6	+1.4
	0.1nm,0.4s,mb3.3,baz=139,slow=8.4,SNR=2.4						

DJA 09 23:42:17,7°28S×106°60E,h98km,MLv3.9/10,Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	Sukabumi	0.28	351	P	Pn	23 42 32.3	+1.0
SKJI				S	Sn	23 42 45.0	+3.1
LEM	Lembang	1.11	66	P	Pn	23 42 38.8	+0.4
LEM				S	Sn	23 42 56.2	+1.6
CGJI	Cibinong	1.12	306	P	Pn	23 42 39.3	+0.7
CGJI				S	Sn	23 42 56.1	+1.2
RBSI	Rajabasa	1.66	329	P	Pn	23 42 45.1	-0.1
KLSI		3.17	324	P	Pn	23 43 04.9	-0.2
MDSI	Maura Dua	3.67	319	P	Pn	23 43 11.6	-0.2
UGM	Wanagama	3.94	99	P	Pn	23 43 15.4	0.0
MNAI	Manna	4.64	308	P	Pn	23 43 24.6	-0.3
PWJI	Pagerwojo	5.21	98	P	Pn	23 43 32.5	-0.1
	0.3nm40nm,3.5s						
KSI	Kapahiang	5.38	312	P	Pn	23 43 34.9	+0.1

*ISCJB **09** 23:45:14.8±0.4,26°.10S±0°.04×125°.28E±0°.04,h10km, Error ellipse: s-maj=5.9km s-min=4.6km az=43.9*
*IDC **09** 23:45:16.7±1.6,26°.13S×125°.40E,h0km,mb4.1/1, mb1 4.0/6,mb1mx3.8/18,mbtmp3.9/6,ML3.7/4,Error ellipse: s-maj=26.2km s-min=18.1km az=128.0*
*AUST **09** 23:45:20.4,26°.03S×125°.22E,h1km,ML4.5*
*NEIC **09** 23:45:20.0,26°.03S×125°.22E,h1km,ML4.5(AUST),After AUST.*

ISC 09 23:45:17.7±0.4,26°.14S±0°.03×125°.30E±0°.04,h10km,n26, σ1§40/51,Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FORT	Forrest	5.22	153	eP	Pn	23 46 39.6	+3.7
FORT				eS	Sn	23 47 38.1	+1.9
	47nm,0.5s						
FORT	Forrest	5.22	153	ePn	Pn	23 46 39.5	+3.6
	109nm,0.6s						
FORT				ePg	Pg	23 46 59.6	+1.8
FORT				eSg	Sg	23 48 02.8	-2.7
KMBL	Kambalda	6.01	209	eP	Pn	23 46 49.4	+2.7
KMBL				eS	Sn	23 47 53.7	-1.9
	247nm,0.7s						
MEEK	Meekatharra	6.02	264	eP	Pn	23 46 48.4	+1.6
MEEK				eS	Sn	23 47 52.7	-3.0
MBWA	Marble Bar	7.11	313	eP	Pn	23 47 01.2	-0.6
MBWA				eS	Sn	23 48 14.8	-8.0
FITZ	Fitzroy Crossi	8.00	2	eP	Pn	23 47 13.9	-0.2
FITZ				eS	Sn	23 48 37.1	-7.6
	9.7nm,0.5s						
FITZ	Fitzroy Crossi	8.00	2	Pn	Pn	23 47 14.1	0.0
	0.2nm,0.3s,baz=178,slow=11,SNR=28						
FITZ				Sn	Sn	23 48 37.7	-6.9
	0.9nm,0.3s,baz=176,slow=14,SNR=4.4						
FITZ				Lg		23 49 31.9	
	2.1nm,0.3s,baz=176,slow=18,SNR=2.5						
FITZ	Fitzroy Crossi	8.00	2	ePn	Pn	23 47 14.3	+0.3
FITZ				Sn	Sn	23 48 45.9	+1.2
FITZ				Lg		23 49 31.9	
ASAR	Alice Springs	8.19	74	Pn	Pn	23 47 17.3	+0.6
	0.8nm,0.3s,baz=256,slow=12,SNR=34						
ASAR				Sn	Sn	23 48 43.6	-5.8
	3.1nm,0.3s,baz=258,slow=22,SNR=9.9						
ASAR				Lg		23 49 32.5	
	2.9nm,0.3s,baz=255,slow=28,SNR=5.4						
KLBR	Kellerberrin	8.56	229	eP	Pn	23 47 23.1	+1.4
KLBR				eS	Sn	23 48 51.3	-7.0
	43nm,0.3s						
MORW	Morawa	8.72	248	eP	Pn	23 47 24.1	+0.3
MORW				eS	Sn	23 48 54.4	-7.8
NWAO	Narrogin (SRO)	9.75	224	eP	Pn	23 47 38.6	+0.6
NWAO				eS	Sn	23 49 16.9	-11
	293nm,0.3s						
NWAO	Narrogin (SRO)	9.75	224	Pn	Pn	23 47 39.0	+1.0
	2.0nm,0.3s,baz=53,slow=13,SNR=12						
NWAO				Sn	Sn	23 49 20.7	-6.9
	29nm,0.3s,baz=40,slow=7.7,SNR=16						
NWAO				Lg		23 50 19.0	
	11nm,0.3s,baz=143,slow=22,SNR=6.8						
NWAO	Narrogin (SRO)	9.75	224	Pn	Pn	23 47 39.0	+1.0
NWAO				Sn	Sn	23 49 20.7	-6.9
NWAO				Lg		23 50 19.0	
WRA	Warramunga Arr	10.36	55	Pn	Pn	23 47 45.7	-0.6
	0.3nm,0.3s,baz=232,slow=13,SNR=9.0						
WRA				Sn	Sn	23 49 35.8	-6.8
	1.0nm,0.3s,baz=230,slow=24,SNR=5.2						
WRA				Lg		23 50 41.5	
	1.5nm,0.3s,baz=241,slow=30,SNR=4.7						
WRA	Warramunga Arr	10.36	55	Pn	Pn	23 47 45.7	-0.6
WRA				Sn	Sn	23 49 35.8	-6.8
WRA				Lg		23 50 41.5	
WRAB	Tennant Creek	10.37	55	ePn	Pn	23 47 46.6	0.0
WRAB				eSn	Sn	23 49 42.3	-0.5
GIRL	Giralia	10.67	287	eP	Pn	23 47 49.9	-0.7
GIRL				eS	Sn	23 49 42.5	-7.6
	126nm,1.0s						
RKGY	Rocky Gully	11.08	218	eP	Pn	23 47 57.6	+1.4
RKGY				eS	Sn	23 49 49.1	-11
	7.1nm,0.2s						
BBOO	Buckleboo	11.49	128	eP	Pn	23 48 02.2	+0.4
BBOO				eS	Sn	23 50 03.4	-6.9
	36nm,1.6s						
KAKA	Kakadu	14.95	28	ePn	Pn	23 48 52.4	+3.2
KAKA				eSn	Sn	23 51 34.2	-0.7
STKA	Stephens Creek	15.36	116	eP	Pn	23 48 51.9	-2.6
STKA				eS	Sn	23 51 33.7	-11
	6.4nm,0.6s						
STKA	Stephens Creek	15.36	116	Pn	Pn	23 48 52.6	-1.9
	0.7nm,0.3s,baz=292,slow=14,SNR=11						
STKA				Sn	Sn	23 51 34.0	-11
	1.1nm,0.3s,baz=25,slow=22,SNR=3.9						
STKA				Lg		23 53 23.7	
	0.8nm,0.3s,baz=23,slow=6.6,SNR=5.3						
STKA	Stephens Creek	15.36	116	ePn	Pn	23 48 52.7	-1.8
	0.8nm,0.6s						
STKA				eSn	Sn	23 51 33.2	-11
QSPA	South Pole Qui	63.95	180	P	P	23 55 51.4	+0.9
	1.4nm,0.8s,baz=333,slow=4.5,SNR=7.8						
QSPA	South Pole Qui	63.95	180	P	P	23 55 51.4	+0.9

*NEIC **10** 00:04:19.5,37°.84N×21°.40E,h25km,MD2.8(ATH),After ATH.*
*ATH **10** 00:04:19.5,37°.84N×21°.40E,h25km±1km,MD2.8/5*
*ISCJB **10** 00:04:20.4±0.5,37°.85N±0°.03×21°.39E±0°.04,h27km±4km, Error ellipse: s-maj=5.5km s-min=4.6km az=20.0*
*CSEM **10** 00:04:20.2±0.2,37°.83N×21°.39E,h20km,MD2.8,Error ellipse: s-maj=4.4km s-min=4.1km az=45.0*
*THE **10** 00:04:20.3,37°.86N×21°.38E,h0km±2km,ML2.6/7,Error ellipse: s-maj=2.0km s-min=0.7km az=226.0*

ISC 10 00:04:20.3±0.6,37°.84N±0°.03×21°.38E±0°.04,h23km±5km, n43,σ1§01/71,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.23	18	ePb	Pb	00 04 25.7	-0.4
RLS				eSb	Sb	00 04 30.0	-0.1
RLS	Riolos of Patr	0.23	18	ePB	Pb	00 04 25.7	-0.4
RLS				eSB	Sb	00 04 30.0	-0.1
RLS	Riolos of Patr	0.23	18	ePb	Pb	00 04 25.7	-0.4
RLS				eSb	Sb	00 04 30.0	-0.1
UPR	University Cam	0.55	36	ePN	Pn	00 04 31.3	-1.4
UPR				eSN	Sb	00 04 38.8	0.0
UPR	University Cam	0.55	36	P	Pb	00 04 31.1	-0.2
UPR				S	Sb	00 04 38.3	-0.5
UPR	University Cam	0.55	36	P	Pb	00 04 31.1	-0.2
UPR				S	Sb	00 04 38.3	-0.5
LAKA	Lakka	0.62	50	P	Pb	00 04 31.8	-0.7
LAKA				S	Sb	00 04 40.7	-0.1
LAKA	Lakka	0.62	50	P	Pb	00 04 31.8	-0.7
LAKA				S	Sb	00 04 40.7	-0.1
VLS	Valsamata	0.71	299	ePn	Pn	00 04 33.9	-0.9
VLS				eSn	Sn	00 04 44.7	-0.3
VLS	Valsamata	0.71	299	ePN	Pn	00 04 33.9	-0.9
VLS				eSN	Sn	00 04 44.7	-0.3
VLS	Valsamata	0.71	299	P	Pb	00 04 34.0	+0.1
VLS				S	Sb	00 04 43.4	+0.2
VLS	Valsamata	0.71	299	P	Pb	00 04 34.0	+0.1
VLS				S	Sb	00 04 43.4	+0.2
VLS				eSn	Sn	00 04 44.7	-0.3
EFP	Efpalio	0.72	35	ePN	Pn	00 04 33.5	-1.6
EFP	Efpalio	0.72	35	P	Pb	00 04 33.4	-0.8
EFP				S	Sb	00 04 44.3	+0.6
EFP	Efpalio	0.72	35	P	Pb	00 04 33.4	-0.8
EFP				S	Sb	00 04 44.3	+0.6
TRIZ	Trizonia	0.76	46	P	Pb	00 04 33.9	-0.9
TRIZ				S	Sb	00 04 45.6	+0.8
TRIZ	Trizonia	0.76	46	P	Pb	00 04 33.9	-0.9
TRIZ				S	Sb	00 04 45.6	+0.8
GUR	Goura	0.77	82	ePN	Pn	00 04 33.8	-1.9
GUR	Goura	0.77	82	P	Pb	00 04 34.0	-1.0
GUR				S	Sb	00 04 45.3	+0.3
GUR	Goura	0.77	82	P	Pb	00 04 34.0	-1.0
GUR				S	Sb	00 04 45.3	+0.3
ITM	Ithomi	0.79	146	ePn	Pb	00 04 35.2	-0.1
ITM	Ithomi	0.79	146	ePN	Pb	00 04 35.2	-0.1
ITM	Ithomi	0.79	146	P	Pb	00 04 35.2	-0.1
ITM				S	Sb	00 04 48.1	+2.6
ITM	Ithomi	0.79	146	P	Pb	00 04 35.2	-0.1
ITM				S	Sb	00 04 48.1	+2.6
KALE	Kalithea	0.82	47	P	Pb	00 04 35.0	-0.8
KALE				S	Sb	00 04 47.2	+0.8
KALE	Kalithea	0.82	47	P	Pb	00 04 35.0	-0.8
KALE				S	Sb	00 04 47.2	+0.8
VLX	Vlachokerasia	0.92	120	P	Pb	00 04 37.8	+0.3
VLX	Vlachokerasia	0.92	120	P	Pb	00 04 37.8	+0.3
PYL	PYLOS	0.98	163	ePN	Pn	00 04 38.2	-0.4
PYL	PYLOS	0.98	163	ePn	Pn	00 04 38.2	-0.4
DSF	Desfina	1.07	57	P	Pn	00 04 39.3	-0.6
DSF	Desfina	1.07	57	P	Pn	00 04 39.3	-0.6
LKD2	Lefkada island	1.11	330	P	Pn	00 04 40.9	+0.6
LKD2				S	Sb	00 04 57.1	+2.4
LKD2	Lefkada island	1.11	330	P	Pn	00 04 40.9	+0.6
LKD2				S	Sb	00 04 57.1	+2.4
EVR	Evrytania	1.13	17	ePn	Pn	00 04 41.3	+0.6
EVR	Evrytania	1.13	17	ePN	Pn	00 04 41.3	+0.6
EVR	Evrytania	1.13	17	ePn	Pn	00 04 41.3	+0.6
LTK	Loutraki	1.27	81	ePN	Pn	00 04 43.2	+0.6
LTK	Loutraki	1.27	81	ePn	Pn	00 04 43.2	+0.6
AGG	Agios Georgios	1.40	32	P	Pn	00 04 45.5	+1.1
AGG				S	Sn	00 05 05.3	+3.1
AGG	Agios Georgios	1.40	32	P	Pn	00 04 45.5	+1.1
AGG				S	Sn	00 05 05.3	+3.1
DID	Didima	1.51	102	P	Pn	00 04 47.7	+1.8
DID				S	Sn	00 05 10.0	+5.1
DID	Didima	1.51	102	P	Pn	00 04 47.7	+1.8

*ISCJB **10** 00:05:20.5±0.6,25°.85S±0°.05×125°.31E±0°.04,h10km, Error ellipse: s-maj=7.3km s-min=5.2km az=152.0*
*IDC **10** 00:05:24.2±2.4,26°.10S×125°.39E,h0km,mb1 3.8/5, mb1mx3.5/17,mbtmp3.7/5,ML3.4/4,Error ellipse: s-maj=29.8km s-min=23.0km az=135.0*
*AUST **10** 00:05:28.5,26°.03S×125°.32E,h9km,ML3.6*
*NEIC **10** 00:05:28.0,26°.03S×125°.32E,h9km,ML3.6(AUST),After AUST.*

ISC 10 00:05:24.4±0.5,25°.98S±0°.06×125°.39E±0°.05,h10km,n15, σ1§42/26,Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FORT	Forrest	5.33	154	eP	Pn	00 06 46.3	+2.3
FORT				e		00 07 43.8	
MEEK	Meekatharra	6.11	262	eP	Pn	00 06 55.6	+0.8
MEEK				eS	Sn	00 08 00.6	-4.3
KMBL	Kambalda	6.19	209	eP	Pn	00 06 57.0	+1.2
KMBL				e		00 08 01.3	
MBWA	Marble Bar	7.07	312	eP	Pn	00 07 08.2	+0.3
MBWA				eS	Sn	00 08 23.1	-5.2
FITZ	Fitzroy Crossi	7.84	2	eP	Pn	00 07 20.9	+2.3
FITZ				eS	Sn	00 08 44.8	-2.7
	10nm,0.9s						
FITZ	Fitzroy Crossi	7.84	2	Pn	Pn	00 07 21.0	+2.4
	0.1nm,0.3s,baz=175,slow=11,SNR=20						
FITZ				Sn	Sn	00 08 45.6	-1.9
	0.4nm,0.3s,baz=209,slow=10,SNR=3.4						
FITZ				Lg		00 09 39.0	
	0.4nm,0.3s,baz=125,slow=23,SNR=2.0						
ASAR	Alice Springs	8.07	75	Pn	Pn	00 07 25.0	+3.2
	0.4nm,0.3s,baz=256,slow=12,SNR=14						
ASAR				Sn	Sn	00 08 51.7	-1.4
	1.8nm,0.3s,baz=259,slow=22,SNR=11						
ASAR				Lg		00 09 40.0	
	1.7nm,0.3s,baz=261,slow=27,SNR=4.4						
KLBR	Kellerberrin	8.72	228	eP	Pn	00 07 30.4	-0.2
KLBR				e		00 08 58.6	
MORW	Morawa	8.85	248	eP	Pn	00 07 31.5	-0.9
MORW				eS	Sn	00 09 02.1	-10
NWAO	Narrogin (SRO)	9.92	224	eP	Pn	00 07 46.6	-0.4
NWAO				e		00 09 28.6	
NWAO	Narrogin (SRO)	9.92	224	Pn	Pn	00 07 46.6	-0.4
	0.7nm,0.3s,baz=61,slow=22,SNR=8.6						
NWAO				Sn	Sn	00 09 28.8	-10
	7.6nm,0.3s,baz=256,slow=9.9,SNR=14						
NWAO				Lg		00 10 27.4	
	4.5nm,0.3s,baz=142,slow=23,SNR=6.6						
WRA	Warramunga Arr	10.20	56	Pn	Pn	00 07 52.9	+2.0
	0.2nm,0.3s,baz=231,slow=12,SNR=6.4						
WRA				Sn	Sn	00 09 45.5	0.0
	0.6nm,0.3s,baz=229,slow=25,SNR=4.7						
WRA				Lg		00 10 49.2	
	0.6nm,0.3s,baz=236,slow=26,SNR=3.2						
RKGY	Rocky Gully	11.25	218	eP	Pn	00 08 04.6	-0.7
RKGY				eS	Sn	00 10 01.3	-10
	39nm,1.0s						
STKA	Stephens Creek	15.35	116	Pn	Pn	00 08 59.5	-1.7
	0.3nm,0.3s,baz=300,slow=18,SNR=4.6						
STKA				Sn	Sn	00 11 43.7	-7.7
	0.5nm,0.3s,baz=302,slow=21,SNR=3.8						
STKA				Lg		00 13 34.2	
	0.2nm,0.3s,baz=220,slow=20,SNR=4.1						
STKA	Stephens Creek	15.35	116	Pn	Pn	00 08 59.5	-1.7
STKA				Sn	Sn	00 11 43.7	-7.7
STKA				Lg		00 13 34.2	

IDC 10 00:37:44.4±5.1,16°.30S×176°.33W,h0km,mb4.5/3, mb1 4.7/3,mb1mx4.0/16,mbtmp4.5/3,Error ellipse: s-maj=184.9km s-min=54.5km az=133.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	41.14	240	P	P	00 45 31.7	+1.2
	1.9nm,0.4s,baz=90,slow=10,SNR=7.3						
WRA	Warramunga Arr	46.89	258	P	P	00 46 16.0	-0.9
	1.8nm,0.5s,baz=96,slow=7.1,SNR=20						
ASAR	Alice Springs	47.15	253	P	P	00 46 18.6	-0.3
	14nm,0.5s,baz=88,slow=8.1,SNR=190						
BRTR	Keskin Array B	145.00	318	PKPbc	PKPbc	00 57 22.7	-0.6
	0.1nm,0.4s,baz=8.5,slow=2.9,SNR=2.7						

*DDA **10** 00:44:18.0,36°.76N×36°.01E,h10km±2km,Md2.8*
*ISCJB **10** 00:44:18.3±0.6,36°.98N±0°.05×35°.99E±0°.04,h15km±6km, Error ellipse: s-maj=7.8km s-min=5.8km az=14.2*
*ISK **10** 00:44:18.3,37°.00N×35°.98E,h2km,MD2.6*
*CSEM **10** 00:44:18.4±0.3,36°.97N×35°.98E,h20km,MD2.6,Error ellipse: s-maj=8.4km s-min=6.3km az=7.0*

ISC 10 00:44:17.2±0.6,36°.85N±0°.04×35°.96E±0°.04,h15km±7km, n22,σ1§24/29,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEYT	Ceyhan	0.23	312	ePG	Pg	00 44 22.1	-0.2
CEYT				eSG	Sg	00 44 26.8	+1.0
CEYT	Ceyhan	0.23	312	ePg	Pg	00 44 22.1	-0.2
CEYT				eSg	Sg	00 44 26.8	+0.9
KRTS	Karatas	0.55	240	ePG	Pg	00 44 31.4	+3.4
KRTS	Karatas	0.55	240	ePg	Pg	00 44 31.4	+3.4
KOZT	Kozan	0.64	350	ePG	Pg	00 44 28.7	-0.9
KOZT				eSG	Sg	00 44 36.4	-1.7
HTY	Hatay	0.74	169	ePG	Pg	00 44 36.4	+4.7
HTY	Hatay	0.74	169	ePg	Pg	00 44 36.4	+4.7
YAYL	Yayladag	0.83	172	iP	Pg	00 44 32.4	-0.8
YAYL				iS	Sg	00 44 43.0	-1.0
YAYL	Yayladag	0.83	172	iP	Pg	00 44 32.4	-0.8
YAYL				iS	Sg	00 44 43.0	-1.1
KARA	Karaisali	0.83	299	ePG	Pg	00 44 33.9	+0.5
KARA	Karaisali	0.83	299	ePg	Pg	00 44 33.9	+0.5
KUZU	Kuzuini	0.90	95	iP	Pb	00 44 33.6	-0.8
KUZU				iS	Sg	00 44 46.9	+0.7
KUZU	Kuzuini	0.90	95	iP	Pb	00 44 33.6	-0.9
KUZU				iS	Sg	00 44 46.9	+0.6
KMRS	Kahramanmaras	0.99	49	ePG	Pg	00 44 36.5	+0.1
KMRS	Kahramanmaras	0.99	49	ePg	Pg	00 44 36.5	+0.1
GULE	Gulek	1.04	295	iS	Sb	00 44 51.0	+0.6
GULE	Gulek	1.04	295	iS	Sb	00 44 51.0	+0.5
GAZ	Gaziantep	1.05	72	ePG	Pg	00 44 38.7	+1.3
GAZ	Gaziantep	1.05	72	ePg	Pg	00 44 38.7	+1.3
GZT	Gaziantep	1.37	68	iP	Pn	00 44 44.3	+2.4
SARI	SarD1z-Kayseri	1.91	17	ePN	Pn	00 44 46.5	-2.8
SARI	SarD1z-Kayseri	1.91	17	ePn	Pn	00 44 46.5	-2.8

DJA 10 00:45:35,9°.21S×107°.23E,h40km,MLv4.2/5,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	Lembang	2.40	9	P	Pn	00 46 13.8	+2.0
CGJI	Cibinong	3.00	329	P	Pn	00 46 19.7	-0.3
CGJI				S	Sn	00 46 56.3	+1.6
UGM	Wanagama	3.50	69	P	Pn	00 46 27.6	+0.6
UGM				S	Sn	00 47 09.9	+2.7
SMRI	Semarang	3.84	56	P	Pn	00 46 34.4	+2.8
PCJI	Pacitan	4.03	76	P	Pn	00 46 34.3	+0.1
PCJI				S	Sn	00 47 23.0	+2.8
PWJI	Pagerwojo	4.67	76	P	Pn	00 46 44.3	+1.2
PWJI				S	Sn	00 47 38.3	+2.2
KLSI		5.13	331	P	Pn	00 46 48.8	-0.6

IDC 10 00:52:17.4±1.4,10°.79N×91°.36E,h0km,mb3.6/6, mb1 3.7/6,mb1mx3.5/22,mbtmp3.6/6,MS3.2/2,Ms1 3.2/2, ms1mx2.7/24,Error ellipse: s-maj=56.0km s-min=20.9km az=58.0,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	10.58	43	Pn	Pn	00 54 55.9	+5.5
	0.5nm,0.3s,baz=235,slow=14,SNR=5.1						
PSI	Prapat	10.92	136	LR	LR	00 59 34.0	
	comp=Z,122nm,19.6s,baz=31,slow=40						
MKAR	Makanchi Array	36.70	350	P	P	00 59 25.9	-0.2
	0.7nm,0.8s,baz=165,slow=9.7,SNR=5.0						
SONM	Songino Array	39.03	16	P	P	00 59 46.0	+0.2
	0.3nm,0.5s,baz=210,slow=5.0,SNR=2.8						
KSRS	Korea Array	42.21	45	LR	LR	01 18 23.5	
	comp=Z,29nm,18.7s,baz=45,slow=37						
ZALV	Zalesovo Beam	43.36	354	P	P	01 00 21.4	+0.1
	0.3nm,0.2s,baz=180,slow=12,SNR=2.3						
WRA	Warramunga Arr	52.18	126	P	P	01 01 28.7	-1.6
	0.4nm,0.3s,baz=300,slow=10,SNR=11						
ASAR	Alice Springs	53.88	130	P	P	01 01 44.6	+1.9
	0.6nm,0.6s,baz=304,slow=6.9,SNR=5.4						
BRTR	Keskin Array B	58.46	310	P	P	01 02 15.4	0.0
	0.6nm,0.7s,baz=114,slow=8.2,SNR=4.8						

IDC 10 01:18:41.0±11.0,21°.95N×143°.31E,h267km±88km, mb3.2/5,mb1 3.3/5,mb1mx3.0/22,mbtmp3.2/5,MS2.3/1, Ms1 2.3/1,ms1mx2.0/11,Error ellipse: s-maj=144.7km s-min=21.4km az=77.0,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	20.38	323	P	P	01 22 58.0	+0.1
	1.0nm,0.6s,baz=143,slow=9.0,SNR=5.2						
KSRS				LR	LR	01 30 42.9	
	comp=Z,8.2nm,18.8s,baz=0.0,slow=35						
WRA	Warramunga Arr	42.55	193	P	P	01 26 10.9	0.0
	0.6nm,0.6s,baz=12,slow=8.6,SNR=5.1						
MKAR	Makanchi Array	54.61	313	P	P	01 27 41.3	-0.9
	0.2nm,0.4s,baz=96,slow=9.7,SNR=4.7						
BVAR	Borovoye Array	62.55	319	P	P	01 28 37.6	+1.0
	2.6nm,0.3s,baz=99,slow=8.1,SNR=20						
ARCES	ARCESS Array B	78.72	342	P	P	01 30 17.5	+4.0
	0.8nm,0.8s,baz=60,slow=6.3,SNR=2.5						
FINES	FINESS Array B	83.00	335	P	P	01 30 35.3	-0.9
	0.6nm,0.3s,baz=83,slow=5.4,SNR=9.1						

*MEX **10** 01:35:04.2±1.5,13°.63N×93°.28W,h20km±46km,MD4.4*
*NEIC **10** 01:35:04.0,13°.63N×93°.28W,h20km,mb4.1/1, MD4.4(MEX),After MEX.*
*ISCJB **10** 01:35:05.8±0.8,13°.83N±0°.06×93°.31W±0°.05,h33km, mb4.0/3,MS3.5/3,Error ellipse: s-maj=8.8km s-min=5.7km az=24.3*
*CASC **10** 01:35:12.3±1.3,14°.15N×92°.93W,h58km±98km,MD4.1, mb4.1(NEIC)*
*IDC **10** 01:35:15.0±4.0,14°.69N×92°.85W,h38km±38km,mb3.7/3, mb1 4.0/6,mb1mx3.6/21,mbtmp3.6/6,ML3.2/2,MS3.3/4, Ms1 3.3/4,ms1mx2.9/28,Error ellipse: s-maj=41.2km s-min=18.2km az=41.0*

ISC 10 01:35:09.0±1.0,13°.91N±0°.07×93°.18W±0°.06,h35km,n27, σ1§21/31,mb4.0/3,MS3.5/3,Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		1.33	42	iP	Pn	01 35 27.6	-3.5
THIG				iS	Sn	01 35 47.9	+0.3
JAT	Jato	1.55	75	eP	Pn	01 35 34.4	+0.2
PCIG		1.78	359	iP	Pn	01 35 35.0	-2.4
PCIG				iS	Sn	01 35 59.2	+0.3
TP2	Tecpan 2	2.27	67	eP	Pn	01 35 44.4	+0.4
FG6		2.32	74	eP	Pn	01 35 44.3	-0.4
FUG	Fuego 3	2.33	76	eP	Pn	01 35 44.2	-0.6
APG	El Apazote	2.85	67	Pn	Pn	01 35 51.8	-0.2
	6.7nm,0.3s,baz=243,slow=6.9,SNR=68						
APG				Sn	Sn	01 36 17.5	-7.5
	5.9nm,0.3s,baz=242,slow=17,SNR=8.9						
TGIG		2.85	1	iP	Pn	01 35 50.8	-1.3
TGIG				iS	Sn	01 36 25.7	+0.5
SCX	San Cristobal	2.86	11	iP	Pn	01 35 51.2	-1.0
SCX				iS	Sn	01 36 27.2	+1.9
HUIG	Huatulco	3.38	303	iP	Pn	01 35 55.5	-3.8
HUIG				iS	Sx	01 36 31.7	
CMIG	Matias Romero	3.56	333	Pn	Pn	01 36 00.3	-1.5
	2.4nm,0.3s,baz=135,slow=9.8,SNR=27						
CMIG				Sn	Sx	01 36 36.4	
	3.2nm,0.3s,baz=109,sl

Ms1 3.6/6,ms1mx3.1/30,Error ellipse: s-maj=24.4km s-min=15.7km az=91.0
ISCJB ***10*** *01:41:10.2±1.2, 19°.50N±0°.03×65°.36W±0°.03,h7km±9km, mb3.9/13,MS3.9/7,Error ellipse: s-maj=5.0km s-min=4.2km az=169.2*
RSPR ***10*** *01:41:12.8, 19°.54N×65°.34W,h6km±2km,MD4.8/8, MD4.8/8*
NEIC ***10*** *01:41:13.0, 19°.36N×65°.25W,h98km,mb4.1/3,After RSPR.*
BJI ***10*** *01:41:22.9, 19°.40N×65°.30W,h97km,mB4.7/3*
ISC 10 01:41:11.9±1.5,19°.44N±0°.03×65°.38W±0°.03,h9km±10km, n101,σ1s19/118,mb3.9/13,MS3.9/7,15C-25D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STVI	**Saint Thomas**	**1.15**	**160**	⇓*eP*	**Pb**	**01 41 33.2**	**-0.9**
STVI				*eS*	**Sb**	**01 41 49.4**	**+0.2**
STVI	**Saint Thomas**	**1.15**	**160**	⇓*eP*	**Pb**	**01 41 33.2**	**-0.9**
STVI				*eS*	**Sb**	**01 41 49.4**	**+0.2**
CBYP	**Canovanas**	**1.25**	**201**	⇑*eP*	**Pn**	**01 41 35.0**	**-0.6**
CBYP	**Canovanas**	**1.25**	**201**	*eS*	**Sb**	**01 41 52.5**	**+0.7**
CBYP	**Canovanas**	**1.25**	**201**	*e*Pn	**Pn**	**01 41 34.1**	**-1.4**
CBYP				*eS*	**Sb**	**01 41 52.3**	**+0.5**
CBYP				*eS*	**Sb**	**01 41 52.5**	**+0.7**
CBYP	**Canovanas**	**1.25**	**201**	⇑*eP*	**Pn**	**01 41 35.0**	**-0.6**
CBYP				*eS*	**Sb**	**01 41 52.5**	**+0.7**
TBVI	**Tortola**	**1.25**	**145**	⇓*iP*	**Pn**	**01 41 34.6**	**-1.0**
TBVI	**Tortola**	**1.25**	**145**	⇓*iP*	**Pn**	**01 41 34.6**	**-1.0**
MTP	**Monte Pirata**	**1.34**	**187**	⇓*eP*	**Pn**	**01 41 36.2**	**-0.7**
MTP	**Monte Pirata**	**1.34**	**187**	*eS*	**Sb**	**01 41 54.8**	**+0.2**
MTP	**Monte Pirata**	**1.34**	**187**	*e*Pn	**Pn**	**01 41 36.0**	**-0.9**
MTP				*eS*	**Sb**	**01 41 55.9**	**+1.3**
MTP	**Monte Pirata**	**1.34**	**187**	⇓*eP*	**Pn**	**01 41 36.2**	**-0.7**
MTP				*eS*	**Sb**	**01 41 54.8**	**+0.2**
HUMP	**Col San Antoni**	**1.36**	**199**	⇓*eP*	**Pn**	**01 41 36.3**	**-0.9**
HUMP				*eS*	**Sb**	**01 41 55.3**	**+0.1**
HUMP	**Col San Antoni**	**1.36**	**199**	⇓*eP*	**Pn**	**01 41 36.3**	**-0.9**
HUMP				*eS*	**Sb**	**01 41 55.3**	**+0.1**
SJG	**San Juan**	**1.51**	**209**	⇓*eP*	**Pn**	**01 41 38.5**	**-0.7**
SJG	**San Juan**	**1.51**	**209**	*eS*	**Sn**	**01 41 58.6**	**-0.4**
SJG	**San Juan**	**1.51**	**209**	⇓*eP*	**Pn**	**01 41 38.2**	**-1.0**
SJG	**San Juan**	**1.51**	**209**	⇓*eP*	**Pn**	**01 41 38.5**	**-0.7**
SJG				*eS*	**Sn**	**01 41 58.6**	**-0.4**
AOPR	**Arecibo Observ**	**1.70**	**230**	⇓*eP*	**Pn**	**01 41 40.9**	**-0.8**
AOPR	**Arecibo Observ**	**1.70**	**230**	⇓*eP*	**Pn**	**01 41 40.9**	**-0.8**
CELP	**Cerrillos**	**1.77**	**220**	⇑*iP*	**Pn**	**01 41 42.4**	**-0.3**
CELP	**Cerrillos**	**1.77**	**220**	⇑*iP*	**Pn**	**01 41 42.4**	**-0.3**
CDVI	**St. Croix**	**1.78**	**161**	⇓*eP*	**Pn**	**01 41 44.2**	**+1.4**
CDVI				*eS*	**Sn**	**01 42 08.0**	**+2.4**
CDVI	**St. Croix**	**1.78**	**161**	⇓*eP*	**Pn**	**01 41 44.2**	**+1.4**
CDVI				*eS*	**Sn**	**01 42 08.0**	**+2.4**
LRS	**Lares**	**1.80**	**231**	⇑*eP*	**Pn**	**01 41 42.6**	**-0.6**
LRS	**Lares**	**1.80**	**231**	⇑*eP*	**Pn**	**01 41 42.6**	**-0.6**
OBIP	**Obispado Ponce**	**1.81**	**220**	⇓*iP*	**Pn**	**01 41 42.5**	**-0.8**
OBIP				*eS*	**Sn**	**01 42 06.8**	**+0.4**
OBIP	**Obispado Ponce**	**1.81**	**220**	⇓*iP*	**Pn**	**01 41 42.5**	**-0.8**
OBIP				*eS*	**Sn**	**01 42 06.8**	**+0.4**
ICM	**Isla Caja Muer**	**1.88**	**215**	⇓*eP*	**Pn**	**01 41 44.5**	**+0.2**
ICM				*eS*	**Sn**	**01 42 09.2**	**+1.0**
ICM	**Isla Caja Muer**	**1.88**	**215**	⇓*eP*	**Pn**	**01 41 44.5**	**+0.2**
ICM				*eS*	**Sn**	**01 42 09.2**	**+1.0**
AGPR	**Aguadilla, PR**	**1.90**	**240**	⇑*eP*	**Pn**	**01 41 44.0**	**-0.6**
AGPR	**Aguadilla, PR**	**1.90**	**240**	*eS*	**Sn**	**01 42 08.5**	**-0.2**
AGPR	**Aguadilla, PR**	**1.90**	**240**	*e*Pn	**Pn**	**01 41 44.6**	**0.0**
AGPR				*eS*	**Sn**	**01 42 08.5**	**-0.2**
AGPR	**Aguadilla, PR**	**1.90**	**240**	⇑*eP*	**Pn**	**01 41 44.0**	**-0.6**
AGPR				*eS*	**Sn**	**01 42 08.5**	**-0.2**
AGP	**Aguadilla**	**1.96**	**239**	*e*Pn	**Pn**	**01 41 53.3**	**+8.0**
GBPR	**Guanica, Bosqu**	**2.04**	**225**	⇓*eP*	**Pn**	**01 41 46.7**	**+0.3**
GBPR	**Guanica, Bosqu**	**2.04**	**225**	⇓*eP*	**Pn**	**01 41 46.7**	**+0.3**
LSP	**Las Mesas**	**2.05**	**232**	⇓*eP*	**Pn**	**01 41 46.1**	**-0.4**
LSP	**Las Mesas**	**2.05**	**232**	⇓*eP*	**Pn**	**01 41 46.1**	**-0.4**
MPR	**Mayaguez**	**2.07**	**234**	*e*Pn	**Pn**	**01 41 46.2**	**-0.6**
CRPR	**Cabo Rojo, PR**	**2.17**	**229**	⇑*eP*	**Pn**	**01 41 48.5**	**+0.2**
CRPR	**Cabo Rojo, PR**	**2.17**	**229**	⇑*eP*	**Pn**	**01 41 48.5**	**+0.2**
PCDR	**Punta Cana, DR**	**2.99**	**253**	⇑*eP*	**Pn**	**01 41 59.2**	**-0.3**
PCDR	**Punta Cana, DR**	**2.99**	**253**	*eS*	**Sn**	**01 42 34.4**	**-1.0**
PCDR	**Punta Cana, DR**	**2.99**	**253**	⇑*eP*	**Pn**	**01 41 59.2**	**-0.3**
PCDR				*eS*	**Sn**	**01 42 34.4**	**-1.0**
SMN1	**Samana, DR**	**3.69**	**267**	⇓*eP*	**Pn**	**01 42 08.6**	**-0.5**
ANWB	**Willy Bob**	**3.84**	**117**	*e*Pn	**Pn**	**01 42 13.0**	**+1.8**
BPA	**Boggy Peak**	**4.11**	**125**	*e*P	**Pn**	**01 42 16.7**	**+1.8**
LZG	**Guadaloupe-1**	**4.75**	**133**	*e*P	**Pn**	**01 42 23.8**	**+0.1**
SEG	**Port Louis**	**4.77**	**129**	*e*P	**Pn**	**01 42 22.1**	**-1.9**
SCG	**Saint Claude**	**4.89**	**133**	*e*P	**Pn**	**01 42 24.6**	**-1.1**
BCG	**Bois Riant Cap**	**4.89**	**132**	*e*P	**Pn**	**01 42 26.2**	**+0.4**
HMG	**Houelmont**	**4.91**	**134**	*e*P	**Pn**	**01 42 27.4**	**+1.4**
PHG	**Guadaloupe-2**	**4.93**	**133**	*e*P	**Pn**	**01 42 24.6**	**-1.6**
MGG	**Marie-Galante**	**5.22**	**131**	*e*P	**Pn**	**01 42 30.0**	**-0.2**
SDDR	**Presa de Saban**	**5.60**	**266**	⇓*eP*	**Pn**	**01 42 36.0**	**+0.5**
SDDR	**Presa de Saban**	**5.60**	**266**	*e*Pn	**Pn**	**01 42 36.0**	**+0.5**
SDDR	**Presa de Saban**	**5.60**	**266**	⇓*eP*	**Pn**	**01 42 36.0**	**+0.5**
GRTK	**Grand Turk**	**5.78**	**292**	⇑*eP*	**Pn**	**01 42 37.2**	**-0.6**
GRTK	**Grand Turk**	**5.78**	**292**	*e*Pn	**Pn**	**01 42 35.5**	**-2.3**
GRTK				*eS*	**Sn**	**01 43 34.4**	**-10**
GRTK	**Grand Turk**	**5.78**	**292**	⇑*eP*	**Pn**	**01 42 37.2**	**-0.6**
FDF	**Fort de France**	**6.18**	**139**	*e*Pn	**Pn**	**01 42 43.4**	**-0.1**
PCRV	**Puerto La Cruz**	**9.24**	**175**	Pn	**Pn**	**01 43 28.4**	**+3.0**
	0.8nm,0.3s,baz=173,slow=12,SNR=4.2						
PCRV				Sn	**Sn**	**01 45 09.3**	**-0.3**
	0.5nm,0.3s,baz=171,slow=13,SNR=2.4						
PCRV				LR	LR	01 46 37.8	
	comp=Z,206nm,19.5s,baz=36,slow=36						
SDV	**Santo Domingo**	**11.66**	**207**	*e*Pn	**Pn**	**01 44 02.2**	**+3.6**
	11nm,0.8s						
BBSR	**BB Station**	**12.89**	**3**	*e*Pn	**Pn**	**01 44 10.9**	**-4.5**
	18nm,0.8s						
BBSR				*eS*	**Sn**	**01 46 29.9**	**-9.2**
ROSC	**El Rosal**	**16.92**	**212**	P	**Pn**	**01 45 11.9**	**+2.8**
	2.3nm,0.3s,baz=67,slow=15,SNR=4.2						
DWPF	**Disney**	**17.03**	**303**	*e*Pn	**Pn**	**01 45 12.7**	**+2.3**
JSC	**Jenkinsville**	**20.43**	**320**	*e*P	**P**	**01 45 56.5**	**+6.8**
JSC				*eS*	**S**	**01 49 23.4**	**-15**
JTS	**JuntasAbangare**	**20.97**	**247**	LR	LR	01 53 44.3	
	comp=Z,57nm,18.1s,MS3.0,baz=73,slow=36						
GOGA	**Godfrey**	**21.31**	**314**	*e*P	**P**	**01 46 01.3**	**+2.3**
	2.7nm,0.4s,mb3.9						
GOGA				*eS*	**S**	**01 49 44.1**	**-12**
BLA	**Blacksburg**	**22.06**	**327**	*e*P	**P**	**01 46 08.6**	**+1.5**
	18nm,0.7s,mb4.6						
ELN	**Prospectdale**	**22.24**	**326**	P	**P**	**01 46 09.9**	**+0.8**
ELN				*e*		01 46 24.3	
TKL	**Tuckaleechee C**	**22.89**	**319**	S	**S**	**01 50 29.7**	**+3.6**
	7.2nm,0.8s,baz=126,slow=19,SNR=3.3						
TKL	**Tuckaleechee C**	**22.89**	**319**	*e*P	**P**	**01 46 17.7**	**+1.7**
TKL				*e*		01 46 29.9	
TKL				S	**S**	**01 50 29.7**	**+3.6**
CPCT	**Cooper Cave**	**23.23**	**317**	*e*P	**P**	**01 46 21.8**	**+2.2**
CPCT				*eS*	**S**	**01 50 28.3**	**-3.4**
APG	**El Apazote**	**24.35**	**263**	P	**P**	**01 46 31.7**	**+1.3**
	3.0nm,0.8s,mb3.8,baz=239,slow=1.1,SNR=4.5						
NCB	**Newcomb**	**25.56**	**345**	*e*Pn	**P**	**01 46 48.1**	**+7.0**
NCB				*e*		01 47 06.9	
PKME	**Peaks-Kenny Pk**	**25.96**	**354**	*e*P	**P**	**01 46 49.1**	**+4.4**
PKME				*e*		01 47 13.7	
SIV	**San Ignacio**	**35.46**	**173**	P	**P**	**01 48 06.7**	**-2.1**
	1.0nm,0.6s,mb3.9,baz=26,slow=11,SNR=6.6						
LPAZ	**La Paz**	**35.60**	**185**	P	**P**	**01 48 11.2**	**+1.1**
	1.2nm,0.7s,mb3.9,baz=3.9,slow=8.2,SNR=6.4						
TXAR	**Lajitas Array**	**36.10**	**293**	P	**P**	**01 48 14.6**	**+0.3**
	0.4nm,0.5s,mb3.6,baz=122,slow=7.2,SNR=6.3						
SDCO	**Great Sand Dun**	**39.31**	**306**	*e*P	**P**	**01 48 41.0**	**-0.4**
	2.3nm,0.8s,mb4.0						
PDAR	**Pinedale Array**	**43.76**	**312**	P	**P**	**01 49 17.3**	**-0.5**
	1.0nm,1.0s,mb3.5,baz=101,slow=7.7,SNR=5.3						
CPUP	**Villa Florida**	**46.16**	**170**	P	**P**	**01 49 34.9**	**-2.1**
	0.5nm,0.4s,mb3.8,baz=338,slow=6.0,SNR=4.6						
NVAR	**Mina Array Bea**	**49.34**	**304**	P	**P**	**01 50 01.6**	**-0.1**
	1.1nm,0.8s,mb3.9,baz=90,slow=7.4,SNR=6.6						
YKA	**Yellowknife Ar**	**54.61**	**334**	P	**P**	**01 50 38.9**	**-1.7**
	0.4nm,0.5s,mb3.7,baz=102,slow=7.1,SNR=3.3						
ESDC	**Sonseca Array**	**56.02**	**55**	LR	LR	02 08 58.6	
	comp=Z,40nm,20.3s,MS3.5,baz=135,slow=30						
NOA	**NORSAR Array B**	**66.70**	**31**	LR	LR	02 18 31.6	
	comp=Z,48nm,18.8s,MS3.7,baz=270,slow=34						
ARCES	**ARCESS Array B**	**72.27**	**22**	P	**P**	**01 52 35.0**	**-2.3**
	1.1nm,0.8s,mb3.8,baz=273,slow=7.2,SNR=4.3						
KDAK	**Kodiak Island**	**72.30**	**326**	LR	LR	02 27 03.7	
	comp=Z,47nm,18.5s,MS3.8,baz=129,slow=38						
FINES	**FINESS Array B**	**73.82**	**30**	P	**P**	**01 52 45.6**	**-1.1**
	0.7nm,0.5s,mb3.8,baz=282,slow=6.7,SNR=4.1						
FINES				LR	LR	02 23 43.9	
	comp=Z,41nm,18.2s,MS3.8,baz=38,slow=35						
WMQ	**Urumqi**	**112.38**	**21**	*e*PKP	PKiKP	01 59 49.7	+1.1
WMQ				LR	LR		
	comp=N,130nm,30.0s						
WMQ				LR	LR		
	comp=Z,150nm,26.0s,MS4.5						
MDJ	**Mudanjiang**	**114.81**	**348**	PKP	PKiKP	01 59 54.3	+1.1
CN2	**Changchun**	**116.29**	**351**	*e*PKP	PKPdf	01 59 52.4	-3.7
HHC	**Hu-ho-hao-te**	**119.96**	**3**	*e*PKP	PKPdf	01 59 58.0	-5.2
HHC				SS	SS	02 17 45.7	-5.2
HHC				AMB	AMB		
	comp=Z,66nm,9.2s						
BJI	**Beijing**	**120.81**	**359**	PKP	PKPdf	02 00 05.0	+0.1
LZH	**Lanzhou**	**123.84**	**11**	*e*PKP	PKPdf	02 00 10.8	-0.1
LZH				LR	LR		
	comp=N,160nm,18.0s						
LZH				LR	LR		
	comp=Z,200nm,20.1s,MS4.8						
CD2	**Chengdu**	**128.86**	**12**	PKP	PKPdf	02 00 21.1	+0.5

NEIC ***10*** *01:44:24.8, 19°.53N×64°.99W,h25km±10km,* **8C, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBYP	**Canovanas**	**1.50**	**213**	⇑*eP*	Pn	01 44 48.0	-2.0
CBYP	**Canovanas**	**1.50**	**213**	⇑*eP*	Pn	01 44 48.5	-1.6
MTP	**Monte Pirata**	**1.52**	**201**	⇑*eP*	Pn	01 44 48.3	-2.1
MTP	**Monte Pirata**	**1.52**	**201**	⇑*eP*	Pn	01 44 48.3	-2.1
HUMP	**Col San Antoni**	**1.60**	**211**	⇑*eP*	Pn	01 44 49.4	-2.2
HUMP				*eS*	Sn	01 45 08.7	-2.7
HUMP	**Col San Antoni**	**1.60**	**211**	⇑*eP*	Pn	01 44 49.4	-2.2
HUMP				*eS*	Sn	01 45 08.7	-2.7
AOPR	**Arecibo Observ**	**2.04**	**235**	⇑*eP*	Pn	01 44 54.3	-3.2
AOPR	**Arecibo Observ**	**2.04**	**235**	⇑*eP*	Pn	01 44 54.3	-3.2

CSEM ***10*** *01:45:44.9±0.2, 39°.00N×16°.17E,h15km,ML3.5/5,Error ellipse: s-maj=5.0km s-min=3.2km az=105.0*
ISCJB ***10*** *01:45:45.1±0.4, 38°.96N±0°.03×16°.20E±0°.05,h14km±5km, Error ellipse: s-maj=6.3km s-min=4.0km az=24.4*
ROM ***10*** *01:45:45.3±0.2, 38°.97N×16°.24E,h9km±2km,Md2.9/14, Ml3.0/17,Error ellipse: s-maj=1.8km s-min=1.6km az=80.0*
NEIC ***10*** *01:45:45.3, 38°.97N×16°.24E,h9km,ML3.0(ROM),After ROM.*
ISC 10 01:45:45.6±0.4,38°.96N±0°.03×16°.21E±0°.05,h16km±5km, n44,σ0s70/55,3C,Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRI	**Girifalco**	**0.21**	**131**	⇑*iPg*	**Pg**	**01 45 50.5**	**0.0**
GRI				Sg	**Sg**	**01 45 53.5**	**-0.3**
GRI	**Girifalco**	**0.21**	**131**	⇑*iPg*	**Pg**	**01 45 50.5**	**0.0**
GRI				Sg	**Sg**	**01 45 53.5**	**-0.3**
	7μm,0.4s						
GRI	**Girifalco**	**0.21**	**131**	⇑*iPg*	**Pg**	**01 45 50.5**	**0.0**
GRI				Sg	**Sg**	**01 45 53.5**	**-0.3**
	7μm,0.4s						
CARO	**Carolei**	**0.29**	**1**	Pg	**Pg**	**01 45 52.4**	**+0.6**
CARO				Sg	**Sg**	**01 45 57.1**	**+1.1**
	4μm,0.5s						
CARO	**Carolei**	**0.29**	**1**	Pg	**Pg**	**01 45 52.4**	**+0.6**
CARO				Sg	**Sg**	**01 45 57.1**	**+1.1**
	4μm,0.5s						
SERS	**Sersale**	**0.38**	**79**	Pg	**Pg**	**01 45 53.3**	**0.0**
SERS				Sg	**Sg**	**01 45 58.6**	**+0.1**
	916nm,0.3s						
SERS	**Sersale**	**0.38**	**79**	Pg	**Pg**	**01 45 53.3**	**0.0**
SERS				Sg	**Sg**	**01 45 58.6**	**+0.1**
	916nm,0.3s						
JOPP	**Joppolo**	**0.44**	**216**	Pg	**Pg**	**01 45 55.0**	**+0.6**
JOPP				Sg	**Sg**	**01 46 01.6**	**+1.3**
	639nm,0.2s						
JOPP	**Joppolo**	**0.44**	**216**	Pg	**Pg**	**01 45 55.0**	**+0.6**
JOPP				Sg	**Sg**	**01 46 01.6**	**+1.3**
	639nm,0.2s						
PLAC	**Placanica**	**0.54**	**161**	Pg	**Pg**	**01 45 56.3**	**0.0**
PLAC				Sg	**Sg**	**01 46 03.6**	**+0.1**
	824nm,0.7s						
PLAC	**Placanica**	**0.54**	**161**	Pg	**Pg**	**01 45 56.3**	**0.0**
PLAC				Sg	**Sg**	**01 46 03.6**	**+0.1**
	824nm,0.7s						
LADO	**San Nicola del**	**0.68**	**61**	Pg	**Pg**	**01 45 58.4**	**-0.5**
	267nm,0.9s						
LADO	**San Nicola del**	**0.68**	**61**	Pg	**Pg**	**01 45 58.4**	**-0.5**
	267nm,0.9s						
MSRU	**Castanea**	**0.89**	**219**	Pg	**Pg**	**01 46 02.1**	**-0.7**
	281nm,0.3s						
MSRU	**Castanea**	**0.89**	**219**	Pg	**Pg**	**01 46 02.1**	**-0.7**
	281nm,0.3s						
SOI	**Samo**	**0.90**	**188**	Pg	**Pg**	**01 46 02.6**	**-0.4**
SOI	**Samo**	**0.90**	**188**	Pg	**Pg**	**01 46 02.6**	**-0.4**
	247nm,0.5s						
SOI	**Samo**	**0.90**	**188**	Pg	**Pg**	**01 46 02.6**	**-0.4**
	247nm,0.5s						
MPAZ	**Palizzi**	**1.02**	**189**	Pg	**Pg**	**01 46 04.8**	**-0.5**
	313nm,0.6s						
MPAZ	**Palizzi**	**1.02**	**189**	Pg	**Pg**	**01 46 04.8**	**-0.5**
	313nm,0.6s						
MILZ	**Milazzo**	**1.03**	**228**	Pg	**Pg**	**01 46 05.0**	**-0.5**
	413nm,0.6s						
MILZ	**Milazzo**	**1.03**	**228**	Pg	**Pg**	**01 46 05.0**	**-0.5**
	413nm,0.6s						
LLI	**Lipari**	**1.11**	**243**	Pg	**Pg**	**01 46 06.3**	**-0.8**
	2μm,0.7s						
LLI	**Lipari**	**1.11**	**243**	Pg	**Pg**	**01 46 06.3**	**-0.8**
	2μm,0.7s						
ORI	**Oriolo Calabro**	**1.12**	**9**	Pg	**Pg**	**01 46 07.2**	**+0.1**
ORI	**Oriolo Calabro**	**1.12**	**9**	Pg	**Pg**	**01 46 07.2**	**+0.1**
	332nm,0.4s						
ORI	**Oriolo Calabro**	**1.12**	**9**	Pg	**Pg**	**01 46 07.2**	**+0.1**
	332nm,0.4s						
VPL	**Vulcano Piano**	**1.12**	**239**	Pg	**Pg**	**01 46 06.7**	**-0.6**
VPL	**Vulcano Piano**	**1.12**	**239**	Pg	**Pg**	**01 46 06.7**	**-0.6**
SIRI	**Monte Sirino -**	**1.25**	**348**	Pg	**Pn**	**01 46 07.6**	**-0.8**
	250nm,0.5s						
SIRI	**Monte Sirino -**	**1.25**	**348**	Pg	**Pn**	**01 46 07.6**	**-0.8**
	250nm,0.5s						
MMME	**Mongiuffi-Meli**	**1.27**	**217**	Pg	**Pn**	**01 46 10.0**	**+1.3**
	181nm,1.0s						
MMME	**Mongiuffi-Meli**	**1.27**	**217**	Pg	**Pn**	**01 46 10.0**	**+1.3**
	181nm,1.0s						
BULG	**Bulgheria - Ca**	**1.29**	**330**	Pg	**Pn**	**01 46 08.8**	**-0.1**
	189nm,0.4s						
BULG	**Bulgheria - Ca**	**1.29**	**330**	Pg	**Pn**	**01 46 08.8**	**-0.1**
	189nm,0.4s						
MTSN	**Montesano sull**	**1.35**	**345**	Pg	**Pn**	**01 46 09.1**	**-0.7**
MTSN	**Montesano sull**	**1.35**	**345**	Pg	**Pn**	**01 46 09.1**	**-0.7**
MCEL	**Monticello**	**1.40**	**347**	Pg	**Pn**	**01 46 10.1**	**-0.3**
	207nm,1.0s						
MCEL	**Monticello**	**1.40**	**347**	Pg	**Pn**	**01 46 10.1**	**-0.3**
	207nm,1.0s						
LTRZ	**Laterza**	**1.71**	**16**	Pg	**Pn**	**01 46 16.2**	**+1.6**
LTRZ	**Laterza**	**1.71**	**16**	Pg	**Pn**	**01 46 16.2**	**+1.6**
	56nm,0.5s						
LTRZ	**Laterza**	**1.71**	**16**	Pg	**Pn**	**01 46 16.2**	**+1.6**
	56nm,0.5s						
TAR1	**Taranto**	**1.77**	**28**	*e*Pn	**Pn**	**01 46 16.1**	**+0.6**
SG1	**Sgolgore (BA)**	**1.91**	**11**	*e*Sn	**Sg**	**01 46 46.0**	**-1.1**

IDC 10 02:02:18.7±3.5,1°.66N×125°.46E,h348km±31km,mb2.9/3, mb1 3.2/4,mb1mx2.8/22,mbtmp3.0/4,Error ellipse: s-maj=98.9km s-min=20.2km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.63**	**180**	P	P	02 06 23.5	+0.4
	0.2nm,0.3s,baz=15,slow=12,SNR=2.9						
WRA	**Warramunga Arr**	**23.16**	**158**	P	P	02 06 54.4	-1.3
	1.1nm,0.3s,baz=334,slow=11,SNR=16						
ASAR	**Alice Springs**	**26.48**	**162**	P	P	02 07 26.6	+1.3
	0.6nm,0.3s,baz=343,slow=6.8,SNR=7.6						
ASAR				ScP	ScP	02 13 46.1	-0.4
	1.6nm,0.7s,baz=348,slow=2.9,SNR=5.4						
MKAR	**Makanchi Array**	**58.55**	**327**	P	P	02 11 39.6	0.0
	0.2nm,0.3s,baz=120,slow=8.8,SNR=4.8						

MOS ***10*** *02:04:21.3±1.4, 6°.12N×126°.61E,h33km,mb5.1/26,Error ellipse: s-maj=17.8km s-min=7.0km az=116.8*
ISCJB ***10*** *02:04:26.6±0.5, 6°.14N±0°.02×126°.81E±0°.05,h81km±3km, mb4.7/69,Error ellipse: s-maj=7.7km s-min=3.3km az=164.7*
BJI ***10*** *02:04:28.9, 5°.84N×126°.59E,h112km,mB4.9/27,mb4.8/44*
DJA ***10*** *02:04:28, 6°.11N×126°.92E,h53km,Mw5.2/10*
IDC ***10*** *02:04:28.0±1.6, 6°.12N×126°.80E,h84km±13km,mb4.3/19, mb1 4.3/20,mb1mx4.2/26,mbtmp4.3/20,MS3.5/14, Ms1 3.6/14,ms1mx3.4/27,Error ellipse: s-maj=24.3km s-min=9.7km az=72.0*
NEIC ***10*** *02:04:29.9±1.4, 6°.09N×126°.68E,h98km±12km,mb4.7/25, Error ellipse: s-maj=17.7km s-min=8.0km az=78.0*
MAN ***10*** *02:04:30, 6°.30N×126°.55E,h24km,mb5.5,ML4.5,MS4.8*
ISC 10 02:04:28.4±0.5,6°.14N±0°.02×126°.77E±0°.05,h82km±3km, h99km±2.1km:pP-P,n166,σ1s30/185,mb4.7/69,11C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.95**	**327**	*e*P	**Pn**	**02 04 43.5**	**-3.6**
MATI				*eS*	**Sn**	**02 04 56.2**	**-4.8**
DAV	**Davao City (W)**	**1.51**	**308**	P	**Pn**	**02 04 53.1**	**-0.8**
	606nm,0.3s,baz=269,slow=2.2,SNR=20						
DAV				S	**Sn**	**02 05 13.8**	**+0.6**
	1μm,0.3s,baz=209,slow=21,SNR=35						
DAV	**Davao City (W)**	**1.51**	**308**	*e*Pn	**Pn**	**02 04 53.1**	**-0.8**
DAV				*e*Sn	**Sn**	**02 05 14.3**	**+1.1**
DAV	**Davao City (W)**	**1.51**	**308**	⇑*eP*	**Pn**	**02 04 50.3**	**-3.7**
DAV	**Davao City (W)**	**1.51**	**308**	P	**Pn**	**02 04 52.9**	**-1.0**
DMPH	**Davao City--Mi**	**1.57**	**307**	⇓*eP*	**Pn**	**02 04 53.6**	**-1.2**
DMPH				*i* S	**Sn**	**02 05 19.7**	**+5.1**
GSPH	**General Santos**	**1.82**	**269**	⇑*iP*	**Pn**	**02 04 53.9**	**-4.1**
GSPH				*eS*	**Sn**	**02 05 15.4**	**-5.0**
KCP	**Kidapawan**	**1.88**	**297**	⇑*iP*	**Pn**	**02 04 56.7**	**-2.1**
KCP				*i* S	**Sn**	**02 05 20.9**	**-1.2**
BUKP	**Musuan**	**2.42**	**316**	*e*P	**Pn**	**02 05 05.3**	**-0.8**
BUKP				*eS*	**Sn**	**02 05 31.1**	**-3.8**
CTBH	**Cotabato--PC H**	**2.73**	**293**	*e*P	**Pn**	**02 05 09.4**	**-0.8**
CTBH				*i* S	**Sn**	**02 05 40.8**	**-1.6**
SGSI	**Sangihe**	**2.73**	**207**	P	**Pn**	**02 05 08.7**	**-1.5**
SGSI				S	**Sn**	**02 05 43.4**	**+1.0**
BUTP	**Butuan**	**3.04**	**338**	*e*P	**Pn**	**02 05 15.5**	**+1.2**
BUTP				*eS*	**Sn**	**02 05 48.6**	**-1.1**
CGP	**Cagayan de Oro**	**3.09**	**318**	⇓*eP*	**Pn**	**02 05 14.4**	**-0.6**
CGP				*i* S	**Sn**	**02 05 52.2**	**+1.1**
MSLP	**Maasin**	**4.40**	**335**	*e*P	**Pn**	**02 05 33.1**	**+0.2**
TBP	**Tagbilaran**	**4.56**	**321**	*e*P	**Pn**	**02 05 36.1**	**+1.1**
TBP				*eS*	**Sn**	**02 06 26.5**	**-0.3**
LLP	**Lapu-Lapu**	**5.00**	**326**	*e*P	**Pn**	**02 05 40.7**	**-0.3**
LLP				*eS*	**Sn**	**02 06 37.3**	**-0.2**
MNI	**Manado**	**5.05**	**203**	P	**Pn**	**02 05 43.4**	**+1.7**
	2.0nm6μm404nm,0.7s						
TNTI	**Ternate**	**5.36**	**174**	P	**Pn**	**02 05 45.7**	**-0.3**
	1.4nm4μm399nm,0.7s						
TNTI				S	**Sn**	**02 06 48.8**	**+2.4**
	1.4nm4μm399nm,0.7s						
**GUI

comp=Z,2.0nm,0.5s,mb4.0,baz=107,slow=8.1,SNR=6.4
CMAR LR LR 02 21 49.3
comp=Z,106nm,20.7s,baz=125,slow=35
KMI Kunming 29.77 312 P **P** **02 10 28.2 +0.8**
KMI S **S** **02 15 18.0 -0.1**
KMI sS sS 02 15 54.7 +3.9
KMI pmax pmax
comp=Z,14nm,0.9s,mb4.6
KMI LR LR
comp=N,95nm,15.2s
KMI LR LR
comp=E,110nm,13.6s
KMI LR LR
comp=Z,140nm,19.0s
CHTO Chiang Mai 29.89 297 *e*P **P** **02 10 29.3 +0.7**
CHTO pmax pmax
comp=Z,40nm,2.3s,mb4.6
CHTO Chiang Mai 29.89 297 *e*P **P** **02 10 29.3 +0.7**
comp=Z,40nm,2.3s,mb4.6
ASAR Alice Springs 30.43 167 P **P** **02 10 32.0 -1.2**
comp=Z,1.5nm,0.5s,mb3.9,baz=348,slow=7.2,SNR=22
KSRS Korea Array 31.19 2 P **P** **02 10 40.9 +1.1**
comp=Z,0.3nm,0.3s,mb3.5,baz=248,slow=30,SNR=3.7
KSRS LR LR 02 22 28.3
comp=Z,27nm,19.3s,baz=181,slow=35
MJAR Matsushiro Arr 32.02 18 LR LR 02 21 35.7
comp=Z,88nm,21.2s,baz=190,slow=32
XAN Xi'an 32.32 332 P **P** **02 10 49.3 -0.5**
XAN pmax pmax
comp=Z,22nm,0.9s,mb4.9
XAN pmax pmax
comp=Z,15nm,7.1s
XAN LR LR
comp=N,110nm,23.8s
XAN LR LR
comp=E,41nm,26.0s
XAN LR LR
comp=Z,41nm,32.5s
CD2 Chengdu 32.77 322 P **P** **02 10 55.1 +1.3**
CD2 pP pP 02 11 17.2 +4.4
CD2 sP sP 02 11 28.9 +6.5
CD2 PP PP 02 12 08.1 -1.2
CD2 S **S** **02 16 03.3 -1.5**
CD2 sS sS 02 16 42.5 +4.8
CD2 SS SS 02 18 08.4 -21
CD2 pmax pmax
comp=Z,20nm,0.5s,mb5.2
CD2 pmax pmax
comp=Z,90nm,4.7s
CD2 LR LR
comp=N,270nm,7.7s
CD2 LR LR
comp=Z,180nm,6.5s
MEEK Meekatharra 33.53 193 *e*P **P** **02 10 59.9 -0.5**
BJT Baijiatuau 35.05 346 *e*P **P** **02 11 15.4 +1.9**
BJT pmax pmax
comp=Z,35nm,0.7s
BJT Baijiatuau 35.05 346 *e*P **P** **02 11 15.4 +2.0**
comp=Z,36nm,0.7s,mb5.3
BJI Beijing 35.07 346 P **P** **02 11 15.4 +1.8**
BJI S **S** **02 16 39.3 -0.9**
BJI pmax pmax
comp=Z,76nm,0.9s,mb5.5
BJI LR LR
comp=N,63nm,17.4s
BJI LR LR
comp=E,68nm,15.3s
BJI LR LR
comp=Z,46nm,22.4s
LZH Lanzhou 36.48 328 *e*P **P** **02 11 27.5 +1.8**
LZH PP PP 02 12 52.6 +2.3
LZH *e*S **S** **02 17 03.0 +1.2**
LZH *e*SS SS 02 19 31.7 -13
LZH pmax pmax
comp=Z,31nm,1.1s,mb5.2
LZH pmax pmax
comp=Z,100nm,5.2s
LZH LR LR
comp=E,560nm,13.2s
LZH LR LR
comp=Z,770nm,17.0s
FORT Forrest 36.73 178 *e*P **P** **02 11 25.8 -2.0**
comp=Z,16nm,0.6s,mb5.1
HHC Hu-ho-hao-te 37.15 341 *e*P **P** **02 11 33.3 +2.0**
HHC pP pP 02 11 55.5 +4.8
HHC sP sP 02 12 07.4 +7.3
HHC PP PP 02 13 03.1 +5.6
HHC PcP PcP 02 13 52.2 +2.2
HHC S **S** **02 17 12.1 +0.3**
HHC ScP ScP 02 17 29.1 -0.8
HHC PcS PcS 02 17 39.5 +1.3
HHC SS SS 02 19 47.4 -9.1
HHC ScS ScS 02 21 35.7 -1.9
HHC pmax pmax
comp=Z,42nm,0.9s,mb5.4
HHC pmax pmax
comp=Z,77nm,6.1s
HHC LR LR
comp=N,520nm,13.7s
HHC LR LR
comp=E,600nm,13.4s
HHC LR LR
comp=Z,530nm,13.9s
CN2 Changchun 37.53 358 *e*P **P** **02 11 37.8 +3.3**
CN2 *es*P sP 02 12 11.8 +8.5
CN2 *e*S **S** **02 17 19.6 +2.1**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
CN2 pmax pmax
comp=Z,200nm,3.0s
MDJ Mudanjiang 38.41 3 P **P** **02 11 44.2 +2.4**
MDJ pP pP 02 12 05.1 +3.8
MDJ S **S** **02 17 33.5 +2.7**
MDJ ScP ScP 02 17 34.8 +0.2
MDJ PcS PcS 02 17 44.3 +1.5
MDJ pmax pmax
comp=Z,5.0nm,1.6s,mb4.1
MDJ pmax pmax
comp=Z,52nm,4.5s
MDJ LR LR
comp=N,25nm,33.6s
MDJ LR LR
comp=E,56nm,36.8s
MDJ LR LR
comp=Z,67nm,25.3s
SHL Shillong 38.53 304 *e*PKP **P** **02 11 44.0 +0.8**
SHL *ex* x 02 13 55.0
NWAO Narrogin (SRO) 39.89 193 *e*P **P** **02 11 54.0 -0.4**
comp=Z,63nm,0.6s,mb5.6
NWAO Narrogin (SRO) 39.89 193 P **P** **02 11 54.8 +0.4**
comp=Z,4.4nm,0.5s,mb4.6,baz=351,slow=21,SNR=6.2
ASAJ Asahikawa 40.29 18 P **P** **02 11 57.4 -0.1**
comp=Z,2.5nm,0.3s,mb4.6,baz=316,slow=32,SNR=2.9
ASAJ LR LR 02 27 17.3
comp=Z,109nm,21.7s,baz=195,slow=34
STKA Stephens Creek 40.36 160 *e*P **P** **02 11 57.4 -0.8**
comp=Z,4.9nm,0.6s,mb4.5
STKA Stephens Creek 40.36 160 P **P** **02 11 57.3 -0.9**
comp=Z,2.6nm,0.4s,mb4.4,baz=316,slow=8.5,SNR=6.3
STKA LR LR 02 29 12.6
comp=Z,172nm,21.2s,baz=224,slow=37
GTA Gaotai 41.08 328 ⇑P **P** **02 12 03.5 -0.7**
GTA pP pP 02 12 26.6 +2.8
GTA PP PP 02 13 41.8 +1.3
GTA PcP PcP 02 14 05.5 +3.1
GTA S **S** **02 18 06.1 -4.9**
GTA pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
GTA pmax pmax
comp=Z,93nm,4.5s
GTA LR LR
comp=N,110nm,20.8s
GTA LR LR
comp=E,110nm,21.4s
GTA LR LR
comp=Z,230nm,19.9s
TAPN Taplejung 42.67 304 *e*P **P** **02 12 16.9 -0.4**
ODAN Odare 42.75 303 *e*P **P** **02 12 18.3 +0.3**
comp=Z,22nm,0.7s,mb5.0
KLR Kul'dur 43.15 5 *e*P **P** **02 12 19.0 -1.8**
JIRN Jiri 44.04 304 *e*P **P** **02 12 30.2 +1.9**
comp=Z,20nm,0.7s,mb5.0
GUN Gumba 44.39 304 *e*P **P** **02 12 33.2 +2.1**
comp=Z,21nm,0.6s,mb5.0
PKIN Phulchoki 44.67 303 *e*P **P** **02 12 37.0 +3.7**
ULN Ulaanbaatar 44.86 341 *e*P **P** **02 12 36.3 +1.8**
ULN pmax pmax
comp=Z,29nm,0.9s,mb5.0
ULN Ulaanbaatar 44.86 341 *e*P **P** **02 12 36.3 +1.8**
comp=Z,29nm,0.9s,mb5.0
SONM Songino Array 45.05 341 P **P** **02 12 37.4 +1.4**
comp=Z,11nm,0.9s,mb4.6,baz=159,slow=8.5,SNR=45
SONM PcP PcP 02 14 15.2 -0.4
comp=Z,2.2nm,0.8s,baz=168,slow=4.1,SNR=3.9
SONM LR LR 02 32 23.2
comp=Z,65nm,20.6s,baz=169,slow=37
SONM Songino Array 45.05 341 P **P** **02 12 37.4 +1.4**
SONM 02 14 15.2
HYB Hyderabad 48.39 288 *e*P **P** **02 13 02.0 -0.6**
HYB Hyderabad 48.39 288 *i*P **P** **02 13 02.0 -0.6**
TLY Talaya 49.27 341 *e*P **P** **02 13 10.2 +1.4**
TLY pmax pmax
comp=Z,15nm,0.8s,mb5.0
TLY Talaya 49.27 341 *e*P **P** **02 13 10.2 +1.4**
comp=Z,15nm,0.8s,mb5.0
MOY Mondy 50.15 339 *e*P **P** **02 13 17.2 +1.7**
WMQ Urumqi 50.80 324 *e*P **P** **02 13 21.0 +0.5**
WMQ pP pP 02 13 44.3 +3.5
WMQ sP sP 02 13 55.7 +5.7
WMQ pmax pmax
comp=Z,11nm,0.8s,mb4.9
WMQ pmax pmax
comp=Z,150nm,4.8s
WMQ LR LR
comp=N,130nm,28.0s
WMQ LR LR
comp=E,130nm,26.8s
WMQ LR LR
comp=Z,150nm,26.0s
PETK Petropavlovsk- 53.20 23 LR LR 02 32 51.9
comp=Z,41nm,21.7s,baz=47,slow=32
MK31 Makanchi Array 55.63 324 *e*P **P** **02 13 54.8 -1.1**
MK31 *e* 02 14 56.3
MKAR Makanchi Array 55.63 324 P **P** **02 13 54.6 -1.2**
comp=Z,6.3nm,0.6s,mb4.8,baz=124,slow=8.1,SNR=48
MKAR PcP PcP 02 14 56.2 +1.7
comp=Z,7.5nm,0.8s,baz=120,slow=4.2,SNR=8.4
MKAR LR LR 02 39 46.9
comp=Z,47nm,18.4s,baz=234,slow=38
MKAR Makanchi Array 55.63 324 P **P** **02 13 54.7 -1.2**
MKAR 02 14 56.2
MKAR Makanchi Array 55.63 324 P **P** **02 13 54.6 -1.2**
MKAR PcP PcP 02 14 56.2 +1.7
MKAR LR LR 02 39 46.9
KSH Kashi 56.40 314 *e*P **P** **02 14 03.9 +2.4**
KSH pP pP 02 14 27.6 +5.5
KSH sP sP 02 14 39.0 +7.8
KSH PcP PcP 02 15 00.8 +3.1
KSH PP PP 02 16 11.6 +3.7
KSH ScP ScP 02 18 48.6 -1.3
KSH PcS PcS 02 18 59.6 +1.3
KSH S **S** **02 21 43.8 -2.3**
KSH ScS ScS 02 23 39.5 -3.8
KSH SS SS 02 25 31.8 -2.6
KSH pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
KSH pmax pmax
comp=Z,91nm,4.8s
KSH LR LR
comp=N,420nm,13.9s
KSH LR LR
comp=E,140nm,6.8s
KSH LR LR
comp=Z,150nm,5.3s
TKM2 Tokmak 2 58.00 318 *e*P **P** **02 14 12.1 -0.6**
TKM2 pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
TKM2 Tokmak 2 58.00 318 *e*P **P** **02 14 12.1 -0.6**
comp=Z,5.9nm,0.8s,mb4.7
ZAA0 Zalesovo Array 58.48 332 *e*P **P** **02 14 14.0 -1.9**
ZALV Zalesovo Beam 58.48 332 P **P** **02 14 13.6 -2.2**
comp=Z,4.9nm,0.6s,mb4.7,baz=104,slow=6.3,SNR=16
ZALV PcP PcP 02 15 06.4 +0.8
comp=Z,3.1nm,0.8s,baz=149,slow=3.1,SNR=3.9
ZALV LR LR 02 40 48.0
comp=Z,34nm,19.6s,baz=100,slow=37
ZALV Zalesovo Beam 58.48 332 P **P** **02 14 13.6 -2.3**
ZALV 02 15 06.4
AML Almayashu 58.98 316 *e*P **P** **02 14 19.7 +0.1**
AML pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
AML Almayashu 58.98 316 *e*P **P** **02 14 19.7 +0.1**
comp=Z,8.1nm,0.8s,mb4.8
EKS2 Erkin-Say 59.13 317 *e*P **P** **02 14 20.1 -0.5**
EKS2 pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
EKS2 Erkin-Say 59.13 317 *e*P **P** **02 14 20.1 -0.4**
comp=Z,8.7nm,0.7s,mb4.9
SEY Seymchan 59.69 13 *e*P **P** **02 14 24.4 +0.3**
KURK Kurchatov 59.76 327*c i*P **P** **02 14 23.4 -1.3**
KURK pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
KURK Kurchatov 59.76 327 *e*P **P** **02 14 23.2 -1.5**
comp=Z,10.0nm,0.9s,mb4.8
NVS Novosibirsk 59.76 333 *e*P **P** **02 14 24.5 -0.2**
NVS pmax pmax
comp=Z,17nm,1.0s,mb5.0
NVS pmax pmax
comp=N,11nm,1.3s
NVS pmax pmax
comp=E,9.0nm,1.4s
BVAR Borovoye Array 65.34 326 P **P** **02 15 00.7 -1.2**
comp=E,5.3nm,0.8s,mb4.4,baz=119,slow=8.6,SNR=25
BRVK Borovoye 65.42 326*c i*P **P** **02 15 01.1 -1.3**
BRVK pmax pmax
comp=Z,14nm,1.0s,mb4.8
BRVK Borovoye 65.42 326 *e*P **P** **02 15 01.0 -1.4**
comp=Z,11nm,0.9s,mb4.7
BILL Bilibino 67.23 15 *e*P **P** **02 15 15.2 +1.5**
BILL *e* pP 02 15 40.8 +6.0
BILL *e*S S 02 24 01.0 -0.9
BILL pmax pmax
comp=Z,3.0nm,1.4s,mb3.9
BILL MLR MLR
comp=Z,100nm,18.0s
ABKAR Akbulak array 70.33 320 *e*P **P** **02 15 31.9 -1.4**
comp=Z,2.4nm,0.6s,mb4.2
SVE Sverdlovsk 71.95 328⇓*e*P **P** **02 15 44.3 +1.4**
SVE pmax pmax
comp=Z,22nm,0.9s,mb5.0
ARU Arti 72.94 327*c i*P **P** **02 15 46.9 -1.9**
ARU S S 02 25 03.5 -5.4
ARU pmax pmax
comp=Z,12nm,0.7s,mb4.8
ARU Arti 72.94 327 *e*P **P** **02 15 46.8 -2.1**
comp=Z,12nm,0.7s,mb4.8
SOKR Solikamsk 74.65 330*d i*P **P** **02 15 59.4 +0.6**
SOKR pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
DGRG David-gareji 79.53 311 P **P** **02 16 27.1 +0.6**
KDAK Kodiak Island 79.85 32 *i*P **P** **02 16 29.1 +1.2**
MTA Mtatsminda 79.97 311 P **P** **02 16 28.7 -0.1**
GNI Garni 79.99 310 *e*P **P** **02 16 28.6 -0.4**
GNI pmax pmax
comp=Z,7.0nm,0.9s
GNI Garni 79.99 310 *e*P **P** **02 16 29.4 +0.4**
comp=Z,8.3nm,0.9s,mb4.6
TBLG Delisi 80.01 311 *e*P **P** **02 16 28.8 -0.3**
TBLG Delisi 80.01 311 P **P** **02 16 28.9 -0.2**
KEH Kehvi 80.61 312 P **P** **02 16 30.5 -1.8**
ZEI Tsey 80.64 312 *e*P **P** **02 16 31.0 -1.5**
ZEI pmax pmax
comp=Z,8.0nm,0.5s,mb4.8
ONI Oni 80.97 312 P **P** **02 16 27.4 -6.8**
BPAW Bear Paw Mtn. 81.12 26 *e*P **P** **02 16 35.3 +0.7**
comp=Z,6.9nm,0.9s,mb4.5
RC01 Rabbit Creek A 81.51 29 *e*P **P** **02 16 36.8 +0.1**
comp=Z,9.5nm,0.7s,mb4.7
KIV Kislovodsk 81.52 313 *e*P **P** **02 16 36.2 -0.9**
KIV pmax pmax
comp=Z,6.0nm,0.9s,mb4.4
KIV pmax pmax
comp=Z,27nm,19.0s
PMR Palmer 81.83 29 *e*P **P** **02 16 41.3 +3.0**
PMR pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
PMR Palmer 81.83 29 *e*P **P** **02 16 41.3 +3.0**
comp=Z,9.1nm,0.8s,mb4.7
MCK McKinley 82.00 27 *e*P **P** **02 16 39.7 +0.5**
MCK pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
MCK McKinley 82.00 27 *e*P **P** **02 16 39.7 +0.5**
comp=Z,8.7nm,0.8s,mb4.6
VORD Divnogorie 83.69 321 *e*P **P** **02 16 45.7 -2.5**
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.6s
VORD pmax pmax
comp=Z,8.0nm,0.6s,mb4.7
VSR Storozhevoye 83.76 321 *e*P **P** **02 16 47.6 -1.0**
VSR pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
VSR pmax pmax
comp=N,1.0nm,0.4s
VSR pmax pmax
comp=E,4.0nm,0.4s
OBN Obninsk 85.13 325*c i*P **P** **02 16 54.1 -1.3**
OBN *e*S S 02 27 08.1 -10
OBN pmax pmax
comp=Z,30nm,1.0s,mb5.2
OBN MLR MLR
comp=Z,100nm,22.0s
OBN Obninsk 85.13 325 *e*P **P** **02 16 54.3 -1.1**
comp=Z,14nm,0.4s,mb5.3
ANN Anapa 85.25 314 *e*P **P** **02 16 49.1 -7.2**
ANN pmax pmax
comp=Z,22nm,1.1s,mb5.0
MAW Mawson 86.01 200 LR LR 02 49 22.4
comp=Z,46nm,21.4s,baz=97,slow=31
JOF Joensuu 87.07 333 *e*P **P** **02 17 03.6 -1.2**
JOF Joensuu 87.07 333 *ep* **P** **02 17 03.6 -1.2**
comp=Z,14nm,0.6s,mb5.1
MMAI Mount Meron Ar 87.84 303 P **P** **02 17 09.0 -0.2**
comp=Z,1.1nm,0.5s,mb4.2,baz=77,slow=11,SNR=4.3
ARCES ARCESS Array B 88.22 340 P **P** **02 17 08.1 -2.1**
comp=Z,7.4nm,0.8s,mb4.8,baz=46,slow=3.5,SNR=12
ARCES ARCESS Array B 88.22 340 P **P** **02 17 08.1 -2.1**
BR131 Keskin Array S 88.53 310 *e*P **P** **02 17 10.9 -1.4**
comp=Z,2.7nm,0.8s,mb4.3
BRTR Keskin Array B 88.53 310 P **P** **02 17 09.9 -2.3**
comp=Z,3.0nm,0.8s,mb4.4,baz=102,slow=3.9,SNR=12
BRTR Keskin Array B 88.53 310*ce*P **P** **02 17 10.8 -1.5**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
KAF Kangasniemi 89.50 332 *e*P **P** **02 17 15.1 -1.2**
KAF pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
KAF Kangasniemi 89.50 332 *e*P **P** **02 17 15.1 -1.2**
comp=Z,6.2nm,0.6s,mb4.8
KAF Kangasniemi 89.50 332 *ep* **P** **02 17 15.1 -1.2**
comp=Z,6.2nm,0.6s,mb4.8
FINES FINESS Array B 89.75 332 P **P** **02 17 18.1 +0.6**
comp=Z,6.1nm,0.8s,mb4.8,baz=97,slow=7.7,SNR=14
AKASG Malin Array Be 90.06 321 *e*P **P** **02 17 17.3 -1.9**
comp=Z,2.1nm,0.7s,mb4.4,baz=75,slow=4.2,SNR=7.3
AKASG Malin Array Be 90.06 321*ce*P **P** **02 17 17.8 -1.4**
AKASG pmax pmax
comp=Z,2.0nm,0.7s
SUW Suwalki 92.99 325 *e*P **P** **02 17 33.0 +0.4**
SUW Suwalki 92.99 325 *e*P **P** **02 17 33.1 +0.4**
NB2 NORSAR Subarra 96.66 334 P **P** **02 17 49.5 +0.2**
comp=Z,3.9nm,0.8s,mb4.9,baz=65,slow=4.6
NOA NORSAR Array B 96.66 334 P **P** **02 17 49.9 +0.5**
comp=Z,3.6nm,0.8s,mb4.9,baz=65,slow=4.5,SNR=16
BRG Berggiesshubel 99.34 324 *e*P **P** **02 18 02.0 +0.5**
comp=Z,3.3nm,0.8s,mb4.9
DBIC Dimbokro 130.08 284 PKhKP 02 23 31.9
comp=Z,3.2nm,0.7s,baz=101,slow=5.2,SNR=5.4

BJI ***10*** *02:20:48.6, 47.°77N×154.°78E, h92km, mB4.1/3, mb4.3/5*
ISCJB ***10*** *02:20:49.3±0.9, 48.°08N±0.°07×154.°30E±0.°09, h58km±7km, mb4.4/49, MS3.4/7, Error ellipse: s-maj=14.2km s-min=5.7km az=141.4*
MOS ***10*** *02:20:50.4±1.6, 48.°09N×154.°42E, h68km, mb4.8/25, Error ellipse: s-maj=10.7km s-min=7.0km az=93.7*
IDC ***10*** *02:20:51.9±3.5, 48.°14N×154.°33E, h70km±31km, mb3.8/20, mb1 4.0/21, mb1mx3.9/26, mbtmp3.8/21, ML3.3/1, MS3.2/3, Ms1 3.2/3, ms1mx2.6/31, Error ellipse: s-maj=20.1km s-min=13.1km az=165.0*
NEIC ***10*** *02:20:52.2±1.0, 48.°09N×154.°46E, h73km±8km, mb4.5/26, Error ellipse: s-maj=13.8km s-min=8.0km az=150.0*
ISC 10 02:20:51.6±0.8, 48.°11N±0.°07×154.°33E±0.°09, h64km±6km, n141, σ1$04/142, mb4.4/49, 6C-12D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.83**	**24**	*e*PN	**Pn**	**02 21 35.1**	**+0.8**
SKR				*e*S	**Sn**	**02 22 06.5**	**-0.7**
SKR				pmax	pmax		
	comp=N,80nm,0.9s						
SKR				pmax	pmax		
	comp=E,80nm,0.9s						
SKR				pmax	pmax		
	comp=Z,160nm,0.9s						
SKR				smax			
	comp=N,480nm,0.2s						
SKR				smax			
	comp=E,200nm,0.4s						
SKR				smax			
	comp=E,1μm,8.0s						
KUR	**Kuril'sk**	**5.29**	**239**	*e*PN	**Pn**	**02 22 07.3**	**-0.7**
KUR				*e*S	**Sn**	**02 23 08.0**	**+0.4**
KUR				smax			
	comp=N,110nm,0.5s						
KUR				smax			
	comp=E,80nm,0.5s						
PEA0B	**Petropavlovsk-**	**5.45**	**22**	*e*Pn	**Pn**	**02 22 10.9**	**+0.9**
PETK	**Petropavlovsk-**	**5.45**	**22**	P	**Pn**	**02 22 10.8**	**+0.7**
	comp=E,1.0nm,0.3s,baz=182,slow=13,SNR=13						
YSS	**Yuzh-Sakhalins**	**7.92**	**266**	⇑*i*PN	**Pn**	**02 22 49.2**	**+5.3**
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS	**Yuzh-Sakhalins**	**7.92**	**266**	*e*Pn	**Pn**	**02 22 48.7**	**+4.9**
YSS				*e*S	**Sn**	**02 24 12.4**	**+0.6**
ASAJ	**Asahikawa**	**9.07**	**248**	P	**Pn**	**02 23 03.8**	**+4.1**
	comp=Z,1.6nm,0.3s,baz=9.6,slow=15,SNR=6.3						
ASAJ	**Asahikawa**	**9.07**	**248**	PN	**Pn**	**02 23 03.8**	**+4.2**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ERM	**Erimo**	**9.97**	**236**	*e*Pn	**Pn**	**02 23 13.2**	**+1.3**
ERM				*e*S	**Sn**	**02 24 53.1**	**-9.1**
SMY	**Shemya**	**13.42**	**62**	*e*PN	**Pn**	**02 23 56.2**	**-2.6**
SEY	**Seymchan**	**14.90**	**357***ce*P		**Pn**	**02 24 23.4**	**+5.2**
KLR	**Kul'dur**	**14.95**	**283**	*e*P	**Pn**	**02 24 18.8**	**-0.2**
KSRS	**Korea Array**	**22.00**	**251**	P	**P**	**02 25 41.6**	**+1.3**
	comp=Z,2.9nm,0.5s,mb4.0,baz=45,slow=11,SNR=13						
KSRS				LR	LR	02 33 59.5	
	comp=Z,19nm,19.0s,baz=160,slow=36						
KSRS	**Korea Array**	**22.00**	**251**	*e*P	**P**	**02 25 41.6**	**+1.3**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.0						
TIXI	**Tiksi**	**26.41**	**342**	*e*P	pP	02 26 35.6	-1.4
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.1						
HHC	**Hu-ho-hao-te**	**31.04**	**273**	*e*P	**P**	**02 27 00.9**	**-2.2**
HHC				pmax	pmax		
	comp=Z,18nm,0.6s,mb5.1						
HHC				pmax	pmax		
	comp=Z,140nm,6.6s						
SONM	**Songino Array**	**31.68**	**288**	P	**P**	**02 27 08.0**	**-0.7**
	comp=Z,1.0nm,0.8s,mb3.7,baz=78,slow=9.6,SNR=6.2						
WHN	**Wuhan**	**35.08**	**255**	P	**P**	**02 27 36.8**	**-1.6**
INK	**Inuvik**	**40.07**	**33**	P	**P**	**02 28 19.4**	**-0.7**
	comp=Z,2.7nm,0.7s,mb4.1,baz=232,slow=7.2,SNR=3.4						
ZALV	**Zalesovo Beam**	**42.50**	**305**	P	**P**	**02 28 38.3**	**-1.8**
	comp=Z,1.7nm,0.3s,mb4.1,baz=57,slow=7.0,SNR=7.2						
ZALV	**Zalesovo Beam**	**42.50**	**305**	*e*P	**P**	**02 28 38.9**	**-1.2**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.2						
MK31	**Makanchi Array**	**47.06**	**297**	*e*P	**P**	**02 29 15.5**	**-1.0**
MKAR	**Makanchi Array**	**47.06**	**297**	P	**P**	**02 29 15.5**	**-1.0**
	comp=Z,2.6nm,0.7s,mb4.2,baz=70,slow=8.0,SNR=24						
KURK	**Kurchatov**	**47.31**	**303**⇑*i*P		**P**	**02 29 17.0**	**-1.4**
KURK				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
YKA	**Yellowknife Ar**	**49.35**	**38**	P	**P**	**02 29 31.4**	**-2.5**
	comp=Z,0.9nm,0.8s,mb3.9,baz=304,slow=5.9,SNR=3.1						
BVAR	**Borovoye Array**	**50.64**	**309**	P	**P**	**02 29 43.1**	**-0.7**
	comp=Z,1.0nm,0.4s,mb5.1,baz=61,slow=8.0,SNR=45						
BVAR	**Borovoye Array**	**50.64**	**309**	*e*P	**P**	**02 29 47.6**	**+3.8**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRVK	**Borovoye**	**50.68**	**309***c i*P		**P**	**02 29 43.2**	**-0.9**

BRVK pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
BRVK Borovoye 50.68 309 *eP* **P 02 29 43.5 -0.6**
comp=Z,8.6nm,0.6s,mb4.9
CMAR Chiang Mai Arr 53.49 256 P **P 02 30 06.4 +1.0**
comp=Z,1.3nm,0.4s,mb4.2,baz=37,slow=12,SNR=3.3
AAK Ala-Archa 53.97 296 LR LR 02 53 14.0
comp=Z,56nm,18.5s,baz=244,slow=36
ARU Arti 54.57 317 *d iP* **P 02 30 11.1 -1.7**
ARU S **S 02 37 40.2 -6.9**
ARU pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
ARU Arti 54.57 317 *eP* **P 02 30 11.2 -1.6**
comp=Z,8.8nm,0.6s,mb5.0
ARCES ARCESS Array B 56.84 341 P **P 02 30 28.1 -0.8**
comp=Z,1.0nm,0.7s,mb3.9,baz=32,slow=7.9,SNR=8.5
ABKAR Akbulak array 58.19 310 *eP* **P 02 30 37.2 -1.4**
comp=Z,2.2nm,0.5s,mb4.4
AKTO Aktyubinsk 58.44 312 LR LR 02 56 03.5
comp=Z,27nm,18.3s,baz=314,slow=36
JOF Joensuu 60.48 334 *eP* **P 02 30 51.9 -2.3**
JOF Joensuu 60.48 334 *ep* **P 02 30 51.9 -2.3**
comp=Z,3.1nm,0.8s,mb4.4
NVAR Mina Array Bea 61.09 64 P **P 02 30 58.9 +0.1**
comp=Z,1.4nm,0.7s,mb4.2,baz=292,slow=7.4,SNR=14
KAF Kangasniemi 62.56 335 *eP* **P 02 31 04.8 -3.4**
KAF pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
KAF Kangasniemi 62.56 335 *eP* **P 02 31 04.8 -3.4**
comp=Z,3.0nm,0.8s,mb4.5
KAF Kangasniemi 62.56 335 *ep* **P 02 31 04.8 -3.4**
comp=Z,3.0nm,0.8s,mb4.5
FINES FINESS Array B 63.16 335 P **P 02 31 10.8 -1.4**
comp=Z,2.0nm,0.4s,mb4.6,baz=33,slow=7.5,SNR=31
FINES FINESS Array B 63.16 335 P **P 02 31 10.8 -1.4**
PDAR Pinedale Array 63.29 55 P **P 02 31 13.5 +0.1**
comp=Z,1.0nm,0.7s,mb4.0,baz=304,slow=2.9,SNR=10.0
NB2 NORSAR Subarra 67.21 342 P **P 02 31 37.4 -1.0**
comp=Z,1.2nm,0.7s,mb4.0,baz=24,slow=6.5
NOA NORSAR Array B 67.21 342 P **P 02 31 37.9 -0.5**
comp=Z,1.1nm,0.5s,mb4.1,baz=25,slow=6.4,SNR=11
NOA NORSAR Array B 67.21 342 P **P 02 31 37.9 -0.5**
WRA Warramunga Arr 70.07 200 P **P 02 31 56.1 -0.5**
comp=Z,0.5nm,0.7s,mb3.5,baz=17,slow=6.1,SNR=2.6
AKASG Malin Array Be 70.87 327 P **P 02 31 60.0 -1.3**
comp=Z,1.7nm,0.5s,mb4.2,baz=34,slow=7.9,SNR=5.5
AKASG Malin Array Be 70.87 327 *eP* **P 02 31 59.9 -1.4**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKASG Malin Array Be 70.87 327 P **P 02 31 60.0 -1.3**
ASAR Alice Springs 73.76 199 P **P 02 32 16.7 -2.0**
comp=Z,0.4nm,0.9s,mb3.4,baz=23,slow=7.3,SNR=2.9
STHS Stebnicka Huta 74.75 330 *eP* **P 02 32 23.4 -0.9**
STHS Stebnicka Huta 74.75 330 *eP* **P 02 32 23.4 -0.9**
BURAR Bucovina Array 74.90 327 ||P **P 02 32 24.8 -0.4**
BURAR Bucovina Array 74.90 327 ||*iP* **P 02 32 24.8 -0.4**
TESR 75.30 326 ||P **P 02 32 26.9 -0.6**
TESR 75.30 326 ||*iP* **P 02 32 26.9 -0.6**
TRPA Tarpa 75.42 329 ||*iP* **P 02 32 28.7 +0.6**
CLL Collm 75.56 336 *i P* **P 02 32 28.4 -0.5**
CLL *e* 02 32 54.0
CLL pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
CLL Collm 75.56 336 *i P* **P 02 32 28.4 -0.5**
comp=Z,7.0nm,1.0s,mb4.5
CLL *e* 02 32 54.0
CLL Collm 75.56 336 *i P* **P 02 32 28.4 -0.5**
comp=Z,7.0nm,1.0s,mb4.5
MORC Moravsky Berou 75.62 333 ||P **P 02 32 29.4 +0.2**
MORC Moravsky Berou 75.62 333 ||*iP* **P 02 32 29.4 +0.2**
TXAR Lajitas Array 76.12 62 P **P 02 32 32.1 -0.4**
comp=Z,1.7nm,0.7s,mb4.1,baz=297,slow=4.4,SNR=20
TIRR Tirgusor 76.32 323 ||P **P 02 32 32.3 -1.1**
TIRR Tirgusor 76.32 323 ||*iP* **P 02 32 32.3 -1.1**
VYHS Vyhne 76.34 331 *eP* **P 02 32 33.4 0.0**
VYHS pmax pmax
comp=Z,2.0nm,1.2s,mb3.9
VYHS Vyhne 76.34 331 *eP* **P 02 32 33.4 0.0**
comp=Z,1.8nm,1.2s,mb3.9
VYHS Vyhne 76.34 331 *eP* **P 02 32 33.4 0.0**
BZS Buzias 77.90 328 ||P **P 02 32 42.5 +0.3**
BZS Buzias 77.90 328 ||*iP* **P 02 32 42.5 +0.3**
BR131 Keskin Array S 77.96 317 *eP* **P 02 32 43.2 +0.6**
comp=Z,6.1nm,0.9s,mb4.5
BRTR Keskin Array B 77.96 317 P **P 02 32 43.2 +0.6**
comp=Z,4.6nm,0.8s,mb4.5,baz=53,slow=3.7,SNR=24
BAIF Baives 78.88 341 *eP* **P 02 32 47.5 0.0**
CDF Champ du Feu 79.71 338 *eP* **P 02 32 52.2 +0.2**
comp=Z,9.3nm,0.9s,mb4.4
CDF Champ du Feu 79.71 338 *eP* **P 02 32 52.2 +0.2**
CDF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
CDF Champ du Feu 79.71 338 *eP* **P 02 32 52.2 +0.2**
comp=Z,4.7nm,0.9s,mb4.4
VTS Vitosha 79.92 326 ||P **P 02 32 53.7 +0.4**
VTS Vitosha 79.92 326 ||*iP* **P 02 32 53.7 +0.4**
MEZF Maizieres J'vi 80.15 340 *eP* **P 02 32 54.8 +0.4**
HAU Haudompre 80.31 339 *eP* **P 02 32 55.3 0.0**
comp=Z,6.7nm,0.7s,mb4.4
HAU *e*MLR MLR
comp=Z,40nm,20.5s
HAU Haudompre 80.31 339 *eP* **P 02 32 55.3 0.0**
HAU pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
HAU MLR MLR
comp=Z,40nm,20.5s
HAU Haudompre 80.31 339 *eP* **P 02 32 55.3 0.0**
comp=Z,3.3nm,0.7s,mb4.4
HAU LR LR
comp=Z,40nm,20.5s
HINF Hinteralfeld 80.36 338 *eP* **P 02 32 56.4 +0.8**
comp=Z,2.5nm,0.5s,mb4.1
HINF Hinteralfeld 80.36 338 *eP* **P 02 32 56.4 +0.8**
HINF pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
HINF Hinteralfeld 80.36 338 *eP* **P 02 32 56.4 +0.8**
comp=Z,1.3nm,0.5s,mb4.1
TUE Stuetta 80.97 336 *eP* **P 02 32 60.0 +1.1**
comp=Z,6.2nm,0.8s,mb4.6
LOR Lormes 81.59 340 *eP* **P 02 33 02.3 +0.2**
comp=Z,6.5nm,0.6s,mb4.5
LOR *e*MLR MLR
comp=Z,39nm,21.8s
LOR Lormes 81.59 340 *eP* **P 02 33 02.3 +0.2**
LOR pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
LOR MLR MLR
comp=Z,40nm,21.8s
LOR Lormes 81.59 340 *eP* **P 02 33 02.3 +0.2**
comp=Z,3.3nm,0.6s,mb4.4
LOR LR LR
comp=Z,40nm,21.8s
CABF La Chapelle 81.68 338 *eP* **P 02 33 03.3 +0.7**
SSF Saint Saulge 81.86 340 *eP* **P 02 33 04.6 +1.0**
comp=Z,7.8nm,0.9s,mb4.3
SSF Saint Saulge 81.86 340 *eP* **P 02 33 04.6 +1.0**
SSF pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
SSF Saint Saulge 81.86 340 *eP* **P 02 33 04.6 +1.0**
comp=Z,3.9nm,0.9s,mb4.3
SGMF Saint Gilles 81.95 345 *eP* **P 02 33 04.6 +0.6**
comp=Z,25nm,0.9s,mb4.8
SGMF Saint Gilles 81.95 345 *eP* **P 02 33 04.6 +0.6**
SGMF pmax pmax
comp=Z,13nm,0.9s,mb4.9
SGMF Saint Gilles 81.95 345 *eP* **P 02 33 04.6 +0.6**
comp=Z,13nm,0.9s,mb4.8
ROSF Rostrenen 81.99 345 *eP* **P 02 33 04.9 +0.7**
comp=Z,89nm,1.2s,mb5.2
ROSF Rostrenen 81.99 345 *eP* **P 02 33 04.9 +0.7**
ROSF pmax pmax
comp=Z,44nm,1.2s,mb5.3
ROSF Rostrenen 81.99 345 *eP* **P 02 33 04.9 +0.7**
comp=Z,44nm,1.2s,mb5.3
AVF Avril sur Loir 82.15 340 *eP* **P 02 33 05.5 +0.4**
comp=Z,6.5nm,0.7s,mb4.4
AVF Avril sur Loir 82.15 340 *eP* **P 02 33 05.5 +0.4**
AVF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
AVF Avril sur Loir 82.15 340 *eP* **P 02 33 05.5 +0.4**
comp=Z,3.3nm,0.7s,mb4.4
SMF Signal de Mont 82.18 340 *eP* **P 02 33 05.6 +0.4**
MMAI Mount Meron Ar 82.52 312 P **P 02 33 08.1 +0.8**
comp=Z,4.8nm,0.5s,mb4.8,baz=38,slow=7.4,SNR=12
LPL La Plagne 82.54 338 *eP* **P 02 33 08.4 +1.3**
comp=Z,13nm,0.7s,mb4.8
LPL La Plagne 82.54 338 *eP* **P 02 33 08.4 +1.3**
LPL pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
LPL La Plagne 82.54 338 *eP* **P 02 33 08.4 +1.3**
comp=Z,6.4nm,0.7s,mb4.8
LPG La Plagne 82.55 338 *eP* **P 02 33 08.6 +1.4**
comp=Z,12nm,0.7s,mb4.8
LPG La Plagne 82.55 338 *eP* **P 02 33 08.6 +1.4**
LPG pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
LPG La Plagne 82.55 338 *eP* **P 02 33 08.6 +1.4**
comp=Z,6.2nm,0.7s,mb4.8
TCF Toulx Ste Croi 82.88 341 *eP* **P 02 33 09.5 +0.6**
comp=Z,11nm,0.9s,mb4.6
TCF Toulx Ste Croi 82.88 341 *eP* **P 02 33 09.5 +0.6**
TCF pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
TCF Toulx Ste Croi 82.88 341 *eP* **P 02 33 09.5 +0.6**
comp=Z,5.7nm,0.9s,mb4.6
MBDF Montbardon 83.26 337 *eP* **P 02 33 12.0 +1.1**
comp=Z,8.6nm,0.8s,mb4.5
MBDF Montbardon 83.26 337 *eP* **P 02 33 12.0 +1.1**
MBDF pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
MBDF Montbardon 83.26 337 *eP* **P 02 33 12.0 +1.1**
comp=Z,4.3nm,0.8s,mb4.5
ORIF Oris-en-Rattie 83.31 338 *eP* **P 02 33 12.3 +1.2**
comp=Z,8.5nm,0.8s,mb4.5
ORIF *e*MLR MLR
comp=Z,37nm,22.8s
ORIF Oris-en-Rattie 83.31 338 *eP* **P 02 33 12.3 +1.2**
ORIF pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
ORIF Oris-en-Rattie 83.31 338 *eP* **P 02 33 12.3 +1.2**
comp=Z,4.3nm,0.8s,mb4.5
VIVF Saint-Julien-l 83.67 339 *eP* **P 02 33 13.3 +0.3**
comp=Z,6.3nm,0.8s,mb4.5
VIVF Saint-Julien-l 83.67 339 *eP* **P 02 33 13.3 +0.3**
VIVF pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
VIVF Saint-Julien-l 83.67 339 *eP* **P 02 33 13.3 +0.3**
comp=Z,3.2nm,0.8s,mb4.5
RJF Les Rejaudoux 83.97 341 *eP* **P 02 33 16.2 +1.7**
comp=Z,4.4nm,0.7s,mb4.4
RJF *e*MLR MLR
comp=Z,42nm,22.0s
RJF Les Rejaudoux 83.97 341 *eP* **P 02 33 16.2 +1.7**
RJF pmax pmax
comp=Z,2.0nm,0.7s,mb4.4
RJF MLR MLR
comp=Z,40nm,22.0s
RJF Les Rejaudoux 83.97 341 *eP* **P 02 33 16.2 +1.7**
comp=Z,2.2nm,0.7s,mb4.4
RJF LR LR
comp=Z,40nm,22.0s
CAF Calviac 84.21 341 *eP* **P 02 33 17.0 +1.3**
LFF La Frestale 84.48 341 *eP* **P 02 33 18.8 +1.7**
comp=Z,15nm,0.9s,mb4.8
LFF La Frestale 84.48 341 *eP* **P 02 33 18.8 +1.7**
LFF pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
LFF La Frestale 84.48 341 *eP* **P 02 33 18.8 +1.7**
comp=Z,7.5nm,0.9s,mb4.8
LMR La Mourre 84.63 337 *eP* **P 02 33 18.3 +0.4**
EPF Esparros 86.39 341 *eP* **P 02 33 27.6 +1.0**
comp=Z,3.2nm,0.6s,mb4.4
EPF Esparros 86.39 341 *eP* **P 02 33 27.6 +1.0**
EPF pmax pmax
comp=Z,2.0nm,0.6s,mb4.5
EPF Esparros 86.39 341 *eP* **P 02 33 27.6 +1.0**
comp=Z,1.6nm,0.6s,mb4.4
ETSF Etsaut 86.71 342 *eP* **P 02 33 29.6 +1.4**
comp=Z,5.1nm,0.8s,mb4.5
ETSF Etsaut 86.71 342 *eP* **P 02 33 29.6 +1.4**
ETSF pmax pmax
comp=Z,3.0nm,0.8s,mb4.6
ETSF Etsaut 86.71 342 *eP* **P 02 33 29.6 +1.4**
comp=Z,2.5nm,0.8s,mb4.5
KEST Kesra 90.86 332 P **P 02 33 48.9 +0.9**
comp=Z,0.3nm,0.5s,mb3.9,baz=321,slow=3.0,SNR=3.7
CPUP Villa Florida 147.08 60 PKPbc PKPbc 02 40 25.9 -1.2
comp=Z,1.1nm,0.8s,baz=318,slow=6.1,SNR=4.3

ISCJB ***10*** *02:49:47.8±0.5, 0.87N±0.03×121.20E±0.03, h78km±5km, mb4.7/32, Error ellipse: s-maj=5.8km s-min=5.1km az=29.6*
BJI ***10*** *02:49:48.5, 1.38N×121.33E, h42km, mB4.9/6, mb4.7/13, Ms4.2/1, Ms7 3.9/1*
IDC ***10*** *02:49:49.0±2.0, 0.78N×121.19E, h77km±18km, mb4.0/13, mb1 4.2/15, mb1mx4.1/24, mbtmp4.1/15, MS3.3/5, Ms1 3.3/5, ms1mx2.8/28, Error ellipse: s-maj=27.1km s-min=10.8km az=70.0*
NEIC ***10*** *02:49:48.5±0.7, 0.81N×121.17E, h72km±7km, mb4.8/13, Error ellipse: s-maj=8.7km s-min=5.0km az=65.0*
NEIC Felt [II] at Tolitoli.
DJA ***10*** *02:49:48, 1.00N×121.16E, h25km, Mw5.3/10*
ISC 10 02:49:49.2±0.4, 0.83N±0.03×121.17E±0.03, h74km±5km, n89, σ1°03/93, mb4.7/32, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.84**	**114**	P	**Pn**	02 50 05.0	**-1.0**
PCI	**Palu**	**2.18**	**218**	P	**Pn**	02 50 23.2	**-0.1**
KMSI	**Cibinong**	**2.82**	**95**	P	**Pn**	02 50 34.7	**+2.7**
MNI	**Manado**	**3.72**	**80**	P	**Pn**	02 50 42.1	**-2.1**
MNI				S	**Sn**	02 51 21.4	**-5.4**
TTSI	**Tana Toraja**	**4.08**	**199**	P	**Pn**	02 50 52.5	**+3.4**
SMKI	**Samarinda**	**4.16**	**252**	P	**Pn**	02 50 50.0	**-0.2**
SMKI				S	**Sn**	02 51 35.1	**-2.6**
SPSI	**Sidrap Palu** 1.3nm4μm371nm,0.8s	**4.96**	**196**	P	**Pn**	02 51 02.7	**+1.5**
KDI	**Kendari** 1.3nm3μm322nm,0.9s	**4.97**	**163**	P	**Pn**	02 51 02.3	**+1.0**
MYLDM	**Lahad Datu**	**5.08**	**328**	P	**Pn**	02 51 02.8	**0.0**
MYLDM	**Lahad Datu**	**5.08**	**328**	P	**Pn**	02 51 02.0	**-0.8**
SGSI	**Sangihe**	**5.20**	**57**	P	**Pn**	02 51 01.4	**-3.0**
BNSI	**Bone** 1.2nm4μm414nm,0.7s	**5.30**	**192**	P	**Pn**	02 51 09.3	**+3.5**
KAPI	**Kappang** 5.5nm,0.3s,baz=334,slow=9.8,SNR=16	**5.97**	**194**	P	**Pn**	02 51 12.8	**-2.3**
KAPI				S	**Sn**	02 52 28.9	**+6.8**
	baz=97,slow=24,SNR=1.3						
KAPI	**Kappang**	**5.97**	**194**	P	**Pn**	02 51 12.8	**-2.3**
KAPI				S	**Sn**	02 52 28.9	**+6.8**
TNTI	**Ternate** 0.5nm101nm,0.9s	**6.19**	**90**	P	**Pn**	02 51 18.7	**+0.6**
BKSI	**Bulukumba** 0.5nm1μm147nm,0.9s	**6.20**	**190**	P	**Pn**	02 51 21.7	**+3.6**
KBKI	**Kotabaru** 0.5nm2μm157nm,0.7s	**6.47**	**231**	P	**Pn**	02 51 22.3	**+0.5**
LBMI	**Labuha** 2.0nm5μm226nm,0.8s	**6.49**	**103**	P	**Pn**	02 51 22.9	**+0.7**
LBMI				S	**Sn**	02 52 33.6	**-1.2**
	2.0nm5μm226nm,0.8s						
KKM	**Kota Kinabalu** 162nm,0.6s	**7.17**	**316**	*e*Pn	**Pn**	02 51 29.8	**-1.5**
KKM				*e*S	**Sn**	02 52 48.1	**-3.2**
KKM	**Kota Kinabalu** 0.9nm5μm235nm,0.7s	**7.17**	**316**	P	**Pn**	02 51 30.2	**-1.1**
NLAI	**Namlea** 0.8nm3μm214nm,0.8s	**7.17**	**124**	P	**Pn**	02 51 33.3	**+1.9**
KDM	**Kudat**	**7.44**	**325**	P	**Pn**	02 51 35.6	**+0.6**
DAV	**Davao City (W)** 38nm,0.3s,baz=274,slow=22,SNR=9.0	**7.60**	**35**	S	**Sn**	02 53 03.5	**+1.5**
DAV	**Davao City (W)**	**7.60**	**35**	*e*Pn	**Pn**	02 51 37.4	**+0.1**
DAV				*e*Sn	**Sn**	02 53 02.5	**+0.5**
SBUM	**Sibu**	**9.09**	**280**	P	**Pn**	02 51 58.0	**+0.3**
SWI	**Sorong**	**10.23**	**99**	P	**Pn**	02 52 13.9	**+0.7**
KSM	**Kuching** 23nm,0.8s	**10.88**	**273**	*e*Pn	**Pn**	02 52 22.1	**0.0**
KAKA	**Kakadu** 18nm,0.6s	**17.49**	**141**	*e*P	**Pn**	02 53 49.4	**+1.1**
KAKA	**Kakadu** 91nm,0.8s	**17.49**	**141**	*e*Pn	**Pn**	02 53 48.9	**+0.5**
FITZ	**Fitzroy Crossi** 14nm,0.6s	**19.32**	**167**	*e*P	**Pn**	02 54 08.6	**-1.6**
FITZ	**Fitzroy Crossi** 1.0nm,0.3s,baz=6.2,slow=5.4,SNR=21	**19.32**	**167**	P	**Pn**	02 54 09.0	**-1.2**
FITZ	**Fitzroy Crossi** 34nm,1.1s	**19.32**	**167**	*e*P	**Pn**	02 54 08.7	**-1.6**
IPM	**Ipoh**	**20.45**	**281**	P	**P**	02 54 21.2	**+0.4**
KULM	**Kulim**	**20.96**	**283**	P	**P**	02 54 26.3	**-0.1**
KULM	**Kulim**	**20.96**	**283**	*e*P	**P**	02 54 26.0	**-0.4**
	94nm,1.3s						
QIZ	**Qiongzhong**	**21.23**	**329**	*e*P	**P**	02 54 28.8	**-0.4**
MBWA	**Marble Bar** 17nm,0.9s,mb4.4	**21.90**	**184**	*e*P	**P**	02 54 36.9	**+0.6**
PSI	**Prapat** comp=Z,173nm,18.1s,baz=50,slow=42	**22.32**	**275**	LR	LR	03 05 29.4	
WRAB	**Tennant Creek** 19nm,0.8s,mb4.5	**24.34**	**149**	*e*P	**P**	02 54 59.1	**-1.2**
WRA	**Warramunga Arr** 12nm,0.5s,mb4.5,baz=328,slow=10,SNR=118	**24.34**	**149**	P	**P**	02 54 58.7	**-1.6**
WRA				ScP	ScP	03 02 09.4	-1.4
	1.2nm,1.0s,baz=350,slow=2.6,SNR=5.1						
WRA	**Warramunga Arr**	**24.34**	**149**	P	**P**	02 54 58.7	**-1.6**
WRA				ScP	ScP	03 02 09.4	-1.4
COEN	**Coen**	**26.28**	**125**	*e*P	**P**	02 55 16.9	**-1.1**
ASAR	**Alice Springs** 5.8nm,0.6s,mb4.3,baz=343,slow=13,SNR=75	**27.31**	**154**	P	**P**	02 55 26.4	**-0.7**
ASAR				PcP	PcP	02 58 43.5	-1.6
	1.2nm,0.5s,baz=353,slow=2.2,SNR=7.1						
ASAR				ScP	ScP	03 02 17.6	-1.7
	0.7nm,0.9s,baz=336,slow=3.0,SNR=4.5						
CMAR	**Chiang Mai Arr** 1.5nm,0.4s,mb3.9,baz=144,slow=6.7,SNR=5.4	**27.98**	**310**	P	**P**	02 55 33.0	**-0.2**
CMAR				LR	LR	03 07 41.3	
	comp=Z,20nm,18.6s,baz=130,slow=38						
ENH	**Enshi** 26nm,1.0s,mb4.9	**31.32**	**340**	*e*P	**P**	02 56 03.1	**+0.5**
NWAO	**Narrogin (SRO)** 84nm,0.6s	**33.78**	**186**	*e*P	pP	02 56 40.1	-1.5
KSRS	**Korea Array** 7.4nm,0.8s,mb4.7,baz=188,slow=10,SNR=20	**36.98**	**9**	P	**P**	02 56 52.4	**+1.0**
KSRS				LR	LR	03 14 29.8	
	comp=Z,22nm,18.3s,baz=185,slow=40						
SHL	**Shillong**	**37.46**	**313**	*e*PKP	**P**	02 56 55.0	**-0.7**
STKA	**Stephens Creek** 11nm,0.9s,mb4.7	**37.84**	**151**	*e*P	**P**	02 56 58.2	**-0.6**
STKA	**Stephens Creek** 13nm,0.7s,mb4.9,baz=322,slow=9.3,SNR=13	**37.84**	**151**	P	**P**	02 56 58.9	**0.0**
STKA				LR	LR	03 14 49.6	
	comp=Z,72nm,18.1s,baz=24,slow=40						
STKA	**Stephens Creek** 2.2nm,0.8s,mb4.0	**37.84**	**151**	*e*P	**P**	02 56 58.1	**-0.8**
STKA				LR	LR	03 14 49.6	
MAT	**Matsushiro**	**38.88**	**22**	P	**P**	02 57 05.2	**-2.3**
MJAR	**Matsushiro Arr** 5.8nm,0.8s,mb4.5,baz=197,slow=8.7,SNR=20	**38.88**	**22**	P	**P**	02 57 05.7	**-1.8**
BJT	**Baijiatuau** 17nm,0.6s,mb5.0	**39.27**	**354**	*e*P	**P**	02 57 11.0	**+0.3**
CMSA	**Cobar Meteorol**	**39.71**	**146**	*e*P	**P**	02 57 14.3	**-0.1**
LSA	**Lhasa**	**40.51**	**318**	*e*P	**P**	02 57 22.0	**+0.9**
HHC	**Hu-ho-hao-te**	**40.78**	**349**	*e*P	**P**	02 57 24.9	**+1.8**
HHC				S	**S**	03 03 31.6	**+3.0**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
HHC				pmax	pmax		
	comp=Z,58nm,5.9s						
ODAN	**Odare** comp=Z,37nm,0.9s,mb5.1	**41.51**	**311**	*e*P	**P**	02 57 29.6	**+0.2**
TAPN	**Taplejung** comp=Z,34nm,0.5s,mb5.4	**41.54**	**312**	*e*P	**P**	02 57 30.1	**+0.5**
RAMN	**Ramite**	**42.15**	**311**	*e*P	**P**	02 57 35.1	**+0.5**
JIRN	**Jiri** comp=Z,46nm,0.5s,mb5.5	**42.84**	**312**	*e*P	**P**	02 57 40.5	**+0.3**
GTA	**Gaotai**	**43.07**	**336**	*e*P	**P**	02 57 44.0	**+2.1**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.3						
GUN	**Gumba** comp=Z,65nm,0.6s,mb5.5	**43.20**	**312**	*e*P	**P**	02 57 43.4	**+0.3**
PKI	**Pulchoki**	**43.38**	**311**	*e*P	**P**	02 57 44.6	**+0.1**
PKIN	**Phulchoki** comp=Z,28nm,0.8s,mb5.1	**43.39**	**311**	*e*P	**P**	02 57 45.0	**+0.4**
KKN	**Kakani** comp=Z,54nm,1.0s,mb5.2	**43.59**	**311**	*e*P	**P**	02 57 46.2	**0.0**
DMN	**Daman** comp=Z,64nm,0.9s,mb5.3	**43.63**	**311**	*e*P	**P**	02 57 46.8	**+0.3**
GKN	**Gorkha** comp=Z,63nm,0.8s,mb5.4	**44.19**	**311**	*e*P	**P**	02 57 51.0	**0.0**
MDJ	**Mudanjiang** comp=Z,18nm,0.9s,mb4.8	**44.24**	**9**	*e*P	**P**	02 57 51.1	**0.0**
SONM	**Songino Array** comp=Z,2.2nm,0.7s,mb4.2,baz=165,slow=9.2,SNR=11	**48.55**	**347**	P	**P**	02 58 25.8	**+1.0**
MK31	**Makanchi Array**	**56.96**	**329**	*e*P	**P**	02 59 26.9	**0.0**
MKAR	**Makanchi Array** comp=Z,2.1nm,0.7s,mb4.3,baz=130,slow=8.9,SNR=23	**56.96**	**329**	P	**P**	02 59 27.0	**+0.1**
MKAR				LR	LR	03 26 03.6	
	comp=Z,22nm,18.9s,baz=259,slow=38						
MKAR	**Makanchi Array**	**56.96**	**329**	P	**P**	02 59 27.0	**+0.1**
MKAR				LR	LR	03 26 03.6	
TKM2	**Tokmak 2** comp=Z,7.8nm,1.1s,mb4.7	**58.41**	**322**	*e*P	**P**	02 59 37.6	**+0.5**
KBL	**Kabul** comp=Z,17nm,0.9s,mb5.1	**59.02**	**311**	*e*P	**P**	02 59 41.7	**+0.1**
AML	**Almayashu** comp=Z,281nm,1.0s	**59.18**	**320**	*e*P	**P**	02 59 42.1	**-0.5**
PETK	**Petropavlovsk-** comp=Z,0.9nm,0.6s,mb4.0,baz=212,slow=5.3,SNR=3.2	**60.27**	**24**	P	**P**	02 59 49.8	**0.0**
ZAA0	**Zalesovo Array**	**60.82**	**336**	*e*P	**P**	02 59 53.8	**+0.3**
ZALV	**Zalesovo Beam** comp=Z,2.3nm,0.7s,mb4.3,baz=123,slow=5.5,SNR=10.0	**60.82**	**336**	P	**P**	02 59 52.9	**-0.6**
KURK	**Kurchatov** comp=Z,2.5nm,0.5s,mb4.5,baz=125,slow=7.1,SNR=17	**61.36**	**331**	P	**P**	02 59 56.9	**-0.3**
KURK	**Kurchatov** comp=Z,9.5nm,0.9s,mb4.8	**61.36**	**331**	*e*P	**P**	02 59 56.7	**-0.5**
BVAR	**Borovoye Array** comp=Z,0.8nm,0.5s,mb3.8,baz=126,slow=9.3,SNR=5.4	**66.84**	**329**	P	**P**	03 00 32.8	**-0.3**
BRVK	**Borovoye**	**66.91**	**329**	P	**P**	03 00 33.7	**+0.1**
ABKAR	**Akbulak array** comp=Z,1.7nm,0.6s,mb4.0	**70.96**	**323**	*e*P	**P**	03 00 58.4	**-0.3**
AKTK	**Aktyubinsk**	**72.56**	**323**	P	**P**	03 01 08.0	**-0.3**
AKTO	**Aktyubinsk** comp=Z,2.3nm,0.6s,mb4.2,baz=113,slow=6.3,SNR=12	**72.56**	**323**	P	**P**	03 01 08.0	**-0.3**
BRTR	**Keskin Array B** comp=Z,0.7nm,0.6s,mb3.9,baz=130,slow=5.0,SNR=4.3	**87.58**	**310**	P	**P**	03 02 24.7	**-4.7**
SCHQ	**Schefferville** comp=Z,1.7nm,0.7s,baz=344,slow=8.0,SNR=3.6	**124.14**	**6**	PKP	PKPdf	03 08 38.0	-1.2
TXAR	**Lajitas Array** comp=Z,0.3nm,0.6s,baz=229,slow=0.9,SNR=5.5	**127.74**	**51**	PKP	PKPdf	03 08 45.1	-1.8

IDC ***10*** *02:50:48.3±6.2, 2.68S×100.36E, h0km, mb4.1/2, mb1 4.2/3, mb1mx3.7/22, mbtmp4.0/3, MLL3.5/1, MS2.9/1, Ms1 2.9/1, ms1mx2.3/30, Error ellipse: s-maj=253.2km s-min=30.7km az=58.0*
ISCJB ***10*** *02:50:53.7±0.6, 2.13S±0.05×100.63E±0.05, h53km±10km, mb4.0/2, Error ellipse: s-maj=8.2km s-min=7.6km az=157.6*
DJA ***10*** *02:50:53, 2.13S×100.61E, h13km, MLv4.2/10*
ISC 10 02:50:54.3±0.6, 2.11S±0.05×100.61E±0.05, h47km±12km, n16, σ0°96/18, mb4.0/2, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**0.85**	**89**	P	**Pn**	02 51 07.6	**-2.3**
KRJI				S	**Sn**	02 51 20.8	**-0.5**
PPSI	**Pulau Pagai**	**0.89**	**223**	P	**Pn**	02 51 09.7	**-0.8**
PPSI				S	**Sn**	02 51 22.2	**-0.1**
PDSI	**Padang**	**1.20**	**353**	P	**Pn**	02 51 13.4	**-1.3**
PDSI				S	**Sn**	02 51 30.8	**+1.0**
SDSI	**Sungai Dareh**	**1.43**	**35**	P	**Pn**	02 51 18.1	**+0.3**
PPI	**Padang Panjang**	**1.66**	**352**	P	**Pn**	02 51 21.3	**+0.3**
SISI	**Saibi**	**1.71**	**297**	P	**Pn**	02 51 21.8	**+0.1**
RGRI	**Rengat**	**2.45**	**45**	P	**Pn**	02 51 37.4	**+5.5**
BKNI	**Bangkinang**	**2.46**	**10**	P	**Pn**	02 51 36.5	**+4.6**
KSI	**Kapahiang**	**2.50**	**128**	P	**Pn**	02 51 33.9	**+1.4**
MNSI	**Mandailing Nat**	**3.06**	**340**	P	**Pn**	02 51 47.2	**+6.9**
MNAI	**Manna**	**3.24**	**134**	P	**Pn**	02 51 44.1	**+1.5**
MDSI	**Maura Dua**	**4.27**	**124**	P	**

mb3.9/7, MS3.2/2, Error ellipse: s-maj=8.2km s-min=6.8km az=148.4

*DJA **10** 02:56:36, 2°.09S×100°.57E, h13km, MLv4.2/11*

ISC 10 02:56:36.6±0.5, **2°.11S**±0°.04×**100°.59E**±0°.05, **h44**km±7km, **n23**, σ0**99/23**, **mb3.9/7**, **MS3.2/2**, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.87**	**222**	P	**Pn**	**02 56 50.6**	**-1.8**
PPSI				S	**Sn**	**02 57 04.0**	**+0.1**
KRJI	**Kerinci**	**0.87**	**89**	P	**Pn**	**02 56 50.4**	**-2.0**
KRJI				S	**Sn**	**02 57 03.5**	**-0.5**
PDSI	**Padang**	**1.20**	**354**	P	**Pn**	**02 56 55.7**	**-1.2**
PDSI				S	**Sn**	**02 57 11.8**	**-0.2**
SDSI	**Sungai Dareh**	**1.44**	**36**	P	**Pn**	**02 57 00.2**	**0.0**
PPI	**Padang Panjang**	**1.65**	**353**	P	**Pn**	**02 57 03.6**	**+0.4**
SISI	**Saibi**	**1.69**	**297**	P	**Pn**	**02 57 03.8**	**+0.2**
BKNI	**Bangkinang**	**2.46**	**11**	P	**Pn**	**02 57 20.6**	**+6.3**
KSI	**Kapahiang**	**2.52**	**127**	P	**Pn**	**02 57 17.1**	**+2.1**
MNSI	**Mandailing Nat**	**3.06**	**341**	P	**Pn**	**02 57 23.5**	**+1.1**
MNAI	**Manna**	**3.25**	**133**	P	**Pn**	**02 57 31.4**	**+6.3**
MDSI	**Maura Dua**	**4.29**	**123**	P	**Pn**	**02 57 40.0**	**+0.6**
KLSI		**4.86**	**122**	P	**Pn**	**02 57 49.5**	**+2.2**
PSI	**Prapat**	**5.16**	**341**	Pn	**Pn**	**02 57 51.6**	**+0.3**
	0.9nm,0.3s,baz=159,slow=8.6,SNR=3.4						
FITZ	**Fitzroy Crossi**	**29.27**	**125**	P	**P**	**03 02 34.5**	**-0.3**
	2.1nm,0.8s,mb3.9,baz=260,slow=6.1,SNR=2.0						
WRA	**Warramunga Arr**	**37.43**	**121**	P	**P**	**03 03 44.6**	**-1.2**
	0.4nm,0.4s,mb3.6,baz=300,slow=9.8,SNR=8.3						
ASAR	**Alice Springs**	**38.71**	**126**	P	**P**	**03 03 56.1**	**-0.5**
	2.0nm,0.6s,mb4.0,baz=301,slow=7.8,SNR=23						
CBIJ	**Chichi jima**	**49.48**	**51**	LR	LR	03 25 56.2	
	comp=Z,22nm,20.2s,MS3.1,baz=116,slow=35						
MKAR	**Makanchi Array**	**51.30**	**344**	P	**P**	**03 05 36.8**	**+0.6**
	0.4nm,0.4s,mb3.7,baz=152,slow=8.4,SNR=9.4						
KURK	**Kurchatov**	**55.88**	**343**	P	**P**	**03 06 09.5**	**-0.2**
	0.3nm,0.4s,mb3.7,baz=159,slow=7.6,SNR=3.3						
ZALV	**Zalesovo Beam**	**57.39**	**349**	P	**P**	**03 06 20.2**	**-0.1**
	0.8nm,0.4s,mb4.1,baz=165,slow=10.0,SNR=3.9						
ARCES	**ARCESS Array B**	**86.78**	**340**	P	**P**	**03 09 16.4**	**+0.7**
	0.9nm,0.8s,mb4.0,baz=110,slow=6.9,SNR=3.3						
NOA	**NORSAR Array B**	**91.53**	**331**	LR	LR	03 51 19.8	
	comp=Z,12nm,20.9s,MS3.3,baz=135,slow=36						
TXAR	**Lajitas Array**	**144.43**	**38**	PKP	PKPdf	03 16 08.2	-0.7
	0.3nm,0.5s,baz=341,slow=1.0,SNR=9.3						

*IDC **10** 03:34:22.3±14.0, 13°.02S×168°.96E, h0km, mb4.2/4, mb1 4.4/4, mb1mx3.8/17, mbtmp4.2/4, Error ellipse: s-maj=244.0km s-min=108.5km az=59.0*

*NOU **10** 03:34:54.5±1.7, 14°.51S×167°.78E, h30km, MD3.7, ML4.3*

ISC 10 03:35:00.7±3.0, **15°.05**S±0°.2×**165°.5E**±0°.3, **h35**km, **n8**, σ1**02/11**, **mb4.0/3**, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.12**	**173**	*e*P	**Pn**	**03 36 42.0**	**-0.4**
DZM				*e*S	**Sn**	**03 38 02.9**	**+0.9**
DZM				AMP		03 38 13.3	
	comp=Z,352nm,1.0s						
NOUC	**Port Laguerre**	**7.13**	**174**	*e*P	**Pn**	**03 36 42.4**	**-0.2**
NOUC				*e*S	**Sn**	**03 38 03.8**	**+1.4**
NOUC				AMP		03 38 11.9	
	comp=Z,13nm,9.4s						
BAYA	**Yate Dam**	**7.26**	**170**	*e*S	**Sn**	**03 38 03.1**	**-2.5**
ONTRN	**Noumea**	**7.35**	**173**	*e*P	**Pn**	**03 36 47.0**	**+1.4**
ONTRN				*e*S	**Sn**	**03 38 06.9**	**-0.9**
CTA	**Charters Tower**	**19.05**	**252**	P	**Pn**	**03 39 27.3**	**+6.3**
	comp=Z,6.9nm,0.8s,baz=87,slow=13,SNR=4.7						
STKA	**Stephens Creek**	**27.55**	**228**	P	**P**	**03 40 44.5**	**+0.1**
	comp=Z,2.6nm,0.7s,mb4.0,baz=46,slow=9.6,SNR=6.2						
WRA	**Warramunga Arr**	**30.11**	**256**	P	**P**	**03 41 07.1**	**-0.2**
	comp=Z,1.1nm,0.5s,mb3.9,baz=84,slow=8.7,SNR=20						
ASAR	**Alice Springs**	**31.00**	**249**	P	**P**	**03 41 14.9**	**-0.2**
	comp=Z,3.0nm,0.7s,mb4.2,baz=75,slow=9.3,SNR=6.7						

*LDG **10** 03:46:39.2±0.2, 20°.81S×168°.74E, h10km, Mb5.4/3, Ms4.1/7, Error ellipse: s-maj=14.6km s-min=2.7km az=139.0*

*NOU **10** 03:46:39.0±1.9, 20°.58S×168°.75E, h10km, MD2.6, ML4.6*

*SZGRF **10** 03:46:42.9, 21°.025×170°.56E, h41km, Southeast of Loyalty Islands*

*MOS **10** 03:46:43.0±1.1, 20°.98S×168°.58E, h33km, mb5.3/18, MS4.3/6, Error ellipse: s-maj=13.2km s-min=10.0km az=31.2*

*BJI **10** 03:46:43.5, 20°.79S×168°.97E, h45km, mB5.2/27, mb4.9/38, Ms4.9/17, Ms7 4.6/20*

*ISCJB **10** 03:46:43.8±0.2, 21°.02S±0°.04×168°.62E±0°.04, h44km, mb4.9/56, MS4.3/25, Error ellipse: s-maj=7.3km s-min=3.5km az=142.8*

*NEIC **10** 03:46:45.2±0.2, 20°.98S×168°.60E, mb5.1/27, Error ellipse: s-maj=9.8km s-min=7.5km az=164.0*

*IDC **10** 03:46:45.2±0.6, 20°.99S×168°.59E, h40km±4km, mb4.5/17, mb1 4.6/18, mb1mx4.5/20, mbtmp4.5/18, ML4.1/1, MS4.2/15, Ms1 4.1/15, ms1mx4.0/21, Error ellipse: s-maj=16.1km s-min=13.4km az=133.0*

*GCMT **10** 03:46:45.9±0.2, 20°.94S×168°.61E, h12km, MWS.0, Moment Tensor Solution. s44,c55; s81,c116; Moment tensor: Scale 10^{16}Nm; M_{rr}-3.42±.08; $M_{\theta\theta}$1.34±.10; $M_{\phi\phi}$2.09±.08; $M_{r\theta}$0.48±.25; $M_{\theta\phi}$-1.46±.06; $M_{\phi r}$0.33±.25; Best double couple: $M_0$3.40000×10^{16} NP1:ϕ_s151.00000°, δ45.00000°, λ-77.00000°. NP2:ϕ_s313.00000°, δ46.00000°, λ-102.00000°. Principal axes: T 3.2200, Plg0.0000°, Azm52.0000°; N 0.3000, Plg9.0000°, Azm322.0000°; P -3.5100, Plg81.0000°, Azm144.0000°; Data Used: II IU IC CN G.*

ISC 10 03:46:45.7±0.2, **21°.05S**±0°.04×**168°.62E**±0°.04, **h46**km, **h46**km±1.6km:**pP-P**, **n254**, σ1**05**/126, **mb4.9**/56, **MS4.3**/25, **3C-15D**, **Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**1.95**	**235**	*e*P	**Pn**	**03 47 14.1**	**-2.3**
BAYA				*e*S	**Sn**	**03 47 39.7**	**+0.1**
LASL	**Noumea**	**2.26**	**238**	*e*P	**Pn**	**03 47 17.5**	**-3.1**
LASL				*e*S	**Sn**	**03 47 47.7**	**+0.4**
LASL				AMP		03 47 51.1	
	comp=Z,6μm,1.4s						
DZM	**Mont Dzumac**	**2.26**	**243**	*e*Pn	**Pn**	**03 47 18.0**	**-2.7**
	comp=Z,355nm,0.2s						
DZM				*e*Sn	**Sn**	**03 47 43.8**	**-3.5**
	comp=Z,2μm,0.2s						
DZM	**Mont Dzumac**	**2.26**	**243**	*e*P	**Pn**	**03 47 18.1**	**-2.5**
DZM				*e*S	**Sn**	**03 47 45.4**	**-2.0**
NORM	**Noumea**	**2.30**	**239**	*e*P	**Pn**	**03 47 19.8**	**-1.4**
NORM				*e*S	**Sn**	**03 47 48.8**	**+0.4**
NORM				AMP		03 47 51.0	
	comp=Z,6μm,3.0s						
MVNO	**Noumea**	**2.36**	**239**	*e*S	**Sn**	**03 47 51.1**	**+1.4**
ONTRN	**Noumea**	**2.37**	**238**	*e*P	**Pn**	**03 47 20.2**	**-1.9**
ONTRN				*e*S	**Sn**	**03 47 50.4**	**+0.4**
ONTRN				AMP		03 47 54.7	
	comp=Z,10μm,2.3s						
NOUC	**Port Laguerre**	**2.39**	**244**	*e*S	**Sn**	**03 47 52.3**	**+1.7**
NOUC				AMP		03 47 52.9	
	comp=Z,2μm,0.8s						
MSVF	**Nonsavu**	**9.49**	**71**	*e*Pn	**Pn**	**03 49 01.1**	**+1.2**
	comp=Z,276nm,1.7s						
RAO	**Raoul Island**	**14.66**	**127**	Pn	**Pn**	**03 50 10.8**	**+0.5**
	comp=Z,82nm,0.3s,baz=81,slow=16,SNR=2.9						
RAO				LR	LR	03 54 49.4	
	comp=Z,636nm,19.3s,baz=87,slow=33						
EIDS	**Eidsvold**	**16.68**	**252**	*e*P	**Pn**	**03 50 39.6**	**+3.3**
ARMA	**Armidale**	**17.91**	**235**	*e*P	**Pn**	**03 50 50.9**	**-0.5**
	comp=Z,3.2nm,0.8s						
URZ	**Urewera**	**18.65**	**159**	P	**Pn**	**03 51 01.6**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=319,slow=8.4,SNR=6.1						
URZ				LR	LR	03 56 31.6	
	comp=Z,510nm,19.8s,baz=342,slow=31						
URZ	**Urewera**	**18.65**	**159**	*e*P	**Pn**	**03 51 01.1**	**+0.7**
	comp=Z,118nm,1.7s						
AFI	**Afiamalu**	**19.99**	**72**	LR	LR	03 57 55.7	
	comp=Z,541nm,18.1s,baz=211,slow=34						
CTA	**Charters Tower**	**20.96**	**269**	*e*P	**P**	**03 51 26.3**	**+1.3**
	comp=Z,20nm,1.0s						
CTA	**Charters Tower**	**20.96**	**269**	P	**P**	**03 51 26.3**	**+1.3**
	comp=Z,13nm,0.7s,baz=84,slow=11,SNR=9.2						
CTA				LR	LR	03 58 55.5	
	comp=Z,944nm,19.1s,MS4.2,baz=92,slow=35						
CTAO	**Charters Tower**	**20.96**	**269**	*e*P	**P**	**03 51 26.5**	**+1.5**
CTAO				pmax	pmax		
	comp=Z,54nm,1.2s						
CTAO	**Charters Tower**	**20.96**	**269**	*e*P	**P**	**03 51 26.5**	**+1.5**
	comp=Z,54nm,1.2s						
CNB	**Canberra Magne**	**22.08**	**226**	*e*P	**P**	**03 51 39.6**	**+2.7**
CNB				*e*		03 51 49.8	
RPZ	**Rata Peaks**	**22.69**	**175**	P	**P**	**03 51 44.1**	**+0.9**
	comp=Z,15nm,1.0s,mb4.4,baz=131,slow=11,SNR=3.1						
RPZ				LR	LR	03 59 42.4	
	comp=Z,767nm,19.1s,MS4.2,baz=146,slow=34						
PMG	**Port Moresby**	**23.69**	**296**	*c iP*	**P**	**03 51 53.9**	**+0.4**
PMG				pmax	pmax		
	comp=Z,77nm,1.7s						
TOO	**Toolangi**	**25.93**	**226**	*e*P	**P**	**03 52 13.8**	**+0.2**
STKA	**Stephens Creek**	**26.41**	**240**	*e*P	**P**	**03 52 18.6**	**+0.5**
	comp=Z,12nm,0.6s,mb4.6						
STKA	**Stephens Creek**	**26.41**	**240**	P	**P**	**03 52 18.8**	**+0.6**
	comp=Z,12nm,0.5s,mb4.7,baz=76,slow=9.1,SNR=41						
STKA				LR	LR	04 02 58.9	
	comp=Z,961nm,18.6s,MS4.4,baz=262,slow=37						
STKA	**Stephens Creek**	**26.41**	**240**	*e*P	**P**	**03 52 19.1**	**+0.9**
	comp=Z,5.0nm,0.9s,mb4.0						
RAR	**Rarotonga**	**29.46**	**96**	LR	LR	04 02 27.2	
	comp=Z,241nm,20.8s,MS3.8,baz=243,slow=32						
WRAB	**Tennant Creek**	**32.08**	**266**	*e*P	**P**	**03 53 07.7**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,193nm,2.6s,mb5.5						
WRAB	**Tennant Creek**	**32.08**	**266**	*e*P	**P**	**03 53 07.7**	**-0.9**
	comp=Z,193nm,2.6s,mb5.5						
WRA	**Warramunga Arr**	**32.09**	**266**	P	**P**	**03 53 07.5**	**-1.2**
	comp=Z,11nm,1.0s,mb4.6,baz=92,slow=8.4,SNR=67						
WRA				pP	pP	03 53 18.4	-2.4
	comp=Z,2.3nm,0.6s,baz=82,slow=6.0,SNR=5.1						
WRA				LR	LR	04 06 13.6	
	comp=Z,1μm,19.8s,MS4.5,baz=90,slow=36						
WRA	**Warramunga Arr**	**32.09**	**266**	P	**P**	**03 53 07.5**	**-1.2**
WRA				*PP	pP	03 53 18.5	-2.4
ASAR	**Alice Springs**	**32.16**	**259**	P	**P**	**03 53 08.6**	**-0.7**
	comp=Z,29nm,0.9s,mb5.1,baz=87,slow=9.3,SNR=110						
ASAR				pP	pP	03 53 20.0	-1.4
	comp=Z,23nm,0.7s,baz=84,slow=9.2,SNR=21						
ASAR	**Alice Springs**	**32.16**	**259**	P	**P**	**03 53 08.6**	**-0.7**
ASAR				pP	pP	03 53 20.0	-1.4
KAKA	**Kakadu**	**35.53**	**278**	*e*P	**P**	**03 53 39.1**	**+0.5**
	comp=Z,10nm,0.9s,mb4.8						
FORT	**Forrest**	**37.57**	**247**	*e*P	**P**	**03 53 54.6**	**-1.2**
	comp=Z,29nm,0.8s,mb5.1						
FORT				*e*	pP	03 54 06.9	-1.3
TBI	**Tubuai**	**38.79**	**101**	*e*S	**S**	**04 00 10.4**	**+10**
	comp=Z,89nm,29.2s						
TBI				*e*LQ		04 02 52.7	
	comp=Z,656nm,31.2s						
TBI				*e*LR	LR	04 04 48.5	
	comp=Z,352nm,29.8s						
PPT	**Papeete**	**39.53**	**92**	*e*S	**S**	**04 00 17.0**	**+5.1**
	comp=Z,118nm,25.8s						
PPT				*e*LQ		04 03 27.7	
	comp=Z,1μm,28.5s						
PPT				*e*LR	LR	04 05 10.5	
	comp=Z,744nm,29.5s,baz=257						
PPT	**Papeete**	**39.53**	**92**	LR	LR	04 06 46.1	
	comp=Z,223nm,18.3s,MS4.0,baz=258,slow=30						
FITZ	**Fitzroy Crossi**	**40.51**	**266**	*e*P	**P**	**03 54 20.5**	**-0.1**
	comp=Z,43nm,0.7s,mb5.2						
FITZ				*e*	pP	03 54 30.5	-2.5
FITZ	**Fitzroy Crossi**	**40.51**	**266**	LR	LR	04 11 22.7	
	comp=Z,568nm,18.1s,MS4.5,baz=102,slow=36						
FITZ	**Fitzroy Crossi**	**40.51**	**266**	*e*P	**P**	**03 54 20.7**	**+0.1**
	comp=Z,38nm,0.9s,mb5.0						
MBWA	**Marble Bar**	**45.46**	**261**	*e*P	**P**	**03 55 00.6**	**0.0**
	comp=Z,77nm,1.2s,mb5.4						
KLBR	**Kellerberrin**	**46.43**	**246**	*e*P	**P**	**03 55 07.4**	**-0.7**
	comp=Z,52nm,0.9s,mb5.5						
KLBR				*e*	pP	03 55 18.7	-2.0
NWAO	**Narrogin (SRO)**	**46.88**	**244**	LR	LR	04 12 57.0	
	comp=Z,2.3nm,21.0s,baz=171,slow=34						
NWAO	**Narrogin (SRO)**	**46.88**	**244**	*e*P	**P**	**03 55 11.1**	**-0.6**
NWAO				pmax	pmax		
	comp=Z,29nm,1.0s						
NWAO	**Narrogin (SRO)**	**46.88**	**244**	*e*P	**P**	**03 55 11.1**	**-0.5**
	comp=Z,29nm,1.0s,mb5.2						
KAPI	**Kappang**	**49.97**	**282**	P	**P**	**03 55 34.9**	**-0.8**
	comp=Z,28nm,1.1s,mb5.2,baz=99,slow=6.2,SNR=4.9						
RKT	**Rikitea**	**52.03**	**103**	*e*S	**S**	**04 03 18.3**	**+6.6**
	comp=Z,127nm,31.2s						
RKT				*e*LQ		04 08 33.7	
	comp=Z,624nm,39.0s						
RKT				*e*LR	LR	04 10 53.2	
	comp=Z,195nm,33.5s						
SBA	**Scott Base**	**56.85**	**180**	*e*P	**P**	**03 56 26.0**	**+0.8**
SBA				pmax	pmax		
	comp=Z,35nm,1.1s,mb5.3						
SBA	**Scott Base**	**56.85**	**180**	*e*P	**P**	**03 56 25.9**	**+0.7**
	comp=Z,35nm,1.1s,mb5.3						
KKM	**Kota Kinabalu**	**58.03**	**292**	*e*P	**P**	**03 56 34.6**	**+0.2**
	comp=Z,52nm,1.1s,mb5.5						
KSM	**Kuching**	**61.22**	**284**	*e*P	**P**	**03 56 56.4**	**-0.1**
	comp=Z,48nm,1.2s,mb5.5						
KSM				*e*pP	pP	03 57 08.5	-1.0
MJAR	**Matsushiro Arr**	**64.08**	**333**	P	**P**	**03 57 13.8**	**-1.2**
	comp=Z,5.0nm,0.8s,mb4.6,baz=167,slow=7.3,SNR=23						
MJAR				pP	pP	03 57 26.3	-1.9
	comp=Z,1.4nm,0.8s,baz=104,slow=10,SNR=2.5						
MAJO	**Matsushiro**	**64.08**	**333**	*e*P	**P**	**03 57 14.2**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.8						
MAJO	**Matsushiro**	**64.08**	**333**	*e*P	**P**	**03 57 14.2**	**-0.8**
	comp=Z,16nm,1.4s,mb4.8						
MAT	**Matsushiro**	**64.08**	**333**	P	**P**	**03 57 13.9**	**-1.1**
QSPA	**South Pole Qui**	**69.01**	**180**	*e*P	**P**	**03 57 46.0**	**0.0**
	comp=Z,30nm,1.0s,mb5.2						
QSPA				*e*pP	pP	03 57 58.8	-0.4
ASAJ	**Asahikawa**	**69.09**	**340**	P	**P**	**03 57 46.9**	**+0.1**
	comp=Z,8.4nm,0.8s,mb4.7,baz=209,slow=9.7,SNR=7.6						
ASAJ				pP	pP	03 58 00.1	0.0
	comp=Z,14nm,0.8s,baz=220,slow=8.3,SNR=6.5						
KSRS	**Korea Array**	**69.67**	**326**	P	**P**	**03 57 50.2**	**-0.3**
	comp=Z,1.7nm,1.0s,mb4.0,baz=147,slow=7.5,SNR=8.2						
KSRS				LR	LR	04 25 31.2	
	comp=Z,59nm,19.1s,MS3.9,baz=163,slow=33						
QIZ	**Qiongzhong**	**69.98**	**301**	P	**P**	**03 57 52.7**	**-0.1**
QIZ				sP	sP	03 58 16.6	+5.3
QIZ				S	S	04 07 03.0	+2.9
QIZ				pmax	pmax		
	comp=Z,13nm,1.5s,mb4.6						
INCN	**Inchon**	**70.37**	**326**	*e*P	**P**	**03 57 55.3**	**+0.4**
	comp=Z,41nm,1.5s,mb5.1						
NJ2	**Nanjing**	**71.11**	**317**	*e*P	**P**	**03 58 01.4**	**+1.9**
NJ2				pP	pP	03 58 17.9	+5.2
NJ2				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
YSS	**Yuzh-Sakhalins**	**71.60**	**342**	*e*P	**P**	**03 58 02.8**	**+0.7**
YSS				*e*	pP	03 58 15.5	+0.1
YSS				*e*S	S	04 07 20.0	+2.1
YSS				MLR	MLR		
	comp=Z,400nm,16.0s,MS4.8						
YSS				MLR	MLR		
	comp=N,400nm,17.0s						
WHN	**Wuhan**	**73.14**	**313**	P	**P**	**03 58 21.4**	**+10**
PET	**Petropavlovsk**	**74.27**	**354**	*e*P	**P**	**03 58 18.3**	**+0.6**
PET				*e*S	S	04 07 50.9	+3.0
MDJ	**Mudanjiang**	**74.44**	**332**	P	**P**	**03 58 19.0**	**+0.1**
MDJ				pP	pP	03 58 35.5	+3.2
MDJ				S	S	04 07 54.8	+4.6
MDJ				SS	SS	04 12 40.9	+3.0
MDJ				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.8						
MDJ				pmax	pmax		
	comp=Z,67nm,4.2s						
MDJ	**Mudanjiang**	**74.44**	**332**	*e*P	**P**	**03 58 19.6**	**+0.6**
	comp=Z,6.1nm,0.8s,mb4.6						
PETK	**Petropavlovsk-**	**74.45**	**353**	P	**P**	**03 58 18.6**	**-0.1**
	comp=Z,2.2nm,0.4s,mb4.4,baz=129,slow=5.9,SNR=6.6						
PETK				pP	pP	03 58 31.4	-0.7
	comp=Z,8.3nm,0.8s,baz=141,slow=7.3,SNR=5.9						
PETK				LR	LR	04 27 13.8	
	comp=Z,75nm,19.9s,MS4.0,baz=333,slow=33						
PETK	**Petropavlovsk-**	**74.45**	**353**	P	**P**	**03 58 18.7**	**-0.1**
PETK				*PP	pP	03 58 31.4	-0.7
HABR	**Khabarovsk**	**75.44**	**338**	*e*P	**P**	**03 58 23.0**	**-1.6**
HABR				*e*	pP	03 58 35.8	-2.2
HABR				S	S	04 07 57.5	-3.7
HABR				*e*		04 08 30.1	
HABR				SS	SS	04 12 49.0	-4.0
HABR				MLR	MLR		
	comp=Z,78nm,21.0s,MS4.0						
CN2	**Changchun**	**75.70**	**329**	*e*P	**P**	**03 58 29.0**	**+2.8**
CN2				*e*S	S	04 08 05.5	+1.2
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
NIKO	**Nikolski**	**76.27**	**14**	*e*P	**P**	**03 58 27.4**	**-1.8**
	comp=Z,36nm,0.6s,mb5.5						
ENH	**Enshi**	**76.38**	**310**	*e*P	**P**	**03 58 30.1**	**-0.3**
	comp=Z,9.4nm,0.8s,mb4.8						
GYA	**Guiyang**	**76.38**	**306**	P	**P**	**03 58 32.0**	**+1.5**
GYA				pP	pP	03 58 44.3	+0.4
GYA				PP	PP	04 01 25.7	+2.9
GYA				S	S	04 08 12.9	+0.4
GYA				SKS		04 08 32.9	
GYA				SS	SS	04 13 10.0	+1.9
GYA				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
GYA				pmax	pmax		
	comp=Z,140nm,4.9s						
GYA				LR	LR		
	comp=N,840nm,18.5s,MS5.2						
GYA				LR	LR		
	comp=E,610nm,19.0s,MS5.2						
GYA				LR	LR		
	comp=Z,920nm,18.8s,MS5.1						
MAW	**Mawson**	**76.54**	**202**	*e*P	**P**	**03 58 31.1**	**+0.3**
	comp=Z,5.8nm,1.1s,mb4.4						
MAW	**Mawson**	**76.54**	**202**	P	**P**	**03 58 31.1**	**+0.3**
	comp=Z,7.7nm,0.9s,mb4.6,baz=103,slow=8.1,SNR=11						
MAW				pP	pP	03 58 43.4	-0.8
	comp=Z,4.8nm,0.7s,baz=112,slow=9.8,SNR=4.6						
MAW				LR	LR	04 25 13.5	
	comp=Z,72nm,21.5s,MS4.0,baz=241,slow=30						
MAW	**Mawson**	**76.54**	**202**	*e*P	**P**	**03 58 31.0**	**+0.2**
MAW				pmax	pmax		
	comp=Z,4.0nm,1.2s						
MAW	**Mawson**	**76.54**	**202**	*e*P	**P**	**03 58 31.0**	**+0.2**
	comp=Z,3.7nm,1.2s,mb4.2						
KLR	**Kul'dur**	**77.28**	**336**	*e*P	**P**	**03 58 31.1**	**-3.9**
KLR				pmax	pmax		
	comp=Z,50nm,1.8s,mb5.1						
BJT	**Baijiatuau**	**77.97**	**321**	*e*P	**P**	**03 58 39.4**	**+0.3**
BJI	**Beijing**	**77.98**	**322**	P	**P**	**03 58 39.3**	**+0.2**
BJI				S	S	04 08 30.5	+1.2
BJI				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
BJI				LR	LR		
	comp=N,75nm,18.0s						
BJI				LR	LR		
	comp=E,68nm,12.1s						
BJI				LR	LR		
	comp=Z,51nm,36.3s						
CMAR	**Chiang Mai Arr**	**78.72**	**295**	P	**P**	**03 58 44.9**	**+1.2**
	comp=Z,8.6nm,1.0s,mb4.7,baz=133,slow=4.1,SNR=19						
KMI	**Kunming**	**78.74**	**302**	P	**P**	**03 58 45.2**	**+1.5**
KMI				S	S	04 08 38.2	+0.1
KMI				pmax	pmax		
	comp=Z,27nm,1.2s,mb5.0						
KMI				LR	LR		
	comp=Z,48nm,17.4s,MS3.9						
CHG	**Chiang Mai**	**78.88**	**295**	⇓P	**P**	**03 58 45.4**	**+0.8**
	comp=Z,16nm,0.8s,mb5.0						
CHTO	**Chiang Mai**	**78.88**	**295**	*e*P	**P**	**03 58 45.4**	**+0.8**
CHTO				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
CHTO	**Chiang Mai**	**78.88**	**295**	*e*P	**P**	**03 58 45.4**	**+0.8**
	comp=Z,19nm,1.1s,mb4.9						
XAN	**Xi'an**	**78.91**	**313**	P	**P**	**03 58 43.8**	**-0.6**
XAN				pP	pP	03 58 55.6	-2.3
XAN				pmax	pmax		
	comp=Z,3.0nm,1.7s,mb4.0						
XAN				pmax	pmax		
	comp=Z,25nm,6.0s						
CD2	**Chengdu**	**80.88**	**308**	P	**P**	**03 58 56.7**	**+1.5**
CD2				pP	pP	03 59 13.5	+4.8
CD2				PP	PP	04 02 04.4	+4.1
CD2				S	S	04 08 59.6	-0.8
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
CD2				pmax	pmax		
	comp=Z,110nm,7.2s						
CD2				LR	LR		
	comp=N,210nm,5.3s						
CD2				LR	LR		
	comp=Z,190nm,5.5s						
HHC	**Hu-ho-hao-te**	**81.22**	**320**	*e*P	**P**	**03 58 57.0**	**+0.3**
HHC				pP	pP	03 59 14.6	+4.4
HHC				PP	PP	04 02 05.1	+2.2
HHC				S	S	04 09 01.3	-2.2
HHC				SKS		04 09 06.1	
HHC				SS	SS	04 14 22.5	+2.2
HHC				pmax	pmax		
	comp=Z,23nm,0.7s,mb5.2						
HHC				pmax	pmax		
	comp=Z,99nm,7.4s						
HHC				LR	LR		
	comp=N,220nm,17.7s,MS4.7						
HHC				LR	LR		
	comp=E,230nm,17.3s,MS4.7						
HHC				LR	LR		
	comp=Z,220nm,17.0s,MS4.6						
HIA	**Hailar**	**82.38**	**330**	*e*P	**P**	**03 59 02.3**	**-0.3**
HIA				pmax	pmax		
	comp=Z,16nm,1.4s						
HIA

BILL pmax pmax
comp=Z,16nm,2.5s,mb4.9
BILL MLR MLR
comp=Z,100nm,20.0s,MS4.2
YBH Yreka Blue Hor 89.00 44 P **P 03 59 35.5 -0.1**
comp=Z,4.6nm,0.7s,mb4.9,baz=127,slow=5.6,SNR=5.5
YBH pP pP 03 59 47.5 -1.8
comp=Z,3.8nm,0.7s,baz=98,slow=19,SNR=3.6
ISA Isabella 89.07 51 *eP* **P 03 59 35.9 -0.2**
ISA pmax pmax
comp=Z,4.0nm,0.8s,mb4.8
ISA Isabella 89.07 51 *eP* **P 03 59 35.9 -0.2**
comp=Z,3.5nm,0.8s,mb4.7
HUMO Hull Mountain 89.27 43 *eP* **P 03 59 37.0 +0.2**
WAKR Walker 89.67 48 *eP* **P 03 59 38.6 -0.2**
PAHR Pah Rah Range 90.26 47 *eP* **P 03 59 40.6 -1.0**
NVAR Mina Array Bea 90.43 49 P **P 03 59 41.7 -0.7**
comp=Z,2.8nm,0.7s,mb4.7,baz=225,slow=7.8,SNR=15
NVAR pP pP 03 59 54.1 -2.0
comp=Z,5.1nm,1.0s,baz=227,slow=8.0,SNR=8.5
NVAR Mina Array Bea 90.43 49 P **P 03 59 41.7 -0.7**
NVAR pP pP 03 59 54.1 -2.0
MOD Modoc 90.66 45 *eP* **P 03 59 42.6 -0.8**
comp=Z,5.7nm,0.9s,mb4.9
LDFC Landfair 91.29 53 *eP* **P 03 59 46.1 -0.4**
comp=Z,16nm,0.8s,mb5.4
TLY Talaya 91.92 326 *eP* **P 03 59 49.1 +0.1**
TLY pmax pmax
comp=Z,27nm,1.7s,mb5.3
TLY Talaya 91.92 326 *eP* **P 03 59 49.1 +0.1**
comp=Z,27nm,1.7s,mb5.3
WVOR Wild Horse Val 92.00 45 *eP* **P 03 59 48.9 -0.7**
WVOR pmax pmax
comp=Z,10.0nm,1.1s,mb5.1
WVOR Wild Horse Val 92.00 45 *eP* **P 03 59 48.9 -0.7**
comp=Z,9.7nm,1.1s,mb5.0
DLBC Dease Lake 93.91 28 *eP* **P 03 59 58.3 +0.3**
DLBC *e* pP 04 00 09.9 -1.8
WMQ Urumqi 98.03 314 P **P 04 00 17.8 +0.7**
WMQ pP pP 04 00 34.9 +4.0
WMQ pmax pmax
comp=Z,8.0nm,0.8s,mb5.3
WMQ pmax pmax
comp=Z,90nm,4.3s
WMQ LR LR
comp=N,48nm,26.0s
WMQ LR LR
comp=Z,22nm,16.8s
TXAR Lajitas Array 98.14 62 P **P 04 00 20.0 +2.0**
comp=Z,0.2nm,0.8s,baz=223,slow=4.7,SNR=3.1
TXAR pP pP 04 00 31.0 -0.7
comp=Z,0.6nm,0.9s,baz=219,slow=3.2,SNR=5.4
TXAR LR LR 04 37 49.5
comp=Z,118nm,18.2s,MS4.4,baz=180,slow=31
TXAR Lajitas Array 98.14 62 P **P 04 00 20.0 +2.0**
TXAR *PP pP 04 00 31.0 -0.7
TXAR Lajitas Array 98.14 62 P **P 04 00 20.0 +2.0**
TXAR pP pP 04 00 31.0 -0.7
TXAR LR LR 04 37 49.5
PDAR Pinedale Array 98.27 47 P **P 04 00 21.3 +3.1**
comp=Z,0.5nm,0.8s,mb4.1,baz=200,slow=3.0,SNR=4.6
PDAR LR LR 04 37 16.4
comp=Z,57nm,18.1s,MS4.1,baz=258,slow=31
PDAR Pinedale Array 98.27 47 P **P 04 00 21.3 +3.1**
PDAR LR LR 04 37 16.4
MKAR Makanchi Array 102.61 315 P Pdif 04 00 37.6 +0.1
comp=Z,0.3nm,0.4s,baz=102,slow=5.7,SNR=3.9
ARU Arti 118.35 324 *i* PKIKP PKPdf 04 05 26.5 -1.2
ARU 04 12 14.4
ARU Arti 118.35 324 *e*PKPdf PKPdf 04 05 27.1 -0.6
APA Apatity 125.75 341 ||*i* PKIKP PKIKP 04 05 48.2 +6.6
ARCES ARCESS Array B 126.66 345 PKP PKPdf 04 05 42.0 -1.2
comp=Z,4.1nm,1.1s,baz=64,slow=2.8,SNR=9.0
ARCES pPKP pPKPdf 04 05 55.6 -1.9
comp=Z,1.7nm,0.7s,baz=96,slow=2.4,SNR=2.8
KMBO Kilima Mbogo 127.60 251 PKIKP PKPdf 04 05 48.4 +1.6
GNI Garni 128.93 305 *i* PKIKP PKPdf 04 05 48.9 +0.4
GNI pmax pmax
comp=Z,20nm,1.7s
ZEI Tsey 129.30 309 *i* PKIKP PKPdf 04 05 48.4 -0.7
ZEI pmax pmax
comp=Z,4.0nm,0.5s
KIV Kislovodsk 130.01 310 *i* PKIKP PKPdf 04 05 51.1 +0.7
KIV pmax pmax
comp=Z,8.0nm,1.1s
KIV Kislovodsk 130.01 310 PKPdf PKPdf 04 05 50.8 +0.4
OBN Obninsk 130.67 326 *e*PKIKP PKPdf 04 05 51.7 +0.4
OBN *e*PS PS 04 18 19.7 -0.3
OBN pmax pmax
comp=Z,5.0nm,0.7s
ANN Anapa 133.53 312 *i* PKIKP PKPdf 04 05 52.5 -4.6
ANN *e* 04 06 08.9
ANN *e* 04 12 55.4
ANN pmax pmax
comp=Z,55nm,1.3s
AKASG Malin Array Be 136.60 323 PKP PKPdf 04 06 02.0 -0.6
comp=Z,0.3nm,0.3s,baz=72,slow=1.7,SNR=8.1
AKASG pPKP pPKPdf 04 06 15.1 -1.6
comp=Z,1.5nm,0.6s,baz=64,slow=2.2,SNR=3.7
MMAI Mount Meron Ar 136.97 296 PKP PKPdf 04 06 05.2 +1.3
comp=Z,0.7nm,0.3s,baz=118,slow=8.3,SNR=6.7
BRTR Keskin Array B 137.44 306 PKP PKPdf 04 06 04.6 +0.1
comp=Z,1.7nm,0.7s,baz=122,slow=3.5,SNR=11
BRTR Keskin Array B 137.44 306*c* *i*PKIKP PKPdf 04 06 05.0 +0.5
BRTR pmax pmax
comp=Z,2.0nm,0.7s
KOLS Kolonicke sedl 141.37 324 *e*PKIKP PKPdf 04 06 11.4 0.0
KOLS Kolonicke sedl 141.37 324 *e*PKP PKPdf 04 06 11.4 0.0
KECS Kecovo 142.60 325 *e*PKIKP PKPdf 04 06 13.0 -0.6
KECS Kecovo 142.60 325 *e*PKP PKPdf 04 06 13.0 -0.6
OKC Ostrava-Krasne 142.98 328 *e*PKP PKPdf 04 06 11.0 -3.2
OKC *ep*PKP pPKPdf 04 06 25.5 -2.9
PSZ Piszkesteto 143.25 324 *e*PKIKP PKPdf 04 06 12.1 -2.7
VYHS Vyhne 143.47 326 *e*PKIKP PKPdf 04 06 12.8 -2.3
VYHS Vyhne 143.47 326 *e*PKP PKPdf 04 06 12.8 -2.3
DPC Dobruska-Polom 143.51 330 *e*PKP PKPdf 04 06 12.4 -2.8
DPC *e* 04 06 24.7
DPC Dobruska-Polom 143.51 330 *e*PKP PKPdf 04 06 12.4 -2.8
DPC *ep*PKP pPKPdf 04 06 24.7 -4.6
DPC AMS AMS 05 20 50.0
UPC Upice 143.55 330 *e*PKP PKPdf 04 06 12.6 -2.6
UPC *ep*PKP pPKPdf 04 06 24.9 -4.5
BUD Budapest 143.98 324 ||*e*PKP PKPdf 04 06 11.5 -4.6
PVCC Panska Ves 144.19 331 *e*PKP PKPdf 04 06 14.6 -1.7
PVCC *e* 04 06 26.7
PVCC Panska Ves 144.19 331 *e*PKP PKPdf 04 06 14.6 -1.7
PVCC *ep*PKP pPKPdf 04 06 26.7 -3.8
PVCC AMS AMS 05 15 40.0
comp=Z,100nm,5.2s
BRG Berggiesshubel 144.22 332 *e*PKPbc PKPdf 04 06 13.6 -2.8
BRG Berggiesshubel 144.22 332 *e*PKP PKPdf 04 06 14.2 -2.1
comp=Z,29nm,1.3s
BRG *e* 04 06 26.4
comp=Z,9.9nm,0.9s
BRG
comp=N,62nm,13.8s
BRG
comp=E,47nm,12.8s
BRG
comp=Z,87nm,21.3s
CLL Collm 144.29 334 *e*PKPbc PKPdf 04 06 13.9 -2.6
CLL Collm 144.29 334 ||*i* PKP PKPdf 04 06 13.9 -2.6
CLL *i* PKP PKPdf 04 06 17.8 +1.3
CLL *i* 04 06 26.2
CLL Collm 144.29 334 ||*i* PKPdf PKPdf 04 06 13.9 -2.6
comp=Z,24nm,1.3s
CLL *i* PKiKP PKiKP 04 06 17.8 -2.3
comp=Z,11nm,0.8s
CLL *i* pPKPdf pPKPdf 04 06 26.2 -4.4
CLL *es*PKPdf 04 06 32.0
CLL *i* sPKiKP 04 06 36.3
NRDL Niedersach Rie 144.49 337 *e*PKPbc PKPdf 04 06 13.6 -3.2
ZST Bratislava 144.56 327 *e*PKIKP PKPdf 04 06 16.6 -0.5
ZST Bratislava 144.56 327 *e*PKP PKPdf 04 06 16.6 -0.5
PRU Pruhonice 144.59 331 *e*PKP PKPdf 04 06 16.3 -0.7
PRU *e* 04 06 28.5
PRU Pruhonice 144.59 331 *e*PKP PKPdf 04 06 16.3 -0.7
PRU *ep*PKP pPKPdf 04 06 28.5 -2.7
PRU AMS AMS 05 20 10.0
TREC Trest 144.63 329 *e*PKP PKPdf 04 06 16.2 -0.9
TREC AMS AMS 05 17 40.0
comp=Z,100nm,19.1s
CLZ Clausthal 144.91 336 *e*PKPbc PKPdf 04 06 16.5 -1.0
TANN Tannenbergstha 145.19 333 *e*PKPbc PKPbc 04 06 17.3 -0.4
WERD Werda 145.23 333 *e*PKPbc PKPbc 04 06 17.5 -0.4
GUNZ Gunzen 145.28 333 *e*PKPbc PKPbc 04 06 17.9 -0.1
NKC Novy Kostel 145.33 333 *e*PKP PKPdf 04 06 18.2 -0.1
NKC *ep*PKP pPKPdf 04 06 30.4 -2.1
CONA Conrad Observa 145.37 327 *i* PKPdf PKPdf 04 06 19.0 +0.6
comp=Z,66nm,1.3s,SNR=24
MOX Moxa 145.37 334 *e*PKP PKPdf 04 06 18.3 -0.1
comp=Z,57nm,1.6s
MOX *e* 04 06 30.5
MOX Moxa 145.37 334 *e*PKPbc PKPbc 04 06 17.8 -0.5
IBBN Ibbenburen 145.46 339 *e*PKPbc PKPbc 04 06 17.7 -0.8
KHC Kasperske Hory 145.64 331 *e*PKP2 PKPab 04 06 19.0 -0.5
KHC MLR MLR
comp=Z,100nm,18.6s,MS4.6
KHC Kasperske Hory 145.64 331 *e*PKP PKPdf 04 06 19.0 +0.1
KHC *e* 04 06 32.1
KHC LR LR
comp=Z,100nm,18.6s,MS4.6
KHC Kasperske Hory 145.64 331 *e*PKP PKPdf 04 06 19.0 +0.1
KHC *ep*PKP pPKPdf 04 06 32.1 -0.9
KHC AMS AMS 05 21 20.0
comp=Z,100nm,18.6s
UBBA Unterbreizbach 145.87 336 *e*PKPbc PKPbc 04 06 19.5 -0.4
WET Wettzell 145.95 331 *e*PKPbc PKPbc 04 06 20.1 -0.1
ARSA Arzberg 145.98 327 ||*i* PKPab PKPab 04 06 20.4 -0.5
comp=Z,42nm,1.7s,SNR=19
KOGS Kog 146.12 325 *i* PKPdf PKPdf 04 06 20.4 +0.6
MOA Molln 146.21 328 ||*i* PKPab PKPab 04 06 20.9 -0.9
comp=Z,33nm,1.5s,SNR=15
GRF Grafenberg Arr 146.26 333 *e*PKPbc PKPbc 04 06 21.0 -0.1
GRF *ep*PKPbc pPKPbc 04 06 33.3 -1.8
GRFO Grafenberg 146.26 333 *e*PKPbc PKPbc 04 06 20.9 -0.2
BUG Bochum--Üniver 146.35 339 *e*PKPbc PKPbc 04 06 20.5 -0.8
GROS Grobnik 146.51 325 *i* PKPdf PKPdf 04 06 21.4 +0.9
SOKA Soboth 146.61 326 ||*i* PKPbc PKPbc 04 06 21.8 -0.4
comp=Z,18nm,1.1s
TNS Taunus Mts 146.94 336 *e*PKPbc PKPbc 04 06 22.6 -0.4
RJOB Jochberg 147.00 329 *e*PKPbc PKPbc 04 06 22.5 -0.8
PDKS Podkum 147.03 325 *i* PKPdf PKPdf 04 06 22.9 +1.6
BOJS Bojanci 147.25 324 *i* PKPdf PKPdf 04 06 21.9 +0.2
BOJS *i* PKPbc pPKPbc 04 06 37.7 -0.4
LJU Ljubljana 147.29 326 *i* PKPdf PKPdf 04 06 21.6 -0.1
LJU *e* 04 06 23.6
LJU *i* PKPbc pPKPbc 04 06 36.3 -1.9
LJU *e* 04 06 45.0
LJU Ljubljana 147.29 326 *i* PKPdf PKPdf 04 06 21.6 -0.1
LJU *i* PKPbc pPKPbc 04 06 36.3 -1.9
MYKA Terra Mystica 147.36 327 ||*i* PKPbc PKPbc 04 06 23.3 -1.0
comp=Z,16nm,1.5s
FUR Furstenfeldbru 147.39 331 *e*PKPbc PKPbc 04 06 23.9 -0.5
MEM Membach 147.48 339 PKP PKPbc 04 06 24.9 +0.4
CEY Cerknica 147.54 325 *i* PKPdf PKPdf 04 06 21.9 -0.3
CEY *i* PKPbc pPKPbc 04 06 36.6 -2.3
VOY Vojsko 147.63 326 *e*PKPdf PKPdf 04 06 24.3 +2.0
VOY *e*PKPbc pPKPbc 04 06 36.3 -2.8
JAVS Javornik 147.63 326 *i* PKPdf PKPdf 04 06 23.8 +1.5
JAVS *i* PKPbc pPKPbc 04 06 36.1 -3.1
PTCC Patocco-Chiusa 147.66 327 PKP PKPbc 04 06 24.6 -0.5
STU Stuttgart 147.81 334 *e*PKPbc PKPbc 04 06 24.9 -0.6
ABTA Abfaltersbach 147.84 328 ||*i* PKPbc PKPbc 04 06 24.5 -1.1
comp=Z,22nm,1.2s
WTTA Wattenberg 147.89 330 ||*i* PKPbc PKPbc 04 06 25.4 -0.4
comp=Z,33nm,1.5s,SNR=8.5
SKDS Skadanscina 147.89 325 *i* PKPdf PKPbc 04 06 25.1 -0.7
MOTA Moosalm 148.07 331 ||*i* PKPbc PKPbc 04 06 25.8 -0.4
comp=Z,12nm,1.0s,SNR=5.5
WLF Walferdange 148.23 338 PKP PKPbc 04 06 27.2 +0.6
WLF APKP 04 06 39.8
GIVF Givet 148.30 340 *e*PKP1 PKPbc 04 06 25.1 -1.6
FETA Feichten 148.49 330 *i* PKPbc PKPbc 04 06 27.2 -0.1
comp=Z,25nm,1.1s,SNR=13
BFO Black Forest 148.51 334 *e*PKPbc PKPbc 04 06 26.5 -0.8
BFO Black Forest 148.51 334 *e*PKPbc PKPbc 04 06 26.2 -1.1
DAVA Damuels 148.67 332 ||*i* PKPbc PKPbc 04 06 27.3 -0.5
comp=Z,18nm,1.5s
CTI Castel Tesino 148.75 328 PKP2 PKPbc 04 06 28.1 +0.1
CDF Champ du Feu 148.86 336 *e*PKP1 PKPbc 04 06 26.6 -1.6
comp=Z,59nm,1.5s
BRMO Bormio 149.05 330 PKP PKPbc 04 06 28.7 -0.1
RGNG Rignano Grg 149.34 318 PKP PKPbc 04 06 29.2 -0.5
HINF Hinteralfeld 149.51 335 *e*PKP1 PKPbc 04 06 28.1 -1.8
TUE Stuetta 149.53 331 *e*PKPbc PKPbc 04 06 30.0 +0.1
HAU Haudompre 149.55 336 *e*PKP1 PKPbc 04 06 28.2 -1.8
comp=Z,24nm,1.2s
HAU *e*MLR MLR
comp=Z,54nm,19.8s,MS4.0
HAU Haudompre 149.55 336 *e*PKP PKPbc 04 06 28.2 -1.8
HAU LR LR
comp=Z,50nm,19.8s,MS4.3
CING Cingoli 149.74 323 PKP PKPbc 04 06 30.8 +0.2
SNTG Esanatoglia 149.96 323 PKP PKPbc 04 06 31.6 +0.5
NRCA Norcia 150.13 322 PKP PKPbc 04 06 31.6 0.0
SFI Santa Sofia 150.13 325 PKIKP PKPdf 04 06 26.0 -0.5
CSSN Cassano Irpino 150.14 317 PKP PKPbc 04 06 30.9 -0.8
MURB Monte Urbino 150.19 323 PKP PKPbc 04 06 31.2 -0.5
ASS Assisi 150.25 323 PKIKP PKPbc 04 06 30.9 -0.9
AQU L'Aquila 150.26 321 PKIKP PKPbc 04 06 32.2 +0.3
GRI Girifalco 150.27 313 PKIKP PKPbc 04 06 32.9 +0.9
FNVD Fontana Vidola 150.34 326 PKP PKPbc 04 06 32.2 +0.2
VVLD Villa Vallelon 150.43 320 PKP PKPbc 04 06 31.5 -0.8
FIAM Fiamignano 150.48 321 PKP PKPbc 04 06 32.0 -0.4
GSCL Gusciola 150.49 327 PKP PKPbc 04 06 32.9 +0.5
CABF La Chapelle 150.80 335 *e*PKP1 PKPbc 04 06 31.8 -1.2
comp=Z,43nm,1.3s
SOI Samo 150.88 312 PKIKP PKPbc 04 06 33.6 +0.1
LOR Lormes 151.07 338 *e*PKP1 PKPbc 04 06 31.8 -1.8
comp=Z,59nm,1.5s
LOR *e*MLR MLR
comp=Z,53nm,21.0s,MS4.0
LOR Lormes 151.07 338 *e*PKP PKPbc 04 06 31.8 -1.8
LOR LR LR
comp=Z,50nm,21.0s,MS4.3
SSF Saint Saulge 151.37 338 *e*PKP1 PKPbc 04 06 32.6 -1.7
comp=Z,34nm,1.3s
LPL La Plagne 151.42 333 *e*PKP1 PKPbc 04 06 33.3 -1.2
comp=Z,12nm,0.6s
LPG La Plagne 151.42 333 *e*PKP1 PKPbc 04 06 33.5 -1.0
comp=Z,22nm,0.7s
GRR Gorron 151.44 345 *e*PKP1 PKPbc 04 06 32.8 -1.7
SMF Signal de Mont 151.62 338 *e*PKP1 PKPbc 04 06 32.7 -2.2
AVF Avril sur Loir 151.66 338 *e*PKP1 PKPbc 04 06 33.0 -2.0
BNI Bardonecchia 151.81 332 *e*PKIKP PKPbc 04 06 34.0 -1.4
ORIF Oris-en-Rattie 152.26 333 *e*PKP1 PKPbc 04 06 34.7 -1.7
comp=Z,39nm,1.5s
ORIF *e*MLR MLR
comp=Z,84nm,19.5s,MS4.3
TCF Toulx Ste Croi 152.49 339 *e*PKP1 PKPbc 04 06 35.0 -1.9
VIVF Saint-Julien-l 152.81 335 *e*PKP1 PKPbc 04 06 36.0 -1.7
comp=Z,32nm,1.6s
FRF La Foret Royal 152.99 330 *e*PKP1 PKPbc 04 06 36.2 -1.9
comp=Z,27nm,1.2s
SMRF Simiane la Rot 153.14 332 *e*PKP1 PKPbc 04 06 37.0 -1.4
comp=Z,14nm,0.9s
LMR La Mourre 153.23 330 *e*PKP1 PKPbc 04 06 36.8 -1.8
comp=Z,13nm,0.9s
RJF Les Rejaudoux 153.58 339 *e*PKP1 PKPbc 04 06 37.4 -1.9
comp=Z,21nm,1.3s
RJF *e*MLR MLR
comp=Z,73nm,19.8s,MS4.2
RJF Les Rejaudoux 153.58 339 *e*PKP PKPbc 04 06 37.4 -1.9
RJF LR LR
comp=Z,70nm,19.8s,MS4.5
LASF Ste Croix 153.78 335 *e*PKP1 PKPbc 04 06 38.4 -1.4
comp=Z,20nm,1.2s

ISCJB ***10*** *03:50:54.2±3.6, 20°.8S±0°.2×168°.5E±0°.2, h5km±23km, mb4.2/7, Error ellipse: s-maj=43.6km s-min=10.5km az=41.5*
NOU ***10*** *03:50:54.6±0.9, 20°.70S×168°.81E, h10km, MD2.6, MS3.9*
NEIC ***10*** *03:50:59.4±1.3, 21°.07S×168°.58E, h35km, mb4.0/1, Error ellipse: s-maj=47.0km s-min=16.3km az=148.0*
IDC ***10*** *03:51:00.4±2.0, 20°.90S×168°.53E, h38km±6km, mb4.0/7, mb1 4.3/7, mb1mx4.0/15, mbtmp4.0/7, Error ellipse: s-maj=65.4km s-min=24.6km az=143.0*
ISC 10 03:50:54.5±4.3, 20°.9S±0°.2×168°.6E±0°.2, h0km±27km, n14, σ0°58/17, mb4.2/7, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**1.98**	**232**	*e*P	**Pn**	**03 51 29.5**	**+0.2**
BAYA				*e*S	**Sn**	**03 51 54.4**	**-0.4**
PLUM	**Mont Dore**	**2.24**	**233**	*e*S	**Sn**	**03 52 01.7**	**+0.6**
DZM	**Mont Dzumac**	**2.28**	**240**	*e*P	**Pn**	**03 51 33.3**	**-0.1**
DZM				*e*S	**Sn**	**03 52 02.2**	**0.0**
DZM				AMP		03 52 05.5	
	comp=Z,8μm,10.3s						
DZM	**Mont Dzumac**	**2.28**	**240**	*e*Pn	**Pn**	**03 51 33.4**	**0.0**
DZM				*e*Sn	**Sn**	**03 52 01.6**	**-0.7**
CTAO	**Charters Tower**	**20.92**	**268**	P	**P**	**03 55 38.7**	**-0.1**
	comp=Z,5.9nm,0.9s						
STKA	**Stephens Creek**	**26.43**	**240**	P	**P**	**03 56 34.0**	**+0.9**
	comp=Z,3.9nm,0.5s,mb4.3,baz=74,slow=9.2,SNR=7.8						
STKA				pP		03 56 45.3	
	comp=Z,2.7nm,0.7s,baz=108,slow=12,SNR=2.2						
STKA	**Stephens Creek**	**26.43**	**240**	*e*P	**P**	**03 56 33.8**	**+0.7**
STKA				pP		03 56 45.3	
WRA	**Warramunga Arr**	**32.06**	**266**	P	**P**	**03 57 22.2**	**-1.0**
	comp=Z,1.8nm,0.9s,mb4.0,baz=94,slow=9.0,SNR=4.3						
WRA				pP		03 57 33.4	
	comp=Z,2.5nm,0.9s,baz=96,slow=9.2,SNR=5.4						
ASAR	**Alice Springs**	**32.14**	**259**	P	**P**	**03 57 23.5**	**-0.5**
	comp=Z,5.7nm,0.8s,mb4.6,baz=84,slow=9.1,SNR=15						
ASAR				pP		03 57 34.5	
	comp=Z,9.6nm,0.8s,baz=83,slow=8.9,SNR=18						
FITZ	**Fitzroy Crossi**	**40.48**	**266**	P	**P**	**03 58 35.5**	**+0.2**
	comp=Z,5.9nm,0.8s,mb4.3,baz=130,slow=10,SNR=5.6						
FITZ				pP		03 58 46.8	
	comp=Z,7.7nm,0.9s,baz=152,slow=9.9,SNR=3.6						
CMAR	**Chiang Mai Arr**	**78.64**	**295**	P	**P**	**04 02 59.8**	**+1.1**
	comp=Z,1.4nm,0.5s,mb4.2,baz=132,slow=4.0,SNR=2.5						
CMAR				pP		04 03 10.8	
	comp=Z,0.9nm,0.3s,baz=107,slow=4.8,SNR=1.8						
CMAR	**Chiang Mai Arr**	**78.64**	**295**	P	**P**	**04 02 59.8**	**+1.1**
CMAR				pP		04 03 10.8	
SONM	**Songino Array**	**88.20**	**323**	P	**P**	**04 03 47.6**	**+0.3**
	comp=Z,1.4nm,0.8s,mb4.4,baz=144,slow=5.0,SNR=7.3						
SONM				pP		04 03 58.8	
	comp=Z,0.9nm,0.7s,baz=159,slow=4.2,SNR=3.6						
NVAR	**Mina Array Bea**	**90.39**	**49**	P	**P**	**04 03 57.1**	**-0.7**
	comp=Z,0.3nm,0.6s,mb3.7,baz=233,slow=6.7,SNR=3.8						

DJA 10 03:53:57, 2°.13S×100°.64E, h20km, MLv3.7/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**0.82**	**87**	P	Pb	03 54 11.4	-1.2
KRJI				S	Sb	03 54 25.7	+2.4
PPSI	**Pulau Pagai**	**0.89**	**225**	P	Pb	03 54 14.0	+0.2
PPSI				S	Sb	03 54 26.3	+1.1
PDSI	**Padang**	**1.22**	**352**	P	Pn	03 54 18.2	-0.8
PDSI				S	Sb	03 54 34.7	-0.1
SDSI	**Sungai Dareh**	**1.43**	**34**	P	Pn	03 54 22.6	+0.8
PPI	**Padang Panjang**	**1.68**	**352**	P	Pn	03 54 26.1	+0.8
SISI	**Saibi**	**1.74**	**297**	P	Pn	03 54 27.4	+1.3

IDC ***10*** *03:54:05.0±1.5, 15°.36N×122°.81E, h0km, mb4.0/5, mb1 4.2/6, mb1mx3.8/25, mbtmp4.1/6, Error ellipse: s-maj=32.8km s-min=23.8km az=58.0*
MAN ***10*** *03:54:09, 15°.43N×122°.31E, h11km, mb4.8, ML3.7, MS3.8*
ISCJB ***10*** *03:54:10.6±0.8, 15°.52N±0°.05×122°.34E±0°.09, h73km±9km, mb4.0/6, Error ellipse: s-maj=14.8km s-min=7.8km az=161.8*
NEIC ***10*** *03:54:10.2±0.8, 15°.32N×122°.74E, h35km, mb4.3/1, Error ellipse: s-maj=21.2km s-min=13.0km az=67.0*
ISC 10 03:54:11.6±0.8, 15°.53N±0°.05×122°.34E±0°.09, h66km±10km, n19, σ1°09/25, mb4.0/6, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALP	**Baler**	**0.77**	**286**	*e*P	**Pn**	**03 54 24.8**	**-2.3**
BALP				*e*S	**Sn**	**03 54 37.5**	**-0.9**
POLP	**Polilio Island**	**0.88**	**206**	*e*P	**Pn**	**03 54 22.6**	**-5.8**
POLP				*e*S	**Sn**	**03 54 40.4**	**-0.6**
PCPH	**Palayan**	**1.20**	**272**⇑	*e*P	**Pn**	**03 54 31.3**	**-1.2**
PCPH				*e*S	**Sn**	**03 54 48.3**	**+0.2**
CAUP	**Cauayan**	**1.50**	**341**	*e*P	**Pn**	**03 54 37.2**	**+0.8**
TGY	**Tagaytay City**	**1.96**	**224**	Pn	**Pn**	**03 54 43.4**	**+0.8**
	367nm,0.3s,baz=346,slow=2.5,SNR=17						
TGY				Sn	**Sn**	**03 55 11.0**	**+4.7**
	313nm,0.3s,baz=107,slow=19,SNR=14						
TGY	**Tagaytay City**	**1.96**	**224**	‖*e*P	**Pn**	**03 54 45.0**	**+2.3**
TGY				*e*S	**Sn**	**03 55 10.8**	**+4.6**
BOAC	**Boac**	**2.11**	**193**	*e*P	**Pn**	**03 54 43.1**	**-1.6**
BOAC				*e*S	**Sn**	**03 55 11.8**	**+2.0**
AUQP	**San Andres**	**2.21**	**172**	*e*P	**Pn**	**03 54 46.4**	**+0.3**
BOLP	**Bolinao**	**2.48**	**290**	*e*P	**Pn**	**03 54 51.6**	**+1.8**
APYP	**Conner**	**2.55**	**336**	*e*P	**Pn**	**03 54 51.8**	**+1.1**
PVCP	**Virac**	**2.60**	**137**	*e*P	**Pn**	**03 54 51.4**	**0.0**
LUBP	**Lubang**	**2.70**	**229**	*e*P	**Pn**	**03 54 52.8**	**+0.1**
SJMP	**San Jose**	**3.27**	**201**	*e*P	**Pn**	**03 55 01.0**	**+0.5**
FITZ	**Fitzroy Crossi**	**33.57**	**174**	P	**P**	**04 00 45.3**	**-0.2**
	0.7nm,0.3s,mb4.0,baz=283,slow=19,SNR=7.8						
WRA	**Warramunga Arr**	**37.17**	**161**	P	**P**	**04 01 15.1**	**-1.3**
	2.3nm,0.5s,mb4.3,baz=343,slow=9.1,SNR=17						
ASAR	**Alice Springs**	**40.56**	**164**	P	**P**	**04 01 44.5**	**-0.1**
	0.6nm,0.3s,mb3.9,baz=341,slow=7.1,SNR=12						
MKAR	**Makanchi Array**	**45.55**	**322**	P	**P**	**04 02 29.8**	**+5.0**
	0.3nm,0.6s,mb3.2,baz=113,slow=9.6,SNR=3.3						
NWAO	**Narrogin (SRO)**	**48.42**	**186**	P	**P**	**04 02 47.0**	**-0.2**
	8.3nm,0.9s,mb4.6,baz=338,slow=11,SNR=2.7						
KURK	**Kurchatov**	**49.59**	**325**	*e*P	**P**	**04 03 01.0**	**+5.0**
	2.5nm,0.8s,mb4.2						

NOU ***10*** *04:09:18.2±1.5, 20°.53S×168°.56E, h10km, MD2.8, ML4.1*
IDC ***10*** *04:09:26.6±11.0, 19°.43S×167°.01E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.7/14, mbtmp3.7/3, Error ellipse: s-maj=331.2km s-min=56.9km az=134.0*
ISC 10 04:09:18.3±4.2, 20°.9S±0°.4×168°.5E±0°.5, h10km±37km, n7, σ0°48/9, mb3.6/3, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.00**	**230**	*e*P	**Pn**	**04 09 51.8**	**-0.4**
BAYA				*e*S	**Sn**	**04 10 16.6**	**-0.6**
DZM	**Mont Dzumac**	**2.29**	**238**	AMP		04 09 30.0	
	comp=Z,2μm,0.0s						
MVNO	**Noumea**	**2.40**	**234**	*e*P	**Pn**	**04 09 58.3**	**+0.7**
MVNO				*e*S	**Sn**	**04 10 27.5**	**+0.5**
NOUC	**Port Laguerre**	**2.41**	**239**	*e*P	**Pn**	**04 09 57.8**	**0.0**
NOUC				*e*S	**Sn**	**04 10 27.6**	**+0.2**
NOUC				AMP		04 10 29.5	
	comp=Z,164nm,6.0s						
WRA	**Warramunga Arr**	**32.03**	**266**	P	**P**	**04 15 44.5**	**-0.7**
	comp=Z,0.2nm,0.6s,mb3.1,baz=92,slow=8.1,SNR=1.2						
ASAR	**Alice Springs**	**32.12**	**258**	P	**P**	**04 15 45.9**	**-0.2**
	comp=Z,1.6nm,0.7s,mb3.9,baz=81,slow=9.9,SNR=12						
SONM	**Songino Array**	**88.12**	**323**	P	**P**	**04 22 09.6**	**+0.5**
	comp=Z,0.4nm,0.6s,mb3.9,baz=110,slow=4.4,SNR=3.5						

IDC 10 04:27:30.8±4.3, 5°.76N×93°.47E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.3/22, mbtmp3.4/4, Error ellipse: s-maj=164.2km s-min=27.3km az=63.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**42.01**	**349**	P	P	04 35 23.5	-0.2
	0.1nm,0.4s,baz=144,slow=8.5,SNR=4.0						
SONM	**Songino Array**	**43.36**	**13**	P	P	04 35 34.9	+0.2
	0.4nm,0.6s,baz=186,slow=10,SNR=3.6						
WRA	**Warramunga Arr**	**47.61**	**124**	P	P	04 36 08.5	-0.4
	0.2nm,0.5s,baz=301,slow=9.2,SNR=5.2						
ASAR	**Alice Springs**	**49.10**	**128**	P	P	04 36 20.8	+0.5
	0.3nm,0.6s,baz=297,slow=8.6,SNR=2.1						

DJA 10 04:42:44, 2°.15S×100°.51E, h32km, MLv3.7/4, Southern Sumatera

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

CASC 10 04:42:50.3±2.5, 8°31′N×82°57′W, h12km±26km, MD3.8, 1C, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.50**	**346**	*e*P	Pg	04 43 00.8	+0.7
BRU2				*e*S	Sg	04 43 09.4	+2.7
CTCR	**Cotoan**	**0.61**	**342**	⇑*i*P	Pg	04 43 02.3	0.0
CTCR				*e*S	Sg	04 43 11.9	+1.6
CNI	**Changuinola**	**1.10**	**3**	*i*P	Pb	04 43 10.8	-0.6
CNI				*e*S	Sb	04 43 24.7	-1.0
BAR1		**1.18**	**322**	*e*P	Pb	04 43 10.3	-2.3
BUS	**Buena Vista**	**1.71**	**317**	*e*P	Pn	04 43 20.0	+0.1
BUS				*e*S	Sn	04 43 42.0	+0.3
LAJ	**Bijagual**	**2.17**	**315**	*e*P	Pn	04 43 30.8	+4.4
PRS1	**Puriscal**	**2.39**	**314**	*e*P	Pn	04 43 29.2	-0.1
PRS1				*e*S	Sn	04 43 59.8	+1.2
CGA2	**Cerro Gallo 2**	**2.52**	**312**	*e*P	Pn	04 43 34.2	+3.0

*ISCJB **10** 05:06:22.5±0.7, 10°.69N±0°.08×62°.15W±0°.03, h55km±8km, Error ellipse: s-maj=13.8km s-min=5.1km az=5.7*
*FUNV **10** 05:06:23.1, 10°.66N×62°.09W, h49km, MW2.4*
*TRN **10** 05:06:25.0, 10°.82N×62°.00W, h45km, MD2.8*
*NEIC **10** 05:06:25.0, 10°.82N×62°.00W, h45km, MD2.8(TRN), After TRN.*

ISC 10 05:06:23.1±0.7, 10°.69N±0°.08×62°.15W±0°.03, h51km±8km, n16, σ0s77/28, 1C, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.09**	**240**	⇑*e*P	**Pn**	**05 06 30.8**	**-0.1**
GUIV				*e*S	**Sn**	**05 06 36.4**	**-0.1**
TCE	**Chacachacare**	**0.39**	**89**	*e*P	**Pn**	**05 06 33.2**	**0.0**
TCE				*e*S	**Sn**	**05 06 40.0**	**-0.4**
TCE	**Chacachacare**	**0.39**	**89**	*e*P	**Pn**	**05 06 33.2**	**0.0**
TCE				*e*S	**Sn**	**05 06 40.0**	**-0.4**
TRN	**Trinidad (W)**	**0.73**	**93**	*e*P	**Pn**	**05 06 37.6**	**+0.3**
TRN				*e*S	**Sn**	**05 06 46.3**	**-1.3**
TRN	**Trinidad (W)**	**0.73**	**93**	*e*P	**Pn**	**05 06 37.6**	**+0.3**
TRN				*e*S	**Sn**	**05 06 46.3**	**-1.3**
TPP	**Pointe-a-Pierr**	**0.78**	**118**	*e*P	**Pn**	**05 06 39.8**	**+1.9**
TPP				*e*S	**Sn**	**05 06 49.1**	**+0.4**
TPP	**Pointe-a-Pierr**	**0.78**	**118**	*e*P	**Pn**	**05 06 39.8**	**+1.9**
TPP				*e*S	**Sn**	**05 06 49.1**	**+0.4**
GUNV	**Guanoco**	**0.94**	**236**	*e*P	**Pn**	**05 06 40.3**	**+0.3**
GUNV				*e*S	**Sn**	**05 06 53.5**	**+1.0**
CRUV	**Carupano**	**1.07**	**269**	*e*P	**Pn**	**05 06 41.3**	**-0.4**
CRUV				*e*S	**Sn**	**05 06 55.0**	**-0.6**
TBH	**Brigand Hill**	**1.08**	**101**	*e*P	**Pn**	**05 06 42.0**	**0.0**
TBH				*e*S	**Sn**	**05 06 55.9**	**0.0**
TBH	**Brigand Hill**	**1.08**	**101**	*e*P	**Pn**	**05 06 42.0**	**0.0**
TBH				*e*S	**Sn**	**05 06 55.9**	**0.0**
ITEV	**Isla Los Testi**	**1.17**	**304**	*e*P	**Pn**	**05 06 43.6**	**+0.5**
ITEV				*e*S	**Sn**	**05 06 59.2**	**+1.1**
PCRV	**Puerto La Cruz**	**2.50**	**258**	*e*P	**Pn**	**05 07 01.0**	**-0.3**
CUPV	**Ccepira**	**3.64**	**260**	*e*P	**Pn**	**05 07 16.2**	**-0.7**
BIRV	**Birongo**	**4.06**	**267**	*e*P	**Pn**	**05 07 22.9**	**+0.2**
BAUV	**El Baul**	**6.06**	**254**	*e*P	**Pn**	**05 07 48.5**	**-1.7**

*NEIC **10** 05:10:33.3, 16°.05N×94°.02W, h94km, MD4.0(MEX), After MEX.*

MEX 10 05:10:33.3±0.8, 16°.05N×94°.02W, h94km±11km, MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.84**	**114**	*i*P	Pn	05 10 50.4	-1.2
PCIG				*i*S	Sn	05 11 03.8	-1.6
TGIG		**1.12**	**50**	*i*P	Pn	05 10 53.9	-0.8
TGIG				*i*S	Sn	05 11 08.7	-2.1
CMIG	**Matias Romero**	**1.32**	**321**	*i*P	Pn	05 10 56.0	-1.1
CMIG				*i*S	Sn	05 11 14.2	-0.8
CMIG	**Matias Romero**	**1.32**	**321**	*i*P	Pn	05 10 56.0	-1.1
CMIG				*i*S	Sn	05 11 14.2	-0.8
SCX	**San Cristobal**	**1.49**	**63**	*i*P	Pn	05 10 57.7	-1.4
SCX				*i*S	Sn	05 11 17.9	-0.8
SCX	**San Cristobal**	**1.49**	**63**	*i*P	Pn	05 10 57.7	-1.4
SCX				*i*S	Sn	05 11 17.9	-0.8
HUIG	**Huatulco**	**2.03**	**262**	*i*P	Pn	05 11 03.8	-2.2
HUIG				*i*S	Sn	05 11 29.0	-2.1
HUIG	**Huatulco**	**2.03**	**262**	*i*P	Pn	05 11 03.8	-2.2
HUIG				*i*S	Sn	05 11 29.0	-2.1
THIG		**2.04**	**124**	*i*P	Pn	05 11 06.0	-0.1
THIG				*i*S	Sn	05 11 29.5	-1.7
VHO	**Vista Hermosa**	**2.79**	**292**	*i*P	Pn	05 11 23.7	+7.6
VHO				*i*S	Sn	05 11 47.9	-1.3
VHO	**Vista Hermosa**	**2.79**	**292**	*i*P	Pn	05 11 15.7	-0.5
VHO				*i*S	Sn	05 11 47.9	-1.3
PNIG	**Pinotepa**	**3.96**	**275**	*i*P	Pn	05 11 30.9	-1.0
PNIG				*i*S	Sn	05 12 15.7	-1.6
PNIG	**Pinotepa**	**3.96**	**275**	*i*P	Pn	05 11 30.9	-1.0
PNIG				*i*S	Sn	05 12 15.7	-1.6
UTMO	**Huajuapan**	**4.03**	**297**	*e*P	Pn	05 11 32.2	-0.6
UTMO				*i*S	Sn	05 12 18.9	-0.1
PPM	**Popocatepetl**	**5.32**	**305**	*e*P	Pn	05 12 03.0	+13
PPM				*i*S	Sn	05 12 49.5	-0.8
PPM	**Popocatepetl**	**5.32**	**305**	*e*P	Pn	05 12 03.0	+13
PPM				*i*S	Sn	05 12 49.5	-0.8

*NOU **10** 05:16:24.3±1.0, 14°.88S×167°.64E, h30km, MD3.9, ML4.7*
*ISCJB **10** 05:16:26.9±0.1, 15°.25S±0°.02×167°.47E±0°.02, h125km, mb5.4/151, Error ellipse: s-maj=3.5km s-min=2.7km az=139.3*
*BJI **10** 05:16:26.2, 14°.87S×167°.65E, h112km, mB5.1/23, mb5.3/47*
*MOS **10** 05:16:26.2±1.2, 15°.17S×167°.48E, h113km, mb5.2/26, MS4.2/9, Error ellipse: s-maj=9.2km s-min=8.4km az=90.6*
*LDG **10** 05:16:26.5±0.3, 15°.00S×166°.95E, h100km, Mb5.6/4, Ms3.9/7, Error ellipse: s-maj=41.1km s-min=9.9km az=87.0*
*NEIC **10** 05:16:28.0±0.1, 15°.20S×167°.52E, mb5.3/68, Error ellipse: s-maj=5.6km s-min=4.6km az=152.0*
*IDC **10** 05:16:28.2±0.5, 15°.26S×167°.61E, h126km±4km, mb5.0/17, mb1 5.1/17, mb1mx5.1/18, mbtmp5.0/17, MS4.0/20, Ms1 4.0/20, ms1mx3.9/29, Error ellipse: s-maj=13.2km s-min=10.1km az=83.0*
*GCMT **10** 05:16:29.9±0.2, 15°.25S×167°.26E, h128km±1km, MW5.3, Moment Tensor Solution. s79,c114; s99,c188; Moment tensor: Scale 10^{17}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{\phi r}$0.00; Best double couple: $M_0$1.20000×10^{17} NP1:ϕ_s237.00000°, δ52.00000°, λ132.00000°. NP2:ϕ_s1.00000°, δ54.00000°, λ49.00000°. Principal axes: T 1.1400, Plg58.0000°, Azm210.0000°; N 0.0400, Plg32.0000°, Azm27.0000°; P -1.1800, Plg1.0000°, Azm118.0000°; Data Used: II IU IC G CN. Surface waves from 105 sta.*
*DJA **10** 05:16:40, 15°.46S×167°.42E, h230km, Mw5.5/29*

ISC 10 05:16:28.5±0.1, 15°.26S±0°.02×167°.54E±0°.02, h127km, h127km±1.1km: pP-P, n747, σ0s67/497, mb5.4/151, 153C-111D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.85**	**189**	*e*Pn	**Pn**	**05 18 06.3**	**-0.3**
DZM	137nm,0.2s						
DZM				*e*Sn	**Sn**	**05 19 17.6**	**-5.6**
DZM	807nm,0.3s						
DZM	**Mont Dzumac**	**6.85**	**189**	*e*P	**Pn**	**05 18 06.1**	**-0.5**
DZM				*e*S	**Sn**	**05 19 23.3**	**+0.1**
DZM				AMP		05 19 34.9	
DZM	comp=Z,4μm,2.6s						
DZM	**Mont Dzumac**	**6.85**	**189**	*e*Pn	**Pn**	**05 18 06.8**	**+0.2**
DZM	comp=Z,364nm,0.4s						
DZM				*e*Sn	**Sn**	**05 19 24.8**	**+1.7**
BAYA	**Yate Dam**	**6.89**	**185**	*e*P	**Pn**	**05 18 07.7**	**+0.7**
BAYA				*e*S	**Sn**	**05 19 23.6**	**-0.3**
NOUC	**Port Laguerre**	**6.91**	**190**	*e*P	**Pn**	**05 18 07.3**	**+0.1**
NOUC				*e*S	**Sn**	**05 19 24.1**	**-0.3**
NOUC				AMP		05 19 31.1	
NOUC	comp=Z,221nm,4.2s						
NORM	**Noumea**	**7.00**	**188**	*e*P	**Pn**	**05 18 09.2**	**+0.7**
NORM				*e*S	**Sn**	**05 19 25.9**	**-0.8**
ONTRN	**Noumea**	**7.08**	**188**	*e*P	**Pn**	**05 18 10.6**	**+0.9**
ONTRN				*e*S	**Sn**	**05 19 28.3**	**-0.5**
HNR	**Honiara**	**9.41**	**307**	*e*P	**Pn**	**05 18 42.2**	**+1.1**
HNR				pmax	pmax		
	comp=Z,1μm,0.9s						
HNR	**Honiara**	**9.41**	**307**	*e*Pn	**Pn**	**05 18 42.2**	**+1.0**
	comp=Z,1μm,0.9s						
MSVF	**Nonsavu**	**10.38**	**105**	Pn	**Pn**	**05 18 57.6**	**+3.6**
	comp=Z,2μm,1.0s,SNR=7.4						
MSVF	**Nonsavu**	**10.38**	**105**	*e*Pn	**Pn**	**05 18 57.1**	**+3.1**
	comp=Z,430nm,1.0s						
EIDS	**Eidsvold**	**18.41**	**234**	*e*Pn	**Pn**	**05 20 35.9**	**+0.4**
	comp=Z,288nm,0.8s						
AFI	**Afiamalu**	**20.06**	**89**	P	**P**	**05 20 57.6**	**+5.6**
	comp=Z,4.9nm,0.3s,baz=124,slow=4.8,SNR=8.0						
AFI	**Afiamalu**	**20.06**	**89**	P	**P**	**05 20 57.6**	**+5.6**
OUZ	**Omahuta**	**20.61**	**166**	*e*P	**P**	**05 20 58.7**	**+1.1**
	comp=Z,155nm,1.0s						
PMG	**Port Moresby**	**20.74**	**284**	⇑*e*P	**P**	**05 21 00.8**	**+1.5**
PMG				pmax	pmax		
	comp=Z,67nm,1.0s						
PMG	**Port Moresby**	**20.74**	**284**	P	**P**	**05 21 04.3**	**+5.0**
	comp=Z,3μmcomp=Z,100nm,1.1s						
CTA	**Charters Tower**	**20.84**	**254**	P	**P**	**05 21 01.3**	**+1.0**
	comp=Z,62nm,0.6s,baz=79,slow=11,SNR=17						
CTA				PcP	PcP	05 25 04.2	+0.2
	comp=Z,8.8nm,0.8s,baz=117,slow=4.5,SNR=4.4						
CTA	**Charters Tower**	**20.84**	**254**	P	**P**	**05 21 01.3**	**+1.0**
CTA				PcP	PcP	05 25 04.2	+0.2
CTAO	**Charters Tower**	**20.84**	**254**	P	**P**	**05 21 03.3**	**+3.0**
	comp=Z,161nm,1.4s						
ARMA	**Armidale**	**21.00**	**221**	*e*P	**P**	**05 21 02.8**	**+0.9**
ARMA	**Armidale**	**21.00**	**221**	*e*P	**P**	**05 21 02.9**	**+1.0**
	comp=Z,288nm,0.9s						
COEN	**Coen**	**23.61**	**270**	*e*P	**P**	**05 21 28.3**	**+0.1**
	comp=Z,210nm,0.9s,mb5.5						
COEN	**Coen**	**23.61**	**270**	P	**P**	**05 21 27.7**	**-0.4**
	comp=Z,142nm,1.0s,mb5.3						
RIV	**Riverview**	**23.69**	**216**	*e*P	**P**	**05 21 29.5**	**+0.9**
URZ	**Urewera**	**24.42**	**162**	P	**P**	**05 21 35.2**	**-0.1**
	comp=Z,74nm,0.9s,mb5.0,baz=0.3,slow=5.4,SNR=28						
URZ				S	**S**	**05 25 45.6**	**-0.3**
	comp=Z,6.3nm,0.3s,baz=19,slow=24,SNR=11						
URZ				LR	LR	05 29 50.6	
	comp=Z,323nm,18.7s,baz=244,slow=33						
URZ	**Urewera**	**24.42**	**162**	*e*P	**P**	**05 21 35.4**	**+0.2**
	comp=Z,101nm,1.0s,mb5.1						
CNB	**Canberra Magne**	**25.78**	**216**	*e*P	**P**	**05 21 47.9**	**+0.3**
CAN	**Canberra**	**25.99**	**216**	*e*P	**P**	**05 21 49.7**	**+0.2**
CAN				pmax	pmax		
	comp=Z,84nm,1.1s,mb5.1						
CAN	**Canberra**	**25.99**	**216**	*e*P	**P**	**05 21 49.7**	**+0.2**
	comp=Z,84nm,1.1s,mb5.1						
RPZ	**Rata Peaks**	**28.52**	**175**	P	**P**	**05 22 12.5**	**+0.5**
	comp=Z,39nm,0.7s,mb5.2,baz=296,slow=2.8,SNR=19						
RPZ				LR	LR	05 30 33.0	
	comp=Z,433nm,20.3s,baz=352,slow=30						
RPZ	**Rata Peaks**	**28.52**	**175**	*e*P	**P**	**05 22 12.0**	**0.0**
	comp=Z,238nm,1.7s,mb5.5						
STKA	**Stephens Creek**	**28.86**	**230**	*e*P	**P**	**05 22 15.6**	**+0.5**
	comp=Z,204nm,0.9s,mb5.8						
STKA				*e*PCP	PcP	05 25 21.6	0.0
STKA				*e*SCP	ScP	05 28 53.2	+1.8
STKA	**Stephens Creek**	**28.86**	**230**	P	**P**	**05 22 15.7**	**+0.5**
	comp=Z,275nm,0.9s,mb5.9,baz=53,slow=7.8,SNR=169						
STKA				PcP	PcP	05 25 21.7	+0.1
	comp=Z,43nm,0.7s,baz=13,slow=3.7,SNR=13						
STKA				ScP	ScP	05 28 53.4	+2.0
	comp=Z,8.5nm,0.9s,baz=5.5,slow=8.0,SNR=4.7						
STKA				LR	LR	05 32 05.0	
	comp=Z,376nm,21.9s,baz=315,slow=32						
STKA	**Stephens Creek**	**28.86**	**230**	P	**P**	**05 22 15.7**	**+0.5**
STKA				PcP	PcP	05 25 21.7	+0.1
STKA				ScP	ScP	05 28 53.4	+2.0
STKA				LR	LR	05 32 05.0	
TOO	**Toolangi**	**29.59**	**217**	*e*P	**P**	**05 22 22.2**	**+0.7**
ODZ	**Otahua Downs**	**29.81**	**176**	*e*P	**P**	**05 22 22.3**	**-1.0**
	comp=Z,260nm,1.3s,mb5.7						
SMPI	**Sarmi**	**31.34**	**292**	P	**P**	**05 22 38.5**	**+1.2**
	comp=Z,5μmcomp=Z,75nm,1.4s,mb5.2						
RAR	**Rarotonga**	**31.56**	**106**	LR	LR	05 32 16.7	
	comp=Z,377nm,21.9s,baz=260,slow=30						
WRAB	**Tennant Creek**	**31.95**	**257**	P	**P**	**05 22 40.6**	**-1.9**
	comp=Z,507nm,0.6s,mb6.4,SNR=34						
WRAB	**Tennant Creek**	**31.95**	**257**	*e*P	**P**	**05 22 41.0**	**-1.5**
WRAB				*e**PP	pP	05 23 05.2	-4.9
WRAB				*e*		05 25 29.6	
WRAB				pmax	pmax		
	comp=Z,108nm,1.1s,mb5.5						
WRAB	**Tennant Creek**	**31.95**	**257**	*e*P	**P**	**05 22 41.0**	**-1.5**
	comp=Z,108nm,1.1s,mb5.5						
WRAB				*e*pP	pP	05 23 05.2	-4.9
WRAB				*e*PcP	PcP	05 25 29.6	-0.3
WRAB	**Tennant Creek**	**31.95**	**257**	P	**P**	**05 22 41.3**	**-1.2**
	comp=Z,107nm,1.3s,mb5.4						
WRA	**Warramunga Arr**	**31.96**	**257**	P	**P**	**05 22 41.6**	**-1.0**
	comp=Z,64nm,0.8s,mb5.4,baz=84,slow=8.6,SNR=171						
WRA				PcP	PcP	05 25 29.8	-0.2
	comp=Z,18nm,1.0s,baz=84,slow=3.0,SNR=11						
WRA				S	**S**	**05 27 39.9**	**-4.9**
	comp=Z,6.2nm,1.1s,baz=85,slow=16,SNR=5.8						
WRA				ScP	ScP	05 29 02.8	+1.0
	comp=Z,19nm,1.2s,baz=85,slow=3.5,SNR=17						
WRA				PKiKP	PKiKP	05 32 56.3	-2.1
	comp=Z,2.3nm,0.8s,baz=1.3,slow=0.4,SNR=21						
WRA				LR	LR	05 35 16.2	
	comp=Z,717nm,19.0s,baz=100,slow=35						
WRA	**Warramunga Arr**	**31.96**	**257**	P	**P**	**05 22 41.6**	**-1.0**
WRA						05 25 29.8	
WRA				S	**S**	**05 27 39.9**	**-4.9**
WRA	**Warramunga Arr**	**31.96**	**257**	P	**P**	**05 22 41.6**	**-1.0**
WRA				PcP	PcP	05 25 29.8	-0.2
WRA				S	**S**	**05 27 39.9**	**-4.9**
WRA				ScP	ScP	05 29 02.8	+1.0
MOO	**Moorlands**	**32.25**	**209**	*e*P	**P**	**05 22 45.6**	**+0.7**
ASAR	**Alice Springs**	**32.73**	**250**	P	**P**	**05 22 48.4**	**-1.0**
	comp=Z,175nm,0.7s,mb6.0,baz=77,slow=9.1,SNR=978						
ASAR				PcP	PcP	05 25 31.4	-0.6
	comp=Z,6.7nm,0.7s,baz=84,slow=3.2,SNR=6.6						
ASAR				ScP	ScP	05 29 04.8	+0.3
	comp=Z,6.1nm,0.9s,baz=84,slow=3.2,SNR=10						
ASAR				PKiKP	PKiKP	05 32 56.5	-2.2
	comp=Z,2.3nm,1.0s,baz=103,slow=1.4,SNR=7.1						
ASAR	**Alice Springs**	**32.73**	**250**	P	**P**	**05 22 48.4**	**-1.0**
ASAR						05 25 31.5	
ASAR	**Alice Springs**	**32.73**	**250**	P	**P**	**05 22 48.4**	**-1.0**
ASAR				PcP	PcP	05 25 31.4	-0.6
ASAR				ScP	ScP	05 29 04.8	+0.3
KAKA	**Kakadu**	**34.13**	**270**	*e*P	**P**	**05 23 02.0**	**+0.4**
	comp=Z,17nm,0.4s,mb5.2						
KAKA	**Kakadu**	**34.13**	**270**	*e*P	**P**	**05 23 02.2**	**+0.6**
	comp=Z,39nm,0.4s,mb5.6						
KAKA				*e*PcP	PcP	05 25 37.3	+1.1
KAKA	**Kakadu**	**34.13**	**270**	P	**P**	**05 23 03.4**	**+1.8**
	comp=Z,463nmcomp=Z,48nm,0.6s,mb5.5						
TLE	**Tual**	**35.48**	**282**	P	**P**	**05 23 14.5**	**+1.3**
	comp=Z,272nm,1.1s,mb6.0						
KNA	**Kununurra**	**37.33**	**264**	P	**P**	**05 23 28.3**	**-0.6**
	comp=Z,5μmcomp=Z,590nm,1.0s,mb6.5						
SWI	**Sorong**	**38.57**	**288**	P	**P**	**05 23 39.8**	**+0.5**
	comp=Z,167nm,1.0s,mb5.8						
FORT	**Forrest**	**39.26**	**240**	⇑*i*P	**P**	**05 23 44.6**	**-0.2**
	comp=Z,353nm,0.7s,mb6.3						
FORT	**Forrest**	**39.26**	**240**	*e*P	**P**	**05 23 44.5**	**-0.4**
	comp=Z,398nm,0.7s,mb6.3						
FITZ	**Fitzroy Crossi**	**40.18**	**260**	*e*P	**P**	**05 23 51.8**	**-0.8**
	comp=Z,222nm,0.6s,mb6.2						
FITZ	**Fitzroy Crossi**	**40.18**	**260**	LR	LR	05 40 37.3	
	comp=Z,672nm,18.8s,baz=349,slow=36						
FITZ	**Fitzroy Crossi**	**40.18**	**260**	*e*P	**P**	**05 23 52.0**	**-0.7**
	comp=Z,256nm,1.0s,mb6.0						
FITZ	**Fitzroy Crossi**	**40.18**	**260**	P	**P**	**05 23 51.9**	**-0.7**
	comp=Z,3μmcomp=Z,443nm,1.1s,mb6.2						
PPT	**Papeete**	**41.14**	**99**	*e*P	**P**	**05 24 01.4**	**+0.9**
	comp=Z,70nm,1.2s,mb5.4						
PPT	**Papeete**	**41.14**	**99**	*e*P	**P**	**05 24 01.4**	**+0.9**
PPT				pmax	pmax		
	comp=Z,70nm,1.2s						
TBI	**Tubuai**	**41.25**	**108**	*e*S	**S**	**05 30 03.8**	**-2.2**
	comp=Z,207nm,26.2s						
TBI				*e*LR	LR	05 35 41.3	
	comp=Z,606nm,35.0s						
TIAR	**Tiarei**	**41.36**	**99**	*e*P	**P**	**05 24 03.2**	**+0.9**
	comp=Z,113nm,1.0s,mb5.7						
NLAI	**Namlea**	**41.57**	**283**	P	**P**	**05 24 05.3**	**+1.1**
	comp=Z,3μmcomp=Z,216nm,1.2s,mb5.7						
MEH	**Mehetia**	**42.56**	**100**	*e*P	**P**	**05 24 12.9**	**+0.8**
	comp=Z,256nm,1.1s,mb5.8						
PMOR	**Pomariorio Ree**	**42.96**	**96**	*e*P	**P**	**05 24 16.8**	**+1.4**
	comp=Z,430nm,1.1s,mb6.1						
MMRI	**Maumere**	**44.74**	**273**	P	**P**	**05 24 29.2**	**-0.4**
	comp=Z,191nm,1.1s,mb5.8						
SGSI	**Sangihe**	**45.66**	**291**	P	**P**	**05 24 40.5**	**+3.7**
	comp=Z,5μmcomp=Z,208nm,1.4s,mb5.7						
MBWA	**Marble Bar**	**45.66**	**255**	*e*P	**P**	**05 24 36.5**	**-0.3**
	comp=Z,366nm,1.4s,mb5.9						
MBWA	**Marble Bar**	**45.66**	**255**	P	**P**	**05 24 36.5**	**-0.3**
	comp=Z,206nm,0.9s,mb5.8						
DAV	**Davao City (W)**	**47.13**	**295**	LR	LR	05 42 32.4	
	comp=Z,128nm,21.4s,baz=103,slow=33						
BKSI	**Bulukumba**	**47.59**	**277**	P	**P**	**05 24 51.4**	**-0.6**
	comp=Z,575nmcomp=Z,51nm,0.9s,mb5.3						
MRSI	**Marisa**	**47.69**	**285**	P	**P**	**05 24 52.3**	**-0.4**
	comp=Z,1μmcomp=Z,39nm,1.0s,mb5.2						
BNSI	**Bone**	**47.86**	**278**	P	**P**	**05 24 54.6**	**+0.6**
	comp=Z,1μmcomp=Z,140nm,1.1s,mb5.7						
KAPI	**Kappang**	**48.03**	**277**	P	**P**	**05 24 54.8**	**-0.5**
	comp=Z,701nm,1.0s,mb6.5,SNR=11						
KLBR	**Kellerberrin**	**48.08**	**241**	*e*P	**P**	**05 24 54.4**	**-1.0**
	comp=Z,74nm,0.7s,mb5.6						
SPSI	**Sidrap Palu**	**48.31**	**278**	P	**P**	**05 24 56.8**	**-0.7**
	comp=Z,74nm,1.1s,mb5.4						
TTSI	**Tana Toraja**	**48.53**	**280**	P	**P**	**05 25 00.2**	**+1.0**
	comp=Z,36nm,1.0s,mb5.2						
NWAO	**Narrogin (SRO)**	**48.70**	**239**	*e*P	**P**	**05 24 59.3**	**-0.9**
NWAO				pmax	pmax		
	comp=Z,149nm,1.0s						
NWAO	**Narrogin (SRO)**	**48.70**	**239**	*e*P	**P**	**05 24 59.3**	**-0.9**
	comp=Z,149nm,1.0s,mb5.9						
PCI	**Palu**	**49.19**	**282**	P	**P**	**05 25 06.0**	**+1.8**
	comp=Z,2μmcomp=Z,241nm,1.1s,mb6.1						
KHKI	**Kahang-Kahang**	**51.20**	**271**	P	**P**	**05 25 20.7**	**+1.4**
	comp=Z,70nm,1.0s,mb5.6						
SMKI	**Samarinda**	**51.82**	**282**	P	**P**	**05 25 26.8**	**+2.8**
	comp=Z,166nm,1.0s,mb6.0						
KBKI	**Kotabaru**	**51.94**	**278**	P	**P**	**05 25 25.2**	**+0.3**
	comp=Z,98nm,1.0s,mb5.8						
MYLDM	**Lahad Datu**	**52.65**	**289**	P	**P**	**05 25 32.4**	**+2.3**
	comp=Z,1μmcomp=Z,116nm,1.4s,mb5.7						
TSM	**Tawau**	**52.88**	**288**	P	**P**	**05 25 32.6**	**+0.8**
GMJI	**Gumukmas**	**53.30**	**271**	P	**P**	**05 25 39.1**	**+4.2**
	comp=Z,74nm,1.2s,mb5.6						
RKT	**Rikitea**	**54.57**	**108**	*e*S	**S**	**05 33 11.5**	**-2.4**
	comp=Z,306nm,29.8s						
RKT				*e*LR	LR	05 41 49.1	
	comp=Z,479nm,33.8s						
PWJI	**Pagerwojo**	**54.94**	**271**	P	**P**	**05 25 46.6**	**-0.2**
	comp=Z,92nm,1.0s,mb5.8						
SJI	**Sawahan**	**55.04**	**271**	P	**P**	**05 25 47.8**	**+0.3**
	comp=Z,7μmcomp=Z,85nm,1.1s,mb5.7						
KKM	**Kota Kinabalu**	**55.08**	**289**	P	**P**	**05 25 48.6**	**+0.8**
KKM	**Kota Kinabalu**	**55.08**	**289**	*e*P	**P**	**05 25 48.0**	**+0.2**
	comp=Z,189nm,1.2s,mb6.0						
KKM	**Kota Kinabalu**	**55.08**	**289**	P	**P**	**05 25 48.0**	**+0.2**
	comp=Z,1μmcomp=Z,146nm,1.3s,mb5.9						
NGJI	**Ngawi**	**55.42**	**272**	P	Px	05 26 01.9	
	comp=Z,97nm,0.9s,comp=Z,8μm						
PCJI	**Pacitan**	**55.51**	**270**	P	**P**	**05 25 51.0**	**+0.1**
	comp=Z,273nm,1.1s,mb6.2						
UGM	**Wanagama**	**56.20**	**271**	P	**P**	**05 25 56.4**	**+0.6**
	comp=Z,315nm,1.2s,mb6.2						
SMRI	**Semarang**	**56.48**	**272**	P	**P**	**05 25 58.9**	**+1.1**
	comp=Z,157nm,1.0s,mb6.0						
BTM	**Bintulu**	**56.93**	**284**	P	**P**	**05 26 01.9**	**+1.0**
STKI	**Sintang**	**57.42**	**280**	P	**P**	**05 26 05.2**	**+0.8**
	comp=Z,103nm,0.9s,mb5.8						
SBUM	**Sibu**	**57.48**	**283**	P	**P**	**05 26 05.4**	**+0.5**
SBUM	**Sibu**	**57.48**	**283**	P	**P**	**05 26 05.2**	**+0.3**
	comp=Z,479nmcomp=Z,40nm,1.1s,mb5.4						
MJAR	**Matsushiro Arr**	**58.49**	**332**	P	**P**	**05 26 10.8**	**-0.6**
	comp=Z,7.4nm,0.6s,mb4.9,baz=165,slow=7.7,SNR=26						
MJAR				pP	pP	05 26 41.5	-0.3
	comp=Z,7.5nm,0.8s,baz=165,slow=8.5,SNR=3.5						
MJAR				PcP	PcP	05 26 59.9	-0.7
	comp=Z,8.5nm,0.9s,baz=176,slow=4.1,SNR=6.0						
MJAR				LR	LR	05 48 20.1	
	comp=Z,70nm,20.8s,baz=140,slow=33						
MJAR	**Matsushiro

NJ2 LR LR
comp=E,190nm,22.2s
NJ2 LR LR
comp=Z,7µm,14.6s
SDSI Sungai Dareh 66.73 276 P **P 05 27 05.5 -1.2**
comp=Z,30nm,1.3s,mb5.0
KTGM Kuala Trenggan 66.98 283 P **P 05 27 09.1 +0.9**
BKNI Bangkinang 67.46 277 P **P 05 27 11.4 +0.2**
comp=Z,2µmcomp=Z,195nm,1.0s,mb5.9
PDSI Padang 67.67 275 P **P 05 27 11.5 -1.1**
comp=Z,90nm,0.9s,mb5.6
FRIM Kepong 67.75 280 P **P 05 27 13.0 -0.1**
WHN Wuhan 68.49 312 P **P 05 27 09.7 -7.6**
WHN Wuhan 68.49 312 P **P 05 27 17.5 +0.2**
PETK Petropavlovsk- 68.61 354 P **P 05 27 18.2 +0.7**
comp=Z,17nm,0.8s,mb5.0,baz=140,slow=7.5,SNR=32
PETK pP pP 05 27 47.2 -1.6
comp=Z,9.0nm,0.8s,baz=174,slow=4.2,SNR=2.9
PETK LR LR 05 52 50.1
comp=Z,65nm,20.6s,baz=164,slow=32
PETK Petropavlovsk- 68.61 354 P **P 05 27 18.3 +0.8**
PETK *PP pP 05 27 47.2 -1.5
PETK Petropavlovsk- 68.61 354 P **P 05 27 18.2 +0.7**
PETK pP pP 05 27 47.2 -1.6
PETK LR LR 05 52 50.1
IPM Ipoh 68.70 281 P **P 05 27 19.3 +0.3**
IPM Ipoh 68.70 281 P **P 05 27 19.1 +0.1**
comp=Z,84nm,1.2s,mb5.4
UBT Ubonrachathani 68.81 293 ⇓P **P 05 27 20.8 +1.2**
MDJ Mudanjiang 68.87 332 P **P 05 27 19.3 0.0**
MDJ S S 05 36 14.1 +0.9
MDJ ScS ScS 05 37 08.0 +0.3
MDJ pmax pmax
comp=Z,63nm,0.9s,mb5.5
MDJ pmax pmax
comp=Z,60nm,5.2s
MDJ LR LR
comp=N,110nm,36.8s
MDJ LR LR
comp=E,120nm,33.0s
MDJ LR LR
comp=Z,100nm,39.0s
MDJ Mudanjiang 68.87 332 *eP* **P 05 27 19.8 +0.5**
comp=Z,52nm,0.9s,mb5.4
MNSI Mandailing Nat 68.99 277 P **P 05 27 19.9 -0.9**
comp=Z,159nm,0.9s,mb5.9
KULM Kulim 69.31 282 P **P 05 27 23.6 +0.8**
HABR Khabarovsk 69.72 338 *eP* **P 05 27 24.1 -0.4**
HABR PPP 05 31 41.0
HABR S S 05 36 32.8 +10
HABR *SS sS 05 36 52.0 -25
HABR pmax pmax
comp=Z,54nm,1.5s,mb5.2
HABR pmax pmax
comp=N,22nm,1.2s
HABR pmax pmax
comp=E,41nm,1.2s
HABR MLR MLR
comp=Z,115nm,23.0s
SNG Songkhla 69.94 284 P **P 05 27 27.0 +0.4**
comp=Z,140nm,0.8s,mb5.8
MIR Mirnyy 69.95 204⇑*iP* **P 05 27 25.6 -0.2**
MIR pmax pmax
comp=Z,151nm,1.2s,mb5.7
CN2 Changchun 70.23 329 *eP* **P 05 27 30.1 +2.4**
CN2 PcP PcP 05 27 49.0 +0.3
CN2 *eS* S 05 36 31.2 +2.0
CN2 pmax pmax
comp=Z,30nm,0.7s,mb5.2
CN2 pmax pmax
comp=Z,200nm,5.0s
KLR Kul'dur 71.59 336 *eP* **P 05 27 31.8 -4.0**
KLR *e* pP 05 28 04.0 -3.3
KLR pmax pmax
comp=E,57nm,1.6s
KLR pmax pmax
comp=Z,100nm,1.6s,mb5.4
ENH Enshi 71.90 309 *eP* **P 05 27 37.8 -0.3**
comp=Z,64nm,0.9s,mb5.5
GYA Guiyang 72.23 305⇑*iP* **P 05 27 41.0 +0.8**
GYA PcP PcP 05 27 59.4 +1.8
GYA PP PP 05 30 25.9 +3.3
GYA S S 05 36 53.2 +0.2
GYA SKS 05 37 29.6
GYA ScS ScS 05 37 32.3 -2.9
GYA SS SS 05 41 35.5 +1.8
GYA pmax pmax
comp=Z,30nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,160nm,5.9s
GYA LR LR
comp=N,940nm,18.8s
GYA LR LR
comp=E,710nm,19.6s
GYA LR LR
comp=Z,1µm,18.4s
BJT Baijiatuau 72.83 321 *eP* **P 05 27 43.9 +0.5**
BJT pmax pmax
comp=Z,29nm,0.6s
BJT Baijiatuau 72.83 321 *eP* **P 05 27 43.9 +0.5**
comp=Z,29nm,0.6s,mb5.3
BJI Beijing 72.84 321 P **P 05 27 44.0 +0.5**
BJI PP PP 05 30 28.5 +1.0
BJI S S 05 36 56.7 -2.7
BJI pmax pmax
comp=Z,49nm,0.8s,mb5.4
BJI LR LR
comp=N,170nm,27.8s
BJI LR LR
comp=E,120nm,24.5s
BJI LR LR
comp=Z,150nm,37.5s
NST Nakhon Sawan 73.32 292 P **P 05 27 46.5 -0.3**
comp=Z,53nm,0.9s,mb5.4
XAN Xi'an 74.24 313 P **P 05 27 51.9 +0.1**
XAN pmax pmax
comp=Z,13nm,0.9s,mb4.7
XAN pmax pmax
comp=Z,21nm,7.3s
QSPA South Pole Qui 74.77 180 *eP* **P 05 27 54.0 -0.2**
comp=Z,133nm,0.9s,mb5.7
QSPA *e*PcP PcP 05 28 06.8 -0.8
QSPA *e*PP PP 05 30 40.0 -2.6
KMI Kunming 74.81 302 P **P 05 27 56.5 +1.2**
KMI PcP PcP 05 28 09.3 +0.6
KMI PP PP 05 30 47.7 +3.2
KMI S S 05 37 22.6 +0.6
KMI SKS 05 37 48.8
KMI ScS ScS 05 37 54.2 -1.7
KMI pmax pmax
comp=Z,75nm,1.1s,mb5.3
KMI pmax pmax
comp=Z,160nm,5.8s
KMI LR LR
comp=Z,120nm,41.7s
CHRT Chiangrai 75.20 296 ⇑P **P 05 27 58.0 +0.4**
comp=Z,405nm,0.7s,mb6.3
CMAR Chiang Mai Arr 75.40 294 P **P 05 27 59.6 +0.8**
comp=Z,20nm,0.7s,mb5.0,baz=134,slow=5.3,SNR=26
CMAR pP pP 05 28 32.0 +1.5
comp=Z,1.7nm,0.3s,baz=224,slow=56,SNR=2.6
CHG Chiang Mai 75.53 294 ⇑P **P 05 28 00.1 +0.5**
comp=Z,40nm,1.0s,mb5.1
CHTO Chiang Mai 75.53 294 *eP* **P 05 28 00.2 +0.6**
CHTO *e**PP pP 05 28 32.1 +0.8
CHTO pmax pmax
comp=Z,24nm,0.6s,mb5.1
CHTO Chiang Mai 75.53 294 *eP* **P 05 28 00.2 +0.7**
comp=Z,24nm,0.6s,mb5.1
CHTO *ep*P pP 05 28 32.1 +0.8
CHTO Chiang Mai 75.53 294 P **P 05 28 00.1 +0.5**
comp=Z,613nmcomp=Z,57nm,1.4s,mb5.1
HHC Hu-ho-hao-te 76.16 320 *eP* **P 05 28 03.2 +0.6**
HHC PcP PcP 05 28 14.9 +0.7
HHC PP PP 05 30 57.4 +1.8
HHC S S 05 37 36.2 -0.1
HHC SKS 05 37 58.0
HHC ScS ScS 05 38 03.8 -2.3
HHC pmax pmax
comp=Z,33nm,0.9s,mb5.1
HHC pmax pmax
comp=Z,150nm,6.6s
HHC LR LR
comp=N,240nm,16.2s
HHC LR LR
comp=E,230nm,16.8s
HHC LR LR
comp=Z,250nm,16.5s
CD2 Chengdu 76.54 308 P **P 05 28 05.3 +0.3**
CD2 PP PP 05 31 01.3 +2.3
CD2 S S 05 37 40.2 -0.7
CD2 pmax pmax
comp=Z,70nm,1.1s,mb5.3
CD2 pmax pmax
comp=Z,160nm,4.6s
CD2 LR LR
comp=N,210nm,7.1s
CD2 LR LR
comp=Z,140nm,8.3s
HIA Hailar 76.87 330 *eP* **P 05 28 06.6 +0.1**
HIA pmax pmax
comp=Z,58nm,1.2s
HIA Hailar 76.87 330 *eP* **P 05 28 06.6 +0.1**
comp=Z,58nm,1.2s,mb5.2
SEY Seymchan 78.84 353⇑*iP* **P 05 28 16.5 -0.5**
LZH Lanzhou 78.87 312 ⇑P **P 05 28 18.5 +0.7**
LZH PP PP 05 31 20.7 +2.3
LZH *eS* S 05 38 06.0 +0.3
LZH pmax pmax
comp=Z,38nm,1.1s,mb5.1
LZH pmax pmax
comp=Z,130nm,4.1s
LZH LR LR
comp=N,400nm,16.5s
LZH LR LR
comp=Z,700nm,18.7s
OHAK Old Harbor 79.19 20 *eP* **P 05 28 18.4 -0.7**
OHAK *ep*P pP 05 28 53.5 +2.4
KDAK Kodiak Island 79.87 20 LR LR 06 01 09.7
comp=Z,126nm,18.5s,baz=121,slow=34
MAW Mawson 81.49 202 *eP* **P 05 28 31.0 -0.4**
comp=Z,28nm,1.1s,mb5.0
MAW Mawson 81.49 202 P **P 05 28 31.6 +0.2**
comp=Z,34nm,1.0s,mb5.1,baz=102,slow=7.0,SNR=37
MAW LR LR 06 02 27.4
comp=Z,53nm,19.7s,baz=326,slow=34
YAK Yakutsk 82.61 343 *eP* **P 05 28 36.6 -0.5**
YAK *eS* S 05 38 41.9 -1.6
YAK pmax pmax
comp=Z,88nm,0.9s,mb5.6
YAK pmax pmax
comp=N,28nm,1.3s
YAK pmax pmax
comp=E,10.0nm,1.1s
YAK smax
comp=E,24nm,1.6s
YAK Yakutsk 82.61 343 *eP* **P 05 28 37.2 +0.1**
ULN Ulaanbaatar 82.72 324⇑*iP* **P 05 28 38.4 +0.4**
ULN Ulaanbaatar 82.72 324 *eP* **P 05 28 38.4 +0.4**
comp=E,72nm,0.9s,mb5.5
ULN Ulaanbaatar 82.72 324 P **P 05 28 38.2 +0.2**
BILL Biiibino 83.07 360*c iP* **P 05 28 38.6 -0.8**
BILL pmax pmax
comp=Z,17nm,1.2s,mb4.8
BILL Biiibino 83.07 360 *eP* **P 05 28 38.5 -0.9**
comp=Z,5.3nm,0.5s,mb4.6
BILL *ep*P pP 05 29 10.2 -1.5
SONM Songino Array 83.08 324 P **P 05 28 40.1 +0.2**
comp=Z,35nm,0.9s,mb5.2,baz=140,slow=5.6,SNR=180
SONM LR LR 06 01 40.3
comp=Z,97nm,21.8s,baz=342,slow=33
GTA Gaotai 83.22 314 ⇑P **P 05 28 41.7 +0.9**
GTA PP PP 05 31 56.5 +2.3
GTA SKS 05 38 47.7
GTA S S 05 38 49.8 -0.9
GTA SS SS 05 44 21.0 +2.4
GTA pmax pmax
comp=Z,71nm,1.0s,mb5.5
GTA pmax pmax
comp=Z,220nm,3.5s
GTA LR LR
comp=N,230nm,18.1s
GTA LR LR
comp=E,280nm,21.7s
GTA LR LR
comp=Z,98nm,17.5s
RC01 Rabbit Creek A 83.34 19 *eP* **P 05 28 40.1 -0.8**
comp=Z,27nm,1.1s,mb5.0
RC01 *ep*P pP 05 29 13.6 +0.4
PMR Palmer 83.91 19 *eP* **P 05 28 42.1 -1.7**
PMR pmax pmax
comp=Z,18nm,1.1s,mb4.8
PMR MLR MLR
comp=Z,100nm,18.0s
PMR Palmer 83.91 19 *eP* **P 05 28 42.1 -1.7**
comp=Z,18nm,1.1s,mb4.8
PMR LR LR
comp=Z,100nm,18.0s
SHL Shillong 84.05 298⇑*iP* **P 05 28 44.0 -1.4**
SHL *ex* x 05 29 15.0
SHL *eS* S 05 38 58.0 -1.6
SAO San Andreas Ge 84.47 50 *eP* **P 05 28 47.6 +0.3**
SAO *ep*P pP 05 29 23.6 +4.0
TRF Thorofare Moun 84.96 18 *eP* **P 05 28 47.5 -1.6**
comp=Z,24nm,0.9s,mb5.1
TRF *ep*P pP 05 29 22.9 +1.5
PKM Peak Mountain 84.96 52 ⇑P **P 05 28 50.4 +0.6**
comp=Z,5.5nm,0.8s,mb4.5
BMRM Bremner River 84.97 21 *eP* **P 05 28 48.5 -0.7**
comp=Z,5.5nm,0.8s,mb4.5
BMRM *ep*P pP 05 29 23.5 +1.9
BPAW Bear Paw Mtn. 85.26 17 *eP* **P 05 28 48.3 -2.2**
comp=Z,16nm,1.2s,mb4.8
BPAW *ep*P pP 05 29 23.6 +0.7
OHCM Honcut 85.47 47 *eP* **P 05 29 01.4 +9.3**
MCK McKinley 85.57 18 *eP* **P 05 28 51.6 -0.5**
MCK *ep*P pP 05 29 26.9 +2.4
YBH Yreka Blue Hor 85.61 45 LR LR 06 03 13.4
comp=Z,42nm,18.1s,baz=335,slow=33
CMB Columbia Colle 85.75 49 *eP* **P 05 28 53.6 0.0**
CMB *e**PP pP 05 29 25.7 -0.3
ARVC Arvin 85.80 52 ⇓P **P 05 28 54.4 +0.5**
baz=86
HUMO Hull Mountain 85.81 44 *eP* **P 05 28 54.1 +0.3**
comp=Z,17nm,1.3s,mb4.8
HUMO *ep*P pP 05 29 25.2 -1.0
LSA Lhasa 86.06 302 *eP* **P 05 28 56.6 +1.3**
LSA pmax pmax
comp=Z,25nm,0.8s,mb5.2
LSA Lhasa 86.06 302 *eP* **P 05 28 56.5 +1.2**
comp=Z,25nm,0.8s,mb5.2
MWC Mount Wilson 86.06 53 *eP* **P 05 28 55.5 +0.3**
MWC *e**PP pP 05 29 29.3 +1.6
ISA Isabella 86.27 52 ⇑P **P 05 28 56.2 0.0**
baz=86
ISA Isabella 86.27 52 *eP* **P 05 28 56.6 +0.4**
EDW2 Edwards Air Fo 86.35 53 ⇓P **P 05 28 56.7 +0.1**
baz=86,SNR=13
BFSC Mount Baldy Ra 86.38 53 ⇑P **P 05 28 56.3 -0.5**
baz=86,SNR=5.7
MURC Murrieta 86.51 54 ⇓P **P 05 28 57.4 0.0**
baz=87
TLY Talaya 86.58 326 P **P 05 28 57.5 +0.2**
comp=Z,143nm,0.9s,mb5.9,SNR=7.8
TLY Talaya 86.58 326 *eP* **P 05 28 56.4 -0.9**
TLY *e* pP 05 29 30.2 +0.4
TLY *eS* S 05 39 17.1 -6.2
TLY pmax pmax
comp=Z,33nm,1.0s,mb5.2
TLY Talaya 86.58 326 *eP* **P 05 28 57.1 -0.2**
comp=Z,37nm,1.1s,mb5.2
TLY *ep*P pP 05 29 30.5 +0.7
WAKR Walker 86.62 49 *eP* **P 05 28 58.0 +0.2**
WAKR *ep*P pP 05 29 29.0 -1.3
MENT Mentasta 86.64 20 *eP* **P 05 28 56.4 -1.0**
WCN Washoe City 86.69 48 ⇓P **P 05 28 57.9 -0.3**
baz=87
COLA College 86.74 17 *eP* **P 05 28 55.9 -1.9**
COLA *e**PP pP 05 29 30.7 +0.4
COLA pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
COLA College 86.74 17 *eP* **P 05 28 55.9 -1.9**
comp=Z,9.7nm,0.8s,mb4.8
COLA *ep*P pP 05 29 30.7 +0.4
LRMC Laurel Mountai 86.80 52 ⇑P **P 05 28 58.9 +0.1**
baz=87
MTUM Tungsten Hills 86.83 50 *eP* **P 05 28 59.6 +0.7**
MTUM *ep*P pP 05 29 30.7 -0.6
CWC Cottonwood Cre 86.85 51 ⇓P **P 05 28 58.8 -0.2**
baz=87
MONP Monument Peak 86.87 55 ⇓P **P 05 28 59.3 +0.1**
baz=87,SNR=5.9
TIN Tinemaha 86.97 50 ⇓P **P 05 29 00.1 +0.5**
baz=87
PFO Pinyon Flat Ob 87.09 54 ⇑P **P 05 29 00.4 +0.1**
baz=87
PFO Pinyon Flat Ob 87.09 54 *eP* **P 05 29 00.2 -0.1**
PFO *e**PP pP 05 29 31.6 -1.2
PFO pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
PFO Pinyon Flat Ob 87.09 54 *eP* **P 05 29 00.1 -0.1**
comp=Z,10nm,1.1s,mb4.7
PFO *ep*P pP 05 29 31.6 -1.1
PAHR Pah Rah Range 87.11 48 *eP* **P 05 29 00.7 +0.5**
PAHR *ep*P pP 05 29 33.2 +0.4
MPMC Manual Prospec 87.16 52 ⇑P **P 05 29 00.5 0.0**
baz=87,SNR=9.9
H04A Detroit Lake 87.18 42 ⇓P **P 05 28 60.0 -0.5**
baz=87
G04A Mulino 87.21 42 ⇓P **P 05 29 01.0 +0.5**
baz=87
K05A Summer Lake 87.24 44 ⇑P **P 05 29 01.2 +0.4**
baz=87
MOD Modoc 87.32 45 *eP* **P 05 29 01.4 +0.2**
MOD *ep*P pP 05 29 33.3 -0.3
SWSC Sam W. Stewart 87.38 55 ⇑P **P 05 29 01.8 +0.1**
baz=88
GSC Goldstone 87.41 52 ⇑P **P 05 29 01.6 -0.2**
baz=88,SNR=5.9
GSC Goldstone 87.41 52 *eP* **P 05 29 02.0 +0.2**
NVAR Mina Array Bea 87.42 49 P **P 05 29 01.6 0.0**
comp=Z,3.4nm,0.8s,mb4.3,baz=228,slow=8.5,SNR=33
NVAR pP pP 05 29 33.8 -0.4
comp=Z,13nm,1.0s,baz=224,slow=7.7,SNR=7.4
NVAR PKKP PKKPbc 05 46 49.0 -3.3
comp=Z,1.1nm,0.6s,baz=96,slow=3.3,SNR=10
NVAR PKPPKP 05 54 58.7
comp=Z,1.8nm,1.1s,baz=108,slow=4.2,SNR=6.7
NVAR Mina Array Bea 87.42 49 P **P 05 29 01.6 0.0**
NVAR pP pP 05 29 33.8 -0.4
NVAR PKKP PKKPbc 05 46 49.0 -3.3
NVAR P'P' 05 54 58.7
BELC Belle Mtn. Jos 87.58 54 ⇑P **P 05 29 02.7 +0.1**
baz=88,SNR=7.6
GRAC Grapevine Rang 87.59 51 ⇑P **P 05 29 02.6 0.0**
baz=88,SNR=5.6
HEC Hector,Ludlow 87.61 53 ⇑P **P 05 29 02.8 0.0**
baz=88
FURC Furnace Creek, 87.78 51 ⇓P **P 05 29 03.3 -0.1**
baz=88,SNR=12
COLD Coldfoot 87.87 15 *eP* **P 05 29 02.9 -0.3**
comp=Z,4.1nm,0.9s,mb4.5
COLD *ep*P pP 05 29 35.7 0.0
BC3 Big Chuckawall 87.89 54 ⇑P **P 05 29 04.4 +0.3**
baz=88
GNW Green Mountain 87.99 39 *eP* **P 05 29 04.2 0.0**
comp=Z,9.7nm,0.9s,mb4.8
GNW *ep*P pP 05 29 35.8 -0.9
MOY Mondy 88.02 325 *eP* **P 05 29 04.2 0.0**
MOY pmax pmax
comp=Z,40nm,2.2s,mb5.1
SHOC Shoshone 88.02 52 ⇓P **P 05 29 04.9 +0.2**
baz=88
GMRC Granite Mounta 88.11 53 ⇑P **P 05 29 05.0 -0.1**
baz=88,SNR=5.4
TUQ Turquoise Moun 88.13 53 ⇑P **P 05 29 05.2 0.0**
baz=88
TAPN Taplejung 88.16 299 *eP* **P 05 29 04.5 -1.0**
comp=Z,38nm,0.8s,mb5.5
U10A Ash Meadows, A 88.16 52 ⇑P **P 05 29 05.4 +0.2**
baz=88,SNR=8.5
GLA Glamis 88.19 55 ⇓P **P 05 29 05.5 +0.1**
baz=88
SYO Syowa Base 88.28 197⇓*eP* **P 05 29 02.8 -2.5**
SYO Syowa Base 88.28 197⇑*iP*cP PcP 05 29 04.6 -2.3
ODAN Odare 88.28 298 *eP* **P 05 29 05.0 -1.1**
comp=Z,71nm,0.8s,mb5.8
IRM Iron Mountain 88.30 54 ⇑P **P 05 29 06.4 +0.4**
baz=88
S10A Tonopah Range, 88.49 50 ⇓P **P 05 29 06.8 0.0**
baz=89,SNR=17
V11A Goodsprings 88.65 52 ⇓P **P 05 29 07.6 0.0**
baz=89,SNR=7.6
WVOR Wild Horse Val 88.67 45 *eP* **P 05 29 07.5 0.0**
WVOR *e**PP pP 05 29 38.9 -1.2
WVOR pmax pmax
comp=Z,9.0nm,1.2s,mb4.7
WVOR Wild Horse Val 88.67 45 *eP* **P 05 29 07.5 0.0**
comp=Z,9.3nm,1.2s,mb4.7
WVOR *ep*P pP 05 29 38.9 -1.2
I07A Izee 88.71 44 ⇑P **P 05 29 07.6 -0.1**
baz=89,SNR=11
EGAK Eagle 88.72 20 *eP* **P 05 29 05.8 -1.4**
JCW Jim Creek 88.80 39 *eP* **P 05 29 06.4 -1.5**
comp=Z,13nm,1.0s,mb4.9
JCW *ep*P pP 05 29 39.3 -1.3
JCW *es*P sP 05 29 53.1 -0.9
R10A Warm Springs 88.83 50 ⇓P **P 05 29 08.7 +0.3**
baz=89,SNR=12
DAWY Dawson 88.85 21 *eP* **P 05 29 06.8 -1.1**
BMN Battle Mountai 88.92 48 *eP* **P 05 29 09.3 +0.6**
BMN *ep*P pP 05 29 45.6 +4.2
113A Mohawk Valley, 88.94 56 ⇓P **P 05 29 09.2 +0.2**
baz=89
Q10A Clear Creek Ra 88.95 49 ⇓P **P 05 29 08.8 -0.1**
baz=89,SNR=8.0
RAMN Ramite 88.98 298 *eP* **P 05 29 08.1 -1.3**
comp=Z,30nm,0.7s,mb5.4
S11A Rachel 89.02 51 ⇑P **P 05 29 09.5 +0.2**
baz=89
V12A Nelson 89.06 53 ⇑P **P 05 29 09.8 +0.3**
baz=89
J08A Circle Bar Ran 89.12 45 ⇓P **P 05 29 09.4 -0.2**
baz=89,SNR=16
F07A Phinny Hill Vi 89.13 42 ⇑P **P 05 29 09.6 0.0**
baz=89
PDMCI Parker Dam,Lak 89.14 54 ⇓P **P 05 29 10.2 +0.3**
baz=89
RPW Rockport 89.16 39 P **P 05 29 09.0 -0.7**
comp=Z,1.8nm,0.6s,mb4.3
RPW *ep*P pP 05 29 41.1 -1.2
Z13A Yuma Proving G 89.16 55 ⇓P **P 05 29 10.1 0.0**
baz=89,SNR=7.4
P10A Eureka 89.18 49 ⇓P **P 05 29 10.2 +0.3**
baz=89
Y13A Salome 89.22 55 ⇑P **P 05 29 10.5 +0.2**
baz=89
T11A Corn Creek, Al 89.28 51 ⇑P **P 05 29 10.7 +0.2**
baz=89,SNR=14
DLBC Dease Lake 89.28 28 LR LR 06 08 21.2
comp=Z,106nm,19.2s,baz=273,slow=35
R11A Troy Canyon, C 89.38 50 ⇑P **P 05 29 10.6 -0.3**
baz=90,SNR=10
H08A Prairie City 89.43 43 ⇓P **P 05 29 10.7 -0.3**
baz=90,SNR=5.6
E07A Sunnyside 89.44 41 ⇓P **P 05 29 11.2 +0.2**
baz=90
214A Organ Pipe Nat 89.44 57 ⇓P **P 05 29 11.5 +0.1**
baz=90
X13A Yucca 89.47 54 ⇓P **P 05 29 11.4 -0.1**
baz=90,SNR=6.1
T12A Moapa 89.49 52 ⇑P **P 05 29 11.6 +0.1**
baz=90
Q11A Duckwater 89.50 49 ⇑P **P 05 29 11.6 +0.1**
baz=90,SNR=20
G08A Pilot Rock 89.53 43 ⇓P **P 05 29 11.3 -0.2**
baz=90,SNR=13
U12A Valley of Fire 89.53 52 ⇓P **P 05 29 12.1 +0.4**
baz=90
HAWA Hanford 89.58 41 *eP* **P 05 29 12.0 +0.4**
W13A Hualapai Mount 89.59 53 ⇓P **P 05 29 12.1 0.0**
baz=90,SNR=5.7
114A Black Gap (USA 89.64 56 ⇓P **P 05 29 12.5 +0.2**
baz=90
P11A Circle Ranch, 89.67 49 ⇓P **P 05 29 12.7 +0.4**
baz=90
S12A Delamar Landin 89.68 51 ⇓P **P 05 29 12.9 +0.5**
baz=90,SNR=13
V13A Grand Canyon W 89.76 53 ⇑P **P 05 29 12.8 0.0**
baz=90
Z14A Wintersburg 89.78 55 ⇑P **P 05 29 13.2 +0.3**
baz=90
M10A I.L. Ranch, Tu 89.79 47 ⇓P **P 05 29 13.3 +0.5**
baz=90,SNR=11
I09A Lost Marbles R 89.84 44 ⇓P **P 05 29 12.8 -0.2**
baz=90,SNR=11
GUN Gumba 89.88 299 *eP* **P 05 29 12.4 -1.1**

comp=Z,36nm,0.7s,mb5.6
Y14A Wickenburg 89.91 55 ⇑P P 05 29 13.7 +0.1
baz=90
E08A Dider Farm, El 89.92 41 ⇓P P 05 29 13.5 +0.3
baz=90
O11A Cowboy Ranch, 89.94 48 ⇑P P 05 29 13.9 +0.4
baz=90,SNR=19
U13A Pakoon Wash 89.96 52 ⇑P P 05 29 14.0 +0.3
baz=90,SNR=6.8
K10A MacKenzie Ranc 90.01 45 ⇓P P 05 29 13.8 0.0
baz=90,SNR=7.7
L10A Juniper Basin 90.04 46 ⇓P P 05 29 14.1 +0.1
baz=90,SNR=8.1
R12A Pony Springs, 90.10 50 ⇓P P 05 29 14.8 +0.5
baz=90,SNR=8.7
N11A Elko Archery C 90.12 48 ⇓P P 05 29 14.5 +0.1
baz=90
115A Sonoran Desert 90.15 56 ⇓P P 05 29 14.7 +0.1
baz=90
H09A Durkee 90.15 44 ⇑P P 05 29 14.4 0.0
baz=90
X14A Yava 90.17 54 ⇑P P 05 29 15.2 +0.5
baz=90,SNR=8.0
Q12A Willow Creek R 90.17 50 ⇓P P 05 29 15.0 +0.3
baz=90,SNR=15
PKI Pulchoki 90.18 298 *eP* **P 05 29 13.7 -1.2**
comp=Z,27nm,0.7s,mb5.5
PKIN Phulchoki 90.19 298 *eP* **P 05 29 14.1 -0.9**
comp=Z,31nm,0.6s,mb5.6
T13A Saint George 90.20 52 ⇓P P 05 29 15.1 +0.3
baz=90,SNR=14
D08A Wollman Farm, 90.22 41 ⇓P P 05 29 14.7 0.0
baz=90
W14A Seligman 90.25 54 ⇑P P 05 29 15.4 +0.3
baz=90
P12A McGill 90.26 49 ⇑P P 05 29 15.2 +0.1
baz=90
M11A Holland Ranch, 90.29 47 ⇓P P 05 29 15.6 +0.4
baz=90,SNR=11
G09A Cove 90.30 43 ⇑P P 05 29 14.8 -0.2
baz=90,SNR=7.7
J10A Berg Farm, Mel 90.31 45 ⇑P P 05 29 15.3 +0.2
baz=90
KKN Kakani 90.35 299 *eP* **P 05 29 14.3 -1.4**
comp=Z,35nm,0.8s,mb5.6
V14A Boquillas Ranc 90.37 53 ⇓P P 05 29 16.0 +0.3
baz=90,SNR=5.9
S13A Holt Ranch, En 90.42 51 ⇓P P 05 29 16.1 +0.3
baz=90,SNR=8.1
DMN Daman 90.45 298 *eP* **P 05 29 15.4 -0.8**
comp=Z,59nm,0.9s,mb5.7
ELK Elko 90.45 48 *eP* **P 05 29 16.1 +0.2**
ELK *e*PP pP 05 29 47.7 -0.8*
ELK *pmax pmax*
comp=Z,10.0nm,0.9s
ELK Elko 90.45 48 *eP* **P 05 29 16.1 +0.2**
comp=Z,10nm,0.9s,mb5.0
ELK *epP pP 05 29 47.7 -0.9*
Y15A Casa Rosa Ranc 90.45 55 ⇑P P 05 29 16.2 +0.1
baz=90,SNR=6.9
BMO Blue Mountains 90.45 43 *eP* **P 05 29 15.7 -0.1**
B08A Colville Reser 90.46 40 ⇓P P 05 29 15.5 -0.3
baz=91
OD2 Odessa Site #2 90.48 41 *eP* **P 05 29 15.8 -0.1**
OD2 *epP pP 05 29 47.0 -1.5*
E09A Wood Farm, Sta 90.51 42 ⇑P P 05 29 16.1 +0.1
baz=91
116A Eloy 90.52 56 ⇑P P 05 29 16.6 +0.2
baz=91
R13A O'Grain Ranch, 90.53 51 ⇑P P 05 29 16.9 +0.6
baz=91,SNR=5.9
TIXI Tiksi 90.54 349 *eP* **P 05 29 14.0 -1.6**
TIXI *pmax pmax*
comp=Z,23nm,1.5s,mb5.1
TIXI Tiksi 90.54 349 *eP* **P 05 29 14.8 -0.8**
216A Three Points, 90.55 57 ⇓P P 05 29 16.9 +0.3
baz=91
U14A Mt Trumbull 90.56 52 ⇑P P 05 29 16.9 +0.4
baz=91,SNR=12
L11A Cat Creek Ranc 90.57 46 ⇑P P 05 29 16.7 +0.3
baz=91,SNR=18
K11A Parker Ranch, 90.58 46 ⇑P P 05 29 16.4 0.0
baz=91,SNR=11
N12A Clover Valley, 90.63 48 ⇑P P 05 29 16.8 +0.1
baz=91,SNR=9.7
N12A Clover Valley, 90.63 48 *eP* **P 05 29 17.0 +0.3**
comp=Z,9.2nm,0.7s,mb5.0
N12A *epP pP 05 29 47.6 -1.8*
O12A Currie 90.64 48 ⇑P P 05 29 16.8 0.0
baz=91,SNR=10.0
X15A Humboldt 90.69 54 ⇓P P 05 29 17.5 +0.3
baz=91,SNR=7.8
G10A Bishop Farm, J 90.73 43 ⇓P P 05 29 16.6 -0.4
baz=91,SNR=18
Q13A Wheeler Ranch, 90.74 50 ⇓P P 05 29 17.3 0.0
baz=91,SNR=6.1
CCUT Cedar City 90.78 51 *eP* **P 05 29 18.4 +0.9**
CCUT *epP pP 05 29 49.7 -0.5*
ARUT Antelope Range 90.80 51 *eP* **P 05 29 17.6 0.0**
ARUT *e*PP pP 05 29 49.3 -0.9*
ARUT *pmax pmax*
comp=Z,32nm,1.4s,mb5.3
ARUT Antelope Range 90.80 51 *eP* **P 05 29 17.6 +0.1**
comp=Z,32nm,1.4s,mb5.2
ARUT *epP pP 05 29 49.3 -1.0*
T14A Hurricane 90.84 52 ⇓P P 05 29 18.0 +0.3
baz=91
W15A Williams 90.88 54 ⇓P P 05 29 18.5 +0.5
baz=91
M12A Wells 90.90 47 ⇓P P 05 29 17.9 -0.1
baz=91,SNR=7.1
P13A Bates Ranch, G 90.91 49 ⇓P P 05 29 18.1 +0.1
baz=91,SNR=14
F10A Beach Ranch, E 90.91 42 ⇓P P 05 29 17.4 -0.5
baz=91
MFID Camas Ranch 90.94 45 ⇓P P 05 29 17.9 -0.2
baz=91,SNR=7.6
GKN Gorkha 90.96 299 *eP* **P 05 29 16.8 -1.8**
comp=Z,24nm,0.6s,mb5.5
Z16A Peralta Trail, 90.98 56 ⇓P P 05 29 18.3 -0.2
baz=91
I11A Placerville 91.03 45 ⇓P P 05 29 18.3 -0.2
baz=91,SNR=8.2
L12A House Creek Ra 91.08 47 ⇑P P 05 29 19.0 +0.3
baz=91,SNR=13
Y16A Circle Bar Ran 91.10 55 ⇓P P 05 29 19.6 +0.5
baz=91
V15A Kaibab Nationa 91.15 53 ⇑P P 05 29 19.8 +0.6
baz=91
O13A Hicks Ranch, I 91.15 49 ⇓P P 05 29 19.4 +0.3
baz=91
TUC Tucson 91.19 57 *eP* **P 05 29 20.2 +0.7**
TUC *e*PP pP 05 29 51.5 -0.7*
TUC *pmax pmax*
comp=Z,3.0nm,1.1s,mb4.3
TUC Tucson 91.19 57 *eP* **P 05 29 20.2 +0.7**
comp=Z,3.3nm,1.1s,mb4.4
TUC *epP pP 05 29 51.5 -0.7*
N13A Wendover, West 91.23 48 ⇑P P 05 29 19.9 +0.4
baz=91
N13A Wendover, West 91.23 48 *eP* **P 05 29 19.8 +0.4**
comp=Z,34nm,1.0s,mb5.4
N13A *epP pP 05 29 50.9 -1.2*
U15A North Rim 91.24 53 ⇓P P 05 29 20.0 +0.4
baz=91,SNR=8.0
H11A Donnelly 91.26 44 ⇓P P 05 29 19.1 -0.5
baz=91,SNR=7.6
X16A Lo Mia Camp, P 91.29 55 ⇓P P 05 29 20.4 +0.4
baz=91
Q14A Sevier Lake (B 91.30 50 ⇓P P 05 29 20.0 +0.2
baz=91,SNR=11
117A Oracle 91.30 57 ⇑P P 05 29 20.5 +0.4
baz=91
K12A Draper Farm, C 91.32 46 ⇓P P 05 29 19.6 -0.2
baz=91,SNR=7.2
G11A Walters Elk Ra 91.33 43 ⇑P P 05 29 19.2 -0.7
baz=91
J12A Stokes Ranch, 91.39 45 ⇑P P 05 29 20.2 0.0
baz=92,SNR=12
M13A Montello 91.42 48 ⇑P P 05 29 20.3 -0.1
baz=92,SNR=13
M13A Montello 91.42 48 *eP* **P 05 29 20.1 -0.3**
comp=Z,37nm,1.0s,mb5.5
M13A *epP pP 05 29 51.7 -1.4*
I12A Atlanta 91.55 45 ⇑P P 05 29 21.0 +0.1
baz=92
F11A Grangeville 91.58 43 ⇑P P 05 29 19.4 -1.6
baz=92
318A Bisbee 91.58 58 ⇓P P 05 29 21.7 +0.3
baz=92
P14A Drum Mountains 91.64 49 ⇑P P 05 29 21.2 -0.2
baz=92
WUAZ Wupatki 91.68 54 ⇑P P 05 29 22.1 +0.4
baz=92
WUAZ Wupatki 91.68 54 *eP* **P 05 29 21.7 0.0**
comp=Z,4.5nm,0.9s,mb4.7
WUAZ *epP pP 05 29 53.9 -0.5*
218A Dragoon 91.69 57 ⇓P P 05 29 21.9 +0.1
baz=92
X17A Forest Lakes 91.77 55 ⇓P P 05 29 22.5 +0.4
baz=92,SNR=5.1
NEW Newport 91.80 40 *eP* **P 05 29 21.4 -0.5**
NEW *e*PP pP 05 29 52.2 -2.4*
NEW *pmax pmax*
comp=Z,2.0nm,0.8s
NEW Newport 91.80 40 *eP* **P 05 29 21.4 -0.5**
comp=Z,2.3nm,0.8s,mb4.5
NEW *epP pP 05 29 52.2 -2.4*
G12A Big Creek, Yel 91.87 44 ⇓P P 05 29 22.4 0.0
baz=92
K13A Stover Farm, H 91.89 46 ⇑P P 05 29 23.0 +0.5
baz=92
118A Homack Ranch, 91.94 57 ⇓P P 05 29 22.8 -0.2
baz=92
N14A Grayback Hills 91.96 48 ⇑P P 05 29 22.8 0.0
baz=92
HLID Hailey 91.96 45 *eP* **P 05 29 22.8 0.0**
comp=Z,13nm,1.2s,mb5.0
HLID *epP pP 05 29 53.3 -2.3*
MSU Marysvale 91.97 51 *eP* **P 05 29 24.1 +1.1**
MSU *e*PP pP 05 29 55.0 -0.7*
H12A Diamond D Ranc 91.99 44 ⇓P P 05 29 22.8 -0.1
baz=92
DUG Dugway 92.02 49 ⇑P P 05 29 22.8 -0.4
baz=92
DUG Dugway 92.02 49 *eP* **P 05 29 22.9 -0.3**
DUG *e*PP pP 05 29 54.5 -1.4*
DUG *pmax pmax*
comp=Z,2.0nm,0.8s,mb4.4
DUG Dugway 92.02 49 *eP* **P 05 29 22.9 -0.3**
comp=Z,2.2nm,0.8s,mb4.4
DUG *epP pP 05 29 54.5 -1.4*
M14A Sheep Mountain 92.05 48 ⇓P P 05 29 23.1 -0.2
baz=92,SNR=7.4
J13A Cove Ranch, Pi 92.08 46 ⇑P P 05 29 23.7 +0.3
baz=92
F12A Elk City 92.12 43 ⇑P P 05 29 22.7 -0.8
baz=92,SNR=7.4
E12A Beaver Dam Sad 92.14 42 ⇑P P 05 29 23.5 -0.1
baz=92
319A Douglas 92.15 58 ⇑P P 05 29 24.1 +0.2
baz=92
V17A Tonalea, Kykot 92.16 54 ⇓P P 05 29 23.2 -0.7
baz=92
S16A Weppner Ranch, 92.17 52 ⇑P P 05 29 23.5 -0.4
baz=92
C11A Tepee Creek (N 92.19 41 ⇓P P 05 29 23.4 -0.4
baz=92,SNR=7.4
Y18A Canyon Day Jun 92.22 56 ⇓P P 05 29 24.5 +0.2
baz=92
I13A Wildhorse Cree 92.28 45 ⇑P P 05 29 24.3 +0.1
baz=92
L14A Malta 92.29 47 ⇑P P 05 29 24.3 -0.1
baz=92
O15A The Old Anders 92.30 49 ⇑P P 05 29 24.6 +0.2
baz=92
219A White Tail Can 92.34 58 ⇓P P 05 29 24.8 -0.1
baz=92
H13A Challis 92.40 44 ⇑P P 05 29 25.2 +0.4
baz=92
R16A Teasdale 92.42 51 ⇓P P 05 29 25.5 +0.4
baz=92
N15A Stansbury Isla 92.45 48 ⇓P P 05 29 25.2 +0.1
baz=92,SNR=7.4
K14A Jones Ranch, D 92.50 47 ⇑P P 05 29 25.3 0.0
baz=93,SNR=5.1
D12A Red Ives Fores 92.50 42 ⇑P P 05 29 25.0 -0.2
baz=93
X18A Snowflake 92.50 55 ⇑P P 05 29 25.6 0.0
baz=93
119A Ashpeak Ranch, 92.52 57 ⇑P P 05 29 25.8 +0.1
baz=93
HVU Hansel Valley 92.54 47 *eP* **P 05 29 25.5 0.0**
HVU *e*PP pP 05 29 56.1 -2.1*
HVU *pmax pmax*
comp=Z,3.0nm,0.8s,mb4.7
HVU Hansel Valley 92.54 47 *eP* **P 05 29 25.5 0.0**
comp=Z,3.3nm,0.8s,mb4.7
HVU *epP pP 05 29 56.1 -2.2*
T17A Navajo Res., N 92.55 52 ⇑P P 05 29 25.7 -0.1
baz=93
NVL N'lazarevskaya 92.57 188 ⇓*i*P P 05 29 23.6 -1.6
NVL *pmax pmax*
comp=Z,70nm,0.8s,mb6.0
MAIT Maitri 92.57 188 *eP* **P 05 29 24.1 -1.1**
MAIT *e* 05 29 29.5
G13A Cobalt 92.58 44 ⇓P P 05 29 25.5 -0.1
baz=93
SPUT South Promonto 92.63 48 *eP* **P 05 29 26.5 +0.6**
SPUT *epP pP 05 29 59.0 +0.4*
M15A Larsen Ranch, 92.68 48 ⇑P P 05 29 26.0 -0.2
baz=93,SNR=6.9
I14A Mackay 92.74 45 ⇓P P 05 29 26.4 0.0
baz=93
F13A Darby 92.75 43 ⇑P P 05 29 25.8 -0.6
baz=93
V18A Ganado 92.86 54 ⇓P P 05 29 27.4 +0.3
baz=93
L15A Malad City 92.89 47 ⇑P P 05 29 27.3 +0.1
baz=93
220A Playas Peak, P 92.91 58 ⇑P P 05 29 27.4 -0.1
baz=93
O16A Springville 92.98 49 ⇓P P 05 29 27.7 +0.1
baz=93
K15A Arbon 92.99 47 ⇑P P 05 29 27.5 -0.1
baz=93
H14A Leadore 93.02 45 ⇓P P 05 29 27.8 +0.2
baz=93
R17A Hanksville Air 93.04 51 ⇓P P 05 29 27.6 -0.3
baz=93
U18A Rough Rock, Ch 93.11 53 ⇓P P 05 29 28.5 +0.2
baz=93
BSMT Bassoo Peak 93.12 41 *eP* **P 05 29 27.9 -0.1**
comp=Z,2.3nm,0.9s,mb4.5
JLU Jordanelle 93.14 49 *eP* **P 05 29 28.7 +0.4**
JLU *epP pP 05 30 00.6 -0.5*
Z20A Nine Sixteen R 93.19 57 ⇑P P 05 29 28.8 +0.1
baz=93
N16A Rees Ranch, Co 93.23 49 ⇑P P 05 29 28.9 +0.2
baz=93
J15A Blackfoot 93.28 46 ⇓P P 05 29 29.2 +0.3
baz=93
WMQ Urumqi 93.28 314 *eP* **P 05 29 29.0 +0.1**
WMQ *PP PP 05 33 16.6 +2.0*
WMQ *pmax pmax*
comp=Z,51nm,0.8s,mb5.9
WMQ *pmax pmax*
comp=Z,160nm,4.0s
INK Inuvik 93.31 19 LR LR 06 10 43.0
comp=Z,81nm,19.2s,baz=246,slow=35
T18A Mexican Hat 93.31 53 ⇑P P 05 29 29.4 +0.2
baz=93
HWUT Hardware Ranch 93.35 48 *eP* **P 05 29 29.0 -0.2**
HWUT *epP pP 05 30 01.8 -0.2*
S18A Hurst Farm, Bl 93.37 52 ⇑P P 05 29 29.7 +0.2
baz=94
H15A Lima 93.51 45 ⇑P P 05 29 30.0 0.0
baz=94
O17A Robinson Place 93.54 49 ⇑P P 05 29 30.5 +0.3
baz=94,SNR=5.7
L16A Fish Haven 93.57 48 ⇓P P 05 29 30.3 0.0
baz=94
U19A Dine' College, 93.58 54 ⇑P P 05 29 30.6 +0.1
baz=94
R18A Canyonlands Na 93.64 51 ⇓P P 05 29 30.7 0.0
baz=94
DLMT Dillon 93.77 44 *eP* **P 05 29 27.1 -4.0**
comp=Z,6.1nm,0.9s,mb4.9
DLMT *epP pP 05 30 02.4 -1.4*
J16A Bone 93.81 46 ⇓P P 05 29 31.6 +0.2
baz=94
O18A Roosevelt 94.09 50 ⇑P P 05 29 32.7 0.0
baz=94
VNA1 Neumayer--Stat 94.26 181 *eP* **P 05 29 31.5 -1.5**
H16A Russell Place, 94.48 45 ⇑P P 05 29 34.4 0.0
baz=95
C15A Salmond Ranch, 94.50 42 ⇓P P 05 29 34.5 +0.1
baz=95
N18A Larsen Ranch, 94.53 49 ⇓P P 05 29 34.4 -0.3
baz=95
Z22A Elephant Butte 94.54 57 ⇓P P 05 29 34.5 -0.5
baz=95
PV01 Paradox Valley 94.58 52 *eP* **P 05 29 35.6 +0.6**
comp=Z,313nm,0.7s
PV01 *epP pP 05 30 06.4 -1.3*
P19A Cripple Cowboy 94.67 50 ⇑P P 05 29 35.2 -0.2
baz=95
B15A Bradely Ranch, 94.69 41 ⇑P P 05 29 35.1 -0.1
baz=95
K18A Toltan Ranch, 94.73 47 ⇑P P 05 29 35.4 -0.2
baz=95
U21A Nagezi 94.82 54 ⇑P P 05 29 36.3 +0.1
baz=95
J18A Kendall Valley 94.91 47 ⇓P P 05 29 36.4 0.0
baz=95
Q20A Ridgley Place, 95.00 51 ⇓P P 05 29 36.8 -0.1
baz=95
BNM Barren Site 95.05 56 *eP* **P 05 29 36.8 -0.5**
comp=Z,5.4nm,1.0s,mb4.9
BNM *epP pP 05 30 08.5 -1.5*
L19A Farson 95.07 48 ⇓P P 05 29 37.1 -0.1
baz=95
P20A De Beque 95.08 51 ⇑P P 05 29 37.1 -0.2
baz=95
PDAR Pinedale Array 95.11 47 P P 05 29 36.5 -0.8
comp=Z,0.7nm,0.7s,mb4.2,baz=232,slow=1.7,SNR=6.9
PDAR *pP pP 05 30 09.8 -0.3*
comp=Z,1.0nm,0.7s,baz=234,slow=4.8,SNR=4.9
PDAR *PKKP PKKPbc 05 46 30.6 -2.2*
comp=Z,2.4nm,0.8s,baz=78,slow=4.9,SNR=21
PDAR *PKPPKP 05 54 42.9*
comp=Z,0.5nm,0.8s,baz=83,slow=4.6,SNR=4.1
PDAR *LR LR 06 02 42.6*
comp=Z,42nm,21.6s,baz=260,slow=29
O20A White River Ci 95.36 50 ⇓P P 05 29 38.5 0.0
baz=95
ANMO Albuquerque 95.38 55 LR LR 06 03 24.2
comp=Z,58nm,20.4s,baz=86,slow=30
ANMO Albuquerque 95.38 55 *eP* **P 05 29 38.8 0.0**
ANMO *e*PP pP 05 30 09.8 -1.7*
ANMO *pmax pmax*
comp=Z,7.0nm,1.1s
ANMO Albuquerque 95.38 55 *eP* **P 05 29 38.8 +0.1**
comp=Z,7.0nm,1.1s,mb5.0
ANMO *epP pP 05 30 09.8 -1.7*
K19A Absolon Red Bu 95.63 47 ⇑P P 05 29 39.5 -0.2
baz=96
Q22A Crested Butte, 96.03 52 ⇓P P 05 29 41.7 +0.1
baz=96
N21A Black Mountain 96.05 50 ⇓P P 05 29 41.4 -0.2
baz=96
SMCO Snowmass 96.06 51 *eP* **P 05 29 39.1 -2.6**
comp=Z,8.7nm,1.2s,mb5.1
SMCO *epP pP 05 30 13.0 -1.5*
TXAR Lajitas Array 96.30 61 P P 05 29 43.4 +0.3
comp=Z,0.4nm,0.7s,baz=220,slow=5.2,SNR=6.9
TXAR *pP pP 05 30 15.3 -0.5*
comp=Z,1.2nm,0.8s,baz=187,slow=7.6,SNR=4.9
TXAR *PP PP 05 33 37.9 -0.5*
comp=Z,1.6nm,1.1s,baz=221,slow=7.4,SNR=6.4
TXAR *PKKPbc PKKPbc 05 46 24.7 -4.3*
comp=Z,0.8nm,0.9s,baz=105,slow=2.8,SNR=8.2
TXAR *LR LR 06 10 20.0*
comp=Z,54nm,18.4s,baz=355,slow=34
TXAR Lajitas Array 96.30 61 P P 05 29 43.4 +0.3
TXAR **PP pP 05 30 15.3 -0.5*
TXAR *05 33 37.9*
TXAR Lajitas Array 96.30 61 P P 05 29 43.4 +0.3
TXAR *pP pP 05 30 15.3 -0.5*
TXAR *PP PP 05 33 37.9 -0.5*
TXAR *PKKPbc PKKPbc 05 46 24.7 -4.3*
TXAR *LR LR 06 10 20.0*
426A McDonald Obser 96.31 60 ⇑P P 05 29 42.8 -0.3
baz=96
O22A Kremmling 96.62 50 ⇑P P 05 29 44.4 +0.1
baz=97
N22A Wattenberg Ran 96.84 50 ⇓P P 05 29 45.5 +0.2
baz=97
MKAR Makanchi Array 97.77 316 P P 05 29 49.2 -0.1
comp=Z,12nm,0.7s,mb5.5,baz=92,slow=6.0,SNR=92
MKAR *pP pP 05 30 22.6 +0.5*
comp=Z,7.0nm,0.9s,baz=71,slow=11,SNR=4.4
MKAR *PKKP PKKPbc 05 46 21.4 -4.3*
comp=Z,0.4nm,0.6s,baz=262,slow=5.0,SNR=5.1
MKAR Makanchi Array 97.77 316 P P 05 29 49.2 -0.1
MKAR **PP pP 05 30 22.6 +0.6*
MKAR Makanchi Array 97.77 316 P P 05 29 49.2 -0.1
MKAR *pP pP 05 30 22.6 +0.5*
MKAR *PKKP PKKPbc 05 46 21.4 -4.3*
YKA Yellowknife Ar 97.89 27 P P 05 29 48.0 -1.4
comp=Z,6.1nm,0.7s,mb5.2,baz=255,slow=4.7,SNR=32
YKA *pP pP 05 30 22.4 +0.2*
comp=Z,2.5nm,0.8s,baz=253,slow=4.6,SNR=4.4
YKA *PKKP PKKPbc 05 46 21.5 -4.5*
comp=Z,1.4nm,0.8s,baz=59,slow=2.9,SNR=6.7
YKA Yellowknife Ar 97.89 27 P P 05 29 48.0 -1.4
YKA **PP pP 05 30 22.4 +0.2*
YKA Yellowknife Ar 97.89 27 P P 05 29 48.0 -1.5
YKA *pP pP 05 30 22.4 +0.2*
YKA *PKKP PKKPbc 05 46 21.6 -4.5*
ZALV Zalesovo Beam 97.97 324 P P 05 29 49.1 -0.9
comp=Z,15nm,0.7s,mb5.6,baz=114,slow=4.5,SNR=53
ZALV *pP pP 05 30 22.6 -0.1*
comp=Z,7.2nm,0.8s,baz=111,slow=4.6,SNR=4.5
ZALV *LR LR 06 09 56.6*
comp=Z,36nm,20.1s,baz=26,slow=33
ZALV Zalesovo Beam 97.97 324 P P 05 29 49.1 -0.9
ZALV **PP pP 05 30 22.7 -0.1*
KURK Kurchatov 100.97 320 P Pdif 05 30 03.8 +0.2
comp=Z,1.3nm,0.2s,baz=100,slow=4.6,SNR=5.4
BVAR Borovoye Array 106.32 321 Pdiff Pdif 05 30 26.6 -0.7
comp=Z,1.7nm,0.7s,baz=71,slow=6.4,SNR=6.4
BVAR *PKiKP PKiKP 05 34 37.7 -0.2*
comp=Z,1.0nm,0.4s,baz=59,slow=4.0,SNR=6.8
ARU Arti 113.07 325 *i* **PKIKP PKiKP 05 34 49.5 -1.0**
ARU *05 35 39.7*
ARU *SS SS 05 51 33.7 +18*
ARU Arti 113.07 325 *e* **PKPdf PKiKP 05 34 49.8 -0.7**
AKTK Aktyubinsk 114.04 319 PKP PKiKP 05 34 52.0 -0.5
AKTK *PKKPab PKKPab 05 45 38.0 -2.3*
AKTO Aktyubinsk 114.04 319 PKP PKiKP 05 34 52.0 -0.5
comp=Z,3.7nm,0.8s,baz=78,slow=3.6,SNR=10
AKTO *PKKPab PKKPab 05 45 38.0 -2.3*
comp=Z,0.6nm,0.6s,baz=232,slow=4.2,SNR=4.8
LPAZ La Paz 116.73 117 PKP PKPdf 05 34 58.0 -0.8
comp=Z,1.0nm,0.8s,baz=271,slow=4.3,SNR=4.1
LPAZ *PKKPbc PKKPbc 05 45 24.9 -0.6*
comp=Z,1.4nm,0.9s,baz=54,slow=4.2,SNR=6.4
ROSC El Rosal 118.39 93 PKP PKPdf 05 35 01.0 -1.1
comp=Z,3.4nm,0.4s,baz=140,slow=19,SNR=5.6
APA Apatity 119.97 341 *i* **PKIKP PKPdf 05 35 02.8 -0.6**
APA *pmax pmax*
comp=Z,15nm,0.9s
APA *MLR MLR*
comp=Z,100nm,22.0s
KEV Kevo 120.30 345 *e* **PKIKP PKPdf 05 35 02.2 -1.8**
KEV Kevo 120.30 345 *e* **pkp PKPdf 05 35 02.2 -1.8**
comp=Z,13nm,0.7s
SUMG Summit 120.72 9 *i* **P PKPdf 05 35 04.8 0.0**
comp=Z,5.1nm,1.0s
ARCES ARCESS Array B 120.83 345 PKP PKPdf 05 35 04.1 -1.0
comp=Z,26nm,0.7s,baz=98,slow=2.1,SNR=155
ARCES *PKKPbc PKKPbc 05 45 09.1 -3.0*
comp=Z,1.4nm,0.8s,baz=300,slow=2.7,SNR=4.0
ARCES ARCESS Array B 120.83 345 PKP PKPdf 05 35 04.1 -1.0
ARCES *PKKPbc PKKPbc 05 45 09.1 -3.0*
SCHQ Schefferville 122.59 34 PKP PKPdf 05 35 07.8 -1.0
comp=Z,5.4nm,0.8s,baz=262,slow=2.6,SNR=8.7
SCHQ *PKKPab PKKPab 05 45 02.8 +0.1*
comp=Z,6.2nm,0.6s,baz=86,slow=4.3,SNR=17
BOSA Boshof 123.14 220 PKP PKPdf 05 35 10.6 -0.2
comp=Z,15nm,0.9s,baz=69,slow=1.3,SNR=12
KBD Kabd 123.16 295 *e* **P PKPdf 05 35 10.1 -0.7**
KBD *AMb AMB 05 35 12.0*
comp=Z,25nm,0.9s
RDF Al-Radifah 123.28 295 *e* **P PKPdf 05 35 10.7 -0.3**
RDF *AMb AMB 05 35 12.6*
comp=Z,82nm,1.0s
JOF Joensuu 123.47 338 *e* **PKIKP PKPdf 05 35 08.3 -2.0**
JOF Joensuu 123.47 338 *e* **pkp PKPdf 05 35 08.3 -2.0**

comp=Z,27nm,0.8s
NAY Al-Naaiem 123.55 295 *e*P PKPdf 05 35 10.7 -0.9
NAY AMb AMB 05 35 12.4
comp=Z,22nm,1.3s
DGRG David-gareji 123.97 310 P PKPdf 05 35 12.4 +0.5
VRHR Novokhopersk 124.06 322 *e*PKIKP PKPdf 05 35 10.9 -0.9
VRHR pmax pmax
comp=N,7.0nm,0.8s
VRHR pmax pmax
comp=E,6.0nm,0.8s
VRHR pmax pmax
comp=Z,30nm,0.8s
MTA Mtatsminda 124.36 310 P PKPdf 05 35 12.8 +0.1
SCO Scoresbysund 124.49 4 *i* PKIKP PKPdf 05 35 11.1 -1.0
SCO pmax pmax
comp=Z,9.0nm,0.9s
SCO Scoresbysund 124.49 4 *i* P PKPdf 05 35 11.1 -1.0
comp=Z,9.0nm,0.9s
GNI Garni 124.66 308 *e*PKIKP PKPdf 05 35 11.6 -1.7
ZEI Tsey 124.80 312 *e*PKIKP PKPdf 05 35 13.1 -0.4
ZEI pmax pmax
comp=Z,19nm,1.0s
KEH Kehvi 124.87 311 P PKPdf 05 35 13.4 -0.2
ONI Oni 125.16 312 P PKPdf 05 35 14.3 +0.1
OBN Obninsk 125.29 328 *i* PKIKP PKPdf 05 35 12.7 -1.3
OBN *e* 05 37 04.8
OBN pmax pmax
comp=Z,19nm,0.9s
OBN Obninsk 125.29 328 *e*PKP PKPdf 05 35 12.7 -1.3
KIV Kislovodsk 125.40 313 *i* PKIKP PKPdf 05 35 12.5 -2.1
KIV pmax pmax
comp=Z,20nm,1.1s
KIV Kislovodsk 125.40 313⇑*i*P PKPdf 05 35 12.4 -2.2
VSR Storozhevoye 125.47 323 *e*PKIKP PKPdf 05 35 13.3 -1.2
VSR pmax pmax
comp=Z,30nm,0.9s
VSR pmax pmax
comp=N,3.0nm,0.3s
VSR pmax pmax
comp=E,10.0nm,0.9s
VORD Divnogorie 125.48 322 *e*PKIKP PKPdf 05 35 13.8 -0.7
VORD pmax pmax
comp=N,20nm,0.8s
VORD pmax pmax
comp=E,20nm,0.8s
VORD pmax pmax
comp=Z,20nm,0.8s
KAF Kangasniemi 125.78 339 *e*PKIKP PKPdf 05 35 12.8 -2.0
KAF Kangasniemi 125.78 339 *e*pkp PKPdf 05 35 12.8 -2.0
comp=Z,14nm,0.7s,baz=43,slow=2.2
FINES FINESS Array B 126.31 338 PKP PKPdf 05 35 15.1 -0.7
comp=Z,15nm,0.9s,baz=114,slow=4.8,SNR=20
FINES FINESS Array B 126.31 338 PKP PKPdf 05 35 15.1 -0.7
KMBO Kilima Mbogo 128.24 256 PKP PKPdf 05 35 22.1 +1.2
comp=Z,17nm,0.8s,baz=69,slow=2.6,SNR=11
LSZ Lusaka 129.66 235 *e*PKIKP PKPdf 05 35 23.8 +0.2
LSZ *e* 05 37 33.5
NB2 NORSAR Subarra131.20 345 PKPdf PKPdf 05 35 24.4 -0.7
comp=Z,3.5nm,0.7s,baz=31,slow=1.9
NOA NORSAR Array B131.20 345 PKP PKPdf 05 35 25.2 +0.1
comp=Z,9.3nm,0.8s,baz=32,slow=2.0,SNR=27
NOA SKPbc SKPbc 05 38 38.0 -0.4
comp=Z,4.0nm,0.9s,baz=32,slow=2.8,SNR=5.9
NOA NORSAR Array B131.20 345 PKP PKPdf 05 35 25.2 +0.1
NOA SKPbc SKPbc 05 38 38.0 -0.4
AKASG Malin Array Be 131.32 326 PKP PKPdf 05 35 25.0 -0.6
comp=Z,2.0nm,0.6s,baz=56,slow=1.8,SNR=21
AKASG SKPbc SKPbc 05 38 38.3 -0.8
comp=Z,0.3nm,0.3s,baz=47,slow=4.0,SNR=5.1
AKASG Malin Array Be 131.32 326 PKP PKPdf 05 35 25.0 -0.6
AKASG SKPbc SKPbc 05 38 38.3 -0.8
KIEV Kiev 131.33 326 *e*PKIKP PKPdf 05 35 25.4 -0.3
BRTR Keskin Array B 133.05 310 PKP PKPdf 05 35 28.8 -0.5
comp=Z,4.5nm,0.9s,baz=116,slow=2.9,SNR=13
MMAI Mount Meron Ar 133.31 301 PKP PKPdf 05 35 29.9 -0.1
comp=Z,2.8nm,0.5s,baz=72,slow=5.4,SNR=5.9
MMAI SKPab 05 38 48.7
comp=Z,0.7nm,0.3s,baz=71,slow=3.6,SNR=4.6
BURAR Bucovina Array 135.19 324⇑PKIKP PKPdf 05 35 35.6 +2.6
BURAR Bucovina Array 135.19 324⇑*i*P PKPdf 05 35 35.6 +2.6
MLR Muntele Rosu 135.89 321⇑PKIKP PKPdf 05 35 34.3 -0.1
MLR Muntele Rosu 135.89 321⇑*i*P PKPdf 05 35 34.3 -0.1
STHS Stebnicka Huta 136.26 328 *e*PKIKP PKPdf 05 35 35.7 +0.7
STHS Stebnicka Huta 136.26 328 *e*PKP PKPdf 05 35 35.7 +0.7
CRVS Cervenica-Dubn 136.47 328 *e*PKIKP PKPdf 05 35 35.1 -0.3
CRVS Cervenica-Dubn 136.47 328 *e*PKP PKPdf 05 35 35.1 -0.3
NIE Niedzica 136.72 329 *e*PKP PKPdf 05 35 36.5 +0.7
DRGR 137.07 324 PKIKP PKPdf 05 35 36.8 +0.3
DRGR 137.07 324⇓*i*P PKPdf 05 35 36.8 +0.3
BSEG Bad Segeberg 137.49 340 *e*PKPdf PKPdf 05 35 36.9 -0.2
KSP Ksiaz 137.63 333 *e*PKP PKPdf 05 35 37.7 +0.3
KSP Ksiaz 137.63 333 *e*PKP PKPdf 05 35 37.4 0.0
MORC Moravsky Berou 137.82 331⇑PKIKP PKPdf 05 35 37.6 -0.2
MORC Moravsky Berou 137.82 331 *e*PKPdf PKPdf 05 35 37.2 -0.6
MORC Moravsky Berou 137.82 331⇑*i*P PKPdf 05 35 37.6 -0.2
GZR Gura Zlata 137.82 323 PKIKP PKPdf 05 35 37.7 -0.3
GZR Gura Zlata 137.82 323⇓*i*P PKPdf 05 35 37.7 -0.3
PSZ Piszkesteto 137.90 328 PKIKP PKPdf 05 35 38.2 +0.1
PSZ Piszkesteto 137.90 328 *e*PKPdf PKPdf 05 35 38.1 +0.1
PSZ Piszkesteto 137.90 328⇓*i*P PKPdf 05 35 38.2 +0.1
DPC Dobruska-Polom 137.97 333 *e*PKPdf PKPdf 05 35 38.0 -0.1
DPC AMS AMS 06 27 40.0
UPC Upice 137.99 333 *e*PKPdf PKPdf 05 35 38.1 0.0
VYHS Vyhne 138.07 329 *e*PKIKP PKPdf 05 35 37.2 -1.1
VYHS Vyhne 138.07 329 *e*PKP PKPdf 05 35 37.2 -1.1
KOLL Kolacno 138.22 329 *e*PKIKP PKPdf 05 35 38.4 -0.2
KOLL Kolacno 138.22 329 *e*PKP PKPdf 05 35 38.4 -0.2
BZS Buzias 138.37 324 PKIKP PKPdf 05 35 38.8 -0.2
BZS Buzias 138.37 324⇓*i*P PKPdf 05 35 38.8 -0.2
PVCC Panska Ves 138.60 334 *e*PKPdf PKPdf 05 35 39.4 +0.2
PVCC AMS AMS 06 27 00.0
BRG Berggiesshubel 138.60 335 *e*PKPdf PKPdf 05 35 39.0 -0.2
BRG Berggiesshubel 138.60 335 *e*PKP PKPpre 05 35 28.8
comp=Z,3.2nm,0.7s
BRG *e* 05 35 39.1
comp=Z,12nm,1.1s
BUD Budapest 138.63 328⇑*e*PKP PKPdf 05 35 37.3 -2.1
CLL Collm 138.64 336 *i* PKPpre PKPpre 05 35 31.0
comp=Z,7.0nm,1.0s
CLL *i* PKPdf PKPdf 05 35 37.8 -1.5
comp=Z,9.0nm,1.1s
PRU Pruhonice 139.01 333 *e*PKIKP PKPdf 05 35 39.8 -0.2
PRU MLR MLR
comp=Z,100nm,22.0s
PRU Pruhonice 139.01 333 *e*PKP PKPdf 05 35 39.8 -0.2
PRU LR LR
comp=Z,100nm,22.0s
PRU Pruhonice 139.01 333 *e*PKPdf PKPdf 05 35 39.8 -0.2
PRU AMS AMS 06 27 30.0
comp=Z,100nm,22.0s
VTS Vitosha 139.06 319⇑PKIKP PKPdf 05 35 39.8 -0.6
VTS Vitosha 139.06 319⇑*i*P PKPdf 05 35 39.8 -0.6
TREC Trest 139.11 332 *e*PKPdf PKPdf 05 35 39.8 -0.4
TREC AMS AMS 06 27 40.0
ZST Bratislava 139.12 330 *e*PKIKP PKPdf 05 35 39.9 -0.4
ZST Bratislava 139.12 330 *e*PKP PKPdf 05 35 39.9 -0.4
TANN Tannenbergstha 139.56 335 *e*PKP PKPdf 05 35 40.6 -0.4
PKSM Moragy 139.65 326 PKIKP PKPdf 05 35 40.9 -0.4
PKSM Moragy 139.65 326⇓*i*P PKPdf 05 35 40.9 -0.4
NKC Novy Kostel 139.70 335 *e*PKPdf PKPdf 05 35 40.9 -0.4
MOX Moxa 139.71 336 *e*(PKP) PKPpre 05 35 32.2
comp=Z,21nm,1.6s
MOX Moxa 139.71 336 *e*PKPdf PKPdf 05 35 41.3 0.0
KHC Kasperske Hory 140.07 333 *e*PKIKP PKPpre 05 35 36.9
KHC MLR MLR
comp=Z,100nm,31.3s
KHC Kasperske Hory 140.07 333 *e*P PKPpre 05 35 36.9
KHC *e*PKP PKPdf 05 35 41.4 -0.6
KHC LR LR
comp=Z,100nm,31.3s
KHC Kasperske Hory 140.07 333 *e*PKPdf PKPdf 05 35 41.4 -0.6
KHC AMS AMS 06 28 00.0
comp=Z,100nm,31.3s
GRF Grafenberg Arr 140.62 336 *e*PKPdf PKPdf 05 35 43.0 +0.1
PDKS Podkum 141.64 329 *i* PKPdf PKPpre 05 35 38.9
PDKS *i* PKPbc PKPdf 05 35 44.1 -0.8
KBA Koelnbreinsper 141.70 331⇑*i*PKPdf PKPdf 05 35 39.4 -5.6
comp=Z,20nm,1.3s
MEM Membach 141.71 341 PKP PKPdf 05 35 44.7 -0.2
LJU Ljubljana 141.88 329 *e*PKPdf PKPdf 05 35 41.9 -3.4
LJU *e*PKPbc PKPdf 05 35 46.5 +1.2
LJU *e* 05 35 49.3
MYKA Terra Mystica 141.89 331⇑*i*PKPdf PKPdf 05 35 40.5 -4.9
comp=Z,16nm,1.1s

BOJS Bojanci 141.89 328 *i* PKPdf PKPdf 05 35 40.0 -5.4
BOJS *i* PKPbc PKPdf 05 35 45.5 +0.2
VISS Visnje 141.90 329 *i* PKPdf PKPdf 05 35 40.2 -5.2
VISS *i* PKPbc PKPdf 05 35 45.4 0.0
PTCC Patocco-Chiusa 142.19 331 PKP PKPdf 05 35 41.2 -4.7
JAVS Javornik 142.22 329 *i* PKPdf PKPdf 05 35 41.1 -4.8
JAVS *i* PKPbc PKPdf 05 35 46.2 +0.3
JAVS *i* PKPab PKPdf 05 35 54.5 +8.5
ABTA Abfaltersbach 142.33 332⇑*i*PKPdf PKPdf 05 35 41.0 -5.1
comp=Z,20nm,0.8s,SNR=13
WTTA Wattenberg 142.34 333⇑*i*PKPdf PKPdf 05 35 42.0 -4.1
comp=Z,25nm,0.8s
WLF Walferdange 142.48 340 PKP PKPdf 05 35 43.1 -3.2
WLF Walferdange 142.48 340 *e*PKPdf PKPdf 05 35 42.5 -3.8
MOTA Moosalm 142.51 333⇓⇓*i*PKPdf PKPdf 05 35 42.7 -3.8
comp=Z,39nm,0.9s,SNR=13
GIVF Givet 142.52 342 *e*PKP1 PKPdf 05 35 43.0 -3.3
RETA Reutte 142.54 334⇑*i*PKPdf PKPdf 05 35 42.8 -3.7
comp=Z,12nm,0.8s
DOU Dourbes 142.60 342 PKP PKPdf 05 35 42.3 -4.2
BAIF Baives 142.74 342⇑*i*PKP1 PKPdf 05 35 42.9 -3.8
comp=Z,35nm,1.0s
BFO Black Forest 142.84 337 *e*PKIKP PKPdf 05 35 43.5 -3.5
FETA Feichten 142.92 333⇑*i*PKPdf PKPdf 05 35 44.0 -3.1
comp=Z,58nm,0.8s,SNR=38
DAVA Damuels 143.07 334⇓⇓*i*PKPdf PKPdf 05 35 44.0 -3.4
comp=Z,51nm,0.9s
APPI Appiano 143.12 332 PKP PKPdf 05 35 43.7 -3.8
CDF Champ du Feu 143.16 338 *e*PKP1 PKPdf 05 35 43.9 -3.6
comp=Z,44nm,0.7s
CTI Castel Tesino 143.25 332 PKIKP PKPdf 05 35 44.8 -3.0
FELD Feldberg im Sc 143.34 337 PKP PKPdf 05 35 44.8 -3.1
ECH Echery 143.37 338 PKP PKPdf 05 35 44.7 -3.2
ECH Echery 143.37 338 *e*PKPdf PKPdf 05 35 44.6 -3.3
MOF Molkenrain 143.69 338 PKP PKPdf 05 35 45.8 -2.7
MABI Malga Bissina 143.76 333 PKP PKPdf 05 35 46.2 -2.5
THEF They Montfort 143.78 339 PKP PKPdf 05 35 46.3 -2.3
HINF Hinteralfeld 143.82 338 *e*PKP1 PKPdf 05 35 45.9 -2.8
comp=Z,56nm,0.8s
HAU Haudompre 143.84 338 *e*PKP1 PKPdf 05 35 46.2 -2.5
comp=Z,159nm,0.9s
HAU *e*MLR MLR
comp=Z,56nm,23.0s
HAU Haudompre 143.84 338 *e*PKP PKPdf 05 35 46.2 -2.5
HAU LR LR
comp=Z,60nm,23.0s
MEZF Maizieres J'vi 143.85 340 *e*PKP1 PKPdf 05 35 46.6 -2.1
comp=Z,100nm,0.6s
BBS Basel-Blauen 143.87 337 PKIKP PKPdf 05 35 46.6 -2.2
TUE Stuetta 143.94 334 *e*PKPdf PKPdf 05 35 47.5 -1.4
LTRZ Laterza 144.15 321 PKP PKPdf 05 35 47.6 -1.9
LOMF Lomont 144.22 337 PKP PKPdf 05 35 47.9 -1.5
RGNG Rignano Grg 144.24 323 PKP PKPdf 05 35 48.0 -1.6
CING Cingoli 144.43 327 *i* PKPu PKPdf 05 35 49.1 -0.8
ORI Oriolo Calabro 144.70 320 *i* PKIKP PKPdf 05 35 50.0 -0.5
ORI Oriolo Calabro 144.70 320 *i* PKPu PKPdf 05 35 50.0 -0.5
MURB Monte Urbino 144.86 328 *i* PKPu PKPdf 05 35 50.2 -0.5
FNVD Fontana Vidola 144.91 330 *i* PKPu PKPdf 05 35 50.8 +0.1
AQU L'Aquila 145.02 326 *e*PKIKP PKPdf 05 35 51.2 +0.2
AQU L'Aquila 145.02 326⇓*i*P PKPdf 05 35 51.2 +0.2
CSSN Cassano Irpino 145.08 322 PKP PKPdf 05 35 50.3 -0.8
CABF La Chapelle 145.12 337⇑*i*PKP1 PKPbc 05 35 51.2 +0.5
comp=Z,739nm,1.0s
FLN La Foliniere 145.17 346 *e*PKP1 PKPbc 05 35 50.4 -0.4
comp=Z,486nm,0.8s
FLN *e*MLR MLR
comp=Z,43nm,20.5s
FLN La Foliniere 145.17 346 *e*PKP PKPdf 05 35 50.4 -0.6
FLN LR LR
comp=Z,40nm,20.5s
BOB Bobbio (Coli) 145.23 332 *i* PKIKP PKPdf 05 35 51.3 0.0
BOB Bobbio (Coli) 145.23 332 *i* PKPu PKPdf 05 35 51.3 0.0
LDF La Drutiere 145.24 346 *e*PKP1 PKPbc 05 35 50.6 -0.5
comp=Z,227nm,0.8s
VLC Villacollemand 145.26 331 PKP PKPdf 05 35 51.1 -0.2
LOR Lormes 145.32 340⇑*i*PKP1 PKPbc 05 35 51.4 0.0
comp=Z,446nm,1.0s
LOR *e*MLR MLR
comp=Z,52nm,23.0s
LOR Lormes 145.32 340⇑*i*PKP PKPdf 05 35 51.4 +0.1
LOR LR LR
comp=Z,50nm,23.0s
GUAR Guarcino 145.45 325 PKP PKPdf 05 35 51.4 -0.3
GRR Gorron 145.61 346⇑*i*PKP1 PKPbc 05 35 52.1 -0.1
comp=Z,581nm,1.0s
SSF Saint Saulge 145.62 341⇑*i*PKP1 PKPbc 05 35 52.5 +0.2
comp=Z,617nm,1.2s
HYF Humbligny 145.71 342 *e*PKP1 PKPbc 05 35 53.0 +0.4
LPL La Plagne 145.78 336⇑*i*PKP1 PKPbc 05 35 53.4 +0.5
comp=Z,156nm,0.8s
LPG La Plagne 145.79 336⇑*i*PKP1 PKPbc 05 35 53.5 +0.6
comp=Z,128nm,0.6s
SMF Signal de Mont 145.88 340 *e*PKP1 PKPbc 05 35 52.9 -0.2
comp=Z,308nm,1.0s
AVF Avril sur Loir 145.91 340 *e*PKP1 PKPbc 05 35 52.9 -0.3
comp=Z,209nm,0.7s
SGMF Saint Gilles 146.10 348⇑*i*PKP1 PKPbc 05 35 53.4 -0.3
comp=Z,249nm,0.9s
ROSF Rostrenen 146.16 349⇑*i*PKP1 PKPbc 05 35 53.5 -0.4
comp=Z,125nm,0.8s
BNI Bardonecchia 146.19 335 *e*PKP2 PKPbc 05 35 53.0 -1.1
BGF Bois d'Agland 146.28 341⇑*i*PKP1 PKPbc 05 35 54.2 -0.1
comp=Z,240nm,0.7s
GDM Grand'Maison 146.28 336 PKP PKPbc 05 35 54.9 +0.5
BST Brest 146.33 350 PKP PKPdf 05 35 54.5 +1.5
DOI San Damiano 146.40 334 PKIKP PKPdf 05 35 52.6 -0.7
MBDF Montbardon 146.41 335⇑*i*PKP1 PKPbc 05 35 54.5 -0.3
comp=Z,73nm,0.6s
QUIF Quistinic 146.54 349⇑*i*PKP1 PKPbc 05 35 54.4 -0.6
comp=Z,67nm,0.7s
SURF Saint Ours 146.60 335 PKP PKPdf 05 35 53.6 0.0
ORIF Oris-en-Rattie 146.61 336⇑*i*PKP1 PKPbc 05 35 55.4 +0.1
comp=Z,165nm,0.9s
ORIF *e*MLR MLR
comp=Z,50nm,21.0s
SAOF Saorge 146.68 333 PKP PKPdf 05 35 55.2 +1.4
TCF Toulx Ste Croi 146.72 341⇑*i*PKP1 PKPbc 05 35 55.4 -0.2
comp=Z,216nm,1.0s
AUTN L'Aution 146.73 333 PKP PKPdf 05 35 55.4 +1.6
TOUF Mont Tournerai 146.79 334 PKP PKPdf 05 35 54.9 +1.0
SSB Saint Sauveur 146.81 338 *e*PKPdf PKPdf 05 35 53.6 -0.3
SSB *e* 05 35 56.5
SBF Sospel 146.83 333 *e*PKP1 PKPbc 05 35 55.4 -0.6
comp=Z,380nm,0.9s
LUCF Luceram 146.85 333 PKP PKPdf 05 35 55.6 +1.6
MVIF Mont Vial 146.93 334 PKP PKPdf 05 35 55.8 +1.6
REVF Revere 146.96 333 PKP PKPbc 05 35 56.1 -0.3
MFF Saint Martin d 147.10 344⇑*i*PKP1 PKPbc 05 35 56.5 -0.2
comp=Z,351nm,0.8s
VIVF Saint-Julien-l 147.13 337⇑*i*PKP1 PKPbc 05 35 56.8 0.0
comp=Z,77nm,0.9s
CALN Calern 147.16 334 PKP PKPbc 05 35 56.8 -0.1
FRF La Foret Royal 147.42 334⇑*i*PKP1 PKPbc 05 35 57.1 -0.5
comp=Z,166nm,1.0s
SMRF Simiane la Rot 147.52 335⇑*i*PKP1 PKPbc 05 35 58.0 +0.1
comp=Z,138nm,1.1s
LMR La Mourre 147.66 334⇑*i*PKP1 PKPbc 05 35 57.8 -0.5
comp=Z,195nm,1.0s
RJF Les Rejaudoux 147.81 341⇑*i*PKP1 PKPbc 05 35 58.6 0.0
comp=Z,265nm,1.2s
RJF *e*MLR MLR
comp=Z,52nm,20.8s
RJF Les Rejaudoux 147.81 341⇑*i*PKP PKPbc 05 35 58.6 0.0
RJF LR LR
comp=Z,50nm,20.8s
CAF Calviac 147.98 340⇑*i*PKP1 PKPbc 05 35 59.2 +0.1
comp=Z,110nm,1.0s
LASF Ste Croix 148.10 337⇑*i*PKP1 PKPbc 05 35 59.5 +0.1
comp=Z,170nm,1.0s
LFF La Frestale 148.38 342⇑*i*PKP1 PKPbc 05 36 00.1 0.0
comp=Z,195nm,0.9s
VSL Villasalto 149.20 326 *e*PKPdf PKPdf 05 35 57.7 -0.3
VSL *e*PKPbc PKPbc 05 36 02.4 0.0
VSL *e*PKPab PKPab 05 36 07.4 +0.3
MTLF Montolieu 149.33 339⇑*i*PKP1 PKPbc 05 36 02.5 -0.1
comp=Z,122nm,1.0s
LRDF La Roque-de-Fa 149.56 338 PKP PKPbc 05 36 03.0 -0.2
FILF Fillols 149.88 338 PKP PKPbc 05 36 03.8 -0.2
CARF Carcanieres 149.91 338 PKP PKPbc 05 36 03.8 -0.2
MLS Moulis 150.05 340 PKP PKPbc 05 36 02.5 -1.9
SALF Salau 150.19 340 PKP PKPbc 05 36 04.0 -0.7
VALF Valcebollere 150.22 338 PKP PKPbc 05 36 04.8 0.0
EPF Esparros 150.23 341 *e*PKP1 PKPbc 05 36 04.4 -0.4
comp=Z,97nm,1.1s
LABF Labassere 150.30 341 PKP PKPbc 05 36 04.9 0.0

REYF Montagne du Re 150.42 342 PKP PKPbc 05 36 05.2 0.0
RESF Ens 150.43 341 PKP PKPbc 05 36 06.2 +0.9
VIEF Viey 150.46 341 PKP PKPbc 05 36 06.0 +0.7
SJPF Ste Jean 150.62 343 *e*PKP1 PKPbc 05 36 05.7 0.0
comp=Z,95nm,1.1s
LARF Larrau 150.62 343 PKP PKPbc 05 36 05.9 +0.2
ETSF Etsaut 150.62 342 *e*PKP1 PKPbc 05 36 06.1 +0.4
comp=Z,76nm,0.7s
KEST Kesra 151.78 320 PKP PKPdf 05 36 01.6 -0.6
comp=Z,2.9nm,0.9s,baz=101,slow=1.0,SNR=8.3
KEST PKPbc PKPbc 05 36 08.8 +0.2
comp=Z,14nm,0.8s,baz=281,slow=0.6,SNR=31
KEST PKPab PKPab 05 36 18.5 +0.5
comp=Z,12nm,0.8s,baz=330,slow=2.5,SNR=9.6
ABSA Djebel Ababsia 152.53 323 P PKPbc 05 36 10.1 -0.2
CKFL Kef-Lekhel 152.88 324 P PKPbc 05 36 11.2 +0.1
DFRA Djebel Bou Aff 153.24 326 P PKPbc 05 36 09.7 -2.2
SET Setif 153.75 326 P PKPdf 05 36 06.0 +1.0
PVRL Vila Real 153.75 352 *e*PKPbc PKPbc 05 36 13.0 +0.2
PVRL Vila Real 153.75 352 *e*PKPab PKPab 05 36 27.0 +1.0
MVO Moncorvo 153.76 351 *e*PKPdf PKPdf 05 36 04.7 -0.2
MVO Moncorvo 153.76 351 *e*PKPbc PKPbc 05 36 13.1 +0.3
MVO Moncorvo 153.76 351 *e*PKPab PKPab 05 36 26.2 +0.5
PVIS Viseu 154.33 352 *e*PKPbc PKPbc 05 36 14.2 +0.1
PVIS Viseu 154.33 352 *e*PKPab PKPab 05 36 29.4 +0.9
ESDC Sonseca Array 154.56 345 PKP PKPdf 05 36 05.8 -0.3
comp=Z,0.7nm,0.4s,baz=1.8,slow=3.2,SNR=7.4
ESDC PKPbc PKPbc 05 36 13.7 -0.9
comp=Z,1.9nm,0.7s,baz=14,slow=3.6,SNR=7.4
ESDC PKPab PKPab 05 36 29.8 +0.3
comp=Z,5.3nm,0.7s,baz=18,slow=4.5,SNR=11
ESDC PP PP 05 40 01.2 -3.2
comp=Z,2.7nm,0.9s,baz=23,slow=6.5,SNR=4.4
ESDC Sonseca Array 154.56 345 PKP PKPdf 05 36 05.8 -0.3
ESDC PKPbc PKPbc 05 36 13.7 -0.9
ESDC PKPab PKPab 05 36 29.8 +0.3
ESDC PP PP 05 40 01.2 -3.2
MTE Manteigas 154.59 351 *e*PKPdf PKPdf 05 36 05.6 -0.5
MTE Manteigas 154.59 351 *e*PKPbc PKPbc 05 36 14.8 +0.2
MTE Manteigas 154.59 351 *e*PKPab PKPab 05 36 30.3 +0.7
MTE Manteigas 154.59 351 *e*PKPdf PKPdf 05 36 05.8 -0.3
MTE *e*PKPbc PKPbc 05 36 14.3 -0.4
MTE *e*PKPab PKPab 05 36 29.9 +0.4
PCBR Castelo Branco 155.13 351 *e*PKPdf PKPdf 05 36 06.7 -0.1
PCBR Castelo Branco 155.13 351 *e*PKPbc PKPdf 05 36 15.8 +9.0
PCBR Castelo Branco 155.13 351 *e*PKPab PKPab 05 36 32.3 +0.4
PMRV Marv??o 155.52 350 *e*PKPdf PKPdf 05 36 07.1 -0.3
PMRV Marv??o 155.52 350 *e*PKPab PKPab 05 36 33.8 +0.2
PESTR Estremoz 156.10 351 *e*PKPab PKPab 05 36 36.4 +0.3
EVO Evora 156.49 351⇑*i*PKIKP PKPdf 05 36 08.2 -0.5
comp=Z,35nm,1.1s
EVO *e*MLR MLR
comp=Z,67nm,21.5s
EVO Evora 156.49 351 *e*PKPdf PKPdf 05 36 08.3 -0.4
EVO Evora 156.49 351 *e*PKPab PKPab 05 36 38.5 +0.7
PBAR Barrancos 156.68 349 *e*PKPdf PKPdf 05 36 08.3 -0.6
PBAR Barrancos 156.68 349 *e*PKPab PKPab 05 36 39.0 +0.4
PBEJ Beja 156.96 351 *e*PKPdf PKPdf 05 36 09.5 +0.2
PBEJ Beja 156.96 351 *e*PKPab PKPab 05 36 40.9 +1.1
PCVE Castro Verde 157.38 351 *e*PKPab PKPab 05 36 42.5 +0.9
PVAQ Vaqueiros 157.55 350 *e*PKPab PKPab 05 36 43.0 +0.6
PTEO Sao Teotonio 157.56 352 *e*PKPab PKPab 05 36 43.6 +1.2
PBDV Barranco-do-Ve 157.74 350 *e*PKPab PKPab 05 36 44.5 +1.3
TAM Tamanrasset 161.43 297 *e*PKIKP PKPdf 05 36 15.3 +0.4
DBIC Dimbokro 168.66 222 PKP PKPdf 05 36 20.3 -1.1
comp=Z,10nm,0.9s,baz=153,slow=2.2,SNR=4.5
DBIC PKPab PKPab 05 37 32.0 +0.2
comp=Z,14nm,0.9s,baz=142,slow=5.6,SNR=6.4

NNC 10 05:35:28.7±11.0, 36°61N×70°45E, h113km±229km, mb3.3, mpv3.9, 4C-1D, Error ellipse: s-maj=88.9km s-min=64.8km az=4.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.48**	**0**	⇑P	Pn	05 37 03.5	+1.9
	5.8nm,0.5s,baz=187,slow=13,SNR=53						
KK31				⇑S	Sn	05 38 15.9	+1.9
	3.5nm,0.4s,baz=183,slow=20,SNR=10						
TKM2	**Tokmak 2**	**7.44**	**31**	⇑P	Pn	05 37 11.9	-2.7
	2.3nm,0.5s						
TKM2				⇑S	Sn	05 38 37.3	+0.1
	6.1nm,0.8s						
AB31	**Akbulak array**	**14.77**	**332**	P	Pn	05 38 53.8	+2.0
	1.1nm,0.5s,baz=147,slow=11,SNR=34						
AB31				⇓S	Sn	05 41 31.6	-3.2
	0.6nm,0.5s,baz=159,slow=22,SNR=6.0						

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*IDC **10** 05:49:43.5±1.6, 6°93S×154°52E, h0km, mb3.9/7, mb1 4.1/7, mb1mx3.9/17, mbtmp3.9/7, Error ellipse: s-maj=52.1km s-min=24.8km az=120.0*
*NEIC **10** 05:49:45.7±1.1, 6°89S×154°27E, h10km, mb4.3/1, Error ellipse: s-maj=35.0km s-min=17.5km az=131.0*
*ISCJB **10** 05:49:47.2±1.2, 7°0S±0°2×154°4E±0°2, h33km, mb3.8/8, Error ellipse: s-maj=39.9km s-min=18.4km az=32.4*
ISC 10 05:49:49.2±1.2, 7°0S±0°2×154°4E±0°2, h35km, n10, σ0873/10, mb3.8/8, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.57**	**251**	*e*Pn	**Pn**	**05 51 32.7**	**-4.4**
WRAB	**Tennant Creek**	**23.33**	**235**	*e*P	**P**	**05 54 53.1**	**-1.5**
	9.3nm,1.1s,mb4.1						
WRA	**Warramunga Arr**	**23.34**	**235**	P	**P**	**05 54 55.2**	**+0.4**
	2.1nm,0.9s,mb3.6,baz=57,slow=10.0,SNR=9.3						
WRA	**Warramunga Arr**	**23.34**	**235**	P	**P**	**05 54 55.2**	**+0.4**
ASAR	**Alice Springs**	**25.75**	**228**	P	**P**	**05 55 17.6**	**+0.9**
	0.7nm,0.8s,mb3.3,baz=61,slow=8.8,SNR=4.6						
STKA	**Stephens Creek**	**27.50**	**204**	P	**P**	**05 55 32.7**	**+0.3**
	2.6nm,0.8s,mb3.9,baz=18,slow=13,SNR=3.5						
FITZ	**Fitzroy Crossi**	**30.13**	**246**	P	**P**	**05 55 55.7**	**-0.2**
	2.0nm,0.8s,mb3.9,baz=38,slow=12,SNR=3.4						
SONM	**Songino Array**	**69.01**	**328**	P	**P**	**06 00 51.2**	**+0.1**
	0.3nm,0.4s,mb3.6,baz=156,slow=34,SNR=3.0						
MKAR	**Makanchi Array**	**83.01**	**319**	P	**P**	**06 02 11.5**	**+0.6**
	0.8nm,0.7s,mb3.8,baz=102,slow=5.3,SNR=6.8						
NVAR	**Mina Array Bea**	**92.17**	**52**	P	**P**	**06 02 54.9**	**-0.6**
	0.6nm,0.8s,mb4.0,baz=249,slow=6.8,SNR=4.4						

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*NEIC **10** 05:49:57.9, 32°32N×115°32W, h5km, ML3.4(ECX), ML3.2(PAS), After ECX.*
ECX 10 05:49:57.9±0.6, 32°32N×115°32W, h5km, MD3.2, ML3.4, 3C-5D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMX	**El Mayor**	**0.34**	**169**⇓⇓	*e*P	Pg	05 50 03.6	-0.8
EMX				*e*S	Sg	05 50 08.6	-0.2
EMX			⇓⇓	*e*		05 50 09.0	
	comp=N,4μm,0.4s						
SGL	**Mount Signal**	**0.48**	**314**⇓⇓	*i*P	Pg	05 50 06.2	-0.9
COA	**Coachella**	**0.57**	**17**⇓⇓	*i*P	Pg	05 50 08.2	-0.6
YUH	**Yuha Desert**	**0.61**	**303**⇓⇓	*i*P	Pg	05 50 08.3	-1.3
COK	**Cook Ranch**	**0.63**	**327**	*e*P	Pg	05 50 09.0	-1.1
RDX	**Rancho Dawling**	**0.66**	**234**⇑	*e*P	Pg	05 50 09.4	-1.2
RDX				*e*S	Sg	05 50 18.4	-0.7
RDX			⇑	*e*		05 50 20.6	
	comp=N,958nm,0.5s						
YMD	**Yuma Desert**	**0.69**	**70**⇑	*i*P	Pg	05 50 09.8	-1.4
RMX	**La Rumorosa**	**0.70**	**294**	*e*P	Pg	05 50 10.0	-1.4
GLA	**Glamis**	**0.84**	**29**	*e*Pg	Pg	05 50 11.8	-2.2
GLA				*e*Sg	Sg	05 50 24.1	-0.9
ECBX	**El Chinero**	**0.87**	**165**	*e*P	Pg	05 50 13.4	-1.2
ECBX				*e*S	Sg	05 50 25.1	-0.9
CBX	**Cerro Bola**	**1.14**

MWC eSn Sn 05 51 29.4 +7.5
GSC Goldstone 3.22 338 ePn Pn 05 50 51.4 +2.2
TUC Tucson 3.84 89 Pn Pn 05 50 52.1 -5.5
WUAZ Wupatki 4.57 45 ePn Pn 05 51 07.1 -0.6
CCUT Cedar City 5.46 17 ePn Pn 05 51 18.0 -1.9
comp=N,2.9nm,0.9s

*NOU **10** 05:53:08.1±0.6,20.°57S×168.°73E, h10km, MD2.7, ML4.0*
*IDC **10** 05:53:13.8±2.0,20.°20S×167.°64E, h0km, mb4.1/5, mb1 4.2/5, mb1mx4.0/15, mbtmp4.1/5, Error ellipse: s-maj=45.1km s-min=39.6km az=50.0*
ISC 10 05:53:11.8±1.8,21.°1S±0.°3×168.°8E±0.°3, h35km, n9, σ0§97/11, mb4.0/4, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.05 239**		*eP*	**Pn**	**05 53 42.8**	**-1.0**
BAYA				*eS*	**Sn**	**05 54 09.2**	**+1.0**
LASL	**Noumea**	**2.37 241**		*eP*	**Pn**	**05 53 47.5**	**-0.7**
DZM	**Mont Dzumac**	**2.38 245**		*eP*	**Pn**	**05 53 47.1**	**-1.2**
DZM				*eS*	**Sn**	**05 54 16.2**	**-0.1**
DZM				AMP		05 54 22.2	
	comp=Z,4μm,0.0s						
NOUC	**Port Laguerre**	**2.51 246**		*eP*	**Pn**	**05 53 49.8**	**-0.3**
NOUC				*eS*	**Sn**	**05 54 20.1**	**+0.6**
NOUC				AMP		05 54 20.5	
	comp=Z,408nm,0.0s						
STKA	**Stephens Creek**	**26.52 240**		P	**P**	**05 58 48.0**	**+1.9**
	comp=Z,4.4nm,1.0s,mb4.0,baz=80,slow=12,SNR=4.9						
WRA	**Warramunga Arr**	**32.24 266**		P	**P**	**05 59 35.9**	**-1.2**
	comp=Z,0.4nm,0.6s,mb3.5,baz=94,slow=8.1,SNR=4.6						
ASAR	**Alice Springs**	**32.30 259**		P	**P**	**05 59 37.5**	**0.0**
	comp=Z,3.3nm,0.8s,mb4.2,baz=82,slow=9.0,SNR=20						
QSPA	**South Pole Qui**	**68.97 180**		P	pP	06 04 26.5	+2.7
	comp=Z,2.0nm,1.0s,baz=335,slow=2.7,SNR=5.7						
SONM	**Songino Array**	**88.44 323**		P	**P**	**06 06 01.4**	**+1.2**
	comp=Z,1.4nm,0.7s,mb4.3,baz=143,slow=5.1,SNR=8.3						

*IDC **10** 05:56:38.1±1.2, 12.°58N×71.°04W, h0km, mb3.6/6, mb1 4.0/8, mb1mx3.8/22, mbtmp3.9/8, ML3.3/1, MS3.2/4, Ms1 3.2/4, ms1mx2.8/26, Error ellipse: s-maj=33.8km s-min=19.9km az=66.0*
*NEIC **10** 05:56:41.7±0.7, 12.°46N×71.°55W, h10km, mb4.1/1, Error ellipse: s-maj=14.0km s-min=10.1km az=87.0*
*FUNV **10** 05:56:43.7, 12.°55N×71.°83W, h20km, MW4.1*
ISC 10 05:56:45.3±1.2, 12.°48N±0.°03×71.°74W±0.°03, h33km±10km, n41, σ1§21/56, mb3.6/7, MS3.3/2, 2C, Near north coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMOV	**Isla Los Monje**	**0.83**	**98**	*eP*	**Pn**	**05 57 00.9**	**+0.3**
IMOV				*eS*	**Sb**	**05 57 13.0**	**+0.8**
MONV	**Montecano**	**1.81**	**106⇑**	*eP*	**Pn**	**05 57 15.3**	**+1.2**
MONV				*eS*	**Sn**	**05 57 38.4**	**+2.5**
DABV	**Dabajuro**	**1.89**	**145**	*eP*	**Pn**	**05 57 15.8**	**+0.5**
DABV				*eS*	**Sn**	**05 57 40.2**	**+2.3**
VIRV	**Villa del Rosa**	**2.06**	**198⇑**	*iP*	**Pn**	**05 57 16.7**	**-1.0**
VIRV				*eS*	**Sn**	**05 57 41.6**	**-0.7**
QARV	**Quebrada Arrib**	**2.55**	**152**	*eP*	**Pn**	**05 57 25.1**	**+0.7**
QARV				*eS*	**Sn**	**05 57 55.2**	**+0.9**
SIQV	**Siquisique**	**2.62**	**134**	*eP*	**Pn**	**05 57 26.7**	**+1.3**
SIQV				*eS*	**Sn**	**05 57 56.9**	**+0.8**
CURV	**Curarigua**	**3.01**	**144**	*eP*	**Pn**	**05 57 31.5**	**+0.8**
JACV	**Jacura**	**3.17**	**115**	*eP*	**Pn**	**05 57 33.0**	**+0.2**
JACV				*eS*	**Sn**	**05 58 08.8**	**-0.7**
TEPV	**Terepaima**	**3.54**	**135**	*eP*	**Pn**	**05 57 38.6**	**+0.7**
TEPV				*eS*	**Sn**	**05 58 17.9**	**-0.6**
VIGV	**El Vigia**	**3.63**	**174**	*eP*	**Pn**	**05 57 38.5**	**-0.7**
VIGV				*eS*	**Sn**	**05 58 19.8**	**-1.2**
SANV	**Sanarito**	**3.67**	**144**	*eP*	**Pn**	**05 57 40.5**	**+0.8**
SANV				*eS*	**Sn**	**05 58 21.6**	**-0.2**
SDV	**Santo Domingo**	**3.73**	**163**	*ePn*	**Pn**	**05 57 39.7**	**-0.9**
SDV				*eSn*	**Sn**	**05 58 23.0**	**-0.4**
MAPV	**Macapo**	**4.16**	**129**	*eP*	**Pn**	**05 57 46.7**	**+0.2**
SOCV	**Socops**	**4.25**	**168**	*eP*	**Pn**	**05 57 47.8**	**-0.1**
TURV	**Turiamo**	**4.32**	**117**	*eP*	**Pn**	**05 57 47.7**	**-1.0**
CAPV	**Capacho**	**4.62**	**187**	*eP*	**Pn**	**05 57 52.4**	**-0.4**
BAUV	**El Baul**	**5.05**	**134**	*eP*	**Pn**	**05 57 59.0**	**+0.2**
BAUV				*eS*	**Sn**	**05 58 53.9**	**-2.2**
ELOV	**Elorza**	**5.88**	**158**	*eP*	**Pn**	**05 58 09.6**	**-0.5**
MERV	**Las Mercedes**	**6.24**	**120**	*eP*	**Pn**	**05 58 14.6**	**-0.5**
CUPV	**Cępira**	**6.32**	**112**	*eP*	**Pn**	**05 58 14.4**	**-1.8**
PCRV	**Puerto La Cruz**	**7.33**	**107**	*eP*	**Pn**	**05 58 28.9**	**-1.2**
CAOV	**Caicara del Or**	**7.39**	**133**	*eP*	**Pn**	**05 58 29.5**	**-1.5**
CAOV				*eS*	**Sn**	**05 59 47.7**	**-6.1**
SJG	**San Juan**	**7.78**	**43**	Pn	**Pn**	**05 58 25.9**	**-10**
SJG	**San Juan**	**7.78**	**43**	Pn	**Pn**	**05 58 25.9**	**-10**
ROSC	**El Rosal**	**7.99**	**199**	Pn	**Pn**	**05 58 40.5**	**+1.3**
	8.3nm,0.3s,baz=267,slow=6.2,SNR=19						
ROSC				Sn	**Sn**	**06 00 10.1**	**+1.7**
	5.1nm,0.3s,baz=85,slow=23,SNR=4.4						
ROSC				LR	LR	06 02 12.7	
	comp=Z,58nm,21.2s,baz=1.2,slow=40						
MTDJ	**Mount Denham**	**7.99**	**316**	*ePn*	**Pn**	**05 58 40.4**	**+1.3**
MTDJ				*eSn*	**Sn**	**06 00 05.7**	**-2.7**
MTP	**Monte Pirata**	**8.18**	**46**	*ePn*	**Pn**	**05 58 38.2**	**-3.6**
MTP				*eSn*	**Sn**	**06 00 03.9**	**-9.1**
BCIP	**Isla Barro Col**	**8.60**	**248**	*ePn*	**Pn**	**05 58 46.5**	**-1.1**
	10nm,0.5s						
BCIP				*eSn*	**Sn**	**06 00 15.1**	**-8.5**
GUNV	**Guanoco**	**8.93**	**104**	*eP*	**Pn**	**05 58 49.7**	**-2.4**
OTAV	**Otavalo**	**13.86**	**209**	*ePn*	**Pn**	**05 59 59.2**	**-0.3**
	2.4nm,0.8s						
TGUH	**Tegucigalpa,Un**	**15.20**	**278**	*ePn*	**Pn**	**06 00 20.1**	**+2.5**
	4.7nm,0.5s						
APG	**El Apazote**	**18.36**	**280**	LR	LR	06 07 10.8	
	comp=Z,104nm,20.8s,baz=249,slow=33						
CMIG	**Matias Romero**	**22.83**	**284**	P	**P**	**06 01 50.2**	**+4.5**
	2.9nm,0.9s,mb3.7,baz=96,slow=3.8,SNR=7.7						
LPAZ	**La Paz**	**28.80**	**173**	P	**P**	**06 02 39.4**	**-1.0**
	0.4nm,0.3s,mb3.6,baz=3.2,slow=16,SNR=7.5						
LPAZ				LR	LR	06 14 03.6	
	comp=Z,56nm,20.6s,MS3.2,baz=196,slow=36						
LPAZ	**La Paz**	**28.80**	**173**	P	**P**	**06 02 39.4**	**-1.0**
LPAZ				LR	LR	06 14 03.6	
SADO	**Sadowa**	**32.80**	**350**	LR	LR	06 14 24.7	
	comp=Z,80nm,21.9s,MS3.4,baz=42,slow=32						
TXAR	**Lajitas Array**	**34.06**	**304**	P	**P**	**06 03 29.0**	**+2.3**
	0.2nm,0.4s,mb3.4,baz=120,slow=7.6,SNR=7.7						
CPUP	**Villa Florida**	**41.04**	**160**	P	**P**	**06 04 21.6**	**-4.1**
	0.2nm,0.3s,mb3.2,baz=345,slow=7.3,SNR=2.4						
ULM	**Lac du Bonnet**	**42.54**	**337**	P	**P**	**06 04 38.8**	**+1.1**
	1.4nm,0.5s,mb4.0,baz=153,slow=6.8,SNR=3.0						
PDAR	**Pinedale Array**	**44.49**	**320**	P	**P**	**06 04 55.1**	**+1.6**
	0.4nm,0.4s,mb3.5,baz=117,slow=9.7,SNR=4.5						
YBH	**Yreka Blue Hor**	**52.94**	**313**	P	**P**	**06 05 57.7**	**-0.8**
	0.7nm,0.4s,mb4.0,baz=104,slow=4.2,SNR=1.7						

*ISCJB **10** 06:05:30.2±0.3, 62.°80N±0.°03×150.°42W±0.°08, h113km±4km, mb3.8/9, Error ellipse: s-maj=6.1km s-min=4.9km az=174.0*
*IDC **10** 06:05:30.2±2.8, 62.°99N×150.°67W, h82km±30km, mb3.4/9, mb1 3.6/12, mb1mx3.4/26, mbtmp3.5/12, Error ellipse: s-maj=24.2km s-min=22.0km az=17.0*
*NEIC **10** 06:05:31.8, 62.°84N×150.°43W, h101km, MG3.5(AEIC), After AEIC.*
ISC 10 06:05:31.5±0.3, 62.°79N±0.°03×150.°42W±0.°08, h105km±4km, n38, σ0§71/46, mb3.8/9, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRF	**Thorofare Moun**	**0.67**	**5**	*ePn*	**Pn**	**06 05 49.2**	**+0.2**
TRF				*eSn*	**Sn**	**06 06 02.4**	**+0.1**
PPLA	**Purkeypile**	**0.82**	**278**	*ePn*	**Pn**	**06 05 50.8**	**+0.4**
PPLA				*eSn*	**Sn**	**06 06 04.7**	**+0.1**
MCK	**McKinley**	**1.16**	**35**	*ePn*	**Pn**	**06 05 54.2**	**+0.3**
MCK				*eSn*	**Sn**	**06 06 11.2**	**+0.2**
BPAW	**Bear Paw Mtn.**	**1.34**	**349**	*ePn*	**Pn**	**06 05 55.6**	**-0.4**
BPAW				*eSn*	**Sn**	**06 06 13.3**	**-1.3**
PMR	**Palmer**	**1.35**	**153**	*eP*	**Pn**	**06 05 56.4**	**+0.3**
RC01	**Rabbit Creek A**	**1.74**	**169**	*ePn*	**Pn**	**06 06 01.1**	**+0.2**
RC01				*eSn*	**Sn**	**06 06 23.3**	**+0.1**
COLA	**College**	**2.38**	**27**	*ePn*	**Pn**	**06 06 09.0**	**0.0**
COLA				*eSn*	**Sn**	**06 06 38.2**	**+0.3**
TTA	**Tatalina**	**2.57**	**276**	*eP*	**Pn**	**06 06 11.3**	**-0.2**
RSO	**Redoubt South**	**2.59**	**207**	*ePn*	**Pn**	**06 06 12.5**	**+0.7**
DIV	**Divide**	**2.76**	**125**	*ePn*	**Pn**	**06 06 13.8**	**-0.2**
DIV				*eSn*	**Sn**	**06 06 46.4**	**-0.3**
SVW2	**Sparrevohn**	**2.97**	**237**	*eP*	**Pn**	**06 06 16.9**	**+0.1**
MENT	**Mentasta**	**3.08**	**84**	*eP*	**Pn**	**06 06 19.2**	**+1.0**
BMRM	**Bremner River**	**3.31**	**121**	*ePn*	**Pn**	**06 06 21.3**	**0.0**
BMRM				*eSn*	**Sn**	**06 06 58.0**	**-1.8**
COLD	**Coldfoot**	**4.46**	**1**	*ePn*	**Pn**	**06 06 37.1**	**+0.4**
COLD				*eSn*	**Sn**	**06 07 26.9**	**-0.5**
EGAK	**Eagle**	**4.57**	**60**	*ePn*	**Pn**	**06 06 38.4**	**+0.2**
DAWY	**Dawson**	**5.12**	**71**	*ePn*	**Pn**	**06 06 46.0**	**+0.4**
KDAK	**Kodiak Island**	**5.14**	**193**	P	**Pn**	**06 06 45.6**	**-0.3**
	6.4nm,0.3s,baz=31,slow=9.5,SNR=65						
KDAK				S	**Sn**	**06 07 39.8**	**-4.2**
	6.5nm,0.3s,baz=275,slow=21,SNR=13						
KDAK	**Kodiak Island**	**5.14**	**193**	*ePn*	**Pn**	**06 06 45.4**	**-0.6**
OHAK	**Old Harbor**	**5.77**	**196**	*eP*	**Pn**	**06 06 54.0**	**-0.5**
HYT	**Haines Junctio**	**6.43**	**102**	*ePn*	**Pn**	**06 07 13.4**	**+10**
INK	**Inuvik**	**8.90**	**44**	P	**Pn**	**06 07 36.5**	**-0.5**
	0.7nm,0.3s,baz=249,slow=15,SNR=9.2						
INK	**Inuvik**	**8.90**	**44**	*ePn*	**Pn**	**06 07 38.8**	**+1.8**
YKA	**Yellowknife Ar**	**16.34**	**75**	P	**Pn**	**06 09 14.3**	**+0.1**
	0.3nm,0.3s,baz=281,slow=11,SNR=8.9						
ELK	**Elko**	**30.36**	**120**	pP	pP	06 11 59.9	+3.6
	0.2nm,0.3s,baz=357,slow=8.7,SNR=3.6						
NVAR	**Mina Array Bea**	**31.19**	**126**	pP	pP	06 12 06.6	+3.0
	0.8nm,0.8s,baz=297,slow=8.4,SNR=8.7						
TXAR	**Lajitas Array**	**44.94**	**116**	P	**P**	**06 13 38.7**	**+3.2**
	0.1nm,0.3s,mb3.0,baz=338,slow=4.3,SNR=3.3						
TXAR	**Lajitas Array**	**44.94**	**116**	P	**P**	**06 13 38.7**	**+3.1**
ARCES	**ARCESS Array B**	**47.93**	**2**	P	**P**	**06 13 57.9**	**-0.4**
	0.6nm,0.5s,mb3.7,baz=19,slow=7.7,SNR=5.0						
ARCES	**ARCESS Array B**	**47.93**	**2**	P	**P**	**06 13 57.9**	**-0.4**
KSRS	**Korea Array**	**53.78**	**283**	P	**P**	**06 14 43.5**	**+0.9**
	0.6nm,0.4s,mb4.0,baz=346,slow=24,SNR=3.0						
SONM	**Songino Array**	**54.15**	**306**	P	**P**	**06 14 46.5**	**+1.3**
	1.2nm,0.6s,mb4.1,baz=41,slow=7.6,SNR=7.4						
ZALV	**Zalesovo Beam**	**55.85**	**324**	P	**P**	**06 14 56.5**	**-0.7**
	0.8nm,0.4s,mb4.1,baz=28,slow=6.7,SNR=4.1						
BVAR	**Borovoye Array**	**60.16**	**333**	P	**P**	**06 15 26.8**	**-0.6**
	0.4nm,0.4s,mb3.9,baz=43,slow=6.5,SNR=3.3						
BVAR	**Borovoye Array**	**60.16**	**333**	P	**P**	**06 15 26.8**	**-0.6**
KURK	**Kurchatov**	**60.40**	**326**	P	**P**	**06 15 29.2**	**+0.2**
	0.5nm,0.4s,mb3.9,baz=52,slow=32,SNR=3.9						
MKAR	**Makanchi Array**	**63.00**	**322**	P	**P**	**06 15 45.7**	**-0.8**
	0.4nm,0.4s,mb3.7,baz=48,slow=7.4,SNR=7.3						
MKAR	**Makanchi Array**	**63.00**	**322**	P	**P**	**06 15 45.7**	**-0.8**
AKASG	**Malin Array Be**	**66.85**	**0**	P	**P**	**06 16 10.5**	**-0.9**
	0.5nm,0.3s,mb3.8,baz=2.2,slow=6.1,SNR=3.4						

IDC 10 06:12:10.4±0.9, 3.°75N×127.°68E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.8/22, mbtmp3.9/7, Error ellipse: s-maj=95.3km s-min=16.4km az=72.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.44 165**		P	P	06 17 31.7	+0.7
	1.3nm,0.4s,baz=344,slow=10,SNR=33						
ASAR	**Alice Springs**	**27.92 168**		P	P	06 18 02.8	+0.3
	1.0nm,0.6s,baz=358,slow=7.9,SNR=13						
ASAR				PcP	PcP	06 21 16.6	-1.6
	0.3nm,0.5s,baz=350,slow=1.5,SNR=5.1						
KSRS	**Korea Array**	**33.54**	**0**	P	P	06 18 51.5	-0.4
	0.6nm,0.3s,baz=181,slow=9.9,SNR=4.4						
STKA	**Stephens Creek**	**37.82 161**		P	P	06 19 28.7	-0.1
	3.2nm,0.4s,baz=335,slow=7.1,SNR=6.5						
SONM	**Songino Array**	**47.58 341**		P	P	06 20 49.0	+1.2
	0.4nm,0.5s,baz=163,slow=10,SNR=2.8						
MKAR	**Makanchi Array**	**58.08 325**		P	P	06 22 05.6	0.0
	0.4nm,0.4s,baz=128,slow=8.3,SNR=5.9						
KURK	**Kurchatov**	**62.23 327**		P	P	06 22 33.4	-0.5
	0.6nm,0.5s,baz=128,slow=6.3,SNR=3.7						

*IDC **10** 06:29:44.8±0.4, 0.°94N×125.°84E, h0km, mb4.9/21, mb1 4.9/22, mb1mx4.9/24, mbtmp4.9/22, ML5.4/2, MS3.8/8, Ms1 3.7/8, ms1mx3.5/22, Error ellipse: s-maj=19.3km s-min=9.3km az=71.0*
*BJI **10** 06:29:47.3, 0.°76N×125.°95E, h42km, mB5.0/28, mb5.0/45, Ms4.4/35, Ms7 4.2/36*
*MOS **10** 06:29:48.1±1.1, 0.°98N×125.°84E, h33km, mb5.4/36, Error ellipse: s-maj=12.9km s-min=6.0km az=115.0*
*NEIC **10** 06:29:49.9±0.2, 0.°94N×125.°96E, h35km, mb5.1/33, Error ellipse: s-maj=7.5km s-min=4.1km az=72.0*
NEIC Felt [IV] at Bitung and [III] at Manado, Indonesia.
*ISCJB **10** 06:29:50.4±0.4, 0.°97N±0.°03×126.°06E±0.°03, h58km±4km, mb5.1/110, MS4.0/26, Error ellipse: s-maj=5.0km s-min=3.8km az=141.0*
*TEH **10** 06:29:50.0, 0.°91N×126.°03E, h35km*
*DJA **10** 06:29:52, 1.°06N×126.°23E, h51km, mb5.2/49*
ISC 10 06:29:52.3±0.4, 0.°95N±0.°02×126.°06E±0.°03, h59km±3km, h37km±3.0km; pP-P, n311, σ1§18/300, mb5.1/110, MS4.0/26, 16C-4D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.31**	**98**	P	**Pn**	**06 30 12.5**	**-2.0**
MNI	**Manado**	**1.32**	**292**	P	**Pn**	**06 30 12.7**	**-1.9**
KMSI	**Cibinong**	**2.12**	**260**	P	**Pn**	**06 30 24.3**	**-1.1**
LBMI	**Labuha**	**2.13**	**138**	P	**Pn**	**06 30 25.9**	**+0.3**
SGSI	**Sangihe**	**2.77**	**349**	P	**Pn**	**06 30 35.3**	**+1.0**
MRSI	**Marisa**	**4.15**	**264**	P	**Pn**	**06 30 52.4**	**-0.8**
NLAI	**Namlea**	**4.29**	**166**	P	**Pn**	**06 30 55.2**	**+0.1**
AAI	**Ambon**	**5.07**	**155**	P	**Pn**	**06 31 06.8**	**+0.9**
	1.0nm4μm269nm,1.0s						
SWI	**Sorong**	**5.50**	**109**	P	**Pn**	**06 31 11.7**	**0.0**
	0.3nm1μm104nm,0.9s						
KDI	**Kendari**	**5.97**	**215**	P	**Pn**	**06 31 17.6**	**-0.5**
	0.9nm2μm294nm,0.8s						
MPSI	**Mapaga**	**6.20**	**264**	P	**Pn**	**06 31 23.2**	**+2.0**
	4.7nm1μm,0.8s						
CTBH	**Cotabato--PC H**	**6.49**	**344**	*ieP*	**Pn**	**06 31 26.4**	**+1.1**
PCI	**Palu**	**6.49**	**254**	P	**Pn**	**06 31 26.8**	**+1.5**
	1.2nm3μm331nm,1.0s						
BUKP	**Musuan**	**6.96**	**352**	*eP*	**Pn**	**06 31 36.5**	**+4.8**
ZMPH	**Zamboanga City**	**7.17**	**326**	*ieP*	**Pn**	**06 31 32.2**	**-2.4**
ZMPH				*eS*	**Sn**	**06 32 40.5**	**-14**
TTSI	**Tana Toraja**	**7.40**	**238**	P	**Pn**	**06 31 37.6**	**-0.1**
	1.7nm5μm458nm,0.9s						
IPIL	**Ipil**	**7.63**	**333**	*eP*	**Pn**	**06 31 40.7**	**-0.2**
SPSI	**Sidrap Palu**	**7.96**	**232**	P	**Pn**	**06 31 46.1**	**+0.6**
	4μm328nm,0.6s						
BNSI	**Bone**	**7.98**	**228**	P	**Pn**	**06 31 46.0**	**+0.3**
	220nm,0.7s						
BKSI	**Bulukumba**	**8.60**	**224**	P	**Pn**	**06 31 54.2**	**0.0**
	2μm169nm,0.9s						
MYLDM	**Lahad Datu**	**8.64**	**299**	P	**Pn**	**06 31 57.4**	**+2.6**
MYLDM	**Lahad Datu**	**8.64**	**299**	P	**Pn**	**06 31 57.2**	**+2.4**
	3μm448nm,0.8s						
KAPI	**Kappang**	**8.65**	**227**	Pn	**Pn**	**06 31 54.5**	**-0.4**
	942nm,0.4s,SNR=29						
KAPI	**Kappang**	**8.65**	**227**	Pn	**Pn**	**06 31 54.3**	**-0.6**
	17nm,0.3s,baz=47,slow=7.7,SNR=32						
KAPI				Sn	**Sn**	**06 33 28.6**	**-2.5**
	baz=270,slow=20,SNR=1.8						
TSM	**Tawau**	**8.83**	**292**	P	**Pn**	**06 31 57.0**	**-0.3**
SMKI	**Samarinda**	**8.96**	**261**	P	**Pn**	**06 32 04.6**	**+5.4**
	4μm130nm,1.0s						
TLE	**Tual**	**9.34**	**135**	P	**Pn**	**06 32 04.2**	**-0.1**
	6μm204nm,1.5s						
SDKM	**Sandakan**	**10.00**	**298**	P	**Pn**	**06 32 13.3**	**-0.1**
BAKI	**Biak**	**10.27**	**102**	P	**Pn**	**06 32 16.3**	**-0.7**
	4μm230nm,1.3s						
KDM	**Kudat**	**10.95**	**303**	P	**Pn**	**06 32 24.9**	**-1.5**
CUYO	**Cuyo Island**	**11.04**	**333**	*eP*	**Pn**	**06 32 28.9**	**+1.3**
KKM	**Kota Kinabalu**	**11.05**	**297**	P	**Pn**	**06 32 27.4**	**-0.4**
KKM	**Kota Kinabalu**	**11.05**	**297**	P	**Pn**	**06 32 30.1**	**+2.3**
	822nm55nm,0.7s						
SMPI	**Sarmi**	**12.98**	**103**	P	Px	06 33 08.0	
BTM	**Bintulu**	**13.16**	**280**	P	**Pn**	**06 32 59.5**	**+2.9**
SBUM	**Sibu**	**13.92**	**276**	P	**Pn**	**06 33 10.4**	**+3.7**
SBUM	**Sibu**	**13.92**	**276**	P	**Pn**	**06 33 10.5**	**+3.7**
	477nm59nm,1.1s						
KHKI	**Kahang-Kahang**	**13.94**	**228**	P	**Pn**	**06 33 16.4**	**+9.4**
	3μm334nm,0.9s						
TGY	**Tagaytay City**	**14.02**	**339**	Pn	**Pn**	**06 33 03.5**	**-4.6**
	146nm,0.3s,baz=71,slow=9.7,SNR=4.5						
SRBI	**Singaraja**	**14.06**	**230**	P	**Pn**	**06 33 16.6**	**+8.0**
	147nm,1.3s						
KMMI	**Kalianget**	**14.45**	**236**	P	**Pn**	**06 33 21.5**	**+7.7**
	3μm289nm,1.2s						
STKI	**Sintang**	**14.61**	**267**	P	**Pn**	**06 33 17.2**	**+1.3**
	47nm,0.8s						
KAKA	**Kakadu**	**14.97**	**155**	*eP*	**Pn**	**06 33 17.8**	**-2.8**
	50nm,0.8s						
KAKA				*e*		06 33 26.7	
KAKA	**Kakadu**	**14.97**	**155**	*ePn*	**Pn**	**06 33 17.9**	**-2.7**
	467nm,0.6s						
KAKA	**Kakadu**	**14.97**	**155**	P	**Pn**	**06 33 18.4**	**-2.2**
	3μm382nm,1.0s						
GMJI	**Gumukmas**	**15.56**	**234**	P	**Pn**	**06 33 34.3**	**+6.1**
	99nm,1.3s						
KSM	**Kuching**	**15.76**	**272**	P	**Pn**	**06 33 34.9**	**+4.2**
KSM	**Kuching**	**15.76**	**272**	P	**Pn**	**06 33 34.1**	**+3.4**
	875nm94nm,0.9s						
KRKI	**Karangkates**	**16.31**	**236**	P	**Pn**	**06 33 42.1**	**+4.4**
SJI	**Sawahan**	**16.66**	**239**	P	**Pn**	**06 33 44.9**	**+2.8**
	154nm,1.0s						
NGJI	**Ngawi**	**16.75**	**240**	P	**Pn**	**06 33 45.3**	**+2.2**
	102nm,1.5s						
PWJI	**Pagerwojo**	**16.78**	**238**	P	**Pn**	**06 33 45.4**	**+1.9**
	123nm,0.8s						
KNA	**Kununurra**	**16.81**	**171**	*eP*	**Pn**	**06 33 43.4**	**-0.4**
	188nm,0.9s						
KNA	**Kununurra**	**16.81**	**171**	P	**Pn**	**06 33 43.5**	**-0.3**
	4μm635nm,0.9s						
PCJI	**Pacitan**	**17.40**	**238**	P	**Pn**	**06 33 54.0**	**+2.8**
	184nm,1.1s						
UGM	**Wanagama**	**17.82**	**240**	P	**Pn**	**06 33 59.5**	**+3.1**
	136nm,2.1s						
YOGI	**Yogyakarta**	**17.98**	**241**	P	**Pn**	**06 34 01.4**	**+3.1**
	262nm,1.4s						
FITZ	**Fitzroy Crossi**	**18.94**	**181**	*eP*	**Pn**	**06 34 07.4**	**-2.4**
	39nm,0.9s						
FITZ	**Fitzroy Crossi**	**18.94**	**181**	P	**Pn**	**06 34 07.9**	**-1.9**
	1.9nm,0.3s,baz=20,slow=9.3,SNR=34						
FITZ	**Fitzroy Crossi**	**18.94**	**181**	*eP*	**Pn**	**06 34 07.5**	**-2.2**
	43nm,1.1s						
FITZ	**Fitzroy Crossi**	**18.94**	**181**	P	**Pn**	**06 34 08.3**	**-1.5**
	76nm,1.3s						
KLSI	**Ende**	**22.04**	**255**	P	**P**	**06 34 45.1**	**+2.9**
	35nm,0.8s,mb4.8						
MYKOM	**Kota Tinggi**	**22.22**	**272**	P	**P**	**06 34 46.5**	**+2.3**
MYKOM	**Kota Tinggi**	**22.22**	**272**	P	**P**	**06 34 44.2**	**0.0**
	703nm50nm,1.2s,mb4.8						
WRAB	**Tennant Creek**	**22.29**	**159**	P	**P**	**06 34 43.0**	**-1.8**
	2μm,0.8s,SNR=73						
WRAB	**Tennant Creek**	**22.29**	**159**	*eP*	**P**	**06 34 43.6**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,285nm,0.9s,mb5.7						
WRAB	**Tennant Creek**	**22.29**	**159**	*eP*	**P**	**06 34 43.6**	**-1.2**
	comp=Z,285nm,0.9s,mb5.7						
WRAB	**Tennant Creek**	**22.29**	**159**	P	**P**	**06 34 43.8**	**-1.0**
	comp=Z,3μmcomp=Z,390nm,0.9s,mb5.8						
WRA	**Warramunga Arr**	**22.29**	**159**	P	**P**	**06 34 43.5**	**-1.3**
	comp=Z,117nm,0.8s,mb5.3,baz=340,slow=11,SNR=113						
WRA				PcP	PcP	06 38 40.2	+1.2
	comp=Z,3.5nm,0.6s,baz=325,slow=2.2,SNR=4.9						
WRA				S	**S**	**06 38 51.8**	**+4.9**
	comp=Z,4.2nm,1.0s,baz=201,slow=38,SNR=3.6						
WRA	**Warramunga Arr**	**22.29**	**159**	P	**P**	**06 34 43.5**	**-1.3**
WRA				PcP	PcP	06 38 40.2	+1.2
WRA				S	**S**	**06 38 51.8**	**+4.9**
KASI	**Kota Agung**	**22.48**	**253**	P	**P**	**06 34 49.3**	**+2.4**
	comp=Z,64nm,0.9s,mb5.0						
COEN	**Coen**	**22.51**	**132**	*eP*	**P**	**06 34 45.5**	**-1.7**
	comp=Z,561nm,0.9s,mb6.0						
COEN	**Coen**	**22.51**	**132**	P	**P**	**06 34 46.1**	**-1.1**
	comp=Z,338nm,1.1s,mb5.7						
MDSI	**Maura Dua**	**22.52**	**256

CHTO	**Chiang Mai**	**31.98**	**305**	*e*P	**P**	**06 36 12.7**	**-0.3**
CHTO				pmax	pmax		
comp=Z,15nm,1.0s,mb4.8							
CHTO	**Chiang Mai**	**31.98**	**305**	*e*P	**P**	**06 36 12.7**	**-0.3**
comp=Z,15nm,1.0s,mb4.8							
CHTO	**Chiang Mai**	**31.98**	**305**	P	**P**	**06 36 12.8**	**-0.2**
KMI	**Kunming**	**32.94**	**319**	P	**P**	**06 36 23.3**	**+1.9**
KMI				PP	PP	06 37 33.1	-3.7
KMI				S	**S**	**06 41 41.4**	**+6.0**
KMI				SS	SS	06 43 39.7	-20
KMI				pmax	pmax		
comp=Z,17nm,0.7s,mb5.1							
KMI				LR	LR		
comp=N,250nm,19.5s,MS4.0							
KMI				LR	LR		
comp=E,260nm,22.9s,MS4.0							
KMI				LR	LR		
comp=Z,430nm,22.9s,MS4.1							
ENH	**Enshi**	**33.14**	**333**	*e*P	**P**	**06 36 22.3**	**-0.8**
comp=Z,37nm,1.1s,mb5.2							
ENH				*e*PcP	PcP	06 39 05.9	+0.7
KLBR	**Kellerberrin**	**33.31**	**193**	*e*P	**P**	**06 36 23.7**	**-0.8**
comp=Z,18nm,0.6s,mb5.2							
BBOO	**Buckleboo**	**34.88**	**165**	*e*P	**P**	**06 36 37.9**	**-0.2**
comp=Z,17nm,0.8s,mb5.0							
EIDS	**Eidsvold**	**35.64**	**139**	*e*P	**P**	**06 36 45.1**	**+0.3**
comp=Z,15nm,1.1s,mb4.8							
STKA	**Stephens Creek**	**35.81**	**157**	*e*P	**P**	**06 36 46.1**	**0.0**
comp=Z,47nm,0.8s,mb5.5							
STKA	**Stephens Creek**	**35.81**	**157**	P	**P**	**06 36 46.2**	**+0.1**
comp=Z,53nm,0.7s,mb5.6,baz=330,slow=8.1,SNR=53							
STKA				PcP	PcP	06 39 13.6	+0.8
comp=Z,6.6nm,0.5s,baz=0.2,slow=1.9,SNR=4.2							
STKA	**Stephens Creek**	**35.81**	**157**	*e*P	**P**	**06 36 45.9**	**-0.2**
comp=Z,14nm,0.8s,mb4.9							
KSRS	**Korea Array**	**36.37**	**2**	P	**P**	**06 36 51.8**	**+1.0**
comp=Z,5.5nm,0.6s,mb4.7,baz=180,slow=9.8,SNR=18							
KSRS				PcP	PcP	06 39 16.2	+2.0
comp=Z,2.8nm,0.8s,baz=188,slow=3.1,SNR=9.1							
KSRS				LR	LR	06 53 33.3	
comp=Z,108nm,18.7s,MS3.6,baz=180,slow=39							
KSRS	**Korea Array**	**36.37**	**2**	P	**P**	**06 36 51.8**	**+1.0**
KSRS						06 39 16.3	
KSRS				pmax	pmax		
comp=Z,6.0nm,0.6s,mb4.7							
KSRS				pmax	pmax		
comp=Z,3.0nm,0.8s,mb4.3							
KSRS				MLR	MLR		
comp=Z,108nm,18.7s,MS3.6							
CD2	**Chengdu**	**36.53**	**327**	P	**P**	**06 36 51.7**	**-0.6**
CD2				pP	pP	06 37 01.4	-5.9
CD2				sP	sP	06 37 05.3	-8.9
CD2				PP	PP	06 38 17.7	+1.2
CD2				S	**S**	**06 42 31.7**	**+1.1**
CD2				sS	sS	06 42 47.8	-8.1
CD2				SS	SS	06 44 59.0	-13
CD2				pmax	pmax		
comp=Z,30nm,1.2s,mb5.0							
CD2				pmax	pmax		
comp=Z,80nm,6.1s							
CD2				LR	LR		
comp=N,250nm,18.4s							
CD2				LR	LR		
comp=Z,300nm,17.8s,MS4.1							
XAN	**Xi'an**	**36.62**	**336**	P	**P**	**06 36 51.2**	**-1.8**
XAN				pP	pP	06 37 04.8	-3.2
XAN				pmax	pmax		
comp=Z,4.0nm,1.2s,mb4.1							
XAN				LR	LR		
comp=N,120nm,19.0s							
XAN				LR	LR		
comp=E,26nm,27.4s							
XAN				LR	LR		
comp=Z,61nm,23.6s,MS3.3							
MAJO	**Matsushiro**	**37.16**	**16**	*e*P	**P**	**06 36 57.4**	**-0.1**
MAJO				pmax	pmax		
comp=Z,10.0nm,0.8s,mb4.7							
MAJO	**Matsushiro**	**37.16**	**16**	*e*P	**P**	**06 36 57.4**	**-0.2**
comp=Z,10nm,0.8s,mb4.7							
MAT	**Matsushiro**	**37.16**	**16**	P	**P**	**06 36 57.2**	**-0.3**
MJAR	**Matsushiro Arr**	**37.16**	**16**	P	**P**	**06 36 57.3**	**-0.3**
comp=Z,4.9nm,0.6s,mb4.5,baz=187,slow=9.2,SNR=21							
MJAR				PcP	PcP	06 39 18.7	+2.0
comp=Z,0.5nm,0.3s,baz=183,slow=2.8,SNR=4.0							
MJAR				LR	LR	06 50 54.5	
comp=Z,118nm,21.3s,MS3.6,baz=180,slow=34							
MJAR	**Matsushiro Arr**	**37.16**	**16**	P	**P**	**06 36 57.3**	**-0.2**
MJAR						06 39 18.7	
ARMA	**Armidale**	**39.57**	**144**	*e*P	**P**	**06 37 18.8**	**+0.9**
ARMA	**Armidale**	**39.57**	**144**	*e*P	**P**	**06 37 18.2**	**+0.3**
comp=Z,35nm,0.8s,mb5.1							
BJI	**Beijing**	**39.94**	**348**	P	**P**	**06 37 20.0**	**-0.8**
BJI				PP	PP	06 38 53.1	-0.5
BJI				S	**S**	**06 43 32.3**	**+11**
BJI				pmax	pmax		
comp=Z,21nm,0.7s,mb5.0							
BJI				pmax	pmax		
comp=Z,130nm,4.3s							
BJI				LR	LR		
comp=N,120nm,26.0s,MS3.7							
BJI				LR	LR		
comp=E,70nm,26.9s,MS3.7							
BJI				LR	LR		
comp=Z,170nm,29.8s,MS3.7							
ARPS	**Mount Arapiles**	**40.29**	**160**	*e*P	**P**	**06 37 24.2**	**+0.5**
comp=Z,126nm,0.9s,mb5.7							
LZH	**Lanzhou**	**40.59**	**332**	*e*P	**P**	**06 37 25.5**	**-0.8**
LZH				pP	pP	06 37 35.3	-6.1
LZH				PP	PP	06 39 03.5	+2.7
LZH				PcP	PcP	06 39 28.0	+0.5
LZH				*e*S	**S**	**06 43 33.0**	**+1.4**
LZH				sS	sS	06 43 49.6	-7.6
LZH				*e*SS	SS	06 46 28.5	-5.2
LZH				pmax	pmax		
comp=Z,31nm,1.0s,mb4.9							
LZH				pmax	pmax		
comp=Z,120nm,4.7s							
LZH				LR	LR		
comp=E,560nm,13.0s							
LZH				LR	LR		
comp=Z,780nm,17.3s,MS4.6							
SNY	**Shenyang**	**40.75**	**357**	⇑P	**P**	**06 37 28.2**	**+0.7**
SNY				S	**S**	**06 43 27.4**	**-6.5**
SNY				pmax	pmax		
comp=Z,73nm,5.1s							
SNY				LR	LR		
comp=N,160nm,22.2s,MS4.0							
SNY				LR	LR		
comp=E,150nm,18.0s,MS4.0							
SNY				LR	LR		
comp=Z,210nm,23.4s							
SHL	**Shillong**	**41.05**	**309**	*e*PKP	**P**	**06 37 29.5**	**-0.7**
HHC	**Hu-ho-hao-te**	**41.84**	**343**	*e*P	**P**	**06 37 37.4**	**+1.0**
HHC				PP	PP	06 39 17.5	+3.3
HHC				PcP	PcP	06 39 32.5	+1.0
HHC				PcS	PcS	06 43 23.8	+0.8
HHC				S	**S**	**06 43 56.8**	**+6.9**
HHC				SS	SS	06 46 57.4	-0.8
HHC				pmax	pmax		
comp=Z,14nm,0.6s,mb4.8							
HHC				pmax	pmax		
comp=Z,98nm,6.6s							
HHC				LR	LR		
comp=N,310nm,15.2s,MS4.5							
HHC				LR	LR		
comp=E,340nm,15.5s,MS4.5							
HHC				LR	LR		
comp=Z,340nm,15.4s,MS4.3							
CN2	**Changchun**	**42.67**	**359**	*e*P	**P**	**06 37 47.0**	**+3.9**
CN2				PP	PP	06 39 29.0	+5.9
CN2				*e*S	**S**	**06 44 12.5**	**+10**
CN2				pmax	pmax		
comp=Z,10.0nm,0.6s,mb4.7							
CN2				LR	LR		
comp=N,300nm,15.0s,MS4.6							
CN2				LR	LR		
comp=E,500nm,15.0s,MS4.6							
CN2				LR	LR		
comp=Z,600nm,17.0s,MS4.5							
MDJ	**Mudanjiang**	**43.59**	**4**	P	**P**	**06 37 51.6**	**+1.0**
MDJ				pP	pP	06 38 00.4	-5.4
MDJ				sP	sP	06 38 04.3	-8.4
MDJ				PP	PP	06 39 33.5	+0.5
MDJ				ScP	ScP	06 43 27.5	+3.6
MDJ				PcS	PcS	06 43 31.3	+1.4
MDJ				S	**S**	**06 44 19.4**	**+3.8**
MDJ				sS	sS	06 44 35.3	-6.1
MDJ				ScS	ScS	06 47 48.4	+3.8
MDJ				pmax	pmax		
comp=Z,34nm,1.0s,mb5.0							
MDJ				pmax	pmax		
comp=Z,79nm,4.8s							
MDJ				LR	LR		
comp=N,100nm,24.0s,MS3.7							
MDJ				LR	LR		
comp=E,51nm,27.6s,MS3.7							
MDJ				LR	LR		
comp=Z,96nm,24.0s,MS3.6							
LSA	**Lhasa**	**43.82**	**314**	*e*P	**P**	**06 37 53.5**	**+0.8**
LSA				pmax	pmax		
comp=Z,18nm,0.8s,mb4.8							
LSA	**Lhasa**	**43.82**	**314**	*e*P	**P**	**06 37 53.5**	**+0.8**
comp=Z,18nm,0.8s,mb4.9							
GTA	**Gaotai**	**45.16**	**331**	*e*P	**P**	**06 38 02.6**	**-0.6**
GTA				pP	pP	06 38 13.4	-5.1
GTA				sP	sP	06 38 17.1	-8.3
GTA				PcP	PcP	06 39 44.6	+1.8
GTA				PP	PP	06 39 48.6	-1.2
GTA				S	**S**	**06 44 37.5**	**-1.1**
GTA				SS	SS	06 47 50.4	-12
GTA				pmax	pmax		
comp=Z,15nm,0.7s,mb4.9							
GTA				pmax	pmax		
comp=Z,62nm,5.1s							
GTA				LR	LR		
comp=N,310nm,16.7s,MS4.4							
GTA				LR	LR		
comp=E,260nm,20.5s,MS4.4							
GTA				LR	LR		
comp=Z,310nm,19.6s,MS4.2							
VIS	**Vishakhapatnam**	**45.17**	**294**	*e*PKP	**P**	**06 38 02.3**	**-1.4**
VIS				AMb	AMB	06 38 05.0	
comp=Z,51nm,1.1s,mb5.2							
TAPN	**Taplejung**	**45.17**	**309**	*e*P	**P**	**06 38 02.1**	**-1.4**
comp=Z,25nm,0.4s,mb5.4							
ODAN	**Odare**	**45.19**	**308**	*e*P	**P**	**06 38 02.2**	**-1.5**
comp=Z,38nm,0.6s,mb5.4							
DZM	**Mont Dzumac**	**45.54**	**123**	*e*P	**P**	**06 38 07.5**	**+1.0**
comp=Z,48nm,1.1s,mb5.4							
DZM				*e*LR	LR	06 50 56.2	
comp=Z,322nm,24.4s							
RAMN	**Ramite**	**45.86**	**308**	*e*P	**P**	**06 38 07.8**	**-1.1**
comp=Z,66nm,0.7s,mb5.7							
JIRN	**Jiri**	**46.51**	**308**	*e*P	**P**	**06 38 12.7**	**-1.4**
GUN	**Gumba**	**46.87**	**309**	*e*P	**P**	**06 38 15.4**	**-1.5**
comp=Z,108nm,0.6s,mb6.0							
PKI	**Pulchoki**	**47.08**	**308**	*e*P	**P**	**06 38 16.5**	**-2.0**
PKIN	**Phulchoki**	**47.09**	**308**	*e*P	**P**	**06 38 16.8**	**-1.8**
comp=Z,33nm,0.5s,mb5.5							
KKN	**Kakani**	**47.28**	**308**	*e*P	**P**	**06 38 17.6**	**-2.5**
comp=Z,36nm,0.6s,mb5.5							
DMN	**Daman**	**47.34**	**308**	*e*P	**P**	**06 38 18.8**	**-1.7**
GKN	**Gorkha**	**47.89**	**308**	*e*P	**P**	**06 38 22.6**	**-2.2**
comp=Z,56nm,0.8s,mb5.7							
HABR	**Khabarovsk**	**47.97**	**8**	*e*P	**P**	**06 38 25.3**	**+0.3**
HABR						06 40 18.0	
HABR				*e*PPP		06 41 05.0	
HABR				*e*S	**S**	**06 45 23.0**	**+4.5**
HABR				*e**SS	sS	06 45 38.3	-6.2
HABR				pmax	pmax		
comp=Z,61nm,1.1s,mb5.5							
HABR				pmax	pmax		
comp=N,26nm,1.0s							
HABR				pmax	pmax		
comp=E,19nm,0.8s							
HABR				MLR	MLR		
comp=Z,98nm,17.0s,MS3.9							
YSS	**Yuzh-Sakhalins**	**48.08**	**15⇑**	*e*P	**P**	**06 38 27.8**	**+1.9**
KLR	**Kul'dur**	**48.34**	**5**	*e*P	**P**	**06 38 24.7**	**-3.2**
KLR				pmax	pmax		
comp=Z,30nm,1.2s,mb5.2							
HIA	**Hailar**	**48.44**	**354**	*e*P	**P**	**06 38 29.3**	**+0.7**
HIA				*e*		06 39 56.1	
HIA				pmax	pmax		
comp=Z,49nm,1.1s							
HIA	**Hailar**	**48.44**	**354**	*e*P	**P**	**06 38 29.2**	**+0.6**
comp=Z,49nm,1.1s,mb5.5							
HIA				*e*PcP	PcP	06 39 56.1	+2.0
HYB	**Hyderabad**	**49.48**	**292**	*e*P	**P**	**06 38 36.0**	**-1.2**
HYB				pmax	pmax		
comp=Z,71nm,0.8s,mb5.8							
HYB	**Hyderabad**	**49.48**	**292**	*e*P	**P**	**06 38 36.0**	**-1.2**
comp=Z,71nm,0.8s,mb5.8							
HYB	**Hyderabad**	**49.48**	**292**	*i* P	**P**	**06 38 36.0**	**-1.2**
comp=Z,38nm,0.8s,mb5.5							
ULN	**Ulaanbaatar**	**49.55**	**343**	*e*P	**P**	**06 38 37.2**	**0.0**
ULN				pmax	pmax		
comp=Z,8.0nm,0.7s,mb4.9							
ULN	**Ulaanbaatar**	**49.55**	**343**	*e*P	**P**	**06 38 37.2**	**0.0**
comp=Z,7.5nm,0.7s,mb4.8							
ULN	**Ulaanbaatar**	**49.55**	**343**	P	**P**	**06 38 37.4**	**+0.2**
comp=Z,10nm,0.9s,mb4.9							
SONM	**Songino Array**	**49.72**	**343**	P	**P**	**06 38 38.6**	**+0.1**
comp=Z,4.8nm,0.7s,mb4.7,baz=158,slow=8.7,SNR=24							
SONM				PcP	PcP	06 40 00.1	+1.3
comp=Z,2.9nm,0.7s,baz=152,slow=6.2,SNR=4.7							
SONM				LR	LR	07 00 37.9	
comp=Z,86nm,19.5s,MS3.8,baz=336,slow=37							
SONM	**Songino Array**	**49.72**	**343**	P	**P**	**06 38 38.6**	**+0.1**
SONM						06 40 00.1	
BHPL	**Bhopal**	**52.11**	**299**	*e*PKP	**P**	**06 38 55.5**	**-1.4**
BHPL				AMb	AMB	06 38 57.7	
comp=Z,28nm,0.6s,mb5.3							
JOSI	**Joshimath**	**52.99**	**308**	*e*PKP	**P**	**06 39 03.7**	**+0.4**
KAD	**Karad**	**53.52**	**291**	*e*PKP	**P**	**06 39 05.9**	**-1.5**
BISR	**Bishrakh**	**53.90**	**305**	*e*PKP	**P**	**06 39 08.7**	**-1.3**
TLY	**Talaya**	**53.96**	**343**	*e*P	**P**	**06 39 08.7**	**-1.3**
TLY				*e*		06 41 10.4	
TLY				*e*S	**S**	**06 46 57.1**	**+16**
TLY				*e*		06 48 47.5	
TLY				pmax	pmax		
comp=Z,6.0nm,0.7s,mb4.6							
TLY				MLR	MLR		
comp=E,161nm,26.0s							
TLY	**Talaya**	**53.96**	**343**	*e*P	**P**	**06 39 10.8**	**+0.8**
comp=E,6.3nm,0.7s,mb4.7							
SONA	**Sohna**	**54.08**	**305**	*e*PKP	**P**	**06 39 09.3**	**-2.0**
SONA				AMb	AMB	06 39 11.2	
comp=Z,50nm,0.7s,mb5.5							
POO	**Poona**	**54.09**	**292**	*e*PKP	**P**	**06 39 10.0**	**-1.5**
POO				AMb	AMB	06 39 14.3	
comp=Z,25nm,0.9s,mb5.1							
AYAN	**Aya Nagar**	**54.13**	**305**	*e*PKP	**P**	**06 39 10.2**	**-1.5**
AYAN				AMb	AMB	06 39 11.2	
comp=Z,31nm,1.3s,mb5.1							
KLP	**Kalpa**	**54.41**	**309**	*e*PKP	**P**	**06 39 13.8**	**+0.1**
KLP				AMb	AMB	06 39 15.3	
comp=Z,49nm,0.7s,mb5.6							
WMQ	**Urumqi**	**54.63**	**327**	*e*P	**P**	**06 39 17.5**	**+2.5**
KKR	**Kurukshetra**	**54.92**	**307**	*e*PKP	**P**	**06 39 17.5**	**+0.1**
SDNR	**Sundarnagar**	**55.40**	**308**	*e*PKP	**P**	**06 39 19.9**	**-0.9**
CLNS	**Chul'man**	**55.72**	**359**	*e*P	**P**	**06 39 23.6**	**+1.0**
CLNS				pmax	pmax		
comp=Z,24nm,0.9s,mb5.2							
CLNS				pmax	pmax		
comp=N,11nm,0.9s							
CLNS				pmax	pmax		
comp=E,9.0nm,0.9s							
PEA0B	**Petropavlovsk-**	**58.24**	**22**	*e*P	**P**	**06 39 42.1**	**+1.6**
PETK	**Petropavlovsk-**	**58.24**	**22**	P	**P**	**06 39 42.4**	**+1.9**
comp=E,11nm,0.7s,mb5.0,baz=187,slow=3.6,SNR=29							
JASL	**Jaisalmer**	**58.84**	**301**	*e*PKP	**P**	**06 39 45.0**	**-0.2**
BHJ	**Bhuj**	**58.99**	**297**	AMb	AMB	06 38 32.3	
comp=Z,109nm,1.0s,mb5.8							
MK31	**Makanchi Array**	**59.47**	**327**	*ce*P	**P**	**06 39 48.3**	**-0.8**
MK31				pmax	pmax		
comp=Z,20nm,0.6s,mb5.3							
MK31	**Makanchi Array**	**59.47**	**327**	*e*P	**P**	**06 39 48.5**	**-0.6**
MKAR	**Makanchi Array**	**59.47**	**327**	P	**P**	**06 39 48.5**	**-0.7**
comp=Z,10nm,0.5s,mb5.1,baz=122,slow=7.2,SNR=178							
MKAR				LR	LR	07 05 31.4	
comp=Z,215nm,21.7s,MS4.2,baz=125,slow=36							
KSH	**Kashi**	**59.56**	**317**	*e*P	**P**	**06 39 51.0**	**+1.1**
KSH				S	**S**	**06 47 55.3**	**-0.3**
KSH				SS	SS	06 51 48.9	-3.0
KSH				pmax	pmax		
comp=Z,17nm,1.1s,mb5.0							
KSH				pmax	pmax		
comp=Z,54nm,4.0s							
KSH				LR	LR		
comp=N,860nm,15.8s							
KSH				LR	LR		
comp=E,370nm,8.6s							
KSH				LR	LR		
comp=Z,98nm,5.7s							
ULHL	**Ulahol**	**60.66**	**319**	P	**P**	**06 39 58.9**	**+1.5**
SNR=8.6							
YAK	**Yakutsk**	**60.99**	**2**	*e*P	**P**	**06 39 59.3**	**+0.1**
YAK				pmax	pmax		
comp=Z,59nm,0.9s,mb5.7							
YAK				pmax	pmax		
comp=E,5.0nm,0.9s							
YAK				pmax	pmax		
comp=N,23nm,1.1s							
YAK	**Yakutsk**	**60.99**	**2**	*e*P	**P**	**06 40 00.4**	**+1.2**
URZ	**Urewera**	**61.01**	**136**	*e*P	**P**	**06 39 59.7**	**-0.2**
comp=N,13nm,0.7s,mb5.2							
KZA	**Kyzart**	**61.23**	**319**	P	**P**	**06 40 03.6**	**+2.3**
SNR=18							
TKM2	**Tokmak 2**	**61.40**	**320**	P	**P**	**06 40 03.9**	**+1.5**
SNR=26							
UCH	**Uchtor**	**61.78**	**319**	P	**P**	**06 40 07.3**	**+2.3**
SNR=11							
UCH	**Uchtor**	**61.78**	**319**	*e*P	**P**	**06 40 05.2**	**+0.1**
comp=N,30nm,1.2s,mb5.3							
USP	**Ospenovka**	**62.27**	**320**	P	**P**	**06 40 07.1**	**-1.2**
SNR=28							
AML	**Almayashu**	**62.28**	**318**	P	**P**	**06 40 08.5**	**+0.2**
SNR=34							
EKS2	**Erkin-Say**	**62.47**	**319**	P	**P**	**06 40 09.6**	**0.0**
SNR=18							
ZALV	**Zalesovo Beam**	**62.76**	**334**	P	**P**	**06 40 09.9**	**-1.4**
comp=N,4.3nm,0.4s,mb4.9,baz=116,slow=6.0,SNR=16							
ZALV				LR	LR	07 09 07.6	
comp=N,52nm,21.4s,MS3.7,baz=147,slow=38							
KURK	**Kurchatov**	**63.73**	**329**	P	**P**	**06 40 17.2**	**-0.6**
comp=N,431nm,0.6s,SNR=42							
KURK	**Kurchatov**	**63.73**	**329**	*c i*P	**P**	**06 40 16.7**	**-1.1**
KURK				pmax	pmax		
comp=Z,39nm,0.8s,mb5.5							
KURK	**Kurchatov**	**63.73**	**329**	*e*P	**P**	**06 40 17.1**	**-0.7**
NVS	**Novosibirsk**	**64.05**	**334**	*i* P	**P**	**06 40 18.5**	**-1.3**
NVS				pmax	pmax		
comp=Z,16nm,1.1s,mb5.0							
NVS				pmax	pmax		
comp=N,8.0nm,0.9s							
NVS				pmax	pmax		
comp=E,5.0nm,0.9s							
KK31	**Karatay Array**	**64.82**	**318**	*ce*P	**P**	**06 40 24.0**	**-1.1**
KK31				pmax	pmax		
comp=Z,7.0nm,0.5s,mb5.0							
SEY	**Seymchan**	**64.87**	**13⇑**	*i*P	**P**	**06 40 26.2**	**+1.2**
SEY	**Seymchan**	**64.87**	**13⇑**	*i*P	**P**	**06 40 26.3**	**+1.3**
CASY	**Casey**	**68.00**	**187**	*e*P	**P**	**06 40 45.6**	**+0.8**
comp=Z,42nm,1.3s,mb5.3							
VOSK	**Vostochnaya**	**68.83**	**328**	P	**P**	**06 40 49.0**	**-1.4**
VOSK				pmax	pmax		
comp=Z,6.0nm,0.5s,mb4.8							
BVAR	**Borovoye Array**	**69.29**	**328**	P	**P**	**06 40 52.6**	**-0.6**
comp=Z,7.2nm,0.6s,mb4.8,baz=138,slow=7.4,SNR=36							
BRVK	**Borovoye**	**69.36**	**328**	P	**P**	**06 40 53.8**	**+0.2**
comp=Z,121nm,0.5s,mb6.1,SNR=10							
BRVK	**Borovoye**	**69.36**	**328**	*c i*P	**P**	**06 40 53.3**	**-0.3**
BRVK				pmax	pmax		
comp=Z,13nm,0.8s,mb4.9							
BRVK	**Borovoye**	**69.36**	**328**	*e*P	**P**	**06 40 53.2**	**-0.4**
comp=Z,9.2nm,0.5s,mb5.0							
IDAH	**Dahanechah**	**69.58**	**305**	*e*P	**P**	**06 40 55.1**	**-0.3**
ZRNK	**Zerenda**	**70.00**	**327**	*i* P	**P**	**06 40 56.7**	**-0.9**
ZRNK				pmax	pmax		
comp=Z,15nm,0.4s,mb5.3							
TIXI	**Tiksi**	**70.61**	**1**	*c i*P	**P**	**06 41 00.5**	**-0.5**
TIXI				pmax	pmax		
comp=Z,57nm,1.4s,mb5.3							
TIXI	**Tiksi**	**70.61**	**1**	*e*P	**P**	**06 41 00.8**	**-0.2**
IAKL	**Akhelmad**	**71.33**	**308**	*e*P	**P**	**06 41 05.7**	**-0.3**
IKRD	**Kardeh**	**71.56**	**309**	*e*P	**P**	**06 41 02.0**	**-5.4**
ISFR	**Sfrayin**	**72.02**	**309**	*e*P	**P**	**06 41 09.4**	**-0.8**
BILL	**Bilibino**	**72.39**	**15⇓**	*i*P	**P**	**06 41 12.7**	**+0.9**
IPAR	**Pars**	**74.82**	**301**	*e*P	**P**	**06 41 25.2**	**-1.6**
IFIR	**Firoozkooh**	**75.91**	**306**	*e*P	**P**	**06 41 31.2**	**-1.8**
SVE	**Sverdlovsk**	**75.97**	**329⇑**	*e*P	**P**	**06 41 33.1**	**+0.3**
SVE				pmax	pmax		
comp=Z,63nm,1.2s,mb5.4							
IKLH	**Kolahrood**	**76.53**	**304**	*e*P	**P**	**06 41 37.2**	**+0.7**
AKUT	**Akutan**	**76.58**	**34**	*e*P	**P**	**06 41 37.9**	**+1.6**
ARU	**Arti**	**76.92**	**328**	*c i*P	**P**	**06 41 37.6**	**-0.6**
ARU						06 44 27.3	
ARU				S	S	06 51 25.3	+3.7
ARU				SS	SS	06 56 17.2	-2.0
ARU				pmax	pmax		
comp=Z,41nm,1.0s,mb5.3							
ARU	**Arti**	**76.92**	**328**	*e*P	**P**	**06 41 37.6**	**-0.6**
comp=Z,27nm,0.6s,mb5.3							
IPIR	**Pirpir**	**77.02**	**303**	*e*P	**P**	**06 41 39.1**	**-0.2**
SOKR	**Solikamsk**	**78.80**	**331**	*c i*P	**P**	**06 41 48.3**	**-0.3**
SOKR				pmax	pmax		
comp=Z,40nm,1.1s,mb5.3							
SDPT	**Sand Point**	**79.86**	**34**	*e*P	**P**	**06 41 54.8**	**+0.4**
comp=Z,73nm,0.6s,mb5.8							
ISRB	**Sarab**	**80.25**	**308**	*e*P	**P**	**06 41 57.1**	**+0.1**
IGHG	**Ghaleghazi**	**80.79**	**304**	*e*P	**P**	**06 42 00.8**	**+0.9**
IHRS	**Heris**	**80.80**	**309**	*e*P	**P**	**06 41 59.9**	**0.0**
MAW	**Mawson**	**80.93**	**200**	P	**P**	**06 42 01.3**	**+1.4**
comp=Z,6.0nm,0.7s,mb4.7,baz=77,slow=7.0,SNR=9.8							
MAW				LR	LR	07 17 20.7	
comp=Z,14nm,18.1s,MS3.4,baz=322,slow=35							
MAW	**Mawson**	**80.93**	**200**	*e*P	**P**	**06 42 01.1**	**+1.2**
MAW				pmax	pmax		
comp=Z,3.0nm,1.2s							
MAW	**Mawson**	**80.93**	**200**	*e*P	**P**	**06 42 01.1**	**+1.2**
comp=Z,3.0nm,1.2s,mb4.1							
IAZR	**Azarshahr**	**81.57**	**308**	*e*P	**P**	**06 42 03.8**	**-0.2**
SBA	**Scott Base**	**81.69**	**172**	*e*P	**P**	**06 42 05.4**	**+1.6**
SBA				pmax	pmax		
comp=Z,19nm,1.1s,mb4.9							
SBA	**Scott Base**	**81.69**	**172**	*e*P	**P**	**06 42 05.3**	**+1.5**
comp=Z,19nm,1.1s,mb4.9							
ISHB	**Shabestar**	**81.91**	**308**	*e*P	**P**	**06 42 06.3**	**+0.5**
DGRG	**David-gareji**	**82.39**	**312**	P	**P**	**06 42 09.4**	**+1.2**
GNI	**Garni**	**82.75**	**310**	*e*P	**P**	**06 42 10.9**	**+0.8**
GNI				pmax	pmax		
comp=Z,16nm,0.7s							
GNI	**Garni**	**82.75**	**310**	*e*P	**P**	**06 42 10.9**	**+0.8**
comp=Z,16nm,0.7s,mb5.

ANN *eS* SKSac 06 53 02.4 +0.5
ANN *eSS* SS 06 59 10.7 +1.3
ANN pmax pmax
comp=Z,12nm,0.4s,mb5.5
KMBO Kilima Mbogo 88.83 269 P **P 06 42 39.4 -1.3**
comp=Z,5.8nm,0.6s,mb5.1,baz=75,slow=1.5,SNR=3.3
KMBO Kilima Mbogo 88.83 269 P **P 06 42 39.4 -1.4**
KMBO pmax pmax
comp=Z,6.0nm,0.6s
KMBO Kilima Mbogo 88.83 269 *eP* **P 06 42 41.3 +0.6**
comp=Z,22nm,1.4s,mb5.3
OBN Obninsk 88.94 325⇑ *eP* **P 06 42 40.5 +0.2**
OBN *eS* SKSac 06 53 06.2 +1.4
OBN *eSS* SS 06 59 18.4 +1.2
OBN pmax pmax
comp=Z,48nm,1.7s,mb5.5
OBN MLR MLR
comp=Z,100nm,22.0s,MS4.2
MENT Mentasta 89.26 27 *eP* **P 06 42 42.7 +1.0**
SYO Syowa Base 89.61 201⇓ *eP* **P 06 42 42.4 -0.8**
MMAI Mount Meron Ar 90.04 303 P **P 06 42 47.0 +1.0**
comp=Z,4.6nm,0.6s,mb5.0,baz=92,slow=7.8,SNR=12
APA Apatity 90.15 337⇑ *iP* **P 06 42 51.0 +5.3**
EGAK Eagle 90.34 25 *eP* **P 06 42 47.6 +1.0**
comp=Z,2.6nm,0.8s,mb4.6
QSPA South Pole Qui 90.88 180 *eP* **P 06 42 50.0 +1.1**
comp=Z,7.3nm,0.7s,mb5.1
DAWY Dawson 91.15 26 *eP* **P 06 42 51.7 +1.3**
BRTR Keskin Array B 91.27 310 P **P 06 42 50.8 -0.8**
comp=Z,2.7nm,0.9s,mb4.6,baz=119,slow=5.9,SNR=8.5
JOF Joensuu 91.33 333 *eP* **P 06 42 53.3 +2.0**
JOF Joensuu 91.33 333 *ep* **P 06 42 53.3 +2.0**
comp=Z,8.5nm,0.6s,mb5.2
KEV Kevo 92.25 340 *eP* **P 06 43 00.1 +4.6**
KEV pmax pmax
comp=Z,6.0nm,0.9s,mb4.9
KEV Kevo 92.25 340 *eP* **P 06 43 00.1 +4.6**
comp=Z,5.5nm,0.9s,mb4.9
KEV Kevo 92.25 340 *ep* **P 06 43 00.1 +4.6**
comp=Z,5.5nm,0.9s,mb4.9
ARCES ARCESS Array B 92.81 340 P **P 06 42 57.5 -0.6**
comp=Z,4.9nm,0.8s,mb5.0,baz=73,slow=4.0,SNR=12
ARCES PKKP PKKPbc 07 00 09.5 -2.4
comp=Z,0.6nm,0.5s,baz=242,slow=2.6,SNR=8.8
ARCES ARCESS Array B 92.81 340 P **P 06 42 57.5 -0.6**
ARCES PKKP PKKPbc 07 00 09.5 -2.4
AKASG Malin Array Be 93.61 321 P **P 06 43 01.2 -0.9**
comp=Z,1.6nm,0.6s,mb4.7,baz=75,slow=4.3,SNR=5.3
KAF Kangasniemi 93.73 332 *eP* **P 06 43 03.1 +0.6**
KAF pmax pmax
comp=Z,6.0nm,0.6s,mb5.2
KAF Kangasniemi 93.73 332 *eP* **P 06 43 03.1 +0.6**
comp=Z,5.5nm,0.6s,mb5.2
KAF Kangasniemi 93.73 332 *ep* **P 06 43 03.1 +0.6**
comp=Z,5.5nm,0.6s,mb5.2
FINES FINESS Array B 93.95 332 P **P 06 43 03.7 +0.2**
comp=Z,2.6nm,0.6s,mb4.8,baz=69,slow=6.3,SNR=7.2
BUR08 Bucovina Ar. S 96.62 318 *eP* **P 06 43 16.1 +0.2**
BOSA Boshof 99.94 241 LR LR 07 23 11.6
comp=Z,87nm,18.8s,MS4.3,baz=139,slow=32
NB2 NORSAR Subarra100.96 333 P Pdif 06 43 33.5 -1.7
comp=Z,1.0nm,0.8s,baz=70,slow=4.4
NOA NORSAR Array B 100.96 333 P Pdif 06 43 34.1 -1.1
comp=Z,1.1nm,0.8s,baz=69,slow=4.4,SNR=4.3
YKA Yellowknife Ar 102.29 24 P Pdif 06 43 41.8 +0.7
comp=Z,0.3nm,0.5s,baz=302,slow=4.6,SNR=3.3
YKA PKKPbc PKKPbc 06 59 43.3 -2.2
comp=Z,0.9nm,0.8s,baz=114,slow=2.8,SNR=5.0
YKA Yellowknife Ar 102.29 24 P Pdif 06 43 41.8 +0.7
YKA PKKPbc PKKPbc 06 59 43.3 -2.2
NVAR Mina Array Bea 109.24 49 PKKP PKKPdf 06 59 36.4 -2.3
comp=Z,0.4nm,0.7s,baz=141,slow=5.0,SNR=3.4
PDAR Pinedale Array 113.87 42 PKiKP PKiKP 06 48 26.6 +1.8
comp=Z,0.4nm,0.8s,baz=356,slow=1.3,SNR=3.9
PDAR PKKPbc PKKPbc 06 59 08.2 -0.1
comp=Z,1.0nm,0.8s,baz=103,slow=4.1,SNR=8.3
PV01 Paradox Valley 116.50 46 *e*PKPdf PKPdf 06 48 31.7 +1.7
ULM Lac du Bonnet 117.70 29 PKP PKPdf 06 48 31.3 -0.6
comp=Z,1.6nm,0.3s,baz=333,slow=2.3,SNR=3.1
ANMO Albuquerque 119.36 48 *e*PKiKP PKPdf 06 48 37.6 +2.0
ECSD EROS Data Cent 121.43 35 *e*PKPdf PKPdf 06 48 40.0 +0.7
MNTX Cornudas Mount 121.51 51 *e*PKPdf PKPdf 06 48 41.2 +1.3
SCHQ Schefferville 123.40 9 PKP PKPdf 06 48 43.9 +1.2
comp=Z,2.6nm,0.5s,baz=300,slow=2.4,SNR=12
SCHQ Schefferville 123.40 9 PKP PKPdf 06 48 43.9 +1.2
TXAR Lajitas Array 123.80 53 PKP PKPdf 06 48 45.5 +1.2
comp=Z,1.4nm,0.7s,baz=304,slow=0.9,SNR=16
TXAR PKKPab PKKPab 06 58 33.5 +2.1
comp=Z,0.2nm,0.6s,baz=126,slow=4.5,SNR=3.9
KSU1 Kansas State U 124.17 40 *e*PKPdf PKPdf 06 48 45.6 +0.9
JFWS Jewell Farm 125.50 32 *e*PKiKP PKPdf 06 48 47.4 +0.3
JCT Junction City 126.35 50 *e*PKiKP PKPdf 06 48 50.5 +1.4
WVT Waverly 131.47 37 *e*PKiKP PKPdf 06 48 59.2 +0.5
LRAL Lakeview Retre 134.03 40 *e*PKPdf PKPdf 06 49 04.6 +1.0
TKL Tuckaleechee C 134.17 34 *e*PKiKP PKPdf 06 49 04.7 +0.9
BBSR BB Station 145.33 16 *e*PKPbc PKPbc 06 49 25.5 +1.5
JTS JuntasAbangare 147.18 69 PKPbc PKPbc 06 49 31.8 +1.8
comp=Z,14nm,0.8s,baz=290,slow=3.7,SNR=12
JTS JuntasAbangare 147.18 69 *e*PKPdf PKPdf 06 49 29.1 +1.3
JTS *e*PKPbc PKPbc 06 49 31.9 +1.9
LCO Las Campanas 147.83 152 *e*PKPbc PKPbc 06 49 33.4 +2.0
CPUP Villa Florida 154.56 173 PKP PKPdf 06 49 40.5 +1.8
comp=Z,1.1nm,0.6s,baz=79,slow=0.6,SNR=4.3
CPUP PKPbc PKPbc 06 49 48.8 +1.6
comp=Z,2.3nm,0.5s,baz=138,slow=1.3,SNR=15
CPUP PKPab PKPab 06 50 03.3 +1.6
comp=Z,4.4nm,0.6s,baz=169,slow=3.3,SNR=8.3
CPUP Villa Florida 154.56 173 PKiKP PKPdf 06 49 40.6 +1.8
CPUP 06 49 48.8
ATAH Atahualpa 154.85 105 PKPbc PKPbc 06 49 51.4 +3.1
comp=Z,6.3nm,0.8s,baz=42,slow=4.9,SNR=4.7
ATAH PKPab PKPab 06 50 07.8 +4.3
comp=Z,11nm,1.0s,baz=202,slow=9.0,SNR=3.9
LPAZ La Paz 159.31 138 PKP PKPdf 06 49 47.7 +2.6
comp=Z,6.2nm,0.9s,baz=64,slow=2.6,SNR=7.6
LPAZ La Paz 159.31 138 *e*PKPdf PKPdf 06 49 46.8 +1.7
SIV San Ignacio 163.48 155 PKP PKPdf 06 49 51.2 +1.7
SIV PKPab PKPab 06 50 42.1 +1.5
comp=Z,1.5nm,0.6s,baz=215,slow=5.0,SNR=3.5

CASC 10 06:44:32.2±2.7, 8°.43N×82°.98W, h7km, MD3.7, 1C, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.46**	**38**	*eP*	Pg	06 44 41.9	+0.9
BRU2				*eS*	Sg	06 44 50.9	+3.9
CTCR	**Cotoan**	**0.51**	**25**	*eP*	Pg	06 44 43.3	+1.3
CTCR				*eS*	Sg	06 44 50.1	+1.4
BAR1		**0.87**	**338**	*eP*	Pg	06 44 47.7	-1.2
BAR1				*eS*	Sg	06 44 59.9	-0.4
CNI	**Changuinola**	**1.08**	**25**	*eP*	Pg	06 44 52.4	-0.5
BUS	**Buena Vista**	**1.36**	**325**	*eP*	Pn	06 44 55.3	-2.3
BUS				*eS*	Sb	06 45 17.2	+1.6
URSC	**Urasca**	**1.60**	**330**⇑	*eP*	Pn	06 44 59.8	-1.2
LAJ	**Bijagual**	**1.82**	**322**	*eP*	Pn	06 45 06.1	+2.2
LAJ				*eS*	Sn	06 45 35.7	+8.5
PRS1	**Puriscal**	**2.03**	**320**	*eP*	Pn	06 45 06.1	-0.7
PRS1				*eS*	Sn	06 45 33.8	+1.3
CGA2	**Cerro Gallo 2**	**2.15**	**317**	*eP*	Pn	06 45 08.8	+0.2
CGA2				*eS*	Sn	06 45 38.2	+2.7

*NEIC **10** 07:20:57.1, 16°.75N×94°.59W, h115km, MD3.9(MEX), After MEX.*

MEX 10 07:20:57.1±0.7, 16°.75N×94°.59W, h115km±8km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.45**	**321**	*iP*	Pn	07 21 12.9	-1.3
CMIG				*iS*	Sn	07 21 25.5	-1.6
CMIG	**Matias Romero**	**0.45**	**321**	*iP*	Pn	07 21 12.9	-1.3
CMIG				*iS*	Sn	07 21 25.5	-1.6
TGIG		**1.41**	**88**	*iP*	Pn	07 21 22.3	-0.9
TGIG				*iS*	Sn	07 21 40.7	-2.2
PCIG		**1.67**	**128**	*eP*	Pn	07 21 25.0	-1.3
PCIG				*iS*	Sn	07 21 47.4	-1.2
HUIG	**Huatulco**	**1.75**	**237**	*iP*	Pn	07 21 25.4	-1.9
HUIG				*iS*	Sn	07 21 49.1	-1.1
HUIG	**Huatulco**	**1.75**	**237**	*iP*	Pn	07 21 25.4	-1.9
HUIG				*iS*	Sn	07 21 49.1	-1.1
SCX	**San Cristobal**	**1.87**	**90**	*iP*	Pn	07 21 28.2	-0.5
SCX				*iS*	Sn	07 21 52.4	-0.6
SCX	**San Cristobal**	**1.87**	**90**	*iP*	Pn	07 21 28.2	-0.5
SCX				*iS*	Sn	07 21 52.4	-0.6
OXX	**Oaxaca**	**2.07**	**280**	*eP*	Pn	07 21 30.4	-0.8
OXX				*iS*	Sn	07 21 55.2	-2.1
OXX	**Oaxaca**	**2.07**	**280**	*eP*	Pn	07 21 30.4	-0.8
OXX				*iS*	Sn	07 21 55.2	-2.1
VHO	**Vista Hermosa**	**2.08**	**279**	*iP*	Pn	07 21 30.5	-0.8
VHO				*iS*	Sn	07 21 56.2	-1.3
VHO	**Vista Hermosa**	**2.08**	**279**	*iP*	Pn	07 21 30.5	-0.8
VHO				*iS*	Sn	07 21 56.2	-1.3
THIG		**2.89**	**129**	*iS*	Sn	07 22 14.8	-1.4
UTMO	**Huajuapan**	**3.25**	**290**	*eP*	Pn	07 21 45.1	-1.5
UTMO				*iS*	Sn	07 22 23.2	-1.7

IDC 10 07:25:14.9±9.1, 2°.81S×139°.09E, h0km, mb3.9/2, mb1 4.2/3, mb1mx3.7/14, mbtmp3.9/3, ML3.8/1, Error ellipse: s-maj=377.6km s-min=30.4km az=86.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.65**	**195**	P	Pn	07 29 22.1	-0.2
	0.3nm,0.3s,baz=14,slow=12,SNR=23						
ASAR	**Alice Springs**	**21.33**	**193**	P	P	07 30 03.9	+0.2
	3.5nm,0.8s,baz=20,slow=10,SNR=16						
MKAR	**Makanchi Array**	**70.10**	**322**	P	P	07 36 29.1	+0.1
	0.4nm,0.6s,baz=110,slow=8.0,SNR=5.4						

*BJI **10** 07:49:52.2, 40°.00N×27°.70E, h13km, mB4.9/11, mb4.8/20, Ms4.8/11, Ms7 4.5/11*
*ISCJB **10** 07:49:53.7±0.2, 40°.006N±0°.010×27°.70E±0°.01, h10km±1km, mb4.3/42, MS3.8/26, Error ellipse: s-maj=1.8km s-min=1.5km az=141.1*
*DDA **10** 07:49:53.5, 40°.00N×27°.73E, h27km±1km, Ml4.7*
*ATH **10** 07:49:53.1, 40°.00N×27°.72E, h22km±2km, MD4.5/25, ML4.4*
*ISK **10** 07:49:53.9, 40°.01N×27°.72E, h13km, ML4.9*
*IDC **10** 07:49:53.8±0.7, 40°.05N×27°.58E, h0km, mb4.2/17, mb1 4.2/23, mb1mx4.2/32, mbtmp4.2/23, ML4.2/4, MS3.6/23, Ms1 3.6/23, ms1mx3.5/37, Error ellipse: s-maj=14.5km s-min=11.4km az=18.0*
*NEIC **10** 07:49:53.7, 40°.00N×27°.70E, h13km, mb4.2/24, ML4.9(ISK), ML4.4(ATH), After ISK.*
NEIC Felt at Bursa, Buyukcekmece and Istanbul.
*MOS **10** 07:49:54.0±1.2, 40°.05N×27°.68E, h10km, mb4.5/14, Error ellipse: s-maj=4.0km s-min=2.7km az=110.8*
*SOF **10** 07:49:54.9, 40°.22N×27°.57E, h2km, MD3.9*
*CSEM **10** 07:49:54.8±0.1, 40°.00N×27°.71E, h10km, mb4.4/9, Error ellipse: s-maj=2.0km s-min=1.6km az=46.0*
*THE **10** 07:49:55.3, 39°.98N×27°.66E, h6km±1km, ML5.5/8, Error ellipse: s-maj=1.8km s-min=0.7km az=69.0*
*BEO **10** 07:49:56.9±0.8, 40°.36N×27°.72E, h0km, ML4.6/12*

ISC 10 07:49:54.8±0.2, 39°.994N±0°.009×27°.71E±0°.01, h8km±1km, h14km±1.4km: pP-P, n752, σ1§15/864, mb4.3/42, MS3.8/26, 44C-64D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GONE	**Gonen-Balikesi**	**0.06**	**339**	PG	**Pg**	**07 49 57.1**	**+0.5**
GONE	**Gonen-Balikesi**	**0.06**	**339**	*i* Pg	**Pg**	**07 49 57.1**	**+0.6**
BALY	**Balya**	**0.26**	**196**⇑	*iP*	**Pg**	**07 50 00.3**	**+0.4**
BALY				*iS*	**Sg**	**07 50 04.6**	**+1.1**
BALY	**Balya**	**0.26**	**196**	*iP*	**Pg**	**07 50 00.3**	**+0.3**
BALY				*iS*	**Sg**	**07 50 04.6**	**+1.1**
BALB	**Balikesir**	**0.38**	**160**	PG	**Pg**	**07 50 02.2**	**+0.1**
BALB				*e*SG	**Sg**	**07 50 07.8**	**+0.8**
BALB	**Balikesir**	**0.38**	**160**	*i* Pg	**Pg**	**07 50 02.2**	**+0.1**
BALB				*e*Sg	**Sg**	**07 50 07.8**	**+0.8**
BNT	**Bandirma**	**0.40**	**24**	PG	**Pg**	**07 50 02.1**	**-0.4**
BNT	**Bandirma**	**0.40**	**24**	Pg	**Pg**	**07 50 02.0**	**-0.5**
KRBG	**Karabiga-Canak**	**0.51**	**322**	PG	**Pg**	**07 50 04.3**	**-0.4**
KRBG				*e*SG	**Sg**	**07 50 10.9**	**-0.4**
KRBG	**Karabiga-Canak**	**0.51**	**322**	*i* Pg	**Pg**	**07 50 04.3**	**-0.3**
KRBG				*e*Sg	**Sg**	**07 50 11.0**	**-0.3**
RKY	**Sarkoy-Tekirda**	**0.80**	**330**	PG	**Pg**	**07 50 09.9**	**-0.3**
RKY				*e*SG	**Sg**	**07 50 21.1**	**+0.4**
RKY	**Sarkoy-Tekirda**	**0.80**	**330**	*i* Pg	**Pg**	**07 50 09.9**	**-0.3**
RKY				*e*Sg	**Sg**	**07 50 21.1**	**+0.4**
SART	**Tekirdag**	**0.81**	**330**⇓	*iP*	**Pg**	**07 50 09.9**	**-0.4**
SART				*i* S	**Sg**	**07 50 21.1**	**+0.4**
LPK	**Lapseki**	**0.82**	**298**	PG	**Pg**	**07 50 10.3**	**-0.3**
LPK	**Lapseki**	**0.82**	**298**	Pg	**Pg**	**07 50 10.2**	**-0.4**
LPK	**Lapseki**	**0.82**	**298**	*i* Pg	**Pg**	**07 50 10.3**	**-0.3**
MFT	**Murefte**	**0.86**	**338**	PG	**Pg**	**07 50 10.2**	**-1.1**
MFT	**Murefte**	**0.86**	**338**	Pg	**Pg**	**07 50 10.1**	**-1.2**
MFT	**Murefte**	**0.86**	**338**	*i* Pg	**Pg**	**07 50 10.2**	**-1.1**
TKR	**Tekirdag**	**1.00**	**352**	PG	**Pg**	**07 50 13.7**	**-0.4**
TKR	**Tekirdag**	**1.00**	**352**	Pg	**Pg**	**07 50 13.6**	**-0.5**
TKR	**Tekirdag**	**1.00**	**352**	*i* Pg	**Pg**	**07 50 13.7**	**-0.4**
GELI	**Tayfur-Gelibol**	**1.03**	**293**	PG	**Pg**	**07 50 13.9**	**-0.6**
GELI	**Tayfur-Gelibol**	**1.03**	**293**	*i* Pg	**Pg**	**07 50 13.9**	**-0.7**
AYVA	**Ayvalik**	**1.04**	**229**	P	**Pg**	**07 50 14.2**	**-0.6**
AYVA				S	**Sg**	**07 50 29.7**	**+1.3**
AYVA	**Ayvalik**	**1.04**	**229**⇑	*iP*	**Pg**	**07 50 14.1**	**-0.7**
AYVA				*i* S	**Sg**	**07 50 29.8**	**+1.4**
AYVA	**Ayvalik**	**1.04**	**229**	*i* P	**Pg**	**07 50 14.1**	**-0.7**
AYVA				*i* S	**Sg**	**07 50 29.8**	**+1.4**
ARMT	**Armutlu**	**1.05**	**57**	PG	**Pg**	**07 50 14.0**	**-0.9**
ARMT	**Armutlu**	**1.05**	**57**	Pg	**Pg**	**07 50 13.9**	**-1.0**
ARMT	**Armutlu**	**1.05**	**57**	*i* Pg	**Pg**	**07 50 14.0**	**-0.9**
EZN	**Ezine**	**1.08**	**262**	PN	**Pg**	**07 50 15.2**	**-0.3**
EZN	**Ezine**	**1.08**	**262**	Pg	**Pg**	**07 50 15.1**	**-0.4**
EZN	**Ezine**	**1.08**	**262**	*i* Pn	**Pg**	**07 50 15.2**	**-0.3**
ULDT	**Uludag**	**1.10**	**82**⇑	*iP*	**Pg**	**07 50 14.7**	**-1.2**
ULDT				*i* S	**Sg**	**07 50 28.7**	**-1.6**
ULDT	**Uludag**	**1.10**	**82**	*i* P	**Pg**	**07 50 14.7**	**-1.2**
ULDT				*i* S	**Sg**	**07 50 28.7**	**-1.5**
AKS	**Akhisar**	**1.12**	**176**	PN	**Pg**	**07 50 15.7**	**-0.5**
AKS	**Akhisar**	**1.12**	**176**	*i* Pn	**Pg**	**07 50 15.7**	**-0.5**
CRLT	**Corlu**	**1.13**	**1**	PN	**Pg**	**07 50 16.6**	**0.0**
CRLT	**Corlu**	**1.13**	**1**	Pn	**Pg**	**07 50 16.5**	**0.0**
CRLT	**Corlu**	**1.13**	**1**	*i* Pn	**Pg**	**07 50 16.6**	**+0.1**
ERIK	**Erikli-Kesan**	**1.14**	**307**	PN	**Pg**	**07 50 15.8**	**-0.8**
ERIK	**Erikli-Kesan**	**1.14**	**307**	*i* Pn	**Pg**	**07 50 15.8**	**-0.8**
GEMT	**Gemlik**	**1.21**	**68**	PN	**Pn**	**07 50 16.7**	**-1.3**
GEMT	**Gemlik**	**1.21**	**68**	Pn	**Pn**	**07 50 16.7**	**-1.3**
GEMT	**Gemlik**	**1.21**	**68**	*i* Pn	**Pn**	**07 50 16.7**	**-1.3**
DEMI	**Demirci**	**1.23**	**140**⇓	*iP*	**Pb**	**07 50 17.9**	**-0.3**
DEMI				*i* S	**Sb**	**07 50 34.2**	**+0.1**
DEMI	**Demirci**	**1.23**	**140**	*i* P	**Pb**	**07 50 17.9**	**-0.3**
DEMI				*i* S	**Sb**	**07 50 34.2**	**+0.1**
ELBA	**Catalca**	**1.27**	**25**⇑	*iP*	**Pn**	**07 50 18.0**	**-0.9**
ELBA				*i* S	**Sb**	**07 50 34.5**	**-1.1**
ELBA	**Catalca**	**1.27**	**25**	*i* P	**Pn**	**07 50 18.0**	**-0.9**
ELBA				*i* S	**Sb**	**07 50 34.5**	**-1.1**
SLVT	**Silivri**	**1.29**	**17**	*e*PN	**Pn**	**07 50 18.4**	**-0.7**
SLVT	**Silivri**	**1.29**	**17**	*e*Pn	**Pn**	**07 50 18.4**	**-0.7**
PRK	**Paraskevi**	**1.34**	**237**	P	**Pn**	**07 50 18.9**	**-0.9**
PRK				S	**Sb**	**07 50 37.1**	**-0.3**
PRK	**Paraskevi**	**1.34**	**237**	*e*PN	**Pn**	**07 50 19.0**	**-0.8**
PRK				*e*SN	**Sn**	**07 50 37.3**	**-0.4**
PRK	**Paraskevi**	**1.34**	**237**	P	**Pn**	**07 50 18.9**	**-0.9**
PRK				S	**Sb**	**07 50 37.1**	**-0.3**
CTKS	**Kestanelik-??a**	**1.38**	**26**	*e*PN	**Pn**	**07 50 19.8**	**-0.5**
CTKS	**Kestanelik-??a**	**1.38**	**26**	*e*Pn	**Pn**	**07 50 19.8**	**-0.5**
YLV	**Yalova**	**1.39**	**65**	*e*PN	**Pn**	**07 50 19.1**	**-1.4**
YLV	**Yalova**	**1.39**	**65**	Pn	**Pn**	**07 50 18.5**	**-2.0**
YLV	**Yalova**	**1.39**	**65**	*e*Pn	**Pn**	**07 50 19.1**	**-1.4**
ENEZ	**Enez**	**1.40**	**302**	*e*PN	**Pn**	**07 50 20.3**	**-0.3**
ENEZ	**Enez**	**1.40**	**302**	*e*Pn	**Pn**	**07 50 20.3**	**-0.3**
GADA	**Gvkgeada**	**1.41**	**279**	*e*PN	**Pn**	**07 50 19.9**	**-0.7**
GADA	**Gvkgeada**	**1.41**	**279**	Pn	**Pn**	**07 50 20.4**	**-0.3**
GADA	**Gvkgeada**	**1.41**	**279**	*e*Pn	**Pn**	**07 50 19.9**	**-0.8**
BGKT	**Bogazkoy**	**1.44**	**34**	*e*PN	**Pn**	**07 50 19.6**	**-1.5**
BGKT	**Bogazkoy**	**1.44**	**34**	Pn	**Pn**	**07 50 19.5**	**-1.6**
BGKT	**Bogazkoy**	**1.44**	**34**	*e*Pn	**Pn**	**07 50 19.6**	**-1.5**
ISK	**Istanbul-Kandi**	**1.48**	**43**	*e*PN	**Pn**	**07 50 20.7**	**-1.0**
ISK	**Istanbul-Kandi**	**1.48**	**43**	Pn	**Pn**	**07 50 19.9**	**-1.8**
ISK	**Istanbul-Kandi**	**1.48**	**43**	P	**Pn**	**07 50 19.9**	**-1.8**
ISK	**Istanbul-Kandi**	**1.48**	**43**	*e*Pn	**Pn**	**07 50 20.7**	**-1.0**
CTYL	**Yal??k??y-??at**	**1.54**	**16**	*e*PN	**Pn**	**07 50 20.7**	**-1.8**
CTYL	**Yal??k??y-??at**	**1.54**	**16**	*e*Pn	**Pn**	**07 50 20.7**	**-1.9**
ALN	**Alexandroupoli**	**1.56**	**306**	P	**Pn**	**07 50 22.0**	**-0.8**
ALN				S	**Sn**	**07 50 42.6**	**-0.6**
ALN	**Alexandroupoli**	**1.56**	**306**	*e*PN	**Pn**	**07 50 22.1**	**-0.7**
ALN				*e*SN	**Sn**	**07 50 42.5**	**-0.7**
ALN	**Alexandroupoli**	**1.56**	**306**	P	**Pn**	**07 50 22.0**	**-0.8**
ALN				S	**Sn**	**07 50 42.6**	**-0.6**
ALN	**Alexandroupoli**	**1.56**	**306**	*e*Pn	**Pn**	**07 50 22.1**	**-0.7**
ALN				*e*Sn	**Sn**	**07 50 42.5**	**-0.7**
ADVT	**Abdulvahap**	**1.61**	**74**	*e*PN	**Pn**	**07 50 22.4**	**-1.1**
ADVT	**Abdulvahap**	**1.61**	**74**	Pn	**Pn**	**07 50 22.4**	**-1.1**
ADVT	**Abdulvahap**	**1.61**	**74**	*e*Pn	**Pn**	**07 50 22.4**	**-1.1**
KLYT	**Kilyos**	**1.61**	**38**	*e*PN	**Pn**	**07 50 22.3**	**-1.2**
KLYT	**Kilyos**	**1.61**	**38**	Pn	**Pn**	**07 50 22.3**	**-1.2**
KLYT	**Kilyos**	**1.61**	**38**	*e*Pn	**Pn**	**07 50 22.3**	**-1.2**
KDAG	**Bornova**	**1.63**	**192**⇑	*iP*	**Pn**	**07 50 22.4**	**-1.3**
KDAG				*i* S	**Sn**	**07 50 43.3**	**-1.5**
KDAG	**Bornova**	**1.63**	**192**	*i* P	**Pn**	**07 50 22.4**	**-1.3**
KDAG				*i* S	**Sn**	**07 50 43.3**	**-1.5**
IZM	**Izmir**	**1.63**	**193**	*e*PN	**Pn**	**07 50 24.0**	**+0.2**
IZM	**Izmir**	**1.63**	**193**	*e*Pn	**Pn**	**07 50 24.0**	**+0.2**
IZM	**Izmir**	**1.63**	**193**	P	**Pn**	**07 50 24.7**	**+0.9**
SIGR	**SIGRI**	**1.63**	**242**	P	**Pn**	**07 50 23.2**	**-0.6**
SIGR				S	**Sn**	**07 50 43.6**	**-1.4**
SIGR	**SIGRI**	**1.63**	**242**	P	**Pn**	**07 50 23.2**	**-0.6**
SIGR				S	**Sn**	**07 50 43.6**	**-1.4**
SIGR	**SIGRI**	**1.63**	**242**	P	**Pn**	**07 50 23.2**	**-0.6**
SIGR				S	**Sn**	**07 50 43.6**	**-1.4**
GDZ	**Gediz**	**1.64**	**123**	P	**Pn**	**07 50 23.8**	**-0.1**
GDZ				S	**Sn**	**07 50 46.1**	**+1.0**
GDZ	**Gediz**	**1.64**	**123**⇓	*iP*	**Pn**	**07 50 23.8**	**-0.1**
GDZ				*i* S	**Sn**	**07 50 46.1**	**+1.0**
GDZ	**Gediz**	**1.64**	**123**	*i* P	**Pn**	**07 50 23.8**	**-0.1**
GDZ				*i* S	**Sn**	**07 50 46.1**	**+1.0**
CAVI	**Cavuskoy**	**1.65**	**82**	*e*PN	**Pn**	**07 50 23.4**	**-0.6**
CAVI	**Cavuskoy**	**1.65**	**82**	*e*Pn	**Pn**	**07 50 23.4**	**-0.6**
KULA	**Kula-Manisa**	**1.65**	**153**	*e*PN	**Pn**	**07 50 23.7**	**-0.3**
KULA	**Kula-Manisa**	**1.65**	**153**	*e*Pn	**Pn**	**07 50 23.7**	**-0.3**
BLCB	**Balcova**	**1.69**	**198**	*e*PN	**Pn**	**07 50 23.5**	**-1.0**
BLCB	**Balcova**	**1.69**	**198**	P	**Pn**	**07 50 23.7**	**-0.8**
BLCB				S	**Sn**	**07 50 46.7**	**+0.4**
BLCB	**Balcova**	**1.69**	**198**	P	**Pn**	**07 50 23.7**	**-0.8**
BLCB				S	**Sn**	**07 50 46.7**	**+0.4**
BLCB	**Balcova**	**1.69**	**198**	P	**Pn**	**07 50 23.7**	**-0.8**
BLCB				S	**Sn**	**07 50 46.7**	**+0.4**
HRT	**Hereke**	**1.71**	**60**	*e*PN	**Pn**	**07 50 23.3**	**-1.5**
HRT	**Hereke**	**1.71**	**60**	Pn	**Pn**	**07 50 23.3**	**-1.5**
HRT	**Hereke**	**1.71**	**60**	*e*Pn	**Pn**	**07 50 23.3**	**-1.5**
URLA	**Izmir**	**1.85**	**208**⇑	*iP*	**Pn**	**07 50 25.4**	**-1.4**
URLA				*i* S	**Sg**	**07 50 55.3**	**+1.1**
SILT	**Sile**	**1.87**	**51**	*e*PN	**Pn**	**07 50 26.2**	**-0.8**
SILT	**Sile**	**1.87**	**51**	Pn	**Pn**	**07 50 25.9**	**-1.2**
SILT	**Sile**	**1.87**	**51**	*e*Pn	**Pn**	**07 50 26.2**	**-0.9**
LIA	**Limnos Island**	**1.95**	**268**	P	**Pn**	**07 50 27.6**	**-0.5**
LIA				S	**Sn**	**07 50 51.3**	**-1.4**
LIA	**Limnos Island**	**1.95**	**268**	*e*PN	**Pn**	**07 50 27.8**	**-0.3**
LIA				*e*SN	**Sn**	**07 50 52.1**	**-0.6**
LIA	**Limnos Island**	**1.95**	**268**	P	**Pn**	**07 50 27.6**	**-0.5**
LIA				S	**Sn**	**07 50 51.3**	**-1.4**
LIA	**Limnos Island**	**1.95**	**268**	P	**Pn**	**07 50 27.6**	**-0.5**
LIA				S	**Sn**	**07 50 51.3**	**-1.4**
LIA				*e*Sn	**Sn**	**07 50 52.1**	**-0.6**
EDRB	**Edirne**	**1.99**	**339**	*e*PN	**Pn**	**07 50 28.0**	**-0.7**
EDRB	**Edirne**	**1.99**	**339**	Pn	**Pn**	**07 50 27.7**	**-1.0**
EDRB	**Edirne**	**1.99**	**339**	*e*Pn	**Pn**	**07 50 28.0**	**-0.7**
GPA	**Golpazari**	**2.01**	**81**	*e*PN	**Pn**	**07 50 28.5**	**-0.5**
GPA	**Golpazari**	**2.01**	**81**	Pn	**Pn**	**07 50 29.2**	**+0.2**
GPA	**Golpazari**	**2.01**	**81**	*e*Pn	**Pn**	**07 50 28.5**	**-0.5**
GPA	**Golpazari**	**2.01**	**81**	P	**Pn**	**07 50 29.2**	**+0.2**
CHOS	**Chios island**	**2.06**	**219**	*e*PB	**Pn**	**07 50 28.5

ISP	Isparta	3.08 134	⇓iP		Pn	07 50 43.4	-0.3
ISP	Isparta	3.08 134	S		Sg	07 51 36.1	+2.3
PAIG	Paliouri	3.10 270	P		Pn	07 50 42.9	-1.1
PAIG			S		Sn	07 51 21.4	+0.2
PAIG	Paliouri	3.10 270	P		Pn	07 50 42.9	-1.1
PAIG			S		Sn	07 51 21.4	+0.2
PAIG	Paliouri	3.10 270	P		Pn	07 50 42.9	-1.1
PAIG			S		Sn	07 51 21.4	+0.2
PLD	Plovdiv	3.10 314	⇓iPn		Pn	07 50 43.6	-0.4
PLD			eSn		Sn	07 51 19.2	-2.0
PLD	Plovdiv	3.10 314	P		Pn	07 50 43.4	-0.6
PLD	Plovdiv	3.10 314	P		Pn	07 50 43.4	-0.6
PLD	Plovdiv	3.10 314	⇓iPn		Pn	07 50 43.6	-0.4
PLD			eSn		Sn	07 51 19.2	-2.0
ROIA	ROIAK	3.11 355	P		Pn	07 50 43.8	-0.2
GOLH	Golhisar	3.11 152	⇑iP		Pn	07 50 44.6	+0.5
GOLH			i S		Sg	07 51 35.0	+0.4
KDZE	Karadeniz Ereo	3.13 64	ePN		Pn	07 50 43.8	-0.6
KDZE	Karadeniz Ereo	3.13 64	ePn		Pn	07 50 43.8	-0.5
GLHS	Glhisar (BURDU	3.16 153	ePN		Pn	07 50 45.0	+0.2
GLHS	Glhisar (BURDU	3.16 153	Pn		Pn	07 50 43.7	-1.1
GLHS	Glhisar (BURDU	3.16 153	ePn		Pn	07 50 45.0	+0.2
PRD	Provadia	3.21 356	P		Pn	07 50 44.4	-1.1
PRD	Provadia	3.21 356	P		Pn	07 50 44.4	-1.1
NVR	Nevrokopi	3.23 296	P		Pn	07 50 45.1	-0.6
NVR	Nevrokopi	3.23 296	P		Pn	07 50 45.1	-0.6
DAT	Datca	3.26 182	ePN		Pn	07 50 46.1	0.0
DAT	Datca	3.26 182	ePn		Pn	07 50 46.1	-0.1
PLG	Polygyros	3.29 278	P		Pn	07 50 45.8	-0.8
PLG	Polygyros	3.29 278	P		Pn	07 50 45.8	-0.8
APE	Apeiranthos	3.38 211	ePN		Pn	07 50 48.6	+0.7
APE	Apeiranthos	3.38 211	P		Pn	07 50 46.8	-1.1
APE	Apeiranthos	3.38 211	P		Pn	07 50 46.8	-1.1
APE	Apeiranthos	3.38 211	⇓iP		Pn	07 50 46.7	-1.2
APE	Apeiranthos	3.38 211	⇓iP		Pn	07 50 46.7	-1.2
APE	Apeiranthos	3.38 211	ePn		Pn	07 50 48.6	+0.7
BCK	Bucak	3.38 137	ePN		Pn	07 50 48.6	+0.7
BCK	Bucak	3.38 137	Pn		Pn	07 50 48.5	+0.6
BCK	Bucak	3.38 137	ePn		Pn	07 50 48.6	+0.7
NIS1	Nisyros Isl.	3.41 187	P		Pn	07 50 48.6	+0.4
NIS1	Nisyros Isl.	3.41 187	P		Pn	07 50 48.6	+0.4
KIZT	Kizilcal	3.41 108	ePN		Pn	07 50 48.5	+0.2
KIZT	Kizilcal	3.41 108	Pn		Pn	07 50 48.4	+0.1
KIZT	Kizilcal	3.41 108	ePn		Pn	07 50 48.5	+0.2
SOH	Sokhos	3.43 285	P		Pn	07 50 47.7	-0.8
SOH	Sokhos	3.43 285	ePN		Pn	07 50 48.1	-0.4
SOH			eSN		Sn	07 51 28.5	-0.8
SOH	Sokhos	3.43 285	P		Pn	07 50 47.7	-0.8
SOH	Sokhos	3.43 285	P		Pn	07 50 47.7	-0.8
SOH	Sokhos	3.43 285	ePn		Pn	07 50 48.1	-0.4
SOH			eSn		Sn	07 51 28.5	-0.8
NEO	Neokhori	3.53 260	ePn		Pn	07 50 48.8	-1.1
NEO			eSn		Sn	07 51 29.8	-2.0
NEO	Neokhori	3.53 260	ePN		Pn	07 50 48.8	-1.1
NEO			eSN		Sn	07 51 29.8	-2.0
NEO	Neokhori	3.53 260	ePn		Pn	07 50 48.8	-1.1
NEO			eSn		Sn	07 51 29.8	-2.0
XOR	Xorichti	3.54 261	P		Pn	07 50 49.0	-1.1
XOR	Xorichti	3.54 261	P		Pn	07 50 49.0	-1.1
XOR	Xorichti	3.54 261	P		Pn	07 50 49.0	-1.1
PTL	Penteli	3.57 238	ePn		Pn	07 50 50.3	-0.1
PTL			eSn		Sn	07 51 31.8	-1.0
PTL	Penteli	3.57 238	ePN		Pn	07 50 50.3	-0.1
PTL			eSN		Sn	07 51 31.8	-1.0
PTL	Penteli	3.57 238	ePn		Pn	07 50 50.3	-0.1
PTL			eSn		Sn	07 51 31.8	-1.0
HORT	Hortiatis	3.58 281	P		Pn	07 50 50.5	0.0
HORT	Hortiatis	3.58 281	P		Pn	07 50 50.5	0.0
HORT	Hortiatis	3.58 281	P		Pn	07 50 50.5	0.0
SUTC	Sutluce-Ispart	3.59 133	ePN		Pn	07 50 50.8	+0.1
SUTC	Sutluce-Ispart	3.59 133	ePn		Pn	07 50 50.8	0.0
ELL	Elmali	3.67 151	ePN		Pn	07 50 52.4	+0.6
ELL	Elmali	3.67 151	Pn		Pn	07 50 54.3	+2.5
ELL	Elmali	3.67 151	ePn		Pn	07 50 52.4	+0.6
ELL	Elmali	3.67 151	P		Pn	07 50 54.3	+2.5
PGB	Panagyurishte	3.70 315	P		Pn	07 50 51.6	-0.5
PGB	Panagyurishte	3.70 315	P		Pn	07 50 51.6	-0.5
PSN	Preselentsi	3.70 5	P		Pn	07 50 51.1	-1.1
PSN	Preselentsi	3.70 5	P		Pn	07 50 51.1	-1.1
ATH	Athens Observa	3.71 238	eP		Pn	07 50 51.7	-0.7
ATH	Athens Observa	3.71 238	ePN		Pn	07 50 51.7	-0.7
ATH	Athens Observa	3.71 238	ePn		Pn	07 50 51.7	-0.7
VLY	Voula,Athens	3.73 236	ePn		Pn	07 50 51.8	-0.8
VLY	Voula,Athens	3.73 236	ePN		Pn	07 50 51.8	-0.8
VLY	Voula,Athens	3.73 236	ePn		Pn	07 50 51.8	-0.8
ARG	Arkhangelos	3.79 175	P		Pn	07 50 52.8	-0.6
ARG	Arkhangelos	3.79 175	ePN		Pn	07 50 52.4	-1.0
ARG			eSN		Sn	07 51 36.9	-1.2
ARG	Arkhangelos	3.79 175	P		Pn	07 50 52.8	-0.6
ARG	Arkhangelos	3.79 175	ePn		Pn	07 50 52.4	-1.0
ARG	Arkhangelos	3.79 175	P		Pn	07 50 52.8	-0.6
ARG			eSn		Sn	07 51 36.9	-1.2
ANTB	Antalya	3.86 142	ePN		Pn	07 50 55.1	+0.8
ANTB	Antalya	3.86 142	ePn		Pn	07 50 55.1	+0.7
ATAL	Atalanti	3.86 252	P		Pn	07 50 54.5	+0.1
ATAL	Atalanti	3.86 252	P		Pn	07 50 54.5	+0.1
LOD	Lodumlu	3.88 90	ePN		Pn	07 50 55.1	+0.4
LOD	Lodumlu	3.88 90	ePn		Pn	07 50 55.1	+0.4
LKR	Lokris	3.89 251	ePn		Pn	07 50 54.5	-0.4
LKR	Lokris	3.89 251	ePN		Pn	07 50 54.5	-0.4
LKR	Lokris	3.89 251	ePn		Pn	07 50 54.5	-0.4
KKB	Krupnik	3.98 300	P		Pn	07 50 55.7	-0.3
KKB	Krupnik	3.98 300	P		Pn	07 50 55.7	-0.3
SAFT	Safranbolu	3.98 70	ePN		Pn	07 50 56.3	+0.2
SAFT	Safranbolu	3.98 70	Pn		Pn	07 50 58.2	+2.1
SAFT	Safranbolu	3.98 70	ePn		Pn	07 50 56.3	+0.2
LADK	Ladik-KONYA	4.04 115	ePN		Pn	07 50 57.1	+0.2
LADK	Ladik-KONYA	4.04 115	Pn		Pn	07 50 56.3	-0.5
LADK	Ladik-KONYA	4.04 115	ePn		Pn	07 50 57.1	+0.3
ZIMR		4.06 335	⇑P		Pn	07 50 57.4	+0.3
ZIMR		4.06 335	⇑iP		Pn	07 50 57.3	+0.2
VAY	Valandovo	4.13 290	⇓iPn		Pn	07 50 57.6	-0.5
VAY	Valandovo	4.13 290	P		Pn	07 50 57.8	-0.3
VAY	Valandovo	4.13 290	ePn		Pn	07 50 58.2	+0.1
VAY			eSn		Sg	07 52 03.2	-4.1
VAY	Valandovo	4.13 290	P		Pn	07 50 57.8	-0.3
VAY	Valandovo	4.13 290	⇓iPn		Pn	07 50 57.6	-0.5
KONT	Konya--Tatoy	4.16 118	ePN		Pn	07 50 59.4	+0.9
KONT	Konya--Tatoy	4.16 118	Pn		Pn	07 50 59.3	+0.8
KONT	Konya--Tatoy	4.16 118	ePn		Pn	07 50 59.4	+0.9
LTK	Loutraki	4.19 243	P		Pn	07 50 58.6	-0.3
LTK	Loutraki	4.19 243	P		Pn	07 50 58.6	-0.3
VTS	Vitosha	4.27 309	ePn		Pn	07 51 00.3	+0.2
VTS			eSn		Sn	07 51 47.9	-2.2
VTS	Vitosha	4.27 309	⇓P		Pn	07 51 00.1	+0.1
VTS	Vitosha	4.27 309	P		Pn	07 51 00.2	+0.1
VTS	Vitosha	4.27 309	P		Pn	07 51 00.2	+0.1
VTS	Vitosha	4.27 309	P		Pn	07 51 00.1	+0.1
VTS	Vitosha	4.27 309	⇓iP		Pn	07 51 00.1	+0.1
VTS	Vitosha	4.27 309	⇓iP		Pn	07 51 00.1	+0.1
VTS			eSn		Sn	07 51 47.9	-2.2
AGG	Agios Georgios	4.28 259	P		Pn	07 51 00.0	-0.1
AGG	Agios Georgios	4.28 259	P		Pn	07 51 00.0	-0.1
AGG	Agios Georgios	4.28 259	P		Pn	07 51 00.0	-0.1
DID	Didima	4.29 236	P		Pn	07 51 00.1	-0.2
DID	Didima	4.29 236	P		Pn	07 51 00.1	-0.2
THL	Klokotos Trika	4.41 266	ePN		Pn	07 51 01.6	-0.4
THL			eSN		Sn	07 51 51.4	-2.1
THL	Klokotos Trika	4.41 266	P		Pn	07 51 01.1	-0.9
THL	Klokotos Trika	4.41 266	P		Pn	07 51 01.1	-0.9
THL	Klokotos Trika	4.41 266	ePn		Pn	07 51 01.6	-0.4
THL			eSn		Sn	07 51 51.4	-2.1
KARP	Karpathos	4.46 186	ePn		Pn	07 51 02.2	-0.5
KARP			eSn		Sn	07 51 52.7	-2.0
KARP	Karpathos	4.46 186	ePN		Pn	07 51 02.2	-0.5
KARP			eSN		Sn	07 51 52.7	-2.0
KARP	Karpathos	4.46 186	ePn		Pn	07 51 02.2	-0.5
KARP			eSn		Sn	07 51 52.7	-2.0
MPEP	Malo Peshtene	4.49 320	P		Pn	07 51 02.7	-0.3
TIRR	Tirgusor	4.49 6	⇓P		Pn	07 51 02.2	-0.9
TIRR	Tirgusor	4.49 6	ePn		Pn	07 51 02.5	-0.5
TIRR	Tirgusor	4.49 6	⇓iP		Pn	07 51 02.2	-0.9
TIRR	Tirgusor	4.49 6	⇓iP		Pn	07 51 02.2	-0.9
TIRR	Tirgusor	4.49 6	ePn		Pn	07 51 02.5	-0.6
TIRR			S		Sn	07 51 51.3	-4.2
CANT	Cankiri	4.56 80	ePN		Pn	07 51 04.9	+0.9
CANT	Cankiri	4.56 80	Pn		Pn	07 51 04.8	+0.8
KZN	Kozani	4.56 276	ePn		Pn	07 51 04.2	+0.1
KZN			eSn		Sn	07 51 55.2	-2.1
KZN	Kozani	4.56 276	ePN		Pn	07 51 04.2	+0.1
KZN			eSN		Sn	07 51 55.2	-2.1
KZN	Kozani	4.56 276	ePn		Pn	07 51 04.2	+0.1
KZN			eSn		Sn	07 51 55.2	-2.1
BRTR	Keskin Array B	4.57 91	Pn		Pn	07 51 03.6	-0.5
4.3nm,0.3s,baz=257,slow=11,SNR=75							
BRTR			Pg		Pg	07 51 19.8	-2.5
11nm,0.3s,baz=287,slow=14,SNR=48							
BRTR			Sn		Sn	07 51 55.3	-2.1
16nm,0.3s,baz=353,slow=21,SNR=4.7							
BRTR			Lg			07 52 21.1	
29nm,0.3s,baz=269,slow=22,SNR=20							
BRTR	Keskin Array B	4.57 91	P		Pn	07 51 03.7	-0.4
BRTR						07 51 55.3	
BRTR	Keskin Array B	4.57 91	P		Pn	07 51 03.7	-0.4
BRTR	Keskin Array B	4.57 91	Pg		Pg	07 51 19.8	-2.5
BRTR			S		Sn	07 51 55.3	-2.1
INCR	INCERC-Sediu C	4.59 346	⇑iP		Pn	07 51 07.0	+2.6
INCR	INCERC-Sediu C	4.59 346	⇑iP		Pn	07 51 07.0	+2.6
AMRR	Amara	4.62 357	⇑P		Pn	07 51 10.9	+6.1
GUR	Goura	4.66 246	P		Pn	07 51 05.5	+0.1
GUR	Goura	4.66 246	P		Pn	07 51 05.5	+0.1
TRIZ	Trizonia	4.67 251	P		Pn	07 51 05.5	-0.1
TRIZ	Trizonia	4.67 251	P		Pn	07 51 05.5	-0.1
EVR	Evrytania	4.70 259	ePn		Pn	07 51 06.5	+0.6
EVR	Evrytania	4.70 259	ePN		Pn	07 51 06.5	+0.6
EVR	Evrytania	4.70 259	ePn		Pn	07 51 06.5	+0.6
HDMB	Hadim	4.81 127	ePN		Pn	07 51 08.4	+0.9
HDMB	Hadim	4.81 127	Pn		Pn	07 51 09.7	+2.2
HDMB	Hadim	4.81 127	ePn		Pn	07 51 08.4	+0.9
SULT	Sultanhani-AKS	4.86 110	ePN		Pn	07 51 09.7	+1.6
SULT	Sultanhani-AKS	4.86 110	Pn		Pn	07 51 09.6	+1.5
SULT	Sultanhani-AKS	4.86 110	ePn		Pn	07 51 09.7	+1.6
FNA	Florina	4.90 281	P		Pn	07 51 08.6	-0.1
FNA	Florina	4.90 281	P		Pn	07 51 08.6	-0.1
FNA	Florina	4.90 281	P		Pn	07 51 08.6	-0.1
VLX	Vlachokerasia	4.93 240	P		Pn	07 51 09.0	-0.1
VLX	Vlachokerasia	4.93 240	P		Pn	07 51 09.0	-0.1
BIA	Bitola	4.98 284	ePn		Pn	07 51 12.1	+2.4
BIA	Bitola	4.98 284	P		Pn	07 51 12.4	+2.7
BIA	Bitola	4.98 284	ePn		Pn	07 51 12.0	+2.2
BIA	Bitola	4.98 284	ePn		Pn	07 51 12.1	+2.4
BIA	Bitola	4.98 284	P		Pn	07 51 12.4	+2.7
VLI	Veliai	4.98 230	ePn		Pn	07 51 08.9	-0.9
VLI	Veliai	4.98 230	ePN		Pn	07 51 08.9	-0.9
VLI	Veliai	4.98 230	ePn		Pn	07 51 08.9	-0.9
ZKR	Zakros	5.01 194	ePn		Pn	07 51 10.5	+0.2
ZKR	Zakros	5.01 194	ePN		Pn	07 51 10.5	+0.2
ZKR	Zakros	5.01 194	ePn		Pn	07 51 10.5	+0.2
ZAPS	Zavoj	5.02 312	⇓iPn		Pn	07 51 10.8	+0.4
KRUS	Krusevo	5.10 288	⇑iPn		Pn	07 51 11.7	+0.2
LAST	Lasithi	5.14 201	ePn		Pn	07 51 12.7	+0.7
LAST	Lasithi	5.14 201	ePN		Pn	07 51 12.7	+0.7
LAST	Lasithi	5.14 201	ePn		Pn	07 51 12.7	+0.7
SKO	Skopje	5.14 295	ePn		Pn	07 51 12.2	+0.2
SKO	Skopje	5.14 295	P		Pn	07 51 16.1	+4.1
SKO	Skopje	5.14 295	P		Pn	07 51 16.1	+4.1
CFR	Carcaliu	5.19 3	P		Pn	07 51 12.3	-0.4
CFR	Carcaliu	5.19 3	⇓P		Pn	07 51 11.8	-0.9
CFR	Carcaliu	5.19 3	⇑iP		Pn	07 51 11.9	-0.8
CFR	Carcaliu	5.19 3	⇑iP		Pn	07 51 11.9	-0.8
ISR	Istrita	5.19 351	⇑P		Pn	07 51 13.9	+1.2
ISR	Istrita	5.19 351	⇑iP		Pn	07 51 13.9	+1.2
ISR	Istrita	5.19 351	⇑iP		Pn	07 51 13.9	+1.2
IDI	Anoyia	5.20 206	ePn		Pn	07 51 12.5	-0.4
IDI	Anoyia	5.20 206	ePN		Pn	07 51 12.5	-0.4
IDI	Anoyia	5.20 206	ePn		Pn	07 51 12.5	-0.4
TLCR		5.25 9	⇓P		Pn	07 51 14.0	+0.5
TLCR		5.25 9	⇑P		Pn	07 51 12.4	-1.1
TLCR		5.25 9	⇓iP		Pn	07 51 14.0	+0.5
TLCR		5.25 9	⇓iP		Pn	07 51 14.0	+0.5
BARS	Barje	5.25 304	⇓iPn		Pn	07 51 13.7	+0.1
BARS			eSn		Sn	07 52 11.0	-3.3
BARS	Barje	5.25 304	⇓iPn		Pn	07 51 13.7	+0.1
BARS			eSn		Sn	07 52 11.0	-3.3
KBN	Korca	5.33 279	ePN		Pn	07 51 15.9	+1.3
KBN			i SN		Sn	07 51 56.4	-20
KBN	Korca	5.33 279	ePn		Pn	07 51 15.9	+1.3
KBN			i Sn		Sn	07 51 56.4	-20
ITM	Ithomi	5.33 240	ePn		Pn	07 51 15.7	+1.1
ITM	Ithomi	5.33 240	ePN		Pn	07 51 15.7	+1.1
ITM	Ithomi	5.33 240	ePn		Pn	07 51 15.7	+1.1
XRY	Khrisi	5.36 198	ePn		Pn	07 51 14.9	-0.1
XRY	Khrisi	5.36 198	ePN		Pn	07 51 14.9	-0.1
XRY	Khrisi	5.36 198	ePn		Pn	07 51 14.9	-0.1
OHR	Ohrid	5.38 284	⇑iPn		Pn	07 51 16.0	+0.7
OHR	Ohrid	5.38 284	P		Pn	07 51 16.3	+1.0
GRER		5.41 354	P		Pn	07 51 17.4	+1.7
GRER		5.41 354	⇑iP		Pn	07 51 17.4	+1.7
GRER		5.41 354	S		Sg	07 52 49.4	+1.0
GRER		5.41 354	⇑iP		Pn	07 51 17.4	+1.7
SIVA	Sivas	5.48 206	ePn		Pn	07 51 17.8	+1.2
SIVA	Sivas	5.48 206	ePN		Pn	07 51 17.8	+1.2
KARN	Karanos	5.48 214	ePN		Pn	07 51 16.7	0.0
LKD	Levkas	5.62 259	ePn		Pn	07 51 20.5	+1.9
LKD	Levkas	5.62 259	ePN		Pn	07 51 18.9	+0.3
MLR	Muntele Rosu	5.65 347	⇑P		Pn	07 51 20.3	+1.4
MLR	Muntele Rosu	5.65 347	⇓iP		Pn	07 51 19.7	+0.8
MLR	Muntele Rosu	5.65 347	S		Sg	07 52 57.3	+1.3
MLR	Muntele Rosu	5.65 347	⇓iP		Pn	07 51 19.7	+0.8
BOLS	Boljevac	5.76 314	⇓iPn		Pn	07 51 19.6	-0.8
VOIR		5.78 341	⇓P		Pn	07 51 20.6	-0.2
VOIR		5.78 341	⇓iP		Pn	07 51 20.8	0.0
VOIR		5.78 341	⇓iP		Pn	07 51 20.8	0.0
VLS	Valsamata	5.83 254	eP		Pn	07 51 23.7	+2.2
VLS	Valsamata	5.83 254	ePN		Pn	07 51 23.7	+2.2
PLOR	Plostina	5.91 353	P		Pn	07 51 23.4	+0.9
PLOR	Plostina	5.91 353	⇑iP		Pn	07 51 23.3	+0.8
PLOR	Plostina	5.91 353	⇑iP		Pn	07 51 23.3	+0.8
VRI	Vrincioaia	5.91 353	P		Pn	07 51 23.2	+0.6
VRI	Vrincioaia	5.91 353	⇑P		Pn	07 51 22.8	+0.2
VRI	Vrincioaia	5.91 353	⇑iP		Pn	07 51 22.8	+0.2
VRI	Vrincioaia	5.91 353	S		Sg	07 53 06.3	+1.7
VRI	Vrincioaia	5.91 353	⇑iP		Pn	07 51 22.8	+0.2
SRN	Sarande	5.93 271	ePN		Pn	07 51 30.3	+7.4
SRN			i SN		Sn	07 52 10.4	-20
SRN	Sarande	5.93 271	ePn		Pn	07 51 30.3	+7.5
SRN			i Sn		Sn	07 52 10.4	-21
IKL	Isikli	6.02 127	ePN		Pn	07 51 26.0	+1.9
IKL	Isikli	6.02 127	ePn		Pn	07 51 26.0	+1.9
DJES	Djerdap	6.05 322	⇓iPn		Pn	07 51 22.7	-1.8
DJES	Djerdap	6.05 322	P		Pn	07 51 22.8	-1.7
TIR	Tirane	6.12 285	ePn		Pn	07 51 27.9	+2.5
TIR	Tirane	6.12 285	P		Pn	07 51 27.8	+2.4
TIR			pmax		pmax		
comp=Z,94nm,0.8s							
TIR	Tirane	6.12 285	Pn		Pn	07 51 27.8	+2.4
comp=Z,94nm,0.8s							
BCI	Bajram Curri	6.24 295	ePN		Pn	07 51 26.3	-0.7
BCI			i SN		Sn	07 52 19.2	-19
BCI	Bajram Curri	6.24 295	ePn		Pn	07 51 26.3	-0.7
BCI			i Sn		Sn	07 52 19.2	-19
PUK	Puka	6.26 292	ePN		Pn	07 51 30.4	+3.1
PUK			i SN		Sn	07 52 16.2	-23
PUK	Puka	6.26 292	ePn		Pn	07 51 30.4	+3.1
PUK			i Sn		Sn	07 52 16.2	-23
SEV	Sevastopol'	6.34 42	⇓iP		Pn	07 51 27.0	-1.4
SEV			eS		Sn	07 52 34.0	-7.0
SVIS	Svilajnac	6.45 314	ePn		Pn	07 51 29.4	-0.5
LEOM	Leova	6.49 3	P		Pn	07 51 30.5	0.0
GZR	Gura Zlata	6.51 328	⇓P		Pn	07 51 30.0	-0.7
GZR	Gura Zlata	6.51 328	⇓iP		Pn	07 51 30.0	-0.7
GZR	Gura Zlata	6.51 328	S		Sn	07 52 38.3	-6.8
GZR	Gura Zlata	6.51 328	⇓iP		Pn	07 51 30.0	-0.7
GRUS	Gruza	6.51 309	⇓iPn		Pn	07 51 29.5	-1.3
GRUS			eSn		Sn	07 52 40.4	-4.7
GRUS	Gruza	6.51 309	P		Pn	07 51 30.2	-0.6
YAL	Yalta	6.56 45	⇓eP		Pn	07 51 30.4	-1.0
YAL			eS		Sn	07 52 41.6	-4.8
TESR		6.56 354	⇓P		Pn	07 51 31.4	-0.1
TESR		6.56 354	⇑iP		Pn	07 51 31.5	0.0
TESR		6.56 354	⇑iP		Pn	07 51 31.5	0.0
LFK	Lefkose	6.59 134	ePN		Pn	07 51 33.6	+1.6
LFK	Lefkose	6.59 134	Pn		Pn	07 51 32.2	+0.3
LFK	Lefkose	6.59 134	ePn		Pn	07 51 33.6	+1.7
MDB	Medias	6.61 339	⇓P		Pn	07 51 33.4	+1.2
MDB	Medias	6.61 339	⇓iP		Pn	07 51 33.4	+1.2
MDB	Medias	6.61 339	⇓iP		Pn	07 51 33.4	+1.2
CSS	Prodhromos	6.72 137	ePn		Pn	07 51 30.3	-3.4
comp=Z,69nm,1.0s							
ALU	Alushta	6.82 44	eP		Pn	07 51 33.6	-1.4
ALU			eS		Sn	07 52 45.7	-7.1
DEV	Deva	6.86 331	⇓P		Pn	07 51 36.2	+0.6
DEV	Deva	6.86 331	⇓iP		Pn	07 51 36.2	+0.6
DEV	Deva	6.86 331	⇓iP		Pn	07 51 36.2	+0.6
TRUS	Trudelj	6.88 310	⇓iPn		Pn	07 51 33.8	-2.1
KIS	Kishinev	7.05 6	eP		Pn	07 51 37.0	-1.1
KIS			i S		Sn	07 52 57.0	-1.4
KIS			LRM			07 55 47.0	
comp=Z,1μm,13.0s							
KIS	Kishinev	7.05 6	eP		Pn	07 51 37.0	-1.1
KIS			i S		Sn	07 52 57.0	-1.4
KIS			MLR		MLR		
comp=Z,500nm,12.0s							
KIS			MLR		MLR		
comp=E,1μm,13.0s							
KIS			MLR		MLR		
comp=Z,500nm,12.0s							
KIS	Kishinev	7.05 6	eP		Pn	07 51 37.0	-1.1
KIS			i S		Sn	07 52 57.0	-1.4
DIVS	Divibare	7.06 308	⇓iPn		Pn	07 51 37.5	-0.8
DIVS			eSn		Sn	07 52 52.7	-6.0
BZS	Buzias	7.19 323	⇓iPn		Pn	07 51 38.0	-2.1
BZS	Buzias	7.19 323	⇓P		Pn	07 51 38.5	-1.6
BZS	Buzias	7.19 323	P		Pn	07 51 38.3	-1.7
BZS	Buzias	7.19 323	⇓iP		Pn	07 51 38.5	-1.6
BZS	Buzias	7.19 323	⇓iP		Pn	07 51 38.5	-1.6
SUDU	Sudak	7.28 45	eP		Pn	07 51 40.2	-1.1
SUDU			eS		Sn	07 52 57.7	-6.4
BBLS	Lazići	7.30 305	⇓iPn		Pn	07 51 41.7	0.0
BBLS			eSn		Sn	07 52 59.2	-5.5
BBLS	Lazići	7.30 305	P		Pn	07 51 42.6	+0.9
UPM	Unac-Piva	7.33 299	P		Pn	07 51 43.0	+0.9
UPM	Unac-Piva	7.33 299	P		Pn	07 51 43.0	+0.9
BRY	Bratogost	7.47 296	P		Pn	07 51 47.0	+3.0
DRGR		7.71 333	⇓P		Pn	07 51 47.6	+0.4
DRGR		7.71 333	P		Pn	07 51 46.8	-0.5
DRGR		7.71 333	⇓iP		Pn	07 51 47.6	+0.4
DRGR		7.71 333	⇓iP		Pn	07 51 47.6	+0.4
FRGS	Fruska Gora	7.79 314	ePn		Pn	07 51 47.4	-0.9
BURAR	Bucovina Array	7.83 348	⇓P		Pn	07 51 49.8	+0.9
BURAR	Bucovina Array	7.83 348	⇓iP		Pn	07 51 49.8	+0.9
BURAR	Bucovina Array	7.83 348	⇓iP		Pn	07 51 49.8	+0.9
BMR	Baia Mare	8.26 340	⇓P		Pn	07 51 57.2	+2.4
BMR	Baia Mare	8.26 340	⇑iP		Pn	07 51 56.8	+2.0
BMR	Baia Mare	8.26 340	⇑iP		Pn	07 51 56.8	+2.0
ANN	Anapa	8.65 53	eP		Pn	07 51 55.9	-4.2
ANN			e			07 53 30.9	
ANN			pmax		pmax		
comp=N,14nm,0.7s							
ANN			pmax		pmax		
comp=E,7.0nm,0.7s							
ANN			pmax		pmax		
comp=Z,11nm,0.7s							
ANN			pmax		pmax		
comp=N,31nm,0.6s							
ANN			pmax		pmax		
comp=E,17nm,0.6s							
ANN			pmax		pmax		
comp=Z,25n

comp=Z,54nm,11.0s
KIV Kislovodsk 11.83 66 Pn **Pn 07 52 52.4 +8.8**
KIV Kislovodsk 11.83 66 Pn **Pn 07 52 52.4 +8.8**
EIL Elat 11.89 148 Pn **Pn 07 52 45.5 +0.9**
comp=Z,1.0nm,0.3s,baz=343,slow=14,SNR=5.5
EIL Elat 11.89 148 Pn **Pn 07 52 45.5 +0.9**
EIL Elat 11.89 148 Pn **Pn 07 52 45.5 +1.0**
OKC Ostrava-Krasne 11.94 329 AMS AMS 07 58 10.0
comp=Z,700nm,9.7s
VRAC Vranov 12.21 323 Pn **Pn 07 52 47.8 -1.1**
comp=Z,0.4nm,0.3s,baz=137,slow=11,SNR=4.4
VRAC LR LR 07 57 50.5
comp=Z,152nm,21.1s,baz=346,slow=39
VRAC Vranov 12.21 323 Pn **Pn 07 52 47.8 -1.0**
ZEI Tsey 12.47 72 *e*P **Pn 07 52 55.3 +2.8**
ZEI pmax pmax
comp=Z,9.0nm,0.5s
TREC Trest 12.72 321 AMS AMS 07 59 40.0
comp=Z,400nm,10.1s
GNI Garni 13.05 84 LR LR 07 58 08.1
comp=Z,401nm,20.1s,baz=283,slow=38
GNI Garni 13.05 84 *e*P **Pn 07 53 06.4 +6.0**
GNI pmax pmax
comp=Z,11nm,0.8s
GNI Garni 13.05 84 *e*Pn **Pn 07 53 06.4 +6.1**
comp=Z,11nm,0.8s
GNI Garni 13.05 84 *e*Pn **Pn 07 53 06.4 +6.0**
comp=Z,11nm,0.8s
DPC Dobruska-Polom 13.09 326 *e*P **Pn 07 53 00.8 -0.1**
DPC AMS AMS 07 59 10.0
comp=Z,500nm,11.3s
DPC Dobruska-Polom 13.09 326 *e*P **Pn 07 53 00.8 -0.1**
UPC Upice 13.34 326 *e*x x 07 53 15.0
KHC Kasperske Hory 13.58 317 *e*P **Pn 07 53 06.3 -1.3**
KHC AMS AMS 07 59 00.0
comp=Z,400nm,11.8s
KHC Kasperske Hory 13.58 317 *e*P **Pn 07 53 06.3 -1.3**
PRU Pruhonice 13.64 321 AMS AMS 07 59 20.0
comp=Z,400nm,18.0s
WET Wettzell 13.96 316 *e*P **Pn 07 53 13.7 +1.0**
comp=Z,14nm,0.9s
PVCC Panska Ves 14.00 323 AMS AMS 08 00 20.0
comp=Z,400nm,9.8s
DAVOX Davos/Dischmat 14.62 303 Pn **Pn 07 53 23.4 +1.7**
comp=Z,0.7nm,0.3s,baz=132,slow=13,SNR=6.0
DAVOX Davos/Dischmat 14.62 303 Pn **Pn 07 53 23.4 +1.7**
NKC Novy Kostel 14.84 319 AMS AMS 08 01 40.0
comp=Z,400nm,12.1s
NACGM Naroch 14.93 358 *e* **Pn 07 53 21.0 -4.9**
TANN Tannenbergstha 14.94 319 *e*P **Pn 07 53 31.8 +5.7**
GUNZ Gunzen 14.97 319 *e*P **Pn 07 53 31.2 +4.6**
KEST Kesra 15.12 259 Pn **Pn 07 53 29.9 +1.4**
comp=Z,0.1nm,0.3s,baz=36,slow=4.5,SNR=4.6
KEST LR LR 07 59 53.2
comp=Z,62nm,18.5s,baz=293,slow=40
KEST Kesra 15.12 259 *e*Pn **Pn 07 53 29.9 +1.4**
KEST Kesra 15.12 259 *e*Pn **Pn 07 53 30.0 +1.5**
GRF Grafenberg Arr 15.16 315 *e*P **Pn 07 53 33.4 +4.3**
comp=Z,38nm,1.4s
GRF Grafenberg Arr 15.16 315 *e*P **Pn 07 53 33.4 +4.3**
GRF pmax pmax
comp=Z,38nm,1.4s
CLL Collm 15.26 323 *e*P **Pn 07 53 30.0 -0.3**
CLL pmax pmax
comp=Z,6.0nm,0.9s
CLL Collm 15.26 323 *e*P **Pn 07 53 30.0 -0.3**
comp=Z,6.0nm,0.9s
CLL *e* 07 53 38.0
CLL Collm 15.26 323 *e*P **Pn 07 53 30.0 -0.3**
comp=Z,6.0nm,0.9s
CLL *e*PP 07 53 38.0
CLL *e*PPP 07 53 46.0
CLL *e*(SS) 07 56 51.0
CLL Collm 15.26 323 *e*P **Pn 07 53 30.0 -0.3**
MBDF Montbardon 16.17 294 *e*P **Pn 07 53 43.5 +1.2**
comp=Z,69nm,1.1s
MBDF Montbardon 16.17 294 *e*P **Pn 07 53 43.5 +1.2**
MBDF pmax pmax
comp=Z,34nm,1.1s
MBDF Montbardon 16.17 294 *e*P **Pn 07 53 43.5 +1.2**
comp=Z,34nm,1.1s
MBDF Montbardon 16.17 294 *e*P **Pn 07 53 43.5 +1.2**
comp=Z,34nm,1.1s
BFO Black Forest 16.18 307 *e*P **Pn 07 53 45.7 +3.3**
comp=Z,46nm,1.4s
BFO Black Forest 16.18 307 *e*P **Pn 07 53 44.3 +1.9**
BFO pmax pmax
comp=Z,1.0nm,0.6s
BFO Black Forest 16.18 307 *e*Pn **Pn 07 53 44.3 +1.9**
comp=Z,0.9nm,0.6s
BFO Black Forest 16.18 307 *e*Pn **Pn 07 53 44.3 +1.9**
comp=Z,0.9nm,0.6s
LMR La Mourre 16.19 289 *e*P **Pn 07 53 42.5 0.0**
LMR La Mourre 16.19 289 *e*P **Pn 07 53 42.5 0.0**
OBN Obninsk 16.24 18⇓ *e*P **Pn 07 53 44.2 +1.1**
OBN pmax pmax
comp=Z,33nm,1.4s
OBN MLR MLR
comp=Z,300nm,18.0s
OBN Obninsk 16.24 18 *e*Pn **Pn 07 53 44.6 +1.5**
OBN Obninsk 16.24 18 *e*Pn **Pn 07 53 44.6 +1.5**
BNI Bardonecchia 16.30 295 *e*P **Pn 07 53 43.9 +0.1**
BNI pmax pmax
comp=Z,9.0nm,0.8s
BNI Bardonecchia 16.30 295 *e*Pn **Pn 07 53 43.9 +0.1**
comp=Z,9.2nm,0.8s
BNI Bardonecchia 16.30 295 *e*Pn **Pn 07 53 43.9 +0.1**
comp=Z,9.2nm,0.8s
LPG La Plagne 16.33 297 *e*P **Pn 07 53 45.9 +1.6**
LPG La Plagne 16.33 297 *e*P **Pn 07 53 45.9 +1.6**
LPL La Plagne 16.35 297 *e*P **Pn 07 53 45.8 +1.3**
LPL La Plagne 16.35 297 *e*P **Pn 07 53 45.8 +1.3**
ECH Echery 16.86 306 *e*P **Pn 07 53 52.6 +1.6**
ECH pmax pmax
comp=Z,22nm,1.4s
ECH Echery 16.86 306 *e*Pn **Pn 07 53 52.5 +1.6**
comp=Z,22nm,1.4s
ECH Echery 16.86 306 *e*Pn **Pn 07 53 52.5 +1.5**
comp=Z,22nm,1.4s
CDF Champ du Feu 16.86 307 *e*P **Pn 07 53 54.6 +3.6**
comp=Z,149nm,1.6s
CDF Champ du Feu 16.86 307 *e*P **Pn 07 53 54.6 +3.6**
CDF pmax pmax
comp=Z,75nm,1.6s
CDF Champ du Feu 16.86 307 *e*P **Pn 07 53 54.6 +3.6**
comp=Z,75nm,1.6s
CDF Champ du Feu 16.86 307 *e*P **Pn 07 53 54.6 +3.6**
comp=Z,75nm,1.6s
HINF Hinteralfeld 16.91 304 *e*P **Pn 07 53 53.7 +2.1**
HINF Hinteralfeld 16.91 304 *e*P **Pn 07 53 53.7 +2.1**
CABF La Chapelle 17.05 300 *e*P **Pn 07 53 54.2 +0.9**
comp=Z,34nm,1.0s
CABF La Chapelle 17.05 300 *e*P **Pn 07 53 54.2 +0.9**
CABF pmax pmax
comp=Z,17nm,1.0s
CABF La Chapelle 17.05 300 *e*P **Pn 07 53 54.2 +0.9**
comp=Z,17nm,1.0s
CABF La Chapelle 17.05 300 *e*P **Pn 07 53 54.2 +0.9**
comp=Z,17nm,1.0s
MOS Moscow 17.07 19 *e*P **Pn 07 53 54.4 +0.8**
MOS *e*S **Sn 07 57 07.9 +4.6**
HAU Haudompre 17.29 305 *e*P **Pn 07 53 58.8 +2.4**
comp=Z,53nm,1.3s
HAU *e*MLR MLR
comp=Z,78nm,21.2s
HAU Haudompre 17.29 305 *e*P **Pn 07 53 58.8 +2.4**
HAU pmax pmax
comp=Z,27nm,1.3s
HAU Haudompre 17.29 305 *e*P **Pn 07 53 58.8 +2.4**
comp=Z,27nm,1.3s
HAU Haudompre 17.29 305 *e*P **Pn 07 53 58.8 +2.4**
comp=Z,27nm,1.3s
VIVF Saint-Julien-l 17.67 293 *e*P **Pn 07 54 00.3 -0.8**
VIVF Saint-Julien-l 17.67 293 *e*P **Pn 07 54 00.3 -0.8**
LASF Ste Croix 18.16 291 *e*P **Pn 07 54 08.9 +1.7**
comp=Z,22nm,1.1s
LASF Ste Croix 18.16 291 *e*P **Pn 07 54 08.9 +1.7**
comp=Z,11nm,1.1s
VSU Vasula 18.50 358⇑ *i*P **Pn 07 54 14.4 +3.2**
MEM Membach 18.53 312 P **Pn 07 54 13.7 +2.1**
comp=Z,7.5nm,1.2s
MEM Membach 18.53 312 P **Pn 07 54 13.7 +2.1**
comp=Z,7.5nm,1.2s
SMF Signal de Mont 18.56 299 *e*P **Pn 07 54 13.4 +1.4**
comp=Z,25nm,1.1s
SMF Signal de Mont 18.56 299 *e*P **Pn 07 54 13.4 +1.4**
SMF pmax pmax
comp=Z,13nm,1.1s
SMF Signal de Mont 18.56 299 *e*P **Pn 07 54 13.4 +1.4**
comp=Z,13nm,1.1s
SMF Signal de Mont 18.56 299 *e*P **Pn 07 54 13.4 +1.4**
comp=Z,13nm,1.1s
HGN Heimansgroeve 18.64 312 *e*P **Pn 07 54 14.2 +1.2**
comp=Z,23nm,0.9s
HGN Heimansgroeve 18.64 312 *e*S **Sn 07 57 52.4 +11**
LOR Lormes 18.69 301 *e*P **Pn 07 54 15.1 +1.5**
LOR *e*MLR MLR
comp=Z,181nm,19.2s
LOR Lormes 18.69 301 *e*P **Pn 07 54 15.1 +1.5**
BCLA Clavier 18.85 311 P **Pn 07 54 17.8 +2.3**
SSF Saint Saulge 18.88 300 *e*P **Pn 07 54 17.2 +1.3**
comp=Z,20nm,0.8s
SSF Saint Saulge 18.88 300 *e*P **Pn 07 54 17.2 +1.3**
SSF pmax pmax
comp=Z,10.0nm,0.8s
SSF Saint Saulge 18.88 300 *e*P **Pn 07 54 17.2 +1.3**
comp=Z,9.8nm,0.8s
SSF Saint Saulge 18.88 300 *e*P **Pn 07 54 17.2 +1.3**
comp=Z,9.8nm,0.8s
AVF Avril sur Loir 18.92 299 *e*P **Pn 07 54 16.2 -0.2**
comp=Z,17nm,1.0s
AVF Avril sur Loir 18.92 299 *e*P **Pn 07 54 16.2 -0.2**
AVF pmax pmax
comp=Z,9.0nm,1.0s
AVF Avril sur Loir 18.92 299 *e*P **Pn 07 54 16.2 -0.2**
comp=Z,8.7nm,1.0s
AVF Avril sur Loir 18.92 299 *e*P **Pn 07 54 16.2 -0.2**
comp=Z,8.7nm,1.0s
BGF Bois d'Agland 19.21 298 *e*P **Pn 07 54 21.2 +1.3**
comp=Z,35nm,0.9s
BGF Bois d'Agland 19.21 298 *e*P **Pn 07 54 21.2 +1.3**
BGF pmax pmax
comp=Z,18nm,0.9s
BGF Bois d'Agland 19.21 298 *e*P **Pn 07 54 21.2 +1.3**
comp=Z,18nm,0.9s
BGF Bois d'Agland 19.21 298 *e*P **Pn 07 54 21.2 +1.3**
comp=Z,18nm,0.9s
MTLF Montolieu 19.32 288 *e*P **Pn 07 54 20.2 -1.0**
comp=Z,17nm,1.1s
MTLF Montolieu 19.32 288 *e*P **Pn 07 54 20.2 -1.0**
MTLF pmax pmax
comp=Z,8.0nm,1.1s
MTLF Montolieu 19.32 288 *e*P **Pn 07 54 20.2 -1.0**
comp=Z,8.4nm,1.1s
MTLF Montolieu 19.32 288 *e*P **Pn 07 54 20.2 -1.0**
comp=Z,8.4nm,1.1s
TCF Toulx Ste Croi 19.60 297 *e*P **Pn 07 54 24.5 -0.1**
comp=Z,113nm,1.8s
TCF Toulx Ste Croi 19.60 297 *e*P **Pn 07 54 24.5 -0.1**
TCF pmax pmax
comp=Z,57nm,1.8s
TCF Toulx Ste Croi 19.60 297 *e*P **Pn 07 54 24.5 -0.1**
comp=Z,57nm,1.8s
TCF Toulx Ste Croi 19.60 297 *e*P **Pn 07 54 24.5 -0.1**
comp=Z,57nm,1.8s
RJF Les Rejaudoux 19.94 294 *e*P **Pn 07 54 27.7 -1.0**
RJF *e*MLR MLR
comp=Z,206nm,17.5s
RJF Les Rejaudoux 19.94 294 *e*P **Pn 07 54 27.7 -1.0**
LFF La Frestale 20.46 293 *e*P **P 07 54 33.5 +0.9**
LFF La Frestale 20.46 293 *e*P **P 07 54 33.5 +0.9**
EPF Esparros 20.69 287 *e*P **P 07 54 35.7 +0.6**
comp=Z,11nm,0.7s
EPF Esparros 20.69 287 *e*P **P 07 54 35.7 +0.6**
EPF pmax pmax
comp=Z,5.0nm,0.7s
EPF Esparros 20.69 287 *e*P **P 07 54 35.7 +0.6**
comp=Z,5.3nm,0.7s
EPF Esparros 20.69 287 *e*P **P 07 54 35.7 +0.6**
comp=Z,5.3nm,0.7s
MFF Saint Martin d 21.26 297 *e*P **P 07 54 43.1 +1.9**
MFF Saint Martin d 21.26 297 *e*P **P 07 54 43.1 +1.9**
ETSF Etsaut 21.35 287 *e*P **P 07 54 41.5 -0.8**
comp=Z,16nm,0.8s,mb4.1
ETSF Etsaut 21.35 287 *e*P **P 07 54 41.5 -0.8**
ETSF pmax pmax
comp=Z,8.0nm,0.8s,mb4.1
ETSF Etsaut 21.35 287 *e*P **P 07 54 41.5 -0.8**
comp=Z,8.1nm,0.8s,mb4.1
ETSF Etsaut 21.35 287 *e*P **P 07 54 41.5 -0.8**
comp=Z,8.1nm,0.8s,mb4.1
FINES FINESS Array B 21.50 358 P **P 07 54 42.6 -1.1**
comp=Z,9.9nm,0.9s,mb4.2,baz=157,slow=10,SNR=11
FINES LR LR 08 03 18.7
comp=Z,287nm,20.5s,MS3.7,baz=159,slow=38
FINES FINESS Array B 21.50 358 P **P 07 54 42.6 -1.1**
SJPF Ste Jean 21.83 288 *e*P **P 07 54 46.2 -1.2**
comp=Z,26nm,1.0s,mb4.3
SJPF Ste Jean 21.83 288 *e*P **P 07 54 46.2 -1.2**
SJPF pmax pmax
comp=Z,13nm,1.0s,mb4.3
SJPF Ste Jean 21.83 288 *e*P **P 07 54 46.2 -1.2**
comp=Z,13nm,1.0s,mb4.3
SJPF Ste Jean 21.83 288 *e*P **P 07 54 46.2 -1.2**
comp=Z,13nm,1.0s,mb4.3
FLN La Foliniere 21.88 303 *e*P **P 07 54 50.1 +2.2**
FLN *e*MLR MLR
comp=Z,136nm,17.0s,MS3.1
FLN La Foliniere 21.88 303 *e*P **P 07 54 50.1 +2.2**
FLN LR LR
comp=Z,140nm,17.0s,MS3.4
FLN La Foliniere 21.88 303 *e*P **P 07 54 50.1 +2.2**
HFS Hagfors 21.99 341 P **P 07 54 50.1 +1.2**
comp=Z,11nm,0.8s,mb4.3,baz=146,slow=11,SNR=18
HFS LR LR 08 03 56.0
comp=Z,277nm,19.6s,MS3.7,baz=150,slow=38
KAF Kangasniemi 22.16 358 *e*P **P 07 54 49.8 -1.0**
KAF pmax pmax
comp=Z,9.0nm,1.0s,mb4.2
KAF Kangasniemi 22.16 358 *e*P **P 07 54 49.8 -1.0**
comp=Z,8.9nm,1.0s,mb4.2
KAF Kangasniemi 22.16 358 *e*p **P 07 54 49.8 -1.0**
comp=Z,8.9nm,1.0s,mb4.2
KAF Kangasniemi 22.16 358 *e*P **P 07 54 49.8 -1.0**
comp=Z,8.9nm,1.0s,mb4.2
KONO Kongsberg 22.74 336 *e*P **P 07 54 54.4 -2.5**
KONO pmax pmax
comp=Z,18nm,0.8s,mb4.5
KONO Kongsberg 22.74 336 *e*P **P 07 54 54.4 -2.5**
comp=Z,18nm,0.8s,mb4.6
JOF Joensuu 23.06 4 *e*P **P 07 54 59.6 -0.7**
JOF Joensuu 23.06 4 *e*p **P 07 54 59.6 -0.7**
comp=Z,17nm,1.3s,mb4.3
JOF Joensuu 23.06 4 *e*P **P 07 54 59.6 -0.7**
comp=Z,17nm,1.3s,mb4.3
NB2 NORSAR Subarra 23.40 340 P **P 07 55 01.4 -2.5**
comp=Z,6.2nm,1.0s,mb4.0,baz=145,slow=10
NB2 NORSAR Subarra 23.40 340 P **P 07 55 01.4 -2.5**
comp=Z,6.2nm,1.0s,mb4.0,SNR=4.3
NOA NORSAR Array B 23.40 340 P **P 07 55 01.6 -2.4**
comp=Z,3.0nm,0.7s,mb3.8,baz=161,slow=11,SNR=9.7
NOA LR LR 08 04 51.2
comp=Z,109nm,18.9s,MS3.3,baz=150,slow=38
AKTK Aktyubinsk 23.61 54 P **P 07 55 06.2 +0.1**
AKTK LR LR 08 09 09.0
AKTO Aktyubinsk 23.61 54 P **P 07 55 06.2 +0.1**
comp=Z,6.0nm,0.8s,mb4.1,baz=256,slow=11,SNR=19
AKTO LR LR 08 09 09.0
comp=Z,114nm,18.1s,MS3.4,baz=67,slow=49
ESDC Sonseca Array 24.27 280 P **P 07 55 13.2 +1.0**
comp=Z,0.3nm,0.3s,mb3.2,baz=64,slow=12,SNR=1.3
ABKAR Akbulak array 24.58 57 *e*P **P 07 55 15.5 +0.6**
comp=Z,3.3nm,0.7s,mb4.0
TAM Tamanrasset 25.44 234 *e*P **P 07 55 25.0 +1.9**
TAM pmax pmax
comp=Z,8.0nm,1.0s,mb4.2
TAM Tamanrasset 25.44 234 *e*P **P 07 55 25.0 +2.0**
comp=Z,8.2nm,1.0s,mb4.2
EKA Eskdalemuir Ar 25.56 317 P **P 07 55 23.1 -0.8**
comp=Z,5.9nm,0.9s,mb4.1,baz=123,slow=10,SNR=4.2
ARU Arti 26.01 41*c i*P **P 07 55 31.7 +3.8**
ARU *e* 07 56 08.9
ARU SS 08 01 05.5
ARU pmax pmax
comp=Z,12nm,1.7s,mb4.2
SOKR Solikamsk 26.77 33*c i*P **P 07 55 37.6 +2.8**
SOKR pmax pmax
comp=Z,8.0nm,0.6s,mb4.4
SOKR MLR MLR
comp=Z,200nm,20.0s,MS3.7
MDT Midelt 26.88 265 P **P 07 55 36.6 +0.5**
comp=Z,1.7nm,0.8s,mb3.6,baz=58,slow=9.5,SNR=2.4
ARCES ARCESS Array B 29.63 358 LR LR 08 08 08.7
comp=Z,287nm,18.6s,MS3.9,baz=136,slow=37
BRVK Borovoye 31.58 51⇑ *i*P **P 07 56 21.3 +3.7**
BRVK pmax pmax
comp=Z,6.0nm,1.0s,mb4.4
BRVK Borovoye 31.58 51 *e*P **P 07 56 17.4 -0.1**
comp=Z,6.9nm,1.0s,mb4.4
BRVK Borovoye 31.58 51 *e*P **P 07 56 17.4 -0.2**
comp=Z,6.9nm,1.0s,mb4.4
BVAR Borovoye Array 31.64 51 P **P 07 56 20.6 +2.6**
comp=Z,2.4nm,0.9s,mb4.0,baz=260,slow=5.9,SNR=12
BVAR Borovoye Array 31.64 51 P **P 07 56 20.6 +2.5**
AAK Ala-Archa 34.89 70 P **P 07 56 50.6 +4.0**
comp=Z,1.8nm,0.4s,mb4.3,baz=212,slow=2.4,SNR=3.6
FRU Bishkek 34.94 70 *e*P **P 07 56 49.0 +2.0**
FRU Bishkek 34.94 70 *e*P **P 07 56 49.0 +2.0**
JMIC Jan Mayen 36.11 341 LR LR 08 11 45.4
comp=Z,144nm,18.8s,MS3.8,baz=87,slow=36
KURK Kurchatov 36.67 56 P **P 07 57 01.3 -0.4**
comp=Z,3.3nm,0.8s,mb4.2,baz=287,slow=9.7,SNR=7.4
KURK LR LR 08 15 59.8
comp=Z,90nm,18.7s,MS3.6,baz=240,slow=43
KURK Kurchatov 36.67 56⇑ *e*P **P 07 57 04.9 +3.2**
KURK pmax pmax
comp=Z,9.0nm,1.2s,mb4.5
KURK Kurchatov 36.67 56 *e*P **P 07 57 02.5 +0.8**
comp=Z,8.6nm,1.1s,mb4.5
KURK Kurchatov 36.67 56 *e*P **P 07 57 02.5 +0.8**
comp=Z,8.6nm,1.1s,mb4.5
SPITS Spitsbergen Ar 38.58 356 LR LR 08 13 40.4
comp=Z,105nm,18.7s,MS3.7,baz=295,slow=37
NVS Novosibirsk 39.31 49 *e*P **P 07 57 24.4 +0.5**
NVS *e* 07 59 37.3
NVS pmax pmax
comp=Z,16nm,0.9s,mb4.8
NVS pmax pmax
comp=N,7.0nm,1.2s
NVS pmax pmax
comp=E,9.0nm,0.9s
NVS Novosibirsk 39.31 49 *e*P **P 07 57 24.4 +0.5**
comp=E,7.0nm,1.2s,mb4.3
MKAR Makanchi Array 39.55 62 P **P 07 57 26.5 +0.5**
comp=E,3.5nm,0.6s,mb4.2,baz=279,slow=7.6,SNR=26
MKAR LR LR 08 16 35.1
comp=E,75nm,18.4s,MS3.6,baz=268,slow=40
MKAR Makanchi Array 39.55 62 P **P 07 57 26.5 +0.5**
MKAR LR LR 08 16 35.1
ZALV Zalesovo Beam 40.27 50 P **P 07 57 33.3 +1.3**
comp=E,6.0nm,0.6s,mb4.5,baz=268,slow=9.1,SNR=15
ZALV LR LR 08 17 52.3
comp=E,28nm,18.8s,MS3.1,baz=20,slow=42
WMQ Urumqi 43.95 65 *e*P **P 07 58 02.0 -0.1**
WMQ pP pP 07 58 06.5 +1.9
WMQ sP sP 07 58 09.0 +3.4
WMQ PP PP 07 59 46.0 +1.7
WMQ pmax pmax
comp=Z,12nm,0.6s,mb4.8
WMQ pmax pmax
comp=Z,110nm,4.6s
WMQ LR LR
comp=N,130nm,24.0s
WMQ LR LR
comp=Z,90nm,18.8s
DBIC Dimbokro 44.20 230 P **P 07 58 03.3 -1.1**
comp=Z,5.7nm,0.9s,mb4.3,baz=180,slow=17,SNR=3.8
DBIC Dimbokro 44.20 230 P **P 07 58 03.3 -1.1**
TLY Talaya 51.89 50 *e*P **P 07 59 07.9 +4.4**
TLY pmax pmax
comp=Z,4.0nm,1.6s,mb4.1
TLY MLR MLR
comp=Z,101nm,21.0s,MS3.8
GTA Gaotai 54.01 66 *e*P **P 07 59 23.0 +3.7**
GTA pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
SONM Songino Array 54.93 54 P **P 07 59 29.0 +3.1**
comp=Z,1.7nm,0.9s,mb4.1,baz=266,slow=5.2,SNR=5.5
SONM LR LR 08 29 32.2
comp=Z,85nm,18.4s,MS3.9,baz=78,slow=43
LZH Lanzhou 58.36 67 *e*P **P 07 59 50.6 +0.1**
LZH pP pP 07 59 53.8 +0.8
LZH sP sP 07 59 55.3 +1.3
LZH *e*PP PP 08 02 01.5 +2.1
LZH pmax pmax
comp=Z,19nm,1.3s,mb5.0
LZH pmax pmax
comp=Z,52nm,6.2s
LZH LR LR
comp=N,340nm,14.7s
LZH LR LR
comp=Z,500nm,17.9s,MS4.7
CD2 Chengdu 60.89 73 P **P 08 00 07.0 -1.0**
CD2 pP pP 08 00 11.6 +1.0
CD2 sP sP 08 00 13.0 +1.5
CD2 PP PP 08 02 23.1 +1.2
CD2 S **S 08 08 21.6 -4.5**
CD2 SS SS 08 12 20.5 -4.4
CD2 pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
CD2 pmax pmax
comp=Z,100nm,5.7s
CD2 LR LR
comp=N,160nm,7.7s
CD2 LR LR
comp=Z,190nm,7.1s
HHC Hu-ho-hao-te 61.35 59 *e*P **P 08 00 09.1 -1.8**
HHC PcP PcP 08 00 52.0 -1.2
HHC PP PP 08 02 25.0 -0.7
HHC ScP ScP 08 04 51.5 -3.6
HHC PcS PcS 08 04 53.7 -2.3
HHC S **S 08 08 26.0 -5.6**
HHC ScS ScS 08 09 56.3 -6.3
HHC SS SS 08 12 28.0 -3.5
HHC pmax pmax
comp=Z,11nm,0.6s,mb5.2
HHC pmax pmax
comp=Z,69nm,6.8s
HHC LR LR
comp=N,110nm,16.9s,MS4.3
HHC LR LR
comp=E,140nm,16.2s,MS4.3
HHC LR LR
comp=Z,98nm,16.4s,MS4.0
CMAR Chiang Mai Arr 64.15 87 LR LR 08 34 38.4
comp=Z,28nm,18.6s,MS3.5,baz=315,slow=42
BJI Beijing 64.78 58 P **P 08 00 32.4 -1.4**
BJI S **S 08 09 13.7 -1.0**
BJI pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
BJI LR LR
comp=N,130nm,25.8s
BJI LR LR
comp=E,86nm,17.9s
BJI LR LR
comp=Z,56nm,30.9s
GYA Guiyang 65.44 75 P **P 08 00 39.2 +1.0**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
BILL Bilibino 67.88 16 *e*P **P 08 00 56.3 +3.1**
BILL *e*SS SS 08 14 19.3 +7.3
BILL pmax pmax
comp=Z,3.0nm,1.3s,mb4.2
BILL MLR MLR
comp=Z,200nm,20.0s,MS4.3
BOSA Boshof 68.29 182 P **P 08 00 56.2 +0.1**
comp=Z,5.0nm,1.0s,mb4.5,baz=269,slow=3.2,SNR=3.3
BOSA LR LR 08 30 55.9
comp=Z,57nm,19.2s,MS3.8,baz=174,slow=36
BOSA Boshof 68.29 182 P **P 08 00 56.2 +0.1**
SEY Seymchan 68.33 24⇑ *i*P **P 08 00 59.4 +3.4**
WHN Wuhan 68.74 68 P **P 08 00 53.8 -5.4**
MDJ Mudanjiang 70.42 48 P **P 08 01 06.4 -2.9**
MDJ pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
MDJ pmax pmax
comp=Z,33nm,4.9s
HABR Khabarovsk 71.01 42 *e*P **P 08 01 13.6 +0.8**
HABR *e*SP sP 08 01 17.9 +1.5
HABR *e* 08 03 51.5
HABR *e*S S 08 10 31.8 +3.0
HABR *e* 08 11 18.0
HABR *e*SS SS 08 15 06.7 +5.8
HABR pmax pmax
comp=E,14nm,0.8s
HABR pmax pmax
comp=Z,28nm,1.3s,mb5.0
HABR pmax pmax
comp=N,16nm,0.9s

HABR MLR MLR
comp=Z,66nm,23.0s,MS3.8
HABR Khabarovsk 71.01 42 *e*P **P 08 01 13.6 +0.8**
comp=Z,16nm,0.9s,mb5.0
NJ2 Nanjing 71.03 64 *e*P **P 08 01 16.0 +2.8**
NJ2 pmax pmax
comp=Z,40nm,0.5s
YKA Yellowknife Ar 73.46 343 P **P 08 01 26.3 -0.9**
comp=Z,0.6nm,0.7s,mb3.6,baz=30,slow=5.0,SNR=2.6
YKA Yellowknife Ar 73.46 343 P **P 08 01 26.3 -0.9**
YKA pmax pmax
comp=Z,1.0nm,0.7s
KSRS Korea Array 73.78 55 P **P 08 01 30.9 +1.3**
comp=Z,4.3nm,1.0s,mb4.3,baz=313,slow=4.9,SNR=14
KSRS LR LR 08 37 59.7
comp=Z,68nm,18.6s,MS4.0,baz=312,slow=39
KSRS Korea Array 73.78 55 P **P 08 01 30.9 +1.3**
KSRS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
KSRS MLR MLR
comp=Z,68nm,18.6s,MS4.0
DAWY Dawson 75.78 354 *e*P **P 08 01 41.0 +0.4**
YSS Yuzh-Sakhalins 75.90 40 *e*P **P 08 01 44.2 +2.5**
FFC Flin Flon 76.30 333 *i*P **P 08 01 49.6 +5.8**
ULM Lac du Bonnet 77.41 327 LR LR 08 37 18.5
comp=Z,72nm,18.7s,MS4.0,baz=75,slow=37
PETK Petropavlovsk- 77.70 28 LR LR 08 38 17.8
comp=Z,54nm,19.7s,MS3.9,baz=134,slow=37
RC01 Rabbit Creek A 79.25 359 *e*P **P 08 02 01.6 +1.5**
comp=Z,4.9nm,0.9s,mb4.4
MJAR Matsushiro Arr 80.63 50 P **P 08 02 10.8 +2.8**
comp=Z,0.7nm,0.5s,mb3.8,baz=295,slow=6.3,SNR=5.2
MJAR LR LR 08 42 03.1
comp=Z,65nm,20.5s,MS4.0,baz=250,slow=39
MJAR Matsushiro Arr 80.63 50 P **P 08 02 10.8 +2.8**
MJAR pmax pmax
comp=Z,1.0nm,0.5s
MJAR MLR MLR
comp=Z,65nm,20.5s
PDAR Pinedale Array 89.00 330 LR LR 08 43 58.1
comp=Z,47nm,18.6s,MS3.9,baz=246,slow=36
TXAR Lajitas Array 97.55 319 P **P 08 03 29.0 -0.7**
comp=Z,0.3nm,0.8s,mb3.9,baz=92,slow=6.8,SNR=3.6
TXAR LR LR 08 48 27.0
comp=Z,31nm,18.1s,MS3.8,baz=0.0,slow=36

*IDC **10** 08:04:55.9±4.5, 6°.64S×130°.01E, h126km±42km, mb3.9/9, mb1 4.1/12, mb1mx3.9/22, mbtmp4.0/12, Error ellipse: s-maj=33.7km s-min=15.0km az=54.0*
*ISCJB **10** 08:04:58.0±0.5, 6°.82S±0°.04×130°.02E±0°.05, h167km±7km, mb4.1/11, Error ellipse: s-maj=8.8km s-min=5.6km az=162.1*
*NEIC **10** 08:04:57.5±2.0, 6°.71S×129°.98E, h142km±20km, mb4.5/4, Error ellipse: s-maj=16.8km s-min=12.1km az=223.0*
*DJA **10** 08:04:59, 6°.69S×130°.04E, h160km, mb4.9/15*
ISC 10 08:04:58.8±0.5, **6°.79S**±0°.04×**130°.04E**±0°.05, **h156**km±6km, **n55**, σ1°**08**/64, **mb4.1**/11, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TLE	**Tual**	**2.92**	**67**	P	**Pn**	**08 05 45.9**	**+0.6**
AAI	**Ambon**	**3.58**	**329**	P	**Pn**	**08 05 53.6**	**-0.2**
NLAI	**Namlea**	**4.58**	**320**	P	**Pn**	**08 06 08.0**	**+1.2**
SWI	**Sorong**	**6.01**	**12**	P	**Pn**	**08 06 21.7**	**-4.0**
	74nm,0.4s						
KAKA	**Kakadu**	**6.35**	**158**	*e*P	**Pn**	**08 06 31.9**	**+1.7**
	94nm,0.2s						
KAKA				*e*S	**Sn**	**08 07 41.0**	**-0.8**
KAKA	**Kakadu**	**6.35**	**158**	*e*Pn	**Pn**	**08 06 32.3**	**+2.1**
	270nm,0.5s						
KAKA				*e*Sn	**Sn**	**08 07 40.6**	**-1.2**
KAKA	**Kakadu**	**6.35**	**158**	P	**Pn**	**08 06 32.5**	**+2.3**
	214nm,0.6s						
MMRI	**Maumere**	**7.95**	**256**	P	**Pn**	**08 06 52.4**	**+0.9**
	0.5nm120nm,0.9s						
BAKI	**Biak**	**8.22**	**48**	P	**Pn**	**08 06 55.0**	**-0.1**
	2μm,0.7s						
KNA	**Kununurra**	**9.00**	**188**	P	**Pn**	**08 07 05.7**	**+0.3**
	5μm351nm,0.6s						
KMSI	**Cibinong**	**9.49**	**320**	P	**Pn**	**08 07 11.8**	**-0.1**
	151nm,0.7s						
SMPI	**Sarmi**	**9.87**	**62**	P	**Pn**	**08 07 14.0**	**-3.0**
	4μm65nm,1.3s						
BKSI	**Bulukumba**	**9.97**	**278**	P	**Pn**	**08 07 18.3**	**0.0**
	19nm,1.2s						
BNSI	**Bone**	**10.16**	**283**	P	**Pn**	**08 07 30.3**	**+9.4**
FITZ	**Fitzroy Crossi**	**12.04**	**200**	*e*P	**Pn**	**08 07 43.5**	**-1.9**
	29nm,0.3s						
FITZ				*e*S	**Sn**	**08 09 48.8**	**-10**
FITZ	**Fitzroy Crossi**	**12.04**	**200**	P	**Pn**	**08 07 44.0**	**-1.4**
	9.3nm,0.3s,baz=35,slow=11,SNR=119						
FITZ				S	**Sn**	**08 09 48.6**	**-10**
	6.2nm,0.3s,baz=37,slow=11,SNR=6.0						
FITZ	**Fitzroy Crossi**	**12.04**	**200**	P	**Pn**	**08 07 43.8**	**-1.6**
	58nm,1.0s						
WRAB	**Tennant Creek**	**13.72**	**163**	*e*Pn	**Pn**	**08 08 05.1**	**-1.9**
	34nm,0.3s						
WRAB				*e*Sn	**Sn**	**08 10 30.7**	**-8.5**
WRAB	**Tennant Creek**	**13.72**	**163**	P	**Pn**	**08 08 06.1**	**-0.9**
	60nm,0.5s						
WRA	**Warramunga Arr**	**13.73**	**163**	P	**Pn**	**08 08 05.8**	**-1.2**
	1.7nm,0.3s,baz=340,slow=14,SNR=51						
WRA				S	**Sn**	**08 10 30.5**	**-8.9**
	4.2nm,0.3s,baz=339,slow=21,SNR=6.0						
WRA	**Warramunga Arr**	**13.73**	**163**	P	**Pn**	**08 08 05.8**	**-1.2**
WRA				S	**Sn**	**08 10 30.5**	**-8.8**
COEN	**Coen**	**14.75**	**120**	*e*Pn	**Pn**	**08 08 19.2**	**-0.7**
	408nm,0.9s						
COEN	**Coen**	**14.75**	**120**	P	**Pn**	**08 08 22.3**	**+2.4**
	211nm,0.9s						
ASAR	**Alice Springs**	**17.19**	**168**	P	**Pn**	**08 08 49.5**	**-0.1**
	2.8nm,0.3s,baz=352,slow=13,SNR=81						
ASAR				S	**S**	**08 11 50.6**	**-9.2**
	0.7nm,0.3s,baz=337,slow=18,SNR=6.3						
MBWA	**Marble Bar**	**17.43**	**214**	*e*P	**Pn**	**08 08 52.7**	**+0.2**
MBWA				*e*S	**S**	**08 11 55.9**	**-8.7**
MBWA	**Marble Bar**	**17.43**	**214**	*e*P	**Pn**	**08 08 51.5**	**-1.0**
	30nm,0.6s						
MBWA				*e*S	**S**	**08 11 56.2**	**-8.4**
MBWA	**Marble Bar**	**17.43**	**214**	P	**Pn**	**08 08 51.5**	**-1.0**
	54nm,0.7s						
PWJI	**Pagerwojo**	**18.12**	**265**	P	**P**	**08 08 57.1**	**-2.0**
	44nm,0.8s						
SJI	**Sawahan**	**18.15**	**266**	P	**P**	**08 08 59.3**	**-0.1**
SBUM	**Sibu**	**20.01**	**297**	P	**P**	**08 09 20.2**	**+0.6**
	6.9nm,0.9s						
CTA	**Charters Tower**	**20.55**	**132**	*e*P	**P**	**08 09 27.7**	**+2.4**
	13nm,1.0s						
CTA	**Charters Tower**	**20.55**	**132**	P	**P**	**08 09 27.2**	**+2.0**
	8.2nm,0.5s,baz=305,slow=11,SNR=14						
CTAO	**Charters Tower**	**20.55**	**132**	*e*P	**P**	**08 09 27.5**	**+2.2**
	15nm,0.8s						
CTAO				*e*S	S	08 13 36.6	+30
CTAO	**Charters Tower**	**20.55**	**132**	P	**P**	**08 09 26.8**	**+1.5**
MEEK	**Meekatharra**	**22.54**	**208**	*e*P	**P**	**08 09 46.5**	**+0.7**
MEEK				*e*S	**S**	**08 13 56.3**	**+15**
FORT	**Forrest**	**23.94**	**184**	*e*P	**P**	**08 10 00.0**	**+1.5**
	12nm,0.7s,mb4.5						
FORT				*e*S	S	08 14 29.9	+26
FORT	**Forrest**	**23.94**	**184**	*e*Pn	**P**	**08 09 59.9**	**+1.4**
	15nm,0.7s,mb4.6						
STKA	**Stephens Creek**	**27.20**	**158**	*e*P	**P**	**08 10 28.6**	**+0.7**
	3.8nm,0.8s,mb4.1						
STKA	**Stephens Creek**	**27.20**	**158**	P	**P**	**08 10 29.0**	**+1.1**
	3.8nm,0.3s,mb4.5,baz=317,slow=13,SNR=19						
STKA	**Stephens Creek**	**27.20**	**158**	P	**P**	**08 10 29.0**	**+1.1**
NWAO	**Narrogin (SRO)**	**28.61**	**203**	P	**P**	**08 10 41.4**	**+1.0**
	3.1nm,0.3s,mb4.5,baz=278,slow=14,SNR=11						
NWAO	**Narrogin (SRO)**	**28.61**	**203**	P	**P**	**08 10 41.4**	**+1.0**
PSI	**Prapat**	**32.49**	**286**	P	**P**	**08 11 14.8**	**0.0**
	7.1nm,0.8s,mb4.4,baz=126,slow=9.5,SNR=4.3						
PSI	**Prapat**	**32.49**	**286**	P	**P**	**08 11 14.8**	**0.0**
CMAR	**Chiang Mai Arr**	**39.62**	**310**	P	**P**	**08 12 16.3**	**+0.9**
	2.8nm,0.6s,mb4.0,baz=138,slow=5.8,SNR=3.7						
HHC	**Hu-ho-hao-te**	**50.35**	**342**	*e*P	**P**	**08 13 41.0**	**+1.3**
HHC				PcP	PcP	08 14 57.7	+1.6
HHC				PP	PP	08 15 39.7	+2.8
HHC				ScP	ScP	08 18 36.6	-0.8
HHC				PcS	PcS	08 18 53.7	+0.4
HHC				S	**S**	**08 20 40.7**	**0.0**
HHC				ScS	ScS	08 23 12.2	-2.6
HHC				SS	SS	08 24 13.5	-3.2
HHC				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.7						
HHC				pmax	pmax		
	comp=Z,82nm,6.4s						
HHC				LR	LR		
	comp=N,120nm,16.8s						
HHC				LR	LR		
	comp=E,120nm,16.8s						
HHC				LR	LR		
	comp=Z,120nm,16.9s						
MK31	**Makanchi Array**	**68.07**	**327**	*e*P	**P**	**08 15 41.1**	**-0.3**
MKAR	**Makanchi Array**	**68.07**	**327**	P	**P**	**08 15 40.9**	**-0.5**
	comp=Z,2.0nm,0.4s,mb4.2,baz=115,slow=8.3,SNR=36						
EKS2	**Erkin-Say**	**70.88**	**320**	*e*P	**P**	**08 15 58.5**	**-0.3**
	comp=Z,5.0nm,1.1s,mb4.2						
ZALV	**Zalesovo Beam**	**71.41**	**334**	P	**P**	**08 16 00.5**	**-1.2**
	comp=Z,0.5nm,0.4s,mb3.6,baz=134,slow=4.2,SNR=2.9						
KURK	**Kurchatov**	**72.35**	**329**	P	**P**	**08 16 06.3**	**-1.1**
	comp=Z,0.6nm,0.4s,mb3.6,baz=128,slow=5.3,SNR=3.7						
BVAR	**Borovoye Array**	**77.90**	**328**	P	**P**	**08 16 38.7**	**-0.4**
	comp=Z,0.4nm,0.4s,mb3.4,baz=119,slow=12,SNR=3.4						
CPUP	**Villa Florida**	**146.31**	**168**	PKPbc	PKPbc	08 24 22.4	+0.6
	comp=Z,0.8nm,0.4s,baz=174,slow=0.9,SNR=6.2						
CPUP	**Villa Florida**	**146.31**	**168**	PKPbc	PKPbc	08 24 22.4	+0.6
LPAZ	**La Paz**	**150.87**	**142**	PKPbc	PKPbc	08 24 35.5	+1.7
	comp=Z,0.7nm,0.3s,baz=143,slow=3.5,SNR=12						

*CSEM **10** 08:18:25.8±0.6, 42°.68N×9°.04E, h2km, ML2.5/10, Error ellipse: s-maj=19.8km s-min=6.9km az=65.0*
*STR **10** 08:18:25.5±0.1, 42°.59N×8°.81E, h5km, Ml2.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*NEIC **10** 08:18:27.8, 42°.55N×9°.34E, h30km, ML2.5(LDG), ML2.4(STR), After LDG.*
*LDG **10** 08:18:27.2±0.2, 42°.62N×9°.16E, h2km, Ml2.5/11, Error ellipse: s-maj=4.6km s-min=2.7km az=75.0*
*ISCJB **10** 08:18:29.8±1.0, 42°.70N±0°.05×8°.66E±0°.08, h10km, Error ellipse: s-maj=8.4km s-min=6.4km az=152.6*
ISC 10 08:18:30.2±1.0, **42°.72N**±0°.05×**8°.77E**±0°.08, **h10**km, **n34**, σ0°**69**/62, **Corsica**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OSPF	**L'Ospedale**	**1.10**	**163**	Pg	**Pg**	**08 18 43.7**	**-7.6**
OSPF				Sg	**Sg**	**08 18 57.5**	**-8.1**
OSPF	**L'Ospedale**	**1.10**	**163**	Pg	**Pg**	**08 18 43.7**	**-7.6**
OSPF				Sg	**Sg**	**08 18 57.5**	**-8.1**
SBF	**Sospel**	**1.50**	**320**	*e*Pn	**Pn**	**08 18 56.4**	**-0.8**
SBF				*e*Sn	**Sg**	**08 19 19.4**	**+0.8**
	27nm,0.3s						
SBF	**Sospel**	**1.50**	**320**	*e*Pn	**Pn**	**08 18 56.4**	**-0.8**
SBF				*e*Sn	**Sg**	**08 19 19.4**	**+0.8**
	13nm,0.3s						
SAOF	**Saorge**	**1.55**	**325**	Pg	**Pn**	**08 18 56.9**	**-0.9**
SAOF				Sg	**Sg**	**08 19 20.0**	**0.0**
SAOF	**Saorge**	**1.55**	**325**	Pg	**Pn**	**08 18 56.9**	**-0.9**
SAOF				Sg	**Sg**	**08 19 20.0**	**0.0**
AUTN	**L'Aution**	**1.61**	**323**	Pg	**Pn**	**08 18 58.1**	**-0.6**
AUTN				Sg	**Sg**	**08 19 21.9**	**-0.1**
AUTN	**L'Aution**	**1.61**	**323**	Pg	**Pn**	**08 18 58.1**	**-0.6**
AUTN				Sg	**Sg**	**08 19 21.9**	**-0.1**
MVIF	**Mont Vial**	**1.67**	**315**	Pg	**Pn**	**08 18 59.7**	**+0.2**
MVIF	**Mont Vial**	**1.67**	**315**	Pg	**Pn**	**08 18 59.7**	**+0.2**
TOUF	**Mont Tournerai**	**1.71**	**320**	Pg	**Pn**	**08 18 59.9**	**-0.1**
TOUF				Sg	**Sg**	**08 19 25.0**	**-0.1**
TOUF	**Mont Tournerai**	**1.71**	**320**	Pg	**Pn**	**08 18 59.9**	**-0.1**
TOUF				Sg	**Sg**	**08 19 25.0**	**-0.1**
FRF	**La Foret Royal**	**1.77**	**299**	*e*Pn	**Pn**	**08 19 01.2**	**+0.3**
FRF				*e*Sn	**Sg**	**08 19 25.7**	**-1.4**
	4.8nm,0.3s						
FRF	**La Foret Royal**	**1.77**	**299**	*e*Pn	**Pn**	**08 19 01.2**	**+0.3**
FRF				*e*Sn	**Sg**	**08 19 25.7**	**-1.4**
	2.4nm,0.3s						
LMR	**La Mourre**	**1.77**	**291**	*e*Pn	**Pn**	**08 19 01.3**	**+0.4**
LMR				*e*Sn	**Sg**	**08 19 25.6**	**-1.5**
	6.5nm,0.2s						
LMR	**La Mourre**	**1.77**	**291**	*e*Pn	**Pn**	**08 19 01.3**	**+0.4**
LMR				*e*Sn	**Sg**	**08 19 25.6**	**-1.5**
	3.2nm,0.2s						
MBDF	**Montbardon**	**2.48**	**325**	*e*Pn	**Pn**	**08 19 10.2**	**-0.4**
MBDF				*e*Sn	**Sn**	**08 19 41.7**	**+0.8**
	16nm,0.7s						
MBDF	**Montbardon**	**2.48**	**325**	*e*Pn	**Pn**	**08 19 10.2**	**-0.4**
MBDF				*e*Sn	**Sn**	**08 19 41.7**	**+0.8**
	7.8nm,0.7s						
SMRF	**Simiane la Rot**	**2.65**	**299**	*e*Pn	**Pn**	**08 19 14.6**	**+1.6**
SMRF				*e*Sn	**Sn**	**08 19 46.8**	**+1.7**
	0.9nm,0.2s						
SMRF	**Simiane la Rot**	**2.65**	**299**	*e*Pn	**Pn**	**08 19 14.6**	**+1.6**
SMRF				*e*Sn	**Sn**	**08 19 46.8**	**+1.7**
	0.4nm,0.2s						
ORIF	**Oris-en-Rattie**	**3.04**	**317**	*e*Pn	**Pn**	**08 19 18.3**	**0.0**
ORIF				*e*Sn	**Sn**	**08 19 55.1**	**+0.4**
	4.4nm,0.6s						
ORIF	**Oris-en-Rattie**	**3.04**	**317**	*e*Pn	**Pn**	**08 19 18.3**	**0.0**
ORIF				*e*Sn	**Sn**	**08 19 55.1**	**+0.4**
	2.2nm,0.6s						
LPG	**La Plagne**	**3.14**	**333**	*e*Pn	**Pn**	**08 19 19.2**	**-0.5**
LPG				*e*Sn	**Sn**	**08 19 57.0**	**-0.2**
	1.8nm,0.2s						
LPG	**La Plagne**	**3.14**	**333**	*e*Pn	**Pn**	**08 19 19.2**	**-0.5**
LPG				*e*Sn	**Sn**	**08 19 57.0**	**-0.2**
	0.9nm,0.2s						
LPL	**La Plagne**	**3.16**	**333**	*e*Pn	**Pn**	**08 19 19.7**	**-0.3**
LPL				*e*Sn	**Sn**	**08 19 57.3**	**-0.4**
	3.5nm,0.4s						
LPL	**La Plagne**	**3.16**	**333**	*e*Pn	**Pn**	**08 19 19.7**	**-0.3**
LPL				*e*Sn	**Sn**	**08 19 57.3**	**-0.4**
	1.8nm,0.4s						
VIVF	**Saint-Julien-l**	**3.66**	**307**	*e*Pn	**Pn**	**08 19 26.9**	**+0.1**
VIVF				*e*Sn	**Sn**	**08 20 10.7**	**+0.7**
	1.2nm,0.2s						
VIVF	**Saint-Julien-l**	**3.66**	**307**	*e*Pn	**Pn**	**08 19 26.9**	**+0.1**
VIVF				*e*Sn	**Sn**	**08 20 10.7**	**+0.7**
	0.6nm,0.2s						
LASF	**Ste Croix**	**3.83**	**292**	*e*Pn	**Pn**	**08 19 29.2**	**0.0**
LASF				*e*Sn	**Sn**	**08 20 14.9**	**+0.6**
	2.4nm,0.4s						
MTLF	**Montolieu**	**4.85**	**280**	*e*Pn	**Pn**	**08 19 43.1**	**0.0**
MTLF				*e*Sn	**Sn**	**08 20 39.0**	**-0.3**
	1.5nm,0.4s						
CAF	**Calviac**	**5.33**	**297**	*e*Pn	**Pn**	**08 19 50.2**	**+0.4**
CAF	**Calviac**	**5.33**	**297**	*e*Pn	**Pn**	**08 19 50.2**	**+0.4**
SJPF	**Ste Jean**	**7.35**	**276**	*e*Pn	**Pn**	**08 20 17.2**	**-0.3**
SJPF	**Ste Jean**	**7.35**	**276**	*e*Pn	**Pn**	**08 20 17.2**	**-0.3**

*ISCJB **10** 09:02:36.9±0.3, 40°.01N±0°.02×27°.72E±0°.04, h9km±3km, Error ellipse: s-maj=4.6km s-min=3.5km az=167.2*
*DDA **10** 09:02:36.5, 40°.00N×27°.72E, h14km±1km, Md3.0*
*ISK **10** 09:02:36.5, 40°.00N×27°.72E, h11km, MD3.3*
*CSEM **10** 09:02:37.1±0.1, 40°.01N×27°.70E, h10km, MD3.3, Error ellipse: s-maj=2.3km s-min=1.9km az=51.0*
ISC 10 09:02:37.3±0.3, **40°.01N**±0°.02×**27°.71E**±0°.04, **h11**km±3km, **n77**, σ0°**54**/88, **1C, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GONE	**Gonen-Balikesi**	**0.04**	**338**	PG	**Pg**	**09 02 39.5**	**0.0**
GONE				*e*SG	**Sg**	**09 02 41.2**	**+0.2**
GONE	**Gonen-Balikesi**	**0.04**	**338**	*i* Pg	**Pg**	**09 02 39.5**	**0.0**
GONE				*e*Sg	**Sg**	**09 02 41.2**	**+0.2**
BALY	**Balya**	**0.28**	**194**	‖ *i*Pg	**Pg**	**09 02 42.7**	**-0.2**
BALY				*i* Sg	**Sg**	**09 02 47.0**	**+0.3**
BNT	**Bandirma**	**0.39**	**25**	PG	**Pg**	**09 02 44.5**	**-0.4**
BNT	**Bandirma**	**0.39**	**25**	*i* Pg	**Pg**	**09 02 44.5**	**-0.4**
BALB	**Balikesir**	**0.39**	**160**	PG	**Pg**	**09 02 44.6**	**-0.4**
BALB				*e*SG	**Sg**	**09 02 49.9**	**-0.3**
BALB	**Balikesir**	**0.39**	**160**	*i* Pg	**Pg**	**09 02 44.6**	**-0.4**
BALB				*e*Sg	**Sg**	**09 02 49.9**	**-0.3**
KRBG	**Karabiga-Canak**	**0.50**	**321**	*e*PG	**Pg**	**09 02 47.0**	**0.0**
KRBG	**Karabiga-Canak**	**0.50**	**321**	*e*Pg	**Pg**	**09 02 47.0**	**0.0**
RKY	**Sarkoy-Tekirda**	**0.79**	**329**	*e*PG	**Pg**	**09 02 52.7**	**+0.1**
RKY	**Sarkoy-Tekirda**	**0.79**	**329**	*e*Pg	**Pg**	**09 02 52.7**	**+0.1**
SART	**Tekirdag**	**0.79**	**330**	*e*P	**Pg**	**09 02 52.4**	**-0.2**
SART				*e*S	**Sg**	**09 03 04.6**	**+1.6**
SART	**Tekirdag**	**0.79**	**330**	*e*P	**Pg**	**09 02 52.4**	**-0.2**
SART				*e*S	**Sg**	**09 03 04.6**	**+1.7**
LPK	**Lapseki**	**0.81**	**297**	*e*PG	**Pg**	**09 02 52.6**	**-0.4**
LPK	**Lapseki**	**0.81**	**297**	*e*Pg	**Pg**	**09 02 52.6**	**-0.4**
MFT	**Murefte**	**0.84**	**337**	*e*PG	**Pg**	**09 02 53.6**	**0.0**
MFT	**Murefte**	**0.84**	**337**	*e*Pg	**Pg**	**09 02 53.6**	**0.0**
TKR	**Tekirdag**	**0.99**	**352**	*e*PG	**Pg**	**09 02 56.7**	**+0.3**
TKR	**Tekirdag**	**0.99**	**352**	*e*Pg	**Pg**	**09 02 56.7**	**+0.3**
GELI	**Tayfur-Gelibol**	**1.02**	**293**	*e*PG	**Pg**	**09 02 56.2**	**-0.8**
GELI	**Tayfur-Gelibol**	**1.02**	**293**	*e*Pg	**Pg**	**09 02 56.2**	**-0.8**
ARMT	**Armutlu**	**1.04**	**57**	*e*PG	**Pg**	**09 02 56.5**	**-0.9**
ARMT	**Armutlu**	**1.04**	**57**	*e*Pg	**Pg**	**09 02 56.5**	**-0.9**
AYVA	**Ayvalik**	**1.05**	**229**	*i* P	**Pb**	**09 02 56.6**	**-0.8**
AYVA				*i* S	**Sg**	**09 03 12.1**	**+0.9**
AYVA	**Ayvalik**	**1.05**	**229**	*i* P	**Pb**	**09 02 56.6**	**-0.8**
AYVA				*i* S	**Sg**	**09 03 12.1**	**+0.9**
ERIK	**Erikli-Kesan**	**1.13**	**306**	*e*PN	**Pn**	**09 02 58.2**	**-0.8**
ERIK	**Erikli-Kesan**	**1.13**	**306**	*e*Pn	**Pn**	**09 02 58.2**	**-0.8**
AKS	**Akhisar**	**1.13**	**176**	*e*PN	**Pn**	**09 02 58.4**	**-0.6**
AKS	**Akhisar**	**1.13**	**176**	*e*Pn	**Pn**	**09 02 58.4**	**-0.6**
GEMT	**Gemlik**	**1.21**	**69**	*e*PN	**Pn**	**09 02 59.1**	**-1.0**
GEMT	**Gemlik**	**1.21**	**69**	*e*Pn	**Pn**	**09 02 59.1**	**-1.0**
DEMI	**Demirci**	**1.24**	**141**	*i* P	**Pn**	**09 03 00.3**	**-0.2**
DEMI				*i* S	**Sb**	**09 03 16.6**	**0.0**
DEMI	**Demirci**	**1.24**	**141**	*i* P	**Pn**	**09 03 00.3**	**-0.2**
DEMI				*i* S	**Sb**	**09 03 16.6**	**0.0**
SLVT	**Silivri**	**1.28**	**17**	*e*PN	**Pn**	**09 03 00.8**	**-0.2**
SLVT	**Silivri**	**1.28**	**17**	*e*Pn	**Pn**	**09 03 00.8**	**-0.3**
CTKS	**Kestanelik-??a**	**1.37**	**26**	*e*PN	**Pn**	**09 03 02.0**	**-0.3**
CTKS	**Kestanelik-??a**	**1.37**	**26**	*e*Pn	**Pn**	**09 03 02.0**	**-0.3**
ENEZ	**Enez**	**1.39**	**302**	*e*PN	**Pn**	**09 03 02.5**	**-0.1**
ENEZ	**Enez**	**1.39**	**302**	*e*Pn	**Pn**	**09 03 02.5**	**-0.1**
YLV	**Yalova**	**1.39**	**66**	*e*PN	**Pn**	**09 03 02.2**	**-0.4**
YLV	**Yalova**	**1.39**	**66**	*e*Pn	**Pn**	**09 03 02.2**	**-0.4**
GADA	**Gvkgeada**	**1.40**	**278**	*e*PN	**Pn**	**09 03 02.7**	**0.0**
GADA	**Gvkgeada**	**1.40**	**278**	*e*Pn	**Pn**	**09 03 02.7**	**0.0**
BGKT	**Bogazkoy**	**1.43**	**34**	*e*PN	**Pn**	**09 03 03.5**	**+0.4**
BGKT	**Bogazkoy**	**1.43**	**34**	*e*Pn	**Pn**	**09 03 03.5**	**+0.4**
ISK	**Istanbul-Kandi**	**1.48**	**44**	*e*PN	**Pn**	**09 03 03.4**	**-0.3**
ISK	**Istanbul-Kandi**	**1.48**	**44**	*e*Pn	**Pn**	**09 03 03.4**	**-0.4**
CTYL	**Yal??k??y-??at**	**1.53**	**17**	*e*PN	**Pn**	**09 03 04.3**	**-0.3**
CTYL	**Yal??k??y-??at**	**1.53**	**17**	*e*Pn	**Pn**	**09 03 04.3**	**-0.2**
KLYT	**Kilyos**	**1.61**	**39**	*e*PN	**Pn**	**09 03 05.9**	**+0.3**
KLYT	**Kilyos**	**1.61**	**39**	*e*Pn	**Pn**	**09 03 05.9**	**+0.3**
ADVT	**Abdulvahap**	**1.61**	**74**	*e*PN	**Pn**	**09 03 06.2**	**+0.5**
ADVT	**Abdulvahap**	**1.61**	**74**	*e*Pn	**Pn**	**09 03 06.2**	**+0.6**
IZM	**Izmir**	**1.64**	**192**	*e*PN	**Pn**	**09 03 06.2**	**+0.1**
IZM	**Izmir**	**1.64**	**192**	*e*Pn	**Pn**	**09 03 06.2**	**+0.1**
CAVI	**Cavuskoy**	**1.65**	**83**	*e*PN	**Pn**	**09 03 06.4**	**+0.3**
CAVI	**Cavuskoy**	**1.65**	**83**	*e*Pn	**Pn**	**09 03 06.4**	**+0.3**
KULA	**Kula-Manisa**	**1.67**	**153**	*e*PN	**Pn**	**09 03 06.8**	**+0.5**
KULA	**Kula-Manisa**	**1.67**	**153**	*e*Pn	**Pn**	**09 03 06.8**	**+0.5**
BLCB	**Balcova**	**1.70**	**198**	*e*PN	**Pn**	**09 03 07.2**	**+0.4**
BLCB	**Balcova**	**1.70**	**198**	*e*Pn	**Pn**	**09 03 07.2**	**+0.4**
HRT	**Hereke**	**1.70**	**61**	*e*PN	**Pn**	**09 03 06.8**	**-0.1**
HRT	**Hereke**	**1.70**	**61**	*e*Pn	**Pn**	**09 03 06.8**	**-0.1**
SILT	**Sile**	**1.87**	**52**	*e*PN	**Pn**	**09 03 09.6**	**+0.5**
SILT	**Sile**	**1.87**	**52**	*e*Pn	**Pn**	**09 03 09.6**	**+0.5**
EDRB	**Edirne**	**1.98**	**339**	*e*PN	**Pn**	**09 03 10.3**	**-0.4**
EDRB	**Edirne**	**1.98**	**339**	*e*Pn	**Pn**	**09 03 10.3**	**-0.3**
ALT	**Altintas**	**2.09**	**116**	*e*PN	**Pn**	**09 03 12.2**	**0.0**
ALT	**Altintas**	**2.09**	**116**	*e*Pn	**Pn**	**09 03 12.2**	**0.0**
GULT	**Gulveren**	**2.19**	**78**	*e*PN	**Pn**	**09 03 13.7**	**+0.1**
GULT	**Gulveren**	**2.19**	**78**	*e*Pn	**Pn**	**09 03 13.7**	**+0.1**
ESKT	**Eskisehir**	**2.47**	**100**	*e*PN	**Pn**	**09 03 18.5**	**+1.0**
ESKT	**Eskisehir**	**2.47**	**100**	*e*Pn	**Pn**	**09 03 18.5**	**+1.1**
SVRH	**Sivrihisar-ESK**	**3.00**	**100**	*e*PN	**Pn**	**09 03 26.0**	**+1.3**
SVRH	**Sivrihisar-ESK**	**3.00**	**100**	*e*Pn	**Pn**	**09 03 26.0**	**+1.4**
KIZT	**Kizilcal**	**3.42**	**108**	*e*PN	**Pn**	**09 03 30.8**	**+0.3**
KIZT	**Kizilcal**	**3.42**	**108**	*e*Pn

	14nm,0.5s,mb4.6							
UNV	Unalaska Valle	76.61	8	eP		P	09 20 17.3	-1.3
	6.0nm,0.4s,mb4.4							
YSS	Yuzh-Sakhalins	76.78	335	eP		P	09 20 20.9	+1.1
	6.8nm,0.4s,mb4.4							
KSRS	Korea Array	77.20	320	P		P	09 20 23.1	+0.9
	2.2nm,0.8s,mb3.6,baz=133,slow=5.7,SNR=11							
PETK	Petropavlovsk-	77.57	346	P		P	09 20 23.4	-0.5
	10nm,0.7s,mb4.3,baz=120,slow=7.1,SNR=26							
MAW	Mawson	79.42	200	eP		P	09 20 33.8	+0.1
	0.4nm,0.8s							
SAO	San Andreas Ge	80.33	44	eP		P	09 20 38.9	0.0
	12nm,0.8s,mb4.3							
ISA	Isabella	81.63	46	eP		P	09 20 45.5	-0.1
	7.1nm,1.3s,mb3.9							
WAKR	Walker	82.64	43	eP		P	09 20 51.1	+0.4
GLA	Glamis	82.70	50	eP		P	09 20 52.5	+1.3
	22nm,0.4s,mb5.0							
HUMO	Hull Mountain	82.99	38	eP		P	09 20 53.4	+1.1
	100nm,2.5s,mb4.9							
NVAR	Mina Array Bea	83.32	44	P		P	09 20 54.6	+0.5
	2.6nm,0.9s,mb3.7,baz=220,slow=9.3,SNR=18							
LDFC	Landfair	83.59	48	eP		P	09 20 56.4	+0.8
	9.9nm,1.0s,mb4.3							
TUC	Tucson	85.24	52	eP		P	09 21 04.2	+0.6
	4.8nm,1.0s,mb4.0							
ENH	Enshi	85.77	305	eP		P	09 21 06.9	+0.7
	4.4nm,0.3s,mb4.6							
CCUT	Cedar City	86.10	47	eP		P	09 21 08.4	+0.7
	46nm,2.9s,mb4.6							
PMR	Palmer	87.06	14	eP		P	09 21 10.7	-0.9
	538nm,1.1s							
HAWA	Hanford	87.24	37	eP		P	09 21 13.2	+0.4
	31nm,1.6s,mb4.7							
DIV	Divide	87.45	16	eP		P	09 21 13.2	-0.2
	12nm,0.8s,mb4.6							
ETW	Entiat	87.53	36	eP		P	09 21 14.4	+0.2
PPLA	Purkeypile	87.58	12	eP		P	09 21 08.6	-5.5
	7.9nm,0.4s,mb4.8							
M13A	Montello	87.60	43	eP		P	09 21 14.9	+0.3
	11nm,1.4s,mb4.4							
BMRM	Bremner River	87.61	16	eP		P	09 21 13.7	-0.5
	14nm,1.3s,mb4.5							
BMO	Blue Mountains	87.61	39	eP		P	09 21 14.5	-0.1
	4.3nm,1.3s,mb4.0							
OD2	Odessa Site #2	88.29	36	P		P	09 21 18.2	+0.5
TRF	Thorofare Moun	88.46	13	eP		P	09 21 17.4	-0.8
	13nm,0.8s,mb4.7							
HLID	Hailey	88.63	41	eP		P	09 21 19.7	+0.3
	2.4nm,0.8s,mb4.1							
SPUT	South Promonto	88.67	44	eP		P	09 21 20.1	+0.5
	7.6nm,1.2s,mb4.4							
HVU	Hansel Valley	88.70	43	eP		P	09 21 20.2	+0.4
	6.1nm,1.1s,mb4.3							
SRU	San Rafael	88.81	47	eP		P	09 21 20.6	+0.2
	7.4nm,1.1s,mb4.4							
JLU	Jordanelle	88.95	45	eP		P	09 21 21.3	+0.4
	9.9nm,1.7s,mb4.4							
DAU	Daniels Canyon	88.98	45	eP		P	09 21 22.4	+1.3
MCK	McKinley	88.99	13	eP		P	09 21 19.8	-0.8
	11nm,1.1s,mb4.6							
TXAR	Lajitas Array	89.27	58	P		P	09 21 21.1	-1.6
	2.1nm,1.0s,mb3.9,baz=213,slow=4.8,SNR=17							
CMAR	Chiang Mai Arr	89.27	290	P		P	09 21 22.8	-0.1
	6.3nm,0.9s,mb4.5,baz=134,slow=3.2,SNR=22							
HWUT	Hardware Ranch	89.39	44	eP		P	09 21 22.7	-0.3
	2.2nm,0.9s,mb4.0							
CHTO	Chiang Mai	89.41	290	eP		P	09 21 24.6	+1.0
	9.4nm,0.8s,mb4.7							
ANMO	Albuquerque	89.67	52	eP		P	09 21 24.4	-0.1
	4.3nm,1.3s,mb4.1							
GDL2	Guadalupe Moun	89.99	55	eP		P	09 21 26.9	+0.9
	2.7nm,1.0s,mb4.0							
COLA	College	90.23	13	eP		P	09 21 24.9	-1.3
	12nm,1.4s,mb4.5							
SNOW	Snow King Moun	90.85	43	eP		P	09 21 30.1	+0.5
	3.6nm,1.0s,mb4.3							
BW06	Boulder Array	91.26	44	eP		P	09 21 31.4	-0.1
	41nm,2.9s,mb4.8							
PDAR	Pinedale Array	91.26	44	P		P	09 21 30.9	-0.6
	1.4nm,1.0s,mb3.9,baz=241,slow=3.1,SNR=11							
SDCO	Great Sand Dun	91.63	50	eP		P	09 21 33.5	+0.1
	2.0nm,1.1s,mb4.1							
EGAK	Eagle	91.67	15	eP		P	09 21 32.2	-0.7
	3.2nm,0.8s,mb4.4							
INK	Inuvik	96.34	16	eP		P	09 21 53.2	-0.9
	1.1nm,0.6s,mb4.3							
MKAR	Makanchi Array	111.27	313	PKiKP		PKiKP	09 26 54.0	-2.2
	0.4nm,0.4s,baz=63,slow=0.5,SNR=13							
BVAR	Borovoye Array	119.41	319	PKP		PKPdf	09 27 09.7	-1.9
	2.9nm,0.3s,baz=105,slow=2.3,SNR=18							
AKTK	Aktyubinsk	127.32	317	PKP		PKPdf	09 27 26.0	-0.9
AKTO	Aktyubinsk	127.32	317	PKP		PKPdf	09 27 26.0	-0.9
	1.9nm,0.7s,baz=47,slow=4.2,SNR=5.7							
ARCES	ARCESS Array B	130.33	349	PKP		PKPdf	09 27 30.4	-1.6
	2.0nm,0.5s,baz=60,slow=1.1,SNR=11							
LSZ	Lusaka	133.81	219	PKP		PKPdf	09 27 40.8	+0.5
	0.7nm,0.5s,baz=28,slow=14,SNR=3.7							
FINES	FINESS Array B	136.98	342	PKhKP		PKPpre	09 27 34.1	
	0.9nm,0.3s,baz=343,slow=2.0,SNR=3.7							
FINES				PKP		PKPdf	09 27 42.6	-2.1
	1.3nm,0.4s,baz=117,slow=1.8,SNR=7.1							
NB2	NORSAR Subarra	140.49	352	PKP		PKPpre	09 27 43.7	
	comp=Z,0.6nm,0.4s,baz=16,slow=3.2							
NOA	NORSAR Array B	140.49	352	PKhKP		PKPpre	09 27 43.5	
	comp=Z,0.8nm,0.5s,baz=8.8,slow=3.2,SNR=5.9							
HFS	Hagfors	140.98	349	PKhKP		PKPpre	09 27 45.1	
	comp=Z,5.5nm,0.3s,baz=64,slow=3.5,SNR=50							
AKASG	Malin Array Be	143.75	329	PKP		PKPdf	09 27 54.4	-2.8
	comp=Z,7.5nm,0.3s,baz=44,slow=4.1,SNR=39							
AKBB	Malin Array Si	143.75	329	ePKPbc		PKPdf	09 27 54.6	-2.6
SUW	Suwalki	143.88	337	ePKPbc		PKPdf	09 27 55.7	-1.6
ASF	Jabal al Asfar	146.18	295	PKPbc		PKPbc	09 28 04.2	+0.1
	comp=Z,6.2nm,0.8s,baz=297,slow=2.7,SNR=8.0							
BRTR	Keskin Array B	146.82	309	PKPbc		PKPbc	09 28 04.8	-0.8
	comp=Z,1.9nm,0.3s,baz=138,slow=4.9,SNR=16							
EKA	Eskdalemuir Ar	146.84	4	PKPbc		PKPbc	09 28 03.2	-1.9
	comp=Z,5.7nm,0.7s,baz=357,slow=2.4,SNR=13							
MMAI	Mount Meron Ar	147.29	297	PKPbc		PKPbc	09 28 07.0	0.0
	comp=Z,4.3nm,0.3s,baz=54,slow=4.3,SNR=16							
BSEG	Bad Segeberg	147.46	349	ePKPab		PKPab	09 28 10.0	-0.7
KWP	Kalwaria Pacla	147.47	333	ePKPdf		PKPdf	09 28 03.3	-0.2
KWP				ePKPbc		PKPbc	09 28 06.0	-1.0
KWP				ePKPab		PKPab	09 28 11.0	+0.1
BUR08	Bucovina Ar. S	147.75	328	ePKPdf		PKPdf	09 28 04.8	+0.8
BUR08				ePKPbc		PKPbc	09 28 07.8	0.0
BUR08				ePKPab		PKPab	09 28 12.8	+0.7
BURAR	Bucovina Array	147.77	328	⇑P		PKPbc	09 28 08.0	+0.2
BURAR	Bucovina Array	147.77	328	⇑iP		PKPbc	09 28 08.0	+0.2
TIRR	Tirgusor	148.02	321	⇓P		PKPbc	09 28 07.9	-0.7
TIRR				S			09 28 35.3	
TIRR	Tirgusor	148.02	321	⇓iP		PKPbc	09 28 07.9	-0.6
EIL	Elat	148.12	291	PKPbc		PKPbc	09 28 08.9	-0.4
	comp=Z,10nm,0.8s,baz=346,slow=3.4,SNR=10							
VRI	Vrincioaia	148.13	324	⇑P		PKPbc	09 28 07.3	-1.5
VRI	Vrincioaia	148.13	324	⇑iP		PKPbc	09 28 07.3	-1.5
STHS	Stebnicka Huta	148.24	334	eP		PKPbc	09 28 08.6	-0.3
STHS	Stebnicka Huta	148.24	334	ePKP		PKPbc	09 28 08.6	-0.3
CRVS	Cervenica-Dubn	148.55	333	eP		PKPbc	09 28 08.9	-0.8
CRVS	Cervenica-Dubn	148.55	333	ePKP		PKPbc	09 28 08.9	-0.8
CSS	Prodhromos	148.55	301	ePKPbc		PKPbc	09 28 08.7	-1.5
CSS				ePKPab		PKPab	09 28 14.9	-1.0
MLR	Muntele Rosu	148.79	324	⇑P		PKPbc	09 28 09.4	-1.0
MLR	Muntele Rosu	148.79	324	⇑iP		PKPbc	09 28 09.4	-1.0
KSP	Ksiaz	148.85	340	ePKP		PKPbc	09 28 09.5	-0.9
NRDL	Niedersach Rie	148.88	348	ePKPbc		PKPbc	09 28 08.2	-2.2
OKC	Ostrava-Krasne	149.09	337	eP		PKPbc	09 28 10.6	-0.4
OKC	Ostrava-Krasne	149.09	337	⇑ePKP		PKPbc	09 28 10.6	-0.4
UPC	Upice	149.23	340	eP		PKPbc	09 28 10.6	-0.7
UPC				e			09 28 19.2	
UPC	Upice	149.23	340	⇑ePKP		PKPbc	09 28 10.6	-0.7
UPC				ePKPAB		PKPab	09 28 19.2	+1.1
DPC	Dobruska-Polom	149.27	340	eP		PKPbc	09 28 10.8	-0.6
DPC				e			09 28 18.9	
DPC	Dobruska-Polom	149.27	340	⇑ePKP		PKPbc	09 28 10.8	-0.6
DPC				ePKPAB		PKPab	09 28 18.9	+0.6
KECS	Kecovo	149.28	333	eP		PKPbc	09 28 11.2	-0.3
KECS	Kecovo	149.28	333	ePKP		PKPbc	09 28 11.2	-0.3
MORC	Moravsky Berou	149.35	338	ePKPbc		PKPbc	09 28 10.6	-1.0
MORC				ePKPab		PKPab	09 28 18.2	-0.4
CLL	Collm	149.36	344	ePKPbc		PKPbc	09 28 10.2	-1.4
CLL				ePKPab		PKPab	09 28 17.8	-0.8
CLL	Collm	149.36	344	ePKP		PKPbc	09 28 11.0	-0.6
CLL				*i* PKP		PKPab	09 28 17.7	-0.9
CLL	Collm	149.36	344	ePKPbc		PKPbc	09 28 11.0	-0.6
	comp=Z,27nm,0.8s							
CLL				*i* PKPab		PKPab	09 28 17.7	-0.9
	comp=Z,13nm,0.6s							
IBBN	Ibbenburen	149.44	351	ePKPbc		PKPbc	09 28 10.6	-1.2
IBBN				ePKPab		PKPab	09 28 18.3	-0.6
CLZ	Clausthal	149.45	348	ePKPbc		PKPbc	09 28 10.6	-1.2
BRG	Berggiesshubel	149.51	343	ePKPbc		PKPbc	09 28 10.8	-1.2
BRG				ePKPab		PKPab	09 28 18.9	-0.3
BRG	Berggiesshubel	149.51	343	*i* P		PKPbc	09 28 12.0	0.0
	comp=Z,23nm,0.9s							
DRGR		149.56	329	⇑P		PKPbc	09 28 11.8	-0.4
DRGR		149.56	329	⇑iP		PKPbc	09 28 11.8	-0.4
PVCC	Panska Ves	149.65	342	eP		PKPbc	09 28 11.7	-0.6
PVCC	Panska Ves	149.65	342	⇑ePKP		PKPbc	09 28 11.7	-0.6
VRAC	Vranov	150.08	338	PKPbc		PKPbc	09 28 11.9	-1.4
	comp=Z,2.4nm,0.4s,baz=3.4,slow=8.2,SNR=5.7							
VRAC				PKPab		PKPab	09 28 21.7	0.0
	comp=Z,2.5nm,0.6s,baz=190,slow=4.6,SNR=6.3							
PRU	Pruhonice	150.14	341	eP		PKPbc	09 28 13.2	-0.3
PRU	Pruhonice	150.14	341	⇑ePKP		PKPbc	09 28 13.2	-0.3
MOX	Moxa	150.31	345	eP		PKPbc	09 28 13.1	-0.7
	comp=Z,16nm,1.3s							
MOX	Moxa	150.31	345	ePKPbc		PKPbc	09 28 12.6	-1.2
MOX				ePKPab		PKPab	09 28 21.8	-0.8
TANN	Tannenbergstha	150.32	344	ePKPbc		PKPbc	09 28 13.0	-0.9
TANN				ePKPab		PKPab	09 28 22.1	-0.5
BUG	Bochum--Univer	150.36	351	ePKPbc		PKPbc	09 28 13.1	-0.8
TREC	Trest	150.46	340	⇑ePKP		PKPbc	09 28 13.5	-0.7
NKC	Novy Kostel	150.49	344	eP		PKPbc	09 28 13.7	-0.6
NKC				e			09 28 23.5	
NKC	Novy Kostel	150.49	344	⇑ePKP		PKPbc	09 28 13.7	-0.6
NKC				ePKPAB		PKPab	09 28 23.5	+0.2
GZR	Gura Zlata	150.52	327	⇓P		PKPbc	09 28 13.5	-1.0
GZR	Gura Zlata	150.52	327	⇓iP		PKPbc	09 28 13.5	-1.0
KHC	Kasperske Hory	151.19	342	⇑ePKP		PKPbc	09 28 15.0	-0.9
KHC				ePKPAB		PKPab	09 28 26.4	+0.1
TNS	Taunus Mts	151.35	349	ePKPbc		PKPbc	09 28 15.1	-1.1
WET	Wettzell	151.37	343	ePKPab		PKPab	09 28 27.4	+0.3
WLF	Walferdange	152.25	352	ePKPbc		PKPbc	09 28 17.8	-0.4
STU	Stuttgart	152.60	347	ePKPbc		PKPbc	09 28 18.2	-0.9
RJOB	Jochberg	152.67	342	ePKPab		PKPab	09 28 33.0	+0.4
BFO	Black Forest	153.20	348	ePKPab		PKPab	09 28 34.0	-0.8
DAVOX	Davos/Dischmat	154.33	345	PKPab		PKPab	09 28 39.1	-0.6
	comp=Z,3.6nm,0.8s,baz=333,slow=22,SNR=3.5							
ESDC	Sonseca Array	162.23	11	PKPab		PKPab	09 29 12.5	-1.8
	comp=Z,0.2nm,0.2s,baz=343,slow=5.2,SNR=5.0							
KEST	Kesra	164.44	332	PKPab		PKPab	09 29 23.3	-0.9
	comp=Z,0.8nm,0.7s,baz=332,slow=6.1,SNR=3.8							
TORD	Torodi Ar. Bea	170.87	188	PKP		PKPdf	09 28 28.9	-1.9
	comp=Z,1.7nm,1.0s,baz=186,slow=1.4,SNR=6.3							

*NEIC **10** 09:19:15.5, 35°.81N×21°.57E, h10km, ML3.4(ATH), After ATH.*
*ATH **10** 09:19:15.5, 35°.81N×21°.57E, h10km±4km, MD3.9/24, ML3.4*
*CSEM **10** 09:19:17.2±0.2, 35°.87N×21°.58E, h2km, ML4.1/4, Error ellipse: s-maj=5.0km s-min=4.7km az=144.0*
*THE **10** 09:19:20.5, 36°.03N×21°.88E, h1km±4km, ML4.1/4, Error ellipse: s-maj=7.7km s-min=2.3km az=236.0*
*IDC **10** 09:19:24.6±3.7, 36°.03N×21°.73E, h78km±37km, mb3.6/12, mb1 3.6/14, mb1mx3.5/29, mbtmp3.6/14, Error ellipse: s-maj=25.5km s-min=14.4km az=140.0*
ISC 10 09:19:18.6±1.0, 35°.87N±0°.03×21°.60E±0°.04, h17km±6km, n143, σ1°27/169, mb3.9/12, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	1.03	7	ePN	Pg	09 19 36.3	-2.3
PYL				eSB	Sb	09 19 51.2	-0.1
PYL	PYLOS	1.03	7	P	Pg	09 19 36.4	-2.2
PYL				S	Sg	09 19 50.5	-1.6
PYL	PYLOS	1.03	7	P	Pg	09 19 36.4	-2.2
PYL				S	Sg	09 19 50.5	-1.6
PYL				eSb	Sb	09 19 51.2	-0.1
ITM	Ithomi	1.33	11	ePb	Pb	09 19 41.9	-1.3
ITM				eSb	Sb	09 20 00.8	+0.8
ITM	Ithomi	1.33	11	ePB	Pb	09 19 41.9	-1.3
ITM				eSB	Sb	09 20 00.8	+0.8
ITM	Ithomi	1.33	11	P	Pn	09 19 41.6	-0.9
ITM				S	Sn	09 19 59.0	-0.9
ITM	Ithomi	1.33	11	P	Pn	09 19 41.6	-0.9
ITM	Ithomi	1.33	11	ePb	Pb	09 19 41.9	-1.3
ITM				S	Sn	09 19 59.0	-0.9
ITM				eSb	Sb	09 20 00.8	+0.8
VLI	Veliai	1.38	52	ePb	Pb	09 19 43.0	-0.9
VLI				eSb	Sb	09 20 02.3	+1.1
VLI	Veliai	1.38	52	ePB	Pb	09 19 43.0	-0.9
VLI				eSB	Sb	09 20 02.3	+1.1
VLI	Veliai	1.38	52	ePb	Pb	09 19 43.0	-0.9
VLI				eSb	Sb	09 20 02.3	+1.1
VLX	Vlachokerasia	1.62	23	ePB	Pb	09 19 47.0	-1.2
VLX				eSB	Sb	09 20 09.2	+0.8
VLX	Vlachokerasia	1.62	23	P	Pn	09 19 46.9	+0.4
VLX				S	Sn	09 20 06.1	-1.0
VLX	Vlachokerasia	1.62	23	P	Pn	09 19 46.9	+0.4
VLX				S	Sn	09 20 06.1	-1.0
VLX				eSb	Sb	09 20 09.2	+0.8
KARN	Karanos	1.95	103	ePN	Pn	09 19 51.1	+0.1
KARN	Karanos	1.95	103	P	Pn	09 19 51.5	+0.5
KARN	Karanos	1.95	103	ePn	Pn	09 19 51.1	+0.1
KARN	Karanos	1.95	103	P	Pn	09 19 51.5	+0.5
DID	Didima	2.10	38	ePB	Pn	09 19 52.6	-0.4
DID	Didima	2.10	38	P	Pn	09 19 52.8	-0.2
DID				S	Sn	09 20 16.6	-2.2
DID	Didima	2.10	38	P	Pn	09 19 52.8	-0.2
GUR	Goura	2.15	16	ePN	Pn	09 19 55.2	+1.5
GUR	Goura	2.15	16	P	Pn	09 19 54.7	+1.0
GUR	Goura	2.15	16	P	Pn	09 19 54.7	+1.0
GUR	Goura	2.15	16	ePn	Pn	09 19 55.3	+1.6
VAM	Vamos	2.17	102	ePn	Pn	09 19 54.2	+0.2
VAM	Vamos	2.17	102	ePN	Pn	09 19 54.2	+0.2
VAM	Vamos	2.17	102	ePn	Pn	09 19 54.2	+0.2
RLS	Riolos of Patr	2.19	357	ePn	Pn	09 19 55.6	+1.4
RLS	Riolos of Patr	2.19	357	ePN	Pn	09 19 55.6	+1.4
RLS	Riolos of Patr	2.19	357	ePn	Pn	09 19 55.6	+1.4
LAKA	Lakka	2.38	7	P	Pn	09 19 58.4	+1.4
LAKA				S	Sn	09 20 28.0	+2.2
LAKA	Lakka	2.38	7	P	Pn	09 19 58.4	+1.4
LAKA				S	Sn	09 20 28.0	+2.2
LTK	Loutraki	2.41	27	ePB	Pn	09 19 57.5	+0.1
LTK	Loutraki	2.41	27	P	Pn	09 19 57.3	-0.1
LTK	Loutraki	2.41	27	P	Pn	09 19 57.3	-0.1
VLS	Valsamata	2.44	341	ePn	Pn	09 19 58.7	+1.0
VLS	Valsamata	2.44	341	ePN	Pn	09 19 58.7	+1.0
VLS	Valsamata	2.44	341	P	Pn	09 19 58.8	+1.1
VLS	Valsamata	2.44	341	ePn	Pn	09 19 58.7	+1.0
TRIZ	Trizonia	2.52	9	P	Pn	09 20 00.8	+2.0
TRIZ	Trizonia	2.52	9	P	Pn	09 20 00.8	+2.0
EFP	Efpalio	2.56	5	ePN	Pn	09 20 01.2	+1.8
EFP	Efpalio	2.56	5	P	Pn	09 20 01.1	+1.7
EFP	Efpalio	2.56	5	P	Pn	09 20 01.1	+1.7
DSF	Desfina	2.64	16	P	Pn	09 20 00.7	+0.2
DSF	Desfina	2.64	16	P	Pn	09 20 00.7	+0.2
VLY	Voula,Athens	2.65	41	ePb	Pn	09 20 00.0	-0.6
VLY	Voula,Athens	2.65	41	ePB	Pn	09 20 00.0	-0.6
ATH	Athens Observa	2.70	38	ePn	Pn	09 20 02.0	+0.7
ATH	Athens Observa	2.70	38	ePN	Pn	09 20 02.0	+0.7
ATH	Athens Observa	2.70	38	ePn	Pn	09 20 02.0	+0.7
IDI	Anoyia	2.75	101	ePn	Pn	09 20 02.1	+0.1
IDI	Anoyia	2.75	101	ePN	Pn	09 20 02.1	+0.1
IDI	Anoyia	2.75	101	ePn	Pn	09 20 02.1	+0.1
LKD	Levkas	2.93	345	ePb	Pb	09 20 06.1	-4.3
LKD	Levkas	2.93	345	ePB	Pb	09 20 06.1	-4.3
LKD	Levkas	2.93	345	ePb	Pb	09 20 06.1	-4.3
LKR	Lokris	2.99	22	ePn	Pn	09 20 04.4	-0.9
LKR	Lokris	2.99	22	ePN	Pn	09 20 04.4	-0.9
LKR	Lokris	2.99	22	P	Pn	09 20 04.8	-0.5
LKR	Lokris	2.99	22	ePn	Pn	09 20 04.4	-0.9
LKR	Lokris	2.99	22	P	Pn	09 20 04.8	-0.5
EVR	Evrytania	3.04	3	ePb	Pn	09 20 07.5	+1.5
EVR	Evrytania	3.04	3	ePB	Pn	09 20 07.5	+1.5
EVR	Evrytania	3.04	3	ePb	Pn	09 20 07.5	+1.5
AGG	Agios Georgios	3.20	10	ePb	Pn	09 20 09.9	+1.7
AGG	Agios Georgios	3.20	10	ePB	Pn	09 20 09.9	+1.7
AGG	Agios Georgios	3.20	10	P	Pn	09 20 08.9	+0.7
AGG				S	Sn	09 20 45.9	0.0
AGG	Agios Georgios	3.20	10	P	Pn	09 20 08.9	+0.7
AGG	Agios Georgios	3.20	10	ePb	Pn	09 20 09.9	+1.7
AGG				S	Sn	09 20 45.9	0.0
LAST	Lasithi	3.25	101	ePn	Pn	09 20 09.3	+0.5
LAST	Lasithi	3.25	101	ePN	Pn	09 20 09.3	+0.5
LAST	Lasithi	3.25	101	ePn	Pn	09 20 09.3	+0.5
NEO	Neokhori	3.67	20	ePn	Pn	09 20 14.3	-0.3
NEO	Neokhori	3.67	20	ePN	Pn	09 20 14.3	-0.3
NEO	Neokhori	3.67	20	ePn	Pn	09 20 14.3	-0.3
THL	Klokotos Trika	3.70	5	ePN	Pn	09 20 15.4	+0.3
THL	Klokotos Trika	3.70	5	P	Pn	09 20 15.0	-0.1
THL	Klokotos Trika	3.70	5	P	Pn	09 20 15.0	-0.1
THL	Klokotos Trika	3.70	5	ePn	Pn	09 20 15.4	+0.3
XOR	Xorichti	3.71	19	P	Pn	09 20 16.2	+1.0
XOR	Xorichti	3.71	19	P	Pn	09 20 16.2	+1.0
AOS	Alonnisos	3.76	28	P	Pn	09 20 16.5	+0.6
AOS	Alonnisos	3.76	28	P	Pn	09 20 16.5	+0.6
KEK	Kerkira	4.09	340	ePn	Pn	09 20 20.8	+0.4
KEK	Kerkira	4.09	340	ePN	Pn	09 20 20.8	+0.4
KEK	Kerkira	4.09	340	ePn	Pn	09 20 20.8	+0.4
SRN	Sarande	4.20	343	ePN	Pn	09 20 20.5	-1.4
SRN				*i* SN	Sn	09 21 03.9	-6.6
SRN	Sarande	4.20	343	ePn	Pn	09 20 20.5	-1.4
PAIG	Paliouri	4.37	22	P	Pn	09 20 23.8	-0.5
PAIG	Paliouri	4.37	22	P	Pn	09 20 23.8	-0.5
KZN	Kozani	4.43	2	ePn	Pn	09 20 26.1	+1.0
KZN	Kozani	4.43	2	ePN	Pn	09 20 26.1	+1.0
KZN	Kozani	4.43	2	ePn	Pn	09 20 26.1	+1.0
OUR	Ouranopolis	4.84	22	P	Pn	09 20 32.7	+2.0
OUR	Ouranopolis	4.84	22	P	Pn	09 20 32.7	+2.0
HORT	Hortiatis	4.87	14	P	Pn	09 20 31.0	-0.1
HORT	Hortiatis	4.87	14	P	Pn	09 20 31.0	-0.1
FNA	Florina	4.91	358	P	Pn	09 20 32.1	+0.5
FNA	Florina	4.91	358	P	Pn	09 20 32.1	+0.5
SOI	Samo	4.95	298	Pn	Pn	09 20 32.8	+0.6
SOI	Samo	4.95	298	Pn	Pn	09 20 32.8	+0.6
SOH	Sokhos	5.13	15	P	Pn	09 20 35.5	+0.8
SOH	Sokhos	5.13	15	P	Pn	09 20 35.5	+0.8
HAVL	Avola	5.33	284	Pn	Pn	09 20 37.1	-0.4
HAVL				Sn	Sn	09 21 35.4	-3.1
HAVL	Avola	5.33	284	Pn	Pn	09 20 37.1	-0.4
HAVL				Sn	Sn	09 21 35.4	-3.1
HMDC	Modica	5.60	283	Pn	Pn	09 20 41.8	+0.6
HMDC	Modica	5.60	283	Pn	Pn	09 20 41.8	+0.6
HVZN	Vizzini	5.69	285	Pn	Pn	09 20 42.4	0.0
HVZN	Vizzini	5.69	285	Pn	Pn	09 20 42.4	0.0
NVR	Nevrokopi	5.75	17	P	Pn	09 20 45.5	+2.3
NVR	Nevrokopi	5.75	17	P	Pn	09 20 45.5	+2.3
LTRZ	Laterza	6.04	323	Pn	Pn	09 20 47.2	+0.1
	30nm,0.4s						
LTRZ	Laterza	6.04	323	Pn	Pn	09 20 47.2	+0.1
	30nm,0.4s						
BCI

MPR	**Mayaguez**	**1.04 137**⇑	*e*P	Pn	09 27 21.0	-1.8
LSP	**Las Mesas**	**1.11 137**⇑	*e*P	Pn	09 27 22.0	-1.7
LSP			*e*S	Sn	09 27 36.6	-1.1
LRS	**Lares**	**1.20 125**⇑	*e*P	Pn	09 27 23.3	-1.8
LRS			*e*S	Sn	09 27 39.2	-0.9
CRPR	**Cabo Rojo, PR**	**1.22 143**⇑	*e*P	Pn	09 27 23.9	-1.3
CRPR			*e*S	Sn	09 27 40.3	-0.2
AOPR	**Arecibo Observ**	**1.25 120**⇑	*e*P	Pn	09 27 23.5	-2.1
AOPR			*e*S	Sn	09 27 40.1	-1.1
OBIP	**Obispado Ponce**	**1.53 127**⇑	*e*P	Pn	09 27 28.2	-1.4
OBIP			*e*S	Sn	09 27 47.1	-1.1
CELP	**Cerrillos**	**1.54 126**⇑	*e*P	Pn	09 27 28.7	-0.8
CELP			*e*S	Sn	09 27 46.9	-1.4
ICM	**Isla Caja Muer**	**1.69 130**⇑	*e*P	Pn	09 27 32.2	+0.5
SJG	**San Juan**	**1.86 118**⇑	*e*P	Pn	09 27 33.1	-1.0
SJG			*e*S	Sn	09 27 56.0	-0.4
SJG	**San Juan**	**1.86 118**⇑	*e*P	Pn	09 27 33.0	-1.1
SJG			*e*S	Sn	09 27 56.1	-0.2
CBYP	**Canovanas**	**2.05 110**⇑	*e*P	Pn	09 27 35.5	-1.2
HUMP	**Col San Antoni**	**2.10 113**⇑	*e*P	Pn	09 27 36.7	-0.7
HUMP			*e*S	Sn	09 28 02.0	-0.4
STVI	**Saint Thomas**	**2.85 102**⇑	*e*P	Pn	09 27 47.2	-0.5
STVI			*e*S	Sn	09 28 19.7	-1.1
SDDR	**Presa de Saban**	**3.22 270**	*e*Pn	Pn	09 27 57.6	+4.9

*IDC **10** 09:34:01.9±1.2, 0.°24N×98.°46E, h0km, mb4.1/9, mb1 4.2/11, mb1mx3.9/24, mbtmp4.0/11, ML4.2/2, Error ellipse: s-maj=38.7km s-min=20.2km az=56.0*
*NEIC **10** 09:34:07.3±0.7, 0.°30N×98.°53E, h35km, Error ellipse: s-maj=24.6km s-min=11.3km az=65.0*
*ISCJB **10** 09:34:09.4±1.1, 0.°45N±0.°07×98.°54E±0.°09, h67km±9km, mb3.8/9, Error ellipse: s-maj=16.8km s-min=10.0km az=154.7*
*DJA **10** 09:34:10, 0.°51N×98.°47E, h23km, MLv3.9/10*

ISC 10 09:34:10.4±1.0, 0.°42N±0.°07×98.°55E±0.°09, h59km±10km, n22, σ0.88/23, mb3.9/9, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**1.09**	**70**	P	**Pn**	**09 34 29.2**	**-0.4**
MNSI				S	**Sn**	**09 34 43.5**	**-0.4**
SISI	**Saibi**	**1.82**	**163**	P	**Pn**	**09 34 38.9**	**-0.5**
PPI	**Padang Panjang**	**2.04**	**115**	P	**Pn**	**09 34 43.8**	**+1.4**
PDSI	**Padang**	**2.32**	**125**	P	**Pn**	**09 34 51.2**	**+4.9**
PSI	**Prapat**	**2.39**	**9**	Pn	**Pn**	**09 34 45.5**	**-1.7**
	16nm,0.3s,baz=236,slow=2.7,SNR=35						
BKNI	**Bangkinang**	**2.49**	**92**	P	**Pn**	**09 34 51.9**	**+3.4**
TPTI		**3.13**	**334**	P	**Pn**	**09 34 57.4**	**0.0**
SDSI	**Sungai Dareh**	**3.17**	**115**	P	**Pn**	**09 35 06.1**	**+8.2**
IPM	**Ipoh**	**4.73**	**31**	P	**Pn**	**09 35 20.4**	**+1.2**
KULM	**Kulim**	**5.27**	**23**	P	**Pn**	**09 35 27.0**	**+0.4**
CMAR	**Chiang Mai Arr**	**17.93**	**1**	P	**Pn**	**09 38 14.6**	**-1.1**
	0.6nm,0.3s,baz=198,slow=11,SNR=2.8						
WRA	**Warramunga Arr**	**40.48**	**122**	P	**P**	**09 41 42.5**	**-1.2**
	1.1nm,1.1s,mb3.5,baz=306,slow=8.8,SNR=4.5						
ASAR	**Alice Springs**	**41.85**	**127**	P	**P**	**09 41 54.0**	**-0.9**
	0.5nm,0.9s,mb3.2,baz=300,slow=7.7,SNR=4.1						
KSRS	**Korea Array**	**45.74**	**33**	P	**P**	**09 42 25.9**	**0.0**
	1.1nm,0.6s,mb4.0,baz=221,slow=9.0,SNR=6.5						
SONM	**Songino Array**	**47.71**	**7**	P	**P**	**09 42 40.8**	**-0.4**
	0.7nm,0.7s,mb3.8,baz=182,slow=7.9,SNR=4.2						
MK31	**Makanchi Array**	**48.33**	**345**	*e*P	**P**	**09 42 46.9**	**+1.0**
MKAR	**Makanchi Array**	**48.33**	**345**	P	**P**	**09 42 46.7**	**+0.8**
	1.9nm,0.5s,mb4.4,baz=152,slow=8.1,SNR=25						
MKAR	**Makanchi Array**	**48.33**	**345**	P	**P**	**09 42 46.7**	**+0.8**
ZALV	**Zalesovo Beam**	**54.54**	**350**	P	**P**	**09 43 32.6**	**+0.3**
	1.0nm,0.4s,mb4.2,baz=193,slow=6.1,SNR=4.0						
BVAR	**Borovoye Array**	**57.43**	**340**	P	**P**	**09 43 52.7**	**-0.2**
	1.3nm,0.6s,mb4.1,baz=157,slow=8.0,SNR=4.7						
BRTR	**Keskin Array B**	**70.63**	**312**	P	**P**	**09 45 20.2**	**+0.3**
	0.7nm,0.7s,mb3.7,baz=128,slow=8.2,SNR=3.5						
FINES	**FINESS Array B**	**81.31**	**332**	P	**P**	**09 46 20.6**	**+0.5**
	2.8nm,1.0s,mb4.2,baz=99,slow=6.0,SNR=3.9						

NDI 10 09:39:58.3±5.2, 23.°41N×70.°13E, h10km, ML3.7, Southern India

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHJ	**Bhuj**	**0.46**	**250**	*e*PKP	Pg	09 40 06.2	-1.2
BHJ				*e*S	Sg	09 40 15.3	+1.9
BHJ				AML	AML	09 40 15.6	
	comp=E,7μm,0.1s						
BHJ				AML	AML	09 40 15.7	
	comp=N,25μm,0.2s						
BHV	**Bhavnagar**	**2.49**	**131**	*ex*	Pn	09 40 30.0	-8.9
BHV				*e*S	Sn	09 41 08.8	-0.6
AJM	**Ajmer**	**5.11**	**52**	*e*PKP	Pn	09 41 14.4	-0.6
AJM				*e*S	Sn	09 42 10.7	-3.3
AJM				AML	AML	09 42 29.8	
	comp=E,158nm,0.3s						
AJM				AML	AML	09 42 33.3	
	comp=N,150nm,0.2s						
POO	**Poona**	**5.97**	**144**	*e*S	Sn	09 42 30.0	-5.2
POO				AML	AML	09 43 01.0	
	comp=E,54nm,0.8s						
POO				AML	AML	09 43 02.7	
	comp=N,48nm,0.4s						
BHPL	**Bhopal**	**6.71**	**90**	*e*PKP	Pn	09 41 36.5	-0.4
BHPL				*e*S	Sn	09 42 48.2	-5.2
KAD	**Karad**	**7.16**	**147**	*e*PKP	Pn	09 41 42.4	-0.8
KAD				*e*S	Sn	09 42 59.3	-5.3
KAD				AML	AML	09 43 42.5	
	comp=E,70nm,0.4s						
KAD				AML	AML	09 43 44.5	
	comp=N,37nm,0.5s						
LATR	**Latur**	**7.80**	**128**	*ex*	x	09 42 57.6	
NDI	**New Delhi**	**8.26**	**49**	*e*PKP	Pn	09 41 58.0	-0.2
NDI				*ex*	x	09 44 07.0	
HYB	**Hyderabad**	**9.89**	**126**	*i* P	Pn	09 42 20.0	-0.7
HYB				*e*S	Sn	09 44 10.0	-1.8
SDNR	**Sundarnagar**	**10.09**	**36**	*e*S	Sn	09 44 09.5	-7.0
CEP	**Cherat**	**10.49**	**8**	P	Pn	09 42 22.8	-6.0

*DDA **10** 09:54:27.2, 36.°95N×29.°20E, h7km±3km, Md2.8*
*ISCJB **10** 09:54:28.7±0.8, 37.°00N±0.°05×29.°27E±0.°06, h11km±7km, Error ellipse: s-maj=9.6km s-min=7.3km az=155.0*
*ISK **10** 09:54:28.0, 37.°03N×29.°27E, h15km, MD2.8*
*CSEM **10** 09:54:28.4±0.2, 37.°02N×29.°29E, h15km, MD2.8, Error ellipse: s-maj=6.9km s-min=4.7km az=7.0*

ISC 10 09:54:29.0±0.8, 37.°01N±0.°06×29.°29E±0.°07, h16km±7km, n15, σ0.95/23, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.22**	**49**	*e*PG	**Pg**	**09 54 32.7**	**-1.2**
GLHS				*e*SG	**Sg**	**09 54 37.5**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.22**	**49**	*e*Pg	**Pg**	**09 54 32.7**	**-1.3**
GLHS				*e*Sg	**Sg**	**09 54 37.5**	**+0.1**
GOLH	**Golhisar**	**0.31**	**44**⇑	*i* P	**Pg**	**09 54 34.7**	**-0.8**
GOLH				*i* S	**Sg**	**09 54 41.6**	**+1.6**
GOLH	**Golhisar**	**0.31**	**44**	*i* P	**Pg**	**09 54 34.7**	**-0.8**
GOLH				*i* S	**Sg**	**09 54 41.6**	**+1.7**
ELL	**Elmali**	**0.56**	**118**	*e*PG	**Pg**	**09 54 40.0**	**-0.1**
ELL	**Elmali**	**0.56**	**118**	*e*Pg	**Pg**	**09 54 40.0**	**0.0**
TURN	**Turunc**	**0.57**	**256**	*e*P	**Pb**	**09 54 42.5**	**+1.9**
TURN				*e*S	**Sb**	**09 54 53.7**	**+5.2**
DNZL	**Cakiroluk**	**0.70**	**344**	*e*P	**Pb**	**09 54 42.1**	**-0.8**
DNZL				*e*S	**Sb**	**09 54 52.5**	**+0.2**
DNZL	**Cakiroluk**	**0.70**	**344**	*e*P	**Pb**	**09 54 42.1**	**-0.8**
DNZL				*e*S	**Sb**	**09 54 52.5**	**+0.2**
YER	**Yerkesik**	**0.82**	**279**	*e*PG	**Pg**	**09 54 44.4**	**-0.5**
YER	**Yerkesik**	**0.82**	**279**	*e*Pg	**Pg**	**09 54 44.4**	**-0.5**
KORT	**Korkueli**	**0.85**	**91**	*e*P	**Pb**	**09 54 45.3**	**0.0**
KORT				*e*S	**Sb**	**09 55 00.3**	**+3.9**
KORT	**Korkueli**	**0.85**	**91**	*e*P	**Pb**	**09 54 45.3**	**0.0**
DAT	**Datca**	**1.40**	**259**	*e*PN	**Pn**	**09 54 53.5**	**-0.4**
DAT	**Datca**	**1.40**	**259**	*e*Pn	**Pn**	**09 54 53.5**	**-0.4**

*ISCJB **10** 09:58:47.9±0.4, 6.°64N±0.°04×125.°84E±0.°08, h166km±3km, mb4.2/14, Error ellipse: s-maj=14.3km s-min=6.1km az=161.5*
*NEIC **10** 09:58:48.8±0.9, 6.°76N×125.°89E, h162km±7km, mb4.4/3, Error ellipse: s-maj=49.9km s-min=7.9km az=69.0*
*IDC **10** 09:58:49.1±0.4, 6.°61N×125.°58E, h158km±3km, mb3.9/10, mb1 4.0/10, mb1mx3.7/24, mbtmp3.9/10, Error ellipse: s-maj=32.7km s-min=9.9km az=78.0*
*DJA **10** 09:58:50, 6.°59N×126.°15E, h125km, mb4.8/8*
*MAN **10** 09:58:50, 6.°68N×125.°87E, h137km, mb4.9, ML3.8, MS3.9*

ISC 10 09:58:49.0±0.4, 6.°64N±0.°04×125.°87E±0.°08, h159km±4km, n44, σ1.01/53, mb4.2/14, 1C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.49**	**51**	*e*P	**Pn**	**09 59 11.1**	**-0.3**
MATI				*e*S	**Sn**	**09 59 20.2**	**-8.1**
DAV	**Davao City (W)**	**0.52**	**326**	P	**Pn**	**09 59 10.9**	**-0.6**
	1μm,0.3s,baz=244,slow=2.0,SNR=84						
DAV				S	**Sn**	**09 59 29.6**	**+1.0**
	422nm,0.3s,baz=271,slow=23,SNR=13						
DAV	**Davao City (W)**	**0.52**	**326**	*e*Pn	**Pn**	**09 59 11.1**	**-0.4**
DAV				S	**Sn**	**09 59 29.6**	**+1.0**
DAV				*e*Sn	**Sn**	**09 59 31.4**	**+2.7**
DAV	**Davao City (W)**	**0.52**	**326**	P	**Pn**	**09 59 11.3**	**-0.2**
KCP	**Kidapawan**	**0.86**	**295**⇓	*e*P	**Pn**	**09 59 13.3**	**-0.2**
KCP				*i* S	**Sn**	**09 59 33.5**	**+1.3**
GSPH	**General Santos**	**1.07**	**239**⇓	*i* P	**Pn**	**09 59 14.4**	**-0.8**
GSPH				*i* S	**Sn**	**09 59 34.1**	**-1.1**
BUKP	**Musuan**	**1.47**	**327**	*e*P	**Pn**	**09 59 19.5**	**+0.5**
BUKP				*e*S	**Sn**	**09 59 34.5**	**-7.5**
CTBH	**Cotabato--PC H**	**1.72**	**290**⇓	*i* P	**Pn**	**09 59 21.4**	**-0.2**
CTBH				*i* S	**Sn**	**09 59 45.7**	**-0.8**
CGP	**Cagayan de Oro**	**2.15**	**327**⇑	*e*P	**Pn**	**09 59 26.6**	**+0.2**
CGP				*i* S	**Sn**	**09 59 54.9**	**-0.4**
PAGZ	**Pagadian**	**2.75**	**296**	*e*P	**Pn**	**09 59 34.7**	**+1.1**
PAGZ				*e*S	**Sn**	**09 59 50.0**	**-18**
SGSI	**Sangihe**	**2.95**	**187**	P	**Pn**	**09 59 36.6**	**+0.4**
MNI	**Manado**	**5.26**	**191**	P	**Pn**	**10 00 06.7**	**+0.6**
	150nm,0.7s						
TNTI	**Ternate**	**6.01**	**166**	P	**Pn**	**10 00 15.1**	**-1.0**
	2.0nm6μm478nm,1.2s						
MRSI	**Marisa**	**7.27**	**213**	P	**Pn**	**10 00 35.9**	**+3.2**
	0.3nm1μm46nm,0.6s						
LBMI	**Labuha**	**7.41**	**167**	P	**Pn**	**10 00 33.4**	**-1.2**
	3μm95nm,1.3s						
MYLDM	**Lahad Datu**	**7.48**	**259**	P	**Pn**	**10 00 39.0**	**+3.5**
	22nm,1.1s						
SWI	**Sorong**	**9.19**	**144**	P	**Pn**	**10 00 57.3**	**-0.9**
	52nm,0.6s						
NLAI	**Namlea**	**9.89**	**173**	P	**Pn**	**10 01 05.5**	**-2.0**
	3μm96nm,0.6s						
SBUM	**Sibu**	**14.23**	**254**	P	**Pn**	**10 02 08.5**	**+4.9**
KAKA	**Kakadu**	**20.30**	**161**	*e*P	**P**	**10 03 14.4**	**+1.7**
	20nm,0.6s						
KAKA	**Kakadu**	**20.30**	**161**	*e*P	**P**	**10 03 15.0**	**+2.3**
	58nm,0.6s						
FITZ	**Fitzroy Crossi**	**24.58**	**181**	*e*P	**P**	**10 03 54.8**	**+0.3**
	7.3nm,0.6s,mb4.4						
FITZ	**Fitzroy Crossi**	**24.58**	**181**	P	**P**	**10 03 55.1**	**+0.6**
	5.4nm,0.8s,mb4.2,baz=25,slow=8.5,SNR=13						
WRAB	**Tennant Creek**	**27.69**	**163**	*e*P	**P**	**10 04 22.2**	**-0.2**
	4.5nm,0.7s,mb4.3						
WRA	**Warramunga Arr**	**27.70**	**163**	P	**P**	**10 04 21.9**	**-0.5**
	2.8nm,0.6s,mb4.2,baz=342,slow=8.7,SNR=30						
WRA	**Warramunga Arr**	**27.70**	**163**	P	**P**	**10 04 21.9**	**-0.5**
KSRS	**Korea Array**	**30.73**	**3**	P	**P**	**10 04 50.1**	**+1.0**
	0.5nm,0.4s,mb3.6,baz=193,slow=10,SNR=5.0						
ASAR	**Alice Springs**	**31.12**	**166**	P	**P**	**10 04 52.8**	**+0.1**
	4.5nm,0.5s,mb4.4,baz=338,slow=6.8,SNR=68						
FORT	**Forrest**	**37.26**	**177**	*e*P	**P**	**10 05 45.8**	**+0.3**
	12nm,0.4s,mb4.9						
KMBL	**Kambalda**	**37.98**	**186**	*e*P	**P**	**10 05 51.8**	**+0.3**
	46nm,0.4s						
ASAJ	**Asahikawa**	**40.10**	**19**	P	**P**	**10 06 10.8**	**+1.8**
	3.9nm,0.4s,mb4.4,baz=234,slow=10,SNR=14						
NWAO	**Narrogin (SRO)**	**40.19**	**191**	P	**P**	**10 06 10.7**	**+0.8**
	27nm,1.1s,mb4.8,baz=139,slow=5.9,SNR=8.9						
BBOO	**Buckleboo**	**40.41**	**167**	*e*P	**P**	**10 06 12.6**	**+0.9**
	17nm,0.4s,mb5.0						
STKA	**Stephens Creek**	**41.13**	**159**	*e*P	**P**	**10 06 18.3**	**+0.7**
	6.7nm,1.0s,mb4.2						
STKA	**Stephens Creek**	**41.13**	**159**	P	**P**	**10 06 18.6**	**+1.0**
	4.5nm,0.4s,mb4.5,baz=357,slow=6.3,SNR=19						
STKA	**Stephens Creek**	**41.13**	**159**	*e*P	**P**	**10 06 18.3**	**+0.7**
	1.1nm,0.4s,mb3.8						
SONM	**Songino Array**	**44.29**	**341**	P	**P**	**10 06 42.3**	**-0.5**
	0.7nm,0.6s,mb3.5,baz=161,slow=6.3,SNR=4.2						
MK31	**Makanchi Array**	**54.70**	**325**	*e*P	**P**	**10 08 01.1**	**-0.6**
MKAR	**Makanchi Array**	**54.70**	**325**	P	**P**	**10 08 01.1**	**-0.6**
	1.1nm,0.4s,mb3.9,baz=116,slow=7.1,SNR=26						
ZALV	**Zalesovo Beam**	**57.63**	**333**	P	**P**	**10 08 20.3**	**-2.1**
	0.4nm,0.3s,mb3.7,baz=125,slow=7.2,SNR=2.8						
KURK	**Kurchatov**	**58.85**	**327**	P	**P**	**10 08 29.8**	**-1.1**
KURK	**Kurchatov**	**58.85**	**327**	*e*P	**P**	**10 08 30.0**	**-0.9**
ABKAR	**Akbulak array**	**69.38**	**320**	*e*P	**P**	**10 09 38.5**	**-1.1**
	0.2nm,0.4s,mb3.2						
TORD	**Torodi Ar. Bea**	**121.18**	**290**	PKP	PKPdf	10 17 23.4	-0.6
	0.4nm,0.8s,baz=54,slow=1.3,SNR=3.8						

*DDA **10** 10:05:29.4, 36.°98N×29.°15E, h7km±4km, Md2.8*
*ISK **10** 10:05:29.5, 37.°05N×29.°21E, h5km, MD2.7*
*ISCJB **10** 10:05:30.7±0.5, 37.°03N±0.°03×29.°20E±0.°04, h10km, Error ellipse: s-maj=4.5km s-min=3.8km az=43.2*
*CSEM **10** 10:05:30.8±0.3, 37.°06N×29.°28E, h20km, MD2.7, Error ellipse: s-maj=7.8km s-min=6.2km az=23.0*

ISC 10 10:05:31.1±0.5, 37.°03N±0.°03×29.°18E±0.°04, h10km, n20, σ1.19/35, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.28**	**64**	*e*PG	**Pg**	**10 05 35.4**	**-1.3**
GLHS				*e*SG	**Sg**	**10 05 40.5**	**-0.1**
GLHS	**Glhisar (BURDU**	**0.28**	**64**	*e*Pg	**Pg**	**10 05 35.4**	**-1.4**
GLHS				*e*Sg	**Sg**	**10 05 40.5**	**-0.1**
GOLH	**Golhisar**	**0.36**	**56**	*i* P	**Pg**	**10 05 37.5**	**-0.8**
GOLH				*i* S	**Sg**	**10 05 44.4**	**+1.2**
GOLH	**Golhisar**	**0.36**	**56**	*i* P	**Pg**	**10 05 37.5**	**-0.8**
GOLH				*i* S	**Sg**	**10 05 44.4**	**+1.2**
TURN	**Turunc**	**0.49**	**251**	*i* P	**Pg**	**10 05 43.4**	**+2.7**
TURN				*i* S	**Sg**	**10 05 55.1**	**+8.0**
TURN	**Turunc**	**0.49**	**251**	*i* P	**Pg**	**10 05 43.4**	**+2.7**
ELL	**Elmali**	**0.65**	**116**	*e*PG	**Pg**	**10 05 42.7**	**-0.9**
ELL				*e*SG	**Sg**	**10 05 52.9**	**+0.7**
ELL	**Elmali**	**0.65**	**116**	*e*Pg	**Pg**	**10 05 42.7**	**-0.9**
ELL				*e*Sg	**Sg**	**10 05 52.9**	**+0.8**
DNZL	**Cakiroluk**	**0.67**	**351**	*i* P	**Pg**	**10 05 42.8**	**-1.2**
DNZL				*i* S	**Sg**	**10 05 54.2**	**+1.5**
DNZL	**Cakiroluk**	**0.67**	**351**	*i* P	**Pg**	**10 05 42.8**	**-1.2**
DNZL				*i* S	**Sg**	**10 05 54.2**	**+1.5**
YER	**Yerkesik**	**0.73**	**278**	*e*PG	**Pg**	**10 05 46.0**	**+0.9**
YER	**Yerkesik**	**0.73**	**278**	*e*Pg	**Pg**	**10 05 46.0**	**+0.9**
AKAS	**Kas**	**0.87**	**157**	*i* P	**Pg**	**10 05 45.9**	**-1.9**
AKAS				*i* S	**Sg**	**10 06 00.4**	**+1.4**
AKAS	**Kas**	**0.87**	**157**	*i* P	**Pg**	**10 05 45.9**	**-1.9**
AKAS				*i* S	**Sg**	**10 06 00.4**	**+1.3**
AYDN	**Tasoluk**	**1.21**	**302**	*i* P	**Pn**	**10 05 53.5**	**-0.6**
AYDN				*i* S	**Sb**	**10 06 08.1**	**-1.8**
AYDN	**Tasoluk**	**1.21**	**302**	*i* P	**Pn**	**10 05 53.5**	**-0.6**
AYDN				*i* S	**Sb**	**10 06 08.1**	**-1.7**
DAT	**Datca**	**1.32**	**257**	*e*PN	**Pn**	**10 05 55.8**	**+0.2**
DAT	**Datca**	**1.32**	**257**	*e*Pn	**Pn**	**10 05 55.8**	**+0.2**
KHAL	**Karahalli**	**1.36**	**10**	*i* P	**Pn**	**10 05 55.7**	**-0.4**
KHAL				*i* S	**Sg**	**10 06 15.8**	**+1.0**
KHAL	**Karahalli**	**1.36**	**10**	*i* P	**Pn**	**10 05 55.7**	**-0.4**
KHAL				*i* S	**Sg**	**10 06 15.8**	**+1.0**

IDC 10 10:11:15.8±1.8, 6.°98S×154.°67E, h0km, mb4.2/6, mb1 4.4/6, mb1mx4.1/17, mbtmp4.2/6, MS3.4/1, Ms1 3.4/1, ms1mx2.5/26, Error ellipse: s-maj=59.5km s-min=25.2km az=127.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**15.38**	**211**	Pn	Pn	10 14 58.9	+4.7
	0.2nm,0.3s,baz=48,slow=15,SNR=2.3						
WRA	**Warramunga Arr**	**23.56**	**235**	P	P	10 16 27.9	-0.4
	3.4nm,0.9s,baz=58,slow=9.8,SNR=11						
ASAR	**Alice Springs**	**25.94**	**228**	P	P	10 16 50.0	0.0
	1.3nm,0.9s,baz=65,slow=9.3,SNR=8.8						
FITZ	**Fitzroy Crossi**	**30.37**	**246**	P	P	10 17 29.8	+0.1
	4.8nm,1.0s,baz=50,slow=7.9,SNR=2.7						
FITZ				LR	LR	10 28 08.7	
	comp=Z,71nm,19.4s,baz=196,slow=33						
SONM	**Songino Array**	**69.15**	**327**	P	P	10 22 24.0	+0.1
	0.5nm,0.6s,baz=147,slow=5.2,SNR=3.9						
MKAR	**Makanchi Array**	**83.19**	**319**	P	P	10 23 44.3	+0.4
	1.3nm,0.6s,baz=100,slow=5.3,SNR=19						
NVAR	**Mina Array Bea**	**91.96**	**52**	P	P	10 24 26.9	+0.2
	0.7nm,0.8s,baz=253,slow=6.2,SNR=4.7						

*NIED **10** 10:29:00, 35.°90N×141.°60E, h26km, Mw3.9 Best double couple: M0 8.55000×10^14 NP1:φ=19.00000°, δ69.00000°, λ87.00000°. NP2:φ=209.00000°, δ21.00000°, λ99.00000°.*
*IDC **10** 10:29:00.9±1.3, 35.°80N×141.°74E, h0km, mb3.9/8, mb1 3.9/12, mb1mx3.8/28, mbtmp4.0/12, ML3.9/4, MS3.1/7, Ms1 3.1/7, ms1mx2.9/33, Error ellipse: s-maj=40.2km s-min=16.8km az=78.0*
*ISCJB **10** 10:29:04.3±0.6, 35.°83N±0.°04×141.°62E±0.°06, h33km, mb3.9/12, MS3.2/4, Error ellipse: s-maj=6.6km s-min=5.3km az=164.8*
*NEIC **10** 10:29:04.9, 35.°90N×141.°57E, h31km, mb4.0/2, After JMA.*
*JMA **10** 10:29:04.8±0.2, 35.°89N×141.°57E, h31km±3km, M3.7*

ISC 10 10:29:06.3±0.6, 35.°87N±0.°04×141.°55E±0.°06, h35km, n28, σ1.03/38, mb3.9/12, MS3.2/4, 1C-1D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.59**	**254**	P	**Pn**	**10 29 16.8**	**-1.3**
CHOJ				S	**Sn**	**10 29 25.8**	**-0.7**
JHO	**Hitachi**	**1.09**	**313**	⇓P	**Pn**	**10 29 24.1**	**-0.9**
JHO				*e*S	**Sn**	**10 29 38.2**	**-0.7**
JYT	**Yasato**	**1.16**	**289**	P	**Pn**	**10 29 24.9**	**-1.1**
ONAJ	**Iwakimizuishiy**	**1.38**	**334**	⇑P	**Pn**	**10 29 28.2**	**-0.8**
ONAJ				S	**Sn**	**10 29 45.5**	**-0.4**
JFK	**Kawauchi**	**1.59**	**340**	P	**Pn**	**10 29 31.4**	**-0.6**
JFK				S	**Sn**	**10 29 51.0**	**-0.3**
JAG	**Ashikaga**	**1.79**	**289**	P	**Pn**	**10 29 34.0**	**-0.7**
JAG				*e*S	**Sn**	**10 29 56.1**	**0.0**
MJAR	**Matsushiro Arr**	**2.79**	**285**	Pn	**Pn**	**10 29 48.9**	**+0.5**
	13nm,0.3s,baz=223,slow=25,SNR=76						
MJAR				Sn	**Sn**	**10 30 21.9**	**+1.1**
	5.3nm,0.3s,baz=305,slow=28,SNR=5.3						
MJAR				LR	LR	10 31 09.5	
	comp=Z,360nm,18.9s,baz=140,slow=44						
MAJO	**Matsushiro**	**2.79**	**285**	*e*Pn	**Pn**	**10 29 49.1**	**+0.6**
MAJO				*e*Sn	**Sn**	**10 30 20.0**	**-0.8**
MAT	**Matsushiro**	**2.79**	**285**	P	**Pn**	**10 29 49.1**	**+0.7**
MAT				S	**Sn**	**10 30 23.7**	**+2.9**
JHJ	**Hachijo jima 2**	**3.11**	**209**	Pn	**Pn**	**10 29 52.5**	**-0.2**
	31nm,0.3s,baz=84,slow=17,SNR=26						
JHJ				Sn	**Sn**	**10 30 26.6**	**-2.1**
	68nm,0.3s,baz=289,slow=24,SNR=9.2						
ASAJ	**Asahikawa**	**8.28**	**5**	Pn	**Pn**	**10 31 02.9**	**-0.9**
	1.4nm,0.3s,baz=220,slow=9.6,SNR=9.6						
ASAJ				Sn	**Sn**	**10 32 34.1**	**-1.9**
	0.6nm,0.3s,baz=96,slow=24,SNR=4.6						
ASAJ				LR	LR	10 34 47.2	
	comp=Z,73nm,21.1s,baz=195,slow=42						
CBIJ	**Chichi jima**	**8.76**	**176**	Pn	**Pn**	**10 31 06.8**	**-3.7**
	8.2nm,0.3s,baz=270,slow=18,SNR=4.8						
CBIJ				Sn	**Sn**	**10 32 40.7**	**-7.3**
	4.2nm,0.3s,baz=78,slow=23,SNR=4.3						
KSRS	**Korea Array**	**11.06**	**282**	Pn	**Pn**	**10 31 46.4**	**+4.4**
	0.1nm,0.3s,baz=92,slow=13,SNR=2.3						
KSRS				LR	LR	10 35 57.6	
	comp=Z,59nm,21.5s,baz=164,slow=37						
SONM	**Songino Array**	**28.54**	**306**	LR	LR	10 46 45.6	
	comp=Z,63nm,18.3s,MS3.2,baz=106,slow=37						
GTA	**Gaotai**	**33.03**	**289**	*e*P	**P**	**10 35 38.8**	**+0.6**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
ZALV	**Zalesovo Beam**	**42.79**	**313**	P	**P**	**10 37 01.2**	**+0.9**
	comp=Z,0.8nm,0.4s,mb3.8,baz=96,slow=8.9,SNR=3.9						
ZALV				LR	LR	10 54 32.8	
	comp=Z,17nm,18.3s,MS3.0,baz=31,slow=36						
MK31	**Makanchi Array**	**44.84**	**303**	*e*P	**P**	**10 37 17.6**	**+0.8**
MKAR	**Makanchi

1.5nm,0.5s,mb3.8,baz=176,slow=9.8,SNR=8.6
MJAR Matsushiro Arr 34.78 14 P **P 11 27 06.3 -0.8**
2.0nm,0.6s,mb3.8,baz=187,slow=9.6,SNR=11
MAJO Matsushiro 34.78 14 *e*P **P 11 27 05.9 -1.2**
3.2nm,0.4s,mb4.2
STKA Stephens Creek 36.64 161 P **P 11 27 22.3 -0.7**
1.6nm,0.4s,mb4.0,baz=314,slow=8.1,SNR=9.9
SONM Songino Array 48.77 340 P **P 11 29 01.2 +1.3**
0.4nm,0.7s,mb2.9,baz=148,slow=8.5,SNR=3.3
MKAR Makanchi Array 59.34 325 P **P 11 30 17.4 +1.2**
1.0nm,0.5s,mb3.7,baz=118,slow=8.7,SNR=14
ARCES ARCESS Array B 91.94 340 P **P 11 33 19.6 -0.4**
5.5nm,1.2s,mb4.4,baz=79,slow=6.3,SNR=5.8

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*CSEM **10** 11:37:50.3±0.3,29°.88N×36°.25E, h2km, ML2.6, Error ellipse: s-maj=6.4km s-min=3.6km az=106.0*

SGS 10 11:37:50.0,27°.40N×34°.58E, h22km, Red Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JLOS		**1.56**	**31**	S	Sn	11 38 33.3	-2.6
JLOS		**1.56**	**31**	P	Pn	11 38 14.9	-1.6
JLOS		**1.56**	**31**	P	Pn	11 38 14.9	-1.5
JLOS				S	Sn	11 38 33.3	-2.6
HAQS	**Haql**	**1.67**	**10**	S	Sn	11 38 36.0	-2.8
HAQS	**Haql**	**1.67**	**10**	P	Pn	11 38 16.3	-1.7
HAQS	**Haql**	**1.67**	**10**	P	Pn	11 38 16.3	-1.7
HAQS				S	Sn	11 38 36.0	-2.8
TBKS	**Tabuk**	**1.92**	**64**	P	Pn	11 38 19.7	-1.7
TBKS	**Tabuk**	**1.92**	**64**	P	Pn	11 38 19.7	-1.7

GUC 10 12:00:58.5±0.9,23°.79S×67°.47W, h220km, ML4.0,5C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**2.40**	**309**	⇑*i*P	Pn	12 01 50.2	+7.6
PB04				*i* S	S	12 02 29.1	+12
PB04				AML	AML	12 02 30.9	
	comp=E,238nm,0.6s						
CEN1	**Los Morros**	**2.53**	**278**	⇑*i*P	Pn	12 01 44.8	+0.8
CEN1				*i* S	S	12 02 22.2	+2.5
CEN1				AML	AML	12 02 23.8	
	comp=E,122nm,0.4s						
ANCH	**Antofagasta**	**2.69**	**272**	⇑*i*P	Pn	12 01 47.6	+1.8
ANCH				*i* S	S	12 02 24.1	+1.3
ANCH				AML	AML	12 02 26.7	
	comp=N,292nm,0.1s						
PB01	**Plate Boundary**	**3.31**	**325**	⇑*i*P	Pn	12 01 54.9	+2.2
PB01				*i* S	S	12 02 37.7	+2.2
PB01				AML	AML	12 02 38.8	
	comp=E,301nm,0.2s						
HMBC	**Humberston**	**4.15**	**327**	⇑*i*P	Pn	12 02 04.2	+1.3
HMBC				*i* S	S	12 02 55.2	+1.5
PSGC	**Pisagua**	**4.84**	**329**	*e*P	Pn	12 02 12.5	+1.0
PSGC				*i* S	S	12 03 10.0	+0.7
MNMC	**Miæe Miæ**	**5.04**	**336**	*e*P	Pn	12 02 16.4	+2.5
MNMC				*i* S	S	12 03 16.7	+3.1

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*IDC **10** 12:26:16.2±2.7,6°.34S×145°.60E, h0km, mb4.2/9, mb1 4.4/10, mb1mx4.2/16, mbtmp4.2/10, ML4.1/1, MS3.5/6, Ms1 3.5/6, ms1mx3.2/17, Error ellipse: s-maj=69.7km s-min=21.8km az=111.0*
*ISCJB **10** 12:26:21.3±0.8,6°.36S±0°.06×145°.2E±0°.1, h33km, mb4.2/11, MS3.5/4, Error ellipse: s-maj=19.7km s-min=8.4km az=179.6*
*NEIC **10** 12:26:23.1±9.4,6°.30S×145°.10E, h30km±69km, mb4.1/3, Error ellipse: s-maj=32.3km s-min=16.6km az=207.0*

ISC 10 12:26:23.4±0.8,6°.36S±0°.06×145°.2E±0°.1, h35km, n24, σ1§03/23, mb4.2/11, MS3.5/4, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**7.80**	**195**	*e*P	**Pn**	**12 28 14.9**	**+0.4**
COEN	**Coen**	**7.80**	**195**	*e*Pn	**Pn**	**12 28 14.9**	**+0.4**
	546nm,0.5s						
CTA	**Charters Tower**	**13.69**	**176**	*e*P	**Pn**	**12 29 37.4**	**+2.4**
	9.0nm,0.3s						
CTA	**Charters Tower**	**13.69**	**176**	Pn	**Pn**	**12 29 37.6**	**+2.6**
	5.3nm,0.3s,baz=0.9,slow=14,SNR=41						
CTA				LR	LR	12 34 28.9	
	comp=Z,132nm,18.4s,baz=357,slow=36						
CTAO	**Charters Tower**	**13.69**	**176**	*e*Pn	**Pn**	**12 29 37.2**	**+2.2**
	10nm,0.3s						
KAKA	**Kakadu**	**14.06**	**242**	*e*P	**Pn**	**12 29 38.4**	**-1.8**
	13nm,0.6s						
KAKA	**Kakadu**	**14.06**	**242**	*e*Pn	**Pn**	**12 29 39.5**	**-0.7**
	46nm,0.5s						
WRAB	**Tennant Creek**	**17.11**	**217**	*e*Pn	**Pn**	**12 30 18.8**	**-1.2**
	11nm,0.8s						
WRA	**Warramunga Arr**	**17.13**	**217**	P	**Pn**	**12 30 19.1**	**-1.0**
	0.8nm,0.3s,baz=32,slow=12,SNR=54						
WRA				LR	LR	12 37 32.7	
	comp=Z,146nm,20.7s,baz=85,slow=39						
EIDS	**Eidsvold**	**19.72**	**164**	*e*P	**Pn**	**12 30 50.4**	**-1.3**
	7.6nm,0.8s						
ASAR	**Alice Springs**	**20.34**	**211**	P	**P**	**12 30 57.6**	**+0.8**
	19nm,0.8s,baz=39,slow=9.8,SNR=106						
FITZ	**Fitzroy Crossi**	**22.36**	**237**	*e*P	**P**	**12 31 22.8**	**+4.3**
	12nm,0.9s,mb4.3						
FITZ	**Fitzroy Crossi**	**22.36**	**237**	P	**P**	**12 31 19.5**	**+1.0**
	4.3nm,0.7s,mb4.0,baz=72,slow=9.9,SNR=7.2						
FITZ				LR	LR	12 41 14.3	
	comp=Z,127nm,18.4s,MS3.4,baz=51,slow=40						
KAPI	**Kappang**	**25.35**	**272**	P	**P**	**12 31 49.3**	**+1.9**
	10nm,0.8s,mb4.4,baz=159,slow=11,SNR=2.5						
STKA	**Stephens Creek**	**25.61**	**187**	LR	LR	12 42 16.8	
	comp=Z,233nm,21.4s,MS3.7,baz=17,slow=37						
KSRS	**Korea Array**	**46.47**	**341**	P	**P**	**12 34 46.4**	**-0.7**
	0.9nm,0.6s,mb3.9,baz=163,slow=9.1,SNR=7.2						
KSRS				LR	LR	12 52 19.9	
	comp=Z,40nm,18.2s,MS3.4,baz=144,slow=34						
CMAR	**Chiang Mai Arr**	**51.84**	**299**	P	**P**	**12 35 28.9**	**+0.3**
	1.1nm,0.4s,mb4.2,baz=130,slow=5.6,SNR=7.0						
LZH	**Lanzhou**	**57.33**	**321**	*e*P	**P**	**12 36 08.5**	**+0.5**
LZH				pP	pP	12 36 13.2	-5.4
LZH				sP	sP	12 36 15.6	-7.2
LZH				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.0						
GTA	**Gaotai**	**61.88**	**321**	*e*P	**P**	**12 36 39.9**	**+0.5**
GTA				pP	pP	12 36 43.6	-6.5
GTA				sP	sP	12 36 46.7	-7.5
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.3						
SONM	**Songino Array**	**63.86**	**332**	P	**P**	**12 36 51.7**	**-0.6**
	comp=Z,1.4nm,0.9s,mb4.0,baz=166,slow=7.0,SNR=8.7						
MKAR	**Makanchi Array**	**76.64**	**321**	P	**P**	**12 38 10.6**	**0.0**
	comp=Z,1.1nm,0.7s,mb3.9,baz=104,slow=7.6,SNR=9.1						
ZALV	**Zalesovo Beam**	**78.36**	**328**	P	**P**	**12 38 18.8**	**-1.3**
	comp=Z,1.5nm,0.5s,mb4.1,baz=115,slow=6.2,SNR=6.7						
ZALV				LR	LR	13 13 05.6	
	comp=Z,23nm,18.6s,MS3.5,baz=85,slow=36						
AML	**Almayashu**	**80.73**	**314**	*e*P	**P**	**12 38 34.0**	**+0.8**
	comp=Z,2.7nm,0.8s,mb4.2						
BVAR	**Borovoye Array**	**86.00**	**324**	P	**P**	**12 38 60.0**	**-0.1**
	comp=Z,0.7nm,0.5s,mb4.1,baz=108,slow=8.0,SNR=4.0						

DJA 10 12:28:37,10°.59S×112°.43E, h30km, MLv4.0/4, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRKI	**Karangkates**	**2.42**	**1**	P	Px	12 29 30.7	
GMJI	**Gumukmas**	**2.51**	**24**	P	Pn	12 29 17.0	+1.2
PWJI	**Pagerwojo**	**2.62**	**346**	P	Pn	12 29 17.4	0.0
PWJI				S	Sn	12 29 50.9	+2.7
PCJI	**Pacitan**	**2.68**	**332**	P	Pn	12 29 20.1	+1.9
PCJI				S	Sn	12 29 51.5	+1.9
SJI	**Sawahan**	**2.91**	**347**	P	Pn	12 29 22.9	+1.6
UGM	**Wanagama**	**3.26**	**325**	P	Pn	12 29 26.1	0.0
UGM				S	Sn	12 30 07.7	+3.8
NGJI	**Ngawi**	**3.34**	**343**	P	Sn	12 30 12.3	+6.4

GUC 10 12:34:58.7±0.3,22°.86S×68°.98W, h130km, ML3.5, 2C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**0.75**	**321**	⇑*i*P	Pn	12 35 24.5	+5.0
PB04				*i* S	Sn	12 35 44.3	+9.1
PB04				AML	AML	12 35 46.2	
	comp=N,553nm,0.4s						
CEN1	**Los Morros**	**1.24**	**244**	⇓*i*P	Pn	12 35 22.7	-1.3
CEN1				*i* S	Sn	12 35 44.0	+0.8
CEN1				AML	AML	12 35 49.7	
	comp=N,298nm,0.7s						
MECH	**Mejillones**	**1.38**	**259**	*e*P	Pn	12 35 26.0	+0.5
MECH				AML	AML	12 35 56.1	
	comp=N,840nm,0.6s						
ANCH	**Antofagasta**	**1.55**	**238**	⇑*i*P	Pn	12 35 27.9	+0.6
ANCH				*i* S	Sn	12 35 49.9	+0.7
ANCH				AML	AML	12 35 56.1	
	comp=N,718nm,0.4s						
HMBC	**Humberston**	**2.70**	**342**	*e*P	Pn	12 35 42.8	+1.3
HMBC				*e*S	Sn	12 36 16.2	+1.8
HMBC				AML	AML	12 36 41.0	
	comp=N,228nm,0.7s						
PSGC	**Pisagua**	**3.41**	**342**	AML	AML	12 36 46.3	
	comp=N,87nm,0.3s						

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*ISCJB **10** 12:50:19.3±0.3,38°.98N±0°.02×16°.20E±0°.03, h10km±3km, Error ellipse: s-maj=4.7km s-min=2.5km az=29.2*
*ROM **10** 12:50:19.6±0.2,38°.96N×16°.24E, h9km±1km, Md3.1/27, Ml3.5/26, Error ellipse: s-maj=1.7km s-min=1.1km az=99.0*
*CSEM **10** 12:50:19.1±0.2,39°.01N×16°.16E, h10km, ML3.5, Error ellipse: s-maj=5.1km s-min=3.0km az=102.0, After ROM*
*NEIC **10** 12:50:19.6,38°.96N×16°.24E, h9km, ML3.5(ROM), After ROM.*
NEIC Felt at Cosenza and Lamezia Terme.

ISC 10 12:50:20.0±0.3,38°.97N±0°.02×16°.22E±0°.03, h12km±3km, n76, σ0§85/112, 4C-2D, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRI	**Girifalco**	**0.22**	**134**	Pg	**Pg**	**12 50 24.5**	**-0.2**
GRI				Sg	**Sg**	**12 50 27.7**	**-0.1**
GRI	**Girifalco**	**0.22**	**134**	Pg	**Pg**	**12 50 24.5**	**-0.2**
GRI				Sg	**Sg**	**12 50 27.7**	**-0.1**
	22μm,0.4s						
GRI	**Girifalco**	**0.22**	**134**	Pg	**Pg**	**12 50 24.5**	**-0.2**
GRI				Sg	**Sg**	**12 50 27.7**	**-0.1**
	22μm,0.4s						
CARO	**Carolei**	**0.28**	**0**	⇑Pg	**Pg**	**12 50 26.6**	**+0.8**
CARO				Sg	**Sg**	**12 50 31.3**	**+1.6**
	16μm,0.5s						
CARO	**Carolei**	**0.28**	**0**	⇑Pg	**Pg**	**12 50 26.6**	**+0.8**
CARO				Sg	**Sg**	**12 50 31.3**	**+1.6**
	16μm,0.5s						
SERS	**Sersale**	**0.37**	**80**	⇑*i*Pg	**Pg**	**12 50 27.5**	**+0.1**
SERS				Sg	**Sg**	**12 50 32.8**	**+0.4**
	4μm,0.5s						
SERS	**Sersale**	**0.37**	**80**	⇑*i*Pg	**Pg**	**12 50 27.5**	**+0.1**
SERS				Sg	**Sg**	**12 50 32.8**	**+0.4**
	4μm,0.5s						
JOPP	**Joppolo**	**0.45**	**215**	⇓*i*Pg	**Pg**	**12 50 29.1**	**+0.2**
JOPP				Sg	**Sg**	**12 50 35.4**	**+0.6**
	2μm,0.2s						
JOPP	**Joppolo**	**0.45**	**215**	⇓*i*Pg	**Pg**	**12 50 29.1**	**+0.2**
JOPP				Sg	**Sg**	**12 50 35.4**	**+0.6**
	2μm,0.2s						
PLAC	**Placanica**	**0.55**	**162**	Pg	**Pg**	**12 50 30.4**	**-0.4**
PLAC				Sg	**Sg**	**12 50 37.9**	**-0.2**
	3μm,0.7s						
PLAC	**Placanica**	**0.55**	**162**	Pg	**Pg**	**12 50 30.4**	**-0.4**
PLAC				Sg	**Sg**	**12 50 37.9**	**-0.2**
	3μm,0.7s						
LADO	**San Nicola del**	**0.67**	**62**	Pg	**Pg**	**12 50 32.5**	**-0.5**
LADO				Sg	**Sg**	**12 50 42.8**	**+1.0**
	2μm,0.5s						
LADO	**San Nicola del**	**0.67**	**62**	Pg	**Pg**	**12 50 32.5**	**-0.5**
LADO				Sg	**Sg**	**12 50 42.8**	**+1.0**
	2μm,0.5s						
SCLL	**Scilla**	**0.82**	**209**	Pg	**Pg**	**12 50 35.6**	**-0.2**
SCLL				Sg	**Sg**	**12 50 46.1**	**-0.4**
SCLL	**Scilla**	**0.82**	**209**	Pg	**Pg**	**12 50 35.6**	**-0.2**
SCLL				Sg	**Sg**	**12 50 46.1**	**-0.4**
SCLL	**Scilla**	**0.82**	**209**	Pg	**Pg**	**12 50 35.6**	**-0.2**
SCLL				Sg	**Sg**	**12 50 46.1**	**-0.4**
MSRU	**Castanea**	**0.90**	**218**	Pg	**Pg**	**12 50 36.8**	**-0.6**
MSRU				Sg	**Sg**	**12 50 49.9**	**+0.7**
	2μm,0.5s						
MSRU	**Castanea**	**0.90**	**218**	Pg	**Pg**	**12 50 36.8**	**-0.6**
MSRU				Sg	**Sg**	**12 50 49.9**	**+0.7**
SOI	**Samo**	**0.91**	**188**	Pg	**Pg**	**12 50 36.7**	**-0.9**
SOI				Sg	**Sg**	**12 50 50.2**	**+0.8**
SOI	**Samo**	**0.91**	**188**	Pg	**Pg**	**12 50 36.7**	**-0.9**
SOI				Sg	**Sg**	**12 50 50.2**	**+0.8**
	917nm,0.7s						
SOI	**Samo**	**0.91**	**188**	Pg	**Pg**	**12 50 36.7**	**-0.9**
SOI				Sg	**Sg**	**12 50 50.2**	**+0.8**
	917nm,0.7s						
MPAZ	**Palizzi**	**1.03**	**189**	Pg	**Pg**	**12 50 38.8**	**-1.1**
MPAZ				Sg	**Sg**	**12 50 54.3**	**+1.0**
	912nm,0.6s						
MPAZ	**Palizzi**	**1.03**	**189**	Pg	**Pg**	**12 50 38.8**	**-1.1**
MPAZ				Sg	**Sg**	**12 50 54.3**	**+1.0**
	912nm,0.6s						
MILZ	**Milazzo**	**1.04**	**228**	Pg	**Pg**	**12 50 38.4**	**-1.7**
MILZ				Sg	**Sg**	**12 50 54.8**	**+1.1**
	1μm,0.5s						
MILZ	**Milazzo**	**1.04**	**228**	Pg	**Pg**	**12 50 38.4**	**-1.7**
MILZ				Sg	**Sg**	**12 50 54.8**	**+1.1**
ORI	**Oriolo Calabro**	**1.10**	**9**	Pg	**Pg**	**12 50 41.2**	**-0.1**
ORI	**Oriolo Calabro**	**1.10**	**9**	Pg	**Pg**	**12 50 41.2**	**-0.1**
	1μm,0.6s						
ORI	**Oriolo Calabro**	**1.10**	**9**	Pg	**Pg**	**12 50 41.2**	**-0.1**
	1μm,0.6s						
LLI	**Lipari**	**1.12**	**242**	Pg	**Pg**	**12 50 41.1**	**-0.6**
	7μm,0.7s						
LLI	**Lipari**	**1.12**	**242**	Pg	**Pg**	**12 50 41.1**	**-0.6**
	7μm,0.7s						
VPL	**Vulcano Piano**	**1.13**	**239**	Pg	**Pg**	**12 50 41.9**	**+0.1**
VPL				Sg	**Sg**	**12 50 56.0**	**-0.6**
	2μm,0.6s						
VPL	**Vulcano Piano**	**1.13**	**239**	Pg	**Pg**	**12 50 41.9**	**+0.1**
VPL				Sg	**Sg**	**12 50 56.0**	**-0.6**
SIRI	**Monte Sirino -**	**1.24**	**347**	Pg	**Pn**	**12 50 42.5**	**-0.6**
SIRI				Sg	**Sn**	**12 50 59.9**	**+0.2**
SIRI	**Monte Sirino -**	**1.24**	**347**	Pg	**Pn**	**12 50 42.5**	**-0.6**
SIRI				Sg	**Sn**	**12 50 59.9**	**+0.2**
BULG	**Bulgheria - Ca**	**1.28**	**330**	Pg	**Pn**	**12 50 42.8**	**-0.9**
BULG				Sg	**Sn**	**12 51 00.6**	**-0.2**
	721nm,0.5s						
BULG	**Bulgheria - Ca**	**1.28**	**330**	Pg	**Pn**	**12 50 42.8**	**-0.9**
BULG				Sg	**Sn**	**12 51 00.6**	**-0.2**
	721nm,0.5s						
MMME	**Mongiuffi-Meli**	**1.28**	**216**	Pg	**Pn**	**12 50 43.0**	**-0.8**
MMME				Sg	**Sn**	**12 50 59.3**	**-1.6**
	562nm,0.9s						
MMME	**Mongiuffi-Meli**	**1.28**	**216**	Pg	**Pn**	**12 50 43.0**	**-0.8**
MMME				Sg	**Sn**	**12 50 59.3**	**-1.6**
	562nm,0.9s						
MTSN	**Montesano sull**	**1.34**	**345**	Pg	**Pn**	**12 50 45.1**	**+0.6**
	791nm,0.6s						
MTSN	**Montesano sull**	**1.34**	**345**	Pg	**Pn**	**12 50 45.1**	**+0.6**
	791nm,0.6s						
MCEL	**Monticello**	**1.39**	**347**	Pg	**Pn**	**12 50 45.1**	**-0.1**
	704nm,1.0s						
MCEL	**Monticello**	**1.39**	**347**	Pg	**Pn**	**12 50 45.1**	**-0.1**
	704nm,1.0s						
CMPR	**Campora**	**1.52**	**333**	Pg	**Pn**	**12 50 46.0**	**-1.0**
CMPR	**Campora**	**1.52**	**333**	Pg	**Pn**	**12 50 46.0**	**-1.0**
MIGL	**Miglionico**	**1.64**	**6**	Pg	**Pg**	**12 50 50.9**	**-0.6**
	2μm,0.9s						
MIGL	**Miglionico**	**1.64**	**6**	Pg	**Pg**	**12 50 50.9**	**-0.6**
	2μm,0.9s						
CDRU	**Civita di Ruta**	**1.67**	**335**	Pg	**Pn**	**12 50 48.7**	**-0.4**
CDRU	**Civita di Ruta**	**1.67**	**335**	Pg	**Pn**	**12 50 48.7**	**-0.4**
MATE	**Matera**	**1.71**	**12**	Pg	**Pn**	**12 50 50.7**	**+1.0**
	220nm,0.7s						
MATE	**Matera**	**1.71**	**12**	Pg	**Pn**	**12 50 50.7**	**+1.0**
	220nm,0.7s						
GALF	**Gagliano Caste**	**1.81**	**226**	Pg	**Pn**	**12 50 52.5**	**+1.5**
	839nm,0.7s						
GALF	**Gagliano Caste**	**1.81**	**226**	Pg	**Pn**	**12 50 52.5**	**+1.5**
	839nm,0.7s						
MRLC	**Muro Lucano**	**1.87**	**343**	Pg	**Pn**	**12 50 52.9**	**+1.1**
MRLC	**Muro Lucano**	**1.87**	**343**	Pg	**Pn**	**12 50 52.9**	**+1.1**
	154nm,0.7s						
MRLC	**Muro Lucano**	**1.87**	**343**	Pg	**Pn**	**12 50 52.9**	**+1.1**
	154nm,0.7s						
SG1	**Sgolgore (BA)**	**1.90**	**11**	*e*Pn	**Pg**	**12 50 55.4**	**-1.0**
AMUR	**Altamura**	**1.95**	**9**	Pg	**Pn**	**12 50 53.9**	**+0.9**
	112nm,0.5s						
AMUR	**Altamura**	**1.95**	**9**	Pg	**Pn**	**12 50 53.9**	**+0.9**
	112nm,0.5s						
PE1	**Pezze di Greco**	**2.05**	**27**	*e*Pn	**Pg**	**12 50 58.1**	**-1.3**
MRVN	**Minervino Murg**	**2.08**	**360**	Pg	**Pn**	**12 50 54.9**	**+0.1**
	98nm,0.7s						
MRVN	**Minervino Murg**	**2.08**	**360**	Pg	**Pn**	**12 50 54.9**	**+0.1**
	98nm,0.7s						
SNAL	**S. Angelo Dei**	**2.10**	**339**	Pg	**Pn**	**12 50 55.8**	**+0.8**
SNAL	**S. Angelo Dei**	**2.10**	**339**	Pg	**Pn**	**12 50 55.8**	**+0.8**
CDT	**Castel del Mon**	**2.11**	**1**	*e*Pn	**Pg**	**12 50 59.1**	**-1.3**
HVZN	**Vizzini**	**2.15**	**214**	Pg	**Pn**	**12 50 56.3**	**+0.6**
HVZN	**Vizzini**	**2.15**	**214**	Pg	**Pn**	**12 50 56.3**	**+0.6**
	460nm,0.7s						
HVZN	**Vizzini**	**2.15**	**214**	Pg	**Pn**	**12 50 56.3**	**+0.6**
	460nm,0.7s						
HAVL	**Avola**	**2.19**	**204**	Pg	**Pn**	**12 50 57.9**	**+1.7**
HAVL	**Avola**	**2.19**	**204**	Pg	**Pn**	**12 50 57.9**	**+1.7**
	163nm,0.6s						
HAVL	**Avola**	**2.19**	**204**	Pg	**Pn**	**12 50 57.9**	**+1.7**
	163nm,0.6s						
RAFF	**Raffo Rosso**	**2.28**	**221**	Pg	**Pn**	**12 50 58.1**	**+0.6**
RAFF	**Raffo Rosso**	**2.28**	**221**	Pg	**Pn**	**12 50 58.1**	**+0.6**
	167nm,0.8s						
RAFF	**Raffo Rosso**	**2.28**	**221**	Pg	**Pn**	**12 50 58.1**	**+0.6**
	167nm,0.8s						
STON	**Ston**	**4.05**	**16**	*e*Pn	**Pn**	**12 51 21.5**	**-0.3**
STON				Sn	**Sn**	**12 52 09.9**	**+0.7**
STON	**Ston**	**4.05**	**16**	*e*Pn	**Pn**	**12 51 21.5**	**-0.3**
STON				Sn	**Sn**	**12 52 09.9**	**+0.7**
KRUS	**Krusevo**	**4.54**	**57**	*e*Pn	**Pn**	**12 51 29.4**	**+0.9**
KRUS				*e*Sn	**Sn**	**12 52 19.3**	**-1.8**

JMA 10 13:06:47.7±0.2,30°.00N×140°.54E, h191km, M3.5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.16**	**349**	P	Pn	13 07 40.1	+1.3
JHJ2				S	Sn	13 08 17.2	-1.6
CBIJ	**Chichi jima**	**3.23**	**153**	P	Pn	13 07 39.8	+0.1
BSO1	**Boso 1**	**4.66**	**4**	P	Pn	13 07 58.0	+0.6
BSO1				S	Sn	13 08 50.5	-1.8
BSO3	**Boso 3**	**4.79**	**360**	*e*S	Sn	13 08 53.2	-2.1
JOD2	**Odawara 2**	**5.39**	**347**	P	Pn	13 08 08.3	+1.5
JOD2				S	Sn	13 09 07.5	-1.8
JYN	**Shimob**	**5.73**	**343**	P	Pn	13 08 16.5	+5.2
JYN				S	Sn	13 09 20.7	+3.4
JHU	**Hanno**	**5.93**	**350**	P	Pn	13 08 15.0	+1.2
JYT	**Yasato**	**6.22**	**357**	S	Sn	13 09 23.8	-4.8
JAG	**Ashikaga**	**6.47**	**352**	P	Pn	13 08 20.8	-0.1
JHO	**Hitachi**	**6.59**	**0**	P	Pn	13 08 22.8	+0.3
JHO				S	Sn	13 09 31.5	-6.0
JFK	**Kawauchi**	**7.35**	**2**	S	Sn	13 09 48.0	-7.4

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*IDC **10** 13:41:40.8±1.5,9°.76N×125°.99E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.6/22, mbtmp3.8/6, Error ellipse: s-maj=130.2km s-min=20.8km az=73.0*
*ISCJB **10** 13:41:47.0±1.1,9°.71N±0°.04×126°.28E±0°.09, h61km±11km, mb3.7/6, Error ellipse: s-maj=15.2km s-min=7.5km az=0.6*
*MAN **10** 13:41:47,9°.75N×126°.12E, h12km, mb4.7, ML3.6, MS3.5*

ISC 10 13:41:48.4±1.2,9°.71N±0°.05×126°.25E±0°.10, h56km±12km, n18, σ1§24/23, mb3.7/6, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.96**	**220**	*e*P	**Pn**	**13 42 04.3**	**-1.5**
BUTP				*e*S	**Sn**	**13 42 18.3**	**-0.2**
MSLP	**Maasin**	**1.43**	**287**	*e*P	**Pn**	**13 42 12.0**	**-0.1**
MSLP				*e*S	**Sn**	**13 42 27.5**	**-2.4**
CGP	**Cagayan de Oro**	**1.98**	**231**	*e*P	**Pn**	**13 42 18.1**	**-1.3**
CGP				*i* S	**Sn**	**13 42 43.0**	**-0.1**
BESP	**Borongan**	**2.04**	**337**	*e*P	**Pn**	**13 42 20.3**	**-0.1**
BUKP	**Musuan**	**2.16**	**213**	*e*P	**Pn**	**13 42 24.1**	**+2.0**
BUKP				*e*S	**Sn**	**13 42 46.0**	**-1.7**
LLP	**Lapu-Lapu**	**2.33**	**285**	*e*P	**Pn**	**13 42 25.6**	**+1.3**
TBP	**Tagbilaran**	**2.35**	**270**	*e*P	**Pn**	**13 42 27.3**	**+2.7**
TBP				*e*S	**Sn**	**13 42 54.1**	**+1.8**
CNP	**Catarman**	**3.19**	**331**	*e*P	**Pn**	**13 42 34.9**	**-1.2**
PAGZ	**Pagadian**	**3.38**	**237**	*e*P	**Pn**	**13 42 40.1**	**+1.4**
GUIM	**Jordan**	**3.72**	**285**	*e*P	**Pn**	**13 42 43.3**	**-0.1**
PVCP	**Virac**	**4.38**	**332**	*e*P	**Pn**	**13 42 53.4**	**+1.0**
BALP	**Baler**	**7.53**	**323**	*e*P	**Pn**	**13 43 30.1**	**-5.5**
FITZ	**Fitzroy Crossi**	**27.64**	**181**	P	**P**	**13 47 30.1**	**-0.8**
	2.1nm,1.0s,mb3.7,baz=9.7,slow=13,SNR=3.0						
WRA	**Warramunga Arr**	**30.52**	**165**	P	**P**	**13 47 57.9**	**+1.4**
	0.4nm,0.9s,mb3.2,baz=345,slow=9.4,SNR=2.5						
ASAR	**Alice Springs**	**34.00**	**167**	P	**P**	**13 48 27.6**	**+0.7**
	0.3nm,0.6s,mb3.4,baz=351,slow=7.0,SNR=3.6						
MKAR	**Makanchi Array**	**52.46**	**323**	P	**P**	**13 50 54.8**	**-0.7**
	0.3nm,0.3s,mb3.7,baz=127,slow=9.3,SNR=5.0						
ARCES	**ARCESS Array B**	**84.71**	**340**	P	**P**	**13 54 15.6**	**-0.4**
	0.5nm,0.4s,mb4.0,baz=88,slow=7.5,SNR=6.2						
FINES	**FINESS Array B**	**86.37**	**332**	P	**P**	**13 54 23.4**	**-1.0**
	1.1nm,0.5s,mb4.3

mb4.1/9, Error ellipse: s-maj=11.6km s-min=4.9km az=145.7
NEIC ***10*** *14:12:00.9±1.6, 7.°48S×125.°79E, h40km±18km, mb4.1/2, Error ellipse: s-maj=21.5km s-min=10.5km az=49.0*
DJA ***10*** *14:12:02, 7.°54S×125.°53E, h140km, mb4.4/8*
ISC 10 14:12:01.4±0.7, 7.°66S±0.°05×125.°57E±0.°06, h48km±9km, n38, σ0.°96/46, mb4.1/9, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**3.44**	**253**	P	**Pn**	**14 12 56.2**	**+3.7**
NLAI	**Namlea**	**4.65**	**19**	P	**Pn**	**14 13 08.9**	**-0.2**
KDI	**Kendari**	**4.70**	**321**	P	**Pn**	**14 13 07.1**	**-2.8**
WSI	**Waingapu**	**5.58**	**249**	P	**Pn**	**14 13 20.2**	**-1.7**
	1.0nm233nm,0.8s						
BKSI	**Bulukumba**	**5.89**	**293**	P	**Pn**	**14 13 26.7**	**+0.6**
	0.2nm39nm,0.7s						
BKSI				S	**Sn**	**14 14 31.7**	**-0.7**
	0.2nm39nm,0.7s						
BNSI	**Bone**	**6.32**	**300**	P	**Pn**	**14 13 32.7**	**+0.6**
	0.1nm38nm,0.7s						
KAPI	**Kappang**	**6.35**	**294**	Pn	**Pn**	**14 13 33.6**	**+1.1**
	2.2nm,0.3s,baz=155,slow=4.4,SNR=7.0						
KAPI				Sn	**Sn**	**14 14 43.4**	**-0.3**
	0.8nm,0.3s,baz=94,slow=14,SNR=2.5						
KAPI	**Kappang**	**6.35**	**294**	Pn	**Pn**	**14 13 33.6**	**+1.1**
KAPI				Sn	**Sn**	**14 14 43.4**	**-0.3**
SPSI	**Sidrap Palu**	**6.84**	**302**	P	**Pn**	**14 13 39.8**	**+0.6**
	0.1nm24nm,0.7s						
TTSI	**Tana Toraja**	**7.33**	**308**	P	**Pn**	**14 13 46.5**	**+0.5**
	18nm,1.2s						
KAKA	**Kakadu**	**8.42**	**127**	*e*P	**Pn**	**14 14 00.6**	**-0.3**
	9.2nm,0.4s						
KAKA	**Kakadu**	**8.42**	**127**	*e*P	**Pn**	**14 13 59.9**	**-1.1**
	37nm,0.5s						
KNA	**Kununurra**	**8.63**	**159**	*e*P	**Pn**	**14 14 04.6**	**+0.8**
	15nm,0.6s						
KNA				*e*S	**Sn**	**14 15 40.1**	**+0.3**
KNA	**Kununurra**	**8.63**	**159**	P	**Pn**	**14 14 04.9**	**+1.1**
	913nm94nm,0.9s						
FITZ	**Fitzroy Crossi**	**10.38**	**180**	*e*P	**Pn**	**14 14 28.1**	**+0.4**
	9.1nm,0.3s						
FITZ				*e*S	**Sn**	**14 16 22.1**	**-0.6**
FITZ	**Fitzroy Crossi**	**10.38**	**180**	Pn	**Pn**	**14 14 28.5**	**+0.8**
	1.6nm,0.3s,baz=35,slow=10,SNR=22						
FITZ				Sn	**Sn**	**14 16 20.7**	**-2.0**
	0.8nm,0.3s,baz=96,slow=16,SNR=5.3						
FITZ	**Fitzroy Crossi**	**10.38**	**180**	P	**Pn**	**14 14 28.7**	**+1.0**
	33nm,2.2s						
MBWA	**Marble Bar**	**14.56**	**202**	P	**Pn**	**14 15 29.9**	**+5.2**
WRAB	**Tennant Creek**	**14.88**	**146**	*e*P	**Pn**	**14 15 23.9**	**-4.9**
	15nm,1.0s						
WRAB	**Tennant Creek**	**14.88**	**146**	P	**Pn**	**14 15 24.2**	**-4.6**
WRA	**Warramunga Arr**	**14.88**	**146**	Pn	**Pn**	**14 15 24.7**	**-4.1**
	0.9nm,0.3s,baz=322,slow=13,SNR=26						
WRA				Sn	**Sn**	**14 18 04.4**	**-8.2**
	0.4nm,0.3s,baz=321,slow=24,SNR=5.3						
ASAR	**Alice Springs**	**17.81**	**154**	P	**Pn**	**14 16 04.8**	**-1.2**
	1.3nm,0.3s,baz=331,slow=10,SNR=36						
ASAR				S	**S**	**14 19 16.7**	**-12**
	0.1nm,0.3s,baz=316,slow=17,SNR=4.5						
MEEK	**Meekatharra**	**20.00**	**198**	*e*P	**P**	**14 16 34.3**	**+4.2**
STKA	**Stephens Creek**	**28.35**	**150**	*e*P	**P**	**14 17 53.3**	**+2.3**
	3.0nm,0.4s,mb4.3						
STKA	**Stephens Creek**	**28.35**	**150**	P	**P**	**14 17 53.4**	**+2.4**
	4.6nm,0.6s,mb4.3,baz=326,slow=11,SNR=13						
STKA	**Stephens Creek**	**28.35**	**150**	*e*P	**P**	**14 17 52.4**	**+1.4**
CMAR	**Chiang Mai Arr**	**36.92**	**315**	P	**P**	**14 19 07.1**	**+1.1**
	1.6nm,0.8s,mb3.9,baz=140,slow=7.0,SNR=9.2						
GTA	**Gaotai**	**52.56**	**335**	*e*P	**P**	**14 21 10.0**	**-0.1**
GTA				pP	pP	14 21 17.9	-5.5
GTA				sP	sP	14 21 21.5	-7.4
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
ULN	**Ulaanbaatar**	**57.66**	**345**	*e*P	**P**	**14 21 46.2**	**-0.5**
	comp=Z,1.3nm,0.8s,mb4.0						
SONM	**Songino Array**	**57.79**	**345**	P	**P**	**14 21 47.7**	**+0.1**
	comp=Z,1.3nm,0.8s,mb4.0,baz=164,slow=6.9,SNR=7.8						
PETK	**Petropavlovsk-**	**66.39**	**20**	P	**P**	**14 22 45.6**	**+0.3**
	comp=Z,3.1nm,0.7s,mb4.5,baz=193,slow=4.7,SNR=7.4						
MK31	**Makanchi Array**	**66.44**	**329**	*e*P	**P**	**14 22 45.9**	**+0.2**
MKAR	**Makanchi Array**	**66.44**	**329**	P	**P**	**14 22 46.0**	**+0.3**
	comp=Z,0.9nm,0.5s,mb4.0,baz=127,slow=7.9,SNR=6.0						
MKAR	**Makanchi Array**	**66.44**	**329**	P	**P**	**14 22 46.0**	**+0.2**
ZAA0	**Zalesovo Array**	**70.30**	**336**	*e*P	**P**	**14 23 09.0**	**-0.6**
ZALV	**Zalesovo Beam**	**70.30**	**336**	P	**P**	**14 23 08.8**	**-0.9**
	comp=Z,1.0nm,0.4s,mb4.1,baz=129,slow=4.0,SNR=5.1						
KURK	**Kurchatov**	**70.85**	**331**	P	**P**	**14 23 12.8**	**-0.4**
	comp=Z,0.7nm,0.2s,mb4.2,baz=138,slow=5.3,SNR=3.4						
KURK	**Kurchatov**	**70.85**	**331**	*e*P	**P**	**14 23 12.7**	**-0.4**
	comp=Z,2.6nm,1.0s,mb4.1						

NEIC ***10*** *14:13:06.8, 53.°41N×165.°74W, h23km, ML3.6(AEIC), After AEIC.*
ISCJB ***10*** *14:13:07.1±0.9, 53.°50N±0.°08×165.°78W±0.°09, h59km±6km, mb3.8/13, MS2.7/2, Error ellipse: s-maj=14.7km s-min=7.4km az=153.3*
IDC ***10*** *14:13:10.7±4.1, 53.°85N×165.°90W, h61km±37km, mb3.5/13, mb1 3.7/14, mb1mx3.6/29, mbtmp3.6/14, ML3.7/1, MS2.9/2, Ms1 2.9/2, ms1mx2.5/31, Error ellipse: s-maj=31.1km s-min=16.7km az=0.0*
ISC 10 14:13:08.4±0.8, 53.°52N±0.°08×165.°83W±0.°09, h52km±6km, n29, σ1.°03/35, mb3.8/13, MS2.7/2, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UNV	**Unalaska Valle**	**0.52**	**310**	P	**Pn**	**14 13 19.4**	**-0.6**
UNV				S	**Sn**	**14 13 27.8**	**-0.6**
AKUT	**Akutan**	**0.62**	**3**	P	**Pn**	**14 13 20.4**	**-0.8**
AKUT				S	**Sn**	**14 13 31.1**	**+0.6**
AKA	**Akutan**	**0.62**	**3**	P	**Pn**	**14 13 20.4**	**-0.8**
AKA				S	**Sn**	**14 13 31.2**	**+0.6**
AKLV	**Akutan Long Va**	**0.65**	**353**	P	**Pn**	**14 13 21.0**	**-0.7**
AKLV				S	**Sn**	**14 13 31.9**	**+0.7**
AKGG	**Akutan Green G**	**0.69**	**352**	P	**Pn**	**14 13 21.7**	**-0.4**
AKGG				S	**Sn**	**14 13 33.2**	**+1.1**
OKFG	**Magazine Ridge**	**1.25**	**266**	P	**Pn**	**14 13 29.0**	**-0.6**
NIKO	**Nikolski**	**1.90**	**255**	P	**Pn**	**14 13 37.9**	**-0.4**
SDPT	**Sand Point**	**3.62**	**57**	P	**Pn**	**14 14 01.5**	**-0.4**
CHGN	**Chignik**	**5.11**	**54**	*e*P	**Pn**	**14 14 20.9**	**-1.4**
ADK	**Adak**	**6.80**	**260**	*e*P	**Pn**	**14 14 46.8**	**+1.3**
	9.7nm,0.3s						
KDAK	**Kodiak Island**	**8.62**	**55**	P	**Pn**	**14 15 11.1**	**+0.8**
	0.9nm,0.3s,baz=235,slow=8.0,SNR=5.4						
KDAK				S	**Sn**	**14 16 38.3**	**-7.7**
	baz=45,slow=20,SNR=2.3						
GAMB	**Gambell**	**10.73**	**346**	*e*P	**Pn**	**14 15 41.1**	**+1.9**
RC01	**Rabbit Creek A**	**11.52**	**42**	P	**Pn**	**14 15 40.5**	**-9.5**
EGAK	**Eagle**	**16.81**	**38**	*e*P	**Pn**	**14 16 58.8**	**-1.0**
DAWY	**Dawson**	**17.15**	**42**	*e*P	**Pn**	**14 17 05.1**	**+1.0**
INK	**Inuvik**	**21.21**	**33**	P	**P**	**14 17 47.6**	**-1.7**
	1.0nm,0.3s,mb3.6,baz=281,slow=9.0,SNR=9.1						
INK				LR	LR	14 25 56.0	
	comp=Z,37nm,18.1s,MS2.8,baz=126,slow=36						
PETK	**Petropavlovsk-**	**21.65**	**284**	P	**P**	**14 17 54.1**	**0.0**
	1.2nm,0.5s,mb3.5,baz=84,slow=15,SNR=13						
PETK				LR	LR	14 25 08.5	
	comp=Z,21nm,18.3s,MS2.6,baz=80,slow=33						
YKA	**Yellowknife Ar**	**27.86**	**51**	P	**P**	**14 18 53.6**	**+1.0**
	0.4nm,0.4s,mb3.4,baz=278,slow=9.3,SNR=4.5						
NVAR	**Mina Array Bea**	**35.59**	**96**	P	**P**	**14 20 03.0**	**+2.4**
	0.3nm,0.7s,mb3.3,baz=305,slow=9.1,SNR=3.4						
KSRS	**Korea Array**	**47.38**	**278**	P	**P**	**14 21 38.0**	**+0.9**
	1.5nm,0.7s,mb4.0,baz=46,slow=7.4,SNR=8.4						
TXAR	**Lajitas Array**	**50.62**	**93**	P	**P**	**14 22 02.8**	**+0.8**
	0.4nm,0.7s,mb3.5,baz=306,slow=4.2,SNR=4.2						
ARCES	**ARCESS Array B**	**56.98**	**355**	P	**P**	**14 22 46.5**	**-1.4**
	3.5nm,0.9s,mb4.4,baz=5.5,slow=8.0,SNR=5.6						
MKAR	**Makanchi Array**	**64.54**	**315**	P	**P**	**14 23 38.9**	**-0.6**
	0.4nm,0.3s,mb4.0,baz=55,slow=5.3,SNR=4.5						
FINES	**FINESS Array B**	**65.00**	**354**	P	**P**	**14 23 41.1**	**-1.2**
	0.7nm,0.3s,mb4.2,baz=4.9,slow=6.0,SNR=5.7						
NOA	**NORSAR Array B**	**65.77**	**2**	P	**P**	**14 23 46.0**	**-1.3**
	0.8nm,0.7s,mb3.9,baz=358,slow=6.5,SNR=3.2						
KSH	**Kashi**	**73.14**	**315**	*e*P	**P**	**14 24 37.1**	**+4.0**
KSH				pmax	pmax		
	comp=Z,70nm,3.7s						
AKASG	**Malin Array Be**	**75.39**	**350**	P	**P**	**14 24 45.3**	**-0.7**
	comp=Z,0.6nm,0.4s,mb3.9,baz=12,slow=6.1,SNR=3.1						
CMAR	**Chiang Mai Arr**	**78.42**	**285**	P	**P**	**14 25 04.8**	**+1.2**
	comp=Z,1.2nm,0.8s,mb3.9,baz=23,slow=5.5,SNR=4.7						
BRTR	**Keskin Array B**	**85.62**	**345**	P	**P**	**14 25 41.9**	**+0.8**
	comp=Z,0.9nm,0.7s,mb4.1,baz=86,slow=4.0,SNR=4.5						

MOS ***10*** *14:17:03.7±0.9, 10.°12S×119.°12E, h33km, mb5.0/12, Error ellipse: s-maj=23.4km s-min=9.7km az=107.8*
IDC ***10*** *14:17:06.2±0.7, 9.°41S×118.°74E, h0km, mb4.5/15, mb1 4.5/17, mb1mx4.5/25, mbtmp4.5/17, ML4.3/2, MS3.4/2, Ms1 3.4/2, ms1mx2.6/28, Error ellipse: s-maj=26.1km s-min=15.1km az=54.0*
ISCJB ***10*** *14:17:11.3±1.0, 9.°62S±0.°04×118.°80E±0.°06, h61km±9km, mb4.9/53, Error ellipse: s-maj=11.3km s-min=6.2km az=153.7*
BJI ***10*** *14:17:13.3, 9.°60S×118.°80E, h82km, mB4.8/23, mb4.9/37, Ms4.8/13, Ms7 4.4/15*
NEIC ***10*** *14:17:13.3±1.2, 9.°57S×118.°82E, h63km±11km, mb4.8/15, Error ellipse: s-maj=13.5km s-min=7.8km az=62.0*
DJA ***10*** *14:17:16, 9.°67S×118.°87E, h67km, mb4.9/40*
ISC 10 14:17:13.5±0.8, 9.°61S±0.°05×118.°80E±0.°07, h62km±8km, h97km±1.4km: pP-P, n95, σ1.°20/106, mb4.9/53, 3C-2D, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**4.66**	**12**	Pn	**Pn**	**14 18 23.1**	**+1.8**
	39nm,0.3s,baz=195,slow=7.8,SNR=124						
KAPI				Sn	**Sn**	**14 19 13.9**	**-0.2**
	72nm,0.3s,baz=53,slow=22,SNR=13						
KAPI				LR	LR	14 20 27.3	
	comp=Z,301nm,20.3s,baz=52,slow=45						
FITZ	**Fitzroy Crossi**	**10.74**	**143**	*e*P	**Pn**	**14 19 44.2**	**-0.3**
	24nm,0.6s						
FITZ				*e*S	**Sn**	**14 21 33.7**	**-10**
FITZ	**Fitzroy Crossi**	**10.74**	**143**	Pn	**Pn**	**14 19 44.4**	**-0.1**
	1.8nm,0.3s,baz=326,slow=7.0,SNR=12						
FITZ				Sn	**Sn**	**14 21 34.2**	**-9.0**
	1.8nm,0.3s,baz=327,slow=7.5,SNR=4.4						
FITZ	**Fitzroy Crossi**	**10.74**	**143**	*e*Pn	**Pn**	**14 19 43.3**	**-1.2**
	1.4nm,1.1s						
FITZ				*e*Sn	**Sn**	**14 21 25.3**	**-18**
KNA	**Kununurra**	**11.48**	**123**	*e*P	**Pn**	**14 19 53.9**	**-0.7**
	13nm,0.3s						
KNA				*e*S	**Sn**	**14 21 52.7**	**-8.6**
MBWA	**Marble Bar**	**11.52**	**176**	*e*P	**Pn**	**14 19 54.6**	**-0.6**
MBWA				*e*S	**Sn**	**14 21 52.6**	**-10**
MBWA	**Marble Bar**	**11.52**	**176**	*e*Pn	**Pn**	**14 19 54.3**	**-0.9**
	14nm,0.4s						
MBWA				*e*Sn	**Sn**	**14 21 51.1**	**-11**
KAKA	**Kakadu**	**13.73**	**104**	*e*P	**Pn**	**14 20 26.1**	**+0.8**
	36nm,0.4s						
KAKA				*e*S	**Sn**	**14 22 47.2**	**-9.0**
KAKA	**Kakadu**	**13.73**	**104**	*e*Pn	**Pn**	**14 20 24.3**	**-1.0**
	46nm,0.6s						
KSM	**Kuching**	**13.88**	**322**	*e*Pn	**Pn**	**14 20 35.5**	**+8.2**
KKM	**Kota Kinabalu**	**15.76**	**350**	*e*Pn	**Pn**	**14 20 55.9**	**+4.2**
	26nm,0.6s						
WRA	**Warramunga Arr**	**18.18**	**126**	P	**Pn**	**14 21 22.1**	**+0.4**
	1.1nm,0.3s,baz=302,slow=13,SNR=24						
WRA				S	**S**	**14 24 30.8**	**-14**
	1.1nm,0.3s,baz=296,slow=22,SNR=6.6						
WRAB	**Tennant Creek**	**18.19**	**126**	*e*P	**Pn**	**14 21 20.9**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,13nm,0.7s						
WRAB	**Tennant Creek**	**18.19**	**126**	*e*P	**Pn**	**14 21 20.9**	**-0.9**
	comp=Z,13nm,0.7s						
ASAR	**Alice Springs**	**20.09**	**136**	P	**P**	**14 21 44.0**	**+1.9**
	comp=Z,2.8nm,0.6s,baz=310,slow=9.4,SNR=16						
ASAR				S	**S**	**14 25 18.8**	**-5.8**
	comp=Z,9.0nm,0.7s,baz=320,slow=26,SNR=7.5						
NWAO	**Narrogin (SRO)**	**23.25**	**183**	*e*P	pP	14 22 32.1	+2.6
	comp=Z,125nm,0.7s						
NWAO				*e*S	**S**	**14 26 29.2**	**+6.2**
PSI	**Prapat**	**23.33**	**301**	P	**P**	**14 22 13.9**	**-2.6**
	comp=Z,4.8nm,0.4s,mb4.3,baz=120,slow=4.0,SNR=12						
TGY	**Tagaytay City**	**23.65**	**5**	P	**P**	**14 22 19.1**	**-0.2**
	comp=Z,476nm,0.9s,mb5.9,baz=209,slow=4.6,SNR=11						
COEN	**Coen**	**24.24**	**103**	*e*P	**P**	**14 22 26.3**	**+1.5**
MTSU	**Mount Surprise**	**26.15**	**112**	*e*P	**P**	**14 22 43.9**	**+1.7**
	comp=Z,42nm,1.0s,mb4.9						
CTA	**Charters Tower**	**28.46**	**115**	LR	LR	14 35 57.4	
	comp=Z,132nm,19.6s,baz=99,slow=40						
STKA	**Stephens Creek**	**30.61**	**140**	P	**P**	**14 23 23.7**	**+1.9**
	comp=Z,3.5nm,0.7s,mb4.3,baz=323,slow=13,SNR=2.9						
STKA	**Stephens Creek**	**30.61**	**140**	P	**P**	**14 23 23.7**	**+1.9**
CMAR	**Chiang Mai Arr**	**34.08**	**325**	P	**P**	**14 23 51.6**	**-0.6**
	comp=Z,2.2nm,0.5s,mb4.3,baz=152,slow=7.0,SNR=12						
CMAR				PcP	PcP	14 26 31.1	+2.3
	comp=Z,1.1nm,0.6s,baz=195,slow=2.3,SNR=4.7						
GYA	**Guiyang**	**37.74**	**342**	P	**P**	**14 24 25.8**	**+2.4**
GYA				pP	pP	14 24 47.9	+9.0
GYA				PcP	PcP	14 26 40.0	+0.6
GYA				S	**S**	**14 30 12.0**	**+2.5**
GYA				ScP	ScP	14 30 18.0	-3.7
GYA				PcS	PcS	14 30 28.7	+0.4
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
GYA				pmax	pmax		
	comp=Z,80nm,4.6s						
GYA				LR	LR		
	comp=N,540nm,16.8s						
GYA				LR	LR		
	comp=E,410nm,15.6s						
GYA				LR	LR		
	comp=Z,520nm,17.4s						
KMI	**Kunming**	**37.90**	**336**	P	**P**	**14 24 27.2**	**+2.4**
KMI				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
WHN	**Wuhan**	**40.15**	**354**	P	**P**	**14 24 44.8**	**+1.3**
ENH	**Enshi**	**40.65**	**348**	*e*P	**P**	**14 24 47.7**	**+0.1**
	comp=Z,12nm,0.6s,mb4.7						
CD2	**Chengdu**	**42.79**	**341**	P	**P**	**14 25 05.3**	**+0.2**
CD2				PP	PP	14 26 52.0	+6.4
CD2				S	**S**	**14 31 26.9**	**+2.0**
CD2				SS	SS	14 34 35.3	-2.8
CD2				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.0						
CD2				pmax	pmax		
	comp=Z,120nm,5.3s						
CD2				LR	LR		
	comp=N,150nm,8.3s						
CD2				LR	LR		
	comp=Z,170nm,6.5s						
XAN	**Xi'an**	**44.41**	**348**	P	**P**	**14 25 17.6**	**-0.5**
XAN				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
LSA	**Lhasa**	**47.29**	**327**	*e*P	**P**	**14 25 41.8**	**+0.9**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
LSA	**Lhasa**	**47.29**	**327**	*e*P	**P**	**14 25 41.8**	**+0.9**
	comp=Z,6.7nm,0.8s,mb4.6						
ODAN	**Odare**	**47.36**	**321**	*e*P	**P**	**14 25 41.6**	**+0.1**
TAPN	**Taplejung**	**47.52**	**321**	*e*P	**P**	**14 25 39.2**	**-3.5**
	comp=Z,12nm,0.5s,mb5.2						
LZH	**Lanzhou**	**47.58**	**344**	⇓P	**P**	**14 25 44.5**	**+1.5**
LZH				pP	pP	14 26 07.6	+8.6
LZH				PP	PP	14 27 37.5	+2.3
LZH				pmax	pmax		
	comp=Z,22nm,1.3s,mb5.0						
LZH				pmax	pmax		
	comp=Z,71nm,5.6s						
LZH				LR	LR		
	comp=E,500nm,14.8s						
LZH				LR	LR		
	comp=Z,690nm,18.0s						
KSRS	**Korea Array**	**47.58**	**10**	P	**P**	**14 25 42.5**	**-0.5**
	comp=Z,4.9nm,0.6s,mb4.7,baz=189,slow=9.4,SNR=30						
KSRS				PcP	PcP	14 27 12.4	+0.4
	comp=Z,1.4nm,0.7s,baz=181,slow=3.3,SNR=6.2						
RAMN	**Ramite**	**47.92**	**320**	*e*P	**P**	**14 25 46.3**	**+0.5**
	comp=Z,12nm,0.5s,mb5.2						
JIRN	**Jiri**	**48.68**	**320**	*e*P	**P**	**14 25 50.3**	**-1.4**
	comp=Z,15nm,0.5s,mb5.2						
DMN	**Daman**	**49.33**	**320**	*e*P	**P**	**14 25 56.3**	**-0.4**
	comp=Z,13nm,0.6s,mb5.1						
MAJO	**Matsushiro**	**49.40**	**21**	*e*P	**P**	**14 25 54.1**	**-2.9**
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.9						
MAJO	**Matsushiro**	**49.40**	**21**	*e*P	**P**	**14 25 54.1**	**-2.9**
	comp=Z,8.2nm,0.7s,mb4.9						
MAT	**Matsushiro**	**49.40**	**21**	P	**P**	**14 25 54.7**	**-2.3**
MJAR	**Matsushiro Arr**	**49.40**	**21**	P	**P**	**14 25 54.9**	**-2.0**
	comp=Z,5.1nm,0.8s,mb4.6,baz=197,slow=8.4,SNR=13						
BJT	**Baijiatuau**	**49.43**	**357**	*e*P	**P**	**14 25 56.1**	**-1.1**
BJT				pmax	pmax		
	comp=Z,25nm,0.5s						
BJT	**Baijiatuau**	**49.43**	**357**	*e*P	**P**	**14 25 56.1**	**-1.0**
	comp=Z,24nm,0.5s,mb5.5						
BJI	**Beijing**	**49.45**	**357**	P	**P**	**14 25 56.7**	**-0.6**
BJI				pP	pP	14 26 19.8	+6.4
BJI				sP	sP	14 26 30.4	+10
BJI				pmax	pmax		
	comp=Z,28nm,0.6s,mb5.5						
GKN	**Gorkha**	**49.90**	**320**	*e*P	**P**	**14 26 00.7**	**-0.3**
	comp=Z,11nm,0.3s,mb5.3						
HHC	**Hu-ho-hao-te**	**50.64**	**353**	*e*P	**P**	**14 26 07.9**	**+1.6**
HHC				pP	pP	14 26 30.7	+8.2
HHC				sP	sP	14 26 40.2	+11
HHC				PcP	PcP	14 27 22.6	-0.5
HHC				PP	PP	14 28 06.8	+3.8
HHC				ScP	ScP	14 31 08.4	-5.6
HHC				PcS	PcS	14 31 19.6	-0.8
HHC				S	**S**	**14 33 16.2**	**-0.4**
HHC				ScS	ScS	14 35 45.5	-6.0
HHC				SS	SS	14 36 50.2	-1.7
HHC				pmax	pmax		
	comp=Z,24nm,0.6s,mb5.3						
HHC				pmax	pmax		
	comp=Z,110nm,6.6s						
HHC				LR	LR		
	comp=N,370nm,15.7s						
HHC				LR	LR		
	comp=E,440nm,15.5s						
HHC				LR	LR		
	comp=Z,120nm,15.6s						
GTA	**Gaotai**	**51.86**	**341**	⇑P	**P**	**14 26 16.7**	**+1.2**
GTA				pP	pP	14 26 41.6	+10
GTA				PcP	PcP	14 27 28.9	+1.3
GTA				pmax	pmax		
	comp=Z,14nm,0.6s,mb5.1						
CN2	**Changchun**	**53.49**	**6**	*e*P	**P**	**14 26 30.5**	**+3.0**
CN2				*e*sP	sP	14 27 03.3	+13
CN2				*e*S	**S**	**14 33 56.5**	**+0.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
MDJ	**Mudanjiang**	**54.84**	**9**	P	**P**	**14 26 36.2**	**-1.1**
MDJ				pP	pP	14 26 58.2	+4.6
MDJ				sP	sP	14 27 08.7	+8.1
MDJ				ScP	ScP	14 31 27.1	-5.1
MDJ				PcS	PcS	14 31 36.9	-1.6
MDJ				S	**S**	**14 34 11.5**	**-2.3**
MDJ				sS	sS	14 34 49.8	+8.5
MDJ				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
MDJ				pmax	pmax		
	comp=Z,14nm,4.6s						
MDJ	**Mudanjiang**	**54.84**	**9**	*e*P	**P**	**14 26 36.0**	**-1.2**
	comp=Z,9.2nm,0.7s,mb4.9						
ULN	**Ulaanbaatar**	**58.16**	**351**	*e*P	**P**	**14 27 00.4**	**-0.4**
ULN				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.9						
ULN	**Ulaanbaatar**	**58.16**	**351**	*e*P	**P**	**14 27 00.4**	**-0.3**
	comp=Z,16nm,1.3s,mb4.9						
SONM	**Songino Array**	**58.24**	**350**	P	**P**	**14 27 01.5**	**+0.2**
	comp=Z,8.7nm,0.5s,mb5.1,baz=166,slow=8.6,SNR=52						
HABR	**Khabarovsk**	**59.58**	**12**	*e*P	**P**	**14 27 08.0**	**-2.6**
HABR				*e*		14 27 52.8	
HABR				PPP		14 30 46.1	
HABR				*e*SSS		14 41 49.9	
HABR				pmax	pmax		
	comp=Z,18nm,2.2s,mb4.7						
HABR				pmax	pmax		
	comp=N,22nm,2.2s						
HABR				pmax	pmax		
	comp=E,22nm,2.3s						
HABR				MLR	MLR		
	comp=Z,24nm,21.0s						
FUNA	**Funafuti**	**59.58**	**94**	*e*P	**P**	**14 27 10.3**	**-1.0**
	comp=Z,217nm,1.2s,mb6.1						
WMQ	**Urumqi**	**60.21**	**334**	*e*P	**P**	**14 27 16.4**	**+1.3**
WMQ				pP	pP	14 27 40.5	+8.9
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s,mb5.0						
WMQ				pmax	pmax		
	comp=Z,190nm,5.1s						
YSS	**Yuzh-Sakhalins**	**60.22**	**19**	*e*P	**P**	**14 27 14.0**	**-1.1**
YSS	**Yuzh-Sakhalins**	**60.22**	**19**	*e*P	**P**	**14 27 13.5**	**-1.5**
	comp=Z,11nm,1.1s,mb4.8						
TLY	**Talaya**	**62.42**	**349**	*e*P	**P**	**14 27 30.3**	**+0.5**
TLY				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.8						
TLY	**Talaya**	**62.42**	**349**	*e*P	**P**	**14 27 30.3**	**+0.5**
	comp=Z,7.3nm,0.9s,mb4.8						
KSH	**Kashi**	**62.97**	**324**	P	**P**	**14 27 33.7**	**-0.1**
KSH				pP	pP	14 27 57.7	+7.3
KSH				sP	sP	14 28 08.2	+11
KSH				PcP	PcP	14 28 10.9	-0.4
KSH				PP	PP	14 29 53.7	+0.6
KSH				ScP	ScP	14 32 01.9	-6.4
KSH				PcS	PcS	14 32 11.3	-3.4
KSH				S	**S**	**14 35 52.7**	**-6.7**
KSH				sS	sS	14 36

comp=Z,1.3nm,0.8s,mb4.3,baz=115,slow=4.6,SNR=5.4
OBN Obninsk 93.39 325 *e*P **P 14 30 17.5 -4.2**
OBN pmax pmax
comp=Z,8.0nm,0.8s,mb5.2
TORD Torodi Ar. Bea 118.37 280 PKP PKPdf 14 35 56.3 +1.4
comp=Z,0.8nm,0.5s,baz=64,slow=2.1,SNR=5.5
NVAR Mina Array Bea 121.55 51 PKP PKPdf 14 36 02.3 +1.9
comp=Z,0.1nm,0.4s,baz=298,slow=2.6,SNR=3.1
SSPA Standing Stone 145.73 23 *e*PKPab PKPab 14 36 45.4 -0.8
LRAL Lakeview Retre 146.69 42 *e*PKPab PKPab 14 36 48.1 -1.9

DJA 10 14:24:14, 2°.25S×100°.70E, h54km, MLv3.5/8, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**0.78**	**78**	P	Pn	14 24 29.9	+1.0
PPSI	**Pulau Pagai**	**0.86**	**234**	P	Pn	14 24 31.1	+1.1
PDSI	**Padang**	**1.35**	**350**	P	Pn	14 24 35.5	-1.1
PDSI				S	Sn	14 24 53.9	+0.5
SDSI	**Sungai Dareh**	**1.50**	**29**	P	Pn	14 24 40.4	+1.8
PPI	**Padang Panjang**	**1.81**	**350**	P	Pn	14 24 43.5	+0.7
PPI				S	Sn	14 25 05.6	+1.0
SISI	**Saibi**	**1.85**	**300**	P	Pn	14 24 44.0	+0.6
KSI	**Kapahiang**	**2.35**	**126**	P	Pn	14 24 50.5	+0.3
MNAI	**Manna**	**3.08**	**133**	P	Pn	14 25 00.1	0.0
MNSI	**Mandailing Nat**	**3.23**	**340**	P	Pn	14 25 02.1	-0.1

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*ISK **10** 14:41:37.6, 38°.30N×37°.99E, h11km, MD2.8*
*CSEM **10** 14:41:38.6±0.1, 38°.25N×38°.05E, h18km, MD2.8, Error ellipse: s-maj=3.3km s-min=2.1km az=143.0*
*ISCJB **10** 14:41:39.3±0.6, 38°.23N±0°.05×38°.06E±0°.05, h20km±6km, Error ellipse: s-maj=9.0km s-min=6.1km az=166.5*
*DDA **10** 14:41:39.6, 38°.31N×38°.14E, h7km±4km, Md2.8*
ISC 10 14:41:39.2±0.6, 38°.25N±0°.05×38°.09E±0°.05, h20km±4km, n24, σ0°.72/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKCD	**Akcadag**	**0.14**	**290**	*i* P	**Pg**	**14 41 43.4**	**-0.1**
AKCD				*i* S	**Sg**	**14 41 46.5**	**+0.1**
AKCD	**Akcadag**	**0.14**	**290**	*i* P	**Pg**	**14 41 43.4**	**-0.1**
AKCD				*i* S	**Sg**	**14 41 46.5**	**+0.1**
MYA	**Malataya**	**0.28**	**74**	*e*PG	**Pg**	**14 41 45.3**	**-0.2**
MYA				*e*SG	**Sg**	**14 41 50.0**	**+0.2**
MYA	**Malataya**	**0.28**	**74**	*e*Pg	**Pg**	**14 41 45.3**	**-0.2**
MYA				*e*Sg	**Sg**	**14 41 50.0**	**+0.2**
DARE	**Darende-Malaty**	**0.74**	**343**	*e*PG	**Pg**	**14 41 47.5**	**-6.2**
ELZG	**Elazig**	**0.75**	**70**	*i* P	**Pg**	**14 41 53.3**	**-0.6**
ELZG				*i* S	**Sg**	**14 42 04.3**	**+0.4**
ELZG	**Elazig**	**0.75**	**70**	*i* P	**Pg**	**14 41 53.3**	**-0.6**
ELZG				*i* S	**Sg**	**14 42 04.3**	**+0.4**
SVRC	**Sivrice-ELAZID**	**0.97**	**82**	*e*PG	**Pg**	**14 41 58.0**	**-0.1**
SVRC	**Sivrice-ELAZID**	**0.97**	**82**	*e*Pg	**Pg**	**14 41 58.0**	**-0.1**
GZT	**Gaziantep**	**0.98**	**205**	*i* P	**Pg**	**14 42 01.9**	**+3.6**
GZT				*i* S	**Sg**	**14 42 18.3**	**+7.0**
URFA	**Urfa**	**0.99**	**144**	*e*PG	**Pg**	**14 41 58.4**	**-0.2**
URFA	**Urfa**	**0.99**	**144**	*e*Pg	**Pg**	**14 41 58.4**	**-0.1**
KEMA	**Kemaliye**	**1.07**	**17**	*i* P	**Pg**	**14 41 58.4**	**-1.6**
KEMA				*i* S	**Sg**	**14 42 14.9**	**+1.0**
KEMA	**Kemaliye**	**1.07**	**17**	*i* P	**Pg**	**14 41 58.4**	**-1.5**
KEMA				*i* S	**Sg**	**14 42 14.9**	**+0.9**
SARI	**SarD1z-Kayseri**	**1.17**	**292**	*e*PN	**Pn**	**14 42 01.5**	**+1.0**
SARI	**SarD1z-Kayseri**	**1.17**	**292**	*e*Pn	**Pn**	**14 42 01.5**	**+1.0**
KMRS	**Kahramanmaras**	**1.20**	**232**	*e*PN	**Pn**	**14 42 00.5**	**-0.4**
KMRS	**Kahramanmaras**	**1.20**	**232**	*e*Pn	**Pn**	**14 42 00.5**	**-0.3**
PTK	**Pertek**	**1.21**	**57**	*e*PN	**Pn**	**14 42 01.6**	**+0.6**
PTK	**Pertek**	**1.21**	**57**	*e*Pn	**Pn**	**14 42 01.6**	**+0.6**
GAZ	**Gaziantep**	**1.28**	**213**	*e*PN	**Pn**	**14 42 01.9**	**0.0**
GAZ	**Gaziantep**	**1.28**	**213**	*e*Pn	**Pn**	**14 42 01.9**	**-0.1**
SVSK	**Karacayir**	**1.87**	**333**	*e*PN	**Pn**	**14 42 09.3**	**-0.8**
SVSK	**Karacayir**	**1.87**	**333**	*e*Pn	**Pn**	**14 42 09.3**	**-0.8**

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*ISCJB **10** 14:55:12.4±0.4, 2°.31S±0°.06×102°.32E±0°.07, h198km±6km, mb3.1/4, Error ellipse: s-maj=13.6km s-min=5.4km az=139.7*
*IDC **10** 14:55:13.4±3.0, 2°.34S×102°.35E, h191km±33km, mb3.0/4, mb1 3.2/5, mb1mx2.9/22, mbtmp3.0/5, Error ellipse: s-maj=90.9km s-min=16.6km az=56.0*
*DJA **10** 14:55:14, 2°.30S×102°.34E, h166km, MLv4.0/13*
ISC 10 14:55:13.4±0.4, 2°.30S±0°.06×102°.34E±0°.07, h190km±6km, n26, σ1°.06/30, mb3.3/4, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**0.90**	**283**	P	**Pn**	**14 55 43.3**	**+1.9**
KSI	**Kapahiang**	**1.37**	**169**	P	**Pn**	**14 55 46.4**	**+1.3**
KSI				S	**Sn**	**14 56 08.3**	**-1.4**
SDSI	**Sungai Dareh**	**1.63**	**326**	P	**Pn**	**14 55 44.7**	**-2.8**
RGRI	**Rengat**	**1.93**	**360**	P	**Pn**	**14 55 50.3**	**-0.2**
MNAI	**Manna**	**2.14**	**163**	P	**Pn**	**14 55 53.0**	**+0.3**
MNAI				S	**Sn**	**14 56 23.9**	**+0.6**
PDSI	**Padang**	**2.33**	**306**	P	**Pn**	**14 55 55.6**	**+0.9**
PDSI				S	**Sn**	**14 56 25.4**	**-1.5**
PPSI	**Pulau Pagai**	**2.38**	**259**	P	**Pn**	**14 55 55.9**	**+0.7**
PPSI				S	**Sn**	**14 56 26.7**	**-1.0**
PPI	**Padang Panjang**	**2.67**	**313**	P	**Pn**	**14 55 59.3**	**+0.7**
MDSI	**Maura Dua**	**2.85**	**140**	P	**Pn**	**14 56 01.3**	**+0.6**
BKNI	**Bangkinang**	**2.91**	**333**	P	**Pn**	**14 56 02.6**	**+1.1**
LWLI	**Liwa**	**3.20**	**148**	P	**Pn**	**14 56 05.2**	**+0.2**
KLSI		**3.37**	**135**	P	**Pn**	**14 56 08.4**	**+1.4**
SISI	**Saibi**	**3.39**	**286**	P	**Pn**	**14 56 07.9**	**+0.7**
KASI	**Kota Agung**	**3.86**	**146**	P	**Pn**	**14 56 12.7**	**-0.4**
MNSI	**Mandailing Nat**	**4.13**	**318**	P	**Pn**	**14 56 16.9**	**+0.4**
MYKOM	**Kota Tinggi**	**4.33**	**20**	P	**Pn**	**14 56 18.7**	**-0.3**
CGJI	**Cibinong**	**5.44**	**142**	P	**Pn**	**14 56 30.7**	**-2.5**
PSI	**Prapat**	**6.11**	**326**	P	**Pn**	**14 56 41.2**	**-0.8**
	0.8nm,0.3s,baz=140,slow=13,SNR=6.5						
TPTI		**7.55**	**317**	P	**Pn**	**14 57 00.0**	**-0.9**
	0.2nm38nm,0.7s						
UGM	**Wanagama**	**9.88**	**125**	P	**Pn**	**14 57 30.8**	**-0.4**
	94nm,2.2s						
NGJI	**Ngawi**	**10.39**	**119**	P	**Pn**	**14 57 38.8**	**+0.9**
PCJI	**Pacitan**	**10.57**	**124**	P	**Pn**	**14 57 38.1**	**-2.1**
WRA	**Warramunga Arr**	**35.84**	**122**	P	**P**	**15 01 54.1**	**-1.0**
	0.4nm,0.9s,mb3.0,baz=303,slow=9.3,SNR=8.5						
ASAR	**Alice Springs**	**37.20**	**127**	P	**P**	**15 02 06.8**	**+0.3**
	0.6nm,0.4s,mb3.5,baz=302,slow=8.0,SNR=31						
ASAR				PcP	PcP	15 04 21.3	-1.1
	0.4nm,1.0s,baz=305,slow=2.6,SNR=4.7						
SONM	**Songino Array**	**50.05**	**4**	P	**P**	**15 03 49.4**	**+0.8**
	0.9nm,0.5s,mb3.6,baz=182,slow=9.4,SNR=5.6						
MKAR	**Makanchi Array**	**51.97**	**343**	P	**P**	**15 04 03.0**	**+0.1**
	0.1nm,0.3s,mb2.9,baz=154,slow=7.4,SNR=4.7						

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*VIE **10** 15:02:14.7±0.3, 44°.49N×10°.94E, h9km±1km, mb2.1/4, ML2.8/5, Error ellipse: s-maj=2.8km s-min=1.3km az=114.0 31 km W of Bologna*
*CSEM **10** 15:02:14.9±0.2, 44°.44N×10°.88E, h22km±2km, ML2.8/5, Error ellipse: s-maj=4.0km s-min=3.7km az=105.0*
*ISCJB **10** 15:02:15.6±0.4, 44°.40N±0°.04×10°.87E±0°.05, h25km±4km, Error ellipse: s-maj=7.0km s-min=5.9km az=177.7*
*ROM **10** 15:02:15.9±0.2, 44°.38N×10°.84E, h21km±4km, Md2.3/13, Ml2.0/11, Error ellipse: s-maj=3.3km s-min=2.3km az=6.0*
ISC 10 15:02:15.9±0.4, 44°.39N±0°.04×10°.86E±0°.05, h24km±4km, n40, σ0°.65/60, 2C-5D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZCCA	**Zocca**	**0.09**	**115**	⇓*i*Pg	**Pb**	**15 02 20.0**	**-0.3**
ZCCA				Sg	**Sb**	**15 02 24.3**	**+1.0**
ZCCA	**Zocca**	**0.09**	**115**	⇓*i*Pg	**Pb**	**15 02 20.0**	**-0.3**
ZCCA				Sg	**Sb**	**15 02 24.3**	**+1.0**
GSCL	**Gusciola**	**0.20**	**259**	Pg	**Pb**	**15 02 20.9**	**-0.6**
GSCL				Sg	**Sb**	**15 02 24.6**	**-0.7**
	50nm,0.4s						
GSCL	**Gusciola**	**0.20**	**259**	Pg	**Pb**	**15 02 20.9**	**-0.6**
GSCL				Sg	**Sb**	**15 02 24.6**	**-0.7**
	50nm,0.4s						
PZZT	**Monte Pizzetto**	**0.26**	**180**	Pg	**Pb**	**15 02 21.6**	**-0.6**
PZZT				Sg	**Sb**	**15 02 26.6**	**+0.1**
	309nm,0.5s						
PZZT	**Monte Pizzetto**	**0.26**	**180**	Pg	**Pb**	**15 02 21.6**	**-0.6**
PZZT				Sg	**Sb**	**15 02 26.6**	**+0.1**
	309nm,0.5s						
FNVD	**Fontana Vidola**	**0.29**	**140**	Pg	**Pb**	**15 02 21.7**	**-0.9**
FNVD				Sg	**Sb**	**15 02 27.4**	**+0.1**
	1μm,0.2s						
FNVD	**Fontana Vidola**	**0.29**	**140**	Pg	**Pb**	**15 02 21.7**	**-0.9**
FNVD				Sg	**Sb**	**15 02 27.4**	**+0.1**
	1μm,0.2s						
ERBM	**Eremo**	**0.33**	**276**	Pg	**Pb**	**15 02 23.2**	**0.0**
	45nm,0.2s						
ERBM	**Eremo**	**0.33**	**276**	Pg	**Pb**	**15 02 23.2**	**0.0**
	45nm,0.2s						
BDI	**Bagni Di Lucca**	**0.38**	**211**	Pg	**Pb**	**15 02 23.4**	**-0.6**
BDI				Sg	**Sb**	**15 02 29.6**	**0.0**
	207nm,0.3s						
BDI	**Bagni Di Lucca**	**0.38**	**211**	Pg	**Pb**	**15 02 23.4**	**-0.6**
BDI				Sg	**Sb**	**15 02 29.6**	**0.0**
	207nm,0.3s						
VLC	**Villacollemand**	**0.41**	**236**	Pg	**Pb**	**15 02 24.7**	**+0.1**
	57nm,0.8s						
VLC	**Villacollemand**	**0.41**	**236**	Pg	**Pb**	**15 02 24.7**	**+0.1**
	57nm,0.8s						
MTRZ	**Monterenzio**	**0.43**	**91**	Pg	**Pb**	**15 02 25.4**	**+0.5**
MTRZ	**Monterenzio**	**0.43**	**91**	Pg	**Pb**	**15 02 25.4**	**+0.5**
MAIM	**Mastiano**	**0.55**	**210**	Pg	**Pb**	**15 02 27.5**	**+0.7**
	47nm,0.4s						
MAIM	**Mastiano**	**0.55**	**210**	Pg	**Pb**	**15 02 27.5**	**+0.7**
	47nm,0.4s						
CRMI	**Carmignano**	**0.60**	**173**	Pg	**Pb**	**15 02 27.8**	**0.0**
	37nm,0.7s						
CRMI	**Carmignano**	**0.60**	**173**	Pg	**Pb**	**15 02 27.8**	**0.0**
	37nm,0.7s						
PII	**Pisa**	**0.71**	**200**	Pg	**Pb**	**15 02 29.8**	**+0.2**
	31nm,0.2s						
PII	**Pisa**	**0.71**	**200**	Pg	**Pb**	**15 02 29.8**	**+0.2**
	31nm,0.2s						
SFI	**Santa Sofia**	**0.86**	**124**	Pg	**Pb**	**15 02 32.8**	**+0.7**
	25nm,0.7s						
SFI	**Santa Sofia**	**0.86**	**124**	Pg	**Pb**	**15 02 32.8**	**+0.7**
	25nm,0.7s						
ASQU	**Asqua**	**0.89**	**131**	Pg	**Pb**	**15 02 33.2**	**+0.6**
	23nm,0.5s						
ASQU	**Asqua**	**0.89**	**131**	Pg	**Pb**	**15 02 33.2**	**+0.6**
	23nm,0.5s						
SC2M	**Scurtabo**	**0.95**	**271**	Pg	**Pn**	**15 02 34.6**	**+0.9**
SC2M	**Scurtabo**	**0.95**	**271**	Pg	**Pn**	**15 02 34.6**	**+0.9**
CRE	**Caprese Michel**	**1.10**	**134**	Pg	**Pn**	**15 02 36.1**	**+0.4**
	13nm,0.4s						
CRE	**Caprese Michel**	**1.10**	**134**	Pg	**Pn**	**15 02 36.1**	**+0.4**
	13nm,0.4s						
TEOL	**Teolo**	**1.13**	**30**	*e*Pg	**Pn**	**15 02 35.5**	**-0.6**
TEOL				Sg	**Sn**	**15 02 51.9**	**+1.1**
TEOL	**Teolo**	**1.13**	**30**	*e*Pg	**Pn**	**15 02 35.5**	**-0.6**
TEOL				Sg	**Sn**	**15 02 51.9**	**+1.1**
MAGA	**Magasa**	**1.40**	**353**	Pg	**Pn**	**15 02 40.1**	**+0.3**
	202nm,0.2s						
MAGA	**Magasa**	**1.40**	**353**	Pg	**Pn**	**15 02 40.1**	**+0.3**
	202nm,0.2s						
FETA	**Feichten**	**2.63**	**358**	⇑*i*Pn	**Pn**	**15 02 56.3**	**-0.5**
FETA				⇑*i*Sg	**Sn**	**15 03 38.0**	**+10**
	2.2nm,0.3s						
FETA	**Feichten**	**2.63**	**358**	Pn	**Pn**	**15 02 56.3**	**-0.5**
FETA				Sg	**Sn**	**15 03 38.0**	**+10**
	2.2nm,0.3s						
NVLJ	**Novalja**	**2.87**	**85**	*e*Pn	**Pn**	**15 02 59.8**	**-0.3**
NVLJ				Sn	**Sn**	**15 03 31.9**	**-1.9**
NVLJ	**Novalja**	**2.87**	**85**	*e*Pn	**Pn**	**15 02 59.8**	**-0.3**
NVLJ				Sn	**Sn**	**15 03 31.9**	**-2.0**
KBA	**Koelnbreinsper**	**3.20**	**32**	⇓*i*Pg	**Pn**	**15 03 14.0**	**+9.4**
KBA				⇓*i*Sn	**Sn**	**15 03 42.1**	**+0.1**
KBA				⇓*i*Sg	**Sn**	**15 03 57.2**	**+15**
	2.5nm,0.2s						
KBA	**Koelnbreinsper**	**3.20**	**32**	Pg	**Pn**	**15 03 14.0**	**+9.4**
KBA				Sn	**Sn**	**15 03 42.1**	**+0.1**
KBA				Sg	**Sn**	**15 03 57.2**	**+15**
	2.5nm,0.2s						

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*ISCJB **10** 15:18:05.3±2.2, 7°.36S±0°.04×125°.92E±0°.05, h3km±14km, mb4.5/32, MS3.3/5, Error ellipse: s-maj=9.4km s-min=5.8km az=140.6*
*IDC **10** 15:18:06.4±0.9, 7°.47S×125°.86E, h0km, mb4.3/10, mb1 4.4/14, mb1mx4.4/20, mbtmp4.3/14, ML4.1/4, MS3.3/6, Ms1 3.4/6, ms1mx3.0/22, Error ellipse: s-maj=29.7km s-min=20.4km az=69.0*
*BJI **10** 15:18:06.0, 7°.53S×126°.28E, h19km, mB4.7/6, mb4.7/13*
*NEIC **10** 15:18:07.8±3.7, 7°.47S×125°.94E, h13km±24km, mb4.5/14, Error ellipse: s-maj=12.1km s-min=7.0km az=46.0*
*DJA **10** 15:18:40, 7°.20S×123°.43E, h30km, mb4.6/12*
ISC 10 15:18:07.9±2.4, 7°.40S±0°.04×125°.96E±0°.05, h9km±15km, h16km±1.9km: pP-P, n78, σ1°.07/86, mb4.5/32, MS3.3/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**3.89**	**251**	P	**Pn**	**15 19 06.8**	**-1.0**
NLAI	**Namlea**	**4.28**	**15**	P	**Sn**	**15 20 01.8**	**-1.6**
	169nm,0.8s,2μm0.5nm						
AAI	**Ambon**	**4.30**	**31**	P	**Sn**	**15 20 03.8**	**-0.1**
	64nm,0.9s,0.3nm						
KDI	**Kendari**	**4.77**	**316**	P	**Pn**	**15 19 19.4**	**-0.5**
KDI				S	**Sn**	**15 20 10.6**	**-4.8**
WSI	**Waingapu**	**6.04**	**248**	P	**Pn**	**15 19 40.8**	**+3.4**
BKSI	**Bulukumba**	**6.16**	**289**	P	**Pn**	**15 19 37.8**	**-1.3**
BKSI				S	**Sn**	**15 20 44.2**	**-5.5**
BNSI	**Bone**	**6.54**	**297**	P	**Pn**	**15 19 43.7**	**-0.6**
KAPI	**Kappang**	**6.61**	**291**	**Pn**	**Pn**	**15 19 44.3**	**-1.0**
	3.6nm,0.3s,baz=126,slow=13,SNR=9.1						
KAPI				Sn	**Sn**	**15 20 54.2**	**-6.6**
	2.2nm,0.3s,baz=168,slow=19,SNR=3.2						
TLE	**Tual**	**6.96**	**76**	P	**Sn**	**15 20 51.4**	**-18**
	138nm,2.6s						
SPSI	**Sidrap Palu**	**7.04**	**299**	P	**Pn**	**15 19 51.3**	**+0.1**
TTSI	**Tana Toraja**	**7.49**	**305**	P	**Pn**	**15 19 58.4**	**+1.0**
	34nm,0.9s						
APSI	**Ampana**	**7.75**	**326**	S	**Sn**	**15 21 28.1**	**-0.7**
KMSI	**Cibinong**	**8.16**	**346**	P	Px	15 20 32.3	
	84nm,1.0s						
KAKA	**Kakadu**	**8.28**	**130**	*e*P	**Pn**	**15 20 12.4**	**+4.2**
	17nm,0.6s						
KAKA	**Kakadu**	**8.28**	**130**	*e*Pn	**Pn**	**15 20 11.9**	**+3.7**
	70nm,0.6s						
KAKA				*e*Sn	**Sn**	**15 21 39.5**	**-2.5**
KAKA	**Kakadu**	**8.28**	**130**	P	**Pn**	**15 20 17.1**	**+8.9**
KNA	**Kununurra**	**8.74**	**162**	*e*P	**Pn**	**15 20 17.0**	**+2.4**
	18nm,0.5s						
KNA	**Kununurra**	**8.74**	**162**	P	**Pn**	**15 20 15.8**	**+1.2**
PCI	**Palu**	**8.88**	**316**	P	**Pn**	**15 20 22.5**	**+6.0**
	0.1nm56nm,0.8s						
FITZ	**Fitzroy Crossi**	**10.64**	**182**	*e*P	**Pn**	**15 20 40.3**	**-0.3**
	17nm,0.6s						
FITZ				*e*S	**Sn**	**15 22 33.7**	**-6.3**
FITZ	**Fitzroy Crossi**	**10.64**	**182**	Pn	**Pn**	**15 20 40.2**	**-0.5**
	1.1nm,0.3s,baz=19,slow=7.5,SNR=28						
FITZ				Sn	**Sn**	**15 22 33.6**	**-6.4**
	1.3nm,0.3s,baz=104,slow=6.0,SNR=7.3						
FITZ				LR	LR	15 24 41.7	
	comp=Z,162nm,20.2s,baz=8.2,slow=37						
NBBI	**Negara**	**11.28**	**264**	P	**Pn**	**15 20 45.1**	**-4.2**
	310nm,1.3s						
MYLDM	**Lahad Datu**	**14.54**	**329**	P	**Pn**	**15 21 43.2**	**+9.2**
	10nm,2.1s						
WRAB	**Tennant Creek**	**14.88**	**148**	*e*Pn	**Pn**	**15 21 36.0**	**-2.6**
	22nm,0.9s						
WRAB				*e*Sn	**Sn**	**15 24 15.3**	**-8.4**
WRA	**Warramunga Arr**	**14.88**	**148**	Pn	**Pn**	**15 21 36.4**	**-2.3**
	0.6nm,0.3s,baz=316,slow=13,SNR=38						
WRA				Sn	**Sn**	**15 24 13.8**	**-10**
	0.3nm,0.3s,baz=323,slow=24,SNR=5.6						
WRA	**Warramunga Arr**	**14.88**	**148**	Pn	**Pn**	**15 21 36.4**	**-2.3**
WRA				Sn	**Sn**	**15 24 13.8**	**-10**
MBWA	**Marble Bar**	**14.95**	**203**	*e*P	**Pn**	**15 21 46.6**	**+7.1**
MBWA	**Marble Bar**	**14.95**	**203**	*e*Pn	**Pn**	**15 21 37.9**	**-1.6**
SBUM	**Sibu**	**16.84**	**305**	P	**Pn**	**15 22 07.9**	**+3.8**
	6.2nm,0.9s						
ASAR	**Alice Springs**	**17.88**	**156**	P	**Pn**	**15 22 16.4**	**-0.6**
	1.8nm,0.3s,baz=331,slow=11,SNR=72						
ASAR				S	**Sn**	**15 25 27.8**	**-8.8**
	0.1nm,0.3s,baz=318,slow=22,SNR=3.8						
KSM	**Kuching**	**17.93**	**299**	*e*Pn	**Pn**	**15 22 18.5**	**+0.8**
	11nm,1.0s						
KSM	**Kuching**	**17.93**	**299**	P	**Pn**	**15 22 19.8**	**+2.1**
	11nm,1.0s						
COEN	**Coen**	**18.12**	**113**	*e*Pn	**Pn**	**15 22 20.5**	**+0.5**
MEEK	**Meekatharra**	**20.37**	**199**	*e*P	**P**	**15 22 46.0**	**+1.1**
MTSU	**Mount Surprise**	**20.82**	**123**	*e*P	**P**	**15 22 53.4**	**+3.6**
	32nm,0.7s						
FORT	**Forrest**	**23.34**	**175**	*e*P	**P**	**15 23 17.4**	**+0.7**
	15nm,0.7s,mb4.5						
CTAO	**Charters Tower**	**23.37**	**125**	*e*P	**P**	**15 23 19.4**	**+2.3**
	9.4nm,0.9s,mb4.2						
GUMO	**Guam**	**28.06**	**42**	P	Px	15 24 45.1	
STKA	**Stephens Creek**	**28.38**	**151**	*e*P	**P**	**15 24 05.0**	**+2.4**
	4.8nm,0.5s,mb4.4						
STKA	**Stephens Creek**	**28.38**	**151**	P	**P**	**15 24 04.9**	**+2.3**
	5.8nm,0.6s,mb4.4,baz=320,slow=10,SNR=23						
STKA				LR	LR	15 35 17.6	
	comp=Z,189nm,19.9s,MS3.7,baz=26,slow=36						
STKA	**Stephens Creek**	**28.38**	**151**	*e*P	**P**	**15 24 04.4**	**+1.8**
	1.3nm,0.6s,mb3.7						
STKA				LR	LR	15 35 17.6	
CMAR	**Chiang Mai Arr**	**37.02**	**314**	P	**P**	**15 25 19.3**	**+1.1**
	3.0nm,0.7s,mb4.2,baz=145,slow=6.8,SNR=19						
CMAR				LR	LR	15 41 23.8	
	comp=Z,26nm,21.0s,MS3.0,baz=165,slow=38						
CHTO	**Chiang Mai**	**37.26**	**315**	*e*P	**P**	**15 25 20.3**	**+0.1**
	9.5nm,1.4s,mb4.4						
WHN	**Wuhan**	**39.33**	**344**	P	**P**	**15 25 39.3**	**+1.8**
ENH	**Enshi**	**40.66**	**338**	*e*P	**P**	**15 25 49.1**	**+0.6**
	6.1nm,0.7s,mb4.3						
XAN	**Xi'an**	**44.26**	**340**	P	**P**	**15 26 18.9**	**+1.1**
XAN				pP	pP	15 26 22.2	+1.5
XAN				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.8						
KSRS	**Korea Array**	**44.65**	**2**	P	**P**	**15 26 21.8**	**+0.8**
	comp=Z,1.5nm,0.9s,mb3.8,baz=175,slow=9.9,SNR=6.9						
KSRS				PcP	PcP	15 28 04.5	+1.0
	comp=Z,1.4nm,0.8s,baz=173,slow=3.1,SNR=6.2						
KSRS				LR	LR	15 44 49.4	
	comp=Z,26nm,19.0s,MS3.2,baz=193,slow=36						
MAJO	**Matsushiro**	**45.19**	**14**	*e*P	**P**	**15 26 24.4**	**-0.8**
	comp=Z,4.2nm,0.8s,mb4.3						
MJAR	**Matsushiro Arr**	**45.19**	**14**	P	**P**	**15 26 25.1**	**-0.2**
	comp=Z,2.8nm,0.9s,mb4.1,baz=195,slow=9.2,SNR=8.6						
MJAR				LR	LR	15 44 10.2	
	comp=Z,38nm,18.8s,MS3.4,baz=25,slow=34						
LZH	**Lanzhou**	**47.99**	**336**	*e*P	**P**	**15 26 48.0**	**+0.8**
LZH				pP	pP	15 26 53.5	+3.4
LZH				sP	sP	15 26 56.0	+4.8
LZH				pmax	pmax		
	comp=Z,19nm,1.3s,mb5.0						
HHC	**Hu-ho-hao-te**	**49.80**	**346**	*e*P	**P**	**15 27 02.2**	**+1.2**
HHC				S	**S**	**15 34 11.5**	**+0.9**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
HHC				pmax	pmax		
	comp=Z,46nm,6.8s						
ODAN	**Odare**	**50.56**	**314**	*e*P	**P**	**15 27 07.4**	**+0.3**
TAPN	**Taplejung**	**50.63**	**315**	*e*P	**P**	**15 27 07.1**	**-0.5**
	comp=Z,14nm,0.7s,mb5.0						
RAMN	**Ramite**	**51.18**	**313**	*e*P	**P**	**15 27 12.2**	**+0.5**
	comp=Z,44nm,0.6s,mb5.5						
MDJ	**Mudanjiang**	**51.88**	**3**	P	**P**	**15 27 16.8**	**+0.2**
	comp=Z,12nm,1.0s,mb4.8						
GUN	**Gumba**	**52.27**	**314**	*e*P	**P**	**15 27 19.7**	**-0.1**
	comp=Z,35nm,0.7s,mb5.4						
PKI	**Pulchoki**	**52.40**	**313**	*e*P	**P**	**15 27 20.6**	**-0.3**
GTA	**Gaotai**	**52.49**	**335**	P	**P**	**15 27 22.3**	**+1.0**
GTA				pP	pP	15 27 27.2	+3.0
GTA				sP	sP	15 27 30.6	+5.3
GTA				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
KKN	**Kakani**	**52.62**	**313**	*e*P	**P**	**15 27 22.2**	**-0.3**
DMN	**Daman**	**52.65**	**313**	*e*P	**P**	**15 27 22.3**	**-0.3**
	comp=Z,16nm,0.7s,mb5.0						
GKN	**Gorkha**	**53.21**	**313**	*e*P	**P**	**15 27 26.5**	**-0.3**
ULN	**Ulaanbaatar**	**57.50**	**345**	*e*P	**P**	**15 27 57.5**	**+0.1**
	comp=Z,8.6nm,1.2s,mb4.7						
SONM	**Songino Array**	**57.65**	**345**	P	**P**	**15 27 58.8**	**+0.5**
	comp=Z,3.0nm,0.8s,mb4.3,baz=162,slow=8.0,SNR=17						
SONM				PcP	PcP	15 28 52.2	+0.8
	comp=Z,1.4nm,0.7s,baz=164,slow=4.0,SNR=5.4						
SONM				LR	LR	15 53 14.7	
	comp=Z,25nm,19.0s,MS3.3,baz=254,slow=36						
PETK	**Petropavlovsk-**	**66.02**	**20**	P	**P**	**15 28 56.1**	**+1.5**
	comp=Z,7.2nm,0.7s,m

mb1 4.9/16, mb1mx4.9/18, mbtmp4.7/16, MS4.2/23, Ms1 4.2/23, ms1mx4.1/28, Error ellipse: s-maj=16.5km s-min=12.5km az=144.0

MOS **10** *16:01:06.7±2.7, 18°.93S×168°.81E, h33km, mb5.4/31, MS4.4/7, Error ellipse: s-maj=11.3km s-min=8.8km az=133.6*

BJI **10** *16:01:06.0, 19°.69S×169°.47E, h68km, mB5.0/30, mb5.0/46, Ms4.9/26, Ms7 4.6/28*

NEIC **10** *16:01:06.5±1.6, 20°.08S×169°.21E, h70km±14km, mb5.2/59, Error ellipse: s-maj=9.9km s-min=7.6km az=170.0*

GCMT **10** *16:01:08.4±0.2, 20°.04S×169°.02E, h54km, MW5.1, Moment Tensor Solution. s61,c85; s73,c113; Moment tensor: Scale 10^16 Nm; Mrr5.53±.16; Mθθ-0.78±.13; Mφφ-4.75±.13; Mrθ-0.38±.11; Mθφ2.85±.10; Mφr1.37±.10; Best double couple: M0 6.10000×10^16 NP1:φs149.00000°, δ38.00000°, λ85.00000°. NP2:φs336.00000°, δ52.00000°, λ94.00000°. Principal axes: T 5.7100, Plg83.0000°, Azm269.0000°; N 0.6900, Plg3.0000°, Azm153.0000°; P -6.4000, Plg7.0000°, Azm63.0000°; Data Used: IU II IC G CN.*

DJA **10** *16:01:27, 20°.38S×168°.32E, h210km, mb5.1/42*

ISC 10 16:01:04.9±0.1, **20°.09S**±0°.03×**169°.19E**±0°.03, **h48**km, **h48**km±.7km:**pP-P, n666,** σ0°**68**/394, **mb5.3**/120, **MS4.3**/37, **160C-91D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.97**	**226**	*e*P	**Pn**	**16 01 48.6**	**-0.9**
BAYA				*e*S	**Sn**	**16 02 23.4**	**-0.5**
BAYA				AMP		16 02 38.6	
	comp=Z,141nm,1.4s						
PLUM	**Mont Dore**	**3.22**	**227**	*e*P	**Pn**	**16 01 52.7**	**-0.2**
PLUM				*e*S	**Sn**	**16 02 30.3**	**+0.2**
PLUM				AMP		16 02 31.9	
	comp=Z,2μm,5.7s						
DZM	**Mont Dzumac**	**3.23**	**232**	*e*Pn	**Pn**	**16 01 53.1**	**0.0**
	comp=Z,710nm,0.3s						
DZM				*e*Sn	**Sn**	**16 02 29.3**	**-1.1**
	comp=Z,781nm,0.3s						
DZM	**Mont Dzumac**	**3.23**	**232**	*e*Pn	**Pn**	**16 01 52.5**	**-0.6**
DZM				*e*Sn	**Sn**	**16 02 29.6**	**-0.8**
LASL	**Noumea**	**3.26**	**229**	*e*P	**Pn**	**16 01 53.3**	**-0.2**
LASL				*e*S	**Sn**	**16 02 30.3**	**-0.8**
LASL				AMP		16 02 34.5	
	comp=Z,2μm,1.4s						
NORM	**Noumea**	**3.30**	**229**	*e*P	**Pn**	**16 01 53.7**	**-0.3**
NORM				*e*S	**Sn**	**16 02 31.2**	**-0.9**
NORM				AMP		16 02 36.5	
	comp=Z,2μm,5.1s						
NOUC	**Port Laguerre**	**3.35**	**233**	*e*P	**Pn**	**16 01 54.6**	**-0.2**
NOUC				*e*S	**Sn**	**16 02 33.1**	**-0.2**
NOUC				AMP		16 02 34.4	
	comp=Z,1μm,1.7s						
MVNO	**Noumea**	**3.36**	**229**	*e*P	**Pn**	**16 01 54.6**	**-0.3**
MVNO				*e*S	**Sn**	**16 02 32.6**	**-0.8**
MVNO				AMP		16 02 33.7	
	comp=Z,149nm,0.8s						
MSVF	**Nonsavu**	**8.71**	**76**	Pn	**Pn**	**16 03 14.0**	**+5.7**
	comp=Z,1μm,1.0s,SNR=11						
MSVF	**Nonsavu**	**8.71**	**76**	*e*Pn	**Pn**	**16 03 14.4**	**+6.1**
	comp=Z,649nm,1.5s						
HNR	**Honiara**	**13.86**	**319**	LR	LR	16 09 05.6	
	comp=Z,582nm,20.9s,baz=139,slow=35						
RAO	**Raoul Island**	**14.84**	**130**	LR	LR	16 09 09.3	
	comp=Z,640nm,18.9s,baz=301,slow=32						
EIDS	**Eidsvold**	**17.50**	**249**	*e*P	**Pn**	**16 05 08.7**	**+3.1**
	comp=Z,62nm,1.0s						
ARMA	**Armidale**	**18.89**	**234**	*e*P	**Pn**	**16 05 25.6**	**+3.2**
ARMA	**Armidale**	**18.89**	**234**	*e*P	**Pn**	**16 05 25.3**	**+2.9**
	comp=Z,36nm,0.8s						
ARMA				*e*		16 05 32.5	
AFI	**Afiamalu**	**19.21**	**74**	LR	LR	16 11 25.4	
	comp=Z,1μm,21.0s,baz=226,slow=32						
URZ	**Urewera**	**19.36**	**161**	P	**Pn**	**16 05 28.0**	**+0.1**
	comp=Z,1.2nm,0.3s,baz=54,slow=6.5,SNR=11						
URZ				LR	LR	16 11 47.2	
	comp=Z,408nm,19.7s,baz=325,slow=33						
URZ	**Urewera**	**19.36**	**161**	*e*P	**Pn**	**16 05 27.9**	**0.0**
	comp=Z,111nm,1.4s						
RMQ	**Roma**	**19.80**	**247**	*e*P	**Pn**	**16 05 34.8**	**+1.5**
	comp=Z,129nm,1.0s						
CTA	**Charters Tower**	**21.54**	**266**	*e*P	**P**	**16 05 52.3**	**+2.1**
	comp=Z,31nm,0.6s,mb4.9						
CTA				*e*pP		16 06 06.7	
CTA				*e*S	**S**	**16 09 52.6**	**+6.3**
CTA	**Charters Tower**	**21.54**	**266**	P	**P**	**16 05 51.0**	**+0.9**
	comp=Z,57nm,0.7s,mb5.1,baz=88,slow=11,SNR=64						
CTAO	**Charters Tower**	**21.54**	**266**	*e*P	**P**	**16 05 52.4**	**+2.2**
CTAO				pmax	pmax		
	comp=Z,47nm,0.7s,mb5.0						
CTAO	**Charters Tower**	**21.54**	**266**	*e*P	**P**	**16 05 52.4**	**+2.3**
	comp=Z,47nm,0.7s,mb5.0						
CTAO	**Charters Tower**	**21.54**	**266**	P	**P**	**16 05 51.9**	**+1.7**
	comp=Z,84nm,1.1s,mb5.1						
CNB	**Canberra Magne**	**23.13**	**225**	*e*P	**P**	**16 06 09.0**	**+2.1**
CAN	**Canberra**	**23.38**	**225**	*e*P	**P**	**16 06 10.8**	**+1.4**
CAN				pmax	pmax		
	comp=Z,62nm,1.2s,mb4.9						
CAN	**Canberra**	**23.38**	**225**	*e*P	**P**	**16 06 10.8**	**+1.4**
	comp=Z,62nm,1.2s,mb4.9						
RPZ	**Rata Peaks**	**23.61**	**177**	LR	LR	16 14 15.5	
	comp=Z,942nm,21.2s,MS4.2,baz=342,slow=33						
PMG	**Port Moresby**	**23.77**	**293**	⇓*e*P	**P**	**16 06 13.7**	**+0.5**
PMG				pmax	pmax		
	comp=Z,119nm,1.0s						
PMG	**Port Moresby**	**23.77**	**293**	P	**P**	**16 06 13.8**	**+0.6**
	comp=Z,139nm,0.9s,mb5.4						
COEN	**Coen**	**25.59**	**280**	*e*P	**P**	**16 06 31.0**	**+1.2**
COEN				*e*pP	pP	16 06 43.3	+1.1
COEN	**Coen**	**25.59**	**280**	*e*P	**P**	**16 06 30.6**	**+0.8**
	comp=Z,491nm,1.2s,mb5.9						
COEN	**Coen**	**25.59**	**280**	P	**P**	**16 06 30.7**	**+0.9**
	comp=Z,156nm,1.2s,mb5.4						
TOO	**Toolangi**	**26.98**	**225**	*e*P	**P**	**16 06 43.6**	**+1.5**
STKA	**Stephens Creek**	**27.36**	**239**	*e*P	**P**	**16 06 46.5**	**+1.0**
	comp=Z,12nm,0.7s,mb4.5						
STKA	**Stephens Creek**	**27.36**	**239**	P	**P**	**16 06 46.1**	**+0.6**
	comp=Z,14nm,0.8s,mb4.5,baz=57,slow=8.0,SNR=20						
STKA				PcP	PcP	16 10 03.3	-0.6
	comp=Z,6.6nm,0.9s,baz=164,slow=1.9,SNR=3.2						
STKA				LR	LR	16 17 07.3	
	comp=Z,842nm,21.0s,MS4.3,baz=83,slow=35						
STKA	**Stephens Creek**	**27.36**	**239**	*e*P	**P**	**16 06 46.3**	**+0.8**
	comp=Z,8.0nm,1.1s,mb4.2						
STKA				*e*	pP	16 06 57.3	-0.8
RAR	**Rarotonga**	**29.05**	**98**	LR	LR	16 15 16.5	
	comp=Z,364nm,21.5s,MS4.0,baz=264,slow=29						
WRAB	**Tennant Creek**	**32.70**	**264**	P	**P**	**16 07 32.9**	**0.0**
	comp=Z,149nm,0.5s,mb6.2,SNR=20						
WRAB	**Tennant Creek**	**32.70**	**264**	*e*P	**P**	**16 07 32.0**	**-0.9**
WRAB				*e*	pP	16 07 43.5	-2.1
WRAB				pmax	pmax		
	comp=Z,53nm,1.3s,mb5.3						
WRAB	**Tennant Creek**	**32.70**	**264**	*e*P	**P**	**16 07 32.0**	**-0.9**
	comp=Z,53nm,1.3s,mb5.3						
WRAB				*e*	pP	16 07 43.5	-2.1
WRAB	**Tennant Creek**	**32.70**	**264**	P	**P**	**16 07 31.6**	**-1.3**
	comp=Z,35nm,1.2s,mb5.2						
WRA	**Warramunga Arr**	**32.71**	**264**	P	**P**	**16 07 32.4**	**-0.6**
	comp=Z,12nm,0.6s,mb5.0,baz=89,slow=8.5,SNR=157						
WRA				PcP	PcP	16 10 17.6	-0.3
	comp=Z,4.2nm,0.9s,baz=98,slow=2.5,SNR=5.1						
WRA				pPcP		16 10 31.0	
	comp=Z,2.3nm,0.6s,baz=92,slow=3.2,SNR=4.9						
WRA				LR	LR	16 20 37.1	
	comp=Z,582nm,20.2s,MS4.3,baz=105,slow=36						
WRA	**Warramunga Arr**	**32.71**	**264**	P	**P**	**16 07 32.4**	**-0.6**
WRA						16 10 17.6	
ASAR	**Alice Springs**	**32.88**	**257**	P	**P**	**16 07 34.5**	**0.0**
	comp=Z,83nm,0.7s,mb5.8,baz=85,slow=9.1,SNR=962						
ASAR				PcP	PcP	16 10 17.7	-0.6
	comp=Z,3.5nm,0.7s,baz=103,slow=2.8,SNR=4.7						
ASAR				pPcP		16 10 31.4	
	comp=Z,2.0nm,1.0s,baz=89,slow=2.6,SNR=4.4						
ASAR				S	**S**	**16 12 46.4**	**-2.6**
	comp=Z,3.4nm,1.1s,baz=84,slow=16,SNR=5.9						
ASAR	**Alice Springs**	**32.88**	**257**	P	**P**	**16 07 34.6**	**+0.1**
ASAR						16 10 17.7	
ASAR				S	**S**	**16 12 46.4**	**-2.6**
SMPI	**Sarmi**	**34.78**	**297**	P	**P**	**16 07 51.4**	**+0.3**
	comp=Z,35nm,2.0s,mb5.0						
KAKA	**Kakadu**	**35.95**	**276**	*e*P	**P**	**16 08 01.9**	**+0.8**
	comp=Z,34nm,0.8s,mb5.3						
KAKA	**Kakadu**	**35.95**	**276**	P	**P**	**16 08 01.8**	**+0.7**
	comp=Z,24nm,0.8s,mb5.2						
TLE	**Tual**	**38.21**	**287**	P	**P**	**16 08 19.8**	**-0.5**
	comp=Z,144nm,1.5s,mb5.5						
FORT	**Forrest**	**38.45**	**246**	*e*P	**P**	**16 08 22.3**	**+0.2**
	comp=Z,32nm,0.6s,mb5.2						
FORT	**Forrest**	**38.45**	**246**	*e*P	**P**	**16 08 22.0**	**-0.1**
	comp=Z,50nm,0.8s,mb5.3						
TBI	**Tubuai**	**38.46**	**103**	*e*LQ		16 17 29.4	
	comp=Z,795nm,31.8s						
TBI				*e*LR	LR	16 19 21.4	
	comp=Z,818nm,27.8s,baz=273						
KNA	**Kununurra**	**38.64**	**270**	*e*P	**P**	**16 08 23.3**	**-0.6**
	comp=Z,50nm,0.8s,mb5.3						
KNA				*e*pP	pP	16 08 36.0	-0.7
KNA	**Kununurra**	**38.64**	**270**	P	**P**	**16 08 23.7**	**-0.2**
	comp=Z,2μmcomp=Z,211nm,0.8s,mb5.9						
PPT	**Papeete**	**39.04**	**93**	*e*LQ		16 17 44.5	
	comp=Z,1μm,31.5s						
PPT				*e*LR	LR	16 19 28.8	
	comp=Z,1μm,27.8s,baz=256						
PPT	**Papeete**	**39.04**	**93**	LR	LR	16 20 21.9	
	comp=Z,508nm,21.8s,MS4.3,baz=261,slow=30						
FITZ	**Fitzroy Crossi**	**41.12**	**265**	*e*P	**P**	**16 08 45.0**	**+0.5**
	comp=Z,75nm,0.8s,mb5.4						
FITZ				*e*pP	pP	16 08 57.5	+0.1
FITZ	**Fitzroy Crossi**	**41.12**	**265**	LR	LR	16 25 01.7	
	comp=Z,459nm,20.4s,MS4.3,baz=115,slow=35						
FITZ	**Fitzroy Crossi**	**41.12**	**265**	*e*P	**P**	**16 08 44.3**	**-0.1**
	comp=Z,43nm,0.9s,mb5.1						
FITZ				*e*	pP	16 08 56.0	-1.4
FITZ	**Fitzroy Crossi**	**41.12**	**265**	P	**P**	**16 08 44.8**	**+0.3**
	comp=Z,147nm,1.0s,mb5.6						
AAI	**Ambon**	**43.13**	**287**	P	**P**	**16 09 02.0**	**+1.0**
	comp=Z,68nm,1.1s,mb5.3						
TNTI	**Ternate**	**45.91**	**292**	P	**P**	**16 09 21.9**	**-1.2**
	comp=Z,23nm,0.9s,mb5.1						
MBWA	**Marble Bar**	**46.15**	**260**	*e*P	**P**	**16 09 25.2**	**+0.3**
MBWA				*e*pP	pP	16 09 38.4	+0.3
MBWA	**Marble Bar**	**46.15**	**260**	*e*P	**P**	**16 09 25.2**	**+0.3**
	comp=Z,107nm,1.2s,mb5.7						
MBWA				*e*	pP	16 09 38.8	+0.7
MBWA	**Marble Bar**	**46.15**	**260**	P	**P**	**16 09 24.4**	**-0.5**
	comp=Z,88nm,0.9s,mb5.7						
MEEK	**Meekatharra**	**46.64**	**252**	*e*P	**P**	**16 09 28.6**	**-0.1**
MMRI	**Maumere**	**46.74**	**277**	P	**P**	**16 09 28.9**	**-0.7**
	comp=Z,97nm,0.9s,mb5.7						
NWAO	**Narrogin (SRO)**	**47.79**	**243**	*e*P	**P**	**16 09 36.8**	**-0.8**
	comp=Z,290nm,1.0s,mb6.3						
NWAO				*e*pP	pP	16 09 50.2	-0.5
NWAO	**Narrogin (SRO)**	**47.79**	**243**	*e*P	**P**	**16 09 36.4**	**-1.2**
NWAO				pmax	pmax		
	comp=Z,228nm,1.8s						
NWAO	**Narrogin (SRO)**	**47.79**	**243**	*e*P	**P**	**16 09 36.4**	**-1.2**
	comp=Z,228nm,1.8s,mb5.9						
KDI	**Kendari**	**48.08**	**283**	P	**P**	**16 09 39.9**	**-0.2**
	comp=Z,34nm,1.0s,mb5.3						
KMSI	**Cibinong**	**48.80**	**289**	P	**P**	**16 09 48.2**	**+2.6**
	comp=Z,113nm,1.0s,mb5.9						
SGSI	**Sangihe**	**48.95**	**294**	P	**P**	**16 09 47.3**	**+0.6**
	comp=Z,65nm,0.8s,mb5.7						
BKSI	**Bulukumba**	**49.86**	**280**	P	**P**	**16 09 53.7**	**0.0**
	comp=Z,43nm,0.8s,mb5.5						
BNSI	**Bone**	**50.22**	**281**	P	**P**	**16 09 56.9**	**+0.5**
	comp=Z,73nm,1.0s,mb5.7						
KAPI	**Kappang**	**50.32**	**280**	P	**P**	**16 09 57.3**	**+0.1**
	comp=Z,502nm,0.8s,mb6.6,SNR=6.2						
KAPI	**Kappang**	**50.32**	**280**	P	**P**	**16 09 57.2**	**0.0**
	comp=Z,54nm,0.8s,mb5.6,baz=117,slow=5.6,SNR=21						
MRSI	**Marisa**	**50.57**	**288**	P	**P**	**16 09 58.6**	**-0.5**
	comp=Z,444nmcomp=Z,20nm,0.9s,mb5.1						
SPSI	**Sidrap Palu**	**50.70**	**282**	P	**P**	**16 10 00.0**	**0.0**
	comp=Z,41nm,0.9s,mb5.3						
TTSI	**Tana Toraja**	**51.01**	**283**	P	**P**	**16 10 02.6**	**+0.2**
	comp=Z,496nmcomp=Z,39nm,1.0s,mb5.3						
RKT	**Rikitea**	**51.74**	**104**	*e*LR	LR	16 25 30.0	
	comp=Z,477nm,28.2s,baz=249						
PCI	**Palu**	**51.86**	**285**	P	**P**	**16 10 10.7**	**+1.9**
	comp=Z,1μmcomp=Z,116nm,1.2s,mb5.7						
KHKI	**Kahang-Kahang**	**53.02**	**275**	P	**P**	**16 10 16.7**	**-0.7**
	comp=Z,38nm,0.9s,mb5.3						
SRBI	**Singaraja**	**53.48**	**275**	P	**P**	**16 10 21.0**	**+0.2**
	comp=Z,71nm,1.3s,mb5.5						
CBIJ	**Chichi jima**	**53.71**	**330**	LR	LR	16 31 00.9	
	comp=Z,174nm,21.8s,MS4.1,baz=141,slow=34						
KBKI	**Kotabaru**	**54.27**	**281**	P	**P**	**16 10 25.9**	**-0.6**
	comp=Z,25nm,1.0s,mb5.1						
KMMI	**Kalianget**	**54.99**	**276**	P	**P**	**16 10 32.4**	**+0.7**
	comp=Z,75nm,1.5s,mb5.5						
GMJI	**Gumukmas**	**55.08**	**274**	P	**P**	**16 10 30.5**	**-1.9**
	comp=Z,44nm,3.1s						
MYLDM	**Lahad Datu**	**55.78**	**291**	P	**P**	**16 10 41.5**	**+4.1**
	comp=Z,24nm,1.3s,mb5.1						
PWJI	**Pagerwojo**	**56.70**	**274**	P	**P**	**16 10 43.6**	**-0.4**
	comp=Z,37nm,0.9s,mb5.4						
SJI	**Sawahan**	**56.83**	**274**	P	**P**	**16 10 45.3**	**+0.4**
	comp=Z,51nm,0.9s,mb5.6						
PCJI	**Pacitan**	**57.23**	**273**	P	**P**	**16 10 48.0**	**+0.2**
	comp=Z,108nm,1.0s,mb5.8						
SBA	**Scott Base**	**57.81**	**181**	*e*P	**P**	**16 10 51.5**	**+0.6**
SBA				*e*	pP	16 11 03.5	-0.9
SBA				pmax	pmax		
	comp=Z,58nm,1.1s,mb5.5						
SBA	**Scott Base**	**57.81**	**181**	*e*P	**P**	**16 10 51.5**	**+0.6**
	comp=Z,58nm,1.1s,mb5.5						
SBA				*e*	pP	16 11 03.5	-0.9
UGM	**Wanagama**	**57.93**	**273**	P	**P**	**16 10 53.2**	**+0.5**
	comp=Z,114nm,1.1s,mb5.8						
YOGI	**Yogyakarta**	**58.18**	**273**	P	**P**	**16 10 55.6**	**+1.2**
	comp=Z,247nm,1.1s,mb6.1						
KKM	**Kota Kinabalu**	**58.19**	**291**	*e*P	**P**	**16 10 54.5**	**+0.1**
KKM				*e*	pP	16 11 07.8	-0.2
KKM	**Kota Kinabalu**	**58.19**	**291**	P	**P**	**16 10 55.1**	**+0.7**
	comp=Z,569nmcomp=Z,43nm,1.1s,mb5.4						
TGY	**Tagaytay City**	**58.36**	**302**	P	**P**	**16 10 54.9**	**-0.7**
	comp=Z,85nm,0.3s,mb6.2,baz=74,slow=3.9,SNR=3.8						
CASY	**Casey**	**59.33**	**204**	⇑*e*P	**P**	**16 11 01.0**	**-0.5**
CASY				*e*pP	pP	16 11 14.1	-1.0
STKI	**Sintang**	**59.89**	**282**	P	**P**	**16 11 07.8**	**+1.5**
	comp=Z,9μmcomp=Z,65nm,1.1s,mb5.6						
SBUM	**Sibu**	**60.17**	**285**	P	**P**	**16 11 08.7**	**+0.5**
	comp=Z,14nm,2.0s,mb4.7						
LEM	**Lembang**	**61.01**	**273**	P	**P**	**16 11 12.5**	**-1.4**
	comp=Z,143nm,0.9s,mb6.1						
KSM	**Kuching**	**61.52**	**283**	*e*P	**P**	**16 11 17.1**	**-0.3**
	comp=Z,34nm,0.9s,mb5.5						
KSM				*e*	pP	16 11 30.6	-0.4
KSM	**Kuching**	**61.52**	**283**	P	**P**	**16 11 17.5**	**+0.1**
	comp=Z,527nmcomp=Z,43nm,1.3s,mb5.4						
CGJI	**Cibinong**	**62.89**	**273**	P	**P**	**16 11 25.8**	**-0.7**
MJAR	**Matsushiro Arr**	**63.48**	**332**	P	**P**	**16 11 29.3**	**-0.7**
	comp=Z,5.6nm,0.8s,mb4.7,baz=167,slow=7.5,SNR=19						
MJAR				pP	pP	16 11 41.6	-2.0
	comp=Z,6.9nm,0.8s,baz=170,slow=7.6,SNR=10						
MAJO	**Matsushiro**	**63.48**	**332**	*e*P	**P**	**16 11 28.4**	**-1.5**
MAJO				*e*	pP	16 11 42.4	-1.2
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb5.0						
MAJO	**Matsushiro**	**63.48**	**332**	*e*P	**P**	**16 11 28.4**	**-1.5**
	comp=Z,9.0nm,0.7s,mb5.0						
MAJO				*e*	pP	16 11 42.4	-1.2
MAT	**Matsushiro**	**63.48**	**332**	P	**P**	**16 11 29.2**	**-0.7**
YULB	**Yu-li**	**63.63**	**310**	*e*P	**P**	**16 11 28.4**	**-2.8**
	comp=Z,22nm,1.0s,mb5.1						
NACB	**Ninganchiao**	**63.91**	**311**	*e*P	**P**	**16 11 32.8**	**-0.2**
	comp=Z,46nm,0.7s,mb5.6						
NACB				*e*	pP	16 11 45.5	-1.1
TPUB	**Ta-pu**	**64.05**	**310**	*e*P	**P**	**16 11 33.0**	**-0.9**
	comp=Z,55nm,1.0s,mb5.5						
TPUB				*e*	pP	16 11 46.1	-1.6
SSLB	**Suanglung**	**64.12**	**311**	*e*P	**P**	**16 11 33.4**	**-1.0**
	comp=Z,43nm,0.8s,mb5.5						
SSLB				*e*	pP	16 11 47.0	-1.1
YHNB	**Yeheng**	**64.37**	**312**	*e*P	**P**	**16 11 36.1**	**+0.1**
	comp=Z,113nm,1.0s,mb5.8						
YHNB				*e*	pP	16 11 49.5	-0.3
TATO	**Taipei**	**64.49**	**312**	*e*P	**P**	**16 11 36.6**	**-0.2**
TATO				*e*	pP	16 11 50.1	-0.4
MIR	**Mirnyy**	**66.24**	**205**	⇓*i*P	**P**	**16 11 48.0**	**+0.5**
MIR				pmax	pmax		
	comp=Z,52nm,1.2s,mb5.4						
ASAJ	**Asahikawa**	**68.38**	**340**	LR	LR	16 36 53.3	
	comp=Z,230nm,21.6s,MS4.4,baz=166,slow=31						
KSRS	**Korea Array**	**69.18**	**326**	P	**P**	**16 12 05.8**	**-0.6**
	comp=Z,2.9nm,1.1s,mb4.1,baz=157,slow=7.1,SNR=10						
KSRS				pP	pP	16 12 19.3	-0.9
	comp=Z,2.7nm,0.8s,baz=144,slow=5.6,SNR=9.3						
KSRS				LR	LR	16 40 21.1	
	comp=Z,77nm,20.3s,MS3.9,baz=255,slow=34						
QSPA	**South Pole Qui**	**69.97**	**180**	*e*P	**P**	**16 12 10.6**	**-0.1**
	comp=Z,51nm,1.0s,mb5.4						
QSPA				*e*	pP	16 12 24.0	-0.6
YSS	**Yuzh-Sakhalins**	**70.87**	**341**	⇑*i*P	**P**	**16 12 17.0**	**+0.5**
YSS				pmax	pmax		
	comp=Z,50nm,0.9s,mb5.4						
YSS	**Yuzh-Sakhalins**	**70.87**	**341**	*e*P	**P**	**16 12 17.1**	**+0.6**
	comp=Z,40nm,0.8s,mb5.4						
YSS				*e*	pP	16 12 30.6	+0.3
SKR	**Severo-Kuril's**	**71.40**	**351**	*e*P	**P**	**16 12 19.9**	**+0.2**
SKR				pmax	pmax		
	comp=Z,90nm,1.0s,mb5.7						
PSI	**Prapat**	**72.52**	**280**	P	**P**	**16 12 26.6**	**-0.6**
	comp=Z,11nm,0.8s,mb4.8,baz=163,slow=2.9,SNR=7.6						
PET	**Petropavlovsk**	**73.38**	**353**	*e*P	**P**	**16 12 31.1**	**-0.3**
PET				*e*S	S	16 21 56.8	+0.2
PET				*e*PS		16 22 29.9	
PET				pmax	pmax		
	comp=Z,100nm,17.6s						
PETK	**Petropavlovsk-**	**73.57**	**353**	P	**P**	**16 12 32.5**	**0.0**
	comp=Z,15nm,0.8s,mb4.9,baz=139,slow=8.0,SNR=44						
PETK				pP	pP	16 12 46.2	-0.2
	comp=Z,14nm,0.8s,baz=152,slow=8.6,SNR=11						
PETK				LR	LR	16 38 59.5	
	comp=Z,180nm,21.8s,MS4.3,baz=157,slow=31						
PETK	**Petropavlovsk-**	**73.57**	**353**	P	**P**	**16 12 32.6**	**+0.1**
PETK				*PP	pP	16 12 46.2	-0.2
PETK	**Petropavlovsk-**	**73.57**	**353**	P	**P**	**16 12 32.5**	**0.0**
PETK				pP	pP	16 12 46.2	-0.2
PETK				LR	LR	16 38 59.5	
DL2	**Dalian**	**73.66**	**323**	⇑P	**P**	**16 12 33.9**	**+0.5**
DL2				S	S	16 22 03.1	+2.7
DL2				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
DL2				LR	LR		
	comp=N,70nm,26.5s						
DL2				LR	LR		
	comp=Z,90nm,29.4s,MS3.9						
RPN	**Rapa Nui**	**73.80**	**113**	LR	LR	16 37 15.6	
	comp=Z,177nm,21.0s,MS4.3,baz=238,slow=29						
MDJ	**Mudanjiang**	**73.85**	**332**	P	**P**	**16 12 34.6**	**+0.3**
MDJ				PP	PP	16 15 18.7	-1.2
MDJ				S	S	16 22 04.4	+2.2
MDJ				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7						
MDJ				pmax	pmax		
	comp=Z,110nm,6.2s						
MDJ				LR	LR		
	comp=N,50nm,28.0s,MS3.9						
MDJ				LR	LR		
	comp=E,71nm,30.4s,MS3.9						
MDJ				LR	LR		
	comp=Z,96nm,30.4s,MS3.9						
MDJ	**Mudanjiang**	**73.85**	**332**	*e*P	**P**	**16 12 34.3**	**0.0**
	comp=Z,8.4nm,0.8s,mb4.7						
MDJ				*e*	pP	16 12 48.0	-0.2
HABR	**Khabarovsk**	**74.76**	**337**	*de*P	**P**	**16 12 37.6**	**-2.0**
HABR				*e*PP	pP	16 12 47.3	-6.2
HABR				*e*	pP	16 12 51.4	-2.1
HABR				*e*		16 15 24.4	
HABR				PPP		16 17 10.3	
HABR				S	S	16 22 12.5	+0.2
HABR				*e*		16 22 46.6	
HABR				pmax	pmax		
	comp=Z,81nm,2.6s,mb5.2						
HABR				pmax	pmax		
	comp=N,7.0nm,1.2s						
HABR				pmax	pmax		
	comp=E,27nm,2.0s						
HABR				MLR	MLR		
	comp=Z,41nm,17.0s,MS3.8						
CN2	**Changchun**	**75.16**	**329**	*e*P	**P**	**16 12 44.5**	**+2.5**
CN2				*e*S	S	16 22 20.3	+3.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
CN2				LR	LR		
	comp=N,1μm,17.0s,MS5.4						
CN2				LR	LR		
	comp=E,1μm,17.0s,MS5.4						
CN2				LR	LR		
	comp=Z,2μm,18.0s,MS5.4						
ENH	**Enshi**	**76.18**	**310**	*e*P	**P**	**16 12 47.6**	**-0.5**
	comp=Z,60nm,1.0s,mb5.5						
ENH				*e*	pP	16 13 00.5	-1.7
GYA	**Guiyang**	**76.27**	**305**	⇓*i*P	**P**	**16 12 50.0**	**+1.3**
GYA				PP	PP	16 15 44.8	+4.0
GYA				S	S	16 22 31.5	+1.6
GYA				pmax	pmax		

HHC Hu-ho-hao-te 80.83 320 *e*P **P 16 13 14.0 +0.4**
HHC S S 16 23 19.5 +1.3
HHC SKS 16 23 25.2
HHC pmax pmax
comp=Z,28nm,0.7s,mb5.3
HHC pmax pmax
comp=Z,180nm,6.5s
HHC LR LR
comp=N,240nm,17.5s,MS4.8
HHC LR LR
comp=E,260nm,17.1s,MS4.8
HHC LR LR
comp=Z,250nm,17.9s,MS4.6
HIA Hailar 81.82 330 *e*P **P 16 13 18.1 -0.5**
HIA pmax pmax
comp=Z,8.0nm,0.9s
HIA Hailar 81.82 330 *e*P **P 16 13 18.1 -0.5**
comp=Z,8.5nm,0.9s,mb4.7
OHAK Old Harbor 83.17 19 *e*P **P 16 13 24.7 -0.7**
comp=Z,49nm,1.0s,mb5.5
OHAK *e* pP 16 13 39.4 -0.2
LZH Lanzhou 83.26 312 ⇑P **P 16 13 28.2 +1.8**
LZH pP pP 16 13 41.0 +0.4
LZH PP PP 16 16 42.3 +3.5
LZH *e*S S 16 23 44.5 +1.1
LZH pmax pmax
comp=Z,39nm,1.5s,mb5.2
LZH pmax pmax
comp=Z,150nm,9.0s
LZH LR LR
comp=N,430nm,15.2s
LZH LR LR
comp=Z,600nm,19.0s,MS5.0
SEY Seymchan 83.80 352 ||*i*P **P 16 13 27.3 -1.2**
SEY Seymchan 83.80 352 ||*i*P **P 16 13 27.4 -1.1**
KDAK Kodiak Island 83.85 19 P **P 16 13 28.6 -0.3**
comp=Z,179nm,0.8s,mb6.2,SNR=7.0
KDAK Kodiak Island 83.85 19 P **P 16 13 28.4 -0.5**
comp=Z,20nm,0.7s,mb5.4,baz=189,slow=3.1,SNR=16
KDAK LR LR 16 46 43.6
comp=Z,145nm,18.3s,MS4.4,baz=145,slow=33
KDAK Kodiak Island 83.85 19 *i*P **P 16 13 28.5 -0.4**
SYO Syowa Base 84.11 196 ||*e*X **P 16 13 26.6 -3.6**
SYO Syowa Base 84.11 196 ||*e*pP pP 16 13 42.0 -2.4
CLNS Chul'man 85.16 337 *e*P **P 16 13 35.2 -0.3**
CLNS pmax pmax
comp=E,6.0nm,0.8s
CLNS pmax pmax
comp=Z,27nm,1.0s,mb5.3
CLNS pmax pmax
comp=N,13nm,0.9s
BSC Santa Cruz Isl 86.45 52 ⇓P **P 16 13 42.9 +0.4**
baz=86
PKM Peak Mountain 86.72 51 ⇑P **P 16 13 44.7 +0.9**
baz=87
ULN Ulaanbaatar 87.52 323 *e*P **P 16 13 47.8 +0.5**
ULN *e* pP 16 14 01.1 -0.5
ULN pmax pmax
comp=Z,33nm,1.1s,mb5.5
ULN Ulaanbaatar 87.52 323 *e*P **P 16 13 47.8 +0.4**
comp=Z,34nm,1.1s,mb5.5
ULN *e* pP 16 14 01.1 -0.5
YAK Yakutsk 87.67 343 *e*P **P 16 13 45.5 -2.2**
YAK pmax pmax
comp=Z,16nm,1.1s,mb5.2
YAK pmax pmax
comp=N,4.0nm,1.3s
YAK Yakutsk 87.67 343 *e*P **P 16 13 45.7 -2.0**
comp=N,8.7nm,0.8s,mb5.0
YAK *e* pP 16 13 60.0 -2.0
GTA Gaotai 87.67 313 ⇑P **P 16 13 49.1 +0.8**
GTA pP pP 16 14 02.5 -0.1
GTA S S 16 24 28.1 +1.4
GTA SS SS 16 30 16.6 +2.3
GTA pmax pmax
comp=Z,17nm,0.9s,mb5.3
GTA pmax pmax
comp=Z,130nm,5.4s
GTA LR LR
comp=N,67nm,17.5s,MS4.2
GTA LR LR
comp=E,55nm,18.1s,MS4.2
SHL Shillong 87.71 298 *e*PKP **P 16 13 49.0 +0.2**
CMB Columbia Colle 87.76 48 *e*P **P 16 13 47.9 -0.8**
CMB *e* pP 16 14 03.3 +0.3
CMB pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
CMB Columbia Colle 87.76 48 *e*P **P 16 13 47.9 -0.9**
comp=Z,7.9nm,0.9s,mb4.9
CMB *e* pP 16 14 03.3 +0.3
SONM Songino Array 87.87 323 P **P 16 13 49.3 +0.2**
comp=Z,15nm,0.9s,mb5.2,baz=139,slow=5.4,SNR=77
SONM pP pP 16 14 03.1 -0.2
comp=Z,18nm,0.9s,baz=115,slow=5.3,SNR=20
SONM LR LR 16 49 48.7
comp=Z,97nm,21.5s,MS4.2,baz=293,slow=33
SONM Songino Array 87.87 323 P **P 16 13 49.3 +0.3**
SONM *PP pP 16 14 03.1 -0.2
BILL Bilibino 87.90 359 *c i*P **P 16 13 47.8 -0.9**
BILL *e* 16 17 08.7
BILL pmax pmax
comp=Z,18nm,1.2s,mb5.2
BILL Bilibino 87.90 359 *e*P **P 16 13 47.5 -1.2**
comp=Z,9.1nm,0.8s,mb5.1
YBH Yreka Blue Hor 87.94 44 *e*P **P 16 13 49.9 +0.4**
YBH *e* pP 16 14 04.9 +1.1
YBH pmax pmax
comp=Z,7.0nm,0.8s
YBH Yreka Blue Hor 87.94 44 *e*P **P 16 13 49.9 +0.3**
comp=Z,7.4nm,0.8s,mb5.0
YBH *e* pP 16 14 04.9 +1.1
NVL N'lazarevskaya 88.01 187 *i*P **P 16 13 48.5 -1.0**
NVL pmax pmax
comp=Z,33nm,1.2s,mb5.4
MAIT Maitri 88.01 187 *e*P **P 16 13 48.8 -0.7**
BFSC Mount Baldy Ra 88.03 53 ⇑P **P 16 13 49.9 -0.2**
baz=88
ISA Isabella 88.05 51 ⇓P **P 16 13 50.3 +0.1**
baz=88,SNR=12
ISA Isabella 88.05 51 *e*P **P 16 13 50.1 -0.1**
ISA pmax pmax
comp=Z,12nm,1.0s,mb5.1
ISA Isabella 88.05 51 *e*P **P 16 13 50.0 -0.1**
comp=Z,12nm,1.0s,mb5.1
EDW2 Edwards Air Fo 88.06 52 ⇓P **P 16 13 50.3 0.0**
baz=88,SNR=5.2
HUMO Hull Mountain 88.21 43 *e*P **P 16 13 51.1 +0.3**
comp=Z,30nm,1.2s,mb5.4
MONP Monument Peak 88.38 54 ⇑P **P 16 13 52.0 +0.1**
baz=88,SNR=6.8
LRMC Laurel Mountai 88.54 51 ⇓P **P 16 13 52.6 +0.1**
baz=88,SNR=9.8
PFO Pinyon Flat Ob 88.66 54 ⇓P **P 16 13 53.4 +0.2**
baz=88
CWC Cottonwood Cre 88.68 50 ⇓P **P 16 13 53.0 -0.1**
baz=89
WCN Washoe City 88.78 47 ⇓P **P 16 13 53.9 +0.4**
baz=89
SWSC Sam W. Stewart 88.88 54 ⇓P **P 16 13 54.2 0.0**
baz=89
MPMC Manual Prospec 88.94 51 ⇓P **P 16 13 54.6 +0.3**
baz=89,SNR=17
GSC Goldstone 89.12 52 ⇑P **P 16 13 55.1 -0.1**
baz=89
GSC Goldstone 89.12 52 *e*P **P 16 13 54.2 -1.0**
GSC pmax pmax
comp=Z,5.0nm,0.9s,mb4.8
GSC Goldstone 89.12 52 *e*P **P 16 13 54.2 -1.0**
comp=Z,5.0nm,0.9s,mb4.8
BELC Belle Mtn. Jos 89.17 53 ⇑P **P 16 13 55.8 +0.3**
baz=89,SNR=7.6
HEC Hector,Ludlow 89.27 52 ⇓P **P 16 13 56.0 0.0**
baz=89
NVAR Mina Array Bea 89.40 49 P **P 16 13 56.7 +0.2**
comp=Z,11nm,1.0s,mb5.2,baz=224,slow=8.1,SNR=47
GRAC Grapevine Rang 89.44 50 ⇓P **P 16 13 57.0 +0.3**
baz=89,SNR=17
BC3 Big Chuckawall 89.44 54 ⇑P **P 16 13 57.2 +0.4**
baz=89,SNR=5.4
FURC Furnace Creek, 89.58 51 ⇑P **P 16 13 57.3 0.0**
baz=90,SNR=8.7
K05A Summer Lake 89.60 44 ⇑P **P 16 13 57.7 +0.4**
baz=90,SNR=9.9
MOD Modoc 89.61 45 *e*P **P 16 13 57.6 +0.2**
comp=Z,12nm,0.8s,mb5.3
GLA Glamis 89.67 55 ⇑P **P 16 13 58.2 +0.3**
baz=90,SNR=5.7
GLA Glamis 89.67 55 *e*P **P 16 13 58.1 +0.2**
GLA pmax pmax
comp=Z,13nm,1.0s,mb5.2
GLA Glamis 89.67 55 *e*P **P 16 13 58.1 +0.3**
comp=Z,13nm,1.0s,mb5.2
H04A Detroit Lake 89.71 42 ⇑P **P 16 13 57.6 -0.2**
baz=90,SNR=8.7
GMRC Granite Mounta 89.75 53 ⇑P **P 16 13 58.2 0.0**
baz=90,SNR=6.3
SHOC Shoshone 89.76 51 ⇑P **P 16 13 58.4 +0.1**
baz=90
G04A Mulino 89.78 41 ⇑P **P 16 13 58.5 +0.4**
baz=90
E03A Lebam 89.78 40 ⇓P **P 16 13 58.2 +0.2**
baz=90
TUQ Turquoise Moun 89.83 52 ⇑P **P 16 13 58.8 +0.2**
baz=90
IRM Iron Mountain 89.88 53 ⇓P **P 16 13 58.9 +0.1**
baz=90,SNR=11
LSA Lhasa 89.93 302 P **P 16 13 59.5 +0.3**
LSA Lhasa 89.93 302 *e*P **P 16 13 59.9 +0.7**
LSA pmax pmax
comp=Z,12nm,1.1s,mb5.1
LSA Lhasa 89.93 302 *e*P **P 16 13 59.9 +0.7**
comp=Z,12nm,1.1s,mb5.1
U10A Ash Meadows, A 89.94 51 ⇓P **P 16 13 59.3 +0.2**
baz=90,SNR=13
NLWA Neilton Lookou 90.03 39 ⇑P **P 16 13 59.1 -0.1**
baz=90
F04A Amboy 90.17 40 ⇑P **P 16 13 59.7 -0.2**
baz=90
LDFC Landfair 90.29 53 *e*P **P 16 14 01.1 +0.3**
comp=Z,26nm,1.1s,mb5.5
V11A Goodsprings 90.36 52 ⇓P **P 16 14 01.2 +0.2**
baz=90
113A Mohawk Valley, 90.37 55 ⇑P **P 16 14 01.5 +0.3**
baz=90
S10A Tonopah Range, 90.39 50 ⇓P **P 16 14 01.4 +0.2**
baz=90,SNR=36
Z13A Yuma Proving G 90.62 55 ⇑P **P 16 14 02.7 +0.3**
baz=90,SNR=12
PDMCI Parker Dam,Lak 90.70 54 ⇑P **P 16 14 02.9 +0.3**
baz=91
GNW Green Mountain 90.73 39 *e*P **P 16 14 02.1 -0.3**
comp=Z,10nm,0.7s,mb5.3
GNW *e* 16 14 34.8
V12A Nelson 90.75 52 ⇑P **P 16 14 03.1 +0.3**
baz=91
R10A Warm Springs 90.76 49 ⇓P **P 16 14 03.1 +0.2**
baz=91,SNR=5.2
214A Organ Pipe Nat 90.79 56 ⇑P **P 16 14 03.3 +0.2**
baz=91,SNR=7.8
S11A Rachel 90.88 50 ⇓P **P 16 14 03.4 0.0**
baz=91
Q10A Clear Creek Ra 90.91 49 ⇓P **P 16 14 03.5 -0.1**
baz=91,SNR=9.0
LON Longmire 90.94 40 *e*P **P 16 14 02.8 -0.6**
LON pmax pmax
comp=Z,4.0nm,0.6s,mb4.9
LON Longmire 90.94 40 *e*P **P 16 14 02.8 -0.7**
comp=Z,4.0nm,0.6s,mb4.9
WVOR Wild Horse Val 90.95 45 *e*P **P 16 14 03.5 -0.1**
WVOR pmax pmax
comp=Z,19nm,1.1s,mb5.3
WVOR Wild Horse Val 90.95 45 *e*P **P 16 14 03.5 -0.1**
comp=Z,19nm,1.1s,mb5.3
D05A Enumclaw 91.04 40 ⇑P **P 16 14 04.4 +0.5**
baz=91
114A Black Gap (USA 91.05 56 ⇓P **P 16 14 04.4 +0.1**
baz=91,SNR=7.0
X13A Yucca 91.05 54 ⇓P **P 16 14 04.4 +0.2**
baz=91,SNR=9.9
T11A Corn Creek, Al 91.10 51 ⇓P **P 16 14 04.8 +0.4**
baz=91,SNR=19
I07A Izee 91.13 43 ⇑P **P 16 14 04.7 +0.3**
baz=91,SNR=12
P10A Eureka 91.21 48 ⇑P **P 16 14 05.3 +0.4**
baz=91
W13A Hualapai Mount 91.21 53 ⇓P **P 16 14 05.1 +0.1**
baz=91,SNR=6.2
Z14A Wintersburg 91.24 55 ⇑P **P 16 14 05.6 +0.4**
baz=91
SKAG Skagway 91.24 25 *e*P **P 16 14 03.7 -0.9**
comp=Z,15nm,0.8s,mb5.4
R11A Troy Canyon, C 91.29 50 ⇑P **P 16 14 05.1 -0.2**
baz=91,SNR=13
IRK Irkutsk 91.39 326 *e*P **P 16 14 04.3 -1.1**
IRK *e* pP 16 14 18.5 -1.2
IRK pmax pmax
comp=Z,18nm,0.8s,mb5.5
Y14A Wickenburg 91.42 54 ⇓P **P 16 14 05.7 -0.3**
baz=91
TLY Talaya 91.43 325 *e*P **P 16 14 04.1 -1.5**
TLY *e* pP 16 14 19.1 -0.8
TLY LR *e*S S 16 24 52.4 -8.7
TLY *e*SS SS 16 31 12.9 +4.6
TLY pmax pmax
comp=Z,21nm,1.5s,mb5.2
TLY Talaya 91.43 325 *e*P **P 16 14 04.7 -0.9**
comp=Z,25nm,1.4s,mb5.3
TLY *e* pP 16 14 18.6 -1.3
V13A Grand Canyon W 91.44 52 ⇓P **P 16 14 06.3 +0.2**
baz=91,SNR=8.4
Q11A Duckwater 91.45 49 ⇑P **P 16 14 06.2 +0.2**
baz=91,SNR=7.0
J08A Circle Bar Ran 91.47 44 ⇑P **P 16 14 06.3 +0.4**
baz=91
S12A Delamar Landin 91.52 50 ⇓P **P 16 14 07.0 +0.6**
baz=91,SNR=22
P11A Circle Ranch, 91.67 48 ⇑P **P 16 14 07.4 +0.4**
baz=92
U13A Pakoon Wash 91.68 52 ⇑P **P 16 14 07.2 +0.1**
baz=92,SNR=5.8
TAPN Tapejung 91.84 298 *e*P **P 16 14 08.5 +0.4**
H08A Prairie City 91.86 43 ⇓P **P 16 14 07.6 -0.2**
baz=92
W14A Seligman 91.86 53 ⇑P **P 16 14 08.6 +0.6**
baz=92,SNR=8.8
216A Three Points, 91.87 57 ⇑P **P 16 14 08.8 +0.7**
baz=92
116A Eloy 91.89 56 ⇑P **P 16 14 08.5 +0.3**
baz=92
ODAN Odare 91.93 298 *e*P **P 16 14 08.7 +0.2**
comp=Z,38nm,0.9s,mb5.7
Y15A Casa Rosa Ranc 91.94 55 ⇓P **P 16 14 08.6 +0.2**
baz=92,SNR=16
M10A I.L. Ranch, Tu 91.96 46 ⇑P **P 16 14 08.7 +0.4**
baz=92,SNR=8.6
T13A Saint George 91.97 51 ⇑P **P 16 14 08.7 +0.2**
baz=92,SNR=5.6
B06A Marblemount 91.97 38 ⇓P **P 16 14 08.0 -0.2**
baz=92
O11A Cowboy Ranch, 91.98 48 ⇑P **P 16 14 08.5 0.0**
baz=92,SNR=6.6
R12A Pony Springs, 91.98 50 ⇑P **P 16 14 08.9 +0.4**
baz=92
V14A Boquillas Ranc 92.01 53 ⇑P **P 16 14 09.1 +0.4**
baz=92,SNR=8.2
G08A Pilot Rock 92.02 42 ⇓P **P 16 14 08.3 -0.2**
baz=92,SNR=11
Q12A Willow Creek R 92.12 49 ⇓P **P 16 14 09.1 0.0**
baz=92,SNR=6.3
I09A Lost Marbles R 92.22 44 ⇑P **P 16 14 09.4 -0.1**
baz=92
X15A Humboldt 92.22 54 ⇑P **P 16 14 10.1 +0.5**
baz=92,SNR=12
S13A Holt Ranch, En 92.22 51 ⇑P **P 16 14 09.9 +0.3**
baz=92,SNR=5.0
ETW Entiat 92.23 40 *e*P **P 16 14 08.7 -0.8**
comp=Z,9.2nm,0.7s,mb5.2
P12A McGill 92.24 49 ⇑P **P 16 14 09.9 +0.3**
baz=92,SNR=5.1
L10A Juniper Basin 92.24 46 ⇑P **P 16 14 09.5 -0.1**
baz=92,SNR=7.7
U14A Mt Trumbull 92.26 52 ⇑P **P 16 14 10.3 +0.5**
baz=92,SNR=11
K10A MacKenzie Ranc 92.27 45 ⇑P **P 16 14 09.7 0.0**
baz=92,SNR=9.8
217A Green Valley 92.29 57 ⇑P **P 16 14 10.4 +0.4**
baz=92,SNR=9.3
R13A O'Grain Ranch, 92.39 50 ⇓P **P 16 14 10.8 +0.4**
baz=92
M11A Holland Ranch, 92.43 47 ⇑P **P 16 14 10.9 +0.4**
baz=92
TUC Tucson 92.51 57 *e*P **P 16 14 11.2 +0.1**
TUC pmax pmax
comp=Z,8.0nm,1.0s,mb5.1
TUC Tucson 92.51 57 *e*P **P 16 14 11.2 +0.1**
comp=Z,8.4nm,1.0s,mb5.1
Y16A Circle Bar Ran 92.56 55 ⇓P **P 16 14 11.5 +0.2**
baz=92,SNR=12
H09A Durkee 92.57 43 ⇑P **P 16 14 10.9 -0.1**
baz=92
CCUT Cedar City 92.57 51 *e*P **P 16 14 11.4 +0.1**
comp=Z,3.2nm,0.9s,mb4.8
T14A Hurricane 92.59 51 ⇑P **P 16 14 11.6 +0.3**
baz=92
ARUT Antelope Range 92.61 51 *e*P **P 16 14 10.1 -1.3**
ARUT pmax pmax
comp=Z,9.0nm,1.2s,mb5.1
ARUT Antelope Range 92.61 51 *e*P **P 16 14 10.1 -1.3**
comp=Z,9.2nm,1.2s,mb5.1
RAMN Ramite 92.62 298 *e*P **P 16 14 11.7 0.0**
117A Oracle 92.64 56 ⇑P **P 16 14 11.9 +0.2**
baz=92,SNR=10
Q13A Wheeler Ranch, 92.66 49 ⇓P **P 16 14 11.5 -0.1**
baz=92,SNR=8.0
O12A Currie 92.68 48 ⇓P **P 16 14 11.7 +0.1**
baz=93
N12A Clover Valley, 92.71 47 ⇓P **P 16 14 11.8 0.0**
baz=93
N12A Clover Valley, 92.71 47 *e*P **P 16 14 11.4 -0.4**
comp=Z,5.9nm,0.8s,mb5.1
EGAK Eagle 92.74 19 *e*P **P 16 14 09.8 -1.6**
comp=Z,7.3nm,0.8s,mb5.2
G09A Cove 92.76 43 ⇓P **P 16 14 11.7 -0.3**
baz=93
L11A Cat Creek Ranc 92.76 46 ⇓P **P 16 14 12.2 +0.2**
baz=93,SNR=9.0
V15A Kaibab Nationa 92.78 53 ⇓P **P 16 14 12.7 +0.5**
baz=93
X16A Lo Mia Camp, P 92.80 54 ⇑P **P 16 14 12.8 +0.4**
baz=93,SNR=10
DAWY Dawson 92.81 20 *e*P **P 16 14 10.4 -1.2**
318A Bisbee 92.81 58 ⇓P **P 16 14 12.8 +0.3**
baz=93
DLBC Dease Lake 92.82 27 *e*P **P 16 14 11.2 -0.7**
K11A Parker Ranch, 92.83 45 ⇓P **P 16 14 12.1 -0.2**
baz=93
D08A Wollman Farm, 92.83 41 ⇑P **P 16 14 11.9 -0.3**
baz=93
MOY Mondy 92.85 325 *e*P **P 16 14 12.3 +0.1**
P13A Bates Ranch, G 92.86 49 ⇓P **P 16 14 12.7 +0.2**
baz=93,SNR=7.9
U15A North Rim 92.93 52 ⇑P **P 16 14 13.4 +0.5**
baz=93,SNR=7.9
Y17A Roosevelt 92.98 55 ⇑P **P 16 14 13.8 +0.5**
baz=93
W16A Flagstaff 92.99 54 ⇑P **P 16 14 14.0 +0.7**
baz=93
M12A Wells 93.03 47 ⇓P **P 16 14 13.5 +0.2**
baz=93
E09A Wood Farm, Sta 93.07 41 ⇓P **P 16 14 12.9 -0.5**
baz=93
T15A Red Dirt Ranch 93.09 52 ⇓P **P 16 14 14.0 +0.4**
baz=93
OD2 Odessa Site #2 93.11 40 *e*P **P 16 14 13.2 -0.3**
comp=Z,6.3nm,1.0s,mb5.0
B08A Colville Reser 93.17 39 ⇓P **P 16 14 13.7 0.0**
baz=93
G10A Bishop Farm, J 93.19 43 ⇓P **P 16 14 13.8 0.0**
baz=93
Q14A Sevier Lake (B 93.20 50 ⇑P **P 16 14 14.2 +0.1**
baz=93,SNR=11
JIRN Jiri 93.21 298 *e*P **P 16 14 14.9 +0.4**
MFID Camas Ranch 93.23 45 ⇓P **P 16 14 13.9 -0.2**
baz=93
X17A Forest Lakes 93.25 55 ⇑P **P 16 14 15.1 +0.6**
baz=93
L12A House Creek Ra 93.25 46 ⇑P **P 16 14 14.7 +0.4**
baz=93
WUAZ Wupatki 93.27 53 ⇓P **P 16 14 14.8 +0.3**
baz=93,SNR=5.2
WUAZ Wupatki 93.27 53 *e*P **P 16 14 14.5 0.0**
comp=Z,10nm,1.0s,mb5.2
118A Homack Ranch, 93.27 57 ⇓P **P 16 14 14.9 +0.3**
baz=93,SNR=9.7
319A Douglas 93.36 58 ⇑P **P 16 14 15.3 +0.3**
baz=93
I11A Placerville 93.36 44 ⇑P **P 16 14 14.2 -0.5**
baz=93,SNR=5.9
F10A Beach Ranch, E 93.41 42 ⇑P **P 16 14 14.4 -0.5**
baz=93
M13A Montello 93.52 47 ⇑P **P 16 14 15.4 -0.2**
baz=93
M13A Montello 93.52 47 *e*P **P 16 14 15.2 -0.3**
comp=Z,1.8nm,0.4s,mb4.8
K12A Draper Farm, C 93.53 46 ⇓P **P 16 14 15.6 0.0**
baz=93
GUN Gumba 93.56 298 *e*P **P 16 14 16.5 +0.5**
P14A Drum Mountains 93.59 49 ⇑P **P 16 14 15.4 -0.5**
baz=94,SNR=5.3
219A White Tail Can 93.60 57 ⇓P **P 16 14 16.2 +0.1**
baz=94
Y18A Canyon Day Jun 93.64 55 ⇓P **P 16 14 16.8 +0.5**
baz=94
H11A Donnelly 93.65 44 ⇑P **P 16 14 15.5 -0.5**
baz=94,SNR=5.8
J12A Stokes Ranch, 93.65 45 ⇑P **P 16 14 16.0 -0.1**
baz=94,SNR=7.4
G11A Walters Elk Ra 93.78 43 ⇑P **P 16 14 16.4 -0.2**
baz=94
PKI Pulchoki 93.83 298 *e*P **P 16 14 17.4 +0.1**
119A Ashpeak Ranch, 93.84 57 ⇓P **P 16 14 17.1 -0.1**
baz=94
I12A Atlanta 93.85 45 ⇑P **P 16 14 16.8 -0.2**
baz=94
S16A Weppner Ranch, 93.93 51 ⇓P **P 16 14 17.8 +0.3**
baz=94
L13A Double Diamond 93.96 47 ⇑P **P 16 14 17.2 -0.3**
baz=94
KKN Kakani 94.01 298 *e*P **P 16 14 18.2 +0.1**
DMN Daman 94.10 298 *e*P **P 16 14 18.9 +0.4**
comp=Z,54nm,1.0s,mb5.9
M14A Sheep Mountain 94.14 47 ⇑P **P 16 14 18.0 -0.4**
baz=94,SNR=8.5
220A Playas Peak, P 94.15 58 ⇓P **P 16 14 19.1 +0.4**
baz=94
HLID Hailey 94.23 45 ⇑P **P 16 14 18.8 +0.1**
baz=94
HLID Hailey 94.23 45 *e*P **P 16 14 18.2 -0.5**
comp=Z,2.3nm,0.8s,mb4.7
T17A Navajo Res., N 94.25 52 ⇓P **P 16 14 19.3 +0.3**
baz=94
J13A Cove Ranch, Pi 94.33 45 ⇑P **P 16 14 19.1 -0.1**
baz=94
H12A Diamond D Ranc 94.34 44 ⇑P **P 16 14 18.7 -0.5**
baz=94,SNR=6.5
L14A Malta 94.42 47 ⇑P **P 16 14 19.1 -0.5**
baz=94
Z20A Nine Sixteen R 94.53 57 ⇓P **P 16 14 20.8 +0.5**
baz=94
F12A Elk City 94.57 43 ⇓P **P 16 14 19.7 -0.5**
baz=94
I13A Wildhorse Cree 94.57 45 ⇑P **P 16 14 20.3 0.0**
baz=94
GKN Gorkha 94.62 298 *e*P **P 16 14 20.3 -0.6**
K14A Jones Ranch, D 94.67 46 ⇑P **P 16 14 20.6 -0.2**
baz=95
J14A Carey 94.74 46 ⇑P **P 16 14 21.2 +0.1**
baz=95,SNR=5.5
H13A Challis 94.74 44 ⇑P **P 16 14 21.0 0.0**
baz=95
M15A Larsen Ranch, 94.75 48 ⇑P **P 16 14 20.8 -0.4**
baz=95
C11A Tepee Creek (N 94.80 41 ⇑P **P 16 14 21.1 -0.1**
baz=95
TMUT Trail Mountain 94.81 50 *e*P **P 16 14 19.4 -2.1**
comp=Z,7.5nm,1.0s,mb5.1
G13A Cobalt 94.96 44 ⇑P **P 16 14 21.4 -0.7**
baz=95
T18A Mexican Hat 94.99 52 ⇑P **P 16 14 22.3 -0.1**
baz=95
L15A Malad City 95.00 47 ⇑P **P 16 14 22.1 -0.2**
baz=95
I14A Mackay 95.02 45 ⇑P **P 16 14 22.1 -0.2**
baz=95
S18A Hurst Farm, Bl 95.10 52 ⇑P **P 16 14 23.5 +0.6**
baz=95
X20A Quemado 95.11 55 ⇑P **P 16 14 23.0 0.0**
baz=95
F13A Darby 95.18 43 ⇓P **P 16 14 22.3 -0.7**
baz=95
U19A Dine' College, 95.19 53 ⇑P **P 16 14 23.0 -0.3**
baz=95

SRU San Rafael 95.23 50 ⇓P P 16 14 23.5 0.0
baz=95
H14A Leadore 95.34 44 ⇓P P 16 14 23.7 -0.1
baz=95
R18A Canyonlands Na 95.43 51 ⇓P P 16 14 24.6 +0.3
baz=95
O17A Robinson Place 95.48 49 ⇑P P 16 14 24.9 +0.3
baz=95
J15A Blackfoot 95.50 46 ⇑P P 16 14 24.8 +0.2
baz=95
Z22A Elephant Butte 95.85 57 ⇓P P 16 14 26.5 +0.1
baz=96
E14A Clinton 95.96 43 ⇓P P 16 14 26.5 0.0
baz=96
M17A Scullys Gap (B 95.99 48 ⇑P P 16 14 26.5 -0.4
baz=96
J16A Bone 96.00 46 ⇑P P 16 14 26.8 -0.1
baz=96
U21A Nageezi 96.40 54 ⇑P P 16 14 27.7 -1.1
baz=96
324A Moseley Ranch, 96.42 59 ⇑P P 16 14 27.9 -1.1
baz=96
224A Cornudas Mount 96.60 58 ⇑P P 16 14 29.5 -0.3
baz=96
425A Indio Mountain 96.61 60 ⇓P P 16 14 29.4 -0.5
baz=96
S21A Coal Bank Pass 96.73 52 ⇓P P 16 14 30.1 -0.2
baz=97
H16A Russell Place, 96.78 45 ⇑P P 16 14 29.8 -0.6
baz=97
325A Bean Ranch, Si 96.81 59 ⇓P P 16 14 31.0 +0.2
baz=97
TXAR Lajitas Array 97.21 62 P **P 16 14 32.5 -0.2**
comp=Z,0.9nm,0.8s,mb4.2,baz=237,slow=4.3,SNR=9.5
TXAR LR LR 16 49 23.6
comp=Z,150nm,20.3s,MS4.5,baz=355,slow=30
PDAR Pinedale Array 97.23 47 P **P 16 14 32.6 +0.2**
comp=Z,0.7nm,0.7s,mb4.2,baz=242,slow=3.2,SNR=6.2
PDAR PP PP 16 18 27.5 -2.1
comp=Z,0.7nm,1.0s,baz=266,slow=4.5,SNR=4.2
PDAR PKKPbc PKKPbc 16 31 11.1 -1.6
comp=Z,0.5nm,0.9s,baz=116,slow=2.1,SNR=4.0
PDAR LR LR 16 48 20.0
comp=Z,71nm,20.0s,MS4.2,baz=251,slow=29
Y24A Capitan 97.28 57 ⇓P P 16 14 32.8 -0.1
baz=97
INK Inuvik 97.36 18 LR LR 16 54 53.3
comp=Z,115nm,19.9s,MS4.4,baz=230,slow=33
S22A 4UR Ranch, Cre 97.47 53 ⇓P P 16 14 33.6 -0.1
baz=97
627A Terlingua Ranc 97.48 61 ⇓P P 16 14 33.5 -0.4
baz=97
WMQ Urumqi 97.76 314 *eP* **P 16 14 34.6 -0.2**
WMQ PP PP 16 18 35.6 +2.0
WMQ SKS 16 25 08.3
WMQ *eS* S 16 25 54.1 -2.7
WMQ SS SS 16 32 38.6 -0.1
WMQ pmax pmax
comp=Z,110nm,5.2s
WMQ LR LR
comp=N,60nm,20.2s,MS4.3
WMQ LR LR
comp=E,84nm,22.3s,MS4.3
WMQ LR LR
comp=Z,95nm,22.3s,MS4.2
PLCA Paso Flores 97.93 138 LR LR 16 48 28.6
comp=Z,108nm,19.4s,MS4.3,baz=235,slow=29
D17A Six Diamond Ra 98.02 43 ⇑P P 16 14 35.5 -0.4
baz=98
YKA Yellowknife Ar 101.44 27 P Pdif 16 14 49.5 -1.6
comp=Z,1.0nm,0.6s,baz=256,slow=4.5,SNR=5.2
YKA Yellowknife Ar 101.44 27 P Pdif 16 14 49.5 -1.6
MK31 Makanchi Array 102.31 315 *eP* Pdif 16 14 54.4 -0.6
MKAR Makanchi Array 102.31 315 P Pdif 16 14 55.2 +0.2
comp=Z,1.5nm,0.7s,baz=98,slow=6.0,SNR=9.7
MKAR pP 16 15 09.8
comp=Z,1.6nm,0.7s,baz=84,slow=7.0,SNR=6.4
MKAR PP PP 16 19 06.5 -1.6
comp=Z,1.4nm,1.0s,baz=106,slow=9.1,SNR=4.7
ZALV Zalesovo Beam 102.76 323 P Pdif 16 14 55.8 -1.3
comp=Z,0.6nm,0.5s,baz=118,slow=5.4,SNR=4.6
KURK Kurchatov 105.64 319 Pdiff Pdif 16 15 09.9 +0.1
comp=Z,0.6nm,0.6s,baz=104,slow=4.1,SNR=5.4
KURK pDdiff 16 15 24.2
comp=Z,0.5nm,0.6s,baz=95,slow=4.3,SNR=4.8
KURK PKiKP PKiKP 16 19 20.2 -2.4
comp=Z,0.9nm,0.9s,baz=99,slow=1.7,SNR=5.3
BVAR Borovoye Array 111.04 320 PKiKP PKiKP 16 19 31.5 -1.1
comp=Z,1.4nm,0.7s,baz=45,slow=0.6,SNR=10
CPUP Villa Florida 115.45 134 PKP PKPdf 16 19 40.2 -1.8
comp=Z,0.6nm,0.6s,baz=151,slow=9.6,SNR=3.4
ABKAR Akbulak array 117.45 316 PKPdf PKPdf 16 19 43.2 -1.8
ARU Arti 117.90 324 PKiKP PKPdf 16 19 44.3 -1.4
ARU Arti 117.90 324 *e*PKPdf PKPdf 16 19 44.2 -1.5
AKTK Aktyubinsk 118.66 317 PKP PKPdf 16 19 46.3 -1.0
AKTO Aktyubinsk 118.66 317 PKP PKPdf 16 19 46.3 -1.0
comp=Z,3.9nm,0.9s,baz=111,slow=3.3,SNR=12
KEV Kevo 125.35 345 *e*PKiKP PKPdf 16 19 56.1 -3.6
KEV Kevo 125.35 345 *ep* PKPdf 16 19 56.1 -3.6
comp=Z,10nm,0.8s
SCHQ Schefferville 125.62 36 PKP PKPdf 16 19 58.4 -2.2
comp=Z,2.7nm,0.9s,baz=220,slow=8.7,SNR=3.8
ARCES ARCESS Array B 125.88 345 PKP PKPdf 16 19 59.6 -1.0
comp=Z,13nm,0.8s,baz=103,slow=1.6,SNR=37
ARCES pPKP pPKPdf 16 20 13.7 -1.8
comp=Z,5.0nm,0.6s,baz=85,slow=1.7,SNR=5.9
JOF Joensuu 128.51 337 *e*PKiKP PKPdf 16 20 04.8 -1.1
JOF Joensuu 128.51 337 *ep* PKPdf 16 20 04.8 -1.1
comp=Z,17nm,1.1s
ZEI Tsey 129.12 309 *e*PKiKP PKPdf 16 20 06.9 -0.7
ZEI pmax pmax
comp=Z,7.0nm,0.4s
OBN Obninsk 130.18 326 *e*PKiKP PKPdf 16 20 05.2 -4.1
OBN pmax pmax
comp=Z,9.0nm,0.8s
KAF Kangasniemi 130.83 338 *e*PKiKP PKPdf 16 20 07.9 -2.4
KAF Kangasniemi 130.83 338 *ep* PKPdf 16 20 07.9 -2.4
comp=Z,5.1nm,0.9s,baz=41,slow=2.0
FINES FINESS Array B 131.35 337 PKP PKPdf 16 20 10.7 -0.6
comp=Z,5.0nm,1.0s,baz=197,slow=32,SNR=4.3
FINES SKPbc SKPbc 16 23 30.9 -1.5
comp=Z,3.0nm,0.9s,baz=72,slow=8.9,SNR=3.7
AKASG Malin Array Be 136.15 324 PKP PKPdf 16 20 19.6 -1.0
comp=Z,1.5nm,0.5s,baz=64,slow=1.3,SNR=10
AKASG SKPbc SKPbc 16 23 49.2 +0.5
comp=Z,0.3nm,0.4s,baz=50,slow=2.9,SNR=4.7
NB2 NORSAR Subarra136.25 345 PKPdf PKPdf 16 20 20.3 -0.2
comp=Z,6.8nm,1.2s,baz=31,slow=1.9
NOA NORSAR Array B 136.25 345 PKP PKPdf 16 20 19.2 -1.3
comp=Z,4.2nm,0.8s,baz=34,slow=2.0,SNR=12
NOA NORSAR Array B 136.25 345 PKP PKPdf 16 20 19.2 -1.3
MMAI Mount Meron Ar 137.02 297 PKP PKPdf 16 20 23.1 +0.3
comp=Z,1.4nm,0.5s,baz=152,slow=3.8,SNR=4.6
BRTR Keskin Array B 137.29 307 PKP PKPdf 16 20 24.0 +0.9
comp=Z,3.3nm,1.0s,baz=126,slow=3.2,SNR=11
BURAR Bucovina Array 139.97 322 ⇓*iP* PKPdf 16 20 28.8 +1.0
KWP Kalwaria Pacla 140.26 326 *e*PKP PKPdf 16 20 28.1 -0.1
MLR Muntele Rosu 140.57 318 ⇑*iP* PKPdf 16 20 29.7 +0.8
UZH Uzhgorod 141.06 325 *e*PKHKP PKPpre 16 20 24.6
UZH *i* 16 20 28.6
UZH *i* 16 20 39.4
STHS Stebnicka Huta 141.16 326 *e*PKiKP PKPdf 16 20 30.1 +0.2
STHS Stebnicka Huta 141.16 326 *e*PKP PKPdf 16 20 30.0 +0.1
CRVS Cervenica-Dubn 141.35 326 *e*PKHKP PKPpre 16 20 25.6
CRVS Cervenica-Dubn 141.35 326 *e*PKP PKPpre 16 20 25.6
OKC Ostrava-Krasne 142.44 329 *e*PKP PKPdf 16 20 34.7 +2.6
OKC AMS AMS 17 22 00.0
BSEG Bad Segeberg 142.54 339 *e*PKPbc PKPdf 16 20 27.0 -5.2
KSP Ksiaz 142.61 332 *e*PKHKP PKPpre 16 20 28.3
MORC Moravsky Berou 142.77 329 *e*PKHKP PKPpre 16 20 28.3
PSZ Piszkesteto 142.78 325 *e*PKHKP PKPpre 16 20 28.8
PSZ Piszkesteto 142.78 325 ⇓*iP* PKPdf 16 20 35.8 +3.0
DPC Dobruska-Polom 142.95 331 *e*PKHKP PKPpre 16 20 29.0
DPC MLR MLR
comp=Z,100nm,18.3s,MS4.6
DPC Dobruska-Polom 142.95 331 *e*PKP PKPpre 16 20 29.0
DPC *e* 16 20 43.4
DPC LR LR
comp=Z,100nm,18.3s,MS4.6
DPC Dobruska-Polom 142.95 331 *e*PKP PKPpre 16 20 29.0
DPC *ex* x 16 20 43.4
DPC AMS AMS 17 19 20.0
comp=Z,100nm,18.3s
VYHS Vyhne 142.97 327 *e*PKHKP PKPpre 16 20 30.1
VYHS Vyhne 142.97 327 *e*PKP PKPpre 16 20 30.1
UPC Upice 142.98 331 *e*PKP PKPpre 16 20 29.4

KOLL Kolacno 143.14 327 *e*PKHKP PKPpre 16 20 30.4
KOLL Kolacno 143.14 327 *e*PKP PKPpre 16 20 30.4
BUD Budapest 143.51 325 ⇓*e*PKP PKPdf 16 20 31.2 -2.9
PVCC Panska Ves 143.60 333 *e*PKHKP PKPdf 16 20 31.6 -2.6
PVCC MLR MLR
comp=Z,100nm,20.1s,MS4.6
PVCC Panska Ves 143.60 333 *e*PKP PKPdf 16 20 31.6 -2.6
PVCC LR LR
comp=Z,100nm,20.1s,MS4.6
PVCC Panska Ves 143.60 333 *e*PKP PKPdf 16 20 31.6 -2.6
PVCC AMS AMS 17 19 10.0
comp=Z,100nm,20.1s
BRG Berggiesshubel 143.61 333 *e*PKPbc PKPdf 16 20 31.0 -3.2
BRG Berggiesshubel 143.61 333 *e*PKP PKPdf 16 20 31.1 -3.1
comp=Z,26nm,0.9s
BRG *e* 16 20 45.1
comp=Z,13nm,1.1s
VTS Vitosha 143.66 316 PKHKP PKPpre 16 20 28.1
VTS Vitosha 143.66 316 P PKPpre 16 20 28.1
VTS Vitosha 143.66 316 ⇑*iP* PKPdf 16 20 31.5 -3.0
CLL Collm 143.67 335 *e*PKPbc PKPdf 16 20 30.9 -3.4
CLL Collm 143.67 335 *i* PKP PKPdf 16 20 30.9 -3.4
CLL *i* 16 20 45.5
CLL Collm 143.67 335 *i* PKPdf PKPdf 16 20 30.9 -3.4
comp=Z,17nm,0.9s
CLL *i* 16 20 45.5
CLL *e*PP PP 16 23 47.0 +0.4
NRDL Niedersach Rie 143.81 338 *e*PKPbc PKPdf 16 20 32.8 -1.7
PRU Pruhonice 144.00 332 *e*PKHKP PKPdf 16 20 33.0 -1.9
PRU MLR MLR
comp=Z,200nm,32.1s,MS4.7
PRU Pruhonice 144.00 332 *e*PKP PKPdf 16 20 33.0 -1.9
PRU *e* 16 20 47.3
PRU LR LR
comp=Z,200nm,32.1s,MS4.7
PRU Pruhonice 144.00 332 *e*PKP PKPdf 16 20 33.0 -1.9
PRU *ex* x 16 20 47.3
PRU AMS AMS 17 20 20.0
comp=Z,200nm,32.1s
ZST Bratislava 144.04 328 *e*PKIKP PKPdf 16 20 33.7 -1.3
ZST Bratislava 144.04 328 *e*PKP PKPdf 16 20 33.7 -1.3
TREC Trest 144.07 330 *e*PKP PKPdf 16 20 32.9 -2.1
TREC AMS AMS 17 19 40.0
comp=Z,200nm,23.8s
OUR Ouranopolis 144.11 312 PKHKP PKPdf 16 20 32.5 -2.9
OUR Ouranopolis 144.11 312 P PKPdf 16 20 32.5 -2.9
CLZ Clausthal 144.25 337 *e*PKPbc PKPdf 16 20 33.4 -1.8
PAIG Paliouri 144.49 311 PKHKP PKPdf 16 20 33.6 -2.5
PAIG Paliouri 144.49 311 P PKPdf 16 20 33.6 -2.5
PKSM Moragy 144.49 324 ⇑*iP* PKPdf 16 20 34.3 -1.6
TANN Tannenbergstha 144.57 334 *e*PKPbc PKPdf 16 20 34.5 -1.4
HORT Hortiatis 144.62 313 P PKPdf 16 20 34.0 -2.3
HORT Hortiatis 144.62 313 P PKPdf 16 20 34.0 -2.3
VAY Valandovo 144.66 314 PKHKP PKPdf 16 20 34.0 -2.3
VAY Valandovo 144.66 314 P PKPdf 16 20 34.0 -2.3
NKC Novy Kostel 144.72 334 *e*PKP PKPdf 16 20 35.0 -1.1
NKC *e* 16 20 49.4
NKC Novy Kostel 144.72 334 *e*PKP PKPdf 16 20 35.0 -1.1
NKC *ex* x 16 20 49.4
NKC AMS AMS 17 19 00.0
MOX Moxa 144.73 335 ⇑*i*PKP PKPdf 16 20 34.8 -1.3
comp=Z,97nm,1.1s
MOX *e* 16 20 48.9
MOX Moxa 144.73 335 *e*PKPbc PKPdf 16 20 34.9 -1.2
IBBN Ibbenburen 144.75 340 *e*PKPbc PKPdf 16 20 34.6 -1.5
CONA Conrad Observa 144.84 328 ⇑*i*PKPdf PKPdf 16 20 36.0 -0.4
comp=Z,114nm,1.7s,SNR=51
DIVS Divibare 144.93 320 P PKPdf 16 20 36.5 -0.2
XOR Xorichti 145.06 311 P PKPbc 16 20 32.1 -4.5
XOR Xorichti 145.06 311 P PKPbc 16 20 32.1 -4.5
KHC Kasperske Hory 145.06 332 *e*PKP PKPdf 16 20 36.3 -0.5
KHC *ep*PKP pPKPdf 16 20 50.4 -1.1
KHC AMS AMS 17 20 40.0
SKO Skopje 145.11 316 PKIKP PKPdf 16 20 37.0 -0.1
SKO Skopje 145.11 316 P PKPbc 16 20 37.0 +0.3
UBBA Unterbreizbach 145.21 337 *e*PKPbc PKPbc 16 20 36.5 -0.2
WTSB Winterswijk 145.34 341 *e*PKP PKPdf 16 20 36.0 -1.2
comp=Z,7.8nm,1.0s
WET Wettzell 145.36 332 *e*PKPbc PKPbc 16 20 37.3 +0.1
ARSA Arzberg 145.47 328 ⇑*i*PKPab PKPab 16 20 37.4 -0.4
comp=Z,76nm,1.2s,SNR=35
LKR Lokris 145.48 310 P PKPdf 16 20 36.3 -1.5
LKR Lokris 145.48 310 P PKPdf 16 20 36.3 -1.5
KOGS Kog 145.63 326 *i* PKPdf PKPdf 16 20 37.8 0.0
GRF Grafenberg Arr 145.64 334 *e*PKPbc PKPbc 16 20 38.4 +0.3
GRF *ep*PKPbc pPKPbc 16 20 51.4 -1.3
BUG Bochum--Univer 145.64 340 *e*PKPbc PKPbc 16 20 37.4 -0.6
IVA Berane 145.65 318 ⇓*i*PKP PKPdf 16 20 38.1 +0.1
IVA Berane 145.65 318 ⇓*i*PKP PKPdf 16 20 38.2 +0.2
MOA Molln 145.67 330 ⇓*i*PKPab PKPab 16 20 38.2 -0.4
comp=Z,121nm,1.0s,SNR=73
FNA Florina 145.71 314 PKIKP PKPdf 16 20 38.6 +0.5
FNA Florina 145.71 314 P PKPdf 16 20 38.6 +0.5
PLE Pljevlja 145.71 319 ⇓*i*PKP PKPdf 16 20 38.8 +0.7
PLE Pljevlja 145.71 319 ⇓*i*PKP PKPdf 16 20 38.9 +0.8
DID Didima 145.72 308 P PKPdf 16 20 36.5 -1.8
LTK Loutraki 145.74 309 P PKPdf 16 20 37.6 -0.7
DSF Desfina 145.91 310 P PKPdf 16 20 37.9 -0.7
OHR Ohrid 145.94 315 PKHKP PKPdf 16 20 38.3 -0.2
OHR Ohrid 145.94 315 P PKPdf 16 20 38.3 -0.2
SOKA Soboth 146.11 327 ⇑*i*PKPab PKPab 16 20 39.2 -1.1
comp=Z,40nm,1.3s
GUR Goura 146.23 309 P PKPdf 16 20 39.7 +0.6
NKY Niksic 146.24 319 ⇑*i*PKP PKPdf 16 20 39.9 +0.9
NKY Niksic 146.24 319 ⇑*i*PKP PKPdf 16 20 40.0 +1.0
TRIZ Trizonia 146.26 310 P PKPdf 16 20 39.6 +0.4
TNS Taunus Mts 146.27 338 *e*PKPbc PKPbc 16 20 40.0 0.0
TTG Podgorica 146.28 318 ⇑*i*PKP PKPdf 16 20 39.7 +0.6
LAKA Lakka 146.37 310 P PKPdf 16 20 41.4 +2.0
RJOB Jochberg 146.44 331 *e*PKPbc PKPbc 16 20 41.2 +0.7
TIR Tirane 146.45 316 PKP2 PKPbc 16 20 40.6 -0.2
TIR Tirane 146.45 316 P PKPbc 16 20 40.6 -0.2
OBKA Obir 146.47 328 *i* PKPab PKPbc 16 20 40.0 -0.6
comp=Z,19nm,0.9s,SNR=7.8
BRY Bratogost 146.47 319 ⇓*i*PKP PKPdf 16 20 40.2 +0.8
BRY Bratogost 146.47 319 ⇓*i*PKP PKPdf 16 20 40.3 +0.9
ULC Ulcinj 146.53 317 ⇓*i*PKP PKPdf 16 20 40.3 +0.8
ULC Ulcinj 146.53 317 ⇓*i*PKP PKPdf 16 20 40.4 +0.9
PDKS Podkum 146.54 327 *i* PKPdf PKPdf 16 20 40.5 +1.2
BUM Brajici-Budva 146.57 318 ⇑*i*PKP PKPdf 16 20 40.8 +1.2
TOD Tromm 146.65 337 PKP PKPdf 16 20 40.7 +1.3
HGN Heimansgroeve 146.66 341 *e*PKP PKPdf 16 20 39.8 +0.4
comp=Z,46nm,1.4s
KBA Koelnbreinsper 146.66 329 ⇑*i*PKPab PKPdf 16 20 40.3 +0.8
comp=Z,42nm,1.0s,SNR=17
BEBN Eben Emael 146.71 341 PKP PKPbc 16 20 41.9 +0.7
HCY Herceg Novi 146.75 319 ⇑*i*PKP PKPdf 16 20 40.5 +0.7
HCY Herceg Novi 146.75 319 ⇑*i*PKP PKPdf 16 20 40.6 +0.7
MEM Membach 146.77 340 PKP PKPdf 16 20 41.0 +1.4
MEM APKP 16 20 55.3
BOJS Bojanci 146.78 326 *i* PKPdf PKPdf 16 20 39.5 -0.3
BOJS *i* 16 20 41.6
BOJS *i* 16 20 56.0
LJU Ljubljana 146.79 327 *i* PKPdf PKPdf 16 20 38.8 -1.0
LJU *i* 16 20 41.3
LJU *i* 16 20 55.4
FUR Furstenfeldbru 146.79 333 *e*PKPbc PKPbc 16 20 41.6 0.0
ITM Ithomi 146.82 308 P PKPdf 16 20 41.2 +1.1
ITM Ithomi 146.82 308 P PKPdf 16 20 41.2 +1.1
MYKA Terra Mystica 146.83 329 ⇑*i*PKPab PKPdf 16 20 40.8 +0.9
comp=Z,25nm,0.8s
ABH Alteburg 146.88 338 PKP PKPdf 16 20 41.6 +1.8
IGT Igoumenitsa 146.99 313 PKIKP PKPdf 16 20 41.8 +1.4
IGT Igoumenitsa 146.99 313 P PKPdf 16 20 41.8 +1.4
CEY Cerknica 147.05 327 *i* PKPdf PKPdf 16 20 39.6 -0.7
CEY *i* 16 20 42.0
CEY *i* 16 20 55.5
VOY Vojsko 147.12 328 *e*PKPdf PKPdf 16 20 39.8 -0.6
VOY *e* 16 20 41.8
VOY *e* 16 20 53.8
VOY *e* 16 20 55.8
JAVS Javornik 147.13 327 *i* PKPdf PKPdf 16 20 39.0 -1.4
JAVS *i* 16 20 41.8
JAVS *i* 16 20 55.7
PTCC Patocco-Chiusa 147.13 329 PKP PKPdf 16 20 41.4 +1.0
BCLA Clavier 147.15 341 PKP PKPdf 16 20 41.9 +1.7
KTD Kalmit 147.15 337 PKP PKPbc 16 20 42.5 0.0
ROBS Robic 147.17 328 *i* PKPdf PKPdf 16 20 41.5 +1.1
STU Stuttgart 147.18 335 *e*PKPbc PKPbc 16 20 42.5 -0.1
STU Stuttgart 147.18 335 *e*PKPdf PKPdf 16 20 42.2 +1.8
RUP Ruppelstein 147.20 338 PKP PKPbc 16 20 42.6 0.0

WATA Walderalm 147.29 331 ⇑*i*PKPab PKPbc 16 20 42.5 -0.5
comp=Z,44nm,1.0s,SNR=9.7
ABTA Abfaltersbach 147.29 330 *i* PKPbc PKPbc 16 20 41.9 -1.1
comp=Z,48nm,1.0s,SNR=15
WTTA Wattenberg 147.32 331 ⇑*i*PKPab PKPbc 16 20 42.8 -0.2
comp=Z,93nm,1.1s,SNR=12
SNF Seneffe 147.38 342 PKP PKPbc 16 20 42.8 -0.3
SNF APKP 16 20 56.8
SKDS Skadanscina 147.40 327 *i* PKPdf PKPdf 16 20 42.6 +1.8
TRI Trieste 147.41 327 *e*PKiKP PKPdf 16 20 42.1 +1.2
MOTA Moosalm 147.50 332 ⇑*i*PKPab PKPbc 16 20 43.1 -0.4
comp=Z,79nm,0.9s,SNR=25
LANF Langenberg 147.54 337 PKP PKPbc 16 20 43.5 -0.1
WLF Walferdange 147.54 339 PKP PKPbc 16 20 44.0 +0.5
WLF APKP 16 20 58.1
WLF Walferdange 147.54 339 *e*PKPbc PKPbc 16 20 43.9 +0.3
WLF Walferdange 147.54 339 *e*PKPbc PKPbc 16 20 43.6 +0.1
WLF *e* 16 20 58.0
RETA Reutte 147.54 332 *i* PKPab PKPbc 16 20 43.3 -0.4
comp=Z,37nm,1.0s,SNR=13
GIVF Givet 147.58 341 ⇑*i*PKP1 PKPbc 16 20 43.2 -0.5
comp=Z,200nm,0.9s
DOU Dourbes 147.65 341 PKP PKPbc 16 20 43.6 -0.3
DOU APKP 16 20 57.8
BAIF Baives 147.80 342 ⇑*i*PKP1 PKPbc 16 20 44.0 -0.3
comp=Z,159nm,0.9s
BFO Black Forest 147.87 336 *e*PKPbc PKPbc 16 20 44.0 -0.5
BFO Black Forest 147.87 336 *e*PKPbc PKPbc 16 20 43.8 -0.7
SPAK Spaichingen-Ko 147.88 335 PKP PKPbc 16 20 43.9 -0.7
FETA Feichten 147.91 332 *i* PKiKP PKPbc 16 20 44.5 -0.2
comp=Z,93nm,0.9s,SNR=34
MENF Mencas 147.91 344 PKP PKPdf 16 20 43.3 +1.8
DAVA Damuels 148.07 333 ⇑*i*PKiKP PKPbc 16 20 44.8 -0.3
comp=Z,69nm,1.0s,SNR=22
APPI Appiano 148.09 331 PKP PKPdf 16 20 43.9 +2.0
CDF Champ du Feu 148.20 337 ⇑*i*PKP1 PKPbc 16 20 44.9 -0.5
comp=Z,136nm,1.0s
CTI Castel Tesino 148.21 330 PKIKP PKPbc 16 20 44.5 -1.0
FELD Feldberg im Sc 148.37 336 PKP PKPbc 16 20 45.2 -0.7
ECH Echery 148.41 337 PKP PKPbc 16 20 45.2 -0.7
BRMO Bormio 148.48 331 PKP PKPbc 16 20 46.0 -0.2
MOF Molkenrain 148.72 336 PKP PKPbc 16 20 46.2 -0.6
MABI Malga Bissina 148.74 331 PKP PKPbc 16 20 45.8 -1.1
THEF They Montfort 148.82 338 PKP PKPbc 16 20 46.6 -0.4
HINF Hinteralfeld 148.86 337 ⇑*i*PKP1 PKPbc 16 20 46.4 -0.7
comp=Z,72nm,1.0s
HAU Haudompre 148.88 337 ⇑*i*PKP1 PKPbc 16 20 46.6 -0.6
comp=Z,143nm,0.9s
HAU *e*MLR MLR
comp=Z,74nm,23.0s,MS4.1
HAU Haudompre 148.88 337 ⇑*i*PKP PKPbc 16 20 46.6 -0.6
HAU LR LR
comp=Z,70nm,23.0s,MS4.4
BBS Basel-Blauen 148.90 336 PKP PKPbc 16 20 46.7 -0.5
MEZF Maizieres J'vi 148.91 339 ⇑*i*PKP1 PKPbc 16 20 47.1 -0.1
comp=Z,170nm,0.9s
TUE Stuetta 148.94 333 *e*PKPbc PKPbc 16 20 47.0 -0.4
RGNG Rignano Grg 148.97 320 PKP PKPbc 16 20 47.0 -0.6
LOMF Lomont 149.25 336 PKP PKPbc 16 20 47.8 -0.3
CING Cingoli 149.29 324 PKP PKPbc 16 20 48.5 +0.2
ORI Oriolo Calabro 149.33 316 PKIKP PKPbc 16 20 48.6 0.0
MURB Monte Urbino 149.73 325 PKP PKPbc 16 20 49.0 -0.4
CRE Caprese Michel 149.79 326 PKIKP PKPbc 16 20 49.0 -0.6
CSSN Cassano Irpino 149.79 319 PKP PKPbc 16 20 48.7 -1.0
MIDA Miranda 149.79 321 PKP PKPbc 16 20 49.2 -0.4
FNVD Fontana Vidola 149.83 328 PKP PKPbc 16 20 49.8 +0.2
AQU L'Aquila 149.84 323 *e*PKIKP PKPbc 16 20 49.1 -0.6
CABF La Chapelle 150.15 336 ⇑*i*PKP1 PKPbc 16 20 50.3 0.0
comp=Z,207nm,1.1s
BDI Bagni Di Lucca 150.17 328 PKIKP PKPbc 16 20 48.8 -1.7
ORO Oropa 150.19 333 PKIKP PKPbc 16 20 49.9 -0.6
BOB Bobbio (Coli) 150.20 330 PKIKP PKPbc 16 20 49.9 -0.6
FLN La Foliniere 150.21 346 ⇑*i*PKP1 PKPbc 16 20 49.4 -1.0
comp=Z,175nm,0.9s
FLN *e*MLR MLR
comp=Z,67nm,20.0s,MS4.1
FLN La Foliniere 150.21 346 ⇑*i*PKP PKPbc 16 20 49.4 -1.0
FLN LR LR
comp=Z,70nm,20.0s,MS4.5
MNS Montasola 150.23 324 PKIKP PKPbc 16 20 49.6 -1.1
GUAR Guarcino 150.25 322 PKP PKPbc 16 20 49.4 -1.3
LDF La Druitiere 150.29 346 ⇑*i*PKP1 PKPbc 16 20 49.4 -1.2
comp=Z,45nm,0.7s
LOR Lormes 150.38 340 ⇑*i*PKP1 PKPbc 16 20 50.3 -0.6
comp=Z,131nm,0.9s
LOR *e*MLR MLR
comp=Z,67nm,22.0s,MS4.1
LOR Lormes 150.38 340 ⇑*i*PKP PKPbc 16 20 50.3 -0.6
LOR LR LR
comp=Z,70nm,22.0s,MS4.4
PII Pisa 150.45 328 PKHKP PKPbc 16 20 49.4 -1.8
GRR Gorron 150.65 346 ⇑*i*PKP1 PKPbc 16 20 50.6 -0.9
comp=Z,136nm,0.9s
SSF Saint Saulge 150.67 340 ⇑*i*PKP1 PKPbc 16 20 51.0 -0.6
comp=Z,129nm,0.9s
HYF Humbligny 150.76 341 *e*PKP1 PKPbc 16 20 51.5 -0.3
LPL La Plagne 150.80 334 ⇑*i*PKP1 PKPbc 16 20 51.9 0.0
comp=Z,87nm,1.0s
LPG La Plagne 150.81 334 ⇑*i*PKP1 PKPbc 16 20 52.0 +0.1
comp=Z,100nm,1.0s
SMF Signal de Mont 150.93 339 ⇑*i*PKP1 PKPbc 16 20 51.4 -0.8
comp=Z,78nm,1.1s
AVF Avril sur Loir 150.96 340 ⇑*i*PKP1 PKPbc 16 20 51.3 -1.0
comp=Z,41nm,0.9s
SGMF Saint Gilles 151.12 349 ⇑*i*PKP1 PKPbc 16 20 51.4 -1.2
comp=Z,108nm,0.8s
ROSF Rostrenen 151.17 350 ⇑*i*PKP1 PKPbc 16 20 51.4 -1.3
comp=Z,63nm,0.8s
BNI Bardonecchia 151.20 334 *e*PKIKP PKPbc 16 20 52.6 -0.3
GDM Grand'Maison 151.31 335 PKP PKPbc 16 20 53.0 -0.1
BGF Bois d'Agland 151.33 340 ⇑*i*PKP1 PKPbc 16 20 52.4 -0.7
comp=Z,92nm,0.8s
MBDF Montbardon 151.42 333 ⇑*i*PKP1 PKPbc 16 20 52.7 -0.7
comp=Z,29nm,0.8s
QUIF Quistinic 151.56 349 ⇑*i*PKP1 PKPbc 16 20 52.2 -1.4
comp=Z,22nm,0.6s
PLDF La Plantade 151.59 339 PKP PKPbc 16 20 54.7 +1.0
SURF Saint Ours 151.60 333 PKP PKPbc 16 20 53.9 +0.1
ORIF Oris-en-Rattie 151.64 335 ⇑*i*PKP1 PKPbc 16 20 53.3 -0.6
comp=Z,69nm,0.8s
ORIF *e*MLR MLR
comp=Z,60nm,22.0s,MS4.0
SAOF Saorge 151.67 331 PKP PKPbc 16 20 52.9 -1.1
AGO Saint Agoulin 151.68 339 PKP PKPbc 16 20 54.3 +0.3
AUTN L'Aution 151.72 332 PKP PKPbc 16 20 53.3 -0.8
TCF Toulx Ste Croi 151.77 341 ⇑*i*PKP1 PKPbc 16 20 53.4 -0.7
comp=Z,83nm,0.9s
TOUF Mont Tournerai 151.78 332 PKP PKPbc 16 20 53.6 -0.7
SBF Sospel 151.82 331 ⇑*i*PKP1 PKPbc 16 20 53.2 -1.1
comp=Z,124nm,1.1s
LUCF Luceram 151.84 331 PKP PKPbc 16 20 53.8 -0.6
SSB Saint Sauveur 151.85 337 PKP PKPbc 16 20 53.8 -0.6
SSB Saint Sauveur 151.85 337 *e*PKPbc PKPbc 16 20 53.5 -0.8
SSB PKP PKPbc 16 20 53.8 -0.6
MVIF Mont Vial 151.92 332 PKP PKPbc 16 20 53.8 -0.8
REVF Revere 151.95 331 PKP PKPbc 16 20 53.0 -1.6
PYM Petit Puy Mans 151.99 339 PKP PKPbc 16 20 55.2 +0.5
PGF Pioggiola 152.07 328 ⇑*i*PKP1 PKPbc 16 20 54.1 -0.8
comp=Z,100nm,0.8s
OCF Saint Nazaire 152.15 335 PKP PKPbc 16 20 54.4 -0.7
OG26 St.-Nazaire-De 152.15 335 PKP PKPbc 16 20 54.4 -0.7
CALN Calern 152.15 332 PKP PKPbc 16 20 54.1 -1.0
MFF Saint Martin d 152.15 344 ⇑*i*PKP1 PKPbc 16 20 54.0 -1.0
comp=Z,63nm,0.9s
VERF Verneugheol 152.16 340 PKP PKPbc 16 20 54.4 -0.7
VIVF Saint-Julien-l 152.16 336 ⇑*i*PKP1 PKPbc 16 20 54.5 -0.6
comp=Z,80nm,1.1s
LBL Lubilhac 152.36 338 PKP PKPbc 16 20 56.3 +0.8
FRF La Foret Royal 152.41 332 ⇑*i*PKP1 PKPbc 16 20 54.6 -1.1
comp=Z,62nm,1.1s
SMRF Simiane la Rot 152.53 334 ⇑*i*PKP1 PKPbc 16 20 55.6 -0.3
comp=Z,81nm,1.1s
LMR La Mourre 152.65 332 ⇑*i*PKP1 PKPbc 16 20 55.2 -1.0
comp=Z,55nm,1.1s
RJF Les Rejaudoux 152.87 341 ⇑*i*PKP1 PKPbc 16 20 55.8 -0.8
comp=Z,35nm,0.8s
RJF *e*MLR MLR
comp=Z,70nm,22.2s,MS4.1
RJF Les Rejaudoux 152.87 341 ⇑*i*PKP PKPbc 16 20 55.8 -0.8
RJF LR LR
comp=Z,70nm,22.3s,MS4.4
CAF Calviac 153.03 340 ⇑*i*PKP1 PKPbc 16 20 56.4 -0.6
comp=Z,29nm,1.1s
LASF Ste Croix 153.13 336 ⇑*i*PKP1 PKPbc 16 20 56.7 -0.6
comp=Z,51nm,1.1s

LFF	La Frestale	153.43 341	⇑iPKP1	PKPbc	16 20 57.1	-0.8
	comp=Z,49nm,0.8s					
MTLF	Montolieu	154.37 338	⇑iPKP1	PKPbc	16 20 59.2	-0.8
	comp=Z,11nm,0.9s					
EPF	Esparros	155.28 340	ePKP1	PKPdf	16 21 01.5	+8.6
SJPF	Ste Jean	155.67 343	ePKP1	PKPdf	16 21 02.2	+8.8
	comp=Z,8.9nm,0.7s					
ETSF	Etsaut	155.68 341	⇑iPKP1	PKPdf	16 21 02.4	+9.0
	comp=Z,21nm,1.1s					
KEST	Kesra	156.41 316	PKPbc	PKPdf	16 21 03.4	+8.8
	comp=Z,1.2nm,0.7s,baz=293,slow=3.3,SNR=4.7					
KEST			PKPab	PKPab	16 21 23.4	+0.2
	comp=Z,2.9nm,0.8s,baz=346,slow=2.3,SNR=7.2					

*ISCJB **10** 16:13:38.8±0.6, 45°.10N±0°.02×23°.06E±0°.03, h14km±3km, Error ellipse: s-maj=3.9km s-min=3.0km az=26.3*
*BUC **10** 16:13:39.8±1.3, 45°.21N×23°.15E, h12km±6km, MD2.7/3, Error ellipse: s-maj=10.7km s-min=5.1km az=351.0*
*BEO **10** 16:13:39.0±0.7, 45°.10N×23°.18E, h17km±3km, ML3.1/12*
*CSEM **10** 16:13:39.2±0.1, 45°.10N×23°.11E, h12km, ML3.4, Error ellipse: s-maj=3.3km s-min=2.4km az=120.0*
*NEIC **10** 16:13:40.5, 45°.18N×23°.08E, h11km, ML3.4(BUC), After BUC.*

ISC 10 16:13:39.4±0.5, 45°.11N±0°.02×23°.10E±0°.03, h14km±3km, n82, σ0°91/129, 36C-21D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GZR	Gura Zlata	0.36	322	⇑P	Pg	16 13 47.0	+0.2
GZR				S	Sg	16 13 51.5	-0.3
GZR	Gura Zlata	0.36	322	⇑iP	Pg	16 13 47.0	+0.2
GZR				i S	Sg	16 13 51.5	-0.3
GZR	Gura Zlata	0.36	322	⇑iP	Pg	16 13 47.0	+0.2
GZR				S	Sg	16 13 51.5	-0.3
GZR	Gura Zlata	0.36	322	⇑P	Pg	16 13 47.0	+0.2
GZR				S	Sg	16 13 51.5	-0.3
DJES	Djerdap	0.60	223	⇓iPg	Pg	16 13 51.6	+0.4
DJES				i Sg	Sg	16 14 01.4	+2.2
DEV	Deva	0.79	350	⇑P	Pg	16 13 54.0	-0.7
DEV				S	Sg	16 14 04.5	-0.6
DEV	Deva	0.79	350	⇑iP	Pg	16 13 54.0	-0.7
DEV				i S	Sg	16 14 04.5	-0.6
DEV	Deva	0.79	350	⇑iP	Pg	16 13 54.0	-0.7
DEV	Deva	0.79	350	⇑P	Pg	16 13 54.0	-0.7
DEV				S	Sg	16 14 04.5	-0.6
BZS	Buzias	1.16	297	⇑iPg	Pg	16 14 01.4	-0.4
BZS				i Sg	Sg	16 14 16.9	0.0
BZS	Buzias	1.16	297	⇑P	Pn	16 14 01.6	+0.3
BZS				S	Sb	16 14 16.8	+0.6
BZS	Buzias	1.16	297	⇑iP	Pn	16 14 01.6	+0.3
BZS				i S	Sb	16 14 16.8	+0.6
BZS	Buzias	1.16	297	⇑iP	Pn	16 14 01.6	+0.3
BZS	Buzias	1.16	297	⇑P	Pn	16 14 01.6	+0.3
BZS				i Sg	Sg	16 14 16.9	0.0
MDB	Medias	1.37	41	⇑iP	Pn	16 14 03.3	-0.9
MDB				i S	Sn	16 14 21.7	-0.5
MDB	Medias	1.37	41	⇑iP	Pn	16 14 03.3	-0.9
MDB	Medias	1.37	41	⇑iP	Pn	16 14 03.3	-0.9
MDB				S	Sn	16 14 21.7	-0.5
VOIR		1.42	76	⇓iP	Pn	16 14 03.5	-1.3
VOIR				i S	Sn	16 14 23.1	-0.2
VOIR		1.42	76	⇓iP	Pn	16 14 03.5	-1.3
VOIR		1.42	76	⇓iP	Pn	16 14 03.5	-1.3
VOIR				S	Sn	16 14 23.1	-0.2
BOLS	Boljevac	1.52	213	⇑iPn	Pn	16 14 05.5	-0.7
BOLS				i Sg	Sg	16 14 28.7	+0.4
BOLS	Boljevac	1.52	213	⇑iPn	Pn	16 14 05.5	-0.7
BOLS				i Sg	Sg	16 14 28.7	+0.4
SVIS	Svilajnac	1.58	239	⇑iPg	Pg	16 14 08.3	-1.6
SVIS				i Sg	Sg	16 14 30.5	+0.1
DRGR		1.71	351	⇓P	Pn	16 14 09.0	+0.3
DRGR				S	Sn	16 14 31.3	+0.9
DRGR		1.71	351	⇑iP	Pn	16 14 09.0	+0.2
DRGR				i S	Sn	16 14 31.3	+0.9
DRGR		1.71	351	⇑iP	Pn	16 14 09.0	+0.2
DRGR		1.71	351	⇓P	Pn	16 14 09.0	+0.2
DRGR				S	Sn	16 14 31.3	+0.9
ZAPS	Zavoj	1.86	190	⇑iPn	Pn	16 14 10.4	-0.5
ZAPS				eSn	Sn	16 14 33.0	-1.3
MLR	Muntele Rosu	2.05	78	⇓P	Pn	16 14 15.0	+1.5
MLR				S	Sn	16 14 41.7	+2.9
MLR	Muntele Rosu	2.05	78	⇓iP	Pn	16 14 15.0	+1.5
MLR	Muntele Rosu	2.05	78	⇓iP	Pn	16 14 15.0	+1.5
MLR	Muntele Rosu	2.05	78	⇓P	Pn	16 14 15.0	+1.5
GRUS	Gruza	2.10	235	ePn	Pn	16 14 14.2	+0.1
GRUS				eSg	Sg	16 14 46.4	-0.4
GRUS	Gruza	2.10	235	ePn	Pn	16 14 14.2	+0.1
GRUS				eSg	Sg	16 14 46.4	-0.4
TRUS	Trudelj	2.11	246	⇑iPn	Pn	16 14 14.2	-0.2
TRUS	Trudelj	2.11	246	⇑iPn	Pn	16 14 14.2	-0.2
FGSL	Fruska Gora	2.33	272	i Pn	Pn	16 14 17.9	+0.6
FRGS	Fruska Gora	2.33	272	i Pn	Pn	16 14 17.9	+0.6
DIVS	Divibare	2.44	247	⇑iPn	Pn	16 14 19.5	+0.7
DIVS				eSn	Sn	16 14 49.0	+0.6
DIVS	Divibare	2.44	247	⇑iPn	Pn	16 14 19.5	+0.7
DIVS				eSn	Sn	16 14 49.0	+0.6
BARS	Barje	2.47	202	⇑iPn	Pn	16 14 18.8	-0.5
BARS				eSn	Sn	16 14 48.8	-0.5
BARS	Barje	2.47	202	⇑iPn	Pn	16 14 18.8	-0.5
VTS	Vitosha	2.52	178	i Pn	Pn	16 14 18.4	-1.5
VTS	Vitosha	2.52	178	i Pn	Pn	16 14 18.4	-1.5
PLOR	Plostina	2.61	72	⇓iP	Pn	16 14 21.6	+0.4
PLOR	Plostina	2.61	72	⇓iP	Pn	16 14 21.6	+0.4
PLOR	Plostina	2.61	72	⇓iP	Pn	16 14 21.6	+0.4
VRI	Vrincioaia	2.66	72	⇑P	Pn	16 14 23.4	+1.4
VRI	Vrincioaia	2.66	72	⇑iP	Pn	16 14 23.4	+1.4
VRI	Vrincioaia	2.66	72	⇑iP	Pn	16 14 23.4	+1.4
VRI	Vrincioaia	2.66	72	⇑P	Pn	16 14 23.4	+1.4
BURAR	Bucovina Array	2.91	30	⇓iP	Pn	16 14 26.2	+0.9
BURAR	Bucovina Array	2.91	30	⇓iP	Pn	16 14 26.2	+0.9
BURAR	Bucovina Array	2.91	30	⇓iP	Pn	16 14 26.2	+0.9
BBLS	Lazići	2.92	246	ePn	Pn	16 14 26.3	+0.8
BBLS				eSn	Sn	16 15 00.6	+0.3
BBLS	Lazići	2.92	246	ePn	Pn	16 14 26.3	+0.8
BBLS				eSn	Sn	16 15 00.6	+0.3
BUR08	Bucovina Ar. S	2.92	29	ePn	Pn	16 14 25.6	0.0
BUR08	Bucovina Ar. S	2.92	29	ePn	Pn	16 14 25.5	0.0
TRPA	Tarpa	3.05	353	⇓ePn	Pn	16 14 27.6	+0.4
TRPA				eSn	Sn	16 15 03.1	-0.4
PKSM	Moragy	3.31	291	i Pn	Pn	16 14 31.1	+0.2
PKSM				eSn	Sn	16 15 10.1	0.0
PKSM	Moragy	3.31	291	⇑P	Pn	16 14 31.5	+0.6
PKSM	Moragy	3.31	291	⇓ePn	Pn	16 14 31.1	+0.2
PKSM	Moragy	3.31	291	⇑P	Pn	16 14 31.5	+0.6
PKSM				eSn	Sn	16 15 10.1	0.0
PSZ	Piszkesteto	3.58	323	⇓P	Pn	16 14 34.9	+0.4
PSZ	Piszkesteto	3.58	323	⇑iP	Pn	16 14 34.9	+0.4
PSZ	Piszkesteto	3.58	323	⇑iP	Pn	16 14 34.9	+0.4
PSZ	Piszkesteto	3.58	323	⇓P	Pn	16 14 34.9	+0.4
PSZ				eSn	Sn	16 15 14.3	-2.2
BUD	Budapest	3.69	312	⇓ePn	Pn	16 14 35.0	-1.0
BUD				eSn	Sn	16 15 14.3	-5.0
KECS	Kecovo	3.82	333	ePn	Pn	16 14 38.4	+0.5
KECS				eSn	Sn	16 15 23.2	+0.6
KECS	Kecovo	3.82	333	ePN	Pn	16 14 38.4	+0.5
KECS				eSN	Sn	16 15 23.2	+0.6
CRVS	Cervenica-Dubn	3.96	344	ePn	Pn	16 14 39.2	-0.5
CRVS	Cervenica-Dubn	3.96	344	ePN	Pn	16 14 39.2	-0.5
CRVS	Cervenica-Dubn	3.96	344	ePn	Pn	16 14 39.2	-0.5
VYHS	Vyhne	4.48	321	ePn	Pn	16 14 47.5	+0.7
VYHS				eSn	Sn	16 15 39.8	+1.1
VYHS	Vyhne	4.48	321	ePN	Pn	16 14 47.5	+0.7
VYHS				eSN	Sn	16 15 39.8	+1.1
VYHS	Vyhne	4.48	321	ePn	Pn	16 14 47.5	+0.7
VYHS				eSn	Sn	16 15 39.8	+1.1
STHS	Stebnicka Huta	4.49	344	ePn	Pn	16 14 46.5	-0.6
STHS				eSn	Sn	16 15 35.8	-3.3
STHS				eSg	Sg	16 16 04.1	+0.5
STHS	Stebnicka Huta	4.49	344	ePN	Pn	16 14 46.5	-0.6
STHS				eSN	Sn	16 15 35.8	-3.3
STHS				eSG	Sg	16 16 04.1	+0.5
STHS	Stebnicka Huta	4.49	344	ePn	Pn	16 14 46.5	-0.6
STHS				eSn	Sn	16 15 35.8	-3.3
STHS				eSg	Sg	16 16 04.1	+0.5
KOLL	Kolacno	4.74	319	ePn	Pn	16 14 48.1	-2.3
KOLL	Kolacno	4.74	319	ePN	Pn	16 14 48.1	-2.3
KOLL	Kolacno	4.74	319	ePn	Pn	16 14 48.1	-2.3

*NEIC **10** 16:13:52.2, 35°.90S×71°.42W, h113km, MD3.3(GUC), After GUC.*

GUC 10 16:13:52.2±0.8, 35°.90S×71°.42W, h113km±5km, MD3.3, ML3.6, 14C-5D, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TALC	Talca	0.53	341	⇑iP	Pn	16 14 09.6	0.0
TALC				eS	Sn	16 14 22.0	-0.6
TALC	Talca	0.53	341	⇑iP	Pn	16 14 09.6	0.0
TALC				eS	Sn	16 14 22.0	-0.6
TALC				AML	AML	16 14 23.8	
	comp=E,8μm,0.6s						
CCHI	Chillan	0.88	217	⇑iP	Pn	16 14 12.4	0.0
CCHI				i S	Sn	16 14 27.5	-0.3
CCHI	Chillan	0.88	217	⇑iP	Pn	16 14 12.4	0.0
CCHI				i S	Sn	16 14 27.5	-0.3
CCHI				AML	AML	16 14 28.1	
	comp=N,821nm,0.2s						
NICH	Los Niches	0.91	10	⇑iP	Pn	16 14 13.3	+0.6
NICH				i S	Sn	16 14 28.5	+0.3
CACH	El Canelo	1.90	21	⇓iP	Pn	16 14 24.9	+0.8
CACH				i S	Sn	16 14 49.5	+1.1
CACH	El Canelo	1.90	21	⇓iP	Pn	16 14 24.9	+0.8
CACH				i S	Sn	16 14 49.5	+1.1
LNV	Longovilo	1.94	0	⇑iP	Pn	16 14 25.4	+0.8
LNV				i S	Sn	16 14 49.8	+0.6
LNV	Longovilo	1.94	0	⇑iP	Pn	16 14 25.4	+0.8
LNV				i S	Sn	16 14 49.8	+0.6
CHCH	Chadas Angostu	2.06	18	⇑iP	Pn	16 14 26.5	+0.4
CHCH				i S	Sn	16 14 52.6	+0.7
CHCH	Chadas Angostu	2.06	18	⇑iP	Pn	16 14 26.5	+0.4
CHCH				i S	Sn	16 14 52.6	+0.7
TACH	Talagante	2.27	10	⇑iP	Pn	16 14 29.0	+0.2
TACH	Talagante	2.27	10	⇑iP	Pn	16 14 29.0	+0.2
LMEL	Las Melosas	2.28	26	⇓iP	Pn	16 14 29.7	+0.9
LMEL				i S	Sn	16 14 58.0	+1.0
LMEL	Las Melosas	2.28	26	⇓iP	Pn	16 14 29.7	+0.9
LMEL				i S	Sn	16 14 58.0	+1.0
LMEL				AML	AML	16 15 08.2	
	comp=N,199nm,0.1s						
PCH	Pirque	2.39	18	⇑iP	Pn	16 14 30.9	+0.5
PCH				eS	Sn	16 15 00.3	+0.8
PCH	Pirque	2.39	18	⇑iP	Pn	16 14 30.9	+0.5
PCH				eS	Sn	16 15 00.3	+0.8
ANTU	Antumapu	2.41	16	ePn	Pn	16 14 31.2	+0.6
ANTU				i S	Sn	16 15 00.7	+0.7
ANTU	Antumapu	2.41	16	ePn	Pn	16 14 31.2	+0.6
ANTU				i S	Sn	16 15 00.7	+0.7
ANTU				AML	AML	16 15 02.9	
	comp=E,226nm,0.9s						
CLCH	Cerro Calan	2.60	17	⇓iP	Pn	16 14 33.4	+0.4
CLCH				i S	Sn	16 15 04.7	+0.3
CLCH				AML	AML	16 15 09.4	
	comp=E,262nm,0.2s						
FCH	Farellones	2.73	20	ePn	Pn	16 14 37.5	+2.8
FCH				i S	Sn	16 15 09.3	+1.9
PEL	Peldehue	2.81	13	⇑iP	Pn	16 14 36.2	+0.4
PEL				i S	Sn	16 15 09.8	+0.4
PEL				AML	AML	16 15 13.3	
	comp=N,412nm,0.2s						
ROCH	El Roble	2.94	7	ePn	Pn	16 14 38.3	+0.8
ROCH	El Roble	2.94	7	ePn	Pn	16 14 38.3	+0.8
JACH	Jahuel	3.28	12	i S	Sn	16 15 21.2	+0.8
TLL	Tololo Astrono	5.74	5	P	Pn	16 15 15.0	0.0
TLL	Tololo Astrono	5.74	5	ePn	Pn	16 15 15.0	0.0

*IDC **10** 16:18:41.3±0.7, 6°.59S×133°.42E, h0km, mb4.0/8, mb1 4.2/12, mb1mx4.1/17, mbtmp4.1/12, ML4.1/4, Error ellipse: s-maj=42.9km s-min=16.2km az=74.0*
*NEIC **10** 16:18:42.9±0.4, 6°.61S×133°.45E, h10km, mb4.0/1, Error ellipse: s-maj=14.1km s-min=7.0km az=71.0*
*ISCJB **10** 16:18:43.7±0.4, 6°.70S±0°.03×133°.62E±0°.05, h33km, mb4.0/9, Error ellipse: s-maj=7.2km s-min=4.8km az=176.0*
*DJA **10** 16:18:47, 6°.46S×133°.59E, h70km, mb4.8/11*

ISC 10 16:18:46.3±0.4, 6°.65S±0°.04×133°.57E±0°.05, h35km, n42, σ1°17/50, mb4.0/9, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	Tual	1.30	321	P	Pn	16 19 09.2	+1.2
BAKI	Biak	5.98	25	P	Pn	16 20 13.1	+0.7
	0.8nm2μm209nm,0.5s						
BAKI				S	Sn	16 21 16.4	-3.4
	0.8nm2μm209nm,0.5s						
AAI	Ambon	6.11	299	P	Pn	16 20 13.0	-1.1
	0.4nm131nm,1.6s						
KAKA	Kakadu	6.13	190	eP	Pn	16 20 18.9	+4.5
	41nm,0.5s						
KAKA				eS	Sn	16 21 24.0	+0.7
KAKA	Kakadu	6.13	190	ePn	Pn	16 20 18.6	+4.2
	223nm,0.5s						
KAKA				eSn	Sn	16 21 22.6	-0.7
KAKA	Kakadu	6.13	190	P	Pn	16 20 18.9	+4.5
	1.6nm4μm106nm,0.6s						
SMPI	Sarmi	6.91	48	P	Pn	16 20 25.7	+0.6
	0.2nm31nm,1.2s						
MMPI	Merauke	7.00	105	S	Sn	16 21 42.5	-2.2
NLAI	Namlea	7.28	297	P	Pn	16 20 30.2	0.0
	0.3nm1μm52nm,0.4s						
KNA	Kununurra	10.20	207	P	Pn	16 21 12.5	+2.3
	2μm175nm,0.6s						
MMRI	Maumere	11.40	259	P	Pn	16 21 31.7	+4.9
MNI	Manado	11.85	312	P	Pn	16 21 30.7	-2.3
	35nm,0.4s						
COEN	Coen	11.92	128	eP	Pn	16 21 33.9	+0.1
COEN				eS	Sn	16 23 32.4	-13
COEN	Coen	11.92	128	ePn	Pn	16 21 33.5	-0.3
	140nm,0.4s						
COEN				eSn	Sn	16 23 38.5	-7.2
COEN	Coen	11.92	128	P	Pn	16 21 33.8	0.0
	103nm,0.5s						
WRAB	Tennant Creek	13.23	177	ePn	Pn	16 21 51.1	-0.6
	12nm,0.7s						
WRAB				eSn	Sn	16 24 07.6	-10
WRAB	Tennant Creek	13.23	177	P	Pn	16 21 51.5	-0.2
	23nm,3.1s						
WRA	Warramunga Arr	13.24	177	Pn	Pn	16 21 50.9	-1.0
	0.6nm,0.3s,baz=5.2,slow=13,SNR=112						
WRA				Sn	Sn	16 24 12.7	-5.1
	3.4nm,0.3s,baz=0.1,slow=23,SNR=12						
PMG	Port Moresby	13.73	102	P	Pn	16 22 01.0	+2.3
FITZ	Fitzroy Crossi	13.76	213	eP	Pn	16 21 58.5	-0.5
	7.9nm,0.3s						
FITZ				eS	Sn	16 24 23.0	-7.7
FITZ	Fitzroy Crossi	13.76	213	Pn	Pn	16 21 58.7	-0.3
	0.7nm,0.3s,baz=82,slow=23,SNR=32						
FITZ				Sn	Sn	16 24 22.2	-8.5
	1.4nm,0.3s,baz=206,slow=18,SNR=4.6						
FITZ	Fitzroy Crossi	13.76	213	P	Pn	16 21 59.9	+0.9
ASAR	Alice Springs	16.92	179	Pn	Pn	16 22 39.3	-1.2
	1.3nm,0.3s,baz=356,slow=14,SNR=92						
ASAR				Sn	Sn	16 25 42.1	-5.5
	0.6nm,0.3s,baz=357,slow=28,SNR=7.2						
CTA	Charters Tower	18.17	139	eP	Pn	16 22 58.9	+3.0
	5.3nm,0.5s						
CTA	Charters Tower	18.17	139	P	Pn	16 22 57.4	+1.5
	0.9nm,0.3s,baz=309,slow=14,SNR=10.0						
CTA	Charters Tower	18.17	139	P	Pn	16 22 57.4	+1.5
CTAO	Charters Tower	18.17	139	ePn	Pn	16 22 58.0	+2.1
	7.8nm,0.7s						
STKA	Stephens Creek	26.20	164	eP	P	16 24 26.5	+8.7
	4.0nm,0.4s,mb4.3						
STKA	Stephens Creek	26.20	164	P	P	16 24 19.6	+1.8
	1.9nm,1.0s,mb3.6,baz=321,slow=14,SNR=3.9						
DZM	Mont Dzumac	35.23	119	eP	P	16 25 33.1	-4.6
KSRS	Korea Array	44.19	354	P	P	16 26 51.4	-0.5
	1.1nm,0.9s,mb3.6,baz=171,slow=8.9,SNR=6.6						
GTA	Gaotai	55.45	328	P	P	16 28 18.5	+1.0
GTA				pP	pP	16 28 30.1	+2.0
GTA				sP	sP	16 28 35.8	+3.6
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
SONM	Songino Array	59.31	339	P	P	16 28 44.7	+0.2
	comp=Z,0.2nm,0.4s,mb3.5,baz=157,slow=7.8,SNR=3.2						
PETK	Petropavlovsk-	62.95	16	P	P	16 29 09.6	+0.5
	comp=Z,1.8nm,1.0s,mb4.2,baz=163,slow=4.8,SNR=4.6						
MK31	Makanchi Array	69.92	325	eP	P	16 29 54.1	+0.3
MKAR	Makanchi Array	69.92	325	P	P	16 29 54.3	+0.4
	comp=Z,3.2nm,0.7s,mb4.4,baz=116,slow=8.1,SNR=37						

ZALV	Zalesovo Beam	72.88	332	P	P	16 30 10.8	-0.7
	comp=Z,1.7nm,0.7s,mb4.1,baz=123,slow=6.1,SNR=8.1					
ZALV	Zalesovo Beam	72.88	332	P	P	16 30 10.8	-0.7
KURK	Kurchatov	74.10	327	P	P	16 30 18.6	-0.3
	comp=Z,1.5nm,0.6s,mb4.1,baz=122,slow=4.9,SNR=11						
BVAR	Borovoye Array	79.68	327	P	P	16 30 49.3	-0.9
	comp=Z,0.6nm,0.5s,mb3.8,baz=140,slow=7.0,SNR=5.8						
CPUP	Villa Florida	145.56	163	PKPbc	PKPbc	16 38 20.9	-0.8
	comp=Z,0.3nm,0.3s,baz=123,slow=1.3,SNR=3.3						
LPAZ	La Paz	148.69	137	PKPbc	PKPbc	16 38 31.7	+0.9
	comp=Z,0.7nm,0.5s,baz=20,slow=1.8,SNR=3.4						

*ISCJB **10** 16:22:06.9±1.2, 19°.6S±0°.2×177°.7W±0°.2, h567km±23km, mb4.2/6, Error ellipse: s-maj=34.5km s-min=17.8km az=43.5*
*IDC **10** 16:22:07.9±1.5, 19°.56S×177°.64W, h567km±25km, mb3.1/5, mb1 3.4/7, mb1mx3.1/20, mbtmp3.3/7, Error ellipse: s-maj=26.0km s-min=16.0km az=141.0*
*NEIC **10** 16:22:07.8±1.1, 19°.63S×177°.60W, h564km±19km, mb4.6/2, Error ellipse: s-maj=25.4km s-min=15.6km az=145.0*

ISC 10 16:22:07.5±1.2, 19°.6S±0°.2×177°.6W±0°.2, h559km±22km, n12, σ0°78/15, mb4.2/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	7.94	46	P	P	16 24 05.8	+0.8
	3.5nm,0.3s,baz=248,slow=21,SNR=4.8						
AFI				S	S	16 25 40.2	-1.0
	4.0nm,0.3s,baz=273,slow=23,SNR=4.6						
AFI	Afiamalu	7.94	46	P	P	16 24 05.8	+0.8
AFI				S	S	16 25 40.2	-1.0
URZ	Urewera	19.18	193	P	P	16 25 55.1	-0.3
	2.8nm,0.3s,baz=287,slow=2.9,SNR=20						
CTA	Charters Tower	33.95	263	P	P	16 28 05.6	+0.5
	4.0nm,0.5s,mb4.2,baz=85,slow=14,SNR=3.4						
CTA	Charters Tower	33.95	263	P	P	16 28 05.6	+0.5
CTAO	Charters Tower	33.95	263	eP	P	16 28 04.9	-0.2
	4.3nm,0.6s,mb4.2						
ASAR	Alice Springs	45.09	256	P	P	16 29 35.1	+0.7
	2.0nm,0.4s,mb4.0,baz=88,slow=8.4,SNR=9.1						
ASAR				S	S	16 35 31.1	-2.2
	0.9nm,0.6s,baz=92,slow=16,SNR=6.8						
WRA	Warramunga Arr	45.09	261	P	P	16 29 33.7	-0.8
	1.4nm,0.4s,mb3.9,baz=97,slow=7.6,SNR=8.2						
KAKA	Kakadu	48.33	270	eP	P	16 29 59.9	+1.0
	24nm,0.6s,mb4.9						
FITZ	Fitzroy Crossi	53.51	262	P	P	16 30 36.4	-0.2
	1.1nm,0.5s,mb3.5,baz=139,slow=13,SNR=5.6						
NVAR	Mina Array Bea	80.11	43	P	P	16 33 20.1	+0.4
	0.1nm,0.3s,baz=211,slow=5.1,SNR=2.5						
HHC	Hu-ho-hao-te	88.97	314	eP	P	16 34 02.8	-0.1
HHC				S	S	16 44 05.1	+0.9
HHC				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.9						
HHC				pmax	pmax		
	comp=Z,70nm,7.4s						

IDC 10 16:31:46.1±2.5, 18°.65N×146°.83E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.5/22, mbtmp3.7/6, Error ellipse: s-maj=114.1km s-min=23.6km az=86.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	40.27	198	P	P	16 39 25.0	+0.1
	0.6nm,0.7s,baz=18,slow=8.5,SNR=7.7						
ASAR	Alice Springs	43.91	197	P	P	16 39 54.5	-0.1
	0.2nm,0.5s,baz=22,slow=6.2,SNR=4.9						
MKAR	Makanchi Array	59.27	314	P	P	16 41 49.6	+0.2
	0.2nm,0.6s,baz=76,slow=9.1,SNR=3.1						
BVAR	Borovoye Array	67.19	320	P	P	16 42 41.9	0.0
	1.0nm,0.7s,baz=97,slow=7.9,SNR=5.1						
ARCES	ARCESS Array B	82.86	342	P	P	16 44 13.0	+0.9
	1.8nm,0.8s,baz=64,slow=8.2,SNR=6.2						
FINES	FINESS Array B	87.37	336	P	P	16 44 33.8	-1.1
	0.4nm,0.4s,baz=54,slow=3.5,SNR=5.1						

*IDC **10** 17:13:21.9±7.2, 2°.05S×101°.17E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.3/21, mbtmp3.5/4, Error ellipse: s-maj=375.4km s-min=23.4km az=54.0*
*DJA **10** 17:13:23, 2°.18S×100°.62E, h10km, MLv4.2/8*

ISC 10 17:13:22.4±0.9, 2°.13S±0°.04×100°.60E±0°.04, h9km±7km, n15, σ1°23/22, mb3.6/4, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	Kerinci	0.86	87	P	Pg	17 13 38.2	-0.8
KRJI				S	Sg	17 13 51.5	+1.3
PPSI	Pulau Pagai	0.86	223	P	Pg	17 13 37.9	-1.1
PPSI				S	Sg	17 13 51.7	+1.4
PDSI	Padang	1.22	353	P	Pn	17 13 44.1	-1.5
PDSI				S	Sb	17 14 01.0	-0.5
SDSI	Sungai Dareh	1.45	35	P	Pn	17 13 48.5	-0.3
PPI	Padang Panjang	1.68	353	S

s-min=2.6km az=0.2
IDC ***10*** *17:32:25.4±2.4, 6'.51N×124'.53E, h11km±14km, mb4.9/27, mb1 4.9/28, mb1mx4.9/29, mbtmp4.9/28, ML4.6/1, MS4.3/22, Ms1 4.3/22, ms1mx4.2/28, Error ellipse: s-maj=13.1km s-min=10.2km az=82.0*
GCMT ***10*** *17:32:26.5±0.2, 6'.48N×124'.66E, h12km, MW5.1, Moment Tensor Solution. s54,c73; s86,c148; Moment tensor: Scale 10^16Nm; Mrr=2.54±.12; Mθθ=3.88±.09; Mφφ=-1.33±.13; Mrθ=0.81±.27; Mrφ=-4.16±.08; Mθr=-1.72±.32; Best double couple: M=5.40000×10^16 NP1:φs=77.00000°, δ59.00000°, λ=-161.00000°. NP2:φs=337.00000°, δ74.00000°, λ=-33.00000°. Principal axes: T 6.4500, Plg10.0000°, Azm30.0000°; N -2.0500, Plg54.0000°, Azm134.0000°; P -4.3900, Plg34.0000°, Azm293.0000°; Data Used: II IU IC CN G.*
MOS ***10*** *17:32:27.1±1.1, 6'.55N×124'.59E, h33km, mb5.6/49, MS4.6/16 Error ellipse: s-maj=10.5km s-min=5.3km az=114.2*
BJI ***10*** *17:32:28.2, 6'.48N×124'.64E, h41km, mB5.3/34, mb5.2/62, Ms4.7/60, Ms7 4.5/55*
TEH ***10*** *17:32:28.0, 6'.50N×124'.61E, h28km*
NEIC ***10*** *17:32:29.2±0.7, 6'.50N×124'.63E, h40km±6km, mb5.2/72, MS4.7/5, Error ellipse: s-maj=5.8km s-min=4.1km az=70.0*
NEIC Felt [IV PIVS] at Banga and Isulan; [III PIVS] at Palimbang; [II PIVS] at Cotabato and General Santos.
DJA ***10*** *17:32:36, 5.96N×124'.52E, h47km, Mw5.6/34*
ISC 10 17:32:28.2±0.6, 6'.47N±0'.02×124'.67E±0'.02, h29km±4km, h30km±1.8km:pP-P, n474, σ1:15/473, mb5.3/169, MS4.5/52, 21C-20D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.47**	**144**	⇑*i*P	**Pb**	**17 32 38.9**	**+0.8**
KCP	**Kidapawan**	**0.68**	**38**	⇑*i*P	**Pb**	**17 32 38.3**	**-3.2**
KCP				*i* S	**Sb**	**17 33 01.8**	**+11**
CTBH	**Cotabato--PC H**	**0.86**	**330**	⇑*i*P	**Pb**	**17 32 39.4**	**-5.2**
CTBH				*i* S	**Sb**	**17 32 51.5**	**-4.2**
DMPH	**Davao City--Mi**	**1.03**	**54**	⇑*e*P	**Pn**	**17 32 45.1**	**-1.6**
DMPH				*i* S	**Sn**	**17 33 07.3**	**+7.2**
DAV	**Davao City (W)**	**1.08**	**56**	Pg	**Pn**	**17 32 46.2**	**-1.1**
	586nm,0.3s,baz=238,slow=3.2,SNR=78						
DAV				Lg		17 33 04.5	
	942nm,0.3s,baz=90,slow=20,SNR=11						
DAV	**Davao City (W)**	**1.08**	**56**	*e*P	**Pn**	**17 32 46.2**	**-1.1**
BUKP	**Musuan**	**1.45**	**15**	*e*P	**Pn**	**17 32 52.7**	**+0.2**
MATI	**Mati**	**1.64**	**73**	*e*P	**Pn**	**17 32 54.8**	**-0.3**
PAGZ	**Pagadian**	**1.87**	**317**	*e*P	**Pn**	**17 32 56.4**	**-2.0**
CGP	**Cagayan de Oro**	**1.97**	**1**	*e*P	**Pn**	**17 32 58.0**	**-1.6**
CGP				*i* S	**Sn**	**17 33 25.8**	**+2.4**
IPIL	**Ipil**	**2.46**	**302**	*e*P	**Pn**	**17 33 04.6**	**-1.8**
ZMPH	**Zamboanga City**	**2.64**	**281**	⇓*i*P	**Pn**	**17 33 03.8**	**-5.0**
ZMPH				*i* S	**Sn**	**17 33 28.2**	**-12**
BUTP	**Butuan**	**2.65**	**21**	*e*P	**Pn**	**17 33 10.3**	**+1.3**
SNPH	**Sibulan**	**3.19**	**334**	⇑*e*P	**Pn**	**17 33 16.6**	**+0.2**
TBP	**Tagbilaran**	**3.30**	**346**	*e*P	**Pn**	**17 33 19.3**	**+1.4**
MSLP	**Maasin**	**3.64**	**3**	*e*P	**Pn**	**17 33 28.0**	**+5.4**
LLP	**Lapu-Lapu**	**3.88**	**350**	⇓*e*P	**Pn**	**17 33 25.7**	**-0.3**
LLP				*e*S	**Sn**	**17 34 10.8**	**+0.1**
OCLP	**Ormoc**	**4.55**	**359**	*e*P	**Pn**	**17 33 40.5**	**+5.3**
GUIM	**Jordan**	**4.61**	**334**	*e*P	**Pn**	**17 33 36.3**	**+0.2**
MNI	**Manado**	**5.00**	**178**	P	**Pn**	**17 33 39.4**	**-1.9**
MNI				S	**Sn**	**17 34 35.3**	**-2.9**
CUYO	**Cuyo Island**	**5.66**	**321**	*e*P	**Pn**	**17 33 49.7**	**-0.7**
KMSI	**Cibinong**	**5.90**	**187**	P	**Pn**	**17 33 56.0**	**+2.3**
	8.4nm2μm,0.9s						
KMSI				S	**Sn**	**17 34 55.1**	**-5.3**
	8.4nm2μm,0.9s						
CNP	**Cataman**	**6.00**	**360**	*e*P	**Pn**	**17 33 59.3**	**+4.2**
TNTI	**Ternate**	**6.27**	**155**	P	**Pn**	**17 33 58.2**	**-0.6**
	2.2nm7μm652nm,0.8s						
TNTI				S	**Sn**	**17 35 13.0**	**+3.5**
	2.2nm7μm652nm,0.8s						
MYLDM	**Lahad Datu**	**6.28**	**259**	P	**Pn**	**17 33 58.8**	**-0.1**
MRSI	**Marisa**	**6.55**	**205**	P	**Pn**	**17 33 59.5**	**-3.2**
PPR	**Puerto Princes**	**6.74**	**300**	⇑*e*P	**Pn**	**17 34 02.6**	**-2.6**
SJMP	**San Jose**	**6.91**	**330**	*e*P	**Pn**	**17 34 08.2**	**+0.6**
ENPP	**El Nido**	**7.00**	**313**	*e*P	**Pn**	**17 34 07.4**	**-1.5**
BUSP	**Coron**	**7.05**	**322**	*e*P	**Pn**	**17 34 08.7**	**-0.9**
AUQP	**San Andres**	**7.09**	**344**	*e*P	**Pn**	**17 34 20.2**	**+10**
PVCP	**Virac**	**7.10**	**356**	*e*P	**Pn**	**17 34 13.8**	**+3.7**
TSM	**Tawau**	**7.11**	**253**	P	**Pn**	**17 34 08.6**	**-1.7**
BATP	**Bataraza**	**7.19**	**289**	*e*P	**Pn**	**17 34 07.7**	**-3.8**
BOAC	**Boac**	**7.48**	**338**	*e*P	**Pn**	**17 34 19.3**	**+3.8**
SDKM	**Sandakan**	**7.48**	**264**	P	**Pn**	**17 34 13.9**	**-1.6**
LUWI	**Luwuk**	**7.70**	**194**	P	**Pn**	**17 34 17.8**	**-0.7**
	8.5nm2μm,0.9s						
LUWI				S	**Sn**	**17 35 44.1**	**-0.7**
	8.5nm2μm,0.9s						
KDM	**Kudat**	**7.80**	**274**	P	**Pn**	**17 34 20.4**	**+0.5**
KKM	**Kota Kinabalu**	**8.42**	**268**	P	**Pn**	**17 34 28.9**	**+0.6**
KKM	**Kota Kinabalu**	**8.42**	**268**	*e*Pn	**Pn**	**17 34 28.0**	**-0.4**
	48nm,0.7s						
LUBP	**Lubang**	**8.43**	**329**	*e*P	**Pn**	**17 34 29.8**	**+1.3**
POLP	**Polilio Island**	**8.63**	**342**	*e*P	**Pn**	**17 34 35.0**	**+3.7**
PCI	**Palu**	**8.78**	**214**	P	**Pn**	**17 34 31.8**	**-1.4**
	1μm119nm,1.0s						
PCI				S	**Sn**	**17 36 11.2**	**-0.1**
	1μm119nm,1.0s						
BALP	**Baler**	**9.70**	**342**	*e*P	**Pn**	**17 34 49.0**	**+3.1**
NLAI	**Namlea**	**9.95**	**166**	P	**Pn**	**17 34 48.7**	**-0.6**
	5μm589nm,1.1s						
SCZP	**Santa Cruz**	**10.36**	**334**	*e*P	**Pn**	**17 34 57.2**	**+2.3**
KDI	**Kendari**	**10.56**	**191**	P	**Pn**	**17 34 56.9**	**-0.8**
	2μm223nm,0.9s						
TTSI	**Tana Toraja**	**10.62**	**207**	P	**Pn**	**17 34 57.4**	**-1.2**
	3μm209nm,1.5s						
TTSI				S	**Sn**	**17 36 54.5**	**-2.2**
	3μm209nm,1.5s						
AAI	**Ambon**	**10.69**	**161**	P	**Pn**	**17 34 59.5**	**+0.1**
	4μm425nm,1.2s						
CAUP	**Cauayan**	**10.78**	**345**	*e*P	**Pn**	**17 35 03.2**	**+2.5**
BOLP	**Bolinao**	**10.89**	**335**	*e*P	**Pn**	**17 35 05.0**	**+2.7**
SPSI	**Sidrap Palu**	**11.46**	**205**	P	**Pn**	**17 35 10.4**	**+0.3**
SPSI				S	**Sn**	**17 37 10.7**	**-6.6**
BNSI	**Bone**	**11.72**	**203**	P	**Pn**	**17 35 12.6**	**-1.0**
	2μm143nm,1.7s						
BNSI				S	**Sn**	**17 37 17.6**	**-6.0**
	2μm143nm,1.7s						
ABRA	**Dolores**	**11.76**	**341**	*e*P	**Pn**	**17 35 18.7**	**+4.6**
APYP	**Conner**	**11.81**	**344**	*e*P	**Pn**	**17 35 16.8**	**+2.1**
BTM	**Bintulu**	**12.00**	**255**	P	**Pn**	**17 35 18.6**	**+1.2**
KAPI	**Kappang**	**12.42**	**203**	Pn	**Pn**	**17 35 24.8**	**+1.6**
	259nm,0.7s,SNR=5.4						
KAPI	**Kappang**	**12.42**	**203**	Pn	**Pn**	**17 35 23.2**	**0.0**
	3.4nm,0.3s,baz=34,slow=7.7,SNR=17						
KAPI				LR	LR	17 40 06.7	
	comp=Z,3μm,21.1s,baz=18,slow=37						
KAPI	**Kappang**	**12.42**	**203**	Pn	**Pn**	**17 35 23.2**	**0.0**
KAPI				LR	LR	17 40 06.7	
SBUM	**Sibu**	**13.04**	**253**	P	**Pn**	**17 35 33.8**	**+2.1**
TLE	**Tual**	**14.47**	**146**	P	**Pn**	**17 35 54.3**	**+3.1**
	205nm,2.0s						
STKI	**Sintang**	**14.62**	**245**	P	**Pn**	**17 36 01.2**	**+7.9**
KSM	**Kuching**	**15.16**	**251**	P	**Pn**	**17 36 02.2**	**+1.7**
KSM	**Kuching**	**15.16**	**251**	⇑*i*Pn	**Pn**	**17 36 01.5**	**+1.0**
	156nm,1.4s						
KSM				*e*S	**Sn**	**17 39 05.0**	**+17**
MMRI	**Maumere**	**15.20**	**189**	P	**Pn**	**17 36 06.8**	**+5.8**
SMPI	**Sarmi**	**16.34**	**121**	P	**Pn**	**17 36 21.2**	**+5.5**
	65nm,1.4s						
WSI	**Waingapu**	**16.62**	**195**	P	**Pn**	**17 36 22.1**	**+2.9**
	428nm,1.8s						
TWG	**Pinlang**	**16.62**	**348**	*e*Pn	**Pn**	**17 36 18.4**	**-0.8**
	56nm,0.8s						
YULB	**Yu-li**	**17.13**	**349**	*e*Pn	**Pn**	**17 36 24.0**	**-1.7**
	28nm,0.9s						
KMMI	**Kalianget**	**17.16**	**219**	P	**Pn**	**17 36 30.1**	**+4.0**
	9μm295nm,2.2s						
TPUB	**Ta-pu**	**17.18**	**347**	*e*Pn	**Pn**	**17 36 25.7**	**-0.5**
	80nm,0.9s						
SRBI	**Singaraja**	**17.27**	**213**	P	**Pn**	**17 36 33.4**	**+6.0**
KHKI	**Kahang-Kahang**	**17.29**	**212**	P	**Pn**	**17 36 32.5**	**+4.9**
SSLB	**Suanglung**	**17.58**	**349**	*e*Pn	**Pn**	**17 36 31.6**	**+0.3**
	56nm,1.0s						
YHNB	**Yeheng**	**18.37**	**350**	*e*Pn	**Pn**	**17 36 41.8**	**+0.9**
	57nm,1.1s						
GMJI	**Gumukmas**	**18.44**	**218**	P	**Pn**	**17 36 45.4**	**+3.6**
	7μm272nm,2.3s						
KRKI	**Karangkates**	**18.97**	**220**	P	**Pn**	**17 36 54.2**	**+6.0**
NGJI	**Ngawi**	**19.05**	**224**	P	**Pn**	**17 36 53.4**	**+4.2**
	5μm211nm,2.1s						
QIZ	**Qiongzhong**	**19.08**	**312**	P	**Pn**	**17 36 48.8**	**-0.8**
QIZ				S	**Sn**	**17 40 22.5**	**-0.2**
QIZ				pmax	pmax		
	comp=Z,64nm,1.4s						
QIZ				pmax	pmax		
	comp=Z,800nm,6.9s						
QIZ				LR	LR		
	comp=N,1μm,17.6s						
QIZ				LR	LR		
	comp=E,530nm,17.6s						
QIZ				LR	LR		
	comp=Z,2μm,17.6s						
QIZ	**Qiongzhong**	**19.08**	**312**	*e*P	**Pn**	**17 36 50.1**	**+0.5**
	comp=Z,47nm,0.9s						
SJI	**Sawahan**	**19.10**	**223**	P	**Pn**	**17 36 51.7**	**+1.9**
	comp=Z,7μmcomp=Z,339nm,2.0s						
QZH	**Quanzhou**	**19.27**	**343**	⇓*i*P	**Pn**	**17 36 50.5**	**-1.3**
QZH				S	**Sn**	**17 40 26.0**	**-1.1**
QZH				LR	LR		
	comp=N,1μm,11.8s						
QZH				LR	LR		
	comp=E,860nm,13.4s						
QZH				LR	LR		
	comp=Z,2μm,16.3s						
PWJI	**Pagerwojo**	**19.29**	**222**	P	**Pn**	**17 36 54.6**	**+2.5**
	comp=Z,5μmcomp=Z,206nm,2.2s						
TPI	**Tanjungpandan**	**19.31**	**242**	P	**Pn**	**17 36 51.9**	**-0.4**
	comp=Z,1μmcomp=Z,71nm,1.9s						
SMRI	**Semarang**	**19.55**	**227**	P	**Pn**	**17 36 58.5**	**+3.3**
	comp=Z,8μmcomp=Z,304nm,1.9s						
GZH	**Guangzhou**	**19.80**	**328**	P	**Pn**	**17 36 59.9**	**+1.8**
GZH				LR	LR		
	comp=N,1μm,18.9s						
GZH				LR	LR		
	comp=E,2μm,17.1s						
GZH				LR	LR		
	comp=Z,2μm,15.5s						
PCJI	**Pacitan**	**19.83**	**223**	P	**Pn**	**17 37 01.8**	**+3.2**
UGM	**Wanagama**	**20.08**	**225**	P	**P**	**17 37 04.8**	**+5.2**
	comp=Z,8μmcomp=Z,321nm,2.3s						
YOGI	**Yogyakarta**	**20.18**	**226**	P	**P**	**17 37 06.6**	**+6.0**
	comp=Z,8μmcomp=Z,465nm,1.7s						
KAKA	**Kakadu**	**20.56**	**158**	*e*P	**P**	**17 37 05.8**	**+1.0**
	comp=Z,956nm,1.6s						
KAKA	**Kakadu**	**20.56**	**158**	*e*P	**P**	**17 37 05.4**	**+0.7**
	comp=Z,1μm,1.3s						
JCJI	**Jatiwangi**	**20.83**	**232**	P	Px	17 37 32.0	
MYKOM	**Kota Tinggi**	**21.28**	**258**	P	**P**	**17 37 14.4**	**+1.8**
KTGM	**Kuala Trenggan**	**21.46**	**268**	P	**P**	**17 37 16.2**	**+1.7**
LEM	**Lembang**	**21.54**	**232**	P	**P**	**17 37 21.1**	**+5.7**
	comp=Z,3μmcomp=Z,117nm,2.0s,mb5.0						
KGM	**Kluang**	**21.75**	**259**	P	**P**	**17 37 18.4**	**+0.8**
CBJI	**Citeko**	**21.92**	**235**	P	**P**	**17 37 25.3**	**+5.9**
	comp=Z,6μmcomp=Z,332nm,1.0s,mb5.7						
SBJI	**Serang**	**22.34**	**236**	P	**P**	**17 37 28.7**	**+4.8**
	comp=Z,4μmcomp=Z,204nm,1.7s,mb5.3						
KLI	**Kotabumi**	**22.76**	**241**	P	**P**	**17 37 30.8**	**+2.4**
	comp=Z,3μmcomp=Z,205nm,1.1s,mb5.5						
KLSI		**22.79**	**241**	P	**P**	**17 37 28.9**	**+0.2**
	comp=Z,3μmcomp=Z,189nm,2.2s,mb5.1						
CGJI	**Cibinong**	**22.97**	**236**	P	**P**	**17 37 30.7**	**+0.1**
	comp=Z,3μmcomp=Z,117nm,1.4s,mb5.1						
FRIM	**Kepong**	**23.19**	**263**	P	**P**	**17 37 33.7**	**+0.8**
KASI	**Kota Agung**	**23.40**	**240**	P	**P**	**17 37 35.7**	**+0.5**
	comp=Z,2μmcomp=Z,119nm,1.3s,mb5.2						
LWLI	**Liwa**	**23.53**	**241**	P	**P**	**17 37 37.5**	**+1.1**
	comp=Z,4μmcomp=Z,388nm,1.1s,mb5.8						
IPM	**Ipoh**	**23.62**	**266**	P	**P**	**17 37 37.4**	**+0.2**
SNG	**Songkhla**	**23.90**	**273**	P	**P**	**17 37 40.0**	**+0.3**
	comp=Z,90nm,0.8s,mb5.2						
KULM	**Kulim**	**23.93**	**268**	P	**P**	**17 37 40.4**	**+0.4**
KULM	**Kulim**	**23.93**	**268**	*e*P	**P**	**17 37 39.0**	**-1.0**
	comp=Z,295nm,1.5s,mb5.5						
MNAI	**Manna**	**24.20**	**244**	P	**P**	**17 37 42.5**	**-0.1**
	comp=Z,480nm,1.1s,mb5.8						
KSI	**Kapahiang**	**24.23**	**246**	P	**P**	**17 37 43.8**	**+1.0**
	comp=Z,4μmcomp=Z,196nm,2.0s,mb5.2						
SDSI	**Sungai Dareh**	**24.34**	**253**	P	**P**	**17 37 43.9**	**+0.1**
	comp=Z,2μmcomp=Z,96nm,1.3s,mb5.1						
BKNI	**Bangkinang**	**24.36**	**256**	P	**P**	**17 37 44.5**	**+0.5**
	comp=Z,2μmcomp=Z,171nm,1.1s,mb5.4						
FITZ	**Fitzroy Crossi**	**24.43**	**178**	*e*P	**P**	**17 37 44.2**	**-0.3**
	comp=Z,103nm,1.2s,mb5.1						
FITZ	**Fitzroy Crossi**	**24.43**	**178**	P	**P**	**17 37 44.8**	**+0.2**
	comp=Z,26nm,0.7s,mb4.8,baz=9.2,slow=9.9,SNR=25						
FITZ				LR	LR	17 48 29.1	
	comp=Z,464nm,18.2s,MS4.0,baz=271,slow=39						
FITZ	**Fitzroy Crossi**	**24.43**	**178**	*e*P	**P**	**17 37 44.1**	**-0.4**
	comp=Z,292nm,1.6s,mb5.5						
SSE	**Sheshan**	**24.71**	**353**	*e*P	**P**	**17 37 47.2**	**+0.2**
SSE				pP		17 37 56.2	
SSE				S	**S**	**17 42 06.6**	**-0.6**
SSE				sS	sS	17 42 22.6	+1.5
SSE				pmax	pmax		
	comp=Z,30nm,0.7s,mb4.9						
SSE				pmax	pmax		
	comp=Z,190nm,3.7s						
SSE				LR	LR		
	comp=N,770nm,16.4s,MS4.4						
SSE				LR	LR		
	comp=E,550nm,16.4s,MS4.4						
SSE				LR	LR		
	comp=Z,870nm,17.3s,MS4.3						
PPI	**Padang Panjang**	**25.19**	**255**	P	**P**	**17 37 51.3**	**-0.2**
	comp=Z,2μmcomp=Z,102nm,1.6s,mb5.1						
PDSI	**Padang**	**25.25**	**254**	P	**P**	**17 37 54.1**	**+2.0**
	comp=Z,3μmcomp=Z,141nm,1.7s,mb5.2						
MNSI	**Mandailing Nat**	**25.66**	**258**	P	**P**	**17 37 55.8**	**0.0**
	comp=Z,51nm,0.9s,mb5.0						
NST	**Nakhon Sawan**	**25.73**	**293**	P	**P**	**17 37 56.8**	**+0.4**
	comp=Z,77nm,1.1s,mb5.1						
WHN	**Wuhan**	**25.84**	**339**	⇑P	**P**	**17 37 58.6**	**+1.4**
WHN				pP	pP	17 38 09.1	+3.5
WHN				pmax	pmax		
	comp=Z,110nm,1.2s,mb5.3						
WHN				pmax	pmax		
	comp=Z,730nm,4.8s						
WHN				LR	LR		
	comp=N,800nm,10.5s,MS4.8						
WHN				LR	LR		
	comp=E,1μm,13.0s,MS4.8						
WHN				LR	LR		
	comp=Z,2μm,17.3s,MS4.6						
PSI	**Prapat**	**25.92**	**263**	P	**P**	**17 37 57.2**	**-0.9**
	comp=Z,57nm,1.0s,mb5.1,baz=75,slow=3.7,SNR=25						
PSI				PcP	PcP	17 41 25.4	-1.4
	comp=Z,11nm,1.1s,baz=45,slow=1.4,SNR=4.5						
PSI				LR	LR	17 49 33.7	
	comp=Z,586nm,18.1s,MS4.2,baz=280,slow=40						
PSI	**Prapat**	**25.92**	**263**	P	**P**	**17 37 57.2**	**-1.0**
PSI						17 41 25.4	
PSI	**Prapat**	**25.92**	**263**	P	**P**	**17 37 57.2**	**-1.0**
PSI				PcP	PcP	17 41 25.4	-1.4
PSI				LR	LR	17 49 33.7	
NJ2	**Nanjing**	**26.02**	**349**	*e*P	**P**	**17 38 00.0**	**+1.1**
NJ2				pP	pP	17 38 07.0	-0.3
NJ2				sP	sP	17 38 11.2	+0.4
NJ2				PP		17 38 41.6	
NJ2				S	**S**	**17 42 26.5**	**-1.5**
NJ2				sS	sS	17 42 39.5	-2.5
NJ2				pmax	pmax		
	comp=Z,50nm,1.3s,mb4.9						
NJ2				pmax	pmax		
	comp=Z,360nm,4.2s						
NJ2				LR	LR		
	comp=N,640nm,18.2s,MS4.4						
NJ2				LR	LR		
	comp=E,840nm,15.8s,MS4.4						
NJ2				LR	LR		
	comp=Z,5μm,14.4s,MS5.2						
TSI	**Tuntungan**	**26.17**	**265**	P	**P**	**17 38 01.9**	**+1.4**
	comp=Z,136nm,1.3s,mb5.3						
PPSI	**Pulau Pagai**	**26.28**	**250**	P	**P**	**17 38 05.9**	**+4.5**
	comp=Z,314nm,1.5s,mb5.6						
CBIJ	**Chichi jima**	**26.42**	**37**	P	**P**	**17 38 03.4**	**+0.9**
	comp=Z,133nm,0.9s,mb5.5,baz=278,slow=14,SNR=5.0						
CBIJ				LR	LR	17 46 50.1	
	comp=Z,730nm,20.4s,MS4.2,baz=54,slow=33						
SISI	**Saibi**	**26.69**	**254**	P	**P**	**17 38 05.0**	**-0.1**
	comp=Z,162nm,1.9s,mb5.2						
BDT	**Bhumibol Dam**	**27.27**	**295**	P	**P**	**17 38 10.5**	**+0.2**
COEN	**Coen**	**27.37**	**138**	*e*P	**P**	**17 38 12.7**	**+1.5**
COEN	**Coen**	**27.37**	**138**	*e*P	**P**	**17 38 12.1**	**+0.9**
	comp=Z,772nm,1.4s,mb6.0						
PMG	**Port Moresby**	**27.40**	**125**	⇓*i*P	**P**	**17 38 12.9**	**+1.4**
PMG				pmax	pmax		
	comp=Z,107nm,1.7s						
CHRT	**Chiangrai**	**27.60**	**301**	⇓P	**P**	**17 38 13.0**	**-0.2**
	comp=Z,263nm,1.0s,mb5.8						
ENH	**Enshi**	**27.65**	**331**	*e*P	**P**	**17 38 14.1**	**+0.5**
	comp=Z,54nm,1.0s,mb5.1						
CM31	**Chiang Mai Arr**	**27.76**	**298**	*e*P	**P**	**17 38 14.9**	**+0.3**
	comp=Z,14nm,1.0s,mb4.5						
CM31				*e*PcP	PcP	17 41 29.2	-1.8
CMAR	**Chiang Mai Arr**	**27.76**	**298**	P	**P**	**17 38 14.2**	**-0.5**
	comp=Z,6.7nm,0.9s,mb4.3,baz=127,slow=6.8,SNR=43						
CMAR				PcP	PcP	17 41 31.4	+0.4
	comp=Z,3.9nm,0.8s,baz=141,slow=0.9,SNR=13						
CMAR				ScP	ScP	17 45 10.3	+0.4
	comp=Z,0.9nm,0.9s,baz=119,slow=1.5,SNR=4.7						
CMAR				LR	LR	17 49 34.9	
	comp=Z,727nm,18.4s,MS4.3,baz=115,slow=37						
CMAR	**Chiang Mai Arr**	**27.76**	**298**	P	**P**	**17 38 14.2**	**-0.5**
CMAR						17 41 31.4	
MBWA	**Marble Bar**	**27.88**	**190**	*e*P	**P**	**17 38 15.3**	**-0.4**
MBWA	**Marble Bar**	**27.88**	**190**	*e*P	**P**	**17 38 14.6**	**-1.1**
	comp=Z,12nm,0.7s,mb4.7						
CHG	**Chiang Mai**	**27.89**	**298**	⇑P	**P**	**17 38 16.1**	**+0.2**
	comp=Z,16nm,1.0s,mb4.6						
CHTO	**Chiang Mai**	**27.89**	**298**	*e*P	**P**	**17 38 15.0**	**-0.9**
CHTO				*e*		17 41 29.7	
CHTO				pmax	pmax		
	comp=Z,31nm,1.5s,mb4.7						
CHTO	**Chiang Mai**	**27.89**	**298**	*e*P	**P**	**17 38 15.0**	**-0.8**
	comp=Z,30nm,1.5s,mb4.7						
CHTO				*e*PcP	PcP	17 41 29.7	-1.6
CHTO	**Chiang Mai**	**27.89**	**298**	P	**P**	**17 38 16.5**	**+0.6**
	SNR=7.6						
WRAB	**Tennant Creek**	**27.91**	**160**	P	**P**	**17 38 17.4**	**+1.4**
	comp=Z,287nm,0.9s,mb5.9,SNR=6.8						
WRAB	**Tennant Creek**	**27.91**	**160**	*e*P	**P**	**17 38 16.9**	**+0.9**
WRAB				pmax	pmax		
	comp=Z,116nm,1.4s,mb5.3						
WRAB	**Tennant Creek**	**27.91**	**160**	*e*P	**P**	**17 38 16.9**	**+0.9**
	comp=Z,116nm,1.4s,mb5.3						
WRA	**Warramunga Arr**	**27.92**	**160**	P	**P**	**17 38 15.2**	**-0.8**
	comp=Z,6.2nm,0.6s,mb4.4,baz=334,slow=10,SNR=50						
KMI	**Kunming**	**28.01**	**314**	P	**P**	**17 38 18.7**	**+1.9**
KMI				pP	pP	17 38 25.0	-0.3
KMI				PP	PP	17 39 09.0	-11
KMI				PcP	PcP	17 41 32.2	+0.7
KMI				S	**S**	**17 43 00.9**	**+1.3**
KMI				sS	sS	17 43 11.7	-1.9
KMI				SS		17 44 23.1	
KMI				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.6						
KMI				pmax	pmax		
	comp=Z,310nm,6.6s						
KMI				LR	LR		
	comp=N,760nm,15.5s,MS4.5						
KMI				LR	LR		
	comp=E,740nm,14.8s,MS4.5						
KMI				LR	LR		
	comp=Z,960nm,15.5s,MS4.5						
JHJ	**Hachijo jima 2**	**30.00**	**26**	LR	LR	17 50 54.5	
	comp=Z,462nm,18.8s,MS4.1,baz=115,slow=37						
KSRS	**Korea Array**	**30.98**	**5**	P	**P**	**17 38 42.5**	**-0.5**
	comp=Z,9.4nm,0.8s,mb4.7,baz=182,slow=9.9,SNR=53						
KSRS				PcP	PcP	17 41 39.3	+0.5
	comp=Z,1.5nm,0.8s,baz=192,slow=2.2,SNR=4.6						
KSRS				LR	LR	17 52 32.0	
	comp=Z,540nm,18.7s,MS4.2,baz=200,slow=39						
XAN	**Xi'an**	**31.07**	**334**	P	**P**	**17 38 44.5**	**+0.7**
XAN				pP	pP	17 38 54.8	+2.5
XAN				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.4						
CD2	**Chengdu**	**31.24**	**324**	P	**P**	**17 38 45.0**	**-0.4**
CD2				pP	pP	17 38 54.5	+0.6
CD2				sP	sP	17 38 58.5	+1.1
CD2				PP	PP	17 39 48.7	-7.5
CD2				S	**S**	**17 43 48.4**	**-1.7**
CD2				sS	sS	17 44 04.4	+0.3
CD2				SS	SS	17 45 36.0	-28
CD2				pmax	pmax		
	comp=Z,120nm,0.9s,mb5.7						
CD2				pmax	pmax		
	comp=Z,90nm,3.6s						
CD2				LR	LR		
	comp=N,2μm,20.8s						
CD2				LR	LR		
	comp=Z,1μm,17.2s,MS4.6						
ASAR	**Alice Springs**	**31.28**	**164**	P	**P**	**17 38 46.1**	**+0.4**
	comp=Z,3.0nm,0.4s,mb4.4,baz=340,slow=6.9,SNR=72						
MAJO	**Matsushiro**	**32.39**	**21**	*e*P	**P**	**17 38 54.1**	**-1.3**
MAJO				pmax	pmax		
	comp=Z,24nm,1.5s,mb4.8						
MAJO	**Matsushiro**	**32.39**	**21**

HHC PP PP 17 40 52.1 +1.2
HHC PcP PcP 17 41 55.1 +1.7
HHC S **S** **17 45 07.6 +1.2**
HHC sS sS 17 45 19.6 -1.0
HHC ScP ScP 17 45 39.2 +1.2
HHC PcS PcS 17 45 41.7 +0.8
HHC SS SS 17 47 30.5 -15
HHC ScS ScS 17 49 43.2 -0.5
HHC pmax pmax
comp=Z,38nm,1.0s,mb5.3
HHC pmax pmax
comp=Z,270nm,6.2s
HHC LR LR
comp=N,530nm,14.6s,MS4.6
HHC LR LR
comp=E,560nm,14.4s,MS4.6
HHC LR LR
comp=Z,580nm,14.5s,MS4.5
BTO Baotou 36.43 341 *e*P **P** **17 39 29.9 -0.5**
SHL Shillong 36.62 305 *e*PKP **P** **17 39 33.0 +0.7**
SHL *e*PCP PcP 17 41 55.0 -0.1
SHL *e*S **S** **17 45 11.0 -2.6**
VLA Vladivostok 37.05 9 *c i*P **P** **17 39 36.2 +0.6**
VLA pmax pmax
comp=Z,134nm,2.0s,mb5.4
FORT Forrest 37.18 175 *e*P **P** **17 39 35.6 -1.2**
comp=Z,44nm,0.7s,mb5.4
FORT Forrest 37.18 175 *e*P **P** **17 39 35.3 -1.5**
comp=Z,77nm,0.9s,mb5.5
CN2 Changchun 37.19 1 *e*P **P** **17 39 38.5 +1.8**
CN2 *es*P sP 17 39 48.6 -0.2
CN2 PcP PcP 17 41 56.8 +0.4
CN2 *e*S **S** **17 45 23.5 +1.8**
CN2 pmax pmax
comp=Z,40nm,1.3s,mb5.1
CN2 pmax pmax
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,400nm,26.0s,MS4.3
CN2 LR LR
comp=E,600nm,26.0s,MS4.3
CN2 LR LR
comp=Z,200nm,27.0s,MS3.8
MDJ Mudanjiang 38.24 6 P **P** **17 39 46.8 +1.2**
MDJ pP pP 17 39 53.1 -1.1
MDJ PP PP 17 41 14.5 +1.1
MDJ S **S** **17 45 40.7 +3.1**
MDJ ScP ScP 17 45 47.0 +1.4
MDJ PcS PcS 17 45 49.6 +1.1
MDJ sS sS 17 45 51.4 -0.4
MDJ pmax pmax
comp=Z,9.0nm,1.3s,mb4.3
MDJ pmax pmax
comp=Z,120nm,5.0s
MDJ LR LR
comp=N,590nm,33.8s,MS4.2
MDJ LR LR
comp=E,260nm,34.2s,MS4.2
MDJ LR LR
comp=Z,670nm,35.1s,MS4.2
MDJ Mudanjiang 38.24 6 *e*P **P** **17 39 47.6 +2.0**
comp=Z,60nm,1.1s,mb5.2
LSA Lhasa 39.11 310 P **P** **17 39 54.9 +1.7**
LSA S **S** **17 45 51.5 +0.3**
LSA LR LR
comp=N,290nm,23.0s,MS4.2
LSA LR LR
comp=E,220nm,21.7s,MS4.2
LSA LR LR
comp=Z,380nm,21.7s,MS4.2
LSA Lhasa 39.11 310 *e*P **P** **17 39 54.7 +1.5**
LSA pmax pmax
comp=Z,131nm,1.4s,mb5.5
LSA Lhasa 39.11 310 *e*P **P** **17 39 54.7 +1.5**
comp=Z,131nm,1.4s,mb5.5
GTA Gaotai 39.71 329 ⇓P **P** **17 39 59.2 +1.2**
GTA pP pP 17 40 06.9 +0.2
GTA sP sP 17 40 10.3 +0.1
GTA PP PP 17 41 34.7 +5.1
GTA PcP PcP 17 42 04.5 +0.1
GTA PcS PcS 17 45 52.9 -1.5
GTA S **S** **17 46 01.7 +1.8**
GTA sS sS 17 46 14.5 +0.4
GTA pmax pmax
comp=Z,86nm,1.0s,mb5.4
GTA pmax pmax
comp=Z,310nm,4.2s
GTA LR LR
comp=N,490nm,19.0s,MS4.5
GTA LR LR
comp=E,470nm,16.3s,MS4.5
GTA LR LR
comp=Z,700nm,15.2s,MS4.6
ASAJ Asahikawa 40.65 20 P **P** **17 40 06.3 +0.5**
comp=Z,16nm,1.0s,mb4.6,baz=242,slow=17,SNR=19
EIDS Eidsvold 40.76 142 *e*P **P** **17 40 07.0 +0.1**
comp=Z,99nm,1.5s,mb5.2
TAPN Taplejung 40.76 305 *e*P **P** **17 40 07.9 +0.9**
comp=Z,225nm,1.1s,mb5.7
ODAN Odare 40.83 304 *e*P **P** **17 40 08.3 +0.7**
comp=Z,221nm,1.1s,mb5.7
BOK Bokaro 41.02 299 *e*PKP **P** **17 40 08.3 -0.9**
BOK AMb AMB 17 40 12.1
comp=Z,58nm,1.2s,mb5.1
STKA Stephens Creek 41.41 158 *e*P **P** **17 40 14.1 +1.9**
comp=Z,27nm,0.9s,mb4.9
STKA Stephens Creek 41.41 158 P **P** **17 40 13.1 +0.9**
comp=Z,41nm,1.0s,mb5.0,baz=322,slow=8.3,SNR=18
STKA LR LR 17 56 44.8
comp=Z,418nm,21.1s,MS4.3,baz=205,slow=35
STKA Stephens Creek 41.41 158 *e*P **P** **17 40 13.6 +1.5**
RAMN Ramite 41.52 304 *e*P **P** **17 40 13.9 +0.7**
comp=Z,338nm,1.2s,mb5.9
VIS Vishakhapatnam 41.85 289 *e*PKP **P** **17 40 14.8 -1.2**
VIS AMb AMB 17 40 20.2
comp=Z,65nm,1.1s,mb5.2
JIRN Jiri 42.13 305 *e*P **P** **17 40 18.9 +0.7**
comp=Z,320nm,1.1s,mb5.9
GUN Gumba 42.48 305 *e*P **P** **17 40 21.6 +0.6**
comp=Z,298nm,0.9s,mb5.9
PKI Pulchoki 42.73 304 *e*P **P** **17 40 23.3 +0.2**
comp=Z,186nm,1.2s,mb5.7
HABR Khabarovsk 42.77 10 *e*P **P** **17 40 23.6 +0.5**
HABR *e**SP sP 17 40 34.8 -0.4
HABR 17 42 01.4
HABR 17 42 13.5
HABR *e*PPP 17 42 32.3
HABR S **S** **17 46 45.7 +0.6**
HABR *e**SS sS 17 47 00.9 +1.5
HABR *e*SS SS 17 49 55.5 -1.2
HABR *e* 17 50 20.1
HABR pmax pmax
comp=Z,66nm,1.8s,mb5.1
HABR MLR MLR
comp=Z,268nm,19.0s,MS4.2
HIA Hailar 42.85 355 *e*P **P** **17 40 24.1 +0.4**
HIA pmax pmax
comp=Z,31nm,1.2s
HIA Hailar 42.85 355 *e*P **P** **17 40 24.1 +0.4**
comp=Z,31nm,1.2s,mb4.9
KKN Kakani 42.92 304 *e*P **P** **17 40 24.6 0.0**
comp=Z,212nm,1.1s,mb5.8
DMN Daman 43.00 304 *e*P **P** **17 40 25.4 +0.2**
comp=Z,220nm,1.1s,mb5.8
KLR Kul'dur 43.03 7 *e*P **P** **17 40 22.4 -2.7**
KLR *e*S **S** **17 46 45.5 -3.4**
KLR *e* 17 49 55.5
KLR pmax pmax
comp=Z,70nm,1.8s,mb5.1
KLR MLR MLR
comp=N,800nm,17.0s
YSS Yuzh-Sakhalins 43.22 18 *e*P **P** **17 40 27.0 +0.3**
YSS *e*S **S** **17 46 54.0 +2.2**
YSS *e*SS SS 17 50 00.0 -5.6
YSS pmax pmax
comp=Z,30nm,0.9s,mb5.0
YSS MLR MLR
comp=Z,500nm,18.0s,MS4.5
YSS Yuzh-Sakhalins 43.22 18 *e*P **P** **17 40 27.1 +0.4**
comp=Z,30nm,1.1s,mb4.9
GKN Gorkha 43.53 304 *e*P **P** **17 40 29.3 -0.2**
comp=Z,168nm,1.2s,mb5.7
ULN Ulaanbaatar 43.90 343 *e*P **P** **17 40 32.8 +0.6**
ULN pmax pmax
comp=Z,44nm,1.2s,mb5.1
ULN Ulaanbaatar 43.90 343 *e*P **P** **17 40 32.8 +0.6**
comp=Z,44nm,1.2s,mb5.1
ULN Ulaanbaatar 43.90 343 P **P** **17 40 33.4 +1.2**
SNR=37
SONM Songino Array 44.07 342 P **P** **17 40 33.8 +0.3**
comp=Z,17nm,0.9s,mb4.8,baz=162,slow=8.9,SNR=76
SONM LR LR 18 01 52.4
comp=Z,585nm,18.4s,MS4.5,baz=155,slow=40
ARMA Armidale 44.87 146 *e*P **P** **17 40 40.9 +0.7**
HYB Hyderabad 46.30 288 *e*P **P** **17 40 52.0 +0.3**
HYB Hyderabad 46.30 288 *i* P **P** **17 40 52.0 +0.3**
NGP Nagpur 46.46 293 *e*PKP **P** **17 40 52.2 -0.8**
NGP AMb AMB 17 40 54.3
comp=Z,51nm,0.7s,mb5.5
CAN Canberra 47.47 153 *e*P **P** **17 41 01.9 +1.4**
CAN pmax pmax
comp=Z,87nm,1.4s,mb5.5
CAN Canberra 47.47 153 *e*P **P** **17 41 01.9 +1.3**
comp=Z,87nm,1.4s,mb5.5
AKL Akola 48.24 292 *e*PKP **P** **17 41 07.1 +0.2**
AKL AMb AMB 17 41 08.8
comp=Z,125nm,1.2s,mb5.8
TLY Talaya 48.31 343 P **P** **17 41 08.6 +1.8**
comp=Z,57nm,1.8s,mb5.3,SNR=6.5
TLY Talaya 48.31 343 *e*P **P** **17 41 04.2 -2.6**
TLY *e*S **S** **17 48 11.8 +6.9**
TLY pmax pmax
comp=Z,25nm,1.7s,mb5.0
TLY MLR MLR
comp=Z,397nm,21.0s,MS4.4
TLY Talaya 48.31 343 *e*P **P** **17 41 07.7 +0.9**
comp=Z,11nm,1.0s,mb4.8
TLY Talaya 48.31 343 P **P** **17 41 08.5 +1.7**
SNR=16
BHPL Bhopal 48.37 295 *e*PKP **P** **17 41 07.3 -0.5**
BHPL AMb AMB 17 41 09.6
comp=Z,49nm,0.9s,mb5.5
MOY Mondy 49.13 341 *e*P **P** **17 41 14.9 +1.8**
MOY pmax pmax
comp=Z,48nm,1.6s,mb5.3
WMQ Urumqi 49.32 325 P **P** **17 41 16.8 +2.1**
WMQ pP pP 17 41 24.3 +0.8
WMQ sP sP 17 41 27.6 +0.6
WMQ PcP PcP 17 42 39.8 +2.6
WMQ PP PP 17 43 11.1 +2.2
WMQ ScP ScP 17 46 31.8 +1.1
WMQ S **S** **17 48 20.5 +1.1**
WMQ ScS ScS 17 51 05.3 +0.6
WMQ SS SS 17 51 46.0 -5.3
WMQ pmax pmax
comp=Z,71nm,1.1s,mb5.6
WMQ pmax pmax
comp=Z,280nm,4.5s
WMQ LR LR
comp=N,550nm,18.0s,MS4.7
WMQ LR LR
comp=E,310nm,17.0s,MS4.7
WMQ LR LR
comp=Z,360nm,17.0s,MS4.4
DZM Mont Dzumac 49.79 126 *e*P **P** **17 41 18.6 0.0**
comp=Z,60nm,1.3s,mb5.5
POO Poona 50.88 289 *e*PKP **P** **17 41 26.1 -0.9**
POO AMb AMB 17 41 29.8
comp=Z,84nm,1.2s,mb5.6
SKR Severo-Kuril's 51.27 25 *e*P **P** **17 41 34.0 +4.7**
SKR *e* 17 42 40.0
SKR *e*S **S** **17 48 56.0 +10**
SKR MLR MLR
comp=E,1μm,14.0s
SKR MLR MLR
comp=Z,1μm,14.0s,MS5.0
PETK Petropavlovsk- 53.73 24 P **P** **17 41 48.2 +0.7**
comp=Z,11nm,0.8s,mb4.8,baz=196,slow=5.0,SNR=43
PETK LR LR 18 05 56.4
comp=Z,194nm,18.1s,MS4.2,baz=224,slow=37
PETK Petropavlovsk- 53.73 24 P **P** **17 41 48.2 +0.7**
PETK LR LR 18 05 56.4
PET Petropavlovsk 54.06 25 *e*P **P** **17 41 51.5 +1.6**
PET *e*S **S** **17 49 26.5 +2.2**
PET pmax pmax
comp=Z,100nm,7.0s
PET MLR MLR
comp=Z,400nm,18.0s,MS4.5
PET MLR MLR
comp=Z,300nm,16.0s
PET Petropavlovsk 54.06 25 *e*P **P** **17 41 50.0 +0.1**
comp=Z,29nm,1.2s,mb5.1
MK31 Makanchi Array 54.15 325 *e*P **P** **17 41 51.1 +0.3**
MKAR Makanchi Array 54.15 325 P **P** **17 41 51.2 +0.5**
comp=Z,56nm,0.8s,mb5.5,baz=128,slow=7.8,SNR=308
MKAR PcP PcP 17 42 54.2 -1.0
comp=Z,22nm,0.8s,baz=108,slow=4.0,SNR=9.6
MKAR ScP ScP 17 46 53.7 +2.2
comp=Z,1.2nm,0.9s,baz=151,slow=3.3,SNR=4.3
MKAR LR LR 18 07 33.0
comp=Z,304nm,18.2s,MS4.4,baz=120,slow=39
MKAR Makanchi Array 54.15 325 P **P** **17 41 51.3 +0.5**
MKAR 17 42 54.2
MKAR Makanchi Array 54.15 325 P **P** **17 41 51.2 +0.5**
MKAR PcP PcP 17 42 54.2 -1.0
MKAR ScP ScP 17 46 53.7 +2.2
MKAR LR LR 18 07 33.0
KSH Kashi 54.67 315 P **P** **17 41 56.2 +1.5**
KSH pP pP 17 42 03.9 +0.3
KSH PcP PcP 17 42 59.5 +2.2
KSH PP PP 17 43 59.3 +1.9
KSH ScP ScP 17 46 54.7 +0.7
KSH PcS PcS 17 46 57.5 +0.6
KSH S **S** **17 49 32.5 -0.6**
KSH ScS ScS 17 51 40.9 -1.2
KSH SS SS 17 53 13.3 -3.0
KSH pmax pmax
comp=Z,40nm,1.3s,mb5.3
KSH LR LR
comp=N,210nm,11.7s,MS4.8
KSH LR LR
comp=E,580nm,15.9s,MS4.8
KSH LR LR
comp=Z,640nm,14.7s,MS4.8
BHJ Bhuj 55.40 294 *e*PKP **P** **17 42 00.5 +0.3**
BHJ AMb AMB 17 42 06.6
comp=Z,164nm,1.3s,mb5.9
YAK Yakutsk 55.57 3 *e*P **P** **17 42 00.1 -0.6**
YAK *e**PP pP 17 42 12.1 +2.5
YAK *e* 17 43 03.2
YAK *e* 17 44 04.2
YAK *e*S **S** **17 49 37.3 -7.0**
YAK *e* 17 51 43.6
YAK *e*SSS 17 55 36.5
YAK pmax pmax
comp=Z,31nm,0.9s,mb5.3
YAK pmax pmax
comp=N,7.0nm,1.0s
YAK pmax pmax
comp=N,26nm,2.6s
YAK pmax pmax
comp=E,16nm,2.8s
YAK pmax pmax
comp=Z,99nm,3.7s
YAK smax
comp=E,46nm,4.3s
YAK smax
comp=N,19nm,2.5s
YAK Yakutsk 55.57 3 *e*P **P** **17 41 60.0 -0.8**
comp=N,30nm,0.8s,mb5.4
ULHL Ulahol 55.63 318 P **P** **17 42 03.3 +1.7**
SNR=8.9
KZA Kyzart 56.22 317 P **P** **17 42 07.4 +1.5**
SNR=34
TKM2 Tokmak 2 56.35 318 P **P** **17 42 07.1 +0.4**
SNR=26
TKM2 Tokmak 2 56.35 318 *e*P **P** **17 42 07.1 +0.4**
TKM2 pmax pmax
comp=Z,22nm,0.8s,mb5.2
TKM2 Tokmak 2 56.35 318 *e*P **P** **17 42 07.1 +0.4**
comp=Z,22nm,0.8s,mb5.2
KBK Karagaybulak 56.67 318 P **P** **17 42 10.0 +1.1**
SNR=16
UCH Uchtor 56.78 317 P **P** **17 42 11.5 +1.7**
SNR=29
UCH Uchtor 56.78 317 *e*P **P** **17 42 10.8 +1.0**
comp=Z,46nm,0.9s,mb5.5
CHMS Chumysh 56.94 318 P **P** **17 42 10.6 -0.4**
SNR=9.9
AAK Ala-Archa 56.96 317 P **P** **17 42 12.0 +0.9**
comp=Z,107nm,0.9s,mb5.9,SNR=5.8
AAK Ala-Archa 56.96 317 P **P** **17 42 12.0 +0.9**
SNR=9.0
AAK Ala-Archa 56.96 317 P **P** **17 42 10.3 -0.7**
comp=Z,8.6nm,0.7s,mb4.9,baz=147,slow=8.8,SNR=22
AAK PcP PcP 17 43 06.1 0.0
comp=Z,6.3nm,0.6s,baz=116,slow=6.3,SNR=5.1
AAK Ala-Archa 56.96 317 *e*P **P** **17 42 11.3 +0.2**
AAK pmax pmax
comp=Z,16nm,0.9s,mb5.0
AAK Ala-Archa 56.96 317 *e*P **P** **17 42 11.2 +0.2**
comp=Z,16nm,0.9s,mb5.0
FRU Bishkek 56.96 318 *e*P **P** **17 42 10.0 -1.1**
USP Ospenovka 57.22 318 P **P** **17 42 13.2 +0.3**
SNR=43
ZALV Zalesovo Beam 57.23 333 P **P** **17 42 11.7 -1.0**
comp=Z,37nm,1.0s,mb5.4,baz=117,slow=5.8,SNR=86
ZALV PcP PcP 17 43 05.2 -1.8
comp=Z,10nm,1.0s,baz=90,slow=0.1,SNR=4.5
ZALV PKP2bc 18 12 13.3
comp=Z,0.4nm,0.6s,baz=270,slow=4.4,SNR=3.9
ZALV LR LR 18 12 23.4
comp=Z,144nm,18.5s,MS4.1,baz=261,slow=42
ZALV Zalesovo Beam 57.23 333 P **P** **17 42 11.7 -1.0**
ZALV 17 43 05.2
ZALV Zalesovo Beam 57.23 333 P **P** **17 42 11.7 -1.0**
ZALV PcP PcP 17 43 05.2 -1.8
ZALV ⇑*e* 18 12 13.3
ZALV LR LR 18 12 23.4
AML Almayashu 57.30 317 P **P** **17 42 14.3 +0.9**
SNR=67
AML Almayashu 57.30 317 *e*P **P** **17 42 14.2 +0.7**
comp=Z,55nm,0.8s,mb5.6
EKS2 Erkin-Say 57.46 317 P **P** **17 42 15.4 +0.9**
SNR=41
EKS2 Erkin-Say 57.46 317 *e*P **P** **17 42 14.9 +0.4**
comp=Z,35nm,0.8s,mb5.4
KBL Kabul 58.24 307 *e*P **P** **17 42 19.3 -1.0**
KBL pmax pmax
comp=Z,30nm,0.9s,mb5.3
KBL Kabul 58.24 307 *e*P **P** **17 42 19.3 -0.9**
comp=Z,30nm,0.9s,mb5.3
KURK Kurchatov 58.34 327 P **P** **17 42 20.4 -0.2**
comp=Z,689nm,1.1s,mb6.6
KURK Kurchatov 58.34 327 P **P** **17 42 20.2 -0.4**
comp=Z,90nm,1.0s,mb5.8,baz=123,slow=7.0,SNR=78
KURK Kurchatov 58.34 327 ⇓*i*P **P** **17 42 20.1 -0.5**
KURK pmax pmax
comp=Z,185nm,1.2s,mb6.0
KURK Kurchatov 58.34 327 *e*P **P** **17 42 19.9 -0.7**
comp=Z,139nm,1.0s,mb5.9
KURK Kurchatov 58.34 327 P **P** **17 42 20.4 -0.2**
SNR=101
NVS Novosibirsk 58.52 333 *i* P **P** **17 42 20.9 -0.8**
NVS *e*S **S** **17 50 25.1 +1.7**
NVS pmax pmax
comp=Z,105nm,1.1s,mb5.8
NVS pmax pmax
comp=N,60nm,1.2s
NVS pmax pmax
comp=E,60nm,1.2s
NVS smax
comp=N,35nm,2.4s
NVS smax
comp=E,20nm,2.1s
SEY Seymchan 59.87 14 ⇓*i*P **P** **17 42 31.4 +0.5**
SEY Seymchan 59.87 14 ⇓*i*P **P** **17 42 31.5 +0.6**
BVAR Borovoye Array 63.92 327 P **P** **17 42 58.0 -0.3**
comp=E,32nm,0.9s,mb5.3,baz=120,slow=8.8,SNR=128
BVAR PcP PcP 17 43 31.9 -1.9
comp=E,9.8nm,0.8s,baz=116,slow=3.4,SNR=5.7
BVAR LR LR 18 10 32.0
comp=E,66nm,21.5s,MS3.8,baz=128,slow=36
BVAR Borovoye Array 63.92 327 P **P** **17 42 58.0 -0.4**
BVAR 17 43 31.9
BRVK Borovoye 63.99 327 P **P** **17 42 58.6 -0.3**
comp=E,334nm,1.2s,mb6.2,SNR=42
BRVK Borovoye 63.99 327 *e*P **P** **17 42 58.1 -0.8**
BRVK pmax pmax
comp=Z,70nm,1.0s,mb5.7
BRVK Borovoye 63.99 327 *e*P **P** **17 42 58.1 -0.8**
comp=Z,70nm,1.0s,mb5.6
BRVK Borovoye 63.99 327 P **P** **17 42 58.7 -0.2**
SNR=54
TIXI Tiksi 65.16 1 *e*P **P** **17 43 04.8 -1.4**
TIXI pmax pmax
comp=Z,21nm,1.5s,mb5.0
TIXI MLR MLR
comp=Z,246nm,17.0s,MS4.5
TIXI Tiksi 65.16 1 *e*P **P** **17 43 04.2 -1.9**
comp=Z,14nm,1.0s,mb5.0
IDAH Dahanechah 65.37 303 *e*P **P** **17 43 08.3 0.0**
URZ Urewera 65.93 137 *e*P **P** **17 43 13.0 +1.3**
comp=Z,48nm,1.0s,mb5.5
ISRO Mashad 66.26 307 *e*P **P** **17 43 14.0 +0.1**
IMOG Moghan 66.33 307 *e*P **P** **17 43 13.7 -0.7**
IPAY Payeh 66.66 307 *e*P **P** **17 43 16.3 -0.2**
IAKL Akhelmad 66.87 307 *e*P **P** **17 43 17.8 -0.1**
IEMG Emamgholi 67.09 308 *e*P **P** **17 43 19.6 +0.4**
IKRD Kardeh 67.09 307 *e*P **P** **17 43 14.2 -5.1**
BILL Bilibino 67.46 16 ⇓*i*P **P** **17 43 20.9 -0.1**
BILL *e**PP pP 17 43 30.0 -0.1
BILL *e*SS SS 17 56 37.8 +2.4
BILL pmax pmax
comp=Z,16nm,1.4s,mb4.9
BILL Bilibino 67.46 16 *e*P **P** **17 43 21.1 +0.1**
comp=Z,22nm,1.2s,mb5.1
ISFR Sfrayin 67.55 307 *e*P **P** **17 43 22.5 +0.4**
ABKT Ailbek 67.59 308 P **P** **17 43 22.7 +0.3**
comp=Z,180nm,1.0s,mb6.0,SNR=11
ISHV Shirvan 67.86 308 *e*P **P** **17 43 25.5 +1.4**
ABKAR Akbulak array 68.75 321 *e*P **P** **17 43 28.5 -0.9**
comp=Z,25nm,0.9s,mb5.1
IBAF Bafgh 68.85 301 *e*P **P** **17 43 30.7 +0.3**
ICHK Chekchek 69.89 302 *e*P **P** **17 43 35.9 -1.0**
SVE Sverdlovsk 70.57 328 ⇓*e*P **P** **17 43 39.9 -0.6**
SVE pmax pmax
comp=Z,91nm,1.0s,mb5.7
IGLO Ghaloghah 70.79 306 *e*P **P** **17 43 43.1 +0.9**
IPAR Pars 70.88 299 *e*P **P** **17 43 42.4 -0.5**
ILAS Lasjerd 71.38 305 *e*P **P** **17 43 45.2 -0.7**
ARU Arti 71.54 328 P **P** **17 43 45.8 -0.6**
comp=Z,383nm,0.9s,mb6.3,SNR=29
ARU Arti 71.54 328 *d i*P **P** **17 43 44.7 -1.7**
ARU *e* 17 46 24.7
ARU PPP 17 48 11.5
ARU S S 17 53 01.9 -1.5
ARU SS SS 17 57 34.7 -4.0
ARU pmax pmax
comp=Z,68nm,1.0s,mb5.5
ARU Arti 71.54 328 *e*P **P** **17 43 44.4 -2.0**
comp=Z,59nm,0.9s,mb5.5
IZEF Zefreh 71.69 302 *e*P **P** **17 43 49.3 +1.5**
IPRN Peran 71.96 306 *e*P **P** **17 43 48.6 -0.7**
IDMV Damavand 72.15 305 *e*P **P** **17 43 50.2 -0.3**
IKLH Kolahrood 72.35 303 *e*P **P** **17 43 52.1 +0.4**
UNV Unalaska Valle 72.37 35 *e*P **P** **17 43 50.9 -0.5**
comp=Z,44nm,1.0s,mb5.3
AKUT Akutan 72.86 35 *e*P **P** **17 43 50.3 -3.9**
comp=Z,107nm,1.2s,mb5.7
IPIR Pirpir 72.89 302 *e*P **P** **17 43 55.5 +0.6**
IR3 Iran Long-Peri 72.96 305 *e*P **P** **17 43 55.3 0.0**
IMHD Mahdasht 73.27 305 *e*P **P** **17 43 56.3 -0.8**
SOKR Solikamsk 73.33 331 *c i*P **P** **17 43 56.7 -0.3**
SOKR pmax pmax
comp=Z,40nm,1.1s,mb5.3
SOKR MLR MLR
comp=Z,250nm,19.0s,MS4.5
KBD Kabd 75.52 298 *e*P **P** **17 44 09.1 -1.3**
KBD AMb AMB 17 44 14.4
comp=Z,26nm,1.5s,mb4.9
RDF Al-Radifah 75.64 298 *e*P **P** **17 44 09.8 -1.2**
RDF AMb AMB 17 44 15.2
comp=Z,56nm,1.4s,mb5.3
NAY Al-Naaiem 75.91 298 *e*P **P** **17 44 10.8 -1.8**
NAY AMb AMB 17 44 13.2
comp=Z,26nm,0.9s,mb5.2
ISHB Shabestar 77.44 308 *e*P **P** **17 44 20.5 -0.5**
GNI Garni 78.17 310 *d i*P **P** **17 44 25.6 +0.5**
GNI pmax pmax
comp=Z,84nm,1.7s
GNI Garni 78.17 310 *e*P **P** **17 44 24.7 -0.4**
comp=Z,105nm,1.5s,mb5.5
ZEI Tsey 78.87 312 *e*P **P** **17 44 28.5 -0.4**
ZEI pmax pmax

comp=Z,66nm,1.4s,mb5.4
KIV Kislovodsk 79.78 313 P **P 17 44 34.1 +0.3**
comp=Z,167nm,1.2s,mb5.8,SNR=5.2
KIV Kislovodsk 79.78 313 *e*P **P 17 44 34.5 +0.7**
KIV *e*S S 17 54 34.4 -0.5
KIV pmax pmax
comp=Z,27nm,1.0s,mb5.1
KIV Kislovodsk 79.78 313 *e*P **P 17 44 33.8 0.0**
comp=Z,36nm,1.1s,mb5.2
KIV Kislovodsk 79.78 313 P **P 17 44 34.1 +0.3**
SNR=14
OHAK Old Harbor 80.28 33 *e*P **P 17 44 36.0 -0.3**
comp=Z,24nm,1.1s,mb5.0
VRHR Novokhopersk 80.64 321 *e*P **P 17 44 36.7 -1.6**
VRHR pmax pmax
comp=N,7.0nm,0.9s
VRHR pmax pmax
comp=E,10.0nm,0.9s
VRHR pmax pmax
comp=Z,50nm,0.9s,mb5.4
KDAK Kodiak Island 80.69 33 *i* P **P 17 44 39.5 +1.1**
PPLA Purkeypile 81.15 27 *e*P **P 17 44 40.9 +0.1**
comp=Z,25nm,1.3s,mb5.0
BPAW Bear Paw Mtn. 81.74 26 *e*P **P 17 44 43.9 0.0**
comp=Z,25nm,1.1s,mb5.1
SOC Sochi 81.93 313 *e*P **P 17 44 43.4 -1.9**
SOC *e*S S 17 54 54.5 -2.9
SOC pmax pmax
comp=Z,19nm,0.6s,mb5.2
TRF Thorofare Moun 82.03 27 *e*P **P 17 44 45.1 -0.3**
comp=Z,22nm,1.1s,mb5.0
VORD Divnogorie 82.11 320 *e*P **P 17 44 44.3 -1.8**
VORD pmax pmax
comp=N,6.0nm,1.1s
VORD pmax pmax
comp=E,10.0nm,1.1s
VORD pmax pmax
comp=Z,30nm,1.1s,mb5.1
COLD Coldfoot 82.18 23 *e*P **P 17 44 46.5 +0.3**
comp=Z,13nm,1.1s,mb4.8
VSR Storozhevoye 82.18 321 *e*P **P 17 44 45.4 -1.1**
VSR pmax pmax
comp=N,8.0nm,0.9s
VSR pmax pmax
comp=E,30nm,0.9s
VSR pmax pmax
comp=Z,30nm,0.9s,mb5.2
RC01 Rabbit Creek A 82.24 29 *e*P **P 17 44 45.3 -1.3**
comp=Z,13nm,1.0s,mb4.8
PMR Palmer 82.54 29 *e*P **P 17 44 47.8 -0.3**
PMR pmax pmax
comp=Z,17nm,1.0s,mb5.0
PMR Palmer 82.54 29 *e*P **P 17 44 47.8 -0.3**
comp=Z,17nm,1.0s,mb5.0
MCK McKinley 82.64 27 *e*P **P 17 44 47.5 -1.1**
MCK pmax pmax
comp=Z,37nm,1.0s,mb5.4
MCK McKinley 82.64 27 *e*P **P 17 44 47.5 -1.1**
comp=Z,37nm,1.0s,mb5.4
MOS Moscow 83.03 325 *e*P **P 17 44 48.7 -2.1**
MOS *e* 17 47 59.8
MOS pmax pmax
comp=Z,64nm,1.2s,mb5.5
COLA College 83.11 25 *e*P **P 17 44 51.0 0.0**
COLA pmax pmax
comp=Z,11nm,1.1s,mb4.8
COLA College 83.11 25 *e*P **P 17 44 51.0 -0.1**
comp=Z,11nm,1.1s,mb4.8
ANN Anapa 83.53 314 *e*P **P 17 44 47.4 -6.2**
ANN *e*S S 17 55 03.3 -10
ANN pmax pmax
comp=Z,68nm,0.9s,mb5.8
OBN Obninsk 83.66 325⇑*i*P **P 17 44 53.4 -0.6**
OBN *e*S S 17 55 12.7 -1.8
OBN pmax pmax
comp=Z,112nm,2.1s,mb5.6
OBN MLR MLR
comp=Z,300nm,18.0s,MS4.7
OBN Obninsk 83.66 325 *e*P **P 17 44 52.9 -1.2**
LVZ Lovozero 84.06 338⇓*i*P **P 17 44 55.0 -0.8**
DIV Divide 84.17 29 *e*P **P 17 44 58.5 +2.0**
comp=Z,22nm,1.2s,mb5.2
APA Apatity 84.55 337⇑*i*P **P 17 44 58.2 -0.1**
APA *i* S S 17 55 20.0 -3.1
APA *i* PS 17 56 10.0
APA pmax pmax
comp=Z,26nm,1.0s,mb5.3
APA MLR MLR
comp=Z,300nm,19.0s,MS4.7
BMRM Bremner River 84.74 29 *e*P **P 17 45 00.3 +0.9**
comp=Z,18nm,1.3s,mb5.0
MAW Mawson 85.61 200 P **P 17 45 03.5 0.0**
comp=Z,1.7nm,0.7s,mb4.4,baz=29,slow=13,SNR=2.3
MAW LR LR 18 18 37.7
comp=Z,189nm,21.5s,MS4.5,baz=70,slow=32
JOF Joensuu 85.82 333 *e*P **P 17 45 03.0 -1.8**
JOF Joensuu 85.82 333 *e*p **P 17 45 03.0 -1.8**
comp=Z,36nm,1.1s,mb5.5
SIM Simferopol' 85.87 315⇑*e*P **P 17 45 04.8 -0.6**
SIM *e*S S 17 55 41.0 +4.0
SIM pmax pmax
comp=Z,19nm,0.9s,mb5.3
MMAI Mount Meron Ar 85.91 303 P **P 17 45 05.8 -0.1**
comp=Z,41nm,1.2s,mb5.5,baz=70,slow=8.1,SNR=14
MMAI LR LR 18 31 12.6
comp=Z,145nm,18.5s,MS4.4,baz=5.0,slow=41
EGAK Eagle 85.97 25 *e*P **P 17 45 05.6 +0.1**
comp=Z,11nm,1.2s,mb5.0
BR131 Keskin Array S 86.71 309 *e*P **P 17 45 09.5 -0.2**
comp=Z,5.2nm,0.9s,mb4.8
BRTR Keskin Array B 86.71 309 P **P 17 45 07.7 -2.0**
comp=Z,3.9nm,0.9s,mb4.6,baz=116,slow=5.6,SNR=14
BRTR PP PP 17 48 30.8 -1.2
comp=Z,1.3nm,0.8s,baz=39,slow=8.0,SNR=3.7
DAWY Dawson 86.83 26 *e*P **P 17 45 10.1 +0.4**
ARCES ARCESS Array B 87.18 340 P **P 17 45 09.7 -1.7**
comp=Z,9.3nm,0.9s,mb5.0,baz=54,slow=6.3,SNR=11
ARCES LR LR 18 29 12.4
comp=Z,186nm,18.8s,MS4.5,baz=256,slow=39
ARCES ARCESS Array B 87.18 340 P **P 17 45 09.7 -1.7**
ARCES LR LR 18 29 12.3
AREO ARCESS Array S 87.18 340 *e*P **P 17 45 09.4 -1.9**
KMBO Kilima Mbogo 87.56 269 P **P 17 45 14.1 -0.3**
comp=Z,3.4nm,0.4s,mb4.9,baz=179,slow=24,SNR=7.2
KMBO Kilima Mbogo 87.56 269 *e*P **P 17 45 15.0 +0.6**
KMBO pmax pmax
comp=Z,46nm,1.5s
KMBO Kilima Mbogo 87.56 269 *e*P **P 17 45 14.9 +0.6**
comp=Z,46nm,1.5s,mb5.5
KMBO Kilima Mbogo 87.56 269 P **P 17 45 15.2 +0.9**
SNR=9.0
KAF Kangasniemi 88.23 332 *e*P **P 17 45 14.2 -2.3**
KAF pmax pmax
comp=Z,39nm,0.9s,mb5.6
KAF Kangasniemi 88.23 332 *e*P **P 17 45 14.2 -2.3**
comp=Z,39nm,0.9s,mb5.6
KAF Kangasniemi 88.23 332 *e*p **P 17 45 14.2 -2.3**
comp=Z,39nm,0.9s,mb5.6,baz=78,slow=4.2
INK Inuvik 88.38 21 LR LR 18 28 37.3
comp=Z,158nm,19.7s,MS4.4,baz=263,slow=38
INK Inuvik 88.38 21 *e*P **P 17 45 16.0 -1.1**
INK pmax pmax
comp=Z,12nm,1.0s
INK Inuvik 88.38 21 *e*P **P 17 45 16.0 -1.0**
comp=Z,12nm,1.0s,mb5.1
FINES FINESS Array B 88.46 332 P **P 17 45 16.1 -1.5**
comp=Z,22nm,0.9s,mb5.4,baz=90,slow=6.7,SNR=42
FINES LR LR 18 28 05.3
comp=Z,202nm,21.6s,MS4.5,baz=74,slow=38
AKASG Malin Array Be 88.49 321 P **P 17 45 15.6 -2.4**
comp=Z,6.4nm,0.7s,mb5.0,baz=71,slow=4.6,SNR=27
AKASG LR LR 18 31 04.3
comp=Z,173nm,18.9s,MS4.5,baz=90,slow=40
AKBB Malin Array Si 88.49 321 *e*P **P 17 45 16.3 -1.6**
KIEV Kiev 88.50 321 *e*P **P 17 45 14.6 -3.4**
KIEV pmax pmax
comp=Z,7.0nm,0.8s,mb4.9
KIEV Kiev 88.50 321 *e*P **P 17 45 14.6 -3.4**
comp=Z,6.8nm,0.8s,mb4.9
IDID Didziasalis 89.23 326 *e*P **P 17 45 20.1 -1.2**
IDID AMB AMB 17 45 23.5
comp=Z,8.9nm,1.1s,mb5.0
NACGM Naroch 89.28 325 *e* **P 17 45 18.0 -3.6**
IZAR Zarasai 89.43 326 *e*P **P 17 45 21.3 -1.0**
IZAR AMB AMB 17 45 24.3
comp=Z,9.6nm,0.9s,mb5.1

IIGN Ignalina 89.51 326 *e*P **P 17 45 21.8 -0.9**
IIGN AMB AMB 17 45 23.9
comp=Z,8.1nm,0.8s,mb5.1
ISAL Salakas 89.53 326 *e*P **P 17 45 21.3 -1.4**
ISAL AMB AMB 17 45 24.8
comp=Z,6.1nm,1.2s,mb4.8
TESR 90.85 317⇑*i*P **P 17 45 27.5 -1.6**
VRI Vrincioaia 90.91 316⇓*i*P **P 17 45 28.9 -0.5**
SUW Suwalki 91.52 325 *e*P **P 17 45 31.0 -1.0**
MLR Muntele Rosu 91.52 316⇑*i*P **P 17 45 31.8 -0.4**
BUR0AR Bucovina Array 91.61 318⇑*i*P **P 17 45 31.7 -0.9**
BUR08 Bucovina Ar. S 91.61 318 *e*P **P 17 45 31.6 -1.1**
LVV L'vov 91.92 320 *e*P pP 17 45 44.1 +0.7
DLBC Dease Lake 92.45 31 LR LR 18 24 08.8
comp=Z,162nm,20.1s,MS4.5,baz=63,slow=34
UZH Uzhgorod 93.30 320⇓*i*P **P 17 45 40.0 -0.4**
UZH *e* 17 45 55.2
CRVS Cervenica-Dubn 93.77 320 *e*P **P 17 45 42.3 -0.2**
CRVS pmax pmax
comp=Z,19nm,1.2s,mb5.4
CRVS Cervenica-Dubn 93.77 320 *e*P **P 17 45 42.3 -0.2**
comp=Z,19nm,1.2s,mb5.4
CRVS Cervenica-Dubn 93.77 320 *e*P **P 17 45 42.3 -0.2**
SYO Syowa Base 94.23 201⇓*e*P **P 17 45 45.6 +1.4**
DAG Danmarks Havn 94.28 352⇓*i*P **P 17 45 43.3 -1.1**
DAG pmax pmax
comp=Z,5.0nm,0.6s,mb5.1
DAG Danmarks Havn 94.28 352⇓*i*P **P 17 45 43.3 -1.1**
comp=Z,5.3nm,0.6s,mb5.2
KECS Kecovo 94.50 320 *e*P **P 17 45 44.0 -1.9**
KECS pmax pmax
comp=Z,4.0nm,1.0s,mb4.8
KECS Kecovo 94.50 320 *e*P **P 17 45 44.0 -1.9**
comp=Z,3.7nm,1.0s,mb4.8
KECS Kecovo 94.50 320 *e*P **P 17 45 44.0 -1.9**
NB2 NORSAR Subarra 95.44 333 P **P 17 45 47.4 -2.5**
comp=Z,13nm,0.9s,mb5.3,baz=67,slow=4.6
NOA NORSAR Array B 95.44 333 P **P 17 45 47.5 -2.4**
comp=Z,11nm,0.9s,mb5.3,baz=67,slow=4.6,SNR=17
NOA PP PP 17 49 31.5 -8.9
comp=Z,1.5nm,0.9s,baz=66,slow=7.7,SNR=3.6
NOA LR LR 18 33 18.3
comp=Z,209nm,20.2s,MS4.6,baz=70,slow=38
VYHS Vyhne 95.56 320 *e*P **P 17 45 51.1 +0.4**
VYHS pmax pmax
comp=Z,3.0nm,1.4s,mb4.5
VYHS Vyhne 95.56 320 *e*P **P 17 45 51.1 +0.4**
comp=Z,2.7nm,1.4s,mb4.5
VYHS Vyhne 95.56 320 *e*P **P 17 45 51.1 +0.4**
OKC Ostrava-Krasne 95.61 321 *e*P **P 17 45 53.5 +2.6**
OKC AMS AMS 18 33 20.0
comp=Z,200nm,23.2s
MORC Moravsky Berou 96.00 321 P **P 17 45 48.9 -3.8**
QSPA South Pole Qui 96.36 180 *e*P **P 17 45 52.6 -1.1**
KSP Ksiaz 96.44 323 *e*P **P 17 45 54.6 -0.1**
DPC Dobruska-Polom 96.57 322 *e*P **P 17 45 55.6 +0.3**
DPC MLR MLR
comp=Z,200nm,18.5s,MS4.6
DPC Dobruska-Polom 96.57 322 *e*P **P 17 45 55.6 +0.3**
DPC LR LR
comp=Z,200nm,18.5s,MS4.6
DPC Dobruska-Polom 96.57 322 *e*P **P 17 45 55.6 +0.3**
DPC AMS AMS 18 33 10.0
comp=Z,200nm,18.5s
UPC Upice 96.71 322 *e*P **P 17 45 59.0 +3.1**
RUE Ruedersdorf 97.36 325 *e*P **P 17 45 58.0 -0.8**
comp=Z,30nm,0.9s,mb5.7
TREC Trest 97.42 321 AMS AMS 18 33 30.0
comp=Z,200nm,21.1s
PVCC Panska Ves 97.58 323 *e*P **P 17 46 00.3 +0.5**
PVCC MLR MLR
comp=Z,300nm,12.6s,MS5.0
PVCC Panska Ves 97.58 323 *e*P **P 17 46 00.3 +0.5**
PVCC LR LR
comp=Z,300nm,12.6s,MS5.0
PVCC Panska Ves 97.58 323 *e*P **P 17 46 00.3 +0.5**
PVCC AMS AMS 18 33 50.0
comp=Z,300nm,12.6s
PRU Pruhonice 97.77 322 *e*P **P 17 46 01.0 +0.2**
PRU LR LR
comp=Z,300nm,15.1s,MS4.9
PRU Pruhonice 97.77 322 *e*P **P 17 46 01.0 +0.2**
PRU AMS AMS 18 33 50.0
comp=Z,300nm,15.1s
BRG Berggiesshubel 97.83 323 *e*PKP **P 17 46 00.4 -0.6**
BRG
comp=Z,30nm,1.6s,mb5.6
BRG
comp=N,107nm,11.3s
BRG
comp=E,199nm,21.4s
BRG
comp=Z,162nm,19.3s
YKA Yellowknife Ar 97.85 24 P **P 17 45 59.7 -1.1**
comp=Z,2.7nm,0.9s,mb4.8,baz=296,slow=4.6,SNR=8.4
YKA Yellowknife Ar 97.85 24 P **P 17 45 59.7 -1.1**
CLL Collm 98.23 324 *e*P **P 17 46 02.1 -0.7**
comp=Z,26nm,1.6s,mb5.5
CLL Collm 98.23 324 *i* P **P 17 46 01.9 -0.9**
CLL *e*S S 17 57 25.0 -3.6
CLL pmax pmax
comp=Z,7.0nm,1.2s,mb5.1
CLL MLR MLR
comp=Z,200nm,20.4s,MS4.6
CLL Collm 98.23 324 *i* Pdif **P 17 46 01.9 -0.9**
comp=Z,7.0nm,1.2s,mb5.1
CLL *i* 17 46 04.8
CLL *i* 17 46 22.0
CLL *e*Sdif S 17 57 25.0 -3.6
CLL LR LR
comp=Z,200nm,20.4s,MS4.6
CLL Collm 98.23 324⇑*i*Pdif **P 17 46 01.9 -0.9**
comp=Z,7.0nm,1.2s,mb5.1
CLL *i* 17 46 04.8
comp=Z,26nm,1.6s
CLL *i* 17 46 22.0
CLL *e*PP PP 17 49 58.0 -4.2
CLL *e* 17 50 04.0
CLL *e*Sdif S 17 57 25.0 -3.6
CLL *e* 18 09 24.0
CLL LmV 18 33 00.0
comp=Z,200nm,20.4s
KHC Kasperske Hory 98.66 322 *e*P **P 17 46 04.8 +0.1**
KHC LR LR
comp=Z,300nm,19.9s,MS4.8
KHC Kasperske Hory 98.66 322 *e*P **P 17 46 04.8 +0.1**
KHC AMS AMS 18 34 20.0
comp=Z,300nm,19.9s
BSEG Bad Segeberg 98.75 327 *e*P **P 17 46 03.7 -1.3**
comp=Z,17nm,1.2s,mb5.5
TANN Tannenbergstha 98.88 323 *e*P **P 17 46 05.1 -0.6**
comp=Z,14nm,1.5s,mb5.3
NKC Novy Kostel 98.95 323 *e*P **P 17 46 08.7 +2.7**
NKC Novy Kostel 98.95 323 *e*P **P 17 46 08.7 +2.7**
NKC AMS AMS 18 35 00.0
WET Wettzell 99.08 322 *e*P **P 17 46 06.4 -0.2**
comp=Z,15nm,1.7s,mb5.2
MOX Moxa 99.29 324 *e*P **P 17 46 07.2 -0.3**
comp=Z,30nm,1.9s,mb5.5
MOX
comp=Z,200nm,18.0s
MOX Moxa 99.29 324 *e*P **P 17 46 06.9 -0.6**
comp=Z,25nm,1.7s,mb5.5
MOX Moxa 99.29 324 *e*P **P 17 46 07.2 -0.3**
MOX pmax pmax
comp=Z,30nm,1.9s,mb5.5
MOX MLR MLR
comp=Z,200nm,18.0s,MS4.7
NRDL Niedersach Rie 99.44 326 *e*P **P 17 46 07.0 -1.1**
comp=Z,26nm,1.3s,mb5.6
CLZ Clausthal 99.55 325 *e*P **P 17 46 08.3 -0.4**
comp=Z,25nm,1.2s,mb5.5
GRF Grafenberg Arr 99.89 323 *e*P Pdif 17 46 08.9 -1.2
comp=Z,23nm,1.6s
GRF *e*L 18 35 43.3
comp=Z,295nm,20.4s
GRF Grafenberg Arr 99.89 323 *e*P Pdif 17 46 08.9 -1.2
GRF pmax pmax
comp=Z,23nm,1.6s,mb5.4
GRF MLR MLR
comp=Z,300nm,20.4s,MS4.8
LPG La Plagne 104.34 320 *e*PP PP 17 50 47.4 -1.0
comp=Z,30nm,1.1s
LPL La Plagne 104.34 320 *e*PP PP 17 50 47.4 -1.0
comp=Z,29nm,1.1s
BORG Borgarnes 104.61 346 *e*P Pdif 17 46 28.9 -2.2

MBDF Montbardon 104.65 319 *e*PP PP 17 50 49.7 -1.0
comp=Z,28nm,1.2s
ORIF Oris-en-Rattie 105.15 320 *e*PP PP 17 50 53.5 -0.9
comp=Z,18nm,1.0s
NVAR Mina Array Bea 106.58 47 Pdiff Pdif 17 46 40.9 +1.0
comp=Z,0.5nm,0.8s,baz=259,slow=6.7,SNR=3.9
NVAR PKiKP PKiKP 17 50 52.5 +1.5
comp=Z,0.1nm,0.3s,baz=236,slow=4.5,SNR=5.1
PDAR Pinedale Array 110.61 40 PKiKP PKiKP 17 50 59.4 +1.0
comp=Z,0.3nm,0.5s,baz=270,slow=0.6,SNR=5.4
RSSD Black Hills 113.24 36 *e*PKIKP PKiKP 17 51 02.8 -0.5
SDCO Great Sand Dun 115.86 43 *e*PKPdif PKPdif 17 51 09.1 +0.5
ANMO Albuquerque 116.64 46 *e*PKIKP PKPdif 17 51 08.5 -1.6
SCHQ Schefferville 118.17 8 PKP PKPdif 17 51 11.4 -1.1
comp=Z,2.4nm,0.6s,baz=74,slow=4.1,SNR=5.6
MNTX Cornudas Mount 119.03 48 *e*PKPdif PKPdif 17 51 15.0 +0.2
TXAR Lajitas Array 121.48 50 PKP PKPdif 17 51 19.8 +0.2
comp=Z,2.7nm,1.1s,baz=318,slow=1.7,SNR=11
TXAR Lajitas Array 121.48 50 PKP PKPdif 17 51 19.8 +0.2
JFWS Jewell Farm 121.51 30 *e*PKIKP PKPdif 17 51 17.4 -1.9
JCT Junction City 123.75 47 *e*PKIKP PKPdif 17 51 23.8 -0.2
CCM Cathedral Cave 124.51 34 *e*PKIKP PKPdif 17 51 23.9 -1.3
FVM French Village 125.02 34 *e*PKIKP PKPdif 17 51 25.0 -1.2
MIAR Mount Ida 125.52 39 *e*PKIKP PKPdif 17 51 27.3 +0.1
OLIL Olney 125.71 31 *e*PKPdif PKPdif 17 51 26.8 -0.7
SIUC Southern Illin 125.87 33 *e*PKPdif PKPdif 17 51 27.6 -0.2
HKT Hockley 126.88 45 PKIKP PKPdif 17 51 29.7 -0.3
WCI Wyandotte Cave 127.02 30 *e*PKIKP PKPdif 17 51 29.8 -0.2
WVT Waverly 127.79 33 *e*PKIKP PKPdif 17 51 31.3 -0.2
DBIC Dimbokro 127.98 284 PKP PKPdif 17 51 31.3 -1.2
comp=Z,10nm,1.1s,baz=358,slow=1.2,SNR=3.2
DBIC Dimbokro 127.98 284 PKP PKPdif 17 51 31.3 -1.2
SWET Sewanee 129.50 33 *e*PKPdif PKPdif 17 51 34.2 -0.6
LRAL Lakeview Retre 130.52 35 *e*PKPdif PKPdif 17 51 36.1 -0.7
PLCA Paso Flores 143.27 161 PKP PKPdif 17 51 59.0 -1.1
comp=Z,2.0nm,1.0s,baz=199,slow=22,SNR=3.1
PLCA Paso Flores 143.27 161 PKP PKPdif 17 51 59.0 -1.1
JTS JuntasAbangare 146.12 61 *e*PKP2 PKPab 17 52 05.9 -1.4
BCIP Isla Barro Col 151.05 58 *e*PKPdif PKPdif 17 52 15.2 +1.5
ROSC El Rosal 157.94 60 PKP PKPdif 17 52 24.4 +1.1
comp=Z,7.6nm,0.4s,baz=112,slow=16,SNR=3.9
LPAZ La Paz 164.11 129 PKP PKPdif 17 52 32.2 +2.4
comp=Z,2.1nm,0.9s,baz=75,slow=3.6,SNR=7.9
LPAZ PKPab PKPab 17 53 25.6 +2.3
comp=Z,6.8nm,1.1s,baz=246,slow=3.3,SNR=8.2
LPAZ La Paz 164.11 129 PKP PKPdif 17 52 32.2 +2.4
LPAZ PKPab PKPab 17 53 25.6 +2.3

*TRN **10** 17:49:60.0, 19°.37N×63°.68W, h3km*
*NEIC **10** 17:50:02.6, 19°.66N×63°.51W, h24km, MD3.9(RSPR),*
After RSPR.
RSPR 10 17:50:02.6, 19°.66N×63°.51W, h25km±11km, 13C-6D,
Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**1.62**	**221**⇑	*i*P	Pn	17 50 27.5	-2.2
TBVI	**Tortola**	**1.62**	**221**⇑	*i*P	Pn	17 50 27.5	-2.2
STVI	**Saint Thomas**	**1.89**	**227**⇑	*e*P	Pn	17 50 31.2	-2.1
STVI				*e*S	Sn	17 50 53.9	-2.5
STVI	**Saint Thomas**	**1.89**	**227**⇑	*e*P	Pn	17 50 31.2	-2.1
STVI				*e*S	Sn	17 50 53.9	-2.5
MTP	**Monte Pirata**	**2.48**	**232**⇑	*e*P	Pn	17 50 39.9	-1.6
MTP				*e*S	Sn	17 51 08.6	-2.5
MTP	**Monte Pirata**	**2.48**	**232**⇑	*e*P	Pn	17 50 39.9	-1.6
MTP				*e*S	Sn	17 51 08.6	-2.5
CBYP	**Canovanas**	**2.62**	**239**⇑	*e*P	Pn	17 50 41.8	-1.6
CBYP	**Canovanas**	**2.62**	**239**⇑	*e*P	Pn	17 50 41.8	-1.6
HUMP	**Col San Antoni**	**2.68**	**236**⇑	*i*P	Pn	17 50 42.5	-1.8
HUMP				*e*S	Sn	17 51 14.4	-1.6
HUMP	**Col San Antoni**	**2.68**	**236**⇑	*i*P	Pn	17 50 42.5	-1.8
HUMP				*e*S	Sn	17 51 14.4	-1.6
SJG	**San Juan**	**2.94**	**239**⇓	*e*P	Pn	17 50 46.2	-1.6
SJG	**San Juan**	**2.94**	**239**⇓	*i*P	Pn	17 50 46.3	-1.5
SJG	**San Juan**	**2.94**	**239**⇓	*e*P	Pn	17 50 46.2	-1.6
SJG	**San Juan**	**2.94**	**239**⇓	*i*P	Pn	17 50 46.3	-1.5
CELP	**Cerrillos**	**3.31**	**242**⇓	*i*P	Pn	17 50 51.4	-1.5
CELP	**Cerrillos**	**3.31**	**242**⇓	*i*P	Pn	17 50 51.4	-1.5
AOPR	**Arecibo Observ**	**3.34**	**248**⇑	*e*P	Pn	17 50 52.3	-1.0
AOPR	**Arecibo Observ**	**3.34**	**248**⇑	*e*P	Pn	17 50 52.3	-1.0
CRPR	**Cabo Rojo, PR**	**3.79**	**245**⇑	*e*P	Pn	17 50 58.5	-0.9
CRPR				*e*S	Sn	17 51 41.2	-2.1
CRPR	**Cabo Rojo, PR**	**3.79**	**245**⇑	*e*P	Pn	17 50 58.5	-0.9
CRPR				*e*S	Sn	17 51 41.2	-2.1

*JMA **10** 17:51:04.9±0.1, 24°.39N×123°.05E, h59km±1km, M2.9*
*ISCJB **10** 17:51:05.7±0.4, 24°.41N±0°.05×123°.05E±0°.02, h51km±7km,*
Error ellipse: s-maj=7.8km s-min=2.9km az=179.7
*TAP **10** 17:51:05.3, 24°.39N×122°.96E, h19km±1km, ML3.3, D*
ISC 10 17:51:06.4±0.4, 24°.42N±0°.05×123°.05E±0°.02, h48km±8km,
n29, σ0°.86/50, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.06**	**316**	P	**Pn**	**17 51 13.8**	**0.0**
YOJ				*e*S	**Sn**	**17 51 20.0**	**+1.0**
IRIF	**Iriomote-Funau**	**0.62**	**98**	P	**Pn**	**17 51 18.1**	**-0.9**
IRIF				*e*S	**Sn**	**17 51 28.1**	**0.0**
HATJ	**Hateruma jima**	**0.78**	**118**	P	**Pn**	**17 51 19.9**	**-1.1**
HATJ				*e*S	**Sn**	**17 51 31.3**	**-0.4**
JKRS	**Kuro-shima**	**0.89**	**102**	P	**Pn**	**17 51 21.7**	**-0.9**
JKRS				*e*S	**Sn**	**17 51 34.5**	**+0.1**
JIJ	**Ishigaki jima**	**1.00**	**93**	P	**Pn**	**17 51 22.8**	**-1.2**
JIJ				*e*S	**Sn**	**17 51 36.5**	**-0.4**
TWC	**Suao**	**1.11**	**280**	P	**Pn**	**17 51 24.4**	**-1.1**
TWC	baz=282			*e*S	**Sn**	**17 51 38.9**	**-0.8**
TWB1	**Santiao Chiao**	**1.13**	**301**	*e*P	**Pn**	**17 51 25.1**	**-0.7**
TWB1	baz=305			*e*S	**Sn**	**17 51 39.4**	**-0.8**
ENA	**Nanau**	**1.20**	**271**	P	**Pn**	**17 51 25.9**	**-0.8**
TWE	baz=271			*e*S	**Sn**	**17 51 27.2**	**-0.8**
TWE	**Neicheng**	**1.30**	**284**	P	**Pn**	**17 51 27.2**	**-0.8**
TWE	baz=285			*e*S	**Sn**	**17 51 43.9**	**-0.3**
NWF	**Wu-fen Shan**	**1.32**	**299**	*e*S	**Sn**	**17 51 45.4**	**+0.4**
TWA	**Mucha**	**1.45**	**293**	*e*P	**Pn**	**17 51 30.4**	**+0.3**
JTJ	**Tarama**	**1.52**	**81**	P	**Pn**	**17 51 30.4**	**-0.7**
JTJ				*e*S	**Sn**	**17 51 50.1**	**+0.4**
NSK	**Sanguang**	**1.56**	**280**	P	**Pn**	**17 51 31.6**	**-0.1**
NSK	baz=281			*e*S	**Sn**	**17 51 51.3**	**+0.5**
TWY	**Chenhua**	**1.57**	**303**	P	**Pn**	**17 51 31.9**	**+0.1**
TWS1	**Kuangyinshan**	**1.63**	**295**	*e*P	**Pn**	**17 51 33.8**	**+1.1**
WHF	**Hehuan Shan**	**1.66**	**261**	P	**Pn**	**17 51 32.4**	**-0.6**
WHF	baz=260			S	**Sn**	**17 51 52.2**	**-0.8**
TWT	**Tachien**	**1.72**	**265**	*e*P	**Pn**	**17 51 35.9**	**+2.0**
TWT	baz=265			*e*S	**Sn**	**17 51 53.9**	**-0.7**
NSTT	**Nanjuang**	**1.88**	**277**	*e*P	**Pn**	**17 51 35.7**	**-0.3**
NSTT	baz=277			*e*S	**Sn**	**17 51 59.2**	**+0.6**
SMLT	**Sun Moon Lake**	**2.04**	**255**	*e*P	**Pn**	**17 51 38.6**	**+0.4**
SMLT	baz=254			S	**Sn**	**17 52 01.4**	**-1.1**
JMJ	**Miyako jima 2**	**2.08**	**79**	*e*S	**Sn**	**17 52 04.4**	**+1.0**
YUS	**Yu-Shan**	**2.13**	**245**	P	**Pn**	**17 51 39.1**	**-0.4**
YUS	baz=243			*e*S	**Sn**	**17 52 02.3**	**-2.6**
JOGS	**Gusukube**	**2.17**	**81**	P	**Pn**	**17 51 40.0**	**0.0**
JOGS				*e*S	**Sn**	**17 52 06.9**	**+1.2**
TCU	**Taichung**	**2.19**	**263**	*e*P	**Pn**	**17 51 41.6**	**+1.4**
ALS	**Alishan**	**2.25**	**247**	*e*P	**Pn**	**17 51 41.0**	**-0.1**
ALS	baz=245			*e*S	**Sn**	**17 52 06.9**	**-0.7**
CHN5	**Tsauling**	**2.32**	**250**	*e*P	**Pn**	**17 51 43.7**	**+1.6**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHN5	baz=249			eS	Sn	17 52 09.3	-0.1
CHN4	baz=249 **Tsaushan**	**2.49**	**245**	eP	Pn	17 51 45.8	+1.3
CHN4	baz=244			eS	Sn	17 52 14.3	+0.7
WTP	baz=244 **Ta-pu**	**2.52**	**243**	P	Pn	17 51 45.5	+0.7
CHN1	baz=241 **Nanshi**	**2.62**	**242**	eP	Pn	17 51 47.2	+1.0
CHN1	baz=241			eS	Sn	17 52 17.2	+0.4
SGST	baz=241 **Jiashian**	**2.63**	**240**	eP	Pn	17 51 46.9	+0.6
SGST	baz=239			eS	Sn	17 52 18.0	+1.0
	baz=239						

*IDC **10** 17:55:51.8±1.9, 24.°04N×122.°20E, h0km, mb3.4/5, mb1 3.5/5, mb1mx3.3/23, mbtmp3.4/5, Error ellipse: s-maj=159.1km s-min=19.9km az=65.0*
*NEIC **10** 17:55:53.0±1.0, 23.°97N×122.°41E, h10km, Error ellipse: s-maj=14.3km s-min=11.3km az=71.0*
*ISCJB **10** 17:55:55.2±0.9, 23.°96N±0.°02×122.°37E±0.°02, h12km±7km, mb3.3/5, Error ellipse: s-maj=3.6km s-min=2.5km az=171.2*
*TAP **10** 17:55:56.8, 24.°01N×122.°25E, h15km±1km, ML3.7, D*
*JMA **10** 17:55:56.6±0.2, 24.°05N×122.°35E, h37km, M3.3*
ISC 10 17:55:55.4±0.6, 23.°99N±0.°02×122.°36E±0.°02, h12km±4km, n53, σ0§92/81, mb3.3/5, 2C-1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.72**	**308**	P	Pg	17 56 09.6	+0.2
ENA	baz=312			eS	Sg	17 56 18.5	-0.3
NACB	baz=312 **Ninganchiao**	**0.73**	**285**	eP	Pg	17 56 09.2	-0.3
YOJ	**Yonaguni jima**	**0.76**	**51**	P	Pg	17 56 10.5	+0.4
YOJ				S	Sg	17 56 20.3	+0.3
TWC	**Suao**	**0.78**	**323**	⇑iP	Pg	17 56 10.3	-0.1
TWC	baz=329			eS	Sg	17 56 20.8	+0.1
ILA	baz=329 **Ilan**	**0.96**	**324**	eP	Pb	17 56 14.5	+0.6
ILA	baz=329			eS	Sg	17 56 26.4	0.0
TWE	baz=329 **Neicheng**	**0.97**	**319**	P	Pb	17 56 14.1	0.0
TWE	baz=323			eS	Sg	17 56 26.3	-0.4
NNS	baz=323 **Nan Shan**	**1.01**	**297**	P	Pb	17 56 14.6	-0.2
WHF	baz=298 **Hehuan Shan**	**1.02**	**279**	P	Pb	17 56 14.2	-0.7
WHF	baz=278			eS	Sb	17 56 27.1	-1.1
TWB1	baz=278 **Santiao Chiao**	**1.07**	**342**	⇑iP	Pb	17 56 15.7	-0.2
TWB1	baz=346			eS	Sb	17 56 30.9	+1.1
TWT	baz=346 **Tachien**	**1.12**	**284**	eP	Pb	17 56 16.6	-0.1
TWT	baz=283			eS	Sb	17 56 30.5	-0.6
YHNB	baz=283 **Yeheng**	**1.13**	**307**	eP	Pb	17 56 16.2	-0.7
YULB	**Yu-li**	**1.14**	**239**	eP	Pb	17 56 14.9	-2.1
NSK	**Sanguang**	**1.14**	**307**	P	Pb	17 56 16.8	-0.3
NSK	baz=309			eS	Sb	17 56 31.3	-0.6
NWF	baz=309 **Wu-fen Shan**	**1.20**	**334**	iP	Pn	17 56 17.9	-0.1
NWF	baz=337			eS	Sb	17 56 34.1	+0.5
TWA	baz=337 **Mucha**	**1.22**	**324**	P	Pn	17 56 18.6	+0.4
TWA	baz=328			eS	Sb	17 56 35.9	+1.9
TATO	baz=328 **Taipei**	**1.27**	**321**	eP	Pn	17 56 18.2	-0.7
IRIF	**Iriomote-Funau**	**1.30**	**74**	P	Pn	17 56 19.0	-0.3
IRIF				eS	Sb	17 56 35.3	-1.0
TAP1	**Taipei**	**1.30**	**324**	eP	Pn	17 56 19.6	+0.3
TAP1	baz=326			eS	Sb	17 56 37.2	+0.9
SSLB	baz=326 **Suanglung**	**1.30**	**261**	eP	Pn	17 56 17.5	-1.9
HATJ	**Hateruma jima**	**1.32**	**87**	P	Pn	17 56 19.3	-0.3
HATJ				S	Sb	17 56 36.5	-0.5
SMLT	**Sun Moon Lake**	**1.34**	**266**	iP	Pn	17 56 19.2	-0.8
SMLT	baz=264			eS	Sb	17 56 36.2	-1.4
YUS	baz=264 **Yu-Shan**	**1.39**	**249**	P	Pn	17 56 20.0	-0.5
YUS	baz=246			S	Sn	17 56 37.2	-1.5
NSTT	baz=246 **Nanjuang**	**1.40**	**298**	eP	Pn	17 56 21.5	+0.8
NSTT	baz=298			eS	Sn	17 56 37.6	-1.4
TWS1	baz=298 **Kuangyinshan**	**1.40**	**322**	eP	Pn	17 56 21.2	+0.5
TWS1	baz=325			eS	Sn	17 56 38.3	-0.8
NCU	baz=325 **National Centr**	**1.45**	**313**	eP	Pn	17 56 21.8	+0.3
TWY	baz=314 **Chenhua**	**1.46**	**332**	eP	Pn	17 56 22.7	+1.2
TWY	baz=335			eS	Sn	17 56 40.1	-0.5
ALS	baz=335 **Alishan**	**1.50**	**252**	⇓iP	Pn	17 56 22.0	-0.2
ALS	baz=249			eS	Sn	17 56 40.7	-1.0
NSY	baz=249 **Sanyi**	**1.52**	**287**	eP	Pn	17 56 23.4	+1.0
JKRS	baz=286 **Kuro-shima**	**1.52**	**80**	P	Pn	17 56 22.4	0.0
WNT	**Mingjian**	**1.54**	**266**	eP	Pn	17 56 23.6	+1.0
TCU	baz=264 **Taichung**	**1.55**	**276**	eP	Pn	17 56 23.8	+1.0
CHN5	baz=275 **Tsauling**	**1.59**	**256**	eP	Pn	17 56 23.7	+0.3
CHN5	baz=254			eS	Sn	17 56 43.9	0.0
TWG	baz=254 **Pinlang**	**1.66**	**226**	eP	Pn	17 56 20.5	-3.8
JIJ	**Ishigaki jima**	**1.67**	**77**	P	Pn	17 56 23.8	-0.6
JIJ				S	Sn	17 56 45.1	-0.6
WGK	**Gukeng**	**1.68**	**260**	eP	Pn	17 56 25.3	+0.8
TPUB	baz=258 **Ta-pu**	**1.73**	**247**	eP	Pn	17 56 24.9	-0.4
CHN4	**Tsaushan**	**1.74**	**249**	P	Pn	17 56 26.1	+0.7
CHN4	baz=246			eS	Sn	17 56 49.0	+1.5
WTP	baz=246 **Ta-pu**	**1.77**	**246**	P	Pn	17 56 26.1	+0.3
WTP	baz=242			eS	Sn	17 56 48.5	+0.4
CHN1	baz=242 **Nanshi**	**1.86**	**245**	P	Pn	17 56 27.8	+0.7
TWK	baz=242 **Hsinying**	**1.86**	**248**	eP	Pn	17 56 27.9	+0.8
TWK	baz=245			eS	Sn	17 56 51.6	+1.0
SGST	baz=245 **Jiashian**	**1.87**	**241**	P	Pn	17 56 27.4	+0.3
SGST	baz=238			eS	Sn	17 56 52.0	+1.4
WSF	baz=238 **Szhu**	**1.99**	**260**	eP	Pn	17 56 30.0	+1.2
CHN8	baz=258 **Yiju**	**2.07**	**252**	eP	Pn	17 56 30.6	+0.6
TWM1	baz=250 **Shoushan**	**2.13**	**237**	eP	Pn	17 56 33.0	+2.3
JTJ	baz=234 **Tarama**	**2.23**	**73**	P	Pn	17 56 31.9	-0.3
JTJ				S	Sn	17 57 00.2	+0.6
SCZT	**Fangliau**	**2.27**	**225**	eP	Pn	17 56 34.4	+1.6
PNG	baz=222 **Penghu**	**2.61**	**261**	eP	Pn	17 56 37.2	-0.1
JOGS	baz=259 **Gusukube**	**2.88**	**74**	P	Pn	17 56 41.4	+0.3
JOGS				S	Sn	17 57 17.3	+1.7
SONM	**Songino Array**	**26.98**	**336**	P	P	18 01 34.8	-2.0
	0.8nm,0.7s,mb3.4,baz=140,slow=8.9,SNR=6.6						
MKAR	**Makanchi Array**	**39.23**	**316**	P	P	18 03 20.6	-2.9
	0.4nm,0.7s,mb3.3,baz=93,slow=8.7,SNR=2.7						
ZALV	**Zalesovo Beam**	**41.00**	**327**	P	P	18 03 34.8	-3.3
	0.2nm,0.3s,mb3.2,baz=108,slow=9.5,SNR=4.2						
WRA	**Warramunga Arr**	**45.20**	**164**	P	P	18 04 11.3	-1.0
	0.5nm,0.8s,mb3.4,baz=348,slow=9.2,SNR=3.3						
ASAR	**Alice Springs**	**48.68**	**166**	P	P	18 04 38.6	-0.9
	0.1nm,0.4s,mb3.2,baz=344,slow=6.4,SNR=6.1						

*DJA **10** 18:23:49, 2.°41N×95.°22E, h10km, MLv4.0/3*
*IDC **10** 18:23:53.4±1.3, 2.°31N×95.°46E, h0km, mb3.7/7, mb1 3.7/9, mb1mx3.6/24, mbtmp3.6/9, ML3.1/2, MS3.1/2, Ms1 3.1/2, ms1mx2.6/29, Error ellipse: s-maj=44.6km s-min=19.1km az=52.0*
*ISCJB **10** 18:23:56.6±0.8, 2.°41N±0.°10×95.°64E±0.°09, h33km, mb3.7/8, Error ellipse: s-maj=16.6km s-min=9.4km az=42.9*
*NEIC **10** 18:23:58.9±1.0, 2.°42N×95.°57E, h35km, mb4.1/1, Error ellipse: s-maj=26.5km s-min=13.2km az=52.0*
ISC 10 18:23:59.2±0.8, 2.°47N±0.°10×95.°73E±0.°09, h35km, n21, σ1§28/22, mb3.7/8, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**1.65**	**61**	P	Pn	18 24 23.7	-2.0
TPTI				S	Sn	18 24 53.2	+7.6
TSI	**Tuntungan**	**3.01**	**70**	P	Pn	18 24 45.3	+0.9
PSI	**Prapat**	**3.21**	**84**	Pn	Pn	18 24 49.2	+2.1
	0.6nm,0.3s,baz=289,slow=18,SNR=5.5						
PSI				LR	LR	18 25 44.6	
	comp=Z,123nm,18.2s,baz=64,slow=32						
PSI	**Prapat**	**3.21**	**84**	Pn	Pn	18 24 49.2	+2.1
PSI				LR	LR	18 25 44.6	
MNSI	**Mandailing Nat**	**4.19**	**113**	P	Pn	18 24 59.5	-1.1
MNSI				S	Sn	18 25 55.9	+7.5
PPI	**Padang Panjang**	**5.49**	**122**	P	Pn	18 25 18.1	-0.5
KULM	**Kulim**	**5.65**	**60**	eP	Pn	18 25 18.8	-2.0
	21nm,0.8s						
CMAR	**Chiang Mai Arr**	**16.20**	**11**	Pn	Pn	18 27 44.5	+0.3
	0.1nm,0.3s,baz=198,slow=11,SNR=3.9						
LSA	**Lhasa**	**27.43**	**351**	eP	P	18 29 40.9	-0.9
	3.7nm,0.8s,mb4.0						
WRA	**Warramunga Arr**	**43.95**	**122**	P	P	18 32 03.4	+0.2
	0.6nm,0.9s,mb3.3,baz=301,slow=9.0,SNR=4.1						
ASAR	**Alice Springs**	**45.32**	**127**	P	P	18 32 13.2	-1.0
	0.3nm,0.8s,mb3.2,baz=296,slow=8.1,SNR=7.3						
KSRS	**Korea Array**	**45.67**	**36**	LR	LR	18 52 41.4	
	comp=Z,36nm,19.5s,baz=215,slow=38						
MKAR	**Makanchi Array**	**45.68**	**347**	P	P	18 32 15.3	-1.2
	0.4nm,0.6s,mb3.5,baz=170,slow=8.6,SNR=4.1						
MKAR	**Makanchi Array**	**45.68**	**347**	P	P	18 32 15.3	-1.3
SONM	**Songino Array**	**46.12**	**10**	P	P	18 32 22.7	+2.7
	0.6nm,0.8s,mb3.6,baz=180,slow=9.4,SNR=3.6						
SONM	**Songino Array**	**46.12**	**10**	P	P	18 32 22.7	+2.7
KURK	**Kurchatov**	**50.21**	**346**	eP	P	18 32 52.2	+0.7
ZALV	**Zalesovo Beam**	**52.09**	**352**	P	P	18 33 05.8	+0.2
	1.6nm,0.7s,mb4.0,baz=180,slow=7.1,SNR=6.5						
STKA	**Stephens Creek**	**55.29**	**132**	P	P	18 33 31.4	+2.0
	2.6nm,0.8s,mb4.3,baz=308,slow=12,SNR=3.2						
STKA	**Stephens Creek**	**55.29**	**132**	P	P	18 33 31.4	+2.0
BRTR	**Keskin Array B**	**67.18**	**312**	P	P	18 34 49.4	-0.5
	0.3nm,0.4s,mb3.7,baz=124,slow=6.4,SNR=4.3						

*BJI **10** 18:23:59.0, 38.°31N×134.°11E, h432km, mB4.5/11, mb4.7/21*
*NIED **10** 18:24:00, 38.°30N×134.°10E, h440km, Mw4.1 Best double couple: M0=1.43000×10^15 NP1:φ=50.00000°, δ=60.00000°, λ=-143.00000°. NP2:φ=299.00000°, δ=58.00000°, λ=-36.00000°.*
*JMA **10** 18:24:00.6±0.2, 38.°29N×134.°09E, h447km±2km, M3.5*
*ISCJB **10** 18:24:00.8±0.2, 38.°29N±0.°04×134.°11E±0.°05, h444km±4km, mb3.9/24, Error ellipse: s-maj=7.0km s-min=5.7km az=166.8*
*MOS **10** 18:24:00.5±0.6, 38.°33N×134.°10E, h439km, mb4.0/5, Error ellipse: s-maj=14.7km s-min=10.5km az=130.3*
*IDC **10** 18:24:01.3±0.7, 38.°35N×134.°11E, h429km±9km, mb3.3/11, mb1 3.3/15, mb1mx3.2/29, mbtmp3.3/15, Error ellipse: s-maj=14.8km s-min=9.7km az=46.0*
*NEIC **10** 18:24:01.5±0.4, 38.°32N×134.°07E, h435km±7km, mb4.2/9, Error ellipse: s-maj=10.2km s-min=7.8km az=55.0*
ISC 10 18:24:01.6±0.2, 38.°29N±0.°04×134.°07E±0.°05, h435km±4km, n68, σ0§75/84, mb3.9/24, 2C, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAI	**Saigo**	**2.17**	**196**	P	P	18 25 02.3	+0.5
SAI				S	S	18 25 49.9	-0.6
JHG	**Hegura jima**	**2.29**	**100**	P	P	18 25 03.0	+0.5
JHS	**Saijyo**	**3.37**	**193**	P	P	18 25 10.5	0.0
JHS				S	S	18 26 05.7	-0.7
MAJO	**Matsushiro**	**3.72**	**117**	eP	P	18 25 13.4	0.0
MAT	**Matsushiro**	**3.72**	**117**	P	P	18 25 13.4	0.0
MAT				S	S	18 26 12.5	+0.8
MAT	**Matsushiro**	**3.72**	**117**	P	P	18 25 13.4	0.0
MAT				S	S	18 26 12.0	+0.3
MJAR	**Matsushiro Arr**	**3.73**	**117**	P	P	18 25 13.7	+0.3
	1.9nm,0.3s,baz=298,slow=10,SNR=86						
MJAR				S	S	18 26 10.9	-0.8
	0.6nm,0.3s,baz=352,slow=16,SNR=2.9						
JIE	**Ise**	**4.43**	**151**	P	P	18 25 20.4	+0.5
JIE				S	S	18 26 22.0	-1.5
JRY	**Ryogami san**	**4.47**	**119**	P	P	18 25 22.2	+2.0
JRY				S	S	18 26 22.7	-1.4
JWZ	**Kozaga**	**4.93**	**164**	P	P	18 25 24.6	-0.1
KSRS	**Korea Array**	**4.94**	**262**	P	P	18 25 25.0	+0.4
	2.0nm,0.3s,baz=76,slow=10,SNR=77						
KSRS				S	S	18 26 33.3	+1.1
	baz=86,slow=17,SNR=5.5						
KSRS	**Korea Array**	**4.94**	**262**	P	P	18 25 25.0	+0.4
KSRS				S	S	18 26 33.3	+1.1
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.3s						
JOD2	**Odawara 2**	**5.03**	**125**	P	P	18 25 26.4	+0.8
JOD2				S	S	18 26 32.9	-1.1
VLA	**Vladivostok**	**5.10**	**342**	c iP	P	18 25 26.5	+0.5
JTO	**Tosashimizu**	**5.52**	**191**	P	P	18 25 30.7	+0.2
JOSM	**Okushiri--Mats**	**5.61**	**46**	P	P	18 25 32.1	+0.9
JOSM				S	S	18 26 43.8	-0.6
JMK	**Ichinoseki**	**5.63**	**81**	P	P	18 25 31.7	+0.2
JOT	**Ohata**	**6.19**	**58**	P	P	18 25 36.9	-0.3
JKB	**Kayabe**	**6.43**	**54**	P	P	18 25 40.6	+0.8
BSO1	**Boso 1**	**6.64**	**121**	P	P	18 25 40.8	-1.4
BSO1				S	S	18 27 00.5	-3.9
JHJ	**Hachijo jima 2**	**6.94**	**136**	P	P	18 25 46.5	+1.1
	comp=Z,3.7nm,0.3s,baz=151,slow=19,SNR=4.7						
JHJ				S	S	18 27 11.9	+1.6
	comp=Z,11nm,0.3s,baz=79,slow=23,SNR=5.5						
MDJ	**Mudanjiang**	**7.16**	**333**	eP	P	18 25 47.8	+0.4
	comp=Z,24nm,0.9s						
ERM	**Erimo**	**7.89**	**59**	eP	P	18 25 54.5	-0.9
ERM				pmax	pmax		
	comp=Z,43nm,0.6s						
ERM	**Erimo**	**7.89**	**59**	eP	P	18 25 54.5	-1.0
	comp=Z,43nm,0.6s						
ASAJ	**Asahikawa**	**8.67**	**45**	P	P	18 26 03.2	-0.7
	comp=Z,2.4nm,0.3s,baz=239,slow=9.2,SNR=36						
ASAJ				S	S	18 27 38.5	-5.9
	comp=Z,0.9nm,0.3s,baz=139,slow=19,SNR=14						
ASAJ	**Asahikawa**	**8.67**	**45**	P	P	18 26 03.3	-0.6
ASAJ				S	S	18 27 38.5	-5.9
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
KLR	**Kul'dur**	**11.06**	**352**	eP	P	18 26 25.8	-4.3
NJ2	**Nanjing**	**13.91**	**248**	eP	P	18 27 01.9	+0.5
NJ2				pmax	pmax		
	comp=Z,50nm,0.7s						
BJI	**Beijing**	**14.00**	**283**	P	P	18 27 02.6	+0.4
BJI				pmax	pmax		
	comp=Z,20nm,0.8s						
BJI				pmax	pmax		
	comp=Z,51nm,4.0s						
BJT	**Baijiatuau**	**14.01**	**283**	eP	P	18 27 02.7	+0.4
BJT				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BJT	**Baijiatuau**	**14.01**	**283**	eP	P	18 27 02.6	+0.4
	comp=Z,9.6nm,0.5s						
HHC	**Hu-ho-hao-te**	**17.54**	**285**	eP	P	18 27 39.8	0.0
HHC				S	S	18 30 37.1	-3.0
HHC				pmax	pmax		
	comp=Z,15nm,0.6s						
HHC				pmax	pmax		
	comp=Z,96nm,5.0s						
XAN	**Xi'an**	**20.72**	**266**	P	P	18 28 09.6	-0.8
XAN				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ENH	**Enshi**	**21.79**	**256**	eP	P	18 28 19.2	-0.9
	comp=Z,35nm,0.6s,mb5.0						
ULN	**Ulaanbaatar**	**21.84**	**305**	eP	P	18 28 19.6	-0.7
ULN				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.0						
ULN	**Ulaanbaatar**	**21.84**	**305**	eP	P	18 28 19.6	-0.8
	comp=Z,3.6nm,0.6s,mb4.0						
SONM	**Songino Array**	**22.26**	**304**	P	P	18 28 24.7	+0.6
	comp=Z,2.5nm,0.5s,mb3.9,baz=113,slow=10.0,SNR=16						
LZH	**Lanzhou**	**24.14**	**274**	eP	P	18 28 41.2	0.0
LZH				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.4						
LZH				pmax	pmax		
	comp=Z,98nm,5.0s						
GTA	**Gaotai**	**26.61**	**283**	eP	P	18 29 03.1	0.0
GTA				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.2						
BILL	**Bilibino**	**34.69**	**21**	eP	P	18 30 13.6	+1.0
BILL				e		18 32 33.5	
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.6						
CHTO	**Chiang Mai**	**36.16**	**247**	eP	P	18 30 25.5	0.0
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb3.9						
CHTO	**Chiang Mai**	**36.16**	**247**	eP	P	18 30 25.5	0.0
	comp=Z,4.6nm,0.8s,mb3.9						
CMAR	**Chiang Mai Arr**	**36.38**	**247**	P	P	18 30 27.9	+0.5
	comp=Z,1.5nm,0.6s,mb3.5,baz=48,slow=7.5,SNR=15						
ZALV	**Zalesovo Beam**	**36.74**	**312**	P	P	18 30 28.9	-1.1
	comp=Z,1.0nm,0.4s,mb3.5,baz=102,slow=6.8,SNR=6.3						
ZALV				PcP	PcP	18 32 41.6	+0.5
	comp=Z,1.0nm,0.6s,baz=90,slow=4.4,SNR=4.8						
MK31	**Makanchi Array**	**38.48**	**300**	eP	P	18 30 44.0	-0.4
MKAR	**Makanchi Array**	**38.48**	**300**	P	P	18 30 44.0	-0.4
	comp=Z,2.3nm,0.7s,mb3.6,baz=90,slow=10,SNR=28						
MKAR	**Makanchi Array**	**38.48**	**300**	P	P	18 30 44.0	-0.4
TAPN	**Taplejung**	**40.09**	**268**	eP	P	18 30 57.4	-0.4
KURK	**Kurchatov**	**40.53**	**306**	⇑iP	P	18 30 59.8	-1.2
KURK				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.1						
KURK	**Kurchatov**	**40.53**	**306**	eP	P	18 31 00.3	-0.7
	comp=Z,9.8nm,1.0s,mb4.1						
ODAN	**Odare**	**40.57**	**268**	eP	P	18 31 01.5	-0.2
JIRN	**Jiri**	**41.15**	**270**	eP	P	18 31 06.6	+0.4
RAMN	**Ramite**	**41.15**	**268**	eP	P	18 31 06.4	+0.1
	comp=Z,11nm,0.7s,mb4.3						
GUN	**Gumba**	**41.27**	**270**	eP	P	18 31 07.5	+0.2
	comp=Z,32nm,0.7s,mb4.8						
KKN	**Kakani**	**41.80**	**270**	eP	P	18 31 11.4	-0.1
	comp=Z,16nm,0.7s,mb4.5						
GKN	**Gorkha**	**42.21**	**271**	eP	P	18 31 14.5	-0.2
	comp=Z,14nm,0.6s,mb4.5						
BVAR	**Borovoye Array**	**45.37**	**310**	P	P	18 31 38.8	-0.3
	comp=Z,1.1nm,0.5s,mb3.5,baz=94,slow=7.7,SNR=8.4						
ARU	**Arti**	**51.50**	**317**	eP	P	18 32 24.7	-0.3
ARU				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb3.8						
ARU	**Arti**	**51.50**	**317**	eP	P	18 32 24.7	-0.3
	comp=Z,3.8nm,0.6s,mb3.8						
ABKAR	**Akbulak array**	**52.62**	**308**	eP	P	18 32 32.8	-0.3
	comp=Z,4.4nm,0.6s,mb3.9						
WRA	**Warramunga Arr**	**57.92**	**180**	P	P	18 33 10.7	0.0
	comp=Z,1.2nm,0.7s,mb3.4,baz=356,slow=7.6,SNR=15						
ARCES	**ARCESS Array B**	**60.69**	**338**	P	P	18 33 29.3	+0.6
	comp=Z,1.5nm,0.8s,mb3.5,baz=27,slow=8.2,SNR=3.8						
ASAR	**Alice Springs**	**61.63**	**180**	P	P	18 33 36.5	+1.1
	comp=Z,1.8nm,1.0s,mb3.6,baz=2.9,slow=7.8,SNR=19						
FINES	**FINESS Array B**	**64.89**	**330**	P	P	18 33 56.3	+0.2
	comp=Z,4.1nm,0.8s,mb4.1,baz=72,slow=8.2,SNR=8.6						
AKASG	**Malin Array Be**	**69.64**	**319**	P	P	18 34 25.1	-0.5
	comp=Z,2.5nm,0.9s,mb3.7,baz=52,slow=6.8,SNR=4.7						
NB2	**NORSAR Subarra**	**70.66**	**334**	P	P	18 34 31.6	+0.1
	comp=Z,1.4nm,0.8s,mb3.5,baz=44,slow=6.2						
NOA	**NORSAR Array B**	**70.66**	**334**	P	P	18 34 32.0	+0.4
	comp=Z,0.8nm,0.7s,mb3.4,baz=44,slow=5.9,SNR=4.3						
CLL	**Collm**	**76.97**	**327**	iP	P	18 35 08.5	+0.7

*CSEM **10** 18:25:17.5±0.4, 33.°21N×34.°71E, h26km±2km, ML3.2, Error ellipse: s-maj=9.6km s-min=2.9km az=102.0*
GRAL 10 18:25:18.7±0.3, 33.°26N×34.°70E, h22km±2km, MD3.2, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.58**	**66**	eP	Pb	18 25 29.2	-0.9
MATL	**Matarih**	**0.58**	**66**	eP	Pb	18 25 29.2	-0.9
RCY	**Rachaya**	**0.97**	**76**	eP	Pb	18 25 35.9	-0.9
RCY				eS	Sb	18 25 48.6	-0.5
RCY	**Rachaya**	**0.97**	**76**	eP	Pb	18 25 35.9	-0.8
RCY				eS	Sb	18 25 48.6	-0.5
BHL	**Bhannes**	**1.03**	**51**	eP	Pn	18 25 36.5	-1.2
BHL				eS	Sb	18 25 49.8	-1.0
BHL	**Bhannes**	**1.03**	**51**	eP	Pn	18 25 36.5	-1.2
BHL				eS	Sb	18 25 49.8	-1.0
HWQ	**Hawqa**	**1.46**	**45**	eP	Pn	18 25 42.9	-0.7
HWQ				eS	Sn	18 26 00.7	-1.3
HWQ	**Hawqa**	**1.46**	**45**	eP	Pn	18 25 42.9	-0.7
HWQ				eS	Sn	18 26 00.7	-1.3

MAN 10 18:26:15, 6.°41N×124.°60E, h10km, mb4.9, ML3.8, MS3.8, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.48**	**132**	⇓eP	Pg	18 26 29.3	+5.0
GSPH				eS	Sg	18 26 40.6	+10
KCP	**Kidapawan**	**0.77**	**40**	⇓eP	Pg	18 26 29.3	-0.6
KCP				i S	Sg	18 26 44.4	+4.4
CTBH	**Cotabato--PC H**	**0.88**	**337**	⇑eP	Pg	18 26 30.9	-1.0
CTBH				i S	Sg	18 26 41.9	-1.5
BUKP	**Musuan**	**1.53**	**18**	eP	Pn	18 26 42.1	-0.3
PAGZ	**Pagadian**	**1.87**	**320**	eP	Pn	18 26 47.3	+0.2
PAGZ				eS	Sn	18 26 59.4	-11
IPIL	**Ipil**	**2.43**	**304**	eP	Pn	18 26 55.6	+0.8

*IDC **10** 18:56:03.7±0.9, 1.°48N×128.°57E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.8/18, mbtmp3.8/7, Error ellipse: s-maj=68.2km s-min=16.7km az=73.0*
*NEIC **10** 18:56:05.7±0.6, 1.°47N×128.°53E, h15km, mb4.5/1, Error ellipse: s-maj=42.8km s-min=10.4km az=71.0*
*ISCJB **10** 18:56:06.5±0.6, 1.°5N±0.°1×128.°6E±0.°3, h33km, mb4.1/10, Error ellipse: s-maj=43.4km s-min=10.5km az=161.0*
ISC 10 18:56:08.7±0.6, 1.°4N±0.°1×128.°6E±0.°3, h35km, n14, σ1§13/15, mb4.1/10, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRAB	**Tennant Creek**	**21.98**	**165**	eP	P	19 00 59.5	-0.3
WRA	**Warramunga Arr**	**21.99**	**165**	P	P	19 00 58.8	-1.1
	3.0nm,0.6s,mb3.9,baz=344,slow=11,SNR=24						
ASAR	**Alice Springs**	**25.49**	**169**	P	P	19 01 34.6	+0.8
	1.2nm,0.8s,mb3.5,baz=351,slow=13,SNR=15				

comp=Z,3.0nm,0.8s,mb4.4
BVAR Borovoye Array 70.23 327 P **P 19 07 18.3 +0.2**
comp=Z,0.3nm,0.4s,mb3.6,baz=129,slow=10.0,SNR=4.3

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*IDC **10** 19:05:42.9±0.9, 16°.13N×122°.47E, h0km, mb3.8/8, mb1 4.0/8, mb1mx3.7/23, mbtmp3.8/8, Error ellipse: s-maj=65.2km s-min=16.2km az=73.0*
*MAN **10** 19:05:46, 16°.23N×122°.58E, h19km, mb5.1, ML4.1, MS4.3*
*NEIC **10** 19:05:47.4±0.8, 16°.26N×122°.81E, h35km, mb4.3/1, Error ellipse: s-maj=27.4km s-min=11.8km az=79.0*
ISC 10 19:05:44.7±1.1, 16°.23N±0°.04×122°.59E±0°.06, h8km±7km, n29, σ1§19/32, mb3.9/9, 3C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.84**	**349**	*eP*	**Pg**	**19 06 01.7**	**+0.7**
CAUP	**Cauayan**	**1.02**	**314**	*eP*	**Pg**	**19 06 03.8**	**-0.6**
BALP	**Baler**	**1.09**	**244**	*eP*	**Pg**	**19 06 04.0**	**-1.5**
PCPH	**Palayan**	**1.58**	**245**	⇑*eP*	**Pn**	**19 06 12.5**	**-0.5**
PCPH				*eS*	**Sn**	**19 06 33.7**	**0.0**
POLP	**Polilio Island**	**1.62**	**203**	*eP*	**Pn**	**19 06 12.7**	**-0.8**
CVP	**Callao Caves**	**1.64**	**334**	⇑*iP*	**Pn**	**19 06 13.9**	**+0.2**
CVP				*i* S	**Sn**	**19 06 35.4**	**+0.4**
APYP	**Conner**	**2.07**	**322**	*eP*	**Pn**	**19 06 19.9**	**+0.2**
ABRA	**Dolores**	**2.29**	**308**	*eP*	**Pn**	**19 06 22.5**	**-0.1**
BOLP	**Bolinao**	**2.57**	**274**	*eP*	**Pn**	**19 06 28.4**	**+1.8**
SCZP	**Santa Cruz**	**2.61**	**260**	*eP*	**Pn**	**19 06 28.7**	**+1.5**
TGY	**Tagaytay City**	**2.65**	**217**	Pn	**Pn**	**19 06 30.0**	**+2.3**
	27nm,0.3s,baz=157,slow=13,SNR=4.2						
PIP	**Pasuquin**	**2.81**	**318**	⇑*iP*	**Pn**	**19 06 30.5**	**+0.6**
PIP				*i* S	**Sn**	**19 07 03.6**	**-0.3**
BOAC	**Boac**	**2.85**	**195**	*eP*	**Pn**	**19 06 29.2**	**-1.2**
AUQP	**San Andres**	**2.89**	**178**	*eP*	**Pn**	**19 06 33.0**	**+2.0**
PVCP	**Virac**	**3.02**	**150**	*eP*	**Pn**	**19 06 32.9**	**+0.1**
LUBP	**Lubang**	**3.36**	**223**	*eP*	**Pn**	**19 06 44.4**	**+7.0**
CNP	**Catarman**	**4.21**	**151**	*eP*	**Pn**	**19 06 51.3**	**+2.1**
BBP	**Basco**	**4.23**	**352**	*eP*	**Pn**	**19 06 46.4**	**-3.1**
BUSP	**Coron**	**4.80**	**209**	*eP*	**Pn**	**19 07 06.0**	**+8.8**
KSRS	**Korea Array**	**21.66**	**12**	P	**P**	**19 10 36.7**	**+1.1**
	0.9nm,0.5s,mb3.5,baz=193,slow=10,SNR=4.3						
SONM	**Songino Array**	**34.23**	**340**	P	**P**	**19 12 30.3**	**-0.5**
	0.6nm,0.7s,mb3.6,baz=160,slow=9.4,SNR=3.7						
FITZ	**Fitzroy Crossi**	**34.25**	**175**	P	**P**	**19 12 29.3**	**-1.9**
	3.8nm,1.1s,mb4.2,baz=311,slow=10,SNR=5.7						
WRA	**Warramunga Arr**	**37.75**	**162**	P	**P**	**19 13 00.2**	**-1.0**
	3.3nm,0.9s,mb4.1,baz=343,slow=9.2,SNR=9.4						
ASAR	**Alice Springs**	**41.16**	**164**	P	**P**	**19 13 29.1**	**-0.6**
	2.2nm,0.6s,mb4.0,baz=344,slow=7.9,SNR=54						
MKAR	**Makanchi Array**	**45.15**	**321**	P	**P**	**19 14 01.5**	**-0.2**
	0.7nm,0.8s,mb3.5,baz=119,slow=7.9,SNR=6.2						
MKAR	**Makanchi Array**	**45.15**	**321**	P	**P**	**19 14 01.5**	**-0.2**
KURK	**Kurchatov**	**49.16**	**324**	*eP*	**P**	**19 14 31.5**	**-1.4**
	2.0nm,0.6s,mb4.3						
BVAR	**Borovoye Array**	**54.76**	**324**	P	**P**	**19 15 16.2**	**+1.5**
	0.4nm,0.5s,mb3.7,baz=122,slow=14,SNR=3.8						
FINES	**FINESS Array B**	**78.98**	**331**	P	**P**	**19 17 47.0**	**-1.8**
	1.8nm,0.9s,mb4.0,baz=72,slow=6.6,SNR=6.0						

MEX 10 19:19:01.7±1.3, 17°.11N×100°.29W, h5km, MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.06**	**161**	*eP*	Pg	19 19 02.3	-0.9
CAIG				*i* S	Sg	19 19 04.1	-0.1
MEIG	**Mezcala**	**1.03**	**38**	*eP*	Pg	19 19 18.2	-3.4
MEIG				*i* S	Sg	19 19 31.6	-3.4
PLIG	**Platanillo**	**1.48**	**30**	*eP*	Pn	19 19 26.4	-2.6
PLIG				*i* S	Sn	19 19 45.2	-3.6
PNIG	**Pinotepa**	**2.19**	**109**	*i* P	Pn	19 19 35.8	-2.9
PNIG				*i* S	Sn	19 20 02.7	-3.6
PPM	**Popocatepetl**	**2.51**	**39**	*i* P	Pn	19 19 42.2	-0.9
PPM				*i* S	Sn	19 20 11.3	-2.8
MMIG	**Aquila**	**3.14**	**292**	*eP*	Pn	19 19 50.0	-1.9
MMIG				*i* S	Sn	19 20 28.5	-1.3

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*ISCJB **10** 19:21:32.3±2.9, 11°.0S×0°.1×166°.4E±0°.2, h192km±24km, mb3.9/13, Error ellipse: s-maj=30.1km s-min=20.7km az=173.4*
*IDC **10** 19:21:32.6±3.9, 10°.95S×166°.46E, h179km±33km, mb3.8/11, mb1 3.9/12, mb1mx3.7/20, mbtmp3.8/12, MS2.7/1, Ms1 2.7/1, ms1mx2.3/22, Error ellipse: s-maj=27.0km s-min=17.3km az=87.0*
*NEIC **10** 19:21:33.5±2.2, 10°.97S×166°.40E, h186km±17km, mb4.0/2, Error ellipse: s-maj=20.7km s-min=15.0km az=80.0*
ISC 10 19:21:33.4±2.9, 11°.0S±0°.1×166°.4E±0°.2, h185km±23km, n17, σ0§64/17, mb4.0/13, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.54**	**283**	P	**Pn**	**19 23 07.6**	**0.0**
	11nm,0.3s,baz=168,slow=11,SNR=6.1						
HNR				LR	LR	19 24 32.4	
	comp=Z,68nm,20.1s,baz=121,slow=27						
URZ	**Urewera**	**28.82**	**162**	P	**P**	**19 27 14.2**	**-0.1**
	9.3nm,0.7s,mb4.6,baz=165,slow=23,SNR=7.1						
WRA	**Warramunga Arr**	**32.12**	**250**	P	**P**	**19 27 43.6**	**+0.1**
	6.9nm,0.7s,mb4.5,baz=81,slow=9.0,SNR=51						
ASAR	**Alice Springs**	**33.41**	**243**	P	**P**	**19 27 54.4**	**-0.3**
	1.8nm,0.8s,mb3.9,baz=70,slow=9.1,SNR=17						
FITZ	**Fitzroy Crossi**	**40.03**	**255**	P	**P**	**19 28 50.8**	**+0.1**
	7.8nm,0.8s,mb4.4,baz=106,slow=6.4,SNR=14						
MJAR	**Matsushiro Arr**	**54.20**	**332**	P	**P**	**19 30 39.3**	**-0.6**
	0.8nm,0.6s,mb3.6,baz=163,slow=8.7,SNR=3.7						
ASAJ	**Asahikawa**	**58.93**	**340**	P	**P**	**19 31 12.9**	**-0.2**
	3.2nm,0.8s,mb4.2,baz=212,slow=12,SNR=5.5						
KSRS	**Korea Array**	**60.18**	**325**	P	**P**	**19 31 21.4**	**-0.4**
	0.6nm,0.6s,mb3.6,baz=138,slow=7.7,SNR=5.5						
CMAR	**Chiang Mai Arr**	**72.67**	**293**	P	**P**	**19 32 42.5**	**+1.0**
	2.5nm,0.8s,mb4.0,baz=115,slow=4.5,SNR=18						
CHTO	**Chiang Mai**	**72.78**	**294**	*eP*	**P**	**19 32 42.5**	**+0.3**
ULN	**Ulaanbaatar**	**78.62**	**324**	*eP*	**P**	**19 33 15.5**	**+0.9**
	3.8nm,1.1s,mb3.9						
SONM	**Songino Array**	**78.98**	**324**	P	**P**	**19 33 17.3**	**+0.7**
	0.8nm,0.9s,mb3.4,baz=123,slow=5.5,SNR=6.9						
EGAK	**Eagle**	**85.08**	**20**	*eP*	**P**	**19 33 48.8**	**+0.9**
	2.8nm,1.1s,mb3.9						
ZALV	**Zalesovo Beam**	**93.87**	**324**	P	**P**	**19 34 28.7**	**-0.9**
	0.6nm,0.6s,mb3.9,baz=112,slow=3.5,SNR=4.5						
ZALV	**Zalesovo Beam**	**93.87**	**324**	P	**P**	**19 34 28.7**	**-0.9**
MK31	**Makanchi Array**	**93.91**	**317**	*eP*	**P**	**19 34 28.6**	**-1.4**
MKAR	**Makanchi Array**	**93.91**	**317**	P	**P**	**19 34 29.7**	**-0.2**
	1.4nm,0.8s,mb4.2,baz=96,slow=6.5,SNR=17						

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*NIED **10** 19:21:00, 32°.20N×132°.00E, h32km, Mw4.0 Best double couple: M0:9.81000×10^14 NP1:φs312.00000°, δ87.00000°, λ113.00000°. NP2:φs49.00000°, δ23.00000°, λ7.00000°.*
*IDC **10** 19:21:51.1±0.9, 32°.21N×131°.92E, h0km, mb3.6/7, mb1 3.7/11, mb1mx3.6/29, mbtmp3.6/11, ML3.3/4, MS2.8/2, Ms1 2.8/2, ms1mx2.3/30, Error ellipse: s-maj=24.9km s-min=17.8km az=62.0*
*ISCJB **10** 19:21:56.1±0.5, 32°.20N±0°.04×132°.02E±0°.05, h53km±5km, mb3.6/7, Error ellipse: s-maj=8.1km s-min=5.4km az=143.3*
*JMA **10** 19:21:56.8±0.1, 32°.16N×132°.02E, h30km±2km, M4.1 Broadband fault plane solution: P waves. NP1: φs353.00000°, δ14.00000°, λ-61.00000°. NP2: φs143.00000°, δ77.00000°, λ-97.00000°. Principal axes: T Plg32.0000°, Azm239.0000°; N Plg7.0000°, Azm145.0000°; P Plg57.0000°, Azm44.0000°; JMA Felt I J1.*
*NEIC **10** 19:21:56.8, 32°.16N×132°.02E, h30km, MG4.1(JMA), After JMA.*
NEIC Recorded [1 JMA] in Miyazaki and Oita.
ISC 10 19:21:56.7±0.8, 32°.17N±0°.04×132°.01E±0°.04, h33km±5km, n24, σ1§07/31, mb3.6/7, 5C-2D, Shikoku

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTSN	**Tsuno**	**0.44**	**280**	⇓P	**Pb**	**19 22 05.8**	**-0.6**
JTSN				S	**Sb**	**19 22 12.4**	**-0.6**
JKIT	**Kitakata**	**0.66**	**314**	⇑P	**Pn**	**19 22 09.6**	**0.0**
JKIT				S	**Sb**	**19 22 19.4**	**+0.7**
JTZ	**Takazaki**	**0.83**	**251**	⇑P	**Pn**	**19 22 11.8**	**-0.2**
JTZ				S	**Sn**	**19 22 23.1**	**0.0**
JNAR	**Kushima--Naru**	**0.90**	**225**	⇑P	**Pn**	**19 22 13.5**	**+0.5**
JNAR				S	**Sn**	**19 22 26.3**	**+1.5**
JUS	**Usuki**	**0.92**	**346**	⇓P	**Pn**	**19 22 14.0**	**+0.7**
JUS				S	**Sn**	**19 22 27.1**	**+1.7**
JTO	**Tosashimizu**	**0.96**	**44**	⇑P	**Pn**	**19 22 13.8**	**0.0**
JTO				S	**Sn**	**19 22 25.7**	**-0.6**
JIU2	**Izumi 2**	**1.08**	**291**	⇑P	**Pn**	**19 22 16.0**	**+0.5**
JIU2				S	**Sn**	**19 22 30.3**	**+1.0**
KSRS	**Korea Array**	**6.25**	**329**	Pn	**Pn**	**19 23 24.9**	**-1.6**
	0.4nm,0.3s,baz=143,slow=14.5,SNR=5.0						
KSRS				Sn	**Sn**	**19 24 36.7**	**-0.1**
	0.7nm,0.3s,baz=149,slow=24,SNR=6.4						
JHJ	**Hachijo jima 2**	**6.62**	**80**	Pn	**Pn**	**19 23 32.6**	**+0.9**
	7.8nm,0.3s,baz=56,slow=23,SNR=6.5						
MAJO	**Matsushiro**	**6.73**	**48**	*eP*	**Pn**	**19 23 34.9**	**+1.8**
MAT	**Matsushiro**	**6.73**	**48**	P	**Pn**	**19 23 35.2**	**+2.1**
MAT				S	**Sn**	**19 24 48.3**	**-0.2**
MJAR	**Matsushiro Arr**	**6.73**	**48**	Pn	**Pn**	**19 23 30.2**	**-2.9**
	0.5nm,0.3s,baz=332,slow=27,SNR=4.2						
MJAR	**Matsushiro Arr**	**6.73**	**48**	Pn	**Pn**	**19 23 30.2**	**-2.9**
CBIJ	**Chichi jima**	**10.19**	**117**	LR	LR	19 27 36.1	
	comp=Z,63nm,21.8s,baz=66,slow=34						
ASAJ	**Asahikawa**	**14.53**	**32**	Pn	**Pn**	**19 25 19.7**	**-0.1**
	0.2nm,0.3s,baz=178,slow=9.0,SNR=3.8						
SONM	**Songino Array**	**24.94**	**316**	P	**P**	**19 27 16.3**	**-0.4**
	0.3nm,0.4s,mb3.2,baz=130,slow=9.4,SNR=4.7						
PETK	**Petropavlovsk-**	**27.93**	**34**	LR	LR	19 41 19.4	
	comp=Z,20nm,18.4s,baz=111,slow=42						
MKAR	**Makanchi Array**	**40.38**	**306**	P	**P**	**19 29 29.9**	**-1.5**
	0.2nm,0.4s,mb3.2,baz=92,slow=11,SNR=7.2						
BVAR	**Borovoye Array**	**48.26**	**315**	P	**P**	**19 30 32.7**	**-1.5**
	0.4nm,0.5s,mb3.7,baz=98,slow=11,SNR=4.3						
WRA	**Warramunga Arr**	**51.86**	**177**	P	**P**	**19 31 00.7**	**-1.2**
	0.4nm,0.4s,mb3.7,baz=354,slow=7.9,SNR=8.2						
ASAR	**Alice Springs**	**55.55**	**178**	P	**P**	**19 31 29.6**	**+0.8**
	0.4nm,0.6s,mb3.6,baz=14,slow=13,SNR=9.1						
FINES	**FINESS Array B**	**69.34**	**330**	P	**P**	**19 32 58.7**	**-1.8**
	1.4nm,0.7s,mb4.0,baz=86,slow=6.3,SNR=6.6						
FINES	**FINESS Array B**	**69.34**	**330**	P	**P**	**19 32 58.7**	**-1.8**
NVAR	**Mina Array Bea**	**84.05**	**48**	P	**P**	**19 34 24.2**	**+0.2**
	0.3nm,0.6s,mb3.6,baz=247,slow=4.7,SNR=3.8						

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*IDC **10** 19:22:23.7±6.6, 36°.45N×71°.15E, h187km±57km, mb3.3/5, mb1 3.3/11, mb1mx3.1/28, mbtmp3.2/11, Error ellipse: s-maj=54.9km s-min=19.4km az=38.0*
*ISCJB **10** 19:22:25.5±0.4, 36°.63N±0°.03×71°.03E±0°.07, h215km±5km, mb3.4/5, Error ellipse: s-maj=8.8km s-min=4.8km az=0.5*
*NEIC **10** 19:22:25.7±0.7, 36°.51N×71°.23E, h211km±7km, mb4.2/5, Error ellipse: s-maj=10.9km s-min=9.0km az=100.0*
ISC 10 19:22:26.6±0.4, 36°.64N±0°.03×71°.05E±0°.07, h205km±5km, n43, σ1§13/51, mb3.4/5, 1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.66**	**219**	*ePn*	**Pn**	**19 23 12.4**	**-0.1**
KBL				*eSn*	**Sn**	**19 23 46.9**	**-1.5**
CEP	**Cherat**	**2.90**	**166**	⇓P	**Pn**	**19 23 16.4**	**+1.1**
CEP				S	**Sn**	**19 23 54.0**	**+0.6**
KSH	**Kashi**	**4.83**	**52**	Pn	**Pn**	**19 23 35.4**	**-3.5**
KSH				Sn	**Sn**	**19 24 25.5**	**-10**
KSH				smax			
	comp=N,48nm,0.4s						
KSH				smax			
	comp=E,29nm,0.5s						
AML	**Almayashu**	**5.85**	**20**	P	**Pn**	**19 23 52.9**	**+1.0**
	SNR=181						
AML	**Almayashu**	**5.85**	**20**	*eP*	**Pn**	**19 23 52.7**	**+0.8**
AML				*eSn*	**Sn**	**19 24 57.2**	**-2.3**
UCH	**Uchtor**	**6.19**	**25**	P	**Pn**	**19 23 57.4**	**+1.1**
	SNR=16						
UCH	**Uchtor**	**6.19**	**25**	*ePn*	**Pn**	**19 23 57.0**	**+0.8**
	comp=E,22nm,0.7s						
UCH				*eSn*	**Sn**	**19 25 06.2**	**-1.1**
KZA	**Kyzart**	**6.33**	**30**	P	**Pn**	**19 23 58.7**	**+0.6**
	SNR=25						
EKS2	**Erkin-Say**	**6.37**	**18**	P	**Pn**	**19 23 59.6**	**+1.1**
	SNR=7.7						
EKS2	**Erkin-Say**	**6.37**	**18**	*ePn*	**Pn**	**19 23 59.4**	**+0.8**
	comp=E,6.4nm,0.4s						
EKS2				*eSn*	**Sn**	**19 25 09.7**	**-1.8**
AAK	**Ala-Archa**	**6.55**	**23**	P	**Pn**	**19 24 01.6**	**+0.7**
	SNR=15						
AAK	**Ala-Archa**	**6.55**	**23**	P	**Pn**	**19 24 01.1**	**+0.3**
	comp=E,5.9nm,0.3s,baz=184,slow=6.5,SNR=21						
AAK				S	**Sn**	**19 25 15.0**	**-0.7**
	comp=E,1.3nm,0.3s,baz=142,slow=23,SNR=14						
KBK	**Karagaybulak**	**6.72**	**25**	P	**Pn**	**19 24 04.7**	**+1.6**
	SNR=12						
ULHL	**Ulahol**	**6.89**	**34**	P	**Pn**	**19 24 06.2**	**+0.9**
	SNR=12						
CHMS	**Chumysh**	**6.96**	**23**	P	**Pn**	**19 24 07.5**	**+1.3**
	SNR=5.9						
SDNR	**Sundarnagar**	**7.10**	**135**	*ePKP*	**Pn**	**19 24 05.5**	**-2.7**
SDNR				*eS*	**Sn**	**19 25 22.5**	**-6.4**
USP	**Ospenovka**	**7.13**	**21**	P	**Pn**	**19 24 09.2**	**+0.8**
	SNR=12						
TKM2	**Tokmak 2**	**7.18**	**28**	P	**Pn**	**19 24 10.1**	**+1.0**
	SNR=19						
TKM2	**Tokmak 2**	**7.18**	**28**	*ePn*	**Pn**	**19 24 09.8**	**+0.7**
	comp=E,21nm,0.7s						
MKAR	**Makanchi Array**	**13.15**	**36**	P	**Pn**	**19 25 25.2**	**-0.5**
	comp=E,0.1nm,0.3s,baz=213,slow=16,SNR=4.5						
MKAR	**Makanchi Array**	**13.15**	**36**	P	**Pn**	**19 25 25.2**	**-0.5**
GKN	**Gorkha**	**14.35**	**123**	*eP*	**Pn**	**19 25 40.7**	**+0.1**
	comp=E,9.2nm,0.3s						
DMN	**Daman**	**14.92**	**123**	*eP*	**Pn**	**19 25 47.5**	**-0.1**
	comp=E,10nm,0.5s						
KKN	**Kakani**	**14.92**	**122**	*eP*	**Pn**	**19 25 47.2**	**-0.4**
ABKAR	**Akbulak array**	**14.98**	**331**	*ePn*	**Pn**	**19 25 48.8**	**+0.7**
	comp=E,0.3nm,0.3s						
KURK	**Kurchatov**	**15.09**	**19**	P	**Pn**	**19 25 47.1**	**-2.3**
	comp=E,0.1nm,0.3s,baz=208,slow=11,SNR=2.9						
JIRN	**Jiri**	**15.63**	**121**	*eP*	**Pn**	**19 25 56.8**	**+0.6**
	comp=E,24nm,0.4s						
RAMN	**Ramite**	**16.36**	**122**	*eP*	**P**	**19 26 04.5**	**+0.4**
	comp=E,4.0nm,0.3s						
BVAR	**Borovoye Array**	**16.39**	**359**	P	**P**	**19 26 04.8**	**+0.6**
	comp=E,0.5nm,0.3s,baz=192,slow=12,SNR=9.2						
AKTK	**Aktyubinsk**	**16.68**	**330**	P	**P**	**19 26 06.9**	**-0.4**
AKTO	**Aktyubinsk**	**16.68**	**330**	P	**P**	**19 26 06.9**	**-0.4**
	comp=E,0.2nm,0.3s,baz=129,slow=8.4,SNR=8.6						
TAPN	**Taplejung**	**16.88**	**119**	*eP*	**P**	**19 26 12.3**	**+2.5**
ODAN	**Odare**	**16.96**	**120**	*eP*	**P**	**19 26 11.1**	**+0.4**
	comp=E,5.1nm,0.4s						
LSA	**Lhasa**	**18.18**	**107**	Pn	**Pn**	**19 26 22.0**	**-4.4**
	comp=E,2.7nm,0.4s						
ZALV	**Zalesovo Beam**	**19.77**	**25**	P	**P**	**19 26 41.0**	**+0.2**
	comp=E,0.5nm,0.3s,baz=222,slow=12,SNR=9.0						
FINES	**FINESS Array B**	**37.39**	**326**	P	**P**	**19 29 19.8**	**+0.5**
	comp=E,0.6nm,0.3s,mb3.5,baz=133,slow=6.9,SNR=8.0						
FINES	**FINESS Array B**	**37.39**	**326**	P	**P**	**19 29 19.8**	**+0.5**
ARCES	**ARCESS Array B**	**41.03**	**338**	P	**P**	**19 29 50.2**	**+0.9**
	comp=E,1.7nm,0.6s,mb3.6,baz=113,slow=8.5,SNR=10						
ARCES	**ARCESS Array B**	**41.03**	**338**	P	**P**	**19 29 50.2**	**+0.9**
NOA	**NORSAR Array B**	**44.29**	**323**	P	**P**	**19 30 15.4**	**-0.2**
	comp=E,1.0nm,0.7s,mb3.3,baz=96,slow=7.6,SNR=3.5						
WRA	**Warramunga Arr**	**82.03**	**122**	P	**P**	**19 34 22.0**	**-1.9**
	comp=E,0.7nm,0.8s,mb3.3,baz=325,slow=4.9,SNR=5.2						
WRA	**Warramunga Arr**	**82.03**	**122**	P	**P**	**19 34 22.0**	**-1.9**
ASAR	**Alice Springs**	**84.30**	**125**	P	**P**	**19 34 33.8**	**-1.7**
	comp=E,0.5nm,0.7s,mb3.3,baz=297,slow=4.7,SNR=5.2						

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*ISCJB **10** 19:24:49.6±3.1, 16°.8S±0°.5×174°.3W±0°.3, h159km±22km, mb3.4/5, Error ellipse: s-maj=90.7km s-min=23.5km az=146.0*
*IDC **10** 19:24:49.9±3.7, 17°.14S×174°.11W, h157km±27km, mb3.3/5, mb1 3.6/6, mb1mx3.4/18, mbtmp3.4/6, Error ellipse: s-maj=83.3km s-min=19.3km az=148.0*
*NEIC **10** 19:24:49.7±2.5, 17°.14S×174°.12W, h156km±17km, Error ellipse: s-maj=66.6km s-min=16.9km az=148.0*
ISC 10 19:24:50.4±3.1, 16°.8S±0°.5×174°.3W±0°.3, h153km±21km, n9, σ0§87/9, mb3.4/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.77**	**40**	P	**Pn**	**19 25 49.5**	**+1.6**
	17nm,0.3s,baz=19,slow=20,SNR=14						
AFI				S	**Sn**	**19 26 31.2**	**-1.2**
	19nm,0.3s,baz=37,slow=22,SNR=16						
AFI	**Afiamalu**	**3.77**	**40**	*eP*	**Pn**	**19 25 49.3**	**+1.5**
AFI				S	**Sn**	**19 26 31.2**	**-1.2**
WRA	**Warramunga Arr**	**48.71**	**258**	P	**P**	**19 33 19.1**	**-0.6**
	0.9nm,1.1s,mb3.3,baz=92,slow=7.9,SNR=4.8						
ASAR	**Alice Springs**	**48.88**	**253**	P	**P**	**19 33 20.5**	**-0.4**
	1.1nm,0.5s,mb3.8,baz=90,slow=8.0,SNR=35						
PETK	**Petropavlovsk-**	**73.73**	**343**	P	**P**	**19 36 08.2**	**+0.9**
	1.3nm,0.6s,mb3.8,baz=140,slow=7.0,SNR=3.7						
NVAR	**Mina Array Bea**	**75.95**	**42**	P	**P**	**19 36 20.5**	**+0.1**
	0.2nm,0.5s,mb3.0,baz=217,slow=8.9,SNR=3.2						
PDAR	**Pinedale Array**	**83.88**	**42**	P	**P**	**19 37 02.6**	**-0.4**
	0.2nm,0.6s,mb3.0,baz=190,slow=3.3,SNR=4.1						
CLL	**Collm**	**145.11**	**352**	*ePKPbc*	PKPbc	19 44 10.0	+0.7
BRTR	**Keskin Array B**	**146.70**	**319**	PKPbc	PKPbc	19 44 14.9	+0.5
	0.6nm,0.7s,baz=79,slow=3.1,SNR=3.8						

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*ISCJB **10** 19:34:12.9±0.7, 37°.32N±0°.03×22°.96E±0°.04, h7km±6km, Error ellipse: s-maj=5.5km s-min=4.0km az=42.0*
*CSEM **10** 19:34:12.9±0.2, 37°.32N×22°.98E, h15km, MD2.9, Error ellipse: s-maj=3.6km s-min=2.7km az=120.0*
*ATH **10** 19:34:13.1, 37°.33N×22°.96E, h7km±5km, MD2.9/9*
*THE **10** 19:34:13.4, 37°.33N×22°.94E, h9km±2km, ML3.0/3, Error ellipse: s-maj=2.1km s-min=0.4km az=147.0*
ISC 10 19:34:13.1±0.6, 37°.32N±0°.03×22°.97E±0°.04, h14km±5km, n28, σ0§65/49, 1C, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DID	**Didima**	**0.28**	**48**	⇑*iPG*	**Pg**	**19 34 18.6**	**-0.5**
DID				*eSG*	**Sg**	**19 34 22.8**	**-0.3**
DID	**Didima**	**0.28**	**48**	P	**Pg**	**19 34 18.6**	**-0.5**
DID				S	**Sg**	**19 34 23.6**	**+0.5**
DID	**Didima**	**0.28**	**48**	P	**Pg**	**19 34 18.6**	**-0.5**
DID				*eSg*	**Sg**	**19 34 22.8**	**-0.3**
DID				S	**Sg**	**19 34 23.6**	**+0.5**
VLX	**Vlachokerasia**	**0.47**	**277**	*ePB*	**Pg**	**19 34 22.4**	**0.0**
VLX				*eSB*	**Sg**	**19 34 28.5**	**-0.3**
VLX	**Vlachokerasia**	**0.47**	**277**	P	**Pg**	**19 34 22.4**	**0.0**
VLX				S	**Sg**	**19 34 28.7**	**-0.1**
VLX	**Vlachokerasia**	**0.47**	**277**	P	**Pg**	**19 34 22.4**	**0.0**
VLX				*eSb*	**Sg**	**19 34 28.5**	**-0.3**
VLI	**Veliai**	**0.60**	**182**	*ePB*	**Pb**	**19 34 24.8**	**-0.5**
VLI				*eSB*	**Sb**	**19 34 33.5**	**0.0**
VLI	**Veliai**	**0.60**	**182**	*ePb*	**Pb**	**19 34 24.8**	**-0.5**
VLI				*eSb*	**Sb**	**19 34 33.5**	**0.0**
LTK	**Loutraki**	**0.71**	**360**	*ePB*	**Pb**	**19 34 26.2**	**-0.9**
LTK				*eSB*	**Sb**	**19 34 35.6**	**-1.1**
LTK	**Loutraki**	**0.71**	**360**	P	**Pg**	**19 34 26.3**	**-0.5**
LTK				S	**Sg**	**19 34 36.8**	**+0.7**
LTK	**Loutraki**	**0.71**	**360**	P	**Pg**	**19 34 26.3**	**-0.5**
LTK				*eSb*	**Sb**	**19 34 35.6**	**-1.1**
LTK				S	**Sg**	**19 34 36.8**	**+0.7**
GUR	**Goura**	**0.79**	**321**	*ePB*	**Pg**	**19 34 27.8**	**-0.7**
GUR	**Goura**	**0.79**	**321**	P	**Pg**	**19 34 27.8**	**-0.7**
GUR	**Goura**	**0.79**	**321**	P	**Pg**	**19 34 27.8**	**-0.7**
ITM	**Ithomi**	**0.84**	**261**	*ePB*	**Pb**	**19 34 29.2**	**-0.3**
ITM	**Ithomi**	**0.84**	**261**	P	**Pg**	**19 34 29.3**	**-0.1**
ITM				S	**Sg**	**19 34 40.6**	**+0.1**
ITM	**Ithomi**	**0.84**	**261**	*ePb*	**Pb**	**19 34 29.2**	**-0.3**
ITM				S	**Sg**	**19 34 40.6**	**+0.1**
ATHU	**Athens Univers**	**0.92**	**45**	P	**Pb**	**19 34 30.5**	**-0.2**
ATHU				S	**Sg**	**19 34 44.4**	**+1.6**
ATHU	**Athens Univers**	**0.92**	**45**	P	**Pb**	**19 34 30.5**	**-0.2**
ATHU				S	**Sg**	**19 34 44.4**	**+1.6**
KYTH	**Kithira**	**1.03**	**177**	*ePB*	**Pb**	**19 34 33.0**	**+0.3**
KYTH	**Kithira**	**1.03**	**177**	*ePb*	**Pb**	**19 34 33.0**	**+0.3**
PYL	**PYLOS**	**1.07**	**247**	*ePB*	**Pb**	**19 34 33.3**	**0.0**
PYL	**PYLOS**	**1.07**	**247**	P	**Pb**	**19 34 33.2**	**-0.1**
PYL				S	**Sb**	**19 34 48.4**	**+1.3**
PYL	**PYLOS**	**1.07**	**247**	*ePb*	**Pb**	**19 34 33.3**	**0.0**
PYL				S	**Sb**	**19 34 48.4**	**+1.3**
**DS

HHC LR LR
comp=N,110nm,8.3s
HHC LR LR
comp=E,250nm,8.1s
HHC LR LR
comp=Z,100nm,8.5s
CM31 Chiang Mai Arr 14.39 200 *e*P **Pn 19 39 26.6 -0.3**
comp=Z,3.8nm,0.5s
CMAR Chiang Mai Arr 14.39 200 Pn **Pn 19 39 29.1 +2.2**
comp=Z,0.1nm,0.3s,baz=12,slow=10,SNR=11
TAPN Taplejung 15.07 256 *e*P **Pn 19 39 40.0 +3.9**
ODAN Odare 15.52 255 *e*P **Pn 19 39 43.5 +1.5**
SONM Songino Array 15.80 5 Pn **Pn 19 39 45.2 -0.3**
comp=Z,0.3nm,0.3s,baz=187,slow=8.7,SNR=3.6
RAMN Ramite 16.14 256 *e*P **Pn 19 39 49.6 -0.4**
comp=Z,7.5nm,0.6s
GUN Gumba 16.39 260 *e*P **Pn 19 39 57.4 +4.1**
PKI Pulchoki 16.90 259 *e*P **Pn 19 40 00.0 +0.3**
KKN Kakani 16.93 260 *e*P **Pn 19 40 02.0 +1.9**
DMN Daman 17.14 260 *e*P **Pn 19 40 03.6 +0.9**
comp=Z,15nm,0.8s
GKN Gorkha 17.40 261 *e*P **Pn 19 40 06.5 +0.5**
comp=Z,8.8nm,0.5s
KSRS Korea Array 20.20 68 P **P 19 40 37.0 -0.9**
comp=Z,1.8nm,0.7s,baz=250,slow=9.9,SNR=7.9
MK31 Makanchi Array 22.27 317 *e*P **P 19 41 00.1 -0.1**
MKAR Makanchi Array 22.27 317 P **P 19 41 00.8 +0.6**
comp=Z,1.6nm,0.6s,mb3.6,baz=119,slow=12,SNR=18
AAK Ala-Archa 25.70 303 LR LR 19 53 34.1
comp=Z,46nm,21.2s,baz=35,slow=41
ZALV Zalesovo Beam 25.85 333 P **P 19 41 34.6 +0.1**
comp=Z,1.8nm,0.5s,mb3.9,baz=132,slow=8.9,SNR=12
KURK Kurchatov 26.49 322 P **P 19 41 39.4 -0.9**
comp=Z,2.9nm,0.8s,mb3.9,baz=129,slow=8.4,SNR=22
KURK Kurchatov 26.49 322 *e*P **P 19 41 39.9 -0.5**
BVAR Borovoye Array 32.05 321 P **P 19 42 29.3 -0.5**
comp=Z,0.5nm,0.5s,mb3.6,baz=117,slow=11,SNR=6.3
BRVK Borovoye 32.12 321 *e*P **P 19 42 30.1 -0.2**
ABKAR Akbulak array 37.06 311 *e*P **P 19 43 13.0 -0.2**
comp=Z,1.1nm,0.7s,mb3.8
ARU Arti 39.68 322 *e*P **P 19 43 35.1 0.0**
comp=Z,8.5nm,1.0s,mb4.4
BRTR Keskin Array B 56.30 299 P **P 19 45 42.5 -1.4**
comp=Z,0.8nm,0.7s,mb3.8,baz=124,slow=6.6,SNR=4.9
ARCES ARCESS Array B 56.37 336 P **P 19 45 42.8 -1.2**
comp=Z,1.6nm,0.8s,mb4.1,baz=82,slow=8.7,SNR=3.9
AKASG Malin Array Be 56.75 313 P **P 19 45 45.6 -1.4**
comp=Z,0.8nm,0.4s,mb4.2,baz=66,slow=7.7,SNR=4.3
FINES FINESS Array B 56.77 326 P **P 19 45 46.2 -0.8**
comp=Z,1.7nm,0.5s,mb4.4,baz=85,slow=7.3,SNR=15
FINES FINESS Array B 56.77 326 P **P 19 45 46.2 -0.8**
WRA Warramunga Arr 59.27 147 P **P 19 46 06.9 +1.9**
comp=Z,1.6nm,0.7s,mb4.2,baz=339,slow=7.4,SNR=10
ASAR Alice Springs 62.32 149 P **P 19 46 27.4 +1.8**
comp=Z,0.9nm,0.8s,mb4.0,baz=336,slow=7.0,SNR=5.4
HFS Hagfors 62.98 326 P **P 19 46 28.6 -1.0**
comp=Z,1.1nm,0.5s,mb4.2,baz=116,slow=6.6,SNR=5.0
LPG La Plagne 72.61 313 *e*P **P 19 47 30.3 -0.3**
comp=Z,6.2nm,0.8s,mb4.3
LPL La Plagne 72.61 313 *e*P **P 19 47 30.3 -0.3**
MBDF Montbardon 72.96 312 *e*P **P 19 47 33.1 +0.4**

GUC 10 19:36:18.4±0.8, 22°.54S×68°.74W, h116km±16km, ML3.5, 4C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**0.74**	**291**	⇑*i*P	Pn	19 36 44.4	+6.7
PB04				*i* S	Sn	19 37 04.1	+12
PB04				AML	AML	19 37 08.0	
	comp=N,401nm,0.3s						
MACH	**Maria Elena**	**1.00**	**290**	⇑*i*P	Pn	19 36 41.2	+1.1
MACH				*i* S	Sn	19 36 58.0	+1.5
CEN1	**Los Morros**	**1.59**	**237**	⇑*i*P	Pn	19 36 50.2	+3.5
CEN1				*i* S	Sn	19 37 14.0	+5.8
CEN1				AML	AML	19 37 18.8	
	comp=N,329nm,0.7s						
ANCH	**Antofagasta**	**1.92**	**233**	⇑*i*P	Pn	19 36 51.1	+0.5
ANCH				*i* S	Sn	19 37 15.9	+0.7
PSGC	**Pisagua**	**3.20**	**336**	*e*P	Pn	19 37 07.2	0.0
PSGC				AML	AML	19 38 04.5	
	comp=E,96nm,0.2s						
MNMC	**Miæe Miæ**	**3.48**	**347**	*e*P	Pn	19 37 12.3	+1.3
MNMC				*i* S	Sn	19 37 54.5	+2.8
MNMC				AML	AML	19 38 10.8	
	comp=E,174nm,0.4s						

*IDC **10** 19:46:39.6±1.6, 36°.98N×29°.16E, h0km, mb3.5/3, mb1 3.7/7, mb1mx3.5/26, mbtmp3.6/7, ML3.6/4, MS2.7/2, Ms1 2.8/2, ms1mx2.3/25, Error ellipse: s-maj=28.1km s-min=21.3km az=30.0*
*CSEM **10** 19:46:40.5±0.1, 36°.92N×29°.18E, h5km, MD3.7, Error ellipse: s-maj=3.4km s-min=2.4km az=42.0*
*DDA **10** 19:46:40.4, 36°.97N×29°.17E, h7km±3km, Md3.5*
*ISCJB **10** 19:46:40.6±0.5, 36°.95N±0°.02×29°.22E±0°.02, h6km±4km, mb3.4/3, Error ellipse: s-maj=3.7km s-min=2.7km az=9.8*
*ISK **10** 19:46:40.1, 36°.96N×29°.19E, h6km, MD3.7, ML3.5*
*NEIC **10** 19:46:40.0, 36°.96N×29°.19E, h6km, ML3.6(ISK), After ISK.*
*HLW **10** 19:46:47.1, 36°.64N×30°.04E, h10km±13km, Md3.6*
ISC 10 19:46:40.9±0.5, 36°.95N±0°.02×29°.20E±0°.02, h3km±3km, n127, σ1°.07/155, mb3.4/3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.32**	**49**	*e*PG	**Pg**	**19 46 46.6**	**-0.4**
GLHS				*e*SG	**Sg**	**19 46 51.8**	**+0.6**
GLHS	**Glhisar (BURDU**	**0.32**	**49**	*e*Pg	**Pg**	**19 46 46.6**	**-0.4**
GLHS				*e*Sg	**Sg**	**19 46 51.8**	**+0.6**
GOLH	**Golhisar**	**0.41**	**45**	*i* P	**Pg**	**19 46 48.2**	**-0.6**
GOLH				*i* S	**Sg**	**19 46 55.0**	**+0.9**
GOLH	**Golhisar**	**0.41**	**45**	*i* P	**Pg**	**19 46 48.2**	**-0.6**
GOLH				*i* S	**Sg**	**19 46 55.0**	**+0.9**
TURN	**Turunc**	**0.48**	**261**	*i* P	**Pg**	**19 46 54.9**	**+4.7**
TURN				*i* S	**Sg**	**19 47 07.0**	**+11**
ELL	**Elmali**	**0.60**	**109**	*e*PG	**Pg**	**19 46 52.2**	**-0.3**
ELL				*e*SG	**Sg**	**19 47 01.6**	**+1.3**
ELL	**Elmali**	**0.60**	**109**	*e*Pg	**Pg**	**19 46 52.2**	**-0.3**
ELL				*e*Sg	**Sg**	**19 47 01.6**	**+1.3**
DNZL	**Cakiroluk**	**0.75**	**351**	*i* P	**Pg**	**19 46 54.0**	**-1.4**
DNZL				*i* S	**Sg**	**19 47 05.1**	**0.0**
DNZL	**Cakiroluk**	**0.75**	**351**	*i* P	**Pg**	**19 46 54.0**	**-1.3**
DNZL				*i* S	**Sg**	**19 47 05.1**	**0.0**
YER	**Yerkesik**	**0.76**	**285**	*e*PG	**Pg**	**19 46 54.8**	**-0.7**
YER				*e*SG	**Sg**	**19 47 05.9**	**+0.6**
YER	**Yerkesik**	**0.76**	**285**	*e*Pg	**Pg**	**19 46 54.8**	**-0.6**
YER				*e*Sg	**Sg**	**19 47 05.9**	**+0.6**
AKAS	**Kas**	**0.78**	**155**	*i* P	**Pg**	**19 46 56.1**	**+0.2**
AKAS				*i* S	**Sg**	**19 47 10.6**	**+4.6**
AKAS	**Kas**	**0.78**	**155**	*i* P	**Pg**	**19 46 56.1**	**+0.2**
DENT	**Denizli**	**0.82**	**351**	*e*PG	**Pg**	**19 46 56.1**	**-0.5**
DENT	**Denizli**	**0.82**	**351**	*e*Pg	**Pg**	**19 46 56.1**	**-0.5**
KORT	**Korkueli**	**0.92**	**86**	*i* P	**Pg**	**19 46 59.1**	**+0.5**
KORT				*i* S	**Sg**	**19 47 14.9**	**+4.4**
KORT	**Korkueli**	**0.92**	**86**	*i* P	**Pg**	**19 46 59.1**	**+0.5**
KORT				*i* S	**Sg**	**19 47 14.9**	**+4.3**
ARG	**Arkhangelos**	**1.13**	**230**	*e*P	**Pg**	**19 47 02.5**	**-0.1**
ANTB	**Antalya**	**1.17**	**92**	*e*PN	**Pn**	**19 47 02.9**	**-1.2**
ANTB	**Antalya**	**1.17**	**92**	*e*Pn	**Pn**	**19 47 02.9**	**-1.2**
MLSB	**Milas**	**1.19**	**287**	*e*PN	**Pn**	**19 47 02.9**	**-1.6**
MLSB	**Milas**	**1.19**	**287**	*e*Pn	**Pn**	**19 47 02.9**	**-1.6**
BCK	**Bucak**	**1.22**	**65**	*e*PN	**Pn**	**19 47 03.8**	**-1.1**
BCK	**Bucak**	**1.22**	**65**	*e*Pn	**Pn**	**19 47 03.8**	**-1.1**
AYDN	**Tasoluk**	**1.27**	**304**	*i* P	**Pg**	**19 47 04.3**	**-1.0**
AYDN				*i* S	**Sg**	**19 47 22.9**	**+1.1**
AYDN	**Tasoluk**	**1.27**	**304**	*i* P	**Pg**	**19 47 04.3**	**-1.0**
AYDN				*i* S	**Sg**	**19 47 22.9**	**+1.1**
DAT	**Datca**	**1.32**	**261**	*e*PN	**Pn**	**19 47 05.5**	**-0.8**
DAT	**Datca**	**1.32**	**261**	*e*Pn	**Pn**	**19 47 05.5**	**-0.7**
ISP	**Isparta**	**1.37**	**50**	*e*PN	**Pn**	**19 47 06.6**	**-0.4**
ISP	**Isparta**	**1.37**	**50**	*e*Pn	**Pn**	**19 47 06.7**	**-0.2**
ISP	**Isparta**	**1.37**	**50**	*e*Pn	**Pn**	**19 47 06.7**	**-0.2**
KHL	**Karahalli**	**1.40**	**10**	*e*PN	**Pn**	**19 47 06.8**	**-0.6**
KHL	**Karahalli**	**1.40**	**10**	*e*Pn	**Pn**	**19 47 06.8**	**-0.5**
BDRM	**Kayabasi**	**1.41**	**275**	*i* P	**Pn**	**19 47 07.1**	**-0.4**
BDRM				*i* S	**Sb**	**19 47 26.1**	**-0.1**
BDRM	**Kayabasi**	**1.41**	**275**	*i* P	**Pn**	**19 47 07.1**	**-0.4**
BDRM				*i* S	**Sb**	**19 47 26.1**	**-0.2**
KHAL	**Karahalli**	**1.44**	**9**	*i* P	**Pn**	**19 47 07.8**	**-0.1**
KHAL				*i* S	**Sb**	**19 47 27.4**	**+0.2**
KHAL	**Karahalli**	**1.44**	**9**	*i* P	**Pn**	**19 47 07.8**	**-0.1**
KHAL				*i* S	**Sb**	**19 47 27.4**	**+0.3**
BODT	**Bodrum**	**1.52**	**275**	*e*PN	**Pn**	**19 47 08.5**	**-0.5**
BODT	**Bodrum**	**1.52**	**275**	*e*Pn	**Pn**	**19 47 08.5**	**-0.5**
SUTC	**Sutluce-Ispart**	**1.53**	**69**	*e*PN	**Pn**	**19 47 08.5**	**-0.7**
SUTC	**Sutluce-Ispart**	**1.53**	**69**	*e*Pn	**Pn**	**19 47 08.5**	**-0.7**
KULA	**Kula-Manisa**	**1.62**	**345**	*e*PN	**Pn**	**19 47 09.8**	**-0.7**
KULA	**Kula-Manisa**	**1.62**	**345**	*e*Pn	**Pn**	**19 47 09.8**	**-0.6**
SHUT	**Suhut-Afyon**	**1.93**	**33**	*e*PN	**Pn**	**19 47 14.5**	**-0.2**
SHUT	**Suhut-Afyon**	**1.93**	**33**	*e*Pn	**Pn**	**19 47 14.5**	**-0.1**
SMG	**Samos**	**2.03**	**293**	*e*P	**Pn**	**19 47 16.0**	**0.0**
IZM	**Izmir**	**2.11**	**314**	*e*PN	**Pn**	**19 47 16.6**	**-0.5**
IZM	**Izmir**	**2.11**	**314**	*e*Pn	**Pn**	**19 47 16.6**	**-0.6**
KDAG	**Bornova**	**2.11**	**314**	*i* P	**Pn**	**19 47 16.6**	**-0.5**
KDAG	**Bornova**	**2.11**	**314**	*i* P	**Pn**	**19 47 16.6**	**-0.6**
DEMI	**Demirci**	**2.13**	**350**	*i* P	**Pn**	**19 47 16.0**	**-1.4**
DEMI				*i* S	**Sn**	**19 47 44.6**	**+0.3**
DEMI	**Demirci**	**2.13**	**350**	*i* P	**Pn**	**19 47 16.0**	**-1.4**
DEMI				*i* S	**Sn**	**19 47 44.6**	**+0.3**
KARP	**Karpathos**	**2.16**	**230**	*e*P	**Pn**	**19 47 19.0**	**+1.2**
AKS	**Akhisar**	**2.22**	**331**	*e*PN	**Pn**	**19 47 18.3**	**-0.4**
AKS	**Akhisar**	**2.22**	**331**	*e*Pn	**Pn**	**19 47 18.3**	**-0.3**
ALT	**Altintas**	**2.23**	**19**	*e*PN	**Pn**	**19 47 18.3**	**-0.4**
ALT	**Altintas**	**2.23**	**19**	*e*Pn	**Pn**	**19 47 18.3**	**-0.4**
BLCB	**Balcova**	**2.23**	**311**	*e*PN	**Pn**	**19 47 18.3**	**-0.5**
BLCB	**Balcova**	**2.23**	**311**	*e*Pn	**Pn**	**19 47 18.3**	**-0.5**
HDMB	**Hadim**	**2.63**	**89**	*e*PN	**Pn**	**19 47 24.7**	**+0.4**
HDMB	**Hadim**	**2.63**	**89**	*e*Pn	**Pn**	**19 47 24.7**	**+0.4**
KONT	**Konya--Tatoy**	**2.71**	**67**	*e*PN	**Pn**	**19 47 25.6**	**+0.3**
KONT	**Konya--Tatoy**	**2.71**	**67**	*e*Pn	**Pn**	**19 47 25.6**	**+0.3**
LADK	**Ladik-KONYA**	**2.81**	**63**	*e*PN	**Pn**	**19 47 26.9**	**+0.2**
LADK	**Ladik-KONYA**	**2.81**	**63**	*e*Pn	**Pn**	**19 47 26.9**	**+0.2**
KIZT	**Kizilcal**	**2.87**	**47**	*e*PN	**Pn**	**19 47 27.7**	**+0.2**
KIZT	**Kizilcal**	**2.87**	**47**	*e*Pn	**Pn**	**19 47 27.7**	**+0.2**
APE	**Apeiranthos**	**2.94**	**273**	*e*PN	**Pn**	**19 47 29.4**	**+0.9**
APE	**Apeiranthos**	**2.94**	**273**	*e*P	**Pn**	**19 47 29.0**	**+0.5**
APE	**Apeiranthos**	**2.94**	**273**	*e*Pn	**Pn**	**19 47 29.4**	**+0.9**
ZKR	**Zakros**	**3.03**	**234**	*e*P	**Pn**	**19 47 32.0**	**+2.2**
NPS	**Neapolis**	**3.36**	**241**	*e*P	**Pn**	**19 47 35.5**	**+1.2**
LAST	**Lasithi**	**3.50**	**241**	*e*P	**Pn**	**19 47 37.5**	**+1.2**
LEF	**Lefka**	**3.50**	**120**	*e*PN	**Pn**	**19 47 36.3**	**0.0**
LEF	**Lefka**	**3.50**	**120**	*e*Pn	**Pn**	**19 47 36.3**	**0.0**
ADVT	**Abdulvahap**	**3.51**	**7**	*e*PN	**Pn**	**19 47 36.7**	**+0.4**
ADVT	**Abdulvahap**	**3.51**	**7**	*e*Pn	**Pn**	**19 47 36.7**	**+0.4**
YLV	**Yalova**	**3.62**	**2**	*e*PN	**Pn**	**19 47 38.9**	**+1.0**
YLV	**Yalova**	**3.62**	**2**	*e*Pn	**Pn**	**19 47 38.9**	**+1.1**
SULT	**Sultanhani-AKS**	**3.65**	**69**	*e*PN	**Pn**	**19 47 38.9**	**+0.6**
SULT	**Sultanhani-AKS**	**3.65**	**69**	*e*Pn	**Pn**	**19 47 38.9**	**+0.6**
IKL	**Isikli**	**3.68**	**100**	*e*PN	**Pn**	**19 47 39.7**	**+1.1**
IKL	**Isikli**	**3.68**	**100**	*e*Pn	**Pn**	**19 47 39.7**	**+1.0**
LFK	**Lefkose**	**3.88**	**114**	*e*PN	**Pn**	**19 47 42.3**	**+0.8**
LFK	**Lefkose**	**3.88**	**114**	*e*Pn	**Pn**	**19 47 42.3**	**+0.8**
CSS	**Prodhromos**	**3.89**	**119**	*e*PN	**Pn**	**19 47 40.9**	**-0.8**
CSS	**Prodhromos**	**3.89**	**119**	*e*Pn	**Pn**	**19 47 40.9**	**-0.7**
SIVA	**Sivas**	**4.05**	**243**	*e*P	**Pn**	**19 47 46.5**	**+2.7**
GELI	**Tayfur-Gelibol**	**4.05**	**329**	*e*PN	**Pn**	**19 47 44.0**	**+0.1**
GELI	**Tayfur-Gelibol**	**4.05**	**329**	*e*Pn	**Pn**	**19 47 44.0**	**+0.2**
GADA	**Gvkgeada**	**4.15**	**322**	*e*PN	**Pn**	**19 47 45.4**	**+0.3**
GADA	**Gvkgeada**	**4.15**	**322**	*e*Pn	**Pn**	**19 47 45.4**	**+0.3**
MERS	**Mersin**	**4.27**	**89**	*e*PN	**Pn**	**19 47 47.7**	**+0.9**
MERS	**Mersin**	**4.27**	**89**	*e*Pn	**Pn**	**19 47 47.7**	**+0.9**
VAM	**Vamos**	**4.33**	**251**	*e*P	**Pn**	**19 47 51.5**	**+3.9**
VLY	**Voula,Athens**	**4.40**	**283**	*e*P	**Pn**	**19 47 50.0**	**+1.4**
BRTR	**Keskin Array B**	**4.46**	**50**	Pn	**Pn**	**19 47 48.8**	**-0.6**
	0.4nm,0.3s,baz=231,slow=14,SNR=21						
BRTR				Sn	**Sn**	**19 48 43.7**	**+1.9**
	0.4nm,0.3s,baz=220,slow=24,SNR=7.1						
BRTR	**Keskin Array B**	**4.46**	**50**	Pn	**Pn**	**19 47 48.8**	**-0.6**
BRTR				Sn	**Sn**	**19 48 43.7**	**+1.9**
KARN	**Karanos**	**4.54**	**252**	*e*P	**Pn**	**19 47 53.5**	**+2.9**
GVD	**Gavdhos**	**4.65**	**245**	*e*P	**Pn**	**19 47 56.5**	**+4.4**
KARA	**Karaisali**	**4.69**	**84**	*e*PN	**Pn**	**19 47 53.9**	**+1.3**
KARA	**Karaisali**	**4.69**	**84**	*e*Pn	**Pn**	**19 47 53.9**	**+1.3**
VLI	**Veliai**	**5.03**	**269**	*e*P	**Pn**	**19 48 00.5**	**+3.2**
RDO	**Rodhopi**	**5.07**	**327**	*e*P	**Pn**	**19 47 58.0**	**+0.2**
NVR	**Nevrokopi**	**6.04**	**318**	*e*P	**Pn**	**19 48 12.0**	**+0.8**
MMAI	**Mount Meron Ar**	**6.43**	**126**	Pn	**Pn**	**19 48 16.2**	**-0.2**
	11nm,0.3s,baz=304,slow=12,SNR=46						
MMAI				Sn	**Sn**	**19 49 32.5**	**+2.2**
	1.9nm,0.3s,baz=313,slow=27,SNR=2.8						
AMAG	**Maghara**	**7.12**	**151**	P	**Pn**	**19 48 23.2**	**-2.7**
	baz=155						
AMAG				S	**Sn**	**19 49 36.8**	**-11**
	baz=155						
AMAG	**Maghara**	**7.12**	**151**	P	**Pn**	**19 48 23.2**	**-2.7**
ASF	**Jabal al Asfar**	**7.94**	**125**	Pn	**Pn**	**19 48 37.9**	**+0.7**
	0.4nm,0.3s,baz=267,slow=11,SNR=4.8						
ASF				Sn	**Sn**	**19 50 09.7**	**+2.2**
	baz=302,slow=15,SNR=2.0						
HNKL	**Nakhl**	**8.06**	**149**	P	**Pn**	**19 48 36.5**	**-2.3**
	baz=152						
HNKL				S	**Sn**	**19 49 59.2**	**-11**
	baz=152						
HNKL	**Nakhl**	**8.06**	**149**	P	**Pn**	**19 48 36.6**	**-2.2**
EIL	**Elat**	**8.71**	**145**	Pn	**Pn**	**19 48 46.6**	**-1.1**
	1.8nm,0.3s,baz=345,slow=8.7,SNR=8.3						
EIL				Sn	**Sn**	**19 50 24.2**	**-2.2**
	0.9nm,0.3s,baz=350,slow=18,SNR=3.5						
EIL	**Elat**	**8.71**	**145**	Pn	**Pn**	**19 48 46.7**	**-1.0**
EIL				Sn	**Sn**	**19 50 24.2**	**-2.2**
TR2		**9.35**	**155**	P	**Pn**	**19 48 54.8**	**-1.8**
	baz=158						
TR2		**9.35**	**155**	P	**Pn**	**19 48 54.8**	**-1.8**
HDHB	**Dhahab**	**9.38**	**149**	P	**Pn**	**19 48 54.8**	**-2.2**
	baz=152						
HDHB	**Dhahab**	**9.38**	**149**	P	**Pn**	**19 48 54.8**	**-2.2**
HHRG	**Al Ghardaqah**	**10.38**	**158**	P	**Pn**	**19 49 09.8**	**-0.9**
	baz=161						
HHRG	**Al Ghardaqah**	**10.38**	**158**	P	**Pn**	**19 49 09.8**	**-0.9**
DAVOX	**Davos/Dischmat**	**17.38**	**310**	LR	LR	19 57 36.8	
	comp=Z,27nm,21.5s,baz=268,slow=38						
ESDC	**Sonseca Array**	**26.08**	**286**	P	**P**	**19 52 14.8**	**-1.0**
	1.1nm,0.7s,mb3.5,baz=67,slow=12,SNR=4.4						
ESDC	**Sonseca Array**	**26.08**	**286**	P	**P**	**19 52 14.8**	**-0.9**
NOA	**NORSAR Array B**	**26.66**	**340**	LR	LR	20 04 29.8	
	comp=Z,17nm,18.7s,baz=65,slow=40						
KURK	**Kurchatov**	**37.51**	**52**	P	**P**	**19 53 54.6**	**-1.2**
	0.3nm,0.4s,mb3.4,baz=276,slow=8.8,SNR=3.5						
KURK	**Kurchatov**	**37.51**	**52**	P	**P**	**19 53 54.6**	**-1.2**
MKAR	**Makanchi Array**	**40.06**	**59**	P	**P**	**19 54 16.0**	**-1.2**
	0.6nm,0.9s,mb3.3,baz=283,slow=6.9,SNR=4.1						
MKAR	**Makanchi Array**	**40.06**	**59**	P	**P**	**19 54 16.0**	**-1.2**

*CSEM **10** 20:20:29.1±0.1, 47°.28N×8°.91E, h12km, ML2.3/23, Error ellipse: s-maj=2.0km s-min=1.4km az=5.0*
*LDG **10** 20:20:29.8±0.1, 47°.31N×8°.97E, h4km, Md2.2/3, Ml2.2/18, Error ellipse: s-maj=1.4km s-min=0.8km az=92.0*
*ZUR **10** 20:20:29.1, 47°.32N×8°.98E, h-0km±2km, ML1.7/6*
*STR **10** 20:20:31.6±0.8, 47°.38N×8°.88E, h10km, Ml2.1, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
VIE 10 20:20:29.1±0.3, 47°.33N×8°.92E, h10km±1km, ML2.0/4, 8C-10D, Error ellipse: s-maj=1.9km s-min=1.4km az=122.0 23 km SSE of Winterthur, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WILA	**Wila**	**0.09**	**355**	*i* Pg	Pg	20 20 32.1	+0.5
	1μm,0.3s						
WILA				*i* Sg	Sg	20 20 34.1	+0.8
	1μm,0.3s						
WILA	**Wila**	**0.09**	**355**	*i* Pg	Pg	20 20 32.1	+0.5
	1μm,0.3s						
WILA				*i* Sg	Sg	20 20 34.1	+0.8
	1μm,0.3s						
WEIN	**Weingarten**	**0.21**	**13**	⇓*i*Pg	Pg	20 20 34.2	+0.7
	238nm,0.3s						
WEIN				*i* Sg	Sg	20 20 37.6	+1.2
	238nm,0.3s						
WEIN	**Weingarten**	**0.21**	**13**	⇓*i*Pg	Pg	20 20 34.2	+0.7
	238nm,0.3s						
WEIN				*i* Sg	Sg	20 20 37.6	+1.2
	238nm,0.3s						
ZUR	**Degenried**	**0.23**	**281**	*i* Pg	Pg	20 20 35.3	+1.4
	569nm,0.2s						
ZUR				*i* Sg	Sg	20 20 39.6	+2.5
	569nm,0.2s						
ZUR	**Degenried**	**0.23**	**281**	*i* Pg	Pg	20 20 35.3	+1.4
	569nm,0.2s						
ZUR				*i* Sg	Sg	20 20 39.6	+2.5
	569nm,0.2s						
STEIN	**Stein am Rhein**	**0.35**	**354**	*i* Sg	Sg	20 20 39.3	-1.3
	131nm,0.3s						
LIENZ	**Kamor/St.Gall**	**0.39**	**94**	⇑*i*Pg	Pg	20 20 37.3	+0.5
	163nm,0.2s						
LIENZ				*e*Sg	Sg	20 20 43.1	+1.1
	163nm,0.2s						
LIENZ	**Kamor/St.Gall**	**0.39**	**94**	⇑*i*Pg	Pg	20 20 37.3	+0.5
	163nm,0.2s						
LIENZ				*e*Sg	Sg	20 20 43.1	+1.1
	163nm,0.2s						
PLONS	**Plons/SG**	**0.42**	**131**	*i* Sg	Sg	20 20 42.6	-0.3
	54nm,0.6s						
LLS	**Linth-Limmern**	**0.48**	**173**	⇑*i*Pg	Pg	20 20 43.7	+5.2
	31nm,0.2s						
DAVA	**Damuels**	**0.66**	**93**	⇑*i*Pg	Pg	20 20 41.7	-0.1
DAVA				⇓*i*Sg	Sg	20 20 51.2	+0.8
	31nm,0.2s						
DAVA	**Damuels**	**0.66**	**93**	Pg	Pg	20 20 41.7	-0.1
DAVA				Sg	Sg	20 20 51.2	+0.8
	31nm,0.2s						
SPAK	**Spaichingen-Ko**	**0.78**	**353**	Pg	Pg	20 20 45.2	+1.0
SPAK				Sg	Sg	20 20 56.0	+1.6
FELD	**Feldberg im Sc**	**0.83**	**312**	Pg	Pg	20 20 46.0	+0.9
FELD				Sg	Sg	20 20 57.8	+1.9
DAVOX	**Davos/Dischmat**	**0.85**	**129**	⇓*i*Pg	Pg	20 20 45.8	+0.2
	33nm,0.3s						
DAVOX	**Davos/Dischmat**	**0.85**	**129**	⇓*i*Pg	Pg	20 20 45.8	+0.2
	33nm,0.3s						
BFO	**Black Forest**	**1.08**	**339**	*e*Pg	Pg	20 20 50.9	+1.0
	SNR=7.6						
BFO				*e*Sg	Sg	20 21 04.3	+0.4
BFO	**Black Forest**	**1.08**	**339**	Pg	Pg	20 20 50.9	+1.0
	SNR=7.6						
BFO				Sg	Sg	20 21 04.3	+0.3
RETA	**Reutte**	**1.26**	**82**	⇑*i*Pn	Pn	20 20 53.0	+0.1
RETA				⇓*i*Pg	Pg	20 20 53.2	-0.1
RETA				⇑*i*Sg	Sg	20 21 10.9	+1.2
	1.7nm,0.1s						
RETA	**Reutte**	**1.26**	**82**	Pn	Pn	20 20 53.0	+0.1
FETA	**Feichten**	**1.27**	**103**	⇓*i*Pn	Pn	20 20 53.0	0.0
FETA				⇓*i*Sg	Sg	20 21 11.4	+1.4
	1.0nm,0.1s						
FETA	**Feichten**	**1.27**	**103**	Pn	Pn	20 20 53.0	0.0
FETA				Sg	Sg	20 21 11.4	+1.3
	1.0nm,0.1s						
MOF	**Molkenrain**	**1.32**	**294**	Pg	Pg	20 20 56.3	+1.9
MOF				Sg	Sg	20 21 13.4	+1.9
MOF	**Molkenrain**	**1.32**	**294**	Pg	Pg	20 20 56.3	+1.9
MOF				Sg	Sg	20 21 13.4	+1.9
HINF	**Hinteralfeld**	**1.48**	**290**	*e*Pg	Pg	20 20 57.9	+0.3
HINF				*e*Sn	Sn	20 21 15.0	-0.3
HINF				*e*Sg	Sg	20 21 17.7	+0.9
	9.7nm,0.2s						
HINF	**Hinteralfeld**	**1.48**	**290**	*e*Pg	Pg	20 20 57.9	+0.3
HINF				*e*Sn	Sn	20 21 15.0	-0.3
HINF				*e*Sg	Sg	20 21 17.7	+0.9
	4.8nm,0.2s						
ECH	**Echery**	**1.48**	**308**	Pg	Pg	20 20 58.5	+0.9
ECH				Sg	Sg	20 21 17.8	+0.9
ECH	**Echery**	**1.48**	**308**	Pg	Pg	20 20 58.5	+0.9
ECH				Sg	Sg	20 21 17.8	+0.9
MOTA	**Moosalm**	**1.49**	**88**	⇓*i*Pn	Pn	20 20 56.2	+0.3
MOTA				⇑*i*Pg	Pg	20 20 57.7	+0.1
MOTA				⇓*i*Sn	Sn	20 21 16.7	+1.3
MOTA				⇑*i*Sg	Sg	20 21 18.7

RAO S Sn 20 34 10.0 +0.2
69nm,0.3s,baz=108,slow=20,SNR=4.0
ASAR Alice Springs 43.60 262 P P 20 40 34.5 -0.7
0.2nm,0.5s,baz=93,slow=7.4,SNR=6.7
WRA Warramunga Arr 44.20 268 P P 20 40 40.6 +0.5
0.2nm,0.3s,baz=106,slow=7.6,SNR=7.5
MMAI Mount Meron Ar 150.34 291 PKPbc PKPbc 20 52 20.5 +0.7
1.3nm,0.5s,baz=66,slow=5.2,SNR=7.4
BRTR Keskin Array B 150.45 305 PKPbc PKPbc 20 52 18.3 -1.5
0.3nm,0.6s,baz=123,slow=5.3,SNR=2.6

*CSEM **10** 20:40:11.6±0.8, 38°.24N×20°.29E, h15km, MD2.9, Error ellipse: s-maj=13.9km s-min=7.4km az=70.0*
*ATH **10** 20:40:13.4, 38°.01N×20°.48E, h7km±2km, MD2.9/7*
*THE **10** 20:40:13.1, 38°.29N×20°.37E, h0km±8km, Error ellipse: s-maj=12.2km s-min=0.5km az=253.0*
*NEIC **10** 20:40:13.4, 38°.01N×20°.48E, h7km, MD2.9(ATH), After ATH.*

ISC 10 20:40:12.2±1.5, 38°.25N±0°.05×20°.32E±0°.09, h15km±4km, n27, σ0:82/48, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.22**	**108**	*e*Pg	**Pg**	**20 40 17.6**	**+0.5**
VLS				*e*Sg	**Sg**	**20 40 20.7**	**+0.2**
VLS	**Valsamata**	**0.22**	**108**	*e*PG	**Pg**	**20 40 17.6**	**+0.5**
VLS				*e*SG	**Sg**	**20 40 20.7**	**+0.2**
VLS	**Valsamata**	**0.22**	**108**	P	**Pg**	**20 40 17.5**	**+0.4**
VLS				S	**Sg**	**20 40 20.4**	**-0.1**
VLS	**Valsamata**	**0.22**	**108**	P	**Pg**	**20 40 17.5**	**+0.4**
VLS				S	**Sg**	**20 40 20.4**	**-0.1**
VLS				*e*Sg	**Sg**	**20 40 20.7**	**+0.2**
KFL	**Anninata**	**0.39**	**110**	P	**Pg**	**20 40 20.4**	**+0.3**
KFL				S	**Sg**	**20 40 26.1**	**+0.7**
KFL	**Anninata**	**0.39**	**110**	P	**Pg**	**20 40 20.4**	**+0.3**
KFL				S	**Sg**	**20 40 26.1**	**+0.7**
LKD2	**Lefkada island**	**0.60**	**26**	P	**Pg**	**20 40 23.4**	**-0.6**
LKD2				S	**Sg**	**20 40 31.8**	**-0.2**
LKD2	**Lefkada island**	**0.60**	**26**	P	**Pg**	**20 40 23.4**	**-0.6**
LKD2				S	**Sg**	**20 40 31.8**	**-0.2**
RLS	**Riolos of Patr**	**0.92**	**101**	*e*Pb	**Pg**	**20 40 28.3**	**-1.7**
RLS				*e*Sb	**Sg**	**20 40 38.8**	**-3.3**
RLS	**Riolos of Patr**	**0.92**	**101**	*e*PB	**Pg**	**20 40 28.3**	**-1.7**
RLS				*e*SB	**Sg**	**20 40 38.8**	**-3.3**
RLS	**Riolos of Patr**	**0.92**	**101**	*e*Pb	**Pg**	**20 40 28.3**	**-1.7**
RLS				*e*Sb	**Sg**	**20 40 38.8**	**-3.3**
EFP	**Efpalio**	**1.26**	**81**	*e*PB	**Pb**	**20 40 36.1**	**+0.5**
EFP				*e*SB	**Sb**	**20 40 52.3**	**+0.7**
EFP	**Efpalio**	**1.26**	**81**	P	**Pn**	**20 40 34.8**	**-0.4**
EFP				S	**Sb**	**20 40 51.1**	**-0.5**
EFP	**Efpalio**	**1.26**	**81**	P	**Pn**	**20 40 34.8**	**-0.4**
EFP	**Efpalio**	**1.26**	**81**	*e*Pb	**Pb**	**20 40 36.1**	**+0.5**
EFP				S	**Sb**	**20 40 51.1**	**-0.5**
EFP				*e*Sb	**Sb**	**20 40 52.3**	**+0.7**
LAKA	**Lakka**	**1.30**	**90**	P	**Pn**	**20 40 35.7**	**-0.1**
LAKA				S	**Sb**	**20 40 52.0**	**-0.9**
LAKA	**Lakka**	**1.30**	**90**	P	**Pn**	**20 40 35.7**	**-0.1**
LAKA				S	**Sb**	**20 40 52.0**	**-0.9**
EVR	**Evrytania**	**1.34**	**60**	*e*Pg	**Pg**	**20 40 39.0**	**+1.0**
EVR	**Evrytania**	**1.34**	**60**	*e*PG	**Pg**	**20 40 39.0**	**+1.0**
EVR	**Evrytania**	**1.34**	**60**	*e*Pg	**Pg**	**20 40 39.0**	**+1.0**
GUR	**Goura**	**1.62**	**100**	*e*PB	**Pb**	**20 40 41.3**	**-0.5**
GUR				*e*SB	**Sb**	**20 41 01.9**	**-0.2**
GUR	**Goura**	**1.62**	**100**	P	**Pn**	**20 40 41.2**	**+1.0**
GUR				S	**Sn**	**20 41 02.0**	**+1.2**
GUR	**Goura**	**1.62**	**100**	P	**Pn**	**20 40 41.2**	**+1.0**
GUR				S	**Sn**	**20 41 02.0**	**+1.2**
ITM	**Ithomi**	**1.66**	**129**	*e*Pg	**Pn**	**20 40 39.9**	**-0.8**
ITM	**Ithomi**	**1.66**	**129**	*e*PG	**Pn**	**20 40 39.9**	**-0.8**
AGG	**Agios Georgios**	**1.75**	**63**	*e*Pn	**Pg**	**20 40 46.5**	**+0.7**
AGG	**Agios Georgios**	**1.75**	**63**	*e*PN	**Pg**	**20 40 46.5**	**+0.7**

*IDC **10** 20:42:55.0±0.7, 6°.42N×124°.42E, h0km, mb4.0/11, mb1 4.0/11, mb1mx3.9/23, mbtmp4.0/11, MS3.1/6, Ms1 3.1/6, ms1mx2.9/27, Error ellipse: s-maj=15.1km s-min=13.7km az=98.0*
*ISCJB **10** 20:42:55.2±1.5, 6°.43N±0°.05×124°.51E±0°.04, h12km±10km, mb4.0/15, MS3.0/5, Error ellipse: s-maj=7.7km s-min=7.5km az=174.9*
*MAN **10** 20:42:56, 6°.27N×124°.51E, h28km, mb4.7, ML3.6, MS3.6*
*NEIC **10** 20:42:57.1±0.5, 6°.51N×124°.60E, h15km, mb3.9/2, Error ellipse: s-maj=12.9km s-min=9.9km az=73.0*

ISC 10 20:42:56.0±1.0, 6°.50N±0°.05×124°.53E±0°.05, h5km±7km, n32, σ1:14/34, mb4.0/15, MS3.0/5, 2C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.59**	**134**	⇑*e*P	**Pg**	**20 43 10.0**	**+2.7**
KCP	**Kidapawan**	**0.75**	**48**	⇓*e*P	**Pg**	**20 43 10.2**	**-0.3**
KCP				*i* S	**Sg**	**20 43 27.0**	**+6.8**
CTBH	**Cotabato--PC H**	**0.77**	**339**	⇓*e*P	**Pg**	**20 43 11.0**	**+0.3**
CTBH				*i* S	Sg	20 43 42.7	+22
DMPH	**Davao City--Mi**	**1.13**	**59**	⇑*i*P	**Pg**	**20 43 16.6**	**-1.1**
DMPH				*i* S	**Sg**	**20 43 31.6**	**-0.8**
DAV	**Davao City (W)**	**1.19**	**62**	Pg	**Pg**	**20 43 18.4**	**-0.4**
	55nm,0.3s,baz=349,slow=1.2,SNR=13						
DAV				Lg		20 43 38.6	
	125nm,0.3s,baz=86,slow=21,SNR=7.6						
BUKP	**Musuan**	**1.47**	**21**	*e*P	**Pn**	**20 43 23.8**	**+0.7**
BUKP				*e*S	**Sn**	**20 43 45.0**	**+2.3**
PAGZ	**Pagadian**	**1.75**	**320**	*e*P	**Pn**	**20 43 27.3**	**+0.2**
PAGZ				*e*S	**Sn**	**20 43 47.5**	**-2.4**
MATI	**Mati**	**1.77**	**76**	*e*P	**Pn**	**20 43 26.6**	**-0.8**
IPIL	**Ipil**	**2.32**	**303**	*e*P	**Pn**	**20 43 35.9**	**+0.9**
IPIL				*e*S	**Sn**	**20 43 55.7**	**-8.2**
ZMPH	**Zamboanga City**	**2.49**	**281**	⇓*i*P	**Pn**	**20 43 35.7**	**-1.5**
ZMPH				*i* S	**Sn**	**20 43 54.5**	**-13**
KAPI	**Kappang**	**12.39**	**203**	LR	LR	20 50 48.3	
	comp=Z,122nm,20.6s,baz=104,slow=39						
FITZ	**Fitzroy Crossi**	**24.47**	**177**	P	**P**	**20 48 15.4**	**-0.7**
	2.0nm,0.5s,mb3.8,baz=2.9,slow=7.5,SNR=17						
CBIJ	**Chichi jima**	**26.48**	**37**	LR	LR	20 56 49.3	
	comp=Z,27nm,21.7s,MS2.8,baz=99,slow=31						
WRA	**Warramunga Arr**	**28.00**	**160**	P	**P**	**20 48 47.1**	**-0.8**
	1.3nm,0.7s,mb3.6,baz=333,slow=10,SNR=11						
KSRS	**Korea Array**	**30.96**	**5**	P	**P**	**20 49 14.6**	**+0.4**
	0.5nm,0.3s,mb3.8,baz=181,slow=6.7,SNR=3.0						
KSRS				LR	LR	21 00 05.8	
	comp=Z,26nm,21.1s,MS2.9,baz=210,slow=33						
ASAR	**Alice Springs**	**31.35**	**163**	P	**P**	**20 49 17.7**	**0.0**
	0.4nm,0.7s,mb3.4,baz=346,slow=6.7,SNR=6.8						
MJAR	**Matsushiro Arr**	**32.41**	**21**	LR	LR	21 00 26.0	
	comp=Z,43nm,18.9s,MS3.2,baz=240,slow=32						
LZH	**Lanzhou**	**35.02**	**330**	*e*P	**P**	**20 49 52.0**	**+2.4**
LZH				pP	pP	20 49 56.7	+5.5
LZH				sP	sP	20 49 59.1	+7.3
LZH				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.9						
LSA	**Lhasa**	**38.98**	**310**	*e*P	**P**	**20 50 21.4**	**-2.0**
	comp=Z,1.5nm,0.7s,mb3.8						
GTA	**Gaotai**	**39.61**	**329**	*e*P	**P**	**20 50 30.5**	**+2.0**
GTA				pP	pP	20 50 35.9	+5.8
GTA				sP	sP	20 50 39.5	+8.8
GTA				pmax	pmax		
	comp=Z,4.0nm,1.4s,mb4.0						
STKA	**Stephens Creek**	**41.49**	**158**	P	**P**	**20 50 43.5**	**-0.7**
	comp=Z,2.5nm,0.8s,mb3.9,baz=342,slow=13,SNR=3.4						
SONM	**Songino Array**	**44.00**	**342**	P	**P**	**20 51 04.7**	**+0.3**
	comp=Z,0.5nm,0.5s,mb3.5,baz=155,slow=8.7,SNR=6.3						
SONM				PcP	PcP	20 52 50.2	+0.2
	comp=Z,0.5nm,0.7s,baz=132,slow=2.1,SNR=3.1						
SONM				LR	LR	21 11 38.1	
	comp=Z,25nm,18.3s,MS3.2,baz=271,slow=39						
PETK	**Petropavlovsk-**	**53.76**	**24**	LR	LR	21 15 21.5	
	comp=Z,12nm,19.2s,MS3.0,baz=172,slow=36						
MK31	**Makanchi Array**	**54.04**	**325**	*e*P	**P**	**20 52 22.4**	**+1.0**
MKAR	**Makanchi Array**	**54.04**	**325**	P	**P**	**20 52 22.4**	**+1.1**
	comp=Z,2.0nm,0.8s,mb4.1,baz=132,slow=7.9,SNR=22						
MKAR				PcP	PcP	20 53 25.0	-1.4
	comp=Z,1.1nm,0.7s,baz=124,slow=3.6,SNR=8.0						
MKAR	**Makanchi Array**	**54.04**	**325**	P	**P**	**20 52 22.4**	**+1.1**
MKAR				PcP	PcP	20 53 25.0	-1.4
ZALV	**Zalesovo Beam**	**57.14**	**333**	P	**P**	**20 52 43.5**	**0.0**
	comp=Z,1.5nm,0.7s,mb4.1,baz=129,slow=6.0,SNR=6.3						
KURK	**Kurchatov**	**58.24**	**328**	P	**P**		**20 52 51.8 +0.5**
	comp=Z,3.5nm,0.8s,mb4.4,baz=125,slow=6.5,SNR=26						
KURK	**Kurchatov**	**58.24**	**328**	*e*P	**P**	**20 52 51.7**	**+0.3**
BVAR	**Borovoye Array**	**63.81**	**327**	P	**P**	**20 53 28.6**	**-0.6**
	comp=Z,1.1nm,0.7s,mb4.0,baz=128,slow=13,SNR=6.5						
MAW	**Mawson**	**85.59**	**200**	*e*P	**P**	**20 55 35.1**	**+0.1**
	comp=Z,0.8nm,0.7s,mb4.1						
FINES	**FINESS Array B**	**88.37**	**332**	P	**P**	**20 55 47.6**	**-1.1**
	comp=Z,2.2nm,0.9s,mb4.4,baz=119,slow=7.2,SNR=4.9						

*IDC **10** 21:09:13.4±2.1, 9°.36S×107°.05E, h0km, mb3.9/11, mb1 4.0/11, mb1mx3.9/22, mbtmp3.9/11, Error ellipse: s-maj=93.4km s-min=16.4km az=50.0*
*ISCJB **10** 21:09:14.1±2.5, 9°.42S±0°.07×107°.00E±0°.08, h20km±17km, mb3.9/16, Error ellipse: s-maj=17.0km s-min=7.1km az=141.2*
*NEIC **10** 21:09:18.5±0.3, 9°.37S×107°.07E, h35km, mb4.1/7, Error ellipse: s-maj=11.2km s-min=5.1km az=57.0*
*DJA **10** 21:09:20, 9°.14S×107°.15E, h60km, MLv4.2/9*

ISC 10 21:09:16.0±3.2, 9°.39S±0°.07×107°.02E±0°.08, h17km±20km, n40, σ0:81/41, mb3.9/16, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	**Lembang**	**2.61**	**13**	P	**Pn**	**21 09 58.8**	**+1.3**
CGJI	**Cibinong**	**3.06**	**334**	P	**Pn**	**21 10 03.1**	**-0.5**
CGJI				S	**Sn**	**21 10 38.5**	**-1.3**
RBSI	**Rajabasa**	**3.74**	**340**	P	**Pn**	**21 10 14.8**	**+1.8**
UGM	**Wanagama**	**3.76**	**67**	P	**Pn**	**21 10 12.6**	**-0.7**
SMRI	**Semarang**	**4.11**	**56**	S	**Sn**	**21 11 01.0**	**-4.7**
KLSI		**5.19**	**334**	P	**Pn**	**21 10 32.6**	**-0.4**
	0.2nm42nm,0.8s						
LWLI	**Liwa**	**5.24**	**326**	P	**Pn**	**21 10 32.4**	**-1.3**
	0.6nm2μm92nm,0.7s						
MDSI	**Maura Dua**	**5.63**	**330**	P	**Pn**	**21 10 38.5**	**-0.5**
KULM	**Kulim**	**15.90**	**336**	Pn	**Pn**	**21 12 58.8**	**-0.4**
MBWA	**Marble Bar**	**16.93**	**135**	*e*Pn	**Pn**	**21 13 08.6**	**-3.7**
KKM	**Kota Kinabalu**	**17.86**	**31**	*e*Pn	**Pn**	**21 13 24.2**	**+0.3**
FITZ	**Fitzroy Crossi**	**20.03**	**118**	P	**P**	**21 13 48.6**	**+0.3**
	5.3nm,1.2s,baz=300,slow=8.1,SNR=2.1						
FITZ	**Fitzroy Crossi**	**20.03**	**118**	*e*P	**P**	**21 13 48.7**	**+0.3**
	1.4nm,0.5s						
NWAO	**Narrogin (SRO)**	**25.25**	**160**	P	**P**	**21 14 41.4**	**+0.1**
WRA	**Warramunga Arr**	**28.39**	**115**	P	**P**	**21 15 09.4**	**-0.3**
	0.6nm,0.7s,mb3.4,baz=288,slow=11,SNR=4.5						
WRAB	**Tennant Creek**	**28.39**	**115**	*e*P	**P**	**21 15 09.0**	**-0.8**
	3.2nm,0.8s,mb4.0						
CM31	**Chiang Mai Arr**	**28.80**	**344**	P	**P**	**21 15 12.7**	**-0.5**
CMAR	**Chiang Mai Arr**	**28.80**	**344**	P	**P**	**21 15 12.9**	**-0.4**
	1.8nm,0.7s,mb3.9,baz=178,slow=8.5,SNR=16						
CHTO	**Chiang Mai**	**29.13**	**344**	*e*P	**P**	**21 15 17.1**	**+0.9**
	4.6nm,0.9s,mb4.2						
ASAR	**Alice Springs**	**29.34**	**122**	P	**P**	**21 15 18.5**	**+0.3**
	0.4nm,0.6s,mb3.3,baz=302,slow=8.7,SNR=3.2						
STKA	**Stephens Creek**	**39.06**	**130**	P	**P**	**21 16 42.1**	**-0.1**
	3.3nm,0.9s,mb4.1,baz=296,slow=11,SNR=3.6						
STKA	**Stephens Creek**	**39.06**	**130**	*e*P	**P**	**21 16 42.1**	**-0.2**
	0.7nm,0.9s,mb3.4						
ENH	**Enshi**	**39.50**	**3**	P	**P**	**21 16 45.3**	**-0.5**
LSA	**Lhasa**	**41.76**	**339**	*e*P	**P**	**21 17 06.1**	**+1.6**
	2.1nm,0.6s,mb3.9						
XAN	**Xi'an**	**43.23**	**2**	P	**P**	**21 17 15.9**	**-0.5**
XAN				pP	pP	21 17 25.9	+4.3
XAN				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.7						
GTA	**Gaotai**	**49.01**	**353**	*e*P	**P**	**21 18 04.8**	**+3.0**
GTA				pP	pP	21 18 10.2	+3.0
GTA				sP	sP	21 18 13.8	+4.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.1						
KBL	**Kabul**	**56.59**	**323**	*e*P	**P**	**21 18 58.4**	**+0.4**
CASY	**Casey**	**56.86**	**178**	*e*P	**P**	**21 18 58.8**	**-0.6**
SONM	**Songino Array**	**56.97**	**359**	P	**P**	**21 19 01.0**	**+0.5**
	comp=Z,0.7nm,0.7s,mb3.8,baz=181,slow=6.3,SNR=4.7						
ULN	**Ulaanbaatar**	**57.00**	**0**	P	**P**	**21 18 59.7**	**-1.0**
MK31	**Makanchi Array**	**60.13**	**341**	*e*P	**P**	**21 19 22.4**	**-0.1**
MKAR	**Makanchi Array**	**60.13**	**341**	P	**P**	**21 19 23.0**	**+0.5**
	comp=Z,2.0nm,0.6s,mb4.3,baz=144,slow=8.0,SNR=23						
KURK	**Kurchatov**	**64.74**	**340**	P	**P**	**21 19 53.2**	**-0.1**
	comp=Z,0.9nm,0.6s,mb4.0,baz=158,slow=5.8,SNR=6.2						
KURK	**Kurchatov**	**64.74**	**340**	*e*P	**P**	**21 19 53.3**	**0.0**
	comp=Z,1.9nm,0.6s,mb4.3						
KURK				*e*		21 20 02.6	
ZALV	**Zalesovo Beam**	**65.84**	**346**	P	**P**	**21 19 59.7**	**-0.6**
	comp=Z,0.3nm,0.3s,mb3.8,baz=135,slow=6.8,SNR=2.7						
BVAR	**Borovoye Array**	**69.56**	**337**	P	**P**	**21 20 24.1**	**+0.3**
	comp=Z,0.8nm,0.4s,mb4.0,baz=141,slow=9.6,SNR=9.3						
BRVK	**Borovoye**	**69.63**	**337**	*e*P	**P**	**21 20 24.9**	**+0.6**
KMBO	**Kilima Mbogo**	**69.86**	**272**	*e*P	**P**	**21 20 27.4**	**+0.9**
ABKAR	**Akbulak array**	**71.47**	**330**	*e*P	**P**	**21 20 35.5**	**0.0**
	comp=Z,2.1nm,0.6s,mb4.2						
PETK	**Petropavlovsk-**	**75.66**	**29**	P	**P**	**21 21 00.2**	**+0.1**
	comp=Z,1.2nm,0.6s,mb4.0,baz=232,slow=3.5,SNR=2.9						

MAN 10 21:19:07.7±19N×124°.36E, h30km, mb4.8, ML3.7, MS3.8, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.12**	**286**	⇑*e*P	Pb	21 19 13.2	+0.7
CTBH				*i* S	Sb	21 19 25.6	+9.4
BUKP	**Musuan**	**0.98**	**45**	*e*P	Pn	21 19 25.4	+0.7
BUKP				*e*S	Sn	21 19 37.6	+0.1
PAGZ	**Pagadian**	**1.17**	**304**	*e*P	Pn	21 19 28.4	+1.1
PAGZ				*e*S	Sn	21 19 35.6	-6.7
IPIL	**Ipil**	**1.87**	**289**	*e*P	Pn	21 19 37.9	+0.9

*NEIC **10** 21:22:31.0, 15°.98N×94°.98W, h60km, MD4.3(MEX), After MEX.*

MEX 10 21:22:31.0±1.4, 15°.98N×94°.98W, h60km±34km, MD4.3, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.10**	**259**	*i* P	Pn	21 22 48.5	-1.9
HUIG				*i* S	Sn	21 23 03.4	-1.5
HUIG	**Huatulco**	**1.10**	**259**	*i* P	Pn	21 22 48.5	-1.9
HUIG				*i* S	Sn	21 23 03.4	-1.5
PCIG		**1.72**	**99**	*i* P	Pn	21 22 57.6	-1.0
PCIG				*i* S	Sn	21 23 18.1	-1.5
TGIG		**1.95**	**66**	*i* P	Pn	21 23 00.0	-1.8
TGIG				*i* S	Sn	21 23 22.6	-2.6
OXX	**Oaxaca**	**2.00**	**303**	*i* P	Pn	21 23 02.2	-0.2
OXX				*i* S	Sn	21 23 20.7	-5.6
OXX	**Oaxaca**	**2.00**	**303**	*i* P	Pn	21 23 02.2	-0.2
OXX				*i* S	Sn	21 23 20.7	-5.6
VHO	**Vista Hermosa**	**2.00**	**303**	*i* P	Pn	21 23 01.6	-0.8
VHO				*e*S	Sn	21 23 24.0	-2.4
VHO	**Vista Hermosa**	**2.00**	**303**	*i* P	Pn	21 23 01.6	-0.8
VHO				*e*S	Sn	21 23 24.0	-2.4
SCX	**San Cristobal**	**2.38**	**71**	*i* P	Pn	21 23 07.1	-0.5
SCX				*i* S	Sn	21 23 36.5	+0.9
SCX	**San Cristobal**	**2.38**	**71**	*i* P	Pn	21 23 07.1	-0.5
SCX				*i* S	Sn	21 23 36.5	+0.9
THIG		**2.83**	**112**	*i* P	Pn	21 23 11.0	-2.8
THIG				*e*S	Sn	21 23 43.1	-3.6
PNIG	**Pinotepa**	**3.05**	**278**	*i* P	Pn	21 23 14.9	-1.9
PNIG				*e*S	Sn	21 23 49.4	-2.7
PNIG	**Pinotepa**	**3.05**	**278**	*i* P	Pn	21 23 14.9	-1.9
PNIG				*e*S	Sn	21 23 49.4	-2.7
UTMO	**Huajuapan**	**3.27**	**305**	*i* P	Pn	21 23 19.6	-0.2
UTMO				*i* S	Sn	21 24 07.8	+10
PPM	**Popocatepetl**	**4.64**	**312**	*i* P	Pn	21 23 37.9	-0.6
PPM				*e*P		21 23 40.9	
PPM				*e*S	Sn	21 24 30.3	-0.7
PPM	**Popocatepetl**	**4.64**	**312**	*i* P	Pn	21 23 37.9	-0.6
PPM				*e*P		21 23 40.9	
PPM				*e*S	Sn	21 24 30.3	-0.7
ACX	**Acapulco**	**4.76**	**281**	*e*P	Pn	21 23 38.0	-2.2
ACX				*i* S	Sn	21 24 30.8	-3.4
ACX	**Acapulco**	**4.76**	**281**	*e*P	Pn	21 23 38.0	-2.2
ACX				*i* S	Sn	21 24 30.8	-3.4
CAIG	**El Cayaco**	**5.18**	**283**	*i* P	Pn	21 23 44.5	-1.4
CAIG				*e*S	Sn	21 24 42.4	-2.0
CAIG	**El Cayaco**	**5.18**	**283**	*i* P	Pn	21 23 44.5	-1.4
CAIG				*e*S	Sn	21 24 42.4	-2.0

BJI 10 21:26:47.7, 44°.00N×87°.62E, h15km, mB4.5/1, mb3.7/1, ML3.0/8, Ms7 3.3/1, 1C, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**0.19**	**163**	⇑*i*Pg	Pg	21 26 50.3	-1.8
WMQ				Sg	Sg	21 26 53.4	-1.7

*IDC **10** 21:47:18.0±1.5, 5°.18S×145°.59E, h0km, mb3.9/8, mb1 4.2/9, mb1mx4.0/16, mbtmp4.0/9, ML4.3/1, MS3.3/3, Ms1 3.3/3, ms1mx2.9/18, Error ellipse: s-maj=51.2km s-min=19.1km az=94.0*
*ISCJB **10** 21:47:30.3±3.1, 5°.4S±0°.1×145°.3E±0°.1, h110km±27km, mb3.9/11, Error ellipse: s-maj=24.8km s-min=14.7km az=156.2*
*NEIC **10** 21:47:30.9±1.7, 5°.36S×145°.37E, h103km±15km, mb4.2/7, Error ellipse: s-maj=14.0km s-min=9.1km az=64.0*

ISC 10 21:47:31.0±2.6, 5°.40S±0°.10×145°.3E±0°.1, h102km±23km, n32, σ0:86/31, mb3.9/11, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**8.77**	**194**	*e*Pn	**Pn**	**21 49 35.9**	**+1.0**
	158nm,0.8s						
COEN				*e*Sn	**Sn**	**21 51 10.6**	**-1.4**
CTA	**Charters Tower**	**14.62**	**177**	Pn	**Pn**	**21 50 52.2**	**-0.8**
	0.2nm,0.3s,baz=2.7,slow=14,SNR=2.1						
CTA	**Charters Tower**	**14.62**	**177**	Pn	**Pn**	**21 50 52.2**	**-0.8**
CTAO	**Charters Tower**	**14.62**	**177**	*e*Pn	**Pn**	**21 50 54.4**	**+1.4**
KAKA	**Kakadu**	**14.66**	**239**	*e*Pn	**Pn**	**21 50 55.0**	**+1.6**
	54nm,0.8s						
WRAB	**Tennant Creek**	**17.97**	**216**	*e*Pn	**Pn**	**21 51 33.0**	**-1.3**
	10nm,0.9s						
WRA	**Warramunga Arr**	**17.98**	**216**	P	**Pn**	**21 51 34.0**	**-0.6**
	1.1nm,0.3s,baz=32,slow=10,SNR=36						
WRA				PcP	PcP	21 56 05.8	+1.3
	0.1nm,0.3s,baz=21,slow=1.8,SNR=8.2						
ASAR	**Alice Springs**	**21.24**	**210**	P	**P**	**21 52 09.2**	**+0.3**
	5.0nm,0.5s,mb4.1,baz=39,slow=7.9,SNR=46						
FITZ	**Fitzroy Crossi**	**23.02**	**235**	P	**P**	**21 52 28.3**	**+0.8**
	27nm,0.7s,mb4.7,baz=60,slow=8.2,SNR=62						
FITZ				LR	LR	22 02 23.5	
	comp=Z,56nm,21.2s,baz=279,slow=39						
FITZ	**Fitzroy Crossi**	**23.02**	**235**	*e*P	**P**	**21 52 28.1**	**+0.7**
	19nm,0.6s,mb4.6						
FITZ				LR	LR	22 02 23.5	
STKA	**Stephens Creek**	**26.57**	**187**	P	**P**	**21 53 00.6**	**+1.0**
	5.4nm,0.7s,mb4.2,baz=12,slow=12,SNR=13						
STKA				LR	LR	22 03 04.1	
	comp=Z,94nm,18.2s,baz=24,slow=35						
STKA	**Stephens Creek**	**26.57**	**187**	*e*P	**P**	**21 53 00.2**	**+0.6**
	0.9nm,0.5s,mb3.6						
STKA				LR	LR	22 03 04.1	
MBWA	**Marble Bar**	**29.36**	**235**	*e*P	**P**	**21 53 25.1**	**+0.6**
	3.2nm,0.5s,mb4.2						
KSM	**Kuching**	**35.65**	**280**	P	**P**	**21 54 19.2**	**-0.3**
KSRS	**Korea Array**	**45.62**	**341**	LR	LR	22 13 46.6	
	comp=Z,26nm,19.4s,baz=104,slow=35						
KULM	**Kulim**	**45.87**	**283**	P	**P**	**21 55 41.3**	**-2.3**
CM31	**Chiang Mai Arr**	**51.51**	**299**	P	**P**	**21 56 26.5**	**-0.2**
CMAR	**Chiang Mai Arr**	**51.51**	**299**	P	**P**	**21 56 26.6**	**0.0**
	0.7nm,0.8s,mb3.8,baz=117,slow=5.6,SNR=4.1						
LSA	**Lhasa**	**62.56**	**307**	P	**P**	**21 57 44.9**	**+0.4**
SONM	**Songino Array**	**63.09**	**332**	P	**P**	**21 57 48.7**	**+1.1**
	0.2nm,0.5s,mb3.4,baz=157,slow=4.7,SNR=2.6						
CASY	**Casey**	**65.40**	**195**	*e*P	**P**	**21 58 03.3**	**+0.9**
SBA	**Scott Base**	**73.28**	**175**	*e*P	**P**	**21 58 50.3**	**-0.5**
MKAR	**Makanchi Array**	**75.99**	**321**	P	**P**	**21 59 06.4**	**-0.5**
	0.1nm,0.3s,mb3.0,baz=95,slow=8.5,SNR=4.7						
ZALV	**Zalesovo Beam**	**77.63**	**328**	P	**P**	**21 59 15.7**	**-0.3**
	0.4nm,0.4s,mb3.5,baz=123,slow=5.3,SNR=2.6						
TKM2	**Tokmak 2**	**79.06**	**315**	*e*P	**P**	**21 59 24.8**	**+0.6**
UCH	**Uchtor**	**79.62**	**315**	*e*P	**P**	**21 59 27.0**	**-0.2**
	1.7nm,0.6s,mb4.0						
EKS2	**Erkin-Say**	**80.26**	**315**	P	**P**	**21 59 30.7**	**0.0**
QSPA	**South Pole Qui**	**84.56**	**180**	*e*P	**P**	**21 59 53.0**	**+0.7**
	4.6nm,1.0s,mb4.4						
COLA	**College**	**85.25**	**23**	P	**P**	**21 59 54.9**	**-1.0**
BVAR	**

*NEIC **10** 22:13:51.0, 35°.69N×26°.53E, h12km, MD3.0(ATH), After ATH.*
*CSEM **10** 22:13:51.0, 35°.69N×26°.53E, h12km, MD3.0, After ATH*
ATH 10 22:13:51.0, 35°.69N×26°.53E, h12km±4km, MD3.0/6, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.63**	**204**	*e*Pb	Pb	22 14 03.1	-0.8
ZKR	**Zakros**	**0.63**	**204**	*e*PB	Pb	22 14 03.1	-0.8
ZKR	**Zakros**	**0.63**	**204**	*e*Pb	Pb	22 14 03.1	-0.8
NPS	**Neapolis**	**0.86**	**241**	*e*Pb	Pb	22 14 06.4	-1.5
NPS				*e*Sb	Sb	22 14 18.8	-0.6
NPS	**Neapolis**	**0.86**	**241**	*e*PB	Pb	22 14 06.4	-1.5
NPS				*e*SB	Sb	22 14 18.8	-0.6
NPS	**Neapolis**	**0.86**	**241**	*e*Pb	Pb	22 14 06.4	-1.5
NPS				*e*Sb	Sb	22 14 18.8	-0.6
LAST	**Lasithi**	**1.01**	**239**	*e*Pg	Pg	22 14 09.9	-0.5
LAST				*e*Sb	Sb	22 14 24.3	+0.7
LAST	**Lasithi**	**1.01**	**239**	*e*PG	Pg	22 14 09.9	-0.5
LAST				*e*SB	Sb	22 14 24.3	+0.7
LAST	**Lasithi**	**1.01**	**239**	*e*Pg	Pg	22 14 09.9	-0.5
LAST				*e*Sb	Sb	22 14 24.3	+0.7
SIVA	**Sivas**	**1.56**	**245**	*e*Pb	Pb	22 14 21.2	+1.4
SIVA	**Sivas**	**1.56**	**245**	*e*PB	Pb	22 14 21.2	+1.4
SIVA	**Sivas**	**1.56**	**245**	*e*Pb	Pb	22 14 21.2	+1.4
VAM	**Vamos**	**1.92**	**262**	*e*Pn	Pn	22 14 26.1	+2.6
VAM	**Vamos**	**1.92**	**262**	*e*PN	Pn	22 14 26.1	+2.6
VAM	**Vamos**	**1.92**	**262**	*e*Pn	Pn	22 14 26.1	+2.6
TURN	**Turunc**	**2.05**	**54**	*i* P	Pn	22 14 17.4	-7.8
KARN	**Karanos**	**2.15**	**263**	*e*PN	Pn	22 14 28.9	+2.3
KARN	**Karanos**	**2.15**	**263**	*e*Pn	Pn	22 14 28.9	+2.3
AYDN	**Tasoluk**	**2.25**	**28**	*i* P	Pn	22 14 29.6	+1.6

*IDC **10** 22:17:21.3±1.8, 8°.23S×125°.00E, h0km, mb3.3/1, mb1 3.5/4, mb1mx3.3/19, mbtmp3.3/4, ML3.0/3, Error ellipse: s-maj=108.2km s-min=27.1km az=67.0*
*NEIC **10** 22:17:26.2±0.5, 8°.08S×125°.35E, h35km, mb4.2/2, Error ellipse: s-maj=27.1km s-min=7.6km az=58.0*
ISC 10 22:17:30.6±3.7, 8°.5S±0°.2×125°.2E±0°.2, h83km±40km, n11, σ1§23/15, mb3.7/3, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.56**	**177**	*e*Pn	**Pn**	**22 19 44.2**	**-1.2**
	0.0nm,0.3s,baz=4.7,slow=9.5,SNR=4.5						
FITZ				Sn	**Sn**	**22 21 29.1**	**-2.1**
	0.1nm,0.3s,baz=109,slow=18,SNR=2.2						
FITZ	**Fitzroy Crossi**	**9.56**	**177**	*e*Pn	**Pn**	**22 19 47.5**	**+2.1**
FITZ				*e*Sn	**Sn**	**22 21 33.7**	**+2.5**
WRA	**Warramunga Arr**	**14.42**	**143**	Pn	**Pn**	**22 20 50.2**	**-0.4**
	0.1nm,0.3s,baz=315,slow=14,SNR=7.3						
WRA				Sn	**Sn**	**22 23 27.4**	**-2.0**
	0.1nm,0.3s,baz=321,slow=25,SNR=5.1						
WRAB	**Tennant Creek**	**14.42**	**143**	*e*Pn	**Pn**	**22 20 51.2**	**+0.6**
	0.5nm,0.5s						
ASAR	**Alice Springs**	**17.24**	**152**	Pn	**Pn**	**22 21 28.2**	**+2.1**
	0.0nm,0.3s,baz=331,slow=15,SNR=3.0						
ASAR				Sn	**Sn**	**22 24 36.9**	**-0.7**
	0.1nm,0.3s,baz=316,slow=21,SNR=2.9						
CTAO	**Charters Tower**	**23.40**	**122**	P	**P**	**22 22 34.0**	**+1.7**
LSA	**Lhasa**	**50.15**	**321**	P	**P**	**22 26 16.9**	**-0.8**
MKAR	**Makanchi Array**	**66.97**	**329**	P	**P**	**22 28 13.8**	**-0.5**
	0.2nm,0.6s,mb3.1,baz=126,slow=7.3,SNR=3.5						
KBL	**Kabul**	**68.16**	**312**	*e*P	**P**	**22 28 21.5**	**-0.6**
	0.8nm,0.5s,mb3.8						
UCH	**Uchtor**	**68.45**	**322**	*e*P	**P**	**22 28 23.8**	**+0.1**
	1.1nm,0.4s,mb4.0						
BRVK	**Borovoye**	**76.92**	**330**	P	**P**	**22 29 13.9**	**+0.2**

SKHL 10 22:32:31.1±0.1, 55°.17N×122°.83E, h22km±2km, mb3.7/5, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUP	**Tupik**	**1.82**	**247**	*e*Pg	Pn	22 33 04.8	+3.7
TUP				AMB	AMB	22 33 09.4	
	44nm,0.3s						
TUP				*e*Sg	Sn	22 33 28.2	+4.7
TUP				A		22 33 30.1	
	83nm,0.4s						
CLNS	**Chul'man**	**2.03**	**34**	*e*Pn	Pn	22 33 06.7	+2.7
CLNS				*e*Pg	Pn	22 33 09.3	+5.3
CLNS				AMB	AMB	22 33 11.3	
	5.0nm,0.1s						
CLNS				*e*Sn	Sn	22 33 33.0	+4.4
CLNS				*e*Sg	Sn	22 33 35.2	+6.6
CLNS				A		22 33 36.5	
	235nm,0.5s						
CLNS				A		22 33 36.5	
	211nm,0.5s						
KROS	**Kirovskiy**	**2.51**	**105**	*e*Pn	Pn	22 33 09.6	-0.9
KROS				*e*Pg	Pn	22 33 16.1	+5.6
KROS				AMB	AMB	22 33 17.7	
	8.0nm,0.3s						
KROS				pPg		22 33 23.0	
KROS				*e*rx	rx	22 33 39.0	
KROS				*e*Sg	Sn	22 33 49.0	+8.7
KROS				A		22 33 54.0	
	62nm,0.5s						
KROS				A		22 33 54.0	
	55nm,0.5s						
ZEA	**Zeya**	**2.95**	**117**	*e*Sg	Sn	22 34 04.0	+13
ZEA				A		22 34 09.0	
	100nm,0.8s						
ZEA				A		22 34 09.0	
	110nm,0.8s						
BMKR	**Bomnak**	**3.50**	**95**	*e*Pn	Pn	22 33 23.1	-1.0
BMKR				*e*Pg	Pn	22 33 33.5	+9.4
BMKR				AMB	AMB	22 33 34.7	
	5.0nm,0.4s						
BMKR				pPg		22 33 38.0	
BMKR				*e*Sn	Sn	22 34 05.5	+0.8
BMKR				*e*Sg	Sn	22 34 19.0	+14
BMKR				A		22 34 25.5	
	51nm,0.5s						
NLY	**Nelyaty**	**4.24**	**291**	*e*Pg	Pn	22 33 47.6	+13
NLY				AMB	AMB	22 33 48.6	
	3.0nm,0.3s						
NLY				*e*Sg	Sn	22 34 42.7	+20
NLY				A		22 34 43.7	
	49nm,0.8s						
EKMR	**Ekimchan**	**6.31**	**105**	*e*Sg	Sn	22 35 49.0	+35
EKMR				A		22 35 57.5	
	8.0nm,0.6s						

*ISCJB **10** 23:05:19.8±2.3, 7°.8N±0°.1×126°.84E±0°.08, h3km±14km, mb3.6/3, Error ellipse: s-maj=17.9km s-min=13.4km az=169.8*
*IDC **10** 23:05:21.9±1.3, 7°.67N×126°.76E, h0km, mb3.6/3, mb1 3.7/3, mb1mx3.4/21, mbtmp3.6/3, MS2.5/1, Ms1 2.5/1, ms1mx2.4/28, Error ellipse: s-maj=24.5km s-min=16.9km az=139.0*
ISC 10 23:05:22.3±2.6, 7°.8N±0°.1×126°.75E±0°.09, h6km±16km, n8, σ1§07/9, mb3.6/3, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.34**	**240**	Pg	**Pg**	**23 05 48.4**	**+0.3**
	105nm,0.3s,baz=49,slow=5.6,SNR=5.0						
DAV				Lg		23 06 03.7	
	46nm,0.3s,baz=65,slow=22,SNR=11						
DMPH	**Davao City--Mi**	**1.40**	**242**	*e*P	**Pn**	**23 05 45.8**	**-2.6**
DMPH				*i* S	**Sb**	**23 06 08.3**	**+1.3**
BUKP	**Musuan**	**1.68**	**275**	*e*P	**Pn**	**23 05 51.7**	**-0.6**
CGP	**Cagayan de Oro**	**2.16**	**289**	*e*P	**Pn**	**23 05 59.0**	**+0.2**
CGP				*i* S	**Sn**	**23 06 25.4**	**-0.5**
WRA	**Warramunga Arr**	**28.51**	**165**	P	**P**	**23 11 18.6**	**-0.1**
	0.5nm,0.7s,mb3.4,baz=337,slow=11,SNR=5.3						
KSRS	**Korea Array**	**29.59**	**2**	LR	LR	23 23 01.3	
	comp=Z,10nm,21.0s,baz=230,slow=36						
MKAR	**Makanchi Array**	**54.32**	**324**	P	**P**	**23 14 51.5**	**+1.9**
	1.1nm,0.9s,mb3.6,baz=125,slow=8.6,SNR=7.6						
MKAR				PcP	PcP	23 15 54.2	+0.6
	0.6nm,0.7s,baz=125,slow=3.7,SNR=4.6						
BVAR	**Borovoye Array**	**64.00**	**326**	P	**P**	**23 15 56.4**	**-0.2**
	0.4nm,0.8s,mb3.5,baz=119,slow=9.2,SNR=4.2						

*NEIC **10** 23:12:37.7, 16°.84N×94°.65W, h100km, MD3.9(MEX), After MEX.*
MEX 10 23:12:37.7±1.6, 16°.84N×94°.65W, h100km±38km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**1.46**	**92**	*i* P	Pn	23 13 02.7	-0.8
TGIG				*i* S	Sn	23 13 20.5	-2.5
HUIG	**Huatulco**	**1.76**	**233**	*i* P	Pn	23 13 04.5	-2.7
HUIG				*i* S	Sn	23 13 28.4	-1.4
HUIG	**Huatulco**	**1.76**	**233**	*i* P	Pn	23 13 04.5	-2.7
HUIG				*i* S	Sn	23 13 28.4	-1.4
PCIG		**1.78**	**129**	*i* P	Pn	23 13 06.7	-0.8
PCIG				*i* S	Sn	23 13 29.7	-0.4
VHO	**Vista Hermosa**	**2.01**	**277**	*i* P	Pn	23 13 10.1	-0.3
VHO				*i* S	Sn	23 13 35.4	-0.1
VHO	**Vista Hermosa**	**2.01**	**277**	*i* P	Pn	23 13 10.1	-0.3
VHO				*i* S	Sn	23 13 35.4	-0.1
UTMO	**Huajuapan**	**3.17**	**288**	*i* P	Pn	23 13 26.0	+0.2
UTMO				*i* S	Sn	23 14 02.3	-0.5
PNIG	**Pinotepa**	**3.37**	**263**	*i* P	Pn	23 13 25.8	-2.6
PNIG				*i* S	Sn	23 14 06.7	-0.8
PNIG	**Pinotepa**	**3.37**	**263**	*i* P	Pn	23 13 25.8	-2.6
PNIG				*i* S	Sn	23 14 06.7	-0.8
PPM	**Popocatepetl**	**4.39**	**301**	*e*P	Pn	23 13 42.1	0.0
PPM				*i* S	Sn	23 14 33.8	+1.7
PPM	**Popocatepetl**	**4.39**	**301**	*e*P	Pn	23 13 42.1	0.0
PPM				*i* S	Sn	23 14 33.8	+1.7

SKHL 10 23:28:44.2±1.0, 56°.13N×123°.80E, h10km±2km, mb4.5/6, 1C-2D, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLNS	**Chul'man**	**0.93**	**40**	*e*Pg	Pg	23 29 03.4	+1.3
CLNS				AMB	AMB	23 29 03.7	
	86nm,0.2s						
CLNS				*e*Sg	Sg	23 29 15.4	+1.1
CLNS				A		23 29 17.1	
	431nm,0.3s						
KROS	**Kirovskiy**	**2.49**	**132**	⇑*i*Pn	Pn	23 29 24.3	-0.4
KROS				⇓*i*Pg	Pg	23 29 28.0	-3.8
KROS				AMB	AMB	23 29 29.1	
	130nm,0.5s						
KROS				AMB	AMB	23 29 29.1	
	110nm,0.5s						
KROS				AMB	AMB	23 29 29.1	
	170nm,0.5s						
KROS				*i* Sn	Sn	23 29 55.6	+0.6
KROS				*e*Sg	Sg	23 30 00.5	-3.5
KROS				A		23 30 04.8	
	190nm,0.5s						
KROS				A		23 30 04.8	
	480nm,0.5s						
TUP	**Tupik**	**2.79**	**234**	*e*Pn	Pn	23 29 31.0	+2.2
TUP				*e*Pg	Pg	23 29 35.3	-2.2
TUP				AMB	AMB	23 29 36.2	
	74nm,0.5s						
TUP				*e*Sg	Sg	23 30 11.0	-2.6
TUP				A		23 30 14.5	
	171nm,0.7s						
ZEA	**Zeya**	**3.12**	**139**	*e*Pn	Pn	23 29 34.0	+0.7
ZEA				pPn		23 29 36.8	
ZEA				⇓*i*Pg	Pg	23 29 39.9	-3.9
ZEA				AMB	AMB	23 29 41.0	
	97nm,0.5s						
ZEA				*e*Sn	Sn	23 30 12.1	+1.6
ZEA				*e*Sg	Sg	23 30 22.2	-2.0
ZEA				A		23 30 24.3	
	330nm,0.5s						
BMKR	**Bomnak**	**3.21**	**114**	*e*Pn	Pn	23 29 33.0	-1.5
BMKR				pPn		23 29 36.3	
BMKR				*e*Pg	Pg	23 29 41.0	-4.6
BMKR				AMB	AMB	23 29 42.5	
	83nm,0.4s						
BMKR				AMB	AMB	23 29 42.5	
	204nm,0.4s						
BMKR				*e*Sn	Sn	23 30 10.6	-2.2
BMKR				*e*Sg	Sg	23 30 23.5	-3.6
BMKR				A		23 30 26.4	
	602nm,0.4s						
EKMR	**Ekimchan**	**6.14**	**116**	*e*Pn	Pn	23 30 13.6	-1.2
EKMR				*e*Pg	Pg	23 30 35.7	-5.9
EKMR				AMB	AMB	23 30 40.3	
	6.0nm,0.5s						
EKMR				AMB	AMB	23 30 40.3	
	8.0nm,0.5s						
EKMR				*e*Sg	Sg	23 31 57.7	-3.3
EKMR				A		23 32 05.9	
	80nm,0.5s						
EKMR				A		23 32 05.9	
	57nm,0.5s						
KLR	**Kul'dur**	**8.43**	**142**	*e*Pn	Pn	23 30 46.6	+0.4
GRNR	**Gornyy**	**9.24**	**120**	*e*Sg	Sn	23 33 34.9	+54
GRNR				A		23 33 46.0	
	42nm,1.0s						
NKL	**Nikolayevsk**	**10.23**	**100**	*e*Sg	Sn	23 34 02.5	+57
NKL				A		23 34 07.8	
	34nm,0.9s						

*IDC **10** 23:34:44.4±9.4, 37°.10N×71°.63E, h106km±63km, mb3.7/1, mb1 3.4/5, mb1mx3.1/26, mbtmp3.3/5, Error ellipse: s-maj=86.4km s-min=53.0km az=153.0*
*ISCJB **10** 23:34:47.4±0.7, 37°.37N±0°.05×71°.3E±0°.1, h96km±12km, Error ellipse: s-maj=15.1km s-min=5.9km az=28.6*
*NEIC **10** 23:34:48.7±0.8, 37°.41N×71°.22E, h78km±12km, mb3.3/2, Error ellipse: s-maj=12.6km s-min=8.2km az=121.0*
ISC 10 23:34:49.0±0.7, 37°.37N±0°.05×71°.28E±0°.10, h91km±11km, n23, σ1§15/32, 3C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**3.36**	**213**	*e*Pn	**Pn**	**23 35 38.8**	**-0.5**
KBL				*e*Sn	**Sn**	**23 36 17.9**	**-0.4**
KSH	**Kashi**	**4.26**	**58**	Pn	**Pn**	**23 35 44.3**	**-7.2**
KSH				Sn	**Sn**	**23 36 26.3**	**-14**
KSH				smax			
	comp=N,100nm,0.8s						
KSH				smax			
	comp=E,76nm,0.2s						
AML	**Almayashu**	**5.10**	**21**	*e*Pn	**Pn**	**23 36 03.6**	**+0.7**
	comp=E,36nm,0.3s						
AML				*e*Sn	**Sn**	**23 37 01.3**	**+0.8**
UCH	**Uchtor**	**5.45**	**26**	*e*Pn	**Pn**	**23 36 07.5**	**-0.2**
UCH				*e*Sn	**Sn**	**23 37 08.1**	**-0.8**
EKS2	**Erkin-Say**	**5.62**	**19**	*e*Pn	**Pn**	**23 36 10.4**	**+0.4**
	comp=E,4.0nm,0.6s						
EKS2				*e*Sn	**Sn**	**23 37 12.9**	**-0.2**
KK31	**Karatay Array**	**5.75**	**354**	⇑P	**Pn**	**23 36 13.9**	**+2.1**
	comp=E,4.3nm,0.3s,baz=175,slow=12,SNR=173						
KK31				⇓S	**Sn**	**23 37 17.7**	**+1.3**
	comp=E,2.4nm,0.2s,baz=177,slow=22,SNR=4.6						
AAK	**Ala-Archa**	**5.80**	**24**	P	**Pn**	**23 36 10.1**	**-2.3**
	comp=E,1.6nm,0.3s,baz=186,slow=6.6,SNR=5.4						
AAK				S	**Sn**	**23 37 17.8**	**+0.2**
	comp=E,1.5nm,0.3s,baz=308,slow=22,SNR=13						
AAK	**Ala-Archa**	**5.80**	**24**	*e*Pn	**Pn**	**23 36 12.4**	**-0.1**
AAK				*e*Sn	**Sn**	**23 37 16.0**	**-1.6**
MK31	**Makanchi Array**	**12.46**	**37**	Pn	**Pn**	**23 37 41.6**	**-1.2**
MKAR	**Makanchi Array**	**12.46**	**37**	P	**Pn**	**23 37 45.1**	**+2.4**
	comp=E,0.1nm,0.3s,baz=206,slow=9.6,SNR=6.2						
KURK	**Kurchatov**	**14.33**	**19**	P	**Pn**	**23 38 06.5**	**-0.9**
	comp=E,0.1nm,0.3s,baz=203,slow=11,SNR=9.3						
KURK	**Kurchatov**	**14.33**	**19**	*e*Pn	**Pn**	**23 38 06.6**	**-0.8**
AB31	**Akbulak array**	**14.44**	**329**	⇑P	**Pn**	**23 38 08.8**	**0.0**
	comp=E,0.2nm,0.3s						
AB31				⇑S	**Sn**	**23 40 40.7**	**-6.9**
	comp=E,0.9nm,0.5s						
BVAR	**Borovoye Array**	**15.66**	**358**	P	**Pn**	**23 38 21.7**	**-2.5**
	comp=E,0.1nm,0.3s,baz=171,slow=10,SNR=4.3						
BRVK	**Borovoye**	**15.70**	**358**	*e*Pn	**Pn**	**23 38 24.3**	**-0.4**
	comp=E,0.6nm,0.5s						
AKTK	**Aktyubinsk**	**16.15**	**328**	P	**Pn**	**23 38 30.1**	**-0.2**
AKTO	**Aktyubinsk**	**16.15**	**328**	P	**Pn**	**23 38 30.1**	**-0.2**
	comp=E,0.2nm,0.3s,baz=121,slow=12,SNR=4.0						
ZALV	**Zalesovo Beam**	**19.03**	**25**	P	**Pn**	**23 38 59.3**	**-5.9**
	comp=E,0.4nm,0.3s,baz=229,slow=9.2,SNR=6.7						
GNI	**Garni**	**20.86**	**286**	*e*P	**P**	**23 39 24.0**	**+0.6**
	comp=E,2.1nm,0.6s						
BR131	**Keskin Array S**	**29.39**	**286**	P	**P**	**23 40 44.0**	**+0.6**
CM31	**Chiang Mai Arr**	**30.69**	**120**	*e*P	**P**	**23 40 57.2**	**+2.1**
ARCES	**ARCESS Array B**	**40.43**	**337**	P	**P**	**23 42 14.6**	**-3.2**
	comp=E,3.1nm,0.9s,baz=111,slow=6.8,SNR=4.0						
ARCES	**ARCESS Array B**	**40.43**	**337**	P	**P**	**23 42 14.6**	**-3.2**

IDC 10 23:43:19.4±3.9, 19°.66S×176°.51W, h0km, mb4.2/5, mb1 4.4/5, mb1mx4.0/18, mbtmp4.2/5, Error ellipse: s-maj=145.8km s-min=57.1km az=146.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**34.98**	**263**	P	P	23 50 15.2	+1.6
	2.1nm,0.4s,baz=88,slow=11,SNR=3.5						
STKA	**Stephens Creek**	**39.42**	**243**	P	P	23 50 51.0	-0.2
	1.9nm,0.4s,baz=84,slow=11,SNR=5.5						
ASAR	**Alice Springs**	**46.08**	**256**	P	P	23 51 44.9	-0.5
	2.3nm,0.5s,baz=95,slow=7.8,SNR=37						
WRA	**Warramunga Arr**	**46.11**	**261**	P	P	23 51 44.9	-0.8
	0.7nm,0.3s,baz=96,slow=7.6,SNR=19						
FITZ	**Fitzroy Crossi**	**54.53**	**261**	P	P	23 52 49.3	-0.2
	1.4nm,0.6s,baz=100,slow=11,SNR=4.3						
MMAI	**Mount Meron Ar**	**148.60**	**302**	PKPbc	PKPbc	00 03 08.4	-0.3
	0.6nm,0.5s,baz=78,slow=6.6,SNR=3.3						

IDC 10 23:46:36.9±57.0, 17°.45S×174°.91W, h0km, mb4.2/3, mb1 4.4/3, mb1mx3.9/16, mbtmp4.2/3, Error ellipse: s-maj=1068.0km s-min=170.6km az=80.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.78**	**242**	P	P	23 54 29.0	+0.7
	1.3nm,0.5s,baz=61,slow=10,SNR=5.2						
WRA	**Warramunga Arr**	**48.00**	**259**	P	P	23 55 17.6	-0.4
	1.5nm,0.4s,baz=97,slow=8.0,SNR=13						
ASAR	**Alice Springs**	**48.13**	**254**	P	P	23 55 18.7	-0.3
	2.2nm,0.5s,baz=89,slow=7.9,SNR=27						

*IDC **10** 23:50:09.3±1.0, 30°.98S×177°.80W, h0km, mb4.5/7, mb1 4.6/9, mb1mx4.4/19, mbtmp4.5/9, ML4.3/1, MS3.6/2, Ms1 3.6/2, ms1mx2.8/22, Error ellipse: s-maj=32.5km s-min=18.5km az=132.0*
*ISCJB **10** 23:50:13.8±0.7, 31°.00S±0°.05×178°.1W±0°.1, h33km, mb4.4/11, MS3.5/2, Error ellipse: s-maj=16.9km s-min=6.5km az=12.9*
*NEIC **10** 23:50:13.1±3.2, 30°.91S×177°.85W, h23km±21km, mb4.5/7, Error ellipse: s-maj=16.3km s-min=10.4km az=109.0*
ISC 10 23:50:15.6±0.7, 30°.93S±0°.05×178°.0W±0°.1, h35km, n54, σ0§99/38, mb4.5/11, MS3.5/2, 1C, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.68**	**2**	Pn	**Pn**	**23 50 40.3**	**-2.1**
	249nm,0.3s,baz=251,slow=22,SNR=17						
RAO				Sn	**Sn**	**23 50 57.0**	**-5.7**
	965nm,0.3s,baz=114,slow=23,SNR=18						
PUZ	**Puketiti**	**7.77**	**203**	PN	**Pn**	**23 52 05.0**	**-1.0**
PUZ				SN	**Sn**	**23 53 33.0**	**+0.2**
CNGZ	**Carnagh Statio**	**8.16**	**202**	PN	**Pn**	**23 52 10.7**	**-0.7**
URZ	**Urewera**	**8.35**	**208**	Pn	**Pn**	**23 52 12.8**	**-1.3**
	1.0nm,0.3s,baz=156,slow=21,SNR=13						
URZ				Sn	**Sn**	**23 53 47.5**	**+0.3**
	4.3nm,0.3s,baz=264,slow=23,SNR=14						
URZ	**Urewera**	**8.35**	**208**	*e*Pn	**Pn**	**23 52 13.1**	**-0.9**
URZ				*e*Sn	**Sn**	**23 53 48.9**	**+1.7**
URZ	**Urewera**	**8.35**	**208**	PN	**Pn**	**23 52 12.6**	**-1.5**
URZ				SN	**Sn**	**23 53 46.8**	**-0.3**
MRZ	**Mangatainoka R**	**11.02**	**206**	PN	**Pn**	**23 52 46.3**	**-4.3**
MRZ				SN	**Sn**	**23 54 46.8**	**-5.8**
CTZ	**Chatham Island**	**12.83**	**176**	SN	**Sn**	**23 55 29.0**	**-7.7**
THZ	**Tophouse**	**13.06**	**212**	PN	**Pn**	**23 53 18.5**	**0.0**
THZ				SN	**Sn**	**23 55 34.2**	**-8.2**
RPZ	**Rata Peaks**	**15.44**	**211**	Pn	**Pn**	**23 53 50.0**	**-0.5**
	1.2nm,0.3s,baz=75,slow=12,SNR=4.8						
RPZ				Sn	**Sn**	**23 56 28.4**	**-12**
	0.7nm,0.3s,baz=24,slow=19,SNR=3.8						
DZM	**Mont Dzumac**	**16.48**	**299**	*e*LR	LR	23 57 34.2	
	216nm,25.4s						
TBI	**Tubuai**	**26.43**	**80**	*e*T		00 23 44.0	
	42nm,0.4s						
EIDS	**Eidsvold**	**27.78**	**274**	P	**P**	**23 56 02.4**	**+1.1**
PAE	**Paea**	**28.97**	**69**	*e*T		00 26 46.5	
	18nm,0.3s						
PPT	**Papeete**	**29.02**	**69**	LR	LR	00 04 41.5	
	comp=Z,112nm,21.2s,MS3.5,baz=267,slow=30						
TIAR	**Tiarei**	**29.21**	**70**	*e*T		00 27 04.9	
	12nm,0.3s						
MEH	**Mehetia**	**30.08**	**71**	*e*T		00 28 11.4	
	97nm,0.3s						
CTA	**Charters Tower**	**33.90**	**280**	P	**P**	**23 56 56.6**	**+1.4**
	8.2nm,0.6s,mb4.8,baz=103,slow=9.3,SNR=13						
CTA				LR	LR	00 09 09.4	
	comp=Z,94nm,20.9s,MS3.5,baz=226,slow=34						
CTAO	**Charters Tower**	**33.90**	**280**	*e*P	**P**	**23 56 56.6**	**+1.3**
	5.3nm,0.6s,mb4.7						
STKA	**Stephens Creek**	**34.38**	**258**	P	**P**	**23 57 00.9**	**+1.6**
	16nm,0.8s,mb5.0,baz=93,slow=9.4,SNR=24						
STKA	**Stephens Creek**	**34.38**	**258**	*e*P	**P**	**23 57 01.1**	**+1.8**
	2.4nm,0.7s,mb4.2						
RKT	**Rikitea**	**38.91**	**89**	*e*T		00 39 22.7	
	1.2nm,0.2s						
ASAR	**Alice Springs**	**43.10**	**267**	P	**P**	**23 58 12.1**	**-0.4**
	2.3nm,0.3s,mb4.3,baz=105,slow=7.8,SNR=23						
WB2	**Warramunga Arr**	**44.12**	**273**	*e*P	**P**	**23 58 20.3**	**-0.5**
WRAB	**Tennant Creek**	**44.13**	**273**	*e*P	**P**	**23 58 20.0**	**-0.8**
	4.5nm,0.6s,mb4.4						
WRA	**Warramunga Arr**	**44.13**	**273**	P	**P**	**23 58 20.2**	**-0.6**
	4.8nm,0.3s,mb4.7,baz=110,slow=8.2,SNR=49						
SBA	**Scott Base**	**47.51**	**184**	*e*P	**P**	**23 58 47.6**	**+0.9**
	2.7nm,0.9s,mb4.3						
FITZ	**Fitzroy Crossi**	**52.38**	**270**	P	**P**	**23 59 24.0**	**-0.5**
	2.0nm,0.6s,mb4.2,baz=268,slow=14,SNR=5.7						
FITZ	**Fitzroy Crossi**	**52.38**	**270**	*e*P	**P**	**23 59 24.2**	**-0.2**
	2.2nm,0.6s,mb4.3						
CASY	**Casey**	**54.68**	**208**	*e*P	**P**	**23 59 40.7**	**0.0**
	9.8nm,0.9s,mb4.8						
MBWA	**Marble Bar**	**56.18**	**264**	P	**P**	**23 59 52.3**	**+0.1

*ISCJB **10** 23:50:32.4±1.4, 6.41N±0.04×124.61E±0.05, h6km±9km, mb4.4/32, MS3.5/6, Error ellipse: s-maj=8.8km s-min=6.9km az=170.2*
*IDC **10** 23:50:32.9±0.7, 6.41N×124.45E, h0km, mb4.1/12, mb1 4.1/12, mb1mx4.0/22, mbtmp4.1/12, MS3.4/6, Ms1 3.5/6, ms1mx2.9/27, Error ellipse: s-maj=16.3km s-min=13.3km az=143.0*
*MAN **10** 23:50:32, 6.38N×124.44E, h14km, mb5.1, ML4.0, MS4.2*
*BJI **10** 23:50:36.1, 6.31N×125.03E, h51km, mB4.8/6, mb4.6/10, Ms4.1/2, Ms7 3.9/2*
*NEIC **10** 23:50:38.0±1.3, 6.48N×124.67E, h37km±13km, mb4.5/11, Error ellipse: s-maj=13.5km s-min=6.5km az=69.0*

ISC 10 23:50:33.4±1.1, 6.44N±0.05×124.62E±0.05, h1km±6km, n59, σ1900/61, mb4.5/32, MS3.5/6, 3C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	General Santos	0.48	137	⇑eP	Pg	23 50 48.0	+5.4
CTBH	Cotabato--PC H	0.86	334	⇑iP	Pg	23 50 48.8	-1.1
CTBH				iS	Sg	23 51 01.2	+0.1
DMPH	Davao City--Mi	1.09	54	eP	Pg	23 50 54.7	+0.5
DMPH				iS	Sg	23 51 18.5	+10
DAV	Davao City (W)	1.14	57	Pg	Pg	23 50 56.0	+0.8
	161nm,0.3s,baz=227,slow=2.6,SNR=17						
DAV				Lg		23 51 15.8	
	170nm,0.3s,baz=297,slow=19,SNR=12						
DAV	Davao City (W)	1.14	57	ePn	Pn	23 50 56.1	-0.4
DAV				Lg		23 51 15.8	
BUKP	Musuan	1.49	17	eP	Pn	23 50 60.0	-1.4
PAGZ	Pagadian	1.86	319	eP	Pn	23 51 05.1	-1.3
PAGZ				eS	Sn	23 51 24.4	-6.2
CGP	Cagayan de Oro	2.00	2	eP	Pn	23 51 07.5	-0.9
CGP				iS	Sn	23 51 34.2	+0.2
IPIL	Ipil	2.43	303	eP	Pn	23 51 14.5	+0.2
ZMPH	Zamboanga City	2.59	281	⇓iP	Pn	23 51 13.5	-3.0
ZMPH				iS	Sn	23 51 42.0	-6.6
TBP	Tagbilaran	3.31	347	eP	Pn	23 51 30.4	+3.9
KAPI	Kappang	12.38	203	LR	LR	23 58 25.9	
	comp=Z,110nm,21.9s,baz=13,slow=38						
TWG	Pinlang	16.64	348	ePn	Pn	23 54 29.0	+1.0
YULB	Yu-li	17.15	350	Pn	Pn	23 54 34.4	-0.1
SSLB	Suanglung	17.60	349	ePn	Pn	23 54 40.4	+0.3
KULM	Kulim	23.87	269	eP	P	23 55 49.3	+0.5
	57nm,1.9s,mb4.8						
FITZ	Fitzroy Crossi	24.41	178	P	P	23 55 53.4	-0.2
	14nm,1.2s,mb4.4,baz=358,slow=13,SNR=7.0						
FITZ	Fitzroy Crossi	24.41	178	eP	P	23 55 53.2	-0.3
	10.0nm,1.1s,mb4.3						
PSI	Prapat	25.86	263	P	P	23 56 05.0	-1.9
	6.3nm,0.8s,mb4.3,baz=86,slow=14,SNR=2.8						
PSI				LR	LR	00 06 08.6	
	comp=Z,192nm,18.5s,MS3.7,baz=270,slow=36						
CMAR	Chiang Mai Arr	27.72	298	P	P	23 56 25.9	+2.3
	0.8nm,0.3s,mb4.0,baz=116,slow=8.4,SNR=4.9						
CHTO	Chiang Mai	27.86	299	eP	P	23 56 24.9	+0.1
WRAB	Tennant Creek	27.90	160	eP	P	23 56 24.6	-0.6
	2.1nm,0.7s,mb4.1						
WRA	Warramunga Arr	27.91	160	P	P	23 56 26.1	+0.9
	1.5nm,0.7s,mb3.9,baz=332,slow=9.9,SNR=6.1						
KSRS	Korea Array	31.01	5	P	P	23 56 53.3	+0.7
	0.5nm,0.3s,mb3.9,baz=190,slow=9.7,SNR=5.3						
KSRS				LR	LR	00 10 30.7	
	comp=Z,47nm,18.7s,MS3.2,baz=10,slow=39						
ASAR	Alice Springs	31.27	163	P	P	23 56 54.7	-0.3
	0.3nm,0.4s,mb3.5,baz=348,slow=7.5,SNR=4.2						
MJAR	Matsushiro Arr	32.44	21	LR	LR	00 08 05.1	
	comp=Z,93nm,21.1s,MS3.5,baz=220,slow=32						
LZH	Lanzhou	35.12	330	⇑P	P	23 57 29.6	+1.1
LZH				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
SHL	Shillong	36.60	305	ePKP	P	23 57 43.0	+1.6
MDJ	Mudanjiang	38.27	6	P	P	23 57 54.4	-0.9
LSA	Lhasa	39.09	310	P	P	23 58 04.0	+1.6
LSA	Lhasa	39.09	310	eP	P	23 58 01.7	-0.6
	comp=Z,5.3nm,0.7s,mb4.3						
GTA	Gaotai	39.71	329	eP	P	23 58 08.9	+1.5
GTA				S	S	00 04 13.2	+1.3
GTA				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.4						
GTA				pmax	pmax		
	comp=Z,100nm,6.3s						
GTA				LR	LR		
	comp=N,71nm,15.2s,MS3.8						
GTA				LR	LR		
	comp=E,79nm,17.5s,MS3.8						
GTA				LR	LR		
	comp=Z,75nm,14.3s,MS3.7						
TAPN	Taplejung	40.74	305	eP	P	23 58 17.3	+1.2
	comp=Z,21nm,0.8s,mb4.9						
ODAN	Odare	40.80	304	eP	P	23 58 17.5	+0.8
	comp=Z,31nm,0.9s,mb5.0						
RAMN	Ramite	41.49	304	eP	P	23 58 23.3	+1.0
	comp=Z,43nm,1.0s,mb5.2						
JIRN	Jiri	42.10	305	eP	P	23 58 28.2	+0.9
	comp=Z,60nm,0.9s,mb5.3						
GUN	Gumba	42.45	305	eP	P	23 58 31.1	+0.9
	comp=Z,60nm,0.8s,mb5.4						
PKI	Pulchoki	42.71	304	eP	P	23 58 32.6	+0.3
PKIN	Phulchoki	42.72	304	eP	P	23 58 32.8	+0.4
KKN	Kakani	42.90	304	eP	P	23 58 34.1	+0.3
	comp=Z,30nm,0.9s,mb5.0						
DMN	Daman	42.97	304	eP	P	23 58 34.8	+0.4
	comp=Z,30nm,0.9s,mb5.0						
GKN	Gorkha	43.50	304	eP	P	23 58 38.9	+0.2
ULN	Ulaanbaatar	43.91	343	eP	P	23 58 40.3	-1.4
	comp=Z,4.5nm,1.1s,mb4.1						
SONM	Songino Array	44.08	342	P	P	23 58 43.0	0.0
	comp=Z,1.8nm,0.9s,mb3.8,baz=161,slow=9.0,SNR=13						
SONM				LR	LR	00 18 54.3	
	comp=Z,48nm,18.4s,MS3.5,baz=323,slow=39						
PETK	Petropavlovsk-	53.77	24	P	P	23 59 57.7	+0.3
	comp=Z,0.9nm,0.6s,mb4.0,baz=212,slow=1.4,SNR=4.0						
PETK	Petropavlovsk-	53.77	24	P	P	23 59 57.7	+0.3
MKAR	Makanchi Array	54.14	325	P	P	00 00 00.6	+0.4
	comp=Z,6.7nm,0.8s,mb4.7,baz=123,slow=8.8,SNR=42						
MKAR				PcP	PcP	00 01 03.4	-1.5
	comp=Z,2.1nm,0.7s,baz=123,slow=4.5,SNR=6.2						
ZALV	Zalesovo Beam	57.23	333	P	P	00 00 21.5	-0.8
	comp=Z,2.6nm,0.7s,mb4.3,baz=116,slow=6.9,SNR=15						
AML	Almayashu	57.29	317	eP	P	00 00 23.7	+0.8
	comp=Z,4.6nm,0.7s,mb4.6						
AML				ePcP	PcP	00 01 17.1	-0.1
EKS2	Erkin-Say	57.44	317	eP	P	00 00 23.7	-0.2
	comp=Z,3.1nm,0.7s,mb4.5						
KBL	Kabul	58.22	307	eP	P	00 00 28.4	-1.2
	comp=Z,3.3nm,0.6s,mb4.5						
KURK	Kurchatov	58.34	328	eP	P	00 00 29.2	-0.9
	comp=Z,18nm,1.0s,mb5.1						
BVAR	Borovoye Array	63.91	327	P	P	00 01 07.3	-0.6
	comp=Z,3.6nm,0.9s,mb4.6,baz=139,slow=9.6,SNR=11						
BRVK	Borovoye	63.99	327	eP	P	00 01 08.0	-0.4
	comp=Z,6.5nm,0.9s,mb4.9						
ARU	Arti	71.53	328	eP	P	00 01 54.0	-1.9
	comp=Z,3.6nm,0.8s,mb4.5						
PPT	Papeete	87.94	108	eLR	LR	00 03 41.4	
	comp=Z,106nm,30.2s						
FINES	FINESS Array B	88.46	332	P	P	00 03 25.5	-1.8
	comp=Z,2.4nm,0.9s,mb4.5,baz=66,slow=3.4,SNR=3.5						
AKASG	Malin Array Be	88.48	321	P	P	00 03 25.7	-1.9
	comp=Z,0.7nm,0.6s,mb4.2,baz=68,slow=4.5,SNR=3.1						
NOA	NORSAR Array B	95.44	333	LR	LR	00 50 16.0	
	comp=Z,21nm,20.6s,MS3.6,baz=235,slow=38						

*BJI **10** 23:54:52.8, 3.61S×35.32E, h10km, mB4.8/2, mb4.8/4, Ms4.7/1, Ms7 4.2/1*
*ISCJB **10** 23:54:59.2±0.4, 2.68S±0.05×35.87E±0.07, h10km, mb4.3/21, MS3.6/11, Error ellipse: s-maj=11.1km s-min=6.7km az=26.5*
*IDC **10** 23:54:59.7±0.7, 2.67S×35.96E, h0km, mb4.2/12, mb1 4.3/14, mb1mx4.1/27, mbtmp4.2/14, ML4.0/2, MS3.6/13, Ms1 3.6/13, ms1mx3.4/26, Error ellipse: s-maj=24.9km s-min=10.7km az=123.0*
*NEIC **10** 23:55:01.1±0.3, 2.65S×35.86E, h10km, mb4.4/6, Error ellipse: s-maj=11.1km s-min=7.1km az=106.0*
NEIC Felt at Ngorongoro.

ISC 10 23:55:01.2±0.4, 2.69S±0.05×35.94E±0.07, h10km, n38, σ1900/36, mb4.3/21, MS3.6/11, Tanzania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMBO	Kilima Mbogo	2.04	40	Pn	Pn	23 55 35.2	-0.3
	139nm,0.3s,baz=234,slow=0.6,SNR=574						
KMBO				Pg	Pg	23 55 37.3	-3.0
	223nm,0.3s,baz=226,slow=19,SNR=375						
KMBO				Lg		23 56 02.6	
	571nm,0.3s,baz=309,slow=22,SNR=15						
KMBO	Kilima Mbogo	2.04	40	ePn	Pn	23 55 35.0	-0.6
KMBO				eSn	Sn	23 56 01.5	+0.4
KMBO				Lg		23 56 02.6	
LSZ	Lusaka	14.65	211	Pn	Pn	23 58 25.6	-3.1
	0.9nm,0.3s,baz=25,slow=16,SNR=7.1						
LSZ				Sn	Sn	00 01 02.7	-8.6
	2.1nm,0.3s,baz=143,slow=20,SNR=3.5						
LSZ				Lg		00 02 35.4	
	6.8nm,0.3s,baz=118,slow=18,SNR=10						
LSZ				LR	LR	00 03 16.4	
	comp=Z,164nm,19.7s,baz=40,slow=34						
LSZ	Lusaka	14.65	211	ePn	Pn	23 58 27.2	-1.5
LSZ				Sn	Sn	00 01 02.7	-8.6
LSZ				eS	Sn	00 01 24.6	+13
LSZ				Lg		00 02 35.4	
LSZ				LR	LR	00 03 16.4	
ATD	Arta Tunnel	15.71	26	Lg		00 03 07.9	
	0.3nm,0.3s,baz=324,slow=19,SNR=4.0						
ATD				LR	LR	00 04 24.9	
	comp=Z,148nm,20.9s,baz=190,slow=36						
OPO	Ambohitrombo	19.25	146	P	Pn	23 59 27.1	+0.2
	0.2nm,0.3s,baz=315,slow=12,SNR=6.2						
ABPO	Ambohimpanom	19.63	147	eP	Pn	23 59 32.0	+0.5
	16nm,1.1s						
TSUM	Tsumeb	24.32	226	P	P	00 00 20.1	+0.9
	2.0nm,0.7s,mb3.6,baz=21,slow=11,SNR=5.1						
TSUM				Lg		00 07 47.4	
	8.7nm,0.9s,baz=60,slow=20,SNR=2.3						
TSUM				LR	LR	00 09 45.8	
	comp=Z,137nm,19.4s,MS3.5,baz=44,slow=36						
TSUM	Tsumeb	24.32	226	eP	P	00 00 20.4	+1.2
TSUM				Lg		00 07 47.4	
TSUM				LR	LR	00 09 45.8	
LBTB	Lobatse	24.33	203	P	P	00 00 19.4	+0.2
	5.2nm,0.8s,mb4.0,baz=31,slow=11,SNR=9.0						
LBTB				Lg		00 07 35.2	
	12nm,0.9s,baz=319,slow=23,SNR=4.2						
LBTB				LR	LR	00 09 43.4	
	comp=Z,266nm,20.2s,MS3.7,baz=224,slow=36						
LBTB	Lobatse	24.33	203	eP	P	00 00 18.4	-0.8
	5.0nm,0.6s,mb4.1						
LBTB				Lg		00 07 35.2	
LBTB				LR	LR	00 09 43.4	
BOSA	Boshof	27.71	201	P	P	00 00 49.8	-0.1
	13nm,0.8s,mb4.6,baz=21,slow=8.7,SNR=22						
BOSA				LR	LR	00 12 01.7	
	comp=Z,226nm,20.6s,MS3.7,baz=24,slow=37						
SUR	Sutherland	32.77	204	P	P	00 01 35.1	+0.6
	5.8nm,0.6s,mb4.7,baz=37,slow=11,SNR=6.8						
MMAI	Mount Meron Ar	35.52	359	LR	LR	00 16 27.5	
	comp=Z,103nm,18.2s,MS3.6,baz=155,slow=36						
DBIC	Dimbokro	41.77	283	LR	LR	00 18 47.9	
	comp=Z,72nm,18.4s,MS3.6,baz=84,slow=34						
DBIC	Dimbokro	41.77	283	eP	P	00 02 48.9	-2.3
KEST	Kesra	45.60	329	LR	LR	00 23 33.1	
	comp=Z,64nm,19.4s,MS3.6,baz=349,slow=38						
PSZ	Piszkesteto	52.32	346	eP	P	00 04 13.6	+0.5
	8.0nm,1.1s,mb4.6						
AKASG	Malin Array Be	53.50	355	P	P	00 04 22.4	+0.7
	3.4nm,0.9s,mb4.3,baz=169,slow=6.0,SNR=7.1						
MORC	Moravsky Berou	54.62	345	eP	P	00 04 30.5	+0.6
	3.7nm,1.0s,mb4.4						
ESDC	Sonseca Array	55.82	323	P	P	00 04 38.9	+0.1
	0.8nm,0.6s,mb3.9,baz=135,slow=6.2,SNR=3.3						
ESDC				LR	LR	00 30 31.8	
	comp=Z,68nm,19.8s,MS3.7,baz=140,slow=38						
STU	Stuttgart	56.28	339	P	P	00 04 40.3	-1.6
SUW	Suwalki	57.50	351	eP	P	00 04 50.2	-0.2
	30nm,1.0s,mb5.3						
IDID	Didziasalis	58.30	354	eP	P	00 04 59.8	+3.7
IDID				AMB	AMB	00 05 02.6	
	comp=Z,1.4nm,1.1s,mb3.9						
IIGN	Ignalina	58.40	354	eP	P	00 04 59.4	+2.7
IIGN				AMB	AMB	00 05 03.3	
	comp=Z,3.2nm,1.3s,mb4.2						
ISAL	Salakas	58.62	353	eP	P	00 04 59.6	+1.3
ISAL				AMB	AMB	00 05 03.6	
	comp=Z,1.8nm,1.2s,mb4.0						
IZAR	Zarasai	58.79	354	eP	P	00 05 00.3	+0.8
IZAR				AMB	AMB	00 05 03.0	
	comp=Z,2.0nm,0.8s,mb4.2						
PSI	Prapat	63.20	86	P	P	00 05 30.2	0.0
	comp=Z,4.3nm,0.5s,mb4.8,baz=233,slow=18,SNR=5.6						
MKAR	Makanchi Array	63.91	34	P	P	00 05 33.5	-0.9
	comp=Z,1.5nm,0.8s,mb4.0,baz=231,slow=6.0,SNR=8.3						
FINES	FINESS Array B	64.41	355	P	P	00 05 37.1	-0.2
	comp=Z,1.4nm,0.8s,mb4.0,baz=180,slow=9.2,SNR=3.3						
KURK	Kurchatov	64.48	29	eP	P	00 05 37.6	-0.3
	comp=Z,4.4nm,1.3s,mb4.3						
CMAR	Chiang Mai Arr	65.44	68	P	P	00 05 45.1	+0.3
	comp=Z,2.7nm,0.6s,mb4.5,baz=258,slow=7.8,SNR=17						
NOA	NORSAR Array B	66.37	347	LR	LR	00 34 57.5	
	comp=Z,7.8nm,18.1s,MS3.0,baz=90,slow=36						
MAW	Mawson	67.39	169	LR	LR	00 30 49.0	
	comp=Z,90nm,18.3s,MS4.0,baz=109,slow=32						
ZALV	Zalesovo Beam	69.47	28	P	P	00 06 08.9	-0.8
	comp=Z,0.7nm,0.6s,mb3.8,baz=298,slow=3.2,SNR=5.2						
ZALV				LR	LR	00 39 43.9	
	comp=Z,29nm,19.6s,MS3.5,baz=51,slow=39						
SONM	Songino Array	79.01	40	P	P	00 07 06.0	+0.5
	comp=Z,0.5nm,0.7s,mb3.6,baz=254,slow=4.3,SNR=4.6						
HHC	Hu-ho-hao-te	80.93	48	eP	P	00 07 15.5	-0.5
HHC				S	S	00 17 23.7	-1.3
HHC				pmax	pmax		
	comp=Z,22nm,0.7s,mb5.2						
HHC				pmax	pmax		
	comp=Z,69nm,7.3s						
SCHQ	Schefferville	99.54	325	LR	LR	00 49 33.0	
	comp=Z,36nm,18.3s,MS3.9,baz=185,slow=33						

*NEIC **11** 00:06:14.9, 38.30S×178.60E, h30km, ML3.9(WEL), After WEL.*

WEL 11 00:06:16.2±0.2, 38.35S×178.47E, h27km±1km, ML3.8/6, 1C, Error ellipse: s-maj=2.0km s-min=0.9km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNGZ	Carnagh Statio	0.25	236	P*	Pb	00 06 22.9	+0.3
PUZ	Puketiti	0.32	328	P*	Pb	00 06 23.0	-0.6
PUZ				S*	Sb	00 06 28.6	-0.1
PUZ	Puketiti	0.32	328	P	Pb	00 06 23.0	-0.6
PUZ				S	Sb	00 06 28.6	-0.1
PRGZ	Paritu Road	0.74	219	P*	Pb	00 06 30.3	-0.2
MWZ	Matawai	0.74	271	⇑P*	Pb	00 06 30.0	-0.5
MWZ				S*	Sb	00 06 40.7	+0.5
MWZ	Matawai	0.74	271	P	Pb	00 06 29.9	-0.6
MXZ	Matakaoa Point	0.79	350	P*	Pb	00 06 31.3	-0.1
MXZ				S*	Sb	00 06 42.2	+0.6
MXZ	Matakaoa Point	0.79	350	P	Pb	00 06 31.3	0.0
KNZ	Kokohu	0.92	223	PN	Pn	00 06 32.2	-1.1
KNZ	Kokohu	0.92	223	P	Pn	00 06 32.2	-1.1
MHGZ	Mahia Peninsul	0.92	209	PN	Pn	00 06 32.9	-0.4
URZ	Urewera	1.08	274	PN	Pn	00 06 35.0	-0.4
URZ				SN	Sn	00 06 49.5	0.0
URZ	Urewera	1.08	274	P	Pn	00 06 35.0	-0.5
RAHZ	Arahi	1.23	242	PN	Pn	00 06 38.5	+1.0
BFZ	Birch Farm	2.90	216	ePN	Pn	00 06 58.3	-2.2
BFZ	Birch Farm	2.90	216	P	Pn	00 06 57.4	-3.1
MRZ	Mangatainoka R	3.22	223	ePN	Pn	00 07 02.4	-2.5

*ISCJB **11** 00:14:27.6±1.1, 8.08S±0.07×119.92E±0.09, h196km±11km, mb3.5/5, Error ellipse: s-maj=16.4km s-min=8.4km az=146.2*
*IDC **11** 00:14:28.8±2.2, 8.13S×119.92E, h194km±21km, mb3.2/4, mb1 3.2/7, mb1mx3.1/22, mbtmp3.1/7, Error ellipse: s-maj=61.0km s-min=12.8km az=56.0*
*NEIC **11** 00:14:28.5±0.8, 8.10S×119.90E, h188km±8km, mb3.7/3, Error ellipse: s-maj=11.0km s-min=5.8km az=60.0*

ISC 11 00:14:28.7±1.0, 8.11S±0.07×119.93E±0.09, h191km±11km, n24, σ0973/26, mb3.6/5, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	Kappang	3.08	357	P	Pn	00 15 18.5	-0.3
	0.5nm,0.3s,baz=142,slow=19,SNR=2.9						
KAPI	Kappang	3.08	357	P	Pn	00 15 18.5	-0.3
FITZ	Fitzroy Crossi	11.38	151	P	Pn	00 17 05.0	-1.0
	0.1nm,0.3s,baz=350,slow=11,SNR=2.6						
FITZ				S	Sn	00 19 03.5	-9.3
	0.2nm,0.3s,baz=131,slow=17,SNR=1.6						
FITZ	Fitzroy Crossi	11.38	151	ePn	Pn	00 17 05.1	-0.9
MBWA	Marble Bar	12.98	181	Pn	Pn	00 17 26.1	-0.2
WRA	Warramunga Arr	18.25	132	P	P	00 18 28.7	+0.7
	0.2nm,0.3s,baz=304,slow=12,SNR=5.1						
WRA				S	S	00 21 45.6	-1.3
	0.1nm,0.3s,baz=297,slow=21,SNR=6.1						
WRAB	Tennant Creek	18.26	132	eP	P	00 18 28.5	+0.4
	3.0nm,0.8s						
WB2	Warramunga Arr	18.26	132	eP	P	00 18 28.7	+0.6
ASAR	Alice Springs	20.47	141	P	P	00 18 52.1	+0.3
	1.9nm,0.3s,baz=315,slow=9.0,SNR=21						
COCO	West Island	23.09	258	P	P	00 19 18.5	+0.7
KULM	Kulim	23.38	304	eP	P	00 19 20.1	-0.4
	1.3nm,0.5s,mb3.6						
NWAO	Narrogin (SRO)	24.83	185	P	P	00 19 34.1	+0.8
STKA	Stephens Creek	31.08	143	P	P	00 20 29.9	+0.9
	4.0nm,1.1s,mb4.1,baz=302,slow=9.5,SNR=5.2						
STKA	Stephens Creek	31.08	143	eP	P	00 20 29.9	+0.9
ENH	Enshi	39.45	346	P	P	00 21 42.2	+1.8
HNR	Honiara	39.56	95	eP	P	00 21 41.5	-0.1
DGAR	Diego Garcia	47.02	267	P	P	00 22 40.7	-0.7
MAJO	Matsushiro	47.61	20	eP	P	00 22 45.3	-0.2
MCQ	Macquarie Isla	55.78	154	P	P	00 23 45.5	-0.2
SONM	Songino Array	56.97	349	P	P	00 23 54.7	+0.6
	0.4nm,0.5s,mb3.5,baz=147,slow=3.4,SNR=2.7						
MKAR	Makanchi Array	64.09	332	P	P	00 24 41.2	-1.1
	0.2nm,0.6s,mb3.1,baz=142,slow=8.4,SNR=3.0						
KBL	Kabul	64.11	315	P	P	00 24 42.3	-0.4
KURK	Kurchatov	68.61	333	eP	P	00 25 10.3	-0.6
	0.6nm,0.6s,mb3.5						
KIV	Kislovodsk	86.50	315	P	P	00 26 49.8	-0.3

*NEIC **11** 00:51:29.4, 37.29S×176.48E, h208km, MG4.0(WEL), After WEL.*

WEL 11 00:51:30.2±0.5, 37.39S×176.59E, h212km±3km, ML4.0/12, Error ellipse: s-maj=5.4km s-min=4.4km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPRZ	Ohinepanea	0.45	184	PN	Pn	00 51 58.8	+0.3
URZ	Urewera	0.96	155	PN	Pn	00 52 00.6	-0.3
URZ				SN	S	00 52 25.0	+0.1
URZ	Urewera	0.96	155	P	Pn	00 52 00.6	-0.3
MWZ	Matawai	1.20	142	PN	Pn	00 52 02.4	-0.1
MWZ				SN	S	00 52 27.0	-0.8
MWZ	Matawai	1.20	142	P	Pn	00 52 02.4	-0.1
MWZ				S	S	00 52 27.0	-0.8
MXZ	Matakaoa Point	1.38	98	PN	Pn	00 52 03.8	0.0
MXZ				SN	S	00 52 30.8	+0.7
MXZ	Matakaoa Point	1.38	98	P	Pn	00 52 03.8	-0.1
MXZ				S	S	00 52 30.8	+0.7
PUZ	Puketiti	1.49	118	PN	Pn	00 52 04.7	0.0
PUZ	Puketiti	1.49	118	P	Pn	00 52 04.7	-0.1
RAHZ	Arahi	1.57	166	PN	Pn	00 52 06.0	+0.5
CNGZ	Carnagh Statio	1.68	131	PN	Pn	00 52 07.2	+0.7
NMHZ	Naumai	1.71	174	PN	Pn	00 52 07.4	+0.6
BKZ	Black Stump Fm	1.77	182	PN	Pn	00 52 06.8	-0.5
BKZ				SN	S	00 52 35.6	-0.9
BKZ	Black Stump Fm	1.77	182	P	Pn	00 52 06.8	-0.5
KNZ	Kokohu	1.84	153	PN	Pn	00 52 07.8	-0.1
KNZ	Kokohu	1.84	153	P	Pn	00 52 07.8	-0.1
PRGZ	Paritu Road	1.84	147	PN	Pn	00 52 08.3	+0.4
KRVZ	Karewarewa	1.86	203	PN	Pn	00 52 08.1	-0.1
OTVZ	Oturere	1.91	202	PN	Pn	00 52 08.8	+0.1
MHGZ	Mahia Peninsul	2.04	150	PN	Pn	00 52 09.8	-0.1
MCHZ	McNeill Hill	2.05	178	PN	Pn	00 52 10.1	+0.1
CKHZ	Cape Kidnapper	2.30	171	PN	Pn	00 52 12.4	-0.2
KAHZ	Kahuranaki	2.41	175	PN	Pn	00 52 13.3	-0.4
PNHZ	Pukenui	2.54	187	PN	Pn	00 52 14.0	-1.1
PXZ	Pawanui	2.65	175	PN	Pn	00 52 15.5	-0.8
WPHZ	Waipukurau	2.67	182	PN	Pn	00 52 15.6	-1.0
TSZ	Takapari Road	2.71	190	PN	Pn	00 52 15.3	-1.8
DVHZ	Dannevirke	2.92	186	ePN	Pn	00 52 17.6	-1.8
POWZ	Post Office Ro	3.06	192	PN	Pn	00 52 19.4	-1.7
BFZ	Birch Farm	3.29	185	PN	Pn	00 52 21.9	-1.9
BFZ	Birch Farm	3.29	185	P	Pn	00 52 21.9	-1.9
MRZ	Mangatainoka R	3.36	193	PN	Pn	00 52 22.1	-2.5
MRZ	Mangatainoka R	3.36	193	P	Pn	00 52 22.3	-2.2
TIWZ	Tintock	3.42	189	PN	Pn	00 52 23.6	-1.8
OGWZ	Otaki Gorge	3.59	197	PN	Pn	00 52 24.9	-2.4
HOWZ	Holdsworth Sta	3.60	193	PN	Pn	00 52 24.8	-2.6
KIW	Kapiti Island	3.70	200	PN	Pn	00 52 25.7	-2.9
KIW	Kapiti Island	3.70	200	P	Pn	00 52 25.7	-3.0
DUWZ	D'Urville Isla	3.99	211	PN	Pn	00 52 29.1	-3.1
TRWZ	Traveller	4.06	190	PN	Pn	00 52 30.4	-2.6
SNZO	South Karori	4.18	200	PN	Pn	00 52 31.2	-3.3
SNZO	South Karori	4.18	200	P	Pn	00 52 31.2	-3.3
TCW	Tory Channel	4.22	204	PN	Pn	00 52 31.7	-3.3

BEST	**Besiri**	**1.78**	**176**	*e*P	Pn	01 15 46.0	+2.6
BEST				*e*S	Sn	01 16 11.0	+4.8

*NEIC **11** 01:57:11.7, 17°.09N×95°.39W, h113km, MD3.9(MEX), After MEX.*

MEX 11 01:57:11.7±1.0, 17°.09N×95°.39W, h113km±8km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.48**	**89**	*i* P	Pn	01 57 27.6	-1.2
CMIG				*i* S	Sn	01 57 39.4	-2.2
CMIG	**Matias Romero**	**0.48**	**89**	*i* P	Pn	01 57 27.6	-1.2
CMIG				*i* S	Sn	01 57 39.4	-2.2
VHO	**Vista Hermosa**	**1.29**	**270**	*i* P	Pn	01 57 35.5	-0.7
VHO				*i* S	Sn	01 57 54.2	-0.6
VHO	**Vista Hermosa**	**1.29**	**270**	*i* P	Pn	01 57 35.5	-0.7
VHO				*i* S	Sn	01 57 54.2	-0.6
HUIG	**Huatulco**	**1.48**	**208**	*i* P	Pn	01 57 36.9	-1.6
HUIG				*i* S	Sn	01 57 57.5	-1.3
HUIG	**Huatulco**	**1.48**	**208**	*i* P	Pn	01 57 36.9	-1.6
HUIG				*i* S	Sn	01 57 57.5	-1.3
TGIG		**2.19**	**98**	*i* P	Pn	01 57 46.5	-0.7
TGIG				*i* S	Sn	01 58 13.7	-0.8
UTMO	**Huajuapan**	**2.42**	**288**	*e*P	Pn	01 57 49.0	-1.2
UTMO				*i* S	Sn	01 58 18.5	-1.2
PCIG		**2.49**	**123**	*i* P	Pn	01 57 49.2	-2.0
PCIG				*i* S	Sn	01 58 20.5	-0.9
PNIG	**Pinotepa**	**2.71**	**256**	*i* P	Pn	01 57 51.2	-2.8
PNIG				*i* S	Sn	01 58 22.7	-3.9
PNIG	**Pinotepa**	**2.71**	**256**	*i* P	Pn	01 57 51.2	-2.8
PNIG				*i* S	Sn	01 58 22.7	-3.9

*IDC **11** 02:03:42.5±0.5, 35°.42N×69°.61E, h0km, mb4.8/21, mb1 4.9/26, mb1mx4.8/29, mbtmp4.8/26, ML4.2/5, MS3.8/22, Ms1 3.8/22, ms1mx3.6/35, Error ellipse: s-maj=12.0km s-min=10.6km az=166.0*

*ISCJB **11** 02:03:44.7±0.7, 35°.38N±0°.02×69°.59E±0°.02, h24km±5km, mb4.9/177, MS3.9/54, Error ellipse: s-maj=3.4km s-min=2.3km az=15.8*

*GCMT **11** 02:03:45.7±0.4, 35°.46N×69°.41E, h22km±1km, MW4.8, Moment Tensor Solution. s27,c35; s55,c85; Moment tensor: Scale 10^16^Nm; M_{rr}1.41±.12; $M_{\theta\theta}$0.49±.09; $M_{\phi\phi}$-1.90±.08; $M_{r\theta}$0.04±.18; $M_{\theta\phi}$-0.50±.06; $M_{\phi r}$0.10±.12; Best double couple: M_0=1.70000×10^16^ NP1:ϕ_s190.00000°, δ43.00000°, λ88.00000°. NP2:ϕ_s13.00000°, δ47.00000°, λ92.00000°. Principal axes: T 1.4100, Plg88.0000°, Azm321.0000°; N 0.5900, Plg1.0000°, Azm191.0000°; P -2.0000, Plg2.0000°, Azm101.0000°; Data Used: IC II IU CN G.*

*MOS **11** 02:03:45.8±1.0, 35°.38N×69°.62E, h33km, mb5.1/84 Error ellipse: s-maj=5.7km s-min=3.6km az=125.6*

*NNC **11** 02:03:47.9±5.3, 35°.65N×68°.55E, h82km±71km, mb5.1, mpv5.0, Error ellipse: s-maj=45.1km s-min=34.0km az=79.0*

*NEIC **11** 02:03:47.5±1.8, 35°.40N×69°.58E, h32km±12km, mb5.0/105, Error ellipse: s-maj=5.8km s-min=3.9km az=188.0*

NEIC Felt [II] at Bagrami. Also felt at Charikar and Kabul.

*BJI **11** 02:03:47.1, 35°.61N×69°.42E, h45km, mB4.9/29, mb4.9/48, ML5.1/2, Ms4.5/45, Ms7 4.3/38*

*TEH **11** 02:03:51.0, 35°.92N×69°.64E, h35km*

*SZGRF **11** 02:03:55.1, 36°.71N×69°.51E, h33km, mb4.6, Hindu Kush, Afghanistan, region*

ISC 11 02:03:48.7±0.3, 35°.39N±0°.02×69°.59E±0°.02, h41km±2km, h42km±3.2km: pP-P, n579, σ1°13/618, mb4.9/177, MS3.9/54, 49C-24D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**0.95**	**208**	*e*Pn	**Pn**	**02 03 59.9**	**-5.8**
KBL				*e*Sn	**Sn**	**02 04 12.7**	**-5.3**
CHCP	**Chirah Chowk**	**3.49**	**119**	P	**Pn**	**02 04 44.5**	**+4.0**
SARP	**Sargodha**	**4.31**	**142**	P	**Pn**	**02 04 54.3**	**+2.5**
SRNI	**Srinagar**	**4.52**	**105**	*e*PKP	Px	02 05 08.0	
SRNI				*e*S	**Sn**	**02 06 02.0**	**+16**
JMU	**Jammu**	**5.15**	**120**	*e*PKP	**Pn**	**02 05 11.5**	**+8.2**
JMU				*e*S	**Sn**	**02 06 11.0**	**+9.5**
THN	**Thein Dam**	**5.89**	**118**	*e*PKP	**Pn**	**02 05 15.0**	**+1.6**
DLH	**Dalhousie**	**6.01**	**116**	*e*PKP	**Pn**	**02 05 22.0**	**+6.8**
DLH				*e*S	**Sn**	**02 06 29.0**	**+6.3**
KSH	**Kashi**	**6.54**	**49**	Pn	**Pn**	**02 05 21.9**	**-0.5**
KSH				Sn	**Sn**	**02 06 32.7**	**-3.0**
KSH				PP		02 06 36.7	
KSH	comp=N,1μm,0.6s			smax			
KSH	comp=E,840nm,0.7s			smax			
BHK	**Bhakra**	**6.95**	**123**	*e*PKP	**Pn**	**02 05 30.8**	**+2.8**
BHK				*ex*	x	02 07 28.0	
SDNR	**Sundarnagar**	**7.29**	**120**	*e*PKP	**Pn**	**02 05 32.9**	**+0.3**
SDNR				*e*S	**Sn**	**02 06 56.1**	**+2.0**
AML	**Almayashu**	**7.46**	**24**	P	**Pn**	**02 05 35.1**	**+0.2**
AML	SNR=220 **Almayashu**	**7.46**	**24**	*e*Pn	**Pn**	**02 05 35.0**	**+0.1**
AML	comp=E,729nm,0.6s			*e*Sn	**Sn**	**02 06 56.5**	**-1.6**
SMLA	**Simla**	**7.64**	**122**	*i* P	**Pn**	**02 05 37.6**	**+0.2**
SMLA				*i* S	**Sn**	**02 07 05.0**	**+2.3**
SMLA	comp=N,7μm,0.4s			⇓		02 07 08.4	
SMLA	comp=E,6μm,0.2s					02 07 08.5	
KK31	**Karatay Array**	**7.74**	**5**	⇑Pn	**Pn**	**02 05 37.3**	**-1.4**
KK31	comp=E,42nm,0.5s,baz=206,slow=15,SNR=641			⇑Sn	**Sn**	**02 07 03.1**	**-1.9**
KK31	comp=E,144nm,0.8s,baz=200,slow=20,SNR=4.3 **Karatay Array**	**7.74**	**5**	*e*P	**Pn**	**02 05 37.3**	**-1.5**
KK31				S	**Sn**	**02 07 02.8**	**-2.2**
KK31				pmax	pmax		
KK31	comp=Z,48nm,0.4s			smax			
IMYA	comp=N,124nm,0.6s **Miami**	**7.76**	**280**	*e*P	**Pn**	**02 05 38.0**	**-1.1**
UCH	**Uchtor**	**7.84**	**28**	P	**Pn**	**02 05 40.8**	**+0.7**
UCH	SNR=55 **Uchtor**	**7.84**	**28**	*e*Pn	**Pn**	**02 05 40.6**	**+0.5**
UCH	comp=N,193nm,0.6s			*e*Sn	**Sn**	**02 07 14.3**	**+6.8**
EKS2	**Erkin-Say**	**7.96**	**23**	P	**Pn**	**02 05 41.8**	**0.0**
EKS2	SNR=64 **Erkin-Say**	**7.96**	**23**	*e*Pn	**Pn**	**02 05 41.5**	**-0.3**
EKS2	comp=N,169nm,0.7s			*e*Sn	**Sn**	**02 07 11.7**	**+1.2**
KZA	**Kyzart**	**8.01**	**32**	P	**Pn**	**02 05 42.9**	**+0.4**
KKR	SNR=63 **Kurukshetra**	**8.15**	**130**	*e*PKP	**Pn**	**02 05 45.3**	**+0.8**
AAK	**Ala-Archa**	**8.18**	**26**	Pn	**Pn**	**02 05 45.6**	**+0.8**
AAK	comp=N,2μm,0.4s,SNR=38 **Ala-Archa**	**8.18**	**26**	P	**Pn**	**02 05 45.3**	**+0.5**
AAK	SNR=65 **Ala-Archa**	**8.18**	**26**	Pn	**Pn**	**02 05 45.1**	**+0.3**
AAK	comp=N,14nm,0.3s,baz=194,slow=7.9,SNR=40			Sn	**Sn**	**02 07 19.0**	**+3.1**
AAK	baz=325,slow=19,SNR=1.9 **Ala-Archa**	**8.18**	**26**	Pn	**Pn**	**02 05 45.1**	**+0.3**
AAK				Sn	**Sn**	**02 07 19.0**	**+3.1**
KLP	**Kalpa**	**8.20**	**116**	*e*PKP	**Pn**	**02 05 46.3**	**+1.2**
KLP				AML	AML	02 08 19.3	
KLP	comp=E,2μm,0.8s			AML	AML	02 08 21.2	
ISRO	comp=N,2μm,0.6s **Mashad**	**8.27**	**279**	*e*P	**Pn**	**02 05 42.4**	**-3.6**
IMOG	**Moghan**	**8.36**	**278**	*e*P	**Pn**	**02 05 48.0**	**+0.7**
KBK	**Karagaybulak**	**8.37**	**28**	P	**Pn**	**02 05 48.1**	**+0.7**
FRU	SNR=32 **Bishkek**	**8.40**	**26**	⇑*e*P	**Pn**	**02 05 48.0**	**+0.2**
FRU				*i* S	**Sn**	**02 07 30.0**	**+8.7**
FRU	comp=Z,300nm,1.3s			pmax	pmax		
FRU	comp=E,2μm,1.9s			smax			
RTK	**Rohtak**	**8.58**	**136**	*e*PKP	**Pn**	**02 05 49.2**	**-1.2**
CHMS	**Chumysh**	**8.59**	**26**	P	**Pn**	**02 05 50.7**	**+0.2**
ULHL	SNR=36 **Ulahol**	**8.59**	**35**	P	**Pn**	**02 05 51.5**	**+1.1**
IPAY	SNR=15 **Payeh**	**8.66**	**280**	*e*P	**Pn**	**02 05 49.2**	**-2.2**
DDI	**Dehra Dun**	**8.73**	**123**	*e*PKP	**Pn**	**02 05 52.0**	**-0.5**
DDI				*ex*	x	02 08 37.0	
USP	**Ospenovka**	**8.74**	**24**	P	**Pn**	**02 05 52.8**	**+0.4**
TKM2	SNR=10 **Tokmak 2**	**8.85**	**30**	⇑Pn	**Pn**	**02 05 54.2**	**+0.2**
TKM2	comp=E,231nm,1.1s			⇓Sn	**Sn**	**02 07 38.9**	**+6.5**
TKM2	comp=E,143nm,1.1s **Tokmak 2**	**8.85**	**30**	P	**Pn**	**02 05 54.2**	**+0.2**
TKM2	SNR=34 **Tokmak 2**	**8.85**	**30**	*e*P	**Pn**	**02 05 53.7**	**-0.3**
TKM2				pmax	pmax		
TKM2	comp=Z,236nm,0.9s **Tokmak 2**	**8.85**	**30**	*e*Pn	**Pn**	**02 05 53.7**	**-0.3**
IAKL	comp=Z,236nm,0.9s **Akhelmad**	**8.86**	**281**	*e*P	**Pn**	**02 05 52.3**	**-1.9**
KHET	**Khetri**	**9.01**	**142**	*e*PKP	**Pn**	**02 05 55.0**	**-1.3**
KHET				*e*S	**Sn**	**02 07 31.9**	**-4.5**
KHET				AML	AML	02 08 42.4	
KHET	comp=E,228nm,0.6s			AML	AML	02 08 42.8	
NDI	comp=N,96nm,0.4s **New Delhi**	**9.30**	**134**	*e*PKP	**Pn**	**02 05 58.0**	**-2.3**
NDI				*ex*	x	02 07 33.0	
ITEG	**Tejag**	**9.32**	**258**	*e*P	**Pn**	**02 06 01.1**	**+0.6**
AYAN	**Aya Nagar**	**9.40**	**135**	*e*PKP	**Pn**	**02 06 01.0**	**-0.6**
ABKT	**Ailbek**	**9.55**	**289**	Pn	**Pn**	**02 06 01.1**	**-2.6**
VAN	comp=N,581nm,0.5s,SNR=17 **Vannovskaya**	**9.57**	**289**	*e*P	**Pn**	**02 06 00.5**	**-3.4**
JOSI	**Joshimath**	**9.66**	**117**	*e*PKP	**Pn**	**02 06 04.9**	**-0.3**
JOSI				AML	AML	02 08 05.8	
JOSI	comp=E,1μm,0.6s			AML	AML	02 08 08.1	
KNDC	comp=N,1μm,0.6s **Almaty**	**9.68**	**34**	⇑Pn	**Pn**	**02 06 10.4**	**+5.0**
KNDC	comp=N,130nm,0.6s			⇑Sn	**Sn**	**02 08 00.1**	**+7.3**
AAA	**Alma-Ata**	**9.72**	**34**	*i* P	**Pn**	**02 06 09.1**	**+3.2**
AAA				*i* S	**Sn**	**02 08 01.0**	**+7.4**
AAA	comp=Z,3μm,8.0s			MLR	MLR		
ISHV	**Shirvan**	**9.81**	**286**	*e*P	**Pn**	**02 06 04.1**	**-3.1**
AJM	**Ajmer**	**9.88**	**153**	*e*PKP	**Pn**	**02 06 07.0**	**-1.3**
PTH	**Pithoragarh**	**10.70**	**120**	*e*PKP	**Pn**	**02 06 18.0**	**-1.4**
PTH				*ex*	x	02 08 16.2	
BHJ	**Bhuj**	**12.09**	**180**	*e*PKP	**Pn**	**02 06 36.0**	**-2.5**
IBAF	**Bafgh**	**12.30**	**256**	*e*P	**Pn**	**02 06 42.2**	**+1.0**
IGLO	**Ghaloghah**	**12.82**	**280**	*e*P	**Pn**	**02 06 47.5**	**-0.8**
IKIA	**Kiasar**	**12.94**	**278**	*e*P	**Pn**	**02 06 51.0**	**+1.1**
IMEH	**Mehriz**	**13.13**	**257**	*e*P	**Pn**	**02 06 53.7**	**+1.1**
ISHM	**Shahmirzad**	**13.27**	**277**	*e*P	**Pn**	**02 06 54.7**	**+0.2**
ISAD	**Sadrabad**	**13.69**	**260**	*e*P	**Pn**	**02 07 03.6**	**+3.4**
BHPL	**Bhopal**	**13.89**	**148**	*e*PKP	**Pn**	**02 07 00.7**	**-2.3**
IPRN	**Peran**	**14.03**	**279**	*e*P	**Pn**	**02 07 02.8**	**-2.0**
IZEF	**Zefreh**	**14.51**	**265**	*e*P	**Pn**	**02 07 11.6**	**+0.2**
GKN	**Gorkha**	**14.77**	**116**	*e*P	**Pn**	**02 07 10.8**	**-4.0**
MK31	comp=Z,328nm,0.6s **Makanchi Array**	**14.86**	**36**	⇑Pn	**Pn**	**02 07 17.3**	**+1.3**
MK31	comp=Z,73nm,0.8s **Makanchi Array**	**14.86**	**36**	P	**Pn**	**02 07 17.2**	**+1.2**
MK31				pmax	pmax		
MK31	comp=Z,27nm,0.5s **Makanchi Array**	**14.86**	**36**	*e*Pn	**Pn**	**02 07 13.4**	**-2.6**
MKAR	**Makanchi Array**	**14.86**	**36**	Pn	**Pn**	**02 07 13.5**	**-2.5**
MKAR	comp=Z,0.9nm,0.3s,baz=226,slow=15,SNR=45			Sn	**Sn**	**02 10 13.1**	**+14**
MKAR	baz=225,slow=22,SNR=1.5			LR	LR	02 13 13.8	
IPAR	comp=Z,510nm,19.3s,baz=225,slow=38 **Pars**	**14.99**	**253**	*e*P	**Pn**	**02 07 22.6**	**+4.9**
IKLH	**Kolahrood**	**15.02**	**267**	*e*P	**Pn**	**02 07 21.1**	**+3.0**
DMN	**Daman**	**15.33**	**116**	*e*P	**Pn**	**02 07 17.8**	**-4.4**
KKN	comp=Z,245nm,0.7s **Kakani**	**15.36**	**115**	*e*P	**Pn**	**02 07 18.4**	**-4.2**
PKIN	comp=Z,285nm,0.6s **Phulchoki**	**15.56**	**116**	*e*P	**Pn**	**02 07 21.0**	**-4.2**
AB31	comp=Z,278nm,0.6s **Akbulak array**	**15.56**	**336**	⇓Pn	**Pn**	**02 07 19.5**	**-5.6**
AB31	comp=Z,18nm,0.6s			⇑Sn	**Sn**	**02 10 05.3**	**-11**
ABKAR	comp=Z,16nm,0.6s **Akbulak array**	**15.56**	**336**	*e*Pn	**Pn**	**02 07 19.6**	**-5.5**
PKI	comp=Z,20nm,0.5s **Pulchoki**	**15.58**	**116**	*e*P	**Pn**	**02 07 21.3**	**-4.1**
IPIR	comp=Z,311nm,0.6s **Pirpir**	**15.73**	**265**	*e*P	**Pn**	**02 07 29.4**	**+2.0**
GUN	**Gumba**	**15.74**	**114**	*e*P	**Pn**	**02 07 24.3**	**-3.2**
WBK	comp=Z,227nm,0.6s **Wadi Bani Khal**	**15.74**	**219**	Pn	**Pn**	**02 07 32.3**	**+4.7**
AKL	SNR=5.3 **Akola**	**16.02**	**154**	⇑*i*P	**Pn**	**02 07 31.4**	**+0.2**
AKL				*i* x	x	02 10 19.4	
IRAZ	**Razeghan**	**16.03**	**276**	*e*P	**Pn**	**02 07 32.3**	**+1.1**
JIRN	**Jiri**	**16.11**	**114**	*e*P	**Pn**	**02 07 28.7**	**-3.5**
WMQ	comp=Z,169nm,0.4s **Urumqi**	**16.28**	**53**	P	**Pn**	**02 07 34.9**	**+0.6**
WMQ				pP	pP	02 07 43.9	-2.8
WMQ				PP		02 07 49.0	
WMQ				sP	sP	02 07 50.3	-1.6
WMQ				S	**S**	**02 10 32.7**	**-12**
WMQ				sS	sS	02 10 46.7	-14
WMQ				SS		02 10 52.9	
WMQ				PcP	PcP	02 12 28.8	+2.5
WMQ				ScS	ScS	02 19 35.8	-0.6
WMQ				pmax	pmax		
WMQ	comp=Z,92nm,0.9s			pmax	pmax		
WMQ	comp=Z,220nm,3.1s			LR	LR		
WMQ	comp=N,1μm,20.8s			LR	LR		
JMDO	comp=E,510nm,21.5s **Jabal Madar**	**16.39**	**221**	Pn	**Pn**	**02 07 35.0**	**-0.8**
NGP	SNR=7.6 **Nagpur**	**16.44**	**147**	*ex*	**Pn**	**02 07 33.4**	**-3.1**
NGP				*ex*	x	02 10 30.0	
BSY	**Bisya**	**16.59**	**224**	Pn	**Pn**	**02 07 42.8**	**+4.4**
KURK	SNR=5.5 **Kurchatov**	**16.66**	**20**	Pn	**Pn**	**02 07 37.3**	**-1.7**
KURK	comp=E,608nm,0.9s,SNR=6.3 **Kurchatov**	**16.66**	**20**	⇑Pn	**Pn**	**02 07 36.0**	**-3.0**
KURK	comp=E,121nm,1.0s			Sn	**Sn**	**02 10 42.9**	**0.0**
KURK	**Kurchatov**	**16.66**	**20**	Pn	**Pn**	**02 07 32.3**	**-6.7**
KURK	comp=E,0.1nm,0.3s,baz=213,slow=12,SNR=29			Sn	**Sn**	**02 10 45.7**	**+2.9**
KURK	baz=153,slow=39,SNR=1.7			LR	LR	02 14 46.0	
KURK	comp=E,218nm,19.2s,baz=210,slow=40 **Kurchatov**	**16.66**	**20**	⇓*i*P	**Pn**	**02 07 33.9**	**-5.1**
KURK	comp=Z,40nm,1.4s			pmax	pmax		
KURK	**Kurchatov**	**16.66**	**20**	*e*Pn	**Pn**	**02 07 34.0**	**-5.0**
KURK	comp=Z,111nm,1.0s **Kurchatov**	**16.66**	**20**	Pn	**Pn**	**02 07 38.3**	**-0.7**
RAMN	SNR=58 **Ramite**	**16.80**	**115**	*e*P	**Pn**	**02 07 36.5**	**-4.5**
POO	comp=Z,203nm,0.5s **Poona**	**17.21**	**166**	*ex*	**Pn**	**02 07 50.0**	**+3.9**
AKTK	**Aktyubinsk**	**17.23**	**334**	Pn	**Pn**	**02 07 42.7**	**-3.4**
AKTK				Sn	**Sn**	**02 10 47.7**	**-8.9**
AKTK				Lg		02 12 50.2	
AKTO	**Aktyubinsk**	**17.23**	**334**	Pn	**Pn**	**02 07 42.7**	**-3.4**
AKTO	comp=Z,1.7nm,0.3s,baz=158,slow=13,SNR=22			Sn	**Sn**	**02 10 47.7**	**-8.9**
AKTO	comp=Z,0.4nm,0.3s,baz=141,slow=16,SNR=1.9			Lg		02 12 50.2	
AKTO	baz=229,slow=18,SNR=1.6 **Aktyubinsk**	**17.23**	**334**	P	**Pn**	**02 07 42.7**	**-3.4**
AKTO						02 10 47.7	
VOSK	**Vostochnaya**	**17.36**	**3**	⇓Pn	**Pn**	**02 07 43.7**	**-4.0**
TAPN	comp=Z,88nm,1.0s **Taplejung**	**17.41**	**112**	*e*P	**Pn**	**02 07 45.7**	**-2.9**
ODAN	comp=Z,248nm,0.8s **Odare**	**17.44**	**114**	*e*P	**Pn**	**02 07 44.9**	**-4.0**
ZRNK	comp=Z,183nm,0.7s **Zerenda**	**17.56**	**359**	⇑Pn	**Pn**	**02 07 45.9**	**-4.4**
ZRNK	**Zerenda**	**17.56**	**359**	P	**Pn**	**02 07 45.8**	**-4.4**
ZRNK				pmax	pmax		
BVAR	comp=Z,36nm,0.6s **Borovoye Array**	**17.64**	**2**	P	**Pn**	**02 07 47.3**	**-3.9**
BVAR	comp=Z,0.7nm,0.3s,baz=178,slow=14,SNR=32			S	**S**	**02 11 12.1**	**-0.6**
	comp=Z,0.8nm,0.3s,baz=234,slow=22,SNR=1.4						
BRVK	**Borovoye**	**17.67**	**1**	Pn	**Pn**	**02 07 47.3**	**-4.3**
	comp=Z,466nm,1.2s,SNR=18						
BRVK	**Borovoye**	**17.67**	**1**	⇑Pn	**Pn**	**02 07 47.6**	**-4.0**
	comp=Z,341nm,2.1s						
BRVK				Sn	**Sn**	**02 10 59.9**	**-7.4**
BRVK	**Borovoye**	**17.67**	**1**	P	**Pn**	**02 07 47.5**	**-4.1**
BRVK				pmax	pmax		
	comp=Z,341nm,2.1s						
BRVK	**Borovoye**	**17.67**	**1**	*e*Pn	**Pn**	**02 07 47.8**	**-3.8**
	comp=Z,549nm,2.1s						
BRVK	**Borovoye**	**17.67**	**1**	Pn	**Pn**	**02 07 48.1**	**-3.5**
	SNR=84						
ISRB	**Sarab**	**17.76**	**284**	*e*P	**Pn**	**02 07 51.5**	**-1.3**
LATR	**Latur**	**18.00**	**158**	*e*PKP	**Pn**	**02 07 56.5**	**+0.6**
LATR				*ex*	x	02 11 11.4	
IKOM	**Komasi**	**18.17**	**273**	*e*P	**Pn**	**02 08 01.4**	**+3.5**
BOK	**Bokaro**	**18.26**	**125**	*e*PKP	**Pn**	**02 07 58.1**	**-0.9**
IVIS	**Veis**	**18.65**	**274**	*e*P	**Pn**	**02 08 01.4**	**-2.3**
MAK	**Makhachkala**	**18.68**	**301**	*e*P	**Pn**	**02 08 02.9**	**-1.1**
MAK				*e*S	**S**	**02 11 34.1**	**+0.2**
MAK				pmax	pmax		
	comp=Z,48nm,0.7s						
MAK				MLR	MLR		
	comp=Z,969nm,12.0s						
IGHG	**Ghaleghazi**	**18.91**	**273**	*e*P	**Pn**	**02 08 08.1**	**+1.2**
LSA	**Lhasa**	**19.03**	**101**	P	**Pn**	**02 08 10.9**	**+2.6**
LSA				S	**S**	**02 11 36.3**	**-4.8**
LSA				pmax	pmax		
	comp=Z,80nm,6.2s						
LSA				LR	LR		
	comp=N,140nm,6.8s						
LSA				LR	LR		
	comp=E,180nm,7.6s						
LSA				LR	LR		
	comp=Z,350nm,10.6s						
LSA	**Lhasa**	**19.03**	**101**	*e*P	**Pn**	**02 08 08.5**	**+0.2**
LSA				pmax	pmax		
	comp=Z,54nm,0.8s						
LSA	**Lhasa**	**19.03**	**101**	*e*P	**Pn**	**02 08 08.5**	**+0.2**
	comp=Z,54nm,0.8s						
ISHB	**Shabestar**	**19.39**	**286**	*e*P	**Pn**	**02 08 12.6**	**+0.1**
KBD	**Kabd**	**19.50**	**258**	*e*P	**Pn**	**02 08 13.4**	**-0.5**
KBD				AMb	AMB	02 08 20.1	
	comp=Z,46nm,1.6s						
HYB	**Hyderabad**	**19.60**	**154**	*e*P	**Pn**	**02 08 15.0**	**-0.1**
HYB				*e*S	**S**	**02 11 36.0**	**-17**
HYB	**Hyderabad**	**19.60**	**154**	*i* P	**Pn**	**02 08 15.0**	**-0.1**
HYB				*e*S	**S**	**02 11 50.0**	**-2.6**
RDF	**Al-Radifah**	**19.72**	**257**	*e*P	**Pn**	**02 08 16.2**	**-0.3**
RDF				AMb	AMB	02 08 22.7	
	comp=Z,68nm,1.2s						
NAY	**Al-Naaiem**	**19.83**	**258**	*e*P	**Pn**	**02 08 16.9**	**-1.0**
NAY				AMb	AMB	02 08 25.1	
	comp=Z,44nm,1.5s						
DGRG	**David-gareji**	**19.88**	**295**	P	**Pn**	**02 08 17.2**	**-1.2**
GNI	**Garni**	**20.18**	**291**	P	**P**	**02 08 20.0**	**+0.3**
	comp=Z,58nm,0.8s,baz=54,slow=8.7,SNR=37						
GNI				LR	LR	02 17 48.1	
	comp=Z,116nm,21.2s,MS3.2,baz=87,slow=42						
GNI	**Garni**	**20.18**	**291**	*d* *i*P	**P**	**02 08 22.2**	**+2.5**
GNI				pmax	pmax		
	comp=Z,158nm,1.2s						
GNI	**Garni**	**20.18**	**291**	*e*P	**P**	**02 08 21.7**	**+1.9**
	comp=Z,164nm,1.0s						
MTA	**Mtatsminda**	**20.35**	**295**	P	**P**	**02 08 22.0**	**+0.4**
TBLG	**Delisi**	**20.40**	**296**	*e*P	**P**	**02 08 22.9**	**+0.8**
TBLG	**Delisi**	**20.40**	**296**	P	**P**	**02 08 22.9**	**+0.8**
GOR	**Gori**	**20.91**	**296**	P	**P**	**02 08 29.0**	**+1.4**
KEH	**Kehvi**	**21.09**	**297**	P	**P**	**02 08 28.7**	**-0.8**
ZEI	**Tsey**	**21.21**	**298**	*e*P	**P**	**02 08 31.2**	**+0.4**
ZEI				*e*S	**S**	**02 12 32.6**	**+8.4**
ZEI				pmax	pmax		
	comp=Z,128nm,1.4s,mb5.1						
ZALV	**Zalesovo Beam**	**21.41**	**25**	P	**P**	**02 08 32.1**	**-0.6**
	comp=Z,92nm,0.7s,mb5.2,baz=221,slow=11,SNR=143						
ZALV				S	**S**	**02 12 28.1**	**+0.2**
	comp=Z,0.6nm,0.4s,baz=306,slow=13,SNR=1.9						
ZALV				LR	LR	02 17 27.8	
	comp=Z,185nm,18.5s,MS3.5,baz=66,slow=39						
ZALV	**Zalesovo Beam**	**21.41**	**25**	P	**P**	**02 08 32.2**	**-0.6**
ZALV				S	**S**	**02 12 28.1**	**+0.2**
VIS	**Vishakhapatnam**	**21.42**	**142**	*e*PKP	**P**	**02 08 34.0**	**+0.8**
VIS				*i* x	x	02 12 23.2	
ONI	**Oni**	**21.50**	**297**	P	**P**	**02 08 35.1**	**+1.2**
SHL	**Shillong**	**21.53**	**111**	*e*PKP	**P**	**02 08 34.0**	**-0.4**
SHL				*i* x	x	02 12 25.0	
NVS	**Novosibirsk**	**21.63**	**22**	*i* P	**P**	**02 08 34.7**	**-0.5**
NVS				*e*S	**S**	**02 12 37.6**	**+5.3**
NVS				pmax	pmax		
	comp=Z,184nm,1.1s,mb5.4						
NVS				pmax	pmax		
	comp=N,247nm,1.4s						
AGT	**Agartala**	**22.00**	**116**	*ex*	**P**	**02 08 35.0**	**-4.4**
SVE	**Sverdlovsk**	**22.29**	**347**	⇓*e*P	**P**	**02 08 42.0**	**-0.2**
SVE				pmax	pmax		
	comp=Z,64nm,1.2s,mb4.9						
SVE				MLR	MLR		
	comp=Z,1μm,13.0s,MS4.5						
KIV	**Kislovodsk**	**22.33**	**301**	P	**P**	**02 08 42.5**	**-0.3**
	comp=Z,454nm,0.7s,mb6.0,SNR=7.8						
KIV	**Kislovodsk**	**22.33**	**301**	⇓*e*P	**P**	**02 08 42.7**	**-0.1**
KIV				*e*		02 09 04.2	
KIV				*i* S	**S**	**02 12 50.0**	**+4.0**
KIV				pmax	pmax		
	comp=Z,32nm,0.7s,mb4.9						
KIV				MLR	MLR		
	comp=Z,200nm,16.0s,MS3.6						
KIV	**Kislovodsk**	**22.33**	**301**	*e*P	**P**	**02 08 42.5**	**-0.3**
	comp=Z,56nm,0.7s,mb5.1						
KIV	**Kislovodsk**	**22.33**	**301**	P	**P**	**02 08 42.5**	**-0.3**
	SNR=24						
ARU	**Arti**	**22.34**	**344**	P	**P**	**02 08 43.3**	**+0.5**
	comp=Z,381nm,0.7s,mb5.9,SNR=18						
ARU	**Arti**	**22.34**	**344**	*c* *i*P	**P**	**02 08 42.6**	**-0.2**
ARU				*e*PPP		02 09 11.3	
ARU				S	**S**	**02 12 47.8**	**+1.7**
ARU				SS		02 13 18.1	
ARU				SSS		02 13 34.0	
ARU				pmax	pmax		
	comp=Z,102nm,1.7s,mb5.0						
ARU				MLR	MLR		
	comp=Z,241nm,12.0s,MS3.8						
ARU	**Arti**	**22.34**	**344**	*e*P	**P**	**02 08 43.2**

ANN pmax pmax
comp=Z,125nm,1.4s,mb5.2
ANN MLR MLR
comp=Z,246nm,15.0s,MS3.9
VORD Divnogorie 26.78 315 *e*P **P 02 09 24.1 -0.5**
VORD pmax pmax
comp=Z,10.0nm,0.6s,mb4.5
VORD pmax pmax
comp=N,40nm,1.2s
VSR Storozhevoye 26.95 315 *e*P **P 02 09 26.9 +0.7**
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,50nm,0.8s
VSR pmax pmax
comp=Z,30nm,0.8s,mb4.9
VOR Voronezh 27.15 316 P **P 02 09 26.0 -1.9**
VOR pmax pmax
comp=Z,160nm,1.0s,mb5.5
ASF Jabal al Asfar 27.29 273 P **P 02 09 31.0 +1.6**
comp=Z,1.5nm,0.8s,baz=139,slow=9.1,SNR=1.9
ASF PcP PcP 02 12 50.3 +2.0
comp=Z,2.1nm,0.9s,baz=39,slow=6.5,SNR=2.9
ASF LR LR 02 21 51.6
comp=Z,155nm,18.4s,MS3.6,baz=262,slow=40
ASF Jabal al Asfar 27.29 273 P **P 02 09 31.0 +1.6**
ASF 02 12 50.3
MOY Mondy 27.70 44 *e*P **P 02 09 34.6 +1.7**
MOY pmax pmax
comp=Z,26nm,3.9s
LZH Lanzhou 27.74 78 *e*P **P 02 09 35.0 +1.6**
LZH pP pP 02 09 44.5 +0.1
LZH PP 02 10 23.1
LZH pmax pmax
comp=Z,31nm,1.0s,mb4.9
LZH pmax pmax
comp=Z,140nm,4.1s
LZH LR LR
comp=E,610nm,11.0s
LZH LR LR
comp=Z,960nm,13.2s,MS4.6
MMAI Mount Meron Ar 28.29 275 P **P 02 09 37.8 -0.5**
comp=Z,0.2nm,0.3s,baz=64,slow=10,SNR=2.8
MMAI PcP PcP 02 12 51.9 +1.2
comp=Z,2.4nm,0.7s,baz=51,slow=2.7,SNR=5.1
MMAI LR LR 02 22 31.0
comp=Z,112nm,18.1s,MS3.5,baz=95,slow=40
SIM Simferopol' 28.54 300 *e*P **P 02 09 43.3 +2.9**
SIM pmax pmax
comp=Z,12nm,0.9s,mb4.6
SIM MLR MLR
comp=Z,150nm,20.0s,MS3.6
BRTR Keskin Array B 28.70 289 P **P 02 09 41.5 -0.5**
comp=Z,5.1nm,0.9s,mb4.2,baz=95,slow=7.9,SNR=23
BRTR PcP PcP 02 12 52.0 +0.4
comp=Z,1.2nm,0.6s,baz=140,slow=2.8,SNR=5.9
CD2 Chengdu 28.87 89 P **P 02 09 45.0 +1.5**
CD2 pP pP 02 09 56.7 +2.1
CD2 sP sP 02 10 02.3 +2.8
CD2 PP PP 02 10 39.0 -10
CD2 S **S 02 14 30.2 -0.8**
CD2 sS sS 02 14 50.3 +0.8
CD2 SS SS 02 15 59.6 -35
CD2 pmax pmax
comp=Z,20nm,0.6s,mb5.0
CD2 pmax pmax
comp=Z,170nm,6.5s
CD2 LR LR
comp=N,310nm,7.7s
CD2 LR LR
comp=Z,380nm,7.1s
TLY Talaya 29.24 46 *e*P **P 02 09 47.8 +1.3**
TLY *e*SS SS 02 16 21.0 -20
TLY pmax pmax
comp=Z,11nm,1.0s,mb4.5
TLY MLR MLR
comp=Z,111nm,11.0s,MS3.7
EIL Elat 29.65 269 LR LR 02 23 35.7
comp=Z,270nm,19.4s,MS3.9,baz=191,slow=40
MOS Moscow 29.83 323 *e*P **P 02 09 51.1 -0.6**
MOS *e* 02 11 06.0
MOS pmax pmax
comp=Z,100nm,1.3s,mb5.4
MOS pmax pmax
comp=Z,83nm,1.1s,mb5.4
MOS MLR MLR
comp=Z,600nm,18.0s,MS4.3
SONM Songino Array 29.91 54 P **P 02 09 53.5 +0.9**
comp=Z,18nm,1.0s,mb4.8,baz=256,slow=9.4,SNR=78
SONM PcP PcP 02 12 54.2 -0.2
comp=Z,2.9nm,0.9s,baz=256,slow=1.8,SNR=4.1
SONM LR LR 02 23 35.8
comp=Z,291nm,20.1s,MS3.9,baz=85,slow=40
SONM Songino Array 29.91 54 P **P 02 09 53.5 +0.9**
SONM 02 12 54.2
SONM Songino Array 29.91 54 P **P 02 09 53.5 +0.9**
SONM PcP PcP 02 12 54.2 -0.3
SONM LR LR 02 23 35.8
OBN Obninsk 30.06 321 P **P 02 09 54.6 +0.8**
comp=Z,698nm,0.7s,SNR=5.7
OBN Obninsk 30.06 321⇑*e*P **P 02 09 54.0 +0.2**
OBN *e* 02 10 49.2
OBN *i* S **S 02 14 52.6 +3.5**
OBN pmax pmax
comp=Z,150nm,1.2s,mb5.6
OBN MLR MLR
comp=Z,200nm,17.0s,MS3.8
OBN Obninsk 30.06 321 *e*P **P 02 09 54.2 +0.4**
comp=Z,81nm,0.7s,mb5.6
KMI Kunming 30.29 101 P **P 02 10 00.5 +4.4**
KMI PP PP 02 10 59.5 -5.4
KMI S **S 02 14 53.5 +0.2**
KMI sS sS 02 15 15.5 +3.6
KMI ScS ScS 02 20 32.7 +1.7
KMI pmax pmax
comp=Z,17nm,0.8s,mb4.8
KMI LR LR
comp=N,220nm,13.7s,MS4.0
KMI LR LR
comp=E,100nm,11.1s,MS4.0
KMI LR LR
comp=Z,210nm,10.0s,MS4.1
ULN Ulaanbaatar 30.36 54 *e*P **P 02 09 56.8 +0.3**
ULN pmax pmax
comp=Z,12nm,0.9s,mb4.6
ULN Ulaanbaatar 30.36 54 *e*P **P 02 09 56.8 +0.4**
comp=Z,12nm,0.9s,mb4.6
CHG Chiang Mai 30.75 115⇑P **P 02 10 04.9 +4.6**
comp=Z,13nm,0.6s,mb4.9
CHTO Chiang Mai 30.75 115 *e*P **P 02 10 05.4 +5.1**
CHTO pmax pmax
comp=Z,14nm,1.1s,mb4.7
CHTO Chiang Mai 30.75 115 *e*P **P 02 10 05.4 +5.1**
comp=Z,14nm,1.1s,mb4.7
CMAR Chiang Mai Arr 30.98 115 P **P 02 10 02.7 +0.5**
comp=Z,11nm,0.8s,mb4.7,baz=302,slow=8.3,SNR=17
CMAR PcP PcP 02 12 59.7 +2.0
comp=Z,1.6nm,0.3s,baz=298,slow=4.0,SNR=3.8
CMAR LR LR 02 23 37.7
comp=Z,73nm,19.4s,MS3.4,baz=265,slow=39
CMAR Chiang Mai Arr 30.98 115 P **P 02 10 02.7 +0.5**
CMAR 02 12 59.7
BDT Bhumibol Dam 31.79 117 P **P 02 10 10.0 +0.6**
comp=Z,11nm,1.0s,mb4.7
XAN Xi'an 32.22 81 P **P 02 10 13.9 +0.8**
XAN pP pP 02 10 23.7 -0.5
XAN pmax pmax
comp=Z,6.0nm,1.0s,mb4.4
XAN LR LR
comp=N,310nm,14.2s,MS4.2
XAN LR LR
comp=E,77nm,12.4s,MS4.2
TLCR 32.30 300⇑P **P 02 10 14.5 +0.8**
TLCR 32.30 300⇑*i*P **P 02 10 14.4 +0.7**
KIS Kishinev 32.45 304 *e*P **P 02 10 17.0 +2.1**
KIS *e*L 02 27 04.0
KIS Kishinev 32.45 304 *e*P **P 02 10 17.0 +2.1**
KIS *e* pP 02 10 27.0 +0.9
AKASG Malin Array Be 32.77 310 P **P 02 10 17.1 -0.5**
comp=E,17nm,0.7s,mb5.1,baz=88,slow=7.2,SNR=23
AKBB Malin Array Si 32.77 310 *e*P **P 02 10 17.9 +0.2**
KIEV Kiev 32.78 310 *e*P **P 02 10 17.5 -0.2**
KIEV pmax pmax
comp=Z,16nm,0.8s,mb5.0
KIEV Kiev 32.78 310 *e*P **P 02 10 17.5 -0.2**
comp=Z,16nm,0.8s,mb5.0

GYA Guiyang 32.88 95⇑*i*P **P 02 10 20.5 +1.6**
GYA pP pP 02 10 32.8 +2.8
GYA PP PP 02 11 31.2 -2.4
GYA PcP PcP 02 13 03.6 +0.8
GYA S **S 02 15 31.8 -1.9**
GYA sS sS 02 15 55.0 +2.6
GYA ScP ScP 02 16 44.5 +0.9
GYA PcS PcS 02 16 51.4 +3.1
GYA SS SS 02 17 34.9 -21
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.0
GYA pmax pmax
comp=Z,120nm,4.9s
GYA LR LR
comp=N,640nm,16.3s,MS4.5
GYA LR LR
comp=E,520nm,17.0s,MS4.5
GYA LR LR
comp=Z,820nm,17.6s,MS4.5
HHC Hu-ho-hao-te 33.24 68 *e*P **P 02 10 21.6 -0.3**
HHC pP pP 02 10 34.1 +1.1
HHC sP sP 02 10 39.1 +1.2
HHC PP PP 02 11 33.5 -3.9
HHC PcP PcP 02 13 03.9 +0.3
HHC S **S 02 15 36.7 -2.4**
HHC sS sS 02 15 57.7 0.0
HHC ScP ScP 02 16 43.0 -1.6
HHC PcS PcS 02 16 48.5 -0.6
HHC ScS ScS 02 20 42.3 -2.9
HHC pmax pmax
comp=Z,21nm,0.7s,mb5.2
HHC pmax pmax
comp=Z,86nm,5.8s
HHC LR LR
comp=N,240nm,12.2s,MS4.5
HHC LR LR
comp=E,540nm,12.4s,MS4.5
HHC LR LR
comp=Z,390nm,12.2s,MS4.3
NST Nakhon Sawan 33.63 118 P **P 02 10 23.4 -2.1**
ENH Enshi 33.75 87 *e*P **P 02 10 27.9 +1.4**
comp=Z,35nm,0.8s,mb5.3
VRI Vrincioaia 33.80 301⇑P **P 02 10 29.0 +2.2**
VRI P 02 10 29.5
VRI Vrincioaia 33.80 301⇑*i*P **P 02 10 29.0 +2.3**
PLOR Plostina 33.86 301 P **P 02 10 28.9 +1.7**
PLOR Plostina 33.86 301⇓*i*P **P 02 10 28.6 +1.4**
TESR 33.89 302⇓P **P 02 10 31.6 +4.1**
TESR 33.89 302⇓*i*P **P 02 10 31.6 +4.1**
MLR Muntele Rosu 34.34 301⇑P **P 02 10 32.9 +1.5**
MLR P 02 10 33.1
MLR Muntele Rosu 34.34 301⇑*i*P **P 02 10 32.9 +1.5**
BURAR Bucovina Array 34.94 304⇑P **P 02 10 37.9 +1.3**
BURAR Bucovina Array 34.94 304⇑*i*P **P 02 10 37.9 +1.3**
BUR08 Bucovina Ar. S 34.96 304 *e*P **P 02 10 36.9 +0.2**
NACGM Naroch 35.23 317 *e* **P 02 10 35.0 -3.9**
IDID Didziasalis 35.36 318 *e*P **P 02 10 40.1 0.0**
IDID AMB AMB 02 10 45.5
comp=Z,10nm,1.0s,mb4.7
IIGN Ignalina 35.66 318 *e*P **P 02 10 42.6 0.0**
IIGN AMB AMB 02 10 47.2
comp=Z,18nm,0.7s,mb5.2
IZAR Zarasai 35.76 318 *e*P **P 02 10 43.5 +0.1**
IZAR AMB AMB 02 10 48.0
comp=Z,18nm,0.8s,mb5.1
ISAL Salakas 35.77 318 *e*P **P 02 10 43.4 -0.1**
ISAL AMB AMB 02 10 49.1
comp=Z,12nm,1.0s,mb4.8
LVV L'vov 35.92 308 *e*P **P 02 10 44.2 -0.7**
LVV *e* 02 10 52.0
LVV *e* 02 12 01.6
LVV *e*PPP 02 12 27.2
LVV *e*S **S 02 16 15.4 -4.8**
LVV *e*SS SS 02 19 04.0 +6.4
BMR Baia Mare 36.11 304 P **P 02 10 52.0 +5.4**
JOF Joensuu 36.27 331 *e*P **P 02 10 47.3 -0.5**
JOF pmax pmax
comp=Z,26nm,0.5s,mb5.4
JOF Joensuu 36.27 331 *e*p **P 02 10 47.3 -0.5**
comp=Z,26nm,0.5s,mb5.4
VSU Vasula 36.36 323⇓*i*P **P 02 10 47.6 -1.0**
VSU pmax pmax
comp=Z,63nm,1.0s,mb5.5
VTS Vitosha 36.39 296⇑P **P 02 10 49.2 +0.2**
VTS Vitosha 36.39 296⇑*i*P **P 02 10 49.2 +0.2**
DRGR 36.61 303⇑P **P 02 10 52.1 +1.2**
DRGR P 02 10 53.2
DRGR 36.61 303⇑*i*P **P 02 10 52.1 +1.2**
KWP Kalwaria Pacla 36.76 308 *e*P **P 02 10 53.7 +1.7**
KWP *e*pP pP 02 10 58.3 -5.1
KWP *e*S **S 02 16 33.2 +0.2**
KWP LMZ 02 25 01.8
comp=Z,100nm,29.3s
KWP Kalwaria Pacla 36.76 308 *e*P **P 02 10 53.3 +1.2**
comp=Z,28nm,0.9s,mb5.1
KWP Kalwaria Pacla 36.76 308⇑*i*P **P 02 10 53.8 +1.7**
BJI Beijing 36.82 69 P **P 02 10 54.0 +1.2**
BJI PP PP 02 12 17.4 +0.4
BJI S **S 02 16 33.3 -0.9**
BJI pmax pmax
comp=Z,13nm,0.9s,mb4.8
BJI pmax pmax
comp=Z,120nm,3.5s
BJI LR LR
comp=N,470nm,19.9s,MS4.3
BJI LR LR
comp=E,160nm,20.3s,MS4.3
BJI LR LR
comp=Z,170nm,21.8s,MS3.8
UZH Uzhgorod 36.96 306 *e*P **P 02 10 59.2 +5.4**
GVD Gavdhos 36.97 283 *e*P **P 02 10 54.6 +0.5**
comp=Z,100nm,0.7s,mb5.8
SUW Suwalki 37.07 315 *e*P **P 02 10 54.1 -0.5**
SUW *e*pP pP 02 10 57.5 -8.4
SUW *e*sP sP 02 11 03.1 -7.7
SUW *e*PP PP 02 12 18.9 -0.6
SUW LMZ 02 28 39.7
comp=Z,300nm,14.9s
SUW Suwalki 37.07 315 *e*P **P 02 10 54.4 -0.3**
comp=Z,32nm,0.6s,mb5.3
BZS Buzias 37.38 301 P **P 02 10 58.1 +0.7**
BZS Buzias 37.38 301⇓P **P 02 10 57.7 +0.3**
BZS P 02 10 58.1
BZS Buzias 37.38 301⇓*i*P **P 02 10 57.7 +0.3**
CRVS Cervenica-Dubn 37.52 306 *e*P **P 02 10 59.1 +0.5**
CRVS pmax pmax
comp=Z,70nm,3.0s
CRVS Cervenica-Dubn 37.52 306 *e*P **P 02 10 59.1 +0.5**
comp=Z,70nm,3.0s
CRVS Cervenica-Dubn 37.52 306 *e*P **P 02 10 59.1 +0.5**
WHN Wuhan 37.63 84⇓P **P 02 11 01.6 +1.9**
WHN LR LR
comp=N,380nm,11.2s
WHN LR LR
comp=E,290nm,9.8s
WHN LR LR
comp=Z,570nm,13.5s,MS4.5
STHS Stebnicka Huta 37.69 307 *e*P **P 02 11 03.6 +3.6**
STHS pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
STHS Stebnicka Huta 37.69 307 *e*P **P 02 11 03.6 +3.6**
comp=Z,2.8nm,0.7s,mb4.1
STHS Stebnicka Huta 37.69 307 *e*P **P 02 11 03.6 +3.6**
FINES FINESS Array B 37.78 327 P **P 02 11 00.2 -0.4**
comp=Z,34nm,0.7s,mb5.2,baz=111,slow=10,SNR=47
FINES LR LR 02 29 02.0
comp=Z,114nm,18.3s,MS3.7,baz=292,slow=40
KAF Kangasniemi 37.95 328 *e*P **P 02 11 01.3 -0.7**
KAF pmax pmax
comp=Z,27nm,0.7s,mb5.1
KAF Kangasniemi 37.95 328 *e*P **P 02 11 01.3 -0.7**
comp=Z,27nm,0.7s,mb5.1
KAF Kangasniemi 37.95 328 *e*p **P 02 11 01.3 -0.7**
comp=Z,27nm,0.7s,mb5.1
LVZ Lovozero 38.08 339 P **P 02 11 03.6 +0.6**
comp=Z,161nm,0.8s,mb5.8,SNR=5.6
LVZ Lovozero 38.08 339 *i* P **P 02 11 03.1 +0.1**
KECS Kecovo 38.16 306 *e*P **P 02 11 07.4 +3.5**
comp=Z,2.5nm,1.0s,mb3.9
KECS Kecovo 38.16 306 *e*P **P 02 11 07.4 +3.5**
NIE Niedzica 38.30 307 *e*P **P 02 11 06.5 +1.4**
PSZ Piszkesteto 38.54 305⇑P **P 02 11 08.4 +1.2**
PSZ Piszkesteto 38.54 305 *e*P **P 02 11 08.2 +1.0**
comp=Z,10nm,1.0s,mb4.5

PSZ Piszkesteto 38.54 305⇑*i*P **P 02 11 08.4 +1.2**
OJC Ojcow 38.67 308 *e*P **P 02 11 06.5 -1.8**
BUD Budapest 39.13 304⇓*e*P **P 02 11 08.6 -3.5**
VYHS Vyhne 39.25 306 *e*P **P 02 11 13.5 +0.4**
VYHS pmax pmax
comp=Z,16nm,2.5s,mb4.3
VYHS Vyhne 39.25 306 *e*P **P 02 11 13.5 +0.4**
comp=Z,16nm,2.5s,mb4.3
VYHS Vyhne 39.25 306 *e*P **P 02 11 13.4 +0.3**
PKSM Moragy 39.43 302⇑P **P 02 11 16.2 +1.5**
PKSM Moragy 39.43 302⇑*i*P **P 02 11 16.2 +1.5**
OKC Ostrava-Krasne 39.72 308 *e*P **P 02 11 17.9 +0.9**
MORC Moravsky Berou 40.11 308 *e*P **P 02 11 20.8 +0.5**
comp=Z,7.4nm,0.8s,mb4.5
MORC Moravsky Berou 40.11 308⇑*i*P **P 02 11 20.8 +0.5**
ZST Bratislava 40.41 305 *e*P **P 02 11 27.7 +4.9**
ZST pmax pmax
comp=Z,6.0nm,1.0s,mb4.3
ZST Bratislava 40.41 305 *e*P **P 02 11 27.7 +4.9**
comp=Z,6.4nm,1.0s,mb4.3
ZST Bratislava 40.41 305 *e*P **P 02 11 27.7 +4.9**
GKP Gorka Klasztor 40.47 313 *e*P **P 02 11 23.7 +0.5**
GKP *e*pP pP 02 11 26.6 -8.0
GKP *e*sP sP 02 11 32.4 -6.9
GKP LMZ 02 30 48.4
comp=Z,300nm,13.5s
VRAC Vranov 40.73 307 LR LR 02 29 22.7
comp=Z,97nm,21.9s,MS3.6,baz=94,slow=38
VRAC Vranov 40.73 307⇑P **P 02 11 26.0 +0.6**
VRAC Vranov 40.73 307⇑*i*P **P 02 11 26.0 +0.6**
NJ2 Nanjing 40.78 80 *e*P **P 02 11 27.2 +1.2**
NJ2 pmax pmax
comp=Z,20nm,0.5s,mb5.0
DPC Dobruska-Polom 40.91 308 *e*P **P 02 11 27.5 +0.7**
DPC *e*PP PP 02 13 10.3 +8.8
KSP Ksiaz 40.93 309 *e*P **P 02 11 34.0 +7.0**
KOGS Kog 41.07 302 *i* P **P 02 11 26.9 -1.3**
UPC Upice 41.11 309 *e*P **P 02 11 29.0 +0.6**
UPC *e* 02 12 58.8
UPC Upice 41.11 309 *e*P **P 02 11 29.0 +0.6**
UPC *e*PP PP 02 12 58.8 -4.8
CONA Conrad Observa 41.25 305⇑*i*P **P 02 11 31.3 +1.6**
comp=Z,19nm,1.2s,mb4.6
KEV Kevo 41.42 339 *e*P **P 02 11 30.9 +0.1**
KEV pmax pmax
comp=Z,9.0nm,0.6s,mb4.6
KEV Kevo 41.42 339 *e*P **P 02 11 30.9 +0.1**
comp=Z,9.3nm,0.6s,mb4.6
KEV Kevo 41.42 339 *e*p **P 02 11 30.9 +0.1**
comp=Z,9.3nm,0.6s,mb4.6
KULM Kulim 41.43 129 *e*P **P 02 11 32.3 +0.8**
comp=Z,8.1nm,0.6s,mb4.5
TREC Trest 41.45 307 *e*P **P 02 11 31.8 +0.5**
TREC Trest 41.45 307 *e*P **P 02 11 31.8 +0.5**
ARCES ARCESS Array B 41.74 338 P **P 02 11 33.7 +0.3**
comp=Z,23nm,0.7s,mb4.9,baz=120,slow=7.1,SNR=41
ARCES LR LR 02 29 23.9
comp=Z,112nm,19.8s,MS3.7,baz=300,slow=37
ARE0 ARCESS Array S 41.74 338 *e*P **P 02 11 34.1 +0.7**
SOKA Soboth 41.90 303⇑*i*P **P 02 11 35.3 +0.3**
comp=Z,11nm,0.8s,mb4.5
PDKS Podkum 41.97 302 *i* P **P 02 11 35.7 +0.1**
BSD Bornholm Skovb 41.98 316 *i* P **P 02 11 37.4 +1.8**
BSD pmax pmax
comp=Z,29nm,0.8s,mb5.0
BSD Bornholm Skovb 41.98 316 *i* P **P 02 11 37.4 +1.8**
comp=Z,29nm,0.8s,mb5.0
PRU Pruhonice 42.05 308 *e*P **P 02 11 37.8 +1.6**
PRU *e* 02 13 16.2
PRU Pruhonice 42.05 308 *e*P **P 02 11 37.8 +1.6**
PRU *e*PP PP 02 13 16.2 +2.3
PRU AMS AMS 02 28 20.0
SNY Shenyang 42.09 64⇓P **P 02 11 36.7 0.0**
SNY S **S 02 17 54.6 +1.3**
SNY pmax pmax
comp=Z,10.0nm,0.6s,mb4.6
SNY pmax pmax
comp=Z,97nm,5.2s
SNY LR LR
comp=N,420nm,17.4s
SNY LR LR
comp=Z,340nm,11.8s
KTK1 Kautokeino 42.18 337 *e*P **P 02 11 36.7 -0.3**
OBKA Obir 42.24 303⇑*i*P **P 02 11 39.7 +1.9**
comp=Z,14nm,1.6s,mb4.3
MOA Molln 42.33 305⇑*i*P **P 02 11 38.3 -0.2**
comp=Z,9.5nm,0.9s,mb4.4
BRG Berggiesshubel 42.42 309 *e*P **P 02 11 39.8 +0.6**
comp=Z,9.2nm,1.0s,mb4.3
BRG *e* 02 11 43.2
comp=Z,9.2nm,0.8s
BRG *e*PP PP 02 13 19.9 +2.1
comp=Z,4.8nm,0.9s
BRG *e* 02 17 27.7
comp=Z,3.3nm,1.0s
BRG S **S 02 17 55.0 -2.9**
BRG *e* 02 18 12.1
comp=Z,5.7nm,1.4s
CLNS Chul'man 42.50 42 *e*P **P 02 11 40.7 +0.9**
CLNS *e*PPP 02 13 27.5
CLNS *e* 02 13 30.7
CLNS *e*S **S 02 18 03.9 +5.0**
CLNS pmax pmax
comp=E,10.0nm,0.9s
CLNS pmax pmax
comp=Z,20nm,1.1s,mb4.8
CLNS pmax pmax
comp=N,7.0nm,1.0s
CLNS smax
comp=E,143nm,14.6s
CLNS smax
comp=N,64nm,16.9s
CLNS MLR MLR
comp=N,121nm,12.0s,MS4.2
CLNS MLR MLR
comp=Z,294nm,12.0s,MS4.4
CLNS MLR MLR
comp=E,158nm,15.0s,MS4.2
GEC2 GERESS Array S 42.65 306 *e*P **P 02 11 42.3 +1.3**
comp=Z,9.0nm,1.3s,mb4.3
KHC Kasperske Hory 42.71 307 *e*P **P 02 11 41.7 +0.1**
KHC *e*PP PP 02 13 20.6 -0.4
CADS Cadrg 42.83 302 *i* P **P 02 11 43.1 +0.5**
CLL Collm 43.01 310 *e*P **P 02 11 44.5 +0.6**
comp=Z,6.0nm,0.8s,mb4.4
CLL Collm 43.01 310⇓*i*P **P 02 11 44.2 +0.3**
CLL *e*S **S 02 18 06.0 -0.5**
CLL pmax pmax
comp=Z,5.0nm,1.0s,mb4.2
CLL Collm 43.01 310⇓*i*P **P 02 11 44.2 +0.3**
comp=Z,5.0nm,1.0s,mb4.2
CLL *i* 02 11 47.2
CLL *e*S **S 02 18 06.0 -0.5**
CLL Collm 43.01 310⇓*i*P **P 02 11 44.2 +0.3**
comp=Z,5.0nm,1.0s,mb4.2
CLL *i* P(2) 02 11 47.2
comp=Z,6.0nm,0.8s
CLL *i* pP pP 02 11 52.9 -2.5
CLL *i* PP PP 02 13 22.7 -1.4
CLL *i* pPP 02 13 29.2
CLL *i* 02 13 40.0
CLL *e*S **S 02 18 06.0 -0.5**
CLL *e*SS SS 02 21 24.0 +4.8
KBA Koelnbreinsper 43.01 304⇑*i*P **P 02 11 45.2 +1.2**
comp=Z,19nm,1.2s,mb4.7
CN2 Changchun 43.14 61 *e*P **P 02 11 45.9 +0.7**
CN2 *e*pP pP 02 11 58.3 +1.7
CN2 *e*S **S 02 18 08.3 -0.4**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
CN2 pmax pmax
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,600nm,20.0s,MS4.5
CN2 LR LR
comp=E,200nm,20.0s,MS4.5
CN2 LR LR
comp=Z,200nm,21.0s,MS4.0
WET Wettzell 43.17 307 *e*P **P 02 11 45.7 +0.4**
comp=Z,5.0nm,1.3s,mb4.1
HFS Hagfors 43.24 323 LR LR 02 30 10.8
comp=Z,175nm,20.3s,MS4.0,baz=97,slow=37
RJOB Jochberg 43.33 305 *e*P **P 02 11 48.5 +1.9**
comp=Z,7.0nm,1.1s,mb4.3
TANN Tannenbergstha 43.38 309 *e*P **P 02 11 48.1 +1.2**

comp=Z,7.0nm,1.1s,mb4.3
NKC Novy Kostel 43.39 308 *e*P **P 02 11 47.9 +0.8**
COP Copenhagen 43.44 316 *e*P **P 02 11 51.4 +4.1**
COP pmax pmax
comp=Z,23nm,0.8s,mb5.0
COP Copenhagen 43.44 316 *i* P **P 02 11 51.4 +4.1**
comp=Z,23nm,0.8s,mb5.0
AQU L'Aquila 43.61 297 *e*P **P 02 11 48.9 0.0**
AQU *e**PP pP 02 12 03.4 +3.0
AQU pmax pmax
comp=Z,17nm,0.9s,mb4.8
AQU L'Aquila 43.61 297 *e*P **P 02 11 48.9 0.0**
comp=Z,17nm,0.9s,mb4.8
AQU *e*pP pP 02 12 03.4 +3.0
TRO Tromso 43.83 337 *e*P **P 02 11 50.1 -0.2**
TRO *e*SS SS 02 21 37.5 +2.8
TRO AMS AMS 02 31 24.4
comp=Z,348nm,10.6s,MS4.5
TRO Tromso 43.83 337 *e*P **P 02 11 48.5 -1.8**
TRO LR LR
comp=Z,350nm,10.6s,MS4.5
MOX Moxa 43.91 309 *e*(P) **P 02 11 52.3 +1.1**
MOX *e* 02 11 56.3
comp=Z,16nm,1.2s
MOX *e* 02 13 48.0
MOX
comp=Z,200nm,13.0s
MOX Moxa 43.91 309 *e*P **P 02 11 51.9 +0.7**
comp=Z,11nm,1.2s,mb4.5
MOX Moxa 43.91 309 P **P 02 11 52.3 +1.1**
MOX pmax pmax
comp=Z,16nm,1.2s,mb4.6
MOX MLR MLR
comp=Z,200nm,13.0s,MS4.2
MOX Moxa 43.91 309 P **P 02 11 52.3 +1.1**
comp=Z,16nm,1.2s,mb4.6
MOX *e* 02 11 56.3
MOX *e* 02 13 48.0
MOX LR LR
comp=Z,200nm,13.0s,MS4.2
GRF Grafenberg Arr 44.22 308 *e*P **P 02 11 54.9 +1.2**
comp=Z,21nm,1.1s,mb4.8
GRF Grafenberg Arr 44.22 308 *e*P **P 02 11 54.9 +1.2**
GRF pmax pmax
comp=Z,21nm,1.1s,mb4.8
MOR8 Moi Rana 44.23 331 *e*P **P 02 11 52.5 -1.0**
MOR8 AMb AMB 02 11 57.0
comp=Z,51nm,0.9s,mb5.3
MOR8 Moi Rana 44.23 331 *e*P **P 02 11 52.5 -1.0**
comp=Z,51nm,0.9s,mb5.2
WDD Wield Dalam 44.24 287 *e*P **P 02 11 53.5 -0.6**
comp=Z,39nm,0.8s,mb5.2
MOTA Moosalm 44.51 304⇓ *i*P **P 02 11 56.7 +0.7**
comp=Z,6.3nm,0.9s,mb4.5
NB2 NORSAR Subarra 44.59 324 P **P 02 11 55.5 -1.0**
comp=Z,49nm,0.6s,mb5.5,baz=99,slow=7.9
NOA NORSAR Array B 44.59 324 P **P 02 11 55.0 -1.4**
comp=Z,56nm,0.7s,mb5.5,baz=99,slow=7.9,SNR=59
NOA LR LR 02 33 39.1
comp=Z,107nm,19.4s,MS3.8,baz=90,slow=40
BSEG Bad Segeberg 44.62 314 *e*P **P 02 11 56.4 -0.4**
comp=Z,22nm,0.7s,mb5.1
CLZ Clausthal 44.63 311 *e*P **P 02 11 57.5 +0.5**
comp=Z,28nm,1.3s,mb4.9
OSL Oslo 44.70 322 *e*P **P 02 11 57.4 0.0**
NAO01 NORSAR Array S 44.72 324 *e*P **P 02 11 57.2 -0.4**
comp=Z,19nm,0.8s,mb5.0
NRDL Niedersach Rie 44.77 312 *e*P **P 02 11 57.6 -0.5**
comp=Z,11nm,0.8s,mb4.7
FETA Feichten 44.80 304⇑ *i*P **P 02 11 58.8 +0.4**
comp=Z,9.7nm,1.1s,mb4.5
NSS Namsos 44.84 329 *e*P **P 02 11 57.7 -0.8**
UBBA Unterbreizbach 44.92 309 *e*P **P 02 11 58.9 -0.4**
comp=Z,6.0nm,0.6s,mb4.6
KONO Kongsberg 45.23 322 *e*P **P 02 12 01.4 -0.2**
KONO Kongsberg 45.23 322 *e*P **P 02 12 00.9 -0.8**
KONO pmax pmax
comp=Z,40nm,0.8s,mb5.3
KONO Kongsberg 45.23 322 *e*P **P 02 12 00.9 -0.7**
comp=Z,40nm,0.8s,mb5.3
MUD Monsted U'grnd 45.29 317 *i* P **P 02 12 03.2 +1.1**
MUD pmax pmax
comp=Z,24nm,0.8s,mb5.1
MUD Monsted U'grnd 45.29 317 *i* P **P 02 12 03.2 +1.1**
comp=Z,24nm,0.8s,mb5.1
DAVA Damuels 45.34 304⇑ *i*P **P 02 12 01.2 -1.4**
comp=Z,16nm,1.1s,mb4.8
DAVOX Davos/Dischmat 45.41 304 LR LR 02 34 51.2
comp=Z,68nm,19.7s,MS3.6,baz=265,slow=41
YAK Yakutsk 45.53 35 *i* P **P 02 12 04.3 +0.3**
SSLB Suanglung 45.69 90 *e*P **P 02 12 07.4 +1.6**
comp=Z,27nm,0.8s,mb5.2
TOD Tromm 45.79 308 *e*P **P 02 12 12.7 +6.5**
MDJ Mudanjiang 45.95 59 P **P 02 12 07.4 -0.2**
MDJ pP pP 02 12 18.6 -0.5
MDJ sP sP 02 12 23.7 -0.2
MDJ PP PP 02 13 52.0 -3.6
MDJ S **S 02 18 48.4 -1.0**
MDJ pmax pmax
comp=Z,7.0nm,0.5s,mb4.8
MDJ pmax pmax
comp=Z,42nm,6.3s
MDJ LR LR
comp=N,430nm,22.4s
MDJ LR LR
comp=E,210nm,16.3s
MDJ LR LR
comp=Z,230nm,15.7s
SPAK Spaichingen-Ko 45.97 306 *e*P **P 02 12 13.3 +5.7**
YULB Yu-li 46.15 90 *e*P **P 02 12 11.2 +1.8**
comp=Z,26nm,0.9s,mb5.2
IBBN Ibbenburen 46.22 311 *e*P **P 02 12 10.4 +0.9**
comp=Z,65nm,1.4s,mb5.4
TWG Pinlang 46.23 91 *e*P **P 02 12 12.5 +2.5**
comp=Z,28nm,0.3s,mb5.7
KSRS Korea Array 46.34 69 P **P 02 12 10.2 -0.5**
comp=Z,12nm,0.7s,mb4.9,baz=283,slow=6.5,SNR=22
KSRS PcP PcP 02 13 44.2 -1.2
comp=Z,4.5nm,0.8s,baz=285,slow=2.5,SNR=6.5
KSRS LR LR 02 33 32.3
comp=Z,153nm,18.6s,MS4.0,baz=134,slow=39
KSRS Korea Array 46.34 69 P **P 02 12 10.2 -0.5**
KSRS 02 13 44.2
KSRS pmax pmax
comp=Z,12nm,0.7s,mb4.9
KSRS MLR MLR
comp=Z,153nm,18.6s,MS4.0
SNART Snartemo 46.40 320 *e*P **P 02 12 11.1 +0.3**
FELD Feldberg im Sc 46.52 305 *e*P **P 02 12 17.7 +5.7**
KLR Kul'dur 46.73 53 *e*P **P 02 12 09.8 -3.8**
KLR MLR MLR
comp=E,500nm,13.0s
KLR MLR MLR
comp=Z,900nm,13.0s,MS4.9
PGF Pioggiola 46.77 298 *e*P **P 02 12 12.7 -1.3**
comp=Z,32nm,0.8s,mb5.0
PGF Pioggiola 46.77 298 *e*P **P 02 12 12.7 -1.3**
PGF pmax pmax
comp=Z,16nm,0.8s,mb5.0
PGF Pioggiola 46.77 298 *e*P **P 02 12 12.7 -1.3**
comp=Z,16nm,0.8s,mb5.0
BLS5 Blasjo 46.82 321 *e*P **P 02 12 14.6 +0.4**
BLS5 AMb AMB 02 12 20.2
comp=Z,78nm,1.5s,mb5.4
BLS5 Blasjo 46.82 321 *e*P **P 02 12 14.6 +0.4**
comp=Z,78nm,1.5s,mb5.4
CDF Champ du Feu 46.93 306 *e*P **P 02 12 14.4 -0.8**
comp=Z,17nm,1.1s,mb4.6
CDF Champ du Feu 46.93 306 *e*P **P 02 12 14.4 -0.8**
CDF pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
CDF Champ du Feu 46.93 306 *e*P **P 02 12 14.4 -0.8**
comp=Z,8.6nm,1.1s,mb4.6
MOF Molkenrain 47.10 305 *e*P **P 02 12 21.3 +4.8**
TIXI Tiksi 47.23 22 *e*P **P 02 12 16.7 -0.5**
TIXI pmax pmax
comp=Z,26nm,0.9s,mb5.2
TIXI MLR MLR
comp=Z,168nm,13.0s,MS4.2
TIXI Tiksi 47.23 22 *e*P **P 02 12 16.8 -0.4**
comp=Z,24nm,0.8s,mb5.2
KMBO Kilima Mbogo 47.23 227 *e*P **P 02 12 18.4 +0.5**
KMBO pmax pmax
comp=Z,2.0nm,0.6s
KMBO Kilima Mbogo 47.23 227 *e*P **P 02 12 18.4 +0.5**
comp=Z,1.6nm,0.6s,mb4.1

HINF Hinteralfeld 47.30 305 *e*P **P 02 12 17.1 -0.9**
comp=Z,16nm,0.9s,mb4.6
HINF Hinteralfeld 47.30 305 *e*P **P 02 12 17.1 -0.9**
HINF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
HINF Hinteralfeld 47.30 305 *e*P **P 02 12 17.1 -0.9**
comp=Z,8.2nm,0.9s,mb4.7
BER Bergen 47.41 323 *e*P **P 02 12 19.2 +0.5**
BER *e*SS SS 02 22 36.4 -1.0
MEM Membach 47.47 309 P **P 02 12 20.8 +1.5**
WLF Walferdange 47.49 308 P **P 02 12 20.7 +1.1**
comp=Z,10nm,1.3s,mb4.6
WLF Walferdange 47.49 308 *e*P **P 02 12 20.6 +1.1**
comp=Z,13nm,0.9s,mb4.9
WLF Walferdange 47.49 308 *e*P **P 02 12 20.3 +0.8**
WLF pmax pmax
comp=Z,11nm,0.8s,mb4.8
WLF Walferdange 47.49 308 *e*P **P 02 12 20.3 +0.8**
comp=Z,11nm,0.8s,mb4.8
SAOF Saorge 47.50 300 *e*P **P 02 12 24.2 +4.5**
SAOF Saorge 47.50 300 *e*P **P 02 12 24.2 +4.5**
AUTN L'Aution 47.59 300 *e*P **P 02 12 27.1 +6.8**
AUTN L'Aution 47.59 300 *e*P **P 02 12 27.1 +6.8**
HAU Haudompre 47.60 306 *e*P **P 02 12 19.5 -0.9**
comp=Z,18nm,0.9s,mb4.8
HAU *e*MLR MLR
comp=Z,64nm,18.0s,MS3.3
HAU Haudompre 47.60 306 *e*P **P 02 12 19.5 -0.9**
HAU pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
HAU MLR MLR
comp=Z,60nm,18.0s,MS3.6
HAU Haudompre 47.60 306 *e*P **P 02 12 19.5 -0.9**
comp=Z,8.9nm,0.9s,mb4.8
HAU LR LR
comp=Z,60nm,18.0s,MS3.6
SBF Sospel 47.61 300 *e*P **P 02 12 19.7 -0.8**
comp=Z,19nm,0.7s,mb5.0
SBF Sospel 47.61 300 *e*P **P 02 12 19.7 -0.8**
SBF pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
SBF Sospel 47.61 300 *e*P **P 02 12 19.7 -0.8**
comp=Z,9.6nm,0.7s,mb4.9
LUCF Luceram 47.66 300 *e*P **P 02 12 26.4 +5.5**
TOUF Mont Tournerai 47.71 300 *e*P **P 02 12 26.6 +5.3**
TOUF Mont Tournerai 47.71 300 *e*P **P 02 12 26.6 +5.3**
LPG La Plagne 47.76 302 *e*P **P 02 12 21.3 -0.4**
comp=Z,28nm,0.8s,mb5.1
LPG La Plagne 47.76 302 *e*P **P 02 12 21.3 -0.4**
LPG pmax pmax
comp=Z,14nm,0.8s,mb5.0
LPG La Plagne 47.76 302 *e*P **P 02 12 21.3 -0.4**
comp=Z,14nm,0.8s,mb5.0
LPL La Plagne 47.77 302 *e*P **P 02 12 21.4 -0.3**
comp=Z,15nm,0.6s,mb4.9
LPL La Plagne 47.77 302 *e*P **P 02 12 21.4 -0.3**
LPL pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
LPL La Plagne 47.77 302 *e*P **P 02 12 21.4 -0.3**
comp=Z,7.3nm,0.6s,mb4.9
THEF They Montfort 47.81 306 *e*P **P 02 12 27.9 +5.9**
BNI Bardonecchia 47.90 302 *e*P **P 02 12 24.5 +1.8**
BNI pmax pmax
comp=Z,30nm,1.3s,mb5.2
BNI Bardonecchia 47.90 302 *e*P **P 02 12 24.5 +1.7**
comp=Z,30nm,1.3s,mb5.2
MBDF Montbardon 47.90 301 *e*P **P 02 12 23.0 +0.3**
comp=Z,29nm,0.7s,mb5.1
MBDF Montbardon 47.90 301 *e*P **P 02 12 23.0 +0.3**
MBDF pmax pmax
comp=Z,15nm,0.7s,mb5.1
MBDF Montbardon 47.90 301 *e*P **P 02 12 23.0 +0.3**
comp=Z,15nm,0.7s,mb5.1
CABF La Chapelle 48.01 304 *e*P **P 02 12 23.1 -0.5**
comp=Z,85nm,1.4s,mb5.3
CABF La Chapelle 48.01 304 *e*P **P 02 12 23.1 -0.5**
CABF pmax pmax
comp=Z,43nm,1.4s,mb5.3
CABF La Chapelle 48.01 304 *e*P **P 02 12 23.1 -0.5**
comp=Z,42nm,1.4s,mb5.3
CALN Calern 48.02 300 *e*P **P 02 12 29.1 +5.4**
CALN Calern 48.02 300 *e*P **P 02 12 29.1 +5.4**
FRF La Foret Royal 48.23 300 *e*P **P 02 12 23.9 -1.4**
comp=Z,68nm,1.5s,mb5.2
FRF La Foret Royal 48.23 300 *e*P **P 02 12 23.9 -1.4**
FRF pmax pmax
comp=Z,34nm,1.5s,mb5.2
FRF La Foret Royal 48.23 300 *e*P **P 02 12 23.9 -1.4**
comp=Z,34nm,1.5s,mb5.2
GIVF Givet 48.28 309 *e*P **P 02 12 25.2 -0.4**
comp=Z,15nm,0.7s,mb4.8
GIVF Givet 48.28 309 *e*P **P 02 12 25.2 -0.4**
GIVF pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
GIVF Givet 48.28 309 *e*P **P 02 12 25.2 -0.4**
comp=Z,7.4nm,0.7s,mb4.8
KEST Kesra 48.30 289 P **P 02 12 26.2 +0.2**
comp=Z,2.9nm,0.5s,mb4.5,baz=104,slow=5.5,SNR=15
KEST Kesra 48.30 289 *e*P **P 02 12 26.4 +0.4**
SPITS Spitsbergen Ar 48.32 347 LR LR 02 34 23.6
comp=Z,109nm,19.0s,MS3.9,baz=90,slow=38
LMR La Mourre 48.38 300 *e*P **P 02 12 25.7 -0.8**
MEZF Maizieres J'vi 48.38 307 *e*P **P 02 12 25.5 -0.9**
comp=Z,27nm,0.9s,mb5.0
MEZF Maizieres J'vi 48.38 307 *e*P **P 02 12 25.5 -0.9**
comp=Z,27nm,0.9s,mb5.3
ORIF Oris-en-Rattie 48.48 302 *e*P **P 02 12 26.1 -1.1**
comp=Z,4.6nm,0.6s,mb4.4
ORIF *e*MLR MLR
comp=Z,130nm,22.8s,MS3.5
ORIF Oris-en-Rattie 48.48 302 *e*P **P 02 12 26.1 -1.1**
ORIF pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
ORIF Oris-en-Rattie 48.48 302 *e*P **P 02 12 26.1 -1.1**
comp=Z,2.3nm,0.6s,mb4.4
BAIF Baives 48.68 309 *e*P **P 02 12 28.1 -0.6**
comp=Z,27nm,0.8s,mb5.0
BAIF Baives 48.68 309 *e*P **P 02 12 28.1 -0.6**
BAIF pmax pmax
comp=Z,13nm,0.8s,mb5.0
BAIF Baives 48.68 309 *e*P **P 02 12 28.1 -0.6**
comp=Z,13nm,0.8s,mb5.0
SMRF Simiane la Rot 48.90 301 *e*P **P 02 12 30.0 -0.4**
HABR Khabarovsk 49.00 53 *e*P **P 02 12 28.4 -2.7**
HABR *e**SP sP 02 12 42.3 -5.2
HABR *e* 02 13 52.6
HABR *e*S **S 02 19 29.0 -3.5**
HABR *e**SS sS 02 19 46.5 -5.3
HABR 02 22 17.3
HABR *e*SSS 02 24 16.1
HABR pmax pmax
comp=Z,28nm,1.1s,mb5.2
HABR MLR MLR
comp=Z,116nm,16.0s,MS4.0
SSB Saint Sauveur 49.33 302 *e*P **P 02 12 33.4 -0.3**
SSB pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
SSB Saint Sauveur 49.33 302 *e*P **P 02 12 33.4 -0.3**
comp=Z,5.5nm,0.7s,mb4.7
VIVF Saint-Julien-l 49.33 302 *e*P **P 02 12 33.4 -0.4**
comp=Z,75nm,1.3s,mb5.3
VIVF Saint-Julien-l 49.33 302 *e*P **P 02 12 33.4 -0.4**
VIVF pmax pmax
comp=Z,37nm,1.3s,mb5.2
VIVF Saint-Julien-l 49.33 302 *e*P **P 02 12 33.4 -0.4**
comp=Z,37nm,1.3s,mb5.3
LOR Lormes 49.39 305 *e*P **P 02 12 33.4 -0.8**
comp=Z,13nm,0.9s,mb4.7
LOR *e*MLR MLR
comp=Z,80nm,19.5s,MS3.4
LOR Lormes 49.39 305 *e*P **P 02 12 33.4 -0.8**
LOR pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
LOR MLR MLR
comp=Z,80nm,19.5s,MS3.7
LOR Lormes 49.39 305 *e*P **P 02 12 33.4 -0.8**
comp=Z,6.6nm,0.9s,mb4.7
LOR LR LR
comp=Z,80nm,19.5s,MS3.7
KBS Kingsbay 49.45 348 *e*P **P 02 12 40.3 +6.1**
SMF Signal de Mont 49.52 304 *e*P **P 02 12 34.3 -0.9**
comp=Z,31nm,0.9s,mb5.0
SMF Signal de Mont 49.52 304 *e*P **P 02 12 34.3 -0.9**
SMF pmax pmax
comp=Z,16nm,0.9s,mb5.0
SMF Signal de Mont 49.52 304 *e*P **P 02 12 34.3 -0.9**

comp=Z,16nm,0.9s,mb5.0
SSF Saint Saulge 49.67 305 *e*P **P 02 12 35.1 -1.2**
comp=Z,28nm,1.2s,mb4.9
SSF Saint Saulge 49.67 305 *e*P **P 02 12 35.1 -1.2**
SSF pmax pmax
comp=Z,14nm,1.2s,mb4.9
SSF Saint Saulge 49.67 305 *e*P **P 02 12 35.1 -1.2**
comp=Z,14nm,1.2s,mb4.9
AVF Avril sur Loir 49.82 305 *e*P **P 02 12 36.6 -0.9**
comp=Z,23nm,0.8s,mb4.9
AVF Avril sur Loir 49.82 305 *e*P **P 02 12 36.6 -0.9**
AVF pmax pmax
comp=Z,12nm,0.8s,mb5.0
AVF Avril sur Loir 49.82 305 *e*P **P 02 12 36.6 -0.9**
comp=Z,12nm,0.8s,mb5.0
LASF Ste Croix 50.08 301 *e*P **P 02 12 39.2 -0.3**
comp=Z,92nm,1.3s,mb5.4
AGO Saint Agoulin 50.13 304 *e*P **P 02 12 42.5 +2.7**
BGF Bois d'Agland 50.21 304 *e*P **P 02 12 39.4 -1.0**
comp=Z,14nm,0.8s,mb4.8
BGF Bois d'Agland 50.21 304 *e*P **P 02 12 39.4 -1.0**
BGF pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
BGF Bois d'Agland 50.21 304 *e*P **P 02 12 39.4 -1.0**
comp=Z,7.2nm,0.8s,mb4.8
PYM Petit Puy Mans 50.28 303 *e*P **P 02 12 45.5 +4.6**
TCF Toulx Ste Croi 50.70 304 *e*P **P 02 12 43.6 -0.5**
comp=Z,38nm,1.1s,mb4.9
TCF Toulx Ste Croi 50.70 304 *e*P **P 02 12 43.6 -0.5**
TCF pmax pmax
comp=Z,19nm,1.1s,mb4.9
TCF Toulx Ste Croi 50.70 304 *e*P **P 02 12 43.6 -0.5**
comp=Z,19nm,1.1s,mb4.9
CAF Calviac 51.12 303 *e*P **P 02 12 46.9 -0.4**
comp=Z,20nm,1.0s,mb4.7
CAF Calviac 51.12 303 *e*P **P 02 12 46.9 -0.4**
CAF pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
CAF Calviac 51.12 303 *e*P **P 02 12 46.9 -0.4**
comp=Z,9.9nm,1.0s,mb4.7
RJF Les Rejaudoux 51.40 303 *e*P **P 02 12 49.2 -0.2**
comp=Z,32nm,1.2s,mb4.8
RJF *e*MLR MLR
comp=Z,100nm,22.8s,MS3.5
RJF Les Rejaudoux 51.40 303 *e*P **P 02 12 49.2 -0.2**
RJF pmax pmax
comp=Z,16nm,1.2s,mb4.8
RJF MLR MLR
comp=Z,100nm,22.8s,MS3.8
RJF Les Rejaudoux 51.40 303 *e*P **P 02 12 49.2 -0.2**
comp=Z,16nm,1.2s,mb4.8
RJF LR LR
comp=Z,100nm,22.8s,MS3.8
MTLF Montolieu 51.41 301 *e*P **P 02 12 48.9 -0.6**
comp=Z,21nm,1.0s,mb4.7
MTLF Montolieu 51.41 301 *e*P **P 02 12 48.9 -0.6**
MTLF pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
MTLF Montolieu 51.41 301 *e*P **P 02 12 48.9 -0.6**
comp=Z,10nm,1.0s,mb4.7
LDF La Druitiere 51.74 308 *e*P **P 02 12 51.0 -0.8**
comp=Z,11nm,0.5s,mb4.8
LDF La Druitiere 51.74 308 *e*P **P 02 12 51.0 -0.8**
LDF pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
LDF La Druitiere 51.74 308 *e*P **P 02 12 51.0 -0.8**
comp=Z,5.3nm,0.5s,mb4.7
FLN La Foliniere 51.93 308 *e*P **P 02 12 51.9 -1.4**
comp=Z,16nm,0.8s,mb4.7
FLN *e*MLR MLR
comp=Z,73nm,17.2s,MS3.5
FLN La Foliniere 51.93 308 *e*P **P 02 12 51.9 -1.4**
FLN pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
FLN MLR MLR
comp=Z,70nm,17.3s,MS3.8
FLN La Foliniere 51.93 308 *e*P **P 02 12 51.9 -1.4**
comp=Z,8.1nm,0.8s,mb4.7
FLN LR LR
comp=Z,70nm,17.3s,MS3.8
LFF La Frestale 52.03 303 *e*P **P 02 12 53.4 -0.7**
comp=Z,15nm,0.6s,mb4.8
LFF La Frestale 52.03 303 *e*P **P 02 12 53.4 -0.7**
LFF pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
LFF La Frestale 52.03 303 *e*P **P 02 12 53.4 -0.7**
comp=Z,7.3nm,0.6s,mb4.8
MFF Saint Martin d 52.21 305 *e*P **P 02 12 54.1 -1.3**
comp=Z,3.8nm,0.4s,mb4.3
MFF Saint Martin d 52.21 305 *e*P **P 02 12 54.1 -1.3**
MFF pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
MFF Saint Martin d 52.21 305 *e*P **P 02 12 54.1 -1.3**
comp=Z,1.9nm,0.4s,mb4.4
GRR Gorron 52.26 307 *e*P **P 02 12 55.1 -0.6**
ESK Eskdalemuir 52.32 316 *i* P **P 02 13 00.1 +4.0**
ESK Eskdalemuir 52.32 316 *e*P **P 02 12 55.5 -0.5**
comp=Z,48nm,1.2s,mb5.3
EPF Esparros 52.82 301 *e*P **P 02 12 59.3 -0.7**
comp=Z,6.6nm,0.6s,mb4.4
EPF Esparros 52.82 301 *e*P **P 02 12 59.3 -0.7**
EPF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
EPF Esparros 52.82 301 *e*P **P 02 12 59.3 -0.7**
comp=Z,3.3nm,0.6s,mb4.4
JMIC Jan Mayen 53.14 336 LR LR 02 38 20.1
comp=Z,48nm,19.1s,MS3.6,baz=72,slow=39
SGMF Saint Gilles 53.39 308 *e*P **P 02 13 03.5 -0.6**
ETSF Etsaut 53.49 301 *e*P **P 02 13 04.3 -0.6**
comp=Z,38nm,1.0s,mb5.0
ETSF Etsaut 53.49 301 *e*P **P 02 13 04.3 -0.6**
ETSF pmax pmax
comp=Z,19nm,1.0s,mb5.0
ETSF Etsaut 53.49 301 *e*P **P 02 13 04.3 -0.6**
comp=Z,19nm,1.0s,mb5.0
ROSF Rostrenen 53.84 308 *e*P **P 02 13 06.2 -1.1**
comp=Z,23nm,0.8s,mb4.8
ROSF Rostrenen 53.84 308 *e*P **P 02 13 06.2 -1.1**
ROSF pmax pmax
comp=Z,11nm,0.8s,mb4.8
ROSF Rostrenen 53.84 308 *e*P **P 02 13 06.2 -1.1**
comp=Z,11nm,0.8s,mb4.8
SJPF Ste Jean 53.89 301 *e*P **P 02 13 07.1 -0.8**
YSS Yuzh-Sakhalins 54.41 54⇓ *i*P **P 02 13 11.0 -0.5**
YSS pmax pmax
comp=E,50nm,1.0s
YSS pmax pmax
comp=Z,60nm,1.0s,mb5.5
YSS MLR MLR
comp=Z,200nm,16.0s,MS4.3
YSS Yuzh-Sakhalins 54.41 54 *e*P **P 02 13 11.9 +0.4**
comp=Z,89nm,1.1s,mb5.6
MAJO Matsushiro 54.44 67 *e*P **P 02 13 11.5 -0.4**
MAJO pmax pmax
comp=Z,21nm,0.9s,mb5.1
MAJO Matsushiro 54.44 67 *e*P **P 02 13 11.5 -0.4**
comp=Z,22nm,0.9s,mb5.1
MAT Matsushiro 54.44 67 P **P 02 13 10.9 -1.0**
MJAR Matsushiro Arr 54.44 67 P **P 02 13 11.4 -0.5**
comp=Z,14nm,0.9s,mb4.9,baz=288,slow=9.7,SNR=18
MJAR LR LR 02 36 50.3
comp=Z,76nm,20.4s,MS3.8,baz=240,slow=36
DAG Danmarks Havn 55.47 344⇑ *i*P **P 02 13 19.0 +0.2**
DAG pmax pmax
comp=Z,13nm,1.0s,mb4.9
DAG Danmarks Havn 55.47 344⇑ *i*P **P 02 13 19.0 +0.2**
comp=Z,13nm,1.0s,mb4.9
SEY Seymchan 55.98 33⇓ *i*P **P 02 13 22.3 -0.3**
TAM Tamanrasset 56.50 276 *e*P **P 02 13 27.9 +0.9**
TAM pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
TAM Tamanrasset 56.50 276 *e*P **P 02 13 27.9 +0.9**
comp=Z,3.7nm,0.8s,mb4.5
ESDC Sonseca Array 56.96 298 P **P 02 13 28.8 -1.2**
comp=Z,7.3nm,0.7s,mb4.8,baz=59,slow=7.5,SNR=14
ESDC Sonseca Array 56.96 298 P **P 02 13 28.8 -1.2**
ESLA Sonseca Array 56.96 298 *e*P **P 02 13 31.9 +1.9**
comp=Z,2.2nm,0.8s,mb4.2
MTE Manteigas 59.26 300 *e*P **P 02 13 47.5 +1.5**
BILL Bilibino 60.11 26⇑ *e*P **P 02 13 51.3 -0.1**
BILL *e* 02 16 05.2
BILL pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
BILL MLR MLR
comp=Z,200nm,17.0s,MS4.3
BILL Bilibino 60.11 26 *e*P **P 02 13 51.9 +0.5**
comp=Z,18nm,0.8s,mb5.1

EVO	Evora	60.31	298	*e*P		P	02 13 52.7	-0.6
	comp=Z,25nm,1.0s,mb4.9							
EVO				*e*MLR		MLR		
	comp=Z,45nm,21.8s,MS3.3							
PETK	Petropavlovsk-	61.56	43	P		P	02 13 59.8	-1.7
	comp=Z,3.7nm,0.6s,mb4.7,baz=343,slow=1.5,SNR=5.8							
PETK				LR		LR	02 42 07.0	
	comp=Z,81nm,18.4s,MS3.9,baz=287,slow=38							
SUMG	Summit	61.74	341	*e*P		P	02 14 03.3	+0.9
	comp=Z,19nm,0.9s,mb5.2							
SUMG	Summit	61.74	341	*i* P		P	02 14 04.1	+1.7
	comp=Z,15nm,0.9s,mb5.1							
PET	Petropavlovsk	62.13	43	*e*P		P	02 14 03.2	-2.2
PET				*e*S		S	02 22 24.0	-3.5
PET				pmax		pmax		
	comp=Z,100nm,16.9s							
PET				pmax		pmax		
	comp=Z,17nm,0.9s,mb5.2							
PET				MLR		MLR		
	comp=Z,200nm,18.0s,MS4.3							
PET	Petropavlovsk	62.13	43	⇓*i*P		P	02 14 03.1	-2.3
LSZ	Lusaka	63.86	225	*e*P		P	02 14 16.3	-0.9
LSZ				pmax		pmax		
	comp=Z,3.0nm,0.6s,mb4.5							
LSZ	Lusaka	63.86	225	*e*P		P	02 14 16.3	-1.0
	comp=Z,2.8nm,0.6s,mb4.5							
LBTB	Lobatse	73.08	221	*e*P		P	02 15 14.1	-0.6
LBTB				pmax		pmax		
	comp=Z,9.0nm,0.7s,mb4.8							
LBTB	Lobatse	73.08	221	*e*P		P	02 15 14.1	-0.6
	comp=Z,8.6nm,0.7s,mb4.8							
TSUM	Tsumeb	73.33	231	*e*P		P	02 15 16.6	+0.3
	comp=Z,8.1nm,1.1s,mb4.6							
COLD	Coldfoot	73.35	15	*e*P		P	02 15 15.3	-0.4
	comp=Z,18nm,1.1s,mb4.9							
DBIC	Dimbokro	73.49	266	P		P	02 15 16.3	-1.2
	comp=Z,8.5nm,1.1s,mb4.6,baz=49,slow=11,SNR=3.6							
DBIC				LR		LR	02 50 42.0	
	comp=Z,60nm,18.8s,MS3.9,baz=138,slow=38							
DBIC	Dimbokro	73.49	266	*e*P		P	02 15 18.8	+1.3
DBIC				pmax		pmax		
	comp=Z,12nm,1.0s							
DBIC	Dimbokro	73.49	266	*e*P		P	02 15 18.8	+1.3
	comp=Z,12nm,1.0s,mb4.8							
KIC	Kosan Boka	73.57	266	*e*P		P	02 15 23.0	+5.1
	comp=Z,19nm,0.7s,mb5.1							
MBWA	Marble Bar	73.63	132	*e*P		P	02 15 18.5	+0.5
TIC	Toumodi	73.64	267	*e*P		P	02 15 23.9	+5.6
	comp=Z,67nm,1.4s,mb5.4							
TIC	Toumodi	73.64	267	*e*P		P	02 15 23.9	+5.6
TIC				pmax		pmax		
	comp=Z,67nm,1.4s,mb5.4							
LIC	Lamto	73.88	266	*e*P		P	02 15 24.7	+4.9
	comp=Z,54nm,1.1s,mb5.4							
FITZ	Fitzroy Crossi	75.17	125	*e*P		P	02 15 26.8	-0.2
	comp=Z,17nm,1.1s,mb4.9							
INK	Inuvik	75.18	9	*e*P		P	02 15 25.9	-0.5
INK				pmax		pmax		
	comp=Z,28nm,1.1s							
INK	Inuvik	75.18	9	*e*P		P	02 15 25.9	-0.6
	comp=Z,28nm,1.1s,mb5.1							
COLA	College	75.86	16	*e*P		P	02 15 29.5	-0.8
COLA				pmax		pmax		
	comp=Z,22nm,0.9s,mb5.1							
COLA	College	75.86	16	*e*P		P	02 15 29.5	-0.8
	comp=Z,22nm,0.9s,mb5.1							
BOSA	Boshof	76.16	219	P		P	02 15 30.9	-1.5
	comp=Z,6.9nm,0.6s,mb4.8,baz=33,slow=4.7,SNR=21							
BOSA	Boshof	76.16	219	*e*P		P	02 15 31.9	-0.6
BOSA				pmax		pmax		
	comp=Z,7.0nm,0.6s,mb4.8							
BOSA	Boshof	76.16	219	*e*P		P	02 15 31.9	-0.5
	comp=Z,6.9nm,0.6s,mb4.8							
TRF	Thorofare Moun	76.51	17	*e*P		P	02 15 33.5	-0.6
MCK	McKinley	76.59	17	*e*P		P	02 15 34.1	-0.4
MCK				pmax		pmax		
	comp=Z,8.0nm,0.7s,mb4.8							
MCK	McKinley	76.59	17	*e*P		P	02 15 34.1	-0.4
	comp=Z,7.9nm,0.7s,mb4.8							
SVW2	Sparrevohn	77.06	21	*e*P		P	02 15 31.9	-5.3
	comp=Z,1.7nm,0.5s,mb4.2							
EGAK	Eagle	77.29	13	*e*P		P	02 15 37.9	-0.6
	comp=Z,17nm,1.2s,mb4.8							
DAWY	Dawson	78.26	13	*e*P		P	02 15 43.0	-0.9
PMR	Palmer	78.38	18	*e*P		P	02 15 43.2	-1.3
PMR				pmax		pmax		
	comp=Z,10.0nm,1.0s,mb4.7							
PMR	Palmer	78.38	18	*e*P		P	02 15 43.2	-1.3
	comp=Z,10nm,1.0s,mb4.7							
RC01	Rabbit Creek A	78.66	18	*e*P		P	02 15 44.0	-2.0
	comp=Z,14nm,1.0s,mb4.8							
DIV	Divide	79.59	17	*e*P		P	02 15 50.5	-0.7
	comp=Z,17nm,1.0s,mb4.9							
BMRM	Bremner River	80.00	16	*e*P		P	02 15 52.5	-0.9
	comp=Z,25nm,1.0s,mb5.1							
KDAK	Kodiak Island	80.66	21	*e*P		P	02 15 56.5	-0.5
KDAK				pmax		pmax		
	comp=Z,31nm,1.1s,mb5.2							
KDAK	Kodiak Island	80.66	21	*e*P		P	02 15 56.5	-0.5
	comp=Z,31nm,1.1s,mb5.2							
PNL	Peninsula	82.30	14	*e*P		P	02 16 05.9	+0.3
	comp=Z,30nm,1.0s,mb5.2							
WRA	Warramunga Arr	82.39	121	P		P	02 16 05.9	-0.7
	comp=Z,9.5nm,0.9s,mb4.7,baz=322,slow=4.9,SNR=11							
WRA				PKKPbc		PKKPbc	02 34 33.1	+0.2
	comp=Z,0.5nm,0.6s,baz=131,slow=2.1,SNR=5.4							
WRA	Warramunga Arr	82.39	121	P		P	02 16 05.9	-0.7
WRA				PKKPbc		PKKPbc	02 34 33.1	+0.2
WRAB	Tennant Creek	82.39	121	P		P	02 16 06.0	-0.7
	comp=Z,86nm,0.8s,mb5.7,SNR=7.6							
WRAB	Tennant Creek	82.39	121	*e*P		P	02 16 06.0	-0.7
WRAB				pmax		pmax		
	comp=Z,13nm,0.9s,mb4.9							
WRAB	Tennant Creek	82.39	121	*e*P		P	02 16 06.0	-0.7
	comp=Z,13nm,0.9s,mb4.8							
YKA	Yellowknife Ar	82.40	2	P		P	02 16 05.1	-1.0
	comp=Z,5.7nm,0.8s,mb4.6,baz=346,slow=5.3,SNR=13							
SCHQ	Schefferville	82.66	336	P		P	02 16 07.0	-0.7
	comp=Z,15nm,1.1s,mb4.9,baz=34,slow=5.1,SNR=7.2							
ASAR	Alice Springs	84.58	124	P		P	02 16 17.1	-0.7
	comp=Z,13nm,0.9s,mb5.0,baz=320,slow=5.4,SNR=52							
ASAR				PKKPbc		PKKPbc	02 34 26.7	-1.2
	comp=Z,0.2nm,0.5s,baz=129,slow=2.7,SNR=2.6							
DLBC	Dease Lake	85.10	10	*e*P		P	02 16 19.4	-0.6
FFC	Flin Flon	89.96	355	*i* P		P	02 16 44.1	+0.6
FFC	Flin Flon	89.96	355	*e*P		P	02 16 42.6	-0.9
	comp=Z,11nm,1.2s,mb5.1							
CTAO	Charters Tower	91.13	114	*e*P		P	02 16 48.8	-0.6
CTAO				pmax		pmax		
	comp=Z,9.0nm,0.8s,mb5.2							
CTAO	Charters Tower	91.13	114	*e*P		P	02 16 48.8	-0.6
	comp=Z,8.5nm,0.8s,mb5.1							
EDM	Edmonton	91.72	2	*e*P		P	02 16 51.5	-0.2
ULM	Lac du Bonnet	93.77	351	LR		LR	03 03 03.4	
	comp=Z,47nm,18.0s,MS4.0,baz=114,slow=38							
JCW	Jim Creek	96.16	8	*e*P		P	02 17 12.0	-0.1
	comp=Z,7.2nm,0.7s,mb5.2							
TXAR	Lajitas Array	115.31	353	PKP		PKPdf	02 22 28.6	+2.5
	comp=Z,0.1nm,0.6s,baz=146,slow=5.3,SNR=3.6							
TXAR				PKKPbc		PKKPbc	02 33 00.1	+0.1
	comp=Z,0.7nm,0.8s,baz=170,slow=7.6,SNR=7.2							
TXAR				PKKPab		PKKPab	02 33 05.7	-3.5
	comp=Z,0.7nm,0.7s,baz=169,slow=7.1,SNR=7.0							
QSPA	South Pole Qui	125.19	180	*e*PKPdf		PKPdf	02 22 43.6	+0.1
ROSC	El Rosal	127.55	312	PKP		PKPdf	02 22 51.4	+1.4
	comp=Z,5.4nm,0.4s,baz=106,slow=18,SNR=2.0							
CPUP	Villa Florida	134.01	266	PKP		PKPdf	02 23 01.1	-0.7
	comp=Z,1.5nm,0.6s,baz=52,slow=3.3,SNR=4.7							
CPUP	Villa Florida	134.01	266	*e*PKPdf		PKPdf	02 23 01.2	-0.6
LPAZ	La Paz	137.84	286	PKP		PKPdf	02 23 09.6	+0.4
	comp=Z,1.9nm,0.9s,baz=58,slow=5.4,SNR=6.5							
LPAZ	La Paz	137.84	286	PKP		PKPdf	02 23 09.6	+0.4
TRQA	Tornquist	141.43	251	*e*PKPdf		PKPdf	02 23 15.6	+0.5
LCO	Las Campanas	145.97	269	*e*PKPbc		PKPbc	02 23 25.9	+1.8
PLCA	Paso Flores	148.36	248	PKPbc		PKPbc	02 23 30.7	+0.3
	comp=Z,9.5nm,1.0s,baz=95,slow=2.8,SNR=8.8							
PLCA	Paso Flores	148.36	248	*e*PKPbc		PKPbc	02 23 30.6	+0.1

*CSEM **11** 02:06:28.4±0.2, 41.°37N×23.°58E, h15km, ML2.5/7, Error ellipse: s-maj=3.5km s-min=3.0km az=90.0*
*ISCJB **11** 02:06:30.9±0.4, 41.°26N±0.°03×23.°60E±0.°04, h33km, Error ellipse: s-maj=4.3km s-min=3.6km az=14.0*
*THE **11** 02:06:30.1, 41.°24N×23.°71E, h8km, ML2.5/7, Error ellipse: s-maj=1.3km s-min=0.5km az=163.0*

*BEO **11** 02:06:31.4±0.6, 41.°42N×23.°49E, h0km, ML1.6/4*
ISC 11 02:06:28.3±0.4, 41.°36N±0.°02×23.°60E±0.°04, h14km±5km, n27, σ0.9°77/53, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOH	Sokhos	0.57	199	P	Pg	02 06 40.0	+0.5
SOH				S	Sg	02 06 46.9	-0.2
SOH	Sokhos	0.57	199	P	Pg	02 06 40.0	+0.5
SOH				S	Sg	02 06 46.9	-0.2
KAVA	Kavala	0.78	118	P	Pg	02 06 42.8	-0.6
KAVA				S	Sg	02 06 51.9	-1.7
KAVA	Kavala	0.78	118	P	Pg	02 06 42.8	-0.6
VAY	Valandovo	0.78	267	*i* Pg	Pg	02 06 44.2	+0.8
VAY				*e*Sg	Sg	02 06 53.5	-0.1
VAY	Valandovo	0.78	267	*i* Pg	Pg	02 06 44.2	+0.8
VAY				*e*Sg	Sg	02 06 53.5	-0.1
HORT	Hortiatis	0.85	207	P	Pg	02 06 45.2	+0.4
HORT				S	Sg	02 06 56.6	+0.6
HORT	Hortiatis	0.85	207	P	Pg	02 06 45.2	+0.4
HORT				S	Sg	02 06 56.6	+0.6
THE	Thessaloniki	0.88	214	P	Pg	02 06 45.5	+0.3
THE				S	Sg	02 06 57.4	+0.7
THE	Thessaloniki	0.88	214	P	Pg	02 06 45.5	+0.3
THE				S	Sg	02 06 57.4	+0.7
PLG	Polygyros	0.99	187	P	Pb	02 06 47.0	-0.3
PLG				S	Sb	02 06 59.8	-0.4
PLG	Polygyros	0.99	187	P	Pb	02 06 47.0	-0.3
PLG				S	Sb	02 06 59.8	-0.4
OUR	Ouranopolis	1.07	164	P	Pb	02 06 47.9	-0.6
OUR				S	Sb	02 07 01.2	-1.1
OUR	Ouranopolis	1.07	164	P	Pb	02 06 47.9	-0.6
OUR				S	Sb	02 07 01.2	-1.1
PLD	Plovdiv	1.11	48	*e*Pg	Pg	02 06 51.4	+1.7
PLD				*e*Sg	Sg	02 07 07.8	+3.7
PLD	Plovdiv	1.11	48	*e*Pg	Pg	02 06 51.4	+1.7
PLD				*e*Sg	Sg	02 07 07.8	+3.7
VTS	Vitosha	1.26	347	*e*Pg	Pg	02 06 52.5	-0.1
VTS				*e*Sg	Sg	02 07 09.3	+0.2
VTS	Vitosha	1.26	347	*e*Pg	Pg	02 06 52.5	-0.1
VTS				*e*Sg	Sg	02 07 09.3	+0.2
PAIG	Paliouri	1.43	178	P	Pn	02 06 54.2	+0.3
PAIG				S	Sn	02 07 12.7	+0.2
PAIG	Paliouri	1.43	178	P	Pn	02 06 54.2	+0.3
PAIG				S	Sn	02 07 12.7	+0.2
RDO	Rodhopi	1.47	98	P	Pn	02 06 54.9	+0.5
RDO				S	Sn	02 07 13.7	+0.2
RDO	Rodhopi	1.47	98	P	Pn	02 06 54.9	+0.5
RDO				S	Sn	02 07 13.7	+0.2
ALN	Alexandroupoli	1.90	103	P	Pn	02 07 00.8	+0.5
ALN				S	Sn	02 07 24.3	+0.3
ALN	Alexandroupoli	1.90	103	P	Pn	02 07 00.8	+0.5
ALN				S	Sn	02 07 24.3	+0.3
BARS	Barje	1.97	318	*e*Pg	Pg	02 07 04.8	-1.3
BARS				*e*Sg	Sg	02 07 30.1	-1.6
BARS	Barje	1.97	318	*e*Pg	Pg	02 07 04.8	-1.3
BARS				*e*Sg	Sg	02 07 30.1	-1.6
ZAPS	Zavoj	2.04	340	*e*Pg	Pg	02 07 07.1	-0.3
ZAPS				*e*Sg	Sg	02 07 34.2	+0.3

*CSEM **11** 02:07:50.5±0.2, 32.°97N×14.°19W, h10km, ML2.2, Error ellipse: s-maj=9.3km s-min=4.6km az=136.0*
*NEIC **11** 02:07:52.2, 32.°77N×13.°82W, h0km, MG4.3(MDD), After MDD.*
INMG 11 02:07:56.2±0.8, 32.°97N×14.°23W, h10km, ML2.2, Error ellipse: s-maj=3.3km s-min=1.9km az=117.0, Madeira Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMPS	Porto Santo	1.77	273	*e*P	Pn	02 08 21.1	-5.7
PMPS				*e*S	Sn	02 08 39.5	-10
PMPS				A		02 08 41.1	
	13nm,0.1s						
PMPS	Porto Santo	1.77	273	*e*P	Pn	02 08 21.1	-5.7
PMAR	Madeira	2.27	265	*e*Pn	Pn	02 08 29.4	-4.4
PMAR				*e*Sn	Sn	02 08 53.7	-8.1
PMAR				A		02 09 00.5	
	26nm,0.3s						
PMAR	Madeira	2.27	265	*e*Pn	Pn	02 08 29.4	-4.4
PMAR				*e*Sn	Sn	02 08 53.7	-8.1
	26nm,0.3s						
EFAM	Famara	3.88	171	S	Sn	02 09 30.2	-11
	3.2nm,0.2s,SNR=7.9						
CFUE	Fuerteventura	4.32	177	P	Pn	02 08 55.9	-6.0
	1.8nm,0.1s,SNR=7.9						
CFUE				S	Sn	02 09 40.2	-12
	6.2nm,0.1s,SNR=7.9						
CFTV	Fuerteventura	4.54	178	P	Pn	02 08 59.3	-5.7
CFTV				S	Sn	02 09 45.2	-13
CFTV	Fuerteventura	4.54	178	P	Pn	02 08 59.3	-5.7
	0.7nm,0.1s,SNR=7.9						
CFTV				S	Sn	02 09 45.2	-13
	3.3nm,0.3s,SNR=7.9						
PFVI	Vila Bisbo	6.07	45	*e*Pn	Pn	02 09 19.6	-6.4
PFVI				*e*Sn	Sn	02 10 22.1	-13
PFVI	Vila Bisbo	6.07	45	P	Pn	02 09 18.6	-7.4
PFVI				S	Sn	02 10 22.9	-13
PFVI	Vila Bisbo	6.07	45	P	Pn	02 09 18.6	-7.4
	2.0nm,0.1s,SNR=6.3						
PFVI	Vila Bisbo	6.07	45	*e*Pn	Pn	02 09 19.6	-6.4
PTEO	Sao Teotonio	6.41	43	*e*Pn	Pn	02 09 24.6	-6.1
PTEO				*e*Sn	Sn	02 10 31.8	-12
PTEO	Sao Teotonio	6.41	43	*e*Pn	Pn	02 09 24.6	-6.1
PBDV	Barranco-do-Ve	6.70	49	*e*Pn	Pn	02 09 28.4	-6.2
PBDV				*e*Sn	Sn	02 10 38.6	-12
PBDV	Barranco-do-Ve	6.70	49	*e*Pn	Pn	02 09 28.4	-6.2
PCVE	Castro Verde	6.87	46	*e*Pn	Pn	02 09 31.0	-6.0
PCVE				*e*Sn	Sn	02 10 43.1	-12
PCVE	Castro Verde	6.87	46	*e*Pn	Pn	02 09 31.0	-6.0
PVAQ	Vaqueiros	6.93	49	*e*Pn	Pn	02 09 32.0	-5.8
PVAQ				*e*Sn	Sn	02 10 42.4	-14
PVAQ				A		02 10 49.1	
	1.2nm,0.4s						
PVAQ	Vaqueiros	6.93	49	*e*Pn	Pn	02 09 32.0	-5.8
PBEJ	Beja	7.24	44	*e*Pn	Pn	02 09 35.9	-6.1
PBEJ				*e*Sn	Sn	02 10 50.4	-14
PBEJ				A		02 10 55.5	
	0.8nm,0.3s						
PBEJ	Beja	7.24	44	*e*Pn	Pn	02 09 35.9	-6.1
EVO	Evora	7.51	41	*e*Sn	Sn	02 10 56.4	-14
EVO				A		02 10 58.7	
	1.1nm,0.1s						
EMIN	Mina Concepcio	7.81	50	P	Pn	02 09 44.3	-5.6
EMIN				S	Sn	02 11 05.6	-13
EMIN	Mina Concepcio	7.81	50	P	Pn	02 09 44.3	-5.6
	0.2nm,0.1s,SNR=7.9						
PBAR	Barrancos	7.83	46	*e*Pn	Pn	02 09 43.9	-6.2
PBAR				*e*Sn	Sn	02 11 04.5	-14
PBAR	Barrancos	7.83	46	*e*Pn	Pn	02 09 43.9	-6.2
ESPR	Espera	7.90	58	P	Pn	02 09 46.3	-4.8
ESPR				S	Sn	02 11 08.2	-12
ESPR	Espera	7.90	58	P	Pn	02 09 46.3	-4.8
	0.8nm,0.1s,SNR=6.8						
PESTR	Estremoz	7.98	41	*e*Pn	Pn	02 09 46.5	-5.6
PESTR	Estremoz	7.98	41	*e*Pn	Pn	02 09 46.5	-5.6
EADA	Adamuz	9.42	54	P	Pn	02 10 05.6	-6.3
EADA				S	Sn	02 11 43.6	-14
EADA	Adamuz	9.42	54	P	Pn	02 10 05.6	-6.3
	1.0nm,0.2s,SNR=7.9						

IDC 11 02:37:36.3±3.2, 14.°58S×174.°06W, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.8/16, mbtmp3.8/4, Error ellipse: s-maj=222.7km s-min=27.0km az=150.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.31	74	Pn	Pn	02 38 08.8	-6.8
	63nm,0.3s,baz=147,slow=1.6,SNR=40						
AFI				Sn	Sn	02 38 28.9	-16
	325nm,0.3s,baz=51,slow=24,SNR=27						
WRA	Warramunga Arr	49.41	256	P	P	02 46 28.6	+0.3
	0.4nm,0.4s,baz=90,slow=7.1,SNR=3.6						
ASAR	Alice Springs	49.76	251	P	P	02 46 30.6	-0.3
	1.2nm,0.4s,baz=88,slow=8.1,SNR=24						
NVAR	Mina Array Bea	74.15	42	P	P	02 49 15.0	+0.2
	0.5nm,0.6s,baz=232,slow=8.8,SNR=4.2						
PDAR	Pinedale Array	82.09	42	P	P	02 49 59.2	+0.5
	0.3nm,0.6s,baz=227,slow=3.5,SNR=3.9						

BRTR	Keskin Array B	145.12	321	PKPbc		PKPbc	02 57 15.1	-0.5
	0.6nm,0.5s,baz=80,slow=2.9,SNR=4.2							

*NIED **11** 03:07:00.25.°10N×121.°90E, h8km, Mw4.6 Best double couple: M0=8.60000×10^15 NP1:φ0=68.00000°, δ75.00000°, λ-95.00000°. NP2:φ0=268.00000°, δ16.00000°, λ-71.00000°.*
*IDC **11** 03:07:44.9±0.5, 25.°15N×122.°33E, h0km, mb4.6/18, mb1 4.6/21, mb1mx4.5/29, mbtmp4.6/21, ML4.0/2, MS3.7/19, Ms1 3.7/19, ms1mx3.6/28, Error ellipse: s-maj=18.4km s-min=13.1km az=68.0*
*ISCJB **11** 03:07:47.9±0.4, 25.°18N±0.°02×122.°31E±0.°02, h26km±2km, mb4.8/105, MS4.0/26, Error ellipse: s-maj=3.8km s-min=2.5km az=21.4*
*MOS **11** 03:07:48.9±1.0, 25.°20N×122.°27E, h33km, mb5.0/43, Error ellipse: s-maj=9.6km s-min=5.3km az=116.9*
*BJI **11** 03:07:48.7, 25.°31N×122.°15E, h19km, mB4.7/32, mb4.7/37, ML5.0/7, Ms4.6/42, Ms7 4.5/38*
*TAP **11** 03:07:48.2, 25.°13N×122.°25E, h16km, ML4.7, C*
*NEIC **11** 03:07:49.9±1.8, 25.°11N×122.°27E, h31km±12km, mb4.8/48, ML5.1(TAP), Error ellipse: s-maj=6.0km s-min=5.3km az=88.0*
NEIC Recorded [2 TAP] in T'ai-pei and [1 TAP] in I-lan and T'ao-yuan.
*SZGRF **11** 03:07:51.7, 25.°01N×121.°97E, h33km, mb4.7, Taiwan*
ISC 11 03:07:48.7±0.6, 25.°15N±0.°02×122.°27E±0.°02, h20km±3km, n324, σ1.9°04/362, mb4.8/105, MS4.0/26, 33C-23D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.29	242	P	Pg	03 07 54.4	-1.0
	baz=252						
TWB1				*e*S	Sg	03 07 58.8	-1.0
	baz=252						
NWF	Wu-fen Shan	0.45	260	⇓P	Pb	03 07 57.6	-0.4
	baz=267						
ILA	Ilan	0.61	231	P	Pb	03 08 00.5	-0.2
	baz=219						
ILA				*e*S	Sb	03 08 08.6	-0.4
	baz=219						
TWY	Chenhua	0.62	282	⇓*i*P	Pb	03 08 01.1	+0.1
	baz=282						
TWY				*i* S	Sb	03 08 10.4	+1.2
	baz=282						
TWA	Mucha	0.65	255	⇑*i*P	Pb	03 08 01.4	0.0
	baz=245						
TWA				S	Sb	03 08 10.9	+0.9
	baz=245						
TWC	Suao	0.66	216	⇓*i*P	Pb	03 08 00.6	-1.0
	baz=204						
TWC				S	Sb	03 08 09.5	-0.8
	baz=204						
TAP1	Taipei	0.69	261	⇑*i*P	Pb	03 08 02.5	+0.4
	baz=260						
TWE	Neicheng	0.70	232	P	Pb	03 08 01.3	-0.9
	baz=221						
TWE				S	Sb	03 08 10.4	-0.9
	baz=221						
TATO	Taipei	0.73	257	*e*Pn	Pn	03 08 02.3	-1.7
TATO				*e*Sn	Sn	03 08 12.8	-1.8
TWS1	Kuangyinshan	0.78	267	⇑*i*P	Pb	03 08 04.1	+0.5
	baz=266						
TWS1				*e*S	Sb	03 08 15.3	+1.6
	baz=266						
ENA	Nanau	0.87	214	*i* P	Pb	03 08 03.9	-1.2
	baz=202						
ENA				*e*S	Sb	03 08 15.1	-1.2
	baz=202						
YHNB	Yeheng	0.94	240	*e*Pn	Pn	03 08 05.3	-1.6
YHNB				*e*Sn	Sn	03 08 16.2	-3.6
NSK	Sanguang	0.96	241	⇑*i*P	Pb	03 08 06.1	-0.5
	baz=239						
NSK				S	Sb	03 08 17.7	-1.1
	baz=239						
EHP	Heping Village	0.97	210	*e*P	Pb	03 08 06.6	-0.2
	baz=197						
EHP				*e*S	Sb	03 08 18.5	-0.6
	baz=197						
NCU	National Centr	1.00	260	*e*P	Pb	03 08 06.8	-0.6
	baz=257						
NCU				S	Sb	03 08 21.4	+1.2
	baz=257						
NNS	Nan Shan	1.08	229	*e*P	Pb	03 08 07.5	-1.3
	baz=227						
NNS				*e*S	Sb	03 08 22.7	+0.2
	baz=227						
NACB	Ninganchiao	1.15	213	*e*Pn	Pn	03 08 08.1	-1.6
NACB				*e*Sn	Sn	03 08 23.5	-1.3
TWD	Chiawan	1.23	210	P	Pn	03 08 09.9	-0.9
	baz=203						
TWD				*e*S	Sb	03 08 26.7	0.0
	baz=203						
HSN	Hsinchu	1.23	254	⇑P	Pn	03 08 10.0	-0.9
	baz=251						
HSN				*e*S	Sb	03 08 25.3	-1.5
	baz=251						
NSTT	Nanjuang	1.27	246	⇑*i*P	Pn	03 08 10.8	-0.5
	baz=260						
NSTT				*e*S	Sn	03 08 27.5	-0.2
	baz=260						
HWA	Hwalien	1.32	208	*e*P	Pn	03 08 12.3	+0.3
	baz=209						
HWA				*e*S	Sn	03 08 30.7	+1.7
	baz=209						
TWT	Tachien	1.34	228	P	Pn	03 08 12.5	+0.2
	baz=242						
WHF	Hehuan Shan	1.36	223	⇑*i*P	Pn	03 08 12.4	-0.1
	baz=211						
WHF				*e*S	Sn	03 08 29.0	-1.0
	baz=211						
ESL	Shilin	1.53	210	*e*P	Pn	03 08 14.2	-0.8
	baz=211						
ESL				*e*S	Sn	03 08 34.6	+0.3
	baz=211

baz=229
CHN8 Yiju 2.60 227 *e*P **Pn 03 08 30.2 +0.5**
baz=233
CHN3 Shinhua 2.70 221 *e*P **Pn 03 08 32.3 +1.2**
baz=216
SCLT Jiali 2.73 224 *e*P **Pn 03 08 32.4 +0.9**
baz=219
TAI1 Yung-k'ang 2.81 222 *e*P **Pn 03 08 33.9 +1.3**
baz=217
SSD Sandimen 2.83 212 ⇓P **Pn 03 08 35.1 +2.3**
baz=200
TWM1 Shoushan 2.87 217 *e*P **Pn 03 08 34.9 +1.6**
baz=213
PNG Penghu 2.94 238 *e*P **Pn 03 08 33.3 -1.0**
baz=230
EAST Anshuo 3.05 206 *e*P **Pn 03 08 35.7 -0.1**
baz=197
TAW Tawu 3.05 205 *e*P **Pn 03 08 35.1 -0.8**
baz=195
SCZT Fangliau 3.15 209 *e*P **Pn 03 08 39.7 +2.4**
baz=198
LAY Lan-yu 3.17 192 P **Pn 03 08 35.7 -1.7**
baz=193
TWP Hsiaoliuchiu 3.29 213 *e*P **Pn 03 08 41.7 +2.5**
baz=224
QZH Quanzhou 3.35 267 ⇓*i*Pn **Pn 03 08 38.6 -1.3**
QZH Sn **Sn 03 09 16.4 -2.7**
QZH smax
comp=N,4μm,0.8s
QZH smax
comp=E,2μm,0.8s
QZH LR LR
comp=N,7μm,10.0s
QZH LR LR
comp=E,7μm,9.8s
QZH LR LR
comp=Z,9μm,8.8s
HEN Hengchun 3.43 205 *e*P **Pn 03 08 44.7 +3.6**
baz=194
TWK1 Hengchun 3.46 203 *e*P **Pn 03 08 41.0 -0.6**
baz=193
TSEB Hengchuen, Pin 3.47 202 *e*P **Pn 03 08 42.9 +1.3**
baz=193
KNM Kinmen 3.57 259 ⇑*e*P **Pn 03 08 43.7 +0.7**
baz=253
SSE Sheshan 6.00 351 *e*Pn **Pn 03 09 18.2 +1.8**
SSE Sn **Sn 03 10 23.6 -1.0**
SSE smax
comp=N,780nm,1.1s
SSE smax
comp=E,1μm,1.0s
SSE LR LR
comp=N,2μm,11.4s
SSE LR LR
comp=E,550nm,11.4s
SSE LR LR
comp=Z,2μm,11.0s
NJ2 Nanjing 7.50 337 *e*Pn **Pn 03 09 39.2 +2.2**
NJ2 Sn **Sn 03 11 03.0 +1.4**
NJ2 smax
comp=N,1μm,0.8s
NJ2 smax
comp=E,1μm,0.6s
NJ2 LR LR
comp=N,2μm,7.2s
NJ2 LR LR
comp=E,3μm,8.0s
NJ2 LR LR
comp=Z,3μm,6.4s
GZH Guangzhou 8.41 258 Pg **Pn 03 09 43.2 -6.3**
GZH Sg **Sn 03 11 05.3 -19**
GZH smax
comp=N,550nm,0.9s
GZH smax
comp=E,410nm,1.0s
WHN Wuhan 8.83 309 ⇑P **Pn 03 09 53.9 -1.4**
WHN S **Sn 03 11 32.7 -1.6**
WHN LR LR
comp=N,9μm,11.4s
WHN LR LR
comp=E,7μm,9.8s
WHN LR LR
comp=Z,9μm,9.0s
TIA Tai'an 11.88 339 *e*P **Pn 03 10 44.1 +7.1**
TIA S Sn 03 13 27.0 +38
TIA LR LR
comp=N,1μm,10.0s
TIA LR LR
comp=E,1μm,13.0s
QIZ Qiongzhong 13.03 245 P **Pn 03 10 53.9 +1.1**
QIZ S **Sn 03 13 19.2 +2.0**
QIZ pmax pmax
comp=Z,28nm,2.0s
QIZ pmax pmax
comp=Z,100nm,3.7s
QIZ LR LR
comp=N,1μm,13.8s
QIZ LR LR
comp=E,260nm,12.9s
QIZ LR LR
comp=Z,630nm,10.3s
KSRS Korea Array 13.18 20 Pn **Pn 03 10 54.9 +0.1**
comp=Z,0.6nm,0.3s,baz=206,slow=13,SNR=8.2
KSRS LR LR 03 16 09.4
comp=Z,211nm,20.3s,baz=190,slow=38
KSRS Korea Array 13.18 20 P **Pn 03 10 54.9 +0.2**
KSRS pmax pmax
comp=Z,1.0nm,0.3s
KSRS MLR MLR
comp=Z,211nm,20.3s
GYA Guiyang 14.12 279 ⇑*i*P **Pn 03 11 07.6 -0.1**
GYA pP 03 11 15.0
GYA PP 03 11 21.9
GYA S **Sn 03 13 44.5 +0.6**
GYA SS 03 14 04.2
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,120nm,4.0s
GYA LR LR
comp=N,5μm,13.3s
GYA LR LR
comp=E,3μm,12.0s
GYA LR LR
comp=Z,6μm,12.6s
BJI Beijing 15.71 342 P **Pn 03 11 30.0 +1.2**
BJI S **Sn 03 14 25.1 +2.8**
BJI pmax pmax
comp=Z,7.0nm,0.7s
BJI pmax pmax
comp=Z,80nm,4.0s
BJI LR LR
comp=N,820nm,11.8s
BJI LR LR
comp=E,640nm,11.2s
SNY Shenyang 16.67 3 ⇓P **Pn 03 11 37.1 -4.0**
SNY pmax pmax
comp=Z,8.0nm,0.9s
SNY pmax pmax
comp=Z,150nm,6.3s
SNY LR LR
comp=N,1μm,10.8s
SNY LR LR
comp=Z,1μm,11.7s
JHJ Hachijo jima 2 17.22 59 Pn **Pn 03 11 47.5 -0.6**
comp=Z,2.9nm,0.3s,baz=237,slow=17,SNR=3.7
JHJ LR LR 03 18 17.3
comp=Z,201nm,18.3s,baz=273,slow=37
CD2 Chengdu 17.32 294 P **Pn 03 11 49.3 0.0**
CD2 pP pP 03 11 55.1 -1.1
CD2 sP sP 03 11 59.3 +0.5
CD2 PP 03 12 04.0
CD2 S **Sn 03 14 59.6 -2.0**
CD2 sS sS 03 15 08.8 -10
CD2 SS 03 15 21.3
CD2 pmax pmax
comp=Z,30nm,0.8s
CD2 pmax pmax
comp=Z,170nm,7.1s
CD2 LR LR
comp=N,260nm,6.8s
CD2 LR LR
comp=Z,330nm,7.2s
KMI Kunming 17.69 274 P **Pn 03 11 56.2 +2.2**
KMI pP pP 03 12 02.7 +2.3
KMI sP sP 03 12 06.8 +3.9
KMI PP 03 12 11.1
KMI S **Sn 03 15 09.5 -1.1**
KMI sS sS 03 15 19.8 -6.7
KMI SS 03 15 31.8
KMI pmax pmax
comp=Z,12nm,1.2s
KMI pmax pmax
comp=Z,100nm,4.7s
KMI LR LR
comp=N,1μm,9.7s
KMI LR LR
comp=E,710nm,10.0s
KMI LR LR
comp=Z,840nm,9.7s
MAJO Matsushiro 17.75 46 *e*P **Pn 03 12 02.2 +7.5**
MAJO pmax pmax
comp=Z,12nm,1.1s
MAJO Matsushiro 17.75 46 *e*Pn **Pn 03 12 02.2 +7.5**
comp=Z,12nm,1.1s
MAT Matsushiro 17.75 46 P **Pn 03 11 55.9 +1.2**
MAT S **Sn 03 15 21.0 +9.0**
MJAR Matsushiro Arr 17.75 46 Pn **Pn 03 11 55.3 +0.6**
baz=243,slow=11,SNR=6.7
MJAR LR LR 03 19 29.2
comp=Z,196nm,19.5s,baz=255,slow=40
CBIJ Chichi jima 17.98 79 LR LR 03 17 40.1
comp=Z,180nm,21.6s,baz=121,slow=33
HHC Hu-ho-hao-te 18.03 333 *e*P **Pn 03 11 59.4 +1.4**
HHC sP sP 03 12 09.4 +2.9
HHC PP 03 12 15.3
HHC S **Sn 03 15 17.4 -1.1**
HHC sS sS 03 15 25.5 -7.6
HHC SS 03 15 39.5
HHC PcP PcP 03 16 34.8 +2.5
HHC ScS ScS 03 23 45.7 -1.4
HHC pmax pmax
comp=Z,21nm,0.5s
HHC pmax pmax
comp=Z,150nm,4.8s
HHC LR LR
comp=N,810nm,9.9s
HHC LR LR
comp=E,560nm,9.2s
HHC LR LR
comp=Z,720nm,9.3s
DAV Davao City (W) 18.25 169 LR LR 03 19 37.0
comp=Z,177nm,18.0s,baz=321,slow=39
BTO Baotou 18.50 329 *e*P **Pn 03 12 04.0 +0.2**
CN2 Changchun 18.79 7 *e*P **Pn 03 12 08.9 +1.6**
CN2 *e*pP pP 03 12 16.0 +3.7
CN2 *e*S **Sn 03 15 35.0 -1.9**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,1μm,12.0s
CN2 LR LR
comp=E,700nm,12.0s
CN2 LR LR
comp=Z,1μm,13.0s
LZH Lanzhou 19.21 309 *e*P **Pn 03 12 12.7 +0.2**
LZH pP pP 03 12 21.6 +4.5
LZH sP sP 03 12 26.0 +6.4
LZH PP 03 12 30.2
LZH *e*S **Sn 03 15 42.5 -4.8**
LZH sS sS 03 15 54.8 -2.5
LZH *e*SS 03 16 08.3
LZH pmax pmax
comp=Z,49nm,1.0s
LZH pmax pmax
comp=Z,250nm,5.1s
LZH LR LR
comp=N,1μm,10.3s
LZH LR LR
comp=Z,1μm,11.6s
KKM Kota Kinabalu 19.86 198 *e*P **Pn 03 12 18.9 -1.5**
comp=Z,7.3nm,0.7s
MDJ Mudanjiang 20.31 15 P **P 03 12 25.0 +1.6**
MDJ pP 03 12 30.7
MDJ sP sP 03 12 33.4 +1.9
MDJ S **S 03 16 12.0 +1.8**
MDJ pmax pmax
comp=Z,29nm,1.1s
MDJ pmax pmax
comp=Z,39nm,2.8s
MDJ LR LR
comp=N,940nm,13.4s,MS4.4
MDJ LR LR
comp=E,630nm,12.3s,MS4.4
MDJ LR LR
comp=Z,740nm,14.4s,MS4.2
MDJ Mudanjiang 20.31 15 *e*P **P 03 12 24.9 +1.5**
comp=Z,22nm,0.9s
CHRT Chiangrai 21.42 260 ⇓P **P 03 12 37.0 +1.4**
CHG Chiang Mai 22.52 258 ⇑P **P 03 12 49.6 +2.3**
comp=Z,16nm,0.8s,mb4.5
CHTO Chiang Mai 22.52 258 *e*P **P 03 12 47.3 0.0**
CHTO pmax pmax
comp=Z,67nm,1.9s,mb4.8
CHTO Chiang Mai 22.52 258 *e*P **P 03 12 47.3 0.0**
comp=Z,67nm,1.9s,mb4.8
CMAR Chiang Mai Arr 22.64 258 P **P 03 12 50.1 +1.5**
comp=Z,3.4nm,0.6s,mb3.9,baz=58,slow=8.5,SNR=26
CMAR PcP PcP 03 16 41.2 -0.1
comp=Z,1.3nm,0.5s,baz=69,slow=0.3,SNR=8.7
CMAR LR LR 03 21 37.1
comp=Z,88nm,19.9s,MS3.2,baz=40,slow=37
CMAR Chiang Mai Arr 22.64 258 P **P 03 12 50.2 +1.5**
CMAR 03 16 41.2
GTA Gaotai 23.64 312 P **P 03 12 59.0 +0.2**
GTA pP 03 13 06.4
GTA sP sP 03 13 09.9 +2.7
GTA pmax pmax
comp=Z,12nm,1.7s,mb4.0
GTA pmax pmax
comp=Z,170nm,6.8s
GTA LR LR
comp=N,710nm,12.5s,MS4.5
GTA LR LR
comp=E,750nm,11.3s,MS4.5
GTA LR LR
comp=Z,1μm,10.1s,MS4.6
ASAJ Asahikawa 25.13 36 P **P 03 13 11.9 -0.4**
comp=Z,7.9nm,0.8s,mb4.3,baz=247,slow=13,SNR=10.0
ASAJ LR LR 03 23 21.5
comp=Z,129nm,19.1s,MS3.5,baz=199,slow=37
ASAJ Asahikawa 25.13 36 P **P 03 13 11.9 -0.4**
ASAJ pmax pmax
comp=Z,8.0nm,0.8s
ASAJ MLR MLR
comp=Z,129nm,19.1s
KLR Kul'dur 25.15 15 *e*P **P 03 13 07.1 -5.4**
KLR MLR MLR
comp=N,1μm,12.0s,MS4.6
KLR MLR MLR
comp=E,700nm,12.0s,MS4.6
KLR MLR MLR
comp=Z,2μm,12.0s,MS4.8
HABR Khabarovsk 25.36 20 *e*P **P 03 13 13.5 -0.8**
HABR *e**PP pP 03 13 22.7 +2.4
HABR *e**SP sP 03 13 27.3 +4.5
HABR *e* 03 13 49.2
HABR *e*S **S 03 17 39.4 -0.2**
HABR *e**SS sS 03 17 55.5 +6.0
HABR *e* 03 24 10.2
HABR pmax pmax
comp=N,29nm,2.1s
HABR pmax pmax
comp=E,29nm,1.1s
HABR pmax pmax
comp=Z,24nm,1.0s,mb4.7
ULN Ulaanbaatar 25.67 336 *e*P **P 03 13 15.6 -1.6**
ULN pmax pmax
comp=Z,13nm,1.3s,mb4.3
ULN Ulaanbaatar 25.67 336 *e*P **P 03 13 15.6 -1.5**
comp=Z,13nm,1.3s,mb4.3
SONM Songino Array 25.89 335 P **P 03 13 19.5 +0.3**
comp=Z,6.5nm,0.9s,mb4.2,baz=147,slow=10,SNR=30
SONM LR LR 03 23 16.7
comp=Z,148nm,21.5s,MS3.5,baz=288,slow=36
SONM Songino Array 25.89 335 P **P 03 13 19.4 +0.3**
SONM LR LR 03 23 16.7
KSM Kuching 26.22 208 *e*P **P 03 13 22.1 -0.4**
YSS Yuzh-Sakhalins 27.19 32 *e*P **P 03 13 32.0 +1.1**
YSS pmax pmax
comp=Z,90nm,1.2s,mb5.2
YSS MLR MLR
comp=N,300nm,14.0s
YSS MLR MLR
comp=Z,300nm,14.0s,MS4.0
YSS Yuzh-Sakhalins 27.19 32 *e*P **P 03 13 32.5 +1.6**
comp=Z,67nm,1.2s,mb5.0
SHL Shillong 27.44 277 *e*PKP **P 03 13 33.0 -0.4**
LSA Lhasa 27.95 286 P **P 03 13 39.7 +1.8**
LSA LR LR
comp=N,80nm,8.8s
LSA LR LR
comp=E,410nm,13.3s
LSA LR LR
comp=Z,570nm,10.0s,MS4.5
TLY Talaya 30.07 337 *e*P **P 03 13 56.1 -0.4**
TLY *e*SS SS 03 20 27.2 -35
TLY pmax pmax
comp=Z,10.0nm,1.2s,mb4.4
TLY MLR MLR
comp=Z,277nm,12.0s,MS4.1
KAPI Kappang 30.08 185 LR LR 03 25 37.7
comp=Z,124nm,20.1s,MS3.5,baz=358,slow=36
TAPN Taplejung 31.02 282 *e*P **P 03 14 06.1 +0.9**
comp=Z,32nm,0.9s,mb5.2
ODAN Odare 31.34 281 *e*P **P 03 14 08.7 +0.7**
comp=Z,38nm,0.8s,mb5.3
RAMN Ramite 32.04 281 *e*P **P 03 14 14.6 +0.4**
comp=Z,24nm,0.9s,mb5.0
GUN Gumba 32.60 283 *e*P **P 03 14 20.0 +0.9**
comp=Z,38nm,0.8s,mb5.4
PKI Pulchoki 33.05 282 *e*P **P 03 14 23.3 +0.3**
PKIN Phulchoki 33.05 282 *e*P **P 03 14 23.3 +0.2**
comp=Z,10nm,0.6s,mb4.9
KKN Kakani 33.14 283 *e*P **P 03 14 24.2 +0.4**
comp=Z,49nm,1.0s,mb5.4
DMN Daman 33.31 283 *e*P **P 03 14 25.7 +0.4**
comp=Z,14nm,0.5s,mb5.2
GKN Gorkha 33.70 283 *e*P **P 03 14 28.8 +0.1**
comp=Z,72nm,1.1s,mb5.5
WMQ Urumqi 33.72 312 P **P 03 14 30.2 +1.5**
WMQ pP pP 03 14 37.5 +2.7
WMQ sP sP 03 14 40.9 +3.7
WMQ PP PP 03 15 43.2 -1.9
WMQ PcP PcP 03 17 09.9 +1.9
WMQ *e*S **S 03 19 50.9 -0.1**
WMQ SS SS 03 21 56.5 -20
WMQ ScS ScS 03 24 51.6 -1.4
WMQ pmax pmax
comp=Z,11nm,0.8s,mb4.8
WMQ pmax pmax
comp=Z,140nm,4.8s
WMQ LR LR
comp=N,220nm,22.8s,MS3.9
WMQ LR LR
comp=E,99nm,22.8s,MS3.9
MKAR Makanchi Array 38.35 315 P **P 03 15 07.8 -0.4**
comp=E,8.2nm,0.9s,mb4.4,baz=104,slow=10,SNR=44
MKAR PcP PcP 03 17 20.3 -1.5
comp=E,1.5nm,0.8s,baz=84,slow=6.2,SNR=3.9
MKAR Makanchi Array 38.35 315 P **P 03 15 07.8 -0.4**
MKAR PcP PcP 03 17 20.3 -1.5
PETK Petropavlovsk- 38.52 34 LR LR 03 29 38.5
comp=E,68nm,20.3s,MS3.5,baz=72,slow=34
PET Petropavlovsk 38.96 35 *e*P **P 03 15 14.5 +1.2**
PET *e*S **S 03 21 13.5 +2.7**
PET pmax pmax
comp=Z,18nm,1.2s,mb4.7
PET MLR MLR
comp=Z,200nm,15.0s,MS4.1
ZALV Zalesovo Beam 39.99 326 P **P 03 15 20.7 -1.1**
comp=Z,6.2nm,0.7s,mb4.5,baz=106,slow=8.4,SNR=29
ZALV LR LR 03 32 49.5
comp=Z,130nm,20.9s,MS3.8,baz=246,slow=38
NVS Novosibirsk 41.24 326 *e*P **P 03 15 31.5 -0.7**
NVS pmax pmax
comp=N,21nm,1.7s
NVS pmax pmax
comp=Z,16nm,1.7s,mb4.4
NVS pmax pmax
comp=E,11nm,1.5s
ULHL Ulahol 41.38 306 P **P 03 15 35.0 +1.5**
SNR=26
TKM2 Tokmak 2 41.97 307 P **P 03 15 39.9 +1.6**
SNR=26
TKM2 Tokmak 2 41.97 307 *e*P **P 03 15 39.6 +1.3**
TKM2 pmax pmax
comp=Z,32nm,0.8s,mb5.0
TKM2 Tokmak 2 41.97 307 *e*P **P 03 15 39.6 +1.3**
comp=Z,32nm,0.8s,mb5.0
KURK Kurchatov 42.00 319 P **P 03 15 38.0 -0.5**
KURK pmax pmax
comp=Z,18nm,1.2s,mb4.6
KURK Kurchatov 42.00 319 *e*P **P 03 15 37.5 -1.0**
comp=Z,17nm,1.1s,mb4.6
KBK Karagaybulak 42.40 306 P **P 03 15 43.7 +1.9**
SNR=6.2
CHMS Chumysh 42.59 307 P **P 03 15 44.5 +1.1**
SNR=9.1
UCH Uchtor 42.65 306 P **P 03 15 46.8 +2.9**
SNR=13
UCH Uchtor 42.65 306 *e*P **P 03 15 46.3 +2.4**
comp=Z,33nm,1.0s,mb5.0
AAK Ala-Archa 42.72 306 *e*P **P 03 15 45.6 +1.1**
AAK pmax pmax
comp=Z,11nm,1.0s,mb4.5
AAK Ala-Archa 42.72 306 *e*P **P 03 15 45.6 +1.1**
comp=Z,11nm,1.0s,mb4.5
SEY Seymchan 42.74 20 *ce*P **P 03 15 43.6 -0.7**
AML Almayashu 43.24 305 P **P 03 15 50.8 +2.1**
SNR=25
AML Almayashu 43.24 305 *e*P **P 03 15 50.4 +1.7**
comp=Z,30nm,1.1s,mb4.9
EKS2 Erkin-Say 43.25 306 P **P 03 15 50.0 +1.3**
SNR=11
EKS2 Erkin-Say 43.25 306 *e*P **P 03 15 49.8 +1.0**
comp=Z,77nm,0.8s,mb5.5
COEN Coen 43.89 150 *e*P **P 03 15 54.4 +0.3**
COEN Coen 43.89 150 *e*P **P 03 15 54.1 0.0**
comp=Z,194nm,0.6s,mb6.0
KK31 Karatay Array 45.69 306 *i*P **P 03 16 08.6 +0.4**
KK31 pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
MBWA Marble Bar 46.10 183 *e*P **P 03 16 09.4 -2.1**
comp=Z,5.0nm,0.7s,mb4.5
WRAB Tennant Creek 46.32 164 *e*P **P 03 16 13.1 -0.3**
comp=Z,76nm,0.7s,mb5.7
WRA Warramunga Arr 46.33 164 P **P 03 16 12.3 -1.1**
comp=Z,24nm,0.6s,mb5.3,baz=346,slow=8.6,SNR=55
WRA PcP PcP 03 17 47.0 -1.5
comp=Z,3.1nm,0.8s,baz=336,slow=4.0,SNR=3.9
KBL Kabul 46.66 295 *e*P **P 03 16 17.5 +1.5**
KBL pmax pmax
comp=Z,16nm,1.0s,mb4.9
KBL Kabul 46.66 295 *e*P **P 03 16 17.5 +1.5**
comp=Z,16nm,1.0s,mb4.9
TIXI Tiksi 46.68 3 *e*P **P 03 16 15.0 -0.6**
TIXI pmax pmax
comp=Z,15nm,1.8s,mb4.6
TIXI MLR MLR
comp=Z,392nm,14.0s,MS4.5
TIXI Tiksi 46.68 3 *e*P **P 03 16 15.6 -0.1**
comp=Z,4.5nm,0.7s,mb4.5
VOSK Vostochnaya 47.14 320 P **P 03 16 17.9 -1.6**
VOSK pmax pmax
comp=Z,12nm,0.8s,mb4.9
BVAR Borovoye Array 47.57 320 P **P 03 16 22.5 -0.3**
comp=Z,8.8nm,0.7s,mb4.9,baz=102,slow=8.6,SNR=46
BRVK Borovoye 47.64 320 *d*P **P 03 16 23.3 0.0**
BRVK pmax pmax
comp=Z,26nm,0.8s,mb5.3
BRVK Borovoye 47.64 320 *e*P **P 03 16 23.5 +0.2**
comp=Z,26nm,0.9s,mb5.3
ZRNK Zerenda 48.36 320 P **P 03 16 28.6 -0.3**
ZRNK pmax pmax
comp=Z,34nm,0.9s,mb5.4
ASAR Alice Springs 49.82 166 P **P 03 16 40.1 -0.2**
comp=Z,7.3nm,0.7s,mb4.8,baz=345,slow=6.9,SNR=56
ASAR PcP PcP 03 17 59.7 -1.2
comp=Z,3.4nm,0.9s,baz=347,slow=3.5,SNR=4.1
BILL Bilibino 50.44 20 ⇑*e*P **P 03 16 45.7 +1.1**
BILL *e* 03 18 37.6
BILL pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
BILL MLR MLR
comp=Z,100nm,14.0s,MS4.0
CTA Charters Tower 50.65 150 *e*P **P 03 16 51.7 +5.0**
comp=Z,6.2nm,0.7s,mb4.7

CTAO Charters Tower 50.65 150 *eP* **P 03 16 52.2 +5.5**
CTAO pmax pmax
comp=Z,43nm,1.6s,mb5.1
CTAO Charters Tower 50.65 150 *eP* **P 03 16 52.2 +5.5**
comp=Z,43nm,1.6s,mb5.1
AB31 Akbulak array 53.49 314 *i P* **P 03 17 07.5 -0.1**
AB31 pmax pmax
comp=Z,3.0nm,0.4s,mb4.6
ABKAR Akbulak array 53.49 314 *eP* **P 03 17 07.6 +0.1**
comp=Z,8.9nm,0.7s,mb4.8
SVE Sverdlovsk 53.86 323 *eP* **P 03 17 06.3 -3.9**
SVE pmax pmax
comp=Z,26nm,1.1s,mb5.1
ARU Arti 54.94 323 *d iP* **P 03 17 17.3 -0.8**
ARU 03 19 16.2
ARU S **S 03 24 58.0 -0.6**
ARU SS SS 03 28 39.2 -2.7
ARU pmax pmax
comp=Z,21nm,1.2s,mb5.0
ARU Arti 54.94 323 *eP* **P 03 17 17.0 -1.0**
FORT Forrest 55.88 174 *eP* **P 03 17 29.4 +4.3**
comp=Z,36nm,1.0s,mb5.3
STKA Stephens Creek 59.63 161 *eP* **P 03 17 55.4 +4.0**
comp=Z,4.5nm,0.8s,mb4.5
STKA Stephens Creek 59.63 161 P **P 03 17 50.3 -1.1**
comp=Z,4.2nm,0.7s,mb4.6,baz=334,slow=8.4,SNR=9.8
STKA LR LR 03 44 40.7
comp=Z,114nm,18.4s,MS4.0,baz=204,slow=37
DGRG David-gareji 64.33 306 P **P 03 18 24.0 +0.9**
MTA Mtatsminda 64.71 306 P **P 03 18 24.2 -1.3**
TBLG Delisi 64.74 306 *eP* **P 03 18 25.6 -0.1**
TBLG Delisi 64.74 306 P **P 03 18 25.6 -0.1**
GNI Garni 65.08 304⇑ *iP* **P 03 18 29.5 +1.6**
GNI pmax pmax
comp=Z,16nm,1.2s
GNI Garni 65.08 304 *eP* **P 03 18 28.7 +0.7**
comp=Z,15nm,1.0s,mb5.0
VRHR Novokhopersk 65.11 317 *eP* **P 03 18 26.8 -1.2**
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,20nm,0.6s
VRHR pmax pmax
comp=Z,20nm,0.6s,mb5.3
ZEI Tsey 65.14 307 *eP* **P 03 18 27.8 -0.5**
ZEI pmax pmax
comp=Z,31nm,1.0s,mb5.3
KEH Kehvi 65.21 307 P **P 03 18 28.1 -0.6**
KBD Kabd 65.44 292 *eP* **P 03 18 30.3 -0.2**
KBD AMb AMB 03 18 31.1
comp=Z,18nm,0.6s,mb5.2
ONI Oni 65.50 307 P **P 03 18 32.2 +1.6**
RDF Al-Radifah 65.63 292 *eP* **P 03 18 31.6 -0.1**
RDF AMb AMB 03 18 32.4
comp=Z,54nm,0.7s,mb5.7
KIV Kislovodsk 65.76 309⇑ *eP* **P 03 18 32.8 +0.5**
KIV *e* 03 20 55.8
KIV *e*S S 03 27 07.2 -10
KIV pmax pmax
comp=Z,57nm,1.2s,mb5.5
KIV MLR MLR
comp=Z,100nm,19.0s,MS4.0
KIV Kislovodsk 65.76 309 *eP* **P 03 18 32.7 +0.4**
comp=Z,62nm,1.2s,mb5.5
NAY Al-Naaiem 65.80 292 *eP* **P 03 18 32.3 -0.5**
NAY AMb AMB 03 18 33.2
comp=Z,20nm,0.7s,mb5.3
BPAW Bear Paw Mtn. 66.28 29 *eP* **P 03 18 35.5 +0.3**
comp=Z,8.7nm,1.4s,mb4.6
KDAK Kodiak Island 66.55 36 P **P 03 18 36.3 -0.8**
comp=Z,2.7nm,0.7s,mb4.4,baz=276,slow=9.2,SNR=3.8
VORD Divnogorie 66.58 317 *eP* **P 03 18 36.1 -1.3**
VORD pmax pmax
comp=Z,7.0nm,0.5s,mb5.0
VORD pmax pmax
comp=N,5.0nm,1.0s
VORD pmax pmax
comp=E,10.0nm,1.0s
APA Apatity 66.60 335⇓ *eP* **P 03 18 37.0 -0.3**
APA pmax pmax
comp=Z,38nm,1.4s,mb5.2
VSR Storozhevoye 66.61 317 *eP* **P 03 18 36.5 -1.1**
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
VSR pmax pmax
comp=N,10.0nm,1.3s
VSR pmax pmax
comp=E,30nm,1.3s
MOS Moscow 66.65 322 *eP* **P 03 18 34.8 -3.0**
MCK McKinley 67.23 29 *eP* **P 03 18 41.4 +0.1**
MCK pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
MCK McKinley 67.23 29 *eP* **P 03 18 41.4 0.0**
comp=Z,6.6nm,1.1s,mb4.6
OBN Obninsk 67.36 322⇑ *iP* **P 03 18 41.9 -0.4**
OBN *e* 03 21 08.3
OBN *e*S S 03 27 35.8 -0.9
OBN pmax pmax
comp=Z,35nm,1.7s,mb5.1
OBN MLR MLR
comp=Z,100nm,20.0s,MS4.0
JOF Joensuu 68.36 331 *eP* **P 03 18 47.3 -1.1**
JOF pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
JOF Joensuu 68.36 331 *ep* **P 03 18 47.3 -1.1**
comp=Z,9.4nm,0.6s,mb5.0
KEV Kevo 68.45 338 *eP* **P 03 18 47.7 -1.2**
KEV pmax pmax
comp=Z,14nm,0.9s,mb5.0
KEV Kevo 68.45 338 *eP* **P 03 18 47.7 -1.2**
comp=Z,14nm,0.9s,mb5.0
KEV Kevo 68.45 338 *ep* **P 03 18 47.7 -1.2**
comp=Z,14nm,0.9s,mb5.0
ARCES ARCESS Array B 69.02 338 P **P 03 18 52.3 -0.1**
comp=Z,8.7nm,1.1s,mb4.6,baz=61,slow=9.9,SNR=7.4
ARCES LR LR 03 52 06.4
comp=Z,61nm,20.8s,MS3.8,baz=106,slow=39
ANN Anapa 69.22 311 *eP* **P 03 18 52.0 -2.2**
ANN *e*S S 03 27 55.6 -3.6
EGAK Eagle 70.28 27 *eP* **P 03 18 59.7 -0.6**
comp=Z,4.9nm,0.9s,mb4.4
KAF Kangasniemi 70.81 330 *eP* **P 03 19 02.3 -1.3**
KAF pmax pmax
comp=Z,14nm,0.9s,mb4.9
KAF Kangasniemi 70.81 330 *eP* **P 03 19 02.3 -1.3**
comp=Z,14nm,0.9s,mb4.9
KAF Kangasniemi 70.81 330 *ep* **P 03 19 02.3 -1.3**
comp=Z,14nm,0.9s,mb4.9
FINES FINESS Array B 71.12 330 P **P 03 19 04.8 -0.7**
comp=Z,12nm,0.8s,mb4.9,baz=76,slow=8.0,SNR=29
FINES LR LR 03 52 59.9
comp=Z,158nm,18.4s,MS4.3,baz=150,slow=38
DAWY Dawson 71.23 27 *eP* **P 03 19 06.2 +0.2**
SIM Simferopol' 71.44 312 P **P 03 19 07.7 -0.1**
SIM pmax pmax
comp=Z,22nm,1.0s,mb5.0
INK Inuvik 71.96 22 *eP* **P 03 19 10.2 -0.2**
INK pmax pmax
comp=Z,14nm,1.1s
INK Inuvik 71.96 22 *eP* **P 03 19 10.2 -0.2**
comp=Z,14nm,1.1s,mb4.8
IDID Didziasalis 72.73 323 *eP* **P 03 19 14.8 -0.4**
IDID AMB AMB 03 19 16.4
comp=Z,16nm,0.9s,mb5.0
AKASG Malin Array Be 72.81 318 P **P 03 19 14.5 -1.3**
comp=Z,22nm,0.9s,mb5.1,baz=59,slow=6.0,SNR=42
AKASG LR LR 03 51 38.3
comp=Z,62nm,21.7s,MS3.9,baz=40,slow=36
AKBB Malin Array Si 72.81 318 *eP* **P 03 19 14.4 -1.4**
KIEV Kiev 72.82 318 *eP* **P 03 19 14.1 -1.8**
KIEV pmax pmax
comp=Z,17nm,1.0s,mb4.9
KIEV Kiev 72.82 318 *eP* **P 03 19 14.1 -1.8**
comp=Z,17nm,1.0s,mb4.9
NACGM Naroch 72.85 323 *e* **P 03 19 13.0 -3.0**
IZAR Zarasai 72.86 324 *eP* **P 03 19 15.7 -0.3**
IZAR AMB AMB 03 19 17.0
comp=Z,14nm,1.1s,mb4.8
ISAL Salakas 72.98 324 *eP* **P 03 19 16.5 -0.3**
ISAL AMB AMB 03 19 17.8
comp=Z,9.0nm,1.0s,mb4.7
IIGN Ignalina 73.00 324 *eP* **P 03 19 16.5 -0.4**
IIGN AMB AMB 03 19 17.9
comp=Z,7.9nm,1.2s,mb4.5
HYT Haines Junctio 73.17 30 *eP* **P 03 19 18.6 +0.8**
BR131 Keskin Array S 73.40 306 *eP* **P 03 19 19.6 0.0**
comp=Z,6.4nm,0.6s,mb4.7
BRTR Keskin Array B 73.40 306 P **P 03 19 19.7 +0.2**
comp=Z,9.8nm,0.9s,mb4.7,baz=102,slow=5.5,SNR=40
BRTR LR LR 03 56 01.7
comp=Z,34nm,18.8s,MS3.6,baz=286,slow=39
MMAI Mount Meron Ar 74.29 299 P **P 03 19 25.4 +0.5**
comp=Z,1.0nm,0.3s,mb4.3,baz=62,slow=10.0,SNR=5.7
KIS Kishinev 74.29 315 eUNK 03 19 23.0
LEOM Leova 74.84 314 ⇓P **P 03 19 27.3 -0.5**
LEOM Leova 74.84 314 ⇓*iP* **P 03 19 27.3 -0.5**
TLCR 74.92 313 ⇓P **P 03 19 28.4 +0.1**
TLCR 74.92 313 ⇓*iP* **P 03 19 28.4 +0.1**
SUW Suwalki 75.13 323 *eP* **P 03 19 28.9 -0.4**
CSS Prodhromos 75.24 302 *eP* **P 03 19 29.0 -1.4**
comp=Z,32nm,0.8s,mb5.3
TESR 75.86 315 ⇓P **P 03 19 33.2 -0.4**
TESR 75.86 315 ⇓*iP* **P 03 19 33.3 -0.4**
VRI Vrincioaia 76.05 314 ⇑P **P 03 19 35.7 +0.9**
VRI Vrincioaia 76.05 314 ⇑*iP* **P 03 19 35.7 +0.9**
LVV L'vov 76.24 319 *eP* **P 03 19 35.2 -0.6**
BUR08 Bucovina Ar. S 76.36 316 *eP* **P 03 19 36.2 -0.2**
BURAR Bucovina Array 76.36 316 ⇑P **P 03 19 36.2 -0.3**
BURAR Bucovina Array 76.36 316 ⇑*iP* **P 03 19 36.2 -0.3**
MLR Muntele Rosu 76.70 314 ⇑P **P 03 19 38.6 +0.2**
MLR Muntele Rosu 76.70 314 ⇑*iP* **P 03 19 38.6 +0.2**
KWP Kalwaria Pacla 77.11 319 *eP* **P 03 19 40.6 0.0**
KWP Kalwaria Pacla 77.11 319 *eP* **P 03 19 40.8 +0.2**
comp=Z,73nm,1.0s,mb5.6
KWP Kalwaria Pacla 77.11 319 ⇓*iP* **P 03 19 40.8 +0.1**
VOIR 77.30 314 ⇑P **P 03 19 41.3 -0.5**
VOIR 77.30 314 ⇑*iP* **P 03 19 41.3 -0.5**
RES Resolute Bay 77.55 9 *eP* **P 03 19 42.0 -0.7**
RES pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
RES Resolute Bay 77.55 9 *eP* **P 03 19 42.0 -0.7**
comp=Z,3.5nm,0.9s,mb4.3
NB2 NORSAR Subarra 77.84 332 P **P 03 19 43.7 -0.8**
comp=Z,17nm,0.8s,mb5.0,baz=56,slow=5.6
NB2 NORSAR Subarra 77.84 332 P **P 03 19 43.7 -0.8**
baz=56,slow=5.6
NB2 NORSAR Subarra 77.84 332 P **P 03 19 43.7 -0.8**
NB2 NORSAR Subarra 77.84 332 P **P 03 19 43.7 -0.8**
NOA NORSAR Array B 77.84 332 P **P 03 19 43.4 -1.1**
comp=Z,13nm,0.8s,mb4.9,baz=60,slow=5.3,SNR=53
NOA LR LR 03 57 33.5
comp=Z,67nm,18.2s,MS4.0,baz=90,slow=38
STHS Stebnicka Huta 78.06 319 *eP* **P 03 19 46.1 +0.1**
STHS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
STHS Stebnicka Huta 78.06 319 *eP* **P 03 19 46.1 +0.1**
comp=Z,4.0nm,1.0s,mb4.3
STHS Stebnicka Huta 78.06 319 *eP* **P 03 19 46.1 +0.1**
NAO01 NORSAR Array S 78.08 332 *eP* **P 03 19 44.8 -1.1**
comp=Z,7.9nm,0.8s,mb4.7
CRVS Cervenica-Dubn 78.15 319 *eP* **P 03 19 46.6 +0.1**
CRVS pmax pmax
comp=Z,14nm,2.2s,mb4.5
CRVS Cervenica-Dubn 78.15 319 *eP* **P 03 19 46.6 +0.1**
comp=Z,14nm,2.2s,mb4.5
CRVS Cervenica-Dubn 78.15 319 *eP* **P 03 19 46.6 +0.1**
DRGR 78.25 316 ⇓P **P 03 19 47.3 +0.2**
DRGR 78.25 316 ⇓*iP* **P 03 19 47.3 +0.2**
OJC Ojcow 78.57 320 *eP* **P 03 19 46.0 -2.8**
NIE Niedzica 78.61 319 *eP* **P 03 19 50.0 +0.9**
GZR Gura Zlata 78.78 315 ⇓P **P 03 19 51.1 +1.0**
GZR Gura Zlata 78.78 315 ⇓*iP* **P 03 19 51.1 +1.0**
VTS Vitosha 79.66 312 ⇑P **P 03 19 55.1 +0.2**
VTS Vitosha 79.66 312 ⇑*iP* **P 03 19 55.1 +0.2**
OKC Ostrava-Krasne 79.70 320 *eP* **P 03 19 54.8 -0.2**
VYHS Vyhne 79.89 319 *eP* **P 03 19 56.3 +0.2**
VYHS pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
VYHS Vyhne 79.89 319 *eP* **P 03 19 56.3 +0.2**
comp=Z,8.3nm,1.2s,mb4.5
VYHS Vyhne 79.89 319 *eP* **P 03 19 56.3 +0.2**
MORC Moravsky Berou 80.07 320 *eP* **P 03 19 56.7 -0.3**
MORC pmax pmax
comp=Z,6.0nm,1.4s,mb4.3
MORC Moravsky Berou 80.07 320 *eP* **P 03 19 56.7 -0.3**
comp=Z,5.9nm,1.4s,mb4.3
DPC Dobruska-Polom 80.51 321 *eP* **P 03 19 59.5 +0.2**
UPC Upice 80.61 322 *eP* **P 03 20 00.1 +0.2**
PKSM Moragy 81.04 317 ⇓P **P 03 20 01.5 -0.8**
PKSM Moragy 81.04 317 ⇓*iP* **P 03 20 01.5 -0.8**
PRU Pruhonice 81.69 322 *eP* **P 03 20 06.6 +1.0**
YKA Yellowknife Ar 81.70 23 P **P 03 20 04.4 -1.0**
comp=Z,3.9nm,0.8s,mb4.4,baz=315,slow=5.1,SNR=12
CLL Collm 81.88 323 ⇑*iP* **P 03 20 06.5 -0.1**
CLL pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
CLL Collm 81.88 323 ⇑*iP* **P 03 20 06.5 -0.1**
comp=Z,6.0nm,0.9s,mb4.5
CLL Collm 81.88 323 ⇑*iP* **P 03 20 06.5 -0.1**
comp=Z,6.0nm,0.9s,mb4.5
CONA Conrad Observa 81.92 319 P **P 03 20 07.5 +0.6**
comp=Z,7.6nm,1.7s,mb4.3
CSNA Conrad Observa 81.92 319 ⇑*iP* **P 03 20 07.6 +0.7**
comp=Z,5.8nm,1.5s,mb4.3
ARSA Arzberg 82.45 319 P **P 03 20 09.8 +0.1**
comp=Z,2.3nm,0.9s,mb4.1
KHC Kasperske Hory 82.66 321 *eP* **P 03 20 10.9 +0.2**
MOA Molln 82.90 320 **P 03 20 12.3 +0.3**
SOKA Soboth 83.02 319 P **P 03 20 11.3 -1.4**
comp=Z,4.8nm,1.6s,mb4.3
BOJS Bojanci 83.46 317 *i* P **P 03 20 15.3 +0.3**
VNDS Vrh nad Dolski 83.50 318 *i* P **P 03 20 15.1 -0.1**
GRF Grafenberg Arr 83.69 322 *eP* **P 03 20 16.1 0.0**
comp=Z,7.0nm,1.3s,mb4.6
GRF Grafenberg Arr 83.69 322 *eP* **P 03 20 16.1 0.0**
comp=Z,7.0nm,1.3s,mb4.6
GRF pmax pmax
comp=Z,7.0nm,1.3s,mb4.6
ROBS Robic 84.15 319 *i* P **P 03 20 17.7 -0.8**
ABTA Abfaltersbach 84.48 319 P **P 03 20 19.8 -0.4**
comp=Z,3.5nm,1.3s,mb4.3
KMBO Kilima Mbogo 85.97 267 *eP* **P 03 20 28.1 -0.1**
KMBO pmax pmax
comp=Z,4.0nm,1.0s
KMBO Kilima Mbogo 85.97 267 *eP* **P 03 20 28.1 -0.1**
comp=Z,4.1nm,1.0s,mb4.6
CDF Champ du Feu 86.56 323 *eP* **P 03 20 30.9 +0.4**
MEZF Maizieres J'vi 87.72 324 *eP* **P 03 20 36.2 +0.1**
LPG La Plagne 88.52 321 *eP* **P 03 20 40.3 +0.3**
comp=Z,3.9nm,0.7s,mb4.5
LPG La Plagne 88.52 321 *eP* **P 03 20 40.3 +0.3**
LPG pmax pmax
comp=Z,2.0nm,0.7s,mb4.6
LPG La Plagne 88.52 321 *eP* **P 03 20 40.3 +0.3**
comp=Z,2.0nm,0.7s,mb4.6
LPL La Plagne 88.52 321 *eP* **P 03 20 40.2 +0.2**
SBF Sospel 89.06 319 *eP* **P 03 20 41.9 -0.6**
comp=Z,5.3nm,0.7s,mb4.7
SBF Sospel 89.06 319 *eP* **P 03 20 41.9 -0.6**
SBF pmax pmax
comp=Z,3.0nm,0.6s,mb4.8
SBF Sospel 89.06 319 *eP* **P 03 20 41.9 -0.6**
comp=Z,2.7nm,0.6s,mb4.8
SSF Saint Saulge 89.41 323 *eP* **P 03 20 44.1 0.0**
comp=Z,5.0nm,0.9s,mb4.5
SSF Saint Saulge 89.41 323 *eP* **P 03 20 44.1 0.0**
SSF pmax pmax
comp=Z,3.0nm,0.9s,mb4.6
SSF Saint Saulge 89.41 323 *eP* **P 03 20 44.1 0.0**
comp=Z,2.5nm,0.9s,mb4.5
AVF Avril sur Loir 89.66 323 *eP* **P 03 20 44.9 -0.4**
FRF La Foret Royal 89.70 319 *eP* **P 03 20 45.2 -0.3**
comp=Z,2.1nm,0.5s,mb4.4
FRF La Foret Royal 89.70 319 *eP* **P 03 20 45.2 -0.3**
FRF pmax pmax
comp=Z,1.0nm,0.5s,mb4.4
FRF La Foret Royal 89.70 319 *eP* **P 03 20 45.2 -0.3**
comp=Z,1.0nm,0.5s,mb4.4
JTMT Jette 91.44 34 *eP* **P 03 20 52.3 -1.3**
comp=Z,32nm,0.8s,mb5.7
FFC Flin Flon 91.85 24 *i* P **P 03 20 56.6 +1.3**
FFC Flin Flon 91.85 24 *eP* **P 03 20 54.7 -0.6**
comp=Z,3.1nm,0.7s,mb4.8
WVOR Wild Horse Val 92.41 40 *eP* **P 03 20 58.2 0.0**
WVOR pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
WVOR Wild Horse Val 92.41 40 *eP* **P 03 20 58.2 +0.1**
comp=Z,3.5nm,0.9s,mb4.7
HLID Hailey 94.11 38 *eP* **P 03 21 07.1 +1.2**
comp=Z,1.6nm,0.9s,mb4.5
NVAR Mina Array Bea 95.05 43 P **P 03 21 10.0 -0.4**
comp=Z,0.4nm,0.7s,mb4.0,baz=280,slow=5.8,SNR=3.5
PPT Papeete 95.67 107 LR LR 04 02 33.7
comp=Z,94nm,18.6s,MS4.3,baz=353,slow=34
SCHQ Schefferville 99.97 5 LR LR 04 07 17.6
comp=Z,61nm,18.7s,MS4.1,baz=71,slow=36
LPAZ La Paz 166.87 50 PKP PKPdf 03 27 53.6 -0.1
comp=Z,0.4nm,0.4s,baz=108,slow=3.2,SNR=3.2

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*NEIC **11** 03:26:42.4, 42°.61S×173°.91E, h5km, ML3.8(WEL), After WEL.*

WEL 11 03:26:42.5±0.1, 42°.59S×173°.90E, h5km, ML3.7/28, Error ellipse: s-maj=1.2km s-min=1.0km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSWZ	**Blackbirch Sta**	**0.88**	**359**	PG	Pg	03 27 00.4	+1.2
BSWZ				*e*SG	Sg	03 27 11.1	+0.5
BSWZ	**Blackbirch Sta**	**0.88**	**359**	P	Pg	03 27 00.4	+1.2
BSWZ				S	Sg	03 27 12.9	+2.3
THZ	**Tophouse**	**1.11**	**318**	P*	Pb	03 27 03.6	-0.4
THZ				SG	Sg	03 27 19.2	+1.1
THZ	**Tophouse**	**1.11**	**318**	P	Pg	03 27 03.6	-0.1
TUWZ	**Tuamarina**	**1.16**	**2**	P*	Pb	03 27 04.7	-0.2
TUWZ				SG	Sg	03 27 20.5	+0.8
LTZ	**Lake Taylor**	**1.22**	**260**	P*	Pb	03 27 05.6	-0.3
LTZ				S*	Sb	03 27 21.7	-0.2
LTZ	**Lake Taylor**	**1.22**	**260**	P	Pg	03 27 05.6	-0.2
CRLZ	**Canterbury Las**	**1.36**	**223**	PN	Pn	03 27 07.8	-0.3
CRLZ	**Canterbury Las**	**1.36**	**223**	P	Pn	03 27 07.5	-0.6
BHW	**Baring Head**	**1.39**	**32**	P*	Pb	03 27 07.8	-1.0
BHW	**Baring Head**	**1.39**	**32**	P	Pn	03 27 07.8	-0.6
TCW	**Tory Channel**	**1.41**	**12**	P*	Pb	03 27 08.1	-1.1
TCW	**Tory Channel**	**1.41**	**12**	P	Pn	03 27 08.1	-0.6
SNZO	**South Karori**	**1.42**	**25**	P*	Pb	03 27 08.4	-0.9
SNZO	**South Karori**	**1.42**	**25**	P	Pn	03 27 08.4	-0.4
NNZ	**Nelson**	**1.43**	**344**	PN	Pn	03 27 08.4	-0.5
NNZ	**Nelson**	**1.43**	**344**	P	Pn	03 27 08.4	-0.6
PLWZ	**Palliser**	**1.44**	**45**	P*	Pb	03 27 08.6	-1.1
MQZ	**McQueen's Vall**	**1.44**	**219**	PN	Pn	03 27 08.3	-0.9
MQZ	**McQueen's Vall**	**1.44**	**219**	P	Pn	03 27 08.3	-0.9
MSWZ	**Moikau Station**	**1.55**	**41**	P*	Pb	03 27 09.9	-1.7
CAW	**Cannon Point**	**1.72**	**31**	PN	Pn	03 27 12.4	-0.6
CAW	**Cannon Point**	**1.72**	**31**	P	Pn	03 27 12.4	-0.6
DSZ	**Denniston Nort**	**1.77**	**298**	PN	Pn	03 27 13.6	-0.1
DSZ	**Denniston Nort**	**1.77**	**298**	P	Pn	03 27 14.7	+1.0
DUWZ	**D'Urville Isla**	**1.79**	**1**	PN	Pn	03 27 14.1	+0.2
TRWZ	**Traveller**	**1.79**	**49**	PN	Pn	03 27 13.3	-0.7
MTW	**Mount Morrison**	**1.87**	**40**	PN	Pn	03 27 14.1	-0.9
MTW	**Mount Morrison**	**1.87**	**40**	P	Pn	03 27 14.1	-0.9
KIW	**Kapiti Island**	**1.89**	**24**	PN	Pn	03 27 14.5	-0.8
KIW	**Kapiti Island**	**1.89**	**24**	P	Pn	03 27 14.5	-0.8
OGWZ	**Otaki Gorge**	**2.01**	**29**	PN	Pn	03 27 16.4	-0.6
QRZ	**Quartz Range**	**2.04**	**329**	PN	Pn	03 27 17.9	+0.5
QRZ	**Quartz Range**	**2.04**	**329**	P	Pn	03 27 17.9	+0.5
MRZ	**Mangatainoka R**	**2.30**	**34**	PN	Pn	03 27 20.3	-0.8
MRZ	**Mangatainoka R**	**2.30**	**34**	P	Pn	03 27 20.3	-0.7
RPZ	**Rata Peaks**	**2.37**	**241**	PN	Pn	03 27 21.2	-0.7
RPZ	**Rata Peaks**	**2.37**	**241**	P	Pn	03 27 21.2	-0.7
WVZ	**Waitaha Valley**	**2.38**	**257**	PN	Pn	03 27 22.3	+0.2
WVZ	**Waitaha Valley**	**2.38**	**257**	P	Pn	03 27 22.3	+0.3
BFZ	**Birch Farm**	**2.60**	**43**	PN	Pn	03 27 23.7	-1.4
BFZ	**Birch Farm**	**2.60**	**43**	P	Pn	03 27 23.7	-1.4
LBZ	**Lake Benmore**	**3.24**	**235**	PN	Pn	03 27 34.1	+0.1
LBZ	**Lake Benmore**	**3.24**	**235**	P	Pn	03 27 34.1	+0.1
ODZ	**Otahua Downs**	**3.40**	**223**	PN	Pn	03 27 35.5	-0.6
ODZ	**Otahua Downs**	**3.40**	**223**	P	Pn	03 27 35.5	-0.6
MOVZ	**Moawhango**	**3.48**	**24**	PN	Pn	03 27 36.8	-0.4
VRZ	**Vera Road**	**3.52**	**11**	PN	Pn	03 27 37.9	+0.1
VRZ	**Vera Road**	**3.52**	**11**	P	Pn	03 27 37.9	+0.1
HIZ	**Hauiti**	**4.14**	**10**	PN	Pn	03 27 47.2	+0.9
HIZ	**Hauiti**	**4.14**	**10**	P	Pn	03 27 47.2	+1.0
EAZ	**Earnscleugh**	**4.24**	**230**	PN	Pn	03 27 47.3	-0.4
EAZ	**Earnscleugh**	**4.24**	**230**	P	Pn	03 27 47.3	-0.3
TUZ	**Tuapeka**	**4.55**	**221**	PN	Pn	03 27 51.6	-0.3
TUZ	**Tuapeka**	**4.55**	**221**	P	Pn	03 27 51.6	-0.3
SYZ	**Scrubby Hill**	**5.21**	**219**	PN	Pn	03 28 00.9	-0.1
SYZ	**Scrubby Hill**	**5.21**	**219**	P	Pn	03 28 00.9	0.0

MAN 11 03:30:35, 6°.49N×124°.45E, h1km, mb4.6, ML3.5, MS3.4, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.64**	**129**	⇓*iP*	Pg	03 30 52.2	+5.0
CTBH	**Cotabato--PC H**	**0.76**	**344**	⇓*eP*	Pg	03 30 50.6	+1.1
CTBH				*i* S	Sg	03 31 02.6	+3.3
BUKP	**Musuan**	**1.51**	**24**	*eP*	Pn	03 31 03.7	+0.5
BUKP				*e*S	Sb	03 31 16.5	-6.9
PAGZ	**Pagadian**	**1.72**	**322**	*eP*	Pn	03 31 06.9	+0.9
PAGZ				*e*S	Sn	03 31 17.1	-12

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*ISCJB **11** 03:45:09.0±1.7, 6°.40N±0°.04×124°.41E±0°.06, h13km±11km, mb4.0/16, MS3.3/5, Error ellipse: s-maj=9.8km s-min=7.3km az=178.1*

*IDC **11** 03:45:08.7±0.7, 6°.44N×124°.52E, h0km, mb4.0/9, mb1 4.1/9, mb1mx3.9/21, mbtmp4.0/9, MS3.4/6, Ms1 3.4/6, ms1mx3.0/25, Error ellipse: s-maj=15.7km s-min=13.1km az=132.0*

*NEIC **11** 03:45:15.6±2.2, 6°.55N×124°.82E, h54km±23km, mb4.4/7, Error ellipse: s-maj=31.9km s-min=7.6km az=73.0*

ISC 11 03:45:10.0±1.4, 6°.42N±0°.05×124°.38E±0°.06, h6km±9km, n30, σ1=01/27, mb4.0/16, MS3.3/5, 2C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.66**	**120**	⇓*iP*	**Pg**	**03 45 23.7**	**+1.0**
CTBH	**Cotabato--PC H**	**0.81**	**351**	⇓*eP*	**Pg**	**03 45 24.8**	**-0.7**
CTBH				*i* S	**Sg**	**03 45 36.2**	**+0.2**
KCP	**Kidapawan**	**0.92**	**50**	⇑*eP*	**Pg**	**03 45 26.7**	**-0.9**
KCP				*i* S	**Sg**	**03 45 39.3**	**-0.3**
DMPH	**Davao City--Mi**	**1.30**	**60**	⇑*iP*	**Pn**	**03 45 30.4**	**-4.3**
DMPH				*i* S	**Sg**	**03 45 53.0**	**+1.1**
DAV	**Davao City (W)**	**1.36**	**62**	Pg	**Pg**	**03 45 32.1**	**-4.0**
	126nm,0.3s,baz=244,slow=3.7,SNR=13						
DAV				Lg		03 45 48.7	
	176nm,0.3s,baz=108,slow=20,SNR=12						
ZMPH	**Zamboanga City**	**2.36**	**283**	⇓*iP*	**Pn**	**03 45 49.0**	**-0.4**
ZMPH				*i* S	Sn	03 46 46.2	+28
KAPI	**Kappang**	**12.26**	**202**	LR	LR	03 53 11.0	
	comp=Z,199nm,18.2s,baz=220,slow=39						
KAKA	**Kakadu**	**20.63**	**157**	*eP*	**P**	**03 49 50.8**	**+0.5**
	126nm,0.8s						
FITZ	**Fitzroy Crossi**	**24.40**	**177**	P	**P**	**03 50 29.5**	**+0.2**
	3.0nm,0.7s,mb3.8,baz=20,slow=11,SNR=9.8						
CBIJ	**Chichi jima**	**26.64**	**37**	LR	LR	03 59 13.0	
	comp=Z,63nm,20.5s,MS3.1,baz=117,slow=32						
WRA	**Warramunga Arr**	**27.97**	**160**	P	**P**	**03 51 00.5**	**-1.1**
	0.8nm,0.6s,mb3.5,baz=335,slow=10,SNR=8.1						
KSRS	**Korea Array**	**31.06**	**5**	LR	LR	04 04 47.7	
	comp=Z,50nm,18.7s,MS3.2,baz=332,slow=38						
ASAR	**Alice Springs**	**31.32**	**163**	P	**P**	**03 51 30.0**	**-1.2**
	0.5nm,0.4s,mb3.7,baz=338,slow=7.0,SNR=8.4						
MJAR	**Matsushiro Arr**	**32.54**	**21**	LR	LR	04 03 15.8	
	comp=Z,52nm,19.5s,MS3.2,baz=200,slow=34						
GTA	**Gaotai**	**39.60**	**330**	*eP*	**P**	**03 52 46.0**	**+3.7**
GTA				pP	pP	03 52 50.2	+6.0
GTA				sP	sP	03 52 53.6	+8.6
GTA				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.0						
ASAJ	**Asahikawa**	**40.80**	**20**	LR	LR	04 07 53.1	
	comp=Z,63nm,21.1s,MS3.5,baz=355,slow=34						
STKA	**Stephens Creek**	**41.48**	**158**	P	**P**	**03 52 58.5**	**+0.7**
	comp=Z,1.9nm,0.6s,mb3.9,baz=330,slow=10,SNR=4.2						
SONM	**Songino Array**	**44.03**	**343**	P	**P**	**03 53 18.3**	**-0.1**
	comp=Z,0.5nm,0.8s,mb3.3,baz=164,slow=10,SNR=3.1						
MK31	**Makanchi Array**	**54.02**	**325**	*eP*	**P**	**03 54 36.2**	**+1.1**
MK31				*e*PcP	PcP	03 55 38.7	-1.5
MKAR	**Makanchi Array**	**54.02**	**325**	P	**P**	**03 54 36.5**	**+1.3**
	comp=Z,2.8nm,0.7s,mb4.3,baz=130,slow=8.3,SNR=34						
MKAR				PcP	PcP	03 55 39.0	-1.1
	comp=Z,1.3nm,0.6s,baz=122,slow=3.8,SNR=7.7

comp=Z,1.8nm,0.6s,mb4.3
KURK Kurchatov 58.23 328 *e*P **P 03 55 05.7 +0.6**
comp=Z,7.9nm,1.2s,mb4.6
BVAR Borovoye Array 63.80 327 P **P 03 55 43.0 +0.1**
comp=Z,0.6nm,0.4s,mb3.9,baz=134,slow=11,SNR=6.4
BRVK Borovoye 63.87 327 *e*P **P 03 55 43.2 -0.2**
comp=Z,1.9nm,0.6s,mb4.3
ABKAR Akbulak array 68.60 321 *e*P **P 03 56 12.9 -0.9**
comp=Z,1.0nm,0.8s,mb3.8
FINES FINESS Array B 88.37 332 P **P 03 58 01.2 -1.5**
comp=Z,1.8nm,0.7s,mb4.4,baz=35,slow=7.0,SNR=4.1
INK Inuvik 88.53 21 *e*P **P 03 58 00.9 -2.3**
comp=Z,3.9nm,1.2s,mb4.6

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*IDC **11** 03:47:57.6±2.5, 6°.07N×126°.73E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.6/21, mbtmp3.7/5, Error ellipse: s-maj=250.7km s-min=22.4km az=67.0*

NEIC 11 03:48:03.5±2.1, 5°.80N×126°.27E, h35km, mb4.0/4, Error ellipse: s-maj=215.0km s-min=10.8km az=65.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**19.39**	**162**	*e*P	Pn	03 52 25.7	-2.2
	15nm,0.7s						
WRA	**Warramunga Arr**	**26.79**	**163**	P	P	03 53 41.6	+1.2
	0.3nm,0.5s,baz=344,slow=10.0,SNR=3.3						
ASAR	**Alice Springs**	**30.22**	**166**	P	P	03 54 10.6	-0.3
	0.5nm,0.8s,baz=358,slow=8.5,SNR=3.7						
MKAR	**Makanchi Array**	**55.60**	**325**	P	P	03 57 36.2	+0.5
	0.4nm,0.5s,baz=119,slow=7.4,SNR=4.2						
AML	**Almayashu**	**58.87**	**316**	*e*P	P	03 57 59.4	+0.4
	0.8nm,0.6s						
KURK	**Kurchatov**	**59.76**	**327**	P	P	03 58 04.7	-0.2
	0.5nm,0.5s,baz=124,slow=7.2,SNR=4.1						
KURK	**Kurchatov**	**59.76**	**327**	*e*P	P	03 58 05.1	+0.2
	0.6nm,0.5s						
BVAR	**Borovoye Array**	**65.34**	**327**	P	P	03 58 41.4	-0.7
	0.3nm,0.4s,baz=128,slow=9.3,SNR=2.8						
ABKAR	**Akbulak array**	**70.27**	**320**	*e*P	P	03 59 13.6	+0.4
	0.7nm,0.6s						

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*NEIC **11** 04:52:25.6, 32°.40S×69°.86W, h127km, MD3.5(GUC), After GUC.*

GUC 11 04:52:25.6±0.7, 32°.40S×69°.86W, h127km±7km, MD3.5, ML3.3, 8C-4D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FCH	**Farellones**	**0.99**	**202**	⇓*i*P	Pn	04 52 48.8	+0.6
FCH				*i* S	Sn	04 53 06.4	+1.0
FCH	**Farellones**	**0.99**	**202**	⇓*i*P	Pn	04 52 48.8	+0.6
FCH				*i* S	Sn	04 53 06.4	+1.0
PEL	**Peldehue**	**1.02**	**223**	⇑*i*P	Pn	04 52 48.7	+0.3
PEL				*i* S	Sn	04 53 05.8	+0.1
PEL				AML	AML	04 53 06.5	
	comp=N,1μm,0.3s						
CLCH	**Cerro Calan**	**1.15**	**210**	*e*P	Pn	04 52 49.9	+0.2
CLCH				*i* S	Sn	04 53 08.4	+0.4
CLCH				AML	AML	04 53 10.6	
	comp=E,366nm,0.4s						
SAN	**Santiago**	**1.25**	**213**	*e*P	Pn	04 52 50.9	+0.1
SAN				*i* S	Sn	04 53 10.0	+0.2
SAN	**Santiago**	**1.25**	**213**	*e*P	Pn	04 52 50.9	+0.1
SAN				*i* S	Sn	04 53 10.0	+0.2
SAN				AML	AML	04 53 10.8	
	comp=N,324nm,0.1s						
SJCH	**San Jose de Ma**	**1.30**	**199**	*e*P	Pn	04 52 51.7	+0.3
SJCH				*i* S	Sn	04 53 11.5	+0.6
SJCH	**San Jose de Ma**	**1.30**	**199**	*e*P	Pn	04 52 51.7	+0.3
SJCH				*i* S	Sn	04 53 11.5	+0.6
SJCH				AML	AML	04 53 14.5	
	comp=E,150nm,0.3s						
ANTU	**Antumapu**	**1.33**	**209**	*e*P	Pn	04 52 52.1	+0.4
ANTU				*i* S	Sn	04 53 11.8	+0.2
ANTU	**Antumapu**	**1.33**	**209**	*e*P	Pn	04 52 52.1	+0.4
ANTU				*i* S	Sn	04 53 11.8	+0.2
ANTU				AML	AML	04 53 12.8	
	comp=N,449nm,0.6s						
PCH	**Pirque**	**1.33**	**204**	*e*P	Pn	04 52 52.0	+0.4
PCH				*i* S	Sn	04 53 11.9	+0.4
PCH	**Pirque**	**1.33**	**204**	*e*P	Pn	04 52 52.0	+0.4
PCH				*i* S	Sn	04 53 11.9	+0.4
LMEL	**Las Melosas**	**1.47**	**191**	⇑*i*P	Pn	04 52 53.4	+0.2
LMEL				*i* S	Sn	04 53 15.6	+1.4
LMEL	**Las Melosas**	**1.47**	**191**	⇑*i*P	Pn	04 52 53.4	+0.2
LMEL				*i* S	Sn	04 53 15.6	+1.4
LMEL				AML	AML	04 53 23.0	
	comp=N,417nm,0.5s						
CHNG	**Los Chungos**	**1.49**	**290**	⇑*i*P	Pn	04 52 53.7	+0.3
CHNG				*i* S	Sn	04 53 14.1	-0.4
TACH	**Talagante**	**1.54**	**216**	*e*P	Pn	04 52 53.9	-0.1
TACH				*i* S	Sn	04 53 15.9	+0.2
TACH	**Talagante**	**1.54**	**216**	*e*P	Pn	04 52 53.9	-0.1
TACH				*i* S	Sn	04 53 15.9	+0.2
CMCH	**Combarbala**	**1.57**	**321**	⇓*i*P	Pn	04 52 54.7	+0.4
CMCH				*i* S	Sn	04 53 16.9	+0.8
CMCH	**Combarbala**	**1.57**	**321**	⇓*i*P	Pn	04 52 54.7	+0.4
CMCH				*i* S	Sn	04 53 16.9	+0.8
CMCH				AML	AML	04 53 21.5	
	comp=E,746nm,0.7s						
CHCH	**Chadas Angostu**	**1.67**	**203**	⇑*i*P	Pn	04 52 55.7	+0.3
CHCH				*i* S	Sn	04 53 18.7	+0.5
CHCH	**Chadas Angostu**	**1.67**	**203**	⇑*i*P	Pn	04 52 55.7	+0.3
CHCH				*i* S	Sn	04 53 18.7	+0.5
CACH	**El Canelo**	**1.82**	**200**	*e*P	Pn	04 52 58.1	+0.9
CACH				*i* S	Sn	04 53 22.8	+1.4
CACH	**El Canelo**	**1.82**	**200**	*e*P	Pn	04 52 58.1	+0.9
CACH				*i* S	Sn	04 53 22.8	+1.4
TLL	**Tololo Astrono**	**2.37**	**340**	*e*P	Pn	04 53 05.2	+1.1
TLL				*e*S	Sn	04 53 35.1	+1.5
TLL	**Tololo Astrono**	**2.37**	**340**	*e*P	Pn	04 53 05.2	+1.1
TLL				*e*S	Sn	04 53 35.1	+1.5
TLL				AML	AML	04 53 40.0	
	comp=N,102nm,0.5s						
LCO	**Las Campanas**	**3.46**	**348**	⇑*i*P	Pn	04 53 18.9	+0.8
LCO				S	Sn	04 53 59.1	+0.4
LCO	**Las Campanas**	**3.46**	**348**	⇑*i*P	Pn	04 53 18.9	+0.8
LCO				*i* S	Sn	04 53 59.1	+0.4
LCO				AML	AML	04 54 00.0	
	comp=E,101nm,0.4s						

DJA 11 05:09:02, 0°.05N×125°.43E, h10km, MLv3.9/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	**Manado**	**1.50**	**337**	P	Pn	05 09 27.4	-1.7
MNI				S	Sn	05 09 59.2	+10
KMSI	**Cibinong**	**1.54**	**290**	P	Pn	05 09 30.6	+1.1
KMSI				S	Sn	05 09 48.6	-1.0
LUWI	**Luwuk**	**2.87**	**248**	P	Pn	05 09 46.2	-1.7

IDC 11 05:19:14.3±3.4, 2°.74S×101°.03E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.5/19, mbtmp3.5/4, Error ellipse: s-maj=140.1km s-min=25.1km az=57.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**36.74**	**120**	P	P	05 26 23.8	+0.2
	0.3nm,0.5s,baz=299,slow=10,SNR=5.5						
ASAR	**Alice Springs**	**37.99**	**126**	P	P	05 26 33.9	-0.4
	0.3nm,0.6s,baz=297,slow=8.1,SNR=2.8						
SONM	**Songino Array**	**50.58**	**5**	P	P	05 28 16.4	+1.7
	0.5nm,0.5s,baz=181,slow=11,SNR=3.5						
MKAR	**Makanchi Array**	**52.01**	**344**	P	P	05 28 24.3	-1.1
	0.6nm,0.7s,baz=148,slow=7.8,SNR=5.9						
TXAR	**Lajitas Array**	**144.64**	**39**	PKP	PKPdf	05 38 52.4	-1.3
	0.5nm,0.6s,baz=322,slow=1.0,SNR=7.7						

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*IDC **11** 05:33:13.5±0.9, 46°.62N×155°.69E, h0km, mb3.6/6, mb1 4.0/8, mb1mx3.7/25, mbtmp3.7/8, ML3.5/2, Error ellipse: s-maj=37.4km s-min=20.4km az=150.0*
*ISCJB **11** 05:33:16.8±0.7, 46°.6N±0°.1×155°.6E±0°.1, h33km, mb3.7/8, Error ellipse: s-maj=20.5km s-min=12.1km az=149.6*
*MOS **11** 05:33:16.6±1.4, 46°.64N×155°.87E, h33km, mb4.0/4, Error ellipse: s-maj=20.0km s-min=14.4km az=69.4*

ISC 11 05:33:19.2±0.7, 46°.6N±0°.1×155°.7E±0°.1, h35km, n17, σ1§07/18, mb3.7/8, 1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**4.12**	**4**	*e*PN	**Pn**	05 34 12.5	**-7.0**
YSS	**Yuzh-Sakhalins**	**8.86**	**277**	*e*PN	**Pn**	05 35 33.4	**+8.8**
ASAJ	**Asahikawa**	**9.52**	**260**	Pn	**Pn**	05 35 33.1	**-0.4**
	0.4nm,0.3s,baz=85,slow=17,SNR=4.7						
MJAR	**Matsushiro Arr**	**16.43**	**239**	Pn	**Pn**	**05 37 06.2**	**-0.6**
	0.4nm,0.3s,baz=58,slow=12,SNR=3.1						
MAJO	**Matsushiro**	**16.43**	**239**	*e*P	**Pn**	**05 37 09.4**	**+2.5**
BILL	**Bilibino**	**22.20**	**11**	⇓*e*P	**P**	**05 38 15.1**	**+3.1**
BILL				*e*S	**S**	**05 42 13.7**	**-0.6**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb3.6						
BILL				MLR	MLR		
	comp=Z,200nm,20.0s						
TIXI	**Tiksi**	**28.14**	**342**	*e*P	**P**	**05 39 08.8**	**+1.3**
MKAR	**Makanchi Array**	**48.56**	**299**	P	**P**	**05 41 57.9**	**-0.8**
	comp=Z,0.1nm,0.4s,mb3.2,baz=75,slow=6.9,SNR=3.6						
KURK	**Kurchatov**	**48.91**	**305**	*e*P	**P**	**05 42 00.1**	**-1.2**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb4.0						
NVAR	**Mina Array Bea**	**60.95**	**64**	P	**P**	**05 43 28.2**	**-0.4**
	comp=Z,0.6nm,0.7s,mb3.8,baz=282,slow=7.4,SNR=4.0						
PDAR	**Pinedale Array**	**63.42**	**55**	P	**P**	**05 43 45.0**	**0.0**
	comp=Z,0.6nm,0.9s,mb3.7,baz=270,slow=3.0,SNR=5.7						
WRA	**Warramunga Arr**	**68.96**	**201**	P	**P**	**05 44 19.9**	**-0.7**
	comp=Z,0.9nm,0.8s,mb3.8,baz=22,slow=7.2,SNR=5.3						
WRA	**Warramunga Arr**	**68.96**	**201**	P	**P**	**05 44 19.9**	**-0.7**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**72.63**	**201**	P	**P**	**05 44 43.5**	**+0.6**
	comp=Z,0.5nm,0.6s,mb3.6,baz=16,slow=6.3,SNR=5.4						
ASAR	**Alice Springs**	**72.63**	**201**	*e*P	**P**	**05 44 43.5**	**+0.6**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	**Lajitas Array**	**76.04**	**62**	P	**P**	**05 45 02.6**	**-0.3**
	comp=Z,0.6nm,0.5s,mb3.8,baz=300,slow=4.3,SNR=10						
TXAR	**Lajitas Array**	**76.04**	**62**	P	**P**	**05 45 02.6**	**-0.3**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						

NNC 11 05:34:19.3±3.8, 53°.27N×87°.24E, h0km, mb3.6, mpv3.4, 6C-1D, Error ellipse: s-maj=35.6km s-min=20.4km az=78.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**5.90**	**248**	⇑Pn	Pn	05 35 49.4	+1.4
	3.4nm,0.7s						
KURK				⇑Lg		05 37 29.9	
	8.5nm,1.2s						
MK31	**Makanchi Array**	**7.22**	**208**	⇓Pn	Pn	05 36 08.4	+2.4
	1.0nm,0.5s,baz=29,slow=13,SNR=22						
MK31				⇑Sn	Sn	05 37 35.2	+6.6
	0.9nm,0.7s,baz=36,slow=26,SNR=2.6						
MK31				⇑Lg		05 38 09.0	
	2.9nm,0.8s,baz=38,slow=28,SNR=4.8						
VOSK	**Vostochnaya**	**9.82**	**273**	⇑Pn	Pn	05 36 43.3	+1.7
	0.3nm,0.4s						
VOSK				⇑Sn	Sn	05 38 30.3	-2.2
	1.2nm,0.6s						

IDC 11 05:39:44.2±6.0, 11°.08N×92°.07E, h29km±7km, mb3.4/4, mb1 3.6/4, mb1mx3.3/21, mbtmp3.4/4, Error ellipse: s-maj=313.7km s-min=21.4km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.55**	**349**	P	P	05 46 47.6	+0.4
	0.3nm,0.6s,baz=168,slow=7.4,SNR=2.8						
MKAR				pP	pP	05 46 55.6	-0.3
	0.3nm,0.7s,baz=165,slow=7.1,SNR=3.6						
FITZ	**Fitzroy Crossi**	**44.03**	**131**	P	P	05 47 49.1	-0.5
	1.3nm,0.6s,baz=333,slow=14,SNR=3.8						
WRA	**Warramunga Arr**	**51.78**	**126**	P	P	05 48 49.4	-0.3
	0.2nm,0.3s,baz=307,slow=8.2,SNR=4.5						
WRA				pP	pP	05 48 59.0	+0.5
	0.2nm,0.4s,baz=307,slow=8.3,SNR=1.7						
ASAR	**Alice Springs**	**53.53**	**130**	P	P	05 49 02.8	+0.3
	0.6nm,0.9s,baz=304,slow=7.0,SNR=5.0						
ASAR				pP	pP	05 49 11.4	0.0
	0.5nm,0.7s,baz=305,slow=7.5,SNR=3.4						

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*IDC **11** 06:06:25.9±0.5, 27°.52N×140°.48E, h465km±15km, mb3.3/8, mb1 3.3/10, mb1mx3.1/24, mbtmp3.3/10, Error ellipse: s-maj=51.5km s-min=12.6km az=77.0*
*JMA **11** 06:06:27.2±0.2, 27°.70N×140°.51E, h459km, M3.8*

ISC 11 06:06:26.4±0.5, 27°.59N±0°.07×140°.6E±0°.4, h470km±13km, n19, σ0§81/28, mb3.5/8, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.52**	**108**	P	**P**	**06 07 26.8**	**+0.3**
	22nm,0.3s,baz=313,slow=20,SNR=40						
CBIJ				S	**S**	**06 08 14.2**	**-1.0**
	42nm,0.3s,baz=279,slow=23,SNR=13						
CBIJ	**Chichi jima**	**1.52**	**108**	P	**P**	**06 07 26.8**	**+0.3**
CBIJ				S	**S**	**06 08 13.4**	**-1.8**
JHHJ	**Haha-jima-NKT**	**1.73**	**123**	P	**P**	**06 07 28.3**	**+0.9**
JHHJ				S	**S**	**06 08 16.6**	**-0.2**
JHJ	**Hachijo jima 2**	**5.55**	**353**	P	**P**	**06 07 57.2**	**+0.3**
	14nm,0.3s,baz=50,slow=22,SNR=5.4						
BSO1	**Boso 1**	**7.05**	**3**	P	**P**	**06 08 13.3**	**+1.3**
BSO1				S	**S**	**06 09 38.9**	**+0.3**
BSO3	**Boso 3**	**7.19**	**360**	P	**P**	**06 08 14.6**	**+1.1**
BSO3				S	**S**	**06 09 40.7**	**-0.6**
BSO4	**Boso 4**	**7.38**	**359**	P	**P**	**06 08 16.0**	**+0.5**
BSO4				S	**S**	**06 09 44.7**	**-0.2**
JRY	**Ryogami san**	**8.52**	**351**	P	**P**	**06 08 28.2**	**+0.7**
JRY				S	**S**	**06 10 05.7**	**-1.3**
JAG	**Ashikaga**	**8.86**	**354**	P	**P**	**06 08 30.9**	**-0.2**
JAG				S	**S**	**06 10 09.7**	**-4.0**
JHO	**Hitachi**	**8.99**	**0**	P	**P**	**06 08 33.8**	**+1.2**
JHO				S	**S**	**06 10 14.6**	**-1.8**
MJAR	**Matsushiro Arr**	**9.15**	**348**	P	**P**	**06 08 35.2**	**+1.0**
	0.4nm,0.3s,baz=151,slow=10,SNR=2.5						
WRA	**Warramunga Arr**	**47.63**	**188**	P	**P**	**06 14 18.2**	**-0.7**
	1.0nm,0.4s,mb3.5,baz=4.6,slow=7.6,SNR=29						
MKAR	**Makanchi Array**	**49.05**	**309**	P	**P**	**06 14 28.7**	**-0.5**
	0.6nm,0.6s,mb3.1,baz=90,slow=11,SNR=6.0						
ASAR	**Alice Springs**	**51.36**	**188**	P	**P**	**06 14 45.8**	**-0.7**
	0.3nm,0.3s,mb3.1,baz=357,slow=4.6,SNR=8.1						
KURK	**Kurchatov**	**51.61**	**314**	P	**P**	**06 14 48.0**	**0.0**
	2.6nm,0.2s,mb4.2,baz=90,slow=7.5,SNR=8.0						
BVAR	**Borovoye Array**	**56.70**	**317**	P	**P**	**06 15 23.9**	**-0.1**
	1.9nm,0.4s,mb3.8,baz=84,slow=7.6,SNR=9.9						
ARCES	**ARCESS Array B**	**72.60**	**340**	P	**P**	**06 17 05.2**	**+0.6**
	0.9nm,0.8s,mb3.4,baz=82,slow=8.7,SNR=5.8						
FINES	**FINESS Array B**	**76.87**	**333**	P	**P**	**06 17 28.8**	**0.0**
	1.9nm,0.4s,mb4.0,baz=61,slow=4.6,SNR=17						
NOA	**NORSAR Array B**	**82.62**	**338**	P	**P**	**06 17 58.8**	**-0.3**
	0.6nm,0.9s,mb3.1,baz=45,slow=5.1,SNR=3.3						

IDC 11 06:39:26.6±0.9, 38°.60S×46°.56E, h0km, mb4.0/7, mb1 4.2/8, mb1mx4.0/21, mbtmp4.0/8, MS3.5/2, Ms1 3.5/2, ms1mx3.0/24, Error ellipse: s-maj=39.3km s-min=20.6km az=25.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**19.97**	**2**	P	Pn	06 44 01.0	-1.1
	0.1nm,0.3s,baz=312,slow=24,SNR=1.9						
BOSA	**Boshof**	**20.31**	**293**	P	P	06 44 04.0	-0.1
	4.1nm,0.9s,baz=148,slow=13,SNR=4.4						
LBTB	**Lobatse**	**22.31**	**301**	P	P	06 44 25.3	-0.4
	5.5nm,0.9s,baz=109,slow=8.4,SNR=5.7						
LBTB				LR	LR	06 51 59.2	
	comp=Z,113nm,18.2s,baz=350,slow=34						
LSZ	**Lusaka**	**28.32**	**320**	LR	LR	06 54 56.5	
	comp=Z,114nm,20.4s,baz=187,slow=33						
ASAR	**Alice Springs**	**73.66**	**107**	P	P	06 51 02.3	0.0
	0.9nm,0.7s,baz=235,slow=5.6,SNR=13						
STKA	**Stephens Creek**	**74.45**	**118**	P	P	06 51 07.1	+0.4
	1.2nm,0.5s,baz=218,slow=14,SNR=5.8						
CMAR	**Chiang Mai Arr**	**75.02**	**51**	P	P	06 51 09.4	-0.6
	0.8nm,0.3s,baz=221,slow=32,SNR=2.9						
WRA	**Warramunga Arr**	**76.16**	**104**	P	P	06 51 16.7	-0.1
	0.7nm,0.7s,baz=227,slow=4.6,SNR=8.6						
MKAR	**Makanchi Array**	**90.83**	**24**	P	P	06 52 32.5	+1.2
	0.2nm,0.6s,baz=210,slow=4.6,SNR=3.9						
TXAR	**Lajitas Array**	**153.73**	**258**	PKPbc	PKPbc	06 59 26.3	-1.3
	0.4nm,1.0s,baz=127,slow=8.3,SNR=2.9						
TXAR				PKPab	PKPab	06 59 41.5	+1.1
	0.6nm,1.1s,baz=138,slow=9.6,SNR=3.5						

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*BJI **11** 06:45:58.4, 40°.77N×78°.36E, h7km, ML2.7/6*
*NNC **11** 06:46:01.0±2.3, 41°.11N×78°.39E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=22.3km s-min=9.0km az=159.0*
*ISCJB **11** 06:46:02.6±1.7, 41°.0N±0°.1×78°.4E±0°.2, h10km, Error ellipse: s-maj=23.9km s-min=9.6km az=44.9*

ISC 11 06:46:05.6±1.6, 41°.1N±0°.1×78°.2E±0°.2, h10km, n4, σ2§23/6, 4C-3D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**2.35**	**227**	Pn	**Pn**	**06 46 42.4**	**-1.9**
KSH				Sn	**Sn**	**06 47 16.5**	**+3.3**
KSH				smax			
	comp=N,40nm,0.4s						
KSH				smax			
	comp=E,80nm,0.8s						
TKM2	**Tokmak 2**	**2.63**	**313**	⇑Pn	**Pn**	**06 46 47.1**	**-0.9**
	comp=E,3.4nm,0.5s						
TKM2				⇓Lg		06 47 29.9	
	comp=E,25nm,0.8s						
KK31	**Karatay Array**	**6.04**	**291**	⇑Pg	**Pb**	**06 47 51.3**	**+0.3**
	comp=E,0.4nm,0.4s,baz=118,slow=15,SNR=3.9						
KK31				⇓Lg		06 49 11.7	
	comp=E,1.3nm,0.6s,baz=107,slow=28,SNR=5.4						
MK31	**Makanchi Array**	**6.37**	**26**	⇓Pn	**Pn**	**06 47 38.6**	**-0.8**
	comp=E,0.2nm,0.6s,baz=198,slow=15,SNR=4.5						
MK31				⇑Sn	**Sn**	**06 48 55.0**	**+2.8**
	comp=E,1.0nm,0.8s,baz=206,slow=19,SNR=5.2						
MK31				⇑Lg		06 49 21.8	
	comp=E,1.4nm,0.8s						

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*IDC **11** 06:51:35.5±0.4, 9°.50S×107°.71E, h0km, mb5.4/26, mb1 5.4/27, mb1mx5.4/28, mbtmp5.4/27, MS4.7/16, Ms1 4.7/16, ms1mx4.5/24, Error ellipse: s-maj=13.2km s-min=11.3km az=64.0*
*BJI **11** 06:51:36.2, 9°.50S×107°.60E, h15km, mB5.2/35, mb5.4/62, Ms5.0/65, Ms7 4.8/55*
*NEIC **11** 06:51:38.2±2.4, 9°.52S×107°.62E, h16km±14km, mb5.5/69, MS4.8/148, Error ellipse: s-maj=5.7km s-min=4.2km az=54.0*
*MOS **11** 06:51:39.6±1.2, 9°.47S×107°.59E, h33km, mb5.7/57, MS4.7/50, Error ellipse: s-maj=10.1km s-min=5.6km az=113.5*
*ISCJB **11** 06:51:40.4±0.5, 9°.49S±0°.03×107°.64E±0°.03, h45km±3km, mb5.5/161, MS4.8/185, Error ellipse: s-maj=4.6km s-min=3.9km az=36.3*
*DJA **11** 06:51:40, 9°.57S×107°.51E, h20km, Mw5.7/36*
*GCMT **11** 06:51:41.7±0.2, 9°.76S×107°.53E, h18km, MW5.3, Moment Tensor Solution. s76,c121; s28,c29; Moment tensor: Scale 10^{17}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{\phi r}$0.00; Best double couple: $M_0$1.20000×10^{17} NP1:ϕ_s123.00000°, δ33.00000°, λ-78.00000°. NP2: ϕ_s289.00000°, δ58.00000°, λ-98.00000°. Principal axes: T 1.3200, Plg13.0000°, Azm24.0000°; N -0.2600, Plg6.0000°, Azm293.0000°; P -1.0500, Plg76.0000°, Azm176.0000°; Data Used: IU II IC G CN. Surface waves: sta= 84, comp=157, per= 50.*

ISC 11 06:51:41.7±0.4, 9°.54S±0°.03×107°.62E±0°.03, h40km±3km, h36km±3.4km; pP-P, n875, σ1§05/434, mb5.5/160, MS4.8/185, 147C-168D, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLJI	**Cilicap**	**2.27**	**38**	P	**Pn**	**06 52 16.6**	**-0.2**
LEM	**Lembang**	**2.69**	**0**	P	**Pn**	**06 52 22.9**	**+0.4**
YOGI	**Yogyakarta**	**3.15**	**57**	P	**Pn**	**06 52 27.5**	**-1.3**
UGM	**Wanagama**	**3.30**	**61**	P	**Pn**	**06 52 29.5**	**-1.3**
CGJI	**Cibinong**	**3.47**	**327**	P	**Pn**	**06 52 31.8**	**-1.5**
TNG	**Tangerang**	**3.48**	**344**	P	**Pn**	**06 52 34.8**	**+1.5**
TNG				P		06 52 35.7	
SBJI	**Serang**	**3.70**	**336**	P	**Pn**	**06 52 36.3**	**-0.1**
SMRI	**Semarang**	**3.73**	**49**	P	**Pn**	**06 52 37.5**	**+0.7**
PCJI	**Pacitan**	**3.76**	**70**	P	**Pn**	**06 52 35.8**	**-1.4**
RBSI	**Rajabasa**	**4.11**	**333**	P	**Pn**	**06 52 41.4**	**-0.6**
NGJI	**Ngawi**	**4.37**	**61**	P	**Pn**	**06 52 47.4**	**+1.8**
PWJI	**Pagerwojo**	**4.41**	**70**	P	**Pn**	**06 52 46.2**	**+0.1**
SJI	**Sawahan**	**4.48**	**67**	P	**Pn**	**06 52 46.6**	**-0.5**
BLSI	**Bandar Lampung**	**4.76**	**330**	P	**Pn**	**06 52 50.5**	**-0.5**
KRKI	**Karangkates**	**4.97**	**74**	P	**Pn**	**06 52 54.9**	**+1.0**
KASI	**Kota Agung**	**5.05**	**322**	P	**Pn**	**06 52 53.4**	**-1.5**
	17nm555nm,0.5s						
KLI	**Kotabumi**	**5.39**	**329**	P	**Pn**	**06 52 59.6**	**0.0**
	5.4nm490nm,0.8s						
LWLI	**Liwa**	**5.71**	**322**	P	**Pn**	**06 53 03.7**	**-0.3**
	19nm895nm,0.5s						
GMJI	**Gumukmas**	**5.89**	**78**	P	**Pn**	**06 53 06.2**	**-0.3**
	3.4nm864nm,1.2s						
MDSI	**Maura Dua**	**6.07**	**326**	P	**Pn**	**06 53 07.3**	**-1.6**
	1.4nm4μm328nm,0.7s						
TPI	**Tanjungpandan**	**6.74**	**0**	P	**Pn**	**06 53 19.6**	**+1.5**
	1.4nm4μm396nm,1.0s						
KMMI	**Kalianget**	**6.75**	**69**	P	**Pn**	**06 53 23.9**	**+5.6**
	2.0nm6μm344nm,1.0s						
ABJI	**Asem Bagus**	**6.77**	**76**	P	**Pn**	**06 53 22.6**	**+4.1**
NBBI	**Negara**	**7.02**	**81**	P	**Pn**	**06 53 24.4**	**+2.4**
	8.7nm1μm,1.0s						
PMBI	**Palembang**	**7.15**	**337**	P	**Pn**	**06 53 25.4**	**+1.6**
	2.5nm472nm,0.9s						
SRBI	**Singaraja**	**7.64**	**80**	P	**Pn**

comp=Z,2μm,18.6s,baz=307,slow=35
FITZ Fitzroy Crossi 19.45 118 *e*P **Pn 06 56 05.0 -1.5**
113nm,1.0s
FITZ Fitzroy Crossi 19.45 118 P **Pn 06 56 07.4 +1.0**
5μm246nm,1.8s
MNI Manado 20.33 58 P **P 06 56 20.2 +5.6**
286nm,1.1s
NLAI Namlea 20.34 73 P **P 06 56 19.3 +4.5**
3μm251nm,1.3s
AAI Ambon 21.24 75 P **P 06 56 29.5 +5.0**
6μm451nm,1.3s,mb5.7
KNA Kununurra 21.53 109 P **P 06 56 27.2 -0.4**
1μm,1.0s,mb6.3
LBMI Labuha 21.67 67 P **P 06 56 34.0 +4.9**
6μm598nm,1.7s,mb5.8
TNTI Ternate 22.17 64 P **P 06 56 34.1 -0.4**
7μm572nm,1.8s,mb5.7
KLBR Kellerberrin 23.88 158 *e*P **P 06 56 49.2 -2.4**
65nm,0.8s,mb5.1
KLBR *e*S **S 07 01 06.1 +1.0**
DAV Davao City (W) 24.34 48 P **P 06 56 55.9 0.0**
281nm,0.4s,mb6.1,baz=234,slow=9.4,SNR=10
DAV LR LR 07 06 55.8
comp=Z,2μm,20.4s,MS4.5,baz=355,slow=38
DAV Davao City (W) 24.34 48⇑*e*P **P 06 56 54.3 -1.7**
KAKA Kakadu 24.56 100⇓*i*P **P 06 56 58.5 +0.6**
132nm,0.8s,mb5.5
KAKA *e*S **S 07 01 35.9 +20**
KAKA Kakadu 24.56 100 *e*P **P 06 56 59.2 +1.3**
494nm,0.8s,mb6.1
KAKA Kakadu 24.56 100 P **P 06 57 02.3 +4.4**
2μm320nm,0.8s,mb5.9
NWAO Narrogin (SRO) 24.91 161 P **P 06 56 59.6 -1.4**
110nm,0.9s,mb5.4,baz=334,slow=10,SNR=29
NWAO S **S 07 01 29.8 +8.1**
15nm,0.7s,baz=288,slow=19,SNR=2.2
NWAO LR LR 07 05 29.9
comp=Z,18nm,18.4s,baz=220,slow=34
NWAO Narrogin (SRO) 24.91 161 *e*P **P 06 56 59.5 -1.5**
NWAO pmax pmax
comp=Z,96nm,0.9s
NWAO MLR MLR
comp=Z,3μm,19.0s
NWAO Narrogin (SRO) 24.91 161 *e*P **P 06 56 59.5 -1.5**
comp=Z,96nm,0.9s,mb5.3
NWAO LR LR
comp=Z,3μm,19.0s,MS4.8
TBP Tagbilaran 25.03 41 *e*P **P 06 57 03.5 +1.3**
SWI Sorong 25.05 71 P **P 06 57 05.4 +2.9**
comp=Z,2μmcomp=Z,80nm,1.0s,mb5.2
NST Nakhon Sawan 26.12 343 P **P 06 57 04.5 -7.6**
comp=Z,96nm,1.0s,mb5.3
TGY Tagaytay City 26.95 30 P **P 06 57 18.0 -1.6**
comp=Z,101nm,0.3s,mb5.8,baz=264,slow=14,SNR=4.5
WRA Warramunga Arr 27.79 115 P **P 06 57 26.1 -1.1**
comp=Z,100nm,1.0s,mb5.4,baz=288,slow=10,SNR=204
WRA PcP PcP 07 00 42.7 -0.3
comp=Z,19nm,0.8s,baz=293,slow=2.3,SNR=13
WRA Warramunga Arr 27.79 115 P **P 06 57 26.1 -1.1**
WRA PcP PcP 07 00 42.7 -0.3
WRAB Tennant Creek 27.80 115 P **P 06 57 26.9 -0.3**
comp=Z,558nm,0.8s,mb6.2,SNR=28
WRAB Tennant Creek 27.80 115 *e*P **P 06 57 26.2 -1.0**
WRAB pmax pmax
comp=Z,160nm,1.2s,mb5.5
WRAB MLR MLR
comp=Z,2μm,20.0s,MS4.7
WRAB Tennant Creek 27.80 115 *e*P **P 06 57 26.2 -1.0**
comp=Z,160nm,1.2s,mb5.5
WRAB LR LR
comp=Z,2μm,20.0s,MS4.7
WRAB Tennant Creek 27.80 115 P **P 06 57 26.9 -0.3**
comp=Z,129nm,1.4s,mb5.3
BDT Bhumibol Dam 27.94 342 P **P 06 57 29.0 +0.6**
FORT Forrest 28.45 141 *e*P **P 06 57 31.2 -1.6**
comp=Z,22nm,0.8s,mb4.8
FORT *e*S S 07 02 49.4 +32
FORT Forrest 28.45 141 *e*P **P 06 57 31.6 -1.3**
comp=Z,34nm,0.9s,mb5.0
QIZ Qiongzhong 28.47 4 P **P 06 57 33.4 +0.3**
QIZ pP pP 06 57 37.6 -6.6
QIZ sP sP 06 57 40.9 -8.1
QIZ PP PP 06 58 27.3 -11
QIZ S **S 07 02 13.4 -4.6**
QIZ pmax pmax
comp=Z,37nm,1.9s,mb4.7
QIZ pmax pmax
comp=Z,380nm,10.6s
QIZ LR LR
comp=N,850nm,13.3s,MS4.5
QIZ LR LR
comp=E,410nm,16.9s,MS4.5
QIZ LR LR
comp=Z,1μm,15.1s,MS4.6
QIZ Qiongzhong 28.47 4 *e*P **P 06 57 33.1 0.0**
comp=Z,95nm,1.4s,mb5.2
QIZ LR LR
comp=Z,1μm,20.0s,MS4.5
ASAR Alice Springs 28.77 122 P **P 06 57 34.5 -1.3**
comp=Z,13nm,0.7s,mb4.8,baz=292,slow=7.9,SNR=70
ASAR PcP PcP 07 00 45.8 +0.5
comp=Z,31nm,1.0s,baz=307,slow=2.2,SNR=21
CM31 Chiang Mai Arr 29.10 343 *e*P **P 06 57 38.9 +0.2**
comp=Z,14nm,0.6s,mb4.9
CM31 LR LR
comp=Z,1μm,22.0s,MS4.4
CMAR Chiang Mai Arr 29.10 343 P **P 06 57 38.4 -0.4**
comp=Z,32nm,0.9s,mb5.0,baz=180,slow=8.6,SNR=23
CMAR PcP PcP 07 00 46.8 +0.6
comp=Z,8.5nm,1.0s,baz=199,slow=3.6,SNR=6.1
CMAR LR LR 07 10 39.7
comp=Z,1μm,19.5s,MS4.5,baz=318,slow=39
CMAR Chiang Mai Arr 29.10 343 P **P 06 57 38.4 -0.3**
CMAR 07 00 46.8
CHG Chiang Mai 29.44 343 ⇓P **P 06 57 41.0 -0.7**
comp=Z,85nm,1.1s,mb5.4
CHTO Chiang Mai 29.44 343 *e*P **P 06 57 41.1 -0.6**
CHTO *e* 07 00 48.0
CHTO pmax pmax
comp=Z,92nm,1.1s,mb5.4
CHTO MLR MLR
comp=Z,1μm,19.0s,MS4.6
CHTO Chiang Mai 29.44 343 *e*P **P 06 57 41.1 -0.6**
comp=Z,92nm,1.1s,mb5.4
CHTO *e*PcP PcP 07 00 48.0 +1.0
CHTO LR LR
comp=Z,1μm,19.0s,MS4.6
CHTO Chiang Mai 29.44 343 P **P 06 57 42.5 +0.8**
comp=Z,1μmcomp=Z,98nm,1.2s,mb5.4
CHTO Chiang Mai 29.44 343 P **P 06 57 41.7 0.0**
SNR=24
CHRT Chiangrai 30.22 345 ⇑P **P 06 57 49.0 +0.3**
comp=Z,184nm,1.0s,mb5.8
TWG Pinlang 34.75 22 *e*P **P 06 58 28.1 -0.2**
comp=Z,88nm,1.1s,mb5.6
KMI Kunming 34.77 352 P **P 06 58 30.5 +2.0**
KMI pP pP 06 58 33.8 -5.8
KMI sP sP 06 58 35.1 -9.3
KMI PP PP 06 59 48.6 +0.7
KMI S **S 07 04 01.5 +5.2**
KMI sS sS 07 04 07.1 -7.8
KMI pmax pmax
comp=Z,120nm,1.2s,mb5.7
KMI pmax pmax
comp=Z,280nm,8.6s
KMI LR LR
comp=N,3μm,14.7s,MS5.2
KMI LR LR
comp=E,2μm,15.7s,MS5.2
KMI LR LR
comp=Z,3μm,14.7s,MS5.1
DGAR Diego Garcia 34.83 271 PFAKE 06 58 40.0 +11
DGAR LR LR
comp=Z,2μm,20.0s,MS4.8
TPUB Ta-pu 35.03 21 *e*P **P 06 58 30.4 -0.3**
comp=Z,106nm,1.0s,mb5.7
COEN Coen 35.07 101 *e*P **P 06 58 31.1 -0.1**
comp=Z,688nm,1.0s,mb6.5
COEN *e*PcP PcP 07 01 03.5 +0.9
COEN Coen 35.07 101 P **P 06 58 32.1 +0.9**
comp=Z,325nm,1.0s,mb6.2
YULB Yu-li 35.36 22 *e*P **P 06 58 32.3 -1.2**
comp=Z,75nm,0.8s,mb5.7
SSLB Suanglung 35.59 21 *e*P **P 06 58 35.4 -0.1**
comp=Z,286nm,1.0s,mb6.2
GYA Guiyang 35.79 359⇑*i*P **P 06 58 39.8 +2.6**
GYA pP pP 06 58 45.7 -2.7
GYA PcP PcP 07 01 07.4 +3.0
GYA ScP ScP 07 04 51.5 +4.0
GYA pmax pmax
comp=Z,40nm,1.0s,mb5.3
GYA pmax pmax
comp=Z,420nm,5.9s
GYA LR LR
comp=N,3μm,17.3s,MS5.1
GYA LR LR
comp=E,2μm,18.0s,MS5.1
GYA LR LR
comp=Z,2μm,16.6s,MS4.9
QZH Quanzhou 35.90 17 *e*P **P 06 58 38.0 -0.2**
QZH S **S 07 04 09.0 -4.7**
QZH LR LR
comp=N,1μm,14.9s,MS4.8
QZH LR LR
comp=E,530nm,10.4s,MS4.8
QZH LR LR
comp=Z,1μm,18.1s
NACB Ninganchiao 36.18 22 *e*P **P 06 58 39.3 -1.2**
comp=Z,78nm,0.9s,mb5.6
NACB *e* pP 06 58 48.2 -3.5
YHNB Yeheng 36.55 21 *e*P **P 06 58 43.0 -0.7**
comp=Z,133nm,1.1s,mb5.7
TATO Taipei 36.87 21 *e*P **P 06 58 45.3 -1.1**
comp=Z,102nm,1.0s,mb5.6
SHL Shillong 38.11 337 *i* P **P 06 58 56.0 -0.9**
SHL *i x* x 07 04 44.0
STKA Stephens Creek 38.52 130⇓*i*P **P 06 58 59.8 -0.6**
comp=Z,92nm,0.9s,mb5.5
STKA *i* PCP PcP 07 01 13.0 +0.3
STKA Stephens Creek 38.52 130 P **P 06 58 59.8 -0.6**
comp=Z,154nm,1.0s,mb5.7,baz=302,slow=8.3,SNR=134
STKA PcP PcP 07 01 13.1 +0.4
comp=Z,26nm,0.7s,baz=309,slow=5.9,SNR=4.5
STKA LR LR 07 15 15.7
comp=Z,2μm,19.5s,MS4.9,baz=291,slow=37
STKA Stephens Creek 38.52 130 *e*P **P 06 58 60.0 -0.4**
comp=Z,36nm,1.0s,mb5.0
STKA *e*PcP PcP 07 01 12.5 -0.2
CTA Charters Tower 38.71 110⇓*i*P **P 06 59 02.5 +0.4**
comp=Z,58nm,0.7s,mb5.4
CTA *e*PCP PcP 07 01 12.5 -1.0
CTAO Charters Tower 38.71 110 *e*P **P 06 59 02.7 +0.6**
CTAO *e* 07 01 13.7
CTAO pmax pmax
comp=Z,109nm,0.9s,mb5.6
CTAO MLR MLR
comp=Z,1μm,20.0s,MS4.7
CTAO Charters Tower 38.71 110 *e*P **P 06 59 02.7 +0.6**
comp=Z,109nm,0.9s,mb5.6
CTAO *e*PcP PcP 07 01 13.7 +0.1
CTAO LR LR
comp=Z,1μm,20.0s,MS4.7
CTAO Charters Tower 38.71 110 P **P 06 59 03.2 +1.1**
comp=Z,2μmcomp=Z,166nm,1.2s,mb5.6
PMG Port Moresby 38.99 93*c i*P **P 06 59 05.5 +1.0**
PMG Port Moresby 38.99 93 *e*P **P 06 59 05.8 +1.3**
comp=Z,74nm,1.1s,mb5.3
PMG *e*PcP PcP 07 01 15.6 +1.1
PMG LR LR
comp=Z,897nm,21.0s,MS4.6
PMG Port Moresby 38.99 93 P **P 06 59 07.2 +2.7**
comp=Z,1μmcomp=Z,66nm,1.6s,mb5.1
HYB Hyderabad 39.27 313 *e*P **P 06 59 06.5 -0.3**
HYB pmax pmax
comp=Z,70nm,1.0s,mb5.3
HYB Hyderabad 39.27 313 *e*P **P 06 59 06.5 -0.3**
comp=Z,70nm,1.0s,mb5.3
HYB Hyderabad 39.27 313⇑*i*P **P 06 59 06.5 -0.3**
comp=Z,35nm,1.0s,mb5.0
HYB *e*S **S 07 05 10.0 +5.0**
ENH Enshi 39.62 3 *e*P **P 06 59 09.4 -0.1**
comp=Z,161nm,1.1s,mb5.7
ENH LR LR
comp=Z,1μm,20.0s,MS4.7
WHN Wuhan 40.37 9 P **P 06 59 16.4 +0.7**
WHN pP pP 06 59 22.6 -4.4
WHN S **S 07 05 22.6 +1.5**
WHN LR LR
comp=N,1μm,15.0s,MS5.1
WHN LR LR
comp=E,2μm,15.0s,MS5.1
WHN LR LR
comp=Z,3μm,16.8s,MS5.2
CD2 Chengdu 40.38 355 P **P 06 59 14.7 -1.1**
CD2 pP pP 06 59 19.2 -7.9
CD2 PP PP 07 00 52.0 +2.6
CD2 S **S 07 05 23.6 +2.3**
CD2 sS sS 07 05 31.0 -9.1
CD2 SS SS 07 08 18.2 -3.4
CD2 pmax pmax
comp=Z,170nm,1.2s,mb5.7
CD2 pmax pmax
comp=Z,330nm,10.1s
CD2 LR LR
comp=N,1μm,14.3s
CD2 LR LR
comp=Z,1μm,17.2s,MS4.9
ODAN Odare 41.16 332 *e*P **P 06 59 22.8 +0.5**
comp=Z,167nm,0.7s,mb5.8
TAPN Taplejung 41.44 333 *e*P **P 06 59 25.5 +1.0**
comp=Z,196nm,0.9s,mb5.7
NGP Nagpur 41.44 318 *ex* PP 07 00 55.1 -6.0
NGP AMb AMB 07 00 56.7
comp=Z,90nm,0.8s,mb5.4
RAMN Ramite 41.61 331 *e*P **P 06 59 26.6 +0.6**
comp=Z,216nm,1.1s,mb5.7
LSA Lhasa 42.11 338 P **P 06 59 34.1 +4.1**
LSA S **S 07 05 39.8 -7.2**
LSA SS SS 07 08 52.2 -3.7
LSA pmax pmax
comp=Z,90nm,0.9s,mb5.4
LSA pmax pmax
comp=Z,360nm,5.0s
LSA LR LR
comp=N,390nm,18.0s,MS4.7
LSA LR LR
comp=E,830nm,15.0s,MS4.7
LSA LR LR
comp=Z,560nm,20.0s,MS4.4
LSA Lhasa 42.11 338 *e*P **P 06 59 31.0 +1.0**
LSA *e*S **S 07 05 47.0 0.0**
LSA pmax pmax
comp=Z,66nm,0.8s,mb5.3
LSA MLR MLR
comp=Z,555nm,19.0s,MS4.5
LSA Lhasa 42.11 338 *e*P **P 06 59 31.0 +1.0**
comp=Z,66nm,0.8s,mb5.3
LSA *e*S **S 07 05 47.0 0.0**
LSA LR LR
comp=Z,555nm,19.0s,MS4.5
JIRN Jiri 42.40 331 *e*P **P 06 59 33.4 +1.0**
comp=Z,114nm,0.7s,mb5.6
SSE Sheshan 42.45 17 *e*P **P 06 59 30.3 -2.4**
SSE pP pP 06 59 39.1 -5.0
SSE sP sP 06 59 43.2 -5.7
SSE PcP PcP 07 01 23.6 -1.7
SSE S **S 07 05 48.3 -3.6**
SSE sS sS 07 06 05.3 -5.4
SSE pmax pmax
comp=Z,29nm,0.7s,mb5.0
SSE pmax pmax
comp=Z,140nm,6.1s
SSE LR LR
comp=N,370nm,19.0s,MS4.3
SSE LR LR
comp=E,59nm,18.9s,MS4.3
SSE LR LR
comp=Z,460nm,16.2s,MS4.5
KAD Karad 42.47 309 *e*PKP **P 06 59 34.3 +1.2**
KAD AMb AMB 06 59 41.9
comp=Z,64nm,1.8s,mb5.0
AKL Akola 42.52 315 *e*PKP **P 06 59 33.6 0.0**
AKL AMb AMB 06 59 42.7
comp=Z,71nm,0.9s,mb5.4
PKI Pulchoki 42.70 330 *e*P **P 06 59 35.2 +0.3**
comp=Z,131nm,1.0s,mb5.6
PKIN Phulchoki 42.71 330 *e*P **P 06 59 35.4 +0.4**
comp=Z,64nm,0.8s,mb5.4
NJ2 Nanjing 42.73 14 *e*P **P 06 59 35.2 +0.2**
NJ2 pP pP 06 59 39.9 -6.5
NJ2 sP sP 06 59 42.0 -9.1
NJ2 S **S 07 05 55.5 -0.5**
NJ2 pmax pmax
comp=Z,30nm,0.8s,mb5.1
NJ2 pmax pmax
comp=Z,190nm,6.8s
NJ2 LR LR
comp=N,370nm,17.3s,MS4.5
NJ2 LR LR
comp=E,390nm,14.2s,MS4.5
NJ2 LR LR
comp=Z,990nm,16.0s,MS4.8
GUN Gumba 42.76 331 *e*P **P 06 59 36.2 +0.8**
comp=Z,316nm,1.1s,mb6.0
DMN Daman 42.88 330 *e*P **P 06 59 36.7 +0.3**
comp=Z,213nm,0.9s,mb5.9
KKN Kakani 42.95 330 *e*P **P 06 59 37.4 +0.5**
comp=Z,174nm,0.9s,mb5.8
XAN Xi'an 43.35 2 P **P 06 59 39.5 -0.5**
XAN pP pP 06 59 47.9 -3.5
XAN sP sP 06 59 53.2 -3.0
XAN S **S 07 06 03.3 -1.8**
XAN sS sS 07 06 20.9 -3.1
XAN pmax pmax
comp=Z,32nm,1.4s,mb4.9
XAN pmax pmax
comp=Z,60nm,5.3s
XAN LR LR
comp=N,720nm,17.0s,MS4.7
XAN LR LR
comp=E,300nm,17.0s,MS4.7
XAN LR LR
comp=Z,410nm,21.3s,MS4.3
GKN Gorkha 43.44 330 *e*P **P 06 59 41.3 +0.4**
comp=Z,86nm,0.4s,mb5.8
POO Poona 43.45 310 *e*PKP **P 06 59 40.0 -1.1**
GUMO Guam 43.53 59 PFAKE 06 59 50.0 +8.2
GUMO LR LR
comp=Z,392nm,19.0s,MS4.3
BHPL Bhopal 43.98 318 *e*PKP **P 06 59 45.6 +0.4**
TOO Toolangi 44.06 135⇓*i*P **P 06 59 46.6 +0.8**
EIDS Eidsvold 44.13 117 *e*P **P 06 59 47.2 +0.7**
comp=Z,38nm,1.0s,mb5.1
EIDS *e*PcP PcP 07 01 31.4 +0.2
LZH Lanzhou 45.52 356⇑P **P 06 59 58.0 +0.7**
LZH pP pP 07 00 05.0 -3.7
LZH sP sP 07 00 09.1 -4.4
LZH PP PP 07 01 45.6 +1.1
LZH S **S 07 06 40.1 +3.6**
LZH sS sS 07 06 51.8 -3.7
LZH SS SS 07 09 56.0 -5.1
LZH pmax pmax
comp=Z,120nm,1.5s,mb5.6
LZH pmax pmax
comp=Z,410nm,5.4s
LZH LR LR
comp=N,990nm,14.0s
LZH LR LR
comp=Z,2μm,17.0s,MS5.1
CAN Canberra 45.58 131 PFAKE 07 00 10.0 +12
CAN LR LR
comp=Z,2μm,21.0s,MS4.9
ARMA Armidale 45.92 123 *e*P **P 07 00 01.9 +1.2**
comp=Z,31nm,0.9s,mb5.2
TIA Tai'an 46.38 11 P **P 07 00 03.0 -1.1**
TIA pmax pmax
comp=Z,62nm,0.8s,mb5.6
PTH Pithoragarh 46.98 327 *e*PKP **P 07 00 08.2 -0.7**
SONA Sohna 47.78 323 *e*PKP **P 07 00 14.8 -0.4**
SONA AMb AMB 07 00 19.1
comp=Z,124nm,1.0s,mb5.9
BISR Bishrakh 47.80 323 *e*PKP **P 07 00 15.4 +0.1**
NDI New Delhi 48.02 323 *e*PKP **P 07 00 15.0 -2.0**
NDI *ex* x 07 07 12.0
AJM Ajmer 48.03 319 *e*PKP **P 07 00 17.6 +0.5**
AJM AMb AMB 07 00 23.2
comp=Z,48nm,1.8s,mb5.2
JOSI Joshimath 48.12 327 *e*PKP **P 07 00 17.9 +0.1**
KHET Khetri 48.42 321 *e*PKP **P 07 00 19.9 -0.2**
DDI Dehra Dun 48.76 325 *e*PKP **P 07 00 23.5 +0.8**
DDI *ex* x 07 02 17.0
GTA Gaotai 49.23 352 P **P 07 00 27.0 +0.9**
GTA pP pP 07 00 31.1 -6.6
GTA sP sP 07 00 34.5 -7.9
GTA PP PP 07 02 21.2 +0.8
GTA S **S 07 07 31.0 +1.7**
GTA ScS ScS 07 10 14.3 -0.6
GTA SS SS 07 10 57.3 -4.1
GTA pmax pmax
comp=Z,91nm,1.3s,mb5.7
GTA pmax pmax
comp=Z,440nm,5.9s
GTA LR LR
comp=N,1μm,20.5s,MS5.1
GTA LR LR
comp=E,2μm,21.1s,MS5.1
GTA LR LR
comp=Z,1μm,19.6s,MS4.9
KLP Kalpa 49.58 327 *e*PKP **P 07 00 29.3 +0.4**
KLP AMb AMB 07 00 33.3
comp=Z,42nm,0.6s,mb5.7
BJT Baijiatuau 49.94 9 *e*P **P 07 00 31.7 +0.2**
BJT pmax pmax
comp=Z,128nm,0.9s
BJT MLR MLR
comp=Z,897nm,19.0s
BJT Baijiatuau 49.94 9 *e*P **P 07 00 31.6 +0.2**
comp=Z,128nm,0.9s,mb6.0
BJT LR LR
comp=Z,897nm,19.0s,MS4.8
BJI Beijing 49.96 9 P **P 07 00 31.6 -0.1**
BJI PP PP 07 02 25.1 -1.9
BJI S **S 07 07 45.7 +6.3**
BJI pmax pmax
comp=Z,130nm,0.9s,mb6.0
BJI pmax pmax
comp=Z,350nm,3.8s
BJI LR LR
comp=N,750nm,17.9s,MS4.9
BJI LR LR
comp=E,860nm,17.3s,MS4.9
BJI LR LR
comp=Z,620nm,19.8s,MS4.6
INCN Inchon 50.05 20 PFAKE 07 00 40.0 +7.6
INCN LR LR
comp=Z,329nm,19.0s,MS4.4
SDNR Sundarnagar 50.26 326 *e*PKP **P 07 00 33.5 -0.6**
HHC Hu-ho-hao-te 50.27 4 *e*P **P 07 00 33.4 -0.6**
HHC PcP PcP 07 01 51.5 -1.0
HHC PP PP 07 02 29.6 -0.2
HHC PcS PcS 07 05 47.2 -2.3
HHC S **S 07 07 45.7 +2.1**
HHC ScS ScS 07 10 20.8 -1.1
HHC SS SS 07 11 16.9 -1.0
HHC pmax pmax
comp=Z,48nm,1.1s,mb5.4
HHC pmax pmax
comp=Z,300nm,8.9s
HHC LR LR
comp=N,940nm,15.3s,MS5.0
HHC LR LR
comp=E,710nm,15.1s,MS5.0
HHC LR LR
comp=Z,820nm,15.6s,MS4.8
JASL Jaisalmer 50.81 316 *e*PKP **P 07 00 38.5 +0.1**
RER Riviere de l'E 51.13 251 *e*P **P 07 00 41.7 +0.8**
comp=Z,100nm,0.9s,mb5.8
THN Thein Dam 51.66 325 *e*PKP **P 07 00 43.1 -1.6**
MSEY Mahe Island 51.92 272 PFAKE 07 01 00.0 +13
MSEY LR LR
comp=Z,846nm,19.0s,MS4.8
SNY Shenyang 53.17 15⇑P **P 07 00 53.9 -1.8**
SNY S **S 07 08 19.1 -4.5**
SNY pmax pmax
comp=Z,26nm,1.6s,mb4.9
SNY pmax pmax
comp=Z,340nm,10.2s
SNY LR LR
comp=N,750nm,18.6s
SNY LR LR
comp=Z,700nm,20.4s,MS4.7
MAT Matsushiro 54.11 30 P **P 07 01 00.3 -2.4**
MAT S **S 07 08 32.0 -4.5**
MAJO Matsushiro 54.11 30 *e*P **P 07 00 59.8 -2.9**
MAJO pmax pmax
comp=Z,27nm,1.0s,mb5.1
MAJO MLR MLR
comp=Z,396nm,21.0s,MS4.5

MAJO Matsushiro 54.11 30 *e*P **P 07 00 59.8 -2.8**
comp=Z,27nm,1.0s,mb5.1
MAJO LR LR
comp=Z,396nm,21.0s,MS4.5
MJAR Matsushiro Arr 54.11 30 P **P 07 01 00.1 -2.6**
comp=Z,12nm,0.9s,mb4.8,baz=213,slow=7.3,SNR=30
MJAR PcP PcP 07 02 07.3 +0.3
comp=Z,5.6nm,0.8s,baz=206,slow=5.4,SNR=4.3
MJAR ScP ScP 07 06 04.2 +2.0
comp=Z,0.4nm,0.3s,baz=201,slow=4.8,SNR=4.2
MJAR LR LR 07 24 57.6
comp=Z,348nm,19.7s,MS4.4,baz=225,slow=37
MJAR Matsushiro Arr 54.11 30 P **P 07 01 00.1 -2.6**
MJAR 07 02 07.3
CN2 Changchun 55.50 16 *e*P **P 07 01 11.9 -0.7**
CN2 *e*pP pP 07 01 24.0 -0.3
CN2 *e*S **S 07 08 50.4 -4.6**
CN2 pmax pmax
comp=Z,20nm,1.2s,mb5.0
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,500nm,18.0s,MS4.8
CN2 LR LR
comp=E,600nm,18.0s,MS4.8
CN2 LR LR
comp=Z,400nm,20.0s,MS4.5
WMQ Urumqi 56.10 343 P **P 07 01 18.0 +1.1**
WMQ pP pP 07 01 22.6 -6.0
WMQ sP sP 07 01 25.0 -8.3
WMQ PcP PcP 07 02 16.0 +1.4
WMQ PP PP 07 03 24.4 +2.0
WMQ S **S 07 09 04.7 +1.7**
WMQ ScS ScS 07 11 03.2 +0.4
WMQ SS SS 07 12 51.0 +0.9
WMQ pmax pmax
comp=Z,120nm,1.0s,mb5.9
WMQ pmax pmax
comp=Z,61nm,6.2s
WMQ LR LR
comp=N,370nm,20.0s,MS4.7
WMQ LR LR
comp=E,610nm,22.4s,MS4.7
WMQ LR LR
comp=Z,450nm,18.5s,MS4.6
CASY Casey 56.70 179⇓ *i*P **P 07 01 19.1 -1.7**
CASY Casey 56.70 179 *e*P **P 07 01 19.6 -1.3**
comp=Z,34nm,0.9s,mb5.4
CASY *e* pP 07 01 32.9 +0.4
CASY LR LR
comp=Z,1μm,20.0s,MS5.1
KSH Kashi 56.96 331 P **P 07 01 21.6 -1.5**
KSH S **S 07 09 10.2 -4.2**
KSH LR LR
comp=N,920nm,18.2s,MS5.1
KSH LR LR
comp=E,1μm,21.4s,MS5.1
KSH Kashi 56.96 331 P **P 07 01 21.7 -1.4**
KSH PcP PcP 07 02 17.7 -0.3
KSH PP PP 07 03 30.0 -0.1
KSH PcS PcS 07 06 16.7 -2.1
KSH S **S 07 09 11.8 -2.6**
KSH SS SS 07 12 59.2 -4.5
KSH pmax pmax
comp=Z,51nm,1.3s,mb5.4
KSH pmax pmax
comp=Z,140nm,4.0s
KSH LR LR
comp=N,920nm,18.2s
KSH LR LR
comp=E,320nm,10.3s
KSH LR LR
comp=Z,480nm,21.5s,MS4.6
KBL Kabul 57.06 322 *e*P **P 07 01 23.4 -0.5**
KBL pmax pmax
comp=Z,46nm,1.2s,mb5.4
KBL Kabul 57.06 322 *e*P **P 07 01 23.4 -0.5**
comp=Z,46nm,1.2s,mb5.4
SONM Songino Array 57.13 359 P **P 07 01 24.5 +0.5**
comp=Z,19nm,0.7s,mb5.2,baz=172,slow=8.2,SNR=65
SONM LR LR 07 28 37.1
comp=Z,1μm,19.9s,MS4.9,baz=171,slow=39
SONM PKPPKP 07 31 06.3
comp=Z,0.9nm,0.9s,baz=281,slow=0.7,SNR=4.0
ULN Ulaanbaatar 57.15 360 *e*P **P 07 01 24.4 +0.2**
ULN *e* pP 07 01 38.2 +2.2
ULN pmax pmax
comp=Z,43nm,0.9s,mb5.5
ULN MLR MLR
comp=Z,924nm,21.0s,MS4.9
ULN Ulaanbaatar 57.15 360 *e*P **P 07 01 24.4 +0.2**
comp=Z,44nm,0.9s,mb5.5
ULN *e* pP 07 01 38.2 +2.2
ULN LR LR
comp=Z,924nm,21.0s,MS4.9
ULN Ulaanbaatar 57.15 360 P **P 07 01 25.1 +0.9**
comp=Z,468nmcomp=Z,47nm,0.9s,mb5.5
ULN Ulaanbaatar 57.15 360 P **P 07 01 24.9 +0.7**
SNR=30
MDJ Mudanjiang 57.45 18 P **P 07 01 25.4 -1.0**
MDJ PcP PcP 07 02 19.7 -0.1
MDJ PP PP 07 03 33.2 -1.2
MDJ S **S 07 09 16.0 -4.7**
MDJ ScS ScS 07 11 16.3 +3.7
MDJ SS SS 07 13 13.3 +2.1
MDJ pmax pmax
comp=Z,14nm,1.3s,mb4.8
MDJ pmax pmax
comp=Z,160nm,9.5s
MDJ LR LR
comp=N,330nm,21.1s,MS4.5
MDJ LR LR
comp=E,150nm,20.4s,MS4.5
MDJ LR LR
comp=Z,380nm,16.6s,MS4.6
MDJ Mudanjiang 57.45 18 *e*P **P 07 01 25.4 -1.0**
comp=Z,5.0nm,0.4s,mb4.9
MDJ LR LR
comp=Z,377nm,22.0s,MS4.5
DZM Mont Dzumac 57.65 110 *e*P **P 07 01 29.1 +0.7**
comp=Z,57nm,1.1s,mb5.5
DZM *e*S **S 07 09 22.5 -1.8**
comp=Z,201nm,23.9s
DZM *e*LR LR 07 18 26.5
comp=Z,973nm,22.9s
MIR Mirnyy 57.80 187⇓ *i*P **P 07 01 28.4 -0.2**
MIR pmax pmax
comp=Z,138nm,1.2s,mb5.9
MIR pmax pmax
comp=Z,500nm,5.0s
SMDO Samad 58.32 305 P **P 07 01 33.9 +0.9**
SNR=6.7
ULHL Ulahol 59.00 333 P **P 07 01 35.4 -1.9**
SNR=17
ABPO Ambohimpanom 59.04 254 *e*P **P 07 01 38.4 +0.3**
ABPO *e* 07 01 52.7
ABPO pmax pmax
comp=Z,95nm,1.4s,mb5.6
ABPO MLR MLR
comp=Z,554nm,20.0s,MS4.7
ABPO Ambohimpanom 59.04 254 *e*P **P 07 01 38.4 +0.3**
comp=Z,95nm,1.4s,mb5.6
ABPO *e* pP 07 01 52.7 +2.8
ABPO LR LR
comp=Z,554nm,20.0s,MS4.7
OPO Ambohidratompo 59.08 254 P **P 07 01 39.6 +1.2**
comp=Z,32nm,1.1s,mb5.3,baz=81,slow=5.0,SNR=19
HOQ Hoqain 59.17 305 P **P 07 01 39.7 +0.9**
SNR=8.8
KZA Kyzart 59.31 332 P **P 07 01 40.3 +0.8**
SNR=42
HIA Hailar 59.51 9 *e*P **P 07 01 40.2 -0.5**
HIA pmax pmax
comp=Z,36nm,1.3s
HIA MLR MLR
comp=Z,673nm,22.0s
HIA Hailar 59.51 9 *e*P **P 07 01 40.2 -0.5**
comp=Z,36nm,1.3s,mb5.2
HIA LR LR
comp=Z,673nm,22.0s,MS4.7
UCH Uchtor 59.77 332 P **P 07 01 46.6 +4.0**
SNR=6.4
UCH Uchtor 59.77 332 *e*P **P 07 01 45.7 +3.1**
comp=Z,55nm,1.6s,mb5.3
TKM2 Tokmak 2 59.82 333 P **P 07 01 42.9 -0.1**
SNR=42
TKM2 Tokmak 2 59.82 333 PFAKE 07 02 00.0 +17
TKM2 LR LR
comp=Z,470nm,22.0s,MS4.6
KBK Karagaybulak 59.91 333 P **P 07 01 47.2 +3.7**
SNR=8.1
AML Almayashu 60.08 331 P **P 07 01 45.0 +0.2**
SNR=24
AML Almayashu 60.08 331 *e*P **P 07 01 44.9 +0.2**
comp=Z,25nm,0.9s,mb5.2
AML LR LR
comp=Z,440nm,21.0s,MS4.6
AAK Ala-Archa 60.09 332 P **P 07 01 48.0 +3.1**
comp=Z,130nm,1.4s,mb5.8,SNR=5.5
AAK Ala-Archa 60.09 332 P **P 07 01 48.7 +3.8**
SNR=8.8
AAK Ala-Archa 60.09 332 P **P 07 01 45.4 +0.6**
comp=Z,2.6nm,0.4s,mb4.6,baz=144,slow=7.4,SNR=24
AAK PcP PcP 07 02 30.8 +0.5
comp=Z,5.2nm,0.7s,baz=168,slow=3.3,SNR=4.6
AAK Ala-Archa 60.09 332 P **P 07 01 45.4 +0.6**
AAK PcP PcP 07 02 30.8 +0.5
AAK LR LR
comp=Z,661nm,22.0s,MS4.7
FRU Bishkek 60.20 333 *e*P **P 07 01 47.5 +2.0**
FRU pmax pmax
comp=Z,95nm,1.8s,mb5.5
CHMS Chumysh 60.27 333 P **P 07 01 48.9 +2.9**
SNR=6.0
EKS2 Erkin-Say 60.45 332 P **P 07 01 47.9 +0.7**
SNR=31
EKS2 Erkin-Say 60.45 332 *e*P **P 07 01 47.4 +0.2**
comp=Z,35nm,1.0s,mb5.3
EKS2 LR LR
comp=Z,520nm,20.0s,MS4.7
MK31 Makanchi Array 60.46 340 *i*P **P 07 01 47.3 0.0**
MK31 pmax pmax
comp=Z,37nm,0.6s,mb5.6
MK31 Makanchi Array 60.46 340 *e*P **P 07 01 47.1 -0.1**
MKAR Makanchi Array 60.46 340 P **P 07 01 47.4 +0.1**
comp=Z,50nm,0.6s,mb5.7,baz=149,slow=7.8,SNR=183
MKAR PKPPKP 07 31 05.3
comp=Z,0.7nm,1.0s,baz=307,slow=0.6,SNR=4.4
MKAR LR LR 07 31 50.9
comp=Z,539nm,20.0s,MS4.7,baz=154,slow=40
MKAR Makanchi Array 60.46 340 P **P 07 01 47.4 +0.1**
MKAR P'P' 07 31 05.3
MKAR LR LR 07 31 50.9
USP Ospenovka 60.59 333 P **P 07 01 51.4 +3.2**
SNR=13
ERM Erimo 60.77 30 *e*P **P 07 01 50.1 +0.6**
ERM pmax pmax
comp=Z,40nm,1.3s,mb5.4
ERM MLR MLR
comp=Z,227nm,22.0s,MS4.3
ERM Erimo 60.77 30 *e*P **P 07 01 50.1 +0.6**
comp=Z,40nm,1.3s,mb5.4
ERM LR LR
comp=Z,227nm,22.0s,MS4.3
TLY Talaya 61.06 357 *e*P **P 07 01 50.3 -0.9**
TLY *e* 07 02 33.4
TLY *e* 07 04 13.4
TLY *e*S **S 07 10 03.3 -3.9**
TLY *e*PS 07 10 41.7
TLY *e* 07 11 32.1
TLY pmax pmax
comp=Z,23nm,1.5s,mb5.1
TLY MLR MLR
comp=Z,606nm,20.0s,MS4.8
TLY Talaya 61.06 357 *e*P **P 07 01 50.2 -1.0**
comp=Z,18nm,1.2s,mb5.1
TLY LR LR
comp=Z,666nm,21.0s,MS4.8
TLY Talaya 61.06 357 P **P 07 01 50.9 -0.4**
SNR=9.3
DRV Dumont d'Urvil 61.13 166 P **P 07 01 49.0 -2.6**
DRV S **S 07 10 20.0 +12**
MOY Mondy 61.22 355 *e*P **P 07 01 53.1 +0.8**
MOY pmax pmax
comp=Z,55nm,2.1s,mb5.3
IRK Irkutsk 61.60 358 *e*P **P 07 01 54.6 -0.2**
IRK *e*S **S 07 10 17.3 +3.4**
IRK pmax pmax
comp=Z,32nm,1.6s,mb5.2
KLR Kul'dur 62.24 18 *e*P **P 07 01 54.0 -5.2**
KLR *e*S **S 07 10 15.0 -7.2**
KLR pmax pmax
comp=E,28nm,1.6s
KLR pmax pmax
comp=Z,62nm,1.6s,mb5.5
KK31 Karatay Array 62.35 330 *i*P **P 07 01 59.6 -0.5**
KK31 pmax pmax
comp=Z,2.0nm,0.4s,mb4.6
HABR Khabarovsk 62.63 20 *e*P **P 07 01 59.4 -2.5**
HABR *e*PP pP 07 02 09.2 -4.5
HABR 07 02 39.4
HABR *e* 07 04 15.8
HABR *e*S **S 07 10 24.5 -2.6**
HABR *e* 07 11 48.4
HABR pmax pmax
comp=E,46nm,1.0s
HABR pmax pmax
comp=Z,63nm,1.0s,mb5.7
HABR pmax pmax
comp=N,26nm,0.9s
HABR MLR MLR
comp=Z,332nm,19.0s,MS4.5
YUK Yuzh-Kuril'sk 63.59 30⇓ *i*P **P 07 02 13.0 +4.6**
YUK pmax pmax
comp=Z,125nm,10.0s
YUK pmax pmax
comp=N,56nm,5.2s
YUK pmax pmax
comp=E,50nm,5.2s
YUK MLR MLR
comp=N,450nm,19.0s
YUK MLR MLR
comp=Z,270nm,19.0s,MS4.5
YSS Yuzh-Sakhalins 64.36 26⇑ *i*P **P 07 02 12.2 -1.2**
YSS *e*S **S 07 10 46.0 -2.8**
YSS pmax pmax
comp=Z,90nm,1.0s,mb5.8
YSS MLR MLR
comp=N,400nm,17.0s,MS4.9
YSS MLR MLR
comp=E,500nm,17.0s,MS4.9
YSS MLR MLR
comp=Z,300nm,17.0s,MS4.5
YSS Yuzh-Sakhalins 64.36 26 *e*P **P 07 02 12.8 -0.5**
comp=Z,114nm,1.0s,mb5.9
YSS LR LR
comp=Z,128nm,22.0s,MS4.1
KURK Kurchatov 65.08 340 P **P 07 02 18.7 +0.8**
comp=Z,516nm,1.4s,mb6.4,SNR=58
KURK Kurchatov 65.08 340 *de*P **P 07 02 18.0 +0.1**
KURK pmax pmax
comp=Z,131nm,1.2s,mb5.8
KURK Kurchatov 65.08 340 *e*P **P 07 02 17.9 0.0**
comp=Z,108nm,1.0s,mb5.8
KURK LR LR
comp=Z,852nm,19.0s,MS5.0
KURK Kurchatov 65.08 340 P **P 07 02 18.5 +0.6**
SNR=57
MAW Mawson 65.13 197⇓ *i*P **P 07 02 17.9 -0.2**
comp=Z,95nm,0.8s,mb5.9
MAW Mawson 65.13 197 P **P 07 02 18.0 -0.1**
comp=Z,168nm,1.0s,mb6.0,baz=48,slow=6.5,SNR=77
MAW LR LR 07 26 22.8
comp=Z,489nm,18.8s,MS4.7,baz=201,slow=32
MAW Mawson 65.13 197 *e*P **P 07 02 17.9 -0.2**
MAW pmax pmax
comp=Z,33nm,0.9s
MAW Mawson 65.13 197 *e*P **P 07 02 17.9 -0.2**
comp=Z,33nm,0.9s,mb5.4
ABKT Ailbek 66.06 319 P **P 07 02 24.9 +0.4**
comp=Z,408nm,1.1s,mb6.4,SNR=12
ZALV Zalesovo Beam 66.12 345 P **P 07 02 24.1 -0.5**
comp=Z,12nm,0.3s,mb5.4,baz=157,slow=6.1,SNR=62
ZALV PKPPKP 07 30 58.4
comp=Z,0.5nm,0.3s,baz=282,slow=1.4,SNR=3.5
ZALV LR LR 07 33 53.1
comp=Z,297nm,18.9s,MS4.5,baz=315,slow=38
ZALV Zalesovo Beam 66.12 345 P **P 07 02 24.1 -0.5**
ZALV P'P' 07 30 58.4
ZALV LR LR 07 33 53.1
SNZO South Karori 66.58 131 PFAKE 07 02 40.0 +12
SNZO LR LR
comp=Z,1μm,19.0s,MS5.1
NVS Novosibirsk 67.33 345 *e*P **P 07 02 32.8 +0.5**
NVS *e* 07 11 22.3
NVS pmax pmax
comp=Z,45nm,1.5s,mb5.3
NVS pmax pmax
comp=N,57nm,1.7s
NVS pmax pmax
comp=E,36nm,1.6s
CLNS Chul'man 67.66 10 *e*P **P 07 02 34.1 -0.2**
CLNS *e* 07 02 58.1
CLNS *e* 07 05 01.3
CLNS *e*PPP 07 06 45.1
CLNS *e* 07 12 03.8
CLNS *e**SS SKSac 07 12 31.4 +2.6
CLNS pmax pmax
comp=E,16nm,0.9s
CLNS pmax pmax
comp=Z,36nm,1.1s,mb5.3
CLNS pmax pmax
comp=N,35nm,1.5s
CLNS pmax pmax
comp=N,9.0nm,1.0s
CLNS pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
CLNS pmax pmax
comp=E,12nm,0.8s
ATD Arta Tunnel 67.70 287 P **P 07 02 35.5 0.0**
comp=E,14nm,0.8s,mb5.0,baz=137,slow=22,SNR=5.1
MSVF Nonsavu 68.61 105 PFAKE 07 02 50.0 +8.8
MSVF LR LR
comp=Z,729nm,20.0s,MS4.9
VOSK Vostochnaya 69.47 337 P **P 07 02 45.6 -0.1**
VOSK pmax pmax
comp=Z,58nm,1.2s,mb5.4
BVAR Borovoye Array 69.93 337 P **P 07 02 48.2 -0.3**
comp=Z,32nm,0.6s,mb5.5,baz=140,slow=7.8,SNR=94
BVAR PKP2bc 07 30 49.5
comp=Z,0.2nm,0.3s,baz=318,slow=1.9,SNR=3.7
BVAR Borovoye Array 69.93 337 P **P 07 02 48.2 -0.3**
BVAR *e* 07 30 49.5
BRVK Borovoye 69.99 337 P **P 07 02 49.3 +0.4**
comp=Z,285nm,1.2s,mb6.1,SNR=8.1
BRVK Borovoye 69.99 337 *e*P **P 07 02 48.8 -0.1**
BRVK pmax pmax
comp=Z,72nm,1.1s,mb5.5
BRVK MLR MLR
comp=Z,603nm,21.0s,MS4.8
BRVK Borovoye 69.99 337 *e*P **P 07 02 48.8 -0.1**
comp=Z,72nm,1.1s,mb5.5
BRVK LR LR
comp=Z,603nm,21.0s,MS4.8
BRVK Borovoye 69.99 337 P **P 07 02 49.3 +0.4**
SNR=29
KMBO Kilima Mbogo 70.45 272 P **P 07 02 53.7 +1.1**
comp=Z,29nm,0.9s,mb5.2,baz=181,slow=24,SNR=17
KMBO Kilima Mbogo 70.45 272 *e*P **P 07 02 53.4 +0.8**
KMBO pmax pmax
comp=Z,47nm,1.1s
KMBO MLR MLR
comp=Z,492nm,20.0s
KMBO Kilima Mbogo 70.45 272 *e*P **P 07 02 53.4 +0.8**
comp=Z,47nm,1.1s,mb5.3
KMBO LR LR
comp=Z,492nm,20.0s,MS4.8
KMBO Kilima Mbogo 70.45 272 P **P 07 02 54.0 +1.4**
SNR=12
AB31 Akbulak array 71.89 329 *i*P **P 07 03 00.2 -0.3**
AB31 pmax pmax
comp=Z,41nm,0.5s,mb5.6
ABKAR Akbulak array 71.89 329 *e*P **P 07 03 00.5 0.0**
comp=Z,88nm,0.8s,mb5.7
POGA Pongola 73.30 244⇓ *i*P **P 07 03 09.5 0.0**
POGA AMb AMB 07 03 11.2
comp=Z,152nm,1.4s,mb5.7
SYO Syowa Base 73.35 200⇑ *i*X **P 07 03 06.9 -2.0**
SYO Syowa Base 73.35 200⇓ *e*pP **P 07 03 11.9 +3.0**
YAK Yakutsk 73.39 11 *e*P **P 07 03 08.7 -0.5**
YAK pmax pmax
comp=Z,68nm,0.8s,mb5.6
YAK MLR MLR
comp=Z,504nm,19.0s,MS4.8
YAK Yakutsk 73.39 11 *e*P **P 07 03 08.7 -0.5**
comp=Z,68nm,0.8s,mb5.6
YAK LR LR
comp=Z,504nm,19.0s,MS4.8
SBA Scott Base 74.45 169 *e*P **P 07 03 15.2 -0.1**
SBA pmax pmax
comp=Z,43nm,1.0s,mb5.3
SBA Scott Base 74.45 169 *e*P **P 07 03 15.2 -0.1**
comp=Z,43nm,1.0s,mb5.3
MSNA Messina 75.02 249 *e*P **P 07 03 19.3 -0.3**
MSNA AMb AMB 07 03 22.2
comp=Z,73nm,1.7s,mb5.3
KSD Kokstad 75.09 241 *e*P **P 07 03 20.4 +0.5**
KSD AMb AMB 07 03 22.3
comp=Z,554nm,1.2s,mb6.4
MAK Makhachkala 75.58 319 *e*P **P 07 03 17.6 -4.7**
MAK *i* 07 03 25.2
MAK *i* S S 07 12 53.4 -7.0
MAK *i* 07 13 31.0
MAK pmax pmax
comp=Z,19nm,0.2s,mb5.7
PET Petropavlovsk 75.91 29 *e*P **P 07 03 23.1 -0.8**
PET *e*S S 07 13 02.5 -1.1
PET *e*PS 07 13 48.6
PET pmax pmax
comp=Z,200nm,13.4s
PET pmax pmax
comp=Z,200nm,10.0s
PET pmax pmax
comp=Z,43nm,1.4s,mb5.2
PET MLR MLR
comp=Z,200nm,18.0s,MS4.5
PET MLR MLR
comp=Z,300nm,18.0s
PET Petropavlovsk 75.91 29 *e*P **P 07 03 22.9 -1.0**
comp=Z,47nm,1.1s,mb5.3
PET LR LR
comp=Z,241nm,20.0s,MS4.5
GNI Garni 76.17 315 *de*P **P 07 03 25.8 0.0**
GNI pmax pmax
comp=Z,53nm,2.5s
GNI Garni 76.17 315 *e*P **P 07 03 26.2 +0.5**
comp=Z,59nm,1.2s,mb5.4
GNI *e* 07 03 34.1
GNI LR LR
comp=Z,252nm,22.0s,MS4.5
GNI Garni 76.17 315 P **P 07 03 26.7 +0.9**
SNR=9.6
DGRG David-gareji 76.30 317 P **P 07 03 27.3 +0.8**
ERPM east rand prop 76.36 245 *e*P **P 07 03 28.1 +0.9**
ERPM AMb AMB 07 03 31.0
comp=Z,92nm,1.7s,mb5.4
SLR Silverton 76.36 246 *e*P **P 07 03 27.9 +0.7**
SLR AMb AMB 07 03 29.1
comp=Z,206nm,1.1s,mb6.0
SVE Sverdlovsk 76.56 336⇓ *e*P **P 07 03 28.5 +0.9**
SVE *e* 07 03 46.7
SVE *e*S S 07 13 11.1 +0.6
SVE *e*SS SS 07 18 12.2 +5.6
SVE pmax pmax
comp=Z,78nm,1.3s,mb5.5
SVE MLR MLR
comp=Z,339nm,18.0s,MS4.7
MTA Mtatsminda 76.80 317 P **P 07 03 29.2 -0.1**
TBLG Delisi 76.85 317 P **P 07 03 29.8 +0.2**
TBLG Delisi 76.85 317 P **P 07 03 29.8 +0.3**
MBAR Mbarara 76.96 272 P **P 07 03 31.5 +0.7**
comp=Z,110nm,0.9s,mb5.8,SNR=5.9
MBAR Mbarara 76.96 272 *d i*P **P 07 03 30.8 0.0**
MBAR Mbarara 76.96 272 *e*P **P 07 03 31.1 +0.3**
MBAR AMb AMB 07 03 32.2
comp=Z,95nm,1.2s,mb5.6
ARU Arti 77.16 335 P **P 07 03 31.0 +0.1**
comp=Z,240nm,1.2s,mb6.0,SNR=7.3
ARU Arti 77.16 335 *d i*P **P 07 03 31.2 +0.2**
ARU 07 06 20.6
ARU PPP 07 08 07.3
ARU S S 07 13 19.4 +2.3
ARU SS SS 07 18 16.1 +0.4
ARU pmax pmax
comp=Z,72nm,1.7s,mb5.3
ARU MLR MLR
comp=Z,427nm,25.0s,MS4.7
ARU Arti 77.16 335 *e*P **P 07 03 31.3 +0.4**

comp=Z,56nm,1.1s,mb5.4
ARU e 07 03 38.1
ARU e 07 03 48.8
ARU LR LR
comp=Z,412nm,21.0s,MS4.7
GOR Gori 77.39 317 P **P 07 03 33.3 +0.7**
LSZ Lusaka 77.42 256 P **P 07 03 33.7 +0.4**
comp=Z,43nm,0.8s,mb5.4,baz=92,slow=5.0,SNR=85
LSZ Lusaka 77.42 256 *e*P **P 07 03 33.6 +0.2**
LSZ pmax pmax
comp=Z,64nm,0.9s,mb5.5
LSZ MLR MLR
comp=Z,733nm,21.0s,MS5.0
LSZ Lusaka 77.42 256 *e*P **P 07 03 33.6 +0.2**
comp=Z,64nm,0.9s,mb5.5
LSZ LR LR
comp=Z,733nm,21.0s,MS5.0
LSZ Lusaka 77.42 256⇓*i*P **P 07 03 33.5 +0.1**
LSZ AMb AMB 07 03 34.9
comp=Z,771nm,1.8s,mb6.3
LSZ Lusaka 77.42 256 P **P 07 03 33.8 +0.5**
SNR=13
GRM Grahamstown 77.43 238 *e*P **P 07 03 32.8 -0.3**
GRM AMb AMB 07 03 35.3
comp=Z,149nm,1.2s,mb5.8
KEH Kehvi 77.64 317 P **P 07 03 33.2 -0.8**
ZEI Tsey 77.86 318 *e*P **P 07 03 35.2 0.0**
ZEI pmax pmax
comp=Z,87nm,1.5s,mb5.5
ONI Oni 78.08 317 P **P 07 03 37.2 +0.7**
SOE Somerset East 78.26 239⇓*i*P **P 07 03 38.8 +1.0**
SOE AMb AMB 07 03 40.2
comp=Z,186nm,1.2s,mb5.9
HVD Gariep Dam 78.46 241⇓*i*P **P 07 03 39.4 +0.5**
HVD AMb AMB 07 03 41.8
comp=Z,86nm,1.4s,mb5.5
BOSA Boshof 78.83 243 P **P 07 03 41.5 +0.6**
comp=Z,39nm,1.1s,mb5.3,baz=96,slow=7.1,SNR=22
BOSA LR LR 07 33 52.9
comp=Z,854nm,18.3s,MS5.1,baz=102,slow=32
BOSA Boshof 78.83 243 *e*P **P 07 03 40.9 -0.1**
BOSA pmax pmax
comp=Z,103nm,1.3s,mb5.6
BOSA MLR MLR
comp=Z,1µm,20.0s,MS5.2
BOSA Boshof 78.83 243 *e*P **P 07 03 40.9 0.0**
comp=Z,103nm,1.3s,mb5.6
BOSA LR LR
comp=Z,1µm,20.0s,MS5.2
BOSA Boshof 78.83 243 *e*P **P 07 03 41.0 +0.1**
BOSA AMb AMB 07 03 43.2
comp=Z,105nm,1.6s,mb5.5
LBTB Lobatse 78.84 246 P **P 07 03 41.5 +0.4**
comp=Z,25nm,0.8s,mb5.2,baz=120,slow=5.1,SNR=29
LBTB Lobatse 78.84 246 *e*P **P 07 03 41.2 +0.1**
LBTB pmax pmax
comp=Z,154nm,1.8s,mb5.6
LBTB MLR MLR
comp=Z,549nm,20.0s,MS4.9
LBTB Lobatse 78.84 246 *e*P **P 07 03 41.2 +0.1**
comp=Z,154nm,1.8s,mb5.6
LBTB LR LR
comp=Z,549nm,20.0s,MS4.9
LBTB Lobatse 78.84 246⇓*i*P **P 07 03 41.1 0.0**
LBTB AMb AMB 07 03 42.7
comp=Z,62nm,1.6s,mb5.3
SWZ Schweizer 78.89 244⇓*i*P **P 07 03 41.4 +0.1**
SWZ AMb AMB 07 03 43.9
comp=Z,174nm,1.5s,mb5.8
KIV Kislovodsk 79.16 318⇓*e*P **P 07 03 42.4 0.0**
KIV *e* 07 06 43.4
KIV *e*S S 07 13 41.5 +2.3
KIV pmax pmax
comp=Z,42nm,1.0s,mb5.3
KIV MLR MLR
comp=Z,100nm,20.0s,MS4.2
KIV Kislovodsk 79.16 318 *e*P **P 07 03 42.2 -0.1**
comp=Z,26nm,0.9s,mb5.2
KIV LR LR
comp=Z,230nm,19.0s,MS4.5
KIV Kislovodsk 79.16 318 P **P 07 03 42.8 +0.5**
SNR=7.5
SOKR Solikamsk 79.89 336*d i*P **P 07 03 46.3 +0.3**
SOKR S S 07 13 54.8 +8.5
SOKR pmax pmax
comp=Z,30nm,1.4s,mb5.0
SOKR MLR MLR
comp=Z,560nm,18.0s,MS5.0
SEY Seymchan 79.98 19⇑*e*P **P 07 03 47.6 +1.2**
QSPA South Pole Qui 80.47 180 *e*P **P 07 03 48.3 -0.5**
comp=Z,78nm,1.1s,mb5.5
QSPA LR LR
comp=Z,876nm,20.0s,MS5.1
MMAI Mount Meron Ar 80.57 306 P **P 07 03 51.5 +1.3**
comp=Z,20nm,0.7s,mb5.2,baz=100,slow=8.8,SNR=27
MMAI LR LR 07 39 19.6
comp=Z,615nm,19.6s,MS5.0,baz=110,slow=36
PKA Prieska 80.91 241⇓*i*P **P 07 03 52.6 +0.4**
PKA AMb AMB 07 03 55.6
comp=Z,34nm,1.7s,mb5.0
SOC Sochi 80.99 317 *e*P **P 07 03 49.6 -2.6**
SOC *e**PP pP 07 03 59.7 -4.8
SOC *e**SP sP 07 04 05.2 -3.8
SOC *e* 07 06 54.2
SOC *e*PPP 07 08 47.0
SOC *e*S S 07 13 54.1 -4.4
SOC pmax pmax
comp=Z,42nm,0.9s,mb5.4
SOC MLR MLR
comp=Z,294nm,17.0s,MS4.7
TIXI Tiksi 82.24 7 *e*P **P 07 03 56.8 -1.4**
TIXI *e* 07 07 03.0
TIXI pmax pmax
comp=Z,30nm,1.0s,mb5.2
TIXI MLR MLR
comp=Z,627nm,19.0s,MS5.0
TIXI Tiksi 82.24 7 *e*P **P 07 03 57.6 -0.6**
comp=Z,18nm,0.7s,mb5.1
TIXI LR LR
comp=Z,546nm,19.0s,MS4.9
SUR Sutherland 82.28 238 P **P 07 04 00.7 +1.3**
comp=Z,77nm,1.1s,mb5.5,baz=107,slow=5.5,SNR=15
SUR Sutherland 82.28 238 *e*P **P 07 04 00.6 +1.2**
comp=Z,123nm,1.3s,mb5.7
SUR *e* pP 07 04 14.1 +2.4
SUR LR LR
comp=Z,1µm,20.0s,MS5.2
SUR Sutherland 82.28 238 P **P 07 04 00.5 +1.1**
comp=Z,448nm,1.2s,mb6.3,SNR=7.0
SUR Sutherland 82.28 238⇓*i*P **P 07 04 00.5 +1.1**
SUR AMb AMB 07 04 02.1
comp=Z,118nm,1.4s,mb5.6
UPI Upington 82.36 243⇓*i*P **P 07 04 00.4 +0.5**
UPI AMb AMB 07 04 04.0
comp=Z,122nm,1.6s,mb5.6
CSS Prodhromos 82.79 307 PFAKE 07 04 10.0 +8.1
CSS LR LR
comp=Z,575nm,19.0s,MS5.0
VRHR Novokhopersk 82.80 325 *e*P **P 07 04 01.5 -0.1**
VRHR *e* 07 04 08.9
VRHR pmax pmax
comp=N,30nm,0.9s
VRHR pmax pmax
comp=E,30nm,0.9s
VRHR pmax pmax
comp=Z,160nm,0.9s,mb6.0
ANN Anapa 82.97 318 *e*P **P 07 04 01.9 -0.7**
ANN *e*S S 07 14 19.5 +0.8
ANN pmax pmax
comp=Z,179nm,8.6s
ANN MLR MLR
comp=Z,352nm,20.0s,MS4.7
NVL N'lazarevskaya 82.97 199⇓*i*P **P 07 04 01.4 -0.8**
NVL *e* 07 04 08.1
NVL *e**PP pP 07 04 18.7 +4.3
NVL *e* 07 14 19.9
NVL pmax pmax
comp=Z,43nm,1.0s,mb5.4
NVL MLR MLR
comp=Z,675nm,16.0s,MS5.1
MAIT Maitri 83.00 199 *e*P **P 07 04 02.5 +0.2**
MAIT *e* pP 07 04 16.1 +1.5
BR131 Keskin Array S 83.96 312 *e*P **P 07 04 07.6 -0.3**
comp=Z,30nm,0.8s,mb5.5
BR131 *e* pP 07 04 18.7 -1.4
BR131 LR LR
comp=Z,420nm,20.0s,MS4.8
BRTR Keskin Array B 83.96 312 P **P 07 04 07.6 -0.2**
comp=Z,22nm,1.0s,mb5.2,baz=130,slow=5.6,SNR=74
BRTR LR LR 07 43 44.4
comp=Z,392nm,20.3s,MS4.8,baz=92,slow=37
BRTR Keskin Array B 83.96 312 *i*P **P 07 04 07.5 -0.3**
BRTR pmax pmax
comp=Z,22nm,1.0s
VORD Divnogorie 84.09 324 *e*P **P 07 04 07.8 -0.4**
VORD pmax pmax
comp=N,30nm,1.0s
VORD pmax pmax
comp=E,30nm,1.0s
VORD pmax pmax
comp=Z,60nm,1.0s,mb5.7
VSR Storozhevoye 84.27 324 *e*P **P 07 04 08.6 -0.5**
VSR *e* pP 07 04 22.2 +0.8
VSR pmax pmax
comp=N,30nm,1.1s
VSR pmax pmax
comp=E,90nm,1.1s
VSR pmax pmax
comp=Z,130nm,1.1s,mb6.0
SIM Simferopol' 85.24 317 *e*P **P 07 04 14.8 +0.7**
SIM *e*S S 07 14 37.0 -4.5
SIM pmax pmax
comp=Z,300nm,18.0s
SIM MLR MLR
comp=Z,500nm,22.0s,MS4.9
ISP Isparta 85.76 309 PFAKE 07 04 30.0 +13
ISP LR LR
comp=Z,390nm,19.0s,MS4.8
MOS Moscow 86.84 328 *e*P **P 07 04 20.9 -0.9**
MOS *e* pP 07 04 33.8 -0.3
MOS *e* 07 07 42.8
MOS pmax pmax
comp=Z,123nm,1.1s,mb6.0
MOS pmax pmax
comp=Z,200nm,1.6s,mb6.1
TSUM Tsumeb 86.94 251 *e*P **P 07 04 23.4 +0.2**
comp=Z,55nm,1.0s,mb5.7
TSUM *e* pP 07 04 36.6 +1.1
TSUM LR LR
comp=Z,543nm,19.0s,MS5.0
OBN Obninsk 87.17 327⇓*e*P **P 07 04 23.7 +0.3**
OBN *e* 07 07 47.7
OBN *e*S S 07 14 49.3 -11
OBN pmax pmax
comp=Z,215nm,1.7s,mb6.1
OBN Obninsk 87.17 327 *e*P **P 07 04 23.6 +0.2**
comp=Z,174nm,1.2s,mb6.2
OBN *e* pP 07 04 36.6 +0.8
OBN LR LR
comp=Z,319nm,20.0s,MS4.7
BILL Bilibino 87.68 19⇓*i*P **P 07 04 25.3 -0.3**
BILL *e* 07 07 48.2
BILL *e*S S 07 14 53.6 -11
BILL pmax pmax
comp=Z,10.0nm,0.7s,mb5.2
BILL MLR MLR
comp=Z,200nm,17.0s,MS4.6
BILL Bilibino 87.68 19 *e*P **P 07 04 24.8 -0.8**
comp=Z,7.8nm,0.4s,mb5.3
BILL LR LR
comp=Z,282nm,20.0s,MS4.7
TIRR Tirgusor 89.00 315 *e*P **P 07 04 32.7 +0.3**
TIRR pmax pmax
comp=Z,26nm,1.4s,mb5.4
TIRR Tirgusor 89.00 315 *e*P **P 07 04 32.7 +0.3**
comp=Z,26nm,1.4s,mb5.4
VNA1 Neumayer--Stat 89.33 197 *e*P **P 07 04 34.0 +0.5**
KIS Kishinev 89.36 318 *e*P **P 07 04 33.0 -1.0**
KIS *e*S S 07 15 18.0 -3.0
LEOM Leova 89.61 317 P **P 07 04 36.0 +0.8**
AKASG Malin Array Be 90.05 321 P **P 07 04 36.2 -0.9**
comp=Z,9.4nm,0.9s,mb5.1,baz=86,slow=4.7,SNR=23
AKASG PP PP 07 08 09.8 -1.0
comp=Z,9.1nm,1.0s,baz=92,slow=6.3,SNR=9.3
AKASG Malin Array Be 90.05 321 P **P 07 04 36.2 -0.9**
AKASG PP PP 07 08 09.8 -1.0
AKBB Malin Array Si 90.05 321 *e*P **P 07 04 35.9 -1.2**
AKBB *e* 07 04 44.7
KIEV Kiev 90.06 321 *e*P **P 07 04 36.3 -0.9**
KIEV *e* 07 08 13.2
KIEV pmax pmax
comp=Z,7.0nm,0.8s,mb5.0
KIEV MLR MLR
comp=Z,206nm,20.0s,MS4.6
KIEV Kiev 90.06 321 *e*P **P 07 04 36.3 -0.9**
comp=Z,6.6nm,0.8s,mb5.0
KIEV *e*PP PP 07 08 13.2 +2.3
KIEV LR LR
comp=Z,206nm,20.0s,MS4.6
VRI Vrincioaia 90.49 316⇓P **P 07 04 40.2 +0.9**
VRI Vrincioaia 90.49 316⇓*i*P **P 07 04 40.2 +0.9**
PLOR Plostina 90.54 316⇑P **P 07 04 40.7 +1.1**
PLOR Plostina 90.54 316⇑*i*P **P 07 04 40.7 +1.1**
TESR 90.69 317⇓P **P 07 04 40.9 +0.6**
TESR 90.69 317⇓*i*P **P 07 04 40.9 +0.7**
MLR Muntele Rosu 90.94 316⇓P **P 07 04 42.2 +0.8**
MLR Muntele Rosu 90.94 316⇓*i*P **P 07 04 42.2 +0.8**
BURAR Bucovina Array 91.89 318⇑P **P 07 04 47.0 +1.3**
BURAR Bucovina Array 91.89 318⇑*i*P **P 07 04 47.0 +1.3**
BUR08 Bucovina Ar. S 91.90 318 *e*P **P 07 04 46.8 +0.9**
JOF Joensuu 92.26 334 *e*P **P 07 04 47.4 +0.3**
JOF pmax pmax
comp=Z,16nm,0.8s,mb5.4
JOF Joensuu 92.26 334 *e*p **P 07 04 47.4 +0.3**
comp=Z,16nm,0.8s,mb5.4
VTS Vitosha 92.29 313⇑P **P 07 04 46.9 -0.9**
VTS Vitosha 92.29 313⇑*i*P **P 07 04 46.9 -0.9**
LVZ Lovozero 92.46 339 *e*P **P 07 04 46.5 -1.5**
LVZ MLR MLR
comp=Z,578nm,22.0s,MS5.0
NACGM Naroch 92.50 325 *e* **P 07 04 45.0 -3.4**
APA Apatity 92.81 338⇑*e*P **P 07 04 50.0 +0.4**
APA pmax pmax
comp=Z,10.0nm,1.0s,mb5.2
GZR Gura Zlata 93.11 315⇓P **P 07 04 52.3 +0.8**
GZR Gura Zlata 93.11 315⇓*i*P **P 07 04 52.3 +0.8**
DRGR 93.41 317⇑P **P 07 04 52.7 -0.1**
DRGR 93.41 317⇑*i*P **P 07 04 52.7 -0.1**
KWP Kalwaria Pacla 93.91 320 PFAKE 07 05 10.0 +15
KWP LR LR
comp=Z,273nm,19.0s,MS4.7
BZS Buzias 93.95 315⇑P **P 07 04 55.7 +0.4**
BZS Buzias 93.95 315⇑*i*P **P 07 04 55.7 +0.4**
FINES FINESS Array B 94.28 332 P **P 07 04 54.8 -1.6**
comp=Z,6.7nm,0.9s,mb5.1,baz=48,slow=2.8,SNR=13
FINES LR LR 07 55 06.8
comp=Z,151nm,18.1s,MS4.5,baz=294,slow=40
KAF Kangasniemi 94.31 332 *e*P **P 07 04 55.4 -1.2**
KAF pmax pmax
comp=Z,25nm,1.1s,mb5.6
KAF Kangasniemi 94.31 332 *e*P **P 07 04 55.4 -1.2**
comp=Z,25nm,1.1s,mb5.6
KAF Kangasniemi 94.31 332 *e*p **P 07 04 55.4 -1.2**
comp=Z,25nm,1.1s,mb5.6
TIR Tirane 94.54 311 PFAKE 07 05 10.0 +12
TIR LR LR
comp=Z,342nm,19.0s,MS4.8
CRVS Cervenica-Dubn 94.59 319 *e*P **P 07 05 01.1 +2.9**
CRVS Cervenica-Dubn 94.59 319 *e*P **P 07 05 01.1 +2.9**
STHS Stebnicka Huta 94.81 319 *e*P **P 07 04 59.8 +0.6**
STHS pmax pmax
comp=Z,4.0nm,0.8s,mb4.9
STHS Stebnicka Huta 94.81 319 *e*P **P 07 04 59.8 +0.6**
comp=Z,4.4nm,0.8s,mb4.9
STHS *e*PP pP 07 05 05.7 -5.9
STHS Stebnicka Huta 94.81 319 *e*P **P 07 04 59.8 +0.6**
STHS *e*pP pP 07 05 05.7 -5.9
KECS Kecovo 95.17 318 *e*P **P 07 05 01.3 +0.5**
KECS pmax pmax
comp=Z,3.0nm,1.0s,mb4.7
KECS Kecovo 95.17 318 *e*P **P 07 05 01.3 +0.5**
comp=Z,3.3nm,1.0s,mb4.7
KECS Kecovo 95.17 318 *e*P **P 07 05 01.3 +0.5**
UNV Unalaska Valle 95.20 36 *e*P **P 07 05 00.1 -0.8**
comp=Z,29nm,1.0s,mb5.7
PSZ Piszkesteto 95.47 318 PFAKE 07 05 10.0 +7.8
PSZ LR LR
comp=Z,277nm,20.0s,MS4.7
KEV Kevo 95.64 340 PFAKE 07 05 10.0 +7.5
KEV LR LR
comp=Z,432nm,20.0s,MS4.9
ARCES ARCESS Array B 96.11 339 P **P 07 05 03.8 -0.9**
comp=Z,8.6nm,0.9s,mb5.2,baz=99,slow=7.5,SNR=13
ARCES LR LR 07 54 35.8
comp=Z,376nm,18.2s,MS4.9,baz=280,slow=39
VYHS Vyhne 96.25 318 *e*P **P 07 05 06.1 +0.3**
VYHS pmax pmax
comp=Z,4.0nm,1.3s,mb4.7
VYHS Vyhne 96.25 318 *e*P **P 07 05 06.1 +0.3**
comp=Z,3.6nm,1.3s,mb4.6
VYHS Vyhne 96.25 318 *e*P **P 07 05 06.1 +0.3**
STON Ston 96.34 312 Sn SKSac 07 15 52.3 +12
TBI Tubuai 97.92 115 *e*LR LR 07 37 03.9
comp=Z,587nm,22.2s
WDD Wield Dalam 98.00 305 PFAKE 07 05 30.0 +16
WDD LR LR
comp=Z,155nm,21.0s,MS4.5
GROS Grobnik 98.28 316 *e*Pdiff **P 07 05 14.8 -0.2**
BOJS Bojanci 98.37 315 *e*Pdiff **P 07 05 15.3 -0.1**
LJU Ljubljana 98.92 315 *e*Pdiff **P 07 05 18.1 +0.2**
PPT Papeete 99.16 110 *e*S S 07 16 43.7 -4.9
comp=Z,262nm,23.5s
PPT *e*SP SP 07 18 08.5 -6.2
comp=Z,84nm,26.8s
PPT *e*LR LR 07 37 32.0
comp=Z,298nm,23.0s
PPT Papeete 99.16 110 LR LR 07 46 22.8
comp=Z,275nm,20.7s,MS4.7,baz=257,slow=33
TRI Trieste 99.43 315 PFAKE 07 05 30.0 +10
TRI LR LR
comp=Z,195nm,20.0s,MS4.6
AQU L'Aquila 99.45 311 PFAKE 07 05 30.0 +10
AQU LR LR
comp=Z,219nm,20.0s,MS4.7
BRG Berggiesshubel 99.64 320 *e*(P) Pdif 07 05 21.3 +0.4
comp=Z,4.3nm,1.0s
BRG *e* 07 09 27.0
CLL Collm 100.25 321 *e*P Pdif 07 05 20.0 -3.6
CLL *e* 07 09 33.0
CLL MLR MLR
comp=Z,200nm,21.7s,MS4.6
CLL Collm 100.25 321 *e*Pdif Pdif 07 05 20.0 -3.6
CLL *e*PP PP 07 09 33.0 +3.0
CLL Collm 100.25 321 *e*PP PP 07 09 33.0 +3.0
CLL *e*PPS 07 19 18.0
CLL *e*SS SS 07 23 46.0 -5.4
CLL LmV 07 56 00.0
comp=Z,200nm,21.7s
KBS Kingsbay 100.39 349 PFAKE 07 05 40.0 +16
KBS LR LR
comp=Z,510nm,19.0s,MS5.0
GRF Grafenberg Arr 101.33 319 *e*PP PP 07 09 37.5 -0.7
VLC Villacollemand 101.75 313 PFAKE 07 05 40.0 +10
VLC LR LR
comp=Z,277nm,21.0s,MS4.8
KONO Kongsberg 102.22 329 PFAKE 07 05 40.0 +7.6
KONO LR LR
comp=Z,309nm,21.0s,MS4.8
VSL Villasalto 102.33 308 PFAKE 07 05 40.0 +7.1
VSL LR LR
comp=Z,91nm,20.0s,MS4.3
TUE Stuetta 102.53 316 PFAKE 07 05 50.0 +16
TUE LR LR
comp=Z,289nm,19.0s,MS4.8
BFO Black Forest 103.23 317 PFAKE 07 05 50.0 +13
BFO LR LR
comp=Z,170nm,20.0s,MS4.6
KDAK Kodiak Island 103.23 33 PFAKE 07 05 50.0 +13
KDAK LR LR
comp=Z,243nm,21.0s,MS4.7
ECH Echery 104.01 317 PFAKE 07 05 50.0 +10
ECH LR LR
comp=Z,226nm,21.0s,MS4.7
BNI Bardonecchia 104.40 314 PFAKE 07 05 50.0 +7.9
BNI LR LR
comp=Z,304nm,20.0s,MS4.8
WLF Walferdange 104.62 319 PFAKE 07 05 50.0 +6.9
WLF LR LR
comp=Z,290nm,21.0s,MS4.8
TAM Tamanrasset 104.72 291 PFAKE 07 06 00.0 +16
TAM LR LR
comp=Z,259nm,19.0s,MS4.8
COLA College 104.75 25 PFAKE 07 05 50.0 +6.4
COLA LR LR
comp=Z,114nm,20.0s,MS4.4
SSB Saint Sauveur 105.91 314 PFAKE 07 10 10.0 +8.7
SSB LR LR
comp=Z,167nm,20.0s,MS4.6
EGAK Eagle 107.56 25 PFAKE 07 10 20.0 +16
EGAK LR LR
comp=Z,186nm,21.0s,MS4.6
INK Inuvik 109.26 20 *e*PKPdf PKiKP 07 10 06.4 -0.5
ESK Eskdalemuir 109.60 325 PFAKE 07 10 20.0 +12
ESK LR LR
comp=Z,194nm,20.0s,MS4.7
RKT Rikitea 110.72 119 *e*LR LR 07 43 01.6
comp=Z,423nm,23.8s
ESDC Sonseca Array 112.62 309 PKKPbc PKKPbc 07 21 03.1 -0.8
comp=Z,0.2nm,0.3s,baz=270,slow=5.9,SNR=4.0
ESLA Sonseca Array 112.62 309 PFAKE 07 10 30.0 +16
ESLA LR LR
comp=Z,1µm,20.0s,MS5.4
PAB San Pablo 112.93 309 PFAKE 07 10 30.0 +15
PAB LR LR
comp=Z,203nm,19.0s,MS4.7
DBIC Dimbokro 113.17 273 PFAKE 07 10 30.0 +14
DBIC LR LR
comp=Z,228nm,20.0s,MS4.8
RES Resolute Bay 113.63 6 *e*PKIKP PKiKP 07 10 14.8 -0.2
BORG Borgarnes 114.50 338 PFAKE 07 10 30.0 +13
BORG LR LR
comp=Z,242nm,20.0s,MS4.8
DLBC Dease Lake 114.69 29 *e*PKPdf PKiKP 07 10 18.1 +0.6
SFS San Fernando 114.74 306 PFAKE 07 10 30.0 +12
SFS LR LR
comp=Z,556nm,22.0s,MS5.1
PBAR Barrancos 115.19 308 *e*PKPdf PKiKP 07 10 19.4 +0.3
MTE Manteigas 115.25 310 *e*PKPdf PKiKP 07 10 19.9 +0.8
MTE Manteigas 115.25 310 PFAKE 07 10 30.0 +11
MTE LR LR
comp=Z,184nm,20.0s,MS4.7
PVAQ Vaqueiros 115.83 307 *e*PKPdf PKPdf 07 10 21.4 +1.1
PBDV Barranco-do-Ve 116.02 307 *e*PKPdf PKPdf 07 10 21.3 +0.6
PCVE Castro Verde 116.05 307 *e*PKPdf PKPdf 07 10 21.2 +0.5
MORF Marmelete 116.58 307 *e*PKPdf PKPdf 07 10 23.2 +1.4
YKA Yellowknife Ar 119.01 21 PKP PKPdf 07 10 25.2 -0.4
comp=Z,9.8nm,0.8s,baz=306,slow=1.9,SNR=24
YKA PKKPbc PKKPbc 07 20 40.8 -1.5
comp=Z,0.6nm,0.6s,baz=111,slow=3.8,SNR=3.6
YKA Yellowknife Ar 119.01 21 PKP PKPdf 07 10 25.2 -0.4
YKA PKKPbc PKKPbc 07 20 40.8 -1.5
NLWA Neilton Lookou 122.56 39⇓P PKPdf 07 10 34.1 +1.1
baz=122
A05A Maple Falls 122.96 37⇑P PKPdf 07 10 34.3 +0.6
baz=123
E03A Lebam 123.09 40⇓P PKPdf 07 10 34.9 +0.9
baz=123
CMW Cultus Mountai 123.19 37 P PKPdf 07 10 35.3 +1.2
F03A Seaside 123.33 41⇑P PKPdf 07 10 35.6 +1.2
baz=123
B06A Marblemount 123.53 37⇑P PKPdf 07 10 35.8 +1.0
baz=124
D05A Enumclaw 123.80 39⇑P PKPdf 07 10 36.7 +1.3
baz=124
TDL Tradedollar La 124.02 40 P PKPdf 07 10 37.1 +1.3
F04A Amboy 124.06 40⇓P PKPdf 07 10 36.4 +0.5
baz=124,SNR=5.6
LON Longmire 124.10 39 *e*PKIKP PKPdf 07 10 36.1 +0.2
G04A Mulino 124.32 41⇓P PKPdf 07 10 37.4 +1.0
baz=124
TWW Teanaway 124.51 38 P PKPdf 07 10 38.2 +1.5
H04A Detroit Lake 124.72 42⇑P PKPdf 07 10 38.0 +0.8
baz=125
NAC Naches 124.72 39 P PKPdf 07 10 38.4 +1.3
WTV Waterville 124.81 37 P PKPdf 07 10 37.9 +0.6
B08A Colville Reser 124.87 36⇓P PKPdf 07 10 37.5 +0.2
baz=125
HUMO Hull Mountain 125.00 44 *e*PKPdf PKPdf 07 10 38.3 +0.5
EDM Edmonton 125.41 29 *e*PKIKP PKPdf 07 10 38.5 +0.3
G06A Carlson Farm, 125.49 40⇑P PKPdf 07 10 39.7 +1.1
baz=126
RSW Rattlesnake Hi 125.63 39 *e*PKPdf PKPdf 07 10 40.8 +1.9
HAWA Hanford 125.67 39 *e*PKPdf PKPdf 07 10 39.6 +0.7
HAWA LR LR
comp=Z,154nm,21.0s,MS4.7
OD2 Odessa Site #2 125.70 37 *e*PKPdf PKPdf 07 10 39.7 +0.7

D08A **Wollman Farm,** 125.73 38 ⇑P PKPdf 07 10 39.9 +0.8
baz=126
H2OWA **Water** 125.74 39 P PKPdf 07 10 40.5 +1.4
E08A **Dider Farm, El** 125.92 38 ⇑P PKPdf 07 10 40.7 +1.3
baz=126
WDC **Whiskeytown Da** 126.01 46 PFAKE 07 10 50.0 +10
WDC LR LR
comp=Z,204nm,21.0s,MS4.8
NEW **Newport** 126.20 36 *e*PKIKP PKPdf 07 10 40.6 +0.7
K05A **Summer Lake** 126.36 43 ⇑P PKPdf 07 10 41.6 +1.2
baz=126
E09A **Wood Farm, Sta** 126.46 38 ⇓P PKPdf 07 10 41.5 +1.0
baz=126
G08A **Pilot Rock** 126.53 40 ⇑P PKPdf 07 10 41.6 +1.0
baz=126
LTIM **Timbered Crate** 126.54 45 P PKPdf 07 10 42.2 +1.4
A12A **Yaak River Ran** 126.68 34 ⇓P PKPdf 07 10 41.7 +0.9
baz=127
I07A **Izee** 126.71 41 ⇑P PKPdf 07 10 42.3 +1.3
baz=127
C11A **Tepee Creek (N** 126.92 36 ⇓P PKPdf 07 10 41.8 +0.5
baz=127
MOD **Modoc** 127.08 44 PFAKE 07 10 50.0 +8.2
MOD LR LR
comp=Z,153nm,20.0s,MS4.7
G09A **Cove** 127.27 39 ⇓P PKPdf 07 10 42.4 +0.3
baz=127,SNR=5.1
F10A **Beach Ranch, E** 127.28 38 ⇑P PKPdf 07 10 42.5 +0.5
baz=127
A13A **Flathead Natio** 127.37 34 ⇑P PKPdf 07 10 43.1 +1.0
baz=127
C12B **Naegeli Ranch,** 127.44 36 ⇓P PKPdf 07 10 43.0 +0.7
baz=127
WALA **Waterton Lakes** 127.57 33 *e*PKPdf PKPdf 07 10 43.0 +0.5
H09A **Durkee** 127.63 40 ⇑P PKPdf 07 10 43.4 +0.6
baz=128,SNR=5.2
B13A **Whitefish** 127.65 34 ⇑P PKPdf 07 10 43.1 +0.5
baz=128
G10A **Bishop Farm, J** 127.67 39 ⇑P PKPdf 07 10 43.3 +0.5
baz=128
J08A **Circle Bar Ran** 127.70 42 ⇑P PKPdf 07 10 43.9 +1.0
baz=128
BSMT **Bassoo Peak** 127.75 35 P PKPdf 07 10 43.7 +0.8
BMO **Blue Mountains** 127.77 39 PFAKE 07 10 50.0 +7.0
BMO LR LR
comp=Z,154nm,22.0s,MS4.6
D12A **Red Ives Fores** 127.85 36 ⇓P PKPdf 07 10 43.0 -0.1
baz=128
A14A **Double T Ranch** 127.88 33 ⇓P PKPdf 07 10 43.5 +0.4
baz=128
I09A **Lost Marbles R** 127.90 41 ⇑P PKPdf 07 10 44.1 +0.8
baz=128,SNR=7.4
F11A **Grangeville** 127.97 38 ⇓P PKPdf 07 10 43.9 +0.5
baz=128
WVOR **Wild Horse Val** 127.99 43 PFAKE 07 11 00.0 +16
WVOR LR LR
comp=Z,162nm,20.0s,MS4.7
E12A **Beaver Dam Sad** 128.06 37 ⇓P PKPdf 07 10 44.2 +0.7
baz=128
G11A **Walters Elk Ra** 128.15 38 ⇑P PKPdf 07 10 43.9 +0.2
baz=128,SNR=10
A15A **Johnson Ranch,** 128.25 33 ⇑P PKPdf 07 10 43.5 -0.3
baz=128
B14A **Marquette Ranc** 128.31 34 ⇑P PKPdf 07 10 44.5 +0.6
baz=128
D13A **Huson** 128.35 36 ⇑P PKPdf 07 10 44.0 0.0
baz=128
C14A **Swan Lake** 128.38 35 ⇓P PKPdf 07 10 44.8 +0.7
baz=128
SWMT **Swartz Lake** 128.38 35 *e*PKPdf PKPdf 07 10 44.5 +0.4
I10A **Payette** 128.45 40 ⇑P PKPdf 07 10 45.6 +1.2
baz=128
CMB **Columbia Colle** 128.47 49 *e*PKIKP PKPdf 07 10 45.2 +0.6
CMB MLR MLR
comp=Z,178nm,20.0s,MS4.8
WCN **Washoe City** 128.47 47 ⇑P PKPdf 07 10 45.7 +1.2
baz=128
F12A **Elk City** 128.58 38 ⇓P PKPdf 07 10 45.4 +0.8
baz=128
H11A **Donnelly** 128.65 39 ⇓P PKPdf 07 10 45.3 +0.6
baz=129,SNR=8.7
B15A **Bradely Ranch,** 128.73 34 ⇓P PKPdf 07 10 44.7 0.0
baz=129
J10A **Berg Farm, Mel** 128.78 41 ⇓P PKPdf 07 10 46.3 +1.3
baz=129
MSO **Missoula** 128.79 36 *e*PKPdf PKPdf 07 10 45.5 +0.6
MSO LR LR
comp=Z,96nm,19.0s,MS4.5
D14A **Greenough** 128.90 35 ⇑P PKPdf 07 10 45.0 -0.1
baz=129
K10A **MacKenzie Ranc** 129.01 42 ⇓P PKPdf 07 10 45.7 +0.3
baz=129
C15A **Salmond Ranch,** 129.01 34 ⇑P PKPdf 07 10 45.8 +0.5
baz=129
I11A **Placerville** 129.07 40 ⇑P PKPdf 07 10 46.4 +0.9
baz=129,SNR=7.2
F13A **Darby** 129.12 37 ⇑P PKPdf 07 10 45.6 +0.1
baz=129
CHMT **Chamberlain Mo** 129.14 35 *e*PKPdf PKPdf 07 10 46.3 +0.8
FFC **Flin Flon** 129.17 22 *e*PKIKP PKPdf 07 10 45.3 -0.1
FFC MLR MLR
comp=Z,230nm,19.0s,MS4.9
E14A **Clinton** 129.27 36 ⇓P PKPdf 07 10 46.8 +1.0
baz=129
MFID **Camas Ranch** 129.39 40 ⇓P PKPdf 07 10 47.2 +1.0
baz=129,SNR=13
CMLA **Cha da Macela** 129.41 312 *e*LR LR 07 52 17.8
H12A **Diamond D Ranc** 129.44 39 ⇓P PKPdf 07 10 47.0 +0.7
baz=129,SNR=11
C16A **Fuhringer Ranc** 129.47 34 ⇓P PKPdf 07 10 46.1 0.0
baz=129
D15A **Lincoln** 129.48 35 ⇓P PKPdf 07 10 46.6 +0.4
baz=129
G13A **Cobalt** 129.54 38 ⇓P PKPdf 07 10 47.2 +0.8
baz=130
K11A **Parker Ranch,** 129.56 41 ⇑P PKPdf 07 10 47.7 +1.2
baz=130
L10A **Juniper Basin** 129.59 42 ⇑P PKPdf 07 10 47.4 +0.8
baz=130
I12A **Atlanta** 129.65 40 ⇓P PKPdf 07 10 47.8 +1.2
baz=130,SNR=15
F14A **Wisdom** 129.67 37 ⇑P PKPdf 07 10 47.8 +1.2
baz=130
B17A **L&G Farms, Che** 129.69 33 ⇑P PKPdf 07 10 46.7 +0.1
baz=130
E15A **Deer Lodge** 129.76 36 ⇑P PKPdf 07 10 47.2 +0.4
baz=130
M10A **I.L. Ranch, Tu** 129.80 43 ⇓P PKPdf 07 10 48.1 +1.1
baz=130
H13A **Challis** 129.80 38 ⇑P PKPdf 07 10 47.8 +0.9
baz=130,SNR=19
A18A **Metzger Ranch,** 129.80 31 ⇓P PKPdf 07 10 46.9 +0.1
baz=130
BMN **Battle Mountai** 129.81 44 PFAKE 07 11 00.0 +13
BMN LR LR
comp=Z,149nm,21.0s,MS4.7
NVAR **Mina Array Bea** 129.85 47 PKP PKPdf 07 10 48.4 +1.2
comp=Z,3.5nm,0.8s,baz=226,slow=2.9,SNR=24
PKM **Peak Mountain** 129.95 52 ⇓P PKPdf 07 10 49.2 +1.7
baz=130
PLCA **Paso Flores** 129.96 182 PKP PKPdf 07 10 48.5 +1.1
comp=Z,9.3nm,1.0s,baz=118,slow=1.7,SNR=8.0
D16A **Dana Ranch, Ca** 130.03 34 ⇓P PKPdf 07 10 47.9 +0.7
baz=130
B18A **Beardsley Farm** 130.17 32 ⇓P PKPdf 07 10 48.2 +0.7
baz=130
F15A **Butte** 130.17 36 ⇑P PKPdf 07 10 48.0 +0.4
baz=130
LRM **Limekiln Ridge** 130.21 36 *e*PKPdf PKPdf 07 10 49.8 +2.2
LRM *e* 07 11 02.6
LRM *e*SKP 07 14 09.4
HLID **Hailey** 130.21 40 ⇑P PKPdf 07 10 49.0 +1.3
baz=130,SNR=19
HLID **Hailey** 130.21 40 *e*PKPdf PKPdf 07 10 49.1 +1.4
HLID *e*SKPab 07 14 09.9
I13A **Wildhorse Cree** 130.22 39 ⇓P PKPdf 07 10 49.0 +1.2
baz=130,SNR=15
H14A **Leadore** 130.32 38 ⇑P PKPdf 07 10 49.2 +1.3
baz=130
M11A **Holland Ranch,** 130.34 43 ⇓P PKPdf 07 10 49.9 +1.9
baz=130
K12A **Draper Farm, C** 130.36 41 ⇓P PKPdf 07 10 49.1 +1.1
baz=130
DLMT **Dillon** 130.37 37 *e*PKPdf PKPdf 07 10 49.4 +1.4
DLMT *e*SKPbc SKPbc 07 14 09.5 +1.3
BSC **Santa Cruz Isl** 130.38 53 ⇓P PKPdf 07 10 49.6 +1.3
baz=130
EGMT **Eagleton** 130.41 32 ⇑P PKPdf 07 10 48.5 +0.5
baz=130
EGMT **Eagleton** 130.41 32 *e*PKPdf PKPdf 07 10 48.6 +0.7
EGMT *e*SKPbc SKPbc 07 14 09.2 +1.1
D17A **Six Diamond Ra** 130.44 34 ⇑P PKPdf 07 10 48.5 +0.4
baz=130
J13A **Cove Ranch, Pi** 130.45 40 ⇑P PKPdf 07 10 49.5 +1.3
baz=130,SNR=22
L12A **House Creek Ra** 130.52 41 ⇑P PKPdf 07 10 49.9 +1.6
baz=130
G15A **Dillon** 130.55 37 ⇑P PKPdf 07 10 49.3 +1.0
baz=130
I14A **Mackay** 130.62 39 ⇑P PKPdf 07 10 49.4 +0.9
baz=131
ARVC **Arvin** 130.65 52 ⇓P PKPdf 07 10 49.9 +1.1
baz=131
N11A **Elko Archery C** 130.66 43 ⇑P PKPdf 07 10 49.7 +1.1
baz=131
P10A **Eureka** 130.68 45 ⇑P PKPdf 07 10 49.6 +0.9
baz=131
F16A **Kennard Place,** 130.70 36 ⇓P PKPdf 07 10 49.3 +0.8
baz=131
ISA **Isabella** 130.74 51 ⇑P PKPdf 07 10 49.8 +0.9
baz=131
E17A **Martinsdale** 130.75 35 ⇑P PKPdf 07 10 49.5 +0.8
baz=131
CWC **Cottonwood Cre** 130.76 50 ⇓P PKPdf 07 10 49.9 +0.9
baz=131
TPH **Tonopah** 130.77 47 PFAKE 07 11 00.0 +11
TPH LR LR
comp=Z,175nm,20.0s,MS4.8
BOZ **Bozeman (W)** 130.78 36 ⇓P PKPdf 07 10 49.7 +1.0
baz=131
BOZ **Bozeman (W)** 130.78 36 *e*PKIKP PKPdf 07 10 49.2 +0.5
BOZ MLR MLR
comp=Z,205nm,19.0s,MS4.8
BOZ **Bozeman (W)** 130.78 36 *e*PKPdf PKPdf 07 10 49.2 +0.5
BOZ *e*SKPbc SKPbc 07 14 11.4 +1.8
BOZ LR LR
comp=Z,205nm,19.0s,MS4.8
BLG **Laguna Peak** 130.79 53 ⇓P PKPdf 07 10 49.7 +0.6
baz=131
K13A **Stover Farm, H** 130.88 40 ⇓P PKPdf 07 10 50.6 +1.6
baz=131,SNR=11
J14A **Carey** 130.90 39 ⇑P PKPdf 07 10 50.4 +1.4
baz=131,SNR=7.9
G16A **Moss Hill, Enn** 130.91 36 ⇑P PKPdf 07 10 50.1 +1.1
baz=131
M12A **Wells** 130.93 42 ⇑P PKPdf 07 10 50.4 +1.2
baz=131
O11A **Cowboy Ranch,** 131.02 44 ⇓P PKPdf 07 10 50.6 +1.3
baz=131
ELK **Elko** 131.03 43 PFAKE 07 11 00.0 +11
ELK LR LR
comp=Z,167nm,19.0s,MS4.8
GRAC **Grapevine Rang** 131.08 49 ⇑P PKPdf 07 10 50.8 +1.2
baz=131
N12A **Clover Valley,** 131.11 43 ⇑P PKPdf 07 10 50.8 +1.3
baz=131
N12A **Clover Valley,** 131.11 43 *e*PKPdf PKPdf 07 10 51.0 +1.5
N12A *e*SKPbc SKPbc 07 14 13.2 +2.2
I15A **Monteview** 131.18 38 ⇓P PKPdf 07 10 50.7 +1.1
baz=131
DAC **Darwin (Calif)** 131.19 50 PFAKE 07 11 00.0 +10
DAC LR LR
comp=Z,214nm,19.0s,MS4.9
F17A **Fitzpatrick Pl** 131.19 35 ⇓P PKPdf 07 10 50.6 +1.1
baz=131
E18A **Harlowton** 131.21 34 ⇓P PKPdf 07 10 50.3 +0.8
baz=131
L13A **Double Diamond** 131.25 41 ⇑P PKPdf 07 10 51.5 +1.8
baz=131,SNR=9.3
S10A **Tonopah Range,** 131.29 47 ⇑P PKPdf 07 10 51.3 +1.4
baz=131
MPMC **Manual Prospec** 131.34 50 ⇓P PKPdf 07 10 51.3 +1.2
baz=131
EDW2 **Edwards Air Fo** 131.38 52 ⇓P PKPdf 07 10 51.6 +1.4
baz=131
M13A **Montello** 131.46 42 ⇓P PKPdf 07 10 51.4 +1.3
baz=131
G17A **Pierce Place,** 131.48 36 ⇑P PKPdf 07 10 51.3 +1.2
baz=131
K14A **Jones Ranch, D** 131.51 40 ⇑P PKPdf 07 10 51.7 +1.5
baz=132,SNR=16
J15A **Blackfoot** 131.53 39 ⇑P PKPdf 07 10 51.8 +1.6
baz=132,SNR=14
H16A **Russell Place,** 131.53 37 ⇑P PKPdf 07 10 51.6 +1.4
baz=132
CIS **Catalina Islan** 131.54 54 ⇑P PKPdf 07 10 51.4 +0.8
baz=132
MWC **Mount Wilson** 131.55 52 *e*PKIKP PKPdf 07 10 50.3 -0.2
O12A **Currie** 131.58 44 ⇑P PKPdf 07 10 51.7 +1.3
baz=132
Q11A **Duckwater** 131.58 46 ⇓P PKPdf 07 10 51.8 +1.3
baz=132
F18A **Big Timber** 131.72 35 ⇓P PKPdf 07 10 51.4 +1.0
baz=132
YMR **Madison River** 131.72 37 *e*PKPdf PKPdf 07 10 52.5 +2.0
YMR *e*SKPbc SKPbc 07 14 16.3 +3.2
L14A **Malta** 131.73 41 ⇑P PKPdf 07 10 51.7 +1.1
baz=132,SNR=8.1
GCMT **Greycliff** 131.81 35 *e*PKPdf PKPdf 07 10 51.9 +1.2
GCMT *e*SKPbc SKPbc 07 14 16.0 +2.5
P12A **McGill** 131.83 45 ⇓P PKPdf 07 10 51.9 +0.9
baz=132
R11A **Troy Canyon, C** 131.84 46 ⇓P PKPdf 07 10 52.2 +1.2
baz=132
K15A **Arbon** 131.85 40 ⇑P PKPdf 07 10 52.2 +1.4
baz=132,SNR=12
BFSC **Mount Baldy Ra** 131.85 52 ⇑P PKPdf 07 10 52.2 +1.1
baz=132
M14A **Sheep Mountain** 131.92 41 ⇓P PKPdf 07 10 52.5 +1.5
baz=132,SNR=12
S11A **Rachel** 132.02 47 ⇓P PKPdf 07 10 52.9 +1.6
baz=132
Q12A **Willow Creek R** 132.07 45 ⇓P PKPdf 07 10 53.0 +1.7
baz=132
LKWY **Lake** 132.11 36 PFAKE 07 11 00.0 +8.7
LKWY LR LR
comp=Z,286nm,21.0s,MS5.0
GSC **Goldstone** 132.14 51 ⇑P PKPdf 07 10 53.0 +1.4
baz=132
GSC **Goldstone** 132.14 51 *e*PKPdf PKPdf 07 10 53.5 +1.9
HVU **Hansel Valley** 132.16 41 *e*PKIKP PKPdf 07 10 52.6 +1.1
L15A **Malad City** 132.29 40 ⇓P PKPdf 07 10 52.3 +0.6
baz=132,SNR=11
N14A **Grayback Hills** 132.35 42 ⇓P PKPdf 07 10 52.6 +0.7
baz=132
K16A **Soda Springs** 132.36 39 ⇑P PKPdf 07 10 52.8 +1.0
baz=132
BGU **Big Grassy Mou** 132.42 42 *e*PKPdf PKPdf 07 10 53.1 +1.2
BGU *e*SKPbc SKPbc 07 14 18.1 +2.4
RLMT **Red Lodge** 132.44 35 *e*PKPdf PKPdf 07 10 53.4 +1.5
RLMT *e*SKPbc SKPbc 07 14 16.9 +1.2
RLMT LR LR
comp=Z,154nm,20.0s,MS4.7
P13A **Bates Ranch, G** 132.45 44 ⇓P PKPdf 07 10 53.2 +1.1
baz=132
REDW **Red Top Meadow** 132.52 38 *e*PKPdf PKPdf 07 10 52.6 +0.5
SNOW **Snow King Moun** 132.52 38 *e*PKPdf PKPdf 07 10 53.5 +1.4
LOHW **Long Hollow** 132.53 38 *e*PKPdf PKPdf 07 10 53.4 +1.3
T11A **Corn Creek, Al** 132.56 47 ⇓P PKPdf 07 10 54.2 +1.8
baz=132
J17A **Brown Place, J** 132.61 38 ⇓P PKPdf 07 10 53.3 +1.1
baz=133
HEC **Hector,Ludlow** 132.67 51 ⇓P PKPdf 07 10 54.0 +1.3
baz=133
Q13A **Wheeler Ranch,** 132.68 45 ⇓P PKPdf 07 10 53.1 +0.5
baz=133
S12A **Delamar Landin** 132.68 47 ⇑P PKPdf 07 10 53.9 +1.3
baz=133
AHID **Auburn Hatcher** 132.70 39 PFAKE 07 11 00.0 +7.6
AHID LR LR
comp=Z,182nm,21.0s,MS4.8
L16A **Fish Haven** 132.89 40 ⇓P PKPdf 07 10 54.1 +1.3
baz=133
DGMT **Dagmar** 132.90 29 ⇑P PKPdf 07 10 53.7 +1.1
baz=133
DGMT **Dagmar** 132.90 29 PFAKE 07 11 00.0 +7.4
DGMT LR LR
comp=Z,202nm,20.0s,MS4.8
DUG **Dugway** 132.92 43 ⇓P PKPdf 07 10 54.0 +1.1
baz=133
DUG **Dugway** 132.92 43 *e*PKIKP PKPdf 07 10 53.5 +0.6
DUG MLR MLR
comp=Z,130nm,19.0s,MS4.7
DUG **Dugway** 132.92 43 *e*PKPdf PKPdf 07 10 53.5 +0.5
DUG *e*SKPbc SKPbc 07 14 19.5 +2.0
DUG LR LR
comp=Z,130nm,19.0s,MS4.7
V11A **Goodsprings** 132.97 49 ⇑P PKPdf 07 10 54.7 +1.5
baz=133
PFO **Pinyon Flat Ob** 133.01 53 ⇓P PKPdf 07 10 54.7 +1.4
baz=133
PFO **Pinyon Flat Ob** 133.01 53 PFAKE 07 11 10.0 +17
PFO LR LR
comp=Z,167nm,20.0s,MS4.8
HWUT **Hardware Ranch** 133.02 40 *e*PKPdf PKPdf 07 10 54.0 +0.9
HWUT *e*SKPbc SKPbc 07 14 19.9 +2.1
HWUT LR LR
comp=Z,230nm,19.0s,MS4.9
P14A **Drum Mountains** 133.03 44 ⇑P PKPdf 07 10 54.5 +1.4
baz=133
J18A **Kendall Valley** 133.11 38 ⇓P PKPdf 07 10 54.7 +1.5
baz=133
LAO **LASA Array** 133.11 32 *e*PKPdf PKPdf 07 10 54.2 +1.1
LAO *e*SKPbc SKPbc 07 14 19.8 +1.9
LAO LR LR
comp=Z,96nm,20.0s,MS4.5
GMRC **Granite Mounta** 133.20 51 ⇓P PKPdf 07 10 55.3 +1.6
baz=133
BELC **Belle Mtn. Jos** 133.23 52 ⇓P PKPdf 07 10 55.4 +1.7
baz=133
MONP **Monument Peak** 133.28 53 ⇑P PKPdf 07 10 55.3 +1.4
baz=133
S13A **Holt Ranch, En** 133.40 46 ⇑P PKPdf 07 10 55.5 +1.5
baz=133
K18A **Toltan Ranch,** 133.42 38 ⇓P PKPdf 07 10 54.9 +1.1
baz=133
V12A **Nelson** 133.45 49 ⇑P PKPdf 07 10 55.6 +1.5
baz=133
N16A **Rees Ranch, Co** 133.48 41 ⇑P PKPdf 07 10 55.4 +1.4
baz=133
JLU **Jordanelle** 133.62 42 *e*PKPdf PKPdf 07 10 55.1 +0.8
JLU *e*SKPbc SKPbc 07 14 22.0 +2.1
BW06 **Boulder Array** 133.64 38 ⇑P PKPdf 07 10 55.2 +1.0
baz=134
BW06 **Boulder Array** 133.64 38 PFAKE 07 11 10.0 +16
BW06 LR LR
comp=Z,140nm,19.0s,MS4.7
PDAR **Pinedale Array** 133.64 38 PKP PKPdf 07 10 54.5 +0.2
comp=Z,2.1nm,0.8s,baz=207,slow=0.6,SNR=18
M17A **Scullys Gap (B** 133.66 40 ⇑P PKPdf 07 10 55.7 +1.4
baz=134
O16A **Springville** 133.78 42 ⇓P PKPdf 07 10 55.5 +0.9
baz=134
Q15A **Fillmore** 133.79 44 ⇑P PKPdf 07 10 56.4 +1.8
baz=134
S14A **Cedar City** 133.81 46 ⇓P PKPdf 07 10 55.9 +1.2
baz=134
L18A **Fontenelle, Gr** 133.82 39 ⇓P PKPdf 07 10 56.2 +1.6
baz=134
IRM **Iron Mountain** 133.82 51 ⇑P PKPdf 07 10 56.5 +1.7
baz=134
N17A **Moffit Pass** 133.84 41 ⇓P PKPdf 07 10 55.8 +1.1
baz=134
DAU **Daniels Canyon** 133.84 42 *e*PKIKP PKPdf 07 10 55.0 +0.3
P16A **Fountain Green** 133.98 43 ⇓P PKPdf 07 10 56.4 +1.5
baz=134
K19A **Absolon Red Bu** 134.04 37 ⇓P PKPdf 07 10 55.6 +0.7
baz=134
M18A **Lyman** 134.07 40 ⇑P PKPdf 07 10 56.0 +0.9
baz=134,SNR=5.4
L19A **Farson** 134.14 39 ⇑P PKPdf 07 10 56.3 +1.2
baz=134
MVU **Marysvale** 134.14 44 PFAKE 07 11 10.0 +15
MVU LR LR
comp=Z,167nm,19.0s,MS4.8
MSU **Marysvale** 134.16 44 *e*PKIKP PKPdf 07 10 55.4 +0.1
T14A **Hurricane** 134.18 47 ⇑P PKPdf 07 10 57.1 +1.6
baz=134
O17A **Robinson Place** 134.29 42 ⇓P PKPdf 07 10 56.9 +1.4
baz=134,SNR=17
K20A **Yellowstone Ra** 134.44 37 ⇑P PKPdf 07 10 56.2 +0.4
baz=134
N18A **Larsen Ranch,** 134.56 40 ⇑P PKPdf 07 10 57.0 +1.0
baz=134
M19A **Rock Springs** 134.60 39 ⇓P PKPdf 07 10 57.0 +1.0
baz=134
SCHQ **Schefferville** 134.61 355 PKP PKPdf 07 10 55.5 -0.2
comp=Z,12nm,0.9s,baz=44,slow=4.0,SNR=9.7
P17A **Butcher Ranch,** 134.66 42 ⇓P PKPdf 07 10 56.8 +0.6
baz=135
X13A **Yucca** 134.67 50 ⇑P PKPdf 07 10 57.5 +1.1
baz=135
O18A **Roosevelt** 134.73 41 ⇑P PKPdf 07 10 57.4 +1.0
baz=135,SNR=14
R16A **Teasdale** 134.75 44 ⇑P PKPdf 07 10 57.9 +1.5
baz=135
V14A **Boquillas Ranc** 134.78 48 ⇑P PKPdf 07 10 58.3 +1.7
baz=135
L20A **Wamsutter** 134.81 38 ⇑P PKPdf 07 10 57.6 +1.1
baz=135
P18A **Preston Nutter** 134.91 42 ⇓P PKPdf 07 10 57.9 +1.2
baz=135,SNR=6.9
N19A **John Jarvie Ra** 134.92 40 ⇑P PKPdf 07 10 57.7 +1.0
baz=135
S16A **Weppner Ranch,** 134.94 45 ⇓P PKPdf 07 10 58.0 +1.2
baz=135
W14A **Seligman** 134.98 49 ⇑P PKPdf 07 10 58.5 +1.6
baz=135
ULM **Lac du Bonnet** 134.99 21 PKP PKPdf 07 10 55.1 -1.4
comp=Z,16nm,1.1s,baz=314,slow=5.2,SNR=6.7
ULM **Lac du Bonnet** 134.99 21 *e*PKPdf PKPdf 07 10 55.7 -0.8
ULM LR LR
comp=Z,260nm,22.0s,MS4.9
SRU **San Rafael** 134.99 43 ⇑P PKPdf 07 10 57.8 +0.9
baz=135
SRU **San Rafael** 134.99 43 *e*PKPdf PKPdf 07 10 56.2 -0.7
U15A **North Rim** 135.03 47 ⇑P PKPdf 07 10 58.5 +1.5
baz=135
R17A **Hanksville Air** 135.21 44 ⇓P PKPdf 07 10 58.1 +0.8
baz=135
Q18A **Rafter H Ranch** 135.25 43 ⇑P PKPdf 07 10 58.3 +0.9
baz=135,SNR=5.9
O19A **Miners Draw (B** 135.28 41 ⇑P PKPdf 07 10 58.3 +0.9
baz=135,SNR=6.5
Z13A **Yuma Proving G** 135.34 52 ⇓P PKPdf 07 10 59.4 +1.7
baz=135
V15A **Kaibab Nationa** 135.39 48 ⇓P PKPdf 07 10 59.6 +1.9
baz=135
L21A **Rawlins** 135.43 38 ⇓P PKPdf 07 10 58.5 +0.9
baz=135
X14A **Yava** 135.43 50 ⇑P PKPdf 07 10 59.2 +1.4
baz=135
S17A **Black Ridge (B** 135.53 45 ⇑P PKPdf 07 10 58.6 +0.7
baz=136
N20A **Spence Gulch,** 135.53 39 ⇑P PKPdf 07 10 59.3 +1.5
baz=136
Y14A **Wickenburg** 135.55 51 ⇑P PKPdf 07 10 59.2 +1.2
baz=136
M21A **Separation Pea** 135.64 38 ⇓P PKPdf 07 10 59.2 +1.2
baz=136
RWWY **Rawlins** 135.69 38 *e*PKPdf PKPdf 07 10 58.7 +0.6
P19A **Cripple Cowboy** 135.74 41 ⇑P PKPdf 07 10 59.2 +0.9
baz=136,SNR=6.1
R18A **Canyonlands Na** 135.78 43 ⇑P PKPdf 07 10 59.1 +0.7
baz=136,SNR=11
T17A **Navajo Res., N** 135.84 46 ⇓P PKPdf 07 10 59.8 +1.3
baz=136
Q19A **Hogan Spring (** 135.91 42 ⇑P PKPdf 07 10 59.7 +1.1
baz=136,SNR=8.3
X15A **Humboldt** 135.91 50 ⇓P PKPdf 07 11 00.3 +1.6
baz=136
O20A **White River Ci** 135.94 40 ⇑P PKPdf 07 10 59.6 +1.0
baz=136,SNR=18
RSSD **Black Hills** 135.97 33 *e*PKPdf PKPdf 07 10 58.8 +0.2
RSSD *e*SKPbc SKPbc 07 14 28.7 +1.4
N21A **Black Mountain** 136.04 39 ⇓P PKPdf 07 10 59.5 +0.7
baz=136
Y15A **Casa Rosa Ranc** 136.06 50 ⇓P PKPdf 07 11 00.2 +1.2
baz=136
S18A **Hurst Farm, Bl** 136.06 44 ⇓P PKPdf 07 11 00.0 +1.1
baz=136
WUAZ **Wupatki** 136.11 48 ⇓P PKPdf 07 11 00.5 +1.5
baz=136
WUAZ **Wupatki** 136.11 48 *e*PKPdf PKPdf 07 11 00.7 +1.6
WUAZ *e* 07 11 15.7
WUAZ LR LR
comp=Z,207nm,21.0s,MS4.8
114A **Black Gap (USA** 136.11 52 ⇓P PKPdf 07 11 00.7 +1.6
baz=136
U17A **Shonto** 136.12 46 ⇓P PKPdf 07 11 01.1 +2.1
baz=136

P20A	De Beque	136.19	41	⇓P	PKPdf	07 11 00.1 +1.1
	baz=136,SNR=13					
R19A	Curley Farm, L	136.26	43	⇓P	PKPdf	07 11 00.4 +1.1
	baz=136,SNR=6.4					
O21A	Pagoda	136.38	40	⇓P	PKPdf	07 11 00.9 +1.4
	baz=136					
T18A	Mexican Hat	136.42	45	⇓P	PKPdf	07 11 00.9 +1.3
	baz=136					
PV04	Paradox Valley	136.44	43	*e*PKPdf	PKPdf	07 11 00.7 +1.1
214A	Organ Pipe Nat	136.47	53	⇓P	PKPdf	07 11 01.4 +1.5
	baz=136					
V17A	Tonalea, Kykot	136.48	47	⇓P	PKPdf	07 11 01.3 +1.5
	baz=136					
X16A	Lo Mia Camp, P	136.54	49	⇓P	PKPdf	07 11 01.8 +1.9
	baz=136					
Q20A	Ridgley Place,	136.55	42	⇓P	PKPdf	07 11 01.0 +1.2
	baz=136,SNR=9.0					
N22A	Wattenberg Ran	136.67	38	⇓P	PKPdf	07 11 01.6 +1.7
	baz=137					
PV01	Paradox Valley	136.80	43	*e*PKPdf	PKPdf	07 11 01.6 +1.4
R20A	Redvale	136.90	43	⇓P	PKPdf	07 11 02.0 +1.5
	baz=137					
PHWY	Pilot Hill	136.97	37	*e*PKPdf	PKPdf	07 11 00.8 +0.4
O22A	Kremmling	136.99	39	⇑P	PKPdf	07 11 03.1 +2.6
	baz=137					
X17A	Forest Lakes	137.04	49	⇓P	PKPdf	07 11 03.1 +2.3
	baz=137					
V18A	Ganado	137.06	47	⇓P	PKPdf	07 11 02.9 +2.0
	baz=137					
Q21A	Lamborn Mesa,	137.09	41	⇑P	PKPdf	07 11 02.4 +1.7
	baz=137					
S20A	Disappointment	137.10	43	⇑P	PKPdf	07 11 02.2 +1.4
	baz=137,SNR=8.7					
T19A	Beclabito	137.16	45	⇓P	PKPdf	07 11 02.5 +1.5
	baz=137					
SMCO	Snowmass	137.28	41	*e*PKPdf	PKPdf	07 11 02.1 +1.0
SMCO				*e*SKPdf	SKPdf	07 14 33.9 +0.8
Y17A	Roosevelt	137.29	50	⇑P	PKPdf	07 11 03.5 +2.2
	baz=137					
U19A	Dine' College,	137.30	46	⇓P	PKPdf	07 11 02.7 +1.5
	baz=137					
MVCO	Mesa Verde	137.33	44	⇑P	PKPdf	07 11 02.8 +1.5
	baz=137,SNR=11					
MVCO	Mesa Verde	137.33	44	*e*PKPdf	PKPdf	07 11 02.6 +1.3
MVCO				LR	LR	
	comp=Z,223nm,21.0s,MS4.9					
R21A	Cimarron	137.36	42	⇑P	PKPdf	07 11 02.8 +1.5
	baz=137					
W18A	Petrified Fore	137.48	47	⇓P	PKPdf	07 11 04.0 +2.4
	baz=137					
Q22A	Crested Butte,	137.50	41	⇓P	PKPdf	07 11 02.9 +1.4
	baz=137,SNR=8.3					
S21A	Coal Bank Pass	137.57	43	⇓P	PKPdf	07 11 03.6 +1.9
	baz=138,SNR=20					
X18A	Snowflake	137.59	48	⇓P	PKPdf	07 11 04.3 +2.4
	baz=138					
V19A	Window Rock	137.69	46	⇑P	PKPdf	07 11 04.2 +2.2
	baz=138					
ISCO	Idaho Springs	137.78	39	*e*PKIKP	PKPdf	07 11 02.6 +0.6
ISCO				MLR	MLR	
	comp=Z,197nm,19.0s,MS4.9					
117A	Oracle	137.84	51	⇓P	PKPdf	07 11 04.1 +1.7
	baz=138					
Y18A	Canyon Day Jun	137.87	49	⇓P	PKPdf	07 11 03.9 +1.5
	baz=138					
TUC	Tucson	137.91	52	*e*PKIKP	PKPdf	07 11 05.0 +2.5
TUC				MLR	MLR	
	comp=Z,149nm,20.0s,MS4.7					
R22A	Saguache, Gunn	137.96	42	⇑P	PKPdf	07 11 04.3 +1.9
	baz=138,SNR=6.9					
V20A	Brimhall	138.06	46	⇑P	PKPdf	07 11 04.0 +1.4
	baz=138					
217A	Green Valley	138.10	52	⇓P	PKPdf	07 11 04.2 +1.3
	baz=138					
T21A	Navajo Lake	138.10	44	⇓P	PKPdf	07 11 04.1 +1.4
	baz=138					
X19A	St. Johns	138.12	48	⇓P	PKPdf	07 11 04.2 +1.4
	baz=138					
U21A	Nageezi	138.31	44	⇓P	PKPdf	07 11 04.6 +1.4
	baz=138,SNR=5.1					
Y19A	Nutrioso	138.37	49	⇓P	PKPdf	07 11 05.2 +1.9
	baz=138					
W20A	Ramah	138.37	47	⇑P	PKPdf	07 11 04.4 +1.1
	baz=138					
EYMN	Ely	138.46	19	PFAKE		07 11 20.0 +17
EYMN				LR	LR	
	comp=Z,262nm,22.0s,MS4.9					
T22A	Edith	138.52	43	⇓P	PKPdf	07 11 04.9 +1.4
	baz=138,SNR=6.3					
P25A	Willow Gulch B	138.84	38	⇑P	PKPdf	07 11 05.6 +1.6
	baz=139					
SPB	Sao Paulo	139.02	216	PFAKE		07 11 20.0 +15
SPB				LR	LR	
	comp=Z,358nm,19.0s,MS5.1					
R24A	Sanders Place,	139.02	40	⇓P	PKPdf	07 11 06.0 +1.6
	baz=139					
Y20A	Horse Springs,	139.03	48	⇓P	PKPdf	07 11 05.8 +1.3
	baz=139					
SDCO	Great Sand Dun	139.05	41	*e*PKPdf	PKPdf	07 11 05.0 +0.5
SDCO				LR	LR	
	comp=Z,202nm,22.0s,MS4.8					
V22A	San Miguel Ran	139.09	45	⇑P	PKPdf	07 11 06.8 +2.2
	baz=139					
OGNE	Ogallala	139.18	35	PFAKE		07 11 20.0 +15
OGNE				LR	LR	
	comp=Z,177nm,20.0s,MS4.8					
X21A	Alamocita Cree	139.21	47	⇓P	PKPdf	07 11 06.5 +1.7
	baz=139					
219A	White Tail Can	139.22	51	⇓P	PKPdf	07 11 06.7 +1.8
	baz=139					
Z20A	Nine Sixteen R	139.24	49	⇓P	PKPdf	07 11 06.9 +2.0
	baz=139					
S24A	Houchin Ranch,	139.29	41	⇑P	PKPdf	07 11 06.8 +2.0
	baz=139					
U23A	El Rito	139.37	44	⇓P	PKPdf	07 11 06.8 +1.7
	baz=139,SNR=8.6					
120A	U Bar Ranch, L	139.46	50	⇓P	PKPdf	07 11 07.2 +1.9
	baz=139					
319A	Douglas	139.46	52	⇑P	PKPdf	07 11 07.3 +2.0
	baz=139					
Y21A	Point of Rocks	139.50	48	⇑P	PKPdf	07 11 07.6 +2.2
	baz=140					
V23A	Ortiz Mt. (NFS	139.69	44	⇑P	PKPdf	07 11 06.8 +1.2
	baz=140					
LAZ	Ladron	139.70	47	*e*PKPdf	PKPdf	07 11 04.7 -1.0
S25A	Robets Cordova	139.78	41	⇑P	PKPdf	07 11 07.2 +1.4
	baz=140					
ANMO	Albuquerque	139.91	46	*e*PKPpre		07 10 58.2
ANMO				*e*PKPdf	PKPdf	07 11 09.0 +2.9
ANMO				*e*SKPdf	SKPdf	07 14 41.6 +3.8
ANMO				LR	LR	
	comp=Z,172nm,19.0s,MS4.8					
ECSD	EROS Data Cent	139.94	28	*e*PKPpre		07 10 58.8
ECSD				*e*PKPdf	PKPdf	07 11 05.8 -0.1
ECSD				*e*PP	PP	07 14 05.7 +4.0
ECSD				*e*SKPdf	SKPdf	07 14 39.2 +1.6
ECSD				LR	LR	
	comp=Z,211nm,20.0s,MS4.9					
Y22A	Socorro	140.05	47	⇑P	PKPdf	07 11 07.9 +1.6
	baz=140					
T25A	Trinidad	140.10	41	⇓P	PKPdf	07 11 07.8 +1.4
	baz=140					
121A	Cookes Peak, D	140.11	50	⇑P	PKPdf	07 11 08.0 +1.5
	baz=140					
BNM	Barren Site	140.19	47	*e*PKPpre		07 11 02.9
V24A	Rampart Ranch,	140.32	44	⇓P	PKPdf	07 11 08.5 +1.7
	baz=140,SNR=7.3					
Z22A	Elephant Butte	140.38	48	⇑P	PKPdf	07 11 08.5 +1.5
	baz=140,SNR=8.1					
RCBR	Riachuelo	140.57	249	PFAKE		07 11 20.0 +12
RCBR				LR	LR	
	comp=Z,562nm,20.0s,MS5.3					
V25A	Rancho No Teng	140.71	43	⇓P	PKPdf	07 11 08.6 +1.1
	baz=141,SNR=6.8					
CPUP	Villa Florida	141.46	202	PKhKP		07 11 01.7
	comp=Z,2.8nm,0.6s,baz=157,slow=2.1,SNR=12					
CPUP				PKP	PKPdf	07 11 08.0 -1.2
	comp=Z,10.0nm,0.8s,baz=136,slow=2.4,SNR=15					
CPUP				PP	PP	07 14 10.5 -0.3
	comp=Z,2.2nm,0.9s,baz=120,slow=5.0,SNR=3.5					
CPUP	Villa Florida	141.46	202	PKP	PKPdf	07 11 08.0 -1.2
CPUP				PP	PP	07 14 10.5 -0.3
LCO	Las Campanas	141.64	182	*e*PKPdf	PKPdf	07 11 10.3 +0.9
CBKS	Cedar Bluff	141.92	36	PFAKE		07 11 20.0 +10
CBKS				LR	LR	
	comp=Z,214nm,20.0s,MS4.9					
MNTX	Cornudas Mount	142.30	49	*e*PKPpre		07 11 06.6
MNTX				*e*PKPdf	PKPdf	07 11 10.9 +0.4
MNTX				LR	LR	
	comp=Z,158nm,21.0s,MS4.8					
GDL2	Guadalupe Moun	142.81	48	*e*PKPdf	PKPdf	07 11 08.7 -2.6
SCIA	State Center	142.91	26	*e*PKPdf	PKPdf	07 11 09.1 -2.2
SCIA				LR	LR	
	comp=Z,266nm,21.0s,MS5.0					
CLNB	Carlsbad	143.13	48	*e*PKPdf	PKPdf	07 11 10.2 -1.8
AMTX	Amarillo	143.22	42	*e*PKPdf	PKPdf	07 11 10.6 -1.4
AMTX				LR	LR	
	comp=Z,285nm,22.0s,MS5.0					
JFWS	Jewell Farm	143.26	22	*e*PKIKP	PKPdf	07 11 09.2 -2.6
JFWS				MLR	MLR	
	comp=Z,223nm,20.0s,MS4.9					
KSU1	Kansas State U	143.45	32	*e*PKPdf	PKPdf	07 11 09.7 -2.6
KSU1				LR	LR	
	comp=Z,121nm,19.0s,MS4.7					
PKME	Peaks-Kenny Pk	144.30	356	*e*PKPdf	PKPdf	07 11 11.7 -1.8
PKME				LR	LR	
	comp=Z,234nm,21.0s,MS4.9					
TXAR	Lajitas Array	144.71	52	PKP	PKPdf	07 11 14.6 -0.2
	comp=Z,30nm,0.8s,baz=247,slow=1.4,SNR=253					
428A	Kincaid Ranch,	144.79	49	⇑P	PKPdf	07 11 15.6 +0.7
	baz=145,SNR=154					
627A	Terlingua Ranc	144.87	51	⇑P	PKPdf	07 11 15.1 0.0
	baz=145,SNR=99					
528A	Cox Ranch, San	144.99	50	⇑P	PKPdf	07 11 15.8 +0.5
	baz=145,SNR=83					
LONY	Lake Ozonia	145.00	3	*e*PKPdf	PKPdf	07 11 14.3 -0.5
LONY				LR	LR	
	comp=Z,139nm,22.0s,MS4.7					
WMOK	Wichita Mounta	145.19	40	*e*PKIKP	PKPdf	07 11 15.4 0.0
WMOK				MLR	MLR	
	comp=Z,221nm,19.0s,MS5.0					
628A	Black Gap, Mar	145.24	51	⇑P	PKPbc	07 11 16.6 +1.2
	baz=145,SNR=140					
LBNH	Lisbon	145.43	359	*e*PKIKP	PKPdf	07 11 15.8 +0.2
LBNH				MLR	MLR	
	comp=Z,307nm,19.0s,MS5.1					
HDIL	Hopedale	145.65	23	*e*PKPdf	PKPdf	07 11 16.2 +0.1
HDIL				LR	LR	
	comp=Z,223nm,20.0s,MS4.9					
NCB	Newcomb	145.66	2	*e*PKPdf	PKPdf	07 11 15.9 0.0
NCB				LR	LR	
	comp=Z,290nm,20.0s,MS5.0					
AAM	Ann Arbor	145.90	15	*e*PKP2	PKPab	07 11 17.2 -0.3
ERPA	Erie	146.87	10	*e*PKPbc	PKPbc	07 11 20.2 +0.3
ERPA				LR	LR	
	comp=Z,310nm,20.0s,MS5.1					
SLM	Saint Louis	146.89	26	*e*PKPdf	PKPdf	07 11 18.6 +0.4
SLM				*e*PKPbc	PKPbc	07 11 20.2 +0.1
CCM	Cathedral Cave	146.92	28	*e*PKIKP	PKPdf	07 11 18.2 -0.1
CCM				*e*		07 11 20.4
CCM				MLR	MLR	
	comp=Z,238nm,19.0s,MS5.0					
JCT	Junction City	147.03	47	*e*PKPdf	PKPdf	07 11 19.3 +0.6
JCT				*e*PKPbc	PKPbc	07 11 21.9 +1.1
BINY	Binghamton	147.31	5	*e*PKPdf	PKPdf	07 11 19.4 +0.6
BINY				LR	LR	
	comp=Z,300nm,21.0s,MS5.0					
FVM	French Village	147.35	27	*e*PKIKP	PKPdf	07 11 19.0 0.0
FVM				*e*		07 11 21.4
OLIL	Olney	147.69	23	*e*PKPdf	PKPdf	07 11 20.1 +0.5
OLIL				*e*PKPbc	PKPbc	07 11 22.8 +0.4
BLO	Bloomington	147.89	21	*e*PKIKP	PKPdf	07 11 19.8 -0.1
BLO				*e*		07 11 22.9
ACSO	Alum Creek Sta	148.01	15	*e*PKPdf	PKPdf	07 11 20.3 +0.3
ACSO				*e*PKPbc	PKPbc	07 11 23.3 +0.1
SIUC	Southern Illin	148.10	26	*e*PKPdf	PKPdf	07 11 20.6 +0.3
SIUC				*e*PKPbc	PKPbc	07 11 23.5 0.0
MIAR	Mount Ida	148.44	35	*e*PKIKP	PKPdf	07 11 21.6 +0.7
MIAR				*e*		07 11 24.6
MIAR				*e*		07 11 28.5
MIAR				MLR	MLR	
	comp=Z,197nm,19.0s,MS4.9					
SSPA	Standing Stone	148.65	8	*e*PKPdf	PKPdf	07 11 21.1 +0.1
SSPA				*e*PKPbc	PKPbc	07 11 24.9 +0.1
SSPA				LR	LR	
	comp=Z,234nm,19.0s,MS5.0					
PARMO	Parma	148.74	28	*e*PKPdf	PKPdf	07 11 21.9 +0.6
PARMO				*e*PKPbc	PKPbc	07 11 25.5 +0.3
WCI	Wyandotte Cave	148.81	21	*e*PKIKP	PKPdf	07 11 21.7 +0.3
WCI				*e*		07 11 25.5
WCI				MLR	MLR	
	comp=Z,196nm,21.0s,MS4.9					
UALR	University of	148.94	33	*e*PKPbc	PKPbc	07 11 25.8 0.0
GNAR	Gosnell	149.19	29	*e*PKPbc	PKPbc	07 11 27.0 +0.7
HBAR	Harrisburg	149.21	30	*e*PKPbc	PKPbc	07 11 27.3 +0.9
GLAT	Glass	149.28	27	*e*PKPdf	PKPdf	07 11 22.9 +0.7
GLAT				*e*PKPbc	PKPbc	07 11 27.0 +0.5
MCWV	Mont Chateau	149.28	11	*e*PKPbc	PKPbc	07 11 26.8 +0.4
MCWV				LR	LR	
	comp=Z,288nm,19.0s,MS5.1					
UTMT	University of	149.40	27	*e*PKPbc	PKPbc	07 11 27.2 +0.3
HALT	Halls	149.55	28	*e*PKPdf	PKPdf	07 11 23.2 +0.5
HALT				*e*PKPbc	PKPbc	07 11 27.8 +0.6
NATX	Nacogdoches	149.74	40	*e*PKPdf	PKPdf	07 11 23.9 +0.8
NATX				*e*PKPbc	PKPbc	07 11 28.8 +1.0
NATX				LR	LR	
	comp=Z,263nm,20.0s,MS5.0					
MET	Memphis--Engin	149.91	30	*e*PKPbc	PKPbc	07 11 28.3 +0.2
KVTX	Kingsville	150.01	50	PKPdf	PKPdf	07 11 26.1 +2.5
KVTX				*e*PKPbc	PKPbc	07 11 31.2 +2.6
KVTX				LR	LR	
	comp=Z,228nm,22.0s,MS4.9					
WVT	Waverly	150.03	26	*e*PKPdf	PKPdf	07 11 23.7 +0.2
WVT				*e*PKPbc	PKPbc	07 11 28.6 +0.2
WVT				LR	LR	
	comp=Z,233nm,22.0s,MS4.9					
HKT	Hockley	150.13	44	*e*PKIKP	PKPdf	07 11 24.6 +0.8
HKT				*e*		07 11 30.0
HKT				MLR	MLR	
	comp=Z,235nm,20.0s,MS5.0					
OXF	Oxford	150.65	30	*e*PKIKP	PKPbc	07 11 29.7 -0.2
OXF				MLR	MLR	
	comp=Z,283nm,22.0s,MS5.0					
CBN	Corbin	151.11	8	*e*PKPdf	PKPdf	07 11 25.4 +0.4
CBN				*e*PKPbc	PKPbc	07 11 31.0 +0.1
CBN				LR	LR	
	comp=Z,380nm,21.0s,MS5.2					
ELN	Prospectdale	151.41	14	*e*PKPdf	PKPdf	07 11 25.1 -0.5
ELN				*e*PKPbc	PKPbc	07 11 31.6 0.0
BLA	Blacksburg	151.50	14	*e*PKIKP	PKPdf	07 11 25.8 +0.1
BLA				*e*		07 11 31.6
BLA				MLR	MLR	
	comp=Z,235nm,19.0s,MS5.0					
SWET	Sewanee	151.60	24	*e*PKPdf	PKPdf	07 11 25.6 -0.3
SWET				*e*PKPbc	PKPbc	07 11 31.7 -0.4
VBMS	Vicksburg	151.87	34	*e*PKPdf	PKPdf	07 11 27.4 +1.0
VBMS				*e*PKPbc	PKPbc	07 11 33.3 +0.5
VBMS				LR	LR	
	comp=Z,253nm,19.0s,MS5.0					
CPCT	Cooper Cave	151.93	21	*e*PKPdf	PKPdf	07 11 26.7 +0.3
CPCT				*e*PKPbc	PKPbc	07 11 33.0 +0.1
TKL	Tuckaleechee C	152.00	20	*e*PKIKP	PKPdf	07 11 26.8 +0.3
TKL				*e*		07 11 33.1
LRAL	Lakeview Retre	153.01	28	*e*PKPdf	PKPdf	07 11 28.4 +0.4
LRAL				*e*PKPbc	PKPbc	07 11 35.2 -0.2
LRAL				LR	LR	
	comp=Z,247nm,20.0s,MS5.0					
CNNC	Cliffs of the	153.93	10	*e*PKPdf	PKPdf	07 11 30.2 +1.0
CNNC				*e*PKPbc	PKPbc	07 11 37.4 +0.1
CNNC				*e*PKPab	PKPab	07 11 50.8 +0.5
CNNC				LR	LR	
	comp=Z,332nm,19.0s,MS5.2					
LPAZ	La Paz	154.00	189	PKP	PKPdf	07 11 31.0 +1.1
	comp=Z,9.3nm,0.9s,baz=91,slow=2.3,SNR=24					
LPAZ				PKPab	PKPab	07 11 51.2 +0.1
	comp=Z,17nm,0.8s,baz=164,slow=4.6,SNR=11					
LPAZ	La Paz	154.00	189	PKIKP	PKPdf	07 11 31.0 +1.1
LPAZ						07 11 51.2
LPAZ				pmax	pmax	
	comp=Z,9.0nm,1.0s					
LPAZ				pmax	pmax	
	comp=Z,17nm,0.8s					
LPAZ	La Paz	154.00	189	*e*PKPdf	PKPdf	07 11 30.9 +1.0
LPAZ				*e*PKPbc	PKPbc	07 11 39.0 +1.0
LPAZ				*e*PKPab	PKPab	07 11 52.1 +1.0
LPAZ				LR	LR	
	comp=Z,252nm,19.0s,MS5.0					
JSC	Jenkinsville	154.06	17	*e*PKIKP	PKPdf	07 11 29.8 +0.3
JSC				*e*		07 11 37.6
JSC				*e*		07 11 49.7
GOGA	Godfrey	154.14	22	*e*PKIKP	PKPdf	07 11 30.0 +0.4
GOGA				*e*		07 11 38.0
GOGA				*e*		07 11 51.2
BRAL	Brewton	154.64	31	*e*PKPdf	PKPdf	07 11 32.0 +1.6
BRAL				*e*PKPbc	PKPbc	07 11 39.7 +0.8
NHSC	New Hope	155.47	16	PFAKE		07 11 40.0 +8.5
NHSC				LR	LR	
	comp=Z,351nm,22.0s,MS5.1					
NNA	Nana	158.16	168	PFAKE		07 11 50.0 +15
NNA				LR	LR	
	comp=Z,212nm,20.0s,MS5.0					
DWPF	Disney	159.65	24	PFAKE		07 11 50.0 +13
DWPF				LR	LR	
	comp=Z,298nm,19.0s,MS5.2					
TEIG	Tepich	161.34	53	PFAKE		07 11 50.0 +11
TEIG				LR	LR	
	comp=Z,267nm,19.0s					
TGUH	Tegucigalpa,Un	164.75	71	*e*PKPdf	PKPdf	07 11 42.1 -0.2
TGUH				LR	LR	
	comp=Z,220nm,21.0s					
JTS	JuntasAbangare	167.59	85	PFAKE		07 12 00.0 +15
JTS				LR	LR	
	comp=Z,392nm,19.0s					
FDF	Fort de France	167.87	296	PFAKE		07 12 00.0 +15
FDF				LR	LR	
	comp=Z,157nm,20.0s					
OTAV	Otavalo	168.96	146	*e*PKPdf	PKPdf	07 11 46.4 +0.8
OTAV				*e*PKPab	PKPab	07 12 58.2 +1.7
OTAV				LR	LR	
	comp=Z,342nm,19.0s					
GRGR	Grenville	169.15	285	PFAKE		07 12 00.0 +14
GRGR				LR	LR	
	comp=Z,275nm,19.0s					
SJG	San Juan	169.55	325	PFAKE		07 12 00.0 +14
SJG				LR	LR	
	comp=Z,349nm,21.0s					
MTDJ	Mount Denham	170.02	29	PFAKE		07 12 00.0 +14
MTDJ				LR	LR	
	comp=Z,197nm,19.0s					
BCIP	Isla Barro Col	172.64	92	PFAKE		07 12 00.0 +13
BCIP				LR	LR	
	comp=Z,309nm,20.0s					
ROSC	El Rosal	174.97	157	PKP	PKPdf	07 11 48.4 0.0
	comp=Z,18nm,1.1s,baz=229,slow=2.5,SNR=17					
ROSC	El Rosal	174.97	157	*e*PKPdf	PKPdf	07 11 48.7 +0.3
SDV	Santo Domingo	178.15	250	PFAKE		07 12 00.0 +11
SDV				LR	LR	
	comp=Z,210nm,19.0s					

NEIC ***11*** *07:09:23.2±3.3, 24°.20N×122°.37E, h10km, MG3.2(JMA),*
Error ellipse: s-maj=34.7km s-min=15.5km az=83.0
ISCJB ***11*** *07:09:26.7±0.5, 24°.25N±0°.02×122°.17E±0°.02, h8km±2km,*
Error ellipse: s-maj=2.8km s-min=2.3km az=146.6
TAP ***11*** *07:09:27.4, 24°.26N×122°.16E, h7km, ML3.7, D*
JMA ***11*** *07:09:27.0±0.2, 25°.06N×122°.25E, h27km, M3.2*
ISC 11 07:09:27.6±0.4, 24°.28N±0°.02×122°.16E±0°.02, h14km±2km,
n55, σ0=81/106, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.41**	**291**	P	**Pg**	**07 09 35.3**	**-0.4**
	baz=293						
ENA				S	**Sg**	**07 09 41.0**	**-0.2**
	baz=293						
TWC	**Suao**	**0.43**	**320**	⇑*i*P	**Pg**	**07 09 35.9**	**-0.3**
	baz=321						
TWC				S	**Sg**	**07 09 41.9**	**-0.1**
	baz=321						
NACB	**Ninganchiao**	**0.52**	**258**	*e*Pg	**Pg**	**07 09 37.2**	**-0.6**
NACB				*e*Sg	**Sg**	**07 09 46.0**	**+1.1**
TWD	**Chiawan**	**0.55**	**249**	*i* P	**Pg**	**07 09 38.5**	**+0.2**
	baz=250						
TWD				*e*S	**Sg**	**07 09 46.5**	**+0.9**
	baz=250						
HWA	**Hwalien**	**0.59**	**239**	*e*P	**Pg**	**07 09 38.7**	**-0.3**
	baz=240						
HWA				*e*S	**Sg**	**07 09 48.5**	**+1.6**
	baz=240						
ILA	**Ilan**	**0.61**	**323**	*e*P	**Pg**	**07 09 38.7**	**-0.8**
	baz=323						
ILA				*e*S	**Sg**	**07 09 48.2**	**+0.6**
	baz=323						
TWE	**Neicheng**	**0.62**	**315**	*i* P	**Pg**	**07 09 39.2**	**-0.6**
	baz=316						
TWE				*e*S	**Sg**	**07 09 48.6**	**+0.5**
	baz=316						
NNS	**Nan Shan**	**0.73**	**283**	P	**Pg**	**07 09 41.6**	**-0.2**
	baz=283						
NNS				S	**Sg**	**07 09 51.4**	**0.0**
	baz=283						
TWB1	**Santiao Chiao**	**0.74**	**348**	*i* P	**Pg**	**07 09 42.0**	**0.0**
	baz=348						
TWB1				*e*S	**Sg**	**07 09 52.8**	**+1.0**
	baz=348						
YOJ	**Yonaguni jima**	**0.80**	**77**	P	**Pg**	**07 09 43.6**	**+0.5**
YOJ				S	**Sg**	**07 09 55.4**	**+1.8**
ESL	**Shilin**	**0.81**	**235**	P	**Pg**	**07 09 42.4**	**-0.8**
	baz=235						
ESL				S	**Sg**	**07 09 54.7**	**+0.9**
	baz=235						
YHNB	**Yeheng**	**0.81**	**299**	*e*Pg	**Pg**	**07 09 42.4**	**-0.9**
YHNB				*e*Sg	**Sg**	**07 09 54.4**	**+0.5**
WHF	**Hehuan Shan**	**0.82**	**261**	P	**Pg**	**07 09 42.9**	**-0.7**
	baz=261						
WHF				*i* S	**Sg**	**07 09 54.3**	**-0.1**
	baz=261						
NSK	**Sanguang**	**0.83**	**299**	*i* P	**Pg**	**07 09 42.9**	**-0.7**
	baz=299						
NSK				S	**Sg**	**07 09 54.7**	**+0.2**
	baz=299						
NWF	**Wu-fen Shan**	**0.86**	**337**	P	**Pg**	**07 09 44.1**	**-0.1**
	baz=336						
NWF				S	**Sg**	**07 09 56.2**	**+0.8**
	baz=336						
TWA	**Mucha**	**0.87**	**323**	*e*P	**Pg**	**07 09 43.8**	**-0.6**
	baz=324						
TWA				*e*S	**Sg**	**07 09 56.5**	**+0.6**
	baz=324						
TWT	**Tachien**	**0.89**	**268**	P	**Pb**	**07 09 44.5**	**-0.3**
	baz=269						
TWT				S	**Sg**	**07 09 56.9**	**+0.2**
	baz=269						
TATO	**Taipei**	**0.92**	**319**	*e*Pn	**Pn**	**07 09 45.1**	**-0.9**
TATO				*e*Sg	**Sg**	**07 10 01.2**	**+3.7**
TAP1	**Taipei**	**0.95**	**323**	P	**Pb**	**07 09 45.8**	**0.0**
	baz=322						
TAP1				S	**Sb**	**07 09 58.9**	**+0.7**
	baz=322						
TWS1	**Kuangyinshan**	**1.06**	**321**	P	**Pb**	**07 09 47.7**	**+0.1**
	baz=321						
TWS1				S	**Sb**	**07 10 01.9**	**+0.6**
	baz=321						
EHY	**Hungye**	**1.08**	**225**

NSY				*e*S	**Sb**	07 10 08.1	+0.4
	baz=276						
YUS	**Yu-Shan**	**1.35 235**	*e*P		**Pn**	07 09 51.6	-0.5
	baz=234						
YUS				*e*S	**Sn**	07 10 09.1	-0.6
	baz=234						
TCU	**Taichung**	**1.36 265**	P		**Pn**	07 09 51.3	-0.8
	baz=265						
TCU				S	**Sn**	07 10 09.5	-0.4
	baz=265						
WNT	**Mingjian**	**1.40 254**	P		**Pn**	07 09 53.1	+0.4
	baz=254						
WNT				*e*S	**Sn**	07 10 11.2	+0.2
	baz=254						
IRIF	**Iriomote-Funau**	**1.44 88**	P		**Pn**	07 09 52.8	-0.4
IRIF			S		**Sn**	07 10 11.5	-0.4
ALS	**Alishan**	**1.45 238**	P		**Pn**	07 09 52.6	-0.8
	baz=238						
ALS				*e*S	**Sn**	07 10 13.4	+1.1
	baz=238						
ELDTW	**Lidau**	**1.51 224**	*e*P		**Pn**	07 09 51.5	-2.6
	baz=224						
CHN5	**Tsauling**	**1.51 244**	P		**Pn**	07 09 54.0	-0.2
	baz=244						
CHN5				S	**Sn**	07 10 13.4	-0.3
	baz=244						
HATJ	**Hateruma jima**	**1.52 98**	P		**Pn**	07 09 56.3	+2.0
HATJ			*e*S		**Sn**	07 10 17.4	+3.4
JKRS	**Kuro-shima**	**1.69 91**	P		**Pn**	07 09 56.9	+0.2
JKRS			S		**Sn**	07 10 18.8	+0.7
STYT	**Tauyuan**	**1.70 229**	*e*P		**Pn**	07 09 55.3	-1.5
	baz=229						
STYT				*e*S	**Sn**	07 10 19.9	+1.6
	baz=229						
CHN4	**Tsaushan**	**1.70 237**	P		**Pn**	07 09 57.0	+0.1
	baz=237						
CHN4				S	**Sn**	07 10 19.4	+1.0
	baz=237						
TPUB	**Ta-pu**	**1.70 235**	*e*Pn		**Pn**	07 09 56.2	-0.7
WTP	**Ta-pu**	**1.75 234**	*e*P		**Pn**	07 09 57.5	0.0
	baz=234						
WTP				*e*S	**Sn**	07 10 20.2	+0.7
	baz=234						
TWG	**Pinlang**	**1.76 215**	*e*P		**Pn**	07 09 58.2	+0.6
	baz=214						
WTCT	**Ta-ch'eng**	**1.76 257**	P		**Pn**	07 09 56.7	-1.0
	baz=256						
WTCT				*e*S	**Sn**	07 10 19.7	-0.2
	baz=256						
JIJ	**Ishigaki jima**	**1.81 87**	P		**Pn**	07 09 57.8	-0.6
JIJ			S		**Sn**	07 10 20.4	-0.8
TWK	**Hsinying**	**1.83 237**	P		**Pn**	07 09 58.8	+0.2
	baz=236						
TWK				S	**Sn**	07 10 22.2	+0.6
	baz=236						
CHN1	**Nanshi**	**1.85 234**	P		**Pn**	07 09 58.8	0.0
	baz=234						
CHN1				S	**Sn**	07 10 22.4	+0.4
	baz=234						
SGST	**Jiashian**	**1.87 231**	P		**Pn**	07 09 59.0	-0.1
	baz=230						
SGST				*e*S	**Sn**	07 10 23.7	+1.2
	baz=230						
SSD	**Sandimen**	**2.07 223**	P		**Pn**	07 10 01.5	-0.4
	baz=222						
SSD				S	**Sn**	07 10 27.9	+0.4
	baz=222						
EAST	**Anshuo**	**2.24 213**	*e*P		**Pn**	07 10 05.2	+1.0
	baz=212						
EAST				*e*S	**Sn**	07 10 33.0	+1.4
	baz=212						
JTJ	**Tarama**	**2.35 81**	P		**Pn**	07 10 06.1	+0.4
JTJ			*e*S		**Sn**	07 10 34.5	+0.2
SCZT	**Fangliau**	**2.37 217**	P		**Pn**	07 10 06.4	+0.5
	baz=216						
SCZT				S	**Sn**	07 10 35.6	+0.9
	baz=216						
PNG	**Penghu**	**2.48 254**	*e*P		**Pn**	07 10 07.7	+0.1
	baz=253						
PNG				S	**Sn**	07 10 38.1	+0.5
	baz=253						
WDGT	**Dungji**	**2.50 247**	P		**Pn**	07 10 08.3	+0.5
	baz=246						
WDGT				*e*S	**Sn**	07 10 38.1	0.0
	baz=246						

*IDC **11** 07:39:26.0±1.5, 25°.05N×121°.93E, h0km, mb3.9/8, mb1 4.1/8, mb1mx3.9/22, mbtmp3.9/8, Error ellipse: s-maj=142.4km s-min=19.3km az=65.0*
*NEIC **11** 07:39:27.9±1.1, 25°.16N×122°.35E, h10km, Error ellipse: s-maj=16.2km s-min=12.8km az=121.0*
*ISCJB **11** 07:39:28.8±0.8, 25°.12N±0°.03×122°.32E±0°.03, h9km±3km, mb3.8/8, Error ellipse: s-maj=5.3km s-min=5.2km az=22.1*
*TAP **11** 07:39:29.2, 25°.07N×122°.26E, h11km, ML3.8, D*
ISC 11 07:39:28.8±0.8, 25°.12N±0°.03×122°.33E±0°.04, h8km±3km, n51, σ1ˢ19/84, mb3.8/8, 4C-1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.33 251**		⇓*i*P	**Pg**	07 39 35.3	+0.1
	baz=255						
TWB1				S	**Sg**	07 39 39.8	+0.2
	baz=255						
NWF	**Wu-fen Shan**	**0.50 265**		⇑*i*P	**Pg**	07 39 38.6	+0.1
	baz=270						
NWF				S	**Sg**	07 39 45.3	+0.3
	baz=270						
ILA	**Ilan**	**0.63 237**		*e*P	**Pg**	07 39 41.4	+0.3
	baz=236						
ILA				*e*S	**Sg**	07 39 50.8	+1.5
	baz=236						
TWC	**Suao**	**0.67 221**		*i* P	**Pg**	07 39 41.4	-0.3
	baz=218						
TWC				S	**Sg**	07 39 50.4	0.0
	baz=218						
TWY	**Chenhua**	**0.68 284**		⇑*i*P	**Pg**	07 39 42.1	+0.3
	baz=288						
TWY				S	**Sg**	07 39 52.0	+1.3
	baz=288						
TWA	**Mucha**	**0.69 259**		⇑*i*P	**Pg**	07 39 42.3	+0.2
	baz=261						
TWA				*i* S	**Sg**	07 39 52.3	+1.2
	baz=261						
TWE	**Neicheng**	**0.72 237**		*i* P	**Pg**	07 39 42.2	-0.4
	baz=236						
TWE				S	**Sg**	07 39 51.5	-0.6
	baz=236						
TAP1	**Taipei**	**0.73 264**		P	**Pg**	07 39 43.1	+0.1
	baz=267						
TAP1				S	**Sg**	07 39 54.1	+1.5
	baz=267						
TATO	**Taipei**	**0.78 260**		*e*Pg	**Pg**	07 39 43.4	-0.4
TATO				*e*Sg	**Sg**	07 39 53.9	+0.1
TWS1	**Kuangyinshan**	**0.83 269**		P	**Pg**	07 39 45.2	+0.5
	baz=272						
TWS1				*e*S	**Sg**	07 39 56.9	+1.5
	baz=272						
ENA	**Nanau**	**0.87 218**		P	**Pg**	07 39 45.0	-0.5
	baz=216						
ENA				S	**Sg**	07 39 56.3	-0.5
	baz=216						
YHNB	**Yeheng**	**0.97 243**		*e*Pg	**Pg**	07 39 46.5	-1.0
YHNB				*e*Sg	**Sg**	07 39 57.9	-2.3
NSK	**Sanguang**	**0.99 244**		*i* P	**Pg**	07 39 47.0	-0.8
	baz=244						
NSK				S	**Sg**	07 39 58.7	-1.8
	baz=244						
NCU	**National Centr**	**1.05 262**		P	**Pg**	07 39 48.7	-0.2
	baz=263						
NCU				*e*S	**Sg**	07 40 02.3	-0.2
	baz=263						
NNS	**Nan Shan**	**1.10 232**		P	**Pg**	07 39 49.1	-0.8
	baz=231						
NNS				S	**Sg**	07 40 03.0	-1.2
	baz=231						
NACB	**Ninganchiao**	**1.15 216**		*e*Pg	**Pg**	07 39 49.2	-1.8
NACB				*e*Sg	**Sg**	07 40 03.6	-2.3
TWD	**Chiawan**	**1.23 213**		P	**Pn**	07 39 51.1	-1.1
	baz=211						
TWD				*e*S	**Sb**	07 40 06.8	-1.5
	baz=211						
NSTT	**Nanjuang**	**1.30 248**		P	**Pn**	07 39 51.8	-1.5
	baz=248						
NSTT				*e*S	**Sb**	07 40 08.2	-2.1
	baz=248						
TWT	**Tachien**	**1.36 231**		P	**Pn**	07 39 54.0	0.0
	baz=230						
TWT				S	**Sb**	07 40 11.2	-0.8
	baz=230						
WHF	**Hehuan Shan**	**1.37 225**		⇑*i*P	**Pn**	07 39 53.6	-0.6
	baz=224						
WHF				S	**Sb**	07 40 10.6	-1.7
	baz=224						
ESL	**Shilin**	**1.53 212**		P	**Pn**	07 39 56.4	-0.1
	baz=210						
ESL				S	**Sn**	07 40 15.9	-0.6
	baz=210						
NSY	**Sanyi**	**1.59 244**		*e*P	**Pn**	07 39 58.5	+1.4
	baz=244						
NSY				*e*S	**Sn**	07 40 16.6	-1.2
	baz=244						
TCU	**Taichung**	**1.79 238**		*e*P	**Pn**	07 40 00.6	+0.6
	baz=237						
TCU				*e*S	**Sn**	07 40 22.3	-0.5
	baz=237						
SMLT	**Sun Moon Lake**	**1.79 227**		P	**Pn**	07 40 01.6	+1.6
	baz=226						
SMLT				S	**Sn**	07 40 23.4	+0.5
	baz=226						
SSLB	**Suanglung**	**1.82 224**		*e*Pn	**Pn**	07 40 00.8	+0.4
SSLB				*e*Sg	**Sg**	07 40 22.9	-4.5
EHY	**Hungye**	**1.85 210**		*e*P	**Pn**	07 40 00.9	+0.1
	baz=208						
EHY				*e*S	**Sn**	07 40 25.2	+0.9
	baz=208						
YULB	**Yu-li**	**1.96 209**		*e*Pn	**Pn**	07 40 02.8	+0.5
YULB				*e*Sg	**Sg**	07 40 35.2	+3.5
TWF1	**Yuli**	**1.99 208**		*e*P	**Pn**	07 40 02.8	0.0
	baz=207						
TWF1				*e*S	**Sn**	07 40 28.3	+0.4
	baz=207						
YUS	**Yu-Shan**	**2.05 218**		*e*P	**Pn**	07 40 05.2	+1.6
	baz=217						
ALS	**Alishan**	**2.12 221**		*e*P	**Pn**	07 40 06.4	+1.9
	baz=220						
CHN5	**Tsauling**	**2.13 225**		*e*P	**Pn**	07 40 06.6	+1.9
	baz=224						
CHN5				*e*S	**Sn**	07 40 30.9	-0.5
	baz=224						
ELDTW	**Lidau**	**2.26 212**		P	**Pn**	07 40 06.6	+0.1
	baz=211						
ELDTW				*e*S	**Sn**	07 40 34.6	0.0
	baz=211						
CHN4	**Tsaushan**	**2.37 222**		*e*P	**Pn**	07 40 09.6	+1.7
	baz=221						
TPUB	**Ta-pu**	**2.38 221**		*e*Pn	**Pn**	07 40 10.1	+1.9
STYT	**Tauyuan**	**2.42 217**		*e*P	**Pn**	07 40 10.4	+1.8
	baz=215						
WTP	**Ta-pu**	**2.43 220**		*e*P	**Pn**	07 40 10.4	+1.6
	baz=219						
WTP				*e*S	**Sn**	07 40 38.8	0.0
	baz=219						
TWK	**Hsinying**	**2.49 223**		*e*P	**Pn**	07 40 10.8	+1.1
	baz=221						
CHN1	**Nanshi**	**2.53 221**		*e*P	**Pn**	07 40 12.1	+1.9
	baz=220						
CHN1				*e*S	**Sn**	07 40 42.2	+1.1
	baz=220						
TWG	**Pinlang**	**2.56 207**		*e*Pn	**Pn**	07 40 14.1	+3.6
SGST	**Jiashian**	**2.58 219**		*e*P	**Pn**	07 40 12.6	+1.7
	baz=217						
SSD	**Sandimen**	**2.83 214**		*e*P	**Pn**	07 40 15.9	+1.7
	baz=212						
EAST	**Anshuo**	**3.04 207**		P	**Pn**	07 40 17.9	+0.7
	baz=205						
EAST				*e*S	**Sn**	07 40 53.9	+0.2
	baz=205						
SONM	**Songino Array**	**25.94 335**		P	**P**	07 45 00.7	-0.8
	0.7nm,0.9s,mb3.2,baz=147,slow=9.2,SNR=4.4						
MKAR	**Makanchi Array**	**38.41 315**		P	**P**	07 46 48.6	-2.0
	0.3nm,0.6s,mb3.2,baz=94,slow=10,SNR=3.8						
WRA	**Warramunga Arr**	**46.29 164**		P	**P**	07 47 54.4	-0.6
	4.4nm,0.6s,mb4.5,baz=347,slow=8.7,SNR=17						
BVAR	**Borovoye Array**	**47.62 320**		P	**P**	07 48 00.5	-4.6
	0.9nm,0.5s,mb4.0,baz=91,slow=9.5,SNR=4.8						
ASAR	**Alice Springs**	**49.77 166**		P	**P**	07 48 19.8	-2.1
	1.8nm,0.8s,mb4.2,baz=344,slow=6.3,SNR=3.6						
FINES	**FINESS Array B**	**71.17 330**		P	**P**	07 50 45.0	-2.7
	1.4nm,0.8s,mb4.0,baz=81,slow=12,SNR=3.8						
AKASG	**Malin Array Be**	**72.87 318**		P	**P**	07 50 55.6	-2.5
	0.2nm,0.3s,mb3.5,baz=56,slow=8.2,SNR=4.2						
NB2	**NORSAR Subarra**	**77.89 332**		P	**P**	07 51 24.7	-2.1
	comp=Z,0.9nm,0.7s,mb3.8,baz=59,slow=5.9						
NOA	**NORSAR Array B**	**77.89 332**		P	**P**	07 51 24.4	-2.3
	comp=Z,1.2nm,0.7s,mb3.9,baz=61,slow=5.6,SNR=4.9						

WEL 11 08:36:43.3±0.1, 38°.82S×177°.41E, h44km±3km, ML3.5/11, 4C-2D, Error ellipse: s-maj=1.5km s-min=0.9km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAHZ	**Arahi**	**0.27 249**		PN	Pn	08 36 50.8	-0.8
RAHZ				SN	Sn	08 36 57.0	-0.5
KNZ	**Kokohu**	**0.29 135**		⇑PN	Pn	08 36 51.5	-0.3
KNZ				SN	Sn	08 36 58.3	+0.5
PRGZ	**Paritu Road**	**0.38 106**		⇑PN	Pn	08 36 52.9	+0.1
MWZ	**Matawai**	**0.49 11**		⇓PN	Pn	08 36 53.7	-0.4
MWZ				SN	Sn	08 37 01.6	-0.1
MHGZ	**Mahia Peninsul**	**0.51 131**		⇑PN	Pn	08 36 54.6	+0.3
NMHZ	**Naumai**	**0.55 239**		PN	Pn	08 36 54.9	+0.1
URZ	**Urewera**	**0.61 337**		⇑PN	Pn	08 36 54.9	-0.7
CNGZ	**Carnagh Statio**	**0.71 62**		PN	Pn	08 36 57.2	+0.3
BKZ	**Black Stump Fm**	**0.80 244**		⇓PN	Pn	08 36 58.4	+0.3
MCHZ	**McNeill Hill**	**0.84 221**		PN	Pn	08 36 59.2	+0.6
RRRZ	**Republican Roa**	**0.85 304**		PN	Pn	08 36 58.6	-0.2
PRRZ	**Plateau Road**	**0.86 292**		PN	Pn	08 36 58.9	-0.1
ALRZ	**Allen Road**	**0.87 287**		PN	Pn	08 36 59.1	-0.1
CKHZ	**Cape Kidnapper**	**0.88 197**		PN	Pn	08 36 59.1	-0.1
EDRZ	**Edgecumbe**	**0.89 323**		PN	Pn	08 36 59.2	-0.1
TARZ	**Mount Tarawera**	**0.92 309**		PN	Pn	08 36 59.9	+0.1
HRRZ	**Handcock Road**	**0.98 295**		PN	Pn	08 37 00.4	-0.2
PUZ	**Puketiti**	**1.00 42**		PN	Pn	08 37 00.0	-0.8
HATZ	**Hinemaiaia**	**1.03 266**		*e*PN	Pn	08 37 00.9	-0.4
KAHZ	**Kahuranaki**	**1.06 203**		PN	Pn	08 37 01.6	-0.1
OMRZ	**Omania**	**1.08 311**		PN	Pn	08 37 01.6	-0.4
OPRZ	**Ohinepanea**	**1.18 325**		PN	Pn	08 37 02.6	-0.8
RATZ	**Rangitukua**	**1.28 267**		PN	Pn	08 37 05.1	+0.4
PXZ	**Pawanui**	**1.28 199**		PN	Pn	08 37 03.6	-1.1
WIZ	**White Island**	**1.30 352**		PN	Pn	08 37 04.5	-0.5
KRVZ	**Karewarewa**	**1.41 258**		PN	Pn	08 37 06.5	0.0
MOVZ	**Moawhango**	**1.42 245**		PN	Pn	08 37 06.7	+0.1
MXZ	**Matakaoa Point**	**1.44 30**		PN	Pn	08 37 07.6	+0.8
PNHZ	**Pukenui**	**1.44 220**		PN	Pn	08 37 06.2	-0.7
WTVZ	**West Tongariro**	**1.45 258**		PN	Pn	08 37 07.6	+0.5
WPHZ	**Waipukurau**	**1.45 211**		PN	Pn	08 37 06.3	-0.8
WPVZ	**Whakapapa**	**1.50 255**		PN	Pn	08 37 08.1	+0.3
FWVZ	**Far West T-bar**	**1.51 253**		PN	Pn	08 37 08.1	+0.2
PRHZ	**Porangahau**	**1.57 202**		PN	Pn	08 37 07.4	-1.2
TSZ	**Takapari Road**	**1.67 222**		PN	Pn	08 37 09.0	-1.1
PKVZ	**Pokaka**	**1.68 253**		PN	Pn	08 37 10.6	+0.5
DVHZ	**Dannevirke**	**1.77 213**		PN	Pn	08 37 09.8	-1.5
POWZ	**Post Office Ro**	**2.02 218**		PN	Pn	08 37 13.6	-1.3
HIZ	**Hauiti**	**2.02 278**		PN	Pn	08 37 15.6	+0.7
BFZ	**Birch Farm**	**2.07 205**		PN	Pn	08 37 13.6	-1.9
VRZ	**Vera Road**	**2.09 261**		PN	Pn	08 37 16.1	+0.3
WAZ	**Wanganui**	**2.10 243**		PN	Pn	08 37 16.1	+0.1
TIWZ	**Tintock**	**2.28 211**		PN	Pn	08 37 17.0	-1.4
MRZ	**Mangatainoka R**	**2.32 217**		PN	Pn	08 37 17.0	-2.0
HOWZ	**Holdsworth Sta**	**2.54 214**		PN	Pn	08 37 19.5	-2.5
OGWZ	**Otaki Gorge**	**2.64 220**		PN	Pn	08 37 21.1	-2.3
MTW	**Mount Morrison**	**2.76 212**		PN	Pn	08 37 22.1	-2.9
KIW	**Kapiti Island**	**2.81 223**		PN	Pn	08 37 23.6	-2.0
TRWZ	**Traveller**	**2.90 207**		PN	Pn	08 37 24.0	-2.8
CAW	**Cannon Point**	**2.91 217**		PN	Pn	08 37 24.3	-2.8
PAWZ	**Paruwai Farm**	**2.98 210**		PN	Pn	08 37 24.8	-3.2
PLWZ	**Palliser**	**3.21 210**		PN	Pn	08 37 27.8	-3.4
DUWZ	**D'Urville Isla**	**3.34 232**		PN	Pn	08 37 31.1	-1.9
TCW	**Tory Channel**	**3.39 224**		PN	Pn	08 37 30.7	-3.0
TUWZ	**Tuamarina**	**3.73 224**		PN	Pn	08 37 35.1	-3.1
NNZ	**Nelson**	**3.92 231**		PN	Pn	08 37 38.2	-2.6
BSWZ	**Blackbirch Sta**	**3.96 222**		PN	Pn	08 37 37.7	-3.8
QRZ	**Quartz Range**	**4.26 240**		PN	Pn	08 37 43.7	-1.9
THZ	**Tophouse**	**4.53 228**		PN	Pn	08 37 46.0	-3.3
LTZ	**Lake Taylor**	**5.56 223**		PN	Pn	08 37 58.5	-4.9
MQZ	**McQueen's Vall**	**6.06 215**		PN	Pn	08 38 04.8	-5.5
CTZ	**Chatham Island**	**6.66 139**		SN	Sn	08 39 24.7	-8.3
LBZ	**Lake Benmore**	**7.76 222**		PN	Pn	08 38 29.2	-4.4
ODZ	**Otahua Downs**	**8.01 217**		PN	Pn	08 38 31.9	-5.1
TUZ	**Tuapeka**	**9.16 216**		PN	Pn	08 38 48.0	-4.7

IDC 11 08:42:35.6±3.1, 18°.61N×147°.96E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.5/20, mbtmp3.5/5, Error ellipse: s-maj=132.9km s-min=25.5km az=86.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.57 200**		P	P	08 50 17.2	+0.2
	0.2nm,0.5s,baz=24,slow=8.3,SNR=8.2						
ASAR	**Alice Springs**	**44.20 199**		P	P	08 50 46.1	-0.4
	0.3nm,0.8s,baz=16,slow=11,SNR=3.4						
MKAR	**Makanchi Array**	**60.08 314**		P	P	08 52 45.0	+0.5
	0.1nm,0.5s,baz=82,slow=6.6,SNR=2.5						
BVAR	**Borovoye Array**	**67.91 320**		P	P	08 53 35.4	-0.6
	0.3nm,0.4s,baz=101,slow=6.0,SNR=2.8						
ARCES	**ARCESS Array B**	**83.23 343**		P	P	08 55 04.4	+0.8
	1.7nm,0.8s,baz=51,slow=7.1,SNR=3.6						

*NEIC **11** 08:52:22.0, 32°.09S×69°.64W, h152km, MD3.5(GUC), After GUC.*
GUC 11 08:52:22.0±0.6, 32°.09S×69°.64W, h152km±8km, MD3.5, ML3.4, 4C-2D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACH	**Jahuel**	**1.00 233**		*e*P	Pn	08 52 47.4	+0.5
JACH				*i* S	Sn	08 53 06.7	+0.8
JACH	**Jahuel**	**1.00 233**		*e*P	Pn	08 52 47.4	+0.5
JACH				*i* S	Sn	08 53 06.7	+0.8
PEL	**Peldehue**	**1.37 220**		⇑*i*P	Pn	08 52 50.6	+0.3
PEL				*i* S	Sn	08 53 12.1	0.0
PEL				AML	AML	08 53 13.1	
	comp=N,756nm,0.4s						
ROCH	**El Roble**	**1.46 232**		*e*P	Pn	08 52 52.0	+0.9
ROCH				*i* S	Sn	08 53 14.9	+1.3
ROCH	**El Roble**	**1.46 232**		*e*P	Pn	08 52 52.0	+0.9
ROCH				*i* S	Sn	08 53 14.9	+1.3
CMCH	**Combarbala**	**1.48 308**		⇓*i*P	Pn	08 52 51.9	+0.5
CMCH				*i* S	Sn	08 53 14.9	+1.0
CMCH	**Combarbala**	**1.48 308**		⇓*i*P	Pn	08 52 51.9	+0.5
CMCH				*i* S	Sn	08 53 14.9	+1.0
CMCH				AML	AML	08 53 16.4	
	comp=N,1μm,0.4s						
CLCH	**Cerro Calan**	**1.51 210**		⇑*i*P	Pn	08 52 52.4	+0.6
CLCH				*i* S	Sn	08 53 15.1	+0.6
CLCH				AML	AML	08 53 17.1	
	comp=E,401nm,0.4s						
SAN	**Santiago**	**1.61 212**		*e*P	Pn	08 52 52.8	0.0
SAN				*i* S	Sn	08 53 17.0	+0.5
SAN	**Santiago**	**1.61 212**		*e*P	Pn	08 52 52.8	0.0
SAN				*i* S	Sn	08 53 17.0	+0.5
SAN				AML	AML	08 53 17.8	
	comp=N,238nm,0.3s						
SJCH	**San Jose de Ma**	**1.66 201**		*i* S	Sn	08 53 18.3	+0.8
PCH	**Pirque**	**1.70 205**		*e*P	Pn	08 52 54.3	+0.5
PCH				*i* S	Sn	08 53 19.2	+1.0
PCH	**Pirque**	**1.70 205**		*e*P	Pn	08 52 54.3	+0.5
PCH				*i* S	Sn	08 53 19.2	+1.0
ANTU	**Antumapu**	**1.70 209**		⇑*i*P	Pn	08 52 54.2	+0.4
ANTU				*i* S	Sn	08 53 18.8	+0.6
ANTU	**Antumapu**	**1.70 209**		⇑*i*P	Pn	08 52 54.2	+0.4
ANTU				*i* S	Sn	08 53 18.8	+0.6
ANTU				AML	AML	08 53 19.8	
	comp=E,381nm,0.3s						
LMEL	**Las Melosas**	**1.82 195**		*e*P	Pn	08 52 56.3	+1.2
LMEL				*i* S	Sn	08 53 21.6	+1.0
LMEL	**Las Melosas**	**1.82 195**		*e*P	Pn	08 52 56.3	+1.2
LMEL				*i* S	Sn	08 53 21.6	+1.0
LMEL				AML	AML	08 53 30.5	
	comp=N,224nm,0.1s						
TACH	**Talagante**	**1.91 215**		*e*P	Pn	08 52 56.4	+0.3
TACH				*i* S	Sn	08 53 22.8	+0.5
TACH	**Talagante**	**1.91 215**		*e*P	Pn	08 52 56.4	+0.3
TACH				*i* S	Sn	08 53 22.8	+0.5
CHCH	**Chadas Angostu**	**2.03 205**		*e*P	Pn	08 52 58.3	+0.8
CHCH				*i* S	Sn	08 53 25.4	+0.5
CHCH	**Chadas Angostu**	**2.03 205**		*e*P	Pn	08 52 58.3	+0.8
CHCH				*i* S	Sn	08 53 25.4	+0.5
TLL	**Tololo Astrono**	**2.16 332**		*e*P	Pn	08 53 00.3	+1.2
TLL				*i* S	Sn	08 53 28.9	+1.3
TLL	**Tololo Astrono**	**2.16 332**		*e*P	Pn	08 53 00.3	+1.2
TLL				*i* S	Sn	08 53 28.9	+1.3
TLL				AML	AML	08 53 32.9	
	comp=E,103nm,0.5s						
CACH	**El Canelo**	**2.18 201**		*e*P	Pn	08 53 00.4	+1.1
CACH				*e*S	Sn	08 53 29.6	+1.6
CACH	**El Canelo**	**2.18 201**		*e*P	Pn	08 53 00.4	+1.1
CACH				*e*S	Sn	08 53 29.6	+1.6
LCO	**Las Campanas**	**3.20 343**		*e*P	Pn	08 53 12.9	+1.0
LCO	**Las Campanas**	**3.20 343**		*e*P	Pn	08 53 12.9	+1.0

NNC 11 08:55:52.3±5.0, 53°.83N×86°.54E, h0km, mb3.7, mpv3.1, 5C-4D, Error ellipse: s-maj=46.1km s-min=23.5km az=65.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**5.78 241**		⇑Pn	Pn	08 57 21.9	+2.8
	3.6nm,0.9s						
KURK				⇑Lg		08 59 04.1	
	16nm,1.1s						
MK31	**Makanchi Array**	**7.55 203**		⇓Pn	Pn	08 57 45.8	+2.3
	0.2nm,0.3s,baz=28,slow=14,SNR=29						
MK31				⇑Sn	Sn	08 59 16.0	+6.3
	0.4nm,0.5s,baz=29,slow=26,SNR=2.6						
MK31				⇓Lg		08 59 56.8	
	11nm,1.1s,baz=31,slow=30,SNR=5.1						
VOSK	**Vostochnaya**	**9.39 270**		⇑Pn	Pn	08 58 08.8	0.0
	1.2nm,0.4s						
VOSK				⇓Sn	Sn	08 59 54.0	-0.9
	6.7nm,0.8s						
ZRNK	**Zerenda

62nm,1.3s,mb4.9
TSUM Tsumeb 31.75 108 LR LR 09 44 46.3
comp=Z,562nm,18.8s,MS4.3,baz=322,slow=31
SUR Sutherland 38.40 128 P **P** **09 35 40.3 +0.7**
8.9nm,0.8s,mb4.5,baz=264,slow=7.3,SNR=2.4
BOSA Boshof 40.70 121 LR LR 09 49 21.3
comp=Z,729nm,21.5s,MS4.5,baz=16,slow=31
LSZ Lusaka 41.58 100 P **P** **09 36 04.1 -2.1**
5.8nm,0.9s,mb4.2,baz=270,slow=6.7,SNR=8.6
LSZ Lusaka 41.58 100 *eP* **P** **09 36 03.5 -2.8**
65nm,2.3s,mb4.8
CPUP Villa Florida 42.89 244 P **P** **09 36 16.6 -0.2**
1.8nm,0.7s,mb3.9,baz=76,slow=9.7,SNR=5.5
CPUP LR LR 09 50 45.9
comp=Z,287nm,19.2s,MS4.2,baz=72,slow=32
SIV San Ignacio 45.41 259 P **P** **09 36 37.5 +0.4**
1.3nm,1.0s,mb3.7,baz=76,slow=7.3,SNR=4.0
TRQA Tornquist 49.82 230 *eP* **P** **09 37 12.9 +1.8**
10.0nm,1.0s,mb4.8
ESDC Sonseca Array 51.97 10 LR LR 09 58 22.4
comp=Z,107nm,19.1s,MS3.9,baz=185,slow=35
LPAZ La Paz 52.18 258 P **P** **09 37 29.6 +0.4**
1.3nm,0.8s,mb3.9,baz=109,slow=5.1,SNR=5.7
KEST Kesra 52.20 25 P **P** **09 37 29.8 +0.9**
2.9nm,1.0s,mb4.2,baz=184,slow=4.1,SNR=5.5
KEST LR LR 09 59 33.0
comp=Z,196nm,18.5s,MS4.2,baz=214,slow=36
KEST Kesra 52.20 25 *eP* **P** **09 37 29.9 +1.0**
KMBO Kilima Mbogo 52.34 82 *eP* **P** **09 37 32.3 +1.9**
13nm,1.3s,mb4.7
CFAA Coronel Fontan 53.25 239 P **P** **09 37 35.2 -1.7**
0.7nm,0.8s,mb3.6,baz=86,slow=7.4,SNR=11
CFAA Coronel Fontan 53.25 239 P **P** **09 37 35.2 -1.7**
PLCA Paso Flores 56.94 229 LR LR 09 59 03.0
comp=Z,162nm,19.5s,MS4.1,baz=89,slow=32
HUMP Col San Antoni 58.72 300 *eP* **P** **09 38 18.0 +1.9**
48nm,1.5s,mb5.3
SJG San Juan 58.96 299 *eP* **P** **09 38 15.5 -2.3**
20nm,1.1s,mb5.1
ROSC El Rosal 61.77 282 LR LR 10 01 18.6
comp=Z,345nm,20.3s,MS4.5,baz=19,slow=32
EIL Elat 62.86 48 P **P** **09 38 44.5 +0.3**
5.6nm,1.1s,mb4.6,baz=184,slow=6.8,SNR=4.3
OTAV Otavalo 64.62 276 *eP* **P** **09 38 57.8 +1.6**
10nm,1.4s,mb4.7
MMAI Mount Meron Ar 65.03 45 LR LR 10 07 34.7
comp=Z,77nm,20.1s,MS3.9,baz=320,slow=36
ASF Jabal al Asfar 65.62 47 P **P** **09 39 03.2 +1.0**
1.8nm,0.6s,mb4.3,baz=259,slow=0.7,SNR=6.6
VYHS Vyhne 66.72 23 *eP* **P** **09 39 09.0 +0.1**
8.2nm,1.5s,mb4.5
VYHS *e* pP 09 39 15.8 -1.3
VYHS Vyhne 66.72 23 *eP* **P** **09 39 09.0 +0.1**
VYHS *epP* pP 09 39 15.8 -1.3
SYO Syowa Base 66.79 161⇑ *eX* **P** **09 39 08.4 -0.7**
SYO Syowa Base 66.79 161⇑ *epP* pP 09 39 13.7 -3.5
BR131 Keskin Array S 67.84 38 *eP* **P** **09 39 16.1 -0.1**
2.1nm,0.8s,mb4.2
BRTR Keskin Array B 67.84 38 P **P** **09 39 15.7 -0.6**
1.4nm,0.8s,mb4.0,baz=187,slow=7.3,SNR=7.4
CRVS Cervenica-Dubn 68.09 25 *eP* pP 09 39 24.0 -1.8
12nm,1.5s
CRVS Cervenica-Dubn 68.09 25 *epP* pP 09 39 24.0 -1.8
KIEV Kiev 72.77 27 *eP* **P** **09 39 45.0 -1.1**
12nm,1.0s,mb4.8
AKASG Malin Array Be 72.78 27 P **P** **09 39 44.5 -1.7**
0.9nm,0.4s,mb4.0,baz=227,slow=6.3,SNR=12
AKASG LR LR 10 12 57.7
comp=Z,164nm,19.1s,MS4.3,baz=255,slow=37
AKASG Malin Array Be 72.78 27 P **P** **09 39 44.5 -1.7**
AKASG LR LR 10 12 57.7
MAW Mawson 74.49 157 LR LR 10 07 43.3
comp=Z,198nm,19.7s,MS4.4,baz=76,slow=32
NOA NORSAR Array B 75.24 13 P **P** **09 40 01.2 +0.9**
0.8nm,0.7s,mb3.8,baz=204,slow=6.3,SNR=3.4
NOA LR LR 10 11 44.4
comp=Z,91nm,20.4s,MS4.1,baz=180,slow=35
CNNC Cliffs of the 75.91 311 *eP* **P** **09 40 05.1 +0.4**
11nm,0.3s,mb5.2
COW Cow Castle Cre 77.26 308 *eP* **P** **09 40 11.5 -1.0**
JSC Jenkinsville 78.05 309 *eP* **P** **09 40 18.2 +1.3**
QSPA South Pole Qui 78.51 180 *eP* **P** **09 40 18.2 -0.4**
9.1nm,1.0s,mb4.7
SCHQ Schefferville 79.48 332 LR LR 10 09 57.5
comp=Z,108nm,19.8s,MS4.2,baz=108,slow=31
FINES FINESS Array B 79.51 19 P **P** **09 40 23.8 -0.4**
1.1nm,0.7s,mb3.9,baz=207,slow=5.9,SNR=3.1
ACSO Alum Creek Sta 81.63 314 *eP* **P** **09 40 37.1 +1.0**
19nm,1.1s,mb4.9
SWET Sewanee 81.97 308 *eP* **P** **09 40 37.7 -0.3**
LRAL Lakeview Retre 82.06 306 *eP* **P** **09 40 39.0 +0.4**
9.5nm,1.1s,mb4.6
WVT Waverly 83.73 309 *eP* **P** **09 40 46.9 -0.3**
16nm,1.2s,mb5.0
OLIL Olney 84.78 311 *eP* **P** **09 40 52.8 +0.4**
23nm,0.9s,mb5.3
SIUC Southern Illin 85.29 310 *eP* **P** **09 40 54.6 -0.5**
21nm,1.2s,mb5.1
HDIL Hopedale 86.25 313 *eP* **P** **09 40 58.2 -1.5**
12nm,0.9s,mb5.1
FVM French Village 86.28 310 *eP* **P** **09 40 58.1 -1.8**
38nm,1.5s,mb5.4
CCM Cathedral Cave 86.92 310 *eP* **P** **09 41 03.1 0.0**
22nm,1.1s,mb5.3
JCT Junction City 91.87 301 *eP* **P** **09 41 26.6 0.0**
17nm,1.5s,mb5.2
ECSD EROS Data Cent 92.36 314 *eP* **P** **09 41 28.4 -0.1**
6.2nm,1.1s,mb4.8
TXAR Lajitas Array 94.93 299 P **P** **09 41 41.8 +1.1**
1.4nm,1.1s,mb4.3,baz=116,slow=2.9,SNR=7.7
ISCO Idaho Springs 98.22 309 *e*PKKPbc PKKPbc 09 58 32.4 +4.0
DCID1 Drake Creek 102.78 312 *e*PKKPbc PKKPbc 09 58 22.9 +7.4
WMQ Urumqi 106.70 48 *eP* Pdif 09 42 34.7 +1.9
KMI Kunming 119.37 68 PKP PKPdf 09 47 07.9 -0.1
CD2 Chengdu 120.03 61 PKP PKPdf 09 47 11.7 +2.6
CD2 PP PP 09 48 40.0 +6.1
CD2 PKS 09 50 47.1
CD2 SKS SKSdf 09 54 22.6 +2.8
CD2 SKKS SKKSac 09 55 33.0 +0.6
CD2 AMB AMB
comp=Z,110nm,5.9s
CD2 LR LR
comp=N,370nm,13.7s
CD2 LR LR
comp=Z,480nm,14.8s,MS5.3
GYA Guiyang 122.86 66 Pdif Pdif 09 43 45.8 +1.1
GYA PKP PKPdf 09 47 16.2 +1.5
GYA PP PP 09 48 58.4 +5.0
GYA PKS 09 50 49.0
GYA SKKS SKKSac 09 55 48.2 -2.8
GYA SS SS 10 05 35.8 0.0
GYA AMB AMB
comp=Z,120nm,7.9s
GYA LR LR
comp=N,140nm,22.3s,MS4.7
GYA LR LR
comp=E,120nm,23.0s,MS4.7
GYA LR LR
comp=Z,150nm,21.6s,MS4.6
HHC Hu-ho-hao-te 124.58 48 *e*PKP PKPdf 09 47 14.8 -2.8
HHC PP PP 09 49 04.4 +0.1
HHC PKS 09 50 50.0
HHC SKS SKSdf 09 54 25.3 -2.6
HHC SKKS SKKSac 09 55 56.1 -5.3
HHC AMB AMB
comp=Z,61nm,9.2s
HHC LR LR
comp=N,480nm,20.3s,MS5.2
HHC LR LR
comp=E,350nm,20.7s,MS5.2
HHC LR LR
comp=Z,550nm,20.2s,MS5.2
BJI Beijing 128.18 48 PKP PKPdf 09 47 25.5 +1.0
BJI PP PP 09 49 28.9 +0.7
NJ2 Nanjing 132.56 57 *e*PKP PKPdf 09 47 29.2 -3.9
CN2 Changchun 132.91 40 *e*PKP PKPdf 09 47 35.9 +2.6
MJAR Matsushiro Arr 145.05 40 PKPbc PKPbc 09 47 55.8 +0.8
comp=Z,1.8nm,1.0s,baz=298,slow=2.6,SNR=3.2

*BJI **11** 09:37:36.6, 10°.80N×91°.70E, h10km, mB4.8/1, mb4.3/3*
*NEIC **11** 09:37:38.6±0.3, 10°.77N×91°.73E, h10km, mb4.5/6, Error ellipse: s-maj=7.9km s-min=6.8km az=92.0*
*ISCJB **11** 09:37:40.3±0.4, 10°.77N±0°.06×91°.64E±0°.06, h33km, mb4.2/24, Error ellipse: s-maj=9.8km s-min=7.5km az=37.8*
*IDC **11** 09:37:41.4±0.9, 10°.81N×91°.69E, h27km±5km, mb3.9/17, mb1 4.0/18, mb1mx3.9/25, mbtmp3.9/18, ML4.0/1, MS3.2/1, Ms1 3.2/1, ms1mx2.4/37, Error ellipse: s-maj=20.2km s-min=13.3km az=62.0*
ISC 11 09:37:42.5±0.4,**10.80N**±0°.06×**91.69E**±0°.06,**h35**km, **(h26**km±2.3km:**pP-P),n41,**σ0s**86**/37,**mb4.2**/24,**Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.35**	**42**	Pn	**Pn**	**09 40 06.5**	**-2.1**
	0.4nm,0.3s,baz=222,slow=15,SNR=4.4						
VIS	**Vishakhapatnam**	**10.62**	**311**	*i* P	**Pn**	**09 40 10.7**	**-1.6**
VIS				*i* S	**Sn**	**09 41 58.5**	**-12**
VIS				*ex*	x	09 42 02.9	
	comp=E,31nm,0.8s						
PSI	**Prapat**	**10.71**	**137**	LR	LR	09 44 18.9	
	comp=E,134nm,19.7s,baz=15,slow=37						
PALK	**Pallekele**	**11.40**	**253**	*e*Pn	**Pn**	**09 40 23.4**	**+0.4**
HYB	**Hyderabad**	**14.33**	**299**	*i* P	**Pn**	**09 41 03.0**	**0.0**
HYB				*e*S	**Sn**	**09 43 40.0**	**-0.8**
HYB				*e*		09 45 00.0	
ENH	**Enshi**	**25.49**	**38**	*e*P	**P**	**09 43 07.0**	**-0.6**
	comp=E,27nm,0.8s,mb4.8						
DGAR	**Diego Garcia**	**26.34**	**227**	*e*P	**P**	**09 43 14.3**	**-1.2**
	comp=E,130nm,0.9s						
AML	**Almayashu**	**34.96**	**336**	*e*P	**P**	**09 44 33.1**	**+1.8**
	comp=E,9.3nm,1.0s,mb4.7						
AAK	**Ala-Archa**	**35.08**	**338**	*e*P	**P**	**09 44 34.1**	**+1.8**
EKS2	**Erkin-Say**	**35.38**	**337**	*e*P	**P**	**09 44 36.5**	**+1.6**
	comp=E,2.4nm,0.7s,mb4.2						
MK31	**Makanchi Array**	**36.75**	**349**	*e*P	**P**	**09 44 46.8**	**+0.3**
MKAR	**Makanchi Array**	**36.75**	**349**	P	**P**	**09 44 46.3**	**-0.2**
	comp=E,3.8nm,0.8s,mb4.3,baz=168,slow=8.3,SNR=38						
MKAR				pP	pP	09 44 54.8	-1.9
	comp=E,2.7nm,0.7s,baz=166,slow=7.0,SNR=13						
SONM	**Songino Array**	**38.94**	**16**	P	**P**	**09 45 05.4**	**+0.4**
	comp=E,3.0nm,0.9s,mb4.0,baz=200,slow=9.3,SNR=16						
SONM				pP	pP	09 45 12.5	-2.7
	comp=E,3.2nm,1.0s,baz=205,slow=7.9,SNR=8.5						
SONM				PcP	PcP	09 47 16.0	+0.9
	comp=E,0.2nm,0.4s,baz=180,slow=0.9,SNR=2.7						
SONM				pPcP		09 47 23.4	
	comp=E,0.7nm,0.8s,baz=0.3,slow=0.4,SNR=3.8						
ULN	**Ulaanbaatar**	**39.14**	**16**	*e*P	**P**	**09 45 06.8**	**+0.1**
	comp=E,1.1nm,0.8s,mb3.6						
KURK	**Kurchatov**	**41.22**	**347**	P	**P**	**09 45 23.5**	**-0.4**
	comp=E,2.8nm,0.9s,mb3.9,baz=160,slow=7.6,SNR=11						
KURK				pP	pP	09 45 31.4	-2.8
	comp=E,2.5nm,0.9s,baz=158,slow=7.4,SNR=5.2						
KURK				PcP	PcP	09 47 22.1	-0.3
	comp=E,0.7nm,0.6s,baz=163,slow=3.6,SNR=2.2						
KURK				pPcP		09 47 30.1	
	comp=E,0.4nm,0.3s,baz=161,slow=2.0,SNR=3.6						
KURK	**Kurchatov**	**41.22**	**347**	*e*P	**P**	**09 45 24.1**	**+0.2**
KURK				pP	pP	09 45 31.4	-2.8
KURK				PcP	PcP	09 47 22.1	-0.3
KURK				pPcP		09 47 30.1	
ZALV	**Zalesovo Beam**	**43.38**	**354**	P	**P**	**09 45 40.8**	**-0.6**
	comp=E,2.1nm,0.5s,mb4.1,baz=170,slow=9.0,SNR=11						
ZALV				pP	pP	09 45 49.5	-2.3
	comp=E,2.5nm,0.7s,baz=170,slow=9.0,SNR=3.9						
FITZ	**Fitzroy Crossi**	**44.14**	**130**	P	**P**	**09 45 47.7**	**-0.3**
	comp=E,4.3nm,1.0s,mb4.2,baz=342,slow=9.1,SNR=3.7						
BVAR	**Borovoye Array**	**45.47**	**342**	P	**P**	**09 45 58.1**	**0.0**
	comp=E,0.7nm,0.6s,mb3.6,baz=152,slow=9.6,SNR=4.1						
ABKAR	**Akbulak array**	**46.52**	**332**	*e*P	**P**	**09 46 07.4**	**+0.9**
	comp=E,3.9nm,1.0s,mb4.3						
MAJO	**Matsushiro**	**49.09**	**51**	*e*P	**P**	**09 46 27.4**	**+0.7**
	comp=E,4.0nm,0.7s,mb4.6						
NWAO	**Narrogin (SRO)**	**49.85**	**152**	*e*P	**P**	**09 46 32.6**	**+0.2**
	comp=E,188nm,1.7s						
WRA	**Warramunga Arr**	**51.93**	**126**	P	**P**	**09 46 47.9**	**-0.4**
	comp=E,1.1nm,0.7s,mb3.9,baz=307,slow=8.2,SNR=22						
ARU	**Arti**	**52.27**	**337**	*e*P	**P**	**09 46 50.5**	**+0.2**
	comp=E,2.0nm,0.3s,mb4.5						
OPO	**Ambohidratompo**	**52.71**	**237**	P	**P**	**09 46 53.9**	**-0.2**
	comp=E,1.7nm,0.3s,mb4.4,baz=88,slow=10,SNR=11						
ASAR	**Alice Springs**	**53.64**	**130**	P	**P**	**09 47 01.2**	**+0.3**
	comp=E,2.6nm,0.7s,mb4.3,baz=304,slow=6.4,SNR=27						
BRTR	**Keskin Array B**	**58.70**	**310**	P	**P**	**09 47 36.9**	**+0.1**
	comp=E,1.9nm,0.9s,mb4.1,baz=108,slow=7.9,SNR=6.8						
STKA	**Stephens Creek**	**63.87**	**134**	P	**P**	**09 48 11.6**	**-0.2**
	comp=E,1.2nm,0.9s,mb3.9,baz=306,slow=14,SNR=2.4						
AKASG	**Malin Array Be**	**64.37**	**321**	P	**P**	**09 48 13.4**	**-1.5**
	comp=E,0.2nm,0.2s,mb3.7,baz=90,slow=5.3,SNR=4.1						
FINES	**FINESS Array B**	**69.01**	**332**	P	**P**	**09 48 43.7**	**-0.5**
	comp=E,3.2nm,0.8s,mb4.3,baz=124,slow=6.9,SNR=7.8						
ARCES	**ARCESS Array B**	**71.71**	**340**	P	**P**	**09 49 01.3**	**+0.6**
	comp=E,1.2nm,0.8s,mb3.9,baz=111,slow=6.6,SNR=4.4						
BOSA	**Boshof**	**75.12**	**236**	P	**P**	**09 49 21.9**	**+0.5**
	comp=E,3.4nm,0.8s,mb4.3,baz=22,slow=2.8,SNR=4.3						
BOSA	**Boshof**	**75.12**	**236**	P	**P**	**09 49 21.9**	**+0.5**
NB2	**NORSAR Subarra**	**76.01**	**330**	P	**P**	**09 49 25.2**	**-0.7**
	comp=Z,2.5nm,0.8s,mb4.2,baz=99,slow=5.1						
NOA	**NORSAR Array B**	**76.01**	**330**	P	**P**	**09 49 25.6**	**-0.3**
	comp=Z,2.3nm,0.9s,mb4.1,baz=94,slow=5.7,SNR=5.2						
TORD	**Torodi Ar. Bea**	**87.58**	**283**	P	**P**	**09 50 28.7**	**+0.9**
	comp=Z,0.6nm,0.8s,mb3.9,baz=79,slow=3.2,SNR=4.1						
PDAR	**Pinedale Array**	**123.26**	**19**	PKP	PKPdf	09 56 35.3	-0.8
	comp=Z,0.2nm,0.3s,baz=349,slow=0.9,SNR=3.4						
NVAR	**Mina Array Bea**	**123.58**	**28**	PKP	PKPdf	09 56 37.4	+0.6
	comp=Z,0.3nm,0.7s,baz=352,slow=2.0,SNR=3.5						
TXAR	**Lajitas Array**	**137.44**	**20**	PKP	PKPdf	09 57 02.6	-0.7
	comp=Z,0.1nm,0.6s,baz=64,slow=2.1,SNR=2.8						
CPUP	**Villa Florida**	**146.93**	**238**	PKPbc	PKPbc	09 57 21.0	-1.1
	comp=Z,1.4nm,0.8s,baz=90,slow=1.0,SNR=3.2						
LPAZ	**La Paz**	**159.64**	**252**	PKP	PKPdf	09 57 38.8	+0.2
	comp=Z,0.4nm,0.3s,baz=90,slow=2.0,SNR=4.3						

*ISCJB **11** 09:42:09.6±0.7, 37°.05N±0°.04×29°.29E±0°.06, h9km±9km, Error ellipse: s-maj=9.5km s-min=5.0km az=137.9*
*DDA **11** 09:42:09.0, 37°.04N×29°.21E, h7km±3km, Md2.8*
*ISK **11** 09:42:09.6, 37°.10N×29°.35E, h5km, MD2.5*
*CSEM **11** 09:42:09.8±0.2, 37°.10N×29°.33E, h10km, MD2.5, Error ellipse: s-maj=5.6km s-min=3.4km az=36.0*
ISC 11 09:42:09.9±0.6,**37.06N**±0°.04×**29.29E**±0°.06,**h11**km±8km, **n18,**σ1s**07**/28,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Gihisar (BURDU**	**0.19**	**60**	*e*PG	**Pg**	**09 42 12.9**	**-1.3**
GLHS	**Gihisar (BURDU**	**0.19**	**60**	*e*Pg	**Pg**	**09 42 12.9**	**-1.3**
GOLH	**Golhisar**	**0.28**	**51**	*i* P	**Pg**	**09 42 14.7**	**-1.0**
GOLH				*i* S	**Sg**	**09 42 21.4**	**+1.8**
GOLH	**Golhisar**	**0.28**	**51**	*i* P	**Pg**	**09 42 14.7**	**-1.0**
GOLH				*i* S	**Sg**	**09 42 21.4**	**+1.8**
ELL	**Elmali**	**0.59**	**122**	*e*PG	**Pg**	**09 42 21.3**	**-0.1**
ELL				*e*SG	**Sg**	**09 42 29.3**	**+0.3**
ELL	**Elmali**	**0.59**	**122**	*e*Pg	**Pg**	**09 42 21.3**	**0.0**
ELL				*e*Sg	**Sg**	**09 42 29.3**	**+0.3**
DNZL	**Cakiroluk**	**0.66**	**343**	*i* P	**Pg**	**09 42 22.3**	**-0.5**
DNZL				*i* S	**Sg**	**09 42 31.9**	**+0.5**
DNZL	**Cakiroluk**	**0.66**	**343**	*i* P	**Pg**	**09 42 22.3**	**-0.5**
DNZL				*i* S	**Sg**	**09 42 31.9**	**+0.5**
YER	**Yerkesik**	**0.81**	**276**	*e*PG	**Pg**	**09 42 26.3**	**+0.7**
YER	**Yerkesik**	**0.81**	**276**	*e*Pg	**Pg**	**09 42 26.3**	**+0.8**
AKAS	**Kas**	**0.86**	**163**	*i* P	**Pg**	**09 42 23.6**	**-3.0**
AKAS				*i* S	**Sg**	**09 42 38.3**	**+0.5**
AKAS	**Kas**	**0.86**	**163**	*i* P	**Pg**	**09 42 23.6**	**-3.0**
AKAS				*i* S	**Sg**	**09 42 38.3**	**+0.5**
AYDN	**Tasoluk**	**1.27**	**299**	*i* P	**Pn**	**09 42 32.6**	**-1.0**
AYDN				*i* S	**Sb**	**09 42 49.7**	**-0.5**
AYDN	**Tasoluk**	**1.27**	**299**	*i* P	**Pn**	**09 42 32.6**	**-1.0**
AYDN				*i* S	**Sb**	**09 42 49.7**	**-0.6**
DAT	**Datca**	**1.41**	**257**	*e*PN	**Pn**	**09 42 37.4**	**+1.9**
DAT	**Datca**	**1.41**	**257**	*e*Pn	**Pn**	**09 42 37.4**	**+1.9**
SUTC	**Sutluce-Ispart**	**1.43**	**72**	*e*PN	**Pn**	**09 42 35.9**	**+0.2**
SUTC	**Sutluce-Ispart**	**1.43**	**72**	*e*Pn	**Pn**	**09 42 35.9**	**+0.2**

*NEIC **11** 09:56:55.9, 14°.45N×93°.62W, h17km, MD4.0(MEX), After MEX.*
MEX 11 09:56:55.9±1.8,**14°.45N**×**93°.62W,h17**km±287km,**MD4.0, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.30**	**17**	*i* P	Pn	09 57 14.9	-4.4
PCIG				*i* S	Sn	09 57 30.8	-5.7
TGIG		**2.36**	**12**	*i* P	Pn	09 57 32.3	-1.6
TGIG				*i* S	Sn	09 57 58.5	-4.0
SCX	**San Cristobal**	**2.46**	**23**	*i* P	Pn	09 57 33.0	-2.2
SCX				*i* S	Sn	09 58 02.8	-2.2
SCX	**San Cristobal**	**2.46**	**23**	*i* P	Pn	09 57 33.0	-2.2
SCX				*i* S	Sn	09 58 02.8	-2.2
HUIG	**Huatulco**	**2.73**	**299**	*e*P	Pn	09 57 35.6	-3.4
HUIG				*i* S	Sn	09 58 08.7	-3.0
HUIG	**Huatulco**	**2.73**	**299**	*e*P	Pn	09 57 35.6	-3.4
HUIG				*i* S	Sn	09 58 08.7	-3.0
VHO	**Vista Hermosa**	**3.97**	**311**	*e*P	Pn	09 57 54.1	-2.0
VHO				*i* S	Sn	09 58 38.9	-3.3
VHO	**Vista Hermosa**	**3.97**	**311**	*e*P	Pn	09 57 54.1	-2.0
VHO				*i* S	Sn	09 58 38.9	-3.3
PNIG	**Pinotepa**	**4.75**	**295**	*e*P	Pn	09 58 09.4	+2.6
PNIG				*i* S	Sn	09 58 59.1	-2.5
PNIG	**Pinotepa**	**4.75**	**295**	*e*P	Pn	09 58 09.4	+2.6
PNIG				*i* S	Sn	09 58 59.1	-2.5
UTMO	**Huajuapan**	**5.24**	**310**	*i* P	Pn	09 58 14.1	+0.6
UTMO				*i* S	Sn	09 59 15.9	+2.4

*ISCJB **11** 09:57:32.4±1.2, 20°.66S±0°.05×175°.99W±0°.05, h167km±11km, mb4.6/51, Error ellipse: s-maj=9.2km s-min=6.8km az=37.3*
*SZGRF **11** 09:57:35.4, 20°.60S×178°.08W, h176km, Fiji Islands region*
*IDC **11** 09:57:35.1±0.6, 20°.57S×175°.96W, h179km±5km, mb4.4/14, mb1 4.5/16, mb1mx4.5/20, mbtmp4.4/16, MS3.2/1, Ms1 3.2/1, ms1mx2.8/28, Error ellipse: s-maj=18.7km s-min=10.3km az=140.0*
*NEIC **11** 09:57:35.2±0.9, 20°.64S×175°.95W, h182km±8km, mb4.7/38, Error ellipse: s-maj=7.5km s-min=6.0km az=141.0*
ISC 11 09:57:31.8±1.2,**20°.60S**±0°.05×**175°.94W**±0°.06, **h147**km±11km,**h184**km±1.5km:**pP-P,n179,**σ0s**86**/93, **mb4.6**/51,**18C-9D,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.36**	**296**	*e*Pn	**Pn**	**09 59 09.4**	**+6.2**
	751nm,1.3s						
AFI	**Afiamalu**	**7.75**	**32**	P	**Pn**	**09 59 18.3**	**-3.6**
	6.4nm,0.3s,baz=259,slow=10,SNR=6.2						
AFI				S	**Sn**	**10 00 32.9**	**-15**
	9.4nm,0.3s,baz=222,slow=16,SNR=4.0						
AFI				LR	LR	10 02 11.7	
	comp=Z,166nm,20.6s,baz=204,slow=36						
AFI	**Afiamalu**	**7.75**	**32**	P	**Pn**	**09 59 18.3**	**-3.6**
AFI				*e*Sn	**Pn**	**09 59 18.5**	**-3.4**
AFI				S	**Sn**	**10 00 32.9**	**-15**
AFI				*e*Sn	**Sn**	**10 00 37.8**	**-10**
AFI				LR	LR	10 02 11.7	
RAO	**Raoul Island**	**8.80**	**191**	P	**Pn**	**09 59 35.7**	**-0.2**
	44nm,0.3s,baz=31,slow=19,SNR=2.8						
RAO				S	**Sn**	**10 01 12.2**	**-1.4**
	124nm,0.3s,baz=3.9,slow=22,SNR=6.8						
FUNA	**Funafuti**	**12.89**	**338**	*e*Pn	**Pn**	**10 00 31.5**	**+1.7**
RAR	**Rarotonga**	**15.12**	**95**	P	**Pn**	**10 00 58.6**	**+0.8**
	2.3nm,0.3s,baz=277,slow=13,SNR=5.1						
RAR				S	**Sn**	**10 03 35.1**	**-11**
	2.6nm,0.3s,baz=198,slow=13,SNR=2.6						
RAR	**Rarotonga**	**15.12**	**95**	*e*P	**Pn**	**10 01 00.6**	**+2.7**
RAR				S	**Sn**	**10 03 35.1**	**-11**
BAYA	**Yate Dam**	**16.08**	**261**	*e*P	**Pn**	**10 01 15.6**	**+6.0**
DZM	**Mont Dzumac**	**16.48**	**262**	*e*P	**Pn**	**10 01 19.6**	**+5.0**
	235nm,0.7s						
NOUC	**Port Laguerre**	**16.61**	**262**	*e*P	**Pn**	**10 01 19.5**	**+3.3**
URZ	**Urewera**	**18.60**	**197**	P	**P**	**10 01 37.0**	**-0.7**
	12nm,0.3s,baz=314,slow=1.5,SNR=56						
URZ				S	**S**	**10 04 53.7**	**-8.3**
	2.9nm,0.3s,baz=55,slow=21,SNR=6.3						
SNZO	**South Karori**	**22.12**	**199**	*e*P	**P**	**10 02 13.6**	**-1.8**
RPZ	**Rata Peaks**	**25.48**	**202**	P	**P**	**10 02 47.1**	**+0.9**
	21nm,0.6s,mb4.8,baz=345,slow=9.1,SNR=15						
RPZ	**Rata Peaks**	**25.48**	**202**	*e*P	**P**	**10 02 48.0**	**+1.8**
	17nm,0.5s,mb4.8						
HNR	**Honiara**	**25.76**	**292**	*e*P	**P**	**10 02 50.0**	**+0.9**
	1μm,2.2s						
EIDS	**Eidsvold**	**30.68**	**255**	*e*P	**P**	**10 03 33.3**	**+0.5**
	54nm,1.0s,mb5.2						
ARMA	**Armidale**	**30.77**	**245**	*e*P	**P**	**10 03 34.7**	**+1.3**
	30nm,0.7s,mb5.1						
KWAJ	**Kwajalein Atol**	**33.39**	**329**	*e*P	**P**	**10 03 55.4**	**-1.0**
	29nm,0.4s,mb5.4						
CNB	**Canberra Magne**	**33.78**	**237**	*e*P	**P**	**10 04 00.2**	**+0.6**
CTA	**Charters Tower**	**35.40**	**264**	*e*P	**P**	**10 04 14.4**	**+0.6**
	54nm,0.6s,mb5.3						
CTA	**Charters Tower**	**35.40**	**264**	P	**P**	**10 04 14.6**	**+0.8**
	60nm,0.5s,mb5.4,baz=96,slow=10,SNR=58						
CTA	**Charters Tower**	**35.40**	**264**	P	**P**	**10 04 14.6**	**+0.8**
CTAO	**Charters Tower**	**35.40**	**264**	*e*P	**P**	**10 04 14.8**	**+1.0**
PMG	**Port Moresby**	**37.25**	**282**	*e*P	**P**	**10 04 30.1**	**+0.6**
TOO	**Toolangi**	**37.41**	**235**	*e*P	**P**	**10 04 30.0**	**-0.6**
STKA	**Stephens Creek**	**39.49**	**245**	*e*P	**P**	**10 04 47.8**	**-0.2**
	15nm,0.7s,mb4.7						
STKA	**Stephens Creek**	**39.49**	**245**	P	**P**	**10 04 47.9**	**-0.1**
	23nm,0.7s,mb4.9,baz=92,slow=11,SNR=54						
STKA				PcP	PcP	10 06 53.4	+0.5
	5.3nm,0.5s,baz=96,slow=4.5,SNR=6.8						
STKA	**Stephens Creek**	**39.49**	**245**	*e*P	**P**	**10 04 47.9**	**-0.2**
	5.3nm,0.8s,mb4.2						
COEN	**Coen**	**39.52**	**273**	*e*P	**P**	**10 04 49.3**	**+0.8**
	856nm,0.8s						
POHA	**Pohakuloa**	**44.81**	**28**	*e*P	**P**	**10 05 31.3**	**+0.1**
	79nm,1.2s,mb5.2						
ASAR	**Alice Springs**	**46.38**	**257**	P	**P**	**10 05 42.8**	**-0.8**
	27nm,0.7s,mb5.0,baz=93,slow=8.5,SNR=14						
ASAR				PcP	PcP	10 07 15.7	-0.6
	6.1nm,0.6s,baz=107,slow=4.0,SNR=8.4						
ASAR				ScP	ScP	10 10 54.4	-1.5
	0.6nm,0.6s,baz=98,

comp=Z,7.4nm,1.0s,mb4.4
ETW Entiat 84.22 34 *e*P **P 10 09 46.8 +0.2**
comp=Z,4.6nm,0.7s,mb4.3
PMR Palmer 84.68 13 *e*P **P 10 09 47.6 -1.0**
TTA Tatalina 84.72 9 *e*P **P 10 09 48.8 +0.1**
comp=Z,6.1nm,0.3s,mb4.8
DIV Divide 84.99 14 *e*P **P 10 09 49.6 -0.5**
comp=Z,14nm,1.0s,mb4.6
BMRM Bremner River 85.12 15 *e*P **P 10 09 50.4 -0.4**
comp=Z,396nm,0.6s
HLID Hailey 85.15 40 *e*P **P 10 09 51.9 +0.6**
comp=Z,2.9nm,0.9s,mb4.0
SRU San Rafael 85.21 45 *e*P **P 10 09 52.3 +0.6**
comp=Z,3.7nm,0.6s,mb4.3
MNTX Cornudas Mount 85.24 54 *e*P **P 10 09 52.8 +0.7**
comp=Z,2.0nm,0.9s,mb3.9
TXAR Lajitas Array 85.49 57 P **P 10 09 53.0 -0.3**
comp=Z,1.7nm,0.9s,mb3.8,baz=218,slow=8.1,SNR=16
TXAR pP pP 10 10 38.8 +8.5
comp=Z,1.9nm,1.0s,baz=222,slow=5.0,SNR=5.3
KULM Kulim 85.70 277 *e*P **P 10 09 54.8 0.0**
comp=Z,5.9nm,0.7s,mb4.4
HWUT Hardware Ranch 85.84 43 *e*P **P 10 09 54.5 -0.3**
ANMO Albuquerque 85.97 50 *e*P **P 10 09 56.1 +0.6**
comp=Z,2.3nm,1.0s,mb3.9
PV01 Paradox Valley 86.03 47 *e*P **P 10 09 56.1 +0.3**
comp=Z,58nm,0.5s,mb5.6
TRF Thorofare Mount 86.15 11 *e*P **P 10 09 54.9 -0.9**
comp=Z,17nm,0.8s,mb4.8
MCK McKinley 86.66 12 *e*P **P 10 09 57.6 -0.7**
comp=Z,23nm,1.0s,mb5.0
ENH Enshi 87.70 303 *e*P **P 10 10 04.2 +0.1**
PDAR Pinedale Array 87.72 42 P **P 10 10 03.1 -0.7**
comp=Z,0.7nm,0.7s,mb3.6,baz=249,slow=2.9,SNR=6.7
PLCA Paso Flores 87.80 133 *e*P **P 10 10 04.6 +0.1**
comp=Z,27nm,1.7s,mb4.8
COLA College 87.90 12 *e*P **P 10 10 03.2 -1.0**
comp=Z,12nm,1.1s,mb4.6
SDCO Great Sand Dun 87.97 48 *e*P **P 10 10 04.1 -1.1**
comp=Z,1.0nm,1.0s,mb3.6
DAWY Dawson 89.03 15 *e*P **P 10 10 09.7 +0.1**
EGAK Eagle 89.21 14 *e*P **P 10 10 10.1 -0.2**
comp=Z,9.0nm,1.1s,mb4.6
COLD Coldfoot 89.63 10 *e*P **P 10 10 12.4 +0.1**
comp=Z,5.9nm,1.2s,mb4.4
HIA Hailar 89.90 324 *e*P **P 10 10 13.3 -0.7**
RSSD Black Hills 91.89 43 *e*P **P 10 10 23.2 -0.1**
comp=Z,5.6nm,1.2s,mb4.5
CMAR Chiang Mai Arr 91.97 289 P **P 10 10 24.3 0.0**
comp=Z,3.8nm,0.4s,mb4.8,baz=121,slow=2.8,SNR=9.8
CHTO Chiang Mai 92.10 289 *e*P **P 10 10 25.2 +0.3**
comp=Z,6.0nm,0.8s,mb4.7
RES Resolute Bay 107.36 16 *e*PKPdf PKiKP 10 15 40.3 +0.3
MK31 Makanchi Array 112.67 313 *e*PKPdf PKiKP 10 15 49.1 -1.6
MKAR Makanchi Array 112.67 313 PKiKP PKiKP 10 15 49.0 -1.7
comp=Z,0.6nm,0.4s,baz=106,slow=0.5,SNR=27
BVAR Borovoye Array 120.39 320 PKP PKPdf 10 16 04.1 -1.3
comp=Z,1.4nm,0.5s,baz=124,slow=0.6,SNR=6.6
BOSA Boshof 126.97 203 PKP PKPdf 10 16 19.4 +0.6
comp=Z,1.8nm,0.5s,baz=164,slow=5.5,SNR=4.4
ARCES ARCESS Array B 129.35 350 PKhKP PKPpre 10 16 14.6
comp=Z,1.4nm,0.9s,baz=8.1,slow=1.3,SNR=2.2
ARCES PKP PKPdf 10 16 20.1 -2.0
comp=Z,1.2nm,0.5s,baz=27,slow=1.0,SNR=13
FINES FINESS Array B 136.39 345 PKhKP PKPpre 10 16 27.1
comp=Z,1.6nm,0.8s,baz=101,slow=4.4,SNR=2.5
FINES PKP PKPdf 10 16 34.7 -0.8
comp=Z,3.7nm,0.9s,baz=72,slow=4.5,SNR=7.0
NB2 NORSAR Subarra 139.28 355 PKP PKPpre 10 16 35.8
comp=Z,0.1nm,0.6s,baz=24,slow=3.6
NOA NORSAR Array B 139.28 355 PKhKP PKPpre 10 16 36.2
comp=Z,0.9nm,0.7s,baz=7.2,slow=3.1,SNR=4.2
NOA NORSAR Array B 139.28 355 PKP PKPpre 10 16 36.2
AKASG Malin Array Be 144.01 333 PKhKP PKPpre 10 16 46.2
comp=Z,26nm,0.6s,baz=41,slow=4.3,SNR=72
AKASG Malin Array Be 144.01 333 PKP PKPpre 10 16 46.2
KWP Kalwaria Pacla 147.45 337 ||*P* PKPab 10 17 00.4 -0.2
KWP Kalwaria Pacla 147.45 337 ||*iP* PKPab 10 17 00.4 -0.1
BUR08 Bucovina Ar. S 148.05 333 *e*PKPbc PKPbc 10 16 59.9 -0.1
BURAR Bucovina Array 148.07 333 ⇑*P* PKPbc 10 17 01.2 +1.2
BURAR Bucovina Array 148.07 333 ⇑*iP* PKPbc 10 17 01.2 +1.2
STHS Stebnicka Huta 148.14 339 *e*P PKPab 10 17 04.5 +1.2
STHS Stebnicka Huta 148.14 339 *e*PKP PKPab 10 17 04.5 +1.2
TESR 148.25 330 ⇑*P* PKPbc 10 17 01.2 +0.8
TESR 148.25 330 ⇑*iP* PKPbc 10 17 01.2 +0.7
BR131 Keskin Array S 148.32 314 *e*PKPdf PKPdf 10 16 56.8 -0.5
BR131 *e*PKPbc PKPbc 10 17 00.1 -0.8
BR131 *e*PKPab PKPab 10 17 03.8 -0.6
BRTR Keskin Array B 148.32 314 PKPbc PKPbc 10 17 00.1 -0.8
comp=Z,13nm,0.6s,baz=138,slow=4.5,SNR=61
BRTR pPKPbc pPKPbc 10 17 45.2 +5.6
comp=Z,3.2nm,0.8s,baz=139,slow=5.4,SNR=2.2
CRVS Cervenica-Dubn 148.50 338 *e*P PKPbc 10 17 01.1 +0.1
CRVS Cervenica-Dubn 148.50 338 *e*PKP PKPbc 10 17 01.0 0.0
CLL Collm 148.56 349 *e*PKPbc PKPbc 10 17 00.4 -0.7
CLL *e*PKPab PKPab 10 17 03.8 -1.1
CLL Collm 148.56 349 ||*i*PKPbc PKPbc 10 17 00.2 -0.9
comp=Z,14nm,0.7s
CLL *i* PKPab PKPab 10 17 03.7 -1.2
comp=Z,14nm,0.8s
CLL *e*(pPKPdf) 10 17 42.0
CLL *e*pPKPbc pPKPbc 10 17 46.0 +6.2
CLL *e*pPKiKP 10 17 49.0
VRI Vrincioaia 148.68 329 ⇑*iP* PKPbc 10 16 59.6 -2.0
UPC Upice 148.69 345 *e*PKP PKPbc 10 17 01.4 -0.1
UPC *e* 10 17 05.7
UPC Upice 148.69 345 ⇑*e*PKP PKPbc 10 17 01.4 -0.1
UPC *e*PKPAB PKPab 10 17 05.7 +0.2
OKC Ostrava-Krasne 148.75 342 *e*PKP PKPbc 10 17 01.3 -0.3
OKC *e* 10 17 05.7
OKC Ostrava-Krasne 148.75 342 ⇑*e*PKP PKPbc 10 17 01.3 -0.3
OKC *e*PKPAB PKPab 10 17 05.7 -0.1
OKC AMS AMS 11 06 00.0
comp=Z,1μm,20.9s
TRPA Tarpa 148.75 336 ⇑*iP* PKPbc 10 17 00.9 -0.8
DPC Dobruska-Polom 148.76 345 *e*PKP PKPbc 10 17 01.7 +0.1
DPC *e* 10 17 06.1
DPC LR LR
comp=Z,2μm,22.5s
DPC Dobruska-Polom 148.76 345 ⇑*e*PKP PKPbc 10 17 01.7 +0.1
DPC *e*PKPAB PKPab 10 17 06.1 +0.3
DPC AMS AMS 11 08 20.0
comp=Z,2μm,22.5s
BRG Berggiesshubel 148.80 348 *e*PKPbc PKPbc 10 17 00.9 -0.8
BRG *e*PKPab PKPab 10 17 05.2 -0.7
BRG *e*pPKPab pPKPab 10 17 51.9 +8.1
BRG Berggiesshubel 148.80 348 *i* PKP PKPbc 10 17 01.3 -0.4
comp=Z,9.0nm,0.8s
BRG *i* PKPab 10 17 05.1 -0.8
comp=Z,9.4nm,0.7s
BRG
comp=N,888nm,23.1s
BRG
comp=E,1μm,25.3s
BRG
comp=Z,2μm,22.5s
NEUB Neuenburg 148.85 351 *e*PKPbc PKPbc 10 17 00.7 -1.1
NEUB *e*PKPab PKPab 10 17 05.4 -0.7
MORC Moravsky Berou 148.97 343 ||*P* PKPbc 10 17 01.6 -0.6
MORC Moravsky Berou 148.97 343 ||*iP* PKPbc 10 17 01.6 -0.6
PVCC Panska Ves 149.00 347 *e*PKP PKPbc 10 17 02.3 +0.1
PVCC LR LR
comp=Z,2μm,20.5s
PVCC Panska Ves 149.00 347 ⇑*e*PKP PKPbc 10 17 02.3 +0.1
PVCC AMS AMS 11 10 00.0
comp=Z,2μm,20.5s
KECS Kecovo 149.20 338 *e*PKP PKPbc 10 17 02.8 0.0
KECS *e* 10 17 07.7
MLR Muntele Rosu 149.33 329 ||*iP* PKPbc 10 17 03.2 0.0
MOX Moxa 149.43 351 *e*PKPbc PKPbc 10 17 02.5 -0.8
MOX *e*PKPab PKPab 10 17 07.5 -1.0
MOX *e*pPKPab pPKPab 10 17 51.0 +4.7
PLN Plauen 149.49 350 *e*PKPbc PKPbc 10 17 02.9 -0.6
PLN *e*PKPab PKPab 10 17 07.9 -0.9
PLN *e*pPKPab pPKPab 10 17 52.4 +5.8
WERD Werda 149.51 350 *e*PKPbc PKPbc 10 17 02.9 -0.6
WERD *e*PKPab PKPab 10 17 08.2 -0.6
WERD *e*pPKPab pPKPab 10 17 51.7 +5.1
TANN Tannenbergstha 149.51 349 *e*PKPbc PKPbc 10 17 02.8 -0.7
TANN *e*PKPab PKPab 10 17 07.8 -1.0
TANN *e*pPKPab pPKPab 10 17 52.5 +5.9
PRU Pruhonice 149.51 347 *e*PKP PKPbc 10 17 03.5 0.0
PRU *e* 10 17 09.6
PRU *e* 10 28 38.1
PRU *e* 10 35 19.7
PRU LR LR
comp=Z,2μm,20.2s
PRU Pruhonice 149.51 347 ⇑*e*PKP PKPbc 10 17 03.5 0.0
PRU *e*PKPAB PKPab 10 17 09.6 +0.7
PRU *ex* x 10 28 38.1
PRU *ex* x 10 35 19.7
PRU AMS AMS 11 09 40.0
comp=Z,2μm,20.2s
MMAI Mount Meron Ar 149.53 300 PKPbc PKPbc 10 17 04.0 -0.1
comp=Z,13nm,0.5s,baz=71,slow=4.9,SNR=32
MMAI pPKPbc pPKPbc 10 17 49.4 +6.5
comp=Z,5.0nm,0.7s,baz=35,slow=7.4,SNR=2.4
GUNZ Gunzen 149.58 350 *e*PKPbc PKPbc 10 17 03.3 -0.4
GUNZ *e*PKPab PKPab 10 17 08.5 -0.6
GUNZ *e*pPKPab pPKPab 10 17 52.8 +5.9
VRAC Vranov 149.65 344 ||*iP* PKPbc 10 17 03.6 -0.3
NKC Novy Kostel 149.69 349 *e*PKPbc PKPbc 10 17 03.9 0.0
NKC *e*PKPab PKPab 10 17 09.1 -0.5
NKC *e*pPKPab pPKPab 10 17 52.7 +5.3
NKC Novy Kostel 149.69 349 AMS AMS 11 11 20.0
comp=Z,2μm,21.0s
VYHS Vyhne 149.74 340 *e*P PKPbc 10 17 04.1 0.0
VYHS *e* PKPab 10 17 10.2 +0.4
VYHS Vyhne 149.74 340 *e*PKP PKPbc 10 17 04.1 0.0
VYHS *e* 10 17 10.2
DRGR 149.77 334 ⇑*P* PKPbc 10 17 04.0 -0.3
DRGR 149.77 334 ⇑*iP* PKPbc 10 17 04.0 -0.3
VOIR 149.79 330 ⇑*iP* PKPbc 10 17 05.5 +1.1
PSZ Piszkesteto 149.89 339 *e*PKPbc PKPbc 10 17 05.0 +0.5
PSZ *e*PKPab PKPab 10 17 10.0 -0.5
PSZ Piszkesteto 149.89 339 ⇑*iP* PKPab 10 17 11.4 +0.9
TREC Trest 149.95 345 ||*e*PKP PKPbc 10 17 04.2 -0.4
TREC AMS AMS 11 07 50.0
comp=Z,2μm,20.9s
GRF Grafenberg Arr 150.41 351 *e*PKPbc PKPbc 10 17 05.1 -0.6
GRF *e*PKPab PKPab 10 17 12.0 -0.6
KHC Kasperske Hory 150.53 347 ⇑*e*PKP PKPbc 10 17 05.6 -0.4
KHC *e*PKPAB PKPab 10 17 12.9 -0.2
KHC *ex* x 10 28 46.9
KHC *ex* x 10 35 33.8
KHC AMS AMS 11 10 20.0
comp=Z,2μm,20.7s
CSS Prodhromos 150.54 305 *e*PKPdf PKPdf 10 16 59.0 -2.0
CSS *e*PKPbc PKPbc 10 17 04.6 -1.9
CSS *e*PKPab PKPab 10 17 12.9 -0.8
GIVF Givet 150.55 359 *e*PKP1 PKPbc 10 17 05.2 -0.8
comp=Z,25nm,0.8s
BAIF Baives 150.60 360 *e*PKP1 PKPbc 10 17 05.4 -0.7
comp=Z,36nm,1.1s
WET Wettzell 150.66 348 *e*PKPbc PKPbc 10 17 05.9 -0.4
WET *e*PKPab PKPab 10 17 13.0 -0.6
GEC2 GERESS Array S 150.78 347 *e*PKPdf PKPdf 10 17 00.1 -0.8
GEC2 *e*PKPbc PKPbc 10 17 05.7 -0.9
GEC2 *e*PKPab PKPab 10 17 13.7 -0.4
CONA Conrad Observa 151.11 343 P PKPbc 10 17 07.3 -0.1
comp=Z,9.0nm,1.0s
BZS Buzias 151.17 334 ||*iP* PKPbc 10 17 06.7 -0.9
ISP Isparta 151.37 313 *e*PKPbc PKPbc 10 17 07.2 -1.2
ISP *e*PKPab PKPab 10 17 17.0 0.0
FLN La Foliniere 151.66 6 *e*PKP1 PKPbc 10 17 07.3 -1.3
comp=Z,34nm,0.9s
ROSF Rostrenen 151.70 10 *e*PKP1 PKPbc 10 17 07.2 -1.5
comp=Z,22nm,0.9s
PKSM Moragy 151.80 338 ||*iP* PKPbc 10 17 07.8 -1.2
LDF La Druitiere 151.87 6 *e*PKP1 PKPbc 10 17 07.6 -1.5
comp=Z,3.7nm,0.5s
SGMF Saint Gilles 151.90 9 *e*PKP1 PKPbc 10 17 07.7 -1.5
comp=Z,30nm,0.9s
GRR Gorron 151.99 7 *e*PKP1 PKPbc 10 17 08.2 -1.2
comp=Z,25nm,0.7s
CDF Champ du Feu 152.13 355 *e*PKP1 PKPbc 10 17 08.7 -1.0
comp=Z,17nm,1.0s
MEZF Maizieres J'vi 152.15 359 *e*PKP1 PKPbc 10 17 09.0 -0.7
comp=Z,32nm,1.0s
KOGS Kog 152.35 342 *e* PKPab 10 17 20.2 -0.6
KBA Koelnbreinsper 152.53 346 ⇑*iP*KPbc PKPbc 10 17 09.7 -0.9
comp=Z,3.8nm,0.8s
HAU Haudompre 152.59 357 *e*PKP1 PKPbc 10 17 09.7 -1.1
HINF Hinteralfeld 152.75 356 *e*PKP1 PKPbc 10 17 09.7 -1.4
DAVA Damuels 152.96 351 P PKPbc 10 17 11.4 -0.2
comp=Z,5.5nm,0.8s
ABTA Abfaltersbach 153.02 347 P PKPbc 10 17 10.6 -1.1
comp=Z,6.2nm,1.2s
GCIS Gornji Cirnik 153.06 342 *e*PKP PKPbc 10 17 11.4 -0.5
GCIS *e* 10 17 23.1
PDKS Podkum 153.06 343 *e*PKP PKPbc 10 17 10.9 -1.0
PDKS *e* 10 17 22.6
LOR Lormes 153.40 0 *e*PKP1 PKPbc 10 17 11.5 -1.0
comp=Z,12nm,0.8s
SSF Saint Saulge 153.60 1 *e*PKP1 PKPbc 10 17 12.0 -1.0
comp=Z,10nm,0.9s
CABF La Chapelle 154.00 357 *e*PKP1 PKPbc 10 17 12.5 -1.4
comp=Z,10nm,0.9s
ESDC Sonseca Array 159.78 18 PKPab PKPab 10 17 51.8 -1.0
comp=Z,0.4nm,0.4s,baz=320,slow=3.8,SNR=4.8
TORD Torodi Ar. Bea 172.25 163 PKP PKPdf 10 17 21.9 -2.1
comp=Z,1.3nm,0.9s,baz=246,slow=1.4,SNR=4.9

NEIC ***11*** *09:58:47.1,14°.07N×93°.37W,h7km,MD4.1(MEX),After MEX.*
MEX 11 09:58:47.1±0.7,14°.07N×93°.37W,h7km±17km,MD4.1,
Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.35**	**52**	*i* P	Pn	09 59 08.4	-3.9
THIG				*i* S	Sb	09 59 25.7	-4.5
PCIG		**1.63**	**5**	*i* P	Pn	09 59 12.4	-3.8
PCIG				*i* S	Sn	09 59 32.2	-5.1
TGIG		**2.70**	**5**	*i* P	Pn	09 59 28.7	-2.2
TGIG				*i* S	Sn	09 59 59.6	-4.2
SCX	**San Cristobal**	**2.74**	**15**	*i* P	Pn	09 59 32.0	+0.5
SCX				*i* S	Sn	10 00 05.8	+1.0
SCX	**San Cristobal**	**2.74**	**15**	*i* P	Pn	09 59 32.0	+0.5
SCX				*i* S	Sn	10 00 05.8	+1.0
HUIG	**Huatulco**	**3.14**	**303**	*e*P	Pn	09 59 34.7	-2.3
HUIG				*i* S	Sn	10 00 10.7	-4.0
HUIG	**Huatulco**	**3.14**	**303**	*e*P	Pn	09 59 34.7	-2.3
HUIG				*i* S	Sn	10 00 10.7	-4.0
CMIG	**Matias Romero**	**3.34**	**334**	*i* P	Pn	09 59 39.3	-0.4
CMIG				*i* S	Sn	10 00 16.4	-3.2
CMIG	**Matias Romero**	**3.34**	**334**	*i* P	Pn	09 59 39.3	-0.4
CMIG				*i* S	Sn	10 00 16.4	-3.2
PNIG	**Pinotepa**	**5.14**	**297**	*i* P	Pn	10 00 04.6	+0.1
PNIG				*i* S	Sn	10 00 59.5	-4.6
PNIG	**Pinotepa**	**5.14**	**297**	*i* P	Pn	10 00 04.6	+0.1
PNIG				*i* S	Sn	10 00 59.5	-4.6

IDC ***11*** *09:58:45.5±0.6,2°.87S×147°.79E,h0km,mb5.0/15, mb1 5.2/16,mb1mx5.1/18,mbtmp5.0/16,ML3.9/1,MS5.1/21, Ms1 5.1/21,ms1mx5.0/25,Error ellipse: s-maj=22.4km s-min=14.4km az=102.0*
BJI ***11*** *09:58:47.8,2°.78S×148°.15E,h29km,mB5.4/43,mb5.0/56, Ms5.4/62,Ms7 5.2/56*
ISCJB ***11*** *09:58:48.9±1.1,2°.94S±0°.03×148°.00E±0°.03,h30km±7km, mb5.3/142,MS5.3/225,Error ellipse: s-maj=5.6km s-min=5.2km az=2.0*
MOS ***11*** *09:58:49.4±1.2,2°.90S×147°.66E,h33km,mb5.4/36, MS5.2/29,Error ellipse: s-maj=11.3km s-min=6.1km az=94.8*
NEIC ***11*** *09:58:49.9±2.6,2°.94S×147°.82E,h24km±18km,mb5.3/61, MS5.3/185,MW5.7,MW5.7,Error ellipse: s-maj=7.7km s-min=5.6km az=87.0,Moment Tensor Solution. s25 Moment tensor: Scale 10^{17}Nm; M_{rr}1.22; $M_{\theta\theta}$-0.42; $M_{\phi\phi}$-0.80; $M_{r\theta}$1.89; $M_{\theta\phi}$1.21; $M_{\phi r}$3.85; Best double couple: $M_0$4.60000×10^{17} NP1:ϕ_s19.00000°,δ85.00000°, λ105.00000°. NP2:ϕ_s126.00000°,δ15.00000°,λ18.00000°. Principal axes: T 5.1000, Plg47.0000°, Azm303.0000°; N -1.3100, Plg14.0000°, Azm197.0000°; P -3.7800, Plg38.0000°, Azm95.0000°;*
GCMT ***11*** *09:58:49.5±0.1,2°.95S×148°.08E,h14km,MW5.6,Moment Tensor Solution. s94,c157; s58,c68; Moment tensor: Scale 10^{17}Nm; M_{rr}0.01±.03; $M_{\theta\theta}$1.73±.04; $M_{\phi\phi}$-1.74±.04; $M_{r\theta}$0.10±.07; $M_{\theta\phi}$3.03±.04; $M_{\phi r}$0.31±.08; Best double couple: $M_0$3.50000×10^{17} NP1:ϕ_s105.00000°,δ85.00000°, λ0.00000°. NP2:ϕ_s15.00000°,δ90.00000°,λ175.00000°.*

Principal axes: T 3.5000, Plg4.0000°, Azm330.0000°; N 0.0000, Plg85.0000°, Azm192.0000°; P -3.5100, Plg4.0000°, Azm60.0000°; Data Used: II IU IC G CN. Surface waves: sta=116, comp=230, per= 50.
DJA ***11*** *09:58:52,2°.93S×148°.16E,h44km,Mw5.7/31*
ISC 11 09:58:52.1±0.8,2°.94S±0°.03×148°.01E±0°.03,h42km±7km, h16km±4.4km:pP-P,n473,σ1§33/314,mb5.3/142,MS5.3/225, 16C-8D,Admiralty Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.48**	**187**	*c*eP	**Pn**	**10 00 24.0**	**-1.0**
PMG				pmax	pmax		
comp=Z,107nm,0.8s							
PMG	**Port Moresby**	**6.48**	**187**	*e*Pn	**Pn**	**10 00 24.5**	**-0.5**
PMG				*e*Sn	**Sn**	**10 01 37.0**	**-0.6**
PMG	**Port Moresby**	**6.48**	**187**	P	**Pn**	**10 00 26.3**	**+1.3**
comp=Z,1.8nmcomp=Z,9μmcomp=Z,266nm,0.9s							
SMPI	**Sarmi**	**9.34**	**276**	P	**Pn**	**10 01 06.5**	**+2.2**
comp=Z,881nm,1.7s							
COEN	**Coen**	**11.94**	**203**	*e*Pn	**Pn**	**10 01 39.6**	**-0.3**
comp=Z,2μm,1.6s							
COEN	**Coen**	**11.94**	**203**	P	**Pn**	**10 01 38.8**	**-1.1**
comp=Z,10μmcomp=Z,443nm,1.7s							
TLE	**Tual**	**15.46**	**260**	P	**Pn**	**10 02 35.0**	**+7.5**
GUMO	**Guam**	**16.72**	**349**	*e*P	**Pn**	**10 02 41.5**	**-1.9**
GUMO				pmax	pmax		
comp=Z,302nm,1.4s							
GUMO	**Guam**	**16.72**	**349**	*e*Pn	**Pn**	**10 02 41.5**	**-2.0**
comp=Z,302nm,1.4s							
GUMO	**Guam**	**16.72**	**349**	P	**Pn**	**10 02 41.5**	**-1.9**
comp=Z,5μmcomp=Z,179nm,1.4s							
SWI	**Sorong**	**16.87**	**277**	P	**Pn**	**10 02 47.8**	**+2.4**
comp=Z,4μmcomp=Z,223nm,2.0s							
CTA	**Charters Tower**	**17.13**	**186**	*e*P	**Pn**	**10 02 45.0**	**-3.5**
comp=Z,55nm,1.4s							
CTA	**Charters Tower**	**17.13**	**186**	Pn	**Pn**	**10 02 46.0**	**-2.4**
comp=Z,0.3nm,0.3s,baz=357,slow=12,SNR=14							
CTA				LR	LR	10 08 56.6	
comp=Z,8μm,20.7s,baz=6.2,slow=36							
CTA	**Charters Tower**	**17.13**	**186**	Pn	**Pn**	**10 02 46.0**	**-2.4**
CTA				LR	LR	10 08 56.6	
CTAO	**Charters Tower**	**17.13**	**186**	*e*P	**Pn**	**10 02 48.6**	**+0.1**
CTAO				pmax	pmax		
comp=Z,198nm,1.4s							
CTAO	**Charters Tower**	**17.13**	**186**	*e*P	**Pn**	**10 02 48.6**	**+0.2**
comp=Z,198nm,1.4s							
CTAO	**Charters Tower**	**17.13**	**186**	P	**Pn**	**10 02 49.0**	**+0.5**
comp=Z,110nm,1.7s							
KAKA	**Kakadu**	**18.21**	**237**	*e*P	**Pn**	**10 02 58.4**	**-3.5**
comp=Z,330nm,0.9s							
KAKA	**Kakadu**	**18.21**	**237**	*e*P	**Pn**	**10 02 58.7**	**-3.2**
comp=Z,1μm,1.0s							
KAKA	**Kakadu**	**18.21**	**237**	P	**Pn**	**10 02 59.5**	**-2.4**
comp=Z,4μmcomp=Z,473nm,1.0s							
AAI	**Ambon**	**19.80**	**267**	P	**Pn**	**10 03 20.1**	**-0.9**
comp=Z,4μmcomp=Z,288nm,1.4s							
LBMI	**Labuha**	**20.63**	**276**	P	**P**	**10 03 30.6**	**+2.4**
comp=Z,586nm,1.8s							
NLAI	**Namlea**	**20.89**	**269**	P	**P**	**10 03 33.4**	**+2.4**
comp=Z,3μmcomp=Z,124nm,1.7s							
TNTI	**Ternate**	**20.97**	**280**	P	**P**	**10 03 34.5**	**+2.6**
comp=Z,8μmcomp=Z,596nm,1.1s							
WRAB	**Tennant Creek**	**21.52**	**217**	*e*P	**P**	**10 03 34.0**	**-3.7**
WRAB				pmax	pmax		
comp=Z,2μm,2.1s,mb6.2							
WRAB				MLR	MLR		
comp=Z,4μm,19.0s,MS4.8							
WRAB	**Tennant Creek**	**21.52**	**217**	*e*P	**P**	**10 03 34.0**	**-3.7**
comp=Z,2μm,2.1s,mb6.2							
WRAB				LR	LR		
comp=Z,4μm,19.0s,MS4.8							
WRAB	**Tennant Creek**	**21.52**	**217**	P	**P**	**10 03 35.5**	**-2.2**
comp=Z,5μmcomp=Z,338nm,1.3s,mb5.6							
WRA	**Warramunga Arr**	**21.53**	**217**	P	**P**	**10 03 34.2**	**-3.6**
comp=Z,201nm,1.1s,mb5.5,baz=42,slow=11,SNR=101							
WRA				PcP	PcP	10 07 39.9	+0.5
comp=Z,10nm,0.9s,baz=22,slow=2.2,SNR=5.8							
WRA				LR	LR	10 12 29.5	
comp=Z,3μm,18.2s,MS4.8,baz=45,slow=38							
WRA	**Warramunga Arr**	**21.53**	**217**	P	**P**	**10 03 34.3**	**-3.6**
WRA						10 07 39.9	
WRA	**Warramunga Arr**	**21.53**	**217**	P	**P**	**10 03 34.2**	**-3.6**
WRA				PcP	PcP	10 07 39.9	+0.5
WRA				LR	LR	10 12 29.5	
KNA	**Kununurra**	**22.83**	**235**	P	**P**	**10 03 49.5**	**-2.2**
comp=Z,3μmcomp=Z,434nm,1.0s,mb5.8							
SGSI	**Sangihe**	**23.42**	**286**	P	**P**	**10 03 57.1**	**-0.7**
comp=Z,332nm,1.2s,mb5.7							
MNI	**Manado**	**23.57**	**280**	P	**P**	**10 03 59.2**	**-0.1**
comp=Z,3μmcomp=Z,302nm,1.3s,mb5.6							
DAV	**Davao City (W)**	**24.50**	**294**	LR	LR	10 13 40.3	
comp=Z,3μm,19.9s,MS4.8,baz=280,slow=37							
DAV	**Davao City (W)**	**24.50**	**294**	PFAKE		10 04 20.0	+12
DAV				LR	LR		
comp=Z,5μm,20.0s,MS5.0							
ASAR	**Alice Springs**	**24.71**	**212**	P	**P**	**10 04 07.2**	**-2.4**
comp=Z,87nm,0.9s,mb5.3,baz=38,slow=7.1,SNR=176							
LUWI	**Luwuk**	**25.30**	**274**	P	**P**	**10 04 16.1**	**+1.1**
comp=Z,8μmcomp=Z,804nm,1.3s,mb6.1							
KDI	**Kendari**	**25.37**	**267**	P	**P**	**10 04 16.6**	**+1.0**
comp=Z,2μmcomp=Z,63nm,1.5s,mb4.9							
DZM	**Mont Dzumac**	**26.11**	**138**	*e*LR	LR	10 10 53.8	
comp=Z,21μm,26.0s							
MMRI	**Maumere**	**26.25**	**256**	P	**P**	**10 04 23.0**	**-0.6**
comp=Z,3μmcomp=Z,320nm,1.1s,mb5.7							
MRSI	**Marisa**	**26.28**	**277**	P	**P**	**10 04 23.5**	**-0.4**
comp=Z,1μmcomp=Z,122nm,1.2s,mb5.3							
FITZ	**Fitzroy Crossi**	**26.60**	**234**	*e*P	**P**	**10 04 25.1**	**-1.7**
comp=Z,808nm,0.9s,mb6.2							
FITZ				*e*S	**S**	**10 08 52.1**	**-6.8**
FITZ	**Fitzroy Crossi**	**26.60**	**234**	P	**P**	**10 04 26.1**	**-0.7**
comp=Z,431nm,0.9s,mb6.0,baz=61,slow=8.6,SNR=73							
FITZ				LR	LR	10 15 29.4	
comp=Z,7μm,19.3s,MS5.2,baz=57,slow=38							
FITZ	**Fitzroy Crossi**	**26.60**	**234**	P	**P**	**10 04 26.9**	**+0.1**
comp=Z,1μm,1.1s,mb6.3							
ARMA	**Armidale**	**27.54**	**173**	*e*P	**P**	**10 04 32.8**	**-2.2**
ARMA	**Armidale**	**27.54**	**173**	*e*P	**P**	**10 04 36.8**	**+1.8**
comp=Z,103nm,1.3s,mb5.3							
BNSI	**Bone**	**27.89**	**266**	P	**P**	**10 04 40.2**	**+1.8**
comp=Z,2μmcomp=Z,166nm,1.2s,mb5.5							
BKSI	**Bulukumba**	**27.92**	**264**	P	**P**	**10 04 38.6**	**0.0**
comp=Z,1μmcomp=Z,73nm,1.4s,mb5.1							
TTSI	**Tana Toraja**	**28.16**	**269**	P	**P**	**10 04 42.6**	**+1.8**
comp=Z,1μmcomp=Z,69nm,1.4s,mb5.1							
SPSI	**Sidrap Palu**	**28.21**	**267**	P	**P**	**10 04 41.3**	**+0.1**
comp=Z,1μmcomp=Z,74nm,1.6s,mb5.1							
PCI	**Palu**	**28.23**	**274**	P	**P**	**10 04 43.7**	**+2.3**
comp=Z,3μmcomp=Z,262nm,1.0s,mb5.8							
WAKE	**Wake Island**	**28.70**	**39**	PFAKE		10 05 00.0	+15
WAKE				LR	LR		
comp=Z,3μm,22.0s,MS4.8							
STKA	**Stephens Creek**	**29.41**	**191**	LR	LR	10 17 46.4	
comp=Z,7μm,18.8s,MS5.3,baz=9.9,slow=39							
CBIJ	**Chichi jima**	**30.39**	**350**	LR	LR	10 15 24.1	
comp=Z,4μm,21.3s,MS5.1,baz=157,slow=33							
MYLDM

KKM	**Kota Kinabalu**	**32.99 286**	*e*P	**P**	**10 05 24.0**	**+0.6**
	comp=Z,118nm,1.2s,mb5.7					
KKM			LR	LR		
	comp=Z,3μm,20.0s,MS5.0					
FORT	**Forrest**	**33.50 212**	*e*P	**P**	**10 05 24.1**	**-3.5**
	comp=Z,77nm,0.8s,mb5.7					
FORT	**Forrest**	**33.50 212**	*e*P	**P**	**10 05 25.1**	**-2.6**
	comp=Z,120nm,0.9s,mb5.8					
TOO	**Toolangi**	**34.54 184**	*e*P	**P**	**10 05 34.4**	**-2.2**
BTM	**Bintulu**	**35.44 280**	P	**P**	**10 05 46.2**	**+1.5**
SBUM	**Sibu**	**36.18 278**	P	**P**	**10 05 52.0**	**+1.0**
SBUM	**Sibu**	**36.18 278**	P	**P**	**10 05 51.3**	**+0.3**
	comp=Z,1μmcomp=Z,76nm,1.7s,mb5.3					
PWJI	**Pagerwojo**	**36.38 261**	P	**P**	**10 05 56.1**	**+3.3**
	comp=Z,48nm,1.2s,mb5.3					
SJI	**Sawahan**	**36.39 261**	P	**P**	**10 05 55.6**	**+2.8**
	comp=Z,43nm,1.6s,mb5.1					
STKI	**Sintang**	**36.64 274**	P	**P**	**10 05 55.9**	**+0.9**
	comp=Z,89nm,1.6s,mb5.3					
YULB	**Yu-li**	**36.92 317**	*e*P	**P**	**10 05 55.7**	**-1.5**
	comp=Z,62nm,0.9s,mb5.4					
NACB	**Ninganchiao**	**37.24 318**	*e*P	**P**	**10 05 58.8**	**-1.1**
	comp=Z,124nm,1.4s,mb5.5					
TPUB	**Ta-pu**	**37.32 316**	*e*P	**P**	**10 06 00.5**	**-0.1**
	comp=Z,35nm,0.8s,mb5.2					
SSLB	**Suanglung**	**37.41 317**	*e*P	**P**	**10 06 01.5**	**+0.1**
	comp=Z,44nm,0.9s,mb5.3					
YHNB	**Yeheng**	**37.72 318**	*e*P	**P**	**10 06 03.2**	**-0.7**
	comp=Z,115nm,1.0s,mb5.6					
YHNB			LR	LR		
	comp=Z,6μm,22.0s,MS5.4					
TATO	**Taipei**	**37.85 319**	*e*P	**P**	**10 06 05.5**	**+0.4**
	comp=Z,114nm,0.9s,mb5.6					
TATO			LR	LR		
	comp=Z,7μm,21.0s,MS5.5					
KSM	**Kuching**	**37.95 276**	P	**P**	**10 06 06.7**	**+0.7**
KSM	**Kuching**	**37.95 276**	*e*P	**P**	**10 06 06.5**	**+0.4**
	comp=Z,131nm,1.2s,mb5.5					
KSM			LR	LR		
	comp=Z,1μm,20.0s,MS4.8					
KSM	**Kuching**	**37.95 276**	P	**P**	**10 06 05.7**	**-0.4**
	comp=Z,1μmcomp=Z,106nm,1.3s,mb5.4					
QZH	**Quanzhou**	**39.80 316**	⇑*i*P	**P**	**10 06 20.0**	**-1.4**
QZH			S	**S**	**10 12 25.0**	**+2.1**
QZH			LR	LR		
	comp=N,2μm,12.0s					
QZH			LR	LR		
	comp=E,5μm,19.0s					
TPI	**Tanjungpandan**	**40.31 269**	P	**P**	**10 06 28.1**	**+2.3**
	comp=E,1μmcomp=E,116nm,1.6s,mb5.4					
MJAR	**Matsushiro Arr**	**40.33 348**	P	**P**	**10 06 22.8**	**-2.8**
	comp=E,5.1nm,1.1s,mb4.2,baz=166,slow=9.6,SNR=8.8					
MJAR			PcP	PcP	10 08 29.4	+0.9
	comp=E,2.7nm,1.0s,baz=164,slow=3.0,SNR=4.4					
MJAR			LR	LR	10 22 42.4	
	comp=E,2μm,18.2s,MS5.1,baz=165,slow=36					
MJAR	**Matsushiro Arr**	**40.33 348**	P	**P**	**10 06 22.8**	**-2.8**
MJAR					10 08 29.4	
MAJO	**Matsushiro**	**40.33 348**	*e*P	**P**	**10 06 25.2**	**-0.4**
MAJO			pmax	pmax		
	comp=Z,18nm,1.1s,mb4.7					
MAJO			MLR	MLR		
	comp=Z,2μm,19.0s,MS5.0					
MAJO	**Matsushiro**	**40.33 348**	*e*P	**P**	**10 06 25.1**	**-0.5**
	comp=Z,18nm,1.1s,mb4.7					
MAJO			LR	LR		
	comp=Z,2μm,19.0s,MS5.0					
MAT	**Matsushiro**	**40.33 348**	P	**P**	**10 06 23.3**	**-2.3**
MAT			S	**S**	**10 12 27.0**	**-3.6**
LEM	**Lembang**	**40.42 263**	P	**P**	**10 06 28.0**	**+1.2**
	comp=Z,153nm,1.0s,mb5.7					
CBJI	**Citeko**	**41.16 264**	P	**P**	**10 06 34.6**	**+1.8**
	comp=Z,356nm,0.7s,mb6.1					
AFI	**Afiamalu**	**41.17 108**	PFAKE		10 06 50.0	+17
AFI			LR	LR		
	comp=Z,2μm,20.0s,MS5.0					
TNG	**Tangerang**	**41.35 264**	P	**P**	**10 06 31.7**	**-2.7**
	comp=Z,3μm,0.5s					
TNG			P		10 06 31.8	
	comp=Z,2μm,0.5s					
NWAO	**Narrogin (SRO)**	**41.48 221**	P	**P**	**10 06 33.0**	**-2.2**
	comp=Z,24nm,1.0s,mb4.8,baz=349,slow=6.7,SNR=3.6					
NWAO	**Narrogin (SRO)**	**41.48 221**	P	**P**	**10 06 33.0**	**-2.2**
NWAO			LR	LR		
	comp=Z,7μm,21.0s,MS5.5					
RAO	**Raoul Island**	**41.60 132**	LR	LR	10 19 45.1	
	comp=Z,920nm,21.4s,MS4.6,baz=271,slow=30					
CGJI	**Cibinong**	**42.32 263**	P	**P**	**10 06 41.7**	**-0.6**
	comp=Z,3μmcomp=Z,122nm,1.0s,mb5.5					
SSE	**Sheshan**	**42.41 325**	*e*P	**P**	**10 06 39.6**	**-3.2**
SSE			pP	pP	10 06 48.9	-5.6
SSE			PP	PP	10 08 17.7	-4.0
SSE			S	**S**	**10 12 59.0**	**-2.6**
SSE			sS	sS	10 13 18.1	-3.1
SSE			ScS	ScS	10 16 33.8	-7.5
SSE			pmax	pmax		
	comp=Z,35nm,0.6s,mb5.2					
SSE			pmax	pmax		
	comp=Z,360nm,12.0s					
SSE			LR	LR		
	comp=N,3μm,20.6s,MS5.2					
SSE			LR	LR		
	comp=E,2μm,20.5s,MS5.2					
SSE			LR	LR		
	comp=Z,4μm,20.5s,MS5.3					
GZH	**Guangzhou**	**42.57 309**	P	**P**	**10 06 42.0**	**-2.2**
GZH			S	**S**	**10 13 02.8**	**-1.3**
GZH			LR	LR		
	comp=N,1μm,15.9s					
GZH			LR	LR		
	comp=E,3μm,21.1s					
GZH			LR	LR		
	comp=Z,5μm,20.6s,MS5.4					
QIZ	**Qiongzhong**	**43.43 302**	P	**P**	**10 06 50.1**	**-1.1**
QIZ			PP	PP	10 08 34.3	+1.5
QIZ			S	**S**	**10 13 21.1**	**+4.2**
QIZ			sS	sS	10 13 28.4	-8.0
QIZ			SS	SS	10 16 28.0	-4.2
QIZ			pmax	pmax		
	comp=Z,70nm,1.4s,mb5.2					
QIZ			pmax	pmax		
	comp=Z,410nm,10.2s					
QIZ			LR	LR		
	comp=N,1μm,21.1s,MS4.8					
QIZ			LR	LR		
	comp=E,1μm,22.9s,MS4.8					
QIZ			LR	LR		
	comp=Z,4μm,22.6s,MS5.3					
QIZ	**Qiongzhong**	**43.43 302**	*e*P	**P**	**10 06 51.0**	**-0.2**
	comp=Z,126nm,1.4s,mb5.5					
QIZ			LR	LR		
	comp=Z,4μm,22.0s,MS5.3					
KASI	**Kota Agung**	**43.47 265**	P	**P**	**10 06 51.3**	**-0.3**
	comp=Z,161nm,1.1s,mb5.7					
MDSI	**Maura Dua**	**43.77 267**	P	**P**	**10 06 53.7**	**-0.3**
	comp=Z,1μmcomp=Z,132nm,1.1s,mb5.6					
LWLI	**Liwa**	**43.89 266**	P	**P**	**10 06 56.1**	**+1.1**
URZ	**Urewera**	**44.07 147**	LR	LR	10 22 20.5	
	comp=Z,5μm,21.6s,MS5.4,baz=322,slow=32					
KS15	**Wonju Array Si**	**44.32 337**	*e*P	**P**	**10 06 57.0**	**-1.1**
MYKOM	**Kota Tinggi**	**44.40 276**	P	**P**	**10 07 00.7**	**+1.6**
NJ2	**Nanjing**	**44.47 324**	*e*P	**P**	**10 06 59.9**	**+0.6**
NJ2			pP	pP	10 07 03.6	-7.5
NJ2			sP	sP	10 07 05.9	-10
NJ2			PP	PP	10 08 44.5	+0.8
NJ2			S	**S**	**10 13 35.5**	**+3.8**
NJ2			sS	sS	10 13 43.5	-7.8
NJ2			pmax	pmax		
	comp=Z,40nm,1.0s,mb5.1					
NJ2			pmax	pmax		
	comp=Z,270nm,5.1s					
NJ2			LR	LR		
	comp=N,2μm,14.3s,MS5.3					
NJ2			LR	LR		
	comp=E,2μm,14.6s,MS5.3					
NJ2			LR	LR		
	comp=Z,2μm,13.9s,MS5.3					
INCN	**Inchon**	**44.85 336**	*e*P	**P**	**10 07 03.4**	**+1.0**
	comp=Z,170nm,1.8s,mb5.6					
INCN			LR	LR		
	comp=Z,2μm,22.0s,MS5.0					
ERM	**Erimo**	**44.96 355**	PFAKE		10 07 10.0	+6.9
ERM			LR	LR		
	comp=Z,3μm,20.0s,MS5.2					
SNZO	**South Karori**	**45.11 151**	PFAKE		10 07 20.0	+16
SNZO			LR	LR		
	comp=Z,5μm,19.0s,MS5.4					
RPZ	**Rata Peaks**	**45.45 157**	P	**P**	**10 07 07.0**	**0.0**
	comp=Z,56nm,1.1s,mb5.3,baz=33,slow=8.9,SNR=3.8					
RPZ			LR	LR	10 24 10.1	
	comp=Z,3μm,19.6s,MS5.3,baz=329,slow=33					
MIDW	**Midway**	**45.47 45**	PFAKE		10 07 20.0	+13
MIDW			LR	LR		
	comp=Z,2μm,20.0s,MS5.1					
KTGM	**Kuala Trenggan**	**45.58 280**	P	**P**	**10 07 09.6**	**+1.1**
JOHN	**Johnston Islan**	**46.26 64**	PFAKE		10 07 30.0	+16
JOHN			LR	LR		
	comp=Z,4μm,22.0s,MS5.3					
WHN	**Wuhan**	**46.26 319**	P	**P**	**10 07 14.0**	**+0.4**
WHN			S	**S**	**10 13 56.5**	**-1.2**
WHN			LR	LR		
	comp=N,3μm,13.0s,MS5.7					
WHN			LR	LR		
	comp=E,6μm,17.8s,MS5.7					
WHN			LR	LR		
	comp=Z,9μm,20.6s,MS5.7					
FRIM	**Kepong**	**46.77 277**	P	**P**	**10 07 19.3**	**+1.4**
YUK	**Yuzh-Kuril'sk**	**46.80 358**	⇓*i*P	**P**	**10 07 14.7**	**-2.9**
YUK			*i* S	**S**	**10 14 09.8**	**+4.9**
YUK			pmax	pmax		
	comp=N,290nm,1.1s					
YUK			pmax	pmax		
	comp=E,130nm,1.1s					
YUK			pmax	pmax		
	comp=Z,220nm,1.1s,mb6.0					
YUK			smax			
	comp=N,400nm,1.4s					
YUK			smax			
	comp=E,220nm,1.4s					
YUK			MLR	MLR		
	comp=N,700nm,22.0s,MS4.8					
YUK			MLR	MLR		
	comp=E,800nm,22.0s,MS4.8					
YUK			MLR	MLR		
	comp=Z,700nm,22.0s,MS4.6					
IPM	**Ipoh**	**47.53 279**	P	**P**	**10 07 24.5**	**+0.7**
KULM	**Kulim**	**48.01 280**	P	**P**	**10 07 28.7**	**+1.1**
KULM	**Kulim**	**48.01 280**	*e*P	**P**	**10 07 26.4**	**-1.1**
	comp=Z,62nm,1.5s,mb5.4					
DL2	**Dalian**	**48.23 332**	P	**P**	**10 07 26.9**	**-1.9**
DL2			pmax	pmax		
	comp=Z,30nm,1.3s,mb5.2					
DL2			pmax	pmax		
	comp=Z,240nm,8.5s					
DL2			LR	LR		
	comp=N,1μm,20.6s,MS4.9					
DL2			LR	LR		
	comp=E,570nm,21.8s,MS4.9					
DL2			LR	LR		
	comp=Z,2μm,20.2s,MS5.0					
SNG	**Songkhla**	**48.36 282**	P	**P**	**10 07 31.0**	**+0.8**
TIA	**Tai'an**	**48.46 326**	*e*P	**P**	**10 07 29.7**	**-0.9**
TIA			S	**S**	**10 14 35.0**	**+6.2**
TIA			LR	LR		
	comp=N,700nm,12.0s,MS5.1					
TIA			LR	LR		
	comp=E,1μm,13.0s,MS5.1					
PSI	**Prapat**	**49.40 276**	P	**P**	**10 07 35.7**	**-2.5**
	comp=E,5.1nm,0.6s,mb4.8,baz=87,slow=10.0,SNR=3.1					
PSI	**Prapat**	**49.40 276**	P	**P**	**10 07 35.7**	**-2.6**
ENH	**Enshi**	**49.43 315**	*e*P	**P**	**10 07 38.8**	**+0.6**
	comp=E,26nm,1.0s,mb5.2					
ENH			LR	LR		
	comp=Z,2μm,20.0s,MS5.1					
GYA	**Guiyang**	**49.50 309**	⇓*i*P	**P**	**10 07 39.6**	**+0.9**
GYA			S	**S**	**10 14 45.8**	**+2.2**
GYA			SS	SS	10 18 13.2	-3.0
GYA			pmax	pmax		
	comp=Z,30nm,1.0s,mb5.3					
GYA			pmax	pmax		
	comp=Z,160nm,5.2s					
GYA			LR	LR		
	comp=N,2μm,17.3s,MS5.2					
GYA			LR	LR		
	comp=E,1μm,18.0s,MS5.2					
GYA			LR	LR		
	comp=Z,1μm,16.6s,MS5.0					
SNY	**Shenyang**	**49.78 336**	⇑P	**P**	**10 07 38.8**	**-1.8**
SNY			S	**S**	**10 14 43.5**	**-3.6**
SNY			pmax	pmax		
	comp=Z,26nm,1.9s,mb4.9					
SNY			pmax	pmax		
	comp=Z,480nm,7.5s					
SNY			LR	LR		
	comp=N,980nm,14.6s,MS5.0					
SNY			LR	LR		
	comp=E,700nm,17.2s,MS5.0					
SNY			LR	LR		
	comp=Z,1μm,16.3s,MS5.1					
YSS	**Yuzh-Sakhalins**	**49.90 355**	⇑*e*P	**P**	**10 07 40.2**	**-1.2**
YSS			*e*		10 09 07.0	
YSS			*e*		10 17 30.0	
YSS			pmax	pmax		
	comp=Z,50nm,1.0s,mb5.5					
YSS	**Yuzh-Sakhalins**	**49.90 355**	*e*P	**P**	**10 07 41.1**	**-0.3**
	comp=Z,42nm,1.1s,mb5.4					
YSS			LR	LR		
	comp=Z,334nm,20.0s,MS4.3					
MDJ	**Mudanjiang**	**50.13 343**	P	**P**	**10 07 39.2**	**-4.0**
MDJ			PP	PP	10 09 33.0	-5.8
MDJ			S	**S**	**10 14 49.2**	**-2.7**
MDJ			ScS	ScS	10 17 28.5	-2.5
MDJ			SS	SS	10 18 19.1	-6.7
MDJ			pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.7					
MDJ			pmax	pmax		
	comp=Z,350nm,9.3s					
MDJ			LR	LR		
	comp=N,2μm,26.8s,MS5.1					
MDJ			LR	LR		
	comp=E,1μm,22.5s,MS5.1					
MDJ			LR	LR		
	comp=Z,3μm,31.2s					
MDJ	**Mudanjiang**	**50.13 343**	*e*P	**P**	**10 07 43.8**	**+0.6**
MDJ			LR	LR		
	comp=Z,2μm,19.0s,MS5.1					
CN2	**Changchun**	**50.76 339**	*e*P	**P**	**10 07 50.6**	**+2.6**
CN2			*e*pP	pP	10 07 55.3	-4.6
CN2			*e*S	**S**	**10 15 01.1**	**+0.5**
CN2			SS	SS	10 18 26.2	-10
CN2			pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0					
CN2			pmax	pmax		
	comp=Z,200nm,4.0s					
CN2			LR	LR		
	comp=N,1μm,18.0s,MS5.1					
CN2			LR	LR		
	comp=E,1μm,18.0s,MS5.1					
NST	**Nakhon Sawan**	**50.84 293**	P	**P**	**10 07 46.7**	**-2.3**
	comp=E,54nm,0.7s,mb5.6					
BJT	**Baijiatuau**	**51.77 329**	PFAKE		10 08 10.0	+14
BJT			LR	LR		
	comp=Z,2μm,21.0s,MS5.1					
BJI	**Beijing**	**51.78 329**	P	**P**	**10 07 55.2**	**-0.5**
BJI			PP	PP	10 09 54.9	+1.1
BJI			S	**S**	**10 15 18.7**	**+3.8**
BJI			pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7					
BJI			pmax	pmax		
	comp=Z,410nm,8.0s					
BJI			LR	LR		
	comp=N,2μm,26.2s,MS5.2					
BJI			LR	LR		
	comp=E,1μm,23.7s,MS5.2					
BJI			LR	LR		
	comp=Z,3μm,30.5s					
KMI	**Kunming**	**52.01 305**	P	**P**	**10 07 59.0**	**+1.3**
KMI			PcP	PcP	10 09 11.2	+1.5
KMI			PP	PP	10 09 58.4	+2.2
KMI			PcS	PcS	10 13 07.7	-0.3
KMI			S	**S**	**10 15 21.5**	**+3.0**
KMI			SS	SS	10 18 57.1	+0.9
KMI			pmax	pmax		
	comp=Z,52nm,1.6s,mb5.2					
KMI			pmax	pmax		
	comp=Z,380nm,5.2s					
KMI			LR	LR		
	comp=N,1μm,18.9s,MS5.1					
KMI			LR	LR		
	comp=E,1μm,19.8s,MS5.1					
KMI			LR	LR		
	comp=Z,2μm,25.5s					
XAN	**Xi'an**	**52.03 318**	P	**P**	**10 07 55.9**	**-1.8**
XAN			pP	pP	10 08 06.3	-3.4
XAN			sP	sP	10 08 09.4	-5.2
XAN			PP	PP	10 09 57.5	+1.3
XAN			S	**S**	**10 15 20.9**	**+2.4**
XAN			pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8					
XAN			pmax	pmax		
	comp=Z,120nm,8.8s					
XAN			LR	LR		
	comp=N,1μm,18.7s,MS5.1					
XAN			LR	LR		
	comp=E,550nm,15.4s,MS5.1					
XAN			LR	LR		
	comp=Z,880nm,18.7s,MS4.8					
HABR	**Khabarovsk**	**52.44 349**	P	**P**	**10 07 57.4**	**-3.0**
HABR			*e**PP	pP	10 08 07.1	-5.3
HABR			*e*S	**S**	**10 15 21.3**	**-2.3**
HABR			*SS	sS	10 15 37.5	-6.1
HABR			*e*		10 17 44.4	
HABR			*e*SS	SS	10 19 00.3	-1.9
HABR			pmax	pmax		
	comp=E,25nm,1.1s					
HABR			pmax	pmax		
	comp=Z,34nm,1.0s,mb5.2					
HABR			pmax	pmax		
	comp=N,33nm,1.9s					
HABR			MLR	MLR		
	comp=Z,830nm,17.0s,MS4.8					
CHRT	**Chiangrai**	**52.49 298**	⇓P	**P**	**10 08 02.0**	**+0.7**
	comp=Z,158nm,1.2s,mb5.8					
CHRT	**Chiangrai**	**52.49 298**	⇑P	**P**	**10 08 04.4**	**+3.1**
	comp=Z,440nm,1.3s,mb6.2					
CM31	**Chiang Mai Arr**	**52.77 296**	P	**P**	**10 08 05.9**	**+2.5**
CM31			LR	LR		
	comp=Z,1μm,21.0s,MS4.9					
CMAR	**Chiang Mai Arr**	**52.77 296**	P	**P**	**10 08 01.2**	**-2.2**
	comp=Z,27nm,1.1s,mb5.1,baz=118,slow=5.6,SNR=30					
CMAR			LR	LR	10 31 13.2	
	comp=Z,987nm,18.1s,MS4.9,baz=282,slow=37					
CHTO	**Chiang Mai**	**52.88 296**	*e*P	**P**	**10 08 03.4**	**-0.9**
CHTO			pmax	pmax		
	comp=Z,44nm,1.2s,mb5.3					
CHTO			MLR	MLR		
	comp=Z,1μm,20.0s,MS5.0					
CHTO	**Chiang Mai**	**52.88 296**	*e*P	**P**	**10 08 03.4**	**-0.9**
	comp=Z,44nm,1.2s,mb5.3					
CHTO			LR	LR		
	comp=Z,1μm,20.0s,MS5.0					
CHTO	**Chiang Mai**	**52.88 296**	P	**P**	**10 08 06.0**	**+1.7**
	SNR=14					
KLR	**Kul'dur**	**53.84 347**	*e*P	**P**	**10 08 06.0**	**-4.8**
KLR			*e*S	**S**	**10 15 42.0**	**-0.7**
KLR			*e*SS	SS	10 19 19.5	-4.8
KLR			smax			
	comp=N,1μm,18.0s					
KLR			smax			
	comp=E,600nm,18.0s					
KLR			MLR	MLR		
	comp=N,1μm,13.0s,MS5.2					
KLR			MLR	MLR		
	comp=E,700nm,13.0s,MS5.2					
KLR			MLR	MLR		
	comp=Z,1μm,13.0s,MS5.2					
RAR	**Rarotonga**	**53.89 114**	LR	LR	10 27 52.8	
	comp=Z,556nm,20.7s,MS4.6,baz=276,slow=32					
CD2	**Chengdu**	**53.93 312**	P	**P**	**10 08 12.2**	**+0.4**
CD2			pP	pP	10 08 16.8	-7.0
CD2			PP	PP	10 10 15.5	+2.0
CD2			S	**S**	**10 15 45.6**	**+1.1**
CD2			SS	SS	10 19 25.2	-1.2
CD2			pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2					
CD2			pmax	pmax		
	comp=Z,580nm,4.1s					
CD2			LR	LR		
	comp=N,3μm,18.4s					
CD2			LR	LR		
	comp=Z,3μm,22.0s,MS5.4					
XMAS	**Kiritimati**	**54.75 85**	PFAKE		10 08 30.0	+12
XMAS			LR	LR		
	comp=Z,2μm,20.0s,MS5.2					
HHC	**Hu-ho-hao-te**	**54.82 327**	*e*P	**P**	**10 08 17.0**	**-1.0**
HHC			PcP	PcP	10 09 19.4	-0.6
HHC			PP	PP	10 10 21.0	-0.2
HHC			ScP	ScP	10 13 15.6	+0.3
HHC			PcS	PcS	10 13 17.2	-2.4
HHC			S	**S**	**10 15 55.4**	**-0.7**
HHC			ScS	ScS	10 18 02.7	-1.2
HHC			SS	SS	10 19 38.6	-1.4
HHC			pmax	pmax		
	comp=Z,13nm,0.7s,mb5.1					
HHC			pmax	pmax		
	comp=Z,440nm,6.3s					
HHC			LR	LR		
	comp=N,2μm,16.4s,MS5.4					
HHC			LR	LR		
	comp=E,2μm,16.6s,MS5.4					
HHC			LR	LR		
	comp=Z,3μm,16.6s,MS5.5					
BTO	**Baotou**	**55.52 325**	*e*P	**P**	**10 08 21.7**	**-1.4**
PET	**Petropavlovsk**	**56.48 8**	*e*P	**P**	**10 08 28.9**	**-0.8**
PET			*i* S	**S**	**10 16 17.7**	**-0.1**
PET			pmax	pmax		
	comp=Z,200nm,16.1s					
PET			pmax	pmax		
	comp=Z,34nm,1.1s,mb5.3					
PET			MLR	MLR		
	comp=Z,1μm,16.0s,MS5.0					
PET			MLR	MLR		
	comp=Z,1μm,20.0s					
PET	**Petropavlovsk**	**56.48 8**	*e*P	**P**	**10 08 30.2**	**+0.5**
	comp=Z,35nm,1.1s,mb5.3					
PET			LR	LR		
	comp=Z,968nm,20.0s,MS4.9					
LZH	**Lanzhou**	**56.61 317**	⇑P	**P**	**10 08 30.6**	**-0.4**
LZH			PP	PP	10 10 38.0	+0.7
LZH			S	**S**	**10 16 20.5**	**+0.3**
LZH			SS	SS	10 20 09.0	+0.6
LZH			pmax	pmax		
	comp=Z,42nm,1.1s,mb5.4					
LZH			pmax	pmax		
	comp=Z,500nm,8.0s					
LZH			LR	LR		
	comp=N,1μm,16.0s					
LZH			LR	LR		
	comp=Z,2μm,17.2s,MS5.3					
HIA	**Hailar**	**57.48 338**	*e*P	**P**	**10 08 36.3**	**-0.5**
HIA			pmax	pmax		
	comp=Z,9.0nm,0.6s					
HIA			MLR	MLR		
	comp=Z,1μm,20.0s					
HIA	**Hailar**	**57.48 338**	*e*P	**P**	**10 08 36.3**	**-0.5**
	comp=Z,9.0nm,0.6s,mb5.0					
HIA			LR	LR		
	comp=Z,1μm,20.0s,MS5.1					
KIP	**Kipapa**	**58.08 63**	PFAKE		10 09 00.0	+18
KIP			LR	LR		
	comp=Z,2μm,19.0s,MS5.2					
POHA	**Pohakuloa**	**59.82 65**	PFAKE		10 09 10.0	+16
POHA			LR	LR		
	comp=Z,4μm,19.0s,MS5.5					
GTA	**Gaotai**	**61.09 319**	*e*P	**P**	**10 09 01.0**	**-1.0**
GTA			PP	PP	10 11 18.5	+1.5
GTA			S	**S**	**10 17 22.5**	**+4.3**
GTA			sS	sS	10 17 32.4	-6.2
GTA			pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.7					
GTA			pmax	pmax		
	comp=Z,380nm,7.4s					
GTA			LR	LR		
	comp=N,980nm,20.2s,MS5.2					
GTA			LR	LR		
	comp=E,1μm,19.0s,MS5.2					
GTA			LR	LR		
	comp=Z,1μm,24.1s					
SHL	**Shillong**	**61.26 301**	*e*PKP	**P**	**10 09 03.0**	**-0.5**
ULN	**Ulaanbaatar**	**61.96 330**	*e*P	**P**	**10 09 07.2**	**-0.5**
ULN			pmax	pmax		
	comp=Z,17nm,0.9s,mb5.2					
ULN			MLR	MLR		
	comp=Z,2μm,19.0s,MS5.2					
ULN	**Ulaanbaatar**	**61.96 330**	*e*P	**P**	**10 09 07.2**	**-0.5**
	comp=Z,17nm,0.9s,mb5.2					
ULN			LR	LR		
	comp=Z,2μm,19.0s,MS5.2					

ULN Ulaanbaatar 61.96 330 P **P** **10 09 07.3 -0.4**
SNR=18
CIT Chita 62.05 337 *e*P **P** **10 09 04.4 -3.8**
CIT pmax pmax
comp=Z,96nm,2.2s,mb5.5
SONM Songino Array 62.27 330 P **P** **10 09 08.8 -0.9**
comp=Z,14nm,0.8s,mb5.1,baz=141,slow=6.7,SNR=41
SONM LR LR 10 36 26.7
comp=Z,3μm,18.3s,MS5.4,baz=132,slow=36
SONM PKP2bc 10 38 24.3
comp=Z,2.4nm,1.2s,baz=251,slow=2.3,SNR=6.7
SONM Songino Array 62.27 330 P **P** **10 09 08.8 -0.9**
SONM LR LR 10 36 26.7
SONM ⇑*e* 10 38 24.3
CLNS Chul'man 62.47 346 *e*P **P** **10 09 10.5 -0.4**
CLNS *e**PP pP 10 09 16.2 -7.0
CLNS *e* 10 09 46.4
CLNS *e* 10 11 25.0
CLNS *e*PPP 10 12 54.1
CLNS *e*S **S** **10 17 36.7 +1.7**
CLNS *e* 10 18 49.2
CLNS pmax pmax
comp=Z,49nm,1.1s,mb5.5
CLNS pmax pmax
comp=N,21nm,1.1s
CLNS pmax pmax
comp=E,11nm,0.9s
CLNS pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
CLNS pmax pmax
comp=N,4.0nm,0.9s
CLNS pmax pmax
comp=E,4.0nm,1.3s
CLNS smax
comp=N,215nm,11.3s
CLNS smax
comp=E,547nm,12.8s
CLNS MLR MLR
comp=E,477nm,13.0s,MS4.9
CLNS MLR MLR
comp=N,299nm,14.0s,MS4.9
PPT Papeete 62.84 108 *e*S **S** **10 17 37.6 -3.4**
comp=N,718nm,23.8s
PPT *e*S **S** **10 17 38.8 -2.2**
comp=N,2μm,26.2s
PPT *e*LQ 10 25 04.0
comp=N,7μm,32.5s
PPT *e*LR LR 10 28 04.0
comp=N,2μm,25.2s
PPT Papeete 62.84 108 LR LR 10 30 12.0
comp=N,505nm,19.8s,MS4.7,baz=276,slow=30
LSA Lhasa 63.27 305 *e*P **P** **10 09 17.9 +1.1**
LSA pmax pmax
comp=Z,34nm,1.2s,mb5.3
LSA MLR MLR
comp=Z,986nm,20.0s,MS5.0
LSA Lhasa 63.27 305 *e*P **P** **10 09 17.9 +1.1**
comp=Z,34nm,1.2s,mb5.3
LSA LR LR
comp=Z,986nm,20.0s,MS5.0
TBI Tubuai 63.67 115 *e*S **S** **10 17 49.7 -1.6**
comp=Z,808nm,28.8s
TBI *e*LQ 10 25 33.8
comp=Z,4μm,39.0s
TBI *e*LR LR 10 28 02.2
comp=Z,2μm,29.2s
DRV Dumont d'Urvil 63.85 184 L 10 25 00.0
DRV R 10 30 00.0
TAPN Taplejung 65.37 302 *e*P **P** **10 09 31.4 +0.8**
comp=Z,177nm,1.3s,mb5.9
ODAN Odare 65.50 301 *e*P **P** **10 09 32.1 +0.6**
comp=Z,21nm,0.3s,mb5.6
SEY Seymchan 65.78 2 *c*eP **P** **10 09 30.6 -1.9**
SEY Seymchan 65.78 2⇑*e*P **P** **10 09 30.7 -1.9**
BOK Bokaro 65.97 298 *e*PKP **P** **10 09 33.0 -1.5**
BOK AMb AMB 10 09 38.6
comp=Z,51nm,1.2s,mb5.4
TLY Talaya 66.14 332 *d i*P **P** **10 09 31.1 -3.9**
TLY *e* 10 10 04.1
TLY *e*PPP 10 13 36.0
TLY *e*S S 10 18 25.4 +4.9
TLY *e*PS 10 18 45.2
TLY *e*SS SS 10 22 30.5 -6.5
TLY pmax pmax
comp=Z,30nm,1.4s,mb5.1
TLY Talaya 66.14 332 *e*P **P** **10 09 35.2 +0.2**
comp=Z,31nm,1.3s,mb5.2
TLY LR LR
comp=Z,2μm,22.0s,MS5.3
TLY Talaya 66.14 332 P **P** **10 09 34.4 -0.6**
SNR=21
RAMN Ramite 66.20 301 *e*P **P** **10 09 36.5 +0.5**
comp=Z,153nm,1.5s,mb5.8
IRK Irkutsk 66.21 332 *e*P **P** **10 09 33.8 -1.7**
IRK pmax pmax
comp=Z,42nm,1.0s,mb5.4
YAK Yakutsk 66.30 351 *e*P **P** **10 09 35.5 -0.4**
YAK *e* 10 12 05.3
YAK *e*S S 10 18 23.4 +1.3
YAK pmax pmax
comp=Z,52nm,1.5s,mb5.3
YAK pmax pmax
comp=N,32nm,1.3s
YAK pmax pmax
comp=E,40nm,1.3s
YAK smax
comp=N,500nm,6.5s
YAK MLR MLR
comp=Z,629nm,17.8s,MS4.9
YAK Yakutsk 66.30 351 *e*P **P** **10 09 37.1 +1.3**
comp=Z,35nm,0.8s,mb5.4
YAK LR LR
comp=Z,1μm,19.0s,MS5.2
JIRN Jiri 66.75 302 *e*P **P** **10 09 40.1 +0.6**
comp=Z,286nm,1.8s,mb6.0
GUN Gumba 67.09 302 *e*P **P** **10 09 42.2 +0.6**
comp=Z,470nm,1.6s,mb6.3
PKI Pulchoki 67.39 301 *e*P **P** **10 09 43.6 0.0**
comp=Z,320nm,1.8s,mb6.1
PKIN Phulchoki 67.40 301 *e*P **P** **10 09 43.6 0.0**
comp=Z,48nm,0.6s,mb5.7
MOY Mondy 67.41 330 *e*P **P** **10 09 42.9 -0.3**
MOY pmax pmax
comp=Z,94nm,2.2s,mb5.4
KKN Kakani 67.56 302 *e*P **P** **10 09 44.7 +0.1**
comp=Z,115nm,1.3s,mb5.8
DMN Daman 67.66 301 *e*P **P** **10 09 45.7 +0.4**
comp=Z,252nm,1.4s,mb6.0
PALK Pallekele 67.93 279 *e*P **P** **10 09 49.0 +1.8**
PALK pmax pmax
comp=Z,22nm,1.0s,mb5.1
PALK Pallekele 67.93 279 *e*P **P** **10 09 49.0 +1.8**
comp=Z,22nm,1.0s,mb5.2
UNV Unalaska Valle 68.05 27 *e*P **P** **10 09 47.9 +0.7**
comp=Z,19nm,0.8s,mb5.2
GKN Gorkha 68.17 302 *e*P **P** **10 09 48.4 -0.1**
comp=Z,249nm,1.6s,mb6.0
CASY Casey 68.45 195 *e*P **P** **10 09 49.2 -0.3**
comp=Z,5.0nm,0.8s,mb4.6
CASY LR LR
comp=Z,2μm,20.0s,MS5.3
AKUT Akutan 68.57 27 *e*P **P** **10 09 51.3 +0.9**
comp=Z,80nm,1.3s,mb5.5
WMQ Urumqi 71.17 318 P **P** **10 10 07.1 +0.5**
WMQ pP pP 10 10 11.8 -7.3
WMQ PcP PcP 10 10 27.6 +1.1
WMQ PP PP 10 12 46.7 +1.8
WMQ S S 10 19 21.3 +0.7
WMQ ScS ScS 10 20 07.0 -0.8
WMQ SS SS 10 23 56.3 +1.2
WMQ pmax pmax
comp=Z,78nm,1.2s,mb5.5
WMQ pmax pmax
comp=Z,360nm,4.3s
WMQ LR LR
comp=N,1μm,24.6s,MS5.2
WMQ LR LR
comp=E,790nm,24.0s,MS5.2
WMQ LR LR
comp=Z,950nm,23.0s,MS5.0
HYB Hyderabad 71.38 289 *e*P **P** **10 10 08.5 +0.1**
HYB Hyderabad 71.38 289 *i* P **P** **10 10 08.5 +0.1**
HYB *e*S S 10 19 28.0 +4.1
NGP Nagpur 71.56 293 *e*PKP **P** **10 10 08.7 -0.8**
SDPT Sand Point 71.75 28 *e*P **P** **10 10 10.3 +0.4**
comp=Z,38nm,1.0s,mb5.3
BILL Bilibino 71.97 7⇓*e*P **P** **10 10 09.5 -1.4**
BILL *e* 10 12 51.6
BILL *i* S S 10 19 23.9 -5.0
BILL pmax pmax
comp=Z,19nm,1.0s,mb5.0
BILL Biiibino 71.97 7 *e*P **P** **10 10 10.3 -0.6**
BILL LR LR
comp=Z,920nm,20.0s,MS5.0
CHGN Chignik 73.25 28 *e*P **P** **10 10 19.2 +0.5**
AKL Akola 73.35 292 *e*PKP **P** **10 10 18.9 -1.2**
BHPL Bhopal 73.42 295 *e*PKP **P** **10 10 19.4 -1.1**
BHPL AMb AMB 10 10 23.5
comp=Z,46nm,1.1s,mb5.3
MIR Mirnyy 73.98 200 *e*P **P** **10 10 23.0 +0.1**
MIR pmax pmax
comp=Z,90nm,2.0s,mb5.3
MIR MLR MLR
comp=N,1μm,18.0s,MS5.3
MIR MLR MLR
comp=E,1μm,18.0s,MS5.3
MIR MLR MLR
comp=Z,2μm,18.0s,MS5.3
DGAR Diego Garcia 75.31 263 PFAKE 10 10 40.0 +8.3
DGAR LR LR
comp=Z,1μm,22.0s,MS5.2
KAD Karad 75.49 289 *e*PKP **P** **10 10 32.0 -0.6**
TIXI Tiksi 75.50 354 *e*P **P** **10 10 32.3 +0.8**
TIXI *e*S S 10 20 08.5 -0.1
TIXI pmax pmax
comp=Z,20nm,1.1s,mb5.0
TIXI Tiksi 75.50 354 *e*P **P** **10 10 32.3 +0.7**
comp=Z,13nm,0.9s,mb4.8
TIXI LR LR
comp=Z,902nm,19.0s,MS5.1
SBA Scott Base 75.51 176 *e*P **P** **10 10 32.0 +0.4**
SBA pmax pmax
comp=Z,31nm,1.5s,mb5.0
SBA MLR MLR
comp=Z,1μm,19.0s,MS5.3
SBA Scott Base 75.51 176 *e*P **P** **10 10 32.0 +0.4**
comp=Z,31nm,1.5s,mb5.0
SBA LR LR
comp=Z,1μm,19.0s,MS5.3
MK31 Makanchi Array 75.81 320 *i* P **P** **10 10 32.8 -1.1**
MK31 pmax pmax
comp=Z,20nm,1.1s,mb5.0
MK31 Makanchi Array 75.81 320 *e*P **P** **10 10 32.8 -1.1**
MKAR Makanchi Array 75.81 320 P **P** **10 10 32.4 -1.5**
comp=Z,12nm,1.0s,mb4.8,baz=101,slow=6.3,SNR=41
MKAR PP PP 10 13 23.0 -1.4
comp=Z,5.1nm,1.1s,baz=107,slow=6.5,SNR=5.1
MKAR LR LR 10 44 37.9
comp=Z,2μm,18.5s,MS5.4,baz=103,slow=36
MKAR Makanchi Array 75.81 320 *c*eP **P** **10 10 32.7 -1.2**
MKAR pmax pmax
comp=Z,12nm,1.0s
POO Poona 75.97 290 *e*PKP **P** **10 10 35.7 +0.3**
POO AMb AMB 10 10 40.6
comp=Z,79nm,1.4s,mb5.4
OHAK Old Harbor 76.15 29 *e*P **P** **10 10 36.2 +0.7**
comp=Z,34nm,1.2s,mb5.2
AJM Ajmer 76.49 298 *e*PKP **P** **10 10 37.0 -1.2**
AJM AMb AMB 10 10 42.0
comp=Z,75nm,1.3s,mb5.5
KDAK Kodiak Island 76.75 28 P **P** **10 10 39.5 +0.6**
comp=Z,17nm,1.0s,mb4.9,baz=178,slow=2.2,SNR=6.7
KDAK Kodiak Island 76.75 28 *e*P **P** **10 10 39.3 +0.4**
KDAK pmax pmax
comp=Z,20nm,1.1s,mb5.0
KDAK MLR MLR
comp=Z,1μm,19.0s,MS5.2
KDAK Kodiak Island 76.75 28 *e*P **P** **10 10 39.3 +0.4**
comp=Z,20nm,1.1s,mb5.0
KDAK LR LR
comp=Z,1μm,19.0s,MS5.2
RKT Rikitea 76.91 113 *e*S S 10 20 21.5 -4.4
comp=Z,285nm,26.2s
RKT *e*LQ 10 31 18.3
comp=Z,3μm,34.8s
RKT *e*LR LR 10 34 01.7
comp=Z,1μm,26.0s
ZALV Zalesovo Beam 76.99 327 P **P** **10 10 38.5 -1.9**
comp=Z,20nm,1.2s,mb4.9,baz=103,slow=4.7,SNR=20
ZALV PKPPKP 10 37 55.0
comp=Z,0.7nm,0.4s,baz=266,slow=4.0,SNR=4.1
ZALV LR LR 10 44 43.5
comp=Z,1μm,18.6s,MS5.2,baz=107,slow=36
ZALV Zalesovo Beam 76.99 327 P **P** **10 10 38.5 -1.9**
ZALV P'P' 10 37 55.0
ZALV LR LR 10 44 43.5
SVW2 Sparrevohn 77.06 25 *e*P **P** **10 10 42.0 +1.4**
comp=Z,45nm,1.7s,mb5.1
TTA Tatalina 77.86 23 *e*P **P** **10 10 47.1 +2.1**
RSO Redoubt South 77.94 26 *e*P **P** **10 10 46.5 +1.0**
KSH Kashi 78.12 311 *e*P **P** **10 10 48.8 +1.8**
KSH pP pP 10 10 53.6 -6.0
KSH PcP PcP 10 10 58.5 +2.0
KSH PP PP 10 13 47.7 +3.7
KSH S S 10 20 41.9 +3.5
KSH SKS 10 20 57.8
KSH ScS ScS 10 21 04.2 +0.4
KSH SS SS 10 25 46.3 +5.4
KSH pmax pmax
comp=Z,29nm,1.3s,mb5.0
KSH pmax pmax
comp=Z,230nm,3.5s
KSH LR LR
comp=N,450nm,11.3s,MS5.3
KSH LR LR
comp=E,750nm,14.8s,MS5.3
KSH LR LR
comp=Z,1μm,21.6s
NVS Novosibirsk 78.20 328⇑*i*P **P** **10 10 44.9 -2.2**
NVS pmax pmax
comp=N,63nm,2.2s
NVS pmax pmax
comp=E,85nm,2.2s
NVS pmax pmax
comp=Z,130nm,2.2s,mb5.5
NIL Nilore 79.00 305 PFAKE 10 11 00.0 +8.0
NIL LR LR
comp=Z,90nm,20.0s,MS4.1
TKM2 Tokmak 2 79.22 315 P **P** **10 10 50.3 -2.7**
SNR=12
TKM2 Tokmak 2 79.22 315 *e*P **P** **10 10 53.0 0.0**
TKM2 pmax pmax
comp=Z,17nm,1.2s,mb4.8
TKM2 MLR MLR
comp=Z,1μm,20.0s,MS5.2
TKM2 Tokmak 2 79.22 315 *e*P **P** **10 10 53.0 -0.1**
comp=Z,17nm,1.2s,mb4.8
TKM2 LR LR
comp=Z,1μm,20.0s,MS5.2
KZA Kyzart 79.27 314 P **P** **10 10 53.3 +0.1**
SNR=37
PPLA Purkeypile 79.35 24 *e*P **P** **10 10 54.4 +1.1**
comp=Z,117nm,1.9s,mb5.5
KURK Kurchatov 79.39 323 LR LR 10 45 33.2
comp=Z,1μm,20.1s,MS5.2,baz=70,slow=35
KURK Kurchatov 79.39 323 *c*eP **P** **10 10 51.6 -2.1**
KURK pmax pmax
comp=Z,46nm,1.2s,mb5.3
KURK Kurchatov 79.39 323 *e*P **P** **10 10 52.4 -1.3**
comp=Z,33nm,0.9s,mb5.3
KURK LR LR
comp=Z,1μm,20.0s,MS5.3
KURK Kurchatov 79.39 323 P **P** **10 10 51.8 -1.9**
SNR=25
RC01 Rabbit Creek A 79.55 26 *e*P **P** **10 10 56.1 +1.8**
comp=Z,40nm,1.1s,mb5.3
UCH Uchtor 79.83 314 P **P** **10 10 58.0 +1.6**
SNR=8.0
UCH Uchtor 79.83 314 *e*P **P** **10 10 57.0 +0.7**
comp=Z,19nm,1.2s,mb4.9
UCH LR LR
comp=Z,661nm,21.0s,MS5.0
CHMS Chumysh 79.84 314 P **P** **10 10 53.8 -2.6**
SNR=5.3
FRU Bishkek 79.90 314 *e*P **P** **10 10 58.0 +1.3**
FRU pmax pmax
comp=Z,80nm,2.1s,mb5.3
AAK Ala-Archa 79.94 314 LR LR 10 46 15.9
comp=Z,2μm,20.7s,MS5.4,baz=83,slow=36
AAK Ala-Archa 79.94 314 *e*P **P** **10 10 57.3 +0.4**
AAK pmax pmax
comp=Z,16nm,1.2s,mb4.8
AAK MLR MLR
comp=Z,2μm,21.0s,MS5.4
AAK Ala-Archa 79.94 314 *e*P **P** **10 10 57.3 +0.4**
comp=Z,16nm,1.2s,mb4.8
AAK LR LR
comp=Z,2μm,21.0s,MS5.4
PMR Palmer 80.03 26 *e*P **P** **10 10 57.1 +0.1**
USP Ospenovka 80.08 315 P **P** **10 10 58.1 +0.4**
SNR=15
BPAW Bear Paw Mtn. 80.40 23 *e*P **P** **10 10 59.4 +0.5**
comp=Z,23nm,1.2s,mb5.0
AML Almayashu 80.40 313 P **P** **10 10 59.7 +0.3**
SNR=29
AML Almayashu 80.40 313 *e*P **P** **10 10 59.6 +0.1**
comp=Z,44nm,1.2s,mb5.3
AML LR LR
comp=Z,972nm,22.0s,MS5.1
EKS2 Erkin-Say 80.46 314 P **P** **10 10 56.5 -3.2**
SNR=14
EKS2 Erkin-Say 80.46 314 *e*P **P** **10 10 59.7 -0.1**
comp=Z,23nm,1.2s,mb5.0
EKS2 LR LR
comp=Z,2μm,20.0s,MS5.3
BHJ Bhuj 80.48 294 *e*PKP **P** **10 10 59.5 -0.7**
MCK McKinley 81.04 24 *e*P **P** **10 11 02.6 +0.2**
MCK pmax pmax
comp=Z,56nm,1.1s,mb5.4
MCK McKinley 81.04 24 *e*P **P** **10 11 02.6 +0.3**
comp=Z,56nm,1.1s,mb5.4
DIV Divide 81.32 27 *e*P **P** **10 11 06.0 +2.1**
COLA College 81.96 23 *e*P **P** **10 11 07.7 +0.5**
COLA pmax pmax
comp=Z,13nm,1.0s,mb4.8
COLA MLR MLR
comp=Z,803nm,19.0s,MS5.1
COLA College 81.96 23 *e*P **P** **10 11 07.7 +0.5**
comp=Z,13nm,1.0s,mb4.8
COLA LR LR
comp=Z,803nm,19.0s,MS5.1
COLD Coldfoot 82.14 20 *e*P **P** **10 11 09.2 +1.2**
comp=Z,16nm,1.3s,mb4.8
KBL Kabul 82.59 305 *e*P **P** **10 11 10.3 -0.9**
KBL pmax pmax
comp=Z,22nm,1.3s,mb5.0
KBL Kabul 82.59 305 *e*P **P** **10 11 10.3 -0.9**
comp=Z,22nm,1.3s,mb5.0
MENT Mentasta 82.89 25 *e*P **P** **10 11 13.2 +1.2**
KK31 Karatay Array 82.90 314⇑*e*P **P** **10 11 11.3 -1.3**
PNL Peninsula 83.82 29 *e*P **P** **10 11 18.6 +1.7**
comp=Z,26nm,1.2s,mb5.2
VOSK Vostochnaya 84.50 323 P **P** **10 11 18.3 -2.3**
VOSK pmax pmax
comp=Z,39nm,1.2s,mb5.4
EGAK Eagle 84.58 24 *e*P **P** **10 11 20.6 0.0**
EGAK LR LR
comp=Z,1μm,21.0s,MS5.3
BVAR Borovoye Array 84.92 324 P **P** **10 11 21.0 -1.6**
comp=Z,17nm,0.9s,mb5.2,baz=116,slow=6.8,SNR=39
BRVK Borovoye 84.98 324 *c*eP **P** **10 11 22.1 -0.9**
BRVK pmax pmax
comp=Z,40nm,1.2s,mb5.4
BRVK Borovoye 84.98 324 *e*P **P** **10 11 21.6 -1.4**
comp=Z,44nm,1.4s,mb5.4
BRVK LR LR
comp=Z,1μm,19.0s,MS5.3
BRVK Borovoye 84.98 324 P **P** **10 11 24.0 +1.0**
SNR=27
HYT Haines Junctio 85.04 28 *e*P **P** **10 11 24.9 +1.8**
DAWY Dawson 85.09 25 *e*P **P** **10 11 24.3 +1.0**
MAW Mawson 85.44 203 P **P** **10 11 25.1 +0.2**
comp=Z,12nm,1.0s,mb5.0,baz=68,slow=6.9,SNR=7.0
MAW LR LR 10 49 26.0
comp=Z,2μm,19.3s,MS5.4,baz=77,slow=36
MAW Mawson 85.44 203 *e*P **P** **10 11 25.4 +0.4**
MAW pmax pmax
comp=Z,4.0nm,1.1s
MAW Mawson 85.44 203 *e*P **P** **10 11 25.4 +0.4**
comp=Z,3.8nm,1.1s,mb4.4
ZRNK Zerenda 85.72 323 P **P** **10 11 24.5 -2.2**
ZRNK pmax pmax
comp=Z,17nm,0.9s,mb5.3
SKAG Skagway 85.77 30 *e*P **P** **10 11 29.1 +2.4**
comp=Z,29nm,1.2s,mb5.4
DIB Dawson Inlet, 86.06 36 T 11 46 41.1
SNR=151
QSPA South Pole Qui 87.00 180 *e*P **P** **10 11 32.4 -0.1**
comp=Z,12nm,1.1s,mb5.0
QSPA LR LR
comp=Z,2μm,20.0s,MS5.4
DLBC Dease Lake 88.28 31 *e*P **P** **10 11 39.5 +0.6**
INK Inuvik 88.46 21 *e*P **P** **10 11 40.0 +0.4**
INK pmax pmax
comp=Z,21nm,1.0s
INK Inuvik 88.46 21 *e*P **P** **10 11 40.0 +0.4**
comp=Z,21nm,1.0s,mb5.3
WBK Wadi Bani Khal 90.23 292 P **P** **10 11 48.1 -0.8**
SNR=5.5
AB31 Akbulak array 90.94 319⇑*e*P **P** **10 11 49.2 -2.4**
ABKAR Akbulak array 90.94 319 *e*P **P** **10 11 49.1 -2.5**
comp=Z,6.6nm,1.0s,mb4.9
HOPS Hopland 90.99 51 PFAKE 10 12 00.0 +7.9
HOPS LR LR
comp=Z,2μm,20.0s,MS5.5
MCCM Marconi Confer 91.09 52 PFAKE 10 12 00.0 +7.4
MCCM LR LR
comp=Z,2μm,21.0s,MS5.5
COR Corvallis 91.11 46 PFAKE 10 12 00.0 +7.5
COR LR LR
comp=Z,1μm,21.0s,MS5.3
HUMO Hull Mountain 91.26 48 PFAKE 10 12 10.0 +17
HUMO LR LR
comp=Z,2μm,21.0s,MS5.5
YBH Yreka Blue Hor 91.40 48 LR LR 10 44 13.6
comp=Z,2μm,21.9s,MS5.5,baz=359,slow=30
YBH Yreka Blue Hor 91.40 48 PFAKE 10 12 10.0 +16
YBH LR LR
comp=Z,2μm,22.0s,MS5.5
WDC Whiskeytown Da 91.47 50 PFAKE 10 12 10.0 +16
WDC LR LR
comp=Z,1μm,21.0s,MS5.4
HOQ Hoqain 91.81 293 P **P** **10 11 55.7 -0.6**
SNR=6.0
ARU Arti 92.13 326 *d i*P **P** **10 11 54.8 -2.1**
ARU S SKSac 10 22 24.4 -2.2
ARU SP SP 10 24 00.3 -5.7
ARU PS PS 10 24 08.7 -3.1
ARU pmax pmax
comp=Z,25nm,1.2s,mb5.4
ARU MLR MLR
comp=Z,3μm,22.0s,MS5.7
ARU Arti 92.13 326 *e*P **P** **10 11 56.4 -0.5**
ARU LR LR
comp=Z,3μm,22.0s,MS5.7
SAO San Andreas Ge 92.17 53 PFAKE 10 12 10.0 +12
SAO LR LR
comp=Z,957nm,19.0s,MS5.3
AKTO Aktyubinsk 92.25 320 LR LR 10 51 31.0
comp=Z,756nm,21.9s,MS5.1,baz=81,slow=34
MSEY Mahe Island 92.29 265 PFAKE 10 12 10.0 +11
MSEY LR LR
comp=Z,663nm,21.0s,MS5.1
ARQ Araqi 92.52 293 P **P** **10 11 59.0 -0.5**
SNR=7.4
CMB Columbia Colle 93.06 52 *e*P **P** **10 12 02.9 +1.2**
CMB MLR MLR
comp=Z,2μm,20.0s,MS5.5
MOD Modoc 93.20 48 PFAKE 10 12 10.0 +7.7
MOD LR LR
comp=Z,2μm,21.0s,MS5.5
ETW Entiat 93.27 43 *e*P **P** **10 12 03.2 +0.7**
SYO Syowa Base 93.79 200⇑*e*P **P** **10 12 02.6 -1.8**
HAWA Hanford 93.81 44 PFAKE 10 12 20.0 +15
HAWA LR LR
comp=Z,1μm,22.0s,MS5.3
OD2 Odessa Site #2 94.37 43 *e*P **P** **10 12 08.8 +1.3**
WVOR Wild Horse Val 94.44 48 PFAKE 10 12 20.0 +12
WVOR LR LR
comp=Z,1μm,22.0s,MS5.4
NVAR Mina Array Bea 94.70 52 P **P** **10 12 08.5 -0.7**
comp=Z,4.2nm,1.1s,mb4.8,baz=249,slow=6.6,SNR=10
NVAR PKKPab 10 29 42.4
comp=Z,0.8nm,1.1s,baz=121,slow=5.7,SNR=4.4
NVAR Mina Array Bea 94.70 52 P **P** **10 12 08.5 -0.7**
NVAR PKKPab 10 29 42.4
MWC Mount Wilson 94.89 56 *e*P **P** **10 12 11.1 +0.9**
DAC Darwin (Calif) 95.27 54 PFAKE 10 12 20.0 +8.1

DAC LR LR
comp=Z,1μm,20.0s,MS5.3
BMO Blue Mountains 95.38 45 *e*P **P 10 12 13.8 +1.6**
BMO MLR MLR
comp=Z,484nm,20.0s,MS5.0
BMN Battle Mountai 95.53 50 PFAKE 10 12 30.0 +17
BMN LR LR
comp=Z,1μm,21.0s,MS5.4
TPH Tonopah 95.55 52 PFAKE 10 12 30.0 +17
TPH LR LR
comp=Z,942nm,22.0s,MS5.2
YKA Yellowknife Ar 96.01 28 P **P 10 12 14.0 -0.7**
comp=Z,11nm,1.0s,mb5.2,baz=274,slow=4.6,SNR=15
PFO Pinyon Flat Ob 96.23 57 *e*P **P 10 12 17.3 +1.0**
PFO MLR MLR
comp=Z,2μm,20.0s,MS5.5
ELK Elko 97.03 49 PFAKE 10 12 30.0 +10
ELK LR LR
comp=Z,274nm,19.0s,MS4.8
HLID Hailey 97.51 47 *e*P **P 10 12 24.1 +2.2**
comp=Z,3.2nm,1.1s,mb4.8
MSO Missoula 97.65 43 PFAKE 10 12 30.0 +7.6
MSO LR LR
comp=Z,599nm,20.0s,MS5.1
M13A Montello 97.81 49 *e*P **P 10 12 21.1 -2.1**
CHMT Chamberlain Mo 98.11 43 *e*P **P 10 12 26.0 +1.5**
DUG Dugway 98.90 50 PFAKE 10 12 40.0 +12
DUG LR LR
comp=Z,969nm,22.0s,MS5.3
ABPO Ambohimpanom 99.22 250 PFAKE 10 12 40.0 +10
ABPO LR LR
comp=Z,940nm,21.0s,MS5.3
BOZ Bozeman (W) 99.34 44 *e*P **P 10 12 32.1 +2.1**
BOZ MLR MLR
comp=Z,663nm,20.0s,MS5.1
MVU Marysvale 99.48 52 PFAKE 10 12 40.0 +9.2
MVU LR LR
comp=Z,983nm,20.0s,MS5.3
HWUT Hardware Ranch 99.74 48 PFAKE 10 12 40.0 +8.4
HWUT LR LR
comp=Z,2μm,20.0s,MS5.5
RES Resolute Bay 99.79 14 *e*P Pdif 10 12 33.3 +1.5
AHID Auburn Hatcher 99.99 47 PFAKE 10 12 50.0 +17
AHID LR LR
comp=Z,1μm,20.0s,MS5.3
LKWY Lake 100.31 45 PFAKE 10 12 50.0 +16
LKWY LR LR
comp=Z,918nm,19.0s,MS5.3
WUAZ Wupatki 100.34 55 PFAKE 10 12 50.0 +16
WUAZ LR LR
comp=Z,1μm,20.0s,MS5.4
KBS Kingsbay 100.90 352 PFAKE 10 12 50.0 +13
KBS LR LR
comp=Z,502nm,20.0s,MS5.0
TUC Tucson 101.04 58 PFAKE 10 12 50.0 +13
TUC LR LR
comp=Z,2μm,21.0s,MS5.5
RLMT Red Lodge 101.05 45 PFAKE 10 12 50.0 +13
RLMT LR LR
comp=Z,601nm,20.0s,MS5.1
BW06 Boulder Array 101.12 47 PFAKE 10 12 50.0 +12
BW06 LR LR
comp=Z,968nm,20.0s,MS5.3
PDAR Pinedale Array 101.12 47 P Pdif 10 12 38.8 +1.1
comp=Z,0.7nm,0.9s,baz=238,slow=5.0,SNR=3.6
LVZ Lovozero 101.37 339 PFAKE 10 12 50.0 +11
LVZ LR LR
comp=Z,565nm,20.0s,MS5.1
GNI Garni 102.03 310 PFAKE 10 12 50.0 +8.2
GNI LR LR
comp=Z,724nm,21.0s,MS5.2
ZEI Tsey 102.35 313 *e*P Pdif 10 12 38.8 -4.4
ZEI pmax pmax
comp=Z,5.0nm,0.4s
MVCO Mesa Verde 102.52 53 PFAKE 10 13 00.0 +16
MVCO LR LR
comp=Z,658nm,20.0s,MS5.2
LAO LASA Array 102.93 43 PFAKE 10 13 00.0 +14
LAO LR LR
comp=Z,1μm,19.0s,MS5.4
BHD Baghdad 103.01 303 *e*x x 10 12 45.0
BHD *e*x x 10 23 24.0
BHD *e*x x 10 24 01.0
KIV Kislovodsk 103.06 314⇓*e*P Pdif 10 12 47.3 +1.0
KIV *i* 10 17 02.4
KIV *e*S SKSac 10 23 18.6 -4.6
KIV *e*PS PS 10 26 11.3 +0.5
KIV *e*SS SS 10 31 48.7 +8.0
KIV pmax pmax
comp=Z,7.0nm,0.7s
KIV MLR MLR
comp=Z,1μm,22.0s,MS5.3
KIV Kislovodsk 103.06 314 PFAKE 10 13 00.0 +14
KIV LR LR
comp=Z,997nm,22.0s,MS5.3
KEV Kevo 103.11 342 PFAKE 10 13 00.0 +13
KEV LR LR
comp=Z,923nm,21.0s,MS5.3
ARCES ARCESS Array B 103.68 342 Pdiff Pdif 10 12 47.2 -1.9
comp=Z,7.1nm,0.9s,baz=38,slow=4.6,SNR=7.1
ARCES ARCESS Array B 103.68 342 Pdif Pdif 10 12 47.2 -1.9
FFC Flin Flon 103.87 34 PFAKE 10 13 00.0 +10
FFC LR LR
comp=Z,789nm,21.0s,MS5.2
DGMT Dagmar 103.95 41 PFAKE 10 13 00.0 +10
DGMT LR LR
comp=Z,612nm,20.0s,MS5.1
ANMO Albuquerque 104.40 55 PFAKE 10 13 10.0 +18
ANMO LR LR
comp=Z,778nm,20.0s,MS5.2
ISCO Idaho Springs 104.44 50 PFAKE 10 13 10.0 +17
ISCO LR LR
comp=Z,1μm,20.0s,MS5.4
OBN Obninsk 104.57 326⇓*e*P Pdif 10 12 51.2 -1.9
OBN *e*S SKSac 10 23 31.1 +1.4
OBN *e*SS SS 10 32 05.8 +5.2
OBN pmax pmax
comp=Z,5.0nm,0.4s
OBN MLR MLR
comp=Z,2μm,22.0s,MS5.7
OBN Obninsk 104.57 326 PFAKE 10 13 00.0 +6.9
OBN LR LR
comp=Z,3μm,21.0s,MS5.7
SDCO Great Sand Dun 104.82 52 PFAKE 10 13 10.0 +16
SDCO LR LR
comp=Z,927nm,22.0s,MS5.3
RSSD Black Hills 104.90 45 PFAKE 10 17 20.0 +10
RSSD LR LR
comp=Z,954nm,22.0s,MS5.3
MNTX Cornudas Mount 105.66 58 PFAKE 10 17 20.0 +8.4
MNTX LR LR
comp=Z,783nm,20.0s,MS5.2
OGNE Ogallala 106.95 48 PFAKE 10 17 30.0 +16
OGNE LR LR
comp=Z,2μm,20.0s,MS5.5
FINES FINESS Array B 107.37 335 Pdiff Pdif 10 13 03.9 -1.7
comp=Z,1.5nm,0.8s,baz=52,slow=3.4,SNR=4.8
TXAR Lajitas Array 107.39 60 PKKPbc PKKPbc 10 28 30.9 +0.1
comp=Z,0.5nm,0.9s,baz=151,slow=2.9,SNR=3.6
TXAR PKKPab PKKPab 10 28 45.2 +0.2
comp=Z,0.8nm,0.9s,baz=120,slow=7.6,SNR=6.4
AMTX Amarillo 108.30 54 PFAKE 10 17 30.0 +14
AMTX LR LR
comp=Z,1μm,21.0s,MS5.4
PMSA Palmer Station 108.46 166 PFAKE 10 17 30.0 +14
PMSA LR LR
comp=Z,712nm,19.0s,MS5.2
CBKS Cedar Bluff 109.10 50 PFAKE 10 17 30.0 +12
CBKS LR LR
comp=Z,923nm,20.0s,MS5.3
AGMN Agassiz Nation 109.37 39 PFAKE 10 17 30.0 +12
AGMN LR LR
comp=Z,1μm,22.0s,MS5.4
ECSD EROS Data Cent 110.20 44 PFAKE 10 17 30.0 +10
ECSD LR LR
comp=Z,883nm,21.0s,MS5.3
KIEV Kiev 110.21 324 PFAKE 10 17 30.0 +11
KIEV LR LR
comp=Z,1μm,22.0s,MS5.4
SUMG Summit 110.34 2 *i*P PP 10 17 51.3 -2.6
SUMG *e* SP 10 27 16.2 -1.9
SUMG
comp=Z,310nm,21.0s
BR131 Keskin Array S 110.51 311 PFAKE 10 17 30.0 +10
BR131 LR LR
comp=Z,374nm,22.0s,MS4.9
BRTR Keskin Array B 110.51 311 PKKPbc PKKPbc 10 28 22.1 +0.8
comp=Z,0.2nm,0.3s,baz=344,slow=4.8,SNR=3.6
KMBO Kilima Mbogo 110.67 268 PFAKE 10 17 30.0 +8.6
KMBO LR LR
comp=Z,335nm,20.0s,MS4.9
WMOK Wichita Mounta 110.67 54 PFAKE 10 17 30.0 +9.2
WMOK LR LR
comp=Z,924nm,21.0s,MS5.3
KSU1 Kansas State U 111.41 49 PFAKE 10 17 30.0 +7.9
KSU1 LR LR
comp=Z,983nm,20.0s,MS5.4
KIS Kishinev 111.75 320 *e*PKP PKiKP 10 17 54.0 +31
KIS *e*L 11 00 20.0
KIS LRM 11 05 52.0
comp=Z,1μm,21.0s
CSS Prodhromos 111.82 306 PFAKE 10 17 30.0 +7.0
CSS LR LR
comp=Z,341nm,20.0s,MS4.9
EYMN Ely 112.24 39 PFAKE 10 17 40.0 +17
EYMN LR LR
comp=Z,885nm,22.0s,MS5.3
KVTX Kingsville 112.67 61 PFAKE 10 17 40.0 +15
KVTX LR LR
comp=Z,818nm,21.0s,MS5.3
SCIA State Center 113.13 45 PFAKE 10 17 40.0 +15
SCIA LR LR
comp=Z,746nm,22.0s,MS5.2
ISP Isparta 113.34 310 PFAKE 10 17 40.0 +14
ISP LR LR
comp=Z,578nm,22.0s,MS5.1
NAO01 NORSAR Array S 113.76 339 PFAKE 10 17 40.0 +14
NAO01 LR LR
comp=Z,1μm,20.0s,MS5.4
HKT Hockley 114.04 59 PFAKE 10 17 40.0 +13
HKT LR LR
comp=Z,2μm,20.0s,MS5.7
KWP Kalwaria Pacla 114.46 324 PFAKE 10 17 40.0 +12
KWP LR LR
comp=Z,1μm,22.0s,MS5.5
NATX Nacogdoches 114.66 56 PFAKE 10 17 40.0 +11
NATX LR LR
comp=Z,1μm,19.0s,MS5.5
JFWS Jewell Farm 114.87 44 PFAKE 10 17 40.0 +11
JFWS LR LR
comp=Z,808nm,21.0s,MS5.3
MIAR Mount Ida 114.90 53 PFAKE 10 17 40.0 +11
MIAR LR LR
comp=Z,1μm,22.0s,MS5.5
KONO Kongsberg 115.04 338 PFAKE 10 17 40.0 +12
KONO LR LR
comp=Z,1μm,19.0s,MS5.5
CCM Cathedral Cave 115.74 49 PFAKE 10 17 40.0 +10
CCM LR LR
comp=Z,1μm,20.0s,MS5.5
HDIL Hopedale 116.36 46 PFAKE 10 17 40.0 +8.5
HDIL LR LR
comp=Z,904nm,19.0s,MS5.4
BOSA Boshof 116.80 236 PFAKE 10 17 40.0 +7.2
BOSA LR LR
comp=Z,1μm,22.0s,MS5.4
PSZ Piszkesteto 116.90 324 PFAKE 10 17 40.0 +7.7
PSZ LR LR
comp=Z,1μm,19.0s,MS5.5
MBAR Mbarara 117.20 268 PFAKE 10 17 50.0 +16
MBAR LR LR
comp=Z,669nm,20.0s,MS5.3
LBTB Lobatse 117.66 240 PFAKE 10 17 50.0 +15
LBTB LR LR
comp=Z,613nm,21.0s,MS5.2
LSZ Lusaka 117.78 251 *e*PKIKP PKPdf 10 17 36.5 +1.6
LSZ MLR MLR
comp=Z,672nm,21.0s,MS5.2
BORG Borgarnes 117.85 355 PFAKE 10 17 50.0 +16
BORG LR LR
comp=Z,419nm,21.0s,MS5.0
VBMS Vicksburg 117.97 55 PFAKE 10 17 50.0 +15
VBMS LR LR
comp=Z,964nm,20.0s,MS5.4
OXF Oxford 118.22 52 PFAKE 10 17 50.0 +15
OXF LR LR
comp=Z,1μm,21.0s,MS5.6
BRG Berggiesshubel 118.66 329 PP PP 10 18 31.0 -22
BRG SS SS 10 35 14.0 +6.0
CLL Collm 118.89 330 *e*PP PP 10 19 00.0 +5.2
CLL *e*PS PS 10 28 38.0 -5.0
CLL *e*(PPS) 10 30 21.0
CLL *e*SS SS 10 35 24.0 +13
CLL *e*SSS 10 39 18.0
CLL *e* 10 40 48.0
CLL *e* 10 44 42.0
CLL Lm 11 09 00.0
comp=Z,2μm,21.4s
SUR Sutherland 118.93 230 PFAKE 10 17 50.0 +13
SUR LR LR
comp=Z,1μm,20.0s,MS5.5
WVT Waverly 118.94 50 PFAKE 10 17 50.0 +13
WVT LR LR
comp=Z,568nm,20.0s,MS5.2
WCI Wyandotte Cave 119.36 47 PFAKE 10 17 50.0 +13
WCI LR LR
comp=Z,1μm,20.0s,MS5.6
TIR Tirane 119.87 317 PFAKE 10 17 50.0 +12
TIR LR LR
comp=Z,1μm,22.0s,MS5.5
LRAL Lakeview Retre 120.58 53 PFAKE 10 17 50.0 +10
LRAL LR LR
comp=Z,520nm,21.0s,MS5.2
PAYG Puerto Ayora 121.61 93 PFAKE 10 17 50.0 +7.6
PAYG LR LR
comp=Z,1μm,20.0s,MS5.6
TRI Trieste 121.65 324 PFAKE 10 17 50.0 +8.4
TRI LR LR
comp=Z,1μm,22.0s,MS5.5
ERPA Erie 122.09 41 PFAKE 10 17 50.0 +7.5
ERPA LR LR
comp=Z,896nm,21.0s,MS5.4
TEIG Tepich 122.55 68 PFAKE 10 18 00.0 +16
TEIG LR LR
comp=Z,713nm,22.0s,MS5.3
ESK Eskdalemuir 122.83 341 PFAKE 10 18 00.0 +16
ESK LR LR
comp=Z,607nm,20.0s,MS5.2
BFO Black Forest 123.10 329 PFAKE 10 18 00.0 +16
BFO LR LR
comp=Z,2μm,21.0s,MS5.6
WLF Walferdange 123.31 331 PFAKE 10 18 00.0 +15
WLF LR LR
comp=Z,1μm,20.0s,MS5.6
MCWV Mont Chateau 123.35 43 PFAKE 10 18 00.0 +15
MCWV LR LR
comp=Z,1μm,22.0s,MS5.5
AQU L'Aquila 123.65 321 PFAKE 10 18 00.0 +14
AQU LR LR
comp=Z,936nm,22.0s,MS5.4
TUE Stuetta 123.72 327 PFAKE 10 18 00.0 +14
TUE LR LR
comp=Z,2μm,20.0s,MS5.7
ECH Echery 123.78 329 PFAKE 10 18 00.0 +14
ECH LR LR
comp=Z,2μm,20.0s,MS5.7
BLA Blacksburg 124.04 46 PFAKE 10 18 00.0 +14
BLA LR LR
comp=Z,1μm,19.0s,MS5.7
PLCA Paso Flores 124.07 145 PKP PKPdf 10 17 48.0 +1.6
comp=Z,5.7nm,0.9s,baz=205,slow=4.9,SNR=6.6
LONY Lake Ozonia 124.11 36 PFAKE 10 18 00.0 +14
LONY LR LR
comp=Z,863nm,22.0s,MS5.4
SSPA Standing Stone 124.19 41 PFAKE 10 18 00.0 +13
SSPA LR LR
comp=Z,878nm,20.0s,MS5.4
TGUH Tegucigalpa,Un 124.35 75 PFAKE 10 18 00.0 +12
TGUH LR LR
comp=Z,1μm,20.0s,MS5.6
VLC Villacollemand 124.50 324 PFAKE 10 18 00.0 +13
VLC LR LR
comp=Z,2μm,22.0s,MS5.6
BINY Binghamton 124.61 39 PFAKE 10 18 00.0 +13
BINY LR LR
comp=Z,2μm,22.0s,MS5.7
NCB Newcomb 124.69 36 PFAKE 10 18 00.0 +13
NCB LR LR
comp=Z,897nm,20.0s,MS5.4
CBN Corbin 125.73 44 PFAKE 10 18 00.0 +10
CBN LR LR
comp=Z,805nm,20.0s,MS5.4
LBNH Lisbon 125.86 35 PFAKE 10 18 00.0 +10
LBNH LR LR
comp=Z,1μm,20.0s,MS5.6
NHSC New Hope 125.91 51 PFAKE 10 18 00.0 +10
NHSC LR LR
comp=Z,834nm,22.0s,MS5.4
WDD Wield Dalam 126.02 313 PFAKE 10 18 00.0 +10
WDD LR LR
comp=Z,403nm,22.0s,MS5.0
BNI Bardonecchia 126.07 327 PFAKE 10 18 00.0 +10
BNI LR LR
comp=Z,2μm,22.0s,MS5.7
TSUM Tsumeb 126.54 244 *e*PKPdf PKPdf 10 17 54.0 +2.3
TSUM LR LR
comp=Z,743nm,20.0s,MS5.4
PKME Peaks-Kenny Pk 126.67 32 PFAKE 10 18 00.0 +8.8
PKME LR LR
comp=Z,658nm,20.0s,MS5.3
DWPF Disney 126.69 57 PFAKE 10 18 00.0 +8.2
DWPF LR LR
comp=Z,626nm,20.0s,MS5.3
CNNC Cliffs of the 126.74 47 PFAKE 10 18 00.0 +8.4
CNNC LR LR
comp=Z,1μm,21.0s,MS5.5
JTS JuntasAbangare 126.94 79 PFAKE 10 18 10.0 +17
JTS LR LR
comp=Z,2μm,21.0s,MS5.7
SSB Saint Sauveur 127.07 328 PFAKE 10 18 00.0 +8.0
SSB LR LR
comp=Z,943nm,21.0s,MS5.4
VSL Villasalto 127.75 320 PFAKE 10 18 10.0 +17
VSL LR LR
comp=Z,378nm,20.0s,MS5.1
TRQA Tornquist 130.66 149 PFAKE 10 18 10.0 +11
TRQA LR LR
comp=Z,849nm,21.0s,MS5.4
BCIP Isla Barro Col 132.05 80 PFAKE 10 18 10.0 +7.7
BCIP LR LR
comp=Z,1μm,21.0s,MS5.5
MTDJ Mount Denham 132.89 68 PFAKE 10 18 20.0 +16
MTDJ LR LR
comp=Z,680nm,22.0s,MS5.3
NNA Nana 133.02 109 PFAKE 10 18 20.0 +16
NNA LR LR
comp=Z,305nm,19.0s,MS5.0
OTAV Otavalo 133.48 92 PFAKE 10 18 20.0 +15
OTAV LR LR
comp=Z,863nm,22.0s,MS5.4
GTBY Guantanamo Bay 134.68 65 PFAKE 10 18 20.0 +13
GTBY LR LR
comp=Z,589nm,19.0s,MS5.3
ESLA Sonseca Array 135.47 329 *e*PKPdf PKPdf 10 18 09.1 +1.1
ESLA LR LR
comp=Z,4μm,22.0s,MS6.2
PAB San Pablo 135.76 329 PFAKE 10 18 20.0 +11
PAB LR LR
comp=Z,961nm,22.0s,MS5.5
MTE Manteigas 136.66 333 PFAKE 10 18 20.0 +10
MTE LR LR
comp=Z,1μm,21.0s,MS5.6
BBSR BB Station 137.59 43 PFAKE 10 18 20.0 +7.8
BBSR LR LR
comp=Z,977nm,20.0s,MS5.5
GRTK Grand Turk 137.72 61 PFAKE 10 18 30.0 +17
GRTK LR LR
comp=Z,711nm,19.0s,MS5.4
TAM Tamanrasset 138.66 302 *e*PKIKP PKPdf 10 18 18.2 +3.8
TAM MLR MLR
comp=Z,424nm,20.0s,MS5.2
SFS San Fernando 139.04 328 PFAKE 10 18 30.0 +15
SFS LR LR
comp=Z,2μm,21.0s,MS5.8
LPAZ La Paz 139.49 119 PKhKP 10 18 10.0
comp=Z,1.9nm,0.7s,baz=236,slow=3.6,SNR=7.3
LPAZ PKP PKPdf 10 18 19.2 +3.2
comp=Z,21nm,1.3s,baz=322,slow=3.9,SNR=15
LPAZ La Paz 139.49 119 PKP 10 18 10.0
LPAZ PKP PKPdf 10 18 19.2 +3.2
LPAZ LR LR
comp=Z,340nm,20.0s,MS5.1
SDV Santo Domingo 141.13 80 PFAKE 10 18 30.0 +11
SDV LR LR
comp=Z,318nm,21.0s,MS5.0
CPUP Villa Florida 141.95 141 PKP PKPdf 10 18 20.6 +0.3
comp=Z,13nm,1.0s,baz=199,slow=1.2,SNR=13
SJG San Juan 143.29 63 PFAKE 10 18 40.0 +17
SJG LR LR
comp=Z,798nm,20.0s,MS5.5
TOA0 Torodi Ar. Sit 145.19 289 *e*PKPbc PKPbc 10 18 24.6 -1.3
TORD Torodi Ar. Bea 145.19 289 PKP PKPdf 10 18 24.8 -1.5
comp=Z,81nm,1.1s,baz=70,slow=3.2,SNR=52
TORD PP PP 10 21 42.9 -2.6
comp=Z,3.6nm,1.1s,baz=87,slow=4.0,SNR=4.3
ANWB Willy Bob 147.32 61 PFAKE 10 18 40.0 +10
ANWB LR LR
comp=Z,694nm,19.0s,MS5.5
FDF Fort de France 148.95 66 PFAKE 10 18 40.0 +7.5
FDF LR LR
comp=Z,647nm,22.0s,MS5.4
GRGR Grenville 149.24 71 PFAKE 10 18 50.0 +17
GRGR LR LR
comp=Z,426nm,22.0s,MS5.2
SPB Sao Paulo 149.63 151 *e*PKPbc PKPbc 10 18 40.2 +2.1
SPB LR LR
comp=Z,656nm,19.0s,MS5.5
KIC Kosan Boka 152.64 278 *e*PKIKP PKPbc 10 18 45.5 +0.1
comp=Z,49nm,1.0s
DBIC Dimbokro 152.72 279 PKPbc PKPbc 10 18 45.0 -0.5
comp=Z,13nm,1.0s,baz=30,slow=3.0,SNR=5.3
DBIC PKPab PKPab 10 18 55.2 -1.2
comp=Z,35nm,1.0s,baz=90,slow=3.4,SNR=9.8
DBIC Dimbokro 152.72 279 *e*PKPbc PKPbc 10 18 45.8 +0.3
DBIC PKPab PKPab 10 18 55.2 -1.2
DBIC *e*PKPab PKPab 10 18 57.5 +1.2
DBIC LR LR
comp=Z,773nm,20.0s,MS5.5
TIC Toumodi 152.88 279 *e*PKIKP PKPbc 10 18 45.9 0.0
comp=Z,79nm,1.2s
LIC Lamto 152.94 278 *e*PKIKP PKPbc 10 18 46.0 0.0
comp=Z,97nm,1.2s
SACV Santiago Islan 165.47 326 PFAKE 10 19 00.0 +6.8
SACV LR LR
comp=Z,730nm,21.0s
RCBR Riachuelo 170.45 156 PFAKE 10 19 10.0 +13
RCBR LR LR
comp=Z,1μm,19.0s

WEL 11 10:03:52.5±0.1,39°.29S×174°.91E,h30km±1km,ML3.5/36,
2C-8D,Error ellipse: s-maj=0.9km s-min=0.9km az=90.0,
North Island

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
VRZ	**Vera Road**	**0.20**	**324**	⇓P*		Pb	10 03 58.7	-0.1
VRZ				S*		Sb	10 04 04.0	+1.0
VRZ				S*		Sb	10 04 04.1	+1.2
PKVZ	**Pokaka**	**0.34**	**90**	P*		Pb	10 04 00.4	-0.1
PKVZ				S*		Sb	10 04 06.8	+0.9
RAEZ	**Rainy Point**	**0.40**	**270**	P*		Pb	10 04 01.1	-0.3
MTVZ	**Mangateitei**	**0.45**	**103**	P*		Pb	10 04 01.9	-0.2
MTVZ				S*		Sb	10 04 09.2	+0.5
TWVZ	**Taurewa**	**0.47**	**62**	⇓P*		Pb	10 04 02.0	-0.4
WAZ	**Wanganui**	**0.47**	**173**	⇑P*		Pb	10 04 01.8	-0.7
TRVZ	**Turoa**	**0.50**	**91**	⇓P*		Pb	10 04 02.8	-0.1
FWVZ	**Far West T-bar**	**0.50**	**86**	⇓P*		Pb	10 04 02.8	-0.2
FWVZ				S*		Sb	10 04 10.4	+0.4
MHEZ	**Mangahewa**	**0.50**	**295**	P*		Pb	10 04 02.5	-0.4
WPVZ	**Whakapapa**	**0.50**	**81**	⇓P*		Pb	10 04 02.8	-0.2
DRZ	**Dome Shelter**	**0.51**	**89**	P*		Pb	10 04 03.0	0.0
DRZ				S*		Sb	10 04 11.0	+0.7
WNVZ	**Wahianoa**	**0.54**	**94**	P*		Pb	10 04 03.4	-0.1
NGZ	**Ngauruhoe**	**0.55**	**78**	P*		Pb	10 04 03.2	-0.5
WTVZ	**West Tongariro**	**0.56**	**72**	⇓P*		Pb	10 04 03.5	-0.3
DREZ	**Durham Road**	**0.56**	**280**	P*		Pb	10 04 03.3	-0.6
TUVZ	**Tukino**	**0.58**	**88**	P*		Pb	10 04 04.1	-0.1
OTVZ	**Oturere**	**0.60**	**78**	⇓P*		Pb	10 04 04.3	-0.3
KRVZ	**Karewarewa**	**0.60**	**71**	⇓P*		Pb	10 04 04.2	-0.4
DFE	**Dawson Falls**	**0.62**	**266**	P*		Pb	10 04 04.7	-0.3
MOVZ	**Moawhango**	**0.67**	**101**	⇑PN		Pn	10 04 04.9	-0.9
KATZ	**Kakaramea**	**0.69**	**63**	PN		Pn	10 04 05.6	-0.6
PKE	**Pukeiti**	**0.72**	**277**	PN		Pn	10 04 05.8	-0.8
HIZ	**Hauiti**	**0.78**	**357**	PN		Pn	10 04 06.6	-0.8

HIZ				SN	Sn	10 04 17.9	0.0				
RATZ	**Rangitukua**	**0.79**	**58**	PN	Pn	10 04 07.1	-0.5				
RITZ	**Rihia Road**	**0.80**	**68**	PN	Pn	10 04 07.9	+0.2				
WATZ	**Wairara**	**0.86**	**48**	PN	Pn	10 04 08.2	-0.4				
TSZ	**Takapari Road**	**1.12**	**134**	PN	Pn	10 04 11.5	-0.6				
PNHZ	**Pukenui**	**1.18**	**122**	PN	Pn	10 04 12.3	-0.5				
BKZ	**Black Stump Fm**	**1.24**	**85**	PN	Pn	10 04 16.1	+2.4				
DVHZ	**Dannevirke**	**1.40**	**137**	PN	Pn	10 04 16.9	+1.0				
WPHZ	**Waipukurau**	**1.41**	**124**	PN	Pn	10 04 17.2	+1.1				
MRZ	**Mangatainoka R**	**1.47**	**160**	PN	Pn	10 04 16.7	-0.1				
OGWZ	**Otaki Gorge**	**1.54**	**173**	PN	Pn	10 04 18.0	+0.1				
KIW	**Kapiti Island**	**1.57**	**180**	PN	Pn	10 04 18.0	-0.3				
TOZ	**Tahuroa Road**	**1.62**	**17**	PN	Pn	10 04 18.4	-0.7				
DUWZ	**D'Urville Isla**	**1.69**	**206**	PN	Pn	10 04 19.6	-0.4				
MKAZ	**Moumakai**	**2.18**	**5**	PN	Pn	10 04 26.2	-0.5				
NNZ	**Nelson**	**2.25**	**211**	PN	Pn	10 04 27.5	-0.2				
TUWZ	**Tuamarina**	**2.26**	**199**	PN	Pn	10 04 28.0	+0.2				
WTAZ	**Waiatarua**	**2.37**	**354**	PN	Pn	10 04 29.0	-0.2				
QRZ	**Quartz Range**	**2.39**	**229**	PN	Pn	10 04 27.8	-1.7				
RVAZ	**Riverhead Bore**	**2.53**	**354**	PN	Pn	10 04 31.0	-0.5				
KUZ	**Kuaotunu**	**2.62**	**14**	PN	Pn	10 04 31.7	-1.1				
THZ	**Tophouse**	**2.91**	**211**	PN	Pn	10 04 36.5	-0.1				
WCZ	**Waipu Caves**	**3.37**	**352**	PN	Pn	10 04 42.3	-0.8				

*NEIC **11** 10:04:44.0±4.8, 24°.74S×179°.56E, h566km±55km, mb3.9/1, Error ellipse: s-maj=86.3km s-min=28.0km az=165.0*

IDC 11 10:04:36.7±3.6, **24°.75S×179°.81E, h483**km±33km, **mb3.4**/7, **mb1 3.7**/7, **mb1mx3.5**/14, **mbtmp3.4**/7, **Error ellipse: s-maj=91.1km s-min=21.8km az=160.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**31.32**	**272**	P	P	10 10 17.4	+0.8
	12nm,0.4s,baz=95,slow=10,SNR=21						
STKA	**Stephens Creek**	**34.25**	**249**	P	P	10 10 41.2	-0.2
	1.7nm,0.6s,baz=105,slow=20,SNR=4.1						
STKA	**Stephens Creek**	**34.25**	**249**	*eP*	P	10 10 41.7	+0.3
ASAR	**Alice Springs**	**41.73**	**262**	P	P	10 11 42.5	-0.3
	3.8nm,0.6s,baz=92,slow=8.3,SNR=26						
WRAB	**Tennant Creek**	**42.17**	**267**	*eP*	P	10 11 45.5	-0.8
	2.0nm,0.6s						
WRA	**Warramunga Arr**	**42.18**	**267**	P	P	10 11 45.8	-0.6
	2.1nm,0.3s,baz=99,slow=6.7,SNR=90						
WRA				ScP	ScP	10 16 34.8	+0.8
	0.7nm,0.7s,baz=103,slow=3.8,SNR=6.2						
FITZ	**Fitzroy Crossi**	**50.59**	**266**	P	P	10 12 50.7	+0.3
	2.0nm,0.5s,baz=101,slow=7.0,SNR=8.1						
FITZ	**Fitzroy Crossi**	**50.59**	**266**	*eP*	P	10 12 51.0	+0.6
NVAR	**Mina Array Bea**	**85.48**	**44**	P	P	10 16 22.6	-0.1
	0.3nm,0.7s,baz=242,slow=7.8,SNR=2.6						
TXAR	**Lajitas Array**	**91.03**	**58**	P	P	10 16 50.6	+1.7
	0.5nm,0.8s,baz=216,slow=6.2,SNR=7.4						
ARCES	**ARCESS Array B**	**132.68**	**348**	PKP	PKPdf	10 22 54.2	-0.9
	0.6nm,0.6s,baz=42,slow=2.8,SNR=4.6						
NOA	**NORSAR Array B**	**142.89**	**351**	PKhKP		10 23 08.8	
	1.0nm,0.8s,baz=18,slow=2.8,SNR=3.8						
HFS	**Hagfors**	**143.34**	**348**	PKP	PKPdf	10 23 12.5	-2.4
	3.9nm,0.4s,baz=70,slow=4.9,SNR=37						
AKASG	**Malin Array Be**	**145.58**	**326**	PKPbc	PKPbc	10 23 19.5	-0.9
	0.9nm,0.4s,baz=44,slow=4.1,SNR=6.3						
BRTR	**Keskin Array B**	**147.94**	**306**	PKPbc	PKPbc	10 23 26.1	-1.0
	0.5nm,0.6s,baz=70,slow=1.0,SNR=3.3						

*ISCJB **11** 10:05:29.5±0.9, 36°.98N±0°.05×29°.15E±0°.04, h5km±6km, Error ellipse: s-maj=7.9km s-min=5.3km az=11.2*
*ISK **11** 10:05:29.4, 36°.96N×29°.21E, h13km, MD2.8*
*CSEM **11** 10:05:29.6±0.1, 36°.98N×29°.16E, h12km, MD2.8, Error ellipse: s-maj=3.0km s-min=1.8km az=169.0*
*DDA **11** 10:05:31.4, 37°.08N×29°.19E, h7km±3km, Md2.9*

ISC 11 10:05:30.1±0.8, **36°.99N**±0°.05×**29°.15E**±0°.04, **h10**km±6km, **n24**, σ0°77/36, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.33**	**59**	*eP*G	**Pg**	**10 05 36.4**	**-0.2**
GLHS				*eS*G	**Sg**	**10 05 40.7**	**-0.2**
GLHS	**Glhisar (BURDU**	**0.33**	**59**	*eP*g	**Pg**	**10 05 36.4**	**-0.2**
GLHS				*eS*g	**Sg**	**10 05 40.7**	**-0.2**
GOLH	**Golhisar**	**0.41**	**53**	*i P*	**Pg**	**10 05 37.6**	**-0.5**
GOLH				*i* S	**Sg**	**10 05 43.9**	**+0.3**
GOLH	**Golhisar**	**0.41**	**53**	*i P*	**Pg**	**10 05 37.6**	**-0.6**
GOLH				*i* S	**Sg**	**10 05 43.9**	**+0.2**
TURN	**Turunc**	**0.45**	**255**	*i P*	**Pg**	**10 05 43.1**	**+4.1**
TURN	**Turunc**	**0.45**	**255**	*i P*	**Pg**	**10 05 43.1**	**+4.2**
ELL	**Elmali**	**0.65**	**111**	*e*PG	**Pg**	**10 05 41.3**	**-1.4**
ELL	**Elmali**	**0.65**	**111**	*e*Pg	**Pg**	**10 05 41.3**	**-1.4**
DNZL	**Cakiroluk**	**0.70**	**353**	*i P*	**Pg**	**10 05 43.0**	**-0.7**
DNZL				*i* S	**Sg**	**10 05 52.7**	**-0.3**
DNZL	**Cakiroluk**	**0.70**	**353**	*i P*	**Pg**	**10 05 43.0**	**-0.7**
DNZL				*i* S	**Sg**	**10 05 52.7**	**-0.2**
YER	**Yerkesik**	**0.71**	**282**	*e*PG	**Pg**	**10 05 44.8**	**+1.0**
YER	**Yerkesik**	**0.71**	**282**	*e*Pg	**Pg**	**10 05 44.8**	**+1.0**
KORT	**Korkueli**	**0.96**	**89**	*i P*	**Pg**	**10 05 49.3**	**+0.7**
KORT				*i* S	**Sg**	**10 06 02.6**	**+1.6**
KORT	**Korkueli**	**0.96**	**89**	*i P*	**Pg**	**10 05 49.3**	**+0.7**
KORT				*i* S	**Sg**	**10 06 02.7**	**+1.6**
AYDN	**Tasoluk**	**1.22**	**304**	*i P*	**Pn**	**10 05 54.0**	**+1.0**
AYDN				*i* S	**Sb**	**10 06 08.3**	**-0.5**
AYDN	**Tasoluk**	**1.22**	**304**	*i P*	**Pn**	**10 05 54.0**	**+0.9**
AYDN				*i* S	**Sb**	**10 06 08.3**	**-0.5**
DAT	**Datca**	**1.29**	**259**	*e*PN	**Pn**	**10 05 53.7**	**-0.3**
DAT	**Datca**	**1.29**	**259**	*e*Pn	**Pn**	**10 05 53.7**	**-0.4**
KHAL	**Karahalli**	**1.41**	**11**	*i P*	**Pn**	**10 05 55.5**	**-0.1**
KHAL				*i* S	**Sn**	**10 06 15.1**	**+0.9**
KHAL	**Karahalli**	**1.41**	**11**	*i P*	**Pn**	**10 05 55.5**	**-0.2**
KHAL				*i* S	**Sn**	**10 06 15.1**	**+0.8**
SUTC	**Sutluce-Ispart**	**1.56**	**71**	*e*PN	**Pn**	**10 05 57.1**	**-0.6**
SUTC	**Sutluce-Ispart**	**1.56**	**71**	*e*Pn	**Pn**	**10 05 57.1**	**-0.6**
HDMB	**Hadim**	**2.67**	**90**	*e*PN	**Pn**	**10 06 12.5**	**-0.6**
HDMB	**Hadim**	**2.67**	**90**	*e*Pn	**Pn**	**10 06 12.5**	**-0.6**

*DDA **11** 10:12:43.8, 37°.02N×29°.17E, h4km±4km, Md3.0*
*CSEM **11** 10:12:43.6±0.2, 37°.02N×29°.16E, h8km, MD3.0, Error ellipse: s-maj=4.7km s-min=3.0km az=9.0*

ISK 11 10:12:41.9, 37°.03N×29°.15E, h5km, MD3.0, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.31**	**65**	PG	Pg	10 12 49.2	+1.4
GLHS				*e*SG	Sg	10 12 54.6	+2.8
GLHS	**Glhisar (BURDU**	**0.31**	**65**	*i* Pg	Pg	10 12 49.2	+1.4
GLHS				*e*Sg	Sg	10 12 54.6	+2.8
GOLH	**Golhisar**	**0.39**	**57**	*i* P	Pg	10 12 51.0	+1.6
GOLH				*i* S	Sg	10 12 57.7	+3.2
GOLH	**Golhisar**	**0.39**	**57**	*i* P	Pg	10 12 51.0	+1.6
TURN	**Turunc**	**0.47**	**251**	*i* P	Pg	10 12 58.0	+7.1
TURN				*i* S	Sg	10 13 09.0	+12
ELL	**Elmali**	**0.67**	**114**	*e*PG	Pg	10 12 55.6	+0.9
ELL				*e*SG	Sg	10 13 06.3	+3.0
ELL	**Elmali**	**0.67**	**114**	*e*Pg	Pg	10 12 55.6	+0.9
ELL				*e*Sg	Sg	10 13 06.3	+3.0
DNZL	**Cakiroluk**	**0.67**	**353**	*i* P	Pg	10 12 56.6	+1.8
DNZL				*i* S	Sg	10 13 08.4	+5.0
DNZL	**Cakiroluk**	**0.67**	**353**	*i* P	Pg	10 12 56.6	+1.8
DNZL				*i* S	Sg	10 13 08.4	+4.9
YER	**Yerkesik**	**0.70**	**279**	*e*PG	Pg	10 12 56.8	+1.4
YER	**Yerkesik**	**0.70**	**279**	*e*Pg	Pg	10 12 56.8	+1.4
DENT	**Denizli**	**0.73**	**353**	*e*PG	Pg	10 12 57.2	+1.2
DENT	**Denizli**	**0.73**	**353**	*e*Pg	Pg	10 12 57.2	+1.2
AKAS	**Kas**	**0.87**	**155**	*i* P	Pg	10 13 00.3	+1.8
AKAS				*i* S	Sg	10 13 18.1	+8.3
AKAS	**Kas**	**0.87**	**155**	*i* P	Pg	10 13 00.3	+1.7
KORT	**Korkueli**	**0.96**	**91**	*i* P	Pg	10 13 02.7	+2.4
KORT				*i* S	Sg	10 13 15.9	+3.2
KORT	**Korkueli**	**0.96**	**91**	*i* P	Pg	10 13 02.7	+2.4
MLSB	**Milas**	**1.13**	**284**	*e*PN	Pn	10 13 04.6	+0.2
MLSB	**Milas**	**1.13**	**284**	*e*Pn	Pn	10 13 04.6	+0.2
AYDN	**Tasoluk**	**1.20**	**302**	*i* P	Pg	10 13 07.5	+2.6
AYDN				*i* S	Sg	10 13 25.4	+5.0
AYDN	**Tasoluk**	**1.20**	**302**	*i* P	Pg	10 13 07.5	+2.6
AYDN				*i* S	Sg	10 13 25.4	+5.0
ANTB	**Antalya**	**1.21**	**95**	*e*PN	Pn	10 13 06.3	+0.8
ANTB	**Antalya**	**1.21**	**95**	*e*Pn	Pn	10 13 06.3	+0.9
BCK	**Bucak**	**1.23**	**69**	*e*PN	Pn	10 13 06.6	+1.0
BCK	**Bucak**	**1.23**	**69**	*e*Pn	Pn	10 13 06.6	+0.9
DAT	**Datca**	**1.30**	**257**	*e*PN	Pn	10 13 07.7	+1.1
DAT	**Datca**	**1.30**	**257**	*e*Pn	Pn	10 13 07.7	+1.0
KHL	**Karahalli**	**1.33**	**13**	*e*PN	Pn	10 13 08.1	+1.0
KHL	**Karahalli**	**1.33**	**13**	*e*Pn	Pn	10 13 08.1	+1.0
ISP	**Isparta**	**1.35**	**53**	*e*PN	Pn	10 13 09.1	+1.7
ISP	**Isparta**	**1.35**	**53**	*e*Pn	Pn	10 13 09.1	+1.7
BDRM	**Kayabasi**	**1.37**	**272**	*i P*	Pn	10 13 10.2	+2.6
BDRM				*i* S	Sb	10 13 29.9	+4.2
BDRM	**Kayabasi**	**1.37**	**272**	*i P*	Pn	10 13 10.2	+2.6
BDRM				*i* S	Sb	10 13 30.0	+4.3
KHAL	**Karahalli**	**1.37**	**11**	*i P*	Pn	10 13 09.7	+2.0
KHAL				*i* S	Sb	10 13 29.7	+3.9
KHAL	**Karahalli**	**1.37**	**11**	*i P*	Pn	10 13 09.7	+2.0
KHAL				*i* S	Sb	10 13 29.7	+3.9
BODT	**Bodrum**	**1.48**	**272**	*e*PN	Pn	10 13 10.6	+1.5
BODT	**Bodrum**	**1.48**	**272**	*e*Pn	Pn	10 13 10.6	+1.5
KULA	**Kula-Manisa**	**1.54**	**345**	*e*PN	Pn	10 13 11.3	+1.4
KULA	**Kula-Manisa**	**1.54**	**345**	*e*Pn	Pn	10 13 11.4	+1.4
SUTC	**Sutluce-Ispart**	**1.54**	**72**	*e*PN	Pn	10 13 11.6	+1.6
SUTC	**Sutluce-Ispart**	**1.54**	**72**	*e*Pn	Pn	10 13 11.6	+1.6
SHUT	**Suhut-Afyon**	**1.89**	**36**	*e*PN	Pn	10 13 16.5	+1.8
SHUT	**Suhut-Afyon**	**1.89**	**36**	*e*Pn	Pn	10 13 16.5	+1.8
IZM	**Izmir**	**2.03**	**313**	*e*PN	Pn	10 13 18.7	+2.0
IZM	**Izmir**	**2.03**	**313**	*e*Pn	Pn	10 13 18.7	+1.9
GDZ	**Gediz**	**2.08**	**7**	*i P*	Pn	10 13 22.7	+5.4
GDZ				*i* S	Sn	10 13 54.1	+10
GDZ	**Gediz**	**2.08**	**7**	*i P*	Pn	10 13 22.7	+5.3
HDMB	**Hadim**	**2.67**	**90**	*e*PN	Pn	10 13 28.2	+2.7
HDMB	**Hadim**	**2.67**	**90**	*e*Pn	Pn	10 13 28.2	+2.7

*IDC **11** 10:27:32.5±4.5, 4°.63S×104°.49E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.5/20, mbtmp3.5/4, Error ellipse: s-maj=239.3km s-min=26.3km az=51.0*
*DJA **11** 10:27:48, 6°.09S×105°.43E, h4km, MLv3.4/10*
*ISCJB **11** 10:27:50.5±0.7, 6°.00S±0°.08×105°.61E±0°.07, h33km, mb3.4/3, Error ellipse: s-maj=14.2km s-min=5.4km az=43.9*

ISC 11 10:27:51.6±0.7, **5°.9S**±0°.1×**105°.7E**±0°.1, **h35**km, **n15**, σ1°26/19, **mb3.4/3, Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RBSI	**Rajabasa**	**0.10**	**58**	P	**Pn**	**10 27 55.9**	**-1.8**
RBSI				S	**Sn**	**10 28 02.2**	**+0.4**
SBJI	**Serang**	**0.52**	**115**	P	**Pn**	**10 28 01.9**	**-0.6**
BLSI	**Bandar Lampung**	**0.67**	**322**	P	**Pn**	**10 28 01.6**	**-3.0**
BLSI				S	**Sn**	**10 28 13.0**	**-0.8**
CGJI	**Cibinong**	**0.71**	**177**	P	**Pn**	**10 27 58.9**	**-6.3**
KASI	**Kota Agung**	**1.21**	**288**	P	**Pn**	**10 28 07.0**	**-5.1**
CBJI	**Citeko**	**1.29**	**114**	P	**Pn**	**10 28 18.0**	**+4.8**
KLI	**Kotabumi**	**1.30**	**322**	P	**Pn**	**10 28 14.5**	**+1.2**
SKJI	**Sukabumi**	**1.42**	**141**	P	**Pn**	**10 28 14.6**	**-0.3**
KLSI		**1.51**	**322**	P	**Pn**	**10 28 15.6**	**-0.6**
KLSI				S	**Sn**	**10 28 37.8**	**+3.1**
LWLI	**Liwa**	**1.82**	**299**	P	**Pn**	**10 28 19.5**	**-0.8**
MDSI	**Maura Dua**	**2.03**	**313**	P	**Pn**	**10 28 23.3**	**-0.1**
MDSI				S	**Sn**	**10 28 50.6**	**+3.0**
LEM	**Lembang**	**2.16**	**115**	P	**Pn**	**10 28 35.0**	**+10**
FITZ	**Fitzroy Crossi**	**22.97**	**124**	P	**P**	**10 32 54.9**	**+1.6**
	2.6nm,1.0s,mb3.6,baz=302,slow=19,SNR=2.3						
WRA	**Warramunga Arr**	**31.17**	**119**	P	**P**	**10 34 08.1**	**+0.6**
	0.5nm,0.7s,mb3.5,baz=297,slow=9.3,SNR=6.8						
ASAR	**Alice Springs**	**32.41**	**126**	P	**P**	**10 34 18.9**	**+0.4**
	0.2nm,0.4s,mb3.3,baz=298,slow=8.3,SNR=6.5						

CASC 11 10:37:46.5±2.8, **14°.05N×89°.83W, h8**km±8km, **MD3.5, 1C, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RBDL	**Robledal**	**0.15**	**67**	*e*P	Pg	10 37 50.5	+0.7
RTR	**El Retiro**	**0.24**	**131**	*e*P	Pg	10 37 52.1	+0.8
RTR				*e*S	Sg	10 37 56.2	+1.7
SNJE	**San Jose**	**0.29**	**130**	*e*P	Pg	10 37 52.9	+0.7
SNJE				*e*S	Sg	10 37 57.9	+1.8
SBLS	**San Blas**	**0.29**	**136**	*e*P	Pg	10 37 52.9	+0.6
SBLS				*e*S	Sg	10 37 59.2	+3.0
MTO2	**Montecristo 2**	**0.57**	**53**	*e*P	Pg	10 37 57.7	+0.1
MTO2				*e*S	Sg	10 38 05.8	+0.8
BOQS	**Boqueron**	**0.62**	**121**	*e*P	Pg	10 37 59.2	+0.6
BOQS				*e*S	Sg	10 38 08.2	+1.6
NBG	**Las Nubes**	**0.73**	**317**	*e*P	Pg	10 38 00.9	+0.3
NBG				*e*S	Sg	10 38 10.8	+0.7
LBRS	**Las Brisas**	**0.83**	**112**	*e*P	Pg	10 38 01.5	-0.9
LFRS	**El Faro**	**0.86**	**120**	*e*P	Pg	10 38 02.3	-0.8
LFRS				*e*S	Sg	10 38 14.4	+0.1
MRL	**Marmol**	**1.01**	**8**	*e*P	Pg	10 38 06.5	+0.5
MRL				*e*S	Sg	10 38 19.8	+0.6
FUG	**Fuego 3**	**1.05**	**292**	*e*P	Pg	10 38 06.3	-0.5
FUG				*e*S	Sg	10 38 19.9	-0.6
SNVI	**San Vicente**	**1.06**	**114**	*e*P	Pg	10 38 07.1	+0.2
FG6		**1.14**	**296**	*e*P	Pg	10 38 08.1	-0.2
FG6				*e*S	Sg	10 38 22.6	-0.5
TP2	**Tecpan 2**	**1.36**	**302**	*e*P	Pn	10 38 12.6	+0.8
CAHU	**Cacacuatique**	**1.60**	**100**	*e*P	Pn	10 38 15.8	+0.7
CAHU				*e*S	Sn	10 38 38.5	+2.5
JAT	**Jato**	**1.77**	**279**	*e*P	Pn	10 38 19.6	+2.1
CNCH	**Conchagua**	**2.09**	**111**	*e*P	Pn	10 38 23.6	+1.8
TGUH	**Tegucigalpa,Un**	**2.48**	**90**	*e*P	Pn	10 38 30.6	+3.3

*ISCJB **11** 10:42:30.4±0.3, 16°.75N±0°.05×94°.23W±0°.02, h137km±4km, mb4.0/11, Error ellipse: s-maj=7.9km s-min=3.6km az=13.3*
*IDC **11** 10:42:30.6±0.5, 16°.87N×93°.98W, h122km±7km, mb3.8/7, mb1 3.9/10, mb1mx3.7/23, mbtmp3.7/10, Error ellipse: s-maj=32.4km s-min=8.4km az=35.0*
*MEX **11** 10:42:33.1±1.2, 16°.77N×94°.23W, h130km±10km, MD4.4*
*NEIC **11** 10:42:33.1, 16°.77N×94°.23W, h130km, mb4.2/9, MD4.3(MEX), After MEX.*

ISC 11 10:42:31.6±0.3, **16°.71N**±0°.04×**94°.23W**±0°.02, **h133**km±3km, **n52**, σ1°13/80, **mb4.0**/11, **Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.73**	**302**	P	**Pn**	**10 42 52.6**	**+0.2**
	167nm,0.3s,baz=103,slow=5.5,SNR=1325						
CMIG				S	**Sn**	**10 43 08.2**	**-0.1**
	584nm,0.3s,baz=61,slow=19,SNR=117						
CMIG	**Matias Romero**	**0.73**	**302**	*i P*	**Pn**	**10 42 52.6**	**+0.1**
CMIG				*e*S	**Sn**	**10 43 06.2**	**-2.1**
CMIG				S	**Sn**	**10 43 08.2**	**-0.1**
CMIG	**Matias Romero**	**0.73**	**302**	*i P*	**Pn**	**10 42 52.6**	**+0.1**
CMIG				*e*S	**Sn**	**10 43 06.2**	**-2.1**
TGIG		**1.07**	**86**	*i P*	**Pn**	**10 42 55.0**	**-0.3**
TGIG				*e*S	**Sn**	**10 43 12.4**	**-1.0**
PCIG		**1.39**	**135**	*i P*	**Pn**	**10 42 59.4**	**+0.7**
PCIG				*e*S	**Sn**	**10 43 20.0**	**+0.6**
SCX	**San Cristobal**	**1.53**	**89**	*i P*	**Pn**	**10 43 00.6**	**+0.3**
SCX				*i* S	**Sn**	**10 43 21.6**	**-0.4**
SCX	**San Cristobal**	**1.53**	**89**	*i P*	**Pn**	**10 43 00.6**	**+0.3**
SCX				*i* S	**Sn**	**10 43 21.6**	**-0.4**
HUIG	**Huatulco**	**2.03**	**243**	*i P*	**Pn**	**10 43 05.2**	**-0.9**
HUIG				*i* S	**Sn**	**10 43 33.6**	**+1.2**
HUIG	**Huatulco**	**2.03**	**243**	*i P*	**Pn**	**10 43 05.2**	**-0.9**
HUIG				*i* S	**Sn**	**10 43 33.6**	**+1.2**
OXX	**Oaxaca**	**2.41**	**279**	*i P*	**Pn**	**10 43 13.4**	**+2.6**
OXX				*i* S	**Sn**	**10 43 45.2**	**+4.3**
OXX	**Oaxaca**	**2.41**	**279**	*i P*	**Pn**	**10 43 13.4**	**+2.6**
OXX				*i* S	**Sn**	**10 43 45.2**	**+4.3**
VHO	**Vista Hermosa**	**2.42**	**279**	*i P*	**Pn**	**10 43 11.9**	**+1.0**
VHO				*i* S	**Sn**	**10 43 40.7**	**-0.5**
VHO	**Vista Hermosa**	**2.42**	**279**	*i P*	**Pn**	**10 43 11.9**	**+1.0**
VHO				*i* S	**Sn**	**10 43 40.7**	**-0.5**
THIG		**2.60**	**133**	*i P*	**Pn**	**10 43 14.4**	**+1.1**
THIG				*e*S	**Sn**	**10 43 45.5**	**+0.2**
TPIG	**Tehuac#an**	**3.44**	**300**	*i P*	**Pn**	**10 43 24.6**	**+0.6**
TPIG				*e*S	**Sn**	**10 44 04.2**	**-0.4**
UTMO	**Huajuapan**	**3.59**	**289**	*i P*	**Pn**	**10 43 27.0**	**+1.0**
UTMO				*e*S	**Sn**	**10 44 07.0**	**-1.1**
PNIG	**Pinotepa**	**3.75**	**266**	*i P*	**Pn**	**10 43 27.5**	**-0.6**
PNIG				*e*S	**Sn**	**10 44 11.3**	**-0.6**
PNIG	**Pinotepa**	**3.75**	**266**	*i P*	**Pn**	**10 43 27.5**	**-0.6**
PNIG				*e*S	**Sn**	**10 44 11.3**	**-0.6**
APG	**El Apazote**	**4.00**	**114**	P	**Pn**	**10 43 30.2**	**-1.3**
	15nm,0.3s,baz=284,slow=13,SNR=95						
APG				S	**Sn**	**10 44 13.1**	**-4.8**
	142nm,0.3s,baz=233,slow=20,SNR=22						
PPM	**Popocatepetl**	**4.80**	**300**	*i P*	**Pn**	**10 43 42.3**	**+0.3**
PPM				*e*S	**Sn**	**10 44 36.3**	**-0.6**
PPM	**Popocatepetl**	**4.80**	**300**	*e*P	**Pn**	**10 43 38.6**	**-3.4**
PPM				*i* P		10 43 42.3	
PPM				*e*S	**Sn**	**10 44 36.3**	**-0.6**
PLIG	**Platanillo**	**5.30**	**289**	*i P*	**Pn**	**10 43 49.7**	**+0.9**
PLIG				*e*S	**Sn**	**10 44 48.3**	**-0.6**
PLIG	**Platanillo**	**5.30**	**289**	*i P*	**Pn**	**10 43 49.7**	**+0.9**
PLIG				*e*S	**Sn**	**10 44 48.3**	**-0.6**
ACX	**Acapulco**	**5.39**	**273**	*e*P	**Pn**	**10 43 44.8**	**-5.2**
ACX	**Acapulco**	**5.39**	**273**	*e*P	**Pn**	**10 43 44.8**	**-5.2**
CAIG	**El Cayaco**	**5.79**	**274**	*i P*	**Pn**	**10 43 55.4**	**0.0**
CAIG				*e*S	**Sn**	**10 45 00.1**	**-0.5**
CAIG	**El Cayaco**	**5.79**	**274**	*i P*	**Pn**	**10 43 55.4**	**0.0**
CAIG				*e*S	**Sn**	**10 45 00.1**	**-0.5**
TEIG	**Tepich**	**6.65**	**57**	*e*Pn	**Pn**	**10 44 03.4**	**-3.5**
	36nm,0.3s						
TEIG				*e*Sn	**Sn**	**10 45 22.2**	**+0.8**
TGUH	**Tegucigalpa,Un**	**7.21**	**110**	*e*Pn	**Pn**	**10 44 15.3**	**+0.8**
JTS	**JuntasAbangare**	**11.05**	**124**	P	**Pn**	**10 45 05.4**	**-0.5**
	5.2nm,0.3s,baz=317,slow=20,SNR=21						
JCT	**Junction City**	**14.63**	**341**	*e*Pn	**Pn**	**10 45 52.7**	**+0.6**
	7.6nm,0.5s						
JCT				*e*Sn	**Sn**	**10 48 37.2**	**+3.1**
TXAR	**Lajitas Array**	**15.27**	**327**	P	**Pn**	**10 46 01.5**	**+1.4**
	0.0nm,0.3s,baz=148,slow=15,SNR=5.6						
MIAR	**Mount Ida**	**17.78**	**2**	*e*P	**Pn**	**10 46 28.2**	**-2.4**
	5.4nm,0.4s						
MIAR				*e*S	**S**	**10 49 48.5**	**+1.3**
WMOK	**Wichita Mounta**	**18.41**	**348**	*e*P	**P**	**10 46 37.5**	**+1.0**
	5.8nm,0.6s						
GOGA	**Godfrey**	**19.26**	**28**	*e*P	**P**	**10 46 46.4**	**+0.7**
	8.7nm,1.0s						
TUC	**Tucson**	**21.59**	**319**	*e*P	**P**	**10 47 11.3**	**+0.5**
	6.1nm,1.4s,mb3.8						
PV04	**Paradox Valley**	**25.15**	**332**	*e*P	**P**	**10 47 48.1**	**+3.7**
ECSD	**EROS Data Cent**	**27.02**	**356**	*e*P	**P**	**10 47 59.4**	**-1.8**
	1.5nm,0.6s,mb3.8						
NVAR	**Mina Array Bea**	**30.23**	**320**	P	**P**	**10 48 30.6**	**+1.0**
	0.5nm,0.9s,mb3.3,baz=148,slow=8.6,SNR=3.4						
NVAR				pP	pP	10 49 01.7	+3.4
	0.7nm,0.8s,baz=137,slow=8.8,SNR=5.0						
NVAR	**Mina Array Bea**	**30.23**	**320**	P	**P**	**10 48 30.6**	**+1.0**
NVAR				pP	pP	10 49 01.7	+3.4
AGMN	**Agassiz Nation**	**31.54**	**358**	*e*P	**P**	**10 48 38.8**	**-2.3**
	3.8nm,0.7s,mb4.2						
LPAZ	**La Paz**	**41.68**	**141**	P	**P**	**10 50 09.2**	**+1.9**
	1.1nm,0.8s,mb3.5,baz=306,slow=12,SNR=4.2						
SIV	**San Ignacio**	**46.10**	**133**	P	**P**	**10 50 40.7**	**-2.0**
	1.6nm,0.6s,mb3.8,baz=300,slow=8.2,SNR=9.4						
YKA	**

CORM	**Corum**	**2.04 292**	*e*PN	**Pn**	**11 08 17.9 -1.0**
CORM	**Corum**	**2.04 292**	*e*Pn	**Pn**	**11 08 17.9 -1.0**
GUMT	**Gumushane**	**2.09 60**	*e*PN	**Pn**	**11 08 20.4 +0.8**
GUMT	**Gumushane**	**2.09 60**	*e*Pn	**Pn**	**11 08 20.4 +0.8**

IDC 11 11:09:42.0±3.3, 9°83S×154°59E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.7/13, mbtmp3.6/5, Error ellipse: s-maj=96.1km s-min=29.8km az=108.0, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.98**	**240**	P	P	11 14 38.0	+0.3
	1.8nm,0.9s,baz=64,slow=10.0,SNR=8.0						
ASAR	**Alice Springs**	**24.07**	**233**	P	P	11 14 58.3	-0.9
	1.0nm,1.0s,baz=64,slow=8.4,SNR=4.6						
STKA	**Stephens Creek**	**25.02**	**207**	P	P	11 15 08.2	+0.4
	2.0nm,0.8s,baz=24,slow=10.0,SNR=3.1						
SONM	**Songino Array**	**71.51**	**328**	P	P	11 21 04.2	-0.3
	0.5nm,0.7s,baz=120,slow=6.0,SNR=4.0						
MKAR	**Makanchi Array**	**85.27**	**319**	P	P	11 22 21.7	+1.0
	0.1nm,0.5s,baz=105,slow=4.9,SNR=5.1						

CASC 11 11:38:40.4±1.7, 8°90N×82°51W, h10km, MD3.5, 1C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.21**	**240**	⇓*i*P	Pg	11 38 45.8	+0.9
BRU2				*e*S	Sg	11 38 49.6	+1.9
CTCR	**Cotoan**	**0.25**	**269**	*e*P	Pg	11 38 46.1	+0.6
CTCR				*e*S	Sg	11 38 50.6	+1.6
CNI	**Changuinola**	**0.51**	**359**	⇑*i*P	Pg	11 38 50.8	+0.4
CNI				*e*S	Sg	11 38 58.4	+1.2
ACR	**Cerro Adams**	**0.70**	**250**	⇓*e*P	Pg	11 38 53.2	-0.7
ACR				*e*S	Sg	11 39 04.3	+1.2
BAR1		**0.86**	**293**	*e*P	Pg	11 38 55.6	-1.5
BAR1				*e*S	Sg	11 39 08.2	-0.2
BUS	**Buena Vista**	**1.40**	**298**	*e*P	Pn	11 39 05.5	-0.5
BUS				*e*S	Sn	11 39 24.8	+0.3
URSC	**Urasca**	**1.56**	**307**	*e*P	Pn	11 39 08.1	-0.1
URSC				*e*S	Sn	11 39 28.4	-0.2
LAJ	**Bijagual**	**1.86**	**301**	*e*P	Pn	11 39 18.2	+5.9
LAJ				*e*S	Sn	11 39 45.8	+10
PRS1	**Puriscal**	**2.08**	**301**	⇓*e*P	Pn	11 39 16.2	+0.8
PRS1				*e*S	Sn	11 39 42.5	+1.1
CGA2	**Cerro Gallo 2**	**2.23**	**300**	*e*P	Pn	11 39 18.5	+1.1
CGA2				*e*S	Sn	11 39 46.4	+1.3
BCIP	**Isla Barro Col**	**2.65**	**84**	*e*S	Sn	11 39 54.8	-0.6

*ISCJB **11** 11:54:19.7±0.4, 13°.59N±0°.05×120°.70E±0°.07, h148km±4km, mb4.0/15, Error ellipse: s-maj=11.9km s-min=7.8km az=173.6*
*IDC **11** 11:54:19.5±0.7, 13°.59N×120°.96E, h140km±5km, mb3.3/8, mb1 3.4/8, mb1mx3.3/21, mbtmp3.3/8, Error ellipse: s-maj=29.9km s-min=15.9km az=67.0*
*NEIC **11** 11:54:20.0±0.8, 13°.56N×120°.95E, h146km±7km, mb3.9/2, Error ellipse: s-maj=19.6km s-min=10.5km az=67.0*
*MAN **11** 11:54:21, 13°.60N×120°.68E, h108km, mb4.8, ML3.7, MS3.7*
ISC 11 11:54:20.8±0.4, 13°58N±0°.05×120°71E±0°.07, h142km±4km, n32, σ1°04/34, mb4.0/15, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.47**	**289**	*e*P	**Pn**	**11 54 40.0**	**-1.1**
LUBP				*e*S	Px	11 54 42.5	
TGY	**Tagaytay City**	**0.57**	**23**	P	**Pn**	**11 54 41.1**	**-0.4**
	562nm,0.3s,baz=158,slow=5.4,SNR=26						
TGY				S	**Sn**	**11 54 56.6**	**-0.8**
	282nm,0.3s,baz=341,slow=22,SNR=10						
BOAC	**Boac**	**1.11**	**96**	*e*P	**Pn**	**11 54 44.4**	**-1.4**
BOAC				*e*S	**Sn**	**11 54 50.7**	**-14**
SJMP	**San Jose**	**1.18**	**160**	*e*P	**Pn**	**11 54 46.2**	**-0.3**
BUSP	**Coron**	**1.64**	**198**	*e*P	**Pn**	**11 54 51.4**	**0.0**
POLP	**Polilio Island**	**1.65**	**46**	*e*P	**Pn**	**11 54 52.6**	**+1.2**
OTRP	**Odiongan**	**1.76**	**133**	*e*P	**Pn**	**11 54 52.4**	**-0.3**
AUQP	**San Andres**	**1.93**	**97**	*e*P	**Pn**	**11 54 56.7**	**+2.1**
PCPH	**Palayan**	**2.01**	**11**	⇓*e*P	**Pn**	**11 54 54.1**	**-1.4**
BALP	**Baler**	**2.31**	**21**	*e*P	**Pn**	**11 54 59.4**	**+0.3**
SCZP	**Santa Cruz**	**2.32**	**341**	*e*P	**Pn**	**11 55 00.1**	**+0.9**
ENPP	**El Nido**	**2.67**	**208**	*e*P	**Pn**	**11 55 04.7**	**+1.0**
CUYO	**Cuyo Island**	**2.73**	**174**	*e*P	**Pn**	**11 55 05.3**	**+0.8**
BOLP	**Bolinao**	**2.89**	**345**	*e*P	**Pn**	**11 55 05.4**	**-1.0**
PVCP	**Virac**	**3.35**	**89**	*e*P	**Pn**	**11 55 13.7**	**+1.4**
CAUP	**Cauayan**	**3.51**	**18**	*e*P	**Pn**	**11 55 15.6**	**+1.2**
CMAR	**Chiang Mai Arr**	**21.47**	**286**	P	**P**	**11 58 59.9**	**+1.8**
	3.9nm,0.8s,mb3.8,baz=94,slow=8.0,SNR=26						
PSI	**Prapat**	**24.05**	**245**	P	**P**	**11 59 23.8**	**+0.9**
	3.1nm,0.7s,mb4.0,baz=90,slow=3.0,SNR=4.2						
ODAN	**Odare**	**33.83**	**298**	*e*P	**P**	**12 00 49.9**	**+0.3**
	21nm,0.6s,mb5.0						
RAMN	**Ramite**	**34.53**	**298**	*e*P	**P**	**12 00 57.0**	**+1.4**
	17nm,0.6s,mb4.9						
JIRN	**Jiri**	**35.08**	**299**	*e*P	**P**	**12 00 59.5**	**-0.8**
	21nm,0.4s,mb5.1						
GUN	**Gumba**	**35.41**	**299**	*e*P	**P**	**12 01 01.8**	**-1.4**
	13nm,0.4s,mb4.9						
KKN	**Kakani**	**35.89**	**299**	*e*P	**P**	**12 01 06.8**	**-0.5**
	17nm,0.6s,mb4.9						
WRA	**Warramunga Arr**	**35.91**	**158**	P	**P**	**12 01 06.0**	**-1.4**
	0.2nm,0.4s,mb3.1,baz=332,slow=10,SNR=4.6						
WRA				pP	pP	12 01 36.8	-1.6
	0.4nm,0.8s,baz=333,slow=9.7,SNR=3.1						
SONM	**Songino Array**	**36.17**	**344**	P	**P**	**12 01 09.4**	**0.0**
	0.5nm,0.6s,mb3.3,baz=161,slow=10,SNR=5.5						
ASAR	**Alice Springs**	**39.20**	**161**	P	**P**	**12 01 33.3**	**-1.9**
	0.2nm,0.3s,mb3.2,baz=336,slow=7.8,SNR=4.6						
ASAR				pP	pP	12 02 06.5	0.0
	0.7nm,1.0s,baz=337,slow=6.5,SNR=4.6						
MK31	**Makanchi Array**	**46.13**	**324**	*e*P	**P**	**12 02 31.0**	**+0.2**
MKAR	**Makanchi Array**	**46.13**	**324**	P	**P**	**12 02 31.4**	**+0.7**
	1.7nm,0.8s,mb3.7,baz=118,slow=7.8,SNR=10						
ZALV	**Zalesovo Beam**	**49.17**	**333**	P	**P**	**12 02 53.3**	**-0.8**
	1.1nm,0.5s,mb3.7,baz=120,slow=6.8,SNR=4.5						
KURK	**Kurchatov**	**50.29**	**326**	*e*P	**P**	**12 03 03.5**	**+0.9**
	4.2nm,0.8s,mb4.1						
ABKAR	**Akbulak array**	**60.83**	**319**	*e*P	**P**	**12 04 18.1**	**+0.2**
	0.4nm,0.4s,mb3.6						
ARCES	**ARCESS Array B**	**79.20**	**339**	P	**P**	**12 06 08.1**	**-1.5**
	0.6nm,0.8s,mb3.3,baz=61,slow=6.3,SNR=2.9						

NNC 11 11:54:34.8±5.9, 53°93N×85°96E, h0km, mb3.9, mpv3.4, 6C-3D, Error ellipse: s-maj=54.6km s-min=26.8km az=63.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**5.53**	**237**	⇑Pn	Pn	11 56 00.6	+2.3
	6.8nm,1.3s						
KURK				⇑Lg		11 57 36.1	
	14nm,0.9s						
MK31	**Makanchi Array**	**7.52**	**200**	⇓Pn	Pn	11 56 28.3	+2.8
	1.1nm,0.5s,baz=24,slow=12,SNR=24						
MK31				⇑Sn	Sn	11 57 57.5	+6.1
	1.0nm,0.6s						
MK31				⇓Lg		11 58 38.3	
	1.9nm,0.7s,baz=33,slow=31,SNR=4.2						
VOSK	**Vostochnaya**	**9.05**	**268**	⇑Pn	Pn	11 56 46.3	-0.3
	1.8nm,0.6s						
VOSK				⇑Sn	Sn	11 58 24.0	-5.0
	3.1nm,0.7s						
ZRNK	**Zerenda**	**10.17**	**271**	⇑Pn	Pn	11 57 01.3	-0.5
	2.2nm,0.6s						
ZRNK				⇓Sn	Sn	11 59 02.3	+5.9
	1.6nm,0.7s						

*NEIC **11** 11:59:01.0±1.2, 6°.96S×154°.76E, mb4.2/2, Error ellipse: s-maj=39.0km s-min=15.0km az=115.0*
IDC 11 11:58:59.7±1.8, 7°07S×154°86E, h43km±6km, mb3.6/8, mb1 3.8/8, mb1mx3.7/15, mbtmp3.6/8, Error ellipse: s-maj=51.9km s-min=20.2km az=119.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**15.40**	**212**	P	Pn	12 02 37.9	+3.7
	baz=37,slow=14,SNR=4.3						
WRAB	**Tennant Creek**	**23.65**	**235**	*e*P	P	12 04 08.1	+0.7
	29nm,1.7s						
WRA	**Warramunga Arr**	**23.66**	**235**	P	P	12 04 06.6	-0.9
	1.6nm,0.8s,baz=58,slow=9.7,SNR=12						
WRA				pP	pP	12 04 19.4	+0.8
	1.3nm,0.7s,baz=57,slow=9.6,SNR=5.2						
WRA	**Warramunga Arr**	**23.66**	**235**	P	P	12 04 06.6	-0.9
WRA				pP	pP	12 04 19.4	+0.8
ASAR	**Alice Springs**	**26.02**	**228**	P	P	12 04 29.3	+0.3
	1.1nm,0.9s,baz=60,slow=9.9,SNR=8.2						
ASAR				sP	sP	12 04 46.2	+0.7
	1.1nm,0.8s,baz=61,slow=8.7,SNR=4.2						
FITZ	**Fitzroy Crossi**	**30.50**	**246**	P	P	12 05 08.4	-0.6
	1.9nm,1.0s,baz=63,slow=11,SNR=3.5						
CMAR	**Chiang Mai Arr**	**60.69**	**296**	P	P	12 09 08.9	+1.7
	0.6nm,0.3s,baz=120,slow=6.4,SNR=3.2						
SONM	**Songino Array**	**69.32**	**327**	P	P	12 10 02.6	-0.1
	0.2nm,0.3s,baz=134,slow=4.2,SNR=3.0						
SONM				pP	pP	12 10 15.9	+0.7
	0.3nm,0.3s,baz=145,slow=5.4,SNR=4.0						
MK31	**Makanchi Array**	**83.37**	**319**	*e*P	P	12 11 22.9	+0.5
MKAR	**Makanchi Array**	**83.37**	**319**	P	P	12 11 22.3	-0.1
	1.2nm,0.7s,baz=98,slow=5.9,SNR=17						
MKAR				pP	pP	12 11 34.4	-0.8
	0.6nm,0.6s,baz=107,slow=4.2,SNR=5.3						
ZALV	**Zalesovo Beam**	**84.16**	**326**	P	P	12 11 25.6	-0.7
	0.6nm,0.3s,baz=101,slow=7.5,SNR=3.1						
KURK	**Kurchatov**	**86.80**	**322**	*e*P	P	12 11 41.1	+1.6
	0.4nm,0.4s						
NVAR	**Mina Array Bea**	**91.87**	**52**	P	P	12 12 04.4	+0.7
	0.2nm,0.4s,baz=252,slow=6.0,SNR=4.1						

IDC 11 12:36:37.0±2.2, 5°91S×129°47E, h0km, mb3.5/1, mb1 3.8/4, mb1mx3.6/16, mbtmp3.6/4, ML3.7/3, Error ellipse: s-maj=93.0km s-min=27.9km az=75.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.69**	**197**	Pn	Pn	12 39 40.6	+1.7
	0.3nm,0.3s,baz=44,slow=8.3,SNR=16						
FITZ				Sn	Sn	12 41 47.0	-14
	0.6nm,0.3s,baz=87,slow=22,SNR=7.8						
WRA	**Warramunga Arr**	**14.73**	**162**	Pn	Pn	12 40 06.7	-0.1
	0.3nm,0.3s,baz=342,slow=13,SNR=36						
WRA				Sn	Sn	12 42 38.8	-12
	0.5nm,0.3s,baz=336,slow=25,SNR=7.7						
ASAR	**Alice Springs**	**18.17**	**167**	P	Pn	12 40 49.7	-1.1
	0.2nm,0.3s,baz=345,slow=10,SNR=16						
ASAR				S	Sn	12 44 02.2	-12
	0.2nm,0.3s,baz=340,slow=24,SNR=4.7						
MKAR	**Makanchi Array**	**67.03**	**327**	P	P	12 47 32.1	+0.1
	0.2nm,0.4s,baz=134,slow=6.2,SNR=5.7						

*IDC **11** 12:47:07.8±1.5, 43°.13N×126°.29W, h0km, mb3.7/6, mb1 3.9/12, mb1mx3.8/29, mbtmp3.8/12, ML3.4/6, MS3.5/11, Ms1 3.5/11, ms1mx3.3/38, Error ellipse: s-maj=33.5km s-min=10.4km az=44.0*
*ISCJB **11** 12:47:09.6±0.3, 43°.27N±0°.02×126°.29W±0°.04, h13km, mb4.2/16, MS3.5/6, Error ellipse: s-maj=4.3km s-min=3.3km az=151.7*
*BJI **11** 12:47:11.4, 44°.02N×126°.60W, h9km, mB4.9/5, mb4.8/7, Ms4.5/5, Ms7 4.1/5*
*NEIC **11** 12:47:11.2±0.6, 43°.29N×126°.28W, h10km, mb4.3/18, Error ellipse: s-maj=8.1km s-min=4.7km az=54.0*
ISC 11 12:47:10.8±1.3, 43°27N±0°.03×126°36W±0°.04, h9km±9km, h14km±1.4km; pP-P, n109, σ1°13/118, mb4.2/16, MS3.5/6, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**1.54**	**104**	P	**Pn**	**12 47 33.9**	**-4.5**
RNO	**Roman Nose**	**2.01**	**71**	P	**Pn**	**12 47 42.5**	**-2.3**
DBO	**Dodson Butte**	**2.28**	**93**	P	**Pn**	**12 47 45.4**	**-3.2**
EUO	**Eugene**	**2.50**	**71**	P	**Pn**	**12 47 49.6**	**-2.1**
COR	**Corvallis**	**2.57**	**58**	*e*Pn	**Pn**	**12 47 51.1**	**-1.4**
COR				*e*Sn	**Sn**	**12 48 23.7**	**-0.2**
HUMO	**Hull Mountain**	**2.58**	**104**	*e*Pn	**Pn**	**12 47 49.1**	**-3.7**
HUMO				*e*Sn	**Sn**	**12 48 22.8**	**-1.5**
HEBO	**Mount Hebo**	**2.69**	**43**	*e*Pn	**Pn**	**12 47 53.1**	**-1.2**
HEBO				*e*Sn	**Sn**	**12 48 27.4**	**+0.4**
BBOR	**Butler Butte**	**2.72**	**97**	P	**Pn**	**12 47 52.1**	**-2.5**
IRO	**Indian Ridge**	**3.07**	**75**	P	**Pn**	**12 47 58.1**	**-1.3**
YBH	**Yreka Blue Hor**	**3.11**	**118**	**Pn**	**Pn**	**12 47 56.3**	**-3.6**
	2.6nm,0.3s,baz=312,slow=10,SNR=55						
YBH				S	**Sn**	**12 48 35.0**	**-2.1**
	1.3nm,0.3s,baz=96,slow=13,SNR=7.4						
YBH				LR	LR	12 49 17.9	
	comp=Z,499nm,19.0s,baz=293,slow=44						
YBH	**Yreka Blue Hor**	**3.11**	**118**	*e*Pn	**Pn**	**12 47 56.9**	**-3.1**
YBH				*e*Sn	**Sn**	**12 48 37.5**	**+0.3**
BKCOR	**Black Crater**	**3.53**	**72**	P	**Pn**	**12 48 04.7**	**-1.0**
HOOD	**Mount Hood Mea**	**3.95**	**57**	*e*Pn	**Pn**	**12 48 11.7**	**+0.1**
HOOD				*e*Sn	**Sn**	**12 48 59.1**	**+1.1**
NLWA	**Neilton Lookou**	**4.48**	**22**	*e*Pn	**Pn**	**12 48 18.3**	**-0.4**
NLWA				*e*Sn	**Sn**	**12 49 09.8**	**-1.1**
MOD	**Modoc**	**4.68**	**105**	*e*Pn	**Pn**	**12 48 21.7**	**+0.2**
LON	**Longmire**	**4.74**	**41**	*e*Pn	**Pn**	**12 48 22.3**	**-0.1**
LON				*e*Sn	**Sn**	**12 49 17.3**	**-0.1**
GNW	**Green Mountain**	**4.96**	**29**	*e*Pn	**Pn**	**12 48 26.2**	**+0.8**
GNW				*e*Sn	**Sn**	**12 49 25.3**	**+2.5**
RSW	**Rattlesnake Hi**	**5.73**	**55**	*e*Pn	**Pn**	**12 48 35.8**	**-0.2**
WVOR	**Wild Horse Val**	**5.74**	**96**	*e*Pn	**Pn**	**12 48 34.1**	**-2.0**
	19nm,1.1s						
PGC	**Sidney**	**5.75**	**20**	*e*Pn	**Pn**	**12 48 35.8**	**-0.4**
PGC				*e*Sn	**Sn**	**12 49 41.2**	**-1.0**
HAWA	**Hanford**	**5.77**	**55**	*e*Pn	**Pn**	**12 48 36.1**	**-0.4**
JCW	**Jim Creek**	**5.81**	**31**	*e*Pn	**Pn**	**12 48 36.6**	**-0.5**
JCW				*e*Sn	**Sn**	**12 49 45.1**	**+1.2**
ETW	**Entiat**	**6.06**	**42**	*e*Pn	**Pn**	**12 48 41.1**	**+0.6**
RPW	**Rockport**	**6.18**	**31**	*e*Pn	**Pn**	**12 48 41.8**	**-0.4**
RPW				*e*Sn	**Sn**	**12 49 54.6**	**+1.7**
LNOR	**Lincton Mounta**	**6.32**	**63**	*e*Pn	**Pn**	**12 48 42.8**	**-1.3**
BMO	**Blue Mountains**	**6.71**	**73**	*e*Pn	**Pn**	**12 48 48.0**	**-1.4**
OD2	**Odessa Site #2**	**6.78**	**50**	*e*Pn	**Pn**	**12 48 50.0**	**-0.4**
CMB	**Columbia Colle**	**6.93**	**137**	*e*Pn	**Pn**	**12 48 53.3**	**+0.8**
NVAR	**Mina Array Bea**	**7.79**	**126**	Pn	**Pn**	**12 49 03.3**	**-0.9**
	0.1nm,0.3s,baz=296,slow=14,SNR=6.2						
ELK	**Elko**	**8.66**	**103**	Pn	**Pn**	**12 49 15.7**	**-0.4**
	0.1nm,0.3s,baz=291,slow=13,SNR=7.7						
HLID	**Hailey**	**8.70**	**84**	*e*Pn	**Pn**	**12 49 17.3**	**+0.5**
N12A	**Clover Valley,**	**8.76**	**102**	*e*Pn	**Pn**	**12 49 19.1**	**+1.6**
BBB	**Bella Bella**	**8.99**	**353**	Pn	**Pn**	**12 49 21.8**	**+1.1**
	0.7nm,0.3s,baz=357,slow=14,SNR=7.6						
BBB				LR	LR	12 52 11.9	
	comp=Z,298nm,19.3s,baz=337,slow=33						
M13A	**Montello**	**9.23**	**98**	*e*Pn	**Pn**	**12 49 25.0**	**+0.9**
BSMT	**Bassoo Peak**	**9.32**	**57**	*e*Pn	**Pn**	**12 49 25.9**	**+0.8**
N13A	**Wendover, West**	**9.36**	**101**	*e*Pn	**Pn**	**12 49 26.4**	**+0.7**
MSO	**Missoula**	**9.48**	**64**	*e*Pn	**Pn**	**12 49 26.8**	**-0.6**
JTMT	**Jette**	**9.58**	**58**	*e*Pn	**Pn**	**12 49 29.9**	**+1.1**
SWMT	**Swartz Lake**	**9.67**	**60**	*e*Pn	**Pn**	**12 49 29.5**	**-0.5**
	5.9nm,1.0s						
ISA	**Isabella**	**9.74**	**139**	*e*Pn	**Pn**	**12 49 31.3**	**+0.3**
SLMT	**Seeley Lake**	**9.90**	**62**	*e*Pn	**Pn**	**12 49 32.4**	**-0.8**
CHMT	**Chamberlain Mo**	**9.96**	**64**	*e*Pn	**Pn**	**12 49 33.3**	**-0.6**
DLMT	**Dillon**	**10.08**	**73**	*e*Pn	**Pn**	**12 49 35.0**	**-0.7**
LRM	**Limekiln Ridge**	**10.25**	**71**	*e*Pn	**Pn**	**12 49 37.8**	**-0.2**
WALA	**Waterton Lakes**	**10.39**	**52**	*e*Pn	**Pn**	**12 49 40.5**	**+0.7**
DUG	**Dugway**	**10.58**	**102**	*e*Pn	**Pn**	**12 49 42.2**	**-0.3**
BOZ	**Bozeman (W)**	**10.79**	**72**	*e*Pn	**Pn**	**12 49 45.3**	**-0.1**
GSC	**Goldstone**	**10.86**	**134**	*e*Pn	**Pn**	**12 49 49.2**	**+2.8**
RRI2	**Red Ridge**	**10.96**	**84**	*e*Pn	**Pn**	**12 49 48.3**	**+0.6**
NLU	**North Lily Min**	**11.20**	**102**	*e*Pn	**Pn**	**12 49 52.5**	**+1.6**
IMW	**Indian Meadow**	**11.21**	**82**	*e*Pn	**Pn**	**12 49 53.5**	**+2.4**
TPAW	**Teton Pass**	**11.22**	**84**	*e*Pn	**Pn**	**12 49 53.0**	**+1.7**
REDW	**Red Top Meadow**	**11.30**	**84**	*e*Pn	**Pn**	**12 49 54.0**	**+1.7**
CCUT	**Cedar City**	**11.43**	**116**	*e*Pn	**Pn**	**12 49 55.9**	**+1.7**
LOHW	**Long Hollow**	**11.46**	**83**	*e*Pn	**Pn**	**12 49 56.1**	**+1.5**
LDFC	**Landfair**	**11.96**	**129**	*e*Pn	**Pn**	**12 50 02.5**	**+1.1**
GCMT	**Greycliff**	**12.18**	**72**	*e*Pn	**Pn**	**12 50 05.5**	**+1.2**
	2.9nm,0.9s						
BW06	**Boulder Array**	**12.31**	**87**	*e*Pn	**Pn**	**12 50 06.9**	**+0.7**
PDAR	**Pinedale Array**	**12.31**	**87**	Pn	**Pn**	**12 50 06.8**	**+0.7**
	0.0nm,0.3s,baz=286,slow=11,SNR=16						
PDAR				LR	LR	12 55 17.3	
	comp=Z,451nm,19.2s,baz=313,slow=40						
EDM	**Edmonton**	**13.18**	**36**	*e*Pn	**Pn**	**12 50 17.8**	**-0.2**
WUAZ	**Wupatki**	**13.92**	**119**	*e*Pn	**Pn**	**12 50 30.4**	**+2.1**
PV04	**Paradox Valley**	**14.08**	**104**	*e*Pn	**Pn**	**12 50 31.4**	**+1.1**
PV01	**Paradox Valley**	**14.43**	**105**	*e*Pn	**Pn**	**12 50 34.5**	**-0.7**
	413nm,1.1s						
DLBC	**Dease Lake**	**15.36**	**353**	Pn	**Pn**	**12 50 50.9**	**+3.4**
	0.1nm,0.3s,baz=175,slow=12,SNR=19						
DLBC				LR	LR	12 56 02.7	
	comp=Z,138nm,20.0s,baz=328,slow=34						
DLBC	**Dease Lake**	**15.36**	**353**	*e*P	**Pn**	**12 50 53.8**	**+6.4**
DLBC				LR	LR	12 56 02.6	
ISCO	**Idaho Springs**	**15.91**	**96**	*e*Pn	**Pn**	**12 50 54.8**	**0.0**
	11nm,1.0s						
DGMT	**Dagmar**	**16.27**	**64**	*e*Pn	**Pn**	**12 50 59.0**	**-0.3**
	55nm,1.3s						
SDCO	**Great Sand Dun**	**16.78**	**102**	*e*Pn	**Pn**	**12 51 04.9**	**-1.0**
	26nm,1.5s						
LAZ	**Ladron**	**17.37**	**114**	*e*Pn	**Pn**	**12 51 13.4**	**+0.1**
	4.2nm,1.3s						
ANMO	**Albuquerque**	**17.51**	**112**	P	**Pn**	**12 51 12.6**	**-2.5**
	0.1nm,0.3s,baz=315,slow=11,SNR=13						
ANMO				LR	LR	12 58 31.4	
	comp=Z,119nm,18.0s,baz=125,slow=39						
ANMO	**Albuquerque**	**17.51**	**112**	*e*Pn	**Pn**	**12 51 14.2**	**-0.9**
	10nm,1.1s						
BNM	**Barren Site**	**17.86**	**114**	*e*Pn	**Pn**	**12 51 19.4**	**0.0**
	19nm,1.3s						
HYT	**Haines Junctio**	**18.82**	**343**	*e*Pn	**Pn**	**12 51 31.4**	**+0.4**
FFC	**Flin Flon**	**19.56**	**46**	*e*P	**Pn**	**12 51 38.2**	**-1.8**
	22nm,1.0s						
YKA	**Yellowknife Ar**	**20.45**	**16**	P	**P**	**12 51 49.7**	**+1.4**
	2.2nm,0.7s,baz=206,slow=11,SNR=3.1						
GDL2	**Guadalupe Moun**	**20.55**	**115**	*e*P	**P**	**12 51 50.9**	**+1.3**
AMTX	**Amarillo**	**20.85**	**105**	*e*Pn	**P**	**12 51 54.3**	**+1.4**
	55nm,1.5s						
ECSD	**EROS Data Cent**	**21.53**	**78**	*e*P	**P**	**12 51 59.1**	**-1.0**
	14nm,1.1s,mb4.3						
ULM	**Lac du Bonnet**	**21.91**	**61**	P	**P**	**12 52 02.8**	**-1.3**
	7.2nm,0.9s,mb4.1,baz=294,slow=13,SNR=3.7						
ULM				LR	LR	13 01 04.9	
	comp=Z,266nm,18.4s,MS3.7,baz=258,slow=38						
KDAK	**Kodiak Island**	**21.91**	**321**	P	**P**	**12 52 02.5**	**-1.6**
	2.4nm,0.5s,mb3.9,baz=78,slow=6.7,SNR=4.9						
KDAK	**Kodiak Island**	**21.91**	**321**	P	**P**	**12 52 02.5**	**-1.6**
DAWY	**Dawson**	**22.13**	**345**	*e*P	**P**	**12 52 07.8**	**+1.5**
MENT	**Mentasta**	**22.14**	**339**	*e*P	**P**	**12 52 06.6**	**+0.2**
KSU1	**Kansas State U**	**22.71**	**90**	*e*P	**P**	**12 52 12.4**	**-0.3**
	37nm,1.1s,mb4.7						
TXAR	**Lajitas Array**	**22.88**	**120**	P	**P**	**12 52 11.9**	**-2.7**
	1.0nm,1.1s,mb3.2,baz=315,slow=10,SNR=6.6						
TXAR				LR	LR	13 01 54.6	
	comp=Z,50nm,19.8s,MS3.0,baz=180,slow=39						
WMOK	**Wichita Mounta**	**22.98**	**102**	*e*P	**P**	**12 52 15.8**	**+0.2**
	7.8nm,1.0s,mb4.1						
PPLA	**Purkeypile**	**24.73**	**332**	*e*P	**P**	**12 52 31.8**	**-0.3**
	9.4nm,1.0s,mb4.3						
SDPT	**Sand Point**	**25.04**	**311**	*e*P	**P**	**12 52 35.1**	**+0.1**
	42nm,1.6s,mb4.7						
INK	**Inuvik**	**25.38**	**354**	P	**P**	**12 52 37.3**	**-0.6**
	1.1nm,0.7s,mb3.5,baz=298,slow=7.2,SNR=2.6						
INK				LR	LR	13 02 18.3	
	comp=Z,159nm,19.4s,MS3.5,baz=185,slow=36						
INK	**Inuvik**	**25.38**	**354**	P	**P**	**12 52 37.3**	**-0.6**
INK				LR	LR	13 02 18.3	
MIAR	**Mount Ida**	**26.82**	**98**	*e*P	**P**	**12 52 52.0**	**+0.7**
	6.9nm,1.0s,mb4.1						
CCM	**Cathedral Cave**	**27.01**	**89**	*e*P	**P**	**12 52 52.9**	**0.0**
	13nm,1.4s,mb4.3						
COLD	**Coldfoot**	**27.23**	**340**	*e*P	**P**	**12 52 56.8**	**+2.1**
	32nm,2.0s,mb4.5						
IMA2	**Indian Mountai**	**27.34**	**336**	*e*P	**P**	**12

comp=E,440nm,0.1s

PSGC	**Pisagua**	**3.14**	**319**	*e*P	Pn	13 08 58.8 +1.8
PSGC				*i* S	S	13 09 39.8 +1.9
MNMC	**Miaee Miaé**	**3.24**	**331**	⇑*i*P	Pn	13 09 00.6 +2.4
MNMC				*i* S	S	13 09 42.5 +2.5

IDC ***11*** *13:10:54.8±1.1, 7°.57S×127°.80E, h0km, mb3.9/4, mb1 4.0/7, mb1mx3.8/16, mbtmp3.8/7, ML3.8/3, Error ellipse: s-maj=88.3km s-min=19.8km az=70.0*
NEIC ***11*** *13:11:03.0±2.3, 7°.81S×127°.49E, h68km±26km, mb3.9/1, Error ellipse: s-maj=20.6km s-min=18.6km az=47.0*
ISCJB ***11*** *13:11:03.0±2.2, 7°.94S±0°.08×127°.78E±0°.10, h100km±23km, mb3.7/5, Error ellipse: s-maj=16.9km s-min=11.8km az=153.2*

ISC 11 13:11:06.6±2.0, 8°.06S±0°.09×127°.84E±0°.09, h122km±22km, n13, σ0§94/18, mb3.7/5, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.47**	**136**	*e*Pn	**Pn**	**13 12 41.2**	**+1.7**
KAKA				*e*Sn	**Sn**	**13 13 51.2**	**-0.8**
FITZ	**Fitzroy Crossi**	**10.21**	**192**	Pn	**Pn**	**13 13 29.5**	**-0.5**
	0.5nm,0.3s,baz=20,slow=14,SNR=8.0						
FITZ				Sn	**Sn**	**13 15 23.0**	**+0.3**
	0.6nm,0.3s,baz=74,slow=18,SNR=4.0						
WRAB	**Tennant Creek**	**13.39**	**153**	*e*Pn	**Pn**	**13 14 11.4**	**-0.4**
WRAB				*e*Sn	**Sn**	**13 16 38.0**	**-1.5**
WRA	**Warramunga Arr**	**13.39**	**153**	Pn	**Pn**	**13 14 10.5**	**-1.4**
	0.7nm,0.3s,baz=334,slow=14,SNR=12						
WRA				Sn	**Sn**	**13 16 40.7**	**+1.1**
	0.9nm,0.3s,baz=318,slow=23,SNR=5.8						
MBWA	**Marble Bar**	**15.20**	**210**	Pn	**Pn**	**13 14 34.5**	**-0.4**
ASAR	**Alice Springs**	**16.58**	**160**	P	**Pn**	**13 14 53.9**	**+2.0**
	0.3nm,0.3s,baz=339,slow=10,SNR=29						
ASAR				S	**S**	**13 17 57.4**	**+0.5**
	0.2nm,0.3s,baz=341,slow=19,SNR=4.7						
STKA	**Stephens Creek**	**26.94**	**153**	P	**P**	**13 16 42.7**	**+6.0**
	2.5nm,0.6s,mb3.9,baz=320,slow=11,SNR=9.9						
STKA	**Stephens Creek**	**26.94**	**153**	P	**P**	**13 16 42.7**	**+6.0**
SONM	**Songino Array**	**58.79**	**343**	P	**P**	**13 20 52.3**	**+0.3**
	0.4nm,0.4s,mb3.8,baz=159,slow=7.4,SNR=4.0						
MK31	**Makanchi Array**	**67.95**	**328**	*e*P	**P**	**13 21 52.1**	**-0.3**
MKAR	**Makanchi Array**	**67.95**	**328**	P	**P**	**13 21 52.8**	**+0.4**
	0.7nm,0.7s,mb3.6,baz=126,slow=7.0,SNR=4.4						
ZALV	**Zalesovo Beam**	**71.60**	**335**	P	**P**	**13 22 14.4**	**-0.1**
	0.2nm,0.3s,mb3.4,baz=115,slow=6.7,SNR=2.8						
KURK	**Kurchatov**	**72.32**	**330**	P	**P**	**13 22 18.3**	**-0.6**
	1.1nm,0.7s,mb3.8						

NNC 11 13:12:35.6±8.9, 36°.63N×70°.97E, h146km±157km, mb3.1, mpv3.7,3C, Error ellipse: s-maj=116.3km s-min=41.3km az=47.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.47**	**357**	P	Pn	13 14 08.7	+0.2
	2.2nm,0.2s,baz=176,slow=12,SNR=67						
KK31				S	Sn	13 15 22.1	+1.0
	6.5nm,0.5s,baz=186,slow=23,SNR=14						
TKM2	**Tokmak 2**	**7.22**	**28**	⇑P	Pn	13 14 18.1	-0.3
	1.6nm,0.4s						
AB31	**Akbulak array**	**14.96**	**331**	⇑P	Pn	13 16 00.6	+1.2
	1.0nm,0.2s,baz=169,slow=11,SNR=37						
AB31				⇑S	Sn	13 18 43.8	-1.5
	0.8nm,0.6s,baz=159,slow=22,SNR=4.8						

ISCJB ***11*** *13:15:52.5±0.3, 40°.00N±0°.02×27°.74E±0°.03, h6km±3km, Error ellipse: s-maj=4.3km s-min=3.1km az=153.4*
DDA ***11*** *13:15:52.0, 39°.98N×27°.74E, h7km±4km, Md2.9*
ISK ***11*** *13:15:52.1, 39°.99N×27°.76E, h8km, MD2.7*
CSEM ***11*** *13:15:52.6±0.1, 40°.00N×27°.74E, h5km, MD2.7, Error ellipse: s-maj=2.6km s-min=1.9km az=60.0*

ISC 11 13:15:52.8±0.3, 40°.00N±0°.02×27°.74E±0°.03, h7km±4km, n57, σ0§60/79, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GONE	**Gonen-Balikesi**	**0.07**	**319**	PG	**Pg**	**13 15 54.7**	**+0.2**
GONE				*e*SG	**Sg**	**13 15 56.7**	**+0.9**
GONE	**Gonen-Balikesi**	**0.07**	**319**	*i* Pg	**Pg**	**13 15 54.7**	**+0.1**
GONE				*e*Sg	**Sg**	**13 15 56.7**	**+0.9**
BALY	**Balya**	**0.27**	**200**	*i* P	**Pg**	**13 15 58.2**	**+0.1**
BALY				*i* S	**Sg**	**13 16 01.9**	**+0.2**
BALY	**Balya**	**0.27**	**200**	*i* P	**Pg**	**13 15 58.2**	**0.0**
BALY				*i* S	**Sg**	**13 16 02.0**	**+0.2**
BALB	**Balikesir**	**0.37**	**163**	*e*PG	**Pg**	**13 16 00.0**	**0.0**
BALB				*e*SG	**Sg**	**13 16 05.3**	**+0.3**
BALB	**Balikesir**	**0.37**	**163**	*e*Pg	**Pg**	**13 16 00.0**	**0.0**
BALB				*e*Sg	**Sg**	**13 16 05.3**	**+0.4**
BNT	**Bandirma**	**0.38**	**21**	*e*PG	**Pg**	**13 16 00.0**	**-0.3**
BNT	**Bandirma**	**0.38**	**21**	*e*Pg	**Pg**	**13 16 00.0**	**-0.3**
KRBG	**Karabiga-Canak**	**0.52**	**319**	*e*PG	**Pg**	**13 16 03.0**	**+0.1**
KRBG				*e*SG	**Sg**	**13 16 10.8**	**+1.1**
KRBG	**Karabiga-Canak**	**0.52**	**319**	*e*Pg	**Pg**	**13 16 03.0**	**+0.1**
KRBG				*e*Sg	**Sg**	**13 16 10.8**	**+1.1**
DURS	**Dursunbey**	**0.69**	**125**	*i* P	**Pg**	**13 16 06.0**	**-0.1**
DURS				*i* S	**Sg**	**13 16 15.3**	**+0.3**
DURS	**Dursunbey**	**0.69**	**125**	*i* P	**Pg**	**13 16 06.0**	**-0.1**
DURS				*i* S	**Sg**	**13 16 15.3**	**+0.3**
RKY	**Sarkoy-Tekirda**	**0.81**	**328**	*e*PG	**Pg**	**13 16 08.4**	**0.0**
RKY	**Sarkoy-Tekirda**	**0.81**	**328**	*e*Pg	**Pg**	**13 16 08.4**	**-0.1**
SART	**Tekirdag**	**0.81**	**328**	*i* P	**Pg**	**13 16 07.6**	**-0.9**
SART				*i* S	**Sg**	**13 16 19.6**	**+0.6**
SART	**Tekirdag**	**0.81**	**328**	*i* P	**Pg**	**13 16 07.6**	**-0.9**
SART				*i* S	**Sg**	**13 16 19.6**	**+0.6**
LPK	**Lapseki**	**0.84**	**297**	*e*PG	**Pg**	**13 16 09.0**	**0.0**
LPK	**Lapseki**	**0.84**	**297**	*e*Pg	**Pg**	**13 16 09.0**	**0.0**
MFT	**Murefte**	**0.86**	**336**	*e*PG	**Pg**	**13 16 09.0**	**-0.4**
MFT	**Murefte**	**0.86**	**336**	*e*Pg	**Pg**	**13 16 09.0**	**-0.4**
MDNY	**Mudanya-Bursa**	**0.95**	**67**	*e*PG	**Pg**	**13 16 10.7**	**-0.4**
MDNY	**Mudanya-Bursa**	**0.95**	**67**	*e*Pg	**Pg**	**13 16 10.7**	**-0.4**
TKR	**Tekirdag**	**1.00**	**351**	*e*PG	**Pg**	**13 16 11.9**	**-0.2**
TKR	**Tekirdag**	**1.00**	**351**	*e*Pg	**Pg**	**13 16 12.0**	**-0.1**
ARMT	**Armutlu**	**1.03**	**56**	*e*PG	**Pg**	**13 16 12.0**	**-0.5**
ARMT	**Armutlu**	**1.03**	**56**	*e*Pg	**Pg**	**13 16 12.0**	**-0.6**
GELI	**Tayfur-Gelibol**	**1.05**	**293**	*e*PG	**Pg**	**13 16 12.9**	**-0.1**
GELI	**Tayfur-Gelibol**	**1.05**	**293**	*e*Pg	**Pg**	**13 16 12.9**	**-0.1**
AYVA	**Ayvalik**	**1.06**	**230**	*i* P	**Pg**	**13 16 13.3**	**+0.1**
AYVA				*i* S	**Sg**	**13 16 26.7**	**-0.3**
AYVA	**Ayvalik**	**1.06**	**230**	*i* P	**Pg**	**13 16 13.3**	**+0.1**
AYVA				*i* S	**Sg**	**13 16 26.7**	**-0.3**
ULDT	**Uludag**	**1.08**	**82**	*i* P	**Pg**	**13 16 09.1**	**-4.4**
ULDT				*i* S	**Sg**	**13 16 27.3**	**-0.3**
ULDT	**Uludag**	**1.08**	**82**	*i* P	**Pg**	**13 16 09.1**	**-4.5**
ULDT				*i* S	**Sg**	**13 16 27.3**	**-0.3**
EZN	**Ezine**	**1.10**	**262**	*e*PN	**Pg**	**13 16 14.1**	**+0.1**
AKHS	**Akhisar**	**1.12**	**177**	*i* P	**Pg**	**13 16 13.6**	**-0.7**
AKHS				*i* S	**Sg**	**13 16 29.0**	**+0.2**
AKHS	**Akhisar**	**1.12**	**177**	*i* P	**Pg**	**13 16 13.6**	**-0.7**
AKHS				*i* S	**Sg**	**13 16 29.0**	**+0.2**
AKS	**Akhisar**	**1.12**	**177**	*e*PN	**Pg**	**13 16 13.7**	**-0.6**
AKS	**Akhisar**	**1.12**	**177**	*e*Pn	**Pg**	**13 16 13.7**	**-0.6**
ERIK	**Erikli-Kesan**	**1.16**	**306**	*e*PN	**Pn**	**13 16 15.0**	**-0.5**
ERIK	**Erikli-Kesan**	**1.16**	**306**	*e*Pn	**Pn**	**13 16 15.0**	**-0.4**
DEMI	**Demirci**	**1.22**	**141**	*i* P	**Pb**	**13 16 15.6**	**-0.5**
DEMI				*i* S	**Sg**	**13 16 31.7**	**-0.2**
DEMI	**Demirci**	**1.22**	**141**	*i* P	**Pb**	**13 16 15.6**	**-0.5**
DEMI				*i* S	**Sg**	**13 16 31.7**	**-0.2**
SLVT	**Silivri**	**1.28**	**16**	*e*PN	**Pn**	**13 16 17.0**	**-0.2**
SLVT	**Silivri**	**1.28**	**16**	*e*Pn	**Pn**	**13 16 17.0**	**-0.2**
CTKS	**Kestanelik-??a**	**1.37**	**25**	*e*PN	**Pn**	**13 16 17.9**	**-0.5**
CTKS	**Kestanelik-??a**	**1.37**	**25**	*e*Pn	**Pn**	**13 16 17.9**	**-0.5**
YLV	**Yalova**	**1.37**	**65**	*e*PN	**Pn**	**13 16 17.9**	**-0.5**
YLV	**Yalova**	**1.37**	**65**	*e*Pn	**Pn**	**13 16 17.9**	**-0.5**
GADA	**Gvkgeada**	**1.43**	**278**	*e*PN	**Pn**	**13 16 18.4**	**-0.7**
ADVT	**Abdulvahap**	**1.59**	**73**	*e*PN	**Pn**	**13 16 21.4**	**0.0**
ADVT	**Abdulvahap**	**1.59**	**73**	*e*Pn	**Pn**	**13 16 21.4**	**0.0**
KLYT	**Kilyos**	**1.60**	**38**	*e*PN	**Pn**	**13 16 22.3**	**+0.7**
KLYT	**Kilyos**	**1.60**	**38**	*e*Pn	**Pn**	**13 16 22.3**	**+0.8**
GDZ	**Gediz**	**1.62**	**123**	*i* P	**Pn**	**13 16 23.6**	**+1.8**
GDZ				*i* S	**Sn**	**13 16 45.1**	**+2.1**
GDZ	**Gediz**	**1.62**	**123**	*i* P	**Pn**	**13 16 23.6**	**+1.8**
GDZ				*i* S	**Sn**	**13 16 45.1**	**+2.1**
KULA	**Kula-Manisa**	**1.64**	**154**	*e*PN	**Pn**	**13 16 21.6**	**-0.5**
KULA	**Kula-Manisa**	**1.64**	**154**	*e*Pn	**Pn**	**13 16 21.6**	**-0.5**
EDRB	**Edirne**	**2.00**	**338**	*e*PN	**Pn**	**13 16 27.3**	**+0.3**

NIED ***11*** *13:21:00, 33°.20N×137°.10E, h11km, Mw3.8 Best double couple: M0:5.94000×10^14 NP1:φ=85.00000°, δ=63.00000°, λ=90.00000°. NP2:φ=265.00000°, δ=27.00000°, λ=90.00000°.*
NEIC ***11*** *13:21:49.4, 33°.23N×137°.14E, h40km, mb4.0/2, After JMA.*
JMA ***11*** *13:21:49.3±0.1, 33°.23N×137°.14E, h40km±2km, M4.0*
IDC ***11*** *13:21:52.2±0.8, 33°.27N×137°.35E, h38km±7km, mb3.4/6, mb1 3.6/9, mb1mx3.4/27, mbtmp3.5/9, ML3.5/3, MS3.3/1, Ms1 3.3/1, ms1mx2.4/27, Error ellipse: s-maj=20.0km s-min=15.4km az=68.0*

ISC 11 13:21:49.8±1.5, 33°.30N±0°.04×137°.10E±0°.03, h20km±10km, h39km±2.4km; pP-P, n28, σ0§86/43, mb3.6/8, 10D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TK01	**Tokai 1**	**0.62**	**41**	P	**Pb**	**13 22 02.1**	**+0.1**
TK01				S	**Sb**	**13 22 11.2**	**+0.9**
TK02	**Tokai 2**	**0.85**	**40**	⇓P	**Pb**	**13 22 05.4**	**-0.5**
TK02				S	**Sb**	**13 22 17.2**	**+0.3**
TK03	**Tokai 3**	**1.13**	**40**	S	**Sb**	**13 22 24.2**	**-0.7**
JIE	**Ise**	**1.14**	**344**	⇓P	**Pn**	**13 22 10.7**	**+0.1**
JIE				S	**Sb**	**13 22 26.3**	**+1.1**
JKN2	**Miekihoku**	**1.16**	**324**	⇓P	**Pn**	**13 22 10.8**	**-0.1**
JKN2				S	**Sb**	**13 22 25.1**	**-0.8**
JWZ	**Kozaga**	**1.18**	**282**	⇓P	**Pn**	**13 22 10.3**	**-0.8**
JWZ				S	**Sb**	**13 22 25.1**	**-1.2**
TK04	**Tokai 4**	**1.26**	**31**	⇓P	**Pn**	**13 22 11.7**	**-0.6**
TK04				S	**Sn**	**13 22 28.0**	**-0.7**
TSUJ	**Tsu 2**	**1.52**	**338**	⇓P	**Pn**	**13 22 15.9**	**+0.1**
TSUJ				S	**Sn**	**13 22 34.8**	**-0.2**
JWY	**Kouya**	**1.55**	**307**	⇓P	**Pn**	**13 22 16.7**	**+0.4**
JWY				S	**Sn**	**13 22 35.5**	**-0.4**
JWM	**Minabe**	**1.56**	**291**	P	**Pn**	**13 22 16.1**	**-0.2**
JWM				S	**Sn**	**13 22 34.9**	**-1.0**
JHE	**Heguri**	**1.79**	**319**	⇓P	**Pn**	**13 22 20.0**	**+0.4**
JHE				S	**Sn**	**13 22 41.7**	**0.0**
SHZ3	**Shizuoka 3**	**1.99**	**27**	⇓P	**Pn**	**13 22 21.5**	**-0.8**
SHZ3				S	**Sn**	**13 22 44.1**	**-2.6**
JHJ	**Hachijo jima 2**	**2.26**	**94**	Pn	**Pn**	**13 22 24.7**	**-1.3**
	13nm,0.3s,baz=74,slow=23,SNR=16						
JHJ				Sn	**Sn**	**13 22 48.2**	**-5.1**
	46nm,0.3s,baz=74,slow=22,SNR=12						
JGM	**Miyama**	**2.42**	**353**	⇓P	**Pn**	**13 22 28.7**	**+0.5**
JGM				S	**Sn**	**13 22 57.8**	**+0.6**
MAJO	**Matsushiro**	**3.36**	**15**	*e*Pn	**Pn**	**13 22 42.1**	**+0.9**
MAJO				*e*Sn	**Sn**	**13 23 21.2**	**+0.7**
MAT	**Matsushiro**	**3.36**	**15**	P	**Pn**	**13 22 42.0**	**+0.8**
MAT				S	**Sn**	**13 23 20.7**	**+0.2**
MJAR	**Matsushiro Arr**	**3.36**	**15**	Pn	**Pn**	**13 22 42.0**	**+0.8**
	13nm,0.3s,baz=174,slow=13,SNR=184						
MJAR				Sn	**Sn**	**13 23 19.9**	**-0.6**
	23nm,0.3s,baz=345,slow=31,SNR=17						
ASAJ	**Asahikawa**	**11.62**	**20**	Pn	**Pn**	**13 24 32.7**	**-1.7**
	0.4nm,0.3s,baz=240,slow=18,SNR=5.7						
SONM	**Songino Array**	**27.26**	**311**	P	**P**	**13 27 33.9**	**+1.4**
	1.1nm,1.0s,mb3.4,baz=116,slow=8.8,SNR=6.7						
MK31	**Makanchi Array**	**43.23**	**305**	*e*P	**P**	**13 29 50.7**	**+1.2**
MK31				*e*		13 30 02.8	
MKAR	**Makanchi Array**	**43.23**	**305**	*e*P	**P**	**13 29 50.8**	**+1.3**
	0.6nm,0.7s,mb3.5,baz=92,slow=10,SNR=9.8						
MKAR				pP	pP	13 30 03.0	+7.4
	1.1nm,0.8s,baz=90,slow=10,SNR=7.5						
KURK	**Kurchatov**	**45.56**	**311**	*e*P	**P**	**13 30 08.3**	**+0.2**
	1.7nm,0.8s,mb4.0						
WRA	**Warramunga Arr**	**53.00**	**183**	P	**P**	**13 31 03.6**	**-1.6**
	0.3nm,0.8s,mb3.3,baz=22,slow=7.2,SNR=3.0						
WRA				pP	pP	13 31 15.2	+3.7
	0.6nm,0.6s,baz=358,slow=7.8,SNR=3.8						
ASAR	**Alice Springs**	**56.73**	**184**	P	**P**	**13 31 33.5**	**+1.4**
	0.1nm,0.6s,mb3.0,baz=2.7,slow=7.9,SNR=3.5						
ASAR				pP	pP	13 31 43.5	+5.1
	0.4nm,0.7s,baz=13,slow=11,SNR=3.3						
ABKAR	**Akbulak array**	**57.67**	**311**	*e*P	**P**	**13 31 38.8**	**+0.2**
	0.8nm,0.5s,mb4.0						
ABKAR				*e*		13 31 52.1	
INK	**Inuvik**	**59.30**	**26**	LR	LR	14 03 09.7	
	comp=Z,23nm,18.4s,baz=248,slow=42						
BRTR	**Keskin Array B**	**78.61**	**310**	P	**P**	**13 33 50.9**	**+0.7**
	1.7nm,0.7s,mb4.1,baz=90,slow=3.7,SNR=5.3						
TXAR	**Lajitas Array**	**95.21**	**50**	P	**P**	**13 35 12.5**	**+0.3**
	0.3nm,0.8s,mb3.8,baz=252,slow=2.0,SNR=4.5						

ISCJB ***11*** *13:28:30.1±0.3, 32°.68N±0°.02×116°.01W±0°.02, h12km±2km, Error ellipse: s-maj=2.9km s-min=2.8km az=141.5*
NEIC ***11*** *13:28:31.0, 32°.67N×116°.04W, h10km, ML3.0(PAS), After PAS.*
NEIC Felt at Ocotillo.
ECX ***11*** *13:28:31.4±0.6, 32°.67N×116°.03W, h4km±1km, MD3.1, ML3.2*

ISC 11 13:28:30.2±0.3, 32°.67N±0°.02×116°.01W±0°.02, h13km±2km, n39, σ0§82/66, 17C-27D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVTC	**Desert V Tower**	**0.08**	**262**	⇑P	**Pg**	**13 28 33.0**	**+0.1**
	baz=0.0,SNR=1000						
DVTC				⇓S	**Sg**	**13 28 34.6**	**-0.4**
	baz=0.0						
YUH	**Yuha Desert**	**0.08**	**106**	⇓*e*P	**Pg**	**13 28 33.1**	**+0.1**
RMX	**La Rumorosa**	**0.09**	**220**	⇑*e*P	**Pg**	**13 28 33.1**	**0.0**
RMX				*e*S	**Sg**	**13 28 34.8**	**-0.3**
CRR	**Carrizo Plain**	**0.22**	**9**	⇓*e*P	**Pg**	**13 28 35.3**	**+0.3**
SGL	**Mount Signal**	**0.24**	**95**	⇑*e*P	**Pg**	**13 28 36.2**	**+0.8**
COK	**Cook Ranch**	**0.30**	**53**	⇑*e*P	**Pg**	**13 28 37.4**	**+1.0**
SWSC	**Sam W. Stewart**	**0.33**	**34**	⇑P	**Pg**	**13 28 37.4**	**+0.5**
	baz=0.3						
SWSC				⇑S	**Sg**	**13 28 41.8**	**+0.4**
	baz=0.3						
MONP	**Monument Peak**	**0.41**	**303**	⇑P	**Pg**	**13 28 38.5**	**+0.2**
	baz=0.4,SNR=475						
MONP				⇑S	**Sg**	**13 28 43.7**	**-0.1**
	baz=0.4						
BAR	**Barrett**	**0.56**	**271**	⇓*e*P	**Pg**	**13 28 41.2**	**+0.1**
BAR	**Barrett**	**0.56**	**271**	*e*Pg	**Pg**	**13 28 41.2**	**+0.1**
BAR				*e*Sg	**Sg**	**13 28 48.0**	**-0.5**
CBX	**Cerro Bola**	**0.66**	**237**	⇑*e*P	**Pg**	**13 28 43.2**	**+0.2**
CBX				*e*S	**Sg**	**13 28 51.9**	**+0.3**
RDX	**Rancho Dawling**	**0.74**	**175**	⇓*i*P	**Pg**	**13 28 44.4**	**-0.2**
RDX				*e*S	**Sg**	**13 28 54.4**	**+0.1**
RDX				⇓*e*		13 28 55.0	
	comp=E,612nm,0.3s						
EMX	**El Mayor**	**0.94**	**136**	⇓*e*P	**Pb**	**13 28 48.5**	**+0.2**
EMX				*e*S	**Sb**	**13 29 01.2**	**+0.5**
109C	**Camp Elliot, M**	**0.95**	**284**	⇓P	**Pb**	**13 28 47.8**	**-0.6**
	baz=0.9,SNR=84						
109C				⇓S	**Sb**	**13 28 59.6**	**-1.2**
	baz=0.9						
PFO	**Pinyon Flat Ob**	**1.01**	**338**	⇑P	**Pb**	**13 28 48.9**	**-0.6**
	baz=1.0,SNR=208						
PFO				⇑S	**Sb**	**13 29 02.3**	**-0.3**
	baz=1.0						
PFO	**Pinyon Flat Ob**	**1.01**	**338**	*e*Pg	**Pg**	**13 28 49.1**	**-0.6**
PFO				*e*S	**Sb**	**13 29 02.5**	**-0.1**
GLA	**Glamis**	**1.07**	**69**	⇓P	**Pb**	**13 28 49.7**	**-0.8**
	baz=1.1,SNR=39						
GLA				⇑S	**Sb**	**13 29 03.6**	**-0.8**
	baz=1.1						
GLA	**Glamis**	**1.07**	**69**	*e*P	**Pb**	**13 28 49.8**	**-0.7**
GLA				*e*S	**Sb**	**13 29 04.0**	**-0.3**
BC3	**Big Chuckawall**	**1.09**	**25**	⇓P	**Pb**	**13 28 50.2**	**-0.6**
	baz=1.1,SNR=38						
BC3				⇓S	**Sb**	**13 29 05.2**	**+0.2**
	baz=1.1						
PBX	**Punta Banda**	**1.10**	**213**	⇓*e*P	**Pb**	**13 28 51.0**	**-0.1**
PBX				*e*S	**Sb**	**13 29 05.6**	**+0.2**
PBX				*e*		13 29 06.9	
	comp=N,556nm,0.1s						
ECNX	**Esteban Cantu**	**1.12**	**206**	⇓*e*P	**Pb**	**13 28 51.2**	**-0.2**
ECNX				*e*P		13 28 48.7	
ECNX				*e*S	**Sb**	**13 29 01.5**	**-4.5**
ECNX				*e*S	**Sb**	**13 29 06.2**	**+0.2**
BELC	**Belle Mtn. Jos**	**1.33**	**0**	⇓P	**Pn**	**13 28 53.5**	**-0.8**
	baz=1.3,SNR=13						
BELC				⇓S	**Sb**	**13 29 09.6**	**-2.2**
	baz=1.3						
MURC	**Murrieta**	**1.36**	**313**	⇑S	**Sn**	**13 29 12.3**	**-0.4**
	baz=1.3						
ECBX	**El Chinero**	**1.45**	**145**	⇓*e*P	**Pn**	**13 28 55.5**	**-0.5**
ECBX				*e*S	**Sn**	**13 29 14.9**	**+0.1**

IRM	**Iron Mountain**	**1.65**	**26**	⇓Pb	**Pb**	**13 28 59.5**	**-0.9**
	baz=1.7					
BBRC	**Big Bear Solar**	**1.76**	**335**	⇑P	**Pn**	**13 29 00.3**	**0.0**
	baz=1.8					
BBRC				⇓Sb	**Sb**	**13 29 25.3**	**+1.0**
	baz=1.8					
113A	**Mohawk Valley,**	**1.90**	**86**	⇓P	**Pn**	**13 29 01.7**	**-0.5**
	baz=1.9,SNR=27					
113A				⇑S	**Sn**	**13 29 25.2**	**-0.7**
	baz=1.9					
Z13A	**Yuma Proving G**	**2.05**	**74**	⇓P	**Pn**	**13 29 03.7**	**-0.6**
	baz=2.1					
BFSC	**Mount Baldy Ra**	**2.08**	**319**	⇓Pb	**Pb**	**13 29 07.5**	**-0.3**
	baz=2.1					
BFSC				⇑Sb	**Sb**	**13 29 34.3**	**+0.7**
	baz=2.1					
CIS	**Catalina Islan**	**2.14**	**291**	⇓P	**Pn**	**13 29 06.8**	**+1.3**
	baz=2.1,SNR=18					
SCI	**San Clemente I**	**2.16**	**279**	⇑P	**Pn**	**13 29 06.0**	**+0.3**
	baz=2.1,SNR=11					
SCI				⇓S	**Sn**	**13 29 31.6**	**-0.7**
	baz=2.1					
FMP	**Fort Macarthur**	**2.18**	**299**	⇓Sb	**Sb**	**13 29 36.3**	**+0.1**
	baz=2.2					
MWC	**Mount Wilson**	**2.31**	**313**	*e*Pn	**Pn**	**13 29 09.1**	**+1.3**
MWC				*e*Sn	**Sn**	**13 29 38.0**	**+2.0**
PASC	**Pasadena Art C**	**2.35**	**310**	Pg	**Pg**	**13 29 15.7**	**+0.3**
PASC				*e*Sg	**Sg**	**13 29 42.2**	**-3.7**
LDFC	**Landfair**	**2.52**	**17**	Pn	**Pn**	**13 29 12.6**	**+1.9**
LDFC				*e*Sg	**Sg**	**13 29 53.2**	**+2.1**
X13A	**Yucca**	**2.65**	**43**	⇓P	**Pn**	**13 29 12.4**	**-0.1**
	baz=2.7					
GSC	**Goldstone**	**2.71**	**346**	*e*Pg	**Pg**	**13 29 20.7**	**-1.4**
GSC				*e*Sg	**Sg**	**13 29 55.4**	**-1.8**
EDW2	**Edwards Air Fo**	**2.75**	**324**	⇓Sb	**Sb**	**13 29 54.6**	**+1.8**
	baz=2.7					
ISA	**Isabella**	**3.62**	**326**	*e*Pn	**Pn**	**13 29 26.2**	**+0.4**

ISCJB ***11*** *13:36:02.8±1.0, 14°.3N±0°.1×56°.4E±0°.1, h10km, mb3.8/18, MS3.2/7, Error ellipse: s-maj=21.7km s-min=13.8km az=23.2*
IDC ***11*** *13:36:02.7±1.1, 14°.27N×56°.36E, h0km, mb3.9/15, mb1 4.0/15, mb1mx3.9/26, mbtmp3.9/15, MS3.2/8, Ms1 3.2/8, ms1mx2.9/33, Error ellipse: s-maj=28.7km s-min=18.4km az=28.0*
CSEM ***11*** *13:36:04.4, 14°.31N×56°.39E, h10km, mb4.0/3, After NEIC*
NEIC ***11*** *13:36:04.5±0.8, 14°.31N×56°.39E, h10km, mb4.0/3, Error ellipse: s-maj=18.1km s-min=12.8km az=200.0*

ISC 11 13:36:04.5±1.0, 14°.3N±0°.1×56°.4E±0°.1, h10km, n48, σ0§98/39, mb3.8/18, MS3.2/7, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATD	**Arta Tunnel**	**13.48**	**260**	LR	LR	13 44 01.1	
	comp=Z,56nm,18.7s,baz=338,slow=36						
KBL	**Kabul**	**23.17**	**27**	P	**P**	**13 41 11.9**	**+0.6**
	9.4nm,1.4s,mb4.0						
KBL	**Kabul**	**23.17**	**27**	P	**P**	**13 41 11.9**	**+0.6**
	9.4nm,1.4s,mb4.0						
EIL	**Elat**	**25.00**	**311**	P	**P**	**13 41 29.7**	**+1.1**
	3.6nm,0.9s,mb3.9,baz=325,slow=18,SNR=3.5						
EIL				LR	LR	13 52 13.9	
	comp=Z,61nm,19.6s,MS3.1,baz=81,slow=39						
EIL	**Elat**	**25.00**	**311**	P	**P**	**13 41 29.7**	**+1.1**
ASF	**Jabal al Asfar**	**25.16**	**318**	P	**P**	**13 41 32.0**	**+2.0**
	0.7nm,0.4s,mb3.6,baz=14,slow=22,SNR=5.6						
GNI	**Garni**	**27.69**	**341**	LR	LR	13 52 18.9	
	comp=Z,29nm,20.9s,MS2.8,baz=186,slow=35						

PMG	**Port Moresby**	**3.56 177**	*e*Pn	**Pn**	**13 39 32.0**	**-0.1**
COEN	**Coen**	**8.89 204**	*e*Pn	**Pn**	**13 40 45.1**	**0.0**
COEN			*e*Sn	**Sn**	**13 42 17.6**	**-6.3**
HNR	**Honiara**	**13.37 106**	LR	LR	13 46 20.4	
	comp=Z,98nm,19.6s,baz=308,slow=35					
CTA	**Charters Tower**	**14.19 183**	Pn	**Pn**	**13 41 58.1**	**+0.6**
	1.9nm,0.3s,baz=360,slow=14,SNR=10					
CTA			LR	LR	13 47 04.6	
	comp=Z,201nm,21.4s,baz=166,slow=36					
CTAO	**Charters Tower**	**14.19 183**	*e*P	**Pn**	**13 41 59.2**	**+1.7**
	11nm,0.7s					
KAKA	**Kakadu**	**15.86 243**	*e*P	**Pn**	**13 42 20.9**	**+1.7**
	46nm,0.6s					
KAKA	**Kakadu**	**15.86 243**	*e*P	**Pn**	**13 42 20.7**	**+1.5**
	145nm,0.6s					
WRAB	**Tennant Creek**	**18.62 220**	*e*P	**Pn**	**13 42 51.8**	**-1.4**
	8.6nm,0.9s					
WRA	**Warramunga Arr**	**18.63 220**	P	**Pn**	**13 42 52.1**	**-1.3**
	0.7nm,0.3s,baz=43,slow=11,SNR=38					
EIDS	**Eidsvold**	**19.83 169**	*e*P	**Pn**	**13 43 05.8**	**-1.9**
	5.8nm,0.6s					
ASAR	**Alice Springs**	**21.73 214**	P	**P**	**13 43 26.9**	**+0.6**
	3.7nm,0.4s,mb4.1,baz=54,slow=8.9,SNR=74					
ASAR			S	**S**	**13 47 29.0**	**+5.1**
	1.5nm,1.0s,baz=35,slow=22,SNR=5.1					
FITZ	**Fitzroy Crossi**	**24.11 238**	*e*P	**P**	**13 43 50.3**	**0.0**
	21nm,0.7s,mb4.7					
FITZ	**Fitzroy Crossi**	**24.11 238**	P	**P**	**13 43 50.3**	**0.0**
	13nm,0.7s,mb4.5,baz=74,slow=5.9,SNR=29					
FITZ			LR	LR	13 55 01.7	
	comp=Z,89nm,18.1s,MS3.3,baz=26,slow=41					
ARMA	**Armidale**	**24.86 170**	*e*P	**P**	**13 43 58.4**	**+1.5**
STKA	**Stephens Creek**	**26.40 190**	*e*P	**P**	**13 44 11.2**	**+0.4**
	4.3nm,0.8s,mb4.0					
STKA	**Stephens Creek**	**26.40 190**	P	**P**	**13 44 11.4**	**+0.5**
	4.5nm,0.6s,mb4.2,baz=18,slow=11,SNR=11					
STKA			LR	LR	13 55 13.4	
	comp=Z,148nm,19.5s,MS3.5,baz=24,slow=38					
STKA	**Stephens Creek**	**26.40 190**	*e*P	**P**	**13 44 09.0**	**-1.9**
	0.9nm,0.7s,mb3.4					
STKA			LR	LR	13 55 13.4	
SONM	**Songino Array**	**64.23 331**	P	**P**	**13 49 09.1**	**+0.4**
	1.0nm,1.0s,mb3.8,baz=136,slow=6.4,SNR=5.5					
ZALV	**Zalesovo Beam**	**78.84 328**	P	**P**	**13 50 35.5**	**-1.1**
	0.3nm,0.3s,mb3.7,baz=142,slow=7.2,SNR=2.5					
KURK	**Kurchatov**	**81.04 323**	LR	LR	14 30 04.3	
	comp=Z,20nm,20.5s,MS3.5,baz=165,slow=38					
QSPA	**South Pole Qui**	**84.14 180**	P	**P**	**13 51 04.3**	**+0.1**
	1.6nm,0.6s,mb4.3,baz=268,slow=2.0,SNR=16					
QSPA	**South Pole Qui**	**84.14 180**	*e*P	**P**	**13 51 05.4**	**+1.2**
	1.8nm,0.6s,mb4.4					
CPUP	**Villa Florida**	**140.30 145**	PKP	PKPdf	13 58 04.4	+1.3
	0.4nm,0.4s,baz=129,slow=3.2,SNR=3.5					

*IDC **11** 13:39:09.9±1.4,59.°12S×25.°94W,h0km,mb4.0/6, mb1 4.2/6,mb1mx4.0/16,mbtmp4.0/6, Error ellipse: s-maj=46.9km s-min=23.8km az=42.0*
*ISCJB **11** 13:39:12.8±8.4,59.°1S±0.°2×26.°1W±0.°3,h28km±61km, mb3.9/9, Error ellipse: s-maj=31.8km s-min=17.1km az=38.4*
*NEIC **11** 13:39:15.6±0.7,59.°10S×26.°22W,h35km,mb3.9/4, Error ellipse: s-maj=21.8km s-min=14.7km az=214.0*

ISC 11 13:39:16.3±3.0,59.°2S±0.°2×26.°2W±0.°3,h39km±29km,n14, σ0s89/13,mb3.9/9,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.75 154**		*e*		**Pn**	**13 42 28.0**	**-0.2**
USHA	**Ushuaia**	**23.10 262**		P		**P**	**13 44 19.1**	**+0.8**
	8.9nm,1.0s,mb4.1,baz=92,slow=14,SNR=3.6							
QSPA	**South Pole Qui**	**31.10 180**		P		**P**	**13 45 30.0**	**-0.2**
	0.9nm,0.5s,mb3.8,baz=135,slow=1.2,SNR=9.3							
QSPA	**South Pole Qui**	**31.10 180**		*e*P		**P**	**13 45 30.1**	**0.0**
	0.7nm,0.6s,mb3.7							
TRQA	**Tornquist**	**31.10 297**		*e*P		**P**	**13 45 28.2**	**-2.5**
	3.4nm,0.8s,mb4.2							
PLCA	**Paso Flores**	**33.15 284**		P		**P**	**13 45 48.4**	**-0.1**
	3.1nm,0.8s,mb4.3,baz=122,slow=9.4,SNR=7.3							
PLCA	**Paso Flores**	**33.15 284**		P		**P**	**13 45 48.4**	**-0.1**
CFAA	**Coronel Fontan**	**39.32 296**		P		**P**	**13 46 41.7**	**+0.4**
	0.6nm,0.6s,mb3.5,baz=154,slow=6.2,SNR=9.6							
CFAA	**Coronel Fontan**	**39.32 296**		P		**P**	**13 46 41.7**	**+0.4**
SBA	**Scott Base**	**43.02 184**		P		**P**	**13 47 12.0**	**+0.8**
	0.7nm,0.9s,mb3.4							
LPAZ	**La Paz**	**52.61 306**		P		**P**	**13 48 26.8**	**+0.7**
	0.5nm,0.4s,mb3.8,baz=156,slow=4.2,SNR=3.5							
LSZ	**Lusaka**	**59.08 66**		P		**P**	**13 49 13.0**	**+0.6**
	1.1nm,0.6s,mb4.1							
ASAR	**Alice Springs**	**95.88 162**		P		**P**	**13 52 37.5**	**-1.1**
	0.5nm,0.9s,mb3.9,baz=181,slow=4.3,SNR=6.2							
SONM	**Songino Array**	**150.27 91**		PKPbc		PKPbc	13 59 01.7	-0.2
	0.4nm,0.4s,baz=213,slow=3.1,SNR=5.9							

*ISCJB **11** 13:45:20.8±0.7,38.°06N±0.°04×21.°56E±0.°03,h11km±6km, Error ellipse: s-maj=6.3km s-min=4.1km az=12.0*
*ATH **11** 13:45:20.5,38.°07N×21.°56E,h19km±2km,MD2.7/6*
*CSEM **11** 13:45:20.7±0.2,38.°11N×21.°52E,h20km,MD2.7, Error ellipse: s-maj=6.9km s-min=4.4km az=154.0*
*THE **11** 13:45:21.2,38.°07N×21.°55E,h0km±2km,ML2.6/5, Error ellipse: s-maj=2.3km s-min=0.6km az=292.0*

ISC 11 13:45:21.0±0.4,38.°09N±0.°03×21.°54E±0.°03,h19km±3km, n31,σ0s76/59,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.07 243**		*e*PB		**Pg**	**13 45 24.0**	**-0.5**
RLS				*e*SB		**Sg**	**13 45 26.7**	**-0.1**
RLS	**Riolos of Patr**	**0.07 243**		*e*Pb		**Pg**	**13 45 24.0**	**-0.5**
RLS				*e*Sb		**Sg**	**13 45 26.7**	**-0.1**
UPR	**University Cam**	**0.27 44**		P		**Pg**	**13 45 27.0**	**-0.1**
UPR				S		**Sg**	**13 45 31.5**	**+0.2**
UPR	**University Cam**	**0.27 44**		P		**Pg**	**13 45 27.0**	**-0.1**
UPR				S		**Sg**	**13 45 31.5**	**+0.2**
LAKA	**Lakka**	**0.37 66**		P		**Pg**	**13 45 28.5**	**-0.4**
LAKA				S		**Sg**	**13 45 34.6**	**+0.5**
LAKA	**Lakka**	**0.37 66**		P		**Pg**	**13 45 28.5**	**-0.4**
LAKA				S		**Sg**	**13 45 34.6**	**+0.5**
EFP	**Efpalio**	**0.44 40**		*e*PB		**Pb**	**13 45 30.0**	**-0.2**
EFP				*e*SB		**Sg**	**13 45 36.1**	**0.0**
EFP	**Efpalio**	**0.44 40**		P		**Pg**	**13 45 29.9**	**-0.2**
EFP				S		**Sg**	**13 45 36.1**	**0.0**
EFP	**Efpalio**	**0.44 40**		*e*Pb		**Pb**	**13 45 30.0**	**-0.2**
EFP				*e*Sb		**Sg**	**13 45 36.1**	**0.0**
TRIZ	**Trizonia**	**0.50 56**		P		**Pg**	**13 45 30.7**	**-0.4**
TRIZ				S		**Sg**	**13 45 38.7**	**+0.8**
TRIZ	**Trizonia**	**0.50 56**		P		**Pg**	**13 45 30.7**	**-0.4**
TRIZ				S		**Sg**	**13 45 38.7**	**+0.8**
KALE	**Kalithea**	**0.56 57**		P		**Pg**	**13 45 31.7**	**-0.5**
KALE				S		**Sg**	**13 45 40.4**	**+0.7**
KALE	**Kalithea**	**0.56 57**		P		**Pg**	**13 45 31.7**	**-0.5**
KALE				S		**Sg**	**13 45 40.4**	**+0.7**
KFL	**Anninata**	**0.60 272**		P		**Pg**	**13 45 33.0**	**+0.1**
KFL				S		**Sg**	**13 45 41.3**	**+0.4**
KFL	**Anninata**	**0.60 272**		P		**Pg**	**13 45 33.0**	**+0.1**
KFL				S		**Sg**	**13 45 41.3**	**+0.4**
GUR	**Goura**	**0.65 103**		*e*PB		**Pb**	**13 45 32.5**	**-1.2**
GUR				*e*SN		**Sb**	**13 45 42.2**	**-0.2**
GUR	**Goura**	**0.65 103**		P		**Pb**	**13 45 32.4**	**-1.3**
GUR				S		**Sb**	**13 45 42.2**	**-0.2**
GUR	**Goura**	**0.65 103**		*e*Pb		**Pb**	**13 45 32.5**	**-1.2**
GUR				*e*Sn		**Sb**	**13 45 42.2**	**-0.2**
VLS	**Valsamata**	**0.76 277**		*e*PN		**Pb**	**13 45 35.0**	**-0.6**
VLS				*e*SN		**Sn**	**13 45 46.9**	**-0.8**
VLS	**Valsamata**	**0.76 277**		P		**Pb**	**13 45 35.0**	**-0.6**
VLS				S		**Sb**	**13 45 47.4**	**+1.8**
VLS	**Valsamata**	**0.76 277**		*e*Pn		**Pb**	**13 45 35.0**	**-0.6**
VLS				*e*Sn		**Sn**	**13 45 46.9**	**-0.8**
VLS				S		**Sb**	**13 45 47.4**	**+1.8**
DSF	**Desfina**	**0.84 67**		P		**Pb**	**13 45 36.2**	**-0.8**
DSF				S		**Sb**	**13 45 48.8**	**+0.9**
DSF	**Desfina**	**0.84 67**		P		**Pb**	**13 45 36.2**	**-0.8**
DSF				S		**Sb**	**13 45 48.8**	**+0.9**
ITM	**Ithomi**	**0.96 161**		*e*PN		**Pn**	**13 45 38.1**	**-1.4**
ITM	**Ithomi**	**0.96 161**		P		**Pb**	**13 45 38.4**	**-0.6**
ITM				S		**Sb**	**13 45 53.1**	**+1.8**
ITM	**Ithomi**	**0.96 161**		*e*Pn		**Pn**	**13 45 38.1**	**-1.4**
ITM	**Ithomi**	**0.96 161**		P		**Pb**	**13 45 38.4**	**-0.6**
ITM				S		**Sb**	**13 45 53.1**	**+1.8**
PYL	**PYLOS**	**1.20 172**		*e*PN		**Pn**	**13 45 43.8**	**+1.0**
PYL	**PYLOS**	**1.20 172**		*e*Pn		**Pn**	**13 45 43.8**	**+1.0**
DID	**Didima**	**1.46 113**		P		**Pg**	**13 45 48.7**	**-0.5**
DID				S		**Sg**	**13 46 08.7**	**+0.5**
DID	**Didima**	**1.46 113**		P		**Pg**	**13 45 48.7**	**-0.5**
DID				S		**Sg**	**13 46 08.7**	**+0.5**

*CSEM **11** 14:00:38.1,46.°38N×6.°90E,h-0km,ML0.8, Suspected Mining explosion. After ZUR*

ZUR 11 14:00:38.1,46.°38N×6.°90E,h-0km±1km,ML0.8/2,4C, Suspected Mining explosion.,Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIGLE	**Aigle**	**0.06 133**		⇑*i*Pg		14 00 39.6	
AIGLE				*e*Sg		14 00 40.3	
AIGLE	**Aigle**	**0.06 133**		⇑*i*Pg		14 00 39.6	
AIGLE				*e*Sg		14 00 40.3	
GRYON	**Gryon**	**0.20 131**		*e*Pg		14 00 42.2	
	36nm,1.3s						
GRYON				*e*Sg		14 00 45.2	
	36nm,1.3s						
GRYON	**Gryon**	**0.20 131**		*e*Pg		14 00 42.2	
	36nm,1.3s						
GRYON				*e*Sg		14 00 45.2	
	36nm,1.3s						
SALAN	**Lac Salanfe**	**0.24 167**		*e*Sg		14 00 43.7	
	18nm,0.4s						
SALAN	**Lac Salanfe**	**0.24 167**		*e*Sg		14 00 43.7	
	18nm,0.4s						
SENIN	**Lac Senin/Sane**	**0.28 93**		*e*Sg		14 00 47.0	
	143nm,0.5s						
SENIN	**Lac Senin/Sane**	**0.28 93**		⇑*i*Pg		14 00 48.2	
	143nm,0.5s						
SENIN	**Lac Senin/Sane**	**0.28 93**		*e*Sg		14 00 47.0	
	143nm,0.5s						
SENIN	**Lac Senin/Sane**	**0.28 93**		⇑*i*Pg		14 00 48.2	
	143nm,0.5s						

*THE **11** 14:11:46.5,36.°83N×30.°02E,h28km±50km,ML5.1/2, Error ellipse: s-maj=50.2km s-min=2.2km az=103.0*
*IDC **11** 14:11:48.7±1.0,36.°94N×29.°21E,h0km,mb4.0/11, mb1 4.1/19,mb1mx4.0/30,mbtmp4.0/19,ML4.1/7,MS3.1/8, Ms1 3.1/8,ms1mx2.8/31, Error ellipse: s-maj=22.0km s-min=13.7km az=30.0*
*MOS **11** 14:11:49.2±0.8,36.°97N×29.°23E,h10km,mb4.3/7, Error ellipse: s-maj=6.6km s-min=4.3km az=117.9*
*NEIC **11** 14:11:49.7,37.°05N×29.°15E,h3km,mb4.1/14, MD3.7(DDA),ML4.1(ISK),ML3.7(NIC), After ISK.*
*DDA **11** 14:11:49.5,36.°98N×29.°14E,h26km±1km,Md3.7,Ml3.8*
*CSEM **11** 14:11:50.4±0.1,36.°98N×29.°17E,h2km,mb4.2/10,Mw3.4, Error ellipse: s-maj=3.0km s-min=2.1km az=21.0*
*ISCJB **11** 14:11:50.8±0.4,37.°06N±0.°02×29.°16E±0.°01,h10km±3km, mb4.3/28,MS3.1/3, Error ellipse: s-maj=2.9km s-min=1.8km az=7.7*
*ISK **11** 14:11:50.3,37.°05N×29.°15E,h6km,ML4.1*
*NIC **11** 14:11:51.2±0.2,36.°96N×29.°00E,h7km,mb4.1,ML3.7, MW3.4*

ISC 11 14:11:51.4±0.4,37.°04N±0.°02×29.°16E±0.°01,h5km±2km, n405,σ1s11/471,mb4.3/28,MS3.1/3,12C-10D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.29 67**		PG		**Pg**	**14 11 56.2**	**-0.9**
GLHS				*e*SG		**Sg**	**14 12 01.9**	**+1.0**
GLHS	**Glhisar (BURDU**	**0.29 67**		*i* Pg		**Pg**	**14 11 56.2**	**-0.9**
GLHS				*e*Sg		**Sg**	**14 12 01.9**	**+1.0**
GOLH	**Golhisar**	**0.38 59**		*i* P		**Pg**	**14 11 58.1**	**-0.5**
GOLH				*i* S		**Sg**	**14 12 04.8**	**+1.3**
GOLH	**Golhisar**	**0.38 59**		*i* P		**Pg**	**14 11 58.1**	**-0.5**
GOLH				*i* S		**Sg**	**14 12 04.8**	**+1.3**
TURN	**Turunc**	**0.48 249**		*i* P		**Pg**	**14 12 04.7**	**+4.1**
TURN				*i* S		**Sg**	**14 12 15.1**	**+8.3**
DNZL	**Cakiroluk**	**0.65 352**		*i* P		**Pg**	**14 12 03.2**	**-0.8**
DNZL				*i* S		**Sg**	**14 12 14.4**	**+2.0**
DNZL	**Cakiroluk**	**0.65 352**		*i* P		**Pg**	**14 12 03.2**	**-0.7**
DNZL				*i* S		**Sg**	**14 12 14.4**	**+2.0**
ELL	**Elmali**	**0.67 116**		*e*PG		**Pg**	**14 12 02.9**	**-1.3**
ELL				*e*SG		**Sg**	**14 12 13.9**	**+1.0**
ELL	**Elmali**	**0.67 116**		Pg		**Pg**	**14 12 02.1**	**-2.1**
ELL	**Elmali**	**0.67 116**		P		**Pg**	**14 12 02.1**	**-2.1**
ELL	**Elmali**	**0.67 116**		*e*Pg		**Pg**	**14 12 02.9**	**-1.3**
YER	**Yerkesik**	**0.71 278**		*e*PG		**Pg**	**14 12 04.2**	**-0.8**
YER				*e*SG		**Sg**	**14 12 14.3**	**+0.1**
YER	**Yerkesik**	**0.71 278**		Pg		**Pg**	**14 12 04.5**	**-0.5**
YER	**Yerkesik**	**0.71 278**		*e*Pg		**Pg**	**14 12 04.2**	**-0.8**
YER	**Yerkesik**	**0.71 278**		P		**Pg**	**14 12 04.5**	**-0.5**
YER				*e*Sg		**Sg**	**14 12 14.3**	**+0.1**
DENT	**Denizli**	**0.72 352**		*e*PG		**Pg**	**14 12 04.2**	**-0.9**
DENT	**Denizli**	**0.72 352**		Pg		**Pg**	**14 12 04.1**	**-1.1**
DENT	**Denizli**	**0.72 352**		*e*Pg		**Pg**	**14 12 04.3**	**-0.9**
AKAS	**Kas**	**0.88 156**		*i* P		**Pg**	**14 12 06.3**	**-2.1**
AKAS				*i* S		**Sg**	**14 12 22.5**	**+2.7**
AKAS	**Kas**	**0.88 156**		*i* P		**Pg**	**14 12 06.3**	**-2.0**
KORT	**Korkueli**	**0.95 92**		*i* P		**Pg**	**14 12 07.9**	**-1.8**
KORT				*i* S		**Sg**	**14 12 21.6**	**-0.5**
KORT	**Korkueli**	**0.95 92**		*i* P		**Pg**	**14 12 07.9**	**-1.8**
KORT				*i* S		**Sg**	**14 12 21.6**	**-0.5**
MLSB	**Milas**	**1.13 283**		*e*PN		**Pn**	**14 12 12.8**	**-1.1**
MLSB				*e*SN		**Sn**	**14 12 28.1**	**-1.8**
MLSB	**Milas**	**1.13 283**		Pn		**Pn**	**14 12 12.2**	**-1.8**
MLSB				Sg		**Sg**	**14 12 28.1**	**+0.3**
MLSB	**Milas**	**1.13 283**		*e*Pn		**Pn**	**14 12 12.8**	**-1.1**
MLSB				*e*Sn		**Sn**	**14 12 28.1**	**-1.8**
ARG	**Arkhangelos**	**1.17 226**		P		**Pg**	**14 12 11.6**	**-2.3**
ARG				S		**Sg**	**14 12 32.5**	**+3.5**
ARG	**Arkhangelos**	**1.17 226**		P		**Pg**	**14 12 11.6**	**-2.3**
ARG				S		**Sg**	**14 12 32.5**	**+3.5**
ARG	**Arkhangelos**	**1.17 226**		P		**Pg**	**14 12 11.6**	**-2.3**
AYDN	**Tasoluk**	**1.19 302**		*i* P		**Pg**	**14 12 13.2**	**-1.1**
AYDN				*i* S		**Sg**	**14 12 29.8**	**+0.1**
AYDN	**Tasoluk**	**1.19 302**		*i* P		**Pg**	**14 12 13.2**	**-1.1**
AYDN				*i* S		**Sg**	**14 12 29.8**	**+0.1**
ANTB	**Antalya**	**1.21 96**		*e*PN		**Pn**	**14 12 14.1**	**-0.8**
ANTB				*e*SN		**Sn**	**14 12 31.8**	**+0.2**
ANTB	**Antalya**	**1.21 96**		*e*Pn		**Pn**	**14 12 14.1**	**-0.8**
ANTB				*e*Sn		**Sn**	**14 12 31.8**	**+0.2**
BCK	**Bucak**	**1.21 69**		*e*PN		**Pn**	**14 12 13.8**	**-1.2**
BCK				*e*SN		**Sn**	**14 12 31.2**	**-0.6**
BCK	**Bucak**	**1.21 69**		Pn		**Pn**	**14 12 13.8**	**-1.3**
BCK	**Bucak**	**1.21 69**		*e*Pn		**Pn**	**14 12 13.8**	**-1.2**
BCK				*e*Sn		**Sn**	**14 12 31.2**	**-0.7**
DAT	**Datca**	**1.31 257**		*e*PN		**Pn**	**14 12 15.2**	**-1.1**
DAT				*e*SN		**Sn**	**14 12 33.9**	**-0.2**
DAT	**Datca**	**1.31 257**		*e*Pn		**Pn**	**14 12 15.2**	**-1.1**
DAT				*e*Sn		**Sn**	**14 12 33.9**	**-0.2**
KHL	**Karahalli**	**1.31 13**		*e*PN		**Pn**	**14 12 15.5**	**-0.9**
KHL	**Karahalli**	**1.31 13**		*e*Pn		**Pn**	**14 12 15.5**	**-0.9**
KHAL	**Karahalli**	**1.35 11**		*i* P		**Pn**	**14 12 15.9**	**-1.1**
KHAL				*i* S		**Sb**	**14 12 36.1**	**+1.3**
KHAL	**Karahalli**	**1.35 11**		*i* P		**Pn**	**14 12 15.9**	**-1.0**
KHAL				*i* S		**Sb**	**14 12 36.1**	**+1.3**
BDRM	**Kayabasi**	**1.37 271**		*i* P		**Pn**	**14 12 16.6**	**-0.6**
BDRM				*i* S		**Sb**	**14 12 32.0**	**-3.4**
BDRM	**Kayabasi**	**1.37 271**		*i* P		**Pn**	**14 12 16.6**	**-0.6**
BDRM				*i* S		**Sb**	**14 12 32.0**	**-3.4**
BODT	**Bodrum**	**1.48 271**		*e*PN		**Pn**	**14 12 18.0**	**-0.7**
BODT	**Bodrum**	**1.48 271**		Pn		**Pn**	**14 12 18.5**	**-0.2**
BODT	**Bodrum**	**1.48 271**		*e*Pn		**Pn**	**14 12 18.0**	**-0.7**
KULA	**Kula-Manisa**	**1.52 345**		*e*PN		**Pn**	**14 12 18.7**	**-0.6**
KULA	**Kula-Manisa**	**1.52 345**		*e*Pn		**Pn**	**14 12 18.7**	**-0.6**
SUTC	**Sutluce-Ispart**	**1.53 73**		*e*PN		**Pn**	**14 12 19.5**	**+0.1**
SUTC	**Sutluce-Ispart**	**1.53 73**		*e*Pn		**Pn**	**14 12 19.5**	**+0.1**
NIS1	**Nisyros Isl.**	**1.65 255**		P		**Pn**	**14 12 21.3**	**+0.3**
NIS1				S		**Sn**	**14 12 46.7**	**+4.1**
NIS1	**Nisyros Isl.**	**1.65 255**		P		**Pn**	**14 12 21.3**	**+0.3**
NIS1				S		**Sn**	**14 12 46.7**	**+4.1**
GCAM	**G?zelcaml?**	**1.67 294**		*i* P		**Pn**	**14 12 21.0**	**-0.3**
GCAM				*i* S		**Sn**	**14 12 40.6**	**-2.5**
GCAM				*i* S		**Sn**	**14 12 43.3**	**+0.2**
GCAM	**G?zelcaml?**	**1.67 294**		*i* P		**Pn**	**14 12 21.0**	**-0.3**
GCAM				*i* S		**Sn**	**14 12 43.3**	**+0.2**
SHUT	**Suhut-Afyon**	**1.87 36**		*e*PN		**Pn**	**14 12 24.1**	**+0.1**
SHUT	**Suhut-Afyon**	**1.87 36**		*e*Pn		**Pn**	**14 12 24.1**	**+0.1**
SMG	**Samos**	**1.97 290**		*e*P		**Pn**	**14 12 25.0**	**-0.4**
KDAG	**Bornova**	**2.02 313**		*i* P		**Pn**	**14 12 25.7**	**-0.4**
KDAG				*i* S		**Sn**	**14 12 42.2**	**-10**
KDAG	**Bornova**	**2.02 313**		*i* P		**Pn**	**14 12 25.7**	**-0.5**
DEMI	**Demirci**	**2.03 350**		*i* P		**Pn**	**14 12 25.6**	**-0.6**
DEMI				*i* S		**Sn**	**14 12 52.0**	**0.0**
DEMI	**Demirci**	**2.03 350**		*i* P		**Pn**	**14 12 25.6**	**-0.6**
DEMI				*i* S		**Sn**	**14 12 52.0**	**+0.1**
AKHS	**Akhisar**	**2.12 330**		*i* P		**Pn**	**14 12 26.8**	**-0.7**
AKHS				*i* S		**Sn**	**14 12 53.6**	**-0.6**
AKHS	**Akhisar**	**2.12 330**		*i* P		**Pn**	**14 12 26.8**	**-0.7**
AKHS				*i* S		**Sn**	**14 12 53.6**	**-0.6**
AKS	**Akhisar**	**2.12 330**		*e*PN		**Pn**	**14 12 27.0**	**-0.5**
AKS	**Akhisar**	**2.12 330**		*e*Pn		**Pn**	**14 12 27.0**	**-0.5**
ALT	**Altintas**	**2.15 20**		*e*PN		**Pn**	**14 12 27.9**	**0.0**
ALT	**Altintas**	**2.15 20**		*e*Pn		**Pn**	**14 12 27.9**	**+0.1**
BOLV	**Bolvadin**	**2.19 40**		*e*P		**Pn**	**14 12 28.8**	**+0.3**
BOLV				*i* S		**Sn**	**14 12 58.1**	**+2.1**
BOLV	**Bolvadin**	**2.19 40**		*e*P		**Pn**	**14 12 28.8**	**+0.3**
BOLV				*i* S		**Sn**	**14 12 58.1**	**+2.1**
KARP	**Karpathos**	**2.20 228**		*e*P		**Pn**	**14 12 28.5**	**-0.1**
GAZI	**Gazipasa**	**2.66 107**		*i* P		**Pn**	**14 12 35.4**	**+0.4**
GAZI				*i* S		**Sn**	**14 13 07.1**	**-0.5**
GAZI	**Gazipasa**	**2.66 107**		*i* P		**Pn**	**14 12 35.4**	**+0.4**
GAZI				*i* S		**Sn**	**14 13 07.1**	**-0.5**
KONT	**Konya--Tatoy**	**2.70 70**		*e*PN		**Pn**	**14 12 35.7**	**+0.2**
KONT	**Konya--Tatoy**	**2.70 70**		*e*Pn		**Pn**	**14 12 35.7**	**+0.2**
BALB	**Balikesir**	**2.78 339**		*e*PN		**Pn**	**14 12 36.9**	**+0.3**
BALB	**Balikesir**	**2.78 339**		Pn		**Pn**	**14 12 36.0**	**-0.6**
BALB	**Balikesir**	**2.78 339**		*e*Pn		**Pn**	**14 12 36.9**	**+0.3**
LADK	**Ladik-KONYA**	**2.79 65**		*e*PN		**Pn**	**14 12 37.2**	**+0.4**
LADK	**Ladik-KONYA**	**2.79 65**		*e*Pn		**Pn**	**14 12 37.2**	**+0.4**
CHOS	**Chios island**	**2.80 300**		*e*P		**Pn**	**14 12 37.5**	**+0.6**
CHOS	**Chios island**	**2.80 300**		P		**Pn**	**14 12 37.2**	**+0.3**
CHOS				S		**Sg**	**14 13 19.2**	**-2.3**
CHOS	**Chios island**	**2.80 300**		P		**Pn**	**14 12 37.2**	**+0.3**
ESKT	**Eskisehir**	**2.81 28**		*e*PN		**Pn**	**14 12 37.1**	**+0.1**
ESKT	**Eskisehir**	**2.81 28**		*e*Pn		**Pn**	**14 12 37.1**	**+0.1**
KIZT	**Kizilcal**	**2.83 49**		*e*PN		**Pn**	**14 12 37.5**	**+0.3**
KIZT	**Kizilcal**	**2.83 49**		*e*Pn		**Pn**	**14 12 37.5**	**+0.3**
APE	**Apeiranthos**	**2.90 272**		*e*PN		**Pn**	**14 12 38.4**	**+0.2**
APE	**Apeiranthos**	**2.90 272**		P		**Pn**	**14 12 38.7**	**+0.4**
APE	**Apeiranthos**	**2.90 272**		*e*P		**Pn**	**14 12 39.0**	**+0.7**
APE	**Apeiranthos**	**2.90 272**		P		**Pn**	**14 12 38.7**	**+0.4**
APE	**Apeiranthos**	**2.90 272**		⇑*i*P		**Sn**	**14 13 15.8**	**+2.3**
APE	**Apeiranthos**	**2.90 272**		*e*Pn		**Pn**	**14 12 38.4**	**+0.1**
APE	**Apeiranthos**	**2.90 272**		P		**Pn**	**14 12 38.7**	**+0.4**
ERMK	**Ermenek**	**3.04 96**		*e*P		**Pn**	**14 12 43.9**	**+3.8**
ERMK				*i* S		**Sn**	**14 13 21.2**	**+4.4**
ERMK	**Ermenek**	**3.04 96**		*e*P		**Pn**	**14 12 43.9**	**+3.8**
SVRH	**Sivrihisar-ESK**	**3.04 37**		*e*PN		**Pn**	**14 12 40.5**	**+0.4**
SVRH	**Sivrihisar-ESK**	**3.04 37**		*e*Pn		**Pn**	**14 12 40.5**	**+0.4**
THR1	**Thera Island**	**3.05 258**		P		**Pn**	**14 12 40.2**	**-0.1**
	240nm,1.0s						
THR1				S		**Sb**	**14 13 23.2**	**-0.4**
THR1	**Thera Island**	**3.05 258**		P		**Pn**	**14

GVD Gavdhos 4.67 243 Pn **Pn 14 13 02.4 -0.1**
KARA Karaisali 4.71 86 *e*PN **Pn 14 13 05.1 +1.9**
KARA Karaisali 4.71 86 *e*Pn **Pn 14 13 05.1 +1.9**
RDO Rodhopi 4.97 327 P **Pn 14 13 06.5 -0.2**
RDO Rodhopi 4.97 327 P **Pn 14 13 06.5 -0.2**
RDO Rodhopi 4.97 327 P **Pn 14 13 06.5 -0.2**
KYTH Kithira 4.98 263 *e*P **Pn 14 13 08.5 +1.7**
VLI Veliai 5.00 268 *e*P **Pn 14 13 08.5 +1.4**
EDRB Edirne 5.15 339 *e*PN **Pn 14 13 10.2 +1.1**
EDRB Edirne 5.15 339 *e*Pn **Pn 14 13 10.2 +1.1**
CORM Corum 5.31 52 *e*PN **Pn 14 13 12.8 +1.5**
CORM Corum 5.31 52 *e*Pn **Pn 14 13 12.8 +1.5**
KOZT Kozan 5.34 83 *e*PN **Pn 14 13 13.2 +1.5**
KOZT Kozan 5.34 83 *e*Pn **Pn 14 13 13.2 +1.5**
KAVA Kavala 5.36 319 P **Pn 14 13 12.2 +0.2**
KAVA Kavala 5.36 319 P **Pn 14 13 12.2 +0.2**
VLX Vlachokerasia 5.42 275 *e*P **Pn 14 13 17.5 +4.6**
KDZ Kurdzhali 5.44 329 P **Pn 14 13 13.3 +0.2**
KDZ Kurdzhali 5.44 329 P **Pn 14 13 13.3 +0.2**
GUR Goura 5.50 281 *e*P **Pn 14 13 16.5 +2.6**
GUR Goura 5.50 281 P **Pn 14 13 16.2 +2.3**
DIM Dimitrovgrad 5.73 332 P **Pn 14 13 16.9 -0.2**
DIM Dimitrovgrad 5.73 332 P **Pn 14 13 16.9 -0.2**
AGG Agios Georgios 5.74 292 P **Pn 14 13 18.7 +1.4**
AGG Agios Georgios 5.74 292 *e*P **Pn 14 13 19.5 +2.2**
AGG Agios Georgios 5.74 292 P **Pn 14 13 18.7 +1.4**
AGG Agios Georgios 5.74 292 P **Pn 14 13 18.7 +1.4**
RZN Rozhen 5.78 325 P **Pn 14 13 18.2 +0.5**
RZN Rozhen 5.78 325 P **Pn 14 13 18.2 +0.5**
ITM Ithomi 5.78 274 P **Pn 14 13 21.0 +3.2**
ITM Ithomi 5.78 274 *e*P **Pn 14 13 22.5 +4.7**
ITM Ithomi 5.78 274 P **Pn 14 13 21.0 +3.2**
LAKA Lakka 5.82 284 P **Pn 14 13 20.5 +2.1**
LAKA Lakka 5.82 284 P **Pn 14 13 20.5 +2.1**
EFP Efpalio 5.91 286 *e*P **Pn 14 13 22.5 +2.9**
PYL PYLOS 5.94 271 *e*P **Pn 14 13 22.5 +2.5**
THL Klokotos Trika 6.16 296 *e*P **Pn 14 13 24.5 +1.5**
SARI SarD1z-Kayseri 6.18 72 *e*PN **Pn 14 13 21.5 -1.9**
SARI SarD1z-Kayseri 6.18 72 *e*Pn **Pn 14 13 21.5 -1.8**
RLS Riolos of Patr 6.20 282 *e*P **Pn 14 13 30.5 +7.0**
MMAI Mount Meron Ar 6.51 126 Pn **Pn 14 13 25.7 -2.1**
comp=Z,20nm,0.3s,baz=313,slow=11,SNR=31
MMAI Sn **Sn 14 14 37.3 -5.1**
comp=Z,3.5nm,0.3s,baz=313,slow=25,SNR=3.7
MMAI LR LR 14 16 33.3
comp=Z,265nm,19.6s,baz=295,slow=44
LTBQ Tobruq 6.59 223 *i* P **Pn 14 13 28.2 -0.7**
SNR=90
PGB Panagyurishte 6.71 327 P **Pn 14 13 30.0 -0.6**
PGB Panagyurishte 6.71 327 P **Pn 14 13 30.0 -0.6**
KKB Krupnik 6.73 318 P **Pn 14 13 31.3 +0.5**
KKB Krupnik 6.73 318 P **Pn 14 13 31.3 +0.5**
LKD Levkas 6.93 286 *e*P **Pn 14 13 42.5 +8.9**
VTS Vitosha 7.19 322 P **Pn 14 13 36.7 -0.4**
VTS Vitosha 7.19 322 P **Pn 14 13 36.7 -0.4**
VTS Vitosha 7.19 322 *e*Pn **Pn 14 13 37.4 +0.3**
TIRR Tirgusor 7.43 356 ⇑P **Pn 14 13 40.9 +0.5**
TIRR Tirgusor 7.43 356 ⇑*i*P **Pn 14 13 40.9 +0.5**
TIRR Tirgusor 7.43 356 P **Pn 14 13 40.9 +0.5**
ASF Jabal al Asfar 8.02 125 Pn **Pn 14 13 45.8 -2.7**
comp=Z,1.3nm,0.3s,baz=173,slow=18,SNR=2.6
ASF LR LR 14 17 30.3
comp=Z,190nm,19.4s,baz=51,slow=43
BARS Barje 8.07 318 ⇓*i*Pn **Pn 14 13 50.3 +1.1**
TLCR 8.14 358 ⇑P **Pn 14 13 50.6 +0.4**
TLCR 8.14 358 ⇑*i*P **Pn 14 13 50.6 +0.4**
TLCR 8.14 358 P **Pn 14 13 50.6 +0.4**
SIM Simferopol' 8.74 24 *e*P **Pn 14 13 59.9 +1.5**
SIM pmax pmax
comp=Z,16nm,0.6s
SIM Simferopol' 8.74 24 *e*P **Pn 14 13 59.9 +1.5**
comp=Z,16nm,0.6s
MLR Muntele Rosu 8.78 345 ⇓P **Pn 14 14 00.3 +1.4**
MLR Muntele Rosu 8.78 345 ⇓*i*P **Pn 14 14 00.3 +1.4**
MLR Muntele Rosu 8.78 345 P **Pn 14 14 00.3 +1.4**
EIL Elat 8.80 145 Pn **Pn 14 13 56.3 -3.0**
comp=Z,4.9nm,0.3s,baz=333,slow=7.9,SNR=37
EIL Sn **Sn 14 15 32.1 -6.8**
comp=Z,2.3nm,0.3s,baz=87,slow=15,SNR=3.8
EIL LR LR 14 18 33.7
comp=Z,72nm,19.5s,baz=289,slow=47
EIL Elat 8.80 145 Pn **Pn 14 13 56.3 -3.0**
VOIR 8.94 341 ⇓P **Pn 14 14 02.4 +1.3**
VOIR 8.94 341 ⇓*i*P **Pn 14 14 02.4 +1.3**
VOIR 8.94 341 P **Pn 14 14 02.4 +1.3**
PLOR Plostina 9.00 349 ⇑P **Pn 14 14 00.1 -1.9**
PLOR Plostina 9.00 349 ⇑*i*P **Pn 14 14 00.1 -1.9**
PLOR Plostina 9.00 349 P **Pn 14 14 00.1 -1.9**
VRI Vrincioaia 9.00 349 ⇑P **Pn 14 14 03.3 +1.3**
VRI Vrincioaia 9.00 349 ⇑*i*P **Pn 14 14 03.3 +1.3**
VRI Vrincioaia 9.00 349 P **Pn 14 14 03.3 +1.3**
LJBD Adjabya 9.63 233 *e*P **Pn 14 14 08.5 -2.1**
SNR=90
BZS Buzias 10.27 329 ⇓P **Pn 14 14 28.5 +9.2**
BZS Buzias 10.27 329 ⇓*i*P **Pn 14 14 28.5 +9.2**
BURAR Bucovina Array 10.96 346 ⇓P **Pn 14 14 30.8 +2.0**
BURAR Bucovina Array 10.96 346 ⇓*i*P **Pn 14 14 30.8 +2.0**
BURAR Bucovina Array 10.96 346 ⇓P **Pn 14 14 30.8 +2.0**
BUR08 Bucovina Ar. S 10.99 346 *e*Pn **Pn 14 14 29.4 +0.2**
BUR08 Bucovina Ar. S 10.99 346 *e*Pn **Pn 14 14 29.4 +0.2**
KIV Kislovodsk 12.39 52 ⇑*e*P **Pn 14 14 47.5 -0.8**
KIV *e*S **Sn 14 17 02.9 -3.8**
KIV pmax pmax
comp=Z,3.0nm,0.6s
KIV MLR MLR
comp=Z,100nm,17.0s
KIV Kislovodsk 12.39 52 *e*P **Pn 14 14 47.5 -0.8**
comp=Z,3.0nm,0.6s
GNI Garni 12.58 71 LR LR 14 19 55.2
comp=Z,32nm,18.4s,baz=166,slow=39
AKASG Malin Array Be 13.65 0 Pn **Pn 14 15 05.0 -0.6**
comp=Z,0.4nm,0.3s,baz=182,slow=12,SNR=5.9
AKASG Malin Array Be 13.65 0 *i* P **Pn 14 15 04.0 -1.6**
AKASG Malin Array Be 13.65 0 *i* P **Pn 14 15 04.0 -1.6**
AKASG Malin Array Be 13.65 0 Pn **Pn 14 15 05.0 -0.6**
OKC Ostrava-Krasne 15.06 332 *e*P **Pn 14 15 32.0 +7.2**
OKC Ostrava-Krasne 15.06 332 *e*P **Pn 14 15 32.0 +7.2**
VRAC Vranov 15.28 327 Pn **Pn 14 15 27.0 -0.6**
comp=Z,0.4nm,0.3s,baz=288,slow=19,SNR=2.3
VRAC LR LR 14 21 59.9
comp=Z,62nm,19.7s,baz=255,slow=40
VRAC Vranov 15.28 327 Pn **Pn 14 15 27.0 -0.7**
VSR Storozhevoye 15.86 24 *e*P **Pn 14 15 35.3 0.0**
VSR pmax pmax
comp=E,2.0nm,0.6s
VSR pmax pmax
comp=Z,8.0nm,0.6s
VSR pmax pmax
comp=N,4.0nm,0.3s
KEST Kesra 16.01 271 Pn **Pn 14 15 36.7 -0.6**
comp=N,0.0nm,0.3s,baz=304,slow=5.4,SNR=2.7
DPC Dobruska-Polom 16.19 329 *e*P **Pn 14 15 44.5 +5.0**
DPC Dobruska-Polom 16.19 329 *e*P **Pn 14 15 44.5 +5.0**
PGF Pioggiola 16.43 296 *e*P **Pn 14 15 42.3 -0.3**
comp=N,29nm,1.2s
PGF Pioggiola 16.43 296 *e*P **Pn 14 15 42.3 -0.3**
PGF pmax pmax
comp=Z,14nm,1.2s
PGF Pioggiola 16.43 296 *e*P **Pn 14 15 42.3 -0.3**
comp=Z,14nm,1.2s
UPC Upice 16.44 329 *e*P **Pn 14 15 47.5 +4.9**
UPC Upice 16.44 329 *e*P **Pn 14 15 47.5 +4.9**
KHC Kasperske Hory 16.56 322 *e*P **Pn 14 15 50.4 +6.2**
KHC MLR MLR
comp=Z,200nm,8.1s
KHC Kasperske Hory 16.56 322 *e*P **Pn 14 15 50.4 +6.2**
KHC AMS AMS 14 22 50.0
comp=Z,200nm,8.1s
DAVOX Davos/Dischmat 17.30 310 P **Pn 14 15 53.9 +0.4**
comp=Z,0.4nm,0.3s,baz=338,slow=23,SNR=4.8
DAVOX Davos/Dischmat 17.30 310 P **Pn 14 15 53.9 +0.4**
BRG Berggiesshubel 17.59 327 *e*(P) **Pn 14 16 01.6 +4.5**
comp=Z,12nm,1.4s
SBF Sospel 17.86 299 *e*P **Pn 14 16 01.2 +0.7**
comp=Z,22nm,0.8s
SBF Sospel 17.86 299 *e*P **Pn 14 16 01.2 +0.7**
SBF pmax pmax
comp=Z,11nm,0.8s
SBF Sospel 17.86 299 *e*P **Pn 14 16 01.2 +0.7**
comp=Z,11nm,0.8s
SBF Sospel 17.86 299 *e*P **Pn 14 16 01.2 +0.7**
comp=Z,11nm,0.8s
CLL Collm 18.32 326 *e*P **Pn 14 16 06.0 -0.1**
CLL MLR MLR
comp=Z,100nm,20.3s
CLL Collm 18.32 326 *e*P **Pn 14 16 06.0 -0.1**
CLL *e* 14 16 19.0
CLL Collm 18.32 326 *e*P **Pn 14 16 06.0 -0.1**
CLL *e*PP 14 16 19.0
CLL *e*S **Sn 14 19 36.0 +5.2**
CLL LmV 14 24 00.0
comp=Z,100nm,20.3s
CLL Collm 18.32 326 *e*P **Pn 14 16 06.0 -0.1**
comp=Z,100nm,20.3s
LMR La Mourre 18.39 297 *e*P **Pn 14 16 07.1 +0.1**
LMR La Mourre 18.39 297 *e*P **Pn 14 16 07.1 +0.1**
MBDF Montbardon 18.55 301 *e*P **Pn 14 16 08.7 -0.3**
comp=Z,16nm,0.9s
MBDF Montbardon 18.55 301 *e*P **Pn 14 16 08.7 -0.3**
MBDF pmax pmax
comp=Z,8.0nm,0.9s
MBDF Montbardon 18.55 301 *e*P **Pn 14 16 08.7 -0.3**
comp=Z,7.9nm,0.9s
MBDF Montbardon 18.55 301 *e*P **Pn 14 16 08.7 -0.3**
comp=Z,7.9nm,0.9s
OBN Obninsk 18.77 13 ⇑*e*P **Pn 14 16 10.9 -0.7**
OBN *e*S **Sn 14 19 45.9 +4.2**
OBN pmax pmax
comp=Z,3.0nm,0.8s
OBN MLR MLR
comp=Z,100nm,21.0s
OBN Obninsk 18.77 13 *e*P **Pn 14 16 10.9 -0.7**
comp=Z,3.0nm,0.8s
OBN *e*S **Sn 14 19 45.9 +4.2**
comp=Z,100nm,21.0s
LPG La Plagne 18.80 304 *e*P **Pn 14 16 12.1 +0.1**
comp=Z,10nm,0.6s
LPG La Plagne 18.80 304 *e*P **Pn 14 16 12.1 +0.1**
LPG pmax pmax
comp=Z,5.0nm,0.6s
LPG La Plagne 18.80 304 *e*P **Pn 14 16 12.1 +0.1**
comp=Z,5.1nm,0.6s
LPG La Plagne 18.80 304 *e*P **Pn 14 16 12.1 +0.1**
comp=Z,5.1nm,0.6s
LPL La Plagne 18.82 304 *e*P **Pn 14 16 12.5 +0.2**
LPL La Plagne 18.82 304 *e*P **Pn 14 16 12.5 +0.2**
ORIF Oris-en-Rattie 19.21 301 *e*P **Pn 14 16 17.0 0.0**
comp=Z,26nm,1.1s
ORIF Oris-en-Rattie 19.21 301 *e*P **Pn 14 16 17.0 0.0**
ORIF pmax pmax
comp=Z,13nm,1.1s
ORIF Oris-en-Rattie 19.21 301 *e*P **Pn 14 16 17.0 0.0**
comp=Z,13nm,1.1s
ORIF Oris-en-Rattie 19.21 301 *e*P **Pn 14 16 17.0 0.0**
comp=Z,13nm,1.1s
HINF Hinteralfeld 19.60 310 *e*P **Pn 14 16 20.2 -1.5**
HINF Hinteralfeld 19.60 310 *e*P **Pn 14 16 20.2 -1.5**
CABF La Chapelle 19.61 306 *e*P **Pn 14 16 21.0 -0.8**
comp=Z,14nm,0.5s
CABF La Chapelle 19.61 306 *e*P **Pn 14 16 21.0 -0.8**
CABF pmax pmax
comp=Z,7.0nm,0.5s
CABF La Chapelle 19.61 306 *e*P **Pn 14 16 21.0 -0.8**
comp=Z,7.1nm,0.5s
CABF La Chapelle 19.61 306 *e*P **Pn 14 16 21.0 -0.8**
comp=Z,7.1nm,0.5s
CDF Champ du Feu 19.61 312 *e*P **Pn 14 16 21.3 -0.5**
comp=Z,34nm,1.2s
CDF Champ du Feu 19.61 312 *e*P **Pn 14 16 21.3 -0.5**
CDF pmax pmax
comp=Z,17nm,1.2s
CDF Champ du Feu 19.61 312 *e*P **Pn 14 16 21.3 -0.5**
comp=Z,17nm,1.2s
CDF Champ du Feu 19.61 312 *e*P **Pn 14 16 21.3 -0.5**
comp=Z,17nm,1.2s
HAU Haudompre 19.99 310 *e*P **Pn 14 16 25.0 -1.3**
HAU Haudompre 19.99 310 *e*P **Pn 14 16 25.0 -1.3**
VIVF Saint-Julien-l 20.02 301 *e*P **P 14 16 24.5 -0.5**
comp=Z,22nm,0.9s
VIVF Saint-Julien-l 20.02 301 *e*P **P 14 16 24.5 -0.5**
VIVF pmax pmax
comp=Z,11nm,0.9s
VIVF Saint-Julien-l 20.02 301 *e*P **P 14 16 24.5 -0.5**
comp=Z,11nm,0.9s
VIVF Saint-Julien-l 20.02 301 *e*P **P 14 16 24.5 -0.5**
comp=Z,11nm,0.9s
SMF Signal de Mont 21.08 305 *e*P **P 14 16 35.9 -0.6**
SMF Signal de Mont 21.08 305 *e*P **P 14 16 35.9 -0.6**
SSF Saint Saulge 21.43 306 *e*P **P 14 16 40.5 +0.3**
SSF Saint Saulge 21.43 306 *e*P **P 14 16 40.5 +0.3**
VSU Vasula 21.49 357 *e*P **P 14 16 40.1 -0.6**
VSU pmax pmax
comp=Z,9.0nm,0.9s,mb4.1
VSU Vasula 21.49 357 *e*P **P 14 16 40.1 -0.6**
comp=Z,9.0nm,0.9s,mb4.1
BGF Bois d'Agland 21.71 304 *e*P **P 14 16 43.3 +0.1**
comp=Z,8.1nm,0.7s,mb4.0
BGF Bois d'Agland 21.71 304 *e*P **P 14 16 43.3 +0.1**
BGF pmax pmax
comp=Z,4.0nm,0.7s,mb4.0
BGF Bois d'Agland 21.71 304 *e*P **P 14 16 43.3 +0.1**
comp=Z,4.1nm,0.7s,mb4.0
BGF Bois d'Agland 21.71 304 *e*P **P 14 16 43.3 +0.1**
comp=Z,4.1nm,0.7s,mb4.0
RJF Les Rejaudoux 22.30 300 *e*P **P 14 16 50.2 +0.6**
RJF Les Rejaudoux 22.30 300 *e*P **P 14 16 50.2 +0.6**
MFF Saint Martin d 23.72 303 *e*P **P 14 17 02.9 -1.4**
comp=Z,8.3nm,0.7s,mb4.0
MFF Saint Martin d 23.72 303 *e*P **P 14 17 02.9 -1.4**
MFF pmax pmax
comp=Z,4.0nm,0.7s,mb4.0
MFF Saint Martin d 23.72 303 *e*P **P 14 17 02.9 -1.4**
comp=Z,4.2nm,0.7s,mb4.0
MFF Saint Martin d 23.72 303 *e*P **P 14 17 02.9 -1.4**
comp=Z,4.2nm,0.7s,mb4.0
FINES FINESS Array B 24.50 356 P **P 14 17 11.0 -0.3**
comp=Z,3.8nm,0.8s,mb4.0,baz=149,slow=4.4,SNR=11
FINES FINESS Array B 24.50 356 P **P 14 17 11.0 -0.3**
FLN La Foliniere 24.51 308 *e*P **P 14 17 09.1 -2.4**
comp=Z,21nm,0.9s,mb4.4
FLN La Foliniere 24.51 308 *e*P **P 14 17 09.1 -2.4**
FLN pmax pmax
comp=Z,11nm,0.9s,mb4.4
FLN La Foliniere 24.51 308 *e*P **P 14 17 09.1 -2.4**
comp=Z,11nm,0.9s,mb4.4
FLN La Foliniere 24.51 308 *e*P **P 14 17 09.1 -2.4**
comp=Z,11nm,0.9s,mb4.4
AKTK Aktyubinsk 24.59 48 P **P 14 17 10.6 -1.7**
AKTK Aktyubinsk 24.59 48 P **P 14 17 10.6 -1.6**
AKTO Aktyubinsk 24.59 48 P **P 14 17 10.6 -1.7**
comp=Z,3.1nm,0.8s,mb3.9,baz=154,slow=20,SNR=10
TAM Tamanrasset 24.84 242 *e*P **P 14 17 13.5 -1.2**
TAM pmax pmax
comp=Z,4.0nm,0.8s,mb4.0
TAM Tamanrasset 24.84 242 *e*P **P 14 17 13.5 -1.3**
comp=Z,4.1nm,0.8s,mb4.0
TAM Tamanrasset 24.84 242 *e*P **P 14 17 13.5 -1.2**
comp=Z,4.1nm,0.8s,mb4.0
HFS Hagfors 25.14 342 P **P 14 17 17.0 -0.1**
comp=Z,6.5nm,0.8s,mb4.2,baz=140,slow=7.4,SNR=8.7
HFS LR LR 14 28 20.4
comp=Z,90nm,18.5s,MS3.3,baz=138,slow=39
HFS Hagfors 25.14 342 P **P 14 17 17.0 -0.1**
ABKAR Akbulak array 25.38 51 *e*P **P 14 17 17.4 -2.0**
comp=Z,1.8nm,0.8s,mb3.6
ABKAR Akbulak array 25.38 51 *e*P **P 14 17 17.4 -2.0**
comp=Z,1.8nm,0.8s,mb3.6
SGMF Saint Gilles 25.70 306 *e*P **P 14 17 22.3 0.0**
SGMF Saint Gilles 25.70 306 *e*P **P 14 17 22.3 0.0**
JOF Joensuu 25.94 2 *e*P **P 14 17 24.6 +0.3**
JOF pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
JOF Joensuu 25.94 2 *e*p **P 14 17 24.6 +0.3**
comp=Z,4.5nm,0.7s,mb4.1
JOF Joensuu 25.94 2 *e*P **P 14 17 24.6 +0.3**
comp=Z,5.0nm,0.7s,mb4.2
QUIF Quistinic 26.02 305 *e*P **P 14 17 25.5 +0.3**
comp=Z,53nm,1.2s,mb4.6
QUIF Quistinic 26.02 305 *e*P **P 14 17 25.5 +0.3**
QUIF pmax pmax
comp=Z,26nm,1.2s,mb4.6
QUIF Quistinic 26.02 305 *e*P **P 14 17 25.5 +0.3**
comp=Z,26nm,1.2s,mb4.6
QUIF Quistinic 26.02 305 *e*P **P 14 17 25.5 +0.3**
comp=Z,26nm,1.2s,mb4.6
ESDC Sonseca Array 26.03 286 P **P 14 17 24.3 -1.1**
comp=Z,2.3nm,0.7s,mb3.8,baz=85,slow=8.8,SNR=8.0
ESDC Sonseca Array 26.03 286 P **P 14 17 24.3 -1.1**
ROSF Rostrenen 26.18 306 *e*P **P 14 17 26.6 -0.1**
ROSF Rostrenen 26.18 306 *e*P **P 14 17 26.6 -0.1**
NB2 NORSAR Subarra 26.56 340 P **P 14 17 28.5 -1.5**
comp=Z,0.8nm,0.7s,mb3.4,baz=145,slow=10
NB2 NORSAR Subarra 26.56 340 P **P 14 17 28.5 -1.5**
comp=Z,0.8nm,0.7s,mb3.4,SNR=6.3
NOA NORSAR Array B 26.56 340 P **P 14 17 28.3 -1.7**
comp=Z,1.6nm,0.8s,mb3.6,baz=145,slow=9.1,SNR=5.2
NOA LR LR 14 29 36.5
comp=Z,52nm,20.1s,MS3.1,baz=145,slow=40
NOA NORSAR Array B 26.56 340 P **P 14 17 28.3 -1.7**
NOA LR LR 14 29 36.5
NOA NORSAR Array B 26.56 340 P **P 14 17 28.3 -1.7**
LVZ Lovozero 31.06 4 *c e*P **P 14 18 11.5 +1.6**
LVZ pmax pmax
comp=Z,32nm,2.5s,mb4.7
LVZ Lovozero 31.06 4 *e*P **P 14 18 11.5 +1.6**
comp=Z,32nm,2.5s,mb4.7
ARCES ARCESS Array B 32.61 358 P **P 14 18 23.6 0.0**
comp=Z,3.0nm,0.9s,mb4.2,baz=180,slow=2.3,SNR=5.7
ARCES LR LR 14 33 26.7
comp=Z,34nm,21.3s,MS3.0,baz=76,slow=40
ARCES ARCESS Array B 32.61 358 P **P 14 18 23.6 0.0**
KURK Kurchatov 37.47 53 P **P 14 19 02.9 -2.8**
comp=Z,1.3nm,0.6s,mb4.0,baz=276,slow=8.8,SNR=6.9
KURK Kurchatov 37.47 53 P **P 14 19 02.9 -2.8**
MKAR Makanchi Array 40.03 59 P **P 14 19 25.6 -1.7**
comp=Z,1.1nm,0.7s,mb3.7,baz=270,slow=6.9,SNR=9.7
MKAR Makanchi Array 40.03 59 P **P 14 19 25.6 -1.6**
DMN Daman 47.62 85 *e*P **P 14 20 28.5 0.0**
comp=Z,18nm,0.9s,mb5.1
KKN Kakani 47.67 84 *e*P **P 14 20 28.5 -0.4**
comp=Z,5.5nm,0.5s,mb4.9
PKIN Phulchoki 47.86 84 *e*P **P 14 20 29.7 -0.7**
comp=Z,10.0nm,0.6s,mb5.0
PKI Pulchoki 47.87 84 *e*P **P 14 20 30.0 -0.5**
comp=Z,12nm,0.7s,mb5.0
GUN Gumba 48.10 84 *e*P **P 14 20 31.6 -0.6**
comp=Z,13nm,0.5s,mb5.2
JIRN Jiri 48.45 84 *e*P **P 14 20 33.6 -1.4**
comp=Z,6.2nm,0.4s,mb5.0
RAMN Ramite 49.10 84 *e*P **P 14 20 37.5 -2.4**
comp=Z,18nm,1.0s,mb5.1
SONM Songino Array 55.78 53 P **P 14 21 27.5 -1.7**
comp=Z,0.5nm,0.8s,mb3.6,baz=302,slow=8.3,SNR=3.6
SONM Songino Array 55.78 53 P **P 14 21 27.5 -1.7**
HHC Hu-ho-hao-te 61.90 58 *e*P **P 14 22 08.7 -3.1**
HHC S **S 14 30 29.5 -6.7**
HHC pmax pmax
comp=Z,13nm,0.7s,mb5.2
HHC pmax pmax
comp=Z,77nm,6.7s
CMAR Chiang Mai Arr 63.18 86 P **P 14 22 18.4 -2.3**
comp=Z,1.0nm,0.8s,mb4.0,baz=312,slow=7.9,SNR=6.8
CMAR Chiang Mai Arr 63.18 86 P **P 14 22 18.4 -2.3**
SCHQ Schefferville 63.84 320 P **P 14 22 22.5 -2.0**
comp=Z,3.0nm,0.6s,mb4.5,baz=31,slow=5.2,SNR=4.6
SCHQ Schefferville 63.84 320 P **P 14 22 22.5 -2.0**
SCHQ Schefferville 63.84 320 P **P 14 22 22.5 -2.0**

IDC 11 14:17:00.4±55.0, 17°.00S×179°.71E, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.8/14, mbtmp4.0/3, Error ellipse: s-maj=986.8km s-min=150.0km az=77.0, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.52**	**240**	P	P	14 24 16.8	+0.5
	2.2nm,0.9s,baz=98,slow=7.1,SNR=4.3						
WRA	**Warramunga Arr**	**43.04**	**259**	P	P	14 25 01.7	-0.5
	0.4nm,0.4s,baz=95,slow=7.8,SNR=28						
ASAR	**Alice Springs**	**43.32**	**253**	P	P	14 25 04.4	0.0
	3.0nm,0.5s,baz=88,slow=7.7,SNR=122						

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*SKO **11** 14:23:06.9,40°.38N×21°.59E,h0km,M1.6,ML1.9*
*ISCJB **11** 14:23:09.3±0.6,40°.50N±0°.03×21°.38E±0°.05,h10km±8km, Error ellipse: s-maj=7.0km s-min=4.8km az=165.0*
*CSEM **11** 14:23:09.3,40°.50N×21°.38E,h11km,ML2.5/4, After THE THE **11** 14:23:09.3,40°.50N×21°.38E,h11km±1km,ML2.5/4, Error ellipse: s-maj=1.8km s-min=0.5km az=319.0*

ISC 11 14:23:09.3±0.6, 40°.50N±0°.03×21°.37E±0°.06, h16km±7km, n14, σ0°.94/28, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEST	**Nestorio**	**0.26**	**252**	P	**Pg**	14 23 14.2	-0.7
NEST				S	**Sg**	14 23 19.2	+0.5
NEST	**Nestorio**	**0.26**	**252**	P	**Pg**	14 23 14.2	-0.7
NEST				S	**Sg**	14 23 19.2	+0.5
FNA	**Florina**	**0.29**	**1**	P	**Pg**	14 23 15.0	-0.5
FNA				S	**Sg**	14 23 19.8	+0.2
FNA	**Florina**	**0.29**	**1**	P	**Pg**	14 23 15.0	-0.5
FNA				S	**Sg**	14 23 19.8	+0.2
KZN	**Kozani**	**0.36**	**121**	P	**Pg**	14 23 16.3	-0.4
KZN				S	**Sg**	14 23 21.9	+0.2
KZN	**Kozani**	**0.36**	**121**	P	**Pg**	14 23 16.3	-0.4
KZN				S	**Sg**	14 23 21.9	+0.2
BIA	**Bitola**	**0.52**	**356**	*i* Pg	**Pg**	14 23 18.9	-0.8
BIA				*i* Sg	**Sg**	14 23 28.4	+1.6
BIA				*e*Lg		14 23 29.0	
	comp=N,39nm,0.4s						
BIA				*e*Lg		14 23 29.4	
	comp=E,29nm,0.2s						
BIA	**Bitola**	**0.52**	**356**	P	**Pg**	14 23 18.9	-0.8
BIA				S	**Sg**	14 23 27.3	+0.5
BIA	**Bitola**	**0.52**	**356**	P	**Pg**	14 23 18.9	-0.8
BIA				S	**Sg**	14 23 27.3	+0.5
OHR	**Ohrid**	**0.75**	**325**	*i* Pg	**Pg**	14 23 23.3	-0.6
OHR				*i* Sg	**Sg**	14 23 37.6	+3.8
OHR				*e*Lg		14 23 38.0	
	comp=E,36nm,0.6s						
OHR				*e*Lg		14 23 38.1	
	comp=N,26nm,0.5s						
KRUS	**Krusevo**	**0.88**	**354**	*i* Pg	**Pg**	14 23 25.1	-1.2
KRUS				*i* Sg	**Sg**	14 23 39.8	+1.9
KRUS				*e*Lg		14 23 40.0	
	comp=E,6.0nm,0.2s						
KRUS				*e*Lg		14 23 41.5	
	comp=N,15nm,0.4s						
THL	**Klokotos Trika**	**1.05**	**152**	P	**Pb**	14 23 28.9	-0.3
THL				S	**Sb**	14 23 44.3	+1.6
THL	**Klokotos Trika**	**1.05**	**152**	P	**Pb**	14 23 28.9	-0.3
THL				S	**Sb**	14 23 44.3	+1.6
VAY	**Valandovo**	**1.23**	**47**	*e*Pn	**Pn**	14 23 30.9	-0.9
VAY				*e*Sn	**Sn**	14 23 53.3	+5.2
VAY				*e*Lg		14 23 53.9	
VAY				*e*Lg		14 23 54.9	
	comp=N,26nm,1.0s						

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*CSEM **11** 14:55:30.6±0.2,37°.85N×21°.41E,h2km,ML3.0, Error ellipse: s-maj=4.2km s-min=3.3km az=57.0*
*THE **11** 14:55:30.9,37°.85N×21°.45E,h0km±1km,ML3.8/13, Error ellipse: s-maj=1.5km s-min=0.6km az=217.0*
*ISCJB **11** 14:55:31.0±0.3,37°.85N±0°.02×21°.42E±0°.02,h10km, Error ellipse: s-maj=2.8km s-min=2.4km az=136.5*
*NEIC **11** 14:55:31.2,37°.90N×21°.43E,h21km,ML3.0(ATH), After ATH.*
*ATH **11** 14:55:31.2,37°.90N×21°.43E,h21km±2km,MD3.5/16, ML3.0*

ISC 11 14:55:31.4±0.4, 37°.86N±0°.02×21°.44E±0°.02, h4km±3km, n97, σ1°.05/152, 3C, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.20**	**6**	⇑*i*Pb	**Pg**	14 55 36.1	+0.7
RLS				*e*Sb	**Sg**	14 55 39.4	+1.4
RLS	**Riolos of Patr**	**0.20**	**6**	⇑*i*PB	**Pg**	14 55 36.1	+0.7
RLS				*e*SB	**Sg**	14 55 39.4	+1.4
RLS	**Riolos of Patr**	**0.20**	**6**	⇑*i*Pb	**Pg**	14 55 36.1	+0.7
RLS				*e*Sb	**Sg**	14 55 39.4	+1.4
UPR	**University Cam**	**0.51**	**32**	*e*PB	**Pg**	14 55 41.1	0.0
UPR				*e*SB	**Sg**	14 55 48.4	+0.6
UPR	**University Cam**	**0.51**	**32**	P	**Pg**	14 55 41.3	+0.2
UPR				S	**Sg**	14 55 48.5	+0.7
UPR	**University Cam**	**0.51**	**32**	*e*Pb	**Pg**	14 55 41.1	0.0
UPR				*e*Sb	**Sg**	14 55 48.4	+0.6
KFL	**Anninata**	**0.57**	**297**	P	**Pg**	14 55 42.1	-0.3
KFL				S	**Sg**	14 55 51.7	+1.8
KFL	**Anninata**	**0.57**	**297**	P	**Pg**	14 55 42.1	-0.3
KFL				S	**Sg**	14 55 51.7	+1.8
LAKA	**Lakka**	**0.57**	**48**	P	**Pg**	14 55 41.8	-0.6

LAKA				S	Sg	14 55 50.2	+0.3
LAKA	**Lakka**	**0.57**	**48**	P	Pg	14 55 41.8	-0.6
LAKA				S	Sg	14 55 50.2	+0.3
EFP	**Efpalio**	**0.68**	**33**	*e*PN	Pg	14 55 43.7	-0.7
EFP				*e*SN	Sg	14 55 53.7	+0.5
EFP	**Efpalio**	**0.68**	**33**	P	Pg	14 55 43.6	-0.8
EFP				S	Sg	14 55 53.5	+0.3
EFP	**Efpalio**	**0.68**	**33**	*e*Pn	Pg	14 55 43.7	-0.7
EFP				S	Sg	14 55 53.5	+0.3
TRIZ	**Trizonia**	**0.71**	**44**	P	Pg	14 55 44.0	-1.1
TRIZ				S	Sg	14 55 54.5	+0.2
TRIZ	**Trizonia**	**0.71**	**44**	P	Pg	14 55 44.0	-1.1
TRIZ				S	Sg	14 55 54.5	+0.2
GUR	**Goura**	**0.72**	**83**	*e*PB	Pg	14 55 44.3	-0.9
GUR				*e*SN	Sg	14 55 55.7	+1.2
GUR	**Goura**	**0.72**	**83**	P	Pg	14 55 44.2	-1.0
GUR				S	Sg	14 55 55.5	+1.0
GUR	**Goura**	**0.72**	**83**	*e*Pb	Pg	14 55 44.3	-0.9
GUR				S	Sg	14 55 55.5	+1.0
VLS	**Valsamata**	**0.74**	**296**	*e*Pb	Pg	14 55 44.5	-1.2
VLS				*e*Sn	Sg	14 55 56.4	+1.1
VLS	**Valsamata**	**0.74**	**296**	*e*PB	Pg	14 55 44.5	-1.2
VLS				*e*SN	Sg	14 55 56.4	+1.1
VLS	**Valsamata**	**0.74**	**296**	P	Pg	14 55 44.4	-1.3
VLS				S	Sg	14 55 56.3	+1.0
VLS	**Valsamata**	**0.74**	**296**	*e*Pb	Pg	14 55 44.5	-1.2
VLS				S	Sg	14 55 56.3	+1.0
KALE	**Kalithea**	**0.77**	**46**	P	Pg	14 55 44.9	-1.2
KALE				S	Sg	14 55 56.1	0.0
KALE	**Kalithea**	**0.77**	**46**	P	Pg	14 55 44.9	-1.2
KALE				S	Sg	14 55 56.1	0.0
ITM	**Ithomi**	**0.78**	**150**	*e*Pb	Pg	14 55 46.6	+0.3
ITM				*e*SN	Sg	14 55 58.7	+2.4
ITM	**Ithomi**	**0.78**	**150**	*e*PB	Pg	14 55 46.6	+0.3
ITM				*e*SN	Sg	14 55 58.7	+2.4
ITM	**Ithomi**	**0.78**	**150**	P	Pg	14 55 46.1	-0.2
ITM				S	Sg	14 55 56.4	+0.1
ITM	**Ithomi**	**0.78**	**150**	P	Pg	14 55 46.1	-0.2
ITM	**Ithomi**	**0.78**	**150**	*e*Pb	Pg	14 55 46.6	+0.3
ITM				S	Sg	14 55 56.4	+0.1
VLX	**Vlachokerasia**	**0.89**	**123**	*e*PN	Pg	14 55 49.1	+0.7
VLX				*e*SN	Sg	14 56 02.0	+2.1
VLX	**Vlachokerasia**	**0.89**	**123**	P	Pg	14 55 48.6	+0.2
VLX				S	Sg	14 56 01.0	+1.1
VLX	**Vlachokerasia**	**0.89**	**123**	P	Pg	14 55 48.6	+0.2
VLX	**Vlachokerasia**	**0.89**	**123**	*e*Pn	Pg	14 55 49.1	+0.7
VLX				S	Sg	14 56 01.0	+1.1
PYL	**PYLOS**	**0.99**	**166**	*e*PB	Pg	14 55 50.0	-0.3
PYL				*e*SN	Sn	14 56 06.1	-0.3
PYL	**PYLOS**	**0.99**	**166**	P	Pg	14 55 49.8	-0.5
PYL				S	Sg	14 56 02.9	-0.2
PYL	**PYLOS**	**0.99**	**166**	*e*Pb	Pg	14 55 50.0	-0.3
PYL				S	Sg	14 56 02.9	-0.2
PYL				*e*Sn	Sn	14 56 06.1	-0.3
DSF	**Desfina**	**1.02**	**57**	P	Pg	14 55 49.3	-1.7
DSF				S	Sg	14 56 05.0	+0.8
DSF	**Desfina**	**1.02**	**57**	P	Pg	14 55 49.3	-1.7
DSF				S	Sg	14 56 05.0	+0.8
LKD	**Levkas**	**1.05**	**324**	P	Pg	14 55 50.7	-0.9
LKD	**Levkas**	**1.05**	**324**	P	Pg	14 55 50.7	-0.9
EVR	**Evrytania**	**1.10**	**15**	*e*Pn	Pg	14 55 50.9	-1.6
EVR	**Evrytania**	**1.10**	**15**	*e*PN	Pg	14 55 50.9	-1.6
LKD2	**Lefkada island**	**1.12**	**327**	P	Pg	14 55 51.0	-1.8
LKD2				S	Sg	14 56 08.8	+1.5
LKD2	**Lefkada island**	**1.12**	**327**	P	Pg	14 55 51.0	-1.8
LKD2				S	Sg	14 56 08.8	+1.5
LTK	**Loutraki**	**1.22**	**82**	*e*PB	Pb	14 55 53.3	-1.7
LTK	**Loutraki**	**1.22**	**82**	P	Pg	14 55 53.2	-1.6
LTK				S	Sg	14 56 11.3	+0.7
LTK	**Loutraki**	**1.22**	**82**	P	Pg	14 55 53.2	-1.6
LTK				S	Sg	14 56 11.3	+0.7
AGG	**Agios Georgios**	**1.36**	**31**	*e*Pn	Pn	14 55 57.1	-0.1
AGG	**Agios Georgios**	**1.36**	**31**	*e*PN	Pn	14 55 57.1	-0.1
AGG	**Agios Georgios**	**1.36**	**31**	P	Pn	14 55 55.9	-1.3
AGG				S	Sg	14 56 16.0	+0.9
AGG	**Agios Georgios**	**1.36**	**31**	P	Pn	14 55 55.9	-1.3
AGG	**Agios Georgios**	**1.36**	**31**	*e*Pn	Pn	14 55 57.1	-0.1
AGG				S	Sg	14 56 16.0	+0.9
LKR	**Lokris**	**1.46**	**57**	*e*Pn	Pn	14 55 57.7	-0.9
LKR	**Lokris**	**1.46**	**57**	*e*PN	Pn	14 55 57.7	-0.9
LKR	**Lokris**	**1.46**	**57**	P	Pn	14 55 57.2	-1.4
LKR				S	Sb	14 56 18.6	+0.5
LKR	**Lokris**	**1.46**	**57**	P	Pn	14 55 57.2	-1.4
LKR	**Lokris**	**1.46**	**57**	*e*Pn	Pn	14 55 57.7	-0.9
LKR				S	Sb	14 56 18.6	+0.5
DID	**Didima**	**1.47**	**103**	*e*PN	Pn	14 55 58.1	+0.5
DID	**Didima**	**1.47**	**103**	P	Pn	14 55 57.7	-0.9
DID				S	Sb	14 56 18.0	-0.3
DID	**Didima**	**1.47**	**103**	P	Pn	14 55 57.7	-0.9
DID	**Didima**	**1.47**	**103**	*e*Pn	Pn	14 55 58.1	-0.5
DID				S	Sb	14 56 18.0	-0.3
ATAL	**Atalanti**	**1.50**	**56**	P	Pn	14 55 58.4	-0.7
ATAL				S	Sn	14 56 18.8	-0.3
ATAL	**Atalanti**	**1.50**	**56**	P	Pn	14 55 58.4	-0.7
ATAL				S	Sn	14 56 18.8	-0.3
NAIG	**Nisos Aigina**	**1.63**	**93**	*e*Pn	Pn	14 56 01.0	+0.2
NAIG	**Nisos Aigina**	**1.63**	**93**	*e*PN	Pn	14 56 01.0	+0.2
NAIG	**Nisos Aigina**	**1.63**	**93**	*e*Pn	Pn	14 56 01.0	+0.2
VLI	**Veliai**	**1.65**	**133**	*e*Pn	Pn	14 56 03.0	+1.9
VLI	**Veliai**	**1.65**	**133**	*e*PN	Pn	14 56 03.0	+1.9
VLI	**Veliai**	**1.65**	**133**	*e*Pn	Pn	14 56 03.0	+1.9
THL	**Klokotos Trika**	**1.77**	**15**	*e*PN	Pn	14 56 03.3	+0.6
THL	**Klokotos Trika**	**1.77**	**15**	P	Pn	14 56 02.9	+0.2
THL				S	Sn	14 56 25.6	-0.1
THL	**Klokotos Trika**	**1.77**	**15**	P	Pn	14 56 02.9	+0.2
THL	**Klokotos Trika**	**1.77**	**15**	*e*Pn	Pn	14 56 03.3	+0.6
THL				S	Sn	14 56 25.6	-0.1
ATH	**Athens Observa**	**1.81**	**86**	*e*Pn	Pn	14 56 05.7	+2.4
ATH	**Athens Observa**	**1.81**	**86**	*e*PN	Pn	14 56 05.7	+2.4
ATH	**Athens Observa**	**1.81**	**86**	*e*Pn	Pn	14 56 05.7	+2.4
JAN	**Janina**	**1.86**	**346**	*e*Pn	Pn	14 56 04.3	+0.3
JAN	**Janina**	**1.86**	**346**	*e*PN	Pn	14 56 04.3	+0.3
JAN	**Janina**	**1.86**	**346**	*e*Pn	Pn	14 56 04.3	+0.3
VLY	**Voula,Athens**	**1.86**	**89**	*e*Pn	Pn	14 56 04.2	+0.1
VLY	**Voula,Athens**	**1.86**	**89**	*e*PN	Pn	14 56 04.2	+0.1
VLY	**Voula,Athens**	**1.86**	**89**	*e*Pn	Pn	14 56 04.2	+0.1
IGT	**Igoumenitsa**	**1.89**	**333**	P	Pn	14 56 05.3	+0.9
IGT	**Igoumenitsa**	**1.89**	**333**	P	Pn	14 56 03.8	-0.6
IGT				S	Sn	14 56 29.7	+1.1
IGT	**Igoumenitsa**	**1.89**	**333**	P	Pn	14 56 03.8	-0.6
IGT				S	Sn	14 56 29.7	+1.1
NEO	**Neokhori**	**2.01**	**43**	*e*Pb	Pb	14 56 05.3	-3.3
NEO	**Neokhori**	**2.01**	**43**	*e*PB	Pb	14 56 05.3	-3.3
KYTH	**Kithira**	**2.02**	**140**	*e*Pn	Pn	14 56 09.4	+3.1
KYTH	**Kithira**	**2.02**	**140**	*e*PN	Pn	14 56 09.4	+3.1
XOR	**Xorichti**	**2.04**	**42**	P	Pn	14 56 05.6	-0.9
XOR				S	Sn	14 56 33.1	+0.7
XOR	**Xorichti**	**2.04**	**42**	P	Pn	14 56 05.6	-0.9
XOR				S	Sn	14 56 33.1	+0.7
KEK	**Kerkira**	**2.25**	**326**	*e*Pb	Pb	14 56 08.6	-4.1
KEK	**Kerkira**	**2.25**	**326**	*e*PB	Pb	14 56 08.6	-4.1
KEK	**Kerkira**	**2.25**	**326**	P	Pn	14 56 08.2	-1.3
KEK	**Kerkira**	**2.25**	**326**	P	Pn	14 56 08.2	-1.3
AOS	**Alonnisos**	**2.32**	**55**	P	Pn	14 56 11.3	+0.9
AOS	**Alonnisos**	**2.32**	**55**	P	Pn	14 56 11.3	+0.9

*ISCJB **11** 15:00:35.0±0.5, 37°.22N×0°.04×28°.18E±0°.03, h10km, Error ellipse: s-maj=5.1km s-min=3.8km az=8.5*
*ISK **11** 15:00:34.6, 37°.19N×28°.18E, h9km, MD2.7*
*DDA **11** 15:00:34.8, 37°.25N×28°.19E, h7km±4km, Md2.8*
*CSEM **11** 15:00:34.8±0.1, 37°.24N×28°.22E, h2km, MD2.7, Error ellipse: s-maj=2.5km s-min=1.9km az=22.0*
ISC 11 15:00:35.2±0.6, 37°.25N±0°.04×28°.21E±0°.04, h0km±10km, n22, σ0s67/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.12**	**152**	PG	Pg	15 00 37.5	-0.1
YER	**Yerkesik**	**0.12**	**152**	*i* Pg	Pg	15 00 37.5	-0.1
MLSB	**Milas**	**0.35**	**278**	*e*PG	Pg	15 00 42.0	+0.1
MLSB				*e*SG	Sg	15 00 47.1	+0.7
MLSB	**Milas**	**0.35**	**278**	*e*Pg	Pg	15 00 42.0	+0.1
MLSB				*e*Sg	Sg	15 00 47.1	+0.7
TURN	**Turunc**	**0.49**	**140**	*i* P	Pg	15 00 43.8	-0.7
TURN				*i* S	Sg	15 00 51.0	+0.2
TURN	**Turunc**	**0.49**	**140**	*i* P	Pg	15 00 43.8	-0.7
TURN				*i* S	Sg	15 00 51.0	+0.2
AYDN	**Tasoluk**	**0.49**	**328**	*i* P	Pg	15 00 44.7	+0.1
AYDN				*i* S	Sg	15 00 50.4	-0.6
AYDN	**Tasoluk**	**0.49**	**328**	*i* P	Pg	15 00 44.7	+0.1
AYDN				*i* S	Sg	15 00 50.4	-0.6
BDRM	**Kayabasi**	**0.64**	**254**	*i* P	Pg	15 00 47.0	-0.4
BDRM				*i* S	Sg	15 00 56.7	+1.1
BDRM	**Kayabasi**	**0.64**	**254**	*i* P	Pg	15 00 47.0	-0.4
BDRM				*i* S	Sg	15 00 56.7	+1.1
DAT	**Datca**	**0.72**	**225**	*e*PG	Pg	15 00 48.1	-0.9
DAT	**Datca**	**0.72**	**225**	*e*Pg	Pg	15 00 48.1	-0.9
BODT	**Bodrum**	**0.74**	**256**	*e*PG	Pg	15 00 48.8	-0.5
BODT	**Bodrum**	**0.74**	**256**	*e*Pg	Pg	15 00 48.8	-0.6
DNZL	**Cakiroluk**	**0.80**	**56**	*i* P	Pg	15 00 50.5	0.0
DNZL				*i* S	Sg	15 01 04.5	+3.6
DNZL	**Cakiroluk**	**0.80**	**56**	*i* P	Pg	15 00 50.5	0.0
DNZL				*i* S	Sg	15 01 04.5	+3.6
KULA	**Kula-Manisa**	**1.32**	**16**	*e*PN	Pn	15 01 00.5	-0.3
KULA	**Kula-Manisa**	**1.32**	**16**	*e*Pn	Pn	15 01 00.5	-0.3
KHL	**Karahalli**	**1.50**	**44**	*e*PN	Pn	15 01 02.7	-0.5
KHL	**Karahalli**	**1.50**	**44**	*e*Pn	Pn	15 01 02.7	-0.6
AKAS	**Kas**	**1.51**	**132**	*i* P	Pn	15 01 04.4	+1.0
AKAS				*i* S	Sg	15 01 32.9	+9.2
AKAS	**Kas**	**1.51**	**132**	*i* P	Pn	15 01 04.4	+1.0

*IDC **11** 15:02:36.0±0.9, 15°.31N×122°.78E, h0km, mb4.0/9, mb1 4.2/10, mb1mx4.0/22, mbtmp4.0/10, ML4.6/1, MS2.9/1, Ms1 3.1/1, ms1mx2.0/29, Error ellipse: s-maj=26.8km s-min=16.4km az=73.0*
*MAN **11** 15:02:38, 15°.41N×122°.48E, h1km, mb5.3, ML4.2, MS4.4*
MAN INTENSITY I - MAKATI CITY.
*ISCJB **11** 15:02:41.5±0.6, 15°.41N±0°.03×122°.47E±0°.06, h39km±7km, mb4.1/14, Error ellipse: s-maj=9.7km s-min=5.2km az=166.7*
*NEIC **11** 15:02:42.6±2.4, 15°.23N×122°.63E, h49km±21km, mb4.2/5, Error ellipse: s-maj=22.4km s-min=8.4km az=61.0*
NEIC Felt [I PIVS] at Makati, Luzon.
ISC 11 15:02:41.9±1.8, 15°.41N±0°.03×122°.45E±0°.06, h27km±14km, n34, σ1s05/39, mb4.1/14, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**0.84**	**216**	*e*P	Pb	15 02 54.2	-3.8
BALP	**Baler**	**0.91**	**291**	*e*P	Pn	15 02 56.7	-2.2
PCPH	**Palayan**	**1.32**	**277**	||*e*P	Pn	15 03 02.3	-2.2
PCPH				*e*S	Sn	15 03 19.7	-1.4
PALP	**Palanan**	**1.64**	**359**	*e*P	Pn	15 03 08.2	-0.8
TGY	**Tagaytay City**	**1.96**	**229**	Pn	Pn	15 03 13.9	+0.5
	204nm,0.3s,baz=96,slow=2.2,SNR=17						
TGY				Sn	Sn	15 03 40.6	+3.5
	264nm,0.3s,baz=310,slow=5.6,SNR=4.9						
BOAC	**Boac**	**2.03**	**197**	*e*P	Pn	15 03 14.2	-0.2
BOAC				*e*S	Sn	15 03 39.8	+1.0
AUQP	**San Andres**	**2.09**	**174**	*e*P	Pn	15 03 17.0	+1.9
AUQP				*e*S	Sn	15 03 38.2	-2.0
CVP	**Callao Caves**	**2.36**	**345**	||*i*P	Pn	15 03 18.2	-0.6
CVP				*i* S	Sn	15 03 47.5	+0.6
PVCP	**Virac**	**2.44**	**137**	*e*P	Pn	15 03 20.5	+0.4
SCZP	**Santa Cruz**	**2.48**	**279**	*e*P	Pn	15 03 21.6	+1.2
BOLP	**Bolinao**	**2.63**	**292**	*e*P	Pn	15 03 22.8	+0.3
APYP	**Conner**	**2.70**	**335**	*e*P	Pn	15 03 23.3	-0.3
LUBP	**Lubang**	**2.71**	**232**	*e*P	Pn	15 03 23.6	-0.1
ABRA	**Dolores**	**2.78**	**323**	*e*P	Pn	15 03 26.3	+1.6
SJMP	**San Jose**	**3.21**	**204**	*e*P	Pn	15 03 31.8	+1.2
CNP	**Catarman**	**3.59**	**143**	*e*P	Pn	15 03 35.6	-0.3
BUSP	**Coron**	**4.03**	**213**	*e*P	Pn	15 03 41.3	-0.6
CM31	**Chiang Mai Arr**	**22.69**	**281**	P	P	15 07 41.9	+0.4
	4.6nm,0.8s,mb4.0						
CMAR	**Chiang Mai Arr**	**22.69**	**281**	P	P	15 07 42.5	+1.1
	2.6nm,0.7s,mb3.8,baz=93,slow=7.5,SNR=18						
CMAR				LR	LR	15 16 58.3	
	comp=Z,28nm,18.6s,baz=205,slow=38						
ULN	**Ulaanbaatar**	**34.78**	**342**	P	P	15 09 30.2	+0.2
	1.2nm,0.8s,mb3.9						
SONM	**Songino Array**	**34.95**	**341**	P	P	15 09 32.0	+0.5
	1.0nm,0.8s,mb3.8,baz=166,slow=9.7,SNR=7.4						
SONM				PcP	PcP	15 12 03.2	-0.4
	0.6nm,1.0s,baz=159,slow=3.6,SNR=4.0						
WRA	**Warramunga Arr**	**37.02**	**161**	P	P	15 09 45.6	-3.9
	2.5nm,0.9s,mb4.0,baz=343,slow=9.2,SNR=12						
ASAR	**Alice Springs**	**40.42**	**164**	P	P	15 10 14.9	-3.0
	0.5nm,0.4s,mb3.6,baz=342,slow=7.2,SNR=14						
MK31	**Makanchi Array**	**45.71**	**322**	*e*P	P	15 11 00.9	+0.4
MKAR	**Makanchi Array**	**45.71**	**322**	P	P	15 11 01.4	+0.9
	3.0nm,0.7s,mb4.3,baz=119,slow=8.8,SNR=29						
MKAR				PcP	PcP	15 12 36.1	-2.1
	0.8nm,0.8s,baz=134,slow=3.5,SNR=4.1						
ZALV	**Zalesovo Beam**	**48.35**	**331**	P	P	15 11 21.3	+0.2
	4.3nm,0.9s,mb4.5,baz=116,slow=6.8,SNR=14						
ZALV	**Zalesovo Beam**	**48.35**	**331**	P	P	15 11 21.3	+0.2
KURK	**Kurchatov**	**49.75**	**325**	*e*P	P	15 11 31.8	0.0
	14nm,0.7s,mb5.1						
KURK				*e*PcP	PcP	15 12 47.3	-5.2
BVAR	**Borovoye Array**	**55.34**	**325**	P	P	15 12 13.2	-0.1
	1.2nm,0.7s,mb4.0,baz=116,slow=10,SNR=11						
BRVK	**Borovoye**	**55.42**	**325**	*e*P	P	15 12 13.9	+0.2
	6.5nm,1.0s,mb4.6						
ABKAR	**Akbulak array**	**60.58**	**318**	*e*P	P	15 12 49.5	-0.5
	0.8nm,0.7s,mb4.0						
FINES	**FINESS Array B**	**79.62**	**331**	P	P	15 14 46.3	-0.2
	1.5nm,0.8s,mb4.0,baz=76,slow=5.9,SNR=3.8						
NB2	**NORSAR Subarra**	**86.52**	**333**	P	P	15 15 21.5	-0.7
	comp=Z,0.9nm,0.7s,mb4.1,baz=64,slow=5.1						
NOA	**NORSAR Array B**	**86.52**	**333**	P	P	15 15 21.5	-0.7
	comp=Z,1.4nm,0.8s,mb4.3,baz=64,slow=5.0,SNR=4.3						

*ISCJB **11** 15:23:41.7±0.6, 38°.41N±0°.04×39°.31E±0°.04, h7km±4km, Error ellipse: s-maj=6.4km s-min=5.1km az=32.8*
*DDA **11** 15:23:41.3, 38°.43N×39°.30E, h5km±3km, Md2.8*
*CSEM **11** 15:23:41.8±0.1, 38°.42N×39°.29E, h8km, MD2.6, Error ellipse: s-maj=3.1km s-min=2.7km az=23.0*
*ISK **11** 15:23:41.5, 38°.42N×39°.28E, h5km, MD2.6*
ISC 11 15:23:42.1±0.7, 38°.41N±0°.04×39°.30E±0°.04, h7km±8km, n16, σ0s63/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVRC	**Sivrice-ELAZID**	**0.03**	**170**	PG	Pg	15 23 43.2	-0.2
SVRC				*e*SG	Sg	15 23 44.3	-0.1
SVRC	**Sivrice-ELAZID**	**0.03**	**170**	*i* Pg	Pg	15 23 43.3	-0.2
SVRC				*e*Sg	Sg	15 23 44.3	-0.2
ELZG	**Elazig**	**0.26**	**289**	*i* P	Pg	15 23 47.3	0.0
ELZG				*i* S	Sg	15 23 51.4	+0.7
ELZG	**Elazig**	**0.26**	**289**	*i* P	Pg	15 23 47.3	0.0
ELZG				*i* S	Sg	15 23 51.4	+0.6
PTK	**Pertek**	**0.48**	**9**	*e*PG	Pg	15 23 51.3	-0.2
PTK				*e*SG	Sg	15 23 58.3	+0.4
PTK	**Pertek**	**0.48**	**9**	*e*Pg	Pg	15 23 51.3	-0.2
PTK				*e*Sg	Sg	15 23 58.3	+0.4
MYA	**Malataya**	**0.69**	**263**	*e*PG	Pg	15 23 55.0	-0.4
MYA				*e*SG	Sg	15 24 04.8	+0.4
MYA	**Malataya**	**0.69**	**263**	*e*Pg	Pg	15 23 55.0	-0.4
MYA				*e*Sg	Sg	15 24 04.8	+0.4
DIYA	**Diyarbakir**	**0.81**	**127**	*i* P	Pg	15 23 58.0	+0.3
DIYA				*i* S	Sg	15 24 08.7	+0.5
DIYA	**Diyarbakir**	**0.81**	**127**	*i* P	Pg	15 23 58.0	+0.3
DIYA				*i* S	Sg	15 24 08.7	+0.5
URFA	**Urfa**	**1.04**	**201**	*e*PG	Pg	15 24 02.0	-0.1
URFA	**Urfa**	**1.04**	**201**	*e*Pg	Pg	15 24 02.0	0.0
KEMA	**Kemaliye**	**1.06**	**324**	*i* P	Pg	15 24 00.9	-1.6
KEMA				*i* S	Sg	15 24 16.8	+0.5
KEMA	**Kemaliye**	**1.06**	**324**	*i* P	Pg	15 24 00.9	-1.6
AKCD	**Akcadag**	**1.09**	**264**	*e*P	Pg	15 24 01.8	-1.2
AKCD				*i* S	Sg	15 24 17.8	+0.7
AKCD	**Akcadag**	**1.09**	**264**	*e*P	Pg	15 24 01.8	-1.2
AKCD				*i* S	Sg	15 24 17.8	+0.7

*TAP **11** 16:17:21.0, 23°.71N×122°.49E, h3km±2km, ML2.6, D*
*ISCJB **11** 16:17:21.3±1.3, 23°.75N±0°.04×122°.50E±0°.03, h11km±10km, Error ellipse: s-maj=6.8km s-min=3.3km az=159.5*
*JMA **11** 16:17:23.0±0.2, 24°.08N×122°.37E, h57km*
ISC 11 16:17:20.8±0.7, 23°.76N±0°.04×122°.51E±0°.03, h7km±4km, n27, σ1s01/41, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.84**	**33**	P	Pg	16 17 37.2	+0.2
YOJ				*e*S	Sg	16 17 47.6	-0.3
TWD	**Chiawan**	**0.89**	**291**	*e*P	Pg	16 17 38.0	0.0
	baz=294						
ENA	**Nanau**	**0.97**	**314**	*e*P	Pg	16 17 40.4	+1.0
	baz=316						
ENA				*e*S	Sg	16 17 53.9	+1.9
	baz=316						
ESL	**Shilin**	**0.98**	**274**	*e*P	Pg	16 17 40.9	+1.2
	baz=276						
ESL				*e*S	Sg	16 17 52.7	+0.2
	baz=276						
TWC	**Suao**	**1.04**	**325**	*e*P	Pg	16 17 40.6	-0.2
	baz=327						
TWC				*e*S	Sg	16 17 54.8	+0.5
	baz=327						
EHY	**Hungye**	**1.11**	**257**	*e*S	Sg	16 17 56.3	-0.3
	baz=259						
TWF1	**Yuli**	**1.18**	**250**	P	Pg	16 17 42.5	-1.0
	baz=251						
TWF1				*e*S	Sg	16 17 57.8	-1.0
	baz=251						
WHF	**Hehuan Shan**	**1.20**	**289**	*e*P	Pg	16 17 43.0	-0.9
	baz=291						
WHF				*e*S	Sg	16 17 58.3	-1.1
	baz=291						
HATJ	**Hateruma jima**	**1.23**	**76**	P	Pg	16 17 45.4	+1.0
TWE	**Neicheng**	**1.23**	**322**	*e*P	Pg	16 17 44.0	-0.4
	baz=323						
NNS	**Nan Shan**	**1.24**	**304**	*e*P	Pb	16 17 44.0	-0.5
	baz=305						
IRIF	**Iriomote-Funau**	**1.26**	**63**	P	Pn	16 17 44.9	0.0
IRIF				*e*S	Sg	16 18 00.4	-1.0
TWT	**Tachien**	**1.31**	**292**	*e*P	Pn	16 17 44.9	-0.6
	baz=293						
NSK	**Sanguang**	**1.39**	**311**	*e*P	Pn	16 17 44.7	-1.9
	baz=313						
YUS	**Yu-Shan**	**1.45**	**260**	*e*P	Pn	16 17 48.5	+1.0
	baz=261						
YUS				*e*S	Sn	16 18 05.4	-1.3
	baz=261						
JKRS	**Kuro-shima**	**1.46**	**71**	P	Pn	16 17 48.3	+0.7
SMLT	**Sun Moon Lake**	**1.48**	**275**	*e*P	Pn	16 17 47.0	-0.8
	baz=276						
ELDTW	**Lidau**	**1.48**	**248**	*e*P	Pn	16 17 46.8	-1.1
	baz=248						
ELDTW				*e*S	Sn	16 18 04.4	-3.0
	baz=248						
ALS	**Alishan**	**1.58**	**261**	*e*P	Pn	16 17 48.8	-0.4
	baz=262						
ALS				*e*S	Sn	16 18 08.9	-1.0
	baz=262						
JIJ	**Ishigaki jima**	**1.61**	**68**	P	Pn	16 17 50.0	+0.3
JIJ				*e*S	Sn	16 18 09.8	-1.0
NSTT	**Nanjuang**	**1.62**	**303**	*e*P	Pn	16 17 50.6	+0.7
	baz=304						
CHN5	**Tsauling**	**1.68**	**265**	*e*P	Pn	16 17 51.7	+1.0
	baz=266						
CHN5				*e*S	Sn	16 18 12.4	-0.1
	baz=266						
WTP	**Ta-pu**	**1.81**	**254**	*e*P	Pn	16 17 52.3	-0.1
	baz=254						
WTP				*e*S	Sn	16 18 16.8	+1.2
	baz=254						
SGST	**Jiashian**	**1.89**	**250**	*e*P	Pn	16 17 53.9	+0.4
	baz=250						
CHN1	**Nanshi**	**1.90**	**253**	*e*P	Pn	16 17 56.1	+2.4
	baz=253						
CHN1				*e*S	Sn	16 18 20.0	+2.0
	baz=253						
SSD	**Sandimen**	**2.00**	**240**	*e*P	Pn	16 17 56.6	+1.6
	baz=240						
EAST	**Anshuo**	**2.05**	**228**	*e*P	Pn	16 17 55.9	+0.2
	baz=228						

*ISCJB **11** 16:25:27.6±0.8, 37°.00N±0°.04×29°.17E±0°.04, h2km±9km, Error ellipse: s-maj=7.1km s-min=5.5km az=20.4*
*DDA **11** 16:25:27.2, 37°.01N×29°.17E, h7km±2km, Md3.0*
*ISK **11** 16:25:27.6, 36°.97N×29°.24E, h8km, MD3.0*
*CSEM **11** 16:25:27.5±0.2, 36°.97N×29°.19E, h5km, MD3.0, Error ellipse: s-maj=3.8km s-min=2.7km az=73.0*
ISC 11 16:25:27.9±0.7, 36°.99N±0°.04×29°.17E±0°.04, h5km±9km, n21, σ0s79/31, Turkey

| Code | Station Name |

PET eS Sn 16 42 29.7 -2.6
PET pmax pmax
comp=Z,18nm,0.4s
PET smax
comp=E,158nm,0.7s
PET Petropavlovsk 3.71 35 eP Pn 16 41 48.4 -0.7
PET i S Sn 16 42 30.6 -1.7
PET Petropavlovsk 3.71 35 ePn Pn 16 41 47.9 -1.2
PET eSn Sn 16 42 30.3 -2.0
AVH Avacha 3.93 33 eP Pn 16 41 52.4 +0.4
GNL Ganaly 4.06 24 eP Pn 16 41 54.5 +0.8
KII Karymskiy 4.81 32 eP Pn 16 42 03.5 -0.2
MKZ Mys Kozlova 6.06 39 eP Pn 16 42 17.5 -3.0
MKZ i S Sn 16 43 20.1 -8.5
KMNR Kamenistaya 6.51 26 eP Pn 16 42 27.2 +0.8
KPT Kopyto 6.68 25 eP Pn 16 42 29.1 +0.3
BZMR Bezymyannaya 6.73 26 eP Pn 16 42 29.8 +0.3
SRDR Sredinnyy 6.87 22 eP Pn 16 42 32.4 +1.1
KUR Kuril'sk 6.88 229 PN Pn 16 42 40.0 +8.4
KUR S Sn 16 43 47.0 -1.4
KUR smax
comp=N,100nm,0.8s
KUR smax
comp=E,30nm,0.8s
ZLN Zelenaya 6.89 27 eP Pn 16 42 32.4 +0.7
CIRR Tsirk 6.96 27 eP Pn 16 42 33.4 +0.8
KRSR Krestovskiy 7.00 26 eP Pn 16 42 33.4 +0.3
KLY Klyuchi 7.11 25 eP Pn 16 42 35.2 +0.7
KBTR Krutoberegovo 7.71 34 eP Pn 16 42 40.7 -1.9
KBTR i S Sn 16 44 02.7 -5.6
BKI Bering 8.37 48 eP Pn 16 42 48.3 -3.2
BKI i S Sn 16 44 11.1 -13
YSS Yuzh-Sakhalins 8.80 254 ePN Pn 16 43 01.0 +3.6
YSS Yuzh-Sakhalins 8.80 254 ePn Pn 16 42 54.5 -2.8
ASAJ Asahikawa 10.41 240 P Pn 16 43 20.2 +1.4
comp=E,2.3nm,0.3s,baz=70,slow=14,SNR=29
ASAJ Asahikawa 10.41 240 PN Pn 16 43 20.3 +1.4
ASAJ pmax pmax
comp=Z,2.0nm,0.3s
ERM Erimo 11.56 231 d PN Pn 16 43 31.1 -3.0
ERM Erimo 11.56 231 ePn Pn 16 43 30.5 -3.6
HABR Khabarovsk 13.23 271 ePN Pn 16 43 57.7 +1.8
HABR pmax pmax
comp=Z,23nm,1.4s
HABR pmax pmax
comp=E,28nm,1.9s
HABR pmax pmax
comp=N,22nm,2.4s
KLR Kul'dur 15.19 276 eP Pn 16 44 20.8 +0.2
MDJ Mudanjiang 18.12 262 eP P 16 44 59.7 +4.8
comp=N,36nm,0.9s
MAJO Matsushiro 18.22 229 eP P 16 44 56.1 +0.1
MAJO pmax pmax
comp=Z,15nm,0.4s
MAJO Matsushiro 18.22 229 ePn Pn 16 44 56.0 -1.5
comp=Z,16nm,0.4s
MAT Matsushiro 18.22 229 P P 16 44 56.3 +0.3
MJAR Matsushiro Arr 18.22 229 P P 16 44 56.5 +0.4
comp=Z,1.2nm,0.3s,baz=29,slow=10,SNR=14
MJAR Matsushiro Arr 18.22 229 P P 16 44 56.5 +0.4
YAK Yakutsk 18.48 320 eP P 16 44 59.3 +0.7
YAK e 16 45 54.2
YAK eS S 16 48 26.2 +3.8
YAK pmax pmax
comp=Z,12nm,1.4s
YAK pmax pmax
comp=E,23nm,0.9s
YAK pmax pmax
comp=N,30nm,1.3s
YAK smax
comp=N,2μm,1.7s
YAK Yakutsk 18.48 320 ePn Pn 16 44 59.3 -1.1
comp=N,32nm,0.6s
BILL Bilibino 18.89 13↑ eP P 16 45 02.9 -0.1
BILL pmax pmax
comp=Z,4.0nm,1.0s
BILL MLR MLR
comp=Z,100nm,21.0s
CLNS Chul'man 19.17 302 eP P 16 45 10.1 +4.0
CLNS pmax pmax
comp=Z,12nm,0.9s
CLNS pmax pmax
comp=N,7.0nm,1.0s
CLNS pmax pmax
comp=E,8.0nm,0.9s
HIA Hailar 22.83 282 eP P 16 45 44.0 -0.7
HIA pmax pmax
comp=Z,9.0nm,0.8s
HIA Hailar 22.83 282 eP P 16 45 44.0 -0.7
comp=Z,9.3nm,0.8s,mb4.3
KDAK Kodiak Island 31.04 55 P P 16 46 55.3 -2.7
comp=Z,5.6nm,0.8s,mb4.4,baz=276,slow=5.9,SNR=7.9
ULN Ulaanbaatar 31.25 285 eP P 16 46 59.4 -0.7
ULN pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
ULN Ulaanbaatar 31.25 285 eP P 16 46 59.4 -0.7
comp=Z,2.3nm,0.8s,mb4.0
BPAW Bear Paw Mtn. 31.39 43 eP P 16 47 00.1 -1.0
comp=Z,4.5nm,0.7s,mb4.3
HHC Hu-ho-hao-te 31.55 270 eP P 16 47 00.8 -2.0
HHC PP PP 16 48 08.9 -7.5
HHC PcP PcP 16 49 50.9 -1.2
HHC S S 16 51 58.0 -3.4
HHC ScP ScP 16 53 21.4 -1.3
HHC PcS PcS 16 53 34.3 -2.3
HHC ScS ScS 16 57 18.1 -2.7
HHC pmax pmax
comp=Z,15nm,0.5s,mb5.0
HHC pmax pmax
comp=Z,120nm,5.2s
HHC LR LR
comp=N,110nm,12.3s
HHC LR LR
comp=E,110nm,12.4s
HHC LR LR
comp=Z,94nm,11.9s
SONM Songino Array 31.67 285 P P 16 47 03.7 -0.1
comp=Z,0.9nm,0.5s,mb3.8,baz=71,slow=7.6,SNR=10
SONM PcP PcP 16 49 52.3 0.0
comp=Z,0.1nm,0.3s,baz=134,slow=4.2,SNR=2.1
TRF Thorofare Moun 31.70 44 eP P 16 47 03.3 -0.5
comp=Z,5.2nm,0.8s,mb4.3
MCK McKinley 32.30 44 eP P 16 47 08.4 -0.6
MCK pmax pmax
comp=Z,11nm,0.9s,mb4.6
MCK McKinley 32.30 44 eP P 16 47 08.4 -0.7
comp=Z,11nm,0.9s,mb4.6
COLA College 32.74 41 eP P 16 47 12.5 -0.4
COLA pmax pmax
comp=Z,12nm,0.9s,mb4.6
COLA College 32.74 41 eP P 16 47 12.5 -0.5
comp=Z,12nm,0.9s,mb4.6
MENT Mentasta 34.70 45 eP P 16 47 29.1 -0.8
EGAK Eagle 35.60 41 eP P 16 47 36.3 -1.3
comp=Z,16nm,1.1s,mb4.6
DAWY Dawson 36.46 42 eP P 16 47 44.0 -0.9
HYT Haines Junctio 38.00 47 eP P 16 47 58.3 +0.4
INK Inuvik 38.16 35 P P 16 47 57.4 -1.8
comp=Z,4.0nm,0.6s,mb4.2,baz=284,slow=8.3,SNR=8.9
LZH Lanzhou 39.23 269 eP P 16 48 08.5 0.0
LZH PP PP 16 49 45.4 +4.4
LZH pmax pmax
comp=Z,18nm,1.2s,mb4.6
LZH pmax pmax
comp=Z,45nm,4.7s
GTA Gaotai 39.89 276 eP P 16 48 14.7 +0.8
GTA pmax pmax
comp=Z,7.0nm,1.1s,mb4.2
ZALV Zalesovo Beam 41.88 303 P P 16 48 30.2 +0.2
comp=Z,7.5nm,0.4s,mb4.7,baz=60,slow=6.9,SNR=45
NVS Novosibirsk 42.35 305↓ i P P 16 48 34.7 +0.9
NVS pmax pmax
comp=Z,17nm,1.4s,mb4.5
NVS pmax pmax
comp=N,7.0nm,1.7s
NVS pmax pmax
comp=E,10.0nm,1.4s
CD2 Chengdu 42.58 263 P P 16 48 35.4 -0.5
CD2 pP pP 16 49 03.9 -1.7
CD2 PP PP 16 50 18.4 +1.3
CD2 S S 16 54 47.6 -0.9
CD2 SS SS 16 57 55.2 -8.1
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.7
CD2 pmax pmax
comp=Z,150nm,7.1s
CD2 LR LR
comp=N,140nm,6.5s
CD2 LR LR
comp=Z,190nm,7.7s
GYA Guiyang 43.80 256 P P 16 48 45.3 -0.5
GYA pP pP 16 49 13.7 -1.9
GYA PP PP 16 50 30.8 +0.5
GYA ScP ScP 16 54 09.8 +0.7
GYA PcS PcS 16 54 22.4 -0.8
GYA S S 16 55 05.9 -0.6
GYA ScS ScS 16 58 30.0 -1.0
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
WMQ Urumqi 45.08 289 eP P 16 48 56.3 +0.5
WMQ pP pP 16 49 24.9 -0.8
WMQ PP PP 16 50 44.5 +1.0
WMQ pmax pmax
comp=Z,22nm,0.8s,mb4.8
WMQ pmax pmax
comp=Z,99nm,4.6s
MK31 Makanchi Array 46.71 296 i P P 16 49 08.8 +0.3
MK31 pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
MK31 Makanchi Array 46.71 296 eP P 16 49 08.8 +0.3
MKAR Makanchi Array 46.71 296 P P 16 49 08.7 +0.2
comp=Z,7.1nm,0.8s,mb4.3,baz=62,slow=8.0,SNR=50
KURK Kurchatov 46.74 302 de P P 16 49 09.5 +0.8
KURK pmax pmax
comp=Z,17nm,0.6s,mb4.8
KURK Kurchatov 46.74 302 eP P 16 49 08.9 +0.3
comp=Z,22nm,0.6s,mb5.0
KURK e pP 16 49 42.5 +3.8
KMI Kunming 47.22 258 P P 16 49 12.5 -0.2
KMI pP pP 16 49 40.9 -2.0
KMI PP PP 16 51 04.0 -0.7
KMI S S 16 55 54.5 -1.1
KMI SS SS 16 59 17.1 -7.3
KMI pmax pmax
comp=Z,4.0nm,0.7s,mb4.2
KMI pmax pmax
comp=Z,110nm,5.5s
KMI LR LR
comp=N,130nm,15.8s
KMI LR LR
comp=E,81nm,15.3s
KMI LR LR
comp=Z,140nm,6.6s
RES Resolute Bay 47.29 20 P P 16 49 12.8 +0.1
comp=Z,0.5nm,0.3s,mb3.6,baz=287,slow=11,SNR=3.4
YKA Yellowknife Ar 47.49 39 P P 16 49 13.9 -0.4
comp=Z,3.8nm,0.6s,mb4.2,baz=294,slow=6.9,SNR=7.7
VOSK Vostochnaya 49.74 308 P P 16 49 29.9 -1.7
VOSK pmax pmax
comp=Z,4.0nm,0.7s,mb4.2
BVAR Borovoye Array 49.88 308 P P 16 49 33.0 +0.3
comp=Z,1.9nm,0.4s,mb4.1,baz=53,slow=8.7,SNR=24
BVAR PcP PcP 16 50 52.9 +1.8
comp=Z,1.0nm,0.5s,baz=46,slow=4.2,SNR=5.0
BRVK Borovoye 49.91 308 eP P 16 49 31.8 -1.1
ZRNK Zerenda 50.62 309 P P 16 49 37.5 -0.7
B08A Colville Reser 52.90 56↑ P P 16 49 54.7 -0.5
baz=53
ARU Arti 53.55 317 d iP P 16 49 59.2 -0.6
ARU e 16 51 58.3
ARU S S 16 57 23.4 +1.1
ARU pmax pmax
comp=Z,10.0nm,1.2s,mb4.4
ARU Arti 53.55 317 eP P 16 49 59.2 -0.6
comp=Z,6.0nm,0.8s,mb4.4
OD2 Odessa Site #2 53.82 57 eP P 16 50 00.8 -1.1
comp=Z,5.5nm,1.0s,mb4.2
CHTO Chiang Mai 54.23 256 eP P 16 50 06.8 +1.5
CHTO pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
CHTO Chiang Mai 54.23 256 eP P 16 50 06.8 +1.5
comp=Z,9.4nm,0.8s,mb4.6
CM31 Chiang Mai Arr 54.49 256 eP P 16 50 08.8 +1.7
comp=Z,4.7nm,0.8s,mb4.3
CMAR Chiang Mai Arr 54.49 256 P P 16 50 09.2 +2.0
comp=Z,4.5nm,0.8s,mb4.3,baz=33,slow=6.9,SNR=44
E09A Wood Farm, Sta 54.66 58↓ P P 16 50 07.4 -0.6
baz=54
C11A Tepee Creek (N 54.86 55↓ P P 16 50 09.1 -0.4
baz=55
G08A Pilot Rock 54.97 59↑ P P 16 50 10.0 -0.3
baz=55
YBH Yreka Blue Hor 55.04 65 P P 16 50 11.7 +0.8
comp=Z,1.5nm,0.8s,mb3.8,baz=1.4,slow=8.1,SNR=6.2
ARCES ARCESS Array B 55.21 341 P P 16 50 09.5 -2.1
comp=Z,1.5nm,0.8s,mb3.8,baz=26,slow=9.0,SNR=3.8
WALA Waterton Lakes 55.33 53 eP P 16 50 11.7 -1.1
C12B Naegeli Ranch, 55.35 55↓ P P 16 50 12.9 -0.2
baz=55
K05A Summer Lake 55.47 63↑ P P 16 50 14.1 +0.2
baz=55
B13A Whitefish 55.47 54↑ P P 16 50 13.6 -0.2
baz=55
BSMT Bassoo Peak 55.63 55 eP P 16 50 15.4 +0.4
A14A Double T Ranch 55.64 53↓ P P 16 50 14.4 -0.6
baz=56
G10A Bishop Farm, J 55.98 58↓ P P 16 50 17.4 -0.1
baz=56
A15A Johnson Ranch, 55.99 53↑ P P 16 50 16.3 -1.2
baz=56
B14A Marquette Ranc 56.10 53↑ P P 16 50 18.1 -0.2
baz=56
E12A Beaver Dam Sad 56.11 56↑ P P 16 50 18.0 -0.4
baz=56
D13A Huson 56.28 55↑ P P 16 50 19.5 -0.2
baz=56
G11A Walters Elk Ra 56.38 58↑ P P 16 50 20.2 -0.1
baz=56
I09A Lost Marbles R 56.47 60↑ P P 16 50 21.0 -0.1
baz=56
B15A Bradely Ranch, 56.50 53↑ P P 16 50 20.6 -0.6
baz=56
SLMT Seeley Lake 56.70 55 eP P 16 50 21.8 -0.8
F12A Elk City 56.70 57↑ P P 16 50 22.5 -0.1
baz=56,SNR=5.2
D14A Greenough 56.79 55↑ P P 16 50 22.7 -0.5
baz=57,SNR=8.1
H11A Donnelly 56.96 58↑ P P 16 50 24.1 -0.4
baz=57,SNR=5.6
CHMT Chamberlain Mo 57.03 55 eP P 16 50 24.0 -0.9
comp=Z,1.4nm,0.6s,mb4.0
E14A Clinton 57.22 55↑ P P 16 50 26.0 -0.3
baz=57
C16A Fuhringer Ranc 57.25 53↑ P P 16 50 26.4 0.0
baz=57
D15A Lincoln 57.33 54↑ P P 16 50 26.8 -0.2
baz=57
FFC Flin Flon 57.37 42 ce P P 16 50 27.7 +0.5
AB31 Akbulak array 57.40 309 P P 16 50 27.2 -0.3
AB31 pmax pmax
comp=Z,2.0nm,0.4s,mb4.3
ABKAR Akbulak array 57.40 309 eP P 16 50 27.3 -0.1
comp=Z,3.1nm,0.6s,mb4.3
AKTK Aktyubinsk 57.58 311 P P 16 50 28.6 -0.1
AKTO Aktyubinsk 57.58 311 P P 16 50 28.6 -0.1
comp=Z,1.9nm,0.5s,mb4.2,baz=66,slow=10.0,SNR=7.9
E15A Deer Lodge 57.67 55↑ P P 16 50 29.3 -0.1
baz=58
G13A Cobalt 57.68 57↑ P P 16 50 28.9 -0.6
baz=58,SNR=6.7
H12A Diamond D Ranc 57.69 58↓ P P 16 50 29.7 +0.1
baz=58
K10A MacKenzie Ranc 57.72 60↑ P P 16 50 30.2 +0.4
baz=58
D16A Dana Ranch, Ca 57.85 54↑ P P 16 50 30.8 +0.1
baz=58
B18A Beardsley Farm 57.87 52↓ P P 16 50 30.5 -0.2
baz=58
H13A Challis 58.01 57↓ P P 16 50 31.4 -0.4
baz=58,SNR=5.1
I12A Atlanta 58.03 59↓ P P 16 50 31.9 0.0
baz=58
F15A Butte 58.12 55↑ P P 16 50 33.0 +0.4
baz=58
LRM Limekiln Ridge 58.16 55 eP P 16 50 33.2 +0.3
K11A Parker Ranch, 58.20 60↓ P P 16 50 33.1 -0.1
baz=58
H14A Leadore 58.46 57↓ P P 16 50 34.7 -0.2
baz=58
I13A Wildhorse Cree 58.51 58↓ P P 16 50 35.5 +0.2
baz=58,SNR=7.8
G15A Dillon 58.57 56↓ P P 16 50 36.2 +0.5
baz=58
HLID Hailey 58.58 58↑ P P 16 50 36.2 +0.4
baz=58
HLID Hailey 58.58 58 eP P 16 50 35.8 +0.1
comp=Z,1.6nm,0.9s,mb3.9
E17A Martinsdale 58.58 54↓ P P 16 50 36.5 +0.7
baz=58
BOZ Bozeman (W) 58.71 55↑ P P 16 50 36.8 +0.2
baz=58,SNR=6.2
BOZ Bozeman (W) 58.71 55 eP P 16 50 36.6 -0.1
BOZ pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
BOZ Bozeman (W) 58.71 55 eP P 16 50 36.6 0.0
comp=Z,3.0nm,0.7s,mb4.2
M10A I.L. Ranch, Tu 58.73 61↓ P P 16 50 37.7 +0.8
baz=59
L11A Cat Creek Ranc 58.75 60↑ P P 16 50 37.4 +0.4
baz=59
J13A Cove Ranch, Pi 58.81 58↑ P P 16 50 38.0 +0.6
baz=59
I14A Mackay 58.86 58↑ P P 16 50 38.4 +0.6
baz=59
K12A Draper Farm, C 58.91 60↑ P P 16 50 38.4 +0.3
baz=59
E18A Harlowton 59.00 53↓ P P 16 50 39.3 +0.6
baz=59
F17A Fitzpatrick Pl 59.05 54↓ P P 16 50 39.7 +0.7
baz=59
M11A Holland Ranch, 59.21 61↑ P P 16 50 40.1 -0.1
baz=59
J14A Carey 59.22 58↑ P P 16 50 41.0 +0.8
baz=59,SNR=8.1
G17A Pierce Place, 59.40 55↑ P P 16 50 41.8 +0.4
baz=59
H16A Russell Place, 59.54 56↑ P P 16 50 42.8 +0.4
baz=59
F18A Big Timber 59.54 54↑ P P 16 50 42.7 +0.3
baz=59,SNR=5.4
M12A Wells 59.71 61↓ P P 16 50 44.4 +0.7
baz=60
NVAR Mina Array Bea 59.75 65 P P 16 50 43.2 -0.7
comp=Z,2.6nm,0.7s,mb4.2,baz=288,slow=7.2,SNR=13
J15A Blackfoot 59.77 57↑ P P 16 50 44.6 +0.7
baz=60
L13A Double Diamond 59.81 59↓ P P 16 50 45.0 +0.8
baz=60
ELK Elko 59.98 61 P P 16 50 45.7 +0.3
comp=Z,1.3nm,0.6s,mb3.9,baz=316,slow=6.9,SNR=6.1
ELK Elko 59.98 61 P P 16 50 45.7 +0.3
O11A Cowboy Ranch, 60.15 62↓ P P 16 50 46.9 +0.3
baz=60
RLMT Red Lodge 60.30 54↓ P P 16 50 48.2 +0.6
baz=60
RLMT Red Lodge 60.30 54 eP P 16 50 47.3 -0.3
comp=Z,3.3nm,0.8s,mb4.2
M14A Sheep Mountain 60.53 60↑ P P 16 50 50.0 +0.8
baz=60
O12A Currie 60.58 61↑ P P 16 50 49.7 +0.2
baz=60
K16A Soda Springs 60.60 57↓ P P 16 50 50.7 +1.0
baz=60
P12A McGill 61.02 62↓ P P 16 50 52.5 0.0
baz=61
S10A Tonopah Range, 61.09 65↑ P P 16 50 53.0 0.0
baz=61
GRAC Grapevine Rang 61.26 66↑ P P 16 50 54.3 0.0
baz=61
R11A Troy Canyon, C 61.39 64↓ P P 16 50 54.7 -0.3
baz=61,SNR=6.2
K18A Toltan Ranch, 61.58 57↓ P P 16 50 56.8 +0.6
baz=61
FINES FINESS Array B 61.66 335 P P 16 50 55.7 -0.8
comp=Z,0.9nm,0.5s,mb3.9,baz=33,slow=8.1,SNR=13
FINES sP sP 16 51 37.0 -5.5
comp=Z,1.7nm,0.9s,baz=279,slow=3.7,SNR=2.0
DUG Dugway 61.71 60↑ P P 16 50 57.4 +0.2
baz=62
BW06 Boulder Array 61.75 56↑ P P 16 50 57.2 -0.1
baz=62,SNR=6.4
PDAR Pinedale Array 61.75 56 P P 16 50 57.2 -0.1
comp=Z,3.7nm,0.7s,mb4.3,baz=332,slow=2.5,SNR=36
S11A Rachel 61.77 64↓ P P 16 50 57.8 +0.2
baz=62
MPMC Manual Prospec 61.83 67↓ P P 16 50 57.8 -0.2
baz=62
Q13A Wheeler Ranch, 61.88 62↑ P P 16 50 58.5 +0.2
baz=62
FURC Furnace Creek, 61.92 66↑ P P 16 50 58.3 -0.4
baz=62,SNR=5.4
R12A Pony Springs, 61.97 63↓ P P 16 50 58.7 -0.2
baz=62
P14A Drum Mountains 61.98 61↓ P P 16 50 59.0 +0.1
baz=62
LRMC Laurel Mountai 62.11 67↓ P P 16 50 59.5 -0.4
baz=62
U10A Ash Meadows, A 62.27 66↑ P P 16 51 01.1 +0.1
baz=62
Q14A Sevier Lake (B 62.27 62↑ P P 16 51 01.1 +0.1
baz=62,SNR=5.6
S13A Holt Ranch, En 62.91 63↓ P P 16 51 05.3 +0.1
baz=63
ULM Lac du Bonnet 63.16 43 P P 16 51 05.4 -1.3
comp=Z,3.7nm,0.6s,mb4.4,baz=236,slow=3.6,SNR=2.5
T13A Saint George 63.27 64↓ P P 16 51 07.7 +0.1
baz=63
HEC Hector,Ludlow 63.36 67↑ P P 16 51 07.6 -0.6
baz=63
L21A Rawlins 63.47 56↑ P P 16 51 09.1 +0.2
baz=63
Q16A Castle Valley 63.51 60↓ P P 16 51 09.7 +0.6
baz=63
U13A Pakoon Wash 63.65 64↑ P P 16 51 10.0 -0.1
baz=64,SNR=5.5
RSSD Black Hills 63.69 52 eP P 16 51 09.6 -0.6
RSSD pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
RSSD Black Hills 63.69 52 eP P 16 51 09.6 -0.7
comp=Z,2.7nm,0.6s,mb4.2
T14A Hurricane 63.71 63↓ P P 16 51 10.8 +0.3
baz=64
M21A Separation Pea 63.73 56↑ P P 16 51 10.9 +0.4
baz=64
SRU San Rafael 63.74 60↓ P P 16 51 10.6 0.0
baz=64,SNR=6.1
R16A Teasdale 63.78 61↓ P P 16 51 11.8 +0.9
baz=64
N20A Spence Gulch, 63.78 57↑ P P 16 51 11.2 +0.3
baz=64,SNR=6.7
GMRC Granite Mounta 63.79 67↑ P P 16 51 10.7 -0.3
baz=64
V13A Grand Canyon W 64.03 65↓ P P 16 51 12.5 -0.1
baz=64,SNR=5.9
S16A Weppner Ranch, 64.10 62↓ P P 16 51 12.9 -0.2
baz=64
R17A Hanksville Air 64.12 61↑ P P 16 51 12.8 -0.4
baz=64
P19A Cripple Cowboy 64.23 59↑ P P 16 51 14.2 +0.3
baz=64
N21A Black Mountain 64.24 57↑ P P 16 51 14.5 +0.7
baz=64
IRM Iron Mountain 64.53 67↑ P P 16 51 15.4 -0.4
baz=64
Q19A Hogan Spring (64.55 59↑ P P 16 51 15.4 -0.6
baz=64,SNR=9.3
R18A Canyonlands Na 64.60 60↓ P P 16 51 15.5 -0.7
baz=64,SNR=6.0
U15A North Rim 64.61 63↓ P P 16 51 16.7 +0.3
baz=64
W13A Hualapai Mount 64.61 65↑ P P 16 51 16.1 -0.3
baz=64
S17A Black Ridge (B 64.61 61↓ P P 16 51 16.4 0.0
baz=64
O21A Pagoda 64.65 57↑ P P 16 51 16.5 0.0
baz=64
V14A Boquillas Ranc 64.69 64↑ P P 16 51 17.0 +0.1
baz=64,SNR=7.2
BC3 Big Chuckawall 64.70 67↓ P P 16 51 16.5 -0.4
baz=64
N22A Wattenberg Ran 64.78 56↓ P P 16 51 17.6 +0.3
baz=65
X13A Yucca 65.00 66↑ P P 16 51 18.8 -0.1
baz=65
W14A Seligman 65.00 65↑ P P 16 51 19.6 +0.6
baz=65
R19A Curley Farm, L 65.02 60↓ P P 16 51 18.9 -0.1
baz=65
S18A Hurst Farm, Bl 65.03 61↑ P P 16 51 18.6 -0.4
baz=65,SNR=6.5

V15A	Kaibab Nationa	65.11	64	⇓P		P	16 51 19.7 +0.2
	baz=65						
O22A	Kremmling	65.18	57	⇑P		P	16 51 20.4 +0.4
	baz=65						
T18A	Mexican Hat	65.49	61	⇓P		P	16 51 21.6 -0.4
	baz=65						
R20A	Redvale	65.58	59	⇑P		P	16 51 22.2 -0.4
	baz=65						
SMCO	Snowmass	65.65	58	eP		P	16 51 22.7 -0.3
	comp=Z,4.8nm,0.6s,mb4.5						
S20A	Disappointment	65.85	60	⇑P		P	16 51 24.4 +0.1
	baz=66						
HFS	Hagfors	65.86	340	P		P	16 51 23.6 -0.4
	comp=Z,1.0nm,0.4s,mb4.0,baz=78,slow=7.5,SNR=5.9						
Q22A	Crested Butte,	65.91	58	⇑P		P	16 51 25.3 +0.6
	baz=66						
R21A	Cimarron	65.91	59	⇓P		P	16 51 25.3 +0.6
	baz=66						
ISCO	Idaho Springs	65.94	56	eP		P	16 51 25.0 +0.1
ISCO				pmax		pmax	
	comp=Z,3.0nm,0.7s,mb4.2						
ISCO	Idaho Springs	65.94	56	eP		P	16 51 25.0 +0.1
	comp=Z,3.1nm,0.7s,mb4.2						
Y14A	Wickenburg	65.95	66	⇓P		P	16 51 25.1 +0.1
	baz=66						
X15A	Humboldt	66.01	65	⇓P		P	16 51 25.5 +0.1
	baz=66						
V17A	Tonalea, Kykot	66.04	63	⇓P		P	16 51 26.0 +0.4
	baz=66,SNR=10.0						
Z13A	Yuma Proving G	66.08	66	⇑P		P	16 51 26.1 +0.2
	baz=66						
T19A	Beclabito	66.19	61	⇓P		P	16 51 26.3 -0.2
	baz=66						
MVCO	Mesa Verde	66.21	60	⇑P		P	16 51 27.2 +0.6
	baz=66						
S21A	Coal Bank Pass	66.28	59	⇑P		P	16 51 27.7 +0.6
	baz=66						
Y15A	Casa Rosa Ranc	66.33	65	⇑P		P	16 51 27.8 +0.4
	baz=66						
R22A	Saguache, Gunn	66.45	58	⇑P		P	16 51 28.4 +0.3
	baz=66						
V18A	Ganado	66.47	62	⇓P		P	16 51 28.7 +0.4
	baz=66						
X16A	Lo Mia Camp, P	66.52	64	⇑P		P	16 51 29.0 +0.4
	baz=66						
S22A	4UR Ranch, Cre	66.75	59	⇓P		P	16 51 30.5 +0.4
	baz=67						
114A	Black Gap (USA	66.86	66	⇑P		P	16 51 30.8 0.0
	baz=67						
T22A	Edith	67.24	59	⇓P		P	16 51 33.3 +0.2
	baz=67						
U21A	Nageezi	67.24	60	⇑P		P	16 51 33.6 +0.4
	baz=67						
X18A	Snowflake	67.30	63	⇑P		P	16 51 34.0 +0.4
	baz=67						
Q25A	Bedland, Calha	67.31	56	⇑P		P	16 51 34.0 +0.4
	baz=67						
R24A	Sanders Place,	67.35	57	⇑P		P	16 51 33.9 0.0
	baz=67						
Y17A	Roosevelt	67.38	64	⇓P		P	16 51 33.9 -0.2
	baz=67						
214A	Organ Pipe Nat	67.47	67	⇑P		P	16 51 34.4 -0.3
	baz=67						
S24A	Houchin Ranch,	67.72	58	⇑P		P	16 51 36.7 +0.5
	baz=68						
X19A	St. Johns	67.75	63	⇓P		P	16 51 36.7 +0.3
	baz=68						
Y18A	Canyon Day Jun	67.79	64	⇓P		P	16 51 37.1 +0.5
	baz=68						
V22A	San Miguel Ran	68.03	60	⇑P		P	16 51 38.0 -0.1
	baz=68						
X20A	Quemado	68.12	62	⇓P		P	16 51 39.5 +0.8
	baz=68						
U23A	El Rito	68.13	59	⇓P		P	16 51 39.2 +0.4
	baz=68,SNR=5.5						
117A	Oracle	68.25	65	⇑P		P	16 51 39.3 -0.3
	baz=68						
X21A	Alamocita Cree	68.60	62	⇓P		P	16 51 42.2 +0.5
	baz=68						
118A	Homack Ranch,	68.65	65	⇓P		P	16 51 42.2 +0.2
	baz=68						
Y20A	Horse Springs,	68.65	63	⇓P		P	16 51 42.2 +0.2
	baz=68						
217A	Green Valley	68.78	66	⇑P		P	16 51 43.4 +0.5
	baz=69						
Y21A	Point of Rocks	68.98	62	⇓P		P	16 51 45.0 +1.0
	baz=69						
U25A	Circle Dot Ran	69.06	58	⇑P		P	16 51 44.9 +0.4
	baz=69						
Z20A	Nine Sixteen R	69.10	63	⇓P		P	16 51 45.7 +0.8
	baz=69						
W24A	Lazy 6 Ranch,	69.38	60	⇑P		P	16 51 46.9 +0.4
	baz=69						
U26A	Atchley Ranch,	69.43	58	⇑P		P	16 51 45.9 -0.9
	baz=69						
120A	U Bar Ranch, L	69.49	64	⇑P		P	16 51 47.8 +0.6
	baz=69						
318A	Bisbee	69.50	65	⇓P		P	16 51 47.1 -0.2
	baz=69						
219A	White Tail Can	69.53	65	⇑P		P	16 51 47.6 +0.1
	baz=69						
AKASG	Malin Array Be	69.57	327	P		P	16 51 46.4 -1.0
	comp=Z,1.0nm,0.4s,mb3.9,baz=32,slow=6.7,SNR=3.9						
SCHQ	Schefferville	69.76	24	P		P	16 51 47.6 -0.9
	comp=Z,3.6nm,0.7s,mb4.2,baz=328,slow=4.5,SNR=5.9						
W25A	X Bar L Ranch,	69.90	59	⇓P		P	16 51 50.1 +0.4
	baz=70						
Z22A	Elephant Butte	69.93	62	⇓P		P	16 51 50.0 +0.1
	baz=70						
Y23A	Lovelace Mesa,	69.95	61	⇓P		P	16 51 50.2 +0.1
	baz=70						
319A	Douglas	69.97	65	⇑P		P	16 51 50.1 0.0
	baz=70						
X25A	Clemmons Ranch	70.30	60	⇑P		P	16 51 52.0 -0.2
	baz=70						
Y24A	Capitan	70.31	61	⇓P		P	16 51 52.2 0.0
	baz=70						
Y25A	Mesa, Roswell	70.72	60	⇓P		P	16 51 54.6 -0.1
	baz=70						
X26A	CR and CF Fran	70.75	59	⇑P		P	16 51 55.1 +0.2
	baz=71						
Z24A	Sheeppen Canyo	70.78	61	⇓P		P	16 51 55.1 0.0
	baz=71						
Y27A	Causey	71.61	59	⇑P		P	16 51 60.0 -0.1
	baz=71						
Z26A	Caprock	71.61	60	⇑P		P	16 51 59.8 -0.3
	baz=71						
125A	Gardner Draw,	71.68	61	⇑P		P	16 52 00.7 +0.2
	baz=72						
MSTX	Muleshoe	71.76	59	⇑P		P	16 52 01.0 +0.1
	baz=72						
225A	Deer Hill, Car	71.99	61	⇓P		P	16 52 02.8 +0.4
	baz=72						
Z27A	Tatum	72.00	60	⇓P		P	16 52 02.3 -0.1
	baz=72						
WRA	Warramunga Arr	72.06	201	P		P	16 52 02.4 -0.3
	comp=Z,0.2nm,0.5s,mb3.1,baz=19,slow=6.5,SNR=5.2						
WRA				pP		pP	16 52 33.1 -2.1
	comp=Z,0.8nm,0.5s,baz=18,slow=6.7,SNR=5.9						
WRA	Warramunga Arr	72.06	201	P		P	16 52 02.4 -0.3
WRA				pP		pP	16 52 33.1 -2.1
324A	Moseley Ranch,	72.11	62	⇑P		P	16 52 02.1 -1.0
	baz=72						
226A	Malaga, Loving	72.44	61	⇑P		P	16 52 05.3 +0.3
	baz=72						
325A	Bean Ranch, Si	72.46	62	⇑P		P	16 52 05.0 -0.2
	baz=72						
425A	Indio Mountain	72.88	63	⇑P		P	16 52 07.7 0.0
	baz=73						
326A	Caldwell Ranch	73.06	61	⇓P		P	16 52 08.4 -0.3
	baz=73						
EKA	Eskdalemuir Ar	73.46	347	P		P	16 52 10.5 -0.2
	comp=Z,0.8nm,0.8s,mb3.5,baz=24,slow=5.4,SNR=2.9						
426A	McDonald Obser	73.52	62	⇑P		P	16 52 11.0 -0.4
	baz=73						
328A	Wristen Ranch,	73.67	61	⇓P		P	16 52 12.0 -0.3
	baz=74						
526A	Mary Lane Ranc	73.94	62	⇓P		P	16 52 13.9 0.0
	baz=74						
527A	Woodward Ranch	74.15	62	⇑P		P	16 52 15.0 -0.1
	baz=74						
428A	Kincaid Ranch,	74.24	61	⇑P		P	16 52 15.7 +0.1
	baz=74						
626A	Big Bend Ranch	74.29	63	⇑P		P	16 52 15.5 -0.4
	baz=74						
528A	Cox Ranch, San	74.60	61	⇑P		P	16 52 17.7 -0.1
	baz=74						
TXAR	Lajitas Array	74.73	63	P		P	16 52 18.0 -0.5
	comp=Z,4.5nm,0.5s,mb4.4,baz=298,slow=4.7,SNR=85						
627A	Terlingua Ranc	74.80	62	⇑P		P	16 52 18.5 -0.4
	baz=75						
628A	Black Gap, Mar	75.06	62	⇑P		P	16 52 20.5 +0.1
	baz=75						
ASAR	Alice Springs	75.75	200	P		P	16 52 24.5 +0.4
	comp=Z,0.2nm,0.8s,baz=12,slow=5.6,SNR=3.5						
ASAR				pP		pP	16 52 56.1 -0.8
	comp=Z,0.7nm,0.6s,baz=9.5,slow=5.5,SNR=5.3						
BRTR	Keskin Array B	76.92	318	P		P	16 52 31.0 +0.3
	comp=Z,0.8nm,0.7s,mb3.5,baz=64,slow=4.3,SNR=3.8						
ASF	Jabal al Asfar	81.61	311	P		P	16 52 57.4 +1.1
	comp=Z,1.2nm,0.4s,mb3.8,baz=5.0,slow=4.5,SNR=3.7						
MMAI	Mount Meron Ar	81.64	313	P		P	16 52 57.7 +1.2
	comp=Z,3.7nm,0.5s,mb4.3,baz=34,slow=7.6,SNR=13						
KEST	Kesra	89.42	333	P		P	16 53 36.7 +1.8
	comp=Z,0.6nm,0.6s,mb3.7,baz=315,slow=7.1,SNR=3.0						
CPUP	Villa Florida	145.62	59	PKPbc		PKPbc	17 00 15.4 -0.7
	comp=Z,0.3nm,0.4s,baz=307,slow=1.7,SNR=3.5						
PLCA	Paso Flores	147.03	91	PKPbc		PKPbc	17 00 18.1 -1.7
	comp=Z,1.6nm,0.5s,baz=130,slow=7.3,SNR=5.0						

GUC 11 16:42:37.7±0.3, 19°22S×69°32W, h117km±2km, ML3.7, 4C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNMC	Miæe Miæ	0.28	288	⇑iP	Pn	16 42 54.8	+0.6
MNMC				i S	Sn	16 43 08.0	+1.3
MNMC				AML	AML	16 43 14.1	
	comp=E,5μm,0.3s						
PSGC	Pisagua	0.85	244	⇑iP	Pn	16 42 58.3	+0.2
PSGC				i S	Sn	16 43 13.9	+0.4
PSGC				AML	AML	16 43 15.2	
	comp=N,2μm,0.2s						
HMBC	Humberston	1.18	207	⇑iP	Pn	16 43 02.1	+0.7
HMBC				i S	Sn	16 43 20.5	+1.2
HMBC				AML	AML	16 43 24.1	
	comp=N,1μm,0.3s						
PB01	Plate Boundary	1.82	185	i P	Pn	16 43 10.0	+1.2
PB01				i S	Sn	16 43 34.2	+1.6
PB01				AML	AML	16 43 34.9	
	comp=E,736nm,0.5s						
PB04	Plate Boundary	3.04	183	⇑iP	Pn	16 43 26.9	+2.5
PB04				i S	Sn	16 44 04.4	+4.0
PB04				AML	AML	16 44 07.2	
	comp=E,141nm,0.2s						

THE 11 16:43:02.4, 36°98N×27°86E, h0km±1km, ML3.6/1, Error ellipse: s-maj=1.6km s-min=0.6km az=27.0
CSEM 11 16:43:03.4±0.1, 36°96N×27°75E, h12km, MD3.0, Error ellipse: s-maj=3.7km s-min=3.5km az=100.0
DDA 11 16:43:03.7, 37°00N×27°78E, h7km±2km, Md3.0
ISCJB 11 16:43:03.6±0.5, 36°95N±0°02×27°74E±0°04, h14km±4km, Error ellipse: s-maj=4.8km s-min=3.8km az=174.1
ISK 11 16:43:03.0, 36°97N×27°80E, h9km, MD2.7
NEIC 11 16:43:03.1, 36°92N×27°74E, h29km, MD3.0(DDA), MD2.9(ATH), After ATH.
ATH 11 16:43:03.1, 36°92N×27°74E, h29km±2km, MD2.9/4

ISC 11 16:43:03.7±0.4, 36°96N±0°02×27°75E±0°04, h15km±3km, n45, σ0°93/67, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	Kayabasi	0.27	293	i P	Pg	16 43 09.7	+0.3
BDRM				i S	Sg	16 43 13.8	+0.5
BDRM	Kayabasi	0.27	293	i P	Pg	16 43 09.7	+0.3
BDRM				i S	Sg	16 43 13.8	+0.5
DAT	Datca	0.27	211	ePG	Pg	16 43 09.4	0.0
DAT				eSG	Sg	16 43 14.2	+0.9
DAT	Datca	0.27	211	ePg	Pg	16 43 09.4	0.0
MLSB	Milas	0.34	3	ePG	Pg	16 43 09.9	-0.7
MLSB	Milas	0.34	3	ePg	Pg	16 43 09.9	-0.7
BODT	Bodrum	0.37	286	ePG	Pg	16 43 11.4	+0.3
BODT	Bodrum	0.37	286	ePg	Pg	16 43 11.4	+0.2
YER	Yerkesik	0.46	68	ePG	Pg	16 43 11.8	-1.0
YER	Yerkesik	0.46	68	ePg	Pg	16 43 11.8	-1.0
NIS1	Nisyros Isl.	0.58	232	P	Pg	16 43 15.6	+0.5
NIS1				S	Sg	16 43 26.4	+3.5
NIS1	Nisyros Isl.	0.58	232	P	Pg	16 43 15.6	+0.5
NIS1				S	Sg	16 43 26.4	+3.5
AYDN	Tasoluk	0.71	8	i P	Pg	16 43 16.7	-0.7
AYDN				i S	Sg	16 43 26.0	-0.8
AYDN	Tasoluk	0.71	8	i P	Pg	16 43 16.7	-0.8
AYDN				i S	Sg	16 43 26.0	-0.8
ARG	Arkhangelos	0.80	158	ePn	Pn	16 43 18.4	-2.1
ARG				eSn	Sn	16 43 30.6	-1.5
ARG	Arkhangelos	0.80	158	ePN	Pn	16 43 18.4	-2.1
ARG				eSN	Sn	16 43 30.6	-1.5
ARG	Arkhangelos	0.80	158	P	Pg	16 43 18.3	-0.9
ARG				S	Sg	16 43 30.5	+0.7
ARG	Arkhangelos	0.80	158	P	Pg	16 43 18.3	-0.9
GCAM	G?zelcaml?	0.85	331	i P	Pg	16 43 19.4	-0.7
GCAM				i S	Sg	16 43 31.2	0.0
GCAM	G?zelcaml?	0.85	331	i P	Pg	16 43 19.5	-0.6
GCAM				i S	Sg	16 43 31.2	0.0
SMG	Samos	1.04	316	ePn	Pn	16 43 23.5	-0.3
SMG				eSn	Sn	16 43 38.7	+0.6
SMG	Samos	1.04	316	ePN	Pn	16 43 23.5	-0.3
SMG				eSN	Sn	16 43 38.7	+0.6
SMG	Samos	1.04	316	ePn	Pn	16 43 23.5	-0.3
SMG				eSn	Sn	16 43 38.7	+0.6
DNZL	Cakiroluk	1.26	54	i P	Pn	16 43 26.5	-0.3
DNZL				i S	Sb	16 43 44.3	+1.0
DNZL	Cakiroluk	1.26	54	i P	Pn	16 43 26.5	-0.3
DNZL				i S	Sb	16 43 44.3	+1.0
GLHS	Glhisar (BURDU	1.41	82	ePN	Pn	16 43 28.7	-0.1
GLHS	Glhisar (BURDU	1.41	82	ePn	Pn	16 43 28.7	-0.1
GOLH	Golhisar	1.47	79	i P	Pn	16 43 31.3	+1.6
GOLH				i S	Sn	16 43 51.8	+3.1
GOLH	Golhisar	1.47	79	i P	Pn	16 43 31.3	+1.6
KARP	Karpathos	1.49	199	ePn	Pn	16 43 29.6	-0.3
KARP				eSn	Sn	16 43 48.7	-0.4
KARP	Karpathos	1.49	199	ePN	Pn	16 43 29.6	-0.3
KARP				eSN	Sn	16 43 48.7	-0.4
KARP	Karpathos	1.49	199	ePn	Pn	16 43 29.6	-0.3
KARP				eSn	Sn	16 43 48.7	-0.4
AKAS	Kas	1.66	115	i P	Pn	16 43 34.4	+2.1
AKAS				i S	Sn	16 43 58.8	+5.5
AKAS	Kas	1.66	115	i P	Pn	16 43 34.4	+2.2
KSL	Kastellorizon	1.68	118	ePn	Pn	16 43 32.3	-0.3
KSL	Kastellorizon	1.68	118	ePN	Pn	16 43 32.3	-0.3
KULA	Kula-Manisa	1.71	25	ePN	Pn	16 43 33.6	+0.6
KULA	Kula-Manisa	1.71	25	ePn	Pn	16 43 33.6	+0.6
ELL	Elmali	1.74	96	ePN	Pn	16 43 33.6	+0.2
ELL	Elmali	1.74	96	ePn	Pn	16 43 33.6	+0.2
CHOS	Chios island	1.96	317	P	Pn	16 43 36.3	-0.1
CHOS	Chios island	1.96	317	P	Pn	16 43 36.3	-0.1
LAST	Lasithi	2.57	226	ePn	Pn	16 43 44.2	-0.6
LAST	Lasithi	2.57	226	ePN	Pn	16 43 44.2	-0.6
LAST	Lasithi	2.57	226	ePn	Pn	16 43 44.2	-0.6

WAR 11 16:48:26.7, 50°21N×19°10E
ISCJB 11 16:48:27.5±0.6, 50°21N±0°04×19°07E±0°03, h0km, Error ellipse: s-maj=5.3km s-min=2.6km az=11.6
IPEC 11 16:48:27.6±0.2, 50°28N×19°12E, h0km±1km, ML1.7/3, Error ellipse: s-maj=2.8km s-min=0.9km az=173.0
PRU 11 16:48:29.5, 50°28N×19°02E, h0km
CSEM 11 16:48:29.4±0.4, 50°25N×18°96E, h2km, ML2.6/7, Error ellipse: s-maj=9.2km s-min=3.4km az=9.0

ISC 11 16:48:28.2±0.6, 50°22N±0°04×19°07E±0°03, h0km, n27, σ1°37/46, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	Ojcow	0.47	90	ePg	Pg	16 48 35.8	-1.5
OJC				eSg	Sg	16 48 42.6	-0.8
OKC	Ostrava-Krasne	0.70	238	ePG	Pg	16 48 42.6	+0.9
OKC				eSG	Sg	16 48 52.0	+1.2
	comp=Z,16nm,0.7s						
OKC	Ostrava-Krasne	0.70	238	Pg	Pg	16 48 42.6	+0.9
OKC				Sg	Sg	16 48 52.0	+1.2
	comp=Z,16nm,0.7s						
MORC	Moravsky Berou	1.08	246	ePg	Pg	16 48 49.1	+0.2
	baz=63						
MORC				eSg	Sg	16 49 03.4	+0.6
	comp=Z,18nm,0.4s,baz=63						
NIE	Niedzica	1.14	134	ePg	Pg	16 48 51.4	+1.4
NIE				eSg	Sg	16 49 07.6	+2.9
NIE	Niedzica	1.14	134	ePg	Pg	16 48 51.4	+1.4
NIE				eSg	Sg	16 49 07.6	+2.9
STHS	Stebnicka Huta	1.62	119	ePN	Pg	16 49 00.2	+0.9
STHS				eSN	Sg	16 49 23.2	+2.9
STHS	Stebnicka Huta	1.62	119	ePn	Pg	16 49 00.2	+0.9
STHS				eSn	Sg	16 49 23.2	+2.9
KOLL	Kolacno	1.70	195	ePN	Pg	16 49 01.7	+1.0
KOLL				eSN	Sg	16 49 23.0	+0.3
KOLL	Kolacno	1.70	195	ePn	Pg	16 49 01.7	+1.0
KOLL				eSn	Sg	16 49 23.0	+0.3
VYHS	Vyhne	1.73	185	ePN	Pb	16 48 59.5	-1.4
VYHS				eSN	Sb	16 49 22.3	-0.8
VYHS	Vyhne	1.73	185	ePn	Pb	16 48 59.5	-1.4
VYHS				eSn	Sb	16 49 22.3	-0.8
DPC	Dobruska-Polom	1.76	275	ePG	Pg	16 49 00.1	-1.9
DPC				eSG	Sg	16 49 23.8	-1.1
	comp=Z,13nm,0.6s						
DPC	Dobruska-Polom	1.76	275	ePn	Pn	16 49 00.0	0.0
	baz=91						
DPC				Sg	Sg	16 49 23.8	-1.1
	comp=Z,13nm,0.6s						
VRAC	Vranov	1.84	241	ePn	Pn	16 49 01.4	+0.3
	baz=58						
VRAC				eSg	Sg	16 49 27.1	-0.3
	comp=Z,6.5nm,0.3s,baz=58						
KSP	Ksiaz	1.88	291	ePg	Pb	16 49 05.0	+1.7
KSP				eSg	Sb	16 49 29.4	+2.1
KECS	Kecovo	1.97	151	ePN	Pg	16 49 03.4	-2.6
KECS				eSN	Sg	16 49 30.0	-1.5
UPC	Upice	1.98	280	eSG	Sg	16 49 31.2	-0.5
UPC	Upice	1.98	280	Sg	Sg	16 49 31.2	-0.5
CRVS	Cervenica-Dubn	2.04	129	ePN	Pg	16 49 07.2	-0.1
CRVS				eSN	Sg	16 49 33.5	-0.3
CRVS	Cervenica-Dubn	2.04	129	ePn	Pg	16 49 07.2	-0.1
CRVS				eSn	Sg	16 49 33.5	-0.3
KRUC	Moravsky	2.09	237	eSn	Sn	16 49 33.0	+2.0
	comp=Z,2.1nm,0.2s,baz=54						
PRU	Pruhonice	2.92	267	eSG	Sg	16 49 59.5	-2.5
	comp=Z,2.6nm,0.3s						
PRU	Pruhonice	2.92	267	Sg	Sg	16 49 59.5	-2.5
	comp=Z,2.6nm,0.3s						
BRG	Berggiesshubel	3.33	283	SG	Sg	16 50 19.1	+3.9
	comp=Z,2.8nm,0.4s						
KHC	Kasperske Hory	3.73	255	eSG	Sg	16 50 25.6	-2.3
	comp=Z,4.0nm,0.6s						
KHC	Kasperske Hory	3.73	255	Sg	Sg	16 50 25.6	-2.3
	comp=Z,4.0nm,0.6s						

KRSC 11 16:57:57.7±0.6, 56°33N×163°52E, h14km±15km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.41	253	eP	Pg	16 58 05.5	-0.4
KBTR				i S	Sg	16 58 10.7	-0.7
SMKR	Semkarok	1.17	283	eP	Pn	16 58 18.7	-0.9
SMKR				i S	Sb	16 58 34.5	-0.1
BDR	Baidarnaya	1.31	281	eP	Pn	16 58 21.5	0.0
BDR				i S	Sb	16 58 38.8	+0.3
SRKR	Sorokina	1.34	285	eP	Pn	16 58 21.9	-0.1
SRKR				i S	Sn	16 58 39.3	-0.3
ZLN	Zelenaya	1.55	259	eP	Pn	16 58 26.4	+1.6
ZLN				i S	Sn	16 58 47.5	+2.8
CIRR	Tsirk	1.56	263	eP	Pn	16 58 26.7	+1.7
CIRR				i S	Sn	16 58 47.8	+2.8
KLY	Klyuchi	1.60	271	eP	Pn	16 58 24.9	-0.6
KLY				i S	Sn	16 58 45.1	-0.8
KRSR	Krestovskiy	1.65	267	eP	Pn	16 58 26.5	+0.3
KRSR				i S	Sn	16 58 48.0	+0.8
BZMR	Bezymyannaya	1.74	258	eP	Pn	16 58 29.5	+2.1
BZMR				i S	Sn	16 58 52.3	+2.9
BKI	Bering	1.79	128	eP	Pn	16 58 28.2	+0.1
BKI				i S	Sn	16 58 50.2	-0.3
KPT	Kopyto	1.88	260	eP	Pn	16 58 31.2	+1.8
KPT				i S	Sn	16 58 55.3	+2.5
KMNR	Kamenistaya	1.93	254	eP	Pn	16 58 32.6	+2.6
KMNR				i S	Sn	16 58 57.5	+3.5
MKZ	Mys Kozlova	2.05	211	eP	Pn	16 58 31.8	+0.1
MKZ				i S	Sn	16 58 56.7	-0.3
KOZ	Kozyrevsk	2.06	264	eP	Pn	16 58 33.9	+2.1
KOZ				i S	Sn	16 59 00.8	+3.6
SRDR	Sredinnyy	2.12	271	eP	Pn	16 58 34.8	+2.2
SRDR				i S	Sn	16 59 01.4	+2.7
AVH	Avacha	4.13	224	P	Pn	16 59 04.4	+4.1
GNL	Ganaly	4.16	233	eP	Pn	16 59 03.0	+2.4

ISCJB 11 17:04:26.9±0.5, 37°04N±0°03×29°18E±0°03, h6km±5km, Error ellipse: s-maj=5.5km s-min=4.0km az=19.2
DDA 11 17:04:26.4, 37°02N×29°15E, h7km±4km, Md3.3
ISK 11 17:04:26.4, 37°07N×29°19E, h9km, MD3.0
CSEM 11 17:04:27.0±0.1, 37°08N×29°22E, h10km, MD3.0, Error ellipse: s-maj=1.9km s-min=1.3km az=9.0

ISC 11 17:04:27.3±0.5, 37°04N±0°03×29°18E±0°03, h11km±4km, n36, σ0°91/55, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.28	66	ePG	Pg	17 04 32.1	-0.9
GLHS				eSG	Sg	17 04 36.8	+0.1
GLHS	Glhisar (BURDU	0.28	66	ePg	Pg	17 04 32.1	-0.9
GLHS				eSg	Sg	17 04 36.8	0.0
GOLH	Golhisar	0.36	57	i P	Pg	17 04 34.0	-0.5
GOLH				i S	Sg	17 04 40.0	+0.7
GOLH	Golhisar	0.36	57	i P	Pg	17 04 34.0	-0.5
GOLH				i S	Sg	17 04 40.0	+0.7
TURN	Turunc	0.49	250	i P	Pg	17 04 40.4	+3.4
TURN				i S	Sg	17 04 51.9	+8.3
TURN	Turunc	0.49	250	i P	Pg	17 04 40.4	+3.4
ELL	Elmali	0.65	116	ePG	Pg	17 04 39.4	-0.6
ELL				eSG	Sg	17 04 49.6	+1.0
ELL	Elmali	0.65	116	ePg	Pg	17 04 39.4	-0.6
ELL				eSg	Sg	17 04 49.6	+1.1
DNZL	Cakiroluk	0.66	351	i P	Pg	17 04 39.2	-0.9
DNZL				i S	Sg	17 04 49.5	+0.8
DNZL	Cakiroluk	0.66	351	i P	Pg	17 04 39.2	-0.9
DNZL				i S	Sg	17 04 49.5	+0.8
DENT	Denizli	0.72	351	ePG

CSEM **11** *17:04:36.1±0.3, 36°.09N×0°.61W, h2km, ML3.5, Error ellipse: s-maj=8.0km s-min=5.6km az=49.0*
MDD **11** *17:04:37.5±0.8, 35°.84N×0°.57W, h30km, mbLg2.2/12, Error ellipse: s-maj=8.3km s-min=6.6km az=148.0*
ISC 11 17:04:35.8±0.5, 36°.00N±0°.03×0°.63W±0°.04, h10km, n60, σ1°.36/94, 2C, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USTO	Oran	0.27	166	P	Pg	17 04 39.0	-2.3
USTO	Oran	0.27	166	P	Pg	17 04 39.0	-2.3
USTO	Oran	0.27	166	P	Pg	17 04 39.0	-2.3
ODZI	Dziouia	0.86	215	P	Pg	17 04 52.0	-0.3
ODZI	Dziouia	0.86	215	P	Pg	17 04 52.0	-0.3
ODZI	Dziouia	0.86	215	P	Pg	17 04 52.0	-0.3
OJBR	Djebel Berber	0.90	117	P	Pg	17 04 53.0	0.0
OJBR	Djebel Berber	0.90	117	P	Pg	17 04 53.0	0.0
OJBR	Djebel Berber	0.90	117	P	Pg	17 04 53.0	0.0
OJBR	Djebel Berber	0.90	117	P	Pg	17 04 53.0	0.0
OKGL	Djebel Kef Gue	1.03	87	P	Pg	17 04 54.0	-1.7
OKGL	Djebel Kef Gue	1.03	87	P	Pg	17 04 54.0	-1.7
OKGL	Djebel Kef Gue	1.03	87	P	Pg	17 04 54.0	-1.7
OKGL	Djebel Kef Gue	1.03	87	P	Pg	17 04 54.0	-1.7
EANR	'Ain N'Sour	1.41	91	P	Pn	17 05 04.0	+2.5
EANR	'Ain N'Sour	1.41	91	P	Pn	17 05 04.0	+2.5
EANR	'Ain N'Sour	1.41	91	P	Pn	17 05 04.0	+2.5
EANR	'Ain N'Sour	1.41	91	P	Pn	17 05 04.0	+2.5
ETRT	Tiaret	1.69	111	P	Pn	17 05 07.5	+2.2
ETRT	Tiaret	1.69	111	P	Pn	17 05 07.5	+2.2
ETRT	Tiaret	1.69	111	P	Pn	17 05 07.5	+2.2
ETRT	Tiaret	1.69	111	P	Pn	17 05 07.5	+2.2
EMUR	La Murta	1.90	345	P	Pn	17 05 08.7	+0.4
	0.9nm,0.1s,SNR=7.9						
EMUR				S	Sn	17 05 30.6	-1.7
	6.3nm,0.2s,SNR=7.9						
EMUR	La Murta	1.90	345	P	Pn	17 05 08.7	+0.4
	0.9nm,0.1s,SNR=7.9						
EMUR				S	Sn	17 05 30.6	-1.7
	6.3nm,0.2s,SNR=7.9						
EMUR	La Murta	1.90	345	P	Pn	17 05 08.7	+0.4
	0.9nm,0.1s,SNR=7.9						
EMUR				S	Sn	17 05 30.6	-1.7
	6.3nm,0.2s,SNR=7.9						
EALB	Alboran	1.95	269	P	Pn	17 05 07.4	-1.5
	1.9nm,0.3s,SNR=7.9						
EALB				S	Sn	17 05 30.0	-3.4
	7.1nm,0.2s,SNR=7.9						
EALB	Alboran	1.95	269	P	Pn	17 05 07.4	-1.5
	1.9nm,0.3s,SNR=7.9						
EALB				S	Sn	17 05 30.0	-3.4
	7.1nm,0.2s,SNR=7.9						
EALB	Alboran	1.95	269	P	Pn	17 05 07.4	-1.5
	1.9nm,0.3s,SNR=7.9						
EBER	Berja	2.03	297	P	Pn	17 05 10.1	+0.1
	2.2nm,0.2s,SNR=5.9						
EBER				S	Sn	17 05 35.7	+0.3
	5.9nm,0.2s,SNR=7.9						
EBER	Berja	2.03	297	P	Pn	17 05 10.1	+0.1
	2.2nm,0.2s,SNR=5.9						
EBER				S	Sn	17 05 35.7	+0.3
	5.9nm,0.2s,SNR=7.9						
EBER	Berja	2.03	297	P	Pn	17 05 10.1	+0.1
	2.2nm,0.2s,SNR=5.9						
EBER				S	Sn	17 05 35.7	+0.3
	5.9nm,0.2s,SNR=7.9						
EHUE	Huescar	2.40	320	P	Pn	17 05 18.5	+3.4
	0.2nm,0.5s,SNR=7.9						
EHUE				S	Sn	17 05 43.9	-0.6
	1.0nm,0.4s,SNR=7.9						
EHUE	Huescar	2.40	320	P	Pn	17 05 18.5	+3.4
	0.2nm,0.5s,SNR=7.9						
EHUE				S	Sn	17 05 43.9	-0.6
	1.0nm,0.4s,SNR=7.9						
EQUE	Quentar	2.56	299	P	Pn	17 05 18.3	+1.0
	1.4nm,0.2s,SNR=7.9						
EQUE				S	Sn	17 05 47.3	-1.2
	1.4nm,0.3s,SNR=7.9						
EQUE	Quentar	2.56	299	P	Pn	17 05 18.3	+1.0
	1.4nm,0.2s,SNR=7.9						
EQUE				S	Sn	17 05 47.3	-1.2
	1.4nm,0.3s,SNR=7.9						
EQUE	Quentar	2.56	299	P	Pn	17 05 18.3	+1.0
	1.4nm,0.2s,SNR=7.9						
EQES	Quesada	2.66	313	P	Pn	17 05 20.5	+1.8
	1.6nm,0.2s,SNR=7.9						
EQES				S	Sn	17 05 50.7	-0.2
	2.2nm,0.2s,SNR=7.9						
EQES	Quesada	2.66	313	P	Pn	17 05 20.5	+1.8
	1.6nm,0.2s,SNR=7.9						
EQES				S	Sn	17 05 50.7	-0.2
	2.2nm,0.2s,SNR=7.9						
EBEN	Beniarda	2.72	7	P	Pn	17 05 20.0	+0.5
	0.6nm,0.1s,SNR=7.1						
EBEN				S	Sn	17 05 51.8	-0.7
	1.4nm,0.2s,SNR=7.9						
EBEN	Beniarda	2.72	7	P	Pn	17 05 20.0	+0.5
	0.6nm,0.1s,SNR=7.1						
EBEN				S	Sn	17 05 51.8	-0.7
	1.4nm,0.2s,SNR=7.9						
EBEN	Beniarda	2.72	7	P	Pn	17 05 20.0	+0.5
	0.6nm,0.1s,SNR=7.1						
EBEN				S	Sn	17 05 51.8	-0.7
	1.4nm,0.2s,SNR=7.9						
ETOB	Tobarra	2.74	345	P	Pn	17 05 21.0	+1.2
	0.6nm,0.1s,SNR=7.1						
ETOB				S	Sn	17 05 53.5	+0.5
	9.9nm,0.4s,SNR=7.9						
ETOB	Tobarra	2.74	345	P	Pn	17 05 21.0	+1.2
	0.6nm,0.1s,SNR=7.1						
ETOB				S	Sn	17 05 53.5	+0.5
	9.9nm,0.4s,SNR=7.9						
ETOB	Tobarra	2.74	345	P	Pn	17 05 21.0	+1.2
	0.6nm,0.1s,SNR=7.1						
ETOB				S	Sn	17 05 53.5	+0.5
	9.9nm,0.4s,SNR=7.9						
EVIA	Vianos	3.03	331	P	Pn	17 05 23.9	+0.2
	0.6nm,0.1s,SNR=7.9						
EVIA				S	Sn	17 06 01.2	+1.2
	4.1nm,0.2s,SNR=7.9						
EVIA	Vianos	3.03	331	P	Pn	17 05 23.9	+0.2
	0.6nm,0.1s,SNR=7.9						
EVIA				S	Sn	17 06 01.2	+1.2
	4.1nm,0.2s,SNR=7.9						
EVIA	Vianos	3.03	331	P	Pn	17 05 23.9	+0.1
	0.6nm,0.1s,SNR=7.9						
EVIA				S	Sn	17 06 02.3	+2.2
	4.1nm,0.2s,SNR=7.9						
EMIJ	Mijas	3.39	281	S	Sn	17 06 04.9	-4.2
	5.1nm,0.5s,SNR=7.9						
EMIJ	Mijas	3.39	281	S	Sn	17 06 04.9	-4.2
	5.1nm,0.5s,SNR=7.9						
EIBI	Ibiza	3.41	27	⇑P	Pn	17 05 28.5	-0.4
	8.6nm,0.3s,SNR=18						
EIBI				S	Sn	17 06 07.2	-2.2
	6.6nm,0.2s,SNR=7.9						
EIBI	Ibiza	3.41	27	⇑P	Pn	17 05 28.5	-0.4
	8.6nm,0.3s,SNR=18						
EIBI				S	Sn	17 06 07.2	-2.2
	6.6nm,0.2s,SNR=7.9						
EIBI	Ibiza	3.41	27	P	Pn	17 05 28.5	-0.5
	8.6nm,0.3s,SNR=18						
EIBI				S	Sn	17 06 07.2	-2.2
	6.6nm,0.2s,SNR=7.9						
ECHE	Chera	3.60	356	P	Pn	17 05 34.0	+2.4
	0.9nm,0.4s,SNR=7.9						
ECHE				S	Sn	17 06 13.1	-0.9
	0.7nm,0.2s,SNR=7.9						
ECHE	Chera	3.60	356	P	Pn	17 05 34.0	+2.4
	0.9nm,0.4s,SNR=7.9						
ECHE				S	Sn	17 06 13.1	-0.9
	0.7nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	4.36	2	P	Pn	17 05 44.3	+2.3
	1.1nm,0.2s,SNR=7.9						
EMOS				S	Sn	17 06 32.8	-0.1
	1.2nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	4.36	2	P	Pn	17 05 44.3	+2.3
	1.1nm,0.2s,SNR=7.9						
EMOS				S	Sn	17 06 32.8	-0.1
	1.2nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	4.36	2	P	Pn	17 05 44.3	+2.2
	1.1nm,0.2s,SNR=7.9						
EMOS				S	Sn	17 06 32.8	-0.1
	1.2nm,0.2s,SNR=7.9						
ETOS	Mallorca	4.65	35	P	Pn	17 05 46.7	+0.7
	0.7nm,0.2s,SNR=7.9						
ETOS				S	Sn	17 06 38.1	-1.9
	1.8nm,0.2s,SNR=7.9						
ETOS	Mallorca	4.65	35	P	Pn	17 05 46.7	+0.7
	0.7nm,0.2s,SNR=7.9						
ETOS				S	Sn	17 06 38.1	-1.9
	1.8nm,0.2s,SNR=7.9						
ETOS	Mallorca	4.65	35	P	Pn	17 05 46.7	+0.7
	0.7nm,0.2s,SNR=7.9						
ETOS				S	Sn	17 06 38.1	-1.9
	1.8nm,0.2s,SNR=7.9						

MAN 11 17:05:22, 6°.05N×124°.68E, h96km, mb5.1, ML4.0, MS4.2, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	General Santos	0.27	82	⇑iP	Pn	17 05 39.6	+3.7
CTBH	Cotabato--PC H	1.24	340	⇓iP	Pn	17 05 40.4	-4.5
CTBH				iS	Sn	17 06 00.8	-1.4
DMPH	Davao City--Mi	1.31	39	eP	Pn	17 05 46.8	+1.1
DMPH				iS	Sn	17 06 09.1	+5.4
MATI	Mati	1.80	60	eP	Pn	17 06 01.1	+9.3
BUKP	Musuan	1.86	12	eP	Pn	17 05 53.6	+1.0
BUKP				eS	Sn	17 06 09.8	-6.1
PAGZ	Pagadian	2.20	324	eP	Pn	17 05 57.5	+0.4
PAGZ				eS	Sn	17 06 16.7	-7.3
CGP	Cagayan de Oro	2.39	0	eP	Pn	17 06 00.5	+0.9
IPIL	Ipil	2.72	310	eP	Pn	17 06 05.7	+1.8
IPIL				eS	Sn	17 06 26.9	-9.2
ZMPH	Zamboanga City	2.75	289	⇓iP	Pn	17 06 05.8	+1.4

MAN 11 17:16:37, 15°.36N×122°.29E, h23km, mb4.7, ML3.6, MS3.6, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	Polillo Island	0.71	208	eP	Pb	17 16 49.9	-0.8
POLP				eS	Sb	17 17 00.7	+0.7
BALP	Baler	0.79	299	eP	Pb	17 16 52.6	+0.6
BALP				eS	Sb	17 17 02.1	-0.1
PCPH	Palayan	1.17	280	⇓eP	Pn	17 16 58.9	+1.0
BOAC	Boac	1.93	193	eP	Pn	17 17 10.0	+1.5
BOAC				eS	Sn	17 17 32.7	+0.7
AUQP	San Andres	2.06	169	eP	Pn	17 17 11.9	+1.8
PVCP	Virac	2.52	134	eP	Pn	17 17 17.7	+1.2
LUBP	Lubang	2.55	231	eP	Pn	17 17 21.6	+4.7
APYP	Conner	2.69	338	eP	Pn	17 17 19.3	+0.4
SJMP	San Jose	3.09	202	eP	Pn	17 17 27.7	+3.2
CNP	Catarman	3.65	140	eP	Pn	17 17 32.9	+0.8

IDC **11** *17:56:10.3±2.9, 22°.14S×177°.99W, h0km, mb4.3/5, mb1 4.5/5, mb1mx4.2/14, mbtmp4.3/5, Error ellipse: s-maj=138.7km s-min=34.6km az=149.0*
NEIC 11 17:56:38.4±7.5, 23°.03S×178°.88W, h190km±71km, mb4.6/7, 1D, Error ellipse: s-maj=43.2km s-min=31.5km az=204.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTAO	Charters Tower	32.51	268	eP	P	18 02 54.4	+2.9
	12nm,0.5s						
STKA	Stephens Creek	36.00	247	P	P	18 03 23.4	+2.1
	1.3nm,0.6s,baz=95,slow=11,SNR=4.6						
STKA	Stephens Creek	36.00	247	eP	P	18 03 23.0	+1.6
	0.5nm,0.8s						
ASAR	Alice Springs	43.20	259	P	P	18 04 21.0	+0.2
	4.0nm,0.7s,baz=98,slow=7.3,SNR=53						
WRAB	Tennant Creek	43.49	265	eP	P	18 04 22.4	-0.8
	4.8nm,0.7s						
WRA	Warramunga Arr	43.50	265	P	P	18 04 23.0	-0.3
	2.3nm,0.5s,baz=91,slow=8.3,SNR=85						
KAKA	Kakadu	47.27	274	eP	P	18 04 53.0	+0.1
	13nm,0.5s						
FITZ	Fitzroy Crossi	51.93	265	P	P	18 05 27.2	-0.9
	3.2nm,0.4s,baz=99,slow=9.1						
MBWA	Marble Bar	56.54	259	eP	P	18 05 58.8	-2.6
	4.7nm,0.5s						
QSPA	South Pole Qui	67.05	180	eP	P	18 07 12.0	+1.4
	2.1nm,0.6s						
NIKO	Nikolski	76.18	6	eP	P	18 08 05.3	+0.1
	17nm,0.9s						
CMAR	Chiang Mai Arr	90.19	290	P	P	18 09 16.1	-1.6
	1.3nm,0.9s,baz=140,slow=3.3,SNR=10.0						
ARCES	ARCESS Array B	131.24	349	PKP	PKPdf	18 15 22.8	-4.2
	2.3nm,1.0s,baz=14,slow=5.6,SNR=5.7						
AKASG	Malin Array Be	144.78	329	PKP	PKPdf	18 15 47.6	-4.7
	2.2nm,0.5s,baz=44,slow=4.1,SNR=16						
BRTR	Keskin Array B	147.85	309	PKPbc	PKPbc	18 15 56.1	-4.9
	0.6nm,0.6s,baz=146,slow=5.0,SNR=2.9						
BRTR				PKPab	PKPab	18 16 00.9	-3.2
	0.9nm,0.7s,baz=73,slow=4.3,SNR=5.0						
MMAI	Mount Meron Ar	148.26	296	PKPbc	PKPbc	18 15 58.4	-4.0
	1.6nm,0.4s,baz=69,slow=7.5,SNR=9.6						
CLL	Collm	150.31	345	⇓iPKPbc	PKPbc	18 16 03.2	-3.6
	comp=Z,4.0nm,0.8s						
CLL				iPKPab	PKPab	18 16 11.7	-2.0

WEL 11 17:59:48.5±0.3, 38°.34S×178°.48E, h26km±2km, ML3.1/4, Error ellipse: s-maj=3.0km s-min=1.4km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNGZ	Carnagh Statio	0.26	235	P*	Pb	17 59 55.3	+0.3
PUZ	Puketiti	0.31	327	P*	Pb	17 59 55.4	-0.5
PUZ				S*	Sb	18 00 01.2	+0.4
MWZ	Matawai	0.75	270	P*	Pb	18 00 02.3	-0.5
MWZ				S*	Sb	18 00 13.2	+0.5
MWZ				S*	Sb	18 00 13.3	+0.6
PRGZ	Paritu Road	0.75	218	P*	Pb	18 00 02.7	-0.3
MXZ	Matakaoa Point	0.78	350	P*	Pb	18 00 03.7	+0.2
KNZ	Kokohu	0.93	222	PN	Pn	18 00 04.6	-1.3
MHGZ	Mahia Peninsul	0.93	208	PN	Pn	18 00 05.2	-0.7
URZ	Urewera	1.08	274	PN	Pn	18 00 07.6	-0.3
URZ	Urewera	1.08	274	ePn	Pn	18 00 07.3	-0.7
	31nm,0.4s						

ISCJB **11** *18:05:43.5±1.8, 6°.39N±0°.04×124°.53E±0°.04, h12km±12km, mb4.0/18, Error ellipse: s-maj=6.7km s-min=6.5km az=148.4*
IDC **11** *18:05:43.1±0.7, 6°.41N×124°.63E, h0km, mb3.9/9, mb1 4.0/9, mb1mx3.8/20, mbtmp3.9/9, Error ellipse: s-maj=21.6km s-min=14.5km az=77.0*
MAN **11** *18:05:44, 6°.32N×124°.57E, h38km, mb5.1, ML4.0, MS4.2*
NEIC **11** *18:05:49.5±3.6, 6°.45N×124°.80E, h48km±39km, mb4.2/7, Error ellipse: s-maj=49.8km s-min=7.5km az=72.0*
ISC 11 18:05:43.8±1.2, 6°.45N±0°.04×124°.60E±0°.04, h2km±7km, n33, σ1°.01/40, mb4.0/18, 3C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	General Santos	0.50	135	⇑eP	Pg	18 05 58.5	+5.0
CTBH	Cotabato--PC H	0.84	336	⇑eP	Pg	18 05 59.3	-0.7
CTBH				iS	Sg	18 06 18.8	+7.8
DMPH	Davao City--Mi	1.10	55	⇑iP	Pg	18 06 05.4	+0.4
DAV	Davao City (W)	1.16	58	Pn	Pn	18 06 06.8	-0.2
	104nm,0.3s,baz=258,slow=5.1,SNR=6.4						
DAV				Sn	Sn	18 06 23.1	-0.4
	219nm,0.3s,baz=107,slow=23,SNR=20						
BUKP	Musuan	1.50	18	eP	Pn	18 06 11.2	-0.5
BUKP				eS	Sn	18 06 30.4	-1.4
MATI	Mati	1.72	73	eP	Pn	18 06 14.6	-0.3
MATI				eS	Sn	18 06 30.2	-7.3
PAGZ	Pagadian	1.84	319	eP	Pn	18 06 16.3	-0.1
PAGZ				eS	Sn	18 06 39.0	-1.3
CGP	Cagayan de Oro	2.00	3	eP	Pn	18 06 17.9	-0.7
CGP				iS	Sn	18 06 45.0	+0.7
IPIL	Ipil	2.41	304	eP	Pn	18 06 24.5	+0.2
ZMPH	Zamboanga City	2.56	281	⇓iP	Pn	18 06 24.3	-2.1
ZMPH				iS	Sn	18 06 52.7	-5.5
CUYO	Cuyo Island	5.62	321	eP	Pn	18 07 09.2	+0.7
ENPP	El Nido	6.96	313	eP	Pn	18 07 27.1	+0.2
FITZ	Fitzroy Crossi	24.41	178	P	P	18 11 03.6	-0.3
	1.8nm,0.5s,mb3.8,baz=355,slow=9.0,SNR=12						
WRAB	Tennant Creek	27.92	160	P	P	18 11 35.0	-0.5
	6.7nm,1.1s,mb4.2						
WRA	Warramunga Arr	27.92	160	P	P	18 11 34.5	-1.1
	0.8nm,0.6s,mb3.5,baz=332,slow=11,SNR=9.9						
ASAR	Alice Springs	31.28	163	P	P	18 12 04.0	-1.4
	0.4nm,0.6s,mb3.4,baz=339,slow=7.4,SNR=8.0						
LZH	Lanzhou	35.10	330	eP	P	18 12 40.5	+1.9
LZH				pP		18 12 45.0	
LZH				sP	sP	18 12 47.3	+7.9
LZH				pmax	pmax		
	comp=Z,17nm,1.4s,mb4.8						
GTA	Gaotai	39.69	329	eP	P	18 13 19.6	+2.1
GTA				pP		18 13 23.9	
GTA				sP	sP	18 13 27.6	+9.3
GTA				pmax	pmax		
	comp=Z,5.0nm,1.6s,mb4.0						
STKA	Stephens Creek	41.42	158	P	P	18 13 32.5	+0.6
	comp=Z,2.9nm,0.9s,mb3.9,baz=352,slow=7.1,SNR=4.3						
ULN	Ulaanbaatar	43.90	343	eP	P	18 13 52.8	+0.9
	comp=Z,3.0nm,1.2s,mb3.9						
SONM	Songino Array	44.07	342	P	P	18 13 54.7	+1.5
	comp=Z,0.8nm,0.8s,mb3.5,baz=163,slow=9.1,SNR=7.5						
SONM				PcP	PcP	18 15 38.1	-0.5
	comp=Z,0.1nm,0.3s,baz=132,slow=4.3,SNR=3.5						
TARA	Tarawa	48.46	94	eP	P	18 14 31.3	+3.0
	comp=Z,0.2nm,0.5s,mb3.4						
MK31	Makanchi Array	54.12	325	eP	P	18 15 11.0	+0.7
MK31				ePcP	PcP	18 16 13.6	-1.5
MKAR	Makanchi Array	54.12	325	P	P	18 15 11.4	+1.1
	comp=Z,2.9nm,0.8s,mb4.2,baz=129,slow=8.0,SNR=23						
MKAR				PcP	PcP	18 16 13.8	-1.3
	comp=Z,1.4nm,0.6s,baz=131,slow=3.5,SNR=9.4						
ZALV	Zalesovo Beam	57.22	333	P	P	18 15 32.2	-0.2
	comp=Z,3.1nm,1.0s,mb4.3,baz=127,slow=6.2,SNR=7.2						
ZALV	Zalesovo Beam	57.22	333	P	P	18 15 32.2	-0.2
AML	Almayashu	57.27	317	eP	P	18 15 34.1	+1.1
	comp=Z,1.4nm,0.7s,mb4.1						
EKS2	Erkin-Say	57.42	317	eP	P	18 15 34.7	+0.6
	comp=Z,1.7nm,0.8s,mb4.1						
KURK	Kurchatov	58.32	328	eP	P	18 15 40.4	+0.2
	comp=Z,9.4nm,1.0s,mb4.8						
BVAR	Borovoye Array	63.90	327	P	P	18 16 17.9	-0.2
	comp=Z,1.2nm,0.8s,mb4.0,baz=123,slow=11,SNR=7.3						
BVAR				PcP	PcP	18 16 52.1	-1.6
	comp=Z,0.9nm,0.7s,baz=131,slow=4.5,SNR=4.4						
BRVK	Borovoye	63.97	327	eP	P	18 16 18.2	-0.3
	comp=Z,3.6nm,0.9s,mb4.4						
ARU	Arti	71.52	328	P	P	18 17 04.9	-1.2
FINES	FINESS Array B	88.45	332	P	P	18 18 35.8	-1.7
	comp=Z,2.0nm,0.8s,mb4.4,baz=114,slow=4.6,SNR=5.1						

ISCJB **11** *18:11:37.7±2.4, 11°.59N±0°.07×140°.8E±0°.1, h64km±23km, mb4.1/16, Error ellipse: s-maj=19.8km s-min=11.2km az=10.2*
NEIC **11** *18:11:39.3±2.0, 11°.60N×140°.66E, h64km±20km, mb4.4/5, Error ellipse: s-maj=17.4km s-min=10.6km az=93.0*
IDC **11** *18:11:40.1±0.7, 11°.61N×140°.80E, h70km±5km, mb3.7/11, mb1 3.9/11, mb1mx3.7/20, mbtmp3.7/11, MS3.3/6, Ms1 3.4/6, ms1mx2.9/30, Error ellipse: s-maj=25.3km s-min=13.7km az=83.0*
ISC 11 18:11:40.5±2.1, 11°.60N±0°.07×140°.8E±0°.1, h75km±22km, h71km±2.2km:pP-P, n26, σ0°.76/23, mb4.0/16, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	4.40	63	ePn	Pn	18 12 45.5	+0.6
GUMO				eSn	Sn	18 13 34.4	-0.6
JHJ	Hachijo jima 2	21.44	358	LR	LR	18 22 49.0	
	comp=Z,99nm,20.1s,baz=341,slow=31						
PMG	Port Moresby	21.79	163	eP	P	18 16 26.5	0.0
	25nm,0.9s,mb4.5						
HNR	Honiara	28.24	137	LR	LR	18 26 54.9	
	comp=Z,49nm,18.6s,baz=244,slow=32						
CTA	Charters Tower	31.93	170	LR	LR	18 30 50.1	
	comp=Z,77nm,19.2s,baz=244,slow=36						
WRAB	Tennant Creek	31.98	192	eP	P	18 17 59.2	-0.4
	7.0nm,1.0s,mb4.3						
WRA	Warramunga Arr	31.99	192	P	P	18 17 59.9	+0.2
	2.7nm,0.9s,mb4.0,baz=11,slow=9.8,SNR=13						
WRA				pP	pP	18 18 15.6	-2.0
	1.4nm,0.7s,baz=11,slow=9.7,SNR=4.7						
WRA	Warramunga Arr	31.99	192	P	P	18 17 59.9	+0.2
WRA				pP	pP	18 18 15.6	-2.0
ASAR	Alice Springs	35.70	191	P	P	18 18 32.5	+0.7
	0.6nm,0.5s,mb3.8,baz=18,slow=12,SNR=16						
HHC	Hu-ho-hao-te	38.88	324	eP	P	18 18 59.2	+0.6
HHC				S	S	18 24 52.2	+1.0
HHC				pmax	pmax		
	comp=Z,21nm,0.6s,mb5.1						
HHC				pmax	pmax		
	comp=Z,180nm,6.4s						
KULM	Kulim	40.21	264	P	P	18 19 05.8	-4.3
	comp=Z,2.8nm,0.9s,mb4.1						
CMAR	Chiang Mai Arr	40.96	285	P	P	18 19 15.5	-0.8
	comp=Z,0.2nm,0.3s,mb3.4,baz=82,slow=6.5,SNR=5.8						
CMAR				LR	LR	18 34 01.3	
	comp=Z,16nm,20.6s,baz=160,slow=33						
STKA	Stephens Creek	43.23	179	P	P	18 19 34.9	+0.5
	comp=Z,2.0nm,0.6s,mb4.0,baz=347,slow=12,SNR=2.6						
STKA	Stephens Creek	43.23	179	eP	P	18 19 34.1	-0.3
	comp=Z,1.2nm,1.0s,mb3.6						
PETK	Petropavlovsk-	43.55	15	P	P	18 19 37.4	+0.6
	baz=134,slow=4.2						
SONM	Songino Array	46.21	328	P	P	18 19 59.1	+1.1
	comp=Z,0.4nm,0.8s,mb3.2,baz=120,slow=8.5,SNR=3.8						
SONM				pP	pP	18 20 16.3	-0.3
	comp=Z,1.0nm,0.7s,baz=144,slow=8.5,SNR=6.7						
SONM				LR	LR	18 39 48.7	
	comp=Z,44nm,18.2s,baz=91,slow=37						
MKAR	Makanchi Array	60.24	318	P	P	18 21 41.3	+0.4
	comp=Z,0.7nm,0.8s,mb3.8,baz=99,slow=7.5,SNR=5.2						
MKAR				pP	pP	18 22 00.3	0.0
	comp=Z,1.2nm,0.9s,baz=98,slow=8.7,SNR=5.3						
KURK	Kurchatov	63.61	321	eP	P	18 22 02.8	-0.6
	comp=Z,6.7nm,1.0s,mb4.4						
BVAR	Borovoye Array	69.07	322	P	P	18 22 37.9	-0.4
	comp=Z,0.6nm,0.3s,mb3.9,baz=91,slow=6.2,SNR=9.1						
BVAR				pP	pP	18 22 56.7	-1.4
	comp=Z,1.5nm,0.8s,baz=103,slow=6.4,SNR=4.3						
YKA	Yellowknife Ar	86.41	27	P	P	18 24 14.2	-0.2
	comp=Z,2.2nm,0.8s,mb4.2,baz=301,slow=5.1,SNR=4.9						
YKA	Yellowknife Ar	86.41	27	P	P	18 24 14.2	-0.2
ARCES	ARCESS Array B	87.73	341	P	P	18 24 19.8	-1.0
	comp=Z,0.7nm,0.7s,mb3.8,baz=60,slow=7.2,SNR=3.9						
ARCES				LR	LR	19 05 20.8	
	comp=Z,26nm,20.4s,baz=70,slow=37						
NVAR	Mina Array Bea	91.22	50	P	P	18 24 38.6	+0.9
	comp=Z,1.6nm,0.8s,mb4.2,baz=261,slow=6.3,SNR=8.8						
FINES	FINESS Array B	91.26	334	P	P	18 24 35.5	-1.9
	comp=Z,1.1nm,0.5s,mb4.2,baz=86,slow=4.3,SNR=10						
LPAZ	La Paz	151.51	103	PKPbc	PKPbc	18 31 28.7	+1.8
	comp=Z,1.0nm,0.6s,baz=295,slow=3.1,SNR=4.8						
LPAZ				pPKPbc	pPKPbc	18 31 46.9	-1.4
	comp=Z,1.3nm,0.6s,baz=348,slow=4.5,SNR=4.1						
LPAZ	La Paz	151.51	103	PKPbc	PKPbc	18 31 28.7	+1.8
LPAZ				pPKPbc	pPKPbc	18 31 46.9	-1.4

JMA 11 18:12:35.9±0.3, 44°.00N×148°.21E, h0km, M3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	1.90	251	P	Pn	18 13 10.1	+0.6
NEM2				eS	Sn	18 13 35.0	+0.9
JRA	Rausu	2.23	269	P	Pn	18 13 14.7	+0.6
JRA				eS	Sn	18 13 43.4	+1.1
JNK	Nakash	2.56	262	P	Pn	18 13 19.5	+0.9
JNK				eS	Sn	18 13 51.5	+1.0
JAK	Akkeshi	2.75	250	P	Pn	18 13 22.3	+1.1
JAR	Ashorobuto	3.30	259	P	Pn	18 13 30.6	+1.8
JCH	Churui	3.80	250	P	Pn	18 13 37.1	+1.5
JCH				eS	Sn	18 14 22.5	+1.5
JNBK	Urakawa-nobuka	4.35	249	P	Pn	18 13 45.4	+2.2
JKB	Kayabe	5.67	251	P	Pn	18 14 03.3	+1.9
JKB				eS	Sn	18 15 08.0	+0.8
JOT	Ohata	5.89	246	P	Pn	18 14 06.3	+1.9
JOT				eS	Sn	18 15 13.0	+0.5

IDC **11** *18:22:04.5±0.8, 7°.57N×73°.17W, h0km, mb3.9/4, mb1 4.3/7, mb1mx3.9/22, mbtmp4.2/7, MS3.1/3, Ms1 3.1/3, ms1mx2.7/24, Error ellipse: s-maj=28.5km s-min=14.0km az=105.0*
FUNV **11** *18:22:05.4, 7°.15N×73°.48W, h20km, MW4.4*
ISCJB **11** *18:22:07.1±1.4, 7°.43N±0°.05×73°.21W±0°.04, h15km±10km, mb3.9/5, Error ellipse: s-maj=7.8km s-min=6.1km az=166.6*

*NEIC **11** 18:22:10.0±2.5, 7°.55N×73°.13W, h35km±21km, mb3.9/1, Error ellipse: s-maj=12.5km s-min=9.3km az=131.0*
NEIC Felt at Bucaramanga.
ISC 11 18:22:10.2±1.6, 7°.41N±0°.05×73°.17W±0°.03, h33km±15km, n40, σ1§19/55, mb3.9/5, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VIGV	**El Vigia**	**2.29**	**52**	*e*P	**Pn**	**18 22 46.8**	**+1.2**
VIGV				*e*S	**Sn**	18 23 17.4	+4.9
SOCV	**Socops**	**2.45**	**69**	*e*P	**Pn**	**18 22 48.8**	**+0.9**
SOCV				*e*S	**Sn**	18 23 21.2	+4.5
ROSC	**El Rosal**	**2.79**	**204**	Pn	**Pn**	**18 22 54.0**	**+1.5**
	5.7nm,0.3s,baz=228,slow=20,SNR=10.0						
ROSC				Pg	**Pn**	**18 22 58.7**	**+6.2**
	35nm,0.3s,baz=82,slow=21,SNR=21						
ROSC				Lg		18 23 37.7	
	118nm,0.3s,baz=77,slow=23,SNR=4.2						
ROSC	**El Rosal**	**2.79**	**204**	*e*Pn	**Pn**	**18 22 54.0**	**+1.5**
ROSC				Pn	**Pn**	**18 22 54.0**	**+1.5**
ROSC				Pg	**Pn**	**18 22 58.7**	**+6.2**
ROSC				*e*Sg	**Sn**	**18 23 34.9**	**+10**
ROSC				Lg		18 23 37.7	
SDV	**Santo Domingo**	**2.91**	**60**	*e*Pn	**Pn**	**18 22 54.8**	**+0.6**
SDV				*e*Sg	**Sn**	**18 23 36.9**	**+8.9**
VIRV	**Villa del Rosa**	**3.16**	**14**	*e*P	**Pn**	**18 22 57.9**	**+0.2**
VIRV				*e*S	**Sn**	**18 23 36.2**	**+2.0**
ELOV	**Elorza**	**3.69**	**96**	*e*P	**Pn**	**18 23 04.8**	**0.0**
ELOV				*e*S	**Sn**	**18 23 47.6**	**+0.5**
QARV	**Quebrada Arrib**	**3.82**	**43**	*e*P	**Pn**	**18 23 07.7**	**+1.0**
CURV	**Curarigua**	**4.09**	**51**	*e*P	**Pn**	**18 23 11.0**	**+0.5**
CURV				*e*S	**Sn**	**18 23 59.9**	**+2.7**
DABV	**Dabajuro**	**4.29**	**36**	*e*P	**Pn**	**18 23 13.7**	**+0.5**
DABV				*e*S	**Sn**	**18 24 04.7**	**+2.5**
SIQV	**Siquisique**	**4.62**	**46**	*e*P	**Pn**	**18 23 18.2**	**+0.4**
TEPV	**Terepaima**	**4.68**	**57**	*e*P	**Pn**	**18 23 19.2**	**+0.7**
TEPV				*e*S	**Sn**	**18 24 13.6**	**+1.9**
MAPV	**Macapo**	**5.25**	**62**	*e*P	**Pn**	**18 23 26.4**	**+0.1**
BAUV	**El Baul**	**5.30**	**73**	*e*P	**Pn**	**18 23 26.0**	**-1.1**
BAUV				*e*S	**Sn**	**18 24 26.8**	**-0.3**
IMOV	**Isla Los Monje**	**5.40**	**24**	*e*P	**Pn**	**18 23 28.4**	**0.0**
IMOV				*e*S	**Sn**	**18 24 28.9**	**-0.6**
MONV	**Montecano**	**5.51**	**35**	*e*P	**Pn**	**18 23 29.5**	**-0.4**
MONV				*e*S	**Sn**	**18 24 32.1**	**0.0**
TURV	**Turiamo**	**6.07**	**60**	*e*P	**Pn**	**18 23 37.6**	**-0.1**
TURV				*e*S	**Sn**	**18 24 45.4**	**-0.6**
CAOV	**Caicara del Or**	**6.80**	**90**	*e*P	**Pn**	**18 23 46.1**	**-1.5**
CAOV				*e*S	**Sn**	**18 25 00.0**	**-3.9**
BCIP	**Isla Barro Col**	**6.82**	**285**	*e*Pn	**Pn**	**18 23 46.5**	**-1.5**
MERV	**Las Mercedes**	**7.04**	**74**	*e*P	**Pn**	**18 23 50.1**	**-0.9**
MERV				*e*S	**Sn**	**18 25 08.0**	**-2.1**
BIRV	**Birongo**	**7.47**	**65**	*e*P	**Pn**	**18 23 55.9**	**-1.0**
BIRV				*e*S	**Sn**	**18 25 18.5**	**-2.0**
OTAV	**Otavalo**	**8.86**	**217**	*e*Pn	**Pn**	**18 24 18.4**	**+2.5**
PCRV	**Puerto La Cruz**	**8.87**	**71**	Pn	**Pn**	**18 24 14.9**	**-1.3**
	14nm,0.3s,baz=208,slow=6.0,SNR=28						
PCRV				LR	LR	18 27 38.7	
	comp=Z,76nm,21.4s,baz=248,slow=38						
MTDJ	**Mount Denham**	**11.56**	**339**	Pn	**Pn**	**18 24 51.8**	**-1.1**
	121nm,1.5s						
SDDR	**Presa de Saban**	**11.64**	**9**	*e*Pn	**Pn**	**18 24 54.4**	**+0.2**
	27nm,0.7s						
SDDR				*e*Sn	**Sn**	**18 26 58.0**	**-5.1**
JTS	**JuntasAbangare**	**11.98**	**285**	LR	LR	18 30 27.2	
	comp=Z,117nm,18.1s,baz=253,slow=42						
SJG	**San Juan**	**12.64**	**32**	Pn	**Pn**	**18 25 04.1**	**-3.7**
	0.3nm,0.3s,baz=139,slow=24,SNR=1.6						
SJG	**San Juan**	**12.64**	**32**	*e*Pn	**Pn**	**18 25 03.7**	**-4.1**
MTP	**Monte Pirata**	**12.96**	**34**	*e*Pn	**Pn**	**18 25 08.2**	**-3.8**
FDF	**Fort de France**	**13.86**	**57**	Pn	**Pn**	**18 25 20.6**	**-3.7**
CMIG	**Matias Romero**	**23.27**	**296**	LR	LR	18 38 17.6	
	comp=Z,45nm,18.2s,baz=170,slow=42						
SIV	**San Ignacio**	**26.16**	**153**	P	**P**	**18 27 43.9**	**+2.2**
	0.4nm,0.3s,mb3.4,baz=337,slow=18,SNR=2.7						
MIAR	**Mount Ida**	**32.90**	**328**	P	**P**	**18 28 40.3**	**-1.0**
TXAR	**Lajitas Array**	**36.03**	**311**	P	**P**	**18 29 08.4**	**-0.2**
	0.4nm,0.5s,mb3.6,baz=125,slow=9.6,SNR=8.9						
MNTX	**Cornudas Mount**	**38.53**	**313**	*e*P	**P**	**18 29 29.5**	**-0.2**
	1.1nm,0.6s,mb3.8						
SCHQ	**Schefferville**	**47.56**	**5**	P	**P**	**18 30 41.5**	**-0.8**
	3.3nm,0.6s,mb4.5,baz=262,slow=16,SNR=5.0						
YKA	**Yellowknife Ar**	**62.69**	**340**	P	**P**	**18 32 30.3**	**-1.2**
	1.3nm,0.5s,mb4.3,baz=132,slow=6.9,SNR=8.5						
ASAR	**Alice Springs**	**149.41**	**235**	PKP	PKPdf	18 41 52.4	+0.1
	0.8nm,0.9s,baz=122,slow=3.3,SNR=12						
ASAR				PKPbc	PKPbc	18 41 54.9	-1.8
	1.2nm,0.9s,baz=120,slow=3.1,SNR=3.9						
WRA	**Warramunga Arr**	**150.57**	**242**	PKPbc	PKPbc	18 41 57.7	-1.9
	1.0nm,0.5s,baz=106,slow=2.6,SNR=27						
CMAR	**Chiang Mai Arr**	**153.14**	**17**	PKPbc	PKPbc	18 42 03.8	-1.7
	0.2nm,0.6s,baz=317,slow=2.6,SNR=2.1						
CMAR				PKPab	PKPab	18 42 14.1	-2.8
	0.4nm,0.6s,baz=315,slow=3.5,SNR=5.3						

*ISCJB **11** 18:23:58.6±1.4, 26°.56N±0°.09×141°.6E±0°.2, h62km±17km, mb3.8/7, Error ellipse: s-maj=32.8km s-min=10.8km az=162.4*
*IDC **11** 18:23:59.4±2.0, 26°.66N×141°.53E, h53km±21km, mb3.5/6, mb1 3.6/9, mb1mx3.3/26, mbtmp3.5/9, ML3.3/3, Error ellipse: s-maj=31.5km s-min=15.6km az=70.0*
*JMA **11** 18:23:59.6±0.2, 26°.54N×141°.51E, h39km, M4.3*
*NEIC **11** 18:23:59.7, 26°.55N×141°.51E, h39km, MG4.3(JMA), After JMA.*
ISC 11 18:24:00.3±1.1, 26°.60N±0°.09×141°.7E±0°.2, h64km±14km, n18, σ0§88/22, mb3.8/7, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**0.45**	**86**	P	**Pn**	**18 24 11.6**	**-0.6**
JHHJ				S	**Sn**	**18 24 20.2**	**-0.6**
CBIJ	**Chichi jima**	**0.67**	**43**	P	**Pn**	**18 24 14.6**	**+0.1**
	181nm,0.3s,baz=123,slow=3.4,SNR=272						
CBIJ				S	**Sn**	**18 24 25.4**	**+0.4**
	1μm,0.3s,baz=278,slow=22,SNR=138						
CBIJ	**Chichi jima**	**0.67**	**43**	P	**Pn**	**18 24 14.6**	**+0.1**
CBIJ				S	**Sn**	**18 24 25.6**	**+0.7**
JHJ	**Hachijo jima 2**	**6.70**	**346**	P	**Pn**	**18 25 35.9**	**-0.2**
	3.1nm,0.3s,baz=248,slow=19,SNR=6.6						
JHJ				S	**Sn**	**18 26 47.2**	**-3.7**
	5.0nm,0.3s,baz=90,slow=22,SNR=1.3						
JAG	**Ashikaga**	**9.97**	**350**	P	**Pn**	**18 26 22.3**	**+1.5**
JHO	**Hitachi**	**10.02**	**355**	P	**Pn**	**18 26 25.1**	**+3.6**
MJAR	**Matsushiro Arr**	**10.34**	**344**	P	**Pn**	**18 26 24.9**	**-0.8**
	0.1nm,0.3s,baz=198,slow=6.6,SNR=2.4						
MAJO	**Matsushiro**	**10.34**	**344**	Pn	**Pn**	**18 26 29.8**	**+4.0**
ASAJ	**Asahikawa**	**17.49**	**2**	P	**Pn**	**18 28 00.8**	**+1.0**
	0.3nm,0.3s,baz=201,slow=8.6,SNR=5.0						
HHC	**Hu-ho-hao-te**	**28.63**	**307**	*e*P	**P**	**18 29 51.0**	**+0.4**
HHC				S	**S**	**18 34 34.1**	**-0.5**
HHC				pmax	pmax		
	comp=Z,11nm,0.5s,mb4.8						
HHC				pmax	pmax		
	comp=Z,79nm,5.5s						
WRAB	**Tennant Creek**	**46.80**	**189**	*e*P	**P**	**18 32 24.1**	**+0.5**
WRA	**Warramunga Arr**	**46.81**	**189**	P	**P**	**18 32 23.8**	**+0.1**
	comp=Z,1.0nm,0.4s,mb4.1,baz=11,slow=8.5,SNR=27						
ASAR	**Alice Springs**	**50.53**	**189**	P	**P**	**18 32 52.9**	**+0.7**
	comp=Z,0.3nm,0.9s,mb3.2,baz=14,slow=8.7,SNR=4.5						
KURK	**Kurchatov**	**53.01**	**315**	P	**P**	**18 33 09.6**	**-0.8**
	comp=Z,0.1nm,0.4s,mb3.1,baz=92,slow=7.7,SNR=2.5						
FINES	**FINESS Array B**	**78.19**	**334**	P	**P**	**18 35 52.6**	**+0.2**
	comp=Z,0.5nm,0.3s,mb3.9,baz=64,slow=4.8,SNR=7.6						
HFS	**Hagfors**	**83.70**	**337**	P	**P**	**18 36 21.5**	**-0.3**
	comp=Z,0.3nm,0.3s,mb3.9,baz=122,slow=1.9,SNR=5.2						
NOA	**NORSAR Array B**	**83.90**	**338**	P	**P**	**18 36 21.1**	**-1.7**
	comp=Z,0.3nm,0.5s,mb3.6,baz=54,slow=6.2,SNR=3.0						
LPAZ	**La Paz**	**150.49**	**76**	PKPbc	PKPbc	18 43 48.3	+2.9
	comp=Z,0.6nm,0.5s,baz=27,slow=4.5,SNR=3.3						

*BJI **11** 18:50:12.7, 9°.08S×105°.82E, h10km, mB4.8/7, mb4.7/16, Ms4.1/1, Ms7 4.2/1*
*IDC **11** 18:50:19.2±1.2, 8°.27S×105°.41E, h0km, mb4.1/12, mb1 4.3/12, mb1mx4.1/20, mbtmp4.1/12, MS3.4/6, Ms1 3.4/6, ms1mx3.0/28, Error ellipse: s-maj=52.1km s-min=14.4km az=50.0*
*DJA **11** 18:50:20, 8°.38S×105°.29E, h10km, MLv4.6/17*
*ISCJB **11** 18:50:21.7±0.4, 8°.35S±0°.05×105°.41E±0°.05, h33km, mb4.4/35, MS3.4/6, Error ellipse: s-maj=8.9km s-min=4.7km az=39.6*
*NEIC **11** 18:50:23.5±0.4, 8°.38S×105°.39E, h35km, mb4.3/14, Error ellipse: s-maj=12.1km s-min=6.7km az=50.0*
ISC 11 18:50:24.2±0.4, 8°.30S±0°.05×105°.41E±0°.05, h35km, (h16km±7.9km:pP-P), n73, σ1§03/67, mb4.4/35, MS3.4/6, South of Java

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGJI	**Cibinong**	**1.69**	**9**	P	**Pn**	**18 50 50.7**	**-0.6**
SKJI	**Sukabumi**	**1.71**	**42**	P	**Pn**	**18 50 50.7**	**-0.8**
SBJI	**Serang**	**2.28**	**18**	P	**Pn**	**18 51 01.2**	**+1.9**
RBSI	**Rajabasa**	**2.46**	**8**	P	**Pn**	**18 51 01.2**	**-0.6**
LEM	**Lembang**	**2.63**	**56**	P	**Pn**	**18 51 06.0**	**+1.9**
KASI	**Kota Agung**	**2.90**	**342**	P	**Pn**	**18 51 06.3**	**-1.6**
BLSI	**Bandar Lampung**	**2.91**	**357**	P	**Pn**	**18 51 07.5**	**-0.6**
LWLI	**Liwa**	**3.52**	**337**	P	**Pn**	**18 51 15.6**	**-0.9**
KLSI		**3.65**	**349**	P	**Pn**	**18 51 17.8**	**-0.3**
MDSI	**Maura Dua**	**3.98**	**342**	P	**Pn**	**18 51 21.7**	**-1.0**
MNAI	**Manna**	**4.61**	**328**	P	**Pn**	**18 51 29.6**	**-1.8**
UGM	**Wanagama**	**5.08**	**86**	P	**Pn**	**18 51 37.1**	**-0.7**
	0.8nm139nm,2.1s						
PMBI	**Palembang**	**5.37**	**353**	P	**Pn**	**18 51 40.6**	**-1.3**
	1.2nm8μm157nm,0.4s						
KSI	**Kapahiang**	**5.40**	**329**	P	**Pn**	**18 51 40.4**	**-1.9**
	0.5nm136nm,0.8s						
PCJI	**Pacitan**	**5.71**	**89**	P	**Pn**	**18 51 45.9**	**-0.6**
	0.5nm120nm,1.4s						
TPI	**Tanjungpandan**	**5.94**	**22**	P	**Pn**	**18 51 49.5**	**-0.2**
	0.1nm1μm33nm,1.1s						
SJI	**Sawahan**	**6.32**	**85**	P	**Pn**	**18 51 56.7**	**+1.8**
	0.5nm2μm97nm,0.7s						
PWJI	**Pagerwojo**	**6.33**	**88**	P	**Pn**	**18 51 54.6**	**-0.5**
	0.4nm122nm,0.8s						
GMJI	**Gumukmas**	**7.95**	**90**	P	**Pn**	**18 52 17.9**	**+0.6**
	63nm,1.1s						
COCO	**West Island**	**9.29**	**245**	*e*Pn	**Pn**	**18 52 32.9**	**-2.8**
SRBI	**Singaraja**	**9.70**	**89**	P	**Pn**	**18 52 41.2**	**-0.2**
	86nm,0.8s						
KHKI	**Kahang-Kahang**	**10.09**	**91**	P	**Pn**	**18 52 45.7**	**-1.0**
MBWA	**Marble Bar**	**18.83**	**134**	*e*Pn	**Pn**	**18 54 38.8**	**-3.0**
	4.6nm,0.7s						
FITZ	**Fitzroy Crossi**	**21.95**	**118**	P	**P**	**18 55 15.3**	**+0.4**
	3.4nm,0.7s,mb3.9,baz=291,slow=7.2,SNR=8.1						
KAKA	**Kakadu**	**26.93**	**102**	*e*P	**P**	**18 55 59.4**	**-3.1**
	26nm,0.6s,mb4.9						
CM31	**Chiang Mai Arr**	**27.34**	**347**	*e*P	**P**	**18 56 06.3**	**+0.3**
	1.7nm,0.6s,mb3.8						
CMAR	**Chiang Mai Arr**	**27.34**	**347**	P	**P**	**18 56 06.5**	**+0.4**
	2.1nm,0.6s,mb3.9,baz=180,slow=8.6,SNR=26						
CHTO	**Chiang Mai**	**27.68**	**347**	*e*P	**P**	**18 56 09.1**	**+0.1**
	1.6nm,0.7s,mb3.8						
WRA	**Warramunga Arr**	**30.29**	**116**	P	**P**	**18 56 32.5**	**+0.2**
	1.5nm,0.5s,mb3.9,baz=289,slow=10,SNR=19						
WRA				PcP	PcP	18 59 33.3	+0.9
	0.7nm,1.1s,baz=312,slow=1.9,SNR=4.6						
WRAB	**Tennant Creek**	**30.30**	**116**	*e*P	**P**	**18 56 32.0**	**-0.4**
	3.7nm,0.8s,mb4.2						
ASAR	**Alice Springs**	**31.27**	**123**	P	**P**	**18 56 40.8**	**-0.2**
	0.3nm,0.4s,mb3.5,baz=296,slow=8.3,SNR=23						
ENH	**Enshi**	**38.54**	**6**	*e*P	**P**	**18 57 42.8**	**-0.7**
	4.1nm,0.6s,mb4.3						
ODAN	**Odare**	**39.08**	**334**	*e*P	**P**	**18 57 49.1**	**+1.1**
	18nm,0.7s,mb4.9						
JIRN	**Jiri**	**40.30**	**333**	*e*P	**P**	**18 57 59.6**	**+1.4**
	10nm,0.3s,mb5.0						
GUN	**Gumba**	**40.65**	**333**	*e*P	**P**	**18 58 02.5**	**+1.4**
	27nm,0.7s,mb5.0						
DMN	**Daman**	**40.75**	**332**	*e*P	**P**	**18 58 03.0**	**+1.1**
KKN	**Kakani**	**40.82**	**332**	*e*P	**P**	**18 58 03.5**	**+1.0**
	5.4nm,0.2s,mb4.8						
STKA	**Stephens Creek**	**40.98**	**130**	P	**P**	**18 58 04.2**	**+0.3**
	2.8nm,0.5s,mb4.1,baz=295,slow=12,SNR=9.0						
STKA	**Stephens Creek**	**40.98**	**130**	*e*P	**P**	**18 58 03.9**	**0.0**
	1.6nm,0.8s,mb3.7						
GKN	**Gorkha**	**41.30**	**332**	*e*P	**P**	**18 58 07.5**	**+1.0**
	11nm,0.3s,mb5.0						
XAN	**Xi'an**	**42.23**	**4**	P	**P**	**18 58 14.1**	**+0.1**
XAN				pP	pP	18 58 23.5	-0.8
XAN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.0						
LZH	**Lanzhou**	**44.17**	**358**	*e*P	**P**	**18 58 30.0**	**+0.4**
LZH				pP	pP	18 58 34.8	-5.1
LZH				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.7						
GTA	**Gaotai**	**47.75**	**354**	*e*P	**P**	**18 58 59.7**	**+2.0**
GTA				pP	pP	18 59 04.1	-4.1
GTA				sP	sP	18 59 07.5	-4.8
GTA				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.7						
HHC	**Hu-ho-hao-te**	**49.23**	**6**	*e*P	**P**	**18 59 12.7**	**+3.6**
HHC				S	**S**	**19 06 19.9**	**+7.3**
HHC				pmax	pmax		
	comp=Z,18nm,0.6s,mb5.3						
HHC				pmax	pmax		
	comp=Z,160nm,6.5s						
MJAR	**Matsushiro Arr**	**54.20**	**33**	P	**P**	**18 59 45.0**	**-1.3**
	comp=Z,0.8nm,0.4s,mb4.0,baz=207,slow=8.2,SNR=4.8						
SONM	**Songino Array**	**55.89**	**1**	P	**P**	**18 59 59.6**	**+1.3**
	comp=Z,2.6nm,0.4s,mb4.7,baz=182,slow=9.6,SNR=70						
ULN	**Ulaanbaatar**	**55.93**	**1**	*e*P	**P**	**18 59 59.4**	**+0.8**
	comp=Z,3.5nm,0.6s,mb4.6						
TKM2	**Tokmak 2**	**57.76**	**334**	P	**P**	**19 00 10.9**	**-0.7**
EKS2	**Erkin-Say**	**58.35**	**333**	*e*P	**P**	**19 00 15.2**	**-0.6**
	comp=Z,1.9nm,0.8s,mb4.2						
MK31	**Makanchi Array**	**58.59**	**342**	*e*P	**P**	**19 00 17.3**	**-0.1**
MKAR	**Makanchi Array**	**58.59**	**342**	P	**P**	**19 00 17.5**	**+0.1**
	comp=Z,2.1nm,0.5s,mb4.4,baz=157,slow=6.7,SNR=29						
MKAR				LR	LR	19 28 39.2	
	comp=Z,23nm,18.8s,MS3.3,baz=46,slow=39						
HIA	**Hailar**	**58.68**	**11**	P	**P**	**19 00 17.1**	**-0.8**
KURK	**Kurchatov**	**63.19**	**341**	LR	LR	19 29 49.9	
	comp=Z,16nm,21.2s,MS3.2,baz=170,slow=38						
KURK	**Kurchatov**	**63.19**	**341**	*e*P	**P**	**19 00 48.5**	**-0.2**
	comp=Z,3.2nm,0.8s,mb4.5						
ZALV	**Zalesovo Beam**	**64.41**	**347**	P	**P**	**19 00 56.4**	**-0.1**
	comp=Z,3.9nm,0.4s,mb4.8,baz=158,slow=5.6,SNR=28						
ZALV				LR	LR	19 31 54.1	
	comp=Z,16nm,19.1s,MS3.2,baz=252,slow=39						
ZALV	**Zalesovo Beam**	**64.41**	**347**	P	**P**	**19 00 56.4**	**-0.1**
ZALV				LR	LR	19 31 54.1	
BVAR	**Borovoye Array**	**67.95**	**338**	P	**P**	**19 01 19.5**	**+0.2**
	comp=Z,0.8nm,0.4s,mb4.1,baz=144,slow=10,SNR=5.6						
ABKAR	**Akbulak array**	**69.73**	**330**	*e*P	**P**	**19 01 30.3**	**-0.2**
	comp=Z,2.2nm,0.6s,mb4.3						
YAK	**Yakutsk**	**72.61**	**12**	*e*P	**P**	**19 01 46.5**	**-1.1**
	comp=Z,6.1nm,0.6s,mb4.7						
ARU	**Arti**	**75.12**	**335**	P	**P**	**19 02 02.8**	**+0.4**
MMAI	**Mount Meron Ar**	**78.08**	**306**	LR	LR	19 38 20.2	
	comp=Z,25nm,19.8s,MS3.5,baz=110,slow=37						
BRTR	**Keskin Array B**	**81.52**	**312**	P	**P**	**19 02 38.2**	**-0.1**
	comp=Z,0.4nm,0.7s,mb3.5,baz=126,slow=2.5,SNR=3.0						
QSPA	**South Pole Qui**	**81.70**	**180**	*e*P	**P**	**19 02 39.5**	**+0.9**
	comp=Z,1.3nm,0.7s,mb4.0						
TSUM	**Tsumeb**	**85.28**	**251**	LR	LR	19 35 34.2	
	comp=Z,36nm,21.9s,MS3.7,baz=135,slow=32						
FINES	**FINESS Array B**	**92.16**	**332**	P	**P**	**19 03 30.0**	**+0.2**
	comp=Z,3.6nm,1.2s,mb4.6,baz=88,slow=7.1,SNR=2.9						
FINES	**FINESS Array B**	**92.16**	**332**	P	**P**	**19 03 30.0**	**+0.2**
ARCES	**ARCESS Array B**	**94.20**	**340**	LR	LR	19 52 06.8	
	comp=Z,25nm,20.6s,MS3.7,baz=172,slow=39						
CPUP	**Villa Florida**	**141.72**	**205**	PKP	PKPdf	19 09 57.6	+4.8
	comp=Z,0.3nm,0.3s,baz=85,slow=11,SNR=1.6						
TXAR	**Lajitas Array**	**145.60**	**49**	PKPbc	PKPbc	19 10 00.2	+0.5
	comp=Z,2.0nm,1.0s,baz=264,slow=1.6,SNR=13						
TXAR	**Lajitas Array**	**145.60**	**49**	PKPbc	PKPbc	19 10 00.2	+0.5

MEX 11 19:19:57.7±0.6, 16°.39N×96°.09W, h69km±8km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.61**	**181**	*i* P	Pn	19 20 10.3	-1.3
HUIG				*e*S	Sn	19 20 20.1	-1.7
VHO	**Vista Hermosa**	**0.92**	**318**	*i* P	Pn	19 20 14.2	-0.9
VHO				*e*S	Sn	19 20 26.6	-1.4
PNIG	**Pinotepa**	**1.95**	**270**	*i* P	Pn	19 20 27.6	-1.1
PNIG				*e*S	Sn	19 20 49.8	-2.5
PCIG		**2.85**	**103**	*i* P	Pn	19 20 40.1	-0.7
PCIG				*i* S	Sn	19 21 11.6	-2.4

*ISCJB **11** 19:20:25.0±1.2, 31°.2N±0°.1×104°.1E±0°.1, h0km±10km, mb3.8/3, Error ellipse: s-maj=24.5km s-min=6.7km az=140.8*
*IDC **11** 19:20:26.1±1.4, 31°.11N×103°.80E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.4/21, mbtmp3.5/4, ML2.8/1, Error ellipse: s-maj=92.0km s-min=24.4km az=60.0*
*BJI **11** 19:20:28.7, 31°.21N×103°.89E, h17km, ML3.2/9*
ISC 11 19:20:27.7±1.2, 31°.2N±0°.1×104°.0E±0°.1, h7km±10km, n6, σ1§34/8, mb3.7/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.35**	**215**	Pg	**Pg**	**19 20 34.1**	**-0.3**
CD2				Sg	**Sg**	**19 20 39.5**	**+0.5**
CD2				smax			
	comp=N,3μm,0.7s						
CD2				smax			
	comp=E,3μm,0.5s						
XAN	**Xi'an**	**5.04**	**54**	Pg	**Sn**	**19 22 42.6**	**+0.5**
XAN				Sg	**Sg**	**19 23 08.9**	**-0.5**
XAN				smax			
	comp=N,19nm,0.6s						
XAN				smax			
	comp=E,11nm,0.8s						
SONM	**Songino Array**	**16.72**	**6**	Pn	**Pn**	**19 24 24.9**	**+2.6**
	comp=E,0.0nm,0.3s,baz=182,slow=16,SNR=4.0						
MKAR	**Makanchi Array**	**22.84**	**319**	P	**P**	**19 25 30.9**	**-0.4**
	comp=E,0.6nm,1.0s,mb3.0,baz=108,slow=9.3,SNR=3.7						
ARCES	**ARCESS Array B**	**57.13**	**336**	P	**P**	**19 30 13.3**	**-1.2**
	comp=E,5.2nm,1.1s,mb4.5,baz=75,slow=6.9,SNR=3.4						
WRA	**Warramunga Arr**	**58.60**	**146**	P	**P**	**19 30 25.2**	**-0.2**
	comp=E,0.4nm,0.5s,mb3.7,baz=339,slow=7.8,SNR=14						

*ISCJB **11** 19:30:25.8±0.6, 55°.22N±0°.03×161°.82E±0°.06, h95km±8km, Error ellipse: s-maj=6.1km s-min=4.6km az=19.1*
*KRSC **11** 19:30:25.6±0.5, 55°.22N×161°.80E, h82km±72km, ML4.0*
*MOS **11** 19:30:26.0±0.6, 55°.21N×161°.80E, h81km, mb4.1/1, Error ellipse: s-maj=37.0km s-min=14.0km az=76.4*
ISC 11 19:30:26.7±0.7, 55°.22N±0°.03×161°.82E±0°.06, h92km±9km, n25, σ0§71/45, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.67**	**185**	*e*P	**Pn**	**19 30 42.7**	**-0.3**
MKZ				*i* S	**Sn**	**19 30 55.5**	**+0.3**
ZLN	**Zelenaya**	**0.98**	**324**	*e*P	**Pn**	**19 30 46.7**	**+0.5**
ZLN				*i* S	**Sn**	**19 31 01.9**	**+1.0**
BZMR	**Bezymyannaya**	**1.04**	**314**	*e*P	**Pn**	**19 30 46.6**	**-0.3**
BZMR				*i* S	**Sn**	**19 31 02.1**	**0.0**
KMNR	**Kamenistaya**	**1.05**	**301**	*e*P	**Pn**	**19 30 46.7**	**-0.3**
KMNR				*i* S	**Sn**	**19 31 02.5**	**+0.3**
CIRR	**Tsirk**	**1.08**	**326**	*e*P	**Pn**	**19 30 47.5**	**+0.1**
CIRR				*i* S	**Sn**	**19 31 03.4**	**+0.5**
KBTR	**Krutoberegovo**	**1.14**	**29**	*e*P	**Pn**	**19 30 48.1**	**+0.1**
KBTR				*i* S	**Sn**	**19 31 04.6**	**+0.5**
KPT	**Kopyto**	**1.18**	**310**	*e*P	**Pn**	**19 30 48.0**	**-0.5**
KPT				*i* S	**Sn**	**19 31 04.8**	**-0.1**
KLY	**Klyuchi**	**1.28**	**329**	*e*P	**Pn**	**19 30 48.6**	**-1.1**
KLY				*i* S	**Sn**	**19 31 05.8**	**-1.3**
SMKR	**Semkarok**	**1.38**	**352**	P	**Pn**	**19 30 51.4**	**+0.5**
SMKR				*i* S	**Sn**	**19 31 10.1**	**+0.9**
KOZR	**Kozyr**	**1.38**	**309**	PN	**Pn**	**19 30 50.6**	**-0.4**
KOZR				S	**Sn**	**19 31 09.0**	**-0.3**
KOZ	**Kozyrevsk**	**1.39**	**308**	*e*P	**Pn**	**19 30 50.6**	**-0.4**
KOZ				*i* S	**Sn**	**19 31 09.0**	**-0.4**
BDR	**Baidarnaya**	**1.39**	**346**	*e*P	**Pn**	**19 30 51.2**	**+0.1**
BDR				*i* S	**Sn**	**19 31 10.3**	**+0.7**
SRKR	**Sorokina**	**1.48**	**346**	*e*P	**Pn**	**19 30 52.2**	**0.0**
SRKR				*i* S	**Sn**	**19 31

	baz=1.7,SNR=14							
109C				⇊Sb	Sb	19 40 56.4	+0.1	
	baz=1.7							
Z13A	**Yuma Proving G**	**1.63**	**58**	⇑P	**Pn**	19 40 34.3	-0.3	
	baz=1.8,SNR=56							
IRM	**Iron Mountain**	**1.82**	**4**	⇑P	**Pn**	19 40 36.5	-0.8	
	baz=2.0,SNR=19							
Y13A	**Salome**	**1.92**	**39**	⇊Pb	**Pb**	19 40 41.1	0.0	
	baz=2.1							
MURC	**Murrieta**	**2.04**	**309**	⇑Sb	**Sb**	19 41 09.6	+1.3	
	baz=2.2							
114A	**Black Gap (USA**	**2.08**	**78**	⇊P	**Pn**	19 40 40.4	-0.4	
	baz=2.1,SNR=28							
214A	**Organ Pipe Nat**	**2.14**	**100**	⇊P	**Pn**	19 40 41.6	0.0	
	baz=2.1,SNR=10							
GMRC	**Granite Mounta**	**2.46**	**353**	⇑P	**Pn**	19 40 45.8	-0.2	
	baz=2.7							
LDFC	**Landfair**	**2.74**	**3**	*e*Pn	**Pn**	19 40 49.3	-0.6	
SCI	**San Clemente I**	**2.81**	**284**	⇊Sb	**Sb**	19 41 32.3	+1.5	
	baz=2.9							
CIS	**Catalina Islan**	**2.82**	**293**	⇊Sb	**Sb**	19 41 32.6	+1.7	
	baz=2.9							
Y15A	**Casa Rosa Ranc**	**2.96**	**56**	⇑P	**Pn**	19 40 53.3	+0.3	
	baz=3.1							
MWC	**Mount Wilson**	**2.98**	**310**	*e*Pn	**Pn**	19 40 54.0	+0.9	
MWC				*e*Sg	**Sg**	19 41 37.6	-4.4	
GSC	**Goldstone**	**3.21**	**337**	*e*Pn	**Pn**	19 40 59.6	+3.2	
GSC				*e*Pg	**Pg**	19 41 09.6	+1.9	
V12A	**Nelson**	**3.40**	**6**	⇊P	**Pn**	19 40 59.5	+0.5	
	baz=3.6,SNR=7.0							
V13A	**Grand Canyon W**	**3.67**	**17**	⇊P	**Pn**	19 41 04.1	+1.4	
	baz=3.9,SNR=15							
TUC	**Tucson**	**3.82**	**89**	*e*Pn	**Pn**	19 41 05.1	+0.4	
TUC				*e*S	**Sn**	19 42 02.9	+13	
Y17A	**Roosevelt**	**3.98**	**69**	⇊P	**Pn**	19 41 07.2	+0.3	
	baz=4.1,SNR=8.7							
U13A	**Pakoon Wash**	**4.22**	**15**	⇊P	**Pn**	19 41 11.4	+1.3	
	baz=4.4,SNR=10							
ISA	**Isabella**	**4.24**	**322**	Pn	**Pn**	19 41 08.0	-2.5	
WUAZ	**Wupatki**	**4.55**	**45**	*e*Pn	**Pn**	19 41 17.2	+2.4	
WUAZ				*e*Sg	**Sg**	19 42 31.2	-1.0	
CCUT	**Cedar City**	**5.44**	**16**	*e*Pn	**Pn**	19 41 27.6	+0.6	
	comp=N,3.8nm,0.7s							
CCUT				*e*Pg	**Pg**	19 41 52.2	+1.9	
PV04	**Paradox Valley**	**7.99**	**39**	Pn	**Pn**	19 42 01.5	-0.4	

*ISCJB **11** 20:05:52.4±0.6, 51°.50N±0°.03×16°.16E±0°.03, h0km, Error ellipse: s-maj=4.5km s-min=2.6km az=13.6*
*IPEC **11** 20:05:53.2±0.3, 51°.61N×16°.23E, h0km, ML2.3/3, Error ellipse: s-maj=1.9km s-min=1.5km az=45.0*
*CSEM **11** 20:05:54.5±0.3, 51°.50N×16°.11E, h2km, ML3.2/10, Error ellipse: s-maj=5.0km s-min=2.9km az=6.0*
*PRU **11** 20:05:54.9, 51°.51N×16°.13E, h0km*
*WAR **11** 20:05:55.3, 51°.55N×16°.10E, ML2.6, Mining Induced*
*VIE **11** 20:05:57.5±0.7, 51°.25N×16°.14E, h0km, mb2.3/4, ML2.7/5, Error ellipse: s-maj=4.4km s-min=4.0km az=154.0 63 km WNW of Wroclaw Suspected Mining induced.*

ISC 11 20:05:53.7±0.5, 51°.55N±0°.03×16°.13E±0°.03, h0km, n43, σ0°83/81, 4C-2D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.71**	**172**	*e*Pg	**Pg**	**20 06 08.3**	**+1.1**
KSP				*e*Sg	**Sg**	**20 06 18.0**	**+1.6**
KSP	**Ksiaz**	**0.71**	**172**	*i* Pg	**Pg**	**20 06 08.3**	**+1.1**
KSP				*e*Sg	**Sg**	**20 06 17.9**	**+1.5**
KSP	**Ksiaz**	**0.71**	**172**	*e*Pg	**Pg**	**20 06 08.1**	**+0.9**
	baz=357						
KSP				*e*Sg	**Sg**	**20 06 17.2**	**+0.8**
	baz=357						
UPC	**Upice**	**1.04**	**184**	*e*PG	**Pg**	**20 06 14.2**	**+0.6**
UPC	**Upice**	**1.04**	**184**	Pg	**Pg**	**20 06 14.2**	**+0.6**
DPC	**Dobruska-Polom**	**1.20**	**174**	*e*PG	**Pg**	**20 06 17.1**	**+0.4**
DPC				*e*SG	**Sg**	**20 06 32.4**	**+0.2**
	comp=Z,33nm,0.3s						
DPC	**Dobruska-Polom**	**1.20**	**174**	*e*Pg	**Pg**	**20 06 17.0**	**+0.3**
	baz=357						
DPC				Sg	**Sg**	**20 06 32.4**	**+0.2**
	comp=Z,33nm,0.3s						
PVCC	**Panska Ves**	**1.42**	**225**	*e*PG	**Pg**	**20 06 21.0**	**+0.2**
PVCC				*e*SG	**Sg**	**20 06 39.7**	**+0.6**
PVCC	**Panska Ves**	**1.42**	**225**	Pg	**Pg**	**20 06 21.0**	**+0.2**
PVCC	**Panska Ves**	**1.42**	**225**	*e*Pn	**Pn**	**20 06 21.4**	**+0.8**
	baz=43						
PVCC				Sg	**Sg**	**20 06 39.7**	**+0.6**
BRG	**Berggiesshubel**	**1.53**	**245**	PG	**Pg**	**20 06 23.1**	**+0.1**
BRG				SG	**Sg**	**20 06 43.9**	**+1.1**
	comp=Z,47nm,0.3s						
PRU	**Pruhonice**	**1.86**	**214**	*e*PN	**Pn**	**20 06 27.2**	**+0.5**
PRU				*e*PG	**Pg**	**20 06 29.2**	**0.0**
PRU				*e*SG	**Sg**	**20 06 53.4**	**+0.1**
	comp=Z,30nm,0.4s						
PRU	**Pruhonice**	**1.86**	**214**	Pn	**Pn**	**20 06 27.2**	**+0.5**
PRU	**Pruhonice**	**1.86**	**214**	Pg	**Pg**	**20 06 29.2**	**0.0**
PRU				Sg	**Sg**	**20 06 53.4**	**+0.1**
	comp=Z,30nm,0.4s						
CLL	**Collm**	**1.97**	**264**	*e*Pn	**Pn**	**20 06 28.0**	**-0.3**
CLL				*i* Pg	**Pg**	**20 06 30.7**	**-0.7**
CLL				*i*		20 06 34.2	
CLL				*i* Sg	**Sg**	**20 06 56.9**	**-0.1**
	comp=Z,14nm,0.4s						
MORC	**Moravsky Berou**	**1.98**	**153**	*e*Pn	**Pn**	**20 06 28.2**	**-0.2**
	baz=336						
MORC				*e*Sg	**Sg**	**20 06 56.4**	**-1.0**
	comp=Z,19nm,0.3s,baz=336						
OKC	**Ostrava-Krasne**	**2.14**	**142**	*e*PG	**Pg**	**20 06 34.1**	**-0.5**
OKC				*e*SG	**Sg**	**20 07 01.6**	**-0.6**
	comp=Z,20nm,0.5s						
OKC	**Ostrava-Krasne**	**2.14**	**142**	Pg	**Pg**	**20 06 34.1**	**-0.5**
OKC				Sg	**Sg**	**20 07 01.6**	**-0.6**
	comp=Z,20nm,0.5s						
VRAC	**Vranov**	**2.26**	**172**	*e*Pn	**Pn**	**20 06 32.8**	**+0.6**
	baz=354						
VRAC				*e*Sg	**Sg**	**20 07 05.7**	**-0.5**
	comp=Z,18nm,0.3s,baz=354						
TREC	**Trest**	**2.29**	**191**	*e*PN	**Pn**	**20 06 33.4**	**+0.8**
TREC				*e*PG	**Pg**	**20 06 37.1**	**-0.4**
TREC	**Trest**	**2.29**	**191**	Pn	**Pn**	**20 06 33.4**	**+0.8**
KRUC	**Moravsky**	**2.49**	**176**	*e*Pn	**Pn**	**20 06 35.9**	**+0.5**
	baz=358						
KRUC				*e*Sg	**Sg**	**20 07 13.1**	**-0.5**
	comp=Z,8.3nm,0.3s,baz=358						
OJC	**Ojcow**	**2.67**	**118**	*e*Pg	**Pg**	**20 06 43.1**	**-1.8**
OJC				*e*Sg	**Sg**	**20 07 18.2**	**-1.3**
NKC	**Novy Kostel**	**2.68**	**242**	*e*PN	**Pn**	**20 06 38.3**	**+0.4**
NKC				*e*PG	**Pg**	**20 06 44.4**	**-0.5**
NKC				*e*SG	**Sg**	**20 07 20.0**	**+0.4**
	comp=Z,24nm,0.3s						
NKC	**Novy Kostel**	**2.68**	**242**	Pn	**Pn**	**20 06 38.3**	**+0.4**
NKC	**Novy Kostel**	**2.68**	**242**	Pg	**Pg**	**20 06 44.4**	**-0.5**
NKC				Sg	**Sg**	**20 07 20.0**	**+0.4**
	comp=Z,24nm,0.3s						
KHC	**Kasperske Hory**	**2.92**	**215**	*e*PN	**Pn**	**20 06 41.2**	**-0.1**
KHC				*e*PG	**Pg**	**20 06 47.6**	**-1.9**
KHC				*e*SN	**Sn**	**20 07 17.0**	**0.0**
KHC				*e*SG	**Sg**	**20 07 26.3**	**-1.0**
	comp=Z,7.4nm,0.4s						
KHC	**Kasperske Hory**	**2.92**	**215**	Pn	**Pn**	**20 06 41.2**	**-0.1**
MOX	**Moxa**	**2.99**	**254**	*e*PN	**Pn**	**20 06 43.2**	**+1.0**
MOX				*i* PG	**Pg**	**20 06 50.4**	**-0.5**
MOX				*i* SG	**Sg**	**20 07 28.9**	**-0.6**
NIE	**Niedzica**	**3.42**	**127**	*e*P	**Pg**	**20 06 59.0**	**-0.1**
NIE				*e*S	**Sg**	**20 07 43.4**	**+0.1**
VYHS	**Vyhne**	**3.52**	**149**	*e*PN	**Pn**	**20 06 49.7**	**+0.2**
VYHS				*e*		20 07 03.0	
VYHS	**Vyhne**	**3.52**	**149**	*e*Pn	**Pn**	**20 06 49.7**	**+0.2**
VYHS				*e*Sg	**Sg**	**20 07 46.2**	**-0.4**
CONA	**Conrad Observa**	**3.62**	**183**	⇊*i*Pn	**Pn**	**20 06 50.8**	**-0.2**
CONA				⇑*i*Sg	**Sg**	**20 07 46.8**	**-3.2**
	comp=Z,6.3nm,0.3s						
CONA	**Conrad Observa**	**3.62**	**183**	Pn	**Pn**	**20 06 50.8**	**-0.2**
CONA				Sg	**Sg**	**20 07 46.8**	**-3.2**
	comp=Z,6.3nm,0.3s						
BSD	**Bornholm Skovb**	**3.65**	**349**	*i* P	**Pn**	**20 06 50.2**	**-1.1**
BSD				*i* S	**Sn**	**20 07 31.5**	**-3.5**
BSD	**Bornholm Skovb**	**3.65**	**349**	*i* P	**Pn**	**20 06 50.2**	**-1.1**
MOA	**Molln**	**3.89**	**199**	⇑*i*Pn	**Pn**	**20 06 55.4**	**+0.7**
MOA				⇓*i*Sg	**Sg**	**20 07 58.3**	**-0.3**
	comp=Z,7.3nm,0.5s						
MOA	**Molln**	**3.89**	**199**	Pn	**Pn**	**20 06 55.4**	**+0.8**
MOA				Sg	**Sg**	**20 07 58.3**	**-0.3**
	comp=Z,7.3nm,0.5s						
STHS	**Stebnicka Huta**	**3.90**	**121**	*e*PN	**Pn**	**20 06 55.8**	**+1.1**
STHS				*e*		20 07 10.4	
STHS	**Stebnicka Huta**	**3.90**	**121**	*e*Pn	**Pn**	**20 06 55.8**	**+1.1**
STHS				*e*Sg	**Sg**	**20 08 00.4**	**+1.6**
CRVS	**Cervenica-Dubn**	**4.33**	**126**	*e*	**Pg**	**20 07 18.2**	**+1.7**
KBA	**Koelnbreinsper**	**4.83**	**203**	⇑*i*Pn	**Pn**	**20 07 08.4**	**+0.9**
KBA				⇑*i*Sg	**Sg**	**20 08 27.9**	**-0.8**
	comp=Z,8.5nm,0.8s						
KBA	**Koelnbreinsper**	**4.83**	**203**	Pn	**Pn**	**20 07 08.4**	**+0.9**
KBA				Sg	**Sg**	**20 08 27.9**	**-0.7**
	comp=Z,8.5nm,0.8s						

CSEM 11 20:09:01.4±0.4, 27°.88N×56°.53E, h2km, ML4.0, Error ellipse: s-maj=13.4km s-min=8.5km az=127.0, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.57**	**214**	*e*Pg	Pg	20 09 13.0	+0.7
KRBR	**Kerman**	**2.11**	**6**	*e*Pn	Pn	20 09 39.0	+1.3
KRBR				*e*Sg	Sg	20 10 08.8	-0.4
ZHSF	**Zahedan**	**4.11**	**64**	*e*Pn	Pn	20 10 04.8	-0.5
ZHSF				*e*Sg	Sg	20 11 06.8	-6.8
NASN	**Na'in**	**5.87**	**328**	*e*Pn	Pn	20 10 30.6	+1.2
RDF	**Al-Radifah**	**7.97**	**280**	*e*P	Pn	20 10 58.0	-0.3
NAY	**Al-Naaiem**	**8.28**	**282**	*e*P	Pn	20 11 01.8	-0.7
MIB	**Mutribah**	**8.28**	**286**	*e*P	Pn	20 11 02.0	-0.6

IDC 11 20:11:13.1±42.0, 29°.94S×179°.94W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.9/12, mbtmp4.0/3, Error ellipse: s-maj=751.3km s-min=152.6km az=96.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**32.94**	**257**	P	P	20 17 49.8	+0.3
	0.7nm,0.5s,baz=107,slow=15,SNR=3.9						
ASAR	**Alice Springs**	**41.45**	**267**	P	P	20 19 01.5	-0.3
	1.1nm,0.5s,baz=107,slow=7.3,SNR=32						
WRA	**Warramunga Arr**	**42.40**	**273**	P	P	20 19 09.5	0.0
	1.1nm,0.4s,baz=112,slow=8.0,SNR=24						

*ISCJB **11** 20:15:42.6±1.8, 41°.27N±0°.04×43°.96E±0°.04, h5km±14km, Error ellipse: s-maj=7.5km s-min=3.9km az=146.5*
*CSEM **11** 20:15:42.7±0.1, 41°.26N×43°.94E, h2km, MD3.0, Error ellipse: s-maj=4.7km s-min=2.2km az=150.0*
*TIF **11** 20:15:47.8, 41°.28N×43°.98E, h10km*
*DDA **11** 20:15:47.8, 41°.10N×43°.65E, h9km, Md3.0*

ISC 11 20:15:43.1±0.7, 41°.27N±0°.04×43°.93E±0°.07, h5km±10km, n20, σ0°61/40, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOR	**Gori**	**0.73**	**10**	P	**Pg**	**20 15 56.9**	**-0.2**
GOR				S	**Sg**	**20 16 07.5**	**+1.0**
GOR	**Gori**	**0.73**	**10**	P	**Pg**	**20 15 56.9**	**-0.1**
GOR				S	**Sg**	**20 16 07.5**	**+1.0**
TBLG	**Delisi**	**0.76**	**52**	P	**Pg**	**20 15 57.1**	**-0.6**
TBLG				S	**Sg**	**20 16 07.6**	**+0.1**
TBLG	**Delisi**	**0.76**	**52**	P	**Pg**	**20 15 57.1**	**-0.6**
TBLG				S	**Sg**	**20 16 07.6**	**+0.1**
MTA	**Mtatsminda**	**0.77**	**56**	P	**Pg**	**20 15 57.2**	**-0.7**
MTA				S	**Sg**	**20 16 07.5**	**-0.4**
MTA	**Mtatsminda**	**0.77**	**56**	P	**Pg**	**20 15 57.2**	**-0.7**
MTA				S	**Sg**	**20 16 07.5**	**-0.4**
DIGO	**Kars**	**0.95**	**207**	*i* P	**Pg**	**20 16 00.9**	**-0.4**
DIGO				*i* S	**Sg**	**20 16 13.9**	**+0.2**
DIGO	**Kars**	**0.95**	**207**	*i* P	**Pg**	**20 16 00.9**	**-0.4**
DIGO				*i* S	**Sg**	**20 16 13.9**	**+0.2**
DGRG	**David-gareji**	**1.10**	**80**	P	**Pg**	**20 16 03.4**	**-0.7**
DGRG				S	**Sg**	**20 16 19.9**	**+1.6**
DGRG	**David-gareji**	**1.10**	**80**	P	**Pg**	**20 16 03.4**	**-0.7**
DGRG				S	**Sg**	**20 16 19.9**	**+1.5**
ONI	**Oni**	**1.37**	**345**	P	**Pn**	**20 16 07.9**	**-0.9**
ONI				S	**Sb**	**20 16 26.8**	**-0.1**
ARTV	**Artvin**	**1.52**	**267**	*i* P	**Pn**	**20 16 10.6**	**-0.2**
ARTV				*i* S	**Sn**	**20 16 30.4**	**-0.6**
ARTV	**Artvin**	**1.52**	**267**	*i* P	**Pn**	**20 16 10.6**	**-0.2**
ARTV				*i* S	**Sn**	**20 16 30.4**	**-0.5**
DAGI	**Agillar**	**1.54**	**264**	*i* P	**Pn**	**20 16 11.1**	**0.0**
DAGI				*i* S	**Sn**	**20 16 31.8**	**+0.3**
DDEM	**Demirkent**	**1.69**	**258**	*e*P	**Pn**	**20 16 14.2**	**+1.0**
DDEM				*e*S	**Sn**	**20 16 34.7**	**-0.6**
DDEM	**Demirkent**	**1.69**	**258**	*e*P	**Pn**	**20 16 14.2**	**+0.9**
DDEM				*e*S	**Sn**	**20 16 34.7**	**-0.6**
DBAD	**Bademkaya**	**1.71**	**262**	*i* P	**Pn**	**20 16 13.9**	**+0.4**
DBAD				*i* S	**Sn**	**20 16 36.1**	**+0.3**
DBAD	**Bademkaya**	**1.71**	**262**	*i* P	**Pn**	**20 16 13.9**	**+0.4**
DBAD				*i* S	**Sn**	**20 16 36.1**	**+0.4**
DBOC	**Borcka**	**1.71**	**273**	*i* P	**Pn**	**20 16 13.9**	**+0.4**
DBOC				*i* S	**Sn**	**20 16 35.9**	**+0.2**
DBOC	**Borcka**	**1.71**	**273**	*i* P	**Pn**	**20 16 13.9**	**+0.4**
DBOC				*i* S	**Sn**	**20 16 35.9**	**+0.2**

MAN 11 20:17:50, 6°.59N×124°.64E, h62km, mb4.5, ML3.3, MS3.2, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**0.61**	**47**	⇊*e*P	Pn	20 18 05.1	+1.8
KCP				*i* S	Sn	20 18 17.0	+4.0
DMPH	**Davao City--Mi**	**0.99**	**60**	⇊*i*P	Pn	20 18 08.6	+0.7
BUKP	**Musuan**	**1.34**	**18**	*e*P	Pn	20 18 14.7	+2.0
BUKP				*e*S	Sn	20 18 30.9	+1.2
PAGZ	**Pagadian**	**1.77**	**315**	*e*P	Pn	20 18 19.6	+1.3
IPIL	**Ipil**	**2.37**	**300**	*e*P	Pn	20 18 28.0	+1.4
IPIL				*e*S	Sn	20 18 50.8	-3.9

IDC 11 20:18:54.1±31.0, 20°.92S×177°.52W, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.8/14, mbtmp3.9/4, Error ellipse: s-maj=601.4km s-min=155.0km az=90.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.01**	**245**	P	P	20 26 14.4	+0.4
	2.5nm,0.8s,baz=73,slow=11,SNR=3.6						
ASAR	**Alice Springs**	**44.86**	**257**	P	P	20 27 10.2	-0.2
	0.7nm,0.4s,baz=97,slow=7.3,SNR=16						
WRA	**Warramunga Arr**	**44.99**	**262**	P	P	20 27 11.3	-0.1
	0.4nm,0.3s,baz=100,slow=8.5,SNR=42						
FITZ	**Fitzroy Crossi**	**53.42**	**263**	P	P	20 28 15.9	-0.2
	2.4nm,1.1s,baz=78,slow=9.2,SNR=4.4						

*CSEM **11** 20:19:34.7±0.1, 35°.93N×35°.80E, h10km, MD3.4, Error ellipse: s-maj=2.7km s-min=2.4km az=64.0*
*ISK **11** 20:19:34.0, 35°.89N×35°.82E, h15km, MD3.4*
*ISCJB **11** 20:19:35.2±1.1, 35°.92N±0°.02×35°.81E±0°.03, h15km±8km, Error ellipse: s-maj=4.7km s-min=3.9km az=157.1*
*DDA **11** 20:19:35.3, 36°.00N×35°.88E, h24km±2km, MD3.4*
*NSSC **11** 20:19:37, 35°.88N×36°.04E, h27km±3km*

ISC 11 20:19:34.9±0.5, 35°.92N±0°.02×35°.82E±0°.04, h13km±4km, n50, σ0°81/73, 10D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YAYL	**Yayladag**	**0.26**	**63**	*i* P	**Pg**	**20 19 40.3**	**0.0**
YAYL				*i* S	**Sg**	**20 19 44.7**	**+0.7**
YAYL	**Yayladag**	**0.26**	**63**	*i* P	**Pg**	**20 19 40.3**	**0.0**
YAYL				*i* S	**Sg**	**20 19 44.7**	**+0.7**
SLNF	**Slenfeh**	**0.46**	**134**	⇑P	**Pg**	**20 19 45.0**	**+1.1**
SLNF				⇑S	**Sg**	**20 19 50.0**	**-0.1**
SLNF	**Slenfeh**	**0.46**	**134**	⇑*i*P	**Pg**	**20 19 45.1**	**+1.2**
SLNF				⇑*i*S	**Sg**	**20 19 50.8**	**+0.7**
BTCH	**Batrach**	**0.53**	**77**	⇊P	**Pg**	**20 19 46.0**	**+0.7**
BTCH				⇊S	**Sg**	**20 19 53.0**	**+0.6**
BTCH	**Batrach**	**0.53**	**77**	⇊*i*P	**Pg**	**20 19 46.0**	**+0.7**
BTCH				⇊*i*S	**Sg**	**20 19 53.0**	**+0.6**
WRDH	**Warideh**	**0.63**	**130**	⇑P	**Pg**	**20 19 47.0**	**-0.2**
WRDH				⇑S	**Sg**	**20 19 54.0**	**-1.5**
WRDH	**Warideh**	**0.63**	**130**	⇑*i*P	**Pg**	**20 19 47.7**	**+0.5**
WRDH				⇑*i*S	**Sg**	**20 19 54.5**	**-1.0**
COBT	**Iskenderun**	**0.70**	**30**	*i* P	**Pg**	**20 19 48.6**	**+0.1**
COBT				*i* S	**Sg**	**20 19 55.3**	**-2.3**
COBT	**Iskenderun**	**0.70**	**30**	*i* P	**Pg**	**20 19 48.6**	**+0.2**
COBT				*i* S	**Sg**	**20 19 55.3**	**-2.3**
KRTS	**Karatas**	**0.75**	**331**	*e*PG	**Pg**	**20 19 49.5**	**+0.1**
KRTS	**Karatas**	**0.75**	**331**	*e*Pg	**Pg**	**20 19 49.5**	**+0.1**
YURE	**YUREGIR**	**0.92**	**351**	*e*P	**Pg**	**20 19 52.7**	**0.0**
YURE				*e*S	**Sg**	**20 20 08.1**	**+3.5**
YURE	**YUREGIR**	**0.92**	**351**	*e*P	**Pg**	**20 19 52.7**	**+0.1**
DRWC	**Darouich**	**0.98**	**44**	⇊P	**Pb**	**20 19 53.0**	**-0.8**
DRWC				⇊S	**Sg**	**20 20 06.0**	**-0.6**
DRWC	**Darouich**	**0.98**	**44**	⇊*i*P	**Pb**	**20 19 53.6**	**-0.2**
DRWC				⇊*i*S	**Sg**	**20 20 06.5**	**-0.1**
BIDA	**Albida**	**0.99**	**155**	⇊P	**Pb**	**20 19 53.0**	**-0.9**
BIDA				⇑S	**Sg**	**20 20 05.0**	**-1.9**
BIDA	**Albida**	**0.99**	**155**	⇊*i*P	**Pb**	**20 19 53.2**	**-0.7**
BIDA				⇑*i*S	**Sg**	**20 20 05.9**	**-1.0**
CEYT	**Ceyhan**	**1.09**	**357**	*e*PN	**Pn**	**20 19 55.8**	**-0.1**
CEYT				*e*SN	**Sn**	**20 20 11.6**	**+0.7**
CEYT	**Ceyhan**	**1.09**	**357**	*e*Pn	**Pn**	**20 19 55.8**	**-0.1**
CEYT				*e*Sn	**Sn**	**20 20 11.6**	**+0.7**
KUZU	**Kuzuini**	**1.33**	**50**	*i* P	**Pn**	**20 19 59.1**	**0.0**
KUZU				*i* S	**Sb**	**20 20 16.4**	**-0.1**
KUZU	**Kuzuini**	**1.33**	**50**	*i* P	**Pn**	**20 19 59.1**	**0.0**
KUZU				*i* S	**Sb**	**20 20 16.5**	**-0.1**
EREN	**Erenkoy**	**1.40**	**254**	*e*PN	**Pn**	**20 19 59.6**	**-0.5**
EREN	**Erenkoy**	**1.40**	**254**	*e*Pn	**Pn**	**20 19 59.6**	**-0.5**
MERS	**Mersin**	**1.41**	**313**	*e*PN	**Pn**	**20 20 00.2**	**-0.1**
MERS	**Mersin**	**1.41**	**313**	*e*Pn	**Pn**	**20 20 00.2**	**-0.1**
KARA	**Karaisali**	**1.48**	**336**	*e*PN	**Pn**	**20 20 01.1**	**-0.1**
KARA	**Karaisali**	**1.48**	**336**	*e*Pn	**Pn**	**20 20 01.1**	**-0.1**
KOZT	**Kozan**	**1.56**	**0**	*e*PN	**Pn**	**20 20 02.1**	**-0.3**
GULE	**Gulek**	**1.60**	**329**	*i* P	**Pn**	**20 20 04.1**	**+1.1**
GULE				*i* S	**Sn**	**20 20 22.0**	**-1.5**
GULE	**Gulek**	**1.60**	**329**	*i* P	**Pn**	**20 20 04.1**	**+1.2**
GULE				*i* S	**Sn**	**20 20 22.0**	**-1.5**
HWQ	**Hawqa**	**1.64**	**176**	*e*P	**Pn**	**20 20 04.3**	**+0.8**
HWQ	**Hawqa**	**1.64**	**176**	*e*P	**Pn**	**20 20 04.3**	**+0.9**
GAZ	**Gaziantep**	**1.68**	**41**	*e*PN	**Pn**	**20 20 04.0**	**0.0**
GAZ	**Gaziantep**	**1.68**	**41**	*e*Pn	**Pn**	**20 20 04.1**	**+0.1**
IKL	**Isikli**	**1.76**	**281**	*e*PN	**Pn**	**20 20 04.5**	**-0.6**
IKL	**Isikli**	**1.76**	**281**	*e*Pn	**Pn**	**20 20 04.5**	**-0.6**
KMRS	**Kahramanmaras**	**1.81**	**28**	*e*PN	**Pn**	**20 20 05.8**	**+0.1**
KMRS	**Kahramanmaras**	**1.81**	**28**	*e*Pn	**Pn**	**20 20 05.8**	**0.0**
LFK	**Lefkose**	**1.97**	**252**	*e*PN	**Pn**	**20 20 07.8**	**-0.1**
LFK	**Lefkose**	**1.97**	**252**	*e*Pn	**Pn**	**20 20 07.8**	**-0.2**
GZT	**Gaziantep**	**2.01**	**44**	*i* P	**Pn**	**20 20 13.0**	**+4.5**
BHL	**Bhannes**	**2.01**	**184**	*e*P	**Pn**	**20 20 09.8**	**+1.2**
BHL	**Bhannes**	**2.01**	**184**	*e*P	**Pn**	**20 20 09.8**	**+1.2**
SARI	**SarD1z-Kayseri**	**2.84**	**14**	*e*PN	**Pn**	**20 20 16.1**	**-3.9**
SARI	**SarD1z-Kayseri**	**2.84**	**14**	*e*Pn	**Pn**	**20 20 16.1**	**-3.9**
HDMB	**Hadim**	**2.88**	**292**	*e*PN	**Pn**	**20 20 20.9**	**+0.4**
HDMB	**Hadim**	**2.88**	**292**	*e*Pn	**Pn**	**20 20 20.9**	**+0.3**
AKCD	**Akcadag**	**2.91**	**35**	*i* P	**Pn**	**20 20 21.9**	**+1.0**
AKCD				*i* S	**Sn**	**20 20 55.5**	**-0.2**
AKCD	**Akcadag**	**2.91**	**35**	*i* P	**Pn**	**20 20 21.9**	**+1.0**
AKCD				*i* S	**Sn**	**20 20 55.5**	**-0.2**

IDC 11 20:20:45.7±3.6, 16°.75S×176°.87W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.9/14, mbtmp4.1/3, Error ellipse: s-maj=163.6km s-min=48.8km az=142.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.48**	**240**	P	P	20 28 26.6	+0.2
	2.9nm,0.8s,baz=80,slow=11,SNR=7.1						
WRA	**Warramunga Arr**	**46.30**	**258**	P	P	20 29 13.8	+0.2
	0.6nm,0.5s,baz=94,slow=7.8,SNR=20						
ASAR	**Alice Springs**	**46.53**	**253**	P	P	20 29 14.8	-0.5
	3.8nm,0.5s,baz=88,slow=9.1,SNR=81						
BRTR	**Keskin Array B**	**144.98**	**317**	PKP	PKPdf	20 40 24.5	-0.8
	0.4nm,0.6s,baz=38,slow=3.6,SNR=3.7						
MMAI	**Mount Meron Ar**	**146.72**	**305**	PKPbc	PKPbc	20 40 29.5	-0.6
	0

comp=Z,0.4nm,0.4s,mb3.1,baz=67,slow=8.8,SNR=4.5
MBWA Marble Bar 47.10 214 *e*P **P 20 38 41.9 -1.5**
comp=Z,4.7nm,0.5s,mb4.1
PSI Prapat 48.23 256 P **P 20 38 53.5 +1.3**
comp=Z,3.4nm,0.7s,mb3.8,baz=90,slow=7.1,SNR=3.7
STKA Stephens Creek 50.61 184 P **P 20 39 07.9 -1.8**
comp=Z,1.8nm,0.9s,mb3.5,baz=349,slow=9.6,SNR=4.1
MKAR Makanchi Array 58.18 314 P **P 20 40 04.2 +0.1**
comp=Z,0.2nm,0.6s,mb3.0,baz=92,slow=8.5,SNR=3.9
BVAR Borovoye Array 66.19 320 P **P 20 40 56.8 -0.3**
comp=Z,0.6nm,0.5s,mb3.5,baz=89,slow=7.4,SNR=7.3
INK Inuvik 69.29 23 P **P 20 41 16.2 0.0**
comp=Z,1.5nm,0.6s,mb3.8,baz=211,slow=5.9,SNR=3.0
NVAR Mina Array Bea 83.20 52 P **P 20 42 35.8 +0.8**
comp=Z,0.3nm,0.3s,mb3.4,baz=266,slow=4.5,SNR=3.7
FINES FINESS Array B 86.62 335 P **P 20 42 49.6 -2.0**
comp=Z,2.4nm,1.1s,mb3.9,baz=56,slow=5.2,SNR=6.8
TXAR Lajitas Array 97.91 55 P **P 20 43 45.5 +1.1**
comp=Z,0.4nm,0.9s,mb3.8,baz=250,slow=4.7,SNR=3.6
TXAR Lajitas Array 97.91 55 P **P 20 43 45.5 +1.1**
LPAZ La Paz 147.90 91 PKPbc PKPbc 20 49 52.7 -0.6
comp=Z,0.5nm,0.5s,baz=292,slow=5.7,SNR=3.2
LPAZ La Paz 147.90 91 PKPbc PKPbc 20 49 52.7 -0.6

*ISCJB **11** 20:39:21.6±1.4, 48.°8N±0.°1×154.°7E±0.°1, h71km±13km, mb3.8/8, Error ellipse: s-maj=23.4km s-min=9.3km az=144.3*
*MOS **11** 20:39:21.6±1.6, 48.°68N×154.°71E, h80km, mb4.1/1, Error ellipse: s-maj=31.6km s-min=14.3km az=58.9*
*IDC **11** 20:39:23.1±5.2, 48.°59N×154.°75E, h70km±47km, mb3.3/6, mb1 3.7/7, mb1mx3.3/24, mbtmp3.4/7, ML4.0/1, Error ellipse: s-maj=38.1km s-min=23.8km az=148.0*
*NEIC **11** 20:39:23.9±1.7, 48.°64N×154.°72E, h78km±16km, mb4.9/1, Error ellipse: s-maj=28.4km s-min=10.1km az=150.0*
ISC 11 20:39:23.4±1.2, 48.°8N±0.°1×154.°7E±0.°1, h72km±11km, n14, σ0.95/17, mb3.8/8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.11**	**26**	*e*PN	**Pn**	**20 39 56.5**	**0.0**
SKR				*e*S	**Sn**	**20 40 21.1**	**-0.7**
SKR	comp=Z,40nm,0.5s			pmax	pmax		
SKR	comp=N,230nm,0.5s			smax			
SKR	comp=E,150nm,0.5s			smax			
SKR	comp=Z,50nm,0.5s			smax			
PET	**Petropavlovsk**	**4.93**	**29**	*e*PN	**Pn**	**20 40 36.6**	**+1.8**
PET				*e*S	**Sn**	**20 41 29.3**	**-1.1**
PET	comp=E,52nm,0.7s			smax			
PET	comp=N,33nm,1.4s			smax			
YSS	**Yuzh-Sakhalins**	**8.23**	**262**	*e*PN	**Pn**	**20 41 20.7**	**+0.8**
ASAJ	**Asahikawa**	**9.56**	**245**	P	**Pn**	**20 41 37.3**	**-0.8**
ASAJ	comp=N,1.5nm,0.3s,baz=69,slow=11,SNR=17			PN	**Pn**	**20 41 37.3**	**-0.8**
ASAJ	comp=Z,2.0nm,0.3s			pmax	pmax		
NIKO	**Nikolski**	**23.22**	**66**	P	**P**	**20 44 24.3**	**+0.4**
HHC	comp=Z,52nm,1.1s,mb4.8 **Hu-ho-hao-te**	**31.25**	**272**	*e*P	**P**	**20 45 36.7**	**+0.7**
HHC				S	**S**	**20 50 36.2**	**-0.9**
HHC	comp=Z,10.0nm,0.6s,mb4.7			pmax	pmax		
HHC	comp=Z,120nm,6.4s			pmax	pmax		
MKAR	**Makanchi Array**	**46.96**	**296**	P	**P**	**20 47 46.6**	**-0.1**
CMAR	comp=Z,0.4nm,0.7s,mb3.3,baz=70,slow=5.3,SNR=5.0 **Chiang Mai Arr**	**53.88**	**256**	P	**P**	**20 48 39.8**	**+0.6**
PDAR	comp=Z,1.3nm,0.7s,mb4.1,baz=35,slow=7.3,SNR=14 **Pinedale Array**	**62.71**	**56**	P	**P**	**20 49 41.7**	**+1.3**
WRA	comp=Z,0.1nm,0.3s,mb3.2,baz=347,slow=3.7,SNR=3.9 **Warramunga Arr**	**70.79**	**200**	P	**P**	**20 50 29.9**	**-2.0**
WRA	comp=Z,0.6nm,0.9s,mb3.4,baz=18,slow=6.2,SNR=4.0 **Warramunga Arr**	**70.79**	**200**	P	**P**	**20 50 29.9**	**-2.0**
WRA	comp=Z,1.0nm,0.1s			pmax	pmax		
ASAR	**Alice Springs**	**74.48**	**200**	P	**P**	**20 50 53.1**	**-0.7**
TXAR	comp=Z,0.4nm,0.6s,mb3.3,baz=14,slow=4.9,SNR=4.0 **Lajitas Array**	**75.58**	**62**	P	**P**	**20 51 00.5**	**+0.2**
TXAR	comp=Z,0.2nm,0.6s,baz=295,slow=4.3,SNR=5.3			pP	pP	20 51 16.0	-3.6
	comp=Z,0.2nm,0.6s,baz=298,slow=4.6,SNR=3.8						

*NEIC **11** 21:11:26.3±1.7, 69.°39N×53.°31W, h10km, ML4.1(OTT), Error ellipse: s-maj=29.8km s-min=9.3km az=159.0*
OTT 11 21:11:30.3±0.4, 69.°43N×53.°66W, h18km, ML4.0/7, Greenland west coast. 472km northeast from Qikiqtarjuaq, Nu Eastern Arctic Background Seismic Zone., Western Kalaallit Nunaat

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUMG	**Summit**	**5.87**	**51**	*e*Pn	Pn	21 12 52.7	-3.6
SUMG				*e*Sn	Sn	21 13 54.1	-8.9
SUMG				*e*Sg	Sg	21 14 23.3	-15
GIFN	**Gifford Fjord,**	**9.69**	**286**	Pn	Pn	21 13 47.6	-0.9
GIFN				Sn	Sn	21 15 29.9	-6.8
GIFN	**Gifford Fjord,**	**9.69**	**286**	PN	Pn	21 13 47.6	-0.9
GIFN				SN	Sn	21 15 29.9	-6.8
GIFN	comp=Z,4.6nm,0.5s			Trac		21 15 31.7	
LAIN	**Lailor River,**	**10.54**	**282**	Pn	Pn	21 13 58.4	-1.7
LAIN				Sn	Sn	21 15 48.8	-8.6
LAIN	**Lailor River,**	**10.54**	**282**	PN	Pn	21 13 58.4	-1.7
LAIN				SN	Sn	21 15 48.8	-8.6
LAIN	comp=Z,3.6nm,0.2s			Trac		21 15 56.0	
SRLN	**Sarcpa Lake, N**	**10.63**	**279**	Pn	Pn	21 13 60.0	-1.4
SRLN				Sn	Sn	21 15 51.4	-8.3
SRLN	**Sarcpa Lake, N**	**10.63**	**279**	PN	Pn	21 13 60.0	-1.4
SRLN				SN	Sn	21 15 51.4	-8.3
SRLN	comp=Z,2.6nm,0.4s			Trac		21 15 54.4	
AP3N	**Apex site 3 Nu**	**10.76**	**285**	Pn	Pn	21 14 02.9	-0.4
AP3N				Sn	Sn	21 15 55.5	-7.5
AP3N	**Apex site 3 Nu**	**10.76**	**285**	PN	Pn	21 14 02.9	-0.4
AP3N				SN	Sn	21 15 55.5	-7.5
AP3N	comp=Z,3.9nm,0.3s			Trac		21 15 59.7	
IVKQ	**Ivujivik**	**12.06**	**246**	PN	Pn	21 14 21.8	+0.8
IVKQ				SN	Sn	21 16 25.0	-10
IVKQ	comp=Z,8.8nm,0.3s			Trac		21 16 31.1	
QILN	**Qililugaq Expl**	**12.45**	**273**	Pn	Pn	21 14 25.0	-1.3
QILN				Sn	Sn	21 16 34.5	-10
QILN	**Qililugaq Expl**	**12.45**	**273**	PN	Pn	21 14 25.0	-1.3
QILN				SN	Sn	21 16 34.5	-10
QILN	comp=Z,4.5nm,0.3s			Trac		21 16 41.4	
AKVQ	**Akulivik**	**13.35**	**242**	SN	Sn	21 16 58.8	-7.5
EUNU	**Eureka**	**13.37**	**336**	Pn	Pn	21 14 36.7	-2.1
EUNU				Sn	Sn	21 16 52.7	-14
EUNU	**Eureka**	**13.37**	**336**	PN	Pn	21 14 36.7	-2.1
EUNU				SN	Sn	21 16 52.7	-14
NUNN	**Nunuq Camp, NU**	**14.85**	**272**	Pn	Pn	21 14 57.1	-1.9
NUNN				Sn	Sn	21 17 32.9	-10
NUNN	**Nunuq Camp, NU**	**14.85**	**272**	PN	Pn	21 14 57.1	-1.9
NUNN				SN	Sn	21 17 32.9	-10
NUNN	comp=Z,5.6nm,0.8s			Trac		21 17 48.9	
SEDN	**First Sedna Si**	**16.05**	**266**	PN	Pn	21 15 14.1	-0.7
SEDN				SN	Sn	21 17 59.0	-13
SEDN				Trac		21 18 06.2	
	comp=Z,6.1nm,0.6s						

*IDC **11** 21:14:51.0±2.7, 43.°02S×74.°22W, h0km, mb4.1/2, mb1 4.2/3, mb1mx3.9/14, mbtmp4.0/3, ML4.1/1, MS3.3/2, Ms1 3.3/2, ms1mx2.6/29, Error ellipse: s-maj=81.5km s-min=24.5km az=128.0*
*GUC **11** 21:14:56.4±0.5, 43.°05S×71.°42W, h4km±999km, ML3.8*
ISC 11 21:14:54.4±3.9, 43.°1S±0.°2×73.°5W±0.°7, h0km±15km, n7, σ1.9/13/9, mb4.2/2, 1D, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILCA	**Isla Las Cabra**	**1.27**	**33**	⇓*i*P	**Pn**	**21 15 19.7**	**+0.5**
ILCA				*e*S	**Sb**	**21 15 37.5**	**+1.6**
ILCA	comp=N,2μm,0.4s			AML	AML	21 15 41.0	
HOCH	**HornopirØn**	**1.45**	**33**	*e*S	**Sn**	**21 15 40.7**	**-0.7**
HOCH				AML	AML	21 15 49.9	
PUEL	comp=E,5μm,0.5s **Puelo Alto**	**1.70**	**31**	*e*P	**Pn**	**21 15 24.8**	**-0.5**
PUEL				*i* S	**Sn**	**21 15 46.4**	**-1.3**
PUEL	comp=N,4μm,0.6s			AML	AML	21 15 55.8	
PLCA	**Paso Flores**	**3.23**	**43**	Pn	**Pn**	**21 15 48.6**	**+2.3**
PLCA	comp=N,3.4nm,0.3s,baz=230,slow=13,SNR=24			Pg	**Pg**	**21 15 54.9**	**-1.5**
PLCA	comp=N,9.2nm,0.3s,baz=235,slow=16,SNR=41			Lg		21 16 44.5	
PLCA	comp=N,7.6nm,0.3s,baz=125,slow=21,SNR=3.8			LR	LR	21 17 10.6	
CPUP	comp=N,325nm,18.1s,baz=200,slow=39 **Villa Florida**	**21.30**	**43**	P	**P**	**21 19 42.5**	**-0.1**
CPUP	comp=N,2.1nm,0.4s,mb3.8,baz=211,slow=9.5,SNR=15			LR	LR	21 28 49.0	
BOSA	comp=N,100nm,18.9s,baz=278,slow=39 **Boshof**	**76.89**	**117**	P	**P**	**21 26 48.1**	**-0.3**
MKAR	comp=N,3.2nm,0.8s,mb4.5,baz=217,slow=5.1,SNR=4.4 **Makanchi Array**	**162.47**	**70**	PKPab	PKPab	21 35 44.0	-1.4
	comp=N,0.6nm,0.7s,baz=270,slow=3.6,SNR=6.9						

IDC 11 21:24:40.2±52.0, 19.°11S×176.°60W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/14, mbtmp3.9/3, MS3.3/1, Ms1 3.3/1, ms1mx2.6/34, Error ellipse: s-maj=965.9km s-min=169.6km az=81.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.93**	**43**	LR	LR	21 28 14.8	
	comp=Z,284nm,21.5s,baz=148,slow=31						
STKA	**Stephens Creek**	**39.59**	**243**	P	P	21 32 13.3	-0.2
	4.6nm,1.1s,baz=79,slow=10,SNR=1.7						
WRA	**Warramunga Arr**	**46.12**	**260**	P	P	21 33 06.7	+0.1
	0.3nm,0.3s,baz=96,slow=7.3,SNR=23						
ASAR	**Alice Springs**	**46.14**	**255**	P	P	21 33 06.6	-0.1
	0.8nm,0.5s,baz=95,slow=7.9,SNR=15						

*ISCJB **11** 21:29:36.9±0.3, 23.°87N±0.°02×121.°71E±0.°02, h32km±2km, Error ellipse: s-maj=3.1km s-min=2.1km az=41.8*
*TAP **11** 21:29:36.9, 23.°91N×121.°62E, h41km, ML3.3, C*
*JMA **11** 21:29:37.1±0.3, 23.°95N×121.°71E, h73km, M2.7*
ISC 11 21:29:37.4±0.3, 23.°88N±0.°02×121.°68E±0.°02, h33km±2km, n54, σ0.89/100, 3C-1D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.12**	**323**	*i* P	**Pb**	**21 29 43.9**	**+0.6**
HWA	baz=348			*e*S	**Sb**	**21 29 48.3**	**+1.1**
ESF	**Shoufeng Towns**	**0.16**	**266**	*e*P	**Pb**	**21 29 44.1**	**+0.5**
TWD	baz=265 **Chiawan**	**0.21**	**338**	*i* P	**Pb**	**21 29 44.0**	**-0.1**
TWD	baz=343			S	**Sb**	**21 29 49.4**	**+0.7**
TEGC	**Jichi Village**	**0.22**	**217**	*e*P	**Pb**	**21 29 44.9**	**+0.7**
TEGC	baz=196			*e*S	**Sb**	**21 29 50.7**	**+1.9**
ESL	**Shilin**	**0.24**	**253**	P	**Pb**	**21 29 44.2**	**-0.2**
ESL	baz=251			*e*S	**Sb**	**21 29 49.0**	**-0.1**
WHF	baz=251 **Hehuan Shan**	**0.46**	**304**	⇑*i*P	**Pb**	**21 29 46.8**	**-0.6**
WHF	baz=302			*i* S	**Sb**	**21 29 53.9**	**-0.4**
EHY	**Hungye**	**0.50**	**221**	*e*P	**Pb**	**21 29 46.5**	**-1.5**
EHY	baz=223			*e*S	**Sb**	**21 29 53.6**	**-1.6**
ENA	**Nanau**	**0.55**	**6**	⇑*i*P	**Pb**	**21 29 48.1**	**-0.7**
ENA	baz=2.0			S	**Sb**	**21 29 57.1**	**+0.6**
TWT	**Tachien**	**0.59**	**309**	*i* P	**Pb**	**21 29 49.0**	**-0.5**
TWT	baz=309			S	**Sb**	**21 29 57.1**	**-0.6**
NNS	**Nan Shan**	**0.62**	**333**	P	**Pn**	**21 29 49.0**	**-0.9**
NNS	baz=336			S	**Sb**	**21 29 57.9**	**-0.7**
TWF1	**Yuli**	**0.64**	**214**	P	**Pn**	**21 29 48.3**	**-1.8**
TWF1	baz=219			*e*S	**Sb**	**21 29 56.9**	**-1.9**
SMLT	**Sun Moon Lake**	**0.71**	**270**	*i* P	**Pn**	**21 29 50.4**	**-0.8**
SMLT	baz=268			*i* S	**Sn**	**21 29 59.9**	**-1.3**
TWC	**Suao**	**0.74**	**12**	*i* P	**Pn**	**21 29 51.3**	**-0.3**
TWC	baz=23			*e*S	**Sn**	**21 30 02.1**	**+0.4**
YUS	**Yu-Shan**	**0.78**	**240**	⇓*i*P	**Pn**	**21 29 51.8**	**-0.3**
YUS	baz=231			*i* S	**Sn**	**21 30 01.6**	**-1.0**
TWE	**Neicheng**	**0.83**	**359**	P	**Pn**	**21 29 52.0**	**-0.9**
TWE	baz=355			*e*S	**Sn**	**21 30 04.1**	**0.0**
NSK	**Sanguang**	**0.84**	**340**	⇑*i*P	**Pn**	**21 29 52.3**	**-0.7**
NSK	baz=341			S	**Sn**	**21 30 03.2**	**-1.1**
ALS	**Alishan**	**0.89**	**245**	*i* P	**Pn**	**21 29 53.3**	**-0.3**
ALS	baz=237			S	**Sn**	**21 30 05.2**	**-0.1**
WNT	**Mingjian**	**0.91**	**270**	P	**Pn**	**21 29 54.4**	**+0.5**
WNT	baz=269			*e*S	**Sn**	**21 30 04.3**	**-1.7**
ELDTW	**Lidau**	**0.92**	**222**	*e*P	**Pn**	**21 29 52.5**	**-1.6**
ELDTW	baz=219			*e*S	**Sn**	**21 30 04.8**	**-1.4**
TWQ1	**Liyutan**	**0.95**	**299**	P	**Pn**	**21 29 54.8**	**+0.3**
TWQ1	baz=299			S	**Sn**	**21 30 07.1**	**+0.2**
TCU	**Taichung**	**0.96**	**286**	*i* P	**Pn**	**21 29 55.0**	**+0.5**
TCU	baz=286			S	**Sn**	**21 30 08.1**	**+1.1**
CHN5	**Tsauling**	**0.96**	**253**	*i* P	**Pn**	**21 29 54.5**	**-0.2**
CHN5	baz=252			*i* S	**Sn**	**21 30 07.4**	**+0.2**
NSTT	**Nanjuang**	**0.97**	**320**	*i* P	**Pn**	**21 29 55.1**	**+0.4**
NSTT	baz=310			S	**Sn**	**21 30 07.4**	**0.0**
NSY	**Sanyi**	**0.99**	**302**	P	**Pn**	**21 29 55.3**	**+0.2**
NSY	baz=303			*e*S	**Sn**	**21 30 08.8**	**+0.8**
TWA	**Mucha**	**1.10**	**355**	*e*P	**Pn**	**21 29 57.3**	**+0.8**
STYT	baz=357 **Tauyuan**	**1.11**	**230**	P	**Pn**	**21 29 56.4**	**-0.3**
STYT	baz=226			S	**Sn**	**21 30 10.7**	**-0.1**
CHN4	**Tsaushan**	**1.13**	**242**	P	**Pn**	**21 29 57.5**	**+0.6**
CHN4	baz=241			S	**Sn**	**21 30 12.7**	**+1.3**
TWB1	**Santiao Chiao**	**1.15**	**14**	P	**Pn**	**21 29 58.3**	**+1.0**
TWB1	baz=27			*e*S	**Sn**	**21 30 12.4**	**+0.4**
TAP1	**Taipei**	**1.16**	**353**	*e*P	**Pn**	**21 29 57.7**	**+0.3**
TAP1	baz=352			S	**Sn**	**21 30 12.7**	**+0.6**
WTP	**Ta-pu**	**1.17**	**237**	*i* P	**Pn**	**21 29 57.6**	**+0.1**
WTP	baz=236			*i* S	**Sn**	**21 30 12.9**	**+0.6**
NCU	**National Centr**	**1.17**	**337**	*e*P	**Pn**	**21 29 58.2**	**+0.4**
NWF	baz=337 **Wu-fen Shan**	**1.19**	**4**	*e*P	**Pn**	**21 29 58.2**	**+0.4**
NWF	baz=349			*e*S	**Sn**	**21 30 12.9**	**+0.1**
TWG	baz=349 **Pinlang**	**1.20**	**208**	*e*P	**Pn**	**21 29 57.7**	**-0.2**
TWG	baz=196			*e*S	**Sn**	**21 30 10.3**	**-2.7**
TTN	**Taitung**	**1.23**	**204**	*e*P	**Pn**	**21 29 59.3**	**+1.0**
TTN	baz=203			*e*S	**Sn**	**21 30 14.4**	**+0.7**
TWS1	**Kuangyinshan**	**1.24**	**349**	*e*P	**Pn**	**21 29 59.1**	**+0.7**
TWS1	baz=358			*e*S	**Sn**	**21 30 14.2**	**+0.2**
TWK	**Hsinying**	**1.25**	**241**	P	**Pn**	**21 29 59.0**	**+0.3**
TWK	baz=240			*e*S	**Sn**	**21 30 14.9**	**+0.4**
CHN1	baz=240 **Nanshi**	**1.27**	**237**	P	**Pn**	**21 29 59.7**	**+0.9**
CHN1	baz=237			S	**Sn**	**21 30 15.8**	**+1.1**
WTCT	**Ta-ch'eng**	**1.28**	**269**	*e*P	**Pn**	**21 29 59.2**	**+0.2**
SGST	baz=268 **Jiashian**	**1.29**	**232**	P	**Pn**	**21 29 59.7**	**+0.6**
SGST	baz=231			S	**Sn**	**21 30 16.3**	**+1.1**
YOJ	**Yonaguni jima**	**1.34**	**64**	P	**Pn**	**21 29 59.7**	**-0.2**
YOJ				S	**Sn**	**21 30 16.3**	**-0.3**
CHN3	**Shinhua**	**1.45**	**237**	*e*P	**Pn**	**21 30 03.7**	**+2.3**
CHN3	baz=237			*e*S	**Sn**	**21 30 22.7**	**+3.4**
CHN8	baz=237 **Yiju**	**1.45**	**249**	*e*P	**Pn**	**21 29 59.9**	**-1.5**
CHN8	baz=248			*e*S	**Sn**	**21 30 19.9**	**+0.7**
SSD	baz=248 **Sandimen**	**1.49**	**221**	*i* P	**Pn**	**21 30 02.9**	**+1.0**
SSD	baz=221			*i* S	**Sn**	**21 30 21.1**	**+0.9**
EAST	**Anshuo**	**1.68**	**207**	*e*P	**Pn**	**21 30 04.3**	**-0.2**
SCZT	baz=201 **Fangliau**	**1.79**	**213**	*e*P	**Pn**	**21 30 07.5**	**+1.4**
SCZT	baz=203			*e*S	**Sn**	**21 30 29.6**	**+1.9**
LAY	**Lan-yu**	**1.84**	**184**	*e*P	**Pn**	**21 30 05.5**	**-1.2**
IRIF	baz=177 **Iriomote-Funau**	**1.93**	**76**	P	**Pn**	**21 30 07.7**	**-0.2**
IRIF				S	**Sn**	**21 30 31.1**	**+0.1**
HATJ	**Hateruma jima**	**1.95**	**84**	P	**Pn**	**21 30 07.9**	**-0.3**
HATJ				S	**Sn**	**21 30 31.6**	**0.0**
PNG	**Penghu**	**1.97**	**261**	P	**Pn**	**21 30 07.8**	**-0.7**
PNG	baz=261			S	**Sn**	**21 30 30.7**	**-1.5**
TWK1	**Hengchun**	**2.09**	**203**	*e*P	**Pn**	**21 30 10.7**	**+0.4**
JKRS	baz=194 **Kuro-shima**	**2.16**	**80**	P	**Pn**	**21 30 11.4**	**+0.3**
JKRS				S	**Sn**	**21 30 37.3**	**+0.6**
JIJ	**Ishigaki jima**	**2.30**	**78**	P	**Pn**	**21 30 12.5**	**-0.5**
JIJ				S	**Sn**	**21 30 38.2**	**-2.0**
JTJ	**Tarama**	**2.86**	**74**	P	**Pn**	**21 30 20.4**	**-0.3**
JTJ				S	**Sn**	**21 30 54.0**	**0.0**
JOGS	**Gusukube**	**3.51**	**75**	*e*S	**Sn**	**21 31 10.8**	**+0.7**

*NIED **11** 21:35:00, 21.°00N×121.°30E, h14km, Mw5.4 Best double couple: M0=1.39000×10^17 NP1:φs=252.00000°, δ80.00000°, λ-154.00000°. NP2:φs=157.00000°, δ64.00000°, λ-11.00000°.*
*IDC **11** 21:35:05.0±0.4, 21.°02N×121.°16E, h0km, mb4.8/30, mb1 4.9/30, mb1mx4.8/34, mbtmp4.8/30, MS4.9/19, Ms1 4.9/19, ms1mx4.7/27, Error ellipse: s-maj=14.0km s-min=10.2km az=64.0*
*JMA **11** 21:35:05.4±0.5, 21.°01N×121.°28E, h0km, M5.4*
*ISCJB **11** 21:35:05.8±0.4, 21.°07N±0.°01×121.°14E±0.°02, h9km±2km, mb5.2/220, MS5.2/237, Error ellipse: s-maj=2.8km s-min=1.7km az=6.4*
*NEIC **11** 21:35:06.5±0.2, 21.°02N×121.°13E, h6km, mb5.3/114, MS5.1/185, MW5.5, Error ellipse: s-maj=4.9km s-min=4.2km az=79.0, Moment Tensor Solution. s41 Moment tensor: Scale 10^17Nm; Mrr=0.14; Mθθ=0.89; Mφφ1.03; Mrθ-1.47; Mθφ-0.30; Mφr-0.58; Best double couple: M0=1.90000×10^17 NP1:φs=47.00000°, δ88.00000°, λ-57.00000°. NP2:φs=140.00000°, δ33.00000°, λ-177.00000°. Principal axes: T 1.3500, Plg34.0000°, Azm108.0000°; N 0.8000, Plg33.0000°, Azm225.0000°; P -2.1400, Plg37.0000°, Azm346.0000°;*
*TAP **11** 21:35:06.2, 20.°99N×121.°20E, h70km, ML5.5, C*
*BJI **11** 21:35:07.7, 21.°29N×120.°90E, h10km, mB5.4/40, mb5.0/52, ML4.6/5, Ms5.5/67, Ms7 5.3/57*
*MOS **11** 21:35:09.1±1.2, 21.°03N×121.°15E, h33km, mb5.5/76, MS5.2/61, Error ellipse: s-maj=7.5km s-min=4.3km az=114.4*
*GCMT **11** 21:35:10.2±0.1, 21.°06N×121.°04E, h18km, MW5.5, Moment Tensor Solution. s84,c157; s99,c207; Moment tensor: Scale 10^17Nm; Mrr0.62±.03; Mθθ0.70±.02; Mφφ-1.32±.03; Mrθ-1.03±.07; Mθφ-1.56±.02; Mφr0.04±.06; Best double couple: M0=2.20000×10^17 NP1:φs=348.00000°, δ60.00000°, λ17.00000°. NP2:φs=249.00000°, δ75.00000°, λ149.00000°. Principal axes: T 2.1300, Plg32.0000°, Azm205.0000°; N 0.1100, Plg56.0000°, Azm46.0000°; P -2.2500, Plg10.0000°, Azm301.0000°; Data Used: II IU IC G CN. Surface waves from 102 sta.*
*SZGRF **11** 21:35:13.5, 22.°51N×122.°70E, h33km, mb5.2, MS5.6, Taiwan region*
*DJA **11** 21:35:13, 21.°05N×121.°11E, h52km, Mw5.8/24*
ISC 11 21:35:07.3±0.4, 21.°10N±0.°01×121.°12E±0.°02, h7km±2km, h23km±1.8km: pP-P, n830, σ1.9/16/736, mb5.2/220, MS5.2/237, 40C-18D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**0.82**	**346**	*e*P	**Pg**	**21 35 24.0**	**+0.9**
TWK1	baz=333 **Hengchun**	**0.89**	**341**	⇓*i*P	**Pg**	**21 35 25.1**	**+0.7**
HEN	baz=339 **Hengchun**	**0.97**	**339**	⇓*i*P	**Pg**	**21 35 26.9**	**+0.9**
LAY	baz=330 **Lan-yu**	**1.02**	**23**	⇓P	**Pg**	**21 35 26.3**	**-0.6**
LAY	baz=17			*e*S	**Sg**	**21 35 41.3**	**+1.2**
BBP	**Basco**	**1.03**	**129**	*e*P	**Pg**	**21 35 26.3**	**-0.7**
TAW	**Tawu**	**1.27**	**351**	*e*P	**Pn**	**21 35 29.6**	**-1.8**
TAW	baz=358			*e*S	**Sb**	**21 35 48.9**	**+0.9**
EAST	baz=358 **Anshuo**	**1.30**	**349**	⇓*e*P	**Pn**	**21 35 29.9**	**-2.0**
SCZT	baz=357 **Fangliau**	**1.35**	**340**	⇑*i*P	**Pn**	**21 35 32.1**	**-0.5**
SCZT	baz=339			*e*S	**Sb**	**21 35 50.2**	**-0.2**
TWP	**Hsiaoliuchiu**	**1.43**	**331**	⇑*i*P	**Pn**	**21 35 33.5**	**-0.1**
TWP	baz=330			*e*S	**Sb**	**21 35 53.7**	**+1.2**
KAU	**Kaohsiung**	**1.64**	**333**	*e*P	**Pn**	**21 35 36.1**	**-0.5**
TTN	baz=333 **Taitung**	**1.65**	**1**	*e*P	**Pn**	**21 35 35.5**	**-1.1**
TTN	baz=359			*e*S	**Sn**	**21 35 57.3**	**-0.7**
SSD	baz=359 **Sandimen**	**1.70**	**345**	⇑*i*P	**Pn**	**21 35 36.8**	**-0.6**
TWG	baz=351 **Pinlang**	**1.71**	**359**	*e*Pn	**Pn**	**21 35 34.8**	**-2.7**
TWG				*e*Pg	**Pg**	**21 35 40.0**	**-0.2**
TWG				*e*Sn	**Sn**	**21 35 58.2**	**-1.4**
TWG	**Pinlang**	**1.71**	**359**	*e*P	**Pn**	**21 35 35.4**	**-2.2**
	baz=356						

TWM1	Shoushan	1.83	340	⇑eP		Pn	21 35 39.4 +0.2
	baz=339						
SGST	Jiashian	2.03	346	⇑iP		Pn	21 35 42.0 0.0
	baz=334						
ELDTW	Lidau	2.08	357	eP		Pn	21 35 40.4 -2.2
	baz=1.0						
STYT	Tauyuan	2.08	351	⇑P		Pn	21 35 42.2 -0.4
	baz=350						
CHN3	Shinhua	2.09	341	eP		Pn	21 35 42.2 -0.5
	baz=340						
TAI1	Yung-k'ang	2.10	337	eP		Pn	21 35 41.6 -1.3
	baz=337						
CHN1	Nanshi	2.15	345	⇑iP		Pn	21 35 43.1 -0.4
	baz=333						
WTP	Ta-pu	2.19	348	⇑iP		Pn	21 35 43.8 -0.2
	baz=347						
TWK	Hsinying	2.23	345	⇑iP		Pn	21 35 44.1 -0.6
	baz=332						
SCLT	Jiali	2.24	338	eP		Pn	21 35 43.4 -1.3
	baz=337						
SCLT				eS		Sn	21 36 12.3 -0.3
	baz=337						
TPUB	Ta-pu	2.24	348	ePn		Pn	21 35 43.8 -1.0
TPUB				ePg		Pg	21 35 49.8 -0.4
TPUB				eSg		Sg	21 36 21.3 +2.1
TWF1	Yuli	2.25	4	eP		Pn	21 35 42.2 -2.6
	baz=356						
YULB	Yu-li	2.29	4	ePn		Pn	21 35 43.1 -2.3
YULB				ePg		Pg	21 35 49.4 -1.8
CHN4	Tsaushan	2.29	348	⇑P		Pn	21 35 45.0 -0.5
	baz=347						
YUS	Yu-Shan	2.38	356	eP		Pn	21 35 46.6 -0.2
	baz=355						
CHN8	Yiju	2.39	340	eP		Pn	21 35 45.0 -1.8
	baz=329						
EHY	Hungye	2.40	4	eP		Pn	21 35 45.2 -1.8
	baz=3.0						
ALS	Alishan	2.42	353	P		Pn	21 35 47.3 +0.1
	baz=352						
CHN5	Tsauling	2.52	351	⇑P		Pn	21 35 48.4 -0.2
	baz=350						
WDGT	Dungji	2.54	328	eP		Pn	21 35 46.9 -2.0
	baz=328						
WSF	Szhu	2.66	342	eP		Pn	21 35 50.8 +0.2
	baz=341						
SSLB	Suanglung	2.68	357	ePn		Pn	21 35 50.9 0.0
SSLB				ePg		Pg	21 35 59.0 +0.3
ESL	Shilin	2.72	6	eP		Pn	21 35 50.1 -1.2
	baz=357						
ESL				eS		Sn	21 36 22.7 -1.8
	baz=357						
SMLT	Sun Moon Lake	2.78	356	⇑eP		Pn	21 35 52.7 +0.5
	baz=355						
SMLT				eS		Sn	21 36 25.2 -0.8
	baz=355						
WNT	Mingjian	2.79	352	eP		Pn	21 35 52.1 -0.3
	baz=351						
WNT				eS		Sn	21 36 27.2 +0.8
	baz=351						
PNG	Penghu	2.85	330	eP		Pn	21 35 51.1 -2.1
	baz=330						
WTCT	Ta-ch'eng	2.86	344	eP		Pn	21 35 52.1 -1.2
	baz=336						
HWA	Hwalien	2.90	9	eP		Pn	21 35 52.6 -1.3
	baz=359						
HWA				eS		Sn	21 36 27.3 -1.6
	baz=359						
TWD	Chiawan	3.00	8	eP		Pn	21 35 54.6 -0.6
	baz=356						
WHF	Hehuan Shan	3.03	3	eP		Pn	21 35 55.4 -0.3
	baz=351						
TCU	Taichung	3.06	352	P		Pn	21 35 55.9 -0.2
	baz=351						
NACB	Ninganchiao	3.09	8	ePn		Pn	21 35 54.8 -1.7
NACB				eSn		Sn	21 36 35.2 +1.5
NACB				eSg		Sg	21 36 45.4 -1.2
TWT	Tachien	3.14	1	eP		Pn	21 35 57.2 0.0
	baz=350						
APYP	Conner	3.22	178	eP		Pn	21 35 58.0 -0.3
TWQ1	Liyutan	3.25	354	eP		Pn	21 35 58.9 +0.2
	baz=353						
NSY	Sanyi	3.32	354	eP		Pn	21 36 00.3 +0.7
	baz=353						
NNS	Nan Shan	3.33	4	eP		Pn	21 36 00.3 +0.5
	baz=11						
ENA	Nanau	3.36	10	eP		Pn	21 35 59.5 -0.7
	baz=357						
ENA				eS		Sn	21 36 39.4 -0.9
	baz=357						
ABRA	Dolores	3.45	186	eP		Pn	21 36 00.3 -1.2
NSTT	Nanjuang	3.52	358	eP		Pn	21 36 00.6 -1.7
	baz=357						
TWC	Suao	3.56	11	eP		Pn	21 36 02.9 0.0
	baz=9.0						
TWC				eS		Sn	21 36 44.5 -0.7
	baz=9.0						
YHNB	Yeheng	3.56	4	ePn		Pn	21 36 02.9 -0.1
YHNB				eSg		Sg	21 36 57.1 -4.6
NSK	Sanguang	3.57	4	eP		Pn	21 36 03.2 +0.2
	baz=353						
NSK				eS		Sn	21 36 45.7 +0.3
	baz=353						
TWE	Neicheng	3.64	8	eP		Pn	21 36 04.5 +0.5
	baz=358						
TWE				eS		Sn	21 36 46.7 -0.6
	baz=358						
ILA	Ilan	3.69	9	eP		Pn	21 36 05.9 +1.1
	baz=357						
YOJ	Yonaguni jima	3.77	27	P		Pn	21 36 06.7 +0.8
YOJ				eS		Sn	21 36 52.6 +2.0
HATJ	Hateruma jima	3.85	40	P		Pn	21 36 06.9 0.0
HATJ				eS		Sn	21 36 53.1 +0.7
TATO	Taipei	3.87	5	ePn		Pn	21 36 08.4 +1.2
TATO	Taipei	3.87	5	Pn		Pn	21 36 10.9 +3.7
	SNR=29						
TWA	Mucha	3.89	6	eP		Pn	21 36 08.7 +1.3
	baz=5.0						
TAP1	Taipei	3.94	5	eP		Pn	21 36 08.4 +0.2
	baz=4.0						
TAP1				eS		Sn	21 36 55.7 +1.1
	baz=4.0						
TWB1	Santiao Chiao	3.97	11	eP		Pn	21 36 09.4 +0.8
	baz=22						
TWB1				eS		Sn	21 36 55.3 -0.2
	baz=22						
TWS1	Kuangyinshan	3.99	4	eP		Pn	21 36 10.4 +1.5
	baz=351						
NWF	Wu-fen Shan	4.00	9	eP		Pn	21 36 09.8 +0.8
	baz=357						
IRIF	Iriomote-Funau	4.02	36	P		Pn	21 36 09.8 +0.5
IRIF				eS		Sn	21 36 58.0 +1.3
JKRS	Kuro-shima	4.11	40	P		Pn	21 36 11.1 +0.6
JKRS				eS		Sn	21 37 00.8 +2.0
KNM	Kinmen	4.13	324	eP		Pn	21 36 09.5 -1.2
	baz=322						
TWY	Chenhua	4.18	6	eP		Pn	21 36 12.1 +0.6
	baz=5.0						
CAUP	Cauayan	4.19	171	eP		Pn	21 36 15.2 +3.6
PALP	Palanan	4.20	163	eP		Pn	21 36 13.0 +1.2
JIJ	Ishigaki jima	4.28	40	P		Pn	21 36 13.0 +0.1
JIJ				eS		Sn	21 37 02.4 -0.7
QZH	Quanzhou	4.48	329	⇓iPn		Pn	21 36 12.8 -2.8
QZH				Sn		Sn	21 37 02.1 -5.8
QZH				smax			
	comp=N,1μm,0.8s						
QZH				smax			
	comp=E,1μm,0.8s						
QZH				LR		LR	
	comp=N,52μm,11.2s						
QZH				LR		LR	
	comp=E,49μm,11.2s						
QZH				LR		LR	
	comp=Z,68μm,12.4s						
BOLP	Bolinao	4.83	194	eP		Pn	21 36 20.4 0.0
JTJ	Tarama	4.83	42	P		Pn	21 36 20.7 +0.3
JTJ				eS		Sn	21 37 16.5 -0.1
JMJ	Miyako jima 2	5.34	45	eS		Sn	21 37 31.0 +1.9
BALP	Baler	5.35	175	eP		Pn	21 36 28.1 +0.5
JOGS	Gusukube	5.38	47	P		Pn	21 36 28.6 +0.7
JOGS				eS		Sn	21 37 30.7 +0.6
SCZP	Santa Cruz	5.42	192	eP		Pn	21 36 28.6 +0.1
PCPH	Palayan	5.51	180	⇑eP		Pn	21 36 30.1 +0.3
POLP	Polillo Island	6.38	173	eP		Pn	21 36 42.9 +1.1
POLP	Polillo Island	6.38	173	eP		Pn	21 36 42.9 +1.1
HKC	Hong Kong Obse	6.57	282	Pn		Pn	21 36 43.0 -1.3
TGY	Tagaytay City	6.96	181	Pn		Pn	21 36 50.5 +0.8
	comp=Z,35nm,0.3s,baz=268,slow=1.5,SNR=11						
JKE	Kume jima 2	7.35	44	P		Pn	21 36 55.6 +0.6
JKE				eS		Sn	21 38 18.7 0.0
LUBP	Lubang	7.37	187	eP		Pn	21 36 56.5 +1.1
LUBP	Lubang	7.37	187	eP		Pn	21 36 56.5 +1.1
GZH	Guangzhou	7.47	287	P		Pn	21 36 52.4 -4.4
GZH				smax			
	comp=N,670nm,0.9s						
GZH				smax			
	comp=E,560nm,1.0s						
SJMP	San Jose	8.59	180	eP		Pn	21 37 13.7 +1.6
SJMP	San Jose	8.59	180	eP		Pn	21 37 13.7 +1.6
JIH	Iheya	8.61	45	P		Pn	21 37 14.0 +1.7
JIH				eS		Sn	21 38 48.1 -1.5
JOW	Kunigami	8.68	48	P		Pn	21 37 13.7 +0.4
JOW				eS		Sn	21 38 46.4 -5.1
BUSP	Coron	9.09	186	eP		Pn	21 37 17.8 -1.1
BUSP	Coron	9.09	186	eP		Pn	21 37 17.8 -1.1
JTK	Tokunoshima	9.76	45	P		Pn	21 37 27.0 -1.0
JTK				eS		Sn	21 39 11.4 -6.5
SSE	Sheshan	9.96	0	eP		Pn	21 37 29.6 -1.2
SSE				S		Sn	21 39 21.8 -0.9
SSE				pmax	pmax		
	comp=Z,32nm,0.7s						
SSE				LR	LR		
	comp=N,8μm,17.4s						
SSE				LR	LR		
	comp=E,18μm,17.5s						
SSE				LR	LR		
	comp=Z,11μm,12.1s						
ENPP	El Nido	9.97	190	eP		Pn	21 37 30.4 -0.7
ENPP	El Nido	9.97	190	eP		Pn	21 37 29.6 -1.5
CUYO	Cuyo Island	10.19	181	eP		Pn	21 37 36.0 +1.9
CUYO	Cuyo Island	10.19	181	eP		Pn	21 37 36.3 +2.2
JMZ	Minamidaito 2	10.39	61	P		Pn	21 37 36.9 +0.1
GUIM	Jordan	10.51	172	eP		Pn	21 37 39.0 +0.6
JAM	Amami Oshima	10.60	45	P		Pn	21 37 38.2 -1.4
QIZ	Qiongzhong	10.79	261	P		Pn	21 37 40.7 -1.6
QIZ				sP			21 37 47.1
QIZ				S		Sn	21 39 44.9 +1.5
QIZ				sS			21 39 50.4
QIZ				SS			21 39 59.3
QIZ				pmax	pmax		
	comp=Z,24nm,1.3s						
QIZ				pmax	pmax		
	comp=Z,460nm,9.9s						
QIZ				LR	LR		
	comp=N,24μm,15.2s						
QIZ				LR	LR		
	comp=E,5μm,15.8s						
QIZ				LR	LR		
	comp=Z,14μm,16.9s						
QIZ	Qiongzhong	10.79	261	ePn		Pn	21 37 40.3 -2.0
	comp=Z,85nm,1.0s						
NJ2	Nanjing	11.09	350	eP		Pn	21 37 45.4 -1.0
NJ2				pP			21 37 47.5
NJ2				sP			21 37 49.6
NJ2				PP			21 37 51.9
NJ2				S		Sn	21 39 51.0 +0.3
NJ2				sS			21 39 58.5
NJ2				pmax	pmax		
	comp=Z,450nm,4.6s						
NJ2				LR	LR		
	comp=N,10μm,13.3s						
NJ2				LR	LR		
	comp=E,26μm,15.6s						
NJ2				LR	LR		
	comp=Z,9μm,11.5s						
WHN	Wuhan	11.20	328	⇑P		Pn	21 37 45.5 -2.4
WHN				S		Sn	21 39 47.3 -6.1
WHN				LR	LR		
	comp=N,47μm,10.8s						
WHN				LR	LR		
	comp=E,20μm,10.3s						
WHN				LR	LR		
	comp=Z,39μm,12.2s						
BATP	Bataraza	12.64	195	eP		Pn	21 38 08.8 +1.2
BATP	Bataraza	12.64	195	eP		Pn	21 38 08.8 +1.2
BUKP	Musuan	13.69	163	eP		Pn	21 38 31.6 +10
ENH	Enshi	13.90	313	ePn		Pn	21 38 23.9 -0.8
	comp=Z,136nm,1.3s						
GYA	Guiyang	14.26	295	⇑iP		Pn	21 38 29.9 +0.2
GYA				PP			21 38 40.5
GYA				S		Sn	21 41 09.4 +1.1
GYA				pmax	pmax		
	comp=Z,60nm,0.8s						
GYA				pmax	pmax		
	comp=Z,190nm,4.4s						
GYA				LR	LR		
	comp=N,10μm,13.3s						
GYA				LR	LR		
	comp=E,7μm,12.0s						
GYA				LR	LR		
	comp=Z,11μm,12.6s						
DMPH	Davao City--Mi	14.57	162	eP		pP	21 38 45.5 +2.9
DAV	Davao City (W)	14.60	162	Pn		Pn	21 38 36.7 +2.3
	comp=Z,8.7nm,0.3s,baz=292,slow=11,SNR=1.8						
DAV				LR	LR		21 45 33.0
	comp=Z,9μm,18.6s,baz=122,slow=43						
KDM	Kudat	14.70	197	P		Pn	21 38 37.2 +1.5
SDKM	Sandakan	15.83	194	P		Pn	21 38 50.9 +0.2
MYLDM	Lahad Datu	16.03	189	P		Pn	21 38 55.6 +2.4
MYLDM	Lahad Datu	16.03	189	P		Pn	21 38 55.4 +2.1
	comp=Z,450nm,2.0s						
XAN	Xi'an	16.80	323	P		Pn	21 39 02.1 -1.0
XAN				pmax	pmax		
	comp=Z,52nm,1.5s						
XAN				pmax	pmax		
	comp=Z,630nm,12.5s						
XAN				LR	LR		
	comp=N,10μm,15.6s						
XAN				LR	LR		
	comp=E,4μm,18.2s						
XAN				LR	LR		
	comp=Z,4μm,13.0s						
TSM	Tawau	17.00	191	P		Pn	21 39 06.5 +0.9
INCN	Inchon	17.01	15	ePn		Pn	21 39 05.3 -0.4
	comp=Z,100nm,1.3s						
KMI	Kunming	17.37	287	⇑P		Pn	21 39 10.0 -0.3
KMI				sP	sP		21 39 12.4 -2.3
KMI				PP			21 39 24.4
KMI				S		Sn	21 42 21.0 -2.9
KMI				sS	sS		21 42 23.3 -13
KMI				SS			21 42 42.3
KMI				PcP	PcP		21 43 54.3 +1.9
KMI				pmax	pmax		
	comp=Z,42nm,1.9s						
KMI				pmax	pmax		
	comp=Z,1μm,9.0s						
KMI				LR	LR		
	comp=N,9μm,13.1s						
KMI				LR	LR		
	comp=E,6μm,10.4s						
KMI				LR	LR		
	comp=Z,8μm,13.1s						
DL2	Dalian	17.75	1	P		Pn	21 39 15.7 +0.8
DL2				S		Sn	21 42 33.2 +0.3
DL2				pmax	pmax		
	comp=Z,20nm,0.7s						
DL2				pmax	pmax		
	comp=Z,1μm,11.2s						
DL2				LR	LR		
	comp=N,6μm,13.4s						
DL2				LR	LR		
	comp=Z,6μm,12.6s						
TIY	Taiyuan	18.18	337	⇑P		Pn	21 39 21.9 +1.7
TIY				S		Sn	21 42 42.1 -1.3
TIY				LR	LR		
	comp=N,16μm,12.3s						
TIY				LR	LR		
	comp=E,5μm,9.5s						
TIY				LR	LR		
	comp=Z,18μm,13.4s						
CD2	Chengdu	18.39	306	P		Pn	21 39 19.2 -3.6
CD2				PP			21 39 34.8
CD2				S		Sn	21 42 42.6 -5.8
CD2				SS			21 43 06.3
CD2				pmax	pmax		
	comp=Z,250nm,1.1s						
CD2				pmax	pmax		
	comp=Z,3μm,9.3s						
CD2				LR	LR		
	comp=N,22μm,13.3s						
CD2				LR	LR		
	comp=Z,15μm,11.3s						
BJT	Baijiatuau	19.33	348	eP		Pn	21 39 33.8 -0.3
BJT				pmax	pmax		
	comp=Z,145nm,0.8s						
BJT	Baijiatuau	19.33	348	eP		Pn	21 39 33.8 -0.2
	comp=Z,145nm,0.8s						
BJI	Beijing	19.35	348	P		Pn	21 39 34.2 -0.1
BJI				S		Sn	21 43 11.2 -0.2
BJI				pmax	pmax		
	comp=Z,210nm,0.8s						
BJI				pmax	pmax		
	comp=Z,1μm,8.2s						
BJI				LR	LR		
	comp=N,8μm,20.6s						
BJI				LR	LR		
	comp=E,13μm,19.5s						
BJI				LR	LR		
	comp=Z,7μm,21.1s						
BTM	Bintulu	19.43	205	P		Pn	21 39 34.2 -1.4
MNI	Manado	19.87	169	P		Pn	21 39 40.1 -0.7
	comp=Z,4μmcomp=Z,374nm,1.1s						
CHRT	Chiangrai	20.02	270	⇑P		P	21 39 46.4 +5.6
	comp=Z,116nm,1.4s						
CBIJ	Chichi jima	20.13	69	P		P	21 39 41.8 -0.1
	comp=Z,122nm,0.7s,baz=243,slow=6.8,SNR=5.0						
JHJ	Hachijo jima 2	20.44	50	P		P	21 39 46.1 +0.8
	comp=Z,83nm,0.9s,baz=230,slow=15,SNR=2.5						
SBUM	Sibu	20.46	206	P		P	21 39 45.9 +0.3
SBUM	Sibu	20.46	206	P		P	21 39 45.1 -0.5
MRSI	Marisa	20.51	178	P		P	21 39 46.9 +0.8
	comp=Z,5μmcomp=Z,377nm,1.2s						
KMSI	Cibinong	20.59	172	P		P	21 39 47.9 +0.9
	comp=Z,10μmcomp=Z,757nm,0.9s						
NST	Nakhon Sawan	20.62	258	P		P	21 39 50.9 +3.5
	comp=Z,189nm,0.9s						
SNY	Shenyang	20.77	5	⇑P		P	21 39 48.6 -0.1
SNY				S		S	21 43 36.4 -4.4
SNY				pmax	pmax		
	comp=Z,1μm,11.6s						
SNY				LR	LR		
	comp=N,4μm,13.2s						
SNY				LR	LR		
	comp=E,8μm,19.2s						
SNY				LR	LR		
	comp=Z,9μm,15.5s,MS5.2						
CHTO	Chiang Mai	20.96	268	eP		P	21 39 50.5 -0.6
CHTO				pmax	pmax		
	comp=Z,165nm,1.7s						
CHTO				MLR	MLR		
	comp=Z,5μm,19.0s,MS4.9						
CHTO	Chiang Mai	20.96	268	eP		P	21 39 50.5 -0.6
	comp=Z,165nm,1.7s						
CHTO				LR	LR		
	comp=Z,5μm,19.0s,MS4.9						
CHTO	Chiang Mai	20.96	268	P		P	21 39 51.3 +0.2
	comp=Z,60nm,1.8s						
CHTO	Chiang Mai	20.96	268	P		P	21 39 51.2 +0.1
	SNR=26						
CM31	Chiang Mai Arr	21.03	267	eP		P	21 39 51.9 +0.1
CM31				LR	LR		
	comp=Z,5μm,20.0s,MS4.9						
CMAR	Chiang Mai Arr	21.03	267	P		P	21 39 51.7 0.0
	comp=Z,12nm,0.8s,mb4.3,baz=73,slow=9.3,SNR=63						
CMAR				PcP	PcP		21 43 58.7 -0.2
	comp=Z,4.2nm,0.8s,baz=56,slow=0.3,SNR=7.9						
CMAR				LR	LR		21 49 29.1
	comp=Z,5μm,18.1s,MS4.9,baz=82,slow=41						
CMAR	Chiang Mai Arr	21.03	267	P		P	21 39 51.7 -0.1
CMAR							21 43 58.7
TNTI	Ternate	21.11	162	P		P	21 39 50.8 -1.8
	comp=Z,3μmcomp=Z,170nm,1.3s,mb5.2						
LZH	Lanzhou	21.23	318	⇓P		P	21 39 54.7 +0.9
LZH				pP			21 40 03.8
LZH				sP	sP		21 40 08.0 +11
LZH				PP			21 40 17.6
LZH				S		S	21 43 42.0 -8.1
LZH				sS	sS		21 43 56.2 +2.8
LZH				SS			21 44 14.8
LZH				pmax	pmax		
	comp=Z,220nm,1.2s,mb5.4						
LZH				pmax	pmax		
	comp=Z,1μm,4.2s						
LZH				LR	LR		
	comp=N,12μm,10.2s						
LZH				LR	LR		
	comp=Z,13μm,12.6s,MS5.5						
HHC	Hu-ho-hao-te	21.30	340	eP		P	21 39 55.2 +0.8
HHC				PP			21 40 18.5
HHC				S		S	21 43 48.7 -2.5
HHC				PcP	PcP		21 43 59.7 +0.7
HHC				ScP	ScP		21 47 37.0 +0.6
HHC				pmax	pmax		
	comp=Z,66nm,1.0s,mb4.9						
HHC				pmax	pmax		
	comp=Z,2μm,5.3s						
HHC				LR	LR		
	comp=N,15μm,11.8s,MS5.8						
HHC				LR	LR		
	comp=E,14μm,11.7s,MS5.8						
HHC				LR	LR		
	comp=Z,12μm,11.5s,MS5.5						
MAJO	Matsushiro	21.42	40	eP		P	21 39 58.6 +2.8
MAJO				pmax	pmax		
	comp=Z,277nm,1.5s,mb5.4						
MAJO				MLR	MLR		
	comp=Z,4μm,20.0s,MS4.8						
MAJO	Matsushiro	21.42	40	eP		P	21 39 58.6 +2.8
	comp=Z,277nm,1.5s,mb5.4						
MAJO				LR	LR		
	comp=Z,4μm,20.0s,MS4.8						
MAT	Matsushiro	21.42	40	P		P	21 39 57.5 +1.7
MAT				S		S	21 43 56.0 +2.3
MJAR	Matsushiro Arr	21.42	40	P		P	21 39 54.8 -1.0
	comp=Z,15nm,0.8s,mb4.4,baz=229,slow=7.5,SNR=31						
MJAR				S		S	21 44 01.5 +7.8
	comp=Z,1.0nm,0.8s,baz=147,slow=20,SNR=2.9						
BTO	Baotou	21.62	337	eP		P	21 39 57.3 -0.6
BTO				LR	LR		
	comp=N,4μm,14.7s,MS5.1						
BTO				LR	LR		
	comp=E,3μm,12.5s,MS5.1						
PCI	Palu	21.91	183	P		P	21 40 01.5 +0.3
	comp=E,4μmcomp=E,302nm,1.1s,mb5.6						
LUWI	Luwuk	22.06	176	P		P	21 40 01.8 -1.1
	comp=E,10μmcomp=E,861nm,0.9s,mb6.2						
KSM	Kuching	22.17	210	P		P	21 40 03.0 -1.1
KSM	Kuching	22.17	210	eP		P	21 40 02.4 -1.7
	comp=E,91nm,0.9s,mb5.2						
KSM				LR	LR		
	comp=Z,3μm,19.0s,MS4.7						
KSM	Kuching	22.17	210	P		P	21 40 02.4 -1.7
CN2	Changchun	22.92	8	eP		P	21 40 12.8 +1.0
CN2				esP	sP		21 40 18.0 +3.2
CN2				eS		S	21 44 14.4 -7.7
CN2				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.5						
CN2				pmax	pmax		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=N,7μm,15.0s,MS5.3						
CN2				LR	LR		
	comp=E,6μm,15.0s,MS5.3						
CN2				LR	LR		
	comp=Z,1μm,16.0s,MS4.4						
STKI	Sintang	22.93	205	P		P	21 40 10.8 -1.3
	comp=Z,9μmcomp=Z,102nm,0.9s,mb5.2						
KTGM	Kuala Trenggan	23.45	231	P		P	21 40 18.1 +0.4
GUMO	Guam	23.85	104	eP		P	21 40 20.5 -0.9
GUMO				pmax	pmax		
	comp=Z,493nm,1.5s,mb5.7						
GUMO				MLR	MLR		
	comp=Z,2μm,19.0s,MS4.6						
GUMO	Guam	23.85	104	eP		P	21 40 20.5 -0.9
	comp=Z,494nm,1.5s,mb5.7						
GUMO				LR	LR		
	comp=Z,2μm,19.0s,MS4.6						
GUMO	Guam	23.85	104	P		P	21 40 21.1 -0.3
TTSI	Tana Toraja	24.03	183	P		P	21 40 22.7 -0.3
	comp=Z,3μmcomp=Z,213nm,0.9s,mb5.5						
MDJ	Mudanjiang	24.48	15	P		P	21 40 27.8 +0.9
MDJ				PcP	PcP		21 44 03.9 -1.6
MDJ				S		S	21 44 46.7 -0.7
MDJ				ScP	ScP		21 47 44.8 +0.1
MDJ				ScS	ScS		21 51 32.5 +0.3
MDJ				pmax	pmax		
	comp=Z,73nm,0.8s,mb5.2						
MDJ				pmax	pmax		

comp=Z,430nm,7.7s
MDJ LR LR
comp=N,7μm,16.1s,MS5.4
MDJ LR LR
comp=E,6μm,16.6s,MS5.4
MDJ LR LR
comp=Z,8μm,17.5s,MS5.3
MDJ Mudanjiang 24.48 15 *e*P **P 21 40 27.2 +0.4**
comp=Z,65nm,0.9s,mb5.1
MDJ LR LR
comp=Z,4μm,20.0s,MS4.8
KBKI Kotabaru 24.73 192 P **P 21 40 29.5 +0.1**
comp=Z,3μmcomp=Z,176nm,1.2s,mb5.5
NLAI Namlea 24.89 166 P **P 21 40 31.8 +1.0**
comp=Z,4μmcomp=Z,371nm,1.2s,mb5.8
SPSI Sidrap Palu 24.94 183 P **P 21 40 30.2 -1.1**
comp=Z,3μmcomp=Z,135nm,0.9s,mb5.5
KDI Kendari 24.94 176 P **P 21 40 31.1 -0.3**
comp=Z,2μmcomp=Z,80nm,1.1s,mb5.2
KULM Kulim 25.32 235 P **P 21 40 36.0 +1.1**
KULM Kulim 25.32 235 *e*P **P 21 40 33.0 -1.8**
comp=Z,14nm,0.6s,mb4.7
KULM LR LR
comp=Z,3μm,21.0s,MS4.8
BNSI Bone 25.36 182 P **P 21 40 35.1 0.0**
comp=Z,3μmcomp=Z,223nm,1.2s,mb5.5
MYKOM **Kota Tinggi 25.53 224** P **P 21 40 36.9 +0.1**
IPM Ipoh 25.57 233 P **P 21 40 35.6 -1.5**
IPM Ipoh 25.57 233 P **P 21 40 35.7 -1.4**
AAI Ambon 25.59 163 P **P 21 40 37.1 -0.1**
comp=Z,4μmcomp=Z,204nm,1.4s,mb5.5
KGM Kluang 25.71 225 P **P 21 40 39.4 +1.1**
GTA Gaotai 25.81 320 *e*P **P 21 40 38.9 -0.1**
GTA pP pP 21 40 42.9 +1.7
GTA sP sP 21 40 46.4 +4.2
GTA S **S 21 45 08.2 -0.5**
GTA sS sS 21 45 17.7 +5.3
GTA pmax pmax
comp=Z,12nm,1.7s,mb4.2
GTA pmax pmax
comp=Z,760nm,7.7s
GTA LR LR
comp=N,5μm,18.1s,MS5.2
GTA LR LR
comp=E,4μm,17.5s,MS5.2
GTA LR LR
comp=Z,7μm,13.1s,MS5.3
FRIM Kepong 25.98 230 P **P 21 40 39.9 -0.9**
BKSI Bulukumba 26.27 182 P **P 21 40 42.4 -1.0**
comp=Z,1μmcomp=Z,56nm,1.0s,mb5.0
SHL Shillong 27.18 285 *e*PKP **P 21 40 55.0 +3.4**
SHL *i* S **S 21 45 35.0 +4.3**
ERM Erimo 27.91 37 P **P 21 41 01.7 +3.7**
comp=Z,242nm,0.9s,mb5.8,SNR=5.1
ERM Erimo 27.91 37 *e*P **P 21 40 58.9 +0.9**
ERM Erimo 27.91 37 *e*P **P 21 41 01.2 +3.2**
comp=Z,38nm,0.9s,mb5.0
ERM LR LR
comp=Z,3μm,22.0s,MS4.8
HIA Hailar 28.13 358 *e*P **P 21 40 59.0 -0.8**
HIA pmax pmax
comp=Z,200nm,1.5s
HIA MLR MLR
comp=Z,8μm,20.0s
HIA Hailar 28.13 358 *e*P **P 21 40 59.0 -0.7**
comp=Z,200nm,1.5s,mb5.5
HIA LR LR
comp=Z,8μm,20.0s,MS5.3
PSI Prapat 28.24 233 P **P 21 40 59.8 -1.4**
comp=Z,20nm,0.8s,mb4.8,baz=61,slow=6.7,SNR=25
PSI LR LR 21 51 45.8
comp=Z,3μm,19.5s,MS4.8,baz=35,slow=35
LSA Lhasa 28.33 294 *e*P **P 21 41 03.2 +1.4**
LSA pmax pmax
comp=Z,90nm,1.4s,mb5.2
LSA MLR MLR
comp=Z,3μm,20.0s,MS4.9
LSA Lhasa 28.33 294 *e*P **P 21 41 03.2 +1.3**
comp=Z,90nm,1.4s,mb5.2
LSA LR LR
comp=Z,3μm,20.0s,MS4.9
BKNI Bangkinang 28.48 226 P **P 21 41 12.5 +9.3**
PMBI Palembang 28.75 216 P **P 21 41 02.2 -3.5**
ULN Ulaanbaatar 29.01 340 *e*P **P 21 41 07.6 -0.1**
ULN pmax pmax
comp=Z,225nm,1.5s,mb5.7
ULN MLR MLR
comp=Z,10μm,20.0s,MS5.4
ULN Ulaanbaatar 29.01 340 *e*P **P 21 41 07.6 0.0**
comp=Z,225nm,1.5s,mb5.7
ULN LR LR
comp=Z,10μm,20.0s,MS5.4
ULN Ulaanbaatar 29.01 340 P **P 21 41 08.0 +0.4**
SNR=122
ASAJ Asahikawa 29.06 33 P **P 21 41 07.5 -0.6**
comp=Z,20nm,0.7s,mb5.0,baz=240,slow=13,SNR=21
ASAJ LR LR 21 55 03.1
comp=Z,2μm,18.4s,MS4.8,baz=55,slow=41
MNSI Mandailing Nat 29.14 229 P **P 21 41 08.1 -1.1**
comp=Z,2μmcomp=Z,123nm,1.0s,mb5.6
SDSI Sungai Dareh 29.16 224 P **P 21 41 09.8 +0.5**
comp=Z,25nm,1.6s,mb4.7
SONM Songino Array 29.20 339 P **P 21 41 09.1 -0.2**
comp=Z,20nm,0.7s,mb5.0,baz=157,slow=8.0,SNR=55
SONM ScP ScP 21 47 58.0 -0.7
comp=Z,1.4nm,0.9s,baz=248,slow=0.7,SNR=4.1
SONM LR LR 21 54 08.4
comp=Z,9μm,19.2s,MS5.4,baz=152,slow=39
SONM Songino Array 29.20 339 P **P 21 41 09.1 -0.2**
SONM 21 47 58.0
KLR Kul'dur 29.32 14 *e*P **P 21 41 08.0 -2.4**
KLR MLR MLR
comp=N,8μm,15.0s
KLR MLR MLR
comp=Z,9μm,15.0s,MS5.5
PPI Padang Panjang 29.48 226 P **P 21 41 11.4 -0.8**
comp=Z,7μmcomp=Z,84nm,2.0s,mb5.1
HABR Khabarovsk 29.51 19 P **P 21 41 11.0 -1.1**
HABR *e**PP pP 21 41 20.0 +5.7
HABR *e**SP sP 21 41 24.1 +8.8
HABR *e* 21 42 05.3
HABR S **S 21 46 03.6 -3.3**
HABR *e**SS sS 21 46 20.0 +9.4
HABR SS SS 21 47 33.6 -38
HABR *e* 21 51 48.6
HABR MLR MLR
comp=Z,2μm,19.0s,MS4.7
MMRI Maumere 29.57 178 P **P 21 41 10.7 -2.2**
comp=Z,4μmcomp=Z,255nm,1.6s,mb5.7
KHKI Kahang-Kahang 29.77 191 P **P 21 41 14.1 -0.6**
comp=Z,1μmcomp=Z,120nm,1.0s,mb5.6
PDSI Padang 29.78 225 P **P 21 41 24.7 +10**
NGJI Ngawi 29.84 200 P **P 21 41 16.4 +1.1**
comp=Z,80nm,1.4s,mb5.2
SJI Sawahan 30.09 199 P **P 21 41 16.9 -0.6**
comp=Z,90nm,2.1s,mb5.1
KLSI 30.25 214 P **P 21 41 18.6 -0.4**
comp=Z,2μmcomp=Z,127nm,2.0s,mb5.3
KRKI Karangkates 30.30 197 P **P 21 41 29.0 +10**
PWJI Pagerwojo 30.35 198 P **P 21 41 18.7 -1.1**
comp=Z,109nm,1.1s,mb5.5
MDSI Maura Dua 30.37 215 P **P 21 41 19.4 -0.7**
comp=Z,32nm,0.9s,mb5.0
KSI Kapahiang 30.57 219 P **P 21 41 21.2 -0.6**
comp=Z,95nm,1.0s,mb5.6
YUK Yuzh-Kuril'sk 30.73 36⇑ *i*P **P 21 41 24.9 +1.9**
YUK *i* 21 42 25.1
YUK *i* S **S 21 46 28.2 +2.0**
YUK pmax pmax
comp=Z,800nm,2.4s,mb6.1
YUK pmax pmax
comp=N,200nm,1.2s
YUK pmax pmax
comp=E,200nm,1.2s
YUK smax
comp=N,300nm,1.4s
YUK smax
comp=E,600nm,2.8s
LEM Lembang 30.76 207 P **P 21 41 25.0 +1.6**
comp=E,2μmcomp=E,96nm,0.9s,mb5.6
LWLI Liwa 30.88 215 P **P 21 41 23.1 -1.5**
comp=E,120nm,0.9s,mb5.7
TAPN Taplejung 31.03 288 *e*P **P 21 41 28.1 +2.3**
comp=E,166nm,1.3s,mb5.7
YSS Yuzh-Sakhalins 31.21 29⇑ *e*P **P 21 41 27.0 -0.1**
YSS *e* 21 41 35.7
YSS *e**SP sP 21 41 42.0 +12
YSS *e*S **S 21 46 27.0 -6.5**
YSS pmax pmax
comp=Z,40nm,1.0s,mb5.2
YSS MLR MLR
comp=N,3μm,18.0s
YSS MLR MLR
comp=Z,2μm,18.0s,MS4.9
YSS Yuzh-Sakhalins 31.21 29 *e*P **P 21 41 27.8 +0.7**
comp=Z,59nm,1.0s,mb5.4
YSS LR LR
comp=Z,845nm,20.0s,MS4.4
ODAN Odare 31.29 287 *e*P **P 21 41 29.1 +1.0**
comp=Z,128nm,1.3s,mb5.6
RAMN Ramite 32.00 287 *e*P **P 21 41 35.3 +1.0**
comp=Z,247nm,1.4s,mb5.9
JIRN Jiri 32.40 289 *e*P **P 21 41 39.3 +1.4**
comp=Z,79nm,0.9s,mb5.5
GUN Gumba 32.69 289 *e*P **P 21 41 41.7 +1.3**
comp=Z,186nm,1.0s,mb6.0
PKI Pulchoki 33.09 288 *e*P **P 21 41 44.3 +0.4**
comp=Z,108nm,1.1s,mb5.7
KKN Kakani 33.21 289 *e*P **P 21 41 45.5 +0.5**
comp=Z,91nm,1.0s,mb5.7
DMN Daman 33.36 288 *e*P **P 21 41 46.4 +0.2**
comp=Z,133nm,1.2s,mb5.7
TLY Talaya 33.43 340 P **P 21 41 46.9 +0.4**
comp=Z,235nm,1.0s,mb6.1,SNR=16
TLY Talaya 33.43 340 *e*P **P 21 41 47.5 +1.0**
TLY *e* 21 43 14.3
TLY *e*S **S 21 46 58.9 -9.0**
TLY pmax pmax
comp=Z,131nm,2.0s,mb5.5
TLY MLR MLR
comp=Z,8μm,17.0s,MS5.5
TLY Talaya 33.43 340 *e*P **P 21 41 46.5 0.0**
comp=Z,145nm,1.5s,mb5.7
TLY LR LR
comp=Z,8μm,19.0s,MS5.5
TLY Talaya 33.43 340 P **P 21 41 47.0 +0.5**
SNR=52
IRK Irkutsk 33.72 341⇑ *i*P **P 21 41 49.1 0.0**
IRK *e* 21 43 09.2
IRK pmax pmax
comp=Z,167nm,1.7s,mb5.7
GKN Gorkha 33.80 289 *e*P **P 21 41 49.9 -0.1**
comp=Z,112nm,1.2s,mb5.7
MOY Mondy 34.30 338 *e*P **P 21 41 54.6 +0.5**
MOY pmax pmax
comp=Z,214nm,1.8s,mb5.8
KAKA Kakadu 35.39 161 *e*P **P 21 42 02.0 -1.9**
comp=Z,25nm,0.6s,mb5.3
KAKA Kakadu 35.39 161 *e*P **P 21 42 01.6 -2.3**
comp=Z,65nm,0.6s,mb5.7
CLNS Chul'man 35.80 4 *e*P **P 21 42 07.4 +0.5**
CLNS *e**PP pP 21 42 23.1 +14
CLNS *e* 21 43 27.3
CLNS *e* 21 44 33.8
CLNS *e*S **S 21 47 37.7 -6.7**
CLNS pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
CLNS pmax pmax
comp=N,6.0nm,1.0s
CLNS pmax pmax
comp=E,3.0nm,0.9s
CLNS pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
CLNS pmax pmax
comp=N,8.0nm,1.2s
CLNS pmax pmax
comp=E,4.0nm,0.8s
CLNS smax
comp=N,153nm,12.7s
CLNS smax
comp=E,193nm,13.1s
WMQ Urumqi 35.80 317 P **P 21 42 08.0 +0.8**
WMQ pP pP 21 42 12.4 +3.0
WMQ sP sP 21 42 15.0 +4.7
WMQ PP PP 21 43 29.1 +0.7
WMQ PcP PcP 21 44 35.8 +1.0
WMQ S **S 21 47 44.2 -0.6**
WMQ sS sS 21 47 51.6 +3.1
WMQ ScP ScP 21 48 20.2 -1.2
WMQ SS SS 21 50 05.0 -16
WMQ ScS ScS 21 52 23.9 -2.5
WMQ pmax pmax
comp=Z,27nm,1.4s,mb5.0
WMQ pmax pmax
comp=Z,510nm,6.2s
WMQ LR LR
comp=N,3μm,17.3s,MS5.2
WMQ LR LR
comp=E,2μm,17.0s,MS5.2
WMQ LR LR
comp=Z,2μm,17.0s,MS5.0
PTH Pithoragarh 37.76 291 *ex* **P 21 42 24.5 +0.4**
FITZ Fitzroy Crossi 39.21 173 *e*P **P 21 42 33.7 -2.5**
comp=Z,26nm,0.7s,mb5.1
FITZ Fitzroy Crossi 39.21 173 LR LR 21 58 37.8
comp=Z,953nm,21.3s,MS4.6,baz=98,slow=36
FITZ Fitzroy Crossi 39.21 173 *e*P **P 21 42 33.7 -2.5**
comp=Z,40nm,1.2s,mb5.0
PMG Port Moresby 39.67 137 *e*P **P 21 42 40.5 +0.3**
PMG pmax pmax
comp=Z,37nm,0.8s
PMG Port Moresby 39.67 137 *e*P **P 21 42 39.0 -1.2**
comp=Z,31nm,0.7s,mb5.2
PMG LR LR
comp=Z,1μm,20.0s,MS4.8
PMG Port Moresby 39.67 137 P **P 21 42 38.9 -1.3**
comp=Z,58nm,1.5s,mb5.1
DDI Dehra Dun 39.67 292 *ex* pP 21 42 43.0 +0.6
DDI *ex* x 21 44 32.5
HYB Hyderabad 40.27 272 *e*P **P 21 42 46.0 +0.8**
HYB Hyderabad 40.27 272 *i* P **P 21 42 46.0 +0.8**
HYB *e*S **S 21 48 52.0 -1.0**
SKR Severo-Kuril's 40.30 34 *e*P **P 21 42 45.0 0.0**
SKR pmax pmax
comp=Z,70nm,1.0s,mb5.3
SKR pmax pmax
comp=Z,800nm,4.0s
MK31 Makanchi Array 40.55 318 *e*P **P 21 42 47.2 0.0**
MK31 pmax pmax
comp=Z,31nm,0.8s,mb5.0
MK31 Makanchi Array 40.55 318 *e*P **P 21 42 47.0 -0.1**
MKAR Makanchi Array 40.55 318 P **P 21 42 46.8 -0.4**
comp=Z,16nm,0.7s,mb4.8,baz=114,slow=9.5,SNR=174
MKAR ScP ScP 21 48 40.1 +0.7
comp=Z,0.5nm,0.7s,baz=110,slow=6.3,SNR=3.1
MKAR LR LR 21 59 33.8
comp=Z,2μm,20.5s,MS5.0,baz=111,slow=36
COCO West Island 40.79 218 PFAKE 21 43 00.0 +11
COCO LR LR
comp=Z,1μm,19.0s,MS4.7
COEN Coen 41.02 146 *e*P **P 21 42 50.2 -1.1**
comp=Z,104nm,0.7s,mb5.6
YAK Yakutsk 41.33 6 *e*P **P 21 42 53.2 -0.1**
YAK pmax pmax
comp=Z,290nm,1.0s,mb5.9
YAK MLR MLR
comp=Z,5μm,16.7s,MS5.5
YAK Yakutsk 41.33 6 *e*P **P 21 42 53.8 +0.5**
comp=Z,75nm,0.9s,mb5.3
YAK LR LR
comp=Z,1μm,20.0s,MS4.8
MBWA Marble Bar 42.02 182 *e*P **P 21 42 56.9 -2.5**
MBWA Marble Bar 42.02 182 *e*P **P 21 42 56.7 -2.7**
comp=Z,24nm,1.1s,mb4.7
MBWA LR LR
comp=Z,1μm,22.0s,MS4.7
KSH Kashi 42.59 306 P **P 21 43 08.3 +4.3**
KSH PcP PcP 21 44 59.9 +3.6
KSH ScP ScP 21 48 50.5 +2.8
KSH S **S 21 49 33.5 +6.5**
KSH ScS ScS 21 53 07.6 +1.4
KSH pmax pmax
comp=Z,110nm,1.5s,mb5.4
KSH pmax pmax
comp=Z,350nm,4.0s
KSH LR LR
comp=N,3μm,14.9s,MS5.5
KSH LR LR
comp=E,4μm,16.2s,MS5.5
KSH LR LR
comp=Z,6μm,15.4s,MS5.6
WAKE Wake Island 42.67 84 *e*P **P 21 43 04.0 -0.9**
comp=Z,118nm,1.2s,mb5.5
WAKE LR LR
comp=Z,955nm,20.0s,MS4.7
WRAB Tennant Creek 42.79 162 P **P 21 43 03.9 -1.8**
comp=Z,265nm,1.2s,mb5.8,SNR=25
WRAB Tennant Creek 42.79 162 *e*P **P 21 43 02.9 -2.8**
WRAB *e*S **S 21 49 24.3 -5.8**
WRAB pmax pmax
comp=Z,85nm,1.1s,mb5.4
WRAB MLR MLR
comp=Z,1μm,22.0s,MS4.8
WRAB Tennant Creek 42.79 162 *e*P **P 21 43 02.9 -2.8**
comp=Z,85nm,1.1s,mb5.4
WRAB *e*S **S 21 49 24.3 -5.8**
WRAB LR LR
comp=Z,1μm,22.0s,MS4.8
WRA Warramunga Arr 42.79 162 P **P 21 43 03.3 -2.4**
comp=Z,13nm,0.5s,mb5.0,baz=344,slow=9.1,SNR=91
WRA ScP ScP 21 48 46.9 -1.7
comp=Z,3.8nm,1.1s,baz=346,slow=4.1,SNR=4.5
WRA S **S 21 49 24.2 -6.0**
comp=Z,13nm,1.1s,baz=346,slow=14,SNR=8.6
ZALV Zalesovo Beam 42.82 329 P **P 21 43 04.5 -1.1**
comp=Z,22nm,0.7s,mb5.0,baz=116,slow=7.3,SNR=81
ZALV S **S 21 49 26.6 -3.4**
comp=Z,0.2nm,0.3s,baz=105,slow=17,SNR=2.3
ZALV LR LR 22 02 27.3
comp=Z,2μm,18.9s,MS5.0,baz=127,slow=38
ZALV Zalesovo Beam 42.82 329 P **P 21 43 04.5 -1.1**
ZALV S **S 21 49 26.6 -3.4**
PET Petropavlovsk 42.90 33 *e*P **P 21 43 06.2 -0.1**
PET *e*S **S 21 49 29.3 -2.0**
PET *e* 21 53 16.7
PET pmax pmax
comp=Z,36nm,0.9s,mb5.1
PET pmax pmax
comp=Z,300nm,4.3s
PET pmax pmax
comp=Z,200nm,6.0s
PET MLR MLR
comp=Z,2μm,18.0s,MS5.0
PET Petropavlovsk 42.90 33 *e*P **P 21 43 06.2 -0.1**
comp=Z,55nm,1.1s,mb5.2
PET LR LR
comp=Z,2μm,19.0s,MS5.0
ULHL Ulahol 43.03 310 P **P 21 43 10.2 +2.7**
SNR=9.2
TKM2 Tokmak 2 43.66 311 P **P 21 43 15.2 +2.6**
SNR=9.5
TKM2 Tokmak 2 43.66 311 *e*P **P 21 43 13.7 +1.1**
TKM2 pmax pmax
comp=Z,47nm,1.1s,mb5.1
TKM2 MLR MLR
comp=Z,3μm,22.0s,MS5.2
TKM2 Tokmak 2 43.66 311 *e*P **P 21 43 13.7 +1.1**
comp=Z,47nm,1.1s,mb5.1
TKM2 LR LR
comp=Z,3μm,22.0s,MS5.2
KZA Kyzart 43.70 309 P **P 21 43 14.9 +2.0**
SNR=21
KBK Karagaybulak 44.06 310 P **P 21 43 17.3 +1.5**
SNR=15
NVS Novosibirsk 44.09 329⇓ *i*P **P 21 43 15.7 -0.2**
NVS *e*PPP 21 45 38.6
NVS *i* S **S 21 49 47.9 -0.7**
NVS *e*SS SS 21 53 06.0 +0.3
NVS pmax pmax
comp=Z,312nm,2.0s,mb5.7
NVS pmax pmax
comp=N,220nm,1.8s
NVS pmax pmax
comp=E,187nm,1.8s
NVS smax
comp=N,88nm,2.2s
NVS smax
comp=E,116nm,2.2s
UCH Uchtor 44.27 309 P **P 21 43 19.5 +2.0**
SNR=12
UCH Uchtor 44.27 309 *e*P **P 21 43 19.4 +1.9**
comp=E,103nm,1.4s,mb5.4
CHMS Chumysh 44.28 310 P **P 21 43 18.4 +0.8**
SNR=11
FRU Bishkek 44.34 310 *e*P **P 21 43 19.5 +1.5**
FRU pmax pmax
comp=Z,120nm,1.9s,mb5.3
AAK Ala-Archa 44.38 310 P **P 21 43 20.7 +2.3**
comp=Z,98nm,1.0s,mb5.5,SNR=10.0
AAK Ala-Archa 44.38 310 P **P 21 43 20.6 +2.2**
SNR=5.6
AAK Ala-Archa 44.38 310 P **P 21 43 19.1 +0.8**
comp=Z,6.2nm,0.7s,mb4.5,baz=123,slow=8.4,SNR=14
KURK Kurchatov 44.44 322 P **P 21 43 18.4 -0.4**
comp=Z,358nm,1.8s,mb5.8,SNR=33
KURK Kurchatov 44.44 322 P **P 21 43 18.2 -0.5**
comp=Z,33nm,0.8s,mb5.1,baz=134,slow=6.7,SNR=136
KURK S **S 21 49 51.9 -2.0**
comp=Z,0.1nm,0.2s,baz=101,slow=3.9,SNR=2.7
KURK Kurchatov 44.44 322 *e*P **P 21 43 18.9 +0.1**
KURK pmax pmax
comp=Z,84nm,1.7s,mb5.2
KURK Kurchatov 44.44 322 *e*P **P 21 43 18.7 -0.1**
comp=Z,171nm,1.4s,mb5.6
KURK LR LR
comp=Z,2μm,21.0s,MS5.1
KURK Kurchatov 44.44 322 P **P 21 43 19.0 +0.2**
SNR=91
USP Ospenovka 44.53 311 P **P 21 43 21.2 +1.7**
SNR=6.3
AML Almayashu 44.84 309 P **P 21 43 23.6 +1.5**
SNR=33
AML Almayashu 44.84 309 *e*P **P 21 43 23.6 +1.6**
AML LR LR
comp=Z,4μm,21.0s,MS5.3
EKS2 Erkin-Say 44.90 310 P **P 21 43 24.0 +1.5**
SNR=12
EKS2 Erkin-Say 44.90 310 *e*P **P 21 43 23.5 +1.0**
comp=Z,42nm,1.2s,mb5.2
EKS2 LR LR
comp=Z,4μm,19.0s,MS5.4
ASAR Alice Springs 46.20 164 P **P 21 43 31.2 -1.8**
comp=Z,9.8nm,0.7s,mb4.9,baz=339,slow=6.5,SNR=56
ASAR ScP ScP 21 48 59.9 -2.7
comp=Z,4.3nm,1.0s,baz=351,slow=5.1,SNR=7.7
ASAR S **S 21 50 15.7 -4.0**
comp=Z,1.9nm,1.0s,baz=347,slow=17,SNR=5.1
SEY Seymchan 46.89 19 *e*P **P 21 43 38.6 +0.7**
KK31 Karatay Array 47.34 310 P **P 21 43 42.3 +0.6**
KK31 pmax pmax
comp=Z,83nm,1.1s,mb5.6
KBL Kabul 47.49 298 *e*P **P 21 43 43.8 +0.7**
KBL pmax pmax
comp=Z,110nm,1.4s,mb5.6
KBL Kabul 47.49 298 *e*P **P 21 43 43.8 +0.8**
comp=Z,110nm,1.4s,mb5.6
MEEK Meekatharra 47.52 183 *e*P **P 21 43 40.9 -2.3**
CTA Charters Tower 47.75 147 *e*P **P 21 43 44.3 -0.8**
comp=Z,23nm,0.8s,mb5.2
CTA *e*S **S 21 50 38.6 -3.4**
CTA Charters Tower 47.75 147 P **P 21 43 44.5 -0.7**
comp=Z,7.4nm,0.5s,mb5.0,baz=328,slow=7.7,SNR=16
CTA LR LR 22 02 18.5
comp=Z,1μm,19.9s,MS4.9,baz=326,slow=34
CTAO Charters Tower 47.75 147 *e*P **P 21 43 44.4 -0.7**
CTAO pmax pmax
comp=Z,67nm,1.2s,mb5.5
CTAO MLR MLR
comp=Z,1μm,19.0s,MS5.0
CTAO Charters Tower 47.75 147 *e*P **P 21 43 44.4 -0.7**
comp=Z,67nm,1.2s,mb5.5
CTAO LR LR
comp=Z,1μm,19.0s,MS5.0
HNR Honiara 48.74 125 LR LR 22 03 28.0
comp=Z,833nm,19.6s,MS4.7,baz=132,slow=35
HNR Honiara 48.74 125 PFAKE 21 44 00.0 +7.1
HNR LR LR
comp=Z,1μm,19.0s,MS4.8
VOSK Vostochnaya 49.60 322 P **P 21 43 58.4 -0.6**
VOSK pmax pmax
comp=Z,47nm,1.1s,mb5.4
BVAR Borovoye Array 50.04 322 P **P 21 44 02.3 -0.1**
comp=Z,3.5nm,0.6s,mb4.6,baz=112,slow=9.6,SNR=19
BVAR PcP PcP 21 45 21.6 -0.6
comp=Z,5.6nm,0.7s,baz=111,slow=3.5,SNR=4.8
BVAR S **S 21 51 11.9 -1.6**
comp=Z,0.5nm,0.8s,baz=30,slow=6.7,SNR=2.0
BRVK Borovoye 50.11 322 P **P 21 44 03.0 +0.1**
comp=Z,272nm,0.9s,mb6.3,SNR=10

BRVK Borovoye 50.11 322 *ce*P **P 21 44 03.5 +0.6**
BRVK pmax pmax
comp=Z,28nm,1.2s,mb5.2
BRVK Borovoye 50.11 322 *e*P **P 21 44 02.9 0.0**
comp=Z,118nm,1.4s,mb5.7
BRVK LR LR
comp=Z,2μm,19.0s,MS5.2
BRVK Borovoye 50.11 322 P **P 21 44 03.4 +0.5**
SNR=50
TIXI Tiksi 50.76 3 *e*P **P 21 44 06.2 -1.4**
TIXI *e* 21 46 06.0
TIXI *e*S **S 21 51 17.0 -6.1**
TIXI pmax pmax
comp=Z,64nm,1.4s,mb5.4
TIXI MLR MLR
comp=Z,3μm,16.0s,MS5.4
TIXI Tiksi 50.76 3 *e*P **P 21 44 06.4 -1.2**
comp=Z,33nm,1.0s,mb5.2
TIXI LR LR
comp=Z,4μm,22.0s,MS5.3
ZRNK Zerenda 50.81 322 P **P 21 44 07.9 -0.3**
ZRNK pmax pmax
comp=Z,124nm,1.5s,mb5.6
FORT Forrest 52.01 172 *e*P **P 21 44 15.9 -1.5**
comp=Z,44nm,0.7s,mb5.5
FORT Forrest 52.01 172 *e*P **P 21 44 16.0 -1.4**
comp=Z,54nm,0.7s,mb5.6
QLP Quilpie 52.43 154 *e*P **P 21 44 19.0 -1.6**
KLBR Kellerberrin 52.49 184 *e*P **P 21 44 18.6 -2.3**
comp=Z,42nm,0.8s,mb5.4
BILL Bilibino 54.60 19⇓*e*P **P 21 44 35.3 -0.7**
BILL *e* 21 46 37.3
BILL *e*S **S 21 52 04.0 -12**
BILL pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
BILL MLR MLR
comp=Z,3μm,17.0s,MS5.4
BILL Bilibino 54.60 19 *e*P **P 21 44 35.4 -0.6**
comp=Z,18nm,0.9s,mb5.1
BILL LR LR
comp=Z,2μm,20.0s,MS5.2
AB31 Akbulak array 55.57 316 P **P 21 44 43.7 +0.3**
AB31 pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
ABKAR Akbulak array 55.57 316 *e*P **P 21 44 43.1 -0.2**
comp=Z,52nm,1.1s,mb5.5
MIDW Midway 55.85 70 PFAKE 21 45 00.0 +14
MIDW LR LR
comp=Z,814nm,19.0s,MS4.8
STKA Stephens Creek 56.21 159 *e*P **P 21 44 47.0 -1.0**
comp=Z,20nm,0.7s,mb5.2
STKA Stephens Creek 56.21 159 P **P 21 44 47.1 -0.9**
comp=Z,32nm,0.8s,mb5.4,baz=338,slow=7.5,SNR=33
STKA LR LR 22 08 22.4
comp=Z,814nm,20.3s,MS4.8,baz=102,slow=36
STKA Stephens Creek 56.21 159 *e*P **P 21 44 47.1 -1.0**
comp=Z,5.5nm,0.8s,mb4.6
ABKT Ailbek 56.34 302 P **P 21 44 53.6 +4.6**
comp=Z,228nm,1.1s,mb6.1,SNR=12
SVE Sverdlovsk 56.50 325⇓*e*P **P 21 44 50.4 +0.5**
SVE *e*S **S 21 52 39.7 -1.7**
SVE pmax pmax
comp=Z,140nm,1.5s,mb5.8
SVE MLR MLR
comp=Z,2μm,13.0s,MS5.4
AKTK Aktyubinsk 56.95 317 P **P 21 44 53.5 +0.3**
AKTO Aktyubinsk 56.95 317 P **P 21 44 53.5 +0.3**
comp=Z,4.4nm,0.6s,mb4.6,baz=89,slow=8.9,SNR=14
ARU Arti 57.54 324 P **P 21 44 57.1 -0.1**
comp=Z,296nm,1.9s,mb6.0,SNR=7.8
ARU Arti 57.54 324 *d i*P **P 21 44 56.6 -0.6**
ARU *e* 21 45 48.4
ARU *e* 21 47 07.1
ARU S **S 21 52 53.2 -1.9**
ARU 21 54 39.1
ARU SS SS 21 56 47.5 +2.8
ARU pmax pmax
comp=Z,13nm,0.7s,mb5.1
ARU MLR MLR
comp=Z,2μm,17.0s,MS5.3
ARU Arti 57.54 324 *e*P **P 21 44 56.4 -0.8**
comp=Z,187nm,1.6s,mb5.9
ARU LR LR
comp=Z,2μm,21.0s,MS5.2
HOQ Hoqain 58.63 285 P **P 21 45 13.0 +7.6**
SNR=5.7
ARMA Armidale 59.03 149 *e*P **P 21 45 06.4 -1.5**
SOKR Solikamsk 59.07 328⇑*i*P **P 21 45 13.0 +5.1**
SOKR S **S 21 53 14.0 -0.9**
SOKR pmax pmax
comp=Z,70nm,1.6s,mb5.4
SOKR MLR MLR
comp=Z,5μm,16.0s,MS5.7
DZM Mont Dzumac 61.62 131 *e*S **S 21 53 43.1 -5.5**
comp=Z,2μm,30.2s
DZM *e*LR LR 22 03 43.1
comp=Z,2μm,22.9s
DZM Mont Dzumac 61.62 131 *e*P **P 21 45 26.1 +0.2**
comp=Z,64nm,1.2s,mb5.6
CNB Canberra Magne 62.17 154 *e*P **P 21 45 28.9 -0.4**
TOO Toolangi 62.71 158 *e*P **P 21 45 33.1 +0.3**
MAK Makhachkala 64.12 308 *e*P **P 21 45 42.3 0.0**
MAK *e* 21 46 16.4
MAK *e* 21 48 01.4
MAK *e*PPP 21 49 37.3
MAK *i* S **S 21 54 17.3 -2.3**
MAK *e* 21 55 30.4
MAK *e*SS SS 21 58 30.2 +1.8
MAK pmax pmax
comp=Z,92nm,1.5s,mb5.6
MAK MLR MLR
comp=Z,2μm,15.0s,MS5.4
FUNA Funafuti 64.17 111 PFAKE 21 45 50.0 +7.0
FUNA LR LR
comp=Z,7μm,20.0s,MS5.9
JOHN Johnston Islan 65.30 81 PFAKE 21 46 00.0 +10
JOHN LR LR
comp=Z,504nm,20.0s,MS4.7
DGRG David-gareji 65.87 307 P **P 21 45 56.4 +2.7**
MTA Mtatsminda 66.27 307 P **P 21 46 02.3 +6.0**
SDPT Sand Point 66.36 38 *e*P **P 21 45 55.1 -1.5**
comp=Z,26nm,0.6s,mb5.4
GNI Garni 66.52 306 *e*P **P 21 45 58.8 +0.9**
GNI pmax pmax
comp=Z,15nm,1.7s
GNI Garni 66.52 306 *e*P **P 21 45 57.9 0.0**
comp=Z,80nm,1.3s,mb5.6
GNI LR LR
comp=Z,969nm,21.0s,MS5.0
GNI Garni 66.52 306 P **P 21 46 05.1 +7.2**
SNR=14
GOR Gori 66.73 308 P **P 21 46 05.7 +6.5**
ZEI Tsey 66.78 309 *e*P **P 21 45 59.3 -0.2**
ZEI *e*S S 21 54 49.4 -2.7
ZEI *e* 21 55 51.8
ZEI pmax pmax
comp=Z,50nm,1.5s,mb5.3
ZEI MLR MLR
comp=Z,1μm,17.0s,MS5.2
ONI Oni 67.13 308 P **P 21 46 08.5 +6.7**
VRHR Novokhopersk 67.35 318 *e*P **P 21 46 02.2 -0.8**
VRHR pmax pmax
comp=N,8.0nm,0.8s
VRHR pmax pmax
comp=E,10.0nm,0.8s
VRHR pmax pmax
comp=Z,40nm,0.8s,mb5.5
KIV Kislovodsk 67.49 310 P **P 21 46 04.6 +0.6**
comp=Z,259nm,1.1s,mb6.2,SNR=6.0
KIV Kislovodsk 67.49 310⇑*e*P **P 21 46 04.5 +0.5**
KIV *e* 21 48 33.0
KIV *e*S S 21 55 02.4 +1.7
KIV pmax pmax
comp=Z,19nm,1.0s,mb5.1
KIV MLR MLR
comp=Z,1μm,16.0s,MS5.2
KIV Kislovodsk 67.49 310 *e*P **P 21 46 04.3 +0.2**
comp=Z,50nm,1.0s,mb5.5
KIV LR LR
comp=Z,1μm,21.0s,MS5.1
KIV Kislovodsk 67.49 310 P **P 21 46 04.4 +0.4**
SNR=34
MSVF Nonsavu 67.84 120 *e*P **P 21 46 06.7 +0.2**
comp=Z,34nm,1.0s,mb5.3
MSVF LR LR
comp=Z,767nm,19.0s,MS5.0

BHD Baghdad 67.98 298 *ex* x 21 46 07.0
BHD *ex* x 21 46 36.0
BHD *ex* x 21 48 36.0
BHD *ex* x 21 55 01.0
TTA Tatalina 68.21 29 *e*P **P 21 46 08.8 +0.7**
SVW2 Sparrevohn 68.55 31 *e*P **P 21 46 11.3 +1.0**
comp=Z,14nm,1.2s,mb4.8
VORD Divnogorie 68.83 318 *e*P **P 21 46 14.8 +2.6**
VORD pmax pmax
comp=Z,40nm,1.5s,mb5.1
VORD pmax pmax
comp=N,20nm,0.7s
VORD pmax pmax
comp=E,20nm,0.7s
VSR Storozhevoye 68.87 318 *e*P **P 21 46 12.5 0.0**
VSR *e*S S 21 55 14.4 -2.5
VSR pmax pmax
comp=E,30nm,1.3s
VSR pmax pmax
comp=Z,40nm,1.3s,mb5.2
VSR pmax pmax
comp=N,8.0nm,0.6s
VSR smax
comp=N,120nm,4.3s
VSR smax
comp=E,210nm,4.3s
VSR smax
comp=Z,80nm,4.3s
VSR MLR MLR
comp=N,790nm,18.0s,MS5.2
VSR MLR MLR
comp=E,970nm,18.0s,MS5.2
VSR MLR MLR
comp=Z,1μm,18.0s,MS5.2
MOS Moscow 69.21 323 *e*P **P 21 46 15.6 +1.1**
MOS *e* 21 46 21.5
MOS *e* 21 46 37.4
MOS *e* 21 48 47.1
MOS *e*S S 21 55 18.5 -2.2
MOS pmax pmax
comp=Z,32nm,0.9s,mb5.2
MOS MLR MLR
comp=E,1μm,15.0s
MOS MLR MLR
comp=Z,2μm,15.0s,MS5.5
MSEY Mahe Island 69.21 256 PFAKE 21 46 30.0 +15
MSEY LR LR
comp=Z,593nm,20.0s,MS4.8
LVZ Lovozero 69.33 336 PFAKE 21 46 30.0 +15
LVZ LR LR
comp=Z,1μm,19.0s,MS5.2
SOC Sochi 69.68 310 *e*P **P 21 46 20.2 +2.5**
SOC *e**SP sP 21 46 29.8 +8.9
SOC *e* 21 46 38.0
SOC *e*S S 21 55 19.6 -7.1
SOC *e* 21 56 10.8
SOC *e*SS SS 21 59 55.0 +0.6
SOC pmax pmax
comp=Z,23nm,1.2s,mb5.0
SOC MLR MLR
comp=Z,1μm,12.0s,MS5.3
APA Apatity 69.83 336⇑*e*P **P 21 46 19.0 +0.8**
APA *i* 21 46 42.8
APA *i* S S 21 55 28.0 +0.3
APA *e* 21 56 00.0
APA *e*SSS 22 03 08.0
APA pmax pmax
comp=Z,21nm,1.0s,mb5.0
APA MLR MLR
comp=Z,2μm,17.0s,MS5.5
OBN Obninsk 69.89 322 *d i*P **P 21 46 19.3 +0.6**
OBN *e* 21 48 52.4
OBN *i* S S 21 55 29.0 +0.3
OBN pmax pmax
comp=Z,12nm,1.0s,mb4.8
OBN MLR MLR
comp=Z,2μm,18.0s,MS5.4
OBN Obninsk 69.89 322 *e*P **P 21 46 19.6 +0.9**
comp=Z,310nm,2.0s,mb5.9
OBN LR LR
comp=Z,2μm,19.0s,MS5.3
PPLA Purkeypile 69.95 29 *e*P **P 21 46 18.9 -0.1**
comp=Z,56nm,1.1s,mb5.4
RSO Redoubt South 70.00 32 *e*P **P 21 46 19.8 +0.5**
OHAK Old Harbor 70.17 35 *e*P **P 21 46 20.3 -0.1**
comp=Z,29nm,1.2s,mb5.1
COLD Coldfoot 70.24 24 *e*P **P 21 46 20.1 -0.6**
comp=Z,53nm,1.2s,mb5.3
BPAW Bear Paw Mtn. 70.33 28 *e*P **P 21 46 21.0 -0.3**
comp=Z,71nm,1.2s,mb5.5
KDAK Kodiak Island 70.46 35 P **P 21 46 21.5 -0.7**
comp=Z,301nm,0.7s,mb6.3,SNR=8.8
KDAK Kodiak Island 70.46 35 P **P 21 46 20.9 -1.3**
comp=Z,31nm,0.9s,mb5.2,baz=315,slow=3.0,SNR=23
KDAK Kodiak Island 70.46 35 *ce*P **P 21 46 22.1 -0.1**
KDAK Kodiak Island 70.46 35 *e*P **P 21 46 21.4 -0.8**
comp=Z,94nm,1.2s,mb5.6
KDAK LR LR
comp=Z,966nm,19.0s,MS5.1
TRF Thorofare Moun 70.73 28 *e*P **P 21 46 23.8 0.0**
comp=Z,15nm,0.7s,mb5.0
ANN Anapa 71.07 312 *e*P **P 21 46 25.0 -1.2**
ANN *e* 21 49 05.5
ANN *e*S S 21 55 41.4 -1.5
ANN pmax pmax
comp=Z,133nm,1.4s,mb5.7
MCK McKinley 71.28 28 *e*P **P 21 46 27.4 +0.3**
MCK pmax pmax
comp=Z,115nm,1.2s,mb5.7
MCK McKinley 71.28 28 *e*P **P 21 46 27.4 +0.3**
comp=Z,115nm,1.2s,mb5.7
JOF Joensuu 71.36 331 *e*P **P 21 46 26.4 -1.2**
JOF pmax pmax
comp=Z,31nm,0.7s,mb5.3
JOF Joensuu 71.36 331 *ep* **P 21 46 26.4 -1.2**
comp=Z,31nm,0.7s,mb5.3
RC01 Rabbit Creek A 71.36 31 *e*P **P 21 46 26.8 -0.9**
comp=Z,39nm,1.2s,mb5.2
COLA College 71.55 27 *e*P **P 21 46 29.7 +1.0**
COLA pmax pmax
comp=Z,14nm,0.8s,mb4.9
COLA MLR MLR
comp=Z,625nm,21.0s,MS4.8
COLA College 71.55 27 *e*P **P 21 46 29.7 +1.0**
comp=Z,14nm,0.8s,mb4.9
COLA LR LR
comp=Z,625nm,21.0s,MS4.8
PMR Palmer 71.56 30 *e*P **P 21 46 28.6 -0.2**
PMR pmax pmax
comp=Z,36nm,1.0s,mb5.3
PMR Palmer 71.56 30 *e*P **P 21 46 28.6 -0.2**
comp=Z,36nm,1.0s,mb5.2
KEV Kevo 71.81 339 *e*P **P 21 46 29.0 -1.2**
KEV pmax pmax
comp=Z,22nm,0.7s,mb5.2
KEV Kevo 71.81 339 *e*P **P 21 46 29.0 -1.2**
comp=Z,22nm,0.7s,mb5.2
KEV Kevo 71.81 339 *ep* **P 21 46 29.0 -1.2**
comp=Z,22nm,0.7s,mb5.2
ARCES ARCESS Array B 72.37 338 P **P 21 46 32.7 -0.9**
comp=Z,5.5nm,0.8s,mb4.5,baz=78,slow=7.9,SNR=21
ARE0 ARCESS Array S 72.37 338 *e*P **P 21 46 33.0 -0.5**
BJO Bjornoya 72.97 344 AMS AMS 22 25 21.5
comp=Z,2μm,10.7s,MS5.7
KBS Kingsbay 73.03 349 *e*P **P 21 46 37.9 +0.6**
KBS *e*S S 21 56 07.0 +2.5
KBS AMS AMS 22 22 09.6
comp=Z,4μm,19.4s,MS5.7
DIV Divide 73.24 30 *e*P **P 21 46 39.9 +1.1**
comp=Z,130nm,1.3s,mb5.7
SIM Simferopol' 73.34 312 *e*P **P 21 46 42.9 +3.1**
SIM *e*S S 21 56 09.0 0.0
SIM pmax pmax
comp=Z,30nm,1.1s,mb5.1
MENT Mentasta 73.75 28 *e*P **P 21 46 42.7 +0.9**
KAF Kangasniemi 73.80 331 *e*P **P 21 46 40.7 -1.4**
KAF pmax pmax
comp=Z,20nm,0.7s,mb5.2
KAF Kangasniemi 73.80 331 *e*P **P 21 46 40.7 -1.4**
comp=Z,20nm,0.7s,mb5.2
KAF Kangasniemi 73.80 331 *ep* **P 21 46 40.7 -1.4**
comp=Z,20nm,0.7s,mb5.2
BMRM Bremner River 73.83 30 *e*P **P 21 46 43.2 +0.9**
comp=Z,64nm,1.1s,mb5.5
BMRM *ep*P pP 21 46 51.5 +6.8
FINES FINESS Array B 74.07 330 P **P 21 46 42.0 -1.8**
comp=Z,4.5nm,0.9s,mb4.4,baz=88,slow=6.3,SNR=12
FINES LR LR 22 23 23.2
comp=Z,2μm,19.6s,MS5.4,baz=75,slow=39
EGAK Eagle 74.36 26 *e*P **P 21 46 46.1 +0.7**
comp=Z,36nm,1.0s,mb5.2
EGAK LR LR
comp=Z,702nm,19.0s,MS5.0
VSU Vasula 74.52 327 *i* P **P 21 46 46.7 +0.3**
VSU pmax pmax
comp=Z,13nm,1.0s,mb4.8
TRO Tromso 74.56 339 *e*P **P 21 46 47.8 +1.3**
TRO *e*S S 21 56 22.1 +0.2
TRO AMS AMS 22 26 01.8
comp=Z,2μm,23.8s,MS5.4
BR131 Keskin Array S 74.96 307 *e*P **P 21 46 48.9 -0.4**
comp=Z,15nm,1.1s,mb4.8
BR131 LR LR
comp=Z,614nm,22.0s,MS4.9
BRTR Keskin Array B 74.96 307 P **P 21 46 48.7 -0.7**
comp=Z,1.6nm,0.6s,mb4.1,baz=114,slow=5.6,SNR=12
BRTR LR LR 22 25 34.1
comp=Z,400nm,21.3s,MS4.7,baz=245,slow=40
BRTR Keskin Array B 74.96 307 *ce*P **P 21 46 49.4 +0.1**
BRTR pmax pmax
comp=Z,2.0nm,0.6s
AKASG Malin Array Be 75.13 319 P **P 21 46 49.6 -0.5**
comp=Z,1.0nm,0.5s,mb4.0,baz=60,slow=6.6,SNR=6.1
AKASG LR LR 22 24 09.5
comp=Z,685nm,19.3s,MS5.0,baz=60,slow=39
AKBB Malin Array Si 75.13 319 *e*P **P 21 46 50.0 -0.1**
AKBB *e**PP pP 21 46 57.6 +5.1
KIEV Kiev 75.14 319 *e*P **P 21 46 48.8 -1.4**
KIEV *e**PP pP 21 46 57.0 +4.4
KIEV pmax pmax
comp=Z,35nm,1.4s,mb5.1
KIEV MLR MLR
comp=Z,775nm,21.0s,MS5.0
KIEV Kiev 75.14 319 *e*P **P 21 46 48.8 -1.3**
comp=Z,35nm,1.4s,mb5.1
KIEV *ep*P pP 21 46 57.0 +4.4
KIEV LR LR
comp=Z,775nm,21.0s,MS5.0
DAWY Dawson 75.30 27 *e*P **P 21 46 49.6 -1.2**
IDID Didziasalis 75.35 324 *e*P **P 21 46 56.4 +5.2**
MMAI Mount Meron Ar 75.36 300 P **P 21 46 51.7 -0.1**
comp=Z,1.7nm,0.8s,mb4.0,baz=54,slow=11,SNR=4.2
MMAI LR LR 22 26 45.7
comp=Z,504nm,18.7s,MS4.8,baz=90,slow=41
NACGM Naroch 75.44 323 *e* **P 21 46 50.0 -1.8**
IZAR Zarasai 75.50 324 *e*P **P 21 46 57.1 +5.0**
ISAL Salakas 75.62 324 *e*P **P 21 46 58.1 +5.3**
IIGN Ignalina 75.63 324 *e*P **P 21 46 58.0 +5.2**
INK Inuvik 76.10 22 P **P 21 46 53.5 -1.8**
comp=Z,4.9nm,0.7s,mb4.6,baz=311,slow=7.1,SNR=7.2
INK Inuvik 76.10 22 *e*P **P 21 46 54.3 -1.0**
INK *e**PP pP 21 47 03.2 +5.5
INK pmax pmax
comp=Z,90nm,1.4s
INK Inuvik 76.10 22 *e*P **P 21 46 54.3 -1.0**
comp=Z,90nm,1.4s,mb5.5
INK *ep*P pP 21 47 03.2 +5.5
KIS Kishinev 76.39 315 *e*P **P 21 46 57.0 -0.4**
KIS Kishinev 76.39 315 *e*PP PP 21 50 00.0 +11
KIS *e*S S 21 56 39.0 -3.9
KIS Kishinev 76.39 315 *e*P **P 21 46 57.0 -0.4**
KIS *e* 21 47 04.0
KIS *e* 21 47 09.0
KIS *e*S S 21 56 39.0 -3.9
KIS MLR MLR
comp=Z,1μm,18.0s,MS5.3
KIS MLR MLR
comp=N,800nm,17.0s,MS5.3
KIS MLR MLR
comp=E,1μm,19.0s,MS5.3
KIS MLR MLR
comp=Z,1μm,18.0s
CSS Prodhromos 76.48 302 *e*P **P 21 46 56.4 -1.8**
comp=Z,41nm,1.0s,mb5.3
CSS LR LR
comp=Z,805nm,22.0s,MS5.0
ALE Alert 76.56 0 P **P 21 47 00.8 +3.0**
comp=Z,132nm,1.4s,mb5.7,SNR=6.0
PNL Peninsula 76.69 31 *e*P **P 21 46 59.5 +0.8**
comp=Z,31nm,1.0s,mb5.2
PNL *ep*P pP 21 47 07.8 +6.6
RAO Raoul Island 77.17 128 P **P 21 46 59.2 -2.8**
comp=Z,89nm,0.3s,mb6.2,baz=138,slow=18,SNR=2.4
TIRR Tirgusor 77.39 313⇑*i*P **P 21 47 09.0 +5.9**
SUW Suwalki 77.71 323 *e*P **P 21 47 04.6 -0.1**
SUW *e*PcP PcP 21 47 13.0 -1.7
SUW *e*S S 21 56 52.5 -4.6
SUW LMZ 22 26 43.7
comp=Z,2μm,16.7s
SUW Suwalki 77.71 323 *e*P **P 21 47 04.6 -0.1**
SUW *e* 21 47 13.0
SUW *e*S S 21 56 52.4 -4.7
SUW MLR MLR
comp=Z,2μm,16.7s,MS5.6
SUW Suwalki 77.71 323 *e*P **P 21 47 04.4 -0.3**
comp=Z,56nm,1.0s,mb5.5
SUW *ep*P pP 21 47 13.2 +6.1
PSN Preselentsi 77.78 312 P PcP 21 47 13.7 -1.6
TESR 77.96 315 P PcP 21 47 14.5 -1.5
TESR 77.96 315⇓*i*P **P 21 47 11.6 +5.4**
GRER 78.09 314 P PcP 21 47 17.2 +0.7
VRI Vrincioaia 78.11 315⇑P **P 21 47 11.4 +4.4**
VRI Vrincioaia 78.11 315 P PcP 21 47 16.1 -0.5
VRI Vrincioaia 78.11 315⇑*i*P **P 21 47 11.4 +4.4**
PLOR Plostina 78.16 315 P PcP 21 47 15.5 -1.4
BURAR Bucovina Array 78.55 317⇑*i*P **P 21 47 08.5 -0.9**
BUR08 Bucovina Ar. S 78.55 317 *e*P **P 21 47 08.9 -0.5**
LVV L'vov 78.58 319 *e*P **P 21 47 13.2 +3.7**
LVV *e*S S 21 57 10.6 +4.1
LVV *e*PS 21 57 44.0
LVV MLR MLR
comp=Z,1μm,15.0s,MS5.3
LVV MLR MLR
comp=N,700nm,14.0s,MS5.2
LVV MLR MLR
comp=E,500nm,15.0s,MS5.2
SKAG Skagway 78.70 30 *e*P **P 21 47 10.2 +0.2**
comp=E,68nm,1.4s,mb5.4
MLR Muntele Rosu 78.75 314⇑P **P 21 47 16.3 +5.7**
MLR Muntele Rosu 78.75 314 P **P 21 47 17.1 +6.6**
MLR Muntele Rosu 78.75 314⇑*i*P **P 21 47 16.3 +5.7**
NSS Namsos 79.03 335 *e*P **P 21 47 12.4 +0.6**
RPZ Rata Peaks 79.09 146 P **P 21 47 09.4 -2.9**
comp=E,35nm,0.9s,mb5.3,baz=62,slow=4.3,SNR=5.5
VOIR 79.36 315⇓P **P 21 47 20.4 +6.5**
VOIR 79.36 315⇓*i*P **P 21 47 20.4 +6.5**
DAG Danmarks Havn 79.39 351 *e*P **P 21 47 13.0 -0.6**
DAG pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
DAG Danmarks Havn 79.39 351 *i* P **P 21 47 13.0 -0.6**
comp=Z,3.0nm,0.8s,mb4.3
KWP Kalwaria Pacla 79.45 319 *e*P **P 21 47 19.3 +4.9**
KWP *ep*P pP 21 47 22.6 +5.9
KWP *e*PP PP 21 50 12.1 -2.0
KWP LMZ 22 24 45.3
comp=Z,2μm,25.9s
KWP Kalwaria Pacla 79.45 319⇑P **P 21 47 14.9 +0.6**
KWP Kalwaria Pacla 79.45 319 *e*P **P 21 47 15.2 +0.9**
comp=Z,205nm,1.7s,mb5.8
KWP LR LR
comp=Z,1μm,20.0s,MS5.3
KWP Kalwaria Pacla 79.45 319⇑*i*P **P 21 47 14.9 +0.6**
SNZO South Karori 79.50 142 PFAKE 21 47 30.0 +15
SNZO LR LR
comp=Z,814nm,20.0s,MS5.1
WAR Warsaw 79.54 322 *e*P **P 21 47 15.9 +1.1**
WAR *e*PcP PcP 21 47 18.9 -3.8
WAR LMZ 22 21 51.0
comp=Z,1μm,23.1s
SIT Sitka 79.62 33 *e*P **P 21 47 14.6 -0.5**
SIT *e**PP pP 21 47 24.3 +6.8
SIT pmax pmax
comp=Z,133nm,1.4s,mb5.7
SIT Sitka 79.62 33 *e*P **P 21 47 14.6 -0.5**
comp=Z,133nm,1.4s,mb5.7
SIT *ep*P pP 21 47 24.3 +6.8
UZH Uzhgorod 80.05 318 *e*P **P 21 47 22.0 +4.4**
UZH *e*S S 21 57 22.6 +0.4
UZH *e*PS 21 58 26.4
KDZ Kurdzhali 80.36 311 P PcP 21 47 27.9 +1.4

STHS Stebnicka Huta 80.42 319 *e*P **P** **21 47 25.0 +5.4**
STHS *e* 21 57 30.0
STHS pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
STHS Stebnicka Huta 80.42 319 *e*P **P** **21 47 25.0 +5.4**
comp=Z,6.2nm,1.2s,mb4.4
STHS *e*PP PcP 21 47 28.3 +1.7
STHS *e* 21 57 30.0
STHS Stebnicka Huta 80.42 319 *e*P **P** **21 47 25.0 +5.4**
STHS *e*pP pP 21 47 28.3 +6.3
STHS *e*pP S 21 57 30.0 +3.9
DRGR 80.43 316 P **P** **21 47 22.1 +2.6**
CRVS Cervenica-Dubn 80.47 319 *e*P **P** **21 47 25.7 +5.8**
CRVS pmax pmax
comp=Z,45nm,1.7s,mb5.1
CRVS Cervenica-Dubn 80.47 319 *e*P **P** **21 47 25.7 +5.8**
comp=Z,45nm,1.7s,mb5.1
CRVS *e*PP PcP 21 47 29.2 +2.3
CRVS Cervenica-Dubn 80.47 319 *e*P **P** **21 47 25.7 +5.8**
CRVS *e*pP pP 21 47 29.2 +6.9
PLD Plovdiv 80.71 311 P **P** **21 47 29.2 +7.9**
RZN Rozhen 80.84 311 P **P** **21 47 29.4 +7.4**
RZN P pP 21 47 31.7 +7.2
NB2 NORSAR Subarra 80.91 332 P **P** **21 47 20.4 -1.6**
comp=Z,28nm,1.4s,mb5.0,baz=62,slow=5.3
NOA NORSAR Array B 80.91 332 P **P** **21 47 19.8 -2.2**
comp=Z,1.7nm,0.8s,mb4.0,baz=64,slow=5.3,SNR=5.0
NOA LR LR 22 27 19.2
comp=Z,3μm,18.0s,MS5.7,baz=55,slow=39
PGB Panagyurishte 80.93 312 P **P** **21 47 30.6 +8.1**
NIE Niedzica 80.98 319 *e*P **P** **21 47 24.9 +2.3**
OJC Ojcow 80.99 320 *e*P **P** **21 47 20.2 -2.4**
OJC *e* 21 47 26.4
OJC *e*S S 21 57 27.5 -4.5
OJC *e* 21 57 36.3
OJC MLR MLR
comp=Z,2μm,18.5s,MS5.4
NAO01 NORSAR Array S 81.15 332 PFAKE 21 47 30.0 +6.8
NAO01 LR LR
comp=Z,3μm,19.0s,MS5.7
KECS Kecovo 81.23 319 *e*P **P** **21 47 29.1 +5.2**
KECS pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
KECS Kecovo 81.23 319 *e*P **P** **21 47 29.1 +5.2**
comp=Z,7.7nm,1.2s,mb4.5
KECS *e*PP PcP 21 47 32.9 +2.7
KECS Kecovo 81.23 319 *e*P **P** **21 47 29.1 +5.2**
KECS *e*pP pP 21 47 32.9 +6.6
GKP Gorka Klasztor 81.28 324 *e*P **P** **21 47 25.7 +1.6**
GKP *e*pP pP 21 47 31.8 +5.3
GKP *e*S S 21 57 31.8 -3.2
GKP *e*SKS 21 57 40.0
GKP LMZ 22 28 49.5
comp=Z,2μm,20.2s
CRAG Craig 81.39 34 *e*P **P** **21 47 25.8 +1.2**
comp=Z,34nm,1.0s,mb5.2
CRAG *e*pP pP 21 47 33.5 +6.5
MMB Musomiste 81.57 311 P PcP 21 47 37.3 +5.5
MMB Musomiste 81.57 311 *e*P S 21 57 35.6 -2.8
VTS Vitosha 81.58 312 ⇓P **P** **21 47 26.2 +0.3**
VTS Vitosha 81.58 312 P **P** **21 47 27.7 +1.8**
VTS Vitosha 81.58 312 ⇓*i*P **P** **21 47 26.2 +0.3**
DLBC Dease Lake 81.63 30 P **P** **21 47 25.6 -0.2**
comp=Z,7.6nm,1.0s,mb4.6,baz=298,slow=4.4,SNR=13
DLBC Dease Lake 81.63 30 *e*P **P** **21 47 26.1 +0.2**
DLBC *e*pP pP 21 47 35.3 +7.1
RES Resolute Bay 81.70 9 *e*P **P** **21 47 24.9 -1.1**
RES *e**PP pP 21 47 34.1 +5.7
RES pmax pmax
comp=Z,75nm,1.2s,mb5.5
RES Resolute Bay 81.70 9 *e*P **P** **21 47 24.9 -1.0**
comp=Z,76nm,1.2s,mb5.5
RES *e*pP pP 21 47 34.1 +5.7
MOL Molde 81.70 335 AMS AMS 22 28 13.9
comp=Z,2μm,14.0s,MS5.7
BSD Bornholm Skovb 81.77 326 *i*P **P** **21 47 31.8 +5.2**
BSD *e*S S 21 57 39.7 -0.2
BSD MLR MLR
comp=Z,2μm,19.0s,MS5.4
BSD Bornholm Skovb 81.77 326 *i*P **P** **21 47 31.8 +5.2**
BSD Bornholm Skovb 81.77 326 *e*S S 21 57 39.7 -0.2
BSD
comp=Z,2μm,19.0s
JMIC Jan Mayen 81.78 345 *e*P **P** **21 47 32.2 +5.7**
JMIC *e*SKS 21 57 44.4
JMIC AMS AMS 22 26 42.5
comp=Z,2μm,17.5s,MS5.5
PSZ Piszkesteto 81.80 318 *e*P **P** **21 47 27.3 +0.3**
PSZ *e**PP pP 21 47 34.8 +5.4
PSZ pmax pmax
comp=Z,66nm,1.8s,mb5.3
PSZ MLR MLR
comp=Z,1μm,21.0s,MS5.3
PSZ Piszkesteto 81.80 318 *e*P **P** **21 47 27.3 +0.3**
comp=Z,66nm,1.8s,mb5.3
PSZ *e*pP pP 21 47 34.8 +5.4
PSZ LR LR
comp=Z,1μm,21.0s,MS5.3
LIKS Likavka 81.86 319 *e*P **P** **21 47 35.4 +8.2**
LIKS Likavka 81.86 319 *e*pP pP 21 47 35.4 +5.7
KKB Krupnik 81.92 312 P **P** **21 47 25.1 -2.7**
KKB Krupnik 81.92 312 *e*P S 21 57 44.9 +2.9
OKC Ostrava-Krasne 82.12 320 *e*P **P** **21 47 30.6 +2.0**
OKC *e* 21 57 42.0
OKC MLR MLR
comp=Z,1μm,14.7s,MS5.5
OKC Ostrava-Krasne 82.12 320 *e*P **P** **21 47 30.6 +2.0**
OKC *e*SKS 21 57 42.0
OKC Ostrava-Krasne 82.12 320 *e*P **P** **21 47 30.6 +2.0**
OKC *e*S S 21 57 42.0 -1.8
OKC AMS AMS 22 31 40.0
comp=Z,1μm,14.7s
VYHS Vyhne 82.24 319 *e*P **P** **21 47 31.5 +2.2**
VYHS pmax pmax
comp=Z,14nm,1.4s,mb4.7
VYHS Vyhne 82.24 319 *e*P **P** **21 47 31.5 +2.2**
comp=Z,14nm,1.4s,mb4.7
VYHS *e*PP PcP 21 47 38.3 +3.7
VYHS *e*PP PP 21 50 29.3 -7.9
VYHS Vyhne 82.24 319 *e*P **P** **21 47 31.5 +2.2**
VYHS *e*pP pP 21 47 38.3 +6.6
VYHS *e*PP PP 21 50 29.2 -8.0
KONO Kongsberg 82.28 332 *e*P **P** **21 47 35.1 +5.8**
KONO *e*S S 21 57 47.8 +2.8
KONO AMS AMS 22 25 41.0
comp=Z,2μm,20.8s,MS5.4
KOLL Kolacno 82.47 319 *e*P **P** **21 47 35.0 +4.5**
KOLL Kolacno 82.47 319 *e*P **P** **21 47 35.0 +4.5**
MORC Moravsky Berou 82.51 321 *e*P **P** **21 47 30.5 -0.1**
MORC *e**PP pP 21 47 40.0 +6.9
MORC pmax pmax
comp=Z,46nm,1.9s,mb5.2
MORC Moravsky Berou 82.51 321 *e*P **P** **21 47 30.5 -0.2**
comp=Z,46nm,1.9s,mb5.2
MORC *e*pP pP 21 47 40.0 +6.9
BUD Budapest 82.51 318 ⇓*e*pP pP 21 47 33.9 +0.7
ABPO Ambohimpanom 82.58 246 PFAKE 21 47 40.0 +8.5
ABPO LR LR
comp=Z,664nm,20.0s,MS5.0
COP Copenhagen 82.79 327 *i*P **P** **21 47 34.4 +2.4**
COP Copenhagen 82.79 327 *i*P **P** **21 47 34.4 +2.4**
KSP Ksiaz 82.80 322 *e*P **P** **21 47 33.8 +1.6**
KSP *e*pP pP 21 47 40.7 +6.1
KSP *e*S S 21 57 50.4 -0.3
KSP LMZ 22 29 31.7
comp=Z,4μm,19.4s
KSP Ksiaz 82.80 322 *e*P **P** **21 47 32.5 +0.3**
KSP *e*S S 21 57 48.0 -2.7
KSP MLR MLR
comp=Z,4μm,19.4s,MS5.8
DPC Dobruska-Polom 82.99 321 *e*P **P** **21 47 34.3 +1.2**
DPC *e* 21 47 41.1
DPC *e* 21 57 48.4
DPC MLR MLR
comp=Z,1μm,19.2s,MS5.3
DPC Dobruska-Polom 82.99 321 *e*P **P** **21 47 34.3 +1.2**
DPC *e* 21 47 41.1
DPC *e*SKS 21 57 48.4
DPC LR LR
comp=Z,1μm,19.2s,MS5.3
DPC Dobruska-Polom 82.99 321 *e*P **P** **21 47 34.3 +1.2**
DPC *e*x x 21 47 41.1
DPC *e*S S 21 57 48.4 -4.2
DPC AMS AMS 22 24 40.0
comp=Z,1μm,19.2s
UPC Upice 83.11 322 *e*P **P** **21 47 36.4 +2.7**
FOO Floro 83.22 334 *e*P **P** **21 47 38.9 +4.8**
FOO *e*S S 21 57 55.5 +1.0
FOO *e*SS SS 22 03 19.8 +1.8
FOO AMS AMS 22 30 03.9
comp=Z,3μm,14.1s,MS5.8
ZST Bratislava 83.42 319 *e*P **P** **21 47 37.5 +2.1**
ZST Bratislava 83.42 319 *e*P **P** **21 47 37.5 +2.1**
BER Bergen 83.75 333 *e*P **P** **21 47 42.2 +5.3**
BER *e*SKS 21 57 59.5
BER *e*SS SS 22 03 30.8 +4.9
BER AMS AMS 22 28 42.1
comp=Z,4μm,17.5s,MS5.8
TREC Trest 83.93 321 *e*P **P** **21 47 39.1 +1.1**
TREC *e* 21 57 58.6
TREC MLR MLR
comp=Z,2μm,19.1s,MS5.4
TREC Trest 83.93 321 *e*P **P** **21 47 39.1 +1.1**
TREC *e*SKS 21 57 58.6
TREC AMS AMS 22 29 00.0
comp=Z,2μm,19.1s
PVCC Panska Ves 83.93 322 *e*P **P** **21 47 39.9 +1.9**
PVCC *e* 21 47 46.7
PVCC MLR MLR
comp=Z,2μm,16.7s,MS5.5
PVCC Panska Ves 83.93 322 *e*P **P** **21 47 39.9 +1.9**
PVCC *e* 21 47 46.7
PVCC LR LR
comp=Z,2μm,16.7s,MS5.5
PVCC Panska Ves 83.93 322 *e*P **P** **21 47 39.9 +1.9**
PVCC *e*x x 21 47 46.7
PVCC AMS AMS 22 30 40.0
comp=Z,2μm,16.7s
MUD Monsted U'grnd 84.03 329 *i*P **P** **21 47 42.4 +4.0**
MUD Monsted U'grnd 84.03 329 *i*P **P** **21 47 42.4 +4.0**
BRG Berggiesshubel 84.14 323 *e*P **P** **21 47 40.2 +1.2**
comp=Z,24nm,1.2s,mb5.2
BRG Berggiesshubel 84.14 323 *e*P **P** **21 47 40.6 +1.6**
comp=Z,6.8nm,1.1s,mb4.7
BRG *e* 21 47 46.8
comp=Z,24nm,1.2s
BRG PP PP 21 50 53.0 +0.3
BRG S S 21 57 59.0 -5.1
BRG PS 21 58 44.0
PRU Pruhonice 84.18 322 *e*P **P** **21 47 38.4 -0.9**
PRU *e* 21 47 45.0
PRU *e* 21 58 00.6
PRU MLR MLR
comp=Z,2μm,18.2s,MS5.5
PRU Pruhonice 84.18 322 *e*P **P** **21 47 38.4 -0.9**
PRU *e* 21 47 45.0
PRU *e*SKS 21 58 00.6
PRU LR LR
comp=Z,2μm,18.2s,MS5.5
PRU Pruhonice 84.18 322 *e*P **P** **21 47 38.4 -0.9**
PRU *e*x x 21 47 45.0
PRU *e*SKS 21 58 00.6
PRU AMS AMS 22 30 00.0
comp=Z,2μm,18.2s
CONA Conrad Observa 84.28 319 ⇑*i*sP sP 21 47 41.3 -1.9
comp=Z,27nm,1.4s
TIR Tirane 84.36 312 PFAKE 21 47 50.0 +10
TIR LR LR
comp=Z,1μm,19.0s,MS5.2
CLL Collm 84.47 323 *e*P **P** **21 47 41.7 +1.0**
comp=Z,28nm,1.2s,mb5.3
CLL Collm 84.47 323 *i*P **P** **21 47 41.6 +0.9**
CLL *i* 21 47 47.7
CLL *e*S S 21 58 07.0 -0.5
CLL pmax pmax
comp=Z,10.0nm,1.2s,mb4.8
CLL Collm 84.47 323 *i*P **P** **21 47 41.6 +0.9**
comp=Z,10.0nm,1.2s,mb4.8
CLL *i* pP 21 47 45.4 +2.3
CLL *i* 21 47 47.7
CLL *e*S S 21 58 07.0 -0.5
CLL *e*P'P' 22 13 55.0
CLL Collm 84.47 323 *i*P **P** **21 47 41.6 +0.9**
comp=Z,10.0nm,1.2s,mb4.8
CLL *i*PcP PcP 21 47 45.4 +1.1
comp=Z,11nm,1.0s
CLL *i* 21 47 47.7
comp=Z,27nm,1.2s
CLL *i* 21 48 04.6
CLL *e*PP PP 21 51 02.0 +6.6
CLL *e* 21 51 08.0
CLL *e*S S 21 58 07.0 -0.5
CLL *e*PS 21 59 00.0
CLL *e*SS SS 22 03 36.0 -1.0
CLL *e* 22 04 24.0
CLL *e*SSS 22 07 30.0
CLL *e*PKPPKPdf 22 13 55.0
CLL LmH 22 23 00.0
comp=N,3μm,20.9s
CLL LmH 22 23 00.0
comp=E,2μm,20.5s
CLL LmV 22 30 00.0
comp=N,2μm,18.1s
CLL LmV 22 30 00.0
comp=E,3μm,20.2s
KOGS Kog 84.67 318 *e*P **P** **21 47 43.4 +1.5**
KOGS *i*S S 21 58 07.5 -2.2
KMBO Kilima Mbogo 84.68 267 *e*P **P** **21 47 42.3 -0.2**
KMBO pmax pmax
comp=Z,15nm,1.0s
KMBO MLR MLR
comp=Z,525nm,21.0s
KMBO Kilima Mbogo 84.68 267 *e*P **P** **21 47 42.3 -0.2**
comp=Z,15nm,1.0s,mb5.1
KMBO LR LR
comp=Z,525nm,21.0s,MS4.9
ARSA Arzberg 84.78 319 ⇓*i*pP pP 21 47 43.4 -1.4
comp=Z,14nm,1.5s
KHC Kasperske Hory 85.12 321 *e*P **P** **21 47 44.7 +0.7**
KHC *e* 21 58 07.5
KHC MLR MLR
comp=Z,2μm,16.5s,MS5.5
KHC Kasperske Hory 85.12 321 *e*P **P** **21 47 44.7 +0.7**
KHC *e*x x 21 47 49.2
KHC *e*SKS 21 58 07.5
KHC AMS AMS 22 29 30.0
comp=Z,2μm,16.5s
GROS Grobnik 85.13 318 *e*P **P** **21 47 45.4 +1.2**
GEC2 GERESS Array S 85.18 321 *e*P **P** **21 47 45.9 +1.6**
comp=Z,19nm,1.2s,mb5.1
TANN Tannenbergstha 85.18 323 *e*P **P** **21 47 45.7 +1.4**
comp=Z,12nm,1.3s,mb4.9
WERD Werda 85.26 323 *e*P **P** **21 47 46.1 +1.4**
comp=Z,14nm,1.2s,mb5.0
NKC Novy Kostel 85.28 322 *e*P **P** **21 47 49.8 +5.0**
NKC MLR MLR
comp=Z,2μm,15.2s,MS5.5
NKC Novy Kostel 85.28 322 *e*P **P** **21 47 49.8 +5.0**
NKC AMS AMS 22 31 30.0
comp=Z,2μm,15.2s
GUNZ Gunzen 85.28 323 *e*P **P** **21 47 46.3 +1.5**
comp=Z,19nm,1.2s,mb5.1
MOA Molln 85.29 320 ⇑*i*pP pP 21 47 45.4 -1.9
comp=Z,35nm,1.6s
SOKA Soboth 85.33 318 ⇑*i*P **P** **21 47 43.5 -1.7**
comp=Z,16nm,1.5s,mb4.9
NRDL Niedersach Rie 85.50 325 *e*P **P** **21 47 46.4 +0.6**
comp=Z,23nm,1.3s,mb5.2
WET Wettzell 85.53 321 *e*P **P** **21 47 48.0 +1.9**
comp=Z,26nm,1.6s,mb5.2
SUMG Summit 85.55 354 *e*P **P** **21 47 45.7 -0.1**
comp=Z,35nm,1.0s,mb5.5
MOX Moxa 85.56 323 *e*P **P** **21 47 51.9 +5.7**
comp=Z,27nm,1.6s,mb5.2
MOX *e* 21 48 15.9
MOX *e* 21 51 11.0
MOX
comp=Z,2μm,20.0s
MOX Moxa 85.56 323 *e*P **P** **21 47 47.3 +1.1**
comp=Z,21nm,1.3s,mb5.2
MOX Moxa 85.56 323 *e*P **P** **21 47 51.9 +5.7**
MOX *e* 21 51 11.0
MOX pmax pmax
comp=Z,27nm,1.6s,mb5.2
MOX MLR MLR
comp=Z,2μm,20.0s,MS5.5
CLZ Clausthal 85.67 324 *e*P **P** **21 47 48.7 +2.0**
comp=Z,31nm,1.3s,mb5.4
BOJS Bojanci 85.70 317 *e*P **P** **21 47 46.3 -0.7**
BOJS *e*S S 21 58 19.0 -0.9
YKA Yellowknife Ar 85.83 23 P **P** **21 47 46.2 -1.1**
comp=Z,12nm,1.0s,mb5.1,baz=314,slow=5.0,SNR=20
YKA Yellowknife Ar 85.83 23 P **P** **21 47 46.2 -1.1**
LJU Ljubljana 85.92 318 *e*(P) **P** **21 47 50.0 +1.9**
KBA Koelnbreinsper 86.19 319 ⇑*i*sP sP 21 47 50.8 -1.9
comp=Z,8.2nm,1.1s
RJOB Jochberg 86.22 320 *e*P **P** **21 47 50.9 +1.4**
comp=Z,12nm,1.2s,mb5.0
GRF Grafenberg Arr 86.23 322 *e*P **P** **21 47 51.2 +1.7**
comp=Z,35nm,1.6s,mb5.3
GRF *e*PP PP 21 51 11.1 +1.4
GRF *e*S SKSac 21 58 06.7 -9.5
GRF *e*L 22 31 11.5
comp=Z,2μm,19.1s
GRF Grafenberg Arr 86.23 322 *e*P **P** **21 47 51.2 +1.7**
GRF *e* 21 51 11.1
GRF *e*S SKSac 21 58 06.7 -9.5
GRF pmax pmax
comp=Z,35nm,1.6s,mb5.3
GRF MLR MLR
comp=Z,2μm,19.1s,MS5.6
VOY Vojsko 86.33 318 *e* **P** **21 47 52.2 +2.1**
VOY *e* pP 21 47 55.5 +3.0
VOY *e* 21 48 04.7
VOY *e* 21 48 18.7
UBBA Unterbreizbach 86.37 324 *e*P **P** **21 47 51.6 +1.4**
comp=Z,37nm,1.9s,mb5.3
TRI Trieste 86.55 318 PFAKE 21 48 00.0 +8.8
TRI LR LR
comp=Z,1μm,19.0s,MS5.3
FUR Furstenfeldbru 86.92 321 *e*P **P** **21 47 54.8 +1.8**
comp=Z,66nm,2.0s,mb5.5
ACER Acerenza 87.29 313 P **P** **21 48 01.3 +6.4**
CASY Casey 87.47 184 PFAKE 21 48 10.0 +15
CASY LR LR
comp=Z,470nm,21.0s,MS4.9
BUG Bochum--Univer 87.55 325 *e*P **P** **21 47 56.9 +1.0**
comp=Z,27nm,1.3s,mb5.3
CIGN Sant'Elia a Pi 87.62 314 P **P** **21 47 57.1 +0.6**
AQU L'Aquila 88.30 315 *e*P **P** **21 48 02.7 +3.0**
AQU pmax pmax
comp=Z,20nm,1.1s,mb5.3
AQU MLR MLR
comp=Z,1μm,20.0s,MS5.3
AQU L'Aquila 88.30 315 *e*P **P** **21 48 02.7 +2.9**
comp=Z,20nm,1.1s,mb5.3
AQU LR LR
comp=Z,1μm,20.0s,MS5.3
SOI Samo 88.38 310 P **P** **21 48 01.7 +1.5**
MURB Monte Urbino 88.46 316 P **P** **21 48 01.4 +1.0**
LANF Langenberg 88.52 323 *e*P **P** **21 48 07.4 +6.8**
BFO Black Forest 88.56 322 PFAKE 21 48 10.0 +9.2
BFO LR LR
comp=Z,2μm,19.0s,MS5.5
RUP Ruppelstein 88.57 324 *e*P **P** **21 48 07.2 +6.4**
SFI Santa Sofia 88.59 317 P **P** **21 48 05.7 +4.6**
TUE Stuetta 88.89 320 *e*P **P** **21 48 03.8 +1.4**
comp=Z,18nm,1.3s,mb5.2
TUE LR LR
comp=Z,2μm,19.0s,MS5.5
FELD Feldberg im Sc 88.98 322 *e*P **P** **21 48 10.3 +7.5**
WLF Walferdange 89.09 324 *e*P **P** **21 48 04.4 +1.1**
comp=Z,24nm,1.1s,mb5.4
WLF Walferdange 89.09 324 *e*P **P** **21 48 02.4 -0.9**
WLF pmax pmax
comp=Z,22nm,1.1s,mb5.4
WLF MLR MLR
comp=Z,2μm,19.0s,MS5.5
WLF Walferdange 89.09 324 *e*P **P** **21 48 02.4 -0.9**
comp=Z,22nm,1.1s,mb5.4
WLF LR LR
comp=Z,2μm,19.0s,MS5.5
CDF Champ du Feu 89.12 322 *e*P **P** **21 48 02.1 -1.3**
comp=Z,48nm,1.5s,mb5.3
CDF Champ du Feu 89.12 322 *e*P **P** **21 48 02.1 -1.3**
CDF pmax pmax
comp=Z,24nm,1.5s,mb5.3
CDF Champ du Feu 89.12 322 *e*P **P** **21 48 02.1 -1.3**
comp=Z,24nm,1.5s,mb5.3
ECH Echery 89.29 322 PFAKE 21 48 20.0 +16
ECH LR LR
comp=Z,2μm,21.0s,MS5.5
VLC Villacollemand 89.40 318 PFAKE 21 48 20.0 +15
VLC LR LR
comp=Z,1μm,19.0s,MS5.3
BORG Borgarnes 89.67 345 PFAKE 21 48 20.0 +14
BORG LR LR
comp=Z,2μm,21.0s,MS5.4
HINF Hinteralfeld 89.67 322 *e*P **P** **21 48 05.6 -0.4**
HAU Haudompre 89.86 322 *e*P **P** **21 48 05.2 -1.7**
PGC Sidney 89.89 37 *e*P **P** **21 48 07.4 +0.4**
comp=Z,0.9nm,0.9s,mb4.1
MEZF Maizieres J'vi 90.32 323 *e*P **P** **21 48 07.9 -1.2**
NLWA Neilton Lookou 90.33 38 *e*P **P** **21 48 09.3 +0.2**
comp=Z,12nm,0.9s,mb5.2
NLWA *e*pP pP 21 48 18.3 +6.7
NLWA LR LR
comp=Z,562nm,22.0s,MS5.0
ESK Eskdalemuir 90.42 332 PFAKE 21 48 20.0 +11
ESK LR LR
comp=Z,2μm,22.0s,MS5.5
WDD Wield Dalam 90.45 309 PFAKE 21 48 20.0 +10
WDD LR LR
comp=Z,356nm,20.0s,MS4.8
MBAR Mbarara 90.57 270 PFAKE 21 48 20.0 +9.1
MBAR LR LR
comp=Z,445nm,20.0s,MS4.9
GNW Green Mountain 90.83 37 *e*P **P** **21 48 12.5 +1.0**
comp=Z,6.8nm,1.1s,mb4.9
LPG La Plagne 90.95 320 *e*P **P** **21 48 12.8 +0.8**
comp=Z,34nm,1.1s,mb5.3
LPG La Plagne 90.95 320 *e*P **P** **21 48 12.8 +0.8**
LPG pmax pmax
comp=Z,17nm,1.1s,mb5.3
LPG La Plagne 90.95 320 *e*P **P** **21 48 12.8 +0.8**
comp=Z,17nm,1.1s,mb5.3
LPL La Plagne 90.95 320 *e*P **P** **21 48 12.6 +0.5**
comp=Z,62nm,1.6s,mb5.4
LPL La Plagne 90.95 320 *e*P **P** **21 48 12.6 +0.5**
LPL pmax pmax
comp=Z,31nm,1.6s,mb5.4
LPL La Plagne 90.95 320 *e*P **P** **21 48 12.6 +0.5**
comp=Z,31nm,1.6s,mb5.4
JCW Jim Creek 90.99 37 P **P** **21 48 13.4 +1.2**
PGF Pioggiola 91.07 317 *e*P **P** **21 48 13.0 +0.3**
comp=Z,53nm,1.1s,mb5.5
PGF Pioggiola 91.07 317 *e*P **P** **21 48 13.0 +0.3**
PGF pmax pmax
comp=Z,26nm,1.1s,mb5.5
PGF Pioggiola 91.07 317 *e*P **P** **21 48 13.0 +0.3**
comp=Z,26nm,1.1s,mb5.5
RPW Rockport 91.08 36 *e*P **P** **21 48 13.0 +0.5**
comp=Z,8.3nm,0.9s,mb5.1
BNI Bardonecchia 91.23 320 *e*P **P** **21 48 12.7 -0.7**
BNI pmax pmax
comp=Z,12nm,1.1s,mb5.1
BNI MLR MLR
comp=Z,3μm,20.0s,MS5.7
BNI Bardonecchia 91.23 320 *e*P **P** **21 48 12.7 -0.7**
comp=Z,12nm,1.1s,mb5.2
BNI LR LR
comp=Z,3μm,20.0s,MS5.7
SAOF Saorge 91.25 319 *e*P **P** **21 48 21.2 +7.7**
AUTN L'Aution 91.32 319 *e*P **P** **21 48 22.1 +8.3**
MBDF Montbardon 91.34 319 *e*P **P** **21 48 13.4 -0.5**
comp=Z,19nm,1.1s,mb5.1
MBDF Montbardon 91.34 319 *e*P **P** **21 48 13.4 -0.5**
MBDF pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
MBDF Montbardon 91.34 319 *e*P **P** **21 48 13.4 -0.5**
comp=Z,9.6nm,1.0s,mb5.1
SBF Sospel 91.39 319 *e*P **P** **21 48 13.9 -0.2**
comp=Z,29nm,1.0s,mb5.3
SBF Sospel 91.39 319 *e*P **P** **21 48 13.9 -0.2**
SBF pmax pmax
comp=Z,15nm,1.0s,mb5.3
SBF Sospel 91.39 319 *e*P **P** **21 48 13.9 -0.2**
comp=Z,15nm,1.0s,mb5.3
TOUF Mont Tournerai 91.42 319 *e*P **P** **21 48 22.4 +8.1**
LUCF Luceram 91.42 319 *e*P **P** **21 48 22.2 +7.9**
MVIF Mont Vial 91.54 319 *e*P **P** **21 48 22.7 +7.9**
LOR Lormes 91.67 323 *e*P **P** **21 48 13.7 -1.7**
comp=Z,26nm,1.3s,mb5.1
LOR Lormes 91.67 323 *e*P **P** **21 48 13.7 -1.7**

LOR pmax pmax
comp=Z,13nm,1.3s,mb5.1
LOR Lormes 91.67 323 *e*P **P 21 48 13.7 -1.7**
comp=Z,13nm,1.3s,mb5.1
ORIF Oris-en-Rattie 91.78 320 *e*P **P 21 48 16.1 +0.2**
comp=Z,87nm,1.6s,mb5.5
ORIF Oris-en-Rattie 91.78 320 *e*P **P 21 48 16.1 +0.2**
ORIF pmax pmax
comp=Z,44nm,1.6s,mb5.5
ORIF Oris-en-Rattie 91.78 320 *e*P **P 21 48 16.1 +0.2**
comp=Z,44nm,1.6s,mb5.5
SSF Saint Saulge 91.99 323 *e*P **P 21 48 15.1 -1.7**
comp=Z,25nm,1.4s,mb5.1
SSF Saint Saulge 91.99 323 *e*P **P 21 48 15.1 -1.7**
SSF pmax pmax
comp=Z,13nm,1.4s,mb5.1
SSF Saint Saulge 91.99 323 *e*P **P 21 48 15.1 -1.7**
comp=Z,13nm,1.4s,mb5.0
FRF La Foret Royal 92.03 319 *e*P **P 21 48 15.9 -1.2**
comp=Z,41nm,1.3s,mb5.3
FRF La Foret Royal 92.03 319 *e*P **P 21 48 15.9 -1.2**
FRF pmax pmax
comp=Z,21nm,1.3s,mb5.3
FRF La Foret Royal 92.03 319 *e*P **P 21 48 15.9 -1.2**
comp=Z,21nm,1.3s,mb5.3
SMF Signal de Mont 92.03 322 *e*P **P 21 48 15.6 -1.4**
comp=Z,18nm,0.9s,mb5.1
SMF Signal de Mont 92.03 322 *e*P **P 21 48 15.6 -1.4**
SMF pmax pmax
comp=Z,9.0nm,0.9s,mb5.1
SMF Signal de Mont 92.03 322 *e*P **P 21 48 15.6 -1.4**
comp=Z,8.9nm,0.9s,mb5.1
COR Corvallis 92.16 40 PFAKE 21 48 30.0 +12
COR LR LR
comp=Z,688nm,21.0s,MS5.1
ETW Entiat 92.21 37 *e*P **P 21 48 18.4 +0.6**
comp=Z,19nm,0.8s,mb5.5
ETW *e*pP pP 21 48 26.8 +6.5
AVF Avril sur Loir 92.23 323 *e*P **P 21 48 16.2 -1.7**
comp=Z,17nm,1.0s,mb5.0
AVF Avril sur Loir 92.23 323 *e*P **P 21 48 16.2 -1.7**
AVF pmax pmax
comp=Z,8.0nm,1.0s,mb5.0
AVF Avril sur Loir 92.23 323 *e*P **P 21 48 16.2 -1.7**
comp=Z,8.4nm,1.0s,mb5.0
LMR La Mourre 92.23 318 *e*P **P 21 48 18.1 0.0**
comp=Z,78nm,1.6s,mb5.5
LMR La Mourre 92.23 318 *e*P **P 21 48 18.1 0.0**
LMR pmax pmax
comp=Z,39nm,1.6s,mb5.5
LMR La Mourre 92.23 318 *e*P **P 21 48 18.1 0.0**
comp=Z,39nm,1.6s,mb5.5
TBM Table Mountain 92.31 37 P **P 21 48 20.0 +1.7**
EDM Edmonton 92.31 29 *e*P **P 21 48 18.3 +0.1**
VSL Villasalto 92.34 314 PFAKE 21 48 30.0 +11
VSL LR LR
comp=Z,439nm,20.0s,MS4.9
SSB Saint Sauveur 92.38 321 PFAKE 21 48 30.0 +11
SSB LR LR
comp=Z,1μm,21.0s,MS5.3
PLDF La Plantade 92.53 322 *e*P **P 21 48 27.3 +7.9**
AGO Saint Agoulin 92.77 322 *e*P **P 21 48 29.1 +8.6**
IRO Indian Ridge 93.11 40 P **P 21 48 22.6 +0.5**
TCF Toulx Ste Croi 93.16 323 *e*P **P 21 48 20.9 -1.4**
comp=Z,38nm,1.6s,mb5.3
TCF Toulx Ste Croi 93.16 323 *e*P **P 21 48 20.9 -1.4**
TCF pmax pmax
comp=Z,19nm,1.6s,mb5.3
TCF Toulx Ste Croi 93.16 323 *e*P **P 21 48 20.9 -1.4**
comp=Z,19nm,1.6s,mb5.3
HAWA Hanford 93.35 37 PFAKE 21 48 30.0 +6.9
HAWA LR LR
comp=Z,282nm,21.0s,MS4.7
HUMO Hull Mountain 93.44 42 PFAKE 21 48 30.0 +6.4
HUMO LR LR
comp=Z,447nm,20.0s,MS4.9
NEW Newport 93.56 35 *e*P **P 21 48 23.9 -0.2**
NEW pmax pmax
comp=Z,9.0nm,0.7s
NEW MLR MLR
comp=Z,546nm,20.0s
NEW Newport 93.56 35 *e*P **P 21 48 23.9 -0.2**
comp=Z,9.2nm,0.7s,mb5.3
NEW LR LR
comp=Z,546nm,20.0s,MS5.0
YBH Yreka Blue Hor 94.07 42 P **P 21 48 24.6 -1.9**
comp=Z,2.6nm,1.0s,mb4.6,baz=304,slow=7.3,SNR=2.7
YBH Yreka Blue Hor 94.07 42 P **P 21 48 24.6 -1.9**
YBH LR LR
comp=Z,431nm,22.0s,MS4.9
RJF Les Rejaudoux 94.13 322 *e*P **P 21 48 25.9 -0.8**
comp=Z,20nm,1.0s,mb5.2
RJF Les Rejaudoux 94.13 322 *e*P **P 21 48 25.9 -0.8**
RJF pmax pmax
comp=Z,10.0nm,1.0s,mb5.2
RJF Les Rejaudoux 94.13 322 *e*P **P 21 48 25.9 -0.8**
comp=Z,9.9nm,1.0s,mb5.2
KEST Kesra 94.23 311 LR LR 22 34 52.9
comp=Z,187nm,18.2s,MS4.6,baz=351,slow=38
WALA Waterton Lakes 94.73 33 *e*P **P 21 48 29.5 +0.1**
comp=Z,0.5nm,1.0s,mb3.9
WDC Whiskeytown Da 94.80 43 PFAKE 21 48 40.0 +10
WDC LR LR
comp=Z,380nm,21.0s,MS4.8
BSMT Bassoo Peak 95.05 34 *e*P **P 21 48 32.3 +1.4**
comp=Z,7.0nm,0.8s,mb5.1
HOPS Hopland 95.31 45 PFAKE 21 48 40.0 +7.7
HOPS LR LR
comp=Z,540nm,19.0s,MS5.0
LBCM Butte Creek Ri 95.42 43 P **P 21 48 33.4 +0.7**
MOD Modoc 95.47 41 PFAKE 21 48 40.0 +7.0
MOD LR LR
comp=Z,351nm,20.0s,MS4.8
BMO Blue Mountains 95.52 38 PFAKE 21 48 40.0 +6.9
BMO LR LR
comp=Z,343nm,19.0s,MS4.8
PPT Papeete 95.54 107 *e*PS PS 22 01 06.2 -3.7
PPT *e*SS SS 22 06 10.8 -9.1
comp=Z,444nm,29.2s
PPT *e*LR LR 22 19 23.7
comp=Z,260nm,24.2s
PPT *e*LR LR 22 28 36.6
comp=Z,1μm,33.2s
PPT Papeete 95.54 107 LR LR
comp=Z,207nm,19.1s,MS4.6,baz=318,slow=34
SWMT Swartz Lake 95.68 34 *e*P **P 21 48 34.0 +0.2**
comp=Z,4.0nm,0.9s,mb4.8
MCCM Marconi Confer 95.89 45 PFAKE 21 48 50.0 +15
MCCM LR LR
comp=Z,340nm,20.0s,MS4.8
FFC Flin Flon 95.97 23 *e*P **P 21 48 33.5 -1.4**
FFC pmax pmax
comp=Z,8.0nm,0.9s,mb5.2
FFC MLR MLR
comp=Z,546nm,20.0s,MS5.0
FFC Flin Flon 95.97 23 *e*P **P 21 48 33.5 -1.5**
comp=Z,8.5nm,0.9s,mb5.2
FFC LR LR
comp=Z,546nm,20.0s,MS5.0
SLMT Seeley Lake 96.11 34 *e*P **P 21 48 36.5 +0.7**
comp=Z,7.2nm,0.8s,mb5.2
MSO Missoula 96.14 34 PFAKE 21 48 50.0 +14
MSO LR LR
comp=Z,254nm,20.0s,MS4.7
WVOR Wild Horse Val 96.18 40 *e*P **P 21 48 36.6 +0.4**
WVOR pmax pmax
comp=Z,7.0nm,1.3s,mb4.9
WVOR MLR MLR
comp=Z,345nm,21.0s,MS4.8
WVOR Wild Horse Val 96.18 40 *e*P **P 21 48 36.6 +0.4**
comp=Z,6.7nm,1.3s,mb4.9
WVOR LR LR
comp=Z,345nm,21.0s,MS4.8
CHMT Chamberlain Mo 96.45 34 *e*P **P 21 48 36.2 -1.1**
comp=Z,1.5nm,1.0s,mb4.4
EGMT Eagleton 97.49 32 PFAKE 21 48 50.0 +8.0
EGMT LR LR
comp=Z,536nm,20.0s,MS5.0
CMB Columbia Colle 97.60 44 *e*P **P 21 48 42.3 -0.4**
CMB pmax pmax
comp=Z,9.0nm,0.9s,mb5.3
CMB MLR MLR
comp=Z,306nm,19.0s,MS4.8
CMB Columbia Colle 97.60 44 *e*P **P 21 48 42.3 -0.4**
comp=Z,8.8nm,0.9s,mb5.3
CMB LR LR
comp=Z,306nm,19.0s,MS4.8
SAO San Andreas Ge 97.60 46 PFAKE 21 48 50.0 +7.3
SAO LR LR
comp=Z,473nm,22.0s,MS4.9
TBI Tubuai 97.61 112 *e*SP SP 22 01 22.6 -8.7
comp=Z,249nm,30.8s
TBI *e*SS SS 22 06 43.9 -5.1
comp=Z,357nm,28.5s
TBI *e*LR LR 22 20 15.4
comp=Z,721nm,36.5s
DLMT Dillon 97.81 35 *e*P **P 21 48 44.7 +1.3**
comp=Z,6.0nm,0.9s,mb5.1
HLID Hailey 97.96 37 *e*P **P 21 48 45.3 +1.1**
comp=Z,2.8nm,0.8s,mb4.8
HLID LR LR
comp=Z,562nm,20.0s,MS5.0
LSZ Lusaka 98.03 257 *e*P **P 21 48 42.7 -2.3**
LSZ pmax pmax
comp=Z,7.0nm,0.8s,mb5.2
LSZ MLR MLR
comp=Z,711nm,19.0s,MS5.2
LSZ Lusaka 98.03 257 *e*P **P 21 48 42.7 -2.3**
comp=Z,6.8nm,0.8s,mb5.2
LSZ LR LR
comp=Z,711nm,19.0s,MS5.2
BOZ Bozeman (W) 98.13 34 PFAKE 21 49 00.0 +15
BOZ LR LR
comp=Z,523nm,20.0s,MS5.0
MAW Mawson 98.18 199 LR LR 22 30 48.6
comp=Z,264nm,18.7s,MS4.8,baz=52,slow=34
BMN Battle Mountai 98.22 41 PFAKE 21 49 00.0 +15
BMN LR LR
comp=Z,292nm,21.0s,MS4.8
NVAR Mina Array Bea 98.72 43 P **P 21 48 47.0 -0.8**
comp=Z,1.2nm,0.8s,mb4.5,baz=283,slow=3.8,SNR=6.9
ELK Elko 99.23 40 P **P 21 48 50.2 +0.2**
comp=Z,0.3nm,0.3s,mb4.2,baz=336,slow=10.0,SNR=2.1
ELK Elko 99.23 40 P **P 21 48 50.2 +0.2**
ELK LR LR
comp=Z,305nm,20.0s,MS4.8
LKWY Lake 99.50 35 PFAKE 21 49 00.0 +8.9
LKWY LR LR
comp=Z,976nm,20.0s,MS5.3
TPH Tonopah 99.61 43 PFAKE 21 49 00.0 +8.3
TPH LR LR
comp=Z,423nm,22.0s,MS4.9
RLMT Red Lodge 99.72 34 PFAKE 21 49 00.0 +8.1
RLMT LR LR
comp=Z,567nm,22.0s,MS5.0
DGMT Dagmar 99.78 29 PFAKE 21 49 00.0 +7.9
DGMT LR LR
comp=Z,567nm,19.0s,MS5.1
LAO LASA Array 100.14 31 PFAKE 21 49 00.0 +6.3
LAO LR LR
comp=Z,618nm,22.0s,MS5.1
AHID Auburn Hatcher 100.32 36 PFAKE 21 49 10.0 +15
AHID LR LR
comp=Z,539nm,20.0s,MS5.0
DAC Darwin (Calif) 100.43 45 PFAKE 21 49 10.0 +15
DAC LR LR
comp=Z,352nm,20.0s,MS4.9
ESLA Sonseca Array 100.76 320 PFAKE 21 49 10.0 +14
ESLA LR LR
comp=Z,5μm,20.0s,MS6.0
HWUT Hardware Ranch 100.82 37 PFAKE 21 49 10.0 +13
HWUT LR LR
comp=Z,543nm,21.0s,MS5.0
DUG Dugway 101.01 39 PFAKE 21 49 10.0 +12
DUG LR LR
comp=Z,481nm,20.0s,MS5.0
PAB San Pablo 101.07 320 PFAKE 21 49 10.0 +12
PAB LR LR
comp=Z,740nm,21.0s,MS5.2
BW06 Boulder Array 101.17 35 PFAKE 21 49 10.0 +12
BW06 LR LR
comp=Z,544nm,19.0s,MS5.1
PDAR Pinedale Array 101.17 35 P Pdif 21 48 59.5 +1.3
comp=Z,0.2nm,0.6s,baz=338,slow=1.9,SNR=2.3
ULM Lac du Bonnet 101.80 23 PFAKE 21 49 10.0 +8.9
ULM LR LR
comp=Z,860nm,20.0s,MS5.3
SBA Scott Base 102.21 171 PFAKE 21 49 10.0 +7.1
SBA LR LR
comp=Z,463nm,19.0s,MS5.0
MTE Manteigas 102.38 322 PFAKE 21 49 20.0 +16
MTE LR LR
comp=Z,1μm,20.0s,MS5.4
MVU Marysvale 102.45 40 PFAKE 21 49 20.0 +16
MVU LR LR
comp=Z,408nm,21.0s,MS4.9
PFO Pinyon Flat Ob 102.75 46 PFAKE 21 49 20.0 +15
PFO LR LR
comp=Z,387nm,20.0s,MS4.9
RSSD Black Hills 103.06 32 PFAKE 21 49 20.0 +13
RSSD LR LR
comp=Z,556nm,19.0s,MS5.1
AGMN Agassiz Nation 103.40 24 PFAKE 21 49 20.0 +12
AGMN LR LR
comp=Z,1μm,20.0s,MS5.4
LBTB Lobatse 103.42 248 PFAKE 21 49 20.0 +12
LBTB LR LR
comp=Z,1μm,20.0s,MS5.4
TAM Tamanrasset 103.56 301 PFAKE 21 49 20.0 +11
TAM LR LR
comp=Z,444nm,21.0s,MS5.0
SCHQ Schefferville 104.07 5 PFAKE 21 49 20.0 +8.8
SCHQ LR LR
comp=Z,834nm,20.0s,MS5.3
SFS San Fernando 104.16 319 PFAKE 21 49 20.0 +8.4
SFS LR LR
comp=Z,2μm,22.0s,MS5.6
BOSA Boshof 104.73 245 PFAKE 21 49 30.0 +16
BOSA LR LR
comp=Z,739nm,20.0s,MS5.2
WUAZ Wupatki 104.88 42 PFAKE 21 49 30.0 +15
WUAZ LR LR
comp=Z,351nm,19.0s,MS4.9
EYMN Ely 105.30 22 PFAKE 21 53 40.0 +9.2
EYMN LR LR
comp=Z,546nm,20.0s,MS5.1
ISCO Idaho Springs 105.36 36 PFAKE 21 53 40.0 +8.9
ISCO LR LR
comp=Z,441nm,21.0s,MS5.0
MVCO Mesa Verde 105.52 39 PFAKE 21 53 40.0 +8.5
MVCO LR LR
comp=Z,557nm,22.0s,MS5.1
OGNE Ogallala 106.41 33 PFAKE 21 53 40.0 +7.0
OGNE LR LR
comp=Z,483nm,21.0s,MS5.0
ECSD EROS Data Cent 106.79 28 PFAKE 21 53 40.0 +6.3
ECSD LR LR
comp=Z,782nm,20.0s,MS5.3
SDCO Great Sand Dun 106.87 37 PFAKE 21 53 50.0 +16
SDCO LR LR
comp=Z,496nm,22.0s,MS5.0
TUC Tucson 107.31 44 PFAKE 21 53 50.0 +15
TUC LR LR
comp=Z,367nm,20.0s,MS4.9
COWI Conover 107.71 22 PFAKE 21 53 50.0 +15
COWI LR LR
comp=Z,794nm,20.0s,MS5.3
ANMO Albuquerque 108.26 40 PFAKE 21 53 50.0 +13
ANMO LR LR
comp=Z,477nm,22.0s,MS5.0
TSUM Tsumeb 108.88 256 PFAKE 21 53 50.0 +12
TSUM LR LR
comp=Z,720nm,19.0s,MS5.3
CBKS Cedar Bluff 109.17 33 PFAKE 21 53 50.0 +12
CBKS LR LR
comp=Z,708nm,19.0s,MS5.2
SUR Sutherland 109.40 242 PFAKE 21 53 50.0 +11
SUR LR LR
comp=Z,785nm,19.0s,MS5.3
SCIA State Center 109.72 27 PFAKE 21 53 50.0 +11
SCIA LR LR
comp=Z,617nm,20.0s,MS5.2
JFWS Jewell Farm 110.06 24 PFAKE 21 53 50.0 +10
JFWS LR LR
comp=Z,668nm,19.0s,MS5.2
RKT Rikitea 110.27 108 *e*LR LR 22 25 20.0
comp=Z,495nm,35.8s
KSU1 Kansas State U 110.48 31 PFAKE 21 53 50.0 +9.3
KSU1 LR LR
comp=Z,634nm,20.0s,MS5.2
QSPA South Pole Qui 110.90 180 PFAKE 21 53 50.0 +10
QSPA LR LR
comp=Z,698nm,20.0s,MS5.2
AMTX Amarillo 111.07 37 PFAKE 21 53 50.0 +8.0
AMTX LR LR
comp=Z,594nm,19.0s,MS5.2
MNTX Cornudas Mount 111.15 42 PFAKE 21 53 50.0 +7.8
MNTX LR LR
comp=Z,298nm,21.0s,MS4.8
HDIL Hopedale 112.44 25 PFAKE 21 54 00.0 +16
HDIL LR LR
comp=Z,686nm,22.0s,MS5.2
WMOK Wichita Mounta 112.77 35 PFAKE 21 54 00.0 +15
WMOK LR LR
comp=Z,499nm,21.0s,MS5.1
AAM Ann Arbor 112.89 20 PFAKE 21 54 00.0 +15
AAM LR LR
comp=Z,956nm,19.0s,MS5.4
LONY Lake Ozonia 113.05 12 PFAKE 21 54 00.0 +15
LONY LR LR
comp=Z,653nm,20.0s,MS5.2
PKME Peaks-Kenny Pk 113.28 8 PFAKE 21 54 00.0 +14
PKME LR LR
comp=Z,810nm,20.0s,MS5.3
CMLA Cha da Macela 113.57 332 PFAKE 21 54 00.0 +13
CMLA LR LR
comp=Z,893nm,20.0s,MS5.4
NCB Newcomb 113.74 12 PFAKE 21 54 00.0 +13
NCB LR LR
comp=Z,645nm,20.0s,MS5.2
CCM Cathedral Cave 113.76 27 PFAKE 21 54 00.0 +13
CCM LR LR
comp=Z,560nm,20.0s,MS5.2
LBNH Lisbon 113.89 10 PFAKE 21 54 00.0 +13
LBNH LR LR
comp=Z,915nm,22.0s,MS5.3
ERPA Erie 114.14 17 PFAKE 21 54 00.0 +12
ERPA LR LR
comp=Z,689nm,19.0s,MS5.3
ACSO Alum Creek Sta 114.98 20 PFAKE 21 54 00.0 +11
ACSO LR LR
comp=Z,760nm,21.0s,MS5.3
BINY Binghamton 115.07 14 PFAKE 21 54 00.0 +11
BINY LR LR
comp=Z,926nm,22.0s,MS5.3
JCT Junction City 115.37 39 PFAKE 21 54 00.0 +10
JCT LR LR
comp=Z,558nm,21.0s,MS5.2
MIAR Mount Ida 115.58 31 PFAKE 21 54 00.0 +9.4
MIAR LR LR
comp=Z,648nm,20.0s,MS5.2
WCI Wyandotte Cave 115.61 24 PFAKE 21 54 00.0 +9.5
WCI LR LR
comp=Z,432nm,20.0s,MS5.1
SSPA Standing Stone 116.09 16 PFAKE 21 54 00.0 +8.6
SSPA LR LR
comp=Z,801nm,19.0s,MS5.3
MCWV Mont Chateau 116.47 18 PFAKE 21 54 00.0 +7.8
MCWV LR LR
comp=Z,1μm,20.0s,MS5.4
WVT Waverly 116.83 26 *e*PKIKP PKPdf 21 53 52.3 -0.7
WVT MLR MLR
comp=Z,675nm,22.0s,MS5.2
NATX Nacogdoches 117.25 34 PFAKE 21 54 00.0 +6.1
NATX LR LR
comp=Z,579nm,20.0s,MS5.2
OXF Oxford 117.54 28 PFAKE 21 54 10.0 +16
OXF LR LR
comp=Z,768nm,21.0s,MS5.3
HKT Hockley 118.03 36 PFAKE 21 54 10.0 +15
HKT LR LR
comp=Z,666nm,19.0s,MS5.3
CBN Corbin 118.51 17 PFAKE 21 54 10.0 +14
CBN LR LR
comp=Z,959nm,19.0s,MS5.5
BLA Blacksburg 118.55 19 *e*PKIKP PKPdf 21 53 55.8 -0.4
BLA MLR MLR
comp=Z,879nm,22.0s,MS5.3
KVTX Kingsville 118.66 40 PFAKE 21 54 10.0 +13
KVTX LR LR
comp=Z,602nm,20.0s,MS5.2
VBMS Vicksburg 118.95 31 PFAKE 21 54 10.0 +13
VBMS LR LR
comp=Z,820nm,20.0s,MS5.4
LRAL Lakeview Retre 119.84 27 PFAKE 21 54 10.0 +11
LRAL LR LR
comp=Z,437nm,20.0s,MS5.1
DBIC Dimbokro 120.24 291 PKP PKPdf 21 53 58.0 -2.1
comp=Z,3.0nm,0.9s,baz=127,slow=5.1,SNR=3.2
DBIC Dimbokro 120.24 291 PKP PKPdf 21 53 58.0 -2.1
DBIC LR LR
comp=Z,487nm,21.0s,MS5.1
KIC Kosan Boka 120.28 291 *e*PKP1 PKPdf 21 53 58.4 -1.8
comp=Z,18nm,0.9s
TIC Toumodi 120.39 292 *e*PKP1 PKPdf 21 53 57.9 -2.5
comp=Z,52nm,1.4s
LIC Lamto 120.60 291 *e*PKP1 PKPdf 21 53 59.0 -1.8
comp=Z,50nm,1.3s
GOGA Godfrey 120.94 24 PFAKE 21 54 10.0 +9.1
GOGA LR LR
comp=Z,575nm,20.0s,MS5.2
CNNC Cliffs of the 121.14 18 PFAKE 21 54 10.0 +8.7
CNNC LR LR
comp=Z,880nm,19.0s,MS5.4
BRAL Brewton 121.55 28 PFAKE 21 54 10.0 +7.8
BRAL LR LR
comp=Z,622nm,20.0s,MS5.2
NHSC New Hope 122.39 21 PFAKE 21 54 10.0 +6.3
NHSC LR LR
comp=Z,723nm,20.0s,MS5.3
DWPF Disney 126.44 25 PFAKE 21 54 20.0 +8.4
DWPF LR LR
comp=Z,1μm,19.0s,MS5.6
BBSR BB Station 126.54 6 PFAKE 21 54 20.0 +8.3
BBSR LR LR
comp=Z,1μm,19.0s,MS5.5
TEIG Tepich 129.87 37 PFAKE 21 54 30.0 +12
TEIG LR LR
comp=Z,534nm,20.0s,MS5.2
SACV Santiago Islan 130.16 313 PFAKE 21 54 30.0 +11
SACV LR LR
comp=Z,822nm,19.0s,MS5.5
TGUH Tegucigalpa,Un 135.30 41 PFAKE 21 54 40.0 +11
TGUH LR LR
comp=Z,366nm,20.0s,MS5.1
GRTK Grand Turk 135.99 17 PFAKE 21 54 40.0 +10
GRTK LR LR
comp=Z,911nm,22.0s,MS5.5
GTBY Guantanamo Bay 136.24 22 PFAKE 21 54 40.0 +10
GTBY LR LR
comp=Z,782nm,21.0s,MS5.4
MTDJ Mount Denham 136.86 26 PFAKE 21 54 40.0 +8.5
MTDJ LR LR
comp=Z,781nm,22.0s,MS5.4
SDDR Presa de Saban 138.35 18 PFAKE 21 54 50.0 +16
SDDR LR LR
comp=Z,729nm,20.0s,MS5.4
JTS JuntasAbangare 139.63 42 PFAKE 21 54 50.0 +13
JTS LR LR
comp=Z,369nm,19.0s,MS5.2
SJG San Juan 140.39 11 PFAKE 21 54 50.0 +12
SJG LR LR
comp=Z,679nm,21.0s,MS5.4
ANWB Willy Bob 141.37 4 PFAKE 21 54 50.0 +10
ANWB LR LR
comp=Z,443nm,20.0s,MS5.2
BCIP Isla Barro Col 143.55 36 PFAKE 21 54 50.0 +6.2
BCIP LR LR
comp=Z,340nm,21.0s,MS5.1
FDF Fort de France 144.32 4 PFAKE 21 55 00.0 +15
FDF LR LR
comp=Z,468nm,20.0s,MS5.2
USHA Ushuaia 145.55 170 PKPbc PKPbc 21 54 44.0 -2.0
comp=Z,73nm,0.9s,baz=214,slow=3.9,SNR=28
GRGR Grenville 146.87 5 PFAKE 21 55 00.0 +11
GRGR LR LR
comp=Z,507nm,21.0s,MS5.3
SDV Santo Domingo 148.04 22 PFAKE 21 55 00.0 +8.6
SDV LR LR
comp=Z,186nm,20.0s,MS4.9
PCRV Puerto La Cruz 148.41 11 PKPbc PKPbc 21 54 54.6 -0.8
comp=Z,6.1nm,0.6s,baz=180,slow=2.0,SNR=2.4
ROSC El Rosal 150.08 32 PKPbc PKPbc 21 54 58.7 -1.0
comp=Z,4.7nm,0.3s,baz=315,slow=5.7,SNR=2.5
ROSC El Rosal 150.08 32 *e*PKPbc PKPbc 21 54 59.6 -0.1
OTAV Otavalo 151.44 44 PFAKE 21 55 10.0 +13
OTAV LR LR
comp=Z,299nm,21.0s,MS5.1
RCBR Riachuelo 153.05 301 PFAKE 21 55 10.0 +11

RCBR				LR	LR			
	comp=Z,653nm,21.0s,MS5.4							
NNA	**Nana**	**160.56**	**65**	PFAKE		21 55 20.0	+11	
NNA				LR	LR			
	comp=Z,487nm,21.0s							
TRQA	**Tornquist**	**162.89**	**172**	*e*PKPdf	PKPdf	21 55 09.3	-1.2	
TRQA				*e*PKPab	PKPab	21 55 58.4	-1.0	
TRQA				LR	LR			
	comp=Z,591nm,20.0s							
CFAA	**Coronel Fontan**	**166.60**	**143**	PKP	PKPdf	21 55 12.8	-1.1	
	comp=Z,1.1nm,1.1s,baz=279,slow=3.0,SNR=5.6							
CFAA				PKPab	PKPab	21 56 15.2	-0.9	
	comp=Z,0.2nm,0.4s,baz=196,slow=3.2,SNR=2.9							
LCO	**Las Campanas**	**166.71**	**129**	PFAKE		21 55 20.0	+5.9	
LCO				LR	LR			
	comp=Z,516nm,22.0s							
SPB	**Sao Paulo**	**169.12**	**255**	PFAKE		21 55 30.0	+14	
SPB				LR	LR			
	comp=Z,520nm,21.0s							
LPAZ	**La Paz**	**170.02**	**63**	PKP	PKPdf	21 55 16.1	-0.5	
	comp=Z,2.9nm,0.9s,baz=6.8,slow=5.7,SNR=9.1							
LPAZ	**La Paz**	**170.02**	**63**	*e*PKPdf	PKPdf	21 55 17.8	+1.1	
LPAZ				LR	LR			
	comp=Z,654nm,22.0s							
CPUP	**Villa Florida**	**174.60**	**195**	PKP	PKPdf	21 55 17.4	-1.0	
	comp=Z,0.6nm,0.4s,baz=236,slow=4.0,SNR=5.4							
CPUP				PKPab	PKPab	21 56 50.0	-1.5	
	comp=Z,4.6nm,0.8s,baz=133,slow=4.5,SNR=9.1							
CPUP	**Villa Florida**	**174.60**	**195**	*e*PKPdf	PKPdf	21 55 17.4	-1.0	
CPUP				*e*PKPab	PKPab	21 56 49.8	-1.7	

*ISCJB **11** 21:39:06.8±1.2,23°.92S±0°.10×179°.7W±0°.2,h525km±26km, mb4.5/9, Error ellipse: s-maj=32.8km s-min=13.9km az=11.1*
*NEIC **11** 21:39:07.2±1.1,23°.88S×179°.89W,h500km±22km,mb4.5/5, Error ellipse: s-maj=28.5km s-min=15.9km az=118.0*
*IDC **11** 21:39:10.0±2.9,24°.17S×179°.89E,h510km±30km,mb4.0/5, mb1 4.2/7,mb1mx3.7/17,mbtmp4.1/7, Error ellipse: s-maj=36.1km s-min=24.2km az=33.0*

ISC 11 21:39:08.0±1.1,24°.1S±0°.1×179°.6W±0°.3,h539km±28km, n18,σ0°78/18,mb4.5/9,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.38**	**165**	P	**P**	**21 40 41.0**	**+0.7**
	96nm,0.3s,baz=289,slow=22,SNR=6.0						
AFI	**Afiamalu**	**12.48**	**37**	P	**P**	**21 41 50.8**	**-0.9**
	4.7nm,0.3s,baz=86,slow=22,SNR=4.2						
URZ	**Urewera**	**14.44**	**191**	P	**P**	**21 42 12.6**	**+0.9**
	8.9nm,0.3s,baz=23,slow=1.5,SNR=23						
URZ				S	**S**	**21 44 41.2**	**-1.8**
	0.7nm,0.3s,baz=45,slow=16,SNR=6.2						
URZ	**Urewera**	**14.44**	**191**	*e*P	**P**	**21 42 12.1**	**+0.5**
	26nm,0.4s						
URZ				S	**S**	**21 44 41.2**	**-1.8**
RPZ	**Rata Peaks**	**21.08**	**199**	P	**P**	**21 43 15.3**	**+1.3**
	17nm,0.6s,mb4.9,baz=70,slow=12,SNR=11						
CTA	**Charters Tower**	**31.88**	**270**	P	**P**	**21 44 49.3**	**-0.1**
	20nm,0.4s,mb5.0,baz=97,slow=12,SNR=20						
CTAO	**Charters Tower**	**31.88**	**270**	*e*P	**P**	**21 44 49.1**	**-0.3**
	6.6nm,0.4s,mb4.5						
ARPS	**Mount Arapiles**	**35.39**	**240**	*e*P	**P**	**21 45 19.1**	**+0.4**
	40nm,0.7s,mb5.1						
ASAR	**Alice Springs**	**42.41**	**261**	P	**P**	**21 46 15.4**	**-0.2**
	4.2nm,0.5s,mb4.2,baz=96,slow=7.5,SNR=14						
WRA	**Warramunga Arr**	**42.80**	**266**	P	**P**	**21 46 17.9**	**-0.7**
	9.6nm,0.3s,mb4.7,baz=103,slow=8.3,SNR=91						
WRA	**Warramunga Arr**	**42.80**	**266**	P	**P**	**21 46 17.9**	**-0.7**
FORT	**Forrest**	**46.64**	**250**	*e*P	**P**	**21 46 47.2**	**-0.8**
	5.6nm,0.4s,mb4.5						
FITZ	**Fitzroy Crossi**	**51.22**	**266**	P	**P**	**21 47 22.7**	**+0.5**
	4.3nm,0.4s,mb4.1,baz=109,slow=8.2,SNR=12						
MBWA	**Marble Bar**	**55.75**	**260**	*e*P	**P**	**21 47 53.9**	**-0.2**
KSM	**Kuching**	**72.53**	**280**	*e*P	**P**	**21 49 41.4**	**+0.5**
	6.6nm,0.7s,mb4.2						
CHTO	**Chiang Mai**	**90.11**	**290**	*e*P	**P**	**21 51 11.5**	**+0.4**
	7.1nm,1.2s,mb4.4						
BRTR	**Keskin Array B**	**148.00**	**307**	PKPbc	PKPbc	21 57 58.0	+5.0
	0.4nm,0.4s,baz=90,slow=5.8,SNR=4.3						
MMAI	**Mount Meron Ar**	**148.14**	**294**	PKPbc	PKPbc	21 57 56.2	+2.7
	1.9nm,0.4s,baz=76,slow=7.8,SNR=20						

*NIED **11** 21:45:00,20°.90N×121°.30E,h5km,Mw4.8 Best double couple: M0 1.68000×10^16 NP1:φs259.00000°,δ52.00000°, λ-104.00000°. NP2:φs101.00000°,δ40.00000°, λ-72.00000°.*
*TAP **11** 21:45:07.8,20°.91N×121°.32E,h67km±1km,ML5.2,D*
*ISCJB **11** 21:45:08.3±0.6,21°.06N±0°.02×121°.14E±0°.02,h4km±3km, mb4.7/89,MS4.8/10, Error ellipse: s-maj=3.7km s-min=2.8km az=23.0*
*JMA **11** 21:45:08.1±0.5,20°.93N×121°.32E,h0km,M5.2*
*IDC **11** 21:45:08.9±0.4,21°.03N×121°.02E,h0km,mb4.4/30, mb1 4.5/30,mb1mx4.4/35,mbtmp4.4/30,MS4.5/3, Ms1 4.5/3,ms1mx3.7/27, Error ellipse: s-maj=16.0km s-min=10.9km az=70.0*
*NEIC **11** 21:45:10.9±0.2,21°.07N×121°.14E,h10km,mb4.9/39, Error ellipse: s-maj=6.0km s-min=4.5km az=90.0*
*BJI **11** 21:45:12.4,21°.23N×120°.92E,h22km,mB5.4/12,mb4.7/38, ML4.3/5,Ms5.1/27,Ms7 4.9/26*
*GCMT **11** 21:45:12.4±0.3,21°.08N×120°.98E,h23km±1km,MW5.0, Moment Tensor Solution. s6,c7; s72,c122; Moment tensor: Scale 10^16Nm; Mrr1.34±.25; Mθθ1.25±.13; Mφφ-2.60±.21; Mrθ-1.23±.21; Mθφ-3.24±.11; Mφr-0.95±.25; Best double couple: M0 4.00000×10^16 NP1:φs344.00000°, δ67.00000°,λ5.00000°. NP2:φs252.00000°,δ86.00000°, λ157.00000°. Principal axes: T 3.3100, Plg19.0000°, Azm206.0000°; N 1.4700, Plg66.0000°, Azm63.0000°; P -4.7800, Plg13.0000°, Azm301.0000°; Data Used: IU IC II G CN.*
*MOS **11** 21:45:15.3±1.1,21°.52N×121°.08E,h33km,mb5.1/35, MS4.9/5 Error ellipse: s-maj=11.6km s-min=6.1km az=112.0*

ISC 11 21:45:10.3±0.6,21°.10N±0°.02×121°.09E±0°.02,h5km±3km, h19km±2.0km:pP-P,n289,σ1§07/323,mb4.7/89,MS4.8/10, 10C-9D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**0.81**	**348**	⇓*i*P	**Pg**	**21 45 27.8**	**+1.9**
	baz=336						
TSEB				*e*S	**Sg**	**21 45 42.4**	**+6.0**
	baz=336						
TWK1	**Hengchun**	**0.88**	**343**	⇓*i*P	**Pg**	**21 45 28.3**	**+1.2**
	baz=335						
TWK1				S	**Sg**	**21 45 43.5**	**+5.0**
	baz=335						
HEN	**Hengchun**	**0.95**	**340**	⇓P	**Pg**	**21 45 30.1**	**+1.5**
	baz=334						
HEN				*e*S	**Sg**	**21 45 46.0**	**+4.9**
	baz=334						
LAY	**Lan-yu**	**1.03**	**25**	⇓*e*P	**Pg**	**21 45 29.6**	**-0.4**
	baz=11						
LAY				*e*S	**Sg**	**21 45 43.7**	**+0.4**
	baz=11						
TAW	**Tawu**	**1.26**	**352**	*i* P	**Pg**	**21 45 32.9**	**-1.6**
	baz=353						
TAW				*e*S	**Sg**	**21 45 52.5**	**+1.7**
	baz=353						
EAST	**Anshuo**	**1.29**	**350**	⇓P	**Pn**	**21 45 33.2**	**-1.8**
	baz=354						
SCZT	**Fangliau**	**1.33**	**341**	⇑P	**Pn**	**21 45 35.3**	**-0.3**
	baz=329						
TWP	**Hsiaoliuchiu**	**1.41**	**332**	*e*P	**Pn**	**21 45 36.5**	**-0.2**
	baz=329						
KAU	**Kaohsiung**	**1.63**	**334**	*e*P	**Pn**	**21 45 39.1**	**-0.6**
	baz=331						
TTN	**Taitung**	**1.64**	**2**	*e*P	**Pn**	**21 45 38.1**	**-1.8**
	baz=2.0						
SSD	**Sandimen**	**1.69**	**346**	*e*P	**Pn**	**21 45 40.2**	**-0.3**
	baz=349						
TWG	**Pinlang**	**1.71**	**360**	*e*Pn	**Pn**	**21 45 37.7**	**-3.1**
TWG				*e*Pg	**Pg**	**21 45 43.4**	**+0.3**
TWG	**Pinlang**	**1.71**	**360**	*e*P	**Pn**	**21 45 38.6**	**-2.2**
	baz=353						
TWM1	**Shoushan**	**1.82**	**340**	*e*P	**Pn**	**21 45 42.7**	**+0.4**
	baz=337						
SGST	**Jiashian**	**2.02**	**347**	P	**Pn**	**21 45 45.0**	**-0.1**
	baz=332						
STYT	**Tauyuan**	**2.07**	**352**	*e*P	**Pn**	**21 45 45.6**	**-0.2**
	baz=347						
CHN3	**Shinhua**	**2.07**	**341**	*e*P	**Pn**	**21 45 45.8**	**0.0**
	baz=338						
ELDTW	**Lidau**	**2.08**	**358**	*e*P	**Pn**	**21 45 43.9**	**-1.9**
	baz=358						
TAI1	**Yung-k'ang**	**2.08**	**338**	*e*P	**Pn**	**21 45 45.3**	**-0.6**
	baz=325						
CHN1	**Nanshi**	**2.13**	**346**	*e*P	**Pn**	**21 45 45.8**	**-0.8**
	baz=353						
WTP	**Ta-pu**	**2.18**	**348**	⇑P	**Pn**	**21 45 47.0**	**-0.2**
	baz=345						
SCLT	**Jiali**	**2.22**	**338**	*e*P	**Pn**	**21 45 46.7**	**-1.1**
	baz=325						
SCLT				*e*S	**Sn**	**21 46 14.9**	**-0.8**
	baz=325						
TWK	**Hsinying**	**2.22**	**346**	*e*P	**Pn**	**21 45 47.7**	**-0.2**
	baz=342						
TPUB	**Ta-pu**	**2.23**	**349**	*e*Pn	**Pn**	**21 45 47.8**	**-0.1**
TPUB				*e*Pg	**Pg**	**21 45 53.7**	**+0.7**
TWF1	**Yuli**	**2.25**	**5**	*e*P	**Pn**	**21 45 45.8**	**-2.4**
	baz=353						
CHN4	**Tsaushan**	**2.28**	**349**	⇓P	**Pn**	**21 45 48.7**	**0.0**
	baz=345						
YULB	**Yu-li**	**2.29**	**5**	*e*Pn	**Pn**	**21 45 47.7**	**-1.1**
YULB				*e*Pg	**Pg**	**21 45 52.5**	**-1.7**
CHN8	**Yiju**	**2.37**	**340**	*e*P	**Pn**	**21 45 48.7**	**-1.3**
	baz=327						
YUS	**Yu-Shan**	**2.38**	**357**	*e*P	**Pn**	**21 45 49.6**	**-0.4**
	baz=342						
EHY	**Hungye**	**2.40**	**5**	*e*P	**Pn**	**21 45 48.8**	**-1.6**
	baz=354						
ALS	**Alishan**	**2.41**	**354**	⇑P	**Pn**	**21 45 50.9**	**+0.5**
	baz=350						
CHN5	**Tsauling**	**2.51**	**351**	*e*P	**Pn**	**21 45 51.7**	**-0.1**
	baz=348						
WSF	**Szhu**	**2.65**	**343**	*e*P	**Pn**	**21 45 53.1**	**-0.6**
	baz=331						
SSLB	**Suanglung**	**2.67**	**357**	*e*Pn	**Pn**	**21 45 54.1**	**0.0**
SSLB				*e*Pg	**Pg**	**21 45 59.4**	**-2.2**
SSLB				*e*Sg	**Sg**	**21 46 36.5**	**+0.2**
ESL	**Shilin**	**2.72**	**7**	*e*P	**Pn**	**21 45 53.5**	**-1.2**
	baz=355						
ESL				*e*S	**Sn**	**21 46 26.4**	**-1.5**
	baz=355						
SMLT	**Sun Moon Lake**	**2.77**	**356**	*e*P	**Pn**	**21 45 55.4**	**0.0**
	baz=353						
SMLT				*e*S	**Sn**	**21 46 30.4**	**+1.1**
	baz=353						
WNT	**Mingjian**	**2.79**	**352**	*e*P	**Pn**	**21 45 55.7**	**+0.1**
	baz=349						
PNG	**Penghu**	**2.83**	**330**	*e*P	**Pn**	**21 45 54.2**	**-2.0**
	baz=322						
PNG				*e*S	**Sn**	**21 46 27.0**	**-3.8**
	baz=322						
WTCT	**Ta-ch'eng**	**2.85**	**345**	*e*P	**Pn**	**21 45 55.6**	**-0.9**
	baz=352						
WTCT				*e*S	**Sn**	**21 46 30.0**	**-1.1**
	baz=352						
HWA	**Hwalien**	**2.90**	**9**	*e*P	**Pn**	**21 45 56.2**	**-0.9**
	baz=12						
TWD	**Chiawan**	**3.00**	**9**	*e*P	**Pn**	**21 45 58.2**	**-0.3**
	baz=352						
TWD				*e*S	**Sn**	**21 46 34.1**	**-0.8**
	baz=352						
WHF	**Hehuan Shan**	**3.03**	**3**	*e*P	**Pn**	**21 45 58.8**	**-0.1**
	baz=7.0						
TCU	**Taichung**	**3.05**	**353**	*e*P	**Pn**	**21 45 59.5**	**+0.2**
	baz=350						
NACB	**Ninganchiao**	**3.09**	**9**	*e*Pn	**Pn**	**21 45 59.0**	**-0.8**
NACB				*e*Pg	**Pg**	**21 46 10.2**	**+0.7**
NACB				*e*Sg	**Sn**	**21 46 39.2**	**+2.0**
TWT	**Tachien**	**3.13**	**2**	*e*P	**Pn**	**21 45 60.0**	**-0.4**
	baz=347						
TWQ1	**Liyutan**	**3.24**	**355**	*e*P	**Pn**	**21 46 01.6**	**-0.3**
	baz=352						
NSY	**Sanyi**	**3.31**	**355**	*e*P	**Pn**	**21 46 03.0**	**+0.2**
	baz=352						
NNS	**Nan Shan**	**3.33**	**5**	*e*P	**Pn**	**21 46 03.8**	**+0.7**
	baz=9.0						
ENA	**Nanau**	**3.36**	**10**	*e*P	**Pn**	**21 46 02.5**	**-1.0**
	baz=6.0						
NSTT	**Nanjuang**	**3.51**	**359**	*e*P	**Pn**	**21 46 04.7**	**-0.9**
	baz=356						
TWC	**Suao**	**3.56**	**11**	*e*P	**Pn**	**21 46 05.8**	**-0.4**
	baz=8.0						
YHNB	**Yeheng**	**3.56**	**4**	*e*Pn	**Pn**	**21 46 05.9**	**-0.3**
YHNB				*e*Pg	**Pg**	**21 46 16.6**	**-1.9**
YHNB				*e*Sg	**Sg**	**21 46 59.9**	**-4.8**
NSK	**Sanguang**	**3.56**	**4**	*e*P	**Pn**	**21 46 06.4**	**+0.1**
	baz=351						
NSK				*e*S	**Sn**	**21 46 48.7**	**-0.2**
	baz=351						
TWE	**Neicheng**	**3.64**	**8**	*e*P	**Pn**	**21 46 08.5**	**+1.2**
	baz=5.0						
ILA	**Ilan**	**3.69**	**9**	*e*P	**Pn**	**21 46 08.7**	**+0.6**
	baz=355						
YOJ	**Yonaguni jima**	**3.78**	**28**	P	**Pn**	**21 46 09.9**	**+0.6**
YOJ				*e*S	**Sn**	**21 46 58.3**	**+4.0**
HATJ	**Hateruma jima**	**3.87**	**40**	P	**Pn**	**21 46 10.7**	**+0.2**
HATJ				S	**Sn**	**21 46 56.3**	**0.0**
TATO	**Taipei**	**3.87**	**5**	*e*Pn	**Pn**	**21 46 09.5**	**-1.1**
TWA	**Mucha**	**3.88**	**7**	*e*P	**Pn**	**21 46 11.1**	**+0.4**
	baz=4.0						
TAP1	**Taipei**	**3.94**	**6**	*e*P	**Pn**	**21 46 12.6**	**+1.2**
	baz=2.0						
TWB1	**Santiao Chiao**	**3.97**	**12**	*e*P	**Pn**	**21 46 12.6**	**+0.7**
	baz=20						
TWB1				*e*S	**Sn**	**21 46 58.5**	**-0.4**
	baz=20						
TWS1	**Kuangyinshan**	**3.99**	**4**	*e*P	**Pn**	**21 46 12.3**	**+0.2**
	baz=349						
TWS1				*e*S	**Sn**	**21 46 59.7**	**+0.4**
	baz=349						
NWF	**Wu-fen Shan**	**4.00**	**9**	*e*P	**Pn**	**21 46 13.5**	**+1.2**
	baz=354						
IRIF	**Iriomote-Funau**	**4.04**	**37**	P	**Pn**	**21 46 13.4**	**+0.6**
IRIF				S	**Sn**	**21 47 01.2**	**+0.7**
KNM	**Kinmen**	**4.11**	**324**	*e*P	**Pn**	**21 46 13.2**	**-0.6**
	baz=322						
JKRS	**Kuro-shima**	**4.12**	**40**	P	**Pn**	**21 46 14.1**	**+0.1**
TWY	**Chenhua**	**4.18**	**6**	*e*P	**Pn**	**21 46 15.1**	**+0.3**
	baz=3.0						
JIJ	**Ishigaki jima**	**4.30**	**40**	P	**Pn**	**21 46 16.3**	**-0.1**
JIJ				*e*S	**Sn**	**21 47 06.2**	**-0.8**
QZH	**Quanzhou**	**4.46**	**329**	*e*Pn	**Pn**	**21 46 16.8**	**-1.8**
QZH				Sn	**Sn**	**21 47 05.7**	**-5.2**
QZH				smax			
	comp=N,610nm,0.9s						
QZH				smax			
	comp=E,590nm,1.1s						
QZH				LR	LR		
	comp=N,10μm,11.8s						
QZH				LR	LR		
	comp=E,9μm,11.1s						
QZH				LR	LR		
	comp=Z,12μm,12.8s						
JTJ	**Tarama**	**4.85**	**43**	P	**Pn**	**21 46 23.9**	**-0.1**
JTJ				*e*S	**Sn**	**21 47 21.1**	**+0.6**
JMJ	**Miyako jima 2**	**5.35**	**46**	P	**Pn**	**21 46 31.8**	**+0.9**
JMJ				*e*S	**Sn**	**21 47 32.7**	**-0.3**
JOGS	**Gusukube**	**5.39**	**47**	*e*S	**Sn**	**21 47 35.4**	**+1.4**
TGY	**Tagaytay City**	**6.96**	**181**	Pn	**Pn**	**21 46 54.0**	**+0.9**
	comp=Z,42nm,0.3s,baz=299,slow=10,SNR=1.9						
JKE	**Kume jima 2**	**7.37**	**44**	P	**Pn**	**21 46 58.4**	**-0.2**
GZH	**Guangzhou**	**7.45**	**287**	P	**Pn**	**21 46 55.9**	**-3.8**
GZH				smax			
	comp=N,360nm,0.9s						
GZH				smax			
	comp=E,250nm,0.8s						
JIH	**Iheya**	**8.62**	**45**	P	**Pn**	**21 47 16.3**	**+0.5**
JOW	**Kunigami**	**8.70**	**48**	P	**Pn**	**21 47 16.8**	**-0.1**
JAM	**Amami Oshima**	**10.62**	**45**	P	**Pn**	**21 47 41.3**	**-1.9**
QIZ	**Qiongzhong**	**10.77**	**261**	P	**Pn**	**21 47 44.0**	**-1.2**
QIZ				S	**Sn**	**21 49 51.4**	**+5.2**
QIZ				pmax	pmax		
	comp=Z,23nm,1.7s						
NJ2	**Nanjing**	**11.08**	**350**	*e*P	**Pn**	**21 47 52.9**	**+3.4**
NJ2				pP		21 47 55.1	
NJ2				sP		21 47 57.5	
NJ2				PP		21 48 00.2	
NJ2				S	**Sn**	**21 49 57.5**	**+3.6**
NJ2				sS		21 50 03.5	
NJ2				LR	LR		
	comp=N,3μm,8.8s						
NJ2				LR	LR		
	comp=E,4μm,10.3s						
NJ2				LR	LR		
	comp=Z,4μm,9.9s						
ENH	**Enshi**	**13.87**	**313**	*e*Pn	**Pn**	**21 48 28.8**	**+1.1**
	comp=Z,28nm,1.1s						
GYA	**Guiyang**	**14.23**	**295**	⇑*i*P	**Pn**	**21 48 33.8**	**+1.2**
GYA				PP		21 48 44.3	
GYA				S	**Sn**	**21 51 14.9**	**+3.9**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,4.4s						
GYA				LR	LR		
	comp=N,5μm,13.8s						
GYA				LR	LR		
	comp=E,4μm,12.7s						
GYA				LR	LR		
	comp=Z,6μm,12.4s						
DAV	**Davao City (W)**	**14.61**	**162**	LR	LR	21 54 31.1	
	comp=Z,3μm,18.0s,baz=129,slow=39						
XAN	**Xi'an**	**16.78**	**323**	P	**Pn**	**21 49 06.7**	**+0.5**
XAN				pP	pP	21 49 16.5	+6.8
XAN				pmax	pmax		
	comp=Z,15nm,1.3s						
KMI	**Kunming**	**17.34**	**287**	P	**Pn**	**21 49 15.6**	**+2.3**
KMI				pP	pP	21 49 17.7	+1.7
KMI				sP	sP	21 49 19.2	+2.6
KMI				PP		21 49 29.9	
CD2	**Chengdu**	**18.36**	**306**	P	**Pn**	**21 49 26.5**	**+0.7**
CD2				pP	pP	21 49 30.1	+2.9
CD2				sP	sP	21 49 33.5	+5.7
CD2				PP		21 49 42.2	
CD2				S	**Sn**	**21 52 48.7**	**-2.6**
CD2				sS	sS	21 52 54.4	-3.9
CD2				SS		21 53 12.5	
CD2				pmax	pmax		
	comp=Z,70nm,1.2s						
CD2				pmax	pmax		
	comp=Z,4μm,7.7s						
CD2				LR	LR		
	comp=N,3μm,9.5s						
CD2				LR	LR		
	comp=Z,3μm,10.7s						
BJT	**Baijiatuao**	**19.32**	**349**	*e*P	**Pn**	**21 49 37.4**	**+0.1**
BJI	**Beijing**	**19.34**	**349**	P	**Pn**	**21 49 37.5**	**0.0**
BJI				pmax	pmax		
	comp=Z,97nm,0.9s						
CBIJ	**Chichi jima**	**20.15**	**69**	P	**P**	**21 49 47.1**	**+1.5**
	comp=Z,70nm,0.9s,baz=298,slow=17,SNR=2.8						
JHJ	**Hachijo jima 2**	**20.46**	**50**	P	**P**	**21 49 49.7**	**+0.9**
	comp=Z,25nm,0.6s,baz=262,slow=15,SNR=2.0						
SNY	**Shenyang**	**20.77**	**5**	⇑P	**P**	**21 49 55.0**	**+2.9**
SNY				pmax	pmax		
	comp=Z,23nm,0.7s						
SNY				pmax	pmax		
	comp=Z,1μm,5.2s						
SNY				LR	LR		
	comp=N,3μm,12.0s,MS4.9						
SNY				LR	LR		
	comp=E,1μm,12.0s,MS4.9						
SNY				LR	LR		
	comp=Z,2μm,12.8s,MS4.8						
CHTO	**Chiang Mai**	**20.94**	**268**	*e*P	**P**	**21 49 54.5**	**+0.4**
CHTO				pmax	pmax		
	comp=Z,25nm,1.5s						
CHTO	**Chiang Mai**	**20.94**	**268**	*e*P	**P**	**21 49 54.5**	**+0.4**
	comp=Z,25nm,1.5s						
CM31	**Chiang Mai Arr**	**21.00**	**267**	*e*P	**P**	**21 49 55.7**	**+0.9**
	comp=Z,2.7nm,0.7s,mb3.7						
CMAR	**Chiang Mai Arr**	**21.00**	**267**	P	**P**	**21 49 54.9**	**+0.1**
	comp=Z,4.3nm,0.8s,mb3.8,baz=74,slow=9.2,SNR=30						
CMAR				PcP	PcP	21 54 02.5	+0.3
	comp=Z,0.9nm,0.5s,baz=54,slow=0.4,SNR=9.1						
CMAR				LR	LR	21 59 18.2	
	comp=Z,525nm,20.3s,MS3.9,baz=80,slow=41						
CMAR	**Chiang Mai Arr**	**21.00**	**267**	P	**P**	**21 49 54.9**	**+0.1**
CMAR						21 54 02.6	
CMAR	**Chiang Mai Arr**	**21.00**	**267**	P	**P**	**21 49 54.9**	**+0.1**
CMAR				PcP	PcP	21 54 02.5	+0.3
CMAR				LR	LR	21 59 18.2	
LZH	**Lanzhou**	**21.21**	**318**	⇓P	**P**	**21 49 59.0**	**+2.1**
LZH				pP		21 50 08.1	
LZH				sP	sP	21 50 12.0	+13
LZH				PP		21 50 22.2	
LZH				*e*S	**S**	**21 53 46.1**	**-7.1**
LZH				sS	sS	21 54 00.5	+5.2
LZH				SS		21 54 20.0	
LZH				pmax	pmax		
	comp=Z,140nm,1.5s,mb5.1						
LZH				pmax	pmax		
	comp=Z,310nm,4.3s						
LZH				LR	LR		
	comp=N,2μm,11.4s						
LZH				LR	LR		
	comp=Z,3μm,12.5s,MS4.8						
HHC	**Hu-ho-hao-te**	**21.28**	**340**	*e*P	**P**	**21 49 59.3**	**+1.6**
HHC				S	**S**	**21 53 50.9**	**-3.6**
HHC				pmax	pmax		
	comp=Z,56nm,0.9s,mb4.9						
MAJO	**Matsushiro**	**21.43**	**40**	*e*P	**P**	**21 50 01.0**	**+1.7**
MAJO				pmax	pmax		
	comp=Z,56nm,1.2s,mb4.8						
MAJO	**Matsushiro**	**21.43**	**40**	*e*P	**P**	**21 50 01.0**	**+1.6**
	comp=Z,56nm,1.2s,mb4.8						
MAT	**Matsushiro**	**21.43**	**40**	P	**P**	**21 50 01.2**	**+1.9**
MJAR	**Matsushiro Arr**	**21.43**	**40**	P	**P**	**21 50 00.4**	**+1.1**
	comp=Z,7.2nm,0.8s,mb4.1,baz=232,slow=7.7,SNR=26						
KSM	**Kuching**	**22.16**	**210**	*e*P	**P**	**21 50 06.0**	**-1.4**
	comp=Z,27nm,1.1s,mb4.6						
MDJ	**Mudanjiang**	**24.48**	**15**	P	**P**	**21 50 30.6**	**+0.3**
MDJ				pmax	pmax		
	comp=Z,35nm,0.9s,mb4.8						
MDJ				pmax	pmax		
	comp=Z,1μm,13.7s						
MDJ	**Mudanjiang**	**24.48**	**15**	*e*P	**P**	**21 50 30.3**	**0.0**
	comp=Z,34nm,0.9s,mb4.8						
KULM	**Kulim**	**25.30**	**234**	*e*P	**P**	**21 50 38.0**	**-0.1**
	comp=Z,3.6nm,0.7s,mb4.0						
GTA	**Gaotai**	**25.78**	**320**	*e*P	**P**	**21 50 42.6**	**+0.4**
GTA				pP	pP	21 50 47.2	+3.6
GTA				sP	sP	21 50 50.4	+6.2
GTA				S	**S**	**21 55 10.7**	**-1.3**
GTA				sS	sS	21 55 18.1	+3.8
GTA				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.2						
GTA				LR	LR		
	comp=N,2μm,13.7s,MS4.8						
GTA				LR	LR		
	comp=E,1μm,14.0s,MS4.8						
GTA				LR	LR		
	comp=Z,1μm,14.6s,MS4.6						
ERM	**Erimo**	**27.93**	**37**	*e*P	**P**	**21 51 02.3**	**+0.8**
HIA	**Hailar**	**28.12**	**358**	*e*P	**P**	**21 51 01.8**	**-1.3**
HIA				pmax	pmax		
	comp=Z,20nm,0.9s		

comp=Z,12nm,0.7s,mb4.9
TLY Talaya 33.41 340 *e*P **P 21 51 47.2 -2.6**
TLY pmax pmax
comp=Z,13nm,0.9s,mb4.9
TLY Talaya 33.41 340 *e*P **P 21 51 50.9 +1.1**
comp=Z,13nm,0.9s,mb4.9
IRK Irkutsk 33.71 341 *e*P **P 21 51 52.4 +0.1**
IRK *e* 21 53 15.8
IRK pmax pmax
comp=Z,35nm,1.5s,mb5.1
GKN Gorkha 33.77 289 *e*P **P 21 51 53.1 -0.1**
comp=Z,21nm,0.9s,mb5.0
KAKA Kakadu 35.41 161 *e*P **P 21 52 07.6 +0.2**
comp=Z,8.3nm,0.6s,mb4.8
WMQ Urumqi 35.78 317 P **P 21 52 12.4 +2.0**
WMQ pP pP 21 52 16.8 +5.0
WMQ sP sP 21 52 19.4 +7.0
WMQ PP PP 21 53 33.5 +1.9
WMQ pmax pmax
comp=Z,11nm,1.4s,mb4.6
WMQ pmax pmax
comp=Z,610nm,5.2s
WMQ LR LR
comp=N,3μm,19.0s,MS5.1
WMQ LR LR
comp=E,2μm,20.1s,MS5.1
WMQ LR LR
comp=Z,2μm,22.1s,MS4.8
FITZ Fitzroy Crossi 39.22 173 *e*P **P 21 52 37.4 -2.3**
comp=Z,9.3nm,0.9s,mb4.5
FITZ Fitzroy Crossi 39.22 173 P **P 21 52 37.1 -2.6**
comp=Z,3.0nm,0.6s,mb4.2,baz=353,slow=15,SNR=7.1
MK31 Makanchi Array 40.53 319 *e*P **P 21 52 50.8 +0.4**
MKAR Makanchi Array 40.53 319 P **P 21 52 50.5 +0.1**
comp=Z,3.9nm,0.7s,mb4.2,baz=112,slow=9.4,SNR=30
COEN Coen 41.05 146 *e*P **P 21 52 54.2 -0.8**
YAK Yakutsk 41.33 6 *e*P **P 21 52 56.7 0.0**
YAK pmax pmax
comp=Z,22nm,0.8s,mb4.8
YAK Yakutsk 41.33 6 *e*P **P 21 52 56.7 -0.1**
comp=Z,22nm,0.8s,mb4.8
KSH Kashi 42.56 306 P **P 21 53 03.4 -3.8**
KSH S **S 21 59 21.2 -9.1**
KSH LR LR
comp=N,4μm,14.9s,MS5.6
KSH LR LR
comp=E,4μm,16.8s,MS5.6
KSH Kashi 42.56 306 *e*P **P 21 53 11.3 +4.1**
KSH pP pP 21 53 15.6 +7.0
KSH sP sP 21 53 18.6 +9.4
KSH PP PP 21 54 54.0 +8.3
KSH PcP PcP 21 55 02.4 +2.7
KSH ScP ScP 21 58 51.3 0.0
KSH PcS PcS 21 58 53.9 +2.3
KSH S **S 21 59 35.3 +5.0**
KSH sS sS 21 59 43.4 +11
KSH ScS ScS 22 03 09.3 -0.5
KSH pmax pmax
comp=Z,19nm,1.2s,mb4.7
KSH pmax pmax
comp=Z,230nm,7.0s
KSH LR LR
comp=N,750nm,10.7s,MS5.0
KSH LR LR
comp=E,780nm,11.2s,MS5.0
KSH LR LR
comp=Z,1μm,13.3s,MS5.0
ZALV Zalesovo Beam 42.80 329 P **P 21 53 08.0 -0.9**
comp=Z,15nm,0.7s,mb4.8,baz=111,slow=8.1,SNR=32
ZALV Zalesovo Beam 42.80 329 P **P 21 53 08.0 -0.9**
WRAB Tennant Creek 42.80 161 P **P 21 53 08.8 -0.4**
comp=Z,114nm,1.1s,mb5.5,SNR=6.3
WRAB Tennant Creek 42.80 161 *e*P **P 21 53 08.3 -0.9**
WRAB pmax pmax
comp=Z,44nm,1.4s,mb5.0
WRAB Tennant Creek 42.80 161 *e*P **P 21 53 08.3 -0.9**
comp=Z,44nm,1.4s,mb5.0
WRA Warramunga Arr 42.80 161 P **P 21 53 07.3 -2.0**
comp=Z,5.6nm,0.6s,mb4.5,baz=344,slow=9.0,SNR=46
PET Petropavlovsk 42.92 33 *e*P **P 21 53 15.0 +5.1**
PET pmax pmax
comp=Z,26nm,1.1s,mb4.9
TKM2 Tokmak 2 43.64 311 P **P 21 53 18.2 +2.3**
SNR=6.3
TKM2 Tokmak 2 43.64 311 *e*P **P 21 53 17.9 +2.1**
TKM2 pmax pmax
comp=Z,23nm,1.4s,mb4.7
TKM2 Tokmak 2 43.64 311 *e*P **P 21 53 17.9 +2.0**
comp=Z,23nm,1.4s,mb4.7
KZA Kyzart 43.67 309 P **P 21 53 17.8 +1.7**
SNR=11
NVS Novosibirsk 44.07 329⇑ *i*P **P 21 53 19.0 -0.1**
NVS *e*S **S 21 59 49.4 -2.6**
NVS pmax pmax
comp=N,37nm,1.7s
NVS pmax pmax
comp=E,40nm,1.7s
NVS pmax pmax
comp=Z,48nm,1.7s,mb5.0
NVS smax
comp=N,15nm,2.5s
NVS smax
comp=E,35nm,2.3s
UCH Uchtor 44.24 309 P **P 21 53 23.5 +2.8**
SNR=6.5
UCH Uchtor 44.24 309 *e*P **P 21 53 23.2 +2.5**
UCH pmax pmax
comp=Z,33nm,1.4s,mb4.9
UCH Uchtor 44.24 309 *e*P **P 21 53 23.2 +2.5**
comp=Z,34nm,1.4s,mb4.9
CHMS Chumysh 44.26 310 P **P 21 53 22.6 +1.8**
SNR=7.6
FRU Bishkek 44.31 310 *e*P **P 21 53 20.0 -1.3**
AAK Ala-Archa 44.35 310 P **P 21 53 20.8 -0.8**
comp=Z,1.3nm,0.3s,mb4.1,baz=207,slow=9.0,SNR=5.4
KURK Kurchatov 44.42 322 P **P 21 53 22.4 +0.4**
comp=Z,94nm,1.6s,mb5.3,SNR=9.2
KURK Kurchatov 44.42 322 P **P 21 53 21.9 -0.1**
comp=Z,11nm,0.9s,mb4.6,baz=145,slow=6.4,SNR=57
KURK Kurchatov 44.42 322 *e*P **P 21 53 22.2 +0.2**
KURK pmax pmax
comp=Z,19nm,1.0s,mb4.8
KURK Kurchatov 44.42 322 *e*P **P 21 53 22.2 +0.2**
comp=Z,19nm,1.0s,mb4.8
AML Almayashu 44.81 309 P **P 21 53 28.2 +3.0**
SNR=17
AML Almayashu 44.81 309 *e*P **P 21 53 27.7 +2.4**
AML pmax pmax
comp=Z,26nm,1.2s,mb4.9
AML Almayashu 44.81 309 *e*P **P 21 53 27.7 +2.4**
comp=Z,26nm,1.2s,mb4.9
EKS2 Erkin-Say 44.87 310 P **P 21 53 27.4 +1.7**
SNR=5.6
EKS2 Erkin-Say 44.87 310 *e*P **P 21 53 27.2 +1.5**
EKS2 pmax pmax
comp=Z,28nm,1.7s,mb4.8
EKS2 Erkin-Say 44.87 310 *e*P **P 21 53 27.2 +1.5**
comp=Z,28nm,1.7s,mb4.8
ASAR Alice Springs 46.22 164 P **P 21 53 34.8 -1.7**
comp=Z,2.4nm,0.5s,mb4.4,baz=340,slow=6.6,SNR=23
KBL Kabul 47.46 298 *e*P **P 21 53 48.3 +2.0**
KBL pmax pmax
comp=Z,27nm,1.3s,mb5.0
KBL Kabul 47.46 298 *e*P **P 21 53 48.3 +2.0**
comp=Z,27nm,1.3s,mb5.0
MEEK Meekatharra 47.52 183 *e*P **P 21 53 45.4 -1.2**
CTA Charters Tower 47.77 147 *e*P **P 21 53 49.6 +0.9**
comp=Z,12nm,1.3s,mb4.8
CTA Charters Tower 47.77 147 P **P 21 53 48.1 -0.7**
comp=Z,4.3nm,0.7s,mb4.6,baz=331,slow=6.9,SNR=5.4
CTAO Charters Tower 47.77 147 *e*P **P 21 53 49.0 +0.3**
CTAO pmax pmax
comp=Z,54nm,1.5s,mb5.4
CTAO Charters Tower 47.77 147 *e*P **P 21 53 49.0 +0.2**
comp=Z,54nm,1.5s,mb5.4
BVAR Borovoye Array 50.02 322 P **P 21 54 05.2 -0.4**
comp=Z,1.8nm,0.7s,mb4.2,baz=107,slow=9.5,SNR=10.0
BRVK Borovoye 50.09 322 P **P 21 54 07.1 +0.9**
comp=Z,100nm,0.9s,mb5.8,SNR=5.8
BRVK Borovoye 50.09 322 *e*P **P 21 54 06.9 +0.7**
BRVK pmax pmax
comp=Z,16nm,1.7s,mb4.8
BRVK Borovoye 50.09 322 *e*P **P 21 54 07.1 +1.0**
comp=Z,16nm,0.9s,mb5.1
MORW Morawa 50.12 186 *e*P **P 21 54 05.2 -1.4**
TIXI Tiksi 50.76 3 *e*P **P 21 54 13.0 +2.0**
TIXI pmax pmax
comp=Z,22nm,1.5s,mb4.9
TIXI Tiksi 50.76 3 *e*P **P 21 54 09.4 -1.6**
comp=Z,26nm,1.4s,mb5.0
QLP Quilpie 52.45 154 *e*P **P 21 54 23.7 -0.4**
NWAO Narrogin (SRO) 53.85 184 P **P 21 54 34.0 -0.3**
comp=Z,14nm,1.0s,mb4.9,baz=0.0,slow=3.0,SNR=2.7
BILL Bilibino 54.60 19⇑ *e*P **P 21 54 39.3 -0.2**
BILL *e* 21 56 43.3
BILL *e*S **S 22 02 18.4 -1.0**
BILL pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
BILL MLR MLR
comp=Z,900nm,17.0s,MS4.9
ABKAR Akbulak array 55.55 316 *e*P **P 21 54 46.7 0.0**
comp=Z,7.2nm,0.9s,mb4.7
STKA Stephens Creek 56.23 159 *e*P **P 21 54 51.5 -0.1**
comp=Z,6.0nm,0.7s,mb4.7
STKA Stephens Creek 56.23 159 P **P 21 54 50.8 -0.8**
comp=Z,4.8nm,0.6s,mb4.7,baz=347,slow=9.9,SNR=12
STKA Stephens Creek 56.23 159 *e*P **P 21 54 51.4 -0.2**
STKA pmax pmax
comp=Z,2.0nm,0.8s
STKA Stephens Creek 56.23 159 *e*P **P 21 54 51.4 -0.1**
comp=Z,2.1nm,0.8s,mb4.2
SVE Sverdlovsk 56.48 325⇑ *e*P **P 21 54 54.2 +1.0**
SVE pmax pmax
comp=Z,28nm,1.5s,mb5.1
AKTK Aktyubinsk 56.93 317 P **P 21 54 56.1 -0.3**
AKTO Aktyubinsk 56.93 317 P **P 21 54 56.1 -0.3**
comp=Z,3.6nm,0.9s,mb4.4,baz=89,slow=13,SNR=4.9
ARU Arti 57.52 324 *d i*P **P 21 55 00.3 -0.2**
ARU *e* 21 57 08.7
ARU S **S 22 02 58.5 0.0**
ARU SS SS 22 06 43.3 -4.7
ARU pmax pmax
comp=Z,15nm,1.7s,mb4.8
ARU Arti 57.52 324 *e*P **P 21 55 00.4 -0.1**
comp=Z,140nm,2.5s,mb5.5
GNI Garni 66.49 306 *e*P **P 21 55 59.4 -1.8**
GNI pmax pmax
comp=Z,11nm,1.2s
ZEI Tsey 66.75 309 *e*P **P 21 56 03.1 +0.3**
ZEI pmax pmax
comp=Z,8.0nm,0.5s,mb5.0
VRHR Novokhopersk 67.33 318 *e*P **P 21 56 12.5 +6.3**
VRHR pmax pmax
comp=E,7.0nm,0.8s
VRHR pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
VRHR pmax pmax
comp=N,3.0nm,0.4s
KIV Kislovodsk 67.47 310⇓ *e*P **P 21 56 08.8 +1.5**
KIV *e*S S 22 05 00.9 -3.2
KIV pmax pmax
comp=Z,11nm,1.7s,mb4.6
KIV MLR MLR
comp=Z,600nm,18.0s,MS4.9
KIV Kislovodsk 67.47 310 *e*P **P 21 56 08.1 +0.8**
TTA Tatalina 68.22 29 *e*P **P 21 56 12.0 +0.3**
SVW2 Sparrevohn 68.56 31 *e*P **P 21 56 18.9 +5.1**
comp=Z,10nm,1.5s,mb4.5
VSR Storozhevoye 68.85 318 *e*P **P 21 56 21.4 +5.6**
VSR pmax pmax
comp=E,10.0nm,0.9s
VSR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
VSR pmax pmax
comp=N,2.0nm,0.4s
APA Apatity 69.81 336⇑ *e*P **P 21 56 28.6 +7.1**
APA pmax pmax
comp=Z,18nm,1.0s,mb5.0
OBN Obninsk 69.86 322⇑ *e*P **P 21 56 22.7 +0.7**
OBN *e*S S 22 05 21.4 -11
OBN pmax pmax
comp=Z,18nm,1.3s,mb4.8
OBN MLR MLR
comp=Z,600nm,16.0s,MS4.9
PPLA Purkeypile 69.96 29 *e*P **P 21 56 22.5 0.0**
comp=Z,14nm,0.8s,mb4.9
OHAK Old Harbor 70.18 35 *e*P **P 21 56 23.3 -0.6**
comp=Z,12nm,1.0s,mb4.8
COLD Coldfoot 70.25 24 *e*P **P 21 56 24.4 +0.2**
comp=Z,14nm,1.2s,mb4.8
BPAW Bear Paw Mtn. 70.34 28 *e*P **P 21 56 24.7 -0.1**
comp=Z,23nm,1.3s,mb5.0
KDAK Kodiak Island 70.47 35 P **P 21 56 25.8 +0.1**
comp=Z,6.7nm,0.6s,mb4.7,baz=343,slow=2.6,SNR=8.0
KDAK Kodiak Island 70.47 35 *i* P **P 21 56 26.0 +0.3**
KDAK Kodiak Island 70.47 35 *e*P **P 21 56 26.2 +0.5**
TRF Thorofare Moun 70.74 28 *e*P **P 21 56 28.3 +1.0**
comp=Z,8.5nm,0.8s,mb4.7
MCK McKinley 71.29 28 *e*P **P 21 56 31.3 +0.7**
MCK pmax pmax
comp=Z,22nm,1.0s,mb5.0
MCK McKinley 71.29 28 *e*P **P 21 56 31.3 +0.7**
comp=Z,22nm,1.0s,mb5.0
JOF Joensuu 71.34 331 *e*P **P 21 56 30.6 -0.3**
JOF Joensuu 71.34 331 *e*p **P 21 56 30.6 -0.3**
comp=Z,8.4nm,0.7s,mb4.8
KEV Kevo 71.79 339 *e*P **P 21 56 33.2 -0.3**
KEV pmax pmax
comp=Z,12nm,0.9s,mb4.8
KEV Kevo 71.79 339 *e*P **P 21 56 33.2 -0.3**
comp=Z,12nm,0.9s,mb4.8
KEV Kevo 71.79 339 *e*p **P 21 56 33.2 -0.3**
comp=Z,12nm,0.9s,mb4.8
ARCES ARCESS Array B 72.35 338 P **P 21 56 36.8 -0.1**
comp=Z,2.2nm,0.8s,mb4.2,baz=74,slow=8.9,SNR=14
SPITS Spitsbergen Ar 72.46 348 P **P 21 56 36.8 -0.6**
comp=Z,6.3nm,0.7s,mb4.7,baz=120,slow=4.9,SNR=8.0
DIV Divide 73.25 30 *e*P **P 21 56 41.8 -0.6**
DIV *e*pP pP 21 56 49.4 +5.5
BMRM Bremner River 73.84 30 *e*P **P 21 56 47.0 +1.1**
comp=Z,22nm,0.9s,mb5.1
BMRM *e*pP pP 21 56 53.5 +6.1
FINES FINESS Array B 74.05 330 P **P 21 56 46.0 -1.1**
comp=Z,2.6nm,0.8s,mb4.2,baz=69,slow=4.6,SNR=5.4
EGAK Eagle 74.37 26 *e*P **P 21 56 48.5 -0.3**
BR131 Keskin Array S 74.93 307 *e*P **P 21 56 52.6 0.0**
comp=Z,1.4nm,0.7s,mb4.0
BRTR Keskin Array B 74.93 307 P **P 21 56 52.3 -0.3**
comp=Z,0.9nm,0.6s,mb3.9,baz=115,slow=4.8,SNR=5.3
BRTR Keskin Array B 74.93 307 *e*P **P 21 56 52.7 +0.1**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
AKASG Malin Array Be 75.11 319 P **P 21 56 52.2 -1.2**
comp=Z,1.1nm,0.6s,mb4.0,baz=66,slow=5.3,SNR=4.2
DAWY Dawson 75.31 27 *e*P **P 21 56 54.4 +0.1**
INK Inuvik 76.11 22 P **P 21 56 57.6 -1.1**
comp=Z,3.0nm,0.7s,mb4.3,baz=260,slow=6.1,SNR=3.7
INK Inuvik 76.11 22 *e*P **P 21 56 58.1 -0.7**
KIS Kishinev 76.37 315 *e*PS PcP 21 57 14.0 +1.5
KIS *e*SSS 22 05 38.0
KIS *e*LQ 22 16 55.0
KIS LRM 22 25 24.0
comp=Z,1μm,18.0s
HYT Haines Junctio 77.20 30 *e*P **P 21 57 06.6 +1.5**
BUR08 Bucovina Ar. S 78.52 317 *e*P **P 21 57 12.8 0.0**
CRVS Cervenica-Dubn 80.45 319 *e*P **P 21 57 26.9 +3.7**
CRVS pmax pmax
comp=Z,9.0nm,1.8s,mb4.4
CRVS Cervenica-Dubn 80.45 319 *e*P **P 21 57 26.9 +3.7**
comp=Z,9.2nm,1.8s,mb4.4
CRVS *e* 21 57 47.9
CRVS Cervenica-Dubn 80.45 319 *e*P **P 21 57 26.9 +3.7**
CRVS *e* 21 57 47.9
NB2 NORSAR Subarra 80.90 332 P **P 21 57 24.9 -0.4**
comp=Z,4.2nm,1.1s,mb4.3,baz=58,slow=5.3
NOA NORSAR Array B 80.90 332 P **P 21 57 24.5 -0.8**
comp=Z,1.1nm,0.7s,mb3.9,baz=60,slow=5.4,SNR=6.6
VTS Vitosha 81.56 312 *e*P **P 21 57 30.1 +0.9**
DLBC Dease Lake 81.64 30 P **P 21 57 29.6 +0.3**
comp=Z,2.2nm,0.9s,mb4.1,baz=245,slow=11,SNR=3.6
RES Resolute Bay 81.70 9 *e*P **P 21 57 29.1 -0.3**
VYHS Vyhne 82.21 319 *e*P **P 21 57 34.2 +1.6**
VYHS *e* 21 57 47.9
VYHS pmax pmax
comp=Z,6.0nm,2.0s,mb4.2
VYHS Vyhne 82.21 319 *e*P **P 21 57 34.2 +1.6**
comp=Z,6.2nm,2.0s,mb4.2
VYHS *e* 21 57 47.9
VYHS Vyhne 82.21 319 *e*P **P 21 57 34.2 +1.6**
VYHS *e* 21 57 47.9
DPC Dobruska-Polom 82.97 321 *e*P **P 21 57 38.5 +2.0**
DPC *e* 21 57 46.0
DPC Dobruska-Polom 82.97 321 *e*P **P 21 57 38.5 +2.0**
DPC *e* 21 57 46.0
DPC Dobruska-Polom 82.97 321 *e*P **P 21 57 38.5 +2.0**
DPC *ex* x 21 57 46.0
UPC Upice 83.08 322 *e*P **P 21 57 38.6 +1.5**
UPC Upice 83.08 322 *e*P **P 21 57 38.6 +1.5**
UPC Upice 83.08 322 *e*P **P 21 57 38.6 +1.5**
TREC Trest 83.90 321 *e*P **P 21 57 51.2 +10**
TREC *e* 21 58 08.5
TREC Trest 83.90 321 *e*P **P 21 57 51.2 +10**
TREC *ex* x 21 58 08.5
PRU Pruhonice 84.16 322 *e*P **P 21 57 51.9 +9.3**
PRU Pruhonice 84.16 322 *e*P **P 21 57 51.9 +9.3**
PRU Pruhonice 84.16 322 *e*P **P 21 57 51.9 +9.3**
CLL Collm 84.45 323 *e*P **P 21 57 49.0 +5.0**
CLL pmax pmax
comp=Z,4.0nm,1.0s,mb4.5
CLL Collm 84.45 323 *e*P **P 21 57 49.0 +5.0**
comp=Z,4.0nm,1.0s,mb4.5
CLL *i* 21 57 53.6
CLL Collm 84.45 323 *e*sP sP 21 57 49.0 +2.8
comp=Z,4.0nm,1.0s
CLL *e*sPcP 21 57 52.0
CLL *i* 21 57 58.0
CLL *i* 21 58 12.2
CLL *e*(PP) 22 01 06.0
KHC Kasperske Hory 85.10 321 *e*P **P 21 57 50.9 +3.5**
KHC Kasperske Hory 85.10 321 *e*P **P 21 57 50.9 +3.5**
KHC *e* 21 57 55.5
KHC Kasperske Hory 85.10 321 *e*P **P 21 57 50.9 +3.5**
KHC *ex* x 21 57 55.5
SUMG Summit 85.54 354 *e*P **P 21 57 49.6 +0.5**
YKA Yellowknife Ar 85.83 23 P **P 21 57 48.6 -2.2**
comp=Z,1.7nm,0.6s,mb4.5,baz=309,slow=4.7,SNR=7.1
CDF Champ du Feu 89.10 322 *e*P **P 21 58 05.6 -1.2**
LPG La Plagne 90.93 320 *e*P **P 21 58 16.7 +1.3**
comp=Z,10nm,0.8s,mb4.9
LPG La Plagne 90.93 320 *e*P **P 21 58 16.7 +1.3**
LPG pmax pmax
comp=Z,5.0nm,0.8s,mb4.9
LPG La Plagne 90.93 320 *e*P **P 21 58 16.7 +1.3**
comp=Z,5.3nm,0.8s,mb4.9
LPL La Plagne 90.93 320 *e*P **P 21 58 16.8 +1.4**
comp=Z,14nm,1.1s,mb4.9
LPL La Plagne 90.93 320 *e*P **P 21 58 16.8 +1.4**
LPL pmax pmax
comp=Z,7.0nm,1.1s,mb4.9
LPL La Plagne 90.93 320 *e*P **P 21 58 16.8 +1.4**
comp=Z,7.2nm,1.1s,mb4.9
JCW Jim Creek 91.00 37 *e*P **P 21 58 24.2 +8.5**
PGF Pioggiola 91.05 317 *e*P **P 21 58 16.2 +0.2**
comp=Z,14nm,0.8s,mb5.0
PGF Pioggiola 91.05 317 *e*P **P 21 58 16.2 +0.2**
PGF pmax pmax
comp=Z,7.0nm,0.8s,mb5.0
PGF Pioggiola 91.05 317 *e*P **P 21 58 16.2 +0.2**
comp=Z,6.8nm,0.8s,mb5.0
MBDF Montbardon 91.32 319 *e*P **P 21 58 17.6 +0.4**
ORIF Oris-en-Rattie 91.75 320 *e*P **P 21 58 20.2 +0.9**
SSF Saint Saulge 91.97 323 *e*P **P 21 58 19.2 -1.0**
NVAR Mina Array Bea 98.73 43 P **P 21 58 51.6 +0.3**
comp=Z,0.6nm,0.9s,mb4.1,baz=270,slow=7.2,SNR=2.5
ELK Elko 99.25 40 P **P 21 58 53.2 -0.2**
comp=Z,0.2nm,0.4s,mb4.0,baz=281,slow=5.2,SNR=2.2
DBIC Dimbokro 120.21 291 PKP PKPdf 22 04 04.3 +0.9
comp=Z,3.6nm,1.0s,baz=111,slow=3.1,SNR=2.2
DBIC Dimbokro 120.21 291 PKP PKPdf 22 04 04.3 +0.9
PCRV Puerto La Cruz 148.41 11 PKPbc PKPbc 22 04 58.1 -0.8
comp=Z,4.2nm,0.5s,baz=135,slow=4.3,SNR=1.9
ROSC El Rosal 150.09 32 PKPbc PKPbc 22 05 04.6 +1.4
comp=Z,3.5nm,0.5s,baz=45,slow=1.4,SNR=5.1
LPAZ La Paz 170.04 63 PKP PKPdf 22 05 21.0 +0.9
comp=Z,0.7nm,0.7s,baz=338,slow=2.5,SNR=3.1

DJA 11 21:45:57,6°26S×103°63E, h9km, MLv3.5/5, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
LWLI	**Liwa**	**1.31**	**19**	P	Pn	21 46 20.5	-0.9
LWLI				S	Sb	21 46 38.5	-0.1
MDSI	**Maura Dua**	**1.84**	**17**	P	Pn	21 46 27.8	-1.1
MDSI				S	Sn	21 46 53.3	+1.0
KLSI		**1.91**	**35**	P	Pn	21 46 31.0	+1.3
MNAI	**Manna**	**2.00**	**340**	P	Pn	21 46 30.9	-0.1
CGJI	**Cibinong**	**2.08**	**100**	P	Pn	21 46 32.3	+0.2
RBSI	**Rajabasa**	**2.14**	**79**	P	Pn	21 46 33.7	+0.8

ISCJB ***11*** *21:50:39.9±0.3, 41°.13N±0°.02×20°.23E±0°.02, h10km, Error ellipse: s-maj=3.0km s-min=1.7km az=141.3*
THE ***11*** *21:50:39.3, 41°.19N×20°.25E, h0km±3km, ML3.1/5, Error ellipse: s-maj=3.7km s-min=1.2km az=356.0*
PDG ***11*** *21:50:39.0±0.2, 41°.09N×20°.14E, h3km, ML2.7/9, Error ellipse: s-maj=1.0km s-min=1.6km az=0.0*
NEIC ***11*** *21:50:39.0, 41°.09N×20°.14E, h3km, MD3.2(ATH), ML2.7(PDG), After PDG.*
SKO ***11*** *21:50:39.0, 41°.06N×20°.14E, h10km, M2.0, ML2.6*
ATH ***11*** *21:50:39.8, 41°.33N×20°.08E, h45km, MD3.2/4*
CSEM ***11*** *21:50:40.2±0.2, 41°.10N×20°.22E, h2km, ML3.1/5, Error ellipse: s-maj=5.8km s-min=3.0km az=53.0*

ISC 11 21:50:40.1±0.4, 41°.13N±0°.02×20°.21E±0°.03, h5km±3km, n70, σ1s20/134, 9C-9D, Albania

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.34**	**311**	P	**Pg**	**21 50 45.3**	**-1.4**
TIR				S	**Sg**	**21 50 51.5**	**+0.4**
TIR	**Tirane**	**0.34**	**311**	P	**Pg**	**21 50 45.3**	**-1.4**
TIR				S	**Sg**	**21 50 51.5**	**+0.4**
OHR	**Ohrid**	**0.45**	**92**	*i* Pg	**Pg**	**21 50 47.8**	**-1.0**
OHR				*i* Sg	**Sg**	**21 50 55.8**	**+1.2**
OHR				*e*Lg		21 50 55.9	
OHR	comp=E,270nm,0.6s			*e*Lg		21 50 56.0	
OHR	comp=N,201nm,0.5s						
OHR	**Ohrid**	**0.45**	**92**	P	**Pg**	**21 50 47.8**	**-1.0**
OHR				S	**Sg**	**21 50 53.5**	**-1.1**
OHR	**Ohrid**	**0.45**	**92**	P	**Pg**	**21 50 47.8**	**-1.0**
OHR				S	**Sg**	**21 50 53.5**	**-1.1**
OHR				*e*Sg	**Sg**	**21 50 55.6**	**+1.0**
KBN	**Korca**	**0.67**	**139**	*i* PN	**Pg**	**21 50 51.2**	**-1.8**
KBN				*i* PN	**Sg**	**21 51 02.0**	**+0.4**
KBN	**Korca**	**0.67**	**139**	*i* Pn	**Pg**	**21 50 51.2**	**-1.8**
KRUS	**Krusevo**	**0.82**	**73**	*i* Pg	**Pg**	**21 50 54.3**	**-1.6**
KRUS				*i* Sg	**Sg**	**21 51 07.8**	**+1.2**
KRUS				*e*Lg		21 51 08.5	
KRUS	comp=E,35nm,0.3s						
KRUS	comp=N,59nm,0.6s			*e*Lg		21 51 08.5	
BIA	**Bitola**	**0.85**	**97**	*i* Pg	**Pg**	**21 50 54.8**	**-1.6**
BIA				*i* Sg	**Sg**	**21 51 07.7**	**+0.2**
BIA				*e*Lg		21 51 09.2	
BIA	comp=N,20nm,0.3s			*e*Lg		21 51 09.5	
BIA	comp=E,41nm,0.4s						
BIA	**Bitola**	**0.85**	**97**	P	**Pg**	**21 50 54.9**	**-1.6**
BIA				S	**Sg**	**21 51 07.5**	**0.0**
BIA	**Bitola**	**0.85**	**97**	P	**Pg**	**21 50 54.9**	**-1.6**
BIA				S	**Sg**	**21 51 07.5**	**0.0**
PUK	**Puka**	**0.94**	**346**	*i* PN	**Pg**	**21 50 57.0**	**-1.3**
PUK				*i* SN	**Sg**	**21 51 13.0**	**+2.5**
PUK	**Puka**	**0.94**	**346**	*i* Pn	**Pg**	**21 50 57.0**	**-1.3**
PUK				*i* Sn	**Sg**	**21 51 13.0**	**+2.5**
FNA	**Florina**	**0.95**	**111**	P	**Pg**	**21 50 56.7**	**-1.7**
FNA				S	**Sg**	**21 51 10.8**	**+0.1**
FNA	**Florina**	**0.95**	**111**	P	**Pg**	**21 50 56.7**	**-1.7**
FNA				S	**Sg**	**21 51 10.8**	**+0.1**
NEST	**Nestorio**	**0.96**	**138**	P	**Pg**	**21 50 56.6**	**-1.9**
NEST				S	**Sg**	**21 51 11.6**	**+0.7**
NEST	**Nestorio**	**0.96**	**138**	P	**Pg**	**21 50 56.6**	**-1.9**
NEST				S	**Sg**	**21 51 11.6**	**+0.7**
ULC	**Ulcinj**	**1.10**	**320**⇑	*i* Pg	**Pg**	**21 50 59.0**	**-2.3**
ULC				*e*Sg	**Sg**	**21 51 16.2**	**+0.6**
ULC	**Ulcinj**	**1.10**	**320**⇑	*i* Pg	**Pg**	**21 50 59.0**	**-2.3**
ULC				*e*Sg	**Sg**	**21 51 16.2**	**+0.6**
BCI	**Bajram Curri**	**1.24**	**355**	*i* PN	**Pn**	**21 51 02.3**	**-1.9**
BCI				*i* SN	**Sn**	**21 51 21.8**	**+0.5**
BCI	**Bajram Curri**	**1.24**	**355**	*i* Pn	**Pn**	**21 51 02.3**	**-1.9**
BCI				*i* Sn	**Sn**	**21 51 21.8**	**+0.5**

SKO	**Skopje**	**1.25**	**47**	*i* Pg	**Pn**	**21 51 02.4**	**-1.9**
SKO				*i* Sg	**Sg**	**21 51 22.0**	**+1.6**
SKO				*e*Lg		21 51 23.1	
	comp=N,116nm,0.4s						
SKO				*e*Lg		21 51 23.4	
	comp=E,85nm,0.6s						
SRN	**Sarande**	**1.26**	**187**	*i* PN	**Pn**	**21 51 03.7**	**-0.6**
SRN				*i* SN	**Sn**	**21 51 23.9**	**+2.3**
SRN	**Sarande**	**1.26**	**187**	*i* Pn	**Pn**	**21 51 03.7**	**-0.6**
SRN				*i* Sn	**Sn**	**21 51 23.9**	**+2.3**
KZN	**Kozani**	**1.44**	**124**	*e*P	**Pn**	**21 51 07.5**	**+0.6**
KZN				*e*S	**Sg**	**21 51 27.6**	**+1.1**
KZN	**Kozani**	**1.44**	**124**	*e*P	**Pn**	**21 51 07.5**	**+0.6**
KZN				*e*S	**Sg**	**21 51 27.6**	**+1.1**
KZN	**Kozani**	**1.44**	**124**	P	**Pn**	**21 51 07.0**	**+0.1**
KZN				S	**Sg**	**21 51 27.7**	**+1.2**
KZN	**Kozani**	**1.44**	**124**	P	**Pn**	**21 51 07.0**	**+0.1**
KZN				*e*S	**Sg**	**21 51 27.6**	**+1.1**
KEK	**Kerkira**	**1.45**	**193**	*e*P	**Pn**	**21 51 06.7**	**-0.3**
KEK				*e*S	**Sg**	**21 51 27.5**	**+0.9**
KEK	**Kerkira**	**1.45**	**193**	*e*P	**Pn**	**21 51 06.7**	**-0.3**
KEK				*e*S	**Sg**	**21 51 27.5**	**+0.9**
KEK	**Kerkira**	**1.45**	**193**	P	**Pn**	**21 51 07.0**	**0.0**
KEK				S	**Sg**	**21 51 27.8**	**+1.2**
KEK	**Kerkira**	**1.45**	**193**	P	**Pn**	**21 51 07.0**	**0.0**
KEK				*e*S	**Sg**	**21 51 27.5**	**+0.9**
PVY	**Plav**	**1.48**	**353⇑**	*i*Pg	**Pn**	**21 51 06.4**	**-1.0**
PVY				*e*Sg	**Sg**	**21 51 30.5**	**+2.9**
PVY	**Plav**	**1.48**	**353⇑**	*i*Pg	**Pn**	**21 51 06.4**	**-1.0**
PVY				*e*Sg	**Sg**	**21 51 30.5**	**+2.9**
PDG	**Podgorica**	**1.48**	**332⇑**	*i*Pg	**Pn**	**21 51 05.9**	**-1.6**
PDG				*e*Sg	**Sg**	**21 51 30.0**	**+2.2**
TTG	**Podgorica**	**1.48**	**332⇑**	*i*Pg	**Pn**	**21 51 05.9**	**-1.6**
TTG				*e*Sg	**Sg**	**21 51 30.0**	**+2.2**
TTG	**Podgorica**	**1.48**	**332⇑**	*i*Pg	**Pn**	**21 51 05.9**	**-1.6**
TTG				*e*Sg	**Sg**	**21 51 30.0**	**+2.2**
BUM	**Brajici-Budva**	**1.53**	**321⇓**	*i*Pg	**Pn**	**21 51 07.4**	**-0.7**
BUM				*e*Sg	**Sg**	**21 51 31.8**	**+2.6**
BUM	**Brajici-Budva**	**1.53**	**321⇓**	*i*Pg	**Pn**	**21 51 07.4**	**-0.7**
BUM				*e*Sg	**Sg**	**21 51 31.8**	**+2.6**
JAN	**Janina**	**1.55**	**161**	*e*P	**Pn**	**21 51 09.5**	**+1.1**
JAN	**Janina**	**1.55**	**161**	*e*P	**Pn**	**21 51 09.5**	**+1.1**
JAN	**Janina**	**1.55**	**161**	*e*P	**Pn**	**21 51 09.5**	**+1.1**
IGT	**Igoumenitsa**	**1.60**	**176**	P	**Pn**	**21 51 09.5**	**+0.5**
IGT				S	**Sg**	**21 51 32.3**	**+0.9**
IGT	**Igoumenitsa**	**1.60**	**176**	P	**Pn**	**21 51 09.5**	**+0.5**
IGT				S	**Sg**	**21 51 32.3**	**+0.9**
BEY	**Berane**	**1.76**	**353⇓**	*i*Pn	**Pn**	**21 51 11.8**	**+0.5**
BEY				*e*Sn	**Sg**	**21 51 37.9**	**+1.3**
IVA	**Berane**	**1.76**	**353⇓**	*i*Pn	**Pn**	**21 51 11.8**	**+0.5**
IVA				*e*Sn	**Sg**	**21 51 37.9**	**+1.3**
IVA	**Berane**	**1.76**	**353⇓**	*i*Pn	**Pn**	**21 51 11.8**	**+0.5**
IVA				*e*Sn	**Sg**	**21 51 37.9**	**+1.3**
VAY	**Valandovo**	**1.79**	**83**	*e*Pn	**Pn**	**21 51 10.3**	**-1.4**
VAY				*e*Sn	**Sg**	**21 51 37.4**	**-0.3**
VAY				*e*Lg		21 51 40.1	
	comp=E,38nm,1.1s						
VAY				*e*Lg		21 51 41.3	
	comp=N,18nm,0.6s						
HCY	**Herceg Novi**	**1.84**	**316⇑**	*i*Pn	**Pn**	**21 51 12.4**	**+0.1**
HCY				*e*Sn	**Sg**	**21 51 39.1**	**0.0**
HCY	**Herceg Novi**	**1.84**	**316⇑**	*i*Pn	**Pn**	**21 51 12.4**	**+0.1**
HCY				*e*Sn	**Sg**	**21 51 39.1**	**0.0**
NKY	**Niksic**	**1.91**	**332⇓**	*i*Pn	**Pn**	**21 51 13.8**	**+0.4**
NKY				*e*Sn	**Sg**	**21 51 41.0**	**-0.5**
NKY	**Niksic**	**1.91**	**332⇓**	*i*Pn	**Pn**	**21 51 13.8**	**+0.4**
NKY				*e*Sn	**Sg**	**21 51 41.0**	**-0.5**
BARS	**Barje**	**2.07**	**35**	*e*Pn	**Pb**	**21 51 17.6**	**-0.6**
BARS				*e*Sn	**Sg**	**21 51 46.9**	**+0.2**
THL	**Klokotos Trika**	**2.08**	**138**	*e*P	**Pn**	**21 51 17.1**	**+1.4**
THL	**Klokotos Trika**	**2.08**	**138**	P	**Pn**	**21 51 15.5**	**-0.2**
THL				S	**Sn**	**21 51 43.4**	**+1.3**
THL	**Klokotos Trika**	**2.08**	**138**	P	**Pn**	**21 51 15.5**	**-0.2**
THL				S	**Sn**	**21 51 43.4**	**+1.3**
TREB	**Trebinje**	**2.11**	**320**	*i* Pn	**Pn**	**21 51 16.8**	**+0.7**
TREB				*e*Sn	**Sb**	**21 51 44.7**	**-0.6**
SJES	**Sjenica**	**2.14**	**355**	*e*Pn	**Pb**	**21 51 19.3**	**-0.1**
BRY	**Bratogost**	**2.16**	**326**	*e*Pn	**Pn**	**21 51 17.0**	**+0.2**
BRY				*e*Sn	**Sb**	**21 51 47.2**	**+0.3**
BRY	**Bratogost**	**2.16**	**326**	*e*Pn	**Pn**	**21 51 17.0**	**+0.2**
BRY				*e*Sn	**Sb**	**21 51 47.2**	**+0.3**
UPM	**Unac-Piva**	**2.29**	**336⇓**	*i*Pn	**Pn**	**21 51 18.8**	**+0.3**
UPM				*e*Sn	**Sb**	**21 51 50.7**	**+0.2**
UPM	**Unac-Piva**	**2.29**	**336⇓**	*i*Pn	**Pn**	**21 51 18.8**	**+0.3**
UPM				*e*Sn	**Sb**	**21 51 50.7**	**+0.2**
STON	**Ston**	**2.56**	**314**	*e*Pn	**Pn**	**21 51 21.6**	**-0.6**
STON				Sn	**Sn**	**21 52.9**	**-0.8**
STON	**Ston**	**2.56**	**314**	*e*Pn	**Pn**	**21 51 21.6**	**-0.6**
STON				Sn	**Sn**	**21 52.9**	**-0.8**
AGG	**Agios Georgios**	**2.66**	**142**	P	**Pn**	**21 51 24.9**	**+1.2**
AGG				S	**Sn**	**21 56.7**	**+0.4**
AGG	**Agios Georgios**	**2.66**	**142**	P	**Pn**	**21 51 24.9**	**+1.2**
AGG				S	**Sn**	**21 56.7**	**+0.4**
BBLS	**Lazići**	**2.80**	**348**	*e*Pn	**Pb**	**21 51 30.3**	**-0.3**
DIVS	**Divibare**	**2.97**	**357**	*e*Pn	**Pn**	**21 51 29.3**	**+1.3**
DIVS				*e*Sn	**Sb**	**21 52 06.7**	**+2.7**
NVLJ	**Novalja**	**5.21**	**313**	*e*Pn	**Pn**	**21 51 56.7**	**-2.1**
NVLJ				Sn	**Sn**	**21 52 57.4**	**-1.8**
NVLJ	**Novalja**	**5.21**	**313**	*e*Pn	**Pn**	**21 51 56.6**	**-2.1**
NVLJ				Sn	**Sn**	**21 52 57.3**	**-1.9**

*BJI **11** 21:55:29.1, 7.°31S×125.°01E, h367km, mb4.0/6*
*ISCJB **11** 21:55:31.0±0.3, 7.°61S±0.°03×124.°78E±0.°04, h394km±4km, mb4.2/33, Error ellipse: s-maj=6.9km s-min=4.9km az=154.4*
*DJA **11** 21:55:31, 7.°65S×124.°77E, h385km, mb4.5/27*
*NEIC **11** 21:55:31.1±0.8, 7.°52S×124.°87E, h377km±9km, mb4.2/14, Error ellipse: s-maj=7.8km s-min=5.4km az=69.0*
*IDC **11** 21:55:32.2±1.9, 7.°56S×124.°88E, h390km±21km, mb3.8/10, mb1 4.0/13, mb1mx3.8/20, mbtmp3.9/13, Error ellipse: s-maj=20.1km s-min=7.5km az=71.0*

ISC 11 21:55:31.9±0.3, 7.°61S±0.°03×124.°77E±0.°04, h384km±4km, n89, σ0°89/91, mb4.2/33, 1C, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**2.71**	**248**	P	**Pn**	**21 56 30.3**	**-1.2**
KDI	**Kendari**	**4.21**	**329**	P	**Pn**	**21 56 44.2**	**-1.0**
WSI	**Waingapu**	**4.87**	**245**	P	**Pn**	**21 56 50.7**	**-1.1**
NLAI	**Namlea**	**4.92**	**28**	P	**Pn**	**21 56 53.3**	**+0.9**
BKSI	**Bulukumba** 0.2nm51nm,0.7s	**5.15**	**296**	P	**Pn**	**21 56 54.8**	**0.0**
AAI	**Ambon** 0.6nm159nm,0.8s	**5.18**	**41**	P	**Pn**	**21 56 54.8**	**-0.3**
BNSI	**Bone** 0.2nm38nm,0.9s	**5.63**	**304**	P	**Pn**	**21 57 01.1**	**+1.2**
TTSI	**Tana Toraja** 33nm,0.8s	**6.70**	**312**	P	**Pn**	**21 57 12.4**	**+0.6**
LUWI	**Luwuk** 0.6nm182nm,1.0s	**6.82**	**343**	P	**Pn**	**21 57 13.2**	**0.0**
LBMI	**Labuha** 5μm97nm,0.4s	**7.44**	**22**	P	**Pn**	**21 57 22.3**	**+2.0**
TLE	**Tual** 97nm,1.6s	**8.15**	**77**	P	**Pn**	**21 57 26.9**	**-1.6**
KMSI	**Cibinong** 4μm434nm,0.7s	**8.17**	**354**	P	**Pn**	**21 57 29.4**	**+0.7**
PCI	**Palu** 69nm,1.0s	**8.28**	**323**	P	**Pn**	**21 57 31.7**	**+1.8**
MRSI	**Marisa** 154nm,0.8s	**8.52**	**341**	P	**Pn**	**21 57 33.4**	**+0.7**
TNTI	**Ternate** 5μm498nm,0.8s	**8.72**	**17**	P	**Pn**	**21 57 35.6**	**+0.5**
KNA	**Kununurra** 15nm,0.3s	**8.98**	**155**	*e*P	**Pn**	**21 57 37.9**	**-0.2**
KNA	**Kununurra** 2μm92nm,0.9s	**8.98**	**155**	P	**Pn**	**21 57 38.3**	**+0.2**
MNI	**Manado** 4μm350nm,0.6s	**8.99**	**0**	P	**Pn**	**21 57 39.2**	**+0.9**
KAKA	**Kakadu** 45nm,0.6s	**9.09**	**124⇑**	*i*P	**Pn**	**21 57 39.4**	**+0.1**
KAKA	**Kakadu** 140nm,0.6s	**9.09**	**124**	*e*P	**Pn**	**21 57 38.8**	**-0.5**
KAKA	**Kakadu** 1μm119nm,0.6s	**9.09**	**124**	P	**Pn**	**21 57 39.5**	**+0.2**
KHKI	**Kahang-Kahang** 54nm,0.7s	**9.11**	**265**	P	**Pn**	**21 57 36.9**	**-2.6**
SRBI	**Singaraja** 60nm,0.8s	**9.48**	**267**	P	**Pn**	**21 57 43.2**	**-0.7**
FITZ	**Fitzroy Crossi** 54nm,0.3s	**10.46**	**175**	*e*P	**Pn**	**21 57 55.8**	**+0.5**
FITZ	**Fitzroy Crossi** 11nm,0.3s,baz=8.5,slow=8.9,SNR=96	**10.46**	**175**	P	**Pn**	**21 57 55.4**	**+0.1**
FITZ				S	**S**	**21 59 52.6**	**-0.8**
	1.1nm,0.3s,baz=228,slow=14,SNR=4.6						
FITZ	**Fitzroy Crossi** 180nm,1.0s	**10.46**	**175**	P	**Pn**	**21 57 55.8**	**+0.5**
GMJI	**Gumukmas** 31nm,1.3s	**11.24**	**266**	P	**Pn**	**21 58 02.7**	**-1.8**
PWJI	**Pagerwojo** 43nm,0.8s	**12.85**	**267**	P	**P**	**21 58 23.1**	**+1.4**
BAKI	**Biak**	**12.97**	**61**	P	**P**	**21 58 18.1**	**-5.0**
PCJI	**Pacitan**	**13.48**	**267**	P	**P**	**21 58 29.8**	**+1.2**
MBWA	**Marble Bar**	**14.32**	**199**	*e*P	**P**	**21 58 38.4**	**+0.7**
MBWA	**Marble Bar** 9.5nm,0.6s	**14.32**	**199**	*e*P	**P**	**21 58 38.1**	**+0.4**
MBWA	**Marble Bar** 31nm,3.1s	**14.32**	**199**	P	**P**	**21 58 38.7**	**+1.0**
SMPI	**Sarmi** 209nm,0.7s	**14.97**	**69**	P	**P**	**21 58 45.0**	**+0.1**
WRAB	**Tennant Creek** 20nm,0.8s	**15.37**	**144**	*e*P	**P**	**21 58 48.0**	**-1.1**
WRAB				*e*S	**S**	**22 01 34.2**	**+1.7**
WRAB	**Tennant Creek** 30nm,2.5s	**15.37**	**144**	P	**P**	**21 58 48.7**	**-0.4**
WRA	**Warramunga Arr** 4.0nm,0.3s,baz=316,slow=13,SNR=54	**15.37**	**144**	P	**P**	**21 58 48.5**	**-0.7**
WRA				S	**S**	**22 01 34.0**	**+1.4**
	baz=315,slow=23,SNR=9.1						
WRA	**Warramunga Arr**	**15.37**	**144**	P	**P**	**21 58 48.5**	**-0.7**
WRA				S	**S**	**22 01 34.0**	**+1.4**
ASAR	**Alice Springs** 6.2nm,0.3s,baz=340,slow=15,SNR=156	**18.21**	**152**	P	**P**	**21 59 19.6**	**+0.2**
ASAR				S	**S**	**22 02 27.9**	**+0.1**
	baz=325,slow=19,SNR=6.3						
CGJI	**Cibinong** 43nm,1.4s	**18.96**	**272**	P	**P**	**21 59 27.1**	**-0.3**
COEN	**Coen**	**19.14**	**111**	*e*P	**P**	**21 59 27.5**	**-1.8**
COEN	**Coen** 49nm,0.5s	**19.14**	**111**	*e*P	**P**	**21 59 27.1**	**-2.2**
COEN	**Coen** 72nm,0.9s	**19.14**	**111**	P	**P**	**21 59 27.6**	**-1.7**
MEEK	**Meekatharra**	**19.81**	**196**	*e*P	**P**	**21 59 35.8**	**+0.1**
PMG	**Port Moresby** 11nm,0.6s,mb4.5	**22.21**	**96**	*e*P	**P**	**21 59 56.8**	**-1.0**
FORT	**Forrest** 40nm,0.6s,mb5.0	**23.25**	**173**	*e*P	**P**	**22 00 07.1**	**+0.1**
NWAO	**Narrogin (SRO)** 44nm,0.3s,mb5.4	**26.14**	**194**	*e*P	**P**	**22 00 33.3**	**+0.4**
NWAO	**Narrogin (SRO)** 7.7nm,0.3s,mb4.6,baz=48,slow=8.9,SNR=26	**26.14**	**194**	P	**P**	**22 00 33.2**	**+0.3**
NWAO	**Narrogin (SRO)**	**26.14**	**194**	P	**P**	**22 00 33.2**	**+0.3**
QLP	**Quilpie**	**26.42**	**138**	*e*P	**P**	**22 00 36.1**	**+0.7**
BBOO	**Buckleboo** 14nm,0.3s,mb4.9	**27.18**	**159**	*e*P	**P**	**22 00 42.2**	**+0.2**
KULM	**Kulim** 3.2nm,0.5s,mb4.0	**27.26**	**297**	*e*P	**P**	**22 00 43.1**	**+0.1**
KULM	**Kulim** 7.0nm,1.2s,mb4.0	**27.26**	**297**	P	**P**	**22 00 43.5**	**+0.5**
PSI	**Prapat** 2.0nm,0.4s,mb3.8,baz=141,slow=6.5,SNR=4.4	**27.78**	**291**	P	**P**	**22 00 46.8**	**-0.9**
STKA	**Stephens Creek** 6.5nm,0.3s,mb4.4	**28.79**	**149**	*e*P	**P**	**22 00 56.9**	**+0.7**
STKA	**Stephens Creek** 8.8nm,0.4s,mb4.4,baz=325,slow=8.2,SNR=30	**28.79**	**149**	P	**P**	**22 00 56.5**	**+0.3**
STKA				S	**S**	**22 05 15.4**	**-1.9**
	1.0nm,0.6s,baz=342,slow=19,SNR=1.9						
ARPS	**Mount Arapiles** 62nm,0.6s,mb5.1	**32.93**	**154**	*e*P	**P**	**22 01 33.3**	**+1.2**
ENH	**Enshi** 11nm,0.6s,mb4.3	**40.42**	**339**	*e*P	**P**	**22 02 34.2**	**-0.5**
XAN	**Xi'an**	**44.06**	**341**	P	**P**	**22 03 02.5**	**-1.1**
XAN				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb3.9						
MAJO	**Matsushiro** comp=Z,4.6nm,0.5s,mb4.1	**45.70**	**15**	*e*P	**P**	**22 03 14.6**	**-1.7**
MJAR	**Matsushiro Arr** comp=Z,4.7nm,0.7s,mb4.0,baz=192,slow=8.4,SNR=14	**45.70**	**15**	P	**P**	**22 03 14.6**	**-1.7**
LSA	**Lhasa** comp=Z,5.7nm,0.7s,mb4.0	**49.20**	**320**	*e*P	**P**	**22 03 43.8**	**+0.7**
ODAN	**Odare** comp=Z,12nm,0.5s,mb4.5	**49.87**	**315**	*e*P	**P**	**22 03 48.4**	**+0.3**
TAPN	**Taplejung** comp=Z,17nm,0.3s,mb4.8	**49.95**	**316**	*e*P	**P**	**22 03 49.0**	**+0.3**
RAMN	**Ramite** comp=Z,23nm,0.5s,mb4.7	**50.48**	**314**	*e*P	**P**	**22 03 53.2**	**+0.6**
GUN	**Gumba** comp=Z,25nm,0.6s,mb4.6	**51.57**	**315**	*e*P	**P**	**22 04 01.1**	**+0.5**
PKI	**Pulchoki** comp=Z,9.9nm,0.4s,mb4.3	**51.70**	**314**	*e*P	**P**	**22 04 02.0**	**+0.4**
KKN	**Kakani** comp=Z,16nm,0.9s,mb4.2	**51.94**	**314**	*e*P	**P**	**22 04 03.6**	**+0.4**
DMN	**Daman** comp=Z,8.4nm,0.7s,mb4.1	**51.94**	**314**	*e*P	**P**	**22 04 03.3**	**0.0**
GTA	**Gaotai**	**52.19**	**336**	*e*P	**P**	**22 04 05.2**	**+0.3**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb3.6						
GKN	**Gorkha** comp=Z,9.7nm,0.3s,mb4.6	**52.50**	**314**	*e*P	**P**	**22 04 07.3**	**-0.2**
ASAJ	**Asahikawa** comp=Z,6.3nm,0.5s,mb4.1,baz=233,slow=7.9,SNR=11	**53.95**	**16**	P	**P**	**22 04 17.1**	**-0.5**
ULN	**Ulaanbaatar**	**57.41**	**346**	*e*P	**P**	**22 04 41.3**	**-0.5**
ULN	**Ulaanbaatar**	**57.41**	**346**	P	**P**	**22 04 41.7**	**-0.1**
SONM	**Songino Array** comp=Z,2.2nm,0.7s,mb3.6,baz=162,slow=8.1,SNR=19	**57.55**	**345**	P	**P**	**22 04 42.5**	**-0.2**
CASY	**Casey** comp=Z,2.0nm,0.6s,mb3.6	**59.40**	**187**	*e*P	**P**	**22 04 55.4**	**+0.3**
MK31	**Makanchi Array**	**66.00**	**329**	*e*P	**P**	**22 05 38.3**	**-0.2**
MKAR	**Makanchi Array** comp=Z,5.9nm,0.5s,mb4.5,baz=124,slow=7.5,SNR=95	**66.00**	**329**	P	**P**	**22 05 38.5**	**+0.1**
KBL	**Kabul** comp=Z,2.6nm,0.8s,mb3.9	**67.26**	**312**	*e*P	**P**	**22 05 47.1**	**+0.5**
YAK	**Yakutsk** comp=Z,26nm,0.6s,mb4.9	**69.54**	**2**	*e*P	**P**	**22 05 59.8**	**-0.2**
ZALV	**Zalesovo Beam** comp=Z,2.0nm,0.4s,mb4.0,baz=122,slow=3.8,SNR=14	**69.94**	**336**	P	**P**	**22 06 01.5**	**-1.1**
MAW	**Mawson** comp=Z,3.0nm,0.5s,mb4.1,baz=90,slow=4.0,SNR=3.9	**72.52**	**201**	P	**P**	**22 06 18.8**	**+1.2**
BVAR	**Borovoye Array** comp=Z,1.0nm,0.6s,mb3.6,baz=120,slow=7.8,SNR=12	**75.88**	**330**	P	**P**	**22 06 36.9**	**-0.2**
BRVK	**Borovoye** comp=Z,0.9nm,0.4s,mb3.8	**75.95**	**330**	*e*P	**P**	**22 06 37.1**	**-0.4**
ABKAR	**Akbulak array** comp=Z,0.5nm,0.5s,mb3.4	**79.81**	**323**	*e*P	**P**	**22 06 58.1**	**-0.5**
ARCES	**ARCESS Array B**	**100.33**	**339**	P	Pdif	22 08 35.9	+0.2
	comp=Z,1.7nm,1.0s,baz=95,slow=5.5,SNR=4.0						
CPUP	**Vila Florida** comp=Z,1.4nm,0.5s,baz=180,slow=1.4,SNR=6.6	**146.20**	**177**	PKPbc	PKPbc	22 14 29.1	+0.5
LPAZ	**La Paz** comp=Z,0.3nm,0.4s,baz=194,slow=4.2,SNR=3.8	**153.04**	**152**	PKPab	PKPab	22 14 59.2	+0.7
LPAZ	**La Paz**	**153.04**	**152**	PKPab	PKPab	22 14 59.2	+0.7

WEL 11 22:14:46.5±0.8, 37.°23S×179.°88W, h33km, ML3.5/2, Error ellipse: s-maj=6.8km s-min=6.8km az=0.0, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.48**	**256**	PN	Pn	22 15 10.1	-0.7
MXZ				SN	Sn	22 15 27.6	-1.4
URZ	**Urewera**	**2.60**	**246**	PN	Pn	22 15 26.1	-0.1
URZ				SN	Sn	22 15 55.6	-0.9
KNZ	**Kokohu**	**2.63**	**226**	PN	Pn	22 15 25.9	-0.8
KNZ				SN	Sn	22 15 55.3	-2.1
PRHZ	**Porangahau**	**4.08**	**221**	PN	Pn	22 15 42.7	-3.8

IDC 11 22:19:25.2±2.3, 5.°86S×130.°14E, h0km, mb3.4/1, mb1 3.3/3, mb1mx3.2/14, mbtmp3.2/3, ML3.0/1, Error ellipse: s-maj=145.5km s-min=31.3km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=347,slow=12,SNR=7.0	**14.58**	**164**	Pn	Pn	22 22 54.2	+1.3
WRA				Sn	Sn	22 25 22.4	-13
	0.1nm,0.3s,baz=351,slow=24,SNR=6.2						
ASAR	**Alice Springs** 0.1nm,0.3s,baz=349,slow=10,SNR=4.5	**18.07**	**169**	P	Pn	22 23 36.9	-0.9
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=132,slow=6.4,SNR=3.7	**67.36**	**326**	P	P	22 30 22.3	+0.2

FUNV 11 22:20:20.3, 6.°69N×73.°16W, h168km, MW3.6, 1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.44**	**36⇓**	*i*P	Pn	22 20 50.4	-0.3
CAPV				*e*S	Sn	22 21 12.0	-2.2
SOCV	**Socops**	**2.78**	**55**	*e*P	Pn	22 21 05.1	-0.6
SOCV				*e*S	Sn	22 21 36.8	-4.1
VIGV	**El Vigia**	**2.78**	**40**	*e*P	Pn	22 21 04.9	-0.8
VIGV				*e*S	Sn	22 21 38.1	-2.9
VIRV	**Villa del Rosa**	**3.86**	**11**	*e*P	Pn	22 21 17.1	-2.2
VIRV				*e*S	Sn	22 22 00.8	-4.5
BAUV	**El Baul**	**5.54**	**66**	*e*P	Pn	22 21 39.2	-2.0
MONV	**Montecano**	**6.11**	**31**	*e*P	Pn	22 21 46.6	-2.0
CAOV	**Caicara del Or**	**6.81**	**84**	*e*P	Pn	22 21 55.8	-2.1

IDC 11 22:23:08.8±5.3, 15.°16N×84.°57W, h0km, mb3.7/3, mb1 4.1/4, mb1mx3.7/18, mbtmp3.7/4, ML3.4/1, Error ellipse: s-maj=148.6km s-min=20.7km az=82.0, Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTS	**JuntasAbangare** 1.7nm,0.3s,baz=324,slow=14,SNR=4.5	**4.85**	**184**	Pn	Pn	22 24 24.6	+1.6
JTS				Lg		22 25 41.1	
	2.6nm,0.3s,baz=228,slow=17,SNR=4.6						
TXAR	**Lajitas Array** 0.7nm,0.8s,baz=133,slow=7.5,SNR=6.4	**22.57**	**312**	P	P	22 28 11.1	+0.4
PDAR	**Pinedale Array** 0.5nm,0.6s,baz=125,slow=9.3,SNR=4.7	**34.88**	**327**	P	P	22 30 01.3	-0.6
NVAR	**Mina Array Bea** 1.9nm,0.9s,baz=119,slow=7.5,SNR=2.8	**37.67**	**314**	P	P	22 30 26.4	+0.6

*IDC **11** 22:23:33.5±1.6, 7.°62S×127.°09E, h0km, mb3.9/3, mb1 4.1/5, mb1mx3.8/16, mbtmp3.9/5, ML4.0/2, Error ellipse: s-maj=214.7km s-min=29.1km az=63.0*
*NEIC **11** 22:23:48.2±2.8, 7.°69S×127.°79E, h137km±33km, mb4.2/5, Error ellipse: s-maj=28.9km s-min=21.4km az=110.0*
*ISCJB **11** 22:23:50.1±3.9, 7.°8S±0.°2×128.°1E±0.°2, h182km±47km, mb3.7/4, Error ellipse: s-maj=39.9km s-min=25.5km az=145.3*

ISC 11 22:23:50.7±3.7, 7.°8S±0.°2×128.°1E±0.°2, h170km±46km, n11, σ1°18/11, mb3.7/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu** 43nm,0.4s	**6.49**	**139**	*e*Pn	**Pn**	**22 25 24.3**	**+0.3**
FITZ	**Fitzroy Crossi** 5.4nm,0.4s	**10.53**	**193**	*e*Pn	**Pn**	**22 26 16.2**	**-1.1**
FITZ				*e*Sn	Sx	22 28 02.9	
WRA	**Warramunga Arr** 0.9nm,0.3s,baz=323,slow=13,SNR=26	**13.51**	**154**	Pn	**Pn**	**22 26 53.7**	**-2.0**
WRA				Sn	Sx	22 29 17.2	
	1.8nm,0.3s,baz=340,slow=22,SNR=11						
WRA	**Warramunga Arr**	**13.51**	**154**	Pn	**Pn**	**22 26 53.7**	**-2.0**
WRA				Sn	Sx	22 29 17.2	
MBWA	**Marble Bar** 3.6nm,0.7s	**15.56**	**210**	*e*P	**Pn**	**22 27 22.9**	**+1.7**
ASAR	**Alice Springs** 0.5nm,0.3s,baz=341,slow=11,SNR=55	**16.74**	**161**	P	**Pn**	**22 27 37.0**	**+1.5**
ASAR				S	Sx	22 30 36.0	
	0.6nm,0.3s,baz=321,slow=15,SNR=7.6						
MAJO	**Matsushiro** 3.0nm,0.5s,mb4.2	**45.10**	**11**	*e*P	**P**	**22 31 51.3**	**+1.3**
MKAR	**Makanchi Array** 0.4nm,0.6s,mb3.3,baz=124,slow=8.0,SNR=6.9	**67.87**	**328**	P	**P**	**22 34 30.2**	**-0.5**
KURK	**Kurchatov** 1.2nm,0.6s,mb3.8,baz=132,slow=5.1,SNR=6.4	**72.22**	**329**	P	**P**	**22 34 56.2**	**-0.9**
KURK	**Kurchatov** 1.7nm,0.7s,mb3.9	**72.22**	**329**	*e*P	**P**	**22 34 56.6**	**-0.5**
BVAR	**Borovoye Array** 0.5nm,0.5s,mb3.4,baz=134,slow=8.4,SNR=6.7	**77.74**	**328**	P	**P**	**22 35 28.1**	**-0.5**

*IDC **11** 22:30:11.1±1.4, 1.°63N×84.°73W, h0km, mb3.6/4, mb1 4.0/7, mb1mx3.8/20, mbtmp3.9/7, ML3.6/2, MS3.6/6, Ms1 3.6/6, ms1mx3.5/22, Error ellipse: s-maj=47.8km s-min=18.5km az=57.0*
*ISCJB **11** 22:30:16.1±2.3, 1.°80N±0.°08×84.°4W±0.°1, h50km±25km, mb3.6/5, MS3.9/2, Error ellipse: s-maj=23.2km s-min=8.3km az=150.6*
*NEIC **11** 22:30:18.8±2.2, 1.°86N×84.°37W, h61km±24km, mb3.7/2, Error ellipse: s-maj=31.8km s-min=9.6km az=57.0*

ISC 11 22:30:18.6±1.7, 1.°76N±0.°08×84.°4W±0.°1, h57km±19km, n14, σ1°01/14, mb3.6/5, MS3.9/2, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTAV	**Otavalo** 9.4nm,0.6s	**6.15**	**104**	*e*Pn	**Pn**	**22 31 45.6**	**-1.4**
OTAV				*e*Sn	**Sn**	**22 32 55.3**	**-0.8**
JTS	**JuntasAbangare** 1.1nm,0.3s,baz=333,slow=24,SNR=6.6	**8.49**	**356**	Pn	**Pn**	**22 32 18.4**	**-0.6**
JTS				Sn	**Sn**	**22 33 54.6**	**+1.3**
	baz=260,slow=23,SNR=3.2						
ROSC	**El Rosal** baz=100,slow=19,SNR=3.6	**10.53**	**73**	Pn	**Pn**	**22 32 48.8**	**

WKZ	Wanaka	1.49	69	PN	Pn	23 05 15.4	+0.1
APZ	The Paps	1.59	156	PN	Pn	23 05 16.0	-0.6
EAZ	Earnscleugh	1.59	85	PN	Pn	23 05 16.5	-0.1
JCZ	Jackson Bay	1.78	43	PN	Pn	23 05 18.8	-0.3
SYZ	Scrubby Hill	1.85	129	PN	Pn	23 05 19.5	-0.7
TUZ	Tuapeka	1.89	109	PN	Pn	23 05 19.9	-0.7
LBZ	Lake Benmore	2.43	67	PN	Pn	23 05 26.5	-1.5
ODZ	Otahua Downs	2.55	84	PN	Pn	23 05 28.3	-1.3
FOZ	Fox Glacier	2.61	47	PN	Pn	23 05 30.2	-0.2
RPZ	Rata Peaks	3.30	61	PN	Pn	23 05 37.5	-2.3
WVZ	Waitaha Valley	3.50	50	PN	Pn	23 05 39.1	-3.5
MQZ	McQueen's Vall	4.33	69	PN	Pn	23 05 51.0	-2.8
LTZ	Lake Taylor	4.56	57	PN	Pn	23 05 53.8	-3.2
DSZ	Denniston Nort	5.00	45	PN	Pn	23 06 01.0	-2.1
THZ	Tophouse	5.57	52	PN	Pn	23 06 07.5	-3.3
QRZ	Quartz Range	6.06	43	PN	Pn	23 06 16.3	-1.1

NIED ***11*** *23:06:00,39.°20N×140.°80E,h5km,Mw4.2 Best double couple: M0=2.52000×10^15 NP1:φs=120.00000°,δ89.00000°, λ-4.00000°. NP2:φs=210.00000°,δ86.00000°, λ-179.00000°.*
JMA ***11*** *23:06:03.6,39.°17N×140.°84E,h8km±1km,M4.4*
JMA Felt II J1.
NEIC ***11*** *23:06:03.7,39.°17N×140.°84E,h8km,mb4.4/11,After JMA.*
NEIC Recorded [2 JMA] in Akita, Iwate and Miyagi.
IDC ***11*** *23:06:03.8±0.6,39.°11N×140.°52E,h0km,mb4.1/21, mb1 4.2/24,mb1mx4.1/31,mbtmp4.1/24,ML3.8/3,MS3.5/5, Ms1 3.5/5,ms1mx3.1/30,Error ellipse: s-maj=17.4km s-min=13.4km az=101.0*
ISCJB ***11*** *23:06:03.3±0.5,39.°17N±0.°02×140.°83E±0.°04,h11km±3km, mb4.2/38,MS3.7/4,Error ellipse: s-maj=4.8km s-min=3.4km az=4.5*
MOS ***11*** *23:06:06.9±1.1,39.°17N×140.°62E,h33km,mb4.7/9,Error ellipse: s-maj=12.7km s-min=7.2km az=93.2*

ISC 11 23:06:03.7±0.5,39.°17N±0.°02×140.°82E±0.°04,h2km±3km, n74,σ1°13/88,mb4.2/38,MS3.7/4,5C-4D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRG	Rokugo	0.27	328	⇑P	Pg	23 06 09.3	+0.3
JRG				eS	Sg	23 06 13.6	+1.1
JMK	Ichinoseki	0.38	124	⇑P	Pg	23 06 10.5	-0.5
JMK				S	Sg	23 06 15.6	-0.2
JYK	Kaneyama	0.43	236	⇓P	Pg	23 06 12.4	+0.3
JYK				S	Sg	23 06 18.9	+1.2
JOM	Ohasama	0.48	50	⇓P	Pg	23 06 12.4	-0.5
JOM				S	Sg	23 06 18.9	-0.2
JOU	Okura	0.81	189	⇑P	Pg	23 06 19.3	+0.1
JOU				S	Sg	23 06 30.5	+0.9
JIO	Ouri	0.82	150	⇑P	Pg	23 06 18.8	-0.6
JIO				S	Sg	23 06 30.0	-0.1
JAH	Hinai	1.03	352	⇑P	Pg	23 06 22.9	-0.6
JAH				S	Sg	23 06 36.4	-0.5
MJAR	Matsushiro Arr	3.33	219	Pn	Pn	23 06 56.6	-0.2
	3.0nm,0.3s,baz=31,slow=13,SNR=24						
MJAR				Lg		23 07 48.1	
	3.3nm,0.3s,baz=28,slow=17,SNR=5.1						
MAJO	Matsushiro	3.34	219	ePn	Pn	23 06 57.6	+0.8
MAJO				ePg	Pg	23 07 06.2	-1.4
MAT	Matsushiro	3.34	219	P	Pn	23 06 58.0	+1.2
MAT				eS	Sn	23 07 37.7	+0.7
ERM	Erimo	3.36	31	ePn	Pn	23 06 58.4	+1.3
ERM	Erimo	3.36	31	ePn	Pn	23 06 57.7	+0.6
ASAJ	Asahikawa	5.12	14	Pn	Pn	23 07 23.8	+2.4
	4.0nm,0.3s,baz=232,slow=14,SNR=19						
ASAJ				Sn	Sn	23 08 25.0	+4.0
	1.1nm,0.3s,baz=57,slow=20,SNR=1.9						
ASAJ				LR	LR	23 10 03.7	
	comp=Z,232nm,18.4s,baz=197,slow=46						
ASAJ	Asahikawa	5.12	14	P	Pn	23 07 23.8	+2.4
ASAJ						23 08 25.0	
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,232nm,18.4s						
JHJ	Hachijo jima 2	6.09	188	Pn	Pn	23 07 32.6	-2.1
	comp=Z,16nm,0.3s,baz=268,slow=23,SNR=4.6						
JHJ				Sn	Sn	23 08 46.8	+1.9
	comp=Z,5.7nm,0.3s,baz=94,slow=23,SNR=4.1						
JHJ				LR	LR	23 10 07.7	
	comp=Z,275nm,19.3s,baz=116,slow=41						
YSS	Yuzh-Sakhalins	7.91	10	eP	Pn	23 08 01.0	+1.3
YSS				eS	Sn	23 09 30.0	+0.3
YSS				MLR	MLR		
	comp=N,500nm,10.0s						
YSS				MLR	MLR		
	comp=Z,500nm,10.0s						
HABR	Khabarovsk	10.19	338	eP	Pn	23 08 34.7	+3.8
HABR				pmax	pmax		
	comp=Z,38nm,1.3s						
HABR				pmax	pmax		
	comp=N,36nm,1.4s						
HABR				pmax	pmax		
	comp=E,24nm,1.8s						
HABR				MLR	MLR		
	comp=Z,225nm,15.0s						
KLR	Kul'dur	11.97	330	eP	Pn	23 08 55.3	0.0
KLR				pmax	pmax		
	comp=E,28nm,1.6s						
KLR				pmax	pmax		
	comp=Z,40nm,1.6s						
CBIJ	Chichi jima	12.09	174	Pn	Pn	23 08 53.6	-3.4
	comp=Z,3.5nm,0.3s,baz=86,slow=20,SNR=3.7						
HHC	Hu-ho-hao-te	22.43	284	eP	P	23 10 59.2	-4.4
HHC				S	S	23 14 57.5	-13
HHC				pmax	pmax		
	comp=Z,13nm,0.5s,mb4.6						
HHC				pmax	pmax		
	comp=Z,120nm,5.0s						
SEY	Seymchan	24.80	13	eP	P	23 11 26.0	-0.7
SONM	Songino Array	26.25	301	P	P	23 11 38.4	-1.7
	comp=Z,0.7nm,0.8s,mb3.2,baz=110,slow=8.9,SNR=4.3						
ZALV	Zalesovo Beam	40.16	311	P	P	23 13 40.0	-0.8
	comp=Z,3.7nm,0.8s,mb4.2,baz=89,slow=7.7,SNR=17						
ZALV				PcP	PcP	23 15 44.8	-0.3
	comp=Z,0.6nm,0.6s,baz=88,slow=3.7,SNR=3.7						
CMAR	Chiang Mai Arr	41.64	252	P	P	23 13 51.3	-2.1
	comp=Z,0.4nm,0.3s,mb3.5,baz=217,slow=28,SNR=2.6						
CMAR				LR	LR	23 29 51.8	
	comp=Z,38nm,21.1s,MS3.2,baz=60,slow=34						
MK31	Makanchi Array	42.62	300	eP	P	23 14 00.0	-1.2
MKAR	Makanchi Array	42.62	300	P	P	23 14 00.2	-0.9
	comp=Z,3.5nm,0.9s,mb4.1,baz=84,slow=9.6,SNR=26						
MKAR	Makanchi Array	42.62	300	eP	P	23 14 00.2	-1.0
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KURK	Kurchatov	44.27	306	eP	P	23 14 14.2	-0.2
KURK				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.3						
KURK	Kurchatov	44.27	306	eP	P	23 14 13.3	-1.1
	comp=Z,5.6nm,0.8s,mb4.3						
KDAK	Kodiak Island	45.85	43	P	P	23 14 29.1	+2.2
	comp=Z,1.6nm,0.4s,mb4.3,baz=255,slow=8.1,SNR=3.1						
COLD	Coldfoot	46.53	30	eP	P	23 14 30.5	-1.6
	comp=Z,3.0nm,0.9s,mb4.2						
TKM2	Tokmak 2	48.23	297	eP	P	23 14 45.7	0.0
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
TKM2	Tokmak 2	48.23	297	eP	P	23 14 45.7	0.0
	comp=Z,6.0nm,0.8s,mb4.7						
BVAR	Borovoye Array	48.81	311	P	P	23 14 49.4	-0.6
	comp=Z,1.1nm,0.6s,mb4.0,baz=69,slow=8.1,SNR=9.7						
BVAR				PcP	PcP	23 16 14.7	0.0
	comp=Z,1.3nm,0.7s,baz=88,slow=3.5,SNR=6.1						
BRVK	Borovoye	48.86	311	eP	P	23 14 50.2	-0.2
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
BRVK	Borovoye	48.86	311	eP	P	23 14 50.5	+0.1
	comp=Z,1.0nm,0.6s,mb4.0						
EKS2	Erkin-Say	49.58	297	eP	P	23 14 56.2	+0.1
	comp=Z,2.8nm,0.9s,mb4.3						
AML	Almayashu	49.82	296	eP	P	23 14 58.8	+0.9
	comp=Z,3.9nm,0.8s,mb4.5						
INK	Inuvik	52.72	28	P	P	23 15 20.9	+1.7
	comp=Z,2.7nm,0.9s,mb4.2,baz=292,slow=2.0,SNR=3.5						
SVE	Sverdlovsk	53.25	317	⇓eP	P	23 15 24.0	+0.6
SVE				eS	S	23 22 42.6	-12
SVE				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
SVE				MLR	MLR		
	comp=Z,130nm,15.0s,MS4.1						
ARU	Arti	54.47	317	d iP	P	23 15 31.9	-0.3
ARU				e		23 17 29.2	
ARU				S	S	23 23 10.6	-0.9
ARU				SS	SS	23 26 48.5	-4.7
ARU				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
ARU	Arti	54.47	317	eP	P	23 15 31.1	-1.1
	comp=Z,4.3nm,0.8s,mb4.4						
ABKAR	Akbulak array	56.23	309	eP	P	23 15 44.0	-1.1
	comp=Z,2.2nm,0.7s,mb4.3						
KBL	Kabul	56.24	289	eP	P	23 15 45.4	0.0
KBL				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
KBL	Kabul	56.24	289	eP	P	23 15 45.4	0.0
	comp=Z,6.4nm,0.9s,mb4.7						
WRA	Warramunga Arr	59.11	187	P	P	23 16 05.0	-0.5
	comp=Z,1.5nm,0.5s,mb4.2,baz=5.0,slow=7.3,SNR=27						
RES	Resolute Bay	60.66	15	P	P	23 16 16.6	+1.0
	comp=Z,2.8nm,0.9s,mb4.4,baz=268,slow=5.4,SNR=4.6						
ARCES	ARCESS Array B	61.84	339	P	P	23 16 23.4	-0.3
	comp=Z,1.0nm,0.8s,mb4.0,baz=55,slow=9.1,SNR=4.5						
ARCES				LR	LR	23 43 26.2	
	comp=Z,75nm,21.7s,MS3.8,baz=193,slow=36						
ASAR	Alice Springs	62.84	187	P	P	23 16 30.4	-0.3
	comp=Z,1.1nm,0.8s,mb4.1,baz=9.7,slow=6.9,SNR=10.0						
ASAR	Alice Springs	62.84	187	eP	P	23 16 30.4	-0.4
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	FINESS Array B	66.72	332	P	P	23 16 56.2	+0.4
	comp=Z,3.7nm,0.8s,mb4.4,baz=64,slow=4.4,SNR=9.0						
KIV	Kislovodsk	69.17	310	eP	P	23 17 12.0	+0.5
KIV				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
KIV	Kislovodsk	69.17	310	eP	P	23 17 12.0	+0.5
	comp=Z,12nm,0.9s,mb4.8						
HFS	Hagfors	71.96	335	P	P	23 17 28.1	-0.2
	comp=Z,1.9nm,0.7s,mb4.1,baz=50,slow=7.9,SNR=12						
NB2	NORSAR Subarra	72.05	337	P	P	23 17 28.7	0.0
	comp=Z,3.1nm,0.9s,mb4.2,baz=38,slow=6.2						
NOA	NORSAR Array B	72.05	337	P	P	23 17 29.1	+0.4
	comp=Z,2.9nm,0.9s,mb4.2,baz=39,slow=6.0,SNR=5.7						
NOA				LR	LR	23 51 24.6	
	comp=Z,56nm,21.2s,MS3.8,baz=240,slow=38						
AKASG	Malin Array Be	72.33	322	P	P	23 17 29.8	-0.8
	comp=Z,0.9nm,0.5s,mb3.9,baz=46,slow=7.1,SNR=4.8						
AKASG	Malin Array Be	72.33	322	eP	P	23 17 32.5	+1.9
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NVAR	Mina Array Bea	74.09	53	P	P	23 17 43.5	+2.3
	comp=Z,0.5nm,0.4s,mb3.8,baz=288,slow=7.4,SNR=8.3						
BUR08	Bucovina Ar. S	76.34	321	eP	P	23 17 55.2	+1.1
PDAR	Pinedale Array	76.51	46	P	P	23 17 56.5	+1.4
	comp=Z,0.6nm,0.6s,mb3.7,baz=304,slow=2.7,SNR=5.1						
BRTR	Keskin Array B	77.10	311	P	P	23 17 59.4	+0.9
	comp=Z,0.6nm,0.6s,mb3.7,baz=127,slow=5.4,SNR=5.0						
BRTR	Keskin Array B	77.10	311	eP	P	23 17 59.3	+0.8
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MORC	Moravsky Berou	78.33	326	eP	P	23 18 04.9	-0.2
MORC				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
MORC	Moravsky Berou	78.33	326	eP	P	23 18 04.9	-0.3
	comp=Z,1.9nm,0.9s,mb4.0						
VRAC	Vranov	79.08	327	P	P	23 18 10.6	+1.3
	comp=Z,2.4nm,0.3s,mb4.6,baz=357,slow=2.7,SNR=3.2						
MMAI	Mount Meron Ar	80.36	305	P	P	23 18 16.6	+0.1
	comp=Z,1.1nm,0.8s,mb3.8,baz=102,slow=4.7,SNR=2.7						
LOR	Lormes	85.78	332	eP	P	23 18 41.7	-2.6
SSF	Saint Saulge	86.08	332	eP	P	23 18 44.0	-1.8
	comp=Z,8.9nm,0.9s,mb4.7						
LPL	La Plagne	86.16	330	eP	P	23 18 44.8	-1.5
	comp=Z,8.4nm,1.0s,mb4.6						
LPG	La Plagne	86.17	330	eP	P	23 18 45.1	-1.2
	comp=Z,5.8nm,0.6s,mb4.7						
AVF	Avril sur Loir	86.37	332	eP	P	23 18 44.4	-2.9
	comp=Z,13nm,0.9s,mb4.9						
TXAR	Lajitas Array	89.19	52	P	P	23 19 03.2	+2.1
	comp=Z,0.6nm,0.9s,mb3.9,baz=260,slow=3.7,SNR=3.9						
LPAZ	La Paz	145.96	56	PKPbc	PKPbc	23 25 47.0	+1.8
	comp=Z,2.3nm,0.9s,baz=344,slow=3.9,SNR=11						

ISK ***11*** *23:06:13.7,39.°41N×41.°02E,h16km,MD2.8*
DDA ***11*** *23:06:13.1,39.°35N×41.°06E,h15km±1km,Md3.1*
ISCJB ***11*** *23:06:14.1±0.4,39.°37N±0.°02×41.°07E±0.°04,h10km,Error ellipse: s-maj=4.7km s-min=3.4km az=18.0*
CSEM ***11*** *23:06:14.0±0.2,39.°40N×41.°05E,h12km,MD2.8,Error ellipse: s-maj=6.3km s-min=4.4km az=135.0*

ISC 11 23:06:14.0±0.6,39.°37N±0.°03×41.°09E±0.°04,h4km±5km, n22,σ0°88/35,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNGL	BINGOL	0.42	174	i P	Pg	23 06 21.3	-0.7
BNGL				i S	Sg	23 06 27.6	+0.2
EZM	Erzurum	0.58	21	PG	Pg	23 06 25.2	+0.1
ERZM	Erzurum	0.58	21	i P	Pg	23 06 25.0	-0.1
ERZM				i S	Sg	23 06 32.5	-0.1
ERZM	Erzurum	0.58	21	i P	Pg	23 06 25.0	-0.1
ERZM				i S	Sg	23 06 32.5	-0.1
BINT	Bingol	0.68	224	PG	Pg	23 06 27.4	+0.5
BINT				eSG	Sg	23 06 37.0	+1.2
BINT	Bingol	0.68	224	i Pg	Pg	23 06 27.5	+0.5
BINT				eSg	Sg	23 06 37.0	+1.2
KOPT	Kop Dagi	0.80	325	i P	Pg	23 06 28.5	-0.8
KOPT				i S	Sg	23 06 40.0	+0.4
KOPT	Kop Dagi	0.80	325	i P	Pg	23 06 28.5	-0.7
KOPT				i S	Sg	23 06 40.0	+0.4
TUTA	Tutak	1.33	88	i P	Pn	23 06 39.1	-0.4
TUTA				i S	Sg	23 06 57.7	+0.8
TUTA	Tutak	1.33	88	i P	Pn	23 06 39.1	-0.3
TUTA				i S	Sg	23 06 57.7	+0.8
PTK	Pertek	1.40	251	ePN	Pn	23 06 38.6	-1.8
PTK	Pertek	1.40	251	ePn	Pn	23 06 38.6	-1.8
BEST	Besiri	1.48	175	i P	Pn	23 06 40.9	-0.6
BEST				i S	Sn	23 07 01.6	+0.4
AGRB	Hanur-Agry	1.49	81	ePN	Pn	23 06 41.2	-0.3
AGRB	Hanur-Agry	1.49	81	ePn	Pn	23 06 41.2	-0.3
GUMT	Gumushane	1.65	312	ePN	Pn	23 06 42.2	-1.6
GUMT	Gumushane	1.65	312	ePn	Pn	23 06 42.2	-1.6
SVRC	Sivrice-ELAZID	1.71	235	ePN	Pn	23 06 43.3	-1.3
SVRC	Sivrice-ELAZID	1.71	235	ePn	Pn	23 06 43.3	-1.2
DAGI	Agillar	1.82	20	i P	Pn	23 06 46.3	+0.2
DAGI				i S	Sn	23 07 11.0	+1.3
KEMA	Kemaliye	2.02	268	i P	Pn	23 06 49.2	+0.4
KEMA				i S	Sn	23 07 16.3	+1.8
KEMA	Kemaliye	2.02	268	i P	Pn	23 06 49.2	+0.4
KEMA				i S	Sn	23 07 16.3	+1.8

ISCJB ***11*** *23:08:59.1±0.5,37.°91N±0.°03×23.°41E±0.°03,h11km±5km, Error ellipse: s-maj=5.2km s-min=3.5km az=174.3*
ATH ***11*** *23:08:59.0,37.°90N×23.°38E,h19km±2km,MD2.5/8,ML1.4*
CSEM ***11*** *23:08:59.3±0.1,37.°91N×23.°39E,h10km,ML1.4,Error ellipse: s-maj=1.7km s-min=1.3km az=10.0*
THE ***11*** *23:08:59.6,37.°90N×23.°39E,h6km±2km,ML2.2/2,Error ellipse: s-maj=2.8km s-min=0.6km az=163.0*

ISC 11 23:08:59.5±0.4,37.°91N±0.°04×23.°38E±0.°03,h12km±6km, n35,σ0°46/52,2D,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NAIG	Nisos Aigina	0.18	151	i/PB	Pg	23 09 03.0	-0.4
NAIG	Nisos Aigina	0.18	151	⇓i/Pb	Pg	23 09 03.0	-0.4
ATH	Athens Observa	0.27	77	ePB	Pg	23 09 04.9	-0.2
ATH				eSB	Sg	23 09 09.7	+0.8
ATH	Athens Observa	0.27	77	ePb	Pg	23 09 04.9	-0.2
ATH				eSb	Sg	23 09 09.7	+0.8
ATHU	Athens Univers	0.32	80	P	Pg	23 09 06.1	+0.1
ATHU				S	Sg	23 09 10.2	-0.2
ATHU	Athens Univers	0.32	80	P	Pg	23 09 06.1	+0.1
ATHU				S	Sg	23 09 10.2	-0.2
VLY	Voula,Athens	0.33	100	ePB	Pg	23 09 05.8	-0.4
VLY				eSB	Sg	23 09 11.2	+0.5
VLY	Voula,Athens	0.33	100	ePb	Pg	23 09 05.8	-0.4
VLY				eSb	Sg	23 09 11.2	+0.5
LTK	Loutraki	0.34	289	ePB	Pg	23 09 06.4	0.0
LTK				eSB	Sg	23 09 11.8	+0.7
LTK	Loutraki	0.34	289	P	Pg	23 09 06.5	+0.1
LTK				S	Sg	23 09 11.4	+0.3
LTK	Loutraki	0.34	289	P	Pg	23 09 06.5	+0.1
LTK				S	Sg	23 09 11.4	+0.3
LTK				eSb	Sg	23 09 11.8	+0.7
PTL	Penteli	0.41	70	ePB	Pg	23 09 07.2	-0.3
PTL				eSB	Sg	23 09 12.9	-0.1
PTL	Penteli	0.41	70	ePb	Pg	23 09 07.2	-0.3
PTL				eSb	Sg	23 09 12.9	-0.1
DID	Didima	0.42	196	ePB	Pg	23 09 07.3	-0.5
DID				eSB	Sg	23 09 14.0	+0.5
DID	Didima	0.42	196	P	Pg	23 09 07.3	-0.5
DID				S	Sg	23 09 13.4	-0.1
DID	Didima	0.42	196	P	Pg	23 09 07.3	-0.5
DID				S	Sg	23 09 13.4	-0.1
DID				eSb	Sg	23 09 14.0	+0.5
LKR	Lokris	0.80	338	ePN	Pg	23 09 14.7	-0.2
LKR	Lokris	0.80	338	P	Pg	23 09 14.7	-0.2
LKR	Lokris	0.80	338	P	Pg	23 09 14.7	-0.2
GUR	Goura	0.82	272	ePB	Pb	23 09 14.5	-1.2
GUR	Goura	0.82	272	P	Pg	23 09 15.0	-0.4
GUR	Goura	0.82	272	ePb	Pb	23 09 14.5	-1.2
GUR	Goura	0.82	272	P	Pg	23 09 15.0	-0.4
ATAL	Atalanti	0.83	340	P	Pg	23 09 15.4	-0.1
ATAL	Atalanti	0.83	340	P	Pg	23 09 15.4	-0.1
DSF	Desfina	0.84	307	P	Pg	23 09 15.6	-0.1
DSF	Desfina	0.84	307	P	Pg	23 09 15.6	-0.1
VLX	Vlachokerasia	0.96	236	P	Pb	23 09 18.0	-0.1
VLX				S	Sb	23 09 31.5	+0.8
VLX	Vlachokerasia	0.96	236	P	Pb	23 09 18.0	-0.1
TRIZ	Trizonia	1.13	294	P	Pb	23 09 21.5	+0.6
TRIZ	Trizonia	1.13	294	P	Pb	23 09 21.5	+0.6
LAKA	Lakka	1.15	287	P	Pn	23 09 21.8	+0.4
LAKA	Lakka	1.15	287	P	Pn	23 09 21.8	+0.4
XOR	Xorichti	1.46	354	P	Pn	23 09 25.6	0.0
XOR	Xorichti	1.46	354	P	Pn	23 09 25.6	0.0

TIR ***11*** *23:18:30.7±6.6,38.°52N×18.°08E,h0km,Mw99km,ML3.4*
ISCJB ***11*** *23:18:34.7±0.4,38.°08N±0.°01×21.°51E±0.°02,h7km±2km, mb3.6/6,Error ellipse: s-maj=2.6km s-min=2.2km az=19.3*
CSEM ***11*** *23:18:34.7±0.1,38.°06N×21.°52E,h2km,ML3.2,Error ellipse: s-maj=3.6km s-min=2.8km az=27.0*
IDC ***11*** *23:18:35.1±4.1,38.°44N×21.°86E,h0km,mb3.7/6, mb1 3.6/8,mb1mx3.4/26,mbtmp3.6/8,ML2.9/2,Error ellipse: s-maj=80.1km s-min=24.5km az=31.0*
NEIC ***11*** *23:18:35.2,38.°10N×21.°55E,h17km,ML3.2(ATH),After ATH.*
ATH ***11*** *23:18:35.2,38.°10N×21.°55E,h17km,MD3.4/14,ML3.2*
THE ***11*** *23:18:35.1,38.°06N×21.°56E,h2km±1km,ML4.0/16,Error ellipse: s-maj=1.1km s-min=0.6km az=168.0*

ISC 11 23:18:35.3±0.3,38.°06N±0.°02×21.°53E±0.°02,h7km±2km, n193,σ1°18/281,mb3.6/6,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.05	269	ePb	Pg	23 18 38.5	+1.6
RLS				eSb	Sg	23 18 41.3	+3.3
RLS	Riolos of Patr	0.05	269	ePB	Pg	23 18 38.5	+1.6
RLS				eSB	Sg	23 18 41.3	+3.3
RLS	Riolos of Patr	0.05	269	ePb	Pg	23 18 38.5	+1.6
RLS				eSb	Sg	23 18 41.3	+3.3
UPR	University Cam	0.30	42	ePB	Pg	23 18 41.2	0.0
UPR				eSB	Sg	23 18 45.7	+0.5
UPR	University Cam	0.30	42	P	Pg	23 18 41.2	0.0
UPR				S	Sg	23 18 45.5	+0.3
UPR	University Cam	0.30	42	ePb	Pg	23 18 41.2	0.0
UPR				S	Sg	23 18 45.5	+0.3
LAKA	Lakka	0.40	63	P	Pg	23 18 42.7	-0.3
LAKA				S	Sg	23 18 47.4	-0.8
LAKA	Lakka	0.40	63	P	Pg	23 18 42.7	-0.3
LAKA				S	Sg	23 18 47.4	-0.8
EFP	Efpalio	0.47	38	ePB	Pg	23 18 43.7	-0.7
EFP				eSB	Sg	23 18 50.6	0.0
EFP	Efpalio	0.47	38	P	Pg	23 18 43.7	-0.7
EFP				S	Sg	23 18 50.2	-0.4
EFP	Efpalio	0.47	38	ePb	Pg	23 18 43.7	-0.7
EFP				S	Sg	23 18 50.2	-0.4
EFP				eSb	Sg	23 18 50.6	0.0
TRIZ	Trizonia	0.52	54	P	Pg	23 18 44.7	-0.7
TRIZ				S	Sg	23 18 52.2	0.0
TRIZ	Trizonia	0.52	54	P	Pg	23 18 44.7	-0.7
TRIZ				S	Sg	23 18 52.2	0.0
KALE	Kalithea	0.58	55	P	Pg	23 18 45.7	-0.8
KALE				S	Sg	23 18 54.6	+0.5
KALE	Kalithea	0.58	55	P	Pg	23 18 45.7	-0.8
KALE				S	Sg	23 18 54.6	+0.5
KFL	Anninata	0.59	275	P	Pg	23 18 46.6	-0.1
KFL				S	Sg	23 18 56.5	+2.1
KFL	Anninata	0.59	275	P	Pg	23 18 46.6	-0.1
KFL				S	Sg	23 18 56.5	+2.1
GUR	Goura	0.65	101	ePB	Pg	23 18 47.2	-0.6
GUR				eSN	Sg	23 18 57.3	+1.0
GUR	Goura	0.65	101	P	Pg	23 18 47.2	-0.6
GUR				S	Sg	23 18 56.6	+0.3
GUR	Goura	0.65	101	ePb	Pg	23 18 47.2	-0.6
GUR				S	Sg	23 18 56.6	+0.3
GUR				eSn	Sg	23 18 57.3	+1.0
VLS	Valsamata	0.75	279	ePn	Pn	23 18 49.8	-2.5
VLS				eSn	Sg	23 19 01.4	+1.8
VLS	Valsamata	0.75	279	ePN	Pn	23 18 49.8	-2.5
VLS				eSN	S

PYL			*e*SN		**Sn**	**23 19 15.0**	**+0.7**
PYL	**PYLOS**	**1.17 172**	P		**Pg**	**23 18 56.6**	**-1.2**
PYL			S		**Sg**	**23 19 15.1**	**+2.1**
PYL	**PYLOS**	**1.17 172**	P		**Pg**	**23 18 56.6**	**-1.2**
PYL	**PYLOS**	**1.17 172**	*e*Pn		**Pn**	**23 18 57.8**	**-0.3**
PYL			*e*Sn		**Sn**	**23 19 15.0**	**+0.7**
LKR	**Lokris**	**1.29 62**	*e*Pn		**Pn**	**23 18 58.9**	**-0.9**
LKR	**Lokris**	**1.29 62**	*e*PN		**Pn**	**23 18 58.9**	**-0.9**
LKR	**Lokris**	**1.29 62**	P		**Pn**	**23 18 58.2**	**-1.6**
LKR			S		**Sb**	**23 19 17.9**	**+1.1**
LKR	**Lokris**	**1.29 62**	P		**Pn**	**23 18 58.2**	**-1.6**
LKR	**Lokris**	**1.29 62**	*e*Pn		**Pn**	**23 18 58.9**	**-0.9**
LKR			S		**Sb**	**23 19 17.9**	**+1.1**
ATAL	**Atalanti**	**1.33 61**	P		**Pn**	**23 18 58.7**	**-1.6**
ATAL			S		**Sb**	**23 19 18.4**	**+0.6**
ATAL	**Atalanti**	**1.33 61**	P		**Pn**	**23 18 58.7**	**-1.6**
ATAL			S		**Sb**	**23 19 18.4**	**+0.6**
DID	**Didima**	**1.46 112**	*e*PN		**Pn**	**23 19 02.6**	**+0.6**
DID	**Didima**	**1.46 112**	P		**Pn**	**23 19 01.4**	**-0.6**
DID			S		**Sn**	**23 19 21.9**	**+0.6**
DID	**Didima**	**1.46 112**	P		**Pn**	**23 19 01.4**	**-0.6**
DID	**Didima**	**1.46 112**	*e*Pn		**Pn**	**23 19 02.6**	**+0.6**
DID			S		**Sn**	**23 19 21.9**	**+0.6**
THL	**Klokotos Trika**	**1.55 14**	*e*Pn		**Pn**	**23 19 03.5**	**+0.2**
THL			*e*SN		**Sn**	**23 19 24.7**	**+1.1**
THL	**Klokotos Trika**	**1.55 14**	P		**Pn**	**23 19 02.8**	**-0.5**
THL			S		**Sn**	**23 19 24.4**	**+0.8**
THL	**Klokotos Trika**	**1.55 14**	P		**Pn**	**23 19 02.8**	**-0.5**
THL	**Klokotos Trika**	**1.55 14**	*e*Pn		**Pn**	**23 19 03.5**	**+0.2**
THL			S		**Sn**	**23 19 24.4**	**+0.8**
THL			*e*Sn		**Sn**	**23 19 24.7**	**+1.1**
NAIG	**Nisos Aigina**	**1.57 100**	*e*Pn		**Pn**	**23 19 03.8**	**+0.2**
NAIG	**Nisos Aigina**	**1.57 100**	*e*PN		**Pn**	**23 19 03.8**	**+0.2**
NAIG	**Nisos Aigina**	**1.57 100**	*e*Pn		**Pn**	**23 19 03.8**	**+0.2**
JAN	**Janina**	**1.68 342**	*e*Pn		**Pn**	**23 19 05.8**	**+0.7**
JAN	**Janina**	**1.68 342**	*e*PN		**Pn**	**23 19 05.8**	**+0.7**
JAN	**Janina**	**1.68 342**	*e*Pn		**Pn**	**23 19 05.8**	**+0.7**
ATH	**Athens Observa**	**1.73 92**	*e*Pn		**Pn**	**23 19 06.7**	**+1.0**
ATH			*e*Sn		**Sn**	**23 19 29.4**	**+1.4**
ATH	**Athens Observa**	**1.73 92**	*e*PN		**Pn**	**23 19 06.7**	**+1.0**
ATH			*e*SN		**Sn**	**23 19 29.4**	**+1.4**
ATH	**Athens Observa**	**1.73 92**	*e*Pn		**Pn**	**23 19 06.7**	**+1.0**
ATH			*e*Sn		**Sn**	**23 19 29.4**	**+1.4**
VLI	**Veliai**	**1.74 140**	*e*Pn		**Pn**	**23 19 07.5**	**+1.6**
VLI	**Veliai**	**1.74 140**	*e*PN		**Pn**	**23 19 07.5**	**+1.6**
VLI	**Veliai**	**1.74 140**	*e*Pn		**Pn**	**23 19 07.5**	**+1.6**
IGT	**Igoumenitsa**	**1.75 328**	P		**Pn**	**23 19 05.7**	**-0.3**
IGT	**Igoumenitsa**	**1.75 328**	P		**Pn**	**23 19 05.8**	**-0.2**
IGT	**Igoumenitsa**	**1.75 328**	P		**Pn**	**23 19 05.8**	**-0.2**
ATHU	**Athens Univers**	**1.78 92**	P		**Pn**	**23 19 07.2**	**+0.8**
ATHU			S		**Sn**	**23 19 29.1**	**-0.2**
ATHU	**Athens Univers**	**1.78 92**	P		**Pn**	**23 19 07.2**	**+0.8**
ATHU			S		**Sn**	**23 19 29.1**	**-0.2**
VLY	**Voula,Athens**	**1.80 96**	*e*Pn		**Pn**	**23 19 07.3**	**+0.6**
VLY	**Voula,Athens**	**1.80 96**	*e*PN		**Pn**	**23 19 07.3**	**+0.6**
VLY	**Voula,Athens**	**1.80 96**	*e*Pn		**Pn**	**23 19 07.3**	**+0.6**
NEO	**Neokhori**	**1.82 46**	*e*Pn		**Pn**	**23 19 07.0**	**0.0**
NEO	**Neokhori**	**1.82 46**	*e*PN		**Pn**	**23 19 07.0**	**0.0**
NEO	**Neokhori**	**1.82 46**	*e*Pn		**Pn**	**23 19 07.0**	**0.0**
PTL	**Penteli**	**1.84 90**	*e*Pn		**Pn**	**23 19 07.9**	**+0.6**
PTL	**Penteli**	**1.84 90**	*e*PN		**Pn**	**23 19 07.9**	**+0.6**
PTL	**Penteli**	**1.84 90**	*e*Pn		**Pn**	**23 19 07.9**	**+0.6**
XOR	**Xorichti**	**1.84 44**	P		**Pn**	**23 19 06.4**	**-0.9**
XOR	**Xorichti**	**1.84 44**	P		**Pn**	**23 19 06.1**	**-1.2**
XOR			S		**Sn**	**23 19 31.8**	**+1.0**
XOR	**Xorichti**	**1.84 44**	P		**Pn**	**23 19 06.4**	**-0.9**
XOR			S		**Sn**	**23 19 31.8**	**+1.0**
KEK	**Kerkira**	**2.14 321**	*e*Pn		**Pn**	**23 19 11.9**	**+0.6**
KEK	**Kerkira**	**2.14 321**	*e*PN		**Pn**	**23 19 11.9**	**+0.6**
KEK	**Kerkira**	**2.14 321**	P		**Pn**	**23 19 10.9**	**-0.4**
KEK	**Kerkira**	**2.14 321**	P		**Pn**	**23 19 10.9**	**-0.4**
KEK	**Kerkira**	**2.14 321**	*e*Pn		**Pn**	**23 19 11.9**	**+0.6**
KYTH	**Kithira**	**2.14 145**	*e*Pn		**Pn**	**23 19 13.4**	**+2.0**
KYTH	**Kithira**	**2.14 145**	*e*PN		**Pn**	**23 19 13.4**	**+2.0**
KYTH	**Kithira**	**2.14 145**	*e*Pn		**Pn**	**23 19 13.4**	**+2.0**
AOS	**Alonnisos**	**2.15 58**	P		**Pn**	**23 19 11.8**	**+0.3**
AOS	**Alonnisos**	**2.15 58**	P		**Pn**	**23 19 10.4**	**-1.1**
AOS			S		**Sn**	**23 19 39.1**	**+0.7**
AOS	**Alonnisos**	**2.15 58**	P		**Pn**	**23 19 11.8**	**+0.3**
AOS			S		**Sn**	**23 19 39.1**	**+0.7**
SRN	**Sarande**	**2.18 327**	*e*PN		**Pn**	**23 19 12.2**	**+0.3**
SRN			*i* SN		**Sn**	**23 19 39.7**	**+0.6**
SRN	**Sarande**	**2.18 327**	*e*Pn		**Pn**	**23 19 12.2**	**+0.3**
SRN			*i* Sn		**Sn**	**23 19 39.7**	**+0.6**
KZN	**Kozani**	**2.25 5**	*e*Pn		**Pn**	**23 19 14.1**	**+1.2**
KZN	**Kozani**	**2.25 5**	*e*PN		**Pn**	**23 19 14.1**	**+1.2**
KZN	**Kozani**	**2.25 5**	P		**Pn**	**23 19 14.1**	**+1.2**
KZN	**Kozani**	**2.25 5**	*e*Pn		**Pn**	**23 19 14.1**	**+1.2**
NEST	**Nestorio**	**2.38 351**	P		**Pn**	**23 19 16.1**	**+1.4**
NEST			S		**Sn**	**23 19 45.0**	**+0.8**
NEST	**Nestorio**	**2.38 351**	P		**Pn**	**23 19 16.1**	**+1.4**
NEST			S		**Sn**	**23 19 45.0**	**+0.8**
PAIG	**Paliouri**	**2.51 41**	P		**Pn**	**23 19 16.0**	**-0.4**
PAIG	**Paliouri**	**2.51 41**	P		**Pn**	**23 19 15.0**	**-1.4**
PAIG	**Paliouri**	**2.51 41**	P		**Pn**	**23 19 16.0**	**-0.4**
KBN	**Korca**	**2.63 348**	*e*PN		**Pn**	**23 19 19.4**	**+1.3**
KBN	**Korca**	**2.63 348**	*e*Pn		**Pn**	**23 19 19.4**	**+1.3**
FNA	**Florina**	**2.72 357**	P		**Pn**	**23 19 19.8**	**+0.4**
FNA	**Florina**	**2.72 357**	P		**Pn**	**23 19 19.7**	**+0.3**
FNA			S		**Sn**	**23 19 54.8**	**+2.2**
FNA	**Florina**	**2.72 357**	P		**Pn**	**23 19 19.7**	**+0.3**
FNA			S		**Sn**	**23 19 54.8**	**+2.2**
PLG	**Polygyros**	**2.75 32**	*e*Pn		**Pn**	**23 19 19.3**	**-0.5**
PLG	**Polygyros**	**2.75 32**	*e*PN		**Pn**	**23 19 19.3**	**-0.5**
PLG	**Polygyros**	**2.75 32**	P		**Pn**	**23 19 19.2**	**-0.6**
PLG	**Polygyros**	**2.75 32**	*e*Pn		**Pn**	**23 19 19.3**	**-0.5**
THE	**Thessaloniki**	**2.80 23**	P		**Pn**	**23 19 22.2**	**+1.7**
THE	**Thessaloniki**	**2.80 23**	P		**Pn**	**23 19 22.2**	**+1.7**
HORT	**Hortiatis**	**2.81 25**	P		**Pn**	**23 19 21.6**	**+1.0**
HORT	**Hortiatis**	**2.81 25**	P		**Pn**	**23 19 21.6**	**+1.0**
OUR	**Ouranopolis**	**2.96 39**	P		**Pn**	**23 19 24.0**	**+1.3**
OUR	**Ouranopolis**	**2.96 39**	P		**Pn**	**23 19 21.6**	**-1.1**
OUR	**Ouranopolis**	**2.96 39**	P		**Pn**	**23 19 24.0**	**+1.3**
SOH	**Sokhos**	**3.10 26**	*e*Pn		**Pn**	**23 19 25.4**	**+0.8**
SOH	**Sokhos**	**3.10 26**	*e*PN		**Pn**	**23 19 25.4**	**+0.8**
SOH	**Sokhos**	**3.10 26**	P		**Pn**	**23 19 24.6**	**0.0**
SOH			S		**Sn**	**23 20 03.1**	**+1.3**
SOH	**Sokhos**	**3.10 26**	P		**Pn**	**23 19 24.6**	**0.0**
SOH	**Sokhos**	**3.10 26**	*e*Pn		**Pn**	**23 19 25.4**	**+0.8**
SOH			S		**Sn**	**23 20 03.1**	**+1.3**
OHR	**Ohrid**	**3.10 350**	*i* Pn		**Pn**	**23 19 24.9**	**+0.3**
OHR	**Ohrid**	**3.10 350**	P		**Pn**	**23 19 24.9**	**+0.3**
OHR	**Ohrid**	**3.10 350**	P		**Pn**	**23 19 24.9**	**+0.3**
KARN	**Karanos**	**3.27 143**	P		**Pn**	**23 19 29.4**	**+2.5**
KARN	**Karanos**	**3.27 143**	P		**Pn**	**23 19 29.4**	**+2.5**
KRUS	**Krusevo**	**3.31 356**	*i* Pn		**Pn**	**23 19 27.3**	**-0.2**
LIA	**Limnos Island**	**3.39 56**	P		**Pn**	**23 19 30.2**	**+1.7**
LIA	**Limnos Island**	**3.39 56**	P		**Pn**	**23 19 30.2**	**+1.7**
TIR	**Tirane**	**3.53 339**	*e*Pn		**Pn**	**23 19 30.8**	**+0.3**
TIR	**Tirane**	**3.53 339**	P		**Pn**	**23 19 31.0**	**+0.5**
TIR	**Tirane**	**3.53 339**	*e*Pn		**Pn**	**23 19 30.8**	**+0.3**
NVR	**Nevrokopi**	**3.75 28**	P		**Pn**	**23 19 35.3**	**+1.8**
NVR	**Nevrokopi**	**3.75 28**	P		**Pn**	**23 19 35.3**	**+1.8**
MMB	**Musomiste**	**3.91 25**	P		**Pn**	**23 19 36.1**	**+0.4**
MMB	**Musomiste**	**3.91 25**	P		**Pn**	**23 19 36.1**	**+0.4**
KKB	**Krupnik**	**3.98 17**	P		**Pn**	**23 19 38.1**	**+1.3**
KKB	**Krupnik**	**3.98 17**	P		**Pn**	**23 19 38.1**	**+1.3**
PUK	**Puka**	**4.17 343**	*e*PN		**Pn**	**23 19 39.7**	**+0.4**
PUK	**Puka**	**4.17 343**	*e*Pn		**Pn**	**23 19 39.7**	**+0.4**
RDO	**Rodhopi**	**4.37 44**	P		**Pn**	**23 19 44.0**	**+2.0**
RDO	**Rodhopi**	**4.37 44**	P		**Pn**	**23 19 44.0**	**+2.0**
RZN	**Rozhen**	**4.37 33**	P		**Pn**	**23 19 43.0**	**+0.9**
RZN	**Rozhen**	**4.37 33**	P		**Pn**	**23 19 43.0**	**+0.9**
BCI	**Bajram Curri**	**4.45 346**	*e*PN		**Pn**	**23 19 43.5**	**+0.4**
BCI			*i* SN		**Sn**	**23 20 35.4**	**+0.3**
BCI	**Bajram Curri**	**4.45 346**	*e*Pn		**Pn**	**23 19 43.5**	**+0.4**
BCI			*i* Sn		**Sn**	**23 20 35.4**	**+0.3**
SG1	**Sgolgore (BA)**	**4.67 308**	*e*Pn		**Pn**	**23 19 45.8**	**-0.4**
SG1			*e*Sn		**Sn**	**23 20 39.5**	**-1.1**
VTS	**Vitosha**	**4.71 15**	P		**Pn**	**23 19 47.9**	**+1.3**
VTS	**Vitosha**	**4.71 15**	*e*P		**Pn**	**23 19 47.5**	**+0.9**
VTS	**Vitosha**	**4.71 15**	P		**Pn**	**23 19 47.9**	**+1.3**
BARS	**Barje**	**4.76 3**	*i* Pn		**Pn**	**23 19 46.3**	**-1.1**
CDT	**Castel del Mon**	**5.06 308**	*e*Pn		**Pn**	**23 19 51.0**	**-0.6**
CDT			*e*Sn		**Sn**	**23 20 50.6**	**+0.3**
STON	**Ston**	**5.63 330**	*i* Pn		**Pn**	**23 19 57.1**	**-2.2**
STON			Sn		**Sn**	**23 20 58.8**	**-5.4**
STON	**Ston**	**5.63 330**	*i* Pn		**Pn**	**23 19 57.0**	**-2.3**
MRB1	**Monte Rocchett**	**5.92 303**	Pn		**Pn**	**23 20 04.2**	**+0.9**
	27nm,0.5s						
MRB1	**Monte Rocchett**	**5.92 303**	Pn		**Pn**	**23 20 04.2**	**+0.9**
	27nm,0.5s						
BBLS	**Lazići**	**6.02 345**	*i* Pn		**Pn**	**23 20 03.4**	**-1.3**
DIVS	**Divibare**	**6.14 350**	*i* Pn		**Pn**	**23 20 04.9**	**-1.5**
NRCA	**Norcia**	**8.00 309**	Pn		**Pn**	**23 20 32.5**	**+0.7**
	1.9nm,0.3s						
NRCA	**Norcia**	**8.00 309**	Pn		**Pn**	**23 20 32.5**	**+0.7**
	1.9nm,0.3s						
NVLJ	**Novalja**	**8.21 324**	*e*Pn		**Pn**	**23 20 33.1**	**-1.6**
NVLJ			Sn		**Sn**	**23 22 02.5**	**-5.1**
NVLJ	**Novalja**	**8.21 324**	*e*Pn		**Pn**	**23 20 33.0**	**-1.7**
BRTR	**Keskin Array B**	**9.59 76**	Pn		**Pn**	**23 20 50.3**	**-3.3**
	0.0nm,0.3s,baz=295,slow=10,SNR=2.2						
MMAI	**Mount Meron Ar**	**12.36 110**	Pn		**Pn**	**23 21 31.0**	**-0.7**
	0.3nm,0.3s,baz=315,slow=12,SNR=5.6						
HFS	**Hagfors**	**22.65 350**	P		**P**	**23 23 34.1**	**-2.6**
	1.7nm,0.8s,mb3.5,baz=162,slow=10,SNR=5.7						
HFS	**Hagfors**	**22.65 350**	P		**P**	**23 23 34.1**	**-2.6**
FINES	**FINESS Array B**	**23.58 5**	P		**P**	**23 23 43.1**	**-3.4**
	0.7nm,0.7s,mb3.2,baz=336,slow=23,SNR=4.3						
EKA	**Eskdalemuir Ar**	**23.99 324**	P		**P**	**23 23 49.8**	**-0.4**
	0.9nm,0.7s,mb3.3,baz=126,slow=8.4,SNR=4.0						
EKA	**Eskdalemuir Ar**	**23.99 324**	P		**P**	**23 23 49.8**	**-0.4**
ARCES	**ARCESS Array B**	**31.61 3**	P		**P**	**23 24 55.7**	**-2.6**
	1.7nm,1.0s,mb3.8,baz=198,slow=11,SNR=2.7						
MKAR	**Makanchi Array**	**44.68 58**	P		**P**	**23 26 46.1**	**-2.5**
	0.4nm,0.5s,mb3.5,baz=278,slow=7.4,SNR=11						
MKAR	**Makanchi Array**	**44.68 58**	P		**P**	**23 26 46.2**	**-2.4**
ZALV	**Zalesovo Beam**	**45.18 48**	P		**P**	**23 26 49.7**	**-2.7**
	1.7nm,0.4s,mb4.2,baz=275,slow=8.3,SNR=9.3						

MEX 11 23:28:42.5±1.0, 15°.35N×94°.72W, h16km±14km, MD3.9, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.40**	**288**	*i* P	Pn	23 29 04.2	-3.2
HUIG				*e*S	Sn	23 29 19.6	-5.9
PCIG		**1.49**	**76**	*i* P	Pn	23 29 05.0	-3.7
PCIG				*i* S	Sn	23 29 22.0	-5.8
TGIG		**2.10**	**47**	*i* P	Pn	23 29 14.5	-2.4
TGIG				*e*S	Sn	23 29 37.9	-4.9
VHO	**Vista Hermosa**	**2.59**	**312**	*i* P	Pn	23 29 20.1	-3.6
VHO				*e*S	Sn	23 29 51.5	-3.3

ISCJB ***11*** *23:41:48.0±0.5, 23°.08N±0°.02×121°.45E±0°.02, h8km±3km, Error ellipse: s-maj=3.2km s-min=2.4km az=148.9*
NEIC ***11*** *23:41:48.1±1.8, 23°.13N×121°.48E, h10km, Error ellipse: s-maj=20.3km s-min=8.6km az=119.0*
JMA ***11*** *23:41:50.4±0.3, 23°.08N×121°.47E, h83km, M2.9*
TAP ***11*** *23:41:50.0, 23°.15N×121°.33E, h15km, ML3.7, C*
ISC 11 23:41:48.5±0.4, 23°.08N±0°.02×121°.44E±0°.02, h9km±3km, n61, σ1°.00/102, 11C-3D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWF1	**Yuli**	**0.30**	**334**	⇑*i* P	**Pg**	**23 41 55.2**	**+0.8**
	baz=345						
TWF1				*i* S	**Sg**	**23 41 59.3**	**+0.8**
	baz=345						
YULB	**Yu-li**	**0.33**	**337**	*e*Pg	**Pg**	**23 41 55.2**	**+0.1**
YULB				*e*Sg	**Sg**	**23 41 59.5**	**-0.1**
ELDTW	**Lidau**	**0.40**	**285**	⇑*i* P	**Pg**	**23 41 56.2**	**-0.2**
	baz=277						
ELDTW				S	**Sg**	**23 42 00.5**	**-1.3**
	baz=277						
TTN	**Taitung**	**0.42**	**219**	*i* P	**Pg**	**23 41 59.3**	**+2.5**
	baz=193						
TTN				*i* S	**Sg**	**23 42 06.5**	**+4.0**
	baz=193						
TWG	**Pinlang**	**0.43**	**232**	*e*Pg	**Pg**	**23 41 57.6**	**+0.7**
TWG				*e*Sg	**Sg**	**23 42 03.7**	**+1.2**
TWG	**Pinlang**	**0.43**	**232**	*e*P	**Pg**	**23 41 57.8**	**+0.9**
	baz=215						
TWG				S	**Sg**	**23 42 04.1**	**+1.6**
	baz=215						
EHY	**Hungye**	**0.43**	**346**	*i* P	**Pg**	**23 41 57.4**	**+0.4**
	baz=349						
EHY				*e*S	**Sg**	**23 42 03.2**	**+0.5**
	baz=349						
YUS	**Yu-Shan**	**0.60**	**312**	⇑*i* P	**Pg**	**23 42 00.2**	**0.0**
	baz=307						
YUS				*i* S	**Sg**	**23 42 06.8**	**-1.4**
	baz=307						
STYT	**Tauyuan**	**0.63**	**277**	⇑*i* P	**Pg**	**23 42 00.5**	**-0.3**
	baz=269						
STYT				S	**Sg**	**23 42 08.0**	**-1.1**
	baz=269						
ALS	**Alishan**	**0.72**	**306**	⇑*i* P	**Pg**	**23 42 02.4**	**-0.1**
	baz=306						
ALS				*e*S	**Sg**	**23 42 10.9**	**-1.0**
	baz=306						
ESL	**Shilin**	**0.73**	**360**	*e*P	**Pg**	**23 42 03.1**	**+0.6**
	baz=6.0						
TPUB	**Ta-pu**	**0.78**	**286**	*e*Pg	**Pg**	**23 42 03.3**	**-0.2**
TPUB				*e*Sg	**Sg**	**23 42 12.8**	**-0.8**
WTP	**Ta-pu**	**0.78**	**282**	⇑P	**Pg**	**23 42 03.5**	**0.0**
	baz=277						
WTP				*e*S	**Sg**	**23 42 12.8**	**-0.8**
	baz=277						
SGST	**Jiashian**	**0.79**	**270**	⇑P	**Pg**	**23 42 03.9**	**+0.2**
	baz=263						
SGST				*e*S	**Sg**	**23 42 13.9**	**-0.1**
	baz=263						
SSD	**Sandimen**	**0.82**	**246**	⇓*i* P	**Pg**	**23 42 03.9**	**-0.4**
	baz=232						
SSD				*e*S	**Sg**	**23 42 12.7**	**-2.2**
	baz=232						
CHN4	**Tsaushan**	**0.82**	**289**	⇑P	**Pg**	**23 42 04.5**	**+0.1**
	baz=291						
CHN4				*e*S	**Sg**	**23 42 15.2**	**+0.1**
	baz=291						
SSLB	**Suanglung**	**0.83**	**328**	*e*Pg	**Pg**	**23 42 03.5**	**-1.0**
SSLB				*e*Sg	**Sg**	**23 42 12.7**	**-2.7**
CHN1	**Nanshi**	**0.84**	**277**	⇑*i* P	**Pg**	**23 42 05.2**	**+0.4**
	baz=267						
CHN1				*e*S	**Sg**	**23 42 16.2**	**+0.4**
	baz=267						
CHN5	**Tsauling**	**0.87**	**306**	⇑*i* P	**Pg**	**23 42 05.4**	**+0.2**
	baz=305						
CHN5				S	**Sg**	**23 42 15.7**	**-0.8**
	baz=305						
TAW	**Tawu**	**0.88**	**215**	*e*P	**Pg**	**23 42 04.8**	**-0.6**
	baz=215						
TAW				*e*S	**Sg**	**23 42 16.2**	**-0.7**
	baz=215						
EAST	**Anshuo**	**0.89**	**218**	⇓*i* P	**Pg**	**23 42 05.3**	**-0.3**
	baz=210						
EAST				*e*S	**Sg**	**23 42 16.4**	**-0.7**
	baz=210						
TWK	**Hsinying**	**0.89**	**282**	⇑*i* P	**Pg**	**23 42 05.7**	**-0.1**
	baz=277						
TWK				*e*S	**Sg**	**23 42 17.5**	**+0.1**
	baz=277						
HWA	**Hwalien**	**0.90**	**10**	*e*P	**Pg**	**23 42 07.5**	**+1.6**
	baz=359						
SMLT	**Sun Moon Lake**	**0.94**	**328**	P	**Pg**	**23 42 06.0**	**-0.5**
	baz=330						
TWM1	**Shoushan**	**0.97**	**255**	*e*P	**Pg**	**23 42 08.2**	**+1.0**
	baz=249						
CHN3	**Shinhua**	**0.99**	**270**	*e*P	**Pg**	**23 42 10.0**	**+2.5**
	baz=273						
CHN3				*e*S	**Sg**	**23 42 23.3**	**+2.9**
	baz=273						
TWD	**Chiawan**	**1.00**	**8**	*e*P	**Pg**	**23 42 07.7**	**-0.1**
	baz=15						
TWD				*e*S	**Sg**	**23 42 22.5**	**+1.6**
	baz=15						
SCZT	**Fangliau**	**1.04**	**227**	*e*P	**Pg**	**23 42 07.9**	**-0.6**
	baz=217						
LAY	**Lan-yu**	**1.05**	**174**	*e*P	**Pg**	**23 42 08.0**	**-0.7**
	baz=164						
WNT	**Mingjian**	**1.05**	**319**	*e*P	**Pg**	**23 42 08.7**	**0.0**
	baz=319						
WNT				*e*S	**Sg**	**23 42 22.4**	**0.0**
	baz=319						
WHF	**Hehuan Shan**	**1.07**	**351**	⇓P	**Pg**	**23 42 08.3**	**-0.8**
	baz=354						
NACB	**Ninganchiao**	**1.09**	**7**	*e*Pg	**Pg**	**23 42 07.8**	**-1.8**
NACB				*e*Sg	**Sg**	**23 42 21.0**	**-2.8**
TAI1	**Yung-k'ang**	**1.12**	**268**	*e*P	**Pg**	**23 42 10.7**	**+0.7**
	baz=273						
TAI1				*e*S	**Sg**	**23 42 25.9**	**+1.4**
	baz=273						
SCLT	**Jiali**	**1.15**	**275**	*e*P	**Pb**	**23 42 09.8**	**-0.8**
	baz=269						
SCLT				*e*S	**Sg**	**23 42 26.5**	**+0.9**
	baz=269						
CHN8	**Yiju**	**1.16**	**283**	*e*P	**Pb**	**23 42 10.7**	**-0.1**
	baz=278						
CHN8				*e*S	**Sg**	**23 42 26.3**	**+0.5**
	baz=278						
TWT	**Tachien**	**1.19**	**348**	*e*P	**Pb**	**23 42 10.0**	**-1.2**
	baz=347						
TWP	**Hsiaoliuchiu**	**1.24**	**234**	*e*P	**Pn**	**23 42 14.8**	**+2.8**
	baz=215						
WSF	**Szhu**	**1.25**	**296**	*e*P	**Pn**	**23 42 11.1**	**-1.1**
	baz=292						
WSF				*e*S	**Sb**	**23 42 27.6**	**-0.8**
	baz=292						
TCU	**Taichung**	**1.27**	**327**	*e*P	**Pn**	**23 42 13.0**	**+0.5**
	baz=312						
TWK1	**Hengchun**	**1.28**	**207**	*e*P	**Pn**	**23 42 12.3**	**-0.3**
	baz=197						
WTCT	**Ta-ch'eng**	**1.32**	**306**	*e*P	**Pn**	**23 42 12.3**	**-0.8**
	baz=303						
WTCT				*e*S	**Sb**	**23 42 29.7**	**-0.8**
	baz=303						
ENA	**Nanau**	**1.37**	**12**	*e*P	**Pn**	**23 42 13.2**	**-0.6**
TWQ1	**Liyutan**	**1.40**	**334**	P	**Pn**	**23 42 15.1**	**+0.9**
	baz=334						
TWQ1				*e*S	**Sb**	**23 42 34.2**	**+1.4**
	baz=334						
NSY	**Sanyi**	**1.46**	**335**	P	**Pn**	**23 42 16.5**	**+1.4**
	baz=335						
NSY				*e*S	**Sn**	**23 42 36.2**	**+1.7**
	baz=335						
TWC	**Suao**	**1.56**	**14**	*e*P	**Pn**	**23 42 17.7**	**+1.2**
	baz=359						
YHNB	**Yeheng**	**1.58**	**358**	*e*Pn	**Pn**	**23 42 16.2**	**-0.5**
YHNB				*e*Pg	**Pg**	**23 42 19.9**	**+1.1**
NSK	**Sanguang**	**1.59**	**357**	*e*P	**Pn**	**23 42 16.5**	**-0.3**
	baz=8.0						
NSTT	**Nanjuang**	**1.59**	**345**	*e*P	**Pn**	**23 42 17.0**	**+0.1**
	baz=358						
NSTT				*e*S	**Sn**	**23 42 38.0**	**+0.4**
	baz=358						
TWE	**Neicheng**	**1.64**	**7**	*e*P	**Pn**	**23 42 18.1**	**+0.6**
	baz=4.0						
WDGT	**Dungji**	**1.65**	**276**	*e*P	**Pn**	**23 42 17.0**	**-0.6**
	baz=272						
PNG	**Penghu**	**1.80**	**286**	*e*P	**Pn**	**23 42 18.5**	**-1.2**
	baz=281						
PNG				*e*S	**Sn**	**23 42 42.0**	**-0.7**
	baz=281						
TWA	**Mucha**	**1.89**	**4**	*e*P	**Pn**	**23 42 23.7**	**+2.7**
	baz=11						
TWB1	**Santiao Chiao**	**1.98**	**15**	*e*P	**Pn**	**23 42 23.9**	**+1.7**
	baz=359						
YOJ	**Yonaguni jima**	**1.99**	**46**	P	**Pn**	**23 42 22.5**	**+0.1**
YOJ				S	**Sn**	**23 42 46.8**	**-0.6**
NWF	**Wu-fen Shan**	**2.00**	**9**	*e*P	**Pn**	**23 42 24.2**	**+1.6**
	baz=3.0						
HATJ	**Hateruma jima**	**2.38**	**66**	P	**Pn**	**23 42 27.7**	**0.0**
HATJ				S	**Sn**	**23 42 55.2**	**-1.8**
IRIF	**Iriomote-Funau**	**2.44**	**59**	P	**Pn**	**23 42 28.8**	**+0.2**
IRIF				S	**Sn**	**23 42 58.8**	**+0.2**
JKRS	**Kuro-shima**	**2.62**	**64**	P	**Pn**	**23 42 31.3**	**+0.2**
JKRS				S	**Sn**	**23 43 02.6**	**-0.4**
JIJ	**Ishigaki jima**	**2.79**	**62**	P	**Pn**	**23 42 33.4**	**+0.1**
J

SKR MLR MLR
comp=N,1µm,18.0s
SKR MLR MLR
comp=E,2µm,18.0s
SKR MLR MLR
comp=Z,1µm,18.0s
RC01 Rabbit Creek A 17.40 47 *e*P **Pn 00 05 25.6 +0.4**
comp=Z,24nm,0.4s
PMR Palmer 17.86 46 *e*P **Pn 00 05 30.1 -0.6**
PMR pmax pmax
comp=Z,6.0nm,0.3s
PMR Palmer 17.86 46 *e*P **Pn 00 05 30.1 -0.6**
comp=Z,6.4nm,0.3s
TRF Thorofare Moun 18.16 39 *e*P **Pn 00 05 35.0 +0.6**
comp=Z,380nm,1.2s
BPAW Bear Paw Mtn. 18.22 37 *e*P **Pn 00 05 35.5 +0.4**
comp=Z,95nm,0.6s
BILL Biiibino 18.49 339*c i*P **Pn 00 05 39.6 +1.3**
BILL pmax pmax
comp=Z,191nm,1.0s
BILL MLR MLR
comp=Z,3µm,20.0s
BILL Biiibino 18.49 339 *e*P **Pn 00 05 39.9 +1.6**
comp=Z,206nm,1.0s
MID Middleton Isla 18.57 53 *e*P **Pn 00 05 38.1 -1.2**
MID pmax pmax
comp=Z,94nm,0.6s
MID Middleton Isla 18.57 53 *e*P **Pn 00 05 38.1 -1.2**
comp=Z,94nm,0.6s
MCK McKinley 18.83 39 *e*P **Pn 00 05 41.0 -1.4**
MCK pmax pmax
comp=Z,85nm,0.5s
MCK McKinley 18.83 39 *e*P **Pn 00 05 41.0 -1.4**
comp=Z,85nm,0.5s
DIV Divide 19.24 49 *e*P **Pn 00 05 44.9 -2.5**
comp=Z,30nm,0.6s
COLA College 19.78 37 *e*P **Pn 00 05 51.5 -2.2**
COLA pmax pmax
comp=Z,87nm,0.7s
COLA College 19.78 37 *e*P **Pn 00 05 51.5 -2.2**
comp=Z,87nm,0.7s
SEY Seymchan 20.08 316 *e*P **P 00 05 57.1 +2.2**
COLD Coldfoot 20.26 30 *e*P **P 00 05 58.7 +1.8**
comp=Z,165nm,1.0s
COLD *e*PcP PcP 00 10 09.0 +1.1
PNL Peninsula 22.10 54 *e*P **P 00 06 15.4 -1.2**
comp=Z,48nm,0.5s,mb5.2
EGAK Eagle 22.36 41 *e*P **P 00 06 18.8 -0.5**
comp=Z,64nm,0.5s,mb5.3
SKAG Skagway 24.16 55 *e*P **P 00 06 37.4 +0.5**
comp=Z,7.4nm,0.5s,mb4.4
CRAG Craig 25.66 64 *e*P **P 00 06 52.0 +1.5**
comp=Z,59nm,0.8s,mb5.2
YUK Yuzh-Kuril'sk 26.23 268⇑ *i*P **P 00 06 53.2 -2.6**
YUK *i* S **S 00 11 26.4 +3.0**
YUK pmax pmax
comp=E,300nm,1.3s
YUK pmax pmax
comp=Z,500nm,1.3s,mb5.9
YUK pmax pmax
comp=N,100nm,0.6s
YUK pmax pmax
comp=Z,520nm,1.3s,mb5.9
YUK smax
comp=E,300nm,10.0s
YUK smax
comp=N,100nm,5.0s
YUK MLR MLR
comp=E,400nm,19.0s
YUK MLR MLR
comp=Z,500nm,19.0s
YUK MLR MLR
comp=N,100nm,9.4s
INK Inuvik 26.38 35 P **P 00 06 55.7 -1.2**
comp=N,6.8nm,0.4s,mb4.6,baz=253,slow=7.5,SNR=40
INK PcP PcP 00 10 21.2 +0.5
comp=N,13nm,0.5s,baz=323,slow=2.4,SNR=15
INK ScP ScP 00 13 56.5 +1.5
comp=N,3.0nm,0.7s,baz=144,slow=3.4,SNR=4.7
INK LR LR 00 19 06.4
comp=N,2µm,18.2s,baz=231,slow=40
INK Inuvik 26.38 35 *e*P **P 00 06 56.5 -0.4**
INK *e* 00 10 20.7
INK pmax pmax
comp=Z,10.0nm,0.5s
INK Inuvik 26.38 35 *e*P **P 00 06 56.5 -0.4**
comp=Z,10nm,0.5s,mb4.6
INK *e*PcP PcP 00 10 20.7 0.0
YSS Yuzh-Sakhalins 26.80 276⇓ *i*P **P 00 07 02.0 +1.1**
YSS *e* pP 00 07 12.5 -3.5
YSS *e*S **S 00 11 36.0 +3.6**
YSS pmax pmax
comp=Z,120nm,1.0s,mb5.4
YSS MLR MLR
comp=E,1µm,20.0s
YSS MLR MLR
comp=Z,1µm,20.0s
YSS Yuzh-Sakhalins 26.80 276 *e*P **P 00 07 01.8 +0.8**
DLBC Dease Lake 26.95 57 P **P 00 06 55.0 -7.2**
comp=Z,1.6nm,0.3s,mb4.0,baz=138,slow=17,SNR=5.1
DLBC PcP PcP 00 10 23.0 +0.8
comp=Z,5.3nm,0.6s,baz=241,slow=3.8,SNR=3.6
DLBC LR LR 00 18 33.2
comp=Z,1µm,19.7s,baz=283,slow=38
DLBC Dease Lake 26.95 57 *e*P **P 00 07 03.3 +1.2**
DLBC PcP PcP 00 10 23.0 +0.8
DLBC *e*PcP PcP 00 10 23.2 +1.0
DLBC LR LR 00 18 33.1
ASAJ Asahikawa 28.22 271 P **P 00 07 13.4 -0.2**
comp=Z,38nm,0.9s,mb5.0,baz=4.4,slow=4.7,SNR=25
ASAJ LR LR 00 19 46.0
comp=Z,438nm,18.3s,baz=246,slow=39
BBB Bella Bella 29.34 70 LR LR 00 17 05.3
comp=Z,757nm,21.1s,baz=85,slow=32
YAK Yakutsk 30.39 311 *e*P **P 00 07 32.5 -0.1**
YAK *e**PP pP 00 07 41.1 -6.7
YAK *e* 00 10 30.2
YAK *e*S **S 00 12 32.4 +4.0**
YAK *e*SSS 00 14 32.0
YAK *e* 00 18 02.2
YAK pmax pmax
comp=Z,15nm,0.8s,mb4.8
YAK smax
comp=E,356nm,17.0s
YAK MLR MLR
comp=Z,2µm,20.0s
YAK MLR MLR
comp=E,1µm,20.0s
HABR Khabarovsk 30.89 284*c i*P **P 00 07 37.0 -0.2**
HABR 00 10 30.5
HABR *e*S **S 00 12 39.1 +2.6**
HABR *e*SS SS 00 14 25.9 -24
HABR 00 18 05.3
HABR pmax pmax
comp=Z,67nm,1.3s,mb5.3
HABR pmax pmax
comp=E,36nm,0.7s
HABR pmax pmax
comp=N,28nm,0.8s
HABR MLR MLR
comp=Z,1µm,18.0s
TIXI Tiksi 31.16 330 *e*P **P 00 07 39.2 -0.1**
TIXI *i* 00 10 32.7
TIXI *e*S **S 00 12 33.8 -6.5**
TIXI pmax pmax
comp=Z,11nm,1.5s,mb4.5
TIXI MLR MLR
comp=Z,2µm,18.0s
TIXI Tiksi 31.16 330 *e*P **P 00 07 39.6 +0.2**
comp=Z,4.8nm,0.6s,mb4.5
TIXI *e*PcP PcP 00 10 32.5 -0.1
TIXI *e*ScP ScP 00 14 10.8 +0.9
KLR Kul'dur 32.56 287 *e*P **P 00 07 47.0 -4.9**
KLR pmax pmax
comp=E,8.0nm,1.6s
KLR pmax pmax
comp=Z,12nm,1.6s,mb4.6
KLR MLR MLR
comp=Z,500nm,13.0s
OBC Olympics--Boni 33.33 75 P **P 00 08 00.8 +2.2**
OOW Octopus West 33.39 76 P **P 00 08 01.5 +2.4**
NLWA Neilton Lookou 33.74 76⇓P **P 00 08 03.3 +1.2**
baz=34
NLWA Neilton Lookou 33.74 76 *e*P **P 00 08 03.8 +1.7**
comp=Z,76nm,1.5s,mb5.4
YKA Yellowknife Ar 33.95 47 P **P 00 08 02.9 -0.8**
comp=Z,10nm,0.7s,mb4.9,baz=283,slow=7.7,SNR=34
YKA PcP PcP 00 10 41.4 +0.9
comp=Z,12nm,0.7s,baz=286,slow=3.0,SNR=27
YKA ScP ScP 00 14 21.6 +1.9
comp=Z,2.3nm,0.7s,baz=286,slow=3.7,SNR=7.0
YKA Yellowknife Ar 33.95 47 P **P 00 08 02.9 -0.9**
YKA 00 10 41.4
YKA pmax pmax
comp=Z,10.0nm,0.7s
YKA Yellowknife Ar 33.95 47 P **P 00 08 02.9 -0.8**
YKA PcP PcP 00 10 41.4 +0.9
YKA ScP ScP 00 14 21.6 +1.9
VDB Vedder Mountai 34.08 72 P **P 00 08 05.7 +0.6**
GNW Green Mountain 34.29 75 *e*P **P 00 08 07.1 +0.2**
comp=Z,17nm,1.1s,mb4.9
GNW *e*PcP PcP 00 10 42.4 +0.6
CMW Cultus Mountai 34.33 73 P **P 00 08 08.9 +1.7**
JCW Jim Creek 34.55 74 P **P 00 08 10.1 +1.0**
BMW Boistfort Moun 34.56 77 P **P 00 08 14.1 +4.9**
RPW Rockport 34.68 73 *e*P **P 00 08 10.5 +0.3**
comp=Z,12nm,0.8s,mb4.9
D05A Enumclaw 34.97 75⇓P **P 00 08 13.2 +0.4**
baz=35,SNR=7.5
LON Longmire 35.28 76 *e*P **P 00 08 17.1 +1.6**
LON pmax pmax
comp=Z,11nm,0.7s,mb4.9
LON Longmire 35.28 76 *e*P **P 00 08 17.1 +1.6**
comp=Z,11nm,0.7s,mb4.9
MJAR Matsushiro Arr 35.32 263 P **P 00 08 15.6 -0.4**
comp=Z,19nm,0.8s,mb5.1,baz=52,slow=7.2,SNR=56
MJAR PcP PcP 00 10 45.1 +0.1
comp=Z,1.8nm,0.7s,baz=227,slow=0.3,SNR=4.3
MJAR LR LR 00 20 39.8
comp=Z,806nm,21.6s,baz=70,slow=33
MAJO Matsushiro 35.32 263 *e*P **P 00 08 15.8 -0.1**
MAJO pmax pmax
comp=Z,66nm,0.9s,mb5.6
MAJO Matsushiro 35.32 263 *e*P **P 00 08 15.8 -0.1**
comp=Z,66nm,0.9s,mb5.6
MAT Matsushiro 35.32 263 P **P 00 08 15.5 -0.4**
MAT S **S 00 13 43.0 -2.5**
ETW Entiat 35.77 74 P **P 00 08 20.7 +1.0**
TBM Table Mountain 35.82 75 P **P 00 08 20.9 +0.9**
EBG Ellensburg 35.96 75 P **P 00 08 22.3 +1.0**
B08A Colville Reser 36.02 72 P **P 00 08 22.2 +0.5**
baz=36,SNR=20
MDJ Mudanjiang 36.02 281 P **P 00 08 20.5 -1.3**
MDJ pP pP 00 08 35.6 -1.6
MDJ PP PP 00 09 42.4 -2.1
MDJ S **S 00 13 55.5 -0.5**
MDJ ScP ScP 00 14 26.8 -0.6
MDJ PcS PcS 00 14 33.8 -0.5
MDJ ScS ScS 00 18 32.6 -0.4
MDJ pmax pmax
comp=Z,23nm,0.9s,mb5.1
MDJ pmax pmax
comp=Z,170nm,8.1s
MDJ LR LR
comp=N,570nm,17.9s
MDJ LR LR
comp=E,710nm,18.4s
MDJ LR LR
comp=Z,1µm,20.1s
MDJ Mudanjiang 36.02 281 *e*P **P 00 08 20.8 -1.0**
comp=Z,21nm,0.9s,mb5.1
H04A Detroit Lake 36.08 79⇓P **P 00 08 23.4 +1.1**
baz=36
E07A Sunnyside 36.56 75⇓P **P 00 08 27.4 +1.0**
baz=36
HUMO Hull Mountain 36.71 83 *e*P **P 00 08 27.9 +0.2**
comp=Z,12nm,1.0s,mb4.7
G06A Carlson Farm, 36.74 77⇓P **P 00 08 28.4 +0.4**
baz=37
RSW Rattlesnake Hi 36.80 75 *e*P **P 00 08 29.2 +0.8**
comp=Z,35nm,0.5s,mb5.4
HAWA Hanford 36.83 75 *e*P **P 00 08 29.2 +0.5**
comp=Z,28nm,0.6s,mb5.3
OD2 Odessa Site #2 36.84 73 *e*P **P 00 08 28.8 +0.1**
comp=Z,52nm,1.0s,mb5.3
F07A Phinny Hill Vi 36.84 76⇑P **P 00 08 28.6 -0.2**
baz=37
D08A Wollman Farm, 36.88 74⇑P **P 00 08 28.5 -0.6**
baz=37,SNR=10
E08A Dier Farm, El 37.07 75⇑P **P 00 08 29.9 -0.8**
baz=37,SNR=5.2
YBH Yreka Blue Hor 37.34 84 *e*P **P 00 08 34.8 +1.7**
YBH pmax pmax
comp=Z,11nm,0.7s
YBH Yreka Blue Hor 37.34 84 *e*P **P 00 08 34.8 +1.7**
comp=Z,11nm,0.7s,mb4.8
EDM Edmonton 37.36 62 *e*P **P 00 08 33.1 0.0**
NEW Newport 37.37 71 *e*P **P 00 08 33.1 -0.1**
NEW pmax pmax
comp=Z,37nm,0.7s
NEW Newport 37.37 71 *e*P **P 00 08 33.1 -0.1**
comp=Z,37nm,0.7s,mb5.3
E09A Wood Farm, Sta 37.61 74⇑P **P 00 08 35.1 -0.1**
baz=38,SNR=8.5
G08A Pilot Rock 37.73 76⇑P **P 00 08 35.6 -0.8**
baz=38,SNR=13
LNOR Lincton Mounta 37.84 75 *e*P **P 00 08 37.8 +0.5**
LNOR pmax pmax
comp=Z,9.0nm,0.7s,mb4.6
LNOR Lincton Mounta 37.84 75 *e*P **P 00 08 37.8 +0.5**
comp=Z,9.0nm,0.7s,mb4.6
K05A Summer Lake 37.91 81⇓P **P 00 08 39.3 +1.4**
baz=38,SNR=9.8
I07A Izee 38.03 78⇓P **P 00 08 39.1 +0.2**
baz=38,SNR=13
C11A Tepee Creek (N 38.08 71⇑P **P 00 08 38.8 -0.4**
baz=38
F10A Beach Ranch, E 38.43 74⇓P **P 00 08 41.8 -0.4**
baz=38,SNR=11
G09A Cove 38.45 76⇓P **P 00 08 42.4 0.0**
baz=38,SNR=12
A13A Flathead Natio 38.64 69⇓P **P 00 08 43.7 -0.2**
baz=38
MOD Modoc 38.74 82 *e*P **P 00 08 45.3 +0.5**
comp=Z,17nm,0.8s,mb4.8
MOD *e*PcP PcP 00 10 55.8 +0.6
G10A Bishop Farm, J 38.84 75⇑P **P 00 08 45.7 0.0**
baz=39,SNR=15
H09A Durkee 38.84 76⇓P **P 00 08 45.7 0.0**
baz=39
WALA Waterton Lakes 38.87 68 *e*P **P 00 08 46.2 +0.4**
comp=Z,1.2nm,1.0s,mb3.6
WALA *e*PcP PcP 00 10 56.7 +1.2
B13A Whitefish 38.87 70⇑P **P 00 08 45.7 -0.2**
baz=39,SNR=6.3
RES Resolute Bay 38.87 25 P **P 00 08 44.1 -1.5**
comp=Z,4.2nm,0.7s,mb4.3,baz=259,slow=7.6,SNR=8.5
RES PcP PcP 00 10 55.8 +0.7
comp=Z,16nm,0.8s,baz=302,slow=1.6,SNR=13
RES ScP ScP 00 14 39.7 +2.0
comp=Z,3.6nm,1.0s,baz=74,slow=3.6,SNR=5.3
RES Resolute Bay 38.87 25 *e*P **P 00 08 46.0 +0.4**
RES *e* 00 10 55.5
RES *e*S **S 00 14 40.0 +1.4**
RES pmax pmax
comp=Z,7.0nm,0.9s,mb4.4
RES Resolute Bay 38.87 25 *e*P **P 00 08 46.0 +0.4**
comp=Z,6.8nm,0.9s,mb4.4
RES *e*PcP PcP 00 10 55.5 +0.4
RES *e*S **S 00 14 40.0 +1.4**
BSMT Bassoo Peak 38.94 70 *e*P **P 00 08 46.6 +0.2**
comp=Z,37nm,0.8s,mb5.2
BMO Blue Mountains 38.96 76 *e*P **P 00 08 46.6 0.0**
comp=Z,7.2nm,0.6s,mb4.6
CN2 Changchun 38.98 282⇑P **P 00 08 46.5 -0.3**
CN2 *e*S **S 00 14 39.5 -1.4**
CN2 pmax pmax
comp=Z,30nm,0.9s,mb5.0
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,1µm,21.0s
CN2 LR LR
comp=E,1µm,21.0s
CN2 LR LR
comp=Z,900nm,22.0s
D12A Red Ives Fores 39.00 72⇑P **P 00 08 47.0 0.0**
baz=39
J08A Circle Bar Ran 39.05 79 P **P 00 08 48.0 +0.6**
baz=39,SNR=16
F11A Grangeville 39.12 74 P **P 00 08 48.1 +0.2**
baz=39,SNR=14
C13A Hot Springs 39.15 71⇑P **P 00 08 47.9 -0.3**
baz=39,SNR=27
A14A Double T Ranch 39.19 68 P **P 00 08 48.8 +0.2**
baz=39,SNR=40
E12A Beaver Dam Sad 39.20 73⇑P **P 00 08 48.5 0.0**
baz=39
JTMT Jette 39.29 70 *e*P **P 00 08 49.3 0.0**
comp=Z,33nm,1.2s,mb4.9
G11A Walters Elk Ra 39.30 75⇓P **P 00 08 49.0 -0.4**
baz=39,SNR=17
YBMT Yellow Bay 39.39 70 *e*P **P 00 08 50.4 +0.2**
comp=Z,12nm,0.8s,mb4.7
WVOR Wild Horse Val 39.46 80 *e*P **P 00 08 51.9 +1.0**
WVOR pmax pmax
comp=Z,23nm,0.8s,mb5.0
WVOR Wild Horse Val 39.46 80 *e*P **P 00 08 51.9 +1.0**
comp=Z,23nm,0.8s,mb5.0
D13A Huson 39.51 71⇑P **P 00 08 50.5 -0.7**
baz=39,SNR=12
SWMT Swartz Lake 39.57 71 *e*P **P 00 08 51.6 -0.1**
comp=Z,14nm,1.0s,mb4.6
SWMT *e*PcP PcP 00 10 58.0 +0.2
B14A Marquette Ranc 39.58 69⇑P **P 00 08 50.9 -0.8**
baz=40,SNR=11
HIA Hailar 39.59 293 *e*P **P 00 08 51.2 -0.6**
HIA pmax pmax
comp=Z,30nm,0.7s
HIA Hailar 39.59 293 *e*P **P 00 08 51.2 -0.6**
comp=Z,30nm,0.7s,mb5.1
A15A Johnson Ranch, 39.59 68⇑P **P 00 08 51.2 -0.7**
baz=40,SNR=20
C14A Swan Lake 39.59 70⇑P **P 00 08 51.6 -0.3**
baz=40
I10A Payette 39.68 77⇓P **P 00 08 53.4 +0.8**
baz=40,SNR=8.3
F12A Elk City 39.72 74⇑P **P 00 08 53.1 +0.1**
baz=40,SNR=33
H11A Donnelly 39.82 75⇑P **P 00 08 53.5 -0.3**
baz=40,SNR=9.9
MSO Missoula 39.95 71 *e*P **P 00 08 54.6 -0.2**
comp=Z,17nm,0.6s,mb5.0
MSO *e*PcP PcP 00 10 59.0 +0.1
E13A Victor 40.00 72⇓P **P 00 08 54.5 -0.8**
baz=40,SNR=21
SLMT Seeley Lake 40.00 71 *e*P **P 00 08 55.1 -0.2**
comp=Z,80nm,1.3s,mb5.3
SLMT *e*PcP PcP 00 10 59.8 +0.6
G12A Big Creek, Yel 40.01 74⇑P **P 00 08 55.5 +0.1**
baz=40
B15A Bradely Ranch, 40.01 69⇑P **P 00 08 55.0 -0.4**
baz=40,SNR=21
D14A Greenough 40.08 71⇑P **P 00 08 55.4 -0.5**
baz=40,SNR=31
C15A Salmond Ranch, 40.26 69⇓P **P 00 08 57.3 0.0**
baz=40,SNR=65
F13A Darby 40.26 73⇑P **P 00 08 57.2 -0.2**
baz=40,SNR=18
A16A West Butte Ran 40.26 67⇓P **P 00 08 56.4 -0.9**
baz=40,SNR=24
I11A Placerville 40.28 76⇑P **P 00 08 56.7 -0.9**
baz=40,SNR=12
CHMT Chamberlain Mo 40.31 71 *e*P **P 00 08 57.9 0.0**
comp=Z,10nm,0.8s,mb4.6
CHMT *e*PcP PcP 00 11 00.8 +0.6
K10A MacKenzie Ranc 40.35 78⇑P **P 00 08 58.5 +0.3**
baz=40,SNR=18
E14A Clinton 40.43 72⇓P **P 00 08 58.6 -0.2**
baz=40,SNR=20
B16A M & M Farms, S 40.46 68⇓P **P 00 08 57.9 -1.1**
baz=40,SNR=6.0
H12A Diamond D Ranc 40.60 75 P **P 00 08 60.0 -0.3**
baz=40,SNR=19
D15A Lincoln 40.68 70⇓P **P 00 08 59.6 -1.2**
baz=41,SNR=13
G13A Cobalt 40.68 74⇓P **P 00 09 00.9 0.0**
baz=40,SNR=37
C16A Fuhringer Ranc 40.74 69⇑P **P 00 09 00.6 -0.8**
baz=41,SNR=21
F14A Wisdom 40.82 72⇑P **P 00 09 02.0 0.0**
baz=41,SNR=9.8
I12A Atlanta 40.85 76⇓P **P 00 09 02.3 0.0**
baz=41,SNR=29
K11A Parker Ranch, 40.87 78⇓P **P 00 09 02.9 +0.4**
baz=41,SNR=12
E15A Deer Lodge 40.93 71⇓P **P 00 09 02.1 -0.9**
baz=41,SNR=30
H13A Challis 40.95 75⇑P **P 00 09 03.0 -0.2**
baz=41
CMB Columbia Colle 40.97 87 *e*P **P 00 09 04.4 +1.1**
CMB pmax pmax
comp=Z,21nm,1.3s,mb4.6
CMB Columbia Colle 40.97 87 *e*P **P 00 09 04.4 +1.1**
comp=Z,21nm,1.3s,mb4.6
L10A Juniper Basin 40.99 79⇑P **P 00 09 03.5 0.0**
baz=41,SNR=7.1
B17A L&G Farms, Che 41.04 68⇑P **P 00 09 03.5 -0.3**
baz=41,SNR=7.1
J12A Stokes Ranch, 41.17 77⇑P **P 00 09 04.9 0.0**
baz=41,SNR=15
SNY Shenyang 41.22 281⇑P **P 00 09 05.8 +0.4**
SNY LR LR
comp=N,580nm,23.1s
SNY LR LR
comp=E,370nm,21.3s
SNY LR LR
comp=Z,910nm,26.4s
D16A Dana Ranch, Ca 41.25 70⇑P **P 00 09 05.5 -0.1**
baz=41,SNR=12
HRY Holter Researc 41.25 70 *e*P **P 00 09 06.1 +0.5**
comp=Z,29nm,0.7s,mb5.0
M10A I.L. Ranch, Tu 41.27 80⇑P **P 00 09 06.6 +0.8**
baz=41,SNR=10.0
F15A Butte 41.32 72⇓P **P 00 09 05.1 -1.0**
baz=41,SNR=12
LRM Limekiln Ridge 41.36 72 *e*P **P 00 09 06.7 +0.2**
comp=Z,112nm,1.2s,mb5.4
L11A Cat Creek Ranc 41.38 79⇓P **P 00 09 06.8 +0.1**
baz=41,SNR=26
I13A Wildhorse Cree 41.39 75⇑P **P 00 09 07.2 +0.4**
baz=41,SNR=35
C17A Wharram Farm, 41.40 69⇑P **P 00 09 06.1 -0.7**
baz=41
HLID Hailey 41.41 76⇑P **P 00 09 06.8 -0.1**
baz=41,SNR=37
HLID Hailey 41.41 76 *e*P **P 00 09 07.5 +0.6**
comp=Z,48nm,1.3s,mb5.0
HLID *e*PcP PcP 00 11 05.1 +1.3
HLID *e*ScP ScP 00 14 50.0 +1.9
H14A Leadore 41.46 74⇓P **P 00 09 06.9 -0.4**
baz=41,SNR=17
BMN Battle Mountai 41.48 82 *e*P **P 00 09 08.7 +1.1**
BMN pmax pmax
comp=Z,14nm,0.8s,mb4.6
BMN Battle Mountai 41.48 82 *e*P **P 00 09 08.7 +1.1**
comp=Z,14nm,0.8s,mb4.6
DLMT Dillon 41.52 73 *e*P **P 00 09 08.0 +0.2**
comp=Z,25nm,1.2s,mb4.7
DLMT *e*PcP PcP 00 11 04.8 +0.7
DLMT *e*ScP ScP 00 14 50.1 +1.6
B18A Beardsley Farm 41.58 67⇓P **P 00 09 07.8 -0.4**
baz=42,SNR=10
K12A Draper Farm, C 41.63 77⇓P **P 00 09 09.4 +0.6**
baz=42,SNR=18
J13A Cove Ranch, Pi 41.65 76⇓P **P 00 09 08.6 -0.2**
baz=42,SNR=28
G15A Dillon 41.69 73⇑P **P 00 09 08.2 -1.0**
baz=42,SNR=22
D17A Six Diamond Ra 41.69 69⇓P **P 00 09 09.0 -0.2**
baz=42,SNR=24
M11A Holland Ranch, 41.78 79⇓P **P 00 09 10.5 +0.6**
baz=42,SNR=15
I14A Mackay 41.79 75⇓P **P 00 09 10.1 +0.1**
baz=42,SNR=21
L12A House Creek Ra 41.84 78⇑P **P 00 09 11.1 +0.6**
baz=42,SNR=6.8
F16A Kennard Place, 41.86 72⇓P **P 00 09 10.5 -0.1**
baz=42,SNR=11
H15A Lima 41.89 74⇑P **P 00 09 10.7 -0.1**
baz=42
INCN Inchon 41.93 273 *e*P **P 00 09 11.6 +0.4**
comp=Z,50nm,0.8s,mb5.2
BOZ Bozeman (W) 41.94 72⇓P **P 00 09 10.8 -0.4**
baz=42,SNR=54
BOZ Bozeman (W) 41.94 72 *e*P **P 00 09 10.9 -0.3**
BOZ *e* 00 11 06.8
BOZ pmax pmax
comp=Z,27nm,0.8s,mb4.9
BOZ Bozeman (W) 41.94 72 *e*P **P 00 09 10.9 -0.3**

comp=Z,27nm,0.8s,mb4.9
BOZ eP cP P cP 00 11 06.8 +1.3
E17A Martinsdale 41.96 70 ⇓P P 00 09 11.9 +0.5
baz=42,SNR=14
NVAR Mina Array Bea 42.02 85 P P 00 09 12.0 +0.1
comp=Z,4.8nm,1.0s,mb4.1,baz=294,slow=7.3,SNR=17
NVAR P cP P cP 00 11 06.0 +0.1
comp=Z,7.6nm,0.7s,baz=270,slow=2.5,SNR=8.1
NVAR S cP S cP 00 14 52.9 +2.2
comp=Z,0.5nm,0.7s,baz=224,slow=2.5,SNR=4.1
G16A Moss Hill, Enn 42.06 72 P P 00 09 11.8 -0.3
baz=42,SNR=30
J14A Carey 42.08 76 ⇑P P 00 09 12.7 +0.3
baz=42,SNR=18
K13A Stover Farm, H 42.12 77 ⇑P P 00 09 13.6 +0.8
baz=42,SNR=6.7
D18A Linhart Farms, 42.19 69 ⇓P P 00 09 13.7 +0.5
baz=42,SNR=11
M12A Wells 42.33 79 ⇑P P 00 09 15.1 +0.7
baz=42,SNR=12
I15A Monteview 42.33 74 ⇑P P 00 09 14.0 -0.4
baz=42,SNR=6.6
F17A Fitzpatrick Pl 42.37 71 ⇓P P 00 09 14.8 0.0
baz=42,SNR=12
E18A Harlowton 42.45 70 ⇑P P 00 09 15.0 -0.3
baz=42,SNR=16
ELK Elko 42.52 80 eP P 00 09 17.0 +1.0
ELK pmax pmax
comp=Z,17nm,0.8s
ELK Elko 42.52 80 eP **P 00 09 17.0 +1.0**
comp=Z,17nm,0.8s,mb4.8
L13A Double Diamond 42.53 77 ⇑P P 00 09 16.8 +0.7
baz=42,SNR=12
N12A Clover Valley, 42.58 80 ⇓P P 00 09 17.1 +0.7
baz=42,SNR=10
N12A Clover Valley, 42.58 80 eP **P 00 09 17.6 +1.1**
comp=Z,44nm,1.0s,mb5.1
O11A Cowboy Ranch, 42.63 81 ⇑P P 00 09 17.3 +0.5
baz=42,SNR=9.2
H16A Russell Place, 42.68 73 ⇑P P 00 09 17.4 +0.1
baz=42
J15A Blackfoot 42.69 75 ⇓P P 00 09 17.9 +0.5
baz=43,SNR=23
M13A Montello 42.81 78 ⇑P P 00 09 18.3 -0.1
baz=43,SNR=9.0
M13A Montello 42.81 78 eP **P 00 09 19.1 +0.8**
comp=Z,19nm,0.9s,mb4.8
YMR Madison River 42.86 73 eP **P 00 09 20.0 +1.2**
comp=Z,43nm,0.8s,mb5.2
F18A Big Timber 42.92 70 ⇑P P 00 09 19.2 0.0
baz=43,SNR=9.0
Q10A Clear Creek Ra 42.95 83 ⇓P P 00 09 19.9 +0.3
baz=43,SNR=9.6
L14A Malta 42.99 77 ⇑P P 00 09 19.8 +0.1
baz=43,SNR=13
I16A Newdale 42.99 74 ⇑P P 00 09 20.4 +0.6
baz=43
K15A Arbon 43.04 76 ⇑P P 00 09 20.9 +0.7
baz=43,SNR=16
YFT Old Faithful 43.06 73 eP **P 00 09 21.0 +0.7**
comp=Z,28nm,0.8s,mb5.0
O12A Currie 43.10 80 ⇓P P 00 09 21.1 +0.4
baz=43,SNR=29
M14A Sheep Mountain 43.23 78 ⇓P P 00 09 21.9 +0.2
baz=43,SNR=8.8
J16A Bone 43.26 75 ⇑P P 00 09 23.3 +1.4
baz=43
IMW Indian Meadow 43.31 73 eP **P 00 09 23.1 +0.7**
comp=Z,28nm,1.0s,mb5.0
IMW eP cP P cP 00 11 11.5 +1.4
S10A Tonopah Range, 43.39 84 ⇓P P 00 09 23.1 0.0
baz=43,SNR=26
RRI2 Red Ridge 43.39 74 eP **P 00 09 23.5 +0.5**
comp=Z,29nm,0.9s,mb5.0
Q11A Duckwater 43.40 82 ⇓P P 00 09 23.4 +0.2
baz=43,SNR=13
HVU Hansel Valley 43.42 77 eP **P 00 09 23.7 +0.5**
HVU e 00 11 10.9
HVU pmax pmax
comp=Z,13nm,0.6s,mb4.8
HVU Hansel Valley 43.42 77 eP **P 00 09 23.7 +0.5**
comp=Z,13nm,0.6s,mb4.8
HVU eP cP P cP 00 11 10.9 +0.4
P12A McGill 43.48 81 ⇓P P 00 09 24.2 +0.4
baz=43,SNR=12
L15A Malad City 43.52 77 P P 00 09 24.9 +0.9
baz=43,SNR=12
K16A Soda Springs 43.53 75 ⇑P P 00 09 26.0 +1.9
baz=43,SNR=24
TPAW Teton Pass 43.53 74 eP **P 00 09 24.9 +0.8**
comp=Z,32nm,1.3s,mb4.9
TPAW eP cP P cP 00 11 12.0 +1.2
RLMT Red Lodge 43.62 71 P P 00 09 25.9 +1.1
baz=44,SNR=28
RLMT Red Lodge 43.62 71 eP **P 00 09 25.7 +0.9**
comp=Z,65nm,1.1s,mb5.3
ISA Isabella 43.65 88 eP **P 00 09 25.2 0.0**
ISA pmax pmax
comp=Z,20nm,1.1s,mb4.8
ISA Isabella 43.65 88 eP **P 00 09 25.2 0.0**
comp=Z,20nm,1.1s,mb4.8
REDW Red Top Meadow 43.66 74 eP **P 00 09 26.0 +0.8**
comp=Z,11nm,0.9s,mb4.6
SNOW Snow King Moun 43.67 74 eP **P 00 09 26.3 +1.1**
comp=Z,34nm,1.2s,mb5.0
LOHW Long Hollow 43.67 74 eP **P 00 09 25.9 +0.6**
comp=Z,6.8nm,0.7s,mb4.5
N14A Grayback Hills 43.71 78 ⇓P P 00 09 25.1 -0.5
baz=44,SNR=16
R11A Troy Canyon, C 43.75 83 P P 00 09 25.9 -0.1
baz=44,SNR=21
BGU Big Grassy Mou 43.76 78 eP **P 00 09 26.7 +0.6**
comp=Z,47nm,1.4s,mb5.0
Q12A Willow Creek R 43.79 82 ⇑P P 00 09 25.5 -0.8
baz=44,SNR=12
AHID Auburn Hatcher 43.86 75 eP **P 00 09 26.9 +0.2**
comp=Z,19nm,0.8s,mb4.9
MPMC Manual Prospec 44.01 87 ⇓P P 00 09 28.2 +0.1
baz=44,SNR=6.4
P13A Bates Ranch, G 44.04 81 P P 00 09 29.1 +0.8
baz=44,SNR=10
I18A Diamond G Ranc 44.09 73 ⇑P P 00 09 29.7 +1.1
baz=44,SNR=14
L16A Fish Haven 44.09 76 ⇑P P 00 09 29.5 +0.9
baz=44
N15A Stansbury Isla 44.10 78 ⇑P P 00 09 29.7 +1.1
baz=44
FURC Furnace Creek, 44.14 86 ⇓P P 00 09 29.2 +0.1
baz=44
DL2 Dalian 44.15 279 P P 00 09 29.9 +0.7
DL2 S S 00 15 56.7 -0.8
DL2 sS sS 00 16 18.1 -6.2
DL2 pmax pmax
comp=Z,40nm,1.0s,mb5.1
DL2 pmax pmax
comp=Z,260nm,5.5s
DL2 LR LR
comp=N,270nm,17.0s
DL2 LR LR
comp=E,300nm,16.1s
DL2 LR LR
comp=Z,350nm,18.7s
J18A Kendall Valley 44.25 74 ⇓P P 00 09 29.9 0.0
baz=44
HWUT Hardware Ranch 44.25 77 eP **P 00 09 30.5 +0.6**
comp=Z,11nm,0.7s,mb4.7
HWUT eP cP P cP 00 11 14.0 +0.6
DUG Dugway 44.33 79 ⇓P P 00 09 30.3 -0.3
baz=44,SNR=29
DUG Dugway 44.33 79 eP **P 00 09 31.4 +0.8**
DUG pmax pmax
comp=Z,38nm,1.0s,mb5.1
DUG Dugway 44.33 79 eP **P 00 09 31.4 +0.8**
comp=Z,38nm,1.0s,mb5.1
Q13A Wheeler Ranch, 44.34 81 ⇓P P 00 09 31.3 +0.6
baz=44,SNR=11
NOQ North Oquirrh 44.48 78 eP **P 00 09 32.6 +0.9**
comp=Z,40nm,0.9s,mb5.1
LAO LASA Array 44.53 67 eP **P 00 09 32.8 +0.7**
comp=Z,175nm,1.6s,mb5.6
P14A Drum Mountains 44.54 80 ⇓P P 00 09 32.5 +0.3
baz=44,SNR=8.4
K18A Toltan Ranch, 44.57 74 ⇓P P 00 09 33.0 +0.6
baz=44,SNR=19
S12A Delamar Landin 44.67 83 ⇓P P 00 09 33.6 +0.3
baz=44,SNR=10
T11A Corn Creek, Al 44.67 84 ⇓P P 00 09 33.0 -0.3
baz=44,SNR=20

FCC Fort Churchill 44.68 47 eP **P 00 09 31.9 -1.2**
comp=Z,0.4nm,0.6s
FCC eP cP P cP 00 11 13.2 -1.3
CTU Camp Tracy 44.68 78 eP **P 00 09 34.1 +0.7**
comp=Z,16nm,0.8s,mb4.9
DGMT Dagmar 44.71 64 ⇓P P 00 09 32.9 -0.6
baz=45,SNR=6.7
Q14A Sevier Lake (B 44.78 81 ⇓P P 00 09 34.6 +0.5
baz=45,SNR=36
BW06 Boulder Array 44.78 74 P P 00 09 34.3 +0.1
baz=45,SNR=31
PDAR Pinedale Array 44.78 74 P P 00 09 34.1 0.0
comp=Z,26nm,0.7s,mb5.2,baz=303,slow=4.1,SNR=171
PDAR LR LR 00 25 42.2
comp=Z,618nm,21.7s,baz=311,slow=33
MWC Mount Wilson 44.84 89 eP **P 00 09 35.7 +1.0**
MWC pmax pmax
comp=Z,51nm,1.3s,mb5.2
MWC Mount Wilson 44.84 89 eP **P 00 09 35.7 +1.0**
comp=Z,52nm,1.3s,mb5.2
R13A O'Grain Ranch, 44.85 82 ⇑P P 00 09 35.8 +1.0
baz=45
M17A Scullys Gap (B 44.88 76 ⇑P P 00 09 35.4 +0.5
baz=45
GSC Goldstone 44.92 87 ⇓P P 00 09 34.9 -0.4
baz=45,SNR=13
GSC Goldstone 44.92 87 eP **P 00 09 34.9 -0.4**
GSC pmax pmax
comp=Z,33nm,1.1s,mb5.1
GSC Goldstone 44.92 87 eP **P 00 09 34.9 -0.4**
comp=Z,33nm,1.1s,mb5.1
JLU Jordanelle 44.92 78 eP **P 00 09 35.9 +0.7**
comp=Z,17nm,0.9s,mb4.9
JLU eP cP P cP 00 11 16.3 +0.6
NLU North Lily Min 44.93 79 eP **P 00 09 35.7 +0.3**
comp=Z,42nm,1.3s,mb5.1
L18A Fontenelle, Gr 44.99 75 ⇓P P 00 09 35.8 0.0
baz=45,SNR=7.9
P15A Leamington 45.04 79 ⇑P P 00 09 37.2 +1.0
baz=45
BFSC Mount Baldy Ra 45.08 89 ⇓P P 00 09 36.8 +0.2
baz=45,SNR=6.3
O16A Springville 45.13 78 ⇑P P 00 09 37.1 +0.2
baz=45,SNR=9.6
DAU Daniels Canyon 45.15 78 eP **P 00 09 38.5 +1.4**
DAU pmax pmax
comp=Z,27nm,0.9s,mb5.1
DAU Daniels Canyon 45.15 78 eP **P 00 09 38.5 +1.4**
comp=Z,27nm,0.9s,mb5.1
MPU Maple Canyon 45.16 78 eP **P 00 09 38.3 +1.2**
comp=Z,11nm,0.6s,mb4.9
K19A Absolon Red Bu 45.17 73 P P 00 09 36.8 -0.5
baz=45,SNR=36
M18A Lyman 45.27 76 ⇓P P 00 09 37.9 -0.1
baz=45,SNR=12
L19A Farson 45.29 75 ⇑P P 00 09 38.1 -0.1
baz=45,SNR=14
S13A Holt Ranch, En 45.30 83 ⇑P P 00 09 38.0 -0.3
baz=45,SNR=21
Q15A Fillmore 45.33 80 P P 00 09 39.4 +0.9
baz=45,SNR=10
ARUT Antelope Range 45.42 82 eP **P 00 09 40.1 +0.8**
ARUT pmax pmax
comp=Z,5.0nm,0.5s,mb4.6
ARUT Antelope Range 45.42 82 eP **P 00 09 40.1 +0.8**
comp=Z,5.4nm,0.5s,mb4.6
V11A Goodsprings 45.43 86 ⇓P P 00 09 39.6 +0.3
baz=45,SNR=5.7
HEC Hector,Ludlow 45.52 87 ⇓P P 00 09 40.2 +0.1
baz=45
K20A Yellowstone Ra 45.57 73 ⇓P P 00 09 39.4 -1.0
baz=45,SNR=23
T13A Saint George 45.62 83 ⇑P P 00 09 40.6 -0.3
baz=46,SNR=19
CCUT Cedar City 45.62 82 eP **P 00 09 41.4 +0.6**
comp=Z,6.5nm,0.7s,mb4.7
MURC Murrieta 45.79 89 ⇓P P 00 09 42.6 +0.4
baz=46
TMUT Trail Mountain 45.86 79 eP **P 00 09 44.0 +1.3**
comp=Z,18nm,0.6s,mb5.2
V12A Nelson 45.86 85 ⇓P P 00 09 42.1 -0.7
baz=46
U13A Pakoon Wash 45.97 84 ⇓P P 00 09 43.4 -0.2
baz=46,SNR=17
GMRC Granite Mounta 45.97 87 ⇑P P 00 09 43.0 -0.6
baz=46,SNR=9.9
O18A Roosevelt 46.00 77 ⇓P P 00 09 44.4 +0.6
baz=46,SNR=7.3
P17A Butcher Ranch, 46.04 78 P P 00 09 45.0 +0.9
baz=46,SNR=6.5
T14A Hurricane 46.10 83 ⇓P P 00 09 44.8 +0.2
baz=46,SNR=9.0
Q16A Castle Valley 46.12 79 ⇑P P 00 09 45.5 +0.7
baz=46,SNR=7.5
N19A John Jarvie Ra 46.12 76 ⇑P P 00 09 43.8 -1.0
baz=46,SNR=13
P18A Preston Nutter 46.24 78 ⇓P P 00 09 45.5 -0.2
baz=46,SNR=27
PFO Pinyon Flat Ob 46.25 89 ⇓P P 00 09 45.3 -0.5
baz=46
PFO Pinyon Flat Ob 46.25 89 eP **P 00 09 45.6 -0.2**
PFO e*PP pP 00 10 00.1 -1.7
PFO pmax pmax
comp=Z,19nm,1.4s,mb4.8
PFO Pinyon Flat Ob 46.25 89 eP **P 00 09 45.6 -0.2**
comp=Z,19nm,1.4s,mb4.8
PFO epP pP 00 10 00.1 -1.7
BELC Belle Mtn. Jos 46.27 88 ⇑P P 00 09 45.2 -0.8
baz=46
V13A Grand Canyon W 46.32 85 ⇑P P 00 09 46.0 -0.3
baz=46,SNR=12
R16A Teasdale 46.32 80 ⇑P P 00 09 47.2 +0.8
baz=46,SNR=19
M20A Sweetwater, Wa 46.36 75 ⇓P P 00 09 46.2 -0.4
baz=46,SNR=13
SRU San Rafael 46.39 79 ⇑P P 00 09 46.6 -0.3
baz=46,SNR=7.1
SRU San Rafael 46.39 79 eP **P 00 09 47.5 +0.6**
SRU pmax pmax
comp=Z,18nm,0.7s,mb5.1
SRU San Rafael 46.39 79 eP **P 00 09 47.5 +0.6**
comp=Z,18nm,0.7s,mb5.1
U14A Mt Trumbull 46.45 83 ⇓P P 00 09 47.0 -0.4
baz=46,SNR=11
O19A Miners Draw (B 46.52 76 ⇑P P 00 09 47.7 -0.1
baz=46,SNR=9.3
T15A Red Dirt Ranch 46.56 82 ⇓P P 00 09 48.6 +0.4
baz=46,SNR=10
L21A Rawlins 46.57 74 ⇑P P 00 09 47.9 -0.4
baz=46,SNR=37
S16A Weppner Ranch, 46.60 81 ⇑P P 00 09 48.9 +0.4
baz=46,SNR=9.2
Q18A Rafter H Ranch 46.64 78 ⇑P P 00 09 48.1 -0.7
baz=46,SNR=19
IRM Iron Mountain 46.70 87 ⇑P P 00 09 48.2 -1.1
baz=46,SNR=5.6
R17A Hanksville Air 46.71 80 ⇓P P 00 09 49.4 0.0
baz=46,SNR=20
N20A Spence Gulch, 46.71 75 ⇓P P 00 09 49.2 -0.2
baz=47,SNR=17
BAR Barrett 46.73 90 eP **P 00 09 50.1 +0.5**
comp=Z,17nm,1.1s,mb4.9
M21A Separation Pea 46.78 74 ⇑P P 00 09 49.9 0.0
baz=47,SNR=10
BJI Beijing 46.79 283 P P 00 09 50.7 +0.7
BJI PP PP 00 11 38.0 -2.6
BJI S S 00 16 31.2 -4.3
BJI pmax pmax
comp=Z,180nm,0.8s,mb6.0
BJI pmax pmax
comp=Z,540nm,3.4s
BJI LR LR
comp=N,1µm,20.2s
BJI LR LR
comp=E,1µm,24.2s
BJI LR LR
comp=Z,1µm,23.4s
BJT Baijiatuau 46.81 283 eP **P 00 09 50.6 +0.5**
comp=Z,164nm,0.8s,mb6.0
RWWY Rawlins 46.83 74 eP **P 00 09 50.4 +0.1**
comp=Z,27nm,0.8s,mb5.2
W13A Hualapai Mount 46.87 85 ⇓P P 00 09 50.0 -0.7
baz=47,SNR=12
U15A North Rim 47.00 83 P P 00 09 52.2 +0.5
baz=47,SNR=38
V14A Boquillas Ranc 47.00 84 ⇓P P 00 09 51.5 -0.2
baz=47,SNR=17
P19A Cripple Cowboy 47.01 77 ⇓P P 00 09 51.8 0.0
baz=47,SNR=28
L22A Ellis Ranch, M 47.08 73 ⇑P P 00 09 52.8 +0.5
baz=47
S17A Black Ridge (B 47.15 80 ⇑P P 00 09 53.2 +0.4
baz=47,SNR=8.5
O20A White River Ci 47.15 76 P P 00 09 52.7 -0.1
baz=47,SNR=22
TLY Talaya 47.19 303 eP **P 00 09 52.0 -1.0**
TLY e 00 11 23.5
TLY e 00 11 43.7
TLY ePPP 00 12 32.1
TLY eS **S 00 16 52.7 +12**
TLY e 00 19 37.8
TLY pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
TLY pmax pmax
comp=Z,638nm,20.0s
TLY Talaya 47.19 303 P P 00 09 53.2 +0.2
SNR=5.2
N21A Black Mountain 47.20 75 P P 00 09 53.0 -0.1
baz=47,SNR=13
R18A Canyonlands Na 47.23 79 ⇓P P 00 09 53.0 -0.4
baz=47,SNR=7.9
X13A Yucca 47.23 86 ⇓P P 00 09 52.9 -0.6
baz=47,SNR=11
RSSD Black Hills 47.25 69 eP **P 00 09 53.3 -0.3**
RSSD e 00 11 24.3
RSSD pmax pmax
comp=Z,19nm,0.8s,mb5.1
RSSD Black Hills 47.25 69 eP **P 00 09 53.3 -0.2**
comp=Z,19nm,0.8s,mb5.1
RSSD eP cP P cP 00 11 24.3 +0.5
W14A Seligman 47.29 85 ⇑P P 00 09 53.0 -1.0
baz=47,SNR=9.4
V15A Kaibab Nationa 47.46 83 ⇑P P 00 09 55.3 0.0
baz=47,SNR=15
ULN Ulaanbaatar 47.49 297 eP **P 00 09 54.4 -1.0**
ULN e 00 11 24.4
ULN pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
ULN Ulaanbaatar 47.49 297 eP **P 00 09 54.4 -0.9**
comp=Z,4.5nm,0.6s,mb4.6
ULN eP cP P cP 00 11 24.4 -0.2
ULN Ulaanbaatar 47.49 297 P P 00 09 55.2 -0.2
comp=Z,6.9nm,0.8s,mb4.6
T17A Navajo Res., N 47.55 81 ⇓P P 00 09 55.5 -0.5
baz=47,SNR=10
O21A Pagoda 47.57 75 ⇑P P 00 09 55.8 -0.3
baz=47,SNR=11
S18A Hurst Farm, Bl 47.61 80 ⇓P P 00 09 56.1 -0.3
baz=47,SNR=38
R19A Curley Farm, L 47.68 79 ⇓P P 00 09 56.6 -0.3
baz=48,SNR=7.8
Y13A Salome 47.75 87 ⇑P P 00 09 57.2 -0.3
baz=48
N22A Wattenberg Ran 47.82 74 ⇑P P 00 09 58.2 +0.2
baz=48,SNR=13
W15A Williams 47.82 84 ⇑P P 00 09 58.1 +0.1
baz=48,SNR=6.6
PV04 Paradox Valley 47.83 78 eP **P 00 09 58.0 -0.1**
Q20A Ridgley Place, 47.85 77 ⇓P P 00 09 57.7 -0.5
baz=48,SNR=16
SONM Songino Array 47.88 298 P P 00 09 57.8 -0.6
comp=Z,1.6nm,0.3s,mb4.5,baz=52,slow=8.3,SNR=31
SONM P cP P cP 00 11 25.5 -0.4
comp=Z,12nm,0.8s,baz=88,slow=2.1,SNR=15
SONM S cP S cP 00 15 17.6 +3.0
comp=Z,2.4nm,0.8s,baz=36,slow=3.3,SNR=5.1
SONM L R L R 00 31 34.3
comp=Z,940nm,18.7s,baz=53,slow=38
U17A Shonto 47.89 81 ⇓P P 00 09 58.6 0.0
baz=48
U16A Tuba City 47.90 82 ⇑P P 00 09 58.0 -0.6
baz=48
X14A Yava 47.90 85 ⇓P P 00 09 58.5 -0.1
baz=48,SNR=17
T18A Mexican Hat 48.03 80 ⇑P P 00 09 59.1 -0.6
baz=48,SNR=36
N23A Red Feather La 48.07 74 ⇑P P 00 10 00.2 +0.3
baz=48
S19A Harvey Farm, M 48.10 79 ⇓P P 00 10 00.5 +0.4
baz=48
WUAZ Wupatki 48.15 83 ⇑P P 00 10 00.4 -0.3
baz=48,SNR=18
WUAZ Wupatki 48.15 83 eP **P 00 10 00.7 0.0**
comp=Z,14nm,0.6s,mb5.2
O22A Kremmling 48.16 75 ⇓P P 00 10 00.7 +0.1
baz=48,SNR=19
PV01 Paradox Valley 48.20 78 eP **P 00 10 00.8 -0.2**
comp=Z,2µm,0.7s
Z13A Yuma Proving G 48.26 87 ⇑P P 00 10 01.0 -0.5
baz=48,SNR=6.4
ULM Lac du Bonnet 48.27 58 P P 00 10 00.2 -1.0
comp=Z,5.1nm,0.3s,mb5.0,baz=308,slow=8.1,SNR=9.3
ULM L R L R 00 31 57.0
comp=Z,322nm,19.3s,baz=297,slow=38
ULM Lac du Bonnet 48.27 58 eP **P 00 10 00.1 -1.2**
comp=Z,6.5nm,0.7s,mb4.8
R20A Redvale 48.28 78 ⇑P P 00 10 01.1 -0.5
baz=48,SNR=11
X15A Humboldt 48.29 85 ⇓P P 00 10 01.2 -0.5
baz=48,SNR=13
W16A Flagstaff 48.33 84 ⇑P P 00 10 02.1 +0.1
baz=48,SNR=5.9
Q21A Lamborn Mesa, 48.36 77 ⇑P P 00 10 02.1 -0.1
baz=48,SNR=13
V17A Tonalea, Kykot 48.44 82 ⇓P P 00 10 02.8 -0.1
baz=48,SNR=24
U18A Rough Rock, Ch 48.49 81 ⇓P P 00 10 03.2 0.0
baz=48,SNR=6.7
O23A Lake Granby, G 48.50 74 ⇑P P 00 10 04.2 +0.9
baz=48
SMCO Snowmass 48.51 76 eP **P 00 10 01.8 -1.5**
comp=Z,8.9nm,0.5s,mb5.0
S20A Disappointment 48.52 79 ⇓P P 00 10 02.9 -0.5
baz=48,SNR=14
MOY Mondy 48.57 305 eP **P 00 10 05.0 +1.4**
Y15A Casa Rosa Ranc 48.58 85 ⇓P P 00 10 03.6 -0.4
baz=48,SNR=11
TIA Tai'an 48.63 279 eP **P 00 10 04.0 -0.3**
TIA pmax pmax
comp=Z,49nm,1.1s,mb5.5
R21A Cimarron 48.67 77 ⇓P P 00 10 04.5 0.0
baz=48,SNR=11
Q22A Crested Butte, 48.75 77 ⇓P P 00 10 05.5 +0.3
baz=49,SNR=11
T19A Beclabito 48.75 80 P P 00 10 05.0 -0.2
baz=49,SNR=43
MVCO Mesa Verde 48.83 79 ⇓P P 00 10 05.3 -0.5
baz=49,SNR=13
MVCO Mesa Verde 48.83 79 eP **P 00 10 06.3 +0.5**
comp=Z,36nm,1.2s,mb5.3
X16A Lo Mia Camp, P 48.83 84 ⇓P P 00 10 05.9 0.0
baz=49,SNR=11
V18A Ganado 48.92 82 ⇓P P 00 10 06.1 -0.4
baz=49,SNR=7.8
ISCO Idaho Springs 48.94 75 eP **P 00 10 07.4 +0.8**
ISCO pmax pmax
comp=Z,17nm,0.9s,mb5.1
ISCO Idaho Springs 48.94 75 eP **P 00 10 07.4 +0.7**
comp=Z,17nm,0.9s,mb5.1
S21A Coal Bank Pass 48.97 78 P P 00 10 07.2 +0.4
baz=49,SNR=27
U19A Dine' College, 48.98 81 ⇓P P 00 10 06.3 -0.7
baz=49,SNR=6.5
114A Black Gap (USA 49.05 87 ⇓P P 00 10 06.7 -0.8
baz=49,SNR=7.8
HHC Hu-ho-hao-te 49.07 287 eP **P 00 10 07.5 -0.1**
HHC P cP P cP 00 11 31.2 +0.8
HHC P P P P 00 12 02.3 +1.0
HHC S cP S cP 00 15 20.1 +0.3
HHC P cS P cS 00 15 25.9 -0.8
HHC S **S 00 17 06.3 -1.3**
HHC S cS S cS 00 19 51.3 -2.2
HHC S S S S 00 20 32.3 -6.5
HHC pmax pmax
comp=Z,66nm,1.1s,mb5.6
HHC pmax pmax
comp=Z,420nm,6.3s
HHC L R L R
comp=N,530nm,16.6s
HHC L R L R
comp=E,680nm,16.6s
HHC L R L R
comp=Z,730nm,16.7s
P23A Jefferson 49.07 75 ⇓P P 00 10 08.3 +0.6
baz=49,SNR=16

Y16A	Circle Bar Ran	49.16	85	⇓P	P	00 10 08.9	+0.5
	baz=49,SNR=6.6						
R22A	Saguache, Gunn	49.24	77	⇑P	P	00 10 09.4	+0.5
	baz=49,SNR=20						
AGMN	Agassiz Nation	49.40	60	eP	P	00 10 09.3	-0.7
	comp=Z,39nm,1.1s,mb5.3						
115A	Sonoran Desert	49.49	86	⇑P	P	00 10 10.5	-0.4
	baz=49,SNR=6.6						
S22A	4UR Ranch, Cre	49.51	78	⇑P	P	00 10 11.3	+0.3
	baz=49,SNR=33						
SSE	Sheshan	49.51	271	P	P	00 10 11.1	0.0
SSE				S	S	00 17 08.6	-5.4
SSE				sS	sS	00 17 35.8	-5.4
SSE				pmax	pmax		
	comp=Z,50nm,0.8s,mb5.6						
SSE				pmax	pmax		
	comp=Z,250nm,8.9s						
SSE				LR	LR		
	comp=N,200nm,26.6s						
SSE				LR	LR		
	comp=E,190nm,26.6s						
SSE				LR	LR		
	comp=Z,300nm,19.0s						
T21A	Navajo Lake	49.56	79	⇑P	P	00 10 12.2	+0.8
	baz=49						
KBS	Kingsbay	49.60	358	eP	P	00 10 12.2	+1.1
KBS				AMS	AMS	00 28 55.6	
	comp=Z,876nm,21.7s						
214A	Organ Pipe Nat	49.63	88	⇓P	P	00 10 12.1	+0.2
	baz=50						
W19A	Sanders	49.64	82	⇑P	P	00 10 11.9	-0.1
	baz=50,SNR=7.2						
X18A	Snowflake	49.68	83	⇓P	P	00 10 12.6	+0.3
	baz=50,SNR=7.9						
Y17A	Roosevelt	49.68	84	P	P	00 10 12.3	0.0
	baz=50,SNR=16						
V20A	Brimhall	49.76	81	⇑P	P	00 10 13.3	+0.3
	baz=50,SNR=6.0						
U21A	Nageezi	49.85	79	P	P	00 10 14.0	+0.4
	baz=50,SNR=24						
T22A	Edith	49.93	78	⇑P	P	00 10 15.1	+0.9
	baz=50,SNR=26						
P25A	Willow Gulch B	49.99	74	⇓P	P	00 10 15.5	+0.9
	baz=50						
Y18A	Canyon Day Jun	50.13	84	⇓P	P	00 10 15.7	0.0
	baz=50,SNR=7.8						
BTO	Baotou	50.13	288	eP	P	00 10 16.4	+0.7
X19A	St. Johns	50.16	83	⇓P	P	00 10 15.5	-0.4
	baz=50,SNR=7.7						
W20A	Ramah	50.18	81	⇓P	P	00 10 15.1	-1.0
	baz=50,SNR=7.2						
R24A	Sanders Place,	50.24	76	⇑P	P	00 10 16.5	0.0
	baz=50,SNR=16						
SDCO	Great Sand Dun	50.31	77	eP	P	00 10 17.2	+0.1
	comp=Z,16nm,0.8s,mb5.1						
NJ2	Nanjing	50.31	273	eP	P	00 10 16.4	-0.7
NJ2				pP	pP	00 10 31.2	-2.1
NJ2				PP	PP	00 12 13.2	+0.4
NJ2				S	S	00 17 22.0	-3.2
NJ2				sS	sS	00 17 48.5	-3.9
NJ2				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.5						
NJ2				pmax	pmax		
	comp=Z,170nm,4.5s						
NJ2				LR	LR		
	comp=N,1μm,23.0s						
NJ2				LR	LR		
	comp=E,400nm,22.4s						
NJ2				LR	LR		
	comp=Z,1μm,22.8s						
Q25A	Bedland, Calha	50.32	75	⇑P	P	00 10 17.1	-0.1
	baz=50,SNR=15						
OGNE	Ogallala	50.36	71	eP	P	00 10 17.2	-0.2
	comp=Z,22nm,0.8s,mb5.2						
U22A	Llaves	50.37	79	⇓P	P	00 10 18.0	+0.5
	baz=50,SNR=12						
T23A	Casias Ranch,	50.44	78	⇑P	P	00 10 19.0	+0.9
	baz=50,SNR=8.3						
117A	Oracle	50.50	85	⇓P	P	00 10 18.2	-0.4
	baz=50,SNR=10						
TIY	Taiyuan	50.52	283	eP	P	00 10 20.0	+1.3
TIY				S	S	00 17 26.7	-1.3
TIY				LR	LR		
	comp=N,460nm,16.2s						
TIY				LR	LR		
	comp=E,930nm,23.4s						
TIY				LR	LR		
	comp=Z,930nm,25.2s						
S24A	Houchin Ranch,	50.55	77	⇑P	P	00 10 19.3	+0.4
	baz=50,SNR=16						
X20A	Quemado	50.57	82	⇑P	P	00 10 19.2	+0.2
	baz=50						
V22A	San Miguel Ran	50.64	79	⇑P	P	00 10 19.2	-0.4
	baz=50,SNR=13						
TUC	Tucson	50.65	86	eP	P	00 10 19.2	-0.5
TUC				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
TUC	Tucson	50.65	86	eP	P	00 10 19.2	-0.5
	comp=Z,11nm,0.8s,mb4.8						
U23A	El Rito	50.81	79	P	P	00 10 21.4	+0.5
	baz=51,SNR=37						
118A	Homack Ranch,	50.93	85	⇑P	P	00 10 21.5	-0.3
	baz=51,SNR=18						
S25A	Robets Cordova	51.01	76	P	P	00 10 22.5	+0.2
	baz=51,SNR=30						
Y20A	Horse Springs,	51.06	82	⇑P	P	00 10 22.6	-0.2
	baz=51,SNR=16						
X21A	Alamocita Cree	51.07	82	⇑P	P	00 10 23.2	+0.4
	baz=51,SNR=27						
DAG	Danmarks Havn	51.08	6	⇑iP	P	00 10 22.2	-0.1
DAG				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
DAG	Danmarks Havn	51.08	6	⇑iP	P	00 10 22.2	-0.1
	comp=Z,3.0nm,0.8s,mb4.3						
V23A	Ortiz Mt. (NFS	51.20	79	⇓P	P	00 10 24.6	+0.8
	baz=51,SNR=8.6						
119A	Ashpeak Ranch,	51.26	84	⇑P	P	00 10 23.9	-0.3
	baz=51,SNR=5.5						
U24A	Moreno Valley	51.31	78	⇓P	P	00 10 24.9	+0.3
	baz=51						
218A	Dragoon	51.34	85	P	P	00 10 25.1	+0.3
	baz=51,SNR=6.0						
T25A	Trinidad	51.37	77	⇑P	P	00 10 25.4	+0.4
	baz=51,SNR=42						
Y21A	Point of Rocks	51.43	82	⇓P	P	00 10 25.3	-0.3
	baz=51,SNR=6.5						
Z20A	Nine Sixteen R	51.47	83	⇓P	P	00 10 25.1	-0.7
	baz=51,SNR=9.7						
LAZ	Ladron	51.50	81	eP	P	00 10 27.0	+1.0
	comp=Z,5.2nm,0.8s,mb4.5						
ANMO	Albuquerque	51.55	80	eP	P	00 10 26.7	+0.3
ANMO				e		00 11 40.2	
ANMO				pmax	pmax		
	comp=Z,17nm,1.3s						
ANMO	Albuquerque	51.55	80	eP	P	00 10 26.7	+0.3
	comp=Z,17nm,1.3s,mb4.8						
ANMO				ePcP	PcP	00 11 40.2	+0.6
W23A	Werner Place,	51.60	80	⇓P	P	00 10 26.6	-0.2
	baz=51,SNR=7.5						
318A	Bisbee	51.73	86	⇑P	P	00 10 27.0	-0.8
	baz=52,SNR=11						
ECSD	EROS Data Cent	51.75	65	eP	P	00 10 25.9	-1.8
	comp=Z,26nm,0.8s,mb5.2						
LENM	Lemitar	51.76	81	eP	P	00 10 28.7	+0.8
	comp=Z,6.2nm,0.7s,mb4.7						
V24A	Rampart Ranch,	51.77	79	⇓P	P	00 10 28.0	0.0
	baz=52,SNR=29						
219A	White Tail Can	51.81	85	⇑P	P	00 10 28.5	+0.1
	baz=52						
120A	U Bar Ranch, L	51.82	84	⇑P	P	00 10 28.8	+0.3
	baz=52,SNR=8.6						
U25A	Circle Dot Ran	51.85	77	⇑P	P	00 10 28.5	-0.1
	baz=52,SNR=36						
Z21A	St. Cloud Mine	51.90	82	⇑P	P	00 10 28.5	-0.5
	baz=52,SNR=14						
Y22A	Socorro	51.92	81	⇓P	P	00 10 29.3	+0.1
	baz=52,SNR=15						
EYMN	Ely	51.95	58	eP	P	00 10 28.7	-0.5
	comp=Z,15nm,0.8s,mb5.0						
BNM	Barren Site	51.98	81	eP	P	00 10 30.2	+0.6
	comp=Z,13nm,1.0s,mb4.8						
W24A	Lazy 6 Ranch,	52.02	79	⇓P	P	00 10 30.1	+0.2
	baz=52,SNR=23						
V25A	Rancho No Teng	52.09	78	⇑P	P	00 10 30.7	+0.2
	baz=52,SNR=34						
U26A	Atchley Ranch,	52.26	77	⇑P	P	00 10 31.5	-0.1
	baz=52,SNR=12						
220A	Playas Peak, P	52.33	84	⇑P	P	00 10 32.2	0.0
	baz=52,SNR=6.9						
Z22A	Elephant Butte	52.38	82	⇓P	P	00 10 32.8	+0.2
	baz=52,SNR=11						
Y23A	Lovelace Mesa,	52.48	81	⇓P	P	00 10 33.2	-0.1
	baz=52,SNR=32						
W25A	X Bar L Ranch,	52.60	78	⇑P	P	00 10 34.0	-0.2
	baz=52,SNR=29						
V26A	Tequesquite Ra	52.63	77	⇑P	P	00 10 34.3	0.0
	baz=52,SNR=19						
SUMG	Summit	52.67	15	eP	P	00 10 34.3	+0.1
	comp=Z,19nm,0.9s,mb5.0						
SUMG	Summit	52.67	15	iP	P	00 10 34.4	+0.2
	comp=Z,13nm,0.9s,mb4.9						
SUMG							
	comp=Z,320nm,22.0s						
Y24A	Capitan	52.87	80	⇓P	P	00 10 35.7	-0.5
	baz=53,SNR=62						
X25A	Clemmons Ranch	52.94	79	⇑P	P	00 10 36.8	+0.1
	baz=53,SNR=9.6						
CBKS	Cedar Bluff	53.08	72	eP	P	00 10 37.8	+0.1
	comp=Z,76nm,0.8s,mb5.7						
Z24A	Sheeppen Canyo	53.31	81	⇑P	P	00 10 39.8	+0.4
	baz=53,SNR=16						
Y25A	Mesa, Roswell	53.32	80	⇓P	P	00 10 39.3	-0.3
	baz=53,SNR=33						
X26A	CR and CF Fran	53.44	79	⇓P	P	00 10 40.3	-0.1
	baz=53,SNR=16						
W27A	Bowe Ranch, En	53.55	78	⇑P	P	00 10 40.8	-0.4
	baz=53,SNR=9.2						
124A	Stringfield Ra	53.68	81	⇑P	P	00 10 41.5	-0.7
	baz=54,SNR=16						
Z25A	Roswell	53.74	80	⇑P	P	00 10 42.2	-0.4
	baz=54,SNR=11						
Y26A	Elida	53.85	79	⇓P	P	00 10 43.1	-0.3
	baz=54,SNR=6.9						
224A	Cornudas Mount	54.07	82	⇑P	P	00 10 44.5	-0.5
	baz=54,SNR=19						
WHN	Wuhan	54.15	275	⇓P	P	00 10 45.9	+0.3
WHN				pP	pP	00 11 00.8	-1.1
WHN				S	S	00 18 19.5	+1.9
WHN				pmax	pmax		
	comp=Z,61nm,1.0s,mb5.5						
WHN				pmax	pmax		
	comp=Z,680nm,3.6s						
WHN				LR	LR		
	comp=Z,680nm,18.6s						
NACB	Ninganchiao	54.17	264	eP	P	00 10 44.6	-1.2
	comp=Z,28nm,0.9s,mb5.2						
Z26A	Caprock	54.20	80	⇓P	P	00 10 45.5	-0.4
	baz=54,SNR=17						
125A	Gardner Draw,	54.20	81	⇓P	P	00 10 45.7	-0.2
	baz=54,SNR=22						
Y27A	Causey	54.29	79	⇓P	P	00 10 46.6	+0.1
	baz=54,SNR=32						
COWI	Conover	54.37	59	eP	P	00 10 45.9	-1.1
	comp=Z,19nm,0.6s,mb5.2						
MNTX	Cornudas Mount	54.41	82	eP	P	00 10 47.4	-0.2
	comp=Z,18nm,0.9s,mb5.0						
CPRX	Cap Rock	54.43	80	eP	P	00 10 47.4	-0.3
	comp=Z,11nm,0.8s,mb4.8						
MSTX	Muleshoe	54.47	78	⇓P	P	00 10 47.4	-0.5
	baz=54,SNR=24						
225A	Deer Hill, Car	54.48	82	⇑P	P	00 10 48.1	+0.1
	baz=54,SNR=18						
AMTX	Amarillo	54.52	77	eP	P	00 10 47.5	-0.7
	comp=Z,25nm,0.8s,mb5.3						
324A	Moseley Ranch,	54.53	83	⇓P	P	00 10 47.7	-0.7
	baz=54,SNR=6.1						
126A	Clayton Basin,	54.60	80	⇓P	P	00 10 47.9	-0.9
	baz=54,SNR=10						
Z27A	Tatum	54.64	79	⇑P	P	00 10 48.1	-1.0
	baz=54,SNR=13						
GDL2	Guadalupe Moun	54.70	81	eP	P	00 10 49.5	0.0
	comp=Z,4.7nm,0.3s,mb5.0						
KSU1	Kansas State U	54.73	70	eP	P	00 10 49.1	-0.6
	comp=Z,17nm,0.6s,mb5.2						
SSLB	Suanglung	54.85	264	eP	P	00 10 49.8	-0.9
	comp=Z,90nm,0.9s,mb5.8						
325A	Bean Ranch, Si	54.89	82	⇓P	P	00 10 50.3	-0.7
	baz=55,SNR=36						
YULB	Yu-li	54.92	264	eP	P	00 10 50.0	-1.3
	comp=Z,21nm,0.8s,mb5.2						
ZALV	Zalesovo Beam	54.94	314	P	P	00 10 49.7	-1.3
	comp=Z,2.1nm,0.4s,mb4.5,baz=41,slow=6.3,SNR=12						
ZALV				PcP	PcP	00 11 52.4	+0.3
	comp=Z,24nm,0.7s,baz=33,slow=4.1,SNR=39						
ZALV				LR	LR	00 36 28.2	
	comp=Z,933nm,19.8s,baz=325,slow=38						
ZALV	Zalesovo Beam	54.94	314	P	P	00 10 49.7	-1.3
ZALV						00 11 52.4	
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
ZALV				MLR	MLR		
	comp=Z,933nm,19.8s						
ZALV	Zalesovo Beam	54.94	314	P	P	00 10 49.7	-1.3
ZALV				PcP	PcP	00 11 52.4	+0.3
ZALV				LR	LR	00 36 28.2	
226A	Malaga, Loving	54.95	81	P	P	00 10 51.2	-0.2
	baz=55,SNR=19						
NVS	Novosibirsk	55.04	316	iP	P	00 10 51.0	-0.7
NVS				pmax	pmax		
	comp=N,15nm,2.0s						
NVS				pmax	pmax		
	comp=E,20nm,2.0s						
NVS				pmax	pmax		
	comp=Z,36nm,2.0s,mb5.1						
XAN	Xi'an	55.09	282	P	P	00 10 51.9	-0.5
XAN				pP	pP	00 11 03.1	-5.6
XAN				sP	sP	00 11 11.7	-4.1
XAN				PcP	PcP	00 11 52.1	-1.0
XAN				PP	PP	00 12 55.4	-0.5
XAN				ScP	ScP	00 15 49.3	+3.3
XAN				PcS	PcS	00 15 53.3	+0.2
XAN				S	S	00 18 25.7	-4.5
XAN				ScS	ScS	00 20 34.7	-1.0
XAN				pmax	pmax		
	comp=Z,39nm,1.1s,mb5.3						
XAN				pmax	pmax		
	comp=Z,76nm,8.2s						
XAN				LR	LR		
	comp=N,330nm,28.3s						
XAN				LR	LR		
	comp=E,260nm,40.2s						
XAN				LR	LR		
	comp=Z,250nm,31.2s						
425A	Indio Mountain	55.29	83	⇑P	P	00 10 53.6	-0.2
	baz=55,SNR=14						
TPUB	Ta-pu	55.41	264	eP	P	00 10 54.5	-0.2
	comp=Z,447nm,1.2s,mb6.4						
326A	Caldwell Ranch	55.54	82	⇓P	P	00 10 55.2	-0.5
	baz=55,SNR=17						
JFWS	Jewell Farm	55.84	62	eP	P	00 10 55.8	-1.8
	comp=Z,47nm,0.6s,mb5.7						
426A	McDonald Obser	55.96	82	⇓P	P	00 10 57.6	-1.0
	baz=56,SNR=25						
328A	Wristen Ranch,	56.22	81	P	P	00 10 59.7	-0.8
	baz=56,SNR=26						
427A	Hayter Ranch,	56.22	82	⇓P	P	00 11 00.1	-0.4
	baz=56,SNR=10						
526A	Mary Lane Ranc	56.35	83	P	P	00 11 01.2	-0.2
	baz=56,SNR=30						
WMOK	Wichita Mounta	56.37	75	eP	P	00 11 01.2	-0.3
WMOK				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.2						
WMOK	Wichita Mounta	56.37	75	eP	P	00 11 01.2	-0.3
	comp=Z,21nm,0.9s,mb5.2						
527A	Woodward Ranch	56.58	82	P	P	00 11 02.8	-0.3
	baz=56,SNR=6.5						
626A	Big Bend Ranch	56.67	83	P	P	00 11 03.2	-0.5
	baz=56,SNR=34						
428A	Kincaid Ranch,	56.75	81	P	P	00 11 04.0	-0.2
	baz=57,SNR=34						
LZH	Lanzhou	56.76	288	⇑P	P	00 11 05.3	+1.0
LZH				PP	PP	00 13 13.5	+2.8
LZH				S	S	00 18 54.6	+2.3
LZH				SS	SS	00 22 39.7	-0.8
LZH				pmax	pmax		
	comp=Z,47nm,1.5s,mb5.3						
LZH				pmax	pmax		
	comp=Z,180nm,8.0s						
LZH				LR	LR		
	comp=N,620nm,15.1s						
LZH				LR	LR		
	comp=Z,1μm,18.5s						
GTA	Gaotai	56.87	293	eP	P	00 11 03.9	-1.1
GTA				pP	pP	00 11 20.1	-1.3
GTA				PP	PP	00 13 13.4	+1.8
GTA				S	S	00 18 51.7	-2.0
GTA				sS	sS	00 19 18.4	-3.0
GTA				SS	SS	00 22 39.1	-2.9
GTA				pmax	pmax		
	comp=Z,180nm,5.3s						
GTA				LR	LR		
	comp=N,940nm,19.3s						
GTA				LR	LR		
	comp=E,590nm,21.7s						
GTA				LR	LR		
	comp=Z,1μm,21.1s						
TXAR	Lajitas Array	57.12	83	P	P	00 11 06.2	-0.7
	comp=Z,9.0nm,0.7s,mb4.9,baz=300,slow=5.3,SNR=107						
TXAR				ScP	ScP	00 15 57.1	+2.1
	comp=Z,0.4nm,0.7s,baz=319,slow=2.6,SNR=4.1						
TXAR				LR	LR	00 32 27.2	
	comp=Z,410nm,21.6s,baz=5.0,slow=33						
627A	Terlingua Ranc	57.21	83	P	P	00 11 07.0	-0.6
	baz=57,SNR=28						
ENH	Enshi	57.34	279	eP	P	00 11 07.9	-0.6
	comp=Z,58nm,0.8s,mb5.7						
JMIC	Jan Mayen	57.37	5	eP	P	00 11 14.7	+6.7
JMIC				eS	S	00 19 08.1	+8.7
628A	Black Gap, Mar	57.49	82	P	P	00 11 08.9	-0.6
	baz=57,SNR=42						
KEV	Kevo	57.72	351	eP	P	00 11 10.2	-0.3
KEV				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
KEV	Kevo	57.72	351	ep	P	00 11 10.2	-0.3
	comp=Z,3.6nm,0.5s,mb4.7						
HDIL	Hopedale	57.95	64	eP	P	00 11 11.3	-1.2
	comp=Z,73nm,0.7s,mb5.8						
ARCES	ARCESS Array B	58.08	351	P	P	00 11 12.2	-0.9
	comp=Z,4.7nm,0.6s,mb4.7,baz=15,slow=7.9,SNR=38						
ARCES				PcP	PcP	00 12 04.5	+0.4
	comp=Z,4.1nm,0.8s,baz=23,slow=4.1,SNR=6.3						
ARCES				ScP	ScP	00 16 01.3	+2.7
	comp=Z,2.1nm,0.8s,baz=19,slow=7.9,SNR=4.0						
ARCES				LR	LR	00 37 01.5	
	comp=Z,918nm,21.0s,baz=181,slow=37						
ARCES	ARCESS Array B	58.08	351	P	P	00 11 12.2	-0.9
ARCES				PcP	PcP	00 12 04.5	+0.4
ARCES				ScP	ScP	00 16 01.3	+2.7
ARCES				LR	LR	00 37 01.5	
TRO	Tromso	58.52	354	eP	P	00 11 15.7	-0.4
TRO				AMS	AMS	00 39 11.1	
	comp=Z,303nm,21.4s						
CCM	Cathedral Cave	58.54	67	eP	P	00 11 15.0	-1.8
CCM				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.0						
CCM	Cathedral Cave	58.54	67	eP	P	00 11 15.0	-1.8
	comp=Z,14nm,0.8s,mb5.0						
LVZ	Lovozero	58.54	347	ceP	P	00 11 14.8	-1.5
LVZ				pmax	pmax		
	comp=Z,37nm,2.5s,mb5.0						
JCT	Junction City	58.69	79	eP	P	00 11 17.2	-0.7
JCT				pmax	pmax		
	comp=Z,18nm,0.7s,mb5.2						
JCT	Junction City	58.69	79	eP	P	00 11 17.2	-0.7
	comp=Z,18nm,0.7s,mb5.2						
SCHQ	Schefferville	58.85	40	P	P	00 11 18.1	-0.5
	comp=Z,13nm,0.9s,mb5.0,baz=330,slow=7.5,SNR=17						
SCHQ				LR	LR	00 38 16.9	
	comp=Z,1μm,19.1s,baz=106,slow=38						
SCHQ	Schefferville	58.85	40	eP	P	00 11 17.5	-1.1
	comp=Z,23nm,1.0s,mb5.2						
APA	Apatity	59.02	347	⇑eP	pP	00 11 30.0	-6.1
APA				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
APA				MLR	MLR		
	comp=Z,500nm,18.0s						
FVM	French Village	59.06	67	eP	P	00 11 18.8	-1.6
FVM				pmax	pmax		
	comp=Z,26nm,0.7s,mb5.4						
FVM	French Village	59.06	67	eP	P	00 11 18.8	-1.6
	comp=Z,26nm,0.7s,mb5.4						
MIAR	Mount Ida	59.61	72	eP	P	00 11 23.8	-0.4
MIAR				pmax	pmax		
	comp=Z,28nm,0.6s,mb5.5						
MIAR	Mount Ida	59.61	72	eP	P	00 11 23.8	-0.3
	comp=Z,28nm,0.6s,mb5.5						
AAM	Ann Arbor	59.83	59	eP	P	00 11 25.5	-0.1
AAM				pmax	pmax		
	comp=Z,22nm,0.4s,mb5.5						
AAM	Ann Arbor	59.83	59	eP	P	00 11 25.5	-0.1
	comp=Z,22nm,0.4s,mb5.5						
OLIL	Olney	59.87	65	eP	P	00 11 25.2	-0.7
	comp=Z,95nm,0.9s,mb5.8						
KURK	Kurchatov	59.92	315	P	P	00 11 25.2	-0.9
	comp=Z,357nm,0.4s,SNR=42						
KURK	Kurchatov	59.92	315	eP	P	00 11 25.6	-0.5
KURK				e		00 12 10.9	
KURK				pmax	pmax		
	comp=Z,28nm,0.5s,mb5.5						
KURK	Kurchatov	59.92	315	eP	P	00 11 25.6	-0.5
	comp=Z,28nm,0.5s,mb5.5						
KURK				ePcP	PcP	00 12 10.9	-0.9
KURK	Kurchatov	59.92	315	P	P	00 11 25.5	-0.6
	SNR=11						
SIUC	Southern Illin	59.94	66	eP	P	00 11 25.4	-1.0
	comp=Z,20nm,0.6s,mb5.3						
UALR	University of	60.17	71	eP	P	00 11 27.5	-0.6
	comp=Z,12nm,0.6s,mb5.1						
PARMO	Parma	60.36	67	eP	P	00 11 28.0	-1.3
PARMO				epP	pP	00 11 41.2	-4.6
CD2	Chengdu	60.40	283	P	P	00 11 30.1	+0.5
CD2				pP	pP	00 11 46.2	0.0
CD2				PP	PP	00 13 45.3	+2.3
CD2				S	S	00 19 37.5	-2.2
CD2				SS	SS	00 23 36.6	-1.2
CD2				pmax	pmax		
	comp=Z,310nm,7.1s						
CD2				LR	LR		
	comp=N,460nm,19.0s						
CD2				LR	LR		
	comp=Z,470nm,20.2s						
BLO	Bloomington	60.45	63	eP	P	00 11 28.6	-1.2
BLO				pmax	pmax		
	comp=Z,17nm,0.6s,mb5.2						
BLO	Bloomington	60.45	63	eP	P	00 11 28.6	-1.3
	comp=Z,17nm,0.6s,mb5.2						
WMQ	Urumqi	60.46	304	P	P	00 11 32.1	+2.2
WMQ				PcP	PcP	00 12 15.9	+1.8
WMQ				PP	PP	00 13 47.9	+4.6
WMQ				ScP	ScP	00 16 10.5	+0.9
WMQ				S	S	00 19 41.3	+1.1
WMQ				ScS	ScS	00 21 13.4	-1.3
WMQ				SS	SS	00 23 41.1	+2.9
WMQ				pmax	pmax		
	comp=Z,31nm,1.0s,mb5.3						
WMQ				pmax	pmax		
	comp=Z,160nm,2.6s,mb5.6						
WMQ				LR	LR		
	comp=N,610nm,20.1s						
WMQ				LR	LR		
	comp=E,450nm,21.5s						
WMQ				LR	LR		
	comp=Z,490nm,23.6s						
NATX	Nacogdoches	60.91	75	eP	P	00 11 33.2	+0.1
	comp=Z,35nm,0.9s,mb5.5						
MK31	Makanchi Array	61.05	310	iP	P	00 11 32.6	-1.2
MK31				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.6						
MK31	Makanchi Array	61.05	310	eP	P	00 11 32.5	-1.3
MKAR	Makanchi Array	61.05	310	P	P	00 11 32.5	-1.3
	comp=Z,3.3nm,0.4s,mb4.8,baz=49,slow=6.3,SNR=73						
MKAR				PcP	PcP	00 12 15.9	-0.4
	comp=Z,2.2nm,0.6s,baz=35,slow=4.4,SNR=4.0						
MKAR				LR	LR	00 40 10.8	
	comp=Z,258nm,18.5s,baz=33,slow=38						
MKAR	Makanchi Array	61.

comp=Z,19nm,1.2s,mb5.1
ACSO Alum Creek Sta 61.65 60 *e*P **P 00 11 37.4 -0.6**
comp=Z,38nm,0.7s,mb5.6
VOSK Vostochnaya 61.65 320 P **P 00 11 37.9 +0.1**
VOSK pmax pmax
comp=Z,10.0nm,0.6s,mb5.1
BVAR Borovoye Array 61.65 321 P **P 00 11 37.9 +0.1**
comp=Z,18nm,0.3s,mb5.7,baz=57,slow=7.0,SNR=178
BVAR PcP PcP 00 12 18.6 -0.1
comp=Z,21nm,0.8s,baz=54,slow=3.8,SNR=15
BVAR ScP ScP 00 16 17.0 +2.3
comp=Z,1.9nm,0.7s,baz=57,slow=5.5,SNR=4.3
BRVK Borovoye 61.67 321 P **P 00 11 38.7 +0.8**
comp=Z,129nm,0.4s,mb6.4,SNR=15
BRVK Borovoye 61.67 321 P **P 00 11 38.1 +0.2**
BRVK pmax pmax
comp=Z,18nm,0.6s,mb5.4
BRVK Borovoye 61.67 321 *e*P **P 00 11 37.9 0.0**
comp=Z,29nm,0.9s,mb5.4
BRVK *e*PcP PcP 00 12 18.9 +0.1
BRVK Borovoye 61.67 321 P **P 00 11 38.0 +0.1**
SNR=14
GYA Guiyang 61.80 278⇓*i*P **P 00 11 40.0 +0.8**
GYA PcP PcP 00 12 21.0 +1.3
GYA PP PP 00 13 58.7 +3.2
GYA ScP ScP 00 16 15.2 -0.6
GYA PcS PcS 00 16 22.9 0.0
GYA S **S 00 19 55.3 -2.3**
GYA SS SS 00 24 01.8 +1.9
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.2
GYA pmax pmax
comp=Z,120nm,5.4s
GYA LR LR
comp=N,590nm,18.8s
GYA LR LR
comp=E,460nm,19.7s
GYA LR LR
comp=Z,580nm,18.4s
WVT Waverly 61.84 67 *e*P **P 00 11 38.4 -0.9**
WVT pmax pmax
comp=Z,9.0nm,0.6s,mb5.1
WVT Waverly 61.84 67 *e*P **P 00 11 38.4 -0.9**
comp=Z,9.1nm,0.6s,mb5.1
ERPA Erie 61.90 57 *e*P **P 00 11 39.8 +0.2**
comp=Z,141nm,1.4s,mb5.9
OXF Oxford 62.07 69 *e*P **P 00 11 39.9 -1.0**
comp=Z,132nm,1.0s,mb6.0
SVE Sverdlovsk 62.17 329 *e*P **P 00 11 42.1 +0.9**
SVE *e* 00 12 20.8
SVE pmax pmax
comp=Z,8.0nm,1.0s,mb4.8
SVE MLR MLR
comp=Z,1μm,20.0s
ZRNK Zerenda 62.25 322 P **P 00 11 42.0 +0.2**
ZRNK pmax pmax
comp=Z,12nm,0.4s,mb5.4
LONY Lake Ozonia 62.84 52 *e*P **P 00 11 44.4 -1.4**
comp=Z,24nm,1.3s,mb5.2
LONY *e*PcP PcP 00 12 23.7 0.0
VBMS Vicksburg 63.06 72 *e*P **P 00 11 48.2 +0.7**
comp=Z,35nm,0.3s,mb6.0
ARU Arti 63.16 329*c i*P **P 00 11 47.3 -0.5**
ARU *e* 00 12 22.1
ARU S **S 00 20 16.5 +2.6**
ARU pmax pmax
comp=Z,14nm,1.7s,mb4.8
ARU Arti 63.16 329 *e*P **P 00 11 48.0 +0.2**
comp=Z,8.1nm,0.8s,mb4.9
NCB Newcomb 63.49 52 *e*P **P 00 11 49.4 -0.8**
comp=Z,18nm,0.9s,mb5.2
NCB *e*PcP PcP 00 12 27.1 +0.8
SWET Sewanee 63.57 66 *e*P **P 00 11 49.3 -1.6**
JOF Joensuu 63.72 346 *e*P **P 00 11 50.4 -0.9**
JOF pmax pmax
comp=Z,6.0nm,0.4s,mb5.0
JOF Joensuu 63.72 346 *e*p **P 00 11 50.4 -0.9**
comp=Z,5.5nm,0.4s,mb4.9
MCWV Mont Chateau 63.74 59 *e*P **P 00 11 51.5 -0.4**
comp=Z,57nm,0.6s,mb5.8
BINY Binghamton 63.90 54 *e*P **P 00 11 52.6 -0.3**
comp=Z,70nm,1.1s,mb5.6
SSPA Standing Stone 64.06 57 *e*P **P 00 11 53.5 -0.5**
comp=Z,32nm,0.8s,mb5.4
CPCT Cooper Cave 64.21 65 *e*P **P 00 11 54.1 -0.9**
TKL Tuckaleechee C 64.48 64 *e*P **P 00 11 56.4 -0.4**
LRAL Lakeview Retre 64.53 68 *e*P **P 00 11 56.0 -1.2**
comp=Z,6.6nm,0.6s,mb4.8
ELN Prospectdale 65.01 61 *e*P **P 00 11 59.7 -0.6**
KAF Kangasniemi 65.17 348 *e*P **P 00 12 00.0 -0.9**
KAF pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
KAF Kangasniemi 65.17 348 *e*p **P 00 12 00.0 -0.9**
comp=Z,5.5nm,0.5s,mb4.8
KMI Kunming 65.18 280 ⇑P **P 00 12 01.9 +0.4**
KMI pP pP 00 12 10.9 -7.3
KMI S S 00 20 40.6 +0.8
KMI sS sS 00 20 57.2 -11
KMI SKS 00 21 54.2
KMI SS SS 00 24 53.7 +0.9
KMI pmax pmax
comp=Z,63nm,0.8s,mb5.7
KMI pmax pmax
comp=Z,310nm,4.6s
KMI LR LR
comp=N,280nm,21.1s
KMI LR LR
comp=E,360nm,22.2s
KMI LR LR
comp=Z,400nm,30.0s
BLA Blacksburg 65.21 61 *e*P **P 00 12 01.2 -0.3**
comp=Z,76nm,0.9s,mb5.7
QIZ Qiongzhong 65.28 270 P **P 00 12 02.6 +0.4**
QIZ S S 00 20 43.4 +2.3
QIZ SS SS 00 25 02.4 +7.8
QIZ pmax pmax
comp=Z,20nm,1.1s,mb5.1
QIZ pmax pmax
comp=Z,210nm,10.5s
QIZ LR LR
comp=N,280nm,21.0s
QIZ LR LR
comp=E,90nm,21.9s
QIZ LR LR
comp=Z,280nm,23.2s
FINES FINESS Array B 65.85 348 P **P 00 12 04.1 -1.2**
comp=Z,1.6nm,0.3s,mb4.5,baz=7.4,slow=7.2,SNR=35
FINES LR LR 00 42 32.1
comp=Z,675nm,21.4s,baz=16,slow=38
FINES FINESS Array B 65.85 348 P **P 00 12 04.1 -1.1**
FINES pmax pmax
comp=Z,2.0nm,0.3s
FINES MLR MLR
comp=Z,675nm,21.4s
FINES FINESS Array B 65.85 348 P **P 00 12 04.1 -1.2**
FINES LR LR 00 42 32.1
CBN Corbin 66.12 58 *e*P **P 00 12 07.6 +0.3**
comp=Z,34nm,0.4s,mb5.7
GOGA Godfrey 66.28 66 *e*P **P 00 12 07.5 -1.0**
GOGA pmax pmax
comp=Z,29nm,0.9s,mb5.3
GOGA Godfrey 66.28 66 *e*P **P 00 12 07.5 -1.0**
comp=Z,29nm,0.9s,mb5.3
JSC Jenkinsville 66.89 64 *e*P **P 00 12 12.3 0.0**
TKM2 Tokmak 2 67.11 311 P **P 00 12 15.1 +1.5**
SNR=6.7
TKM2 Tokmak 2 67.11 311 *e*P **P 00 12 14.6 +1.0**
TKM2 pmax pmax
comp=Z,15nm,0.9s,mb5.0
TKM2 Tokmak 2 67.11 311 *e*P **P 00 12 14.6 +1.0**
comp=Z,15nm,0.9s,mb5.0
ULHL Ulahol 67.32 310 P **P 00 12 16.7 +1.8**
SNR=10
USP Ospenovka 67.36 312 P **P 00 12 15.3 +0.1**
SNR=34
NB2 NORSAR Subarra 67.50 356 P **P 00 12 15.0 -0.8**
comp=Z,3.7nm,0.7s,mb4.5,baz=7.2,slow=6.5
NOA NORSAR Array B 67.50 356 P **P 00 12 15.5 -0.3**
comp=Z,3.8nm,0.8s,mb4.5,baz=5.8,slow=6.6,SNR=15
NOA LR LR 00 39 39.1
comp=Z,372nm,21.6s,baz=0.0,slow=34
NOA NORSAR Array B 67.50 356 P **P 00 12 15.5 -0.3**
NOA LR LR 00 39 39.1
KBK Karagaybulak 67.62 311 P **P 00 12 16.9 +0.1**
SNR=14
FRU Bishkek 67.64 311 *e*P **P 00 12 17.0 +0.1**
FRU pmax pmax
comp=Z,110nm,2.2s,mb5.5
AAK Ala-Archa 67.85 311 P **P 00 12 19.2 +0.9**
comp=Z,228nm,0.7s,mb6.3,SNR=6.6
AAK Ala-Archa 67.85 311 P **P 00 12 19.2 +1.0**
SNR=11
AAK Ala-Archa 67.85 311 *e*P **P 00 12 18.6 +0.3**
AAK pmax pmax
comp=Z,20nm,0.6s,mb5.3
AAK Ala-Archa 67.85 311 *e*P **P 00 12 18.6 +0.3**
comp=Z,20nm,0.6s,mb5.3
KZA Kyzart 67.92 310 P **P 00 12 19.8 +1.1**
SNR=12
CNNC Cliffs of the 68.04 61 *e*P **P 00 12 19.6 0.0**
comp=Z,35nm,0.8s,mb5.4
EKS2 Erkin-Say 68.16 312 P **P 00 12 20.9 +0.6**
SNR=35
EKS2 Erkin-Say 68.16 312 *e*P **P 00 12 20.8 +0.5**
comp=Z,24nm,0.6s,mb5.4
BER Bergen 68.32 359 *e* **P 00 12 20.2 -0.7**
BER *e*S S 00 21 24.0 +7.4
NHSC New Hope 68.36 64 *e*P **P 00 12 22.2 +0.6**
comp=Z,334nm,1.4s,mb6.2
AML Almayashu 68.61 311 P **P 00 12 24.4 +1.4**
SNR=33
AML Almayashu 68.61 311 *e*P **P 00 12 23.8 +0.7**
comp=Z,18nm,0.8s,mb5.0
AB31 Akbulak array 68.63 324 P **P 00 12 23.4 +0.4**
AB31 pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
ABKAR Akbulak array 68.63 324 *e*P **P 00 12 23.4 +0.4**
comp=Z,8.7nm,0.7s,mb4.8
LSA Lhasa 68.77 291 *e*P **P 00 12 25.7 +1.5**
LSA pmax pmax
comp=Z,27nm,0.6s,mb5.3
LSA Lhasa 68.77 291 *e*P **P 00 12 25.7 +1.5**
comp=Z,26nm,0.6s,mb5.3
KONO Kongsberg 68.96 357 *e*P **P 00 12 24.7 -0.2**
KONO *e*S S 00 21 32.4 +8.2
KK31 Karatay Array 69.31 314 P **P 00 12 26.8 -0.5**
KK31 pmax pmax
comp=Z,21nm,0.5s,mb5.3
KSH Kashi 69.54 308 P **P 00 12 32.1 +3.2**
KSH S S 00 21 32.4 +0.7
KSH LR LR
comp=N,2.0nm,0.6s
KSH smax
comp=N,2.0nm,0.3s
KSH LR LR
comp=E,3.0nm,0.3s
KSH Kashi 69.54 308 P **P 00 12 32.5 +3.6**
KSH PcP PcP 00 12 55.4 +3.8
KSH PP PP 00 15 09.6 +6.9
KSH S S 00 21 34.9 +3.2
KSH ScS ScS 00 22 25.3 +0.6
KSH SS SS 00 26 05.4 +6.0
KSH pmax pmax
comp=Z,49nm,1.1s,mb5.3
KSH LR LR
comp=N,120nm,5.6s
KSH LR LR
comp=E,160nm,9.3s
KSH LR LR
comp=Z,360nm,10.8s
OBN Obninsk 70.14 341*ce*P **P 00 12 30.8 -1.5**
OBN *e**PP pP 00 12 45.7 -3.5
OBN *e* 00 12 54.2
OBN *e*SS SS 00 26 09.3 +1.5
OBN pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
MYLDM Lahad Datu 70.66 253 P **P 00 12 36.6 +0.6**
MYLDM Lahad Datu 70.66 253 P **P 00 12 37.4 +1.4**
comp=Z,1μmcomp=Z,81nm,1.1s,mb5.6
CHRT Chiangrai 70.90 278 ⇓P **P 00 12 38.0 +0.6**
comp=Z,184nm,0.9s,mb6.0
SDKM Sandakan 71.07 255 P **P 00 12 38.9 +0.3**
KKM Kota Kinabalu 71.34 256 P **P 00 12 40.8 +0.7**
KKM Kota Kinabalu 71.34 256 *e*P **P 00 12 40.5 +0.4**
comp=Z,12nm,0.8s,mb4.9
KKM *e*pP pP 00 12 55.6 -1.5
KKM Kota Kinabalu 71.34 256 P **P 00 12 41.1 +0.9**
comp=Z,634nmcomp=Z,47nm,1.3s,mb5.3
TSM Tawau 71.74 253 P **P 00 12 42.9 +0.4**
CHG Chiang Mai 72.22 278 ⇑P **P 00 12 45.6 +0.3**
comp=Z,22nm,0.9s,mb5.1
CHTO Chiang Mai 72.22 278 *e*P **P 00 12 44.5 -0.8**
CHTO pmax pmax
comp=Z,15nm,0.9s,mb4.9
CHTO Chiang Mai 72.22 278 *e*P **P 00 12 44.5 -0.8**
comp=Z,15nm,0.9s,mb4.9
CHTO Chiang Mai 72.22 278 P **P 00 12 45.3 0.0**
comp=Z,484nmcomp=Z,25nm,1.0s,mb5.1
CHTO Chiang Mai 72.22 278 P **P 00 12 46.2 +0.9**
SNR=7.8
CM31 Chiang Mai Arr 72.49 278 *e*P **P 00 12 47.6 +0.6**
comp=Z,28nm,0.7s,mb5.3
CMAR Chiang Mai Arr 72.49 278 P **P 00 12 47.2 +0.2**
comp=Z,30nm,0.8s,mb5.3,baz=27,slow=6.8,SNR=105
CMAR LR LR 00 47 57.0
comp=Z,316nm,19.5s,baz=40,slow=38
CMAR Chiang Mai Arr 72.49 278 P **P 00 12 47.2 +0.2**
CMAR pmax pmax
comp=Z,30nm,0.8s
CMAR MLR MLR
comp=Z,316nm,19.5s
TAPN Taplejung 72.53 292 *e*P **P 00 12 48.2 +1.1**
comp=Z,185nm,0.9s,mb6.0
VRHR Novokhopersk 72.70 336 *e*P **P 00 12 46.5 -1.2**
VRHR pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
VRHR pmax pmax
comp=N,10.0nm,1.0s
VRHR pmax pmax
comp=E,10.0nm,1.0s
PPT Papeete 72.78 153 *e*S S 00 22 13.3 +3.9
comp=E,970nm,29.0s
PPT *e*SS SS 00 26 58.4 +7.5
comp=E,2μm,26.8s
PPT *e*LR LR 00 35 04.8
comp=E,913nm,23.8s,baz=342
PPT Papeete 72.78 153 LR LR 00 36 36.4
comp=E,474nm,20.6s,baz=320,slow=29
ODAN Odze 73.08 292 *e*P **P 00 12 51.5 +1.1**
comp=E,99nm,1.1s,mb5.7
GUN Gumba 73.15 294 *e*P **P 00 12 51.5 +0.7**
comp=E,145nm,0.4s,mb6.3
JIRN Jiri 73.16 293 *e*P **P 00 12 52.2 +1.3**
comp=E,166nm,0.8s,mb6.0
LUWI Luwuk 73.18 246 P **P 00 12 49.8 -1.3**
comp=E,2μmcomp=E,121nm,0.9s,mb5.8
VSR Storozhevoye 73.19 338 *e*P **P 00 12 50.2 -0.4**
VSR *e* pP 00 13 04.9 -2.7
VSR pmax pmax
comp=N,4.0nm,0.6s
VSR pmax pmax
comp=E,3.0nm,0.6s
VSR pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
VSR MLR MLR
comp=N,840nm,21.0s
VSR MLR MLR
comp=E,350nm,21.0s
VSR MLR MLR
comp=Z,1μm,21.0s
BSD Bornholm Skovb 73.20 353 *e*P **P 00 12 49.3 -1.3**
BSD pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
BSD MLR MLR
comp=Z,520nm,22.0s
BSD Bornholm Skovb 73.20 353 *i* P **P 00 12 49.3 -1.3**
comp=Z,9.7nm,0.9s,mb4.7
BSD
comp=Z,520nm,22.0s
BDT Bhumibol Dam 73.37 277 P **P 00 12 52.0 -0.2**
comp=Z,22nm,0.9s,mb5.1
RAMN Ramite 73.47 292 *e*P **P 00 12 52.8 +0.1**
comp=Z,165nm,0.6s,mb6.1
KKN Kakani 73.58 294 *e*P **P 00 12 54.4 +1.1**
comp=Z,80nm,0.6s,mb5.8
PKI Pulchoki 73.68 294 *e*P **P 00 12 54.5 +0.6**
PKIN Phulchoki 73.68 294 *e*P **P 00 12 54.3 +0.4**
GKN Gorkha 73.79 295 *e*P **P 00 12 55.0 +0.5**
comp=Z,89nm,0.6s,mb5.9
DMN Daman 73.82 294 *e*P **P 00 12 55.0 +0.3**
comp=Z,156nm,1.2s,mb5.8
BSEG Bad Segeberg 74.65 356 *e*P **P 00 12 59.6 +0.5**
comp=Z,10.0nm,1.0s,mb4.7
PCI Palu 74.76 248 P **P 00 13 00.1 -0.2**
comp=Z,1μmcomp=Z,102nm,1.2s,mb5.6
DZM Mont Dzumac 74.93 196 *e*LR LR 00 36 12.6
comp=Z,804nm,25.9s
BTM Bintulu 75.48 257 P **P 00 13 04.9 +0.4**
DDI Dehra Dun 75.62 301 *e*PKP **P 00 13 06.5 +1.4**
AKASG Malin Array Be 75.75 344 P **P 00 13 04.7 -0.8**
comp=Z,2.3nm,0.3s,mb4.6,baz=18,slow=5.9,SNR=9.2
AKASG LR LR 00 49 53.6
comp=Z,638nm,19.7s,baz=5.0,slow=38
AKASG Malin Array Be 75.75 344 P **P 00 13 04.7 -0.8**
AKASG pmax pmax
comp=Z,2.0nm,0.3s
AKASG MLR MLR
comp=Z,638nm,19.7s
AKBB Malin Array Si 75.75 344 *e*P **P 00 13 04.9 -0.6**
KIEV Kiev 75.75 344 *e*P **P 00 13 04.8 -0.7**
KIEV pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
KIEV Kiev 75.75 344 *e*P **P 00 13 04.8 -0.7**
comp=Z,5.3nm,0.5s,mb4.7
CAL Calcutta 75.82 288 *e*PKP **P 00 13 04.8 -1.5**
BOK Bokaro 76.30 291 *e*PKP **P 00 13 10.2 +1.2**
SBUM Sibu 76.60 257 P **P 00 13 11.5 +0.6**
SBUM Sibu 76.60 257 P **P 00 13 11.7 +0.9**
comp=Z,458nmcomp=Z,24nm,1.4s,mb4.9
CLZ Clausthal 76.73 356 *e*P **P 00 13 11.2 +0.2**
comp=Z,11nm,1.0s,mb4.7
KBL Kabul 76.85 310 *e*P **P 00 13 11.2 -0.8**
KBL pmax pmax
comp=Z,63nm,1.0s,mb5.5
KBL Kabul 76.85 310 *e*P **P 00 13 11.2 -0.8**
comp=Z,63nm,1.0s,mb5.5
CLL Collm 77.12 354 *e*P **P 00 13 12.9 -0.3**
comp=Z,4.0nm,0.8s,mb4.4
CLL Collm 77.12 354⇓*i*P **P 00 13 12.9 -0.3**
CLL pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
CLL Collm 77.12 354⇓*i*P **P 00 13 12.9 -0.3**
comp=Z,4.0nm,0.7s,mb4.5
CLL Collm 77.12 354⇓*i*P **P 00 13 12.9 -0.3**
comp=Z,4.0nm,0.7s,mb4.5
CLL *e*pPcP pP 00 13 30.0 -0.3
CLL *e*PS 00 23 42.0
CLL *e*SS SS 00 28 08.0 +14
CLL *e*SSS 00 31 48.0
CLL *e*SSSS 00 33 54.0
BUG Bochum--Univer 77.25 358 *e*P **P 00 13 13.8 -0.1**
comp=Z,14nm,1.2s,mb4.8
LVV L'vov 77.44 347 *e*P **P 00 13 14.2 -0.8**
LVV MLR MLR
comp=N,300nm,21.0s
LVV MLR MLR
comp=Z,400nm,21.0s
BRG Berggiesshubel 77.49 353 *e*P **P 00 13 14.8 -0.5**
comp=Z,5.0nm,1.0s,mb4.4
BRG Berggiesshubel 77.49 353 *e*P **P 00 13 14.9 -0.4**
comp=Z,5.3nm,1.0s,mb4.4
BRG S S 00 23 10.0 +9.0
BRG SS SS 00 28 22.0 +23
BRG
comp=N,407nm,23.0s
BRG
comp=E,251nm,29.8s
BRG
comp=Z,605nm,24.5s
UPC Upice 77.69 352 *e*P **P 00 13 16.1 -0.3**
DPC Dobruska-Polom 77.81 352 *e*P **P 00 13 17.3 +0.2**
DPC *e*S S 00 23 39.9 +35
DPC MLR MLR
comp=Z,600nm,20.7s
DPC Dobruska-Polom 77.81 352 *e*P **P 00 13 17.3 +0.2**
DPC *e*S S 00 23 39.9 +35
DPC *e*SS SS 00 28 38.5 +34
DPC LR LR
comp=Z,600nm,20.7s
DPC Dobruska-Polom 77.81 352 *e*P **P 00 13 17.3 +0.2**
DPC *e*SKS 00 23 39.9
DPC *e*x x 00 28 38.5
DPC AMS AMS 00 44 40.0
comp=Z,600nm,20.7s
MOX Moxa 77.86 355 *e*P **P 00 13 17.2 -0.2**
comp=Z,7.0nm,1.1s,mb4.5
KAKA Kakadu 77.87 231 *e*P **P 00 13 18.6 +0.8**
comp=Z,26nm,0.9s,mb5.2
MEM Membach 78.11 358 P **P 00 13 19.4 +0.6**
comp=Z,7.7nm,1.6s,mb4.4
OKC Ostrava-Krasne 78.14 350 *e*P **P 00 13 18.5 -0.4**
OKC *e*S S 00 23 48.3 +40
OKC MLR MLR
comp=Z,500nm,22.3s
OKC Ostrava-Krasne 78.14 350 *e*P **P 00 13 18.5 -0.4**
OKC *e*S S 00 23 48.3 +40
OKC *e*SS SS 00 28 35.5 +26
OKC Ostrava-Krasne 78.14 350 *e*P **P 00 13 18.5 -0.4**
OKC *e*XSKS 00 23 48.3
OKC *e*x x 00 28 35.5
OKC AMS AMS 00 46 30.0
comp=Z,500nm,22.3s
STHS Stebnicka Huta 78.20 348 *e*P **P 00 13 20.3 +1.0**
STHS pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
STHS Stebnicka Huta 78.20 348 *e*P **P 00 13 20.3 +1.0**
comp=Z,2.9nm,1.0s,mb4.2
STHS Stebnicka Huta 78.20 348 *e*P **P 00 13 20.3 +1.0**
NKC Novy Kostel 78.23 354 *e*P **P 00 13 19.6 +0.2**
NKC MLR MLR
comp=Z,500nm,27.3s
NKC Novy Kostel 78.23 354 *e*P **P 00 13 19.6 +0.2**
NKC AMS AMS 00 42 10.0
comp=Z,500nm,27.3s
TBI Tubuai 78.32 155 *e*S S 00 23 18.2 +7.9
comp=Z,564nm,36.2s
TBI *e*LR LR 00 37 30.3
comp=Z,955nm,28.0s,baz=344
PRU Pruhonice 78.32 353 *e*P **P 00 13 20.5 +0.6**
PRU MLR MLR
comp=Z,500nm,23.5s
PRU Pruhonice 78.32 353 *e*P **P 00 13 20.5 +0.6**
PRU *e*S S 00 23 42.4 +32
PRU *e*SS SS 00 28 48.4 +36
PRU LR LR
comp=Z,500nm,23.5s
PRU Pruhonice 78.32 353 *e*P **P 00 13 20.5 +0.6**
PRU *e*SKS 00 23 42.4
PRU *e*x x 00 28 48.4
PRU AMS AMS 00 44 20.0
comp=Z,500nm,23.5s
TNS Taunus Mts 78.43 357 *e*P **P 00 13 20.5 0.0**
comp=Z,13nm,1.0s,mb4.8
KSM Kuching 78.53 258 *e*P **P 00 13 22.0 +0.4**
comp=Z,24nm,1.0s,mb5.1
KSM Kuching 78.53 258 P **P 00 13 22.6 +1.0**
comp=Z,585nmcomp=Z,35nm,1.3s,mb5.2
CTAO Charters Tower 78.56 216 *e*P **P 00 13 20.8 -0.6**
CTAO pmax pmax
comp=Z,18nm,1.1s,mb4.9
CTAO Charters Tower 78.56 216 *e*P **P 00 13 20.8 -0.6**
comp=Z,18nm,1.1s,mb4.9
TGUH Tegucigalpa,Un 78.57 82 *e*P **P 00 13 22.9 +1.1**
GIVF Givet 78.63 359 *e*P **P 00 13 21.1 -0.5**
DOU Dourbes 78.64 359 P **P 00 13 22.2 +0.6**
comp=Z,11nm,2.4s,mb4.4
BAIF Baives 78.68 360 *e*P **P 00 13 21.6 -0.3**
comp=Z,26nm,1.0s,mb4.8
BAIF Baives 78.68 360 *e*P **P 00 13 21.6 -0.3**
BAIF pmax pmax
comp=Z,13nm,1.0s,mb4.8
BAIF Baives 78.68 360 *e*P **P 00 13 21.6 -0.3**
comp=Z,13nm,1.0s,mb4.8
CRVS Cervenica-Dubn 78.68 348 *e*P **P 00 13 22.3 +0.4**
CRVS pmax pmax
comp=Z,12nm,2.1s,mb4.5
CRVS Cervenica-Dubn 78.68 348 *e*P **P 00 13 22.3 +0.4**
comp=Z,12nm,2.1s,mb4.5
CRVS Cervenica-Dubn 78.68 348 *e*P **P 00 13 22.3 +0.4**
GRF Grafenberg Arr 78.84 355 *e*P **P 00 13 22.8 0.0**
comp=Z,12nm,0.9s,mb4.8
GRF *e*L 00 48 01.9
comp=Z,322nm,21.7s
GRF Grafenberg Arr 78.84 355 *e*P **P 00 13 22.8 0.0**
GRF pmax pmax
comp=Z,12nm,0.9s,mb4.8
GRF MLR MLR
comp=Z,300nm,21.7s

ABKT Ailbek 78.90 319 P **P 00 13 24.3 +1.0**
comp=Z,169nm,1.0s,mb5.9,SNR=11
KIV Kislovodsk 78.96 332 *e*P **P 00 13 24.1 +0.6**
KIV *e*SS SS 00 28 22.5 +0.6
KIV pmax pmax
comp=Z,11nm,1.0s,mb4.7
KIV MLR MLR
comp=Z,300nm,23.0s
KIV Kislovodsk 78.96 332 *e*P **P 00 13 24.1 +0.5**
comp=Z,13nm,1.1s,mb4.8
KECS Kecovo 79.22 349 *e*P **P 00 13 25.4 +0.5**
KECS pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
KECS Kecovo 79.22 349 *e*P **P 00 13 25.4 +0.5**
comp=Z,1.9nm,0.8s,mb4.1
KECS Kecovo 79.22 349 *e*P **P 00 13 25.4 +0.5**
KHC Kasperske Hory 79.25 353 *e*P **P 00 13 25.3 +0.3**
KHC MLR MLR
comp=Z,500nm,20.4s
KHC Kasperske Hory 79.25 353 *e*P **P 00 13 25.3 +0.3**
KHC *e*XSKS 00 23 51.7
KHC *ex* x 00 28 50.6
KHC AMS AMS 00 44 00.0
comp=Z,500nm,20.4s
TRPA Tarpa 79.30 347⇑*i*P **P 00 13 25.2 -0.1**
BUR08 Bucovina Ar. S 79.38 345 *e*P **P 00 13 25.7 -0.1**
KIS Kishinev 79.38 343 *e*P **P 00 13 24.0 -1.8**
KIS *e*S S 00 23 19.0 -2.4
KIS LRM 00 54 00.0
comp=Z,800nm,17.0s
KIS Kishinev 79.38 343 *e*P **P 00 13 24.0 -1.8**
KIS *e* pP 00 13 40.0 -3.0
KIS *e*S S 00 23 19.0 -2.4
KIS *e* 00 23 39.0
KIS *e* 00 24 07.0
VYHS Vyhne 79.40 350 *e*P **P 00 13 25.8 0.0**
VYHS pmax pmax
comp=Z,13nm,2.1s,mb4.5
VYHS Vyhne 79.40 350 *e*P **P 00 13 25.8 0.0**
comp=Z,13nm,2.1s,mb4.5
VYHS Vyhne 79.40 350 *e*P **P 00 13 25.8 0.0**
BURAR Bucovina Array 79.40 345⇑P **P 00 13 25.7 -0.2**
BURAR Bucovina Array 79.40 345⇑*i*P **P 00 13 25.7 -0.2**
GEC2 GERESS Array S 79.52 353 *e*P **P 00 13 26.1 -0.4**
comp=Z,6.0nm,1.2s,mb4.4
ANN Anapa 79.59 336 *e*P **P 00 13 28.5 +1.5**
ANN pmax pmax
comp=Z,87nm,1.3s,mb5.5
ANN MLR MLR
comp=N,369nm,18.0s
ANN MLR MLR
comp=E,262nm,18.0s
ANN MLR MLR
comp=Z,338nm,18.0s
ZEI Tsey 79.68 331 *e*P **P 00 13 28.2 +0.7**
ZEI pmax pmax
comp=Z,23nm,1.1s,mb5.0
PSZ Piszkesteto 79.84 349 *e*P **P 00 13 28.7 +0.4**
PSZ pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
PSZ Piszkesteto 79.84 349 *e*P **P 00 13 28.7 +0.4**
comp=Z,4.4nm,0.9s,mb4.4
STU Stuttgart 79.85 356 *e*P **P 00 13 28.3 0.0**
comp=Z,8.0nm,1.0s,mb4.6
STU Stuttgart 79.85 356 *e*P **P 00 13 28.4 +0.1**
STU pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
STU Stuttgart 79.85 356 *e*P **P 00 13 28.4 +0.1**
comp=Z,7.3nm,0.6s,mb4.8
ZST Bratislava 79.87 351 *e*P **P 00 13 29.1 +0.7**
ZST pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
ZST Bratislava 79.87 351 *e*P **P 00 13 29.1 +0.7**
comp=Z,4.2nm,0.6s,mb4.5
ZST Bratislava 79.87 351 *e*P **P 00 13 29.1 +0.7**
FLN La Foliniere 79.91 3 *e*P **P 00 13 28.2 -0.4**
FLN *e*MLR MLR
comp=Z,355nm,19.8s
FLN La Foliniere 79.91 3 *e*P **P 00 13 28.2 -0.4**
FLN LR LR
comp=Z,350nm,19.8s
KTGM Kuala Trenggan 79.94 266 P **P 00 13 30.0 +0.7**
ONI Oni 79.98 331 P **P 00 13 23.3 -5.8**
LDF La Druitiere 80.09 3 *e*P **P 00 13 28.6 -1.0**
comp=Z,11nm,0.6s,mb4.7
LDF La Druitiere 80.09 3 *e*P **P 00 13 28.6 -1.0**
LDF pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
LDF La Druitiere 80.09 3 *e*P **P 00 13 28.6 -1.0**
comp=Z,5.5nm,0.6s,mb4.7
ROSF Rostrenen 80.23 5 *e*P **P 00 13 30.0 -0.3**
comp=Z,6.7nm,0.7s,mb4.4
ROSF Rostrenen 80.23 5 *e*P **P 00 13 30.0 -0.3**
ROSF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
ROSF Rostrenen 80.23 5 *e*P **P 00 13 30.0 -0.3**
comp=Z,3.3nm,0.7s,mb4.4
MEZF Maizieres J'vi 80.23 359 *e*P **P 00 13 30.1 -0.2**
TESR 80.24 344⇓P **P 00 13 30.6 +0.2**
TESR 80.24 344⇓*i*P **P 00 13 30.6 +0.2**
SIM Simferopol' 80.25 339 *e*P **P 00 13 34.0 +3.5**
SIM pmax pmax
comp=Z,40nm,8.4s
GRR Gorron 80.28 3 *e*P **P 00 13 30.0 -0.6**
comp=Z,23nm,1.0s,mb4.8
GRR Gorron 80.28 3 *e*P **P 00 13 30.0 -0.6**
GRR pmax pmax
comp=Z,11nm,1.0s,mb4.7
GRR Gorron 80.28 3 *e*P **P 00 13 30.0 -0.6**
comp=Z,11nm,1.0s,mb4.8
CDF Champ du Feu 80.28 358 *e*P **P 00 13 30.1 -0.5**
comp=Z,2.9nm,0.4s,mb4.3
CDF Champ du Feu 80.28 358 *e*P **P 00 13 30.1 -0.5**
CDF pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
CDF Champ du Feu 80.28 358 *e*P **P 00 13 30.1 -0.5**
comp=Z,1.5nm,0.4s,mb4.3
BFO Black Forest 80.33 357 *e*P **P 00 13 31.2 +0.3**
comp=Z,5.0nm,1.0s,mb4.4
SGMF Saint Gilles 80.34 4 *e*P **P 00 13 30.6 -0.4**
comp=Z,12nm,0.7s,mb4.7
SGMF Saint Gilles 80.34 4 *e*P **P 00 13 30.6 -0.4**
SGMF pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
SGMF Saint Gilles 80.34 4 *e*P **P 00 13 30.6 -0.4**
comp=Z,6.3nm,0.6s,mb4.7
TBLG Delisi 80.37 330 P **P 00 13 32.3 +1.1**
TBLG Delisi 80.37 330 P **P 00 13 32.3 +1.1**
MTA Mtatsminda 80.39 330 P **P 00 13 30.9 -0.4**
DGRG David-gareji 80.43 329 P **P 00 13 33.2 +1.7**
ECH Echery 80.48 358 *e*P **P 00 13 31.7 0.0**
ECH pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
ECH Echery 80.48 358 *e*P **P 00 13 31.7 0.0**
comp=Z,3.6nm,0.9s,mb4.3
AJM Ajmer 80.49 301 *e*PKP **P 00 13 32.1 0.0**
DRGR 80.58 347⇓P **P 00 13 32.4 +0.1**
DRGR 80.58 347⇓*i*P **P 00 13 32.4 +0.1**
QUIF Quistinic 80.65 5 *e*P **P 00 13 32.1 -0.5**
comp=Z,23nm,0.8s,mb4.9
QUIF Quistinic 80.65 5 *e*P **P 00 13 32.1 -0.5**
QUIF pmax pmax
comp=Z,11nm,0.8s,mb4.8
QUIF Quistinic 80.65 5 *e*P **P 00 13 32.1 -0.5**
comp=Z,11nm,0.8s,mb4.8
HAU Haudompre 80.70 358 *e*P **P 00 13 32.2 -0.7**
comp=Z,18nm,1.1s,mb4.6
HAU *e*MLR MLR
comp=Z,416nm,20.2s
HAU Haudompre 80.70 358 *e*P **P 00 13 32.2 -0.7**
HAU pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
HAU MLR MLR
comp=Z,420nm,20.3s
HAU Haudompre 80.70 358 *e*P **P 00 13 32.2 -0.7**
comp=Z,8.9nm,1.0s,mb4.7
HAU LR LR
comp=Z,420nm,20.3s
VRI Vrincioaia 80.85 344⇓*i*P **P 00 13 35.5 +1.8**
HINF Hinteralfeld 80.88 358 *e*P **P 00 13 32.9 -1.0**
comp=Z,5.1nm,0.6s,mb4.3
HINF Hinteralfeld 80.88 358 *e*P **P 00 13 32.9 -1.0**
HINF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
HINF Hinteralfeld 80.88 358 *e*P **P 00 13 32.9 -1.0**
comp=Z,2.5nm,0.6s,mb4.3
TLCR 81.13 342⇑P **P 00 13 36.0 +0.8**
TLCR 81.13 342⇑*i*P **P 00 13 36.0 +0.8**
MTDJ Mount Denham 81.25 72 *e*P **P 00 13 36.6 +0.3**
MLR Muntele Rosu 81.35 344⇑P **P 00 13 36.4 0.0**
MLR Muntele Rosu 81.35 344⇑*i*P **P 00 13 36.4 0.0**
LOR Lormes 81.47 360 *e*P **P 00 13 36.5 -0.5**
comp=Z,14nm,1.0s,mb4.6
LOR *e*MLR MLR
comp=Z,259nm,22.5s
LOR Lormes 81.47 360 *e*P **P 00 13 36.5 -0.5**
LOR pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
LOR MLR MLR
comp=Z,260nm,22.5s
LOR Lormes 81.47 360 *e*P **P 00 13 36.5 -0.5**
comp=Z,7.2nm,1.0s,mb4.6
LOR LR LR
comp=Z,260nm,22.5s
KULM Kulim 81.52 268 P **P 00 13 38.5 +0.8**
KULM Kulim 81.52 268 *e*P **P 00 13 36.6 -1.1**
comp=Z,39nm,1.3s,mb5.2
VOIR 81.55 345⇑P **P 00 13 36.8 -0.6**
VOIR 81.55 345⇑*i*P **P 00 13 36.8 -0.6**
BHPL Bhopal 81.55 297 *e*PKP **P 00 13 37.4 -0.4**
SSF Saint Saulge 81.68 0 *e*P **P 00 13 37.6 -0.5**
comp=Z,9.6nm,0.8s,mb4.5
SSF Saint Saulge 81.68 0 *e*P **P 00 13 37.6 -0.5**
SSF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
SSF Saint Saulge 81.68 0 *e*P **P 00 13 37.6 -0.5**
comp=Z,4.8nm,0.8s,mb4.5
GROS Grobnik 81.74 352 *i*P **P 00 13 38.2 -0.2**
GNI Garni 81.81 329 *e*P **P 00 13 40.4 +1.5**
GNI pmax pmax
comp=Z,12nm,1.2s
GNI Garni 81.81 329 *e*P **P 00 13 40.8 +1.8**
comp=Z,17nm,1.1s,mb4.9
EIDS Eidsvold 81.84 209 *e*P **P 00 13 38.4 -0.6**
comp=Z,65nm,1.3s,mb5.4
BZS Buzias 81.89 347⇓P **P 00 13 39.1 -0.1**
BZS Buzias 81.89 347⇓*i*P **P 00 13 39.0 -0.2**
TIRR Tirgusor 81.91 342⇓P **P 00 13 40.1 +0.8**
TIRR Tirgusor 81.91 342 *e*P **P 00 13 39.5 +0.1**
comp=Z,13nm,1.1s,mb4.8
TIRR Tirgusor 81.91 342⇓*i*P **P 00 13 40.0 +0.7**
IPM Ipoh 81.91 267 P **P 00 13 39.6 -0.2**
comp=Z,36nm,0.9s,mb5.3
GZR Gura Zlata 81.94 346⇓P **P 00 13 39.9 +0.4**
GZR Gura Zlata 81.94 346⇓*i*P **P 00 13 39.9 +0.4**
AVF Avril sur Loir 81.95 0 *e*P **P 00 13 38.9 -0.6**
comp=Z,11nm,0.7s,mb4.6
AVF Avril sur Loir 81.95 0 *e*P **P 00 13 38.9 -0.6**
AVF pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
AVF Avril sur Loir 81.95 0 *e*P **P 00 13 38.9 -0.6**
comp=Z,5.6nm,0.7s,mb4.6
PTCC Patocco-Chiusa 81.97 353 P **P 00 13 40.6 +0.9**
MFF Saint Martin d 82.08 3 *e*P **P 00 13 39.8 -0.4**
comp=Z,56nm,1.3s,mb5.0
MFF Saint Martin d 82.08 3 *e*P **P 00 13 39.8 -0.4**
MFF pmax pmax
comp=Z,28nm,1.3s,mb5.0
MFF Saint Martin d 82.08 3 *e*P **P 00 13 39.8 -0.4**
comp=Z,28nm,1.3s,mb5.0
SMF Signal de Mont 82.09 360 *e*P **P 00 13 39.7 -0.6**
comp=Z,26nm,1.0s,mb4.8
SMF Signal de Mont 82.09 360 *e*P **P 00 13 39.7 -0.6**
SMF pmax pmax
comp=Z,13nm,1.0s,mb4.8
SMF Signal de Mont 82.09 360 *e*P **P 00 13 39.7 -0.6**
comp=Z,13nm,1.0s,mb4.8
CABF La Chapelle 82.11 358 *e*P **P 00 13 40.3 0.0**
comp=Z,11nm,0.8s,mb4.5
CABF La Chapelle 82.11 358 *e*P **P 00 13 40.3 0.0**
CABF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
CABF La Chapelle 82.11 358 *e*P **P 00 13 40.3 0.0**
comp=Z,5.5nm,0.8s,mb4.5
BGF Bois d'Agland 82.18 1 *e*P **P 00 13 40.2 -0.5**
comp=Z,9.4nm,0.7s,mb4.5
BGF Bois d'Agland 82.18 1 *e*P **P 00 13 40.2 -0.5**
BGF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
BGF Bois d'Agland 82.18 1 *e*P **P 00 13 40.2 -0.5**
comp=Z,4.7nm,0.7s,mb4.5
MYKOM Kota Tinggi 82.25 263 P **P 00 13 42.2 +0.7**
MYKOM Kota Tinggi 82.25 263 P **P 00 13 42.1 +0.5**
comp=Z,487nmcomp=Z,38nm,0.9s,mb5.3
KNA Kununurra 82.28 233 P **P 00 13 41.2 -0.3**
comp=Z,647nmcomp=Z,77nm,0.8s,mb5.7
NGP Nagpur 82.29 294 *e*PKP **P 00 13 40.5 -1.2**
KGM Kluang 82.40 264 P **P 00 13 43.2 +0.8**
TCF Toulx Ste Croi 82.44 1 *e*P **P 00 13 41.9 -0.2**
comp=Z,11nm,0.8s,mb4.5
TCF Toulx Ste Croi 82.44 1 *e*P **P 00 13 41.9 -0.2**
TCF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
TCF Toulx Ste Croi 82.44 1 *e*P **P 00 13 41.9 -0.2**
comp=Z,5.3nm,0.8s,mb4.5
FRIM Kepong 82.50 266 P **P 00 13 43.6 +0.7**
VIS Vishakhapatnam 82.50 289 *e*PKP **P 00 13 42.9 0.0**
CEY Cerknica 82.55 352 *e*P **P 00 13 42.2 -0.5**
RKT Rikitea 82.82 142 *e*LR LR 00 39 46.9
comp=Z,1μm,24.5s,baz=332
WRAB Tennant Creek 83.25 226 *e*P **P 00 13 44.8 -1.7**
WRAB pmax pmax
comp=Z,19nm,1.1s,mb5.0
WRAB Tennant Creek 83.25 226 *e*P **P 00 13 44.8 -1.7**
comp=Z,19nm,1.1s,mb5.0
WRA Warramunga Arr 83.27 226 P **P 00 13 44.8 -1.8**
comp=Z,6.8nm,0.6s,mb4.8,baz=35,slow=6.0,SNR=48
WRA PKKPbc PKKPbc 00 32 07.5 +2.3
comp=Z,0.8nm,0.9s,baz=226,slow=2.1,SNR=6.3
WRA Warramunga Arr 83.27 226 P **P 00 13 44.8 -1.8**
WRA pmax pmax
comp=Z,7.0nm,0.6s
WRA pmax pmax
comp=Z,1.0nm,0.9s
RJF Les Rejaudoux 83.42 1 *e*P **P 00 13 46.8 -0.4**
comp=Z,26nm,1.1s,mb4.9
RJF *e*MLR MLR
comp=Z,400nm,20.0s
RJF Les Rejaudoux 83.42 1 *e*P **P 00 13 46.8 -0.4**
RJF pmax pmax
comp=Z,13nm,1.1s,mb4.9
RJF MLR MLR
comp=Z,400nm,20.0s
RJF Les Rejaudoux 83.42 1 *e*P **P 00 13 46.8 -0.4**
comp=Z,13nm,1.1s,mb4.9
RJF LR LR
comp=Z,400nm,20.0s
BNI Bardonecchia 83.65 358 *e*P **P 00 13 49.1 +0.7**
BNI pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
BNI Bardonecchia 83.65 358 *e*P **P 00 13 49.1 +0.8**
comp=Z,8.7nm,1.0s,mb4.8
LFF La Frestale 83.77 2 *e*P **P 00 13 48.9 -0.1**
comp=Z,38nm,1.1s,mb5.1
LFF La Frestale 83.77 2 *e*P **P 00 13 48.9 -0.1**
LFF pmax pmax
comp=Z,19nm,1.1s,mb5.1
LFF La Frestale 83.77 2 *e*P **P 00 13 48.9 -0.1**
comp=Z,19nm,1.1s,mb5.1
AKL Akola 83.79 296 *e*PKP **P 00 13 49.7 +0.2**
AKL AMb AMB 00 13 50.7
comp=Z,40nm,1.4s,mb5.4
ORIF Oris-en-Rattie 83.80 358 *e*P **P 00 13 49.4 +0.3**
comp=Z,2.2nm,0.6s,mb4.2
ORIF *e*MLR MLR
comp=Z,401nm,22.8s
ORIF Oris-en-Rattie 83.80 358 *e*P **P 00 13 49.4 +0.3**
ORIF pmax pmax
comp=Z,1.0nm,0.6s,mb4.1
ORIF Oris-en-Rattie 83.80 358 *e*P **P 00 13 49.4 +0.3**
comp=Z,1.1nm,0.6s,mb4.2
CAF Calviac 83.80 1 *e*P **P 00 13 49.1 0.0**
comp=Z,6.6nm,0.6s,mb4.6
CAF Calviac 83.80 1 *e*P **P 00 13 49.1 0.0**
CAF pmax pmax
comp=Z,3.0nm,0.6s,mb4.6
CAF Calviac 83.80 1 *e*P **P 00 13 49.1 0.0**
comp=Z,3.3nm,0.6s,mb4.6
BOB Bobbio (Coli) 83.84 356 P **P 00 13 50.0 +0.7**
VIVF Saint-Julien-l 83.88 359 *e*P **P 00 13 49.8 +0.3**
comp=Z,12nm,1.0s,mb4.7
VIVF Saint-Julien-l 83.88 359 *e*P **P 00 13 49.8 +0.3**
VIVF pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
VIVF Saint-Julien-l 83.88 359 *e*P **P 00 13 49.8 +0.3**
comp=Z,5.9nm,1.0s,mb4.7
MBDF Montbardon 83.97 358 *e*P **P 00 13 49.3 -0.7**
comp=Z,6.0nm,0.6s,mb4.6
MBDF Montbardon 83.97 358 *e*P **P 00 13 49.3 -0.7**
MBDF pmax pmax
comp=Z,3.0nm,0.6s,mb4.6
MBDF Montbardon 83.97 358 *e*P **P 00 13 49.3 -0.7**
comp=Z,3.0nm,0.6s,mb4.6
VTS Vitosha 84.62 346⇑*i*P **P 00 13 52.7 -0.6**
LASF Ste Croix 84.66 360 *e*P **P 00 13 53.3 -0.2**
comp=Z,7.7nm,0.8s,mb4.6
SMRF Simiane la Rot 84.75 359 *e*P **P 00 13 53.3 -0.6**
comp=Z,21nm,1.1s,mb4.9
SMRF Simiane la Rot 84.75 359 *e*P **P 00 13 53.3 -0.6**
comp=Z,21nm,1.1s,mb5.2
SBF Sospel 84.82 357 *e*P **P 00 13 53.7 -0.6**
comp=Z,24nm,0.8s,mb5.1
SBF Sospel 84.82 357 *e*P **P 00 13 53.7 -0.6**
SBF pmax pmax
comp=Z,12nm,0.8s,mb5.1
SBF Sospel 84.82 357 *e*P **P 00 13 53.7 -0.6**
comp=Z,12nm,0.8s,mb5.1
BKNI Bangkinang 85.13 264 P **P 00 13 57.0 +0.7**
comp=Z,72nm,0.9s,mb5.8
SNTG Esanatoglia 85.14 353 P **P 00 13 56.5 +0.6**
comp=Z,22nm,0.1s,mb6.2
FRF La Foret Royal 85.14 358 *e*P **P 00 13 55.3 -0.6**
comp=Z,7.8nm,0.8s,mb4.6
FRF La Foret Royal 85.14 358 *e*P **P 00 13 55.3 -0.6**
FRF pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
FRF La Foret Royal 85.14 358 *e*P **P 00 13 55.3 -0.6**
comp=Z,3.9nm,0.8s,mb4.6
MURB Monte Urbino 85.16 353 P **P 00 14 00.1 +4.1**
BR131 Keskin Array S 85.31 337 *e*P **P 00 13 57.2 +0.3**
comp=Z,6.2nm,0.7s,mb4.8
BRTR Keskin Array B 85.31 337 P **P 00 13 57.1 +0.3**
comp=Z,8.5nm,0.8s,mb5.0,baz=48,slow=2.6,SNR=47
BRTR LR LR 00 58 32.7
comp=Z,184nm,19.9s,baz=68,slow=40
ASS Assisi 85.35 353 P **P 00 13 57.4 +0.4**
comp=Z,22nm,0.1s,mb6.2
LMR La Mourre 85.37 358 *e*P **P 00 13 56.5 -0.6**
comp=Z,11nm,1.1s,mb4.6
LMR La Mourre 85.37 358 *e*P **P 00 13 56.5 -0.6**
LMR pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
LMR La Mourre 85.37 358 *e*P **P 00 13 56.5 -0.6**
comp=Z,5.3nm,1.0s,mb4.6
MTLF Montolieu 85.39 1 *e*P **P 00 13 57.0 -0.2**
comp=Z,12nm,0.9s,mb4.7
MTLF Montolieu 85.39 1 *e*P **P 00 13 57.0 -0.2**
MTLF pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
MTLF Montolieu 85.39 1 *e*P **P 00 13 57.0 -0.2**
comp=Z,5.8nm,0.9s,mb4.7
HYB Hyderabad 85.53 292 *e*P **P 00 13 58.0 -0.2**
HYB Hyderabad 85.53 292 *i*P **P 00 13 58.0 -0.2**
SJPF Ste Jean 85.53 4 *e*P **P 00 13 57.6 -0.3**
comp=Z,4.0nm,0.5s,mb4.6
SJPF Ste Jean 85.53 4 *e*P **P 00 13 57.6 -0.3**
SJPF pmax pmax
comp=Z,2.0nm,0.5s,mb4.6
SJPF Ste Jean 85.53 4 *e*P **P 00 13 57.6 -0.3**
comp=Z,2.0nm,0.5s,mb4.6
NRCA Norcia 85.55 353 P **P 00 13 58.5 +0.6**
comp=Z,3.8nm,0.4s,mb5.0
EPF Esparros 85.67 2 *e*P **P 00 13 58.3 -0.2**
comp=Z,6.0nm,0.8s,mb4.6
EPF Esparros 85.67 2 *e*P **P 00 13 58.3 -0.2**
EPF pmax pmax
comp=Z,3.0nm,0.8s,mb4.6
EPF Esparros 85.67 2 *e*P **P 00 13 58.3 -0.2**
comp=Z,3.0nm,0.8s,mb4.6
ETSF Etsaut 85.77 3 *e*P **P 00 13 59.1 0.0**
comp=Z,5.3nm,0.7s,mb4.5
ETSF Etsaut 85.77 3 *e*P **P 00 13 59.1 0.0**
ETSF pmax pmax
comp=Z,3.0nm,0.7s,mb4.6
ETSF Etsaut 85.77 3 *e*P **P 00 13 59.1 0.0**
comp=Z,2.7nm,0.7s,mb4.6
FITZ Fitzroy Crossi 85.83 234 *e*P **P 00 13 58.7 -0.8**
comp=Z,38nm,1.0s,mb5.6
FITZ Fitzroy Crossi 85.83 234 *e*P **P 00 13 58.7 -0.9**
comp=Z,30nm,1.0s,mb5.5
FITZ Fitzroy Crossi 85.83 234 P **P 00 13 59.2 -0.3**
comp=Z,68nm,1.0s,mb5.8
AQU L'Aquila 86.00 353⇓P **P 00 14 00.6 +0.4**
AQU L'Aquila 86.00 353 *e*P **P 00 14 00.2 0.0**
comp=Z,9.2nm,0.8s,mb5.1
AQU L'Aquila 86.00 353⇓*i*P **P 00 14 00.6 +0.4**
MNS Montasola 86.02 353 P **P 00 13 59.7 -0.6**
MNS pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
MNS Montasola 86.02 353 P **P 00 13 59.7 -0.6**
comp=Z,9.1nm,0.8s,mb5.1
PGF Pioggiola 86.07 356 *e*P **P 00 13 59.9 -0.7**
comp=Z,12nm,0.8s,mb4.9
PGF Pioggiola 86.07 356 *e*P **P 00 13 59.9 -0.7**
PGF pmax pmax
comp=Z,6.0nm,0.8s,mb4.9
PGF Pioggiola 86.07 356 *e*P **P 00 13 59.9 -0.7**
comp=Z,6.2nm,0.8s,mb4.9
FIAM Fiamignano 86.11 353 P **P 00 14 00.7 0.0**
comp=Z,11nm,0.8s,mb5.1
ARMA Armidale 86.42 207 *e*P **P 00 14 02.1 0.0**
comp=Z,26nm,1.3s,mb5.3
ASAR Alice Springs 86.72 224 P **P 00 14 02.6 -1.2**
comp=Z,9.7nm,0.8s,mb5.1,baz=30,slow=4.7,SNR=49
ASAR Alice Springs 86.72 224 P **P 00 14 02.6 -1.2**
ASAR pmax pmax
comp=Z,10.0nm,0.9s
KLSI 86.78 258 P **P 00 14 03.2 -1.2**
comp=Z,55nm,0.9s,mb5.8
POO Poona 87.31 297 *e*PKP **P 00 14 06.8 -0.2**
KAD Karad 88.10 296 *e*PKP **P 00 14 10.4 -0.4**
MTP Monte Pirata 88.24 63 *e*P **P 00 14 11.0 -0.4**
comp=Z,47nm,0.9s,mb5.7
MTP *e*pP pP 00 14 27.3 -1.6
ESDC Sonseca Array 88.82 6 P **P 00 14 12.8 -1.0**
comp=Z,1.0nm,0.5s,mb4.4,baz=348,slow=4.5,SNR=12
ESDC LR LR 00 52 25.1
comp=Z,165nm,21.6s,baz=10.0,slow=34
ESDC Sonseca Array 88.82 6 P **P 00 14 12.8 -1.1**
ESDC LR LR 00 52 25.1
STKA Stephens Creek 90.99 215 LR LR 00 50 43.5
comp=Z,426nm,20.4s,baz=26,slow=32
MMAI Mount Meron Ar 91.20 334 P **P 00 14 25.2 +0.1**
comp=Z,5.7nm,0.9s,mb4.9,baz=19,slow=5.6,SNR=11
MMAI LR LR 01 03 10.9
comp=Z,222nm,18.1s,baz=45,slow=41
MBWA Marble Bar 91.42 237 *e*P **P 00 14 24.9 -1.1**
MBWA Marble Bar 91.42 237 *e*P **P 00 14 24.9 -1.1**
comp=Z,26nm,1.0s,mb5.5
MBWA Marble Bar 91.42 237 P **P 00 14 25.4 -0.6**
ARQ Araqi 92.15 313 P **P 00 14 29.8 +0.2**
SNR=12
JMDO Jabal Madar 92.25 311 P **P 00 14 30.3 +0.2**
SNR=5.1
ROSC El Rosal 93.66 78 LR LR 00 55 48.6
comp=Z,94nm,20.8s,baz=219,slow=35
OTAV Otavalo 94.74 84 *e*P **P 00 14 42.2 +0.6**
comp=Z,5.1nm,0.9s,mb5.0
LPAZ La Paz 113.91 86 *e*PKIKP PKiKP 00 19 59.1 +0.5
DBIC Dimbokro 121.46 10 PKP PKPdf 00 20 12.8 -0.6
comp=Z,9.9nm,0.4s,baz=342,slow=2.6,SNR=76
DBIC Dimbokro 121.46 10 PKIKP PKPdf 00 20 12.8 -0.6
DBIC pmax pmax
comp=Z,10.0nm,0.4s
DBIC Dimbokro 121.46 10 *e*PKPdf PKPdf 00 20 12.6 -0.8
TIC Toumodi 121.47 10 *e*PKIKP PKPdf 00 20 12.8 -0.6
comp=Z,12nm,0.4s
KIC Kosan Boka 121.78 10 *e*PKIKP PKPdf 00 20 13.3 -0.7
comp=Z,19nm,0.5s
LIC Lamto 121.89 10 *e*PKIKP PKPdf 00 20 13.6 -0.6
comp=Z,30nm,0.6s
LIC Lamto 121.89 10 *e*PKIKP PKPdf 00 20 13.6 -0.6
comp=Z,18nm,0.6s
LIC *e*MLR MLR
comp=Z,412nm,20.0s
LIC Lamto 121.89 10 *e*PKPdf PKPdf 00 20 13.6 -0.6
LIC LR LR
comp=Z,210nm,20.0s

KMBO	Kilima Mbogo	122.28	319	*e*PKIKP	PKPdf	00 20 16.1	+1.1
CPUP	Villa Florida	128.06	85	PKP	PKPdf	00 20 25.2	-0.4
	comp=Z,2.5nm,0.7s,baz=290,slow=2.9,SNR=10.0						
CPUP	Villa Florida	128.06	85	PKIKP	PKPdf	00 20 25.2	-0.4
CPUP				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CPUP	Villa Florida	128.06	85	*e*PKPdf	PKPdf	00 20 24.5	-1.0
PLCA	Paso Flores	129.61	108	PKP	PKPdf	00 20 28.7	+0.7
	comp=Z,8.1nm,1.0s,baz=268,slow=3.3,SNR=7.1						
PLCA	Paso Flores	129.61	108	*e*PKPdf	PKPdf	00 20 27.7	-0.3
TRQA	Tornquist	133.10	100	*e*PKPdf	PKPdf	00 20 34.0	-0.7
LSZ	Lusaka	138.74	323	*e*PKIKP	PKPdf	00 20 45.6	-0.3
QSPA	South Pole Qui	141.40	180	PKhKP		00 20 42.7	
	comp=Z,3.6nm,0.7s,baz=284,slow=1.9,SNR=7.6						
QSPA	South Pole Qui	141.40	180	*e*PKPpre		00 20 43.2	
MSNA	Messina	144.33	315	⇑*i*P	PKPdf	00 20 54.6	-1.1
MSNA				AMS	AMS	01 33 06.3	
	comp=Z,301nm,21.3s						
TSUM	Tsumeb	145.81	336	*e*PKPbc	PKPbc	00 20 58.9	-0.1
MAW	Mawson	147.62	218	*e*P	PKPbc	00 21 02.2	-0.5
	comp=Z,37nm,1.0s						
MAW	Mawson	147.62	218	PKPbc	PKPbc	00 21 02.0	-0.7
	comp=Z,41nm,0.9s,baz=88,slow=1.9,SNR=30						
MAW	Mawson	147.62	218	PKP2	PKPbc	00 21 02.0	-0.7
MAW				pmax	pmax		
	comp=Z,41nm,0.9s						
MAW	Mawson	147.62	218	*e*PKPbc	PKPbc	00 21 01.8	-0.9
POGA	Pongola	147.89	308	⇑*i*P	PKPbc	00 21 04.5	-0.2
POGA				AMS	AMS	00 40 46.8	
	comp=Z,3μm,20.0s						
SLR	Silverton	148.05	315	*e*P	PKPbc	00 21 05.4	+0.2
SLR				AMS	AMS	01 50 18.9	
	comp=Z,293nm,19.3s						
LBTB	Lobatse	148.56	319	*e*PKPdf	PKPdf	00 21 03.1	+0.3
LBTB				*e*PKPbc	PKPbc	00 21 06.6	+0.1
LBTB	Lobatse	148.56	319	*e*P	PKPdf	00 21 03.5	+0.7
LBTB				AMS	AMS	01 44 48.0	
	comp=Z,151nm,19.1s						
ERPM	east rand prop	148.60	314	⇑*i*P	PKPbc	00 21 06.7	+0.1
ERPM				AMS	AMS	00 58 49.5	
	comp=Z,692nm,22.9s						
KSR	Koster	148.76	317	*e*P	PKPbc	00 21 07.4	+0.4
KSR				AMS	AMS	01 10 47.4	
	comp=Z,1μm,19.7s						
SWZ	Schweizer	150.59	318	⇑*i*P	PKPbc	00 21 11.5	+0.1
SWZ				AMS	AMS	01 47 07.5	
	comp=Z,630nm,19.2s						
BOSA	Boshof	151.87	317	PKPbc	PKPbc	00 21 14.5	+0.2
	comp=Z,23nm,0.5s,baz=352,slow=2.9,SNR=13						
BOSA				PKPab	PKPab	00 21 24.8	+1.1
	comp=Z,19nm,0.7s,baz=30,slow=5.0,SNR=8.9						
BOSA	Boshof	151.87	317	*e*PKPbc	PKPbc	00 21 14.0	-0.4
BOSA				*e*PKPab	PKPab	00 21 23.8	+0.1
BOSA	Boshof	151.87	317	⇓*i*P	PKPbc	00 21 14.3	0.0
BOSA				AMS	AMS	01 46 09.8	
	comp=Z,278nm,19.4s						
UPI	Upington	153.25	324	*e*P	PKPbc	00 21 16.7	-0.7
UPI				AMS	AMS	01 14 06.4	
	comp=Z,10μm,23.1s						
SYO	Syowa Base	155.69	211	⇑*e*pPKPdf	pPKPdf	00 21 34.0	+3.8

NEIC ***12*** *00:08:56.6, 45°.82S×166°.79E, h101km, mb4.9/12, After WEL.*
NEIC Felt in the Fiordland-Otago-Southland area.
ISCJB ***12*** *00:08:56.2±0.3, 45°.70S±0°.05×167°.24E±0°.05, h118km±3km, mb5.0/21, Error ellipse: s-maj=8.8km s-min=4.6km az=148.3*
WEL ***12*** *00:08:56.8±0.3, 45°.79S×166°.80E, h103km±1km, ML6.0/19, Error ellipse: s-maj=3.2km s-min=1.5km az=90.0, reported intensity MM 5.*
WEL Felt from West Coast to Southland, and from Fiordland to Otago, maximum.
IDC ***12*** *00:08:57.0±2.1, 45°.65S×167°.07E, h109km±18km, mb4.6/5, mb1 4.8/6, mb1mx4.4/12, mbtmp4.6/6, MS3.9/2, Ms1 3.8/2, ms1mx3.3/15, Error ellipse: s-maj=22.5km s-min=16.1km az=180.0*
BJI ***12*** *00:08:58.1, 45°.32S×167°.18E, h118km, mB5.5/9, mb5.2/15*
GCMT ***12*** *00:09:01.8±0.3, 45°.56S×166°.72E, h112km±3km, MW5.1, Moment Tensor Solution. s32,c38; s64,c95; Moment tensor: Scale 10^16^Nm; Mrr=0.68±.20; Mθθ3.77±.18; Mφφ=3.10±.19; Mrθ0.95±.15; Mθφ=3.62±.18; Mφr=3.04±.15; Best double couple: M0=6.00000×10^16^ NP1:φs=70.00000°, δ57.00000°, λ=174.00000°. NP2:φs=336.00000°, δ85.00000°, λ=33.00000°. Principal axes: T 6.0200, Plg19.0000°, Azm28.0000°; N -0.1600, Plg57.0000°, Azm148.0000°; P -5.8700, Plg27.0000°, Azm288.0000°; Data Used: II G IU IC CN.*

ISC 12 00:08:57.1±0.3, 45°.72S±0°.05×167°.22E±0°.05, h112km±3km, n164, σ1=23/122, mb5.0/21, 4C-5D, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	Deep Cove	0.24	349	PN	Pn	00 09 11.9	-1.0
DCZ				SN	Sn	00 09 23.3	-1.5
DCZ	Deep Cove	0.24	349	P	Pn	00 09 11.7	-1.2
DCZ				S	Sn	00 09 23.3	-1.5
WHZ	Wether Hill Ro	0.54	109	PN	Pn	00 09 15.1	+0.7
WHZ	Wether Hill Ro	0.54	109	P	Pn	00 09 15.1	+0.6
PYZ	Puysegur Point	0.59	220	PN	Pn	00 09 12.1	-2.7
PYZ				SN	Sn	00 09 23.0	-5.1
MLZ	Mavora Lakes	0.77	61	PN	Pn	00 09 17.6	+1.4
MLZ				SN	Sn	00 09 32.1	+1.5
MLZ	Mavora Lakes	0.77	61	P	Pn	00 09 17.6	+1.3
MLZ				S	Sn	00 09 32.1	+1.4
MSZ	Milford Sound	1.16	26	PN	Pn	00 09 21.4	+1.3
MSZ	Milford Sound	1.16	26	P	Pn	00 09 21.4	+1.2
APZ	The Paps	1.24	155	PN	Pn	00 09 20.2	-0.8
EAZ	Earnscleugh	1.55	72	PN	Pn	00 09 27.0	+2.4
EAZ	Earnscleugh	1.55	72	P	Pn	00 09 27.0	+2.4
WKZ	Wanaka	1.55	56	PN	Pn	00 09 27.2	+2.6
WKZ	Wanaka	1.55	56	P	Pn	00 09 27.2	+2.6
SYZ	Scrubby Hill	1.57	122	PN	Pn	00 09 25.4	+0.5
SYZ	Scrubby Hill	1.57	122	P	Pn	00 09 25.4	+0.6
TUZ	Tuapeka	1.70	99	PN	Pn	00 09 27.4	+0.9
TUZ	Tuapeka	1.70	99	P	Pn	00 09 27.4	+0.9
JCZ	Jackson Bay	1.97	34	PN	Pn	00 09 31.7	+1.8
LBZ	Lake Benmore	2.49	59	PN	Pn	00 09 37.3	+0.8
LBZ	Lake Benmore	2.49	59	P	Pn	00 09 37.3	+0.9
ODZ	Otahua Downs	2.50	76	PN	Pn	00 09 37.5	+0.9
ODZ	Otahua Downs	2.50	76	P	Pn	00 09 37.5	+0.8
FOZ	Fox Glacier	2.78	40	PN	Pn	00 09 42.2	+1.9
RPZ	Rata Peaks	3.39	55	PN	Pn	00 09 48.5	+0.2
RPZ	Rata Peaks	3.39	55	P	Pn	00 09 48.9	+0.6
	501nm,0.3s,baz=224,slow=5.4,SNR=2112						
RPZ				S	Sn	00 10 29.4	+1.6
	2μm,0.3s,baz=359,slow=24,SNR=81						
RPZ	Rata Peaks	3.39	55	P	Pn	00 09 48.5	+0.2
WVZ	Waitaha Valley	3.65	45	PN	Pn	00 09 52.1	+0.3
MQZ	McQueen's Vall	4.36	64	PN	Pn	00 10 02.0	+0.7
MQZ	McQueen's Vall	4.36	64	P	Pn	00 10 02.0	+0.7
CRLZ	Canterbury Las	4.41	63	PN	Pn	00 10 02.7	+0.7
CRLZ	Canterbury Las	4.41	63	P	Pn	00 10 02.7	+0.8
LTZ	Lake Taylor	4.67	53	PN	Pn	00 10 05.2	-0.2
DSZ	Denniston Nort	5.17	42	PN	Pn	00 10 12.3	0.0
DSZ	Denniston Nort	5.17	42	P	Pn	00 10 12.3	0.0
THZ	Tophouse	5.71	48	PN	Pn	00 10 18.9	-0.5
THZ	Tophouse	5.71	48	P	Pn	00 10 18.9	-0.6
QRZ	Quartz Range	6.24	40	PN	Pn	00 10 26.3	-0.3
QRZ	Quartz Range	6.24	40	P	Pn	00 10 26.3	-0.4
NNZ	Nelson	6.35	47	PN	Pn	00 10 28.0	-0.1
NNZ	Nelson	6.35	47	P	Pn	00 10 28.0	-0.2
TCW	Tory Channel	6.83	51	PN	Pn	00 10 33.6	-1.0
TCW	Tory Channel	6.83	51	P	Pn	00 10 33.6	-1.0
SNZO	South Karori	7.00	54	PN	Pn	00 10 36.3	-0.7
SNZO	South Karori	7.00	54	P	Pn	00 10 36.3	-0.7
BHW	Baring Head	7.03	55	PN	Pn	00 10 37.4	+0.1
BHW	Baring Head	7.03	55	P	Pn	00 10 37.4	0.0
WEL	Wellington	7.05	54	PN	Pn	00 10 38.4	+0.7
CAW	Cannon Point	7.34	54	PN	Pn	00 10 40.8	-0.8
CAW	Cannon Point	7.34	54	P	Pn	00 10 40.8	-0.8
KIW	Kapiti Island	7.42	52	PN	Pn	00 10 41.5	-1.1
KIW	Kapiti Island	7.42	52	P	Pn	00 10 41.5	-1.1
TRWZ	Traveller	7.51	58	PN	Pn	00 10 44.8	+0.9
MTW	Mount Morrison	7.55	56	PN	Pn	00 10 43.8	-0.7
MTW				SN	Sn	00 12 04.4	-4.1
OGWZ	Otaki Gorge	7.59	53	*e*PN	Pn	00 10 43.6	-1.4
HOWZ	Holdsworth Sta	7.73	54	PN	Pn	00 10 45.8	-1.0
MRZ	Mangatainoka R	7.92	53	PN	Pn	00 10 47.5	-2.0
MRZ				SN	Sn	00 12 14.2	-3.3
NEZ	North Egmont	8.20	41	PN	Pn	00 10 54.6	+1.3
PKE	Pukeiti	8.21	40	PN	Pn	00 10 54.5	+1.0
PKE				SN	Sn	00 12 23.8	-0.7
WAZ	Wanganui	8.25	47	PN	Pn	00 10 54.3	+0.3
BFZ	Birch Farm	8.29	56	PN	Pn	00 10 54.5	0.0
BFZ				SN	Sn	00 12 23.5	-2.9
TSZ	Takapari Road	8.55	52	PN	Pn	00 10 57.8	-0.2
VRZ	Vera Road	8.63	43	PN	Pn	00 10 59.4	+0.3
WPHZ	Waipukurau	8.81	53	SN	Sn	00 12 36.5	-2.5
HIZ	Hauiti	9.16	41	PN	Pn	00 11 04.3	-2.0
HIZ				SN	Sn	00 12 45.6	-1.9
KAHZ	Kahuranaki	9.24	54	PN	Pn	00 11 06.2	-1.2
KNZ	Kokohu	10.22	53	PN	Pn	00 11 19.1	-1.6
MCQ	Macquarie Isla	10.26	208	*e*Pn	Pn	00 11 19.1	-1.9
URZ	Urewera	10.47	48	PN	Pn	00 11 20.8	-3.1
URZ	Urewera	10.47	48	P	Pn	00 11 21.8	-2.2
	24nm,0.3s,baz=241,slow=7.9,SNR=47						
URZ				S	Sn	00 13 13.4	-5.9
	8.1nm,0.3s,baz=74,slow=17,SNR=6.8						
URZ	Urewera	10.47	48	*e*Pn	Pn	00 11 20.7	-3.3
	130nm,0.6s						
URZ				*e*Sn	Sn	00 13 10.9	-8.3
WCZ	Waipu Caves	11.15	31	PN	Pn	00 11 34.1	+1.0
OUZ	Omahuta	11.55	27	PN	Pn	00 11 39.7	+1.3
OUZ	Omahuta	11.55	27	*e*Pn	Pn	00 11 38.5	+0.1
	98nm,0.5s						
MOO	Moorlands	14.76	276	*e*P	Pn	00 12 19.7	-0.4
CNB	Canberra Magne	17.06	301	*e*P	Pn	00 12 49.5	+0.9
CAN	Canberra	17.28	301	*e*P	Pn	00 12 51.7	+0.5
	88nm,1.4s						
TOO	Toolangi	18.13	289	*e*P	P	00 13 00.4	+0.1
YNG	Young	18.34	302	*e*P	P	00 13 03.2	+0.6
	42nm,1.3s						
ARMA	Armidale	19.54	316	*e*P	P	00 13 17.7	+1.9
ARMA				*e*S	S	00 16 57.8	+7.5
ARMA	Armidale	19.54	316	*e*P	P	00 13 17.4	+1.6
	97nm,1.3s						
DZM	Mont Dzumac	23.60	358	*e*P	P	00 13 59.2	+1.5
STKA	Stephens Creek	24.16	296	*e*P	P	00 14 03.0	+0.3
	53nm,1.1s,mb4.8						
STKA	Stephens Creek	24.16	296	P	P	00 14 02.7	0.0
	84nm,1.1s,mb5.0,baz=123,slow=11,SNR=43						
STKA				LR	LR	00 21 43.6	
	comp=Z,244nm,19.5s,baz=296,slow=32						
STKA	Stephens Creek	24.16	296	*e*P	P	00 14 02.8	+0.1
FORT	Forrest	33.81	282	*e*P	P	00 15 28.0	-0.4
	30nm,0.8s,mb5.2						
ASAR	Alice Springs	34.75	298	P	P	00 15 35.3	-1.2
	30nm,1.1s,mb5.1,baz=132,slow=9.0,SNR=42						
CASY	Casey	36.08	215	*e*P	P	00 15 48.2	+0.8
	8.1nm,1.1s,mb4.6						
HNR	Honiara	36.69	348	*e*P	P	00 15 52.1	-1.1
WRA	Warramunga Arr	37.30	303	P	P	00 15 56.8	-1.5
	14nm,0.7s,mb5.0,baz=135,slow=8.0,SNR=66						
WRA				ScP	ScP	00 21 52.0	+0.1
	2.9nm,1.3s,baz=138,slow=4.1,SNR=6.9						
WRAB	Tennant Creek	37.30	303	P	P	00 15 56.6	-1.7
	143nm,1.1s,mb5.8,SNR=9.6						
WRAB	Tennant Creek	37.30	303	*e*P	P	00 15 56.4	-1.9
	20nm,0.9s,mb5.0						
COEN	Coen	37.61	320	*e*P	P	00 16 00.3	-0.6
	66nm,0.8s,mb5.5						
QSPA	South Pole Qui	44.41	180	P	P	00 16 56.9	+1.0
	5.0nm,0.9s,mb4.2,baz=15,slow=2.1,SNR=11						
QSPA	South Pole Qui	44.41	180	*e*P	P	00 16 56.8	+1.0
	15nm,1.4s,mb4.5						
MBWA	Marble Bar	45.74	286	*e*P	P	00 17 05.6	-1.5
	31nm,1.2s,mb4.9						
MAW	Mawson	53.66	207	LR	LR	00 38 53.1	
	comp=Z,105nm,19.4s,baz=255,slow=34						
SYO	Syowa Base	59.24	199	⇑*e*P	P	00 18 44.4	-1.6
KSM	Kuching	68.65	296	*e*P	P	00 19 47.1	-1.2
	9.7nm,0.7s,mb4.7						
KULM	Kulim	77.76	291	*e*P	P	00 20 41.1	-0.8
	4.8nm,0.6s,mb4.4						
CMAR	Chiang Mai Arr	88.76	298	P	P	00 21 38.5	+0.4
	5.6nm,0.8s,mb4.7,baz=158,slow=3.5,SNR=32						
NJ2	Nanjing	88.94	321	*e*P	P	00 21 39.8	+1.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
CHTO	Chiang Mai	89.03	298	*e*P	P	00 21 39.2	-0.2
	comp=Z,3.6nm,0.9s,mb4.4						
WHN	Wuhan	89.77	317	P	P	00 21 44.8	+2.2
GYA	Guiyang	90.43	309	⇓*i*P	P	00 21 47.0	+1.3
GYA				sP	sP	00 22 31.7	+4.9
GYA				PP	PP	00 25 26.8	+4.7
GYA				SKS		00 32 07.3	
GYA				S	S	00 32 31.0	0.0
GYA				sS	sS	00 33 23.8	+2.4
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.2						
GYA				pmax	pmax		
	comp=Z,120nm,5.8s						
KMI	Kunming	91.58	305	P	P	00 21 53.2	+2.1
KMI				pP	pP	00 22 23.8	+3.4
KMI				sP	sP	00 22 36.2	+4.0
KMI				PP	PP	00 25 32.1	+0.8
KMI				S	S	00 32 40.9	-0.7
KMI				sS	sS	00 33 35.0	+2.9
KMI				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.9						
KMI				LR	LR		
	comp=N,200nm,18.4s						
KMI				LR	LR		
	comp=E,230nm,12.3s						
KMI				LR	LR		
	comp=Z,220nm,14.7s						
CD2	Chengdu	95.49	309	P	P	00 22 09.1	+0.1
CD2				pP	pP	00 22 41.7	+3.5
CD2				sP	sP	00 22 55.1	+5.0
CD2				PP	PP	00 26 04.7	+3.0
CD2				SKS		00 32 32.2	
CD2				S	S	00 33 12.6	-3.1
CD2				sS	sS	00 34 09.7	+3.2
CD2				SS	SS	00 39 49.0	+1.9
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.5						
CD2				pmax	pmax		
	comp=Z,110nm,4.5s						
CD2				LR	LR		
	comp=N,220nm,7.1s						
CD2				LR	LR		
	comp=Z,170nm,6.6s						
CN2	Changchun	96.54	331	*e*P	P	00 22 16.4	+3.0
CN2				*e*sP	sP	00 22 59.5	+5.0
CN2				*e*S	S	00 33 25.6	+1.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.4						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
BJI	Beijing	96.84	323	P	P	00 22 15.9	+1.1
BJI				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb5.3						
LZH	Lanzhou	99.45	313	*e*P	Pdif	00 22 28.8	+1.8
LZH				pP	pP	00 22 57.3	+1.3
LZH				sP	sP	00 23 10.5	+2.7
LZH				PP	PP	00 26 37.0	+5.0
LZH				*e*S	S	00 33 48.0	-1.1
LZH				sS	sS	00 34 38.5	-1.6
LZH				pmax	pmax		
	comp=Z,17nm,1.5s,mb5.3						
LZH				pmax	pmax		
	comp=Z,89nm,5.8s						
HHC	Hu-ho-hao-te	99.50	321	*e*P	Pdif	00 22 28.1	+0.8
HHC				pP	pP	00 22 58.9	+2.8
HHC				sP	sP	00 23 11.1	+3.2
HHC				PP	PP	00 26 36.4	+4.1
HHC				SKS		00 32 54.5	
HHC				S	S	00 33 48.3	-1.0
HHC				sS	sS	00 34 42.1	+1.7
HHC				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.8						
HHC				pmax	pmax		
	comp=Z,65nm,7.0s						
HHC				LR	LR		
	comp=N,120nm,18.4s						
HHC				LR	LR		
	comp=E,110nm,18.5s						
HHC				LR	LR		
	comp=Z,120nm,18.6s						
WMQ	Urumqi	113.59	309	*e*PKP	PKiKP	00 27 23.1	+1.7
AMTX	Amarillo	114.66	65	*e*PKP	PKiKP	00 27 22.4	-1.3
MK31	Makanchi Array	118.42	309	*e*PKPdf	PKPdf	00 27 29.5	-1.0
MKAR	Makanchi Array	118.42	309	PKP	PKPdf	00 27 30.2	-0.3
	comp=Z,0.4nm,0.5s,baz=188,slow=2.5,SNR=12						
INK	Inuvik	121.96	22	*e*PKPdf	PKPdf	00 27 35.5	-1.3
	comp=Z,1.9nm,0.5s,baz=125,slow=5.4,SNR=4.8						
INK	Inuvik	121.96	22	*e*PKPdf	PKPdf	00 27 35.7	-1.0
KURK	Kurchatov	122.68	311	*e*PKPdf	PKPdf	00 27 37.5	-1.1
WVT	Waverly	124.42	71	*e*PKPdf	PKPdf	00 27 41.7	-0.8
YKA	Yellowknife Ar	124.42	33	PKP	PKPdf	00 27 41.0	-0.6
	comp=Z,0.7nm,0.6s,baz=268,slow=2.1,SNR=4.9						
WCI	Wyandotte Cave	126.61	70	*e*PKPdf	PKPdf	00 27 46.4	-0.2
RES	Resolute Bay	135.51	22	*e*PKPdf	PKPdf	00 28 02.8	+0.5
DBIC	Dimbokro	140.50	192	PKhKP	PKPpre	00 28 05.2	
	comp=Z,6.7nm,1.1s,baz=56,slow=7.6,SNR=6.2						
DBIC				PKP	PKPdf	00 28 14.7	+1.3
	comp=Z,4.3nm,0.8s,baz=146,slow=12,SNR=5.3						
SCHQ	Schefferville	145.08	55	PKPbc	PKPbc	00 28 19.6	-0.2
	comp=Z,5.1nm,0.6s,baz=291,slow=2.9,SNR=13						
BR131	Keskin Array S	145.76	277	*e*PKPbc	PKPbc	00 28 21.7	-0.9
BRTR	Keskin Array B	145.76	277	PKPbc	PKPbc	00 28 22.1	-0.5
	comp=Z,5.5nm,0.9s,baz=134,slow=4.6,SNR=24						
BRTR				pPKPbc	pPKPbc	00 28 53.4	+0.8
	comp=Z,4.2nm,0.8s,baz=144,slow=4.5,SNR=1.9						
KEV	Kevo	148.91	334	*e*pkp	PKPbc	00 28 29.7	-0.5
	comp=Z,5.5nm,0.6s						
ARCES	ARCESS Array B	149.47	335	PKPbc	PKPbc	00 28 31.9	+0.2
	comp=Z,6.1nm,0.6s,baz=88,slow=4.0,SNR=61						
ARCES				pPKPbc	pPKPbc	00 29 02.1	+0.1
	comp=Z,3.1nm,0.9s,baz=90,slow=2.9,SNR=2.3						
JOF	Joensuu	149.85	321	*e*pkp	PKPbc	00 28 31.7	-1.0
	comp=Z,3.8nm,0.6s						
TIRR	Tirgusor	151.11	282	⇓*i*P	PKPab	00 28 43.1	-1.4
AKASG	Malin Array Be	151.85	296	PKP	PKPdf	00 28 32.3	+1.0
	comp=Z,0.3nm,0.3s,baz=119,slow=1.7,SNR=4.3						
AKASG				PKPbc	PKPbc	00 28 37.4	-0.5
	comp=Z,3.1nm,0.5s,baz=83,slow=2.4,SNR=16						
AKBB	Malin Array Si	151.85	296	*e*PKPbc	PKPbc	00 28 37.3	-0.5
KIEV	Kiev	151.86	296	*e*PKPbc	PKPbc	00 28 37.0	-0.9
KAF	Kangasniemi	152.31	320	*e*pkp	PKPbc	00 28 36.7	-1.8
	comp=Z,6.2nm,0.5s,baz=65,slow=2.1						
FINES	FINESS Array B	152.61	319	PKPbc	PKPbc	00 28 39.2	0.0
	comp=Z,4.1nm,0.5s,baz=85,slow=3.7,SNR=64						
VRI	Vrincioaia	152.64	285	⇑*i*P	PKPab	00 28 50.7	-0.2
TAM	Tamanrasset	152.71	219	*e*PKPbc	PKPbc	00 28 40.9	+0.3
TESR		152.85	286	⇑*i*P	PKPab	00 28 51.5	-0.2
MLR	Muntele Rosu	153.08	284	⇑*i*P	PKPbc	00 28 40.8	+0.1
BURAR	Bucovina Array	154.02	288	⇓*i*P	PKPab	00 28 57.7	+1.0
BUR08	Bucovina Ar. S	154.04	288	*e*PKPab	PKPab	00 28 56.4	-0.4
VTS	Vitosha	154.13	276	⇓*i*P	PKPab	00 28 56.8	-0.5
BZS	Buzias	156.07	282	⇓*i*P	PKPab	00 29 05.0	-0.5
STHS	Stebnicka Huta	156.87	292	*e*PKP	PKPab	00 29 09.0	+0.2
VYHS	Vyhne	158.38	289	*e*PKP	PKPab	00 29 14.8	-0.6
MORC	Moravsky Berou	159.28	292	*e*PKPab	PKPab	00 29 18.7	-0.6
KEST	Kesra	160.54	247	PKPab	PKPab	00 29 25.2	0.0
	comp=Z,2.9nm,0.9s,baz=81,slow=1.3,SNR=8.2						
PGF	Pioggiola	164.05	266	*e*PKP2	PKPab	00 29 39.0	-1.4
	comp=Z,30nm,1.1s						
SBF	Sospel	165.53	270	*e*PKP2	PKPab	00 29 45.4	-1.5
	comp=Z,8.6nm,0.7s						
FRF	La Foret Royal	166.00	268	*e*PKP2	PKPab	00 29 47.6	-1.4
	comp=Z,5.7nm,0.8s						
LMR	La Mourre	166.03	267	*e*PKP2	PKPab	00 29 47.7	-1.5
	comp=Z,4.5nm,0.8s						
LPG	La Plagne	166.32	276	*e*PKP2	PKPab	00 29 48.8	-1.6
	comp=Z,3.8nm,0.7s						
LPL	La Plagne	166.34	276	*e*PKP2	PKPab	00 29 48.9	-1.5
	comp=Z,4.9nm,0.7s						
HAU	Haudompre	166.71	287	*e*PKP2	PKPab	00 29 50.2	-1.8
	comp=Z,8.1nm,0.9s						
ORIF	Oris-en-Rattie	166.84	273	*e*PKP2	PKPab	00 29 51.4	-1.3
	comp=Z,8.4nm,0.9s						
CABF	La Chapelle	166.89	281	*e*PKP2	PKPab	00 29 50.8	-2.0
	comp=Z,4.3nm,0.7s						
VIVF	Saint-Julien-l	167.67	272	*e*PKP2	PKPab	00 29 54.8	-1.6
LASF	Ste Croix	168.08	268	*e*PKP2	PKPab	00 29 56.7	-1.5
	comp=Z,23nm,1.3s						
LOR	Lormes	168.42	284	*e*PKP2	PKPab	00 29 58.1	-1.5
SMF	Signal de Mont	168.44	281	*e*PKP2	PKPab	00 29 57.9	-1.8
	comp=Z,5.8nm,0.8s						
SSF	Saint Saulge	168.67	283	*e*PKP2	PKPab	00 29 59.1	-1.6
	comp=Z,7.0nm,0.9s						
RJF	Les Rejaudoux	169.95	273	*e*PKP2	PKPab	00 30 05.3	-1.2
	comp=Z,14nm,1.0s						
SJPF	Ste Jean	171.33	257	*e*PKP2	PKPab	00 30 09.7	-2.9
EVO	Evora	171.99	208	*e*PKP2	PKPab	00 30 18.3	+2.8
	comp=Z,34nm,1.4s						

SKHL ***12*** *00:13:12.1±3.0, 43°

n25,σ1°22/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNGL	**BINGOL**	**0.37**	**210**	*i* P	**Pg**	**00 32 43.5**	**-0.2**
BNGL				*i* S	**Sg**	**00 32 49.6**	**+1.0**
ERZM	**Erzurum**	**0.63**	**358**	*i* P	**Pg**	**00 32 48.5**	**-0.2**
ERZM				*i* S	**Sg**	**00 32 54.8**	**-2.1**
ERZM	**Erzurum**	**0.63**	**358**	*i* P	**Pg**	**00 32 48.5**	**-0.2**
ERZM				*i* S	**Sg**	**00 32 54.8**	**-2.0**
EZM	**Erzurum**	**0.63**	**358**	*e*PG	**Pg**	**00 32 47.7**	**-1.0**
EZM	**Erzurum**	**0.63**	**358**	*e*Pg	**Pg**	**00 32 47.7**	**-1.0**
BINT	**Bingol**	**0.81**	**241**	*e*PG	**Pg**	**00 32 53.2**	**+1.2**
BINT	**Bingol**	**0.81**	**241**	*e*Pg	**Pg**	**00 32 53.3**	**+1.2**
KOPT	**Kop Dagi**	**1.01**	**317**	*i* P	**Pg**	**00 32 55.9**	**-0.2**
KOPT				*i* S	**Sg**	**00 33 10.3**	**+1.1**
KOPT	**Kop Dagi**	**1.01**	**317**	*i* P	**Pg**	**00 32 55.9**	**-0.1**
KOPT				*i* S	**Sg**	**00 33 10.3**	**+1.1**
TATV	**Tatvan**	**1.03**	**138**	*i* P	**Pg**	**00 32 55.8**	**-0.4**
TATV				*i* S	**Sg**	**00 33 09.6**	**+0.1**
TATV	**Tatvan**	**1.03**	**138**	*i* P	**Pg**	**00 32 55.8**	**-0.4**
TATV				*i* S	**Sg**	**00 33 09.6**	**+0.1**
TUTA	**Tutak**	**1.11**	**83**	*i* P	**Pg**	**00 32 56.9**	**-0.9**
TUTA				*i* S	**Sg**	**00 33 14.4**	**+2.2**
TUTA	**Tutak**	**1.11**	**83**	*i* P	**Pg**	**00 32 56.9**	**-0.9**
TUTA				*i* S	**Sg**	**00 33 14.4**	**+2.2**
AGRB	**Hanur-Agry**	**1.27**	**76**	*e*PN	**Pn**	**00 33 00.1**	**-1.2**
AGRB				*e*SN	**Sn**	**00 33 17.6**	**-1.4**
AGRB	**Hanur-Agry**	**1.27**	**76**	*e*Pn	**Pn**	**00 33 00.1**	**-1.2**
AGRB				*e*Sn	**Sn**	**00 33 17.6**	**-1.4**
BEST	**Besiri**	**1.39**	**184**	*i* P	**Pn**	**00 33 02.6**	**-0.3**
BEST				*i* S	**Sg**	**00 33 21.4**	**+0.3**
PTK	**Pertek**	**1.60**	**257**	*e*PN	**Pn**	**00 33 04.7**	**-1.2**
PTK	**Pertek**	**1.60**	**257**	*e*Pn	**Pn**	**00 33 04.7**	**-1.2**
DAGI	**Agillar**	**1.84**	**12**	*i* P	**Pn**	**00 33 10.4**	**+1.3**
DAGI				*i* S	**Sn**	**00 33 36.0**	**+3.0**
SVRC	**Sivrice-ELAZID**	**1.86**	**242**	*e*PN	**Pn**	**00 33 08.5**	**-0.9**
SVRC	**Sivrice-ELAZID**	**1.86**	**242**	*e*Pn	**Pn**	**00 33 08.5**	**-0.9**
GUMT	**Gumushane**	**1.89**	**309**	*e*PN	**Pn**	**00 33 08.0**	**-1.8**
GUMT	**Gumushane**	**1.89**	**309**	*e*Pn	**Pn**	**00 33 08.0**	**-1.8**
ARTV	**Artvin**	**1.95**	**12**	*e*P	**Pn**	**00 33 12.0**	**+1.4**
ARTV				*i* S	**Sn**	**00 33 37.6**	**+1.9**
ARTV	**Artvin**	**1.95**	**12**	*e*P	**Pn**	**00 33 12.0**	**+1.4**
ARTV				*i* S	**Sn**	**00 33 37.6**	**+1.9**

MAN 12 00:32:59, 8°.39N×125°.83E, h15km, mb4.5, ML3.4, MS3.3, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.61**	**340**	*e*P	Pg	00 33 10.8	-0.2
BUTP				*e*S	Sg	00 33 15.2	-3.9
BUKP	**Musuan**	**0.92**	**236**	*e*P	Pb	00 33 15.9	-0.7
BUKP				*e*S	Sb	00 33 25.3	-3.4
CGP	**Cagayan de Oro**	**1.13**	**273**	⇓*e*P	Pb	00 33 18.5	-1.7
CGP				*i* S	Sb	00 33 35.6	+0.9
TBP	**Tagbilaran**	**2.33**	**304**	*e*P	Pn	00 33 37.5	+0.7
TBP				*e*S	Sn	00 34 06.7	+1.3

*ISCJB **12** 00:38:14.0±0.4, 38°.07N±0°.03×21°.56E±0°.03, h10km±3km, Error ellipse: s-maj=5.5km s-min=3.5km az=171.4*
*ATH **12** 00:38:13.9, 38°.04N×21°.55E, h11km±1km, MD2.9/8*
*CSEM **12** 00:38:13.8±0.2, 38°.06N×21°.56E, h15km, MD2.9, Error ellipse: s-maj=4.2km s-min=3.0km az=176.0*
*NEIC **12** 00:38:13.9, 38°.04N×21°.55E, h11km, MD2.9(ATH), After ATH.*
*THE **12** 00:38:14.4, 38°.05N×21°.58E, h11km±10km, ML2.5/5, Error ellipse: s-maj=10.8km s-min=0.6km az=19.0*
ISC 12 00:38:14.2±0.5, 38°.06N±0°.03×21°.56E±0°.03, h14km±4km, n33, σ0°.77/58, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.07**	**270**	*e*Pg	**Pg**	**00 38 15.9**	**-1.2**
RLS				*e*Sg	**Sg**	**00 38 18.0**	**-1.2**
RLS	**Riolos of Patr**	**0.07**	**270**	*e*PG	**Pg**	**00 38 15.9**	**-1.2**
RLS				*e*SG	**Sg**	**00 38 18.0**	**-1.2**
RLS	**Riolos of Patr**	**0.07**	**270**	*e*Pg	**Pg**	**00 38 15.9**	**-1.2**
RLS				*e*Sg	**Sg**	**00 38 18.0**	**-1.2**
UPR	**University Cam**	**0.29**	**38**	*e*PB	**Pg**	**00 38 20.2**	**0.0**
UPR				*e*SB	**Sg**	**00 38 24.6**	**+0.3**
UPR	**University Cam**	**0.29**	**38**	*e*Pb	**Pg**	**00 38 20.2**	**0.0**
UPR				*e*Sb	**Sg**	**00 38 24.6**	**+0.3**
LAKA	**Lakka**	**0.38**	**61**	P	**Pg**	**00 38 21.4**	**-0.4**
LAKA				S	**Sg**	**00 38 27.5**	**+0.6**
LAKA	**Lakka**	**0.38**	**61**	P	**Pg**	**00 38 21.4**	**-0.4**
LAKA				S	**Sg**	**00 38 27.5**	**+0.6**
EFP	**Efpalio**	**0.46**	**36**	*e*PG	**Pg**	**00 38 22.9**	**-0.4**
EFP				*e*SB	**Sg**	**00 38 29.9**	**+0.4**
EFP	**Efpalio**	**0.46**	**36**	P	**Pg**	**00 38 22.9**	**-0.4**
EFP				S	**Sg**	**00 38 30.6**	**+1.1**
EFP	**Efpalio**	**0.46**	**36**	P	**Pg**	**00 38 22.9**	**-0.4**
EFP				*e*Sb	**Sg**	**00 38 29.9**	**+0.4**
EFP				S	**Sg**	**00 38 30.6**	**+1.1**
TRIZ	**Trizonia**	**0.51**	**52**	P	**Pg**	**00 38 23.4**	**-0.8**
TRIZ				S	**Sg**	**00 38 31.3**	**+0.3**
TRIZ	**Trizonia**	**0.51**	**52**	P	**Pg**	**00 38 23.4**	**-0.8**
TRIZ				S	**Sg**	**00 38 31.3**	**+0.3**
KFL	**Anninata**	**0.61**	**275**	P	**Pg**	**00 38 26.8**	**+0.6**
KFL				S	**Sg**	**00 38 35.7**	**+1.4**
KFL	**Anninata**	**0.61**	**275**	P	**Pg**	**00 38 26.8**	**+0.6**
KFL				S	**Sg**	**00 38 35.7**	**+1.4**
GUR	**Goura**	**0.63**	**101**	*e*PG	**Pg**	**00 38 25.8**	**-0.7**
GUR				*e*SB	**Sb**	**00 38 35.3**	**-0.2**
GUR	**Goura**	**0.63**	**101**	P	**Pg**	**00 38 25.6**	**-0.9**
GUR				S	**Sg**	**00 38 35.4**	**+0.6**
GUR	**Goura**	**0.63**	**101**	*e*Pg	**Pg**	**00 38 25.8**	**-0.7**
GUR				*e*Sb	**Sb**	**00 38 35.3**	**-0.2**
VLS	**Valsamata**	**0.78**	**279**	*e*Pg	**Pg**	**00 38 28.4**	**-0.9**
VLS				*e*Sb	**Sb**	**00 38 39.8**	**0.0**
VLS	**Valsamata**	**0.78**	**279**	*e*PG	**Pg**	**00 38 28.4**	**-0.9**
VLS				*e*SB	**Sb**	**00 38 39.8**	**0.0**
VLS	**Valsamata**	**0.78**	**279**	P	**Pg**	**00 38 28.6**	**-0.7**
VLS				S	**Sg**	**00 38 41.0**	**+1.5**
VLS	**Valsamata**	**0.78**	**279**	*e*Pg	**Pg**	**00 38 28.4**	**-0.9**
VLS				*e*Sb	**Sb**	**00 38 39.8**	**0.0**
VLS				S	**Sg**	**00 38 41.0**	**+1.5**
EVR	**Evrytania**	**0.88**	**13**	*e*Pb	**Pb**	**00 38 30.8**	**-0.4**
EVR	**Evrytania**	**0.88**	**13**	*e*PB	**Pb**	**00 38 30.8**	**-0.4**
EVR	**Evrytania**	**0.88**	**13**	*e*Pb	**Pb**	**00 38 30.8**	**-0.4**
ITM	**Ithomi**	**0.92**	**162**	*e*Pb	**Pb**	**00 38 31.3**	**-0.6**
ITM	**Ithomi**	**0.92**	**162**	*e*PB	**Pb**	**00 38 31.3**	**-0.6**
ITM	**Ithomi**	**0.92**	**162**	*e*PB	**Pb**	**00 38 31.3**	**-0.6**
ITM	**Ithomi**	**0.92**	**162**	*e*Pb	**Pb**	**00 38 31.3**	**-0.6**
VLX	**Vlachokerasia**	**0.94**	**136**	P	**Pb**	**00 38 32.3**	**0.0**
VLX				S	**Sg**	**00 38 46.1**	**+1.3**
VLX	**Vlachokerasia**	**0.94**	**136**	P	**Pb**	**00 38 32.3**	**0.0**
VLX				S	**Sg**	**00 38 46.1**	**+1.3**
LKD	**Levkas**	**0.97**	**312**	*e*Pn	**Pn**	**00 38 32.7**	**-0.6**
LKD	**Levkas**	**0.97**	**312**	*e*PN	**Pn**	**00 38 32.7**	**-0.6**
LKD	**Levkas**	**0.97**	**312**	*e*Pn	**Pn**	**00 38 32.7**	**-0.6**

IDC 12 00:44:09.4±3.4, 22°.28N×143°.85E, h94km±25km, mb3.4/7, mb1 3.5/8, mb1mx3.4/22, mbtmp3.5/8, Error ellipse: s-maj=83.0km s-min=16.0km az=81.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.03**	**343**	P	Pn	00 45 24.3	+1.8
	5.9nm,0.3s,baz=277,slow=18,SNR=6.3						
CBIJ				S	Sn	00 46 18.9	-0.4
	15nm,0.3s,baz=116,slow=23,SNR=11						
SONM	**Songino Array**	**39.30**	**320**	P	P	00 51 29.6	+0.6
	0.3nm,0.5s,baz=130,slow=7.9,SNR=4.1						
WRA	**Warramunga Arr**	**42.98**	**193**	P	P	00 51 59.9	+0.5
	0.2nm,0.3s,baz=13,slow=8.8,SNR=12						
ASAR	**Alice Springs**	**46.68**	**193**	P	P	00 52 27.7	-1.1
	0.2nm,0.3s,baz=14,slow=6.4,SNR=3.5						
MKAR	**Makanchi Array**	**54.77**	**312**	P	P	00 53 29.5	+0.1
	0.4nm,0.5s,baz=81,slow=8.9,SNR=7.0						
BVAR	**Borovoye Array**	**62.64**	**319**	P	P	00 54 24.0	+0.2
	2.8nm,0.4s,baz=90,slow=6.4,SNR=27						
ARCES	**ARCESS Array B**	**78.57**	**342**	P	P	00 56 01.3	+1.0
	1.2nm,0.9s,baz=70,slow=7.9,SNR=3.4						
FINES	**FINESS Array B**	**82.93**	**335**	P	P	00 56 22.3	-1.3
	0.3nm,0.3s,baz=54,slow=5.3,SNR=7.6						

*DDA **12** 00:50:29.5, 38°.82N×40°.32E, h7km±5km, Md3.0*
*ISCJB **12** 00:50:30.7±0.4, 38°.85N±0°.03×40°.30E±0°.04, h21km±5km, Error ellipse: s-maj=5.4km s-min=4.5km az=154.4*
*ISK **12** 00:50:30.0, 38°.91N×40°.22E, h17km, MD2.9*
*CSEM **12** 00:50:30.4±0.1, 38°.84N×40°.25E, h19km, MD2.9, Error ellipse: s-maj=2.6km s-min=1.6km az=139.0*
ISC 12 00:50:30.5±0.5, 38°.84N±0°.03×40°.29E±0°.03, h17km±4km, n21, σ0°.85/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BINT	**Bingol**	**0.16**	**77**	PG	**Pg**	**00 50 35.5**	**+0.7**
BINT				*e*SG	**Sg**	**00 50 39.4**	**+1.8**
BINT	**Bingol**	**0.16**	**77**	*i* Pg	**Pg**	**00 50 35.5**	**+0.8**
BINT				*e*Sg	**Sg**	**00 50 39.4**	**+1.8**
BNGL	**BINGOL**	**0.68**	**80**	*i* P	**Pg**	**00 50 42.5**	**-1.3**
BNGL				*i* S	**Sg**	**00 50 52.2**	**-0.7**
PTK	**Pertek**	**0.70**	**275**	*e*PG	**Pg**	**00 50 42.7**	**-1.6**
PTK				*e*SG	**Sg**	**00 50 53.3**	**-0.3**
PTK	**Pertek**	**0.70**	**275**	*e*Pg	**Pg**	**00 50 42.7**	**-1.6**
PTK				*e*Sg	**Sg**	**00 50 53.3**	**-0.3**
SVRC	**Sivrice-ELAZID**	**0.90**	**239**	*e*PG	**Pg**	**00 50 47.5**	**-0.4**
SVRC				*e*SG	**Sg**	**00 51 00.7**	**+1.0**
SVRC	**Sivrice-ELAZID**	**0.90**	**239**	*e*Pg	**Pg**	**00 50 47.5**	**-0.4**
SVRC				*e*Sg	**Sg**	**00 51 00.7**	**+1.0**
DIYA	**Diyarbakir**	**0.92**	**188**	*i* P	**Pb**	**00 50 47.7**	**-0.3**
DIYA				*i* S	**Sb**	**00 50 59.7**	**-0.3**
DIYA	**Diyarbakir**	**0.92**	**188**	*i* P	**Pb**	**00 50 47.7**	**-0.3**
DIYA				*i* S	**Sb**	**00 50 59.7**	**-0.3**
ELZG	**Elazig**	**1.08**	**252**	*i* P	**Pb**	**00 50 49.8**	**-0.8**
ELZG				*i* S	**Sb**	**00 51 08.7**	**+4.3**
ELZG	**Elazig**	**1.08**	**252**	*i* P	**Pb**	**00 50 49.8**	**-0.8**
KOPT	**Kop Dagi**	**1.19**	**8**	*i* P	**Pn**	**00 50 52.8**	**+0.5**
KOPT				*i* S	**Sb**	**00 51 12.7**	**+5.1**
KOPT	**Kop Dagi**	**1.19**	**8**	*i* P	**Pn**	**00 50 52.8**	**+0.5**
BEST	**Besiri**	**1.22**	**141**	*e*P	**Pn**	**00 50 53.2**	**+0.5**
BEST				*i* S	**Sb**	**00 51 08.6**	**+0.1**
EZM	**Erzurum**	**1.35**	**38**	*e*PN	**Pn**	**00 50 54.1**	**-0.4**
ERZM	**Erzurum**	**1.35**	**38**	*i* P	**Pn**	**00 50 55.0**	**+0.4**
ERZM				*i* S	**Sn**	**00 51 11.9**	**-0.2**
ERZM	**Erzurum**	**1.35**	**38**	*i* P	**Pn**	**00 50 55.0**	**+0.5**
ERZM				*i* S	**Sn**	**00 51 11.9**	**-0.2**
KEMA	**Kemaliye**	**1.46**	**288**	*i* P	**Pn**	**00 50 55.7**	**-0.4**
KEMA				*i* S	**Sn**	**00 51 17.8**	**+3.0**
KEMA	**Kemaliye**	**1.46**	**288**	*i* P	**Pn**	**00 50 55.7**	**-0.4**
KEMA				*i* S	**Sn**	**00 51 17.8**	**+3.0**
MARD	**Mardin**	**1.57**	**166**	*i* P	**Pn**	**00 50 57.5**	**0.0**
MARD				*i* S	**Sn**	**00 51 17.7**	**+0.3**
GUMT	**Gumushane**	**1.74**	**339**	*e*PN	**Pn**	**00 50 59.4**	**-0.4**

*IDC **12** 00:58:46.3±3.8, 44°.14N×149°.34E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.6/23, mbtmp3.7/6, Error ellipse: s-maj=117.1km s-min=34.6km az=1.0*
*ISCJB **12** 00:58:50.8±2.8, 44°.4N±0°.6×149°.2E±0°.2, h33km, mb3.8/10, Error ellipse: s-maj=83.2km s-min=24.5km az=178.0*
*NEIC **12** 00:58:51.6±2.2, 44°.11N×149°.26E, h35km, mb3.9/3, Error ellipse: s-maj=69.6km s-min=18.3km az=179.0*
ISC 12 00:58:52.3±2.8, 44°.3N±0°.6×149°.3E±0°.2, h35km, n12, σ0°.50/12, mb3.8/10, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULN	**Ulaanbaatar**	**29.23**	**292**	*e*P	**P**	**01 04 50.9**	**+0.3**
	0.8nm,0.6s,mb3.6						
SONM	**Songino Array**	**29.68**	**292**	P	**P**	**01 04 54.6**	**+0.1**
	0.7nm,0.6s,mb3.5,baz=85,slow=8.6,SNR=7.3						
MK31	**Makanchi Array**	**45.69**	**298**	*e*P	**P**	**01 07 09.4**	**-0.1**
MKAR	**Makanchi Array**	**45.69**	**298**	P	**P**	**01 07 09.1**	**-0.4**
	1.5nm,0.7s,mb4.0,baz=78,slow=8.3,SNR=11						
KURK	**Kurchatov**	**46.49**	**304**	*e*P	**P**	**01 07 15.1**	**-0.7**
	1.0nm,0.7s,mb3.9						
BVAR	**Borovoye Array**	**50.34**	**310**	P	**P**	**01 07 46.5**	**+1.2**
	0.1nm,0.4s,mb3.2,baz=87,slow=5.9,SNR=2.7						
ABKAR	**Akbulak array**	**57.91**	**309**	*e*P	**P**	**01 08 40.3**	**-0.3**
	0.8nm,0.6s,mb3.9						
JOF	**Joensuu**	**62.31**	**333**	*e*p	**P**	**01 09 09.9**	**-0.6**
	1.7nm,0.5s,mb4.4						
FINES	**FINESS Array B**	**65.08**	**334**	P	**P**	**01 09 28.9**	**+0.1**
	1.5nm,0.6s,mb4.2,baz=28,slow=8.6,SNR=11						
NB2	**NORSAR Subarra**	**69.64**	**340**	P	**P**	**01 09 57.7**	**+0.1**
	comp=Z,3.0nm,1.1s,mb4.1,baz=30,slow=6.2						
NOA	**NORSAR Array B**	**69.64**	**340**	P	**P**	**01 09 58.0**	**+0.4**
	comp=Z,1.4nm,0.9s,mb3.9,baz=31,slow=6.3,SNR=3.3						
TXAR	**Lajitas Array**	**81.07**	**58**	P	**P**	**01 11 03.9**	**0.0**
	comp=Z,0.1nm,0.6s,mb2.9,baz=279,slow=2.9,SNR=3.5						

*ISCJB **12** 01:00:37.3±1.6, 23°.6S±0°.1×179°.9E±0°.2, h533km±17km, mb4.2/10, Error ellipse: s-maj=22.8km s-min=17.7km az=156.1*
*IDC **12** 01:00:38.3±2.6, 23°.64S×179°.97E, h530km±28km, mb3.6/7, mb1 3.8/9, mb1mx3.6/16, mbtmp3.7/9, Error ellipse: s-maj=31.8km s-min=19.8km az=10.0*
*NEIC **12** 01:00:38.0±1.3, 23°.63S×180°.00E, h533km±14km, mb4.6/4, Error ellipse: s-maj=19.5km s-min=14.1km az=197.0*
ISC 12 01:00:39.3±1.6, 23°.8S±0°.1×179°.9E±0°.2, h537km±17km, n22, σ0°.89/17, mb4.2/10, 1C, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.75**	**161**	P	**P**	**01 02 14.8**	**-0.1**
	58nm,0.3s,baz=270,slow=24,SNR=5.8						
URZ	**Urewera**	**14.60**	**189**	P	**P**	**01 03 44.8**	**+0.2**
	11nm,0.3s,baz=52,slow=2.6,SNR=33						
URZ				S	**S**	**01 06 16.3**	**-0.9**
	1.9nm,0.3s,baz=67,slow=21,SNR=9.7						
URZ	**Urewera**	**14.60**	**189**	*e*P	**P**	**01 03 44.4**	**-0.2**
	38nm,0.5s						
URZ				S	**S**	**01 06 16.3**	**-0.9**
RPZ	**Rata Peaks**	**21.15**	**198**	P	**P**	**01 04 47.4**	**+1.2**
	9.5nm,0.6s,mb4.6,baz=51,slow=6.5,SNR=3.8						
CTA	**Charters Tower**	**31.41**	**270**	P	**P**	**01 06 16.9**	**+0.3**
	10nm,0.4s,mb4.7,baz=91,slow=11,SNR=18						
CTAO	**Charters Tower**	**31.41**	**270**	*e*P	**P**	**01 06 16.7**	**0.0**
	6.4nm,0.3s,mb4.6						
STKA	**Stephens Creek**	**34.69**	**248**	P	**P**	**01 06 45.6**	**+1.3**
	2.8nm,0.5s,mb4.1,baz=83,slow=8.1,SNR=3.4						
ASAR	**Alice Springs**	**41.98**	**261**	P	**P**	**01 07 43.4**	**-0.1**
	4.9nm,0.8s,mb4.1,baz=101,slow=7.2,SNR=43						
WRA	**Warramunga Arr**	**42.34**	**266**	P	**P**	**01 07 45.5**	**-0.9**
	3.5nm,0.4s,mb4.3,baz=92,slow=8.5,SNR=176						
FORT	**Forrest**	**46.28**	**250**	*e*P	**P**	**01 08 16.0**	**-0.6**
	12nm,0.5s,mb4.7						
CASY	**Casey**	**60.16**	**206**	*e*P	**P**	**01 09 54.6**	**0.0**
	2.9nm,0.6s,mb3.8						
QSPA	**South Pole Qui**	**66.27**	**180**	*e*P	**P**	**01 10 35.3**	**+1.7**
	19nm,1.2s,mb4.5						
MAW	**Mawson**	**77.81**	**200**	P	**P**	**01 11 41.2**	**+0.5**
	2.9nm,0.6s,mb3.8,baz=137,slow=8.5,SNR=4.6						
SYO	**Syowa Base**	**83.08**	**193**	⇑*e*P	**P**	**01 12 06.4**	**-1.7**
TXAR	**Lajitas Array**	**90.44**	**58**	P	**P**	**01 12 43.4**	**-0.4**
	0.5nm,0.9s,mb3.3,baz=205,slow=5.5,SNR=4.7						
MKAR	**Makanchi Array**	**112.04**	**313**	PKiKP	PKiKP	01 18 11.7	-1.7
	0.3nm,0.7s,baz=157,slow=3.4,SNR=3.6						
BVAR	**Borovoye Array**	**120.33**	**319**	PKP	PKPdf	01 18 27.4	-1.7
	0.3nm,0.3s,baz=54,slow=3.8,SNR=3.7						
ARCES	**ARCESS Array B**	**131.79**	**348**	SKPbc	SKPbc	01 21 25.8	-0.5
	2.9nm,1.0s,baz=38,slow=14,SNR=4.3						
FINES	**FINESS Array B**	**138.34**	**341**	SKPbc	SKPbc	01 21 45.6	-1.3
	1.1nm,0.8s,baz=66,slow=4.6,SNR=4.9						
BRTR	**Keskin Array B**	**147.47**	**307**	PKPbc	PKPbc	01 19 22.1	-0.9
	0.5nm,0.7s,baz=142,slow=6.3,SNR=4.2						
MMAI	**Mount Meron Ar**	**147.60**	**294**	PKPbc	PKPbc	01 19 23.7	+0.1
	2.4nm,0.5s,baz=67,slow=6.4,SNR=12						
CLL	**Collm**	**150.75**	**343**	*i* PKPbc	PKPbc	01 19 29.9	-0.7

*ISK **12** 01:02:54.4, 37°.04N×29°.22E, h9km, MD3.0*
*ISCJB **12** 01:02:55.0±0.6, 37°.01N±0°.03×29°.19E±0°.04, h4km±7km, Error ellipse: s-maj=5.8km s-min=4.9km az=176.0*
*DDA **12** 01:02:55.4, 36°.99N×29°.17E, h7km±4km, Md2.9*
*CSEM **12** 01:02:55.1±0.2, 37°.01N×29°.21E, h10km, MD3.0, Error ellipse: s-maj=4.2km s-min=3.2km az=13.0*
ISC 12 01:02:55.6±0.5, 37°.01N±0°.03×29°.20E±0°.04, h8km±6km, n30, σ0°.88/45, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.28**	**59**	*e*Pg	**Pg**	**01 02 59.8**	**-1.4**
GLHS				*e*SG	**Sg**	**01 03 04.2**	**-0.7**
GLHS	**Glhisar (BURDU**	**0.28**	**59**	*e*Pg	**Pg**	**01 02 59.8**	**-1.3**
GLHS				*e*Sg	**Sg**	**01 03 04.2**	**-0.7**
GOLH	**Golhisar**	**0.37**	**52**	*i* P	**Pg**	**01 03 02.6**	**-0.2**
GOLH				*i* S	**Sg**	**01 03 08.8**	**+1.2**
GOLH	**Golhisar**	**0.37**	**52**	*i* P	**Pg**	**01 03 02.6**	**-0.2**
GOLH				*i* S	**Sg**	**01 03 08.8**	**+1.2**
TURN	**Turunc**	**0.50**	**254**	*i* P	**Pg**	**01 03 09.9**	**+4.7**
TURN				*i* S	**Sg**	**01 03 20.9**	**+9.1**
ELL	**Elmali**	**0.62**	**115**	*e*PG	**Pg**	**01 03 06.8**	**-0.8**
ELL				*e*SG	**Sg**	**01 03 16.2**	**+0.4**
ELL	**Elmali**	**0.62**	**115**	*e*Pg	**Pg**	**01 03 06.8**	**-0.8**
ELL				*e*Sg	**Sg**	**01 03 16.2**	**+0.4**
DNZL	**Cakiroluk**	**0.69**	**350**	*i* P	**Pg**	**01 03 08.8**	**-0.1**
DNZL				*i* S	**Sg**	**01 03 18.9**	**+1.1**
YER	**Yerkesik**	**0.74**	**280**	*e*PG	**Pg**	**01 03 09.4**	**-0.5**
YER	**Yerkesik**	**0.74**	**280**	*e*Pg	**Pg**	**01 03 09.4**	**-0.5**
DENT	**Denizli**	**0.75**	**350**	*e*PG	**Pg**	**01 03 08.8**	**-1.4**
DENT	**Denizli**	**0.75**	**350**	*e*Pg	**Pg**	**01 03 08.8**	**-1.3**
AKAS	**Kas**	**0.84**	**157**	*i* P	**Pg**	**01 03 11.4**	**-0.4**
AKAS				*i* S	**Sg**	**01 03 24.4**	**+1.8**
AKAS	**Kas**	**0.84**	**157**	*i* P	**Pg**	**01 03 11.4**	**-0.3**
AKAS				*i* S	**Sg**	**01 03 24.5**	**+1.8**
MLSB	**Milas**	**1.17**	**284**	*e*PN	**Pn**	**01 03 17.4**	**-0.8**
MLSB	**Milas**	**1.17**	**284**	*e*Pn	**Pn**	**01 03 17.4**	**-0.8**
AYDN	**Tasoluk**	**1.24**	**302**	*i* P	**Pb**	**01 03 20.2**	**+1.0**
AYDN				*i* S	**Sg**	**01 03 36.0**	**+0.6**
AYDN	**Tasoluk**	**1.24**	**302**	*i* P	**Pb**	**01 03 20.2**	**+1.0**
AYDN				*i* S	**Sg**	**01 03 36.0**	**+0.6**
DAT	**Datca**	**1.33**	**258**	*e*PN	**Pn**	**01 03 20.5**	**+0.1**
DAT	**Datca**	**1.33**	**258**	*e*Pn	**Pn**	**01 03 20.5**	**+0.1**
KHL	**Karahalli**	**1.33**	**11**	*e*PN	**Pn**	**01 03 19.4**	**-1.1**
KHL	**Karahalli**	**1.33**	**11**	*e*Pn	**Pn**	**01 03 19.4**	**-1.1**
KHAL	**Karahalli**	**1.38**	**10**	*i* P	**Pn**	**01 03 21.6**	**+0.6**
KHAL				*i* S	**Sb**	**01 03 40.8**	**+1.5**
KHAL	**Karahalli**	**1.38**	**10**	*i* P	**Pn**	**01 03 21.6**	**+0.6**
KHAL				*i* S	**Sb**	**01 03 40.8**	**+1.5**
BODT	**Bodrum**	**1.51**	**273**	*e*PN	**Pn**	**01 03 22.8**	**-0.1**
BODT	**Bodrum**	**1.51**	**273**	*e*Pn	**Pn**	**01 03 22.8**	**-0.1**
KULA	**Kula-Manisa**	**1.56**	**344**	*e*PN	**Pn**	**01 03 22.5**	**-1.1**
KULA	**Kula-Manisa**	**1.56**	**344**	*e*Pn	**Pn**	**01 03 22.5**	**-1.1**
DEMI	**Demirci**	**2.06**	**349**	*i* P	**Pn**	**01 03 30.9**	**+0.4**
DEMI				*e*S	**Sn**	**01 03 56.2**	**-0.1**
DEMI	**Demirci**	**2.06**	**349**	*i* P	**Pn**	**01 03 30.9**	**+0.4**

IDC 12 01:59:07.2±2.3, 22°.03N×143°.23E, h258km±19km, mb3.2/7, mb1 3.3/8, mb1mx3.1/22, mbtmp3.2/8, Error ellipse: s-maj=70.8km s-min=16.4km az=82.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.14**	**350**	P	Pn	02 00 25.4	+0.5
	11nm,0.3s,baz=297,slow=23,SNR=7.4						
CBIJ				S	S	02 01 27.1	+0.3
	8.1nm,0.3s,baz=268,slow=24,SNR=6.7						
SONM	**Songino Array**	**39.11**	**320**	P	P	02 06 09.8	0.0
	0.4nm,0.4s,baz=117,slow=6.2,SNR=4.8						
WRA	**Warramunga Arr**	**42.61**	**192**	P	P	02 06 38.3	-0.1
	0.3nm,0.4s,baz=8.6,slow=7.8,SNR=16						
ZALV	**Zalesovo Beam**	**53.98**	**321**	P	P

ZALV	Zalesovo Beam	19.72	25	P	P	02 25 27.6	-1.7
ARU	Arti	21.49	341	eP	P	02 25 49.3	+1.0
	comp=E,1.2nm,0.5s,mb3.5						
FINES	FINESS Array B	37.38	326	P	P	02 28 11.4	+0.8
	comp=E,1.8nm,1.0s,mb4.0,baz=120,slow=8.2,SNR=3.9						
FINES	FINESS Array B	37.38	326	P	P	02 28 11.4	+0.8
ARCES	ARCESS Array B	41.01	337	P	P	02 28 41.6	+0.9
	comp=E,0.9nm,0.8s,mb3.6,baz=102,slow=8.4,SNR=4.2						
ARCES	ARCESS Array B	41.01	337	P	P	02 28 41.6	+0.9
NOA	NORSAR Array B	44.28	323	P	P	02 29 07.0	-0.3
	comp=E,0.8nm,0.9s,mb3.5,baz=100,slow=7.9,SNR=2.8						
NOA	NORSAR Array B	44.28	323	P	P	02 29 07.0	-0.3

*ISCJB **12** 02:32:57.3±0.5, 38.°16N±0.°02×21.°59E±0.°02, h8km±4km, Error ellipse: s-maj=3.3km s-min=3.2km az=173.5*
*ATH **12** 02:32:57.1, 38.°15N×21.°62E, h24km, MD3.3/10, ML3.0*
*CSEM **12** 02:32:57.4±0.2, 38.°15N×21.°58E, h12km, ML3.0, Error ellipse: s-maj=4.4km s-min=4.1km az=153.0*
*NEIC **12** 02:32:57.1, 38.°15N×21.°62E, h24km, ML3.0(ATH), After ATH.*
*THE **12** 02:32:57.6, 38.°14N×21.°61E, h0km±2km, ML3.7/12, Error ellipse: s-maj=2.2km s-min=0.7km az=258.0*

ISC 12 02:32:58.0±0.3, 38.°16N±0.°02×21.°59E±0.°02, h15km±2km, n93, σ1.°20/141, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.14	224	ePb	Pg	02 33 02.2	+0.5
RLS				eSb	Sg	02 33 05.8	+1.6
RLS	Riolos of Patr	0.14	224	ePB	Pg	02 33 02.2	+0.5
RLS				eSB	Sg	02 33 05.8	+1.6
RLS	Riolos of Patr	0.14	224	ePb	Pg	02 33 02.2	+0.5
UPR	University Cam	0.20	51	ePB	Pg	02 33 02.4	-0.2
UPR				eSB	Sg	02 33 06.8	+1.1
UPR	University Cam	0.20	51	P	Pg	02 33 02.5	-0.1
UPR	University Cam	0.20	51	P	Pg	02 33 02.5	-0.1
UPR				eSb	Sg	02 33 06.8	+1.1
LAKA	Lakka	0.32	75	P	Pg	02 33 04.0	-0.5
LAKA				S	Sg	02 33 08.9	-0.1
LAKA	Lakka	0.32	75	P	Pg	02 33 04.0	-0.5
LAKA				S	Sg	02 33 08.9	-0.1
EFP	Efpalio	0.36	43	ePB	Pg	02 33 04.8	-0.6
EFP				eSB	Sg	02 33 10.9	+0.5
EFP	Efpalio	0.36	43	P	Pg	02 33 05.1	-0.3
EFP				S	Sg	02 33 10.9	+0.5
EFP	Efpalio	0.36	43	ePb	Pg	02 33 04.8	-0.6
EFP	Efpalio	0.36	43	P	Pg	02 33 05.1	-0.3
EFP				S	Sg	02 33 10.9	+0.5
TRIZ	Trizonia	0.43	61	P	Pg	02 33 05.9	-0.7
TRIZ				S	Sg	02 33 12.5	0.0
TRIZ	Trizonia	0.43	61	P	Pg	02 33 05.9	-0.7
TRIZ				S	Sg	02 33 12.5	0.0
KALE	Kalithea	0.49	62	P	Pg	02 33 06.8	-0.9
KALE				S	Sg	02 33 14.2	-0.1
KALE	Kalithea	0.49	62	P	Pg	02 33 06.8	-0.9
KALE				S	Sg	02 33 14.2	-0.1
GUR	Goura	0.63	110	ePN	Pn	02 33 09.0	-3.4
GUR				eSN	Sg	02 33 18.7	-0.1
GUR	Goura	0.63	110	P	Pg	02 33 09.1	-1.3
GUR				S	Sg	02 33 18.6	-0.2
GUR	Goura	0.63	110	P	Pg	02 33 09.1	-1.3
GUR				S	Sg	02 33 18.6	-0.2
EVR	Evrytania	0.77	13	ePn	Pn	02 33 12.2	-2.2
EVR	Evrytania	0.77	13	ePn	Pn	02 33 12.2	-2.2
EVR	Evrytania	0.77	13	ePn	Pn	02 33 12.2	-2.2
DSF	Desfina	0.78	71	P	Pg	02 33 11.3	-1.8
DSF				S	Sg	02 33 22.8	-0.6
DSF	Desfina	0.78	71	P	Pg	02 33 11.3	-1.8
DSF				S	Sg	02 33 22.8	-0.6
VLS	Valsamata	0.79	272	ePb	Pb	02 33 12.5	-0.9
VLS				eSn	Sn	02 33 25.2	-0.9
VLS	Valsamata	0.79	272	ePB	Pb	02 33 12.5	-0.9
VLS				eSN	Sn	02 33 25.2	-0.9
VLS	Valsamata	0.79	272	P	Pg	02 33 12.4	-0.9
VLS				S	Sg	02 33 25.7	+2.0
VLS	Valsamata	0.79	272	ePb	Pb	02 33 12.5	-0.9
VLS				eSn	Sn	02 33 25.2	-0.9
VLS				S	Sg	02 33 25.7	+2.0
LKD	Levkas	0.92	307	ePn	Pn	02 33 15.2	-1.1
LKD	Levkas	0.92	307	ePN	Pn	02 33 15.2	-1.1
LKD	Levkas	0.92	307	ePn	Pn	02 33 15.2	-1.1
LKD2	Lefkada island	0.96	311	P	Pb	02 33 15.8	-0.6
LKD2				S	Sb	02 33 30.5	+1.5
LKD2	Lefkada island	0.96	311	P	Pb	02 33 15.8	-0.6
LKD2				S	Sb	02 33 30.5	+1.5
VLX	Vlachokerasia	1.01	141	ePN	Pb	02 33 16.1	-1.0
VLX				eSN	Sn	02 33 30.3	-1.1
VLX	Vlachokerasia	1.01	141	P	Pb	02 33 16.1	-1.0
VLX				S	Sb	02 33 31.2	+1.1
VLX	Vlachokerasia	1.01	141	P	Pb	02 33 16.1	-1.0
VLX				eSn	Sn	02 33 30.3	-1.1
VLX				S	Sb	02 33 31.2	+1.1
ITM	Ithomi	1.01	165	ePn	Pn	02 33 16.1	-1.6
ITM				eSn	Sn	02 33 30.8	-0.8
ITM	Ithomi	1.01	165	ePN	Pn	02 33 16.1	-1.6
ITM				eSN	Sn	02 33 30.8	-0.8
ITM	Ithomi	1.01	165	P	Pb	02 33 16.3	-0.9
ITM				S	Sb	02 33 31.7	+1.3
ITM	Ithomi	1.01	165	P	Pb	02 33 16.3	-0.9
ITM				eSn	Sn	02 33 30.8	-0.8
ITM				S	Sb	02 33 31.7	+1.3
AGG	Agios Georgios	1.04	34	ePb	Pb	02 33 16.1	-1.5
AGG	Agios Georgios	1.04	34	ePB	Pb	02 33 16.1	-1.5
AGG	Agios Georgios	1.04	34	P	Pb	02 33 16.4	-1.2
AGG				S	Sb	02 33 31.7	+0.6
AGG	Agios Georgios	1.04	34	ePb	Pb	02 33 16.1	-1.5
AGG	Agios Georgios	1.04	34	P	Pb	02 33 16.4	-1.2
AGG				S	Sb	02 33 31.7	+0.6
LTK	Loutraki	1.09	97	ePN	Pn	02 33 17.6	-1.2
LTK	Loutraki	1.09	97	P	Pb	02 33 17.7	-0.9
LTK				S	Sb	02 33 33.9	+1.2
LTK	Loutraki	1.09	97	P	Pb	02 33 17.7	-0.9
LTK				S	Sb	02 33 33.9	+1.2
LKR	Lokris	1.21	66	ePn	Pn	02 33 19.3	-1.0
LKR	Lokris	1.21	66	ePN	Pn	02 33 19.3	-1.0
LKR	Lokris	1.21	66	P	Pn	02 33 20.0	-0.3
LKR				S	Sb	02 33 37.5	+1.5
LKR	Lokris	1.21	66	ePn	Pn	02 33 19.3	-1.0
LKR	Lokris	1.21	66	P	Pn	02 33 20.0	-0.3
LKR				S	Sb	02 33 37.5	+1.5
ATAL	Atalanti	1.24	64	P	Pn	02 33 20.4	-0.4
ATAL				S	Sb	02 33 39.1	+2.1
ATAL	Atalanti	1.24	64	P	Pn	02 33 20.4	-0.4
ATAL				S	Sb	02 33 39.1	+2.1
PYL	PYLOS	1.27	175	ePN	Pn	02 33 20.6	-0.5
PYL	PYLOS	1.27	175	P	Pn	02 33 21.0	-0.1
PYL				S	Sb	02 33 39.1	+1.4
PYL	PYLOS	1.27	175	ePn	Pn	02 33 20.6	-0.5
PYL	PYLOS	1.27	175	P	Pn	02 33 21.0	-0.1
PYL				S	Sb	02 33 39.1	+1.4
THL	Klokotos Trika	1.44	13	ePN	Pn	02 33 24.0	+0.5
THL	Klokotos Trika	1.44	13	P	Pn	02 33 24.2	+0.7
THL				S	Sn	02 33 47.1	+4.9
THL	Klokotos Trika	1.44	13	ePn	Pn	02 33 24.0	+0.5
THL				S	Sn	02 33 47.1	+4.9
DID	Didima	1.46	116	ePN	Pn	02 33 23.0	-0.7
DID	Didima	1.46	116	P	Pn	02 33 23.3	-0.4
DID				S	Sn	02 33 43.9	+1.3
DID	Didima	1.46	116	ePn	Pn	02 33 23.0	-0.7
DID	Didima	1.46	116	P	Pn	02 33 23.3	-0.4
DID				S	Sn	02 33 43.9	+1.3
NAIG	Nisos Aigina	1.55	104	ePn	Pn	02 33 25.5	+0.4
NAIG	Nisos Aigina	1.55	104	ePN	Pn	02 33 25.5	+0.4
NAIG	Nisos Aigina	1.55	104	ePn	Pn	02 33 25.5	+0.4
ATH	Athens Observa	1.69	96	ePn	Pn	02 33 27.1	+0.2
ATH	Athens Observa	1.69	96	ePN	Pn	02 33 27.1	+0.2
ATH	Athens Observa	1.69	96	ePn	Pn	02 33 27.1	+0.2
NEO	Neokhori	1.71	48	ePb	Pb	02 33 26.5	-2.7
NEO	Neokhori	1.71	48	ePB	Pb	02 33 26.5	-2.7
XOR	Xorichti	1.74	46	P	Pn	02 33 29.6	+2.0
XOR	Xorichti	1.74	46	P	Pn	02 33 29.6	+2.0
VLY	Voula,Athens	1.77	99	P	Pn	02 33 29.9	+1.9
VLY	Voula,Athens	1.77	99	P	Pn	02 33 29.9	+1.9
VLI	Veliai	1.79	143	P	Pn	02 33 31.0	+2.6
VLI	Veliai	1.79	143	P	Pn	02 33 31.0	+2.6
PTL	Penteli	1.80	93	ePn	Pn	02 33 28.3	-0.1
PTL	Penteli	1.80	93	ePN	Pn	02 33 28.3	-0.1
PTL	Penteli	1.80	93	ePn	Pn	02 33 28.3	-0.1
KEK	Kerkira	2.09	319	ePb	Pb	02 33 33.4	-2.1
KEK	Kerkira	2.09	319	ePB	Pb	02 33 33.4	-2.1
KZN	Kozani	2.15	4	ePn	Pn	02 33 34.5	+1.2
KZN	Kozani	2.15	4	ePN	Pn	02 33 34.5	+1.2
KZN	Kozani	2.15	4	ePn	Pn	02 33 34.5	+1.2
KYTH	Kithira	2.20	148	ePn	Pn	02 33 34.3	+0.3
KYTH	Kithira	2.20	148	ePN	Pn	02 33 34.3	+0.3
KYTH	Kithira	2.20	148	ePn	Pn	02 33 34.3	+0.3
BIA	Bitola	2.86	356	ePn	Pb	02 33 50.1	+1.3
OHR	Ohrid	3.01	349	ePn	Pg	02 33 57.7	+2.0

*NEIC **12** 02:33:45.8, 32.°68S×71.°66W, h15km, ML3.4(GUC), After GUC.*

GUC 12 02:33:45.8±1.0, 32.°68S×71.°66W, h15km±19km, MD3.7, ML3.4, 9C-8D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHA	Instituto Hidr	0.35	178	⇑iP	Pg	02 33 53.5	+0.5
IHA				iS	Sg	02 33 58.3	+0.5
IHA	Instituto Hidr	0.35	178	⇑iP	Pg	02 33 53.5	+0.5
IHA				iS	Sg	02 33 58.3	+0.5
CHNG	Los Chungos	0.81	10	⇓iP	Pb	02 34 00.3	-1.2
CHNG				iS	Sg	02 34 11.4	-0.6
PEL	Peldehue	0.94	120	⇑iP	Pb	02 34 02.9	-0.8
PEL				iS	Sb	02 34 15.6	-0.3
PEL				AML	AML	02 34 16.8	
	comp=N,4μm,0.3s						
CLCH	Cerro Calan	1.18	128	⇓iP	Pn	02 34 06.5	-1.2
CLCH				iS	Sb	02 34 22.1	-0.8
CLCH				AML	AML	02 34 22.8	
	comp=E,1μm,0.3s						
CLCH				AML	AML	02 34 23.3	
	comp=E,1μm,0.3s						
ANTU	Antumapu	1.23	136	⇑iP	Pn	02 34 07.6	-0.9
ANTU				iS	Sb	02 34 23.8	-0.7
ANTU	Antumapu	1.23	136	⇑iP	Pn	02 34 07.6	-0.9
ANTU				iS	Sb	02 34 23.8	-0.7
ANTU				AML	AML	02 34 27.8	
	comp=E,1μm,0.2s						
LNV	Longovilo	1.29	171	⇑iP	Pn	02 34 07.3	-2.0
LNV				iS	Sb	02 34 24.1	-2.0
LNV	Longovilo	1.29	171	⇑iP	Pn	02 34 07.3	-2.0
LNV				iS	Sb	02 34 24.1	-2.0
FCH	Farellones	1.32	120	P	Pn	02 34 08.7	-0.9
FCH				S	Sn	02 34 25.8	-1.1
FCH	Farellones	1.32	120	⇓iP	Pn	02 34 08.7	-0.9
FCH				⇓iP		02 34 11.4	
FCH				iS	Sn	02 34 25.8	-1.1
FCH				iS	Sn	02 34 30.0	+3.2
FCH				AML	AML	02 34 31.2	
	comp=E,1μm,0.2s						
CHCH	Chadas Angostu	1.51	146	⇑iP	Pn	02 34 12.0	-0.2
CHCH	Chadas Angostu	1.51	146	⇑iP	Pn	02 34 12.0	-0.2
CMCH	Combarbala	1.60	21	⇓iP	Pn	02 34 12.8	-0.7
CMCH				iS	Sn	02 34 33.9	0.0
CMCH	Combarbala	1.60	21	⇓iP	Pn	02 34 12.8	-0.7
CMCH				iS	Sn	02 34 33.9	0.0
CACH	El Canelo	1.68	149	iP	Pn	02 34 15.1	+0.5
CACH				iS	Sn	02 34 37.7	+1.7
CACH	El Canelo	1.68	149	iP	Pn	02 34 15.1	+0.5
CACH				iS	Sn	02 34 37.7	+1.7
LMEL	Las Melosas	1.69	134	⇓iP	Pn	02 34 14.3	-0.3
LMEL				iS	Sn	02 34 36.3	+0.3
LMEL	Las Melosas	1.69	134	⇓iP	Pn	02 34 14.3	-0.3
LMEL				iS	Sn	02 34 36.3	+0.3
TLL	Tololo Astrono	2.61	16	eP	Pn	02 34 29.1	+1.8
TLL	Tololo Astrono	2.61	16	eP	Pn	02 34 29.1	+1.8
TLL				AML	AML	02 35 10.5	
	comp=N,214nm,0.4s						

TAP 12 02:37:20.5, 24.°21N×121.°81E, h9km, ML3.9, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	Heping Village	0.12	328	P	Pg	02 37 23.6	+0.2
	baz=327						
EHP				S	Sg	02 37 25.9	+0.6
	baz=327						
ENA	Nanau	0.23	343	iP	Pg	02 37 25.4	+0.2
	baz=341						
ENA				eS	Sg	02 37 29.2	+0.8
	baz=341						
TWD	Chiawan	0.23	238	eP	Pg	02 37 25.8	+0.5
	baz=247						
TWD				eS	Sg	02 37 28.9	+0.5
	baz=247						
HWA	Hwalien	0.30	220	eP	Pg	02 37 27.3	+0.9
	baz=236						
TWC	Suao	0.40	5	P	Pg	02 37 28.4	0.0
	baz=1.0						
TWC				iS	Sg	02 37 34.5	+0.8
	baz=1.0						
NNS	Nan Shan	0.46	300	eP	Pg	02 37 30.1	+0.6
	baz=300						
NNS				S	Sg	02 37 35.8	+0.2
	baz=300						
WHF	Hehuan Shan	0.50	263	eP	Pg	02 37 30.9	+0.6
	baz=267						
WHF				eS	Sg	02 37 37.5	+0.6
	baz=267						
ESL	Shilin	0.52	222	eP	Pg	02 37 31.4	+0.8
	baz=238						
TWE	Neicheng	0.53	345	iP	Pg	02 37 31.4	+0.6
	baz=342						
TWE				eS	Sg	02 37 38.5	+0.8
	baz=342						
ILA	Ilan	0.56	354	eP	Pg	02 37 31.8	+0.4
	baz=342						
ILA				eS	Sg	02 37 40.7	+2.0
	baz=342						
TWT	Tachien	0.58	275	eP	Pg	02 37 33.0	+1.2
	baz=277						
NSK	Sanguang	0.62	319	P	Pg	02 37 33.3	+0.7
	baz=317						
NSK				S	Sg	02 37 41.6	+0.8
	baz=317						
TWA	Mucha	0.80	345	eP	Pg	02 37 36.5	+0.6
	baz=331						
TWA				eS	Sg	02 37 47.1	+0.8
	baz=331						
TWB1	Santiao Chiao	0.81	11	eP	Pg	02 37 36.1	-0.1
	baz=360						
EHY	Hungye	0.83	213	eP	Pg	02 37 37.4	+0.9
	baz=231						
NSTT	Nanjuang	0.85	300	eP	Pg	02 37 38.2	+1.3
	baz=301						
NWF	Wu-fen Shan	0.86	358	eP	Pg	02 37 38.2	+1.1
	baz=353						
TAP1	Taipei	0.87	342	eP	Pg	02 37 37.5	+0.2
	baz=338						
TAP1				eS	Sg	02 37 49.2	+0.6
	baz=338						
SMLT	Sun Moon Lake	0.90	249	eP	Pg	02 37 38.3	+0.6
	baz=252						
SMLT				eS	Sg	02 37 50.6	+1.3
	baz=252						
NCU	National Centr	0.95	323	eP	Pg	02 37 40.2	+1.4
	baz=321						
NCU				eS	Sg	02 37 54.2	+3.1
	baz=321						
TWQ1	Liyutan	0.96	279	eP	Pg	02 37 41.2	+2.2
	baz=282						
TWS1	Kuangyinshan	0.96	338	P	Pg	02 37 39.9	+0.9
	baz=335						
TWF1	Yuli	0.97	209	eP	Pg	02 37 40.3	+1.1
	baz=230						
NSY	Sanyi	0.98	283	eP	Pg	02 37 40.3	+0.9
	baz=286						
TCU	Taichung	1.04	267	P	Pg	02 37 42.0	+1.5
	baz=270						
TCU				eS	Sg	02 37 57.4	+3.3
	baz=270						
YUS	Yu-Shan	1.06	228	eP	Pg	02 37 41.2	+0.3
	baz=234						
TWY	Chenhua	1.08	350	eP	Pg	02 37 41.6	+0.3
	baz=346						
ALS	Alishan	1.15	233	eP	Pb	02 37 44.1	+1.5
	baz=247						
CHN5	Tsauling	1.20	240	P	Pb	02 37 45.2	+1.8
	baz=245						
CHN5				eS	Sb	02 38 03.6	+4.5
	baz=245						
CHN4	Tsaushan	1.41	233	eP	Pn	02 37 48.7	+2.5
	baz=241						
STYT	Tauyuan	1.42	223	eP	Pn	02 37 46.5	+0.1
	baz=231						
WTP	Ta-pu	1.46	229	eP	Pn	02 37 49.6	+2.6
	baz=237						
TWK	Hsinying	1.53	233	eP	Pn	02 37 51.0	+2.9
	baz=241						
CHN1	Nanshi	1.56	229	eP	Pn	02 37 50.5	+2.2
	baz=238						
SGST	Jiashian	1.59	225	eP	Pn	02 37 50.7	+1.9
	baz=233						
SSD	Sandimen	1.81	217	eP	Pn	02 37 54.4	+2.5
	baz=238						

TAP 12 02:37:28.6, 24.°23N×121.°79E, h11km±1km, ML3.7, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	Heping Village	0.09	330	P	Pg	02 37 31.7	+0.4
	baz=333						
EHP				S	Sg	02 37 34.1	+0.9
	baz=333						
ENA	Nanau	0.20	347	P	Pg	02 37 33.8	+0.8
	baz=348						
ENA				S	Sg	02 37 37.3	+1.4
	baz=348						
TWD	Chiawan	0.23	230	eP	Pg	02 37 34.0	+0.5
	baz=228						
NNS	Nan Shan	0.43	299	eP	Pg	02 37 38.1	+0.9
	baz=298						
NNS				eS	Sg	02 37 44.8	+1.8
	baz=298						
WHF	Hehuan Shan	0.49	260	eP	Pg	02 37 39.9	+1.7
	baz=259						
WHF				eS	Sg	02 37 46.3	+1.6
	baz=259						
ESL	Shilin	0.53	218	eP	Pg	02 37 40.0	+1.1
	baz=217						

TAP 12 02:38:15.6, 24.°22N×121.°80E, h9km, ML3.6, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	Heping Village	0.10	330	P	Pg	02 38 18.2	+0.1
	baz=333						
EHP				eS	Sg	02 38 20.4	+0.6
	baz=333						
ENA	Nanau	0.21	346	P	Pg	02 38 20.1	+0.2
	baz=348						
ENA				eS	Sg	02 38 23.8	+0.9
	baz=348						
TWD	Chiawan	0.23	233	P	Pg	02 38 20.5	+0.3
	baz=239						
TWD				S	Sg	02 38 24.1	+0.7
	baz=239						
HWA	Hwalien	0.30	216	eP	Pg	02 38 23.3	+1.8
	baz=229						
TWC	Suao	0.39	7	eP	Pg	02 38 23.4	+0.1
	baz=8.0						
TWC				eS	Sg	02 38 29.1	+0.7
	baz=8.0						
NNS	Nan Shan	0.45	300	eP	Pg	02 38 24.7	+0.4
	baz=299						
NNS				eS	Sg	02 38 30.7	+0.5
	baz=299						
WHF	Hehuan Shan	0.49	262	eP	Pg	02 38 25.4	+0.3
	baz=262						
WHF				S	Sg	02 38 32.7	+1.1
	baz=262						
TWE	Neicheng	0.51	347	iP	Pg	02 38 26.0	+0.5
	baz=348						
TWE				S	Sg	02 38 33.6	+1.3
	baz=348						
ESL	Shilin	0.52	220	eP	Pg	02 38 27.8	+2.1
	baz=232						
ILA	Ilan	0.55	355	eS	Sg	02 38 35.5	+2.1
	baz=348						
TWT	Tachien	0.57	274	eP	Pg	02 38 28.7	+2.1
	baz=273						
TWT				eS	Sg	02 38 37.5	+3.4
	baz=273						
NSK	Sanguang	0.61	319	eP	Pg	02 38 27.9	+0.6
	baz=319						
NSK				eS	Sg	02 38 36.1	+0.8
	baz=319						
TWA	Mucha	0.78	346	eP	Pg	02 38 31.1	+0.4
	baz=336						
TWB1	Santiao Chiao	0.81	12	eP	Pg	02 38 31.0	-0.1
	baz=5.0						
EHY	Hungye	0.83	212	eP	Pg	02 38 32.3	+0.7
	baz=225						
NSTT	Nanjuang	0.83	300	eP	Pg	02 38 32.4	+0.8
	baz=299						
NSTT				eS	Sg	02 38 43.8	+1.3
	baz=299						
NWF	Wu-fen Shan	0.85	359	P	Pg	02 38 32.1	+0.2
	baz=350						
NWF				S	Sg	02 38 43.6	+0.6
	baz=350						
SMLT	Sun Moon Lake	0.89	248	eP	Pg	02 38 34.0	+1.3
	baz=249						
TWQ1	Liyutan	0.94	278	eP	Pg	02 38 34.7	+1.0
	baz=278						
TWS1	Kuangyinshan	0.94	339	eP	Pg	02 38 35.0	+1.2
	baz=338						
NSY	Sanyi	0.97	282	eP	Pg	02 38 36.0	+1.8
	baz=281						
TWF1	Yuli	0.98	208	eP	Pg	02 38 35.6	+1.2
	baz=225						
TCU	Taichung	1.03	266	eP	Pg	02 38 38.2	+2.9
	baz=267						
YUS	Yu-Shan	1.06	227	eP	Pg	02 38 36.4	+0.5
	baz=228						
YUS				eS	Sg	02 38 52.0	+2.2
	baz=228						
TWY	Chenhua	1.07	350	eP	Pg	02 38 37.8	+1.7
	baz=335						
ALS	Alishan	1.15	232	eP	Pb	02 38 38.7	+1.1
	baz=243						
CHN5	Tsauling	1.20	239	eP	Pb	02 38 39.6	+1.2
	baz=242						
CHN4	Tsaushan	1.40	232	eP	Pn	02 38 43.0	+1.6
	baz=235						
CHN4				eS	Sb	02 39 02.8	+2.9
	baz=235						
WTP	Ta-pu	1.45	228	eP	Pn	02 38 43.1	+1.0
	baz=230						
WTP				eS	Sn	02 39 04.4	+3.1
	baz=230						
CHN1	Nanshi	1.55	229	eP	Pn	02 38 44.0	+0.6
	baz=232						
CHN1				eS	Sn	02 39 06.6	+2.9
	baz=232						
SGST	Jiashian	1.59	225	eP	Pn	02 38 44.7	+0.8
	baz=227						
SGST				eS	Sn	02 39 07.4	+2.8
	baz=227						
SSD	Sandimen	1.81	216	eP	Pn	02 38 48.4	+1.3
	baz=232						
SSD				eS	Sn	02 39 14.1	+3.9
	baz=232						

*IDC **12** 02:52:02.6±1.3, 16.°16N×122.°34E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.6/19, mbtmp3.8/6, Error ellipse: s-maj=183.5km s-min=20.0km az=67.0*
*ISCJB **12** 02:52:05.4±0.8, 16.°31N±0.°08×122.°7E±0.°1, h33km, mb3.8/10, Error ellipse: s-maj=20.9km s-min=10.1km az=13.5*
*NEIC **12** 02:52:08.1±0.9, 16.°00N×122.°04E, h35km, mb4.2/2, Error ellipse: s-maj=105.0km s-min=13.2km az=64.0*

ISC 12 02:52:07.4±0.8, 16.°30N±0.°08×122.°7E±0.°2, h35km, n12, σ0.°97/12, mb3.8/10, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	Tagaytay City	2.74	217	Sn	Sn	02 53 20.8	+0.1
	67nm,0.3s,baz=100,slow=19,SNR=4.4						
WRA	Warramunga Arr	37.80	162	P

KURK Kurchatov 49.14 324 *eP* **P 03 00 52.4 +0.9**
1.1nm,0.4s,mb4.2
ABKAR Akbulak array 60.05 318 *eP* **P 03 02 09.1 -1.7**
1.0nm,0.6s,mb4.0
JOF Joensuu 76.25 332 *ep* **P 03 03 51.8 -0.2**
0.3nm,0.4s,mb3.6
ARCES ARCESS Array B 77.34 339 P **P 03 04 00.0 +1.9**
0.6nm,0.6s,mb3.7,baz=91,slow=7.6,SNR=7.7
KAF Kangasniemi 78.68 332 *ep* **P 03 04 03.4 -2.3**
0.4nm,0.3s,mb3.8
FINES FINESS Array B 78.94 331 P **P 03 04 07.3 +0.2**
0.4nm,0.3s,mb3.8,baz=58,slow=4.3,SNR=9.3
NOA NORSAR Array B 85.82 333 P **P 03 04 43.1 0.0**
0.5nm,0.7s,mb3.9,baz=67,slow=4.9,SNR=2.7

NIED ***12*** *03:03:00, 36.°40N×141.°40E, h35km, Mw4.3 Best double couple: M0:3.53000×10^15 NP1:φ=28.00000°, δ73.00000°, λ95.00000°. NP2:φ=192.00000°, δ18.00000°, λ75.00000°.*
IDC ***12*** *03:03:13.1±0.6, 36.°36N×141.°41E, h0km, mb4.2/19, mb1 4.3/23, mb1mx4.3/30, mbtmp4.3/23, ML4.3/4, MS3.3/5, Ms1 3.3/5, ms1mx3.0/30, Error ellipse: s-maj=15.2km s-min=13.3km az=99.0*
ISCJB ***12*** *03:03:15.3±0.9, 36.°39N±0.°03×141.°55E±0.°04, h29km±6km, mb4.4/52, MS3.5/6, Error ellipse: s-maj=5.8km s-min=4.4km az=10.0*
BJI ***12*** *03:03:15.9, 36.°44N×141.°30E, h24km, mB4.5/11, mb4.6/18, Ms4.3/2, Ms7 4.2/2*
MOS ***12*** *03:03:15.9±1.1, 36.°41N×141.°51E, h33km, mb4.6/31, Error ellipse: s-maj=11.3km s-min=7.0km az=113.1*
NEIC ***12*** *03:03:17.4±2.1, 36.°37N×141.°41E, h29km±14km, mb4.5/23, MW4.3(NIED), Error ellipse: s-maj=8.4km s-min=6.1km az=138.0*
NEIC Recorded [1 JMA] in Ibaraki and Tochigi.
JMA ***12*** *03:03:17.3±0.1, 36.°39N×141.°39E, h48km±3km, M4.2*
JMA Felt I J1.
ISC 12 03:03:16.2±0.9,**36.°38N**±0.°03×**141.°48E**±0.°04,**h20**km±5km,
n130, σ0°**89**/143,**mb4.4**/52,**MS3.5**/6,**1C-9D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.77**	**288**	⇓P	**Pb**	**03 03 30.9**	**0.0**
JHO				*e*S	**Sb**	03 03 40.8	-0.2
CHOJ	**Chosi**	**0.84**	**217**	⇓P	**Pb**	**03 03 32.5**	**+0.4**
CHOJ				*e*S	**Sb**	03 03 43.3	+0.4
ONAJ	**Iwakimizuishiy**	**0.91**	**323**	⇓P	**Pb**	**03 03 32.7**	**-0.5**
ONAJ				*e*S	**Sb**	03 03 44.9	0.0
JYT	**Yasato**	**1.05**	**262**	⇓P	**Pn**	**03 03 34.8**	**-0.9**
JFT	**Otama**	**1.46**	**321**	⇓P	**Pn**	**03 03 41.8**	**+0.4**
JFT				*e*S	**Sn**	03 03 59.2	-0.8
JMM	**Marumori**	**1.59**	**340**	⇓P	**Pn**	**03 03 42.7**	**-0.4**
JMM				S	**Sn**	03 04 02.0	-1.0
JAG	**Ashikaga**	**1.64**	**272**	⇓P	**Pn**	**03 03 43.3**	**-0.5**
JAG				*e*S	**Sn**	03 04 03.1	-1.2
JFY	**Yanaizu**	**1.76**	**306**	P	**Pn**	**03 03 45.8**	**+0.4**
JFY				S	**Sn**	03 04 08.6	+1.4
BSO1	**Boso 1**	**1.77**	**194**	P	**Pn**	**03 03 47.1**	**+1.5**
JKT	**Katashina**	**1.84**	**283**	⇓P	**Pn**	**03 03 46.9**	**+0.3**
MJAR	**Matsushiro Arr**	**2.65**	**275**	Pn	**Pn**	**03 03 57.6**	**0.0**
	55nm,0.3s,baz=84,slow=10,SNR=464						
MJAR				Sn	**Sn**	03 04 30.3	+1.2
	28nm,0.3s,baz=293,slow=16,SNR=6.8						
MJAR	**Matsushiro Arr**	**2.65**	**275**	P	**Pn**	**03 03 57.6**	**0.0**
MJAR						03 04 30.3	
MJAR				pmax	pmax		
	comp=Z,55nm,0.3s						
MJAR				smax			
	comp=N,28nm,0.3s						
MAJO	**Matsushiro**	**2.65**	**275**	*e*P	**Pn**	**03 03 58.7**	**+1.0**
MAT	**Matsushiro**	**2.65**	**275**	P	**Pn**	**03 03 58.4**	**+0.7**
MAT				S	**Sn**	03 04 31.7	+2.5
JHJ	**Hachijo jima 2**	**3.54**	**204**	Pn	**Pn**	**03 04 10.4**	**+0.5**
	comp=N,84nm,0.3s,baz=261,slow=23,SNR=19						
JHJ				Sn	**Sn**	03 04 49.8	-1.4
	comp=N,78nm,0.3s,baz=269,slow=23,SNR=3.8						
JHJ				LR	LR	03 05 17.4	
	comp=N,131nm,19.5s,baz=15,slow=36						
ERM	**Erimo**	**5.78**	**12**	*e*P	**Pn**	**03 04 40.6**	**-0.1**
ERM	**Erimo**	**5.78**	**12**	*e*Pn	**Pn**	**03 04 41.0**	**+0.3**
	comp=N,31nm,0.8s						
ERM				*e*Sn	**Sn**	03 05 47.1	+0.8
ASAJ	**Asahikawa**	**7.78**	**6**	Pn	**Pn**	**03 05 07.3**	**-0.2**
	comp=N,2.9nm,0.3s,baz=210,slow=11,SNR=15						
ASAJ				Sn	**Sn**	03 06 35.8	+0.2
	comp=N,3.1nm,0.3s,baz=6.0,slow=22,SNR=6.8						
ASAJ	**Asahikawa**	**7.78**	**6**	P	**Pn**	**03 05 07.4**	**-0.7**
ASAJ						03 06 35.8	
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				smax			
	comp=N,3.0nm,0.3s						
CBIJ	**Chichi jima**	**9.27**	**176**	Pn	**Pn**	**03 05 26.6**	**-2.1**
	comp=N,13nm,0.3s,baz=316,slow=19,SNR=11						
YSS	**Yuzh-Sakhalins**	**10.61**	**5**	*e*P	**Pn**	**03 05 46.4**	**-0.5**
NJ2	**Nanjing**	**19.20**	**264**	*e*P	**Pn**	**03 07 39.5**	**-0.1**
NJ2				pP	pP	03 07 47.5	+3.1
NJ2				sP	sP	03 07 51.0	+4.0
NJ2				PP		03 07 54.7	
NJ2				S	**Sn**	**03 11 04.1**	**-10**
NJ2				sS	sS	03 11 16.7	-7.7
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,110nm,4.3s						
NJ2				LR	LR		
	comp=Z,5μm,22.9s						
WHN	**Wuhan**	**23.33**	**263**	P	**P**	**03 08 24.7**	**+1.5**
WHN				*e*S	**S**	**03 12 29.4**	**-5.1**
HHC	**Hu-ho-hao-te**	**23.74**	**290**	*e*P	**P**	**03 08 24.2**	**-2.8**
HHC				S	**S**	**03 12 27.2**	**-14**
HHC				pmax	pmax		
	comp=Z,13nm,0.5s,mb4.6						
HHC				pmax	pmax		
	comp=Z,77nm,5.1s						
YAK	**Yakutsk**	**26.72**	**348**	*e*P	**P**	**03 08 52.4**	**-1.4**
YAK				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.7						
YAK				pmax	pmax		
	comp=N,9.0nm,1.0s						
ENH	**Enshi**	**27.34**	**266**	*e*P	**P**	**03 08 58.6**	**-1.1**
	comp=N,20nm,0.6s,mb4.8						
SEY	**Seymchan**	**27.42**	**11**	*e*P	**P**	**03 09 04.2**	**+4.1**
ULN	**Ulaanbaatar**	**27.77**	**305**	*e*P	**P**	**03 09 03.1**	**-0.4**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.2						
ULN	**Ulaanbaatar**	**27.77**	**305**	*e*P	**P**	**03 09 03.1**	**-0.4**
	comp=Z,5.6nm,0.9s,mb4.2						
SONM	**Songino Array**	**28.20**	**305**	P	**P**	**03 09 07.3**	**0.0**
	comp=Z,3.6nm,0.6s,mb4.2,baz=106,slow=9.3,SNR=24						
SONM				LR	LR	03 20 24.6	
	comp=Z,82nm,19.5s,MS3.3,baz=357,slow=37						
SONM	**Songino Array**	**28.20**	**305**	P	**P**	**03 09 07.3**	**0.0**
SONM				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SONM				MLR	MLR		
	comp=Z,82nm,19.5s						
TLY	**Talaya**	**30.81**	**312**	*e*P	**P**	**03 09 28.7**	**-1.6**
TLY				*e*		03 10 25.1	
TLY				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.4						
TLY				MLR	MLR		
	comp=Z,133nm,16.0s,MS3.7						
GTA	**Gaotai**	**32.82**	**288**	*e*P	**P**	**03 09 48.2**	**+0.1**
GTA				pP	pP	03 09 52.8	-1.5
GTA				sP	sP	03 09 55.4	-1.4
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
BILL	**Bilibino**	**34.64**	**16**	*e*P	**P**	**03 10 07.3**	**+3.7**
BILL				*e*		03 11 18.1	
BILL				*e*		03 12 42.2	
BILL				*e*SS	SS	03 17 39.9	-22
BILL				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.8						
BILL				MLR	MLR		
	comp=Z,100nm,19.0s,MS3.6						
CHTO	**Chiang Mai**	**41.19**	**257**	*e*P	**P**	**03 10 58.9**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
CHTO	**Chiang Mai**	**41.19**	**257**	*e*P	**P**	**03 10 58.9**	**-0.5**
	comp=Z,2.1nm,0.6s,mb3.9						
CMAR	**Chiang Mai Arr**	**41.39**	**256**	P	**P**	**03 11 01.3**	**+0.2**
	comp=Z,1.1nm,0.4s,mb3.9,baz=40,slow=4.6,SNR=6.2						
CMAR	**Chiang Mai Arr**	**41.39**	**256**	P	**P**	**03 11 01.3**	**+0.2**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**42.40**	**313**	P	**P**	**03 11 08.9**	**0.0**
	comp=Z,6.3nm,0.6s,mb4.5,baz=89,slow=6.9,SNR=31						
ZALV				LR	LR	03 29 27.7	
	comp=Z,33nm,20.4s,MS3.2,baz=77,slow=37						
ZALV	**Zalesovo Beam**	**42.40**	**313**	P	**P**	**03 11 08.9**	**-0.1**
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.4						
ZALV				MLR	MLR		
	comp=Z,33nm,20.4s,MS3.2						
NVS	**Novosibirsk**	**43.34**	**314**	*e*P	**P**	**03 11 16.3**	**-0.2**
MK31	**Makanchi Array**	**44.52**	**303**	*e*P	**P**	**03 11 26.0**	**-0.1**
MKAR	**Makanchi Array**	**44.52**	**303**	P	**P**	**03 11 26.1**	**0.0**
	comp=Z,2.5nm,0.7s,mb4.2,baz=86,slow=8.9,SNR=28						
MKAR	**Makanchi Array**	**44.52**	**303**	P	**P**	**03 11 26.1**	**0.0**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
TAPN	**Taplejung**	**46.05**	**275**	*e*P	**P**	**03 11 39.1**	**+0.6**
	comp=Z,14nm,0.6s,mb5.1						
KURK	**Kurchatov**	**46.38**	**309**	P	**P**	**03 11 40.4**	**-0.5**
	comp=Z,7.5nm,0.6s,mb4.8,baz=84,slow=8.1,SNR=26						
KURK	**Kurchatov**	**46.38**	**309**	*e*P	**P**	**03 11 40.0**	**-0.9**
KURK				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.8						
KURK	**Kurchatov**	**46.38**	**309**	*e*P	**P**	**03 11 40.1**	**-0.8**
	comp=Z,8.6nm,0.6s,mb4.9						
RAMN	**Ramite**	**47.11**	**275**	*e*P	**P**	**03 11 47.0**	**+0.1**
	comp=Z,83nm,0.7s						
JIRN	**Jiri**	**47.14**	**276**	*e*P	**P**	**03 11 47.7**	**+0.6**
	comp=Z,56nm,0.8s,mb5.5						
GUN	**Gumba**	**47.28**	**276**	*e*P	**P**	**03 11 49.2**	**+1.0**
	comp=Z,37nm,0.8s,mb5.4						
PKI	**Pulchoki**	**47.80**	**276**	*e*P	**P**	**03 11 52.2**	**-0.1**
PKIN	**Phulchoki**	**47.81**	**276**	*e*P	**P**	**03 11 52.4**	**+0.1**
KKN	**Kakani**	**47.81**	**276**	*e*P	**P**	**03 11 52.7**	**+0.4**
DMN	**Daman**	**48.03**	**276**	*e*P	**P**	**03 11 54.0**	**0.0**
GKN	**Gorkha**	**48.24**	**277**	*e*P	**P**	**03 11 55.9**	**+0.3**
	comp=Z,30nm,0.7s,mb5.4						
TKM2	**Tokmak 2**	**49.99**	**299**	*e*P	**P**	**03 12 09.9**	**+1.0**
TKM2				pmax	pmax		
	comp=Z,20nm,1.4s,mb5.0						
TKM2	**Tokmak 2**	**49.99**	**299**	*e*P	**P**	**03 12 09.8**	**+1.0**
	comp=Z,20nm,1.4s,mb5.0						
BVAR	**Borovoye Array**	**51.06**	**313**	P	**P**	**03 12 15.8**	**-0.9**
	comp=Z,1.1nm,0.5s,mb4.1,baz=78,slow=7.7,SNR=8.2						
BVAR	**Borovoye Array**	**51.06**	**313**	P	**P**	**03 12 15.8**	**-0.9**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRVK	**Borovoye**	**51.11**	**313**	*e*P	**P**	**03 12 17.6**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
BRVK	**Borovoye**	**51.11**	**313**	*e*P	**P**	**03 12 17.1**	**0.0**
	comp=Z,2.3nm,0.8s,mb4.2						
EKS2	**Erkin-Say**	**51.35**	**299**	*e*P	**P**	**03 12 19.1**	**0.0**
	comp=Z,1.8nm,0.7s,mb4.1						
PSI	**Prapat**	**51.51**	**240**	P	**P**	**03 12 20.3**	**-0.3**
	comp=Z,1.9nm,0.4s,mb4.3,baz=320,slow=5.4,SNR=3.8						
PSI	**Prapat**	**51.51**	**240**	P	**P**	**03 12 20.3**	**-0.3**
PSI				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						
AML	**Almayashu**	**51.57**	**298**	*e*P	**P**	**03 12 21.6**	**+0.9**
	comp=Z,6.7nm,0.6s,mb4.8						
INK	**Inuvik**	**54.95**	**27**	P	**P**	**03 12 46.0**	**+0.8**
	comp=Z,1.5nm,0.5s,mb4.2,baz=289,slow=11,SNR=4.6						
INK	**Inuvik**	**54.95**	**27**	P	**P**	**03 12 46.0**	**+0.8**
INK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
INK	**Inuvik**	**54.95**	**27**	*e*P	**P**	**03 12 45.7**	**+0.5**
	comp=Z,1.8nm,0.6s,mb4.3						
SVE	**Sverdlovsk**	**55.68**	**319**	*e*P	**P**	**03 12 50.8**	**+0.2**
WRAB	**Tennant Creek**	**56.41**	**188**	*e*P	**P**	**03 12 55.7**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
WRAB	**Tennant Creek**	**56.41**	**188**	*e*P	**P**	**03 12 55.7**	**-0.5**
	comp=Z,5.0nm,0.9s,mb4.5						
WRA	**Warramunga Arr**	**56.42**	**188**	P	**P**	**03 12 55.5**	**-0.7**
	comp=Z,1.6nm,0.7s,mb4.2,baz=5.6,slow=7.5,SNR=22						
WRA	**Warramunga Arr**	**56.42**	**188**	P	**P**	**03 12 55.6**	**-0.6**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARU	**Arti**	**56.89**	**319**	*d*iP	**P**	**03 12 58.8**	**-0.5**
ARU				S	**S**	**03 20 47.6**	**-4.1**
ARU				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
ARU	**Arti**	**56.89**	**319**	*e*P	**P**	**03 12 58.9**	**-0.3**
	comp=Z,6.2nm,0.8s,mb4.7						
ABKAR	**Akbulak array**	**58.41**	**310**	*e*P	**P**	**03 13 09.3**	**-0.8**
	comp=Z,1.9nm,0.5s,mb4.4						
ASAR	**Alice Springs**	**60.15**	**188**	P	**P**	**03 13 21.9**	**-0.4**
	comp=Z,0.3nm,0.3s,mb3.8,baz=351,slow=5.4,SNR=5.6						
RES	**Resolute Bay**	**63.22**	**14**	*e*P	**P**	**03 13 42.1**	**-0.3**
RES				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.4						
RES	**Resolute Bay**	**63.22**	**14**	*e*P	**P**	**03 13 42.1**	**-0.3**
	comp=Z,3.0nm,0.9s,mb4.4						
ARCES	**ARCESS Array B**	**64.63**	**340**	P	**P**	**03 13 52.0**	**+0.3**
	comp=Z,3.2nm,0.7s,mb4.4,baz=67,slow=8.1,SNR=25						
ARCES	**ARCESS Array B**	**64.63**	**340**	P	**P**	**03 13 52.1**	**+0.3**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
OBN	**Obninsk**	**68.66**	**323**	*e*P	**P**	**03 14 18.0**	**+0.3**
OBN				*e*SS	SS	03 27 37.3	-5.6
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
FINES	**FINESS Array B**	**69.42**	**332**	P	**P**	**03 14 22.2**	**-0.1**
	comp=Z,4.5nm,0.7s,mb4.5,baz=46,slow=8.2,SNR=15						
FINES				LR	LR	03 49 40.7	
	comp=Z,47nm,18.5s,MS3.8,baz=294,slow=40						
FINES	**FINESS Array B**	**69.42**	**332**	P	**P**	**03 14 22.2**	**-0.1**
FINES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
FINES				MLR	MLR		
	comp=Z,47nm,18.5s						
VSR	**Storozhevoye**	**69.46**	**319**	*e*P	**P**	**03 14 22.2**	**-0.6**
VSR				pmax	pmax		
	comp=E,7.0nm,1.0s						
VSR				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
VSR				pmax	pmax		
	comp=N,4.0nm,0.5s						
VORD	**Divnogorie**	**69.53**	**319**	*e*P	**P**	**03 14 23.2**	**0.0**
VORD				pmax	pmax		
	comp=N,8.0nm,1.1s						
VORD				pmax	pmax		
	comp=E,8.0nm,1.1s						
VORD				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
NEW	**Newport**	**70.56**	**44**	*e*P	**P**	**03 14 30.5**	**+0.9**
NEW				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NEW	**Newport**	**70.56**	**44**	*e*P	**P**	**03 14 30.5**	**+0.9**
	comp=Z,2.2nm,0.8s,mb4.1						
KIV	**Kislovodsk**	**71.38**	**311**	*e*P	**P**	**03 14 35.9**	**+1.3**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
KIV	**Kislovodsk**	**71.38**	**311**	*e*P	**P**	**03 14 35.1**	**+0.5**
	comp=Z,9.5nm,0.8s,mb4.8						
NB2	**NORSAR Subarra**	**74.81**	**337**	P	**P**	**03 14 54.2**	**-0.4**
	comp=Z,3.2nm,0.8s,mb4.3,baz=38,slow=5.9						
NOA	**NORSAR Array B**	**74.81**	**337**	P	**P**	**03 14 54.0**	**-0.6**
	comp=Z,3.8nm,0.8s,mb4.4,baz=39,slow=5.8,SNR=14						
NOA	**NORSAR Array B**	**74.81**	**337**	P	**P**	**03 14 54.0**	**-0.6**
NOA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AKASG	**Malin Array Be**	**74.85**	**322**	P	**P**	**03 14 54.5**	**-0.5**
	comp=Z,2.3nm,0.4s,mb4.4,baz=46,slow=6.1,SNR=13						
AKASG	**Malin Array Be**	**74.85**	**322**	P	**P**	**03 14 54.5**	**-0.5**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKBB	**Malin Array Si**	**74.85**	**322**	*e*P	**P**	**03 14 54.2**	**-0.8**
NAO01	**NORSAR Array S**	**75.07**	**337**	*e*P	**P**	**03 14 55.8**	**-0.3**
	comp=Z,5.5nm,0.9s,mb4.5						
NVAR	**Mina Array Bea**	**75.34**	**53**	P	**P**	**03 15 00.2**	**+2.2**
	comp=Z,1.0nm,0.8s,mb3.8,baz=264,slow=6.0,SNR=5.0						
PDAR	**Pinedale Array**	**78.09**	**45**	P	**P**	**03 15 15.5**	**+2.0**
	comp=Z,0.3nm,0.7s,mb3.3,baz=272,slow=2.4,SNR=3.3						
KWP	**Kalwaria Pacla**	**78.70**	**324**	*e*P	**P**	**03 15 17.6**	**+0.9**
KWP				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
KWP	**Kalwaria Pacla**	**78.70**	**324**	*e*P	**P**	**03 15 17.6**	**+0.8**
	comp=Z,13nm,0.9s,mb4.8						
BUR08	**Bucovina Ar. S**	**78.85**	**322**	*e*P	**P**	**03 15 16.9**	**-0.7**
BR131	**Keskin Array S**	**79.33**	**312**	*e*P	**P**	**03 15 20.9**	**+0.5**
	comp=Z,1.0nm,0.6s,mb3.9						
BRTR	**Keskin Array B**	**79.33**	**312**	P	**P**	**03 15 21.0**	**+0.6**
	comp=Z,1.8nm,0.7s,mb4.1,baz=126,slow=4.3,SNR=12						
BRTR	**Keskin Array B**	**79.33**	**312**	*ce*P	**P**	**03 15 21.2**	**+0.8**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
STHS	**Stebnicka Huta**	**79.53**	**325**	*e*P	**P**	**03 15 25.0**	**+3.7**
STHS	**Stebnicka Huta**	**79.53**	**325**	*e*	**P**	**03 15 25.0**	**+3.7**
OJC	**Ojcow**	**79.62**	**326**	*e*P	**P**	**03 15 19.2**	**-2.5**
CRVS	**Cervenica-Dubn**	**79.79**	**325**	*e*P	**P**	**03 15 23.1**	**+0.4**
CRVS				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
CRVS	**Cervenica-Dubn**	**79.79**	**325**	*e*P	**P**	**03 15 23.1**	**+0.4**
	comp=Z,1.9nm,0.9s,mb4.0						
CRVS	**Cervenica-Dubn**	**79.79**	**325**	*e*P	**P**	**03 15 23.1**	**+0.4**
NIE	**Niedzica**	**79.96**	**325**	*e*P	**P**	**03 15 24.7**	**+1.1**
KECS	**Kecovo**	**80.54**	**325**	*e*P	**P**	**03 15 24.6**	**-2.2**
KECS	**Kecovo**	**80.54**	**325**	*e*P	**P**	**03 15 24.6**	**-2.2**
MORC	**Moravsky Berou**	**80.94**	**327**	*e*P	**P**	**03 15 28.6**	**-0.3**
MORC				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
MORC	**Moravsky Berou**	**80.94**	**327**	*e*P	**P**	**03 15 28.6**	**-0.3**
	comp=Z,2.5nm,0.8s,mb4.2						
PSZ	**Piszkesteto**	**81.22**	**325**	*e*P	**P**	**03 15 30.7**	**+0.3**
PSZ				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
PSZ	**Piszkesteto**	**81.22**	**325**	*e*P	**P**	**03 15 30.7**	**+0.3**
	comp=Z,5.2nm,0.9s,mb4.5						
VYHS	**Vyhne**	**81.30**	**325**	*e*P	**P**	**03 15 31.0**	**+0.2**
VYHS				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
VYHS	**Vyhne**	**81.30**	**325**	*e*P	**P**	**03 15 31.0**	**+0.2**
	comp=Z,1.7nm,1.0s,mb3.9						
VYHS	**Vyhne**	**81.30**	**325**	*e*P	**P**	**03 15 31.0**	**+0.2**
CLL	**Collm**	**81.69**	**330**	*i*P	**P**	**03 15 32.6**	**-0.3**
CLL				*e*		03 15 44.0	
CLL				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
CLL	**Collm**	**81.69**	**330**	*i*P	**P**	**03 15 32.6**	**-0.3**
	comp=Z,5.0nm,0.8s,mb4.5						
CLL				*es*P	sP	03 15 44.0	+2.0
MMAI	**Mount Meron Ar**	**82.39**	**305**	P	**P**	**03 15 37.9**	**+1.0**
	comp=Z,2.2nm,0.7s,mb4.2,baz=30,slow=5.1,SNR=5.5						
MMAI				LR	LR	03 57 17.3	
	comp=Z,26nm,19.1s,MS3.6,baz=255,slow=39						
CSS	**Prodhromos**	**82.51**	**308**	*e*P	**P**	**03 15 36.0**	**-1.4**
	comp=Z,5.4nm,0.7s,mb4.7						
TXAR	**Lajitas Array**	**90.48**	**52**	P	**P**	**03 16 17.7**	**+1.0**
	comp=Z,0.2nm,0.7s,mb3.5,baz=280,slow=5.3,SNR=3.2						
LPAZ	**La Paz**	**146.97**	**61**	PKPbc	PKPbc	03 22 58.2	+0.6
	comp=Z,0.4nm,0.5s,baz=8.5,slow=5.4,SNR=4.3						
LPAZ	**La Paz**	**146.97**	**61**	*e*PKPbc	PKPbc	03 22 58.2	+0.6
SIV	**San Ignacio**	**151.46**	**51**	PKPbc	PKPbc	03 23 09.5	+0.5
	comp=Z,1.6nm,0.8s,baz=57,slow=1.4,SNR=11						
SIV				PKPab	PKPab	03 23 16.2	-1.1
	comp=Z,0.9nm,0.7s,baz=288,slow=7.0,SNR=5.1						

IDC ***12*** *03:04:37.8±1.3, 36.°50N×141.°57E, h0km, mb4.1/10, mb1 4.2/13, mb1mx4.0/27, mbtmp4.2/13, ML4.1/3, MS4.0/1, Ms1 4.0/1, ms1mx2.8/29, Error ellipse: s-maj=33.4km s-min=21.2km az=79.0*
NEIC ***12*** *03:04:39.5±0.7, 36.°48N×141.°49E, h10km, mb4.4/6, Error ellipse: s-maj=14.9km s-min=11.1km az=153.0*
NEIC Recorded [1 JMA] in Ibaraki and Tochigi.
ISCJB ***12*** *03:04:41.1±0.9, 36.°35N±0.°03×141.°49E±0.°08, h39km±7km, mb4.1/16, Error ellipse: s-maj=10.4km s-min=5.6km az=1.3*
JMA ***12*** *03:04:42.1±0.1, 36.°39N×141.°38E, h50km±3km, M3.9*
JMA Felt I J1.
ISC 12 03:04:40.9±1.1,**36.°39N**±0.°03×**141.°45E**±0.°06,**h19**km±7km,
n36, σ0°**80**/44,**mb4.1**/16,**1D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.74**	**287**	⇓P	**Pb**	**03 04 55.6**	**+0.4**
CHOJ	**Chosi**	**0.84**	**215**	P	**Pb**	**03 04 57.2**	**+0.4**
CHOJ				*e*S	**Sb**	03 05 08.0	+0.3
ONAJ	**Iwakimizuishiy**	**0.88**	**324**	P	**Pb**	**03 04 57.5**	**-0.1**
JYT	**Yasato**	**1.03**	**261**	P	**Pb**	**03 04 59.7**	**-0.4**
JYT				*e*S	**Sb**	03 05 11.9	-1.3
JFK	**Kawauchi**	**1.08**	**335**	P	**Pn**	**03 05 00.3**	**-0.6**
JFK				*e*S	**Sb**	03 05 13.8	-0.8
JFT	**Otama**	**1.44**	**322**	P	**Pn**	**03 05 06.6**	**+0.7**
JMM	**Marumori**	**1.56**	**340**	P	**Pn**	**03 05 07.6**	**0.0**
JMM				*e*S	**Sn**	03 05 26.4	-0.9
JAG	**Ashikaga**	**1.61**	**272**	*i*P	**Pn**	**03 05 07.8**	**-0.5**
JAG				*e*S	**Sn**	03 05 27.1	-1.4
JFY	**Yanaizu**	**1.73**	**306**	P	**Pn**	**03 05 10.8**	**+0.9**
JFY				*e*S	**Sn**	03 05 32.7

IDC 12 03:43:21.9±1.6, 15.°49S×174.°21W, h0km, mb4.2/7, mb1 4.5/8, mb1mx4.3/15, mbtmp4.2/8, ML1.7/1, MS3.9/11, Ms1 3.9/11, ms1mx3.6/27, Error ellipse: s-maj=123.7km s-min=18.2km az=150.0
ISCJB 12 03:43:25.6±0.8, 15.°4S±0.°3×174.°3W±0.°2, h33km, mb4.2/21, MS3.9/10, Error ellipse: s-maj=50.8km s-min=12.3km az=150.6
NEIC 12 03:43:27.4±0.5, 15.°40S×174.°33W, h35km, mb4.3/14, Error ellipse: s-maj=31.5km s-min=8.6km az=150.0
ISC 12 03:43:27.6±0.8, 15.°4S±0.°3×174.°3W±0.°2, h35km, n46, σ0.°73/27, mb4.2/21, MS3.9/10, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.84**	**59**	Pn	**Pn**	**03 44 07.5**	**-3.0**
	6.6nm,0.3s,baz=54,slow=8.2,SNR=5.3						
AFI				Sn	**Sn**	**03 44 38.8**	**-4.8**
	6.5nm,0.3s,baz=203,slow=21,SNR=2.8						
AFI				T		03 46 45.9	
	19nm,0.3s,baz=98,slow=6.2,SNR=5.9						
AFI	**Afiamalu**	**2.84**	**59**	Pn	**Pn**	**03 44 07.5**	**-3.0**
AFI				Sn	**Sn**	**03 44 38.8**	**-4.8**
RAR	**Rarotonga**	**14.93**	**115**	LR	LR	03 51 24.8	
	comp=Z,521nm,19.8s,baz=91,slow=33						
DZM	**Mont Dzumac**	**19.41**	**247**	eLR	LR	03 52 23.2	
	277nm,23.9s						
PPT	**Papeete**	**23.78**	**99**	eLR	LR	03 54 25.9	
	269nm,23.2s						
PPT	**Papeete**	**23.78**	**99**	LR	LR	03 56 04.2	
	comp=Z,271nm,18.2s,MS3.8,baz=300,slow=32						
TBI	**Tubuai**	**24.68**	**112**	eLR	LR	03 54 57.3	
	418nm,23.0s						
HNR	**Honiara**	**25.85**	**280**	LR	LR	03 58 13.3	
	comp=Z,190nm,18.3s,MS3.7,baz=220,slow=34						
RKT	**Rikitea**	**37.80**	**108**	eLR	LR	04 01 00.3	
	270nm,23.8s						
CTA	**Charters Tower**	**37.81**	**257**	LR	LR	04 02 45.6	
	comp=Z,102nm,20.2s,MS3.6,baz=53,slow=31						
STKA	**Stephens Creek**	**43.30**	**240**	P	**P**	**03 51 24.4**	**-1.7**
	4.3nm,0.9s,mb4.2,baz=27,slow=5.6,SNR=3.1						
WRA	**Warramunga Arr**	**49.02**	**257**	P	**P**	**03 52 11.2**	**-0.1**
	2.9nm,1.0s,mb4.3,baz=92,slow=7.7,SNR=9.0						
ASAR	**Alice Springs**	**49.30**	**252**	P	**P**	**03 52 13.9**	**+0.5**
	8.0nm,0.8s,mb4.8,baz=84,slow=8.5,SNR=35						
FITZ	**Fitzroy Crossi**	**57.38**	**258**	LR	LR	04 16 36.5	
	comp=Z,223nm,18.5s,MS4.3,baz=27,slow=35						
DAV	**Davao City (W)**	**63.62**	**286**	LR	LR	04 14 57.6	
	comp=Z,84nm,21.6s,MS3.9,baz=352,slow=30						
MJAR	**Matsushiro Arr**	**68.40**	**320**	LR	LR	04 19 13.1	
	comp=Z,79nm,19.3s,MS4.0,baz=115,slow=31						
NVAR	**Mina Array Bea**	**74.91**	**42**	P	**P**	**03 55 05.2**	**+0.3**
	0.9nm,0.7s,mb3.8,baz=226,slow=10.0,SNR=7.7						
NVAR	**Mina Array Bea**	**74.91**	**42**	P	**P**	**03 55 05.2**	**+0.3**
TUC	**Tucson**	**77.06**	**51**	eP	**P**	**03 55 18.4**	**+1.0**
	1.7nm,0.8s,mb4.0						
DUG	**Dugway**	**79.45**	**43**	eP	**P**	**03 55 30.8**	**+0.4**
	1.3nm,0.7s,mb4.0						
HLID	**Hailey**	**80.17**	**40**	eP	**P**	**03 55 34.7**	**+0.5**
	2.7nm,1.2s,mb4.0						
TRF	**Thorofare Moun**	**80.79**	**11**	eP	**P**	**03 55 36.6**	**-0.4**
	23nm,1.6s,mb4.8						
MNTX	**Cornudas Mount**	**80.91**	**54**	eP	**P**	**03 55 38.7**	**+0.2**
	0.5nm,0.9s,mb3.4						
HWUT	**Hardware Ranch**	**80.97**	**42**	eP	**P**	**03 55 38.4**	**-0.2**
	1.9nm,0.3s,mb4.0						
MCK	**McKinley**	**81.30**	**11**	eP	**P**	**03 55 39.2**	**-0.5**
	3.1nm,0.5s,mb4.5						
TXAR	**Lajitas Array**	**81.32**	**56**	P	**P**	**03 55 41.6**	**+0.9**
	1.5nm,1.2s,mb3.8,baz=251,slow=3.8,SNR=7.4						
TXAR				LR	LR	04 27 33.2	
	comp=Z,79nm,18.4s,MS4.1,baz=0.0,slow=33						
ANMO	**Albuquerque**	**81.46**	**50**	eP	**P**	**03 55 41.1**	**-0.2**
	4.5nm,1.4s,mb4.2						
TPAW	**Teton Pass**	**82.30**	**41**	eP	**P**	**03 55 46.0**	**+0.5**
	0.9nm,0.5s,mb4.0						
COLA	**College**	**82.53**	**11**	eP	**P**	**03 55 46.0**	**-0.3**
	4.3nm,0.7s,mb4.6						
BW06	**Boulder Array**	**82.84**	**42**	eP	**P**	**03 55 48.2**	**-0.2**
	4.2nm,1.3s,mb4.3						
PDAR	**Pinedale Array**	**82.84**	**42**	P	**P**	**03 55 48.5**	**+0.2**
	0.9nm,0.9s,mb3.8,baz=213,slow=4.6,SNR=8.8						
SMCO	**Snowmass**	**82.93**	**46**	eP	**P**	**03 55 49.4**	**+0.5**
	16nm,1.6s,mb4.8						
BOZ	**Bozeman (W)**	**82.96**	**39**	eP	**P**	**03 55 49.5**	**+0.6**
	3.3nm,1.3s,mb4.2						
SDCO	**Great Sand Dun**	**83.35**	**48**	eP	**P**	**03 55 51.1**	**0.0**
	4.3nm,1.6s,mb4.2						
DAWY	**Dawson**	**83.64**	**15**	eP	**P**	**03 55 52.7**	**+0.7**
USHA	**Ushuaia**	**86.38**	**146**	LR	LR	04 25 46.5	
	comp=Z,118nm,18.5s,MS4.3,baz=211,slow=30						
YKA	**Yellowknife Ar**	**90.45**	**24**	P	**P**	**03 56 24.3**	**-0.8**
	0.8nm,0.8s,mb4.1,baz=254,slow=6.6,SNR=4.3						
SONM	**Songino Array**	**94.29**	**318**	LR	LR	04 33 43.5	
	comp=Z,40nm,20.6s,MS3.9,baz=81,slow=32						
CFAA	**Coronel Fontan**	**95.14**	**125**	LR	LR	04 29 23.2	
	comp=Z,13nm,19.2s,MS3.4,baz=257,slow=29						
PRU	**Pruhonice**	**144.78**	**350**	ePKP	PKPdf	04 02 58.5	-2.2
PRU				ex	x	04 03 05.6	
VRAC	**Vranov**	**145.05**	**348**	eP	PKPbc	04 03 01.0	+0.5
VYHS	**Vyhne**	**145.29**	**345**	ePKP	PKPbc	04 03 02.1	+0.7
GRF	**Grafenberg Arr**	**145.52**	**354**	ePKP	PKPdf	04 03 02.4	+0.4
PSZ	**Piszkesteto**	**145.53**	**343**	ePKPbc	PKPbc	04 03 02.7	+0.5
BRTR	**Keskin Array B**	**145.63**	**320**	PKPbc	PKPbc	04 03 02.9	+0.1
	2.0nm,1.1s,baz=170,slow=10.0,SNR=6.5						
KHC	**Kasperske Hory**	**145.76**	**351**	ePKP	PKPdf	04 03 03.1	+0.7

ISCJB 12 03:45:12.3±2.3, 18.°84N±0.°08×145.°3E±0.°2, h193km±19km, mb3.6/13, Error ellipse: s-maj=33.2km s-min=12.4km az=177.1
IDC 12 03:45:12.1±3.1, 18.°86N×145.°48E, h177km±28km, mb3.5/10, mb1 3.7/12, mb1mx3.6/23, mbtmp3.6/12, Error ellipse: s-maj=28.4km s-min=11.8km az=92.0
NEIC 12 03:45:15.6±2.7, 18.°83N×145.°38E, h212km±26km, mb3.9/4, Error ellipse: s-maj=20.3km s-min=8.0km az=89.0
ISC 12 03:45:12.6±2.2, 18.°84N±0.°08×145.°4E±0.°2, h180km±18km, n20, σ0.°67/21, mb3.8/13, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**8.73**	**341**	P	**Pn**	**03 47 14.9**	**-0.5**
	2.8nm,0.3s,baz=290,slow=20,SNR=4.4						
CBIJ				S	**Sn**	**03 48 52.4**	**-0.6**
	7.2nm,0.3s,baz=276,slow=21,SNR=5.1						
MJAR	**Matsushiro Arr**	**18.73**	**342**	P	**P**	**03 49 18.1**	**+0.5**
	0.7nm,0.3s,baz=108,slow=12,SNR=8.0						
MAJO	**Matsushiro**	**18.74**	**342**	eP	**P**	**03 49 19.0**	**+1.3**
	8.1nm,0.6s						
MAT	**Matsushiro**	**18.74**	**342**	P	**P**	**03 49 18.7**	**+1.1**
WRAB	**Tennant Creek**	**40.02**	**196**	eP	**P**	**03 52 29.7**	**-0.3**
	1.8nm,0.5s,mb4.0						
WRA	**Warramunga Arr**	**40.03**	**196**	P	**P**	**03 52 29.8**	**-0.3**
	1.0nm,0.3s,mb3.9,baz=18,slow=8.2,SNR=33						
FITZ	**Fitzroy Crossi**	**41.52**	**209**	P	**P**	**03 52 42.9**	**+0.6**
	1.3nm,0.3s,mb4.0,baz=72,slow=8.2,SNR=12						
SONM	**Songino Array**	**42.85**	**321**	P	**P**	**03 52 53.3**	**+0.5**
	0.7nm,0.5s,mb3.6,baz=138,slow=9.8,SNR=6.3						
ASAR	**Alice Springs**	**43.71**	**195**	P	**P**	**03 53 00.1**	**+0.3**
	0.4nm,0.4s,mb3.4,baz=18,slow=6.7,SNR=7.3						
MK31	**Makanchi Array**	**58.16**	**314**	eP	**P**	**03 54 47.5**	**+0.1**
MKAR	**Makanchi Array**	**58.16**	**314**	P	**P**	**03 54 47.9**	**+0.5**
	0.8nm,0.7s,mb3.7,baz=88,slow=9.0,SNR=7.7						
MKAR	**Makanchi Array**	**58.16**	**314**	P	**P**	**03 54 47.9**	**+0.5**
KURK	**Kurchatov**	**60.97**	**318**	eP	**P**	**03 55 05.4**	**-1.2**
	1.2nm,0.3s,mb4.2						
BVAR	**Borovoye Array**	**66.18**	**320**	P	**P**	**03 55 40.4**	**-0.2**
	1.5nm,0.5s,mb4.1,baz=100,slow=8.2,SNR=9.8						
ABKAR	**Akbulak array**	**73.04**	**317**	eP	**P**	**03 56 21.9**	**-0.8**
	0.3nm,0.3s,mb3.5						
YKA	**Yellowknife Ar**	**78.00**	**28**	P	**P**	**03 56 50.1**	**-0.6**
	0.9nm,0.7s,mb3.5,baz=280,slow=5.5,SNR=2.7						
ARCES	**ARCESS Array B**	**82.27**	**342**	P	**P**	**03 57 13.8**	**+0.4**
	0.9nm,0.7s,mb3.5,baz=70,slow=7.1,SNR=9.2						
NVAR	**Mina Array Bea**	**83.28**	**52**	P	**P**	**03 57 19.4**	**+0.2**
	1.6nm,0.7s,mb3.9,baz=262,slow=4.5,SNR=7.7						
NVAR	**Mina Array Bea**	**83.28**	**52**	P	**P**	**03 57 19.4**	**+0.2**
FINES	**FINESS Array B**	**86.64**	**335**	P	**P**	**03 57 34.4**	**-1.0**
	0.4nm,0.3s,mb3.7,baz=64,slow=5.3,SNR=9.9						

IDC 12 04:02:26.9±1.6, 20.°65S×70.°15W, h0km, mb4.3/1, mb1 4.1/2, mb1mx3.6/16, mbtmp4.1/2, ML3.5/1, MS3.4/2, Ms1 3.5/2, ms1mx2.9/22, Error ellipse: s-maj=76.5km s-min=36.1km az=115.0
GUC 12 04:02:31.8±0.7, 19.°92S×70.°55W, h38km±9km, ML3.7
ISC 12 04:02:28.0±1.4, 19.°95S±0.°06×70.°74W±0.°08, h10km, n10, σ0.°83/10, 3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.68**	**59**	⇓iP	**Pg**	**04 02 42.2**	**+1.1**
PSGC				i S	**Sg**	**04 02 49.9**	**-0.1**
PSGC				AML	AML	04 02 50.4	
	comp=N,3μm,0.2s						
HMBC	**Humberston**	**0.87**	**113**	⇓iP	**Pg**	**04 02 45.7**	**+0.9**
HMBC				i S	**Sg**	**04 02 55.9**	**-0.2**
HMBC				AML	AML	04 02 56.8	
	comp=E,4μm,0.4s						
MNMC	**Miæe Miæ**	**1.35**	**53**	⇓iP	**Pn**	**04 02 53.4**	**+0.5**
MNMC				i S	**Sb**	**04 03 09.4**	**-1.3**
MNMC				AML	AML	04 03 13.2	
	comp=E,9μm,0.2s						
PB04	**Plate Boundary**	**2.59**	**153**	eP	**Pn**	**04 03 09.5**	**-0.5**
PB04				AML	AML	04 03 56.2	
	comp=N,505nm,0.6s						
LPAZ	**La Paz**	**4.40**	**35**	Pn	**Pn**	**04 03 41.7**	**+6.8**
	comp=N,1.4nm,0.3s,baz=223,slow=6.4,SNR=35						
LPAZ				Pg	**Pg**	**04 03 53.1**	**+0.7**
	comp=N,2.4nm,0.3s,baz=218,slow=14,SNR=27						
LPAZ				Lg		04 04 53.5	
	comp=N,0.9nm,0.3s,baz=180,slow=20,SNR=1.7						
LPAZ				LR	LR	04 05 46.8	
	comp=N,134nm,19.9s,baz=29,slow=42						
SCHQ	**Schefferville**	**74.55**	**2**	LR	LR	04 47 48.4	
	comp=N,79nm,18.5s,baz=129,slow=36						
TORD	**Torodi Ar. Bea**	**78.47**	**71**	P	**P**	**04 14 28.6**	**-1.2**
	comp=N,1.3nm,0.5s,baz=248,slow=5.6,SNR=55						
WRA	**Warramunga Arr**	**133.36**	**213**	PKP	PKPdf	04 21 46.4	+1.2
	comp=N,0.5nm,1.0s,baz=153,slow=1.7,SNR=3.8						
MKAR	**Makanchi Array**	**145.33**	**33**	PKPbc	PKPbc	04 22 06.3	+0.4
	comp=N,0.9nm,0.6s,baz=317,slow=4.2,SNR=9.7						
SONM	**Songino Array**	**152.08**	**4**	PKPbc	PKPbc	04 22 25.1	+1.5
	comp=N,0.5nm,0.6s,baz=0.3,slow=1.1,SNR=3.3						

CSEM 12 04:02:43.1±3.4, 49.°44N×17.°98E, h2km, Error ellipse: s-maj=70.7km s-min=32.4km az=95.0
PRU 12 04:02:41.2, 49.°80N×18.°44E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MORC	**Moravsky Berou**	**0.58**	**268**	ePg	Pg	04 02 51.7	-0.6
MORC				eSg	Sg	04 02 59.9	0.0
DPC	**Dobruska-Polom**	**1.47**	**293**	ePG	Pg	04 03 08.3	-1.1
DPC				eSG	Sg	04 03 27.4	-1.0
DPC	**Dobruska-Polom**	**1.47**	**293**	epPKP	Pg	04 03 10.6	+1.2
DPC	**Dobruska-Polom**	**1.47**	**293**	Pg	Pg	04 03 08.3	-1.1
DPC	**Dobruska-Polom**	**1.47**	**293**	P	Pn	04 03 10.6	+1.7
DPC				Sg	Sg	04 03 27.4	-1.0

NEIC 12 04:06:06.4, 48.°87N×125.°60W, h32km, ML3.1(PGC), After PGC.
NEIC Felt at Ucluelet.
PGC 12 04:06:06.4±0.2, 48.°87N×125.°60W, h32km, ML3.1/19, 15D, 10km Ssw of Ucluelet, Bc Vancouver Island Region, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZB	**Mount Ozzard**	**0.12**	**38**	P	Pb	04 06 11.7	-0.3
OZB				S	Sb	04 06 15.1	-0.8
OZB	**Mount Ozzard**	**0.12**	**38**	⇑P	Pb	04 06 11.7	-0.3
OZB				⇑S	Sb	04 06 15.1	-0.8
BMSB	**Bamfield Mari**	**0.31**	**95**	⇑P	Pb	04 06 13.9	-0.2
BMSB				⇓S	Sb	04 06 18.9	-0.4
MGB	**Mount Grey**	**0.62**	**77**	P	Pb	04 06 18.0	-0.8
MGB				S	Sb	04 06 26.0	-1.2
MGB	**Mount Grey**	**0.62**	**77**	⇑P	Pb	04 06 18.0	-0.8
MGB				⇑S	Sb	04 06 26.0	-1.2
ALB	**Alberni**	**0.65**	**51**	P	Pb	04 06 18.3	-1.0
ALB				S	Sb	04 06 26.7	-1.4
ALB	**Alberni**	**0.65**	**51**	⇑P	Pb	04 06 18.3	-1.0
ALB				⇑S	Sb	04 06 26.7	-1.4
ETB	**Estevan Point**	**0.80**	**310**	P	Pn	04 06 21.0	-0.4
ETB	**Estevan Point**	**0.80**	**310**	⇓P	Pn	04 06 21.0	-0.4
PFB	**Port Renfrew**	**0.83**	**110**	P	Pn	04 06 21.0	-0.8
PFB				S	Sn	04 06 31.8	-1.0
PFB	**Port Renfrew**	**0.83**	**110**	⇑P	Pn	04 06 21.0	-0.8
PFB				⇓S	Sn	04 06 31.8	-1.0
GDR	**Gold River**	**0.96**	**343**	P	Pn	04 06 23.2	-0.3
GDR				S	Sn	04 06 35.3	-0.8
GDR	**Gold River**	**0.96**	**343**	⇓P	Pn	04 06 23.2	-0.3
GDR				⇓S	Sn	04 06 35.3	-0.8
NLLB	**Nanaimo Lost L**	**1.12**	**71**	⇑P	Pn	04 06 25.6	-0.2
NLLB				⇑S	Sn	04 06 40.2	0.0
TXB	**Texada**	**1.13**	**42**	⇓P	Pn	04 06 25.9	0.0
TXB				⇓S	Sn	04 06 39.8	-0.5
CBB	**Campbell River**	**1.18**	**8**	P	Pn	04 06 26.6	0.0
CBB				S	Sn	04 06 41.6	+0.1
CBB	**Campbell River**	**1.18**	**8**	⇓P	Pn	04 06 26.6	0.0
CBB				⇑S	Sn	04 06 41.6	+0.1
LZB	**Mount Lazard**	**1.21**	**102**	⇓P	Pn	04 06 26.7	-0.3
LZB				⇓S	Sn	04 06 42.7	+0.5
SHB	**Sechelt**	**1.35**	**57**	P	Pn	04 06 29.3	+0.4
SHB				S	Sn	04 06 46.4	+0.6
SHB	**Sechelt**	**1.35**	**57**	⇓P	Pn	04 06 29.3	+0.4
SHB				⇓S	Sn	04 06 46.4	+0.6
GOBB	**Galiano Island**	**1.38**	**86**	P	Pn	04 06 30.0	+0.6
GOBB				S	Sn	04 06 48.3	+1.7
GOBB	**Galiano Island**	**1.38**	**86**	⇑P	Pn	04 06 30.0	+0.6
GOBB				⇑S	Sn	04 06 48.3	+1.7
EDB	**Eliza Dome**	**1.41**	**316**	⇓P	Pn	04 06 31.3	+1.4
PGC	**Sidney**	**1.44**	**98**	ePn	Pn	04 06 29.7	-0.5
PGC				eSn	Sn	04 06 48.9	+0.9
PGC	**Sidney**	**1.44**	**98**	⇑P	Pn	04 06 29.8	-0.4
WOSB	**Woss**	**1.44**	**334**	⇓P	Pn	04 06 30.6	+0.3
NCRB	**Newcastle Ridg**	**1.57**	**349**	⇑P	Pn	04 06 32.8	+0.8
VGZ	**Gonzales**	**1.58**	**106**	⇓P	Pn	04 06 31.9	-0.2
BIB	**Bowen Island**	**1.60**	**69**	⇑P	Pn	04 06 33.7	+1.2
SNB	**Saturna Island**	**1.61**	**92**	P	Pn	04 06 33.1	+0.5
SNB	**Saturna Island**	**1.61**	**92**	⇑P	Pn	04 06 33.1	+0.5
WPB	**Watts Point**	**1.76**	**62**	P	Pn	04 06 35.6	+1.1
WPB	**Watts Point**	**1.76**	**62**	⇑P	Pn	04 06 35.6	+1.1
MAYB	**Maynard**	**1.84**	**327**	P	Pn	04 06 36.5	+0.8
MAYB	**Maynard**	**1.84**	**327**	⇑P	Pn	04 06 36.5	+0.8
NLWA	**Neilton Lookou**	**1.88**	**141**	ePn	Pn	04 06 36.2	-0.1
GNW	**Green Mountain**	**2.27**	**124**	ePn	Pn	04 06 43.3	+1.7
JCW	**Jim Creek**	**2.53**	**104**	ePn	Pn	04 06 46.3	+1.1
RPW	**Rockport**	**2.74**	**97**	ePn	Pn	04 06 49.0	+0.9

SGS 12 04:27:07.2, 27.°69N×56.°39E, h14km
CSEM 12 04:27:10.1±0.7, 27.°47N×56.°24E, h15km, ML3.0, Error ellipse: s-maj=23.0km s-min=16.2km az=80.0
TEH 12 04:27:10.9, 27.°50N×56.°55E, h20km
OMAN 12 04:27:14.8±99.0, 26.°99N×56.°62E, h10km, Error ellipse: s-maj=49.9km s-min=32.2km az=248.0
ISC 12 04:27:12.4±0.9, 27.°42N±0.°04×56.°25E±0.°09, h34km±8km, n23, σ1.9±12/25, 1D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.07**	**253**	ePg	**Pb**	**04 27 18.0**	**-0.1**
BANOM	**Banah**	**1.49**	**178**	P	**Pn**	**04 27 36.1**	**-0.6**
	SNR=74						
BANOM	**Banah**	**1.49**	**178**	P	**Pn**	**04 27 36.1**	**-0.6**
	SNR=74						
HATD	**Hatta, Dubai**	**2.58**	**182**	P	**Pn**	**04 27 53.3**	**+1.5**
HATD	**Hatta, Dubai**	**2.58**	**182**	⇓P	**Pn**	**04 27 53.3**	**+1.5**
KRBR	**Kerman**	**2.59**	**10**	ePn	**Pn**	**04 27 50.6**	**-1.3**
KRBR				eSg	**Sn**	**04 28 22.5**	**+0.3**
ASHO	**Ashiyiah**	**2.73**	**184**	P	**Pn**	**04 27 53.7**	**-0.1**
	SNR=16						
ASHO	**Ashiyiah**	**2.73**	**184**	P	**Pn**	**04 27 53.7**	**-0.1**
	SNR=16						
ASUD	**Al Ashush, Dub**	**2.90**	**197**	P	**Pn**	**04 27 57.4**	**+1.3**
	SNR=17						
ASUD	**Al Ashush, Dub**	**2.90**	**197**	P	**Pn**	**04 27 57.4**	**+1.3**
	SNR=17						
GHIR	**Ghir-Karzin**	**3.01**	**287**	ePn	**Pn**	**04 27 59.7**	**+2.1**
IPAR	**Pars**	**3.70**	**311**	ePn	**Pn**	**04 28 08.8**	**+1.6**
IPAR				e		04 29 40.7	
	comp=Z,193nm,0.3s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBAF	**Bafgh**	**4.20**	**352**	ePn	**Pn**	**04 28 12.5**	**-1.5**
IBAF				e		04 28 34.2	
	comp=Z,124nm,0.1s						
IMEH	**Mehriz**	**4.21**	**341**	ePn	**Pn**	**04 28 13.8**	**-0.3**
IMEH				e		04 29 05.4	
	comp=Z,187nm,0.1s						
ICHK	**Chekchek**	**5.07**	**342**	ePn	**Pn**	**04 28 25.5**	**-0.4**
ICHK				e		04 29 23.8	
	comp=N,100nm,0.2s						
BTHS		**5.92**	**237**	P	**Pn**	**04 28 36.5**	**-1.1**
BTHS		**5.92**	**237**	P	**Pn**	**04 28 36.5**	**-1.1**
BTHS				S	**Sn**	**04 29 43.4**	**-0.8**
IZEF	**Zefreh**	**6.42**	**329**	ePn	**Pn**	**04 28 44.9**	**+0.4**
IZEF				e		04 28 57.4	
	comp=Z,52nm,0.1s						
IPIR	**Pirpir**	**7.00**	**320**	ePn	**Pn**	**04 28 54.2**	**+1.7**
IPIR				e		04 29 11.1	
	comp=Z,67nm,0.1s						
LYLS		**9.78**	**239**	P	**Pn**	**04 29 30.1**	**-0.5**
LYLS		**9.78**	**239**	P	**Pn**	**04 29 30.1**	**-0.5**
ASYS		**10.57**	**273**	P	**Pn**	**04 29 39.7**	**-1.8**
ASYS		**10.57**	**273**	P	**Pn**	**04 29 39.7**	**-1.8**

IDC 12 04:38:23.2±1.5, 28.°93S×69.°74W, h0km, mb3.8/3, mb1 3.7/6, mb1mx3.6/17, mbtmp3.5/6, ML3.5/3, Error ellipse: s-maj=48.8km s-min=35.4km az=37.0
NEIC 12 04:38:33.5±1.0, 28.°55S×69.°36W, h68km±9km, mb4.2/1, Error ellipse: s-maj=17.9km s-min=12.4km az=153.0
ISC 12 04:38:33.6±1.0, 28.°6S±0.°1×69.°4W±0.°1, h66km±12km, n13, σ0.°95/10, mb3.7/4, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**1.25**	**250**	ePg	**Pn**	**04 38 55.9**	**+0.8**
LCO				eSg	**Sn**	**04 39 10.9**	**-0.3**
CPUP	**Villa Florida**	**10.92**	**81**	Pn	**Pn**	**04 41 05.5**	**-1.5**
	0.1nm,0.3s,baz=267,slow=17,SNR=2.6						
LPAZ	**La Paz**	**12.29**	**6**	Pn	**Pn**	**04 41 26.2**	**+0.4**
	0.1nm,0.3s,baz=174,slow=10,SNR=3.0						
LPAZ	**La Paz**	**12.29**	**6**	ePn	**Pn**	**04 41 25.3**	**-0.5**
	0.6nm,0.6s						
SIV	**San Ignacio**	**14.69**	**33**	Pn	**Pn**	**04 41 59.0**	**+1.3**
	0.1nm,0.3s,baz=236,slow=15,SNR=3.4						
TXAR	**Lajitas Array**	**66.28**	**327**	P	**P**	**04 49 14.3**	**-0.5**
	0.2nm,0.6s,mb3.1,baz=148,slow=8.6,SNR=2.8						
RWWY	**Rawlins**	**78.19**	**332**	eP	**P**	**04 50 24.2**	**-1.4**
	1.8nm,0.6s,mb4.0						
TORD	**Torodi Ar. Bea**	**80.18**	**69**	P	**P**	**04 50 38.1**	**+1.0**
	0.6nm,0.6s,mb3.6,baz=269,slow=5.4,SNR=17						
BOSA	**Boshof**	**80.58**	**117**	P	**P**	**04 50 39.5**	**+0.6**
	1.8nm,0.7s,mb4.0,baz=214,slow=3.6,SNR=3.0						
KURK	**Kurchatov**	**147.30**	**39**	PKPbc	PKPbc	04 58 09.0	-0.2
	0.4nm,0.5s,baz=312,slow=2.4,SNR=2.5						
ZALV	**Zalesovo Beam**	**148.42**	**29**	PKPbc	PKPbc	04 58 11.7	-0.3
	1.1nm,0.5s,baz=317,slow=3.2,SNR=5.8						
MKAR	**Makanchi Array**	**151.36**	**43**	PKPbc	PKPbc	04 58 19.0	-0.4
	0.6nm,0.4s,baz=308,slow=2.4,SNR=8.3						
MKAR	**Makanchi Array**	**151.36**	**43**	PKPbc	PKPbc	04 58 19.0	-0.4

IDC 12 04:44:00.8±4.0, 5.°84S×147.°53E, h0km, mb3.6/1, mb1 4.1/2, mb1mx3.6/13, mbtmp3.8/2, ML4.1/1, MS2.9/1, Ms1 2.9/1, ms1mx2.4/11, Error ellipse: s-maj=133.0km s-min=47.8km az=111.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**14.21**	**185**	LR	LR	04 52 14.4	
	comp=Z,45nm,18.7s,baz=57,slow=35						
WRA	**Warramunga Arr**	**19.00**	**221**	P	Pn	04 48 24.6	-0.2
	0.6nm,0.3s,baz=45,slow=12,SNR=49						
ASAR	**Alice Springs**	**22.05**	**215**	P	P	04 48 57.4	+0.1
	1.6nm,0.3s,baz=52,slow=9.0,SNR=31						
TORD	**Torodi Ar. Bea**	**145.56**	**285**	PKPbc	PKPbc	05 03 41.2	-1.1
	0.5nm,1.1s,baz=72,slow=4.6,SNR=4.4						

DDA 12 04:56:01.5, 37.°01N×29.°15E, h7km±4km, Md3.0
ISK 12 04:56:01.2, 37.°11N×29.°18E, h17km, MD2.8
*CSEM 12 04:56:02.2±0.3, 37.°08N×29.°23E, h20km, MD2.8, Error ellipse: s-maj=7.8km s-min=5.4km az=41

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSMR	**Kasumkent**	**1.17**	**105**	*e*PG	Pg	05 09 49.0	+0.5
KSMR				*e*S	Sb	05 10 11.0	+8.4
KSMR	**Kasumkent**	**1.17**	**105**	*e*Pg	Pg	05 09 49.0	+0.5
KSMR				*e*Sg	Sg	05 10 11.0	+7.3
MTA	**Mtatsminda**	**1.38**	**262**	P	Pn	05 09 43.3	-7.3
MTA				S	Sn	05 09 59.8	-8.8
TBLG	**Delisi**	**1.42**	**264**	*e*PG	Pg	05 09 44.3	-9.0
TBLG	**Delisi**	**1.42**	**264**	P	Pn	05 09 44.3	-6.8
TBLG				S	Sn	05 10 01.5	-7.9
TBLG	**Delisi**	**1.42**	**264**	*e*Pg	Pg	05 09 44.3	-9.0
SNJR	**Sundja**	**1.77**	**312**	*e*PN	Pn	05 09 59.0	+3.0
SNJR	**Sundja**	**1.77**	**312**	*e*Pn	Pn	05 09 59.0	+3.0
VLKR	**Vladikavkaz**	**1.83**	**309**	*e*PN	Pn	05 09 59.5	+2.7
VLKR	**Vladikavkaz**	**1.83**	**309**	*e*Pn	Pn	05 09 59.5	+2.7
GOR	**Gori**	**1.88**	**273**	P	Pn	05 09 48.5	-8.8
GOR				S	Sn	05 10 14.2	-6.5
LACR	**Lac**	**1.95**	**299**	*e*PN	Pn	05 09 59.6	+1.1
LACR	**Lac**	**1.95**	**299**	*e*Pn	Pn	05 09 59.6	+1.1
BTKR	**Batakoyurt**	**2.12**	**314**	*e*PN	Pn	05 10 04.7	+3.9
BTKR				*e*S	Sn	05 10 29.8	+3.0
BTKR	**Batakoyurt**	**2.12**	**314**	*e*Pn	Pn	05 10 04.7	+3.9
BTKR				*e*Sb	Sb	05 10 29.8	-0.3
ARNR	**Ardon**	**2.15**	**307**	*e*PN	Pn	05 10 04.1	+2.9
ARNR	**Ardon**	**2.15**	**307**	*e*Pn	Pn	05 10 04.1	+2.9
ZEI	**Tsey**	**2.20**	**294**	*e*PN	Pn	05 10 02.8	+1.0
ZEI	**Tsey**	**2.20**	**294**	*e*Pn	Pn	05 10 02.8	+1.0
KORR	**Kora**	**2.23**	**303**	*e*PN	Pn	05 10 04.2	+2.0
KORR				*e*S	Sn	05 10 29.6	+0.2
KORR	**Kora**	**2.23**	**303**	*e*Pn	Pn	05 10 04.2	+2.0
KORR				*e*Sn	Sn	05 10 29.6	+0.2
KMSR	**Komsomolskaya**	**2.26**	**311**	*e*PN	Pn	05 10 06.0	+3.4
KMSR				*e*S	Sn	05 10 32.1	+2.0
KMSR	**Komsomolskaya**	**2.26**	**311**	*e*Pn	Pn	05 10 06.0	+3.4
KMSR				*e*Sn	Sn	05 10 32.1	+2.0
TRKR	**Terskaya**	**2.29**	**323**	*e*PN	Pn	05 10 08.0	+5.0
TRKR				*e*S	Sn	05 10 36.2	+5.3
TRKR	**Terskaya**	**2.29**	**323**	*e*Pn	Pn	05 10 08.0	+5.0
TRKR				*e*Sn	Sn	05 10 36.2	+5.3
ONI	**Oni**	**2.45**	**287**	P	Pn	05 10 02.8	-2.5
ONI				S	Sn	05 10 31.7	-3.2
LSNR	**Lesken**	**2.48**	**304**	*e*PN	Pn	05 10 08.0	+2.3
LSNR				*e*S	Sn	05 10 35.7	0.0
LSNR	**Lesken**	**2.48**	**304**	*e*Pn	Pn	05 10 08.0	+2.3
LSNR				*e*Sn	Sn	05 10 35.7	0.0

IDC 12 05:14:07.0±14.0, 10.°95N×92.°27E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/21, mbtmp3.4/3, Error ellipse: s-maj=765.4km s-min=30.5km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.71**	**349**	P	P	05 21 15.8	0.0
	0.2nm,0.6s,baz=165,slow=7.4,SNR=4.2						
WRA	**Warramunga Arr**	**51.55**	**126**	P	P	05 23 15.6	+0.4
	0.3nm,0.9s,baz=305,slow=7.8,SNR=4.6						
ASAR	**Alice Springs**	**53.30**	**131**	P	P	05 23 27.7	-0.4
	0.2nm,0.4s,baz=314,slow=6.1,SNR=4.1						

NIED ***12*** *05:18:00, 24.°20N×121.°50E, h35km, Mw4.6 Best double couple: M0=8.57000×10^15 NP1:φ=62.00000°, δ=90.00000°, λ=86.00000°. NP2:φ=331.00000°, δ=4.00000°, λ=179.00000°.*
JMA ***12*** *05:18:28.5±0.4, 24.°18N×121.°53E, h23km, M4.9*
IDC ***12*** *05:18:28.5±0.7, 24.°28N×122.°04E, h0km, mb4.1/15, mb1 4.2/15, mb1mx4.1/22, mbtmp4.0/15, MS4.0/21, Ms1 4.0/21, ms1mx3.7/43, Error ellipse: s-maj=31.9km s-min=15.7km az=64.0*
ISCJB ***12*** *05:18:30.8±0.3, 24.°23N±0.°01×121.°86E±0.°02, h5km±2km, mb4.0/22, MS4.0/20, Error ellipse: s-maj=2.9km s-min=2.0km az=30.0*
TAP ***12*** *05:18:30.7, 24.°20N×121.°81E, h7km, ML4.5, C*
NEIC ***12*** *05:18:30.2±0.5, 24.°19N×121.°88E, h10km, mb4.3/7, ML4.5(TAP), Error ellipse: s-maj=8.8km s-min=6.3km az=99.0*
NEIC Felt at Pan-ch'iao. Recorded [4 TAP] in I-lan, [3 TAP] in Hua-lien and [1 TAP] in T'ai-pei.
BJI ***12*** *05:18:32.0, 24.°43N×121.°75E, h9km, mB4.6/13, mb4.2/16, ML4.2/7, Ms4.6/23, Ms7 4.5/22*

ISC 12 05:18:31.4±0.3, 24.°22N±0.°01×121.°85E±0.°02, h6km±2km, n122, σ1§15/156, mb4.0/22, MS4.0/20, 7C-3D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.13**	**310**	P	**Pg**	**05 18 33.7**	**-0.5**
	baz=334						
EHP				S	**Sg**	**05 18 36.0**	**-0.1**
	baz=334						
ENA	**Nanau**	**0.23**	**333**	P	**Pg**	**05 18 35.6**	**-0.3**
	baz=344						
ENA				S	**Sg**	**05 18 39.4**	**+0.5**
	baz=344						
NACB	**Ninganchiao**	**0.24**	**258**	*e*Pg	**Pg**	**05 18 34.3**	**-1.8**
NACB				*e*Sg	**Sg**	**05 18 38.2**	**-1.2**
TWD	**Chiawan**	**0.28**	**239**	*i* P	**Pg**	**05 18 35.6**	**-1.2**
	baz=252						
TWD				S	**Sg**	**05 18 39.1**	**-1.3**
	baz=252						
HWA	**Hwalien**	**0.34**	**223**	*e*P	**Pg**	**05 18 37.8**	**-0.1**
	baz=236						
TWC	**Suao**	**0.38**	**359**	*i* P	**Pg**	**05 18 39.0**	**+0.2**
	baz=356						
TWC				S	**Sg**	**05 18 44.4**	**+0.5**
	baz=356						
ESF	**Shoufeng Towns**	**0.47**	**222**	*e*P	**Pg**	**05 18 40.0**	**-0.5**
	baz=238						
NNS	**Nan Shan**	**0.49**	**296**	⇑*i*P	**Pg**	**05 18 40.1**	**-0.7**
	baz=303						
NNS				*e*S	**Sg**	**05 18 45.9**	**-1.4**
	baz=303						
TWE	**Neicheng**	**0.52**	**341**	⇑*i*P	**Pg**	**05 18 41.6**	**+0.2**
	baz=345						
TWE				S	**Sg**	**05 18 48.5**	**+0.2**
	baz=345						
WHF	**Hehuan Shan**	**0.54**	**262**	*e*P	**Pg**	**05 18 40.9**	**-0.9**
	baz=268						
ILA	**Ilan**	**0.55**	**350**	*i* P	**Pg**	**05 18 42.3**	**+0.3**
	baz=344						
ILA				S	**Sg**	**05 18 50.9**	**+1.8**
	baz=344						
ESL	**Shilin**	**0.56**	**223**	*i* P	**Pg**	**05 18 41.9**	**-0.3**
	baz=235						
ESL				*e*S	**Sg**	**05 18 50.7**	**+1.3**
	baz=235						
TEGC	**Jichi Village**	**0.59**	**209**	*e*P	**Pg**	**05 18 43.3**	**+0.6**
	baz=214						
TEGC				*e*S	**Sg**	**05 18 53.0**	**+2.7**
	baz=214						
TWT	**Tachien**	**0.62**	**273**	*e*P	**Pg**	**05 18 43.6**	**+0.3**
	baz=278						
YHNB	**Yeheng**	**0.62**	**316**	*e*Pg	**Pg**	**05 18 42.7**	**-0.6**
YHNB				*e*Sg	**Sg**	**05 18 52.3**	**+0.9**
NSK	**Sanguang**	**0.64**	**315**	*i* P	**Pg**	**05 18 43.4**	**-0.2**
	baz=320						
NSK				S	**Sg**	**05 18 51.4**	**-0.6**
	baz=320						
TWB1	**Santiao Chiao**	**0.79**	**9**	*e*P	**Pg**	**05 18 46.5**	**-0.1**
	baz=5.0						
TWB1				*e*S	**Sg**	**05 18 57.7**	**+0.8**
	baz=5.0						
TWA	**Mucha**	**0.79**	**342**	⇑P	**Pg**	**05 18 46.6**	**0.0**
	baz=342						
TWA				S	**Sg**	**05 18 57.6**	**+0.7**
	baz=342						
TATO	**Taipei**	**0.82**	**336**	*e*Pg	**Pg**	**05 18 46.7**	**-0.4**
NWF	**Wu-fen Shan**	**0.85**	**355**	*i* P	**Pg**	**05 18 47.6**	**0.0**
	baz=346						
NWF				S	**Sg**	**05 18 58.9**	**+0.3**
	baz=346						
EHY	**Hungye**	**0.86**	**214**	*e*P	**Pg**	**05 18 46.6**	**-1.4**
	baz=231						
EHY				*e*S	**Sg**	**05 19 00.8**	**+1.6**
	baz=231						
TAP1	**Taipei**	**0.87**	**340**	⇑*i*P	**Pg**	**05 18 48.3**	**+0.3**
	baz=340						
TAP1				S	**Sg**	**05 18 59.6**	**+0.4**
	baz=340						
NSTT	**Nanjuang**	**0.88**	**298**	P	**Pg**	**05 18 47.9**	**-0.4**
	baz=303						
NSTT				*e*S	**Sg**	**05 19 00.4**	**+0.8**
	baz=303						
SSLB	**Suanglung**	**0.93**	**242**	*e*Pg	**Pg**	**05 18 47.5**	**-1.8**
SMLT	**Sun Moon Lake**	**0.94**	**249**	P	**Pg**	**05 18 48.3**	**-1.1**
	baz=253						
SMLT				*e*S	**Sg**	**05 19 00.8**	**-0.7**
	baz=253						
TWS1	**Kuangyinshan**	**0.96**	**336**	⇑*i*P	**Pg**	**05 18 50.4**	**+0.6**
	baz=337						
NCU	**National Centr**	**0.96**	**321**	P	**Pg**	**05 18 50.1**	**+0.3**
	baz=324						
NCU				S	**Sg**	**05 19 04.5**	**+2.2**
	baz=324						
YULB	**Yu-li**	**0.97**	**212**	*e*Pg	**Pg**	**05 18 48.3**	**-1.7**
HSN	**Hsinchu**	**0.99**	**306**	*e*P	**Pg**	**05 18 50.4**	**+0.1**
	baz=312						
HSN				*e*S	**Sg**	**05 19 05.3**	**+2.0**
	baz=312						
TWQ1	**Liyutan**	**0.99**	**277**	P	**Pg**	**05 18 50.9**	**+0.5**
	baz=283						
TWF1	**Yuli**	**1.01**	**211**	*e*P	**Pg**	**05 18 49.4**	**-1.3**
	baz=227						
NSY	**Sanyi**	**1.02**	**281**	⇓*i*P	**Pg**	**05 18 51.1**	**+0.3**
	baz=287						
TWY	**Chenhua**	**1.07**	**348**	*e*P	**Pg**	**05 18 52.0**	**+0.1**
	baz=347						
TCU	**Taichung**	**1.08**	**266**	*i* P	**Pg**	**05 18 52.7**	**+0.6**
	baz=271						
TCU				S	**Sg**	**05 19 07.1**	**+1.0**
	baz=271						
YOJ	**Yonaguni jima**	**1.08**	**77**	P	**Pg**	**05 18 52.8**	**+0.7**
YOJ				S	**Sg**	**05 19 10.3**	**+4.1**
YUS	**Yu-Shan**	**1.10**	**229**	P	**Pg**	**05 18 51.8**	**-0.8**
	baz=233						
YUS				*e*S	**Sg**	**05 19 07.1**	**+0.3**
	baz=233						
WNT	**Mingjian**	**1.12**	**252**	P	**Pg**	**05 18 53.0**	**+0.1**
	baz=251						
WNT				*e*S	**Sg**	**05 19 07.8**	**+0.3**
	baz=251						
ALS	**Alishan**	**1.20**	**234**	P	**Pg**	**05 18 53.4**	**-0.9**
	baz=239						
ALS				*e*S	**Sg**	**05 19 09.8**	**+0.1**
	baz=239						
CHN5	**Tsauling**	**1.24**	**240**	*e*P	**Pb**	**05 18 54.8**	**-0.4**
	baz=245						
CHN5				*e*S	**Sg**	**05 19 12.5**	**+1.2**
	baz=245						
ELDTW	**Lidau**	**1.28**	**217**	*e*P	**Pn**	**05 18 53.2**	**-2.6**
	baz=208						
CHN4	**Tsaushan**	**1.45**	**233**	P	**Pn**	**05 18 57.6**	**-0.4**
	baz=240						
CHN4				*e*S	**Sn**	**05 19 18.1**	**+0.8**
	baz=240						
TPUB	**Ta-pu**	**1.45**	**231**	*e*Pn	**Pn**	**05 18 57.5**	**-0.6**
TPUB				*e*Sn	**Sn**	**05 19 21.3**	**+4.0**
WTCT	**Ta-ch'eng**	**1.48**	**256**	P	**Pn**	**05 18 58.2**	**-0.3**
	baz=262						
WTCT				*e*S	**Sn**	**05 19 18.7**	**+0.5**
	baz=262						
WTP	**Ta-pu**	**1.50**	**230**	⇓*i*P	**Pn**	**05 18 58.4**	**-0.3**
	baz=237						
WTP				S	**Sn**	**05 19 19.1**	**+0.6**
	baz=237						
TWG	**Pinlang**	**1.57**	**207**	*e*Pn	**Pn**	**05 18 56.2**	**-3.5**
TWK	**Hsinying**	**1.57**	**233**	⇓*i*P	**Pn**	**05 19 00.1**	**+0.4**
	baz=240						
TWK				*e*S	**Sn**	**05 19 21.5**	**+1.1**
	baz=240						
CHN1	**Nanshi**	**1.60**	**230**	P	**Pn**	**05 19 00.3**	**+0.2**
	baz=236						
CHN1				*e*S	**Sn**	**05 19 22.8**	**+1.8**
	baz=236						
TTN	**Taitung**	**1.60**	**204**	*e*P	**Pn**	**05 18 58.5**	**-1.7**
	baz=198						
WSF	**Szhu**	**1.60**	**249**	*e*P	**Pn**	**05 19 02.0**	**+1.8**
	baz=266						
WSF				*e*S	**Sn**	**05 19 22.4**	**+1.3**
	baz=266						
SGST	**Jiashian**	**1.63**	**226**	*i* P	**Pn**	**05 19 00.8**	**+0.3**
	baz=232						
SGST				*e*S	**Sn**	**05 19 23.5**	**+1.7**
	baz=232						
IRIF	**Iriomote-Funau**	**1.71**	**86**	P	**Pn**	**05 19 01.7**	**0.0**
IRIF				S	**Sn**	**05 19 27.8**	**+3.9**
CHN8	**Yiju**	**1.74**	**240**	P	**Pn**	**05 19 02.2**	**+0.2**
	baz=248						
CHN8				S	**Sn**	**05 19 26.6**	**+2.1**
	baz=248						
CHN3	**Shinhua**	**1.78**	**230**	*e*P	**Pn**	**05 19 03.9**	**+1.3**
	baz=243						
HATJ	**Hateruma jima**	**1.79**	**95**	P	**Pn**	**05 19 03.1**	**+0.4**
SCLT	**Jiali**	**1.85**	**236**	*e*P	**Pn**	**05 19 04.0**	**+0.6**
	baz=245						
SCLT				*e*S	**Sn**	**05 19 29.1**	**+2.0**
	baz=245						
SSD	**Sandimen**	**1.85**	**218**	*e*P	**Pn**	**05 19 02.8**	**-0.8**
	baz=238						
SSD				*e*S	**Sn**	**05 19 28.9**	**+1.6**
	baz=238						
TAI1	**Yung-k'ang**	**1.90**	**232**	*e*P	**Pn**	**05 19 05.4**	**+1.1**
	baz=244						
TWM1	**Shoushan**	**1.92**	**224**	*e*P	**Pn**	**05 19 05.3**	**+0.9**
	baz=233						
JKRS	**Kuro-shima**	**1.97**	**89**	P	**Pn**	**05 19 06.1**	**+0.9**
JKRS				*e*S	**Sn**	**05 19 34.3**	**+4.2**
EAST	**Anshuo**	**2.05**	**207**	*e*P	**Pn**	**05 19 06.0**	**-0.3**
	baz=202						
TAW	**Tawu**	**2.06**	**206**	*e*P	**Pn**	**05 19 07.0**	**+0.6**
	baz=214						
JIJ	**Ishigaki jima**	**2.09**	**86**	P	**Pn**	**05 19 07.1**	**+0.2**
JIJ				*e*S	**Sn**	**05 19 34.2**	**+1.0**
SCZT	**Fangliau**	**2.17**	**212**	*e*P	**Pn**	**05 19 08.4**	**+0.5**
	baz=225						
SCZT				*e*S	**Sn**	**05 19 35.7**	**+0.7**
	baz=225						
LAY	**Lan-yu**	**2.19**	**187**	*e*P	**Pn**	**05 19 05.8**	**-2.4**
	baz=194						
PNG	**Penghu**	**2.20**	**253**	*e*P	**Pn**	**05 19 07.5**	**-0.9**
	baz=260						
PNG				*e*S	**Sn**	**05 19 35.0**	**-1.0**
	baz=260						
TWP	**Hsiaoliuchiu**	**2.32**	**217**	*e*P	**Pn**	**05 19 12.7**	**+2.7**
	baz=229						
HEN	**Hengchun**	**2.44**	**205**	*e*P	**Pn**	**05 19 13.0**	**+1.4**
	baz=202						
TWK1	**Hengchun**	**2.47**	**203**	*e*P	**Pn**	**05 19 11.4**	**-0.6**
	baz=198						
TSEB	**Hengchuen, Pin**	**2.47**	**201**	*e*P	**Pn**	**05 19 12.3**	**+0.1**
	baz=212						
JTJ	**Tarama**	**2.63**	**80**	P	**Pn**	**05 19 15.6**	**+1.3**
JTJ				*e*S	**Sn**	**05 19 49.8**	**+3.3**
QZH	**Quanzhou**	**3.06**	**284**	⇑*i*Pn	**Pn**	**05 19 18.2**	**-1.9**
QZH				Sn	**Sn**	**05 19 53.2**	**-3.8**
QZH				smax			
	comp=N,1μm,0.7s						
QZH				smax			
	comp=E,900nm,0.9s						
QZH				LR	LR		
	comp=N,5μm,11.3s						
QZH				LR	LR		
	comp=E,8μm,11.0s						
QZH				LR	LR		
	comp=Z,9μm,11.0s						
KNM	**Kinmen**	**3.13**	**274**	*e*P	**Pn**	**05 19 21.5**	**+0.4**
	baz=281						
JMJ	**Miyako jima 2**	**3.19**	**79**	*e*S	**Sn**	**05 20 05.0**	**+4.7**
JOGS	**Gusukube**	**3.28**	**80**	*e*S	**Sn**	**05 20 05.1**	**+2.6**
JAGN	**Aguni-jima**	**5.41**	**63**	P	**Pn**	**05 19 57.6**	**+5.1**
JIH	**Iheya**	**6.19**	**62**	P	**Pn**	**05 20 06.4**	**+3.2**
SSE	**Sheshan**	**6.87**	**355**	P	**Pn**	**05 20 11.3**	**-1.3**
SSE				LR	LR		
	comp=N,3μm,11.8s						
SSE				LR	LR		
	comp=E,870nm,11.8s						
SSE				LR	LR		
	comp=Z,3μm,11.0s						
NJ2	**Nanjing**	**8.23**	**342**	*e*P	**Pn**	**05 20 28.0**	**-3.3**
NJ2				pP		05 20 34.7	
NJ2				PP		05 20 37.6	
NJ2				sP		05 20 41.8	
NJ2				S	**Sn**	**05 21 56.5**	**-8.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				smax			
	comp=N,160nm,1.1s						
NJ2				smax			
	comp=E,130nm,1.1s						
NJ2				LR	LR		
	comp=N,3μm,11.8s						
NJ2				LR	LR		
	comp=E,21μm,11.2s						
NJ2				LR	LR		
	comp=Z,3μm,13.0s						
WHN	**Wuhan**	**9.17**	**315**	*e*P	**Pn**	**05 20 44.7**	**+0.6**
WHN				S	**Sn**	**05 22 23.6**	**-4.0**
WHN				LR	LR		
	comp=N,7μm,9.6s						
WHN				LR	LR		
	comp=E,7μm,10.0s						
WHN				LR	LR		
	comp=Z,11μm,9.3s						
QIZ	**Qiongzhong**	**12.31**	**247**	P	**Pn**	**05 21 29.3**	**+2.2**
QIZ				S	**Sn**	**05 23 43.8**	**-0.9**
QIZ				pmax	pmax		
	comp=Z,22nm,1.4s						
QIZ				LR	LR		
	comp=N,290nm,13.7s						
QIZ				LR	LR		
	comp=E,270nm,10.8s						
QIZ				LR	LR		
	comp=Z,390nm,10.2s						
DAV	**Davao City (W)**	**17.43**	**168**	LR	LR	05 30 37.4	
	comp=Z,259nm,18.4s,baz=4.4,slow=42						
SNY	**Shenyang**	**17.61**	**4**	⇑P	**Pn**	**05 22 38.8**	**+1.5**
SNY				pmax	pmax		
	comp=Z,170nm,5.7s						
SNY				LR	LR		
	comp=N,2μm,11.4s						
SNY				LR	LR		
	comp=E,520nm,8.4s						
SNY				LR	LR		
	comp=Z,2μm,12.3s						
MJAR	**Matsushiro Arr**	**18.67**	**45**	LR	LR	05 30 45.4	
	comp=Z,246nm,18.9s,baz=220,slow=40						
HHC	**Hu-ho-hao-te**	**18.69**	**335**	*e*P	**Pn**	**05 22 44.3**	**-6.2**
HHC				PP		05 22 59.9	
HHC				S	**Sn**	**05 26 06.2**	**-13**
HHC				SS		05 26 29.9	
HHC				PcP	PcP	05 27 15.3	-3.1
HHC				ScS	ScS	05 34 27.9	-7.8
HHC				pmax	pmax		
	comp=Z,16nm,0.5s						
HHC				pmax	pmax		
	comp=Z,120nm,5.5s						
HHC				LR	LR		
	comp=N,1μm,11.0s						
HHC				LR	LR		
	comp=E,550nm,11.1s						
HHC				LR	LR		
	comp=Z,1μm,11.1s						
LZH	**Lanzhou**	**19.52**	**311**	*e*P	**Pn**	**05 23 02.5**	**+2.0**
LZH				pP	pP	05 23 07.0	+5.8
LZH				sP	sP	05 23 10.2	+8.2
LZH				pmax	pmax		
	comp=Z,30nm,1.1s						
LZH				pmax	pmax		
	comp=Z,180nm,4.0s						
LZH				LR	LR		
	comp=E,1μm,11.4s						
LZH				LR	LR		
	comp=Z,2μm,12.3s						
CHTO	**Chiang Mai**	**21.97**	**260**	*e*P	**P**	**05 23 27.6**	**+1.6**
	comp=Z,18nm,1.4s,mb4.3						
CMAR	**Chiang Mai Arr**	**22.09**	**259**	P	**P**	**05 23 27.9**	**+0.6**
	comp=Z,1.2nm,0.3s,mb3.8,baz=60,slow=8.6,SNR=7.9						
GTA	**Gaotai**	**23.99**	**314**	*e*P	**P**	**05 23 45.8**	**-0.9**
GTA				pP		05 23 50.4	
GTA				sP	sP	05 23 53.6	+4.2
GTA				pmax	pmax		
	comp=Z,130nm,5.1s						
GTA				LR	LR		
	comp=N,370nm,11.6s,MS4.5						
GTA				LR	LR		
	comp=E,900nm,11.9s,MS4.5						
GTA				LR	LR		
	comp=Z,1μm,11.6s,MS4.7						
ASAJ	**Asahikawa**	**26.10**	**35**	LR	LR	05 35 07.1	
	comp=Z,494nm,18.2s,MS4.1,baz=35,slow=38						
ULN	**Ulaanbaatar**	**26.36**	**337**	*e*P	**P**	**05 24 07.2**	**-0.9**
	comp=Z,4.5nm,0.8s,mb4.0						
SONM	**Songino Array**	**26.57**	**336**	P	**P**	**05 24 09.3**	**-0.7**
	comp=Z,3.3nm,0.7s,mb4.0,baz=151,slow=9.7,SNR=19						
SONM				LR	LR	05 36 08.0	
	comp=Z,415nm,19.3s,MS4.0,baz=308,slow=40						
MK31	**Makanchi Array**	**38.74**	**316**	*e*P	**P**	**05 25 55.4**	**-0.8**
MKAR	**Makanchi Array**	**38.74**	**316**	P	**P**	**05 25 55.1**	**-1.1**
	comp=Z,2.4nm,0.7s,mb4.0,baz=103,slow=10,SNR=24						
MKAR				LR	LR	05 41 40.7	
	comp=Z,76nm,20.7s,MS3.5,baz=259,slow=36						
ZALV	**Zalesovo Beam**	**40.55**	**327**	P	**P**	**05 26 09.8**	**-1.4**
	comp=Z,2.8nm,0.7s,mb4.0,baz=109,slow=7.6,SNR=14						
ZALV				LR	LR	05 44 26.7	
	comp=Z,86nm,20.9s,MS3.6,baz=254,slow=38						
TKM2	**Tokmak 2**	**42.22**	**308**	*e*P	**P**	**05 26 24.8**	**-0.3**
	comp=Z,4.8nm,0.9s,mb4.1						
KURK	**Kurchatov**	**42.45**	**320**	LR	LR	05 45 49.4	
	comp=Z,71nm,18.8s,MS3.6,baz=130,slow=39						
WRA	**Warramunga Arr**	**45.55**	**163**	P	**P**	**05 26 49.5**	**-2.5**
	comp=Z,1.7nm,0.8s,mb4.0,baz=346,slow=8.7,SNR=11						
BVAR	**Borovoye Array**	**48.03**	**321**	P	**P**	**05 27 10.2**	**-0.9**
	comp=Z,1.8nm,0.6s,mb4.3,baz=100,slow=6.7,SNR=10						
BRVK	**Borovoye**	**48.10**	**321**	*e*P	**P**	**05 27 10.9**	**-0.8**
	comp=Z,3.4nm,0.6s,mb4.5						
ASAR	**Alice Springs**	**49.02**	**165**	P	**P**	**05 27 18.6**	**-0.4**
	comp=Z,0.8nm,0.8s,mb3.8,baz=342,slow=7.1,SNR=5.4						
HNR	**Honiara**	**50.02**	**127**	LR	LR	05 45 20.4	
	comp=Z,61nm,18.6s,MS3.6,baz=308,slow=32						
CTA	**Charters Tower**	**50.05**	**150**	LR	LR	05 46 25.7	
	comp=Z,155nm,20.6s,MS4.0,baz=48,slow=34						
ABKAR	**Akbulak array**	**53.85**	**314**	*e*P	**P**	**05 27 54.2**	**-0.8**
	comp=Z,3.9nm,0.7s,mb4.5						
ARU	**Arti**	**55.44**	**323**	*e*P	**P**	**05 28 04.4**	**-2.0**
	comp=Z,2.8nm,0.6s,mb4.5						
STKA	**Stephens Creek**	**58.89**	**160**	P	**P**	**05 28 28.6**	**-2.5**
	comp=Z,1.9nm,0.8s,mb4.2,baz=312,slow=14,SNR=2.9						
STKA				LR	LR	05 53 55.2	
	comp=Z,115nm,19.2s,MS4.0,baz=28,slow=36						
GNI	**Garni**	**65.28**	**305**	LR	LR	06 01 47.9	
	comp=Z,69nm,18.7s,MS3.9,baz=265,slow=40						
KDAK	**Kodiak Island**	**67.52**	**35**	LR	LR	05 57 14.6	
	comp=Z,150nm,19.5s,MS4.2,baz=17,slow=34						
SPITS	**Spitsbergen Ar**	**69.58**	**348**	LR	LR	06 04 05.1	
	comp=Z,226nm,18.1s,MS4.5,baz=45,slow=39						
ARCES	**ARCESS Array B**	**69.73**	**338**	P	**P**	**05 29 40.9**	**-0.8**
	comp=Z,2.5nm,1.1s,mb4.1,baz=54,slow=6.8,SNR=2.7						
FINES	**FINESS Array B**	**71.72**	**330**	P	**P**	**05 29 52.3**	**-1.6**
	comp=Z,0.6nm,0.4s,mb3.8,baz=66,slow=4.8,SNR=8.8						
FINES				LR	LR	06 04 41.2	
	comp=Z,182nm,19.0s,MS4.4,baz=288,slow=39						
AKASG	**Malin Array Be**	**73.25**	**318**	P	**P**	**05 30 00.6**	**-2.6**
	comp=Z,0.3nm,0.3s,mb3.8,baz=61,slow=6.5,SNR=4.7						
BRTR	**Keskin Array B**	**73.64**	**307**	P	**P**	**05 30 04.3**	**-1.4**

baz=353
ENA *e*S Sg 05 19 10.2 +1.5
baz=353
TWD Chiawan 0.23 224 *e*P Pg 05 19 07.3 +0.7
baz=223
TWC Suao 0.37 11 *e*P Pg 05 19 10.2 +1.0
baz=12
NNS Nan Shan 0.41 299 *e*P Pg 05 19 10.5 +0.6
baz=298
NNS *e*S Sg 05 19 17.0 +1.6
baz=298
WHF Hehuan Shan 0.47 258 *e*P Pg 05 19 10.8 -0.2
baz=257
WHF *e*S Sg 05 19 19.1 +1.8
baz=257
TWE Neicheng 0.48 349 *e*P Pg 05 19 10.9 -0.4
baz=350

DDA ***12*** *05:27:37.9, 37°.11N×30°.77E, h17km±5km, Md3.1*
ISCJB ***12*** *05:27:38.8±0.6, 37°.16N±0°.03×30°.75E±0°.04, h3km±6km, Error ellipse: s-maj=5.3km s-min=4.8km az=8.7*
ISK ***12*** *05:27:38.9, 37°.17N×30°.72E, h6km, MD2.8*
CSEM ***12*** *05:27:39.2±0.1, 37°.16N×30°.72E, h5km, MD2.8, Error ellipse: s-maj=1.9km s-min=1.6km az=133.0*
ISC 12 05:27:39.2±0.6, 37°.15N±0°.03×30°.76E±0°.05, h4km±6km, n36, σ0s83/48, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ANTB	**Antalya**	**0.27**	**198**	*e*PG			**Pg**	**05 27 44.7**	**+0.4**
ANTB				*e*SG			**Sg**	**05 27 49.5**	**+1.7**
ANTB	**Antalya**	**0.27**	**198**	*e*Pg			**Pg**	**05 27 44.7**	**+0.4**
ANTB				*e*Sg			**Sg**	**05 27 49.5**	**+1.7**
BCK	**Bucak**	**0.34**	**336**	*e*PG			**Pg**	**05 27 45.3**	**-0.3**
BCK				*e*SG			**Sg**	**05 27 50.4**	**+0.4**
BCK	**Bucak**	**0.34**	**336**	*e*Pg			**Pg**	**05 27 45.3**	**-0.3**
BCK				*e*Sg			**Sg**	**05 27 50.4**	**+0.4**
KORT	**Korkueli**	**0.36**	**245**	*i* P			**Pg**	**05 27 45.1**	**-1.0**
KORT				*i* S			**Sg**	**05 27 50.5**	**-0.3**
KORT	**Korkueli**	**0.36**	**245**	*i* P			**Pg**	**05 27 45.1**	**-1.0**
KORT				*i* S			**Sg**	**05 27 50.5**	**-0.2**
SUTC	**Sutluce-Ispart**	**0.38**	**31**	*e*PG			**Pg**	**05 27 46.6**	**+0.2**
SUTC	**Sutluce-Ispart**	**0.38**	**31**	*e*Pg			**Pg**	**05 27 46.6**	**+0.2**
ISP	**Isparta**	**0.69**	**344**	*e*PG			**Pg**	**05 27 52.4**	**0.0**
ELL	**Elmali**	**0.79**	**239**	*e*PG			**Pg**	**05 27 54.2**	**-0.1**
ELL	**Elmali**	**0.79**	**239**	*e*Pg			**Pg**	**05 27 54.2**	**-0.1**
GOLH	**Golhisar**	**0.96**	**275**	*i* P			**Pg**	**05 27 56.1**	**-1.4**
GOLH				*i* S			**Sg**	**05 28 11.1**	**+1.1**
GOLH	**Golhisar**	**0.96**	**275**	*i* P			**Pg**	**05 27 56.1**	**-1.4**
GOLH				*i* S			**Sg**	**05 28 11.1**	**+1.1**
GLHS	**Glhisar (BURDU**	**1.00**	**271**	*e*PG			**Pg**	**05 27 57.6**	**-0.8**
GLHS	**Glhisar (BURDU**	**1.00**	**271**	*e*Pg			**Pg**	**05 27 57.6**	**-0.8**
AKAS	**Kas**	**1.30**	**226**	*i* P			**Pn**	**05 28 04.4**	**+0.3**
AKAS				*i* S			**Sg**	**05 28 27.7**	**+6.7**
AKAS	**Kas**	**1.30**	**226**	*i* P			**Pn**	**05 28 04.4**	**+0.3**
HDMB	**Hadim**	**1.40**	**97**	*e*PN			**Pn**	**05 28 06.0**	**+0.6**
HDMB	**Hadim**	**1.40**	**97**	*e*Pn			**Pn**	**05 28 06.0**	**+0.6**
SHUT	**Suhut-Afyon**	**1.41**	**353**	*e*PN			**Pn**	**05 28 05.3**	**-0.2**
SHUT	**Suhut-Afyon**	**1.41**	**353**	*e*Pn			**Pn**	**05 28 05.3**	**-0.2**
KONT	**Konya--Tatoy**	**1.50**	**58**	*e*PN			**Pn**	**05 28 07.2**	**+0.4**
KONT	**Konya--Tatoy**	**1.50**	**58**	*e*Pn			**Pn**	**05 28 07.2**	**+0.4**
KHL	**Karahalli**	**1.52**	**320**	*e*PN			**Pn**	**05 28 06.6**	**-0.6**
KHL	**Karahalli**	**1.52**	**320**	*e*Pn			**Pn**	**05 28 06.6**	**-0.5**
GAZI	**Gazipasa**	**1.55**	**126**	*e*P			**Pn**	**05 28 05.9**	**-1.6**
GAZI				*e*S			**Sn**	**05 28 27.8**	**-0.3**
GAZI	**Gazipasa**	**1.55**	**126**	*e*P			**Pn**	**05 28 05.9**	**-1.6**
GAZI				*e*S			**Sn**	**05 28 27.8**	**-0.3**
KHAL	**Karahalli**	**1.57**	**321**	*i* P			**Pn**	**05 28 07.5**	**-0.4**
KHAL				*i* S			**Sn**	**05 28 31.5**	**+2.8**
KHAL	**Karahalli**	**1.57**	**321**	*i* P			**Pn**	**05 28 07.5**	**-0.4**
KHAL				*i* S			**Sn**	**05 28 31.5**	**+2.8**
LADK	**Ladik-KONYA**	**1.65**	**50**	*e*PN			**Pn**	**05 28 09.3**	**+0.4**
LADK	**Ladik-KONYA**	**1.65**	**50**	*e*Pn			**Pn**	**05 28 09.3**	**+0.4**
KIZT	**Kizilcal**	**1.94**	**27**	*e*PN			**Pn**	**05 28 13.2**	**+0.4**
KIZT	**Kizilcal**	**1.94**	**27**	*e*Pn			**Pn**	**05 28 13.2**	**+0.3**
YER	**Yerkesik**	**1.98**	**270**	*e*PN			**Pn**	**05 28 13.2**	**-0.2**
YER	**Yerkesik**	**1.98**	**270**	*e*Pn			**Pn**	**05 28 13.2**	**-0.2**
DZM	**Mont Dzumac**	**139.02**	**81**	*e*LR			LR	05 47 32.4	
	205nm,24.6s								

BJI ***12*** *05:38:47.5, 51°.81N×159°.29E, h11km, mB4.8/22, mb4.8/38, Ms4.3/22, Ms7 4.2/22*
IDC ***12*** *05:38:47.0±0.6, 51°.63N×159°.45E, h0km, mb4.5/26, mb1 4.6/27, mb1mx4.6/30, mbtmp4.5/27, ML4.2/1, MS4.0/11, Ms1 4.0/11, ms1mx3.7/31, Error ellipse: s-maj=16.7km s-min=12.5km az=138.0*
MOS ***12*** *05:38:47.6±1.3, 51°.57N×159°.34E, h14km, mb4.9/66, Error ellipse: s-maj=8.5km s-min=4.2km az=94.8*
KRSC ***12*** *05:38:48.0±0.7, 51°.46N×159°.92E, h16km±16km, ML5.0*
NEIC ***12*** *05:38:49.7±2.5, 51°.62N×159°.44E, h16km±15km, mb4.6/63, Error ellipse: s-maj=7.1km s-min=4.5km az=159.0*
ISCJB ***12*** *05:38:50.7±0.5, 51°.47N±0°.03×159°.66E±0°.05, h41km±3km, mb4.6/133, MS4.1/28, Error ellipse: s-maj=6.8km s-min=3.8km az=139.5*
SZGRF ***12*** *05:39:16.8, 54°.02N×152°.73E, h33km, mb4.8, Sea of Okhotsk*
ISC 12 05:38:53.4±0.5, 51°.57N±0°.04×159°.52E±0°.05, h44km±3km, h24km±2.2km: pP-P, n355, σ1s05/375, mb4.6/133, MS4.1/28, 29C-12D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GRL	**Gorelyy**	**1.33**	**318**	*e*P			**Pn**	**05 39 16.1**	**+0.7**
GRL				*i* S			**Sn**	**05 39 36.7**	**+4.9**
PET	**Petropavlovsk**	**1.55**	**340**	⇑*i* PN			**Pn**	**05 39 17.8**	**-0.6**
PET					pmax		pmax		
	comp=Z,1μm,1.2s								
PET					pmax		pmax		
	comp=Z,400nm,3.7s								
PET					pmax		pmax		
	comp=Z,937nm,0.4s								
PET	**Petropavlovsk**	**1.55**	**340**	*e*P			**Pn**	**05 39 18.1**	**-0.3**
PET				*i* S			**Sn**	**05 39 40.5**	**+3.2**
PET	**Petropavlovsk**	**1.55**	**340**	*e*Pn			**Pn**	**05 39 17.9**	**-0.5**
PET				*e*Sg			**Sn**	**05 39 41.1**	**+3.8**
SPN	**Mys Shipunski**	**1.56**	**11**	*e*P			**Pn**	**05 39 16.9**	**-1.6**
SPN				*i* S			**Sn**	**05 39 37.6**	**+0.1**
INSR	**Institute**	**1.60**	**340**	*e*P			**Pn**	**05 39 19.2**	**+0.1**
INSR				*i* S			**Sn**	**05 39 42.1**	**+3.6**
NLC	**Nalytchevo**	**1.60**	**356**	*e*P			**Pn**	**05 39 18.1**	**-1.1**
AVH	**Avacha**	**1.76**	**344**	*e*P			**Pn**	**05 39 21.5**	**+0.2**
MIPR	**Malaya Ipel'ka**	**1.85**	**293**	*e*P			**Pn**	**05 39 23.7**	**+1.2**
MIPR				*i* S			**Sn**	**05 39 50.0**	**+5.3**
SKR	**Severo-Kuril's**	**2.32**	**249**	*i* PN			**Pn**	**05 39 29.0**	**0.0**
SKR				*i* S			**Sn**	**05 39 57.5**	**+1.2**
SKR					pmax		pmax		
	comp=Z,1μm,2.0s								
SKR					pmax		pmax		
	comp=E,330nm,0.5s								
SKR					pmax		pmax		
	comp=Z,580nm,0.5s								
SKR					pmax		pmax		
	comp=N,200nm,0.3s								
SKR					smax				
	comp=N,4μm,0.5s								
SKR					smax				
	comp=E,3μm,0.5s								
SKR					smax				
	comp=N,7μm,2.0s								
SKR					smax				
	comp=E,5μm,2.0s								
SKR					MLR		MLR		
	comp=N,6μm,14.0s								
SKR					MLR		MLR		
	comp=E,7μm,14.0s								
SKR					MLR		MLR		
	comp=Z,6μm,14.0s								
GNL	**Ganaly**	**2.33**	**336**	*e*P			**Pn**	**05 39 29.8**	**+0.6**
KII	**Karymskiy**	**2.47**	**359**	*e*P			**Pn**	**05 39 30.9**	**-0.1**
ALID	**Alaid**	**2.60**	**256**	*e*P			**Pn**	**05 39 32.7**	**-0.1**
MKZ	**Mys Kozlova**	**3.27**	**23**	*e*P			**Pn**	**05 39 39.5**	**-2.5**
MKZ				*i* S			**Sn**	**05 40 16.2**	**-3.4**
KMNR	**Kamenistaya**	**4.21**	**5**	*e*P			**Pn**	**05 39 55.6**	**+0.7**
BZMR	**Bezymyannaya**	**4.41**	**7**	*e*P			**Pn**	**05 39 58.6**	**+1.0**
KPT	**Kopyto**	**4.42**	**5**	*e*P			**Pn**	**05 39 58.2**	**+0.4**
KOZ	**Kozyrevsk**	**4.50**	**2**	*e*P			**Pn**	**05 40 00.0**	**+1.1**
KOZR	**Kozyr**	**4.51**	**3**	PN			**Pn**	**05 40 00.0**	**+1.0**
ZLN	**Zelenaya**	**4.52**	**9**	*e*P			**Pn**	**05 40 00.3**	**+1.2**
CIRR	**Tsirk**	**4.61**	**9**	*e*P			**Pn**	**05 40 00.7**	**+0.3**
KRSR	**Krestovskiy**	**4.69**	**7**	*e*P			**Pn**	**05 40 02.6**	**+1.1**
SRDR	**Sredinnyy**	**4.75**	**1**	*e*P			**Pn**	**05 40 03.5**	**+1.1**
KLY	**Klyuchi**	**4.80**	**8**	*e*P			**Pn**	**05 40 04.9**	**+2.0**
KBTR	**Krutoberegovo**	**5.04**	**21**	*e*P			**Pn**	**05 40 05.0**	**-1.2**
KBTR				*i* S			**Sn**	**05 41 01.4**	**-1.6**
BDR	**Baidarnaya**	**5.10**	**11**	*e*P			**Pn**	**05 40 08.3**	**+1.2**
SMKR	**Semkarok**	**5.15**	**12**	*e*P			**Pn**	**05 40 08.2**	**+0.5**
SRKR	**Sorokina**	**5.18**	**10**	*e*P			**Pn**	**05 40 08.5**	**+0.3**
SMY	**Shemya**	**9.04**	**77**	*e*Pn			**Pn**	**05 40 58.0**	**-3.1**
SMY				*e*Sn			**Sn**	**05 42 33.7**	**-7.7**
YSS	**Yuzh-Sakhalins**	**11.88**	**254**	*e*PN			**Pn**	**05 41 41.0**	**+1.0**
YSS					MLR		MLR		
	comp=N,700nm,16.0s								
YSS					MLR		MLR		
	comp=Z,600nm,16.0s								
YSS					MLR		MLR		
	comp=E,700nm,18.0s								
ASAJ	**Asahikawa**	**13.58**	**243**	Pn			**Pn**	**05 42 02.2**	**-0.9**
	comp=E,1.6nm,0.3s,baz=67,slow=13,SNR=19								
ASAJ	**Asahikawa**	**13.58**	**243**	PN			**Pn**	**05 42 02.2**	**-0.9**
ASAJ					pmax		pmax		
	comp=Z,2.0nm,0.3s								
ERM	**Erimo**	**14.70**	**236**	*e*Pn			**Pn**	**05 42 17.2**	**-1.1**
HABR	**Khabarovsk**	**16.01**	**268**	P			**Pn**	**05 42 30.1**	**-5.1**
HABR					pmax		pmax		
	comp=E,15nm,1.5s								
HABR					pmax		pmax		
	comp=Z,13nm,1.4s								
HABR					pmax		pmax		
	comp=N,7.0nm,1.0s								
HABR					MLR		MLR		
	comp=Z,584nm,17.0s								
BILL	**Biilibino**	**16.84**	**9**	*de*P			**Pn**	**05 42 44.7**	**-0.9**
BILL				*e*S			**S**	**05 45 52.0**	**-8.3**
BILL					pmax		pmax		
	comp=Z,22nm,1.2s								
BILL					MLR		MLR		
	comp=Z,500nm,17.0s								
BILL	**Biilibino**	**16.84**	**9**	*e*P			**Pn**	**05 42 45.2**	**-0.4**
	comp=Z,17nm,1.0s								
KLR	**Kul'dur**	**17.82**	**273**	*e*P			**Pn**	**05 42 55.0**	**-2.8**
KLR					pmax		pmax		
	comp=E,47nm,1.2s								
KLR					pmax		pmax		
	comp=Z,56nm,1.2s								
KLR					MLR		MLR		
	comp=N,700nm,13.0s								
KLR					MLR		MLR		
	comp=Z,2μm,13.0s								
YAK	**Yakutsk**	**19.22**	**315**	*e*P			**Pn**	**05 43 10.8**	**-3.8**
YAK					pmax		pmax		
	comp=E,34nm,1.0s								
YAK					pmax		pmax		
	comp=N,18nm,1.5s								
YAK					pmax		pmax		
	comp=Z,105nm,0.9s								
YAK					MLR		MLR		
	comp=E,418nm,16.0s								
YAK					MLR		MLR		
	comp=Z,515nm,15.0s								
YAK					MLR		MLR		
	comp=N,235nm,12.0s								
YAK	**Yakutsk**	**19.22**	**315**	*e*P			**Pn**	**05 43 11.5**	**-3.0**
	comp=N,122nm,0.8s								
VLA	**Vladivostok**	**20.45**	**256**	*e*P			**P**	**05 43 23.7**	**-3.1**
VLA					pmax		pmax		
	comp=Z,23nm,1.0s								
CLNS	**Chul'man**	**20.77**	**298**	*e*P			**P**	**05 43 28.9**	**-1.3**
CLNS				*e**PP				05 43 36.5	
CLNS				*e*				05 43 45.8	
CLNS				*e*S			**S**	**05 47 19.2**	**-0.2**
CLNS				*e*				05 47 37.0	
CLNS					pmax		pmax		
	comp=Z,9.0nm,0.8s								
CLNS					pmax		pmax		
	comp=N,9.0nm,0.8s								
CLNS					pmax		pmax		
	comp=E,6.0nm,0.9s								
CLNS					pmax		pmax		
	comp=Z,9.0nm,1.1s								
CLNS					pmax		pmax		
	comp=N,8.0nm,0.9s								
CLNS					pmax		pmax		
	comp=E,7.0nm,0.9s								
CLNS					smax				
	comp=N,49nm,12.8s								
CLNS					smax				
	comp=E,170nm,14.6s								
CLNS					MLR		MLR		
	comp=E,363nm,15.0s,MS4.0								
CLNS					MLR		MLR		
	comp=Z,295nm,11.0s,MS3.9								
CLNS					MLR		MLR		
	comp=N,140nm,12.0s,MS4.0								
MDJ	**Mudanjiang**	**21.06**	**263**	P			**P**	**05 43 30.6**	**-2.9**
MDJ					pmax		pmax		
	comp=Z,17nm,0.9s,mb4.4								
MDJ					pmax		pmax		
	comp=Z,68nm,7.1s								
MDJ					LR		LR		
	comp=N,170nm,13.8s,MS3.9								
MDJ					LR		LR		
	comp=E,360nm,14.8s,MS3.9								
MDJ					LR		LR		
	comp=Z,600nm,13.8s,MS4.1								
MDJ	**Mudanjiang**	**21.06**	**263**	*e*P			**P**	**05 43 30.5**	**-3.0**
	comp=Z,16nm,0.8s,mb4.4								
MAJO	**Matsushiro**	**21.34**	**234**	*e*P			**P**	**05 43 36.6**	**0.0**
MAJO					pmax		pmax		
	comp=Z,32nm,0.9s,mb4.7								
MAJO	**Matsushiro**	**21.34**	**234**	*e*P			**P**	**05 43 36.6**	**+0.1**
	comp=Z,32nm,0.9s,mb4.7								
MAT	**Matsushiro**	**21.34**	**234**	P			**P**	**05 43 36.4**	**-0.2**
MAT				*e*S			**S**	**05 47 34.0**	**+3.1**
MJAR	**Matsushiro Arr**	**21.34**	**234**	P			**P**	**05 43 36.5**	**-0.1**
	comp=Z,15nm,0.9s,mb4.3,baz=29,slow=9.8,SNR=35								
MJAR					LR		LR	05 52 27.9	
	comp=Z,293nm,20.9s,MS3.6,baz=55,slow=38								
MJAR	**Matsushiro Arr**	**21.34**	**234**	P			**P**	**05 43 36.5**	**0.0**
MJAR					pmax		pmax		
	comp=Z,15nm,0.9s								
MJAR					MLR		MLR		
	comp=Z,293nm,20.9s								
MJAR	**Matsushiro Arr**	**21.34**	**234**	P			**P**	**05 43 36.5**	**-0.1**
MJAR					LR		LR	05 52 27.9	
CN2	**Changchun**	**24.05**	**265**	*e*P			**P**	**05 44 03.6**	**-0.5**
CN2				*es*P			sP	05 44 14.6	-6.3
CN2				*e*S			**S**	**05 48 15.4**	**-2.8**
CN2					pmax		pmax		
	comp=Z,10.0nm,0.8s,mb4.3								
CN2					pmax		pmax		
	comp=Z,200nm,3.0s								
CN2					LR		LR		
	comp=N,300nm,19.0s,MS4.0								
CN2					LR		LR		
	comp=E,400nm,19.0s,MS4.0								
CN2					LR		LR		
	comp=Z,600nm,21.0s,MS4.0								
TIXI	**Tiksi**	**24.33**	**337**	*e*P			**P**	**05 44 04.7**	**-1.7**
TIXI					pmax		pmax		
	comp=Z,32nm,0.9s,mb4.8								
TIXI					MLR		MLR		
	comp=Z,318nm,12.0s,MS4.0								
TIXI	**Tiksi**	**24.33**	**337**	*e*P			**P**	**05 44 05.5**	**-0.9**
	comp=Z,45nm,1.2s,mb4.8								
HIA	**Hailar**	**25.24**	**281**	*e*P			**P**	**05 44 13.4**	**-1.5**
HIA					pmax		pmax		
	comp=Z,57nm,0.9s								
HIA	**Hailar**	**25.24**	**281**	*e*P			**P**	**05 44 13.3**	**-1.5**
	comp=Z,58nm,0.9s,mb5.1								
COLA	**College**	**29.74**	**43**	*e*P			**P**	**05 44 55.0**	**0.0**
COLA					pmax		pmax		
	comp=Z,6.0nm,0.8s,mb4.4								
COLA	**College**	**29.74**	**43**	*e*P			**P**	**05 44 55.0**	**0.0**
	comp=Z,5.6nm,0.8s,mb4.3								
BJI	**Beijing**	**31.89**	**266**	P			**P**	**05 45 15.6**	**+1.4**
BJI				S			**S**	**05 50 21.8**	**0.0**
BJI					pmax		pmax		
	comp=Z,13nm,0.8s,mb4.8								
BJI					pmax		pmax		
	comp=Z,99nm,6.0s								
BJI					LR		LR		
	comp=N,260nm,19.4s								
BJI					LR		LR		
	comp=E,220nm,25.3s								
BJI					LR		LR		
	comp=Z,130nm,21.1s,MS3.6								
EGAK	**Eagle**	**32.60**	**43**	*e*P			**P**	**05 45 19.0**	**-1.2**
	comp=Z,7.7nm,0.8s,mb4.7								
DAWY	**Dawson**	**33.44**	**44**	*e*P			**P**	**05 45 27.0**	**-0.5**
ULN	**Ulaanbaatar**	**33.52**	**285**	*e*P			**P**	**05 45 27.5**	**-0.9**
ULN					pmax		pmax		
	comp=Z,4.0nm,0.9s,mb4.3								
ULN	**Ulaanbaatar**	**33.52**	**285**	*e*P			**P**	**05 45 27.5**	**-0.9**
	comp=Z,4.4nm,0.9s,mb4.4								
SONM	**Songino Array**	**33.93**	**285**	P			**P**	**05 45 31.3**	**-0.7**
	comp=Z,1.4nm,0.4s,mb4.3,baz=39,slow=7.5,SNR=9.8								
SONM					PcP		PcP	05 48 08.9	-0.5
	comp=Z,0.8nm,0.6s,baz=52,slow=1.8,SNR=3.7								
SONM					LR		LR	06 00 49.8	
	comp=Z,446nm,18.3s,MS4.2,baz=175,slow=39								
SONM	**Songino Array**	**33.93**	**285**	P			**P**	**05 45 31.3**	**-0.7**
SONM								05 48 08.9	
SONM					pmax		pmax		
	comp=Z,1.0nm,0.4s								
SONM					MLR		MLR		
	comp=Z,446nm,18.3s								
TLY	**Talaya**	**33.96**	**293**	*e*P			**P**	**05 45 31.1**	**-1.1**
TLY				*e*S			**S**	**05 50 56.8**	**+3.0**
TLY				*e*SS			SS	05 52 58.2	-23
TLY					pmax		pmax		
	comp=Z,7.0nm,1.2s,mb4.5								
TLY					MLR		MLR		
	comp=Z,111nm,15.0s,MS3.7								
TLY	**Talaya**	**33.96**	**293**	*e*P			**P**	**05 45 31.2**	**-1.0**
	comp=Z,4.4nm,0.8s,mb4.4								
HHC	**Hu-ho-hao-te**	**34.30**	**271**	*e*P			**P**	**05 45 33.4**	**-1.8**
HHC				S			**S**	**05 50 55.5**	**-3.7**
HHC					pmax		pmax		
	comp=Z,11nm,0.6s,mb5.0								
HHC					pmax		pmax		
	comp=Z,72nm,6.3s								
INK	**Inuvik**	**35.30**	**36**	P			**P**	**05 45 43.5**	**0.0**
	comp=Z,3.5nm,0.8s,mb4.3,baz=316,slow=6.6,SNR=6.7								
INK	**Inuvik**	**35.30**	**36**	P			**P**	**05 45 43.5**	**0.0**
INK					pmax		pmax		
	comp=Z,4.0nm,0.8s								
INK	**Inuvik**	**35.30**	**36**	*e*P			**P**	**05 45 43.9**	**+0.4**
	comp=Z,4.5nm,0.8s,mb4.5								
NJ2	**Nanjing**	**35.45**	**253**	*e*P			**P**	**05 45 46.2**	**+1.0**
NJ2					pmax		pmax		
	comp=Z,40nm,1.1s,mb5.3								
MOY	**Mondy**	**35.49**	**294**	*e*P			**P**	**05 45 44.9**	**-0.5**
KRAR	**Krasnoyarsk**	**38.24**	**304**	*e*P			**P**	**05 46 05.5**	**-3.2**
KRAR					pmax		pmax		
	comp=Z,12nm,0.9s,mb4.6								
WHN	**Wuhan**	**39.23**	**255**	P			**P**	**05 46 16.9**	**-0.3**
LZH	**Lanzhou**	**41.99**	**271**	*e*P			**P**	**05 46 40.5**	**+0.5**
LZH				pP			pP	05 46 49.7	-2.3
LZH				sP			sP	05 46 53.4	-3.8
LZH				PcP			PcP	05 48 36.9	+2.4
LZH				*e*S			**S**	**05 52 56.0**	**+0.4**
LZH				sS			sS	05 53 09.5	-6.1
LZH				SS			SS	05 55 54.0	-9.4
LZH					pmax		pmax		
	comp=Z,24nm,1.2s,mb4.7								
LZH					pmax		pmax		
	comp=Z,150nm,5.2s								
LZH					LR		LR		
	comp=E,400nm,14.3s								
LZH					LR		LR		
	comp=Z,490nm,16.0s,MS4.5								
ENH	**Enshi**	**42.38**	**260**	*e*P			**P**	**05 46 42.6**	**-0.6**
	comp=Z,24nm,0.9s,mb4.8								
GTA	**Gaotai**	**42.45**	**278**	*e*P			**P**	**05 46 43.0**	**-0.6**
GTA				pP			pP	05 46 47.4	-8.3
GTA				sP			sP	05 46 50.3	-11
GTA					pmax		pmax		
	comp=Z,5.0nm,1.3s,mb4.0								
ZALV	**Zalesovo Beam**	**43.32**	**304**	P			**P**	**05 46 48.2**	**-2.3**
	comp=Z,2.5nm,0.5s,mb4.2,baz=58,slow=6.7,SNR=11								
ZALV					PcP		PcP	05 48 38.0	-0.6
	comp=Z,0.8nm,0.4s,baz=70,slow=4.9,SNR=5.2								
ZALV					LR		LR	06 06 12.5	
	comp=Z,204nm,18.6s,MS4.1,baz=249,slow=38								
ZALV	**Zalesovo Beam**	**43.32**	**304**	P			**P**	**05 46 48.2**	**-2.3**
ZALV								05 48 38.0	
ZALV					pmax		pmax		
	comp=Z,3.0nm,0.5s,mb4.3								
ZALV					MLR		MLR		
	comp=Z,204nm,18.6s,MS4.1								
ZALV	**Zalesovo Beam**	**43.32**	**304**	P			**P**	**05 46 48.2**	**-2.3**
ZALV				PcP			PcP	05 48 38.0	-0.6
ZALV				LR			LR	06 06 12.5	
NVS	**Novosibirsk**	**43.70**	**306**	⇑*i* P			**P**	**05 46 51.4**	**-2.2**
NVS					pmax		pmax		
	comp=Z,21nm,1.0s,mb4.8								
NVS					pmax		pmax		
	comp=N,6.0nm,1.0s								
NVS					pmax		pmax		
	comp=E,15nm,1.0s								
YKA	**Yellowknife Ar**	**44.53**	**41**	P			**P**	**05 46 58.7**	**-1.4**
	comp=E,2.0nm,0.8s,mb4.0,baz=296,slow=7.9,SNR=5.2								
YKA	**Yellowknife Ar**	**44.53**	**41**	P			**P**	**05 46 58.7**	**-1.4**
YKA					pmax		pmax		
	comp=Z,2.0nm,0.8s								
YKA	**Yellowknife Ar**	**44.53**	**41**	P			**P**	**05 46 58.7**	**-1.4**
RES	**Resolute Bay**	**44.87**	**21**	P			**P**	**05 47 02.7**	**0.0**
	comp=Z,3.2nm,0.7s,mb4.3,baz=311,slow=10,SNR=8.2								
RES	**Resolute Bay**	**44.87**	**21**	P			**P**	**05 47 02.7**	**0.0**
RES					pmax		pmax		
	comp=Z,3.0nm,0.7s,mb4.2								
RES	**Resolute Bay**	**44.87**	**21**	*e*P			**P**	**05 47 02.7**	**0.0**
	comp=Z,4.3nm,0.8s,mb4.3								
CD2	**Chengdu**	**45.48**	**265**	P			**P**	**05 47 08.6**	**+0.5**
CD2				pP			pP	05 47 16.1	-4.1
CD2				sP			sP	05 47 19.4	-5.9
CD2				PP			PP	05 48 55.2	+0.3
CD2				S			**S**	**05 53 47.0**	**+0.4**
CD2				sS			sS	05 53 59.4	-7.4

MKAR LR LR 06 08 57.9
comp=Z,134nm,18.1s,MS4.0,baz=253,slow=37
MKAR Makanchi Array 48.51 297 *ce*P **P 05 47 30.0 -1.5**
SPITS Spitsbergen Ar 48.58 351 P **P 05 47 31.9 +0.3**
comp=Z,13nm,0.4s,mb5.3,baz=30,slow=8.7,SNR=55
SPITS Spitsbergen Ar 48.58 351 P **P 05 47 31.9 +0.2**
SPITS pmax pmax
comp=Z,13nm,0.4s
KMI Kunming 50.22 261 ⇓P **P 05 47 45.7 +0.9**
KMI pP pP 05 47 53.5 -3.6
KMI sP sP 05 47 56.7 -5.5
KMI PcP PcP 05 49 05.4 +2.0
KMI PP PP 05 49 41.4 +1.1
KMI S **S 05 54 54.3 +0.5**
KMI sS sS 05 55 07.2 -7.1
KMI SS SS 05 58 23.7 -3.7
KMI pmax pmax
comp=Z,11nm,1.0s,mb4.8
KMI pmax pmax
comp=Z,100nm,4.5s
KMI LR LR
comp=N,180nm,18.0s,MS4.3
KMI LR LR
comp=E,140nm,15.4s,MS4.3
KMI LR LR
comp=Z,170nm,14.6s,MS4.2
QIZ Qiongzhong 50.56 249 P **P 05 47 49.8 +2.4**
QIZ S **S 05 55 01.4 +2.8**
QIZ pmax pmax
comp=Z,26nm,1.9s,mb4.8
QIZ LR LR
comp=Z,160nm,15.9s,MS4.1
VOSK Vostochnaya 50.96 308 P **P 05 47 47.4 -2.6**
VOSK pmax pmax
comp=Z,12nm,0.8s,mb4.9
BVAR Borovoye Array 51.07 309 P **P 05 47 48.9 -2.0**
comp=Z,13nm,0.5s,mb5.1,baz=59,slow=8.8,SNR=59
BVAR Borovoye Array 51.07 309 P **P 05 47 48.9 -1.9**
BVAR pmax pmax
comp=Z,13nm,0.5s
BRVK Borovoye 51.10 309 *ce*P **P 05 47 49.1 -2.0**
BRVK pmax pmax
comp=Z,19nm,0.8s,mb5.1
BRVK Borovoye 51.10 309 *e*P **P 05 47 48.9 -2.2**
comp=Z,17nm,0.6s,mb5.2
WALA Waterton Lakes 52.19 56 *e*P **P 05 47 59.0 -0.3**
comp=Z,0.2nm,1.1s
BSMT Bassoo Peak 52.47 58 *e*P **P 05 48 01.8 +0.4**
comp=Z,4.0nm,0.9s,mb4.3
SVE Sverdlovsk 53.15 317⇑*e*P **P 05 48 05.3 -1.0**
SVE pmax pmax
comp=Z,13nm,1.2s,mb4.7
SVE MLR MLR
comp=Z,380nm,15.0s,MS4.6
LVZ Lovozero 53.97 337 *e*P **P 05 48 10.4 -1.7**
LVZ pmax pmax
comp=Z,50nm,2.5s,mb5.0
KEV Kevo 54.15 342 *e*P **P 05 48 11.9 -1.5**
KEV pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
KEV Kevo 54.15 342 *e*p **P 05 48 11.9 -1.5**
comp=Z,8.2nm,0.8s,mb4.7
ARU Arti 54.28 318 *d i*P **P 05 48 12.6 -1.9**
ARU *e* 05 50 11.1
ARU S **S 05 55 49.2 +0.5**
ARU SS SS 05 59 28.5 -1.8
ARU pmax pmax
comp=Z,16nm,1.0s,mb4.9
ARU Arti 54.28 318 *e*P **P 05 48 12.8 -1.7**
comp=Z,10nm,0.5s,mb5.0
ARCES ARCESS Array B 54.63 342 P **P 05 48 16.1 -0.8**
comp=Z,14nm,0.9s,mb5.0,baz=39,slow=7.6,SNR=39
ARCES ARCESS Array B 54.63 342 P **P 05 48 16.1 -0.7**
ARCES pmax pmax
comp=Z,14nm,0.9s
ARE0 ARCESS Array S 54.63 342 *e*P **P 05 48 16.1 -0.7**
FCC Fort Churchill 54.90 38 *e*P **P 05 48 17.6 -1.4**
comp=Z,0.3nm,0.8s,mb3.4
SUMG Summit 55.51 6 *e*P **P 05 48 24.3 +1.1**
comp=Z,12nm,1.0s,mb4.9
SUMG *e*pP pP 05 48 32.3 -3.4
SUMG Summit 55.51 6 *i*P **P 05 48 32.0 +8.8**
comp=Z,4.9nm,0.8s,mb4.6
EKS2 Erkin-Say 55.83 297 *e*P **P 05 48 25.4 -0.5**
comp=Z,5.0nm,0.9s,mb4.5
NVAR Mina Array Bea 56.61 69 P **P 05 48 31.6 +0.2**
comp=Z,0.3nm,0.5s,mb3.5,baz=292,slow=7.8,SNR=3.8
KSH Kashi 56.67 293 *e*P **P 05 48 35.1 +3.1**
KSH pP pP 05 48 42.5 -1.9
KSH sP sP 05 48 45.7 -3.8
KSH PcP PcP 05 49 30.2 +2.5
KSH PP PP 05 50 42.5 +4.5
KSH ScP ScP 05 53 26.3 +3.0
KSH PcS PcS 05 53 29.5 +1.1
KSH S **S 05 56 24.8 +3.8**
KSH sS sS 05 56 37.6 -4.1
KSH ScS ScS 05 58 18.6 +1.3
KSH SS SS 06 00 14.4 +5.8
KSH pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
KSH pmax pmax
comp=Z,180nm,8.7s
KSH LR LR
comp=N,250nm,12.4s
KSH LR LR
comp=E,100nm,5.6s
KSH LR LR
comp=Z,170nm,8.9s
ELK Elko 56.81 65 P **P 05 48 35.6 +2.7**
comp=Z,0.3nm,0.4s,mb3.7,baz=308,slow=12,SNR=1.9
CHTO Chiang Mai 57.26 259 *e*P **P 05 48 37.5 +1.2**
CHTO pmax pmax
comp=Z,11nm,0.8s,mb4.9
CHTO Chiang Mai 57.26 259 *e*P **P 05 48 37.5 +1.2**
comp=Z,11nm,0.8s,mb4.9
KK31 Karatay Array 57.33 300 *i*P **P 05 48 35.5 -1.0**
KK31 pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
CM31 Chiang Mai Arr 57.53 259 *e*P **P 05 48 39.0 +0.7**
comp=Z,8.1nm,0.7s,mb4.9
CMAR Chiang Mai Arr 57.53 259 P **P 05 48 39.8 +1.5**
comp=Z,5.5nm,0.8s,mb4.6,baz=32,slow=6.9,SNR=23
CMAR LR LR 06 17 37.2
comp=Z,106nm,18.2s,MS4.0,baz=35,slow=40
CMAR Chiang Mai Arr 57.53 259 P **P 05 48 39.8 +1.6**
CMAR pmax pmax
comp=Z,6.0nm,0.8s
CMAR MLR MLR
comp=Z,107nm,18.2s
TAPN Taplejung 57.97 275 *e*P **P 05 48 41.4 +0.1**
AB31 Akbulak array 58.52 311 *i*P **P 05 48 43.1 -1.7**
AB31 pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
ABKAR Akbulak array 58.52 311 *e*P **P 05 48 43.3 -1.5**
comp=Z,6.3nm,0.8s,mb4.7
ODAN Odare 58.52 274 *e*P **P 05 48 45.8 +0.7**
BW06 Boulder Array 58.58 60 *e*P **P 05 48 45.0 -0.4**
comp=Z,2.4nm,0.8s,mb4.3
BW06 *e*pP pP 05 48 54.2 -3.7
PDAR Pinedale Array 58.58 60 P **P 05 48 46.1 +0.8**
comp=Z,0.7nm,0.8s,mb3.7,baz=300,slow=3.3,SNR=5.8
AKTO Aktyubinsk 58.60 313 LR LR 06 16 35.5
comp=Z,254nm,19.3s,MS4.3,baz=254,slow=39
JIRN Jiri 58.70 276 *e*P **P 05 48 47.1 +0.8**
JOF Joensuu 58.80 335 *e*P **P 05 48 45.7 -0.8**
JOF pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
JOF Joensuu 58.80 335 *e*p **P 05 48 45.7 -0.8**
comp=Z,6.1nm,0.5s,mb4.9
RAMN Ramite 58.95 275 *e*P **P 05 48 48.0 -0.1**
comp=Z,38nm,0.6s,mb5.6
KKN Kakani 59.17 277 *e*P **P 05 48 49.8 +0.2**
comp=Z,18nm,0.5s,mb5.4
PKI Pulchoki 59.24 277 *e*P **P 05 48 50.4 +0.3**
PKIN Phulchoki 59.25 277 *e*P **P 05 48 50.0 -0.2**
DMN Daman 59.41 277 *e*P **P 05 48 51.4 +0.2**
comp=Z,28nm,0.6s,mb5.5
GKN Gorkha 59.41 277 *e*P **P 05 48 51.4 +0.1**
RSSD Black Hills 60.55 55 *e*P **P 05 48 59.5 +0.6**
RSSD pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
RSSD Black Hills 60.55 55 *e*P **P 05 48 59.5 +0.6**
comp=Z,4.0nm,0.7s,mb4.7
SRU San Rafael 60.57 63 *e*P **P 05 49 01.5 +2.4**
SRU pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
SRU San Rafael 60.57 63 *e*P **P 05 49 01.5 +2.4**
comp=Z,3.9nm,0.9s,mb4.5
KAF Kangasniemi 60.75 337 *e*P **P 05 48 59.2 -0.7**
KAF pmax pmax
comp=Z,6.0nm,0.4s,mb5.1
KAF Kangasniemi 60.75 337 *ep* **P 05 48 59.2 -0.7**
comp=Z,6.1nm,0.4s,mb5.1,baz=36,slow=6.2
FINES FINESS Array B 61.38 337 P **P 05 49 03.9 -0.3**
comp=Z,8.4nm,0.6s,mb5.1,baz=43,slow=6.1,SNR=60
FINES FINESS Array B 61.38 337 P **P 05 49 03.9 -0.3**
FINES pmax pmax
comp=Z,8.0nm,0.6s
ISCO Idaho Springs 62.78 60 *e*P **P 05 49 17.0 +3.1**
ISCO pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
ISCO Idaho Springs 62.78 60 *e*P **P 05 49 16.9 +3.0**
comp=Z,2.4nm,0.9s,mb4.3
OBN Obninsk 63.61 327 *e*P **P 05 49 16.9 -2.3**
OBN *e* 05 49 56.5
OBN *e*S **S 05 57 50.4 +0.9**
OBN *e*SS SS 06 01 55.7 -0.7
OBN pmax pmax
comp=Z,7.0nm,0.5s,mb5.0
OBN MLR MLR
comp=Z,200nm,18.0s,MS4.3
NB2 NORSAR Subarra 64.91 344 P **P 05 49 27.4 -0.2**
comp=Z,7.1nm,0.7s,mb4.8,baz=21,slow=6.5
NOA NORSAR Array B 64.91 344 P **P 05 49 27.6 0.0**
comp=Z,6.7nm,0.8s,mb4.7,baz=20,slow=6.6,SNR=24
NOA NORSAR Array B 64.91 344 P **P 05 49 27.6 0.0**
NOA pmax pmax
comp=Z,7.0nm,0.8s
SCHQ Schefferville 67.16 27 P **P 05 49 41.9 -0.3**
comp=Z,1.9nm,0.4s,mb4.5,baz=315,slow=5.4,SNR=11
SCHQ LR LR 06 23 14.6
comp=Z,63nm,18.2s,MS3.9,baz=60,slow=40
MNTX Cornudas Mount 68.82 66 *e*P **P 05 49 53.8 +0.9**
comp=Z,1.5nm,0.9s,mb3.9
MNTX *e*pP pP 05 50 01.3 -4.4
AKASG Malin Array Be 69.74 329 P **P 05 49 57.5 -0.7**
comp=Z,16nm,0.5s,mb5.2,baz=30,slow=6.0,SNR=50
AKASG Malin Array Be 69.74 329 P **P 05 49 57.6 -0.7**
AKASG pmax pmax
comp=Z,16nm,0.5s
AKBB Malin Array Si 69.74 329 *e*P **P 05 49 57.3 -1.0**
WMOK Wichita Mounta 70.18 59 *e*P **P 05 50 00.6 -0.7**
WMOK *e**PP pP 05 50 08.7 -5.4
WMOK pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
WMOK Wichita Mounta 70.18 59 *e*P **P 05 50 00.6 -0.7**
comp=Z,3.9nm,1.1s,mb4.2
WMOK *e*pP pP 05 50 08.7 -5.3
TXAR Lajitas Array 71.57 66 P **P 05 50 09.8 0.0**
comp=Z,0.5nm,0.6s,mb3.6,baz=314,slow=4.7,SNR=7.0
TXAR Lajitas Array 71.57 66 P **P 05 50 09.8 0.0**
TXAR pmax pmax
comp=Z,1.0nm,0.6s
BSEG Bad Segeberg 71.75 341 *e*P **P 05 50 11.3 +0.8**
comp=Z,10.0nm,1.1s,mb4.7
ANN Anapa 71.78 321 *e*P **P 05 50 15.5 +4.7**
ANN pmax pmax
comp=Z,55nm,1.2s,mb5.4
LVV L'vov 72.12 332 *e*P **P 05 50 12.2 -0.6**
OJC Ojcow 72.97 334 *e*P **P 05 50 15.9 -1.9**
STHS Stebnicka Huta 73.29 333 *e*P **P 05 50 21.0 +1.3**
STHS pmax pmax
comp=Z,23nm,1.9s,mb4.8
STHS Stebnicka Huta 73.29 333 *e*P **P 05 50 21.0 +1.3**
comp=Z,23nm,1.9s,mb4.8
STHS Stebnicka Huta 73.29 333 *e*P **P 05 50 21.0 +1.3**
CLL Collm 73.65 339 *e*P **P 05 50 21.9 +0.1**
comp=Z,12nm,1.1s,mb4.7
CLL Collm 73.65 339⇓*i*P **P 05 50 22.2 +0.4**
CLL pmax pmax
comp=Z,12nm,1.1s,mb4.7
CLL MLR MLR
comp=Z,100nm,20.7s,MS4.1
CLL Collm 73.65 339⇓*i*P **P 05 50 22.2 +0.4**
CLL Collm 73.65 339⇓*i*P **P 05 50 22.2 +0.4**
comp=Z,12nm,1.1s,mb4.7
CLL *e*PPS 06 00 48.0
CLL Lm 06 24 00.0
comp=Z,100nm,20.7s
UPC Upice 73.68 337 *e*P **P 05 50 22.8 +0.8**
BUR08 Bucovina Ar. S 73.69 330 *e*P **P 05 50 22.1 0.0**
CRVS Cervenica-Dubn 73.69 333 *e*P **P 05 50 22.6 +0.5**
CRVS pmax pmax
comp=Z,29nm,2.2s,mb4.8
CRVS Cervenica-Dubn 73.69 333 *e*P **P 05 50 22.6 +0.5**
comp=Z,29nm,2.2s,mb4.8
CRVS Cervenica-Dubn 73.69 333 *e*P **P 05 50 22.6 +0.5**
UZH Uzhgorod 73.70 332 *e*P **P 05 50 20.4 -1.7**
BUR01 Bucovina Ar. S 73.72 330 P **P 05 50 22.6 +0.4**
BURAR Bucovina Array 73.72 330⇑P **P 05 50 22.4 +0.2**
BURAR Bucovina Array 73.72 330⇑*i*P **P 05 50 22.4 +0.2**
CLZ Clausthal 73.72 341 *e*P **P 05 50 23.0 +0.8**
comp=Z,11nm,1.1s,mb4.7
DPC Dobruska-Polom 73.75 336 *e*P **P 05 50 23.2 +0.8**
DPC MLR MLR
comp=Z,200nm,17.4s,MS4.5
DPC Dobruska-Polom 73.75 336 *e*P **P 05 50 23.2 +0.8**
DPC AMS AMS 06 28 10.0
comp=Z,200nm,17.4s
OKC Ostrava-Krasne 73.75 335 *e*P **P 05 50 23.7 +1.3**
BRG Berggiesshubel 73.84 338 *e*P **P 05 50 22.7 -0.2**
comp=Z,4.0nm,1.0s,mb4.3
BRG Berggiesshubel 73.84 338 *e*P **P 05 50 22.3 -0.6**
comp=Z,4.5nm,1.1s,mb4.3
MORC Moravsky Berou 73.97 335 P **P 05 50 24.4 +0.7**
MORC Moravsky Berou 73.97 335 *e*P **P 05 50 23.6 -0.1**
comp=Z,8.2nm,0.8s,mb4.7
MORC Moravsky Berou 73.97 335⇑*i*P **P 05 50 24.1 +0.4**
PVCC Panska Ves 74.01 338 AMS AMS 06 28 10.0
comp=Z,300nm,14.9s
TRPA Tarpa 74.07 332⇑*i*P **P 05 50 25.0 +0.7**
TESR 74.23 328⇓P **P 05 50 25.8 +0.5**
TESR 74.23 328⇓*i*P **P 05 50 25.8 +0.5**
KECS Kecovo 74.35 333 *e*P **P 05 50 26.5 +0.6**
KECS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
KECS Kecovo 74.35 333 *e*P **P 05 50 26.5 +0.6**
comp=Z,2.8nm,0.9s,mb4.2
KECS Kecovo 74.35 333 *e*P **P 05 50 26.5 +0.6**
PRU Pruhonice 74.52 337 *e*P **P 05 50 28.1 +1.2**
PRU MLR MLR
comp=Z,300nm,10.2s,MS4.9
PRU Pruhonice 74.52 337 *e*P **P 05 50 28.1 +1.2**
PRU AMS AMS 06 28 30.0
comp=Z,300nm,10.2s
WRA Warramunga Arr 74.55 205 P **P 05 50 26.9 -0.4**
comp=Z,5.1nm,0.8s,mb4.5,baz=21,slow=6.2,SNR=26
WRA Warramunga Arr 74.55 205 P **P 05 50 26.9 -0.4**
WRA pmax pmax
comp=Z,5.0nm,0.8s
WRA Warramunga Arr 74.55 205 P **P 05 50 26.9 -0.4**
MOX Moxa 74.58 339 *e*P **P 05 50 27.7 +0.5**
comp=Z,4.0nm,0.9s,mb4.3
VRI Vrincioaia 74.77 328⇑P **P 05 50 29.3 +0.9**
VRI Vrincioaia 74.77 328⇑*i*P **P 05 50 29.3 +0.9**
NKC Novy Kostel 74.78 339 *e*P **P 05 50 28.5 +0.1**
VYHS Vyhne 74.80 334 *e*P **P 05 50 29.3 +0.8**
VYHS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
VYHS Vyhne 74.80 334 *e*P **P 05 50 29.3 +0.8**
comp=Z,4.0nm,1.0s,mb4.3
VYHS Vyhne 74.80 334 *e*P **P 05 50 29.3 +0.8**
PLOR Plostina 74.81 328⇑P **P 05 50 29.9 +1.3**
PLOR Plostina 74.81 328⇑*i*P **P 05 50 29.9 +1.3**
KOLL Kolacno 74.84 334 *e*P **P 05 50 30.1 +1.3**
KOLL Kolacno 74.84 334 *e*P **P 05 50 30.1 +1.3**
TREC Trest 74.94 337 AMS AMS 06 29 20.0
comp=Z,100nm,12.7s
PSZ Piszkesteto 75.03 333⇑P **P 05 50 30.9 +1.0**
PSZ Piszkesteto 75.03 333 *e*P **P 05 50 30.8 +0.9**
comp=Z,6.1nm,0.8s,mb4.6
PSZ Piszkesteto 75.03 333⇑*i*P **P 05 50 30.9 +1.0**
DRGR 75.22 331⇓P **P 05 50 31.4 +0.4**
DRGR 75.22 331 P **P 05 50 31.3 +0.3**
DRGR 75.22 331⇓*i*P **P 05 50 31.4 +0.4**
MLR Muntele Rosu 75.36 328 P **P 05 50 33.4 +1.6**
MLR Muntele Rosu 75.36 328⇑P **P 05 50 32.9 +1.1**
MLR Muntele Rosu 75.36 328⇑*i*P **P 05 50 32.9 +1.1**
TIRR Tirgusor 75.43 326 P **P 05 50 32.4 +0.1**
TIRR Tirgusor 75.43 326⇑P **P 05 50 32.3 +0.1**
TIRR Tirgusor 75.43 326⇑*i*P **P 05 50 32.3 0.0**
FITZ Fitzroy Crossi 75.44 213 P **P 05 50 32.9 +0.5**
comp=Z,4.3nm,0.8s,mb4.4,baz=311,slow=4.9,SNR=7.0
FITZ Fitzroy Crossi 75.44 213 *e*P **P 05 50 33.0 +0.5**
comp=Z,5.1nm,0.9s,mb4.5
ZST Bratislava 75.54 335 *e*P **P 05 50 31.6 -1.2**
ZST pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
ZST Bratislava 75.54 335 *e*P **P 05 50 31.6 -1.2**
comp=Z,5.9nm,0.6s,mb4.7
ZST Bratislava 75.54 335 *e*P **P 05 50 31.6 -1.2**
KHC Kasperske Hory 75.55 338 *e*P **P 05 50 34.0 +1.2**
KHC MLR MLR
comp=Z,300nm,12.9s,MS4.8
KHC Kasperske Hory 75.55 338 *e*P **P 05 50 33.5 +0.6**
comp=Z,6.4nm,0.9s,mb4.5
KHC Kasperske Hory 75.55 338 *e*P **P 05 50 34.0 +1.2**
KHC AMS AMS 06 29 00.0
comp=Z,300nm,12.9s
GRF Grafenberg Arr 75.56 339 *e*P **P 05 50 33.8 +0.9**
comp=Z,29nm,1.6s,mb5.0
GRF Grafenberg Arr 75.56 339 *e*P **P 05 50 33.8 +0.9**
GRF pmax pmax
comp=Z,29nm,1.6s,mb5.0
GRF Grafenberg Arr 75.56 339 *e*P **P 05 50 33.8 +0.9**
comp=Z,29nm,1.6s,mb5.0
BEBN Eben Emael 75.62 343 P **P 05 50 32.6 -0.6**
TNS Taunus Mts 75.64 341 *e*P **P 05 50 34.6 +1.2**
comp=Z,29nm,1.5s,mb5.0
VOIR 75.70 329 P **P 05 50 34.6 +0.8**
VOIR 75.70 329⇑P **P 05 50 34.5 +0.8**
VOIR 75.70 329⇑*i*P **P 05 50 34.5 +0.7**
WET Wettzell 75.70 338 *e*P **P 05 50 34.4 +0.7**
comp=Z,6.0nm,1.1s,mb4.4
MEM Membach 75.74 343 P **P 05 50 35.0 +1.1**
comp=Z,11nm,1.2s,mb4.7
GEC2 GERESS Array S 75.79 337 *e*P **P 05 50 34.6 +0.4**
comp=Z,6.0nm,1.3s,mb4.4
BCLA Clavier 76.05 343 P **P 05 50 36.7 +1.0**
comp=Z,15nm,2.3s,mb4.5
CONA Conrad Observa 76.11 336⇑*i*pP **P 05 50 37.2 +1.2**
comp=Z,7.9nm,1.0s,mb4.6
SNF Seneffe 76.14 344 P **P 05 50 35.6 -0.6**
comp=Z,16nm,2.4s,mb4.5
GIVF Givet 76.44 344 *e*P **P 05 50 37.2 -0.7**
GZR Gura Zlata 76.46 330⇑P **P 05 50 38.7 +0.6**
GZR Gura Zlata 76.46 330⇑*i*P **P 05 50 38.7 +0.6**
DOU Dourbes 76.49 344 P **P 05 50 37.7 -0.4**
comp=Z,11nm,2.4s,mb4.4
BAIF Baives 76.59 344 *e*P **P 05 50 39.1 +0.4**
comp=Z,9.9nm,0.9s,mb4.4
BAIF Baives 76.59 344 *e*P **P 05 50 39.1 +0.4**
BAIF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
BAIF Baives 76.59 344 *e*P **P 05 50 39.1 +0.4**
comp=Z,4.9nm,0.9s,mb4.4
FUR Furstenfeldbru 76.99 339 *e*P **P 05 50 42.0 +1.0**
comp=Z,9.0nm,0.6s,mb4.9
BFO Black Forest 77.47 341 *e*P **P 05 50 45.6 +1.9**
comp=Z,6.0nm,0.9s,mb4.5
SOKA Soboth 77.48 336⇑*i*P **P 05 50 44.6 +0.8**
comp=Z,12nm,1.3s,mb4.7
KBA Koelnbreinsper 77.52 337⇑*i*pP **P 05 50 45.4 +1.4**
comp=Z,34nm,1.0s,mb5.2
GROS Grobnik 77.56 335 *i*P **P 05 50 44.8 +0.5**
BR131 Keskin Array S 77.57 320 *e*P **P 05 50 44.9 +0.5**
comp=Z,5.3nm,0.7s,mb4.6
BRTR Keskin Array B 77.57 320 P **P 05 50 44.6 +0.2**
comp=Z,8.9nm,0.9s,mb4.7,baz=45,slow=3.7,SNR=31
BRTR Keskin Array B 77.57 320 *ce*P **P 05 50 45.0 +0.6**
BRTR pmax pmax
comp=Z,9.0nm,0.9s
CDF Champ du Feu 77.60 341 *e*P **P 05 50 43.8 -0.6**
comp=Z,11nm,0.8s,mb4.5
CDF Champ du Feu 77.60 341 *e*P **P 05 50 43.8 -0.6**
CDF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
CDF Champ du Feu 77.60 341 *e*P **P 05 50 43.8 -0.6**
comp=Z,5.7nm,0.8s,mb4.5
MEZF Maizieres J'vi 77.94 343 *e*P **P 05 50 46.0 -0.3**
comp=Z,17nm,0.9s,mb4.7
MEZF Maizieres J'vi 77.94 343 *e*P **P 05 50 46.0 -0.3**
comp=Z,17nm,0.9s,mb5.0
HAU Haudompre 78.17 342 *e*P **P 05 50 46.9 -0.7**
comp=Z,4.9nm,0.5s,mb4.4
HAU Haudompre 78.17 342 *e*P **P 05 50 46.9 -0.7**
HAU pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
HAU Haudompre 78.17 342 *e*P **P 05 50 46.9 -0.7**
comp=Z,2.5nm,0.5s,mb4.4
FETA Feichten 78.19 339⇑*i*pP **P 05 50 48.9 +1.1**
comp=Z,7.0nm,1.2s,mb4.5
ASAR Alice Springs 78.22 204 P **P 05 50 48.0 0.0**
comp=Z,1.5nm,0.7s,mb4.0,baz=21,slow=5.7,SNR=15
ASAR Alice Springs 78.22 204 P **P 05 50 48.1 +0.1**
ASAR pmax pmax
comp=Z,2.0nm,0.7s
FLN La Foliniere 78.59 347 *e*P **P 05 50 49.6 -0.3**
comp=Z,26nm,1.0s,mb4.8
FLN La Foliniere 78.59 347 *e*P **P 05 50 49.6 -0.3**
FLN pmax pmax
comp=Z,13nm,1.0s,mb4.8
FLN La Foliniere 78.59 347 *e*P **P 05 50 49.6 -0.3**
comp=Z,13nm,1.0s,mb4.8
LDF La Druitiere 78.71 346 *e*P **P 05 50 50.0 -0.5**
comp=Z,4.4nm,0.6s,mb4.3
LDF La Druitiere 78.71 346 *e*P **P 05 50 50.0 -0.5**
LDF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
LDF La Druitiere 78.71 346 *e*P **P 05 50 50.0 -0.5**
comp=Z,2.2nm,0.6s,mb4.3
VTS Vitosha 78.84 329⇓P **P 05 50 51.6 +0.2**
VTS Vitosha 78.84 329⇓*i*P **P 05 50 51.6 +0.2**
GRR Gorron 79.01 347 *e*P **P 05 50 52.1 -0.1**
comp=Z,21nm,0.9s,mb4.8
GRR Gorron 79.01 347 *e*P **P 05 50 52.1 -0.1**
GRR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
GRR Gorron 79.01 347 *e*P **P 05 50 52.1 -0.1**
comp=Z,10nm,0.9s,mb4.8
TUE Stuetta 79.02 340 *e*P **P 05 50 53.8 +1.5**
comp=Z,6.2nm,0.8s,mb4.6
LOR Lormes 79.34 343 *e*P **P 05 50 53.5 -0.6**
comp=Z,13nm,0.8s,mb4.6
LOR Lormes 79.34 343 *e*P **P 05 50 53.5 -0.6**
LOR pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
LOR Lormes 79.34 343 *e*P **P 05 50 53.5 -0.6**
comp=Z,6.7nm,0.8s,mb4.6
CABF La Chapelle 79.56 342 *e*P **P 05 50 55.0 -0.3**
comp=Z,20nm,1.1s,mb4.6
CABF La Chapelle 79.56 342 *e*P **P 05 50 55.0 -0.3**
CABF pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
CABF La Chapelle 79.56 342 *e*P **P 05 50 55.0 -0.3**
comp=Z,9.8nm,1.1s,mb4.7
SSF Saint Saulge 79.61 344 *e*P **P 05 50 54.9 -0.6**
comp=Z,9.3nm,0.8s,mb4.5
SSF Saint Saulge 79.61 344 *e*P **P 05 50 54.9 -0.6**
SSF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
SSF Saint Saulge 79.61 344 *e*P **P 05 50 54.9 -0.6**
comp=Z,4.7nm,0.8s,mb4.5
AVF Avril sur Loir 79.90 344 *e*P **P 05 50 56.6 -0.5**
comp=Z,16nm,0.9s,mb4.7
AVF Avril sur Loir 79.90 344 *e*P **P 05 50 56.6 -0.5**
AVF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
AVF Avril sur Loir 79.90 344 *e*P **P 05 50 56.6 -0.5**
comp=Z,8.2nm,0.9s,mb4.7
SMF Signal de Mont 79.95 343 *e*P **P 05 50 56.8 -0.6**
comp=Z,15nm,1.1s,mb4.5
SMF Signal de Mont 79.95 343 *e*P **P 05 50 56.8 -0.6**
SMF pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
SMF Signal de Mont 79.95 343 *e*P **P 05 50 56.8 -0.6**
comp=Z,7.4nm,1.1s,mb4.5
BGF Bois d'Agland 80.21 344 *e*P **P 05 50 58.2 -0.6**
LPL La Plagne 80.48 341 *e*P **P 05 51 00.6 +0.3**
comp=Z,9.4nm,0.7s,mb4.5
LPL La Plagne 80.48 341 *e*P **P 05 51 00.6 +0.3**
LPL pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
LPL La Plagne 80.48 341 *e*P **P 05 51 00.6 +0.3**
comp=Z,4.7nm,0.7s,mb4.5
LPG La Plagne 80.50 341 *e*P **P 05 51 00.9 +0.6**
comp=Z,14nm,0.8s,mb4.6
LPG La Plagne 80.50 341 *e*P **P 05 51 00.9 +0.6**

LPG pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
LPG La Plagne 80.50 341 *e*P **P** **05 51 00.9 +0.6**
comp=Z,6.9nm,0.8s,mb4.6
TCF Toulx Ste Croi 80.58 344 *e*P **P** **05 51 00.4 -0.4**
comp=Z,10.0nm,0.9s,mb4.5
TCF Toulx Ste Croi 80.58 344 *e*P **P** **05 51 00.4 -0.4**
TCF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
TCF Toulx Ste Croi 80.58 344 *e*P **P** **05 51 00.4 -0.4**
comp=Z,5.0nm,0.9s,mb4.4
MFF Saint Martin d 80.65 346 *e*P **P** **05 51 00.0 -1.1**
comp=Z,14nm,0.9s,mb4.6
MFF Saint Martin d 80.65 346 *e*P **P** **05 51 00.0 -1.1**
MFF pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
MFF Saint Martin d 80.65 346 *e*P **P** **05 51 00.0 -1.1**
comp=Z,6.8nm,0.9s,mb4.6
ORIF Oris-en-Rattie 81.23 341 *e*P **P** **05 51 04.6 +0.4**
comp=Z,21nm,1.3s,mb4.6
ORIF Oris-en-Rattie 81.23 341 *e*P **P** **05 51 04.6 +0.4**
ORIF pmax pmax
comp=Z,11nm,1.3s,mb4.6
ORIF Oris-en-Rattie 81.23 341 *e*P **P** **05 51 04.6 +0.4**
comp=Z,11nm,1.3s,mb4.6
MBDF Montbardon 81.23 341 *e*P **P** **05 51 04.3 0.0**
VIVF Saint-Julien-l 81.52 342 *e*P **P** **05 51 05.8 0.0**
comp=Z,9.1nm,0.9s,mb4.4
VIVF Saint-Julien-l 81.52 342 *e*P **P** **05 51 05.8 0.0**
VIVF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
VIVF Saint-Julien-l 81.52 342 *e*P **P** **05 51 05.8 0.0**
comp=Z,4.6nm,0.9s,mb4.4
RJF Les Rejaudoux 81.65 345 *e*P **P** **05 51 06.2 -0.3**
PPT Papeete 81.89 132 LR LR 06 19 53.4
comp=Z,42nm,20.1s,MS3.8,baz=346,slow=30
SBF Sospel 81.92 340 *e*P **P** **05 51 06.6 -1.3**
comp=Z,4.9nm,0.4s,mb4.5
CAF Calviac 81.93 344 *e*P **P** **05 51 07.2 -0.7**
comp=Z,9.6nm,0.7s,mb4.5
CAF Calviac 81.93 344 *e*P **P** **05 51 07.2 -0.7**
CAF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
CAF Calviac 81.93 344 *e*P **P** **05 51 07.2 -0.7**
comp=Z,4.8nm,0.7s,mb4.5
LFF La Frestale 82.14 345 *e*P **P** **05 51 08.3 -0.7**
SMRF Simiane la Rot 82.19 341 *e*P **P** **05 51 09.6 +0.3**
comp=Z,14nm,1.0s,mb4.5
SMRF Simiane la Rot 82.19 341 *e*P **P** **05 51 09.6 +0.3**
comp=Z,14nm,1.0s,mb4.8
FRF La Foret Royal 82.37 340 *e*P **P** **05 51 09.6 -0.7**
comp=Z,7.1nm,0.9s,mb4.3
FRF La Foret Royal 82.37 340 *e*P **P** **05 51 09.6 -0.7**
FRF pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
FRF La Foret Royal 82.37 340 *e*P **P** **05 51 09.6 -0.7**
comp=Z,3.5nm,0.9s,mb4.3
MMAI Mount Meron Ar 82.56 315 P **P** **05 51 12.2 +0.7**
comp=Z,8.3nm,0.6s,mb5.0,baz=41,slow=7.9,SNR=27
MMAI LR LR 06 33 37.6
comp=Z,132nm,18.9s,MS4.3,baz=50,slow=40
ASF Jabal al Asfar 82.61 314 P **P** **05 51 12.8 +1.1**
comp=Z,7.3nm,0.8s,mb4.7,baz=340,slow=0.5,SNR=10
ASF Jabal al Asfar 82.61 314 P **P** **05 51 12.8 +1.1**
ASF pmax pmax
comp=Z,7.0nm,0.9s
LMR La Mourre 82.62 340 *e*P **P** **05 51 10.2 -1.4**
comp=Z,6.5nm,0.6s,mb4.5
LMR La Mourre 82.62 340 *e*P **P** **05 51 10.2 -1.4**
LMR pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
LMR La Mourre 82.62 340 *e*P **P** **05 51 10.2 -1.4**
comp=Z,3.3nm,0.6s,mb4.5
PGF Pioggiola 82.82 339 *e*P **P** **05 51 12.7 0.0**
MTLF Montolieu 83.44 344 *e*P **P** **05 51 15.6 -0.2**
comp=Z,4.7nm,0.9s,mb4.2
MTLF Montolieu 83.44 344 *e*P **P** **05 51 15.6 -0.2**
MTLF pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
MTLF Montolieu 83.44 344 *e*P **P** **05 51 15.6 -0.2**
comp=Z,2.3nm,0.9s,mb4.2
EIL Elat 85.61 314 P **P** **05 51 27.5 +0.5**
comp=Z,7.0nm,0.8s,mb4.9,baz=346,slow=6.1,SNR=7.9
ESDC Sonseca Array 87.99 347 P **P** **05 51 38.3 -0.2**
comp=Z,0.2nm,0.4s,mb3.7,baz=346,slow=6.4,SNR=3.6
ESDC LR LR 06 38 28.4
comp=Z,59nm,18.2s,MS4.0,baz=5.0,slow=41
ESDC Sonseca Array 87.99 347 P **P** **05 51 38.3 -0.2**
ESDC LR LR 06 38 28.4
KEST Kesra 89.21 336 P **P** **05 51 47.5 +3.2**
comp=Z,3.0nm,0.7s,mb4.7,baz=49,slow=2.0,SNR=11
TORD Torodi Ar. Bea 112.73 337 PP PP 05 58 08.5 -3.5
comp=Z,1.8nm,0.9s,baz=11,slow=6.5,SNR=7.2

FUNV 12 05:40:13.2, 6°68N×73°23W, h156km, MW3.6, 1C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.48**	**38**	⇑*i*P	Pn	05 40 43.4	+0.4
CAPV				*e*S	Sn	05 41 04.2	-1.8
VIGV	**El Vigia**	**2.83**	**41**	*e*P	Pn	05 40 58.0	-0.6
VIGV				*e*S	Sn	05 41 30.0	-3.8
SOCV	**Socops**	**2.84**	**56**	*e*P	Pn	05 40 57.9	-0.8
SOCV				*e*S	Sn	05 41 29.9	-4.1
VIRV	**Villa del Rosa**	**3.88**	**12**	*e*P	Pn	05 41 10.3	-1.8
VIRV				*e*S	Sn	05 41 53.0	-4.9
QARV	**Quebrada Arrib**	**4.41**	**37**	*e*P	Pn	05 41 18.0	-0.9
QARV				*e*S	Sn	05 42 05.6	-4.5
CURV	**Curarigua**	**4.62**	**44**	*e*P	Pn	05 41 20.2	-1.6
BAUV	**El Baul**	**5.61**	**66**	*e*P	Pn	05 41 32.0	-2.8
MAPV	**Macapo**	**5.66**	**56**	*e*P	Pn	05 41 34.0	-1.5
MAPV				*e*S	Sn	05 42 33.5	-6.3
MONV	**Montecano**	**6.14**	**31**	*e*P	Pn	05 41 39.7	-2.2
CAOV	**Caicara del Or**	**6.88**	**84**	*e*P	Pn	05 41 48.8	-2.9
CAOV				*e*S	Sn	05 43 01.0	-8.0

IDC 12 05:49:17.8±2.2, 0°63S×127°65E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.5/17, mbtmp3.5/3, Error ellipse: s-maj=158.5km s-min=27.6km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.29**	**162**	P	P	05 53 55.6	+0.4
0.9nm,0.5s,baz=340,slow=11,SNR=32							
ASAR	**Alice Springs**	**23.70**	**166**	P	P	05 54 31.2	-0.3
0.8nm,0.3s,baz=346,slow=10,SNR=20							
MKAR	**Makanchi Array**	**61.65**	**326**	P	P	05 59 37.5	+0.1
0.3nm,0.7s,baz=124,slow=6.1,SNR=3.4							

DDA ***12*** *05:54:03.8, 39°21N×41°67E, h24km±1km, Md4.0*
NEIC ***12*** *05:54:03.5, 39°29N×41°74E, h5km, mb3.9/3, ML4.0(ISK), After ISK.*
ISCJB ***12*** *05:54:03.8±0.4, 39°24N±0°02×41°74E±0°02, h3km±3km, mb3.7/10, Error ellipse: s-maj=2.9km s-min=2.5km az=139.4*
ISK ***12*** *05:54:03.4, 39°28N×41°72E, h5km, ML4.0*
CSEM ***12*** *05:54:04.3±0.1, 39°27N×41°73E, h2km, ML4.0, Error ellipse: s-maj=4.7km s-min=3.5km az=11.0*
IDC ***12*** *05:54:05.0±1.0, 39°43N×41°80E, h0km, mb3.8/8, mb1 3.7/14, mb1mx3.6/26, mbtmp3.6/14, ML3.1/4, Error ellipse: s-maj=21.4km s-min=13.2km az=167.0*
ISC 12 05:54:04.3±0.4, 39°23N±0°02×41°73E±0°02, h1km±3km, n109, σ1§24/145, mb3.8/10, 6C-8D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNGL	**BINGOL**	**0.53**	**238**	⇓*i*P	Pg	05 54 13.2	-1.2
BNGL				*i*S	Sg	05 54 20.7	-0.6
ERZM	**Erzurum**	**0.73**	**338**	⇓*i*P	Pg	05 54 17.4	-0.8
ERZM				*i*S	Sg	05 54 31.3	+3.6
ERZM	**Erzurum**	**0.73**	**338**	*i*P	Pg	05 54 17.4	-0.9
ERZM				*i*S	Sg	05 54 31.3	+3.6
EZM	**Erzurum**	**0.73**	**337**	PG	Pg	05 54 17.4	-0.9
HOMI	**Horasan**	**0.82**	**10**	⇑*i*P	Pg	05 54 19.1	-1.1
HOMI				*i*S	Sg	05 54 32.7	+1.9
TATV	**Tatvan**	**0.84**	**149**	⇓*i*P	Pg	05 54 19.4	-1.0
TATV				*i*S	Sg	05 54 31.9	+0.6
TATV	**Tatvan**	**0.84**	**149**	*i*P	Pg	05 54 19.4	-1.0
TATV				*i*S	Sg	05 54 31.9	+0.7
TUTA	**Tutak**	**0.86**	**78**	⇓*i*P	Pg	05 54 20.6	-0.3
TUTA				*i*S	Sg	05 54 34.4	+2.4
TUTA	**Tutak**	**0.86**	**78**	*i*P	Pg	05 54 20.6	-0.2
TUTA				*i*S	Sg	05 54 34.4	+2.4
BINT	**Bingol**	**1.03**	**250**	PG	Pg	05 54 24.0	0.0
BINT				*e*SG	Sg	05 54 39.5	+2.3
BINT	**Bingol**	**1.03**	**250**	*i*Pg	Pg	05 54 24.0	0.0
AGRB	**Hanur-Agry**	**1.04**	**70**	*e*PG	Pg	05 54 24.1	-0.1
AGRB				*e*SG	Sg	05 54 39.5	+1.8
AGRB	**Hanur-Agry**	**1.04**	**70**	*e*Pg	Pg	05 54 24.2	-0.1
AGRB				*e*Sg	Sg	05 54 39.5	+1.8
KOPT	**Kop Dagi**	**1.23**	**310**	⇓*i*P	Pg	05 54 26.1	-1.8
KOPT				*i*S	Sg	05 54 44.5	+0.6
KOPT	**Kop Dagi**	**1.23**	**310**	*i*P	Pg	05 54 26.1	-1.8
KOPT				*i*S	Sg	05 54 44.5	+0.6
BEST	**Besiri**	**1.39**	**195**	⇓*i*P	Pn	05 54 29.7	-1.1
BEST				*i*S	Sg	05 54 49.1	+0.3
VANB	**Van**	**1.45**	**116**	*e*PN	Pb	05 54 32.0	0.0
VANB	**Van**	**1.45**	**116**	*e*Pn	Pb	05 54 32.0	0.0
VANT	**Van**	**1.45**	**123**	*e*PN	Pb	05 54 33.0	+0.9
TVAN	**Van**	**1.49**	**118**	⇓*i*P	Pn	05 54 32.2	0.0
TVAN				*i*S	Sg	05 54 47.8	-4.4
TVAN	**Van**	**1.49**	**118**	*i*P	Pn	05 54 32.2	0.0
TVAN				*i*S	Sg	05 54 47.8	-4.3
DYDN	**Diyadin**	**1.55**	**78**	*i*P	Pb	05 54 32.6	-1.2
DYDN				*i*S	Sn	05 54 53.8	-0.1
DYDN	**Diyadin**	**1.55**	**78**	*i*P	Pb	05 54 32.7	-1.2
DYDN				*i*S	Sn	05 54 53.8	-0.1
DDEM	**Demirkent**	**1.66**	**1**	⇑*i*P	Pn	05 54 34.3	-0.3
DDEM				*i*S	Sg	05 54 58.7	+1.1
DDEM	**Demirkent**	**1.66**	**1**	*i*P	Pn	05 54 34.3	-0.3
DDEM				*i*S	Sg	05 54 58.7	+1.1
CLDR	**Caldiran**	**1.71**	**92**	*e*PN	Pn	05 54 35.3	+0.1
CLDR	**Caldiran**	**1.71**	**92**	*e*Pn	Pn	05 54 35.3	+0.1
DIGO	**Kars**	**1.73**	**47**	⇑*i*P	Pn	05 54 36.1	+0.5
DIGO				*i*S	Sg	05 55 04.4	+4.3
DIGO	**Kars**	**1.73**	**47**	*i*P	Pn	05 54 36.1	+0.5
KARS	**Kars**	**1.74**	**36**	*e*PN	Pn	05 54 35.2	-0.5
KARS	**Kars**	**1.74**	**36**	*e*Pn	Pn	05 54 35.2	-0.5
DIYA	**Diyarbakir**	**1.81**	**224**	⇓*i*P	Pn	05 54 36.1	-0.6
DIYA				*i*S	Sn	05 54 59.3	-1.0
DIYA	**Diyarbakir**	**1.81**	**224**	*i*P	Pn	05 54 36.1	-0.6
DIYA				*i*S	Sn	05 54 59.3	-1.0
DAGI	**Agillar**	**1.85**	**4**	⇑*i*P	Pn	05 54 36.9	-0.3
DAGI				*i*S	Sn	05 55 01.2	0.0
EZC	**Erzincan**	**1.91**	**287**	*e*PN	Pn	05 54 37.7	-0.3
ARTV	**Artvin**	**1.96**	**5**	⇑*i*P	Pn	05 54 38.4	-0.3
ARTV				*i*S	Sg	05 55 06.8	-0.4
ARTV	**Artvin**	**1.96**	**5**	*i*P	Pn	05 54 38.3	-0.4
ARTV				*i*S	Sg	05 55 06.8	-0.4
PZAR	**Pazar-Rize**	**2.04**	**342**	*e*PN	Pn	05 54 39.7	-0.1
PZAR	**Pazar-Rize**	**2.04**	**342**	*e*Pn	Pn	05 54 39.7	-0.2
MARD	**Mardin**	**2.06**	**202**	*i*P	Pn	05 54 39.5	-0.5
MARD				*i*S	Sn	05 55 06.0	-0.3
SVRC	**Sivrice-ELAZID**	**2.07**	**246**	*e*PN	Pn	05 54 40.1	-0.1
SVRC	**Sivrice-ELAZID**	**2.07**	**246**	*e*Pn	Pn	05 54 40.1	-0.2
DBOC	**Borcka**	**2.11**	**359**	⇑*i*P	Pn	05 54 40.3	-0.5
DBOC				*i*S	Sg	05 55 10.6	-1.5
DBOC	**Borcka**	**2.11**	**359**	*i*P	Pn	05 54 40.3	-0.5
DBOC				*i*S	Sg	05 55 10.6	-1.6
GUMT	**Gumushane**	**2.12**	**306**	*e*PN	Pn	05 54 41.5	+0.7
GUMT	**Gumushane**	**2.12**	**306**	*e*Pn	Pn	05 54 41.6	+0.7
BCA	**Borcka**	**2.21**	**358**	*e*PN	Pn	05 54 41.5	-0.6
BCA	**Borcka**	**2.21**	**358**	*e*Pn	Pn	05 54 41.5	-0.7
ELZG	**Elazig**	**2.26**	**252**	*i*P	Pn	05 54 42.1	-0.7
ELZG				*i*S	Sb	05 55 15.6	+1.1
ELZG	**Elazig**	**2.26**	**252**	*i*P	Pn	05 54 42.2	-0.7
MACK	**Trabzon**	**2.27**	**319**	*i*P	Pb	05 54 45.0	-1.2
MACK				*i*S	Sb	05 55 16.0	+1.2
MACK	**Trabzon**	**2.27**	**319**	*i*P	Pb	05 54 45.0	-1.2
HKR	**Hakkari**	**2.29**	**136**	*e*PN	Pb	05 54 44.3	-2.2
HKR	**Hakkari**	**2.29**	**136**	*e*Pn	Pb	05 54 44.3	-2.1
KTUT	**Trabzon**	**2.31**	**320**	*e*PN	Pb	05 54 44.3	-2.5
KTUT	**Trabzon**	**2.31**	**320**	*e*Pn	Pb	05 54 44.3	-2.5
CUKT	**Cukurca**	**2.48**	**143**	*e*PN	Pn	05 54 47.0	+1.2
CUKT	**Cukurca**	**2.48**	**143**	*e*Pn	Pn	05 54 47.0	+1.2
GNI	**Garni**	**2.50**	**68**	*e*PN	Pb	05 54 46.9	-3.2
GNI	**Garni**	**2.50**	**68**	Pn	Pb	05 54 46.8	-3.2
13nm,0.3s,baz=304,slow=4.2,SNR=12							
GNI				Lg		05 55 26.7	
14nm,0.3s,baz=210,slow=20,SNR=3.8							
GNI	**Garni**	**2.50**	**68**	Pn	Pb	05 54 46.8	-3.2
GNI				Lg		05 55 26.8	
KEMA	**Kemaliye**	**2.51**	**272**	*i*P	Pn	05 54 45.3	-1.0
KEMA				*i*S	Sb	05 55 24.0	+2.5
KEMA	**Kemaliye**	**2.51**	**272**	*i*P	Pn	05 54 45.3	-1.0
MYA	**Malataya**	**2.73**	**252**	*e*PN	Pn	05 54 50.6	+1.3
MYA	**Malataya**	**2.73**	**252**	*e*Pn	Pn	05 54 50.6	+1.3
ESPY	**Espiye-Giresun**	**2.85**	**307**	*e*PN	Pn	05 54 52.1	+1.2
ESPY	**Espiye-Giresun**	**2.85**	**307**	*e*Pn	Pn	05 54 52.1	+1.2
DARE	**Darende-Malaty**	**3.06**	**266**	*e*PN	Pg	05 55 00.3	-2.8
GRSN	**GIRESUNGRSN**	**3.15**	**304**	*e*P	Pn	05 54 58.1	+3.1
GRSN				*e*S	Sg	05 55 42.0	-3.4
GRSN	**GIRESUNGRSN**	**3.15**	**304**	*e*P	Pn	05 54 58.1	+3.1
TBLG	**Delisi**	**3.39**	**42**	P	Pn	05 54 58.8	+0.4
TBLG				S	Sg	05 55 57.1	+3.8
MTA	**Mtatsminda**	**3.39**	**43**	P	Pn	05 54 58.8	+0.4
MTA				S	Sg	05 55 56.0	+2.6
DGRG	**David-gareji**	**3.56**	**50**	P	Pn	05 55 02.0	+1.3
ONI	**Oni**	**3.60**	**21**	P	Pn	05 55 01.8	+0.5
ONI				S	Sg	05 56 00.3	+0.3
SVSK	**Karacayir**	**3.72**	**282**	*e*PN	Pn	05 55 04.2	+1.4
SVSK	**Karacayir**	**3.72**	**282**	*e*Pn	Pn	05 55 04.2	+1.3
SARI	**SarD1z-Kayseri**	**3.96**	**264**	*e*PN	Pn	05 55 12.4	+6.2
GAZ	**Gaziantep**	**4.11**	**241**	*e*PN	Pn	05 55 09.9	+1.7
GAZ	**Gaziantep**	**4.11**	**241**	*e*Pn	Pn	05 55 10.0	+1.8
KVT	**Kavak**	**4.73**	**295**	*e*PN	Pn	05 55 18.4	+1.7
KVT	**Kavak**	**4.73**	**295**	*e*Pn	Pn	05 55 18.4	+1.7
BRTR	**Keskin Array B**	**6.28**	**277**	Pn	Pn	05 55 40.2	+2.2
0.1nm,0.3s,baz=110,slow=15,SNR=5.0							
BRTR				Lg		05 57 21.7	
0.1nm,0.3s,baz=96,slow=25,SNR=2.0							
MMAI	**Mount Meron Ar**	**8.04**	**221**	Pn	Pn	05 56 06.0	+3.8
0.9nm,0.3s,baz=64,slow=13,SNR=3.6							
MMAI				Lg		05 58 20.9	
0.8nm,0.3s,baz=52,slow=29,SNR=3.0							
ASF	**Jabal al Asfar**	**8.06**	**211**	Pn	Pn	05 56 05.8	+3.2
0.1nm,0.3s,baz=12,slow=14,SNR=2.6							
ASF				Lg		05 58 21.5	
0.2nm,0.3s,baz=108,slow=22,SNR=4.3							
AKASG	**Malin Array Be**	**14.46**	**327**	Pn	Pn	05 57 28.4	-1.6
0.6nm,0.3s,baz=137,slow=11,SNR=6.7							
AKASG	**Malin Array Be**	**14.46**	**327**	Pn	Pn	05 57 28.4	-1.6
AKTK	**Aktyubinsk**	**16.05**	**40**	Pn	Pn	05 57 47.3	-3.8
AKTO	**Aktyubinsk**	**16.05**	**40**	Pn	Pn	05 57 47.3	-3.8
0.1nm,0.3s,baz=248,slow=14,SNR=3.6							
ABKAR	**Akbulak array**	**16.42**	**46**	*e*P	Pn	05 57 54.6	-1.3
1.3nm,0.7s							
ARU	**Arti**	**20.49**	**27**	*e*P	P	05 58 42.5	-0.9
4.6nm,0.6s							
ARU	**Arti**	**20.49**	**27**	*e*P	P	05 58 42.5	-0.9
4.6nm,0.6s							
BVAR	**Borovoye Array**	**23.98**	**45**	P	P	05 59 19.6	-0.6
2.3nm,0.8s,mb3.8,baz=224,slow=8.1,SNR=14							
BVAR	**Borovoye Array**	**23.98**	**45**	P	P	05 59 19.6	-0.6
FINES	**FINESS Array B**	**24.25**	**342**	P	P	05 59 21.1	-1.3
3.2nm,0.7s,mb4.0,baz=139,slow=11,SNR=8.5							
FINES	**FINESS Array B**	**24.25**	**342**	P	P	05 59 21.1	-1.4
TKM2	**Tokmak 2**	**25.70**	**71**	*e*P	P	05 59 36.9	+1.0
4.4nm,1.1s,mb4.0							
TKM2	**Tokmak 2**	**25.70**	**71**	*e*P	P	05 59 36.8	+0.9
4.4nm,1.1s,mb4.0							
HFS	**Hagfors**	**27.32**	**329**	P	P	05 59 53.5	+3.2
1.6nm,0.9s,mb3.8,baz=89,slow=19,SNR=2.7							
KURK	**Kurchatov**	**28.22**	**54**	P	P	05 59 57.3	-1.2
1.7nm,0.8s,mb3.9,baz=270,slow=9.3,SNR=9.2							
KURK	**Kurchatov**	**28.22**	**54**	P	P	05 59 57.3	-1.2
MKAR	**Makanchi Array**	**30.34**	**62**	P	P	06 00 17.4	+0.1
0.8nm,0.8s,mb3.6,baz=278,slow=7.5,SNR=10							
MKAR	**Makanchi Array**	**30.34**	**62**	P	P	06 00 17.4	+0.1
ARCES	**ARCESS Array B**	**31.57**	**349**	P	P	06 00 26.3	-1.7
0.6nm,0.7s,mb3.6,baz=153,slow=10,SNR=3.3							
ARCES	**ARCESS Array B**	**31.57**	**349**	P	P	06 00 26.3	-1.7
ZALV	**Zalesovo Beam**	**32.51**	**49**	P	P	06 00 34.9	-1.5
0.7nm,0.4s,mb3.9,baz=274,slow=11,SNR=3.1							
TORD	**Torodi Ar. Bea**	**43.81**	**245**	P	P	06 02 13.6	+1.6
1.1nm,1.1s,mb3.5,baz=43,slow=4.0,SNR=3.8							
TORD	**Torodi Ar. Bea**	**43.81**	**245**	P	P	06 02 13.6	+1.6
SONM	**Songino Array**	**46.42**	**57**	P	P	06 02 32.6	+0.2
0.5nm,0.6s,mb3.7,baz=278,slow=10.0,SNR=3.1							
SONM	**Songino Array**	**46.42**	**57**	P	P	06 02 32.5	+0.1

IDC ***12*** *06:06:41.8±1.0, 51°64N×159°25E, h0km, mb3.7/13, mb1 3.8/13, mb1mx3.7/26, mbtmp3.7/13, MS4.4/1, Ms1 4.4/1, ms1mx3.0/25, Error ellipse: s-maj=27.1km s-min=23.5km az=84.0*
MOS ***12*** *06:06:41.6±1.5, 51°45N×159°48E, h13km, mb4.1/8, Error ellipse: s-maj=21.1km s-min=8.0km az=90.3*
KRSC ***12*** *06:06:43.4±0.6, 51°43N×159°93E, h33km±33km, ML4.2*
ISCJB ***12*** *06:06:45.0±1.1, 51°43N±0°07×159°8E±0°1, h54km±8km, mb3.8/15, Error ellipse: s-maj=14.0km s-min=6.3km az=136.7*
NEIC ***12*** *06:06:49.8±1.9, 51°67N×159°18E, h58km±15km, mb4.1/1, Error ellipse: s-maj=19.1km s-min=16.0km az=95.0*
ISC 12 06:06:46.1±1.1, 51°44N±0°06×159°83E±0°10, h43km±8km, n41, σ1§17/48, mb3.8/15, 1C, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	**Gorelyy**	**1.56**	**316**	*e*P	Pn	06 07 11.7	+0.4
GRL				*i*S	Sn	06 07 32.7	+2.4
SPN	**Mys Shipunski**	**1.67**	**4**	*e*P	Pn	06 07 12.2	-0.6
SPN				*i*S	Sn	06 07 33.2	+0.3
PET	**Petropavlovsk**	**1.75**	**336**	*e*PN	Pn	06 07 13.1	-0.8
PET				*e*S	Sn	06 07 35.5	+0.6
PET				pmax	pmax		
comp=Z,135nm,0.4s							
PET				smax			
comp=N,900nm,0.8s							
PET				smax			
comp=N,1μm,0.6s							
PET	**Petropavlovsk**	**1.75**	**336**	*e*P	Pn	06 07 13.2	-0.7
PET				*i*S	Sn	06 07 35.5	+0.6
PET	**Petropavlovsk**	**1.75**	**336**	*e*Pn	Pn	06 07 13.0	-0.9
NLC	**Nalytchevo**	**1.76**	**350**	*e*P	Pn	06 07 13.6	-0.5
AVH	**Avacha**	**1.95**	**340**	*e*P	Pn	06 07 18.0	+1.4
MIPR	**Malaya Ipel'ka**	**2.08**	**295**	*e*P	Pn	06 07 18.5	0.0
MIPR				*i*S	Sn	06 07 43.7	+0.5
SKR	**Severo-Kuril's**	**2.46**	**254**	*e*PN	Pn	06 07 24.0	+0.3
SKR				*e*S	Sn	06 07 51.1	-1.4
SKR				pmax	pmax		
comp=E,40nm,0.4s							
SKR				pmax	pmax		
comp=Z,70nm,0.4s							
SKR				smax			
comp=N,390nm,0.5s							
SKR				smax			
comp=E,310nm,0.5s							
SKR				smax			
comp=Z,120nm,0.5s							
GNL	**Ganaly**	**2.54**	**334**	*e*P	Pn	06 07 24.9	+0.2
KII	**Karymskiy**	**2.62**	**355**	*e*P	Pn	06 07 27.1	+1.4
ALID	**Alaid**	**2.76**	**260**	*e*P	Pn	06 07 27.5	-0.2
ALID				*i*S	Sn	06 07 58.9	-0.8
MKZ	**Mys Kozlova**	**3.33**	**19**	*e*P	Pn	06 07 34.9	-0.6
MKZ				*i*S	Sn	06 08 11.6	-2.2
KBTR	**Krutoberegovo**	**5.10**	**19**	*e*P	Pn	06 07 59.8	0.0
ZALV	**Zalesovo Beam**	**43.56**	**304**	P	P	06 14 42.2	-3.0
comp=Z,0.3nm,0.4s,mb3.3,baz=60,slow=6.8,SNR=2.4							
KURK	**Kurchatov**	**48.49**	**303**	P	P	06 15 23.1	-1.0
comp=Z,0.5nm,0.3s,mb4.0,baz=61,slow=7.7,SNR=8.5							
KURK	**Kurchatov**	**48.49**	**303**	P	P	06 15 23.1	-1.0
KURK				pmax	pmax		
comp=Z,1.0nm,0.4s,mb4.2							
KURK	**Kurchatov**	**48.49**	**303**	*e*P	P	06 15 22.8	-1.4
comp=Z,1.2nm,0.5s,mb4.2							
MKAR	**Makanchi Array**	**48.75**	**297**	P	P	06 15 24.8	-1.4
comp=Z,0.2nm,0.5s,mb3.4,baz=51,slow=8.2,SNR=5.0							
BVAR	**Borovoye Array**	**51.31**	**309**	P	P	06 15 43.8	-1.6
comp=Z,1.2nm,0.5s,mb4.1,baz=68,slow=8.6,SNR=5.8							
BVAR	**Borovoye Array**	**51.31**	**309**	P	P	06 15 43.8	-1.7
BVAR				pmax	pmax		
comp=Z,1.0nm,0.5s							
BRVK	**Borovoye**	**51.34**	**309**	⇑*e*P	P	06 15 43.9	-1.8
BRVK				pmax	pmax		
comp=Z,7.0nm,2.5s,mb4.2							
ARCES	**ARCESS Array B**	**54.82**	**342**	P	P	06 16 11.4	+0.3
comp=Z,0.3nm,0.4s,mb3.7,baz=29,slow=11,SNR=4.6							
CMAR	**Chiang Mai Arr**	**57.69**	**259**	P	P	06 16 33.3	+1.0
comp=Z,0.5nm,0.3s,mb4.0,baz=38,slow=9.3,SNR=3.6							
CMAR	**Chiang Mai Arr**	**57.69**	**259**	P	P	06 16 33.3	+1.0
CMAR				pmax	pmax		
comp=Z,1.0nm,0.4s							
FINES	**FINESS Array B**	**61.58**	**337**	P	P	06 16 58.2	-0.2
comp=Z,0.5nm,0.5s,mb3.9,baz=40,slow=7.4,SNR=6.7							
FINES	**FINESS Array B**	**61.58**	**337**	P	P	06 16 58.2	-0.2
FINES				pmax	pmax		
comp=Z,1.0nm,0.5s							
FINES	**FINESS Array B**	**61.58**	**337**	P	P	06 16 58.2	-0.2
OBN	**Obninsk**	**

ESF	**Shoufeng Towns**	**0.46 223**	*e*P	**Pg**	**06 11 54.9**	**-0.8**
	baz=240					
NNS	**Nan Shan**	**0.49 298**	*e*P	**Pg**	**06 11 55.9**	**-0.3**
	baz=305					
TWE	**Neicheng**	**0.53 342**⇑	*i*P	**Pg**	**06 11 57.2**	**+0.1**
	baz=343					
TWE			*e*S	**Sg**	**06 12 04.5**	**+0.4**
	baz=343					
WHF	**Hehuan Shan**	**0.54 263**⇑	*i*P	**Pg**	**06 11 56.2**	**-0.9**
	baz=269					
WHF			*e*S	**Sg**	**06 12 02.3**	**-1.8**
	baz=269					
ESL	**Shilin**	**0.55 224**	*e*P	**Pg**	**06 11 56.5**	**-0.9**
	baz=239					
ESL			*e*S	**Sg**	**06 12 05.3**	**+0.7**
	baz=239					
ILA	**Ilan**	**0.56 351**	*e*P	**Pg**	**06 11 57.9**	**+0.4**
	baz=344					
ILA			*e*S	**Sg**	**06 12 06.8**	**+1.9**
	baz=344					
TEGC	**Jichi Village**	**0.57 209**	*e*P	**Pg**	**06 11 58.6**	**+0.8**
	baz=213					
TWT	**Tachien**	**0.61 274**	⇑P	**Pg**	**06 11 58.2**	**-0.4**
	baz=278					
TWT			*e*S	**Sg**	**06 12 06.2**	**-0.5**
	baz=278					
YHNB	**Yeheng**	**0.63 317**	*e*Pg	**Pg**	**06 11 58.4**	**-0.5**
YHNB			*e*Sg	**Sg**	**06 12 06.6**	**-0.4**
NSK	**Sanguang**	**0.64 316**⇑	*i*P	**Pg**	**06 11 59.0**	**-0.2**
	baz=320					
NSK			*e*S	**Sg**	**06 12 07.4**	**-0.2**
	baz=320					
TWA	**Mucha**	**0.80 343**⇑	*i*P	**Pg**	**06 12 02.4**	**+0.2**
	baz=342					
TWA			*e*S	**Sg**	**06 12 14.5**	**+1.9**
	baz=342					
TWB1	**Santiao Chiao**	**0.80 9**	P	**Pg**	**06 12 02.1**	**-0.1**
	baz=359					
TATO	**Taipei**	**0.83 337**	*e*Pg	**Pg**	**06 12 02.4**	**-0.3**
TATO			*e*Sg	**Sg**	**06 12 15.2**	**+1.7**
EHY	**Hungye**	**0.85 214**	*e*P	**Pg**	**06 12 01.8**	**-1.3**
	baz=219					
NWF	**Wu-fen Shan**	**0.86 356**⇑	*i*P	**Pg**	**06 12 03.6**	**+0.3**
	baz=345					
NWF			*e*S	**Sg**	**06 12 15.4**	**+1.0**
	baz=345					
TAP1	**Taipei**	**0.88 340**	P	**Pg**	**06 12 03.8**	**+0.2**
	baz=339					
TAP1			*e*S	**Sg**	**06 12 15.4**	**+0.4**
	baz=339					
NSTT	**Nanjuang**	**0.88 299**⇑	*i*P	**Pg**	**06 12 03.7**	**+0.1**
	baz=303					
NSTT			*e*S	**Sg**	**06 12 14.0**	**-1.0**
	baz=303					
SSLB	**Suanglung**	**0.92 243**	*e*Pg	**Pg**	**06 12 03.5**	**-0.9**
SSLB			*e*Sg	**Sg**	**06 12 16.8**	**+0.5**
SMLT	**Sun Moon Lake**	**0.93 249**	P	**Pg**	**06 12 03.6**	**-0.9**
	baz=255					
SMLT			*e*S	**Sg**	**06 12 15.4**	**-1.2**
	baz=255					
YULB	**Yu-li**	**0.96 212**	*e*Pg	**Pg**	**06 12 03.9**	**-1.2**
NCU	**National Centr**	**0.96 322**	*e*P	**Pg**	**06 12 06.2**	**+1.0**
	baz=324					
NCU			*e*S	**Sg**	**06 12 19.8**	**+2.0**
	baz=324					
TWS1	**Kuangyinshan**	**0.97 336**	⇑P	**Pg**	**06 12 06.1**	**+0.8**
	baz=336					
TWS1			*e*S	**Sg**	**06 12 19.1**	**+1.2**
	baz=336					
TWQ1	**Liyutan**	**0.99 278**	⇓P	**Pg**	**06 12 06.2**	**+0.5**
	baz=284					
HSN	**Hsinchu**	**0.99 307**	*e*P	**Pg**	**06 12 06.3**	**+0.5**
	baz=312					
HSN			*e*S	**Sg**	**06 12 19.5**	**+0.8**
	baz=312					
TWF1	**Yuli**	**0.99 211**	*e*P	**Pg**	**06 12 04.1**	**-1.7**
	baz=229					
NSY	**Sanyi**	**1.01 282**	*e*P	**Pg**	**06 12 06.9**	**+0.7**
	baz=288					
TCU	**Taichung**	**1.07 267**	P	**Pg**	**06 12 07.8**	**+0.5**
	baz=272					
TCU			*e*S	**Sg**	**06 12 22.2**	**+0.9**
	baz=272					
TWY	**Chenhua**	**1.08 348**	*e*P	**Pg**	**06 12 07.6**	**0.0**
	baz=346					
YUS	**Yu-Shan**	**1.09 229**⇑	*i*P	**Pg**	**06 12 07.0**	**-0.6**
	baz=235					
YUS			*e*S	**Sg**	**06 12 22.3**	**+0.4**
	baz=235					
YOJ	**Yonaguni jima**	**1.09 77**	P	**Pg**	**06 12 08.5**	**+0.8**
YOJ			*e*S	**Sg**	**06 12 25.4**	**+3.5**
WNT	**Mingjian**	**1.11 253**	*e*P	**Pb**	**06 12 08.3**	**+0.2**
	baz=252					
WNT			*e*S	**Sg**	**06 12 23.2**	**+0.6**
	baz=252					
ALS	**Alishan**	**1.18 234**⇑	*i*P	**Pb**	**06 12 08.8**	**-0.5**
	baz=240					
ALS			*e*S	**Sb**	**06 12 25.3**	**+0.6**
	baz=240					
CHN5	**Tsauling**	**1.23 240**	⇑P	**Pn**	**06 12 10.2**	**+0.2**
	baz=247					
CHN5			*e*S	**Sb**	**06 12 27.7**	**+1.6**
	baz=247					
ELDTW	**Lidau**	**1.27 217**	*e*P	**Pn**	**06 12 08.8**	**-1.8**
	baz=212					
ELDTW			*e*S	**Sb**	**06 12 26.2**	**-1.0**
	baz=212					
CHN4	**Tsaushan**	**1.43 234**	P	**Pn**	**06 12 13.2**	**+0.3**
	baz=242					
CHN4			*e*S	**Sn**	**06 12 33.8**	**+2.1**
	baz=242					
TPUB	**Ta-pu**	**1.44 231**	*e*Pn	**Pn**	**06 12 12.7**	**-0.2**
STYT	**Tauyuan**	**1.45 224**	⇑P	**Pn**	**06 12 12.3**	**-0.7**
	baz=232					
STYT			*e*S	**Sn**	**06 12 32.1**	**0.0**
	baz=232					
WTCT	**Ta-ch'eng**	**1.47 257**	*e*P	**Pn**	**06 12 13.1**	**-0.3**
	baz=263					
WTCT			*e*S	**Sn**	**06 12 34.3**	**+1.5**
	baz=263					
WTP	**Ta-pu**	**1.48 230**	⇑P	**Pn**	**06 12 13.5**	**0.0**
	baz=238					
WTP			*e*S	**Sn**	**06 12 33.9**	**+0.9**
	baz=238					
TWG	**Pinlang**	**1.56 207**	*e*Pn	**Pn**	**06 12 11.8**	**-2.7**
TWG	**Pinlang**	**1.56 207**	*e*P	**Pn**	**06 12 11.9**	**-2.6**
	baz=215					
TWK	**Hsinying**	**1.56 233**	P	**Pn**	**06 12 15.1**	**+0.5**
	baz=243					
TWK			*e*S	**Sn**	**06 12 36.3**	**+1.4**
	baz=243					
CHN1	**Nanshi**	**1.58 230**	P	**Pn**	**06 12 15.5**	**+0.6**
	baz=239					
CHN1			*e*S	**Sn**	**06 12 37.2**	**+1.7**
	baz=239					
TTN	**Taitung**	**1.59 204**	*e*P	**Pn**	**06 12 13.6**	**-1.4**
	baz=212					
WSF	**Szhu**	**1.59 249**	*e*P	**Pn**	**06 12 17.0**	**+1.9**
	baz=256					
WSF			*e*S	**Sn**	**06 12 39.1**	**+3.4**
	baz=256					
SGST	**Jiashian**	**1.61 226**	⇑P	**Pn**	**06 12 15.7**	**+0.3**
	baz=234					
SGST			*e*S	**Sn**	**06 12 38.8**	**+2.6**
	baz=234					
IRIF	**Iriomote-Funau**	**1.72 86**	P	**Pn**	**06 12 17.2**	**+0.4**
IRIF			S	**Sn**	**06 12 41.6**	**+2.7**
CHN8	**Yiju**	**1.73 240**	*e*P	**Pn**	**06 12 17.2**	**+0.4**
	baz=250					
CHN8			*e*S	**Sn**	**06 12 41.1**	**+2.1**
	baz=250					
CHN3	**Shinhua**	**1.77 231**	*e*P	**Pn**	**06 12 18.8**	**+1.4**
	baz=245					
HATJ	**Hateruma jima**	**1.80 95**	P	**Pn**	**06 12 18.6**	**+0.8**
SCLT	**Jiali**	**1.83 236**	*e*P	**Pn**	**06 12 19.3**	**+0.9**
	baz=246					
SCLT			*e*S	**Sn**	**06 12 43.3**	**+1.7**
	baz=246					
SSD	**Sandimen**	**1.84 218**	*e*P	**Pn**	**06 12 18.4**	**0.0**
	baz=240					
SSD			*e*S	**Sn**	**06 12 44.0**	**+2.3**
	baz=240					
TWM1	**Shoushan**	**1.90 224**	*e*P	**Pn**	**06 12 20.2**	**+0.9**
	baz=236					
TWM1			*e*S	**Sn**	**06 12 48.3**	**+5.0**
	baz=236					
JKRS	**Kuro-shima**	**1.98 89**	P	**Pn**	**06 12 21.3**	**+1.0**
JKRS			S	**Sn**	**06 12 46.4**	**+1.3**
EAST	**Anshuo**	**2.04 207**	*e*P	**Pn**	**06 12 19.5**	**-1.7**
	baz=201					
TAW	**Tawu**	**2.04 206**	*e*P	**Pn**	**06 12 21.8**	**+0.6**
	baz=217					
TAW			*e*S	**Sn**	**06 12 46.7**	**-0.1**
	baz=217					
JIJ	**Ishigaki jima**	**2.10 85**	P	**Pn**	**06 12 22.3**	**+0.3**
JIJ			S	**Sn**	**06 12 49.9**	**+1.6**
SCZT	**Fangliau**	**2.15 212**	*e*P	**Pn**	**06 12 22.5**	**-0.2**
	baz=226					
SCZT			*e*S	**Sn**	**06 12 52.3**	**+2.8**
	baz=226					
TWP	**Hsiaoliuchiu**	**2.31 217**	*e*P	**Pn**	**06 12 25.0**	**+0.2**
	baz=231					
HEN	**Hengchun**	**2.42 205**	*e*P	**Pn**	**06 12 29.1**	**+2.6**
	baz=201					
TWK1	**Hengchun**	**2.45 203**	*e*P	**Pn**	**06 12 25.6**	**-1.3**
	baz=198					
TSEB	**Hengchuen, Pin**	**2.46 201**	*e*P	**Pn**	**06 12 28.2**	**+1.3**
	baz=211					
JTJ	**Tarama**	**2.64 80**	P	**Pn**	**06 12 30.4**	**+1.0**
JTJ			S	**Sn**	**06 13 03.8**	**+2.3**
QZH	**Quanzhou**	**3.05 284**⇑	*i*Pn	**Pn**	**06 12 33.8**	**-1.3**
QZH			Sn	**Sn**	**06 13 10.4**	**-1.3**
QZH			smax			
	comp=N,2μm,1.0s					
QZH			smax			
	comp=E,2μm,1.0s					
QZH			LR	LR		
	comp=N,5μm,6.8s					
QZH			LR	LR		
	comp=E,10μm,11.2s					
QZH			LR	LR		
	comp=Z,12μm,11.0s					
KNM	**Kinmen**	**3.12 274**	*e*P	**Pn**	**06 12 36.9**	**+0.9**
	baz=282					
SSE	**Sheshan**	**6.88 355**	P	**Pn**	**06 13 27.3**	**-0.5**
SSE			LR	LR		
	comp=N,3μm,11.7s					
SSE			LR	LR		
	comp=E,820nm,11.7s					
SSE			LR	LR		
	comp=Z,3μm,11.1s					
GZH	**Guangzhou**	**7.88 264**	Pg	**Pn**	**06 13 35.8**	**-5.6**
GZH			Sg	**Sn**	**06 14 56.3**	**-14**
GZH			smax			
	comp=N,380nm,1.4s					
GZH			smax			
	comp=E,200nm,1.1s					
NJ2	**Nanjing**	**8.24 342**	*e*P	**Pn**	**06 13 45.5**	**-0.9**
NJ2			pP		06 13 49.6	
NJ2			sP		06 13 50.7	
NJ2			PP		06 13 55.5	
NJ2			S	**Sn**	**06 15 18.0**	**-1.7**
NJ2			sS		06 15 24.0	
NJ2			pmax	pmax		
	comp=Z,40nm,1.3s					
NJ2			smax			
	comp=N,160nm,0.6s					
NJ2			smax			
	comp=E,220nm,1.0s					
NJ2			LR	LR		
	comp=N,2μm,11.4s					
NJ2			LR	LR		
	comp=E,1μm,12.3s					
NJ2			LR	LR		
	comp=Z,10μm,11.9s					
WHN	**Wuhan**	**9.17 315**	⇑P	**Pn**	**06 14 01.5**	**+2.3**
WHN			S	**Sn**	**06 15 36.4**	**-6.1**
WHN			LR	LR		
	comp=N,7μm,8.7s					
WHN			LR	LR		
	comp=E,7μm,9.3s					
WHN			LR	LR		
	comp=Z,11μm,9.2s					
QIZ	**Qiongzhong**	**12.29 248**	P	**Pn**	**06 14 44.5**	**+2.5**
QIZ			S	**Sn**	**06 17 04.8**	**+5.6**
QIZ			pmax	pmax		
	comp=Z,17nm,1.1s					
QIZ			LR	LR		
	comp=N,380nm,12.6s					
QIZ			LR	LR		
	comp=E,240nm,9.9s					
QIZ			LR	LR		
	comp=Z,420nm,9.6s					
GYA	**Guiyang**	**13.91 282**	P	**Pn**	**06 15 03.2**	**-0.9**
GYA			PP		06 15 15.0	
GYA			SS		06 17 57.6	
GYA			pmax	pmax		
	comp=Z,10.0nm,0.8s					
GYA			pmax	pmax		
	comp=Z,90nm,4.2s					
GYA			LR	LR		
	comp=N,520nm,11.9s					
GYA			LR	LR		
	comp=E,580nm,12.3s					
GYA			LR	LR		
	comp=Z,620nm,10.4s					
BJI	**Beijing**	**16.49 344**	P	**Pn**	**06 15 40.4**	**+2.2**
BJI			pmax	pmax		
	comp=Z,10.0nm,0.7s					
BJI			pmax	pmax		
	comp=Z,140nm,5.4s					
BJI			LR	LR		
	comp=N,1μm,13.6s					
BJI			LR	LR		
	comp=E,460nm,12.9s					
BJI			LR	LR		
	comp=Z,430nm,15.1s					
CD2	**Chengdu**	**17.36 297**	P	**Pn**	**06 15 50.7**	**+1.5**
CD2			PP		06 16 05.2	
CD2			S	**Sn**	**06 19 03.7**	**+1.1**
CD2			pmax	pmax		
	comp=Z,30nm,0.5s					
CD2			pmax	pmax		
	comp=Z,280nm,6.5s					
CD2			LR	LR		
	comp=N,2μm,8.9s					
CD2			LR	LR		
	comp=Z,2μm,8.6s					
KMI	**Kunming**	**17.39 277**	P	**Pn**	**06 15 50.3**	**+0.6**
KMI			pP	pP	06 15 51.3	-2.3
KMI			PP		06 16 04.8	
KMI			S	**Sn**	**06 19 02.8**	**-0.6**
KMI			sS	sS	06 19 04.9	-11
KMI			SS		06 19 24.6	
KMI			pmax	pmax		
	comp=Z,4.0nm,0.5s					
KMI			pmax	pmax		
	comp=Z,69nm,6.6s					
KMI			LR	LR		
	comp=N,1μm,12.0s					
KMI			LR	LR		
	comp=E,2μm,9.2s					
KMI			LR	LR		
	comp=Z,2μm,9.2s					
MJAR	**Matsushiro Arr**	**18.68 45**	P	**Pn**	**06 16 01.7**	**-3.8**
	baz=231,slow=8.0,SNR=3.5					
MJAR			LR	LR	06 24 09.9	
	comp=Z,265nm,19.4s,baz=225,slow=40					
HHC	**Hu-ho-hao-te**	**18.69 335**	*e*P	**Pn**	**06 16 04.6**	**-1.0**
HHC			PP		06 16 20.8	
HHC			S	**Sn**	**06 19 33.4**	**-1.3**
HHC			SS		06 19 56.9	
HHC			PcP	PcP	06 20 31.9	-1.4
HHC			ScS	ScS	06 27 48.3	-1.9
HHC			pmax	pmax		
	comp=Z,16nm,0.5s					
HHC			pmax	pmax		
	comp=Z,170nm,5.1s					
HHC			LR	LR		
	comp=N,990nm,9.9s					
HHC			LR	LR		
	comp=E,600nm,9.5s					
HHC			LR	LR		
	comp=Z,930nm,9.6s					
BTO	**Baotou**	**19.12 332**	*e*P	pP	06 16 20.7	+8.1
LZH	**Lanzhou**	**19.52 311**	*e*P	**Pn**	**06 16 18.3**	**+2.8**
LZH			pP	pP	06 16 21.1	+4.1
LZH			sP	sP	06 16 24.9	+6.7
LZH			PP		06 16 37.4	
LZH			*e*S	**Sn**	**06 19 52.6**	**-2.1**
LZH			sS	sS	06 19 57.7	-1.4
LZH			SS		06 20 16.0	
LZH			pmax	pmax		
	comp=Z,29nm,1.3s					
LZH			pmax	pmax		
	comp=Z,160nm,4.8s					
LZH			LR	LR		
	comp=E,1μm,9.6s					
LZH			LR	LR		
	comp=Z,2μm,10.3s					
CN2	**Changchun**	**19.76 8**	*e*P	**Pn**	**06 16 19.0**	**+0.6**
CN2			*e*PP		06 16 37.5	
CN2			*e*S	**Sn**	**06 19 57.0**	**-3.4**
CN2			pmax	pmax		
	comp=Z,20nm,0.7s					
CN2			pmax	pmax		
	comp=Z,200nm,5.0s					
CN2			LR	LR		
	comp=N,1μm,12.0s					
CN2			LR	LR		
	comp=E,500nm,12.0s					
CN2			LR	LR		
	comp=Z,700nm,14.0s					
VLA	**Vladivostok**	**20.60 21**⇓	*e*P	**P**	**06 16 29.4**	**+3.4**
VLA			pmax	pmax		
	comp=Z,26nm,1.0s					
MDJ	**Mudanjiang**	**21.31 15**	P	**P**	**06 16 34.4**	**+0.7**
MDJ			pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2					
MDJ			pmax	pmax		
	comp=Z,38nm,4.4s					
MDJ			LR	LR		
	comp=N,790nm,13.9s,MS4.3					
MDJ			LR	LR		
	comp=E,350nm,13.9s,MS4.3					
MDJ			LR	LR		
	comp=Z,1μm,14.3s,MS4.4					
CHTO	**Chiang Mai**	**21.96 260**	*e*P	**P**	**06 16 41.8**	**+0.9**
CHTO			pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.1					
CHTO	**Chiang Mai**	**21.96 260**	*e*P	**P**	**06 16 41.8**	**+0.9**
	comp=Z,8.8nm,1.1s,mb4.1					
CMAR	**Chiang Mai Arr**	**22.08 259**	P	**P**	**06 16 43.5**	**+1.4**
	comp=Z,4.1nm,1.0s,mb3.8,baz=60,slow=6.8,SNR=8.9					
GTA	**Gaotai**	**24.00 314**	P	**P**	**06 17 02.0**	**+0.4**
GTA			pP		06 17 06.1	
GTA			sP	sP	06 17 09.4	+3.7
GTA			pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.1					
GTA			pmax	pmax		
	comp=Z,75nm,6.2s					
GTA			LR	LR		
	comp=N,380nm,11.9s,MS4.5					
GTA			LR	LR		
	comp=E,920nm,11.9s,MS4.5					
GTA			LR	LR		
	comp=Z,1μm,11.6s,MS4.7					
HIA	**Hailar**	**25.06 357**	*e*P	**P**	**06 17 09.2**	**-2.0**
HIA			pmax	pmax		
	comp=Z,15nm,0.9s					
HIA	**Hailar**	**25.06 357**	*e*P	**P**	**06 17 09.2**	**-2.0**
	comp=Z,15nm,0.9s,mb4.5					
KLR	**Kul'dur**	**26.16 15**	*e*P	**P**	**06 17 16.2**	**-4.9**
HABR	**Khabarovsk**	**26.37 20**	P	**P**	**06 17 21.1**	**-2.0**
HABR			*e**PP	pP	06 17 30.8	+4.9
HABR			S	**S**	**06 21 55.9**	**-0.3**
HABR			*e**SS	sS	06 22 12.1	+11
HABR			*e*SS		06 23 02.0	
HABR			*e*SSS		06 23 17.1	
HABR			*e*		06 28 11.8	
HABR			pmax	pmax		
	comp=E,26nm,1.2s					
HABR			pmax	pmax		
	comp=N,9.0nm,0.9s					
HABR			pmax	pmax		
	comp=Z,27nm,2.3s,mb4.4					
ULN	**Ulaanbaatar**	**26.37 337**	*e*P	**P**	**06 17 22.0**	**-1.1**
ULN			pmax	pmax		
	comp=Z,30nm,1.7s,mb4.5					
ULN	**Ulaanbaatar**	**26.37 337**	*e*P	**P**	**06 17 22.0**	**-1.1**
	comp=Z,30nm,1.7s,mb4.5					
SONM	**Songino Array**	**26.58 336**	P	**P**	**06 17 25.1**	**+0.1**
	comp=Z,6.0nm,1.0s,mb4.1,baz=152,slow=9.3,SNR=24					
TLY	**Talaya**	**30.78 338**	*e*P	**P**	**06 18 02.6**	**+0.3**
TLY			*e*S	**S**	**06 22 55.2**	**-10**
TLY			pmax	pmax		
	comp=Z,8.0nm,1.5s,mb4.3					
TLY			MLR	MLR		
	comp=Z,501nm,14.0s,MS4.3					
WMQ	**Urumqi**	**34.07 314**	P	**P**	**06 18 32.6**	**+1.3**
WMQ			pP	pP	06 18 37.0	+2.8
WMQ			sP	sP	06 18 39.6	+4.2
WMQ			PP	PP	06 19 46.6	-1.8
WMQ			pmax	pmax		
	comp=Z,15nm,1.4s,mb4.7					
WMQ			pmax	pmax		
	comp=Z,170nm,5.0s					
WMQ			LR	LR		
	comp=N,140nm,14.0s,MS4.1					
WMQ			LR	LR		
	comp=E,210nm,13.8s,MS4.1					
WMQ			LR	LR		
	comp=Z,200nm,14.0s,MS4.0					
MK31	**Makanchi Array**	**38.74 316**	*i* P	**P**	**06 19 10.7**	**-0.4**
MK31			pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5					
MK31	**Makanchi Array**	**38.74 316**	*e*P	**P**	**06 19 10.9**	**-0.3**
MKAR	**Makanchi Array**	**38.74 316**	P	**P**	**06 19 11.1**	**0.0**
	comp=Z,4.0nm,0.8s,mb4.2,baz=104,slow=10,SNR=37					
PET	**Petropavlovsk**	**39.95 34**	*e*P	**P**	**06 19 19.6**	**-1.6**
PET			pmax	pmax		
	comp=Z,13nm,0.7s,mb4.8					
PET	**Petropavlovsk**	**39.95 34**	*e*P	**P**	**06 19 19.6**	**-1.6**
	comp=Z,13nm,0.7s,mb4.8					
ZALV	**Zalesovo Beam**	**40.55 327**	P	**P**	**06 19 24.9**	**-1.3**
	comp=Z,6.3nm,0.7s,mb4.3,baz=114,slow=8.1,SNR=24					
ZALV			LR	LR	06 37 14.4	
	comp=Z,174nm,18.1s,MS4.0,baz=67,slow=38					
KSH	**Kashi**	**41.39 303**	*e*P	**P**	**06 19 37.9**	**+4.6**
KSH			PP	PP	06 21 17.4	+8.6
KSH			PcP	PcP	06 21 34.8	+3.4
KSH			PcS	PcS	06 25 24.7	+2.2
KSH			S	**S**	**06 25 55.6**	**+7.4**
KSH			SS	SS	06 28 55.3	+3.3
KSH			ScS	ScS	06 29 40.7	+3.1
KSH			pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.2					
KSH			pmax	pmax		
	comp=Z,110nm,5.3s					
KSH			LR	LR		
	comp=N,470nm,12.3s					
KSH			LR	LR		
	comp=E,220nm,8.5s					
KSH			LR	LR		
	comp=Z,310nm,12.8s,MS4.4					
NVS	**Novosibirsk**	**41.81 327**	*e*P	**P**	**06 19 35.8**	**-0.7**
NVS			pmax	pmax		
	comp=Z,17nm,1.9s,mb4.3					
NVS			pmax	pmax		
	comp=N,14nm,1.8s					
NVS			pmax	pmax		
	comp=E,17nm,1.8s					
TKM2	**Tokmak 2**	**42.22 308**	*e*P	**P**	**06 19 40.9**	**+0.9**
TKM2			pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.3					
TKM2	**Tokmak 2**	**42.22 308**	*e*P	**P**	**06 19 40.9**	**+0.8**
	comp=Z,9.6nm,1.3s,mb4.3					
KURK	**Kurchatov**	**42.46 320**	P	**P**	**06 19 41.7**	**-0.1**
	comp=Z,4.2nm,0.9s,mb4.1,baz=109,slow=7.1,SNR=19					
KURK	**Kurchatov**	**42.46 320**	*e*P	**P**	**06 19 41.6**	**-0.2**
KURK			pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.3					
KURK	**Kurchatov**	**42.46 320**	*e*P	**P**	**06 19 41.6**	**-0.2**
	comp=Z,7.7nm,1.0s,mb4.3					
AAK	**Ala-Archa**	**42.97 307**	P	**P**	**06 19 49.0**	**+2.9**
	comp=Z,1.4nm,0.3s,mb4.2,baz=139,slow=9.3,SNR=3.2					
COEN	**Coen**	**43.28 149**	*e*P	**P**	**06 19 47.4**	**-1.4**
	comp=Z,106nm,1.0s,mb5.5					
AML	**Almayashu**	**43.47 306**	*e*P	**P**	**06 19 50.9**	**+0.7**
AML			pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.3					
AML	**Almayashu**	**43.47 306**	*e*P	**P**	**06 19 50.9**	**+0.7**
	comp=Z,6.7nm,1.1s,mb4.3					
WRA	**Warramunga Arr**	**45.54 163**	P	**P**	**06 20 05.9**	**-1.0**
	comp=Z,4.0nm,0.9s,mb4.3,baz=345,slow=8.7,SNR=10					
KK31	**Karatay Array**	**45.94 307**	*i* P	**P**	**06 20 09.3**	**-0.5**
VOSK	**Vostochnaya**	**47.61 320**	P	**P**	**06 20 21.6**	**-1.2**
VOSK			pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7					
TIXI	**Tiksi**	**47.63 3**	*e*P	**P**	**06 20 21.8**	**-0.9**

TIXI				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.8						
TIXI				MLR	MLR		
	comp=Z,589nm,15.0s,MS4.7						
BVAR	**Borovoye Array**	**48.04**	**321**	P	**P**	**06 20 26.2**	**+0.1**
	comp=Z,3.3nm,0.8s,mb4.4,baz=110,slow=12,SNR=16						
BVAR				PcP	PcP	06 21 52.3	-1.6
	comp=Z,0.5nm,0.5s,baz=71,slow=6.2,SNR=2.6						
BRVK	**Borovoye**	**48.11**	**321** *c*	*i*P	**P**	**06 20 25.9**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
BRVK	**Borovoye**	**48.11**	**321**	*e*P	**P**	**06 20 26.4**	**-0.2**
	comp=Z,9.4nm,0.8s,mb4.9						
ZRNK	**Zerenda**	**48.82**	**320**	P	**P**	**06 20 31.2**	**-0.9**
ZRNK				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
ASAR	**Alice Springs**	**49.01**	**165**	P	**P**	**06 20 33.1**	**-0.7**
	comp=Z,0.7nm,0.7s,mb3.8,baz=343,slow=7.9,SNR=7.9						
BILL	**Bilibino**	**51.45**	**20**⇓	*e*P	**P**	**06 20 50.9**	**-1.0**
BILL				*e*		06 22 05.0	
BILL				*e*		06 22 51.8	
BILL				pmax	pmax		
	comp=Z,10.0nm,1.7s,mb4.5						
BILL				MLR	MLR		
	comp=Z,300nm,18.0s,MS4.4						
AB31	**Akbulak array**	**53.85**	**314**	*i* P	**P**	**06 21 09.1**	**-0.8**
AB31				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
ABKAR	**Akbulak array**	**53.85**	**314**	*e*P	**P**	**06 21 10.0**	**+0.1**
	comp=Z,8.6nm,0.8s,mb4.7						
SVE	**Sverdlovsk**	**54.38**	**324**⇓	*e*P	**P**	**06 21 12.6**	**-1.0**
SVE				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.8						
SVE				MLR	MLR		
	comp=Z,308nm,15.0s,MS4.5						
ARU	**Arti**	**55.45**	**323**	*e*P	**P**	**06 21 20.4**	**-1.0**
ARU				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
ARU	**Arti**	**55.45**	**323**	*e*P	**P**	**06 21 20.4**	**-1.0**
	comp=Z,9.9nm,0.9s,mb4.8						
STKA	**Stephens Creek**	**58.88**	**160**	LR	LR	06 47 18.0	
	comp=Z,82nm,19.5s,MS3.9,baz=204,slow=36						
ZEI	**Tsey**	**65.40**	**308**	*e*P	**P**	**06 22 28.6**	**-1.1**
ZEI				pmax	pmax		
	comp=Z,11nm,0.4s,mb5.2						
KIV	**Kislovodsk**	**66.04**	**309** *c*	*i*P	**P**	**06 22 33.4**	**-0.4**
KIV				*e**PP	pP	06 22 47.2	+10
KIV				pmax	pmax		
	comp=Z,23nm,1.4s,mb5.0						
KIV				MLR	MLR		
	comp=Z,100nm,18.0s,MS4.1						
BPAW	**Bear Paw Mtn.**	**67.28**	**28**	*e*P	**P**	**06 22 41.0**	**-0.3**
	comp=Z,11nm,1.6s,mb4.6						
OBN	**Obninsk**	**67.85**	**322**⇑	*i*P	**P**	**06 22 43.5**	**-1.6**
OBN				*e*		06 23 07.6	
OBN				*e*		06 25 10.1	
OBN				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.1						
OBN				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.2						
PMR	**Palmer**	**68.56**	**31**	*e*P	**P**	**06 22 47.8**	**-1.6**
PMR				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
PMR	**Palmer**	**68.56**	**31**	*e*P	**P**	**06 22 47.8**	**-1.6**
	comp=Z,2.4nm,0.7s,mb4.2						
ARCES	**ARCESS Array B**	**69.74**	**338**	LR	LR	07 01 14.7	
	comp=Z,78nm,18.2s,MS4.0,baz=122,slow=43						
MENT	**Mentasta**	**70.71**	**29**	*e*P	**P**	**06 23 02.7**	**0.0**
EGAK	**Eagle**	**71.29**	**27**	*e*P	**P**	**06 23 04.7**	**-1.5**
	comp=Z,2.8nm,0.8s,mb4.2						
FINES	**FINESS Array B**	**71.73**	**330**	P	**P**	**06 23 07.9**	**-1.0**
	comp=Z,3.5nm,0.8s,mb4.3,baz=35,slow=5.1,SNR=7.1						
FINES				LR	LR	06 57 38.5	
	comp=Z,267nm,18.2s,MS4.5,baz=179,slow=38						
DAWY	**Dawson**	**72.24**	**27**	*e*P	**P**	**06 23 11.1**	**-0.8**
VSU	**Vasula**	**72.29**	**327**⇑	*i*P	**P**	**06 23 10.0**	**-2.3**
VSU				pmax	pmax		
	comp=Z,18nm,1.7s,mb4.7						
INK	**Inuvik**	**72.97**	**22**	*e*P	**P**	**06 23 14.2**	**-2.0**
INK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
INK	**Inuvik**	**72.97**	**22**	*e*P	**P**	**06 23 14.2**	**-2.0**
	comp=Z,5.9nm,1.0s,mb4.5						
AKASG	**Malin Array Be**	**73.25**	**318**	P	**P**	**06 23 16.1**	**-2.1**
	comp=Z,3.1nm,0.8s,mb4.3,baz=58,slow=6.3,SNR=13						
KIEV	**Kiev**	**73.26**	**318**	*e*P	**P**	**06 23 15.5**	**-2.7**
KIEV				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
KIEV	**Kiev**	**73.26**	**318**	*e*P	**P**	**06 23 15.5**	**-2.7**
	comp=Z,5.8nm,1.1s,mb4.4						
BR131	**Keskin Array S**	**73.64**	**307**	*e*P	**P**	**06 23 20.3**	**-0.4**
	comp=Z,1.1nm,0.7s,mb3.9						
BRTR	**Keskin Array B**	**73.64**	**307**	P	**P**	**06 23 20.4**	**-0.2**
	comp=Z,2.5nm,0.9s,mb4.2,baz=107,slow=6.6,SNR=14						
BRTR				LR	LR	07 02 17.1	
	comp=Z,28nm,19.3s,MS3.6,baz=290,slow=41						
BRTR	**Keskin Array B**	**73.64**	**307**	*i* P	**P**	**06 23 20.7**	**0.0**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SKAG	**Skagway**	**75.69**	**31**	*e*P	**P**	**06 23 32.5**	**+0.4**
	comp=Z,5.7nm,0.8s,mb4.5						
NB2	**NORSAR Subarra**	**78.48**	**332**	P	**P**	**06 23 46.1**	**-1.7**
	comp=Z,0.2nm,0.8s,baz=65,slow=6.2						
NOA	**NORSAR Array B**	**78.48**	**332**	P	**P**	**06 23 45.8**	**-2.1**
	comp=Z,1.5nm,0.8s,mb4.0,baz=60,slow=5.6,SNR=5.9						
NOA				LR	LR	07 01 16.2	
	comp=Z,127nm,18.5s,MS4.3,baz=40,slow=38						
DLBC	**Dease Lake**	**78.61**	**31**	*e*P	**P**	**06 23 48.5**	**-0.1**
OJC	**Ojcow**	**79.04**	**320**	*e*P	**P**	**06 23 48.0**	**-3.1**
YKA	**Yellowknife Ar**	**82.71**	**23**	P	**P**	**06 24 08.5**	**-2.0**
	comp=Z,3.1nm,0.8s,mb4.4,baz=313,slow=4.7,SNR=12						
KMBO	**Kilima Mbogo**	**85.52**	**267** *c*	*e*P	**P**	**06 24 19.0**	**-6.7**
WALA	**Waterton Lakes**	**91.77**	**33**	*e*P	**P**	**06 24 55.2**	**+0.5**
	comp=Z,0.1nm,1.0s						
BMO	**Blue Mountains**	**92.66**	**38**	*e*P	**P**	**06 24 59.3**	**+0.3**
BMO				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.5						
BMO	**Blue Mountains**	**92.66**	**38**	*e*P	**P**	**06 24 59.3**	**+0.3**
	comp=Z,1.9nm,1.0s,mb4.5						
HLID	**Hailey**	**95.08**	**37**	*e*P	**P**	**06 25 11.2**	**+1.1**
	comp=Z,0.9nm,0.7s,mb4.3						
NVAR	**Mina Array Bea**	**96.00**	**43**	P	**P**	**06 25 14.3**	**-0.2**
	comp=Z,0.4nm,0.7s,mb4.0,baz=270,slow=4.3,SNR=3.6						
NVAR	**Mina Array Bea**	**96.00**	**43**	P	**P**	**06 25 14.3**	**-0.2**

NEIC ***12*** *06:18:45.5±8.1, 24°.75N×122°.32E, h10km, MG3.2(JMA), Error ellipse: s-maj=98.1km s-min=17.3km az=69.0*
ISCJB ***12*** *06:18:46.9±0.5, 24°.90N±0°.03×121°.94E±0°.02, h106km±3km, Error ellipse: s-maj=4.8km s-min=2.7km az=151.9*
JMA ***12*** *06:18:47.8±0.2, 24°.94N×121°.99E, h103km, M3.2*
TAP ***12*** *06:18:47.3, 24°.92N×121°.91E, h106km, ML4.1, C*
ISC 12 06:18:47.5±0.5, 24°.90N±0°.03×121°.94E±0°.02, h104km±3km, n64, σ0°64/125, 7D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.12**	**22**⇓	*i*P	**Pn**	**06 19 02.2**	**+0.2**
	baz=42						
TWB1				*i* S	**Sn**	**06 19 12.6**	**-0.2**
	baz=42						
ILA	**Ilan**	**0.22**	**233**	P	**Pn**	**06 19 02.6**	**+0.4**
	baz=221						
ILA				*i* S	**Sn**	**06 19 13.8**	**+0.6**
	baz=221						
NWF	**Wu-fen Shan**	**0.22**	**320**⇓	*i*P	**Pn**	**06 19 02.4**	**+0.2**
	baz=320						
NWF				S	**Sn**	**06 19 13.2**	**-0.1**
	baz=320						
TWC	**Suao**	**0.30**	**196**	P	**Pn**	**06 19 02.8**	**+0.2**
	baz=188						
TWC				S	**Sn**	**06 19 13.8**	**0.0**
	baz=188						
TWE	**Neicheng**	**0.31**	**234**	*i* P	**Pn**	**06 19 03.1**	**+0.6**
	baz=225						
TWE				*i* S	**Sn**	**06 19 14.3**	**+0.5**
	baz=225						
TWA	**Mucha**	**0.33**	**284**	P	**Pn**	**06 19 02.8**	**+0.1**
	baz=280						
TWA				S	**Sn**	**06 19 14.1**	**+0.1**
	baz=280						
TAP1	**Taipei**	**0.40**	**290**	P	**Pn**	**06 19 03.2**	**+0.2**
	baz=287						
TAP1				S	**Sn**	**06 19 14.3**	**-0.4**
	baz=287						
TATO	**Taipei**	**0.42**	**280**	*e*Pn	**Pn**	**06 19 02.7**	**-0.4**
TATO				*e*Sn	**Sn**	**06 19 15.4**	**+0.5**
TWY	**Chenhua**	**0.48**	**321**	P	**Pn**	**06 19 03.5**	**-0.1**
	baz=321						
TWY				S	**Sn**	**06 19 15.6**	**-0.1**
	baz=321						
ENA	**Nanau**	**0.50**	**201**	P	**Pn**	**06 19 04.2**	**+0.5**
	baz=196						
ENA				S	**Sn**	**06 19 16.8**	**+0.9**
	baz=196						
TWS1	**Kuangyinshan**	**0.52**	**293**	P	**Pn**	**06 19 04.2**	**+0.4**
	baz=291						
TWS1				S	**Sn**	**06 19 16.3**	**+0.3**
	baz=291						
YHNB	**Yeheng**	**0.56**	**246**	*e*Pn	**Pn**	**06 19 03.8**	**-0.4**
YHNB				*e*Sn	**Sn**	**06 19 15.6**	**-1.1**
NSK	**Sanguang**	**0.57**	**247**⇓	*i*P	**Pn**	**06 19 04.2**	**-0.1**
	baz=243						
NSK				S	**Sn**	**06 19 16.1**	**-0.6**
	baz=243						
NNS	**Nan Shan**	**0.69**	**229**	*i* P	**Pn**	**06 19 05.5**	**+0.3**
	baz=225						
NNS				S	**Sn**	**06 19 18.6**	**+0.2**
	baz=225						
NACB	**Ninganchiao**	**0.79**	**204**	*e*Pn	**Pn**	**06 19 05.5**	**-0.6**
NACB				*e*Sn	**Sn**	**06 19 19.2**	**-0.9**
TWD	**Chiawan**	**0.87**	**201**	*e*P	**Pn**	**06 19 06.3**	**-0.7**
	baz=198						
TWD				*e*S	**Sn**	**06 19 20.9**	**-0.6**
	baz=198						
HSN	**Hsinchu**	**0.89**	**264**	*e*P	**Pn**	**06 19 07.3**	**+0.3**
	baz=263						
HSN				*e*S	**Sn**	**06 19 21.2**	**-0.6**
	baz=263						
NSTT	**Nanjuang**	**0.90**	**253**⇓	*i*P	**Pn**	**06 19 07.1**	**0.0**
	baz=250						
NSTT				*e*S	**Sn**	**06 19 21.4**	**-0.5**
	baz=250						
TWT	**Tachien**	**0.95**	**227**⇓	*i*P	**Pn**	**06 19 08.6**	**+0.9**
	baz=225						
TWT				*e*S	**Sn**	**06 19 24.0**	**+1.1**
	baz=225						
HWA	**Hwalien**	**0.97**	**198**	*e*P	**Pn**	**06 19 07.2**	**-0.7**
	baz=196						
HWA				*e*S	**Sn**	**06 19 24.1**	**+0.9**
	baz=196						
WHF	**Hehuan Shan**	**0.97**	**219**	*e*P	**Pn**	**06 19 08.6**	**+0.7**
	baz=216						
WHF				*e*S	**Sn**	**06 19 23.8**	**+0.5**
	baz=216						
YOJ	**Yonaguni jima**	**1.07**	**114**	P	**Pn**	**06 19 09.0**	**+0.1**
YOJ				S	**Sn**	**06 19 25.3**	**+0.2**
ESL	**Shilin**	**1.18**	**203**	*e*P	**Pn**	**06 19 08.9**	**-1.3**
	baz=201						
ESL				*e*S	**Sn**	**06 19 25.9**	**-1.4**
	baz=201						
NSY	**Sanyi**	**1.18**	**246**	*e*P	**Pn**	**06 19 10.6**	**+0.4**
	baz=244						
NSY				*e*S	**Sn**	**06 19 27.5**	**+0.2**
	baz=244						
TWQ1	**Liyutan**	**1.20**	**243**⇓	*i*P	**Pn**	**06 19 10.5**	**+0.1**
	baz=240						
TWQ1				*e*S	**Sn**	**06 19 27.8**	**+0.1**
	baz=240						
TCU	**Taichung**	**1.37**	**237**	P	**Pn**	**06 19 12.6**	**+0.2**
	baz=235						
TCU				*e*S	**Sn**	**06 19 31.1**	**-0.2**
	baz=235						
SMLT	**Sun Moon Lake**	**1.39**	**223**	P	**Pn**	**06 19 13.1**	**+0.5**
	baz=221						
SMLT				*e*S	**Sn**	**06 19 32.0**	**+0.4**
	baz=221						
SSLB	**Suanglung**	**1.43**	**219**	*e*Pn	**Pn**	**06 19 13.0**	**-0.1**
SSLB				*e*Sn	**Sn**	**06 19 32.9**	**+0.4**
EHY	**Hungye**	**1.50**	**202**	*e*P	**Pn**	**06 19 12.6**	**-1.3**
	baz=200						
EHY				*e*S	**Sn**	**06 19 33.3**	**-0.7**
	baz=200						
WNT	**Mingjian**	**1.53**	**229**	*e*P	**Pn**	**06 19 14.4**	**0.0**
	baz=226						
WNT				*e*S	**Sn**	**06 19 34.9**	**+0.1**
	baz=226						
YULB	**Yu-li**	**1.61**	**202**	*e*Pn	**Pn**	**06 19 13.9**	**-1.4**
YULB				*e*Sn	**Sn**	**06 19 35.5**	**-1.0**
TWF1	**Yuli**	**1.65**	**201**	*e*P	**Pn**	**06 19 15.7**	**-0.1**
	baz=199						
TWF1				*e*S	**Sn**	**06 19 37.2**	**-0.1**
	baz=199						
YUS	**Yu-Shan**	**1.67**	**213**	*e*P	**Pn**	**06 19 16.8**	**+0.8**
	baz=211						
YUS				*e*S	**Sn**	**06 19 37.5**	**-0.2**
	baz=211						
IRIF	**Iriomote-Funau**	**1.72**	**109**	P	**Pn**	**06 19 16.6**	**-0.1**
IRIF				S	**Sn**	**06 19 38.8**	**-0.1**
ALS	**Alishan**	**1.73**	**217**	P	**Pn**	**06 19 17.5**	**+0.7**
	baz=215						
ALS				*e*S	**Sn**	**06 19 39.3**	**+0.2**
	baz=215						
CHN5	**Tsauling**	**1.73**	**222**	*e*P	**Pn**	**06 19 17.4**	**+0.5**
	baz=220						
CHN5				*e*S	**Sn**	**06 19 39.7**	**+0.5**
	baz=220						
HATJ	**Hateruma jima**	**1.90**	**116**	P	**Pn**	**06 19 19.4**	**+0.5**
HATJ				S	**Sn**	**06 19 42.6**	**-0.2**
ELDTW	**Lidau**	**1.90**	**207**	*e*P	**Pn**	**06 19 19.7**	**+0.8**
	baz=205						
ELDTW				*e*S	**Sn**	**06 19 43.3**	**+0.3**
	baz=205						
CHN4	**Tsaushan**	**1.97**	**219**	*e*P	**Pn**	**06 19 20.4**	**+0.6**
	baz=217						
CHN4				*e*S	**Sn**	**06 19 44.9**	**+0.3**
	baz=217						
TPUB	**Ta-pu**	**1.99**	**217**	*e*Pn	**Pn**	**06 19 20.2**	**+0.1**
TPUB				*e*Sn	**Sn**	**06 19 44.2**	**-0.8**
JKRS	**Kuro-shima**	**2.00**	**109**	P	**Pn**	**06 19 20.6**	**+0.5**
JKRS				S	**Sn**	**06 19 45.0**	**-0.1**
WSF	**Szhu**	**2.01**	**232**	*e*P	**Pn**	**06 19 20.9**	**+0.6**
	baz=230						
WSF				*e*S	**Sn**	**06 19 45.1**	**-0.3**
	baz=230						
STYT	**Tauyuan**	**2.04**	**212**	*e*P	**Pn**	**06 19 21.1**	**+0.4**
	baz=210						
STYT				*e*S	**Sn**	**06 19 46.0**	**-0.2**
	baz=210						
WTP	**Ta-pu**	**2.04**	**217**	*e*P	**Pn**	**06 19 21.2**	**+0.4**
	baz=215						
WTP				*e*S	**Sn**	**06 19 46.0**	**-0.3**
	baz=215						
JIJ	**Ishigaki jima**	**2.07**	**104**	P	**Pn**	**06 19 21.2**	**0.0**
JIJ				S	**Sn**	**06 19 46.0**	**-0.9**
TWK	**Hsinying**	**2.10**	**220**	*e*P	**Pn**	**06 19 22.4**	**+0.9**
	baz=217						
TWK				*e*S	**Sn**	**06 19 48.0**	**+0.5**
	baz=217						
CHN1	**Nanshi**	**2.14**	**217**	*e*P	**Pn**	**06 19 22.4**	**+0.3**
	baz=216						
CHN1				*e*S	**Sn**	**06 19 48.0**	**-0.4**
	baz=216						
SGST	**Jiashian**	**2.19**	**215**	*e*P	**Pn**	**06 19 23.3**	**+0.6**
	baz=213						
SGST				*e*S	**Sn**	**06 19 49.2**	**-0.5**
	baz=213						
CHN8	**Yiju**	**2.21**	**226**	*e*P	**Pn**	**06 19 23.4**	**+0.4**
	baz=224						
CHN8				*e*S	**Sn**	**06 19 49.8**	**-0.3**
	baz=224						
TWG	**Pinlang**	**2.22**	**201**	*e*Pn	**Pn**	**06 19 23.1**	**+0.1**
TWG				*e*Sn	**Sn**	**06 19 48.2**	**-2.1**
TWG	**Pinlang**	**2.22**	**201**	*e*P	**Pn**	**06 19 23.4**	**+0.4**
	baz=199						
TWG				*e*S	**Sn**	**06 19 50.1**	**-0.1**
	baz=199						
TTN	**Taitung**	**2.26**	**199**	*e*P	**Pn**	**06 19 24.2**	**+0.7**
	baz=197						
TTN				*e*S	**Sn**	**06 19 51.6**	**+0.5**
	baz=197						
CHN3	**Shinhua**	**2.32**	**219**	*e*P	**Pn**	**06 19 25.1**	**+0.8**
	baz=217						
CHN3				*e*S	**Sn**	**06 19 52.5**	**0.0**
	baz=217						
SSD	**Sandimen**	**2.46**	**209**	*e*P	**Pn**	**06 19 27.0**	**+0.8**
	baz=208						
SSD				*e*S	**Sn**	**06 19 55.8**	**0.0**
	baz=208						
TWM1	**Shoushan**	**2.49**	**214**	*e*P	**Pn**	**06 19 27.4**	**+0.8**
	baz=212						
TWM1				*e*S	**Sn**	**06 19 56.8**	**+0.1**
	baz=212						
JTJ	**Tarama**	**2.52**	**95**	P	**Pn**	**06 19 27.8**	**+0.8**
JTJ				S	**Sn**	**06 19 57.8**	**+0.4**
PNG	**Penghu**	**2.55**	**239**	*e*P	**Pn**	**06 19 26.1**	**-1.2**
	baz=237						
PNG				*e*S	**Sn**	**06 19 55.6**	**-2.4**
	baz=237						
EAST	**Anshuo**	**2.70**	**202**	*e*P	**Pn**	**06 19 29.9**	**+0.5**
	baz=200						
EAST				*e*S	**Sn**	**06 20 01.3**	**-0.2**
	baz=200						
SCZT	**Fangliau**	**2.79**	**206**	*e*P	**Pn**	**06 19 31.1**	**+0.5**
	baz=204						
SCZT				*e*S	**Sn**	**06 20 03.3**	**-0.5**
	baz=204						
QZH	**Quanzhou**	**3.04**	**272**⇓	*i*Pn	**Pn**	**06 19 32.9**	**-0.9**
QZH				Sn	**Sn**	**06 20 06.3**	**-3.3**
QZH				smax			
	comp=N,170nm,0.8s						
QZH				smax			
	comp=E,70nm,0.7s						
JMJ	**Miyako jima 2**	**3.05**	**91**	*e*S	**Sn**	**06 20 09.8**	**0.0**
JOGS	**Gusukube**	**3.15**	**92**	S	**Sn**	**06 20 12.7**	**+0.4**
JOW	**Kunigami**	**6.02**	**70**	P	**Pn**	**06 20 13.4**	**-0.7**
JOW				*e*S	**Sn**	**06 21 19.4**	**-2.2**
JTK	**Tokunoshima**	**6.91**	**64**	P	**Pn**	**06 20 25.5**	**-0.7**

JMA ***12*** *07:03:03.1±0.3, 24°.95N×122°.03E, h14km, M2.6*
TAP 12 07:02:58.6, 24°.20N×121°.79E, h10km, ML3.4, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.11**	**337**	*i* P	Pg	07 03 02.1	+0.7
	baz=340						
EHP				S	Sg	07 03 04.3	+0.9
	baz=340						
TWD	**Chiawan**	**0.21**	**235**	*e*P	Pg	07 03 03.7	+0.6
	baz=234						
ENA	**Nanau**	**0.23**	**349**	P	Pg	07 03 04.3	+1.0
	baz=350						
ENA				*e*S	Sg	07 03 07.8	+1.3
	baz=350						
HWA	**Hwalien**	**0.28**	**217**	*e*P	Pg	07 03 04.7	+0.5
	baz=215						
TWC	**Suao**	**0.41**	**8**	P	Pg	07 03 07.6	+1.0
	baz=9.0						
TWC				S	Sg	07 03 14.1	+2.0
	baz=9.0						
NNS	**Nan Shan**	**0.45**	**302**	*e*P	Pg	07 03 09.1	+1.8
	baz=301						
NNS				S	Sg	07 03 14.7	+1.4
	baz=301						
WHF	**Hehuan Shan**	**0.48**	**263**	*e*P	Pg	07 03 08.7	+0.7
	baz=262						
WHF				*e*S	Sg	07 03 17.2	+2.9
	baz=262						
ESL	**Shilin**	**0.51**	**220**	*e*P	Pg	07 03 09.1	+0.7
	baz=219						
TWE	**Neicheng**	**0.53**	**348**	*e*P	Pg	07 03 09.1	+0.3
	baz=349						
TWE				S	Sg	07 03 17.7	+1.9
	baz=349						
ILA	**Ilan**	**0.56**	**356**	*e*P	Pg	07 03 09.8	+0.3
	baz=356						
ILA				*e*S	Sg	07 03 18.6	+1.8
	baz=356						
TWT	**Tachien**	**0.56**	**275**	*e*P	Pg	07 03 10.6	+1.1
	baz=274						
NSK	**Sanguang**	**0.61**	**320**	*e*P	Pg	07 03 11.1	+0.6
	baz=320						
NSK				S	Sg	07 03 20.3	+1.8
	baz=320						
TWA	**Mucha**	**0.80**	**346**	*e*P	Pg	07 03 14.6	+0.6
	baz=346						
TWA				*e*S	Sg	07 03 26.3	+2.0
	baz=346						
EHY	**Hungye**	**0.82**	**212**	*e*P	Pg	07 03 14.0	-0.3
	baz=211						
TWB1	**Santiao Chiao**	**0.82**	**13**	P	Pg	07 03 15.3	+0.9
	baz=13						
TWB1				*e*S	Sg	07 03 26.6	+1.5
	baz=13						
NSTT	**Nanjuang**	**0.83**	**301**	*e*P	Pg	07 03 15.8	+1.1
	baz=300						
NSTT				*e*S	Sg	07 03 27.4	+1.8
	baz=300						
NWF	**Wu-fen Shan**	**0.86**	**360**	*e*P	Pg	07 03 15.2	0.0
	baz=359						
NWF				*e*S	Sg	07 03 28.3	+1.8
	baz=359						
SMLT	**Sun Moon Lake**	**0.87**	**249**	*e*P	Pg	07 03 16.7	+1.3
	baz=248						
TWS1	**Kuangyinshan**	**0.95**	**339**	*e*P	Pg	07 03 16.5	-0.5
	baz=339						
TWF1	**Yuli**	**0.96**	**208**	*e*P	Pg	07 03 17.1	0.0
	baz=207						
NSY	**Sanyi**	**0.96**	**283**	*e*P	Pg	07 03 17.6	+0.5
	baz=282						
YUS	**Yu-Shan**	**1.05**	**227**	*e*S	Sg	07 03 34.1	+1.8
	baz=226						
TWY	**Chenhua**	**1.08**	**351**	*e*P	Pb	07 03 21.6	+2.2
	baz=351						
YOJ	**Yonaguni jima**	**1.14**	**77**	P	Pb	07 03 21.9	+1.5
YOJ				*e*S	Sb	07 03 35.3	0.0
CHN5	**Tsauling**	**1.18**	**240**	*e*P	Pb	07 03 21.5	+0.5
	baz=239						
ELDTW	**Lidau**	**1.23**	**215**	*e*P	Pn	07 03 22.9	+1.1
	baz=214						
CHN1	**Nanshi**	**1.54**	**229**	*e*P	Pn	07 03 26.0	0.0
	baz=228						
SGST	**Jiashian**	**1.57**	**225**	*e*P	Pn	07 03 25.9	-0.5
	baz=224						
IRIF	**Iriomote-Funau**	**1.78**	**85**	*e*S	Sn	07 03 53.9	+2.0
HATJ	**Hateruma jima**	**1.85**	**94**	*e*S	Sn	07 03 57.2	+3.5
JKRS	**Kuro-shima**	**2.03**	**89**	P	Pn	07 03 36.5	+3.8
JKRS				*e*S	Sn	07 04 00.9	+2.8
JIJ	**Ishigaki jima**	**2.15**	**85**	P	Pn	07 03 36.9	+2.4
JIJ				*e*S	Sn	07 04 02.1	+0.9

MEX 12 07:23:15.3±0.6, 16°.54N×100°.80W, h16km±63km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.71**	**45**	*i* P	Pg	07 23 26.3	-3.0
CAIG				*i* S	Sg	07 23 35.8	-3.0
ACX	**Acapulco**	**0.96**	**70**	*i* P	Pb	07 23 30.0	-3.5
ACX				*i* S	Sb	07 23 40.9	-5.0
MEIG	**Mezcala**	**1.78**	**39**	*i* P	Pn	07 23 42.2	-3.2
MEIG				*i* S	Sn	07 24 02.2	-5.4
PLIG	**Platanillo**	**2.22**	**34**	*i* P	Pn	07 23 48.4	-3.0
PLIG				*i* S	Sn	07 24 13.5	-5.0
PNIG	**Pinotepa**	**2.57**	**93**	*i* P	Pn	07 23 53.5	-2.8
PNIG				*i* S	Sn	07 24 22.6	-4.6

**CASC 12 07:30:39.4±1.7, 8°.43N×82°.97W, h7km, MD3.6, 1C, Panama-Costa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.17**	**315**	P		**07 35 51.3**	**-0.3**
	baz=342						
EHP				S		**07 35 53.6**	**-0.3**
	baz=342						
NACB	**Ninganchiao**	**0.26**	**268**	*e*Pg		**07 35 52.1**	**-1.0**
NACB				*e*Sg		**07 35 55.1**	**-1.4**
ENA	**Nanau**	**0.27**	**333**	⇓*i*P		**07 35 53.4**	**-0.1**
	baz=351						
ENA				*i* S		**07 35 56.9**	**-0.1**
	baz=351						
TWD	**Chiawan**	**0.28**	**248**	*i* P		**07 35 53.0**	**-0.5**
	baz=243						
TWD				S		**07 35 56.3**	**-0.8**
	baz=243						
HWA	**Hwalien**	**0.32**	**230**	*e*P		**07 35 54.7**	**+0.3**
	baz=231						
HWA				*e*S		**07 35 59.4**	**+0.7**
	baz=231						
TWC	**Suao**	**0.42**	**357**	*i* P		**07 35 56.5**	**+0.2**
	baz=9.0						
TWC				*e*S		**07 36 02.0**	**+0.2**
	baz=9.0						
NNS	**Nan Shan**	**0.52**	**299**	*i* P		**07 35 57.6**	**-0.6**
	baz=304						
NNS				S		**07 36 03.6**	**-1.4**
	baz=304						
ESL	**Shilin**	**0.55**	**228**	*e*P		**07 35 58.7**	**0.0**
	baz=230						
ESL				*e*S		**07 36 07.4**	**+1.6**
	baz=230						
WHF	**Hehuan Shan**	**0.56**	**266**	*i* P		**07 35 58.3**	**-0.6**
	baz=266						
WHF				S		**07 36 04.9**	**-1.2**
	baz=266						
TWE	**Neicheng**	**0.57**	**340**	*i* P		**07 35 59.1**	**0.0**
	baz=350						
TWE				S		**07 36 06.3**	**-0.1**
	baz=350						
ILA	**Ilan**	**0.59**	**349**	*e*P		**07 36 02.3**	**+2.8**
	baz=350						
ILA				*e*S		**07 36 09.1**	**+1.9**
	baz=350						
TWT	**Tachien**	**0.64**	**276**	P		**07 36 00.2**	**-0.3**
	baz=276						
TWT				S		**07 36 07.5**	**-1.3**
	baz=276						
YHNB	**Yeheng**	**0.66**	**317**	*e*Pg		**07 36 00.4**	**-0.5**
YHNB				*e*Sg		**07 36 08.2**	**-1.3**
NSK	**Sanguang**	**0.68**	**316**	*i* P		**07 36 00.9**	**-0.3**
	baz=322						
NSK				S		**07 36 08.7**	**-1.4**
	baz=322						
TWB1	**Santiao Chiao**	**0.83**	**7**	*e*P		**07 36 05.0**	**+1.0**
	baz=6.0						
TWA	**Mucha**	**0.83**	**341**	P		**07 36 04.2**	**0.0**
	baz=348						
TWA				*e*S		**07 36 16.2**	**+1.2**
	baz=348						
EHY	**Hungye**	**0.84**	**217**	*e*P		**07 36 03.6**	**-0.8**
	baz=224						
EHY				*e*S		**07 36 17.6**	**+2.3**
	baz=224						
TATO	**Taipei**	**0.86**	**336**	*e*Pg		**07 36 04.5**	**-0.2**
TATO				*e*Sg		**07 36 15.7**	**-0.2**
NWF	**Wu-fen Shan**	**0.89**	**354**	*i* P		**07 36 05.6**	**+0.5**
	baz=351						
NWF				S		**07 36 17.2**	**+0.5**
	baz=351						
TAP1	**Taipei**	**0.91**	**339**	*e*P		**07 36 05.5**	**-0.1**
	baz=344						
TAP1				S		**07 36 16.9**	**-0.5**
	baz=344						
NSTT	**Nanjuang**	**0.91**	**299**	P		**07 36 05.4**	**-0.3**
	baz=303						
NSTT				S		**07 36 16.4**	**-1.2**
	baz=303						
SSLB	**Suanglung**	**0.93**	**245**	*e*Pn		**07 36 04.8**	**-3.1**
SSLB				*e*Sn		**07 36 17.2**	**-4.6**
SMLT	**Sun Moon Lake**	**0.94**	**252**	*e*P		**07 36 05.8**	**-0.4**
	baz=251						
SMLT				*e*S		**07 36 17.1**	**-1.4**
	baz=251						
YULB	**Yu-li**	**0.95**	**214**	*e*Pn		**07 36 06.2**	**-2.1**
YULB				*e*Sn		**07 36 21.7**	**-0.6**
TWF1	**Yuli**	**0.98**	**213**	*e*P		**07 36 06.4**	**-0.7**
	baz=223						
TWF1				*e*S		**07 36 22.9**	**+3.1**
	baz=223						
NCU	**National Centr**	**1.00**	**321**	*e*P		**07 36 07.8**	**+0.4**
	baz=326						
NCU				*e*S		**07 36 23.3**	**+2.9**
	baz=326						
TWS1	**Kuangyinshan**	**1.00**	**336**	P		**07 36 08.0**	**+0.6**
	baz=340						
TWS1				*e*S		**07 36 22.3**	**+1.9**
	baz=340						
TWQ1	**Liyutan**	**1.02**	**279**	*e*P		**07 36 08.7**	**+1.0**
	baz=281						
TWQ1				*e*S		**07 36 22.0**	**+1.1**
	baz=281						
HSN	**Hsinchu**	**1.03**	**307**	P		**07 36 08.6**	**+0.7**
	baz=302						
HSN				*e*S		**07 36 23.5**	**+2.2**
	baz=302						
NSY	**Sanyi**	**1.04**	**283**	P		**07 36 08.2**	**+0.1**
	baz=286						
YUS	**Yu-Shan**	**1.09**	**231**	*e*P		**07 36 08.8**	**-0.3**
	baz=229						
YUS				*e*S		**07 36 23.3**	**0.0**
	baz=229						
TCU	**Taichung**	**1.10**	**268**	*e*P		**07 36 09.7**	**+0.5**
	baz=269						
TCU				*e*S		**07 36 23.8**	**+0.4**
	baz=269						
TWY	**Chenhua**	**1.11**	**347**	*e*P		**07 36 09.6**	**0.0**
	baz=337						
WNT	**Mingjian**	**1.13**	**255**	*e*P		**07 36 10.2**	**+0.3**
	baz=250						
WNT				*e*S		**07 36 26.4**	**+1.8**
	baz=250						
ALS	**Alishan**	**1.19**	**236**	*i* P		**07 36 10.6**	**-0.4**
	baz=235						
ALS				*e*S		**07 36 26.7**	**+0.3**
	baz=235						
CHN5	**Tsauling**	**1.24**	**242**	*e*P		**07 36 11.5**	**-0.5**
	baz=242						
CHN5				S		**07 36 29.8**	**+1.7**
	baz=242						
ELDTW	**Lidau**	**1.27**	**219**	*e*P		**07 36 10.6**	**-1.9**
	baz=203						
CHN4	**Tsaushan**	**1.44**	**235**	P		**07 36 15.1**	**+0.1**
	baz=236						
CHN4				*e*S		**07 36 36.0**	**+1.8**
	baz=236						
TPUB	**Ta-pu**	**1.44**	**233**	*e*Pn		**07 36 14.3**	**-0.8**
TPUB				*e*Sn		**07 36 34.4**	**0.0**
STYT	**Tauyuan**	**1.45**	**225**	*e*P		**07 36 12.8**	**-2.3**
	baz=228						
WTP	**Ta-pu**	**1.49**	**231**	P		**07 36 15.2**	**-0.4**
	baz=232						
WTP				*e*S		**07 36 36.3**	**+0.8**
	baz=232						
TWG	**Pinlang**	**1.55**	**209**	*e*Pn		**07 36 13.9**	**-2.6**
TWK	**Hsinying**	**1.57**	**235**	*e*P		**07 36 17.0**	**+0.3**
	baz=236						
TWK				*e*S		**07 36 38.5**	**+1.1**
	baz=236						
CHN1	**Nanshi**	**1.59**	**231**	*e*P		**07 36 17.3**	**+0.3**
	baz=233						
CHN1				*e*S		**07 36 40.2**	**+2.3**
	baz=233						
SGST	**Jiashian**	**1.62**	**227**	*e*P		**07 36 17.1**	**-0.3**
	baz=228						
SGST				*e*S		**07 36 40.7**	**+2.0**
	baz=228						
CHN8	**Yiju**	**1.74**	**242**	*e*P		**07 36 17.9**	**-1.2**
	baz=244						
CHN8				*e*S		**07 36 43.7**	**+2.0**
	baz=244						
SSD	**Sandimen**	**1.83**	**219**	*e*P		**07 36 20.7**	**+0.3**
	baz=211						
TWM1	**Shoushan**	**1.90**	**225**	*e*P		**07 36 22.5**	**+1.1**
	baz=224						
SCZT	**Fangliau**	**2.14**	**213**	*e*P		**07 36 23.8**	**-0.8**
	baz=199						
PNG	**Penghu**	**2.21**	**254**	*e*P		**07 36 24.4**	**-1.2**
	baz=258						
PNG				*e*S		**07 36 54.3**	**+0.9**
	baz=258						
QZH	**Quanzhou**	**3.08**	**285**	Pn		**07 36 35.3**	**-2.3**
QZH				Sn		**07 37 11.9**	**-3.0**
QZH				smax			
	comp=N,130nm,0.7s						
QZH				smax			
	comp=E,80nm,0.6s						

IDC 12 07:38:05.0±2.4, 16°.19S×178°.39W, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.7/14, mbtmp3.6/4, Error ellipse: s-maj=248.6km s-min=26.5km az=156.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.98**	**258**	P		07 46 22.9	+0.5
	0.4nm,1.0s,baz=92,slow=7.9,SNR=4.2						
ASAR	**Alice Springs**	**45.29**	**253**	P		07 46 24.3	-0.5
	0.4nm,0.5s,baz=89,slow=8.1,SNR=12						
TXAR	**Lajitas Array**	**85.07**	**58**	P		07 50 43.7	+0.6
	0.5nm,0.7s,baz=224,slow=6.6,SNR=7.9						
PDAR	**Pinedale Array**	**86.10**	**43**	P		07 50 47.6	-0.3
	0.3nm,0.7s,baz=226,slow=3.9,SNR=3.9						

IDC 12 07:38:11.4±2.7, 14°.69S×72°.19W, h100km±22km, mb3.1/2, mb1 3.2/5, mb1mx3.1/18, mbtmp3.1/5, Error ellipse: s-maj=140.1km s-min=15.1km az=25.0, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**4.22**	**113**	P	Pn	07 39 16.1	+2.5
	1.5nm,0.3s,baz=286,slow=9.1,SNR=36						
NNA	**Nana**	**5.26**	**300**	P	Pn	07 39 28.6	+0.8
	1.0nm,0.3s,baz=135,slow=13,SNR=3.2						
NNA				S	Sn	07 40 26.6	-0.6
	3.9nm,0.3s,baz=218,slow=19,SNR=4.2						
SIV	**San Ignacio**	**10.80**	**98**	P	Pn	07 40 41.5	-1.6
	0.1nm,0.3s,baz=278,slow=12,SNR=6.6						
TXAR	**Lajitas Array**	**53.29**	**325**	P		07 47 21.7	+1.6
	0.2nm,0.6s,baz=141,slow=7.8,SNR=2.8						
TORD	**Torodi Ar. Bea**	**78.19**	**73**	P		07 49 59.4	-1.1
	0.8nm,0.8s,baz=248,slow=5.4,SNR=4.5						
SONM	**Songino Array**	**146.93**	**2**	PKPbc	PKPbc	07 57 42.1	-0.2
	0.4nm,0.6s,baz=302,slow=2.7,SNR=4.3						

*DJA **12** 07:38:05, 19°.75S×173°.67W, h105km, mb5.5/8*
*SZGRF **12** 07:38:06.9, 20°.64S×176°.28W, h33km, Fiji Islands region*
*ISCJB **12** 07:39:09.4±0.8, 19°.18S±0°.09×177°.49W±0°.09, h556km±12km, mb4.5/31, Error ellipse: s-maj=16.4km s-min=9.2km az=140.2*
*IDC **12** 07:39:10.1±1.4, 19°.17S×177°.39W, h556km±16km, mb3.7/9, mb1 4.0/11, mb1mx3.9/17, mbtmp3.8/11, Error ellipse: s-maj=23.9km s-min=11.4km az=145.0*
*BJI **12** 07:39:11.5, 18°.68S×177°.32W, h566km, mB4.5/5, mb4.6/8*
*NEIC **12** 07:39:11.0±0.8, 19°.03S×177°.49W, h566km±9km, mb4.3/14, Error ellipse: s-maj=13.6km s-min=7.2km az=149.0*
ISC 12 07:39:09.9±0.8, 19°.14S±0°.09×177°.45W±0°.09, h548km±11km, n104, σ0s84/58, mb4.5/31, 2C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.53**	**47**	P	**P**	**07 41 04.1**	**+1.1**
	33nm,0.3s,baz=91,slow=2.1,SNR=23						
AFI				S	**S**	**07 42 34.6**	**-0.9**
	6.6nm,0.3s,baz=253,slow=19,SNR=4.4						
AFI	**Afiamalu**	**7.53**	**47**	*e*P	**P**	**07 41 03.7**	**+0.7**
	105nm,0.5s						
URZ	**Urewera**	**19.63**	**193**	P	**P**	**07 43 01.4**	**-1.1**
	1.7nm,0.3s,baz=64,slow=4.9,SNR=7.4						
ARMA	**Armidale**	**30.14**	**242**	*e*P	**P**	**07 44 36.7**	**+1.0**
ARMA	**Armidale**	**30.14**	**242**	*e*P	**P**	**07 44 36.8**	**+1.1**
	8.8nm,0.7s,mb4.4						
CNB	**Canberra Magne**	**33.43**	**234**	*e*P	**P**	**07 45 03.8**	**+0.2**
CTA	**Charters Tower**	**34.17**	**262**	*e*P	**P**	**07 45 10.2**	**+0.2**
	10.0nm,0.6s,mb4.5						
CTA	**Charters Tower**	**34.17**	**262**	P	**P**	**07 45 10.3**	**+0.3**
	16nm,0.7s,mb4.7,baz=85,slow=11,SNR=11						
CTAO	**Charters Tower**	**34.17**	**262**	*e*P	**P**	**07 45 10.0**	**0.0**
	17nm,0.8s,mb4.6						
CTAO	**Charters Tower**	**34.17**	**262**	P	**P**	**07 45 09.2**	**-0.8**
	26nm,0.9s,mb4.8						
PMG	**Port Moresby**	**35.58**	**281**	P	**P**	**07 45 23.6**	**+1.7**
	66nm,1.2s,mb5.0						
TOO	**Toolangi**	**37.12**	**233**	*e*P	**P**	**07 45 34.9**	**+0.6**
COEN	**Coen**	**38.04**	**272**	*e*P	**P**	**07 45 42.7**	**+0.6**
COEN	**Coen**	**38.04**	**272**	*e*P	**P**	**07 45 42.4**	**+0.3**
	174nm,0.9s,mb5.6						
COEN	**Coen**	**38.04**	**272**	P	**P**	**07 45 42.7**	**+0.6**
	91nm,1.3s,mb5.1						
STKA	**Stephens Creek**	**38.86**	**243**	*e*P	**P**	**07 45 49.4**	**+0.9**
	20nm,1.1s,mb4.6						
STKA	**Stephens Creek**	**38.86**	**243**	P	**P**	**07 45 49.3**	**+0.8**
	19nm,0.6s,mb4.8,baz=90,slow=9.2,SNR=22						
STKA	**Stephens Creek**	**38.86**	**243**	*e*P	**P**	**07 45 49.2**	**+0.7**
	3.3nm,0.5s,mb4.1						
BBOO	**Buckleboo**	**43.63**	**242**	*e*P	**P**	**07 46 26.0**	**-0.2**
	28nm,0.5s,mb5.0						
WRAB	**Tennant Creek**	**45.31**	**261**	*e*P	**P**	**07 46 38.3**	**-1.1**
	12nm,0.6s,mb4.6						
WRAB	**Tennant Creek**	**45.31**	**261**	P	**P**	**07 46 38.8**	**-0.6**
	36nm,1.1s,mb4.8						
WRA	**Warramunga Arr**	**45.32**	**261**	P	**P**	**07 46 38.6**	**-0.9**
	15nm,0.6s,mb4.7,baz=97,slow=8.1,SNR=354						
WRA				PcP	PcP	07 48 06.7	-0.8
	2.9nm,0.8s,baz=93,slow=3.7,SNR=6.2						
WRA				S	**S**	**07 52 35.9**	**-4.7**
	2.5nm,1.0s,baz=95,slow=14,SNR=9.6						
ASAR	**Alice Springs**	**45.35**	**255**	P	**P**	**07 46 39.6**	**0.0**
	35nm,0.8s,mb5.0,baz=88,slow=7.9,SNR=249						
ASAR				PcP	PcP	07 48 06.5	-1.0
	3.5nm,0.7s,baz=112,slow=3.5,SNR=7.4						
ASAR				S	**S**	**07 52 37.5**	**-3.3**
	2.5nm,0.7s,baz=90,slow=15,SNR=16						
KAKA	**Kakadu**	**48.48**	**270**	*e*P	**P**	**07 47 04.2**	**+0.8**
	26nm,0.4s,mb5.1						
KAKA	**Kakadu**	**48.48**	**270**	*e*P	**P**	**07 47 03.9**	**+0.5**
	98nm,0.6s,mb5.5						
KAKA	**Kakadu**	**48.48**	**270**	P	**P**	**07 47 04.0**	**+0.6**
	888nm90nm,0.6s,mb5.5						
FORT	**Forrest**	**50.32**	**246**	*e*P	**P**	**07 47 15.8**	**-0.8**
	40nm,0.6s,mb5.0						
FORT	**Forrest**	**50.32**	**246**	*e*P	**P**	**07 47 15.8**	**-0.9**
	45nm,0.6s,mb5.1						
KNA	**Kununurra**	**51.26**	**265**	P	**P**	**07 47 23.7**	**0.0**
	2μm191nm,0.7s,mb5.6						
SWI	**Sorong**	**53.42**	**284**	P	**P**	**07 47 39.2**	**0.0**
	2μm143nm,0.8s,mb5.3						
FITZ	**Fitzroy Crossi**	**53.74**	**261**	*e*P	**P**	**07 47 40.8**	**-0.6**
	20nm,0.5s,mb4.7						
FITZ	**Fitzroy Crossi**	**53.74**	**261**	*e*P	**P**	**07 47 40.8**	**-0.6**
	7.7nm,0.4s,mb4.4						
FITZ	**Fitzroy Crossi**	**53.74**	**261**	P	**P**	**07 47 41.1**	**-0.3**
MBWA	**Marble Bar**	**58.67**	**256**	*e*P	**P**	**07 48 14.4**	**-0.9**
	10.0nm,0.7s,mb4.2						
MEEK	**Meekatharra**	**58.86**	**250**	*e*P	**P**	**07 48 15.5**	**-1.1**
KLBR	**Kellerberrin**	**59.11**	**244**	*e*P	**P**	**07 48 17.4**	**-0.7**
	19nm,0.8s,mb4.4						
SBA	**Scott Base**	**59.25**	**184**	*e*P	**P**	**07 48 20.0**	**+1.7**
	2.8nm,0.9s,mb3.5						
CASY	**Casey**	**65.41**	**205**	*e*P	**P**	**07 48 57.4**	**-0.8**
	3.3nm,0.7s,mb3.9						
MJAR	**Matsushiro Arr**	**69.44**	**323**	P	**P**	**07 49 22.6**	**-0.7**
	2.9nm,0.7s,mb3.9,baz=159,slow=6.0,SNR=8.0						
MAJO	**Matsushiro**	**69.44**	**323**	*e*P	**P**	**07 49 22.6**	**-0.8**
	5.3nm,0.5s,mb4.3						
PCJI	**Pacitan**	**69.82**	**268**	P	**P**	**07 49 26.1**	**-0.1**
QSPA	**South Pole Qui**	**70.92**	**180**	*e*P	**P**	**07 49 31.8**	**+0.3**
	15nm,1.5s,mb4.3						
NJ2	**Nanjing**	**79.42**	**309**	*e*P	**P**	**07 50 21.2**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,40nm,1.1s,mb4.7						
NVAR	**Mina Array Bea**	**79.68**	**43**	P	**P**	**07 50 21.1**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=224,slow=8.6,SNR=8.0						
LDFC	**Landfair**	**80.01**	**48**	*e*P	**P**	**07 50 23.5**	**+0.8**
	comp=Z,4.5nm,1.1s,mb3.7						
TXAR	**Lajitas Array**	**85.89**	**57**	P	**P**	**07 50 52.9**	**+0.7**
	comp=Z,1.3nm,0.7s,mb3.7,baz=219,slow=6.9,SNR=17						
TXAR	**Lajitas Array**	**85.89**	**57**	P	**P**	**07 50 52.9**	**+0.7**
GYA	**Guiyang**	**86.44**	**299**	P	**P**	**07 50 55.4**	**+0.5**
GYA				pP	pP	07 52 58.9	+4.7
GYA				sP	sP	07 53 54.2	+4.6
GYA				PP	PP	07 54 30.4	+3.6
GYA				SKS		08 00 25.1	
GYA				S	S	08 00 42.8	-2.8
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4						
COLA	**College**	**86.78**	**12**	*e*P	**P**	**07 50 54.2**	**-1.3**
	comp=Z,1.9nm,0.7s,mb3.8						
PDAR	**Pinedale Array**	**87.62**	**43**	P	**P**	**07 50 59.2**	**-0.9**
	comp=Z,0.7nm,0.9s,mb3.4,baz=242,slow=3.2,SNR=5.1						
HHC	**Hu-ho-hao-te**	**88.78**	**314**	*e*P	**P**	**07 51 05.6**	**0.0**
HHC				S	S	08 01 05.8	-1.0
HHC				pmax	pmax		
	comp=Z,24nm,0.7s,mb5.1						
HHC				pmax	pmax		
	comp=Z,80nm,6.9s						
KMI	**Kunming**	**89.20**	**297**	P	**P**	**07 51 07.7**	**-0.2**
KMI				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.5						
CMAR	**Chiang Mai Arr**	**90.16**	**289**	P	**P**	**07 51 12.7**	**+0.3**
	comp=Z,1.7nm,0.3s,mb4.3,baz=107,slow=2.7,SNR=15						
CD2	**Chengdu**	**90.50**	**303**	P	**P**	**07 51 15.0**	**+1.2**
LZH	**Lanzhou**	**92.36**	**307**	*e*P	**P**	**07 51 27.7**	**+5.5**
LZH				pP	pP	07 53 27.5	+4.7
LZH				sP	sP	07 54 18.0	+0.3
LZH				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
CPUP	**Villa Florida**	**106.37**	**126**	*e*PKPdf	PKiKP	07 56 32.6	-0.5
MKAR	**Makanchi Array**	**110.65**	**314**	PKiKP	PKiKP	07 56 38.2	-2.2
	comp=Z,0.5nm,0.5s,baz=178,slow=0.3,SNR=14						
BVAR	**Borovoye Array**	**118.38**	**321**	PKP	PKPdf	07 56 53.2	-1.8
	comp=Z,1.3nm,0.4s,baz=64,slow=3.4,SNR=8.9						
ARU	**Arti**	**124.38**	**326**	*e*PKPdf	PKPdf	07 57 05.7	-0.8
ARCES	**ARCESS Array B**	**127.69**	**350**	PKP	PKPdf	07 57 11.0	-1.4
	comp=Z,1.1nm,0.5s,baz=41,slow=0.5,SNR=24						
ARCES	**ARCESS Array B**	**127.69**	**350**	PKP	PKPdf	07 57 11.0	-1.4
FINES	**FINESS Array B**	**134.62**	**344**	PKP	PKPdf	07 57 25.1	-0.6
	comp=Z,1.1nm,0.6s,baz=90,slow=5.7,SNR=3.6						
AKASG	**Malin Array Be**	**142.07**	**332**	PKhKP	PKPpre	07 57 34.1	
	comp=Z,1.1nm,0.3s,baz=43,slow=4.2,SNR=11						
BSEG	**Bad Segeberg**	**144.76**	**352**	*e*PKPbc	PKPdf	07 57 44.3	+0.1
BUR08	**Bucovina Ar. S**	**146.11**	**332**	*e*PKPbc	PKPbc	07 57 47.8	-1.0
BURAR	**Bucovina Array**	**146.13**	**332**	⇑*i*P	PKPdf	07 57 47.5	+0.7
BR131	**Keskin Array S**	**146.30**	**314**	*e*PKPbc	PKPbc	07 57 48.5	-1.1
BRTR	**Keskin Array B**	**146.30**	**314**	PKPbc	PKPbc	07 57 48.4	-1.2
	comp=Z,2.7nm,0.7s,baz=138,slow=4.1,SNR=10						
BRTR				PKPab	PKPab	07 57 51.5	-0.4
	comp=Z,2.1nm,0.8s,baz=48,slow=4.3,SNR=5.9						
CLL	**Collm**	**146.86**	**348**	*e*PKPbc	PKPbc	07 57 49.7	-1.0
DPC	**Dobruska-Polom**	**146.99**	**344**	*e*PKP	PKPbc	07 57 50.8	-0.3
BRG	**Berggiesshubel**	**147.08**	**347**	*e*PKPbc	PKPbc	07 57 50.3	-1.0
MLR	**Muntele Rosu**	**147.36**	**329**	⇑*i*P	PKPbc	07 57 51.3	-0.9
MMAI	**Mount Meron Ar**	**147.57**	**302**	PKPbc	PKPbc	07 57 52.5	-0.7
	comp=Z,5.5nm,0.5s,baz=70,slow=7.3,SNR=14						
MMAI				PKPab	PKPab	07 57 57.3	0.0
	comp=Z,1.2nm,0.4s,baz=69,slow=5.5,SNR=5.3						
PRU	**Pruhonice**	**147.77**	**345**	*e*PKP	PKPbc	07 57 53.6	+0.5
PLN	**Plauen**	**147.81**	**348**	*e*PKPbc	PKPbc	07 57 52.3	-0.9
WERD	**Werda**	**147.81**	**348**	*e*PKPbc	PKPbc	07 57 52.2	-1.0
TANN	**Tannenbergstha**	**147.82**	**348**	*e*PKPbc	PKPbc	07 57 52.4	-0.8
GUNZ	**Gunzen**	**147.89**	**348**	*e*PKPbc	PKPbc	07 57 52.7	-0.7
GRF	**Grafenberg Arr**	**148.74**	**349**	*e*PKPbc	PKPbc	07 57 54.8	-0.8
GRF	**Grafenberg Arr**	**148.74**	**349**	*e*PKP	PKPbc	07 57 54.8	-0.8
KHC	**Kasperske Hory**	**148.79**	**346**	*e*PKPbc	PKPbc	07 57 55.0	-0.7
KHC	**Kasperske Hory**	**148.79**	**346**	*e*PKP	PKPbc	07 57 55.3	-0.4
KHC				*ex*	x	07 58 48.0	
GEC2	**GERESS Array S**	**149.03**	**346**	*e*PKPbc	PKPbc	07 57 55.4	-0.9
GIVF	**Givet**	**149.06**	**357**	*e*PKP1	PKPbc	07 57 55.2	-1.1
	comp=Z,9.6nm,0.6s						
BAIF	**Baives**	**149.13**	**358**	*e*PKP1	PKPbc	07 57 55.5	-1.0
	comp=Z,6.6nm,0.6s						
WLF	**Walferdange**	**149.41**	**355**	*e*PKPbc	PKPbc	07 57 56.5	-0.7
FLN	**La Foliniere**	**150.35**	**4**	*e*PKP1	PKPbc	07 57 58.1	-1.3
	comp=Z,8.8nm,0.6s						
BFO	**Black Forest**	**150.51**	**352**	*e*PKPbc	PKPbc	07 57 58.6	-1.2
LDF	**La Druitiere**	**150.54**	**4**	*e*PKP1	PKPbc	07 57 58.3	-1.6
	comp=Z,5.5nm,0.5s						
CDF	**Champ du Feu**	**150.55**	**354**	*e*PKP1	PKPbc	07 57 59.4	-0.5
MEZF	**Maizieres J'vi**	**150.65**	**357**	*e*PKP1	PKPbc	07 58 00.1	0.0
	comp=Z,6.5nm,0.4s						
SGMF	**Saint Gilles**	**150.67**	**7**	*e*PKP1	PKPbc	07 57 59.0	-1.2
GRR	**Gorron**	**150.70**	**5**	*e*PKP1	PKPbc	07 57 58.9	-1.3
	comp=Z,9.1nm,0.6s						
HAU	**Haudompre**	**151.05**	**355**	*e*PKP1	PKPbc	07 58 00.3	-0.7
HINF	**Hinteralfeld**	**151.19**	**354**	*e*PKP1	PKPbc	07 58 00.5	-0.9
CRNS	**Crni Vrh**	**151.45**	**343**	*i* PKPbc	PKPbc	07 58 00.6	-1.4
VOJS	**Vojsko**	**151.60**	**343**	*i* PKPbc	PKPbc	07 58 00.9	-1.4
LOR	**Lormes**	**151.93**	**358**	*e*PKP1	PKPbc	07 58 01.9	-1.1
	comp=Z,3.1nm,0.5s						
SSF	**Saint Saulge**	**152.15**	**359**	*e*PKP1	PKPbc	07 58 02.4	-1.1
	comp=Z,4.0nm,0.7s						
AVF	**Avril sur Loir**	**152.42**	**359**	*e*PKP1	PKPbc	07 58 03.3	-0.8
CABF	**La Chapelle**	**152.45**	**355**	*e*PKP1	PKPbc	07 58 03.7	-0.5
MFF	**Saint Martin d**	**152.53**	**4**	*e*PKP1	PKPbc	07 58 02.8	-1.6
TCF	**Toulx Ste Croi**	**152.93**	**1**	*e*PKP1	PKPbc	07 58 04.4	-0.9
MBDF	**Montbardon**	**154.25**	**353**	*e*PKP1	PKPbc	07 58 07.3	-0.8
	comp=Z,3.5nm,0.6s						

WEL 12 08:29:47.5±0.8, 37°.44S×176°.51E, h157km±6km, ML3.7/10, Error ellipse: s-maj=8.5km s-min=8.1km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.95**	**150**	PN	Pn	08 30 12.4	0.0
URZ				SN	Sn	08 30 31.1

BAYA Yate Dam 2.01 234 *e*P **Pn 08 35 14.1 -1.6**
BAYA *e*S **Sn 08 35 39.9 +0.3**
DZM Mont Dzumac 2.31 242 *e*S **Sn 08 35 47.1 0.0**
DZM AMP 08 35 58.0
comp=Z,5μm,5.0s
NOUC Port Laguerre 2.44 242 *e*P **Pn 08 35 20.2 -1.5**
NOUC *e*S **Sn 08 35 50.4 0.0**
NOUC AMP 08 35 51.5
comp=Z,707nm,0.0s
RMQ Roma 19.00 249 *e*P **Pn 08 39 04.9 +0.9**
comp=Z,31nm,1.0s
CTA Charters Tower 20.98 268 P **P 08 39 25.4 +0.8**
comp=Z,11nm,1.0s,baz=112,slow=14,SNR=4.5
YNG Young 22.25 229 *e*P **P 08 39 40.7 +2.6**
comp=Z,6.4nm,0.8s,mb4.1
YNG *e*pP 08 39 50.9
QLP Quilpie 23.00 251 *e*P **P 08 39 46.4 +0.2**
QLP *e*pP 08 39 56.5
CMSA Cobar Meteorol 23.07 238 *e*P **P 08 39 47.7 +0.9**
CMSA *e*pP 08 39 58.0
MTSU Mount Surprise 23.09 273 *e*P **P 08 39 47.4 +0.2**
comp=Z,34nm,0.9s,mb4.8
MTSU *e*pP 08 39 57.5
STKA Stephens Creek 26.47 240 P **P 08 40 18.0 -0.2**
comp=Z,5.9nm,0.8s,mb4.2,baz=63,slow=11,SNR=11
STKA pP pP 08 40 28.8 +0.6
comp=Z,7.1nm,0.9s,baz=38,slow=6.6,SNR=4.0
WRA Warramunga Arr 32.12 266 P **P 08 41 07.0 -1.6**
comp=Z,2.8nm,1.0s,mb4.0,baz=98,slow=7.9,SNR=11
WRA pP pP 08 41 17.4 -1.3
comp=Z,3.6nm,0.9s,baz=96,slow=8.6,SNR=11
ASAR Alice Springs 32.20 259 P **P 08 41 08.2 -1.1**
comp=Z,9.7nm,0.8s,mb4.7,baz=84,slow=9.3,SNR=77
ASAR pP pP 08 41 18.9 -0.3
comp=Z,16nm,0.8s,baz=85,slow=9.3,SNR=34
QSPA South Pole Qui 69.08 180 P **P 08 45 46.2 +0.1**
comp=Z,3.6nm,1.0s,mb4.3,baz=34,slow=2.6,SNR=6.3
CMAR Chiang Mai Arr 78.71 295 P **P 08 46 44.5 +1.0**
comp=Z,1.3nm,0.5s,mb4.1,baz=133,slow=4.4,SNR=8.5
SONM Songino Array 88.27 323 P **P 08 47 32.1 +0.2**
comp=Z,1.7nm,0.8s,mb4.3,baz=153,slow=6.1,SNR=12
NVAR Mina Array Bea 90.37 49 P **P 08 47 41.4 -0.6**
comp=Z,0.4nm,0.6s,mb3.9,baz=214,slow=7.7,SNR=4.1

MOS ***12*** *08:42:31.1±0.7, 10°.55S×161°.54E, h33km, mb5.3/37, Error ellipse: s-maj=11.0km s-min=9.3km az=81.5*
BJI ***12*** *08:42:32.5, 10°.28S×161°.89E, h40km, mB5.0/30, mb4.8/38, Ms4.8/31, Ms7 4.5/31*
ISCJB ***12*** *08:42:33.1±0.1, 10°.71S±0°.03×161°.69E±0°.03, h48km, mb5.1/129, MS4.4/29, Error ellipse: s-maj=4.8km s-min=3.6km az=155.7*
IDC ***12*** *08:42:33.3±0.4, 10°.66S×161°.79E, h49km±3km, mb4.4/20, mb1 4.5/20, mb1mx4.4/22, mbtmp4.4/20, MS4.2/16, Ms1 4.2/16, ms1mx4.1/26, Error ellipse: s-maj=17.0km s-min=11.7km az=98.0*
NEIC ***12*** *08:42:34.3±0.2, 10°.64S×161°.66E, mb5.1/73, Error ellipse: s-maj=6.6km s-min=5.1km az=140.0*
GCMT ***12*** *08:42:35.9±0.2, 10°.75S×161°.80E, h53km±1km, MW5.3, Moment Tensor Solution. s74,c113; s89,c134; Moment tensor: Scale 10^17^Nm; Mrr0.00; Mθθ0.00; Mφφ0.00; Mrθ0.00; Mφ0.00; Mφr0.00; Best double couple: M0 1.20000×10^17^ NP1:φs 74.00000°, δ88.00000°, λ-2.00000°. NP2:φs 164.00000°, δ88.00000°, λ-178.00000°. Principal axes: T 0.9700, Plg0.0000°, Azm299.0000°; N 0.3700, Plg87.0000°, Azm206.0000°; P -1.3400, Plg3.0000°, Azm29.0000°; Data Used: II IU G CN IC.*
DJA ***12*** *08:42:40, 10°.77S×161°.93E, h95km, mb5.4/36*
NOU ***12*** *08:42:42.9±1.3, 11°.36S×161°.72E, h34km±999km, MD4.8, ML4.4*

ISC 12 08:42:34.9±0.1, 10°.69S±0°.03×161°.73E±0°.03, h50km, h50km±.9km: pP-P, n354, σ0°96/336, mb5.1/129, MS4.4/29, 35C-43D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.15**	**305**	P	**Pn**	**08 43 10.9**	**+2.6**
	1μm,0.3s,baz=169,slow=4.1,SNR=246						
HNR				S	**Sn**	**08 43 40.6**	**+6.8**
	6μm,0.3s,baz=292,slow=20,SNR=12						
HNR	**Honiara**	**2.15**	**305**	*e*Pn	**Pn**	**08 43 10.8**	**+2.4**
HNR				*e*Sn	**Sn**	**08 43 41.9**	**+8.0**
NOUC	**Port Laguerre**	**12.16**	**159**	*e*P	**Pn**	**08 45 24.8**	**-0.7**
NOUC				*e*S	**Sn**	**08 47 31.2**	**-8.5**
NOUC				AMP		08 47 42.0	
	comp=Z,43nm,4.3s						
DZM	**Mont Dzumac**	**12.19**	**159**	*e*Pn	**Pn**	**08 45 25.8**	**-0.1**
	comp=Z,238nm,1.1s						
DZM				*e*LR	LR	08 48 20.3	
	comp=Z,2μm,21.7s						
DZM	**Mont Dzumac**	**12.19**	**159**	*e*P	**Pn**	**08 45 25.5**	**-0.3**
DZM				*e*S	**Sn**	**08 47 35.2**	**-5.1**
DZM				AMP		08 47 39.1	
	comp=Z,518nm,0.0s						
DZM	**Mont Dzumac**	**12.19**	**159**	*e*Pn	**Pn**	**08 45 25.5**	**-0.3**
	comp=Z,88nm,0.8s						
DZM				*e*Sn	**Sn**	**08 47 38.1**	**-2.2**
BAYA	**Yate Dam**	**12.43**	**157**	*e*S	**Sn**	**08 47 40.3**	**-5.8**
PLUM	**Mont Dore**	**12.44**	**158**	*e*P	**Pn**	**08 45 28.6**	**-0.8**
PMG	**Port Moresby**	**14.41**	**274***c*	*i*P	**Pn**	**08 45 58.0**	**+1.9**
PMG				pmax	pmax		
	comp=Z,332nm,1.7s						
PMG	**Port Moresby**	**14.41**	**274**	*e*Pn	**Pn**	**08 46 01.2**	**+5.1**
PMG	**Port Moresby**	**14.41**	**274**	P	**Pn**	**08 46 01.0**	**+4.9**
	comp=Z,3μmcomp=Z,191nm,1.4s						
MSVF	**Nonsavu**	**17.29**	**116**	*e*P	**Pn**	**08 46 33.1**	**+0.2**
	comp=Z,182nm,1.0s						
MSVF				*e*		08 46 44.2	
CTA	**Charters Tower**	**17.59**	**236**	*e*P	**Pn**	**08 46 39.4**	**+2.8**
	comp=Z,67nm,0.8s						
CTA	**Charters Tower**	**17.59**	**236**	P	**Pn**	**08 46 38.6**	**+2.0**
	comp=Z,4.2nm,0.3s,baz=64,slow=14,SNR=29						
CTA				S	**S**	**08 49 49.4**	**-7.9**
	comp=Z,0.6nm,0.3s,baz=142,slow=22,SNR=2.9						
CTA	**Charters Tower**	**17.59**	**236**	P	**Pn**	**08 46 38.6**	**+2.0**
CTA				S	**S**	**08 49 49.4**	**-7.9**
CTAO	**Charters Tower**	**17.59**	**236**	*e*P	**Pn**	**08 46 39.2**	**+2.6**
CTAO				pmax	pmax		
	comp=Z,93nm,0.8s						
CTAO	**Charters Tower**	**17.59**	**236**	*e*P	**Pn**	**08 46 39.2**	**+2.6**
	comp=Z,93nm,0.8s						
CTAO	**Charters Tower**	**17.59**	**236**	P	**Pn**	**08 46 39.5**	**+2.9**
	comp=Z,132nm,1.1s						
EIDS	**Eidsvold**	**17.75**	**213**	*e*P	**Pn**	**08 46 40.1**	**+1.6**
	comp=Z,140nm,0.9s						
COEN	**Coen**	**18.42**	**258**	*e*P	**Pn**	**08 46 50.0**	**+3.3**
	comp=Z,2μm,1.3s						
COEN				*e*		08 47 06.9	
COEN	**Coen**	**18.42**	**258**	P	**Pn**	**08 46 50.1**	**+3.4**
	comp=Z,9μmcomp=Z,568nm,1.4s						
KWAJ	**Kwajalein Atol**	**20.23**	**17**	*e*P	**P**	**08 47 08.9**	**+2.9**
	comp=Z,328nm,0.7s						
ARMA	**Armidale**	**21.77**	**204**	||*i*P	**P**	**08 47 22.7**	**+0.3**
ARMA	**Armidale**	**21.77**	**204**	*e*P	**P**	**08 47 22.8**	**+0.4**
	comp=Z,83nm,0.9s,mb5.2						
SMPI	**Sarmi**	**24.44**	**289**	P	**P**	**08 47 48.5**	**-0.7**
	comp=Z,4μmcomp=Z,278nm,1.4s,mb5.5						
RIV	**Riverview**	**24.99**	**201**	*e*P	**P**	**08 47 55.1**	**+1.1**
AFI	**Afiamalu**	**26.07**	**100**	LR	LR	08 55 13.7	
	comp=Z,341nm,21.3s,MS3.9,baz=175,slow=29						
AFI	**Afiamalu**	**26.07**	**100**	*e*P	**P**	**08 48 04.8**	**+0.8**
AFI				*e*	pP	08 48 15.3	-1.5
AFI				pmax	pmax		
	comp=Z,221nm,1.3s,mb5.5						
AFI	**Afiamalu**	**26.07**	**100**	*e*P	**P**	**08 48 04.8**	**+0.7**
	comp=Z,221nm,1.3s,mb5.5						
AFI				*e*	pP	08 48 15.3	-1.5
YNG	**Young**	**26.48**	**205**	*e*P	**P**	**08 48 07.6**	**+0.1**
	comp=Z,28nm,1.0s,mb4.8						
CNB	**Canberra Magne**	**26.98**	**203**	*e*P	**P**	**08 48 11.8**	**-0.1**
WRAB	**Tennant Creek**	**27.93**	**248**	P	**P**	**08 48 20.0**	**-0.6**
	comp=Z,168nm,0.9s,mb5.7,SNR=8.6						
WRAB	**Tennant Creek**	**27.93**	**248**	*e*P	**P**	**08 48 20.3**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,86nm,1.2s,mb5.3						
WRAB	**Tennant Creek**	**27.93**	**248**	*e*P	**P**	**08 48 20.3**	**-0.4**
	comp=Z,86nm,1.2s,mb5.2						
WRAB	**Tennant Creek**	**27.93**	**248**	P	**P**	**08 48 19.9**	**-0.7**
	comp=Z,67nm,1.4s,mb5.1						
WRA	**Warramunga Arr**	**27.94**	**247**	P	**P**	**08 48 20.4**	**-0.4**
	comp=Z,20nm,0.8s,mb4.8,baz=77,slow=9.3,SNR=88						
WRA				LR	LR	08 59 13.0	
	comp=Z,1μm,18.3s,MS4.6,baz=75,slow=36						
STKA	**Stephens Creek**	**28.12**	**218**	*e*P	**P**	**08 48 21.4**	**-0.9**
	comp=Z,8.0nm,0.6s,mb4.5						
STKA	**Stephens Creek**	**28.12**	**218**	P	**P**	**08 48 21.7**	**-0.5**
	comp=Z,7.3nm,0.6s,mb4.5,baz=39,slow=9.6,SNR=17						
STKA				LR	LR	08 59 32.4	
	comp=Z,2μm,18.3s,MS4.7,baz=35,slow=36						
STKA	**Stephens Creek**	**28.12**	**218**	*e*P	**P**	**08 48 21.3**	**-1.0**
	comp=Z,59nm,2.3s,mb4.8						
KAKA	**Kakadu**	**28.75**	**263**	*e*P	**P**	**08 48 29.0**	**+1.0**
	comp=Z,46nm,1.0s,mb5.2						
KAKA				*e*pP	pP	08 48 42.1	+1.2
KAKA	**Kakadu**	**28.75**	**263**	*e*P	**P**	**08 48 29.5**	**+1.5**
	comp=Z,126nm,0.7s,mb5.8						
KAKA	**Kakadu**	**28.75**	**263**	P	**P**	**08 48 29.6**	**+1.6**
	comp=Z,825nmcomp=Z,100nm,0.8s,mb5.6						
GUMO	**Guam**	**29.35**	**325**	*e*P	**P**	**08 48 31.6**	**-1.7**
GUMO				*e*	pP	08 48 47.5	+1.3
GUMO				pmax	pmax		
	comp=Z,163nm,1.3s,mb5.6						
GUMO	**Guam**	**29.35**	**325**	*e*P	**P**	**08 48 31.6**	**-1.7**
	comp=Z,163nm,1.3s,mb5.6						
GUMO				*e*	pP	08 48 47.5	+1.3
ASAR	**Alice Springs**	**29.48**	**240**	P	**P**	**08 48 33.3**	**-1.1**
	comp=Z,3.2nm,0.5s,mb4.3,baz=64,slow=9.9,SNR=42						
TOO	**Toolangi**	**30.50**	**206**	*e*P	**P**	**08 48 43.3**	**+0.1**
BBOO	**Buckleboo**	**32.29**	**223**	*e*P	**P**	**08 48 58.8**	**-0.3**
	comp=Z,31nm,0.6s,mb5.3						
KNA	**Kununurra**	**32.46**	**257**	*e*P	**P**	**08 49 00.7**	**-0.1**
	comp=Z,157nm,0.9s,mb5.8						
KNA				*e*pP	pP	08 49 13.7	0.0
KNA	**Kununurra**	**32.46**	**257**	P	**P**	**08 49 01.0**	**+0.2**
	comp=Z,4μmcomp=Z,586nm,0.9s,mb6.4						
RPZ	**Rata Peaks**	**33.89**	**168**	P	**P**	**08 49 11.9**	**-1.0**
	comp=Z,18nm,0.6s,mb5.2,baz=25,slow=2.1,SNR=12						
RPZ	**Rata Peaks**	**33.89**	**168**	*e*P	**P**	**08 49 10.8**	**-2.1**
	comp=Z,23nm,0.7s,mb5.2						
NLAI	**Namlea**	**35.13**	**280**	P	**P**	**08 49 26.7**	**+2.6**
	comp=Z,2μmcomp=Z,114nm,1.6s,mb5.6						
LBMI	**Labuha**	**35.45**	**284**	P	**P**	**08 49 27.8**	**+1.0**
	comp=Z,2μmcomp=Z,122nm,1.1s,mb5.8						
FITZ	**Fitzroy Crossi**	**35.68**	**254**	*e*P	**P**	**08 49 27.3**	**-1.4**
	comp=Z,87nm,0.8s,mb5.7						
FITZ	**Fitzroy Crossi**	**35.68**	**254**	*e*P	**P**	**08 49 27.4**	**-1.3**
	comp=Z,54nm,0.8s,mb5.5						
FITZ				*e*	pP	08 49 39.8	-2.0
FITZ	**Fitzroy Crossi**	**35.68**	**254**	P	**P**	**08 49 28.6**	**-0.1**
	comp=Z,148nm,0.9s,mb5.9						
FORT	**Forrest**	**37.08**	**232**	*e*P	**P**	**08 49 40.0**	**-0.5**
	comp=Z,122nm,0.9s,mb5.7						
FORT	**Forrest**	**37.08**	**232**	*e*P	**P**	**08 49 40.2**	**-0.2**
FORT				*e*	pP	08 49 52.1	-1.5
FORT				*e*		08 49 58.7	
RAR	**Rarotonga**	**38.37**	**111**	LR	LR	09 01 06.3	
	comp=Z,1μm,19.7s,MS4.7,baz=85,slow=29						
SGSI	**Sangihe**	**38.76**	**290**	P	**P**	**08 49 55.0**	**+0.1**
	comp=Z,186nm,1.3s,mb5.7						
MMRI	**Maumere**	**38.97**	**269**	P	**P**	**08 50 03.9**	**+7.3**
KMSI	**Cibinong**	**39.17**	**284**	P	**P**	**08 50 00.7**	**+2.4**
	comp=Z,427nm,1.1s,mb6.1						
LUWI	**Luwuk**	**39.87**	**281**	P	**P**	**08 50 04.5**	**+0.3**
	comp=Z,3μmcomp=Z,295nm,1.2s,mb5.9						
MRSI	**Marisa**	**41.09**	**283**	P	**P**	**08 50 15.9**	**+1.7**
	comp=Z,53nm,1.1s,mb5.1						
BKSI	**Bulukumba**	**41.52**	**274**	P	**P**	**08 50 19.1**	**+1.4**
	comp=Z,36nm,1.4s,mb4.8						
MBWA	**Marble Bar**	**41.59**	**250**	*e*P	**P**	**08 50 17.6**	**-0.7**
MBWA	**Marble Bar**	**41.59**	**250**	*e*P	**P**	**08 50 17.6**	**-0.6**
	comp=Z,60nm,0.9s,mb5.2						
MBWA	**Marble Bar**	**41.59**	**250**	P	**P**	**08 50 18.0**	**-0.3**
	comp=Z,80nm,0.9s,mb5.3						
BNSI	**Bone**	**41.70**	**275**	P	**P**	**08 50 20.1**	**+0.8**
	comp=Z,1μmcomp=Z,91nm,1.0s,mb5.3						
SPSI	**Sidrap Palu**	**42.12**	**276**	P	**P**	**08 50 25.3**	**+2.7**
	comp=Z,42nm,1.1s,mb5.0						
TTSI	**Tana Toraja**	**42.26**	**277**	P	**P**	**08 50 26.7**	**+2.9**
	comp=Z,699nmcomp=Z,36nm,0.9s,mb5.0						
PCI	**Palu**	**42.74**	**280**	P	**P**	**08 50 29.8**	**+2.1**
	comp=Z,2μmcomp=Z,156nm,1.3s,mb5.6						
KLBR	**Kellerberrin**	**45.60**	**236**	*e*P	**P**	**08 50 49.2**	**-1.2**
	comp=Z,125nm,1.5s,mb5.6						
KBKI	**Kotabaru**	**45.77**	**276**	P	**P**	**08 50 54.6**	**+2.6**
	comp=Z,882nmcomp=Z,45nm,1.3s,mb5.2						
MYLDM	**Lahad Datu**	**45.84**	**288**	P	**P**	**08 50 53.1**	**+0.6**
	comp=Z,1μmcomp=Z,87nm,1.3s,mb5.5						
MORW	**Morawa**	**46.36**	**240**	*e*P	**P**	**08 50 56.0**	**-0.4**
NWAO	**Narrogin (SRO)**	**46.42**	**234**	*e*P	**P**	**08 50 56.0**	**-0.8**
NWAO				pmax	pmax		
	comp=Z,40nm,1.0s						
NWAO	**Narrogin (SRO)**	**46.42**	**234**	*e*P	**P**	**08 50 56.0**	**-0.8**
	comp=Z,40nm,1.0s,mb5.3						
NWAO				*e*		08 51 15.5	
PPT	**Papeete**	**47.61**	**104**	*e*LQ		09 02 42.6	
	comp=Z,2μm,28.0s						
PPT				*e*LR	LR	09 04 40.5	
	comp=Z,347nm,25.0s,baz=267						
PPT	**Papeete**	**47.61**	**104**	LR	LR	09 05 19.6	
	comp=Z,216nm,20.4s,MS4.1,baz=280,slow=29						
TBI	**Tubuai**	**48.12**	**112**	*e*LQ		09 02 54.6	
	comp=Z,751nm,29.0s						
TBI				*e*LR	LR	09 04 56.6	
	comp=Z,324nm,27.8s						
KKM	**Kota Kinabalu**	**48.27**	**288**	*e*P	**P**	**08 51 10.7**	**-0.8**
	comp=Z,62nm,0.9s,mb5.6						
KKM				*e*	pP	08 51 23.9	-1.0
KKM	**Kota Kinabalu**	**48.27**	**288**	P	**P**	**08 51 11.5**	**+0.1**
	comp=Z,754nmcomp=Z,77nm,1.0s,mb5.7						
JHJ	**Hachijo jima 2**	**48.33**	**335**	P	**P**	**08 51 09.5**	**-2.0**
	comp=Z,77nm,0.9s,mb5.7,baz=142,slow=6.1,SNR=3.6						
PWJI	**Pagerwojo**	**49.29**	**269**	P	**P**	**08 51 24.1**	**+4.8**
	comp=Z,64nm,0.7s,mb5.8						
SJI	**Sawahan**	**49.37**	**269**	P	**P**	**08 51 24.5**	**+4.6**
	comp=Z,96nm,1.4s,mb5.6						
PCJI	**Pacitan**	**49.89**	**268**	P	**P**	**08 51 30.7**	**+6.8**
SBUM	**Sibu**	**50.97**	**282**	P	**P**	**08 51 33.8**	**+1.8**
	comp=Z,23nm,1.3s,mb5.0						
MJAR	**Matsushiro Arr**	**51.94**	**336**	P	**P**	**08 51 36.7**	**-2.1**
	comp=Z,2.8nm,0.9s,mb4.2,baz=167,slow=8.1,SNR=9.4						
MJAR				pP	pP	08 51 50.8	-1.6
	comp=Z,2.1nm,0.6s,baz=171,slow=9.0,SNR=5.1						
MAJO	**Matsushiro**	**51.94**	**336**	*e*P	**P**	**08 51 38.1**	**-0.7**
MAJO				*e*	pP	08 51 52.0	-0.4
MAJO				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
MAJO	**Matsushiro**	**51.94**	**336**	*e*P	**P**	**08 51 38.1**	**-0.7**
	comp=Z,15nm,0.9s,mb4.9						
MAJO				*e*	pP	08 51 52.0	-0.4
MAT	**Matsushiro**	**51.94**	**336**	P	**P**	**08 51 35.7**	**-3.1**
MAT				S	**S**	**08 58 55.0**	**-3.3**
TPUB	**Ta-pu**	**52.52**	**310**	*e*P	**P**	**08 51 42.9**	**-0.5**
	comp=Z,52nm,1.4s,mb5.3						
TPUB				*e*	pP	08 51 55.8	-1.2
KSM	**Kuching**	**52.55**	**280**	*e*P	**P**	**08 51 42.3**	**-1.6**
	comp=Z,41nm,1.2s,mb5.2						
KSM				*e*	pP	08 51 56.5	-1.0
KSM	**Kuching**	**52.55**	**280**	P	**P**	**08 51 50.2**	**+6.3**
	comp=Z,35nm,1.1s,mb5.2						
SSLB	**Suanglung**	**52.56**	**311**	*e*P	**P**	**08 51 42.3**	**-1.4**
	comp=Z,12nm,0.7s,mb4.9						
SSLB				*e*	pP	08 51 55.2	-2.1
YHNB	**Yeheng**	**52.77**	**312**	*e*P	**P**	**08 51 45.1**	**-0.1**
	comp=Z,36nm,1.0s,mb5.2						
YHNB				*e*	pP	08 51 58.5	-0.4
LEM	**Lembang**	**53.57**	**269**	P	**P**	**08 51 54.7**	**+3.4**
	comp=Z,147nm,0.9s,mb5.9						
CGJI	**Cibinong**	**55.49**	**269**	P	**P**	**08 52 05.9**	**+0.6**
	comp=Z,203nm,0.9s,mb6.2						
ASAJ	**Asahikawa**	**57.25**	**344**	P	**P**	**08 52 15.2**	**-1.9**
	comp=Z,17nm,0.9s,mb5.1,baz=242,slow=10,SNR=13						
ASAJ				pP	pP	08 52 30.0	-0.9
	comp=Z,34nm,0.8s,baz=195,slow=7.1,SNR=10						
MDSI	**Maura Dua**	**57.31**	**272**	P	**P**	**08 52 18.3**	**0.0**
	comp=Z,27nm,1.5s,mb5.0						
INCN	**Inchon**	**58.12**	**327**	*e*P	**P**	**08 52 23.1**	**-0.3**
	comp=Z,32nm,1.0s,mb5.3						
INCN				*e*	pP	08 52 37.6	+0.3
NJ2	**Nanjing**	**59.05**	**318**	*e*P	**P**	**08 52 29.0**	**-1.0**
NJ2				S	**S**	**09 00 28.0**	**-5.4**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
NJ2				pmax	pmax		
	comp=Z,310nm,3.7s						
NJ2				LR	LR		
	comp=N,220nm,18.2s,MS4.4						
NJ2				LR	LR		
	comp=E,170nm,18.1s,MS4.4						
NJ2				LR	LR		
	comp=Z,180nm,16.7s,MS4.3						
QIZ	**Qiongzhong**	**59.06**	**300**	P	**P**	**08 52 30.7**	**+0.4**
QIZ				S	**S**	**09 00 32.8**	**-1.1**
QIZ				SS	SS	09 04 32.1	+3.2
QIZ				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
QIZ				pmax	pmax		
	comp=Z,160nm,4.3s						
QIZ				LR	LR		
	comp=Z,220nm,24.1s,MS4.2						
YSS	**Yuzh-Sakhalins**	**59.83**	**345**	*e*P	pP	08 52 48.0	-1.0
YSS				*e*S	**S**	**09 00 44.0**	**+1.0**
YSS				*e*		09 07 12.0	
VLA	**Vladivostok**	**60.08**	**335***de*P		**P**	**08 52 37.4**	**+0.5**
VLA				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.2						
SDSI	**Sungai Dareh**	**60.67**	**275**	P	**P**	**08 52 44.1**	**+2.5**
	comp=Z,2μmcomp=Z,30nm,1.5s,mb5.2						
MDJ	**Mudanjiang**	**62.26**	**335**	P	**P**	**08 52 50.7**	**-0.9**
MDJ				pP	pP	08 53 08.5	+2.9
MDJ				PcP	PcP	08 53 30.1	-1.0
MDJ				PP	PP	08 55 06.9	-2.4
MDJ				S	**S**	**09 01 15.7**	**+1.7**
MDJ				pmax	pmax		
	comp=Z,16nm,1.5s,mb4.9						
MDJ				pmax	pmax		
	comp=Z,49nm,4.4s						
MDJ				LR	LR		
	comp=N,250nm,13.1s,MS4.7						
MDJ				LR	LR		
	comp=E,210nm,14.7s,MS4.7						
MDJ				LR	LR		
	comp=Z,390nm,14.7s,MS4.7						
MNSI	**Mandailing Nat**	**62.84**	**276**	P	**P**	**08 52 55.1**	**-1.0**
	comp=Z,54nm,0.9s,mb5.7						
HABR	**Khabarovsk**	**63.45**	**340**	*e*P	**P**	**08 52 57.6**	**-1.9**
HABR				*e*		08 55 16.5	
HABR				PPP		08 56 45.8	
HABR				S	**S**	**09 01 25.1**	**-3.6**
HABR				*e*SS	SS	09 05 32.8	-4.0
HABR				pmax	pmax		
	comp=E,23nm,2.5s						
HABR				pmax	pmax		
	comp=Z,72nm,2.8s,mb5.3						
HABR				pmax	pmax		
	comp=N,21nm,1.9s						
HABR				MLR	MLR		
	comp=Z,76nm,21.0s,MS3.9						
CN2	**Changchun**	**63.47**	**331**	*e*P	**P**	**08 53 03.4**	**+3.7**
CN2				*e*S	**S**	**09 01 29.7**	**+0.5**
CN2				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.4						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,300nm,15.0s,MS4.7						
CN2				LR	LR		
	comp=E,300nm,15.0s,MS4.7						
CN2				LR	LR		
	comp=Z,400nm,16.0s,MS4.7						
PET	**Petropavlovsk**	**63.51**	**358**	*e*P	**P**	**08 52 59.1**	**-0.6**
PET				*e*S	**S**	**09 01 31.5**	**+2.2**
PET				*e*SS	SS	09 05 29.3	-8.2
PET				pmax	pmax		
	comp=Z,39nm,1.1s,mb5.3						
GYA	**Guiyang**	**64.98**	**306**	P	**P**	**08 53 12.9**	**+2.9**
GYA				PcP	PcP	08 53 45.3	+2.6
GYA				PP	PP	08 55 38.0	+4.4
GYA				ScP		08 57 39.0	
GYA				S	**S**	**09 01 47.5**	**-1.0**
GYA				SKS		09 02 56.6	
GYA				SS	SS	09 06 01.7	+0.2
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
GYA				pmax	pmax		
	comp=Z,120nm,5.2s						
GYA				LR	LR		
	comp=N,690nm,18.9s,MS5.0						
GYA				LR	LR		
	comp=E,560nm,19.5s,MS5.0						
GYA				LR	LR		
	comp=Z,680nm,18.8s,MS4.9						
KLR	**Kul'dur**	**65.23**	**339**	*e*P	**P**	**08 53 06.0**	**-5.1**
KLR				pmax	pmax		
	comp=Z,64nm,1.8s,mb5.3						
CASY	**Casey**	**65.31**	**200**	*e*P	**P**	**08 53 09.0**	**-2.4**
	comp=Z,20nm,1.1s,mb5.1						
CASY				*e*	pP	08 53 22.7	-2.8
BJI	**Beijing**	**65.78**	**323**	P	**P**	**08 53 12.9**	**-1.9**
BJI				PP	PP	08 55 42.2	+1.9
BJI				S	S	09 01 54.9	-2.8
BJI				SS	SS	09 06 14.0	+0.7
BJI				pmax	pmax		
	comp=Z,8.0nm,1.5s,mb4.5						
BJI				pmax	pmax		
	comp=Z,66nm,4.3s						
BJI				LR	LR		
	comp=N,250nm,23.9s,MS4.4						
BJI				LR	LR		
	comp=E,140nm,21.9s,MS4.4						
BJI				LR	LR		
	comp=Z,220nm,25.2s,MS4.3						
SBA	**Scott Base**	**67.20**	**179**	*e*P	**P**	**08 53 24.4**	**+1.0**
SBA				*e*	pP	08 53 38.1	+0.6
SBA				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.2						
SBA	**Scott Base**	**67.20**	**179**	*e*P	**P**	**08 53 24.4**	**+1.0**
	comp=Z,26nm,1.1s,mb5.2						
SBA				*e*	pP	08 53 38.1	+0.6
KMI	**Kunming**	**67.59**	**303**	P	**P**	**08 53 28.2**	**+1.5**
KMI				PcP	PcP	08 53 54.6	+1.0
KMI				PP	PP

CD2 Chengdu 69.28 309 P **P** **08 53 37.8 +0.7**
CD2 PP PP 08 56 14.2 +3.3
CD2 S S 09 02 37.7 -2.4
CD2 SS SS 09 07 07.8 -0.1
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
CD2 pmax pmax
comp=Z,160nm,3.7s
CD2 LR LR
comp=N,190nm,7.7s
CD2 LR LR
comp=Z,190nm,12.5s,MS4.5
HIA Hailar 70.16 332 *e*P **P** **08 53 40.9 -1.3**
HIA pmax pmax
comp=Z,7.0nm,0.6s
HIA Hailar 70.16 332 *e*P **P** **08 53 40.9 -1.3**
comp=Z,6.7nm,0.6s,mb4.8
LZH Lanzhou 71.63 314 *e*P **P** **08 53 52.3 +0.9**
LZH PcP PcP 08 54 12.1 +1.7
LZH PP PP 08 56 36.2 +5.1
LZH SS SS 09 07 43.7 -0.2
LZH pmax pmax
comp=Z,25nm,1.3s,mb5.0
LZH pmax pmax
comp=Z,120nm,7.6s
LZH LR LR
comp=E,430nm,16.4s
LZH LR LR
comp=Z,610nm,17.6s,MS4.9
SEY Seymchan 73.75 356 *d i*P **P** **08 54 03.1 -0.3**
CHGN Chignik 74.48 22 *e*P **P** **08 54 06.6 -1.1**
CHGN pP pP 08 54 19.1 -3.0
ULN Ulaanbaatar 75.73 325 *e*P **P** **08 54 14.6 -0.6**
ULN *e* pP 08 54 28.0 -1.5
ULN pmax pmax
comp=Z,15nm,0.8s,mb5.0
ULN Ulaanbaatar 75.73 325 *e*P **P** **08 54 14.6 -0.5**
comp=Z,15nm,0.8s,mb5.0
ULN *e* pP 08 54 28.0 -1.5
ULN Ulaanbaatar 75.73 325 P **P** **08 54 15.9 +0.7**
comp=Z,332nmcomp=Z,24nm,1.4s,mb4.9
GTA Gaotai 76.00 315 *e*P **P** **08 54 16.4 -0.5**
GTA PP PP 08 57 10.4 +2.2
GTA S S 09 03 50.9 -5.5
GTA SS SS 09 08 48.5 -1.9
GTA pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
GTA pmax pmax
comp=Z,71nm,5.4s
GTA LR LR
comp=N,220nm,23.2s,MS4.6
GTA LR LR
comp=E,240nm,18.4s,MS4.6
GTA LR LR
comp=Z,150nm,19.9s,MS4.3
SONM Songino Array 76.08 325 P **P** **08 54 16.7 -0.4**
comp=Z,5.7nm,0.8s,mb4.6,baz=142,slow=5.7,SNR=33
SONM pP pP 08 54 29.1 -2.4
comp=Z,10nm,0.8s,baz=133,slow=6.3,SNR=9.3
SONM LR LR 09 25 47.9
comp=Z,151nm,21.5s,MS4.3,baz=118,slow=34
SONM Songino Array 76.08 325 P **P** **08 54 16.7 -0.5**
SONM *PP pP 08 54 29.1 -2.4
YAK Yakutsk 76.69 345 *e*P **P** **08 54 19.0 -1.3**
YAK *e* pP 08 54 29.8 -4.8
YAK *e* 08 57 09.9
YAK *e*S S 09 03 57.1 -5.9
YAK *e* 09 04 18.2
YAK pmax pmax
comp=Z,30nm,1.0s,mb5.2
YAK pmax pmax
comp=N,10.0nm,1.2s
YAK pmax pmax
comp=E,6.0nm,1.0s
YAK pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
YAK smax
comp=N,15nm,7.4s
YAK smax
comp=E,102nm,12.6s
SHL Shillong 76.89 299 *e*PKP **P** **08 54 22.5 +0.2**
OHAK Old Harbor 77.08 23 *e*P **P** **08 54 22.5 -0.1**
comp=E,36nm,1.1s,mb5.2
OHAK *e* pP 08 54 36.7 -0.2
KDAK Kodiak Island 77.75 23 P **P** **08 54 24.4 -1.8**
comp=E,13nm,0.8s,mb4.9,baz=209,slow=3.9,SNR=12
KDAK pP pP 08 54 38.6 -2.0
comp=E,22nm,0.9s,baz=300,slow=0.8,SNR=7.1
KDAK Kodiak Island 77.75 23 *e*P **P** **08 54 26.3 0.0**
KDAK *e* pP 08 54 40.5 -0.1
KDAK pmax pmax
comp=Z,22nm,0.9s,mb5.1
KDAK Kodiak Island 77.75 23 *i* P **P** **08 54 27.5 +1.2**
KDAK Kodiak Island 77.75 23 *e*P **P** **08 54 26.3 0.0**
comp=Z,22nm,0.9s,mb5.1
KDAK *e* pP 08 54 40.5 -0.2
BILL Bilibino 78.59 2 *c i*P **P** **08 54 29.6 -1.2**
BILL *e* 08 54 37.0
BILL *e* pP 08 54 45.5 +0.4
BILL *e* 08 57 27.5
BILL pmax pmax
comp=Z,56nm,1.7s,mb5.2
BILL Bilibino 78.59 2 *e*P **P** **08 54 30.9 +0.2**
comp=Z,25nm,0.9s,mb5.2
SVW2 Sparrevohn 79.05 20 *e*P **P** **08 54 33.6 +0.2**
comp=Z,54nm,1.1s,mb5.4
QSPA South Pole Qui 79.31 180 P **P** **08 54 33.7 -1.0**
comp=Z,4.7nm,0.8s,mb4.5,baz=350,slow=1.3,SNR=19
QSPA pP pP 08 54 47.6 -1.5
comp=Z,18nm,0.8s,baz=18,slow=1.6,SNR=20
QSPA LR LR 09 25 53.8
comp=Z,187nm,18.7s,MS4.5,baz=30,slow=33
QSPA South Pole Qui 79.31 180 *e*P **P** **08 54 33.4 -1.3**
comp=Z,31nm,1.0s,mb5.2
QSPA *e* pP 08 54 48.0 -1.1
TLY Talaya 79.67 328 *e*P **P** **08 54 35.0 -2.0**
TLY *e* pP 08 54 51.3 -0.1
TLY *e* 09 04 38.5
TLY *e* 09 09 38.9
TLY pmax pmax
comp=Z,10.0nm,1.5s,mb4.5
TLY Talaya 79.67 328 *e*P **P** **08 54 35.2 -1.8**
comp=Z,8.8nm,0.8s,mb4.7
TLY *e* pP 08 54 51.0 -0.4
PMR Palmer 81.62 21 *e*P **P** **08 54 46.9 -0.3**
PMR pmax pmax
comp=Z,30nm,1.7s,mb5.0
PMR Palmer 81.62 21 *e*P **P** **08 54 46.9 -0.3**
comp=Z,30nm,1.7s,mb4.9
TRF Thorofare Moun 82.47 20 *e*P **P** **08 54 50.5 -1.1**
comp=Z,14nm,0.9s,mb4.9
TRF *e* pP 08 55 04.9 -1.2
BPAW Bear Paw Mtn. 82.69 19 *e*P **P** **08 54 51.8 -1.0**
comp=Z,11nm,1.1s,mb4.8
BMRM Bremner River 82.92 23 *e*P **P** **08 54 53.3 -0.8**
comp=Z,18nm,1.0s,mb5.1
MCK McKinley 83.11 20 *e*P **P** **08 54 54.5 -0.5**
MCK *e* pP 08 55 07.8 -1.6
MCK pmax pmax
comp=Z,47nm,1.2s,mb5.4
MCK McKinley 83.11 20 *e*P **P** **08 54 54.5 -0.5**
comp=Z,47nm,1.2s,mb5.4
MCK *e* pP 08 55 07.8 -1.7
MAW Mawson 83.56 202 P **P** **08 54 56.2 -1.1**
comp=Z,5.3nm,0.9s,mb4.7,baz=107,slow=2.8,SNR=5.4
MAW pP pP 08 55 10.0 -1.8
comp=Z,23nm,1.1s,baz=77,slow=7.5,SNR=8.2
MAW LR LR 09 26 31.2
comp=Z,135nm,19.6s,MS4.3,baz=303,slow=32
MAW Mawson 83.56 202 *e*P **P** **08 54 55.6 -1.8**
MAW *e* pP 08 55 10.2 -1.6
MAW pmax pmax
comp=Z,9.0nm,1.3s
MAW Mawson 83.56 202 *e*P **P** **08 54 55.6 -1.8**
comp=Z,8.8nm,1.3s,mb4.7
MAW *e* pP 08 55 10.2 -1.7
COLA College 84.22 19 *e*P **P** **08 54 59.5 -1.1**
COLA *e* pP 08 55 13.1 -2.0
COLA pmax pmax
comp=Z,18nm,0.8s,mb5.2
COLA College 84.22 19 *e*P **P** **08 54 59.5 -1.1**
comp=Z,18nm,0.8s,mb5.2
COLA *e* pP 08 55 13.1 -2.0
RPN Rapa Nui 84.27 116 LR LR 09 21 33.0
comp=Z,110nm,21.4s,MS4.2,baz=250,slow=28

MENT Mentasta 84.44 22 *e*P **P** **08 55 02.3 +0.5**
MENT *e* pP 08 55 16.1 -0.2
DIB Dawson Inlet, 84.53 33 T 10 28 13.6
SNR=235
TIXI Tiksi 85.02 350 *e*P **P** **08 55 03.7 -0.9**
TIXI pmax pmax
comp=Z,21nm,1.5s,mb5.0
HYT Haines Junctio 85.72 25 *e*P **P** **08 55 09.4 +1.2**
SKAG Skagway 85.99 27 *e*P **P** **08 55 10.3 +0.7**
comp=Z,15nm,1.2s,mb5.1
WMQ Urumqi 86.07 316 P **P** **08 55 09.7 -0.7**
WMQ PP PP 08 58 31.9 +0.6
WMQ pmax pmax
comp=Z,16nm,1.3s,mb5.1
WMQ pmax pmax
comp=Z,150nm,5.6s
WMQ LR LR
comp=N,140nm,26.0s
WMQ LR LR
comp=Z,130nm,20.5s
WDC Whiskeytown Da 86.26 48 *e*P **P** **08 55 11.5 +0.1**
WDC pmax pmax
comp=Z,11nm,1.2s,mb5.0
WDC Whiskeytown Da 86.26 48 *e*P **P** **08 55 11.5 +0.1**
comp=Z,11nm,1.2s,mb5.0
EGAK Eagle 86.43 21 *e*P **P** **08 55 12.1 +0.4**
comp=Z,68nm,1.3s,mb5.7
EGAK *e* pP 08 55 25.9 -0.3
HUMO Hull Mountain 86.58 46 *e*P **P** **08 55 12.3 -0.6**
comp=Z,7.4nm,1.2s,mb4.8
OHCM Honcut 86.68 49 *e*P **P** **08 55 13.2 -0.3**
DAWY Dawson 86.68 22 *e*P **P** **08 55 13.2 +0.3**
DAWY *e* pP 08 55 27.8 +0.3
PKM Peak Mountain 86.74 54 ⇓P **P** **08 55 14.7 +0.8**
baz=87
CMB Columbia Colle 87.14 51 *e*P **P** **08 55 15.4 -0.4**
CMB pmax pmax
comp=Z,16nm,1.4s,mb5.1
CMB Columbia Colle 87.14 51 *e*P **P** **08 55 15.4 -0.4**
comp=Z,16nm,1.4s,mb5.0
WCN Washoe City 87.96 50 ⇑P **P** **08 55 19.4 -0.3**
baz=88
MWC Mount Wilson 87.98 55 *e*P **P** **08 55 19.6 -0.3**
MWC *e* pP 08 55 31.3 -3.2
MWC pmax pmax
comp=Z,17nm,1.0s,mb5.2
MWC Mount Wilson 87.98 55 *e*P **P** **08 55 19.6 -0.3**
comp=Z,17nm,1.0s,mb5.2
MWC *e* pP 08 55 31.3 -3.1
WAKR Walker 87.99 50 *e*P **P** **08 55 20.4 +0.6**
WAKR *e*pP pP 08 55 36.1 +1.8
ISA Isabella 88.00 53 ⇓P **P** **08 55 19.6 -0.3**
baz=88
ISA Isabella 88.00 53 *e*P **P** **08 55 19.8 -0.2**
ISA pmax pmax
comp=Z,6.0nm,1.0s,mb4.8
ISA Isabella 88.00 53 *e*P **P** **08 55 19.8 -0.2**
comp=Z,6.1nm,1.0s,mb4.8
K05A Summer Lake 88.07 46 ⇑P **P** **08 55 19.7 -0.4**
baz=88
EDW2 Edwards Air Fo 88.19 54 ⇓P **P** **08 55 20.6 -0.2**
baz=88,SNR=6.7
MOD Modoc 88.26 47 *e*P **P** **08 55 21.1 0.0**
comp=Z,7.9nm,0.9s,mb4.9
MOD *e* pP 08 55 36.4 +0.8
BFSC Mount Baldy Ra 88.30 55 ⇓P **P** **08 55 21.2 -0.2**
baz=88,SNR=8.3
CWC Cottonwood Cre 88.50 53 ⇓P **P** **08 55 22.7 +0.4**
baz=89
BAR Barrett 88.73 57 *e*P **P** **08 55 23.7 +0.2**
comp=Z,8.2nm,1.0s,mb5.0
NVAR Mina Array Bea 88.83 51 P **P** **08 55 23.1 -0.7**
comp=Z,2.2nm,0.7s,mb4.6,baz=234,slow=7.8,SNR=25
NVAR pP pP 08 55 36.9 -1.5
comp=Z,1.7nm,0.7s,baz=235,slow=7.8,SNR=17
NVAR Mina Array Bea 88.83 51 P **P** **08 55 23.1 -0.7**
NVAR pP pP 08 55 36.9 -1.5
MPMC Manual Prospec 88.87 53 ⇓P **P** **08 55 23.8 -0.3**
baz=89,SNR=8.6
MONP Monument Peak 88.99 56 P **P** **08 55 24.9 +0.2**
baz=89,SNR=14
GSC Goldstone 89.23 54 ⇓P **P** **08 55 25.9 +0.1**
baz=89
GSC Goldstone 89.23 54 *e*P **P** **08 55 25.7 -0.1**
GSC pmax pmax
comp=Z,3.0nm,0.9s,mb4.6
GSC Goldstone 89.23 54 *e*P **P** **08 55 25.7 -0.1**
comp=Z,2.7nm,0.9s,mb4.6
I07A Izee 89.41 45 ⇑P **P** **08 55 26.8 +0.4**
baz=90
FURC Furnace Creek, 89.47 53 ⇓P **P** **08 55 26.9 0.0**
baz=90,SNR=7.5
HEC Hector,Ludlow 89.51 55 ⇓P **P** **08 55 27.2 +0.1**
baz=90,SNR=6.0
BELC Belle Mtn. Jos 89.58 55 P **P** **08 55 27.6 +0.1**
baz=90,SNR=12
WVOR Wild Horse Val 89.59 47 *e*P **P** **08 55 27.7 +0.4**
WVOR pmax pmax
comp=Z,22nm,1.3s,mb5.3
WVOR Wild Horse Val 89.59 47 *e*P **P** **08 55 27.7 +0.4**
comp=Z,22nm,1.3s,mb5.3
SHOC Shoshone 89.79 54 P **P** **08 55 28.2 -0.2**
baz=90,SNR=5.1
U10A Ash Meadows, A 89.87 53 ⇑P **P** **08 55 30.2 +1.4**
baz=90
J08A Circle Bar Ran 89.94 46 ⇓P **P** **08 55 29.2 +0.3**
baz=90
BC3 Big Chuckawall 89.95 56 ⇓P **P** **08 55 29.2 +0.1**
baz=90,SNR=6.4
TUQ Turquoise Moun 89.97 54 ⇑P **P** **08 55 29.6 +0.4**
baz=90,SNR=8.7
S10A Tonopah Range, 90.01 51 ⇑P **P** **08 55 29.5 +0.1**
baz=90,SNR=16
GMRC Granite Mounta 90.03 55 ⇓P **P** **08 55 29.8 +0.3**
baz=90,SNR=6.0
IRM Iron Mountain 90.31 55 ⇑P **P** **08 55 31.1 +0.3**
baz=90,SNR=8.6
GLA Glamis 90.33 57 *e*P **P** **08 55 31.5 +0.6**
GLA *e* pP 08 55 46.7 +1.1
GLA pmax pmax
comp=Z,10.0nm,0.8s,mb5.2
GLA Glamis 90.33 57 *e*P **P** **08 55 31.5 +0.5**
comp=Z,10nm,0.8s,mb5.2
GLA *e* pP 08 55 46.7 +1.2
Q10A Clear Creek Ra 90.37 51 ⇑P **P** **08 55 31.2 +0.3**
baz=90
V11A Goodsprings 90.45 54 ⇑P **P** **08 55 31.7 +0.3**
baz=91,SNR=5.6
LDFC Landfair 90.54 55 *e*P **P** **08 55 32.6 +0.7**
comp=Z,19nm,1.1s,mb5.3
MK31 Makanchi Array 90.58 318 *e*P **P** **08 55 29.7 -2.1**
MK31 *e* pP 08 55 45.6 -0.8
MKAR Makanchi Array 90.58 318 P **P** **08 55 29.8 -2.0**
comp=Z,1.8nm,0.7s,mb4.5,baz=93,slow=6.1,SNR=14
MKAR LR LR 09 36 32.2
comp=Z,57nm,21.3s,MS4.0,baz=97,slow=36
S11A Rachel 90.60 52 ⇑P **P** **08 55 32.7 +0.6**
baz=91,SNR=5.8
B08A Colville Reser 90.66 41 P **P** **08 55 31.7 -0.4**
baz=91,SNR=6.8
PNT Penticton 90.73 40 P **P** **08 55 30.4 -2.0**
OD2 Odessa Site #2 90.81 42 *e*P **P** **08 55 33.4 +0.5**
INK Inuvik 90.87 20 P **P** **08 55 30.7 -1.9**
comp=Z,5.5nm,1.2s,mb4.8,baz=268,slow=6.0,SNR=6.0
INK pP pP 08 55 47.2 0.0
comp=Z,5.9nm,1.2s,baz=288,slow=7.4,SNR=3.5
INK LR LR 09 30 47.1
comp=Z,315nm,21.6s,MS4.7,baz=34,slow=32
INK Inuvik 90.87 20 *e*P **P** **08 55 32.3 -0.3**
INK *e* pP 08 55 47.2 0.0
INK pmax pmax
comp=Z,14nm,1.4s
INK Inuvik 90.87 20 *e*P **P** **08 55 32.3 -0.3**
comp=Z,14nm,1.4s,mb5.1
INK *e* pP 08 55 47.2 0.0
R11A Troy Canyon, C 90.88 51 P **P** **08 55 33.5 +0.1**
baz=91,SNR=13
V12A Nelson 90.88 54 ⇑P **P** **08 55 33.3 -0.2**
baz=91,SNR=7.6
G09A Cove 90.91 44 ⇑P **P** **08 55 33.4 0.0**
baz=91
T11A Corn Creek, Al 90.92 52 ⇑P **P** **08 55 33.6 0.0**
baz=91,SNR=13
K10A MacKenzie Ranc 90.94 47 ⇓P **P** **08 55 33.8 +0.2**
baz=91,SNR=14
Q11A Duckwater 90.94 51 P **P** **08 55 33.7 0.0**
baz=91,SNR=18

SYO Syowa Base 90.95 198 ⇓*es*P sP 08 56 01.5 +8.2
ZALV Zalesovo Beam 90.98 325 P **P** **08 55 31.6 -1.8**
comp=Z,0.4nm,0.4s,mb4.1,baz=151,slow=3.4,SNR=2.6
ZALV LR LR 09 39 42.0
comp=Z,51nm,19.0s,MS4.0,baz=87,slow=38
L10A Juniper Basin 91.07 47 ⇓P **P** **08 55 34.9 +0.7**
baz=91,SNR=7.3
BMO Blue Mountains 91.13 45 *e*P **P** **08 55 33.8 -0.6**
BMO pmax pmax
comp=Z,13nm,1.5s,mb5.0
BMO Blue Mountains 91.13 45 *e*P **P** **08 55 33.8 -0.6**
comp=Z,13nm,1.5s,mb5.0
O11A Cowboy Ranch, 91.22 50 ⇑P **P** **08 55 35.0 +0.1**
baz=91
S12A Delamar Landin 91.29 52 P **P** **08 55 35.6 +0.3**
baz=91,SNR=15
Z13A Yuma Proving G 91.32 57 ⇓P **P** **08 55 35.5 -0.1**
baz=91
G10A Bishop Farm, J 91.36 44 ⇓P **P** **08 55 35.2 -0.3**
baz=92,SNR=18
M11A Holland Ranch, 91.42 48 ⇓P **P** **08 55 36.8 +1.0**
baz=92,SNR=12
F10A Beach Ranch, E 91.45 44 ⇑P **P** **08 55 35.2 -0.6**
baz=92
K11A Parker Ranch, 91.54 47 ⇓P **P** **08 55 36.7 +0.3**
baz=92,SNR=11
V13A Grand Canyon W 91.60 54 ⇓P **P** **08 55 37.1 +0.3**
baz=92,SNR=7.8
L11A Cat Creek Ranc 91.61 48 P **P** **08 55 37.2 +0.6**
baz=92,SNR=11
Q12A Willow Creek R 91.61 51 ⇑P **P** **08 55 37.6 +0.9**
baz=92,SNR=6.4
R12A Pony Springs, 91.63 51 P **P** **08 55 37.2 +0.3**
baz=92,SNR=16
P12A McGill 91.64 50 ⇓P **P** **08 55 37.4 +0.5**
baz=92,SNR=8.0
ELK Elko 91.67 49 *e*P **P** **08 55 37.1 +0.1**
ELK *e* pP 08 55 52.3 +0.7
ELK pmax pmax
comp=Z,9.0nm,0.8s
ELK Elko 91.67 49 *e*P **P** **08 55 37.0 +0.1**
comp=Z,9.1nm,0.8s,mb5.2
ELK *e* pP 08 55 52.3 +0.7
U13A Pakoon Wash 91.73 53 ⇓P **P** **08 55 37.7 +0.3**
baz=92,SNR=5.7
N12A Clover Valley, 91.84 49 P **P** **08 55 38.3 +0.5**
baz=92,SNR=14
N12A Clover Valley, 91.84 49 *e*P **P** **08 55 38.2 +0.4**
comp=Z,27nm,1.0s,mb5.5
N12A *e* pP 08 55 51.0 -1.4
I11A Placerville 91.85 46 P **P** **08 55 38.0 +0.2**
baz=92,SNR=15
T13A Saint George 91.90 53 P **P** **08 55 38.4 +0.2**
baz=92,SNR=16
O12A Currie 91.94 50 ⇓P **P** **08 55 38.8 +0.6**
baz=92,SNR=15
G11A Walters Elk Ra 91.97 44 ⇑P **P** **08 55 37.5 -0.7**
baz=92,SNR=15
H11A Donnelly 91.99 45 ⇓P **P** **08 55 38.3 -0.1**
baz=92,SNR=10
S13A Holt Ranch, En 92.05 52 ⇓P **P** **08 55 39.1 +0.3**
baz=92,SNR=8.1
M12A Wells 92.06 48 P **P** **08 55 39.2 +0.5**
baz=92,SNR=6.4
NEW Newport 92.06 41 *e*P **P** **08 55 37.7 -0.9**
NEW *e* pP 08 55 52.1 -1.1
NEW pmax pmax
comp=Z,7.0nm,1.0s
NEW Newport 92.06 41 *e*P **P** **08 55 37.7 -1.0**
comp=Z,6.9nm,1.0s,mb4.9
NEW *e* pP 08 55 52.1 -1.1
R13A O'Grain Ranch, 92.09 52 ⇓P **P** **08 55 39.9 +0.9**
baz=92,SNR=5.2
NVS Novosibirsk 92.11 325 *e*P pP 08 55 51.2 -2.1
NVS pmax pmax
comp=Z,18nm,1.7s,mb5.1
NVS pmax pmax
comp=N,6.0nm,1.5s
NVS pmax pmax
comp=E,9.0nm,1.4s
F11A Grangeville 92.16 44 ⇑P **P** **08 55 38.6 -0.5**
baz=92
Q13A Wheeler Ranch, 92.21 51 ⇓P **P** **08 55 40.1 +0.6**
baz=92,SNR=8.5
V14A Boquillas Ranc 92.26 54 ⇑P **P** **08 55 40.5 +0.7**
baz=92
J12A Stokes Ranch, 92.31 47 P **P** **08 55 40.4 +0.5**
baz=92,SNR=16
P13A Bates Ranch, G 92.32 50 P **P** **08 55 40.4 +0.4**
baz=92,SNR=14
K12A Draper Farm, C 92.32 47 ⇓P **P** **08 55 40.4 +0.5**
baz=92,SNR=8.0
U14A Mt Trumbull 92.35 54 ⇓P **P** **08 55 40.9 +0.7**
baz=92,SNR=7.2
I12A Atlanta 92.41 46 ⇑P **P** **08 55 41.0 +0.7**
baz=92,SNR=9.2
ARUT Antelope Range 92.42 52 *e*P **P** **08 55 41.2 +0.7**
ARUT pmax pmax
comp=Z,5.0nm,0.8s,mb4.9
ARUT Antelope Range 92.42 52 *e*P **P** **08 55 41.2 +0.7**
comp=Z,4.9nm,0.8s,mb4.9
CCUT Cedar City 92.43 52 *e*P **P** **08 55 41.4 +0.8**
comp=Z,11nm,1.4s,mb5.0
N13A Wendover, West 92.46 49 *e*P **P** **08 55 41.6 +1.0**
comp=Z,17nm,0.9s,mb5.4
C11A Tepee Creek (N 92.53 42 ⇓P **P** **08 55 40.6 -0.2**
baz=93
G12A Big Creek, Yel 92.56 45 ⇑P **P** **08 55 41.0 0.0**
baz=93
M13A Montello 92.59 49 *e*P **P** **08 55 41.7 +0.5**
comp=Z,26nm,1.2s,mb5.5
M13A *e* pP 08 55 54.7 -1.2
E12A Beaver Dam Sad 92.67 43 ⇓P **P** **08 55 41.0 -0.4**
baz=93
F12A Elk City 92.74 44 P **P** **08 55 41.4 -0.4**
baz=93,SNR=15
H12A Diamond D Ranc 92.76 45 P **P** **08 55 41.9 -0.1**
baz=93,SNR=9.2
Q14A Sevier Lake (B 92.78 51 ⇓P **P** **08 55 42.7 +0.5**
baz=93,SNR=6.4
HLID Hailey 92.87 46 P **P** **08 55 43.0 +0.6**
baz=93,SNR=6.8
HLID Hailey 92.87 46 *e*P **P** **08 55 43.0 +0.5**
comp=Z,4.4nm,1.0s,mb4.8
HLID *e* pP 08 55 54.5 -2.6
D12A Red Ives Fores 92.96 43 ⇑P **P** **08 55 42.4 -0.4**
baz=93,SNR=14
J13A Cove Ranch, Pi 93.00 47 ⇑P **P** **08 55 43.8 +0.7**
baz=93
P14A Drum Mountains 93.06 50 ⇓P **P** **08 55 43.8 +0.3**
baz=93
T15A Red Dirt Ranch 93.10 53 ⇑P **P** **08 55 44.1 +0.4**
baz=93
I13A Wildhorse Cree 93.15 46 P **P** **08 55 44.3 +0.5**
baz=93,SNR=17
H13A Challis 93.19 45 ⇓P **P** **08 55 44.4 +0.5**
baz=93,SNR=9.4
M14A Sheep Mountain 93.23 49 ⇓P **P** **08 55 44.7 +0.6**
baz=93
G13A Cobalt 93.31 45 ⇑P **P** **08 55 44.6 +0.1**
baz=93,SNR=13
F13A Darby 93.38 44 ⇓P **P** **08 55 44.5 -0.3**
baz=94,SNR=17
BSMT Bassoo Peak 93.50 42 *e*P **P** **08 55 44.7 -0.5**
comp=Z,3.1nm,1.1s,mb4.7
TUC Tucson 93.52 58 *e*P **P** **08 55 47.0 +1.2**
TUC *e* pP 08 55 59.2 -1.2
TUC pmax pmax
comp=Z,3.0nm,0.9s,mb4.7
TUC Tucson 93.52 58 *e*P **P** **08 55 47.0 +1.3**
comp=Z,2.5nm,0.9s,mb4.6
TUC *e* pP 08 55 59.2 -1.2
117A Oracle 93.61 58 ⇑P **P** **08 55 45.9 -0.2**
baz=94
H14A Leadore 93.82 45 P **P** **08 55 47.2 +0.4**
baz=94,SNR=11
KURK Kurchatov 93.86 321 P **P** **08 55 44.0 -2.8**
comp=Z,1.6nm,1.0s,mb4.4,baz=109,slow=3.1,SNR=8.0
KURK pP pP 08 55 59.8 -1.7
comp=Z,1.3nm,0.8s,baz=105,slow=3.9,SNR=5.4
KURK PP PP 08 59 28.9 -4.1
comp=Z,1.2nm,0.9s,baz=98,slow=7.1,SNR=3.6
KURK LR LR 09 36 29.0
comp=Z,116nm,20.8s,MS4.3,baz=95,slow=34
KURK Kurchatov 93.86 321 *e*P **P** **08 55 45.6 -1.2**
KURK *e* pP 08 55 59.0 -2.5
KURK pmax pmax

comp=Z,10.0nm,1.3s,mb5.1
KURK Kurchatov 93.86 321 *e*P **P 08 55 45.6 -1.2**
comp=Z,10.0nm,1.3s,mb5.1
KURK *e* pP 08 55 59.0 -2.4
H15A Lima 94.33 46 P **P 08 55 49.7 +0.5**
baz=94,SNR=12
CHMT Chamberlain Mo 94.34 43 *e*P **P 08 55 49.5 +0.4**
comp=Z,5.9nm,1.4s,mb4.8
CHMT *e* pP 08 56 02.6 -1.1
DLMT Dillon 94.50 45 *e*P **P 08 55 50.3 +0.4**
comp=Z,4.9nm,1.0s,mb4.9
DLMT *e* pP 08 56 03.3 -1.3
G15A Dillon 94.53 45 ⇑P **P 08 55 50.6 +0.6**
baz=95,SNR=5.1
HWUT Hardware Ranch 94.56 49 *e*P **P 08 55 49.8 -0.5**
comp=Z,3.9nm,1.0s,mb4.8
HWUT *e* pP 08 56 03.7 -1.2
E15A Deer Lodge 94.66 44 ⇓P **P 08 55 50.8 +0.2**
baz=95
LRM Limekiln Ridge 94.68 44 *e*P **P 08 55 51.0 +0.2**
comp=Z,30nm,1.0s,mb5.7
G16A Moss Hill, Enn 95.02 45 ⇑P **P 08 55 52.7 +0.4**
baz=95
BOZ Bozeman (W) 95.22 45 ⇓P **P 08 55 53.2 0.0**
baz=95
BOZ Bozeman (W) 95.22 45 *e*P **P 08 55 53.3 +0.1**
BOZ *e* pP 08 56 07.4 -0.4
BOZ pmax pmax
comp=Z,9.0nm,1.3s,mb5.0
BOZ Bozeman (W) 95.22 45 *e*P **P 08 55 53.3 +0.2**
comp=Z,8.7nm,1.3s,mb5.0
BOZ *e* pP 08 56 07.4 -0.5
F16A Kennard Place, 95.24 45 ⇑P **P 08 55 53.9 +0.6**
baz=95
EDM Edmonton 95.44 37 *e*P **P 08 55 53.7 -0.3**
EDM *e* pP 08 56 06.3 -2.4
PDAR Pinedale Array 96.22 48 P **P 08 55 56.8 -1.0**
comp=Z,0.5nm,0.9s,mb4.0,baz=220,slow=3.9,SNR=4.0
PDAR pP pP 08 56 09.6 -2.9
comp=Z,0.8nm,0.7s,baz=270,slow=1.5,SNR=3.4
PDAR LR LR 09 33 29.4
comp=Z,89nm,19.6s,MS4.2,baz=265,slow=32
PDAR Pinedale Array 96.22 48 P **P 08 55 56.8 -1.0**
PDAR pP pP 08 56 09.6 -2.9
PDAR LR LR 09 33 29.4
YKA Yellowknife Ar 96.48 28 P **P 08 55 56.7 -1.8**
comp=Z,1.8nm,0.8s,mb4.6,baz=255,slow=5.0,SNR=11
YKA pP pP 08 56 11.4 -1.8
comp=Z,1.9nm,0.6s,baz=258,slow=4.5,SNR=7.2
YKA Yellowknife Ar 96.48 28 P **P 08 55 56.7 -1.8**
YKA pP pP 08 56 11.4 -1.8
E18A Harlowton 96.54 44 ⇓P **P 08 55 59.6 +0.4**
baz=97
EGMT Eagleton 96.86 43 ⇑P **P 08 56 00.5 -0.1**
baz=97
EGMT Eagleton 96.86 43 *e*P **P 08 56 00.9 +0.3**
comp=Z,8.5nm,1.0s,mb5.1
ANMO Albuquerque 97.50 56 *e*P **P 08 56 04.4 +0.6**
ANMO *e* pP 08 56 17.0 -1.5
ANMO pmax pmax
comp=Z,2.0nm,1.0s
ANMO Albuquerque 97.50 56 *e*P **P 08 56 04.4 +0.5**
comp=Z,2.5nm,1.0s,mb4.7
ANMO *e* pP 08 56 17.0 -1.5
TXAR Lajitas Array 99.13 62 LR LR 09 31 31.5
comp=Z,123nm,21.4s,MS4.4,baz=230,slow=30
BVAR Borovoye Array 99.25 322 P **P 08 56 09.5 -1.7**
comp=Z,0.7nm,0.5s,mb4.5,baz=234,slow=38,SNR=3.1
BVAR pP pP 08 56 25.4 -0.5
comp=Z,0.6nm,0.4s,baz=96,slow=7.4,SNR=3.1
BRVK Borovoye 99.32 322⇑ *e*P **P 08 56 10.3 -1.2**
BRVK pmax pmax
comp=Z,3.0nm,1.7s,mb4.5
APA Apatity 113.83 341⇑ *i*PKIKP PKiKP 09 01 13.0 +5.4
APA MLR MLR
comp=Z,300nm,17.0s,MS5.0
ARCES ARCESS Array B 114.97 344 PKP PKiKP 09 01 07.3 -2.4
comp=Z,0.7nm,0.7s,baz=90,slow=1.2,SNR=6.0
ARCES pPKP 09 01 21.6
comp=Z,2.1nm,0.9s,baz=93,slow=2.4,SNR=2.8
OBN Obninsk 118.42 328 *e*PKIKP PKPdf 09 01 17.0 +0.2
OBN *e* 09 01 32.3
OBN pmax pmax
comp=Z,2.0nm,0.7s
BOSA Boshof 122.60 226 pPKP pPKPdf 09 01 41.5 +0.7
comp=Z,2.3nm,0.7s,baz=64,slow=4.5,SNR=2.2
LPAZ La Paz 123.86 118 pPKP pPKPdf 09 01 42.7 -0.8
comp=Z,2.3nm,0.6s,baz=279,slow=1.3,SNR=10
LPAZ La Paz 123.86 118 *e*PKIKP PKPdf 09 01 28.1 -0.3
LPAZ *e* 09 01 42.6
ROSC El Rosal 124.22 91 pPKP pPKPdf 09 01 43.3 -1.0
comp=Z,5.7nm,0.8s,baz=81,slow=22,SNR=3.8
AKASG Malin Array Be 124.37 325 PKP PKPdf 09 01 26.2 -2.1
comp=Z,0.4nm,0.3s,baz=48,slow=1.4,SNR=2.7
AKASG pPKP pPKPdf 09 01 41.4 -2.1
comp=Z,1.0nm,0.5s,baz=69,slow=1.6,SNR=2.5
NOA NORSAR Array B 125.27 343 PKP PKPdf 09 01 28.1 -1.7
comp=Z,0.6nm,0.9s,baz=210,slow=18,SNR=2.6
NOA pPKP pPKPdf 09 01 44.3 -0.5
comp=Z,1.0nm,0.8s,baz=32,slow=2.0,SNR=3.0
BRTR Keskin Array B 125.80 312 PKP PKPdf 09 01 29.0 -2.4
comp=Z,0.3nm,0.3s,baz=312,slow=41,SNR=2.9
BRTR pPKP pPKPdf 09 01 45.1 -1.4
comp=Z,0.5nm,0.3s,baz=45,slow=1.9,SNR=3.5
CPUP Villa Florida 127.13 135 PKP PKPdf 09 01 34.4 0.0
comp=Z,0.4nm,0.5s,baz=180,slow=3.1,SNR=4.4
CPUP pPKP pPKPdf 09 01 46.8 -2.7
comp=Z,6.7nm,0.9s,baz=203,slow=0.6,SNR=8.9
SDV Santo Domingo 128.41 87 *e*PKPdf PKPdf 09 01 38.7 +1.5
LOR Lormes 139.02 337 *e*PKIKP PKPdf 09 01 54.7 -1.4
SSF Saint Saulge 139.33 337 *e*PKIKP PKPdf 09 01 54.7 -1.9
comp=Z,22nm,1.2s
GRR Gorron 139.68 342 *e*PKIKP PKPdf 09 01 55.2 -2.0
ETSF Etsaut 144.39 337 *e*PKIKP PKPdf 09 02 04.2 -1.6
comp=Z,45nm,1.0s
KEST Kesra 144.66 319 pPKP pPKPdf 09 02 20.6 -1.0
comp=Z,3.3nm,0.9s,baz=355,slow=4.9,SNR=8.1
KEST Kesra 144.66 319 *e*PKPdf PKPdf 09 02 09.0 +2.5
KEST *e* 09 02 20.0
CMAH Djebel Manchou 145.28 322 P PKPbc 09 02 06.6 -0.8
ABSA Djebel Ababsia 145.48 322 P PKPdf 09 02 07.6 -0.3
CKFL Kef-Lekhel 145.85 323 P PKPdf 09 02 08.6 +0.1
DFRA Djebel Bou Aff 146.25 324 P PKPdf 09 02 10.3 +1.1
ESDC Sonseca Array 148.45 339 pPKPbc pPKPbc 09 02 30.4 -1.0
comp=Z,0.5nm,0.5s,baz=41,slow=2.9,SNR=4.8

IDC 12 09:12:43.3±11.0, 4°.23N×123°.76E, h627^{km}±210^{km}, mb2.8/5, mb1 2.8/5, mb1mx2.6/21, mbtmp2.8/5, Error ellipse: s-maj=290.8km s-min=48.7km az=67.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.17**	**157**	P	P	09 17 30.2	-0.3
	0.4nm,0.3s,baz=335,slow=9.8,SNR=15						
ASAR	**Alice Springs**	**29.44**	**161**	P	P	09 17 59.8	+1.0
	0.1nm,0.4s,baz=341,slow=7.0,SNR=4.1						
MKAR	**Makanchi Array**	**55.48**	**326**	P	P	09 21 20.8	+0.1
	1.4nm,0.4s,baz=124,slow=7.6,SNR=16						
KURK	**Kurchatov**	**59.75**	**329**	P	P	09 21 49.6	+0.2
	1.6nm,0.6s,baz=131,slow=6.4,SNR=4.8						
AKTO	**Aktyubinsk**	**71.44**	**322**	P	P	09 23 01.8	-0.1
	1.6nm,0.7s,baz=119,slow=4.8,SNR=4.6						

ISCJB ***12*** *09:18:25.9±0.6, 51°.70N±0°.08×75°.52E±0°.07, h10^{km}, Error ellipse: s-maj=11.7km s-min=5.0km az=22.2*
NNC ***12*** *09:18:25.9±1.5, 51°.05N×75°.06E, h0^{km}, mb3.2, mpv2.8, Error ellipse: s-maj=43.4km s-min=9.7km az=28.0*
IDC ***12*** *09:18:26.7±0.8, 51°.82N×75°.47E, h0^{km}, mb1 2.9/4, mb1mx2.8/26, mbtmp2.9/4, ML2.9/4, Error ellipse: s-maj=29.4km s-min=7.0km az=28.0*
ISC 12 09:18:27.9±0.6, 51°.70N±0°.08×75°.46E±0°.07, h10^{km}, n9, σ1^{s}23/19, 7C-6D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**2.22**	**115**	⇑Pn	**Pn**	**09 19 05.6**	**+1.0**
	2.6nm,0.3s						
KURK				⇓Sn	**Sn**	**09 19 34.4**	**+2.2**
	8.7nm,0.4s						
KURK	**Kurchatov**	**2.22**	**115**	Pn	**Pn**	**09 19 05.1**	**+0.4**
	1.1nm,0.3s,baz=306,slow=22,SNR=24						
KURK				Pg	**Pg**	**09 19 07.2**	**-3.1**
	1.1nm,0.3s,baz=308,slow=23,SNR=43						
KURK				Sn	**Sn**	**09 19 30.1**	**-2.0**
	0.3nm,0.3s,baz=237,slow=19,SNR=3.5						
KURK				Lg		09 19 37.9	
	1.3nm,0.3s,baz=310,slow=34,SNR=9.6						
VOSK	**Vostochnaya**	**2.94**	**292**	⇓Pn	**Pn**	**09 19 15.5**	**+0.9**
	2.3nm,0.5s						
VOSK				⇑Sn	**Sn**	**09 19 56.6**	**+6.7**
	19nm,0.7s						
BVAR	**Borovoye Array**	**3.38**	**295**	Pn	**Pn**	**09 19 19.3**	**-1.3**
	0.8nm,0.3s,baz=107,slow=14,SNR=9.1						
BVAR				Pg	**Pg**	**09 19 26.3**	**-6.3**
	1.0nm,0.3s,baz=115,slow=17,SNR=15						
BVAR				Sn	**Sn**	**09 19 55.8**	**-5.0**
	0.6nm,0.3s,baz=98,slow=21,SNR=3.6						
BVAR				Lg		09 20 10.6	
	2.8nm,0.3s,baz=122,slow=27,SNR=12						
BRVK	**Borovoye**	**3.45**	**295**	⇓Pn	**Pn**	**09 19 21.2**	**-0.5**
	6.3nm,0.8s						
BRVK				⇑Sn	**Sn**	**09 20 01.5**	**-1.0**
	4.7nm,0.6s						
BRVK				⇓Lg		09 20 16.0	
	14nm,0.6s						
ZRNK	**Zerenda**	**4.15**	**290**	⇓Pn	**Pn**	**09 19 32.8**	**+1.5**
	0.4nm,0.5s						
ZRNK				⇑Pg	**Pg**	**09 19 41.1**	**-6.3**
	1.5nm,0.5s						
ZRNK				⇑Lg		09 20 37.2	
	17nm,1.1s						
ZALV	**Zalesovo Beam**	**6.11**	**65**	Pn	**Pn**	**09 19 59.2**	**+1.2**
	0.8nm,0.3s,baz=258,slow=14,SNR=10.0						
ZALV				Sn	**Sn**	**09 21 07.3**	**-0.7**
	0.1nm,0.3s,baz=253,slow=24,SNR=2.7						
MK31	**Makanchi Array**	**6.64**	**135**	⇑Pn	**Pn**	**09 20 05.9**	**+0.6**
	0.2nm,0.4s,baz=312,slow=12,SNR=8.3						
MK31				⇑Sn	**Sn**	**09 21 19.7**	**-1.3**
	0.6nm,0.4s,baz=123,slow=8.0,SNR=9.7						
MK31				⇓Lg		09 21 47.0	
	1.5nm,0.5s,baz=324,slow=28,SNR=5.0						
MKAR	**Makanchi Array**	**6.64**	**135**	Pn	**Pn**	**09 20 06.3**	**+0.9**
	0.2nm,0.3s,baz=308,slow=13,SNR=9.3						
MKAR				Lg		09 21 59.4	
	0.6nm,0.3s,baz=324,slow=25,SNR=7.7						

NIED ***12*** *09:24:00, 41°.30N×143°.00E, h29^{km}, Mw4.4 Best double couple: M0=4.59000×10^{15} NP1:φ=60.00000°, δ=68.00000°, λ=-80.00000°. NP2:φ=214.00000°, δ=24.00000°, λ=-114.00000°.*
JMA ***12*** *09:24:27.5±0.2, 41°.30N×142°.96E, h17^{km}±3^{km}, M4.4*
JMA Felt I J1.
ISCJB ***12*** *09:24:28.4±0.5, 41°.29N±0°.03×143°.01E±0°.04, h41^{km}±4^{km}, mb4.3/38, MS3.8/8, Error ellipse: s-maj=6.0km s-min=3.4km az=37.2*
MOS ***12*** *09:24:28.5±1.2, 41°.36N×142°.92E, h40^{km}, mb4.5/24, Error ellipse: s-maj=13.2km s-min=6.8km az=91.5*
BJI ***12*** *09:24:30.3, 40°.69N×142°.69E, h47^{km}, mB4.6/5, mb4.6/6, Ms4.2/3, Ms7 3.8/3*
NEIC ***12*** *09:24:30.1±0.3, 41°.39N×142°.87E, h35^{km}, mb4.6/10, MS4.2/1, MW4.4(NIED), Error ellipse: s-maj=7.8km s-min=5.2km az=135.0*
NEIC Recorded [1 JMA] in southern Hokkaido.
IDC ***12*** *09:24:32.1±1.6, 41°.30N×142°.83E, h57^{km}±14^{km}, mb3.8/20, mb1 4.0/23, mb1mx3.9/31, mbtmp3.8/23, MS3.7/7, Ms1 3.6/7, ms1mx3.3/35, Error ellipse: s-maj=15.3km s-min=9.5km az=99.0*
ISC 12 09:24:30.0±0.4, 41°.36N±0°.03×142°.97E±0°.04, h35^{km}±4^{km}, h48^{km}±6.1^{km}: pP-P, n106, σ1^{s}01/124, mb4.3/38, MS3.8/8, 10C-7D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERM	**Erimo**	**0.67**	**12**	*d*P	**Pn**	**09 24 41.1**	**-1.8**
ERM	**Erimo**	**0.67**	**12**	*e*Pn	**Pn**	**09 24 41.2**	**-1.7**
ERM				*e*Sn	**Sn**	**09 24 50.5**	**-1.6**
JEM	**Erimo**	**0.67**	**12**	⇑P	**Pn**	**09 24 41.2**	**-1.7**
JEM				*e*S	**Sn**	**09 24 50.9**	**-1.2**
JNBK	**Urakawa-nobuka**	**0.93**	**350**	⇑P	**Pn**	**09 24 45.9**	**-0.6**
JNBK				S	**Sn**	**09 24 59.8**	**+1.1**
JCH	**Churui**	**1.28**	**13**	⇓P	**Pn**	**09 24 51.6**	**+0.2**
JCH				*e*S	**Sn**	**09 25 08.7**	**+1.3**
JOT	**Ohata**	**1.45**	**271**	⇑P	**Pn**	**09 24 53.0**	**-0.6**
JOT				*e*S	**Sn**	**09 25 11.0**	**-0.4**
JANG	**Nango**	**1.48**	**229**	P	**Pn**	**09 24 52.2**	**-1.9**
JBT2	**Biratori 2**	**1.49**	**342**	⇑P	**Pn**	**09 24 54.9**	**+0.7**
JKB	**Kayabe**	**1.55**	**290**	P	**Pn**	**09 24 54.4**	**-0.6**
JKB				*e*S	**Sn**	**09 25 14.4**	**+0.6**
JTM	**Tenmabayashi**	**1.55**	**249**	P	**Pn**	**09 24 54.5**	**-0.5**
JTM				*e*S	**Sn**	**09 25 14.6**	**+0.7**
JOB	**Onbets**	**1.67**	**22**	⇓P	**Pn**	**09 24 56.9**	**+0.2**
JNB	**Noboribetsu**	**1.82**	**308**	P	**Pn**	**09 24 58.5**	**-0.2**
JNB				*e*S	**Sn**	**09 25 21.0**	**+0.5**
JFR	**Furan**	**1.82**	**351**	P	**Pn**	**09 25 00.1**	**+1.3**
JEW	**Eniwo**	**1.86**	**323**	P	**Pn**	**09 25 00.2**	**+0.9**
JEW				*e*S	**Sn**	**09 25 24.9**	**+3.3**
JSR	**Shiriuchi**	**1.93**	**276**	P	**Pn**	**09 25 00.4**	**+0.2**
JAR	**Ashorobuto**	**2.02**	**17**	⇓P	**Pn**	**09 25 01.1**	**-0.4**
JAR				*e*S	**Sn**	**09 25 27.2**	**+1.7**
JAK	**Akkeshi**	**2.08**	**38**	⇓P	**Pn**	**09 25 01.6**	**-0.7**
JAK				*e*S	**Sn**	**09 25 27.3**	**+0.4**
ASAJ	**Asahikawa**	**2.77**	**354**	P	**Pn**	**09 25 13.0**	**+1.2**
	13nm,0.3s,baz=216,slow=12,SNR=43						
ASAJ				S	**Sn**	**09 25 49.0**	**+5.1**
	23nm,0.3s,baz=305,slow=30,SNR=6.6						
ASAJ				LR	LR	09 26 45.7	
	comp=Z,587nm,18.1s,baz=74,slow=47						
ASAJ	**Asahikawa**	**2.77**	**354**	P	**Pn**	**09 25 13.0**	**+1.2**
ASAJ				S	**Sn**	**09 25 49.0**	**+5.1**
ASAJ				pmax	pmax		
	comp=Z,13nm,0.3s						
ASAJ				smax			
	comp=N,23nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,587nm,18.1s						
YUK	**Yuzh-Kuril'sk**	**3.42**	**38**	⇑ *i*P	**Pn**	**09 25 20.5**	**-0.2**
YUK				*i* S	**Sn**	**09 25 58.9**	**-1.0**
YUK				pmax	pmax		
	comp=N,60nm,0.4s						
YUK				pmax	pmax		
	comp=E,110nm,0.4s						
YUK				pmax	pmax		
	comp=Z,410nm,0.4s						
YUK				pmax	pmax		
	comp=Z,700nm,1.4s						
YUK				smax			
	comp=N,360nm,0.6s						
YUK				smax			
	comp=E,1μm,0.6s						
YUK				smax			
	comp=N,2μm,1.1s						
YUK				smax			
	comp=E,400nm,1.1s						
YUK				MLR	MLR		
	comp=N,800nm,19.0s						
YUK				MLR	MLR		
	comp=E,900nm,19.0s						
YUK				MLR	MLR		
	comp=Z,900nm,19.0s						
KUR	**Kuril'sk**	**5.26**	**41**	*e*P	**Pn**	**09 25 42.0**	**-4.1**
KUR				*e*S	**Sn**	**09 26 42.0**	**-3.5**
KUR				pmax	pmax		
	comp=N,110nm,0.8s						
KUR				pmax	pmax		
	comp=E,90nm,0.8s						
KUR				pmax	pmax		
	comp=Z,330nm,0.8s						
KUR				smax			
	comp=N,150nm,0.6s						
KUR				smax			
	comp=E,80nm,0.6s						
YSS	**Yuzh-Sakhalins**	**5.59**	**358**	*e*P	**Pn**	**09 25 54.0**	**+3.4**
YSS				*e*S	**Sn**	**09 26 58.0**	**+4.5**
YSS				MLR	MLR		
	comp=Z,500nm,14.0s						
YSS				MLR	MLR		
	comp=N,500nm,16.0s						
MAJO	**Matsushiro**	**6.08**	**219**	*e*P	**Pn**	**09 25 58.7**	**+1.4**
MAJO				pmax	pmax		
	comp=Z,30nm,0.8s						
MAJO	**Matsushiro**	**6.08**	**219**	*e*Pn	**Pn**	**09 25 58.7**	**+1.4**
	comp=Z,30nm,0.8s						
MAT	**Matsushiro**	**6.08**	**219**	P	**Pn**	**09 25 58.0**	**+0.7**
MAT				*e*S	**Sn**	**09 27 07.3**	**+1.7**
MJAR	**Matsushiro Arr**	**6.08**	**219**	P	**Pn**	**09 25 57.2**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=27,slow=13,SNR=9.8						
MJAR				S	**Sn**	**09 27 14.9**	**+9.3**
	baz=76,slow=13,SNR=2.0						
MJAR	**Matsushiro Arr**	**6.08**	**219**	P	**Pn**	**09 25 57.2**	**-0.1**
MJAR				S	**Sn**	**09 27 14.9**	**+9.3**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
JHJ	**Hachijo jima 2**	**8.61**	**198**	P	**Pn**	**09 26 33.0**	**+0.9**
	comp=Z,5.3nm,0.3s,baz=263,slow=20,SNR=3.3						
JHJ				S	**Sn**	**09 28 06.6**	**-1.3**
	comp=Z,4.7nm,0.3s,baz=225,slow=22,SNR=3.4						
HABR	**Khabarovsk**	**9.06**	**324**	P	**Pn**	**09 26 33.7**	**-4.4**
HABR				pmax	pmax		
	comp=N,20nm,1.7s						
HABR				pmax	pmax		
	comp=E,5.0nm,0.9s						
HABR				pmax	pmax		
	comp=Z,19nm,1.7s						
HABR				MLR	MLR		
	comp=Z,765nm,17.0s						
KLR	**Kul'dur**	**11.14**	**319**	*e*P	**Pn**	**09 27 05.0**	**-1.6**
KLR				MLR	MLR		
	comp=E,500nm,13.0s						
KLR				MLR	MLR		
	comp=Z,2μm,13.0s						
YAK	**Yakutsk**	**22.19**	**343**	*e*P	**P**	**09 29 17.9**	**-4.8**
YAK				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.2						
YAK				pmax	pmax		
	comp=N,7.0nm,1.2s						
YAK				MLR	MLR		
	comp=N,195nm,22.0s,MS3.6						
YAK				MLR	MLR		
	comp=Z,217nm,22.0s,MS3.5						
YAK				MLR	MLR		
	comp=E,125nm,22.0s,MS3.6						
SEY	**Seymchan**	**22.32**	**11**	⇓ *i*P	**P**	**09 29 21.9**	**-2.2**
HHC	**Hu-ho-hao-te**	**23.61**	**279**	*e*P	**P**	**09 29 37.8**	**+0.1**
HHC				S	**S**	**09 33 44.2**	**-5.2**
HHC				pmax	pmax		
	comp=Z,16nm,0.5s,mb4.7						
HHC				pmax	pmax		
	comp=Z,77nm,5.3s						
TWG	**Pinlang**	**26.07**	**232**	*e*P	**P**	**09 29 58.4**	**-1.8**
	comp=Z,42nm,0.3s,mb5.4						
SONM	**Songino Array**	**26.65**	**296**	P	**P**	**09 30 05.2**	**0.0**
	comp=Z,1.0nm,0.4s,mb3.7,baz=79,slow=8.3,SNR=13						
SONM				LR	LR	09 41 27.4	
	comp=Z,148nm,20.0s,MS3.5,baz=92,slow=38						
SONM	**Songino Array**	**26.65**	**296**	P	**P**	**09 30 05.2**	**0.0**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SONM				MLR	MLR		
	comp=Z,148nm,20.0s						
BILL	**Bilibino**	**29.54**	**18**	⇑ *e*P	**P**	**09 30 28.8**	**-1.9**
BILL				pmax	pmax		
	comp=Z,8.0nm,1.7s,mb4.2						
ZALV	**Zalesovo Beam**	**40.03**	**309**	P	**P**	**09 32 00.8**	**-0.4**
	comp=Z,1.6nm,0.4s,mb4.1,baz=91,slow=8.9,SNR=5.7						
ZALV				LR	LR	09 49 41.5	
	comp=Z,81nm,18.6s,MS3.6,baz=73,slow=38						
ZALV	**Zalesovo Beam**	**40.03**	**309**	P	**P**	**09 32 00.8**	**-0.4**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.2						
ZALV				MLR	MLR		
	comp=Z,81nm,18.6s,MS3.6						
OHAK	**Old Harbor**	**42.81**	**46**	*e*P	**P**	**09 32 24.2**	**+0.2**
	comp=Z,1.0nm,0.4s,mb3.9						
MK31	**Makanchi Array**	**42.98**	**299**	*e*P	**P**	**09 32 25.5**	**0.0**
MK31				*e**PP	pP	09 32 37.0	+1.1
MKAR	**Makanchi Array**	**42.98**	**299**	P	**P**	**09 32 25.1**	**-0.4**
	comp=Z,0.7nm,0.5s,mb3.7,baz=84,slow=10,SNR=11						
MKAR				LR	LR	09 51 23.5	
	comp=Z,51nm,19.1s,MS3.4,baz=216,slow=38						
MKAR	**Makanchi Array**	**42.98**	**299**	*i* P	**P**	**09 32 25.5**	**0.0**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KDAK	**Kodiak Island**	**43.13**	**45**	P	**P**	**09 32 27.0**	**+0.5**
	comp=Z,3.6nm,0.5s,mb4.3,baz=292,slow=3.4,SNR=4.1						
KDAK	**Kodiak Island**	**43.13**	**45**	P	**P**	**09 32 27.0**	**+0.5**
KDAK				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.4						
KDAK	**Kodiak Island**	**43.13**	**45**	P	**P**	**09 32 27.0**	**+0.5**
BPAW	**Bear Paw Mtn.**	**43.48**	**36**	*e*P	**P**	**09 32 30.6**	**+1.4**
	comp=Z,19nm,1.6s,mb4.6						
BPAW				*e*pP	pP	09 32 55.6	+16
TRF	**Thorofare Moun**	**43.81**	**37**	*e*P	**P**	**09 32 33.4**	**+1.5**
	comp=Z,3.5nm,0.9s,mb4.1						
KURK	**Kurchatov**	**44.33**	**305**	P	**P**	**09 32 36.5**	**+0.2**
	comp=Z,1.5nm,0.4s,mb4.1,baz=76,slow=8.8,SNR=11						
KURK	**Kurchatov**	**44.33**	**305**	⇑ *e*P	**P**	**09 32 36.6**	**+0.3**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.1						
COLA	**College**	**44.80**	**34**	*e*P	**P**	**09 32 40.8**	**+0.9**
COLA				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.7						
COLA	**College**	**44.80**	**34**	*e*P	**P**	**09 32 40.8**	**+0.9**
	comp=Z,14nm,1.1s,mb4.7						
MENT	**Mentasta**	**46.82**	**37**	*e*P	**P**	**09 32 57.1**	**+1.3**
MENT				*e*pP	pP	09 33 12.3	+6.1
EGAK	**Eagle**	**47.66**	**34**	*e*P	**P**	**09 33 02.8**	**+0.5**
	comp=Z,26nm,1.7s,mb5.0						
EGAK				*e*pP	pP	09 33 18.9	+6.2
BVAR	**Borovoye Array**	**48.65**	**310**	P	**P**	**09 33 09.8**	**-0.3**
	comp=Z,1.3nm,0.4s,mb4.3,baz=60,slow=9.8,SNR=7.6						
BVAR	**Borovoye Array**	**48.65**	**310**	P	**P**	**09 33 09.8**	**-0.3**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BRVK	**Borovoye**	**48.70**	**310**	⇑ *e*P	**P**	**09 33 10.9**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.7s,mb4.2						
BRVK	**Borovoye**	**48.70**	**310**	*e*P	**P**	**09 33 09.2**	**-1.3**
	comp=Z,4.7nm,0.8s,mb4.6						
AAK	**Ala-Archa**	**49.61**	**296**	LR	LR	09 55 01.4	
	comp=Z,78nm,19.1s,MS3.7,baz=136,slow=37						
INK	**Inuvik**	**50.00**	**29**	P	**P**	**09 33 21.0**	**+0.7**
	comp=Z,2.5nm,0.4s,mb4.6,baz=298,slow=6.2,SNR=17						
INK	**Inuvik**	**50.00**	**29**	P	**P**	**09 33 21.0**	**+0.8**
INK				pmax	pmax		
	comp=Z,3.0nm,0.4s						
INK	**Inuvik**	**50.00**	**29**	*e*P	**P**	**09 33 20.9**	**+0.7**
INK				*e*pP	pP	09 33 31.4	+0.7
ARU	**Arti**	**53.98**	**317**	*d i*P	**P**	**09 33 50.0**	**0.0**
ARU						09 35 46.1	
ARU				S	**S**	**09 41 21.4**	**-1.6**
ARU				SS	SS	09 44 55.5	-8.5
ARU				pmax	pmax		
	comp=Z,9.0nm,1.7s,mb4.4						
ABKAR	**Akbulak array**	**56.14**	**308**	*e*P	**P**	**09 34 05.5**	**-0.2**
	comp=Z,1.5nm,0.5s,mb4.3						
RES	**Resolute Bay**	**58.11**	**15**	*e*P	**P**	**09 34 19.8**	**+0.5**
RES				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
RES	**Resolute Bay**	**58.11**	**15**	*e*P	**P**	**09 34 19.8**	**+0.5**
	comp=Z,7.4nm,0.9s,mb4.7						
YKA	**Yellowknife Ar**	**59.48**	**32**	P	**P**	**09 34 28.5**	**-0.4**
	comp=Z,0.3nm,0.4s,mb3.7,baz=301,slow=6.6,SNR=5.7						
KEV	**Kevo**	**59.84**	**339**	*e*P	**P**	**09 34 29.5**	**-1.8**
KEV				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.5						
KEV	**Kevo**	**59.84**	**339**	*e*p	**P**

OBN pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
FINES FINESS Array B 65.56 332 P **P 09 35 09.2 -0.3**
comp=Z,1.3nm,0.4s,mb4.3,baz=49,slow=6.4,SNR=28
FINES FINESS Array B 65.56 332 P **P 09 35 09.2 -0.3**
FINES pmax pmax
comp=Z,1.0nm,0.4s
XMAS Kiritimati 66.16 110 *e*P **P 09 35 13.8 -0.3**
KIV Kislovodsk 69.01 310*c i*P **P 09 35 33.1 +1.4**
KIV *e* 09 38 02.6
KIV pmax pmax
comp=Z,21nm,1.2s,mb4.9
HFS Hagfors 70.65 336 P **P 09 35 40.7 -0.7**
comp=Z,1.4nm,0.4s,mb4.3,baz=28,slow=3.8,SNR=21
HFS Hagfors 70.65 336 P **P 09 35 40.7 -0.7**
HFS pmax pmax
comp=Z,1.0nm,0.4s
NB2 NORSAR Subarra 70.67 337 P **P 09 35 41.6 +0.1**
comp=Z,7.4nm,1.2s,mb4.5,baz=35,slow=6.5
NOA NORSAR Array B 70.67 337 P **P 09 35 40.7 -0.9**
comp=Z,1.1nm,0.8s,mb3.8,baz=37,slow=6.7,SNR=5.5
NOA NORSAR Array B 70.67 337 P **P 09 35 40.7 -0.8**
NOA pmax pmax
comp=Z,1.0nm,0.8s
NOA NORSAR Array B 70.67 337 P **P 09 35 40.7 -0.9**
NVAR Mina Array Bea 71.47 55 P **P 09 35 47.8 +0.9**
comp=Z,1.7nm,0.9s,mb4.0,baz=284,slow=6.2,SNR=12
AKASG Malin Array Be 71.62 322 P **P 09 35 46.9 -0.6**
comp=Z,0.5nm,0.3s,mb3.9,baz=46,slow=6.0,SNR=7.9
AKASG Malin Array Be 71.62 322 P **P 09 35 46.9 -0.6**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
STKA Stephens Creek 72.89 181 LR LR 10 05 42.5
comp=Z,62nm,19.7s,MS3.9,baz=25,slow=34
PDAR Pinedale Array 73.80 47 P **P 09 36 01.4 +0.7**
comp=Z,0.9nm,0.8s,mb3.8,baz=302,slow=3.3,SNR=8.1
BRTR Keskin Array B 76.89 312 P **P 09 36 18.6 +0.2**
comp=Z,0.7nm,0.9s,mb3.6,baz=269,slow=8.6,SNR=3.6
BRTR Keskin Array B 76.89 312*ce*P **P 09 36 19.7 +1.3**
BRTR pmax pmax
comp=Z,1.0nm,0.9s
CLL Collm 77.94 331 *e*P **P 09 36 24.0 -0.1**
CLL *e* pP 09 36 35.0 -0.1
CLL MLR MLR
comp=Z,100nm,18.1s,MS4.2
CLL Collm 77.94 331 *e*P **P 09 36 24.0 -0.1**
CLL *ep*P pP 09 36 35.0 -0.1
CLL Lm 10 15 00.0
comp=Z,100nm,18.1s
VRAC Vranov 78.14 327 P **P 09 36 25.3 +0.1**
comp=Z,1.5nm,0.4s,mb4.3,baz=69,slow=5.4,SNR=4.2
VRAC Vranov 78.14 327 P **P 09 36 25.3 +0.1**
VRAC pmax pmax
comp=Z,2.0nm,0.4s
GDL2 Guadalupe Moun 84.08 52 *e*P **P 09 36 58.4 +1.2**
comp=Z,0.7nm,0.2s,mb4.4
URZ Urewera 85.15 154 LR LR 10 13 23.6
comp=Z,71nm,20.3s,MS4.0,baz=176,slow=34
TXAR Lajitas Array 86.55 53 P **P 09 37 10.6 +1.1**
comp=Z,0.9nm,0.8s,mb4.1,baz=297,slow=4.3,SNR=13
TXAR Lajitas Array 86.55 53 P **P 09 37 10.6 +1.1**
TXAR pmax pmax
comp=Z,1.0nm,0.8s
SIV San Ignacio 147.29 46 PKPbc PKPbc 09 44 10.3 +0.4
comp=Z,1.1nm,0.7s,baz=320,slow=7.4,SNR=4.1

ISCJB ***12*** *09:36:47.6±0.6,23°.90S±0°.04×66°.80W±0°.06,h190km±4km, mb4.0/16, Error ellipse: s-maj=9.3km s-min=6.8km az=154.7*
IDC ***12*** *09:36:48.7±1.5,23°.93S×66°.74W,h191km±13km,mb3.6/6, mb1 3.7/11,mb1mx3.6/18,mbtmp3.5/11, Error ellipse: s-maj=21.5km s-min=15.0km az=69.0*
GUC ***12*** *09:36:51.1±0.7,23°.65S×67°.23W,h225km,ML4.7*
NEIC ***12*** *09:36:51.1,23°.65S×67°.23W,h225km,mb4.1/11,After GUC.*

ISC 12 09:36:48.3±0.6,23°.90S±0°.04×66°.76W±0°.06,h180km±4km, n160,σ0°76/168,mb4.0/16,73C-54D,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**2.99**	**302**	⇑*i*P	**Pn**	**09 37 43.8**	**+6.9**
PB04				*i* S	**Sn**	**09 38 24.1**	**+9.4**
PB04				AML	AML	09 38 26.6	
comp=N,2μm,0.4s							
CEN1	**Los Morros**	**3.20**	**278**	⇓*i*P	**Pn**	**09 37 42.4**	**+3.0**
CEN1				*i* S	**Sn**	**09 38 21.1**	**+2.0**
CEN1				AML	AML	09 38 23.6	
comp=N,422nm,0.2s							
ANCH	**Antofagasta**	**3.35**	**273**	⇑*i*P	**Pn**	**09 37 41.6**	**+0.3**
ANCH				*i* S	**Sn**	**09 38 20.7**	**-1.8**
ANCH	**Antofagasta**	**3.35**	**273**	⇑*i*P	**Pn**	**09 37 41.6**	**+0.3**
ANCH				*i* S	**Sn**	**09 38 20.7**	**-1.8**
ANCH				AML	AML	09 38 23.2	
comp=N,1μm,0.3s							
MECH	**Mejillones**	**3.48**	**282**	⇑*i*P	**Pn**	**09 37 44.0**	**+1.1**
MECH				*i* S	**Sn**	**09 38 24.4**	**-1.0**
MECH				AML	AML	09 38 27.2	
comp=N,1μm,0.4s							
PB01	**Plate Boundary**	**3.80**	**318**	⇑*i*P	**Pn**	**09 37 47.7**	**+0.8**
PB01				*i* S	**Sn**	**09 38 31.6**	**-1.1**
PB01				AML	AML	09 38 33.3	
comp=E,752nm,0.3s							
HMBC	**Humberston**	**4.63**	**321**	⇑*i*P	**Pn**	**09 37 56.8**	**-0.7**
HMBC				*i* S	**Sn**	**09 38 48.1**	**-3.6**
MNMC	**Miæe Miæ**	**5.43**	**330**	*e*P	**Pn**	**09 38 08.1**	**+0.2**
MNMC				*i* S	**Sn**	**09 39 08.5**	**-1.9**
LPAZ	**La Paz**	**7.68**	**350**	P	**Pn**	**09 38 39.1**	**+1.7**
comp=E,2.0nm,0.3s,baz=150,slow=6.6,SNR=70							
LPAZ				S	**Sn**	**09 40 01.7**	**-2.1**
comp=E,0.1nm,0.3s,baz=113,slow=3.5,SNR=2.1							
LPAZ	**La Paz**	**7.68**	**350**	*e*Pn	**Pn**	**09 38 39.0**	**+1.6**
LPAZ				*e*Sn	**Sn**	**09 40 05.5**	**+1.7**
CFAA	**Coronel Fontan**	**7.79**	**189**	P	**Pn**	**09 38 38.1**	**-0.6**
comp=E,0.5nm,0.3s,baz=6.3,slow=11,SNR=38							
CFAA				S	**Sn**	**09 40 00.9**	**-5.3**
comp=E,0.9nm,0.3s,baz=256,slow=22,SNR=14							
CPUP	**Villa Florida**	**8.88**	**108**	P	**Pn**	**09 38 54.4**	**+1.2**
comp=E,0.5nm,0.3s,baz=268,slow=12,SNR=11							
CPUP	**Villa Florida**	**8.88**	**108**	*e*Pn	**Pn**	**09 38 54.1**	**+0.9**
SIV	**San Ignacio**	**9.51**	**35**	P	**Pn**	**09 39 01.6**	**+0.2**
comp=E,0.6nm,0.3s,baz=230,slow=9.1,SNR=26							
TRQA	**Tornquist**	**14.69**	**165**	*e*Pn	**Pn**	**09 40 06.6**	**-0.8**
comp=E,2.0nm,0.6s							
NNA	**Nana**	**15.23**	**319**	P	**Pn**	**09 40 17.1**	**+2.7**
comp=E,0.7nm,0.3s,baz=140,slow=16,SNR=3.6							
PLCA	**Paso Flores**	**17.09**	**190**	P	**Pn**	**09 40 35.4**	**-1.1**
comp=E,0.1nm,0.3s,baz=8.7,slow=13,SNR=2.2							
LRAL	**Lakeview Retre**	**59.81**	**340**	*e*P	**P**	**09 46 29.0**	**-5.6**
comp=E,1.8nm,0.3s,mb4.4							
SWET	**Sewanee**	**61.54**	**342**	*e*P	**P**	**09 46 42.6**	**-3.5**
JCT	**Junction City**	**62.67**	**328**	*e*P	**P**	**09 46 52.8**	**-1.0**
comp=E,5.1nm,0.6s,mb4.5							
628A	**Black Gap, Mar**	**63.43**	**325**	⇓P	**P**	**09 46 58.3**	**-0.5**
baz=63,SNR=5.6							
627A	**Terlingua Ranc**	**63.67**	**325**	⇓P	**P**	**09 46 59.9**	**-0.5**
baz=64							
TXAR	**Lajitas Array**	**63.72**	**324**	P	**P**	**09 47 00.2**	**-0.5**
comp=E,0.8nm,0.7s,mb3.7,baz=154,slow=8.8,SNR=12							
528A	**Cox Ranch, San**	**63.92**	**325**	⇓P	**P**	**09 46 60.0**	**-2.0**
baz=64							
626A	**Big Bend Ranch**	**64.15**	**324**	⇑P	**P**	**09 47 03.6**	**0.0**
baz=64,SNR=14							
527A	**Woodward Ranch**	**64.33**	**325**	⇓P	**P**	**09 47 03.6**	**-1.1**
baz=64							
526A	**Mary Lane Ranc**	**64.52**	**324**	⇓P	**P**	**09 47 06.0**	**+0.1**
baz=64,SNR=7.9							
427A	**Hayter Ranch,**	**64.78**	**325**	⇑P	**P**	**09 47 06.5**	**-1.1**
baz=65							
328A	**Wristen Ranch,**	**64.90**	**326**	⇑P	**P**	**09 47 07.6**	**-0.8**
baz=65							
426A	**McDonald Obser**	**64.97**	**325**	⇓P	**P**	**09 47 08.6**	**-0.2**
baz=65,SNR=5.7							
326A	**Caldwell Ranch**	**65.45**	**325**	⇑P	**P**	**09 47 11.1**	**-0.8**
baz=65,SNR=5.4							
425A	**Indio Mountain**	**65.57**	**324**	⇑P	**P**	**09 47 11.9**	**-0.8**
baz=65,SNR=6.4							
227A	**Bennet, Jal**	**65.65**	**326**	⇓P	**P**	**09 47 12.7**	**-0.5**
baz=66							
CCM	**Cathedral Cave**	**65.78**	**339**	*e*P	**P**	**09 47 12.1**	**-1.8**
comp=E,8.1nm,0.6s,mb4.7							
325A	**Bean Ranch, Si**	**66.02**	**325**	⇓P	**P**	**09 47 15.4**	**-0.2**
baz=66,SNR=14							
226A	**Malaga, Loving**	**66.11**	**326**	⇓P	**P**	**09 47 15.9**	**-0.1**
baz=66							
324A	**Moseley Ranch,**	**66.35**	**324**	⇓P	**P**	**09 47 16.3**	**-1.3**
baz=66,SNR=6.1							
MNTX	**Cornudas Mount**	**66.49**	**325**	*e*P	**P**	**09 47 17.4**	**-1.1**
comp=E,1.7nm,0.8s,mb3.9							
225A	**Deer Hill, Car**	**66.52**	**325**	⇑P	**P**	**09 47 17.9**	**-0.8**
baz=66							
Z27A	**Tatum**	**66.66**	**327**	⇓P	**P**	**09 47 18.4**	**-1.1**
baz=66							
224A	**Cornudas Mount**	**66.86**	**325**	⇓P	**P**	**09 47 20.0**	**-0.9**
baz=67,SNR=8.5							
125A	**Gardner Draw,**	**66.86**	**326**	⇓P	**P**	**09 47 19.8**	**-1.1**
baz=67							
MSTX	**Muleshoe**	**66.97**	**328**	⇑P	**P**	**09 47 20.4**	**-1.1**
baz=67							
Z26A	**Caprock**	**67.01**	**327**	⇑P	**P**	**09 47 20.8**	**-0.9**
baz=67							
Y27A	**Causey**	**67.09**	**328**	⇑P	**P**	**09 47 21.0**	**-1.2**
baz=67							
124A	**Stringfield Ra**	**67.31**	**325**	⇑P	**P**	**09 47 23.5**	**-0.2**
baz=67							
Z25A	**Roswell**	**67.39**	**326**	⇑P	**P**	**09 47 23.2**	**-1.0**
baz=67,SNR=5.3							
DBIC	**Dimbokro**	**67.56**	**71**	P	**P**	**09 47 23.9**	**-1.7**
comp=E,1.3nm,0.4s,mb4.1,baz=218,slow=7.2,SNR=4.5							
222A	**Williams Famil**	**67.73**	**324**	⇓P	**P**	**09 47 26.4**	**+0.1**
baz=68							
Z24A	**Sheeppen Canyo**	**67.76**	**326**	⇑P	**P**	**09 47 26.2**	**-0.3**
baz=68,SNR=7.2							
Y25A	**Mesa, Roswell**	**67.88**	**327**	⇑P	**P**	**09 47 26.2**	**-1.0**
baz=68							
X26A	**CR and CF Fran**	**67.94**	**328**	⇓P	**P**	**09 47 27.2**	**-0.5**
baz=68							
W27A	**Bowe Ranch, En**	**67.99**	**328**	⇑P	**P**	**09 47 27.5**	**-0.4**
baz=68							
Z23A	**Rita Site, Whi**	**68.16**	**325**	⇑P	**P**	**09 47 29.3**	**+0.4**
baz=68							
319A	**Douglas**	**68.39**	**322**	⇑P	**P**	**09 47 30.7**	**+0.3**
baz=68							
Z22A	**Elephant Butte**	**68.54**	**324**	⇑P	**P**	**09 47 31.7**	**+0.3**
baz=68,SNR=9.3							
W25A	**X Bar L Ranch,**	**68.80**	**328**	⇑P	**P**	**09 47 32.4**	**-0.5**
baz=69							
219A	**White Tail Can**	**68.84**	**322**	⇑P	**P**	**09 47 33.3**	**0.0**
baz=69							
318A	**Bisbee**	**68.84**	**321**	⇑P	**P**	**09 47 33.4**	**+0.1**
baz=69							
120A	**U Bar Ranch, L**	**68.91**	**323**	⇓P	**P**	**09 47 33.8**	**+0.2**
baz=69							
V26A	**Tequesquite Ra**	**68.93**	**328**	⇑P	**P**	**09 47 33.2**	**-0.5**
baz=69							
Z21A	**St. Cloud Mine**	**68.96**	**324**	⇑P	**P**	**09 47 34.0**	**+0.1**
baz=69							
W24A	**Lazy 6 Ranch,**	**69.26**	**327**	⇑P	**P**	**09 47 35.5**	**-0.2**
baz=69							
Z20A	**Nine Sixteen R**	**69.31**	**323**	⇑P	**P**	**09 47 35.7**	**-0.4**
baz=69							
V25A	**Rancho No Teng**	**69.37**	**328**	⇑P	**P**	**09 47 35.5**	**-0.9**
baz=69							
Y21A	**Point of Rocks**	**69.50**	**324**	⇓P	**P**	**09 47 37.5**	**+0.3**
baz=69							
217A	**Green Valley**	**69.57**	**321**	⇑P	**P**	**09 47 37.7**	**-0.1**
baz=69							
ANMO	**Albuquerque**	**69.59**	**326**	*e*P	**P**	**09 47 38.0**	**+0.2**
comp=E,2.7nm,0.9s,mb4.0							
V24A	**Rampart Ranch,**	**69.60**	**327**	⇓P	**P**	**09 47 37.5**	**-0.3**
baz=69							
X21A	**Alamocita Cree**	**69.89**	**325**	⇓P	**P**	**09 47 39.9**	**+0.3**
baz=70							
117A	**Oracle**	**70.11**	**321**	⇓P	**P**	**09 47 41.4**	**+0.4**
baz=70							
Y19A	**Nutrioso**	**70.31**	**323**	⇓P	**P**	**09 47 42.4**	**+0.2**
baz=70							
V22A	**San Miguel Ran**	**70.57**	**326**	⇑P	**P**	**09 47 44.1**	**+0.4**
baz=70							
S25A	**Robets Cordova**	**70.74**	**329**	⇑P	**P**	**09 47 45.3**	**+0.5**
baz=71							
U22A	**Llaves**	**70.90**	**327**	⇑P	**P**	**09 47 45.9**	**+0.2**
baz=71							
Y17A	**Roosevelt**	**70.99**	**322**	⇑P	**P**	**09 47 46.2**	**-0.1**
baz=71							
T23A	**Casias Ranch,**	**71.01**	**328**	⇑P	**P**	**09 47 46.5**	**+0.1**
baz=71							
SDCO	**Great Sand Dun**	**71.32**	**328**	*e*P	**P**	**09 47 48.6**	**+0.5**
comp=E,11nm,1.8s,mb4.3							
U21A	**Nageezi**	**71.35**	**326**	⇑P	**P**	**09 47 48.2**	**-0.2**
baz=71							
T22A	**Edith**	**71.42**	**327**	⇓P	**P**	**09 47 49.4**	**+0.5**
baz=71							
X17A	**Forest Lakes**	**71.45**	**323**	⇓P	**P**	**09 47 49.4**	**+0.4**
baz=71							
Y16A	**Circle Bar Ran**	**71.49**	**322**	⇑P	**P**	**09 47 49.6**	**+0.3**
baz=71							
X16A	**Lo Mia Camp, P**	**71.86**	**322**	⇑P	**P**	**09 47 52.1**	**+0.6**
baz=72							
S22A	**4UR Ranch, Cre**	**71.96**	**328**	⇓P	**P**	**09 47 52.2**	**+0.2**
baz=72							
Y15A	**Casa Rosa Ranc**	**72.03**	**321**	⇓P	**P**	**09 47 52.8**	**+0.3**
baz=72							
U19A	**Dine' College,**	**72.05**	**325**	⇑P	**P**	**09 47 52.3**	**-0.3**
baz=72							
X15A	**Humboldt**	**72.36**	**322**	⇓P	**P**	**09 47 54.7**	**+0.3**
baz=72							
T19A	**Beclabito**	**72.36**	**326**	⇑P	**P**	**09 47 54.6**	**+0.2**
baz=72							
MVCO	**Mesa Verde**	**72.38**	**326**	⇓P	**P**	**09 47 55.2**	**+0.7**
baz=72							
V17A	**Tonalea, Kykot**	**72.39**	**324**	⇓P	**P**	**09 47 55.1**	**+0.5**
baz=72							
Y14A	**Wickenburg**	**72.40**	**321**	⇑P	**P**	**09 47 54.8**	**+0.1**
baz=72							
W16A	**Flagstaff**	**72.41**	**323**	⇑P	**P**	**09 47 55.5**	**+0.8**
baz=72							
P24A	**Kohler Place,**	**72.45**	**330**	⇓P	**P**	**09 47 55.4**	**+0.5**
baz=72							
ECSD	**EROS Data Cent**	**72.67**	**338**	*e*P	**P**	**09 47 55.0**	**-1.1**
comp=E,1.5nm,0.5s,mb4.0							
Y13A	**Salome**	**72.79**	**320**	⇓P	**P**	**09 47 57.4**	**+0.4**
baz=73							
U16A	**Tuba City**	**72.96**	**324**	⇑P	**P**	**09 47 58.1**	**+0.2**
baz=73							
T18A	**Mexican Hat**	**73.04**	**325**	⇓P	**P**	**09 47 58.0**	**-0.4**
baz=73							
R20A	**Redvale**	**73.07**	**327**	⇓P	**P**	**09 47 59.8**	**+1.2**
baz=73,SNR=5.2							
S19A	**Harvey Farm, M**	**73.12**	**326**	⇑P	**P**	**09 47 59.1**	**+0.2**
baz=73							
SMCO	**Snowmass**	**73.15**	**328**	*e*P	**P**	**09 48 00.2**	**+1.1**
comp=E,35nm,2.5s,mb4.7							
V15A	**Kaibab Nationa**	**73.29**	**323**	⇓P	**P**	**09 48 00.8**	**+0.8**
baz=73							
S18A	**Hurst Farm, Bl**	**73.52**	**325**	⇑P	**P**	**09 48 02.0**	**+0.8**
baz=73							
W13A	**Hualapai Mount**	**73.74**	**321**	⇑P	**P**	**09 48 03.5**	**+1.0**
baz=74							
U15A	**North Rim**	**73.80**	**323**	⇑P	**P**	**09 48 04.3**	**+1.4**
baz=74							
T15A	**Red Dirt Ranch**	**74.29**	**324**	⇑P	**P**	**09 48 05.7**	**+0.1**
baz=74							
U14A	**Mt Trumbull**	**74.29**	**323**	⇑P	**P**	**09 48 06.6**	**+0.9**
baz=74							
V13A	**Grand Canyon W**	**74.33**	**322**	⇑P	**P**	**09 48 06.3**	**+0.3**
baz=74							
R17A	**Hanksville Air**	**74.44**	**326**	⇑P	**P**	**09 48 06.7**	**+0.2**
baz=74,SNR=5.5							
P19A	**Cripple Cowboy**	**74.48**	**327**	⇑P	**P**	**09 48 07.1**	**+0.3**
baz=74,SNR=7.0							
O20A	**White River Ci**	**74.51**	**328**	⇑P	**P**	**09 48 07.1**	**+0.2**
baz=74							
GMRC	**Granite Mounta**	**74.54**	**320**	⇓P	**P**	**09 48 07.9**	**+0.7**
baz=74							
SRU	**San Rafael**	**74.86**	**326**	⇑P	**P**	**09 48 09.4**	**+0.4**
baz=75							
SRU	**San Rafael**	**74.86**	**326**	*e*P	**P**	**09 48 09.6**	**+0.7**
comp=E,3.0nm,0.8s,mb4.0							
U12A	**Valley of Fire**	**75.06**	**322**	⇑P	**P**	**09 48 10.5**	**+0.3**
baz=75							
O19A	**Miners Draw (B**	**75.07**	**328**	⇑P	**P**	**09 48 10.4**	**+0.3**
baz=75							
P18A	**Preston Nutter**	**75.11**	**327**	⇓P	**P**	**09 48 10.1**	**-0.2**
baz=75							
L21A	**Rawlins**	**75.53**	**330**	⇑P	**P**	**09 48 13.0**	**+0.3**
baz=75							
O17A	**Robinson Place**	**75.79**	**327**	⇓P	**P**	**09 48 14.6**	**+0.4**
baz=76							
T11A	**Corn Creek, Al**	**76.02**	**322**	⇓P	**P**	**09 48 16.8**	**+1.3**
baz=76							
R12A	**Pony Springs,**	**76.45**	**323**	⇓P	**P**	**09 48 18.4**	**+0.5**
baz=76							
K20A	**Yellowstone Ra**	**76.52**	**330**	⇓P	**P**	**09 48 18.1**	**-0.1**
baz=76							
P14A	**Drum Mountains**	**76.54**	**325**	⇓P	**P**	**09 48 19.0**	**+0.6**
baz=76							
ISA	**Isabella**	**76.82**	**319**	⇓P	**P**	**09 48 20.6**	**+0.4**
baz=77							
R11A	**Troy Canyon, C**	**77.00**	**323**	⇑P	**P**	**09 48 21.9**	**+0.9**
baz=77							
PKM	**Peak Mountain**	**77.13**	**318**	⇑P	**P**	**09 48 22.4**	**+0.5**
baz=77							
PDAR	**Pinedale Array**	**77.17**	**329**	P	**P**	**09 48 21.8**	**-0.2**
comp=E,0.6nm,0.5s,mb3.5,baz=133,slow=7.7,SNR=7.6							
J18A	**Kendall Valley**	**77.73**	**329**	P	**P**	**09 48 25.1**	**+0.1**
baz=78,SNR=6.0							
L15A	**Malad City**	**77.97**	**327**	⇓P	**P**	**09 48 26.1**	**-0.2**
baz=78							
NVAR	**Mina Array Bea**	**78.60**	**321**	P	**P**	**09 48 29.9**	**0.0**
comp=E,0.4nm,0.6s,mb3.2,baz=156,slow=5.0,SNR=4.4							
L13A	**Double Diamond**	**78.81**	**326**	⇓P	**P**	**09 48 31.6**	**+0.6**
baz=79							
RLMT	**Red Lodge**	**78.86**	**331**	⇑P	**P**	**09 48 31.5**	**+0.3**
baz=79							
J15A	**Blackfoot**	**79.03**	**328**	⇓P	**P**	**09 48 32.6**	**+0.5**
baz=79							
F18A	**Big Timber**	**79.67**	**331**	⇑P	**P**	**09 48 35.5**	**+0.1**
baz=80							
HLID	**Hailey**	**80.12**	**327**	⇓P	**P**	**09 48 39.1**	**+1.1**
baz=80							
HLID	**Hailey**	**80.12**	**327**	*e*P	**P**	**09 48 39.0**	**+1.0**
comp=E,3.0nm,0.8s,mb4.0							
G15A	**Dillon**	**80.37**	**329**	⇓P	**P**	**09 48 39.4**	**+0.1**
baz=80							
BOSA	**Boshof**	**80.58**	**117**	P	**P**	**09 48 40.0**	**-1.0**
comp=E,0.8nm,0.3s,mb3.8,baz=240,slow=7.4,SNR=6.6							
E17A	**Martinsdale**	**80.60**	**331**	⇓P	**P**	**09 48 40.3**	**-0.2**
baz=80							
H13A	**Challis**	**80.77**	**328**	P	**P**	**09 48 42.2**	**+0.8**
baz=81,SNR=6.2							
G13A	**Cobalt**	**81.15**	**328**	P	**P**	**09 48 44.3**	**+0.9**
baz=81,SNR=12							
D16A	**Dana Ranch, Ca**	**81.34**	**331**	⇓P	**P**	**09 48 44.9**	**+0.5**
baz=81,SNR=6.0							
C17A	**Wharram Farm,**	**81.46**	**332**	⇓P	**P**	**09 48 44.7**	**-0.2**
baz=81							
B18A	**Beardsley Farm**	**81.62**	**333**	⇑P	**P**	**09 48 45.6**	**-0.2**
baz=82							
F13A	**Darby**	**81.70**	**329**	⇓P	**P**	**09 48 46.6**	**+0.3**
baz=82,SNR=8.0							
J08A	**Circle Bar Ran**	**82.07**	**325**	⇑P	**P**	**09 48 48.8**	**+0.6**
baz=82							
E13A	**Victor**	**82.11**	**329**	⇑P	**P**	**09 48 48.9**	**+0.5**
baz=82,SNR=6.2							
G11A	**Walters Elk Ra**	**82.37**	**327**	⇓P	**P**	**09 48 50.0**	**+0.2**
baz=82							
C15A	**Salmond Ranch,**	**82.38**	**331**	⇑P	**P**	**09 48 49.9**	**+0.1**
baz=82,SNR=5.9							
D13A	**Huson**	**82.72**	**329**	⇑P	**P**	**09 48 51.5**	**-0.1**
baz=83							
E12A	**Beaver Dam Sad**	**82.75**	**328**	⇑P	**P**	**09 48 51.6**	**-0.1**
baz=83							
G09A	**Cove**	**83.04**	**326**	⇑P	**P**	**09 48 53.4**	**+0.2**
baz=83							
D12A	**Red Ives Fores**	**83.11**	**329**	⇓P	**P**	**09 48 53.4**	**-0.1**
baz=83							
C13A	**Hot Springs**	**83.20**	**330**	⇓P	**P**	**09 48 54.0**	**-0.1**
baz=83							
F10A	**Beach Ranch, E**	**83.25**	**327**	⇑P	**P**	**09 48 54.9**	**+0.6**
baz=83							
A13A	**Flathead Natio**	**84.05**	**331**	⇑P	**P**	**09 48 58.4**	**+0.1**
baz=84							
C11A	**Tepee Creek (N**	**84.10**	**329**	⇑P	**P**	**09 48 58.3**	**-0.3**
baz=84							
YKA	**Yellowknife Ar**	**94.10**	**340**	P	**P**	**09 49 44.9**	**-0.7**
comp=E,0.9nm,0.5s,mb4.2,baz=136,slow=4.6,SNR=13							
ASAR	**Alice Springs**	**128.64**	**204**	PKP	PKPdf	09 55 33.5	-1.1
comp=E,0.6nm,0.7s,baz=138,slow=1.8,SNR=9.2							
WRA	**Warramunga Arr**	**131.82**	**207**	PKP	PKPdf	09 55 39.6	-1.1
comp=E,0.6nm,0.6s,baz=152,slow=1.9,SNR=15							
WRA				SKPbc	SKPbc	09 58 46.7	-3.0
comp=E,1.3nm,0.9s,baz=153,slow=3.5,SNR=11							
MKAR	**Makanchi Array**	**146.30**	**40**	PKPbc	PKPbc	09 56 07.3	-0.3
comp=E,0.9nm,0.5s,baz=301,slow=3.2,SNR=9.8							

JMA 12 09:45:26.5±0.3,43°.54N×147°.37E,h17km±5km,M3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.20**	**262**	P	Pn	09 45 48.3	-0.1
NEM2				*e*S	Sb	09 46 04.4	+0.5
JRA	**Rausu**	**1.68**	**284**	P	Pn	09 45 55.3	+0.3
JRA				*e*S	Sn	09 46 16.7	+0.6
JNK	**Nakash**	**1.93**	**272**	P	Pn	09 45 59.1	+0.6
JTKR	**Abashiri--Toko**	**2.54**	**281**	P	Pn	09 46 08.3	+1.3
JAR	**Ashorobuto**	**2.63**	**266**	P	Pn	09 46 10.0	+1.8
JOB	**Onbets**	**2.66**	**257**	*e*S	Sn	09 46 42.0	+1.6
JMP	**Maruseppu**	**2.94**	**281**	P	Pn	09 46 14.1	+1.7
JCH	**Churui**	**3.08**	**254**	P	Pn	09 46 15.7	+1.4
JEM	**Erimo**	**3.46**	**245**	P	Pn	09 46 22.6	+3.1
JFR	**Furan**	**3.50**	**265**	P	Pn	09 46 22.6	+2.5
JNBK	**Urakawa-nobuka**	**3.62**	**251**	P	Pn	09 46 23.7	+2.0

IDC ***12*** *09:46:50.5±0.9,34°.54N×73°.95E,h0km,mb4.0/10, mb1 4.1/15,mb1mx4.0/26,mbtmp4.0/15,ML4.0/4,MS2.9/2, Ms1 2.9/2,ms1mx2.5/29, Error ellipse: s-maj=25.1km s-min=14.8km az=61.0*
NDI ***12*** *09:46:50.0±3.1,34°.84N×73°.28E,h39km±195km,ML3.8, mb3.7(NEIC)*
ISCJB ***12*** *09:

comp=E,121nm,0.4s
PTH Pithoragarh 7.29 131 *ex* x 09 48 44.3
AML Almayashu 7.59 359 *e*Pn **Pn** 09 48 45.8 +2.6
comp=E,13nm,0.6s
AML *e*Sn **Sn** 09 50 08.3 +0.2
AJM Ajmer 8.05 175 *e*PKP **Pn** 09 48 48.0 -1.6
AJM *i* S **Sn** 09 50 15.0 -4.7
AAK Ala-Archa 8.10 3 Pn **Pn** 09 48 53.0 +2.7
comp=E,0.4nm,0.3s,baz=243,slow=8.0,SNR=1.9
AAK Sn **Sn** 09 50 21.7 +1.0
baz=41,slow=18,SNR=1.8
EKS2 Erkin-Say 8.12 359 *e*Pn **Pn** 09 48 52.5 +2.0
comp=E,4.6nm,0.5s
EKS2 *e*Sn **Sn** 09 50 20.8 -0.3
TKM2 Tokmak 2 8.47 8 ⇑Pn **Pn** 09 48 57.7 +2.3
comp=E,5.0nm,0.7s
TKM2 ⇑Sn **Sn** 09 50 29.8 -0.1
comp=E,7.9nm,0.6s
TKM2 Tokmak 2 8.47 8 *e*Pn **Pn** 09 48 55.2 -0.1
comp=E,5.3nm,0.5s
KK31 Karatay Array 8.96 344 Pn **Pn** 09 49 02.3 +0.3
comp=E,17nm,0.6s,baz=170,slow=13,SNR=144
KK31 ⇓Sn **Sn** 09 50 39.5 -2.5
comp=E,15nm,0.8s,baz=176,slow=26,SNR=8.4
GKN Gorkha 11.23 123 *e*P **Pn** 09 49 33.1 -0.1
comp=E,52nm,0.3s
DMN Daman 11.80 123 *e*P **Pn** 09 49 41.1 +0.1
comp=E,30nm,0.3s
KKN Kakani 11.81 122 *e*P **Pn** 09 49 40.5 -0.7
comp=E,33nm,0.4s
PKIN Phulchoki 12.02 122 *e*P **Pn** 09 49 44.0 0.0
comp=E,36nm,0.5s
PKI Pulchoki 12.04 122 *e*P **Pn** 09 49 43.9 -0.3
comp=E,50nm,0.6s
GUN Gumba 12.16 120 *e*P **Pn** 09 49 45.3 -0.7
comp=E,68nm,0.6s
JIRN Jiri 12.54 120 *e*P **Pn** 09 49 49.7 -1.3
comp=E,102nm,0.4s
RAMN Ramite 13.25 121 *e*P **Pn** 09 49 59.4 -1.4
comp=E,40nm,0.5s
MK31 Makanchi Array 13.78 25 Pn **Pn** 09 50 09.7 +1.7
comp=E,1.7nm,0.5s,baz=213,slow=14,SNR=37
MK31 Makanchi Array 13.78 25 *e*Pn **Pn** 09 50 08.8 +0.8
MKAR Makanchi Array 13.78 25 Pn **Pn** 09 50 09.5 +1.5
comp=E,0.2nm,0.3s,baz=216,slow=13,SNR=8.0
TAPN Taplejung 13.81 117 *e*P **Pn** 09 50 06.3 -2.2
comp=E,40nm,0.5s
ODAN Odare 13.87 120 *e*P **Pn** 09 50 07.3 -1.9
comp=E,71nm,0.7s
KURK Kurchatov 16.53 11 Pn **Pn** 09 50 40.5 -3.7
comp=E,0.1nm,0.3s,baz=200,slow=11,SNR=3.1
KURK LR LR 09 57 15.4
comp=E,66nm,18.7s,baz=130,slow=38
KURK Kurchatov 16.53 11 *e*Pn **Pn** 09 50 44.6 +0.4
KURK LR LR 09 57 15.4
AB31 Akbulak array 17.98 329 ⇑Pn **Pn** 09 51 01.0 -1.3
comp=E,0.4nm,0.3s
AB31 ⇑Sn **Sn** 09 54 10.8 -11
comp=E,2.0nm,0.7s
ABKAR Akbulak array 17.98 329 *e*Pn **Pn** 09 51 00.6 -1.6
comp=E,1.4nm,0.4s
VOSK Vostochnaya 18.31 354 ⇑Pn **Pn** 09 51 07.2 +1.0
comp=E,4.8nm,1.1s
BVAR Borovoye Array 18.66 353 P **Pn** 09 51 08.2 -2.3
comp=E,1.0nm,0.3s,baz=146,slow=8.6,SNR=14
BRVK Borovoye 18.70 353 ⇓Pn **Pn** 09 51 10.6 -0.5
comp=E,21nm,1.4s
BRVK Borovoye 18.70 353 *e*Pn **Pn** 09 51 10.4 -0.6
comp=E,8.6nm,0.8s
ZRNK Zerenda 18.74 351 ⇓Pn **Pn** 09 51 11.6 0.0
comp=E,4.2nm,0.9s
AKTK Aktyubinsk 19.69 329 P **Pn** 09 51 20.1 -2.8
AKTK S **Sn** 09 54 55.5 -7.5
AKTO Aktyubinsk 19.69 329 P **Pn** 09 51 20.1 -2.8
comp=E,1.0nm,0.3s,baz=130,slow=8.8,SNR=17
AKTO S **Sn** 09 54 55.5 -7.5
comp=E,0.1nm,0.3s,baz=184,slow=19,SNR=4.5
ZALV Zalesovo Beam 20.87 18 P **P** 09 51 33.7 -0.4
comp=E,6.2nm,0.6s,baz=216,slow=11,SNR=17
ZALV LR LR 10 00 09.7
comp=E,25nm,20.4s,baz=285,slow=38
ZALV Zalesovo Beam 20.87 18 P **P** 09 51 33.7 -0.4
ZALV LR LR 10 00 09.7
GTA Gaotai 21.21 69 *e*P **P** 09 51 41.6 +3.6
GTA pP 09 51 46.0
GTA sP sP 09 51 49.4 -0.5
GTA pmax pmax
comp=Z,9.0nm,1.1s,mb4.0
CMAR Chiang Mai Arr 27.41 119 P **P** 09 52 38.2 +0.5
comp=Z,2.0nm,0.7s,mb3.8,baz=304,slow=11,SNR=13
SONM Songino Array 27.59 51 P **P** 09 52 39.5 +0.4
comp=Z,0.8nm,0.5s,mb3.6,baz=256,slow=9.0,SNR=9.0
FINES FINESS Array B 40.44 327 P **P** 09 54 30.9 +0.9
comp=Z,1.3nm,0.7s,mb3.8,baz=115,slow=8.0,SNR=6.3
ARCES ARCESS Array B 43.87 338 P **P** 09 54 58.8 +0.8
comp=Z,0.6nm,0.4s,mb3.7,baz=110,slow=8.1,SNR=14
NB2 NORSAR Subarra 47.38 324 P **P** 09 55 27.3 +1.5
comp=Z,0.7nm,0.7s,mb3.7,baz=97,slow=7.9
NOA NORSAR Array B 47.38 324 P **P** 09 55 26.2 +0.4
comp=Z,1.0nm,0.7s,mb3.9,baz=97,slow=7.7,SNR=4.2
NOA NORSAR Array B 47.38 324 P **P** 09 55 26.2 +0.4
DBIC Dimbokro 77.02 269 P **P** 09 58 46.0 +0.8
comp=Z,2.6nm,0.7s,mb4.3,baz=90,slow=6.1,SNR=3.2
DBIC Dimbokro 77.02 269 P **P** 09 58 46.0 +0.8
WRA Warramunga Arr 78.92 124 P **P** 09 58 55.7 +0.2
comp=Z,0.7nm,0.5s,mb3.9,baz=322,slow=4.7,SNR=25
WRA Warramunga Arr 78.92 124 P **P** 09 58 55.7 +0.2
ASAR Alice Springs 81.17 127 P **P** 09 59 07.9 +0.4
comp=Z,0.5nm,0.5s,mb3.7,baz=311,slow=5.4,SNR=14
YKA Yellowknife Ar 83.07 4 P **P** 09 59 16.7 -0.2
comp=Z,0.9nm,0.5s,mb4.0,baz=345,slow=5.4,SNR=10.0

ISCJB ***12*** *10:06:32.7±0.5, 38°.30S±0°.03×176°.95E±0°.05, h105km±5km, mb3.4/2, Error ellipse: s-maj=6.7km s-min=5.2km az=170.7*
IDC ***12*** *10:06:32.5±1.9, 38°.56S×176°.97E, h81km±10km, mb3.0/2, mb1 3.4/3, mb1mx3.3/12, mbtmp3.2/3, Error ellipse: s-maj=58.5km s-min=17.8km az=120.0*
WEL ***12*** *10:06:35.2±0.2, 38°.20S×176°.91E, h82km±1km, ML4.2/19, Error ellipse: s-maj=1.1km s-min=1.0km az=90.0*
WEL Felt from Bay of Plenty to Hawke"s Bay, maximum reported intensity MM 4.
NEIC ***12*** *10:06:35.2, 38°.20S×176°.91E, h82km, ML4.2(WEL), After WEL.*
NEIC Felt at Opotiki and Whakatane.

ISC 12 10:06:33.8±0.5, 38°.30S±0°.03×176°.93E±0°.05, h95km±4km, n146, σ1°.34/154, mb3.4/2, 3C, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.15**	**77**	P*	**Pn**	10 06 46.8	-0.5
URZ				S*	**Sn**	10 06 55.8	-1.5
URZ	**Urewera**	**0.15**	**77**	P	**Pn**	10 06 46.8	-0.5
URZ				S	**Sn**	10 06 56.1	-1.2
URZ	**Urewera**	**0.15**	**77**	P	**Pn**	10 06 46.8	-0.5
URZ				S	**Sn**	10 06 55.8	-1.5
EDRZ	**Edgecumbe**	**0.24**	**321**	⇑P*	**Pn**	10 06 47.1	-0.5
EDRZ				S*	**Sn**	10 06 56.1	-1.7
EDRZ	**Edgecumbe**	**0.24**	**321**	P	**Pn**	10 06 47.1	-0.5
EDRZ				S	**Sn**	10 06 56.1	-1.7
RRRZ	**Republican Roa**	**0.33**	**262**	⇑P*	**Pn**	10 06 47.9	-0.1
TARZ	**Mount Tarawera**	**0.34**	**280**	P*	**Pn**	10 06 48.1	0.0
MARZ	**Manawahe**	**0.37**	**327**	P*	**Pn**	10 06 47.6	-0.6
MARZ				S*	**Sn**	10 06 57.1	-1.9
MARZ	**Manawahe**	**0.37**	**327**	P	**Pn**	10 06 47.6	-0.6
MKRZ	**Makatiti**	**0.39**	**293**	P*	**Pn**	10 06 48.6	+0.2
MKRZ	**Makatiti**	**0.39**	**293**	P	**Pn**	10 06 48.6	+0.2
PRRZ	**Plateau Road**	**0.47**	**244**	P*	**Pn**	10 06 49.1	+0.2
MWZ	**Matawai**	**0.47**	**95**	P*	**Pn**	10 06 49.2	+0.3
MWZ				S*	**Sn**	10 06 59.3	-0.9
MWZ	**Matawai**	**0.47**	**95**	P	**Pn**	10 06 49.2	+0.3
OMRZ	**Omania**	**0.48**	**293**	P*	**Pn**	10 06 48.6	-0.3
HRRZ	**Handcock Road**	**0.52**	**259**	P*	**Pn**	10 06 49.3	+0.1
LIRZ	**Lichensteins R**	**0.52**	**304**	P*	**Pn**	10 06 48.8	-0.5
LIRZ	**Lichensteins R**	**0.52**	**304**	P	**Pn**	10 06 48.8	-0.5
ALRZ	**Allen Road**	**0.53**	**239**	P*	**Pn**	10 06 49.7	+0.4
OPRZ	**Ohinepanea**	**0.54**	**327**	⇑P*	**Pn**	10 06 48.5	-1.0
OPRZ				S*	**Sn**	10 06 58.3	-2.7
UTU	**Utuhina**	**0.59**	**281**	P*	**Pn**	10 06 50.0	+0.2
UTU	**Utuhina**	**0.59**	**281**	P	**Pn**	10 06 50.0	+0.2
KARZ	**Kaharoa**	**0.60**	**297**	P*	**Pn**	10 06 49.5	-0.5
KARZ	**Kaharoa**	**0.60**	**297**	P	**Pn**	10 06 49.5	-0.5
RAHZ	**Arahi**	**0.64**	**169**	PN	**Pn**	10 06 51.9	+1.6
TGRZ	**Tauranga**	**0.77**	**317**	P*	**Pn**	10 06 50.7	-0.8
TGRZ	**Tauranga**	**0.77**	**317**	P	**Pn**	10 06 50.7	-0.8
WIZ	**White Island**	**0.79**	**15**	P*	**Pn**	10 06 50.6	-1.1
WIZ	**White Island**	**0.79**	**15**	P	**Pn**	10 06 50.6	-1.1
NMHZ	**Naumai**	**0.81**	**187**	PN	**Pn**	10 06 53.7	+1.9
WHTZ	**Whakaora**	**0.85**	**244**	P*	**Pn**	10 06 53.4	+1.2
WHTZ	**Whakaora**	**0.85**	**244**	P	**Pn**	10 06 53.4	+1.1
KNZ	**Kokohu**	**0.93**	**141**	PN	**Pn**	10 06 54.2	+1.0
BKZ	**Black Stump Fm**	**0.94**	**201**	P*	**Pn**	10 06 54.3	+1.1
BKZ	**Black Stump Fm**	**0.94**	**201**	P	**Pn**	10 06 54.3	+1.1
PRGZ	**Paritu Road**	**0.98**	**130**	PN	**Pn**	10 06 54.8	+1.1
CNGZ	**Carnagh Statio**	**1.02**	**101**	PN	**Pn**	10 06 55.6	+1.4
WATZ	**Wairara**	**1.02**	**246**	P*	**Pn**	10 06 55.0	+0.8
WATZ	**Wairara**	**1.02**	**246**	P	**Pn**	10 06 55.0	+0.8
PUZ	**Puketiti**	**1.07**	**78**	PN	**Pn**	10 06 54.9	+0.2
PUZ	**Puketiti**	**1.07**	**78**	P	**Pn**	10 06 54.9	+0.2
RATZ	**Rangitukua**	**1.07**	**237**	P*	**Pn**	10 06 55.8	+1.1
RATZ	**Rangitukua**	**1.07**	**237**	P	**Pn**	10 06 55.8	+1.1
RITZ	**Rihia Road**	**1.08**	**230**	P	**Pn**	10 06 59.2	+4.4
MYRZ	**Mayor Island**	**1.15**	**332**	P*	**Pn**	10 06 55.2	-0.4
MHGZ	**Mahia Peninsul**	**1.15**	**139**	PN	**Pn**	10 06 57.0	+1.4
MCHZ	**McNeill Hill**	**1.16**	**189**	PN	**Pn**	10 06 57.5	+1.7
KATZ	**Kakaramea**	**1.18**	**234**	P*	**Pn**	10 06 57.1	+1.2
KATZ	**Kakaramea**	**1.18**	**234**	P	**Pn**	10 06 57.1	+1.1
TOZ	**Tahuroa Road**	**1.26**	**296**	P*	**Pn**	10 06 56.6	-0.3
TOZ	**Tahuroa Road**	**1.26**	**296**	P	**Pn**	10 06 56.6	-0.3
KRVZ	**Karewarewa**	**1.29**	**231**	P*	**Pn**	10 06 58.8	+1.6
MXZ	**Matakaoa Point**	**1.31**	**57**	P*	**Pn**	10 06 58.6	+1.1
MXZ	**Matakaoa Point**	**1.31**	**57**	P	**Pn**	10 06 58.6	+1.1
OTVZ	**Oturere**	**1.31**	**228**	P*	**Pn**	10 06 59.3	+1.7
WTVZ	**West Tongariro**	**1.33**	**231**	P*	**Pn**	10 06 59.2	+1.5
NGZ	**Ngauruhoe**	**1.36**	**229**	P*	**Pn**	10 06 59.9	+1.8
NGZ	**Ngauruhoe**	**1.36**	**229**	P	**Pn**	10 06 59.9	+1.8
CKHZ	**Cape Kidnapper**	**1.37**	**175**	PN	**Pn**	10 06 59.3	+1.1
TUVZ	**Tukino**	**1.39**	**225**	P*	**Pn**	10 07 00.2	+1.7
TUVZ	**Tukino**	**1.39**	**225**	P	**Pn**	10 07 00.2	+1.7
TWVZ	**Taurewa**	**1.40**	**236**	P*	**Pn**	10 06 59.9	+1.3
TWVZ	**Taurewa**	**1.40**	**236**	P	**Pn**	10 06 59.9	+1.3
WPVZ	**Whakapapa**	**1.41**	**229**	P*	**Pn**	10 07 00.2	+1.5
FWVZ	**Far West T-bar**	**1.44**	**228**	P*	**Pn**	10 07 00.5	+1.4
FWVZ	**Far West T-bar**	**1.44**	**228**	P	**Pn**	10 07 00.5	+1.4
MOVZ	**Moawhango**	**1.44**	**219**	P*	**Pn**	10 07 00.2	+1.1
DRZ	**Dome Shelter**	**1.45**	**227**	P*	**Pn**	10 07 00.9	+1.8
DRZ	**Dome Shelter**	**1.45**	**227**	P	**Pn**	10 07 00.9	+1.7
WNVZ	**Wahianoa**	**1.46**	**225**	P*	**Pn**	10 07 00.9	+1.6
WNVZ	**Wahianoa**	**1.46**	**225**	P	**Pn**	10 07 00.9	+1.5
TRVZ	**Turoa**	**1.47**	**227**	P*	**Pn**	10 07 01.1	+1.6
KAHZ	**Kahuranaki**	**1.50**	**181**	PN	**Pn**	10 07 00.9	+1.1
MTVZ	**Mangateitei**	**1.58**	**226**	P*	**Pn**	10 07 02.2	+1.5
PKVZ	**Pokaka**	**1.58**	**231**	P*	**Pn**	10 07 02.5	+1.6
HIZ	**Hauiti**	**1.64**	**262**	PN	**Pn**	10 07 02.5	+0.9
HIZ	**Hauiti**	**1.64**	**262**	P	**Pn**	10 07 02.5	+0.9
PNHZ	**Pukenui**	**1.71**	**199**	PN	**Pn**	10 07 03.0	+0.5
PXZ	**Pawanui**	**1.74**	**182**	PN	**Pn**	10 07 03.1	+0.3
KUZ	**Kuaotunu**	**1.82**	**328**	PN	**Pn**	10 07 03.5	-0.4
KUZ	**Kuaotunu**	**1.82**	**328**	P	**Pn**	10 07 03.5	-0.4
MKAZ	**Moumakai**	**1.83**	**310**	PN	**Pn**	10 07 03.9	-0.1
VRZ	**Vera Road**	**1.89**	**243**	PN	**Pn**	10 07 06.1	+1.3
TSZ	**Takapari Road**	**1.92**	**203**	PN	**Pn**	10 07 05.3	+0.2
TSZ	**Takapari Road**	**1.92**	**203**	P	**Pn**	10 07 05.3	+0.2
PRHZ	**Porangahau**	**1.98**	**186**	PN	**Pn**	10 07 06.1	+0.1
DVHZ	**Dannevirke**	**2.09**	**196**	PN	**Pn**	10 07 06.7	-0.6
WAZ	**Wanganui**	**2.10**	**225**	PN	**Pn**	10 07 09.1	+1.6
WAZ	**Wanganui**	**2.10**	**225**	P	**Pn**	10 07 09.1	+1.6
RAEZ	**Rainy Point**	**2.21**	**243**	PN	**Pn**	10 07 11.5	+2.5
RAEZ	**Rainy Point**	**2.21**	**243**	P	**Pn**	10 07 11.5	+2.5
DREZ	**Durham Road**	**2.31**	**246**	PN	**Pn**	10 07 12.9	+2.6
RVAZ	**Riverhead Bore**	**2.41**	**308**	PN	**Pn**	10 07 11.8	+0.3
MRZ	**Mangatainoka R**	**2.58**	**203**	PN	**Pn**	10 07 13.1	-0.8
MRZ	**Mangatainoka R**	**2.58**	**203**	P	**Pn**	10 07 13.1	-0.8
TIWZ	**Tintock**	**2.61**	**198**	PN	**Pn**	10 07 13.9	-0.3
HOWZ	**Holdsworth Sta**	**2.82**	**202**	PN	**Pn**	10 07 15.1	-2.0
OGWZ	**Otaki Gorge**	**2.86**	**208**	PN	**Pn**	10 07 16.7	-0.9
TMWZ	**Te Maipa**	**2.92**	**196**	PN	**Pn**	10 07 17.4	-1.0
KIW	**Kapiti Island**	**3.00**	**211**	PN	**Pn**	10 07 18.4	-1.0
KIW	**Kapiti Island**	**3.00**	**211**	P	**Pn**	10 07 18.4	-1.0
MTW	**Mount Morrison**	**3.06**	**201**	PN	**Pn**	10 07 18.8	-1.5
MTW	**Mount Morrison**	**3.06**	**201**	P	**Pn**	10 07 18.8	-1.5
CAW	**Cannon Point**	**3.15**	**206**	PN	**Pn**	10 07 20.0	-1.5
CAW	**Cannon Point**	**3.15**	**206**	P	**Pn**	10 07 20.0	-1.5
TRWZ	**Traveller**	**3.25**	**197**	PN	**Pn**	10 07 21.3	-1.4
PAWZ	**Paruwai Farm**	**3.29**	**200**	PN	**Pn**	10 07 21.6	-1.7
PAWZ	**Paruwai Farm**	**3.29**	**200**	P	**Pn**	10 07 21.6	-1.8
MSWZ	**Moikau Station**	**3.37**	**202**	PN	**Pn**	10 07 22.5	-2.0
MSWZ	**Moikau Station**	**3.37**	**202**	P	**Pn**	10 07 22.5	-2.0
DUWZ	**D'Urville Isla**	**3.42**	**222**	PN	**Pn**	10 07 23.8	-1.3
WEL	**Wellington**	**3.42**	**208**	PN	**Pn**	10 07 23.2	-1.9
WEL	**Wellington**	**3.42**	**208**	P	**Pn**	10 07 23.2	-1.9
SNZO	**South Karori**	**3.46**	**209**	PN	**Pn**	10 07 23.8	-1.9
SNZO	**South Karori**	**3.46**	**209**	P	**Pn**	10 07 23.8	-1.9
BHW	**Baring Head**	**3.49**	**206**	PN	**Pn**	10 07 23.8	-2.2
BHW	**Baring Head**	**3.49**	**206**	P	**Pn**	10 07 23.8	-2.2
PLWZ	**Palliser**	**3.52**	**201**	PN	**Pn**	10 07 24.2	-2.2
TCW	**Tory Channel**	**3.56**	**214**	PN	**Pn**	10 07 25.2	-1.7
NNZ	**Nelson**	**4.00**	**222**	PN	**Pn**	10 07 30.7	-2.2
OUZ	**Omahuta**	**4.07**	**318**	*e*Pn	**Pn**	10 07 34.9	+1.0
BSWZ	**Blackbirch Sta**	**4.14**	**213**	PN	**Pn**	10 07 32.8	-2.0
BSWZ	**Blackbirch Sta**	**4.14**	**213**	P	**Pn**	10 07 32.8	-2.0
QRZ	**Quartz Range**	**4.24**	**232**	PN	**Pn**	10 07 34.5	-1.6
QRZ	**Quartz Range**	**4.24**	**232**	P	**Pn**	10 07 34.5	-1.6
THZ	**Tophouse**	**4.64**	**220**	PN	**Pn**	10 07 39.3	-2.2
THZ	**Tophouse**	**4.64**	**220**	P	**Pn**	10 07 39.3	-2.3
DSZ	**Denniston Nort**	**5.23**	**227**	PN	**Pn**	10 07 46.9	-2.6
DSZ	**Denniston Nort**	**5.23**	**227**	P	**Pn**	10 07 46.9	-2.7
LTZ	**Lake Taylor**	**5.72**	**217**	PN	**Pn**	10 07 52.5	-3.6
MQZ	**McQueen's Vall**	**6.30**	**210**	PN	**Pn**	10 07 59.3	-4.7
WVZ	**Waitaha Valley**	**6.70**	**223**	PN	**Pn**	10 08 06.6	-3.0
WVZ	**Waitaha Valley**	**6.70**	**223**	P	**Pn**	10 08 06.6	-3.0
RPZ	**Rata Peaks**	**7.00**	**217**	PN	**Pn**	10 08 10.5	-3.2
RPZ	**Rata Peaks**	**7.00**	**217**	P	**Pn**	10 08 11.0	-2.7
3.5nm,0.3s,baz=28,slow=4.8,SNR=18							
RPZ				S	**Sn**	10 09 25.0	-6.7
3.1nm,0.3s,baz=335,slow=19,SNR=11							
RPZ	**Rata Peaks**	**7.00**	**217**	P	**Pn**	10 08 10.5	-3.1
ODZ	**Otahua Downs**	**8.22**	**213**	PN	**Pn**	10 08 25.4	-4.8
JCZ	**Jackson Bay**	**8.44**	**224**	PN	**Pn**	10 08 28.6	-4.6
JCZ	**Jackson Bay**	**8.44**	**224**	P	**Pn**	10 08 28.6	-4.6
TUZ	**Tuapeka**	**9.38**	**213**	PN	**Pn**	10 08 42.1	-3.8
TUZ	**Tuapeka**	**9.38**	**213**	P	**Pn**	10 08 42.1	-3.8
SYZ	**Scrubby Hill**	**10.05**	**212**	PN	**Pn**	10 08 51.4	-3.6
SYZ	**Scrubby Hill**	**10.05**	**212**	P	**Pn**	10 08 51.4	-3.6
ASAR	**Alice Springs**	**39.31**	**279**	P	**P**	10 13 54.7	+1.2
0.2nm,0.3s,mb3.5,baz=130,slow=8.5,SNR=9.9							
WRA	**Warramunga Arr**	**41.04**	**284**	P	**P**	10 14 08.6	+0.7
0.3nm,0.6s,mb3.3,baz=120,slow=8.3,SNR=4.6							
ARCES	**ARCESS Array B**	**145.16**	**343**	PKPbc	PKPbc	10 25 58.3	-0.5
1.0nm,1.0s,baz=35,slow=4.4,SNR=5.2							

IDC ***12*** *10:24:48.4±1.7, 34°.39N×26°.99E, h0km, mb3.9/8, mb1 3.8/11, mb1mx3.7/23, mbtmp3.8/11, ML3.7/3, MS2.6/1, Ms1 2.6/1, ms1mx2.0/35, Error ellipse: s-maj=37.6km s-min=20.8km az=25.0*
ISCJB ***12*** *10:24:51.9±0.4, 34°.25N±0°.04×27°.15E±0°.03, h58km±7km, mb3.6/8, Error ellipse: s-maj=6.2km s-min=3.8km az=24.2*
ATH ***12*** *10:24:53.3, 34°.42N×27°.06E, h86km±9km*
CSEM ***12*** *10:24:53.7±0.2, 34°.28N×27°.10E, h60km, ML3.7, Error ellipse: s-maj=6.1km s-min=3.9km az=27.0*
HLW ***12*** *10:24:56.4, 33°.95N×27°.18E, h33km±52km, Md3.2, Ml3.7*

ISC 12 10:24:53.4±0.3, 34°.27N±0°.04×27°.12E±0°.03, h47km±7km, n58, σ0°.87/78, mb3.6/8, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**1.13**	**319**	*e*P	**Pn**	10 25 12.9	+0.1
ZKR				*e*S	**Sn**	10 25 28.4	+1.3
ZKR	**Zakros**	**1.13**	**319**	*e*P	**Pn**	10 25 12.9	+0.1
ZKR				*e*S	**Sn**	10 25 28.4	+1.3
NPS	**Neapolis**	**1.59**	**309**	*e*P	**Pn**	10 25 19.5	+0.4
NPS				*e*S	**Sn**	10 25 37.5	-1.0
NPS	**Neapolis**	**1.59**	**309**	*e*P	**Pn**	10 25 19.5	+0.4
NPS				*e*S	**Sn**	10 25 37.5	-1.0
LAST	**Lasithi**	**1.62**	**304**	*e*P	**Pn**	10 25 19.8	+0.3
LAST				*e*S	**Sn**	10 25 38.6	-0.6
LAST	**Lasithi**	**1.62**	**304**	*e*P	**Pn**	10 25 19.8	+0.3
LAST				*e*S	**Sn**	10 25 38.6	-0.6
SIVA	**Sivas**	**2.05**	**292**	*e*P	**Pn**	10 25 26.1	+0.7
SIVA				*e*S	**Sn**	10 25 48.9	-0.8
SIVA	**Sivas**	**2.05**	**292**	*e*P	**Pn**	10 25 26.1	+0.7
SIVA				*e*S	**Sn**	10 25 48.9	-0.8
IDI	**Anoyia**	**2.10**	**300**	*e*P	**Pn**	10 25 27.0	+0.9
IDI				*e*S	**Sn**	10 25 50.5	-0.5
IDI	**Anoyia**	**2.10**	**300**	*e*P	**Pn**	10 25 27.0	+0.9
IDI				*e*S	**Sn**	10 25 50.5	-0.5
GVD	**Gavdhos**	**2.57**	**284**	*e*P	**Pn**	10 25 33.1	+0.6
GVD				*e*S	**Sn**	10 26 02.7	+0.2
GVD	**Gavdhos**	**2.57**	**284**	*e*P	**Pn**	10 25 33.1	+0.6
GVD				*e*S	**Sn**	10 26 02.7	+0.2
VAM	**Vamos**	**2.66**	**296**	*e*P	**Pn**	10 25 34.4	+0.7
VAM				*e*S	**Sn**	10 26 05.2	+0.5
VAM	**Vamos**	**2.66**	**296**	*e*P	**Pn**	10 25 34.4	+0.7
VAM				*e*S	**Sn**	10 26 05.2	+0.5
AKAS	**Kas**	**2.82**	**45**	*i* P	**Pn**	10 25 36.6	+0.6
AKAS	**Kas**	**2.82**	**45**	*i* P	**Pn**	10 25 36.6	+0.6
AKAS				*i* S	**Sn**	10 26 07.6	-1.2
TURN	**Turunc**	**2.87**	**24**	*i* P	**Pn**	10 25 35.1	-1.5
TURN	**Turunc**	**2.87**	**24**	*i* P	**Pn**	10 25 35.1	-1.5
KARN	**Karanos**	**2.87**	**294**	*e*P	**Pn**	10 25 37.3	+0.7
KARN				*e*S	**Sn**	10 26 09.6	-0.3
KARN	**Karanos**	**2.87**	**294**	*e*P	**Pn**	10 25 37.3	+0.7
KARN				*e*S	**Sn**	10 26 09.6	-0.3
HMAT	**Matruh**	**3.17**	**180**	P	**Pn**	10 25 40.5	-0.2
baz=182							
HMAT	**Matruh**	**3.17**	**180**	P	**Pn**	10 25 40.5	-0.2
SLUM		**3.20**	**211**	P	**Pn**	10 25 40.8	-0.4
baz=215							
SLUM				AMP		10 26 00.0	
comp=E,260μm,0.3s,logA/T=6.0,baz=215							
SLUM		**3.20**	**211**	P	**Pn**	10 25 40.8	-0.4
AYDN	**Tasoluk**	**3.44**	**10**	*i* P	**Pn**	10 25 44.9	+0.4
AYDN	**Tasoluk**	**3.44**	**10**	*i* P	**Pn**	10 25 44.9	+0.4
GOLH	**Golhisar**	**3.56**	**33**	*i* P	**Pn**	10 25 47.8	+1.6
GOLH	**Golhisar**	**3.56**	**33**	*i* P	**Pn**	10 25 47.8	+1.6
DNZL	**Cakiroluk**	**3.75**	**24**	*i* P	**Pn**	10 25 48.9	+0.2
DNZL	**Cakiroluk**	**3.75**	**24**	*i* P	**Pn**	10 25 48.9	+0.1
KORT	**Korkueli**	**3.79**	**43**	*i* P	**Pn**	10 25 50.7	+1.4
KORT	**Korkueli**	**3.79**	**43**	*i* P	**Pn**	10 25 50.7	+1.5
KYTH	**Kithira**	**3.90**	**302**	*e*P	**Pn**	10 25 50.2	-0.6
KYTH	**Kithira**	**3.90**	**302**	*e*P	**Pn**	10 25 50.2	-0.6
VLI	**Veliai**	**4.20**	**307**	*e*P	**Pn**	10 25 53.3	-1.6
VLI	**Veliai**	**4.20**	**307**	*e*P	**Pn**	10 25 53.3	-1.6
GAZI	**Gazipasa**	**4.68**	**64**	*i* P	**Pn**	10 26 00.7	-0.8
GAZI	**Gazipasa**	**4.68**	**64**	*i* P	**Pn**	10 26 00.7	-0.8
GAZI				*i* S	**Sn**	10 26 50.7	-3.8
KOT	**Kottamia**	**5.89**	**136**	P	**Pn**	10 26 18.4	+0.4
baz=134							
KOT				S	**Sn**	10 27 21.0	-3.3
baz=134							
HSAF	**As Saff**	**5.97**	**140**	P	**Pn**	10 26 19.8	+0.5
baz=138							
AWBH		**6.12**	**165**	P	**Pn**	10 26 21.2	-0.1
baz=164							
AWBH		**6.12**	**165**	P	**Pn**	10 26 21.2	-0.1
MMAI	**Mount Meron Ar**	**7.02**	**98**	Pn	**Pn**	10 26 33.0	-0.5
comp=E,0.6nm,0.3s,baz=283,slow=13,SNR=3.8							
MMAI	

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UGM	**Wanagama**	**0.93**	**4**	P	**Pn**	**10 34 27.6**	**-1.4**
UGM				S	**Sn**	**10 34 42.0**	**-0.6**
PCJI	**Pacitan**	**0.96**	**48**	P	**Pn**	**10 34 26.5**	**-2.8**
PCJI				S	**Sn**	**10 34 40.9**	**-2.3**
YOGI	**Yogyakarta**	**1.04**	**351**	P	**Pn**	**10 34 28.8**	**-1.4**
YOGI				S	**Sn**	**10 34 44.8**	**0.0**
PWJI	**Pagerwojo**	**1.56**	**58**	P	**Pn**	**10 34 35.0**	**-1.8**
PWJI				S	**Sn**	**10 34 56.5**	**-0.1**
SJI	**Sawahan**	**1.70**	**50**	P	**Pn**	**10 34 38.0**	**-0.6**
SJI				S	**Sn**	**10 35 01.6**	**+1.8**
NGJI	**Ngawi**	**1.77**	**34**	P	**Pn**	**10 34 42.0**	**+2.4**
NGJI				S	**Sn**	**10 35 11.0**	**+9.5**
SMRI	**Semarang**	**1.79**	**359**	P	**Pn**	**10 34 41.3**	**+1.5**
SMRI				S	**Sn**	**10 35 08.1**	**+6.3**
CLJI	**Cilicap**	**1.82**	**308**	P	**Pn**	**10 34 38.5**	**-1.7**
CLJI				S	**Sn**	**10 35 02.5**	**-0.1**
KRKI	**Karangkates**	**2.09**	**71**	P	**Pn**	**10 34 42.8**	**-0.9**
KRKI				S	**Sn**	**10 35 09.3**	**+0.3**
CMJI	**Cimerak**	**2.25**	**298**	S	**Sn**	**10 35 10.6**	**-2.4**
GMJI	**Gumukmas**	**3.00**	**79**	P	**Pn**	**10 34 55.9**	**-0.2**
JCJI	**Jatiwangi**	**3.19**	**317**	P	**Pn**	**10 34 56.6**	**-2.1**
JCJI				S	**Sn**	**10 35 34.9**	**-0.8**
LEM	**Lembang**	**3.46**	**305**	P	**Pn**	**10 35 03.2**	**+0.9**
BYJI	**Banyuwangi**	**3.90**	**81**	P	**Pn**	**10 35 09.3**	**+1.0**
KMMI	**Kalianget**	**3.91**	**63**	P	**Pn**	**10 35 09.1**	**+0.8**
NBBI	**Negara**	**4.14**	**84**	P	**Pn**	**10 35 12.3**	**+0.8**
SKJI	**Sukabumi**	**4.28**	**295**	P	**Pn**	**10 35 13.1**	**-0.3**
SRBI	**Singaraja**	**4.76**	**81**	P	**Pn**	**10 35 20.4**	**+0.4**
KHKI	**Kahang-Kahang** 1.3nm4μm156nm,0.7s	**5.11**	**85**	P	**Pn**	**10 35 25.9**	**+1.1**
CGJI	**Cibinong** 1.2nm6μm300nm,0.8s	**5.22**	**295**	P	**Pn**	**10 35 24.9**	**-1.4**
RBSI	**Rajabasa** 0.9nm248nm,1.2s	**5.55**	**302**	P	**Pn**	**10 35 31.9**	**+1.1**
KASI	**Kota Agung** 0.4nm2μm90nm,1.0s	**6.78**	**299**	P	**Pn**	**10 35 48.6**	**+1.1**
KLI	**Kotabumi** 0.5nm126nm,0.9s	**6.83**	**305**	P	**Pn**	**10 35 50.1**	**+1.9**
KLSI	**Kotabumi** 0.3nm90nm,1.2s	**7.03**	**306**	P	**Pn**	**10 35 53.6**	**+2.6**
MDSI	**Maura Dua** 0.2nm40nm,0.8s	**7.60**	**304**	P	**Pn**	**10 36 00.7**	**+2.0**
KBKI	**Kotabaru** 0.4nm6μm34nm,1.1s	**7.91**	**46**	P	**Pn**	**10 36 05.0**	**+2.0**
LHSI	**Lahat** 41nm,0.9s	**8.51**	**305**	P	**Pn**	**10 36 13.3**	**+2.1**
MNAI	**Manna** 313nm,1.1s	**8.69**	**300**	P	**Pn**	**10 36 14.9**	**+1.3**
KSI	**Kapahiang** 127nm,0.7s	**9.37**	**303**	P	**Pn**	**10 36 24.4**	**+1.5**
TTSI	**Tana Toraja**	**10.95**	**59**	P	**Pn**	**10 36 52.0**	**+7.6**
MBWA	**Marble Bar**	**15.16**	**145**	*e*P	**Pn**	**10 37 33.4**	**-6.9**
MBWA	**Marble Bar** 7.7nm,0.4s	**15.16**	**145**	*e*Pn	**Pn**	**10 37 33.6**	**-6.7**
KKM	**Kota Kinabalu** 12nm,0.9s	**15.87**	**21**	*e*Pn	**Pn**	**10 37 45.1**	**-4.3**
MYLDM	**Lahad Datu** 23nm,1.3s	**16.07**	**30**	P	**Pn**	**10 37 57.0**	**+5.0**
PSI	**Prapat** comp=Z,183nm,19.7s,baz=24,slow=40	**16.31**	**315**	LR	LR	10 44 51.2	
FITZ	**Fitzroy Crossi** 36nm,0.6s	**17.38**	**124**	*e*P	**Pn**	**10 38 04.8**	**-3.3**
FITZ	**Fitzroy Crossi** 1.2nm,0.3s,baz=290,slow=5.8,SNR=20	**17.38**	**124**	P	**Pn**	**10 38 05.0**	**-3.1**
FITZ	0.3nm,0.3s,baz=195,slow=20,SNR=2.7			S	**Sn**	**10 41 03.8**	**-17**
FITZ	comp=Z,66nm,20.5s,baz=132,slow=33			LR	LR	10 43 36.9	
FITZ	**Fitzroy Crossi** 82nm,0.8s	**17.38**	**124**	P	**Pn**	**10 38 06.3**	**-1.8**
LBMI	**Labuha**	**18.82**	**65**	P	**Pn**	**10 38 31.2**	**+5.6**
KNA	**Kununurra** 580nm66nm,0.9s	**19.15**	**113**	P	**Pn**	**10 38 27.5**	**-1.9**
KAKA	**Kakadu** 14nm,0.5s,mb4.6	**21.93**	**102**	*e*P	**P**	**10 38 58.5**	**+0.8**
KAKA	**Kakadu** 44nm,0.6s,mb5.0	**21.93**	**102**	*e*P	**P**	**10 38 57.2**	**-0.5**
KAKA				*e*S	**S**	**10 43 00.4**	**+5.0**
KAKA	**Kakadu** 337nm41nm,0.6s,mb4.9	**21.93**	**102**	P	**P**	**10 38 59.4**	**+1.7**
SWI	**Sorong** 23nm,1.0s,mb4.5	**22.18**	**70**	P	**P**	**10 39 02.9**	**+2.6**
WRA	**Warramunga Arr** 7.9nm,0.5s,mb4.4,baz=290,slow=11,SNR=105	**25.59**	**118**	P	**P**	**10 39 32.5**	**0.0**
WRA	comp=Z,48nm,19.7s,baz=230,slow=34			LR	LR	10 48 44.0	
WRA	**Warramunga Arr**	**25.59**	**118**	P	**P**	**10 39 32.5**	**0.0**
WRA				LR	LR	10 48 44.0	
WRAB	**Tennant Creek** 9.7nm,0.6s,mb4.4	**25.59**	**118**	*e*P	**P**	**10 39 32.0**	**-0.5**
WRAB	**Tennant Creek**	**25.59**	**118**	P	**P**	**10 39 33.1**	**+0.6**
ASAR	**Alice Springs** 3.7nm,0.6s,mb4.1,baz=304,slow=9.5,SNR=46	**26.84**	**126**	P	**P**	**10 39 43.6**	**-0.1**
ASAR	1.0nm,0.4s,baz=304,slow=1.9,SNR=6.2			PcP	PcP	10 43 06.4	+1.7
CMAR	**Chiang Mai Arr** comp=Z,56nm,19.6s,baz=150,slow=39	**29.41**	**337**	LR	LR	10 53 03.1	
CTA	**Charters Tower** 9.5nm,0.8s,mb4.8,baz=275,slow=13,SNR=6.2	**36.33**	**112**	P	**P**	**10 41 07.0**	**-0.1**
CTA	comp=Z,87nm,20.1s,baz=47,slow=35			LR	LR	10 55 00.6	
STKA	**Stephens Creek** 5.0nm,0.7s,mb4.5	**36.87**	**133**	*e*P	**P**	**10 41 11.2**	**-0.3**
STKA	**Stephens Creek** 6.6nm,0.7s,mb4.7,baz=326,slow=11,SNR=9.8	**36.87**	**133**	P	**P**	**10 41 11.4**	**0.0**
STKA	comp=Z,89nm,20.1s,baz=308,slow=37			LR	LR	10 56 53.0	
MJAR	**Matsushiro Arr** 2.7nm,0.7s,mb4.4,baz=206,slow=8.0,SNR=12	**52.14**	**28**	P	**P**	**10 43 11.8**	**-1.0**
MJAR	**Matsushiro Arr** 1.0nm,0.4s,mb4.2,baz=151,slow=7.5,SNR=19	**52.14**	**28**	P	**P**	**10 43 11.8**	**-1.0**
ULN	**Ulaanbaatar** 1.7nm,0.9s,mb4.1	**56.54**	**357**	*e*P	**P**	**10 43 44.0**	**-0.6**
SONM	**Songino Array** 0.6nm,0.6s,mb3.8,baz=172,slow=9.5,SNR=6.0	**56.55**	**357**	P	**P**	**10 43 44.5**	**-0.1**
MK31	**Makanchi Array**	**60.82**	**338**	*e*P	**P**	**10 44 13.5**	**-0.8**
MKAR	**Makanchi Array** 1.0nm,0.4s,mb4.2,baz=151,slow=7.5,SNR=19	**60.82**	**338**	P	**P**	**10 44 13.7**	**-0.6**
ZALV	**Zalesovo Beam** 0.6nm,0.3s,mb3.9,baz=158,slow=4.2,SNR=3.2	**66.21**	**344**	P	**P**	**10 44 47.8**	**-1.9**
BVAR	**Borovoye Array** 1.0nm,0.7s,mb3.7,baz=148,slow=8.7,SNR=5.4	**70.42**	**336**	P	**P**	**10 45 15.8**	**-0.2**
ABKAR	**Akbulak array** 1.5nm,0.5s,mb4.1	**72.77**	**328**	*e*P	**P**	**10 45 30.1**	**-0.1**
AKTK	**Aktyubinsk**	**74.47**	**328**	P	**P**	**10 45 40.6**	**+0.4**
AKTO	**Aktyubinsk** 0.6nm,0.5s,mb3.6,baz=113,slow=4.0,SNR=5.8	**74.47**	**328**	P	**P**	**10 45 40.6**	**+0.4**
QSPA	**South Pole Qui** 1.7nm,0.8s,mb3.9,baz=230,slow=3.7,SNR=6.9	**81.15**	**180**	P	**P**	**10 46 17.1**	**+0.2**
BRTR	**Keskin Array B** 1.3nm,0.7s,mb4.0,baz=133,slow=4.9,SNR=6.4	**85.61**	**311**	P	**P**	**10 46 39.4**	**-1.1**
CCM	**Cathedral Cave**	**144.95**	**31**	*e*PKPdf	PKPdf	10 53 39.6	+0.6
MIAR	**Mount Ida**	**146.23**	**37**	*e*PKPbc	PKPbc	10 53 46.9	+4.5
WVT	**Waverly**	**148.14**	**29**	*e*PKPbc	PKPbc	10 53 49.1	+1.4

IDC 12 10:36:37.7±8.3, 19°.92S×177°.73W, h352^{km}±79^{km}, mb3.6/7, mb1 3.7/8, mb1mx3.5/17, mbtmp3.6/8, Error ellipse: s-maj=47.1km s-min=22.4km az=47.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera** 1.5nm,0.3s,baz=168,slow=16,SNR=7.4	**18.82**	**193**	P	P	10 40 33.1	0.0
URZ	0.2nm,0.3s,baz=193,slow=19,SNR=2.3			S	S	10 43 40.1	-7.9
CTA	**Charters Tower** 4.5nm,0.4s,baz=94,slow=12,SNR=7.9	**33.80**	**263**	P	P	10 42 48.5	+0.4
STKA	**Stephens Creek** 3.4nm,0.5s,baz=101,slow=11,SNR=6.4	**38.27**	**244**	P	P	10 43 25.6	+0.1
ASAR	**Alice Springs** 5.8nm,0.6s,baz=96,slow=8.3,SNR=39	**44.90**	**256**	P	P	10 44 18.5	-0.3
WRA	**Warramunga Arr** 1.2nm,0.3s,baz=96,slow=7.5,SNR=23	**44.94**	**261**	P	P	10 44 18.5	-0.6
FITZ	**Fitzroy Crossi** 1.2nm,0.6s,baz=120,slow=8.1,SNR=4.2	**53.36**	**262**	P	P	10 45 22.5	+0.1
MJAR	**Matsushiro Arr** 0.2nm,0.4s,baz=161,slow=6.0,SNR=4.5	**69.89**	**323**	P	P	10 47 11.3	-0.1
QSPA	**South Pole Qui** 3.9nm,0.8s,baz=38,slow=2.4,SNR=8.0	**70.15**	**180**	P	P	10 47 12.7	+0.5

*ISCJB **12** 11:00:55.7±0.8, 17°.8S±0°.2×174°.0W±0°.2, h33^{km}, mb4.2/10, Error ellipse: s-maj=35.6km s-min=9.3km az=35.4*
*IDC **12** 11:00:57.5±5.4, 17°.78S×173°.97W, h36^{km}±45^{km}, mb3.5/5, mb1 3.9/6, mb1mx3.8/16, mbtmp3.6/6, ML2.2/1, MS3.3/1, Ms1 3.3/1, ms1mx2.9/16, Error ellipse: s-maj=45.3km s-min=17.9km az=137.0*
*NEIC **12** 11:00:57.7±7.5, 18°.32S×173°.73W, h48^{km}±69^{km}, mb4.4/4, Error ellipse: s-maj=26.9km s-min=19.1km az=154.0*
ISC 12 11:00:57.7±0.8, 17°.8S±0°.2×174°.0W±0°.2, h35^{km}, n27, σ0°.78/14, mb4.2/10, 1C, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu** 8.1nm,0.3s,baz=332,slow=16,SNR=7.5	**4.40**	**29**	Pn	**Pn**	**11 02 02.3**	**+0.3**
AFI	22nm,0.3s,baz=74,slow=21,SNR=6.4			Sn	**Sn**	**11 02 51.3**	**-0.8**
AFI	**Afiamalu**	**4.40**	**29**	Pn	**Pn**	**11 02 02.3**	**+0.3**
AFI				Sn	**Sn**	**11 02 51.3**	**-0.8**
DZM	**Mont Dzumac** 153nm,23.3s	**18.89**	**254**	*e*LR	LR	11 10 24.5	
URZ	**Urewera** 12nm,0.6s,mb4.5	**21.84**	**199**	*e*P	**P**	**11 05 41.7**	**-5.3**
PPT	**Papeete** 105nm,24.2s	**23.25**	**93**	*e*LR	LR	11 11 13.3	
PPT	**Papeete** comp=Z,73nm,19.7s,baz=343,slow=30	**23.25**	**93**	LR	LR	11 12 33.4	
RPZ	**Rata Peaks** 24nm,0.6s,mb5.1,baz=358,slow=4.7,SNR=15	**28.77**	**203**	P	**P**	**11 06 52.0**	**0.0**
WRA	**Warramunga Arr** 0.5nm,0.3s,mb4.0,baz=96,slow=7.7,SNR=38	**48.80**	**259**	P	**P**	**11 09 39.2**	**-0.5**
ASAR	**Alice Springs** 1.0nm,0.5s,mb4.1,baz=89,slow=7.8,SNR=17	**48.88**	**254**	P	**P**	**11 09 39.8**	**-0.6**
QSPA	**South Pole Qui** 5.6nm,1.2s,mb4.4	**72.27**	**180**	*e*P	**P**	**11 12 14.5**	**-4.4**
NVAR	**Mina Array Bea** 0.3nm,0.6s,mb3.4,baz=228,slow=8.0,SNR=3.8	**76.47**	**42**	P	**P**	**11 12 43.0**	**-0.9**
TXAR	**Lajitas Array** 0.8nm,1.0s,mb3.6,baz=211,slow=7.1,SNR=6.3	**82.40**	**56**	P	**P**	**11 13 16.2**	**-0.2**
TRF	**Thorofare Moun** 2.3nm,0.7s,mb4.3	**83.06**	**10**	*e*P	**P**	**11 13 20.4**	**+1.3**
PDAR	**Pinedale Array** 0.4nm,0.8s,mb3.6,baz=224,slow=4.1,SNR=3.6	**84.41**	**42**	P	**P**	**11 13 26.8**	**+0.3**
COLA	**College** 3.6nm,0.8s,mb4.5	**84.80**	**11**	*e*P	**P**	**11 13 29.4**	**+1.4**
CLL	**Collm** comp=Z,6.0nm,0.9s	**146.10**	**352**	⇑*i*PKPbc	PKPab	11 20 35.7	+1.2
BRTR	**Keskin Array B** comp=Z,1.1nm,0.8s,baz=90,slow=2.5,SNR=4.5	**147.61**	**318**	PKPbc	PKPab	11 20 38.9	+0.3
BAIF	**Baives**	**147.78**	**2**	*e*PKP1	PKPbc	11 20 40.1	+1.4
LDF	**La Druitiere**	**148.87**	**8**	*e*PKP1	PKPbc	11 20 41.9	+0.3
GRR	**Gorron** comp=Z,4.0nm,0.5s	**148.97**	**9**	*e*PKP1	PKPbc	11 20 42.4	+0.5
HAU	**Haudompre** comp=Z,8.2nm,0.8s	**149.86**	**360**	*e*PKP1	PKPbc	11 20 44.9	+0.8
LOR	**Lormes**	**150.55**	**3**	*e*PKP1	PKPbc	11 20 46.6	+0.8
SSF	**Saint Saulge** comp=Z,12nm,1.1s	**150.74**	**4**	*e*PKP1	PKPbc	11 20 47.1	+0.9
AVF	**Avril sur Loir**	**151.00**	**4**	*e*PKP1	PKPbc	11 20 47.1	+0.3
TCF	**Toulx Ste Croi**	**151.41**	**6**	*e*PKP1	PKPbc	11 20 48.1	+0.3
ORIF	**Oris-en-Rattie**	**152.95**	**0**	*e*PKP1	PKPdf	11 20 45.4	+1.3
MBDF	**Montbardon**	**153.14**	**359**	*e*PKP1	PKPdf	11 20 45.2	+0.9

*IDC **12** 11:07:20.3±1.2, 2°.47N×95°.87E, h0^{km}, mb4.2/9, mb1 4.2/11, mb1mx4.0/22, mbtmp4.2/11, ML4.0/2, MS3.5/6, Ms1 3.5/6, ms1mx3.1/27, Error ellipse: s-maj=38.8km s-min=16.7km az=45.0*
*ISCJB **12** 11:07:21.8±2.0, 2°.41N±0°.06×95°.85E±0°.05, h23^{km}±15^{km}, mb4.6/28, MS3.6/5, Error ellipse: s-maj=11.5km s-min=6.9km az=29.4*
*BJI **12** 11:07:21.6, 2°.74N×96°.05E, h9^{km}, mB5.0/6, mb4.9/12*
*NEIC **12** 11:07:23.8±0.5, 2°.45N×95°.89E, mb4.5/6, Error ellipse: s-maj=11.6km s-min=6.9km az=215.0*
*DJA **12** 11:07:26, 2°.39N×96°.05E, h17^{km}, MLv4.4/6*
ISC 12 11:07:24.1±2.1, 2°.46N±0°.06×95°.88E±0°.05, h22^{km}±15^{km}, h24^{km}±2.2^{km}: pP-P, n46, σ0°.79/47, mb4.6/28, MS3.6/5, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**1.52**	**59**	P	**Pn**	**11 07 48.5**	**-1.5**
TPTI				S	**Sn**	**11 08 11.1**	**+2.0**
TSI	**Tuntungan**	**2.87**	**69**	P	**Pn**	**11 08 08.3**	**-0.3**
PSI	**Prapat** 7.2nm,0.3s,baz=289,slow=6.8,SNR=21	**3.06**	**84**	Pn	**Pn**	**11 08 10.6**	**-0.5**
PSI	6.0nm,0.3s,baz=339,slow=9.5,SNR=5.2			Sn	**Sn**	**11 08 47.1**	**0.0**
PSI	comp=Z,444nm,21.5s,baz=179,slow=44			LR	LR	11 09 35.4	
MNSI	**Mandailing Nat**	**4.05**	**114**	P	**Pn**	**11 08 24.3**	**-0.5**
MNSI				S	**Sn**	**11 09 10.0**	**-1.6**
PPI	**Padang Panjang** 0.2nm4μm46nm,0.9s	**5.37**	**123**	P	**Pn**	**11 08 44.8**	**+1.9**
IPM	**Ipoh** 0.4nm1μm78nm,0.9s	**5.51**	**69**	P	**Pn**	**11 08 44.6**	**-0.3**
KULM	**Kulim** 156nm,0.8s	**5.53**	**59**	*e*Pn	**Pn**	**11 08 44.7**	**-0.4**
KULM	**Kulim** 0.5nm2μm165nm,0.9s	**5.53**	**59**	P	**Pn**	**11 08 44.7**	**-0.4**
BKNI	**Bangkinang** 0.4nm74nm,1.1s	**5.58**	**112**	P	**Pn**	**11 08 46.7**	**+0.9**
MYKOM	**Kota Tinggi** 21nm,1.1s	**7.99**	**95**	P	**Pn**	**11 09 20.3**	**+1.3**
MNAI	**Manna**	**9.79**	**134**	P	**Pn**	**11 09 44.0**	**+0.3**
CMAR	**Chiang Mai Arr** 0.4nm,0.3s,baz=198,slow=11,SNR=25	**16.18**	**10**	Pn	**Pn**	**11 11 09.8**	**-0.4**
SHL	**Shillong**	**23.29**	**351**	*e*PKP	**P**	**11 12 28.0**	**-2.5**
ODAN	**Odare** 30nm,0.7s,mb4.9	**25.59**	**342**	*e*P	**P**	**11 12 52.1**	**+0.4**
RAMN	**Ramite** 46nm,0.7s,mb5.1	**25.92**	**341**	*e*P	**P**	**11 12 55.7**	**+0.9**
TAPN	**Taplejung** 30nm,0.8s,mb4.9	**25.95**	**343**	*e*P	**P**	**11 12 56.3**	**+1.3**
JIRN	**Jiri** 51nm,0.8s,mb5.1	**26.72**	**341**	*e*P	**P**	**11 13 03.0**	**+1.1**
PKI	**Pulchoki** 20nm,0.8s,mb4.7	**26.90**	**339**	*e*P	**P**	**11 13 03.5**	**-0.1**
DMN	**Daman** 29nm,0.9s,mb4.8	**27.05**	**339**	*e*P	**P**	**11 13 05.3**	**+0.4**
GUN	**Gumba** 32nm,0.6s,mb5.0	**27.05**	**340**	*e*P	**P**	**11 13 05.6**	**+0.7**
KKN	**Kakani** 19nm,0.5s,mb4.8	**27.15**	**339**	*e*P	**P**	**11 13 05.8**	**0.0**
LSA	**Lhasa** 12nm,0.7s,mb4.5	**27.46**	**351**	*e*P	**P**	**11 13 08.5**	**-0.1**
GKN	**Gorkha** 49nm,0.9s,mb5.2	**27.58**	**338**	*e*P	**P**	**11 13 10.0**	**+0.3**
LZH	**Lanzhou**	**34.26**	**11**	*e*P	**P**	**11 14 07.6**	**-0.9**
LZH				pP	pP	11 14 16.7	+1.4
LZH				sP	sP	11 14 20.8	+2.8
LZH	comp=Z,27nm,1.1s,mb5.1			pmax	pmax		
LZH	comp=Z,130nm,4.3s			pmax	pmax		
GTA	**Gaotai**	**36.95**	**5**	*e*P	**P**	**11 14 30.8**	**-0.8**
GTA				pP	pP	11 14 34.9	-3.5
GTA				sP	sP	11 14 38.0	-3.1
GTA	comp=Z,11nm,0.8s,mb4.7			pmax	pmax		
HHC	**Hu-ho-hao-te**	**40.76**	**18**	*e*P	**P**	**11 15 03.4**	**-0.1**
HHC				S	**S**	**11 21 13.7**	**+0.8**
HHC	comp=Z,18nm,0.6s,mb4.9			pmax	pmax		
HHC	comp=Z,120nm,6.2s			pmax	pmax		
BJT	**Baijiatuau** comp=Z,18nm,0.6s,mb4.9	**41.67**	**24**	*e*P	**P**	**11 15 11.3**	**+0.3**
BJT				*e*pP	pP	11 15 17.9	0.0
BJI	**Beijing**	**41.69**	**24**	P	**P**	**11 15 10.9**	**-0.3**
BJI	comp=Z,40nm,0.7s,mb5.2			pmax	pmax		
WRA	**Warramunga Arr** comp=Z,1.8nm,0.7s,mb3.9,baz=302,slow=9.0,SNR=14	**43.82**	**122**	P	**P**	**11 15 28.5**	**-0.3**
AML	**Almayashu** comp=Z,7.1nm,0.9s,mb4.4	**44.22**	**336**	*e*P	**P**	**11 15 32.6**	**+1.0**
EKS2	**Erkin-Say** comp=Z,2.1nm,0.6s,mb4.1	**44.63**	**337**	*e*P	**P**	**11 15 35.4**	**+0.5**
ASAR	**Alice Springs** comp=Z,0.7nm,0.7s,mb3.6,baz=303,slow=8.1,SNR=8.8	**45.20**	**127**	P	**P**	**11 15 39.5**	**-0.2**
MK31	**Makanchi Array**	**45.72**	**347**	*e*P	**P**	**11 15 43.0**	**-0.4**
MK31				*e*pP	pP	11 15 50.5	+0.2
MKAR	**Makanchi Array** comp=Z,4.4nm,0.7s,mb4.5,baz=163,slow=8.0,SNR=51	**45.72**	**347**	P	**P**	**11 15 43.4**	**-0.1**
MKAR				LR	LR	11 37 40.5	
	comp=Z,29nm,20.0s,MS3.2,baz=171,slow=40						
SONM	**Songino Array** comp=Z,4.0nm,0.6s,mb4.5,baz=190,slow=9.2,SNR=31	**46.10**	**10**	P	**P**	**11 15 46.0**	**-0.5**
SONM	comp=Z,1.0nm,0.8s,baz=176,slow=4.2,SNR=4.3			PcP	PcP	11 17 23.1	+0.7
ULN	**Ulaanbaatar** comp=Z,3.3nm,0.8s,mb4.3	**46.25**	**10**	*e*P	**P**	**11 15 47.3**	**-0.3**
ULN				*e*pP	pP	11 15 53.7	-0.8
MJAR	**Matsushiro Arr** comp=Z,68nm,19.5s,MS3.7,baz=240,slow=40	**51.67**	**44**	LR	LR	11 41 58.9	
ZALV	**Zalesovo Beam** comp=Z,3.9nm,0.5s,mb4.6,baz=175,slow=5.1,SNR=16	**52.12**	**352**	P	**P**	**11 16 32.1**	**-0.3**
ZALV	comp=Z,28nm,19.3s,MS3.3,baz=242,slow=41			LR	LR	11 42 46.2	
BVAR	**Borovoye Array** comp=Z,2.8nm,0.8s,mb4.4,baz=148,slow=8.6,SNR=11	**54.64**	**341**	P	**P**	**11 16 50.6**	**-0.4**
STKA	**Stephens Creek** comp=Z,97nm,18.9s,MS3.9,baz=20,slow=36	**55.17**	**132**	LR	LR	11 40 25.3	
ABKAR	**Akbulak array** comp=Z,3.2nm,0.8s,mb4.4	**55.79**	**332**	*e*P	**P**	**11 16 59.0**	**-0.3**
ABKAR				*e*pP	pP	11 17 06.3	-0.1
AKTK	**Aktyubinsk**	**57.51**	**332**	P	**P**	**11 17 11.2**	**-0.4**
AKTO	**Aktyubinsk** comp=Z,0.9nm,0.4s,mb4.1,baz=135,slow=7.8,SNR=6.0	**57.51**	**332**	P	**P**	**11 17 11.2**	**-0.4**
FINES	**FINESS Array B** comp=Z,1.7nm,0.8s,mb4.1,baz=116,slow=6.6,SNR=5.3	**78.28**	**333**	P	**P**	**11 19 21.7**	**-0.3**
FINES	comp=Z,41nm,20.4s,MS3.8,baz=152,slow=39			LR	LR	11 58 40.6	
ARCES	**ARCESS Array B** comp=Z,1.1nm,0.8s,mb3.9,baz=107,slow=4.2,SNR=5.6	**80.91**	**340**	P	**P**	**11 19 36.1**	**-0.1**
TXAR	**Lajitas Array** comp=Z,0.1nm,0.4s,baz=209,slow=0.5,SNR=4.1	**143.26**	**29**	PKP	PKPdf	11 26 55.8	-1.5

*CRAAG **12** 11:15:08.2, 36°.47N×2°.91E, Ml3.2*
*CSEM **12** 11:15:08.2, 36°.47N×2°.91E, h0^{km}, ML3.2, After ALG*
*ISCJB **12** 11:15:12.6±1.3, 36°.71N±0°.05×2°.7E±0°.1, h10^{km}, Error ellipse: s-maj=12.8km s-min=6.9km az=9.9*
*MDD **12** 11:15:12.7±1.8, 36°.62N×2°.83E, h0^{km}, mb3.7/1, Error ellipse: s-maj=23.6km s-min=9.7km az=101.0, PROXIMO SIN SOLUCION*
ISC 12 11:15:12.6±2.0, 36°.67N±0°.08×2°.7E±0°.1, h6^{km}±15^{km}, n24, σ0°.94/32, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMHD	**Djebel Mahouad**	**0.50**	**159**	P	**Pg**	**11 15 15.3**	**-7.0**
EMHD	**Djebel Mahouad**	**0.50**	**159**	P	**Pg**	**11 15 15.3**	**-7.0**
EMHD	**Djebel Mahouad**	**0.50**	**159**	P	**Pg**	**11 15 15.3**	**-7.0**
EMHD	**Djebel Mahouad**	**0.50**	**159**	P	**Pg**	**11 15 15.3**	**-7.0**
EBNR	**Beni Rached**	**1.04**	**249**	P	**Pg**	**11 15 31.5**	**-1.1**
EBNR	**Beni Rached**	**1.04**	**249**	P	**Pg**	**11 15 31.5**	**-1.1**
EANR	**'Ain N'Sour**	**1.50**	**242**	P	**Pn**	**11 15 41.0**	**+0.9**
EANR	**'Ain N'Sour**	**1.50**	**242**	P	**Pn**	**11 15 41.0**	**+0.9**
EANR	**'Ain N'Sour**	**1.50**	**242**	P	**Pn**	**11 15 41.0**	**+0.9**
EANR	**'Ain N'Sour**	**1.50**	**242**	P	**Pn**	**11 15 41.0**	**+0.9**
ETRT	**Tiaret**	**1.73**	**223**	P	**Pn**	**11 15 42.0**	**-1.2**
ETRT	**Tiaret**	**1.73**	**223**	P	**Pn**	**11 15 42.0**	**-1.2**
ETRT	**Tiaret**	**1.73**	**223**	P	**Pn**	**11 15 42.0**	**-1.2**
ETRT	**Tiaret**	**1.73**	**223**	P	**Pn**	**11 15 42.0**	**-1.2**
EIBI	**Ibiza** 1.8nm,0.1s,SNR=7.9	**2.60**	**335**	P	**Pn**	**11 15 56.2**	**+1.0**
EIBI	6.4nm,0.3s,SNR=7.9			S	**Sn**	**11 16 27.1**	**+0.1**
EIBI	**Ibiza** 1.8nm,0.1s,SNR=7.9	**2.60**	**335**	P	**Pn**	**11 15 56.2**	**+1.0**
EIBI	6.4nm,0.3s,SNR=7.9			S	**Sn**	**11 16 27.1**	**+0.1**
ETOS	**Mallorca** 0.4nm,0.1s,SNR=7.9	**3.09**	**1**	P	**Pn**	**11 16 02.8**	**+0.8**
ETOS	0.5nm,0.3s,SNR=7.9			S	**Sn**	**11 16 37.3**	**-2.0**
ETOS	**Mallorca** 0.4nm,0.1s,SNR=7.9	**3.09**	**1**	P	**Pn**	**11 16 02.8**	**+0.8**
ETOS	0.5nm,0.3s,SNR=7.9			S	**Sn**	**11 16 37.3**	**-2.0**
EBEN	**Beniarda** 0.5nm,0.3s,SNR=7.9	**3.10**	**312**	S	**Sn**	**11 16 39.9**	**+0.4**
EBEN	**Beniarda** 0.5nm,0.3s,SNR=7.9	**3.10**	**312**	S	**Sn**	**11 16 39.9**	**+0.4**
ETOB	**Tobarra** 0.4nm,0.1s,SNR=7.9	**3.93**	**301**	P	**Pn**	**11 16 14.2**	**+0.7**
ETOB	0.9nm,0.2s,SNR=7.9			S	**Sn**	**11 16 59.9**	**0.0**
ETOB	**Tobarra** 0.4nm,0.1s,SNR=7.9	**3.93**	**301**	P	**Pn**	**11 16 14.2**	**+0.7**
ETOB	0.9nm,0.2s,SNR=7.9			S	**Sn**	**11 16 59.9**	**0.0**
EMOS	**Mosqueruela** 0.9nm,0.2s,SNR=7.9	**4.46**	**327**	P	**Pn**	**11 16 21.7**	**+0.9**
EMOS	0.6nm,0.4s,SNR=7.9			S	**Sn**	**11 17 12.2**	**-0.9**
EMOS	**Mosqueruela** 0.9nm,0.2s,SNR=7.9	**4.46**	**327**	P	**Pn**	**11 16 21.7**	**+0.9**
EMOS	0.6nm,0.4s,SNR=7.9			S	**S

LAKA				S	Sg	11 24 01.6	+0.2
EFP	**Efpalio**	**1.12**	**26**	*e*PN	**Pg**	11 23 50.6	-0.5
EFP	**Efpalio**	**1.12**	**26**	P	**Pg**	11 23 50.5	-0.6
EFP				S	**Sg**	11 24 05.2	-0.5
EFP	**Efpalio**	**1.12**	**26**	P	**Pg**	11 23 50.5	-0.6
EFP				S	**Sg**	11 24 05.2	-0.5
TRIZ	**Trizonia**	**1.14**	**33**	P	**Pg**	11 23 50.1	-1.2
TRIZ				S	**Sg**	11 24 06.4	+0.3
TRIZ	**Trizonia**	**1.14**	**33**	P	**Pg**	11 23 50.1	-1.2
TRIZ				S	**Sg**	11 24 06.4	+0.3
KALE	**Kalithea**	**1.19**	**34**	P	**Pb**	11 23 50.5	-1.7
KALE				S	**Sg**	11 24 08.5	+0.8
KALE	**Kalithea**	**1.19**	**34**	P	**Pb**	11 23 50.5	-1.7
KALE				S	**Sg**	11 24 08.5	+0.8
LKD	**Levkas**	**1.39**	**339**	P	**Pn**	11 23 56.3	+1.2
LKD	**Levkas**	**1.39**	**339**	P	**Pn**	11 23 56.3	+1.2
DSF	**Desfina**	**1.40**	**44**	P	**Pn**	11 23 54.4	-0.8
DSF				S	**Sb**	11 24 13.4	+0.5
DSF	**Desfina**	**1.40**	**44**	P	**Pn**	11 23 54.4	-0.8
DSF				S	**Sb**	11 24 14.3	+0.5
LKD2	**Lefkada island**	**1.46**	**340**	P	**Pn**	11 23 56.0	-0.1
LKD2				S	**Sn**	11 24 16.7	+1.3
LKD2	**Lefkada island**	**1.46**	**340**	P	**Pn**	11 23 56.0	-0.1
LKD2				S	**Sn**	11 24 16.7	+1.3
LTK	**Loutraki**	**1.47**	**65**	*e*PN	**Pn**	11 23 55.5	-0.6
LTK				*e*SN	**Sn**	11 24 15.0	-0.5
LTK	**Loutraki**	**1.47**	**65**	P	**Pn**	11 23 55.4	-0.7
LTK				S	**Sn**	11 24 15.3	-0.2
LTK	**Loutraki**	**1.47**	**65**	*e*Pn	**Pn**	11 23 55.5	-0.6
LTK				*e*Sn	**Sn**	11 24 15.0	-0.5
LTK				S	**Sn**	11 24 15.3	-0.2
VLI	**Veliai**	**1.49**	**117**	*e*Pn	**Pn**	11 23 56.7	+0.2
VLI				*e*Sn	**Sn**	11 24 16.9	+0.8
VLI	**Veliai**	**1.49**	**117**	*e*PN	**Pn**	11 23 56.7	+0.2
VLI				*e*SN	**Sn**	11 24 16.9	+0.8
VLI	**Veliai**	**1.49**	**117**	*e*Pn	**Pn**	11 23 56.7	+0.2
VLI				*e*Sn	**Sn**	11 24 16.9	+0.8
DID	**Didima**	**1.55**	**86**	*e*PB	**Pb**	11 23 56.3	-2.1
DID	**Didima**	**1.55**	**86**	P	**Pn**	11 23 57.0	-0.4
DID				S	**Sn**	11 24 17.9	+0.2
DID	**Didima**	**1.55**	**86**	*e*Pb	**Pb**	11 23 56.3	-2.1
DID	**Didima**	**1.55**	**86**	P	**Pn**	11 23 57.0	-0.4
DID				S	**Sn**	11 24 17.9	+0.2
EVR	**Evrytania**	**1.56**	**15**	P	**Pn**	11 23 58.7	+1.3
EVR	**Evrytania**	**1.56**	**15**	P	**Pn**	11 23 58.7	+1.3
NAIG	**Nisos Aigina**	**1.78**	**78**	*e*Pb	**Pb**	11 23 59.5	-2.8
NAIG	**Nisos Aigina**	**1.78**	**78**	*e*PB	**Pb**	11 23 59.5	-2.8
NAIG	**Nisos Aigina**	**1.78**	**78**	*e*Pb	**Pb**	11 23 59.5	-2.8
AGG	**Agios Georgios**	**1.81**	**27**	P	**Pn**	11 24 01.8	+1.0
AGG	**Agios Georgios**	**1.81**	**27**	P	**Pn**	11 24 01.0	+0.2
AGG				S	**Sn**	11 24 24.5	+0.6
AGG	**Agios Georgios**	**1.81**	**27**	P	**Pn**	11 24 01.0	+0.2
AGG				S	**Sn**	11 24 24.5	+0.6
LKR	**Lokris**	**1.83**	**47**	*e*Pn	**Pn**	11 24 00.8	-0.4
LKR				*e*Sn	**Sn**	11 24 25.2	+0.7
LKR	**Lokris**	**1.83**	**47**	*e*PN	**Pn**	11 24 00.8	-0.4
LKR				*e*SN	**Sn**	11 24 25.2	+0.7
LKR	**Lokris**	**1.83**	**47**	P	**Pn**	11 24 00.6	-0.6
LKR				S	**Sn**	11 24 24.6	+0.1
LKR	**Lokris**	**1.83**	**47**	*e*Pn	**Pn**	11 24 00.8	-0.4
LKR				S	**Sn**	11 24 24.6	+0.1
LKR				*e*Sn	**Sn**	11 24 25.2	+0.7
ATAL	**Atalanti**	**1.87**	**46**	P	**Pn**	11 24 01.3	-0.4
ATAL				S	**Sn**	11 24 26.4	+0.9
ATAL	**Atalanti**	**1.87**	**46**	P	**Pn**	11 24 01.3	-0.4
ATAL				S	**Sn**	11 24 26.4	+0.9
ATH	**Athens Observa**	**2.01**	**73**	*e*Pb	**Pb**	11 24 03.6	-2.6
ATH				*e*Sn	**Sn**	11 24 27.8	-1.0
ATH	**Athens Observa**	**2.01**	**73**	*e*PB	**Pb**	11 24 03.6	-2.6
ATH				*e*SN	**Sn**	11 24 27.8	-1.0
ATH	**Athens Observa**	**2.01**	**73**	*e*Pb	**Pb**	11 24 03.6	-2.6
ATH				*e*Sn	**Sn**	11 24 27.8	-1.0
VLY	**Voula,Athens**	**2.04**	**77**	*e*Pn	**Pn**	11 24 02.9	-1.1
VLY	**Voula,Athens**	**2.04**	**77**	*e*PN	**Pn**	11 24 02.9	-1.1
VLY	**Voula,Athens**	**2.04**	**77**	*e*Pn	**Pn**	11 24 02.9	-1.1
PTL	**Penteli**	**2.14**	**72**	*e*Pn	**Pn**	11 24 04.9	-0.5
PTL	**Penteli**	**2.14**	**72**	*e*PN	**Pn**	11 24 04.9	-0.5
PTL	**Penteli**	**2.14**	**72**	*e*Pn	**Pn**	11 24 04.9	-0.5
THL	**Klokotos Trika**	**2.22**	**15**	*e*PB	**Pb**	11 24 06.4	-3.5
THL	**Klokotos Trika**	**2.22**	**15**	P	**Pn**	11 24 06.5	-0.1
THL				S	**Sn**	11 24 34.5	+0.3
THL	**Klokotos Trika**	**2.22**	**15**	P	**Pn**	11 24 06.5	-0.1
THL				S	**Sn**	11 24 34.5	+0.3
NEO	**Neokhori**	**2.43**	**38**	*e*Pn	**Pn**	11 24 09.0	-0.4
NEO	**Neokhori**	**2.43**	**38**	*e*PN	**Pn**	11 24 09.0	-0.4
NEO	**Neokhori**	**2.43**	**38**	*e*Pn	**Pn**	11 24 09.0	-0.4
XOR	**Xorichti**	**2.46**	**37**	P	**Pn**	11 24 09.9	+0.1
XOR	**Xorichti**	**2.46**	**37**	P	**Pn**	11 24 09.0	-0.8
XOR	**Xorichti**	**2.46**	**37**	P	**Pn**	11 24 09.9	+0.1
KEK	**Kerkira**	**2.58**	**334**	*e*Pn	**Pn**	11 24 09.9	-1.5
KEK	**Kerkira**	**2.58**	**334**	*e*PN	**Pn**	11 24 09.9	-1.5
KEK	**Kerkira**	**2.58**	**334**	*e*Pn	**Pn**	11 24 09.9	-1.5
AOS	**Alonnisos**	**2.69**	**49**	P	**Pn**	11 24 12.4	-0.6
AOS	**Alonnisos**	**2.69**	**49**	P	**Pn**	11 24 12.4	-0.6
KARN	**Karanos**	**2.92**	**133**	*e*PN	**Pn**	11 24 16.2	0.0
KARN	**Karanos**	**2.92**	**133**	*e*Pn	**Pn**	11 24 16.3	+0.1
PAIG	**Paliouri**	**3.13**	**36**	P	**Pn**	11 24 20.2	+1.1
PAIG	**Paliouri**	**3.13**	**36**	P	**Pn**	11 24 20.2	+1.1
PLG	**Polygyros**	**3.40**	**29**	P	**Pn**	11 24 24.1	+1.3
PLG	**Polygyros**	**3.40**	**29**	P	**Pn**	11 24 24.1	+1.3
HORT	**Hortiatis**	**3.48**	**23**	P	**Pn**	11 24 25.7	+1.9
HORT	**Hortiatis**	**3.48**	**23**	P	**Pn**	11 24 25.7	+1.9
OUR	**Ouranopolis**	**3.60**	**35**	P	**Pn**	11 24 26.3	+0.9
OUR	**Ouranopolis**	**3.60**	**35**	P	**Pn**	11 24 26.3	+0.9
SMG	**Samos**	**4.42**	**84**	P	**Pn**	11 24 39.6	+2.8
SMG	**Samos**	**4.42**	**84**	P	**Pn**	11 24 39.6	+2.8
FINES	**FINESS Array B**	**24.24**	**6**	P	**P**	11 28 42.0	-4.5
	1.6nm,0.8s,mb3.5,baz=185,slow=11,SNR=8.9						
FINES	**FINESS Array B**	**24.24**	**6**	P	**P**	11 28 42.0	-4.5
ARCES	**ARCESS Array B**	**32.26**	**3**	P	**P**	11 29 52.9	-5.1
	2.0nm,1.0s,mb3.9,baz=195,slow=10,SNR=3.0						
MKAR	**Makanchi Array**	**45.19**	**58**	P	**P**	11 31 41.5	-5.1
	0.2nm,0.4s,mb3.3,baz=274,slow=7.9,SNR=4.9						

IDC 12 12:19:27.9±1.8, 10°72S×124°62E, h0km, mb3.4/1, mb1 3.5/4, mb1mx3.4/16, mbtmp3.3/4, ML3.1/3, Error ellipse: s-maj=79.2km s-min=23.0km az=63.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**7.40**	**172**	Pn	Pn	12 21 17.0	-0.3
	0.3nm,0.3s,baz=17,slow=7.3,SNR=16						
FITZ				Sn	Sn	12 22 44.6	+2.6
	0.6nm,0.3s,baz=113,slow=18,SNR=8.0						
WRA	**Warramunga Arr**	**13.10**	**136**	Pn	Pn	12 22 35.1	-0.3
	0.1nm,0.3s,baz=312,slow=13,SNR=9.1						
WRA				Sn	Sn	12 25 02.9	+0.8
	0.2nm,0.3s,baz=309,slow=24,SNR=9.2						
ASAR	**Alice Springs**	**15.62**	**147**	Pn	Pn	12 23 09.6	+0.1
	0.2nm,0.3s,baz=318,slow=12,SNR=13						
ASAR				Sn	Sn	12 26 05.8	+2.4
	0.1nm,0.3s,baz=312,slow=21,SNR=4.7						
MKAR	**Makanchi Array**	**68.60**	**330**	P	P	12 30 32.9	+0.2
	0.2nm,0.5s,baz=139,slow=7.6,SNR=4.0						

*IDC **12** 12:22:47.5±2.2, 18°57S×168°35E, h0km, mb4.0/7, mb1 4.2/7, mb1mx4.1/14, mbtmp4.0/7, MS3.6/4, Ms1 3.6/4, ms1mx3.3/17, Error ellipse: s-maj=96.5km s-min=26.3km az=155.0*

*NEIC **12** 12:22:50.4±0.6, 18°38S×168°18E, h10km, mb4.3/2, Error ellipse: s-maj=18.2km s-min=13.1km az=139.0*

*LDG **12** 12:22:52.0±0.1, 18°04S×167°42E, h10km, Mb4.2/2, Error ellipse: s-maj=20.0km s-min=4.2km az=93.0*

*NOU **12** 12:22:53.7±0.8, 18°06S×167°48E, h30km, MD3.1, ML3.4*

*ISCJB **12** 12:22:54.7±2.1, 18°5S±0°1×168°0E±0°2, h50km±20km, mb4.1/8, MS3.5/4, Error ellipse: s-maj=25.1km s-min=15.7km az=18.7*

ISC 12 12:22:55.6±2.2, 18°4S±0°1×168°1E±0°2, h44km±21km, n50, σ0°87/25, mb4.1/8, MS3.5/4, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.85**	**196**	*e*P	**Pn**	12 23 53.5	+1.1
BAYA				*e*S	**Sn**	12 24 37.0	+0.6
DZM	**Mont Dzumac**	**3.92**	**202**	*e*Pn	**Pn**	12 23 52.5	-0.7
	34nm,0.3s						
DZM				*e*Sn	**Sn**	12 24 36.2	-1.7
	187nm,0.3s						
DZM				*e*LR	LR	12 24 45.5	
	582nm,24.1s						
DZM	**Mont Dzumac**	**3.92**	**202**	*e*P	**Pn**	12 23 52.9	-0.3
DZM				*e*S	**Sn**	12 24 37.4	-0.5
DZM				AMP		12 24 41.2	
	comp=Z,902nm,2.1s						
DZM	**Mont Dzumac**	**3.92**	**202**	*e*Pn	**Pn**	12 23 51.9	-1.4
DZM				*e*Sn	**Sn**	12 24 38.7	+0.8
NOUC	**Port Laguerre**	**4.00**	**204**	*e*P	**Pn**	12 23 53.8	-0.6
NOUC				*e*S	**Sn**	12 24 38.8	-1.1
NOUC				AMP		12 24 41.6	
	comp=Z,41nm,0.8s						
LASL	**Noumea**	**4.03**	**200**	*e*P	**Pn**	12 23 55.6	+0.7
LASL				*e*S	**Sn**	12 24 41.0	+0.2
CTA	**Charters Tower**	**20.65**	**262**	P	**P**	12 27 33.5	+1.8
	comp=Z,5.6nm,0.9s,baz=78,slow=16,SNR=3.7						
CTA				LR	LR	12 34 13.7	
	comp=Z,139nm,19.5s,MS3.3,baz=289,slow=33						
CTA	**Charters Tower**	**20.65**	**262**	P	**P**	12 27 33.5	+1.8
CTA				LR	LR	12 34 13.7	
CTAO	**Charters Tower**	**20.65**	**262**	P	**P**	12 27 31.7	+0.1
	comp=Z,8.9nm,1.0s						
RPZ	**Rata Peaks**	**25.32**	**175**	LR	LR	12 36 37.7	
	comp=Z,152nm,20.3s,MS3.5,baz=84,slow=33						
STKA	**Stephens Creek**	**27.34**	**236**	LR	LR	12 38 14.6	
	comp=Z,127nm,19.9s,MS3.5,baz=195,slow=34						
WRA	**Warramunga Arr**	**31.85**	**262**	P	**P**	12 29 15.3	-1.3
	comp=Z,0.3nm,0.5s,mb3.4,baz=84,slow=8.3,SNR=9.6						
WRA	**Warramunga Arr**	**31.85**	**262**	P	**P**	12 29 15.3	-1.3
ASAR	**Alice Springs**	**32.24**	**255**	P	**P**	12 29 19.9	-0.1
	comp=Z,1.5nm,0.4s,mb4.2,baz=83,slow=8.4,SNR=42						
FITZ	**Fitzroy Crossi**	**40.21**	**264**	*e*P	**P**	12 30 28.5	+0.3
	comp=Z,9.1nm,0.7s,mb4.6						
FITZ	**Fitzroy Crossi**	**40.21**	**264**	P	**P**	12 30 28.4	+0.3
	comp=Z,1.9nm,0.6s,mb4.0,baz=116,slow=6.6,SNR=12						
FITZ				LR	LR	12 46 46.1	
	comp=Z,100nm,19.4s,MS3.7,baz=107,slow=36						
PPT	**Papeete**	**40.24**	**96**	*e*LR	LR	12 41 37.2	
	comp=Z,84nm,24.5s						
QSPA	**South Pole Qui**	**71.61**	**180**	*e*P	**P**	12 34 12.9	+1.1
	comp=Z,6.3nm,1.1s,mb4.5						
MDJ	**Mudanjiang**	**71.89**	**332**	P	**P**	12 34 14.2	+0.2
MDJ				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
MDJ				pmax	pmax		
	comp=Z,35nm,5.3s						
CMAR	**Chiang Mai Arr**	**77.16**	**295**	P	**P**	12 34 45.6	+0.5
	comp=Z,1.1nm,0.7s,mb3.9,baz=129,slow=4.3,SNR=8.8						
SONM	**Songino Array**	**85.91**	**324**	P	**P**	12 35 30.4	-0.4
	comp=Z,1.5nm,0.9s,mb4.2,baz=146,slow=7.8,SNR=9.6						
NVAR	**Mina Array Bea**	**89.12**	**49**	P	**P**	12 35 45.2	-1.2
	comp=Z,0.4nm,0.6s,mb4.0,baz=233,slow=8.2,SNR=4.0						
ARCES	**ARCESS Array B**	**124.01**	**345**	PKP	PKPdf	12 41 46.9	-1.5
	comp=Z,1.4nm,0.8s,baz=40,slow=2.0,SNR=13						
BAIF	**Baives**	**145.91**	**341**	*e*PKP1	PKPbc	12 42 29.4	-0.7
CDF	**Champ du Feu**	**146.27**	**337**	*e*PKP1	PKPbc	12 42 30.7	-0.6
	comp=Z,7.7nm,0.8s						
HAU	**Haudompre**	**146.96**	**337**	*e*PKP1	PKPbc	12 42 32.5	-0.8
	comp=Z,3.6nm,0.6s						
MEZF	**Maizieres J'vi**	**146.99**	**339**	*e*PKP1	PKPbc	12 42 33.1	-0.3
	comp=Z,9.9nm,0.7s						
CABF	**La Chapelle**	**148.22**	**336**	*e*PKP1	PKPbc	12 42 36.6	-0.2
	comp=Z,9.1nm,0.8s						
FLN	**La Foliniere**	**148.36**	**345**	*e*PKP1	PKPbc	12 42 36.1	-1.0
	comp=Z,10nm,0.7s						
LDF	**La Druitiere**	**148.43**	**345**	*e*PKP1	PKPbc	12 42 36.6	-0.7
LOR	**Lormes**	**148.46**	**339**	*e*PKP1	PKPbc	12 42 36.8	-0.6
	comp=Z,5.7nm,0.7s						
SSF	**Saint Saulge**	**148.76**	**339**	*e*PKP1	PKPbc	12 42 37.6	-0.6
	comp=Z,6.9nm,0.7s						
GRR	**Gorron**	**148.80**	**346**	*e*PKP1	PKPbc	12 42 37.4	-0.8
	comp=Z,13nm,0.7s						
SMF	**Signal de Mont**	**149.01**	**339**	*e*PKP1	PKPbc	12 42 38.0	-0.8
	comp=Z,5.6nm,0.8s						
AVF	**Avril sur Loir**	**149.05**	**339**	*e*PKP1	PKPbc	12 42 37.9	-1.0
	comp=Z,3.5nm,0.7s						
BNI	**Bardonecchia**	**149.25**	**334**	*e*PKPbc	PKPbc	12 42 39.2	-0.3
BGF	**Bois d'Agland**	**149.42**	**340**	*e*PKP1	PKPbc	12 42 39.2	-0.6
	comp=Z,7.5nm,0.7s						
MBDF	**Montbardon**	**149.48**	**333**	*e*PKP1	PKPbc	12 42 40.6	+0.6
	comp=Z,5.8nm,0.8s						
ORIF	**Oris-en-Rattie**	**149.69**	**334**	*e*PKP1	PKPbc	12 42 40.1	-0.5
	comp=Z,11nm,0.9s						
SBF	**Sospel**	**149.87**	**331**	*e*PKP1	PKPbc	12 42 40.0	-1.0
PGF	**Pioggiola**	**150.11**	**328**	*e*PKP1	PKPbc	12 42 40.4	-1.3
	comp=Z,9.7nm,0.8s						
VIVF	**Saint-Julien-l**	**150.23**	**336**	*e*PKP1	PKPbc	12 42 41.4	-0.5
	comp=Z,7.1nm,0.8s						
MFF	**Saint Martin d**	**150.28**	**343**	*e*PKP1	PKPbc	12 42 41.1	-0.8
	comp=Z,12nm,0.9s						
FRF	**La Foret Royal**	**150.46**	**332**	*e*PKP1	PKPbc	12 42 42.2	-0.3
SMRF	**Simiane la Rot**	**150.59**	**334**	*e*PKP1	PKPbc	12 42 42.4	-0.4
LMR	**La Mourre**	**150.70**	**332**	*e*PKP1	PKPbc	12 42 42.2	-0.8
	comp=Z,16nm,0.8s						
RJF	**Les Rejaudoux**	**150.96**	**340**	*e*PKP1	PKPbc	12 42 42.9	-0.7
	comp=Z,10nm,1.0s						
LASF	**Ste Croix**	**151.20**	**336**	*e*PKP1	PKPbc	12 42 43.7	-0.5
	comp=Z,6.7nm,0.9s						
LFF	**La Frestale**	**151.53**	**341**	*e*PKP1	PKPbc	12 42 44.2	-0.7
EVO	**Evora**	**159.69**	**351**	*e*PKIKP	PKPdf	12 42 51.1	+1.2
	comp=Z,21nm,1.1s						

*NIED **12** 12:23:00.21°00N×121°10E, h8km, Mw4.0 Best double couple: M0=9.95000×10^14 NP1:φ=106.00000°, δ=49.00000°, λ=-74.00000°. NP2:φ=262.00000°, δ=44.00000°, λ=-107.00000°.*

*IDC **12** 12:23:11.0±1.0, 20°97N×120°98E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.6/21, mbtmp3.7/6, MS3.3/3, Ms1 3.3/3, ms1mx2.6/31, Error ellipse: s-maj=46.5km s-min=18.7km az=68.0*

*NEIC **12** 12:23:12.1±0.7, 21°10N×121°23E, h10km, MG4.2(JMA), Error ellipse: s-maj=30.5km s-min=9.2km az=83.0*

*ISCJB **12** 12:23:13.8±0.8, 21°07N±0°05×121°1E±0°2, h33km, mb3.6/6, MS3.3/3, Error ellipse: s-maj=24.0km s-min=7.8km az=0.7*

ISC 12 12:23:15.8±0.8, 21°09N±0°06×121°1E±0°2, h35km, n15, σ1°29/16, mb3.6/6, MS3.3/3, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**1.73**	**360**	*e*Pn	**Pn**	12 23 40.3	-3.1
TPUB	**Ta-pu**	**2.24**	**349**	*e*Pn	**Pn**	12 23 49.2	-1.2
YULB	**Yu-li**	**2.30**	**5**	*e*Pn	**Pn**	12 23 49.1	-2.2
SSLB	**Suanglung**	**2.69**	**357**	*e*Pn	**Pn**	12 23 56.0	-0.6
SSLB				*e*Sn	**Sn**	12 24 31.1	+3.2
NACB	**Ninganchiao**	**3.11**	**9**	*e*Pn	**Pn**	12 24 01.9	-0.5
NACB				*e*Sn	**Sn**	12 24 37.7	-0.6
YHNB	**Yeheng**	**3.58**	**4**	*e*Pn	**Pn**	12 24 08.2	-0.6
YHNB				*e*Sn	**Sn**	12 24 50.2	+0.4
TATO	**Taipei**	**3.89**	**5**	*e*Pn	**Pn**	12 24 15.6	+2.5
MJAR	**Matsushiro Arr**	**21.45**	**40**	P	**P**	12 28 03.1	+2.1
	0.5nm,0.6s,mb3.0,baz=255,slow=10,SNR=3.2						
SONM	**Songino Array**	**29.20**	**340**	P	**P**	12 29 14.6	+0.6
	0.4nm,0.3s,mb3.6,baz=165,slow=6.0,SNR=3.8						
SONM				LR	LR	12 42 13.3	
	comp=Z,55nm,19.4s,MS3.2,baz=317,slow=39						
MKAR	**Makanchi Array**	**40.54**	**319**	P	**P**	12 30 52.6	+1.1
	0.8nm,0.6s,mb3.5,baz=113,slow=8.1,SNR=12						
WRA	**Warramunga Arr**	**42.79**	**161**	P	**P**	12 31 09.7	-0.5
	1.2nm,0.6s,mb3.8,baz=343,slow=9.1,SNR=12						
ZALV	**Zalesovo Beam**	**42.81**	**329**	P	**P**	12 31 10.5	+0.4
	0.6nm,0.4s,mb3.7,baz=110,slow=8.1,SNR=6.6						
AAK	**Ala-Archa**	**44.36**	**310**	LR	LR	12 53 43.6	
	comp=Z,25nm,18.1s,MS3.2,baz=208,slow=41						
ASAR	**Alice Springs**	**46.20**	**164**	P	**P**	12 31 37.3	-0.1
	0.8nm,0.6s,mb3.8,baz=342,slow=6.6,SNR=11						
NOA	**NORSAR Array B**	**80.91**	**332**	LR	LR	13 15 24.1	
	comp=Z,18nm,19.7s,MS3.4,baz=90,slow=39						

IDC 12 12:47:26.8±2.3, 6°85S×128°47E, h0km, mb3.4/1, mb1 4.0/4, mb1mx3.7/16, mbtmp3.8/4, ML3.9/2, Error ellipse: s-maj=100.9km s-min=29.0km az=74.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.52**	**194**	Pn	Pn	12 50 14.1	+1.4
	0.8nm,0.3s,baz=31,slow=9.5,SNR=42						
FITZ				Sn	Sn	12 52 07.2	-15
	0.4nm,0.3s,baz=106,slow=20,SNR=4.3						
WRA	**Warramunga Arr**	**14.21**	**157**	Pn	Pn	12 50 48.4	-1.1
	0.5nm,0.3s,baz=335,slow=14,SNR=35						
WRA				Sn	Sn	12 53 11.9	-16
	1.2nm,0.3s,baz=330,slow=23,SNR=12						
ASAR	**Alice Springs**	**17.52**	**163**	P	Pn	12 51 31.9	-0.7
	0.4nm,0.3s,baz=333,slow=11,SNR=32						
ASAR				S	Sn	12 54 31.3	-17
	0.2nm,0.3s,baz=348,slow=25,SNR=7.7						
MKAR	**Makanchi Array**	**67.27**	**327**	P	P	12 58 23.4	+0.2
	0.1nm,0.3s,baz=110,slow=8.0,SNR=3.5						

*ISCJB **12** 12:48:57.0±2.7, 11°04S±0°10×166°0E±0°1, h82km±22km, mb3.9/5, Error ellipse: s-maj=24.7km s-min=10.5km az=146.5*

*NEIC **12** 12:48:57.9±1.6, 10°88S×166°01E, h79km±14km, mb4.2/2, Error ellipse: s-maj=16.6km s-min=13.8km az=47.0*

*IDC **12** 12:48:58.2±6.9, 10°93S×166°01E, h82km±56km, mb3.7/6, mb1 3.9/7, mb1mx3.7/17, mbtmp3.8/7, ML4.6/1, MS3.4/4, Ms1 3.4/4, ms1mx2.8/18, Error ellipse: s-maj=55.2km s-min=30.2km az=137.0*

ISC 12 12:48:58.2±2.1, 11°0S±0°1×166°0E±0°1, h81km±17km, n15, σ0°67/16, mb3.9/6, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.17**	**284**	P	**Pn**	12 50 26.0	-0.9
	16nm,0.3s,baz=116,slow=1.8,SNR=4.8						
HNR				S	**Sn**	12 51 36.3	+0.3
	3.7nm,0.3s,baz=180,slow=18,SNR=2.3						
HNR				LR	LR	12 52 15.8	
	comp=Z,98nm,19.1s,baz=73,slow=32						
HNR	**Honiara**	**6.17**	**284**	P	**Pn**	12 50 26.0	-0.9
HNR				S	**Sn**	12 51 36.4	+0.3
DZM	**Mont Dzumac**	**11.03**	**178**	*e*Pn	**Pn**	12 51 34.1	+1.1
DZM				*e*Sn	**Sn**	12 53 33.7	-0.9
EIDS	**Eidsvold**	**20.12**	**223**	P	**P**	12 53 26.2	+0.4
	9.7nm,0.9s						
CTA	**Charters Tower**	**21.07**	**242**	P	**P**	12 53 36.7	+0.8
	4.3nm,0.7s,mb3.9,baz=81,slow=11,SNR=4.8						
CTA				LR	LR	13 00 33.3	
	comp=Z,69nm,21.7s,baz=71,slow=33						
CTA	**Charters Tower**	**21.07**	**242**	P	**P**	12 53 36.7	+0.8
CTAO	**Charters Tower**	**21.07**	**242**	*e*P	**P**	12 53 37.3	+1.3
	15nm,1.3s,mb4.2						
STKA	**Stephens Creek**	**30.67**	**224**	LR	LR	13 06 28.3	
	comp=Z,79nm,19.4s,baz=25,slow=34						
WRA	**Warramunga Arr**	**31.76**	**250**	P	**P**	12 55 15.0	0.0
	2.9nm,0.8s,mb4.0,baz=82,slow=8.8,SNR=5.2						
ASAR	**Alice Springs**	**33.06**	**243**	P	**P**	12 55 25.7	-0.6
	1.4nm,0.8s,mb3.8,baz=76,slow=9.1,SNR=6.5						
RAR	**Rarotonga**	**34.33**	**112**	LR	LR	13 06 09.6	
	comp=Z,206nm,18.0s,baz=293,slow=30						
FITZ	**Fitzroy Crossi**	**39.66**	**255**	P	**P**	12 56 22.6	0.0
	3.4nm,1.0s,mb4.1,baz=95,slow=12,SNR=3.5						
NVAR	**Mina Array Bea**	**85.78**	**50**	P	**P**	13 01 29.2	+0.4
	0.5nm,0.8s,mb3.5,baz=224,slow=6.2,SNR=4.1						
NVAR	**Mina Array Bea**	**85.78**	**50**	P	**P**	13 01 29.2	+0.4
MKAR	**Makanchi Array**	**93.66**	**317**	P	**P**	13 02 05.0	-0.7
	0.4nm,0.7s,mb3.8,baz=100,slow=6.3,SNR=4.4						

*ISCJB **12** 13:05:20.4±0.9, 41°00N±0°04×20°15E±0°05, h10km, Error ellipse: s-maj=6.4km s-min=4.7km az=138.9*

*TIR **12** 13:05:20.7±1.6, 41°03N×20°31E, h37km±41km, ML3.2*

*CSEM **12** 13:05:20.7, 41°03N×20°31E, h37km, ML3.2, After TIR*

*SKO **

MAT	**Matsushiro**	**4.89 322**	P		**Pn**	**13 19 57.9 +0.3**
MAT			*e*S		**Sn**	**13 20 51.8 -2.6**
MAT	**Matsushiro**	**4.89 322**	P		**Pn**	**13 19 58.3 +0.7**
MAT			S		**Sn**	**13 20 54.4 -0.1**
JMM	**Marumori**	**5.22 350**	P		**Pn**	**13 20 01.4 -0.7**
JMM			S		**Sn**	**13 20 58.0 -4.5**
CBIJ	**Chichi jima**	**5.61 178**	Pn		**Pn**	**13 20 06.6 -0.9**
13nm,0.3s,baz=108,slow=22,SNR=28						
CBIJ			Sn		**Sn**	**13 21 07.5 -4.7**
2.3nm,0.3s,baz=270,slow=20,SNR=2.0						
CBIJ	**Chichi jima**	**5.61 178**	P		**Pn**	**13 20 06.9 -0.6**
ASAJ	**Asahikawa**	**11.39 2**	Pn		**Pn**	**13 21 25.8 -0.9**
0.6nm,0.3s,baz=161,slow=12,SNR=5.8						
ULN	**Ulaanbaatar**	**30.30 310**	*e*P		**P**	**13 24 55.8 +0.4**
1.2nm,0.6s,mb3.8						
SONM	**Songino Array**	**30.71 310**	P		**P**	**13 25 00.1 +1.1**
1.6nm,0.9s,mb3.9,baz=116,slow=7.8,SNR=8.9						
SONM	**Songino Array**	**30.71 310**	P		**P**	**13 25 00.1 +1.1**
ZALV	**Zalesovo Beam**	**45.21 316**	P		**P**	**13 27 00.9 -0.3**
0.4nm,0.3s,mb3.7,baz=100,slow=6.0,SNR=3.2						
MK31	**Makanchi Array**	**46.87 306**	*e*P		**P**	**13 27 14.6 +0.3**
MKAR	**Makanchi Array**	**46.87 306**	P		**P**	**13 27 14.2 -0.1**
1.1nm,0.6s,mb4.0,baz=90,slow=9.8,SNR=15						
KURK	**Kurchatov**	**49.00 311**	*e*P		**P**	**13 27 30.4 -0.4**
1.7nm,0.8s,mb4.1						
TKM2	**Tokmak 2**	**52.14 302**	P		**P**	**13 27 55.3 +0.6**
WRA	**Warramunga Arr**	**52.86 189**	P		**P**	**13 27 60.0 -0.1**
0.6nm,0.4s,mb3.9,baz=5.1,slow=7.6,SNR=24						
AML	**Almayashu**	**53.69 301**	*e*P		**P**	**13 28 07.2 +1.0**
1.7nm,0.6s,mb4.2						
BVAR	**Borovoye Array**	**53.84 315**	P		**P**	**13 28 06.9 -0.1**
0.9nm,0.8s,mb3.8,baz=98,slow=6.6,SNR=6.5						
ASAR	**Alice Springs**	**56.59 189**	P		**P**	**13 28 27.4 +0.3**
0.5nm,1.0s,mb3.5,baz=9.2,slow=8.3,SNR=5.9						
ASAR	**Alice Springs**	**56.59 189**	P		**P**	**13 28 27.4 +0.3**
ARU	**Arti**	**59.90 320**	*e*P		**P**	**13 28 48.0 -1.9**
6.5nm,1.1s,mb4.6						
ABKAR	**Akbulak array**	**61.09 312**	*e*P		**P**	**13 28 57.5 -0.6**
0.5nm,0.4s,mb4.0						
TXAR	**Lajitas Array**	**92.41 53**	P		**P**	**13 31 56.6 +1.2**
0.2nm,0.5s,mb3.7,baz=310,slow=2.0,SNR=4.4						

KRSC 12 13:38:14.3±0.8, 51°.97N×158°.87E, h38km±37km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	**Gorelyy**	**0.76**	**320**	*e*P	Pn	13 38 29.9	+1.4
GRL				*i* S	Sn	13 38 40.7	+1.9
PET	**Petropavlovsk**	**1.06**	**353**	*e*P	Pn	13 38 33.5	+0.8
PET				*i* S	Sn	13 38 47.0	+0.8
NLC	**Nalytchevo**	**1.24**	**13**	*e*P	Pn	13 38 35.0	-0.1
NLC				*i* S	Sn	13 38 49.5	-1.0
AVH	**Avacha**	**1.30**	**357**	*e*P	Pn	13 38 37.4	+1.5
AVH				*i* S	Sn	13 38 54.0	+2.0
SPN	**Mys Shipunski**	**1.33**	**31**	*e*P	Pn	13 38 38.1	+1.8
SPN				*i* S	Sn	13 38 55.2	+2.4
MIPR	**Malaya Ipel'ka**	**1.34**	**284**	*e*P	Pn	13 38 37.3	+0.9
GNL	**Ganaly**	**1.82**	**342**	*e*P	Pn	13 38 44.5	+1.5
KII	**Karymskiy**	**2.10**	**9**	*e*P	Pn	13 38 49.7	+2.8
KII				*i* S	Sn	13 39 15.5	+3.8
ALID	**Alaid**	**2.35**	**243**	*e*P	Pn	13 38 51.2	+0.8
ALID				*i* S	Sn	13 39 18.6	+0.6
MKZ	**Mys Kozlova**	**3.11**	**32**	*e*P	Pn	13 39 02.8	+2.1
MKZ				*i* S	Sn	13 39 38.8	+2.2
KBTR	**Krutoberegovo**	**4.84**	**27**	*e*P	Pn	13 39 27.5	+3.0

NEIC ***12*** *13:51:22.1, 32°.65S×71°.67W, h15km, ML3.4(GUC), After GUC.*

GUC 12 13:51:22.1±0.7, 32°.65S×71°.67W, h15km±4km, MD3.6, ML3.4, 5C-8D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHA	**Instituto Hidr**	**0.37**	**177**	⇑*i*P	Pg	13 51 29.8	+0.1
IHA				*i* S	Sg	13 51 35.5	+0.7
IHA	**Instituto Hidr**	**0.37**	**177**	⇑*i*P	Pg	13 51 29.8	+0.1
IHA				*i* S	Sg	13 51 35.5	+0.7
ROCH	**El Roble**	**0.64**	**120**	⇑*i*P	Pg	13 51 34.5	-0.1
ROCH				*i* S	Sg	13 51 43.3	+0.3
ROCH	**El Roble**	**0.64**	**120**	⇑*i*P	Pg	13 51 34.5	-0.1
ROCH				*i* S	Sg	13 51 43.3	+0.3
CHNG	**Los Chungos**	**0.78**	**10**	⇓*i*P	Pg	13 51 36.1	-1.2
CHNG				*i* S	Sg	13 51 46.8	-0.8
CHNG				AML	AML	13 51 48.6	
comp=N,809nm,0.3s							
JACH	**Jahuel**	**0.91**	**92**	⇓*i*P	Pb	13 51 38.5	-1.0
JACH	**Jahuel**	**0.91**	**92**	⇓*i*P	Pb	13 51 38.5	-1.0
PEL	**Peldehue**	**0.96**	**121**	⇑*i*P	Pb	13 51 39.6	-0.8
PEL				*i* S	Sb	13 51 52.6	-0.3
PEL				AML	AML	13 51 55.0	
comp=E,3μm,0.2s							
SAN	**Santiago**	**1.16**	**134**	*i* S	Sb	13 51 57.3	-1.5
TACH	**Talagante**	**1.17**	**149**	*e*P	Pn	13 51 42.1	-1.9
TACH	**Talagante**	**1.17**	**149**	*e*P	Pn	13 51 42.1	-1.9
CLCH	**Cerro Calan**	**1.20**	**128**	⇓*i*P	Pn	13 51 43.2	-1.2
CLCH				*i* S	Sb	13 51 59.3	-0.7
CLCH				AML	AML	13 52 00.4	
comp=N,2μm,0.5s							
CLCH				AML	AML	13 52 00.9	
comp=N,2μm,0.3s							
ANTU	**Antumapu**	**1.26**	**137**	*e*P	Pn	13 51 44.0	-1.1
ANTU	**Antumapu**	**1.26**	**137**	*e*P	Pn	13 51 44.0	-1.1
ANTU				AML	AML	13 52 04.2	
comp=E,825nm,0.5s							
FCH	**Farellones**	**1.34**	**121**	P	Pn	13 51 45.4	-0.8
FCH	**Farellones**	**1.34**	**121**	⇓*i*P	Pn	13 51 42.0	-4.3
FCH				⇓*i*P		13 51 45.4	
FCH				*i* S	Sn	13 52 00.5	-3.3
FCH				AML	AML	13 52 02.7	
comp=N,750nm,0.3s							
PCH	**Pirque**	**1.37**	**135**	⇓*i*P	Pn	13 51 45.8	-0.8
PCH				*i* S	Sn	13 52 03.4	-1.1
PCH	**Pirque**	**1.37**	**135**	⇓*i*P	Pn	13 51 45.8	-0.8
PCH				*i* S	Sn	13 52 03.4	-1.1
CMCH	**Combarbala**	**1.58**	**21**	*e*P	Pn	13 51 49.1	-0.5
CMCH				*i* S	Sn	13 52 09.9	+0.2
CMCH	**Combarbala**	**1.58**	**21**	*e*P	Pn	13 51 49.1	-0.5
CMCH				*i* S	Sn	13 52 09.9	+0.2
CMCH				AML	AML	13 52 14.5	
comp=N,4μm,0.8s							
LMEL	**Las Melosas**	**1.71**	**135**	*e*P	Pn	13 51 51.4	0.0
LMEL				*i* S	Sn	13 52 13.7	+0.7
LMEL	**Las Melosas**	**1.71**	**135**	*e*P	Pn	13 51 51.4	0.0
LMEL				*i* S	Sn	13 52 13.7	+0.7
LMEL				AML	AML	13 52 17.8	
comp=N,510nm,0.3s							
CACH	**El Canelo**	**1.71**	**149**	*e*P	Pn	13 51 51.8	+0.5
CACH				*i* S	Sn	13 52 15.3	+2.3
CACH	**El Canelo**	**1.71**	**149**	*e*P	Pn	13 51 51.8	+0.5
CACH				*i* S	Sn	13 52 15.3	+2.3

MAN 12 14:18:36, 6°.47N×125°.65E, h32km, mb4.6, ML3.5, MS3.4, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.77**	**52**	*e*P	Pn	14 18 50.9	+0.2
MATI				*e*S	Sn	14 18 58.5	-2.7
BUKP	**Musuan**	**1.52**	**338**	*e*P	Pn	14 19 02.0	+1.0
BUKP				*e*S	Sn	14 19 19.5	-0.1

IDC ***12*** *14:37:28.2±0.8, 31°.74N×104°.45E, h0km, mb3.8/8, mb1 3.9/10, mb1mx3.7/26, mbtmp3.8/10, ML2.7/1, MS2.8/1, Ms1 2.8/1, ms1mx2.1/31, Error ellipse: s-maj=57.4km s-min=15.5km az=60.0*
NEIC ***12*** *14:37:30.9±4.0, 31°.70N×104°.49E, h19km±27km, mb3.5/2, Error ellipse: s-maj=9.9km s-min=8.2km az=55.0*
BJI ***12*** *14:37:31.5, 31°.68N×104°.35E, h21km, ML3.6/16, Ms3.4/3, Ms7 3.3/3*

ISC 12 14:37:28.7±1.1, 31°.65N±0°.03×104°.41E±0°.05, h1km±7km, n23, σ1°10/31, mb3.9/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.93**	**217**	Pg	**Pg**	**14 37 46.0**	**-0.5**
CD2				Sg	**Sg**	**14 37 59.0**	**+0.5**
CD2				smax			
comp=N,2μm,0.5s							
CD2				smax			
comp=E,2μm,0.5s							
LZH	**Lanzhou**	**4.45**	**354**	*e*Pn	**Pn**	**14 38 40.1**	**+2.7**
LZH				Pg	**Pb**	**14 38 48.5**	**+0.8**
LZH				Sn	**Sn**	**14 39 29.8**	**0.0**
LZH				Sg	**Sb**	**14 39 42.6**	**+0.8**
LZH				smax			
comp=N,50nm,0.6s							
LZH				smax			
comp=E,110nm,0.7s							
LZH				LR	LR		
comp=E,220nm,6.4s							
LZH				LR	LR		
comp=Z,260nm,7.8s							
XAN	**Xi'an**	**4.48**	**57**	Pn	**Pn**	**14 38 38.9**	**+1.1**
XAN				Sn	**Sn**	**14 39 32.8**	**+2.2**
XAN				Sg	**Sg**	**14 39 51.7**	**-1.0**
XAN				smax			
comp=N,130nm,0.8s							
XAN				smax			
comp=E,65nm,0.7s							
ENH	**Enshi**	**4.57**	**106**	*e*Pn	**Pn**	**14 38 36.7**	**-2.3**
GYA	**Guiyang**	**5.54**	**159**	Pn	**Pn**	**14 38 58.8**	**+6.5**
GYA				Sn	**Sn**	**14 39 57.0**	**+0.4**
GYA				Sg	**Sg**	**14 40 20.5**	**-6.1**
GYA				smax			
comp=N,120nm,0.8s							
GYA				smax			
comp=E,180nm,0.9s							
KMI	**Kunming**	**6.67**	**193**	P	**Pn**	**14 39 14.0**	**+6.1**
KMI				pmax	pmax		
comp=Z,8.0nm,0.5s							
LSA	**Lhasa**	**11.58**	**264**	Pn	**Pn**	**14 40 17.1**	**+1.9**
CMAR	**Chiang Mai Arr**	**14.04**	**202**	Pn	**Pn**	**14 40 50.1**	**+1.3**
baz=9.7,slow=12,SNR=7.4							
SONM	**Songino Array**	**16.23**	**5**	Pn	**Pn**	**14 41 17.5**	**-0.5**
comp=Z,0.0nm,0.3s,baz=193,slow=12,SNR=5.3							
SONM				LR	LR	14 48 11.8	
comp=Z,35nm,19.1s,baz=244,slow=40							
ULN	**Ulaanbaatar**	**16.32**	**6**	*e*Pn	**Pn**	**14 41 20.1**	**+1.1**
comp=Z,3.3nm,0.9s							
KS15	**Wonju Array Si**	**20.16**	**67**	*e*P	**P**	**14 42 04.0**	**-0.4**
MK31	**Makanchi Array**	**22.75**	**318**	*e*P	**P**	**14 42 30.9**	**-1.3**
MKAR	**Makanchi Array**	**22.75**	**318**	P	**P**	**14 42 31.3**	**-0.9**
comp=Z,1.9nm,1.0s,mb3.6,baz=116,slow=11,SNR=14							
MKAR	**Makanchi Array**	**22.75**	**318**	P	**P**	**14 42 31.3**	**-0.9**
ZAA0	**Zalesovo Array**	**26.35**	**333**	*e*P	**P**	**14 43 05.0**	**-1.1**
ZALV	**Zalesovo Beam**	**26.35**	**333**	P	**P**	**14 43 05.2**	**-1.0**
comp=Z,1.9nm,0.7s,mb3.9,baz=127,slow=10.0,SNR=11							
KURK	**Kurchatov**	**26.97**	**322**	P	**P**	**14 43 11.2**	**-0.6**
comp=Z,1.3nm,0.8s,mb3.7,baz=131,slow=8.8,SNR=11							
KURK	**Kurchatov**	**26.97**	**322**	*e*P	**P**	**14 43 11.1**	**-0.7**
comp=Z,1.5nm,0.9s,mb3.7							
BVAR	**Borovoye Array**	**32.53**	**321**	P	**P**	**14 44 00.9**	**-0.1**
comp=Z,0.4nm,0.5s,mb3.6,baz=92,slow=7.2,SNR=3.1							
BVAR				PcP	PcP	14 46 46.6	-1.0
comp=Z,0.5nm,0.6s,baz=132,slow=2.1,SNR=3.5							
FINES	**FINESS Array B**	**57.26**	**326**	P	**P**	**14 47 16.3**	**-1.3**
comp=Z,1.7nm,0.9s,mb4.1,baz=101,slow=8.1,SNR=7.1							
WRA	**Warramunga Arr**	**58.78**	**147**	P	**P**	**14 47 28.9**	**+0.2**
comp=Z,1.3nm,0.5s,mb4.2,baz=339,slow=7.9,SNR=38							
ASAR	**Alice Springs**	**61.82**	**149**	P	**P**	**14 47 49.5**	**0.0**
comp=Z,0.6nm,0.8s,mb3.9,baz=338,slow=6.7,SNR=13							
HFS	**Hagfors**	**63.47**	**326**	P	**P**	**14 47 59.2**	**-0.8**
comp=Z,0.8nm,0.6s,mb4.0,baz=87,slow=6.1,SNR=4.4							

IDC 12 14:37:53.8±6.5, 0°.95N×97°.71E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.4/20, mbtmp3.5/5, Error ellipse: s-maj=331.9km s-min=22.1km az=55.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**41.47**	**122**	P	P	14 45 42.9	+0.1
0.5nm,0.9s,baz=302,slow=9.1,SNR=2.8							
ASAR	**Alice Springs**	**42.84**	**127**	P	P	14 45 53.7	-0.2
0.4nm,1.0s,baz=295,slow=9.1,SNR=3.3							
MKAR	**Makanchi Array**	**47.60**	**346**	P	P	14 46 31.8	+0.4
0.6nm,0.7s,baz=145,slow=8.7,SNR=5.6							
KURK	**Kurchatov**	**52.16**	**345**	P	P	14 47 04.7	-1.3
0.3nm,0.6s,baz=171,slow=8.0,SNR=3.1							
ZALV	**Zalesovo Beam**	**53.88**	**351**	P	P	14 47 19.0	+0.4
1.4nm,0.5s,baz=174,slow=6.5,SNR=7.9							

GUC 12 14:43:29.2±0.6, 23°.42S×67°.60W, h270km, ML3.5, 2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**2.09**	**303**	*e*P	Pn	14 44 24.2	+10
PB04				*i* S	S	14 45 03.9	+14
PB04				AML	AML	14 45 07.0	
comp=N,75nm,0.3s							
CEN1	**Los Morros**	**2.39**	**270**	⇓*i*P	Pn	14 44 19.8	+2.9
CEN1				*i* S	S	14 44 59.0	+4.4
CEN1				AML	AML	14 45 02.0	
comp=N,46nm,0.7s							
ANCH	**Antofagasta**	**2.59**	**264**	⇓*i*P	Pn	14 44 21.4	+2.6
ANCH				*i* S	S	14 45 00.1	+2.0
PSGC	**Pisagua**	**4.47**	**328**	*e*P	Pn	14 44 45.6	+6.2
PSGC				*e*S	S	14 45 41.7	+6.2

ISCJB ***12*** *15:08:58.3±0.8, 32°.95N±0°.05×105°.48E±0°.06, h10km, mb3.5/3, Error ellipse: s-maj=7.7km s-min=6.9km az=36.7*
BJI ***12*** *15:08:59.6, 32°.66N×105°.29E, h15km, ML3.7/9, Ms3.4/1, Ms7 3.4/2*
IDC ***12*** *15:08:59.1±1.4, 32°.89N×105°.40E, h0km, mb3.3/3, mb1 3.5/5, mb1mx3.3/24, mbtmp3.3/5, ML3.2/2, Error ellipse: s-maj=61.8km s-min=26.1km az=61.0*

ISC 12 15:09:00.9±0.7, 32°.89N±0°.05×105°.44E±0°.06, h10km, n9, σ1°29/16, mb3.5/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.44**	**216**	Pn	**Pn**	**15 09 33.5**	**-7.3**
CD2				Pg	**Pn**	**15 09 36.7**	**-4.2**
CD2				Sg	**Sn**	**15 10 04.7**	**-6.1**
CD2				smax			
comp=N,2μm,0.7s							
CD2				smax			
comp=E,2μm,0.7s							
XAN	**Xi'an**	**3.12**	**68**	Pn	**Pn**	**15 09 51.9**	**+1.7**
XAN				Pg	**Pg**	**15 09 58.9**	**-1.9**
XAN				Sg	**Sg**	**15 10 41.2**	**-0.1**
XAN				smax			
comp=N,250nm,0.7s							
XAN				smax			
comp=E,130nm,0.8s							
LZH	**Lanzhou**	**3.45**	**338**	*e*Pn	**Pn**	**15 09 57.7**	**+3.0**
LZH				Pg	**Pg**	**15 10 06.2**	**-0.8**
LZH				Sn	**Sn**	**15 10 43.5**	**+7.9**
LZH				Sg	**Sg**	**15 10 51.6**	**-0.1**
LZH				smax			
comp=N,160nm,0.6s							
LZH				smax			
comp=E,430nm,0.6s							
LZH				LR	LR		
comp=E,280nm,4.5s							
LZH				LR	LR		
comp=Z,520nm,6.0s							
GTA	**Gaotai**	**7.94**	**327**	*e*P	**Pn**	**15 10 49.6**	**-6.7**
GTA				pP		15 10 53.7	
GTA				sP		15 10 56.6	
GTA				pmax	pmax		
comp=Z,2.0nm,0.7s							
SONM	**Songino Array**	**14.94**	**2**	Pn	**Pn**	**15 12 33.9**	**+1.8**
comp=Z,0.1nm,0.3s,baz=178,slow=18,SNR=3.5							
CMAR	**Chiang Mai Arr**	**15.52**	**204**	Pn	**Pn**	**15 12 41.0**	**+1.1**
comp=Z,0.0nm,0.3s,baz=8.0,slow=9.4,SNR=4.8							
MKAR	**Makanchi Array**	**22.45**	**315**	P	**P**	**15 13 58.7**	**-1.2**
comp=Z,0.5nm,0.9s,mb2.9,baz=114,slow=11,SNR=4.2							
WRA	**Warramunga Arr**	**59.35**	**148**	P	**P**	**15 19 03.8**	**+0.4**
comp=Z,0.6nm,0.7s,mb3.7,baz=340,slow=8.0,SNR=8.4							
ASAR	**Alice Springs**	**62.45**	**150**	P	**P**	**15 19 23.5**	**-0.8**
comp=Z,0.6nm,0.9s,mb3.7,baz=333,slow=6.6,SNR=6.8							

ISCJB ***12*** *15:15:34.8±0.3, 36°.25N±0°.04×137°.16E±0°.06, h267km±2km, mb3.5/11, Error ellipse: s-maj=7.6km s-min=5.6km az=25.0*
IDC ***12*** *15:15:35.2±0.6, 36°.17N×137°.03E, h256km±6km, mb3.2/8, mb1 3.5/9, mb1mx3.2/26, mbtmp3.2/9, Error ellipse: s-maj=20.7km s-min=11.0km az=67.0*
JMA ***12*** *15:15:35.2±0.1, 36°.21N×137°.22E, h268km±2km, M3.1*
NEIC ***12*** *15:15:35.5±0.6, 36°.25N×137°.12E, h260km±6km, mb4.1/5, Error ellipse: s-maj=13.8km s-min=11.5km az=222.0*

ISC 12 15:15:35.7±0.3, 36°.24N±0°.04×137°.17E±0°.05, h262km±2km, n38, σ0°68/56, mb3.5/11, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JGM	**Miyama**	**0.65**	**214**	P	**Pn**	**15 16 10.7**	**+0.3**
JGM				S	**S**	**15 16 37.8**	**0.0**
JKG	**Kaga**	**0.68**	**273**	P	**Pn**	**15 16 11.0**	**+0.6**
JKG				S	**S**	**15 16 38.7**	**+0.9**
MAJO	**Matsushiro**	**0.89**	**70**	*e*Pn	**Pn**	**15 16 11.6**	**+0.2**
MAJO				*e*S	**S**	**15 16 39.2**	**-0.3**
MAT	**Matsushiro**	**0.89**	**70**	P	**Pn**	**15 16 11.6**	**+0.3**
MAT				S	**S**	**15 16 39.3**	**-0.2**
MAT	**Matsushiro**	**0.89**	**70**	P	**Pn**	**15 16 11.7**	**+0.4**
MAT				S	**S**	**15 16 39.7**	**+0.2**
MJAR	**Matsushiro Arr**	**0.89**	**70**	P	**Pn**	**15 16 11.9**	**+0.6**
5.5nm,0.3s,baz=261,slow=7.1,SNR=120							
MJAR				S	**S**	**15 16 39.7**	**+0.2**
2.0nm,0.3s,baz=256,slow=11,SNR=20							
JSZ	**Suzu**	**1.22**	**7**	P	**Pn**	**15 16 13.4**	**+0.3**
JSZ				S	**S**	**15 16 42.6**	**-0.1**
JYN	**Shimob**	**1.34**	**123**	P	**Pn**	**15 16 14.1**	**+0.1**
JRY	**Ryogami san**	**1.42**	**99**	P	**Pn**	**15 16 14.6**	**+0.1**
JRY				S	**S**	**15 16 44.6**	**-0.5**
JHG	**Hegura jima**	**1.62**	**353**	P	**Pn**	**15 16 16.6**	**+0.7**
JWT	**Wachi**	**1.73**	**237**	P	**Pn**	**15 16 16.9**	**+0.1**
JWT				S	**S**	**15 16 48.9**	**-0.4**
JOD2	**Odawara 2**	**1.84**	**121**	P	**Pn**	**15 16 18.0**	**+0.2**
JOD2				S	**S**	**15 16 51.5**	**+0.5**
JAG	**Ashikaga**	**1.85**	**84**	P	**Pn**	**15 16 17.5**	**-0.3**
JIE	**Ise**	**1.88**	**192**	P	**Pn**	**15 16 18.7**	**+0.5**
JIE				S	**S**	**15 16 51.7**	**0.0**
JSD	**Sado**	**1.99**	**26**	P	**Pn**	**15 16 19.3**	**+0.3**
JSD				S	**S**	**15 16 53.1**	**-0.2**
JNS	**Sasagawa**	**2.33**	**47**	P	**Pn**	**15 16 22.5**	**+0.5**
JWY	**Kouya**	**2.40**	**213**	P	**Pn**	**15 16 23.3**	**+0.5**
JWY				S	**S**	**15 16 59.7**	**-0.4**
JAW	**Awa shima**	**2.76**	**36**	P	**Pn**	**15 16 26.5**	**+0.2**
JAW				S	**S**	**15 17 05.9**	**-0.6**
JWZ	**Kozaga**	**2.96**	**204**	P	**Pn**	**15 16 28.3**	**-0.2**
JWZ				S	**S**	**15 17 09.6**	**-0.7**
BSO1	**Boso 1**	**3.49**	**116**	P	**Pn**	**15 16 32.9**	**-1.3**
JHJ	**Hachijo jima 2**	**3.79**	**145**	P	**Pn**	**15 16 37.4**	**-0.2**
2.9nm,0.3s,baz=75,slow=20,SNR=3.8							
JHJ				S	**S**	**15 17 27.1**	**+0.2**
14nm,0.3s,baz=231,slow=23,SNR=6.1							
KS15	**Wonju Array Si**	**7.54**	**282**	*e*Pn	**Pn**	**15 17 22.1**	**-1.0**
ASAJ	**Asahikawa**	**8.89**	**26**	P	**Pn**	**15 17 38.0**	**-2.1**
12nm,0.3s,baz=233,slow=14,SNR=126							
ASAJ				S	**S**	**15 19 12.4**	**-8.3**
0.8nm,0.3s,baz=16,slow=27,SNR=4.5							
CBIJ	**Chichi jima**	**10.07**	**154**	P	**Pn**	**15 17 48.2**	**-6.7**
4.7nm,0.3s,baz=292,slow=18,SNR=9.9							
CBIJ				S	**S**	**15 19 33.3**	**-15**
15nm,0.3s,baz=282,slow=23,SNR=10							
MDJ	**Mudanjiang**	**10.16**	**328**	*e*Pn	**Pn**	**15 17 56.0**	**+0.1**
3.6nm,0.4s							
YSS	**Yuzh-Sakhalins**	**11.49**	**20**	*e*Pn	**Pn**	**15 18 09.8**	**-2.6**
58nm,0.5s							
SONM	**Songino Array**	**25.45**	**307**	P	**P**	**15 20 39.0**	**-0.8**
0.2nm,0.4s,mb2.9,baz=101,slow=11,SNR=3.0							
MKAR	**Makanchi Array**	**41.65**	**302**	P	**P**	**15 22 58.6**	**+0.1**
0.5nm,0.6s,mb2.9,baz=90,slow=9.4,SNR=6.7							
KURK	**Kurchatov**	**43.74**	**308**	P	**P**	**15 23 15.5**	**+0.3**
1.5nm,0.7s,mb3.3,baz=76,slow=6.8,SNR=7.2							
AML	**Almayashu**	**48.55**	**297**	*e*P	**P**	**15 23 53.4**	**+0.8**
1.7nm,0.8s,mb3.4							
WRAB	**Tennant Creek**	**55.93**	**183**	*e*P	**P**	**15 24 46.0**	**-0.7**
3.7nm,0.4s,mb4.2							
WRA	**Warramunga Arr**	**55.94**	**183**	P	**P**	**15 24 46.2**	**-0.7**
4.4nm,0.3s,mb4.3,baz=0.0,slow=7.7,SNR=126							
WRA	**Warramunga Arr**	**55.94**	**183**	P	**P**	**15 24 46.2**	**-0.7**
ASAR	**Alice Springs**	**59.66**	**183**	P	**P**	**15 25 12.4**	**-0.2**
1.0nm,0.7s,mb3.5,baz=15,slow=12,SNR=20							
EGMT	**Eagleton**	**77.08**	**39**	*e*P	**P**	**15 27 09.0**	**+9.0**
3.8nm,0.8s,mb4.2							
NVAR	**Mina Array Bea**	**78.17**	**51**	P	**P**	**15 27 07.4**	**+1.3**
0.2nm,0.6s,mb3.0,baz=319,slow=4.8,SNR=3.2							
PDAR	**Pinedale Array**	**80.62**	**43**	P	**P**	**15 27 20.7**	**+1.4**
0.3nm,0.7s,mb3.2,baz=356,slow=1.4,SNR=2.6							
TXAR	**Lajitas Array**	**93.28**	**50**	P	**P**	**15 28 21.6**	**+0.8**
0.4nm,0.6s,mb3.5,baz=298,slow=2.7,SNR=7.3							

ISCJB ***12*** *15:33:37.2±0.6, 37°.59N±0°.02×21°.94E±0°.04, h9km±4km, Error ellipse: s-maj=4.7km s-min=3.2km az=176.3*
NEIC ***12*** *15:33:37.4, 37°.58N×21°.94E, h21km, ML2.6(ATH), After ATH.*
ATH ***12*** *15:33:37.4, 37°.58N×21°.94E, h21km±1km, MD2.9/6, ML2.6*
THE ***12*** *15:33:37.8, 37°.60N×21°.99E, h4km±2km, ML3.2/8, Error ellipse: s-maj=2.2km s-min=0.5km az=95.0*
CSEM ***12*** *15:33:37.6±0.2, 37°.59N×21°.96E, h9km, ML3.2/8, Error ellipse: s-maj=3.9km s-min=2.9km az=90.0*

ISC 12 15:33:37.9±0.4, 37°.60N±0°.02×21°.97E±0°.03, h10km±3km, n63, σ0°96/99, Southern Greece

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

LTK				S	Sg	15 34 06.6	-0.2
LTK				eSn	Sn	15 34 08.8	-0.6
DSF	**Desfina**	**0.92**	**28**	P	Pg	15 33 54.6	-1.1
DSF				S	Sg	15 34 08.4	+0.7
DSF	**Desfina**	**0.92**	**28**	P	Pg	15 33 54.6	-1.1
DSF				S	Sg	15 34 08.4	+0.7
DID	**Didima**	**1.01**	**95**	ePN	Pg	15 33 56.8	-0.5
DID	**Didima**	**1.01**	**95**	P	Pg	15 33 56.8	-0.5
DID				S	Sg	15 34 10.5	+0.1
DID	**Didima**	**1.01**	**95**	P	Pg	15 33 56.8	-0.5
DID				S	Sg	15 34 10.5	+0.1
VLI	**Veliai**	**1.17**	**138**	ePn	Pn	15 34 00.4	+0.2
VLI	**Veliai**	**1.17**	**138**	ePN	Pn	15 34 00.4	+0.2
VLI	**Veliai**	**1.17**	**138**	ePn	Pn	15 34 00.4	+0.2
NAIG	**Nisos Aigina**	**1.21**	**82**	ePn	Pn	15 34 01.2	+0.4
NAIG	**Nisos Aigina**	**1.21**	**82**	ePN	Pn	15 34 01.2	+0.4
NAIG	**Nisos Aigina**	**1.21**	**82**	ePn	Pn	15 34 01.2	+0.4
VLS	**Valsamata**	**1.24**	**298**	P	Pn	15 34 01.5	+0.3
VLS				S	Sb	15 34 19.0	+1.7
VLS	**Valsamata**	**1.24**	**298**	P	Pn	15 34 01.5	+0.3
VLS				S	Sb	15 34 19.0	+1.7
EVR	**Evrytania**	**1.32**	**354**	ePn	Pn	15 34 02.8	+0.4
EVR	**Evrytania**	**1.32**	**354**	ePN	Pn	15 34 02.8	+0.4
EVR	**Evrytania**	**1.32**	**354**	ePn	Pn	15 34 02.8	+0.4
LKR	**Lokris**	**1.33**	**37**	ePn	Pn	15 34 03.1	+0.7
LKR	**Lokris**	**1.33**	**37**	ePN	Pn	15 34 03.1	+0.7
LKR	**Lokris**	**1.33**	**37**	ePn	Pn	15 34 03.1	+0.7
ATH	**Athens Observa**	**1.43**	**74**	ePn	Pn	15 34 04.7	+0.9
ATH	**Athens Observa**	**1.43**	**74**	ePN	Pn	15 34 04.7	+0.9
ATH	**Athens Observa**	**1.43**	**74**	ePn	Pn	15 34 04.7	+0.9
AGG	**Agios Georgios**	**1.45**	**11**	ePn	Pn	15 34 04.3	+0.2
AGG	**Agios Georgios**	**1.45**	**11**	ePN	Pn	15 34 04.3	+0.2
AGG	**Agios Georgios**	**1.45**	**11**	ePn	Pn	15 34 04.3	+0.2
VLY	**Voula,Athens**	**1.47**	**79**	ePn	Pn	15 34 05.4	+1.1
VLY	**Voula,Athens**	**1.47**	**79**	ePN	Pn	15 34 05.4	+1.1
VLY	**Voula,Athens**	**1.47**	**79**	ePn	Pn	15 34 05.4	+1.1
PTL	**Penteli**	**1.56**	**73**	ePn	Pn	15 34 06.9	+1.2
PTL	**Penteli**	**1.56**	**73**	ePN	Pn	15 34 06.9	+1.2
PTL	**Penteli**	**1.56**	**73**	ePn	Pn	15 34 06.9	+1.2
NEO	**Neokhori**	**1.97**	**30**	P	Pn	15 34 14.0	+2.7
NEO	**Neokhori**	**1.97**	**30**	P	Pn	15 34 14.0	+2.7

NEIC ***12*** *15:36:10.5±0.7,31°.38S×179°.41W,h287km±8km,mb3.8/3, Error ellipse: s-maj=21.0km s-min=10.3km az=115.0*
IDC ***12*** *15:36:10.4±0.9,31°.25S×179°.47W,h277km±8km,mb3.7/3, mb1 3.8/6,mb1mx3.6/15,mbtmp3.7/6,Error ellipse: s-maj=28.8km s-min=12.3km az=127.0*

ISC 12 15:36:09.7±1.0,31°.36S±0°.09×179°.2W±0°.4,h294km±18km, n51,σ0°83/33,mb3.9/6,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.37**	**28**	P	Pn	15 37 00.7	+1.6
	37nm,0.3s,baz=60,slow=20,SNR=6.0						
RAO				S	S	15 37 37.2	-1.2
	172nm,0.3s,baz=94,slow=22,SNR=8.2						
RAO	**Raoul Island**	**2.37**	**28**	ePn	Pn	15 37 00.5	+1.4
RAO				S	S	15 37 37.2	-1.2
PUZ	**Puketiti**	**7.02**	**197**	PN	Pn	15 37 51.9	+0.8
PUZ				eSN	S	15 39 12.3	-0.7
OPRZ	**Ohinepanea**	**7.36**	**207**	ePN	Pn	15 37 57.0	+1.8
CNGZ	**Carnagh Statio**	**7.42**	**196**	ePN	Pn	15 37 57.4	+1.4
MWZ	**Matawai**	**7.47**	**200**	ePN	Pn	15 37 56.8	+0.3
MWZ				eSN	S	15 39 22.9	0.0
URZ	**Urewera**	**7.53**	**203**	P	Pn	15 37 57.1	-0.2
	1.7nm,0.3s,baz=261,slow=12,SNR=22						
URZ				S	S	15 39 25.3	+1.0
	9.0nm,0.3s,baz=99,slow=23,SNR=12						
URZ	**Urewera**	**7.53**	**203**	PN	Pn	15 37 57.0	-0.2
URZ				SN	S	15 39 23.8	-0.5
KNZ	**Kokohu**	**8.06**	**198**	PN	Pn	15 38 03.3	-0.5
KNZ				eSN	S	15 39 36.6	+0.1
MHGZ	**Mahia Peninsul**	**8.13**	**196**	ePN	Pn	15 38 04.6	-0.1
RAHZ	**Arahi**	**8.13**	**201**	ePN	Pn	15 38 04.1	-0.6
NMHZ	**Naumai**	**8.39**	**202**	PN	Pn	15 38 07.3	-0.5
BKZ	**Black Stump Fm**	**8.55**	**203**	PN	Pn	15 38 09.7	-0.2
CKHZ	**Cape Kidnapper**	**8.82**	**199**	ePN	Px	15 38 12.4	
KAHZ	**Kahuranaki**	**9.01**	**200**	ePN	Px	15 38 14.5	
MOVZ	**Moawhango**	**9.03**	**206**	ePN	Px	15 38 14.2	
PXZ	**Pawanui**	**9.23**	**199**	PN	Px	15 38 16.5	
PXZ				eSN	Sx	15 39 59.2	
PRHZ	**Porangahau**	**9.51**	**200**	ePN	Px	15 38 20.0	
TSZ	**Takapari Road**	**9.54**	**203**	ePN	Px	15 38 20.1	
WAZ	**Wanganui**	**9.63**	**208**	ePN	Pn	15 38 22.7	-0.5
MRZ	**Mangatainoka R**	**10.20**	**203**	ePN	Px	15 38 27.9	
MRZ				SN	Sx	15 40 18.2	
OGWZ	**Otaki Gorge**	**10.48**	**204**	ePN	Px	15 38 31.3	
TMWZ	**Te Maipa**	**10.51**	**201**	ePN	Px	15 38 32.1	
MTW	**Mount Morrison**	**10.68**	**202**	ePN	Px	15 38 33.7	
CAW	**Cannon Point**	**10.78**	**204**	ePN	Px	15 38 34.5	
SNZO	**South Karori**	**11.08**	**205**	ePn	Pn	15 38 40.3	-0.7
SNZO				eS	Sx	15 40 39.8	
SNZO	**South Karori**	**11.08**	**205**	ePN	Px	15 38 38.2	
TCW	**Tory Channel**	**11.15**	**206**	ePN	Px	15 38 39.0	
NNZ	**Nelson**	**11.52**	**209**	ePN	Px	15 38 44.4	
NNZ				eSN	Sx	15 40 48.7	
QRZ	**Quartz Range**	**11.58**	**213**	ePN	Px	15 38 44.0	
THZ	**Tophouse**	**12.17**	**209**	ePN	Px	15 38 51.5	
RPZ	**Rata Peaks**	**14.55**	**209**	P	Pn	15 39 21.9	-0.9
	1.2nm,0.3s,baz=44,slow=11,SNR=10						
RPZ				S	Sx	15 41 53.3	
	0.5nm,0.3s,baz=307,slow=20,SNR=6.0						
CTA	**Charters Tower**	**32.97**	**282**	eP	P	15 42 18.0	+0.4
	4.0nm,0.6s,mb4.1						
CTAO	**Charters Tower**	**32.97**	**282**	eP	P	15 42 17.7	+0.1
	9.4nm,0.8s,mb4.4						
STKA	**Stephens Creek**	**33.28**	**259**	eP	P	15 42 22.2	+2.0
	4.7nm,0.4s,mb4.4						
STKA	**Stephens Creek**	**33.28**	**259**	P	P	15 42 22.1	+1.9
	7.5nm,0.6s,mb4.4,baz=101,slow=10,SNR=35						
STKA	**Stephens Creek**	**33.28**	**259**	eP	P	15 42 21.8	+1.6
	1.3nm,0.5s,mb3.7						
ASAR	**Alice Springs**	**42.05**	**269**	P	P	15 43 32.9	-0.4
	1.2nm,0.5s,mb3.4,baz=105,slow=7.3,SNR=43						
WRAB	**Tennant Creek**	**43.12**	**274**	eP	P	15 43 41.2	-0.7
	3.4nm,0.7s,mb3.7						
WRA	**Warramunga Arr**	**43.13**	**274**	P	P	15 43 41.2	-0.7
	1.7nm,0.3s,mb3.7,baz=111,slow=8.1,SNR=85						
QSPA	**South Pole Qui**	**58.75**	**180**	P	P	15 45 43.8	+7.1
	3.8nm,0.6s,mb4.0,baz=269,slow=0.6,SNR=31						
KKM	**Kota Kinabalu**	**71.89**	**289**	eP	P	15 47 01.7	+0.1
BVAR	**Borovoye Array**	**126.37**	**315**	PKP	PKPdf	15 54 39.2	+2.1
	0.4nm,0.5s,baz=136,slow=1.9,SNR=3.6						
ARCES	**ARCESS Array B**	**139.30**	**347**	PKhKP		15 54 55.3	
	1.1nm,0.9s,baz=90,slow=3.6,SNR=3.9						
ARCES				PKP	PKPdf	15 55 05.0	+4.1
	0.3nm,0.3s,baz=73,slow=2.9,SNR=6.7						
JOF	**Joensuu**	**142.92**	**337**	epkp	PKPdf	15 55 05.1	-2.4
	3.5nm,1.1s						
KAF	**Kangasniemi**	**145.10**	**339**	epkp	PKPdf	15 55 11.6	+0.3
	3.6nm,0.5s,baz=39,slow=3.1						
FINES	**FINESS Array B**	**145.68**	**339**	PKPbc	PKPbc	15 55 14.7	+1.3
	5.5nm,0.5s,baz=54,slow=4.1,SNR=72						
NB2	**NORSAR Subarra**	**149.53**	**350**	PKP	PKPbc	15 55 25.2	+1.6
	comp=Z,1.3nm,0.5s,baz=18,slow=2.6						
NOA	**NORSAR Array B**	**149.53**	**350**	PKPbc	PKPbc	15 55 25.5	+1.9
	comp=Z,2.0nm,0.6s,baz=15,slow=4.1,SNR=8.7						
MMAI	**Mount Meron Ar**	**150.75**	**282**	PKPbc	PKPbc	15 55 30.3	+2.9
	comp=Z,0.3nm,0.3s,baz=84,slow=4.1,SNR=3.4						
AKASG	**Malin Array Be**	**151.42**	**321**	PKPbc	PKPbc	15 55 29.3	+0.9
	comp=Z,0.6nm,0.4s,baz=63,slow=2.1,SNR=4.1						

ISCJB ***12*** *15:41:07.7±0.6,51°.38N±0°.03×16°.06E±0°.03,h0km, Error ellipse: s-maj=4.5km s-min=2.5km az=24.2*
IPEC ***12*** *15:41:08.4±0.2,51°.48N×16°.18E,h6km±1km,ML2.2/4, Error ellipse: s-maj=1.5km s-min=0.6km az=39.0*
CSEM ***12*** *15:41:08.1±0.2,51°.45N×16°.11E,h2km,ML3.1/11,Error ellipse: s-maj=4.3km s-min=2.6km az=24.0*
WAR ***12*** *15:41:09.1,51°.46N×16°.10E,ML2.6,Mining Induced*
PRU ***12*** *15:41:09.7,51°.40N×16°.09E,h0km*
VIE ***12*** *15:41:10.9±0.5,51°.23N×16°.17E,h0km,mb2.2/4,ML2.6/4, Error ellipse: s-maj=3.3km s-min=3.0km az=172.0 60 km WNW of Wroclaw Suspected Mining induced.*

ISC 12 15:41:07.8±0.5,51°.46N±0°.03×16°.13E±0°.03,h0km,n44, σ0°84/78,2C-2D,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.63**	**170**	ePg	Pg	15 41 20.6	+0.8
KSP				eSg	Sg	15 41 29.1	+1.2
KSP	**Ksiaz**	**0.63**	**170**	*i* Pg	Pg	15 41 20.6	+0.8
KSP				*i* Sg	Sg	15 41 29.1	+1.2
KSP	**Ksiaz**	**0.63**	**170**	ePg	Pg	15 41 20.5	+0.7
	baz=354						
KSP				eSg	Sg	15 41 28.5	+0.6
	baz=354						
UPC	**Upice**	**0.96**	**184**	ePG	Pg	15 41 26.7	+0.6
UPC	**Upice**	**0.96**	**184**	ePg	Pg	15 41 26.7	+0.6
	baz=6.2						
DPC	**Dobruska-Polom**	**1.12**	**174**	ePG	Pg	15 41 29.4	+0.2
DPC				eSG	Sg	15 41 44.4	+0.7
	comp=Z,21nm,0.3s						
DPC	**Dobruska-Polom**	**1.12**	**174**	Pg	Pg	15 41 29.4	+0.2
DPC				Sg	Sg	15 41 44.4	+0.7
	comp=Z,21nm,0.3s						
PVCC	**Panska Ves**	**1.36**	**227**	ePG	Pg	15 41 34.4	+0.6
PVCC	**Panska Ves**	**1.36**	**227**	ePn	Pn	15 41 33.8	-0.2
	baz=46						
PVCC	**Panska Ves**	**1.36**	**227**	Pg	Pg	15 41 34.4	+0.6
PVCC				eSg	Sg	15 41 52.2	+0.8
	baz=46						
BRG	**Berggiesshubel**	**1.50**	**248**	PN	Pn	15 41 35.0	-0.9
BRG				PG	Pg	15 41 36.4	0.0
BRG				SG	Sg	15 41 56.3	+0.5
	comp=Z,30nm,0.4s						
BRG	**Berggiesshubel**	**1.50**	**248**	ePn	Pn	15 41 35.7	-0.2
	baz=66						
BRG				eSg	Sg	15 41 56.0	+0.2
	baz=66						
RUE	**Ruedersdorf**	**1.77**	**306**	ePn	Pn	15 41 38.3	-1.4
	baz=123						
RUE				eSg	Sg	15 42 04.5	-0.3
	baz=123						
PRU	**Pruhonice**	**1.79**	**215**	ePN	Pn	15 41 40.5	+0.6
PRU				ePG	Pg	15 41 41.9	-0.1
PRU				ex	x	15 41 46.2	
PRU				eSN	Sn	15 41 58.7	-4.5
PRU				eSG	Sg	15 42 04.7	-0.4
	comp=Z,20nm,0.6s						
PRU	**Pruhonice**	**1.79**	**215**	Pn	Pn	15 41 40.5	+0.6
PRU	**Pruhonice**	**1.79**	**215**	Pg	Pg	15 41 41.9	-0.1
PRU				Sg	Sg	15 42 04.7	-0.4
	comp=Z,20nm,0.6s						
MORC	**Moravsky Berou**	**1.91**	**151**	ePn	Pn	15 41 41.4	-0.2
	baz=334						
MORC				eSg	Sg	15 42 07.7	-1.5
	comp=Z,12nm,0.3s,baz=334						
CLL	**Collm**	**1.96**	**267**	*i* Pg	Pg	15 41 44.7	-0.7
CLL				*e*		15 41 59.0	
CLL				*i* Sg	Sg	15 42 10.5	-0.3
	comp=Z,9.0nm,0.5s						
CLL	**Collm**	**1.96**	**267**	ePn	Pn	15 41 43.7	+1.4
	baz=84						
OKC	**Ostrava-Krasne**	**2.07**	**141**	ePN	Pn	15 41 43.8	0.0
OKC				ePG	Pg	15 41 47.2	-0.3
OKC				eSG	Sg	15 42 14.2	-0.2
	comp=Z,28nm,0.7s						
OKC	**Ostrava-Krasne**	**2.07**	**141**	Pn	Pn	15 41 43.8	0.0
OKC	**Ostrava-Krasne**	**2.07**	**141**	Pg	Pg	15 41 47.2	-0.3
OKC				Sg	Sg	15 42 14.2	-0.2
	comp=Z,28nm,0.7s						
VRAC	**Vranov**	**2.18**	**172**	ePn	Pn	15 41 45.5	+0.3
	baz=353						
VRAC				eSg	Sg	15 42 16.4	-1.3
	comp=Z,9.4nm,0.3s,baz=353						
TREC	**Trest**	**2.21**	**191**	ePn	Pn	15 41 47.0	+1.4
	baz=11						
KRUC	**Moravsky**	**2.41**	**176**	ePn	Pn	15 41 49.6	+1.2
	baz=357						
KRUC				eSg	Sg	15 42 24.3	-0.8
	comp=Z,17nm,0.8s,baz=357						
NKC	**Novy Kostel**	**2.64**	**244**	ePN	Pn	15 41 51.7	+0.2
NKC				ePG	Pg	15 41 57.9	-0.4
NKC				eSG	Sg	15 42 32.6	+0.2
	comp=Z,19nm,0.3s						
NKC	**Novy Kostel**	**2.64**	**244**	ePn	Pn	15 41 51.5	0.0
	baz=61						
OJC	**Ojcow**	**2.64**	**117**	ePg	Pg	15 41 57.7	-0.7
OJC				eSg	Sg	15 42 31.4	-1.1
JAVC	**Velka Javorina**	**2.79**	**159**	ePg	Pg	15 42 00.1	-1.1
	baz=340						
JAVC				eSg	Sg	15 42 37.1	-0.2
	comp=Z,11nm,0.6s,baz=340						
KHC	**Kasperske Hory**	**2.85**	**216**	ePN	Pn	15 41 54.9	+0.4
KHC				ePG	Pg	15 42 00.9	-1.5
KHC				eSN	Sn	15 42 29.2	-0.2
KHC				eSG	Sg	15 42 39.4	+0.1
	comp=Z,9.3nm,0.4s						
KHC	**Kasperske Hory**	**2.85**	**216**	ePn	Pn	15 41 54.7	+0.2
	baz=34						
MOX	**Moxa**	**2.96**	**256**	*i* PG	Pg	15 42 04.2	-0.3
MOX				*i* SG	Sg	15 42 42.8	-0.1
MOX	**Moxa**	**2.96**	**256**	ePn	Pn	15 41 56.1	+0.1
	baz=72						
MOX	**Moxa**	**2.96**	**256**	ePg	Pg	15 42 03.6	-0.9
	baz=72						
MOX				eSg	Sg	15 42 42.6	-0.3
	baz=72						
WET	**Wettzell**	**3.12**	**223**	ePn	Pn	15 41 58.1	-0.1
	baz=41						
VYHS	**Vyhne**	**3.45**	**148**	eSG	Sg	15 43 00.7	+2.2
VYHS	**Vyhne**	**3.45**	**148**	eSg	Sg	15 43 00.7	+2.2
CONA	**Conrad Observa**	**3.54**	**183**	⇑*i*Pn	Pn	15 42 04.8	+0.8
CONA				⇓*i*Sg	Sg	15 42 59.9	-1.6
	comp=Z,11nm,0.6s						
CONA	**Conrad Observa**	**3.54**	**183**	Pn	Pn	15 42 04.8	+0.8
CONA				Sg	Sg	15 42 59.9	-1.6
	comp=Z,11nm,0.6s						
MOA	**Molln**	**3.81**	**199**	⇑*i*Pn	Pn	15 42 08.4	+0.7
MOA				⇓*i*Sg	Sg	15 43 10.4	+0.1
	comp=Z,7.8nm,0.4s						
MOA	**Molln**	**3.81**	**199**	Pn	Pn	15 42 08.4	+0.7
MOA				Sg	Sg	15 43 10.4	+0.2
	comp=Z,7.8nm,0.4s						
STHS	**Stebnicka Huta**	**3.86**	**120**	ePN	Pn	15 42 10.6	+2.3
STHS				*e*		15 42 23.9	
STHS	**Stebnicka Huta**	**3.86**	**120**	eSG	Sg	15 43 17.2	+5.5
STHS	**Stebnicka Huta**	**3.86**	**120**	ePn	Pn	15 42 10.6	+2.3

GCMT ***12*** *15:46:01.9±0.3,43°.05N×126°.87W,h18km±1km,MW5.0, Moment Tensor Solution. s35,c38; s83,c120; Moment tensor: Scale 10^16^Nm; Mrr-1.10±.14; Mθθ-1.94±.10; Mφφ3.03±.12; Mrθ-0.55±.24; Mrφ-2.15±.11; Mθφ-0.20±.24; Best double couple: M0 3.40000×10^16^ NP1:φs23.00000°, δ78.00000°,λ-13.00000°. NP2:φs116.00000°,δ78.00000°, λ-167.00000°. Principal axes: T 3.8300, Plg0.0000°, Azm250.0000°; N -0.9200, Plg72.0000°, Azm160.0000°; P -2.9300, Plg18.0000°, Azm340.0000°; Data Used: II IU CN G IC.*
IDC ***12*** *15:46:01.4±1.5,43°.26N×126°.30W,h0km,mb3.6/5, mb1 3.9/11,mb1mx3.7/27,mbtmp3.7/11,ML3.2/5,MS4.0/21, Ms1 4.0/21,ms1mx3.9/31 Error ellipse: s-maj=32.5km s-min=11.4km az=45.0*
NEIC ***12*** *15:46:02.3±0.6,43°.29N×126°.45W,h10km,mb4.4/18, Error ellipse: s-maj=7.6km s-min=4.2km az=71.0*

ISC 12 15:46:03.5±1.5,43°.31N±0°.03×126°.48W±0°.06, h18km±10km,n131,σ1°18/127,mb4.2/11,MS4.0/15,1C,Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**1.63**	**105**	P	Pn	15 46 27.3	-3.9
RNO	**Roman Nose**	**2.08**	**72**	P	Pn	15 46 35.4	-2.0
MPOR	**Mary's Peak**	**2.43**	**59**	P	Pn	15 46 40.5	-1.8
COR	**Corvallis**	**2.62**	**60**	ePn	Pn	15 46 43.6	-1.3
COR				eSn	Sn	15 47 17.8	+1.5
HUMO	**Hull Mountain**	**2.67**	**104**	ePn	Pn	15 46 42.6	-3.0
HUMO				eSn	Sn	15 47 15.5	-2.0
HEBO	**Mount Hebo**	**2.73**	**45**	ePn	Pn	15 46 45.1	-1.3
HEBO				eSn	Sn	15 47 19.6	+0.7
BBOR	**Butler Butte**	**2.81**	**97**	P	Pn	15 46 45.6	-1.9
IRO	**Indian Ridge**	**3.14**	**76**	P	Pn	15 46 51.0	-1.0
KHMM	**Horse Mountain**	**3.17**	**139**	ePn	Pn	15 46 48.0	-4.4
YBH	**Yreka Blue Hor**	**3.20**	**118**	Pn	Pn	15 46 50.6	-2.2
	5.8nm,0.3s,baz=302,slow=12,SNR=58						
YBH				Sn	Sn	15 47 28.0	-2.4
	10nm,0.3s,baz=137,slow=15,SNR=15						
YBH				LR	LR	15 48 15.9	
	comp=Z,1μm,19.2s,baz=296,slow=44						
YBH	**Yreka Blue Hor**	**3.20**	**118**	⇑ePn	Pn	15 46 50.2	-2.6
YBH				eSn	Sn	15 47 26.4	-3.9
HUOR	**Husband**	**3.45**	**75**	P	Pn	15 46 55.8	-0.5
WIFE	**Three Sisters-**	**3.46**	**76**	P	Pn	15 46 55.7	-0.7
BKCOR	**Black Crater**	**3.60**	**72**	P	Pn	15 46 57.7	-0.6
WDC	**Whiskeytown Da**	**4.00**	**132**	ePn	Pn	15 47 03.0	-0.8
HOOD	**Mount Hood Mea**	**4.00**	**58**	ePn	Pn	15 47 03.5	-0.4
KIPM	**Iron Peak**	**4.15**	**146**	ePn	Pn	15 47 03.0	-3.0
NLWA	**Neilton Lookou**	**4.48**	**23**	ePn	Pn	15 47 09.9	-0.5
NLWA				eSn	Sn	15 48 01.1	-0.9
MOD	**Modoc**	**4.77**	**105**	ePn	Pn	15 47 13.2	-1.2
LON	**Longmire**	**4.77**	**42**	ePn	Pn	15 47 14.3	-0.1
GNW	**Green Mountain**	**4.97**	**30**	ePn	Pn	15 47 15.6	-1.6
HOPS	**Hopland**	**5.01**	**148**	ePn	Pn	15 47 17.0	-0.8
OHCM	**Honcut**	**5.46**	**135**	ePn	Pn	15 47 23.6	-0.3
PGC	**Sidney**	**5.75**	**20**	ePn	Pn	15 47 26.1	-1.7
PGC				eSn	Sn	15 48 31.6	-1.6
RSW	**Rattlesnake Hi**	**5.79**	**55**	ePn	Pn	15 47 28.8	+0.4
HAWA	**Hanford**	**5.82**	**56**	ePn	Pn	15 47 28.8	0.0
WVOR	**Wild Horse Val**	**5.83**	**96**	ePn	Pn	15 47 26.5	-2.4
	16nm,0.9s						
JCW	**Jim Creek**	**5.83**	**31**	ePn	Pn	15 47 28.4	-0.6
JCW				eSn	Sn	15 48 37.0	+1.8
ETW	**Entiat**	**6.09**	**43**	ePn	Pn	15 47 33.2	+0.7
RPW	**Rockport**	**6.20**	**32**	ePn	Pn	15 47 33.2	-0.8
RPW				eSn	Sn	15 48 45.5	+1.1
LNOR	**Lincton Mounta**	**6.39**	**63**	ePn	Pn	15 47 35.5	-1.1
PAHR	**Pah Rah Range**	**6.42**	**122**	ePn	Pn	15 47 36.9	-0.2
BMO	**Blue Mountains**	**6.78**	**74**	ePn	Pn	15 47 41.3	-0.8
OD2	**Odessa Site #2**	**6.83**	**51**	ePn	Pn	15 47 42.3	-0.4
CMB	**Columbia Colle**	**7.01**	**137**	ePn	Pn	15 47 45.6	+0.4
WAKR	**Walker**	**7.17**	**130**	ePn	Pn	15 47 47.9	+0.5
WAKR				eSb	Sb	15 49 21.8	-11
NVAR	**Mina Array Bea**	**7.88**	**125**	Pn	Pn	15 47 57.8	+0.7
	0.2nm,0.3s,baz=302,slow=14,SNR=7.4						
NEW	**Newport**	**8.20**	**50**	ePn	Pn	15 48 00.5	-1.0
ELK	**Elko**	**8.75**	**103**	Pn	Pn	15 48 11.0	+2.0
	0.2nm,0.3s,baz=286,slow=15,SNR=16						
ELK				LR	LR	15 52 01.6	
	comp=Z,288nm,21.3s,baz=280,slow=42						
ELK	**Elko**	**8.75**	**103**	Pn	Pn	15 48 11.0	+2.0
ELK				LR	LR	15 52 01.6	
HLID	**Hailey**	**8.78**	**84**	ePn	Pn	15 48 09.8	+0.3
	15nm,1.0s						
N12A	**Clover Valley,**	**8.85**	**102**	ePn	Pn	15 48 12.0	+1.6
BBB	**Bella Bella**	**8.95**	**354**	Pn	Pn	15 48 13.6	+1.8
	0.2nm,0.3s,baz=10,slow=15,SNR=4.5						
BBB				LR	LR	15 51 04.3	
	comp=Z,1μm,20.8s,baz=12,slow=34						
M13A	**Montello**	**9.32**	**98**	ePn	Pn	15 48 17.5	+0.6
BSMT	**Bassoo Peak**	**9.37**	**57**	ePn	Pn	15 48 18.7	+1.2
N13A	**Wendover, West**	**9.45**	**101**	ePn	Pn	15 48 20.3	+1.7
MSO	**Missoula**	**9.54**	**64**	ePn	Pn	15 48 20.1	+0.2
JTMT	**Jette**	**9.64**	**58**	ePn	Pn	15 48 22.4	+1.2
SWMT	**Swartz Lake**	**9.73**	**60**	ePn	Pn	15 48 24.1	+1.7
ISA	**Isabella**	**9.82**	**138**	ePn	Pn	15 48 24.6	+0.9
SLMT	**Seeley Lake**	**9.96**	**62**	ePn	Pn	15 48 25.4	-0.2
CHMT	**Chamberlain Mo**	**10.02**	**64**	ePn	Pn	15 48 25.6	-0.8
DLMT	**Dillon**	**10.16**	**74**	ePn	Pn	15 48 29.1	+0.8
BGU	**Big Grassy Mou**	**10.27**	**99**	ePn	Pn	15 48 30.7	+0.9
LRM	**Limekiln Ridge**	**10.32**	**71**	ePn	Pn	15 48 29.4	-1.2
WALA	**Waterton Lakes**	**10.43**	**52**	ePn	Pn	15 48 33.6	+1.5
DUG	**Dugway**	**10.67**	**102**	ePn	Pn	15 48 35.1	-0.2
BOZ	**Bozeman (W)**	**10.87**	**72**	ePn	Pn	15 48 38.1	+0.1
HRY	**Holter Researc**	**10.91**	**67**	ePn	Pn	15 48 38.7	+0.1
GSC	**Goldstone**	**10.95**	**134**	ePn	Pn	15 48 37.9	-1.2
RRI2	**Red Ridge**	**11.04**	**85**	ePn	Pn	15 48 42.5	+2.1
HWUT	**Hardware Ranch**	**11.15**	**94**	ePn	Pn	15 48 42.1	+0.2
AHID	**Auburn Hatcher**	**11.27**	**87**	ePn	Pn	15 48 43.8	+0.3
IMW	**Indian Meadow**	**11.29**	**82**	ePn	Pn	15 48 45.0	+1.2
	18nm,1.1s						
TPAW	**Teton Pass**	**11.30**	**84**	ePn	Pn	15 48 46.1	+2.1
ARUT	**Antelope Range**	**11.34**	**115**	ePn	Pn	15 48 46.0	+1.4
YFT	**Old Faithful**	**11.35**	**79**	ePn	Pn	15 48 44.6	0.0
REDW	**Red

comp=Z,50nm,18.8s,MS3.8,baz=320,slow=35
FINES FINESS Array B 73.26 13 LR LR 16 30 33.4
comp=Z,135nm,19.4s,MS4.2,baz=17,slow=36
SONM Songino Array 77.99 327 LR LR 16 29 48.3
comp=Z,111nm,21.8s,MS4.2,baz=40,slow=34
ZALV Zalesovo Beam 79.48 342 LR LR 16 33 43.9
comp=Z,76nm,21.7s,MS4.0,baz=57,slow=36
HHC Hu-ho-hao-te 81.25 319 *e*P **P 15 58 17.5 -0.8**
HHC S S 16 08 25.0 -2.6
HHC pmax pmax
comp=Z,14nm,0.7s,mb5.0
HHC pmax pmax
comp=Z,72nm,6.7s
ESDC Sonseca Array 82.43 41 LR LR 16 32 03.8
comp=Z,78nm,19.8s,MS4.1,baz=290,slow=34
BVAR Borovoye Array 82.95 350 P **P 15 58 26.7 -0.3**
comp=Z,0.3nm,0.4s,mb3.6,baz=23,slow=6.2,SNR=3.7
AKASG Malin Array Be 84.01 15 LR LR 16 36 56.7
comp=Z,77nm,19.5s,MS4.1,baz=355,slow=36
MKAR Makanchi Array 86.74 341 P **P 15 58 47.9 +1.8**
comp=Z,0.1nm,0.4s,mb3.4,baz=50,slow=7.7,SNR=2.8
MKAR LR LR 16 38 55.4
comp=Z,42nm,18.8s,MS3.9,baz=13,slow=37
KEST Kesra 91.64 35 LR LR 16 38 32.8
comp=Z,27nm,20.1s,MS3.7,baz=221,slow=34
BRTR Keskin Array B 95.42 15 LR LR 16 45 33.6
comp=Z,67nm,20.9s,MS4.1,baz=105,slow=37
LSZ Lusaka 144.66 46 *e*PKPdf PKPdf 16 05 39.4 +0.2

NIED ***12*** *15:47:00, 43.°60N×147.°30E, h47km, Mw3.7 Best double couple: M0 3.77000×10^14 NP1:φ=299.00000°, δ=85.00000°, λ=-78.00000°. NP2:φ=54.00000°, δ=13.00000°, λ=-155.00000°.*
JMA 12 15:47:58.0±0.3, 43.°55N×147.°30E, h16km±3km, M3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.15**	**261**	P	Pn	15 48 19.3	-0.1
NEM2				*e*S	Sb	15 48 33.8	-0.3
JRA	**Rausu**	**1.62**	**285**	P	Pn	15 48 26.2	+0.3
JNK	**Nakash**	**1.88**	**272**	P	Pn	15 48 30.2	+0.8
JNK				*e*S	Sn	15 48 54.1	+1.4
JAK	**Akkeshi**	**1.98**	**255**	P	Pn	15 48 31.4	+0.6
JTKR	**Abashiri--Toko**	**2.49**	**281**	P	Pn	15 48 39.2	+1.3
JAR	**Ashorobuto**	**2.58**	**266**	P	Pn	15 48 40.6	+1.5
JAR				*e*S	Sn	15 49 12.0	+1.8
JOB	**Onbets**	**2.61**	**257**	*e*S	Sn	15 49 12.7	+1.8
JMP	**Maruseppu**	**2.89**	**280**	P	Pn	15 48 45.1	+1.8
JCH	**Churui**	**3.03**	**253**	P	Pn	15 48 46.6	+1.3
JEM	**Erimo**	**3.41**	**245**	P	Pn	15 48 53.6	+3.1
JFR	**Furan**	**3.45**	**265**	P	Pn	15 48 53.7	+2.6
JNBK	**Urakawa-nobuka**	**3.57**	**251**	P	Pn	15 48 54.2	+1.5

ISCJB ***12*** *16:03:29.8±0.7, 24.°38N±0.°02×122.°00E±0.°02, h13km±5km, Error ellipse: s-maj=3.6km s-min=3.0km az=6.0*
JMA ***12*** *16:03:29.6±0.2, 24.°73N×121.°92E, h42km±4km, M2.4*
TAP ***12*** *16:03:29.8, 24.°41N×121.°93E, h23km, ML3.3, D*
ISC 12 16:03:29.9±0.5, 24.°39N±0.°02×121.°99E±0.°03, h13km±4km, n40, σ0.°75/59, 1C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.23**	**280**	*i*P	**Pg**	**16 03 35.2**	**+0.3**
	baz=274						
ENA				S	**Sg**	**16 03 39.1**	**+0.8**
	baz=274						
ILA	**Ilan**	**0.43**	**330**	P	**Pg**	**16 03 38.7**	**+0.1**
	baz=335						
ILA				S	**Sg**	**16 03 45.5**	**+1.1**
	baz=335						
TWE	**Neicheng**	**0.44**	**319**	↑*i*P	**Pg**	**16 03 38.5**	**-0.2**
	baz=323						
TWE				S	**Sg**	**16 03 44.7**	**0.0**
	baz=323						
TWD	**Chiawan**	**0.47**	**229**	P	**Pg**	**16 03 39.4**	**+0.1**
	baz=221						
TWD				S	**Sg**	**16 03 46.9**	**+1.3**
	baz=221						
HWA	**Hwalien**	**0.54**	**220**	*e*P	**Pg**	**16 03 41.1**	**+0.6**
	baz=213						
NNS	**Nan Shan**	**0.56**	**275**	P	**Pg**	**16 03 40.5**	**-0.5**
	baz=272						
NNS				S	**Sg**	**16 03 48.2**	**-0.2**
	baz=272						
TWB1	**Santiao Chiao**	**0.61**	**0**	P	**Pg**	**16 03 41.7**	**-0.3**
	baz=5.0						
TWB1				S	**Sg**	**16 03 50.5**	**+0.3**
	baz=5.0						
NSK	**Sanguang**	**0.64**	**297**	*i*P	**Pg**	**16 03 41.6**	**-0.9**
	baz=296						
NSK				S	**Sg**	**16 03 49.8**	**-1.2**
	baz=296						
TWA	**Mucha**	**0.69**	**328**	*e*P	**Pg**	**16 03 43.2**	**-0.3**
	baz=331						
TWA				*e*S	**Sg**	**16 03 52.4**	**-0.2**
	baz=331						
NWF	**Wu-fen Shan**	**0.70**	**345**	P	**Pg**	**16 03 43.5**	**-0.1**
	baz=348						
WHF	**Hehuan Shan**	**0.70**	**250**	*i*P	**Pg**	**16 03 43.3**	**-0.4**
	baz=245						
WHF				*e*S	**Sg**	**16 03 53.2**	**+0.3**
	baz=245						
TWT	**Tachien**	**0.75**	**260**	P	**Pg**	**16 03 44.4**	**-0.2**
	baz=256						
TWT				*e*S	**Sg**	**16 03 55.3**	**+0.8**
	baz=256						
ESL	**Shilin**	**0.77**	**222**	P	**Pg**	**16 03 43.8**	**-1.0**
	baz=216						
TAP1	**Taipei**	**0.77**	**327**	*e*P	**Pg**	**16 03 44.6**	**-0.4**
	baz=328						
TAP1				*e*S	**Sg**	**16 03 55.1**	**0.0**
	baz=328						
TWS1	**Kuangyinshan**	**0.88**	**324**	P	**Pg**	**16 03 46.6**	**-0.4**
	baz=326						
TWS1				*e*S	**Sg**	**16 03 58.9**	**+0.5**
	baz=326						
NSTT	**Nanjuang**	**0.93**	**285**	P	**Pb**	**16 03 47.3**	**-0.6**
	baz=284						
YOJ	**Yonaguni jima**	**0.94**	**85**	P	**Pb**	**16 03 47.9**	**-0.1**
YOJ				S	**Sb**	**16 04 01.1**	**+0.8**
TWY	**Chenhua**	**0.95**	**338**	*e*P	**Pb**	**16 03 48.0**	**-0.2**
	baz=341						
EHY	**Hungye**	**1.07**	**215**	*e*P	**Pb**	**16 03 48.1**	**-2.1**
	baz=211						
TWQ1	**Liyutan**	**1.11**	**268**	*e*P	**Pb**	**16 03 50.8**	**-0.2**
	baz=266						
SMLT	**Sun Moon Lake**	**1.11**	**243**	*e*P	**Pb**	**16 03 49.8**	**-1.2**
	baz=240						
NSY	**Sanyi**	**1.12**	**272**	*e*P	**Pb**	**16 03 51.2**	**+0.1**
	baz=270						
NSY				*e*S	**Sb**	**16 04 07.4**	**+1.9**
	baz=270						
TWF1	**Yuli**	**1.21**	**212**	*e*P	**Pn**	**16 03 49.8**	**-2.7**
	baz=208						
WNT	**Mingjian**	**1.30**	**247**	*e*P	**Pn**	**16 03 54.2**	**+0.6**
	baz=244						
YUS	**Yu-Shan**	**1.30**	**227**	*e*P	**Pn**	**16 03 53.0**	**-0.8**
	baz=223						
ALS	**Alishan**	**1.39**	**231**	*e*P	**Pn**	**16 03 54.7**	**-0.3**
	baz=228						
CHN5	**Tsauling**	**1.44**	**237**	*e*P	**Pn**	**16 03 55.8**	**+0.2**
	baz=234						
ELDTW	**Lidau**	**1.49**	**217**	*e*P	**Pn**	**16 03 55.1**	**-1.3**
	baz=214						
IRIF	**Iriomote-Funau**	**1.59**	**92**	P	**Pn**	**16 03 57.3**	**-0.4**
IRIF				S	**Sn**	**16 04 18.0**	**-0.1**
CHN4	**Tsaushan**	**1.64**	**231**	*e*P	**Pn**	**16 03 59.2**	**+0.7**
	baz=229						
STYT	**Tauyuan**	**1.66**	**223**	*e*P	**Pn**	**16 03 59.0**	**+0.3**
	baz=220						
HATJ	**Hateruma jima**	**1.69**	**101**	P	**Pn**	**16 03 59.9**	**+0.8**
HATJ				S	**Sn**	**16 04 22.1**	**+1.5**
WTP	**Ta-pu**	**1.70**	**228**	*e*P	**Pn**	**16 03 59.4**	**+0.2**
	baz=225						
TWK	**Hsinying**	**1.77**	**231**	*e*P	**Pn**	**16 04 00.8**	**+0.5**
	baz=228						
CHN1	**Nanshi**	**1.80**	**228**	*e*P	**Pn**	**16 04 01.2**	**+0.7**
	baz=226						
SGST	**Jiashian**	**1.83**	**225**	*e*P	**Pn**	**16 04 01.7**	**+0.7**
	baz=222						
JKRS	**Kuro-shima**	**1.85**	**94**	P	**Pn**	**16 04 01.5**	**+0.2**
JKRS				S	**Sn**	**16 04 24.7**	**+0.2**
JIJ	**Ishigaki jima**	**1.96**	**90**	P	**Pn**	**16 04 02.6**	**-0.3**
JIJ				S	**Sn**	**16 04 26.1**	**-1.3**
SSD	**Sandimen**	**2.06**	**218**	*e*P	**Pn**	**16 04 05.0**	**+0.9**
	baz=215						
JTJ	**Tarama**	**2.48**	**84**	P	**Pn**	**16 04 10.4**	**+0.4**
JTJ				S	**Sn**	**16 04 40.2**	**0.0**

ATH ***12*** *16:18:56.7, 37.°41N×21.°27E, h29km±1km, MD3.2/9*
NEIC ***12*** *16:18:56.7, 37.°41N×21.°27E, h29km, MD3.2(ATH), After ATH.*
ISCJB ***12*** *16:18:57.2±0.6, 37.°43N±0.°02×21.°32E±0.°04, h9km±3km, Error ellipse: s-maj=5.4km s-min=3.3km az=143.8*
CSEM ***12*** *16:18:57.2±0.2, 37.°42N×21.°27E, h15km, ML3.6/8, Error ellipse: s-maj=5.2km s-min=3.2km az=49.0*
THE ***12*** *16:18:58.3, 37.°46N×21.°34E, h6km±1km, ML3.6/8, Error ellipse: s-maj=1.3km s-min=0.6km az=212.0*
ISC 12 16:18:57.8±0.6, 37.°42N±0.°03×21.°31E±0.°04, h13km±3km, n64, σ0.°90/115, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITM	**Ithomi**	**0.55**	**116**	*e*Pn	**Pg**	**16 19 08.5**	**0.0**
ITM				*e*Sn	**Sg**	**16 19 17.3**	**+1.6**
ITM	**Ithomi**	**0.55**	**116**	*e*PN	**Pg**	**16 19 08.5**	**0.0**
ITM				*e*SN	**Sg**	**16 19 17.3**	**+1.6**
ITM	**Ithomi**	**0.55**	**116**	P	**Pg**	**16 19 08.6**	**+0.1**
ITM				S	**Sg**	**16 19 17.3**	**+1.6**
ITM	**Ithomi**	**0.55**	**116**	P	**Pg**	**16 19 08.6**	**+0.1**
ITM				S	**Sg**	**16 19 17.3**	**+1.6**
PYL	**PYLOS**	**0.63**	**147**	*e*PN	**Pg**	**16 19 09.7**	**-0.3**
PYL				*e*SN	**Sg**	**16 19 19.9**	**+1.6**
PYL	**PYLOS**	**0.63**	**147**	P	**Pg**	**16 19 10.9**	**+0.8**
PYL				S	**Sg**	**16 19 19.5**	**+1.2**
PYL	**PYLOS**	**0.63**	**147**	*e*Pn	**Pg**	**16 19 09.7**	**-0.3**
PYL	**PYLOS**	**0.63**	**147**	P	**Pg**	**16 19 10.9**	**+0.8**
PYL				S	**Sg**	**16 19 19.5**	**+1.2**
PYL				*e*Sn	**Sg**	**16 19 19.9**	**+1.6**
RLS	**Riolos of Patr**	**0.64**	**11**	*e*Pb	**Pg**	**16 19 09.4**	**-0.9**
RLS				*e*Sn	**Sg**	**16 19 20.3**	**+1.5**
RLS	**Riolos of Patr**	**0.64**	**11**	*e*PB	**Pg**	**16 19 09.4**	**-0.9**
RLS				*e*SN	**Sg**	**16 19 20.3**	**+1.5**
RLS	**Riolos of Patr**	**0.64**	**11**	*e*Pb	**Pg**	**16 19 09.4**	**-0.9**
RLS				*e*Sn	**Sg**	**16 19 20.3**	**+1.5**
KFL	**Anninata**	**0.80**	**329**	P	**Pg**	**16 19 12.4**	**-0.9**
KFL				S	**Sg**	**16 19 25.0**	**+1.2**
KFL	**Anninata**	**0.80**	**329**	P	**Pg**	**16 19 12.4**	**-0.9**
KFL				S	**Sg**	**16 19 25.0**	**+1.2**
VLX	**Vlachokerasia**	**0.85**	**93**	*e*PN	**Pg**	**16 19 13.6**	**-0.7**
VLX				*e*SN	**Sn**	**16 19 27.1**	**-0.8**
VLX	**Vlachokerasia**	**0.85**	**93**	P	**Pg**	**16 19 13.6**	**-0.7**
VLX				S	**Sg**	**16 19 26.6**	**+1.2**
VLX	**Vlachokerasia**	**0.85**	**93**	P	**Pg**	**16 19 13.6**	**-0.7**
VLX				S	**Sg**	**16 19 26.6**	**+1.2**
VLX				*e*Sn	**Sn**	**16 19 27.1**	**-0.8**
UPR	**University Cam**	**0.94**	**23**	*e*PN	**Pg**	**16 19 15.6**	**-0.3**
UPR	**University Cam**	**0.94**	**23**	*e*Pn	**Pg**	**16 19 15.6**	**-0.3**
VLS	**Valsamata**	**0.94**	**323**	*e*Pb	**Pg**	**16 19 14.2**	**-1.8**
VLS				*e*Sb	**Sg**	**16 19 29.3**	**+0.9**
VLS	**Valsamata**	**0.94**	**323**	*e*PB	**Pg**	**16 19 14.2**	**-1.8**
VLS				*e*SB	**Sg**	**16 19 29.3**	**+0.9**
VLS	**Valsamata**	**0.94**	**323**	P	**Pg**	**16 19 14.9**	**-1.1**
VLS				S	**Sg**	**16 19 29.2**	**+0.8**
VLS	**Valsamata**	**0.94**	**323**	*e*Pb	**Pg**	**16 19 14.2**	**-1.8**
VLS	**Valsamata**	**0.94**	**323**	P	**Pg**	**16 19 14.9**	**-1.1**
VLS				*e*Sb	**Sg**	**16 19 29.3**	**+0.9**
GUR	**Goura**	**0.96**	**58**	P	**Pg**	**16 19 15.3**	**-1.1**
GUR				S	**Sg**	**16 19 28.7**	**-0.3**
GUR	**Goura**	**0.96**	**58**	P	**Pg**	**16 19 15.3**	**-1.1**
GUR				S	**Sg**	**16 19 28.7**	**-0.3**
LAKA	**Lakka**	**0.97**	**33**	P	**Pg**	**16 19 15.4**	**-1.1**
LAKA				S	**Sg**	**16 19 29.0**	**-0.2**
LAKA	**Lakka**	**0.97**	**33**	P	**Pg**	**16 19 15.4**	**-1.1**
LAKA				S	**Sg**	**16 19 29.0**	**-0.2**
EFP	**Efpalio**	**1.10**	**25**	*e*PN	**Pg**	**16 19 18.4**	**-0.7**
EFP	**Efpalio**	**1.10**	**25**	P	**Pg**	**16 19 18.5**	**-0.6**
EFP				S	**Sg**	**16 19 34.2**	**+0.7**
EFP	**Efpalio**	**1.10**	**25**	*e*Pn	**Pg**	**16 19 18.4**	**-0.7**
EFP				S	**Sg**	**16 19 34.2**	**+0.7**
TRIZ	**Trizonia**	**1.12**	**32**	P	**Pg**	**16 19 18.0**	**-1.3**
TRIZ				S	**Sg**	**16 19 34.3**	**+0.5**
TRIZ	**Trizonia**	**1.12**	**32**	P	**Pg**	**16 19 18.0**	**-1.3**
TRIZ				S	**Sg**	**16 19 34.3**	**+0.5**
KALE	**Kalithea**	**1.17**	**34**	P	**Pb**	**16 19 18.7**	**-1.1**
KALE				S	**Sb**	**16 19 36.1**	**+1.2**
KALE	**Kalithea**	**1.17**	**34**	P	**Pb**	**16 19 18.7**	**-1.1**
KALE				S	**Sb**	**16 19 36.1**	**+1.2**
DSF	**Desfina**	**1.38**	**44**	P	**Pn**	**16 19 23.5**	**+0.8**
DSF				S	**Sn**	**16 19 40.9**	**+0.1**
DSF	**Desfina**	**1.38**	**44**	P	**Pn**	**16 19 23.5**	**+0.8**
DSF				S	**Sn**	**16 19 40.9**	**+0.1**
LTK	**Loutraki**	**1.44**	**65**	*e*PN	**Pn**	**16 19 23.1**	**-0.5**
LTK	**Loutraki**	**1.44**	**65**	P	**Pn**	**16 19 23.2**	**-0.4**
LTK				S	**Sn**	**16 19 43.4**	**+0.9**
LTK	**Loutraki**	**1.44**	**65**	*e*Pn	**Pn**	**16 19 23.1**	**-0.5**
LTK				S	**Sn**	**16 19 43.4**	**+0.9**
LKD2	**Lefkada island**	**1.46**	**339**	P	**Pn**	**16 19 24.4**	**+0.5**
LKD2				S	**Sn**	**16 19 44.5**	**+1.7**
LKD2	**Lefkada island**	**1.46**	**339**	P	**Pn**	**16 19 24.4**	**+0.5**
VLI	**Veliai**	**1.48**	**118**	*e*Pn	**Pn**	**16 19 24.6**	**+0.5**
VLI				*e*Sn	**Sn**	**16 19 43.7**	**+0.4**
VLI	**Veliai**	**1.48**	**118**	*e*PN	**Pn**	**16 19 24.6**	**+0.5**
VLI				*e*SN	**Sn**	**16 19 43.7**	**+0.4**
VLI	**Veliai**	**1.48**	**118**	*e*Pn	**Pn**	**16 19 24.6**	**+0.5**
VLI				*e*Sn	**Sn**	**16 19 43.7**	**+0.4**
DID	**Didima**	**1.53**	**86**	*e*PB	**Pn**	**16 19 24.0**	**-0.9**
DID				*e*SN	**Sn**	**16 19 45.6**	**+0.9**
DID	**Didima**	**1.53**	**86**	*e*Pb	**Pn**	**16 19 24.0**	**-0.9**
DID				*e*Sn	**Sn**	**16 19 45.6**	**+0.9**
NAIG	**Nisos Aigina**	**1.76**	**78**	*e*Pb	**Pn**	**16 19 26.9**	**-1.1**
NAIG	**Nisos Aigina**	**1.76**	**78**	*e*PB	**Pn**	**16 19 26.9**	**-1.1**
NAIG	**Nisos Aigina**	**1.76**	**78**	*e*Pb	**Pn**	**16 19 26.9**	**-1.1**
LKR	**Lokris**	**1.81**	**47**	*e*Pn	**Pn**	**16 19 29.0**	**+0.3**
LKR				*e*Sn	**Sn**	**16 19 52.0**	**+0.5**
LKR	**Lokris**	**1.81**	**47**	*e*PN	**Pn**	**16 19 29.0**	**+0.3**
LKR				*e*SN	**Sn**	**16 19 52.0**	**+0.5**
LKR	**Lokris**	**1.81**	**47**	P	**Pn**	**16 19 29.0**	**+0.3**
LKR				S	**Sn**	**16 19 51.9**	**+0.4**
LKR	**Lokris**	**1.81**	**47**	P	**Pn**	**16 19 29.0**	**+0.3**
LKR				S	**Sn**	**16 19 51.9**	**+0.4**
VLY	**Voula,Athens**	**2.02**	**77**	*e*Pn	**Pn**	**16 19 30.4**	**-1.1**
VLY				*e*Sn	**Sn**	**16 19 56.3**	**-0.3**
VLY	**Voula,Athens**	**2.02**	**77**	*e*PN	**Pn**	**16 19 30.4**	**-1.1**
VLY				*e*SN	**Sn**	**16 19 56.3**	**-0.3**
VLY	**Voula,Athens**	**2.02**	**77**	*e*Pn	**Pn**	**16 19 30.4**	**-1.1**
VLY				*e*Sn	**Sn**	**16 19 56.3**	**-0.3**
PTL	**Penteli**	**2.12**	**72**	*e*Pn	**Pn**	**16 19 32.0**	**-0.9**
PTL				*e*Sn	**Sn**	**16 19 58.1**	**-1.0**
PTL	**Penteli**	**2.12**	**72**	*e*PN	**Pn**	**16 19 32.0**	**-0.9**
PTL				*e*SN	**Sn**	**16 19 58.1**	**-1.0**
PTL	**Penteli**	**2.12**	**72**	*e*Pn	**Pn**	**16 19 32.0**	**-0.9**
PTL				*e*Sn	**Sn**	**16 19 58.1**	**-1.0**
THL	**Klokotos Trika**	**2.21**	**14**	*e*PB	**Pn**	**16 19 34.5**	**+0.3**
THL	**Klokotos Trika**	**2.21**	**14**	*e*Pb	**Pn**	**16 19 34.5**	**+0.3**
NEO	**Neokhori**	**2.41**	**38**	*e*Pn	**Pn**	**16 19 36.9**	**0.0**
NEO	**Neokhori**	**2.41**	**38**	*e*PN	**Pn**	**16 19 36.9**	**0.0**
NEO	**Neokhori**	**2.41**	**38**	*e*Pn	**Pn**	**16 19 36.9**	**0.0**

IDC ***12*** *16:20:17.2±1.1, 10.°61S×161.°62E, h34km±6km, mb3.9/9, mb1 4.1/9, mb1mx4.0/15, mbtmp3.9/9, MS3.7/10, Ms1 3.7/10, ms1mx3.5/25, Error ellipse: s-maj=30.4km s-min=21.0km az=119.0*
ISCJB ***12*** *16:20:21.1±1.9, 10.°65S±0.°07×161.°5E±0.°1, h80km±15km, mb4.2/21, Error ellipse: s-maj=18.9km s-min=11.4km az=7.5*
NEIC ***12*** *16:20:23.1±1.5, 10.°58S×161.°46E, h84km±12km, mb4.6/15, Error ellipse: s-maj=14.5km s-min=8.0km az=105.0*
ISC 12 16:20:20.5±1.5, 10.°66S±0.°07×161.°63E±0.°09, h62km±12km, h35km±.5km; pP-P, n52, σ1.°05/39, mb4.3/21, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.06**	**306**	Pn	**Pn**	**16 20 53.1**	**+0.4**
	335nm,0.3s,baz=149,slow=7.8,SNR=42						
HNR				Sn	**Sn**	**16 21 23.2**	**+5.9**
	682nm,0.3s,baz=152,slow=23,SNR=11						
HNR	**Honiara**	**2.06**	**306**	*e*Pn	**Pn**	**16 20 52.8**	**0.0**
HNR				Sn	**Sn**	**16 21 23.2**	**+5.9**
DZM	**Mont Dzumac**	**12.25**	**158**	*e*Pn	**Pn**	**16 23 10.1**	**-2.1**
	5.4nm,0.3s						
DZM				*e*Sn	**Sn**	**16 25 13.8**	**-13**
	1.3nm,0.2s						
DZM				*e*LR	LR	16 26 03.1	
	465nm,24.8s						
CTA	**Charters Tower**	**17.53**	**236**	*e*P	**Pn**	**16 24 22.1**	**+1.4**
	25nm,0.8s						
CTA	**Charters Tower**	**17.53**	**236**	Pn	**Pn**	**16 24 22.6**	**+1.8**
	2.2nm,0.3s,baz=69,slow=13,SNR=30						
CTA				LR	LR	16 30 10.0	
	comp=Z,149nm,20.1s,baz=47,slow=34						
CTAO	**Charters Tower**	**17.53**	**236**	*e*Pn	**Pn**	**16 24 22.4**	**+1.7**
	31nm,0.8s						
EIDS	**Eidsvold**	**17.73**	**213**	*e*Pn	**Pn**	**16 24 23.8**	**+0.7**
	24nm,1.1s						
COEN	**Coen**	**18.33**	**258**	*e*Pn	**Pn**	**16 24 32.6**	**+2.1**
	87nm,0.9s						
ARMA	**Armidale**	**21.75**	**204**	*e*P	**P**	**16 25 07.4**	**+0.5**
AFI	**Afiamalu**	**26.18**	**100**	LR	LR	16 33 55.7	
	comp=Z,283nm,19.1s,baz=170,slow=31						
WRAB	**Tennant Creek**	**27.85**	**247**	*e*P	**P**	**16 26 04.1**	**-0.3**
	15nm,1.2s,mb4.5						
WRA	**Warramunga Arr**	**27.86**	**247**	P	**P**	**16 26 04.7**	**+0.2**
	1.5nm,0.5s,mb3.9,baz=78,slow=8.9,SNR=15						
STKA	**Stephens Creek**	**28.09**	**218**	*e*P	**P**	**16 26 10.2**	**+3.8**
	4.6nm,1.0s,mb4.1						
STKA	**Stephens Creek**	**28.09**	**218**	P	**P**	**16 26 07.2**	**+0.8**
	2.0nm,0.8s,mb3.8,baz=107,slow=11,SNR=2.0						
KAKA	**Kakadu**	**28.65**	**263**	*e*P	**P**	**16 26 10.7**	**-0.9**
	39nm,0.9s,mb5.1						
ASAR	**Alice Springs**	**29.41**	**240**	P	**P**	**16 26 17.4**	**-0.8**
	0.7nm,0.5s,mb3.6,baz=64,slow=10,SNR=18						
URZ	**Urewera**	**30.79**	**156**	LR	LR	16 35 53.5	
	comp=Z,110nm,19.3s,baz=343,slow=30						
FITZ	**Fitzroy Crossi**	**35.59**	**254**	*e*P	**P**	**16 27 12.2**	**-0.1**
	7.8nm,0.7s,mb4.8						
FITZ	**Fitzroy Crossi**	**35.59**	**254**	*e*P	**P**	**16 27 11.9**	**-0.4**
	4.1nm,0.7s,mb4.5						
MBWA	**Marble Bar**	**41.51**	**250**	*e*P	**P**	**16 28 00.8**	**-1.1**
	12nm,1.1s,mb4.4						
PPT	**Papeete**	**47.71**	**104**	*e*LR	LR	16 42 35.2	
	86nm,22.0s						
PPT	**Papeete**	**47.71**	**104**	LR	LR	16 45 00.8	
	comp=Z,134nm,18.2s,baz=345,slow=31						
KKM	**Kota Kinabalu**	**48.16**	**288**	*e*P	**P**	**16 28 52.6**	**-2.3**
	10nm,0.7s,mb5.0						
MJAR	**Matsushiro Arr**	**51.87**	**336**	P	**P**	**16 29 21.0**	**-1.6**
	0.7nm,0.5s,mb3.8,baz=162,slow=8.3,SNR=6.0						
MAJO	**Matsushiro**	**51.87**	**336**	P	**P**	**16 29 21.9**	**-0.7**
ASAJ	**Asahikawa**	**57.19**	**344**	LR	LR	16 55 14.3	
	comp=Z,58nm,18.3s,baz=356,slow=37						
RKT	**Rikitea**	**61.51**	**111**	*e*LR	LR	16 49 00.2	
	169nm,27.8s						
CASY	**Casey**	**65.31**	**200**	*e*P	**P**	**16 30 55.2**	**-0.5**
	2.6nm,0.8s,mb4.3						
SBA	**Scott Base**	**67.24**	**179**	*e*P	**P**	**16 31 08.7**	**+0.9**
	5.3nm,0.9s,mb4.6						
CMAR	**Chiang Mai Arr**	**68.27**	**295**	P	**P**	**16 31 14.8**	**-0.4**
	0.3nm,0.4s,mb3.7,baz=128,slow=51,SNR=3.0						
CMAR				pP	pP	16 31 25.4	-6.7
	1.1nm,0.8s,baz=107,slow=5.3,SNR=2.8						
ULN	**Ulaanbaatar**	**75.65**	**326**	*e*P	**P**	**16 31 59.6**	**+0.7**
	11nm,1.3s,mb4.6						
GTA	**Gaotai**	**75.91**	**315**	*e*P	PcP	16 32 11.4	-1.4
GTA				pP	pP	16 32 16.2	-1.5
GTA				sP	sP	16 32 19.2	-5.3
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.9						
SONM	**Songino Array**	**76.00**	**325**	P	**P**	**16 32 01.7**	**+0.8**
	comp=Z,1.6nm,0.6s,mb4.1,baz=140,slow=5.5,SNR=17						
SONM				pP	pP	16 32 11.8	-6.1
	comp=Z,3.2nm,0.7s,baz=142,slow=5.3,SNR=12						
SONM				LR	LR	17 07 28.7	
	comp=Z,52nm,18.8s,baz=350,slow=37						
BILL	**Bilibino**	**78.56**	**2**	*e*P	**P**	**16 32 15.1**	**+0.3**
	comp=Z,12nm,1.4s,mb4.6						
QSPA	**South Pole Qui**	**79.34**	**180**	*e*P	**P**	**16 32 18.8**	**-0.2**
	comp=Z,5.6nm,1.0s,mb4.5						
MAW	**Mawson**	**83.55**	**202**	P	**P**	**16 32 41.2**	**-0.3**
	comp=Z,6.9nm,1.0s,mb4.7,baz=54,slow=7.3,SNR=8.7						
MAW	**Mawson**	**83.55**	**202**	*e*P	**P**	**16 32 41.1**	**-0.3**
	comp=Z,2.3nm,1.3s,mb4.2						
DIB	**Dawson Inlet,**	**84.56**	**33**	T		18 05 53.2	
	SNR=83						
EGAK	**Eagle**	**86.44**	**21**	*e*P	**P**	**16 32 56.8**	**+1.0**
	comp=Z,8.1nm,1.1s,mb4.9						
YBH	**Yreka Blue Hor**	**86.54**	**47**	LR	LR	17 08 28.4	
	comp=Z,49nm,18.5s,baz=98,slow=33						
BBB	**Bella Bella**	**86.58**	**35**	LR	LR	17 08 20.9	
	comp=Z,29nm,19.4s,baz=312,slow=33						
DAWY	**Dawson**	**86.69**	**22**	*e*P	**P**	**16 32 58.6**	**+1.6**
NVAR	**Mina Array Bea**	**88.88**	**51**	P	**P**	**16 33 09.7**	**+1.5**
	comp=Z,0.7nm,0.7s,mb4.1,baz=237,slow=6.6,SNR=5.5						
**

*NEIC **12** 16:51:32.5±0.8, 20.°00N×81.°11W, h10km, mb4.0/2, Error ellipse: s-maj=25.7km s-min=8.9km az=208.0*
*JSN **12** 16:51:34.9±0.8, 18.°77N×81.°56W, h48km±999km, MD4.6*
ISC 12 16:51:35.0±0.8, 19.°9N±0.°2×81.°1W±0.°1, h35km±n18, σ1°01/22, 7C-1D, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEJ	**Negril**	**3.09**	**122**	*eP*	**Pn**	**16 52 20.4**	**-0.9**
MTDJ	**Mount Denham**	**3.76**	**116**	*ePn*	**Pn**	**16 52 30.6**	**0.0**
MTDJ				*eSn*	**Sn**	**16 53 09.7**	**-3.9**
MCJ	**Malvern**	**3.78**	**121⇑**	*eP*	**Pn**	**16 52 29.6**	**-1.2**
BBJ	**Bamboo Saint A**	**3.93**	**112⇑**	*eP*	**Pn**	**16 52 33.6**	**+0.9**
BBJ	**Bamboo Saint A**	**3.93**	**112**	*i P*	**Pn**	**16 52 32.6**	**-0.2**
BBJ				*i S*	**Sn**	**16 53 17.2**	**-0.5**
PCJ	**Portland Cotta**	**4.31**	**119⇑**	*eP*	**Pn**	**16 52 36.9**	**-1.1**
STH	**Stony Hill**	**4.45**	**113⇓**	*eP*	**Pn**	**16 52 40.9**	**+0.9**
STH				*i S*	**Sn**	**16 53 29.4**	**-1.1**
STH	**Stony Hill**	**4.45**	**113**	*i P*	**Pn**	**16 52 41.7**	**+1.7**
GWJ	**Greenwich**	**4.52**	**113⇑**	*eP*	**Pn**	**16 52 42.2**	**+1.2**
GWJ	**Greenwich**	**4.52**	**113**	*i P*	**Pn**	**16 52 42.8**	**+1.9**
HOJ	**Hope**	**4.53**	**114⇑**	*eP*	**Pn**	**16 52 41.1**	**+0.1**
HOJ	**Hope**	**4.53**	**114**	*i P*	**Pn**	**16 52 41.9**	**+0.8**
YHJ	**Yallahs**	**4.80**	**114⇑**	*eP*	**Pn**	**16 52 45.7**	**+0.9**
CMJ	**Castle Mountai**	**4.80**	**111**	*i P*	**Pn**	**16 52 46.3**	**+1.4**
GTBY	**Guantanamo Bay**	**5.63**	**89**	*ePn*	**Pn**	**16 53 06.1**	**+10**
TEIG	**Tepich** 46nm,0.3s	**6.75**	**274**	*ePn*	**Pn**	**16 53 11.6**	**-0.1**
TEIG				*eSn*	**Sn**	**16 54 22.0**	**-5.4**
WVT	**Waverly** 2.5nm,0.7s	**17.21**	**341**	*ePn*	**Pn**	**16 55 31.9**	**-0.7**
BBSR	**BB Station** 25nm,0.8s	**19.23**	**47**	Pn	**Pn**	**16 55 52.2**	**-5.1**

*BJI **12** 16:56:01.9, 57.°94N×153.°30W, h15km, mB4.7/3, mb4.4/4*
*IDC **12** 16:56:02.9±2.5, 58.°12N×152.°64W, h17km±20km, mb3.8/12, mb1 3.9/13, mb1mx3.8/24, mbtmp3.7/13, ML3.4/1, Error ellipse: s-maj=37.6km s-min=15.4km az=29.0*
*ISCJB **12** 16:56:03.5±0.4, 58.°02N±0.°04×152.°46W±0.°10, h41km±4km, mb3.9/14, Error ellipse: s-maj=9.0km s-min=5.4km az=24.2*
*NEIC **12** 16:56:05.1±0.4, 57.°98N×152.°48W, h35km, ML3.9(PMR), ML3.7(AEIC), Error ellipse: s-maj=6.7km s-min=5.4km az=98.0*
NEIC Felt [III] at Kodiak.
ISC 12 16:56:05.0±0.4, 57.°98N±0.°04×152.°49W±0.°10, h35km±4km, n47, σ1°00/50, mb3.9/14, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island** 782nm,0.3s,baz=56,slow=6.0,SNR=3856	**0.20**	**195**	Pg	**Pn**	**16 56 11.0**	**-0.8**
KDAK				Lg		16 56 16.0	
KDAK	**Kodiak Island**	**0.20**	**195**	P	**Pn**	**16 56 11.3**	**-0.5**
KDAK				S	**Sn**	**16 56 16.1**	**-0.3**
OHAK	**Old Harbor**	**0.87**	**210**	P	**Pn**	**16 56 20.3**	**-0.3**
OHAK				S	**Sn**	**16 56 31.8**	**-0.2**
AUL	**Augustine Lava**	**1.50**	**341**	P	**Pn**	**16 56 31.4**	**+2.1**
BRLK	**Bradley Lake**	**1.98**	**24**	P	**Pn**	**16 56 36.2**	**+0.4**
RSO	**Redoubt South**	**2.50**	**357**	*ePn*	**Pn**	**16 56 44.4**	**+1.4**
SLKM	**Skilak Lake**	**2.79**	**24**	P	**Pn**	**16 56 47.0**	**-0.1**
FIB	**Fire Island**	**3.41**	**19**	P	**Pn**	**16 56 56.4**	**+0.9**
RC01	**Rabbit Creek A**	**3.42**	**23**	P	**Pn**	**16 56 55.9**	**+0.2**
SVW2	**Sparrevohn**	**3.50**	**335**	*eP*	**Pn**	**16 56 58.1**	**+1.3**
PMR	**Palmer**	**4.00**	**24**	*eP*	**Pn**	**16 57 03.6**	**-0.1**
EYAK	**Cordova Ski Ar**	**4.32**	**50**	P	**Pn**	**16 57 07.1**	**-0.8**
SML	**Sawmill**	**4.38**	**27**	P	**Pn**	**16 57 08.8**	**0.0**
DIV	**Divide**	**4.66**	**44**	P	**Pn**	**16 57 12.2**	**-0.4**
PPLA	**Purkeypile**	**4.94**	**2**	P	**Pn**	**16 57 17.6**	**+1.0**
BMRM	**Bremner River**	**5.02**	**50**	P	**Pn**	**16 57 16.9**	**-0.7**
TT01	**Tatalina**	**5.25**	**342**	P	**Pn**	**16 57 21.6**	**+0.9**
TTA	**Tatalina**	**5.27**	**342**	*ePn*	**Pn**	**16 57 19.6**	**-1.5**
TRF	**Thorofare Moun**	**5.60**	**10**	P	**Pn**	**16 57 26.5**	**+1.0**
RND	**Reindeer**	**5.73**	**17**	P	**Pn**	**16 57 27.8**	**+0.3**
MCK	**McKinley**	**6.03**	**15**	P	**Pn**	**16 57 32.1**	**+0.6**
BPAW	**Bear Paw Mtn.**	**6.19**	**6**	P	**Pn**	**16 57 33.4**	**-0.2**
MENT	**Mentasta**	**6.60**	**37**	*eP*	**Pn**	**16 57 38.6**	**-0.6**
PNL	**Peninsula**	**7.01**	**70**	P	**Pn**	**16 57 43.7**	**-1.2**
COLA	**College** 18nm,0.6s	**7.27**	**16**	*ePn*	**Pn**	**16 57 48.1**	**-0.3**
COLA				*eSn*	**Sn**	**16 59 06.6**	**-3.0**
IM3	**Indian Mountai**	**8.06**	**356**	P	**Pn**	**16 57 59.0**	**-0.3**
EGAK	**Eagle**	**8.71**	**34**	*ePn*	**Pn**	**16 58 07.8**	**-0.5**
DAWY	**Dawson**	**8.80**	**41**	*ePn*	**Pn**	**16 58 09.0**	**-0.5**
INK	**Inuvik** 0.2nm,0.3s,baz=151,slow=13,SNR=2.7	**13.37**	**32**	Pn	**Pn**	**16 59 18.1**	**+6.2**
YKA	**Yellowknife Ar** 0.1nm,0.3s,baz=272,slow=9.9,SNR=3.7	**19.14**	**60**	P	**Pn**	**17 00 24.7**	**-0.9**
ELK	**Elko** 0.8nm,0.7s,mb3.6,baz=13,slow=6.5,SNR=3.6	**29.26**	**110**	P	**P**	**17 02 05.5**	**+2.2**
NVAR	**Mina Array Bea** 0.6nm,0.9s,mb3.3,baz=297,slow=9.0,SNR=6.5	**29.54**	**116**	P	**P**	**17 02 08.1**	**+2.3**
PDAR	**Pinedale Array** 1.3nm,0.6s,mb4.0,baz=321,slow=5.6,SNR=14	**30.71**	**101**	P	**P**	**17 02 17.6**	**+1.4**
TXAR	**Lajitas Array** 0.2nm,0.8s,mb2.9,baz=347,slow=7.8,SNR=3.2	**44.05**	**109**	P	**P**	**17 04 10.4**	**+1.4**
TKL	**Tuckaleechee C**	**49.56**	**86**	*eP*	**P**	**17 04 48.4**	**-3.7**
ARCES	**ARCESS Array B** 0.8nm,0.7s,mb3.8,baz=8.9,slow=8.6,SNR=5.2	**52.78**	**1**	P	**P**	**17 05 15.1**	**-0.6**
SONM	**Songino Array** 1.5nm,0.7s,mb4.1,baz=36,slow=6.6,SNR=13	**56.22**	**307**	P	**P**	**17 05 41.5**	**+0.6**
ZALV	**Zalesovo Beam** 2.1nm,0.7s,mb4.3,baz=24,slow=7.0,SNR=11	**59.17**	**325**	P	**P**	**17 06 01.1**	**-0.6**
HHC	**Hu-ho-hao-te**	**59.37**	**299**	*eP*	**P**	**17 06 02.1**	**-1.1**
HHC				S	**S**	**17 14 06.3**	**-2.9**
HHC	comp=Z,10.0nm,0.6s,mb5.0			pmax	pmax		
HHC	comp=Z,59nm,6.2s			pmax	pmax		
FINES	**FINESS Array B** comp=Z,1.6nm,0.7s,mb4.2,baz=349,slow=6.5,SNR=7.2	**60.91**	**1**	P	**P**	**17 06 13.6**	**+0.2**
BVAR	**Borovoye Array** comp=Z,1.9nm,0.7s,mb4.2,baz=32,slow=6.6,SNR=13	**63.99**	**333**	P	**P**	**17 06 33.6**	**-0.6**
MKAR	**Makanchi Array** comp=Z,0.8nm,0.7s,mb3.8,baz=41,slow=5.9,SNR=9.5	**66.19**	**322**	P	**P**	**17 06 47.4**	**-1.1**
WMQ	**Urumqi**	**66.92**	**317**	*eP*	**P**	**17 06 54.6**	**+1.4**
WMQ				pP	pP	17 07 04.6	+0.6
WMQ				sP	sP	17 07 08.6	+0.4
WMQ	comp=Z,5.0nm,1.2s,mb4.4			pmax	pmax		
WMQ	comp=Z,52nm,4.8s			pmax	pmax		
CD2	**Chengdu**	**71.12**	**298**	P	**P**	**17 07 19.3**	**-0.2**
AKASG	**Malin Array Be** comp=Z,0.4nm,0.4s,mb3.7,baz=3.7,slow=5.9,SNR=6.0	**71.68**	**359**	P	**P**	**17 07 21.4**	**-1.2**
CMAR	**Chiang Mai Arr** comp=Z,0.3nm,0.5s,mb3.7,baz=8.4,slow=3.3,SNR=4.4	**83.96**	**295**	P	**P**	**17 08 30.9**	**-0.4**
BOSA	**Boshof** comp=Z,1.9nm,0.9s,baz=342,slow=3.2,SNR=5.0	**150.61**	**4**	PKPbc	PKPbc	17 15 52.0	-0.5

*IDC **12** 16:58:51.0±2.8, 29.°91N×138.°80E, h310km±68km, mb2.7/4, mb1 2.8/7, mb1mx2.7/25, mbtmp2.8/7, Error ellipse: s-maj=149.9km s-min=13.5km az=70.0*
*ISCJB **12** 16:58:51.0±0.5, 30.°17N±0.°06×139.°8E±0.°2, h363km±10km, mb2.8/4, Error ellipse: s-maj=30.7km s-min=5.7km az=166.9*
*JMA **12** 16:58:51.0±0.3, 30.°13N×139.°70E, h366km±5km, M3.4*
ISC 12 16:58:52.1±0.5, 30.°20N±0.°06×139.°9E±0.°2, h355km±9km, n19, σ0°98/29, mb2.8/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.90**	**358**	P	**Pn**	**16 59 52.2**	**+1.4**
JHJ2				*eS*	**S**	**17 00 37.5**	**-0.6**
JHJ	**Hachijo jima 2** 11nm,0.3s,baz=224,slow=15,SNR=14	**2.91**	**358**	P	**Pn**	**16 59 52.2**	**+1.3**
JHJ				S	**S**	**17 00 37.9**	**-0.4**
CBIJ	**Chichi jima** 4.0nm,0.3s,baz=316,slow=20,SNR=18	**3.68**	**147**	P	**Pn**	**16 59 58.5**	**+0.2**
CBIJ				S	**S**	**17 00 50.4**	**-1.1**
CBIJ	**Chichi jima**	**3.68**	**147**	P	**Pn**	**16 59 58.0**	**-0.2**
CBIJ				S	**S**	**17 00 50.2**	**-1.3**
JHHJ	**Haha-jima-NKT**	**4.08**	**150**	P	**Pn**	**17 00 02.8**	**+0.6**
JHHJ				S	**S**	**17 00 58.0**	**-0.8**
BSO1	**Boso 1**	**4.53**	**11**	P	**Pn**	**17 00 08.1**	**+1.4**
BSO1				*eS*	**S**	**17 01 07.6**	**+0.5**
BSO3	**Boso 3**	**4.62**	**6**	P	**Pn**	**17 00 08.9**	**+1.3**
BSO3				*eS*	**S**	**17 01 07.3**	**-1.4**
BSO4	**Boso 4**	**4.79**	**4**	*eS*	**S**	**17 01 13.2**	**+1.1**
HMMJ	**Hamamatsu 2**	**5.00**	**339**	P	**Pn**	**17 00 12.2**	**+0.5**
JOD2	**Odawara 2**	**5.10**	**352**	P	**Pn**	**17 00 14.0**	**+1.2**
JRY	**Ryogami san**	**5.86**	**352**	P	**Pn**	**17 00 21.9**	**+0.6**
JYT	**Yasato**	**6.01**	**2**	P	**Pn**	**17 00 22.9**	**-0.1**
JYT				*eS*	**S**	**17 01 36.2**	**-0.7**
JAG	**Ashikaga**	**6.22**	**357**	P	**Pn**	**17 00 24.9**	**-0.5**
JHO	**Hitachi**	**6.42**	**5**	P	**Pn**	**17 00 29.0**	**+1.4**
JHO				S	**S**	**17 01 43.4**	**-1.9**
MJAR	**Matsushiro Arr** 0.5nm,0.3s,baz=166,slow=10,SNR=9.6	**6.48**	**348**	P	**Pn**	**17 00 27.7**	**-0.7**
MJAR				S	**S**	**17 01 45.2**	**-1.5**
SONM	**Songino Array** 0.2nm,0.3s,baz=140,slow=15,SNR=3.8	**31.11**	**314**	P	**P**	**17 04 37.6**	**-1.1**
WRA	**Warramunga Arr** 0.1nm,0.4s,mb2.4,baz=111,slow=7.9,SNR=2.1	**50.14**	**187**	P	**P**	**17 07 12.6**	**-0.1**
WRA	0.3nm,0.4s,mb2.8,baz=1.2,slow=7.7,SNR=13			pP	pP	17 08 25.4	-0.2
ASAR	**Alice Springs** 0.2nm,0.4s,baz=1.2,slow=7.7,SNR=1.9	**53.87**	**187**	P	**P**	**17 07 39.9**	**+0.1**
ASAR	0.3nm,1.0s,mb2.6,baz=359,slow=3.7,SNR=4.0			pP	pP	17 08 53.1	-0.8
BVAR	**Borovoye Array** 0.2nm,0.8s,baz=4.6,slow=7.7,SNR=2.1 0.4nm,0.3s,mb3.2,baz=96,slow=8.9,SNR=3.7	**54.42**	**316**	P	**P**	**17 07 43.0**	**-0.5**

*ISCJB **12** 17:16:28.1±0.5, 51.°91N±0.°07×178.°40W±0.°04, h78km±4km, mb4.2/44, Error ellipse: s-maj=11.4km s-min=3.7km az=175.6*
*IDC **12** 17:16:29.6±0.5, 51.°83N×178.°34W, h78km±4km, mb3.7/24, mb1 3.9/25, mb1mx3.8/32, mbtmp3.7/25, Error ellipse: s-maj=14.9km s-min=9.6km az=177.0*
*BJI **12** 17:16:30.8, 51.°90N×179.°25W, h77km, mB4.7/13, mb4.8/19, Ms4.4/8, Ms7 4.1/9*
*NEIC **12** 17:16:30.4, 51.°60N×178.°28W, h68km, mb4.4/14, ML4.2(AEIC), After AEIC.*
ISC 12 17:16:29.4±0.5, 51.°84N±0.°07×178.°39W±0.°04, h74km±4km, h79km±1.2km: pP-P, n132, σ0°68/136, mb4.2/44, 32C-26D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**1.46**	**79**	*ePn*	**Pn**	**17 16 54.0**	**0.0**
GSTR				*eSn*	**Sn**	**17 17 12.5**	**0.0**
AMKA	**Amchitka**	**1.51**	**253**	*eP*	**Pn**	**17 16 54.3**	**-0.3**
AMKA				P		17 16 54.8	
AMKA				S	**Sn**	**17 17 13.6**	**0.0**
SMY	**Shemya**	**4.70**	**284**	*eP*	**Pn**	**17 17 38.2**	**+0.5**
SMY				P		17 17 38.8	
FX1	**Attu Island--F**	**5.28**	**285**	P	**Pn**	**17 17 46.3**	**+0.7**
FX1				S	**Sn**	**17 18 44.8**	**-0.3**
OKFG	**Magazine Ridge**	**6.57**	**72**	P	**Pn**	**17 18 02.9**	**-0.4**
SPIA	**Saint Paul Isl**	**7.14**	**38**	P	**Pn**	**17 18 13.0**	**+1.9**
UNV	**Unalaska Valle**	**7.47**	**70**	P	**Pn**	**17 18 14.2**	**-1.4**
AKUT	**Akutan**	**7.96**	**68**	Pn	**Pn**	**17 18 21.8**	**-0.3**
SDPT	**Sand Point**	**11.20**	**65**	*ePn*	**Pn**	**17 19 06.2**	**-0.3**
OHAK	**Old Harbor** 8.9nm,0.4s	**15.49**	**60**	*ePn*	**Pn**	**17 20 00.1**	**-3.1**
KDAK	**Kodiak Island** 2.8nm,0.3s,baz=257,slow=5.5,SNR=10	**15.96**	**58**	P	**Pn**	**17 20 07.9**	**-1.2**
KDAK	0.3nm,0.3s,baz=337,slow=20,SNR=4.1			S	**S**	**17 23 01.6**	**-13**
KDAK	**Kodiak Island**	**15.96**	**58**	*ePn*	**Pn**	**17 20 07.8**	**-1.4**
BILL	**Bilibino** 4.3nm,0.4s	**17.88**	**341**	*ePn*	**Pn**	**17 20 27.9**	**-4.9**
DIV	**Divide**	**20.06**	**50**	Pn	**P**	**17 20 59.7**	**+3.4**
ASAJ	**Asahikawa** 9.5nm,1.2s,mb4.2,baz=359,slow=7.6,SNR=3.8	**26.97**	**269**	P	**P**	**17 22 03.8**	**-0.1**
ASAJ	2.2nm,0.6s,baz=153,slow=22,SNR=2.2			pP	pP	17 22 23.5	+2.4
MAJO	**Matsushiro** 9.0nm,0.8s,mb4.7	**34.11**	**261**	*eP*	**P**	**17 23 06.9**	**0.0**
MAT	**Matsushiro**	**34.11**	**261**	P	**P**	**17 23 07.1**	**+0.2**
MJAR	**Matsushiro Arr** 3.1nm,0.6s,mb4.3,baz=50,slow=6.9,SNR=26	**34.11**	**261**	P	**P**	**17 23 07.5**	**+0.6**
YKA	**Yellowknife Ar** 1.3nm,0.5s,mb4.0,baz=275,slow=9.7,SNR=4.9	**34.73**	**47**	P	**P**	**17 23 12.4**	**+0.5**
B08A	**Colville Reser** baz=37	**37.14**	**71**	⇑P	**P**	**17 23 32.8**	**+0.1**
CN2	**Changchun** comp=Z,10.0nm,0.5s,mb4.9	**37.71**	**281**	*eP*	**P**	**17 23 38.2**	**+0.6**
CN2				pmax	pmax		
YBH	**Yreka Blue Hor** comp=Z,1.2nm,0.5s,mb4.0,baz=350,slow=10,SNR=3.1	**38.56**	**83**	P	**P**	**17 23 45.6**	**+0.9**
YBH	comp=Z,3.4nm,0.9s,baz=321,slow=5.2,SNR=3.7			pP	pP	17 24 04.6	+2.1
I07A	**Izee** baz=39	**39.22**	**77**	⇓P	**P**	**17 23 50.6**	**+0.5**
BSMT	**Bassoo Peak** comp=Z,1.5nm,0.5s,mb4.1	**40.05**	**70**	*eP*	**P**	**17 23 57.4**	**+0.3**
BSMT				*e*	pP	17 24 15.2	+0.4
WVOR	**Wild Horse Val** comp=Z,3.0nm,0.7s,mb4.2	**40.66**	**79**	*eP*	**P**	**17 24 02.5**	**+0.4**
WVOR				*e*	pP	17 24 20.2	+0.2
F12A	**Elk City** baz=41	**40.86**	**73**	⇓P	**P**	**17 24 03.9**	**+0.1**
C15A	**Salmond Ranch,** baz=41,SNR=6.9	**41.35**	**69**	⇓P	**P**	**17 24 08.1**	**+0.3**
K10A	**MacKenzie Ranc** baz=41	**41.54**	**77**	⇑P	**P**	**17 24 09.3**	**0.0**
I12A	**Atlanta** baz=42	**42.01**	**75**	⇑P	**P**	**17 24 13.2**	**+0.1**
I13A	**Wildhorse Cree** baz=42	**42.55**	**74**	⇑P	**P**	**17 24 17.4**	**-0.1**
L11A	**Cat Creek Ranc** baz=42	**42.56**	**77**	⇑P	**P**	**17 24 17.7**	**0.0**
HLID	**Hailey** baz=42	**42.57**	**75**	⇑P	**P**	**17 24 18.0**	**+0.3**
BOZ	**Bozeman (W)** comp=Z,3.9nm,0.3s,mb4.6	**43.06**	**71**	P	**P**	**17 24 21.4**	**-0.2**
NVAR	**Mina Array Bea** comp=Z,0.7nm,0.5s,mb3.6,baz=291,slow=7.7,SNR=8.1	**43.24**	**84**	P	**P**	**17 24 23.3**	**+0.1**
NVAR	comp=Z,2.2nm,0.9s,baz=288,slow=8.4,SNR=9.6			pP	pP	17 24 41.7	+0.5
NVAR	comp=Z,0.4nm,0.8s,baz=294,slow=4.7,SNR=3.9			ScP	ScP	17 29 53.7	-1.9
ELK	**Elko** comp=Z,2.1nm,0.6s,mb4.0,baz=285,slow=9.7,SNR=9.5	**43.71**	**79**	P	**P**	**17 24 26.3**	**-0.7**
ELK	comp=Z,2.5nm,0.9s,baz=296,slow=9.4,SNR=4.1			pP	pP	17 24 45.8	+0.7
ELK	**Elko**	**43.71**	**79**	P	**P**	**17 24 26.3**	**-0.7**
ELK				pP	pP	17 24 45.8	+0.7
S10A	**Tonopah Range,** baz=44	**44.61**	**83**	⇓P	**P**	**17 24 33.8**	**-0.4**
Q11A	**Duckwater** baz=44	**44.62**	**81**	⇓P	**P**	**17 24 34.6**	**+0.4**
R11A	**Troy Canyon, C** baz=45,SNR=6.7	**44.97**	**82**	⇑P	**P**	**17 24 36.8**	**-0.2**
P13A	**Bates Ranch, G** baz=45	**45.24**	**79**	⇓P	**P**	**17 24 39.4**	**+0.2**
DUG	**Dugway** baz=45	**45.52**	**78**	⇑P	**P**	**17 24 42.0**	**+0.6**
DUG	**Dugway** comp=Z,3.5nm,0.6s,mb4.3	**45.52**	**78**	*eP*	**P**	**17 24 41.2**	**-0.2**
BJI	**Beijing**	**45.53**	**282**	P	**P**	**17 24 41.2**	**-0.2**
BJI	comp=Z,11nm,0.7s,mb4.7			pmax	pmax		
BJI	comp=Z,67nm,5.1s			pmax	pmax		
BJI	comp=Z,23nm,19.4s			LR	LR		
P14A	**Drum Mountains** baz=46,SNR=5.1	**45.73**	**79**	⇑P	**P**	**17 24 43.0**	**-0.1**
S12A	**Delamar Landin** baz=46	**45.88**	**82**	⇑P	**P**	**17 24 44.6**	**+0.3**
T11A	**Corn Creek, Al** baz=46	**45.89**	**83**	⇓P	**P**	**17 24 44.6**	**+0.3**
BW06	**Boulder Array** baz=46	**45.93**	**73**	⇓P	**P**	**17 24 44.6**	**+0.1**
PDAR	**Pinedale Array** comp=Z,2.8nm,0.7s,mb4.1,baz=319,slow=3.7,SNR=19	**45.93**	**73**	P	**P**	**17 24 44.5**	**0.0**
PDAR	comp=Z,1.9nm,0.4s,baz=329,slow=3.2,SNR=6.4			pP	pP	17 25 02.5	-0.1
Q14A	**Sevier Lake (B** baz=46,SNR=7.0	**45.98**	**79**	P	**P**	**17 24 45.5**	**+0.5**
GSC	**Goldstone** baz=46	**46.16**	**86**	⇓P	**P**	**17 24 46.7**	**+0.2**
GSC	**Goldstone** comp=Z,1.4nm,0.4s,mb4.0	**46.16**	**86**	*eP*	**P**	**17 24 46.1**	**-0.4**
GSC				*e*	pP	17 25 03.9	-0.7
K19A	**Absolon Red Bu** baz=46	**46.31**	**72**	⇓P	**P**	**17 24 47.2**	**-0.3**
S13A	**Holt Ranch, En** baz=46,SNR=5.5	**46.51**	**81**	P	**P**	**17 24 49.6**	**+0.4**
SONM	**Songino Array** comp=Z,0.4nm,0.6s,mb3.4,baz=50,slow=8.4,SNR=4.7	**46.67**	**296**	P	**P**	**17 24 50.1**	**-0.1**
SONM	comp=Z,0.6nm,0.7s,baz=46,slow=10.0,SNR=4.0			pP	pP	17 25 09.3	+0.8
SONM	comp=Z,0.8nm,0.4s,baz=92,slow=2.0,SNR=7.5			PcP	PcP	17 26 22.9	+0.1
SONM	comp=Z,0.7nm,0.8s,baz=96,slow=3.9,SNR=3.9			ScP	ScP	17 30 07.9	-1.7
T13A	**Saint George** baz=47	**46.84**	**82**	⇓P	**P**	**17 24 52.4**	**+0.7**
TMUT	**Trail Mountain** comp=Z,3.7nm,0.5s,mb4.4	**47.05**	**78**	*eP*	**P**	**17 24 53.4**	**+0.1**
TMUT				*e*	pP	17 25 13.1	+1.5
U13A	**Pakoon Wash** baz=47,SNR=5.0	**47.19**	**83**	⇑P	**P**	**17 24 55.1**	**+0.7**
SRU	**San Rafael** baz=47	**47.58**	**77**	⇓P	**P**	**17 24 58.3**	**+0.8**
SRU	**San Rafael** comp=Z,4.0nm,0.6s,mb4.4	**47.58**	**77**	*eP*	**P**	**17 24 58.1**	**+0.6**
U14A	**Mt Trumbull** baz=48	**47.67**	**82**	⇑P	**P**	**17 24 58.1**	**-0.1**
O19A	**Miners Draw (B** baz=48	**47.68**	**75**	⇓P	**P**	**17 24 58.2**	**-0.1**
HHC	**Hu-ho-hao-te**	**47.81**	**286**	*eP*	**P**	**17 25 02.6**	**+3.4**
HHC				S	**S**	**17 31 52.7**	**+2.4**
HHC	comp=Z,17nm,0.7s,mb5.0			pmax	pmax		
HHC	comp=Z,44nm,6.9s			pmax	pmax		
HHC	**Hu-ho-hao-te**	**47.81**	**286**	*eP*	**P**	**17 24 58.3**	**-0.9**
HHC				S	**S**	**17 31 46.3**	**-4.0**
HHC	comp=Z,18nm,0.6s,mb5.1			pmax	pmax		
HHC	comp=Z,83nm,6.2s			pmax	pmax		
Q18A	**Rafter H Ranch** baz=48	**47.82**	**77**	⇓P	**P**	**17 24 59.3**	**0.0**
N20A	**Spence Gulch,** baz=48	**47.87**	**74**	⇑P	**P**	**17 24 59.2**	**-0.5**
P19A	**Cripple Cowboy** baz=48,SNR=6.4	**48.18**	**76**	⇑P	**P**	**17 25 02.1**	**0.0**
U15A	**North Rim** baz=48,SNR=8.3	**48.21**	**81**	⇑P	**P**	**17 25 03.2**	**+0.8**
Q19A	**Hogan Spring (** baz=48	**48.44**	**77**	⇑P	**P**	**17 25 03.7**	**-0.4**
S18A	**Hurst Farm, Bl** baz=49,SNR=9.5	**48.80**	**79**	⇑P	**P**	**17 25 06.9**	**0.0**
PV04	**Paradox Valley**	**49.01**	**77**	*eP*	**P**	**17 25 07.9**	**-0.5**
PV04				*e*	pP	17 25 27.3	+0.5
T18A	**Mexican Hat** baz=49	**49.23**	**79**	⇓P	**P**	**17 25 09.5**	**-0.7**
S19A	**Harvey Farm, M** baz=49	**49.28**	**78**	⇑P	**P**	**17 25 10.2**	**-0.4**
WUAZ	**Wupatki** comp=Z,2.4nm,0.6s,mb4.3	**49.37**	**82**	*eP*	**P**	**17 25 11.4**	**+0.2**
PV01	**Paradox Valley** comp=Z,268nm,0.7s	**49.38**	**77**	*eP*	**P**	**17 25 10.5**	**-0.8**
PV01				*e*	pP	17 25 28.9	-0.8
R20A	**Redvale** baz=49	**49.46**	**77**	⇑P	**P**	**17 25 11.8**	**-0.1**
S20A	**Disappointment** baz=50,SNR=8.5	**49.70**	**77**	⇓P	**P**	**17 25 13.6**	**-0.1**
SPITS	**Spitsbergen Ar** comp=Z,1.7nm,0.4s,mb4.3,baz=3.7,slow=6.0,SNR=4.6	**49.93**	**356**	P	**P**	**17 25 15.1**	**+0.1**
SPITS	comp=Z,4.4nm,0.5s,baz=38,slow=4.2,SNR=3.6			pP	pP	17 25 33.2	-0.2
T19A	**Beclabito** baz=50	**49.95**	**79**	⇑P	**P**	**17 25 15.5**	**-0.1**
S21A	**Coal Bank Pass** baz=50	**50.15**	**77**	⇓P	**P**	**17 25 17.6**	**+0.4**
U21A	**Nageezi** baz=51	**51.04**	**78**	⇑P	**P**	**17 25 24.1**	**+0.3**
Y18A	**Canyon Day Jun** baz=51	**51.35**	**82**	⇓P	**P**	**17 25 26.8**	**+0.6**
U22A	**Llaves** baz=51	**51.56**	**78**	⇓P	**P**	**17 25 27.6**	**-0.1**
X20A	**Quemado** baz=52	**51.78**	**81**	⇑P	**P**	**17 25 29.3**	**-0.1**
U23A	**El Rito** baz=52,SNR=8.0	**51.99**	**77**	⇑P	**P**	**17 25 31.8**	**+0.9**
S25A	**Robets Cordova** baz=52	**52.18**	**75**	⇑P	**P**	**17 25 32.3**	**0.0**
Y20A	**Horse Springs,** baz=52	**52.28**	**81**	⇑P	**P**	**17 25 33.9**	**+0.8**
X21A	**Alamocita Cree** baz=52	**52.28**	**80**	⇓P	**P**	**17 25 33.8**	**+0.7**
V23A	**Ortiz Mt. (NFS** baz=52	**52.38**	**78**	⇓P	**P**	**17 25 34.7**	**+0.8**
Z20A	**Nine Sixteen R** baz=52	**52.68**	**82**	⇑P	**P**	**17 25 36.0**	**-0.1**
U25A	**Circle Dot Ran** baz=53	**53.02**	**76**	⇑P	**P**	**17 25 38.3**	**-0.3**
V25A	**Rancho No Teng** baz=53	**53.27**	**77**	⇓P	**P**	**17 25 40.4**	**0.0**
Y23A	**Lovelace Mesa,** baz=54	**53.68**	**79**	⇓P	**P**	**17 25 43.7**	**+0.3**
W25A	**X Bar L Ranch,** baz=54	**53.78**	**77**	⇓P	**P**	**17 25 44.1**	**-0.1**
V26A	**Tequesquite Ra** baz=54	**53.80**	**76**	⇑P	**P**	**17 25 44.1**	**-0.1**
ZALV	**Zalesovo Beam** comp=Z,0.6nm,0.4s,baz=39,slow=3.5,SNR=4.4	**53.90**	**313**	PcP	PcP	17 26 49.2	0.0
Y25A	**Mesa, Roswell** baz=54	**54.52**	**79**	⇑P	**P**	**17 25 49.4**	**-0.1**
LZH	**Lanzhou**	**55.50**	**286**	*eP*	**P**	**17 25 58.5**	**+1.9**
LZH				pP	pP	17 26 21.0	+5.7
LZH				sP	sP	17 26 28.0	+4.5

KMI		pP	pP	17 27 16.4	+2.8
KMI		sP	sP	17 27 25.7	+3.9
KMI		PP	PP	17 29 17.8	+2.2
KMI		S	**S**	**17 35 21.0**	**-3.5**
KMI		sS	sS	17 35 57.8	+0.9
KMI		SS	SS	17 39 31.6	-2.0
KMI		pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.7				
KMI		pmax	pmax		
	comp=Z,100nm,5.7s				
KMI		LR	LR		
	comp=N,62nm,14.5s				
KMI		LR	LR		
	comp=E,60nm,15.3s				
KMI		LR	LR		
	comp=Z,83nm,14.5s				
FINES	**FINESS Array B 65.39 347**	P	**P**	**17 27 02.2**	**-1.3**
	comp=Z,1.0nm,0.7s,mb3.7,baz=15,slow=8.3,SNR=5.0				
FINES	**FINESS Array B 65.39 347**	P	**P**	**17 27 02.2**	**-1.3**
EKS2	**Erkin-Say 67.09 310**	*e*P	**P**	**17 27 13.8**	**-0.9**
	comp=Z,1.7nm,0.5s,mb4.1				
NOA	**NORSAR Array B 67.21 355**	P	**P**	**17 27 14.3**	**-0.9**
	comp=Z,0.6nm,0.7s,mb3.5,baz=6.4,slow=6.0,SNR=3.7				
AKTK	**Aktyubinsk 67.46 325**	P	**P**	**17 27 17.7**	**+0.8**
AKTO	**Aktyubinsk 67.46 325**	P	**P**	**17 27 17.7**	**+0.8**
	comp=Z,0.9nm,0.6s,mb3.8,baz=66,slow=11,SNR=4.1				
HFS	**Hagfors 67.96 354**	P	**P**	**17 27 19.8**	**0.0**
	comp=Z,0.8nm,0.7s,mb3.7,baz=28,slow=6.7,SNR=6.6				
HFS		pP	pP	17 27 41.0	+1.9
	comp=Z,1.5nm,0.7s,baz=116,slow=3.4,SNR=3.6				
CM31	**Chiang Mai Arr 71.22 276**	*e*P	**P**	**17 27 40.3**	**-0.2**
	comp=Z,3.7nm,0.6s,mb4.4				
CMAR	**Chiang Mai Arr 71.22 276**	pP	pP	17 28 00.6	+0.6
	comp=Z,1.2nm,0.7s,baz=12,slow=4.4,SNR=5.1				
AKASG	**Malin Array Be 75.19 342**	P	**P**	**17 28 02.8**	**-0.7**
	comp=Z,0.4nm,0.3s,mb3.6,baz=16,slow=5.3,SNR=4.9				
BUR08	**Bucovina Ar. S 78.86 344**	*e*P	**P**	**17 28 23.0**	**-1.1**
WRA	**Warramunga Arr 82.52 224**	P	**P**	**17 28 42.6**	**-1.3**
	comp=Z,0.2nm,0.3s,mb3.4,baz=35,slow=5.8,SNR=4.9				
BRTR	**Keskin Array B 84.63 336**	P	**P**	**17 28 54.4**	**-0.2**
	comp=Z,0.6nm,0.6s,mb3.7,baz=342,slow=4.7,SNR=3.6				
FITZ	**Fitzroy Crossi 84.95 232**	P	**P**	**17 28 55.9**	**-0.4**
	comp=Z,1.1nm,0.5s,mb4.1,baz=95,slow=3.7,SNR=8.9				
FITZ	**Fitzroy Crossi 84.95 232**	P	**P**	**17 28 55.9**	**-0.4**
ASAR	**Alice Springs 86.00 223**	P	**P**	**17 29 01.1**	**-0.4**
	comp=Z,1.1nm,0.5s,mb4.0,baz=23,slow=5.2,SNR=16				
ASAR		pP	pP	17 29 20.9	-0.5
	comp=Z,0.3nm,0.5s,baz=25,slow=5.7,SNR=2.1				
STKA	**Stephens Creek 90.45 213**	P	**P**	**17 29 22.2**	**-0.2**
	comp=Z,3.4nm,0.7s,mb4.6,baz=321,slow=14,SNR=6.6				
MAW	**Mawson 147.00 218**	PKPbc	PKPbc	17 36 00.9	-1.2
	comp=Z,1.7nm,0.6s,baz=345,slow=10.0,SNR=4.1				
BOSA	**Boshof 150.85 314**	PKPbc	PKPbc	17 36 12.4	-0.7
	comp=Z,5.3nm,0.7s,baz=76,slow=2.4,SNR=12				

*ISCJB **12** 17:18:34.0±1.8, 5.°98S±0.°07×146.°5E±0.°1, h101km±18km, mb3.9/17, Error ellipse: s-maj=20.0km s-min=12.1km az=1.4*
*NEIC **12** 17:18:34.9±2.1, 5.°90S×146.°29E, h90km±24km, mb4.1/8, Error ellipse: s-maj=23.1km s-min=16.0km az=111.0*
*IDC **12** 17:18:36.2±3.8, 5.°89S×146.°21E, h98km±35km, mb3.7/11, mb1 3.8/13, mb1mx3.8/18, mbtmp3.7/13, MS3.1/2, Ms1 3.1/2, ms1mx2.6/20, Error ellipse: s-maj=33.0km s-min=12.0km az=105.0*

ISC 12 17:18:35.1±1.5, 6.°01S±0.°07×146.°5E±0.°1, h97km±16km, n36, σ1.°04/37, mb3.9/17, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.44**	**169**	*e*Pn	**Pn**	**17 19 26.5**	**-0.3**
PMG				*e*Sn	**Sn**	**17 19 56.0**	**-11**
COEN	**Coen**	**8.54**	**202**	*e*Pn	**Pn**	**17 20 36.8**	**+0.7**
	229nm,0.3s						
COEN				*e*Sn	**Sn**	**17 22 05.0**	**-5.7**
CTA	**Charters Tower**	**14.00**	**181**	*e*P	**Pn**	**17 21 52.6**	**+3.4**
	11nm,0.4s						
CTA	**Charters Tower**	**14.00**	**181**	P	**Pn**	**17 21 53.1**	**+3.9**
	3.9nm,0.3s,baz=360,slow=15,SNR=62						
CTA				S	**Sn**	**17 24 22.3**	**-1.1**
	0.2nm,0.3s,baz=280,slow=15,SNR=2.7						
CTA				LR	LR	17 26 29.1	
	comp=Z,54nm,18.2s,baz=193,slow=34						
CTA	**Charters Tower**	**14.00**	**181**	P	**Pn**	**17 21 53.1**	**+3.9**
CTA				S	**Sn**	**17 24 22.3**	**-1.1**
CTA				LR	LR	17 26 29.1	
CTAO	**Charters Tower**	**14.00**	**181**	*e*Pn	**Pn**	**17 21 52.8**	**+3.6**
	9.9nm,0.4s						
KAKA	**Kakadu**	**15.36**	**243**	*e*P	**Pn**	**17 22 08.1**	**+1.4**
	10nm,0.6s						
WRAB	**Tennant Creek**	**18.18**	**219**	*e*P	**Pn**	**17 22 40.8**	**-0.5**
	6.7nm,0.7s						
WRA	**Warramunga Arr**	**18.19**	**219**	P	**Pn**	**17 22 40.3**	**-1.1**
	0.4nm,0.3s,baz=42,slow=12,SNR=20						
WRA				PcP	PcP	17 27 10.8	+1.2
	0.1nm,0.3s,baz=24,slow=2.1,SNR=6.8						
WRA	**Warramunga Arr**	**18.19**	**219**	P	**Pn**	**17 22 40.3**	**-1.1**
WRA				PcP	PcP	17 27 10.8	+1.2
ASAR	**Alice Springs**	**21.32**	**213**	P	**P**	**17 23 14.6**	**+0.2**
	2.0nm,0.5s,mb3.7,baz=52,slow=8.1,SNR=31						
ASAR				S	**S**	**17 27 07.0**	**+1.3**
	0.4nm,0.7s,baz=32,slow=18,SNR=4.2						
FITZ	**Fitzroy Crossi**	**23.62**	**238**	*e*P	**P**	**17 23 37.2**	**-0.4**
	8.3nm,0.8s,mb4.1						
FITZ				*e*		17 23 57.7	
FITZ	**Fitzroy Crossi**	**23.62**	**238**	P	**P**	**17 23 37.3**	**-0.3**
	3.8nm,0.7s,mb3.8,baz=71,slow=4.6,SNR=14						
STKA	**Stephens Creek**	**26.14**	**189**	*e*P	**P**	**17 24 01.3**	**+1.1**
	4.0nm,1.0s,mb3.8						
STKA	**Stephens Creek**	**26.14**	**189**	P	**P**	**17 24 01.4**	**+1.2**
	1.9nm,0.6s,mb3.7,baz=130,slow=19,SNR=9.1						
STKA				LR	LR	17 35 07.7	
	comp=Z,65nm,19.9s,baz=205,slow=38						
STKA	**Stephens Creek**	**26.14**	**189**	*e*P	**P**	**17 24 00.6**	**+0.4**
	1.5nm,1.0s,mb3.4						
STKA				LR	LR	17 35 07.7	
KKM	**Kota Kinabalu**	**32.49**	**291**	*e*P	**P**	**17 24 56.0**	**-0.8**
	2.7nm,0.6s,mb4.2						
MAJO	**Matsushiro**	**43.03**	**350**	*e*P	**P**	**17 26 26.6**	**+1.4**
	2.7nm,0.8s,mb4.0						
KULM	**Kulim**	**47.10**	**283**	*e*P	**P**	**17 26 57.7**	**-0.2**
	2.1nm,0.5s,mb4.1						
COCO	**West Island**	**49.34**	**259**	*e*P	**P**	**17 27 17.3**	**+2.3**
	56nm,0.6s						
ASAJ	**Asahikawa**	**50.01**	**356**	P	**P**	**17 27 20.1**	**+0.5**
	2.3nm,0.7s,mb4.2,baz=40,slow=7.9,SNR=3.3						
CMAR	**Chiang Mai Arr**	**52.79**	**298**	P	**P**	**17 27 40.6**	**-0.2**
	3.3nm,0.6s,mb4.5,baz=119,slow=5.9,SNR=30						
CHTO	**Chiang Mai**	**52.93**	**299**	P	**P**	**17 27 37.9**	**-3.9**
	1.7nm,0.8s,mb4.1						
ULN	**Ulaanbaatar**	**63.87**	**332**	*e*P	**P**	**17 28 57.5**	**+0.1**
	1.3nm,0.8s,mb3.8						
SONM	**Songino Array**	**64.16**	**331**	P	**P**	**17 28 59.5**	**+0.3**
	0.4nm,0.5s,mb3.5,baz=154,slow=5.5,SNR=3.9						
MK31	**Makanchi Array**	**77.17**	**321**	*e*P	**P**	**17 30 17.7**	**-0.6**
MKAR	**Makanchi Array**	**77.17**	**321**	P	**P**	**17 30 17.9**	**-0.4**
	0.7nm,0.6s,mb3.5,baz=98,slow=8.9,SNR=9.5						
ZALV	**Zalesovo Beam**	**78.74**	**328**	P	**P**	**17 30 25.0**	**-1.8**
	1.2nm,0.4s,mb4.0,baz=103,slow=6.5,SNR=7.6						
TKM2	**Tokmak 2**	**80.28**	**315**	*e*P	**P**	**17 30 34.8**	**-0.7**
	1.2nm,0.5s,mb4.0						
KURK	**Kurchatov**	**80.90**	**323**	P	**P**	**17 30 36.8**	**-1.8**
	0.2nm,0.5s,mb3.2,baz=104,slow=7.3,SNR=3.7						
BVAR	**Borovoye Array**	**86.47**	**324**	P	**P**	**17 31 06.8**	**-0.1**
	0.4nm,0.4s,mb3.7,baz=146,slow=6.5,SNR=4.5						
DLBC	**Dease Lake**	**91.67**	**32**	P	**P**	**17 31 33.0**	**+1.7**
	0.4nm,0.3s,mb4.1,baz=292,slow=8.0,SNR=3.2						
KIC	**Kosan Boka**	**151.38**	**272**	*e*PKP1	PKPbc	17 38 19.4	+0.6
	6.7nm,0.5s						
DBIC	**Dimbokro**	**151.50**	**273**	PKPbc	PKPbc	17 38 19.6	+0.6
	3.2nm,0.5s,baz=18,slow=2.7,SNR=7.4						
TIC	**Toumodi**	**151.66**	**273**	*e*PKP1	PKPbc	17 38 20.2	+0.8
	30nm,0.2s						
LIC	**Lamto**	**151.66**	**272**	*e*PKP1	PKPbc	17 38 19.9	+0.5
	21nm,0.6s						

*NEIC **12** 17:20:33.7, 42.°74S×172.°82E, h13km, ML4.1(WEL), After WEL.*

WEL 12 17:20:33.7±0.1, 42.°72S×172.°83E, h12km, ML4.0/41, Error ellipse: s-maj=0.9km s-min=0.7km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTZ	**Lake Taylor**	**0.42**	**262**	P*	Pg	17 20 42.0	+0.1
LTZ				S*	Sg	17 20 48.2	+0.7
LTZ	**Lake Taylor**	**0.42**	**262**	P	Pg	17 20 42.0	+0.1
CRLZ	**Canterbury Las**	**0.87**	**190**	P*	Pb	17 20 49.4	-1.2
CRLZ				S*	Sb	17 21 01.6	-0.5
CRLZ	**Canterbury Las**	**0.87**	**190**	P	Pg	17 20 49.4	-1.0
CRLZ				S	Sg	17 21 01.6	-0.1
THZ	**Tophouse**	**0.96**	**3**	P*	Pb	17 20 50.7	-1.5
THZ	**Tophouse**	**0.96**	**3**	P	Pg	17 20 50.7	-1.5
MQZ	**McQueen's Vall**	**0.99**	**188**	P*	Pb	17 20 50.8	-1.9
MQZ	**McQueen's Vall**	**0.99**	**188**	P	Pb	17 20 50.8	-2.0
DSZ	**Denniston Nort**	**1.24**	**322**	P*	Pb	17 20 56.5	-0.4
DSZ	**Denniston Nort**	**1.24**	**322**	P	Pn	17 20 56.5	-0.3
BSWZ	**Blackbirch Sta**	**1.27**	**38**	PN	Pn	17 20 56.9	-0.3
CMWZ	**Cape Campbell**	**1.42**	**47**	PN	Pn	17 20 58.8	-0.4
TUWZ	**Tuamarina**	**1.54**	**33**	PN	Pn	17 21 00.3	-0.5
NNZ	**Nelson**	**1.56**	**15**	PN	Pn	17 21 00.9	-0.2
NNZ	**Nelson**	**1.56**	**15**	P	Pn	17 21 00.9	-0.3
WVZ	**Waitaha Valley**	**1.58**	**256**	PN	Pn	17 21 00.7	-0.7
WVZ	**Waitaha Valley**	**1.58**	**256**	P	Pn	17 21 00.7	-0.7
RPZ	**Rata Peaks**	**1.63**	**232**	PN	Pn	17 21 00.3	-1.9
RPZ	**Rata Peaks**	**1.63**	**232**	P	Pn	17 21 00.3	-1.9
TCW	**Tory Channel**	**1.85**	**36**	PN	Pn	17 21 04.2	-1.0
TCW	**Tory Channel**	**1.85**	**36**	P	Pn	17 21 04.2	-1.0
QRZ	**Quartz Range**	**1.91**	**353**	PN	Pn	17 21 05.7	-0.3
SNZO	**South Karori**	**1.99**	**45**	PN	Pn	17 21 05.7	-1.4
SNZO	**South Karori**	**1.99**	**45**	P	Pn	17 21 05.7	-1.3
BHW	**Baring Head**	**2.01**	**50**	PN	Pn	17 21 05.7	-1.7
BHW	**Baring Head**	**2.01**	**50**	P	Pn	17 21 05.7	-1.6
WEL	**Wellington**	**2.04**	**46**	PN	Pn	17 21 06.5	-1.2
WEL	**Wellington**	**2.04**	**46**	P	Pn	17 21 06.5	-1.2
DUWZ	**D'Urville Isla**	**2.08**	**23**	PN	Pn	17 21 08.1	-0.3
PLWZ	**Palliser**	**2.14**	**58**	PN	Pn	17 21 06.9	-2.2
MSWZ	**Moikau Station**	**2.23**	**55**	PN	Pn	17 21 08.2	-2.1
CAW	**Cannon Point**	**2.32**	**47**	PN	Pn	17 21 10.0	-1.7
CAW	**Cannon Point**	**2.32**	**47**	P	Pn	17 21 10.0	-1.7
PAWZ	**Paruwai Farm**	**2.35**	**56**	PN	Pn	17 21 09.7	-2.4
PAWZ	**Paruwai Farm**	**2.35**	**56**	P	Pn	17 21 09.7	-2.4
KIW	**Kapiti Island**	**2.42**	**41**	PN	Pn	17 21 12.0	-1.1
KIW	**Kapiti Island**	**2.42**	**41**	P	Pn	17 21 12.0	-1.1
FOZ	**Fox Glacier**	**2.45**	**249**	PN	Pn	17 21 11.6	-1.8
FOZ	**Fox Glacier**	**2.45**	**249**	P	Pn	17 21 11.6	-1.8
TRWZ	**Traveller**	**2.50**	**59**	PN	Pn	17 21 11.6	-2.5
MTW	**Mount Morrison**	**2.53**	**53**	PN	Pn	17 21 12.0	-2.5
MTW	**Mount Morrison**	**2.53**	**53**	P	Pn	17 21 12.0	-2.6
LBZ	**Lake Benmore**	**2.54**	**228**	PN	Pn	17 21 13.1	-1.6
OGWZ	**Otaki Gorge**	**2.59**	**43**	PN	Pn	17 21 13.7	-1.6
HOWZ	**Holdsworth Sta**	**2.71**	**49**	PN	Pn	17 21 14.8	-2.2
TMWZ	**Te Maipa**	**2.80**	**56**	PN	Pn	17 21 15.5	-2.6
ODZ	**Otahua Downs**	**2.81**	**214**	PN	Pn	17 21 16.2	-2.2
ODZ	**Otahua Downs**	**2.81**	**214**	P	Pn	17 21 16.2	-2.1
MRZ	**Mangatainoka R**	**2.91**	**46**	PN	Pn	17 21 17.6	-2.2
MRZ	**Mangatainoka R**	**2.91**	**46**	P	Pn	17 21 17.6	-2.2
TIWZ	**Tintock**	**3.00**	**51**	PN	Pn	17 21 18.2	-2.8
POWZ	**Post Office Ro**	**3.21**	**44**	PN	Pn	17 21 21.4	-2.4
JCZ	**Jackson Bay**	**3.26**	**244**	PN	Pn	17 21 23.0	-1.5
JCZ	**Jackson Bay**	**3.26**	**244**	P	Pn	17 21 23.0	-1.6
WAZ	**Wanganui**	**3.38**	**29**	PN	Pn	17 21 26.5	+0.3
WAZ	**Wanganui**	**3.38**	**29**	P	Pn	17 21 26.5	+0.3
WKZ	**Wanaka**	**3.47**	**231**	PN	Pn	17 21 25.1	-2.4
WKZ	**Wanaka**	**3.47**	**231**	P	Pn	17 21 25.1	-2.4
DVHZ	**Dannevirke**	**3.48**	**47**	PN	Pn	17 21 24.6	-3.0
NWEZ	**Newall Road**	**3.53**	**13**	PN	Pn	17 21 29.5	+1.2
NWEZ	**Newall Road**	**3.53**	**13**	P	Pn	17 21 29.5	+1.2
TSZ	**Takapari Road**	**3.55**	**43**	PN	Pn	17 21 26.0	-2.5
TSZ	**Takapari Road**	**3.55**	**43**	P	Pn	17 21 26.0	-2.6
EAZ	**Earnscleugh**	**3.57**	**224**	PN	Pn	17 21 26.5	-2.3
EAZ	**Earnscleugh**	**3.57**	**224**	P	Pn	17 21 26.5	-2.3
RAEZ	**Rainy Point**	**3.63**	**20**	PN	Pn	17 21 28.9	-0.7
PRHZ	**Porangahau**	**3.77**	**51**	PN	Pn	17 21 29.3	-2.2
MHEZ	**Mangahewa**	**3.81**	**18**	PN	Pn	17 21 33.2	+1.0
VRZ	**Vera Road**	**3.88**	**23**	PN	Pn	17 21 33.7	+0.6
VRZ	**Vera Road**	**3.88**	**23**	P	Pn	17 21 33.7	+0.6
MTVZ	**Mangateitei**	**3.89**	**32**	PN	Pn	17 21 32.8	-0.4
PKVZ	**Pokaka**	**3.92**	**30**	PN	Pn	17 21 33.3	-0.4
TUZ	**Tuapeka**	**3.96**	**214**	PN	Pn	17 21 32.0	-2.2
TUZ	**Tuapeka**	**3.96**	**214**	P	Pn	17 21 32.0	-2.2
WNVZ	**Wahianoa**	**3.99**	**33**	PN	Pn	17 21 34.0	-0.6
WNVZ	**Wahianoa**	**3.99**	**33**	P	Pn	17 21 34.0	-0.5
TRVZ	**Turoa**	**3.99**	**32**	PN	Pn	17 21 34.1	-0.5
MSZ	**Milford Sound**	**4.05**	**240**	PN	Pn	17 21 32.8	-2.7
MSZ	**Milford Sound**	**4.05**	**240**	P	Pn	17 21 32.8	-2.7
TUVZ	**Tukino**	**4.06**	**33**	PN	Pn	17 21 34.9	-0.6
WPVZ	**Whakapapa**	**4.07**	**31**	PN	Pn	17 21 35.2	-0.6
NGZ	**Ngauruhoe**	**4.12**	**32**	PN	Pn	17 21 35.8	-0.6
NGZ	**Ngauruhoe**	**4.12**	**32**	P	Pn	17 21 35.8	-0.5
TWVZ	**Taurewa**	**4.15**	**29**	PN	Pn	17 21 36.0	-0.8
TWVZ	**Taurewa**	**4.15**	**29**	P	Pn	17 21 36.0	-0.8
OTVZ	**Oturere**	**4.15**	**32**	PN	Pn	17 21 36.2	-0.6
WTVZ	**West Tongariro**	**4.17**	**31**	PN	Pn	17 21 36.3	-0.7
WTVZ	**West Tongariro**	**4.17**	**31**	P	Pn	17 21 36.3	-0.7
KRVZ	**Karewarewa**	**4.20**	**31**	PN	Pn	17 21 36.8	-0.7
HIZ	**Hauiti**	**4.48**	**21**	PN	Pn	17 21 41.2	-0.1
HIZ	**Hauiti**	**4.48**	**21**	P	Pn	17 21 41.2	-0.1
SYZ	**Scrubby Hill**	**4.63**	**213**	PN	Pn	17 21 41.4	-2.0
SYZ	**Scrubby Hill**	**4.63**	**213**	P	Pn	17 21 41.4	-2.0
WHZ	**Wether Hill Ro**	**4.72**	**226**	PN	Pn	17 21 42.0	-2.7
WHZ	**Wether Hill Ro**	**4.72**	**226**	P	Pn	17 21 42.0	-2.7
APZ	**The Paps**	**5.36**	**218**	PN	Pn	17 21 51.3	-2.1
APZ	**The Paps**	**5.36**	**218**	P	Pn	17 21 51.3	-2.1
URZ	**Urewera**	**5.52**	**38**	*e*Pn	Pn	17 21 52.5	-3.2
	56nm,0.7s						
MKAZ	**Moumakai**	**5.89**	**19**	PN	Pn	17 22 00.1	-0.6
MKAZ	**Moumakai**	**5.89**	**19**	P	Pn	17 22 00.1	-0.5
WCZ	**Waipu Caves**	**6.88**	**10**	P	Pn	17 22 14.8	+0.6

WEL 12 17:21:56.7±0.1, 42.°64S×173.°96E, h5km, ML3.5/20, Error ellipse: s-maj=1.5km s-min=1.0km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.91**	**12**	PG	Pg	17 22 15.5	+1.5
BSWZ	**Blackbirch Sta**	**0.93**	**356**	P*	Pb	17 22 15.0	-0.2
BSWZ				SG	Sg	17 22 26.9	+0.5
BSWZ				SG	Sg	17 22 27.0	+0.6
THZ	**Tophouse**	**1.18**	**318**	P*	Pb	17 22 18.4	-1.1
THZ				SG	Sg	17 22 34.2	-0.2
TUWZ	**Tuamarina**	**1.21**	**359**	P*	Pb	17 22 19.1	-0.8
TUWZ				SG	Sg	17 22 35.2	-0.2
LTZ	**Lake Taylor**	**1.26**	**263**	P*	Pb	17 22 20.5	-0.3
LTZ				S*	Sb	17 22 37.4	+0.2
CRLZ	**Canterbury Las**	**1.36**	**226**	PN	Pn	17 22 21.5	-0.7
BHW	**Baring Head**	**1.40**	**29**	P*	Pb	17 22 22.4	-0.9
MQZ	**McQueen's Vall**	**1.44**	**221**	PN	Pn	17 22 22.7	-0.6
MQZ				SN	Sn	17 22 41.4	-1.2
PLWZ	**Palliser**	**1.44**	**42**	P*	Pb	17 22 22.8	-1.1
SNZO	**South Karori**	**1.44**	**23**	P*	Pb	17 22 22.9	-1.0
TCW	**Tory Channel**	**1.44**	**9**	P*	Pb	17 22 22.5	-1.5
TCW				S*	Sb	17 22 40.9	-1.7
WEL	**Wellington**	**1.48**	**24**	P*	Pb	17 22 23.6	-1.0
MSWZ	**Moikau Station**	**1.55**	**39**	P*	Pb	17 22 24.2	-1.7
PAWZ	**Paruwai Farm**	**1.66**	**41**	PN	Pn	17 22 25.5	-1.0
CAW	**Cannon Point**	**1.74**	**29**	PN	Pn	17 22 27.0	-0.5
TRWZ	**Traveller**	**1.79**	**47**	PN	Pn	17 22 27.7	-0.4
DSZ	**Denniston Nort**	**1.84**	**298**	PN	Pn	17 22 28.3	-0.5
MTW	**Mount Morrison**	**1.87**	**38**	PN	Pn	17 22 28.4	-0.9
KIW	**Kapiti Island**	**1.91**	**22**	PN	Pn	17 22 29.5	-0.3
OGWZ	**Otaki Gorge**	**2.03**	**27**	PN	Pn	17 22 30.8	-0.7

*LDG **12** 17:34:23.5±0.5, 15.°09S×167.°17E, h10km, Mb4.2/2, Error ellipse: s-maj=63.7km s-min=34.7km az=30.0*
*ISCJB **12** 17:34:37.2±1.7, 15.°56S±0.°09×167.°4E±0.°2, h145km±14km, mb4.0/12, Error ellipse: s-maj=26.5km s-min=13.7km az=160.9*
*IDC **12** 17:34:39.2±8.6, 15.°53S×167.°35E, h147km±61km, mb3.8/8, mb1 3.9/9, mb1mx3.8/17, mbtmp3.8/9, Error ellipse: s-maj=72.7km s-min=21.0km az=114.0*
*NEIC **12** 17:34:40.9±2.9, 15.°43S×167.°31E, h163km±23km, mb4.1/6, Error ellipse: s-maj=24.6km s-min=14.0km az=97.0*
*NOU **12** 17:34:42.0±0.5, 16.°12S×164.°20E, h30km, MD3.3*

ISC 12 17:34:38.0±1.6, 15.°54S±0.°09×167.°4E±0.°2, h135km±13km, n37, σ0.°80/19, mb4.0/12, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.56**	**188**	*e*P	**Pn**	**17 36 11.4**	**-0.7**
DZM				*e*S	**Sn**	**17 37 18.2**	**-7.5**
DZM				AMP		17 37 34.7	
	comp=Z,165nm,5.0s						
LASL	**Noumea 6.71 187**	*e*P	**Pn**	**17 36 14.1**	**+0.1**
NORM	**Noumea 6.71 187**	*e*P	**Pn**	**17 36 13.9**	**-0.2**
HNR	**Honiara 9.46 309**	P	**Pn**	**17 36 51.8**	**+0.7**
	comp=Z,4.9nm,0.3s,baz=98,slow=2.9,SNR=4.2				
EIDS	**Eidsvold 18.12 235**	*e*P	**P**	**17 38 41.9**	**+2.2**
	comp=Z,11nm,0.7s				
STKA	**Stephens Creek 28.56 231**	P	**P**	**17 40 21.9**	**+0.7**
	comp=Z,5.2nm,0.9s,mb4.3,baz=50,slow=7.9,SNR=7.1				
STKA	**Stephens Creek 28.56 231**	*e*P	**P**	**17 40 21.8**	**+0.6**
	comp=Z,2.0nm,1.0s,mb3.8				
WRAB	**Tennant Creek 31.73 257**	*e*P	**P**	**17 40 48.4**	**-1.0**
	comp=Z,0.6nm,0.4s,mb3.7				
WRA	**Warramunga Arr 31.74 257**	P	**P**	**17 40 48.6**	**-0.9**
	comp=Z,1.0nm,0.6s,mb3.7,baz=84,slow=8.4,SNR=21				
ASAR	**Alice Springs 32.49 250**	P	**P**	**17 40 55.5**	**-0.5**
	comp=Z,4.4nm,0.6s,mb4.4,baz=76,slow=9.1,SNR=111				
FITZ	**Fitzroy Crossi 39.98 260**	P	**P**	**17 41 59.6**	**-0.1**
	comp=Z,3.3nm,0.4s,mb4.3,baz=88,slow=8.8,SNR=32				
MBWA	**Marble Bar 45.44 255**	*e*P	**P**	**17 42 43.4**	**-0.4**
	comp=Z,4.8nm,0.7s,mb4.2				
MJAR	**Matsushiro Arr 58.67 333**	P	**P**	**17 44 19.8**	**-1.5**
	comp=Z,0.3nm,0.4s,mb3.5,baz=178,slow=8.5,SNR=4.3				
SBA	**Scott Base 62.33 180**	*e*P	**P**	**17 44 46.4**	**+0.8**
	comp=Z,5.0nm,0.8s,mb4.4				
ASAJ	**Asahikawa 63.53 340**	P	**P**	**17 44 54.5**	**+0.6**
	comp=Z,3.5nm,1.0s,mb4.2,baz=219,slow=14,SNR=4.4				
QSPA	**South Pole Qui 74.50 180**	*e*P	**P**	**17 46 01.2**	**+0.1**
	comp=Z,4.3nm,0.9s,mb4.2				
CMAR	**Chiang Mai Arr 75.38 294**	P	**P**	**17 46 07.2**	**0.0**
	comp=Z,0.7nm,0.7s,mb3.4,baz=133,slow=5.1,SNR=6.5				
SONM	**Songino Array 83.21 324**	P	**P**	**17 46 49.6**	**+0.6**
	comp=Z,0.7nm,0.6s,mb3.6,baz=150,slow=8.7,SNR=7.1				
ARCES	**ARCESS Array B 121.06 345**	PKP	PKPdf	17 53 12.8	-1.2
	comp=Z,0.6nm,0.5s,baz=96,slow=2.0,SNR=14				
HINF	**Hinteralfeld 144.01 338**	*e*PKP1	PKPdf	17 53 54.5	-3.0
FLN	**La Foliniere 145.40 346**	*e*PKP1	PKPbc	17 53 59.2	-0.9
	comp=Z,11nm,0.7s				
LDF	**La Druitiere 145.47 345**	*e*PKP1	PKPbc	17 53 59.9	-0.4
	comp=Z,7.1nm,0.7s				
LOR	**Lormes 145.53 340**	*e*PKP1	PKPbc	17 54 00.2	-0.3
	comp=Z,5.9nm,0.7s				
SSF	**Saint Saulge 145.83 340**	*e*PKP1	PKPbc	17 54 01.1	-0.4
	comp=Z,7.9nm,0.8s				
GRR	**Gorron 145.84 346**	*e*PKP1	PKPbc	17 54 01.7	+0.3
	comp=Z,4.3nm,0.4s				
LPL	**La Plagne 145.97 335**	*e*PKP1	PKPbc	17 54 01.7	-0.2
LPG	**La Plagne 145.98 335**	*e*PKP1	PKPbc	17 54 01.3	-0.7
	comp=Z,5.4nm,0.7s				
AVF	**Avril sur Loir 146.11 340**	*e*PKP1	PKPbc	17 54 01.6	-0.7
	comp=Z,8.4nm,0.9s				

comp=Z,0.6nm,0.3s,mb4.1,baz=82,slow=8.9,SNR=4.6
TKM2 Tokmak 2 50.31 296 *eP* **P 18 15 25.0 -0.7**
TKM2 pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
TKM2 Tokmak 2 50.31 296 *eP* **P 18 15 25.0 -0.8**
comp=Z,2.9nm,1.0s,mb4.3
RES Resolute Bay 56.27 16 P **P 18 16 09.2 +0.1**
comp=Z,1.0nm,0.4s,mb4.2,baz=331,slow=10.0,SNR=4.5
RES Resolute Bay 56.27 16 P **P 18 16 09.2 +0.1**
RES pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
ARCES ARCESS Array B 60.04 340 P **P 18 16 36.2 +0.7**
comp=Z,1.9nm,0.9s,mb4.1,baz=34,slow=8.7,SNR=3.1
ARCES ARCESS Array B 60.04 340 P **P 18 16 36.2 +0.7**
ARCES pmax pmax
comp=Z,2.0nm,0.9s
JOF Joensuu 62.73 332 *eP* **P 18 16 53.3 -0.5**
JOF Joensuu 62.73 332 *ep* **P 18 16 53.3 -0.5**
KAF Kangasniemi 64.98 333 *eP* **P 18 17 07.4 -1.2**
KAF Kangasniemi 64.98 333 *ep* **P 18 17 07.4 -1.2**
FINES FINESS Array B 65.54 333 P **P 18 17 12.2 +0.1**
comp=Z,2.0nm,0.4s,mb4.5,baz=42,slow=7.7,SNR=39
FINES FINESS Array B 65.54 333 P **P 18 17 12.3 +0.1**
FINES pmax pmax
comp=Z,2.0nm,0.4s
NVAR Mina Array Bea 68.83 57 P **P 18 17 34.6 +1.1**
comp=Z,0.5nm,0.7s,mb3.6,baz=285,slow=6.3,SNR=5.3
NB2 NORSAR Subarra 70.38 339 P **P 18 17 43.0 +0.4**
comp=Z,0.8nm,0.5s,mb3.9,baz=32,slow=6.5
NOA NORSAR Array B 70.38 339 P **P 18 17 42.9 +0.2**
comp=Z,1.1nm,0.9s,mb3.8,baz=35,slow=6.1,SNR=4.0
NOA NORSAR Array B 70.38 339 P **P 18 17 42.9 +0.3**
NOA pmax pmax
comp=Z,1.0nm,0.9s
PDAR Pinedale Array 71.23 49 P **P 18 17 47.4 -0.8**
comp=Z,0.2nm,0.5s,mb3.3,baz=298,slow=1.9,SNR=3.1
AKASG Malin Array Be 72.04 323 P **P 18 17 53.3 +0.5**
comp=Z,0.3nm,0.3s,mb3.6,baz=42,slow=6.7,SNR=3.1
TXAR Lajitas Array 83.92 55 P **P 18 18 59.1 -0.1**
comp=Z,0.5nm,0.8s,mb3.7,baz=285,slow=4.8,SNR=5.3
TXAR Lajitas Array 83.92 55 P **P 18 18 59.1 -0.1**
TXAR pmax pmax
comp=Z,1.0nm,0.8s

ISCJB ***12*** *18:09:09.4±1.1,20°.99S±0°.09×178°.4W±0°.1,h576km±13km, mb4.1/18, Error ellipse: s-maj=15.3km s-min=13.4km az=32.7*
NEIC ***12*** *18:09:10.1±1.2,20°.85S×178°.33W,h580km±12km, mb4.3/10, Error ellipse: s-maj=19.4km s-min=13.9km az=150.0*
IDC ***12*** *18:09:12.3±2.5,21°.17S×178°.26W,h604km±30km, mb3.3/7, mb1 3.6/8, mb1mx3.4/14, mbtmp3.3/8, Error ellipse: s-maj=27.3km s-min=13.6km az=156.0*
ISC 12 18:09:10.3±1.1,20°.9S±0°.1×178°.4W±0°.1,h571km±12km, n37,σ0°65/30,mb4.1/18,1D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.61**	**313**	*e*Pn	**P**	**P**	**18 10 38.5**	**+0.1**
AFI	**Afiamalu**	**9.39**	**43**	Sn	**S**	**S**	**18 13 00.3**	**-11**
6.3nm,0.3s,baz=252,slow=20,SNR=7.7								
URZ	**Urewera**	**17.73**	**192**	P	**P**	**P**	**18 12 43.3**	**-1.2**
1.3nm,0.3s,baz=347,slow=4.3,SNR=7.2								
URZ				S		**S**	**18 15 34.2**	**-4.5**
0.2nm,0.3s,baz=32,slow=19,SNR=3.7								
EIDS	**Eidsvold**	**28.39**	**255**	*e*P	**P**	**P**	**18 14 19.9**	**+0.1**
3.0nm,0.4s,mb4.3								
ARMA	**Armidale**	**28.56**	**245**	*e*P	**P**	**P**	**18 14 22.0**	**+0.8**
CTA	**Charters Tower**	**33.09**	**265**	*e*P	**P**	**P**	**18 15 00.1**	**+0.1**
5.4nm,0.3s,mb4.6								
CTAO	**Charters Tower**	**33.09**	**265**	*e*P	**P**	**P**	**18 15 00.1**	**+0.1**
7.3nm,0.4s,mb4.6								
CMSA	**Cobar Meteorol**	**33.78**	**244**	*e*P	**P**	**P**	**18 15 06.1**	**+0.4**
PMG	**Port Moresby**	**35.08**	**284**	*e*P	**P**	**P**	**18 15 16.5**	**-0.2**
13nm,0.7s,mb4.6								
STKA	**Stephens Creek**	**37.28**	**245**	*e*P	**P**	**P**	**18 15 35.5**	**+0.8**
3.3nm,0.6s,mb4.0								
STKA	**Stephens Creek**	**37.28**	**245**	P	**P**	**P**	**18 15 35.5**	**+0.8**
3.9nm,0.5s,mb4.2,baz=79,slow=13,SNR=15								
STKA	**Stephens Creek**	**37.28**	**245**	*e*P	**P**	**P**	**18 15 35.0**	**+0.4**
0.9nm,0.6s,mb3.5								
ASAR	**Alice Springs**	**44.07**	**257**	P	**P**	**P**	**18 16 28.8**	**+0.1**
14nm,0.5s,mb4.7,baz=96,slow=7.6,SNR=272								
ASAR				PcP		PcP	18 18 00.8	-0.4
1.1nm,0.5s,baz=99,slow=3.7,SNR=5.0								
ASAR				S		**S**	**18 22 19.9**	**-0.5**
1.0nm,0.8s,baz=91,slow=16,SNR=6.4								
WRAB	**Tennant Creek**	**44.17**	**263**	*e*P	**P**	**P**	**18 16 28.4**	**-1.0**
4.5nm,0.3s,mb4.5								
WRA	**Warramunga Arr**	**44.18**	**263**	P	**P**	**P**	**18 16 28.9**	**-0.7**
6.3nm,0.3s,mb4.6,baz=99,slow=7.6,SNR=486								
WRA				S		**S**	**18 22 22.0**	**-0.1**
0.5nm,1.0s,baz=99,slow=12,SNR=3.1								
KAKA	**Kakadu**	**47.62**	**272**	*e*P	**P**	**P**	**18 16 56.8**	**+1.1**
5.0nm,0.3s,mb4.5								
KAKA	**Kakadu**	**47.62**	**272**	*e*P	**P**	**P**	**18 16 56.3**	**+0.7**
13nm,0.3s,mb4.9								
KNA	**Kununurra**	**50.25**	**267**	*e*P	**P**	**P**	**18 17 14.8**	**-0.3**
5.6nm,0.3s,mb4.5								
FITZ	**Fitzroy Crossi**	**52.61**	**263**	*e*P	**P**	**P**	**18 17 32.2**	**+0.1**
6.6nm,0.4s,mb4.3								
MBWA	**Marble Bar**	**57.41**	**258**	*e*P	**P**	**P**	**18 18 04.7**	**-0.8**
7.0nm,0.5s,mb4.2								
QSPA	**South Pole Qui**	**69.16**	**180**	*e*P	**P**	**P**	**18 19 20.8**	**+1.3**
1.0nm,0.6s,mb3.5								
KKM	**Kota Kinabalu**	**69.51**	**285**	*e*P	**P**	**P**	**18 19 22.4**	**-0.3**
9.0nm,0.7s,mb4.4								
KSM	**Kuching**	**73.11**	**278**	*e*P	**P**	**P**	**18 19 43.5**	**-0.3**
6.1nm,0.6s,mb4.2								
NVAR	**Mina Array Bea**	**81.57**	**43**	P	**P**	**P**	**18 20 28.7**	**-0.3**
0.2nm,0.5s,mb2.8,baz=235,slow=7.6,SNR=2.6								
TXAR	**Lajitas Array**	**87.58**	**57**	P	**P**	**P**	**18 20 58.7**	**+0.2**
0.2nm,0.8s,mb2.9,baz=201,slow=4.8,SNR=2.5								
PDAR	**Pinedale Array**	**89.51**	**43**	P	**P**	**P**	**18 21 06.7**	**-0.5**
0.5nm,0.7s,mb3.5,baz=138,slow=3.6,SNR=4.4								
CMAR	**Chiang Mai Arr**	**99.91**	**290**	P	**P**	**P**	**18 21 10.7**	**+1.2**
1.6nm,0.9s,mb3.9,baz=124,slow=2.8,SNR=9.7								
ZALV	**Zalesovo Beam**	**110.58**	**321**	PKiKP		PKiKP	18 26 35.4	-2.7
0.6nm,0.5s,baz=90,slow=1.5,SNR=3.8								
MKAR	**Makanchi Array**	**111.21**	**313**	PKiKP		PKiKP	18 26 37.9	-1.7
0.2nm,0.4s,baz=108,slow=1.6,SNR=5.0								
BVAR	**Borovoye Array**	**119.15**	**320**	PKP		PKPdf	18 26 53.0	-1.5
1.4nm,0.4s,baz=111,slow=2.7,SNR=6.6								
ARCES	**ARCESS Array B**	**129.25**	**349**	PKP		PKPdf	18 27 12.1	-1.3
0.6nm,0.4s,baz=54,slow=2.1,SNR=9.2								
FINES	**FINESS Array B**	**136.06**	**343**	PKP		PKPdf	18 27 24.7	-1.8
1.4nm,1.0s,baz=75,slow=1.6,SNR=3.6								
FINES	**FINESS Array B**	**136.06**	**343**	PKP		PKPdf	18 27 24.7	-1.8
AKASG	**Malin Array Be**	**143.19**	**331**	PKhKP			18 27 35.9	
3.7nm,0.4s,baz=43,slow=4.3,SNR=25								
BRTR	**Keskin Array B**	**146.84**	**312**	PKPbc		PKPbc	18 27 48.0	-1.2
1.6nm,0.7s,baz=46,slow=4.2,SNR=8.9								
BRTR				PKPab		PKPab	18 27 53.1	+0.8
0.7nm,0.7s,baz=41,slow=2.6,SNR=3.5								
MMAI	**Mount Meron Ar**	**147.69**	**299**	PKPbc		PKPbc	18 27 51.3	-0.3
2.1nm,0.4s,baz=78,slow=5.8,SNR=15								
MMAI				PKPab		PKPab	18 27 56.2	+0.2
1.1nm,0.6s,baz=30,slow=3.8,SNR=5.1								
CLL	**Collm**	**148.37**	**346**	*i*PKPbc		PKPbc	18 27 51.6	-1.1
comp=Z,4.0nm,0.8s								

IDC ***12*** *18:14:15.3±2.9,5°.29N×94°.17E,h0km, mb3.6/6, mb1 3.7/6, mb1mx3.5/20, mbtmp3.6/6, Error ellipse: s-maj=124.5km s-min=21.2km az=58.0*
ISCJB ***12*** *18:14:17.6±1.2,5°.2N±0°.1×94°.1E±0°.2,h33km, mb3.7/6, Error ellipse: s-maj=28.0km s-min=13.6km az=139.1*
NEIC ***12*** *18:14:19.6±0.9,5°.15N×94°.01E,h35km, Error ellipse: s-maj=21.8km s-min=10.9km az=50.0*
ISC 12 18:14:19.7±1.2,5°.2N±0°.1×94°.0E±0°.2,h35km,n12, σ0°62/12,mb3.7/6,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KULM	**Kulim**	**6.61**	**89**	*e*Pn	**Pn**	**Pn**	**18 15 53.6**	**-0.8**
CMAR	**Chiang Mai Arr**	**14.07**	**20**	Pn	**Pn**	**Pn**	**18 17 37.8**	**+1.1**
0.4nm,0.3s,baz=215,slow=12,SNR=12								
CHTO	**Chiang Mai**	**14.40**	**19**	*e*Pn	**Pn**	**Pn**	**18 17 46.3**	**+5.0**
2.8nm,0.6s								
MK31	**Makanchi Array**	**42.70**	**348**	*e*P	**P**	**P**	**18 22 13.4**	**+0.1**
MKAR	**Makanchi Array**	**42.70**	**348**	P	**P**	**P**	**18 22 13.7**	**+0.4**
1.2nm,0.5s,mb3.9,baz=171,slow=8.0,SNR=17								
SONM	**Songino Array**	**43.83**	**12**	P		**P**	**18 22 21.8**	**-0.6**
0.4nm,0.7s,mb3.3,baz=191,slow=6.8,SNR=4.8								
WRA	**Warramunga Arr**	**46.83**	**123**	P		**P**	**18 22 46.9**	**+0.3**
0.6nm,0.6s,mb3.7,baz=304,slow=8.9,SNR=7.2								
KURK	**Kurchatov**	**47.21**	**347**	*e*P		**P**	**18 22 48.2**	**-0.8**
ASAR	**Alice Springs**	**48.31**	**128**	P		**P**	**18 22 58.6**	**+0.6**
0.4nm,0.8s,mb3.5,baz=299,slow=7.2,SNR=4.5								
ZALV	**Zalesovo Beam**	**49.22**	**353**	P		**P**	**18 23 04.2**	**-0.3**
1.0nm,0.4s,mb4.2,baz=176,slow=8.7,SNR=7.6								
ZALV	**Zalesovo Beam**	**49.22**	**353**	P		**P**	**18 23 04.2**	**-0.3**
BVAR	**Borovoye Array**	**51.52**	**342**	P		**P**	**18 23 21.7**	**-0.2**
0.3nm,0.5s,mb3.5,baz=151,slow=13,SNR=3.1								

NIED ***12*** *18:17:00,42°.50N×143°.30E,h56km,Mw4.0 Best double couple: M0:9.79000×1014 NP1:φ:116.00000°,δ:47.00000°, λ:-76.00000°. NP2:φ:276.00000°,δ:45.00000°, λ:-105.00000°.*
ISCJB ***12*** *18:17:03.0±0.3,42°.46N±0°.04×143°.30E±0°.05,h69km±2km, mb3.9/20, Error ellipse: s-maj=6.9km s-min=4.4km az=136.6*
MOS ***12*** *18:17:02.4±0.8,42°.43N×143°.29E,h66km,mb4.2/14, Error ellipse: s-maj=15.5km s-min=9.3km az=85.9*
NEIC ***12*** *18:17:04.3±0.6,42°.46N×143°.28E,h64km±5km, mb4.1/6, Error ellipse: s-maj=9.4km s-min=6.9km az=103.0*
NEIC Recorded [2 JMA] in southeastern Hokkaido.
IDC ***12*** *18:17:04.9±1.9,42°.46N×143°.25E,h69km±15km, mb3.6/12, mb1 3.8/13, mb1mx3.7/24, mbtmp3.6/13, MS3.1/2, Ms1 3.1/2, ms1mx2.5/25, Error ellipse: s-maj=20.2km s-min=14.0km az=90.0*
JMA ***12*** *18:17:05.0±0.1,42°.49N×143°.28E,h51km±1km, M4.1*
JMA Felt II J1.
ISC 12 18:17:04.3±0.3,42°.49N±0°.03×143°.30E±0°.05,h62km±3km, n62,σ0°79/73,mb4.0/20,4C-5D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JCH	**Churui**	**0.14**	**21**	⇓P		**Pn**	**18 17 13.0**	**-0.7**
JCH				*e*S		**Sn**	**18 17 19.0**	**-1.5**
JNBK	**Urakawa-nobuka**	**0.45**	**243**	⇓P		**Pn**	**18 17 15.8**	**-0.1**
JNBK				*e*S		**Sn**	**18 17 24.7**	**+0.3**
JEM	**Erimo**	**0.48**	**192**	⇓P		**Pn**	**18 17 16.7**	**+0.5**
ERM	**Erimo**	**0.48**	**192**	*e*PN		**Pn**	**18 17 15.7**	**-0.5**
JOB	**Onbets**	**0.57**	**43**	⇑P		**Pn**	**18 17 17.6**	**+0.4**
JOB				*e*S		**Sn**	**18 17 27.5**	**+0.9**
JBT2	**Biratori 2**	**0.75**	**293**	⇓P		**Pn**	**18 17 18.9**	**-0.3**
JBT2				*e*S		**Sn**	**18 17 30.2**	**0.0**
JFR	**Furan**	**0.85**	**323**	P		**Pn**	**18 17 19.9**	**-0.6**
JFR				S		**Sn**	**18 17 31.3**	**-1.1**
JAR	**Ashorobuto**	**0.88**	**23**	⇑P		**Pn**	**18 17 21.0**	**+0.2**
JAR				*e*S		**Sn**	**18 17 33.1**	**0.0**
JAK	**Akkeshi**	**1.15**	**63**	⇑P		**Pn**	**18 17 23.9**	**-0.4**
JAK				*e*S		**Sn**	**18 17 38.5**	**-0.7**
JAB	**Ashibetsu**	**1.29**	**323**	⇑P		**Pn**	**18 17 26.9**	**+0.8**
ASAJ	**Asahikawa**	**1.71**	**343**	P		**Pn**	**18 17 32.6**	**+0.9**
63nm,0.3s,baz=198,slow=14,SNR=618								
ASAJ				S		**Sn**	**18 17 54.0**	**+1.4**
50nm,0.3s,baz=120,slow=20,SNR=15								
ASAJ	**Asahikawa**	**1.71**	**343**	PN		**Pn**	**18 17 32.6**	**+0.9**
ASAJ				S		**Sn**	**18 17 54.0**	**+1.4**
ASAJ				pmax		pmax		
comp=Z,63nm,0.3s								
ASAJ				smax				
comp=N,50nm,0.3s								
YUK	**Yuzh-Kuril'sk**	**2.43**	**50**	⇓*i*PN		**Pn**	**18 17 42.2**	**+0.7**
YUK				*i* S		**Sn**	**18 18 10.1**	**0.0**
YUK				pmax		pmax		
comp=Z,370nm,0.4s								
YUK				pmax		pmax		
comp=N,170nm,0.1s								
YUK				pmax		pmax		
comp=E,120nm,0.1s								
YUK				pmax		pmax		
comp=Z,400nm,1.3s								
YUK				smax				
comp=N,700nm,0.7s								
YUK				smax				
comp=E,1μm,0.7s								
YUK				smax				
comp=N,1μm,0.6s								
YUK				smax				
comp=E,2μm,0.6s								
KUR	**Kuril'sk**	**4.30**	**49**	*e*PN		**Pn**	**18 18 06.0**	**-1.0**
KUR				*e*S		**Sn**	**18 18 57.0**	**+1.2**
KUR				pmax		pmax		
comp=Z,90nm,0.7s								
KUR				smax				
comp=N,220nm,0.7s								
KUR				smax				
comp=E,260nm,0.7s								
YSS	**Yuzh-Sakhalins**	**4.48**	**355**	*e*PN		**Pn**	**18 18 10.5**	**+0.9**
YSS				pmax		pmax		
comp=Z,50nm,0.8s								
YSS	**Yuzh-Sakhalins**	**4.48**	**355**	*e*Pn		**Pn**	**18 18 10.7**	**+1.1**
MAJO	**Matsushiro**	**7.12**	**215**	*e*PN		**Pn**	**18 18 45.7**	**0.0**
MAJO				pmax		pmax		
comp=Z,6.0nm,0.5s								
MAJO	**Matsushiro**	**7.12**	**215**	*e*Pn		**Pn**	**18 18 45.7**	**-0.1**
comp=Z,6.4nm,0.5s								
MAT	**Matsushiro**	**7.12**	**215**	P		**Pn**	**18 18 45.6**	**-0.1**
MAT				*e*S		**Sn**	**18 20 07.2**	**+2.0**
MJAR	**Matsushiro Arr**	**7.12**	**215**	P		**Pn**	**18 18 45.5**	**-0.2**
comp=Z,0.7nm,0.3s,baz=33,slow=12,SNR=23								
MJAR				LR		LR	18 22 10.8	
comp=Z,56nm,20.2s,baz=35,slow=43								
JHJ	**Hachijo jima 2**	**9.76**	**198**	S		**Sn**	**18 20 58.9**	**-11**
comp=Z,4.9nm,0.3s,baz=322,slow=20,SNR=3.9								
ULN	**Ulaanbaatar**	**25.94**	**294**	P		**P**	**18 22 27.1**	**-3.5**
ULN				pmax		pmax		
comp=Z,1.0nm,0.6s,mb3.5								
ULN	**Ulaanbaatar**	**25.94**	**294**	P		**P**	**18 22 27.1**	**-3.5**
comp=Z,1.0nm,0.6s,mb3.5								
SONM	**Songino Array**	**26.39**	**294**	P		**P**	**18 22 34.9**	**+0.3**
comp=Z,1.0nm,0.7s,mb3.5,baz=97,slow=7.9,SNR=8.4								
SONM	**Songino Array**	**26.39**	**294**	P		**P**	**18 22 34.9**	**+0.3**
SONM				pmax		pmax		
comp=Z,1.0nm,0.7s								
GTA	**Gaotai**	**32.72**	**280**	*e*P		**P**	**18 23 31.7**	**+0.9**
GTA				pP		pP	18 23 36.1	-10
GTA				sP		sP	18 23 39.6	-14
GTA				pmax		pmax		
comp=Z,4.0nm,1.1s,mb4.3								
ZALV	**Zalesovo Beam**	**39.52**	**308**	P		**P**	**18 24 28.4**	**-0.2**
comp=Z,0.5nm,0.4s,mb3.6,baz=99,slow=9.2,SNR=4.4								
ZALV	**Zalesovo Beam**	**39.52**	**308**	P		**P**	**18 24 28.4**	**-0.2**
ZALV				pmax		pmax		
comp=Z,1.0nm,0.4s,mb3.9								
BPAW	**Bear Paw Mtn.**	**42.42**	**36**	*e*P		**P**	**18 24 51.5**	**-0.9**
comp=Z,1.1nm,0.8s,mb3.5								
MK31	**Makanchi Array**	**42.67**	**298**	*e*P		**P**	**18 24 54.1**	**-0.4**
MK31				*e*		pP	18 25 09.0	-1.3
MKAR	**Makanchi Array**	**42.67**	**298**	P		**P**	**18 24 54.5**	**0.0**
comp=Z,0.9nm,0.6s,mb3.7,baz=80,slow=11,SNR=14								
MKAR	**Makanchi Array**	**42.67**	**298**	P		**P**	**18 24 54.5**	**0.0**
MKAR				pmax		pmax		
comp=Z,1.0nm,0.6s								
KURK	**Kurchatov**	**43.90**	**304**	*e*P		**P**	**18 25 03.5**	**-0.9**
KURK				pmax		pmax		
comp=Z,4.0nm,0.6s,mb4.3								
KURK	**Kurchatov**	**43.90**	**304**	*e*P		**P**	**18 25 03.5**	**-0.9**
comp=Z,3.6nm,0.6s,mb4.3								
BVAR	**Borovoye Array**	**48.12**	**309**	P		**P**	**18 25 37.7**	**+0.2**
comp=Z,1.2nm,0.3s,mb4.3,baz=81,slow=9.5,SNR=14								
BVAR				PcP		PcP	18 27 04.5	+0.4
comp=Z,1.1nm,0.7s,baz=132,slow=4.1,SNR=4.2								
BVAR	**Borovoye Array**	**48.12**	**309**	P		**P**	**18 25 37.7**	**+0.2**
BVAR							18 27 04.5	
BVAR				pmax		pmax		
comp=Z,1.0nm,0.4s								
BRVK	**Borovoye**	**48.17**	**309**	P		**P**	**18 25 37.9**	**0.0**
BRVK				pmax		pmax		
comp=Z,2.0nm,0.7s,mb4.3								
BRVK	**Borovoye**	**48.17**	**309**	P		**P**	**18 25 37.9**	**0.0**
comp=Z,2.5nm,0.7s,mb4.3								
TKM2	**Tokmak 2**	**48.49**	**295**	*e*P		**P**	**18 25 41.3**	**+0.8**
TKM2				pmax		pmax		
comp=Z,3.0nm,1.0s,mb4.3								
TKM2	**Tokmak 2**	**48.49**	**295**	*e*P		**P**	**18 25 41.3**	**+0.8**
comp=Z,2.7nm,1.0s,mb4.2								
HNR	**Honiara**	**53.87**	**160**	LR		LR	18 47 21.3	
comp=Z,42nm,19.5s,baz=198,slow=34								
ABKAR	**Akbulak array**	**55.63**	**308**	*e*P		**P**	**18 26 32.9**	**-0.6**
comp=Z,1.3nm,0.5s,mb4.2								
JOF	**Joensuu**	**61.86**	**331**	*e*P		**P**	**18 27 13.7**	**-2.8**
JOF				pmax		pmax		
comp=Z,1.0nm,0.5s,mb4.2								
JOF	**Joensuu**	**61.86**	**331**	*ep*		**P**	**18 27 13.7**	**-2.8**
comp=Z,1.2nm,0.5s,mb4.3								
WRA	**Warramunga Arr**	**62.66**	**189**	P		**P**	**18 27 21.8**	**-0.5**
comp=Z,1.2nm,0.8s,mb4.0,baz=6.7,slow=6.8,SNR=7.7								
WRA	**Warramunga Arr**	**62.66**	**189**	P		**P**	**18 27 21.8**	**-0.5**
WRA				pmax		pmax		
comp=Z,1.0nm,0.9s								
WRA	**Warramunga Arr**	**62.66**	**189**	P		**P**	**18 27 21.8**	**-0.5**
KAF	**Kangasniemi**	**64.15**	**332**	*e*P		**P**	**18 27 22.8**	**-8.8**
KAF	**Kangasniemi**	**64.15**	**332**	*ep*		**P**	**18 27 22.8**	**-8.8**
FINES	**FINESS Array B**	**64.69**	**332**	P		**P**	**18 27 34.5**	**-0.7**
comp=Z,1.9nm,0.4s,mb4.5,baz=50,slow=7.0,SNR=21								
FINES	**FINESS Array B**	**64.69**	**332**	P		**P**	**18 27 34.5**	**-0.7**
FINES				pmax		pmax		
comp=Z,2.0nm,0.4s								
FINES	**FINESS Array B**	**64.69**	**332**	P		**P**	**18 27 34.5**	**-0.7**
ASAR	**Alice Springs**	**66.39**	**189**	P		**P**	**18 27 46.6**	**+0.1**
comp=Z,0.3nm,0.3s,mb3.8,baz=5.3,slow=5.9,SNR=4.5								
NB2	**NORSAR Subarra**	**69.72**	**337**	P		**P**	**18 28 06.4**	**-0.6**
comp=Z,0.7nm,0.5s,mb3.9,baz=34,slow=6.5								
NOA	**NORSAR Array B**	**69.72**	**337**	P		**P**	**18 28 06.7**	**-0.4**
comp=Z,0.9nm,0.5s,mb4.0,baz=35,slow=6.3,SNR=6.5								
NOA	**NORSAR Array B**	**69.72**	**337**	P		**P**	**18 28 06.7**	**-0.3**
NOA				pmax		pmax		
comp=Z,1.0nm,0.5s								
NVAR	**Mina Array Bea**	**70.63**	**55**	P		**P**	**18 28 13.3**	**+0.3**
comp=Z,0.3nm,0.5s,mb3.5,baz=298,slow=6.0,SNR=4.6								
AKASG	**Malin Array Be**	**70.89**	**322**	P		**P**	**18 28 14.2**	**-0.1**
comp=Z,0.6nm,0.4s,mb3.8,baz=54,slow=5.4,SNR=2.8								
AKASG	**Malin Array Be**	**70.89**	**322**	P		**P**	**18 28 14.2**	**-0.1**
AKASG				pmax		pmax		
comp=Z,1.0nm,0.4s								
PDAR	**Pinedale Array**	**72.86**	**47**	P		**P**	**18 28 26.9**	**+0.6**
comp=Z,0.3nm,0.4s,mb3.5,baz=14,slow=0.9,SNR=4.5								
TXAR	**Lajitas Array**	**85.69**	**54**	P		**P**	**18 29 37.2**	**+0.9**
comp=Z,1.0nm,0.7s,mb4.1,baz=285,slow=3.5,SNR=14								
TXAR	**Lajitas Array**	**85.69**	**54**	P		**P**	**18 29 37.3**	**+0.9**
TXAR				pmax		pmax		
comp=Z,1.0nm,0.7s								

ISCJB ***12*** *18:30:19.2±0.8,31°.38S±0°.05×178°.59W±0°.10,h79km±8km, mb4.5/13, Error ellipse: s-maj=14.7km s-min=5.8km az=21.9*
NEIC ***12*** *18:30:20.6±1.2,31°.20S×178°.50W,h87km±11km,mb4.7/7, Error ellipse: s-maj=17.9km s-min=11.4km az=120.0*
IDC ***12*** *18:30:25.0±1.7,30°.96S×178°.56W,h121km±15km, mb4.4/8, mb1 4.6/8, mb1mx4.3/14, mbtmp4.4/8, MS3.8/1, Ms1 3.7/1, ms1mx3.0/13, Error ellipse: s-maj=21.9km s-min=15.6km az=163.0*
ISC 12 18:30:20.4±0.6,31°.32S±0°.05×178°.54W±0°.10,h74km±7km, n53,σ1°42/62,mb4.5/13,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.13**	**15**	P		**Pn**	**18 30 56.2**	**+2.3**
80nm,0.3s,baz=255,slow=20,SNR=11								
RAO				S		**Sn**	**18 31 19.7**	**+0.3**
507nm,0.3s,baz=197,slow=19,SNR=26								
RAO	**Raoul Island**	**2.13**	**15**	*e*Pn		**Pn**	**18 30 53.7**	**-0.2**
RAO				*e*Sn		**Sn**	**18 31 18.5**	**-0.9**
RAO				S		**Sn**	**18 31 19.7**	**+0.3**
PUZ	**Puketiti**	**7.24**	**200**	PN		**Pn**	**18 32 04.5**	**+1.2**
PUZ				SN		**Sn**	**18 33 25.1**	**+1.2**
CNGZ	**Carnagh Statio**	**7.63**	**200**	SN		**Sn**	**18 33 38.7**	**+5.0**
MWZ	**Matawai**	**7.71**	**204**	PN		**Pn**	**18 32 10.4**	**+0.6**
URZ	**Urewera**	**7.79**	**206**	P		**Pn**	**18 32 11.6**	**+0.6**
1.5nm,0.3s,baz=112,slow=19,SNR=24								
URZ				S		**Sn**	**18 33 39.1**	**+1.5**
19nm,0.3s,baz=76,slow=19,SNR=25								
URZ	**Urewera**	**7.79**	**206**	PN		**Pn**	**18 32 12.1**	**+1.1**
URZ				SN		**Sn**	**18 33 38.4**	**+0.8**
KNZ	**Kokohu**	**8.29**	**201**	PN		**Pn**	**18 32 17.8**	**+0.1**
KNZ				SN		**Sn**	**18 33 46.2**	**-3.4**
NMHZ	**Naumai**	**8.64**	**205**	SN		**Sn**	**18 33 59.5**	**+1.0**
MCHZ	**McNeill Hill**	**8.99**	**204**	*e*PN		**Pn**	**18 32 29.5**	**+2.2**
CKHZ	**Cape Kidnapper**	**9.05**	**202**	PN		**Pn**	**18 32 28.9**	**+0.7**
CKHZ				SN		**Sn**	**18 34 06.2**	**-2.

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.32**	**200**	Pn	Pn	18 39 12.3	-0.9
	0.4nm,0.3s,baz=20,slow=12,SNR=26						
FITZ				Sn	Sn	18 40 59.1	-11
	0.5nm,0.3s,baz=52,slow=18,SNR=3.3						
WRA	**Warramunga Arr**	**12.53**	**158**	Pn	Pn	18 39 43.9	+0.5
	0.5nm,0.3s,baz=337,slow=13,SNR=4.1						
WRA				Sn	Sn	18 41 58.7	-5.0
	1.4nm,0.3s,baz=340,slow=22,SNR=8.6						
ASAR	**Alice Springs**	**15.86**	**164**	Pn	Pn	18 40 29.1	+0.6
	0.2nm,0.3s,baz=343,slow=11,SNR=5.1						
ASAR				Sn	Sn	18 43 18.5	-6.7
	0.4nm,0.3s,baz=346,slow=26,SNR=6.8						
MKAR	**Makanchi Array**	**68.96**	**327**	P	P	18 47 50.9	+0.2
	0.1nm,0.5s,baz=133,slow=5.7,SNR=4.5						

ISCJB ***12*** *19:12:25.6±0.9, 22°.84N±0°.06×12°.1W±0°.2, h10km, mb3.8/11, Error ellipse: s-maj=26.0km s-min=8.2km az=178.4*
IDC ***12*** *19:12:26.4±1.3, 22°.99N×12°.27W, h0km, mb3.8/8, mb1 3.8/9, mb1mx3.7/24, mbtmp3.7/9, ML4.4/1, Error ellipse: s-maj=46.9km s-min=31.8km az=142.0*
CSEM ***12*** *19:12:27.4, 22°.84N×12°.07W, h10km, mb4.2/7, After NEIC*
NEIC ***12*** *19:12:27.4±0.8, 22°.84N×12°.07W, h10km, mb4.2/7, Error ellipse: s-maj=26.0km s-min=8.1km az=89.0*
ISC 12 19:12:27.3±0.9, 22°.83N±0°.06×12°.1W±0°.2, h10km, n51, σ1§13/46, mb3.8/11, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDT	**Midelt**	**11.94**	**32**	Lg		19 18 41.3	
	0.4nm,0.3s,baz=254,slow=5.7,SNR=4.5						
SFS	**San Fernando**	**14.51**	**19**	*e*Pn	**Pn**	**19 15 51.2**	**-1.5**
SFS	**San Fernando**	**14.51**	**19**	*e*Pn	**Pn**	**19 15 51.2**	**-1.5**
TIC	**Toumodi**	**17.48**	**156**	*e*P	**Pn**	**19 16 32.7**	**+1.5**
	20nm,0.5s						
TIC	**Toumodi**	**17.48**	**156**	*e*P	**Pn**	**19 16 32.7**	**+1.5**
	20nm,0.5s						
DBIC	**Dimbokro**	**17.52**	**155**	P	**Pn**	**19 16 30.5**	**-1.2**
	0.6nm,0.3s,baz=323,slow=13,SNR=7.1						
DBIC				Lg		19 21 33.0	
	0.2nm,0.3s,baz=30,slow=20,SNR=3.6						
DBIC	**Dimbokro**	**17.52**	**155**	*e*Pn	**Pn**	**19 16 30.1**	**-1.6**
	11nm,1.1s						
DBIC				*e*Sn	**Sn**	**19 19 36.1**	**-11**
DBIC				Lg		19 21 33.0	
DBIC	**Dimbokro**	**17.52**	**155**	*e*Pn	**Pn**	**19 16 30.1**	**-1.6**
	11nm,1.1s						
DBIC				*e*Sn	**Sn**	**19 19 36.1**	**-11**
CART	**Cartagena**	**17.53**	**30**	*e*P	**Pn**	**19 16 30.2**	**-1.6**
CART	**Cartagena**	**17.53**	**30**	*e*P	**Pn**	**19 16 30.2**	**-1.6**
KIC	**Kosan Boka**	**17.84**	**155**	*e*P	**Pn**	**19 16 34.5**	**-1.3**
	6.7nm,0.6s						
KIC	**Kosan Boka**	**17.84**	**155**	*e*P	**Pn**	**19 16 34.5**	**-1.3**
	6.7nm,0.6s						
LIC	**Lamto**	**17.86**	**157**	*e*P	**Pn**	**19 16 34.6**	**-1.4**
	51nm,1.2s						
LIC	**Lamto**	**17.86**	**157**	*e*P	**Pn**	**19 16 34.6**	**-1.4**
	51nm,1.2s						
ESDC	**Sonseca Array**	**18.16**	**21**	P	**Pn**	**19 16 38.6**	**-0.8**
	0.3nm,0.3s,baz=216,slow=12,SNR=4.3						
ESDC	**Sonseca Array**	**18.16**	**21**	P	**Pn**	**19 16 38.6**	**-0.9**
KEST	**Kesra**	**22.63**	**51**	P	**P**	**19 17 29.1**	**+0.8**
	1.0nm,0.5s,mb3.5,baz=254,slow=19,SNR=5.1						
MORC	**Moravsky Berou**	**35.55**	**33**	P	**P**	**19 19 22.4**	**-2.0**
MORC	**Moravsky Berou**	**35.55**	**33**	P	**P**	**19 19 22.5**	**-2.0**
BR131	**Keskin Array S**	**42.08**	**55**	P	**P**	**19 20 20.3**	**+1.0**
BR131	**Keskin Array S**	**42.08**	**55**	P	**P**	**19 20 20.3**	**+0.9**
BRTR	**Keskin Array B**	**42.08**	**55**	P	**P**	**19 20 21.1**	**+1.8**
	1.1nm,0.8s,mb3.5,baz=284,slow=5.0,SNR=4.5						
BRTR	**Keskin Array B**	**42.08**	**55**	P	**P**	**19 20 21.1**	**+1.7**
FINES	**FINESS Array B**	**46.62**	**24**	P	**P**	**19 20 55.4**	**+0.1**
	1.5nm,0.5s,mb4.2,baz=231,slow=5.5,SNR=17						
FINES	**FINESS Array B**	**46.62**	**24**	P	**P**	**19 20 55.4**	**+0.1**
FINES	**FINESS Array B**	**46.62**	**24**	P	**P**	**19 20 55.4**	**+0.1**
LSZ	**Lusaka**	**54.67**	**130**	P	**P**	**19 21 58.0**	**+1.2**
	4.2nm,1.2s,mb4.3						
LSZ	**Lusaka**	**54.67**	**130**	P	**P**	**19 21 58.0**	**+1.3**
	4.2nm,1.2s,mb4.3						
ARU	**Arti**	**60.62**	**37**	*e*P	**P**	**19 22 38.4**	**+0.3**
ARU	**Arti**	**60.62**	**37**	*e*P	**P**	**19 22 38.4**	**+0.3**
BVAR	**Borovoye Array**	**67.64**	**40**	P	**P**	**19 23 24.9**	**+0.6**
	0.2nm,0.5s,mb3.4,baz=271,slow=7.0,SNR=4.1						
BVAR	**Borovoye Array**	**67.64**	**40**	P	**P**	**19 23 24.9**	**+0.6**
KURK	**Kurchatov**	**73.11**	**42**	*e*P	**P**	**19 23 57.6**	**-0.1**
	2.0nm,1.0s,mb4.0						
KURK	**Kurchatov**	**73.11**	**42**	*e*P	**P**	**19 23 57.6**	**-0.2**
	2.0nm,1.0s,mb4.0						
TKM2	**Tokmak 2**	**73.20**	**50**	P	**P**	**19 23 59.6**	**+1.2**
	1.1nm,0.6s,mb4.0						
TKM2	**Tokmak 2**	**73.20**	**50**	P	**P**	**19 23 59.6**	**+1.2**
	1.1nm,0.6s,mb4.0						
ZALV	**Zalesovo Beam**	**75.79**	**37**	P	**P**	**19 24 13.6**	**+0.3**
	0.4nm,0.5s,mb3.6,baz=306,slow=5.2,SNR=3.3						
ZALV	**Zalesovo Beam**	**75.79**	**37**	P	**P**	**19 24 13.6**	**+0.3**
MK31	**Makanchi Array**	**76.59**	**45**	*e*P	**P**	**19 24 18.4**	**+0.4**
MK31	**Makanchi Array**	**76.59**	**45**	*e*P	**P**	**19 24 18.5**	**+0.5**
MKAR	**Makanchi Array**	**76.59**	**45**	P	**P**	**19 24 18.6**	**+0.6**
	0.8nm,0.5s,mb3.9,baz=281,slow=6.2,SNR=20						
TXAR	**Lajitas Array**	**80.45**	**298**	P	**P**	**19 24 39.5**	**-0.2**
	0.1nm,0.6s,mb2.9,baz=64,slow=5.7,SNR=4.1						
TXAR	**Lajitas Array**	**80.45**	**298**	P	**P**	**19 24 39.5**	**-0.2**
SONM	**Songino Array**	**90.65**	**36**	P	**P**	**19 25 32.0**	**+1.9**
	0.5nm,0.7s,mb4.0,baz=296,slow=7.6,SNR=4.3						
SONM	**Songino Array**	**90.65**	**36**	P	**P**	**19 25 32.0**	**+1.9**
WRA	**Warramunga Arr**	**148.65**	**91**	PKPbc	PKPbc	19 32 15.9	+0.6
	1.0nm,0.7s,baz=293,slow=2.7,SNR=14						
WRA	**Warramunga Arr**	**148.65**	**91**	PKPbc	PKPbc	19 32 15.9	+0.5
WRAB	**Tennant Creek**	**148.66**	**91**	*e*PKPbc	PKPbc	19 32 16.1	+0.7
WRAB	**Tennant Creek**	**148.66**	**91**	*e*PKPbc	PKPbc	19 32 16.1	+0.7
ASAR	**Alice Springs**	**148.79**	**98**	PKPbc	PKPbc	19 32 16.4	+0.8
	1.3nm,0.7s,baz=293,slow=1.7,SNR=20						
ASAR	**Alice Springs**	**148.79**	**98**	PKPbc	PKPbc	19 32 16.5	+0.9

IDC 12 19:20:52.5±5.6, 4°.82S×147°.10E, h0km, mb3.4/3, mb1 3.7/4, mb1mx3.4/14, mbtmp3.5/4, MS3.2/1, Ms1 3.4/1, ms1mx2.5/10, Error ellipse: s-maj=165.1km s-min=30.7km az=103.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.50**	**218**	P	Pn	19 25 22.1	-0.5
	0.3nm,0.3s,baz=37,slow=11,SNR=25						
ASAR	**Alice Springs**	**22.65**	**213**	P	P	19 25 55.6	+0.2
	0.4nm,0.4s,baz=48,slow=8.0,SNR=17						
FITZ	**Fitzroy Crossi**	**24.79**	**236**	P	P	19 26 15.8	-0.6
	0.5nm,0.5s,baz=60,slow=8.1,SNR=4.4						
CMAR	**Chiang Mai Arr**	**52.79**	**297**	LR	LR	19 52 58.5	
	comp=Z,23nm,18.8s,baz=245,slow=36						
MKAR	**Makanchi Array**	**76.66**	**320**	P	P	19 32 45.6	+0.3
	0.4nm,0.3s,baz=122,slow=7.5,SNR=7.8						

NIED ***12*** *19:36:00, 24°.20N×125°.20E, h20km, Mw4.2 Best double couple: M0 2.41000×10^15 NP1:φ=68.00000°, δ72.00000°, λ75.00000°. NP2:φ=290.00000°, δ23.00000°, λ129.00000°.*
IDC ***12*** *19:36:41.5±0.6, 24°.24N×125°.12E, h0km, mb4.4/20, mb1 4.5/20, mb1mx4.4/26, mbtmp4.4/20, MS3.8/7, Ms1 3.8/7, ms1mx3.3/30, Error ellipse: s-maj=24.8km s-min=12.6km az=70.0*
BJI ***12*** *19:36:42.2, 23°.91N×125°.67E, h44km, mB4.5/22, mb4.3/37, Ms4.0/30, Ms7 3.8/30*
MOS ***12*** *19:36:44.4±1.2, 24°.32N×125°.30E, h33km, mb4.8/23, Error ellipse: s-maj=11.7km s-min=6.4km az=113.7*
ISCJB ***12*** *19:36:45.7±0.4, 24°.22N±0°.03×125°.22E±0°.03, h45km±3km, mb4.5/60, MS3.9/18, Error ellipse: s-maj=5.9km s-min=3.7km az=150.7*
JMA ***12*** *19:36:46.3±0.2, 24°.19N×125°.17E, h22km, M4.5*
JMA Felt II J1.
NEIC ***12*** *19:36:48.4±0.9, 24°.20N×125°.05E, h48km±8km, mb4.5/26, MS4.2/1, MW4.2(NIED), Error ellipse: s-maj=8.5km s-min=7.6km az=96.0*
NEIC Recorded [2 JMA] on Miyako-jima.
ISC 12 19:36:45.9±0.7, 24°.20N±0°.04×125°.23E±0°.03, h29km±4km, h34km±2.4km: pP-P, n148, σ1§22/168, mb4.5/60, MS3.9/18, 5C-4D, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**0.58**	**16**	P	**Pb**	**19 36 58.1**	**+0.4**
JOGS				S	**Sb**	**19 37 06.6**	**+1.0**
JMJ	**Miyako jima 2**	**0.62**	**5**	P	**Pb**	**19 36 58.4**	**+0.1**
JMJ				S	**Sb**	**19 37 07.8**	**+1.2**
JTJ	**Tarama**	**0.66**	**312**	P	**Pb**	**19 36 58.2**	**-0.7**
JTJ				S	**Sb**	**19 37 05.9**	**-1.8**
JIJ	**Ishigaki jima**	**1.01**	**280**	P	**Pn**	**19 37 03.8**	**-0.3**
JIJ				S	**Sn**	**19 37 17.6**	**+0.3**
JKRS	**Kuro-shima**	**1.12**	**272**	P	**Pn**	**19 37 06.0**	**+0.4**
JKRS				S	**Sn**	**19 37 20.6**	**+0.6**
HATJ	**Hateruma jima**	**1.31**	**264**	P	**Pn**	**19 37 08.1**	**-0.2**
HATJ				S	**Sn**	**19 37 24.5**	**-0.3**
IRIF	**Iriomote-Funau**	**1.38**	**276**	P	**Pn**	**19 37 09.4**	**+0.2**
IRIF				S	**Sn**	**19 37 29.1**	**+2.7**
YOJ	**Yonaguni jima**	**2.04**	**278**	P	**Pn**	**19 37 18.2**	**-0.1**
JKE	**Kume jima 2**	**2.54**	**33**	P	**Pn**	**19 37 25.0**	**-0.2**
JJT2	**Tamagusuku 2**	**2.99**	**49**	P	**Pn**	**19 37 32.4**	**+1.1**
NAH1	**Naha**	**2.99**	**48**	P	**Pn**	**19 37 35.4**	**+4.1**
JAGN	**Aguni-jima**	**3.00**	**37**	P	**Pn**	**19 37 31.1**	**-0.3**
NACB	**Ninganchiao**	**3.32**	**270**	*e*Pn	**Pn**	**19 37 35.2**	**-0.7**
TATO	**Taipei**	**3.50**	**284**	*e*Pn	**Pn**	**19 37 40.1**	**+1.8**
YHNB	**Yeheng**	**3.55**	**278**	*e*Pn	**Pn**	**19 37 40.4**	**+1.4**
YHNB				*e*		19 37 49.2	
YULB	**Yu-li**	**3.69**	**258**	*e*Pn	**Pn**	**19 37 39.2**	**-1.9**
YULB				*e*		19 37 49.1	
YULB				*e*Sn	**Sn**	**19 38 17.7**	**-5.9**
JIH	**Iheya**	**3.75**	**41**	P	**Pn**	**19 37 41.3**	**-0.5**
JOW	**Kunigami**	**3.80**	**46**	P	**Pn**	**19 37 42.2**	**-0.3**
SSLB	**Suanglung**	**3.94**	**265**	*e*Pn	**Pn**	**19 37 43.4**	**-1.0**
SSLB				*e*		19 37 55.1	
TWG	**Pinlang**	**4.06**	**251**	*e*Pn	**Pn**	**19 37 43.5**	**-2.6**
TWG				*e*		19 37 52.9	
TPUB	**Ta-pu**	**4.31**	**259**	*e*Pn	**Pn**	**19 37 49.5**	**0.0**
JTK	**Tokunoshima**	**4.89**	**42**	P	**Pn**	**19 37 56.2**	**-1.3**
JMZ	**Minamidaito 2**	**5.67**	**72**	P	**Pn**	**19 38 05.6**	**-2.5**
JAM	**Amami Oshima**	**5.74**	**42**	P	**Pn**	**19 38 07.8**	**-1.4**
JZK	**Kikaishima**	**5.91**	**45**	P	**Pn**	**19 38 11.3**	**-0.1**
NJ2	**Nanjing**	**9.64**	**326**	*e*P	**Pn**	**19 39 07.4**	**+4.8**
NJ2				sP		19 39 21.2	
NJ2				S	**Sn**	**19 40 53.1**	**+3.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,90nm,3.8s						
NJ2				LR	LR		
	comp=N,390nm,13.7s						
NJ2				LR	LR		
	comp=E,330nm,11.5s						
NJ2				LR	LR		
	comp=Z,4μm,15.2s						
TGY	**Tagaytay City**	**10.83**	**203**	Pn	**Pn**	**19 39 21.2**	**+2.2**
	comp=Z,58nm,0.3s,baz=320,slow=2.2,SNR=3.7						
DL2	**Dalian**	**14.98**	**349**	P	**Pn**	**19 40 20.9**	**+5.3**
DL2				S	**Sn**	**19 43 06.9**	**+6.4**
DL2				sS	sS	19 43 18.5	-11
DL2				pmax	pmax		
	comp=Z,30nm,0.7s						
DL2				LR	LR		
	comp=N,120nm,11.8s						
DL2				LR	LR		
	comp=E,100nm,11.4s						
DL2				LR	LR		
	comp=Z,160nm,11.2s						
QIZ	**Qiongzhong**	**15.21**	**253**	P	**Pn**	**19 40 18.4**	**-0.2**
QIZ				S	**Sn**	**19 43 05.4**	**-0.8**
QIZ				pmax	pmax		
	comp=Z,15nm,1.7s						
QIZ				LR	LR		
	comp=N,180nm,20.9s						
QIZ				LR	LR		
	comp=Z,250nm,18.5s						
ENH	**Enshi**	**15.25**	**297**	*e*Pn	**Pn**	**19 40 21.0**	**+1.8**
	comp=Z,13nm,0.7s						
ENH				*e*		19 40 28.3	
ENH				*e*		19 40 37.3	
MAJO	**Matsushiro**	**16.61**	**39**	*e*P	**Pn**	**19 40 39.7**	**+3.1**
MAJO				pmax	pmax		
	comp=Z,13nm,0.5s						
MAJO	**Matsushiro**	**16.61**	**39**	*e*Pn	**Pn**	**19 40 39.7**	**+3.1**
	comp=Z,13nm,0.5s						
MAJO				*e*		19 40 49.3	
MAT	**Matsushiro**	**16.61**	**39**	P	**Pn**	**19 40 39.7**	**+3.1**
MJAR	**Matsushiro Arr**	**16.61**	**39**	Pn	**Pn**	**19 40 40.5**	**+3.8**
	comp=Z,0.8nm,0.3s,baz=228,slow=11,SNR=41						
GYA	**Guiyang**	**16.94**	**282**	P	**Pn**	**19 40 40.7**	**-0.1**
GYA				pP	pP	19 40 50.4	0.0
GYA				PP		19 40 56.2	
GYA				S	**Sn**	**19 43 44.1**	**-4.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				LR	LR		
	comp=N,490nm,12.9s						
GYA				LR	LR		
	comp=E,360nm,13.5s						
GYA				LR	LR		
	comp=Z,480nm,11.8s						
BJI	**Beijing**	**17.54**	**336**	P	**Pn**	**19 40 49.3**	**+1.1**
BJI				S	**Sn**	**19 44 04.9**	**+2.2**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BJI				pmax	pmax		
	comp=Z,130nm,3.3s						
BJI				LR	LR		
	comp=N,210nm,19.2s						
BJI				LR	LR		
	comp=E,220nm,16.0s						
BJI				LR	LR		
	comp=Z,190nm,22.4s						
SNY	**Shenyang**	**17.64**	**356**	⇓P	**Pn**	**19 40 50.6**	**+1.2**
SNY				pmax	pmax		
	comp=Z,26nm,0.8s						
SNY				LR	LR		
	comp=N,290nm,16.2s						
SNY				LR	LR		
	comp=E,84nm,10.2s						
SNY				LR	LR		
	comp=Z,310nm,15.0s						
CN2	**Changchun**	**19.56**	**0**	⇓P	**Pn**	**19 41 10.8**	**-1.8**
CN2				*e*S	**Sn**	**19 44 43.9**	**-7.4**
CN2				pmax	pmax		
	comp=Z,100nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,15.0s						
CN2				LR	LR		
	comp=E,200nm,15.0s						
CN2				LR	LR		
	comp=Z,200nm,16.0s						
CD2	**Chengdu**	**20.16**	**294**	P	**P**	**19 41 19.5**	**+1.5**
CD2				pP		19 41 30.1	
CD2				sP	sP	19 41 36.1	+6.5
CD2				PP		19 41 39.8	
CD2				S	**S**	**19 44 56.9**	**-6.0**
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
CD2				pmax	pmax		
	comp=Z,110nm,5.3s						
CD2				LR	LR		
	comp=N,260nm,10.2s						
CD2				LR	LR		
	comp=Z,220nm,10.1s,MS3.8						
HHC	**Hu-ho-hao-te**	**20.17**	**329**	*e*P	**P**	**19 41 17.8**	**-0.1**
HHC				pP		19 41 28.6	
HHC				sP	sP	19 41 33.9	+4.3
HHC				PP		19 41 38.5	
HHC				S	**S**	**19 44 56.2**	**-6.6**
HHC				PcP	PcP	19 45 31.0	-0.8
HHC				ScP	ScP	19 49 02.8	-3.4
HHC				PcS	PcS	19 49 08.0	-1.3
HHC				pmax	pmax		
	comp=Z,18nm,0.5s						
HHC				pmax	pmax		
	comp=Z,120nm,5.1s						
HHC				LR	LR		
	comp=N,300nm,11.2s,MS4.0						
HHC				LR	LR		
	comp=E,250nm,11.5s,MS4.0						
HHC				LR	LR		
	comp=Z,340nm,11.1s,MS4.0						
KMI	**Kunming**	**20.46**	**277**	P	**P**	**19 41 22.9**	**+1.6**
KMI				pP		19 41 34.0	
KMI				sP	sP	19 41 39.8	+6.9
KMI				PP		19 41 44.3	
KMI				S	**S**	**19 45 02.4**	**-6.6**
KMI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KMI				pmax	pmax		
	comp=Z,53nm,3.4s						
KMI				LR	LR		
	comp=N,150nm,13.1s,MS3.7						
KMI				LR	LR		
	comp=E,160nm,13.6s,MS3.7						
KMI				LR	LR		
	comp=Z,200nm,11.3s,MS3.7						
LZH	**Lanzhou**	**21.91**	**308**	*e*P	**P**	**19 41 32.7**	**-4.1**
LZH				pP		19 41 43.6	
LZH				sP	sP	19 41 50.0	+1.5
LZH				PP		19 41 57.1	
LZH				*e*S	**S**	**19 45 24.1**	**-13**
LZH				sS	sS	19 45 41.6	-8.4
LZH				SS		19 46 09.3	
LZH				pmax	pmax		
	comp=Z,22nm,1.2s,mb4.5						
LZH				pmax	pmax		
	comp=Z,150nm,4.6s						
LZH				LR	LR		
	comp=N,410nm,10.4s						
LZH				LR	LR		
	comp=Z,530nm,11.1s,MS4.2						
ERM	**Erimo**	**23.18**	**36⇑**	*e*P	**P**	**19 41 46.5**	**-3.7**
ERM				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.4						
ASAJ	**Asahikawa**	**24.43**	**31**	P	**P**	**19 42 01.4**	**-0.4**
	comp=Z,2.6nm,0.3s,mb4.1,baz=208,slow=7.4,SNR=11						
ASAJ				LR	LR	19 52 29.9	
	comp=Z,181nm,20.4s,MS3.5,baz=359,slow=39						
CHTO	**Chiang Mai**	**25.02**	**263**	*e*P	**P**	**19 42 08.3**	**+0.8**
CHTO				*e*	pP	19 42 18.0	+2.0
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.1						
CHTO	**Chiang Mai**	**25.02**	**263**	*e*P	**P**	**19 42 08.3**	**+0.7**
	comp=Z,4.5nm,0.8s,mb4.0						
CHTO				*e*	pP	19 42 18.0	+2.1
CMAR	**Chiang Mai Arr**	**25.13**	**262**	P	**P**	**19 42 11.3**	**+2.8**
	comp=Z,3.3nm,1.0s,mb3.8,baz=62,slow=9.1,SNR=6.4						
HIA	**Hailar**	**25.39**	**352**	*e*P	**P**	**19 42 09.9**	**-0.7**
HIA				*e*	pP	19 42 19.9	+0.8
HIA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HIA	**Hailar**	**25.39**	**352**	*e*P	**P**	**19 42 09.9**	**-0.6**
	comp=Z,5.0nm,0.6s,mb4.2						
HIA				*e*	pP	19 42 19.9	+0.8
HABR	**Khabarovsk**	**25.44**	**15**	*e*P	**P**	**19 42 07.6**	**-3.4**
HABR				*e**PP	pP	19 42 16.9	-2.6
HABR				*e**SP	sP	19 42 21.3	-1.8
HABR				*e*		19 42 42.8	
HABR						19 45 39.8	
HABR				S	**S**	**19 46 32.5**	**-3.5**
HABR				*e**SS	sS	19 46 48.5	-1.6
HABR				*e*SS		19 47 26.2	
HABR						19 53 04.8	
HABR				MLR	MLR		
	comp=Z,108nm,17.0s,MS3.4						
KLR	**Kul'dur**	**25.51**	**10**	*e*P	**P**	**19 42 08.7**	**-2.9**
KLR				MLR	MLR		
	comp=Z,600nm,13.0s,MS4.3						
GTA	**Gaotai**	**26.28**	**311**	*e*P	**P**	**19 42 17.7**	**-1.0**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.0						
KSM	**Kuching**	**26.81**	**215**	*e*P	**P**	**19 42 24.2**	**+0.5**
	comp=Z,5.1nm,0.8s,mb4.1						
KSM				*e*	pP	19 42 34.0	+1.8
ULN	**Ulaanbaatar**	**27.68**	**333**	*e*P	**P**	**19 42 29.1**	**-2.2**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.0						
ULN	**Ulaanbaatar**	**27.68**	**333**	*e*P	**P**	**19 42 29.1**	**-2.1**
	comp=Z,3.1nm,0.8s,mb4.0						
SONM	**Songino Array**	**27.94**	**332**	P	**P**	**19 42 31.8**	**-1.7**
	comp=Z,1.1nm,0.3s,mb3.9,baz=151,slow=11,SNR=23						
SONM				LR	LR	19 55 08.9	
	comp=Z,249nm,18.6s,MS3.8,baz=99,slow=40						
LSA	**Lhasa**	**30.80**	**288**	*e*P	**P**	**19 42 56.9**	**-2.3**
LSA				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
LSA	**Lhasa**	**30.80**	**288**	*e*P	**P**	**19 42 56.9**	**-2.3**
	comp=Z,2.4nm,0.6s,mb4.2						
TLY	**Talaya**	**32.05**	**334**	*e*P	**P**	**19 43 06.0**	**-3.9**
TLY				*e*S	**S**	**19 48 20.7**	**+0.9**
TLY				pmax	pmax		
	comp=Z,4.0nm,1.4s,mb4.1						
TLY				MLR	MLR		
	comp=Z,182nm,15.0s,MS3.9						
MOY	**Mondy**	**33.13**	**332**	*e*P	**P**	**19 43 18.1**	**-1.2**
WMQ	**Urumqi**	**36.36**	**312**	P	**P**	**19 43 48.3**	**+1.0**
WMQ				pP	pP	19 44 00.5	+4.5
WMQ				sP	sP	19 44 06.0	+6.5
WMQ				PP	PP	19 45 11.9	+1.6
WMQ				PcP	PcP	19 46 13.3	+1.8
WMQ				S	**S**	**19 49 23.2**	**-3.4**
WMQ				ScS	ScS	19 53 59.2	-2.8
WMQ				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
WMQ				pmax	pmax		
	comp=Z,150nm,4.6s						
WMQ				LR	LR		
	comp=N,74nm,24.0s						
WMQ				LR	LR		
	comp=E,61nm,18.0s						
WMQ				LR	LR		
	comp=Z,67nm,18.0s						
PET	**Petropavlovsk**	**38.26**	**32**	*e*P	**P**	**19 44 03.5**	**+0.2**
PET				MLR	MLR		
	comp=Z,100nm,19.0s,MS3.6						
PET	**Petropavlovsk**	**38.26**	**32**	*e*P	**P**	**19 44 03.2**	**-0.1**
MK31	**Makanchi Array**	**40.94**	**314**	*e*P	**P**	**19 44 24.9**	**-0.8**
MKAR	**Makanchi Array**	**40.94**	**314**	P	**P**	**19 44 25.1**	**-0.6**
	comp=Z,5.7nm,0.5s,mb4.5,baz=100,slow=9.9,SNR=120						
MKAR				LR	LR	20 02 55.2	
	comp=Z,102nm,18.2s,MS3.7,baz=254,slow=38						
FITZ	**Fitzroy Crossi**	**42.04**	**179**	P	**P**	**19 44 34.7**	**-0.3**
	comp=Z,4.4nm,0.8s,mb4.1,baz=350,slow=5.6,SNR=17						
ZALV	**Zalesovo Beam**	**42.29**	**325**	P	**P**	**19 44 35.1**	**-1.5**
	comp=Z,3.7nm,0.5s,mb4.3,baz=111,slow=8.6,SNR=23						
ZALV				LR	LR	20 03 27.8	
	comp=Z,49nm,20.7s,MS3.4,baz=245,slow=38						
NVS	**Novosibirsk**	**43.53**	**326**	*e*P	**P**	**19 44 53.3**	**+6.6**
KSH	**Kashi**	**44.00**	**302**	P	**P**	**19 44 54.6**	**+3.8**
KSH				pP	pP	19 45 06.5	+6.9

comp=Z,2.0nm,0.4s,mb4.5
KBL Kabul 49.50 296 *e*P **P 19 45 34.9 +1.0**
KBL pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
KBL Kabul 49.50 296 *e*P **P 19 45 34.9 +1.1**
comp=Z,3.9nm,0.6s,mb4.6
VOSK Vostochnaya 49.61 320 P **P 19 45 33.0 -1.4**
VOSK pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
BVAR Borovoye Array 50.03 320 P **P 19 45 36.9 -0.7**
comp=Z,4.1nm,0.6s,mb4.7,baz=107,slow=7.6,SNR=30
BVAR PcP PcP 19 46 57.8 +0.6
comp=Z,0.6nm,0.6s,baz=107,slow=5.0,SNR=2.5
BRVK Borovoye 50.10 320 ⇓*e*P **P 19 45 37.8 -0.3**
BRVK pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
BRVK Borovoye 50.10 320 *e*P **P 19 45 36.8 -1.3**
comp=Z,3.4nm,0.4s,mb4.7
BILL Bilibino 50.45 19 *e*P **P 19 45 41.0 +0.5**
BILL pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
BILL Bilibino 50.45 19 *e*P **P 19 45 41.0 +0.4**
comp=Z,6.6nm,0.9s,mb4.7
ZRNK Zerenda 50.83 320 P **P 19 45 42.3 -1.3**
ZRNK pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
AB31 Akbulak array 56.08 314 *i* P **P 19 46 22.2 -0.1**
AB31 pmax pmax
comp=Z,8.0nm,0.4s,mb5.1
ABKAR Akbulak array 56.08 314 *e*P **P 19 46 22.0 -0.2**
comp=Z,15nm,0.6s,mb5.2
SVE Sverdlovsk 56.23 323⇑*e*P **P 19 46 22.8 -0.4**
SVE *e*S **S 19 54 14.4 +3.6**
SVE pmax pmax
comp=Z,15nm,1.5s,mb4.8
SVE MLR MLR
comp=Z,226nm,20.0s,MS4.3
AKTK Aktyubinsk 57.35 316 P **P 19 46 31.1 -0.1**
AKTO Aktyubinsk 57.35 316 P **P 19 46 31.1 -0.1**
comp=Z,2.9nm,0.5s,mb4.5,baz=117,slow=16,SNR=20
STKA Stephens Creek 57.91 164 P **P 19 46 35.1 -0.2**
comp=Z,2.6nm,0.6s,mb4.4,baz=358,slow=6.2,SNR=6.4
PPLA Purkeypile 65.40 30 *e*P **P 19 47 28.9 +3.4**
comp=Z,3.4nm,0.5s,mb4.6
KDAK Kodiak Island 65.75 36 P **P 19 47 27.6 -0.3**
comp=Z,2.1nm,0.4s,mb4.5,baz=297,slow=14,SNR=1.7
BPAW Bear Paw Mtn. 65.82 29 *e*P **P 19 47 32.0 +3.9**
comp=Z,4.3nm,0.4s,mb4.8
VRHR Novokhopersk 67.64 317 *e*P **P 19 47 39.3 -0.7**
VRHR pmax pmax
comp=N,3.0nm,0.7s
VRHR pmax pmax
comp=E,8.0nm,0.7s
VRHR pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
ZEI Tsey 67.85 308 *e*P **P 19 47 43.7 +2.2**
ZEI pmax pmax
comp=Z,8.0nm,0.4s,mb5.1
KIV Kislovodsk 68.44 310⇑*e*P **P 19 47 46.3 +1.1**
KIV *e*SS SS 20 01 08.2 -0.4
KIV pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
KIV Kislovodsk 68.44 310 *e*P **P 19 47 46.0 +0.8**
comp=Z,4.4nm,0.7s,mb4.6
KIV *e* pP 19 47 54.6 +0.3
VSR Storozhevoye 69.13 318 *e*P **P 19 47 48.8 -0.5**
VSR pmax pmax
comp=N,5.0nm,0.9s
VSR pmax pmax
comp=E,9.0nm,0.9s
VSR pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
OBN Obninsk 69.77 322⇑*e*P **P 19 47 52.3 -0.9**
OBN *e* 19 48 14.4
OBN pmax pmax
comp=Z,15nm,1.2s,mb4.8
OBN MLR MLR
comp=Z,100nm,23.0s,MS4.0
EGAK Eagle 69.90 27 *e*P **P 19 47 56.7 +2.9**
comp=Z,5.2nm,0.7s,mb4.6
KEV Kevo 70.33 339 *e*P **P 19 47 54.2 -2.2**
KEV Kevo 70.33 339 *e*p **P 19 47 54.2 -2.2**
JOF Joensuu 70.50 331 *e*P **P 19 47 56.7 -0.8**
JOF pmax pmax
comp=Z,7.0nm,0.5s,mb4.8
JOF Joensuu 70.50 331 *e*p **P 19 47 56.7 -0.8**
comp=Z,7.1nm,0.5s,mb4.8
DAWY Dawson 70.83 28 *e*P **P 19 48 03.0 +3.5**
DAWY *e* pP 19 48 12.2 +3.6
ARCES ARCESS Array B 70.90 338 P **P 19 47 59.7 -0.1**
comp=Z,0.7nm,0.6s,mb3.8,baz=74,slow=8.4,SNR=8.9
ARCES LR LR 20 23 45.4
comp=Z,79nm,19.7s,MS4.0,baz=207,slow=40
ARCES ARCESS Array B 70.90 338 P **P 19 47 59.7 -0.2**
ARCES LR LR 20 23 45.4
ARE0 ARCESS Array S 70.90 338 P **P 19 48 04.2 +4.4**
INK Inuvik 71.81 23 P **P 19 48 06.9 +1.5**
comp=Z,1.5nm,0.5s,mb4.2,baz=289,slow=9.6,SNR=5.0
INK Inuvik 71.81 23 *e*P **P 19 48 06.6 +1.2**
INK *e* 19 48 17.9
INK pmax pmax
comp=Z,11nm,1.0s
INK Inuvik 71.81 23 *e*P **P 19 48 06.5 +1.2**
comp=Z,11nm,1.0s,mb4.7
INK *e* 19 48 17.9
AFI Afiamalu 72.22 115 LR LR 20 15 03.4
comp=Z,85nm,21.9s,MS4.0,baz=129,slow=32
KAF Kangasniemi 72.96 331 *e*P **P 19 48 11.0 -1.3**
KAF pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
KAF Kangasniemi 72.96 331 *e*p **P 19 48 11.0 -1.3**
comp=Z,3.4nm,0.5s,mb4.5,baz=72,slow=6.5
FINES FINESS Array B 73.28 330 P **P 19 48 14.3 +0.1**
comp=Z,5.9nm,0.5s,mb4.8,baz=62,slow=5.8,SNR=88
VSU Vasula 73.99 327⇑*e*P **P 19 48 18.9 +0.5**
VSU pmax pmax
comp=Z,17nm,1.7s,mb4.7
AKASG Malin Array Be 75.30 319 P **P 19 48 25.4 -0.7**
comp=Z,2.5nm,0.6s,mb4.3,baz=66,slow=6.3,SNR=5.2
BR131 Keskin Array S 76.12 307 *e*P **P 19 48 32.4 +1.3**
comp=Z,4.3nm,0.9s,mb4.4
BRTR Keskin Array B 76.12 307 P **P 19 48 30.6 -0.5**
comp=Z,1.3nm,0.5s,mb4.1,baz=77,slow=2.8,SNR=8.3
SUW Suwalki 77.50 324 *e*P **P 19 48 37.9 -0.7**
SUW *e* 19 48 49.2
SUW pmax pmax
comp=Z,25nm,0.8s,mb5.2
SUW Suwalki 77.50 324 *e*P **P 19 48 37.9 -0.7**
comp=Z,25nm,0.8s,mb5.2
SUW *e* 19 48 49.2
RES Resolute Bay 78.03 10 P **P 19 48 45.2 +4.0**
RES *e* pP 19 48 52.3 +1.8
RES pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
RES Resolute Bay 78.03 10 P **P 19 48 45.2 +3.9**
comp=Z,3.5nm,0.7s,mb4.4
RES *e* pP 19 48 52.3 +1.8
BUR08 Bucovina Ar. S 78.89 317 *e*P **P 19 48 46.1 -0.3**
BUR08 *e* 19 48 57.2
KWP Kalwaria Pacla 79.58 320 *e*P **P 19 48 49.6 -0.6**
KWP *e* 19 49 01.1
KWP pmax pmax
comp=Z,20nm,1.0s,mb5.0
KWP Kalwaria Pacla 79.58 320 *e*P **P 19 48 49.6 -0.5**
comp=Z,20nm,1.0s,mb5.0
KWP *e* 19 49 01.1
NB2 NORSAR Subarra 79.91 333 P **P 19 48 51.7 0.0**
comp=Z,6.2nm,0.8s,mb4.6,baz=56,slow=5.6
NOA NORSAR Array B 79.91 333 P **P 19 48 51.6 -0.1**
comp=Z,1.7nm,0.5s,mb4.2,baz=55,slow=5.5,SNR=11
NOA LR LR 20 28 28.2
comp=Z,52nm,19.6s,MS3.9,baz=35,slow=39
NOA NORSAR Array B 79.91 333 P **P 19 48 51.6 -0.1**
NOA LR LR 20 28 28.2
CRVS Cervenica-Dubn 80.63 319 *e*P pP 19 49 06.1 +0.9
CRVS Cervenica-Dubn 80.63 319 *e* pP 19 49 06.1 +0.9
KECS Kecovo 81.40 319 *e*P **P 19 49 00.1 +0.2**
KECS pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
KECS Kecovo 81.40 319 *e*P **P 19 49 00.1 +0.2**
comp=Z,1.6nm,0.9s,mb4.0
KECS Kecovo 81.40 319 *e*P **P 19 49 00.1 +0.2**
YKA Yellowknife Ar 81.49 24 P **P 19 49 00.3 +0.1**
comp=Z,2.3nm,0.8s,mb4.2,baz=304,slow=5.0,SNR=3.9
YKA Yellowknife Ar 81.49 24 P **P 19 49 00.3 +0.1**
VYHS Vyhne 82.37 320 *e*P **P 19 49 07.3 +2.3**
VYHS pmax pmax
comp=Z,1.0nm,1.1s,mb3.7
VYHS Vyhne 82.37 320 *e*P **P 19 49 07.3 +2.3**
comp=Z,1.4nm,1.1s,mb3.8
VYHS *e* 19 49 11.3
VYHS Vyhne 82.37 320 *e*P **P 19 49 07.3 +2.3**
VYHS *e*PCP PcP 19 49 11.2 +1.0
SUMG Summit 82.84 355 *e*P **P 19 49 07.8 +0.7**
SUMG pmax pmax
comp=Z,8.0nm,0.7s
SUMG Summit 82.84 355 *e*P **P 19 49 07.8 +0.7**
comp=Z,8.4nm,0.7s,mb4.9
CLL Collm 84.24 324 *e*P **P 19 49 11.0 -3.6**
CLL *e* 19 49 25.0
CLL MLR MLR
comp=Z,100nm,18.4s,MS4.2
NVAR Mina Array Bea 93.86 45 P **P 19 50 01.9 +1.1**
comp=Z,0.3nm,0.4s,mb4.1,baz=273,slow=6.2,SNR=3.2

IDC ***12*** *19:48:11.5±5.9, 23°.81N×124°.31E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.1/21, mbtmp3.2/3, Error ellipse: s-maj=366.8km s-min=27.7km az=61.0*
ISCJB ***12*** *19:48:12.8±1.6, 24°.11N±0°.10×125°.24E±0°.05, h26km±13km, mb3.1/3, Error ellipse: s-maj=16.6km s-min=7.6km az=174.3*
JMA ***12*** *19:48:13.5±0.2, 24°.16N×125°.17E, h8km, M2.8*
ISC 12 19:48:13.0±1.7, 24°.13N±0°.09×125°.21E±0°.05, h17km±12km, n11, σ0°57/18, mb3.1/3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**0.65**	**16**	P	**Pg**	**19 48 26.1**	**+0.3**
JOGS				S	**Sg**	**19 48 35.1**	**+0.6**
JMJ	**Miyako jima 2**	**0.68**	**7**	P	**Pg**	**19 48 26.3**	**-0.2**
JMJ				*e*S	**Sg**	**19 48 35.6**	**0.0**
JTJ	**Tarama**	**0.68**	**318**	P	**Pg**	**19 48 25.9**	**-0.5**
JTJ				*e*S	**Sg**	**19 48 35.2**	**-0.4**
JIJ	**Ishigaki jima**	**1.00**	**284**	P	**Pb**	**19 48 31.9**	**+0.1**
JIJ				*e*S	**Sb**	**19 48 44.7**	**+0.1**
JKRS	**Kuro-shima**	**1.10**	**276**	P	**Pb**	**19 48 33.7**	**+0.2**
JKRS				*e*S	**Sb**	**19 48 47.9**	**+0.4**
HATJ	**Hateruma jima**	**1.28**	**267**	P	**Pn**	**19 48 36.4**	**+0.3**
HATJ				*e*S	**Sb**	**19 48 52.3**	**-0.6**
IRIF	**Iriomote-Funau**	**1.36**	**279**	P	**Pn**	**19 48 38.2**	**+1.0**
IRIF				*e*S	**Sn**	**19 48 55.5**	**+0.6**
YOJ	**Yonaguni jima**	**2.03**	**280**	P	**Pn**	**19 48 46.1**	**-0.3**
MKAR	**Makanchi Array**	**40.96**	**314**	P	**P**	**19 55 52.9**	**-1.8**
	0.1nm,0.3s,mb2.9,baz=97,slow=9.6,SNR=6.2						
WRA	**Warramunga Arr**	**44.70**	**168**	P	**P**	**19 56 25.1**	**-0.2**
	0.3nm,0.9s,mb3.1,baz=348,slow=8.8,SNR=4.5						
ASAR	**Alice Springs**	**48.26**	**169**	P	**P**	**19 56 53.4**	**+0.3**
	0.1nm,0.4s,mb3.2,baz=2.5,slow=8.3,SNR=4.1						

NIED ***12*** *19:54:00, 36°.70N×142°.20E, h17km, Mw3.8 Best double couple: M0=5.32000×10^14 NP1:φ=331.00000°, δ=82.00000°, λ=-98.00000°. NP2:φ=198.00000°, δ=11.00000°, λ=-44.00000°.*
IDC ***12*** *19:54:17.9±1.0, 36°.63N×142°.32E, h0km, mb3.6/7, mb1 3.8/10, mb1mx3.6/26, mbtmp3.7/10, ML3.4/3, MS3.0/1, Ms1 3.0/1, ms1mx2.3/24, Error ellipse: s-maj=26.0km s-min=20.2km az=78.0*
ISCJB ***12*** *19:54:19.3±1.5, 36°.63N±0°.03×142°.29E±0°.05, h25km±12km, mb3.7/9, Error ellipse: s-maj=7.2km s-min=4.9km az=3.8*
JMA ***12*** *19:54:19.1±0.3, 36°.65N×142°.22E, h17km±4km, M3.7*
NEIC ***12*** *19:54:22.8±0.8, 36°.69N×142°.23E, h35km, mb4.0/3, Error ellipse: s-maj=16.2km s-min=13.3km az=221.0*
ISC 12 19:54:19.7±1.6, 36°.64N±0°.03×142°.20E±0°.06, h13km±11km, n34, σ0°95/47, mb3.7/9, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**1.21**	**293**	P	**Pn**	**19 54 40.7**	**-1.7**
JFK	**Kawauchi**	**1.28**	**305**	P	**Pn**	**19 54 42.1**	**-1.2**
JFK				S	**Sb**	**19 54 58.2**	**-1.9**
JHO	**Hitachi**	**1.31**	**269**	P	**Pn**	**19 54 42.3**	**-1.4**
JHO				S	**Sn**	**19 54 59.7**	**-1.3**
CHOJ	**Chosi**	**1.43**	**230**	P	**Pn**	**19 54 45.2**	**-0.2**
CHOJ				S	**Sn**	**19 55 03.4**	**-0.6**
JMM	**Marumori**	**1.66**	**318**	P	**Pn**	**19 54 47.6**	**-0.9**
JMM				S	**Sn**	**19 55 08.6**	**-1.1**
JFT	**Otama**	**1.73**	**301**	P	**Pn**	**19 54 49.2**	**-0.2**
JFT				S	**Sn**	**19 55 12.2**	**+0.9**
JIO	**Ouri**	**1.93**	**340**	P	**Pn**	**19 54 52.4**	**+0.1**
JIO				S	**Sn**	**19 55 16.0**	**-0.4**
JOU	**Okura**	**2.11**	**325**	P	**Pn**	**19 54 55.3**	**+0.6**
JOU				S	**Sn**	**19 55 21.6**	**+0.8**
JFY	**Yanaizu**	**2.14**	**292**	P	**Pn**	**19 54 55.7**	**+0.6**
JFY				S	**Sn**	**19 55 22.7**	**+1.3**
BSO1	**Boso 1**	**2.22**	**207**	P	**Pn**	**19 54 55.9**	**-0.3**
BSO1				S	**Sn**	**19 55 23.5**	**+0.1**
JAG	**Ashikaga**	**2.22**	**265**	P	**Pn**	**19 54 56.4**	**+0.2**
JAG				S	**Sn**	**19 55 23.5**	**0.0**
JMK	**Ichinoseki**	**2.44**	**342**	P	**Pn**	**19 54 59.6**	**+0.4**
JMK				S	**Sn**	**19 55 28.1**	**-0.7**
JNS	**Sasagawa**	**2.58**	**298**	P	**Pn**	**19 55 02.8**	**+1.6**
JYK	**Kaneyama**	**2.70**	**328**	P	**Pn**	**19 55 03.3**	**+0.5**
JRY	**Ryogami san**	**2.73**	**258**	P	**Pn**	**19 55 03.1**	**-0.2**
JRY				S	**Sn**	**19 55 36.4**	**+0.3**
JOD2	**Odawara 2**	**2.87**	**242**	P	**Pn**	**19 55 05.5**	**+0.3**
MJAR	**Matsushiro Arr**	**3.21**	**269**	Pn	**Pn**	**19 55 10.8**	**+1.0**
	15nm,0.3s,baz=96,slow=9.2,SNR=267						
MJAR				LR	LR	19 56 39.7	
	comp=Z,226nm,18.8s,baz=115,slow=43						
MAJO	**Matsushiro**	**3.21**	**269**	*e*Pn	**Pn**	**19 55 11.1**	**+1.2**
MAT	**Matsushiro**	**3.21**	**269**	P	**Pn**	**19 55 11.5**	**+1.6**
MAT				S	**Sn**	**19 55 51.7**	**+3.7**
JHJ	**Hachijo jima 2**	**4.03**	**210**	Pn	**Pn**	**19 55 20.1**	**-1.0**
	22nm,0.3s,baz=60,slow=8.1,SNR=12						
JHJ				Sn	**Sn**	**19 56 04.8**	**-3.4**
	27nm,0.3s,baz=49,slow=20,SNR=4.5						
ASAJ	**Asahikawa**	**7.47**	**2**	Pn	**Pn**	**19 56 07.5**	**-0.9**
	0.2nm,0.3s,baz=204,slow=20,SNR=2.9						
HIA	**Hailar**	**20.63**	**315**	P	**P**	**19 58 57.7**	**-0.9**
	3.1nm,0.8s						
ENH	**Enshi**	**27.93**	**266**	*e*P	**P**	**20 00 09.3**	**-0.3**
	8.2nm,0.8s,mb4.4						
ULN	**Ulaanbaatar**	**28.10**	**305**	*e*P	**P**	**20 00 10.3**	**-0.7**
	3.8nm,1.2s,mb3.9						
SONM	**Songino Array**	**28.53**	**304**	P	**P**	**20 00 15.9**	**+1.1**
	2.4nm,0.8s,mb4.0,baz=104,slow=8.8,SNR=12						
CMAR	**Chiang Mai Arr**	**42.01**	**256**	P	**P**	**20 02 12.2**	**+1.4**
	0.3nm,0.4s,mb3.3,baz=45,slow=6.1,SNR=4.9						
ZALV	**Zalesovo Beam**	**42.65**	**313**	P	**P**	**20 02 17.0**	**+1.4**
	0.3nm,0.3s,mb3.5,baz=64,slow=6.8,SNR=3.7						
MK31	**Makanchi Array**	**44.86**	**303**	*e*P	**P**	**20 02 33.7**	**+0.1**
MKAR	**Makanchi Array**	**44.86**	**303**	P	**P**	**20 02 34.1**	**+0.6**
	0.6nm,0.7s,mb3.5,baz=86,slow=11,SNR=8.4						
EKS2	**Erkin-Say**	**51.73**	**299**	P	**P**	**20 03 26.9**	**+0.3**
WRA	**Warramunga Arr**	**56.76**	**189**	P	**P**	**20 04 02.9**	**-0.5**
	0.8nm,0.9s,mb3.8,baz=7.2,slow=7.1,SNR=5.7						
ASAR	**Alice Springs**	**60.49**	**189**	P	**P**	**20 04 30.3**	**+1.0**
	0.2nm,0.7s,mb3.2,baz=360,slow=5.6,SNR=3.6						
TXAR	**Lajitas Array**	**89.86**	**53**	P	**P**	**20 07 17.6**	**-0.9**
	0.3nm,0.9s,mb3.6,baz=207,slow=1.4,SNR=4.2						
LPAZ	**La Paz**	**146.34**	**61**	PKPbc	PKPbc	20 14 02.5	+1.8
	1.0nm,0.8s,baz=29,slow=4.0,SNR=4.2						

IDC 12 20:12:17.1±9.7, 20°.36S×168°.03E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.8/13, mbtmp3.8/4, Error ellipse: s-maj=279.7km s-min=50.7km az=137.0, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.60**	**265**	P	P	20 18 41.4	-0.4
	1.1nm,0.9s,baz=95,slow=8.6,SNR=5.4						
ASAR	**Alice Springs**	**31.76**	**258**	P	P	20 18 42.9	-0.3
	1.4nm,0.7s,baz=84,slow=9.0,SNR=12						
ASAR				pP		20 18 53.5	
	1.5nm,0.7s,baz=84,slow=9.2,SNR=8.1						
FITZ	**Fitzroy Crossi**	**40.01**	**266**	P	P	20 19 54.6	+0.7
	2.0nm,0.8s,baz=96,slow=19,SNR=4.6						
SONM	**Songino Array**	**87.43**	**324**	P	P	20 25 06.4	+0.2
	0.4nm,0.6s,baz=143,slow=3.1,SNR=2.4						

IDC 12 20:25:47.4±1.8, 8°.27S×122°.92E, h0km, mb3.4/1, mb1 3.4/4, mb1mx3.3/17, mbtmp3.3/4, ML3.2/3, Error ellipse: s-maj=144.2km s-min=26.9km az=61.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.13**	**165**	Pn	Pn	20 28 14.0	-0.2
	0.2nm,0.3s,baz=346,slow=8.8,SNR=10						
FITZ				Sn	Sn	20 29 54.5	-14
	0.8nm,0.3s,baz=21,slow=14,SNR=11						
WRA	**Warramunga Arr**	**16.03**	**138**	Pn	Pn	20 29 34.3	0.0
	0.1nm,0.3s,baz=314,slow=12,SNR=7.0						
WRA				Sn	Sn	20 32 18.0	-15
	0.2nm,0.3s,baz=314,slow=23,SNR=7.2						
ASAR	**Alice Springs**	**18.58**	**147**	P	Pn	20 30 06.2	0.0
	0.2nm,0.3s,baz=328,slow=12,SNR=4.1						
ASAR				S	Sn	20 33 17.1	-18
	0.1nm,0.3s,baz=313,slow=21,SNR=3.1						
MKAR	**Makanchi Array**	**65.65**	**331**	P	P	20 36 33.5	+0.1
	0.2nm,0.5s,baz=146,slow=7.5,SNR=4.4						

WEL 12 20:28:49.8±0.2, 45°.02S×167°.46E, h127km±1km, ML3.5/10, 2C-2D, Error ellipse: s-maj=1.9km s-min=1.1km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.48**	**44**	⇑PN	Pn	20 29 08.5	+0.1
MSZ				SN	Sn	20 29 21.8	-0.5
DCZ	**Deep Cove**	**0.51**	**205**	PN	Pn	20 29 08.3	-0.2
DCZ				SN	Sn	20 29 21.8	-1.0
MLZ	**Mavora Lakes**	**0.60**	**124**	PN	Pn	20 29 09.0	-0.1
MLZ				SN	Sn	20 29 23.1	-0.6
WHZ	**Wether Hill Ro**	**0.94**	**159**	PN	Pn	20 29 11.8	-0.1
WHZ				SN	Sn	20 29 28.1	-0.5
WKZ	**Wanaka**	**1.12**	**81**	PN	Pn	20 29 13.7	+0.1
PYZ	**Puysegur Point**	**1.27**	**205**	PN	Pn	20 29 15.1	-0.1
JCZ	**Jackson Bay**	**1.32**	**45**	PN	Pn	20 29 15.4	-0.3
EAZ	**Earnscleugh**	**1.33**	**100**	⇓PN	Pn	20 29 15.5	-0.2
TUZ	**Tuapeka**	**1.79**	**122**	⇓PN	Pn	20 29 21.0	-0.1
APZ	**The Paps**	**1.85**	**169**	PN	Pn	20 29 21.6	-0.2
SYZ	**Scrubby Hill**	**1.92**	**143**	PN	Pn	20 29 22.6	0.0
LBZ	**Lake Benmore**	**2.04**	**73**	PN	Pn	20 29 22.5	-1.6
FOZ	**Fox Glacier**	**2.16**	**49**	PN	Pn	20 29 25.3	-0.3
ODZ	**Otahua Downs**	**2.26**	**92**	⇑PN	Pn	20 29 25.7	-1.1
WVZ	**Waitaha Valley**	**3.06**	**52**	PN	Pn	20 29 34.7	-2.3
MQZ	**McQueen's Vall**	**3.95**	**72**	PN	Pn	20 29 47.4	-1.4

IDC 12 20:34:35.8±1.9, 2°.84N×128°.77E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/19, mbtmp3.7/5, Error ellipse: s-maj=119.8km s-min=21.8km az=69.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.04**	**188**	P	P	20 39 21.3	-0.1
	2.1nm,1.0s,baz=32,slow=9.5,SNR=2.3						
WRA	**Warramunga Arr**	**23.29**	**167**	P	P	20 39 44.4	-1.1
	1.1nm,0.4s,baz=349,slow=10,SNR=27						
ASAR	**Alice Springs**	**26.81**	**170**	P	P	20 40 18.5	+0.7
	0.2nm,0.4s,baz=354,slow=8.1,SNR=5.2						
STKA	**Stephens Creek**	**36.61**	**162**	P	P	20 41 44.4	+0.5
	1.9nm,0.5s,baz=349,slow=9.0,SNR=4.0						
MKAR	**Makanchi Array**	**59.45**	**325**	P	P	20 44 40.5	0.0
	0.3nm,0.4s,baz=110,slow=8.3,SNR=14						

IDC ***12*** *20:37:45.6±7.9, 1°.75S×101°.22E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/19, mbtmp3.4/3, Error ellipse: s-maj=421.4km s-min=28.9km az=53.0*
ISCJB ***12*** *20:37:46.6±1.2, 2°.27S±0°.07×100°.50E±0°.08, h33km, mb3.4/3, Error ellipse: s-maj=12.4km s-min=9.1km az=146.5*
DJA ***12*** *20:37:48, 2°.13S×100°.59E, h26km, MLv3.4/4*
ISC 12 20:37:48.4±1.2, 2°.21S±0°.07×100°.55E±0°.08, h35km, n7, σ0°51/10, mb3.4/3, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**0.92**	**83**	P	**Pn**	**20 38 05.5**	**+0.7**
KRJI				S	**Sn**	**20 38 16.6**	**-0.2**
PDSI	**Padang**	**1.29**	**356**	P	**Pn**	**20 38 09.3**	**-0.7**
PDSI				S	**Sn**	**20 38 25.9**	**-0.2**
SDSI	**Sungai Dareh**	**1.54**	**35**	P	**Pn**	**20 38 13.0**	**-0.4**
SDSI				S	**Sn**	**20 38 32.5**	**+0.2**
PPI	**Padang Panjang**	**1.75**	**355**	P	**Pn**	**20 38 16.8**	**+0.5**
WRA	**Warramunga Arr**	**37.41**	**121**	P	**P**	**20 44 57.6**	**-0.8**
	0.3nm,0.7s,mb3.2,baz=291,slow=9.6,SNR=5.3						
ASAR	**Alice Springs**	**38.68**	**126**	P	**P**	**20 45 09.3**	**+0.3**
	0.5nm,0.6s,mb3.4,baz=300,slow=8.3,SNR=7.0						
MKAR	**Makanchi Array**	**51.38**	**344**	P	**P**	**20 46 50.1**	**+0.6**
	0.4nm,0.6s,mb3.6,baz=149,slow=8.4,SNR=5.0						

IDC ***12*** *20:51:20.5±9.9, 2°.99N×122°.84E, h580km±159km, mb2.6/7, mb1 2.8/7, mb1mx2.6/20, mbtmp2.6/7, Error ellipse: s-maj=87.0km s-min=34.1km az=75.0*
NEIC 12 20:51:20.0±4.0, 3°.00N×122°.81E, h573km±57km, mb3.8/2, Error ellipse: s-maj=63.4km s-min=10.6km az=56.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSM	**Kuching**	**12.58**	**263**	P	P	20 54 04.7	0.0
	3.5nm,0.7s						
FITZ	**Fitzroy Crossi**	**21.15**	**173**	P	P	20 55 25.3	-0.1
	0.7nm,0.3s,baz=2.2,slow=6.6,SNR=8.7						
WRA	**Warramunga Arr**	**25.45**	**154**	P	P	20 56 03.3	-0.3
	0.7nm,0.3s,baz=336,slow=9.6,SNR=21						
ASAR	**Alice Springs**	**28.62**	**158**	P	P	20 56 31.8	+0.5
	0.3nm,0.3s,baz=334,slow=7.8,SNR=6.0						
SONM	**Songino Array**	**46.86**	**345**	P	P	20 58 59.6	+0.6
	0.4nm,0.5s,baz=154,slow=9.2,SNR=3.2						
MK31	**Makanchi Array**	**55.99**	**327**	*e*P	P	21 00 04.8	0.0
MKAR	**Makanchi Array**	**55.99**	**327**	P	P	21 00 05.0	+0.1
	0.5nm,0.4s,baz=124,slow=7.9,SNR=14						
MKAR	**Makanchi Array**	**55.99**	**327**	P	P	21 00 05.0	+0.1
ZALV	**Zalesovo Beam**	**59.53**	**335**	P	P	21 00 27.8	-0.9
	0.4nm,0.4s,baz=125,slow=7.2,SNR=2.3						
KURK	**Kurchatov**	**60.31**	**329**	*e*P	P	21 00 33.9	0.0
	1.9nm,0.4s						
BVAR	**Borovoye Array**	**65.84**	**328**	P	P	21 01 09.9	+0.7
	0.2nm,0.4s,baz=132,slow=2.1,SNR=2.4						

IDC 12 21:06:35.6±5.9, 18°.49N×146°.57E, h0km, mb3.5/4, mb1 3.8/5, mb1mx3.6/22, mbtmp3.7/5, ML3.6/1, Error ellipse: s-maj=199.7km s-min=22.3km az=80.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**9.47**	**336**	Pn	Pn	21 08 53.1	-0.2
	2.0nm,0.3s,baz=151,slow=19,SNR=4.4						
CBIJ				Sn	Sn	21 10 40.2	-0.4
	1.9nm,0.3s,baz=285,slow=20,SNR=3.9						
WRA	**Warramunga Arr**	**40.03**	**198**	P	P	21 14 11.2	-1.4
	0.3nm,0.7s,baz=19,slow=8.7,SNR=7.6						
FITZ	**Fitzroy Crossi**	**41.78**	**211**	P	P	21 14 27.6	+0.5
	1.2nm,0.9s,baz=37,slow=5.1,SNR=4.5						
ASAR	**Alice Springs**	**43.68**	**197**	P	P	21 14 43.1	+0.6
	0.4nm,0.9s,baz=23,slow=12,SNR=3.5						
MKAR	**Makanchi Array**	**59.21**	**314**	P	P	21 16 39.0	+0.4
	0.2nm,0.6s,baz=91,slow=8.3,SNR=2.6						

BJI ***12

Kenai, Moose Pass, Ninilchik, Palmer, Seward and Sterling.

ISC 12 21:06:39.2±0.4,**59°87N**±0°03×**151°12W**±0°06,**h61**km±2km, **h62**km±1.3km:**pP-P,n213,**σ0s**88**/214,**mb4.4**/62,**14C-9D, Kenai Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRLK	**Bradley Lake**	**0.16**	**132**	P	**Pn**	**21 06 48.1**	**-0.3**
BRLK				S	**Sn**	**21 06 54.8**	**-0.3**
SLKM	**Skilak Lake**	**0.78**	**35**	P	**Pn**	**21 06 53.8**	**-0.6**
AUL	**Augustine Lava**	**1.27**	**248**	P	**Pn**	**21 07 01.2**	**+0.4**
FIB	**Fire Island**	**1.38**	**19**	P	**Pn**	**21 07 02.6**	**+0.4**
FIB				S	**Sn**	**21 07 21.7**	**+2.2**
RC01	**Rabbit Creek A**	**1.40**	**29**	P	**Pn**	**21 07 02.1**	**-0.4**
RC01				S	**Sn**	**21 07 20.3**	**+0.3**
PMR	**Palmer**	**1.98**	**29**	*e*P	**Pn**	**21 07 09.8**	**-0.6**
KDAK	**Kodiak Island**	**2.23**	**201**	P	**Pn**	**21 07 13.5**	**-0.2**
	13nm,0.3s,baz=34,slow=9.5,SNR=42						
KDAK				S	**Sn**	**21 07 49.6**	**+10**
	187nm,0.3s,baz=134,slow=22,SNR=9.9						
KDAK	**Kodiak Island**	**2.23**	**201**	*i* P	**Pn**	**21 07 13.2**	**-0.5**
KDAK	**Kodiak Island**	**2.23**	**201**	P	**Pn**	**21 07 13.5**	**-0.2**
SML	**Sawmill**	**2.38**	**34**	P	**Pn**	**21 07 15.8**	**+0.1**
MID	**Middleton Isla**	**2.47**	**98**	*e*P	**Pn**	**21 07 18.0**	**+1.1**
SVW2	**Sparrevohn**	**2.53**	**301**	*e*P	**Pn**	**21 07 16.0**	**-1.8**
EYAK	**Cordova Ski Ar**	**2.77**	**73**	P	**Pn**	**21 07 19.8**	**-1.2**
OHAK	**Old Harbor**	**2.89**	**204**	*e*P	**Pn**	**21 07 23.8**	**+1.1**
DIV	**Divide**	**2.93**	**62**	*e*Pn	**Pn**	**21 07 22.7**	**-0.6**
DIV				*e*S	**Sn**	**21 07 56.8**	**-0.5**
PPLA	**Purkeypile**	**3.08**	**351**	*e*Pn	**Pn**	**21 07 24.8**	**-0.5**
BMRM	**Bremner River**	**3.41**	**68**	*e*Pn	**Pn**	**21 07 28.6**	**-1.2**
TRF	**Thorofare Moun**	**3.62**	**6**	*e*Pn	**Pn**	**21 07 34.1**	**+1.5**
RND	**Reindeer**	**3.71**	**16**	P	**Pn**	**21 07 34.3**	**+0.4**
TT01	**Tatalina**	**3.85**	**324**	P	**Pn**	**21 07 35.1**	**-0.7**
TTA	**Tatalina**	**3.87**	**325**	*e*P	**Pn**	**21 07 30.5**	**-5.5**
MCK	**McKinley**	**4.01**	**14**	*e*P	**Pn**	**21 07 39.0**	**+1.0**
CHUM	**Lake Minchumin**	**4.07**	**353**	P	**Pn**	**21 07 40.0**	**+1.2**
BPAW	**Bear Paw Mtn.**	**4.25**	**1**	*e*Pn	**Pn**	**21 07 41.9**	**+0.7**
MENT	**Mentasta**	**4.70**	**46**	*e*P	**Pn**	**21 07 47.7**	**+0.3**
DOT	**Dot Lake**	**5.06**	**38**	P	**Pn**	**21 07 52.4**	**+0.1**
COLA	**College**	**5.25**	**15**	P	**Pn**	**21 07 55.0**	**+0.1**
BCA3	**Beaver Creek A**	**5.50**	**50**	P	**Pn**	**21 07 58.5**	**+0.1**
PNL	**Peninsula**	**5.93**	**87**	*e*Pn	**Pn**	**21 08 04.0**	**-0.3**
PNL				*e*S	**Sn**	**21 09 09.1**	**-1.6**
IM3	**Indian Mountai**	**6.25**	**350**	P	**Pn**	**21 08 08.6**	**0.0**
EGAK	**Eagle**	**6.76**	**39**	*e*Pn	**Pn**	**21 08 15.2**	**-0.4**
	46nm,0.6s						
DAWY	**Dawson**	**6.94**	**48**	*e*Pn	**Pn**	**21 08 18.1**	**0.0**
COLD	**Coldfoot**	**7.40**	**3**	*e*Pn	**Pn**	**21 08 24.4**	**+0.1**
COLD				*e*Sn	**Sn**	**21 09 49.3**	**+2.7**
SKAG	**Skagway**	**8.01**	**86**	*e*Pn	**Pn**	**21 08 33.0**	**+0.3**
SKAG				*e*Sn	**Sn**	**21 10 01.4**	**-0.2**
BM3	**Burnt Mountain**	**8.11**	**18**	P	**Pn**	**21 08 33.5**	**-0.5**
WHY	**Whitehorse**	**8.11**	**77**	P	**Pn**	**21 08 33.9**	**-0.2**
BESE	**Bessie Mountai**	**8.44**	**92**	P	**Pn**	**21 08 38.0**	**-0.6**
SIT	**Sitka**	**8.74**	**102**	*e*P	**Pn**	**21 08 42.0**	**-0.7**
DLBC	**Dease Lake**	**10.92**	**88**	P	**Pn**	**21 09 13.9**	**+1.6**
	2.3nm,0.3s,baz=266,slow=8.9,SNR=13						
DLBC	**Dease Lake**	**10.92**	**88**	*e*Pn	**Pn**	**21 09 13.8**	**+1.5**
DLBC				*e*S	**Sn**	**21 11 12.8**	**+0.1**
INK	**Inuvik**	**11.39**	**35**	P	**Pn**	**21 09 18.1**	**-0.7**
	0.5nm,0.3s,baz=244,slow=16,SNR=5.8						
INK				LR	LR	21 14 03.4	
	comp=Z,82nm,21.0s,baz=244,slow=39						
INK	**Inuvik**	**11.39**	**35**	*e*P	**Pn**	**21 09 19.1**	**+0.3**
INK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
INK	**Inuvik**	**11.39**	**35**	*e*Pn	**Pn**	**21 09 19.1**	**+0.3**
	comp=Z,4.3nm,0.8s						
BBB	**Bella Bella**	**14.93**	**111**	LR	LR	21 14 39.1	
	comp=Z,54nm,21.7s,baz=122,slow=32						
YKA	**Yellowknife Ar**	**17.64**	**66**	P	**Pn**	**21 10 40.5**	**+0.1**
	comp=Z,0.8nm,0.3s,baz=278,slow=12,SNR=19						
YKA	**Yellowknife Ar**	**17.64**	**66**	P	**Pn**	**21 10 40.5**	**+0.1**
BILL	**Bilibino**	**20.00**	**312**	*c i* P	**Pn**	**21 11 05.7**	**-2.9**
BILL				pmax	pmax		
	comp=Z,16nm,1.9s						
BILL				MLR	MLR		
	comp=Z,100nm,20.0s						
RES	**Resolute Bay**	**24.92**	**32**	P	**P**	**21 11 56.8**	**+0.8**
	comp=Z,2.7nm,0.8s,mb3.8,baz=250,slow=9.3,SNR=3.6						
RES				sP	sP	21 12 16.8	-1.1
	comp=Z,2.9nm,0.6s,baz=284,slow=9.4,SNR=3.5						
YBH	**Yreka Blue Hor**	**25.22**	**123**	LR	LR	21 20 03.2	
	comp=Z,41nm,22.0s,baz=16,slow=32						
ELK	**Elko**	**29.32**	**115**	P	**P**	**21 12 40.0**	**+4.3**
	comp=Z,0.4nm,0.4s,mb3.5,baz=333,slow=18,SNR=2.2						
ELK				LR	LR	21 23 10.4	
	comp=Z,47nm,18.8s,baz=88,slow=34						
ELK	**Elko**	**29.32**	**115**	P	**P**	**21 12 40.0**	**+4.3**
ELK				LR	LR	21 23 10.4	
NVAR	**Mina Array Bea**	**29.84**	**121**	P	**P**	**21 12 42.3**	**+2.0**
	comp=Z,0.2nm,0.5s,baz=308,slow=9.1,SNR=2.5						
PDAR	**Pinedale Array**	**30.45**	**105**	P	**P**	**21 12 49.1**	**+3.5**
	comp=Z,0.4nm,0.8s,baz=308,slow=7.4,SNR=4.1						
PDAR				pP	pP	21 13 04.0	+3.5
	comp=Z,0.7nm,0.7s,baz=305,slow=5.2,SNR=4.1						
PDAR				sP	sP	21 13 10.6	+3.0
	comp=Z,0.4nm,0.6s,baz=343,slow=4.6,SNR=3.2						
ULM	**Lac du Bonnet**	**32.15**	**82**	LR	LR	21 28 20.0	
	comp=Z,26nm,19.1s,baz=252,slow=40						
TXAR	**Lajitas Array**	**44.05**	**112**	P	**P**	**21 14 43.8**	**+3.0**
	comp=Z,0.4nm,0.8s,baz=338,slow=6.4,SNR=3.9						
TXAR				pP	pP	21 14 57.8	+1.5
	comp=Z,0.9nm,0.9s,baz=336,slow=5.9,SNR=6.8						
TXAR				LR	LR	21 35 00.8	
	comp=Z,28nm,18.4s,baz=180,slow=38						
TXAR	**Lajitas Array**	**44.05**	**112**	P	**P**	**21 14 43.8**	**+3.0**
TXAR				*PP	pP	21 14 57.8	+1.6
MJAR	**Matsushiro Arr**	**49.73**	**275**	P	**P**	**21 15 23.7**	**-1.3**
	comp=Z,0.2nm,0.3s,mb3.6,baz=30,slow=7.5,SNR=4.2						
CN2	**Changchun**	**50.41**	**291**	*e*P	**P**	**21 15 32.0**	**+2.0**
KEV	**Kevo**	**50.66**	**1**	*e*P	**P**	**21 15 29.5**	**-2.0**
KEV				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
KEV	**Kevo**	**50.66**	**1**	*e p*	**P**	**21 15 29.5**	**-2.0**
	comp=Z,3.4nm,0.7s,mb4.4						
ARCES	**ARCESS Array B**	**50.87**	**2**	P	**P**	**21 15 31.6**	**-1.4**
	comp=Z,1.2nm,0.6s,mb4.0,baz=1.9,slow=7.2,SNR=17						
ARCES				pP	pP	21 15 47.9	-0.9
	comp=Z,0.8nm,0.5s,baz=10,slow=7.6,SNR=1.6						
ARCES				PcP	PcP	21 16 49.0	+0.2
	comp=Z,1.2nm,0.6s,baz=355,slow=2.7,SNR=3.6						
ARCES	**ARCESS Array B**	**50.87**	**2**	P	**P**	**21 15 31.6**	**-1.4**
ARCES				pP	pP	21 15 47.9	-0.9
ARCES				PcP	PcP	21 16 49.0	+0.2
SONM	**Songino Array**	**55.63**	**307**	P	**P**	**21 16 08.8**	**+0.5**
	comp=Z,1.3nm,0.8s,mb4.0,baz=45,slow=6.1,SNR=7.6						
SONM				pP	pP	21 16 23.4	-0.8
	comp=Z,2.8nm,0.8s,baz=41,slow=7.8,SNR=7.9						
JOF	**Joensuu**	**57.52**	**359**	*e*P	**P**	**21 16 20.2**	**-1.3**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
JOF	**Joensuu**	**57.52**	**359**	*e p*	**P**	**21 16 20.2**	**-1.3**
	comp=Z,2.9nm,0.6s,mb4.5						
BJI	**Beijing**	**57.66**	**295**	P	**P**	**21 16 23.8**	**+1.0**
BJI				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
ZALV	**Zalesovo Beam**	**58.03**	**325**	P	**P**	**21 16 24.1**	**-1.2**
	comp=Z,0.7nm,0.4s,mb4.1,baz=27,slow=7.4,SNR=5.2						
KAF	**Kangasniemi**	**58.33**	**1**	*e*P	**P**	**21 16 26.1**	**-1.1**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
KAF	**Kangasniemi**	**58.33**	**1**	*e p*	**P**	**21 16 26.1**	**-1.1**
	comp=Z,2.1nm,0.7s,mb4.3						
NB2	**NORSAR Subarra**	**58.65**	**10**	P	**P**	**21 16 28.9**	**-0.5**
	comp=Z,0.9nm,0.8s,mb3.9,baz=350,slow=6.9						
NOA	**NORSAR Array B**	**58.65**	**10**	P	**P**	**21 16 28.8**	**-0.6**
	comp=Z,1.3nm,0.8s,mb4.0,baz=350,slow=6.8,SNR=4.8						
FINES	**FINESS Array B**	**59.00**	**2**	P	**P**	**21 16 30.9**	**-0.9**
	comp=Z,4.7nm,0.7s,mb4.7,baz=3.5,slow=7.2,SNR=23						
FINES				pP	pP	21 16 46.9	-1.0
	comp=Z,1.2nm,0.5s,baz=2.3,slow=8.2,SNR=3.0						
HHC	**Hu-ho-hao-te**	**59.08**	**299**	*e*P	**P**	**21 16 34.9**	**+2.2**
HHC				S	**S**	**21 24 34.9**	**0.0**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
HHC				pmax	pmax		
	comp=Z,100nm,6.4s						
ARU	**Arti**	**61.68**	**342**	*d i* P	**P**	**21 16 48.6**	**-1.6**
ARU				*e*		21 19 02.3	
ARU				S	**S**	**21 25 05.7**	**-1.9**
ARU				SS	SS	21 29 08.3	-0.5
ARU				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.8						
ARU	**Arti**	**61.68**	**342**	*e*P	**P**	**21 16 48.9**	**-1.3**
	comp=Z,4.4nm,0.7s,mb4.7						
VSU	**Vasula**	**62.00**	**1⇑**	*e*P	**P**	**21 16 52.1**	**-0.2**
VSU				pmax	pmax		
	comp=Z,18nm,0.7s,mb5.3						
BRVK	**Borovoye**	**62.61**	**333⇑**	*i* P	**P**	**21 16 55.2**	**-1.3**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.5						
BVAR	**Borovoye Array**	**62.62**	**333**	P	**P**	**21 16 55.0**	**-1.6**
	comp=Z,1.5nm,0.6s,mb4.3,baz=34,slow=6.1,SNR=9.6						
KURK	**Kurchatov**	**62.66**	**327**	P	**P**	**21 16 56.0**	**-0.8**
	comp=Z,1.3nm,0.8s,mb4.1,baz=32,slow=6.5,SNR=4.6						
KURK				pP	pP	21 17 13.2	+0.1
	comp=Z,0.7nm,0.4s,baz=27,slow=7.6,SNR=6.2						
IIGN	**Ignalina**	**65.11**	**2**	*e*P	**P**	**21 17 11.9**	**-0.9**
MKAR	**Makanchi Array**	**65.12**	**323**	P	**P**	**21 17 10.9**	**-2.1**
	comp=Z,0.4nm,0.5s,mb3.7,baz=40,slow=6.9,SNR=4.4						
MKAR				pP	pP	21 17 27.9	-1.5
	comp=Z,0.6nm,0.7s,baz=34,slow=6.3,SNR=3.6						
IDID	**Didziasalis**	**65.15**	**1**	*e*P	**P**	**21 17 12.3**	**-0.8**
OBN	**Obninsk**	**65.20**	**355**	*d i* P	**P**	**21 17 12.7**	**-0.7**
OBN				*e*		21 17 43.3	
OBN				pmax	pmax		
	comp=Z,17nm,1.0s,mb5.0						
GTA	**Gaotai**	**65.27**	**306**	*e*P	**P**	**21 17 14.4**	**+0.2**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.2						
WMQ	**Urumqi**	**66.01**	**317**	*e*P	**P**	**21 17 23.3**	**+4.5**
WHN	**Wuhan**	**66.28**	**290**	*e*P	**P**	**21 17 27.2**	**+6.4**
SUW	**Suwalki**	**66.38**	**4**	*e*P	**P**	**21 17 20.4**	**-0.6**
CLZ	**Clausthal**	**67.64**	**12**	*e*P	**P**	**21 17 29.6**	**+0.5**
	comp=Z,8.0nm,0.7s,mb4.9						
BUG	**Bochum--Univer**	**67.68**	**14**	*e*P	**P**	**21 17 29.6**	**+0.3**
	comp=Z,14nm,0.8s,mb5.0						
ABKAR	**Akbulak array**	**68.34**	**339**	*e*P	**P**	**21 17 32.5**	**-0.9**
	comp=Z,3.7nm,0.6s,mb4.6						
CLL	**Collm**	**68.44**	**11**	*e*P	**P**	**21 17 34.0**	**-0.1**
	comp=Z,8.0nm,1.2s,mb4.6						
CLL	**Collm**	**68.44**	**11⇑**	*i* P	**P**	**21 17 34.2**	**+0.1**
CLL				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.6						
CLL	**Collm**	**68.44**	**11⇑**	*i* P	**P**	**21 17 34.2**	**+0.1**
	comp=Z,8.0nm,1.2s,mb4.6						
CLL	**Collm**	**68.44**	**11⇑**	*i* P	**P**	**21 17 34.2**	**+0.1**
	comp=Z,8.0nm,1.2s,mb4.6						
BAIF	**Baives**	**68.61**	**17**	*e*P	**P**	**21 17 34.8**	**-0.4**
GIVF	**Givet**	**68.66**	**16**	*e*P	**P**	**21 17 35.2**	**-0.3**
BRG	**Berggiesshubel**	**68.95**	**10**	*e*P	**P**	**21 17 37.4**	**+0.1**
	comp=Z,7.0nm,1.2s,mb4.5						
BRG	**Berggiesshubel**	**68.95**	**10**	*e*P	**P**	**21 17 37.6**	**+0.3**
	comp=Z,7.0nm,1.2s,mb4.5						
MOX	**Moxa**	**68.96**	**12**	*e*P	**P**	**21 17 37.8**	**+0.5**
	comp=Z,12nm,0.9s,mb4.8						
MOX	**Moxa**	**68.96**	**12**	*e*P	**P**	**21 17 37.6**	**+0.3**
	comp=Z,16nm,1.5s,mb4.7						
MOX	**Moxa**	**68.96**	**12**	*e*P	**P**	**21 17 37.8**	**+0.5**
MOX				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
VSR	**Storozhevoye**	**68.96**	**353**	*e*P	**P**	**21 17 36.1**	**-1.2**
VSR				pmax	pmax		
	comp=E,5.0nm,0.9s						
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
VSR				pmax	pmax		
	comp=N,5.0nm,0.4s						
TNS	**Taunus Mts**	**69.02**	**14**	*e*P	**P**	**21 17 38.0**	**+0.3**
	comp=Z,8.0nm,0.9s,mb4.7						
PVCC	**Panska Ves**	**69.35**	**10**	*e*P	**P**	**21 17 40.3**	**+0.6**
NKC	**Novy Kostel**	**69.45**	**11**	*e*P	**P**	**21 17 40.9**	**+0.5**
UPC	**Upice**	**69.49**	**9**	*e*P	**P**	**21 17 41.2**	**+0.6**
DPC	**Dobruska-Polom**	**69.67**	**9**	*e*P	**P**	**21 17 42.5**	**+0.8**
DPC				*e*pP	pP	21 17 59.3	+1.1
AKASG	**Malin Array Be**	**69.79**	**360**	P	**P**	**21 17 41.5**	**-1.0**
	comp=Z,8.3nm,0.6s,mb4.9,baz=2.8,slow=6.3,SNR=36						
AKASG				pP	pP	21 17 58.1	-0.8
	comp=Z,1.4nm,0.4s,baz=357,slow=5.6,SNR=3.7						
AKASG	**Malin Array Be**	**69.79**	**360**	P	**P**	**21 17 41.5**	**-1.0**
AKASG				pP	pP	21 17 58.1	-0.8
AKBB	**Malin Array Si**	**69.79**	**360**	*e*P	**P**	**21 17 41.8**	**-0.6**
GRF	**Grafenberg Arr**	**69.86**	**12**	*e*P	**P**	**21 17 43.0**	**+0.1**
	comp=Z,3.0nm,0.7s,mb4.3						
GRF	**Grafenberg Arr**	**69.86**	**12**	*e*P	**P**	**21 17 43.0**	**+0.1**
GRF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
PRU	**Pruhonice**	**69.88**	**10**	*e*P	**P**	**21 17 43.7**	**+0.7**
MEZF	**Maizieres J'vi**	**70.26**	**17**	*e*P	**P**	**21 17 45.2**	**-0.1**
OKC	**Ostrava-Krasne**	**70.30**	**7**	*e*P	**P**	**21 17 46.4**	**+0.8**
MORC	**Moravsky Berou**	**70.32**	**8⇓**	*i* P	**P**	**21 17 46.1**	**+0.4**
WET	**Wettzell**	**70.57**	**11**	*e*P	**P**	**21 17 47.5**	**+0.3**
	comp=Z,5.0nm,1.1s,mb4.4						
KHC	**Kasperske Hory**	**70.65**	**11**	*e*P	**P**	**21 17 48.3**	**+0.6**
KHC				*e*PP	pP	21 18 05.0	+0.8
KHC	**Kasperske Hory**	**70.65**	**11**	*e*P	**P**	**21 17 48.3**	**+0.6**
KHC				*e*pP	pP	21 18 05.0	+0.8
CDF	**Champ du Feu**	**70.65**	**15**	*e*P	**P**	**21 17 47.7**	**-0.1**
	comp=Z,6.7nm,0.9s,mb4.3						
CDF	**Champ du Feu**	**70.65**	**15**	*e*P	**P**	**21 17 47.7**	**-0.1**
CDF				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
CDF	**Champ du Feu**	**70.65**	**15**	*e*P	**P**	**21 17 47.7**	**-0.1**
	comp=Z,3.3nm,0.9s,mb4.3						
TREC	**Trest**	**70.65**	**9**	*e*P	**P**	**21 17 48.1**	**+0.4**
TREC	**Trest**	**70.65**	**9**	*e*P	**P**	**21 17 48.1**	**+0.4**
VRAC	**Vranov**	**70.72**	**8⇑**	*i* P	**P**	**21 17 48.8**	**+0.6**
CD2	**Chengdu**	**70.84**	**299**	P	**P**	**21 17 51.9**	**+2.7**
STHS	**Stebnicka Huta**	**70.89**	**5**	*e*P	**P**	**21 17 50.4**	**+1.2**
STHS				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
STHS	**Stebnicka Huta**	**70.89**	**5**	*e*P	**P**	**21 17 50.4**	**+1.2**
	comp=Z,9.4nm,0.7s,mb4.8						
STHS	**Stebnicka Huta**	**70.89**	**5**	*e*P	**P**	**21 17 50.4**	**+1.2**
HAU	**Haudompre**	**70.92**	**16**	*e*P	**P**	**21 17 49.1**	**-0.3**
	comp=Z,5.7nm,0.6s,mb4.3						
HAU	**Haudompre**	**70.92**	**16**	*e*P	**P**	**21 17 49.1**	**-0.3**
HAU				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
HAU	**Haudompre**	**70.92**	**16**	*e*P	**P**	**21 17 49.1**	**-0.3**
	comp=Z,2.8nm,0.6s,mb4.4						
GEC2	**GERESS Array S**	**70.94**	**11**	*e*P	**P**	**21 17 49.8**	**+0.3**
	comp=Z,2.0nm,0.8s,mb4.1						
HINF	**Hinteralfeld**	**71.18**	**15**	*e*P	**P**	**21 17 50.6**	**-0.4**
	comp=Z,4.6nm,0.7s,mb4.2						
HINF	**Hinteralfeld**	**71.18**	**15**	*e*P	**P**	**21 17 50.6**	**-0.4**
HINF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
HINF	**Hinteralfeld**	**71.18**	**15**	*e*P	**P**	**21 17 50.6**	**-0.4**
	comp=Z,2.3nm,0.7s,mb4.2						
MFF	**Saint Martin d**	**71.27**	**21**	*e*P	**P**	**21 17 51.3**	**-0.2**
	comp=Z,13nm,1.0s,mb4.5						
MFF	**Saint Martin d**	**71.27**	**21**	*e*P	**P**	**21 17 51.3**	**-0.2**
MFF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
MFF	**Saint Martin d**	**71.27**	**21**	*e*P	**P**	**21 17 51.3**	**-0.2**
	comp=Z,6.3nm,1.0s,mb4.5						
LOR	**Lormes**	**71.28**	**18**	*e*P	**P**	**21 17 51.2**	**-0.4**
	comp=Z,8.3nm,0.9s,mb4.3						
LOR	**Lormes**	**71.28**	**18**	*e*P	**P**	**21 17 51.2**	**-0.4**
LOR				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
LOR	**Lormes**	**71.28**	**18**	*e*P	**P**	**21 17 51.2**	**-0.4**
	comp=Z,4.2nm,0.9s,mb4.4						
CRVS	**Cervenica-Dubn**	**71.42**	**5**	*e*P	**P**	**21 17 53.0**	**+0.6**
CRVS				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
CRVS	**Cervenica-Dubn**	**71.42**	**5**	*e*P	**P**	**21 17 53.0**	**+0.6**
	comp=Z,2.1nm,0.9s,mb4.1						
CRVS	**Cervenica-Dubn**	**71.42**	**5**	*e*P	**P**	**21 17 53.0**	**+0.6**
SSF	**Saint Saulge**	**71.43**	**18**	*e*P	**P**	**21 17 52.2**	**-0.3**
	comp=Z,12nm,1.0s,mb4.5						
SSF	**Saint Saulge**	**71.43**	**18**	*e*P	**P**	**21 17 52.2**	**-0.3**
SSF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
SSF	**Saint Saulge**	**71.43**	**18**	*e*P	**P**	**21 17 52.2**	**-0.3**
	comp=Z,5.8nm,1.0s,mb4.5						
KOLL	**Kolacno**	**71.57**	**7**	*e*P	**P**	**21 17 54.0**	**+0.7**
KOLL	**Kolacno**	**71.57**	**7**	*e*P	**P**	**21 17 54.0**	**+0.7**
AVF	**Avril sur Loir**	**71.67**	**18**	*e*P	**P**	**21 17 53.4**	**-0.5**
	comp=Z,4.1nm,0.7s,mb4.2						
AVF	**Avril sur Loir**	**71.67**	**18**	*e*P	**P**	**21 17 53.4**	**-0.5**
AVF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
AVF	**Avril sur Loir**	**71.67**	**18**	*e*P	**P**	**21 17 53.4**	**-0.5**
	comp=Z,2.0nm,0.7s,mb4.2						
VYHS	**Vyhne**	**71.69**	**7**	*e*P	**P**	**21 17 54.2**	**+0.2**
VYHS				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
VYHS	**Vyhne**	**71.69**	**7**	*e*P	**P**	**21 17 54.2**	**+0.2**
	comp=Z,3.3nm,0.9s,mb4.3						
VYHS	**Vyhne**	**71.69**	**7**	*e*P	**P**	**21 17 54.2**	**+0.2**
UZH	**Uzhgorod**	**71.72**	**5**	*e*P	**P**	**21 17 54.4**	**+0.2**
KECS	**Kecovo**	**71.79**	**6**	*e*P	**P**	**21 17 55.2**	**+0.6**
KECS				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
KECS	**Kecovo**	**71.79**	**6**	*e*P	**P**	**21 17 55.2**	**+0.6**
	comp=Z,3.8nm,0.8s,mb4.4						
KECS	**Kecovo**	**71.79**	**6**	*e*P	**P**	**21 17 55.2**	**+0.6**
BGF	**Bois d'Agland**	**71.81**	**19**	*e*P	**P**	**21 17 54.3**	**-0.5**
ZST	**Bratislava**	**71.87**	**8**	*e*P	**P**	**21 17 56.4**	**+1.3**
ZST				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
ZST	**Bratislava**	**71.87**	**8**	*e*P	**P**	**21 17 56.4**	**+1.3**
	comp=Z,6.2nm,0.7s,mb4.7						
ZST	**Bratislava**	**71.87**	**8**	*e*P	**P**	**21 17 56.3**	**+1.2**
SMF	**Signal de Mont**	**71.89**	**18**	*e*P	**P**	**21 17 54.6**	**-0.6**
AML	**Almayashu**	**71.89**	**327**	*e*P	**P**	**21 17 55.5**	**+0.2**
AML				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
AML	**Almayashu**	**71.89**	**327**	*e*P	**P**	**21 17 55.5**	**+0.1**
	comp=Z,1.7nm,0.7s,mb4.1						
RJOB	**Jochberg**	**71.95**	**11**	*e*P	**P**	**21 17 56.0**	**+0.4**
	comp=Z,6.0nm,0.7s,mb4.6						
TCF	**Toulx Ste Croi**	**71.97**	**19**	*e*P	**P**	**21 17 55.1**	**-0.7**
CONA	**Conrad Observa**	**72.04**	**9⇓**	*i* P	**P**	**21 17 56.7**	**+0.6**
	comp=Z,6.5nm,0.7s,mb4.7						
TRPA	**Tarpa**	**72.23**	**4⇓**	*i* P	**P**	**21 17 57.9**	**+0.6**
CABF	**La Chapelle**	**72.25**	**16**	*e*P	**P**	**21 17 57.6**	**+0.2**
	comp=Z,11nm,0.8s,mb4.5						
CABF	**La Chapelle**	**72.25**	**16**	*e*P	**P**	**21 17 57.6**	**+0.2**
CABF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
CABF	**La Chapelle**	**72.25**	**16**	*e*P	**P**	**21 17 57.6**	**+0.2**
	comp=Z,5.3nm,0.8s,mb4.5						
WTTA	**Wattenberg**	**72.30**	**12⇑**	*i* P	**P**	**21 17 58.3**	**+0.6**
	comp=Z,6.6nm,0.6s,mb4.7						
PSZ	**Piszkesteto**	**72.32**	**6⇑**	*i* P	**P**	**21 17 57.9**	**+0.1**
KBA	**Koelnbreinsper**	**72.66**	**11⇓**	*i* P	**P**	**21 18 00.8**	**+1.0**
	comp=Z,12nm,0.6s,mb5.0						
BUR08	**Bucovina Ar. S**	**72.80**	**3**	*e*P	**P**	**21 18 00.9**	**+0.2**
BURAR	**Bucovina Array**	**72.83**	**3⇓**	*i* P	**P**	**21 18 00.9**	**0.0**
LFF	**La Frestale**	**73.03**	**20**	*e*P	**P**	**21 18 00.8**	**-1.3**
GYA	**Guiyang**	**73

GNI	Garni	1.84	99	*e*Pn	Pn	21 22 33.9	0.0
GUMT	Gumushane	2.21	271	*e*PN	Pn	21 22 39.2	+0.3
GUMT	Gumushane	2.21	271	*e*Pn	Pn	21 22 39.2	+0.3

IDC ***12*** *21:32:50.0±0.6, 52°.50N×168°.85W, h0km, mb4.3/23, mb1 4.5/23, mb1mx4.4/27, mbtmp4.3/23, MS3.7/13, Ms1 3.7/13, ms1mx3.4/41, Error ellipse: s-maj=19.0km s-min=12.8km az=174.0*

ISCJB ***12*** *21:32:52.5±1.3, 52°.45N±0°.04×168°.81W±0°.04, h22km±9km, mb4.5/100, MS3.7/18, Error ellipse: s-maj=6.8km s-min=3.7km az=10.7*

BJI ***12*** *21:32:53.1, 52°.50N×168°.80W, h37km, mB4.8/9, mb4.5/14, Ms4.3/6, Ms7 4.2/6*

NEIC ***12*** *21:32:56.1±0.6, 52°.47N×168°.77W, h38km±5km, mb4.5/63, ML4.1(AEIC), ML4.1(PMR), Error ellipse: s-maj=7.3km s-min=4.0km az=179.0*

MOS ***12*** *21:33:00.1±0.7, 53°.52N×169°.54W, h33km, mb4.8/53, Error ellipse: s-maj=21.8km s-min=6.6km az=93.1*

SZGRF ***12*** *21:33:04.6, 53°.79N×168°.94W, h33km, mb4.6, Fox Islands, Aleutian Islands, United States*

ISC 12 21:32:55.7±1.4, 52°.51N±0°.04×168°.81W±0°.04, h32km±9km, h30km±3.3km: pP-P, n351, σ0s78/351, mb4.5/100, MS3.7/18, 49C-57D, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UNV	**Unalaska Valle**	**1.93**	**45**	*e*Pn	**Pn**	**21 33 26.1**	**-0.2**
UNV				*e*S	**Sn**	**21 33 48.2**	**-1.3**
AKGG	**Akutan Green G**	**2.39**	**44**	P	**Pn**	**21 33 32.8**	**+0.2**
AKUT	**Akutan**	**2.44**	**47**	*e*Pn	**Pn**	**21 33 34.4**	**+1.0**
AKUT				S	**Sn**	**21 34 04.4**	**+2.2**
ATKA	**Atka Island**	**3.32**	**267**	P	**Pn**	**21 33 46.3**	**+1.0**
SPIA	**Saint Paul Isl**	**4.76**	**350**	P	**Pn**	**21 34 06.9**	**+1.8**
SDPT	**Sand Point**	**5.69**	**57**	*e*Pn	**Pn**	**21 34 18.2**	**+0.4**
CHGN	**Chignik**	**7.16**	**54**	*e*Pn	**Pn**	**21 34 40.9**	**+2.9**
AMKA	**Amchitka**	**7.44**	**266**	*e*P	**Pn**	**21 34 42.9**	**+1.0**
OHAK	**Old Harbor**	**10.11**	**56**	*e*Pn	**Pn**	**21 35 17.5**	**-1.0**
KDAK	**Kodiak Island**	**10.67**	**54**	Pn	**Pn**	**21 35 25.0**	**-1.2**
	4.4nm,0.3s,baz=244,slow=7.1,SNR=30						
KDAK				Sn	**Sn**	**21 37 19.1**	**-5.3**
	0.3nm,0.3s,baz=213,slow=17,SNR=2.5						
KDAK	**Kodiak Island**	**10.67**	**54**	*ce*P	**Pn**	**21 35 24.8**	**-1.4**
KDAK	**Kodiak Island**	**10.67**	**54**	*e*Pn	**Pn**	**21 35 24.9**	**-1.3**
GAMB	**Gambell**	**11.41**	**353**	*e*Pn	**Pn**	**21 35 37.6**	**+1.5**
RC01	**Rabbit Creek A**	**13.48**	**43**	*e*Pn	**Pn**	**21 36 03.8**	**-0.8**
PPLA	**Purkeypile**	**13.64**	**34**	*e*Pn	**Pn**	**21 36 10.6**	**+4.0**
	31nm,1.2s						
BPAW	**Bear Paw Mtn.**	**14.85**	**32**	*e*P	**Pn**	**21 36 24.3**	**+1.2**
	6.9nm,0.6s						
DIV	**Divide**	**15.21**	**46**	*e*Pn	**Pn**	**21 36 26.5**	**-1.3**
BMRM	**Bremner River**	**15.67**	**48**	*e*Pn	**Pn**	**21 36 32.3**	**-1.5**
	8.7nm,0.5s						
COLA	**College**	**16.39**	**33**	*e*P	**Pn**	**21 36 41.8**	**-1.2**
COLA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
COLA	**College**	**16.39**	**33**	*e*Pn	**Pn**	**21 36 41.8**	**-1.2**
	comp=Z,6.7nm,0.8s						
MENT	**Mentasta**	**16.86**	**42**	*e*Pn	**Pn**	**21 36 49.4**	**+0.4**
COLD	**Coldfoot**	**17.35**	**25**	*e*Pn	**Pn**	**21 36 56.6**	**+1.6**
	comp=Z,6.1nm,0.8s						
EGAK	**Eagle**	**18.72**	**38**	*e*P	**Pn**	**21 37 10.0**	**-1.8**
	comp=Z,8.0nm,0.8s						
DAWY	**Dawson**	**19.10**	**41**	*e*P	**Pn**	**21 37 14.4**	**-2.1**
PET	**Petropavlovsk**	**19.61**	**285**	*e*P	**Pn**	**21 37 20.6**	**-2.0**
PET				pmax	pmax		
	comp=Z,23nm,0.7s						
PET				pmax	pmax		
	comp=Z,100nm,12.5s						
PET				MLR	MLR		
	comp=Z,200nm,18.0s						
BILL	**Bilibino**	**19.64**	**332⇑**	*e*P	**Pn**	**21 37 19.2**	**-3.7**
BILL				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BILL				MLR	MLR		
	comp=Z,300nm,19.0s						
SKAG	**Skagway**	**19.81**	**56**	*e*P	**Pn**	**21 37 22.9**	**-2.1**
	comp=Z,18nm,0.9s						
DIB	**Dawson Inlet,**	**21.80**	**74**	T		22 00 30.7	
DLBC	**Dease Lake**	**22.52**	**59**	P	**P**	**21 37 53.6**	**+1.3**
	comp=Z,2.5nm,0.8s,mb3.7,baz=253,slow=9.5,SNR=5.3						
DLBC				LR	LR	21 46 47.3	
	comp=Z,151nm,19.7s,MS3.4,baz=135,slow=37						
INK	**Inuvik**	**23.05**	**33**	P	**P**	**21 37 55.1**	**-2.7**
	comp=Z,5.5nm,0.5s,mb4.2,baz=255,slow=12,SNR=10						
INK				LR	LR	21 47 53.0	
	comp=Z,204nm,19.6s,MS3.6,baz=257,slow=39						
INK	**Inuvik**	**23.05**	**33**	*e*P	**P**	**21 37 55.4**	**-2.4**
INK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
INK	**Inuvik**	**23.05**	**33**	*e*P	**P**	**21 37 55.4**	**-2.5**
	comp=Z,6.3nm,0.6s,mb4.2						
BBB	**Bella Bella**	**24.63**	**74**	LR	LR	21 46 05.8	
	comp=Z,128nm,20.6s,MS3.4,baz=80,slow=32						
YKA	**Yellowknife Ar**	**29.89**	**49**	P	**P**	**21 38 58.6**	**-1.4**
	comp=Z,1.6nm,0.6s,mb3.9,baz=271,slow=7.4,SNR=7.1						
YBH	**Yreka Blue Hor**	**32.64**	**91**	P	**P**	**21 39 24.5**	**+0.1**
	comp=Z,2.1nm,0.8s,mb4.1,baz=315,slow=2.9,SNR=3.2						
YBH				LR	LR	21 49 17.7	
	comp=Z,97nm,19.4s,MS3.5,baz=346,slow=30						
NEW	**Newport**	**32.64**	**76**	*e*P	**P**	**21 39 24.1**	**-0.3**
NEW				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NEW	**Newport**	**32.64**	**76**	*e*P	**P**	**21 39 24.1**	**-0.3**
	comp=Z,2.1nm,0.8s,mb4.1						
I07A	**Izee**	**33.29**	**85**	⇓P	**P**	**21 39 30.0**	**-0.1**
	baz=33						
G10A	**Bishop Farm, J**	**34.10**	**81**	⇑P	**P**	**21 39 37.6**	**+0.5**
	baz=34,SNR=5.9						
BSMT	**Bassoo Peak**	**34.22**	**76**	*e*P	**P**	**21 39 38.5**	**+0.4**
	comp=Z,5.0nm,1.1s,mb4.4						
E12A	**Beaver Dam Sad**	**34.46**	**78**	⇓P	**P**	**21 39 39.6**	**-0.6**
	baz=34						
A14A	**Double T Ranch**	**34.50**	**73**	⇑P	**P**	**21 39 40.4**	**-0.1**
	baz=34						
G11A	**Walters Elk Ra**	**34.55**	**80**	⇓P	**P**	**21 39 40.8**	**-0.2**
	baz=34						
WVOR	**Wild Horse Val**	**34.72**	**86**	*e*P	**P**	**21 39 43.6**	**+1.1**
WVOR				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
WVOR	**Wild Horse Val**	**34.72**	**86**	*e*P	**P**	**21 39 43.6**	**+1.1**
	comp=Z,2.9nm,1.0s,mb4.2						
A15A	**Johnson Ranch,**	**34.90**	**73**	⇑P	**P**	**21 39 43.6**	**-0.4**
	baz=35						
F12A	**Elk City**	**34.98**	**79**	⇑P	**P**	**21 39 44.6**	**-0.1**
	baz=35,SNR=7.2						
F13A	**Darby**	**35.52**	**79**	⇓P	**P**	**21 39 48.7**	**-0.6**
	baz=35						
C15A	**Salmond Ranch,**	**35.55**	**75**	⇓P	**P**	**21 39 50.0**	**+0.5**
	baz=35,SNR=11						
K10A	**MacKenzie Ranc**	**35.61**	**85**	⇓P	**P**	**21 39 50.5**	**+0.4**
	baz=36						
H12A	**Diamond D Ranc**	**35.85**	**81**	⇑P	**P**	**21 39 52.1**	**-0.1**
	baz=36						
G13A	**Cobalt**	**35.94**	**80**	⇑P	**P**	**21 39 53.0**	**+0.1**
	baz=36						
C16A	**Fuhringer Ranc**	**36.04**	**74**	⇑P	**P**	**21 39 53.6**	**-0.2**
	baz=36,SNR=6.6						
I12A	**Atlanta**	**36.10**	**82**	⇓P	**P**	**21 39 54.1**	**-0.2**
	baz=36,SNR=6.2						
K11A	**Parker Ranch,**	**36.12**	**84**	⇓P	**P**	**21 39 55.0**	**+0.5**
	baz=36,SNR=5.7						
J12A	**Stokes Ranch,**	**36.42**	**83**	⇓P	**P**	**21 39 57.2**	**+0.1**
	baz=36						
L11A	**Cat Creek Ranc**	**36.63**	**85**	⇓P	**P**	**21 39 59.6**	**+0.7**
	baz=36,SNR=7.8						
I13A	**Wildhorse Cree**	**36.65**	**81**	⇑P	**P**	**21 39 59.4**	**+0.4**
	baz=36,SNR=5.3						
HLID	**Hailey**	**36.66**	**82**	⇓P	**P**	**21 39 59.5**	**+0.4**
	baz=36,SNR=5.2						
HLID	**Hailey**	**36.66**	**82**	*e*P	**P**	**21 39 59.4**	**+0.3**
	comp=Z,4.7nm,1.1s,mb4.2						
H14A	**Leadore**	**36.72**	**80**	⇑P	**P**	**21 39 59.9**	**+0.3**
	baz=37						
J13A	**Cove Ranch, Pi**	**36.90**	**82**	⇓P	**P**	**21 40 01.5**	**+0.3**
	baz=37,SNR=10						
B18A	**Beardsley Farm**	**36.90**	**72**	⇑P	**P**	**21 40 00.7**	**-0.4**
	baz=37,SNR=6.7						
I14A	**Mackay**	**37.04**	**81**	⇓P	**P**	**21 40 02.9**	**+0.6**
	baz=37,SNR=10						
BOZ	**Bozeman (W)**	**37.21**	**77**	⇑P	**P**	**21 40 03.6**	**-0.1**
	baz=37,SNR=5.4						
BOZ	**Bozeman (W)**	**37.21**	**77**	*e*P	**P**	**21 40 03.8**	**+0.1**
BOZ				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.3						
BOZ	**Bozeman (W)**	**37.21**	**77**	*e*P	**P**	**21 40 03.8**	**+0.1**
	comp=Z,6.7nm,1.4s,mb4.3						
NVAR	**Mina Array Bea**	**37.32**	**92**	P	**P**	**21 40 05.6**	**+0.8**
	comp=Z,0.9nm,0.9s,mb3.6,baz=297,slow=6.5,SNR=3.7						
J14A	**Carey**	**37.34**	**82**	⇑P	**P**	**21 40 05.7**	**+0.8**
	baz=37						
J15A	**Blackfoot**	**37.95**	**81**	⇓P	**P**	**21 40 11.0**	**+1.0**
	baz=38						
L14A	**Malta**	**38.24**	**83**	⇓P	**P**	**21 40 12.9**	**+0.4**
	baz=38,SNR=5.7						
M14A	**Sheep Mountain**	**38.48**	**84**	⇓P	**P**	**21 40 14.5**	**-0.1**
	baz=38						
J16A	**Bone**	**38.51**	**80**	⇓P	**P**	**21 40 15.8**	**+1.0**
	baz=38						
IMW	**Indian Meadow**	**38.57**	**79**	*e*P	**P**	**21 40 15.9**	**+0.7**
	comp=Z,4.1nm,0.8s,mb4.2						
HVU	**Hansel Valley**	**38.67**	**83**	*e*P	**P**	**21 40 15.6**	**-0.5**
HVU				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
HVU	**Hansel Valley**	**38.67**	**83**	*e*P	**P**	**21 40 15.6**	**-0.5**
	comp=Z,2.9nm,0.7s,mb4.1						
K16A	**Soda Springs**	**38.78**	**81**	⇓P	**P**	**21 40 17.9**	**+0.8**
	baz=39,SNR=6.4						
N14A	**Grayback Hills**	**38.97**	**85**	⇓P	**P**	**21 40 18.8**	**+0.2**
	baz=39,SNR=5.2						
R11A	**Troy Canyon, C**	**39.03**	**90**	⇓P	**P**	**21 40 19.3**	**+0.1**
	baz=39						
DUG	**Dugway**	**39.59**	**85**	⇑P	**P**	**21 40 24.3**	**+0.5**
	baz=39,SNR=6.8						
DUG	**Dugway**	**39.59**	**85**	*e*P	**P**	**21 40 24.0**	**+0.2**
DUG				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.4						
DUG	**Dugway**	**39.59**	**85**	*e*P	**P**	**21 40 24.0**	**+0.2**
	comp=Z,8.9nm,1.1s,mb4.4						
K18A	**Toltan Ranch,**	**39.82**	**80**	⇑P	**P**	**21 40 26.2**	**+0.5**
	baz=40						
T11A	**Corn Creek, Al**	**39.96**	**91**	⇓P	**P**	**21 40 27.8**	**+0.8**
	baz=40						
BW06	**Boulder Array**	**40.04**	**80**	⇓P	**P**	**21 40 27.6**	**0.0**
	baz=40,SNR=9.5						
PDAR	**Pinedale Array**	**40.04**	**80**	P	**P**	**21 40 27.6**	**0.0**
	comp=Z,4.4nm,0.8s,mb4.3,baz=314,slow=5.1,SNR=41						
Q14A	**Sevier Lake (B**	**40.05**	**87**	⇓P	**P**	**21 40 27.9**	**+0.3**
	baz=40						
MJAR	**Matsushiro Arr**	**40.05**	**268**	P	**P**	**21 40 26.9**	**-0.8**
	comp=Z,1.5nm,0.6s,mb3.9,baz=47,slow=7.4,SNR=14						
MJAR				LR	LR	21 56 11.6	
	comp=Z,58nm,19.8s,MS3.4,baz=75,slow=35						
MAJO	**Matsushiro**	**40.05**	**268**	*e*P	**P**	**21 40 27.6**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
MAJO	**Matsushiro**	**40.05**	**268**	*e*P	**P**	**21 40 27.6**	**-0.1**
	comp=Z,10nm,0.9s,mb4.5						
MAT	**Matsushiro**	**40.05**	**268**	P	**P**	**21 40 27.2**	**-0.5**
DAU	**Daniels Canyon**	**40.40**	**84**	*e*P	**P**	**21 40 30.8**	**+0.2**
DAU				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.5						
DAU	**Daniels Canyon**	**40.40**	**84**	*e*P	**P**	**21 40 30.8**	**+0.2**
	comp=Z,11nm,1.1s,mb4.5						
K19A	**Absolon Red Bu**	**40.43**	**79**	⇑P	**P**	**21 40 30.5**	**-0.3**
	baz=40,SNR=6.0						
S13A	**Holt Ranch, En**	**40.57**	**89**	⇓P	**P**	**21 40 32.4**	**+0.3**
	baz=40						
K20A	**Yellowstone Ra**	**40.83**	**79**	⇑P	**P**	**21 40 33.7**	**-0.4**
	baz=41						
O17A	**Robinson Place**	**40.85**	**84**	⇑P	**P**	**21 40 34.9**	**+0.6**
	baz=41						
Q16A	**Castle Valley**	**41.37**	**85**	⇑P	**P**	**21 40 39.0**	**+0.4**
	baz=41						
P18A	**Preston Nutter**	**41.50**	**84**	⇓P	**P**	**21 40 39.6**	**0.0**
	baz=41						
R16A	**Teasdale**	**41.58**	**86**	⇓P	**P**	**21 40 41.3**	**+1.0**
	baz=41						
SRU	**San Rafael**	**41.65**	**85**	⇑P	**P**	**21 40 41.5**	**+0.6**
	baz=42,SNR=8.2						
SRU	**San Rafael**	**41.65**	**85**	*e*P	**P**	**21 40 41.3**	**+0.5**
SRU				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
SRU	**San Rafael**	**41.65**	**85**	*e*P	**P**	**21 40 41.3**	**+0.5**
	comp=Z,9.6nm,0.9s,mb4.4						
O19A	**Miners Draw (B**	**41.77**	**82**	⇑P	**P**	**21 40 42.0**	**+0.2**
	baz=42						
L21A	**Rawlins**	**41.82**	**79**	⇑P	**P**	**21 40 41.6**	**-0.6**
	baz=42,SNR=5.4						
Q18A	**Rafter H Ranch**	**41.89**	**85**	⇓P	**P**	**21 40 42.8**	**0.0**
	baz=42,SNR=7.2						
N20A	**Spence Gulch,**	**41.96**	**81**	⇑P	**P**	**21 40 43.4**	**0.0**
	baz=42						
R17A	**Hanksville Air**	**41.97**	**86**	⇑P	**P**	**21 40 43.5**	**0.0**
	baz=42						
P19A	**Cripple Cowboy**	**42.26**	**83**	⇓P	**P**	**21 40 46.0**	**+0.2**
	baz=42,SNR=12						
U15A	**North Rim**	**42.28**	**89**	⇓P	**P**	**21 40 47.0**	**+1.0**
	baz=42						
O20A	**White River Ci**	**42.40**	**82**	⇑P	**P**	**21 40 46.9**	**-0.1**
	baz=42,SNR=12						
N21A	**Black Mountain**	**42.46**	**81**	⇓P	**P**	**21 40 47.2**	**-0.2**
	baz=42,SNR=5.9						
S18A	**Hurst Farm, Bl**	**42.87**	**86**	⇓P	**P**	**21 40 50.2**	**-0.6**
	baz=43,SNR=7.8						
T18A	**Mexican Hat**	**43.29**	**87**	P	**P**	**21 40 53.7**	**-0.6**
	baz=43,SNR=8.4						
CN2	**Changchun**	**43.31**	**286**	*e*P	**P**	**21 40 54.7**	**+0.4**
S19A	**Harvey Farm, M**	**43.35**	**85**	⇑P	**P**	**21 40 54.4**	**-0.3**
	baz=43,SNR=6.2						
PV01	**Paradox Valley**	**43.45**	**84**	*e*P	**P**	**21 40 55.0**	**-0.5**
	comp=Z,866nm,0.7s						
R20A	**Redvale**	**43.53**	**84**	⇓P	**P**	**21 40 55.9**	**-0.3**
	baz=43,SNR=5.3						
S20A	**Disappointment**	**43.77**	**85**	⇓P	**P**	**21 40 57.7**	**-0.4**
	baz=44,SNR=9.9						
ULM	**Lac du Bonnet**	**43.78**	**62**	P	**P**	**21 40 56.8**	**-1.2**
	comp=Z,8.9nm,0.9s,mb4.5,baz=315,slow=5.6,SNR=3.4						
ULM				LR	LR	21 58 57.5	
	comp=Z,90nm,19.0s,MS3.7,baz=301,slow=36						
T19A	**Beclabito**	**44.01**	**86**	P	**P**	**21 40 59.6**	**-0.4**
	baz=44,SNR=13						
S21A	**Coal Bank Pass**	**44.23**	**84**	⇑P	**P**	**21 41 01.9**	**+0.2**
	baz=44,SNR=8.2						
S22A	**4UR Ranch, Cre**	**44.76**	**84**	⇓P	**P**	**21 41 06.2**	**+0.2**
	baz=45						
U21A	**Nageezi**	**45.11**	**86**	⇑P	**P**	**21 41 09.1**	**+0.4**
	baz=45,SNR=10						
T22A	**Edith**	**45.18**	**84**	⇑P	**P**	**21 41 09.6**	**+0.2**
	baz=45,SNR=5.2						
S24A	**Houchin Ranch,**	**45.80**	**83**	⇑P	**P**	**21 41 14.8**	**+0.6**
	baz=46						
U23A	**El Rito**	**46.06**	**85**	⇓P	**P**	**21 41 16.9**	**+0.6**
	baz=46,SNR=7.2						
S25A	**Robets Cordova**	**46.26**	**82**	⇓P	**P**	**21 41 17.9**	**+0.1**
	baz=46,SNR=6.2						
X21A	**Alamocita Cree**	**46.34**	**88**	⇑P	**P**	**21 41 19.6**	**+1.1**
	baz=46						
T25A	**Trinidad**	**46.62**	**83**	⇑P	**P**	**21 41 20.9**	**+0.2**
	baz=46,SNR=8.2						
LAZ	**Ladron**	**46.77**	**87**	*e*P	**P**	**21 41 22.3**	**+0.5**
	comp=Z,3.1nm,1.1s,mb4.2						
V24A	**Rampart Ranch,**	**47.02**	**85**	⇑P	**P**	**21 41 24.3**	**+0.4**
	baz=47,SNR=6.8						
ECSD	**EROS Data Cent**	**47.10**	**70**	*e*P	**P**	**21 41 22.5**	**-1.9**
	comp=Z,5.0nm,1.0s,mb4.4						
U25A	**Circle Dot Ran**	**47.10**	**83**	⇓P	**P**	**21 41 24.4**	**-0.1**
	baz=47,SNR=9.7						
BNM	**Barren Site**	**47.25**	**87**	*e*P	**P**	**21 41 26.2**	**+0.5**
	comp=Z,2.2nm,0.7s,mb4.2						
V25A	**Rancho No Teng**	**47.34**	**84**	⇑P	**P**	**21 41 26.5**	**+0.1**
	baz=47,SNR=5.8						
U26A	**Atchley Ranch,**	**47.51**	**83**	⇓P	**P**	**21 41 27.7**	**+0.1**
	baz=47,SNR=10.0						
Y23A	**Lovelace Mesa,**	**47.74**	**87**	⇑P	**P**	**21 41 29.9**	**+0.4**
	baz=48,SNR=5.3						
W25A	**X Bar L Ranch,**	**47.85**	**85**	⇓P	**P**	**21 41 30.5**	**+0.2**
	baz=48,SNR=7.4						
V26A	**Tequesquite Ra**	**47.88**	**83**	⇓P	**P**	**21 41 30.4**	**-0.1**
	baz=48,SNR=5.3						
Y24A	**Capitan**	**48.13**	**87**	⇓P	**P**	**21 41 32.4**	**0.0**
	baz=48						
Y25A	**Mesa, Roswell**	**48.58**	**86**	⇑P	**P**	**21 41 35.4**	**-0.6**
	baz=48						
124A	**Stringfield Ra**	**48.95**	**88**	⇑P	**P**	**21 41 37.6**	**-1.2**
	baz=49						
224A	**Cornudas Mount**	**49.34**	**88**	⇓P	**P**	**21 41 41.8**	**0.0**
	baz=49						
Z26A	**Caprock**	**49.46**	**86**	⇓P	**P**	**21 41 42.6**	**-0.1**
	baz=49,SNR=6.2						
125A	**Gardner Draw,**	**49.47**	**87**	⇑P	**P**	**21 41 42.5**	**-0.3**
	baz=49						
MNTX	**Cornudas Mount**	**49.69**	**89**	*e*P	**P**	**21 41 44.2**	**-0.3**
	comp=Z,2.4nm,0.8s,mb4.3						
MSTX	**Muleshoe**	**49.72**	**85**	⇓P	**P**	**21 41 44.1**	**-0.6**
	baz=50						
225A	**Deer Hill, Car**	**49.74**	**88**	⇓P	**P**	**21 41 45.0**	**+0.1**
	baz=50						
324A	**Moseley Ranch,**	**49.80**	**89**	⇑P	**P**	**21 41 44.9**	**-0.4**
	baz=50						
126A	**Clayton Basin,**	**49.87**	**87**	⇑P	**P**	**21 41 45.5**	**-0.3**
	baz=50						
325A	**Bean Ranch, Si**	**50.17**	**89**	⇑P	**P**	**21 41 48.1**	**0.0**
	baz=50,SNR=6.9						
TLY	**Talaya**	**50.54**	**306**	*e*P	**P**	**21 41 50.1**	**-0.5**
TLY				*e*S	**S**	**21 48 50.6**	**-12**
TLY				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
TLY				MLR	MLR		
	comp=Z,64nm,20.0s,MS3.6						
425A	**Indio Mountain**	**50.57**	**89**	⇓P	**P**	**21 41 51.4**	**+0.2**
	baz=50,SNR=5.0						
BJI	**Beijing**	**51.07**	**288**	P	**P**	**21 41 53.7**	**-1.0**
BJI				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
ULN	**Ulaanbaatar**	**51.16**	**301**	*e*P	**P**	**21 41 54.4**	**-1.0**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
ULN	**Ulaanbaatar**	**51.16**	**301**	*e*P	**P**	**21 41 54.4**	**-1.0**
	comp=Z,2.3nm,0.6s,mb4.3						
SONM	**Songino Array**	**51.53**	**301**	P	**P**	**21 41 57.9**	**-0.2**
	comp=Z,1.7nm,0.6s,mb4.1,baz=58,slow=6.4,SNR=20						
SONM				PcP	PcP	21 43 11.7	-0.1
	comp=Z,0.5nm,0.5s,baz=16,slow=2.0,SNR=2.7						
WMOK	**Wichita Mounta**	**51.62**	**81**	*e*P	**P**	**21 41 58.0**	**-1.0**
WMOK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
WMOK	**Wichita Mounta**	**51.62**	**81**	*e*P	**P**	**21 41 58.0**	**-0.9**
	comp=Z,7.1nm,0.8s,mb4.7						
526A	**Mary Lane Ranc**	**51.63**	**89**	⇑P	**P**	**21 41 58.7**	**-0.4**
	baz=52						
626A	**Big Bend Ranch**	**51.96**	**90**	⇑P	**P**	**21 42 00.8**	**-0.8**
	baz=52,SNR=6.1						
428A	**Kincaid Ranch,**	**52.02**	**87**	⇓P	**P**	**21 42 01.2**	**-0.8**
	baz=52,SNR=7.5						
528A	**Cox Ranch, San**	**52.35**	**88**	⇓P	**P**	**21 42 04.1**	**-0.3**
	baz=52						
TXAR	**Lajitas Array**	**52.40**	**89**	P	**P**	**21 42 03.9**	**-0.9**
	comp=Z,3.5nm,0.8s,mb4.3,baz=299,slow=5.5,SNR=47						
TXAR				LR	LR	22 01 57.4	
	comp=Z,54nm,20.6s,MS3.6,baz=5.0,slow=33						
TXAR	**Lajitas Array**	**52.40**	**89**	P	**P**	**21 42 03.9**	**-0.9**
TXAR				LR	LR	22 01 57.4	
627A	**Terlingua Ranc**	**52.49**	**89**	⇑P	**P**	**21 42 04.7**	**-0.7**
	baz=52,SNR=7.4						
628A	**Black Gap, Mar**	**52.77**	**89**	⇓P	**P**	**21 42 07.0**	**-0.6**
	baz=53						
HHC	**Hu-ho-hao-te**	**53.19**	**291**	*e*P	**P**	**21 42 10.2**	**-0.4**
HHC				S	**S**	**21 49 37.3**	**-1.8**
HHC				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.0						
HHC				pmax	pmax		
	comp=Z,86nm,6.8s						
JCT	**Junction City**	**53.95**	**85**	*e*P	**P**	**21 42 15.3**	**-0.9**
JCT				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
JCT	**Junction City**	**53.95**	**85**	*e*P	**P**	**21 42 15.3**	**-0.9**
	comp=Z,5.9nm,0.6s,mb4.7						
MIAR	**Mount Ida**	**54.88**	**77**	*e*P	**P**	**21 42 21.9**	**-1.0**
MIAR				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
MIAR	**Mount Ida**	**54.88**	**77**	*e*P	**P**	**21 42 21.9**	**-1.1**
	comp=Z,7.3nm,1.0s,mb4.7						
SCHQ	**Schefferville**	**55.10**	**44**	P	**P**	**21 42 23.4**	**-0.8**
	comp=Z,3.1nm,0.8s,mb4.4,baz=301,slow=11,SNR=5.3						
SCHQ				LR	LR	22 08 14.7	
	comp=Z,88nm,18.3s,MS3.9,baz=303,slow=38						
KEV	**Kevo**	**57.51**	**354**	*e*P	**P**	**21 42 39.7**	**-1.5**
KEV				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
KEV	**Kevo**	**57.51**	**354**	*e*p	**P**	**21 42 39.7**	**-1.5**
	comp=Z,3.7nm,0.7s,mb4.5						
ZALV	**Zalesovo Beam**	**57.56**	**318**	P	**P**	**21 42 40.4**	**-1.4**
	comp=Z,0.6nm,0.5s,mb3.9,baz=28,slow=6.5,SNR=3.6						
ZALV				PcP	PcP

comp=Z,8.0nm,0.7s,mb4.8
LSA Lhasa 72.70 296 *e*P **P 21 44 21.8 +1.4**
comp=Z,7.6nm,0.7s,mb4.7
CLZ Clausthal 76.03 1 *e*P **P 21 44 40.1 +0.8**
comp=Z,7.0nm,1.2s,mb4.5
AKASG Malin Array Be 76.05 348 P **P 21 44 38.1 -1.4**
comp=Z,5.3nm,0.6s,mb4.7,baz=14,slow=5.7,SNR=13
AKASG LR LR 22 24 32.1
comp=Z,55nm,19.1s,MS3.9,baz=0.0,slow=41
BUG Bochum--Univer 76.38 3 *e*P **P 21 44 41.4 +0.1**
comp=Z,8.0nm,0.9s,mb4.7
CLL Collm 76.55 359 *e*P **P 21 44 42.1 -0.2**
comp=Z,4.0nm,1.0s,mb4.3
CLL Collm 76.55 359 ⇓*i*P **P 21 44 41.8 -0.5**
CLL pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
CLL Collm 76.55 359 ⇓*i*P **P 21 44 41.8 -0.5**
CLL *e*pP pP 21 44 53.0 +0.8
CMAR Chiang Mai Arr 76.92 283 P **P 21 44 44.7 -0.2**
comp=Z,4.8nm,0.8s,mb4.5,baz=26,slow=6.6,SNR=36
BRG Berggiesshubel 76.97 358 *e*P **P 21 44 45.1 +0.4**
comp=Z,4.0nm,1.1s,mb4.3
BRG Berggiesshubel 76.97 358 *e*P **P 21 44 44.4 -0.3**
comp=Z,2.7nm,0.9s,mb4.2
JIRN Jiri 76.99 298 *e*P **P 21 44 45.8 +0.6**
MOX Moxa 77.23 360 *e*P **P 21 44 46.3 +0.2**
comp=Z,4.0nm,0.9s,mb4.3
UPC Upice 77.28 357 *e*P **P 21 44 46.8 +0.3**
UPC Upice 77.28 357 *e*P **P 21 44 46.8 +0.3**
PVCC Panska Ves 77.30 358 *e*P **P 21 44 47.3 +0.7**
PVCC Panska Ves 77.30 358 *e*P **P 21 44 47.3 +0.7**
DZM Mont Dzumac 77.33 203 *e*LR LR 22 08 41.4
comp=Z,81nm,22.3s
RAMN Ramite 77.33 298 *e*P **P 21 44 47.1 -0.1**
comp=Z,25nm,0.8s,mb5.2
KKN Kakani 77.38 299 *e*P **P 21 44 48.0 +0.6**
DPC Dobruska-Polom 77.43 357 *e*P **P 21 44 47.6 +0.3**
DPC Dobruska-Polom 77.43 357 *e*P **P 21 44 47.6 +0.3**
PKI Pulchoki 77.48 299 *e*P **P 21 44 48.2 +0.2**
PKIN Phulchoki 77.48 299 *e*P **P 21 44 48.2 +0.2**
GKN Gorkha 77.55 300 *e*P **P 21 44 48.6 +0.3**
comp=Z,12nm,0.6s,mb5.0
DMN Daman 77.61 299 *e*P **P 21 44 49.0 +0.3**
TNS Taunus Mts 77.62 2 *e*P **P 21 44 48.9 +0.5**
comp=Z,10.0nm,1.3s,mb4.6
NKC Novy Kostel 77.63 359 *e*P **P 21 44 48.9 +0.5**
NKC Novy Kostel 77.63 359 *e*P **P 21 44 48.9 +0.5**
BAIF Baives 77.64 5 *e*P **P 21 44 48.4 -0.1**
comp=Z,5.0nm,0.6s,mb4.3
BAIF Baives 77.64 5 *e*P **P 21 44 48.4 -0.1**
BAIF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
BAIF Baives 77.64 5 *e*P **P 21 44 48.4 -0.1**
comp=Z,2.5nm,0.6s,mb4.3
KWP Kalwaria Pacla 77.77 352 *e*P **P 21 44 49.5 +0.3**
KWP pmax pmax
comp=Z,12nm,0.8s,mb4.9
KWP Kalwaria Pacla 77.77 352 *e*P **P 21 44 49.5 +0.2**
comp=Z,12nm,0.8s,mb4.9
PRU Pruhonice 77.84 358 *e*P **P 21 44 50.4 +0.8**
PRU Pruhonice 77.84 358 *e*P **P 21 44 50.4 +0.8**
MORC Moravsky Berou 77.95 356 *e*P **P 21 44 50.1 -0.1**
MORC pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
MORC Moravsky Berou 77.95 356 *e*P **P 21 44 50.1 -0.1**
comp=Z,2.5nm,0.8s,mb4.2
MORC Moravsky Berou 77.95 356 ⇓*i*P **P 21 44 50.5 +0.3**
STHS Stebnicka Huta 78.10 353 *e*P **P 21 44 52.3 +1.3**
STHS pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
STHS Stebnicka Huta 78.10 353 *e*P **P 21 44 52.3 +1.3**
comp=Z,4.0nm,0.6s,mb4.5
STHS Stebnicka Huta 78.10 353 *e*P **P 21 44 52.2 +1.2**
GRF Grafenberg Arr 78.18 360 *e*P **P 21 44 51.9 +0.4**
comp=Z,6.0nm,0.8s,mb4.6
GRF Grafenberg Arr 78.18 360 *e*P **P 21 44 51.9 +0.4**
GRF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
CRVS Cervenica-Dubn 78.59 353 *e*P **P 21 44 54.5 +0.7**
CRVS pmax pmax
comp=Z,22nm,2.4s,mb4.7
CRVS Cervenica-Dubn 78.59 353 *e*P **P 21 44 54.5 +0.7**
comp=Z,22nm,2.4s,mb4.7
CRVS Cervenica-Dubn 78.59 353 *e*P **P 21 44 54.5 +0.7**
KHC Kasperske Hory 78.72 358 *e*P **P 21 44 55.2 +0.7**
KHC Kasperske Hory 78.72 358 *e*P **P 21 44 55.2 +0.7**
ROSF Rostrenen 78.78 10 *e*P **P 21 44 55.4 +0.6**
LDF La Druitiere 78.82 8 *e*P **P 21 44 54.9 -0.1**
comp=Z,7.5nm,0.5s,mb4.6
LDF La Druitiere 78.82 8 *e*P **P 21 44 54.9 -0.1**
LDF pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
LDF La Druitiere 78.82 8 *e*P **P 21 44 54.9 -0.1**
comp=Z,3.8nm,0.5s,mb4.6
GRR Gorron 78.96 8 *e*P **P 21 44 56.2 +0.4**
comp=Z,9.6nm,0.8s,mb4.5
GRR Gorron 78.96 8 *e*P **P 21 44 56.2 +0.4**
GRR pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
GRR Gorron 78.96 8 *e*P **P 21 44 56.2 +0.4**
comp=Z,4.8nm,0.8s,mb4.5
GEC2 GERESS Array S 79.01 358 *e*P **P 21 44 56.7 +0.7**
KECS Kecovo 79.08 354 *e*P **P 21 44 56.2 -0.2**
KECS pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
KECS Kecovo 79.08 354 *e*P **P 21 44 56.2 -0.2**
comp=Z,1.8nm,0.7s,mb4.1
KECS Kecovo 79.08 354 *e*P **P 21 44 56.2 -0.2**
STU Stuttgart 79.09 1 *e*P **P 21 44 56.7 +0.2**
comp=Z,6.0nm,0.6s,mb4.7
VYHS Vyhne 79.17 355 *e*P **P 21 44 57.4 +0.5**
VYHS *e* pP 21 45 07.2 +0.3
VYHS *e* 21 45 13.4
VYHS pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
VYHS Vyhne 79.17 355 *e*P **P 21 44 57.4 +0.5**
comp=Z,1.9nm,0.8s,mb4.1
VYHS *e* pP 21 45 07.2 +0.3
VYHS *e* 21 45 13.4
VYHS Vyhne 79.17 355 *e*P **P 21 44 57.4 +0.5**
VYHS *e*pP pP 21 45 07.2 +0.3
VYHS *e*sP sP 21 45 13.4 +2.9
CDF Champ du Feu 79.41 3 *e*P **P 21 44 58.3 +0.1**
comp=Z,3.9nm,0.7s,mb4.2
CDF Champ du Feu 79.41 3 *e*P **P 21 44 58.3 +0.1**
CDF pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
CDF Champ du Feu 79.41 3 *e*P **P 21 44 58.3 +0.1**
comp=Z,2.0nm,0.7s,mb4.2
BUR08 Bucovina Ar. S 79.52 350 *e*P **P 21 44 58.7 -0.2**
BURAR Bucovina Array 79.54 350 ⇑*i*P **P 21 44 58.7 -0.3**
ZST Bratislava 79.55 356 *e*P **P 21 45 00.3 +1.3**
ZST pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
ZST Bratislava 79.55 356 *e*P **P 21 45 00.3 +1.3**
comp=Z,5.3nm,0.6s,mb4.7
ZST Bratislava 79.55 356 *e*P **P 21 45 00.3 +1.3**
ECH Echery 79.60 3 *e*P **P 21 44 59.6 +0.3**
ECH pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
ECH Echery 79.60 3 *e*P **P 21 44 59.6 +0.4**
comp=Z,3.1nm,0.9s,mb4.2
KBL Kabul 79.74 315 *e*P **P 21 44 59.8 -0.5**
KBL pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
KBL Kabul 79.74 315 *e*P **P 21 44 59.8 -0.5**
comp=Z,2.6nm,0.7s,mb4.3
HAU Haudompre 79.78 3 *e*P **P 21 45 00.3 0.0**
comp=Z,7.6nm,0.8s,mb4.4
HAU *e*MLR MLR
comp=Z,54nm,21.8s,MS3.5
HAU Haudompre 79.78 3 *e*P **P 21 45 00.3 0.0**
HAU pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
HAU MLR MLR
comp=Z,50nm,21.8s,MS3.8
HAU Haudompre 79.78 3 *e*P **P 21 45 00.3 0.0**
comp=Z,3.8nm,0.8s,mb4.4
HAU LR LR
comp=Z,50nm,21.8s,MS3.8
HINF Hinteralfeld 79.99 3 *e*P **P 21 45 01.3 -0.1**
comp=Z,3.4nm,0.6s,mb4.2
HINF Hinteralfeld 79.99 3 *e*P **P 21 45 01.3 -0.1**
HINF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
HINF Hinteralfeld 79.99 3 *e*P **P 21 45 01.3 -0.1**
comp=Z,1.7nm,0.6s,mb4.2
LOR Lormes 80.41 5 *e*P **P 21 45 04.4 +0.7**
comp=Z,11nm,1.0s,mb4.4
LOR *e*MLR MLR
comp=Z,49nm,17.5s,MS3.6
LOR Lormes 80.41 5 *e*P **P 21 45 04.4 +0.7**
LOR pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
LOR MLR MLR
comp=Z,50nm,17.5s,MS3.9
LOR Lormes 80.41 5 *e*P **P 21 45 04.4 +0.7**
comp=Z,5.3nm,1.0s,mb4.4
LOR LR LR
comp=Z,50nm,17.5s,MS3.9
DRGR 80.59 352 ⇑*i*P **P 21 45 04.4 -0.3**
SSF Saint Saulge 80.59 5 *e*P **P 21 45 04.7 0.0**
comp=Z,4.2nm,0.6s,mb4.2
SSF Saint Saulge 80.59 5 *e*P **P 21 45 04.7 0.0**
SSF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
SSF Saint Saulge 80.59 5 *e*P **P 21 45 04.7 0.0**
comp=Z,2.1nm,0.6s,mb4.2
MFF Saint Martin d 80.80 8 *e*P **P 21 45 05.9 +0.1**
comp=Z,37nm,1.3s,mb4.8
MFF Saint Martin d 80.80 8 *e*P **P 21 45 05.9 +0.1**
MFF pmax pmax
comp=Z,19nm,1.3s,mb4.9
MFF Saint Martin d 80.80 8 *e*P **P 21 45 05.9 +0.1**
comp=Z,19nm,1.3s,mb4.9
AVF Avril sur Loir 80.86 5 *e*P **P 21 45 05.9 -0.2**
comp=Z,12nm,1.1s,mb4.4
AVF Avril sur Loir 80.86 5 *e*P **P 21 45 05.9 -0.2**
AVF pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
AVF Avril sur Loir 80.86 5 *e*P **P 21 45 05.9 -0.2**
comp=Z,5.8nm,1.1s,mb4.4
SMF Signal de Mont 81.03 5 *e*P **P 21 45 07.0 0.0**
comp=Z,5.7nm,0.7s,mb4.3
SMF Signal de Mont 81.03 5 *e*P **P 21 45 07.0 0.0**
SMF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
SMF Signal de Mont 81.03 5 *e*P **P 21 45 07.0 0.0**
comp=Z,2.8nm,0.7s,mb4.3
CABF La Chapelle 81.17 4 *e*P **P 21 45 08.4 +0.7**
comp=Z,25nm,1.0s,mb4.8
CABF La Chapelle 81.17 4 *e*P **P 21 45 08.4 +0.7**
CABF pmax pmax
comp=Z,13nm,1.0s,mb4.8
CABF La Chapelle 81.17 4 *e*P **P 21 45 08.4 +0.7**
comp=Z,13nm,1.0s,mb4.8
TCF Toulx Ste Croi 81.29 6 *e*P **P 21 45 08.2 -0.2**
comp=Z,5.3nm,0.8s,mb4.2
TCF Toulx Ste Croi 81.29 6 *e*P **P 21 45 08.2 -0.2**
TCF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
TCF Toulx Ste Croi 81.29 6 *e*P **P 21 45 08.2 -0.2**
comp=Z,2.7nm,0.8s,mb4.2
MLR Mutele Rosu 81.56 350 ⇓*i*P **P 21 45 10.6 +0.7**
GZR Gura Zlata 81.97 352 ⇓*i*P **P 21 45 11.9 -0.1**
RJF Les Rejaudoux 82.22 7 *e*P **P 21 45 13.4 +0.1**
comp=Z,3.1nm,0.6s,mb4.1
RJF *e*MLR MLR
comp=Z,50nm,19.8s,MS3.6
RJF Les Rejaudoux 82.22 7 *e*P **P 21 45 13.4 +0.1**
RJF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
RJF MLR MLR
comp=Z,50nm,19.8s,MS3.9
RJF Les Rejaudoux 82.22 7 *e*P **P 21 45 13.4 +0.1**
comp=Z,1.5nm,0.6s,mb4.1
RJF LR LR
comp=Z,50nm,19.8s,MS3.9
TIRR Tirgusor 82.28 348 ⇑*i*P **P 21 45 13.3 -0.4**
LFF La Frestale 82.52 7 *e*P **P 21 45 15.1 +0.2**
comp=Z,13nm,0.6s,mb4.8
LFF La Frestale 82.52 7 *e*P **P 21 45 15.1 +0.2**
LFF pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
LFF La Frestale 82.52 7 *e*P **P 21 45 15.1 +0.2**
comp=Z,6.3nm,0.6s,mb4.8
CAF Calviac 82.63 7 *e*P **P 21 45 15.8 +0.3**
comp=Z,11nm,1.0s,mb4.5
CAF Calviac 82.63 7 *e*P **P 21 45 15.8 +0.3**
CAF pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
CAF Calviac 82.63 7 *e*P **P 21 45 15.8 +0.3**
comp=Z,5.6nm,1.0s,mb4.5
BNI Bardonecchia 82.75 3 *e*P **P 21 45 18.2 +2.1**
BNI pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
BNI Bardonecchia 82.75 3 *e*Pn **P 21 45 18.2 +2.1**
comp=Z,7.9nm,0.9s,mb4.7
ORIF Oris-en-Rattie 82.85 4 *e*P **P 21 45 17.4 +0.8**
comp=Z,5.7nm,0.7s,mb4.4
ORIF *e*MLR MLR
comp=Z,70nm,20.2s,MS3.7
ORIF Oris-en-Rattie 82.85 4 *e*P **P 21 45 17.4 +0.8**
ORIF pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
ORIF Oris-en-Rattie 82.85 4 *e*P **P 21 45 17.4 +0.8**
comp=Z,2.8nm,0.6s,mb4.5
VIVF Saint-Julien-l 82.86 5 *e*P **P 21 45 16.5 -0.1**
comp=Z,9.8nm,0.9s,mb4.5
VIVF Saint-Julien-l 82.86 5 *e*P **P 21 45 16.5 -0.1**
VIVF pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
VIVF Saint-Julien-l 82.86 5 *e*P **P 21 45 16.5 -0.1**
comp=Z,4.9nm,0.9s,mb4.5
MBDF Montbardon 83.07 3 *e*P **P 21 45 19.2 +1.4**
comp=Z,12nm,0.7s,mb4.7
MBDF Montbardon 83.07 3 *e*P **P 21 45 19.2 +1.4**
MBDF pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
MBDF Montbardon 83.07 3 *e*P **P 21 45 19.2 +1.4**
comp=Z,6.1nm,0.7s,mb4.7
SBF Sospel 83.96 3 *e*P **P 21 45 24.1 +1.8**
SJPF Ste Jean 84.16 9 *e*P **P 21 45 23.5 +0.1**
comp=Z,12nm,0.9s,mb4.8
SJPF Ste Jean 84.16 9 *e*P **P 21 45 23.5 +0.1**
SJPF pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
SJPF Ste Jean 84.16 9 *e*P **P 21 45 23.5 +0.1**
comp=Z,6.3nm,0.9s,mb4.8
EPF Esparros 84.38 8 *e*P **P 21 45 24.3 -0.2**
ETSF Etsaut 84.43 9 *e*P **P 21 45 24.9 +0.1**
comp=Z,10nm,0.8s,mb4.7
ETSF Etsaut 84.43 9 *e*P **P 21 45 24.9 +0.1**
ETSF pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
ETSF Etsaut 84.43 9 *e*P **P 21 45 24.9 +0.1**
comp=Z,5.3nm,0.8s,mb4.7
PGF Pioggiola 85.31 2 *e*P **P 21 45 29.7 +0.5**
comp=Z,20nm,0.8s,mb5.0
PGF Pioggiola 85.31 2 *e*P **P 21 45 29.7 +0.5**
PGF pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
PGF Pioggiola 85.31 2 *e*P **P 21 45 29.7 +0.5**
comp=Z,9.8nm,0.8s,mb5.0
BRTR Keskin Array B 86.10 343 P **P 21 45 33.5 +0.3**
comp=Z,0.9nm,0.7s,mb4.1,baz=356,slow=2.8,SNR=6.1
ESDC Sonseca Array 87.26 12 P **P 21 45 38.6 -0.2**
comp=Z,2.6nm,0.8s,mb4.5,baz=350,slow=4.9,SNR=10
WRA Warramunga Arr 87.36 232 P **P 21 45 37.2 -2.1**
comp=Z,1.8nm,0.8s,mb4.4,baz=34,slow=6.1,SNR=12
ASAR Alice Springs 90.75 230 P **P 21 45 54.2 -1.0**
comp=Z,2.5nm,0.8s,mb4.6,baz=36,slow=4.8,SNR=17
MMAI Mount Meron Ar 92.25 340 P **P 21 46 02.1 -0.2**
comp=Z,1.3nm,0.7s,mb4.3,baz=66,slow=8.5,SNR=3.0
MAW Mawson 151.19 219 PKPbc PKPbc 21 52 42.6 -1.6
comp=Z,3.6nm,0.8s,baz=152,slow=4.1,SNR=9.5
MAW PKPab PKPab 21 52 50.8 -1.4
comp=Z,6.0nm,0.9s,baz=40,slow=4.4,SNR=7.1

*NOU **12** 21:39:54.8±1.2, 20°.64S×168°.71E, h10km, MD2.7, ML3.5*
*IDC **12** 21:39:56.1±5.9, 20°.42S×168°.13E, h0km, mb4.0/4, mb1 4.1/4, mb1mx3.9/12, mbtmp4.0/4, Error ellipse: s-maj=154.3km s-min=50.9km az=127.0*
ISC 12 21:39:54.7±3.5, **20°.9S**±0°.3×**168°.6E**±0°.4, **h6**km±31km, **n9**, σ0°**69**/12, **mb3.9**/4, **Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.02**	**230**	*e*P	**Pn**	**21 40 30.3**	**+1.0**
BAYA				*e*S	**Sn**	**21 40 54.1**	**-0.6**
DZM	**Mont Dzumac**	**2.31**	**238**	*e*P	**Pn**	**21 40 32.7**	**-0.5**
DZM				*e*S	**Sn**	**21 41 01.3**	**-0.6**
DZM				AMP		21 41 09.6	
	comp=Z,2μm,0.5s						
NORM	**Noumea**	**2.36**	**235**	*e*P	**Pn**	**21 40 33.8**	**-0.1**
MVNO	**Noumea**	**2.41**	**234**	*e*P	**Pn**	**21 40 33.7**	**-1.0**
NOUC	**Port Laguerre**	**2.43**	**239**	*e*P	**Pn**	**21 40 35.5**	**+0.5**
NOUC				*e*S	**Sn**	**21 41 06.3**	**+1.3**
NOUC				AMP		21 41 06.4	
	comp=Z,115nm,3.4s						
STKA	**Stephens Creek**	**26.46**	**240**	P	**P**	**21 45 33.3**	**+0.7**
	comp=Z,3.9nm,1.1s,mb3.9,baz=96,slow=11,SNR=3.8						
WRA	**Warramunga Arr**	**32.05**	**266**	P	**P**	**21 46 22.1**	**-0.4**
	comp=Z,0.8nm,0.8s,mb3.6,baz=94,slow=8.0,SNR=4.9						
ASAR	**Alice Springs**	**32.15**	**258**	P	**P**	**21 46 23.2**	**-0.1**
	comp=Z,2.8nm,0.8s,mb4.2,baz=80,slow=8.6,SNR=17						
SONM	**Songino Array**	**88.14**	**323**	P	**P**	**21 52 46.1**	**-0.1**
	comp=Z,0.6nm,0.6s,mb4.0,baz=132,slow=4.2,SNR=3.6						

*NEIC **12** 21:40:17.4, 31°.39S×70°.21W, h124km, MD3.3(GUC), After GUC.*
GUC 12 21:40:17.4±0.9, **31°.39S×70°.21W, h124**km±8km, **MD3.3, ML3.6, 8C-10D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**0.71**	**287**	*e*P	Pn	21 40 37.8	+0.6
CMCH				*i* S	Sn	21 40 53.0	+1.0
CMCH	**Combarbala**	**0.71**	**287**	*e*P	Pn	21 40 37.8	+0.6
CMCH				*i* S	Sn	21 40 53.0	+1.0
CMCH				AML	AML	21 40 54.4	
	comp=N,5μm,0.2s						
OVCH	**Ovalle**	**1.15**	**312**	⇓*i*P	Pn	21 40 42.3	+1.1
OVCH				*i* S	Sn	21 41 00.7	+1.4
OVCH	**Ovalle**	**1.15**	**312**	⇓*i*P	Pn	21 40 42.3	+1.1
OVCH				*i* S	Sn	21 41 00.7	+1.4
OVCH				AML	AML	21 41 01.1	
	comp=N,1μm,0.2s						
CHNG	**Los Chungos**	**1.20**	**245**	⇓*i*P	Pn	21 40 42.0	+0.2
CHNG				*i* S	Sn	21 41 00.5	+0.2
CHNG				AML	AML	21 41 05.8	
	comp=E,335nm,0.4s						
TLL	**Tololo Astrono**	**1.32**	**337**	⇑*i*P	Pn	21 40 44.7	+1.7
TLL				*i* S	Sn	21 41 04.5	+2.0
TLL	**Tololo Astrono**	**1.32**	**337**	⇑*i*P	Pn	21 40 44.7	+1.7
TLL				*i* S	Sn	21 41 04.5	+2.0
TLL				AML	AML	21 41 07.1	
	comp=N,648nm,0.4s						
JACH	**Jahuel**	**1.33**	**194**	⇑*i*P	Pn	21 40 43.8	+0.7
JACH				*i* S	Sn	21 41 03.8	+1.1
JACH	**Jahuel**	**1.33**	**194**	⇑*i*P	Pn	21 40 43.8	+0.7
JACH				*i* S	Sn	21 41 03.8	+1.1
ROCH	**El Roble**	**1.72**	**203**	⇓*i*P	Pn	21 40 48.1	+0.5
ROCH				S	Sn	21 41 11.1	+0.5
ROCH	**El Roble**	**1.72**	**203**	⇓*i*P	Pn	21 40 48.1	+0.5
ROCH				*i* S	Sn	21 41 11.1	+0.5
PEL	**Peldehue**	**1.80**	**193**	⇓*i*P	Pn	21 40 49.0	+0.5
PEL				*i* S	Sn	21 41 12.5	+0.1
PEL				AML	AML	21 41 15.7	
	comp=N,430nm,0.4s						
FCH	**Farellones**	**1.94**	**182**	⇓*i*P	Pn	21 40 52.0	+1.8
FCH				*i* S	Sn	21 41 17.4	+2.0
FCH	**Farellones**	**1.94**	**182**	⇓*i*P	Pn	21 40 52.0	+1.8
FCH				*i* S	Sn	21 41 17.4	+2.0
FCH				AML	AML	21 41 23.3	
	comp=E,639nm,0.3s						
CLCH	**Cerro Calan**	**2.02**	**188**	*e*P	Pn	21 40 51.6	+0.4
CLCH				*i* S	Sn	21 41 17.6	+0.4
CLCH				AML	AML	21 41 24.1	
	comp=E,438nm,0.6s						
SAN	**Santiago**	**2.09**	**190**	*e*P	Pn	21 40 52.5	+0.3
SAN				*e*S	Sn	21 41 19.2	+0.3
SAN	**Santiago**	**2.09**	**190**	*e*P	Pn	21 40 52.5	+0.3
SAN				*e*S	Sn	21 41 19.2	+0.3
ANTU	**Antumapu**	**2.20**	**189**	*e*P	Pn	21 40 54.2	+0.6
ANTU				*i* S	Sn	21 41 21.7	+0.4
ANTU	**Antumapu**	**2.20**	**189**	*e*P	Pn	21 40 54.2	+0.6
ANTU				*i* S	Sn	21 41 21.7	+0.4
ANTU				AML	AML	21 41 23.5	
	comp=N,346nm,0.4s						
PCH	**Pirque**	**2.24**	**186**	⇓*i*P	Pn	21 40 54.9	+0.9
PCH				*i* S	Sn	21 41 22.4	+0.3
PCH	**Pirque**	**2.24**	**186**	⇓*i*P	Pn	21 40 54.9	+0.9
PCH				*i* S	Sn	21 41 22.4	+0.3
LCCH	**Las Cruces**	**2.38**	**209**	*e*P	Pn	21 40 55.8	+0.1
LCCH	**Las Cruces**	**2.38**	**209**	*e*P	Pn	21 40 55.8	+0.1
LCO	**Las Campanas**	**2.41**	**350**	*e*Pn	Pn	21 40 57.4	+1.2
LCO				*e*Sn	Sn	21 41 26.1	+0.2
LCO	**Las Campanas**	**2.41**	**350**	⇑*i*P	Pn	21 40 57.4	+1.2
LCO				⇑*i*P		21 40 57.4	
LCO				*i* S	Sn	21 41 27.0	+1.1
LCO				*i* S	Sn	21 41 27.0	+1.2
LCO				AML	AML	21 41 29.1	
	comp=E,443nm,0.3s						
LCO				AML	AML	21 41 29.1	
	comp=E,489nm,0.3s						
LMEL	**Las Melosas**	**2.45**	**180**	*e*P	Pn	21 40 57.7	+1.0
LMEL				S	Sn	21 41 29.2	+2.3
LMEL	**Las Melosas**	**2.45**	**180**	*e*P	Pn	21 40 57.7	+1.0
LMEL				*i* S	Sn	21 41 29.2	+2.3
LMEL				AML	AML	21 41 32.4	
	comp=N,390nm,0.1s						
CHCH	**Chadas Angostu**	**2.56**	**188**	⇑*i*P	Pn	21 40 58.5	+0.3
CHCH	**Chadas Angostu**	**2.56**	**188**	⇑*i*P	Pn	21 40 58.5	+0.3
CACH	**El Canelo**	**2.74**	**187**	*e*P	Pn	21 41 01.5	+1.1
CACH				S	Sn	21 41 33.7	+0.2
CACH	**El Canelo**	**2.74**	**187**	*e*P	Pn	21 41 01.5	+1.1
CACH				*i* S	Sn	21 41 33.7	+0.2
LNV	**Longovilo**	**2.75**	**201**	*e*P	Pn	21 40 59.8	-0.7
LNV				*i* S	Sn	21 41 32.5	-1.3
LNV	**Longovilo**	**2.75**	**201**	*e*P	Pn	21 40 59.8	-0.7
LNV				*i* S	Sn	21 41 32.5	-1.3

*ISCJB **12** 21:50:28.8±0.5, 40°.14N±0°.03×26°.91E±0°.04, h8km±6km, Error ellipse: s-maj=5.5km s-min=4.9km az=42.5*
*DDA **12** 21:50:28.7, 40°.12N×26°.96E, h7km±5km, Md2.8*
*ISK **12** 21:50:28.5, 40°.15N×26°.90E, h5km, MD2.7*
*CSEM **12** 21:50:29.1±0.1, 40°.15N×26°.90E, h8km, MD2.7, Error ellipse: s-maj=1.9km s-min=1.5km az=62.0*
ISC 12 21:50:29.2±0.5, **40°.14N**±0°.03×**26°.91E**±0°.04, **h9**km±6km, **n28**, σ0°**46**/41, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPK	**Lapseki**	**0.26**	**334**	*e*PG	**Pg**	**21 50 34.1**	**-0.4**
LPK				*e*SG	**Sg**	**21 50 37.7**	**-0.2**
LPK	**Lapseki**	**0.26**	**334**	*e*Pg	**Pg**	**21 50 34.1**	**-0.3**
LPK				*e*Sg	**Sg**	**21 50 37.7**	**-0.2**
KRBG	**Karabiga-Canak**	**0.39**	**50**	*e*PG	**Pg**	**21 50 36.9**	**0.0**
KRBG				*e*SG	**Sg**	**21 50 42.3**	**+0.3**
KRBG	**Karabiga-Canak**	**0.39**	**50**	*e*Pg	**Pg**	**21 50 36.9**	**0.0**
GELI	**Tayfur-Gelibol**	**0.42**	**308**	*e*PG	**Pg**	**21 50 37.0**	**-0.4**
GELI				*e*SG	**Sg**	**21 50 44.1**	**+1.1**
GELI	**Tayfur-Gelibol**	**0.42**	**308**	*e*Pg	**Pg**	**21 50 37.0**	**-0.5**
GELI				*e*Sg	**Sg**	**21 50 44.1**	**+1.1**
EZN	**Ezine**	**0.55**	**235**	*e*PG	**Pg**	**21 50 39.3**	**-0.6**
EZN				*e*SG	**Sg**	**21 50 47.5**	**+0.4**
EZN	**Ezine**	**0.55**	**235**	*e*Pg	**Pg**	**21 50 39.3**	**-0.6**
EZN				*e*Sg	**Sg**	**21 50 47.5**	**+0.5**
RKY	**Sarkoy-Tekirda**	**0.58**	**20**	*e*PG	**Pg**	**21 50 40.2**	**-0.3**
RKY	**Sarkoy-Tekirda**	**0.58**	**20**	*e*Pg	**Pg**	**21 50 40.2**	**-0.3**
GONE	**Gonen-Balikesi**	**0.60**	**99**	*e*PG	**Pg**	**21 50 40.8**	**0.0**
GONE	**Gonen-Balikesi**	**0.60**	**99**	*e*Pg	**Pg**	**21 50 40.8**	**-0.1**
ERIK	**Erikli-Kesan**	**0.61**	**330**	*e*PG	**Pg**	**21 50 40.6**	**-0.5**
ERIK				*e*SG	**Sg**	**21 50 49.1**	**+0.1**
ERIK	**Erikli-Kesan**	**0.61**	**330**	*e*Pg	**Pg**	**21 50 40.6**	**-0.4**
ERIK				*e*Sg	**Sg**	**21 50 49.1**	**+0.1**
BALY	**Balya**	**0.68**	**126**	*i* P	**Pg**	**21 50 42.7**	**+0.4**
BALY	**Balya**	**0.68**	**126**	*i* P	**Pg**	**21 50 42.7**	**+0.4**
ENEZ	**Enez**	**0.83**	**316**	*e*PG	**Pg**	**21 50 44.8**	**-0.4**
ENEZ	**Enez**	**0.83**	**316**	*e*Pg	**Pg**	**21 50 44.8**	**-0.4**
AYVA	**Ayvalik**	**0.85**	**192**	*i* P	**Pg**	**21 50 45.8**	**+0.2**
AYVA				*i* S	**Sg**	**21 50 56.5**	**-0.1**
AYVA	**Ayvalik**	**0.85**	**192**	*i* P	**Pg**	**21 50 45.8**	**+0.2**
AYVA				*i* S	**Sg**	**21 50 56.5**	**-0.1**
CRLT	**Corlu**	**1.17**	**32**	*e*PN	**Pn**	**21 50 51.3**	**-0.5**
CRLT	**Corlu**	**1.17**	**32**	*e*Pn	**Pn**	**21 50 51.3**	**-0.5**
CTKS	**Kestanel

EDRB	**Edirne**	**1.71**	**356**	*e*Pn	**Pn**	**21 50 59.5**	**+0.3**
EDRB	**Edirne**	**1.71**	**356**	*e*Pn	**Pn**	**21 50 59.5**	**+0.3**
DEMI	**Demirci**	**1.77**	**128**	*i* P	**Pn**	**21 51 00.3**	**+0.2**
DEMI				*i* S	**Sn**	**21 51 22.2**	**-0.6**
DEMI	**Demirci**	**1.77**	**128**	*i* P	**Pn**	**21 51 00.3**	**+0.2**
DEMI				*i* S	**Sn**	**21 51 22.2**	**-0.6**

ISCJB ***12*** *21:56:39.7±1.5,24°.11N±0°.09×125°.26E±0°.06, h23km±12km, mb3.5/3, Error ellipse: s-maj=15.1km s-min=7.1km az=159.2*
IDC ***12*** *21:56:39.2±5.2,23°.72N×124°.19E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/21, mbtmp3.5/3, Error ellipse: s-maj=327.0km s-min=25.6km az=61.0*
JMA ***12*** *21:56:40.4±0.3,24°.17N×125°.16E, h0km±4km, M3.3*
ISC 12 21:56:39.9±1.8,24°.12N±0°.09×125°.21E±0°.05,h14km±13km, n11,σ0§64/17,mb3.5/3,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**0.66**	**16**	P	**Pg**	**21 56 53.2**	**+0.4**
JOGS				S	**Sg**	**21 57 01.8**	**+0.3**
JMJ	**Miyako jima 2**	**0.69**	**6**	P	**Pg**	**21 56 53.5**	**+0.1**
JMJ				*e*S	**Sg**	**21 57 02.7**	**+0.1**
JTJ	**Tarama**	**0.69**	**318**	P	**Pg**	**21 56 53.1**	**-0.4**
JTJ				*e*S	**Sg**	**21 57 02.0**	**-0.6**
JIJ	**Ishigaki jima**	**1.00**	**284**	P	**Pb**	**21 56 59.0**	**-0.1**
JIJ				*e*S	**Sb**	**21 57 11.8**	**-0.4**
JKRS	**Kuro-shima**	**1.10**	**276**	P	**Pb**	**21 57 01.0**	**+0.2**
JKRS				*e*S	**Sb**	**21 57 15.4**	**+0.3**
HATJ	**Hateruma jima**	**1.29**	**267**	P	**Pn**	**21 57 03.4**	**-0.1**
IRIF	**Iriomote-Funau**	**1.37**	**279**	P	**Pn**	**21 57 05.9**	**+1.3**
IRIF				*e*S	**Sn**	**21 57 23.6**	**+1.0**
YOJ	**Yonaguni jima**	**2.04**	**280**	P	**Pn**	**21 57 13.3**	**-0.5**
MKAR	**Makanchi Array**	**40.97**	**314**	P	**P**	**22 04 20.5**	**-1.7**
	0.4nm,0.5s,mb3.3,baz=113,slow=9.6,SNR=13						
WRA	**Warramunga Arr**	**44.69**	**168**	P	**P**	**22 04 52.2**	**-0.4**
	0.5nm,0.5s,mb3.6,baz=348,slow=8.7,SNR=9.1						
ASAR	**Alice Springs**	**48.25**	**169**	P	**P**	**22 05 20.8**	**+0.3**
	0.3nm,0.6s,mb3.5,baz=354,slow=7.3,SNR=6.3						

NEIC 12 22:10:07.2±5.2,43°.09N×126°.50W,h10km,ML3.6,Error ellipse: s-maj=59.1km s-min=11.3km az=76.0,Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBO	**Dodson Butte**	**2.39**	**88**	P	Pn	22 10 45.6	-0.7
HUMO	**Hull Mountain**	**2.65**	**99**	*e*Pn	Pn	22 10 49.3	-0.6
HUMO				*e*S	Sn	22 11 23.3	+1.1
COR	**Corvallis**	**2.75**	**56**	*e*Pn	Pn	22 10 49.6	-1.8
COR				*e*S	Sn	22 11 26.1	+1.4
BBOR	**Butler Butte**	**2.81**	**93**	P	Pn	22 10 52.2	0.0
HEBO	**Mount Hebo**	**2.90**	**42**	*e*Pn	Pn	22 10 52.2	-1.2
YBH	**Yreka Blue Hor**	**3.12**	**115**	*e*Pn	Pn	22 10 57.2	+0.8
IRO	**Indian Ridge**	**3.22**	**72**	P	Pn	22 10 57.8	+0.1
SSOR	**Sweet Springs**	**3.41**	**57**	P	Pn	22 11 00.7	+0.4
HJOR	**Husband**	**3.53**	**71**	P	Pn	22 11 02.6	+0.6
WIFE	**Three Sisters-**	**3.54**	**73**	P	Pn	22 11 02.5	+0.4
GT2	**Goat Mountain**	**3.68**	**54**	P	Pn	22 11 04.5	+0.4
BKCOR	**Black Crater**	**3.69**	**69**	P	Pn	22 11 04.5	+0.3
BPO	**Bald Peter**	**3.81**	**64**	P	Pn	22 11 06.4	+0.5
HOOD	**Mount Hood Mea**	**4.14**	**56**	*e*Pn	Pn	22 11 11.3	+1.0
VLL	**Laurance Lake**	**4.20**	**54**	P	Pn	22 11 11.8	+0.7
VFP	**Flag Point**	**4.25**	**57**	P	Pn	22 11 13.1	+1.1
LON	**Longmire**	**4.95**	**41**	*e*Pn	Pn	22 11 21.8	+0.3
GL2	**New Goldendale**	**4.97**	**53**	P	Pn	22 11 22.2	+0.4

GUC 12 22:12:20.3±0.3,42°.10S×72°.48W,h6km±1km,ML3.7, 2C-2D,Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILCA	**Isla Las Cabra**	**0.06**	**308**	⇑*i*P	Pg	22 12 21.7	-0.2
ILCA				*i* S	Sg	22 12 23.0	+0.1
ILCA				AML	AML	22 12 23.9	
	comp=E,45μm,0.6s						
HOCH	**HornopirØn**	**0.20**	**16**	⇑*i*P	Pg	22 12 24.4	+0.2
HOCH				*i* S	Sg	22 12 27.3	+0.5
PUEL	**Puelo Alto**	**0.45**	**18**	⇓*i*P	Pg	22 12 29.0	0.0
PUEL				*i* S	Sg	22 12 35.6	+0.7
PMCH	**Puerto Montt**	**0.68**	**333**	⇓*i*P	Pg	22 12 33.2	-0.2
PMCH				*i* S	Sg	22 12 42.8	+0.6
OSCH	**Osorno**	**1.59**	**342**	*i* S	Sn	22 13 08.8	-1.1

ISCJB ***12*** *22:15:03.4±1.0,40°.26N±0°.07×77°.77E±0°.06, h10km, mb3.5/3, Error ellipse: s-maj=10.4km s-min=6.3km az=162.7*
NNC ***12*** *22:15:03.9±3.8,40°.41N×77°.72E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=39.0km s-min=17.4km az=150.0*
BJI ***12*** *22:15:06.2,40°.41N×77°.46E, h24km, ML3.5/6, Ms3.3/1*
IDC ***12*** *22:15:06.4±2.2,40°.45N×77°.52E, h0km, mb3.6/3, mb1 3.6/9, mb1mx3.4/28, mbtmp3.6/9, ML3.4/6, MS4.1/1, Ms1 4.1/1, ms1mx2.5/35, Error ellipse: s-maj=25.0km s-min=15.8km az=173.0*
NEIC ***12*** *22:15:07.2±1.3,40°.40N×77°.50E, h10km, mb3.4/1, Error ellipse: s-maj=19.1km s-min=11.5km az=153.0*
ISC 12 22:15:05.9±0.8,40°.27N±0°.06×77°.62E±0°.06,h10km,n36, σ1§46/46,mb3.5/3,10C-4D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**2.23**	**333**	P	**Pn**	**22 15 43.0**	**+0.2**
	SNR=266						
KZA	**Kyzart**	**2.54**	**316**	P	**Pn**	**22 15 48.0**	**+0.8**
	SNR=113						
KNDC	**Almaty**	**2.98**	**351**	⇑Pn	**Pn**	**22 15 54.9**	**+1.6**
	22nm,0.3s						
KNDC				⇑Pg	**Pg**	**22 15 57.9**	**-5.2**
	138nm,0.8s						
KNDC				⇑Lg		22 16 35.2	
	750nm,0.6s						
KBK	**Karagaybulak**	**3.12**	**321**	P	**Pn**	**22 15 56.5**	**+1.4**
	SNR=38						
AAK	**Ala-Archa**	**3.33**	**316**	P	**Pn**	**22 15 59.2**	**+1.3**
	SNR=25						
AAK	**Ala-Archa**	**3.33**	**316**	Pn	**Pn**	**22 15 59.3**	**+1.3**
	15nm,0.3s,baz=121,slow=9.4,SNR=28						
AAK				Pg	**Pg**	**22 16 04.7**	**-5.0**
	21nm,0.3s,baz=135,slow=12,SNR=56						
AAK				Lg		22 16 45.2	
	45nm,0.3s,baz=242,slow=20,SNR=17						
AAK	**Ala-Archa**	**3.33**	**316**	Pn	**Pn**	**22 15 59.3**	**+1.3**
AAK				Pg	**Pg**	**22 16 04.7**	**-5.0**
CHMS	**Chumysh**	**3.47**	**323**	P	**Pn**	**22 16 01.2**	**+1.2**
	SNR=21						
AML	**Almayashu**	**3.50**	**303**	P	**Pn**	**22 16 01.8**	**+1.5**
	SNR=48						
AML	**Almayashu**	**3.50**	**303**	*e*Pn	**Pn**	**22 16 01.6**	**+1.4**
AML				*e*S	**Sb**	**22 16 50.8**	**+0.5**
EKS2	**Erkin-Say**	**3.75**	**311**	P	**Pn**	**22 16 05.4**	**+1.7**
	SNR=33						
EKS2	**Erkin-Say**	**3.75**	**311**	*e*Pn	**Pn**	**22 16 05.1**	**+1.4**
EKS2				*e*S	**Sb**	**22 16 58.0**	**+0.4**
USP	**Ospenovka**	**3.79**	**323**	P	**Pn**	**22 16 05.9**	**+1.5**
	SNR=12						
KK31	**Karatay Array**	**6.03**	**300**	Pn	**Pn**	**22 16 35.0**	**-0.1**
	0.6nm,0.4s,baz=121,slow=11,SNR=25						
KK31				⇑Pg	**Pg**	**22 16 53.1**	**-8.2**
	4.6nm,0.6s,baz=130,slow=14,SNR=5.5						
KK31				⇑Lg		22 18 08.9	
	11nm,0.6s,baz=109,slow=30,SNR=5.5						
MK31	**Makanchi Array**	**7.35**	**26**	Pn	**Pn**	**22 16 53.5**	**+0.4**
	0.5nm,0.3s,baz=204,slow=10,SNR=32						
MK31				⇑Sn	**Sn**	**22 18 17.2**	**+0.7**
	1.5nm,0.4s						
MK31				⇑Lg		22 18 50.4	
	7.2nm,0.7s,baz=206,slow=30,SNR=5.7						
MK31	**Makanchi Array**	**7.35**	**26**	*e*Pn	**Pn**	**22 16 54.3**	**+1.2**
MK31				*e*S	**Sb**	**22 18 51.3**	**+10**
MKAR	**Makanchi Array**	**7.35**	**26**	Pn	**Pn**	**22 16 54.0**	**+0.9**
	0.7nm,0.3s,baz=205,slow=15,SNR=35						
MKAR				Sn	**Sn**	**22 18 14.5**	**-2.0**
	0.5nm,0.3s,baz=221,slow=17,SNR=3.0						
MKAR				Lg		22 18 54.8	
	1.0nm,0.3s,baz=214,slow=30,SNR=6.7						
MKAR	**Makanchi Array**	**7.35**	**26**	Pn	**Pn**	**22 16 54.0**	**+0.9**
MKAR				Sn	**Sn**	**22 18 14.5**	**-2.0**

KBL	**Kabul**	**8.90**	**233**	*e*Pn	**Pn**	**22 17 15.9**	**+1.4**
KBL				*e*S	**Sn**	**22 18 52.4**	**-2.4**
KURK	**Kurchatov**	**10.47**	**3**	⇑Pn	**Pn**	**22 17 34.3**	**-1.6**
	2.4nm,0.8s						
KURK				⇓Lg		22 20 34.2	
	31nm,1.2s						
KURK	**Kurchatov**	**10.47**	**3**	Pn	**Pn**	**22 17 33.6**	**-2.3**
	0.1nm,0.3s,baz=192,slow=12,SNR=12						
KURK				Lg		22 20 29.3	
	0.2nm,0.3s,baz=185,slow=32,SNR=6.5						
KURK	**Kurchatov**	**10.47**	**3**	*e*Pn	**Pn**	**22 17 34.9**	**-1.0**
KURK				*e*Sn	**Sn**	**22 19 27.8**	**-5.4**
VOSK	**Vostochnaya**	**13.26**	**342**	⇑Pn	**Pn**	**22 18 11.9**	**-2.2**
	1.8nm,1.0s						
VOSK				⇓Lg		22 21 57.4	
	45nm,1.4s						
BVAR	**Borovoye Array**	**13.68**	**341**	Pn	**Pn**	**22 18 17.6**	**-2.1**
	0.1nm,0.3s,baz=158,slow=13,SNR=4.1						
BVAR				Lg		22 22 07.3	
	0.4nm,0.3s,baz=140,slow=29,SNR=6.4						
ZRNK	**Zerenda**	**13.98**	**338**	⇓Pn	**Pn**	**22 18 21.8**	**-2.1**
	1.5nm,0.7s						
ZRNK				⇓Lg		22 22 23.5	
	23nm,1.4s						
ZALV	**Zalesovo Beam**	**14.52**	**17**	Pn	**Pn**	**22 18 30.9**	**-0.3**
	0.2nm,0.3s,baz=202,slow=11,SNR=4.0						
ZALV				Lg		22 22 41.8	
	0.2nm,0.3s,baz=199,slow=26,SNR=5.4						
ZALV	**Zalesovo Beam**	**14.52**	**17**	Pn	**Pn**	**22 18 30.9**	**-0.3**
AB31	**Akbulak array**	**15.41**	**312**	⇑Pn	**Pn**	**22 18 38.4**	**-4.7**
	0.6nm,0.6s,baz=110,slow=10,SNR=8.1						
ABKAR	**Akbulak array**	**15.41**	**312**	*e*Pn	**Pn**	**22 18 40.0**	**-3.2**
	2.5nm,1.3s						
AKTK	**Aktyubinsk**	**17.07**	**313**	Pn	**Pn**	**22 19 02.2**	**-2.3**
AKTO	**Aktyubinsk**	**17.07**	**313**	Pn	**Pn**	**22 19 02.2**	**-2.3**
	0.1nm,0.3s,baz=110,slow=15,SNR=3.2						
SONM	**Songino Array**	**21.93**	**60**	P	**P**	**22 20 01.2**	**+2.0**
	0.3nm,0.3s,mb3.1,baz=243,slow=9.5,SNR=2.6						
BHD	**Baghdad**	**27.42**	**266**	*ex*	x	22 20 32.0	
BHD				*i x*	x	22 21 03.0	
BHD				*i x*	x	22 21 27.0	
FINES	**FINESS Array B**	**37.50**	**322**	P	**P**	**22 22 18.6**	**-0.9**
	1.1nm,0.8s,mb3.6,baz=96,slow=9.8,SNR=6.3						
ARCES	**ARCESS Array B**	**39.83**	**334**	P	**P**	**22 22 38.6**	**-0.3**
	1.8nm,0.9s,mb3.8,baz=81,slow=7.6,SNR=3.9						
MJAR	**Matsushiro Arr**	**46.82**	**74**	LR	LR	22 45 13.0	
	comp=Z,204nm,21.6s,baz=260,slow=38						

SZGRF ***12*** *22:19:15.6,32°.89N×47°.96E, h33km, mb4.6, Iran-Iraq border region*
BJI ***12*** *22:19:16.0,33°.40N×47°.30E, h11km, mB4.7/19, mb4.5/31, Ms4.9/18, Ms7 4.5/17*
ISCJB ***12*** *22:19:18.0±0.7,33°.44N±0°.02×47°.31E±0°.02, h13km±4km, mb4.5/108, MS3.8/14, Error ellipse: s-maj=4.3km s-min=2.6km az=23.0*
IDC ***12*** *22:19:17.6±0.7,33°.49N×47°.38E, h0km, mb4.1/20, mb1 4.1/23, mb1mx4.1/29, mbtmp4.1/23, ML3.6/4, MS3.2/7, Ms1 3.2/7, ms1mx2.9/32, Error ellipse: s-maj=16.9km s-min=11.9km az=163.0*
CSEM ***12*** *22:19:19.5±0.1,33°.49N×47°.31E, h10km, mb4.6/78, Ms4.2, Error ellipse: s-maj=4.4km s-min=2.9km az=5.0*
TEH ***12*** *22:19:19.0,33°.38N×47°.23E, h4km*
NEIC ***12*** *22:19:19.0,33°.39N×47°.26E, h1km, mb4.6/58, MN4.3(TEH), After TEH.*
MOS ***12*** *22:19:20.3±1.1,33°.43N×47°.36E, h33km, mb4.7/58, Error ellipse: s-maj=7.5km s-min=3.9km az=128.9*
THR ***12*** *22:19:20.2±1.1,33°.50N×47°.37E, h14km±7km, ML4.1*
ISC 12 22:19:19.7±0.7,33°.46N±0°.03×47°.31E±0°.02,h12km±4km, n535,σ1§07/547,mb4.5/108,MS3.8/14,32C-9D,Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKOM	**Komasi**	**0.74**	**13**	Pg	**Pg**	**22 19 31.8**	**-2.2**
IKOM	**Komasi**	**0.74**	**13**	⇓*e*Pg	**Pg**	**22 19 32.1**	**-1.9**
IKOM				*e*Sg	**Sg**	**22 19 42.9**	**-0.8**
IKOM				*e*		22 19 44.0	
	comp=Z,4μm,0.2s						
IKOM	**Komasi**	**0.74**	**13**	⇓*e*Pg	**Pg**	**22 19 32.1**	**-1.9**
IKOM				*e*Sg	**Sg**	**22 19 42.9**	**-0.8**
IGHG	**Ghaleghazi**	**1.07**	**325**	Pg	**Pg**	**22 19 38.9**	**-1.4**
IGHG	**Ghaleghazi**	**1.07**	**325**	*e*Pg	**Pg**	**22 19 38.7**	**-1.6**
IGHG				*e*		22 20 02.1	
	comp=Z,46μm,0.2s						
IGHG	**Ghaleghazi**	**1.07**	**325**	*e*Pg	**Pg**	**22 19 38.7**	**-1.6**
IVIS	**Veis**	**1.13**	**340**	Pg	**Pg**	**22 19 39.6**	**-2.0**
IVIS	**Veis**	**1.13**	**340**	*e*Pg	**Pg**	**22 19 40.3**	**-1.3**
IVIS				*e*Sg	**Sg**	**22 19 55.3**	**-1.0**
IVIS				*e*		22 20 01.5	
	comp=Z,49μm,0.2s						
IVIS	**Veis**	**1.13**	**340**	*e*Pg	**Pg**	**22 19 40.3**	**-1.3**
IVIS				*e*Sg	**Sg**	**22 19 55.3**	**-1.0**
ILIN	**Lien**	**1.49**	**349**	Pg	**Pn**	**22 19 46.5**	**+0.2**
ILIN				Sg	**Sg**	**22 20 07.5**	**-0.1**
ILIN	**Lien**	**1.49**	**349**	⇑*e*Pg	**Pn**	**22 19 46.9**	**+0.6**
ILIN				*e*Sg	**Sg**	**22 20 08.0**	**+0.4**
ILIN				*e*		22 20 15.5	
	comp=Z,52μm,0.2s						
ILIN	**Lien**	**1.49**	**349**	⇑*e*Pg	**Pn**	**22 19 46.9**	**+0.6**
ILIN				*e*Sg	**Sg**	**22 20 08.0**	**+0.4**
SNGE	**Sanandaj**	**1.63**	**1**	*e*Pg	**Pn**	**22 19 49.2**	**+0.9**
SNGE				*e*Sg	**Sg**	**22 20 10.8**	**-1.5**
SNGE				AML	AML	22 20 16.2	
	comp=E,2μm,0.4s						
SNGE				AML	AML	22 20 20.4	
	comp=N,2μm,0.6s						
SNGE	**Sanandaj**	**1.63**	**1**	*e*Pg	**Pn**	**22 19 49.2**	**+0.9**
SNGE				*e*Sg	**Sg**	**22 20 10.8**	**-1.5**
SHGR	**Shooshtar-Gavs**	**1.84**	**137**	*e*Pg	**Pb**	**22 19 53.6**	**+0.3**
SHGR				*e*Sg	**Sg**	**22 20 18.6**	**-0.3**
SHGR				AML	AML	22 20 29.6	
	comp=N,2μm,0.6s						
SHGR				AML	AML	22 20 31.0	
	comp=E,2μm,0.6s						
SHGR	**Shooshtar-Gavs**	**1.84**	**137**	*e*Pg	**Pb**	**22 19 53.5**	**+0.2**
SHGR				*e*Sg	**Sg**	**22 20 18.6**	**-0.3**
ASAO	**Ashtian**	**2.50**	**63**	*e*Pn	**Pn**	**22 20 02.5**	**+2.2**
ASAO				*e*Sg	**Sg**	**22 20 36.8**	**-3.4**
ASAO				AML	AML	22 20 46.8	
	comp=E,807nm,0.6s						
ASAO				AML	AML	22 20 48.4	
	comp=N,753nm,0.7s						
IRAZ	**Razeghan**	**2.91**	**47**	Pn	**Pn**	**22 20 07.8**	**+1.9**
IRAZ	**Razeghan**	**2.91**	**47**	*e*Sg	**Sg**	**22 20 54.2**	**+1.0**
IRAZ				*e*Pn	**Pn**	**22 20 07.2**	**+1.3**
IRAZ				*e*		22 21 04.9	
	comp=Z,15μm,0.4s						
IPIR	**Pirpir**	**3.10**	**103**	Pn	**Pn**	**22 20 10.2**	**+1.6**
IPIR	**Pirpir**	**3.10**	**103**	⇑*e*Pn	**Pn**	**22 20 09.5**	**+0.9**
IPIR				*e*		22 21 09.5	
	comp=Z,7μm,0.3s						
IPIR	**Pirpir**	**3.10**	**103**	⇑*e*Pn	**Pn**	**22 20 09.5**	**+0.9**
ZNJK	**Zanjan**	**3.40**	**19**	*e*Pn	**Pn**	**22 20 14.5**	**+1.9**
GHVR	**GHOM**	**3.47**	**72**	*e*Pn	**Pn**	**22 20 15.1**	**+1.5**
GHVR				AML	AML	22 21 14.3	
	comp=N,367nm,0.6s						
GHVR				AML	AML	22 21 23.6	
	comp=E,554nm,3.9s						
IMHD	**Mahdasht**	**3.55**	**50**	Pn	**Pn**	**22 20 15.1**	**+0.4**
IMHD	**Mahdasht**	**3.55**	**50**	*e*Pn	**Pn**	**22 20 16.0**	**+1.3**
IMHD				*e*		22 21 15.9	
	comp=Z,5μm,0.4s						
IMHD	**Mahdasht**	**3.55**	**50**	*e*Pn	**Pn**	**22 20 16.0**	**+1.3**
IKLH	**Kolahrood**	**3.57**	**91**	Pn	**Pn**	**22 20 16.1**	**+1.1**
IKLH	**Kolahrood**	**3.57**	**91**	*e*Pn	**Pn**	**22 20 15.9**	**+0.9**
IKLH				*e*		22 21 20.7	
	comp=Z,5μm,0.3s						
IKLH	**Kolahrood**	**3.57**	**91**	*e*Pn	**Pn**	**22 20 15.9**	**+0.9**
THKV	**Tehran--Karaj**	**3.83**	**49**	*e*Pn	**Pn**	**22 20 19.8**	**+1.3**
THKV	**Tehran--Karaj**	**3.83**	**49**	*e*Pn	**Pn**	**22 20 19.8**	**+1.3**
IVRN	**Varamin**	**3.97**	**66**	*e*Pn	**Pn**	**22 20 21.5**	**+1.0**
IGAR	**Gharneh**	**4.12**	**103**	*e*Pn	**Pn**	**22 20 22.6**	**+0.1**
IGAR				*e*		22 21 42.7	
	comp=Z,2μm,0.3s						
ISFB	**Sefidab**	**4.20**	**76**	Pn	**Pn**	**22 20 23.3**	**-0.3**
ISFB	**Sefidab**	**4.20**	**76**	*e*Pn	**Pn**	**22 20 24.0**	**+0.4**
ISFB				*e*		22 21 36.3	
	comp=Z,4μm,0.5s						
ISFB	**Sefidab**	**4.20**	**76**	*e*Pn	**Pn**	**22 20 24.0**	**+0.4**
IZEF	**Zefreh**	**4.25**	**96**	*e*Pn	**Pn**	**22 20 24.7**	**+0.4**
IZEF	**Zefreh**	**4.25**	**96**	*e*Pn	**Pn**	**22 20 24.9**	**+0.6**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IZEF				*e*		22 21 50.4	
	comp=Z,2μm,0.4s						
IZEF	**Zefreh**	**4.25**	**96**	*e*Pn	**Pn**	**22 20 24.9**	**+0.6**
IAFJ	**Afjeh**	**4.35**	**55**	Pn	**Pn**	**22 20 27.1**	**+1.4**
IAFJ	**Afjeh**	**4.35**	**55**	*e*Pn	**Pn**	**22 20 26.9**	**+1.2**
IAFJ				*e*		22 21 50.7	
	comp=N,8μm,0.4s						
IAFJ	**Afjeh**	**4.35**	**55**	*e*Pn	**Pn**	**22 20 26.9**	**+1.2**
IAZR	**Azarshahr**	**4.35**	**346**	Pn	**Pn**	**22 20 27.7**	**+2.0**
IAZR	**Azarshahr**	**4.35**	**346**	*e*Pn	**Pn**	**22 20 26.6**	**+0.9**
IAZR				*e*		22 22 05.1	
	comp=Z,3μm,0.4s						
IAZR	**Azarshahr**	**4.35**	**346**	*e*Pn	**Pn**	**22 20 26.6**	**+0.9**
ISRB	**Sarab**	**4.37**	**4**	Pn	**Pn**	**22 20 27.0**	**+1.0**
ISRB	**Sarab**	**4.37**	**4**	*e*Pn	**Pn**	**22 20 28.3**	**+2.3**
ISRB				*e*		22 20 44.5	
	comp=Z,3μm,0.6s						
DAMV	**Damavand**	**4.42**	**59**	*e*Pn	**Pn**	**22 20 28.0**	**+1.4**
DAMV	**Damavand**	**4.42**	**59**	*e*Pn	**Pn**	**22 20 28.1**	**+1.5**
IDMV	**Damavand**	**4.44**	**60**	Pn	**Pn**	**22 20 27.4**	**+0.5**
IDMV	**Damavand**	**4.44**	**60**	*e*Pn	**Pn**	**22 20 28.0**	**+1.1**
IDMV				*e*		22 21 51.5	
	comp=Z,3μm,0.4s						
IDMV	**Damavand**	**4.44**	**60**	*e*Pn	**Pn**	**22 20 28.0**	**+1.1**
CUKT	**Cukurca**	**4.84**	**322**	*e*P	**Pn**	**22 20 31.4**	**-1.0**
CUKT	**Cukurca**	**4.84**	**322**	*e*P	**Pn**	**22 20 31.4**	**-1.1**
ITBZ	**Tabriz**	**4.86**	**349**	*e*Pn	**Pn**	**22 20 33.3**	**+0.6**
ITBZ				*e*		22 22 19.2	
	comp=Z,1μm,0.4s						
ITBZ	**Tabriz**	**4.86**	**349**	*e*Pn	**Pn**	**22 20 33.3**	**+0.6**
IPRN	**Peran**	**4.98**	**55**	Pn	**Pn**	**22 20 34.2**	**-0.2**
IPRN	**Peran**	**4.98**	**55**	*e*Pn	**Pn**	**22 20 34.3**	**-0.1**
IPRN				*e*		22 22 02.9	
	comp=Z,3μm,0.4s						
IPRN	**Peran**	**4.98**	**55**	*e*Pn	**Pn**	**22 20 34.3**	**-0.1**
IFIR	**Firoozkooh**	**4.99**	**63**	Pn	**Pn**	**22 20 35.1**	**+0.6**
IFIR	**Firoozkooh**	**4.99**	**63**	*e*Pn	**Pn**	**22 20 35.5**	**+1.0**
IFIR				*e*		22 20 54.0	
	comp=Z,824nm,0.2s						
IFIR	**Firoozkooh**	**4.99**	**63**	*e*Pn	**Pn**	**22 20 35.5**	**+1.0**
ISHB	**Shabestar**	**5.01**	**345**	Pn	**Pn**	**22 20 35.1**	**+0.4**
ISHB	**Shabestar**	**5.01**	**345**	*e*Pn	**Pn**	**22 20 35.4**	**+0.7**
ISHB				*e*		22 21 00.0	
	comp=Z,1μm,0.2s						
ILAS	**Lasjerd**	**5.05**	**66**	Pn	**Pn**	**22 20 35.4**	**+0.1**
ILAS	**Lasjerd**	**5.05**	**66**	*e*Pn	**Pn**	**22 20 36.4**	**+1.1**
ILAS				*e*		22 22 33.0	
	comp=Z,4μm,0.5s						
ILAS	**Lasjerd**	**5.05**	**66**	*e*Pn	**Pn**	**22 20 36.4**	**+1.1**
ISHM	**Shahmirzad**	**5.46**	**63**	Pn	**Pn**	**22 20 41.7**	**+0.7**
ISHM	**Shahmirzad**	**5.46**	**63**	*e*Pn	**Pn**	**22 20 41.7**	**+0.7**
ISHM				*e*		22 22 36.4	
	comp=Z,3μm,0.4s						
ISHM	**Shahmirzad**	**5.46**	**63**	*e*Pn	**Pn**	**22 20 41.7**	**+0.7**
ISAD	**Sadrabad**	**5.59**	**104**	*e*Pn	**Pn**	**22 20 42.5**	**-0.3**
ISAD	**Sadrabad**	**5.59**	**104**	*e*Pn	**Pn**	**22 20 42.5**	**-0.3**
IANJ	**Anjilo**	**5.81**	**68**	*e*Pn	**Pn**	**22 20 46.1**	**+0.3**
IANJ				*e*		22 22 39.4	
	comp=Z,986nm,0.5s						
IANJ	**Anjilo**	**5.81**	**68**	*e*Pn	**Pn**	**22 20 46.1**	**+0.3**
VANB	**Van**	**6.03**	**329**	*e*P	**Pn**	**22 20 50.4**	**+1.6**
VANB	**Van**	**6.03**	**329**	*e*P	**Pn**	**22 20 50.4**	**+1.6**
IPAR	**Pars**	**6.08**	**125**	Pn	**Pn**	**22 20 48.7**	**-0.7**
IPAR	**Pars**	**6.08**	**125**	*e*Pn	**Pn**	**22 20 48.8**	**-0.6**
IPAR				*e*		22 22 10.6	
	comp=Z,1μm,0.4s						
IPAR	**Pars**	**6.08**	**125**	*e*Pn	**Pn**	**22 20 48.8**	**-0.6**
IGLO	**Ghaloghah**	**6.16**	**59**	Pn	**Pn**	**22 20 50.4**	**-0.1**
IGLO	**Ghaloghah**	**6.16**	**59**	*e*Pn	**Pn**	**22 20 51.3**	**+0.8**
IGLO				*e*		22 21 18.3	
	comp=Z,2μm,0.4s						
IGLO	**Ghaloghah**	**6.16**	**59**	*e*Pn	**Pn**	**22 20 51.3**	**+0.8**
CLDR	**Caldiran**	**6.30**	**335**	*e*P	**Pn**	**22 20 56.5**	**+4.0**
IMEH	**Mehriz**	**6.51**	**106**	Pn	**Pn**	**22 20 55.0**	**-0.4**
IMEH	**Mehriz**	**6.51

VSR pmax pmax
comp=N,20nm,0.9s
VSR pmax pmax
comp=E,10.0nm,0.9s
VSR pmax pmax
comp=Z,20nm,0.9s
VSR Storozhevoye 18.72 344 *e*P **Pn 22 23 37.5 -1.0**
VOR Voronezh 19.19 345 P **Pn 22 23 45.0 +0.8**
VOR pmax pmax
comp=Z,160nm,1.2s
VOR Voronezh 19.19 345 P **Pn 22 23 45.0 +0.8**
comp=Z,160nm,1.2s
VRI Vrincioaia 20.05 314 ⇑P **P 22 23 53.1 +0.4**
VRI Vrincioaia 20.05 314 ⇑*i*P **P 22 23 53.1 +0.4**
VRI Vrincioaia 20.05 314 P **P 22 23 53.1 +0.4**
PLOR Plostina 20.09 314 ⇑P **P 22 23 58.2 +5.1**
PLOR Plostina 20.09 314 ⇑*i*P **P 22 23 58.2 +5.1**
MLR Muntele Rosu 20.34 312 ⇑P **P 22 23 58.5 +2.7**
MLR Muntele Rosu 20.34 312 ⇑*i*P **P 22 23 58.5 +2.7**
TESR 20.43 316 P **P 22 23 57.4 +0.5**
TESR 20.43 316 ⇑*i*P **P 22 23 56.5 -0.3**
TESR 20.43 316 ⇑*i*P **P 22 23 56.5 -0.3**
VOIR 20.87 312 P **P 22 24 02.9 +1.3**
VOIR 20.87 312 ⇑*i*P **P 22 24 03.0 +1.4**
VOIR 20.87 312 P **P 22 24 02.9 +1.3**
VTS Vitosha 21.01 303 ⇓P **P 22 24 07.7 +4.6**
VTS Vitosha 21.01 303 ⇓*i*P **P 22 24 07.7 +4.6**
AKASG Malin Array Be 21.75 328 P **P 22 24 08.8 -2.1**
comp=Z,0.9nm,0.4s,mb3.6,baz=126,slow=7.7,SNR=7.2
AKASG Malin Array Be 21.75 328 P **P 22 24 08.8 -2.1**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 21.75 328 P **P 22 24 08.8 -2.1**
comp=Z,1.0nm,0.4s,mb3.6
KIEV Kiev 21.75 328 *e*P **P 22 24 11.9 +0.9**
KIEV pmax pmax
comp=Z,4.0nm,0.7s,mb4.0
KIEV Kiev 21.75 328 *e*P **P 22 24 11.8 +0.9**
comp=Z,3.8nm,0.7s,mb3.9
KIEV Kiev 21.75 328 *e*P **P 22 24 11.9 +0.9**
comp=Z,4.0nm,0.7s,mb4.0
BUR01 Bucovina Ar. S 21.85 317 P **P 22 24 12.3 +0.2**
BUR01 Bucovina Ar. S 21.85 317 P **P 22 24 12.3 +0.2**
BURAR Bucovina Array 21.85 317 ⇑P **P 22 24 12.4 +0.3**
BURAR Bucovina Array 21.85 317 ⇑*i*P **P 22 24 12.4 +0.3**
BURAR Bucovina Array 21.85 317 ⇑*i*P **P 22 24 12.4 +0.3**
BUR08 Bucovina Ar. S 21.88 317 *e*P **P 22 24 12.3 -0.1**
BUR08 Bucovina Ar. S 21.88 317 *e*P **P 22 24 12.3 -0.1**
ATD Arta Tunnel 22.20 192 P **P 22 24 16.4 +0.3**
comp=Z,4.9nm,0.7s,mb4.0,baz=12,slow=9.3,SNR=2.5
ATD Arta Tunnel 22.20 192 P **P 22 24 16.4 +0.3**
BOLS Boljevac 22.27 305 *e*P **P 22 24 15.3 -1.3**
AML Almayashu 22.51 60 *e*P **P 22 24 19.7 +0.6**
comp=Z,9.5nm,1.2s,mb4.1
AML Almayashu 22.51 60 *e*P **P 22 24 19.7 +0.5**
comp=Z,9.5nm,1.2s,mb4.1
EKS2 Erkin-Say 22.70 58 *e*P **P 22 24 21.6 +0.4**
comp=Z,168nm,1.1s,mb5.4
EKS2 Erkin-Say 22.70 58 *e*P **P 22 24 21.6 +0.4**
comp=Z,168nm,1.1s,mb5.4
OBN Obninsk 22.93 344 ⇓*i*P **P 22 24 23.7 +0.2**
OBN *e* 22 28 08.5
OBN pmax pmax
comp=Z,41nm,1.7s,mb4.6
OBN Obninsk 22.93 344 *e*P **P 22 24 23.4 -0.1**
OBN Obninsk 22.93 344 *i* P **P 22 24 23.7 +0.2**
comp=Z,41nm,1.7s,mb4.6
DRGR 22.93 313 ⇑P **P 22 24 23.4 -0.2**
DRGR 22.93 313 P **P 22 24 25.7 +2.0**
DRGR 22.93 313 ⇑*i*P **P 22 24 23.4 -0.2**
DRGR 22.93 313 P **P 22 24 23.4 -0.2**
AAK Ala-Archa 23.21 59 P **P 22 24 28.4 +1.8**
comp=Z,1.1nm,0.3s,mb3.8,baz=265,slow=12,SNR=2.9
AAK LR LR 22 34 48.3
comp=Z,102nm,20.4s,MS3.3,baz=257,slow=40
AAK Ala-Archa 23.21 59 P **P 22 24 28.4 +1.8**
AAK pmax pmax
comp=Z,1.0nm,0.3s,mb3.7
AAK MLR MLR
comp=Z,102nm,20.4s,MS3.3
AAK Ala-Archa 23.21 59 P **P 22 24 28.4 +1.8**
comp=Z,102nm,20.4s
MOS Moscow 23.28 346 *e*P **P 22 24 27.7 +0.5**
MOS *e* 22 24 50.6
MOS pmax pmax
comp=Z,51nm,1.6s,mb4.7
MOS Moscow 23.28 346 *e*P **P 22 24 27.7 +0.5**
comp=Z,51nm,1.6s,mb4.7
DIVS Divibare 23.70 305 *e*P **P 22 24 32.3 +0.8**
LVV L'vov 23.73 320 *e*P **P 22 24 31.5 -0.2**
LVV L'vov 23.73 320 *e*P **P 22 24 31.5 -0.2**
KSH Kashi 23.77 67 P **P 22 24 30.0 -2.2**
KSH pmax pmax
comp=Z,13nm,1.0s,mb4.3
KSH pmax pmax
comp=Z,150nm,5.6s
KSH LR LR
comp=N,120nm,5.9s
KSH LR LR
comp=E,100nm,5.1s
KSH LR LR
comp=Z,96nm,6.2s
BBLS Lazići 24.04 304 *e*P **P 22 24 36.2 +1.6**
UZH Uzhgorod 24.05 317 *e*P **P 22 24 34.8 +0.1**
UZH *e* 22 25 01.8
UZH *e* 22 25 20.2
UZH Uzhgorod 24.05 317 *e*P **P 22 24 34.8 +0.1**
FGSL Fruska Gora 24.16 307 *e*P **P 22 24 36.2 +0.5**
FRGS Fruska Gora 24.16 307 *e*P **P 22 24 36.2 +0.5**
ARU Arti 24.25 15 *c i*P **P 22 24 36.0 -0.4**
ARU 22 25 16.4
ARU S **S 22 28 48.8 -5.9**
ARU SS 22 29 37.0
ARU pmax pmax
comp=Z,6.0nm,1.7s,mb3.8
ARU Arti 24.25 15 *e*P **P 22 24 36.1 -0.3**
comp=Z,7.8nm,0.9s,mb4.1
ARU Arti 24.25 15 *i* P **P 22 24 36.0 -0.4**
comp=Z,6.0nm,1.7s,mb3.8
KWP Kalwaria Pacla 24.34 319 *e*P **P 22 24 37.7 +0.4**
KWP pmax pmax
comp=Z,4.0nm,0.6s,mb4.0
KWP Kalwaria Pacla 24.34 319 *e*P **P 22 24 37.7 +0.4**
comp=Z,3.9nm,0.6s,mb4.0
KWP Kalwaria Pacla 24.34 319 *e*P **P 22 24 37.7 +0.4**
comp=Z,4.0nm,0.6s,mb4.0
CRVS Cervenica-Dubn 24.67 316 *e*P **P 22 24 41.4 +1.1**
CRVS pmax pmax
comp=Z,14nm,1.3s,mb4.3
CRVS Cervenica-Dubn 24.67 316 *e*P **P 22 24 41.4 +1.1**
comp=Z,14nm,1.3s,mb4.3
CRVS Cervenica-Dubn 24.67 316 *e*P **P 22 24 41.4 +1.1**
CRVS Cervenica-Dubn 24.67 316 *e*P **P 22 24 41.4 +1.1**
comp=Z,14nm,1.3s,mb4.3
KECS Kecovo 25.04 315 *e*P **P 22 24 46.0 +2.3**
KECS pmax pmax
comp=Z,4.0nm,1.0s,mb3.9
KECS Kecovo 25.04 315 *e*P **P 22 24 46.0 +2.3**
comp=Z,3.7nm,1.0s,mb3.9
KECS Kecovo 25.04 315 *e*P **P 22 24 46.0 +2.3**
STHS Stebnicka Huta 25.04 317 *e*P **P 22 24 45.2 +1.5**
STHS pmax pmax
comp=Z,3.0nm,1.1s,mb3.7
STHS Stebnicka Huta 25.04 317 *e*P **P 22 24 45.2 +1.5**
comp=Z,2.9nm,1.1s,mb3.7
STHS Stebnicka Huta 25.04 317 *e*P **P 22 24 45.2 +1.5**
STHS Stebnicka Huta 25.04 317 *e*P **P 22 24 45.2 +1.5**
comp=Z,2.9nm,1.1s,mb3.7
SVE Sverdlovsk 25.10 17 *e*P **P 22 24 42.7 -1.4**
SVE pmax pmax
comp=Z,18nm,1.2s,mb4.5
SVE Sverdlovsk 25.10 17 *e*P **P 22 24 42.7 -1.4**
comp=Z,18nm,1.2s,mb4.5
PSZ Piszkesteto 25.15 313 *e*P **P 22 24 46.5 +1.8**
PSZ pmax pmax
comp=Z,12nm,1.2s,mb4.3
PSZ Piszkesteto 25.15 313 *e*P **P 22 24 46.5 +1.8**
comp=Z,12nm,1.2s,mb4.3
PSZ Piszkesteto 25.15 313 *e*P **P 22 24 46.5 +1.8**
comp=Z,12nm,1.2s,mb4.3
RTK Rohtak 25.23 92 *e*PKP **P 22 24 45.1 -0.5**
PKSM Moragy 25.28 309 ⇑P **P 22 24 46.5 +0.6**
PKSM Moragy 25.28 309 ⇑*i*P **P 22 24 46.5 +0.6**
PKSM Moragy 25.28 309 P **P 22 24 46.5 +0.6**
BUD Budapest 25.51 312 ⇑*e*pP pP 22 24 46.9 -4.5
BUD Budapest 25.51 312 ⇓*e*P **P 22 24 48.3 +0.4**
BRVK Borovoye 25.57 33 ⇓*e*P **P 22 24 48.4 0.0**
BRVK pmax pmax
comp=Z,12nm,1.7s,mb4.2
BRVK Borovoye 25.57 33 *e*P **P 22 24 48.5 +0.1**
comp=Z,6.3nm,0.8s,mb4.2
BRVK Borovoye 25.57 33 *e*P **P 22 24 48.4 0.0**
comp=Z,12nm,1.7s,mb4.2
BVAR Borovoye Array 25.59 33 P **P 22 24 48.2 -0.4**
comp=Z,2.8nm,0.6s,mb4.0,baz=222,slow=8.7,SNR=13
BVAR PcP PcP 22 28 18.5 -0.9
comp=Z,0.5nm,0.5s,baz=225,slow=0.6,SNR=4.3
BVAR Borovoye Array 25.59 33 P **P 22 24 48.2 -0.5**
BVAR 22 28 18.5
BVAR pmax pmax
comp=Z,3.0nm,0.6s
BVAR Borovoye Array 25.59 33 P **P 22 24 48.2 -0.5**
comp=Z,3.0nm,0.6s,mb4.0
BVAR Borovoye Array 25.59 33 PcP PcP 22 28 18.5 -0.8
VYHS Vyhne 26.03 314 *e*P **P 22 24 53.6 +0.9**
VYHS pmax pmax
comp=Z,4.0nm,1.0s,mb3.9
VYHS Vyhne 26.03 314 *e*P **P 22 24 53.6 +0.9**
comp=Z,3.6nm,1.0s,mb3.9
VYHS Vyhne 26.03 314 *e*P **P 22 24 53.6 +0.9**
VYHS Vyhne 26.03 314 *e*P **P 22 24 53.6 +0.9**
comp=Z,3.6nm,1.0s,mb3.9
SONA Sohna 26.03 93 *e*PKP **P 22 24 52.6 -0.2**
KLP Kalpa 26.12 86 *e*PKP **P 22 24 53.7 0.0**
IDID Didziasalis 26.15 333 *e*P **P 22 24 53.5 -0.2**
IDID AMB AMB 22 24 58.3
comp=Z,5.7nm,1.3s,mb3.9
OJC Ojcow 26.25 318 P **P 22 24 52.1 -2.6**
OJC Ojcow 26.25 318 P **P 22 24 52.1 -2.6**
KOLL Kolacno 26.33 314 *e*P **P 22 24 56.3 +0.9**
KOLL Kolacno 26.33 314 *e*P **P 22 24 56.3 +0.9**
KOLL Kolacno 26.33 314 *e*P **P 22 24 56.3 +0.9**
IIGN Ignalina 26.37 332 *e*P **P 22 24 55.5 -0.2**
IIGN AMB AMB 22 25 00.5
comp=Z,5.4nm,1.2s,mb4.0
IZAR Zarasai 26.66 333 *e*P **P 22 24 56.8 -1.5**
IZAR AMB AMB 22 24 59.8
comp=Z,3.3nm,1.2s,mb3.8
SUW Suwalki 26.71 328 *e*P **P 22 25 00.4 +1.6**
SUW pmax pmax
comp=Z,38nm,1.2s,mb4.8
SUW Suwalki 26.71 328 *e*P **P 22 25 00.4 +1.6**
comp=Z,38nm,1.2s,mb4.8
SUW Suwalki 26.71 328 *e*P **P 22 25 00.4 +1.6**
comp=Z,38nm,1.2s,mb4.8
ZST Bratislava 26.98 312 *e*P **P 22 25 04.7 +3.5**
ZST pmax pmax
comp=Z,10.0nm,1.3s,mb4.2
ZST Bratislava 26.98 312 *e*P **P 22 25 04.7 +3.5**
comp=Z,9.8nm,1.3s,mb4.2
ZST Bratislava 26.98 312 *e*P **P 22 25 04.7 +3.5**
OKC Ostrava-Krasne 27.02 316 *e*P **P 22 25 02.2 +0.6**
OKC MLR MLR
comp=Z,200nm,7.8s
OKC Ostrava-Krasne 27.02 316 *e*P **P 22 25 02.2 +0.6**
OKC AMS AMS 23 22 40.0
comp=Z,200nm,7.8s
OKC Ostrava-Krasne 27.02 316 *e*P **P 22 25 02.2 +0.6**
comp=Z,200nm,7.8s
MORC Moravsky Berou 27.35 316 ⇑P **P 22 25 03.5 -1.0**
MORC Moravsky Berou 27.35 316 ⇑*i*P **P 22 25 03.5 -1.0**
MORC Moravsky Berou 27.35 316 P **P 22 25 03.5 -1.0**
VRAC Vranov 27.72 314 P **P 22 25 08.0 +0.1**
comp=Z,3.8nm,1.1s,mb3.9,baz=69,slow=12,SNR=5.9
VRAC Vranov 27.72 314 ⇑P **P 22 25 07.9 +0.1**
VRAC Vranov 27.72 314 ⇑*i*P **P 22 25 07.9 +0.1**
VRAC Vranov 27.72 314 *e*P **P 22 25 07.9 +0.1**
DPC Dobruska-Polom 28.30 316 *e*P **P 22 25 12.8 -0.2**
DPC MLR MLR
comp=Z,200nm,7.3s
DPC Dobruska-Polom 28.30 316 *e*P **P 22 25 12.8 -0.2**
DPC AMS AMS 23 22 40.0
comp=Z,200nm,7.3s
DPC Dobruska-Polom 28.30 316 *e*P **P 22 25 12.8 -0.2**
comp=Z,200nm,7.3s
TREC Trest 28.38 313 *e*P **P 22 25 14.7 +1.0**
TREC MLR MLR
comp=Z,100nm,19.2s,MS3.4
TREC Trest 28.38 313 *e*P **P 22 25 14.7 +1.0**
TREC AMS AMS 23 23 30.0
comp=Z,100nm,19.2s
TREC Trest 28.38 313 *e*P **P 22 25 14.7 +1.0**
comp=Z,100nm,19.2s
UPC Upice 28.55 316 *e*P **P 22 25 15.5 +0.3**
UPC Upice 28.55 316 *e*P **P 22 25 15.5 +0.3**
KURK Kurchatov 28.64 44 P **P 22 25 15.4 -0.6**
comp=Z,4.2nm,0.9s,mb4.2,baz=247,slow=9.2,SNR=14
KURK LR LR 22 37 57.3
comp=Z,73nm,18.2s,MS3.3,baz=205,slow=39
KURK Kurchatov 28.64 44 P **P 22 25 15.4 -0.7**
KURK pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
KURK MLR MLR
comp=Z,73nm,18.2s,MS3.3
KURK Kurchatov 28.64 44 P **P 22 25 15.4 -0.7**
comp=Z,73nm,18.2s
ASS Assisi 28.68 300 P **P 22 25 17.9 +1.4**
ASS Assisi 28.68 300 P **P 22 25 17.9 +1.4**
PTCC Patocco-Chiusa 28.84 307 P **P 22 25 19.3 +1.4**
comp=Z,9.7nm,1.2s,mb4.4
PTCC Patocco-Chiusa 28.84 307 P **P 22 25 19.3 +1.4**
comp=Z,9.7nm,1.2s,mb4.4
PRU Pruhonice 29.21 314 AMS AMS 23 24 40.0
AKL Akola 29.23 108 *e*PKP **P 22 25 21.9 +0.3**
PVCC Panska Ves 29.40 315 *e*P **P 22 25 23.3 +0.5**
PVCC AMS AMS 23 25 00.0
PVCC Panska Ves 29.40 315 *e*P **P 22 25 23.3 +0.5**
KHC Kasperske Hory 29.49 312 *e*P **P 22 25 24.3 +0.7**
KHC MLR MLR
comp=Z,100nm,18.5s,MS3.5
KHC Kasperske Hory 29.49 312 *e*P **P 22 25 24.3 +0.7**
KHC LR LR
comp=Z,100nm,18.5s,MS3.5
KHC Kasperske Hory 29.49 312 *e*P **P 22 25 24.3 +0.7**
KHC AMS AMS 23 24 20.0
comp=Z,100nm,18.5s
KHC Kasperske Hory 29.49 312 *e*P **P 22 25 24.3 +0.7**
comp=Z,100nm,18.5s
MK31 Makanchi Array 29.62 53 *e*P **P 22 25 25.1 +0.3**
MK31 Makanchi Array 29.62 53 *e*P **P 22 25 25.1 +0.3**
MKAR Makanchi Array 29.62 53 P **P 22 25 25.6 +0.8**
comp=Z,1.7nm,0.7s,mb3.9,baz=249,slow=6.1,SNR=8.5
MKAR LR LR 22 38 55.9
comp=Z,72nm,18.7s,MS3.3,baz=86,slow=40
MKAR Makanchi Array 29.62 53 P **P 22 25 25.6 +0.8**
MKAR pmax pmax
comp=Z,2.0nm,0.7s
MKAR MLR MLR
comp=Z,72nm,18.7s
MKAR Makanchi Array 29.62 53 P **P 22 25 25.6 +0.8**
comp=Z,72nm,18.7s
BRG Berggiesshubel 29.90 316 *e*(P) **P 22 25 33.1 +5.8**
comp=Z,5.5nm,1.4s,mb4.1
FNVD Fontana Vidola 29.94 302 P **P 22 25 30.4 +2.7**
comp=Z,34nm,1.2s,mb5.0
BDI Bagni Di Lucca 30.30 301 P **P 22 25 32.3 +1.5**
BDI pmax pmax
comp=Z,28nm,1.5s,mb4.8
BDI Bagni Di Lucca 30.30 301 P **P 22 25 32.3 +1.5**
comp=Z,28nm,1.5s,mb4.8
BDI Bagni Di Lucca 30.30 301 P **P 22 25 32.3 +1.5**
comp=Z,28nm,1.5s,mb4.8
GSCL Gusciola 30.34 302 P **P 22 25 33.2 +2.0**
comp=Z,27nm,1.3s,mb4.8
GSCL Gusciola 30.34 302 P **P 22 25 33.2 +2.0**
comp=Z,27nm,1.3s,mb4.8
NKC Novy Kostel 30.55 314 *e*P **P 22 25 33.0 0.0**
NKC MLR MLR
comp=Z,100nm,13.6s,MS3.6
NKC Novy Kostel 30.55 314 *e*P **P 22 25 33.0 0.0**
NKC AMS AMS 23 22 10.0
comp=Z,100nm,13.6s
NKC Novy Kostel 30.55 314 *e*P **P 22 25 33.0 0.0**
comp=Z,100nm,13.6s
CLL Collm 30.61 316 ⇑*i*P **P 22 25 31.7 -1.8**
CLL pmax pmax
comp=Z,42nm,2.6s,mb4.8
CLL Collm 30.61 316 ⇑*i*P **P 22 25 31.7 -1.8**
comp=Z,42nm,2.6s,mb4.8
CLL *e* 22 25 52.0
CLL Collm 30.61 316 ⇑*i*P **P 22 25 31.7 -1.8**
comp=Z,42nm,2.6s,mb4.8
CLL Collm 30.61 316 *i* P **P 22 25 31.7 -1.8**
comp=Z,42nm,2.6s,mb4.8
NGP Nagpur 30.63 105 *e*PKP **P 22 25 34.9 +0.9**
NGP AMb AMB 22 25 36.8
comp=Z,17nm,1.1s,mb4.8
GRF Grafenberg Arr 31.13 312 *e*P **P 22 25 37.9 -0.2**
comp=Z,10.0nm,1.4s,mb4.5
GRF Grafenberg Arr 31.13 312 *e*P **P 22 25 37.9 -0.2**
GRF pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
GRF Grafenberg Arr 31.13 312 *e*P **P 22 25 37.9 -0.2**
comp=Z,10.0nm,1.4s,mb4.5
JOF Joensuu 31.16 346 *e*P **P 22 25 37.2 -1.0**
JOF pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
JOF Joensuu 31.16 346 *e*p **P 22 25 37.2 -1.0**
comp=Z,4.0nm,0.9s,mb4.2
JOF Joensuu 31.16 346 *e*P **P 22 25 37.2 -1.0**
comp=Z,4.0nm,0.9s,mb4.2
FINES FINESS Array B 31.17 340 P **P 22 25 37.2 -1.0**
comp=Z,2.6nm,0.5s,mb4.3,baz=145,slow=10.0,SNR=31
FINES PcP PcP 22 28 31.6 -1.3
comp=Z,1.6nm,0.8s,baz=158,slow=1.5,SNR=3.8
FINES FINESS Array B 31.17 340 P **P 22 25 37.3 -1.0**
FINES 22 28 31.7
FINES pmax pmax
comp=Z,3.0nm,0.5s
FINES FINESS Array B 31.17 340 P **P 22 25 37.3 -1.0**
comp=Z,3.0nm,0.5s,mb4.4
FINES FINESS Array B 31.17 340 PcP PcP 22 28 31.7 -1.3
KEST Kesra 31.21 285 P **P 22 25 39.7 +0.7**
comp=Z,0.8nm,0.8s,mb3.6,baz=72,slow=6.4,SNR=2.9
DAVOX Davos/Dischmat 31.26 306 P **P 22 25 41.1 +1.8**
comp=Z,1.8nm,0.4s,mb4.2,baz=89,slow=6.6,SNR=3.1
DAVOX Davos/Dischmat 31.26 306 P **P 22 25 41.1 +1.8**
PGF Pioggiola 31.30 298 *e*P **P 22 25 39.8 +0.1**
comp=Z,30nm,1.2s,mb4.7
PGF Pioggiola 31.30 298 *e*P **P 22 25 39.8 +0.1**
PGF pmax pmax
comp=Z,15nm,1.2s,mb4.7
PGF Pioggiola 31.30 298 *e*P **P 22 25 39.8 +0.1**
comp=Z,15nm,1.2s,mb4.7
PGF Pioggiola 31.30 298 *e*P **P 22 25 39.8 +0.1**
comp=Z,15nm,1.2s,mb4.7
KAF Kangasniemi 31.65 341 *e*P **P 22 25 41.2 -1.4**
KAF pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
KAF Kangasniemi 31.65 341 *e*p **P 22 25 41.2 -1.4**
comp=Z,3.1nm,0.7s,mb4.2
KAF Kangasniemi 31.65 341 *e*P **P 22 25 41.2 -1.4**
comp=Z,3.1nm,0.7s,mb4.2
PCP Piancastagn 31.82 302 P **P 22 25 43.6 -0.7**
PCP Piancastagn 31.82 302 P **P 22 25 43.6 -0.7**
GKN Gorkha 32.42 90 *e*P **P 22 25 48.8 -0.9**
comp=Z,28nm,1.0s,mb5.1
SAOF Saorge 32.47 301 *e*P **P 22 25 50.9 +0.9**
SAOF Saorge 32.47 301 *e*P **P 22 25 50.9 +0.9**
SBF Sospel 32.55 300 *e*P **P 22 25 50.9 +0.3**
comp=Z,63nm,1.0s,mb5.2
SBF Sospel 32.55 300 *e*P **P 22 25 50.9 +0.3**
SBF pmax pmax
comp=Z,31nm,1.0s,mb5.2
SBF Sospel 32.55 300 *e*P **P 22 25 50.9 +0.3**
comp=Z,32nm,1.0s,mb5.2
SBF Sospel 32.55 300 *e*P **P 22 25 50.9 +0.3**
comp=Z,32nm,1.0s,mb5.2
AUTN L'Aution 32.56 301 *e*P **P 22 25 51.7 +0.9**
AUTN L'Aution 32.56 301 *e*P **P 22 25 51.7 +0.9**
LUCF Luceram 32.61 300 *e*P **P 22 25 52.4 +1.2**
LUCF Luceram 32.61 300 *e*P **P 22 25 52.4 +1.2**
TOUF Mont Tournerai 32.69 301 *e*P **P 22 25 53.0 +1.1**
TOUF Mont Tournerai 32.69 301 *e*P **P 22 25 53.0 +1.1**
MVIF Mont Vial 32.75 300 *e*P **P 22 25 53.3 +0.9**
MVIF Mont Vial 32.75 300 *e*P **P 22 25 53.3 +0.9**
WMQ Urumqi 32.91 60 P **P 22 25 54.5 +0.7**
WMQ PP PP 22 27 08.1 0.0
WMQ PcP PcP 22 28 37.2 -0.9
WMQ pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
WMQ pmax pmax
comp=Z,170nm,4.6s
WMQ LR LR
comp=N,200nm,18.2s,MS4.0
WMQ LR LR
comp=E,140nm,16.0s,MS4.0
WMQ LR LR
comp=Z,130nm,16.0s,MS3.7
NVS Novosibirsk 32.94 39 *e*P **P 22 25 50.2 -3.8**
NVS pmax pmax
comp=N,9.0nm,1.4s
NVS pmax pmax
comp=E,6.0nm,1.4s
NVS pmax pmax
comp=Z,9.0nm,1.4s,mb4.5
DMN Daman 32.95 90 *e*P **P 22 25 53.5 -0.8**
comp=Z,24nm,0.9s,mb5.1
KKN Kakani 33.03 90 *e*P **P 22 25 53.5 -1.6**
FRF La Foret Royal 33.09 300 *e*P **P 22 25 55.5 +0.1**
comp=Z,26nm,1.2s,mb4.7
FRF La Foret Royal 33.09 300 *e*P **P 22 25 55.5 +0.1**
FRF pmax pmax
comp=Z,13nm,1.2s,mb4.7
FRF La Foret Royal 33.09 300 *e*P **P 22 25 55.5 +0.1**
comp=Z,13nm,1.2s,mb4.7
FRF La Foret Royal 33.09 300 *e*P **P 22 25 55.5 +0.1**
comp=Z,13nm,1.2s,mb4.7
MBDF Montbardon 33.10 302 *e*P **P 22 25 55.6 +0.1**
comp=Z,21nm,0.8s,mb4.8
MBDF Montbardon 33.10 302 *e*P **P 22 25 55.6 +0.1**
MBDF pmax pmax
comp=Z,11nm,0.8s,mb4.8
MBDF Montbardon 33.10 302 *e*P **P 22 25 55.6 +0.1**
comp=Z,11nm,0.8s,mb4.8
MBDF Montbardon 33.10 302 *e*P **P 22 25 55.6 +0.1**
comp=Z,11nm,0.8s,mb4.8
LMR La Mourre 33.18 299 *e*P **P 22 25 56.3 +0.1**
comp=Z,38nm,1.4s,mb4.8
LMR La Mourre 33.18 299 *e*P **P 22 25 56.3 +0.1**
LMR pmax pmax
comp=Z,19nm,1.4s,mb4.8
LMR La Mourre 33.18 299 *e*P **P 22 25 56.3 +0.1**
comp=Z,19nm,1.4s,mb4.8
LMR La Mourre 33.18 299 *e*P **P 22 25 56.3 +0.1**
comp=Z,19nm,1.4s,mb4.8
LPG La Plagne 33.20 303 *e*P **P 22 25 56.3 0.0**
comp=Z,35nm,1.0s,mb4.9
LPG La Plagne 33.20 303 *e*P **P 22 25 56.3 0.0**
LPG pmax pmax
comp=Z,17nm,1.0s,mb4.9
LPG La Plagne 33.20 303 *e*P **P 22 25 56.3 0.0**
comp=Z,17nm,1.0s,mb4.9
LPG La Plagne 33.20 303 *e*P **P 22 25 56.3 0.0**
comp=Z,17nm,1.0s,mb4.9
BNI Bardonecchia 33.20 303 *e*P **P 22 25 56.5 +0.2**
BNI pmax pmax
comp=Z,33nm,0.8s,mb5.3
BNI Bardonecchia 33.20 303 *e*P **P 22 25 56.5 +0.1**
comp=Z,33nm,0.8s,mb5.3
BNI Bardonecchia 33.20 303 *e*P **P 22 25 56.5 +0.2**
comp=Z,33nm,0.8s,mb5.3
PKIN Phulchoki 33.20 90 *e*P **P 22 25 55.7 -0.8**
comp=Z,36nm,1.3s,mb5.1
PKI Pulchoki 33.21 90 *e*P **P 22 25 55.7 -0.9**
comp=Z,19nm,0.8s,mb5.0
LPL La Plagne 33.21 303 *e*P **P 22 25 56.4 -0.1**
comp=Z,48nm,1.0s,mb5.1
LPL La Plagne 33.21 303 *e*P **P 22 25 56.4 -0.1**
LPL pmax pmax
comp=Z,24nm,1.0s,mb5.1
LPL La Plagne 33.21 303 *e*P **P 22 25 56.4 -0.1**
comp=Z,24nm,1.0s,mb5.1
LPL La Plagne 33.21 303 *e*P **P 22 25 56.4 -0.1**
comp=Z,24nm,1.0s,mb5.1
CDF Champ du Feu 33.31 309 *e*P **P 22 25 56.6 -0.7**
comp=Z,6.9nm,1.1s,mb4.2
CDF Champ du Feu 33.31 309 *e*P **P 22 25 56.6 -0.7**
CDF pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
CDF Champ du Feu 33.31 309 *e*P **P 22 25 56.6 -0.7**
comp=Z,3.5nm,1.1s,mb4.2
CDF Champ du Feu 33.31 309 *e*P **P 22 25 56.6 -0.7**
comp=Z,3.5nm,1.1s,mb4.2
ZALV Zalesovo Beam 33.43 41 P **P 22 25 57.4 -0.8**
comp=Z,3.5nm,0.8s,mb4.4,baz=260,slow=8.9,SNR=12

ZALV LR LR 22 42 09.2
comp=Z,20nm,19.3s,MS2.9,baz=59,slow=41
ZALV Zalesovo Beam 33.43 41 P P 22 25 57.4 -0.8
ZALV LR LR 22 42 09.2
HINF Hinteralfeld 33.48 308 *eP* **P 22 25 58.0 -0.7**
comp=Z,9.0nm,0.9s,mb4.4
HINF Hinteralfeld 33.48 308 *eP* **P 22 25 58.0 -0.7**
HINF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
HINF Hinteralfeld 33.48 308 *eP* **P 22 25 58.0 -0.7**
comp=Z,4.5nm,0.9s,mb4.4
HINF Hinteralfeld 33.48 308 *eP* **P 22 25 58.0 -0.7**
comp=Z,4.5nm,0.9s,mb4.4
GUN Gumba 33.49 89 *eP* **P 22 25 59.5 +0.4**
ORIF Oris-en-Rattie 33.75 302 *eP* **P 22 25 59.9 -1.2**
comp=Z,8.0nm,0.7s,mb4.5
ORIF Oris-en-Rattie 33.75 302 *eP* **P 22 25 59.9 -1.2**
ORIF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
ORIF Oris-en-Rattie 33.75 302 *eP* **P 22 25 59.9 -1.2**
comp=Z,4.0nm,0.7s,mb4.5
ORIF Oris-en-Rattie 33.75 302 *eP* **P 22 25 59.9 -1.2**
comp=Z,4.0nm,0.7s,mb4.5
CABF La Chapelle 33.80 305 *eP* **P 22 26 01.6 0.0**
comp=Z,23nm,0.6s,mb5.0
CABF La Chapelle 33.80 305 *eP* **P 22 26 01.6 0.0**
CABF pmax pmax
comp=Z,12nm,0.6s,mb5.0
CABF La Chapelle 33.80 305 *eP* **P 22 26 01.6 0.0**
comp=Z,12nm,0.6s,mb5.0
CABF La Chapelle 33.80 305 *eP* **P 22 26 01.6 0.0**
comp=Z,12nm,0.6s,mb5.0
JIRN Jiri 33.84 89 *eP* **P 22 26 01.6 -0.5**
comp=Z,13nm,0.4s,mb5.2
HAU Haudompre 33.85 308 *eP* **P 22 26 00.9 -1.0**
comp=Z,18nm,1.2s,mb4.6
HAU Haudompre 33.85 308 *eP* **P 22 26 00.9 -1.0**
HAU pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
HAU Haudompre 33.85 308 *eP* **P 22 26 00.9 -1.0**
comp=Z,9.3nm,1.2s,mb4.6
HAU Haudompre 33.85 308 *eP* **P 22 26 00.9 -1.0**
comp=Z,9.2nm,1.2s,mb4.6
RAMN Ramite 34.42 90 *eP* **P 22 26 06.1 -1.1**
comp=Z,21nm,0.7s,mb5.2
VIVF Saint-Julien-l 34.60 302 *eP* **P 22 26 07.7 -0.8**
comp=Z,63nm,1.4s,mb5.1
VIVF Saint-Julien-l 34.60 302 *eP* **P 22 26 07.7 -0.8**
VIVF pmax pmax
comp=Z,31nm,1.4s,mb5.0
VIVF Saint-Julien-l 34.60 302 *eP* **P 22 26 07.7 -0.8**
comp=Z,31nm,1.4s,mb5.0
VIVF Saint-Julien-l 34.60 302 *eP* **P 22 26 07.7 -0.8**
comp=Z,31nm,1.4s,mb5.1
MEZF Maizieres J'vi 34.79 308 *eP* **P 22 26 09.5 -0.6**
comp=Z,34nm,1.1s,mb4.9
MEZF Maizieres J'vi 34.79 308 *eP* **P 22 26 09.5 -0.6**
comp=Z,34nm,1.1s,mb5.2
MEZF Maizieres J'vi 34.79 308 *eP* **P 22 26 09.5 -0.6**
comp=Z,17nm,1.1s,mb4.9
LASF Ste Croix 35.14 301 *eP* **P 22 26 12.5 -0.7**
LASF Ste Croix 35.14 301 *eP* **P 22 26 12.5 -0.7**
TAPN Taplejung 35.21 89 *eP* **P 22 26 13.7 -0.3**
comp=Z,31nm,0.8s,mb5.3
SMF Signal de Mont 35.34 305 *eP* **P 22 26 14.1 -0.8**
comp=Z,34nm,1.0s,mb4.9
SMF Signal de Mont 35.34 305 *eP* **P 22 26 14.1 -0.8**
SMF pmax pmax
comp=Z,17nm,1.0s,mb4.9
SMF Signal de Mont 35.34 305 *eP* **P 22 26 14.1 -0.8**
comp=Z,17nm,1.0s,mb4.9
SMF Signal de Mont 35.34 305 *eP* **P 22 26 14.1 -0.8**
comp=Z,17nm,1.0s,mb4.9
LOR Lormes 35.40 306 *eP* **P 22 26 14.5 -0.9**
comp=Z,5.8nm,0.8s,mb4.3
LOR Lormes 35.40 306 *eP* **P 22 26 14.5 -0.9**
LOR pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
LOR Lormes 35.40 306 *eP* **P 22 26 14.5 -0.9**
comp=Z,2.9nm,0.8s,mb4.3
LOR Lormes 35.40 306 *eP* **P 22 26 14.5 -0.9**
comp=Z,2.9nm,0.8s,mb4.3
PLDF La Plantade 35.43 304 *eP* **P 22 26 15.3 -0.3**
PLDF La Plantade 35.43 304 *eP* **P 22 26 15.3 -0.3**
BAIF Baives 35.61 311 *eP* **P 22 26 17.0 -0.2**
comp=Z,14nm,1.0s,mb4.5
BAIF Baives 35.61 311 *eP* **P 22 26 17.0 -0.2**
BAIF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
BAIF Baives 35.61 311 *eP* **P 22 26 17.0 -0.2**
comp=Z,7.2nm,1.0s,mb4.6
BAIF Baives 35.61 311 *eP* **P 22 26 17.0 -0.2**
comp=Z,7.2nm,1.0s,mb4.6
SSF Saint Saulge 35.62 306 *eP* **P 22 26 16.5 -0.7**
comp=Z,28nm,1.2s,mb4.8
SSF Saint Saulge 35.62 306 *eP* **P 22 26 16.5 -0.7**
SSF pmax pmax
comp=Z,14nm,1.2s,mb4.8
SSF Saint Saulge 35.62 306 *eP* **P 22 26 16.5 -0.7**
comp=Z,14nm,1.2s,mb4.8
SSF Saint Saulge 35.62 306 *eP* **P 22 26 16.5 -0.7**
comp=Z,14nm,1.2s,mb4.8
LBL Lubilhac 35.63 302 *eP* **P 22 26 17.1 -0.3**
LBL Lubilhac 35.63 302 *eP* **P 22 26 17.1 -0.3**
AVF Avril sur Loir 35.69 305 *eP* **P 22 26 17.1 -0.8**
comp=Z,40nm,1.4s,mb4.8
AVF Avril sur Loir 35.69 305 *eP* **P 22 26 17.1 -0.8**
AVF pmax pmax
comp=Z,20nm,1.4s,mb4.8
AVF Avril sur Loir 35.69 305 *eP* **P 22 26 17.1 -0.8**
comp=Z,20nm,1.4s,mb4.8
AVF Avril sur Loir 35.69 305 *eP* **P 22 26 17.1 -0.8**
comp=Z,20nm,1.4s,mb4.8
AGO Saint Agoulin 35.77 304 *eP* **P 22 26 18.5 -0.1**
AGO Saint Agoulin 35.77 304 *eP* **P 22 26 18.5 -0.1**
BGF Bois d'Agland 36.02 305 *eP* **P 22 26 19.9 -0.8**
comp=Z,13nm,0.9s,mb4.6
BGF Bois d'Agland 36.02 305 *eP* **P 22 26 19.9 -0.8**
BGF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
BGF Bois d'Agland 36.02 305 *eP* **P 22 26 19.9 -0.8**
comp=Z,6.4nm,0.9s,mb4.5
BGF Bois d'Agland 36.02 305 *eP* **P 22 26 19.9 -0.8**
comp=Z,6.4nm,0.9s,mb4.6
NOA NORSAR Array B 36.09 331 P **P 22 26 19.6 -1.5**
comp=Z,0.3nm,0.6s,mb3.4,baz=135,slow=8.8,SNR=2.8
NOA NORSAR Array B 36.09 331 P **P 22 26 19.6 -1.5**
HYF Humbligny 36.23 306 *eP* **P 22 26 22.3 -0.2**
HYF Humbligny 36.23 306 *eP* **P 22 26 22.3 -0.2**
TCF Toulx Ste Croi 36.43 304 *eP* **P 22 26 23.9 -0.3**
comp=Z,9nm,1.1s,mb4.6
TCF Toulx Ste Croi 36.43 304 *eP* **P 22 26 23.9 -0.3**
TCF pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
TCF Toulx Ste Croi 36.43 304 *eP* **P 22 26 23.9 -0.3**
comp=Z,8.3nm,1.1s,mb4.6
TCF Toulx Ste Croi 36.43 304 *eP* **P 22 26 23.9 -0.3**
comp=Z,8.2nm,1.1s,mb4.6
RJF Les Rejaudoux 36.86 302 *eP* **P 22 26 27.7 -0.2**
comp=Z,49nm,1.5s,mb4.8
RJF Les Rejaudoux 36.86 302 *eP* **P 22 26 27.7 -0.2**
RJF pmax pmax
comp=Z,24nm,1.5s,mb4.8
RJF Les Rejaudoux 36.86 302 *eP* **P 22 26 27.7 -0.2**
comp=Z,24nm,1.5s,mb4.8
RJF Les Rejaudoux 36.86 302 *eP* **P 22 26 27.7 -0.2**
comp=Z,24nm,1.5s,mb4.8
LSA Lhasa 37.33 84 *eP* **P 22 26 32.5 +0.4**
LSA pmax pmax
comp=Z,10.0nm,0.9s,mb4.7
LSA Lhasa 37.33 84 *eP* **P 22 26 32.5 +0.4**
comp=Z,9.6nm,0.9s,mb4.6
LSA Lhasa 37.33 84 *eP* **P 22 26 32.5 +0.4**
comp=Z,10.0nm,0.9s,mb4.7
LFF La Frestale 37.40 302 *eP* **P 22 26 31.1 -1.3**
comp=Z,13nm,0.9s,mb4.5
LFF La Frestale 37.40 302 *eP* **P 22 26 31.1 -1.3**
LFF pmax pmax
comp=Z,6.0nm,0.9s,mb4.4
LFF La Frestale 37.40 302 *eP* **P 22 26 31.1 -1.3**
comp=Z,6.4nm,0.9s,mb4.5
LFF La Frestale 37.40 302 *eP* **P 22 26 31.1 -1.3**
comp=Z,6.4nm,0.9s,mb4.5
MFF Saint Martin d 38.08 305 *eP* **P 22 26 37.0 -1.2**
comp=Z,61nm,1.4s,mb4.8
MFF Saint Martin d 38.08 305 *eP* **P 22 26 37.0 -1.2**
MFF pmax pmax
comp=Z,31nm,1.4s,mb4.8
MFF Saint Martin d 38.08 305 *eP* **P 22 26 37.0 -1.2**
comp=Z,31nm,1.4s,mb4.8
MFF Saint Martin d 38.08 305 *eP* **P 22 26 37.0 -1.2**
comp=Z,31nm,1.4s,mb4.8
ARCES ARCESS Array B 38.13 348 P **P 22 26 37.4 -0.9**
comp=Z,1.2nm,0.7s,mb3.7,baz=160,slow=9.8,SNR=11
ARCES LR LR 22 43 13.7
comp=Z,37nm,21.7s,MS3.2,baz=281,slow=38
ARCES ARCESS Array B 38.13 348 P **P 22 26 37.4 -0.9**
ARCES pmax pmax
comp=Z,1.0nm,0.7s
ARCES MLR MLR
comp=Z,37nm,21.7s
ARCES ARCESS Array B 38.13 348 P **P 22 26 37.4 -0.9**
comp=Z,37nm,21.7s
TAM Tamanrasset 38.13 265 *eP* **P 22 26 40.9 +2.0**
TAM pmax pmax
comp=Z,5.0nm,1.3s,mb4.1
TAM Tamanrasset 38.13 265 *eP* **P 22 26 40.9 +1.9**
comp=Z,4.9nm,1.3s,mb4.1
TAM Tamanrasset 38.13 265 *eP* **P 22 26 40.9 +2.0**
comp=Z,5.0nm,1.3s,mb4.1
LDF La Druitiere 38.21 308 *eP* **P 22 26 37.8 -1.4**
comp=Z,3.4nm,0.4s,mb4.1
LDF La Druitiere 38.21 308 *eP* **P 22 26 37.8 -1.4**
LDF pmax pmax
comp=Z,2.0nm,0.4s,mb4.2
LDF La Druitiere 38.21 308 *eP* **P 22 26 37.8 -1.4**
comp=Z,1.7nm,0.4s,mb4.1
LDF La Druitiere 38.21 308 *eP* **P 22 26 37.8 -1.4**
comp=Z,1.7nm,0.4s,mb4.1
FLN La Foliniere 38.46 308 *eP* **P 22 26 40.0 -1.4**
comp=Z,14nm,0.7s,mb4.5
FLN La Foliniere 38.46 308 *eP* **P 22 26 40.0 -1.4**
FLN pmax pmax
comp=Z,7.0nm,0.7s,mb4.5
FLN La Foliniere 38.46 308 *eP* **P 22 26 40.0 -1.4**
comp=Z,6.8nm,0.7s,mb4.5
FLN La Foliniere 38.46 308 *eP* **P 22 26 40.0 -1.4**
comp=Z,6.8nm,0.7s,mb4.5
GRR Gorron 38.68 307 *eP* **P 22 26 42.1 -1.1**
comp=Z,41nm,1.1s,mb4.8
GRR Gorron 38.68 307 *eP* **P 22 26 42.1 -1.1**
GRR pmax pmax
comp=Z,20nm,1.1s,mb4.8
GRR Gorron 38.68 307 *eP* **P 22 26 42.1 -1.1**
comp=Z,20nm,1.1s,mb4.8
GRR Gorron 38.68 307 *eP* **P 22 26 42.1 -1.1**
comp=Z,20nm,1.1s,mb4.8
SHL Shillong 39.34 89 *ePKP* **P 22 26 48.0 -1.1**
SGMF Saint Gilles 39.80 307 *eP* **P 22 26 51.7 -0.9**
SGMF Saint Gilles 39.80 307 *eP* **P 22 26 51.7 -0.9**
QUIF Quistinic 40.19 306 *eP* **P 22 26 54.7 -1.1**
comp=Z,49nm,1.2s,mb4.8
QUIF Quistinic 40.19 306 *eP* **P 22 26 54.7 -1.1**
QUIF pmax pmax
comp=Z,25nm,1.2s,mb4.8
QUIF Quistinic 40.19 306 *eP* **P 22 26 54.7 -1.1**
comp=Z,25nm,1.2s,mb4.8
QUIF Quistinic 40.19 306 *eP* **P 22 26 54.7 -1.1**
comp=Z,25nm,1.2s,mb4.8
ESDC Sonseca Array 41.19 294 P **P 22 27 04.5 +0.3**
comp=Z,0.5nm,0.4s,mb3.5,baz=74,slow=8.2,SNR=12
ESDC Sonseca Array 41.19 294 P **P 22 27 04.5 +0.3**
ESDC Sonseca Array 41.19 294 P **P 22 27 04.5 +0.3**
ESLA Sonseca Array 41.19 294 *eP* **P 22 27 04.9 +0.7**
ESLA Sonseca Array 41.19 294 *eP* **P 22 27 04.9 +0.7**
GTA Gaotai 42.17 66 *eP* **P 22 27 12.0 -0.2**
GTA pP pP 22 27 16.7 +0.9
GTA sP sP 22 27 19.7 +2.4
GTA PP PP 22 28 51.1 +1.3
GTA pmax pmax
comp=Z,5.0nm,0.9s,mb4.1
GTA pmax pmax
comp=Z,48nm,7.7s
GTA LR LR
comp=N,420nm,17.8s,MS4.5
GTA LR LR
comp=E,390nm,17.8s,MS4.5
GTA LR LR
comp=Z,330nm,16.3s,MS4.3
DLF Lyons Farm 42.70 314 *eP* **P 22 27 10.5 -5.8**
LZH Lanzhou 45.96 70 *eP* **P 22 27 44.4 +1.7**
LZH pmax pmax
comp=Z,19nm,1.4s,mb4.8
LZH pmax pmax
comp=Z,86nm,7.1s
LZH LR LR
comp=E,680nm,14.7s
LZH LR LR
comp=Z,730nm,16.4s,MS4.7
SONM Songino Array 45.98 53 P **P 22 27 42.2 -0.5**
comp=Z,0.3nm,0.5s,mb3.5,baz=255,slow=5.7,SNR=4.3
SONM PcP PcP 22 29 18.2 -1.1
comp=Z,1.1nm,0.7s,baz=254,slow=3.2,SNR=5.9
SONM Songino Array 45.98 53 P **P 22 27 42.2 -0.5**
SONM Songino Array 45.98 53 PcP PcP 22 29 18.2 -1.1
ULN Ulaanbaatar 46.42 53 *eP* **P 22 27 43.4 -2.8**
ULN pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
ULN Ulaanbaatar 46.42 53 *eP* **P 22 27 43.4 -2.8**
comp=Z,3.2nm,0.9s,mb4.2
SPITS Spitsbergen Ar 46.78 352 P **P 22 27 48.6 0.0**
comp=Z,0.7nm,0.3s,mb4.0,baz=134,slow=8.4,SNR=4.4
SPITS Spitsbergen Ar 46.78 352 P **P 22 27 48.6 0.0**
SPITS pmax pmax
comp=Z,1.0nm,0.3s
SPITS Spitsbergen Ar 46.78 352 P **P 22 27 48.6 0.0**
comp=Z,1.0nm,0.3s,mb4.2
CD2 Chengdu 47.34 77 P **P 22 27 52.0 -1.6**
CD2 PP PP 22 29 44.0 -0.7
CD2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
CD2 pmax pmax
comp=Z,70nm,4.5s
CD2 LR LR
comp=N,900nm,13.7s
CD2 LR LR
comp=Z,730nm,12.5s,MS4.8
CHTO Chiang Mai 48.13 94 *eP* **P 22 27 58.3 -1.6**
CHTO pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
CHTO Chiang Mai 48.13 94 *eP* **P 22 27 58.3 -1.6**
comp=Z,4.4nm,0.8s,mb4.5
CHTO Chiang Mai 48.13 94 *eP* **P 22 27 58.3 -1.6**
comp=Z,4.0nm,0.8s,mb4.5
CMAR Chiang Mai Arr 48.30 95 P **P 22 27 59.8 -1.4**
comp=Z,2.5nm,0.6s,mb4.4,baz=294,slow=8.4,SNR=19
CMAR PP PP 22 29 50.2 -3.4
comp=Z,0.5nm,0.3s,baz=303,slow=11,SNR=4.3
CMAR Chiang Mai Arr 48.30 95 P **P 22 27 59.8 -1.4**
CMAR 22 29 50.2
CMAR pmax pmax
comp=Z,3.0nm,0.6s
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR Chiang Mai Arr 48.30 95 P **P 22 27 59.8 -1.4**
comp=Z,3.0nm,0.6s,mb4.5
KMI Kunming 48.57 85 P **P 22 28 02.1 -1.1**
KMI PP PP 22 29 56.9 +0.9
KMI pmax pmax
comp=Z,5.0nm,1.4s,mb4.3
KMI pmax pmax
comp=Z,63nm,3.1s
KMI LR LR
comp=N,620nm,11.5s
KMI LR LR
comp=E,270nm,9.1s
KMI LR LR
comp=Z,360nm,12.1s,MS4.6
HHC Hu-ho-hao-te 50.73 62 *eP* **P 22 28 18.1 -1.3**
HHC pmax pmax
comp=Z,16nm,0.6s,mb5.1
HHC pmax pmax
comp=Z,78nm,6.1s
GYA Guiyang 51.30 81 *eP* **P 22 28 23.3 -0.7**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
ENH Enshi 52.21 76 *eP* **P 22 28 29.7 -1.0**
comp=Z,9.9nm,0.8s,mb4.8
ENH Enshi 52.21 76 *eP* **P 22 28 29.7 -1.0**
comp=Z,9.9nm,0.8s,mb4.8
BJI Beijing 54.34 62 P **P 22 28 44.1 -2.1**
BJI pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
DBIC Dimbokro 55.06 253 P **P 22 28 51.8 0.0**
comp=Z,6.8nm,1.1s,mb4.6,baz=45,slow=7.1,SNR=6.3
DBIC Dimbokro 55.06 253 P **P 22 28 51.8 0.0**
DBIC pmax pmax
comp=Z,7.0nm,1.1s
DBIC Dimbokro 55.06 253 *eP* **P 22 28 52.0 +0.2**
DBIC Dimbokro 55.06 253 P **P 22 28 51.8 0.0**
comp=Z,7.0nm,1.1s,mb4.6
KIC Kosan Boka 55.15 253 *ePKIKP* **P 22 28 52.6 +0.2**
comp=Z,12nm,0.8s,mb5.0
TIC Toumodi 55.21 253 *ePKIKP* **P 22 28 52.7 -0.1**
comp=Z,55nm,1.3s,mb5.4
LIC Lamto 55.46 253 *ePKIKP* **P 22 28 52.9 -1.8**
comp=Z,44nm,1.2s,mb5.3
LIC Lamto 55.46 253 *eP* **P 22 28 54.9 +0.2**
comp=Z,6.5nm,0.6s,mb4.5
LIC Lamto 55.46 253 *eP* **P 22 28 54.9 +0.2**
comp=Z,3.3nm,0.6s,mb4.5
LIC Lamto 55.46 253 *eP* **P 22 28 54.9 +0.2**
comp=Z,3.2nm,0.6s,mb4.5
WHN Wuhan 56.03 73 *eP* **P 22 28 57.0 -1.5**
NJ2 Nanjing 59.03 70 *eP* **P 22 29 19.7 0.0**
NJ2 PP PP 22 31 32.5 +2.5
NJ2 pmax pmax
comp=Z,20nm,0.5s,mb5.4
NJ2 pmax pmax
comp=Z,48nm,3.9s
NJ2 LR LR
comp=N,850nm,21.2s
NJ2 LR LR
comp=E,1μm,15.5s
NJ2 LR LR
comp=Z,2μm,20.7s
CN2 Changchun 59.81 55 *eP* **P 22 29 25.9 +1.0**
LBTB Lobatse 61.71 202 *eP* **P 22 29 38.9 +1.0**
LBTB pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
LBTB Lobatse 61.71 202 *eP* **P 22 29 38.9 +1.1**
comp=Z,4.9nm,1.0s,mb4.6
LBTB Lobatse 61.71 202 *eP* **P 22 29 38.9 +1.0**
comp=Z,5.0nm,1.0s,mb4.6
KSRS Korea Array 63.85 61 P **P 22 29 50.4 -1.8**
comp=Z,4.3nm,1.1s,mb4.4,baz=278,slow=6.1,SNR=12
KSRS Korea Array 63.85 61 P **P 22 29 50.4 -1.8**
KSRS pmax pmax
comp=Z,4.0nm,1.1s,mb4.4
KSRS Korea Array 63.85 61 P **P 22 29 50.4 -1.8**
comp=Z,4.0nm,1.1s,mb4.4
VLA Vladivostok 64.44 54⇑ *eP* **P 22 29 53.9 -2.1**
VLA pmax pmax
comp=Z,15nm,0.6s,mb5.2
VLA Vladivostok 64.44 54 *eP* **P 22 29 53.9 -2.1**
comp=Z,15nm,0.6s,mb5.2
BOSA Boshof 65.17 201 P **P 22 30 01.2 +0.4**
comp=Z,5.7nm,0.9s,mb4.6,baz=24,slow=6.3,SNR=4.8
BOSA Boshof 65.17 201 P **P 22 30 01.2 +0.4**
BOSA pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
BOSA Boshof 65.17 201 *eP* **P 22 29 58.9 -1.9**
comp=Z,8.0nm,1.2s,mb4.6
BOSA Boshof 65.17 201 P **P 22 30 01.2 +0.4**
comp=Z,6.0nm,1.0s,mb4.6
SEY Seymchan 67.14 29⇓ *eP* **P 22 30 13.0 0.0**
SEY Seymchan 67.14 29 *eP* **P 22 30 13.0 0.0**
BILL Bilibino 69.14 21⇑ *eP* **P 22 30 24.1 -1.4**
BILL *e* 22 32 53.9
BILL pmax pmax
comp=Z,13nm,1.6s,mb4.6
BILL MLR MLR
comp=Z,100nm,20.0s,MS4.0
BILL Bilibino 69.14 21 *eP* **P 22 30 24.1 -1.4**
comp=Z,13nm,1.6s,mb4.6
YKA Yellowknife Ar 83.28 352 P **P 22 31 44.7 -1.3**
comp=Z,1.8nm,0.8s,mb4.1,baz=6.2,slow=6.3,SNR=4.5
YKA Yellowknife Ar 83.28 352 P **P 22 31 44.7 -1.3**
YKA pmax pmax
comp=Z,2.0nm,0.8s
YKA Yellowknife Ar 83.28 352 P **P 22 31 44.7 -1.3**
comp=Z,2.0nm,0.8s,mb4.2
KDAK Kodiak Island 87.58 11 *i P* **P 22 32 07.1 -0.4**
KDAK Kodiak Island 87.58 11 *i P* **P 22 32 07.1 -0.4**
WCI Wyandotte Cave 96.66 325 *eP* **P 22 32 48.2 -1.8**
comp=Z,30nm,0.8s
WCI Wyandotte Cave 96.66 325 *eP* **P 22 32 48.2 -1.8**

ISCJB ***12*** *22:22:42.0±3.5, 6°.8S±0°.2×125°.4E±0°.3, h515km±55km, mb3.6/8, Error ellipse: s-maj=42.8km s-min=29.4km az=175.7*
NEIC ***12*** *22:22:43.1±2.0, 6°.84S×125°.57E, h520km×32km, mb3.7/1, Error ellipse: s-maj=29.0km s-min=20.5km az=65.0*
IDC ***12*** *22:22:44.6±1.9, 6°.95S×125°.47E, h542km±26km, mb3.2/8, mb1 3.1/11, mb1mx3.0/21, mbtmp3.1/11, Error ellipse: s-maj=37.8km s-min=16.9km az=76.0*
ISC 12 22:22:43.7±2.6, 6°.9S±0°.2×125°.5E±0°.3, h527km±43km**, n16,** σ0§**47**/16**, mb3.6**/8**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.13**	**179**	P	**P**	**22 25 13.2**	**+0.1**
	1.0nm,0.3s,baz=23,slow=7.4,SNR=19						
FITZ	**Fitzroy Crossi**	**11.13**	**179**	*eP*	**P**	**22 25 13.3**	**+0.3**
WRAB	**Tennant Creek**	**15.53**	**147**	*eP*	**P**	**22 25 58.8**	**-0.2**
WRA	**Warramunga Arr**	**15.53**	**147**	P	**P**	**22 25 58.2**	**-0.7**
	0.5nm,0.3s,baz=216,slow=8.0,SNR=46						
ASAR	**Alice Springs**	**18.51**	**155**	P	**P**	**22 26 28.1**	**+0.8**
	0.3nm,0.3s,baz=347,slow=14,SNR=16						
ASAR				ScP	ScP	22 33 13.0	-2.6
	0.1nm,0.3s,baz=355,slow=2.2,SNR=4.3						
KSRS	**Korea Array**	**44.18**	**3**	P	**P**	**22 30 06.4**	**+0.8**
	0.9nm,0.7s,mb3.4,baz=186,slow=10,SNR=5.1						
MJAR	**Matsushiro Arr**	**44.82**	**15**	P	**P**	**22 30 10.3**	**-0.3**
	1.1nm,0.7s,mb3.5,baz=189,slow=8.6,SNR=2.2						
SONM	**Songino Array**	**57.06**	**345**	P	**P**	**22 31 39.6**	**+0.3**
	0.7nm,0.6s,mb3.1,baz=158,slow=11,SNR=4.0						
MK31	**Makanchi Array**	**65.78**	**329**	*eP*	**P**	**22 32 36.5**	**+0.2**
MKAR	**Makanchi Array**	**65.78**	**329**	P	**P**	**22 32 36.6**	**+0.2**
	1.0nm,0.6s,mb3.6,baz=123,slow=7.0,SNR=22						
ZALV	**Zalesovo Beam**	**69.60**	**336**	P	**P**	**22 32 59.0**	**-0.6**
	2.7nm,0.4s,mb4.2,baz=135,slow=5.6,SNR=16						
KURK	**Kurchatov**	**70.18**	**330**	P	**P**	**22 33 03.0**	**-0.1**
	1.3nm,0.5s,mb3.7,baz=135,slow=5.1,SNR=11						
KURK	**Kurchatov**	**70.18**	**330**	*eP*	**P**	**22 33 03.2**	**+0.2**
	1.7nm,0.6s,mb3.8						
BVAR	**Borovoye Array**	**75.66**	**329**	P	**P**	**22 33 33.7**	**-0.8**
	1.0nm,0.6s,mb3.4,baz=112,slow=6.6,SNR=5.2						
AKTK	**Aktyubinsk**	**81.31**	**323**	P	**P**	**22 34 04.8**	**0.0**
AKTO	**Aktyubinsk**	**81.31**	**323**	P	**P**	**22 34 04.8**	**0.0**
	1.3nm,0.5s,mb3.6,baz=80,slow=7.1,SNR=4.1						

NIED ***12*** *22:29:00, 20°.70N×121°.30E, h47km, Mw4.9 Best double couple: M0 2.37000×10^16 NP1:φ0 32.00000°, δ78.00000°, λ82.00000°. NP2:φ0 247.00000°, δ15.00000°, λ124.00000°.*
IDC ***12*** *22:29:45.8±0.6, 20°.96N×121°.09E, h0km, mb4.2/19, mb1 4.3/20, mb1mx4.3/26, mbtmp4.2/20, ML4.3/1, MS3.9/9, Ms1 3.9/9, ms1mx3.4/28, Error ellipse: s-maj=21.0km s-min=13.5km az=72.0*
NEIC ***12*** *22:29:47.3±0.4, 21°.05N×121°.14E, h10km, mb4.7/13, Error ellipse: s-maj=10.4km s-min=6.5km az=101.0*
ISCJB ***12*** *22:29:48.8±0.4, 21°.03N±0°.04×121°.14E±0°.06, h33km, mb4.3/33, MS3.9/10, Error ellipse: s-maj=8.9km s-min=5.7km az=18.5*
MOS ***12*** *22:29:48.9±1.0, 20°.94N×121°.04E, h33km, mb4.9/10, Error ellipse: s-maj=15.4km s-min=8.0km az=116.9*
BJI ***12*** *22:29:49.8, 20°.99N×120°.90E, h31km, mB4.2/5, mb4.4/13, ML4.1/1, Ms4.3/10, Ms7 3.9/10*
ISC 12 22:29:51.0±0.4, 21°.03N±0°.04×121°.13E±0°.07, h35km**, n72,** σ1§**08**/76**, mb4.3**/33**, MS3.9**/10**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**1.78**	**358**	*ePn*	**Pn**	**22 30 14.8**	**-4.5**
TPUB	**Ta-pu**	**2.30**	**349**	*ePn*	**Pn**	**22 30 24.5**	**-2.0**
YULB	**Yu-li**	**2.35**	**4**	*ePn*	**Pn**	**22 30 24.3**	**-2.9**
SSLB	**Suanglung**	**2.75**	**357**	*ePn*	**Pn**	**22 30 29.7**	**-2.8**
NACB	**Ninganchiao**	**3.16**	**8**	*ePn*	**Pn**	**22 30 36.2**	**-2.0**
NACB				*eS*	**Sn**	**22 31 16.3**	**+1.6**
YHNB	**Yeheng**	**3.63**	**4**	*ePn*	**Pn**	**22 30 43.0**	**-1.7**
TATO	**Taipei**	**3.94**	**5**	*ePn*	**Pn**	**22 30 46.6**	**-2.3**
GZH	**Guangzhou**	**7.50**	**287**	Pn	**Pn**	**22 31 33.1**	**-4.8**
GZH				Sn	**Sn**	**22 32 49.7**	**-12**
GZH				smax			
	comp=N,84nm,0.8s						

GZH smax
comp=E,63nm,0.9s
QIZ Qiongzhong 10.79 261 P **Pn 22 32 22.5 -0.6**
QIZ S **Sn 22 34 27.6 +4.9**
QIZ LR LR
comp=N,2μm,15.3s
QIZ LR LR
comp=E,310nm,15.8s
QIZ LR LR
comp=Z,900nm,13.1s
QIZ Qiongzhong 10.79 261 *e*Pn **Pn 22 32 19.8 -3.3**
WHN Wuhan 11.27 329 P **Pn 22 32 35.1 +5.6**
WHN LR LR
comp=N,2μm,15.2s
WHN LR LR
comp=E,3μm,13.3s
WHN LR LR
comp=Z,2μm,13.8s
TIA Tai'an 15.52 348 P **Pn 22 33 31.5 +4.3**
TIA pmax pmax
comp=Z,40nm,1.2s
KSRS Korea Array 17.40 18 P **Pn 22 33 50.4 -0.5**
comp=Z,0.9nm,0.3s,baz=200,slow=11,SNR=43
BJT Baijiatuau 19.39 348 *e*P **Pn 22 34 14.4 -0.8**
BJT pmax pmax
comp=Z,45nm,0.9s
BJT Baijiatuau 19.39 348 *e*P **Pn 22 34 14.4 -0.8**
comp=Z,45nm,0.9s
BJI Beijing 19.41 348 P **Pn 22 34 14.6 -0.9**
BJI S **S 22 37 52.0 +0.2**
BJI pmax pmax
comp=Z,46nm,1.1s
BJI LR LR
comp=N,500nm,21.5s
BJI LR LR
comp=E,850nm,18.1s
BJI LR LR
comp=Z,350nm,22.4s
CHTO Chiang Mai 20.97 268 *e*P **P 22 34 31.7 +0.5**
CHTO pmax pmax
comp=Z,14nm,1.3s
CHTO Chiang Mai 20.97 268 *e*P **P 22 34 31.6 +0.4**
comp=Z,14nm,1.3s
CMAR Chiang Mai Arr 21.04 267 P **P 22 34 32.4 +0.5**
comp=Z,4.0nm,0.7s,mb3.9,baz=75,slow=9.2,SNR=30
CMAR LR LR 22 44 10.5
comp=Z,202nm,20.4s,MS3.5,baz=80,slow=41
CMAR Chiang Mai Arr 21.04 267 P **P 22 34 32.4 +0.5**
CMAR LR LR 22 44 10.4
MAT Matsushiro 21.46 40 P **P 22 34 37.5 +1.1**
MAT S **S 22 38 46.0 +14**
MJAR Matsushiro Arr 21.46 40 P **P 22 34 37.6 +1.2**
comp=Z,5.3nm,1.0s,mb3.8,baz=241,slow=10,SNR=7.6
KSM Kuching 22.12 210 *e*P **P 22 34 42.6 -1.0**
comp=Z,11nm,0.9s,mb4.3
MDJ Mudanjiang 24.54 15 P **P 22 35 07.2 -0.1**
MDJ pmax pmax
comp=Z,19nm,1.1s,mb4.5
MDJ pmax pmax
comp=Z,49nm,5.5s
MDJ LR LR
comp=N,290nm,21.0s,MS4.1
MDJ LR LR
comp=E,620nm,21.0s,MS4.1
MDJ LR LR
comp=Z,340nm,19.1s,MS3.9
MDJ Mudanjiang 24.54 15 *e*P **P 22 35 06.8 -0.4**
comp=Z,18nm,0.8s,mb4.6
PSI Prapat 28.21 233 P **P 22 35 39.9 -0.7**
comp=Z,1.7nm,0.3s,mb4.2,baz=0.0,slow=5.1,SNR=4.8
PSI LR LR 22 46 43.8
comp=Z,231nm,18.3s,MS3.8,baz=323,slow=36
PSI Prapat 28.21 233 P **P 22 35 39.9 -0.8**
PSI LR LR 22 46 43.8
ULN Ulaanbaatar 29.08 340 *e*P **P 22 35 48.4 +0.4**
ULN pmax pmax
comp=Z,21nm,1.4s,mb4.7
ULN Ulaanbaatar 29.08 340 *e*P **P 22 35 48.4 +0.4**
comp=Z,21nm,1.4s,mb4.7
ASAJ Asahikawa 29.11 33 P **P 22 35 48.6 +0.3**
comp=Z,3.7nm,0.7s,mb4.2,baz=240,slow=12,SNR=4.5
SONM Songino Array 29.27 339 P **P 22 35 50.0 +0.3**
comp=Z,7.6nm,0.7s,mb4.5,baz=155,slow=9.3,SNR=30
SONM ScP ScP 22 42 37.8 +2.7
comp=Z,0.4nm,0.9s,baz=169,slow=2.9,SNR=3.7
KLR Kul'dur 29.39 14 *e*P **P 22 35 45.0 -5.7**
TLY Talaya 33.49 340 *e*P **P 22 36 27.7 +0.9**
TLY pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
TLY Talaya 33.49 340 *e*P **P 22 36 27.7 +0.9**
comp=Z,4.9nm,0.8s,mb4.5
IRK Irkutsk 33.79 341 *e*P **P 22 36 30.1 +0.7**
IRK pmax pmax
comp=Z,21nm,0.7s,mb5.2
MK31 Makanchi Array 40.61 319 *e*P **P 22 37 28.0 +0.7**
MKAR Makanchi Array 40.61 319 P **P 22 37 27.9 +0.6**
comp=Z,2.3nm,0.7s,mb3.9,baz=114,slow=9.9,SNR=22
MKAR LR LR 22 54 12.7
comp=Z,160nm,20.6s,MS3.9,baz=117,slow=36
WRAB Tennant Creek 42.72 162 *e*P **P 22 37 44.1 -0.7**
WRAB pmax pmax
comp=Z,23nm,1.2s,mb4.8
WRAB Tennant Creek 42.72 162 *e*P **P 22 37 44.1 -0.7**
comp=Z,23nm,1.2s,mb4.8
WRA Warramunga Arr 42.72 162 P **P 22 37 43.8 -1.1**
comp=Z,6.3nm,0.8s,mb4.4,baz=344,slow=8.9,SNR=15
ZALV Zalesovo Beam 42.88 329 P **P 22 37 45.7 -0.1**
comp=Z,5.0nm,0.8s,mb4.3,baz=114,slow=7.2,SNR=22
ZALV LR LR 22 57 05.0
comp=Z,117nm,18.4s,MS3.8,baz=246,slow=38
ZALV Zalesovo Beam 42.88 329 P **P 22 37 45.7 -0.1**
ZALV LR LR 22 57 05.0
NVS Novosibirsk 44.15 329 *e*P **P 22 37 55.6 -0.4**
NVS *e*S **S 22 44 36.2 +10**
NVS pmax pmax
comp=Z,13nm,1.9s,mb4.3
NVS pmax pmax
comp=N,9.0nm,1.7s
NVS pmax pmax
comp=E,5.0nm,1.7s
NVS smax
comp=N,3.0nm,1.9s
NVS smax
comp=E,7.0nm,1.6s
KURK Kurchatov 44.50 322 P **P 22 37 59.2 +0.3**
comp=E,6.6nm,0.8s,mb4.5,baz=127,slow=6.9,SNR=18
KURK Kurchatov 44.50 322 *e*P **P 22 37 58.6 -0.3**
KURK pmax pmax
comp=Z,30nm,1.9s,mb4.8
KURK Kurchatov 44.50 322 *e*P **P 22 37 58.6 -0.3**
comp=Z,30nm,1.9s,mb4.8
AML Almayashu 44.89 309 *e*P **P 22 38 04.3 +2.2**
AML pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
AML Almayashu 44.89 309 *e*P **P 22 38 04.3 +2.2**
comp=Z,7.7nm,0.9s,mb4.5
ASAR Alice Springs 46.14 164 P **P 22 38 11.8 -0.3**
comp=Z,3.2nm,0.6s,mb4.4,baz=342,slow=8.0,SNR=14
HNR Honiara 48.70 125 LR LR 22 56 10.6
comp=Z,120nm,18.1s,MS3.9,baz=137,slow=33
BVAR Borovoye Array 50.10 322 P **P 22 38 43.0 +0.6**
comp=Z,1.1nm,0.7s,mb4.0,baz=112,slow=11,SNR=8.7
BVAR PcP PcP 22 40 02.1 +0.4
comp=Z,1.0nm,0.6s,baz=114,slow=4.2,SNR=4.9
BRVK Borovoye 50.17 322 *e*P **P 22 38 43.7 +0.7**
BRVK pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
BRVK Borovoye 50.17 322 *e*P **P 22 38 43.7 +0.7**
comp=Z,4.7nm,0.8s,mb4.6
BILL Bilibino 54.66 19 *e*P **P 22 39 19.8 +3.8**
BILL pmax pmax
comp=Z,1.0nm,0.8s,mb3.9
ABKAR Abkulak array 55.63 316 *e*P **P 22 39 23.8 +0.4**
comp=Z,2.4nm,0.9s,mb4.2
STKA Stephens Creek 56.14 159 P **P 22 39 27.4 +0.2**
comp=Z,3.5nm,0.6s,mb4.5,baz=290,slow=12,SNR=10
AKTK Aktyubinsk 57.01 317 P **P 22 39 33.8 +0.7**
AKTO Aktyubinsk 57.01 317 P **P 22 39 33.8 +0.7**
comp=Z,0.7nm,0.6s,mb3.9,baz=108,slow=16,SNR=4.0
ARU Arti 57.60 324 P **P 22 39 35.7 -1.5**
ZEI Tsey 66.83 309 *e*P **P 22 40 37.9 -1.4**
ZEI pmax pmax
comp=Z,12nm,0.5s,mb5.2
KIV Kislovodsk 67.55 310 *e*P **P 22 40 44.8 +1.0**
KIV pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
KIV Kislovodsk 67.55 310 *e*P **P 22 40 44.8 +1.0**
comp=Z,7.0nm,0.8s,mb4.7
ARCES ARCESS Array B 72.43 338 P **P 22 41 14.9 +1.6**
comp=Z,2.2nm,1.0s,mb4.0,baz=80,slow=5.9,SNR=3.2
FINES FINESS Array B 74.14 330 P **P 22 41 24.3 +0.8**
comp=Z,1.1nm,0.8s,mb3.8,baz=129,slow=13,SNR=4.3
FINES LR LR 23 18 50.8
comp=Z,111nm,18.4s,MS4.2,baz=112,slow=40
EGAK Eagle 74.42 26 *e*P **P 22 41 25.6 +0.5**
comp=Z,41nm,2.3s,mb5.0
BRTR Keskin Array B 75.01 307 P **P 22 41 29.6 +0.5**
comp=Z,0.8nm,0.7s,mb3.7,baz=106,slow=4.4,SNR=5.9
BRTR LR LR 23 19 48.1
comp=Z,50nm,21.2s,MS3.8,baz=286,slow=40
AKASG Malin Array Be 75.19 319 P **P 22 41 29.1 -0.7**
comp=Z,0.1nm,0.2s,mb3.3,baz=61,slow=5.8,SNR=3.3
DAWY Dawson 75.36 27 *e*P **P 22 41 31.3 +0.8**
MMAI Mount Meron Ar 75.40 300 LR LR 23 20 08.5
comp=Z,44nm,18.4s,MS3.8,baz=175,slow=40
NB2 NORSAR Subarra 80.98 332 P **P 22 42 01.0 -0.7**
comp=Z,8.0nm,1.4s,mb4.5,baz=63,slow=5.3
NOA NORSAR Array B 80.98 332 P **P 22 42 01.9 +0.2**
comp=Z,0.7nm,0.7s,mb3.7,baz=63,slow=5.3,SNR=3.2
NOA LR LR 23 21 04.4
comp=Z,119nm,20.6s,MS4.2,baz=55,slow=38
YKA Yellowknife Ar 85.89 23 P **P 22 42 28.3 +1.4**
comp=Z,1.0nm,0.7s,mb4.2,baz=307,slow=4.9,SNR=3.9

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*IDC **12** 22:33:33.5±1.6, 7.°87S×128.°68E, h0km, mb3.8/4, mb1 3.7/7, mb1mx3.6/18, mbtmp3.6/7, ML3.5/3, MS3.6/1, Ms1 3.6/1, ms1mx2.3/28, Error ellipse: s-maj=92.4km s-min=24.4km az=76.0*
*ISCJB **12** 22:33:36.3±0.8, 8.°15S±0.°05×128.°41E±0.°08, h33km, mb3.7/4, Error ellipse: s-maj=11.9km s-min=7.3km az=164.8*
*NEIC **12** 22:33:38.2±0.9, 7.°83S×129.°01E, h35km, Error ellipse: s-maj=27.7km s-min=11.4km az=75.0*
ISC 12 22:33:38.7±0.8, 8.°05S±0.°06×128.°5E±0.°1, h35km, n12, σ0.°88/17, mb3.7/4, Timor Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.04**	**140**	*e*Pn		**Pn**	**22 35 09.8**	**+4.2**
KAKA				*e*S		**Sn**	**22 36 13.7**	**0.0**
FITZ	**Fitzroy Crossi**	**10.37**	**195**	Pn		**Pn**	**22 36 07.6**	**+2.5**
FITZ				Sn		**Sn**	**22 37 58.8**	**-1.4**
FITZ	**Fitzroy Crossi**	**10.37**	**195**	*e*Pn		**Pn**	**22 36 07.1**	**+2.0**
FITZ				*e*Sn		**Sn**	**22 38 00.5**	**+0.3**
WRAB	**Tennant Creek**	**13.11**	**155**	*e*Pn		**Pn**	**22 36 43.0**	**+0.6**
WRA	**Warramunga Arr**	**13.11**	**155**	Pn		**Pn**	**22 36 41.6**	**-0.9**
WRA				Sn		**Sn**	**22 39 00.8**	**-6.4**
MBWA	**Marble Bar**	**15.54**	**212**	*e*Pn		**Pn**	**22 37 22.7**	**+7.4**
MBWA				*e*S		**Sn**	**22 40 02.0**	**-4.4**
ASAR	**Alice Springs**	**16.37**	**162**	Pn		**Pn**	**22 37 25.9**	**-0.1**
ASAR				Sn		**Sn**	**22 40 22.5**	**-4.1**
ASAJ	**Asahikawa**	**53.47**	**13**	LR		LR	23 03 30.1	
MKAR	**Makanchi Array**	**68.29**	**328**	P		**P**	**22 44 36.6**	**+0.4**
ZALV	**Zalesovo Beam**	**71.87**	**335**	P		**P**	**22 44 57.5**	**-0.4**
KURK	**Kurchatov**	**72.64**	**329**	P		**P**	**22 45 02.1**	**-0.5**
BVAR	**Borovoye Array**	**78.16**	**328**	P		**P**	**22 45 34.3**	**0.0**

comp=Z,0.8nm,0.8s,baz=140,slow=7.6,SNR=3.8

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*NOU **12** 22:41:57.3±1.4, 20.°45S×168.°40E, h10km, MD2.7, MS1.9*
*IDC **12** 22:41:58.2±5.2, 20.°50S×168.°01E, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.9/13, mbtmp4.1/4, Error ellipse: s-maj=138.3km s-min=45.1km az=127.0*
ISC 12 22:41:59.9±1.8, 20.°9S±0.°3×168.°6E±0.°3, h35km, n9, σ0.°95/12, mb4.0/4, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**1.97**	**232**	*e*P		**Pn**	**22 42 30.5**	**-0.4**
BAYA				*e*S		**Sn**	**22 42 55.4**	**+1.1**
DZM	**Mont Dzumac**	**2.27**	**240**	*e*P		**Pn**	**22 42 32.4**	**-2.5**
DZM	**Mont Dzumac**	**2.27**	**240**	*e*S		**Sn**	**22 43 02.2**	**+0.6**
NORM	**Noumea**	**2.31**	**236**	*e*P		**Pn**	**22 42 36.0**	**+0.4**
NORM				*e*S		**Sn**	**22 43 02.1**	**-0.7**
NOUC	**Port Laguerre**	**2.39**	**241**	*e*P		**Pn**	**22 42 35.6**	**-1.0**
NOUC				*e*S		**Sn**	**22 43 05.2**	**+0.4**
NOUC					AMP		22 43 13.6	
STKA	**Stephens Creek**	**26.42**	**240**	P		**P**	**22 47 34.4**	**+1.0**
WRA	**Warramunga Arr**	**32.04**	**266**	P		**P**	**22 48 22.8**	**-0.7**
ASAR	**Alice Springs**	**32.12**	**259**	P		**P**	**22 48 24.2**	**0.0**
SONM	**Songino Array**	**88.18**	**323**	P		**P**	**22 54 48.2**	**+1.1**

comp=Z,87nm,11.8s
comp=Z,2.3nm,0.7s,mb3.8,baz=71,slow=13,SNR=5.7
comp=Z,1.4nm,1.0s,mb3.8,baz=94,slow=8.3,SNR=8.9
comp=Z,3.5nm,0.7s,mb4.3,baz=86,slow=9.4,SNR=35
comp=Z,1.4nm,0.8s,mb4.3,baz=144,slow=4.3,SNR=7.8

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*NOU **12** 23:00:02.7±1.6, 20.°66S×168.°84E, h10km, MD2.6, ML3.6*
*ISCJB **12** 23:00:06.4±1.2, 21.°0S±0.°2×168.°7E±0.°2, h33km, mb4.2/8, Error ellipse: s-maj=39.6km s-min=6.6km az=140.0*
*NEIC **12** 23:00:08.9±1.5, 20.°94S×168.°53E, h35km, Error ellipse: s-maj=49.7km s-min=16.8km az=137.0*
*IDC **12** 23:00:09.0±2.1, 20.°81S×168.°52E, h34km±7km, mb4.0/7, mb1 4.2/7, mb1mx4.0/13, mbtmp4.0/7, Error ellipse: s-maj=60.9km s-min=24.3km az=143.0*
*SZGRF **12** 23:00:10.8, 23.°08S×164.°19E, h33km, New Caledonia region*
ISC 12 23:00:08.2±1.3, 21.°0S±0.°2×168.°7E±0.°2, h35km, (h38km±.9km:pP-P), n25, σ1.°07/19, mb4.2/8, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.02**	**236**	*e*P		**Pn**	**23 00 38.8**	**-0.9**
BAYA				*e*S		**Sn**	**23 01 04.0**	**+0.3**
DZM	**Mont Dzumac**	**2.33**	**243**	*e*P		**Pn**	**23 00 41.8**	**-2.3**
DZM				*e*S		**Sn**	**23 01 13.1**	**+1.5**
DZM					AMP		23 01 16.3	
DZM	**Mont Dzumac**	**2.33**	**243**	*e*Pn		**Pn**	**23 00 42.4**	**-1.6**
DZM				*e*Sn		**Sn**	**23 01 13.0**	**+1.5**
NORM	**Noumea**	**2.37**	**239**	*e*S		**Sn**	**23 01 11.9**	**-0.6**
NOUC	**Port Laguerre**	**2.46**	**244**	*e*P		**Pn**	**23 00 44.7**	**-1.2**
NOUC				*e*S		**Sn**	**23 01 15.6**	**+0.9**
NOUC					AMP		23 01 18.7	
STKA	**Stephens Creek**	**26.48**	**240**	P		**P**	**23 05 43.6**	**+1.3**
WRA	**Warramunga Arr**	**32.16**	**266**	P		**P**	**23 06 31.8**	**-1.0**
WRA				pP	pP		23 06 41.9	-1.0
WRA	**Warramunga Arr**	**32.16**	**266**	P		**P**	**23 06 31.8**	**-1.0**
WRA				pP	pP		23 06 41.9	-1.0
ASAR	**Alice Springs**	**32.23**	**259**	P		**P**	**23 06 33.2**	**-0.2**
ASAR				pP			23 06 43.3	-0.2
MJAR	**Matsushiro Arr**	**64.09**	**333**	P		**P**	**23 10 37.5**	**-1.2**
CMAR	**Chiang Mai Arr**	**78.77**	**295**	P		**P**	**23 12 08.9**	**+1.2**
CMAR	**Chiang Mai Arr**	**78.77**	**295**	P		**P**	**23 12 08.9**	**+1.2**
ULN	**Ulaanbaatar**	**87.98**	**324**	*e*P		**P**	**23 12 55.8**	**+1.3**
SONM	**Songino Array**	**88.33**	**323**	P		**P**	**23 12 55.7**	**-0.4**
SONM				pP	pP		23 13 07.5	+0.3
NVAR	**Mina Array Bea**	**90.37**	**49**	P		**P**	**23 13 06.6**	**+0.7**
VYHS	**Vyhne**	**143.49**	**326**	*e*PKP		PKPdf	23 19 38.8	-0.2
TANN	**Tannenbergstha**	**145.20**	**333**	*e*PKPbc		PKPbc	23 19 42.7	+1.1
WERD	**Werda**	**145.24**	**333**	*e*PKPbc		PKPbc	23 19 42.7	+1.0
PLN	**Plauen**	**145.27**	**333**	*e*PKPbc		PKPbc	23 19 42.8	+1.0
GUNZ	**Gunzen**	**145.29**	**333**	*e*PKPbc		PKPbc	23 19 43.2	+1.3
MOX	**Moxa**	**145.37**	**334**	*e*PKPbc		PKPbc	23 19 43.8	+1.7
GEC2	**GERESS Array S**	**145.80**	**330**	*e*PKPbc		PKPbc	23 19 44.4	+0.9
WET	**Wettzell**	**145.96**	**331**	*e*PKPbc		PKPbc	23 19 44.9	+0.9
GRF	**Grafenberg Arr**	**146.27**	**333**	*e*PKPbc		PKPbc	23 19 46.4	+1.5
BUG	**Bochum--Üniver**	**146.35**	**339**	*e*PKPbc		PKPbc	23 19 49.1	+4.0

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*IDC **12** 23:14:59.2±2.2, 53.°52N×163.°70W, h0km, mb3.6/7, mb1 3.7/7, mb1mx3.5/26, mbtmp3.6/7, Error ellipse: s-maj=70.7km s-min=29.0km az=21.0*
*ISCJB **12** 23:15:03.1±1.6, 53.°8N±0.°2×163.°3W±0.°1, h34km±11km, mb3.7/7, Error ellipse: s-maj=32.5km s-min=7.2km az=165.1*
*NEIC **12** 23:15:03.0, 53.°47N×163.°57W, h19km, ML3.2(AEIC), After AEIC.*
ISC 12 23:15:03.7±2.9, 53.°7N±0.°2×163.°44W±0.°10, h25km±21km, n14, σ1.°06/18, mb3.7/7, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AKUT	**Akutan**	**1.45**	**289**	*e*Pn		**Pn**	**23 15 27.8**	**-0.5**
AKUT				S		**Sn**	**23 15 48.4**	**+1.9**
AKUT				*e*S		**Sn**	**23 15 51.1**	**+4.6**
AKLV	**Akutan Long Va**	**1.56**	**289**	P		**Pn**	**23 15 29.9**	**0.0**
AKGG	**Akutan Green G**	**1.59**	**290**	P		**Pn**	**23 15 30.1**	**-0.2**
UNV	**Unalaska Valle**	**1.82**	**277**	*e*Pn		**Pn**	**23 15 32.4**	**-1.0**
SDPT	**Sand Point**	**2.41**	**45**	*e*Pn		**Pn**	**23 15 43.6**	**+2.1**
OHAK	**Old Harbor**	**6.78**	**54**	*e*Pn		**Pn**	**23 16 40.2**	**-1.2**
OHAK				*e*S		**Sn**	**23 17 57.9**	**+0.2**
KDAK	**Kodiak Island**	**7.38**	**52**	*e*Pn		**Pn**	**23 16 50.8**	**+1.1**
KDAK				*e*S		**Sn**	**23 18 10.6**	**-1.9**
TXAR	**Lajitas Array**	**49.21**	**95**	P		**P**	**23 23 50.3**	**+0.6**
SONM	**Songino Array**	**53.64**	**303**	P		**P**	**23 24 21.8**	**-0.8**
ARCES	**ARCESS Array B**	**56.92**	**356**	P		**P**	**23 24 47.4**	**+1.4**
KURK	**Kurchatov**	**63.69**	**321**	P		**P**	**23 25 33.1**	**+0.7**
BVAR	**Borovoye Array**	**64.63**	**327**	P		**P**	**23 25 39.1**	**+0.6**
FINES	**FINESS Array B**	**64.98**	**355**	P		**P**	**23 25 39.9**	**-0.9**
MKAR	**Makanchi Array**	**65.42**	**316**	P		**P**	**23 25 42.8**	**-1.0**

comp=Z,0.5s,mb3.5,baz=298,slow=6.0,SNR=5.4
comp=Z,0.5s,mb3.6,baz=47,slow=10,SNR=2.9
comp=Z,1.0nm,0.8s,mb3.9,baz=6.0,slow=9.4,SNR=2.4
comp=Z,0.3nm,0.3s,mb3.8,baz=26,slow=7.4,SNR=3.8
comp=Z,0.5nm,0.5s,mb3.8,baz=76,slow=6.1,SNR=4.6
comp=Z,0.8nm,0.7s,mb3.8,baz=36,slow=10,SNR=2.8
comp=Z,0.2nm,0.4s,mb3.5,baz=44,slow=6.6,SNR=5.0

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*NOU **12** 23:15:11.5±0.8, 20.°53S×168.°71E, h10km, MD2.6, ML3.3*
*NEIC **12** 23:15:19.3±4.3, 20.°76S×168.°16E, h35km, mb3.6/1, Error ellipse: s-maj=114.0km s-min=21.2km az=120.0*
*IDC **12** 23:15:20.5±4.2, 20.°60S×168.°07E, h37km±6km, mb3.9/6, mb1 4.1/6, mb1mx3.9/13, mbtmp3.9/6, MS3.7/1, Ms1 3.6/1, ms1mx2.9/17, Error ellipse: s-maj=109.0km s-min=27.3km az=126.0*
ISC 12 23:15:15.9±1.9, 21.°0S±0.°3×168.°7E±0.°3, h35km, (h40km±1.2km:pP-P), n12, σ1.°03/16, mb4.0/6, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.05**	**236**	*e*P		**Pn**	**23 15 47.3**	**-0.6**
BAYA				*e*S		**Sn**	**23 16 12.6**	**+0.4**
DZM	**Mont Dzumac**	**2.36**	**243**	*e*P		**Pn**	**23 15 50.4**	**-1.7**
DZM				*e*S		**Sn**	**23 16 20.1**	**+0.2**
DZM					AMP		23 16 25.7	
DZM	**Mont Dzumac**	**2.36**	**243**	*e*Pn		**Pn**	**23 15 50.2**	**-2.0**
DZM				*e*S		**Sn**	**23 16 15.0**	**-5.0**
NORM	**Noumea**	**2.40**	**239**	*e*S		**Sn**	**23 16 21.2**	**+0.3**
NOUC	**Port Laguerre**	**2.49**	**244**	*e*P		**Pn**	**23 15 53.0**	**-0.9**
NOUC				*e*S		**Sn**	**23 16 23.8**	**+0.7**
NOUC					AMP		23 16 25.3	
STKA	**Stephens Creek**	**26.51**	**240**	P		**P**	**23 20 51.4**	**+1.1**
STKA				pP	pP		23 21 02.2	+2.0
STKA				LR	LR		23 31 14.8	
STKA	**Stephens Creek**	**26.51**	**240**	*e*P		**P**	**23 20 51.9**	**+1.7**
STKA				*e*	pP		23 21 03.0	+2.8
WRA	**Warramunga Arr**	**32.19**	**266**	P		**P**	**23 21 39.8**	**-1.0**
WRA				pP	pP		23 21 50.5	-0.3
ASAR	**Alice Springs**	**32.26**	**259**	P		**P**	**23 21 41.0**	**-0.3**
ASAR				pP	pP		23 21 51.8	+0.4
MJAR	**Matsushiro Arr**	**64.09**	**333**	P		**P**	**23 25 45.4**	**-1.0**
CMAR	**Chiang Mai Arr**	**78.79**	**295**	P		**P**	**23 27 17.2**	**+1.8**
CMAR				pP	pP		23 27 28.1	+1.7
SONM	**Songino Array**	**88.34**	**323**	P		**P**	**23 28 04.9**	**+1.1**
SONM				pP	pP		23 28 16.2	+1.3

comp=Z,1.2nm,0.7s,mb4.5,baz=0.0,slow=5.1,SNR=4.8
comp=Z,147nm,19.6s,baz=25,slow=36
comp=Z,1.7nm,1.0s,mb3.5
comp=Z,2.2nm,1.1s,mb3.9,baz=92,slow=8.7,SNR=5.6
comp=Z,2.2nm,1.0s,baz=90,slow=8.5,SNR=7.7
comp=Z,4.7nm,0.8s,mb4.4,baz=86,slow=9.0,SNR=35
comp=Z,8.6nm,0.8s,baz=81,slow=9.1,SNR=23
comp=Z,0.3nm,0.3s,mb3.7,baz=180,slow=3.6,SNR=3.4
comp=Z,1.0nm,0.8s,mb3.8,baz=148,slow=3.7,SNR=5.6
comp=Z,0.7nm,0.4s,baz=133,slow=4.2,SNR=1.9
comp=Z,1.0nm,0.7s,mb4.1,baz=148,slow=5.1,SNR=6.6
comp=Z,0.5nm,0.8s,baz=140,slow=4.2,SNR=3.4

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*ISCJB **12** 23:17:33.8±0.4, 33.°83N±0.°06×137.°07E±0.°06, h358km±3km, mb3.2/9, Error ellipse: s-maj=10.1km s-min=6.7km az=155.9*
*IDC **12** 23:17:34.0±0.9, 33.°81N×137.°04E, h345km±10km, mb3.1/8, mb1 3.3/12, mb1mx3.1/27, mbtmp3.2/12, Error ellipse: s-maj=20.7km s-min=13.8km az=81.0*
*JMA **12** 23:17:34.1±0.3, 33.°90N×137.°04E, h361km±3km, M2.9*
*NEIC **12** 23:17:34.1±1.0, 33.°75N×137.°08E, h346km±10km, mb3.7/1, Error ellipse: s-maj=22.9km s-min=13.8km az=125.0*
ISC 12 23:17:34.9±0.4, 33.°86N±0.°06×137.°03E±0.°06, h352km±3km, n37, σ0.°97/53, mb3.2/9, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JIE	**Ise**	**0.60**	**333**	P		**Pn**	**23 18 20.2**	**+0.7**
JIE				S		**S**	**23 18 55.4**	**+0.2**
TK02	**Tokai 2**	**0.61**	**81**	P		**Pn**	**23 18 20.4**	**+0.9**
TK02				*e*S		**S**	**23 18 57.6**	**+2.3**
JKN2	**Miekihoku**	**0.74**	**302**	P		**Pn**	**23 18 20.3**	**+0.5**
JKN2				*e*S		**S**	**23 18 55.7**	**-0.2**
JWZ	**Kozaga**	**1.14**	**254**	P		**Pn**	**23 18 21.5**	**+0.1**
JWZ				*e*S		**S**	**23 18 57.8**	**-0.9**
JWY	**Kouya**	**1.25**	**287**	P		**Pn**	**23 18 22.5**	**+0.7**
JWY				*e*S		**S**	**23 18 59.2**	**-0.3**
JWT	**Wachi**	**1.96**	**317**	P		**Pn**	**23 18 26.3**	**+0.3**
JWT				*e*S		**S**	**23 19 05.8**	**-1.2**
JYN	**Shimob**	**2.06**	**37**	P		**Pn**	**23 18 28.4**	**+1.7**
JAI	**Aioi**	**2.15**	**269**	P		**Pn**	**23 18 27.7**	**+0.3**
JOD2	**Odawara 2**	**2.20**	**50**	P		**Pn**	**23 18 28.1**	**+0.4**
JOD2				*e*S		**S**	**23 19 09.9**	**-0.3**
JHJ	**Hachijo jima 2**	**2.41**	**107**	S		**S**	**23 19 14.6**	**+1.4**
JMN	**Monobe**	**2.63**	**268**	P		**Pn**	**23 18 31.6**	**+0.5**
JRY	**Ryogami san**	**2.65**	**35**	P		**Pn**	**23 18 31.7**	**+0.5**
JRY				*e*S		**S**	**23 19 17.4**	**+0.9**
MAJO	**Matsushiro**	**2.85**	**19**	*e*Pn		**Pn**	**23 18 33.1**	**+0.1**
MAT	**Matsushiro**	**2.85**	**19**	P		**Pn**	**23 18 32.8**	**-0.1**
MAT				S		**S**	**23 19 18.3**	**-1.3**
MAT	**Matsushiro**	**2.85**	**19**	P		**Pn**	**23 18 32.9**	**0.0**
MAT				*e*S		**S**	**23 19 17.7**	**-1.9**
MJAR	**Matsushiro Arr**	**2.85**	**19**	P		**Pn**	**23 18 32.5**	**-0.5**
MJAR				S		**S**	**23 19 18.6**	**-1.0**
JAG	**Ashikaga**	**3.24**	**37**	P		**Pn**	**23 18 35.2**	**-1.3**
JAG				*e*S		**S**	**23 19 21.2**	**-4.9**
BSO1	**Boso 1**	**3.36**	**75**	P		**Pn**	**23 18 35.4**	**-2.3**
BSO1				*e*S		**S**	**23 19 24.2**	**-4.0**
JHS	**Saijyo**	**3.43**	**291**	P		**Pn**	**23 18 38.8**	**+0.5**
JHS				*e*S		**S**	**23 19 28.7**	**-0.7**
JTO	**Tosashimizu**	**3.68**	**256**	P		**Pn**	**23 18 40.9**	**+0.2**
CBIJ	**Chichi jima**	**8.07**	**145**	P		**Pn**	**23 19 26.6**	**-3.4**
CBIJ				S		**S**	**23 20 53.8**	**-10**
KSRS	**Korea Array**	**8.24**	**298**	P		**Pn**	**23 19 32.4**	**+0.7**
ERM	**Erimo**	**9.47**	**29**	*e*Pn		**Pn**	**23 19 45.1**	**-1.3**
ERM				*e*S		**S**	**23 21 25.8**	**-8.2**

comp=Z,0.3nm,0.3s,baz=86,slow=20,SNR=4.5
11nm,0.3s,baz=286,slow=22,SNR=7.9
1.1nm,0.3s,baz=112,slow=12,SNR=42
comp=Z,0.8nm,0.8s,baz=181,slow=4.0
comp=Z,0.9nm,0.3s,baz=200,slow=11,SNR=43
comp=Z,46nm,1.1s
comp=N,500nm,21.5s
comp=E,850nm,18.1s
comp=Z,350nm,22.4s
comp=Z,14nm,1.3s
comp=

ASAJ	Asahikawa	11.12	21	P	Pn	23 20 06.7	+0.7
	1.1nm,0.3s,baz=204,slow=11,SNR=6.8						
YSS	Yuzh-Sakhalins	13.79	17	eP	P	23 20 37.2	+1.3
	11nm,0.5s						
SSLB	Suanglung	17.27	239	eP	P	23 21 12.8	-1.3
	2.3nm,0.5s						
SONM	Songino Array	26.85	311	P	P	23 22 47.5	+3.2
	0.4nm,0.7s,mb2.8,baz=134,slow=8.3,SNR=2.6						
CMAR	Chiang Mai Arr	37.23	255	P	P	23 24 13.6	-0.6
	0.7nm,0.4s,mb3.3,baz=50,slow=7.6,SNR=3.1						
MKAR	Makanchi Array	42.87	304	P	P	23 24 59.9	+0.3
	0.2nm,0.5s,mb2.5,baz=87,slow=9.8,SNR=3.8						
KURK	Kurchatov	45.16	310	P	P	23 25 17.7	+0.1
	0.3nm,0.3s,mb2.9,baz=90,slow=7.0,SNR=5.1						
WRA	Warramunga Arr	53.56	183	P	P	23 26 20.3	-0.4
	0.2nm,0.3s,mb3.0,baz=0.4,slow=7.6,SNR=17						
ARCES	ARCESS Array B	65.69	339	P	P	23 27 42.1	0.0
	1.1nm,0.8s,mb3.6,baz=90,slow=8.5,SNR=4.1						
ARCES	ARCESS Array B	65.69	339	P	P	23 27 42.1	0.0
FINES	FINESS Array B	69.92	331	P	P	23 28 07.9	-0.5
	1.7nm,0.4s,mb4.1,baz=58,slow=5.9,SNR=39						
NOA	NORSAR Array B	75.68	336	P	P	23 28 41.2	-0.7
	0.6nm,0.5s,mb3.5,baz=44,slow=5.6,SNR=3.4						
NOA	NORSAR Array B	75.68	336	P	P	23 28 41.2	-0.7
PDAR	Pinedale Array	82.44	43	P	P	23 29 19.9	+1.3
	0.4nm,0.6s,mb3.4,baz=323,slow=5.7,SNR=3.5						

*ISCJB **12** 23:37:30.1±0.9, 31°.59S±0°.05×178°.7W±0°.1, h73km±10km, mb4.5/9, Error ellipse: s-maj=20.7km s-min=6.1km az=18.0*
*NEIC **12** 23:37:32.6±1.2, 31°.39S×178°.54W, h91km±11km, mb4.6/2, Error ellipse: s-maj=20.8km s-min=11.9km az=113.0*
*IDC **12** 23:37:36.1±1.5, 31°.12S×178°.65W, h117km±13km, mb4.3/7, mb1 4.5/7, mb1mx4.2/15, mbtmp4.3/7, Error ellipse: s-maj=22.8km s-min=15.1km az=128.0*

ISC 12 23:37:31.2±0.7, 31°.52S±0°.05×178°.7W±0°.1, h61km±8km, n50, σ1§62/52, mb4.6/9, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	2.36	17	P	Pn	23 38 08.8	+1.2
	140nm,0.3s,baz=156,slow=1.3,SNR=11						
RAO				S	Sn	23 38 34.4	-0.9
	295nm,0.3s,baz=226,slow=23,SNR=20						
RAO	Raoul Island	2.36	17	ePn	Pn	23 38 08.7	+1.0
RAO				eSn	Sn	23 38 34.0	-1.4
MXZ	Matakaoa Point	6.51	201	ePN	Pn	23 39 07.1	+2.8
MXZ				SN	Sn	23 40 22.1	+5.0
PUZ	Puketiti	7.00	200	P	Pn	23 39 13.2	+2.2
PUZ	Puketiti	7.00	200	PN	Pn	23 39 12.4	+1.4
PUZ				SN	Sn	23 40 32.4	+3.3
URZ	Urewera	7.55	206	P	Pn	23 39 21.1	+2.6
	2.3nm,0.3s,baz=249,slow=5.9,SNR=14						
URZ				S	Sn	23 40 46.5	+3.9
	11nm,0.3s,baz=191,slow=22,SNR=22						
URZ	Urewera	7.55	206	P	Pn	23 39 20.7	+2.2
URZ	Urewera	7.55	206	PN	Pn	23 39 20.6	+2.1
URZ				SN	Sn	23 40 45.9	+3.3
KNZ	Kokohu	8.04	200	eSN	Sn	23 40 54.9	+0.1
NMHZ	Naumai	8.40	205	PN	Pn	23 39 31.8	+1.7
NMHZ				SN	Sn	23 41 07.5	+4.0
KAHZ	Kahuranaki	9.00	202	PN	Pn	23 39 38.6	+0.2
KAHZ				SN	Sn	23 41 20.3	+2.1
PXZ	Pawanui	9.22	202	SN	Sn	23 41 23.1	-0.5
BFZ	Birch Farm	10.01	203	SN	Sn	23 41 40.9	-1.9
MRZ	Mangatainoka R	10.22	205	P	Pn	23 39 53.3	-1.8
MRZ				S	Sn	23 41 41.7	-6.3
MRZ	Mangatainoka R	10.22	205	PN	Pn	23 39 53.3	-1.7
MRZ				SN	Sn	23 41 45.6	-2.4
TMWZ	Te Maipa	10.51	203	eSN	Sn	23 41 51.4	-3.6
KIW	Kapiti Island	10.65	207	PN	Pn	23 39 59.7	-1.2
KIW				eSN	Sn	23 41 55.7	-2.7
SNZO	South Karori	11.11	207	PN	Pn	23 40 03.5	-3.7
NNZ	Nelson	11.58	211	eSN	Sn	23 42 18.0	-3.3
THZ	Tophouse	12.23	211	PN	Pn	23 40 21.4	-1.1
THZ				SN	Sn	23 42 32.3	-4.8
MQZ	McQueen's Vall	13.95	207	eSN	Sn	23 43 09.0	-10
RPZ	Rata Peaks	14.61	211	P	Pn	23 40 58.3	+3.9
	2.4nm,0.3s,baz=164,slow=4.7,SNR=9.7						
RPZ				S	Sn	23 43 24.9	-10
	0.9nm,0.3s,baz=9.0,slow=19,SNR=5.0						
CTAO	Charters Tower	33.38	281	eP	P	23 44 05.1	+1.2
STKA	Stephens Creek	33.63	259	P	P	23 44 07.6	+1.6
	16nm,0.8s,mb5.0,baz=96,slow=10,SNR=13						
ASAR	Alice Springs	42.44	268	P	P	23 45 20.0	-0.2
	6.1nm,0.4s,mb4.6,baz=105,slow=7.5,SNR=115						
ASAR				ScP	ScP	23 50 50.4	-7.4
	1.4nm,0.9s,baz=115,slow=4.1,SNR=8.5						
WRAB	Tennant Creek	43.53	274	eP	P	23 45 29.6	+0.6
	9.9nm,0.5s,mb4.8						
WRA	Warramunga Arr	43.53	274	P	P	23 45 28.6	-0.4
	12nm,0.3s,mb5.1,baz=111,slow=8.0,SNR=252						
WRA				ScP	ScP	23 50 54.0	-8.3
	1.3nm,1.0s,baz=110,slow=3.7,SNR=4.7						
WRA	Warramunga Arr	43.53	274	P	P	23 45 28.6	-0.4
WRA				ScP	ScP	23 50 54.0	-8.3
SBA	Scott Base	46.88	184	eP	P	23 45 57.4	+2.6
KAKA	Kakadu	48.52	281	eP	P	23 46 07.8	-0.5
CASY	Casey	53.87	208	eP	P	23 46 47.5	-0.2
	4.0nm,0.8s,mb4.4						
QSPA	South Pole Qui	58.60	180	P	P	23 47 23.3	+2.1
	11nm,0.7s,mb5.0,baz=18,slow=0.7,SNR=21						
QSPA	South Pole Qui	58.60	180	eP	P	23 47 23.1	+2.0
	5.7nm,0.8s,mb4.7						
MAW	Mawson	71.05	201	P	P	23 48 41.9	-0.4
	2.5nm,1.1s,mb4.1,baz=196,slow=2.7,SNR=3.7						
MAW	Mawson	71.05	201	P	P	23 48 42.3	0.0
TATO	Taipei	80.12	307	P	P	23 49 30.8	-3.9
NVAR	Mina Array Bea	89.48	43	P	P	23 50 19.5	-1.9
	2.1nm,1.0s,mb4.4,baz=216,slow=9.9,SNR=8.3						
NVAR	Mina Array Bea	89.48	43	P	P	23 50 19.5	-1.9
TXAR	Lajitas Array	93.51	58	P	P	23 50 38.4	-2.0
	0.4nm,1.0s,mb3.8,baz=215,slow=11,SNR=3.1						
ARCES	ARCESS Array B	139.54	347	PKhKP		23 56 40.9	
	0.7nm,0.7s,baz=90,slow=0.9,SNR=3.4						
ARCES				PKP	PKPdf	23 56 49.3	-1.5
	2.0nm,0.8s,baz=54,slow=2.3,SNR=3.1						
JOF	Joensuu	143.22	338	ep	PKPdf	23 56 55.8	-1.7
KAF	Kangasniemi	145.38	340	ep	PKPdf	23 56 55.2	-6.1
	3.6nm,0.7s						
FINES	FINESS Array B	145.97	339	PKPbc	PKPbc	23 56 58.9	-4.3
	6.8nm,0.7s,baz=48,slow=4.2,SNR=33						
FINES	FINESS Array B	145.97	339	PKPbc	PKPbc	23 56 58.9	-4.3
NB2	NORSAR Subarra	149.75	350	PKP	PKPdf	23 57 09.5	+0.9
	comp=Z,1.6nm,0.8s,baz=14,slow=4.3						
NOA	NORSAR Array B	149.75	350	PKPbc	PKPbc	23 57 09.8	-3.6
	comp=Z,0.6nm,0.7s,baz=25,slow=3.5,SNR=6.5						
HFS	Hagfors	150.20	347	PKPbc	PKPbc	23 57 10.5	-4.0
	comp=Z,1.2nm,0.5s,baz=116,slow=3.4,SNR=16						
MMAI	Mount Meron Ar	151.17	282	PKPbc	PKPbc	23 57 16.2	-1.5
	comp=Z,0.5nm,0.4s,baz=78,slow=7.8,SNR=6.2						
AKASG	Malin Array Be	151.79	321	PKPbc	PKPbc	23 57 15.2	-3.3
	comp=Z,0.4nm,0.3s,baz=60,slow=3.0,SNR=4.0						
BRTR	Keskin Array B	152.56	296	PKPbc	PKPbc	23 57 20.0	-0.6
	comp=Z,0.4nm,0.8s,baz=64,slow=3.2,SNR=2.5						
BRTR				PKPab	PKPab	23 57 27.6	-3.7
	comp=Z,0.4nm,0.8s,baz=70,slow=3.3,SNR=3.0						

NEIC 13 00:22:58.0, 63°.66N×149°.46W, h10km, ML3.6(PMR), ML3.1(AEIC), After AEIC., Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCK	McKinley	0.25	72	ePg	Pg	00 23 03.0	0.0
MCK				S	Sg	00 23 07.0	+0.6
RND	Reindeer	0.37	132	P	Pg	00 23 05.1	-0.2
RND				S	Sg	00 23 10.4	+0.2
TRF	Thorofare Moun	0.42	241	P	Pg	00 23 06.3	+0.1
TRF				S	Sg	00 23 12.5	+0.7
BPAW	Bear Paw Mtn.	0.81	304	P	Pg	00 23 13.2	-0.3
BPAW				S	Sg	00 23 23.4	-0.6
DHY	Denali Highway	1.11	121	P	Pb	00 23 18.5	-0.7
CHUM	Lake Minchumin	1.29	281	P	Pn	00 23 21.4	-0.7
COLA	College	1.41	29	ePn	Pn	00 23 23.3	-0.4
COLA				eS	Sn	00 23 43.0	+0.7
PPLA	Purkeypile	1.45	239	P	Pn	00 23 24.1	-0.2
SML	Sawmill	1.93	164	P	Pn	00 23 31.1	+0.3
PMR	Palmer	2.08	176	eP	Pn	00 23 33.0	+0.1
DOT	Dot Lake	2.41	88	P	Pn	00 23 37.4	0.0
RC01	Rabbit Creek A	2.58	183	ePn	Pn	00 23 41.5	+1.8
RC01				eS	Sn	00 24 10.0	-1.1
MENT	Mentasta	2.69	103	ePn	Pn	00 23 42.7	+1.4
MENT				eS	Sn	00 24 19.1	+5.2
IM3	Indian Mountai	2.97	324	P	Pn	00 23 45.5	+0.5
TTA	Tatalina	3.05	259	ePn	Pn	00 23 40.6	-5.5
TTA				eS	Sn	00 24 32.4	+10
DIV	Divide	3.06	144	ePn	Pn	00 23 48.0	+1.6
DIV				eS	Sn	00 24 25.2	+2.1
BCA3	Beaver Creek A	3.51	96	P	Pn	00 23 52.6	+0.1
BMRM	Bremner River	3.52	138	ePn	Pn	00 23 54.8	+2.0
BMRM				eS	Sn	00 24 34.4	0.0
RSO	Redoubt South	3.56	207	Pn	Pn	00 23 55.5	+2.3
COLD	Coldfoot	3.60	355	P	Pn	00 23 54.5	+0.8
EGAK	Eagle	3.80	69	ePn	Pn	00 23 56.0	-0.5
EGAK				eS	Sn	00 24 52.9	+12
SVW2	Sparrevohn	3.84	231	eP	Pn	00 23 57.3	+0.3
BM3	Burnt Mountain	4.28	26	P	Pn	00 24 03.4	+0.3
DAWY	Dawson	4.47	80	P	Pn	00 24 06.5	+0.7
KDAK	Kodiak Island	6.09	196	ePn	Pn	00 24 29.4	+1.5
KDAK				eS	Sn	00 25 41.8	+4.3
INK	Inuvik	7.99	47	ePn	Pn	00 24 54.5	+0.6

*IDC **13** 00:32:33.1±2.0, 35°.70N×80°.89E, h0km, mb3.6/3, mb1 3.6/7, mb1mx3.4/25, mbtmp3.5/7, ML3.1/4, MS2.7/2, Ms1 2.7/2, ms1mx2.3/24, Error ellipse: s-maj=44.8km s-min=23.4km az=63.0*
*NEIC **13** 00:32:35.0±1.4, 35°.78N×81°.02E, h10km, Error ellipse: s-maj=26.3km s-min=15.4km az=54.0*

ISC 13 00:32:32.8±1.2, 35°.64N±0°.09×80°.6E±0°.1, h10km, n15, σ1§29/17, mb3.4/3, Kashmir-Xizang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	5.33	318	Pn	Pb	00 34 05.9	-0.1
KSH				Sn	Sb	00 35 11.0	+1.0
KSH				smax			
	comp=N,120nm,1.5s						
KSH				smax			
	comp=E,39nm,0.9s						
KSH	Kashi	5.33	318	Pn	Pb	00 34 04.1	-1.9
KSH				Sn	Sb	00 35 09.2	-0.8
AML	Almayashu	8.42	322	ePn	Pn	00 34 40.0	+5.3
	comp=E,1.9nm,0.7s						
AAK	Ala-Archa	8.43	328	Lg		00 37 13.1	
	comp=E,0.6nm,0.3s,baz=294,slow=18,SNR=2.9						
AAK				LR	LR	00 38 15.0	
	comp=E,51nm,18.4s,baz=177,slow=40						
MK31	Makanchi Array	11.22	6	ePn	Pn	00 35 11.8	-1.3
MKAR	Makanchi Array	11.22	6	Pn	Pn	00 35 14.6	+1.4
	comp=E,0.0nm,0.3s,baz=195,slow=12,SNR=3.8						
MKAR				Sn	Sn	00 37 19.4	+0.8
	comp=E,0.0nm,0.3s,baz=192,slow=23,SNR=2.4						
MKAR	Makanchi Array	11.22	6	Pn	Pn	00 35 14.6	+1.4
MKAR				Sn	Sn	00 37 19.4	+0.8
KURK	Kurchatov	15.14	355	Pn	Pn	00 36 02.9	-3.7
	comp=E,0.1nm,0.3s,baz=178,slow=10.0,SNR=2.2						
KURK	Kurchatov	15.14	355	ePn	Pn	00 36 04.0	-2.5
ZALV	Zalesovo Beam	18.55	8	P	Pn	00 36 48.0	-1.6
	comp=E,0.0nm,0.3s,baz=183,slow=8.7,SNR=2.3						
BVAR	Borovoye Array	18.82	341	P	Pn	00 36 53.7	+0.7
	comp=E,0.3nm,0.3s,baz=118,slow=8.6,SNR=3.7						
SONM	Songino Array	22.67	50	P	P	00 37 34.3	+0.1
	comp=E,0.5nm,0.7s,mb3.0,baz=256,slow=12,SNR=2.6						
CMAR	Chiang Mai Arr	23.60	132	P	P	00 37 44.1	0.0
	comp=E,1.2nm,0.5s,mb3.6,baz=304,slow=10,SNR=4.5						
KSRS	Korea Array	37.76	73	LR	LR	00 56 52.3	
	comp=E,12nm,19.6s,baz=240,slow=39						
FINES	FINESS Array B	42.61	325	P	P	00 40 32.0	+3.2
	comp=E,1.2nm,0.8s,mb3.6,baz=77,slow=12,SNR=4.3						

IDC 13 00:50:39.8±5.1, 15°.42S×172°.75W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.8/17, mbtmp4.0/3, MS3.8/2, Ms1 3.8/2, ms1mx3.1/23, Error ellipse: s-maj=224.9km s-min=24.3km az=136.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	1.77	32	Pn	Pn	00 51 10.5	-1.1
	23nm,0.3s,baz=252,slow=2.8,SNR=14						
AFI				Sn	Sn	00 51 29.4	-5.5
	108nm,0.3s,baz=238,slow=23,SNR=20						
PPT	Papeete	22.32	99	LR	LR	01 02 44.2	
	comp=Z,271nm,19.7s,baz=195,slow=32						
STKA	Stephens Creek	44.57	240	P	P	00 58 53.5	-0.3
	3.6nm,0.8s,baz=72,slow=6.4,SNR=2.6						
WRA	Warramunga Arr	50.45	257	P	P	00 59 39.2	-0.5
	0.4nm,0.4s,baz=95,slow=6.1,SNR=11						
ASAR	Alice Springs	50.70	252	P	P	00 59 41.0	-0.5
	1.9nm,0.5s,baz=86,slow=7.8,SNR=30						
KDAK	Kodiak Island	74.82	11	LR	LR	01 28 19.6	
	comp=Z,46nm,19.8s,baz=98,slow=30						
BRTR	Keskin Array B	146.57	322	PKPbc	PKPbc	01 10 25.0	+1.5
	1.0nm,0.8s,baz=60,slow=3.7,SNR=5.9						

*ATH **13** 01:04:57.6, 37°.45N×21°.34E, h23km±2km, MD3.5/15*
*NEIC **13** 01:04:57.6, 37°.45N×21°.34E, h23km, MD3.5(ATH), After ATH.*
*CSEM **13** 01:04:58.5±0.4, 37°.47N×21°.39E, h15km, MD3.5, Error ellipse: s-maj=10.4km s-min=4.9km az=53.0*
*THE **13** 01:04:59.1, 37°.46N×21°.34E, h3km±2km, ML2.7/2, Error ellipse: s-maj=2.8km s-min=0.7km az=213.0*

ISC 13 01:04:59.1±0.6, 37°.47N±0°.03×21°.42E±0°.05, h16km±5km, n54, σ1§22/80, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITM	Ithomi	0.50	125	ePn	Pg	01 05 08.4	-0.6
ITM				eSn	Sg	01 05 16.8	+1.1
ITM	Ithomi	0.50	125	ePN	Pg	01 05 08.4	-0.6
ITM				eSN	Sg	01 05 16.8	+1.1
ITM	Ithomi	0.50	125	P	Pg	01 05 09.2	+0.2
ITM				S	Sg	01 05 17.6	+1.9
ITM	Ithomi	0.50	125	ePn	Pg	01 05 08.4	-0.6
ITM	Ithomi	0.50	125	P	Pg	01 05 09.2	+0.2
ITM				eSn	Sg	01 05 16.8	+1.1
ITM				S	Sg	01 05 17.6	+1.9
RLS	Riolos of Patr	0.59	4	ePn	Pg	01 05 09.7	-1.0
RLS				eSn	Sg	01 05 18.8	+0.3
RLS	Riolos of Patr	0.59	4	ePN	Pg	01 05 09.7	-1.0
RLS				eSN	Sg	01 05 18.8	+0.3
RLS	Riolos of Patr	0.59	4	ePn	Pg	01 05 09.7	-1.0
RLS				eSn	Sg	01 05 18.8	+0.3
PYL	PYLOS	0.63	156	ePB	Pb	01 05 09.7	-2.0
PYL				eSN	Sg	01 05 20.1	+0.3
PYL	PYLOS	0.63	156	P	Pg	01 05 10.9	-0.6
PYL				S	Sg	01 05 21.2	+1.4
PYL	PYLOS	0.63	156	ePb	Pb	01 05 09.7	-2.0
PYL	PYLOS	0.63	156	P	Pg	01 05 10.9	-0.6
PYL				eSn	Sg	01 05 20.1	+0.3
PYL				S	Sg	01 05 21.2	+1.4
VLX	Vlachokerasia	0.77	97	ePN	Pn	01 05 13.6	-1.6
VLX				eSN	Sn	01 05 25.7	-0.8
VLX	Vlachokerasia	0.77	97	P	Pb	01 05 13.8	-0.3
VLX				S	Sg	01 05 27.2	+2.9
VLX	Vlachokerasia	0.77	97	ePn	Pn	01 05 13.6	-1.6
VLX				eSn	Sn	01 05 25.7	-0.8
VLX				S	Sg	01 05 27.2	+2.9
KFL	Anninata	0.81	322	P	Pb	01 05 14.4	-0.3
KFL				S	Sb	01 05 25.8	+0.4
KFL	Anninata	0.81	322	P	Pb	01 05 14.4	-0.3
KFL				S	Sb	01 05 25.8	+0.4
UPR	University Cam	0.86	20	ePN	Pn	01 05 15.2	-1.3
UPR	University Cam	0.86	20	ePn	Pn	01 05 15.2	-1.3
GUR	Goura	0.87	57	ePB	Pb	01 05 14.6	-1.1
GUR				eSN	Sn	01 05 28.7	-0.2
GUR	Goura	0.87	57	ePb	Pb	01 05 14.6	-1.1
GUR				eSn	Sn	01 05 28.7	-0.2
VLS	Valsamata	0.96	317	ePb	Pb	01 05 15.1	-2.2
VLS				eSb	Sb	01 05 29.9	+0.1
VLS	Valsamata	0.96	317	ePB	Pb	01 05 15.1	-2.2
VLS				eSB	Sb	01 05 29.9	+0.1
VLS	Valsamata	0.96	317	P	Pb	01 05 15.7	-1.6
VLS				S	Sb	01 05 29.9	+0.1
VLS	Valsamata	0.96	317	ePb	Pb	01 05 15.1	-2.2
VLS	Valsamata	0.96	317	P	Pb	01 05 15.7	-1.6
VLS				S	Sb	01 05 29.9	+0.1
EFP	Efpalio	1.03	22	ePN	Pn	01 05 18.0	-0.8
EFP	Efpalio	1.03	22	ePn	Pn	01 05 18.0	-0.8
LTK	Loutraki	1.35	65	ePN	Pn	01 05 23.2	+0.1
LTK	Loutraki	1.35	65	ePn	Pn	01 05 23.2	+0.1
VLI	Veliai	1.43	121	ePn	Pn	01 05 25.9	+1.6
VLI	Veliai	1.43	121	ePN	Pn	01 05 25.9	+1.6
VLI	Veliai	1.43	121	ePn	Pn	01 05 25.9	+1.6
LKD2	Lefkada island	1.45	336	P	Pn	01 05 25.0	+0.5
LKD2				S	Sn	01 05 45.5	+2.4
LKD2	Lefkada island	1.45	336	P	Pn	01 05 25.0	+0.5
LKD2				S	Sn	01 05 45.5	+2.4
DID	Didima	1.45	88	ePB	Pb	01 05 24.5	-1.1
DID	Didima	1.45	88	ePb	Pb	01 05 24.5	-1.1
EVR	Evrytania	1.48	12	ePn	Pn	01 05 26.9	+2.0
EVR	Evrytania	1.48	12	ePN	Pn	01 05 26.9	+2.0
EVR	Evrytania	1.48	12	ePn	Pn	01 05 26.9	+2.0
AGG	Agios Georgios	1.71	25	ePn	Pn	01 05 29.5	+1.4
AGG	Agios Georgios	1.71	25	ePN	Pn	01 05 29.5	+1.4
AGG	Agios Georgios	1.71	25	ePn	Pn	01 05 29.5	+1.4
LKR	Lokris	1.72	46	ePn	Pn	01 05 28.9	+0.7
LKR	Lokris	1.72	46	ePN	Pn	01 05 28.9	+0.7
LKR	Lokris	1.72	46	ePn	Pn	01 05 28.9	+0.7
KYTH	Kithira	1.76	132	ePn	Pn	01 05 30.4	+1.6
KYTH	Kithira	1.76	132	ePN	Pn	01 05 30.4	+1.6
KYTH	Kithira	1.76	132	ePn	Pn	01 05 30.4	+1.6
VLY	Voula,Athens	1.92	78	ePb	Pb	01 05 30.4	-3.3
VLY	Voula,Athens	1.92	78	ePB	Pb	01 05 30.4	-3.3
VLY	Voula,Athens	1.92	78	ePb	Pb	01 05 30.4	-3.3
THL	Klokotos Trika	2.14	12	ePN	Pn	01 05 34.4	+0.3
THL	Klokotos Trika	2.14	12	ePn	Pn	01 05 34.4	+0.3

*ISCJB **13** 01:22:17.3±1.2, 17°.7S±0°.1×178°.80W±0°.10, h538km±17km, mb4.0/21, Error ellipse: s-maj=22.6km s-min=10.3km az=151.1*
*IDC **13** 01:22:17.9±1.9, 17°.78S×178°.74W, h537km±23km, mb3.4/10, mb1 3.6/11, mb1mx3.5/18, mbtmp3.5/11, Error ellipse: s-maj=25.4km s-min=14.3km az=145.0*
*NEIC **13** 01:22:17.8±0.9, 17°.75S×178°.79W, h536km±11km, mb3.9/7, Error ellipse: s-maj=16.1km s-min=8.5km az=149.0*

ISC 13 01:22:18.3±1.2, 17°.7S±0°.1×178°.76W±0°.10, h538km±16km, n35, σ0§83/29, mb4.0/21, 1C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	7.72	62	P	P	01 24 12.8	-0.2
	6.2nm,0.3s,baz=99,slow=7.8,SNR=6.4						
URZ	Urewera	20.78	189	P	P	01 26 20.1	-1.7
	14nm,1.1s,baz=16,slow=7.4,SNR=4.6						
EIDS	Eidsvold	29.02	250	eP	P	01 27 35.2	+0.2
ARMA	Armidale	29.74	239	eP	P	01 27 42.4	+1.2
RMQ	Roma	31.26	248	eP	P	01 27 55.1	+0.8
	6.7nm,0.6s,mb4.3						
CTAO	Charters Tower	33.15	260	eP	P	01 28 09.5	-0.9
	3.6nm,0.7s,mb4.0						
CNB	Canberra Magne	33.27	232	eP	P	01 28 12.4	+1.1
CMSA	Cobar Meteorol	34.95	240	eP	P	01 28 25.8	+0.4
QLP	Quilpie	35.29	249	eP	P	01 28 28.3	0.0
COEN	Coen	36.77	270	eP	P	01 28 41.0	+0.3
	46nm,0.7s,mb5.1						
STKA	Stephens Creek	38.43	241	eP	P	01 28 54.7	+0.7
	6.2nm,0.6s,mb4.3						
STKA	Stephens Creek	38.43	241	P	P	01 28 54.9	+0.9
	7.6nm,0.5s,mb4.5,baz=84,slow=6.5,SNR=20						
WRAB	Tennant Creek	44.33	259	eP	P	01 29 39.7	-1.2
	4.5nm,0.7s,mb4.1						
WRA	Warramunga Arr	44.34	259	P	P	01 29 39.9	-1.1
	4.0nm,0.7s,mb4.1,baz=96,slow=7.0,SNR=72						
WRA				PcP	PcP	01 31 12.4	-1.1
	1.2nm,0.8s,baz=90,slow=3.6,SNR=5.3						
ASAR	Alice Springs	44.52	254	P	P	01 29 42.2	-0.1
	27nm,0.6s,mb5.0,baz=88,slow=8.1,SNR=388						
ASAR				PcP	PcP	01 31 13.5	-0.5
	0.9nm,0.5s,baz=103,slow=3.4,SNR=5.7						
KAKA	Kakadu	47.25	269	eP	P	01 30 04.6	+1.4
	4.5nm,0.2s,mb4.7						
KNA	Kununurra	50.16	264	eP	P	01 30 24.6	-0.2
	7.0nm,0.5s,mb4.3						
FITZ	Fitzroy Crossi	52.73	260	eP	P	01 30 43.2	-0.1
	6.8nm,1.0s,mb3.9						
MJAR	Matsushiro Arr	67.56	324	P	P	01 32 20.7	-0.5
	0.4nm,0.4s,mb3.3,baz=158,slow=21,SNR=3.7						
QSPA	South Pole Qui	72.33	180	eP	P	01 32 49.4	+0.5
	3.7nm,1.1s,mb3.7						
NVAR	Mina Array Bea	79.52	44	P	P	01 33 29.3	0.0
	0.8nm,0.6s,mb3.2,baz=208,slow=7.1,SNR=3.1						
WVOR	Wild Horse Val	81.48	40	eP	P	01 33 40.4	+1.0
	1.0nm,0.6s,mb3.4						
KULM	Kulim	82.68	278	eP	P	01 33 42.2	-4

AB31	**Akbulak array**	**11.17**	**28**	Pn	**Pn**	**01 33 09.7**	**-2.0**
	0.1nm,0.2s,SNR=6.4						
AB31				Sn	**Sn**	**01 35 10.2**	**-6.3**
	1.9nm,0.6s,SNR=6.0						
ABKAR	**Akbulak array**	**11.17**	**28**	*e*Pn	**Pn**	**01 33 10.9**	**-0.7**
ABKAR	**Akbulak array**	**11.17**	**28**	*e*Pn	**Pn**	**01 33 10.9**	**-0.8**
AKTK	**Aktyubinsk**	**11.62**	**19**	Pn	**Pn**	**01 33 17.4**	**-0.3**
AKTK				Sn	**Sn**	**01 35 21.7**	**-5.7**
AKTK	**Aktyubinsk**	**11.62**	**19**	Pn	**Pn**	**01 33 17.4**	**-0.3**
AKTO	**Aktyubinsk**	**11.62**	**19**	Pn	**Pn**	**01 33 17.4**	**-0.3**
	0.3nm,0.3s,baz=199,slow=11,SNR=6.1						
AKTO				Sn	**Sn**	**01 35 21.7**	**-5.7**
	0.7nm,0.3s,baz=151,slow=19,SNR=8.9						
KBL	**Kabul**	**14.51**	**105**	*e*Pn	**Pn**	**01 33 57.5**	**+0.2**
KBL	**Kabul**	**14.51**	**105**	*e*Pn	**Pn**	**01 33 57.5**	**+0.2**
BVAR	**Borovoye Array**	**18.39**	**37**	P	**Pn**	**01 34 47.5**	**+0.6**
	0.1nm,0.3s,baz=231,slow=12,SNR=3.0						
BVAR	**Borovoye Array**	**18.39**	**37**	P	**Pn**	**01 34 47.5**	**+0.6**
KURK	**Kurchatov**	**21.68**	**50**	P	**P**	**01 35 22.4**	**-0.2**
	0.2nm,0.4s,mb2.9,baz=254,slow=12,SNR=1.8						
KURK	**Kurchatov**	**21.68**	**50**	*e*P	**P**	**01 35 23.6**	**+0.9**
	1.6nm,0.9s,mb3.5						
KURK	**Kurchatov**	**21.68**	**50**	*e*P	**P**	**01 35 23.6**	**+0.9**
	1.6nm,0.9s,mb3.5						
MKAR	**Makanchi Array**	**23.11**	**62**	P	**P**	**01 35 39.1**	**+1.2**
	0.7nm,0.9s,mb3.1,baz=247,slow=9.1,SNR=4.8						
MKAR	**Makanchi Array**	**23.11**	**62**	P	**P**	**01 35 39.1**	**+1.2**
FINES	**FINESS Array B**	**27.03**	**332**	P	**P**	**01 36 14.2**	**+0.2**
	0.7nm,0.5s,mb3.4,baz=131,slow=11,SNR=7.2						
FINES	**FINESS Array B**	**27.03**	**332**	P	**P**	**01 36 14.2**	**+0.2**
HFS	**Hagfors**	**31.44**	**323**	P	**P**	**01 36 53.4**	**+0.3**
	1.7nm,0.7s,mb4.0,baz=112,slow=9.1,SNR=7.9						
HFS	**Hagfors**	**31.44**	**323**	P	**P**	**01 36 53.4**	**+0.2**
EKA	**Eskdalemuir Ar**	**39.35**	**312**	P	**P**	**01 38 01.9**	**+0.7**
	1.0nm,0.4s,mb3.9,baz=93,slow=8.7,SNR=12						
EKA	**Eskdalemuir Ar**	**39.35**	**312**	P	**P**	**01 38 01.9**	**+0.7**

*ISCJB **13** 01:53:32.5±0.6, 33°.41N±0°.03×47°.28E±0°.03, h13km±4km, mb4.2/43, Error ellipse: s-maj=4.6km s-min=3.6km az=38.9*
*IDC **13** 01:53:32.7±0.8, 33°.50N×47°.34E, h0km, mb3.9/14, mb1 3.9/18, mb1mx3.9/27, mbtmp3.8/18, ML3.5/3, MS2.7/1, Ms1 2.7/1, ms1mx2.1/30, Error ellipse: s-maj=18.3km s-min=15.8km az=150.0*
*CSEM **13** 01:53:33.9±0.1, 33°.47N×47°.31E, h10km, mb4.4/28, Error ellipse: s-maj=4.1km s-min=3.7km az=22.0*
*NEIC **13** 01:53:35.0, 33°.53N×47°.49E, h5km, mb4.0/7, ML3.7(THR), MN3.7(TEH), After TEH.*
*TEH **13** 01:53:35.9, 33°.53N×47°.49E, h5km*
*THR **13** 01:53:35.6±1.2, 33°.53N×47°.37E, h15km±9km, ML3.7*
*SGS **13** 01:53:36.4, 33°.48N×47°.49E, h16km*

ISC 13 01:53:34.4±0.6, 33°.45N±0°.03×47°.28E±0°.03, h11km±4km, n197, σ1°.02/211, mb4.2/43, 3C-2D, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKOM	**Komasi**	**0.75**	**15**	Pg	**Pg**	**01 53 47.0**	**-1.9**
IKOM				Sg	**Sg**	**01 53 57.6**	**-1.1**
IKOM	**Komasi**	**0.75**	**15**	⇓*e*Pg	**Pg**	**01 53 47.1**	**-1.8**
IKOM				*e*Sg	**Sg**	**01 53 57.7**	**-1.0**
IKOM				*e*		01 53 59.1	
	comp=Z,66μm,0.2s						
IKOM	**Komasi**	**0.75**	**15**	⇓*e*Pg	**Pg**	**01 53 47.1**	**-1.8**
IKOM				Sg	**Sg**	**01 53 57.6**	**-1.1**
IGHG	**Ghaleghazi**	**1.06**	**326**	Pg	**Pg**	**01 53 54.6**	**-0.2**
IGHG				Sg	**Sg**	**01 54 11.0**	**+2.4**
IGHG	**Ghaleghazi**	**1.06**	**326**	*e*Pg	**Pg**	**01 53 54.6**	**-0.2**
IGHG				*e*Sg	**Sg**	**01 54 11.1**	**+2.5**
IGHG				*e*		01 54 19.0	
	comp=Z,18μm,0.3s						
IGHG	**Ghaleghazi**	**1.06**	**326**	*e*Pg	**Pg**	**01 53 54.6**	**-0.2**
IGHG				Sg	**Sg**	**01 54 11.0**	**+2.4**
IVIS	**Veis**	**1.13**	**342**	*e*Pg	**Pg**	**01 53 56.2**	**0.0**
IVIS				*e*Sg	**Sg**	**01 54 10.7**	**-0.3**
IVIS				*e*		01 54 17.0	
	comp=Z,17μm,0.4s						
IVIS	**Veis**	**1.13**	**342**	*e*Pg	**Pg**	**01 53 56.2**	**0.0**
IVIS				*e*Sg	**Sg**	**01 54 10.7**	**-0.3**
ILIN	**Lien**	**1.49**	**350**	Pg	**Pg**	**01 54 02.0**	**-1.0**
ILIN	**Lien**	**1.49**	**350**	⇑*e*Pg	**Pg**	**01 54 02.0**	**-1.0**
ILIN				*e*		01 54 26.9	
	comp=Z,20μm,0.2s						
ILIN	**Lien**	**1.49**	**350**	⇑*e*Pg	**Pg**	**01 54 02.0**	**-1.0**
SNGE	**Sanandaj**	**1.64**	**2**	Pg	**Pg**	**01 54 04.0**	**-1.9**
SNGE	**Sanandaj**	**1.64**	**2**	*e*Pg	**Pb**	**01 54 04.5**	**-0.1**
SNGE				AML	AML	01 54 31.5	
	comp=N,1μm,0.4s						
SNGE				AML	AML	01 54 32.1	
	comp=E,1μm,0.6s						
SNGE	**Sanandaj**	**1.64**	**2**	*e*Pg	**Pb**	**01 54 04.5**	**-0.1**
SHGR	**Shooshtar-Gavs**	**1.85**	**136**	Pg	**Pg**	**01 54 09.0**	**-0.8**
SHGR				Sg	**Sg**	**01 54 34.0**	**+0.2**
SHGR	**Shooshtar-Gavs**	**1.85**	**136**	*e*Pg	**Pg**	**01 54 09.3**	**-0.6**
SHGR				*e*Sg	**Sg**	**01 54 34.5**	**+0.7**
SHGR				AML	AML	01 54 46.4	
	comp=E,1μm,0.6s						
SHGR				AML	AML	01 54 51.0	
	comp=N,995nm,0.6s						
SHGR	**Shooshtar-Gavs**	**1.85**	**136**	*e*Pg	**Pg**	**01 54 09.3**	**-0.5**
SHGR				Sg	**Sg**	**01 54 34.0**	**+0.2**
BHD	**Baghdad**	**2.44**	**267**	*ex*	x	01 54 25.5	
BHD				*ex*	x	01 54 48.5	
ASAO	**Ashtian**	**2.53**	**64**	Pn	**Pn**	**01 54 17.0**	**+1.7**
ASAO				Sg	**Sg**	**01 54 52.0**	**-3.6**
ASAO	**Ashtian**	**2.53**	**64**	*e*Pn	**Pn**	**01 54 17.4**	**+2.1**
ASAO				*e*Sg	**Sg**	**01 54 52.0**	**-3.6**
ASAO				AML	AML	01 54 57.5	
	comp=N,417nm,0.4s						
ASAO				AML	AML	01 55 05.0	
	comp=E,350nm,0.7s						
ASAO	**Ashtian**	**2.53**	**64**	Pn	**Pn**	**01 54 17.0**	**+1.7**
ASAO				*e*Sg	**Sg**	**01 54 52.0**	**-3.6**
IRAZ	**Razeghan**	**2.93**	**48**	*e*Pn	**Pn**	**01 54 22.9**	**+2.1**
IRAZ				*e*		01 55 19.5	
	comp=Z,10μm,0.5s						
GHVR	**GHOM**	**3.49**	**72**	*e*Pn	**Pn**	**01 54 30.1**	**+1.6**
IMHD	**Mahdasht**	**3.57**	**50**	*e*Pn	**Pn**	**01 54 29.8**	**+0.1**
IMHD				*e*		01 55 31.1	
	comp=Z,2μm,0.3s						
IMHD	**Mahdasht**	**3.57**	**50**	*e*Pn	**Pn**	**01 54 29.8**	**+0.1**
THKV	**Tehran--Karaj**	**3.85**	**49**	Pn	**Pn**	**01 54 34.0**	**+0.5**
THKV	**Tehran--Karaj**	**3.85**	**49**	*e*Pn	**Pn**	**01 54 34.8**	**+1.4**
THKV				AML	AML	01 55 48.6	
	comp=N,92nm,0.6s						
THKV	**Tehran--Karaj**	**3.85**	**49**	Pn	**Pn**	**01 54 34.0**	**+0.5**
CHTH	**Charan**	**4.00**	**51**	Pn	**Pn**	**01 54 37.0**	**+1.4**
CHTH	**Charan**	**4.00**	**51**	*e*Pn	**Pn**	**01 54 37.0**	**+1.4**
CHTH	**Charan**	**4.00**	**51**	*e*Pn	**Pn**	**01 54 37.0**	**+1.4**
ISFB	**Sefidab**	**4.22**	**76**	*e*Pn	**Pn**	**01 54 38.0**	**-0.5**
ISFB				*e*		01 55 57.7	
	comp=Z,818nm,0.4s						
ISFB	**Sefidab**	**4.22**	**76**	*e*Pn	**Pn**	**01 54 38.0**	**-0.5**
IAZR	**Azarshahr**	**4.35**	**346**	Pn	**Pn**	**01 54 42.2**	**+1.9**
IAZR	**Azarshahr**	**4.35**	**346**	*e*Pn	**Pn**	**01 54 42.2**	**+1.9**
IAZR				*e*		01 56 09.1	
	comp=Z,2μm,0.4s						
IAZR	**Azarshahr**	**4.35**	**346**	*e*Pn	**Pn**	**01 54 42.2**	**+1.9**
ISRB	**Sarab**	**4.38**	**4**	*e*Pn	**Pn**	**01 54 41.4**	**+0.7**
ISRB				*e*		01 54 59.4	
	comp=Z,824nm,0.3s						
ISRB	**Sarab**	**4.38**	**4**	*e*Pn	**Pn**	**01 54 41.4**	**+0.7**
DAMV	**Damavand**	**4.44**	**59**	*e*Pn	**Pn**	**01 54 42.5**	**+1.0**
DAMV				AML	AML	01 56 03.8	
	comp=N,56nm,0.6s						
DAMV				AML	AML	01 56 14.1	
	comp=E,57nm,0.7s						
IDMV	**Damavand**	**4.46**	**60**	*e*	**Sg**	**01 56 03.2**	**+5.7**
	comp=Z,984nm,0.3s						
IPRN	**Peran**	**5.00**	**55**	*e*	**Sg**	**01 56 16.4**	**+1.4**
	comp=Z,1μm,0.4s						
ISHB	**Shabestar**	**5.01**	**345**	*e*Pn	**Pn**	**01 54 50.8**	**+1.4**
ISHB				*e*		01 55 14.4	
	comp=Z,386nm,0.3s						
IFIR	**Firoozkooh**	**5.02**	**63**	Pn	**Pn**	**01 54 48.7**	**-0.8**
IFIR	**Firoozkooh**	**5.02**	**63**	*e*Pn	**Pn**	**01 54 48.8**	**-0.7**
IFIR				*e*		01 56 38.9	
	comp=Z,381nm,0.0s						
IFIR	**Firoozkooh**	**5.02**	**63**	*e*Pn	**Pn**	**01 54 48.8**	**-0.7**
GRMI	**Germi**	**5.37**	**5**	Pn	**Pn**	**01 54 56.0**	**+1.6**
GRMI	**Germi**	**5.37**	**5**	*e*Pn	**Pn**	**01 54 56.7**	**+2.4**
GRMI	**Germi**	**5.37**	**5**	Pn	**Pn**	**01 54 56.0**	**+1.6**
ISHM	**Shahmirzad**	**5.48**	**63**	*e*Pn	**Pn**	**01 54 55.6**	**-0.3**
ISHM				*e*		01 56 30.6	
	comp=Z,778nm,0.3s						
ISHM	**Shahmirzad**	**5.48**	**63**	*e*Pn	**Pn**	**01 54 55.6**	**-0.3**
ISAD	**Sadrabad**	**5.61**	**104**	*e*Pn	**Pn**	**01 54 57.6**	**-0.1**
ISAD				*e*		01 56 12.2	
	comp=Z,430nm,0.2s						
ISAD	**Sadrabad**	**5.61**	**104**	*e*Pn	**Pn**	**01 54 57.6**	**-0.1**
IPAR	**Pars**	**6.09**	**125**	*e*Pn	**Pn**	**01 55 01.8**	**-2.4**
IPAR				*e*		01 56 41.7	
	comp=Z,487nm,0.5s						
IPAR	**Pars**	**6.09**	**125**	*e*Pn	**Pn**	**01 55 01.8**	**-2.4**
IGLO	**Ghaloghah**	**6.18**	**59**	*e*	**Pg**	**01 55 33.2**	**+0.6**
	comp=Z,574nm,0.4s						
IGLO				*e*Pn	**Pn**	**01 55 04.9**	**-0.5**
ASYS			**6.45**	**204**	P	**Pn**	**01 55 10.6**	**+1.4**
ASYS			**6.45**	**204**	P	**Pn**	**01 55 10.6**	**+1.5**
ASYS					S	**Sn**	**01 56 21.2**	**-1.5**
IMEH	**Mehriz**	**6.53**	**106**	*e*Pn	**Pn**	**01 55 10.1**	**-0.2**
IMEH				*e*		01 56 35.6	
	comp=Z,110nm,0.3s						
IMEH	**Mehriz**	**6.53**	**106**	*e*Pn	**Pn**	**01 55 10.1**	**-0.2**
GNI	**Garni**	**6.99**	**344**	Pn	**Pn**	**01 55 20.3**	**+3.8**
	comp=Z,0.3nm,0.3s,baz=135,slow=17,SNR=2.2						
GNI				Lg		01 57 25.1	
	comp=Z,0.2nm,0.3s,baz=51,slow=24,SNR=1.9						
BOQSS		**7.77**	**166**	S	**Sn**	**01 56 50.6**	**-4.7**
ASF	**Jabal al Asfar**	**8.84**	**265**	Pn	**Pn**	**01 55 42.9**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=345,slow=2.5,SNR=3.6						
BTHS		**9.88**	**161**	P	**Pn**	**01 55 56.3**	**+0.1**
BTHS		**9.88**	**161**	P	**Pn**	**01 55 56.3**	**+0.1**
MMAI	**Mount Meron Ar**	**9.96**	**271**	Lg		01 59 02.2	
	baz=110,slow=22,SNR=4.3						
EIL	**Elat**	**11.17**	**254**	Pn	**Pn**	**01 56 15.3**	**+1.4**
	comp=Z,0.6nm,0.3s,baz=124,slow=6.5,SNR=5.4						
EIL				Lg		01 59 41.0	
	comp=Z,0.2nm,0.3s,baz=11,slow=21,SNR=2.9						
EIL				LR	LR	02 00 26.9	
	comp=Z,34nm,19.4s,baz=95,slow=37						
EIL	**Elat**	**11.17**	**254**	Pn	**Pn**	**01 56 15.3**	**+1.3**
LYLS		**11.37**	**180**	P	**Pn**	**01 56 16.6**	**0.0**
LYLS		**11.37**	**180**	P	**Pn**	**01 56 16.6**	**0.0**
BRTR	**Keskin Array B**	**12.62**	**304**	Pn	**Pn**	**01 56 36.6**	**+2.9**
	comp=Z,0.0nm,0.3s,baz=107,slow=12,SNR=5.1						
ABKAR	**Akbulak array**	**18.39**	**27**	*e*P	**Pn**	**01 57 48.4**	**-0.7**
	comp=Z,2.8nm,0.6s						
AKTK	**Aktyubinsk**	**18.72**	**22**	P	**Pn**	**01 57 52.2**	**-1.0**
AKTK	**Aktyubinsk**	**18.72**	**22**	P	**Pn**	**01 57 52.2**	**-0.9**
AKTO	**Aktyubinsk**	**18.72**	**22**	P	**Pn**	**01 57 52.2**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=201,slow=12,SNR=3.5						
VOIR		**20.86**	**312**	⇑*i*P	**P**	**01 58 18.0**	**+1.9**
AKASG	**Malin Array Be**	**21.74**	**328**	P	**P**	**01 58 25.1**	**-0.5**
	comp=Z,0.8nm,0.5s,mb3.4,baz=144,slow=10,SNR=3.9						
AKASG	**Malin Array Be**	**21.74**	**328**	P	**P**	**01 58 25.0**	**-0.5**
ATD	**Arta Tunnel**	**22.19**	**192**	P	**P**	**01 58 31.5**	**+0.9**
	comp=Z,3.7nm,0.3s,mb4.2,baz=236,slow=23,SNR=2.1						
ATD	**Arta Tunnel**	**22.19**	**192**	P	**P**	**01 58 31.5**	**+0.9**
EKS2	**Erkin-Say**	**22.72**	**58**	*e*P	**P**	**01 58 35.9**	**-0.2**
	comp=Z,1.7nm,0.8s,mb3.5						
EKS2	**Erkin-Say**	**22.72**	**58**	*e*P	**P**	**01 58 35.9**	**-0.2**
	comp=Z,1.7nm,0.8s,mb3.5						
BRVK	**Borovoye**	**25.59**	**33**	*e*P	**P**	**01 59 01.6**	**-1.6**
	comp=Z,3.6nm,0.9s,mb3.9						
BRVK	**Borovoye**	**25.59**	**33**	*e*P	**P**	**01 59 01.6**	**-1.6**
	comp=Z,3.6nm,0.9s,mb3.9						
BVAR	**Borovoye Array**	**25.61**	**33**	P	**P**	**01 59 03.6**	**+0.2**
	comp=Z,2.6nm,0.6s,mb3.9,baz=225,slow=9.9,SNR=11						
BVAR	**Borovoye Array**	**25.61**	**33**	P	**P**	**01 59 03.6**	**+0.1**
KURK	**Kurchatov**	**28.66**	**44**	P	**P**	**01 59 30.6**	**-0.3**
	comp=Z,1.3nm,0.7s,mb3.8,baz=246,slow=8.8,SNR=5.4						
KURK	**Kurchatov**	**28.66**	**44**	*e*P	**P**	**01 59 33.1**	**+2.3**
	comp=Z,1.8nm,0.7s,mb3.9						
MK31	**Makanchi Array**	**29.64**	**53**	*e*P	**P**	**01 59 39.9**	**+0.3**
MK31	**Makanchi Array**	**29.64**	**53**	*e*P	**P**	**01 59 39.9**	**+0.3**
MKAR	**Makanchi Array**	**29.64**	**53**	P	**P**	**01 59 39.5**	**-0.1**
	comp=Z,1.2nm,0.8s,mb3.7,baz=247,slow=9.5,SNR=4.8						
MKAR	**Makanchi Array**	**29.64**	**53**	P	**P**	**01 59 39.5**	**-0.1**
FINES	**FINESS Array B**	**31.17**	**340**	P	**P**	**01 59 52.3**	**-0.6**
	comp=Z,3.6nm,0.9s,mb4.2,baz=145,slow=9.2,SNR=17						
FINES	**FINESS Array B**	**31.17**	**340**	P	**P**	**01 59 52.3**	**-0.6**
KAF	**Kangasniemi**	**31.65**	**341**	*e*P	**P**	**01 59 55.8**	**-1.4**
KAF	**Kangasniemi**	**31.65**	**341**	*e*p	**P**	**01 59 55.8**	**-1.4**
KAF	**Kangasniemi**	**31.65**	**341**	*e*P	**P**	**01 59 55.8**	**-1.4**
SBF	**Sospel**	**32.53**	**300**	*e*P	**P**	**02 00 06.0**	**+0.9**
	comp=Z,37nm,1.0s,mb5.0						
SBF	**Sospel**	**32.53**	**300**	*e*P	**P**	**02 00 06.0**	**+0.9**
	comp=Z,19nm,1.0s,mb5.0						
SBF	**Sospel**	**32.53**	**300**	*e*P	**P**	**02 00 06.0**	**+0.9**
	comp=Z,19nm,1.0s,mb5.0						
MBDF	**Montbardon**	**33.09**	**302**	*e*P	**P**	**02 00 10.7**	**+0.7**
	comp=Z,15nm,0.8s,mb4.7						
MBDF	**Montbardon**	**33.09**	**302**	*e*P	**P**	**02 00 10.7**	**+0.7**
	comp=Z,7.7nm,0.8s,mb4.7						
MBDF	**Montbardon**	**33.09**	**302**	*e*P	**P**	**02 00 10.7**	**+0.7**
	comp=Z,7.7nm,0.8s,mb4.7						
BNI	**Bardonecchia**	**33.18**	**303**	*e*P	**P**	**02 00 11.2**	**+0.4**
	comp=Z,15nm,0.8s,mb5.0						
BNI	**Bardonecchia**	**33.18**	**303**	*e*P	**P**	**02 00 11.2**	**+0.4**
	comp=Z,15nm,0.8s,mb5.0						
LPG	**La Plagne**	**33.18**	**303**	*e*P	**P**	**02 00 11.5**	**+0.7**
	comp=Z,16nm,1.1s,mb4.6						
LPG	**La Plagne**	**33.18**	**303**	*e*P	**P**	**02 00 11.5**	**+0.7**
	comp=Z,7.8nm,1.1s,mb4.5						
LPG	**La Plagne**	**33.18**	**303**	*e*P	**P**	**02 00 11.5**	**+0.7**
	comp=Z,7.8nm,1.1s,mb4.6						
LPL	**La Plagne**	**33.20**	**303**	*e*P	**P**	**02 00 11.6**	**+0.6**
	comp=Z,22nm,1.0s,mb4.7						
LPL	**La Plagne**	**33.20**	**303**	*e*P	**P**	**02 00 11.6**	**+0.6**
	comp=Z,11nm,1.0s,mb4.7						
LPL	**La Plagne**	**33.20**	**303**	*e*P	**P**	**02 00 11.6**	**+0.6**
	comp=Z,11nm,1.0s,mb4.7						
CDF	**Champ du Feu**	**33.30**	**309**	*e*P	**P**	**02 00 11.8**	**0.0**
	comp=Z,6.0nm,0.9s,mb4.2						
CDF	**Champ du Feu**	**33.30**	**309**	*e*P	**P**	**02 00 11.8**	**0.0**
	comp=Z,3.0nm,0.9s,mb4.2						
CDF	**Champ du Feu**	**33.30**	**309**	*e*P	**P**	**02 00 11.8**	**0.0**
	comp=Z,3.0nm,0.9s,mb4.2						
ZALV	**Zalesovo Beam**	**33.45**	**41**	P	**P**	**02 00 12.1**	**-0.9**
	comp=Z,0.8nm,0.4s,mb4.0,baz=260,slow=8.9,SNR=6.5						
HINF	**Hinteralfeld**	**33.47**	**308**	*e*P	**P**	**02 00 13.0**	**-0.2**
	comp=Z,3.0nm,0.7s,mb4.0						
HINF	**Hinteralfeld**	**33.47**	**308**	*e*P	**P**	**02 00 13.0**	**-0.2**
	comp=Z,1.5nm,0.7s,mb4.0						
HINF	**Hinteralfeld**	**33.47**	**308**	*e*P	**P**	**02 00 13.0**	**-0.2**
	comp=Z,1.5nm,0.7s,mb4.0						
ORIF	**Oris-en-Rattie**	**33.73**	**302**	*e*P	**P**	**02 00 15.0**	**-0.6**
	comp=Z,6.2nm,0.9s,mb4.2						
ORIF	**Oris-en-Rattie**	**33.73**	**302**	*e*P	**P**	**02 00 15.0**	**-0.6**
	comp=Z,3.1nm,0.9s,mb4.2						
ORIF	**Oris-en-Rattie**	**33.73**	**302**	*e*P	**P**	**02 00 15.0**	**-0.6**
	comp=Z,3.1nm,0.9s,mb4.2						
CABF	**La Chapelle**	**33.79**	**305**	*e*P	**P**	**02 00 15.8**	**-0.3**
	comp=Z,14nm,0.8s,mb4.6						
CABF	**La Chapelle**	**33.79**	**305**	*e*P	**P**	**02 00 15.8**	**-0.3**
	comp=Z,6.8nm,0.8s,mb4.6						
CABF	**La Chapelle**	**33.79**	**305**	*e*P	**P**	**02 00 15.8**	**-0.3**
	comp=Z,6.8nm,0.8s,mb4.6						
HAU	**Haudompre**	**33.83**	**308**	*e*P	**P**	**02 00 15.8**	**-0.7**
	comp=Z,2.7nm,0.6s,mb4.1						
HAU	**Haudompre**	**33.83**	**308**	*e*P	**P**	**02 00 15.8**	**-0.7**
	comp=Z,1.4nm,0.6s,mb4.1						
HAU	**Haudompre**	**33.83**	**308**	*e*P	**P**	**02 00 15.8**	**-0.7**
	comp=Z,1.4nm,0.6s,mb4.1						
WLF	**Walferdange**	**34.29**	**311**	*e*P	**P**	**02 00 20.1**	**-0.3**
	comp=Z,7.1nm,0.9s,mb4.6						
WLF	**Walferdange**	**34.29**	**311**	*e*P	**P**	**02 00 20.1**	**-0.3**
	comp=Z,7.1nm,0.9s,mb4.6						
VIVF	**Saint-Julien-l**	**34.59**	**302**	*e*P	**P**	**02 00 22.9**	**-0.1**
	comp=Z,12nm,1.1s,mb4.4						
VIVF	**Saint-Julien-l**	**34.59**	**302**	*e*P	**P**	**02 00 22.9**	**-0.1**
	comp=Z,5.8nm,1.1s,mb4.4						
VIVF	**Saint-Julien-l**	**34.59**	**302**	*e*P	**P**	**02 00 22.9**	**-0.1**
	comp=Z,5.8nm,1.1s,mb4.4						
MEZF	**Maizieres J'vi**	**34.77**	**308**	*e*P	**P**	**02 00 24.7**	**+0.1**
	comp=Z,11nm,0.9s,mb4.5						
MEZF	**Maizieres J'vi**	**34.77**	**308**	*e*P	**P**	**02 00 24.7**	**+0.1**
	comp=Z,11nm,0.9s,mb4.8						
MEZF	**Maizieres J'vi**	**34.77**	**308**	*e*P	**P**	**02 00 24.7**	**+0.1**
	comp=Z,5.4nm,0.9s,mb4.5						
SMF	**Signal de Mont**	**35.33**	**305**	*e*P	**P**	**02 00 29.3**	**-0.1**
	comp=Z,15nm,0.8s,mb4.7						
SMF	**Signal de Mont**	**35.33**	**305**	*e*P	**P**	**02 00 29.3**	**-0.1**
	comp=Z,7.4nm,0.8s,mb4.7						
SMF	**Signal de Mont**	**35.33**	**305**	*e*P	**P**	**02 00 29.3**	**-0.1**
	comp=Z,7.4nm,0.8s,mb4.7						
LOR	**Lormes**	**35.39**	**306**	*e*P	**P**	**02 00 29.5**	**-0.4**
LOR	**Lormes**	**35.39**	**306**	*e*P	**P**	**02 00 29.5**	**-0.4**
SSF	**Saint Saulge**	**35.60**	**306**	*e*P	**P**	**02 00 31.7**	**0.0**
	comp=Z,3.3nm,0.7s,mb4.1						
SSF	**Saint Saulge**	**35.60**	**306**	*e*P	**P**	**02 00 31.7**	**0.0**
	comp=Z,1.6nm,0.6s,mb4.1						
SSF	**Saint Saulge**	**35.60**	**306**	*e*P	**P**	**02 00 31.7**	**0.0**
	comp=Z,1.6nm,0.7s,mb4.1						
BAIF	**Baives**	**35.60**	**311**	*e*P	**P**	**02 00 31.5**	**-0.2**
BAIF	**Baives**	**35.60**	**311**	*e*P	**P**	**02 00 31.5**	**-0.2**
AVF	**Avril sur Loir**	**35.68**	**305**	*e*P	**P**	**02 00 31.4**	**-1.0**
	comp=Z,9.4nm,0.9s,mb4.4						
AVF	**Avril sur Loir**	**35.68**	**305**	*e*P	**P**	**02 00 31.4**	**-1.0**
	comp=Z,4.7nm,0.9s,mb4.4						
AVF	**Avril sur Loir**	**35.68**	**305**	*e*P	**P**	**02 00 31.4**	**-1.0**
	comp=Z,4.7nm,0.9s,mb4.4						
NOA	**NORSAR Array B**	**36.08**	**331**	P	**P**	**02 00 35.0**	**-0.7**
	comp=Z,1.4nm,1.0s,mb3.8,baz=133,slow=7.6,SNR=2.7						
NOA	**NORSAR Array B**	**36.08**	**331**	P	**P**	**02 00 35.0**	**-0.7**
MTLF	**Montolieu**	**36.29**	**299**	*e*P	**P**	**02 00 38.2**	**+0.5**
	comp=Z,20nm,1.2s,mb4.6						
MTLF	**Montolieu**	**36.29**	**299**	*e*P	**P**	**02 00 38.2**	**+0.5**
	comp=Z,9.8nm,1.2s,mb4.6						
MTLF	**Montolieu**	**36.29**	**299**	*e*P	**P**	**02 00 38.2**	**+0.5**
	comp=Z,9.8nm,1.2s,mb4.6						
TCF	**Toulx Ste Croi**	**36.42**	**304**	*e*P	**P**	**02 00 39.0**	**+0.3**
	comp=Z,12nm,1.1s,mb4.5						
TCF	**Toulx Ste Croi**	**36.42**	**304**	*e*P	**P**	**02 00 39.0**	**+0.3**
	comp=Z,6.2nm,1.1s,mb4.5						
TCF	**Toulx Ste Croi**	**36.42**	**304**	*e*P	**P**	**02 00 39.0**	**+0.3**
	comp=Z,6.2nm,1.1s,mb4.5						
CAF	**Calviac**	**36.44**	**302**	*e*P	**P**	**02 00 39.3**	**+0.4**
CAF	**Calviac**	**36.44**	**302**	*e*P	**P**	**02 00 39.3**	**+0.4**
RJF	**Les Rejaudoux**	**36.84**	**303**	*e*P	**P**	**02 00 41.7**	**-0.7**
	comp=Z,21nm,1.3s,mb4.5						
RJF	**Les Rejaudoux**	**36.84**	**303**	*e*P	**P**	**02 00 41.7**	**-0.7**
	comp=Z,11nm,1.3s,mb4.5						
RJF	**Les Rejaudoux**	**36.84**	**303**	*e*P	**P**	**02 00 41.7**	**-0.7**
	comp=Z,11nm,1.3s,mb4.5						
LFF	**La Frestale**	**37.38**	**302**	*e*P	**P**	**02 00 45.4**	**-1.5**
	comp=Z,18nm,1.1s,mb4.5						
LFF	**La Frestale**	**37.38**	**302**	*e*P	**P**	**02 00 45.4**	**-1.5**
	comp=Z,9.2

comp=E,0.1nm,0.3s,baz=212,slow=14,SNR=14
KURK Kurchatov 12.23 14 P **Pn 02 11 24.9 -2.2**
comp=E,0.2nm,0.3s,baz=199,slow=11,SNR=8.0
KURK Kurchatov 12.23 14 *e*Pn **Pn 02 11 26.5 -0.7**
BVAR Borovoye Array 14.32 351 P **Pn 02 11 53.9 +0.7**
comp=E,0.3nm,0.3s,baz=161,slow=9.4,SNR=12
BRVK Borovoye 14.37 351 *e*P **Pn 02 11 53.7 -0.1**
comp=E,3.8nm,0.7s
AB31 Akbulak array 14.43 320 P **Pn 02 11 54.2 -0.4**
comp=E,1.0nm,0.5s,baz=126,slow=12,SNR=34
AB31 S **S 02 14 30.9 -4.1**
comp=E,1.3nm,0.5s,baz=132,slow=26,SNR=8.4
ABKAR Akbulak array 14.43 320 *e*P **Pn 02 11 53.5 -1.1**
comp=E,1.7nm,0.5s
AKTK Aktyubinsk 16.15 321 P **P 02 12 14.9 0.0**
AKTO Aktyubinsk 16.15 321 P **P 02 12 14.9 0.0**
comp=E,0.3nm,0.3s,baz=123,slow=13,SNR=8.7
ZALV Zalesovo Beam 16.74 23 P **P 02 12 21.3 0.0**
comp=E,0.6nm,0.3s,baz=217,slow=9.3,SNR=11
SONM Songino Array 25.01 59 P **P 02 13 44.7 -0.2**
comp=E,0.2nm,0.3s,mb3.2,baz=262,slow=8.4,SNR=2.2
FINES FINESS Array B 36.89 324 P **P 02 15 28.9 +0.4**
comp=E,3.5nm,1.1s,mb3.8,baz=79,slow=15,SNR=3.5
ARCES ARCESS Array B 39.87 336 P **P 02 15 54.9 +1.6**
comp=E,0.8nm,0.7s,mb3.2,baz=115,slow=8.7,SNR=3.9

*ISCJB **13** 02:10:08.4±0.7, 36°.58N±0°.04×22°.82E±0°.05, h6km±5km, Error ellipse: s-maj=7.1km s-min=4.9km az=139.8*
*ATH **13** 02:10:08.2, 36°.59N×22°.87E, h24km, MD3.5/15*
*NEIC **13** 02:10:08.2, 36°.59N×22°.87E, h24km, MD3.5(ATH), After ATH.*
*CSEM **13** 02:10:08.7±0.1, 36°.57N×22°.82E, h8km, MD3.5, Error ellipse: s-maj=3.9km s-min=2.5km az=54.0*
*THE **13** 02:10:11.0, 36°.67N×22°.77E, h6km±1km, ML3.3/3, Error ellipse: s-maj=1.3km s-min=0.6km az=160.0*
ISC 13 02:10:09.0±0.7, 36°.58N±0°.04×22°.84E±0°.05, h9km±5km, n50, σ0°.65/69, 12C-3D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLI	**Veliai**	**0.16**	**30**	⇑*i*Pb	**Pg**	02 10 12.6	+0.2
VLI	**Veliai**	**0.16**	**30**	⇓*i*PB	**Pg**	02 10 12.6	+0.2
VLI	**Veliai**	**0.16**	**30**	⇓*i*Pb	**Pg**	02 10 12.6	+0.2
KYTH	**Kithira**	**0.34**	**152**	*e*Pb	**Pg**	02 10 15.9	+0.2
KYTH	**Kithira**	**0.34**	**152**	*e*PB	**Pg**	02 10 15.9	+0.2
KYTH	**Kithira**	**0.34**	**152**	*e*Pb	**Pg**	02 10 15.9	+0.2
VLX	**Vlachokerasia**	**0.87**	**335**	⇑*i*PN	**Pg**	02 10 25.3	-0.5
VLX				*e*SN	**Sg**	02 10 37.4	+0.3
VLX	**Vlachokerasia**	**0.87**	**335**	P	**Pg**	02 10 25.4	-0.4
VLX				S	**Sg**	02 10 36.4	-0.7
VLX	**Vlachokerasia**	**0.87**	**335**	P	**Pg**	02 10 25.4	-0.4
VLX				S	**Sg**	02 10 36.4	-0.7
VLX				*e*Sn	**Sg**	02 10 37.4	+0.3
PYL	**PYLOS**	**0.94**	**290**	⇑*i*PN	**Pg**	02 10 26.8	-0.2
PYL				*e*SN	**Sg**	02 10 40.0	+0.8
PYL	**PYLOS**	**0.94**	**290**	P	**Pg**	02 10 26.8	-0.2
PYL				S	**Sg**	02 10 39.9	+0.7
PYL	**PYLOS**	**0.94**	**290**	P	**Pg**	02 10 26.8	-0.2
PYL				*e*Sn	**Sg**	02 10 40.0	+0.8
ITM	**Ithomi**	**0.94**	**310**	⇑*i*Pn	**Pg**	02 10 26.8	-0.4
ITM	**Ithomi**	**0.94**	**310**	⇑*i*PN	**Pg**	02 10 26.8	-0.4
ITM	**Ithomi**	**0.94**	**310**	P	**Pg**	02 10 26.8	-0.4
ITM				S	**Sg**	02 10 39.1	-0.4
ITM	**Ithomi**	**0.94**	**310**	P	**Pg**	02 10 26.8	-0.4
ITM				S	**Sg**	02 10 39.1	-0.4
DID	**Didima**	**0.98**	**19**	⇑*i*PN	**Pg**	02 10 26.7	-1.1
DID				*e*SN	**Sg**	02 10 40.1	-0.4
DID	**Didima**	**0.98**	**19**	P	**Pg**	02 10 27.8	0.0
DID				S	**Sg**	02 10 41.7	+1.2
DID	**Didima**	**0.98**	**19**	⇑*i*Pn	**Pg**	02 10 26.7	-1.1
DID	**Didima**	**0.98**	**19**	P	**Pg**	02 10 27.8	0.0
DID				S	**Sg**	02 10 41.7	+1.2
GUR	**Goura**	**1.41**	**344**	⇑*i*PN	**Pn**	02 10 34.6	-0.3
GUR				*e*SN	**Sn**	02 10 53.5	-0.1
GUR	**Goura**	**1.41**	**344**	P	**Pn**	02 10 35.1	+0.2
GUR				S	**Sn**	02 10 53.4	-0.2
GUR	**Goura**	**1.41**	**344**	⇑*i*Pn	**Pn**	02 10 34.6	-0.3
GUR	**Goura**	**1.41**	**344**	P	**Pn**	02 10 35.1	+0.2
GUR				*e*Sn	**Sn**	02 10 53.5	-0.1
LTK	**Loutraki**	**1.44**	**4**	⇑*i*PN	**Pn**	02 10 34.7	-0.7
LTK				*e*SN	**Sn**	02 10 54.0	-0.4
LTK	**Loutraki**	**1.44**	**4**	P	**Pn**	02 10 35.4	0.0
LTK				S	**Sn**	02 10 54.3	-0.1
LTK	**Loutraki**	**1.44**	**4**	⇑*i*Pn	**Pn**	02 10 34.7	-0.7
LTK	**Loutraki**	**1.44**	**4**	P	**Pn**	02 10 35.4	0.0
LTK				*e*Sn	**Sn**	02 10 54.0	-0.4
LTK				S	**Sn**	02 10 54.3	-0.1
VLY	**Voula,Athens**	**1.48**	**31**	P	**Pn**	02 10 35.5	-0.4
VLY	**Voula,Athens**	**1.48**	**31**	P	**Pn**	02 10 35.5	-0.4
VAM	**Vamos**	**1.61**	**136**	*e*PN	**Pn**	02 10 36.9	-0.7
VAM	**Vamos**	**1.61**	**136**	*e*PN	**Pn**	02 10 36.9	-0.7
VAM	**Vamos**	**1.61**	**136**	*e*Pn	**Pn**	02 10 36.9	-0.7
RLS	**Riolos of Patr**	**1.84**	**324**	*e*Pn	**Pn**	02 10 41.0	+0.3
RLS	**Riolos of Patr**	**1.84**	**324**	*e*PN	**Pn**	02 10 41.0	+0.3
RLS	**Riolos of Patr**	**1.84**	**324**	*e*Pn	**Pn**	02 10 41.0	+0.3
EFP	**Efpalio**	**1.99**	**338**	⇑*i*PN	**Pn**	02 10 42.6	-0.2
EFP	**Efpalio**	**1.99**	**338**	⇑*i*Pn	**Pn**	02 10 43.6	+0.8
LKR	**Lokris**	**2.07**	**3**	*e*Pn	**Pn**	02 10 44.4	+0.4
LKR	**Lokris**	**2.07**	**3**	*e*PN	**Pn**	02 10 43.8	-0.2
LKR	**Lokris**	**2.07**	**3**	*e*Pn	**Pn**	02 10 44.4	+0.4
AGG	**Agios Georgios**	**2.47**	**351**	*e*Pb	**Pn**	02 10 50.1	+0.6
AGG	**Agios Georgios**	**2.47**	**351**	*e*PN	**Pn**	02 10 49.4	-0.1
EVR	**Evrytania**	**2.47**	**341**	*e*Pb	**Pn**	02 10 50.9	+1.4
EVR	**Evrytania**	**2.47**	**341**	*e*PN	**Pn**	02 10 49.5	0.0
NPS	**Neapolis**	**2.61**	**119**	*e*Pn	**Pn**	02 10 50.8	-0.5
NPS	**Neapolis**	**2.61**	**119**	*e*PN	**Pn**	02 10 50.8	-0.5
NPS	**Neapolis**	**2.61**	**119**	*e*Pn	**Pn**	02 10 50.8	-0.5
ARG	**Arkhangelos**	**4.28**	**93**	P	**Pn**	02 11 17.5	+3.2
ARG	**Arkhangelos**	**4.28**	**93**	P	**Pn**	02 11 17.5	+3.2

*ISCJB **13** 02:18:24.3±1.2, 36°.19N±0°.06×22°.14E±0°.07, h22km±8km, Error ellipse: s-maj=11.9km s-min=7.4km az=135.6*
*ATH **13** 02:18:24.8, 36°.25N×22°.16E, h35km±2km, MD3.5/10*
*NEIC **13** 02:18:24.7, 36°.24N×22°.15E, h34km, MD3.5(ATH), After ATH.*
*CSEM **13** 02:18:24.1±0.6, 36°.24N×22°.15E, h13km±4km, ML3.0/2, Error ellipse: s-maj=12.2km s-min=6.7km az=50.0*
*THE **13** 02:18:26.5, 36°.29N×22°.15E, h18km±9km, ML3.0/2, Error ellipse: s-maj=12.8km s-min=2.2km az=216.0*
ISC 13 02:18:24.1±1.6, 36°.21N±0°.07×22°.15E±0°.08, h15km±14km, n37, σ0°.83/54, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.72**	**84**	*e*Pn	**Pn**	02 18 39.7	0.0
KYTH	**Kithira**	**0.72**	**84**	*e*PN	**Pn**	02 18 39.7	0.0
KYTH	**Kithira**	**0.72**	**84**	*e*Pn	**Pn**	02 18 39.7	0.0
PYL	**PYLOS**	**0.76**	**334**	*e*PN	**Pb**	02 18 38.8	-0.1
PYL				*e*SN	**Sn**	02 18 50.1	-1.2
PYL	**PYLOS**	**0.76**	**334**	P	**Pb**	02 18 38.8	-0.1
PYL				S	**Sb**	02 18 49.9	+0.9
PYL	**PYLOS**	**0.76**	**334**	P	**Pb**	02 18 38.8	-0.1
PYL				*e*Sn	**Sn**	02 18 50.1	-1.2
VLI	**Veliai**	**0.81**	**51**	*e*Pn	**Pn**	02 18 40.7	-0.3
VLI				*e*Sn	**Sn**	02 18 51.6	-1.1
VLI	**Veliai**	**0.81**	**51**	*e*PN	**Pn**	02 18 40.7	-0.3
VLI				*e*SN	**Sn**	02 18 51.6	-1.1
VLI	**Veliai**	**0.81**	**51**	*e*Pn	**Pn**	02 18 40.7	-0.3
VLI				*e*Sn	**Sn**	02 18 51.6	-1.1
ITM	**Ithomi**	**0.98**	**350**	*e*Pn	**Pb**	02 18 42.7	-0.1
ITM				*e*Sn	**Sn**	02 18 56.6	-0.3
ITM	**Ithomi**	**0.98**	**350**	*e*PN	**Pb**	02 18 42.7	-0.1
ITM				*e*SN	**Sn**	02 18 56.6	-0.3
ITM	**Ithomi**	**0.98**	**350**	P	**Pb**	02 18 42.7	-0.1
ITM				S	**Sb**	02 18 56.5	+1.0
ITM	**Ithomi**	**0.98**	**350**	P	**Pb**	02 18 42.7	-0.1
ITM				*e*Sn	**Sn**	02 18 56.6	-0.3
VLX	**Vlachokerasia**	**1.17**	**9**	*e*PN	**Pn**	02 18 46.3	+0.4
VLX				*e*SN	**Sn**	02 19 02.5	+1.0
VLX	**Vlachokerasia**	**1.17**	**9**	P	**Pn**	02 18 46.6	+0.7
VLX				S	**Sb**	02 19 01.3	+0.4
VLX	**Vlachokerasia**	**1.17**	**9**	*e*Pn	**Pn**	02 18 46.3	+0.4
VLX	**Vlachokerasia**	**1.17**	**9**	P	**Pn**	02 18 46.6	+0.7
VLX				S	**Sb**	02 19 01.3	+0.4
VLX				*e*Sn	**Sn**	02 19 02.5	+1.0
DID	**Didima**	**1.56**	**34**	*e*PB	**Pb**	02 18 51.4	-1.2
DID	**Didima**	**1.56**	**34**	P	**Pn**	02 18 52.3	+1.1
DID				S	**Sn**	02 19 10.7	-0.4
DID	**Didima**	**1.56**	**34**	*e*Pb	**Pb**	02 18 51.4	-1.2
DID	**Didima**	**1.56**	**34**	P	**Pn**	02 18 52.3	+1.1
DID				S	**Sn**	02 19 10.7	-0.4
GUR	**Goura**	**1.73**	**5**	*e*PN	**Pn**	02 18 53.9	+0.3
GUR	**Goura**	**1.73**	**5**	*e*Pn	**Pn**	02 18 53.9	+0.3
VAM	**Vamos**	**1.85**	**115**	*e*Pn	**Pn**	02 18 56.1	+0.8
VAM	**Vamos**	**1.85**	**115**	*e*PN	**Pn**	02 18 56.1	+0.8
VAM	**Vamos**	**1.85**	**115**	*e*Pn	**Pn**	02 18 56.1	+0.8
RLS	**Riolos of Patr**	**1.92**	**344**	*e*Pb	**Pb**	02 18 57.2	-1.6
RLS	**Riolos of Patr**	**1.92**	**344**	*e*PB	**Pb**	02 18 57.2	-1.6
RLS	**Riolos of Patr**	**1.92**	**344**	*e*Pb	**Pb**	02 18 57.2	-1.6
LTK	**Loutraki**	**1.92**	**20**	*e*PN	**Pn**	02 18 56.7	+0.5
LTK	**Loutraki**	**1.92**	**20**	*e*Pn	**Pn**	02 18 56.7	+0.5
VLS	**Valsamata**	**2.32**	**328**	*e*Pn	**Pn**	02 19 01.2	-0.5
VLS	**Valsamata**	**2.32**	**328**	*e*PN	**Pn**	02 19 02.4	+0.7
VLS	**Valsamata**	**2.32**	**328**	*e*Pn	**Pn**	02 19 01.2	-0.5
THL	**Klokotos Trika**	**3.35**	**358**	*e*PN	**Pn**	02 19 16.4	+0.6
STON	**Ston**	**7.48**	**334**	*e*Pn	**Pn**	02 20 09.0	-3.7
STON				Sn	**Sn**	02 21 27.4	-10
NVLJ	**Novalja**	**10.01**	**329**	Sn	**Sn**	02 22 28.8	-10

IDC 13 02:36:40.7±15.0, 17°.67S×178°.59W, h510km±177km, mb3.3/5, mb1 3.5/5, mb1mx3.2/16, mbtmp3.3/5, Error ellipse: s-maj=86.2km s-min=29.9km az=13.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**20.86**	**190**	P	P	02 40 45.9	-0.6
	3.6nm,0.5s,baz=326,slow=7.5,SNR=3.3						
STKA	**Stephens Creek**	**38.59**	**241**	P	P	02 43 20.2	+0.6
	2.0nm,0.5s,baz=102,slow=5.9,SNR=4.6						
WRA	**Warramunga Arr**	**44.50**	**259**	P	P	02 44 06.1	-0.6
	1.3nm,0.5s,baz=91,slow=7.0,SNR=64						
ASAR	**Alice Springs**	**44.69**	**254**	P	P	02 44 08.3	+0.3
	11nm,0.5s,baz=88,slow=8.2,SNR=216						
TXAR	**Lajitas Array**	**86.01**	**58**	P	P	02 48 27.8	+0.6
	0.3nm,0.7s,baz=217,slow=8.5,SNR=4.7						
BRTR	**Keskin Array B**	**144.49**	**315**	PKP	PKPdf	02 55 17.9	-1.0
	0.7nm,0.9s,baz=58,slow=1.8,SNR=3.5						

IDC 13 02:53:28.0±12.0, 23°.61S×179°.91E, h428km±156km, mb2.8/3, mb1 3.1/3, mb1mx2.9/13, mbtmp2.8/3, Error ellipse: s-maj=453.4km s-min=45.3km az=167.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.00**	**260**	P	P	03 00 40.0	-0.1
	0.2nm,0.8s,baz=90,slow=6.8,SNR=4.4						
WRA	**Warramunga Arr**	**42.35**	**266**	P	P	03 00 42.8	-0.1
	0.3nm,0.3s,baz=97,slow=8.4,SNR=18						
TXAR	**Lajitas Array**	**90.35**	**58**	P	P	03 05 42.5	+0.2
	0.5nm,0.7s,baz=213,slow=5.3,SNR=8.2						
ARCES	**ARCESS Array B**	**131.59**	**348**	PKP	PKPdf	03 11 48.8	-1.3
	1.1nm,0.9s,baz=57,slow=2.5,SNR=5.6						
FINES	**FINESS Array B**	**138.15**	**341**	PKP	PKPdf	03 12 02.1	-0.4
	1.0nm,0.9s,baz=64,slow=3.2,SNR=3.7						
MMAI	**Mount Meron Ar**	**147.51**	**295**	PKPbc	PKPbc	03 12 22.9	-0.2
	1.2nm,0.5s,baz=82,slow=3.2,SNR=2.7						

*IDC **13** 03:09:19.3±4.2, 2°.41S×100°.25E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.5/21, mbtmp3.6/6, MS3.1/2, Ms1 3.1/2, ms1mx2.6/21, Error ellipse: s-maj=236.9km s-min=20.3km az=54.0*
*ISCJB **13** 03:09:25.8±1.1, 2°.19S±0°.07×100°.52E±0°.09, h60km±11km, mb3.6/6, Error ellipse: s-maj=16.4km s-min=10.4km az=150.1*
*DJA **13** 03:09:25, 2°.17S×100°.55E, h14km, MLv3.7/4*
ISC 13 03:09:26.6±1.1, 2°.19S±0°.07×100°.52E±0°.09, h48km±12km, n13, σ0°.68/14, mb3.6/6, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**1.27**	**357**	P	**Pn**	**03 09 46.6**	**-1.5**
PDSI				S	**Sn**	**03 10 03.4**	**-0.6**
SDSI	**Sungai Dareh**	**1.55**	**36**	P	**Pn**	**03 09 51.1**	**-0.7**
SDSI				S	**Sn**	**03 10 11.1**	**+0.4**
SISI	**Saibi**	**1.67**	**301**	P	**Pn**	**03 09 53.7**	**+0.3**
PPI	**Padang Panjang**	**1.73**	**356**	P	**Pn**	**03 09 54.4**	**+0.1**
PPI				S	**Sn**	**03 10 16.5**	**+1.3**
MNAI	**Manna**	**3.25**	**132**	P	**Pn**	**03 10 15.8**	**+0.7**
PSI	**Prapat**	**5.21**	**342**	LR	LR	03 13 12.3	
	comp=Z,107nm,18.3s,baz=140,slow=44						
WRA	**Warramunga Arr**	**37.45**	**121**	P	**P**	**03 16 35.6**	**0.0**
	0.1nm,0.4s,mb3.0,baz=293,slow=10.0,SNR=5.1						
ASAR	**Alice Springs**	**38.72**	**126**	P	**P**	**03 16 46.6**	**+0.3**
	0.6nm,0.6s,mb3.5,baz=300,slow=7.7,SNR=6.6						
STKA	**Stephens Creek**	**48.63**	**132**	P	**P**	**03 18 05.1**	**-0.8**
	2.1nm,0.8s,mb4.2,baz=312,slow=15,SNR=2.2						
MKAR	**Makanchi Array**	**51.35**	**344**	P	**P**	**03 18 26.7**	**+0.5**
	0.3nm,0.6s,mb3.4,baz=156,slow=8.7,SNR=5.3						
MKAR				LR	LR	03 42 07.6	
	comp=Z,24nm,18.9s,baz=170,slow=38						
KURK	**Kurchatov**	**55.94**	**343**	P	**P**	**03 18 59.4**	**-0.3**
	0.3nm,0.6s,mb3.5,baz=163,slow=7.1,SNR=2.7						
ZALV	**Zalesovo Beam**	**57.45**	**349**	P	**P**	**03 19 10.6**	**+0.2**
	0.4nm,0.3s,mb3.9,baz=192,slow=5.7,SNR=2.4						
TXAR	**Lajitas Array**	**144.54**	**38**	PKP	PKPdf	03 28 59.3	+0.8
	0.1nm,0.4s,baz=315,slow=0.1,SNR=5.2						

MAN 13 03:16:25, 15°.96N×122°.02E, h46km, mb4.0, ML2.8, MS2.5, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALP	**Baler**	**0.48**	**243**	*e*P	Pn	03 16 38.5	+2.7
BALP				*e*S	Sn	03 16 42.5	-0.9
PCPH	**Palayan**	**0.97**	**246**	⇓*e*P	Pn	03 16 43.5	+1.2
PCPH				*e*S	Sn	03 16 52.6	-2.4
POLP	**Polilio Island**	**1.23**	**184**	*e*P	Pn	03 16 47.2	+1.4
POLP				*e*S	Sn	03 17 03.1	+1.9

*TAP **13** 03:17:12.8, 21°.10N×121°.15E, h87km, ML3.7, D*
*ISCJB **13** 03:17:13.6±0.9, 21°.12N±0°.05×121°.28E±0°.09, h82km±9km, Error ellipse: s-maj=13.9km s-min=7.0km az=164.1*
ISC 13 03:17:14.3±0.9, 21°.11N±0°.05×121°.27E±0°.09, h77km±10km, n27, σ0°.60/49, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**0.86**	**337**	P	**Pn**	**03 17 31.4**	**0.0**
	baz=341						
TSEB				S	**Sn**	**03 17 44.6**	**+0.3**
	baz=341						
BBP	**Basco**	**0.93**	**135**	*e*P	**Pn**	**03 17 32.5**	**+0.2**
TWK1	**Hengchun**	**0.94**	**333**	⇑*i*P	**Pn**	**03 17 31.6**	**-0.8**
	baz=340						
TWK1				S	**Sn**	**03 17 45.0**	**-0.9**
	baz=340						
LAY	**Lan-yu**	**0.96**	**16**	P	**Pn**	**03 17 32.1**	**-0.6**
	baz=22						
LAY				S	**Sn**	**03 17 47.3**	**+0.8**
	baz=22						
HEN	**Hengchun**	**1.02**	**331**	P	**Pn**	**03 17 32.6**	**-0.8**
	baz=331						
HEN				*e*S	**Sn**	**03 17 47.8**	**+0.1**
	baz=331						
EAST	**Anshuo**	**1.33**	**343**	P	**Pn**	**03 17 36.9**	**-0.3**
	baz=357						
EAST				S	**Sn**	**03 17 55.1**	**+0.6**
	baz=357						
SCZT	**Fangliau**	**1.39**	**335**	P	**Pn**	**03 17 37.2**	**-0.9**
	baz=339						
SCZT				S	**Sn**	**03 17 55.2**	**-0.9**
	baz=339						
TTN	**Taitung**	**1.64**	**356**	*e*P	**Pn**	**03 17 41.4**	**+0.1**
TTN				*e*S	**Sn**	**03 18 02.2**	**+0.4**
TWG	**Pinlang**	**1.71**	**354**	*e*P	**Pn**	**03 17 43.0**	**+0.7**
	baz=358						
SSD	**Sandimen**	**1.73**	**340**	*e*P	**Pn**	**03 17 42.4**	**-0.2**
	baz=335						
TWM1	**Shoushan**	**1.88**	**336**	*e*P	**Pn**	**03 17 44.4**	**0.0**
	baz=329						
TWM1				*e*S	**Sn**	**03 18 08.2**	**+0.8**
	baz=329						
SGST	**Jiashian**	**2.06**	**342**	*e*P	**Pn**	**03 17 47.3**	**+0.4**
	baz=336						
SGST				*e*S	**Sn**	**03 18 12.7**	**+0.8**
	baz=336						
ELDTW	**Lidau**	**2.08**	**354**	*e*P	**Pn**	**03 17 47.4**	**+0.2**
	baz=3.0						
ELDTW				*e*S	**Sn**	**03 18 13.1**	**+0.8**
	baz=3.0						
STYT	**Tauyuan**	**2.10**	**347**	*e*P	**Pn**	**03 17 47.2**	**-0.2**
	baz=360						
STYT				*e*S	**Sn**	**03 18 12.5**	**-0.2**
	baz=360						
CHN1	**Nanshi**	**2.18**	**342**	*e*P	**Pn**	**03 17 47.9**	**-0.6**
	baz=335						
CHN1				*e*S	**Sn**	**03 18 15.3**	**+0.8**
	baz=335						
WTP	**Ta-pu**	**2.21**	**344**	*e*P	**Pn**	**03 17 49.0**	**+0.1**
	baz=358						
WTP				*e*S	**Sn**	**03 18 15.0**	**-0.4**
	baz=358						
TWF1	**Yuli**	**2.23**	**1**	*e*P	**Pn**	**03 17 48.8**	**-0.4**
	baz=357						
TWF1				*e*S	**Sn**	**03 18 16.0**	**+0.1**
	baz=357						
TWK	**Hsinying**	**2.27**	**342**	*e*P	**Pn**	**03 17 51.1**	**+1.4**
	baz=345						
CHN4	**Tsaushan**	**2.32**	**345**	*e*P	**Pn**	**03 17 51.6**	**+1.2**
	baz=357						
CHN4				*e*S	**Sn**	**03 18 18.4**	**+0.4**
	baz=357						
EHY	**Hungye**	**2.39**	**1**	*e*P	**Pn**	**03 17 51.8**	**+0.5**
	baz=4.0						
YUS	**Yu-Shan**	**2.39**	**353**	*e*P	**Pn**	**03 17 51.6**	**+0.3**
	baz=356						
YUS				*e*S	**Sn**	**03 18 19.5**	**-0.1**
	baz=356						
ALS	**Alishan**	**2.43**	**350**	*e*P	**Pn**	**03 17 51.5**	**-0.3**
	baz=353						
ALS				*e*S	**Sn**	**03 18 20.3**	**-0.3**
	baz=353						
CHN5	**Tsauling**	**2.54**	**348**	*e*P	**Pn**	**03 17 53.3**	**0.0**
	baz=350						
CHN5				*e*S	**Sn**	**03 18 23.2**	**0.0**
	baz=350						
ESL	**Shilin**	**2.70**	**3**	*e*P	**Pn**	**03 17 55.0**	**-0.5**
	baz=360						
ESL				*e*S	**Sn**	**03 18 26.4**	**-0.7**
	baz=360						
SMLT	**Sun Moon Lake**	**2.78**	**353**	*e*P	**Pn**	**03 17 56.8**	**+0.2**
	baz=355						
SMLT				*e*S	**Sn**	**03 18 28.6**	**-0.6**
	baz=355						
WHF	**Hehuan Shan**	**3.02**	**360**	*e*P	**Pn**	**03 18 00.7**	**+0.9**
	baz=353						
WHF				*e*S	**Sn**	**03 18 34.4**	**-0.6**
	baz=353						
TWT	**Tachien**	**3.13**	**358**	*e*P	**Pn**	**03 18 00.8**	**-0.6**
	baz=353						
TWT				*e*S	**Sn**	**03 18 36.5**	**-1.1**
	baz=353						

GUC 13 03:17:33.7±0.6, 23°.81S×67°.37W, h220km, ML3.8, 2C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**2.48**	**308**	⇑*i*P	Pn	03 18 26.4	+7.7
PB04				*i* S	S	03 19 06.2	+12
PB04				AML	AML	03 19 09.0	
	comp=E,136nm,0.8s						
CEN1	**Los Morros**	**2.63**	**279**	*i* P	Pn	03 18 21.9	+1.7
CEN1				*i* S	S	03 18 59.4	+2.7
CEN1				AML	AML	03 19 02.4	
	comp=N,103nm,0.2s						
ANCH	**Antofagasta**	**2.79**	**272**	*e*P	Pn	03 18 23.4	+1.4
ANCH				*i* S	S	03 19 01.8	+1.9
PB01	**Plate Boundary**	**3.38**	**324**	⇑*i*P	Pn	03 18 30.8	+2.0
PB01				*i* S	S	03 19 14.7	+2.5
PB01				AML	AML	03 19 18.0	
	comp=E,83nm,0.5s						
HMBC	**Humberston**	**4.22**	**326**	*e*P	Pn	03 18 40.0	+1.0
HMBC				*i* S	S	03 19 31.9	+1.4
PSGC	**Pisagua**	**4.91**	**328**	*e*P	Pn	03 18 48.1	+0.6
PSGC				*i* S	S	03 19 46.6	+0.6
MNMC	**Miæe Miæ**	**5.09**	**336**	*e*P	Pn	03 18 52.5	+2.6
MNMC				*i* S	S	03 19 52.6	+2.4

*NEIC **13** 03:23:00.5, 15°.36N×94°.57W, h16km, MD4.0(MEX), After MEX.*
MEX 13 03:23:00.5±0.8, 15°.35N×94°.61W, h16km±38km, MD4.0, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.38**	**75**	*i* P	Pn	03 23 21.4	-3.8
PCIG				*i* S	Sn	03 23 37.6	-5.5
HUIG	**Huatulco**	**1.51**	**286**	*i* P	Pn	03 23 23.5	-3.4
HUIG				*e*S	Sn	03 23 40.4	-5.8
HUIG	**Huatulco**	**1.51**	**286**	*i* P	Pn	03 23 23.5	-3.4
HUIG				*i* S	Sn	03 23 40.1	-6.1
CMIG	**Matias Romero**	**1.76**	**351**	*i* P	Pn	03 23 26.7	-3.6
CMIG				*e*S	Sn	03 23 47.1	-5.2
CMIG	**Matias Romero**	**1.76**	**351**	*i* P	Pn	03 23 26.7	-3.6
CMIG				*e*S	Sn	03 23 47.1	-5.2
VHO	**Vista Hermosa**	**2.67**

SSV	**Crater Summit**	**1.12 216**	⇑*iP*	Pn	03 54 31.3	+1.6
SSV			*e*S	Sn	03 54 46.7	+2.1
SSV	**Crater Summit**	**1.12 216**	⇑*eP*	Pn	03 54 30.7	+1.0
SSV			*e*S	Sn	03 54 46.7	+2.1
SVV	**Soufriere Volc**	**1.14 217**	⇑*eP*	Pn	03 54 31.3	+1.3
SVV			*e*S	Sn	03 54 45.9	+0.9
SVV	**Soufriere Volc**	**1.14 217**	⇑*eP*	Pn	03 54 31.3	+1.3
SVV			*e*S	Sn	03 54 45.9	+0.9
SVB	**Belmont**	**1.20 217**	⇑*eP*	Pn	03 54 31.3	+0.5
SVB			*e*S	Sn	03 54 46.8	+0.4
SVB	**Belmont**	**1.20 217**	⇑*eP*	Pn	03 54 31.3	+0.5
SVB			*e*S	Sn	03 54 48.0	+1.6
DLPL	**La Plaine**	**1.30 327**	*e*P	Pn	03 54 33.4	+1.3
DLPL			*e*S	Sn	03 54 52.7	+3.8
MGG	**Marie-Galante**	**1.85 335**	*e*P	Pn	03 54 40.4	+1.1
TBG	**Guadaloupe-3**	**1.95 326**	*e*P	Pn	03 54 42.5	+1.8
PHG	**Guadaloupe-2**	**2.08 328**	*e*P	Pn	03 54 44.0	+1.5
HMG	**Houelmont**	**2.08 327**	*e*P	Pn	03 54 44.6	+2.0
BCG	**Bois Riant Cap**	**2.13 330**	*e*P	Pn	03 54 44.3	+1.1
LZG	**Guadaloupe-1**	**2.25 327**	*e*P	Pn	03 54 46.7	+1.8
SEG	**Port Louis**	**2.36 336**	*e*P	Pn	03 54 48.0	+1.6

*IDC **13** 03:56:52.6±0.9, 0.°69N×99.°47E, h0km, mb3.9/10, mb1 3.9/12, mb1mx3.8/22, mbtmp3.8/12, ML3.8/2, Error ellipse: s-maj=36.1km s-min=14.4km az=67.0*
*NEIC **13** 03:56:54.9±0.6, 0.°76N×99.°72E, h10km, mb4.3/7, Error ellipse: s-maj=25.9km s-min=12.0km az=69.0*
NEIC Felt [II] at Mandailing, Natal and Panyabungan.
*DJA **13** 03:56:55, 0.°72N×99.°64E, h5km, MLv4.5/10*
ISC 13 03:56:53.9±0.8, 0.79N±0.°04×99.78E±0.°04, h2km±5km, n38, σ1§28/39, mb4.0/16, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**0.20**	**273**	P	**Pg**	**03 56 57.9**	**+0.2**
MNSI				S	**Sg**	**03 57 00.9**	**+0.6**
BKNI	**Bangkinang**	**1.34**	**110**	P	**Pn**	**03 57 18.6**	**-1.1**
PPI	**Padang Panjang**	**1.38**	**153**	P	**Pn**	**03 57 19.2**	**-1.0**
PDSI	**Padang**	**1.82**	**158**	P	**Pn**	**03 57 26.5**	**+0.3**
PSI	**Prapat**	**2.17**	**337**	Pn	**Pn**	**03 57 28.8**	**-2.4**
	24nm,0.3s,baz=164,slow=6.6,SNR=54						
PSI				Lg		03 58 00.1	
	39nm,0.3s,baz=223,slow=20,SNR=12						
SISI	**Saibi**	**2.21**	**198**	P	**Pn**	**03 57 30.2**	**-1.4**
SDSI	**Sungai Dareh**	**2.38**	**136**	P	**Pn**	**03 57 35.3**	**+1.4**
RGRI	**Rengat**	**2.79**	**114**	P	**Pn**	**03 57 45.8**	**+6.2**
TPTI		**3.57**	**313**	P	**Pn**	**03 57 52.1**	**+1.7**
KGM	**Kluang**	**3.75**	**71**	P	**Pg**	**03 58 06.3**	**+0.5**
IPM	**Ipoh**	**3.88**	**19**	P	**Pn**	**03 57 57.6**	**+3.1**
IPM	**Ipoh**	**3.88**	**19**	P	**Pn**	**03 57 57.0**	**+2.5**
MYKOM	**Kota Tinggi**	**4.19**	**76**	P	**Pg**	**03 58 15.2**	**+0.9**
KULM	**Kulim**	**4.56**	**11**	P	**Pn**	**03 58 04.2**	**+0.3**
KULM	**Kulim**	**4.56**	**11**	*e*Pn	**Pn**	**03 58 03.5**	**-0.4**
KULM				*e*Pg	**Pg**	**03 58 19.4**	**-1.9**
KULM				*e*Sg	**Sg**	**03 59 19.1**	**-1.4**
KTGM	**Kuala Trenggan**	**5.62**	**37**	P	**Pn**	**03 58 19.4**	**+0.8**
CMAR	**Chiang Mai Arr**	**17.58**	**357**	P	**Pn**	**04 01 00.5**	**+0.3**
	0.1nm,0.3s,baz=186,slow=12,SNR=4.5						
WRA	**Warramunga Arr**	**39.64**	**123**	P	**P**	**04 04 27.2**	**-0.2**
	0.5nm,0.9s,mb3.2,baz=304,slow=9.0,SNR=2.7						
ASAR	**Alice Springs**	**41.11**	**129**	P	**P**	**04 04 40.5**	**+1.0**
	0.2nm,0.7s,mb2.9,baz=310,slow=7.2,SNR=3.2						
KSRS	**Korea Array**	**44.77**	**32**	P	**P**	**04 05 10.4**	**+1.3**
	1.4nm,0.6s,mb3.9,baz=223,slow=8.6,SNR=9.7						
TKM2	**Tokmak 2**	**47.21**	**336**	*e*P	**P**	**04 05 29.9**	**+1.7**
	1.8nm,0.6s,mb4.2						
SONM	**Songino Array**	**47.21**	**6**	P	**P**	**04 05 27.8**	**-0.3**
	1.2nm,0.5s,mb4.0,baz=186,slow=9.4,SNR=10						
AML	**Almayashu**	**47.38**	**334**	*e*P	**P**	**04 05 31.8**	**+2.3**
	1.9nm,0.5s,mb4.3						
EKS2	**Erkin-Say**	**47.77**	**334**	*e*P	**P**	**04 05 34.4**	**+1.8**
	2.2nm,0.6s,mb4.4						
MK31	**Makanchi Array**	**48.30**	**344**	*e*P	**P**	**04 05 37.7**	**+1.1**
MKAR	**Makanchi Array**	**48.30**	**344**	P	**P**	**04 05 35.5**	**-1.1**
	1.7nm,0.5s,mb4.3,baz=155,slow=8.7,SNR=29						
KURK	**Kurchatov**	**52.89**	**343**	*e*P	**P**	**04 06 11.4**	**+0.2**
	1.8nm,0.9s,mb4.0						
ZALV	**Zalesovo Beam**	**54.41**	**349**	P	**P**	**04 06 20.7**	**-1.5**
	3.7nm,0.6s,mb4.5,baz=166,slow=6.2,SNR=14						
BVAR	**Borovoye Array**	**57.51**	**339**	P	**P**	**04 06 42.4**	**-2.1**
	1.1nm,0.6s,mb4.1,baz=138,slow=8.6,SNR=9.4						
ABKAR	**Akbulak array**	**59.11**	**331**	*e*P	**P**	**04 06 56.0**	**+0.2**
	1.0nm,0.6s,mb4.0						
CASY	**Casey**	**67.36**	**175**	*e*P	**P**	**04 07 47.9**	**-2.3**
	7.9nm,1.3s,mb4.6						
BR131	**Keskin Array S**	**71.30**	**312**	*e*P	**P**	**04 08 15.2**	**0.0**
	1.2nm,0.7s,mb3.9						
BRTR	**Keskin Array B**	**71.30**	**312**	P	**P**	**04 08 12.5**	**-2.7**
	0.7nm,0.8s,mb3.7,baz=108,slow=6.6,SNR=4.7						
FINES	**FINESS Array B**	**81.56**	**332**	P	**P**	**04 09 12.3**	**-0.6**
	0.6nm,0.6s,mb3.7,baz=122,slow=7.2,SNR=4.9						
FINES	**FINESS Array B**	**81.56**	**332**	P	**P**	**04 09 12.3**	**-0.6**
ARCES	**ARCESS Array B**	**83.80**	**340**	P	**P**	**04 09 23.6**	**-0.8**
	0.8nm,0.7s,mb4.0,baz=102,slow=5.1,SNR=5.3						
TXAR	**Lajitas Array**	**142.60**	**35**	PKP	PKPdf	04 16 30.7	+1.3
	0.1nm,0.6s,baz=305,slow=3.2,SNR=3.1						
CPUP	**Villa Florida**	**146.38**	**219**	PKPbc	PKPbc	04 16 37.1	-0.1
	0.4nm,0.4s,baz=99,slow=4.1,SNR=4.2						

*ISCJB **13** 03:58:23.6±1.7, 8.°42S±0.°04×105.°32E±0.°05, h16km±12km, mb4.1/19, Error ellipse: s-maj=9.6km s-min=5.4km az=146.7*
*DJA **13** 03:58:26, 8.°36S×105.°28E, h29km, MLv4.5/14*
*IDC **13** 03:58:28.5±0.8, 8.°38S×105.°27E, h34km±4km, mb3.8/13, mb1 3.9/13, mb1mx3.8/21, mbtmp3.8/13, MS3.8/1, Ms1 3.8/1, ms1mx2.5/28, Error ellipse: s-maj=31.8km s-min=11.2km az=53.0*
*NEIC **13** 03:58:28.4±0.4, 8.°39S×105.°31E, mb4.4/4, Error ellipse: s-maj=17.3km s-min=6.3km az=52.0*
ISC 13 03:58:25.0±1.9, 8.°35S±0.°04×105.°33E±0.°05, h10km±12km, h34km±1.6km: pP-P, n46, σ0§75/49, mb4.1/19, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGJI	**Cibinong**	**1.77**	**12**	P	**Pn**	**03 58 54.8**	**-0.9**
CGJI				S	**Sn**	**03 59 17.1**	**-1.1**
SKJI	**Sukabumi**	**1.81**	**42**	P	**Pn**	**03 58 57.1**	**+0.9**
SBJI	**Serang**	**2.35**	**20**	P	**Pn**	**03 59 04.9**	**+1.1**
CBJI	**Citeko**	**2.44**	**38**	P	**Pn**	**03 59 03.2**	**-1.7**
CBJI				S	**Sn**	**03 59 33.9**	**-1.0**
RBSI	**Rajabasa**	**2.53**	**9**	P	**Pn**	**03 59 05.4**	**-0.7**
LEM	**Lembang**	**2.73**	**56**	P	**Pn**	**03 59 10.7**	**+1.8**
KASI	**Kota Agung**	**2.93**	**343**	P	**Pn**	**03 59 10.9**	**-0.8**
KASI				S	**Sn**	**03 59 46.9**	**-0.1**
BLSI	**Bandar Lampung**	**2.97**	**358**	P	**Pn**	**03 59 12.6**	**+0.4**
BLSI				S	**Sn**	**03 59 48.4**	**+0.5**
KLI	**Kotabumi**	**3.50**	**352**	P	**Pn**	**03 59 20.8**	**+1.3**
KLI				S	**Sn**	**04 00 02.1**	**+1.0**
LWLI	**Liwa**	**3.55**	**339**	P	**Pn**	**03 59 19.4**	**-0.8**
KLSI		**3.69**	**351**	P	**Pn**	**03 59 22.3**	**+0.2**
MDSI	**Maura Dua**	**4.01**	**343**	P	**Pn**	**03 59 26.6**	**0.0**
MNAI	**Manna**	**4.62**	**329**	P	**Pn**	**03 59 34.0**	**-0.9**
UGM	**Wanagama**	**5.16**	**85**	P	**Pn**	**03 59 42.3**	**0.0**
	0.7nm145nm,1.1s						
KSI	**Kapahiang**	**5.41**	**330**	P	**Pn**	**03 59 45.7**	**-0.1**
	1.0nm8µm201nm,1.3s						
PCJI	**Pacitan**	**5.79**	**89**	P	**Pn**	**03 59 50.1**	**-0.9**
	97nm,0.5s						
SJI	**Sawahan**	**6.40**	**85**	P	**Pn**	**04 00 00.2**	**+0.8**
	63nm,0.5s						
PWJI	**Pagerwojo**	**6.41**	**88**	P	**Pn**	**03 59 59.9**	**+0.3**
	0.3nm84nm,0.6s						
GMJI	**Gumukmas**	**8.03**	**90**	P	**Pn**	**04 00 22.3**	**+0.5**
	48nm,0.6s						
SRBI	**Singaraja**	**9.78**	**89**	P	**Pn**	**04 00 46.2**	**+0.3**
	75nm,0.6s						
KHKI	**Kahang-Kahang**	**10.17**	**91**	P	**Pn**	**04 00 49.5**	**-1.6**
FITZ	**Fitzroy Crossi**	**21.99**	**118**	P	**P**	**04 03 19.9**	**+0.4**
	1.9nm,0.6s,mb3.7,baz=206,slow=7.5,SNR=6.7						
FITZ				pP		04 03 30.1	
	3.3nm,0.8s,baz=321,slow=3.0,SNR=3.4						
CMAR	**Chiang Mai Arr**	**27.38**	**347**	P	**P**	**04 04 10.8**	**+0.1**
	0.7nm,0.4s,mb3.6,baz=186,slow=7.8,SNR=5.6						
CMAR				pP	pP	04 04 20.2	+6.5
	1.7nm,0.8s,baz=181,slow=8.5,SNR=3.1						
WRA	**Warramunga Arr**	**30.33**	**115**	P	**P**	**04 04 36.5**	**-0.6**
	1.0nm,0.5s,mb3.8,baz=289,slow=10,SNR=15						
WRA				pP	pP	04 04 46.6	+6.5
	1.1nm,0.6s,baz=289,slow=10,SNR=7.5						
WRA				PcP	PcP	04 07 37.5	+0.1
	0.3nm,0.5s,baz=305,slow=1.9,SNR=4.8						
WRA				pPcP		04 07 48.2	
	0.2nm,0.4s,baz=303,slow=2.0,SNR=6.4						
WRA	**Warramunga Arr**	**30.33**	**115**	P	**P**	**04 04 36.5**	**-0.6**
WRA				pP	pP	04 04 46.6	+6.5
WRA				PcP	PcP	04 07 37.5	+0.1
WRA				pPcP		04 07 48.2	
ASAR	**Alice Springs**	**31.30**	**122**	P	**P**	**04 04 45.6**	**0.0**
	0.5nm,0.6s,mb3.5,baz=302,slow=8.3,SNR=7.0						
ASAR				pP	pP	04 04 56.4	+7.8
	0.4nm,0.5s,baz=300,slow=8.1,SNR=1.9						
ASAR	**Alice Springs**	**31.30**	**122**	P	**P**	**04 04 45.6**	**0.0**
ASAR				pP	pP	04 04 56.4	+7.8
STKA	**Stephens Creek**	**41.00**	**130**	P	**P**	**04 06 08.5**	**0.0**
	1.8nm,0.5s,mb3.9,baz=307,slow=10,SNR=5.9						
LZH	**Lanzhou**	**44.22**	**358**	*e*P	**P**	**04 06 35.0**	**+0.5**
LZH				pP	pP	04 06 45.0	+7.4
LZH				sP	sP	04 06 50.6	+12
LZH				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.5						
GTA	**Gaotai**	**47.80**	**354**	*e*P	**P**	**04 07 03.9**	**+1.3**
GTA				pP	pP	04 07 08.8	+3.1
GTA				sP	sP	04 07 12.5	+5.6
GTA				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
KSRS	**Korea Array**	**50.23**	**23**	P	**P**	**04 07 21.9**	**+0.5**
	comp=Z,1.3nm,0.6s,mb4.1,baz=220,slow=8.1,SNR=9.3						
SONM	**Songino Array**	**55.95**	**1**	P	**P**	**04 08 04.1**	**+0.8**
	comp=Z,1.9nm,0.5s,mb4.4,baz=179,slow=8.7,SNR=12						
SONM				pP	pP	04 08 13.3	+6.9
	comp=Z,2.3nm,0.5s,baz=347,slow=24,SNR=7.1						
SONM				LR	LR	04 36 05.6	
	comp=Z,71nm,18.0s,baz=70,slow=40						
ULN	**Ulaanbaatar**	**55.99**	**1**	*e*P	**P**	**04 08 04.1**	**+0.5**
	comp=Z,1.9nm,0.5s,mb4.4						
ULN				*e*pP	pP	04 08 13.9	+7.2
TKM2	**Tokmak 2**	**57.78**	**334**	*e*P	**P**	**04 08 16.7**	**+0.3**
	comp=Z,1.9nm,0.6s,mb4.3						
MK31	**Makanchi Array**	**58.62**	**342**	*e*P	**P**	**04 08 22.1**	**-0.1**
MKAR	**Makanchi Array**	**58.62**	**342**	P	**P**	**04 08 21.6**	**-0.6**
	comp=Z,1.5nm,0.5s,mb4.3,baz=143,slow=6.8,SNR=16						
MKAR				pP	pP	04 08 32.5	+7.2
	comp=Z,2.0nm,0.5s,baz=148,slow=7.9,SNR=14						
KURK	**Kurchatov**	**63.22**	**341**	*e*P	**P**	**04 08 53.6**	**+0.2**
	comp=Z,1.3nm,0.5s,mb4.3						
ZALV	**Zalesovo Beam**	**64.44**	**347**	P	**P**	**04 09 01.2**	**-0.2**
	comp=Z,2.0nm,0.3s,mb4.6,baz=153,slow=6.3,SNR=8.9						
ZALV				pP	pP	04 09 11.0	+6.4
	comp=Z,2.3nm,0.4s,baz=152,slow=4.9,SNR=7.5						
ZALV	**Zalesovo Beam**	**64.44**	**347**	P	**P**	**04 09 01.2**	**-0.2**
ZALV				pP	pP	04 09 11.0	+6.4
MAW	**Mawson**	**65.60**	**197**	P	**P**	**04 09 08.5**	**-0.3**
	comp=Z,0.7nm,0.5s,mb4.0,baz=32,slow=9.5,SNR=3.7						
BVAR	**Borovoye Array**	**67.98**	**338**	P	**P**	**04 09 24.1**	**0.0**
	comp=Z,0.8nm,0.4s,mb4.1,baz=148,slow=11,SNR=5.2						
BVAR				pP	pP	04 09 34.8	+7.5
	comp=Z,1.3nm,0.4s,baz=140,slow=7.5,SNR=6.3						
ABKAR	**Akbulak array**	**69.74**	**330**	*e*P	**P**	**04 09 35.2**	**0.0**
	comp=Z,4.0nm,0.6s,mb4.5						
BRTR	**Keskin Array B**	**81.50**	**312**	P	**P**	**04 10 42.4**	**-0.4**
	comp=Z,0.2nm,0.5s,mb3.3,baz=135,slow=8.0,SNR=2.3						
FINES	**FINESS Array B**	**92.17**	**332**	P	**P**	**04 11 33.9**	**-0.8**
	comp=Z,0.4nm,0.6s,mb4.0,baz=111,slow=22,SNR=3.0						
TXAR	**Lajitas Array**	**145.69**	**49**	PKPbc	PKPbc	04 18 05.1	+0.3
	comp=Z,0.5nm,0.9s,baz=249,slow=0.9,SNR=5.2						
TXAR				pPKPbc	pPKPbc	04 18 16.5	+8.4
	comp=Z,0.8nm,0.7s,baz=315,slow=1.4,SNR=8.1						
TXAR	**Lajitas Array**	**145.69**	**49**	PKPbc	PKPbc	04 18 05.1	+0.3
TXAR				pPKPbc	pPKPbc	04 18 16.5	+8.4

*IDC **13** 04:12:20.9±6.4, 2.°62S×100.°16E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.5/21, mbtmp3.6/5, Error ellipse: s-maj=320.5km s-min=21.3km az=53.0*
*ISCJB **13** 04:12:28.2±0.8, 2.°19S±0.°07×100.°59E±0.°06, h61km±9km, mb3.6/5, Error ellipse: s-maj=13.2km s-min=7.5km az=37.5*
*DJA **13** 04:12:28, 2.°07S×100.°56E, h10km, MLv3.9/12*
ISC 13 04:12:28.9±0.9, 2.°17S±0.°06×100.°61E±0.°06, h46km±10km, n18, σ1§44/24, mb3.6/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**0.86**	**85**	P	**Pn**	**04 12 46.2**	**+1.6**
KRJI				S	**Sn**	**04 12 54.9**	**-1.2**
PDSI	**Padang**	**1.25**	**353**	P	**Pn**	**04 12 47.1**	**-2.9**
PDSI				S	**Sn**	**04 13 02.9**	**-2.9**
SDSI	**Sungai Dareh**	**1.48**	**34**	P	**Pn**	**04 12 51.3**	**-1.7**
SDSI				S	**Sn**	**04 13 13.5**	**+2.3**
PPI	**Padang Panjang**	**1.71**	**353**	P	**Pn**	**04 12 55.3**	**-1.0**
PPI				S	**Sn**	**04 13 17.8**	**+0.8**
SISI	**Saibi**	**1.73**	**299**	P	**Pn**	**04 12 56.3**	**-0.2**
SISI				S	**Sn**	**04 13 19.2**	**+1.8**
KSI	**Kapahiang**	**2.47**	**127**	P	**Pn**	**04 13 12.6**	**+5.9**
KSI				S	**Sn**	**04 13 42.5**	**+6.8**
BKNI	**Bangkinang**	**2.51**	**10**	P	**Pn**	**04 13 10.5**	**+3.2**
BKNI				S	**Sn**	**04 13 43.0**	**+6.3**
JMBI	**JAMBI**	**3.08**	**80**	P	**Pn**	**04 13 19.5**	**+4.4**
MNSI	**Mandailing Nat**	**3.12**	**341**	P	**Pn**	**04 13 14.6**	**-1.0**
MNAI	**Manna**	**3.20**	**133**	P	**Pn**	**04 13 22.5**	**+5.8**
MDSI	**Maura Dua**	**4.25**	**123**	P	**Pn**	**04 13 30.7**	**-0.4**
KLSI		**4.82**	**121**	P	**Pn**	**04 13 40.9**	**+1.9**
WRA	**Warramunga Arr**	**37.39**	**121**	P	**P**	**04 19 36.6**	**-1.0**
	0.2nm,0.5s,mb3.2,baz=292,slow=8.2,SNR=6.0						
ASAR	**Alice Springs**	**38.66**	**126**	P	**P**	**04 19 47.6**	**-0.8**
	1.0nm,0.7s,mb3.7,baz=298,slow=8.1,SNR=16						
MKAR	**Makanchi Array**	**51.35**	**344**	P	**P**	**04 21 28.4**	**-0.3**
	0.5nm,0.6s,mb3.7,baz=161,slow=8.5,SNR=5.8						
KURK	**Kurchatov**	**55.94**	**343**	P	**P**	**04 22 02.7**	**+0.5**
	0.6nm,0.6s,mb3.8,baz=163,slow=7.3,SNR=4.6						
ZALV	**Zalesovo Beam**	**57.44**	**349**	P	**P**	**04 22 14.1**	**+1.2**
	0.3nm,0.3s,mb3.8,baz=156,slow=7.5,SNR=4.1						
TXAR	**Lajitas Array**	**144.46**	**38**	PKPbc	PKPdf	04 32 00.3	-0.6
	0.2nm,0.7s,baz=320,slow=2.8,SNR=3.0						

*IDC **13** 04:13:57.0±2.2, 30.°59N×83.°54E, h0km, mb3.4/5, mb1 3.5/6, mb1mx3.3/25, mbtmp3.4/6, ML2.6/1, MS3.4/8, Ms1 3.4/8, ms1mx3.0/26, Error ellipse: s-maj=68.8km s-min=24.5km az=66.0*
*ISCJB **13** 04:13:58.9±0.7, 30.°75N±0.°07×83.°89E±0.°08, h10km, mb3.3/5, MS3.4/6, Error ellipse: s-maj=10.4km s-min=9.3km az=12.2*
*NEIC **13** 04:13:59.5±1.2, 30.°60N×83.°68E, h10km, mb3.8/3, Error ellipse: s-maj=28.3km s-min=10.1km az=47.0*
ISC 13 04:14:00.2±0.7, 30.°69N±0.°07×83.°83E±0.°08, h10km, n22, σ1§25/16, mb3.3/5, MS3.4/6, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTH	**Pithoragarh**	**3.33**	**251**	*e*PKP	**Pb**	**04 14 58.5**	**-0.9**
NDI	**New Delhi**	**6.09**	**252**	*e*PKP	**Pb**	**04 15 48.0**	**+1.6**
LSA	**Lhasa**	**6.42**	**97**	*e*Pn	**Pn**	**04 15 37.5**	**+2.7**
	13nm,0.8s						
AML	**Almayashu**	**14.02**	**327**	*e*Pn	**Pn**	**04 17 18.6**	**-0.2**
AAK	**Ala-Archa**	**14.06**	**330**	LR	LR	04 23 26.1	
	comp=Z,114nm,20.5s,baz=277,slow=40						
EKS2	**Erkin-Say**	**14.40**	**329**	*e*Pn	**Pn**	**04 17 25.2**	**+1.2**
MK31	**Makanchi Array**	**16.12**	**356**	*e*Pn	**Pn**	**04 17 48.8**	**+2.0**
MKAR	**Makanchi Array**	**16.12**	**356**	Pn	**Pn**	**04 17 45.7**	**-1.1**
	0.0nm,0.3s,baz=177,slow=11,SNR=2.2						
MKAR				LR	LR	04 25 07.2	
	comp=Z,67nm,20.2s,baz=269,slow=41						
MKAR	**Makanchi Array**	**16.12**	**356**	Pn	**Pn**	**04 17 45.7**	**-1.1**
MKAR				LR	LR	04 25 07.2	
CHTO	**Chiang Mai**	**18.10**	**127**	*e*P	**Pn**	**04 18 10.8**	**-1.0**
	4.0nm,0.4s						
KURK	**Kurchatov**	**20.38**	**350**	P	**P**	**04 18 35.6**	**-1.3**
	3.2nm,0.9s,baz=173,slow=10.0,SNR=16						
KURK				LR	LR	04 27 39.5	
	comp=Z,121nm,19.4s,MS3.3,baz=180,slow=40						
KURK	**Kurchatov**	**20.38**	**350**	*e*P	**P**	**04 18 37.0**	**+0.2**
	7.2nm,0.9s						
KURK				LR	LR	04 27 39.5	
ZALV	**Zalesovo Beam**	**23.25**	**1**	P	**P**	**04 19 06.5**	**-1.1**
	0.8nm,0.6s,mb3.4,baz=184,slow=10.0,SNR=4.3						
SONM	**Songino Array**	**24.32**	**39**	P	**P**	**04 19 18.6**	**+0.8**
	0.7nm,0.6s,mb3.3,baz=236,slow=7.8,SNR=5.7						
BVAR	**Borovoye Array**	**24.38**	**340**	P	**P**	**04 19 16.4**	**-1.8**
	0.3nm,0.5s,mb3.0,baz=160,slow=4.6,SNR=3.1						
ABKAR	**Akbulak array**	**25.87**	**323**	*e*P	**P**	**04 19 32.3**	**+0.3**
	1.0nm,0.8s,mb3.4						
AKTO	**Aktyubinsk**	**27.58**	**323**	LR	LR	04 32 05.4	
	comp=Z,107nm,19.7s,MS3.4,baz=68,slow=40						
KSRS	**Korea Array**	**36.88**	**67**	LR	LR	04 37 18.4	
	comp=Z,38nm,21.5s,MS3.1,baz=254,slow=38						
MJAR	**Matsushiro Arr**	**45.16**	**67**	LR	LR	04 42 38.1	
	comp=Z,48nm,19.1s,MS3.5,baz=225,slow=38						
HFS	**Hagfors**	**54.11**	**324**	LR	LR	04 47 47.8	
	comp=Z,48nm,18.8s,MS3.6,baz=240,slow=38						
NOA	**NORSAR Array B**	**55.32**	**326**	LR	LR	04 48 43.1	
	comp=Z,29nm,20.4s,MS3.4,baz=115,slow=38						
WRA	**Warramunga Arr**	**69.93**	**129**	P	**P**	**04 25 11.2**	**-0.6**
	0.5nm,0.9s,mb3.5,baz=327,slow=6.0,SNR=4.0						

IDC 13 04:42:56.1±18.0, 22.°17S×174.°75W, h0km, mb4.2/5, mb1 4.3/5, mb1mx4.0/18, mbtmp4.2/5, Error ellipse: s-maj=337.3km s-min=153.7km az=80.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**36.37**	**266**	P	P	04 50 03.6	+1.4
	2.4nm,0.4s,baz=98,slow=7.1,SNR=9.2						
STKA	**Stephens Creek**	**39.85**	**246**	P	P	04 50 30.5	-1.1
	5.1nm,1.1s,baz=108,slow=3.2,SNR=2.9						
ASAR	**Alice Springs**	**47.11**	**258**	P	P	04 51 29.5	-0.8
	1.0nm,0.5s,baz=95,slow=7.5,SNR=10						
WRA	**Warramunga Arr**	**47.39**	**263**	P	P	04 51 31.9	-0.6
	1.5nm,0.3s,baz=96,slow=8.4,SNR=70						
FITZ	**Fitzroy Crossi**	**55.82**	**263**	P	P	04 52 36.3	+0.7
	2.2nm,1.0s,baz=79,slow=9.4,SNR=4.9						

*ISCJB **13** 04:43:57.6±0.5, 43.°32S±0.°09×39.°5E±0.°1, h10km, mb4.0/17, MS3.9/8, Error ellipse: s-maj=17.6km s-min=9.9km az=143.2*
*IDC **13** 04:43:57.8±0.6, 43.°26S×39.°58E, h0km, mb4.1/14, mb1 4.2/16, mb1mx4.1/23, mbtmp4.1/16, ML3.8/2, MS3.8/9, Ms1 3.8/9, ms1mx3.5/30, Error ellipse: s-maj=22.3km s-min=16.1km az=61.0*
*NEIC **13** 04:43:59.2±0.4, 43.°31S×39.°60E, h10km, mb4.3/5, Error ellipse: s-maj=16.7km s-min=10.2km az=53.0*
ISC 13 04:43:59.3±0.5, 43.°31S±0.°09×39.°6E±0.°1, h10km, n30, σ1§15/22, mb4.0/17, MS3.9/8, Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**18.37**	**300**	P	**Pn**	**04 48 13.5**	**-0.5**
	0.2nm,0.3s,baz=136,slow=16,SNR=3.1						
BOSA	**Boshof**	**18.66**	**317**	P	**Pn**	**04 48 16.9**	**-0.7**
	0.3nm,0.3s,baz=176,slow=12,SNR=7.4						
BOSA				LR	LR	04 54 20.2	
	comp=Z,97nm,18.9s,baz=144,slow=33						
BOSA	**Boshof**	**18.66**	**317**	*e*P	**Pn**	**04 48 17.5**	**-0.1**
	14nm,1.1s						
BOSA				LR	LR	04 54 20.2	
LBTB	**Lobatse**	**21.56**	**323**	P	**P**	**04 48 49.1**	**+0.3**
	2.4nm,0.8s,mb3.7,baz=190,slow=6.1,SNR=2.4						
LBTB				LR	LR	04 55 46.8	
	comp=Z,205nm,19.8s,MS3.5,baz=139,slow=33						
LBTB	**Lobatse**	**21.56**	**323**	*e*P	**P**	**04 48 52.0**	**+3.2**
	9.4nm,1.0s,mb4.2						
LBTB				LR	LR	04 55 46.8	
OPO	**Ambohidratompo**	**25.49**	**17**	P	**P**	**04 49 27.4**	**-0.4**
	2.1nm,0.3s,mb4.1,baz=98,slow=12,SNR=13						
MAW	**Mawson**	**27.34**	**161**	P	**P**	**04 49 44.8**	**+0.8**
	2.1nm,0.9s,mb3.7,baz=19,slow=6.1,SNR=3.8						
MAW				LR	LR	04 57 15.6	

comp=E,55nm,0.6s
EKS2 eSn Sn 05 25 04.5 -0.6
AAK Ala-Archa 6.29 22 P Pn 05 23 59.9 +1.2
SNR=47
AAK Ala-Archa 6.29 22 P Pn 05 23 59.4 +0.6
comp=E,21nm,0.3s,baz=170,slow=5.8,SNR=65
AAK S Sn 05 25 09.3 +0.2
comp=E,4.9nm,0.3s,baz=312,slow=22,SNR=3.7
AAK LR LR 05 26 58.1
comp=E,53nm,21.0s,baz=81,slow=43
AAK Ala-Archa 6.29 22 PN Pn 05 23 59.4 +0.7
AAK S Sn 05 25 09.3 +0.2
AAK pmax pmax
comp=Z,21nm,0.3s
AAK smax
comp=N,5.0nm,0.3s
AAK MLR MLR
comp=Z,53nm,21.0s
KK31 Karatay Array 6.31 354 ⇑P Pn 05 23 57.7 -1.4
comp=Z,38nm,0.5s,baz=176,slow=12,SNR=527
KK31 ⇑S Sn 05 25 06.2 -3.3
comp=Z,7.6nm,0.3s,baz=190,slow=26,SNR=4.1
KBK Karagaybulak 6.45 24 P Pn 05 24 02.7 +1.7
SNR=14
FRU Bishkek 6.50 22 ⇓iPN Pn 05 24 03.0 +1.3
FRU i S Sn 05 25 20.0 +5.6
FRU pmax pmax
comp=Z,80nm,1.2s
FRU smax
comp=E,180nm,1.7s
ULHL Ulahol 6.60 33 P Pn 05 24 05.1 +2.1
SNR=18
CHMS Chumysh 6.70 22 P Pn 05 24 05.0 +0.7
SNR=54
BHK Bhakra 6.83 141 eS Sn 05 25 17.0 -5.5
USP Ospenovka 6.87 20 P Pn 05 24 06.9 +0.2
SNR=38
TKM2 Tokmak 2 6.91 27 ⇓P Pn 05 24 08.1 +0.9
comp=E,52nm,0.8s
TKM2 ⇑S Sn 05 25 27.0 +2.8
comp=E,29nm,0.9s
TKM2 Tokmak 2 6.91 27 P Pn 05 24 08.6 +1.4
SNR=12
TKM2 Tokmak 2 6.91 27 ePN Pn 05 24 08.2 +1.0
TKM2 pmax pmax
comp=Z,66nm,0.9s
TKM2 Tokmak 2 6.91 27 ePn Pn 05 24 08.2 +1.0
comp=Z,66nm,0.9s
SDNR Sundarnagar 7.06 137 ePKP Pn 05 24 10.5 +1.2
SDNR eS Sn 05 25 23.5 -4.5
KLP Kalpa 7.77 131 ePKP Pn 05 24 20.2 +1.1
KLP eS Sn 05 25 37.5 -7.9
KLP AML AML 05 25 54.3
comp=E,286nm,0.5s
KLP AML AML 05 25 54.8
comp=N,237nm,0.5s
DDI Dehra Dun 8.56 137 ePKP Pn 05 24 29.8 +0.1
DDI ex Sn 05 26 03.0 -1.5
JOSI Joshimath 9.26 130 ePKP Pn 05 24 39.5 +0.3
JOSI eS Sn 05 26 15.7 -5.7
JOSI AML AML 05 26 27.5
comp=E,141nm,0.4s
JOSI AML AML 05 26 27.5
comp=N,212nm,0.5s
NDI New Delhi 9.50 147 eS Sn 05 26 20.0 -7.3
SONA Sohna 9.82 149 ePKP Pn 05 24 47.0 +0.2
SONA eS Sn 05 26 26.9 -8.2
AJM Ajmer 10.69 164 eS Sn 05 26 48.0 -8.2
MK31 Makanchi Array 12.86 36 P Pn 05 25 26.9 -0.5
comp=N,2.6nm,0.6s,baz=224,slow=15,SNR=37
MK31 Makanchi Array 12.86 36 ePn Pn 05 25 27.1 -0.2
MKAR Makanchi Array 12.86 36 P Pn 05 25 26.3 -1.0
comp=N,0.7nm,0.3s,baz=226,slow=15,SNR=40
MKAR Makanchi Array 12.86 36 P Pn 05 25 26.3 -1.0
MKAR pmax pmax
comp=Z,1.0nm,0.3s
GKN Gorkha 14.24 124 eP Pn 05 25 43.7 -1.7
comp=Z,70nm,0.6s
KKN Kakani 14.81 123 eP Pn 05 25 51.3 -1.3
comp=Z,26nm,0.5s
DMN Daman 14.81 124 eP Pn 05 25 51.6 -1.1
comp=Z,23nm,0.4s
DMN eS Sn 05 28 25.5 -11
KURK Kurchatov 14.83 18 ⇑P Pn 05 25 55.4 +2.7
comp=Z,4.0nm,0.6s
KURK Kurchatov 14.83 18 P Pn 05 25 49.0 -3.8
comp=Z,0.3nm,0.3s,baz=209,slow=10,SNR=10.0
AB31 Akbulak array 14.95 330 P Pn 05 25 49.9 -4.3
comp=Z,6.4nm,0.4s,baz=148,slow=11,SNR=306
ABKAR Akbulak array 14.95 330 ePn Pn 05 25 49.8 -4.4
comp=Z,13nm,0.4s
ABKAR eSn Sn 05 28 21.9 -17
PKI Pulchoki 15.04 124 eP Pn 05 25 54.3 -1.2
GUN Gumba 15.14 122 eP Pn 05 25 56.8 +0.1
comp=Z,136nm,1.0s
JIRN Jiri 15.51 122 eP Pn 05 26 01.5 +0.1
comp=Z,56nm,0.4s
VOSK Vostochnaya 15.90 359 ⇓P Pn 05 26 03.0 -3.1
comp=Z,8.0nm,0.8s
ZRNK Zerenda 16.21 355 ⇓P Pn 05 26 07.6 -2.4
comp=Z,9.4nm,0.5s
BVAR Borovoye Array 16.21 358 P Pn 05 26 08.0 -2.0
comp=Z,0.9nm,0.3s,baz=165,slow=12,SNR=11
BVAR Borovoye Array 16.21 358 P Pn 05 26 08.0 -2.0
BVAR pmax pmax
comp=Z,1.0nm,0.3s
RAMN Ramite 16.24 123 eP Pn 05 26 10.1 -0.5
comp=Z,26nm,0.4s
RAMN eS S 05 28 59.8 -17
BRVK Borovoye 16.25 358 eP Pn 05 26 08.4 -2.0
BRVK pmax pmax
comp=Z,9.0nm,0.6s
BRVK Borovoye 16.25 358 ePn Pn 05 26 08.4 -2.0
comp=Z,8.8nm,0.6s
AKTK Aktyubinsk 16.65 329 P Pn 05 26 13.2 -2.1
AKTO Aktyubinsk 16.65 329 P Pn 05 26 13.2 -2.1
comp=Z,1.8nm,0.3s,baz=132,slow=14,SNR=22
AKTO Aktyubinsk 16.65 329 P Pn 05 26 13.2 -2.1
AKTO pmax pmax
comp=Z,2.0nm,0.3s
TAPN Taplejung 16.75 120 eP Pn 05 26 18.3 +1.5
comp=Z,25nm,0.5s
ODAN Odare 16.84 122 eP Pn 05 26 17.7 -0.2
comp=Z,48nm,0.8s
LSA Lhasa 18.00 108 P Pn 05 26 36.5 +4.6
LSA pmax pmax
comp=Z,12nm,0.5s
LSA Lhasa 18.00 108 P Pn 05 26 36.5 +4.6
comp=Z,12nm,0.5s
ZALV Zalesovo Beam 19.50 24 P P 05 26 45.8 -1.4
comp=Z,2.0nm,0.3s,baz=219,slow=11,SNR=35
ZALV Zalesovo Beam 19.50 24 P P 05 26 45.8 -1.3
ZALV pmax pmax
comp=Z,2.0nm,0.3s
NVS Novosibirsk 19.78 21 eP P 05 26 47.9 -2.2
NVS pmax pmax
comp=N,6.0nm,0.9s
NVS pmax pmax
comp=E,1.0nm,0.9s
NVS pmax pmax
comp=Z,6.0nm,0.9s
SHL Shillong 20.79 117 ePKP P 05 27 03.5 +2.2
ARU Arti 21.42 340 P P 05 27 08.0 +0.3
ARU Arti 21.42 340 eP P 05 27 08.0 +0.2
comp=Z,9.5nm,0.8s,mb4.2
GTA Gaotai 22.50 75 eP P 05 27 23.0 +3.7
GTA pmax pmax
comp=Z,7.0nm,1.1s,mb3.9
SONM Songino Array 27.92 56 P P 05 28 09.0 +0.5
comp=Z,0.4nm,0.6s,mb3.2,baz=260,slow=8.6,SNR=3.1
BRTR Keskin Array B 29.61 287 P P 05 28 24.4 +0.8
comp=Z,0.5nm,0.6s,mb3.3,baz=109,slow=8.6,SNR=3.8
BRTR pP pP 05 28 43.9 -3.3
comp=Z,0.4nm,0.4s,baz=276,slow=25,SNR=2.5
BRTR Keskin Array B 29.61 287 P P 05 28 24.4 +0.8
BRTR *PP pP 05 28 43.9 -3.3
BRTR pmax pmax
comp=Z,1.0nm,0.6s
AKASG Malin Array Be 32.97 308 P P 05 28 53.3 +0.3
comp=Z,0.9nm,0.4s,mb4.0,baz=81,slow=7.8,SNR=6.8
AKASG Malin Array Be 32.97 308 P P 05 28 53.3 +0.3
AKASG pmax pmax
comp=Z,1.0nm,0.4s
JOF Joensuu 35.73 330 eP P 05 29 17.2 +0.5
JOF pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
JOF Joensuu 35.73 330 ep P 05 29 17.2 +0.5
comp=Z,3.9nm,0.5s,mb4.6
FINES FINESS Array B 37.38 326 P P 05 29 31.5 +0.9
comp=Z,1.3nm,0.4s,mb4.2,baz=128,slow=8.4,SNR=14
FINES pP pP 05 29 51.5 -3.3
comp=Z,2.2nm,0.7s,baz=119,slow=12,SNR=3.6
FINES FINESS Array B 37.38 326 P P 05 29 31.5 +0.9
FINES *PP pP 05 29 51.5 -3.2
FINES pmax pmax
comp=Z,1.0nm,0.4s
FINES FINESS Array B 37.38 326 P P 05 29 31.5 +0.9
FINES pP pP 05 29 51.5 -3.3
KEV Kevo 40.61 338 eP P 05 29 58.1 +0.7
KEV Kevo 40.61 338 ep P 05 29 58.1 +0.7
ARCES ARCESS Array B 40.96 337 P P 05 30 01.1 +0.7
comp=Z,2.4nm,0.5s,mb4.3,baz=114,slow=9.2,SNR=35
ARCES ARCESS Array B 40.96 337 P P 05 30 01.1 +0.8
ARCES pmax pmax
comp=Z,2.0nm,0.5s
ARE0 ARCESS Array S 40.96 337 eP P 05 30 01.2 +0.9
HFS Hagfors 42.99 322 P P 05 30 17.7 +0.7
comp=Z,3.2nm,0.5s,mb4.3,baz=84,slow=12,SNR=15
HFS pP pP 05 30 38.8 -2.7
comp=Z,2.2nm,0.5s,baz=94,slow=11,SNR=3.8
HFS Hagfors 42.99 322 P P 05 30 17.7 +0.7
HFS *PP pP 05 30 38.8 -2.8
HFS pmax pmax
comp=Z,2.0nm,0.5s
NB2 NORSAR Subarra 44.30 323 P P 05 30 27.6 +0.2
comp=Z,1.8nm,0.5s,mb4.1,baz=97,slow=7.9
NOA NORSAR Array B 44.30 323 P P 05 30 27.9 +0.5
comp=Z,1.6nm,0.5s,mb4.0,baz=97,slow=7.7,SNR=10
NOA pP pP 05 30 49.1 -3.0
comp=Z,1.0nm,0.5s,baz=96,slow=8.0,SNR=3.1
NOA NORSAR Array B 44.30 323 P P 05 30 27.9 +0.5
NOA *PP pP 05 30 49.1 -3.0
NOA pmax pmax
comp=Z,2.0nm,0.5s
NOA NORSAR Array B 44.30 323 P P 05 30 27.9 +0.5
NOA pP pP 05 30 49.1 -3.0
MJAR Matsushiro Arr 52.57 69 P P 05 31 31.1 -0.1
comp=Z,1.0nm,0.4s,mb4.2,baz=287,slow=7.5,SNR=6.8
MJAR Matsushiro Arr 52.57 69 P P 05 31 31.1 -0.1
MJAR pmax pmax
comp=Z,1.0nm,0.4s
ESDC Sonseca Array 57.56 298 P P 05 32 06.8 -0.2
comp=Z,0.3nm,0.5s,mb3.5,baz=52,slow=7.8,SNR=4.5
YKA Yellowknife Ar 80.91 3 P P 05 34 31.1 +0.5
comp=Z,0.6nm,0.5s,mb3.7,baz=349,slow=5.6,SNR=3.3
YKA Yellowknife Ar 80.91 3 P P 05 34 31.1 +0.5
YKA pmax pmax
comp=Z,1.0nm,0.5s
WRA Warramunga Arr 81.92 122 P P 05 34 37.1 +0.6
comp=Z,1.5nm,0.6s,mb4.0,baz=324,slow=4.9,SNR=38
WRA Warramunga Arr 81.92 122 P P 05 34 37.1 +0.6
WRA pmax pmax
comp=Z,2.0nm,0.6s
ASAR Alice Springs 84.20 125 P P 05 34 48.9 +0.6
comp=Z,1.4nm,0.6s,mb4.0,baz=314,slow=4.8,SNR=15
ASAR Alice Springs 84.20 125 P P 05 34 48.9 +0.7
ASAR pmax pmax
comp=Z,1.0nm,0.6s

*IDC **13** 05:23:30.4±4.4, 8°.23S×105°.45E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.6/21, mbtmp3.7/6, Error ellipse: s-maj=180.4km s-min=27.8km az=49.0*
*ISCJB **13** 05:23:32.2±2.2, 8°.4S±0°.1×105°.36E±0°.08, h34km±17km, mb3.6/6, Error ellipse: s-maj=18.3km s-min=13.1km az=178.3*
*DJA **13** 05:23:36, 8°.17S×103°.69E, h40km, MLv3.8/4*
ISC 13 05:23:32.5±3.8, 8°.30S±0°.08×105°.41E±0°.09, h17km±25km, n14, σ0°.96/15, mb3.6/6, South of Java

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGJI	**Cibinong**	**1.70**	**10**	P	**Pn**	**05 24 01.6**	**+0.2**
CGJI				S	**Sn**	**05 24 23.5**	**+0.8**
SKJI	**Sukabumi**	**1.72**	**42**	P	**Sn**	**05 24 22.9**	**-0.3**
CBJI	**Citeko**	**2.35**	**38**	P	**Sn**	**05 24 38.7**	**-0.2**
RBSI	**Rajabasa**	**2.46**	**8**	P	**Pn**	**05 24 19.6**	**+7.7**
KASI	**Kota Agung**	**2.90**	**342**	P	**Pn**	**05 24 17.7**	**-0.2**
KASI				S	**Sn**	**05 24 52.0**	**-0.4**
KLSI		**3.65**	**349**	P	**Pn**	**05 24 28.5**	**+0.3**
MDSI	**Maura Dua**	**3.98**	**342**	P	**Pn**	**05 24 32.4**	**-0.4**
CMAR	**Chiang Mai Arr**	**27.34**	**347**	P	**P**	**05 29 16.9**	**+0.1**
	0.3nm,0.3s,mb3.3,baz=183,slow=12,SNR=3.1						
WRA	**Warramunga Arr**	**30.30**	**116**	P	**P**	**05 29 43.1**	**0.0**
	0.2nm,0.5s,mb3.1,baz=291,slow=10,SNR=4.8						
SONM	**Songino Array**	**55.89**	**1**	P	**P**	**05 33 09.5**	**+0.3**
	0.5nm,0.4s,mb3.9,baz=175,slow=8.3,SNR=4.8						
MKAR	**Makanchi Array**	**58.59**	**342**	P	**P**	**05 33 28.9**	**+0.6**
	0.4nm,0.5s,mb3.7,baz=152,slow=8.5,SNR=5.4						
KURK	**Kurchatov**	**63.19**	**341**	P	**P**	**05 33 59.3**	**-0.3**
	0.3nm,0.6s,mb3.6,baz=157,slow=5.0,SNR=2.4						
ZALV	**Zalesovo Beam**	**64.41**	**347**	P	**P**	**05 34 07.3**	**-0.2**
	0.7nm,0.4s,mb4.1,baz=148,slow=6.3,SNR=3.7						
TXAR	**Lajitas Array**	**145.60**	**49**	PKPbc	PKPbc	05 43 12.0	+1.2
	0.4nm,0.9s,baz=264,slow=3.8,SNR=4.0						

*NEIC **13** 05:29:26.5, 31°.89S×72°.25W, h16km, ML3.2(GUC), After GUC.*
GUC 13 05:29:26.5±0.6, 31°.89S×72°.25W, h16km±6km, MD3.8, ML3.2, 3C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.64**	**90**	⇓iP	Pg	05 29 38.5	-0.5
CHNG				i S	Sg	05 29 47.1	-0.4
CMCH	**Combarbala**	**1.28**	**57**	eP	Pn	05 29 48.7	-1.0
CMCH				i S	Sb	05 30 05.9	-0.5
CMCH	**Combarbala**	**1.28**	**57**	eP	Pn	05 29 48.7	-1.0
CMCH				i S	Sb	05 30 05.9	-0.5
CMCH				AML	AML	05 30 09.5	
	comp=N,2μm,0.6s						
JACH	**Jahuel**	**1.61**	**120**	eP	Pn	05 29 54.5	+0.2
JACH				i S	Sn	05 30 15.2	+0.5
JACH	**Jahuel**	**1.61**	**120**	eP	Pn	05 29 54.5	+0.2
JACH				i S	Sn	05 30 15.2	+0.5
PEL	**Peldehue**	**1.82**	**134**	eP	Pn	05 29 57.4	+0.2
PEL				eS	Sn	05 30 20.9	+1.1
PEL				AML	AML	05 30 30.1	
	comp=E,470nm,0.8s						
TACH	**Talagante**	**2.08**	**148**	eP	Pn	05 30 01.5	+0.8
TACH	**Talagante**	**2.08**	**148**	eP	Pn	05 30 01.5	+0.8
CLCH	**Cerro Calan**	**2.09**	**137**	⇑iP	Pn	05 30 01.5	+0.7
CLCH				i S	Sn	05 30 28.1	+1.7
CLCH				AML	AML	05 30 38.4	
	comp=E,202nm,0.5s						
TLL	**Tololo Astrono**	**2.12**	**36**	eP	Pn	05 30 02.3	+1.1
TLL	**Tololo Astrono**	**2.12**	**36**	eP	Pn	05 30 02.3	+1.1
TLL				AML	AML	05 30 40.5	
	comp=N,104nm,0.4s						
PCH	**Pirque**	**2.27**	**140**	eP	Pn	05 30 04.5	+1.3
PCH	**Pirque**	**2.27**	**140**	eP	Pn	05 30 04.5	+1.3
LMEL	**Las Melosas**	**2.61**	**139**	⇑iP	Pn	05 30 09.5	+1.6
LMEL	**Las Melosas**	**2.61**	**139**	⇑iP	Pn	05 30 09.5	+1.6
CACH	**El Canelo**	**2.62**	**149**	eP	Pn	05 30 09.6	+1.4
CACH	**El Canelo**	**2.62**	**149**	eP	Pn	05 30 09.6	+1.4

NNC 13 05:45:06.6±3.6, 36°.96N×70°.97E, h144km±55km, mb3.0, mpv3.9, 2C-3D, Error ellipse: s-maj=33.5km s-min=22.0km az=8.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.15**	**357**	⇓P	Pn	05 46 35.0	-0.1
	3.4nm,0.4s,baz=183,slow=13,SNR=59						
KK31				⇓S	Sn	05 47 45.5	+1.1
	3.8nm,0.5s,baz=185,slow=19,SNR=11						
TKM2	**Tokmak 2**	**6.93**	**29**	⇑P	Pn	05 46 46.0	+0.4
	4.3nm,0.5s						
TKM2				⇑S	Sn	05 48 03.4	+0.2
	2.4nm,0.6s						
MK31	**Makanchi Array**	**12.94**	**37**	⇓P	Pn	05 48 05.8	+0.8
	0.4nm,0.6s,baz=212,slow=9.2,SNR=11						
AB31	**Akbulak array**	**14.68**	**330**	P	Pn	05 48 26.4	-0.7
	0.6nm,0.5s,baz=151,slow=12,SNR=17						

MAN 13 06:02:52, 8°.69N×125°.66E, h3km, mb4.3, ML3.1, MS2.9, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.28**	**351**	eP	Pg	06 02 57.8	+0.3
BUTP				eS	Sg	06 03 05.2	+4.0
CGP	**Cagayan de Oro**	**0.99**	**257**	eP	Pg	06 03 11.8	+0.9
CGP				i S	Sg	06 03 26.6	+2.9
BUKP	**Musuan**	**1.00**	**217**	eP	Pg	06 03 13.4	+2.2
BUKP				eS	Sg	06 03 27.5	+3.4
TBP	**Tagbilaran**	**2.04**	**299**	eP	Pn	06 03 28.0	+0.8
TBP				eS	Sn	06 03 54.4	+1.2
PAGZ	**Pagadian**	**2.41**	**250**	eP	Pn	06 03 36.0	+3.7

IDC 13 06:22:26.4±3.2, 19°.67N×146°.56E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.7/22, mbtmp3.7/7, MS3.1/1, Ms1 3.1/1, ms1mx2.3/27, Error ellipse: s-maj=134.5km s-min=22.5km az=82.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**41.15**	**198**	P	P	06 30 12.3	-0.2
	0.7nm,0.4s,baz=21,slow=9.0,SNR=8.0						
SONM	**Songino Array**	**42.91**	**320**	P	P	06 30 27.6	+0.8
	0.5nm,0.4s,baz=115,slow=6.5,SNR=4.0						
SONM				LR	LR	06 46 29.1	
	comp=Z,26nm,20.9s,baz=67,slow=34						
ASAR	**Alice Springs**	**44.80**	**197**	P	P	06 30 42.3	+0.2
	0.3nm,0.5s,baz=20,slow=13,SNR=4.9						
MKAR	**Makanchi Array**	**58.39**	**313**	P	P	06 32 23.1	-0.5
	0.3nm,0.6s,baz=80,slow=7.8,SNR=4.0						
KURK	**Kurchatov**	**61.10**	**318**	P	P	06 32 41.8	-0.5
	0.6nm,0.5s,baz=91,slow=7.6,SNR=3.8						
BVAR	**Borovoye Array**	**66.26**	**320**	P	P	06 33 17.0	+0.8
	0.4nm,0.4s,baz=91,slow=7.4,SNR=3.9						
FINES	**FINESS Array B**	**86.35**	**335**	P	P	06 35 10.1	-0.1
	0.5nm,0.4s,baz=75,slow=4.5,SNR=10						

IDC 13 06:29:49.5±4.8, 32°.17S×179°.06E, h527km±62km, mb3.1/4, mb1 3.2/5, mb1mx3.0/16, mbtmp3.1/5, Error ellipse: s-maj=82.1km s-min=32.8km az=12.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.28**	**194**	P	P	06 31 30.0	+0.6
	1.3nm,0.3s,baz=347,slow=5.0,SNR=17						
URZ				S	S	06 32 51.1	-0.3
	1.2nm,0.3s,baz=234,slow=23,SNR=13						
CTA	**Charters Tower**	**31.69**	**284**	P	P	06 35 30.3	+0.4
	1.3nm,0.5s,baz=125,slow=12,SNR=3.7						
ASAR	**Alice Springs**	**40.55**	**270**	P	P	06 36 42.9	-0.2
	1.0nm,0.6s,baz=102,slow=7.6,SNR=11						
WRA	**Warramunga Arr**	**41.70**	**276**	P	P	06 36 51.9	-0.4
	1.9nm,0.4s,baz=115,slow=7.6,SNR=30						
FITZ	**Fitzroy Crossi**	**49.88**	**273**	P	P	06 37 54.8	+0.1
	3.0nm,1.0s,baz=146,slow=7.3,SNR=3.9						
FINES	**FINESS Array B**	**145.86**	**337**	PKPbc	PKPbc	06 48 28.2	-0.8
	0.8nm,0.4s,baz=58,slow=2.6,SNR=11						

*BJI **13** 06:53:19.5, 12°.03N×57°.17E, h10km, mB4.9/11, mb4.7/18, Ms4.4/8, Ms7 4.0/8*
*IDC **13** 06:53:23.8±0.6, 12°.05N×57°.97E, h0km, mb4.2/18, mb1 4.3/19, mb1mx4.1/31, mbtmp4.2/19, ML4.3/1, MS3.6/13, Ms1 3.6/13, ms1mx3.4/26, Error ellipse: s-maj=16.6km s-min=15.5km az=64.0*
*NEIC **13** 06:53:25.5±0.4, 12°.08N×57°.88E, h10km, mb4.6/36, Error ellipse: s-maj=8.9km s-min=7.5km az=179.0*
*ISCJB **13** 06:53:26.1±2.0, 12°.12N±0°.07×57°.81E±0°.04, h25km±14km, mb4.5/78, MS3.6/21, Error ellipse: s-maj=11.0km s-min=6.0km az=176.8*
*MOS **13** 06:53:27.3±1.3, 12°.12N×57°.83E, h33km, mb4.7/33, Error ellipse: s-maj=9.9km s-min=5.3km az=118.3*
*CSEM **13** 06:53:29.1±0.2, 12°.11N×57°.85E, h33km, mb4.6/46, Ms3.4, Error ellipse: s-maj=9.8km s-min=8.3km az=6.0*
ISC 13 06:53:28.9±1.9, 12°.12N±0°.06×57°.84E±0°.04, h30km±13km, h16km±2.9km: pP-P, n281, σ1.900/271, mb4.5/78, MS3.6/21, 15C-20D, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATD	**Arta Tunnel**	**14.69**	**269**	Pn	**Pn**	**06 56 55.5**	**+0.8**
	0.4nm,0.3s,baz=65,slow=17,SNR=2.9						
BHJ	**Bhuj**	**15.78**	**44**	ePKP	**Pn**	**06 57 07.7**	**-1.3**
GOA	**Goa**	**15.88**	**76**	ex	x	06 57 48.2	
GOA				AMb	AMB	06 57 59.5	
	comp=Z,36nm,2.0s						
JASL	**Jaisalmer**	**19.17**	**38**	ePKP	**Pn**	**06 57 49.5**	**-1.6**
AKL	**Akola**	**20.26**	**63**	ePKP	**P**	**06 58 01.1**	**-1.0**
HYB	**Hyderabad**	**20.71**	**73**	eP	**P**	**06 58 07.0**	**+0.1**
HYB	**Hyderabad**	**20.71**	**73**	i P	**P**	**06 58 07.0**	**+0.1**
HYB	**Hyderabad**	**20.71**	**73**	eP	**P**	**06 58 07.0**	**+0.1**
AJM	**Ajmer**	**21.31**	**45**	ePKP	**P**	**06 58 14.2**	**+0.9**
AJM				AMb	AMB	06 58 15.1	
	comp=Z,42nm,0.8s,mb4.8						
BHPL	**Bhopal**	**21.66**	**57**	ePKP	**P**	**06 58 16.7**	**-0.5**
BHPL				AMb	AMB	06 58 18.3	
	comp=Z,32nm,0.7s,mb4.8						
NGP	**Nagpur**	**22.20**	**63**	ePKP	**P**	**06 58 22.3**	**-0.6**
NGP				AMb	AMB	06 59 19.2	
	comp=Z,27nm,1.2s,mb4.5						
SONA	**Sohna**	**24.11**	**45**	ePKP	**P**	**06 58 42.0**	**-0.1**
SONA				AMb	AMB	06 58 49.2	
	comp=Z,8.1nm,0.7s,mb4.2						
KMBO	**Kilima Mbogo**	**24.31**	**239**	eP	**P**	**06 58 45.6**	**+1.5**
KMBO				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KMBO	**Kilima Mbogo**	**24.31**	**239**	eP	**P**	**06 58 45.6**	**+1.5**
	comp=Z,8.7nm,0.6s,mb4.4						
KMBO	**Kilima Mbogo**	**24.31**	**239**	eP	**P**	**06 58 45.6**	**+1.5**
	comp=Z,9.0nm,0.6s,mb4.4						
KBL	**Kabul**	**24.54**	**23**	P	**P**	**06 58 48.0**	**+2.1**
KBL	**Kabul**	**24.54**	**23**	P	**P**	**06 58 48.0**	**+2.1**
KLP	**Kalpa**	**26.97**	**41**	ePKP	**P**	**06 59 06.7**	**-1.3**
KLP				AMb	AMB	06 59 24.9	
	comp=Z,9.6nm,0.7s,mb4.5						
JOSI	**Joshimath**	**27.22**	**44**	ePKP	**P**	**06 59 11.2**	**+0.9**
EIL	**Elat**	**27.51**	**313**	LR	LR	07 10 14.3	
	comp=Z,201nm,18.6s,MS3.7,baz=285,slow=36						
ASF	**Jabal al Asfar**	**27.73**	**319**	P	**P**	**06 59 15.5**	**+0.7**
	comp=Z,2.1nm,0.8s,mb3.8,baz=2.1,slow=5.1,SNR=4.2						
ASF				LR	LR	07 10 14.9	
	comp=Z,102nm,20.4s,MS3.4,baz=171,slow=36						
MMAI	**Mount Meron Ar**	**29.23**	**319**	LR	LR	07 11 24.4	
	comp=Z,114nm,21.1s,MS3.5,baz=110,slow=37						
ZEI	**Tsey**	**32.85**	**341**	eP	**P**	**07 00 01.1**	**+1.1**
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.8						
ZEI	**Tsey**	**32.85**	**341**	eP	**P**	**07 00 01.1**	**+1.1**
	comp=Z,7.0nm,0.5s,mb4.8						
EKS2	**Erkin-Say**	**33.44**	**22**	eP	**P**	**07 00 06.8**	**+1.7**
EKS2				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8						
EKS2	**Erkin-Say**	**33.44**	**22**	eP	**P**	**07 00 06.8**	**+1.8**
	comp=Z,13nm,1.1s,mb4.8						
EKS2	**Erkin-Say**	**33.44**	**22**	eP	**P**	**07 00 06.8**	**+1.7**
	comp=Z,13nm,1.1s,mb4.8						
AAK	**Ala-Archa**	**33.67**	**22**	P	**P**	**07 00 08.1**	**+0.9**
	comp=Z,1.5nm,0.3s,mb4.4,baz=246,slow=8.4,SNR=3.7						
AAK	**Ala-Archa**	**33.67**	**22**	P	**P**	**07 00 08.1**	**+1.0**
BRTR	**Keskin Array B**	**34.84**	**326**	P	**P**	**07 00 18.8**	**+1.5**
	comp=Z,4.8nm,1.0s,mb4.4,baz=143,slow=9.0,SNR=18						
BRTR				LR	LR	07 16 08.9	
	comp=Z,130nm,18.6s,MS3.7,baz=20,slow=39						
BRTR	**Keskin Array B**	**34.84**	**326**	P	**P**	**07 00 18.8**	**+1.5**
BR131	**Keskin Array S**	**34.84**	**326**	eP	**P**	**07 00 18.6**	**+1.3**
	comp=Z,5.5nm,1.0s,mb4.4						
BR131	**Keskin Array S**	**34.84**	**326**	eP	**P**	**07 00 18.6**	**+1.3**
	comp=Z,5.5nm,1.0s,mb4.4						
ABKAR	**Akbulak array**	**37.07**	**2**	eP	**P**	**07 00 36.9**	**+0.7**
	comp=Z,4.9nm,0.8s,mb4.4						
ABKAR	**Akbulak array**	**37.07**	**2**	eP	**P**	**07 00 36.9**	**+0.7**
	comp=Z,4.9nm,0.8s,mb4.4						
AKTK	**Aktyubinsk**	**38.21**	**0**	P	**P**	**07 00 46.6**	**+0.7**
AKTK	**Aktyubinsk**	**38.21**	**0**	P	**P**	**07 00 46.6**	**+0.8**
AKTO	**Aktyubinsk**	**38.21**	**0**	P	**P**	**07 00 46.6**	**+0.7**
	comp=Z,5.3nm,0.8s,mb4.3,baz=186,slow=9.3,SNR=18						
LSZ	**Lusaka**	**40.03**	**228**	P	**P**	**07 01 03.0**	**+1.4**
	comp=Z,4.0nm,0.6s,mb4.3,baz=48,slow=8.1,SNR=6.4						
LSZ	**Lusaka**	**40.03**	**228**	eP	**P**	**07 01 02.8**	**+1.3**
LSZ				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.3						

LSZ Lusaka 40.03 228 *eP* **P 07 01 02.8 +1.3**
comp=Z,2.9nm,0.5s,mb4.3
LSZ Lusaka 40.03 228 *eP* **P 07 01 02.8 +1.3**
comp=Z,3.0nm,0.5s,mb4.3
CMAR Chiang Mai Arr 40.08 76 P **P 07 01 01.8 -0.2**
comp=Z,2.4nm,0.7s,mb4.0,baz=272,slow=9.5,SNR=11
CMAR LR LR 07 18 23.9
comp=Z,46nm,18.4s,MS3.4,baz=72,slow=38
CMAR Chiang Mai Arr 40.08 76 P **P 07 01 01.8 -0.2**
MK31 Makanchi Array 40.25 26 *eP* **P 07 01 02.8 -0.2**
MK31 Makanchi Array 40.25 26 *eP* **P 07 01 02.8 -0.2**
MKAR Makanchi Array 40.25 26 P **P 07 01 02.8 -0.2**
comp=Z,1.5nm,0.6s,mb3.9,baz=213,slow=9.2,SNR=21
MKAR LR LR 07 18 19.8
comp=Z,75nm,21.9s,MS3.5,baz=192,slow=37
WMQ Urumqi 40.72 34 *eP* **P 07 01 07.6 +0.6**
WMQ pP pP 07 01 12.1 -3.8
WMQ sP sP 07 01 14.6 -4.9
WMQ PP PP 07 02 45.1 +4.0
WMQ pmax pmax
comp=Z,8.0nm,0.6s,mb4.5
WMQ pmax pmax
comp=Z,100nm,4.6s
WMQ LR LR
comp=N,100nm,24.0s
WMQ LR LR
comp=Z,48nm,23.0s,MS3.3
TIRR Tirgusor 40.92 328 ⇑P **P 07 01 09.3 +0.7**
TIRR Tirgusor 40.92 328 ⇑P **P 07 01 09.3 +0.7**
KURK Kurchatov 42.07 20 P **P 07 01 17.4 -0.6**
comp=Z,2.5nm,0.8s,mb3.9,baz=217,slow=8.0,SNR=9.7
KURK Kurchatov 42.07 20 *eP* **P 07 01 17.6 -0.3**
KURK pmax pmax
comp=Z,2.0nm,0.5s,mb4.0
KURK Kurchatov 42.07 20 *eP* **P 07 01 17.6 -0.3**
comp=Z,1.8nm,0.5s,mb4.0
KURK Kurchatov 42.07 20 *eP* **P 07 01 17.6 -0.3**
comp=Z,2.0nm,0.5s,mb4.0
VTS Vitosha 42.70 322 ⇓P **P 07 01 24.6 +1.4**
VTS Vitosha 42.70 322 ⇓P **P 07 01 24.6 +1.4**
VRI Vrincioaia 42.75 328 ⇓P **P 07 01 25.5 +2.0**
VRI Vrincioaia 42.75 328 ⇓P **P 07 01 25.5 +2.0**
PLOR Plostina 42.78 328 ⇓P **P 07 01 25.6 +1.8**
PLOR Plostina 42.78 328 P **P 07 01 25.6 +1.8**
MLR Muntele Rosu 42.92 327 ⇑P **P 07 01 27.3 +2.4**
MLR Muntele Rosu 42.92 327 ⇑P **P 07 01 27.3 +2.4**
TESR 43.23 329 ⇑P **P 07 01 28.4 +1.0**
TESR 43.23 329 ⇑P **P 07 01 28.4 +1.1**
VOIR 43.36 326 ⇓P **P 07 01 29.3 +0.8**
VOIR 43.36 326 ⇓P **P 07 01 29.3 +0.8**
KMI Kunming 44.27 66 P **P 07 01 38.3 +2.2**
KMI pP pP 07 01 41.3 -3.8
KMI sP sP 07 01 42.5 -6.2
KMI PP PP 07 03 22.9 +3.2
KMI S **S 07 08 11.4 +3.1**
KMI SS SS 07 11 21.5 -5.7
KMI pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
KMI pmax pmax
comp=Z,49nm,3.1s
KMI LR LR
comp=N,120nm,19.4s,MS3.9
KMI LR LR
comp=E,110nm,21.2s,MS3.9
KMI LR LR
comp=Z,160nm,22.5s,MS3.9
BURAR Bucovina Array 44.69 329 ⇑P **P 07 01 37.0 -2.1**
BURAR Bucovina Array 44.69 329 ⇑P **P 07 01 37.0 -2.1**
BUR08 Bucovina Ar. S 44.72 329 *eP* **P 07 01 40.3 +1.0**
BUR08 Bucovina Ar. S 44.72 329 *eP* **P 07 01 40.3 +1.0**
AKASG Malin Array Be 45.01 334 P **P 07 01 40.2 -1.4**
comp=Z,0.2nm,0.3s,mb3.4,baz=141,slow=7.0,SNR=6.1
AKASG Malin Array Be 45.01 334 P **P 07 01 40.2 -1.4**
AKASG Malin Array Be 45.01 334 P **P 07 01 40.2 -1.4**
BZS Buzias 45.38 324 ⇓P **P 07 01 45.1 +0.5**
BZS Buzias 45.38 324 ⇓P **P 07 01 45.0 +0.4**
DRGR 45.48 326 ⇓P **P 07 01 46.8 +1.4**
DRGR 45.48 326 ⇓P **P 07 01 46.8 +1.4**
CD2 Chengdu 46.26 59 P **P 07 01 52.3 +0.5**
CD2 pP pP 07 01 56.8 -4.0
CD2 sP sP 07 01 59.1 -5.3
CD2 PP PP 07 03 40.8 +0.1
CD2 S **S 07 08 37.3 +0.4**
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
CD2 pmax pmax
comp=Z,120nm,6.9s
CD2 LR LR
comp=N,170nm,8.3s
CD2 LR LR
comp=Z,120nm,10.1s,MS4.1
UZH Uzhgorod 46.84 328 *eP* **P 07 01 55.8 -0.3**
UZH Uzhgorod 46.84 328 *eP* **P 07 01 55.8 -0.3**
ZALV Zalesovo Beam 46.89 22 P **P 07 01 55.8 -0.5**
comp=Z,6.2nm,0.5s,mb4.8,baz=213,slow=7.5,SNR=24
ZALV LR LR 07 22 12.1
comp=Z,37nm,21.9s,MS3.3,baz=225,slow=37
NVS Novosibirsk 47.06 20 *eP* **P 07 01 56.9 -0.8**
NVS pmax pmax
comp=N,3.0nm,0.6s
NVS pmax pmax
comp=E,2.0nm,0.6s
NVS pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
NVS Novosibirsk 47.06 20 *eP* **P 07 01 56.9 -0.8**
PKSM Moragy 47.44 323 ⇓P **P 07 02 00.9 +0.2**
PKSM Moragy 47.44 323 ⇓P **P 07 02 00.9 +0.2**
CRVS Cervenica-Dubn 47.44 328 *eP* **P 07 02 01.7 +1.0**
CRVS pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
CRVS Cervenica-Dubn 47.44 328 *eP* **P 07 02 01.7 +1.0**
comp=Z,4.1nm,1.2s,mb4.2
CRVS Cervenica-Dubn 47.44 328 *eP* **P 07 02 01.7 +1.0**
CRVS Cervenica-Dubn 47.44 328 *eP* **P 07 02 01.7 +1.0**
comp=Z,4.0nm,1.2s,mb4.2
KECS Kecovo 47.70 327 *eP* **P 07 02 03.4 +0.6**
KECS pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
KECS Kecovo 47.70 327 *eP* **P 07 02 03.4 +0.6**
comp=Z,1.9nm,0.8s,mb4.2
KECS Kecovo 47.70 327 *eP* **P 07 02 03.4 +0.6**
LZH Lanzhou 47.73 52 *eP* **P 07 02 02.8 -0.5**
LZH pP pP 07 02 07.0 -5.3
LZH sP sP 07 02 11.0 -4.9
LZH pmax pmax
comp=Z,14nm,1.0s,mb5.0
GYA Guiyang 47.96 65 *eP* **P 07 02 06.8 +1.6**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
LBTB Lobatse 48.48 220 P **P 07 02 10.2 +1.1**
comp=Z,2.9nm,0.4s,mb4.7,baz=71,slow=8.5,SNR=6.7
LBTB Lobatse 48.48 220 *eP* **P 07 02 10.0 +0.9**
LBTB pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
LBTB Lobatse 48.48 220 *eP* **P 07 02 10.0 +0.9**
comp=Z,3.3nm,0.5s,mb4.6
LBTB Lobatse 48.48 220 *eP* **P 07 02 10.0 +0.9**
comp=Z,3.0nm,0.5s,mb4.6
VYHS Vyhne 48.60 326 *eP* **P 07 02 09.8 +0.1**
VYHS pmax pmax
comp=Z,3.0nm,1.2s,mb4.2
VYHS Vyhne 48.60 326 *eP* **P 07 02 09.8 +0.1**
comp=Z,2.9nm,1.2s,mb4.2
VYHS Vyhne 48.60 326 *eP* **P 07 02 09.8 +0.1**
VYHS Vyhne 48.60 326 *eP* **P 07 02 09.8 +0.1**
comp=Z,3.0nm,1.2s,mb4.2
KOLL Kolacno 48.88 326 *eP* **P 07 02 12.2 +0.3**
KOLL Kolacno 48.88 326 *eP* **P 07 02 12.2 +0.3**
KOLL Kolacno 48.88 326 *eP* **P 07 02 12.2 +0.3**
BOJS Bojanci 49.10 321 *i P* **P 07 02 14.0 +0.4**
BOJS Bojanci 49.10 321 *i P* **P 07 02 14.0 +0.4**
DOBS Dobrina 49.29 322 *i P* **P 07 02 15.5 +0.5**
DOBS Dobrina 49.29 322 *i P* **P 07 02 15.5 +0.5**
ZST Bratislava 49.39 325 *eP* **P 07 02 15.8 0.0**
ZST pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
ZST Bratislava 49.39 325 *eP* **P 07 02 15.8 0.0**
comp=Z,3.5nm,1.0s,mb4.3
ZST Bratislava 49.39 325 *eP* **P 07 02 15.8 0.0**
ZST Bratislava 49.39 325 *eP* **P 07 02 15.8 0.0**
comp=Z,4.0nm,1.0s,mb4.4
GROS Grobnik 49.42 322 *i P* **P 07 02 16.2 +0.2**
GROS Grobnik 49.42 322 *i P* **P 07 02 16.2 +0.2**
LJU Ljubljana 49.81 321 *i P* **P 07 02 19.4 +0.4**
LJU Ljubljana 49.81 321 *i P* **P 07 02 19.4 +0.4**
CONA Conrad Observa 49.96 324 ⇓*iP* **P 07 02 20.1 0.0**
comp=Z,11nm,1.1s,mb4.8
CONA Conrad Observa 49.96 324 P **P 07 02 20.1 0.0**
comp=Z,11nm,1.1s,mb4.8
MORC Moravsky Berou 50.03 327 ⇓P **P 07 02 20.4 -0.2**
MORC Moravsky Berou 50.03 327 ⇓P **P 07 02 20.4 -0.2**
VRAC Vranov 50.28 326 ⇑P **P 07 02 22.6 +0.1**
VRAC Vranov 50.28 326 ⇑P **P 07 02 22.6 +0.1**
MYKA Terra Mystica 50.63 322 ⇑*iP* **P 07 02 25.6 +0.4**
comp=Z,8.5nm,1.1s,mb4.6
MYKA Terra Mystica 50.63 322 P **P 07 02 25.6 +0.4**
comp=Z,8.5nm,1.1s,mb4.6
MOA Molln 50.84 323 ⇓*iP* **P 07 02 26.8 0.0**
comp=Z,5.8nm,0.7s,mb4.6
MOA Molln 50.84 323 P **P 07 02 26.8 0.0**
comp=Z,5.8nm,0.7s,mb4.6
BOSA Boshof 51.30 217 LR LR 07 21 43.8
comp=Z,96nm,20.6s,MS3.8,baz=27,slow=33
BOSA Boshof 51.30 217 *eP* **P 07 02 31.2 +0.7**
BOSA pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
BOSA Boshof 51.30 217 *eP* **P 07 02 31.2 +0.7**
comp=Z,8.6nm,1.2s,mb4.6
BOSA Boshof 51.30 217 *eP* **P 07 02 31.2 +0.7**
comp=Z,9.0nm,1.2s,mb4.6
WTTA Wattenberg 52.14 321 ⇓*iP* **P 07 02 35.8 -0.7**
comp=Z,10.0nm,0.7s,mb4.9
WTTA Wattenberg 52.14 321 P **P 07 02 35.8 -0.7**
comp=Z,10.0nm,0.7s,mb4.9
WATA Walderalm 52.21 322 ⇓*iP* **P 07 02 35.9 -1.1**
comp=Z,5.7nm,0.6s,mb4.7
WATA Walderalm 52.21 322 P **P 07 02 35.9 -1.1**
comp=Z,5.7nm,0.6s,mb4.7
MOTA Moosalm 52.50 321 ⇑*iP* **P 07 02 38.2 -0.9**
comp=Z,11nm,0.8s,mb4.8
MOTA Moosalm 52.50 321 P **P 07 02 38.2 -1.0**
comp=Z,11nm,0.8s,mb4.8
BRG Berggiesshubel 52.56 326 *eP* **P 07 02 39.0 -0.5**
comp=Z,4.5nm,1.0s,mb4.4
DAVA Damuels 53.23 321 ⇓*iP* **P 07 02 43.8 -0.7**
comp=Z,9.3nm,0.6s,mb4.9
DAVA Damuels 53.23 321 P **P 07 02 43.8 -0.7**
comp=Z,9.3nm,0.6s,mb4.9
CLL Collm 53.29 326 ⇑*iP* **P 07 02 45.0 0.0**
CLL *e* pP 07 02 54.0 -0.1
CLL pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
CLL Collm 53.29 326 ⇑*iP* **P 07 02 45.0 0.0**
comp=Z,6.0nm,1.0s,mb4.5
CLL *e* pP 07 02 54.0 -0.1
CLL Collm 53.29 326 ⇑*iP* **P 07 02 45.0 0.0**
comp=Z,6.0nm,1.0s,mb4.5
CLL *e*(sP) sP 07 02 54.0 -3.7
CLL Collm 53.29 326 *i P* **P 07 02 45.0 0.0**
comp=Z,6.0nm,1.0s,mb4.5
SONM Songino Array 53.83 39 P **P 07 02 48.8 -0.2**
comp=Z,0.4nm,0.4s,mb3.7,baz=248,slow=7.8,SNR=4.8
SONM LR LR 07 25 49.2
comp=Z,56nm,18.5s,MS3.6,baz=106,slow=36
SONM Songino Array 53.83 39 P **P 07 02 48.8 -0.1**
JOF Joensuu 54.13 345 *eP* **P 07 02 49.8 -1.1**
JOF Joensuu 54.13 345 *ep* **P 07 02 49.8 -1.1**
comp=Z,3.0nm,0.6s,mb4.4
JOF Joensuu 54.13 345 *eP* **P 07 02 49.8 -1.1**
MBDF Montbardon 54.24 317 *eP* **P 07 02 53.2 +1.2**
comp=Z,10nm,0.8s,mb4.5
MBDF Montbardon 54.24 317 *eP* **P 07 02 53.2 +1.2**
MBDF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
MBDF Montbardon 54.24 317 *eP* **P 07 02 53.2 +1.2**
comp=Z,5.2nm,0.8s,mb4.5
MBDF Montbardon 54.24 317 *eP* **P 07 02 53.2 +1.2**
comp=Z,5.2nm,0.8s,mb4.5
FINES FINESS Array B 54.37 342 P **P 07 02 52.0 -0.7**
comp=Z,2.7nm,0.8s,mb4.2,baz=145,slow=8.4,SNR=8.6
FINES LR LR 07 26 13.4
comp=Z,26nm,20.1s,MS3.3,baz=330,slow=36
FINES FINESS Array B 54.37 342 P **P 07 02 52.0 -0.7**
FINES LR LR 07 26 13.4
FINES FINESS Array B 54.37 342 P **P 07 02 52.0 -0.7**
LPG La Plagne 54.52 318 *eP* **P 07 02 53.4 -0.7**
comp=Z,12nm,0.6s,mb4.8
LPG La Plagne 54.52 318 *eP* **P 07 02 53.4 -0.7**
LPG pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
LPG La Plagne 54.52 318 *eP* **P 07 02 53.4 -0.7**
comp=Z,6.2nm,0.6s,mb4.8
LPG La Plagne 54.52 318 *eP* **P 07 02 53.4 -0.7**
comp=Z,6.2nm,0.6s,mb4.8
LPL La Plagne 54.54 318 *eP* **P 07 02 53.6 -0.6**
LPL La Plagne 54.54 318 *eP* **P 07 02 53.6 -0.6**
TORD Torodi Ar. Bea 54.70 278 LR LR 07 25 51.9
comp=Z,52nm,18.1s,MS3.6,baz=125,slow=36
ORIF Oris-en-Rattie 54.90 317 *eP* **P 07 02 56.4 -0.4**
comp=Z,12nm,1.1s,mb4.5
ORIF *e*MLR MLR
comp=Z,58nm,20.5s,MS3.3
ORIF Oris-en-Rattie 54.90 317 *eP* **P 07 02 56.4 -0.4**
ORIF pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
ORIF Oris-en-Rattie 54.90 317 *eP* **P 07 02 56.4 -0.4**
comp=Z,5.9nm,1.0s,mb4.6
ORIF Oris-en-Rattie 54.90 317 *eP* **P 07 02 56.4 -0.4**
comp=Z,5.9nm,1.1s,mb4.5
HHC Hu-ho-hao-te 54.91 48 *eP* **P 07 02 56.8 -0.2**
HHC S **S 07 10 35.8 -0.9**
HHC pmax pmax
comp=Z,11nm,0.6s,mb5.1
HHC pmax pmax
comp=Z,56nm,7.0s
CDF Champ du Feu 55.29 321 *eP* **P 07 02 58.6 -0.9**
comp=Z,13nm,1.0s,mb4.6
CDF Champ du Feu 55.29 321 *eP* **P 07 02 58.6 -0.9**
CDF pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
CDF Champ du Feu 55.29 321 *eP* **P 07 02 58.6 -0.9**
comp=Z,6.3nm,1.0s,mb4.6
CDF Champ du Feu 55.29 321 *eP* **P 07 02 58.6 -0.9**
comp=Z,6.3nm,1.0s,mb4.6
HINF Hinteralfeld 55.32 320 *eP* **P 07 02 58.6 -1.2**
HINF Hinteralfeld 55.32 320 *eP* **P 07 02 58.6 -1.2**
CABF La Chapelle 55.35 319 *eP* **P 07 03 00.0 -0.1**
comp=Z,48nm,0.9s,mb5.2
CABF La Chapelle 55.35 319 *eP* **P 07 03 00.0 -0.1**
CABF pmax pmax
comp=Z,24nm,0.9s,mb5.2
CABF La Chapelle 55.35 319 *eP* **P 07 03 00.0 -0.1**
comp=Z,24nm,0.9s,mb5.2
CABF La Chapelle 55.35 319 *eP* **P 07 03 00.0 -0.1**
comp=Z,24nm,0.9s,mb5.2
VIVF Saint-Julien-I 55.69 316 *eP* **P 07 03 01.7 -0.8**
comp=Z,9.7nm,0.9s,mb4.5
VIVF Saint-Julien-I 55.69 316 *eP* **P 07 03 01.7 -0.8**
VIVF pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
VIVF Saint-Julien-I 55.69 316 *eP* **P 07 03 01.7 -0.8**
comp=Z,4.8nm,0.9s,mb4.5
VIVF Saint-Julien-I 55.69 316 *eP* **P 07 03 01.7 -0.8**
comp=Z,4.8nm,0.9s,mb4.5
WLF Walferdange 56.46 322 P **P 07 03 07.7 -0.2**
comp=Z,13nm,2.6s,mb4.5
WLF AP pP 07 03 12.8 -4.3
WLF Walferdange 56.46 322 P **P 07 03 07.6 -0.3**
MEZF Maizieres J'vi 56.69 321 *eP* **P 07 03 09.1 -0.5**
comp=Z,24nm,0.7s,mb5.0
MEZF Maizieres J'vi 56.69 321 *eP* **P 07 03 09.1 -0.5**
comp=Z,24nm,0.7s,mb5.3
MEZF Maizieres J'vi 56.69 321 *eP* **P 07 03 09.1 -0.5**
comp=Z,12nm,0.7s,mb5.0
SMF Signal de Mont 56.82 318 *eP* **P 07 03 09.3 -1.2**
comp=Z,2.9nm,0.6s,mb4.2
SMF Signal de Mont 56.82 318 *eP* **P 07 03 09.3 -1.2**
SMF pmax pmax
comp=Z,1.0nm,0.6s,mb4.0
SMF Signal de Mont 56.82 318 *eP* **P 07 03 09.3 -1.2**
comp=Z,1.5nm,0.6s,mb4.2
SMF Signal de Mont 56.82 318 *eP* **P 07 03 09.3 -1.2**
comp=Z,1.5nm,0.6s,mb4.2
LOR Lormes 57.01 319 *eP* **P 07 03 11.1 -0.8**
comp=Z,17nm,0.8s,mb4.8,baz=108
LOR *e*MLR MLR
comp=Z,56nm,22.8s,MS3.3
LOR Lormes 57.01 319 *eP* **P 07 03 11.1 -0.8**
LOR pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
LOR MLR MLR
comp=Z,60nm,22.8s,MS3.6
LOR Lormes 57.01 319 *eP* **P 07 03 11.1 -0.8**
comp=Z,8.4nm,0.8s,mb4.8
LOR LR LR
comp=Z,60nm,22.8s,MS3.6
LOR Lormes 57.01 319 *eP* **P 07 03 11.1 -0.8**
comp=Z,8.4nm,0.8s,mb4.8,baz=108
SSF Saint Saulge 57.17 319 *eP* **P 07 03 12.2 -0.8**
comp=Z,15nm,0.8s,mb4.8
SSF Saint Saulge 57.17 319 *eP* **P 07 03 12.2 -0.8**
SSF pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
SSF Saint Saulge 57.17 319 *eP* **P 07 03 12.2 -0.8**
comp=Z,7.5nm,0.8s,mb4.8
SSF Saint Saulge 57.17 319 *eP* **P 07 03 12.2 -0.8**
comp=Z,7.5nm,0.8s,mb4.8
AVF Avril sur Loir 57.19 318 *eP* **P 07 03 11.9 -1.2**
comp=Z,7.7nm,0.8s,mb4.5
AVF Avril sur Loir 57.19 318 *eP* **P 07 03 11.9 -1.2**
AVF pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
AVF Avril sur Loir 57.19 318 *eP* **P 07 03 11.9 -1.2**
comp=Z,3.8nm,0.8s,mb4.5
AVF Avril sur Loir 57.19 318 *eP* **P 07 03 11.9 -1.2**
comp=Z,3.8nm,0.8s,mb4.5
BCLA Clavier 57.26 323 P **P 07 03 14.3 +0.7**
comp=Z,10nm,1.9s,mb4.5
BCLA Clavier 57.26 323 P **P 07 03 14.2 +0.7**
comp=Z,10nm,1.9s,mb4.5
GIVF Givet 57.42 322 *eP* **P 07 03 14.3 -0.4**
comp=Z,10nm,0.7s,mb4.7
GIVF Givet 57.42 322 *eP* **P 07 03 14.3 -0.4**
GIVF pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
GIVF Givet 57.42 322 *eP* **P 07 03 14.3 -0.4**
comp=Z,5.3nm,0.7s,mb4.7
GIVF Givet 57.42 322 *eP* **P 07 03 14.3 -0.4**
comp=Z,5.2nm,0.7s,mb4.7
BGF Bois d'Agland 57.44 318 *eP* **P 07 03 14.4 -0.5**
comp=Z,27nm,0.7s,mb5.1
BGF Bois d'Agland 57.44 318 *eP* **P 07 03 14.4 -0.5**
BGF pmax pmax
comp=Z,14nm,0.7s,mb5.1
BGF Bois d'Agland 57.44 318 *eP* **P 07 03 14.4 -0.5**
comp=Z,14nm,0.7s,mb5.1
BGF Bois d'Agland 57.44 318 *eP* **P 07 03 14.4 -0.5**
comp=Z,14nm,0.7s,mb5.1
CAF Calviac 57.48 316 *eP* **P 07 03 14.4 -0.8**
comp=Z,5.4nm,0.8s,mb4.3
CAF Calviac 57.48 316 *eP* **P 07 03 14.4 -0.8**
CAF pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
CAF Calviac 57.48 316 *eP* **P 07 03 14.4 -0.8**
comp=Z,2.7nm,0.8s,mb4.3
CAF Calviac 57.48 316 *eP* **P 07 03 14.4 -0.8**
comp=Z,2.7nm,0.8s,mb4.3
DOU Dourbes 57.55 322 P **P 07 03 15.8 +0.1**
comp=Z,5.7nm,1.2s,mb4.5
DOU Dourbes 57.55 322 P **P 07 03 15.7 0.0**
comp=Z,5.7nm,1.2s,mb4.5
BAIF Baives 57.77 322 *eP* **P 07 03 16.8 -0.4**
comp=Z,27nm,0.9s,mb5.0
BAIF Baives 57.77 322 *eP* **P 07 03 16.8 -0.4**
BAIF pmax pmax
comp=Z,14nm,0.9s,mb5.0
BAIF Baives 57.77 322 *eP* **P 07 03 16.8 -0.4**
comp=Z,14nm,0.9s,mb5.0
BAIF Baives 57.77 322 *eP* **P 07 03 16.8 -0.4**
comp=Z,14nm,0.9s,mb5.0
TCF Toulx Ste Croi 57.78 317 *eP* **P 07 03 16.4 -0.9**
comp=Z,3.1nm,0.6s,mb4.2
TCF Toulx Ste Croi 57.78 317 *eP* **P 07 03 16.4 -0.9**
TCF pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
TCF Toulx Ste Croi 57.78 317 *eP* **P 07 03 16.4 -0.9**
comp=Z,1.5nm,0.6s,mb4.2
TCF Toulx Ste Croi 57.78 317 *eP* **P 07 03 16.4 -0.9**
comp=Z,1.5nm,0.6s,mb4.2
SNF Seneffe 57.89 323 P **P 07 03 18.1 +0.1**
comp=Z,10.0nm,2.0s,mb4.5
SNF AP pP 07 03 21.4 -5.9
SNF Seneffe 57.89 323 P **P 07 03 18.1 +0.1**
RJF Les Rejaudoux 57.96 316 *eP* **P 07 03 17.8 -0.8**
comp=Z,5.4nm,0.8s,mb4.4
RJF *e*MLR MLR
comp=Z,58nm,21.2s,MS3.4
RJF Les Rejaudoux 57.96 316 *eP* **P 07 03 17.8 -0.8**
RJF pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
RJF MLR MLR
comp=Z,60nm,21.3s,MS3.7
RJF Les Rejaudoux 57.96 316 *eP* **P 07 03 17.8 -0.8**
comp=Z,2.7nm,0.8s,mb4.3
RJF LR LR
comp=Z,60nm,21.3s,MS3.7
RJF Les Rejaudoux 57.96 316 *eP* **P 07 03 17.8 -0.8**
comp=Z,2.7nm,0.8s,mb4.4
BJI Beijing 58.14 50 P **P 07 03 20.5 +0.5**
BJI S **S 07 11 21.1 +1.5**
BJI SS SS 07 15 11.9 +0.6
BJI pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
BJI pmax pmax
comp=Z,69nm,4.5s
BJI LR LR
comp=N,130nm,15.4s,MS4.3
BJI LR LR
comp=E,150nm,15.8s,MS4.3
BJI LR LR
comp=Z,170nm,22.4s
LFF La Frestale 58.39 316 *eP* **P 07 03 21.0 -0.6**
comp=Z,22nm,0.9s,mb4.9
LFF La Frestale 58.39 316 *eP* **P 07 03 21.0 -0.6**
LFF pmax pmax
comp=Z,11nm,0.9s,mb4.9
LFF La Frestale 58.39 316 *eP* **P 07 03 21.0 -0.6**
comp=Z,11nm,0.9s,mb4.9
LFF La Frestale 58.39 316 *eP* **P 07 03 21.0 -0.6**
comp=Z,11nm,0.9s,mb4.9
NJ2 Nanjing 59.16 60 *eP* **P 07 03 29.3 +2.0**
NJ2 pmax pmax
comp=Z,20nm,0.5s,mb5.4
SJPF Ste Jean 59.32 313 *eP* **P 07 03 27.8 -0.3**
comp=Z,17nm,1.0s,mb4.7
SJPF Ste Jean 59.32 313 *eP* **P 07 03 27.8 -0.3**
SJPF pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
SJPF Ste Jean 59.32 313 *eP* **P 07 03 27.8 -0.3**
comp=Z,8.4nm,1.0s,mb4.7
SJPF Ste Jean 59.32 313 *eP* **P 07 03 27.8 -0.3**
comp=Z,8.4nm,1.0s,mb4.7
NOA NORSAR Array B 59.39 336 LR LR 07 32 14.9
comp=Z,18nm,19.9s,MS3.2,baz=130,slow=39
LDF La Druitiere 59.97 319 *eP* **P 07 03 31.2 -1.3**
comp=Z,11nm,0.7s,mb4.7
LDF La Druitiere 59.97 319 *eP* **P 07 03 31.2 -1.3**
LDF pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
LDF La Druitiere 59.97 319 *eP* **P 07 03 31.2 -1.3**
comp=Z,5.6nm,0.7s,mb4.7
LDF La Druitiere 59.97 319 *eP* **P 07 03 31.2 -1.3**
comp=Z,5.6nm,0.7s,mb4.7
FLN La Foliniere 60.25 320 *eP* **P 07 03 33.2 -1.2**
comp=Z,11nm,1.0s,mb4.6
FLN *e*MLR MLR
comp=Z,55nm,23.0s,MS3.3
FLN La Foliniere 60.25 320 *eP* **P 07 03 33.2 -1.2**
FLN pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
FLN MLR MLR
comp=Z,60nm,23.0s,MS3.7
FLN La Foliniere 60.25 320 *eP* **P 07 03 33.2 -1.2**
comp=Z,5.7nm,1.0s,mb4.6
FLN LR LR
comp=Z,60nm,23.0s,MS3.7
FLN La Foliniere 60.25 320 *eP* **P 07 03 33.2 -1.2**
comp=Z,5.7nm,1.0s,mb4.6
GRR Gorron 60.38 319 *eP* **P 07 03 35.2 -0.1**
comp=Z,37nm,1.4s,mb4.9
GRR Gorron 60.38 319 *eP* **P 07 03 35.2 -0.1**
GRR pmax pmax
comp=Z,18nm,1.4s,mb4.9
GRR Gorron 60.38 319 *eP* **P 07 03 35.2 -0.1**
comp=Z,18nm,1.4s,mb4.9
GRR Gorron 60.38 319 *eP* **P 07 03 35.2 -0.1**
comp=Z,18nm,1.4s,mb4.9
ESDC Sonseca Array 60.70 309 P **P 07 03 36.9 -0.8**

comp=Z,2.3nm,0.6s,mb4.5,baz=85,slow=6.1,SNR=15
ESDC Sonseca Array 60.70 309 P **P 07 03 36.9 -0.8**
ESDC Sonseca Array 60.70 309 P **P 07 03 36.9 -0.8**
ARCES ARCESS Array B 60.93 348 P **P 07 03 37.8 -0.8**
comp=Z,1.8nm,0.7s,mb4.3,baz=139,slow=7.6,SNR=9.3
ARCES ARCESS Array B 60.93 348 P **P 07 03 37.8 -0.9**
SGMF Saint Gilles 61.44 319 *e*P **P 07 03 40.1 -2.4**
comp=Z,22nm,1.1s,mb4.9
SGMF Saint Gilles 61.44 319 *e*P **P 07 03 40.1 -2.4**
SGMF pmax pmax
comp=Z,11nm,1.1s,mb4.9
SGMF Saint Gilles 61.44 319 *e*P **P 07 03 40.1 -2.4**
comp=Z,11nm,1.1s,mb4.9
SGMF Saint Gilles 61.44 319 *e*P **P 07 03 40.1 -2.4**
comp=Z,11nm,1.1s,mb4.9
CN2 Changchun 65.57 47 *e*P **P 07 04 12.0 +2.1**
FITZ Fitzroy Crossi 73.32 113 P **P 07 04 56.5 -1.7**
comp=Z,2.6nm,0.9s,mb4.2,baz=326,slow=16,SNR=3.4
FITZ Fitzroy Crossi 73.32 113 P **P 07 04 56.5 -1.7**
MJAR Matsushiro Arr 75.20 55 LR LR 07 40 25.2
comp=Z,52nm,18.7s,MS3.9,baz=220,slow=38
WRA Warramunga Arr 81.72 112 P **P 07 05 42.8 -2.4**
comp=Z,0.7nm,0.5s,mb3.8,baz=296,slow=4.4,SNR=13
WRA Warramunga Arr 81.72 112 P **P 07 05 42.8 -2.3**
ASAR Alice Springs 82.38 116 P **P 07 05 46.5 -2.1**
comp=Z,0.8nm,0.7s,mb3.8,baz=292,slow=5.1,SNR=9.1
ASAR Alice Springs 82.38 116 P **P 07 05 46.5 -2.0**
PDAR Pinedale Array 124.18 349 PKP PKPdf 07 12 24.6 -0.3
comp=Z,0.3nm,0.6s,baz=24,slow=3.1,SNR=3.2
PDAR Pinedale Array 124.18 349 PKIKP PKPdf 07 12 24.6 -0.3
NVAR Mina Array Bea 129.59 356 PKP PKPdf 07 12 36.4 +1.0
comp=Z,0.3nm,0.8s,baz=210,slow=2.4,SNR=4.3
NVAR Mina Array Bea 129.59 356 PKIKP PKPdf 07 12 36.4 +1.0
TXAR Lajitas Array 135.09 337 PKP PKPdf 07 12 46.2 +0.1
comp=Z,0.3nm,0.8s,baz=139,slow=2.7,SNR=3.7
TXAR Lajitas Array 135.09 337 PKP PKPdf 07 12 46.2 +0.1
TXAR Lajitas Array 135.09 337 PKIKP PKPdf 07 12 46.2 +0.2

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*JMA **13** 06:56:39.5±0.3,24°.13N×123°.74E,h16km±3km,M1.1*
*ISCJB **13** 06:56:40.5±0.5,24°.16N±0°.04×123°.76E±0°.04,h9km±4km, Error ellipse: s-maj=7.7km s-min=5.4km az=161.1*
*TAP **13** 06:57:05.3,24°.46N×122°.01E,h11km,ML2.6,D*
ISC 13 06:56:40.8±0.5,24°.16N±0°.04×123°.76E±0°.04,h4km±7km, n14,σ0°92/27,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.11**	**158**	P	**Pg**	**06 56 42.6**	**-0.5**
HATJ				S	**Sg**	**06 56 45.0**	**+0.4**
IRIF	**Iriomote-Funau**	**0.17**	**351**	P	**Pg**	**06 56 44.3**	**0.0**
IRIF				S	**Sg**	**06 56 47.5**	**+0.8**
JKRS	**Kuro-shima**	**0.24**	**71**	P	**Pg**	**06 56 45.5**	**0.0**
JKRS				S	**Sg**	**06 56 49.7**	**+1.0**
JIJ	**Ishigaki jima**	**0.40**	**60**	P	**Pg**	**06 56 47.9**	**-0.7**
JIJ				S	**Sg**	**06 56 53.6**	**-0.3**
YOJ	**Yonaguni jima**	**0.75**	**294**	*e*S	**Sg**	**06 57 04.3**	**-0.6**
JTJ	**Tarama**	**0.98**	**61**	P	**Pg**	**06 56 59.2**	**-0.5**
JTJ				S	**Sg**	**06 57 12.3**	**-0.2**
TWB1	**Santiao Chiao**	**1.82**	**298**	P	**Pn**	**06 57 16.7**	**+3.8**
baz=358							
TWB1				S	**Sn**	**06 57 25.0**	**-11**
baz=358							
ENA	**Nanau**	**1.86**	**279**	*i* P	**Pn**	**06 57 11.2**	**-2.3**
baz=261							
ENA				*i* S	**Sn**	**06 57 15.4**	**-22**
baz=261							
TWD	**Chiawan**	**1.98**	**268**	P	**Pn**	**06 57 16.5**	**+1.4**
baz=224							
TWD				S	**Sn**	**06 57 24.6**	**-16**
baz=224							
TWE	**Neicheng**	**1.99**	**287**	*e*P	**Pn**	**06 57 14.2**	**-1.0**
baz=310							
TWE				S	**Sn**	**06 57 20.5**	**-20**
baz=310							
NNS	**Nan Shan**	**2.20**	**278**	*e*P	**Pn**	**06 57 17.4**	**-0.7**
baz=267							
NNS				*e*S	**Sn**	**06 57 25.8**	**-20**
baz=267							
NSK	**Sanguang**	**2.25**	**284**	*e*P	**Pn**	**06 57 19.1**	**+0.2**
baz=289							
NSK				*e*S	**Sn**	**06 57 27.2**	**-20**
baz=289							
WHF	**Hehuan Shan**	**2.28**	**270**	P	**Pn**	**06 57 20.4**	**+1.2**
baz=244							
WHF				*e*S	**Sn**	**06 57 31.4**	**-16**
baz=244							
TWT	**Tachien**	**2.36**	**273**	*e*P	**Pn**	**06 57 21.6**	**+1.2**
baz=254							
TWT				*e*S	**Sn**	**06 57 32.8**	**-17**
baz=254							

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*ISCJB **13** 07:05:58.2±1.3,31°.05S±0°.1×179°.9W±0°.3,h477km±23km, mb3.8/6, Error ellipse: s-maj=37.7km s-min=17.6km az=7.1*
*IDC **13** 07:05:58.8±6.7,30°.89S×179°.82E,h441km±72km,mb3.3/4, mb1 3.5/5,mb1mx3.3/15,mbtmp3.4/5, Error ellipse: s-maj=74.0km s-min=40.9km az=25.0*
*NEIC **13** 07:05:59.4±1.1,30°.88S×179°.94E,h464km±14km,mb4.3/5, Error ellipse: s-maj=23.7km s-min=14.5km az=95.0*
ISC 13 07:05:58.7±1.1,30°.9S±0°.1×179.7W±0°.2,h487km±16km, n31,σ0°80/37,mb3.8/6,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUZ	**Omahuta**	**7.05**	**231**	*e*P	**P**	**07 07 43.9**	**-1.0**
73nm,0.9s							
OUZ				*e*S	**S**	**07 09 12.4**	**+0.5**
PUZ	**Puketiti**	**7.32**	**193**	P	**P**	**07 07 47.1**	**-0.5**
PUZ				S	**S**	**07 09 08.9**	**-8.0**
PUZ	**Puketiti**	**7.32**	**193**	*e*PN	**P**	**07 07 45.9**	**-1.7**
PUZ				SN	**S**	**07 09 08.9**	**-8.0**
MWZ	**Matawai**	**7.73**	**196**	P	**P**	**07 07 52.4**	**+0.6**
MWZ				S	**S**	**07 09 19.8**	**-4.9**
MWZ	**Matawai**	**7.73**	**196**	PN	**P**	**07 07 52.4**	**+0.6**
MWZ				SN	**S**	**07 09 17.3**	**-7.4**
CNGZ	**Carnagh Statio**	**7.73**	**192**	PN	**P**	**07 07 52.7**	**+0.9**
URZ	**Urewera**	**7.77**	**199**	P	**P**	**07 07 52.1**	**-0.1**
18nm,0.3s,baz=3.1,slow=3.5,SNR=98							
URZ				S	**S**	**07 09 19.5**	**-5.9**
7.7nm,0.3s,baz=51,slow=21,SNR=18							
URZ	**Urewera**	**7.77**	**199**	P	**P**	**07 07 51.5**	**-0.7**
URZ				*e*Sn	**S**	**07 09 14.5**	**-11**
URZ	**Urewera**	**7.77**	**199**	PN	**P**	**07 07 51.0**	**-1.2**
URZ				SN	**S**	**07 09 16.7**	**-8.7**
KNZ	**Kokohu**	**8.36**	**194**	PN	**P**	**07 07 60.0**	**+1.7**
RAHZ	**Arahi**	**8.39**	**197**	PN	**P**	**07 07 58.5**	**-0.2**
MHGZ	**Mahia Peninsul**	**8.44**	**193**	PN	**P**	**07 07 59.9**	**+0.7**
MCHZ	**McNeill Hill**	**8.99**	**198**	PN	**P**	**07 08 04.6**	**-0.4**
CKHZ	**Cape Kidnapper**	**9.10**	**196**	PN	**P**	**07 08 06.7**	**+0.6**
KAHZ	**Kahuranaki**	**9.28**	**196**	PN	**P**	**07 08 08.6**	**+0.6**
PXZ	**Pawanui**	**9.50**	**196**	PN	**P**	**07 08 10.4**	**0.0**
TSZ	**Takapari Road**	**9.77**	**200**	PN	**P**	**07 08 12.2**	**-1.1**
BFZ	**Birch Farm**	**10.27**	**197**	P	**P**	**07 08 18.0**	**-0.6**
BFZ	**Birch Farm**	**10.27**	**197**	PN	**P**	**07 08 18.5**	**-0.1**
MRZ	**Mangatainoka R**	**10.44**	**200**	PN	**P**	**07 08 19.1**	**-1.3**
MSVF	**Nonsavu**	**13.29**	**351**	*e*P	**P**	**07 08 51.3**	**+0.2**
34nm,1.3s							
ARMA	**Armidale**	**24.62**	**264**	*e*P	**P**	**07 10 39.6**	**+0.1**
2.2nm,0.4s,mb3.9							
CTA	**Charters Tower**	**32.43**	**281**	P	**P**	**07 11 47.9**	**+0.2**
3.9nm,0.9s,mb3.8,baz=120,slow=13,SNR=3.3							
CTA	**Charters Tower**	**32.43**	**281**	P	**P**	**07 11 47.9**	**+0.1**
CTAO	**Charters Tower**	**32.43**	**281**	*e*P	**P**	**07 11 45.8**	**-2.0**
20nm,1.4s,mb4.3							
STKA	**Stephens Creek**	**32.91**	**258**	P	**P**	**07 11 53.1**	**+1.4**
2.0nm,0.7s,mb3.6,baz=114,slow=10.0,SNR=5.6							
ASAR	**Alice Springs**	**41.60**	**268**	P	**P**	**07 13 03.2**	**-0.1**
0.8nm,0.4s,mb3.5,baz=106,slow=7.3,SNR=21							
WRAB	**Tennant Creek**	**42.63**	**274**	*e*P	**P**	**07 13 11.5**	**0.0**
2.6nm,0.7s,mb3.8							
WRA	**Warramunga Arr**	**42.64**	**274**	P	**P**	**07 13 11.2**	**-0.4**
1.8nm,0.4s,mb3.8,baz=111,slow=7.9,SNR=58							
FINES	**FINESS Array B**	**145.10**	**339**	PKP	PKPdf	07 24 43.0	+3.7
1.5nm,0.8s,baz=49,slow=3.5,SNR=11							
FINES	**FINESS Array B**	**145.10**	**339**	PKP	PKPdf	07 24 43.0	+3.7

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*CSEM **13** 07:08:09.6,38°.96N×48°.67E,h13km,ML3.5, After TEH*
TEH 13 07:08:09.6,38°.96N×48°.67E,h13km,1D, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISRB	**Sarab**	**1.38**	**215**	*e*Pg	Pg	07 08 34.6	-1.6
ISRB				*e*		07 08 37.4	
comp=Z,4μm,0.1s							
ISRB				*e*Sg	Sg	07 08 53.2	-0.9
ISRB	**Sarab**	**1.38**	**215**	*e*Pg	Pg	07 08 34.6	-1.6
ISRB				*e*Sg	Sg	07 08 53.2	-0.9
IHRS	**Heris**	**1.43**	**244**	*e*Pn	Pn	07 08 35.5	+0.3
IHRS				*e*Sg	Sg	07 08 53.9	-1.7
IHRS				*e*		07 08 56.1	
comp=Z,15μm,0.1s							
ITBZ	**Tabriz**	**2.11**	**251**	*e*Pn	Pn	07 08 44.9	+0.3
ITBZ				*e*Sg	Sg	07 09 15.3	-2.0
ITBZ				*e*		07 09 24.3	
comp=Z,1μm,0.1s							
ISHB	**Shabestar**	**2.48**	**255**	*e*Pn	Pn	07 08 53.4	+3.6
ISHB				*e*		07 09 04.9	
comp=Z,497nm,0.1s							
IRAZ	**Razeghan**	**3.69**	**164**	*e*Pn	Pn	07 09 05.5	-0.8
IRAZ				*e*		07 09 55.1	
comp=Z,217nm,0.1s							
IRAZ	**Razeghan**	**3.69**	**164**	*e*Pn	Pn	07 09 05.5	-0.8
IPRN	**Peran**	**3.98**	**132**	*e*	Sn	07 09 56.7	-0.2
comp=Z,2μm,0.1s							
IPRN				*e*Pn	Pn	07 09 09.3	-1.0
IDMV	**Damavand**	**4.31**	**141**	*e*Pn	Pn	07 09 14.6	-0.3
IDMV				*e*		07 09 18.4	
comp=Z,138nm,0.1s							
IDMV	**Damavand**	**4.31**	**141**	*e*Pn	Pn	07 09 14.6	-0.3
IFIR	**Firoozkooh**	**4.64**	**134**	*e*Pn	Pn	07 09 19.5	0.0
IFIR				*e*		07 09 21.6	
comp=Z,415nm,0.1s							
IFIR	**Firoozkooh**	**4.64**	**134**	*e*Pn	Pn	07 09 19.5	0.0
IGLO	**Ghaloghah**	**4.77**	**119**	*e*Pn	Pn	07 09 20.5	-0.7
IGLO				*e*		07 09 22.8	
comp=Z,1μm,0.0s							
IGLO	**Ghaloghah**	**4.77**	**119**	*e*Pn	Pn	07 09 20.5	-0.7
IKIA	**Kiasar**	**4.84**	**123**	*e*Pn	Pn	07 09 21.8	-0.3
IKIA				*e*		07 09 23.1	
comp=Z,744nm,0.1s							
IKIA	**Kiasar**	**4.84**	**123**	*e*Pn	Pn	07 09 21.8	-0.3
ISHM	**Shahmirzad**	**4.84**	**129**	*e*Pn	Pn	07 09 22.0	-0.2
ISHM				*e*		07 10 19.5	
comp=Z,593nm,0.1s							
ISHM	**Shahmirzad**	**4.84**	**129**	*e*Pn	Pn	07 09 22.0	-0.2
IANJ	**Anjilo**	**5.45**	**128**	*e*Pn	Pn	07 09 30.3	-0.2
IANJ				*e*		07 09 36.9	
comp=Z,116nm,0.1s							
IANJ	**Anjilo**	**5.45**	**128**	*e*Pn	Pn	07 09 30.3	-0.2

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*IDC **13** 07:13:54.3±1.7,2°.80S×128°.65E,h0km,mb3.7/2, mb1 4.1/3,mb1mx3.7/18,mbtmp3.8/3,ML4.0/1, Error ellipse: s-maj=130.2km s-min=26.7km az=68.0*
*ISCJB **13** 07:13:58.9±1.0,3°.55S±0°.07×127°.22E±0°.06,h23km±8km, mb3.8/2, Error ellipse: s-maj=12.6km s-min=7.9km az=30.0*
*DJA **13** 07:14:00,3°.39S×127°.32E,h5km,MLv4.0/5*
ISC 13 07:13:59.2±1.1,3°.56S±0°.06×127°.25E±0°.05,h9km±7km,n8, σ0°96/11,mb3.8/2,Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.35**	**335**	P	**Pg**	**07 14 05.9**	**-0.1**
NLAI				S	**Sg**	**07 14 10.2**	**-0.5**
AAI	**Ambon**	**0.96**	**98**	P	**Pg**	**07 14 17.1**	**-0.5**
AAI				S	**Sg**	**07 14 30.6**	**+0.5**
LBMI	**Labuha**	**2.91**	**5**	P	**Pn**	**07 14 46.5**	**+0.8**
SWI	**Sorong**	**4.82**	**56**	P	**Pn**	**07 15 12.9**	**+0.9**
SWI				S	**Sn**	**07 16 07.5**	**-0.5**
LUWI	**Luwuk**	**5.12**	**299**	P	**Pn**	**07 15 17.7**	**+1.6**
WRA	**Warramunga Arr**	**17.70**	**158**	P	**Pn**	**07 18 04.7**	**-1.4**
0.6nm,0.3s,baz=340,slow=12,SNR=27							
ASAR	**Alice Springs**	**21.00**	**163**	P	**P**	**07 18 44.0**	**+0.9**
6.7nm,0.9s,mb4.0,baz=346,slow=13,SNR=36							
ASAR				PcP	PcP	07 22 46.3	-4.2
0.3nm,0.6s,baz=332,slow=2.1,SNR=4.2							
MKAR	**Makanchi Array**	**63.86**	**327**	P	**P**	**07 24 30.4**	**-1.7**
0.4nm,0.7s,mb3.6,baz=128,slow=8.1,SNR=5.2							

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*NIED **13** 07:45:00,24°.80N×127°.80E,h5km,Mw4.3 Best double couple: $M_0$2.98000×10^15 NP1:ϕ_s222.00000°,δ73.00000°, λ-80.00000°. NP2:ϕ_s12.00000°,δ20.00000°, λ-118.00000°.*
*IDC **13** 07:45:38.7±0.7,24°.69N×127°.76E,h0km,mb4.1/15, mb1 4.1/17,mb1mx4.1/27,mbtmp4.0/17,ML3.2/2,MS3.0/4, Ms1 3.0/4,ms1mx2.7/32, Error ellipse: s-maj=30.2km s-min=12.9km az=72.0*
*NEIC **13** 07:45:39.1±3.2,24°.67N×127°.74E,h1km±20km,mb4.6/3, MW4.3(NIED), Error ellipse: s-maj=8.1km s-min=6.6km az=82.0*
*BJI **13** 07:45:39.0,24°.70N×127°.70E,h11km,mB4.1/2,mb4.2/6*
*ISCJB **13** 07:45:41.6±0.4,24°.78N±0°.03×127°.76E±0°.03,h33km, mb4.2/22, Error ellipse: s-maj=5.4km s-min=3.4km az=139.4*
*MOS **13** 07:45:41.6±0.9,24°.70N×127°.80E,h33km,mb4.6/2, Error ellipse: s-maj=23.4km s-min=11.6km az=108.1*
*JMA **13** 07:45:42.1±0.2,24°.83N×127°.82E,h68km,M4.2*
ISC 13 07:45:43.7±0.4,24°.82N±0°.03×127°.72E±0°.03,h35km,n55, σ1°16/71,mb4.2/22,Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT2	**Tamagusuku 2**	**1.31**	**1**	P	**Pn**	**07 46 04.8**	**-0.7**
JJT2				S	**Sn**	**07 46 21.9**	**+0.1**
NAH1	**Naha**	**1.38**	**359**	P	**Pn**	**07 46 05.6**	**-0.8**
NAH1				S	**Sn**	**07 46 22.7**	**-0.7**
JKE	**Kume jima 2**	**1.72**	**331**	P	**Pn**	**07 46 11.2**	**+0.1**
JAGN	**Aguni-jima**	**1.81**	**346**	P	**Pn**	**07 46 12.2**	**-0.2**
JAGN				S	**Sn**	**07 46 34.0**	**-0.2**
JOW	**Kunigami**	**2.06**	**14**	P	**Pn**	**07 46 14.5**	**-1.4**
JOGS	**Gusukube**	**2.11**	**269**	P	**Pn**	**07 46 17.2**	**+0.8**
JOGS				S	**Sn**	**07 46 42.5**	**+1.1**
JMJ	**Miyako jima 2**	**2.21**	**270**	P	**Pn**	**07 46 18.5**	**+0.7**
JMJ				*e*S	**Sn**	**07 46 44.9**	**+1.0**
JIH	**Iheya**	**2.21**	**6**	P	**Pn**	**07 46 17.1**	**-0.9**
JIH				*e*S	**Sn**	**07 46 42.4**	**-1.7**
JTJ	**Tarama**	**2.75**	**267**	P	**Pn**	**07 46 25.5**	**+0.2**
JTJ				S	**Sn**	**07 46 57.0**	**-0.4**
JTK	**Tokunoshima**	**3.15**	**20**	P	**Pn**	**07 46 28.9**	**-1.9**
JTK				S	**Sn**	**07 47 02.9**	**-4.3**
JIJ	**Ishigaki jima**	**3.29**	**263**	P	**Pn**	**07 46 32.6**	**-0.1**
JIJ				S	**Sn**	**07 47 09.4**	**-1.3**
JMZ	**Minamidaito 2**	**3.32**	**72**	P	**Pn**	**07 46 27.8**	**-5.3**
JMZ				*e*S	**Sn**	**07 47 02.1**	**-9.2**
JKRS	**Kuro-shima**	**3.43**	**261**	P	**Pn**	**07 46 34.7**	**0.0**
JKRS				S	**Sn**	**07 47 13.5**	**-0.6**
HATJ	**Hateruma jima**	**3.65**	**259**	P	**Pn**	**07 46 37.3**	**-0.4**
HATJ				*e*S	**Sn**	**07 47 15.9**	**-3.6**
IRIF	**Iriomote-Funau**	**3.67**	**263**	P	**Pn**	**07 46 37.5**	**-0.4**
IRIF				*e*S	**Sn**	**07 47 19.3**	**-0.6**
JAM	**Amami Oshima**	**3.95**	**25**	P	**Pn**	**07 46 40.3**	**-1.5**
JAM				*e*S	**Sn**	**07 47 22.0**	**-5.0**
JZK	**Kikaishima**	**4.02**	**30**	P	**Pn**	**07 46 41.7**	**-1.1**
YOJ	**Yonaguni jima**	**4.30**	**266**	P	**Pn**	**07 46 46.5**	**-0.2**
YOJ				*e*S	**Sn**	**07 47 33.0**	**-2.6**
JNN	**Nakanoshima**	**5.35**	**20**	P	**Pn**	**07 46 59.4**	**-1.7**
YHNB	**Yeheng**	**5.77**	**270**	*e*Pn	**Pn**	**07 47 07.0**	**+0.1**
18nm,0.6s							
YULB	**Yu-li**	**6.04**	**258**	*e*Pn	**Pn**	**07 47 08.4**	**-2.1**
23nm,0.3s							
YULB				*e*Sn	**Sn**	**07 48 13.0**	**-5.5**
TPUB	**Ta-pu**	**6.66**	**258**	*e*Pn	**Pn**	**07 47 18.8**	**-0.3**
TPUB				*e*Sn	**Sn**	**07 48 32.3**	**-1.4**
KSRS	**Korea Array**	**12.59**	**1**	Pn	**Pn**	**07 48 40.0**	**-0.3**
0.2nm,0.3s,baz=177,slow=12,SNR=12							
KSRS				LR	LR	07 54 07.4	
comp=Z,87nm,18.0s,baz=169,slow=40							
CBIJ	**Chichi jima**	**13.21**	**77**	LR	LR	07 53 49.7	
comp=Z,47nm,18.2s,baz=90,slow=37							
MJAR	**Matsushiro Arr**	**14.75**	**35**	Pn	**Pn**	**07 49 09.4**	**-0.3**
0.1nm,0.3s,baz=232,slow=13,SNR=3.4							
MJAR				LR	LR	07 54 04.8	
comp=Z,21nm,18.1s,baz=250,slow=34							
CN2	**Changchun**	**19.02**	**355**	*e*P	**Pn**	**07 50 04.3**	**+0.8**
CN2				pmax	pmax		
comp=Z,10.0nm,0.8s							
ASAJ	**Asahikawa**	**22.75**	**29**	P	**P**	**07 50 43.9**	**+1.1**
comp=Z,2.9nm,0.6s,mb3.9,baz=82,slow=20,SNR=5.0							
LZH	**Lanzhou**	**23.39**	**304**	*e*P	**P**	**07 50 52.0**	**+2.5**
LZH				pmax	pmax		
comp=Z,15nm,1.4s,mb4.2							
KLR	**Kul'dur**	**24.57**	**6**	*e*P	**P**	**07 50 57.0**	**-3.1**
YSS	**Yuzh-Sakhalins**	**25.13**	**25**	*e*P	**P**	**07 51 07.2**	**+1.9**
YSS				*e*	pP	07 51 19.4	+4.1
YSS				pmax	pmax		
comp=Z,30nm,1.0s,mb4.8							
YSS	**Yuzh-Sakhalins**	**25.13**	**25**	P	**P**	**07 51 08.6**	**+3.2**
comp=Z,7.4nm,0.5s,mb4.5							
GTA	**Gaotai**	**27.62**	**309**	*e*P	**P**	**07 51 28.5**	**+0.7**
GTA				pP	pP	07 51 32.8	-5.0
GTA				sP	sP	07 51 36.0	-6.1
GTA				pmax	pmax		
comp=Z,3.0nm,1.1s,mb3.8							
SONM	**Songino Array**	**28.50**	**329**	P	**P**	**07 51 36.9**	**+1.3**
comp=Z,1.1nm,0.4s,mb3.9,baz=152,slow=12,SNR=6.8							
COEN	**Coen**	**41.39**	**157**	*e*P	**P**	**07 53 26.4**	**-0.2**
comp=Z,49nm,0.9s,mb5.1							
MK31	**Makanchi Array**	**42.14**	**313**	*e*P	**P**	**07 53 33.4**	**+0.8**
MKAR	**Makanchi Array**	**42.14**	**313**	P	**P**	**07 53 33.5**	**+0.9**
comp=Z,2.2nm,0.6s,mb4.0,baz=100,slow=9.4,SNR=34							
MKAR				LR	LR	08 12 34.9	
comp=Z,28nm,18.8s,baz=173,slow=38							
FITZ	**Fitzroy Crossi**	**42.71**	**183**	P	**P**	**07 53 36.1**	**-1.3**
comp=Z,4.7nm,0.7s,mb4.3,baz=15,slow=5.7,SNR=13							
ZALV	**Zalesovo Beam**	**43.10**	**324**	P	**P**	**07 53 40.9**	**+0.6**
comp=Z,1.9nm,0.6s,mb4.0,baz=117,slow=7.6,SNR=8.4							
WRAB	**Tennant Creek**	**44.95**	**171**	*e*P	**P**	**07 53 54.5**	**-0.9**
WRAB				pmax	pmax		
comp=Z,13nm,0.8s,mb4.8							
WRAB	**Tennant Creek**	**44.95**	**171**	*e*P	**P**	**07 53 54.5**	**-0.9**
comp=Z,13nm,0.8s,mb4.8							
WRA	**Warramunga Arr**	**44.96**	**171**	P	**P**	**07 53 54.7**	**-0.8**
comp=Z,12nm,0.7s,mb4.8,baz=352,slow=8.7,SNR=110							
WRA	**Warramunga Arr**	**44.96**	**171**	P	**P**	**07 53 54.7**	**-0.8**
KURK	**Kurchatov**	**45.54**	**318**	P	**P**	**07 54 01.1**	**+1.3**
comp=Z,1.1nm,0.2s,mb4.3,baz=106,slow=9.5,SNR=5.4							
ASAR	**Alice Springs**	**48.57**	**172**	P	**P**	**07 54 23.2**	**-0.5**
comp=Z,1.6nm,0.6s,mb4.3,baz=360,slow=14,SNR=27							
BVAR	**Borovoye Array**	**51.03**	**319**	P	**P**	**07 54 43.8**	**+1.7**
comp=Z,1.9nm,0.7s,mb4.2,baz=88,slow=9.0,SNR=5.6							
ABKAR	**Akbulak array**	**57.28**	**314**	*e*P	**P**	**07 55 29.4**	**+1.7**
comp=Z,1.1nm,0.5s,mb4.1							
STKA	**Stephens Creek**	**57.92**	**166**	P	**P**	**07 55 31.1**	**-1.2**
comp=Z,4.4nm,0.6s,mb4.6,baz=358,slow=5.7,SNR=11							
AKTK	**Aktyubinsk**	**58.50**	**315**	P	**P**	**07 55 37.5**	**+1.3**
AKTO	**Aktyubinsk**	**58.50**	**315**	P	**P**	**07 55 37.5**	**+1.3**
comp=Z,2.1nm,0.9s,mb4.2,baz=78,slow=13,SNR=6.0							
RSO	**Redoubt South**	**63.61**	**33**	*e*P	**P**	**07 56 12.5**	**+1.7**
FINES	**FINESS Array B**	**73.86**	**331**	P	**P**	**07 57 15.8**	**+1.3**
comp=Z,1.6nm,0.7s,mb4.0,baz=57,slow=5.3,SNR=8.9							
AKASG	**Malin Array Be**	**76.30**	**320**	P	**P**	**07 57 30.1**	**+1.3**
comp=Z,0.8nm,0.5s,mb3.9,baz=61,slow=7.9,SNR=4.3							
BRTR	**Keskin Array B**	**77.53**	**308**	P	**P**	**07 57 38.2**	**+2.2**
comp=Z,0.5nm,0.6s,mb3.7,baz=131,slow=5.6,SNR=3.6							
NOA	**NORSAR Array B**	**80.37**	**334**	P	**P**	**07 57 52.1**	**+1.0**
comp=Z,1.8nm,1.0s,mb4.0,baz=56,slow=5.5,SNR=3.2							
NVAR	**Mina Array Bea**	**91.81**	**46**	P	**P**	**07 58 50.0**	**+1.7**
comp=Z,0.6nm,0.9s,mb3.9,baz=278,slow=6.4,SNR=4.0							

IDC 13 08:21:02.9±16.0,11°.78N×57°.24E,h0km,mb3.6/4, mb1 3.7/4,mb1mx3.4/24,mbtmp3.6/4,Error ellipse: s-maj=537.7km s-min=34.5km az=81.0,Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**40.81**	**26**	P	P	08 28 46.2	+0.2
0.4nm,0.5s,baz=213,slow=8.8,SNR=5.7							
ZALV	**Zalesovo Beam**	**47.42**	**22**	P	P	08 29 38.7	-0.3
2.5nm,0.6s,baz=218,slow=8.8,SNR=7.5							
WRA	**Warramunga Arr**	**82.14**	**112**	P	P	08 33 26.2	+0.1
0.7nm,1.2s,baz=293,slow=4.5,SNR=3.8							
ASAR	**Alice Springs**	**82.76**	**116**	P	P	08 33 29.4	+0.1
0.3nm,0.8s,baz=286,slow=6.0,SNR=3.4							

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*CSEM **13** 08:24:00.3,38°.23N×22°.18E,h12km,ML1.5/5, After THE*
THE 13 08:24:00.3,38°.23N×22°.18E,h12km±3km,ML1.5/5,Error ellipse: s-maj=3.3km s-min=0.7km az=302.0,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRIZ	**Trizonia**	**0.16**	**327**	P	Pg	08 24 03.8	-0.2
TRIZ				S	Sg	08 24 06.5	0.0
TRIZ	**Trizonia**	**0.16**	**327**	P	Pg	08 24 03.8	-0.2
TRIZ				S	Sg	08 24 06.5	0.0
KALE	**Kalithea**	**0.16**	**348**	P	Pg	08 24 04.0	0.0
KALE				S	Sg	08 24 07.0	+0.4
KALE	**Kalithea**	**0.16**	**348**	P	Pg	08 24 04.0	0.0
KALE				S	Sg	08 24 07.0	+0.4
**

ESDC Sonseca Array 150.99 227 PKPbc PKPbc 08 47 20.9 +1.4

NEIC ***13*** *08:27:54.4, 37°.88S×176°.47E, h154km, MG3.7(WEL), After WEL.*

WEL 13 08:27:54.9±0.3, 37°.88S×176°.48E, h149km±3km, ML3.7/19, Error ellipse: s-maj=1.8km s-min=1.5km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRRZ	**Plateau Road**	**0.62**	**186**	PN	Pn	08 28 17.1	+0.3
PRRZ				SN	Sn	08 28 33.2	-0.4
URZ	**Urewera**	**0.62**	**128**	PN	Pn	08 28 16.4	-0.4
URZ				SN	Sn	08 28 32.9	-0.6
URZ	**Urewera**	**0.62**	**128**	P	Pn	08 28 16.4	-0.4
ALRZ	**Allen Road**	**0.69**	**189**	PN	Pn	08 28 17.5	+0.3
MWZ	**Matawai**	**0.94**	**119**	PN	Pn	08 28 19.0	0.0
MWZ				SN	Sn	08 28 37.5	0.0
MWZ	**Matawai**	**0.94**	**119**	P	Pn	08 28 19.0	-0.1
RAHZ	**Arahi**	**1.14**	**156**	PN	Pn	08 28 21.2	+0.4
RAHZ				SN	Sn	08 28 41.0	+0.4
NMHZ	**Naumai**	**1.24**	**168**	PN	Pn	08 28 22.4	+0.7
NMHZ				SN	Sn	08 28 42.6	+0.2
KUZ	**Kuaotunu**	**1.28**	**332**	PN	Pn	08 28 22.4	+0.2
KUZ	**Kuaotunu**	**1.28**	**332**	P	Pn	08 28 22.4	+0.2
BKZ	**Black Stump Fm**	**1.29**	**180**	PN	Pn	08 28 21.8	-0.4
PUZ	**Puketiti**	**1.42**	**98**	PN	Pn	08 28 23.1	-0.3
PUZ				SN	Sn	08 28 44.1	-1.2
PUZ	**Puketiti**	**1.42**	**98**	P	Pn	08 28 23.1	-0.4
OTVZ	**Oturere**	**1.43**	**206**	PN	Pn	08 28 24.0	+0.3
TWVZ	**Taurewa**	**1.45**	**214**	PN	Pn	08 28 24.0	+0.2
TWVZ	**Taurewa**	**1.45**	**214**	P	Pn	08 28 24.0	+0.2
NGZ	**Ngauruhoe**	**1.47**	**208**	PN	Pn	08 28 24.4	+0.4
NGZ	**Ngauruhoe**	**1.47**	**208**	P	Pn	08 28 24.4	+0.4
KNZ	**Kokohu**	**1.48**	**141**	PN	Pn	08 28 23.9	-0.2
KNZ	**Kokohu**	**1.48**	**141**	P	Pn	08 28 23.9	-0.2
MXZ	**Matakaoa Point**	**1.48**	**78**	PN	Pn	08 28 24.3	+0.2
MXZ	**Matakaoa Point**	**1.48**	**78**	P	Pn	08 28 24.3	+0.1
CNGZ	**Carnagh Statio**	**1.49**	**114**	PN	Pn	08 28 24.8	+0.6
WPVZ	**Whakapapa**	**1.51**	**209**	PN	Pn	08 28 24.7	+0.2
PRGZ	**Paritu Road**	**1.52**	**134**	PN	Pn	08 28 24.4	-0.1
TUVZ	**Tukino**	**1.53**	**205**	PN	Pn	08 28 24.8	+0.2
TUVZ	**Tukino**	**1.53**	**205**	P	Pn	08 28 24.8	+0.1
FWVZ	**Far West T-bar**	**1.56**	**208**	PN	Pn	08 28 25.0	+0.1
FWVZ	**Far West T-bar**	**1.56**	**208**	P	Pn	08 28 25.0	+0.1
MCHZ	**McNeill Hill**	**1.57**	**174**	PN	Pn	08 28 25.3	+0.2
WNVZ	**Wahianoa**	**1.60**	**205**	PN	Pn	08 28 25.4	0.0
WNVZ	**Wahianoa**	**1.60**	**205**	P	Pn	08 28 25.4	0.0
MOVZ	**Moawhango**	**1.63**	**200**	PN	Pn	08 28 25.1	-0.7
MOVZ	**Moawhango**	**1.63**	**200**	P	Pn	08 28 25.1	-0.6
PKVZ	**Pokaka**	**1.67**	**212**	PN	Pn	08 28 26.1	0.0
MHGZ	**Mahia Peninsul**	**1.69**	**139**	PN	Pn	08 28 26.5	+0.1
MTVZ	**Mangateitei**	**1.70**	**207**	PN	Pn	08 28 26.4	-0.1
CKHZ	**Cape Kidnapper**	**1.84**	**165**	PN	Pn	08 28 27.8	-0.2
KAHZ	**Kahuranaki**	**1.94**	**171**	PN	Pn	08 28 28.8	-0.4
PNHZ	**Pukenui**	**2.04**	**186**	PN	Pn	08 28 29.3	-1.1
PXZ	**Pawanui**	**2.17**	**172**	PN	Pn	08 28 30.9	-1.0
WPHZ	**Waipukurau**	**2.18**	**181**	PN	Pn	08 28 30.9	-1.2
WAZ	**Wanganui**	**2.21**	**211**	PN	Pn	08 28 31.8	-0.5
WAZ	**Wanganui**	**2.21**	**211**	P	Pn	08 28 31.8	-0.6
TSZ	**Takapari Road**	**2.21**	**190**	PN	Pn	08 28 31.1	-1.3
PRHZ	**Porangahau**	**2.39**	**177**	PN	Pn	08 28 33.2	-1.3
DVHZ	**Dannevirke**	**2.43**	**186**	PN	Pn	08 28 33.2	-1.8
DVHZ	**Dannevirke**	**2.43**	**186**	P	Pn	08 28 33.2	-1.8
POWZ	**Post Office Ro**	**2.57**	**192**	PN	Pn	08 28 35.0	-1.8
BFZ	**Birch Farm**	**2.80**	**184**	PN	Pn	08 28 37.6	-2.0
BFZ	**Birch Farm**	**2.80**	**184**	P	Pn	08 28 37.6	-2.1
MRZ	**Mangatainoka R**	**2.87**	**194**	PN	Pn	08 28 38.1	-2.4
TIWZ	**Tintock**	**2.93**	**189**	PN	Pn	08 28 39.2	-2.1
OGWZ	**Otaki Gorge**	**3.11**	**199**	PN	Pn	08 28 41.0	-2.5
HOWZ	**Holdsworth Sta**	**3.11**	**194**	PN	Pn	08 28 40.8	-2.7
KIW	**Kapiti Island**	**3.22**	**202**	PN	Pn	08 28 42.0	-2.9
KIW	**Kapiti Island**	**3.22**	**202**	P	Pn	08 28 42.0	-2.9
TMWZ	**Te Maipa**	**3.26**	**188**	PN	Pn	08 28 42.8	-2.6
MTW	**Mount Morrison**	**3.36**	**193**	PN	Pn	08 28 43.6	-3.1
MTW	**Mount Morrison**	**3.36**	**193**	P	Pn	08 28 43.6	-3.2
CAW	**Cannon Point**	**3.41**	**198**	PN	Pn	08 28 44.3	-3.0
DUWZ	**D'Urville Isla**	**3.53**	**213**	PN	Pn	08 28 46.0	-2.9
TRWZ	**Traveller**	**3.57**	**190**	PN	Pn	08 28 46.4	-3.1
PAWZ	**Paruwai Farm**	**3.59**	**193**	PN	Pn	08 28 46.5	-3.3
PAWZ	**Paruwai Farm**	**3.59**	**193**	P	Pn	08 28 46.5	-3.2
WEL	**Wellington**	**3.65**	**201**	PN	Pn	08 28 47.5	-3.0
WEL	**Wellington**	**3.65**	**201**	P	Pn	08 28 47.5	-3.0
MSWZ	**Moikau Station**	**3.66**	**195**	PN	Pn	08 28 47.2	-3.4
MSWZ	**Moikau Station**	**3.66**	**195**	P	Pn	08 28 47.2	-3.4
SNZO	**South Karori**	**3.69**	**201**	PN	Pn	08 28 47.5	-3.5
SNZO	**South Karori**	**3.69**	**201**	P	Pn	08 28 47.5	-3.5
BHW	**Baring Head**	**3.74**	**199**	PN	Pn	08 28 48.1	-3.5
BHW	**Baring Head**	**3.74**	**199**	P	Pn	08 28 48.1	-3.5
TCW	**Tory Channel**	**3.74**	**206**	PN	Pn	08 28 48.4	-3.3
TCW	**Tory Channel**	**3.74**	**206**	P	Pn	08 28 48.4	-3.3
PLWZ	**Palliser**	**3.81**	**194**	PN	Pn	08 28 48.8	-3.7
TUWZ	**Tuamarina**	**4.05**	**208**	PN	Pn	08 28 51.9	-3.8
NNZ	**Nelson**	**4.11**	**215**	PN	Pn	08 28 53.1	-3.4
NNZ	**Nelson**	**4.11**	**215**	P	Pn	08 28 53.1	-3.3
QRZ	**Quartz Range**	**4.25**	**225**	PN	Pn	08 28 54.6	-3.7
QRZ	**Quartz Range**	**4.25**	**225**	P	Pn	08 28 54.6	-3.7
BSWZ	**Blackbirch Sta**	**4.32**	**207**	PN	Pn	08 28 55.7	-3.6
THZ	**Tophouse**	**4.76**	**214**	PN	Pn	08 29 01.3	-3.7
LTZ	**Lake Taylor**	**5.86**	**212**	PN	Pn	08 29 15.9	-3.7
MQZ	**McQueen's Vall**	**6.51**	**205**	P	Pn	08 29 22.1	-6.1
ODZ	**Otahua Downs**	**8.39**	**210**	P	Pn	08 29 48.0	-5.4

IDC ***13*** *08:44:56.6±0.8, 24°.06N×124°.34E, h0km, mb4.2/15, mb1 4.3/17, mb1mx4.2/25, mbtmp4.2/17, ML3.6/2, MS3.1/3, Ms1 3.1/3, ms1mx2.7/23, Error ellipse: s-maj=24.7km s-min=17.3km az=64.0*

MOS ***13*** *08:44:59.7±0.7, 24°.00N×124°.18E, h33km, mb5.0/7, Error ellipse: s-maj=18.8km s-min=10.3km az=107.3*

NIED ***13*** *08:45:00, 24°.00N×124°.60E, h32km, Mw4.1 Best double couple: M0 1.69000×10^15 NP1:φs 32.00000°, δ66.00000°, λ130.00000°. NP2:φs 147.00000°, δ46.00000°, λ35.00000°.*

ISCJB ***13*** *08:45:01.2±0.5, 23°.99N±0°.05×124°.50E±0°.03, h52km±3km, mb4.3/25, Error ellipse: s-maj=8.2km s-min=3.8km az=155.3*

JMA ***13*** *08:45:01.9±0.2, 24°.03N×124°.58E, h36km±5km, M4.4*

JMA Felt I J1.

BJI ***13*** *08:45:02.7, 23°.88N×124°.54E, h82km, mB4.3/16, mb4.3/22, Ms3.7/12, Ms7 3.6/13*

NEIC ***13*** *08:45:04.6±0.9, 24°.02N×124°.32E, h62km±8km, mb4.4/3, Error ellipse: s-maj=10.5km s-min=9.1km az=148.0*

NEIC Recorded [1 JMA] on Ishigaki-jima.

ISC 13 08:45:02.6±0.5, 24°.07N±0°.05×124°.49E±0°.03, h46km±3km, n71, σ1§17/89, mb4.3/25, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIJ	**Ishigaki jima**	**0.43**	**313**	P	Pn	08 45 12.4	-0.4
JIJ				S	Sn	08 45 19.9	-0.2
JKRS	**Kuro-shima**	**0.47**	**291**	P	Pn	08 45 13.5	+0.3
JKRS				S	Sn	08 45 22.0	+1.2
JTJ	**Tarama**	**0.60**	**19**	P	Pn	08 45 14.0	-0.9
JTJ				S	Sn	08 45 23.5	-0.3
HATJ	**Hateruma jima**	**0.63**	**269**	P	Pn	08 45 15.3	+0.1
HATJ				S	Sn	08 45 24.3	0.0
IRIF	**Iriomote-Funau**	**0.74**	**291**	P	Pn	08 45 17.2	+0.4
IRIF				S	Sn	08 45 29.0	+2.0
JMJ	**Miyako jima 2**	**1.04**	**44**	P	Pn	08 45 20.6	-0.2
JMJ				S	Sn	08 45 33.9	-0.3
JOGS	**Gusukube**	**1.08**	**50**	P	Pn	08 45 20.7	-0.6
JOGS				S	Sn	08 45 36.5	+1.4
YOJ	**Yonaguni jima**	**1.41**	**287**	P	Pn	08 45 26.3	+0.6
NACB	**Ninganchiao**	**2.65**	**273**	*e*Pn	Pn	08 45 42.4	-0.4
TATO	**Taipei**	**2.88**	**289**	*e*Pn	Pn	08 45 47.6	+1.6
YHNB	**Yeheng**	**2.90**	**283**	*e*Pn	Pn	08 45 47.8	+1.5
YULB	**Yu-li**	**3.00**	**258**	*e*Pn	Pn	08 45 46.5	-1.2
YULB				*e*Sn	Sn	08 46 20.6	-1.8
JKE	**Kume jima 2**	**3.06**	**42**	P	Pn	08 45 45.8	-2.7
SSLB	**Suanglung**	**3.25**	**266**	*e*Pn	Pn	08 45 51.5	+0.5
TWG	**Pinlang**	**3.38**	**249**	*e*Pn	Pn	08 45 51.4	-1.4
TWG				*e*Sn	Sn	08 46 29.2	-2.4
JAGN	**Aguni-jima**	**3.54**	**44**	P	Pn	08 45 53.2	-1.8
TPUB	**Ta-pu**	**3.62**	**259**	*e*Pn	Pn	08 45 56.6	+0.4
TPUB				*e*Sn	Sn	08 46 38.7	+1.0
JOW	**Kunigami**	**4.39**	**50**	P	Pn	08 46 04.1	-2.6
JTK	**Tokunoshima**	**5.46**	**46**	P	Pn	08 46 18.0	-3.4
JAM	**Amami Oshima**	**6.31**	**46**	P	Pn	08 46 33.9	+0.9
JMZ	**Minamidaito 2**	**6.35**	**73**	P	Pn	08 46 28.7	-5.0
JMZ				S	Sn	08 47 33.8	-11
NJ2	**Nanjing**	**9.38**	**329**	*e*P	Pn	08 47 19.8	+4.7
NJ2				LR	LR		
comp=N,230nm,20.0s							
NJ2				LR	LR		
comp=E,120nm,12.6s							
NJ2				LR	LR		
comp=Z,170nm,16.8s							
KSRS	**Korea Array**	**13.66**	**12**	Pn	Pn	08 48 14.1	+0.5
comp=Z,0.2nm,0.3s,baz=190,slow=13,SNR=6.2							
KSRS				LR	LR	08 54 03.7	
comp=Z,75nm,19.0s,baz=200,slow=40							
QIZ	**Qiongzhong**	**14.52**	**253**	P	Pn	08 48 23.3	-2.0
QIZ				S	Sn	08 51 01.0	-3.9
QIZ				LR	LR		
comp=Z,120nm,7.1s							
CBIJ	**Chichi jima**	**16.25**	**76**	LR	LR	08 54 32.8	
comp=Z,48nm,18.8s,baz=118,slow=35							
GYA	**Guiyang**	**16.30**	**282**	P	Pn	08 48 48.0	-0.3
GYA				pP	pP	08 49 01.3	-0.2
GYA				S	S	08 51 45.6	-13
GYA				SS		08 52 07.3	
GYA				pmax	pmax		
comp=Z,10.0nm,0.8s							
GYA				LR	LR		
comp=N,440nm,14.9s							
GYA				LR	LR		
comp=E,390nm,15.5s							
GYA				LR	LR		
comp=Z,440nm,14.8s							
DAV	**Davao City (W)**	**16.93**	**176**	LR	LR	08 54 52.7	
comp=Z,104nm,20.9s,baz=97,slow=35							
MAJO	**Matsushiro**	**17.15**	**40**	*e*P	Pn	08 49 02.4	+3.6
MJAR	**Matsushiro Arr**	**17.15**	**40**	Pn	Pn	08 49 00.1	+1.2
comp=Z,0.4nm,0.3s,baz=229,slow=11,SNR=8.0							
BJI	**Beijing**	**17.40**	**338**	P	Pn	08 49 04.3	+2.4
BJI				pP	pP	08 49 19.0	+5.5
BJI				sP	sP	08 49 28.3	+8.9
BJI				S	S	08 52 19.8	-1.4
BJI				pmax	pmax		
comp=Z,5.0nm,0.6s							
BJI				pmax	pmax		
comp=N,110nm,4.2s							
BJI				LR	LR		
comp=N,120nm,17.1s							
BJI				LR	LR		
comp=E,99nm,18.9s							
BJI				LR	LR		
comp=Z,45nm,19.4s							
CD2	**Chengdu**	**19.60**	**295**	P	Pn	08 49 28.6	-0.1
CD2				pP	pP	08 49 43.8	+5.9
CD2				PP		08 49 49.8	
CD2				sP	sP	08 49 53.5	+10
CD2				S	S	08 53 00.3	-5.5
CD2				sS	sS	08 53 22.4	-0.9
CD2				SS		08 53 31.1	
CD2				pmax	pmax		
comp=Z,10.0nm,0.5s							
CD2				pmax	pmax		
comp=Z,130nm,4.1s							
CD2				LR	LR		
comp=N,260nm,9.5s							
CD2				LR	LR		
comp=Z,170nm,9.5s							
CN2	**Changchun**	**19.70**	**2**	*e*P	Pn	08 49 28.6	-1.1
CN2				*es*P	sP	08 49 53.6	+8.9
CN2				*e*S	S	08 53 04.3	-3.3
CN2				pmax	pmax		
comp=Z,10.0nm,0.8s							
KMI	**Kunming**	**19.81**	**278**	P	Pn	08 49 29.8	-1.3
KMI				pP	pP	08 49 44.4	+4.2
KMI				PP		08 49 50.4	
KMI				sP	sP	08 49 54.3	+8.3
KMI				S	S	08 53 02.8	-7.2
KMI				sS	sS	08 53 24.8	-2.7
KMI				SS		08 53 33.3	
KMI				pmax	pmax		
comp=Z,5.0nm,1.2s							
KMI				pmax	pmax		
comp=Z,87nm,6.0s							
KMI				LR	LR		
comp=N,150nm,17.9s							
KMI				LR	LR		
comp=E,110nm,16.0s							
KMI				LR	LR		
comp=Z,140nm,17.4s							
HHC	**Hu-ho-hao-te**	**19.94**	**330**	*e*P	Pn	08 49 34.1	+1.6
HHC				S	S	08 53 10.6	-1.7
HHC				pmax	pmax		
comp=Z,19nm,0.5s							
HHC				pmax	pmax		
comp=Z,91nm,5.1s							
MDJ	**Mudanjiang**	**20.92**	**10**	P	P	08 49 43.0	+1.9
MDJ				pP		08 49 57.5	
MDJ				S	S	08 53 35.3	+3.6
MDJ				pmax	pmax		
comp=Z,3.0nm,0.4s							
MDJ				pmax	pmax		
comp=Z,77nm,5.4s							
MDJ				LR	LR		
comp=N,39nm,34.0s							
MDJ				LR	LR		
comp=E,60nm,21.8s							
MDJ				LR	LR		
comp=Z,45nm,24.3s							
LZH	**Lanzhou**	**21.46**	**309**	*e*P	P	08 49 49.0	+1.9
LZH				pP		08 50 04.6	
LZH				PP		08 50 16.3	
LZH				*e*S	S	08 53 40.6	-1.9
LZH				PcP	PcP	08 53 50.0	+1.2
LZH				sS	sS	08 54 05.4	+5.0
LZH				SS		08 54 15.3	
LZH				pmax	pmax		
comp=Z,14nm,1.0s,mb4.2							
LZH				pmax	pmax		
comp=Z,60nm,5.6s							
LZH				LR	LR		
comp=E,230nm,12.4s							
LZH				LR	LR		
comp=Z,270nm,13.7s							
CMAR	**Chiang Mai Arr**	**24.43**	**262**	P	P	08 50 20.6	+3.5
comp=Z,0.8nm,0.4s,mb3.5,baz=60,slow=7.6,SNR=7.6							
ASAJ	**Asahikawa**	**24.89**	**32**	P	P	08 50 20.4	-0.6
comp=Z,3.2nm,0.3s,mb4.3,baz=226,slow=11,SNR=19							
GTA	**Gaotai**	**25.86**	**312**	*e*P	P	08 50 29.9	+0.1
GTA				pmax	pmax		
comp=Z,3.0nm,1.2s,mb3.7							
ULN	**Ulaanbaatar**	**27.50**	**334**	*e*P	P	08 50 44.0	-0.5
ULN				pmax	pmax		
comp=Z,2.0nm,0.4s,mb4.0							
ULN	**Ulaanbaatar**	**27.50**	**334**	*e*P	P	08 50 44.0	-0.5
comp=Z,1.6nm,0.4s,mb3.9							
SONM	**Songino Array**	**27.74**	**333**	P	P	08 50 45.8	-0.8
comp=Z,1.4nm,0.5s,mb3.8,baz=148,slow=8.7,SNR=9.8							
WMQ	**Urumqi**	**35.94**	**312**	*e*P	P	08 51 59.6	+1.0
WMQ				pP	pP	08 52 17.9	+7.0
WMQ				sP	sP	08 52 26.8	+10
WMQ				pmax	pmax		
comp=Z,6.0nm,1.0s,mb4.5							
WMQ				pmax	pmax		
comp=Z,81nm,5.2s							
MK31	**Makanchi Array**	**40.54**	**315**	*e*P	P	08 52 37.3	0.0
MKAR	**Makanchi Array**	**40.54**	**315**	P	P	08 52 37.4	+0.1
comp=Z,2.6nm,0.5s,mb4.1,baz=99,slow=9.2,SNR=45							
ZALV	**Zalesovo Beam**	**42.01**	**326**	P	P	08 52 48.0	-1.2
comp=Z,7.8nm,0.5s,mb4.6,baz=111,slow=8.5,SNR=27							
KURK	**Kurchatov**	**44.14**	**319**	P	P	08 53 06.7	+0.3
comp=Z,1.6nm,0.3s,mb4.2,baz=96,slow=8.5,SNR=17							
KURK	**Kurchatov**	**44.14**	**319**	*e*P	P	08 53 06.4	0.0
KURK				pmax	pmax		
comp=Z,4.0nm,0.5s,mb4.4							
KURK	**Kurchatov**	**44.14**	**319**	*e*P	P	08 53 06.4	0.0
comp=Z,3.7nm,0.5s,mb4.4							
WRA	**Warramunga Arr**	**44.78**	**167**	P	P	08 53 12.0	+0.1
comp=Z,0.3nm,0.4s,mb3.5,baz=347,slow=8.7,SNR=8.2							
ASAR	**Alice Springs**	**48.32**	**168**	P	P	08 53 40.3	+0.8
comp=Z,0.4nm,0.5s,mb3.7,baz=353,slow=7.0,SNR=5.9							
BVAR	**Borovoye Array**	**49.69**	**320**	P	P	08 53 50.0	+0.3
comp=Z,2.8nm,0.4s,mb4.7,baz=110,slow=7.2,SNR=15							
ARU	**Arti**	**57.02**	**323**	*e*P	P	08 54 43.8	+0.3
ARU				pmax	pmax		
comp=Z,4.0nm,0.5s,mb4.7							
ARU	**Arti**	**57.02**	**323**	*e*P	P	08 54 43.8	+0.3
comp=Z,3.7nm,0.5s,mb4.7							
KDAK	**Kodiak Island**	**66.25**	**36**	P	P	08 55 48.6	+3.0
comp=Z,14nm,1.2s,mb4.9,baz=307,slow=4.6,SNR=5.0							
GOF	**Gofitskoye**	**67.52**	**311**	*e*P	P	08 55 59.9	+5.9
GOF				pmax	pmax		
comp=Z,40nm,0.9s,mb5.5							
KEV	**Kevo**	**70.20**	**338**	*e*P	P	08 56 10.5	+0.3
KEV				pmax	pmax		
comp=Z,4.0nm,0.4s,mb4.7							
KEV	**Kevo**	**70.20**	**338**	*e*p	P	08 56 10.5	+0.3
comp=Z,3.8nm,0.4s,mb4.7							
JOF	**Joensuu**	**70.28**	**331**	*e*P	P	08 56 10.3	-0.5
JOF	**Joensuu**	**70.28**	**331**	*e*p	P	08 56 10.3	-0.5
comp=Z,8.0nm,0.5s,mb4.9							
ARCES	**ARCESS Array B**	**70.77**	**338**	P	P	08 56 14.2	+0.5
comp=Z,1.1nm,0.4s,mb4.1,baz=72,slow=7.8,SNR=27							
KAF	**Kangasniemi**	**72.74**	**331**	*e*P	P	08 56 25.5	-0.1
KAF				pmax	pmax		
comp=Z,3.0nm,0.4s,mb4.6							
KAF	**Kangasniemi**	**72.74**	**331**	*e*p	P	08 56 25.5	-0.1
comp=Z,2.9nm,0.4s,mb4.6							
FINES	**FINESS Array B**	**73.06**	**330**	P	P	08 56 27.9	+0.4
comp=Z,6.8nm,0.7s,mb4.7,baz=53,slow=5.6,SNR=43							
AKASG	**Malin Array Be**	**74.95**	**319**	P	P	08 56 38.8	0.0
comp=Z,1.4nm,0.4s,mb4.2,baz=68,slow=6.0,SNR=5.6							
NB2	**NORSAR Subarra**	**79.72**	**333**	P	P	08 57 05.7	+0.4
comp=Z,0.8nm,0.4s,mb4.0,baz=54,slow=6.2							
NOA	**NORSAR Array B**	**79.72**	**333**	P	P	08 57 05.5	+0.2
comp=Z,0.9nm,0.4s,mb4.0,baz=54,slow=5.6,SNR=8.0							
CRVS	**Cervenica-Dubn**	**80.29**	**319**	*e*P	P	08 57 08.1	-0.5
CRVS	**Cervenica-Dubn**	**80.29**	**319**	*e*P	P	08 57 08.1	-0.5
YKA	**Yellowknife Ar**	**81.89**	**24**	P	P	08 57 17.5	+0.7
comp=Z,0.6nm,0.6s,mb3.7,baz=311,slow=3.7,SNR=4.5							
NVAR	**Mina Array Bea**	**94.43**	**44**	P	P	08 58 19.4	+1.6
comp=Z,0.2nm,0.7s,mb3.7,baz=330,slow=5.2,SNR=3.8							

BJI ***13*** *08:50:28.3, 35°.24N×68°.82E, h10km, mB4.8/20, mb4.7/30, Ms4.2/26, Ms7 4.0/24*

IDC ***13*** *08:50:34.0±0.5, 35°.33N×69°.49E, h0km, mb4.5/20, mb1 4.6/25, mb1mx4.5/30, mbtmp4.5/25, ML4.0/4, MS3.5/11, Ms1 3.5/11, ms1mx3.3/31, Error ellipse: s-maj=11.6km s-min=11.1km az=59.0*

ISCJB ***13*** *08:50:35.2±0.7, 35°.31N±0°.02×69°.66E±0°.03, h21km±5km, mb4.6/73, MS3.6/21, Error ellipse: s-maj=3.9km s-min=3.3km az=31.4*

NEIC ***13*** *08:50:35.7±0.3, 35°.29N×69°.56E, h10km, mb4.6/35, Error ellipse: s-maj=6.6km s-min=5.4km az=174.0*

NEIC Felt [II] at Kabul.

MOS ***13*** *08:50:37.6±1.4, 35°.41N×69°.65E, h33km, mb4.8/53, Error ellipse: s-maj=6.5km s-min=4.5km az=111.2*

SZGRF ***13*** *08:50:37.1, 35°.40N×70°.73E, h33km, mb4.2, Hindu Kush, Afghanistan, region*

NNC ***13*** *08:50:43.3±4.0, 35°.76N×69°.19E, h103km±41km, mb4.4, mpv4.9, Error ellipse: s-maj=29.7km s-min=26.7km az=17.0*

ISC 13 08:50:36.5±0.7, 35°.28N±0°.02×69°.61E±0°.02, h16km±5km, n268, σ1§36/297, mb4.6/73, MS3.6/21, 21C-10D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**0.87**	**212**	*e*Pg	Pg	08 50 51.6	-1.9
KBL				*e*Sg	Sg	08 51 03.3	-1.6
CEP	**Cherat**	**2.39**	**127**	⇑P	Pg	08 51 20.9	-1.5
CEP				S	Sg	08 51 58.0	+4.6
THW	**Thamme Wali**	**3.05**	**144**	P	Pb	08 51 29.1	-1.3
THW				S	Sg	08 52 17.0	+2.6
JMU	**Jammu**	**5.08**	**119**	*e*PB	Pg	08 52 10.0	-3.9
JMU				*e*S	Sn	08 52 57.5	+7.0
THN	**Thein Dam**	**5.82**	**117**	*e*PKP	Pn	08 52 06.7	+4.5
THN				*ex*	Sg	08 53 44.6	+1.3
DLH	**Dalhousie**	**5.95**	**116**	*e*PKP	Pn	08 52 12.0	+8.0
DLH				*e*SG	Sg	08 54 02.0	+15
KSH	**Kashi**	**6.60**	**48**	Pn	Pn	08 52 12.9	0.0
KSH				Sn	Sn	08 53 24.8	-2.9
KSH				smax			
comp=N,870nm,1.1s							
KSH				smax			
comp=E,450nm,0.6s							
KSH	**Kashi**	**6.60**	**48**	*e*Pn	Pn	08 52 13.5	+0.6
KSH				pP		08 52 15.8	
KSH				sP		08 52 18.6	
KSH				Sn	Sn	08 53 24.6	-3.1
KSH				sS		08 53 32.8	
KSH				smax			
comp=N,870nm,1.1s							
KSH				smax			
comp=E,450nm,0.6s							
KSH	**Kashi**	**6.60**	**48**	*e*Pn	Pn	08 52 13.0	+0.1
KSH				Sn	Sn	08 53 25.0	-2.7
KSH				smax			
comp=N,870nm,1.1s							
KSH				smax			
comp=E,450nm,0.6s							
BHK	**Bhakra**	**6.88**	**122**	*e*PKP	Pn	08 52 22.2	+5.5
BHK				*e*SB	Sb	08 54 06.2	+8.7
SDNR	**Sundarnagar**	**7.22**	**119**	*e*PKP	Pn	08 52 26.5	+5.1
SDNR				*ex*	x	08 54 29.5	
AML	**Almayashu**	**7.55**	**24**	P	Pn	08 52 27.0	+1.1
SNR=56							
AML	**Almayashu**	**7.55**	**24**	*e*Pn	Pn	08 52 26.9	+1.0
comp=E,3.0nm,0.4s							
AML				*e*Sn	Sn	08 53 48.1	-3.1
KK31	**Karatay

TKM2 Tokmak 2 8.93 30 ⇓P **Pn 08 52 45.5 +0.6**
comp=E,84nm,0.9s
TKM2 ⇑S **Sn 08 54 23.7 -1.5**
comp=E,52nm,1.1s
TKM2 Tokmak 2 8.93 30 P **Pn 08 52 46.0 +1.1**
SNR=40
TKM2 Tokmak 2 8.93 30 *e*Pn **Pn 08 52 45.9 +1.0**
NDI New Delhi 9.22 133 *e*PKP **Pn 08 52 49.0 +0.2**
NDI *e*S **Sn 08 54 32.5 +0.3**
BISR Bishrakh 9.43 133 *ex* 08 54 40.5
ASH Ashkhabad 9.44 290 ⇑P **Pn 08 52 51.9 +0.1**
SONA Sohna 9.46 136 *e*PKP **Pn 08 52 54.3 +2.1**
SONA AML AML 08 54 44.1
comp=N,80nm,0.5s
SONA AML AML 08 54 45.3
comp=E,160nm,0.3s
AJM Ajmer 9.78 152 *e*PKP **Pn 08 52 58.0 +1.4**
AJM *ex* x 08 54 46.7
BHJ Bhuj 11.98 180 *e*PKP **Pn 08 53 26.9 +0.2**
BHPL Bhopal 13.79 148 *e*PKP **Pn 08 53 51.9 +0.4**
GKN Gorkha 14.70 115 *e*P **Pn 08 54 03.1 -0.8**
comp=E,89nm,0.4s
MK31 Makanchi Array 14.94 36 *e*P **Pn 08 54 04.8 -2.2**
MKAR Makanchi Array 14.94 36 Pn **Pn 08 54 04.7 -2.3**
comp=E,0.3nm,0.3s,baz=216,slow=12,SNR=16
MKAR LR LR 09 00 05.9
comp=E,294nm,20.3s,baz=227,slow=38
DMN Daman 15.27 116 *e*P **Pn 08 54 09.8 -1.6**
comp=E,134nm,0.7s
KKN Kakani 15.30 115 *e*P **Pn 08 54 10.4 -1.4**
comp=E,142nm,0.7s
PKIN Phulchoki 15.50 115 *e*P **Pn 08 54 12.7 -1.8**
PKI Pulchoki 15.51 115 *e*P **Pn 08 54 13.0 -1.6**
comp=E,124nm,0.6s
AB31 Akbulak array 15.67 336 P **Pn 08 54 11.4 -5.1**
comp=E,5.6nm,0.5s,baz=158,slow=13,SNR=126
AB31 ⇑S **Sn 08 56 55.9 -14**
comp=E,2.3nm,0.3s
AB31 Akbulak array 15.67 336 *e*P **Pn 08 54 11.4 -5.2**
AB31 pmax pmax
comp=Z,3.0nm,0.2s
ABKAR Akbulak array 15.67 336 *e*Pn **Pn 08 54 11.3 -5.2**
comp=Z,10.0nm,0.5s
GUN Gumba 15.68 113 *e*P **Pn 08 54 18.0 +1.2**
comp=Z,49nm,0.4s
JIRN Jiri 16.04 114 *e*P **Pn 08 54 21.5 0.0**
comp=Z,119nm,0.5s
WMQ Urumqi 16.33 53 P **Pn 08 54 25.5 +0.5**
WMQ pP pP 08 54 29.0 -3.3
WMQ PP 08 54 39.0
WMQ S **Sn 08 57 26.9 +1.1**
WMQ ScS ScS 09 06 30.3 -0.4
WMQ pmax pmax
comp=Z,45nm,0.8s
WMQ pmax pmax
comp=Z,120nm,6.2s
WMQ LR LR
comp=N,550nm,20.2s
WMQ LR LR
comp=E,480nm,21.2s
WMQ LR LR
comp=Z,160nm,22.4s
RAMN Ramite 16.74 115 *e*P **Pn 08 54 26.7 -3.7**
comp=Z,87nm,0.6s
KURK Kurchatov 16.75 20 ⇑P **Pn 08 54 25.6 -4.8**
comp=Z,43nm,1.0s
KURK Kurchatov 16.75 20 Pn **Pn 08 54 24.0 -6.4**
comp=Z,0.1nm,0.3s,baz=213,slow=11,SNR=21
KURK LR LR 09 01 04.1
comp=Z,153nm,19.2s,baz=220,slow=38
KURK Kurchatov 16.75 20 *de*P **Pn 08 54 29.7 -0.7**
KURK pmax pmax
comp=Z,9.0nm,1.0s
KURK Kurchatov 16.75 20 *e*Pn **Pn 08 54 26.0 -4.4**
comp=Z,35nm,0.9s
AKTK Aktyubinsk 17.33 334 Pn **Pn 08 54 34.5 -3.1**
AKTK Sn **Sn 08 57 37.5 -13**
AKTO Aktyubinsk 17.33 334 Pn **Pn 08 54 34.5 -3.1**
comp=Z,2.2nm,0.3s,baz=152,slow=9.4,SNR=20
AKTO Sn **Sn 08 57 37.5 -13**
comp=Z,0.3nm,0.3s,baz=153,slow=16,SNR=1.9
AKTO Aktyubinsk 17.33 334 P **Pn 08 54 34.6 -3.1**
AKTO 08 57 37.5
AKTO pmax pmax
comp=Z,2.0nm,0.3s
TAPN Taplejung 17.35 112 *e*P **Pn 08 54 36.8 -1.3**
comp=Z,33nm,0.5s
ODAN Odare 17.37 114 *e*P **Pn 08 54 34.1 -4.3**
comp=Z,97nm,0.7s
VOSK Vostochnaya 17.47 3 ⇑P **Pn 08 54 35.6 -3.7**
comp=Z,31nm,0.8s
VOSK Vostochnaya 17.47 3 P **Pn 08 54 35.5 -3.8**
VOSK pmax pmax
comp=Z,31nm,0.8s
ZRNK Zerenda 17.67 359 ⇓P **Pn 08 54 37.1 -4.8**
comp=Z,15nm,0.7s
ZRNK Zerenda 17.67 359 P **Pn 08 54 37.1 -4.8**
ZRNK pmax pmax
comp=Z,15nm,0.7s
BVAR Borovoye Array 17.75 2 Pn **Pn 08 54 38.5 -4.3**
comp=Z,0.8nm,0.3s,baz=184,slow=15,SNR=15
BVAR Borovoye Array 17.75 2 P **Pn 08 54 38.5 -4.3**
BVAR pmax pmax
comp=Z,1.0nm,0.3s
BRVK Borovoye 17.78 1 ⇓P **Pn 08 54 38.1 -5.1**
comp=Z,31nm,0.8s
BRVK Borovoye 17.78 1 *e*P **Pn 08 54 39.8 -3.4**
BRVK pmax pmax
comp=Z,14nm,0.5s
BRVK Borovoye 17.78 1 *e*Pn **Pn 08 54 39.8 -3.4**
comp=Z,14nm,0.5s
MAK Makhachkala 18.75 301 *e*P **Pn 08 54 55.6 +0.4**
MAK *e*S **Sn 08 58 24.9 +0.3**
MAK pmax pmax
comp=Z,20nm,0.3s
LSA Lhasa 18.99 101 P **Pn 08 55 01.7 +3.5**
LSA pmax pmax
comp=Z,27nm,0.8s
LSA Lhasa 18.99 101 P **Pn 08 55 01.7 +3.5**
comp=Z,27nm,0.8s
HYB Hyderabad 19.49 154 *e*P **Pn 08 55 04.0 -0.3**
HYB *e*S **Sn 08 58 38.0 -4.8**
HYB Hyderabad 19.49 154 *i* P **Pn 08 55 04.0 -0.3**
HYB *e*S **Sn 08 58 38.0 -4.8**
DGRG David-gareji 19.95 295 P **Pn 08 55 13.5 +4.0**
GNI Garni 20.24 291 P **P 08 55 12.7 +1.7**
comp=Z,9.4nm,0.6s,baz=139,slow=9.7,SNR=7.3
GNI Garni 20.24 291 *ce*P **P 08 55 14.0 +3.0**
GNI pmax pmax
comp=Z,54nm,1.2s
GNI Garni 20.24 291 *e*P **P 08 55 13.2 +2.1**
comp=Z,51nm,1.0s
MTA Mtatsminda 20.42 296 P **P 08 55 14.9 +1.9**
ZEI Tsey 21.28 298 *e*P **P 08 55 23.9 +1.7**
ZEI pmax pmax
comp=Z,24nm,0.7s,mb4.6
SHL Shillong 21.47 111 *e*PKP **P 08 55 26.5 +2.1**
SHL *ex* x 08 59 13.5
ZALV Zalesovo Beam 21.49 25 P **P 08 55 23.9 -0.6**
comp=Z,32nm,0.4s,mb5.0,baz=219,slow=12,SNR=65
ZALV S **S 08 59 23.0 +1.0**
comp=Z,0.8nm,0.4s,baz=216,slow=7.1,SNR=1.5
ZALV LR LR 09 04 31.1
comp=Z,106nm,19.7s,MS3.2,baz=247,slow=39
ZALV Zalesovo Beam 21.49 25 P **P 08 55 23.9 -0.5**
ZALV S **S 08 59 23.0 +1.0**
ZALV pmax pmax
comp=Z,32nm,0.4s,mb5.0
ZALV smax
comp=N,1.0nm,0.4s
ZALV MLR MLR
comp=Z,106nm,19.7s,MS3.2
ONI Oni 21.56 298 P **P 08 55 27.6 +2.3**
NVS Novosibirsk 21.73 22 *e*P **P 08 55 26.5 -0.4**
NVS *e*S **S 08 59 30.5 +3.9**
NVS pmax pmax
comp=E,26nm,1.1s
NVS pmax pmax
comp=Z,82nm,1.1s,mb5.1
NVS pmax pmax
comp=N,35nm,0.8s
SVE Sverdlovsk 22.39 347 ⇑*e*P **P 08 55 37.7 +3.7**
SVE *e*S **S 08 59 39.3 -0.2**
SVE pmax pmax
comp=Z,23nm,1.0s,mb4.6
SVE MLR MLR
comp=Z,506nm,14.0s,MS4.1
KIV Kislovodsk 22.40 301 *e*P **P 08 55 35.6 +1.4**
KIV *e*S **S 08 59 41.3 +1.4**
KIV pmax pmax
comp=Z,22nm,0.7s,mb4.7
KIV MLR MLR
comp=Z,45nm,14.0s,MS3.0
KIV Kislovodsk 22.40 301 *e*P **P 08 55 34.7 +0.4**
comp=Z,26nm,0.7s,mb4.8
ARU Arti 22.45 344 *d i*P **P 08 55 35.3 +0.7**
ARU *e* 08 55 57.4
ARU *e*PPP 08 56 05.6
ARU S **S 08 59 41.4 +0.7**
ARU SS 09 00 09.8
ARU SSS 09 00 26.5
ARU pmax pmax
comp=Z,12nm,0.7s,mb4.4
ARU Arti 22.45 344 *e*P **P 08 55 35.5 +0.9**
comp=Z,20nm,0.8s,mb4.6
GTA Gaotai 24.31 71 P **P 08 55 56.1 +2.8**
GTA pP 08 56 00.3
GTA sP sP 08 56 03.6 +3.6
GTA S **S 09 00 15.8 +4.1**
GTA sS sS 09 00 23.5 +4.0
GTA pmax pmax
comp=Z,13nm,1.0s,mb4.3
GTA pmax pmax
comp=Z,89nm,4.8s
GTA LR LR
comp=N,270nm,15.5s,MS4.0
GTA LR LR
comp=E,230nm,12.8s,MS4.0
GTA LR LR
comp=Z,230nm,10.7s,MS3.9
VRHR Novokhopersk 25.60 317 *e*P **P 08 56 08.1 +3.2**
VRHR pmax pmax
comp=N,8.0nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.7s
VRHR pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
KRAR Krasnoyarsk 26.12 30 *i* P **P 08 56 08.3 -1.2**
KRAR pmax pmax
comp=Z,17nm,1.2s,mb4.5
ANN Anapa 26.26 301 *e*P **P 08 56 04.0 -7.0**
ANN pmax pmax
comp=Z,60nm,1.3s,mb5.0
VSR Storozhevoye 27.04 316 *e*P **P 08 56 19.5 +1.6**
VSR pmax pmax
comp=N,6.0nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.5
VSR pmax pmax
comp=E,1.0nm,0.3s
ASF Jabal al Asfar 27.32 273 LR LR 09 08 52.7
comp=E,82nm,18.0s,MS3.3,baz=198,slow=40
LZH Lanzhou 27.74 78 *e*P **P 08 56 23.0 -1.4**
LZH PP 08 57 12.5
LZH PcP PcP 08 59 38.8 -2.0
LZH *e*S **S 09 01 02.3 -3.9**
LZH pmax pmax
comp=Z,10.0nm,1.1s,mb4.4
LZH pmax pmax
comp=Z,74nm,4.8s
LZH LR LR
comp=E,340nm,10.8s
LZH LR LR
comp=Z,560nm,12.0s,MS4.4
MMAI Mount Meron Ar 28.32 275 LR LR 09 09 15.1
comp=Z,67nm,19.4s,MS3.2,baz=45,slow=40
BR131 Keskin Array S 28.75 290 *e*P **P 08 56 33.8 +0.4**
comp=Z,8.3nm,0.8s,mb4.5
BRTR Keskin Array B 28.75 290 P **P 08 56 34.3 +0.9**
comp=Z,9.1nm,0.8s,mb4.5,baz=93,slow=9.3,SNR=19
BRTR PcP PcP 08 59 45.3 +2.1
comp=Z,0.6nm,0.6s,baz=77,slow=1.9,SNR=2.4
CD2 Chengdu 28.85 89 P **P 08 56 33.4 -0.9**
CD2 PP PP 08 57 25.9 -14
CD2 S **S 09 01 21.3 -2.6**
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.8
CD2 pmax pmax
comp=Z,220nm,5.1s
CD2 LR LR
comp=N,180nm,8.9s
CD2 LR LR
comp=Z,190nm,7.7s
TLY Talaya 29.30 45 P **P 08 56 35.1 -3.0**
TLY pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
TLY Talaya 29.30 45 P **P 08 56 35.1 -3.0**
comp=Z,2.0nm,0.6s,mb4.0
SONM Songino Array B 29.96 54 P **P 08 56 45.3 +1.4**
comp=Z,3.4nm,0.8s,mb4.2,baz=255,slow=10.0,SNR=19
SONM LR LR 09 10 26.8
comp=Z,118nm,20.2s,MS3.5,baz=267,slow=40
SONM Songino Array 29.96 54 P **P 08 56 45.3 +1.3**
SONM pmax pmax
comp=Z,3.0nm,0.8s
SONM MLR MLR
comp=Z,118nm,20.2s
OBN Obninsk 30.16 321 ⇑*i*P **P 08 56 46.3 +0.7**
OBN *i* 08 57 43.3
OBN *e* 08 59 46.4
OBN pmax pmax
comp=Z,50nm,1.2s,mb5.1
OBN MLR MLR
comp=Z,100nm,17.0s,MS3.5
OBN Obninsk 30.16 321 *e*P **P 08 56 46.2 +0.6**
comp=Z,28nm,0.6s,mb5.2
KMI Kunming 30.25 100 P **P 08 56 45.0 -1.7**
KMI PP PP 08 57 43.1 -12
KMI S **S 09 01 41.8 -4.0**
KMI pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
KMI pmax pmax
comp=Z,100nm,4.8s
KMI LR LR
comp=N,67nm,9.5s
KMI LR LR
comp=E,53nm,13.0s
KMI LR LR
comp=Z,70nm,9.5s
ULN Ulaanbaatar 30.40 54 *e*P **P 08 56 49.5 +1.6**
ULN pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
ULN Ulaanbaatar 30.40 54 *e*P **P 08 56 49.5 +1.6**
comp=Z,3.0nm,0.8s,mb4.1
CM31 Chiang Mai Arr 30.91 115 *e*P **P 08 56 54.6 +2.0**
CMAR Chiang Mai Arr 30.91 115 P **P 08 56 54.6 +2.0**
comp=Z,9.2nm,1.0s,mb4.6,baz=297,slow=9.1,SNR=26
CMAR Chiang Mai Arr 30.91 115 P **P 08 56 54.6 +2.0**
CMAR pmax pmax
comp=Z,9.0nm,1.0s
GYA Guiyang 32.84 95 P **P 08 57 07.8 -1.8**
GYA S **S 09 02 21.9 -4.5**
GYA ScP ScP 09 03 35.0 -2.7
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
GYA pmax pmax
comp=Z,120nm,4.9s
GYA LR LR
comp=N,480nm,17.9s,MS4.4
GYA LR LR
comp=E,450nm,18.5s,MS4.4
GYA LR LR
comp=Z,510nm,16.8s,MS4.3
AKASG Malin Array Be 32.85 311 P **P 08 57 09.3 -0.1**
comp=Z,7.1nm,0.7s,mb4.7,baz=87,slow=7.3,SNR=16
HHC Hu-ho-hao-te 33.26 68 *e*P **P 08 57 11.0 -2.1**
HHC PP PP 08 58 21.5 -6.7
HHC PcP PcP 08 59 54.3 -0.9
HHC S **S 09 02 28.6 -4.0**
HHC ScP ScP 09 03 37.1 -1.8
HHC PcS PcS 09 03 38.9 -1.8
HHC ScS ScS 09 07 35.4 -4.1
HHC pmax pmax
comp=Z,18nm,0.5s,mb5.3
HHC pmax pmax
comp=Z,60nm,5.9s
HHC LR LR
comp=N,140nm,12.8s,MS4.0
HHC LR LR
comp=E,130nm,12.3s,MS4.0
HHC LR LR
comp=Z,130nm,12.2s,MS3.9
VRI Vrincioaia 33.88 301 ⇑P **P 08 57 23.7 +5.3**
PLOR Plostina 33.93 301 ⇓P **P 08 57 20.8 +2.0**
TESR 33.97 303 ⇑P **P 08 57 18.8 -0.4**
MLR Muntele Rosu 34.41 301 ⇓P **P 08 57 25.3 +2.3**
BURAR Bucovina Array 35.02 304 ⇑P **P 08 57 30.6 +2.3**
BUR08 Bucovina Ar. S 35.03 304 *e*P **P 08 57 29.9 +1.5**
VOIR 35.04 301 ⇑P **P 08 57 31.7 +3.2**
IDID Didziasalis 35.46 318 *e*P **P 08 57 32.9 +0.9**
IDID AMB AMB 08 57 36.3
comp=Z,9.2nm,0.5s,mb5.0
IIGN Ignalina 35.75 318 *e*P **P 08 57 34.5 0.0**
IIGN AMB AMB 08 57 39.0
comp=Z,8.9nm,0.7s,mb4.8
IZAR Zarasai 35.85 318 *e*P **P 08 57 33.8 -1.5**
IZAR AMB AMB 08 57 39.8
comp=Z,6.7nm,0.7s,mb4.7
JOF Joensuu 36.38 331 *e*P **P 08 57 39.2 -0.5**
JOF pmax pmax
comp=Z,10.0nm,0.4s,mb5.1
JOF Joensuu 36.38 331 *ep* **P 08 57 39.2 -0.5**
comp=Z,9.9nm,0.4s,mb5.1
VSU Vasula 36.46 323 *c i*P **P 08 57 43.5 +3.1**
VSU pmax pmax
comp=Z,30nm,0.7s,mb5.3
DRGR 36.69 303 ⇓P **P 08 57 44.4 +1.8**
BJI Beijing 36.84 68 P **P 08 57 40.9 -3.1**
BJI S **S 09 03 25.3 -2.4**
BJI pmax pmax
comp=Z,6.0nm,0.6s,mb4.6
BJI pmax pmax
comp=Z,68nm,3.8s
BJI LR LR
comp=N,280nm,18.9s,MS4.1
BJI LR LR
comp=E,120nm,18.2s,MS4.1
BJI LR LR
comp=Z,84nm,20.2s,MS3.5
BZS Buzias 37.45 301 ⇑P **P 08 57 51.6 +2.5**
CRVS Cervenica-Dubn 37.60 306 *e*P **P 08 57 51.9 +1.6**
CRVS Cervenica-Dubn 37.60 306 *e*P **P 08 57 51.9 +1.6**
FINES FINESS Array B 37.88 327 P **P 08 57 52.5 0.0**
comp=Z,12nm,0.7s,mb4.8,baz=111,slow=10,SNR=28
FINES FINESS Array B 37.88 327 P **P 08 57 52.5 0.0**
FINES pmax pmax
comp=Z,13nm,0.7s
KAF Kangasniemi 38.06 328 *e*P **P 08 57 54.4 +0.5**
KAF pmax pmax
comp=Z,12nm,0.7s,mb4.7
KAF Kangasniemi 38.06 328 *e*P **P 08 57 54.4 +0.5**
comp=Z,12nm,0.7s,mb4.7
KAF Kangasniemi 38.06 328 *ep* **P 08 57 54.4 +0.5**
comp=Z,12nm,0.7s,mb4.7
KECS Kecovo 38.23 306 *e*P **P 08 58 00.9 +5.3**
KECS Kecovo 38.23 306 *e*P **P 08 58 00.9 +5.3**
APA Apatity 38.34 339 ⇑*e*P **P 08 57 55.6 -0.7**
APA *e* 08 59 24.0
APA *e* 09 00 12.0
APA *e*S **S 09 03 44.0 -5.9**
VYHS Vyhne 39.33 306 *e*P **P 08 58 09.0 +4.2**
VYHS pmax pmax
comp=Z,43nm,3.4s
VYHS Vyhne 39.33 306 *e*P **P 08 58 09.0 +4.2**
comp=Z,43nm,3.4s
VYHS Vyhne 39.33 306 *e*P **P 08 58 09.0 +4.2**
OKC Ostrava-Krasne 39.80 308 AMS AMS 09 18 50.0
comp=Z,300nm,31.6s
MORC Moravsky Berou 40.20 308 *e*P **P 08 58 13.2 +1.2**
MORC pmax pmax
comp=Z,3.0nm,0.9s,mb4.0
MORC Moravsky Berou 40.20 308 *e*P **P 08 58 13.2 +1.2**
comp=Z,2.7nm,0.9s,mb4.0
NJ2 Nanjing 40.78 80 *e*P **P 08 58 15.8 -1.3**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.7
DPC Dobruska-Polom 40.99 308 *e*P **P 08 58 19.3 +0.7**
DPC AMS AMS 09 15 00.0
UPC Upice 41.19 309 *e*P **P 08 58 22.1 +1.9**
KEV Kevo 41.53 339 *e*P **P 08 58 22.3 -0.4**
KEV Kevo 41.53 339 *ep* **P 08 58 22.3 -0.4**
ARCES ARCESS Array B 41.85 338 P **P 08 58 25.6 +0.2**
comp=Z,7.5nm,0.8s,mb4.4,baz=101,slow=6.3,SNR=13
ARCES ARCESS Array B 41.85 338 P **P 08 58 25.6 +0.2**
ARCES pmax pmax
comp=Z,8.0nm,0.8s
PSI Prapat 42.23 133 P **P 08 58 31.0 +1.9**
comp=Z,15nm,0.6s,mb4.8,baz=331,slow=5.6,SNR=18
PSI Prapat 42.23 133 P **P 08 58 31.0 +1.9**
PSI pmax pmax
comp=Z,15nm,0.6s,mb4.8
PSI Prapat 42.23 133 P **P 08 58 31.0 +1.9**
BRG Berggiesshubel 42.51 309 *e*P **P 08 58 34.8 +3.8**
comp=Z,5.3nm,0.7s,mb4.4
CLL Collm 43.09 310 ⇑*i*P **P 08 58 39.4 +3.7**
CLL *e* 08 58 54.0
CLL pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
CLL Collm 43.09 310 ⇑*i*P **P 08 58 39.4 +3.7**
comp=Z,4.0nm,0.9s,mb4.2
CLL *e* 08 58 54.0
CLL Collm 43.09 310 ⇑*i*pP pP 08 58 39.4 -1.2
comp=Z,4.0nm,0.9s
CLL *e* 08 58 54.0
CLL *e*PP PP 09 00 22.0 +6.3
CLL *e*(S) Sx 09 05 30.0
CN2 Changchun 43.18 61 *e*P **P 08 58 34.5 -2.0**
GRF Grafenberg Arr 44.30 308 *e*P **P 08 58 48.2 +2.8**
comp=Z,3.0nm,0.9s,mb4.0
GRF Grafenberg Arr 44.30 308 *e*P **P 08 58 48.2 +2.8**
GRF pmax pmax
comp=Z,3.0nm,0.9s,mb4.0
NB2 NORSAR Subarra 44.69 324 P **P 08 58 47.7 -0.7**
comp=Z,18nm,0.6s,mb5.1,baz=98,slow=7.9
NOA NORSAR Array B 44.69 324 P **P 08 58 47.5 -0.8**
comp=Z,18nm,0.7s,mb5.0,baz=99,slow=8.0,SNR=32
NOA LR LR 09 19 54.6
comp=Z,54nm,18.2s,MS3.5,baz=90,slow=40
NOA NORSAR Array B 44.69 324 P **P 08 58 47.5 -0.9**
NOA pmax pmax
comp=Z,18nm,0.7s
NOA MLR MLR
comp=Z,54nm,18.2s
KONO Kongsberg 45.33 322 *e*P **P 08 58 53.1 -0.4**
KONO pmax pmax
comp=Z,13nm,0.7s,mb4.9
KONO Kongsberg 45.33 322 *e*P **P 08 58 53.1 -0.5**
comp=Z,13nm,0.7s,mb4.9
YAK Yakutsk 45.61 35 *e*P **P 08 58 55.4 -0.3**
YAK pmax pmax
comp=Z,11nm,0.7s,mb4.9
KSRS Korea Array 46.35 69 P **P 08 59 02.6 +0.7**
comp=Z,2.4nm,0.7s,mb4.2,baz=277,slow=6.5,SNR=9.0
KSRS PcP PcP 09 00 39.7 +2.8
comp=Z,1.2nm,0.9s,baz=274,slow=2.4,SNR=5.2
KSRS LR LR 09 20 25.1
comp=Z,52nm,21.1s,MS3.5,baz=276,slow=39
KSRS Korea Array 46.35 69 P **P 08 59 02.6 +0.7**
KSRS 09 00 39.7
KSRS pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
KSRS MLR MLR
comp=Z,52nm,21.1s,MS3.5
PGF Pioggiola 46.84 298 *e*P **P 08 59 04.7 -0.9**
comp=Z,17nm,0.7s,mb4.8
PGF Pioggiola 46.84 298 *e*P **P 08 59 04.7 -0.9**
PGF pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
PGF Pioggiola 46.84 298 *e*P **P 08 59 04.7 -0.9**
comp=Z,8.3nm,0.7s,mb4.8
CDF Champ du Feu 47.01 306 *e*P **P 08 59 05.6 -1.3**
TIXI Tiksi 47.32 22 *e*P **P 08 59 08.5 -0.5**
TIXI pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
TIXI Tiksi 47.32 22 *e*P **P 08 59 08.2 -0.8**
comp=Z,14nm,1.1s,mb4.8
HINF Hinteralfeld 47.38 305 *e*P **P 08 59 09.2 -0.6**
comp=Z,5.4nm,0.8s,mb4.3
HINF Hinteralfeld 47.38 305 *e*P **P 08 59 09.2 -0.6**
HINF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
HINF Hinteralfeld 47.38 305 *e*P **P 08 59 09.2 -0.6**
comp=Z,2.7nm,0.8s,mb4.2
SBF Sospel 47.68 300 *e*P **P 08 59 11.7 -0.5**
HAU Haudompre 47.68 306 *e*P **P 08 59 11.5 -0.6**
HAU *e*MLR MLR
comp=Z,39nm,22.0s,MS3.0

HAU	**Haudompre**	**47.68**	**306**	*e*P	**P**	**08 59 11.5**	**-0.6**
HAU				LR	LR		
	comp=Z,40nm,22.0s,MS3.4						
LPG	**La Plagne**	**47.84**	**302**	*e*P	**P**	**08 59 11.6**	**-1.8**
LPL	**La Plagne**	**47.85**	**302**	*e*P	**P**	**08 59 11.8**	**-1.7**
MBDF	**Montbardon**	**47.97**	**301**	*e*P	**P**	**08 59 14.0**	**-0.4**
	comp=Z,11nm,0.6s,mb4.8						
MBDF	**Montbardon**	**47.97**	**301**	*e*P	**P**	**08 59 14.0**	**-0.4**
MBDF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
MBDF	**Montbardon**	**47.97**	**301**	*e*P	**P**	**08 59 14.0**	**-0.4**
	comp=Z,5.3nm,0.6s,mb4.8						
CABF	**La Chapelle**	**48.09**	**304**	*e*P	**P**	**08 59 14.8**	**-0.5**
	comp=Z,12nm,1.0s,mb4.6						
CABF	**La Chapelle**	**48.09**	**304**	*e*P	**P**	**08 59 14.8**	**-0.5**
CABF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
CABF	**La Chapelle**	**48.09**	**304**	*e*P	**P**	**08 59 14.8**	**-0.5**
	comp=Z,6.1nm,1.0s,mb4.6						
KEST	**Kesra**	**48.36**	**289**	P	**P**	**08 59 16.1**	**-1.5**
	comp=Z,1.2nm,0.9s,mb3.9,baz=63,slow=2.3,SNR=2.4						
ORIF	**Oris-en-Rattie**	**48.55**	**302**	*e*P	**P**	**08 59 18.1**	**-0.8**
	comp=Z,4.2nm,0.6s,mb4.4						
ORIF				*e*MLR	MLR		
	comp=Z,60nm,19.2s,MS3.3						
ORIF	**Oris-en-Rattie**	**48.55**	**302**	*e*P	**P**	**08 59 18.1**	**-0.8**
ORIF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
ORIF	**Oris-en-Rattie**	**48.55**	**302**	*e*P	**P**	**08 59 18.1**	**-0.8**
	comp=Z,2.1nm,0.6s,mb4.3						
BAIF	**Baives**	**48.77**	**309**	*e*P	**P**	**08 59 20.6**	**+0.1**
	comp=Z,9.4nm,0.8s,mb4.6						
BAIF	**Baives**	**48.77**	**309**	*e*P	**P**	**08 59 20.6**	**+0.1**
BAIF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
BAIF	**Baives**	**48.77**	**309**	*e*P	**P**	**08 59 20.6**	**+0.1**
	comp=Z,4.7nm,0.8s,mb4.6						
HABR	**Khabarovsk**	**49.05**	**53**	*e*P	**P**	**08 59 20.7**	**-1.9**
HABR				*e**PP	pP	08 59 30.5	+2.9
HABR				S	**S**	**09 06 22.0**	**-4.6**
HABR				*e**SS	sS	09 06 40.0	+5.3
HABR				*e*		09 09 09.1	
HABR				*e*SS	SS	09 09 56.4	-0.9
HABR				MLR	MLR		
	comp=Z,143nm,17.0s,MS4.0						
VIVF	**Saint-Julien-l**	**49.41**	**302**	*e*P	**P**	**08 59 24.7**	**-0.8**
	comp=Z,17nm,1.0s,mb4.7						
VIVF	**Saint-Julien-l**	**49.41**	**302**	*e*P	**P**	**08 59 24.7**	**-0.8**
VIVF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
VIVF	**Saint-Julien-l**	**49.41**	**302**	*e*P	**P**	**08 59 24.7**	**-0.8**
	comp=Z,8.7nm,1.0s,mb4.7						
LOR	**Lormes**	**49.47**	**305**	*e*P	**P**	**08 59 25.6**	**-0.3**
LOR				*e*MLR	MLR		
	comp=Z,51nm,19.5s,MS3.2						
LOR	**Lormes**	**49.47**	**305**	*e*P	**P**	**08 59 25.6**	**-0.3**
LOR				LR	LR		
	comp=Z,50nm,19.5s,MS3.5						
SMF	**Signal de Mont**	**49.60**	**304**	*e*P	**P**	**08 59 25.6**	**-1.3**
	comp=Z,18nm,0.9s,mb4.8						
SMF	**Signal de Mont**	**49.60**	**304**	*e*P	**P**	**08 59 25.6**	**-1.3**
SMF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
SMF	**Signal de Mont**	**49.60**	**304**	*e*P	**P**	**08 59 25.6**	**-1.3**
	comp=Z,8.9nm,0.9s,mb4.8						
AVF	**Avril sur Loir**	**49.90**	**305**	*e*P	**P**	**08 59 28.7**	**-0.5**
	comp=Z,15nm,0.9s,mb4.7						
AVF	**Avril sur Loir**	**49.90**	**305**	*e*P	**P**	**08 59 28.7**	**-0.5**
AVF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
AVF	**Avril sur Loir**	**49.90**	**305**	*e*P	**P**	**08 59 28.7**	**-0.5**
	comp=Z,7.4nm,0.9s,mb4.7						
BGF	**Bois d'Agland**	**50.29**	**304**	*e*P	**P**	**08 59 30.8**	**-1.4**
TCF	**Toulx Ste Croi**	**50.78**	**304**	*e*P	**P**	**08 59 34.9**	**-1.0**
	comp=Z,23nm,1.2s,mb4.7						
TCF	**Toulx Ste Croi**	**50.78**	**304**	*e*P	**P**	**08 59 34.9**	**-1.0**
TCF				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.7						
TCF	**Toulx Ste Croi**	**50.78**	**304**	*e*P	**P**	**08 59 34.9**	**-1.0**
	comp=Z,11nm,1.2s,mb4.7						
LDF	**La Druitiere**	**51.82**	**308**	*e*P	**P**	**08 59 43.3**	**-0.3**
FLN	**La Foliniere**	**52.02**	**308**	*e*P	**P**	**08 59 44.0**	**-1.1**
FLN				*e*MLR	MLR		
	comp=Z,43nm,20.5s,MS3.2						
FLN	**La Foliniere**	**52.02**	**308**	*e*P	**P**	**08 59 44.0**	**-1.1**
FLN				LR	LR		
	comp=Z,40nm,20.5s,MS3.4						
LFF	**La Frestale**	**52.10**	**303**	*e*P	**P**	**08 59 46.2**	**+0.4**
	comp=Z,12nm,0.6s,mb4.7						
LFF	**La Frestale**	**52.10**	**303**	*e*P	**P**	**08 59 46.2**	**+0.4**
LFF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
LFF	**La Frestale**	**52.10**	**303**	*e*P	**P**	**08 59 46.2**	**+0.4**
	comp=Z,5.8nm,0.6s,mb4.7						
MFF	**Saint Martin d**	**52.29**	**305**	*e*P	**P**	**08 59 46.3**	**-0.9**
GRR	**Gorron**	**52.34**	**307**	*e*P	**P**	**08 59 46.7**	**-0.8**
SGMF	**Saint Gilles**	**53.48**	**308**	*e*P	**P**	**08 59 55.6**	**-0.3**
ETSF	**Etsaut**	**53.56**	**301**	*e*P	**P**	**08 59 55.5**	**-1.1**
	comp=Z,12nm,0.8s,mb4.5						
ETSF	**Etsaut**	**53.56**	**301**	*e*P	**P**	**08 59 55.5**	**-1.1**
ETSF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
ETSF	**Etsaut**	**53.56**	**301**	*e*P	**P**	**08 59 55.5**	**-1.1**
	comp=Z,5.8nm,0.8s,mb4.6						
ROSF	**Rostrenen**	**53.92**	**308**	*e*P	**P**	**08 59 59.0**	**-0.1**
	comp=Z,25nm,1.0s,mb4.8						
ROSF	**Rostrenen**	**53.92**	**308**	*e*P	**P**	**08 59 59.0**	**-0.1**
ROSF				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
ROSF	**Rostrenen**	**53.92**	**308**	*e*P	**P**	**08 59 59.0**	**-0.1**
	comp=Z,13nm,1.0s,mb4.8						
YSS	**Yuzh-Sakhalins**	**54.45**	**54**	*e*P	**P**	**09 00 02.9**	**-0.1**
YSS				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
YSS	**Yuzh-Sakhalins**	**54.45**	**54**	*e*P	**P**	**09 00 02.9**	**-0.2**
	comp=Z,20nm,1.0s,mb5.0						
MAJO	**Matsushiro**	**54.46**	**67**	*e*P	**P**	**09 00 03.5**	**+0.2**
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
MAJO	**Matsushiro**	**54.46**	**67**	*e*P	**P**	**09 00 03.5**	**+0.3**
	comp=Z,5.6nm,0.7s,mb4.6						
MJAR	**Matsushiro Arr**	**54.46**	**67**	P	**P**	**09 00 03.2**	**-0.1**
	comp=Z,3.5nm,0.9s,mb4.3,baz=288,slow=9.8,SNR=14						
MJAR				LR	LR	09 23 32.2	
	comp=Z,45nm,21.5s,MS3.5,baz=190,slow=36						
MJAR	**Matsushiro Arr**	**54.46**	**67**	P	**P**	**09 00 03.2**	**-0.1**
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MJAR				MLR	MLR		
	comp=Z,45nm,21.5s						
SEY	**Seymchan**	**56.06**	**33**	*e*P	**P**	**09 00 13.6**	**-0.8**
ESDC	**Sonseca Array**	**57.03**	**298**	P	**P**	**09 00 20.8**	**-0.9**
	comp=Z,0.9nm,0.5s,mb4.1,baz=57,slow=7.7,SNR=9.2						
BILL	**Bilibino**	**60.20**	**26**	*e*P	**P**	**09 00 43.5**	**+0.3**
BILL				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
EVO	**Evora**	**60.38**	**298**	*e*P	**P**	**09 00 46.8**	**+1.8**
	comp=Z,52nm,1.5s,mb5.0						
TORD	**Torodi Ar. Bea**	**64.56**	**268**	P	**P**	**09 01 11.2**	**-2.0**
	comp=Z,3.0nm,0.6s,mb4.5,baz=48,slow=6.3,SNR=36						
TORD				LR	LR	09 31 31.3	
	comp=Z,66nm,19.4s,MS3.8,baz=335,slow=38						
COLD	**Coldfoot**	**73.44**	**15**	*e*P	**P**	**09 02 07.4**	**-0.3**
	comp=Z,4.3nm,0.8s,mb4.4						
FITZ	**Fitzroy Crossi**	**75.09**	**125**	P	**P**	**09 02 19.2**	**+1.2**
	comp=Z,4.4nm,1.1s,mb4.3,baz=323,slow=5.4,SNR=2.6						
INK	**Inuvik**	**75.28**	**9**	*e*P	**P**	**09 02 17.8**	**-0.5**
INK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
INK	**Inuvik**	**75.28**	**9**	*e*P	**P**	**09 02 17.8**	**-0.5**
	comp=Z,3.8nm,0.6s,mb4.5						
COLA	**College**	**75.96**	**16**	*e*P	**P**	**09 02 21.6**	**-0.6**
COLA				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
COLA	**College**	**75.96**	**16**	*e*P	**P**	**09 02 21.6**	**-0.6**
	comp=Z,6.6nm,0.8s,mb4.6						
BOSA	**Boshof**	**76.09**	**219**	P	**P**	**09 02 22.5**	**-0.9**
	comp=Z,2.4nm,0.6s,mb4.3,baz=33,slow=5.4,SNR=6.2						
BOSA	**Boshof**	**76.09**	**219**	P	**P**	**09 02 22.5**	**-0.9**
BOSA				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
DAWY	**Dawson**	**78.36**	**13**	*e*P	**P**	**09 02 34.8**	**-1.0**
WRA	**Warramunga Arr**	**82.32**	**121**	P	**P**	**09 02 57.6**	**-0.1**
	comp=Z,2.5nm,0.7s,mb4.3,baz=323,slow=4.8,SNR=29						
WRA	**Warramunga Arr**	**82.32**	**121**	P	**P**	**09 02 57.6**	**-0.1**
WRA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
YKA	**Yellowknife Ar**	**82.51**	**2**	P	**P**	**09 02 57.2**	**-0.9**
	comp=Z,3.1nm,0.8s,mb4.4,baz=345,slow=5.1,SNR=8.1						
YKA	**Yellowknife Ar**	**82.51**	**2**	P	**P**	**09 02 57.2**	**-0.9**
YKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SCHQ	**Schefferville**	**82.77**	**336**	P	**P**	**09 02 58.8**	**-0.8**
	comp=Z,3.2nm,0.9s,mb4.4,baz=53,slow=9.6,SNR=3.7						
ASAR	**Alice Springs**	**84.50**	**124**	P	**P**	**09 03 09.1**	**+0.3**
	comp=Z,4.4nm,0.9s,mb4.6,baz=311,slow=5.2,SNR=29						
ASAR	**Alice Springs**	**84.50**	**124**	P	**P**	**09 03 09.1**	**+0.3**
ASAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NVAR	**Mina Array Bea**	**106.30**	**6**	PKiKP	PKiKP	09 09 00.9	+0.5
	comp=Z,0.1nm,0.3s,baz=336,slow=2.0,SNR=2.5						
TXAR	**Lajitas Array**	**115.42**	**354**	PKKPbc	PKKPbc	09 19 51.7	+0.5
	comp=Z,0.4nm,0.7s,baz=182,slow=6.3,SNR=7.0						
CPUP	**Villa Florida**	**134.02**	**266**	PKP	PKPdf	09 09 52.5	-0.9
	comp=Z,0.9nm,0.6s,baz=90,slow=9.1,SNR=3.1						
CPUP	**Villa Florida**	**134.02**	**266**	PKIKP	PKPdf	09 09 52.5	-0.9
CPUP				pmax	pmax		
	comp=Z,1.0nm,0.6s						
LPAZ	**La Paz**	**137.88**	**286**	PKP	PKPdf	09 10 02.0	+1.3
	comp=Z,0.6nm,0.7s,baz=233,slow=5.1,SNR=3.4						
LPAZ	**La Paz**	**137.88**	**286**	PKIKP	PKPdf	09 10 02.1	+1.3
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
PLCA	**Paso Flores**	**148.34**	**248**	PKPbc	PKPbc	09 10 19.4	-2.5
	comp=Z,2.7nm,1.0s,baz=270,slow=1.0,SNR=2.3						

IDC 13 09:36:09.3±1.6, 5°.58S×154°.10E, h0km, mb3.7/5, mb1 4.0/6, mb1mx3.8/17, mbtmp3.9/6, ML4.7/1, Error ellipse: s-maj=36.7km s-min=29.3km az=112.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.95**	**124**	Pn	Pn	09 37 51.0	-1.5
	13nm,0.3s,baz=344,slow=3.9,SNR=2.4						
WRA	**Warramunga Arr**	**23.94**	**232**	P	P	09 41 25.7	+0.3
	0.8nm,0.4s,baz=56,slow=10,SNR=16						
ASAR	**Alice Springs**	**26.49**	**225**	P	P	09 41 49.0	+0.5
	0.4nm,0.5s,baz=58,slow=9.3,SNR=15						
FITZ	**Fitzroy Crossi**	**30.45**	**243**	P	P	09 42 23.8	-0.1
	1.8nm,0.5s,baz=50,slow=7.6,SNR=7.3						
SONM	**Songino Array**	**67.67**	**327**	P	P	09 47 08.4	+0.1
	0.6nm,0.6s,baz=130,slow=6.0,SNR=2.7						
MKAR	**Makanchi Array**	**81.76**	**319**	P	P	09 48 30.1	0.0
	0.2nm,0.5s,baz=97,slow=6.2,SNR=3.5						

*ISCJB **13** 09:36:21.4±0.5, 38°.38S±0°.03×175°.81E±0°.05, h200km±4km, mb3.6/4, Error ellipse: s-maj=7.4km s-min=5.0km az=27.0*
*IDC **13** 09:36:21.5±0.6, 38°.74S×176°.15E, h180km±7km, mb3.2/3, mb1 3.5/4, mb1mx3.3/13, mbtmp3.3/4, Error ellipse: s-maj=29.4km s-min=15.4km az=131.0*
*NEIC **13** 09:36:23.6, 38°.24S×175°.86E, h179km, mb4.4/1, After WEL.*
*WEL **13** 09:36:24.6±0.3, 38°.26S×175°.89E, h170km±2km, ML5.0/23, Error ellipse: s-maj=1.8km s-min=1.5km az=90.0*

ISC 13 09:36:22.0±0.5, 38°.36S±0°.03×175°.81E±0°.05, h196km±4km, n168, σ1§07/177, mb3.6/4, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UTU	**Utuhina**	**0.35**	**59**	PN	**Pn**	**09 36 47.6**	**-0.5**
UTU	**Utuhina**	**0.35**	**59**	P	**Pn**	**09 36 47.6**	**-0.5**
WATZ	**Wairara**	**0.35**	**190**	PN	**Pn**	**09 36 48.3**	**+0.2**
WATZ	**Wairara**	**0.35**	**190**	P	**Pn**	**09 36 48.3**	**+0.2**
HRRZ	**Handcock Road**	**0.37**	**95**	PN	**Pn**	**09 36 47.7**	**-0.4**
ALRZ	**Allen Road**	**0.46**	**116**	PN	**Pn**	**09 36 48.1**	**-0.4**
PRRZ	**Plateau Road**	**0.48**	**107**	PN	**Pn**	**09 36 48.2**	**-0.3**
KARZ	**Kaharoa**	**0.48**	**45**	PN	**Pn**	**09 36 47.8**	**-0.8**
OMRZ	**Omania**	**0.51**	**60**	PN	**Pn**	**09 36 47.9**	**-0.7**
RATZ	**Rangitukua**	**0.51**	**184**	PN	**Pn**	**09 36 48.7**	**+0.1**
RATZ	**Rangitukua**	**0.51**	**184**	P	**Pn**	**09 36 48.7**	**+0.1**
RRRZ	**Republican Roa**	**0.55**	**88**	PN	**Pn**	**09 36 48.2**	**-0.6**
TARZ	**Mount Tarawera**	**0.56**	**77**	PN	**Pn**	**09 36 48.5**	**-0.3**
RITZ	**Rihia Road**	**0.62**	**177**	PN	**Pn**	**09 36 49.9**	**+0.8**
RITZ	**Rihia Road**	**0.62**	**177**	P	**Pn**	**09 36 49.9**	**+0.8**
KATZ	**Kakaramea**	**0.62**	**188**	PN	**Pn**	**09 36 49.6**	**+0.5**
KATZ				SN	**Sn**	09 37 09.3	-1.0
KATZ	**Kakaramea**	**0.62**	**188**	P	**Pn**	**09 36 49.6**	**+0.5**
KATZ				S	**Sn**	09 37 09.3	-1.0
TOZ	**Tahuroa Road**	**0.67**	**339**	PN	**Pn**	**09 36 48.5**	**-0.9**
TOZ				SN	**Sn**	09 37 07.8	-2.7
TOZ	**Tahuroa Road**	**0.67**	**339**	P	**Pn**	**09 36 48.5**	**-0.9**
TGRZ	**Tauranga**	**0.72**	**30**	PN	**Pn**	**09 36 48.7**	**-0.9**
TGRZ	**Tauranga**	**0.72**	**30**	P	**Pn**	**09 36 48.7**	**-1.0**
KRVZ	**Karewarewa**	**0.75**	**190**	PN	**Pn**	**09 36 50.3**	**+0.6**
KRVZ				SN	**Sn**	09 37 10.4	-1.0
HIZ	**Hauiti**	**0.77**	**258**	PN	**Pn**	**09 36 49.9**	**+0.1**
HIZ	**Hauiti**	**0.77**	**258**	P	**Pn**	**09 36 49.9**	**+0.1**
TWVZ	**Taurewa**	**0.77**	**202**	PN	**Pn**	**09 36 50.4**	**+0.5**
TWVZ	**Taurewa**	**0.77**	**202**	P	**Pn**	**09 36 50.4**	**+0.6**
EDRZ	**Edgecumbe**	**0.77**	**71**	PN	**Pn**	**09 36 49.1**	**-0.8**
EDRZ	**Edgecumbe**	**0.77**	**71**	P	**Pn**	**09 36 49.1**	**-0.8**
MARZ	**Manawahe**	**0.78**	**62**	PN	**Pn**	**09 36 49.3**	**-0.7**
MARZ	**Manawahe**	**0.78**	**62**	P	**Pn**	**09 36 49.3**	**-0.6**
WTVZ	**West Tongariro**	**0.78**	**193**	PN	**Pn**	**09 36 50.5**	**+0.6**
WTVZ	**West Tongariro**	**0.78**	**193**	P	**Pn**	**09 36 50.5**	**+0.6**
OPRZ	**Ohinepanea**	**0.78**	**49**	PN	**Pn**	**09 36 48.6**	**-1.3**
OTVZ	**Oturere**	**0.81**	**188**	PN	**Pn**	**09 36 50.9**	**+0.8**
NGZ	**Ngauruhoe**	**0.83**	**191**	PN	**Pn**	**09 36 50.8**	**+0.6**
NGZ	**Ngauruhoe**	**0.83**	**191**	P	**Pn**	**09 36 50.8**	**+0.6**
WPVZ	**Whakapapa**	**0.87**	**194**	PN	**Pn**	**09 36 51.2**	**+0.8**
TUVZ	**Tukino**	**0.92**	**188**	PN	**Pn**	**09 36 51.6**	**+0.9**
TUVZ	**Tukino**	**0.92**	**188**	P	**Pn**	**09 36 51.6**	**+0.9**
FWVZ	**Far West T-bar**	**0.92**	**193**	PN	**Pn**	**09 36 51.6**	**+0.9**
FWVZ	**Far West T-bar**	**0.92**	**193**	P	**Pn**	**09 36 51.6**	**+0.9**
DRZ	**Dome Shelter**	**0.94**	**192**	PN	**Pn**	**09 36 53.7**	**+2.9**
DRZ	**Dome Shelter**	**0.94**	**192**	P	**Pn**	**09 36 53.7**	**+2.9**
TRVZ	**Turoa**	**0.96**	**192**	PN	**Pn**	**09 36 52.0**	**+1.0**
BKZ	**Black Stump Fm**	**0.97**	**147**	PN	**Pn**	**09 36 51.4**	**+0.3**
BKZ	**Black Stump Fm**	**0.97**	**147**	P	**Pn**	**09 36 51.4**	**+0.4**
WNVZ	**Wahianoa**	**0.98**	**190**	PN	**Pn**	**09 36 52.0**	**+0.9**
WNVZ	**Wahianoa**	**0.98**	**190**	P	**Pn**	**09 36 52.0**	**+0.9**
PKVZ	**Pokaka**	**1.00**	**201**	PN	**Pn**	**09 36 52.0**	**+0.8**
URZ	**Urewera**	**1.03**	**85**	PN	**Pn**	**09 36 50.2**	**-1.2**
URZ				SN	**Sn**	09 37 09.4	-4.9
URZ	**Urewera**	**1.03**	**85**	P	**Pn**	**09 36 50.3**	**-1.1**
	96nm,0.3s,baz=262,slow=7.0,SNR=706						
URZ				S	**Sn**	**09 37 09.2**	**-5.0**
	274nm,0.3s,baz=86,slow=0.4,SNR=13						
URZ	**Urewera**	**1.03**	**85**	P	**Pn**	**09 36 50.2**	**-1.3**
MOVZ	**Moawhango**	**1.05**	**183**	PN	**Pn**	**09 36 52.0**	**+0.4**
MOVZ				SN	**Sn**	09 37 12.2	-2.5
MOVZ	**Moawhango**	**1.05**	**183**	P	**Pn**	**09 36 52.0**	**+0.4**
MTVZ	**Mangateitei**	**1.06**	**194**	PN	**Pn**	**09 36 52.5**	**+0.8**
NMHZ	**Naumai**	**1.07**	**134**	PN	**Pn**	**09 36 53.0**	**+1.2**
VRZ	**Vera Road**	**1.12**	**227**	PN	**Pn**	**09 36 53.2**	**+1.0**
VRZ				SN	**Sn**	09 37 16.6	+0.9
VRZ	**Vera Road**	**1.12**	**227**	P	**Pn**	**09 36 53.2**	**+1.0**
VRZ				S	**Sn**	09 37 16.6	+0.9
MYRZ	**Mayor Island**	**1.13**	**18**	PN	**Pn**	**09 36 51.5**	**-0.8**
RAHZ	**Arahi**	**1.14**	**120**	PN	**Pn**	**09 36 52.9**	**+0.6**
MCHZ	**McNeill Hill**	**1.28**	**148**	PN	**Pn**	**09 36 54.8**	**+1.4**
MWZ	**Matawai**	**1.35**	**90**	PN	**Pn**	**09 36 53.3**	**-0.7**
MWZ				SN	**Sn**	09 37 15.6	-3.2
MWZ	**Matawai**	**1.35**	**90**	P	**Pn**	**09 36 53.3**	**-0.7**
MHEZ	**Mangahewa**	**1.37**	**238**	PN	**Pn**	**09 36 55.6**	**+1.5**
WIZ	**White Island**	**1.37**	**53**	PN	**Pn**	**09 36 53.2**	**-1.0**
WIZ	**White Island**	**1.37**	**53**	P	**Pn**	**09 36 53.2**	**-1.0**
RAEZ	**Rainy Point**	**1.45**	**230**	PN	**Pn**	**09 36 56.3**	**+1.6**
RAEZ	**Rainy Point**	**1.45**	**230**	P	**Pn**	**09 36 56.3**	**+1.5**
DREZ	**Durham Road**	**1.51**	**236**	PN	**Pn**	**09 36 56.9**	**+1.5**
WAZ	**Wanganui**	**1.54**	**205**	PN	**Pn**	**09 36 56.6**	**+1.0**
WAZ	**Wanganui**	**1.54**	**205**	P	**Pn**	**09 36 56.6**	**+1.0**
PNHZ	**Pukenui**	**1.58**	**169**	PN	**Pn**	**09 36 56.8**	**+0.8**
KNZ	**Kokohu**	**1.60**	**115**	PN	**Pn**	**09 36 56.6**	**+0.5**
KNZ	**Kokohu**	**1.60**	**115**	P	**Pn**	**09 36 56.6**	**+0.4**
KUZ	**Kuaotunu**	**1.61**	**357**	PN	**Pn**	**09 36 55.0**	**-1.4**
KUZ	**Kuaotunu**	**1.61**	**357**	P	**Pn**	**09 36 55.0**	**-1.4**
NEZ	**North Egmont**	**1.62**	**235**	PN	**Pn**	**09 36 58.3**	**+1.9**
NEZ	**North Egmont**	**1.62**	**235**	P	**Pn**	**09 36 58.3**	**+1.9**
CKHZ	**Cape Kidnapper**	**1.63**	**143**	PN	**Pn**	**09 36 57.7**	**+1.3**
DFE	**Dawson Falls**	**1.65**	**234**	PN	**Pn**	**09 36 58.5**	**+1.9**
DFE	**Dawson Falls**	**1.65**	**234**	P	**Pn**	**09 36 58.5**	**+1.9**
PKE	**Pukeiti**	**1.65**	**239**	PN	**Pn**	**09 36 58.3**	**+1.6**
PKE	**Pukeiti**	**1.65**	**239**	P	**Pn**	**09 36 58.3**	**+1.6**
KAHZ	**Kahuranaki**	**1.66**	**150**	PN	**Pn**	**09 36 58.0**	**+1.3**
TSZ	**Takapari Road**	**1.70**	**176**	PN	**Pn**	**09 36 58.0**	**+0.8**
TSZ	**Takapari Road**	**1.70**	**176**	P	**Pn**	**09 36 58.0**	**+0.9**
PRGZ	**Paritu Road**	**1.72**	**110**	PN	**Pn**	**09 36 57.7**	**+0.4**
WTAZ	**Waiatarua**	**1.73**	**325**	PN	**Pn**	**09 36 57.5**	**0.0**
WTAZ	**Waiatarua**	**1.73**	**325**	P	**Pn**	**09 36 57.5**	**0.0**
WPHZ	**Waipukurau**	**1.77**	**164**	PN	**Pn**	**09 36 58.8**	**+1.0**
NWEZ	**Newall Road**	**1.77**	**238**	PN	**Pn**	**09 36 59.5**	**+1.6**
NWEZ	**Newall Road**	**1.77**	**238**	P	**Pn**	**09 36 59.5**	**+1.7**
MHGZ	**Mahia Peninsul**	**1.82**	**116**	PN	**Pn**	**09 36 59.2**	**+0.9**
PXZ	**Pawanui**	**1.86**	**154**	PN	**Pn**	**09 36 59.8**	**+1.1**
CNGZ	**Carnagh Statio**	**1.89**	**95**	PN	**Pn**	**09 36 59.6**	**+0.6**
PUZ	**Puketiti**	**1.95**	**82**	PN	**Pn**	**09 36 58.9**	**-0.8**
PUZ	**Puketiti**	**1.95**	**82**	P	**Pn**	**09 36 58.9**	**-0.7**
DVHZ	**Dannevirke**	**1.96**	**172**	PN	**Pn**	**09 37 00.4**	**+0.7**
PRHZ	**Porangahau**	**2.01**	**162**	PN	**Pn**	**09 37 01.2**	**+1.0**
POWZ	**Post Office Ro**	**2.03**	**181**	PN	**Pn**	**09 37 01.1**	**+0.7**
MXZ	**Matakaoa Point**	**2.13**	**69**	PN	**Pn**	**09 37 01.2**	**-0.3**
MRZ	**Mangatainoka R**	**2.31**	**184**	PN	**Pn**	**09 37 03.4**	**0.0**
MRZ				SN	**Sn**	09 37 33.5	-2.3
MRZ	**Mangatainoka R**	**2.31**	**184**	P	**Pn**	**09 37 03.4**	**0.0**
BFZ	**Birch Farm**	**2.34**	**172**	PN	**Pn**	**09 37 04.0**	**+0.2**
BFZ	**Birch Farm**	**2.34**	**172**	P	**Pn**	**09 37 04.0**	**+0.2**
TIWZ	**Tintock**	**2.42**	**179**	PN	**Pn**	**09 37 05.1**	**+0.5**
OGWZ	**Otaki Gorge**	**2.50**	**191**	PN	**Pn**	**09 37 06.0**	**+0.5**
HOWZ	**Holdsworth Sta**	**2.55**	**185**	PN	**Pn**	**09 37 06.2**	**+0.2**
KIW	**Kapiti Island**	**2.59**	**195**	PN	**Pn**	**09 37 06.7**	**+0.1**
TMWZ	**Te Maipa**	**2.75**	**179**	PN	**Pn**	**09 37 08.5**	**+0.2**
CAW	**Cannon Point**	**2.81**	**192**	PN	**Pn**	**09 37 09.1**	**+0.1**
CAW	**Cannon Point**	**2.81**	**192**	P	**Pn**	**09 37 09.1**	**+0.1**
MTW	**Mount Morrison**	**2.81**	**185**	PN	**Pn**	**09 37 08.9**	**-0.1**
MTW	**Mount Morrison**	**2.81**	**185**	P	**Pn**	**09 37 08.9**	**-0.1**
DUWZ	**D'Urville Isla**	**2.84**	**210**	PN	**Pn**	**09 37 09.4**	**-0.1**
WEL	**Wellington**	**3.03**	**195**	PN	**Pn**	**09 37 11.6**	**0.0**
WEL	**Wellington**	**3.03**	**195**	P	**Pn**	**09 37 11.6**	**-0.1**
PAWZ	**Paruwai Farm**	**3.03**	**185**	PN	**Pn**	**09 37 11.5**	**-0.2**
PAWZ	**Paruwai Farm**	**3.03**	**185**	P	**Pn**	**09 37 11.5**	**-0.2**
TRWZ	**Traveller**	**3.04**	**182**	PN	**

KIF					S	Sn	09 43 37.7	+1.6
KIF					Sg	Sg	09 43 42.6	-0.7
	comp=Z,8.6nm,0.3s							
LANU	**Lannavaara**	**2.54**	**83**	*e*P	Pn	Pn	09 43 10.0	+0.2
LANU				*e*S	Sn	Sn	09 43 41.3	+0.3
LANU				*e*SG	Sg	Sg	09 43 46.9	-2.7
LANU	**Lannavaara**	**2.54**	**83**	P	Pn	Pn	09 43 10.0	+0.2
LANU				S	Sn	Sn	09 43 41.2	+0.2
LANU				Sg	Sg	Sg	09 43 46.9	-2.7
KTK1	**Kautokeino**	**3.16**	**65**	*e*	Sn	Sn	09 43 57.3	+1.0
KTK1	**Kautokeino**	**3.16**	**65**	*e*S	Sn	Sn	09 43 57.3	+1.0
KTK1	**Kautokeino**	**3.16**	**65**	S	Sn	Sn	09 43 57.2	+0.9
HEF	**Hetta**	**3.18**	**76**	*e*P	Pn	Pn	09 43 18.7	0.0
HEF				*e*S	Sn	Sn	09 43 57.6	+0.7
HEF	**Hetta**	**3.18**	**76**	P	Pn	Pn	09 43 18.6	-0.1
HEF				S	Sn	Sn	09 43 57.5	+0.6
ARA0	**ARCESS Array S**	**4.09**	**61**	Pn	Pn	Pn	09 43 30.1	-1.1
	baz=248,slow=14							
ARA0				Pg	Pg	Pg	09 43 41.7	-4.7
	baz=245,slow=16							
ARA0				Lg			09 44 34.7	
	baz=242,slow=28							
ARA0	**ARCESS Array S**	**4.09**	**61**	*e*P	Pn	Pn	09 43 30.1	-1.1
ARA0				*e*PG	Pg	Pg	09 43 41.7	-4.7
ARA0				*e*SG	Sg	Sg	09 44 34.7	-4.7
ARA0	**ARCESS Array S**	**4.09**	**61**	Pg	Pg	Pg	09 43 41.7	-4.8
	baz=245,slow=14,SNR=9.2							
ARA0	**ARCESS Array S**	**4.09**	**61**	Pn	Pn	Pn	09 43 30.1	-1.1
	baz=248,slow=13,SNR=5.0							
SGF	**Sodankyl**	**4.32**	**90**	*e*P	Pn	Pn	09 43 33.7	-0.5
SGF				*e*S	Sn	Sn	09 44 23.9	-0.9
SGF	**Sodankyl**	**4.32**	**90**	P	Pn	Pn	09 43 33.6	-0.6
SGF				S	Sn	Sn	09 44 23.8	-1.0
RNF	**Rovaniemi**	**4.36**	**102**	*e*S	Sn	Sn	09 44 24.3	-1.5
RNF	**Rovaniemi**	**4.36**	**102**	S	Sn	Sn	09 44 24.2	-1.6
KEV	**Kevo**	**4.66**	**61**	*e*P	Pn	Pn	09 43 39.0	0.0
KEV				*e*S	Sn	Sn	09 44 32.1	-1.1
KEV				*e*SG	Sg	Sg	09 44 52.8	-4.9
KEV				MSG			09 44 56.1	
	comp=Z,2.4nm,0.3s							
KEV	**Kevo**	**4.66**	**61**	P	Pn	Pn	09 43 38.9	-0.1
KEV				S	Sn	Sn	09 44 32.1	-1.1
OUL	**Oulu**	**5.08**	**118**	*e*P	Pn	Pn	09 43 43.5	-1.3
OUL				*e*S	Sn	Sn	09 44 40.3	-3.4
OUL	**Oulu**	**5.08**	**118**	P	Pn	Pn	09 43 43.4	-1.4
OUL				S	Sn	Sn	09 44 40.3	-3.4
VRF	**Varrio**	**5.43**	**85**	*e*P	Pn	Pn	09 43 49.5	-0.1
VRF				*e*S	Sn	Sn	09 44 50.6	-1.7
VRF	**Varrio**	**5.43**	**85**	P	Pn	Pn	09 43 49.4	-0.2
VRF				S	Sn	Sn	09 44 50.5	-1.8
VAF	**Ylistaro**	**5.73**	**144**	*e*P	Pn	Pn	09 43 52.5	-1.1
VAF				*e*S	Sn	Sn	09 44 55.4	-4.2
VAF	**Ylistaro**	**5.73**	**144**	P	Pn	Pn	09 43 52.5	-1.2
VAF				S	Sn	Sn	09 44 55.4	-4.3
MSF	**Maaselka**	**5.76**	**103**	*e*P	Pn	Pn	09 43 54.7	+0.6
MSF				*e*S	Sn	Sn	09 44 56.3	-4.0
MSF	**Maaselka**	**5.76**	**103**	P	Pn	Pn	09 43 54.6	+0.5
MSF				S	Sn	Sn	09 44 56.3	-4.0
KU6	**Riekki**	**6.03**	**101**	*e*P	Pn	Pn	09 43 56.7	-1.0
KU6				*e*S	Sn	Sn	09 45 02.5	-4.3
KU6	**Riekki**	**6.03**	**101**	P	Pn	Pn	09 43 56.7	-1.0
KU6				S	Sn	Sn	09 45 02.5	-4.4
KJN	**Kajaani**	**6.33**	**121**	*e*P	Pn	Pn	09 44 00.7	-1.1
KJN				*e*S	Sn	Sn	09 45 11.2	-3.2
KJN	**Kajaani**	**6.33**	**121**	P	Pn	Pn	09 44 00.7	-1.2
KJN				S	Sn	Sn	09 45 11.1	-3.2
SUF	**Sumiainen**	**6.88**	**133**	*e*P	Pn	Pn	09 44 07.5	-1.9
SUF				*e*S	Sn	Sn	09 45 23.5	-4.3
SUF	**Sumiainen**	**6.88**	**133**	P	Pn	Pn	09 44 07.4	-2.0
SUF				S	Sn	Sn	09 45 23.5	-4.3
KEF	**Keuruu**	**7.00**	**140**	*e*P	Pn	Pn	09 44 09.1	-2.0
KEF				*e*S	Sn	Sn	09 45 25.9	-5.0
KEF	**Keuruu**	**7.00**	**140**	P	Pn	Pn	09 44 09.0	-2.1
KEF				S	Sn	Sn	09 45 25.9	-5.0
NB2	**NORSAR Subarra**	**7.07**	**196**	Lg			09 46 04.3	
	baz=3.9,slow=37							
NB2	**NORSAR Subarra**	**7.07**	**196**	Lg			09 46 04.3	
	baz=3.9,slow=37							
NB2	**NORSAR Subarra**	**7.07**	**196**	*e*SG	Sg	Sg	09 46 04.3	-11
KAF	**Kangasniemi**	**7.41**	**136**	*e*P	Pn	Pn	09 44 14.7	-2.1
KAF				*e*S	Sn	Sn	09 45 36.3	-4.7
KAF	**Kangasniemi**	**7.41**	**136**	P	Pn	Pn	09 44 14.6	-2.1
KAF				S	Sn	Sn	09 45 36.3	-4.7
HFS	**Hagfors**	**7.79**	**186**	Pn	Pn	Pn	09 44 21.1	-0.8
	baz=356,slow=16							
HFS				Sn	Sn	Sn	09 45 46.1	-4.2
	slow=37							
HFS				Lg			09 46 31.4	
	baz=352,slow=28							
HFS	**Hagfors**	**7.79**	**186**	*e*P	Pn	Pn	09 44 21.1	-0.8
HFS				*e*S	Sn	Sn	09 45 46.1	-4.2
HFS				*e*			09 46 31.4	
HFS	**Hagfors**	**7.79**	**186**	P	Pn	Pn	09 44 21.1	-0.8
HFS				S	Sn	Sn	09 45 46.1	-4.2
FIA0	**FINESS Array S**	**7.92**	**139**	Pn	Pn	Pn	09 44 22.4	-1.3
	baz=326,slow=12							
FIA0				Sn	Sn	Sn	09 45 45.2	-8.3
	baz=340,slow=22							
FIA0				Lg			09 46 31.3	
	baz=338,slow=28							
FIA0	**FINESS Array S**	**7.92**	**139**	Pn	Pn	Pn	09 44 22.4	-1.3
	baz=326,slow=12,SNR=8.6							
FIA0				S	Sn	Sn	09 45 48.3	-5.2
JOF	**Joensuu**	**8.31**	**119**	*e*P	Pn	Pn	09 44 27.5	-1.5
JOF				*e*S	Sn	Sn	09 45 57.8	-5.2
JOF	**Joensuu**	**8.31**	**119**	P	Pn	Pn	09 44 27.4	-1.6

IDC 13 09:58:06.3±0.9, 2°.32S×125°.05E, $h0^{km}$, mb3.9/7, mb1 4.0/8, mb1mx3.9/19, mbtmp3.9/8, ML3.9/1, Error ellipse: s-maj=88.3km s-min=17.1km az=68.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**15.69**	**178**	Pn	Pn	10 01 53.7	+4.9
	0.1nm,0.3s,baz=14,slow=12,SNR=3.5						
WRA	**Warramunga Arr**	**19.73**	**153**	P	Pn	10 02 37.8	-1.2
	0.4nm,0.3s,baz=337,slow=12,SNR=28						
ASAR	**Alice Springs**	**22.89**	**159**	P	P	10 03 12.3	+0.7
	2.8nm,0.8s,baz=325,slow=7.3,SNR=28						
STKA	**Stephens Creek**	**33.28**	**154**	P	P	10 04 44.7	-0.8
	4.9nm,0.9s,baz=328,slow=9.5,SNR=3.2						
KSRS	**Korea Array**	**39.66**	**4**	P	P	10 05 39.8	-0.3
	0.6nm,0.8s,baz=163,slow=8.9,SNR=4.4						
SONM	**Songino Array**	**52.55**	**344**	P	P	10 07 22.1	+0.7
	0.3nm,0.5s,baz=160,slow=4.7,SNR=6.0						
MKAR	**Makanchi Array**	**61.65**	**328**	P	P	10 08 26.1	+0.2
	1.5nm,0.6s,baz=125,slow=8.7,SNR=17						
ZALV	**Zalesovo Beam**	**65.26**	**335**	P	P	10 08 49.0	-0.7
	0.7nm,0.5s,baz=170,slow=4.4,SNR=3.5						
BVAR	**Borovoye Array**	**71.52**	**329**	P	P	10 09 29.0	+0.1
	0.3nm,0.4s,baz=186,slow=8.1,SNR=3.7						

*SOF **13** 10:23:39.3, 43°.28N×26°.01E, $h6^{km}$, MD2.7*
*BEO **13** 10:23:40.5±0.6, 43°.26N×25°.97E, $h0^{km}$, ML2.5/4*
*CSEM **13** 10:23:41.9±0.3, 43°.14N×26°.05E, $h2^{km}$, MD2.7, Error ellipse: s-maj=6.0km s-min=4.9km az=106.0*
*NEIC **13** 10:23:41.5, 43°.14N×26°.15E, $h1^{km}$, ML2.7(BUC), After BUC.*
*THE **13** 10:23:44.1, 43°.08N×26°.05E, $h9^{km}\pm49^{km}$, Error ellipse: s-maj=66.1km s-min=1.9km az=63.0*

ISC 13 10:23:39.8±0.5, 43°.26N±0°.03×25°.96E±0°.03, $h4^{km}\pm7^{km}$, n34, σ0.99/52, 2C-11D, Bulgaria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SZH	**Strazhica**	**0.02**	**290**	*i* Pg	**Pg**	**10 23 40.5**	**-0.1**
SZH	**Strazhica**	**0.02**	**290**	*i* Pg	**Pg**	**10 23 40.5**	**-0.1**
PVL	**Pavlikeni**	**0.46**	**265**	*i* Pg	**Pg**	**10 23 52.3**	**+3.7**
PVL	**Pavlikeni**	**0.46**	**265**	*i* Pg	**Pg**	**10 23 52.3**	**+3.7**
ZIMR		**0.58**	**313**	↓P	**Sg**	**10 23 56.0**	**-2.7**
JMB	**Yambol**	**0.92**	**150**	*i* Pg	**Pg**	**10 23 57.3**	**-0.1**
JMB				*i* Sg	**Sg**	**10 24 09.1**	**-0.2**
JMB	**Yambol**	**0.92**	**150**	P	**Pg**	**10 23 57.5**	**+0.1**
JMB				S	**Sg**	**10 24 09.2**	**-0.1**
JMB	**Yambol**	**0.92**	**150**	P	**Pg**	**10 23 57.5**	**+0.1**
JMB				*i* Sg	**Sg**	**10 24 09.1**	**-0.2**
INCR	**INCERC-Sediu C**	**1.19**	**7**	S	**Sg**	**10 24 23.0**	**+5.0**
SULR		**1.43**	**9**	↓P	**Pg**	**10 24 09.8**	**+2.5**
SULR				S	**Sg**	**10 24 30.2**	**+4.3**
SULR		**1.43**	**9**	↓P	**Pg**	**10 24 09.8**	**+2.5**
SULR				S	**Sg**	**10 24 30.2**	**+4.3**
PLD	**Plovdiv**	**1.48**	**219**	↓*i*Pg	**Pn**	**10 24 07.3**	**+0.1**
PLD				*i* Sg	**Sg**	**10 24 27.6**	**+0.3**
PLD	**Plovdiv**	**1.48**	**219**	P	**Pn**	**10 24 07.4**	**+0.2**
PLD				S	**Sg**	**10 24 27.5**	**+0.2**
PLD	**Plovdiv**	**1.48**	**219**	P	**Pn**	**10 24 07.4**	**+0.2**
PLD				S	**Sg**	**10 24 27.5**	**+0.2**
PGB	**Panagyurishte**	**1.50**	**242**	*i* Pg	**Pg**	**10 24 09.2**	**+0.8**
PGB	**Panagyurishte**	**1.50**	**242**	*i* Pg	**Pg**	**10 24 09.2**	**+0.8**
MPEP	**Malo Peshtene**	**1.62**	**274**	*i* P	**Pg**	**10 24 11.0**	**+0.1**
KDZ	**Kurdzhali**	**1.66**	**194**	*i* P	**Pg**	**10 24 11.2**	**-0.4**
KDZ	**Kurdzhali**	**1.66**	**194**	*i* P	**Pg**	**10 24 11.2**	**-0.4**
CVD	**Cernavoda**	**1.84**	**54**	S	**Sg**	**10 24 38.3**	**-0.5**
VTS	**Vitosha**	**2.13**	**253**	↑*i*Pg	**Pb**	**10 24 19.2**	**+0.3**
VTS				*e*Sg	**Sg**	**10 24 48.0**	**-0.1**
VTS	**Vitosha**	**2.13**	**253**	↓P	**Pb**	**10 24 19.0**	**+0.1**
VTS				S	**Sg**	**10 24 48.4**	**+0.3**
VTS	**Vitosha**	**2.13**	**253**	P	**Pb**	**10 24 19.6**	**+0.7**
VTS				S	**Sg**	**10 24 47.9**	**-0.2**
VTS	**Vitosha**	**2.13**	**253**	↑*i*Pg	**Pb**	**10 24 19.2**	**+0.3**
VTS	**Vitosha**	**2.13**	**253**	P	**Pb**	**10 24 19.6**	**+0.7**
VTS				S	**Sg**	**10 24 47.9**	**-0.2**
TIRR	**Tirgusor**	**2.14**	**55**	↓P	**Pb**	**10 24 17.8**	**-1.4**
TIRR				S	**Sb**	**10 24 46.0**	**-0.1**
TIRR	**Tirgusor**	**2.14**	**55**	↓P	**Pb**	**10 24 17.8**	**-1.4**
TIRR				S	**Sb**	**10 24 46.0**	**-0.1**
MLR	**Muntele Rosu**	**2.23**	**360**	↓P	**Pg**	**10 24 22.2**	**-0.3**
MLR				S	**Sg**	**10 24 53.3**	**+1.9**
MLR	**Muntele Rosu**	**2.23**	**360**	↓P	**Pg**	**10 24 22.2**	**-0.3**
MLR				S	**Sg**	**10 24 53.3**	**+1.9**
VOIR		**2.27**	**344**	↓P	**Pg**	**10 24 23.1**	**-0.2**
VOIR		**2.27**	**344**	↓P	**Pg**	**10 24 23.1**	**-0.2**
ZAPS	**Zavoj**	**2.43**	**271**	*e*Pg	**Pg**	**10 24 24.9**	**-1.4**
ZAPS				*e*Sg	**Sg**	**10 24 58.8**	**+1.0**
BARS	**Barje**	**3.07**	**263**	*e*Pg	**Pb**	**10 24 35.5**	**+0.6**
BARS				*e*Sg	**Sg**	**10 25 17.9**	**-0.4**
BZS	**Buzias**	**3.90**	**309**	*e*Sg	**Sg**	**10 25 43.8**	**-1.2**

IDC 13 10:31:41.8±1.6, 30°.97N×41°.59W, $h0^{km}$, mb3.5/4, mb1 3.9/4, mb1mx3.5/26, mbtmp3.5/4, MS3.4/8, Ms1 3.3/8, ms1mx3.1/21, Error ellipse: s-maj=191.8km s-min=25.4km az=20.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCHQ	**Schefferville**	**29.87**	**330**	LR	LR	10 49 49.2	
	comp=Z,54nm,18.0s,baz=121,slow=36						
MDT	**Midelt**	**31.34**	**77**	LR	LR	10 47 30.6	
	comp=Z,99nm,18.8s,baz=291,slow=30						
DBIC	**Dimbokro**	**42.02**	**117**	LR	LR	10 54 11.7	
	comp=Z,74nm,21.3s,baz=339,slow=32						
TORD	**Torodi Ar. Bea**	**43.54**	**104**	P	P	10 39 47.4	-0.1
	0.6nm,1.0s,baz=331,slow=5.4,SNR=2.9						
ULM	**Lac du Bonnet**	**44.40**	**312**	LR	LR	10 58 32.0	
	comp=Z,40nm,20.3s,baz=49,slow=36						
NOA	**NORSAR Array B**	**45.57**	**33**	LR	LR	10 57 47.5	
	comp=Z,13nm,19.2s,baz=125,slow=34						
HFS	**Hagfors**	**46.52**	**35**	LR	LR	10 56 27.7	
	comp=Z,24nm,19.3s,baz=186,slow=32						
TXAR	**Lajitas Array**	**53.08**	**285**	P	P	10 41 01.1	0.0
	0.3nm,0.8s,baz=95,slow=3.8,SNR=3.2						
TXAR				LR	LR	11 00 20.4	
	comp=Z,25nm,18.9s,baz=140,slow=32						
PDAR	**Pinedale Array**	**54.29**	**303**	P	P	10 41 10.1	+0.4
	1.6nm,1.0s,baz=79,slow=9.3,SNR=9.6						
PDAR				LR	LR	11 03 13.7	
	comp=Z,69nm,18.3s,baz=90,slow=35						
NVAR	**Mina Array Bea**	**61.84**	**300**	P	P	10 42 03.0	+0.2
	0.2nm,0.5s,baz=98,slow=6.6,SNR=2.5						

IDC 13 10:34:52.0±12.0, 5°.64S×130°.49E, $h0^{km}$, mb4.4/1, mb1 3.8/4, mb1mx3.5/16, mbtmp3.7/4, ML3.3/2, Error ellipse: s-maj=171.1km s-min=91.2km az=151.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**13.26**	**201**	Pn	Pn	10 38 01.6	-0.1
	0.1nm,0.3s,baz=49,slow=9.3,SNR=6.2						
FITZ				Sn	Sn	10 40 16.9	-13
	0.1nm,0.3s,baz=295,slow=4.0,SNR=1.3						
WRA	**Warramunga Arr**	**14.70**	**166**	Pn	Pn	10 38 21.8	+0.5
	0.1nm,0.3s,baz=348,slow=11,SNR=14						
WRA				Sn	Sn	10 40 52.3	-13
	0.1nm,0.3s,baz=342,slow=22,SNR=4.6						
ASAR	**Alice Springs**	**18.22**	**170**	P	Pn	10 39 05.2	-1.2
	0.1nm,0.3s,baz=345,slow=10,SNR=6.7						
STKA	**Stephens Creek**	**28.10**	**160**	P	P	10 40 46.0	+0.5
	1.5nm,0.9s,baz=354,slow=9.2,SNR=2.9						

IDC 13 10:42:34.0±1.9, 10°.79N×91°.58E, $h0^{km}$, mb3.7/6, mb1 3.8/7, mb1mx3.5/23, mbtmp3.7/7, ML3.7/1, Error ellipse: s-maj=65.1km s-min=18.5km az=66.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.43**	**42**	Pn	Pn	10 45 05.6	+0.7
	0.2nm,0.3s,baz=237,slow=15,SNR=2.8						
MKAR	**Makanchi Array**	**36.74**	**349**	P	P	10 49 43.3	+0.3
	1.3nm,0.5s,baz=168,slow=8.2,SNR=22						
SONM	**Songino Array**	**38.98**	**16**	P	P	10 50 01.6	-0.3
	0.6nm,0.3s,baz=210,slow=7.8,SNR=3.4						
ZALV	**Zalesovo Beam**	**43.39**	**354**	P	P	10 50 37.9	-0.2
	0.8nm,0.4s,baz=171,slow=10,SNR=4.1						
FITZ	**Fitzroy Crossi**	**44.21**	**130**	P	P	10 50 44.8	-0.4
	1.6nm,0.8s,baz=259,slow=5.2,SNR=3.2						
WRA	**Warramunga Arr**	**52.00**	**126**	P	P	10 51 45.2	-0.3
	0.3nm,0.3s,baz=300,slow=10.0,SNR=19						
ASAR	**Alice Springs**	**53.71**	**130**	P	P	10 51 58.7	+0.6
	0.2nm,0.7s,baz=310,slow=7.9,SNR=5.5						

*LDG **13** 12:02:11.0±0.1, 18°.51S×169°.42E, $h10^{km}$, Mb4.4/2, Ms4.2/10, Error ellipse: s-maj=12.5km s-min=2.1km az=118.0*
*IDC **13** 12:02:11.5±0.7, 18°.16S×168°.26E, $h0^{km}$, mb4.1/14, mb1 4.3/15, mb1mx4.3/18, mbtmp4.2/15, ML4.8/1, MS4.1/14, Ms1 4.1/14, ms1mx3.9/22, Error ellipse: s-maj=21.3km s-min=18.1km az=69.0*
*NOU **13** 12:02:16.6±0.9, 17°.95S×167°.74E, $h30^{km}$, MD3.1, ML4.6*
*NEIC **13** 12:02:17.5±0.5, 18°.09S×168°.14E, $h35^{km}$, mb4.4/10, Error ellipse: s-maj=11.8km s-min=9.4km az=160.0*
NEIC Felt at Port-Vila.
*ISCJB **13** 12:02:17.2±1.5, 18°.31S±0°.07×168°.13E±0°.07, $h46^{km}\pm14^{km}$, mb4.2/20, MS4.2/15, Error ellipse: s-maj=13.9km s-min=9.1km az=140.9*
*GCMT **13** 12:02:20.0±0.3, 18°.21S×168°.12E, $h40^{km}\pm1^{km}$, MW5.0, Moment Tensor Solution. s35,c41; s64,c85; Moment tensor: Scale 10^{16}Nm; M_{rr}2.75±.17; $M_{\theta\theta}$0.03±.12; $M_{\phi\phi}$-2.78±.11; $M_{r\theta}$0.44±.11; $M_{\theta\phi}$0.53±.11; $M_{\phi r}$-2.25±.11; Best double couple: $M_0$3.60000×10^{16} NP1:ϕ_s350.00000°, δ25.00000°, λ91.00000°. NP2:ϕ_s169.00000°, δ65.00000°, λ90.00000°. Principal axes: T 3.5700, Plg70.0000°, Azm78.0000°; N 0.1300, Plg0.0000°, Azm169.0000°; P -3.6900, Plg20.0000°, Azm260.0000°; Data Used: IU II G IC CN.*

ISC 13 12:02:18.9±1.3, 18°.30S±0°.07×168°.14E±0°.07, $h46^{km}\pm12^{km}$, n77, σ0.96/47, mb4.2/20, MS4.2/15, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**4.01**	**197**	*e*P	**Pn**	**12 03 18.2**	**+0.4**
BAYA				*e*S	**Sn**	**12 04 03.4**	**-0.2**
DZM	**Mont Dzumac**	**4.08**	**203**	*e*Pn	**Pn**	**12 03 17.7**	**-1.0**
	157nm,0.3s						
DZM				*e*Sn	**Sn**	**12 04 04.9**	**-0.3**
	754nm,0.3s						
DZM				*e*LR	LR	12 04 13.7	
	4μm,24.9s						
DZM	**Mont Dzumac**	**4.08**	**203**	AMP		12 03 12.5	
	comp=Z,3μm,2.6s						
DZM	**Mont Dzumac**	**4.08**	**203**	*e*Pn	**Pn**	**12 03 18.8**	**+0.1**
DZM				*e*Sn	**Sn**	**12 04 04.8**	**-0.3**
NOUC	**Port Laguerre**	**4.16**	**204**	*e*P	**Pn**	**12 03 18.6**	**-1.2**
NOUC				*e*S	**Sn**	**12 04 05.9**	**-1.2**
NOUC				AMP		12 04 17.4	
	comp=Z,158nm,8.5s						
LASL	**Noumea**	**4.19**	**201**	*e*P	**Pn**	**12 03 20.8**	**+0.5**
LASL				*e*S	**Sn**	**12 04 07.4**	**-0.6**
MSVF	**Nonsavu**	**9.45**	**88**	*e*Pn	**Pn**	**12 04 34.5**	**+2.1**
	comp=Z,173nm,1.6s						
HNR	**Honiara**	**11.87**	**317**	Pn	**Pn**	**12 05 01.6**	**-3.9**
	comp=Z,6.2nm,0.3s,baz=179,slow=5.8,SNR=2.0						
HNR				LR	LR	12 08 54.7	
	comp=Z,726nm,20.6s,baz=152,slow=34						
RAO	**Raoul Island**	**16.77**	**133**	LR	LR	12 11 14.7	
	comp=Z,772nm,21.7s,baz=230,slow=32						
EIDS	**Eidsvold**	**17.32**	**243**	*e*P	**Pn**	**12 06 21.1**	**+3.7**
EIDS	**Eidsvold**	**17.32**	**243**	*e*P	**Pn**	**12 06 20.6**	**+3.2**
	comp=Z,16nm,0.9s						
ARMA	**Armidale**	**19.25**	**228**	*e*P	**Pn**	**12 06 40.6**	**-0.2**
	comp=Z,4.4nm,0.3s						
AFI	**Afiamalu**	**19.78**	**80**	LR	LR	12 12 05.5	
	comp=Z,202nm,20.3s,baz=261,slow=30						
CTA	**Charters Tower**	**20.75**	**262**	*e*P	**P**	**12 06 58.2**	**+2.4**
	comp=Z,8.5nm,0.8s						
CTA	**Charters Tower**	**20.75**	**262**	P	**P**	**12 06 56.9**	**+1.0**
	comp=Z,10nm,0.8s,baz=84,slow=15,SNR=11						
CTAO	**Charters Tower**	**20.75**	**262**	*e*P	**P**	**12 06 57.2**	**+1.4**
	comp=Z,11nm,0.8s						
URZ	**Urewera**	**21.38**	**160**	P	**P**	**12 07 02.6**	**+0.2**
	comp=Z,2.0nm,0.4s,mb3.8,baz=56,slow=18,SNR=2.4						
URZ				LR	LR	12 14 15.0	
	comp=Z,422nm,19.1s,MS3.9,baz=243,slow=34						
URZ	**Urewera**	**21.38**	**160**	*e*P	**P**	**12 07 04.4**	**+2.0**
	comp=Z,7.2nm,0.6s,mb4.2						
URZ				LR	LR	12 14 15.0	
MTSU	**Mount Surprise**	**22.63**	**267**	*e*P	**P**	**12 07 17.9**	**+1.9**
	comp=Z,48nm,0.9s,mb4.9						
QLP	**Quilpie**	**23.55**	**245**	*e*P	**P**	**12 07 26.4**	**+1.1**
CMSA	**Cobar Meteorol**	**24.19**	**233**	*e*P	**P**	**12 07 31.6**	**+0.6**
RPZ	**Rata Peaks**	**25.46**	**175**	P	**P**	**12 07 43.4**	**+1.0**
	comp=Z,4.0nm,0.7s,mb4.0,baz=45,slow=14,SNR=2.5						
STKA	**Stephens Creek**	**27.49**	**235**	*e*P	**P**	**12 08 01.4**	**+0.5**
	comp=Z,4.5nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**27.49**	**235**	P	**P**	**12 08 01.5**	**+0.6**
	comp=Z,2.6nm,0.5s,mb4.0,baz=50,slow=7.9,SNR=4.1						
STKA				LR	LR	12 18 39.7	
	comp=Z,550nm,19.8s,MS4.1,baz=44,slow=36						
STKA	**Stephens Creek**	**27.49**	**235**	P	**P**	**12 08 01.5**	**+0.6**
STKA				LR	LR	12 18 39.7	
WRAB	**Tennant Creek**	**31.94**	**262**	*e*P	**P**	**12 08 40.3**	**-0.1**
	comp=Z,8.6nm,1.4s,mb4.4						
WRA	**Warramunga Arr**	**31.95**	**262**	P	**P**	**12 08 39.9**	**-0.6**
	comp=Z,0.5nm,0.4s,mb3.7,baz=91,slow=8.6,SNR=24						
WRA				LR	LR	12 20 57.0	
	comp=Z,522nm,20.2s,MS4.2,baz=100,slow=35						
ASAR	**Alice Springs**	**32.36**	**255**	P	**P**	**12 08 44.1**	**0.0**
	comp=Z,2.3nm,0.5s,mb4.3,baz=83,slow=8.3,SNR=75						
TBI	**Tubuai**	**39.84**	**105**	*e*S	**S**	**12 16 10.8**	**+21**
	comp=Z,174nm,33.8s						
TBI				*e*LR	LR	12 21 09.1	
	comp=Z,672nm,29.2s,baz=270						
PPT	**Papeete**	**40.17**	**96**	*e*S	**S**	**12 16 08.3**	**+14**
	comp=Z,152nm,26.0s						
PPT				*e*LR	LR	12 21 21.8	
	comp=Z,967nm,26.0s,baz=262						
PPT	**Papeete**	**40.17**	**96**	LR	LR	12 22 02.9	
	comp=Z,549nm,20.7s,MS4.4,baz=279,slow=30						
FITZ	**Fitzroy Crossi**	**40.31**	**263**	*e*P	**P**	**12 09 52.3**	**+0.3**
	comp=Z,34nm,1.4s,mb4.9						
FITZ	**Fitzroy Crossi**	**40.31**	**263**	LR	LR	12 26 05.0	
	comp=Z,818nm,20.5s,MS4.6,baz=172,slow=35						
FITZ	**Fitzroy Crossi**	**40.31**	**263**	*e*P	**P**	**12 09 52.5**	**+0.5**
	comp=Z,21nm,1.1s,mb4.8						
DAV	**Davao City (W)**	**48.98**	**297**	LR	LR	12 31 43.9	
	comp=Z,85nm,18.8s,MS3.8,baz=277,slow=36						
MJAR	**Matsushiro Arr**	**61.44**	**333**	P	**P**	**12 12 29.2**	**-1.4**
	comp=Z,0.3nm,0.5s,mb3.7,baz=158,slow=7.3,SNR=3.5						
KSRS	**Korea Array**	**67.15**	**326**	P	**P**	**12 13 07.3**	**-0.6**
	comp=Z,0.3nm,0.6s,mb3.5,baz=334,slow=8.0,SNR=3.5						
QSPA	**South Pole Qui**	**71.75**	**

s-min=23.4km az=108.0, Off coast of southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**3.50**	**94**	Pn	Pn	12 13 19.9	+0.6
	0.5nm,0.3s,baz=277,slow=13,SNR=12						
PLCA				Sn	Sn	12 14 02.3	+0.9
	2.1nm,0.3s,baz=216,slow=19,SNR=4.6						
PLCA				LR	LR	12 14 58.5	
	comp=Z,126nm,18.1s,baz=295,slow=44						
CFAA	**Coronel Fontan**	**10.54**	**34**	Pn	Pn	12 14 55.7	-0.4
	0.2nm,0.3s,baz=208,slow=12,SNR=17						
CPUP	**Villa Florida**	**20.50**	**52**	P	P	12 17 03.6	+0.3
	1.2nm,0.6s,baz=214,slow=13,SNR=6.4						
LPAZ	**La Paz**	**24.95**	**16**	P	P	12 17 50.0	+1.3
	0.6nm,0.7s,baz=191,slow=10,SNR=2.2						
SIV	**San Ignacio**	**27.37**	**31**	P	P	12 18 10.3	-0.4
	0.8nm,0.8s,baz=240,slow=11,SNR=5.0						
QSPA	**South Pole Qui**	**49.68**	**180**	P	P	12 21 16.9	+0.2
	1.5nm,0.8s,baz=115,slow=4.4,SNR=11						
TXAR	**Lajitas Array**	**74.41**	**334**	P	P	12 24 03.6	+0.2
	0.7nm,0.7s,baz=153,slow=8.2,SNR=10.0						
SCHQ	**Schefferville**	**95.30**	**5**	LR	LR	13 08 25.8	
	comp=Z,128nm,18.5s,baz=278,slow=35						

*JMA **13** 12:34:07.0±0.2, 25°.08N×122°.07E, h32km, M2.1*
*ISCJB **13** 12:34:08.6±0.4, 24°.42N±0°.02×121°.99E±0°.02, h29km±3km, Error ellipse: s-maj=4.5km s-min=3.2km az=145.9*
*TAP **13** 12:34:08.2, 24°.42N×121°.97E, h24km, ML3.0, D*
ISC 13 12:34:08.7±0.4, 24°.42N±0°.02×121°.99E±0°.02, h26km±3km, n33, σ0s48/63, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.23**	**271**	*i* P	**Pb**	**12 34 14.1**	**-0.7**
	baz=270						
ENA				*i* S	**Sb**	**12 34 18.7**	**-0.3**
	baz=270						
ILA	**Ilan**	**0.41**	**327**	*i* P	**Pb**	**12 34 16.9**	**-0.5**
	baz=330						
ILA				*i* S	**Sb**	**12 34 24.1**	**+0.7**
	baz=330						
TWE	**Neicheng**	**0.42**	**316**	P	**Pb**	**12 34 17.0**	**-0.6**
	baz=318						
TWE				S	**Sb**	**12 34 23.4**	**-0.3**
	baz=318						
TWD	**Chiawan**	**0.49**	**226**	P	**Pb**	**12 34 18.2**	**-0.6**
	baz=224						
TWD				*e*S	**Sb**	**12 34 26.9**	**+1.1**
	baz=224						
NNS	**Nan Shan**	**0.56**	**272**	P	**Pb**	**12 34 19.2**	**-0.8**
	baz=271						
NNS				S	**Sb**	**12 34 27.4**	**-0.2**
	baz=271						
TWB1	**Santiao Chiao**	**0.58**	**0**	P	**Pb**	**12 34 20.6**	**+0.2**
	baz=2.0						
TWB1				S	**Sb**	**12 34 28.8**	**+0.5**
	baz=2.0						
NSK	**Sanguang**	**0.63**	**294**	P	**Pb**	**12 34 20.2**	**-0.9**
	baz=294						
NSK				S	**Sb**	**12 34 29.0**	**-0.5**
	baz=294						
TWA	**Mucha**	**0.67**	**327**	P	**Pb**	**12 34 21.6**	**-0.1**
	baz=328						
TWA				S	**Sb**	**12 34 31.1**	**+0.4**
	baz=328						
NWF	**Wu-fen Shan**	**0.67**	**344**	P	**Pb**	**12 34 21.7**	**-0.2**
	baz=345						
NWF				S	**Sb**	**12 34 31.5**	**+0.7**
	baz=345						
WHF	**Hehuan Shan**	**0.71**	**247**	P	**Pb**	**12 34 22.2**	**-0.4**
	baz=246						
WHF				S	**Sb**	**12 34 32.9**	**+0.9**
	baz=246						
TWT	**Tachien**	**0.76**	**257**	*e*P	**Pb**	**12 34 23.6**	**+0.2**
	baz=256						
TWT				*e*S	**Sb**	**12 34 34.1**	**+0.8**
	baz=256						
ESL	**Shilin**	**0.79**	**220**	*e*P	**Pb**	**12 34 23.3**	**-0.5**
	baz=218						
ESL				*e*S	**Sb**	**12 34 34.4**	**+0.3**
	baz=218						
TWS1	**Kuangyinshan**	**0.85**	**323**	*e*P	**Pb**	**12 34 24.8**	**0.0**
	baz=323						
TWS1				*e*S	**Sb**	**12 34 36.0**	**+0.1**
	baz=323						
NSTT	**Nanjuang**	**0.92**	**283**	*e*P	**Pn**	**12 34 26.2**	**+0.3**
	baz=283						
NSTT				*e*S	**Sb**	**12 34 38.4**	**+0.4**
	baz=283						
YOJ	**Yonaguni jima**	**0.93**	**87**	P	**Pn**	**12 34 25.7**	**-0.4**
YOJ				S	**Sb**	**12 34 39.3**	**+1.1**
EHY	**Hungye**	**1.10**	**214**	*e*P	**Pn**	**12 34 27.8**	**-0.6**
	baz=212						
EHY				*e*S	**Sn**	**12 34 42.8**	**+0.2**
	baz=212						
TWQ1	**Liyutan**	**1.11**	**266**	*e*P	**Pn**	**12 34 28.5**	**0.0**
	baz=265						
TWQ1				*e*S	**Sn**	**12 34 43.2**	**+0.2**
	baz=265						
NSY	**Sanyi**	**1.12**	**270**	*e*P	**Pn**	**12 34 28.8**	**+0.2**
	baz=269						
NSY				*e*S	**Sn**	**12 34 43.2**	**0.0**
	baz=269						
SMLT	**Sun Moon Lake**	**1.13**	**242**	*e*P	**Pn**	**12 34 28.3**	**-0.5**
	baz=240						
SMLT				*e*S	**Sn**	**12 34 43.3**	**-0.2**
	baz=240						
TCU	**Taichung**	**1.23**	**257**	*e*P	**Pn**	**12 34 30.1**	**-0.1**
	baz=256						
TCU				*e*S	**Sn**	**12 34 45.5**	**-0.4**
	baz=256						
TWF1	**Yuli**	**1.24**	**211**	*e*P	**Pn**	**12 34 29.4**	**-0.9**
	baz=209						
TWF1				*e*S	**Sn**	**12 34 46.6**	**+0.5**
	baz=209						
YUS	**Yu-Shan**	**1.33**	**226**	*e*P	**Pn**	**12 34 31.8**	**+0.3**
	baz=224						
YUS				*e*S	**Sn**	**12 34 48.3**	**-0.1**
	baz=224						
ALS	**Alishan**	**1.41**	**230**	*e*P	**Pn**	**12 34 33.1**	**+0.4**
	baz=229						
ALS				*e*S	**Sn**	**12 34 50.2**	**-0.2**
	baz=229						
CHN5	**Tsauling**	**1.45**	**236**	*e*P	**Pn**	**12 34 33.5**	**+0.3**
	baz=235						
CHN5				*e*S	**Sn**	**12 34 51.8**	**+0.3**
	baz=235						
ELDTW	**Lidau**	**1.52**	**216**	*e*P	**Pn**	**12 34 33.6**	**-0.5**
	baz=215						
ELDTW				*e*S	**Sn**	**12 34 53.0**	**0.0**
	baz=215						
IRIF	**Iriomote-Funau**	**1.59**	**93**	P	**Pn**	**12 34 35.2**	**0.0**
CHN4	**Tsaushan**	**1.66**	**230**	*e*P	**Pn**	**12 34 35.8**	**-0.4**
	baz=229						
CHN4				*e*S	**Sn**	**12 34 57.2**	**+0.6**
	baz=229						
WTP	**Ta-pu**	**1.72**	**227**	*e*P	**Pn**	**12 34 37.1**	**+0.2**
	baz=226						
WTP				*e*S	**Sn**	**12 34 58.5**	**+0.5**
	baz=226						
TWK	**Hsinying**	**1.79**	**230**	*e*P	**Pn**	**12 34 38.0**	**+0.1**
	baz=229						
TWK				*e*S	**Sn**	**12 34 59.9**	**+0.1**
	baz=229						
CHN1	**Nanshi**	**1.82**	**228**	*e*P	**Pn**	**12 34 37.7**	**-0.5**
	baz=226						
CHN1				*e*S	**Sn**	**12 35 00.7**	**+0.3**
	baz=226						
JKRS	**Kuro-shima**	**1.85**	**95**	S	**Sn**	**12 35 02.0**	**+0.7**
SGST	**Jiashian**	**1.85**	**224**	*e*P	**Pn**	**12 34 38.8**	**0.0**
	baz=223						
SGST				*e*S	**Sn**	**12 35 01.1**	**-0.2**
	baz=223						
JJJ	**Ishigaki jima**	**1.97**	**91**	S	**Sn**	**12 35 03.4**	**-0.7**

IDC 13 12:39:38.5±3.6, 21°.85N×143°.65E, h0km, mb3.2/3, mb1 3.5/5, mb1mx3.3/24, mbtmp3.4/5, ML3.5/2, Error ellipse: s-maj=153.1km s-min=22.0km az=80.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.39**	**346**	Pn	Pn	12 41 00.1	0.0
	4.3nm,0.3s,baz=271,slow=22,SNR=10						
CBIJ				Sn	Sn	12 41 54.4	-8.7
	5.4nm,0.3s,baz=108,slow=20,SNR=15						
MJAR	**Matsushiro Arr**	**15.39**	**343**	Pn	Pn	12 43 16.4	-0.6
	0.1nm,0.3s,baz=154,slow=12,SNR=3.0						
KSRS	**Korea Array**	**20.66**	**322**	P	P	12 44 20.1	+0.3
	0.8nm,0.4s,baz=146,slow=8.6,SNR=9.9						
WRA	**Warramunga Arr**	**42.52**	**193**	P	P	12 47 35.9	+0.1
	0.1nm,0.3s,baz=14,slow=8.9,SNR=9.7						
ASAR	**Alice Springs**	**46.22**	**192**	P	P	12 48 05.2	-0.2
	0.6nm,1.1s,baz=14,slow=6.7,SNR=2.9						

MEX 13 12:54:11.4±0.7, 15°.14N×93°.26W, h72km±9km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.56**	**4**	*i* P	Pn	12 54 23.4	-1.6
PCIG				*i* S	Sn	12 54 33.5	-1.5
THIG		**0.99**	**103**	*i* P	Pn	12 54 28.3	-1.5
THIG				*i* S	Sn	12 54 41.8	-1.7
TGIG		**1.64**	**5**	*i* P	Pn	12 54 37.3	-1.0
TGIG				*i* S	Sn	12 54 56.2	-2.3

*ISCJB **13** 13:10:39.0±0.6, 27°.27N±0°.05×102°.8E±0°.2, h10km, mb3.4/7, Error ellipse: s-maj=19.5km s-min=6.6km az=179.1*
*IDC **13** 13:10:39.9±1.0, 27°.35N×102°.89E, h0km, mb3.4/8, mb1 3.5/9, mb1mx3.4/24, mbtmp3.4/9, ML3.5/1, Error ellipse: s-maj=31.4km s-min=18.3km az=64.0*
*BJI **13** 13:10:40.9, 27°.34N×102°.73E, h10km, ML3.2/10*
ISC 13 13:10:41.1±0.6, 27°.27N±0°.05×102°.9E±0°.1, h10km, n10, σ0s97/11, mb3.4/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**2.14**	**183**	Pg	**Pg**	**13 11 20.9**	**-1.3**
KMI				Sg	**Sg**	**13 11 49.6**	**-0.4**
KMI				smax			
	comp=N,110nm,1.0s						
KMI				smax			
	comp=E,150nm,0.7s						
KMI				LR	LR		
	comp=N,410nm,4.0s						
KMI				LR	LR		
	comp=E,540nm,6.0s						
CMAR	**Chiang Mai Arr**	**9.49**	**203**	Pn	**Pn**	**13 13 00.6**	**+2.7**
	comp=E,0.1nm,0.3s,baz=14,slow=11,SNR=3.0						
SONM	**Songino Array**	**20.71**	**7**	P	**P**	**13 15 21.0**	**-0.4**
	comp=E,0.5nm,0.6s,baz=182,slow=10,SNR=3.8						
KSRS	**Korea Array**	**23.41**	**58**	P	**P**	**13 15 50.5**	**+0.1**
	comp=E,0.4nm,0.5s,mb3.1,baz=246,slow=9.2,SNR=4.1						
MKAR	**Makanchi Array**	**25.35**	**326**	P	**P**	**13 16 09.2**	**+1.1**
	comp=E,0.6nm,0.9s,mb3.1,baz=126,slow=7.4,SNR=3.7						
ZALV	**Zalesovo Beam**	**29.79**	**338**	P	**P**	**13 16 46.9**	**-0.9**
	comp=E,0.3nm,0.4s,mb3.4,baz=112,slow=11,SNR=2.3						
KURK	**Kurchatov**	**29.80**	**328**	P	**P**	**13 16 46.9**	**-1.1**
	comp=E,0.4nm,0.5s,mb3.4,baz=132,slow=10,SNR=3.7						
WRA	**Warramunga Arr**	**55.97**	**144**	P	**P**	**13 20 20.1**	**+0.4**
	comp=E,0.5nm,0.6s,mb3.8,baz=333,slow=8.4,SNR=9.5						
BRTR	**Keskin Array B**	**57.76**	**302**	P	**P**	**13 20 32.5**	**+0.1**
	comp=E,0.4nm,0.8s,mb3.5,baz=54,slow=9.8,SNR=2.1						
ASAR	**Alice Springs**	**58.84**	**146**	P	**P**	**13 20 40.7**	**+0.7**
	comp=E,0.3nm,0.6s,mb3.5,baz=332,slow=6.3,SNR=5.4						

*DDA **13** 13:19:57.0, 38°.89N×27°.92E, h3km±3km, Md2.8*
*NEIC **13** 13:19:56.5, 38°.93N×27°.94E, h16km, MD3.6(ATH), MD3.3(ISK), After ATH.*
*ATH **13** 13:19:56.5, 38°.93N×27°.94E, h16km±2km, MD3.6/5*
*ISK **13** 13:19:57.7, 38°.90N×27°.90E, h2km, MD3.2*
*ISCJB **13** 13:19:58.1±0.5, 38°.90N±0°.02×27°.88E±0°.03, h1km±4km, Error ellipse: s-maj=3.9km s-min=3.2km az=28.7*
*CSEM **13** 13:19:58.5±0.1, 38°.90N×27°.86E, h2km, MD3.2, Error ellipse: s-maj=3.8km s-min=3.1km az=101.0*
ISC 13 13:19:58.6±0.5, 38°.90N±0°.02×27°.87E±0°.03, h2km±4km, n87, σ0s97/108, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.05**	**244**	*i* P	**Pg**	**13 19 56.8**	**-2.7**
AKHS				*i* S	**Sg**	**13 19 59.9**	**-0.3**
AKHS	**Akhisar**	**0.05**	**244**	*i* P	**Pg**	**13 19 56.8**	**-2.7**
AKHS				*i* S	**Sg**	**13 19 59.9**	**-0.3**
AKS	**Akhisar**	**0.05**	**245**	*e*PG	**Pg**	**13 19 59.5**	**0.0**
AKS	**Akhisar**	**0.05**	**245**	*e*Pg	**Pg**	**13 19 59.5**	**0.0**
IZM	**Izmir**	**0.69**	**224**	*e*PG	**Pg**	**13 20 12.4**	**+0.6**
IZM				*e*SG	**Sg**	**13 20 22.7**	**+2.0**
KULA	**Kula-Manisa**	**0.73**	**122**	*e*PG	**Pg**	**13 20 11.6**	**-0.9**
KULA				*e*SG	**Sg**	**13 20 22.2**	**+0.2**
KULA	**Kula-Manisa**	**0.73**	**122**	*e*Pg	**Pg**	**13 20 11.6**	**-0.9**
KULA				*e*Sg	**Sg**	**13 20 22.2**	**+0.2**
BALB	**Balikesir**	**0.74**	**1**	*e*PG	**Pg**	**13 20 12.8**	**+0.1**
BALB	**Balikesir**	**0.74**	**1**	*e*Pg	**Pg**	**13 20 12.9**	**+0.1**
BLCB	**Balcova**	**0.83**	**232**	*e*PG	**Pg**	**13 20 14.9**	**+0.5**
BLCB				*e*SG	**Sg**	**13 20 27.3**	**+2.2**
BLCB	**Balcova**	**0.83**	**232**	*e*Pg	**Pg**	**13 20 14.9**	**+0.5**
BLCB				*e*Sg	**Sg**	**13 20 27.3**	**+2.2**
BALY	**Balya**	**0.86**	**347**	*i* P	**Pg**	**13 20 14.8**	**-0.3**
BALY				*i* S	**Sg**	**13 20 26.4**	**+0.1**
BALY	**Balya**	**0.86**	**347**	*i* P	**Pg**	**13 20 14.8**	**-0.3**
BALY				*i* S	**Sg**	**13 20 26.4**	**+0.1**
AYVA	**Ayvalik**	**1.00**	**294**	*i* P	**Pg**	**13 20 16.8**	**-1.0**
AYVA				*i* S	**Sg**	**13 20 33.0**	**+2.2**
AYVA	**Ayvalik**	**1.00**	**294**	*i* P	**Pg**	**13 20 16.8**	**-1.0**
AYVA				*i* S	**Sg**	**13 20 33.0**	**+2.2**
GONE	**Gonen-Balikesi**	**1.15**	**353**	*e*Pn	**Pn**	**13 20 20.1**	**-1.7**
GONE	**Gonen-Balikesi**	**1.15**	**353**	*e*Pn	**Pn**	**13 20 20.1**	**-1.7**
AYDN	**Tasoluk**	**1.24**	**180**	*i* P	**Pg**	**13 20 20.8**	**-1.5**
AYDN				*i* S	**Sg**	**13 20 37.4**	**-0.9**
AYDN	**Tasoluk**	**1.24**	**180**	*i* P	**Pg**	**13 20 20.8**	**-1.5**
AYDN				*i* S	**Sg**	**13 20 37.4**	**-0.9**
PRK	**Paraskevi**	**1.29**	**286**	*e*Pn	**Pn**	**13 20 21.8**	**-1.9**
PRK				*e*Sn	**Sn**	**13 20 39.9**	**-1.6**
PRK	**Paraskevi**	**1.29**	**286**	*e*PN	**Pn**	**13 20 21.8**	**-1.9**
PRK				*e*SN	**Sn**	**13 20 39.9**	**-1.6**
PRK	**Paraskevi**	**1.29**	**286**	*e*Pn	**Pn**	**13 20 21.8**	**-1.9**
PRK				*e*Sn	**Sn**	**13 20 39.9**	**-1.6**
KCTX	**Karacabey (Bur**	**1.42**	**15**	*e*PN	**Pn**	**13 20 24.8**	**-0.6**
KCTX	**Karacabey (Bur**	**1.42**	**15**	*e*Pn	**Pn**	**13 20 24.8**	**-0.6**
SMG	**Samos**	**1.44**	**215**	*e*Pn	**Pn**	**13 20 24.2**	**-1.5**
SMG				*e*Sn	**Sn**	**13 20 45.7**	**+0.5**
SMG	**Samos**	**1.44**	**215**	*e*PN	**Pn**	**13 20 24.2**	**-1.5**
SMG				*e*SN	**Sn**	**13 20 45.7**	**+0.5**
SMG	**Samos**	**1.44**	**215**	*e*Pn	**Pn**	**13 20 24.2**	**-1.5**
SMG				*e*Sn	**Sn**	**13 20 45.7**	**+0.5**
EDC	**Edincik**	**1.45**	**360**	*e*PN	**Pn**	**13 20 25.3**	**-0.5**
EDC	**Edincik**	**1.45**	**360**	*e*Pn	**Pn**	**13 20 25.3**	**-0.5**
BNT	**Bandirma**	**1.46**	**2**	*e*PN	**Pn**	**13 20 25.4**	**-0.5**
BNT	**Bandirma**	**1.46**	**2**	*e*Pn	**Pn**	**13 20 25.4**	**-0.5**
CHOS	**Chios island**	**1.51**	**251**	*e*PN	**Pn**	**13 20 25.2**	**-1.5**
CHOS				*e*SB	**Sb**	**13 20 47.3**	**+0.3**
CHOS	**Chios island**	**1.51**	**251**	*e*Pn	**Pn**	**13 20 25.2**	**-1.5**
CHOS				*e*Sb	**Sb**	**13 20 47.3**	**+0.3**
EZN	**Ezine**	**1.51**	**308**	*e*PN	**Pn**	**13 20 26.2**	**-0.5**
EZN	**Ezine**	**1.51**	**308**	*e*Pn	**Pn**	**13 20 26.2**	**-0.5**
KRBG	**Karabiga-Canak**	**1.56**	**344**	*e*PN	**Pn**	**13 20 26.9**	**-0.4**
KRBG	**Karabiga-Canak**	**1.56**	**344**	*e*Pn	**Pn**	**13 20 26.9**	**-0.4**
MLSB	**Milas**	**1.60**	**183**	*e*PN	**Pn**	**13 20 28.3**	**+0.3**
MLSB	**Milas**	**1.60**	**183**	*e*Pn	**Pn**	**13 20 28.3**	**+0.3**
MDNY	**Mudanya-Bursa**	**1.66**	**28**	*e*PN	**Pn**	**13 20 29.2**	**+0.4**
MDNY	**Mudanya-Bursa**	**1.66**	**28**	*e*Pn	**Pn**	**13 20 29.2**	**+0.4**
LPK	**Lapseki**	**1.70**	**330**	*e*PN	**Pn**	**13 20 29.0**	**-0.3**
LPK	**Lapseki**	**1.70**	**330**	*e*Pn	**Pn**	**13 20 29.0**	**-0.3**
ALT	**Altintas**	**1.75**	**84**	*e*PN	**Pn**	**13 20 30.1**	**+0.1**
ALT	**Altintas**	**1.75**	**84**	*e*Pn	**Pn**	**13 20 30.1**	**+0.1**
YER	**Yerkesik**	**1.79**	**169**	*e*PN	**Pn**	**13 20 31.3**	**+0.7**
YER	**Yerkesik**	**1.79**	**169**	*e*Pn	**Pn**	**13 20 31.3**	**+0.7**
ARMT	**Armutlu**	**1.83**	**24**	*e*PN	**Pn**	**13 20 31.0**	**-0.1**
ARMT	**Armutlu**	**1.83**	**24**	*e*Pn	**Pn**	**13 20 31.0**	**-0.1**
GELI	**Tayfur-Gelibol**	**1.84**	**325**	*e*PN	**Pn**	**13 20 31.5**	**+0.2**
GELI	**Tayfur-Gelibol**	**1.84**	**325**	*e*Pn	**Pn**	**13 20 31.5**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.86**	**344**	*e*PN	**Pn**	**13 20 32.4**	**+0.8**
RKY	**Sarkoy-Tekirda**	**1.86**	**344**	*e*Pn	**Pn**	**13 20 32.4**	**+0.9**
BODT	**Bodrum**	**1.89**	**194**	*e*PN	**Pn**	**13 20 32.0**	**+0.2**
BODT	**Bodrum**	**1.89**	**194**	*e*Pn	**Pn**	**13 20 32.0**	**+0.1**
MFT	**Murefte**	**1.94**	**347**	*e*PN	**Pn**	**13 20 33.1**	**+0.5**
MFT	**Murefte**	**1.94**	**347**	*e*Pn	**Pn**	**13 20 33.1**	**+0.5**
GADA	**Gvkgeada**	**2.00**	**311**	*e*PN	**Pn**	**13 20 34.0**	**+0.6**
GADA	**Gvkgeada**	**2.00**	**311**	*e*Pn	**Pn**	**13 20 34.0**	**+0.6**
CAVI	**Cavuskoy**	**2.00**	**49**	*e*PN	**Pn**	**13 20 33.7**	**+0.2**
CAVI	**Cavuskoy**	**2.00**	**49**	*e*Pn	**Pn**	**13 20 33.7**	**+0.2**
YLV	**Yalova**	**2.03**	**34**	*e*PN	**Pn**	**13 20 34.5**	**+0.7**
YLV	**Yalova**	**2.03**	**34**	*e*Pn	**Pn**	**13 20 34.5**	**+0.7**
ERIK	**Erikli-Kesan**	**2.05**	**330**	*e*PN	**Pn**	**13 20 35.0**	**+0.9**
ERIK	**Erikli-Kesan**	**2.05**	**330**	*e*Pn	**Pn**	**13 20 35.0**	**+0.8**
DAT	**Datca**	**2.18**	**186**	*e*PN	**Pn**	**13 20 36.8**	**+0.9**
DAT	**Datca**	**2.18**	**186**	*e*Pn	**Pn**	**13 20 36.8**	**+0.9**
ENEZ	**Enez**	**2.26**	**325**	*e*PN	**Pn**	**13 20 37.3**	**+0.3**
ENEZ	**Enez**	**2.26**	**325**	*e*Pn	**Pn**	**13 20 37.3**	**+0.3**
LIA	**Limnos Island**	**2.31**	**296**	*e*PN	**Pn**	**13 20 36.6**	**-1.1**
LIA	**Limnos Island**	**2.31**	**296**	*e*PN	**Pn**	**13 20 36.6**	**-1.1**
LIA	**Limnos Island**	**2.31**	**296**	*e*Pn	**Pn**	**13 20 36.6**	**-1.1**
CTKS	**Kestanelik-??a**	**2.38**	**12**	*e*PN	**Pn**	**13 20 40.0**	**+1.2**
CTKS	**Kestanelik-??a**	**2.38**	**12**	*e*Pn	**Pn**	**13 20 40.0**	**+1.3**
ESKT	**Eskisehir**	**2.40**	**74**	*e*PN	**Pn**	**13 20 39.5**	**+0.6**
ESKT	**Eskisehir**	**2.40**	**74**	*e*Pn	**Pn**	**13 20 39.5**	**+0.6**
ALN	**Alexandroupoli**	**2.44**	**325**	*e*PN	**Pn**	**13 20 38.7**	**-0.8**
ALN	**Alexandroupoli**	**2.44**	**325**	*e*PN	**Pn**	**13 20 38.7**	**-0.8**
ALN	**Alexandroupoli**	**2.44**	**325**	*e*Pn	**Pn**	**13 20 38.7**	**-0.8**
GULT	**Gulveren**	**2.55**	**52**	*e*PN	**Pn**	**13 20 41.8**	**+0.7**
GULT	**Gulveren**	**2.55**	**52**	*e*Pn	**Pn**	**13 20 41.8**	**+0.8**
SVRH	**Sivrihisar-ESK**	**2.89**	**78**	*e*PN	**Pn**	**13 20 45.3**	**-0.3**
SVRH	**Sivrihisar-ESK**	**2.89**	**78**	*e*Pn	**Pn**	**13 20 45.3**	**-0.4**
MDU	**Mudurnu**	**3.02**	**58**	*e*PN	**Pn**	**13 20 48.0**	**+0.6**
MDU	**Mudurnu**	**3.02**	**58**	*e*Pn	**Pn**	**13 20 48.0**	**+0.6**
EDRB	**Edirne**	**3.07**	**344**	*e*PN	**Pn**	**13 20 49.8**	**+1.7**
EDRB	**Edirne**	**3.07**	**344**	*e*Pn	**Pn**	**13 20 49.8**	**+1.7**

*IDC **13** 13:21:15.3±1.1, 46°.95N×156°.17E, h0km, mb3.6/8, mb1 3.8/9, mb1mx3.6/26, mbtmp3.7/9, ML3.5/1, MS2.9/1, Ms1 2.9/1, ms1mx2.4/30, Error ellipse: s-maj=27.7km s-min=26.2km az=90.0*
*ISCJB **13** 13:21:18.6±0.9, 47°.0N±0°.1×156°.0E±0°.2, h33km, mb3.7/9, Error ellipse: s-maj=19.8km s-min=11.2km az=37.5*
*MOS **13** 13:21:21.3±2.0, 47°.02N×155°.73E, h58km, mb3.8/4, Error ellipse: s-maj=18.7km s-min=14.3km az=65.6*
ISC 13 13:21:20.7±0.9, 47°.0N±0°.1×156°.1E±0°.2, h35km, n23, σ0s79/22, mb3.7/9, 1C, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.71**	**0**	*e*PN	**Pn**	**13 22 14.1**	**-1.3**
SKR				pmax	pmax		
	comp=N,20nm,0.5s						
SKR				pmax	pmax		
	comp=Z,20nm,0.5s						
KUR	**Kuril'sk**	**5.97**	**256**	*e*PN	**Pn**	**13 22 42.0**	**-4.6**
KUR				pmax	pmax		
	comp=Z,90nm,0.7s						
ASAJ	**Asahikawa**	**9.89**	**258**	Pn	**Pn**	**13 23 40.5**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=85,slow=12,SNR=6.6						
ASAJ	**Asahikawa**	**9.89**	**258**	PN	**Pn**	**13 23 40.6**	**+0.4**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ERM	**Erimo**	**10.48**	**246**	*e*PN	**Pn**	**13 23 47.4**	**-0.9**
BILL	**Bilibino**	**21.76**	**10**	*c*eP	**P**	**13 26 09.0**	**+0.2**
BILL				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb3.9						
KSRS	**Korea Array**	**22.82**	**256**	P	**P**	**13 26 20.2**	**-0.2**
	comp=Z,0.9nm,0.5s,mb3.4,baz=60,slow=11,SNR=6.1						
KSRS	**Korea Array**	**22.82**	**256**	P	**P**	**13 26 20.2**	**-0.2**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.5						
ZALV	**Zalesovo Beam**	**44.12**	**306**	LR	LR	13 48 46.9	
	comp=Z,14nm,19.6s,baz=72,slow=37						
MKAR	**Makanchi Array**	**48.64**	**298**	P	**P**	**13 30 01.2**	**+0.4**
	comp=Z,0.3nm,0.7s,mb3.4,baz=67,slow=9.6,SNR=5.2						
MKAR	**Makanchi Array**	**48.64**	**298**	*e*P	**P**	**13 30 02.5**	**+1.7**
KURK	**Kurchatov**	**48.92**	**305**	P	**P**	**13 30 03.5**	**+0.6**
	comp=Z,1.4nm,0.6s,mb4.2,baz=68,slow=8.4,SNR=11						
KURK	**Kurchatov**	**48.92**	**305**	*e*P	**P**	**13 30 03.0**	**0.0**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
BVAR	**Borovoye Array**	**52.28**	**310**	P	**P**	**13 30 27.9**	**-0.3**
	comp=Z,1.1nm,0.5s,mb4.1,baz=60,slow=8.5,SNR=6.1						
BVAR	**Borovoye Array**	**52.28**	**310**	*e*P	**P**	**13 30 27.8**	**-0.4**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARCES	**ARCESS Array B**	**58.29**	**342**	P	**P**	**13 31 12.3**	**+1.0**
	comp=Z,0.7nm,0.6s,mb3.8,baz=24,slow=6.9,SNR=3.9						
ARCES	**ARCESS Array B**	**58.29**	**342**	P	**P**	**13 31 12.3**	**+1.0**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	**

BNS **13** *13:45:51.5±0.3,50.°60N×4.°66E,h10km,ML3.5*
BGR **13** *13:45:52.0±0.6,50.°67N×4.°77E,h10km,ML3.4,Error ellipse: s-maj=8.9km s-min=6.7km az=101.0*
PRU **13** *13:45:56.3,50.°43N×5.°14E,h0km*
ISC 13 13:45:49.6±0.2,50.°57N±0.°01×4.°54E±0.°02,h11km±1km, n239,σ1°31/439,7C-11D,Belgium

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SNF	**Seneffe**	**0.17**	**249**	⇓P		**Pg**	**Pg**	**13 45 54.4**	**+1.0**
SNF				S		Sg	**Sg**	**13 45 56.8**	**+0.7**
comp=Z,2μm,0.2s									
SNF	**Seneffe**	**0.17**	**249**	P		**Pg**	**Pg**	**13 45 54.4**	**+1.0**
SNF				S		Sg	**Sg**	**13 45 57.2**	**+1.2**
comp=Z,2μm,0.2s									
UCC	**Uccle**	**0.25**	**334**	⇓P		**Pg**	**Pg**	**13 45 54.4**	**-0.4**
UCC				S		Sg	**Sg**	**13 45 56.8**	**-1.5**
comp=Z,8μm,0.1s									
UCC	**Uccle**	**0.25**	**334**	P		**Pg**	**Pg**	**13 45 54.4**	**-0.4**
UCC				S		Sg	**Sg**	**13 45 57.1**	**-1.2**
comp=Z,8μm,0.1s									
DOU	**Dourbes**	**0.48**	**176**	⇑P		**Pg**	**Pg**	**13 46 00.5**	**+1.6**
DOU				S		Sg	**Sg**	**13 46 07.3**	**+2.1**
comp=Z,327nm,0.2s									
DOU	**Dourbes**	**0.48**	**176**	P		**Pg**	**Pg**	**13 46 00.4**	**+1.5**
DOU				S		Sg	**Sg**	**13 46 07.3**	**+2.1**
comp=Z,327nm,0.2s									
GIVF	**Givet**	**0.51**	**159**	*e*Pg		**Pg**	**Pg**	**13 46 00.9**	**+1.5**
GIVF				*e*Sg		Sg	**Sg**	**13 46 07.8**	**+1.7**
comp=Z,2μm,0.2s									
GIVF	**Givet**	**0.51**	**159**	*e*Pg		**Pg**	**Pg**	**13 46 00.9**	**+1.5**
GIVF				*e*Sg		Sg	**Sg**	**13 46 07.8**	**+1.7**
comp=Z,774nm,0.2s									
BCLA	**Clavier**	**0.51**	**107**	⇓P		**Pg**	**Pg**	**13 45 59.7**	**+0.2**
BCLA				S		Sg	**Sg**	**13 46 06.8**	**+0.4**
comp=E,525nm,0.2s									
BCLA	**Clavier**	**0.51**	**107**	P		**Pg**	**Pg**	**13 45 59.7**	**+0.2**
BCLA				S		Sg	**Sg**	**13 46 06.8**	**+0.5**
comp=E,525nm,0.2s									
BAIF	**Baives**	**0.56**	**202**	*e*Pg		**Pg**	**Pg**	**13 46 01.9**	**+1.6**
BAIF				*e*Sg		Sg	**Sg**	**13 46 09.8**	**+2.2**
comp=E,304nm,0.2s									
BAIF	**Baives**	**0.56**	**202**	*e*Pg		**Pg**	**Pg**	**13 46 01.9**	**+1.6**
BAIF				*e*Sg		Sg	**Sg**	**13 46 09.8**	**+2.2**
comp=E,152nm,0.2s									
BEBN	**Eben Emael**	**0.76**	**72**	⇓P		**Pg**	**Pg**	**13 46 03.2**	**-1.0**
BEBN				S		Sg	**Sg**	**13 46 12.0**	**-2.1**
comp=Z,405nm,0.3s									
BEBN	**Eben Emael**	**0.76**	**72**	P		**Pg**	**Pg**	**13 46 03.2**	**-1.0**
BEBN				S		Sg	**Sg**	**13 46 12.0**	**-2.2**
comp=Z,405nm,0.3s									
HGN	**Heimansgroeve**	**0.91**	**77**	*e*Pg		**Pg**	**Pg**	**13 46 05.6**	**-1.5**
HGN				*e*Sg		Sg	**Sg**	**13 46 17.9**	**-1.0**
HGN	**Heimansgroeve**	**0.91**	**77**	⇓*i*Pn		**Pg**	**Pg**	**13 46 05.6**	**-1.4**
comp=Z,196nm,0.2s,baz=270									
HGN	**Heimansgroeve**	**0.91**	**77**	*e*Pg		**Pg**	**Pg**	**13 46 07.5**	**+0.4**
HGN	**Heimansgroeve**	**0.91**	**77**	*e*Sn		**Sn**	**Sn**	**13 46 15.9**	**-5.4**
HGN				*e*Sg		Sg	**Sg**	**13 46 17.9**	**-1.0**
HGN	**Heimansgroeve**	**0.91**	**77**	⇓*i*Pn		**Pg**	**Pg**	**13 46 05.6**	**-1.4**
comp=Z,196nm,0.2s									
HGN				*e*Sg		Sg	**Sg**	**13 46 17.9**	**-1.0**
MEM	**Membach**	**0.94**	**87**	⇓P		**Pg**	**Pg**	**13 46 07.1**	**-0.5**
MEM				S		Sg	**Sg**	**13 46 19.6**	**-0.2**
comp=Z,490nm,0.4s									
MEM	**Membach**	**0.94**	**87**	P		**Pg**	**Pg**	**13 46 07.1**	**-0.5**
MEM				S		Sg	**Sg**	**13 46 19.6**	**-0.2**
comp=Z,490nm,0.4s									
DREG	**Dreilaegerbach**	**1.08**	**85**	*e*Pg		**Pg**	**Pg**	**13 46 09.6**	**-0.8**
DREG				*e*Sg		Sg	**Sg**	**13 46 23.2**	**-1.3**
DREG	**Dreilaegerbach**	**1.08**	**85**	Pg		**Pg**	**Pg**	**13 46 09.6**	**-0.8**
DREG				Sg		Sg	**Sg**	**13 46 23.2**	**-1.3**
KLL	**Kalltalsperre**	**1.13**	**86**	⇓*e*Pg		**Pg**	**Pg**	**13 46 10.5**	**-0.8**
KLL				*e*Sg		Sg	**Sg**	**13 46 24.6**	**-1.4**
comp=Z,608nm,0.3s									
KLL	**Kalltalsperre**	**1.13**	**86**	Pg		**Pg**	**Pg**	**13 46 10.5**	**-0.8**
KLL				Sg		Sg	**Sg**	**13 46 24.6**	**-1.4**
comp=Z,608nm,0.3s									
RODG	**Roetgen-Dahlhe**	**1.19**	**61**	*e*Pg		**Pg**	**Pg**	**13 46 11.6**	**-0.8**
RODG	**Roetgen-Dahlhe**	**1.19**	**61**	Pg		**Pg**	**Pg**	**13 46 11.6**	**-0.8**
BD11	**Borschemich**	**1.30**	**66**	⇑*e*Pg		**Pg**	**Pg**	**13 46 13.8**	**-0.8**
BD11				*e*Sg		Sg	**Sg**	**13 46 30.2**	**-1.3**
BD09	**Hochneukirch**	**1.33**	**66**	*e*Pg		**Pg**	**Pg**	**13 46 14.3**	**-0.8**
BD03	**Millendorf**	**1.35**	**71**	*e*Pg		**Pg**	**Pg**	**13 46 14.8**	**-0.7**
WLF	**Walferdange**	**1.38**	**131**	⇓P		**Pn**	**Pn**	**13 46 16.2**	**+1.6**
WLF				S		Sn	**Sn**	**13 46 33.4**	**+0.5**
comp=Z,298nm,0.5s									
WLF	**Walferdange**	**1.38**	**131**	*e*Pg		**Pg**	**Pg**	**13 46 16.1**	**+0.1**
WLF				*e*Sg		Sg	**Sg**	**13 46 33.4**	**-0.5**
WLF	**Walferdange**	**1.38**	**131**	*e*Pn		**Pn**	**Pn**	**13 46 16.2**	**+1.5**
WLF				*e*S		Sn	**Sn**	**13 46 32.5**	**-0.4**
WLF	**Walferdange**	**1.38**	**131**	Pg		**Pg**	**Pg**	**13 46 16.1**	**+0.1**
WLF				S		Sn	**Sn**	**13 46 33.3**	**+0.4**
comp=Z,298nm,0.5s									
BD01	**Bergheim Laure**	**1.39**	**73**	*e*Pg		**Pg**	**Pg**	**13 46 16.2**	**0.0**
BD07	**Roetschberg**	**1.41**	**74**	*e*Pg		**Pg**	**Pg**	**13 46 16.4**	**-0.1**
STB	**Steinbach**	**1.47**	**88**	*e*Pg		**Pg**	**Pg**	**13 46 16.4**	**-1.4**
STB				*e*Sg		Sg	**Sg**	**13 46 33.3**	**-3.4**
comp=Z,1μm,0.3s									
STB	**Steinbach**	**1.47**	**88**	Pg		**Pg**	**Pg**	**13 46 16.4**	**-1.3**
STB				Sg		Sg	**Sg**	**13 46 33.3**	**-3.5**
comp=Z,1μm,0.3s									
MENF	**Mencas**	**1.52**	**270**	Pg		**Pg**	**Pg**	**13 46 18.5**	**-0.2**
MENF				Sg		Sg	**Sg**	**13 46 40.8**	**+2.4**
MENF	**Mencas**	**1.52**	**270**	Pg		**Pg**	**Pg**	**13 46 18.5**	**-0.2**
MENF				Sg		Sg	**Sg**	**13 46 40.8**	**+2.4**
LAUG	**Laupendahl**	**1.71**	**62**	*e*Pg		**Pn**	**Pn**	**13 46 18.6**	**-0.6**
LAUG				*e*Sg		Sn	**Sn**	**13 46 39.2**	**-1.8**
comp=Z,454nm,0.4s									
LAUG	**Laupendahl**	**1.71**	**62**	Pg		**Pn**	**Pn**	**13 46 18.6**	**-0.6**
LAUG				Sg		Sn	**Sn**	**13 46 39.2**	**-1.8**
comp=Z,454nm,0.4s									
BNS	**Bensberg**	**1.72**	**76**	*e*Pg		**Pn**	**Pn**	**13 46 18.9**	**-0.5**
BNS				*e*Sg		Sn	**Sn**	**13 46 40.6**	**-0.6**
comp=Z,872nm,0.3s									
BNS	**Bensberg**	**1.72**	**76**	Pg		**Pn**	**Pn**	**13 46 18.9**	**-0.5**
BNS				Sg		Sn	**Sn**	**13 46 40.7**	**-0.6**
comp=Z,872nm,0.3s									
HOBG	**Hohbusch**	**1.82**	**76**	*e*Pg		**Pn**	**Pn**	**13 46 21.1**	**+0.3**
HOBG				*e*Sg		Sn	**Sn**	**13 46 42.0**	**-1.9**
comp=Z,698nm,0.4s									
HOBG	**Hohbusch**	**1.82**	**76**	Pg		**Pn**	**Pn**	**13 46 21.1**	**+0.3**
BGG	**Burgeitz**	**1.83**	**100**	*e*Pg		**Pn**	**Pn**	**13 46 21.5**	**+0.7**
BGG				*e*Sg		Sn	**Sn**	**13 46 43.3**	**-0.7**
comp=Z,489nm,0.2s									
BGG	**Burgeitz**	**1.83**	**100**	Pg		**Pn**	**Pn**	**13 46 21.5**	**+0.6**
BGG				Sg		Sn	**Sn**	**13 46 43.3**	**-0.7**
comp=Z,489nm,0.2s									
RUP	**Ruppelstein**	**1.84**	**117**	Pn		**Pn**	**Pn**	**13 46 21.7**	**+0.7**
RUP	**Ruppelstein**	**1.84**	**117**	Pn		**Pn**	**Pn**	**13 46 21.7**	**+0.7**
BUG	**Bochum--Univer**	**1.93**	**62**	*e*Pg		**Pn**	**Pn**	**13 46 22.3**	**0.0**
BUG				*e*Sg		Sn	**Sn**	**13 46 47.8**	**+1.2**
WTSB	**Winterswijk**	**1.99**	**45**	*e*Pg		**Pn**	**Pn**	**13 46 22.4**	**-0.7**
WTSB	**Winterswijk**	**1.99**	**45**	⇑*e*Pn		**Pn**	**Pn**	**13 46 22.4**	**-0.7**
comp=Z,61nm,0.2s									
WTSB	**Winterswijk**	**1.99**	**45**	*e*Pg		**Pg**	**Pg**	**13 46 30.2**	**+2.5**
WTSB	**Winterswijk**	**1.99**	**45**	*e*Sn		**Sn**	**Sn**	**13 46 44.7**	**-3.3**
WTSB				*e*Sg		Sg	**Sg**	**13 46 51.0**	**-2.6**
WTSB	**Winterswijk**	**1.99**	**45**	⇑*e*Pn		**Pn**	**Pn**	**13 46 22.4**	**-0.7**
comp=Z,61nm,0.2s									
WTSB				*e*Sn		Sn	**Sn**	**13 46 44.7**	**-3.3**
WTSB				*e*Sg		Sg	**Sg**	**13 46 51.0**	**-2.6**
RFYF	**Reffroy**	**2.04**	**162**	*e*Pn		**Pn**	**Pn**	**13 46 25.3**	**+1.6**
baz=338									
RFYF				*e*Sg		Sg	**Sg**	**13 46 55.8**	**+0.8**
comp=Z,289nm,0.3s									
RFYF	**Reffroy**	**2.04**	**162**	*e*Pn		**Pn**	**Pn**	**13 46 25.3**	**+1.6**
RFYF				*e*Sg		Sg	**Sg**	**13 46 55.8**	**+0.8**
comp=Z,144nm,0.3s									
KOE	**Koeppel**	**2.05**	**93**	*e*Pg		**Pn**	**Pn**	**13 46 24.6**	**+0.8**
KOE				*e*Sg		Sn	**Sn**	**13 46 49.5**	**+0.2**
comp=Z,387nm,0.3s									
KOE	**Koeppel**	**2.05**	**93**	Pg		**Pn**	**Pn**	**13 46 24.6**	**+0.8**
ABH	**Alteburg**	**2.05**	**109**	Pn		**Pn**	**Pn**	**13 46 24.9**	**+1.0**
ABH	**Alteburg**	**2.05**	**109**	Pn		**Pn**	**Pn**	**13 46 24.9**	**+1.0**
MEZF	**Maizieres J'vi**	**2.10**	**171**	*e*Pn		**Pn**	**Pn**	**13 46 26.0**	**+1.4**
baz=349									
MEZF	**Maizieres J'vi**	**2.10**	**171**	*e*Pg		**Pg**	**Pg**	**13 46 30.4**	**+0.6**
baz=350									
MEZF				*e*Sg		Sg	**Sg**	**13 46 58.1**	**+1.1**
comp=Z,447nm,0.5s									
MEZF	**Maizieres J'vi**	**2.10**	**171**	*e*Pn		**Pn**	**Pn**	**13 46 26.0**	**+1.4**
MEZF				*e*Pg		Pg	**Pg**	**13 46 30.4**	**+0.6**
MEZF				*e*Sg		Sg	**Sg**	**13 46 58.1**	**+1.1**
MEZF	**Maizieres J'vi**	**2.10**	**171**	*e*Pn		**Pn**	**Pn**	**13 46 26.0**	**+1.4**
MEZF	**Maizieres J'vi**	**2.10**	**171**	*e*Pg		**Pg**	**Pg**	**13 46 30.4**	**+0.6**
MEZF				*e*Sg		Sg	**Sg**	**13 46 58.1**	**+1.1**
comp=Z,224nm,0.5s									
SFTF	**Sexfontaines**	**2.39**	**172**	*e*Pn		**Pn**	**Pn**	**13 46 29.7**	**+1.1**
baz=348									
SFTF	**Sexfontaines**	**2.39**	**172**	*e*Pg		**Pg**	**Pg**	**13 46 35.7**	**+0.3**
baz=340									
SFTF				*e*Sg		Sg	**Sg**	**13 47 07.1**	**+0.8**
comp=Z,144nm,0.2s									
SFTF	**Sexfontaines**	**2.39**	**172**	*e*Pn		**Pn**	**Pn**	**13 46 29.7**	**+1.1**
SFTF				*e*Pg		Pg	**Pg**	**13 46 35.7**	**+0.3**
SFTF				*e*Sg		Sg	**Sg**	**13 47 07.1**	**+0.8**
SFTF	**Sexfontaines**	**2.39**	**172**	*e*Pn		**Pn**	**Pn**	**13 46 29.7**	**+1.1**
SFTF	**Sexfontaines**	**2.39**	**172**	*e*Pg		**Pg**	**Pg**	**13 46 35.7**	**+0.3**
SFTF				*e*Sg		Sg	**Sg**	**13 47 07.1**	**+0.8**
comp=Z,72nm,0.2s									
TNS	**Taunus Mts**	**2.53**	**96**	*e*Pn		**Pn**	**Pn**	**13 46 30.9**	**+0.5**
TNS				*e*Sg		Sg	**Sg**	**13 47 07.1**	**-3.6**
TNS	**Taunus Mts**	**2.53**	**96**	Pn		**Pn**	**Pn**	**13 46 30.9**	**+0.5**
TNS				Sg		Sg	**Sg**	**13 47 07.1**	**-3.6**
THEF	**They Montfort**	**2.53**	**157**	Pn		**Pn**	**Pn**	**13 46 31.5**	**+1.0**
THEF	**They Montfort**	**2.53**	**157**	Pn		**Pn**	**Pn**	**13 46 31.5**	**+1.0**
LANF	**Langenberg**	**2.65**	**126**	Pn		**Pn**	**Pn**	**13 46 33.9**	**+1.8**
LANF	**Langenberg**	**2.65**	**126**	Pn		**Pn**	**Pn**	**13 46 33.9**	**+1.8**
IBBN	**Ibbenburen**	**2.66**	**48**	*e*Pn		**Pn**	**Pn**	**13 46 31.5**	**-0.8**
IBBN				*e*Sg		Sg	**Sg**	**13 47 12.8**	**-2.1**
IBBN	**Ibbenburen**	**2.66**	**48**	Pn		**Pn**	**Pn**	**13 46 31.5**	**-0.8**
IBBN				Sg		Sg	**Sg**	**13 47 12.8**	**-2.2**
CDF	**Champ du Feu**	**2.80**	**139**	*e*Pn		**Pn**	**Pn**	**13 46 35.5**	**+1.3**
CDF				*e*Sg		Sg	**Sg**	**13 47 18.8**	**-0.8**
comp=Z,122nm,0.4s									
CDF	**Champ du Feu**	**2.80**	**139**	*e*Pn		**Pn**	**Pn**	**13 46 35.5**	**+1.3**
CDF				*e*Sg		Sg	**Sg**	**13 47 18.8**	**-0.8**
comp=Z,61nm,0.4s									
HAU	**Haudompre**	**2.83**	**155**	*e*Pg		**Pg**	**Pg**	**13 46 43.6**	**-0.1**
HAU				*e*Sg		Sg	**Sg**	**13 47 20.2**	**-0.2**
comp=Z,178nm,0.3s									
HAU	**Haudompre**	**2.83**	**155**	*e*Pn		**Pn**	**Pn**	**13 46 35.1**	**+0.5**
HAU				*e*Pg		Pg	**Pg**	**13 46 43.6**	**-0.1**
HAU				*e*Sg		Sg	**Sg**	**13 47 20.2**	**-0.2**
HAU	**Haudompre**	**2.83**	**155**	*e*Pn		**Pn**	**Pn**	**13 46 35.1**	**+0.5**
HAU	**Haudompre**	**2.83**	**155**	*e*Pg		**Pg**	**Pg**	**13 46 43.6**	**-0.1**
HAU				*e*Sg		Sg	**Sg**	**13 47 20.2**	**-0.2**
comp=Z,89nm,0.3s									
ECH	**Echery**	**2.91**	**143**	Pn		**Pn**	**Pn**	**13 46 38.1**	**+2.3**
ECH	**Echery**	**2.91**	**143**	Pn		**Pn**	**Pn**	**13 46 38.1**	**+2.3**
HINF	**Hinteralfeld**	**3.15**	**150**	*e*Pn		**Pn**	**Pn**	**13 46 39.4**	**+0.4**
HINF				*e*Sg		Sg	**Sg**	**13 47 29.7**	**-0.9**
comp=Z,110nm,0.5s									
HINF	**Hinteralfeld**	**3.15**	**150**	*e*Pn		**Pn**	**Pn**	**13 46 39.4**	**+0.4**
HINF				*e*Sg		Sg	**Sg**	**13 47 29.7**	**-0.9**
comp=Z,55nm,0.5s									
MOF	**Molkenrain**	**3.21**	**147**	Pn		**Pn**	**Pn**	**13 46 42.0**	**+2.2**
MOF	**Molkenrain**	**3.21**	**147**	Pn		**Pn**	**Pn**	**13 46 42.0**	**+2.2**
LOR	**Lormes**	**3.34**	**188**	*e*Pn		**Pn**	**Pn**	**13 46 42.7**	**+1.1**
baz=13									
LOR	**Lormes**	**3.34**	**188**	*e*Pg		**Pg**	**Pg**	**13 46 52.8**	**-0.6**
baz=11									
LOR				*e*Sn		Sn	**Sn**	**13 47 20.8**	**-0.3**
LOR				*e*Sg		Sg	**Sg**	**13 47 36.7**	**+0.1**
comp=Z,74nm,0.3s									
LOR	**Lormes**	**3.34**	**188**	*e*Pn		**Pn**	**Pn**	**13 46 42.7**	**+1.1**
LOR				*e*Pg		Pg	**Pg**	**13 46 52.8**	**-0.6**
LOR				*e*Sn		Sn	**Sn**	**13 47 20.8**	**-0.3**
LOR				*e*Sg		Sg	**Sg**	**13 47 36.7**	**+0.1**
LOR	**Lormes**	**3.34**	**188**	*e*Pn		**Pn**	**Pn**	**13 46 42.7**	**+1.1**
LOR	**Lormes**	**3.34**	**188**	*e*Pg		**Pg**	**Pg**	**13 46 52.8**	**-0.6**
LOR				*e*Sn		Sn	**Sn**	**13 47 20.8**	**-0.3**
LOR				*e*Sg		Sg	**Sg**	**13 47 36.7**	**+0.1**
comp=Z,37nm,0.3s									
BFO	**Black Forest**	**3.34**	**131**	*e*Pn		**Pn**	**Pn**	**13 46 42.8**	**+1.2**
BFO	**Black Forest**	**3.34**	**131**	*e*Pn		**Pn**	**Pn**	**13 46 43.6**	**+2.0**
BFO	**Black Forest**	**3.34**	**131**	Pn		**Pn**	**Pn**	**13 46 42.8**	**+1.2**
UBBA	**Unterbreizbach**	**3.48**	**84**	*e*Pn		**Pn**	**Pn**	**13 46 43.8**	**+0.2**
UBBA	**Unterbreizbach**	**3.48**	**84**	Pn		**Pn**	**Pn**	**13 46 43.8**	**+0.2**
FELD	**Feldberg im Sc**	**3.53**	**139**	Pn		**Pn**	**Pn**	**13 46 45.8**	**+1.6**
FELD	**Feldberg im Sc**	**3.53**	**139**	Pn		**Pn**	**Pn**	**13 46 45.8**	**+1.6**
HYF	**Humbligny**	**3.54**	**201**	*e*Pn		**Pn**	**Pn**	**13 46 45.2**	**+0.9**
HYF				*e*Sg		Sg	**Sg**	**13 47 43.8**	**+0.8**
HYF	**Humbligny**	**3.54**	**201**	*e*Pn		**Pn**	**Pn**	**13 46 45.2**	**+0.9**
HYF				*e*Sg		Sg	**Sg**	**13 47 43.8**	**+0.8**
LOMF	**Lomont**	**3.56**	**154**	Pn		**Pn**	**Pn**	**13 46 47.3**	**+2.7**
LOMF	**Lomont**	**3.56**	**154**	Pn		**Pn**	**Pn**	**13 46 47.3**	**+2.7**
SSF	**Saint Saulge**	**3.58**	**191**	*e*Pg		**Pg**	**Pg**	**13 46 57.5**	**-0.6**
SSF				*e*Sn		Sn	**Sn**	**13 47 26.6**	**-0.5**
SSF				*e*Sg		Sg	**Sg**	**13 47 44.2**	**-0.2**
comp=Z,56nm,0.4s									
SSF	**Saint Saulge**	**3.58**	**191**	*e*Pn		**Pn**	**Pn**	**13 46 45.5**	**+0.6**
SSF				*e*Pg		Pg	**Pg**	**13 46 57.5**	**-0.6**
SSF				*e*Sn		Sn	**Sn**	**13 47 26.6**	**-0.5**
SSF				*e*Sg		Sg	**Sg**	**13 47 44.2**	**-0.2**
SSF	**Saint Saulge**	**3.58**	**191**	*e*Pn		**Pn**	**Pn**	**13 46 45.5**	**+0.6**
SSF	**Saint Saulge**	**3.58**	**191**	*e*Pg		**Pg**	**Pg**	**13 46 57.5**	**-0.6**
SSF				*e*Sn		Sn	**Sn**	**13 47 26.6**	**-0.5**
SSF				*e*Sg		Sg	**Sg**	**13 47 44.2**	**-0.2**
comp=Z,28nm,0.4s									
LDF	**La Druitiere**	**3.62**	**239**	*e*Pn		**Pn**	**Pn**	**13 46 46.7**	**+1.2**
LDF				*e*Sn		Sn	**Sn**	**13 47 27.5**	**-0.6**
LDF				*e*Sg		Sg	**Sg**	**13 47 46.2**	**+0.4**
comp=Z,45nm,0.2s									
LDF	**La Druitiere**	**3.62**	**239**	*e*Pn		**Pn**	**Pn**	**13 46 46.7**	**+1.2**
LDF				*e*Sn		Sn	**Sn**	**13 47 27.5**	**-0.6**
LDF				*e*Sg		Sg	**Sg**	**13 47 46.2**	**+0.4**
comp=Z,22nm,0.2s									
SPAK	**Spaichingen-Ko**	**3.72**	**130**	Pn		**Pn**	**Pn**	**13 46 48.3**	**+1.5**
SPAK	**Spaichingen-Ko**	**3.72**	**130**	Pn		**Pn**	**Pn**	**13 46 48.3**	**+1.5**
FLN	**La Foliniere**	**3.73**	**243**	*e*Pn		**Pn**	**Pn**	**13 46 48.1**	**+1.1**
baz=62									
FLN				*e*Sg		Sg	**Sg**	**13 47 49.4**	**+0.2**
comp=Z,99nm,0.3s									
FLN	**La Foliniere**	**3.73**	**243**	*e*Pn		**Pn**	**Pn**	**13 46 48.1**	**+1.1**
FLN				*e*Sg		Sg	**Sg**	**13 47 49.4**	**+0.2**
comp=Z,49nm,0.3s									
AVF	**Avril sur Loir**	**3.87**	**192**	*e*Pg		**Pg**	**Pg**	**13 47 02.9**	**-0.6**
AVF				*e*Sn		Sn	**Sn**	**13 47 33.6**	**-0.6**
AVF				*e*Sg		Sg	**Sg**	**13 47 53.8**	**+0.2**
comp=Z,40nm,0.5s									
AVF	**Avril sur Loir**	**3.87**	**192**	*e*Pn		**Pn**	**Pn**	**13 46 49.5**	**+0.7**
AVF				*e*Pg		Pg	**Pg**	**13 47 02.9**	**-0.6**
AVF				*e*Sn		Sn	**Sn**	**13 47 33.6**	**-0.6**
AVF				*e*Sg		Sg	**Sg**	**13 47 53.8**	**+0.2**
AVF	**Avril sur Loir**	**3.87**	**192**	*e*Pn		**Pn**	**Pn**	**13 46 49.5**	**+0.7**
AVF	**Avril sur Loir**	**3.87**	**192**	*e*Pg		**Pg**	**Pg**	**13 47 02.9**	**-0.6**
AVF				*e*Sn		Sn	**Sn**	**13 47 33.6**	**-0.6**
AVF				*e*Sg		Sg	**Sg**	**13 47 53.8**	**+0.2**
comp=Z,20nm,0.5s									
CLZ	**Clausthal**	**3.88**	**69**	*e*Pn		**Pn**	**Pn**	**13 46 48.5**	**-0.5**
CLZ				*e*Sg		Sg	**Sg**	**13 47 47.9**	**-6.3**
CLZ	**Clausthal**	**3.88**	**69**	Pn		**Pn**	**Pn**	**13 46 48.5**	**-0.6**
SMF	**Signal de Mont**	**3.96**	**187**	*e*Pg		**Pg**	**Pg**	**13 47 04.8**	**-0.5**
SMF				*e*Sn		Sn	**Sn**	**13 47 35.7**	**-0.7**
SMF				*e*Sg		Sg	**Sg**	**13 47 56.6**	**+0.1**
comp=Z,50nm,0.2s									
SMF	**Signal de Mont**	**3.96**	**187**	*e*Pn		**Pn**	**Pn**	**13 46 50.8**	**+0.7**
SMF				*e*Pg		Pg	**Pg**	**13 47 04.8**	**-0.5**
SMF				*e*Sn		Sn	**Sn**	**13 47 35.7**	**-0.7**
SMF				*e*Sg		Sg	**Sg**	**13 47 56.6**	**+0.1**
SMF	**Signal de Mont**	**3.96**	**187**	*e*Pn		**Pn**	**Pn**	**13 46 50.8**	**+0.7**
SMF	**Signal de Mont**	**3.96**	**187**	*e*Pg		**Pg**	**Pg**	**13 47 04.8**	**-0.5**
SMF				*e*Sn		Sn	**Sn**	**13 47 35.7**	**-0.7**
SMF				*e*Sg		Sg	**Sg**	**13 47 56.6**	**+0.1**
comp=Z,25nm,0.2s									
NRDL	**Niedersach Rie**	**3.98**	**59**	*e*Pn		**Pn**	**Pn**	**13 46 49.0**	**-1.3**
NRDL				*e*Sn		Sn	**Sn**	**13 47 34.6**	**-2.3**
NRDL	**Niedersach Rie**	**3.98**	**59**	Pn		**Pn**	**Pn**	**13 46 49.0**	**-1.3**
NRDL				Sn		Sn	**Sn**	**13 47 34.6**	**-2.3**
CABF	**La Chapelle**	**4.09**	**165**	*e*Pn		**Pn**	**Pn**	**13 46 53.3**	**+1.3**
CABF				*e*Sn		Sn	**Sn**	**13 47 38.6**	**-1.2**
CABF				*e*Sg		Sg	**Sg**	**13 48 00.4**	**-0.6**
comp=Z,151nm,0.7s									
CABF	**La Chapelle**	**4.09**	**165**	*e*Pn		**Pn**	**Pn**	**13 46 53.3**	**+1.3**
CABF				*e*Sn		Sn	**Sn**	**13 47 38.6**	**-1.2**
CABF				*e*Sg		Sg	**Sg**	**13 48 00.4**	**-0.6**
comp=Z,76nm,0.7s									
GRR	**Gorron**	**4.14**	**240**	*e*Pn		**Pn**	**Pn**	**13 46 53.7**	**+1.1**
GRR				*e*Sn		Sn	**Sn**	**13 47 39.9**	**-1.1**
GRR				*e*Sg		Sg	**Sg**	**13 48 02.4**	**0.0**
comp=Z,44nm,0.3s									
GRR	**Gorron**	**4.14**	**240**	*e*Pn		**Pn**	**Pn**	**13 46 53.7**	**+1.1**
GRR				*e*Sn		Sn	**Sn**	**13 47 39.9**	**-1.1**
GRR				*e*Sg		Sg	**Sg**	**13 48 02.4**	**0.0**
comp=Z,22nm,0.3s									
BGF	**Bois d'Agland**	**4.17**	**196**	*e*Pn		**Pn**	**Pn**	**13 46 54.0**	**+1.0**
BGF				*e*Sn		Sn	**Sn**	**13 47 40.9**	**-0.8**
BGF				*e*Sg		Sg	**Sg**	**13 48 03.3**	**-0.1**
comp=Z,106nm,0.4s									
BGF	**Bois d'Agland**	**4.17**	**196**	*e*Pn		**Pn**	**Pn**	**13 46 54.0**	**+1.0**
BGF				*e*Sn		Sn	**Sn**	**13 47 40.9**	**-0.8**
BGF				*e*Sg		Sg	**Sg**	**13 48 03.3**	**-0.1**
comp=Z,53nm,0.4s									
GRA1	**Grafenberg Arr**	**4.39**	**99**	Sg		**Sg**	**Sg**	**13 48 06.0**	**-4.4**
GRF	**Grafenberg Arr**	**4.39**	**99**	*e*Sg		**Sg**	**Sg**	**13 48 06.0**	**-4.4**
MOX	**Moxa**

KHC			*e*SG		**Sg**	**13 48 55.7**	**-7.1**
	comp=Z,16nm,1.4s						
KHC	**Kasperske Hory**	**6.02 100**	Pn		**Pn**	**13 47 21.3**	**+2.8**
MBDF	**Montbardon**	**6.04 165**	*e*Pn		**Pn**	**13 47 19.8**	**+1.1**
MBDF			*e*Sn		**Sn**	**13 48 25.3**	**-2.4**
MBDF			*e*Sg		**Sg**	**13 49 01.1**	**-2.2**
	comp=Z,24nm,0.9s						
MBDF	**Montbardon**	**6.04 165**	*e*Pn		**Pn**	**13 47 19.8**	**+1.1**
LFF	**La Frestale**	**6.19 206**	*e*Pn		**Pn**	**13 47 21.5**	**+0.8**
LFF			*e*Sn		**Sn**	**13 48 29.3**	**-2.1**
LFF			*e*Sg		**Sg**	**13 49 06.3**	**-1.8**
	comp=Z,61nm,0.7s						
LFF	**La Frestale**	**6.19 206**	*e*Pn		**Pn**	**13 47 21.5**	**+0.8**
LFF			*e*Sg		**Sg**	**13 49 06.3**	**-1.8**
	comp=Z,30nm,0.7s						
GEC2	**GERESS Array S**	**6.19 103**	*e*Pn		**Pn**	**13 47 23.4**	**+2.6**
GEC2	**GERESS Array S**	**6.19 103**	Pn		**Pn**	**13 47 23.4**	**+2.6**
LASF	**Ste Croix**	**6.51 184**	*e*Pn		**Pn**	**13 47 26.3**	**+1.1**
LASF			*e*Sn		**Sn**	**13 48 36.5**	**-3.0**
LASF			*e*Sg		**Sg**	**13 49 16.4**	**-2.2**
	comp=Z,33nm,0.8s						
LASF	**Ste Croix**	**6.51 184**	*e*Pn		**Pn**	**13 47 26.3**	**+1.1**
SMRF	**Simiane la Rot**	**6.64 174**	*e*Pn		**Pn**	**13 47 27.1**	**+0.2**
SMRF			*e*Sn		**Sn**	**13 48 39.7**	**-2.8**
	comp=Z,2.9nm,0.5s						
SMRF	**Simiane la Rot**	**6.64 174**	*e*Pn		**Pn**	**13 47 27.1**	**+0.2**
SBF	**Sospel**	**7.00 163**	*e*Pn		**Pn**	**13 47 31.8**	**0.0**
SBF			*e*Sn		**Sn**	**13 48 47.9**	**-3.4**
	comp=Z,14nm,0.4s						
SBF	**Sospel**	**7.00 163**	*e*Pn		**Pn**	**13 47 31.8**	**0.0**
FRF	**La Foret Royal**	**7.16 168**	*e*Pn		**Pn**	**13 47 33.9**	**-0.2**
FRF			*e*Sn		**Sn**	**13 48 52.1**	**-3.2**
	comp=Z,7.5nm,0.2s						
FRF	**La Foret Royal**	**7.16 168**	*e*Pn		**Pn**	**13 47 33.9**	**-0.2**
LMR	**La Mourre**	**7.37 169**	*e*Pn		**Pn**	**13 47 37.4**	**+0.5**
LMR			*e*Sn		**Sn**	**13 48 56.9**	**-3.5**
	comp=Z,2.5nm,0.3s						
LMR	**La Mourre**	**7.37 169**	*e*Pn		**Pn**	**13 47 37.4**	**+0.5**
MTLF	**Montolieu**	**7.41 193**	*e*Pn		**Pn**	**13 47 37.7**	**+0.3**
MTLF			*e*Sg		**Sg**	**13 49 44.4**	**-2.7**
	comp=Z,14nm,0.8s						
MTLF	**Montolieu**	**7.41 193**	*e*Pn		**Pn**	**13 47 37.7**	**+0.3**
DPC	**Dobruska-Polom**	**7.53 87**	*e*SG		**Sg**	**13 49 40.2**	**-11**
	comp=Z,7.2nm,0.9s						
EPF	**Esparros**	**8.07 202**	*e*Pn		**Pn**	**13 47 46.1**	**-0.5**
EPF			*e*Sn		**Sn**	**13 49 14.5**	**-3.3**
	comp=Z,3.5nm,0.2s						
EPF	**Esparros**	**8.07 202**	*e*Pn		**Pn**	**13 47 46.1**	**-0.5**
ETSF	**Etsaut**	**8.43 206**	*e*Pn		**Pn**	**13 47 51.8**	**+0.3**
ETSF			*e*Sn		**Sn**	**13 49 23.1**	**-3.5**
ETSF			*e*Sg		Sn	13 50 16.6	+50
	comp=Z,3.9nm,0.5s						
ETSF	**Etsaut**	**8.43 206**	*e*Pn		**Pn**	**13 47 51.8**	**+0.3**
EALK	**Alkurruntz**	**8.44 212**	P		**Pn**	**13 47 53.1**	**+1.6**
EALK			S		**Sn**	**13 49 22.9**	**-3.8**
EALK	**Alkurruntz**	**8.44 212**	P		**Pn**	**13 47 53.1**	**+1.5**
SJPF	**Ste Jean**	**8.44 210**	*e*Pn		**Pn**	**13 47 51.8**	**+0.2**
SJPF			*e*Sn		**Sn**	**13 49 23.2**	**-3.6**
SJPF			*e*Sg		Sn	13 50 16.9	+50
	comp=Z,6.9nm,0.5s						
SJPF	**Ste Jean**	**8.44 210**	*e*Pn		**Pn**	**13 47 51.8**	**+0.2**
EBIE	**Bielsa**	**8.45 203**	P		**Pn**	**13 47 53.4**	**+1.7**
EBIE			S		**Sn**	**13 49 23.9**	**-3.1**
EBIE	**Bielsa**	**8.45 203**	P		**Pn**	**13 47 53.4**	**+1.7**
ELIZ	**Elizondo**	**8.49 212**	P		**Pn**	**13 47 53.8**	**+1.5**
ELIZ			S		**Sn**	**13 49 23.8**	**-4.3**
ELIZ	**Elizondo**	**8.49 212**	P		**Pn**	**13 47 53.8**	**+1.4**
CSOR	**Sort**	**8.53 197**	P		**Pn**	**13 47 54.5**	**+1.7**
CSOR			S		**Sn**	**13 49 25.5**	**-3.4**
CSOR	**Sort**	**8.53 197**	P		**Pn**	**13 47 54.5**	**+1.7**
KMY	**Karmoy**	**8.67 2**	*e*P		**Pn**	**13 47 53.3**	**-1.4**
KMY			*e*S		**Sn**	**13 49 24.2**	**-8.1**
KMY	**Karmoy**	**8.67 2**	*e*P		**Pn**	**13 47 53.3**	**-1.4**
BLS5	**Blasjo**	**8.94 6**	*e*P		**Pn**	**13 47 56.8**	**-1.6**
BLS5			*e*S		**Sn**	**13 49 26.2**	**-13**
BLS5	**Blasjo**	**8.94 6**	*e*P		**Pn**	**13 47 56.8**	**-1.6**
ELAN	**Lanestosa**	**9.14 220**	P		**Pn**	**13 48 00.6**	**-0.7**
ELAN			S		**Sn**	**13 49 36.6**	**-7.4**
ELAN	**Lanestosa**	**9.14 220**	P		**Pn**	**13 48 00.6**	**-0.7**
EARI	**Arriondas**	**9.86 226**	P		**Pn**	**13 48 11.2**	**+0.2**
EARI			S		**Sn**	**13 49 51.6**	**-10**
EARI	**Arriondas**	**9.86 226**	P		**Pn**	**13 48 11.2**	**+0.1**
EPON	**Pontenova**	**10.78 232**	P		**Pn**	**13 48 22.6**	**-1.0**
	comp=Z,0.7nm,0.2s						
EPON			S		**Sn**	**13 50 13.2**	**-11**
EPON	**Pontenova**	**10.78 232**	P		**Pn**	**13 48 22.6**	**-1.0**
	comp=Z,0.7nm,0.2s						

*IDC **13** 13:45:54.2±0.7, 4°.41N×75°.02W, h30km±4km, mb3.4/8, mb1 3.8/9, mb1mx3.7/19, mbtmp3.5/9, ML4.4/1, MS3.0/3, Ms1 3.0/3, ms1mx2.7/25, Error ellipse: s-maj=15.4km s-min=10.8km az=152.0*

*ISCJB **13** 13:45:55.1±1.0, 4°.53N±0°.06×74°.87W±0°.08, h56km±11km, mb3.6/8, Error ellipse: s-maj=13.4km s-min=10.3km az=22.1*

*NEIC **13** 13:45:55.9±0.9, 4°.49N×74°.87W, h48km±9km, mb4.5/1, Error ellipse: s-maj=10.7km s-min=8.6km az=113.0*

ISC 13 13:45:56.4±0.9, 4°.52N±0°.06×74°.82W±0°.06, h47km±10km, n27, σ1^{9}13/24, mb3.6/8, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**0.59**	**56**	Pg	**Pn**	**13 46 10.2**	**+1.5**
	410nm,0.3s,baz=97,slow=8.1,SNR=607						
ROSC				Lg		13 46 22.1	
	1μm,0.3s,baz=103,slow=19,SNR=31						
ROSC	**El Rosal**	**0.59**	**56**	*e*P	**Pn**	**13 46 09.6**	**+0.9**
ROSC				Pg	**Pn**	**13 46 10.2**	**+1.5**
ROSC				Lg		13 46 22.1	
OTAV	**Otavalo**	**5.59**	**221**	*e*P	**Pn**	**13 47 17.1**	**+0.1**
	51nm,1.0s						
SDV	**Santo Domingo**	**6.01**	**44**	*e*P	**Pn**	**13 47 25.2**	**+2.4**
	107nm,0.6s						
BCIP	**Isla Barro Col**	**6.79**	**313**	*e*P	**Pn**	**13 47 31.4**	**-2.1**
PCRV	**Puerto La Cruz**	**11.56**	**60**	Pn	**Pn**	**13 48 38.7**	**-0.1**
	2.6nm,0.3s,baz=203,slow=15,SNR=14						
PCRV				Sn	**Sn**	**13 50 45.1**	**-1.5**
	0.8nm,0.3s,baz=343,slow=17,SNR=2.6						
PCRV				LR	LR	13 52 31.5	
	comp=Z,49nm,21.9s,baz=229,slow=34						
JTS	**JuntasAbangare**	**11.56**	**300**	LR	LR	13 53 13.0	
	comp=Z,70nm,20.5s,baz=250,slow=38						
ATAH	**Atahualpa**	**12.12**	**197**	LR	LR	13 54 04.7	
	comp=Z,152nm,20.3s,baz=30,slow=41						
MTDJ	**Mount Denham**	**13.88**	**349**	*e*Pn	**Pn**	**13 49 10.4**	**-0.1**
SDDR	**Presa de Saban**	**14.78**	**13**	*e*P	**Pn**	**13 49 23.8**	**+1.3**
	34nm,1.0s						
GTBY	**Guantanamo Bay**	**15.31**	**359**	P	**Pn**	**13 49 30.9**	**+1.4**
CRPR	**Cabo Rojo, PR**	**15.38**	**29**	*e*P	**Pn**	**13 49 29.0**	**-1.3**
SJG	**San Juan**	**15.95**	**31**	Pn	**Pn**	**13 49 35.7**	**-1.9**
	3.5nm,0.3s,baz=217,slow=17,SNR=9.8						
CBYP	**Canovanas**	**16.24**	**32**	*e*P	**Pn**	**13 49 41.0**	**-0.3**
	18nm,0.5s						
MTP	**Monte Pirata**	**16.26**	**33**	*e*P	**Pn**	**13 49 41.0**	**-0.6**
LPAZ	**La Paz**	**21.71**	**162**	P	**P**	**13 50 42.8**	**-0.8**
	0.5nm,0.6s,mb3.1,baz=350,slow=11,SNR=2.5						
SIV	**San Ignacio**	**24.51**	**147**	P	**P**	**13 51 11.6**	**+0.1**
	1.5nm,0.6s,mb3.7,baz=319,slow=13,SNR=8.6						
SIV				pP		13 51 20.3	
	3.5nm,0.5s,baz=324,slow=11,SNR=14						
TXAR	**Lajitas Array**	**36.80**	**315**	P	**P**	**13 52 59.2**	**-0.6**
	0.5nm,1.0s,mb3.3,baz=129,slow=7.1,SNR=2.1						
PDAR	**Pinedale Array**	**48.98**	**326**	P	**P**	**13 54 38.9**	**+0.7**
	0.3nm,0.6s,mb3.5,baz=125,slow=11,SNR=3.4						
SCHQ	**Schefferville**	**50.58**	**6**	P	**P**	**13 54 50.9**	**+0.8**
	2.0nm,0.6s,mb4.2,baz=196,slow=7.4,SNR=3.9						
NVAR	**Mina Array Bea**	**51.93**	**317**	P	**P**	**13 55 01.1**	**+0.6**
	0.3nm,0.7s,mb3.4,baz=126,slow=4.6,SNR=3.1						
NVAR				pP	pP	13 55 10.1	-3.5
	0.8nm,0.8s,baz=128,slow=7.1,SNR=6.2						
YKA	**Yellowknife Ar**	**64.84**	**341**	P	**P**	**13 56 29.3**	**-0.9**
	0.6nm,0.5s,mb3.9,baz=132,slow=6.4,SNR=4.7						
YKA				pP	pP	13 56 38.9	-4.7
	1.0nm,0.4s,baz=131,slow=6.1,SNR=4.7						
YKA	**Yellowknife Ar**	**64.84**	**341**	P	**P**	**13 56 29.3**	**-0.9**
YKA				pP	pP	13 56 38.9	-4.7
ESDC	**Sonseca Array**	**72.42**	**50**	P	**P**	**13 57 19.3**	**+1.5**
	0.3nm,0.6s,mb3.4,baz=276,slow=7.0,SNR=3.1						
HHC	**Hu-ho-hao-te**	**134.47**	**353**	*e*PKP	PKPdf	14 05 07.8	-1.9
HHC				PP	PP	14 07 43.8	+2.8
HHC				SS	SS	14 25 27.9	+0.5
HHC				AMB	AMB		
	comp=Z,64nm,9.2s						
ASAR	**Alice Springs**	**146.39**	**233**	PKPbc	PKPbc	14 05 32.0	-0.9
	comp=Z,0.3nm,0.7s,baz=122,slow=3.3,SNR=4.8						
WRA	**Warramunga Arr**	**147.73**	**239**	PKPbc	PKPbc	14 05 35.4	-1.4
	comp=Z,0.3nm,0.8s,baz=109,slow=2.7,SNR=6.1						
WRA				pPKPbc	pPKPbc	14 05 45.3	-6.0
	comp=Z,0.9nm,0.7s,baz=109,slow=2.5,SNR=5.4						

*DDA **13** 13:56:07.9, 38°.92N×27°.92E, h3km±1km, Md2.8*

*ISCJB **13** 13:56:08.5±0.5, 38°.92N±0°.03×27°.90E±0°.04, h1km±5km, Error ellipse: s-maj=5.1km s-min=3.8km az=33.6*

*CSEM **13** 13:56:08.7±0.1, 38°.92N×27°.89E, h2km, MD3.0, Error ellipse: s-maj=1.3km s-min=1.1km az=117.0*

*ISK **13** 13:56:08.4, 38°.92N×27°.88E, h5km, MD3.0*

ISC 13 13:56:09.0±0.4, 38°.91N±0°.03×27°.89E±0°.04, h3km±4km, n54, σ0^{9}40/66, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.07**	**240**	*i* P	**Pg**	**13 56 10.3**	**-0.2**
AKHS				*i* S	**Sg**	**13 56 11.7**	**+0.2**
AKHS	**Akhisar**	**0.07**	**240**	*i* P	**Pg**	**13 56 10.3**	**-0.2**
AKHS				*i* S	**Sg**	**13 56 11.7**	**+0.2**
AKS	**Akhisar**	**0.07**	**241**	*e*PG	**Pg**	**13 56 10.3**	**-0.2**
AKS				*e*SG	**Sg**	**13 56 11.8**	**+0.3**
AKS	**Akhisar**	**0.07**	**241**	*e*Pg	**Pg**	**13 56 10.3**	**-0.2**
AKS				*e*Sg	**Sg**	**13 56 11.8**	**+0.3**
DEMI	**Demirci**	**0.66**	**78**	*i* P	**Pg**	**13 56 21.6**	**-0.1**
DEMI				*i* S	**Sg**	**13 56 29.8**	**-0.3**
DEMI	**Demirci**	**0.66**	**78**	*i* P	**Pg**	**13 56 21.6**	**0.0**
DEMI				*i* S	**Sg**	**13 56 29.8**	**-0.3**
IZM	**Izmir**	**0.71**	**224**	*e*PG	**Pg**	**13 56 22.5**	**-0.2**
IZM				*e*SG	**Sg**	**13 56 32.5**	**+0.6**
IZM	**Izmir**	**0.71**	**224**	*e*Pg	**Pg**	**13 56 22.5**	**-0.2**
IZM				*e*Sg	**Sg**	**13 56 32.5**	**+0.6**
KULA	**Kula-Manisa**	**0.72**	**123**	*e*PG	**Pg**	**13 56 22.5**	**-0.4**
KULA	**Kula-Manisa**	**0.72**	**123**	*e*Pg	**Pg**	**13 56 22.5**	**-0.4**
BALB	**Balikesir**	**0.73**	**359**	*e*PG	**Pg**	**13 56 22.8**	**-0.2**
BALB				*e*SG	**Sg**	**13 56 33.2**	**+0.8**
BALB	**Balikesir**	**0.73**	**359**	*e*Pg	**Pg**	**13 56 22.8**	**-0.2**
BALB				*e*Sg	**Sg**	**13 56 33.2**	**+0.8**
BLCB	**Balcova**	**0.85**	**232**	*e*PG	**Pg**	**13 56 25.0**	**-0.3**
BLCB	**Balcova**	**0.85**	**232**	*e*Pg	**Pg**	**13 56 25.0**	**-0.3**
BALY	**Balya**	**0.85**	**346**	*i* P	**Pg**	**13 56 24.6**	**-0.8**
BALY				*i* S	**Sg**	**13 56 37.1**	**+0.6**
BALY	**Balya**	**0.85**	**346**	*i* P	**Pg**	**13 56 24.6**	**-0.8**
BALY				*i* S	**Sg**	**13 56 37.1**	**+0.6**
GONE	**Gonen-Balikesi**	**1.14**	**352**	*e*PN	**Pg**	**13 56 30.7**	**-0.3**
GONE	**Gonen-Balikesi**	**1.14**	**352**	*e*Pn	**Pg**	**13 56 30.7**	**-0.3**
KCTX	**Karacabey (Bur**	**1.40**	**15**	*e*PN	**Pn**	**13 56 35.0**	**-0.4**
KCTX	**Karacabey (Bur**	**1.40**	**15**	*e*Pn	**Pn**	**13 56 35.0**	**-0.4**
KHL	**Karahalli**	**1.41**	**114**	*e*PN	**Pn**	**13 56 36.3**	**+0.8**
KHL	**Karahalli**	**1.41**	**114**	*e*Pn	**Pn**	**13 56 36.3**	**+0.8**
EZN	**Ezine**	**1.52**	**307**	*e*PN	**Pn**	**13 56 36.6**	**-0.4**
EZN	**Ezine**	**1.52**	**307**	*e*Pn	**Pn**	**13 56 36.6**	**-0.4**
KRBG	**Karabiga-Canak**	**1.55**	**343**	*e*PN	**Pn**	**13 56 37.2**	**-0.2**
KRBG	**Karabiga-Canak**	**1.55**	**343**	*e*Pn	**Pn**	**13 56 37.2**	**-0.2**
MLSB	**Milas**	**1.62**	**183**	*e*PN	**Pn**	**13 56 38.4**	**0.0**
MLSB	**Milas**	**1.62**	**183**	*e*Pn	**Pn**	**13 56 38.4**	**0.0**
MDNY	**Mudanya-Bursa**	**1.64**	**27**	*e*PN	**Pn**	**13 56 38.8**	**+0.1**
MDNY	**Mudanya-Bursa**	**1.64**	**27**	*e*Pn	**Pn**	**13 56 38.8**	**+0.1**
LPK	**Lapseki**	**1.70**	**329**	*e*PN	**Pn**	**13 56 39.5**	**0.0**
LPK	**Lapseki**	**1.70**	**329**	*e*Pn	**Pn**	**13 56 39.5**	**0.0**
ALT	**Altintas**	**1.73**	**85**	*e*PN	**Pn**	**13 56 39.9**	**-0.1**
ALT	**Altintas**	**1.73**	**85**	*e*Pn	**Pn**	**13 56 39.9**	**-0.1**
YER	**Yerkesik**	**1.80**	**170**	*e*PN	**Pn**	**13 56 41.1**	**+0.2**
YER	**Yerkesik**	**1.80**	**170**	*e*Pn	**Pn**	**13 56 41.1**	**+0.2**
ARMT	**Armutlu**	**1.81**	**24**	*e*PN	**Pn**	**13 56 41.0**	**0.0**
ARMT	**Armutlu**	**1.81**	**24**	*e*Pn	**Pn**	**13 56 41.1**	**0.0**
GELI	**Tayfur-Gelibol**	**1.84**	**324**	*e*PN	**Pn**	**13 56 41.0**	**-0.5**
GELI	**Tayfur-Gelibol**	**1.84**	**324**	*e*Pn	**Pn**	**13 56 41.0**	**-0.5**
RKY	**Sarkoy-Tekirda**	**1.85**	**343**	*e*PN	**Pn**	**13 56 41.5**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.85**	**343**	*e*Pn	**Pn**	**13 56 41.5**	**-0.2**
MFT	**Murefte**	**1.93**	**346**	*e*PN	**Pn**	**13 56 43.2**	**+0.5**
MFT	**Murefte**	**1.93**	**346**	*e*Pn	**Pn**	**13 56 43.2**	**+0.5**
CAVI	**Cavuskoy**	**1.98**	**49**	*e*PN	**Pn**	**13 56 43.6**	**+0.2**
CAVI	**Cavuskoy**	**1.98**	**49**	*e*Pn	**Pn**	**13 56 43.6**	**+0.2**
YLV	**Yalova**	**2.01**	**34**	*e*PN	**Pn**	**13 56 44.6**	**+0.8**
YLV	**Yalova**	**2.01**	**34**	*e*Pn	**Pn**	**13 56 44.6**	**+0.9**
ERIK	**Erikli-Kesan**	**2.05**	**329**	*e*PN	**Pn**	**13 56 44.0**	**-0.3**
ERIK	**Erikli-Kesan**	**2.05**	**329**	*e*Pn	**Pn**	**13 56 44.0**	**-0.3**
ADVT	**Abdulvahap**	**2.08**	**43**	*e*PN	**Pn**	**13 56 44.7**	**0.0**
ADVT	**Abdulvahap**	**2.08**	**43**	*e*Pn	**Pn**	**13 56 44.7**	**-0.1**
ENEZ	**Enez**	**2.26**	**324**	*e*PN	**Pn**	**13 56 46.9**	**-0.3**
ENEZ	**Enez**	**2.26**	**324**	*e*Pn	**Pn**	**13 56 46.9**	**-0.3**

*ISCJB **13** 14:15:43.9±0.9, 14°.8S±0°.2×170°.0E±0°.1, h645km±18km, mb3.5/10, Error ellipse: s-maj=24.9km s-min=18.1km az=148.9*

*NEIC **13** 14:15:43.9±0.7, 14°.70S×170°.08E, h628km±10km, mb3.7/1, Error ellipse: s-maj=16.6km s-min=12.1km az=166.0*

*IDC **13** 14:15:45.0±2.1, 14°.65S×169°.79E, h623km±20km, mb3.0/9, mb1 3.2/9, mb1mx3.1/16, mbtmp3.0/9, Error ellipse: s-maj=32.2km s-min=14.4km az=139.0*

ISC 13 14:15:44.5±0.9, 14°.8S±0°.1×170°.0E±0°.1, h630km±16km, n41, σ0^{9}78/19, mb3.6/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.00**	**204**	*e*P	**P**	**14 17 46.1**	**+1.3**
DZM				*e*S	**S**	**14 19 32.6**	**+9.2**
MSVF	**Nonsavu**	**8.28**	**112**	*e*P	**P**	**14 17 46.1**	**-1.3**
HNR	**Honiara**	**11.16**	**297**	P	**P**	**14 18 14.8**	**-0.4**
STKA	**Stephens Creek**	**31.00**	**232**	P	**P**	**14 21 13.6**	**+0.4**
	3.1nm,0.8s,mb4.0,baz=46,slow=9.8,SNR=3.4						
STKA				PcP	PcP	14 23 49.6	+0.8
	0.6nm,0.4s,baz=121,slow=5.9,SNR=3.9						
STKA	**Stephens Creek**	**31.00**	**232**	P	**P**	**14 21 13.6**	**+0.4**
STKA				PcP	PcP	14 23 49.6	+0.8
WRAB	**Tennant Creek**	**34.36**	**256**	*e*P	**P**	**14 21 41.5**	**0.0**
	1.6nm,0.7s,mb3.8						
WRA	**Warramunga Arr**	**34.37**	**256**	P	**P**	**14 21 41.2**	**-0.4**
	1.8nm,0.7s,mb3.8,baz=86,slow=9.0,SNR=22						
WRA				PcP	PcP	14 23 59.1	+0.6
	0.4nm,0.6s,baz=90,slow=7.0,SNR=4.6						
WRA				S	**S**	**14 26 24.8**	**-2.0**
	0.5nm,0.7s,baz=87,slow=14,SNR=5.8						
WRA				ScP	ScP	14 26 48.1	+2.9
	0.8nm,0.6s,baz=87,slow=3.8,SNR=9.1						
WRA	**Warramunga Arr**	**34.37**	**256**	P	**P**	**14 21 41.2**	**-0.4**
WRA				PcP	PcP	14 23 59.1	+0.6
WRA				S	**S**	**14 26 24.8**	**-2.0**
WRA				ScP	ScP	14 26 48.1	+2.9
ASAR	**Alice Springs**	**35.12**	**250**	P	**P**	**14 21 47.9**	**+0.1**
	2.7nm,0.7s,mb4.0,baz=78,slow=9.4,SNR=57						
ASAR				PcP	PcP	14 24 01.2	+0.5
	0.8nm,0.6s,baz=84,slow=2.9,SNR=8.7						
ASAR				S	**S**	**14 26 36.6**	**-1.4**
	0.9nm,0.8s,baz=75,slow=16,SNR=7.9						
ASAR				ScP	ScP	14 26 50.6	+2.8
	1.7nm,0.6s,baz=89,slow=3.9,SNR=27						
FITZ	**Fitzroy Crossi**	**42.59**	**259**	P	**P**	**14 22 48.2**	**+0.5**
	2.3nm,0.6s,mb3.9,baz=94,slow=9.0,SNR=7.0						
MJAR	**Matsushiro Arr**	**59.20**	**330**	P	**P**	**14 24 46.7**	**-0.2**
	0.8nm,0.8s,mb2.9,baz=159,slow=7.5,SNR=4.3						
MJAR	**Matsushiro Arr**	**59.20**	**330**	P	**P**	**14 24 46.7**	**-0.2**
KSRS	**Korea Array**	**65.28**	**324**	P	**P**	**14 25 26.3**	**+0.3**
	0.6nm,0.9s,mb3.0,baz=137,slow=7.9,SNR=4.9						
CMAR	**Chiang Mai Arr**	**77.38**	**293**	P	**P**	**14 26 37.4**	**+0.7**
	2.4nm,0.8s,mb3.7,baz=127,slow=4.2,SNR=14						
SONM	**Songino Array**	**84.11**	**323**	P	**P**	**14 27 11.2**	**+0.6**
	0.3nm,0.5s,mb3.1,baz=134,slow=6.6,SNR=4.0						
MKAR	**Makanchi Array**	**99.06**	**316**	P	Pdif	14 28 19.5	+0.1
	0.2nm,0.6s,baz=86,slow=7.3,SNR=4.0						
ARCES	**ARCESS Array B**	**120.94**	**346**	PKP	PKPdf	14 33 25.3	-0.8
	1.5nm,0.5s,baz=84,slow=2.9,SNR=18						
ARCES	**ARCESS Array B**	**120.94**	**346**	PKP	PKPdf	14 33 25.3	-0.8
FINES	**FINESS Array B**	**126.71**	**339**	PKP	PKPdf	14 33 37.2	-0.1
	0.4nm,0.4s,baz=225,slow=0.2,SNR=6.2						
CDF	**Champ du Feu**	**143.55**	**341**	*e*PKP1	PKPdf	14 34 07.9	-1.0
	6.6nm,0.6s						
MEZF	**Maizieres J'vi**	**144.14**	**343**	*e*PKP1	PKPdf	14 34 10.2	+0.3
	12nm,0.5s						
HAU	**Haudompre**	**144.20**	**341**	*e*PKP1	PKPdf	14 34 10.1	+0.1
	7.3nm,0.6s						
HINF	**Hinteralfeld**	**144.21**	**340**	*e*PKP1	PKPdf	14 34 09.9	-0.1
FLN	**La Foliniere**	**145.21**	**349**	*e*PKP1	PKPbc	14 34 12.8	-0.1
	6.3nm,0.6s						
LDF	**La Druitiere**	**145.30**	**348**	*e*PKP1	PKPbc	14 34 13.5	+0.3
	1.7nm,0.4s						
CABF	**La Chapelle**	**145.51**	**340**	*e*PKP1	PKPbc	14 34 14.5	+0.6
	9.1nm,0.7s						
LOR	**Lormes**	**145.60**	**343**	*e*PKP1	PKPbc	14 34 14.2	+0.1
	4.0nm,0.5s						
GRR	**Gorron**	**145.64**	**349**	*e*PKP1	PKPbc	14 34 14.1	-0.1
	5.1nm,0.5s						
SSF	**Saint Saulge**	**145.89**	**343**	*e*PKP1	PKPbc	14 34 15.2	+0.3
	5.3nm,0.6s						
SGMF	**Saint Gilles**	**146.05**	**351**	*e*PKP1	PKPbc	14 34 15.2	-0.1
	5.7nm,0.7s						
SMF	**Signal de Mont**	**146.17**	**343**	*e*PKP1	PKPbc	14 34 15.7	0.0
LPL	**La Plagne**	**146.25**	**339**	*e*PKP1	PKPbc	14 34 16.8	+0.8
LPG	**La Plagne**	**146.26**	**339**	*e*PKP1	PKPbc	14 34 16.8	+0.8
	7.6nm,0.8s						
QUIF	**Quistinic**	**146.47**	**352**	*e*PKP1	PKPbc	14 34 16.1	-0.4
	1.8nm,0.5s						
TCF	**Toulx Ste Croi**	**146.95**	**344**	*e*PKP1	PKPbc	14 34 17.9	+0.1
	4.9nm,0.6s						
MFF	**Saint Martin d**	**147.21**	**347**	*e*PKP1	PKPbc	14 34 18.5	0.0
	6.2nm,0.6s						
SMRF	**Simiane la Rot**	**148.00**	**339**	*e*PKP1	PKPbc	14 34 20.5	-0.1
	7.0nm,0.8s						
MTLF	**Montolieu**	**149.66**	**342**	*e*PKP1	PKPbc	14 34 24.9	+0.3
EPF	**Esparros**	**150.47**	**344**	*e*PKP1	PKPbc	14 34 27.2	+0.7
	6.3nm,0.7s						
ETSF	**Etsaut**	**150.81**	**346**	*e*PKP1	PKPbc	14 34 28.0	+0.7
	4.4nm,0.6s						
ESDC	**Sonseca Array**	**154.63**	**349**	PKPab	PKPab	14 34 52.5	-1.3
	0.1nm,0.3s,baz=19,slow=3.6,SNR=3.9						

PGC 13 14:25:39.5±0.8, 51°.66N×131°.05W, h10km, ML3.4/11, Mw4.0, 4D, 184km Sse of Sandspit, Bc Queen Charlotte Islands Region, Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNB	**Barry Inlet**	**1.01**	**335**	↑P	Pg	14 25 57.5	-1.5
BNB				↑S	Sg	14 26 11.1	-1.1
MOBC	**Moresby Island**	**1.59**	**340**	↑Pn	Pn	14 26 06.2	-1.4
DIB	**Dawson Inlet,**	**1.77**	**331**	↓Pn	Pn	14 26 08.2	-2.0
BBB	**Bella Bella**	**1.90**	**73**	↑Pn	Pn	14 26 09.3	-2.5
BBB				↑Sn	Sn	14 26 33.9	-1.9
HOLB	**Holberg**	**2.10**	**118**	↓Pn	Pn	14 26 12.8	-2.0
PHC	**Port Hardy**	**2.47**	**111**	↑Pn	Pn	14 26 16.8	-2.9

AKHS				*i* S		Sg	14 30 55.6	+0.8
AKS	**Akhisar**	0.05	212	PG		Pg	14 30 54.2	+0.1
AKS	**Akhisar**	0.05	212	*i* Pg		Pg	14 30 54.2	+0.1
DEMI	**Demirci**	0.69	80	*i* P		Pg	14 31 05.2	-1.1
DEMI				*i* S		Sg	14 31 14.9	-0.3
DEMI	**Demirci**	0.69	80	*i* P		Pg	14 31 05.2	-1.1
DEMI				*i* S		Sg	14 31 14.9	-0.3
IZM	**Izmir**	0.70	221	*e*PG		Pg	14 31 06.0	-0.5
BALB	**Balikesir**	0.72	2	*e*PG		Pg	14 31 07.3	+0.5
BALB				*e*SG		Sg	14 31 17.4	+1.2
BALB	**Balikesir**	0.72	2	*e*Pg		Pg	14 31 07.3	+0.5
BALB				*e*Sg		Sg	14 31 17.4	+1.3
BLCB	**Balcova**	0.83	230	*e*PG		Pg	14 31 08.4	-0.6
BLCB				*e*SG		Sg	14 31 19.8	0.0
BLCB	**Balcova**	0.83	230	P		Pg	14 31 08.5	-0.5
BLCB				S		Sg	14 31 20.9	+1.2
BLCB	**Balcova**	0.83	230	*e*Pg		Pg	14 31 08.4	-0.6
BLCB				*e*Sg		Sg	14 31 19.8	+0.1
BLCB				S		Sg	14 31 20.9	+1.2
DURS	**Dursunbey**	0.83	36	*i* P		Pg	14 31 08.1	-0.9
DURS				*i* S		Sg	14 31 21.9	+2.0
DURS	**Dursunbey**	0.83	36	*i* P		Pg	14 31 08.1	-1.0
DURS				*i* S		Sg	14 31 21.9	+2.0
BALY	**Balya**	0.83	348	*i* P		Pg	14 31 08.8	-0.3
BALY				*i* S		Sg	14 31 21.1	+1.1
BALY	**Balya**	0.83	348	*i* P		Pg	14 31 08.8	-0.3
BALY				*i* S		Sg	14 31 21.1	+1.2
AYVA	**Ayvalik**	0.98	293	*i* P		Pg	14 31 11.7	-0.2
AYVA				*i* S		Sg	14 31 26.0	+1.4
AYVA	**Ayvalik**	0.98	293	*i* P		Pg	14 31 11.7	-0.2
AYVA				*i* S		Sg	14 31 26.0	+1.4
GONE	**Gonen-Balikesi**	1.13	354	*e*PN		Pg	14 31 14.5	-0.3
GONE	**Gonen-Balikesi**	1.13	354	*e*Pn		Pg	14 31 14.5	-0.2
PRK	**Paraskevi**	1.27	285	*e*Pn		Pn	14 31 16.7	-1.3
PRK				*e*Sb		Sb	14 31 34.4	-0.3
PRK	**Paraskevi**	1.27	285	*e*PN		Pn	14 31 16.7	-1.3
PRK				*e*SB		Sb	14 31 34.4	-0.3
PRK	**Paraskevi**	1.27	285	P		Pg	14 31 16.8	-0.6
PRK				S		Sg	14 31 36.2	+2.3
PRK	**Paraskevi**	1.27	285	P		Pg	14 31 16.8	-0.6
PRK				*e*Sb		Sb	14 31 34.4	-0.3
PRK				S		Sg	14 31 36.2	+2.3
KCTX	**Karacabey (Bur**	1.40	16	*e*PN		Pn	14 31 19.2	-0.6
KCTX	**Karacabey (Bur**	1.40	16	*e*Pn		Pn	14 31 19.2	-0.6
EDC	**Edincik**	1.42	0	*e*PN		Pn	14 31 19.4	-0.8
EDC	**Edincik**	1.42	0	*e*Pn		Pn	14 31 19.4	-0.7
BNT	**Bandirma**	1.43	2	*e*PN		Pn	14 31 19.0	-1.3
BNT	**Bandirma**	1.43	2	*e*Pn		Pn	14 31 19.0	-1.3
KHL	**Karahalli**	1.44	114	*e*PN		Pn	14 31 20.2	-0.2
KHL	**Karahalli**	1.44	114	*e*Pn		Pn	14 31 20.2	-0.2
SMG	**Samos**	1.45	214	*e*Pb		Pb	14 31 20.0	-0.9
SMG				*e*Sb		Sb	14 31 40.1	+0.2
SMG	**Samos**	1.45	214	*e*PB		Pb	14 31 20.0	-0.9
SMG				*e*SB		Sb	14 31 40.1	+0.2
SMG	**Samos**	1.45	214	*e*Pb		Pb	14 31 20.0	-0.9
SMG				*e*Sb		Sb	14 31 40.1	+0.2
EZN	**Ezine**	1.48	308	*e*PN		Pn	14 31 20.0	-1.0
EZN	**Ezine**	1.48	308	*e*Pn		Pn	14 31 20.0	-1.0
CHOS	**Chios island**	1.50	250	*e*PB		Pb	14 31 21.9	+0.1
CHOS				*e*SB		Sb	14 31 42.4	+1.0
CHOS	**Chios island**	1.50	250	P		Pn	14 31 19.9	-1.3
CHOS				S		Sb	14 31 41.5	+0.1
CHOS	**Chios island**	1.50	250	P		Pn	14 31 19.9	-1.3
CHOS	**Chios island**	1.50	250	*e*Pb		Pb	14 31 21.9	+0.1
CHOS				S		Sb	14 31 41.5	+0.1
CHOS				*e*Sb		Sb	14 31 42.4	+1.0
KRBG	**Karabiga-Canak**	1.53	344	*e*PN		Pn	14 31 20.0	-1.5
KRBG	**Karabiga-Canak**	1.53	344	*e*Pn		Pn	14 31 20.0	-1.6
MLSB	**Milas**	1.63	182	*e*PN		Pn	14 31 22.5	-0.4
MLSB	**Milas**	1.63	182	*e*Pn		Pn	14 31 22.5	-0.4
LPK	**Lapseki**	1.67	330	*e*PN		Pn	14 31 23.0	-0.6
LPK	**Lapseki**	1.67	330	*e*Pn		Pn	14 31 23.0	-0.6
ALT	**Altintas**	1.77	85	*e*PN		Pn	14 31 24.8	0.0
ALT	**Altintas**	1.77	85	*e*Pn		Pn	14 31 24.8	-0.1
GELI	**Tayfur-Gelibol**	1.81	325	*e*PN		Pn	14 31 24.8	-0.7
GELI	**Tayfur-Gelibol**	1.81	325	*e*Pn		Pn	14 31 24.8	-0.7
ARMT	**Armutlu**	1.82	25	*e*PN		Pn	14 31 25.6	+0.1
ARMT	**Armutlu**	1.82	25	*e*Pn		Pn	14 31 25.6	+0.1
RKY	**Sarkoy-Tekirda**	1.84	344	*e*PN		Pn	14 31 25.5	-0.3
RKY	**Sarkoy-Tekirda**	1.84	344	*e*Pn		Pn	14 31 25.5	-0.3
BODT	**Bodrum**	1.91	193	*e*PN		Pn	14 31 26.4	-0.4
BODT	**Bodrum**	1.91	193	*e*Pn		Pn	14 31 26.4	-0.4
MFT	**Murefte**	1.91	347	*e*PN		Pn	14 31 26.8	0.0
MFT	**Murefte**	1.91	347	*e*Pn		Pn	14 31 26.8	0.0
GADA	**Gvkgeada**	1.97	311	*e*PN		Pn	14 31 26.9	-0.7
GADA	**Gvkgeada**	1.97	311	*e*Pn		Pn	14 31 26.9	-0.7
CAVI	**Cavuskoy**	2.00	50	*e*PN		Pn	14 31 28.3	+0.2
CAVI	**Cavuskoy**	2.00	50	*e*Pn		Pn	14 31 28.3	+0.2
YLV	**Yalova**	2.02	35	*e*PN		Pn	14 31 29.1	+0.7
YLV	**Yalova**	2.02	35	*e*Pn		Pn	14 31 29.1	+0.8
ERIK	**Erikli-Kesan**	2.02	330	*e*PN		Pn	14 31 27.8	-0.6
ERIK	**Erikli-Kesan**	2.02	330	*e*Pn		Pn	14 31 27.8	-0.6
ADVT	**Abdulvahap**	2.10	43	*e*PN		Pn	14 31 29.8	+0.4
ADVT	**Abdulvahap**	2.10	43	*e*Pn		Pn	14 31 29.8	+0.4
DAT	**Datca**	2.20	186	*e*PN		Pn	14 31 30.8	-0.1
DAT	**Datca**	2.20	186	*e*Pn		Pn	14 31 30.8	0.0
ENEZ	**Enez**	2.23	325	*e*PN		Pn	14 31 30.4	-0.8
ENEZ	**Enez**	2.23	325	*e*Pn		Pn	14 31 30.5	-0.8
LIA	**Limnos Island**	2.28	296	*e*Pn		Pn	14 31 34.8	+2.9
LIA	**Limnos Island**	2.28	296	*e*PN		Pn	14 31 34.8	+2.9
LIA	**Limnos Island**	2.28	296	P		Pn	14 31 31.0	-0.9
LIA				S		Sn	14 32 02.5	+1.8
LIA	**Limnos Island**	2.28	296	P		Pn	14 31 31.0	-0.9
LIA	**Limnos Island**	2.28	296	*e*Pn		Pn	14 31 34.8	+2.9
LIA				S		Sn	14 32 02.5	+1.8
ISK	**Istanbul-Kandi**	2.33	23	*e*PN		Pn	14 31 33.2	+0.6
ISK	**Istanbul-Kandi**	2.33	23	*e*Pn		Pn	14 31 33.2	+0.6
HRT	**Hereke**	2.36	36	*e*PN		Pn	14 31 33.2	+0.3
HRT	**Hereke**	2.36	36	*e*Pn		Pn	14 31 33.2	+0.2
BGKT	**Bogazkoy**	2.36	17	*e*PN		Pn	14 31 33.2	+0.2
BGKT	**Bogazkoy**	2.36	17	*e*Pn		Pn	14 31 33.2	+0.1
CTKS	**Kestanelik-??a**	2.36	12	*e*PN		Pn	14 31 33.2	+0.2
CTKS	**Kestanelik-??a**	2.36	12	*e*Pn		Pn	14 31 33.2	+0.1
ESKT	**Eskisehir**	2.41	75	*e*PN		Pn	14 31 34.7	+1.1
ESKT	**Eskisehir**	2.41	75	*e*Pn		Pn	14 31 34.7	+1.0
ALN	**Alexandroupoli**	2.41	325	*e*Pg		Pg	14 31 37.4	-1.9
ALN				*e*Sn		Sg	14 32 09.1	-1.4
ALN	**Alexandroupoli**	2.41	325	*e*PG		Pg	14 31 37.4	-1.9
ALN				*e*SN		Sg	14 32 09.1	-1.4
ALN	**Alexandroupoli**	2.41	325	P		Pn	14 31 32.6	-1.1
ALN				S		Sn	14 32 06.9	+3.0
ALN	**Alexandroupoli**	2.41	325	P		Pn	14 31 32.6	-1.1
ALN	**Alexandroupoli**	2.41	325	*e*Pg		Pg	14 31 37.4	-1.9
ALN				S		Sn	14 32 06.9	+3.0
KLYT	**Kilyos**	2.50	21	*e*PN		Pn	14 31 35.2	+0.3
KLYT	**Kilyos**	2.50	21	*e*Pn		Pn	14 31 35.2	+0.3
GULT	**Gulveren**	2.55	53	*e*PN		Pn	14 31 36.2	+0.6
GULT	**Gulveren**	2.55	53	*e*Pn		Pn	14 31 36.2	+0.6
APE	**Apeiranthos**	2.60	225	*e*Pn		Pn	14 31 38.8	+2.4
APE	**Apeiranthos**	2.60	225	*e*PN		Pn	14 31 38.8	+2.4
APE	**Apeiranthos**	2.60	225	*e*Pn		Pn	14 31 38.8	+2.4
ARG	**Arkhangelos**	2.71	175	*e*Pb		Pn	14 31 39.0	+1.1
ARG	**Arkhangelos**	2.71	175	*e*PB		Pn	14 31 39.0	+1.1
ARG	**Arkhangelos**	2.71	175	*e*Pb		Pn	14 31 39.0	+1.1
SVRH	**Sivrihisar-ESK**	2.90	78	*e*PN		Pn	14 31 41.4	+1.0
SVRH	**Sivrihisar-ESK**	2.90	78	*e*Pn		Pn	14 31 41.4	+0.9
MDU	**Mudurnu**	3.02	58	*e*PN		Pn	14 31 42.7	+0.6
MDU	**Mudurnu**	3.02	58	*e*Pn		Pn	14 31 42.7	+0.6
EDRB	**Edirne**	3.04	344	*e*PN		Pn	14 31 42.5	+0.2
EDRB	**Edirne**	3.04	344	*e*Pn		Pn	14 31 42.5	+0.1

ISK ***13*** *14:34:43.8, 38°.93N×27°.81E, h13km, MD3.3*
CSEM ***13*** *14:34:44.3±0.1, 38°.93N×27°.83E, h8km, MD3.3, Error ellipse: s-maj=3.5km s-min=2.3km az=106.0*
DDA ***13*** *14:34:44.0, 38°.90N×27°.91E, h7km±1km, Md3.0*
ISCJB ***13*** *14:34:44.0±0.4, 38°.93N±0°.02×27°.86E±0°.05, h8km±4km, Error ellipse: s-maj=6.4km s-min=3.9km az=13.9*
NEIC ***13*** *14:34:46.2, 39°.18N×26°.32E, h43km, MD3.3(ISK), MD3.2(ATH), After ATH.*
ATH ***13*** *14:34:46.2, 39°.18N×26°.32E, h43km±4km, MD3.2/4*
ISC 13 14:34:44.6±0.4, 38°.92N±0°.02×27°.85E±0°.05, h9km±3km, n70, σ0°68/83, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	0.05	212	*i* P	Pg	14 34 46.1	-0.2
AKHS				*i* S	Sg	14 34 47.5	-0.2
AKHS	**Akhisar**	0.05	212	*i* P	Pg	14 34 46.2	-0.2
AKHS				*i* S	Sg	14 34 47.5	-0.2
AKS	**Akhisar**	0.05	213	*e*PG	Pg	14 34 46.2	-0.2
AKS	**Akhisar**	0.05	213	*e*Pg	Pg	14 34 46.2	-0.2
IZM	**Izmir**	0.70	221	*e*PG	Pg	14 34 57.7	-0.3
BALB	**Balikesir**	0.72	2	*e*PG	Pg	14 34 58.5	0.0
BALB				*e*SG	Sg	14 35 08.8	+1.0
BALB	**Balikesir**	0.72	2	*e*Pg	Pg	14 34 58.5	+0.1
BALB				*e*Sg	Sg	14 35 08.8	+1.0
KULA	**Kula-Manisa**	0.76	122	*e*PG	Pg	14 34 58.5	-0.6
KULA	**Kula-Manisa**	0.76	122	*e*Pg	Pg	14 34 58.5	-0.6
BLCB	**Balcova**	0.83	230	*e*PG	Pg	14 35 00.0	-0.5
BLCB				*e*SG	Sg	14 35 12.0	+0.7
BLCB	**Balcova**	0.83	230	*e*Pg	Pg	14 35 00.0	-0.5
BLCB				*e*Sg	Sg	14 35 12.0	+0.7
BALY	**Balya**	0.84	348	*i* P	Pg	14 35 00.8	+0.1
BALY				*i* S	Sg	14 35 13.3	+1.7
BALY	**Balya**	0.84	348	*i* P	Pg	14 35 00.8	+0.1
BALY				*i* S	Sg	14 35 13.3	+1.7
GONE	**Gonen-Balikesi**	1.13	354	*e*PN	Pg	14 35 06.1	-0.2
GONE	**Gonen-Balikesi**	1.13	354	*e*Pn	Pg	14 35 06.1	-0.2
KCTX	**Karacabey (Bur**	1.40	16	*e*PN	Pn	14 35 09.6	-0.7
KCTX	**Karacabey (Bur**	1.40	16	*e*Pn	Pn	14 35 09.6	-0.7
KHL	**Karahalli**	1.44	114	*e*PN	Pn	14 35 10.6	-0.2
KHL	**Karahalli**	1.44	114	*e*Pn	Pn	14 35 10.6	-0.3
SMG	**Samos**	1.45	214	*e*P	Pn	14 35 11.8	+0.8
SMG				*e*S	Sn	14 35 31.7	+1.6
SMG	**Samos**	1.45	214	*e*P	Pn	14 35 11.8	+0.8
SMG				*e*S	Sn	14 35 31.7	+1.6
SMG	**Samos**	1.45	214	*e*P	Pn	14 35 11.8	+0.8
SMG				*e*S	Sn	14 35 31.7	+1.6
DENT	**Denizli**	1.49	141	*e*PN	Pn	14 35 11.8	+0.2
DENT	**Denizli**	1.49	141	*e*Pn	Pn	14 35 11.8	+0.2
KRBG	**Karabiga-Canak**	1.53	344	*e*PN	Pn	14 35 11.1	-1.0
KRBG	**Karabiga-Canak**	1.53	344	*e*Pn	Pn	14 35 11.1	-1.0
MLSB	**Milas**	1.62	182	*e*PN	Pn	14 35 12.3	-1.0
MLSB	**Milas**	1.62	182	*e*Pn	Pn	14 35 12.4	-1.0
ALT	**Altintas**	1.77	85	*e*PN	Pn	14 35 15.9	+0.5
ALT	**Altintas**	1.77	85	*e*Pn	Pn	14 35 15.9	+0.6
YER	**Yerkesik**	1.82	169	*e*PN	Pn	14 35 15.8	-0.2
YER	**Yerkesik**	1.82	169	*e*Pn	Pn	14 35 15.8	-0.2
ARMT	**Armutlu**	1.82	25	*e*PN	Pn	14 35 15.8	-0.3
ARMT	**Armutlu**	1.82	25	*e*Pn	Pn	14 35 15.8	-0.2
RKY	**Sarkoy-Tekirda**	1.84	344	*e*PN	Pn	14 35 15.5	-0.8
RKY	**Sarkoy-Tekirda**	1.84	344	*e*Pn	Pn	14 35 15.5	-0.8
CAVI	**Cavuskoy**	2.00	50	*e*PN	Pn	14 35 18.8	+0.2
CAVI	**Cavuskoy**	2.00	50	*e*Pn	Pn	14 35 18.8	+0.2
ADVT	**Abdulvahap**	2.10	43	*e*PN	Pn	14 35 19.8	-0.1
ADVT	**Abdulvahap**	2.10	43	*e*Pn	Pn	14 35 19.8	-0.1
DAT	**Datca**	2.20	186	*e*PN	Pn	14 35 21.0	-0.3
DAT	**Datca**	2.20	186	*e*Pn	Pn	14 35 21.0	-0.3
SLVT	**Silivri**	2.32	7	*e*PN	Pn	14 35 22.7	-0.3
SLVT	**Silivri**	2.32	7	*e*Pn	Pn	14 35 22.7	-0.3
ISK	**Istanbul-Kandi**	2.33	23	*e*PN	Pn	14 35 22.6	-0.5
ISK	**Istanbul-Kandi**	2.33	23	*e*Pn	Pn	14 35 22.6	-0.5
GPA	**Golpazari**	2.34	54	*e*PN	Pn	14 35 23.6	+0.4
GPA	**Golpazari**	2.34	54	*e*Pn	Pn	14 35 23.6	+0.4
HRT	**Hereke**	2.36	36	*e*PN	Pn	14 35 23.4	-0.1
HRT	**Hereke**	2.36	36	*e*Pn	Pn	14 35 23.4	-0.1
BGKT	**Bogazkoy**	2.37	17	*e*PN	Pn	14 35 22.8	-0.8
BGKT	**Bogazkoy**	2.37	17	*e*Pn	Pn	14 35 22.8	-0.8
CTKS	**Kestanelik-??a**	2.37	12	*e*PN	Pn	14 35 22.7	-0.9
CTKS	**Kestanelik-??a**	2.37	12	*e*Pn	Pn	14 35 22.7	-0.9
ESKT	**Eskisehir**	2.41	75	*e*PN	Pn	14 35 24.9	+0.8
ESKT	**Eskisehir**	2.41	75	*e*Pn	Pn	14 35 25.0	+0.9
ALN	**Alexandroupoli**	2.41	325	*e*P	Pn	14 35 15.9	-8.3
ALN				*e*S	Sn	14 35 35.4	-18
ALN	**Alexandroupoli**	2.41	325	*e*P	Pn	14 35 15.9	-8.3
ALN				*e*S	Sn	14 35 35.4	-18
KLYT	**Kilyos**	2.50	21	*e*PN	Pn	14 35 24.6	-0.8
KLYT	**Kilyos**	2.50	21	*e*Pn	Pn	14 35 24.6	-0.8
GULT	**Gulveren**	2.55	53	*e*PN	Pn	14 35 26.4	+0.3
GULT	**Gulveren**	2.55	53	*e*Pn	Pn	14 35 26.4	+0.3
SVRH	**Sivrihisar-ESK**	2.90	78	*e*PN	Pn	14 35 31.8	+0.9
SVRH	**Sivrihisar-ESK**	2.90	78	*e*Pn	Pn	14 35 31.8	+0.8
MDU	**Mudurnu**	3.02	58	*e*PN	Pn	14 35 33.6	+1.0
MDU	**Mudurnu**	3.02	58	*e*Pn	Pn	14 35 33.6	+1.0
EDRB	**Edirne**	3.04	344	*e*PN	Pn	14 35 32.4	-0.5
EDRB	**Edirne**	3.04	344	*e*Pn	Pn	14 35 32.4	-0.5
KIZT	**Kizilcal**	3.15	90	*e*PN	Pn	14 35 35.0	+0.7
KIZT	**Kizilcal**	3.15	90	*e*Pn	Pn	14 35 35.0	+0.7

NEIC ***13*** *14:36:31.5, 12°.28N×59°.05W, h37km, MD3.5(TRN), After TRN.*
TRN 13 14:36:29.5, 12°.25N×59°.30W, h3km, MD3.5, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBGH	**Gun Hill**	0.92	344	*e*Pn	Pn	14 36 48.8	-0.6
TOSP	**Speyside**	1.54	232	*e*P	Pn	14 37 00.3	+2.4
TOSP				*e*S	Sn	14 37 21.5	+3.2
SVV	**Soufriere Volc**	2.15	300	*e*P	Pn	14 37 09.1	+2.8
SVV				*e*S	Sn	14 37 41.8	+8.2
SVV	**Soufriere Volc**	2.15	300	*e*P	Pn	14 37 09.1	+2.8
SVV				*e*S	Sn	14 37 36.9	+3.3
SVB	**Belmont**	2.16	298	*e*P	Pn	14 37 07.4	+1.0
SVB				*e*S	Sn	14 37 37.7	+3.9
SVB	**Belmont**	2.16	298	*e*P	Pn	14 37 07.4	+1.0
SVB				*e*S	Sn	14 37 37.7	+3.9
MCLT	**Moule a Chique**	2.16	312	*e*P	Pn	14 37 08.0	+1.5
MCLT	**Moule a Chique**	2.16	312	*e*P	Pn	14 37 08.0	+1.5
GRGR	**Grenville**	2.31	267	*e*Pn	Pn	14 37 11.2	+2.7
SLB	**Belfond**	2.31	313	*e*P	Pn	14 37 11.0	+2.5
SLB				*e*S	Sn	14 37 39.8	+2.3
SLB	**Belfond**	2.31	313	*e*P	Pn	14 37 11.0	+2.5
SLB				*e*S	Sn	14 37 39.8	+2.3

IDC ***13*** *14:46:21.6±7.1, 7°.59S×117°.90E, h265km±73km, mb3.0/6, mb1 3.2/7, mb1mx3.0/20, mbtmp3.1/7, Error ellipse: s-maj=111.2km s-min=22.4km az=59.0*
NEIC ***13*** *14:46:24.6±1.1, 7°.64S×117°.90E, h300km, mb3.5/1, Error ellipse: s-maj=78.9km s-min=10.6km az=56.0*
ISC 13 14:46:23.7±4.5, 7°.7S±0°.4×117°.8E±0°.6, h290km±51km, n10, σ0°81/12, mb3.4/5, Bali Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	12.84	144	*e*P	Pn	14 49 17.2	+0.6
0.5nm,0.3s,baz=327,slow=10.0,SNR=20							
FITZ				S	S	14 51 35.6	-3.4
0.1nm,0.3s,baz=9.9,slow=19,SNR=4.2							
FITZ	**Fitzroy Crossi**	12.84	144	*e*P	Pn	14 49 17.2	+0.6
FITZ				S	S	14 51 35.6	-3.4
WRA	**Warramunga Arr**	20.11	129	P	P	14 50 35.6	-0.8
0.6nm,0.2s,baz=296,slow=12,SNR=42							
WRAB	**Tennant Creek**	20.11	129	*e*P	P	14 50 36.8	+0.3
1.5nm,0.5s							
ASAR	**Alice Springs**	22.13	138	P	P	14 50 56.3	+0.5
1.1nm,0.4s,mb3.6,baz=312,slow=9.2,SNR=75							
STKA	**Stephens Creek**	32.69	141	P	P	14 52 30.1	+0.7
3.7nm,1.0s,mb3.9,baz=311,slow=10,SNR=8.8							
STKA	**Stephens Creek**	32.69	141	*e*P	P	14 52 30.3	+0.9
SONM	**Songino Array**	56.21	351	P	P	14 55 34.6	+0.6
0.4nm,0.6s,mb3.0,baz=178,slow=8.8,SNR=3.6							
MKAR	**Makanchi Array**	62.78	333	P	P	14 56 18.0	-0.6
0.2nm,0.5s,mb3.0,baz=151,slow=6.3,SNR=3.5							
ZALV	**Zalesovo Beam**	67.42	340	P	P	14 56 47.5	-0.7
0.2nm,0.3s,mb3.4,baz=149,slow=6.1,SNR=2.2							

ISCJB ***13*** *14:54:47.0±0.5, 38°.90N±0°.04×27°.91E±0°.05, h5km±6km, Error ellipse: s-maj=6.6km s-min=5.5km az=141.8*
DDA ***13*** *14:54:46.5, 38°.89N×27°.92E, h7km±2km, Md2.6*
ISK ***13*** *14:54:46.6, 38°.90N×27°.91E, h5km, MD2.8*
CSEM ***13*** *14:54:47.2±0.1, 38°.90N×27°.91E, h2km, MD2.8, Error ellipse: s-maj=2.0km s-min=1.7km az=98.0*
ISC 13 14:54:47.4±0.5, 38°.90N±0°.03×27°.91E±0°.05, h6km±6km, n25, σ0°56/37, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	0.08	253	*i* P	Pg	14 54 48.8	-0.4
AKHS				*i* S	Sg	14 54 50.3	-0.1
AKHS	**Akhisar**	0.08	253	*i* P	Pg	14 54 48.8	-0.4
AKHS				*i* S	Sg	14 54 50.3	-0.1
AKS	**Akhisar**	0.08	253	*e*PG	Pg	14 54 48.9	-0.3
AKS				*e*SG	Sg	14 54 50.5	0.0
AKS	**Akhisar**	0.08	253	*e*Pg	Pg	14 54 48.9	-0.3
AKS				*e*Sg	Sg	14 54 50.5	0.0
KULA	**Kula-Manisa**	0.70	123	*e*PG	Pg	14 55 00.9	0.0
KULA				*e*SG	Sg	14 55 10.2	+0.1
KULA	**Kula-Manisa**	0.70	123	*e*Pg	Pg	14 55 00.9	-0.1
KULA				*e*Sg	Sg	14 55 10.2	+0.1
IZM	**Izmir**	0.71	225	*e*PG	Pg	14 55 01.0	-0.1
BALB	**Balikesir**	0.74	358	*e*PG	Pg	14 55 01.3	-0.3
BALB				*e*SG	Sg	14 55 11.9	+0.7
BALB	**Balikesir**	0.74	358	*e*Pg	Pg	14 55 01.3	-0.3
BALB				*e*Sg	Sg	14 55 11.9	+0.7
BLCB	**Balcova**	0.85	233	*e*PG	Pg	14 55 03.5	-0.2
BLCB				*e*SG	Sg	14 55 15.8	+1.0
BLCB	**Balcova**	0.85	233	*e*Pg	Pg	14 55 03.5	-0.2
BLCB				*e*Sg	Sg	14 55 15.8	+1.0
BALY	**Balya**	0.87	345	*i* P	Pg	14 55 03.5	-0.6
BALY				*i* S	Sg	14 55 16.1	+0.7
BALY	**Balya**	0.87	345	*i* P	Pg	14 55 03.5	-0.6
BALY				*i* S	Sg	14 55 16.1	+0.8
GONE	**Gonen-Balikesi**	1.16	352	*e*PN	Pn	14 55 08.9	-1.2
GONE	**Gonen-Balikesi**	1.16	352	*e*Pn	Pn	14 55 08.9	-1.2
KHL	**Karahalli**	1.39	114	*e*PN	Pn	14 55 13.7	+0.3
KHL	**Karahalli**	1.39	114	*e*Pn	Pn	14 55 13.7	+0.4
KCTX	**Karacabey (Bur**	1.41	14	*e*PN	Pn	14 55 12.6	-1.0
KCTX	**Karacabey (Bur**	1.41	14	*e*Pn	Pn	14 55 12.6	-1.0
ARMT	**Armutlu**	1.82	24	*e*PN	Pn	14 55 19.6	+0.4
ARMT	**Armutlu**	1.82	24	*e*Pn	Pn	14 55 19.6	+0.4
RKY	**Sarkoy-Tekirda**	1.87	343	*e*PN	Pn	14 55 20.3	+0.3
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ESL	Shilin	2.71	7	eP	Pn	14 59 14.7	-2.4
	baz=5.0						
SMLT	Sun Moon Lake	2.77	356	eP	Pn	14 59 16.9	-1.0
	baz=354						
WNT	Mingjian	2.79	352	eP	Pn	14 59 17.5	-0.6
	baz=350						
PNG	Penghu	2.83	330	eP	Pn	14 59 16.5	-2.3
	baz=325						
PNG				eS	Sn	14 59 46.9	-5.6
	baz=325						
WTCT	Ta-ch'eng	2.85	345	eP	Pn	14 59 16.7	-2.2
	baz=342						
HWA	Hwalien	2.90	9	eP	Pn	14 59 18.9	-0.8
	baz=18						
SGCP	Mt. Cagua	2.99	162	eP	Pn	14 59 20.0	-0.9
TWD	Chiawan	3.00	9	eP	Pn	14 59 19.5	-1.5
WHF	Hehuan Shan	3.03	3	eP	Pn	14 59 20.6	-0.8
	baz=10.0						
TCU	Taichung	3.05	353	eP	Pn	14 59 20.8	-1.0
	baz=351						
NACB	Ninganchiao	3.09	9	ePn	Pn	14 59 19.7	-2.6
TWT	Tachien	3.13	1	eP	Pn	14 59 22.4	-0.5
	baz=347						
APYP	Conner	3.23	177	eP	Pn	14 59 23.2	-1.0
TWQ1	Liyutan	3.24	355	eP	Pn	14 59 24.2	-0.2
	baz=353						
NSY	Sanyi	3.31	355	eP	Pn	14 59 24.7	-0.7
	baz=353						
NNS	Nan Shan	3.33	4	eP	Pn	14 59 24.7	-0.9
	baz=13						
ENA	Nanau	3.36	10	eP	Pn	14 59 24.6	-1.5
CVP	Callao Caves	3.45	168	eP	Pn	14 59 25.9	-1.4
ABRA	Dolores	3.46	186	eP	Pn	14 59 26.2	-1.1
NSTT	Nanjuang	3.51	359	eP	Pn	14 59 27.4	-0.7
	baz=357						
YHNB	Yeheng	3.56	4	ePn	Pn	14 59 28.2	-0.6
NSK	Sanguang	3.56	4	eP	Pn	14 59 27.6	-1.2
	baz=351						
TWE	Neicheng	3.64	8	eP	Pn	14 59 30.2	+0.4
	baz=8.0						
HSN	Hsinchu	3.68	358	eP	Pn	14 59 31.2	+0.7
	baz=358						
ILA	Ilan	3.69	9	eP	Pn	14 59 29.8	-0.8
	baz=9.0						
YOJ	Yonaguni jima	3.78	28	P	Pn	14 59 31.8	0.0
YOJ				S	Sn	15 00 18.9	+3.0
NCU	National Centr	3.85	1	eP	Pn	14 59 32.8	+0.1
	baz=349						
HATJ	Hateruma jima	3.86	40	P	Pn	14 59 32.8	-0.1
HATJ				S	Sn	15 00 19.9	+2.0
TATO	Taipei	3.87	5	ePn	Pn	14 59 32.5	-0.5
TWA	Mucha	3.88	7	eP	Pn	14 59 32.5	-0.7
	baz=14						
TAP1	Taipei	3.94	6	eP	Pn	14 59 33.6	-0.3
	baz=351						
TWB1	Santiao Chiao	3.97	12	eP	Pn	14 59 33.8	-0.6
	baz=358						
TWS1	Kuangyinshan	3.99	4	eP	Pn	14 59 33.1	-1.6
	baz=351						
NWF	Wu-fen Shan	4.00	9	eP	Pn	14 59 33.6	-1.2
	baz=9.0						
IRIF	Iriomote-Funau	4.04	37	P	Pn	14 59 35.3	0.0
IRIF				S	Sn	15 00 23.4	+1.3
KNM	Kinmen	4.11	324	eP	Pn	14 59 34.7	-1.6
	baz=319						
KNM				eS	Sn	15 00 20.6	-3.3
	baz=319						
JKRS	Kuro-shima	4.12	40	P	Pn	14 59 35.7	-0.8
JKRS				S	Sn	15 00 27.3	+3.0
TWY	Chenhua	4.18	6	eP	Pn	14 59 37.6	+0.3
	baz=6.0						
CAUP	Cauayan	4.20	170	eP	Pn	14 59 38.5	+1.0
PALP	Palanan	4.21	162	eP	Pn	14 59 38.1	+0.3
JIJ	Ishigaki jima	4.30	40	P	Pn	14 59 37.8	-1.1
JIJ				S	Sn	15 00 29.8	+1.2
QZH	Quanzhou	4.46	329	Pn	Pn	14 59 37.4	-3.7
QZH				Sn	Sn	15 00 27.8	-4.8
QZH				smax			
	comp=N,11μm,1.7s						
QZH				smax			
	comp=E,4μm,1.2s						
QZH				LR	LR		
	comp=N,616μm,17.1s						
QZH				LR	LR		
	comp=E,1133μm,14.3s						
QZH				LR	LR		
	comp=Z,835μm,13.0s						
BCPH	Baguio City Da	4.72	186⇓	eP	Pn	14 59 42.4	-2.4
BCPH				*i* S	Sn	15 00 41.3	+2.2
BOLP	Bolinao	4.83	194	eP	Pn	14 59 45.7	-0.5
JTJ	Tarama	4.85	43	P	Pn	14 59 46.6	+0.1
JTJ				S	Sn	15 00 44.8	+2.6
JMJ	Miyako jima 2	5.35	46	P	Pn	14 59 54.4	+1.0
JMJ				S	Sn	15 00 57.3	+2.7
BALP	Baler	5.36	175	eP	Pn	14 59 53.3	-0.2
JOGS	Gusukube	5.39	47	P	Pn	14 59 54.0	+0.1
JOGS				S	Sn	15 00 57.6	+2.0
SCZP	Santa Cruz	5.42	192	eP	Pn	14 59 53.3	-1.0
PCPH	Palayan	5.51	180⇓	eP	Pn	14 59 54.5	-1.1
POLP	Polillo Island	6.39	173	eP	Pn	15 00 08.3	+0.6
HKC	Hong Kong Obse	6.54	282	Pn	Pn	15 00 07.0	-2.7
TGY	Tagaytay City	6.96	181	Pn	Pn	15 00 15.6	0.0
	comp=Z,88nm,0.3s,baz=234,slow=2.4,SNR=24						
TGY	Tagaytay City	6.96	181	P	Pn	15 00 15.6	0.0
TGY				pmax	pmax		
	comp=Z,88nm,0.3s						
JKE	Kume jima 2	7.37	44	P	Pn	15 00 20.3	-0.8
JKE				S	Sn	15 01 46.3	+2.1
LUBP	Lubang	7.37	186	eP	Pn	15 00 21.2	0.0
GZH	Guangzhou	7.45	287	Pn	Pn	15 00 17.6	-4.6
GZH				smax			
	comp=N,1μm,1.4s						
GZH				smax			
	comp=E,900nm,0.8s						
BOAC	Boac	7.64	174	eP	Pn	15 00 25.6	+0.8
JAGN	Aguni-jima	7.84	45	P	Pn	15 00 28.2	+0.6
AUQP	San Andres	7.88	169	eP	Pn	15 00 35.1	+6.9
NAH1	Naha	7.90	49	eS	Sn	15 02 00.9	+3.6
JJT2	Tamagusuku 2	7.90	49	P	Pn	15 00 28.5	+0.1
JJT2				eS	Sn	15 02 00.2	+2.9
PVCP	Virac	8.02	158	eP	Pn	15 00 29.7	-0.4
SJMP	San Jose	8.60	180	eP	Pn	15 00 38.2	+0.2
JIH	Iheya	8.62	45	P	Pn	15 00 38.3	0.0
JIH				S	Sn	15 02 14.1	-1.0
JOW	Kunigami	8.70	48	P	Pn	15 00 38.9	-0.5
JOW				S	Sn	15 02 15.1	-1.9
BUSP	Coron	9.09	186	eP	Pn	15 00 43.2	-1.6
CNP	Catarman	9.21	158	eP	Pn	15 00 49.1	+2.8
JTK	Tokunoshima	9.77	46	P	Pn	15 00 54.8	+0.7
JTK				S	Sn	15 02 42.0	-1.4
SSE	Sheshan	9.95	0	P	Pn	15 00 58.5	+2.0
SSE				S	Sn	15 02 53.4	+5.6
SSE				pmax	pmax		
	comp=Z,26nm,0.8s						
SSE				pmax	pmax		
	comp=Z,5μm,12.0s						
SSE				LR	LR		
	comp=N,273μm,24.5s						
SSE				LR	LR		
	comp=E,94μm,24.9s						
SSE				LR	LR		
	comp=Z,1740μm,19.3s						
ENPP	El Nido	9.97	189	eP	Pn	15 00 54.8	-2.1
CUYO	Cuyo Island	10.20	180	eP	Pn	15 00 59.5	-0.5
JMZ	Minamidaito 2	10.41	61	P	Pn	15 01 02.2	-0.7
JMZ				S	Sn	15 02 55.9	-3.3
GUIM	Jordan	10.52	172	eP	Pn	15 01 07.5	+3.1
JAM	Amami Oshima	10.62	45	P	Pn	15 01 05.8	+0.1
JAM				S	Sn	15 02 57.7	-6.4
QIZ	Qiongzhong	10.77	261	P	Pn	15 01 06.1	-1.7
QIZ				pP		15 01 09.8	
QIZ				sP		15 01 12.8	
QIZ				S	Sn	15 03 07.5	-0.4
QIZ				pmax	pmax		
	comp=Z,49nm,1.1s						
QIZ				pmax	pmax		
	comp=Z,2μm,9.0s						
QIZ				LR	LR		
	comp=N,260μm,16.3s						
QIZ				LR	LR		
	comp=E,55μm,16.9s						
QIZ				LR	LR		
	comp=Z,159μm,18.5s						
QIZ	Qiongzhong	10.77	261	eP	Pn	15 01 05.5	-2.2
	comp=Z,109nm,1.0s						
LLP	Lapu-Lapu	11.08	165	eP	Pn	15 01 13.1	+1.1
NJ2	Nanjing	11.08	350	eP	Pn	15 01 11.8	-0.2
NJ2				pP		15 01 14.9	
NJ2				sP		15 01 17.8	
NJ2				PP		15 01 20.0	
NJ2				S	Sn	15 03 09.0	-6.6
NJ2				pmax	pmax		
	comp=Z,30nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,2μm,10.2s						
NJ2				LR	LR		
	comp=N,140μm,14.2s						
NJ2				LR	LR		
	comp=E,134μm,9.8s						
NJ2				LR	LR		
	comp=Z,128μm,13.1s						
WHN	Wuhan	11.19	329	⇑P	Pn	15 01 12.9	-0.5
WHN				sP		15 01 24.9	
WHN				S	Sn	15 03 25.3	+7.3
WHN				LR	LR		
	comp=N,557μm,15.7s						
WHN				LR	LR		
	comp=E,790μm,15.0s						
WHN				LR	LR		
	comp=Z,399μm,13.3s						
PPR	Puerto Princes	11.49	192⇑	eP	Pn	15 01 15.8	-1.9
TBP	Tagbilaran	11.66	166	eP	Pn	15 01 21.8	+1.8
BATP	Bataraza	12.64	195	eP	Pn	15 01 32.0	-1.4
IPIL	Ipil	13.32	174⇓	eP	Pn	15 01 42.4	-0.3
BUKP	Musuan	13.70	163	eP	Pn	15 01 48.5	+0.6
ENH	Enshi	13.87	313	eP	Pn	15 01 50.0	-0.2
	comp=Z,728nm,1.8s						
GYA	Guiyang	14.24	295⇓	*i*P	Pn	15 01 54.8	-0.4
GYA				PP		15 02 06.6	
GYA				SS		15 04 51.8	
GYA				pmax	pmax		
	comp=Z,90nm,1.0s						
GYA				pmax	pmax		
	comp=Z,10μm,4.3s						
GYA				LR	LR		
	comp=N,68μm,15.9s						
GYA				LR	LR		
	comp=E,42μm,16.5s						
GYA				LR	LR		
	comp=Z,56μm,15.8s						
DMPH	Davao City--Mi	14.58	162	eP	Pn	15 02 01.4	+1.5
DAV	Davao City (W)	14.61	162	LR	LR	15 09 00.2	
	comp=Z,132μm,18.8s,baz=328,slow=44						
DAV	Davao City (W)	14.61	162⇓	eP	Pn	15 02 01.5	+1.2
TIA	Tai'an	15.45	348	eP	Pn	15 02 12.1	+0.7
TIA				PP		15 02 25.8	
TIA				PcP	PcP	15 07 14.3	-0.2
TIA				LR	LR		
	comp=N,185μm,18.8s						
TIA				LR	LR		
	comp=E,316μm,21.3s						
KKM	Kota Kinabalu	15.70	198	P	Pn	15 02 14.9	+0.2
KKM	Kota Kinabalu	15.70	198	ePn	Pn	15 02 12.2	-2.6
	comp=E,3μm,1.9s						
KKM	Kota Kinabalu	15.70	198	P	Pn	15 02 14.7	-0.1
	comp=E,652nm,1.9s						
SDKM	Sandakan	15.83	194	P	Pn	15 02 16.4	0.0
MYLDM	Lahad Datu	16.03	189	P	Pn	15 02 20.8	+1.8
	comp=E,1μm,2.0s						
XAN	Xi'an	16.78	323	P	Pn	15 02 27.3	-1.3
XAN				S	Sn	15 05 39.1	+4.5
XAN				pmax	pmax		
	comp=Z,4μm,13.7s						
XAN				LR	LR		
	comp=N,171μm,17.7s						
XAN				LR	LR		
	comp=E,83μm,18.2s						
XAN				LR	LR		
	comp=Z,55μm,13.7s						
TSM	Tawau	17.00	191	P	Pn	15 02 32.4	+1.0
INCN	Inchon	17.02	15	P	Pn	15 02 31.7	+0.2
	comp=Z,516nm,1.7s						
INCN	Inchon	17.02	15	P	Pn	15 02 34.2	+2.8
	SNR=31						
KSRS	Korea Array	17.34	19	P	Pn	15 02 34.8	-0.7
	comp=Z,5.2nm,0.3s,baz=199,slow=10,SNR=228						
KSRS				S	Sn	15 05 52.7	+4.7
	baz=205,slow=28,SNR=2.1						
KSRS				ScP	ScP	15 10 50.5	-1.2
	baz=236,slow=0.9,SNR=4.8						
KSRS	Korea Array	17.34	19	P	Pn	15 02 34.8	-0.7
KSRS				S	Sn	15 05 52.7	+4.7
KSRS				pmax	pmax		
	comp=Z,5.0nm,0.3s						
KMI	Kunming	17.34	287	P	Pn	15 02 35.3	-0.4
KMI				pP	pP	15 02 38.5	-3.4
KMI				sP	sP	15 02 39.8	-4.4
KMI				PP		15 02 51.1	
KMI				S	Sn	15 05 48.3	0.0
KMI				sS	sS	15 05 51.6	-13
KMI				SS		15 06 09.5	
KMI				pmax	pmax		
	comp=Z,6μm,7.7s						
KMI				LR	LR		
	comp=N,119μm,17.2s						
KMI				LR	LR		
	comp=E,81μm,18.0s						
KMI				LR	LR		
	comp=Z,82μm,14.4s						
DL2	Dalian	17.75	1⇑	*i*P	Pn	15 02 40.1	-0.4
DL2				S	Sn	15 06 00.9	+3.0
DL2				pmax	pmax		
	comp=Z,10μm,11.7s						
DL2				LR	LR		
	comp=N,62μm,19.2s						
DL2				LR	LR		
	comp=E,84μm,20.0s						
DL2				LR	LR		
	comp=Z,72μm,17.3s						
SGSI	Sangihe	17.84	165	P	Pn	15 02 37.2	-4.7
	comp=Z,493nm,1.0s						
SGSI				S	Sn	15 06 05.5	+5.0
	comp=Z,493nm,1.0s						
TIY	Taiyuan	18.17	337	⇑P	Pn	15 02 47.3	+1.6
TIY				LR	LR		
	comp=N,138μm,12.3s						
TIY				LR	LR		
	comp=E,83μm,13.5s						
TIY				LR	LR		
	comp=Z,187μm,14.2s						
CD2	Chengdu	18.36	306	P	Pn	15 02 45.5	-2.7
CD2				pP	pP	15 02 49.0	-4.1
CD2				sP	sP	15 02 52.4	-3.0
CD2				PP		15 03 01.1	
CD2				S	Sn	15 06 08.0	-4.9
CD2				sS	sS	15 06 13.0	-12
CD2				SS		15 06 31.3	
CD2				pmax	pmax		
	comp=Z,400nm,1.0s						
CD2				pmax	pmax		
	comp=Z,18μm,11.8s						
CD2				LR	LR		
	comp=N,301μm,15.5s						
CD2				LR	LR		
	comp=Z,170μm,12.5s						
JKN2	Miekihoku	18.73	43	P	Pn	15 02 54.8	+2.2
BJT	Baijiatuau	19.32	349	eP	Pn	15 02 58.7	-0.9
BJT				pmax	pmax		
	comp=Z,246nm,0.7s						
BJT	Baijiatuau	19.32	349	eP	Pn	15 02 58.7	-0.9
	comp=Z,246nm,0.7s						
BJI	Beijing	19.34	349	P	Pn	15 02 58.9	-1.0
BJI				S	Sn	15 06 34.9	-1.4
BJI				pmax	pmax		
	comp=Z,160nm,1.1s						
BJI				pmax	pmax		
	comp=Z,17μm,10.9s						
BJI				LR	LR		
	comp=N,125μm,19.7s						
BJI				LR	LR		
	comp=E,224μm,17.8s						
BJI				LR	LR		
	comp=Z,105μm,22.4s						
BTM	Bintulu	19.43	205	P	Pn	15 02 59.2	-1.9
MNI	Manado	19.88	169	P	Pn	15 03 04.4	-2.1
	comp=Z,876nm,0.8s						
CHRT	Chiangrai	20.00	270	⇓P	P	15 03 06.5	+0.3
	comp=Z,524nm,1.3s						
CBIJ	Chichi jima	20.15	69	P	P	15 03 08.1	+0.3
	comp=Z,84nm,0.5s,baz=237,slow=6.0,SNR=10						
CBIJ				S	S	15 06 58.2	+4.8
	comp=Z,20nm,0.9s,baz=253,slow=19,SNR=2.7						
SBUM	Sibu	20.46	206	P	P	15 03 10.3	-0.9
SBUM	Sibu	20.46	206	P	P	15 03 09.4	-1.7
	comp=Z,610nm,1.7s						
JHJ	Hachijo jima 2	20.46	50	P	P	15 03 12.8	+1.7
	comp=Z,77nm,0.7s,baz=240,slow=6.8,SNR=3.5						
JHJ				LR	LR	15 10 32.5	
	comp=Z,40μm,19.5s,MS5.8,baz=255,slow=35						
MRSI	Marisa	20.52	178	P	P	15 03 12.5	+0.7
	comp=Z,727nm,1.3s						
NST	Nakhon Sawan	20.60	258	P	P	15 03 14.0	+1.3
	comp=Z,117nm,1.5s						
SNY	Shenyang	20.77	5	⇑P	P	15 03 10.6	-3.7
SNY				S	S	15 07 01.5	-3.9
SNY				pmax	pmax		
	comp=Z,6μm,10.4s						
SNY				LR	LR		
	comp=N,87μm,20.6s,MS6.4						
SNY				LR	LR		
	comp=E,110μm,16.7s,MS6.4						
SNY				LR	LR		
	comp=Z,91μm,15.6s,MS6.2						
CHG	Chiang Mai	20.94	268	⇑P	P	15 03 15.8	-0.6
	comp=Z,153nm,1.0s						
CHTO	Chiang Mai	20.94	268	eP	P	15 03 15.8	-0.6
CHTO				pmax	pmax		
	comp=Z,308nm,1.5s						
CHTO				MLR	MLR		
	comp=Z,47μm,19.0s,MS5.9						
CHTO	Chiang Mai	20.94	268	eP	P	15 03 15.8	-0.5
	comp=Z,308nm,1.5s						
CHTO				LR	LR		
	comp=Z,47μm,19.0s,MS5.9						
CHTO	Chiang Mai	20.94	268	P	P	15 03 16.0	-0.4
	comp=Z,6μmcomp=Z,164nm,2.1s						
CHTO	Chiang Mai	20.94	268	P	P	15 03 18.7	+2.3
	SNR=85						
CM31	Chiang Mai Arr	21.00	267	eP	P	15 03 16.7	-0.4
	comp=Z,61nm,0.8s,mb5.0						
CM31				LR	LR		
	comp=Z,68μm,22.0s,MS6.0						
CMAR	Chiang Mai Arr	21.00	267	P	P	15 03 15.6	-1.5
	comp=Z,35nm,0.8s,mb4.7,baz=75,slow=9.1,SNR=82						
CMAR				S	S	15 07 17.5	+7.0
	comp=Z,0.6nm,0.6s,baz=305,slow=33,SNR=2.1						
CMAR				ScP	ScP	15 11 00.8	+0.5
	comp=Z,2.4nm,1.0s,baz=46,slow=1.3,SNR=4.6						
CMAR				LR	LR	15 12 55.0	
	comp=Z,41μm,20.0s,MS5.8,baz=81,slow=41						
TNTI	Ternate	21.12	162	P	P	15 03 14.7	-3.6
	comp=Z,560nm,1.2s,mb5.8						
TNTI				S	S	15 07 19.2	+6.5
	comp=Z,560nm,1.2s						
BDT	Bhumibol Dam	21.21	263	P	P	15 03 20.0	+0.7
	comp=Z,51nm,1.1s,mb4.8						
LZH	Lanzhou	21.21	318	eP	P	15 03 20.9	+1.7
LZH				pP		15 03 25.9	
LZH				sP	sP	15 03 27.9	+1.4
LZH				PP		15 03 42.6	
LZH				eS	S	15 07 11.5	-2.8
LZH				sS	sS	15 07 18.4	-4.0
LZH				PcP	PcP	15 07 27.9	+3.7
LZH				SS		15 07 43.4	
LZH				pmax	pmax		
	comp=Z,250nm,1.1s,mb5.5						
LZH				pmax	pmax		
	comp=Z,1μm,4.6s						
LZH				LR	LR		
	comp=E,135μm,13.2s						
LZH				LR	LR		
	comp=Z,154μm,15.6s,MS6.5						
JNG	Nsakai	21.28	41	P	P	15 03 21.8	+1.9
HHC	Hu-ho-hao-te	21.28	340	eP	P	15 03 21.1	+1.2
HHC				sP	sP	15 03 26.5	-0.7
HHC				PP		15 03 45.8	
HHC				S	S	15 07 14.0	-1.6
HHC				sS	sS	15 07 18.1	-5.6
HHC				PcP	PcP	15 07 24.3	0.0
HHC				SS		15 07 48.1	
HHC				ScP	ScP	15 10 59.5	-1.0
HHC				PcS	PcS	15 11 01.9	-0.4
HHC				pmax	pmax		
	comp=Z,130nm,0.9s,mb5.3						
HHC				pmax	pmax		
	comp=Z,8μm,5.2s						
HHC				LR	LR		
	comp=N,56μm,11.2s,MS6.4						
HHC				LR	LR		
	comp=E,57μm,11.1s,MS6.4						
HHC				LR	LR		
	comp=Z,57μm,11.2s,MS6.2						
MAJO	Matsushiro	21.43	40	eP	P	15 03 22.4	+0.9
MAJO				pmax	pmax		
	comp=Z,198nm,0.9s,mb5.4						
MAJO				MLR	MLR		
	comp=Z,76μm,22.0s,MS6.0						
MAJO	Matsushiro	21.43	40	eP	P	15 03 22.4	+0.9
	comp=Z,198nm,0.9s,mb5.4						
MAJO				LR	LR		
	comp=Z,76μm,22.0s,MS6.0						
MAT	Matsushiro	21.43	40	P	P	15 03 22.7	+1.2
MAT				S	S	15 07 23.1	+4.5
MJAR	Matsushiro Arr	21.43	40	P	P	15 03 22.2	+0.7
	comp=Z,17nm,0.8s,mb4.4,baz=236,slow=7.7,SNR=65						
MJAR				S	S	15 07 25.8	+7.2
	comp=Z,1.1nm,0.9s,baz=359,slow=24,SNR=4.4						
MJAR				ScP	ScP	15 11 00.6	-0.4
	comp=Z,2.1nm,0.9s,baz=214,slow=3.7,SNR=7.8						
MJAR	Matsushiro Arr	21.43	40	P	P	15 03 22.2	+0.7
MJAR				S	S	15 07 25.8	+7.2
MJAR				ScP	ScP	15 11 00.6	-0.4
BTO	Baotou	21.60	337	eP	P	15 03 22.3	-1.0
BTO				S	S	15 07 21.1	-0.8
BTO				LR	LR		
	comp=N,29μm,11.8s						
BTO				LR	LR		
	comp=E,53μm,17.2s						
PCI	Palu	21.91	183	P	P	15 03 26.2	-0.6
	comp=E,699nm,1.4s,mb5.9						
PCI				S	S	15 07 34.4	+6.2
	comp=E,699nm,1.4s						
LUWI	Luwuk	22.07	176	P	P	15 03 26.9	-1.6
	comp=E,2μm,1.5s,mb6.4						
NNT	Nongplab	22.10	251	P	P	15 03 30.0	+1.1
KSM	Kuching	22.16	210	P	P	15 03 27.5	-2.1
KSM	Kuching	22.16	210	eP	P	15 03 26.4	-3.2
	comp=E,738nm,1.5s,mb5.9						
KSM				LR	LR		
	comp=Z,39μm,19.0s,MS5.8						
KSM	Kuching	22.16	210	P	P	15 03 27.2	-2.4
	comp=Z,7μmcomp=Z,291nm,1.6s,mb5.5						
STKI	Sintang	22.92	205	P	P	15 03 35.3	-2.3
	comp=Z,272nm,1.7s,mb5.4						
CN2	Changchun	22.92	8	eP	P	15 03 36.1	-1.2
CN2				*es*P	sP	15 03 43.4	-1.3
CN2				eS	S	15 07 40.8	-5.8
CN2				LR	LR		
	comp=N,13μm,16.0s,MS5.5						
CN2				LR	LR		
	comp=E,7μm,16.0s,MS5.5						
CN2				LR	LR		
	comp=Z,45μm,17.0s,MS6.0						
VLA	Vladivostok	23.74	20⇑	*i*P	P	15 03 43.3	-2.3
GUMO	Guam	23.88	104	eP	P	15 03 45.2	-1.9
GUMO				pmax	pmax		
	comp=Z,1μm,1.4s,mb6.2						
GUMO				MLR	MLR		
	comp=Z,37μm,21.0s,MS5.8						
GUMO	Guam	23.88	104	eP	P	15 03 45.2	-1.9
	comp=Z,1μm,1.4s,mb6.2						
GUMO				LR	LR		
	comp=Z,37μm,21.0s,MS5.8						
GUMO	Guam	23.88	104	P	P	15 03 46.3	-0.8
	comp=Z,758nm,1.6s,mb5.9						
TTSI	Tana Toraja	24.03	183	P	P	15 03 48.3	-0.2
	comp=Z,470nm,1.1s,mb5.8						
SNG	Songkhla	24.16	238	P	P	15 03 47.0	-2.7
	comp=Z,200nm,0.8s,mb5.6						
MDJ	Mudanjiang	24.48	15	P	P	15 03 51.4	-1.0
MDJ				pP		15 03 54.1	
MDJ				sP	sP	15 03 55.9	-4.1
MDJ				PcP	PcP	15 07 29.4	-1.4
MDJ				ScP	ScP	15 11 08.4	-0.4
MDJ				PcS	PcS	15 11 09.9	-0.6
MDJ				ScS	ScS	15 14 55.6	-0.7

MDJ pmax pmax
comp=Z,110nm,0.9s,mb5.3
MDJ pmax pmax
comp=Z,5μm,11.4s
MDJ LR LR
comp=N,78μm,23.6s,MS6.5
MDJ LR LR
comp=E,172μm,20.6s,MS6.5
MDJ LR LR
comp=Z,85μm,18.1s,MS6.3
MDJ Mudanjiang 24.48 15 *e*P **P 15 03 51.3 -1.1**
comp=Z,284nm,1.3s,mb5.5
MDJ LR LR
comp=Z,91μm,20.0s,MS6.3
KBKI Kotabaru 24.73 192 P **P 15 03 55.0 +0.1**
comp=Z,424nm,1.6s,mb5.7
NLAI Namlea 24.90 166 P **P 15 03 55.7 -0.7**
comp=Z,1μm,1.3s,mb6.2
SPSI Sidrap Palu 24.95 183 P **P 15 03 56.0 -0.9**
comp=Z,437nm,1.3s,mb5.8
KDI Kendari 24.95 176 P **P 15 03 56.4 -0.5**
comp=Z,9μmcomp=Z,263nm,1.5s,mb5.5
KULM Kulim 25.30 234 *e*P **P 15 03 57.8 -2.4**
comp=Z,215nm,1.7s,mb5.4
KULM LR LR
comp=Z,59μm,20.0s,MS6.1
MYKOM Kota Tinggi 25.52 223 P **P 15 04 00.7 -1.3**
MYKOM Kota Tinggi 25.52 223 P **P 15 04 00.7 -1.4**
comp=Z,8μmcomp=Z,175nm,1.7s,mb5.3
IPM Ipoh 25.55 232 P **P 15 04 00.2 -2.2**
IPM Ipoh 25.55 232 P **P 15 04 00.0 -2.4**
comp=Z,4μmcomp=Z,182nm,1.2s,mb5.5
AAI Ambon 25.60 163 P **P 15 04 03.3 +0.5**
comp=Z,648nm,1.1s,mb6.0
GTA Gaotai 25.79 320 P **P 15 04 04.4 +0.1**
GTA pP pP 15 04 08.8 -0.9
GTA sP sP 15 04 12.1 +0.2
GTA PP 15 04 47.8
GTA sS sS 15 08 41.5 -0.2
GTA pmax pmax
comp=Z,7μm,11.3s
GTA LR LR
comp=N,100μm,19.6s,MS6.5
GTA LR LR
comp=E,95μm,19.6s,MS6.5
GTA LR LR
comp=Z,85μm,19.9s,MS6.3
TPI Tanjungpandan 27.12 211 P **P 15 04 15.5 -1.1**
comp=Z,5μmcomp=Z,115nm,1.6s,mb5.2
SHL Shillong 27.15 285 *e*PKP **P 15 04 17.5 +0.7**
SHL *ex* x 15 09 04.0
AGT Agartala 27.68 281 *i* P **P 15 04 23.0 +1.4**
AGT *i* x x 15 05 45.0
ERM Erimo 27.93 37 P **P 15 04 26.7 +3.1**
comp=Z,410nm,0.8s,mb6.1,SNR=6.3
ERM Erimo 27.93 37 *i* P **P 15 04 23.6 0.0**
ERM Erimo 27.93 37 *e*P **P 15 04 23.5 -0.1**
comp=Z,97nm,0.9s,mb5.4
ERM LR LR
comp=Z,52μm,22.0s,MS6.1
HIA Hailar 28.12 358 *e*P **P 15 04 24.0 -1.2**
HIA pmax pmax
comp=Z,202nm,1.1s
HIA MLR MLR
comp=Z,134μm,19.0s
HIA Hailar 28.12 358 *e*P **P 15 04 24.0 -1.2**
comp=Z,202nm,1.1s,mb5.7
HIA LR LR
comp=Z,134μm,19.0s,MS6.5
PSI Prapat 28.23 233 P **P 15 04 24.3 -2.2**
comp=Z,53nm,1.1s,mb5.1,baz=24,slow=7.0,SNR=28
PSI S **S 15 09 09.5 -2.3**
comp=Z,1.5nm,0.4s,baz=124,slow=18,SNR=1.5
PSI LR LR 15 15 12.0
comp=Z,45μm,19.5s,MS6.1,baz=39,slow=36
PSI Prapat 28.23 233 P **P 15 04 24.3 -2.2**
PSI S **S 15 09 09.5 -2.2**
PSI pmax pmax
comp=Z,53nm,1.1s,mb5.1
PSI smax
comp=N,2.0nm,0.4s
PSI MLR MLR
comp=Z,45μm,19.5s,MS6.1
LSA Lhasa 28.30 294 P **P 15 04 28.4 +1.3**
LSA S **S 15 09 11.0 -1.7**
LSA pmax pmax
comp=Z,20nm,1.0s,mb4.7
LSA LR LR
comp=N,25μm,15.0s,MS6.1
LSA LR LR
comp=E,32μm,17.0s,MS6.1
LSA LR LR
comp=Z,30μm,16.0s,MS6.0
LSA Lhasa 28.30 294 *e*P **P 15 04 27.6 +0.5**
LSA pmax pmax
comp=Z,213nm,1.5s,mb5.5
LSA MLR MLR
comp=Z,39μm,19.0s,MS6.0
LSA Lhasa 28.30 294 *e*P **P 15 04 27.6 +0.5**
comp=Z,213nm,1.5s,mb5.5
LSA LR LR
comp=Z,39μm,19.0s,MS6.0
BKNI Bangkinang 28.46 226 P **P 15 04 27.9 -0.7**
comp=Z,4μmcomp=Z,247nm,1.3s,mb5.7
TLE Tual 28.93 155 P **P 15 04 34.7 +2.0**
comp=Z,7μmcomp=Z,284nm,1.1s,mb5.9
ULN Ulaanbaatar 29.00 340 *e*P **P 15 04 33.5 +0.5**
ULN pmax pmax
comp=Z,261nm,1.3s,mb5.8
ULN MLR MLR
comp=Z,147μm,21.0s,MS6.6
ULN Ulaanbaatar 29.00 340 *e*P **P 15 04 33.5 +0.4**
comp=Z,261nm,1.3s,mb5.8
ULN LR LR
comp=Z,147μm,21.0s,MS6.6
ULN Ulaanbaatar 29.00 340 P **P 15 04 33.7 +0.7**
comp=Z,4μmcomp=Z,165nm,1.4s,mb5.6
ULN Ulaanbaatar 29.00 340 P **P 15 04 33.8 +0.8**
SNR=208
ASAJ Asahikawa 29.07 33 P **P 15 04 33.6 -0.1**
comp=Z,35nm,0.7s,mb5.2,baz=228,slow=12,SNR=24
ASAJ LR LR 15 15 23.1
comp=Z,16μm,20.2s,MS5.6,baz=346,slow=35
ASAJ Asahikawa 29.07 33 P **P 15 04 33.7 0.0**
ASAJ pmax pmax
comp=Z,35nm,0.7s
ASAJ MLR MLR
comp=Z,16μm,20.2s
MNSI Mandailing Nat 29.12 229 P **P 15 04 32.7 -1.8**
comp=Z,5μmcomp=Z,217nm,1.1s,mb5.8
SDSI Sungai Dareh 29.14 224 P **P 15 04 33.5 -1.2**
comp=Z,3μmcomp=Z,68nm,1.3s,mb5.2
SONM Songino Array 29.18 339 P **P 15 04 34.8 +0.1**
comp=Z,56nm,0.8s,mb5.3,baz=159,slow=9.5,SNR=78
SONM S **S 15 09 27.2 +1.0**
comp=Z,1.3nm,1.0s,baz=175,slow=20,SNR=1.7
SONM ScP ScP 15 11 22.7 0.0
comp=Z,7.2nm,1.0s,baz=169,slow=2.2,SNR=8.3
SONM LR LR 15 18 24.7
comp=Z,122μm,18.0s,MS6.6,baz=151,slow=41
SONM Songino Array 29.18 339 P **P 15 04 34.8 +0.1**
SONM S **S 15 09 27.2 +1.0**
SONM 15 11 22.7
SONM pmax pmax
comp=Z,56nm,0.8s
SONM smax
comp=N,1.0nm,1.0s
SONM MLR MLR
comp=Z,122μm,18.0s
PPI Padang Panjang 29.47 226 P **P 15 04 36.2 -1.3**
comp=Z,165nm,1.7s,mb5.5
ABJI Asem Bagus 29.50 194 P **P 15 04 41.9 +4.2**
HABR Khabarovsk 29.52 19 *i* P **P 15 04 41.0 +3.4**
HABR 15 05 34.7
HABR *e*PPP 15 05 42.5
HABR *e* 15 07 44.2
HABR *e*S **S 15 09 37.2 +5.8**
HABR *e*SS SS 15 11 05.5 -31
HABR *e* 15 11 27.2
HABR *e* 15 15 21.0
HABR pmax pmax
comp=E,27nm,0.8s
HABR pmax pmax
comp=Z,114nm,1.7s,mb5.3
HABR pmax pmax
comp=N,66nm,1.6s
HABR MLR MLR
comp=E,72μm,18.0s
MMRI Maumere 29.57 178 P **P 15 04 37.8 -0.6**
comp=E,632nm,1.4s,mb6.2
SRBI Singaraja 29.57 192 P Px 15 04 52.2
PDSI Padang 29.76 225 P **P 15 04 42.0 +1.9**
comp=E,4μmcomp=E,115nm,1.9s,mb5.3
KHKI Kahang-Kahang 29.77 191 P **P 15 04 41.4 +1.2**
comp=E,5μmcomp=E,252nm,1.3s,mb5.8
NGJI Ngawi 29.83 199 P **P 15 04 41.7 +1.0**
comp=E,8μmcomp=E,154nm,1.9s,mb5.4
SMRI Semarang 29.87 202 P **P 15 04 42.7 +1.7**
comp=E,9μmcomp=E,187nm,2.0s,mb5.5
SJI Sawahan 30.09 199 P **P 15 04 42.5 -0.5**
comp=E,5μmcomp=E,145nm,1.5s,mb5.5
GMJI Gumukmas 30.14 195 P **P 15 04 43.9 +0.4**
comp=E,4μmcomp=E,107nm,1.7s,mb5.3
KLSI 30.24 214 P **P 15 04 43.9 -0.5**
comp=E,332nm,2.0s,mb5.7
KRKI Karangkates 30.29 197 P **P 15 04 44.8 0.0**
IGBI Denpasar 30.30 192 P **P 15 04 44.7 -0.2**
comp=E,10μmcomp=E,554nm,1.3s,mb6.1
KLI Kotabumi 30.32 213 P **P 15 04 46.4 +1.3**
comp=E,178nm,1.7s,mb5.5
PWJI Pagerwojo 30.35 198 P **P 15 04 44.1 -1.2**
comp=E,5μmcomp=E,165nm,1.3s,mb5.6
MDSI Maura Dua 30.36 215 P **P 15 04 44.4 -1.0**
comp=E,3μmcomp=E,90nm,1.6s,mb5.2
CAL Calcutta 30.41 279 *ex* sP 15 04 53.1 -0.4
CAL *ex* x 15 09 26.1
KSI Kapahiang 30.56 219 P **P 15 04 46.2 -1.0**
comp=E,6μmcomp=E,131nm,1.3s,mb5.6
TNG Tangerang 30.59 209 P **P 15 04 52.0 +4.6**
comp=E,1μm,1.9s,mb6.5
TNG P 15 04 52.1
comp=E,883nm,1.8s
WSI Waingapu 30.59 182 P Px 15 05 01.7
YOGI Yogyakarta 30.63 201 P **P 15 04 50.4 +2.6**
comp=E,578nm,1.6s,mb6.1
UGM Wanagama 30.65 201 P **P 15 04 50.5 +2.6**
comp=E,7μmcomp=E,265nm,2.1s,mb5.7
PCJI Pacitan 30.70 199 P **P 15 04 52.5 +4.1**
RBSI Rajabasa 30.73 211 P **P 15 04 52.5 +3.9**
comp=E,8μmcomp=E,258nm,2.0s,mb5.7
YUK Yuzh-Kuril'sk 30.75 36 ⇑*i*P **P 15 04 46.9 -1.7**
YUK *i* 15 05 51.4
YUK *i* S **S 15 09 53.7 +2.9**
YUK *i* SS SS 15 11 59.5 -2.7
YUK pmax pmax
comp=Z,1μm,1.7s,mb6.5
YUK pmax pmax
comp=N,260nm,1.3s
YUK pmax pmax
comp=E,190nm,1.3s
YUK pmax pmax
comp=Z,1.0nm,1.3s
YUK smax
comp=E,13μm,14.7s
YUK smax
comp=N,1μm,3.7s
LEM Lembang 30.75 207 P **P 15 04 49.6 +0.8**
comp=N,7μmcomp=N,176nm,1.9s,mb5.6
SBJI Serang 30.78 210 P **P 15 04 50.5 +1.4**
comp=N,8μmcomp=N,456nm,1.7s,mb6.0
LWLI Liwa 30.87 215 P **P 15 04 50.7 +0.8**
comp=N,7μmcomp=N,335nm,1.7s,mb5.9
SISI Saibi 30.99 227 P **P 15 04 49.5 -1.5**
comp=N,4μmcomp=N,163nm,1.8s,mb5.6
TAPN Taplejung 31.00 288 *e*P **P 15 04 52.5 +1.4**
comp=N,544nm,1.5s,mb6.2
KASI Kota Agung 31.07 213 P **P 15 04 51.1 -0.6**
comp=N,5μmcomp=N,170nm,1.7s,mb5.6
YSS Yuzh-Sakhalins 31.21 29 *e*P **P 15 04 51.0 -1.6**
YSS *e* 15 05 01.2
YSS *e* 15 05 10.0
YSS *e*S **S 15 09 53.0 -5.0**
YSS *e* 15 10 14.0
YSS MLR MLR
comp=E,60μm,18.0s
YSS MLR MLR
comp=Z,32μm,18.0s,MS6.0
YSS Yuzh-Sakhalins 31.21 29 *e*P **P 15 04 52.5 -0.1**
comp=Z,204nm,1.3s,mb5.8
YSS LR LR
comp=Z,13μm,20.0s,MS5.6
ODAN Odare 31.26 287 *e*P **P 15 04 54.0 +0.7**
comp=Z,750nm,1.7s,mb6.2
CIT Chita 31.41 351 *e*P **P 15 04 56.3 +2.0**
CIT *e* 15 05 57.1
CIT pmax pmax
comp=Z,394nm,1.7s,mb6.0
RAMN Ramite 31.97 287 *e*P **P 15 05 00.6 +1.1**
comp=Z,889nm,1.6s,mb6.3
JIRN Jiri 32.37 289 *e*P **P 15 05 04.0 +0.9**
comp=Z,790nm,1.5s,mb6.3
BOK Bokaro 32.60 281 *e*PKP **P 15 05 05.7 +0.6**
BOK AMb AMB 15 05 16.2
comp=Z,189nm,1.4s,mb5.8
GUN Gumba 32.67 289 *e*P **P 15 05 06.7 +1.0**
comp=Z,1μm,1.7s,mb6.5
PKI Pulchoki 33.06 288 *e*P **P 15 05 09.2 +0.1**
comp=Z,672nm,1.8s,mb6.3
KKN Kakani 33.19 289 *e*P **P 15 05 10.9 +0.7**
comp=Z,565nm,1.7s,mb6.2
DMN Daman 33.33 288 *e*P **P 15 05 11.9 +0.4**
comp=Z,1μm,2.0s,mb6.5
TLY Talaya 33.41 340 P **P 15 05 12.2 +0.4**
comp=Z,469nm,0.7s,mb6.5,SNR=21
TLY Talaya 33.41 340 *e*P **P 15 05 13.0 +1.2**
TLY *e*PPP 15 06 41.5
TLY pmax pmax
comp=Z,131nm,1.3s,mb5.7
TLY MLR MLR
comp=Z,108μm,17.0s,MS6.6
TLY Talaya 33.41 340 *e*P **P 15 05 11.3 -0.6**
comp=Z,52nm,0.7s,mb5.6
TLY LR LR
comp=Z,112μm,20.0s,MS6.6
TLY Talaya 33.41 340 P **P 15 05 12.6 +0.7**
SNR=61
IRK Irkutsk 33.71 341 ⇓*i*P **P 15 05 14.2 -0.2**
IRK *e* 15 06 46.0
IRK *e*S **S 15 10 43.1 +6.4**
IRK pmax pmax
comp=Z,395nm,1.8s,mb6.0
GKN Gorkha 33.77 289 *e*P **P 15 05 14.9 -0.4**
comp=Z,598nm,1.6s,mb6.3
MOY Mondy 34.29 338 *e*P **P 15 05 19.6 +0.1**
MOY pmax pmax
comp=Z,384nm,3.1s
KAKA Kakadu 35.41 161 ⇑*i*P **P 15 05 26.6 -2.9**
comp=Z,84nm,0.7s,mb5.8
KAKA *e*S PcS 15 11 45.6 -1.0
KAKA Kakadu 35.41 161 *e*P **P 15 05 26.6 -2.9**
comp=Z,240nm,0.7s,mb6.2
KAKA Kakadu 35.41 161 P **P 15 05 26.6 -2.9**
comp=Z,1μmcomp=Z,196nm,0.7s,mb6.1
VIS Vishakhapatnam 35.72 271 *i* P **P 15 05 31.6 -0.6**
VIS *ex* x 15 05 53.3
comp=Z,278nm,1.8s
VIS *i* S **S 15 11 10.0 +1.5**
VIS *i* S **S 15 11 10.4 +1.9**
WMQ Urumqi 35.78 317 P **P 15 05 32.8 +0.3**
WMQ pP pP 15 05 37.1 -0.8
WMQ sP sP 15 05 39.8 -0.3
WMQ PP PP 15 06 53.8 0.0
WMQ PcP PcP 15 08 00.5 +0.5
WMQ S **S 15 11 08.9 0.0**
WMQ sS sS 15 11 16.3 -1.6
WMQ ScP ScP 15 11 44.9 -0.6
WMQ SS SS 15 13 29.8 -15
WMQ ScS ScS 15 15 48.6 -1.8
WMQ pmax pmax
comp=Z,71nm,1.6s,mb5.3
WMQ pmax pmax
comp=Z,3μm,6.4s
WMQ LR LR
comp=N,56μm,18.8s,MS6.4
WMQ LR LR
comp=E,32μm,17.6s,MS6.4
WMQ LR LR
comp=Z,37μm,18.2s,MS6.2
CLNS Chul'man 35.80 4 *e*P **P 15 05 30.3 -2.1**
CLNS *e* 15 06 51.5
CLNS *e* 15 07 56.2
CLNS *e*S **S 15 11 06.1 -2.7**
CLNS *e*SS SS 15 13 28.0 -17
CLNS pmax pmax
comp=Z,22nm,1.4s,mb4.9
CLNS pmax pmax
comp=E,11nm,1.2s
CLNS pmax pmax
comp=N,13nm,1.2s
CLNS pmax pmax
comp=E,14nm,1.6s
CLNS pmax pmax
comp=N,38nm,1.5s
CLNS pmax pmax
comp=Z,20nm,1.5s,mb4.8
CLNS smax
comp=E,836nm,13.3s
CLNS smax
comp=N,2μm,13.1s
CLNS MLR MLR
comp=N,39μm,18.0s,MS6.4
CLNS MLR MLR
comp=Z,32μm,18.0s,MS6.1
CLNS MLR MLR
comp=E,42μm,16.0s,MS6.4
ALBI Allahabad 36.26 284 *ex* x 15 05 29.0
KNA Kununurra 37.39 168 P **P 15 05 43.7 -2.7**
comp=E,4μmcomp=E,529nm,1.0s,mb6.3
PTH Pithoragarh 37.73 291 *e*PKP **P 15 05 50.0 +0.7**
JOSI Joshimath 38.37 293 *e*PKP **P 15 05 54.5 -0.2**
JOSI AMb AMB 15 06 00.3
comp=Z,314nm,1.0s,mb6.0
NGP Nagpur 39.13 278 *e*PKP **P 15 06 00.8 -0.3**
NGP *i* x x 15 06 08.6
NGP *i* S **S 15 12 02.5 +2.2**
FITZ Fitzroy Crossi 39.22 173 *e*P **P 15 05 58.3 -3.5**
comp=Z,78nm,1.0s,mb5.4
FITZ *e*pP pP 15 06 03.9 -3.3
FITZ *e* 15 06 22.9
FITZ *e*PP PP 15 07 37.0 +5.0
FITZ *e*S **S 15 11 56.0 -5.5**
FITZ Fitzroy Crossi 39.22 173 P **P 15 05 58.3 -3.5**
comp=Z,43nm,0.9s,mb5.2,baz=1.8,slow=7.3,SNR=61
FITZ S **S 15 11 54.7 -6.7**
comp=Z,3.7nm,1.1s,baz=135,slow=20,SNR=2.1
FITZ LR LR 15 22 04.7
comp=Z,12μm,21.9s,MS5.7,baz=359,slow=36
FITZ Fitzroy Crossi 39.22 173 *e*P **P 15 05 58.4 -3.4**
comp=Z,132nm,1.1s,mb5.6
FITZ Fitzroy Crossi 39.22 173 P **P 15 05 59.5 -2.2**
comp=Z,6μmcomp=Z,233nm,1.2s,mb5.8
KLP Kalpa 39.56 294 *e*PKP **P 15 06 05.7 +1.0**
KLP AMb AMB 15 06 15.9
comp=Z,219nm,2.1s,mb5.5
PMG Port Moresby 39.69 137 *ce*P **P 15 06 03.3 -2.5**
PMG pmax pmax
comp=Z,194nm,1.0s
PMG Port Moresby 39.69 137 *e*P **P 15 06 02.6 -3.2**
comp=Z,150nm,0.8s,mb5.8
PMG LR LR
comp=Z,8μm,19.0s,MS5.6
PMG Port Moresby 39.69 137 P **P 15 06 03.5 -2.3**
comp=Z,3μmcomp=Z,212nm,0.9s,mb5.9
BISR Bishrakh 40.13 290 *e*PKP **P 15 06 08.7 -0.7**
HYB Hyderabad 40.24 272 *e*P **P 15 06 12.0 +1.6**
HYB *e*S **S 15 12 16.0 -1.0**
HYB Hyderabad 40.24 272 *i* P **P 15 06 12.0 +1.6**
HYB *e* 15 06 44.0
HYB *e*PP PP 15 07 40.0 -3.1
HYB *e* 15 08 32.0
HYB *e*S **S 15 12 20.0 +3.0**
HYB LR LR 15 19 00.0
comp=Z,23nm,16.0s
SKR Severo-Kuril's 40.31 34 *e*P **P 15 06 11.5 +1.0**
SKR *e* 15 07 50.0
SKR pmax pmax
comp=Z,200nm,1.2s,mb5.7
SKR pmax pmax
comp=N,1μm,12.0s
SKR pmax pmax
comp=E,2μm,12.0s
SKR pmax pmax
comp=Z,2μm,12.0s
SKR MLR MLR
comp=N,28μm,18.0s,MS6.2
SKR MLR MLR
comp=Z,23μm,18.0s,MS6.1
SKR MLR MLR
comp=E,20μm,22.0s,MS6.2
NDI New Delhi 40.33 290 *e*PKP **P 15 06 09.5 -1.5**
NDI *ex* x 15 12 34.0
BHPL Bhopal 40.38 281 *ex* x 15 06 06.7
SONA Sohna 40.44 289 *e*PKP **P 15 06 10.9 -1.1**
MK31 Makanchi Array 40.53 319 *i* P **P 15 06 11.3 -1.1**
MK31 pmax pmax
comp=Z,100nm,1.0s,mb5.4
MK31 Makanchi Array 40.53 319 *e*P **P 15 06 12.1 -0.3**
MKAR Makanchi Array 40.53 319 P **P 15 06 11.3 -1.1**
comp=Z,17nm,0.6s,mb4.8,baz=113,slow=9.1,SNR=94
MKAR LR LR 15 23 00.3
comp=Z,42μm,21.0s,MS6.3,baz=115,slow=36
MKAR Makanchi Array 40.53 319 P **P 15 06 11.4 -1.0**
MKAR pmax pmax
comp=Z,17nm,0.6s
MKAR MLR MLR
comp=Z,42μm,21.0s
SDNR Sundarnagar 40.65 294 *e*PKP **P 15 06 15.5 +1.8**
KRAR Krasnoyarsk 40.69 336 *e*P **P 15 06 14.2 +0.6**
KRAR pmax pmax
comp=Z,123nm,1.2s,mb5.4
KKR Kurukshetra 40.70 292 *e*PKP **P 15 06 15.1 +1.0**
COCO West Island 40.78 218 *i* P **P 15 06 16.5 +1.7**
COCO West Island 40.78 218 PFAKE 15 06 20.0 +5.2
COCO LR LR
comp=Z,14μm,19.0s,MS5.8
COEN Coen 41.04 146 *e*P **P 15 06 15.0 -2.0**
comp=Z,356nm,0.9s,mb6.0
COEN Coen 41.04 146 P **P 15 06 15.2 -1.8**
comp=Z,7μmcomp=Z,242nm,1.8s,mb5.5
AKL Akola 41.08 278 ⇑*i*P **P 15 06 21.3 +4.0**
AKL *i* S **S 15 12 33.6 +4.2**
BHK Bhakra 41.12 294 *ex* x 15 06 21.8
YAK Yakutsk 41.33 6 *e*P **P 15 06 17.2 -1.6**
YAK *e**PP pP 15 06 27.5 +3.2
YAK *e*PPP 15 08 20.7
YAK *e*S **S 15 12 29.2 -2.9**
YAK *e**SS sS 15 12 46.7 +5.5
YAK *e* 15 16 21.0
YAK pmax pmax
comp=Z,57nm,1.1s,mb5.1
YAK pmax pmax
comp=E,4.0nm,1.5s
YAK pmax pmax
comp=N,20nm,1.0s
YAK smax
comp=N,1μm,8.6s
YAK MLR MLR
comp=Z,86μm,16.0s,MS6.7
YAK MLR MLR
comp=N,56μm,14.0s,MS6.6
YAK MLR MLR
comp=E,3μm,16.0s,MS6.6
YAK Yakutsk 41.33 6 *e*P **P 15 06 17.4 -1.4**
comp=E,314nm,1.3s,mb5.8
YAK LR LR
comp=Z,58μm,19.0s,MS6.5
THN Thein Dam 41.78 295 *e*PKP **P 15 06 21.3 -1.6**
MBWA Marble Bar 42.02 182 *e*P **P 15 06 21.9 -3.0**
comp=Z,29nm,0.8s,mb5.0
MBWA LR LR
comp=Z,12μm,19.0s,MS5.8
MBWA Marble Bar 42.02 182 P **P 15 06 22.4 -2.5**
comp=Z,4μmcomp=Z,61nm,1.1s,mb5.2
PETK Petropavlovsk- 42.48 32 P **P 15 06 27.8 -0.6**
PETK LR LR 15 24 11.5
comp=Z,16μm,21.1s,MS5.9,baz=55,slow=36
KSH Kashi 42.56 306 P **P 15 06 32.4 +3.2**
KSH pP pP 15 06 36.8 +2.1
KSH sP sP 15 06 39.8 +2.9
KSH PP PP 15 08 14.3 +6.4
KSH PcP PcP 15 08 22.9 +1.4
KSH ScP ScP 15 12 12.8 +1.1
KSH PcS PcS 15 12 13.8 +0.3
KSH S **S 15 12 56.8 +5.8**
KSH sS sS 15 13 04.6 +4.5
KSH SS SS 15 16 02.5 +1.5
KSH ScS ScS 15 16 29.6 -0.6
KSH pmax pmax

comp=Z,110nm,1.2s,mb5.5
KSH pmax pmax
comp=Z,3μm,7.4s
KSH LR LR
comp=N,62μm,15.7s,MS6.8
KSH LR LR
comp=E,70μm,15.7s,MS6.8
KSH LR LR
comp=Z,82μm,20.3s,MS6.6
AJM Ajmer 42.66 287 *e*PKP **P 15 06 29.9 -0.3**
AAA Alma-Ata 42.78 312 *i* P **P 15 06 28.2 -2.8**
AAA *e*S **S 15 12 48.5 -5.7**
AAA pmax pmax
comp=Z,4μm,10.9s
AAA smax
comp=E,10μm,18.3s
AAA MLR MLR
comp=Z,70μm,18.0s,MS6.6
WRAB Tennant Creek 42.80 161 P **P 15 06 28.2 -3.0**
comp=Z,1μm,0.8s,mb6.8,SNR=19
WRAB Tennant Creek 42.80 161 *e*P **P 15 06 28.9 -2.3**
WRAB pmax pmax
comp=Z,542nm,1.4s,mb6.1
WRAB MLR MLR
comp=Z,12μm,21.0s,MS5.8
WRAB Tennant Creek 42.80 161 *e*P **P 15 06 28.9 -2.3**
comp=Z,326nm,1.4s,mb5.9
WRAB LR LR
comp=Z,29μm,21.0s,MS6.2
WRAB Tennant Creek 42.80 161 P **P 15 06 29.5 -1.7**
comp=Z,6μmcomp=Z,330nm,1.3s,mb5.9
ZALV Zalesovo Beam 42.80 329 P **P 15 06 30.3 -0.6**
comp=Z,20nm,0.6s,mb5.1,baz=114,slow=7.2,SNR=65
ZALV ScP ScP 15 12 11.9 -0.4
comp=Z,3.8nm,0.9s,baz=132,slow=4.3,SNR=4.4
ZALV S **S 15 12 53.2 -0.9**
comp=Z,0.4nm,0.3s,baz=62,slow=28,SNR=2.4
ZALV LR LR 15 25 52.4
comp=Z,27μm,18.8s,MS6.2,baz=129,slow=38
ZALV Zalesovo Beam 42.80 329 P **P 15 06 30.3 -0.6**
ZALV S **S 15 12 53.2 -0.9**
ZALV pmax pmax
comp=Z,20nm,0.6s,mb5.0
ZALV MLR MLR
comp=Z,27μm,18.8s,MS6.2
WRA Warramunga Arr 42.80 161 P **P 15 06 27.4 -3.9**
comp=Z,70nm,0.7s,mb5.5,baz=344,slow=9.2,SNR=119
WRA ScP ScP 15 12 12.4 -0.3
comp=Z,11nm,1.0s,baz=346,slow=3.9,SNR=9.1
WRA S **S 15 12 50.5 -4.3**
comp=Z,11nm,1.1s,baz=340,slow=13,SNR=10
WRA LR LR 15 25 49.6
comp=Z,11μm,21.5s,MS5.7,baz=345,slow=38
WRA Warramunga Arr 42.80 161 P **P 15 06 27.4 -3.9**
WRA S **S 15 12 50.5 -4.3**
WRA pmax pmax
comp=Z,70nm,0.7s
WRA smax
comp=N,11nm,1.1s
WRA MLR MLR
comp=Z,11μm,21.5s
PET Petropavlovsk 42.91 33 *ce*P **P 15 06 33.8 +1.9**
PET *e*S **S 15 12 56.7 +0.9**
PET pmax pmax
comp=Z,1μm,11.6s
PET pmax pmax
comp=Z,155nm,1.3s,mb5.6
PET pmax pmax
comp=Z,2μm,15.1s
PET smax
comp=E,500nm,8.1s
PET MLR MLR
comp=Z,31μm,22.0s,MS6.2
PET Petropavlovsk 42.91 33 P **P 15 06 31.7 -0.2**
comp=Z,236nm,1.4s,mb5.7
PET LR LR
comp=Z,29μm,19.0s,MS6.2
ULHL Ulahol 43.00 310 P **P 15 06 34.8 +2.1**
SNR=23
TKM2 Tokmak 2 43.64 311 P **P 15 06 38.9 +1.0**
SNR=42
TKM2 Tokmak 2 43.64 311 *e*P **P 15 06 38.5 +0.6**
TKM2 pmax pmax
comp=Z,62nm,0.9s,mb5.3
TKM2 MLR MLR
comp=Z,93μm,22.0s,MS6.7
TKM2 Tokmak 2 43.64 311 *e*P **P 15 06 38.5 +0.6**
comp=Z,62nm,0.9s,mb5.3
TKM2 LR LR
comp=Z,93μm,22.0s,MS6.7
KZA Kyzart 43.67 309 P **P 15 06 39.8 +1.6**
SNR=44
KBK Karagaybulak 44.03 310 P **P 15 06 42.0 +1.0**
SNR=10
NVS Novosibirsk 44.07 329⇑ *i*P **P 15 06 41.2 0.0**
NVS *e*S **S 15 13 12.7 0.0**
NVS pmax pmax
comp=N,460nm,1.9s
NVS pmax pmax
comp=E,278nm,1.9s
NVS pmax pmax
comp=Z,474nm,1.9s,mb5.9
NVS smax
comp=E,280nm,2.1s
CHMS Chumysh 44.26 310 P **P 15 06 43.4 +0.5**
SNR=21
FRU Bishkek 44.31 310⇑ *i*P **P 15 06 44.0 +0.7**
FRU pmax pmax
comp=Z,300nm,2.0s,mb5.7
FRU MLR MLR
comp=Z,50nm,17.0s
FRU MLR MLR
comp=N,60nm,14.0s
TRD Trivandrum 44.31 260⇓ *ex* x 15 06 55.5
TRD *ex* x 15 12 41.5
KAD Karad 44.34 273 *e*PKP **P 15 06 43.3 -0.6**
AAK Ala-Archa 44.35 310 P **P 15 06 45.4 +1.8**
comp=N,209nm,1.0s,mb5.8,SNR=24
POO Poona 44.39 275 *e*PKP **P 15 06 43.0 -1.3**
comp=N,50nm,1.0s,mb5.2
KURK Kurchatov 44.42 322 P **P 15 06 44.3 +0.2**
comp=N,735nm,1.1s,mb6.3,SNR=47
KURK Kurchatov 44.42 322 P **P 15 06 43.5 -0.6**
comp=N,95nm,1.1s,mb5.4,baz=120,slow=7.0,SNR=97
KURK S **S 15 13 21.3 +3.4**
comp=N,0.5nm,0.7s,baz=111,slow=23,SNR=2.6
KURK LR LR 15 26 53.9
comp=N,32μm,18.6s,MS6.3,baz=115,slow=38
KURK Kurchatov 44.42 322 *de*P **P 15 06 43.4 -0.7**
KURK pmax pmax
comp=Z,174nm,1.2s,mb5.7
KURK MLR MLR
comp=Z,39μm,13.0s,MS6.5
KURK Kurchatov 44.42 322 *e*P **P 15 06 43.5 -0.5**
comp=Z,311nm,1.4s,mb5.8
KURK LR LR
comp=Z,35μm,20.0s,MS6.3
KURK Kurchatov 44.42 322 P **P 15 06 44.3 +0.2**
SNR=132
USP Ospenovka 44.50 311 P **P 15 06 46.3 +1.4**
SNR=22
AML Almayashu 44.81 309 P **P 15 06 48.9 +1.6**
SNR=62
AML Almayashu 44.81 309 *e*P **P 15 06 48.5 +1.2**
comp=Z,120nm,1.0s,mb5.7
AML LR LR
comp=Z,88μm,22.0s,MS6.6
EKS2 Erkin-Say 44.87 310 P **P 15 06 48.5 +0.8**
SNR=13
EKS2 Erkin-Say 44.87 310 *e*P **P 15 06 48.2 +0.5**
comp=Z,98nm,1.4s,mb5.5
EKS2 LR LR
comp=Z,68μm,20.0s,MS6.6
GOA Goa 45.09 271⇑ *i*P **P 15 06 50.7 +0.9**
GOA *i* S **S 15 13 28.9 +0.4**
JASL Jaisalmer 45.97 287 *e*PKP **P 15 06 57.0 +0.3**
ASAR Alice Springs 46.22 164 P **P 15 06 56.1 -2.4**
comp=Z,24nm,0.7s,mb5.2,baz=339,slow=6.4,SNR=165
ASAR ScP ScP 15 12 25.8 -0.9
comp=Z,13nm,1.0s,baz=349,slow=3.7,SNR=13
ASAR S **S 15 13 40.0 -4.3**
comp=Z,3.6nm,0.9s,baz=349,slow=14,SNR=3.2
ASAR Alice Springs 46.22 164 P **P 15 06 56.1 -2.4**
ASAR S **S 15 13 40.0 -4.3**
ASAR pmax pmax
comp=Z,24nm,0.7s
ASAR smax
comp=N,4.0nm,0.9s
SEY Seymchan 46.90 19 *e*P **P 15 07 03.6 +0.2**
SEY Seymchan 46.90 19 *e*P **P 15 07 03.7 +0.3**
KK31 Karatay Array 47.31 310 *i* P **P 15 07 07.3 +0.3**
KBL Kabul 47.46 298 P **P 15 07 07.6 -0.7**
KBL pmax pmax
comp=Z,170nm,1.3s,mb5.8
KBL Kabul 47.46 298 P **P 15 07 07.6 -0.7**
comp=Z,170nm,1.3s,mb5.8
CTA Charters Tower 47.77 147 *e*P **P 15 07 08.7 -2.0**
comp=Z,99nm,1.5s,mb5.6
CTA *e* 15 07 27.5
CTA *e*S **S 15 14 05.0 -1.6**
CTA Charters Tower 47.77 147 P **P 15 07 08.8 -1.9**
comp=Z,79nm,0.8s,mb5.8,baz=327,slow=10,SNR=32
CTA ScP ScP 15 12 32.0 -1.3
comp=Z,12nm,1.1s,baz=297,slow=9.0,SNR=3.4
CTA S **S 15 14 04.4 -2.2**
comp=Z,2.9nm,0.9s,baz=229,slow=17,SNR=3.7
CTA LR LR 15 25 47.4
comp=Z,27μm,20.4s,MS6.2,baz=326,slow=34
CTA Charters Tower 47.77 147 P **P 15 07 08.8 -1.9**
CTA S **S 15 14 04.4 -2.2**
CTA pmax pmax
comp=Z,79nm,0.8s
CTA smax
comp=N,3.0nm,0.9s
CTA Charters Tower 47.77 147 P **P 15 07 08.8 -1.9**
CTA ScP ScP 15 12 32.0 -1.3
CTA S **S 15 14 04.4 -2.2**
CTA LR LR 15 25 47.4
CTAO Charters Tower 47.77 147 *e*P **P 15 07 08.9 -1.8**
CTAO pmax pmax
comp=Z,431nm,1.5s,mb6.3
CTAO MLR MLR
comp=Z,26μm,20.0s,MS6.2
CTAO Charters Tower 47.77 147 *e*P **P 15 07 08.9 -1.8**
comp=Z,431nm,1.5s,mb6.3
CTAO LR LR
comp=Z,26μm,20.0s,MS6.2
CTAO Charters Tower 47.77 147 P **P 15 07 09.1 -1.6**
comp=Z,5μmcomp=Z,197nm,1.8s,mb5.8
HNR Honiara 48.77 125 LR LR 15 26 54.5
comp=Z,10μm,19.8s,MS5.8,baz=127,slow=35
HNR Honiara 48.77 125 PFAKE 15 07 30.0 +11
HNR LR LR
comp=Z,15μm,20.0s,MS6.0
VOSK Vostochnaya 49.58 322 P **P 15 07 22.9 -1.4**
VOSK pmax pmax
comp=Z,800nm,4.0s
BVAR Borovoye Array 50.02 322 P **P 15 07 27.4 -0.3**
comp=Z,6.9nm,0.5s,mb4.9,baz=110,slow=8.7,SNR=26
BVAR ScP ScP 15 12 43.6 +1.1
comp=Z,4.3nm,0.9s,baz=140,slow=1.1,SNR=6.6
BVAR S **S 15 14 38.8 +1.2**
comp=Z,0.2nm,0.3s,baz=119,slow=15,SNR=2.2
BVAR LR LR 15 29 09.3
comp=Z,384nm,18.4s,baz=114,slow=37
BVAR PKP2bc 15 38 30.3
comp=Z,1.0nm,0.9s,baz=211,slow=2.6,SNR=3.8
BVAR Borovoye Array 50.02 322 P **P 15 07 27.4 -0.3**
BVAR ScP ScP 15 12 43.6 +1.1
BVAR S **S 15 14 38.8 +1.2**
BVAR LR LR 15 29 09.3
BVAR ⇑ *e* 15 38 30.3
BRVK Borovoye 50.09 322 P **P 15 07 28.9 +0.7**
comp=Z,670nm,0.9s,mb6.7,SNR=34
BRVK Borovoye 50.09 322 *e*P **P 15 07 28.6 +0.4**
BRVK pmax pmax
comp=Z,112nm,0.9s,mb5.9
BRVK MLR MLR
comp=Z,32μm,21.0s,MS6.3
BRVK Borovoye 50.09 322 *e*P **P 15 07 28.6 +0.4**
comp=Z,112nm,0.9s,mb5.9
BRVK LR LR
comp=Z,32μm,21.0s,MS6.3
BRVK Borovoye 50.09 322 P **P 15 07 28.9 +0.8**
SNR=74
TIXI Tiksi 50.76 3 *e*P **P 15 07 30.6 -2.4**
TIXI *e* 15 09 26.5
TIXI *e*S **S 15 14 43.8 -3.6**
TIXI *e*SS SS 15 18 21.8 +0.1
TIXI pmax pmax
comp=Z,116nm,1.5s,mb5.6
TIXI MLR MLR
comp=Z,64μm,18.0s,MS6.7
TIXI MLR MLR
comp=N,49μm,21.0s,MS6.6
TIXI MLR MLR
comp=E,12μm,16.0s,MS6.6
TIXI Tiksi 50.76 3 *e*P **P 15 07 30.9 -2.0**
comp=E,96nm,1.1s,mb5.6
TIXI LR LR
comp=Z,66μm,20.0s,MS6.7
ZRNK Zerenda 50.79 322 P **P 15 07 32.4 -1.1**
ZRNK pmax pmax
comp=Z,1μm,4.0s
FORT Forrest 52.02 172 *e*P **P 15 07 41.1 -1.7**
comp=Z,138nm,0.7s,mb6.0
FORT Forrest 52.02 172 *e*P **P 15 07 41.0 -1.9**
comp=Z,191nm,0.8s,mb6.1
KLBR Kellerberrin 52.49 184 *e*P **P 15 07 43.7 -2.7**
comp=Z,61nm,0.9s,mb5.5
NWAO Narrogin (SRO) 53.85 184 P **P 15 07 53.9 -2.5**
comp=Z,50nm,0.8s,mb5.5,baz=4.9,slow=8.0,SNR=24
NWAO LR LR 15 30 21.1
comp=Z,31nm,20.7s,baz=205,slow=36
NWAO Narrogin (SRO) 53.85 184 *e*P **P 15 07 54.0 -2.4**
comp=Z,107nm,1.3s,mb5.6
NWAO LR LR
comp=Z,6μm,22.0s,MS5.6
NWAO Narrogin (SRO) 53.85 184 P **P 15 07 55.6 -0.7**
SNR=6.9
BILL Bilibino 54.60 19 *de*P **P 15 08 00.6 -0.8**
BILL *e* 15 09 03.6
BILL *e* 15 10 04.0
BILL pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
BILL Bilibino 54.60 19 *e*P **P 15 08 00.1 -1.4**
comp=Z,18nm,0.7s,mb5.2
BILL LR LR
comp=Z,37μm,22.0s,MS6.4
EIDS Eidsvold 54.61 146 *e*P **P 15 07 59.3 -2.7**
comp=Z,217nm,1.9s,mb5.9
DGAR Diego Garcia 55.52 245 PFAKE 15 08 20.0 +11
DGAR LR LR
comp=Z,13μm,19.0s,MS6.0
AB31 Akbulak array 55.55 316 *i* P **P 15 08 08.2 -0.4**
ABKAR Akbulak array 55.55 316 *e*P **P 15 08 08.2 -0.4**
comp=Z,17nm,0.7s,mb5.2
MIDW Midway 55.87 70 PFAKE 15 08 20.0 +8.7
MIDW LR LR
comp=Z,8μm,21.0s,MS5.8
ASH Ashkhabad 56.13 302 *e*P **P 15 08 15.4 +2.4**
ASH *e*S **S 15 16 13.6 +12**
STKA Stephens Creek 56.22 159 *e*P **P 15 08 11.6 -1.9**
comp=Z,60nm,0.8s,mb5.7
STKA *e*S **S 15 15 59.8 -2.6**
STKA Stephens Creek 56.22 159 P **P 15 08 11.2 -2.4**
comp=Z,72nm,0.7s,mb5.8,baz=337,slow=6.9,SNR=39
STKA LR LR 15 31 49.8
comp=Z,11μm,21.3s,MS5.9,baz=97,slow=36
STKA Stephens Creek 56.22 159 *e*P **P 15 08 11.4 -2.1**
comp=Z,15nm,0.8s,mb5.1
ABKT Ailbek 56.31 302 P **P 15 08 15.8 +1.5**
comp=Z,338nm,1.1s,mb6.3,SNR=18
VAN Vannovskaya 56.32 302 *e*P **P 15 08 15.4 +1.1**
SVE Sverdlovsk 56.48 325⇓ *e*P **P 15 08 15.7 +0.6**
SVE *e*PPP 15 11 42.5
SVE *e*S **S 15 16 06.9 +1.5**
SVE pmax pmax
comp=Z,119nm,1.1s,mb5.8
SVE pmax pmax
comp=Z,2μm,12.1s
SVE MLR MLR
comp=Z,45μm,18.0s,MS6.6
ADK Adak 56.59 41 PFAKE 15 08 30.0 +14
ADK LR LR
comp=Z,9μm,22.0s,MS5.8
ARU Arti 57.52 324 P **P 15 08 22.1 -0.4**
comp=Z,378nm,0.9s,mb6.4,SNR=13
ARU Arti 57.52 324 *d*P **P 15 08 22.4 -0.1**
ARU *e* 15 09 11.1
ARU *e* 15 10 31.9
ARU *e*PPP 15 11 49.7
ARU S **S 15 16 22.4 +3.2**
ARU 15 18 01.2
ARU pmax pmax
comp=Z,33nm,1.2s,mb5.2
ARU Arti 57.52 324 *e*P **P 15 08 21.6 -0.9**
comp=Z,112nm,1.1s,mb5.8
ARU LR LR
comp=Z,28μm,20.0s,MS6.4
SMDO Samad 58.04 285 P **P 15 08 28.6 +1.9**
SNR=5.4
HOQ Hoqain 58.61 285 P **P 15 08 32.0 +1.4**
SNR=9.4
IBAF Bafgh 58.88 295 *e*P **P 15 08 33.7 +1.2**
ARMA Armidale 59.05 149 *e*P **P 15 08 33.0 -0.4**
ARMA *e*S **S 15 16 40.4 +0.9**
ARMA Armidale 59.05 149 *e*P **P 15 08 32.0 -1.5**
comp=Z,69nm,1.4s,mb5.5
SOKR Solikamsk 59.05 328 *c i*P **P 15 08 35.6 +2.5**
SOKR S **S 15 16 38.7 -0.3**
SOKR SS SS 15 20 31.8 -0.9
SOKR pmax pmax
comp=Z,100nm,1.5s,mb5.6
SOKR MLR MLR
comp=Z,65μm,16.0s,MS6.8
IMEH Mehriz 59.72 295 *e*P **P 15 08 39.2 +0.9**
IGLO Ghaloghah 59.81 301 *e*P **P 15 08 40.1 +1.3**
NAZ Nazwa, Dubai 59.82 287 P **P 15 08 47.6 +8.6**
SNR=5.3
IANJ Anjilo 59.84 300 *e*P **P 15 08 32.3 -6.7**
IKIA Kiasar 59.96 300 *e*P **P 15 08 38.7 -1.1**
ASUD Al Ashush, Dub 60.18 287 P **P 15 08 47.9 +6.4**
SNR=5.0
ISHM Shahmirzad 60.31 300 *e*P **P 15 08 47.4 +5.2**
ILAS Lasjerd 60.62 300 *e*P **P 15 08 45.6 +1.2**
IPAR Pars 61.28 293 *e*P **P 15 08 49.4 +0.5**
ISRV Sarvestan 61.29 293 *e*P **P 15 08 48.1 -1.0**
ISFB Sefidab 61.33 298 *e*P **P 15 08 49.9 +0.7**
IDMV Damavand 61.35 300 *e*P **P 15 08 50.3 +0.9**
IZEF Zefreh 61.44 297 *e*P **P 15 08 54.2 +4.2**
DZM Mont Dzumac 61.65 131 *e*P **P 15 08 52.5 +1.1**
comp=Z,163nm,1.1s,mb6.0
DZM *e*S **S 15 17 07.5 -5.7**
comp=Z,28μm,30.2s
DZM *e*LQ 15 24 31.8
comp=Z,16μm,23.9s
DZM *e*LR LR 15 27 11.1
comp=Z,37μm,22.2s
DZM Mont Dzumac 61.65 131 *e*P **P 15 08 50.4 -1.0**
comp=Z,78nm,0.9s,mb5.8
IVRN Varamin 61.67 299 *e*P **P 15 08 56.2 +4.7**
RIV Riverview 61.69 152 *e*P **P 15 08 55.0 +3.6**
IGAR Garneh 61.75 296 *e*P **P 15 08 53.0 +0.9**
IKLH Kolahrood 62.01 297 *e*P **P 15 08 55.1 +1.3**
CAN Canberra 62.05 154 *e*P **P 15 08 53.4 -0.4**
CAN pmax pmax
comp=Z,287nm,1.8s,mb6.1
CAN MLR MLR
comp=Z,7μm,20.0s,MS5.8
CAN Canberra 62.05 154 *e*P **P 15 08 53.4 -0.4**
comp=Z,287nm,1.8s,mb6.1
CAN LR LR
comp=Z,7μm,20.0s,MS5.8
IR3 Iran Long-Peri 62.18 300 *e*P **P 15 09 00.0 +5.1**
CNB Canberra Magne 62.19 154 *e*P **P 15 08 54.2 -0.6**
CNB *e*S **S 15 17 17.7 -1.9**
IPIR Pirpir 62.67 297 *e*P **P 15 08 58.9 +0.7**
TOO Toolangi 62.72 158 *e*P **P 15 08 58.6 +0.3**
TOO *e*S **S 15 17 27.4 +1.2**
IRAZ Razeghan 63.08 300 *e*P **P 15 09 01.4 +0.5**
TNA Tin City 63.12 26 P **P 15 09 02.1 +1.5**
MAK Makhachkala 64.10 308 *e*P **P 15 09 08.4 +0.9**
MAK *i* 15 09 37.6
MAK *i* 15 11 28.5
MAK *e*S **S 15 17 48.2 +4.6**
MAK *e* 15 18 56.1
MAK pmax pmax
comp=Z,890nm,2.5s,mb6.3
MAK pmax pmax
comp=N,148nm,1.4s
MAK pmax pmax
comp=E,152nm,1.4s
MAK pmax pmax
comp=Z,195nm,1.7s,mb5.9
MAK smax
comp=E,5μm,8.1s
MAK smax
comp=N,6μm,8.6s
MAK MLR MLR
comp=Z,26μm,15.0s,MS6.5
MAK MLR MLR
comp=E,27μm,13.0s
FUNA Funafuti 64.20 111 PFAKE 15 09 20.0 +11
FUNA LR LR
comp=Z,11μm,19.0s,MS6.0
ISRB Sarab 64.56 303 *e*P **P 15 09 12.0 +1.3**
JOHN Johnston Islan 65.32 81 PFAKE 15 09 20.0 +4.1
JOHN LR LR
comp=Z,8μm,21.0s,MS5.9
DGRG David-gareji 65.84 307 P **P 15 09 20.8 +1.9**
DGRG S S 15 18 11.7 +6.6
IAZR Azarshahr 65.90 303 *e*P **P 15 09 20.4 +1.0**
KBD Kabd 65.99 293 *e*P **P 15 09 18.7 -1.4**
KBD AMb AMB 15 09 31.9
comp=Z,51nm,2.4s,mb5.1
ISHB Shabestar 66.10 304 *e*P **P 15 09 22.1 +1.5**
RDF Al-Radifah 66.16 293 *e*P **P 15 09 19.8 -1.4**
RDF AMb AMB 15 09 28.2
comp=Z,91nm,1.3s,mb5.7
MTA Mtatsminda 66.24 307 P **P 15 09 24.9 +3.4**
MTA S S 15 18 10.1 +0.1
TBLG Delisi 66.28 307 *i* P **P 15 09 22.7 +1.0**
TBLG *e*S S 15 18 17.7 +7.3
TBLG Delisi 66.28 307 P **P 15 09 22.7 +1.0**
TBLG S S 15 18 17.7 +7.3
NAY Al-Naaiem 66.36 294 *e*P **P 15 09 20.9 -1.5**
NAY AMb AMB 15 09 31.2
comp=Z,46nm,1.7s,mb5.2
SDPT Sand Point 66.38 38 *e*P **P 15 09 20.2 -1.9**
comp=Z,54nm,0.7s,mb5.7
GNI Garni 66.50 306 *d i*P **P 15 09 25.2 +2.1**
GNI pmax pmax
comp=Z,33nm,1.5s
GNI MLR MLR
comp=Z,15μm,20.0s
GNI Garni 66.50 306 *e*P **P 15 09 24.4 +1.2**
comp=Z,332nm,1.7s,mb6.1
GNI LR LR
comp=Z,17μm,20.0s,MS6.3
GNI Garni 66.50 306 P **P 15 09 30.0 +6.9**
SNR=15
GOR Gori 66.71 308 P **P 15 09 30.8 +6.4**
ZEI Tsey 66.76 309 *e*P **P 15 09 24.4 -0.3**
ZEI *e*S S 15 18 18.3 +2.2
ZEI *e* 15 19 20.9
ZEI pmax pmax
comp=Z,100nm,1.3s,mb5.7
ZEI MLR MLR
comp=Z,21μm,18.0s,MS6.4
ZEI MLR MLR
comp=E,20μm,20.0s,MS6.4
ZEI MLR MLR
comp=N,8μm,15.0s,MS6.4
ONI Oni 67.11 308 P **P 15 09 28.9 +1.9**
ONI S S 15 18 28.6 +8.2
VRHR Novokhopersk 67.33 318 *e*P **P 15 09 27.3 -0.9**
VRHR *e*S S 15 18 21.5 -1.2
VRHR pmax pmax
comp=N,20nm,0.8s
VRHR pmax pmax
comp=E,40nm,0.8s
VRHR pmax pmax
comp=Z,70nm,0.8s,mb5.7
VRHR smax
comp=E,180nm,2.1s
VRHR smax
comp=Z,40nm,2.1s
VRHR smax
comp=N,10.0nm,0.5s
VRHR MLR MLR
comp=N,1μm,18.0s,MS5.4
VRHR MLR MLR
comp=E,2μm,18.0s,MS5.4
VRHR MLR MLR
comp=Z,2μm,18.0s,MS5.5
KIV Kislovodsk 67.47 310 P **P 15 09 30.9 +1.6**
comp=Z,410nm,1.2s,mb6.3,SNR=23

KIV	**Kislovodsk**	**67.47**	**310**	*e*P	**P**	**15 09 29.7 +0.4**
KIV				*e*		15 11 59.8
KIV				*e*PPP		15 13 35.7
KIV				*e*S	S	15 18 28.2 +3.5
KIV				*e*SS	SS	15 22 48.7 +3.9
KIV				pmax	pmax	
	comp=Z,567nm,5.8s					
KIV				pmax	pmax	
	comp=Z,54nm,0.9s,mb5.6					
KIV				MLR	MLR	
	comp=Z,23µm,19.0s,MS6.4					
KIV	**Kislovodsk**	**67.47**	**310**	*e*P	**P**	**15 09 29.8 +0.6**
	comp=Z,173nm,1.4s,mb5.9					
KIV				LR	LR	
	comp=Z,27µm,20.0s,MS6.5					
KIV	**Kislovodsk**	**67.47**	**310**	P	**P**	**15 09 30.1 +0.9**
	SNR=40					
CHGN	**Chignik**	**67.47**	**37**	*e*P	**P**	**15 09 28.3 -0.7**
MOO	**Moorlands**	**67.67**	**159**	*e*P	**P**	**15 09 34.1 +3.8**
MOO				*e*S	S	15 18 26.5 -0.2
MSVF	**Nonsavu**	**67.86**	**120**	*e*P	**P**	**15 09 31.6 -0.5**
	comp=Z,61nm,0.9s,mb5.6					
MSVF				LR	LR	
	comp=Z,11µm,20.0s,MS6.1					
BHD	**Baghdad**	**67.96**	**298**	*e*x	x	15 09 29.0
BHD				*e*x	x	15 18 21.0
TTA	**Tatalina**	**68.22**	**29**	*e*P	**P**	**15 09 40.5 +6.9**
SVW2	**Sparrevohn**	**68.56**	**31**	*e*P	**P**	**15 09 34.3 -1.5**
	comp=Z,122nm,2.1s,mb5.5					
SVW2				LR	LR	
	comp=Z,8µm,19.0s,MS6.0					
VOR	**Voronezh**	**68.76**	**319**	P	**P**	**15 09 37.0 -0.2**
VOR				pmax	pmax	
	comp=Z,240nm,1.4s,mb5.9					
VORD	**Divnogorie**	**68.80**	**318**	*e*P	**P**	**15 09 36.6 -0.9**
VORD				*e*S	S	15 18 38.1 -2.3
VORD				pmax	pmax	
	comp=E,20nm,1.0s					
VORD				pmax	pmax	
	comp=Z,20nm,1.0s,mb5.0					
VORD				pmax	pmax	
	comp=N,4.0nm,0.3s					
VORD				smax		
	comp=N,2µm,7.9s					
VORD				smax		
	comp=E,2µm,7.9s					
VORD				smax		
	comp=Z,1µm,7.9s					
VSR	**Storozhevoye**	**68.85**	**318**	*e*P	**P**	**15 09 37.1 -0.7**
VSR				*e*S	S	15 18 40.1 -0.8
VSR				*e*SS	SS	15 23 05.0 -0.7
VSR				pmax	pmax	
	comp=E,20nm,1.5s					
VSR				pmax	pmax	
	comp=Z,50nm,1.5s,mb5.2					
VSR				pmax	pmax	
	comp=N,9.0nm,0.7s					
VSR				smax		
	comp=N,2µm,6.4s					
VSR				smax		
	comp=E,2µm,6.4s					
VSR				smax		
	comp=Z,820nm,6.4s					
VSR				MLR	MLR	
	comp=N,19µm,18.0s,MS6.5					
VSR				MLR	MLR	
	comp=E,13µm,18.0s,MS6.5					
VSR				MLR	MLR	
	comp=Z,24µm,18.0s,MS6.5					
MSEY	**Mahe Island**	**69.19**	**256**	PFAKE		15 09 50.0 +10
MSEY				LR	LR	
	comp=Z,9µm,20.0s,MS6.0					
MOS	**Moscow**	**69.19**	**323**	*e*P	**P**	**15 09 38.4 -1.4**
MOS				*e*		15 09 53.1
MOS				*e*		15 10 00.3
MOS				*e*		15 12 14.5
MOS				*e*PPP		15 13 58.4
MOS				*i* S	S	15 18 47.2 +2.5
MOS				*e*SS	SS	15 23 18.2 +7.5
MOS				pmax	pmax	
	comp=Z,41nm,0.6s,mb5.5					
MOS				pmax	pmax	
	comp=Z,800nm,3.8s					
MOS				MLR	MLR	
	comp=E,23µm,15.0s					
MOS				MLR	MLR	
	comp=Z,30µm,15.0s,MS6.7					
LVZ	**Lovozero**	**69.31**	**336**	P	**P**	**15 09 43.9 +3.6**
	comp=Z,253nm,1.0s,mb6.1,SNR=7.5					
SOC	**Sochi**	**69.65**	**310**	*e*P	**P**	**15 09 43.1 +0.2**
SOC				*e**PP	pP	15 09 52.9 +4.2
SOC				*e*		15 12 20.2
SOC				*e*PPP		15 14 00.4
SOC				*e*S	S	15 18 51.4 +0.7
SOC				*e**SS	sS	15 19 10.8 +11
SOC				pmax	pmax	
	comp=Z,29nm,0.8s,mb5.3					
SOC				pmax	pmax	
	comp=Z,865nm,3.6s					
SOC				MLR	MLR	
	comp=Z,32µm,18.0s,MS6.6					
SOC	**Sochi**	**69.65**	**310**	*i* P	**P**	**15 09 43.2 +0.3**
APA	**Apatity**	**69.82**	**336**	⇓*i*P	**P**	**15 09 41.0 -2.4**
APA				*i*	pP	15 09 48.0 -1.2
APA				*i*		15 10 07.6
APA				*i*		15 12 16.0
APA				*i* PPP		15 14 00.0
APA				*i* S	S	15 18 50.0 -1.8
APA				MLR	MLR	
	comp=Z,36µm,20.0s,MS6.6					
OBN	**Obninsk**	**69.87**	**322**	⇑*i*P	**P**	**15 09 43.7 -0.3**
OBN				*i*		15 09 54.3
OBN				*i*		15 09 58.3
OBN				*i*		15 10 05.6
OBN				*i*		15 12 18.4
OBN				*i* S	S	15 18 57.5 +4.7
OBN				pmax	pmax	
	comp=Z,43nm,1.2s,mb5.2					
OBN				MLR	MLR	
	comp=Z,20µm,19.0s,MS6.4					
OBN	**Obninsk**	**69.87**	**322**	P	**P**	**15 09 43.5 -0.5**
	comp=Z,322nm,1.8s,mb6.0					
OBN				LR	LR	
	comp=Z,28µm,19.0s,MS6.5					
PPLA	**Purkeypile**	**69.96**	**29**	*e*P	**P**	**15 09 44.6 +0.2**
	comp=Z,450nm,1.7s,mb6.1					
RSO	**Redoubt South**	**70.00**	**32**	*e*P	**P**	**15 09 44.8 +0.1**
	comp=Z,164nm,1.0s,mb5.9					
OHAK	**Old Harbor**	**70.18**	**35**	*e*P	**P**	**15 09 45.5 -0.4**
	comp=Z,442nm,1.9s,mb6.1					
COLD	**Coldfoot**	**70.25**	**24**	*e*P	**P**	**15 09 46.8 +0.6**
	comp=Z,151nm,1.3s,mb5.8					
BPAW	**Bear Paw Mtn.**	**70.34**	**28**	*e*P	**P**	**15 09 46.8 +0.1**
	comp=Z,370nm,1.5s,mb6.1					
KDAK	**Kodiak Island**	**70.47**	**35**	P	**P**	**15 09 47.1 -0.5**
	comp=Z,732nm,0.9s,mb6.6,SNR=7.8					
KDAK	**Kodiak Island**	**70.47**	**35**	P	**P**	**15 09 47.8 +0.2**
	comp=Z,18nm,0.6s,mb5.2,baz=333,slow=2.7,SNR=16					
KDAK	**Kodiak Island**	**70.47**	**35**	*i* P	**P**	**15 09 47.5 -0.1**
KDAK	**Kodiak Island**	**70.47**	**35**	*e*P	**P**	**15 09 47.0 -0.7**
	comp=Z,452nm,1.5s,mb6.2					
KDAK				LR	LR	
	comp=Z,11µm,20.0s,MS6.1					
TRF	**Thorofare Moun**	**70.74**	**28**	*e*P	**P**	**15 09 49.1 0.0**
	comp=Z,252nm,1.6s,mb5.9					
ANN	**Anapa**	**71.05**	**312**	*e*P	**P**	**15 09 54.4 +3.0**
ANN				*e*S	S	15 19 11.1 +4.2
ANN				pmax	pmax	
	comp=Z,213nm,1.3s,mb5.9					
ANN				MLR	MLR	
	comp=N,12µm,22.0s,MS6.5					
ANN				MLR	MLR	
	comp=E,24µm,22.0s,MS6.5					
ANN				MLR	MLR	
	comp=Z,26µm,22.0s,MS6.4					
MCK	**McKinley**	**71.29**	**28**	*e*P	**P**	**15 09 52.3 -0.2**
MCK				pmax	pmax	
	comp=Z,264nm,1.3s,mb6.0					
MCK	**McKinley**	**71.29**	**28**	*e*P	**P**	**15 09 52.3 -0.2**
	comp=Z,262nm,1.3s,mb6.0					
JOF	**Joensuu**	**71.34**	**331**	*e*P	**P**	**15 09 52.4 -0.4**
JOF				pmax	pmax	
	comp=Z,91nm,1.1s,mb5.6					
JOF	**Joensuu**	**71.34**	**331**	*e*p	**P**	**15 09 52.4 -0.4**
	comp=Z,91nm,1.1s,mb5.6					
RC01	**Rabbit Creek A**	**71.37**	**31**	*e*P	**P**	**15 09 51.4 -1.7**
	comp=Z,184nm,1.6s,mb5.8					
COLA	**College**	**71.56**	**27**	*e*P	**P**	**15 09 53.2 -0.9**
COLA				pmax	pmax	
	comp=Z,34nm,0.8s,mb5.3					
COLA				MLR	MLR	
	comp=Z,11µm,20.0s,MS6.1					
COLA	**College**	**71.56**	**27**	*e*P	**P**	**15 09 53.2 -0.9**
	comp=Z,34nm,0.8s,mb5.3					
COLA				LR	LR	
	comp=Z,11µm,20.0s,MS6.1					
PMR	**Palmer**	**71.57**	**30**	*e*P	**P**	**15 09 53.3 -1.0**
PMR				pmax	pmax	
	comp=Z,40nm,1.3s,mb5.2					
PMR				MLR	MLR	
	comp=Z,16µm,23.0s,MS6.2					
PMR	**Palmer**	**71.57**	**30**	*e*P	**P**	**15 09 53.3 -1.0**
	comp=Z,40nm,1.3s,mb5.2					
PMR				LR	LR	
	comp=Z,16µm,23.0s,MS6.2					
KEV	**Kevo**	**71.79**	**339**	*e*P	**P**	**15 09 55.0 -0.4**
KEV				pmax	pmax	
	comp=Z,63nm,0.9s,mb5.5					
KEV	**Kevo**	**71.79**	**339**	*e*P	**P**	**15 09 55.0 -0.4**
	comp=Z,63nm,0.9s,mb5.5					
KEV	**Kevo**	**71.79**	**339**	*e*p	**P**	**15 09 55.0 -0.4**
	comp=Z,63nm,0.9s,mb5.5					
ARCES	**ARCESS Array B**	**72.35**	**338**	P	**P**	**15 09 58.1 -0.7**
	comp=Z,10.0nm,0.8s,mb4.8,baz=74,slow=8.9,SNR=17					
ARCES				LR	LR	15 47 24.1
	comp=Z,21µm,18.7s,MS6.4,baz=356,slow=40					
ARE0	**ARCESS Array S**	**72.35**	**338**	*e*P	**P**	**15 09 58.9 0.0**
BJO	**Bjornoya**	**72.96**	**344**	*e*P	**P**	**15 10 02.8 +0.4**
BJO				*e*S	S	15 19 21.8 -6.2
BJO				AMS	AMS	15 48 47.0
	comp=Z,28µm,11.7s,MS6.8					
BJO1	**Bjornoya**	**73.01**	**344**	*e*P	**P**	**15 10 02.8 +0.1**
BJO1				LR	LR	
	comp=Z,28µm,11.7s,MS6.8					
HSP	**Hornsund**	**73.02**	**347**	*e*P	**P**	**15 10 06.9 +4.2**
KBS	**Kingsbay**	**73.02**	**349**	*e*P	**P**	**15 10 04.9 +2.3**
KBS				*e*S	S	15 19 35.4 +6.8
KBS				AMS	AMS	15 45 59.6
	comp=Z,58µm,18.6s,MS6.9					
KBS	**Kingsbay**	**73.02**	**349**	P	**P**	**15 10 04.5 +1.8**
KBS				pmax	pmax	
	comp=Z,50nm,1.0s,mb5.4					
KBS				MLR	MLR	
	comp=Z,66µm,19.0s,MS6.9					
KBS	**Kingsbay**	**73.02**	**349**	P	**P**	**15 10 04.5 +1.8**
	comp=Z,50nm,1.0s,mb5.4					
KBS				LR	LR	
	comp=Z,66µm,19.0s,MS6.9					
DIV	**Divide**	**73.25**	**30**	*e*P	**P**	**15 10 04.0 -0.3**
	comp=Z,351nm,1.5s,mb6.1					
KTK1	**Kautokeino**	**73.26**	**338**	*e*S	S	15 19 33.8 +2.2
KTK1				*e*		15 19 40.0
SIM	**Simferopol'**	**73.32**	**312**	*e*P	**P**	**15 10 05.3 +0.3**
SIM				*e*		15 10 20.0
SIM				*e*		15 12 55.0
SIM				PPP		15 14 33.0
SIM				*e*S	S	15 19 34.0 +1.0
SIM				*e*PS		15 20 09.0
SIM				*e*SS	SS	15 24 17.0 +2.4
SIM				pmax	pmax	
	comp=Z,98nm,1.7s,mb5.5					
SIM				MLR	MLR	
	comp=Z,20µm,18.5s,MS6.4					
MENT	**Mentasta**	**73.76**	**28**	*e*P	**P**	**15 10 07.0 -0.2**
KAF	**Kangasniemi**	**73.78**	**331**	*e*P	**P**	**15 10 09.4 +2.0**
KAF				pmax	pmax	
	comp=Z,79nm,1.3s,mb5.5					
KAF	**Kangasniemi**	**73.78**	**331**	*e*P	**P**	**15 10 09.4 +2.0**
	comp=Z,79nm,1.3s,mb5.5					
KAF	**Kangasniemi**	**73.78**	**331**	*e*p	**P**	**15 10 09.4 +2.0**
	comp=Z,79nm,1.3s,mb5.5					
BMRM	**Bremner River**	**73.84**	**30**	*e*P	**P**	**15 10 07.2 -0.5**
	comp=Z,132nm,1.2s,mb5.7					
FINES	**FINESS Array B**	**74.05**	**330**	P	**P**	**15 10 07.7 -1.3**
	comp=Z,6.9nm,0.7s,mb4.7,baz=64,slow=6.3,SNR=11					
FINES				S	S	15 19 40.1 -0.5
	comp=Z,0.5nm,0.5s,baz=72,slow=13,SNR=2.1					
FINES				LR	LR	15 47 28.6
	comp=Z,30µm,18.5s,MS6.6,baz=73,slow=40					
FINES	**FINESS Array B**	**74.05**	**330**	P	**P**	**15 10 07.7 -1.3**
FINES				S	S	15 19 40.1 -0.6
FINES				pmax	pmax	
	comp=Z,7.0nm,0.7s					
FINES				smax		
	comp=N,1.0nm,0.5s					
FINES				MLR	MLR	
	comp=Z,30µm,18.5s					
EGAK	**Eagle**	**74.37**	**26**	*e*P	**P**	**15 10 09.8 -0.9**
	comp=Z,179nm,1.4s,mb5.8					
EGAK				LR	LR	
	comp=Z,13µm,19.0s,MS6.2					
KIP	**Kipapa**	**74.48**	**73**	PFAKE		15 10 20.0 +7.8
KIP				LR	LR	
	comp=Z,9µm,22.0s,MS6.0					
VSU	**Vasula**	**74.50**	**327**	*d i*P	**P**	**15 10 12.1 +0.5**
VSU				pmax	pmax	
	comp=Z,32nm,1.6s,mb5.0					
TRO	**Tromso**	**74.55**	**339**	*e*P	**P**	**15 10 15.9 +4.2**
TRO				AMb	AMB	15 10 20.0
	comp=Z,61nm,3.6s					
TRO				*e*S	S	15 19 49.0 +3.1
TRO				AMS	AMS	15 47 56.6
	comp=Z,26µm,20.3s,MS6.5					
TRO	**Tromso**	**74.55**	**339**	*e*P	**P**	**15 10 15.9 +4.2**
TRO				pmax	pmax	
	comp=Z,61nm,3.6s					
TRO				MLR	MLR	
	comp=Z,26µm,20.3s,MS6.5					
TRO	**Tromso**	**74.55**	**339**	*e*P	**P**	**15 10 15.9 +4.2**
	comp=Z,61nm,3.6s					
TRO				LR	LR	
	comp=Z,26µm,20.3s,MS6.5					
HWQ	**Hawqa**	**74.56**	**301**	*e*P	**P**	**15 10 15.1 +2.6**
BHL	**Bhannes**	**74.90**	**301**	*e*P	**P**	**15 10 17.4 +3.0**
MICGM	**Minsk**	**74.91**	**323**	*e*P	**P**	**15 10 14.0 -0.1**
BR131	**Keskin Array S**	**74.94**	**307**	*e*P	**P**	**15 10 13.9 -0.6**
	comp=Z,15nm,0.9s,mb4.9					
BR131				LR	LR	
	comp=Z,8µm,20.0s,MS6.0					
BRTR	**Keskin Array B**	**74.94**	**307**	P	**P**	**15 10 13.1 -1.4**
	comp=Z,3.7nm,0.9s,mb4.3,baz=104,slow=5.2,SNR=22					
BRTR				S	S	15 19 52.1 +0.7
	comp=Z,0.2nm,0.3s,baz=141,slow=26,SNR=2.6					
BRTR				LR	LR	15 51 01.6
	comp=Z,7µm,18.5s,MS6.0,baz=253,slow=42					
BRTR	**Keskin Array B**	**74.94**	**307**	*c e*P	**P**	**15 10 13.8 -0.7**
MNK	**Minsk**	**74.94**	**323**	*e*P	**P**	**15 10 14.0 -0.3**
MNK				*e*		15 10 32.0
MNK				*e*S	S	15 19 48.0 -2.8
MNK				MLR	MLR	
	comp=Z,44µm,16.0s,MS6.9					
MNK				MLR	MLR	
	comp=E,39µm,16.0s					
AKASG	**Malin Array Be**	**75.11**	**319**	P	**P**	**15 10 14.1 -1.2**
	comp=E,1.9nm,0.6s,mb4.2,baz=65,slow=5.6,SNR=9.1					
AKASG				S	S	15 19 50.6 -2.3
	comp=E,0.3nm,0.4s,baz=146,slow=25,SNR=2.7					
AKASG				LR	LR	15 43 39.0
	comp=E,12µm,20.0s,MS6.2,baz=50,slow=36					
AKBB	**Malin Array Si**	**75.11**	**319**	*e*P	**P**	**15 10 15.1 -0.2**
KIEV	**Kiev**	**75.12**	**319**	*e*P	**P**	**15 10 14.8 -0.6**
KIEV				pmax	pmax	
	comp=Z,72nm,1.4s,mb5.4					
KIEV				MLR	MLR	
	comp=Z,12µm,19.0s,MS6.2					
KIEV	**Kiev**	**75.12**	**319**	*e*P	**P**	**15 10 14.8 -0.6**
	comp=Z,72nm,1.4s,mb5.4					
KIEV				LR	LR	
	comp=Z,12µm,19.0s,MS6.2					
DAWY	**Dawson**	**75.31**	**27**	*e*P	**P**	**15 10 15.3 -0.9**
IDID	**Didziasalis**	**75.33**	**324**	*e*P	**P**	**15 10 16.8 +0.3**
MMAI	**Mount Meron Ar**	**75.34**	**300**	P	**P**	**15 10 17.1 +0.2**
	comp=Z,4.2nm,0.7s,mb4.5,baz=126,slow=14,SNR=2.4					
MMAI				S	S	15 19 58.3 +2.2
	comp=Z,0.4nm,0.3s,baz=266,slow=39,SNR=2.1					
MMAI				LR	LR	15 50 22.8
	comp=Z,10µm,20.3s,MS6.1,baz=65,slow=41					
NACGM	**Naroch**	**75.42**	**323**	*e*P	**P**	**15 10 16.0 -1.0**
IZAR	**Zarasai**	**75.48**	**324**	*e*P	**P**	**15 10 17.5 +0.2**
IIGN	**Ignalina**	**75.61**	**324**	*e*P	**P**	**15 10 18.3 +0.2**
INK	**Inuvik**	**76.10**	**22**	P	**P**	**15 10 19.5 -1.2**
	comp=Z,10.0nm,0.7s,mb4.9,baz=305,slow=4.7,SNR=17					
INK				S	S	15 20 02.5 -0.8
	comp=Z,2.9nm,1.0s,baz=139,slow=19,SNR=9.7					
INK	**Inuvik**	**76.10**	**22**	P	**P**	**15 10 19.5 -1.2**
INK				S	S	15 20 02.5 -0.8
INK				pmax	pmax	
	comp=Z,10.0nm,0.7s					
INK				smax		
	comp=N,3.0nm,1.0s					
INK	**Inuvik**	**76.10**	**22**	*e*P	**P**	**15 10 19.5 -1.2**
	comp=N,270nm,1.5s,mb6.0					
KIS	**Kishinev**	**76.37**	**315**	*e*P	**P**	**15 10 20.0 -2.6**
	comp=N,1µm,13.0s					
KIS	**Kishinev**	**76.37**	**315**	*e*PcP	PcP	15 10 36.0 +1.6
KIS	**Kishinev**	**76.37**	**315**	*e*PP	PP	15 13 16.0 +2.1
KIS				*e*S	S	15 20 04.0 -2.9
	comp=N,4µm,12.0s					
KIS	**Kishinev**	**76.37**	**315**	*e*P	**P**	**15 10 20.0 -2.6**
KIS				*e*		15 10 36.0
KIS				*e*		15 13 16.0
KIS				*e*S	S	15 20 04.0 -2.9
KIS				*e*PS		15 20 43.0
KIS				*e*SS	SS	15 25 08.0 +7.2
KIS				pmax	pmax	
	comp=Z,1µm,13.0s					
KIS				smax		
	comp=N,4µm,12.0s					
KIS				smax		
	comp=E,2µm,10.0s					
KIS				MLR	MLR	
	comp=Z,18µm,17.0s,MS6.5					
KIS				MLR	MLR	
	comp=Z,17µm,16.0s					
RER	**Riviere de l'E**	**76.40**	**241**	PFAKE		15 10 30.0 +6.9
RER				LR	LR	
	comp=Z,15µm,20.0s,MS6.3					
ALE	**Alert**	**76.56**	**0**	P	**P**	**15 10 26.6 +3.5**
	comp=Z,326nm,1.6s,mb6.0,SNR=7.1					
PNL	**Peninsula**	**76.70**	**31**	*e*P	**P**	**15 10 26.9 +2.7**
	comp=Z,162nm,1.3s,mb5.8					
TLCR		**76.89**	**313**	⇓P	**P**	**15 10 28.3 +2.7**
POHA	**Pohakuloa**	**77.19**	**74**	PFAKE		15 10 40.0 +12
POHA				LR	LR	
	comp=Z,5µm,21.0s,MS5.8					
RAO	**Raoul Island**	**77.19**	**128**	PFAKE		15 10 40.0 +13
RAO				LR	LR	
	comp=Z,5µm,21.0s,MS5.8					
TIRR	**Tirgusor**	**77.37**	**313**	⇑P	**P**	**15 10 28.8 +0.5**
TIRR	**Tirgusor**	**77.37**	**313**	*e*P	**P**	**15 10 28.1 -0.2**
	comp=Z,87nm,1.5s,mb5.5					
MOR8	**Moi Rana**	**77.39**	**336**	*e*P	**P**	**15 10 29.4 +1.4**
MOR8				AMb	AMB	15 10 39.3
	comp=Z,50nm,1.4s,mb5.3					
MOR8	**Moi Rana**	**77.39**	**336**	*e*P	**P**	**15 10 29.4 +1.4**
	comp=Z,50nm,1.4s,mb5.3					
SUW	**Suwalki**	**77.69**	**323**	*e*P	**P**	**15 10 30.5 +0.6**
SUW				*e*pP	pP	15 10 35.6 -0.2
SUW				*e*S	S	15 20 25.1 +4.1
SUW				LMZ		15 49 16.2
	comp=Z,20µm,22.3s					
SUW	**Suwalki**	**77.69**	**323**	P	**P**	**15 10 29.5 -0.4**
SUW				pmax	pmax	
	comp=Z,108nm,1.0s,mb5.7					
SUW	**Suwalki**	**77.69**	**323**	P	**P**	**15 10 29.5 -0.4**
	comp=Z,108nm,1.0s,mb5.7					
PSN	**Preselentsi**	**77.76**	**312**	*e*P	**P**	**15 10 34.6 +4.1**
ISP	**Isparta**	**77.80**	**306**	P	**P**	**15 10 29.8 -1.1**
ISP					pP	15 10 36.4 -0.3
ISP				pmax	pmax	
	comp=Z,62nm,1.1s,mb5.5					
ISP				MLR	MLR	
	comp=Z,14µm,22.0s,MS6.2					
ISP	**Isparta**	**77.80**	**306**	P	**P**	**15 10 29.8 -1.1**
	comp=Z,62nm,1.1s,mb5.5					
ISP				P	pP	15 10 36.4 -0.3
ISP				LR	LR	
	comp=Z,14µm,22.0s,MS6.2					
STOK	**Stokkvaagen**	**77.84**	**337**	*e*S	S	15 20 21.8 -0.5
TESR		**77.94**	**315**	⇓P	**P**	**15 10 32.0 +0.6**
VRI	**Vrincioaia**	**78.08**	**315**	⇑P	**P**	**15 10 33.0 +0.7**
PLOR	**Plostina**	**78.14**	**315**	⇓P	**P**	**15 10 31.8 -0.8**
DESE	**Dese**	**78.18**	**277**	*e*P	**P**	**15 10 36.0 +2.7**
DESE				*e*S	S	15 20 37.5 +10
PRD	**Provadia**	**78.45**	**312**	*e*P	**P**	**15 10 37.0 +2.7**
BUR01	**Bucovina Ar. S**	**78.52**	**317**	P	**P**	**15 10 40.5 +5.9**
BUR08	**Bucovina Ar. S**	**78.53**	**317**	P	**P**	**15 10 34.1 -0.5**
LVV	**L'vov**	**78.56**	**319**	*e*P	**P**	**15 10 36.1 +1.3**
LVV				*e*		15 10 49.7
LVV				*e*		15 13 37.2
LVV				*e*PPP		15 15 19.1
LVV				*e*S	S	15 20 32.1 +1.6
LVV				*e*PS		15 21 12.3
LVV				*e*SS	SS	15 25 34.9 +1.3
LVV				MLR	MLR	
	comp=N,9µm,22.0s,MS6.3					
LVV				MLR	MLR	
	comp=E,14µm,22.0s,MS6.3					
LVV				MLR	MLR	
	comp=Z,20µm,22.0s,MS6.4					
SKAG	**Skagway**	**78.71**	**30**	*e*P	**P**	**15 10 35.6 +0.2**
	comp=Z,88nm,1.1s,mb5.6					
SKAG				LR	LR	
	comp=Z,14µm,23.0s,MS6.2					
MLR	**Muntele Rosu**	**78.72**	**314**	⇑P	**P**	**15 10 37.2 +1.4**
MLR				P	pP	15 10 41.3 -0.3
NSS	**Namsos**	**79.02**	**335**	*e*P	**P**	**15 10 38.4 +1.4**
NSS				AMb	AMB	15 10 43.4
	comp=Z,49nm,3.4s					
NSS				*e*S	S	15 20 35.8 +0.9
NSS				*e*SS	SS	15 25 44.0 +4.3
NSS				AMS	AMS	15 51 28.6
	comp=Z,30µm,13.0s,MS6.8					
NSS	**Namsos**	**79.02**	**335**	*e*P	**P**	**15 10 38.4 +1.4**
	comp=Z,49nm,3.3s					
NSS				LR	LR	
	comp=Z,30µm,13.0s,MS6.8					
URZ	**Urewera**	**79.04**	**138**	*e*P	**P**	**15 10 36.1 -1.4**
RPZ	**Rata Peaks**	**79.11**	**146**	*e*P	**P**	**15 10 36.6 -1.1**
	comp=Z,83nm,1.0s,mb5.6					
JMB	**Yambol**	**79.25**	**311**	*e*P	**P**	**15 10 42.4 +3.6**
VOIR		**79.34**	**315**	⇓P	**P**	**15 10 41.3 +2.2**
VOIR				P	pP	15 10 44.8 -0.2
DAG	**Danmarks Havn**	**79.38**	**351**	⇑*i*P	**P**	**15 10 37.9 -1.0**
DAG				pmax	pmax	
	comp=Z,6.0nm,0.8s,mb4.6					
DAG				MLR	MLR	
	comp=N,10µm,18.0s,MS6.3					
DAG				MLR	MLR	
	comp=E,8µm,18.0s,MS6.3					
DAG				MLR	MLR	
	comp=Z,22µm,18.0s,MS6.5					
DAG	**Danmarks Havn**	**79.38**	**351**	⇑*i*P	**P**	**15 10 37.9 -1.0**
	comp=Z,6.0nm,0.8s,mb4.6					
DAG				LR	LR	
	comp=Z,22µm,18.0s,MS6.5					
DAG	**Danmarks Havn**	**79.38**	**351**	⇑*i*P	**P**	**15 10 37.9 -1.0**
	comp=Z,6.0nm,0.8s,mb4.6					
DAG						
	comp=Z,22µm,18.0s					
KWP	**Kalwaria Pacla**	**79.43**	**319**	*e*P	**P**	**15 10 40.9 +1.4**
KWP				*e*S	S	15 20 39.6 -0.2
KWP				LMZ		15 48 00.2
	comp=Z,28µm,24.1s					
KWP	**Kalwaria Pacla**	**79.43**	**319**	*e*P	**P**	**15 10 39.5 -0.1**
KWP				pmax	pmax	
	comp=Z,349nm,1.6s,mb6.0					
KWP				MLR	MLR	
	comp=Z,27µm,20.0s,MS6.6					
KWP	**Kalwaria Pacla**	**79.43**	**319**	*e*P	**P**	**15 10 39.5 -0.1**
	comp=Z,349nm,1.6s,mb6.0					
KWP				LR	LR	
	comp=Z,27µm,20.0s,MS6.6					
SZH	**Strazhica**	**79.44**	**312**	*e*P	**P**	**15 10 43.3 +3.5**
SNZO	**South Karori**	**79.52**	**142**	PFAKE		15 10 50.0 +10
SNZO				LR	LR	
	comp=Z,8µm,22.0s,MS6.0					
SIT	**Sitka**	**79.63**	**33**	*e*P	**P**	**15 10 40.9 +0.4**
SIT				pmax	pmax	
	comp

UZH	**Uzhgorod**	**80.03 318**	*e*P	**P**	**15 10 43.0 +0.1**	
UZH			*e*S	S	15 20 48.0 +1.8	
UZH			MLR	MLR		
	comp=Z,10µm,18.0s,MS6.2					
KDZ	**Kurdzhali**	**80.34 311**	*e*P	**P**	**15 10 46.0 +1.3**	
STHS	**Stebnicka Huta**	**80.40 319**	*e*P	**P**	**15 10 44.8 0.0**	
STHS			*e*		15 10 52.2	
STHS			pmax	pmax		
	comp=Z,14nm,1.5s,mb4.7					
STHS	**Stebnicka Huta**	**80.40 319**	*e*P	**P**	**15 10 44.8 0.0**	
STHS			*e*		15 10 52.2	
STHS	**Stebnicka Huta**	**80.40 319**	*e*P	**P**	**15 10 44.8 0.0**	
STHS			*e*pP	pP	15 10 52.2 +1.5	
DRGR		**80.41 316**	⇑P	**P**	**15 10 47.5 +2.5**	
DRGR			P	pP	15 10 52.0 +1.2	
CRVS	**Cervenica-Dubn**	**80.45 319**	*e*P	**P**	**15 10 46.0 +0.9**	
	comp=Z,44nm,1.4s,mb5.2					
CRVS			*e*S	S	15 20 50.4 -0.2	
CRVS			*e*SS	SS	15 26 13.9 +12	
CRVS			LR	LR		
	comp=Z,15µm,23.1s,MS6.3					
CRVS	**Cervenica-Dubn**	**80.45 319**	*e*P	**P**	**15 10 46.0 +0.9**	
DEV	**Deva**	**80.60 316**	⇑P	**P**	**15 10 49.6 +3.6**	
GZR	**Gura Zlata**	**80.86 315**	⇓P	**P**	**15 10 51.9 +4.5**	
GZR			P		15 10 53.4	
NB2	**NORSAR Subarra**	**80.90 332**	P	**P**	**15 10 46.6 -0.7**	
	comp=Z,35nm,1.1s,mb5.2,baz=62,slow=5.3					
NOA	**NORSAR Array B**	**80.90 332**	P	**P**	**15 10 46.7 -0.6**	
	comp=Z,2.0nm,0.7s,mb4.2,baz=63,slow=5.3,SNR=8.1					
NOA			S	S	15 20 57.0 +2.2	
	comp=Z,0.3nm,0.7s,baz=237,slow=23,SNR=2.3					
NOA			LR	LR	15 49 51.5	
	comp=Z,27µm,20.8s,MS6.6,baz=60,slow=38					
PGB	**Panagyurishte**	**80.91 312**	*e*P	**P**	**15 10 49.0 +1.3**	
NIE	**Niedzica**	**80.96 319**	*e*P	**P**	**15 10 49.5 +1.7**	
OJC	**Ojcow**	**80.97 320**	*e*P	**P**	**15 10 45.2 -2.7**	
OJC			*e*	pP	15 10 50.4 -3.3	
OJC			*e*S	S	15 20 53.7 -2.4	
OJC			*e*		15 21 03.3	
NAO01	**NORSAR Array S**	**81.13 332**	*e*P	**P**	**15 10 51.2 +2.7**	
	comp=Z,28nm,1.2s,mb5.1					
NAO01			LR	LR		
	comp=Z,35µm,20.0s,MS6.7					
KECS	**Kecovo**	**81.20 319**	*e*P	**P**	**15 10 51.1 +1.9**	
KECS			pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6					
KECS	**Kecovo**	**81.20 319**	*e*P	**P**	**15 10 51.1 +1.9**	
	comp=Z,9.8nm,1.2s,mb4.6					
KECS			*e*PP	PP	15 13 56.8 +2.6	
KECS	**Kecovo**	**81.20 319**	*e*P	**P**	**15 10 51.1 +1.9**	
KECS			*e*PP	PP	15 13 56.8 +2.6	
GKP	**Gorka Klasztor**	**81.26 324**	*e*P	**P**	**15 10 50.0 +0.7**	
GKP			*e*S	S	15 21 03.3 +4.4	
GKP			LMZ		15 52 06.3	
	comp=Z,42µm,18.7s					
GKP	**Gorka Klasztor**	**81.26 324**	*e*P	**P**	**15 10 50.0 +0.6**	
GKP			*e*S	S	15 21 03.3 +4.4	
XMAS	**Kiritimati**	**81.31 91**	PFAKE		15 11 00.0 +10	
XMAS			LR	LR		
	comp=Z,9µm,21.0s,MS6.1					
CRAG	**Craig**	**81.40 34**	*e*P	**P**	**15 10 50.6 +0.6**	
	comp=Z,197nm,1.5s,mb5.8					
CRAG			LR	LR		
	comp=Z,8µm,19.0s,MS6.1					
BZS	**Buzias**	**81.54 316**	⇓P	**P**	**15 10 53.9 +2.9**	
MMB	**Musomiste**	**81.55 311**	*e*P	**P**	**15 10 51.0 -0.1**	
VTS	**Vitosha**	**81.56 312**	⇑P	**P**	**15 10 51.4 +0.2**	
VTS	**Vitosha**	**81.56 312**	*e*P	**P**	**15 10 52.0 +0.8**	
OSL	**Oslo**	**81.62 332**	*e*	**P**	**15 10 58.6 +7.4**	
DLBC	**Dease Lake**	**81.64 30**	P	**P**	**15 10 51.3 0.0**	
	comp=Z,8.6nm,0.9s,mb4.7,baz=281,slow=4.5,SNR=15					
DLBC			S	S	15 21 06.3 +3.7	
	comp=Z,0.6nm,0.4s,baz=167,slow=19,SNR=2.2					
DLBC	**Dease Lake**	**81.64 30**	*e*P	**P**	**15 10 51.7 +0.4**	
MOL	**Molde**	**81.69 335**	*e*P	**P**	**15 10 56.9 +5.4**	
MOL			*e*S	S	15 21 02.2 -0.8	
MOL			*e*SS	SS	15 26 22.5 +2.8	
MOL			AMS	AMS	15 50 21.9	
	comp=Z,36µm,22.3s,MS6.7					
RES	**Resolute Bay**	**81.70 9**	P	**P**	**15 10 51.2 -0.1**	
RES			pmax	pmax		
	comp=Z,155nm,1.3s,mb5.8					
RES	**Resolute Bay**	**81.70 9**	P	**P**	**15 10 51.2 -0.1**	
	comp=Z,155nm,1.3s,mb5.8					
BSD	**Bornholm Skovb**	**81.75 326**	⇓*i*P	**P**	**15 10 52.1 +0.2**	
BSD			*i* S	S	15 21 03.3 -0.6	
BSD			pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0					
BSD			MLR	MLR		
	comp=Z,25µm,18.0s,MS6.6					
BSD	**Bornholm Skovb**	**81.75 326**	⇓*i*P	**P**	**15 10 52.1 +0.2**	
	comp=Z,20nm,1.0s,mb5.0					
BSD			*i* S	S	15 21 03.3 -0.6	
BSD	**Bornholm Skovb**	**81.75 326**	⇓*i*P	**P**	**15 10 52.1 +0.2**	
	comp=Z,20nm,1.0s,mb5.0					
BSD	**Bornholm Skovb**	**81.75 326**	*i* S	S	15 21 03.3 -0.6	
BSD						
	comp=Z,25µm,18.0s					
JMIC	**Jan Mayen**	**81.77 345**	*e*P	**P**	**15 10 56.4 +4.7**	
JMIC			AMb	AMB	15 11 00.5	
	comp=Z,106nm,3.9s					
JMIC			*e*SKS		15 21 09.1	
JMIC			AMS	AMS	15 50 06.0	
	comp=Z,27µm,25.3s,MS6.5					
JMIC	**Jan Mayen**	**81.77 345**	*e*P	**P**	**15 10 56.4 +4.7**	
	comp=Z,106nm,3.9s					
JMIC			LR	LR		
	comp=Z,27µm,25.3s,MS6.5					
PSZ	**Piszkesteto**	**81.78 318**	P	**P**	**15 10 53.3 +1.1**	
PSZ				pP	15 10 59.6 +1.5	
PSZ			pmax	pmax		
	comp=Z,49nm,1.4s,mb5.2					
PSZ			MLR	MLR		
	comp=Z,32µm,22.0s,MS6.6					
PSZ	**Piszkesteto**	**81.78 318**	P	**P**	**15 10 53.2 +1.0**	
	comp=Z,48nm,1.4s,mb5.2					
PSZ			P	pP	15 10 59.6 +1.6	
PSZ			LR	LR		
	comp=Z,32µm,22.0s,MS6.6					
KKB	**Krupnik**	**81.90 312**	*e*P	**P**	**15 10 53.7 +0.7**	
RAC	**Raciborz**	**81.98 321**	*e*P	**P**	**15 10 53.2 0.0**	
RAC			*e*	pP	15 10 59.0 -0.1	
RAC			*e*S	S	15 21 12.1 +5.6	
RAC			MLR	MLR		
	comp=N,15µm,16.0s,MS6.7					
RAC			MLR	MLR		
	comp=Z,13µm,20.0s,MS6.3					
RAC			MLR	MLR		
	comp=E,22µm,17.0s,MS6.7					
OKC	**Ostrava-Krasne**	**82.10 320**	*e*P	**P**	**15 10 54.7 +0.8**	
OKC			*e*	pP	15 10 59.9 +0.2	
OKC			*e*		15 21 10.3	
OKC			MLR	MLR		
	comp=Z,18µm,16.3s,MS6.5					
OKC	**Ostrava-Krasne**	**82.10 320**	*e*P	**P**	**15 10 54.7 +0.8**	
OKC			*e*	pP	15 10 59.9 +0.2	
OKC			*e*SKS		15 21 10.3	
OKC	**Ostrava-Krasne**	**82.10 320**	*e*P	**P**	**15 10 54.7 +0.8**	
OKC			*e*pP	pP	15 10 59.9 +0.2	
OKC			*e*S	S	15 21 10.3 +2.5	
OKC			AMS	AMS	15 55 00.0	
	comp=Z,18µm,16.3s					
VYHS	**Vyhne**	**82.22 319**	*e*P	**P**	**15 10 55.5 +1.0**	
	comp=Z,33nm,1.6s,mb5.0					
VYHS			*e*S	S	15 21 08.5 -0.5	
VYHS			*e*SS	SS	15 26 31.6 +3.3	
VYHS			LR	LR		
	comp=Z,18µm,19.4s,MS6.5					
VYHS	**Vyhne**	**82.22 319**	*e*P	**P**	**15 10 55.5 +1.0**	
KONO	**Kongsberg**	**82.26 332**	*e*P	**P**	**15 10 56.7 +2.2**	
KONO			*e*S	S	15 21 08.2 -0.8	
KONO			*e*SS	SS	15 26 29.1 +0.8	
KONO			AMS	AMS	15 49 29.2	
	comp=Z,33µm,20.8s,MS6.7					
KOLL	**Kolacno**	**82.45 319**	*e*P	**P**	**15 10 57.7 +2.0**	
KOLL	**Kolacno**	**82.45 319**	*e*P	**P**	**15 10 57.7 +2.0**	
VAY	**Valandovo**	**82.46 311**	*i* P	**P**	**15 10 55.2 -0.7**	
MORC	**Moravsky Berou**	**82.49 321**	*e*P	**P**	**15 10 54.5 -1.4**	
MORC					15 11 02.4	
MORC			pmax	pmax		
	comp=Z,46nm,1.5s,mb5.2					
MORC	**Moravsky Berou**	**82.49 321**	*e*P	**P**	**15 10 54.5 -1.4**	
	comp=Z,46nm,1.5s,mb5.2					
MORC			P		15 11 02.4	
BUD	**Budapest**	**82.49 318**	⇑PcP	PcP	15 10 57.1 -4.0	
ABPO	**Ambohimpanom**	**82.55 246**	*e*P	**P**	**15 10 56.1 -0.6**	
ABPO			pmax	pmax		
	comp=Z,38nm,1.0s,mb5.4					
ABPO			MLR	MLR		
	comp=Z,7µm,20.0s,MS6.0					
ABPO	**Ambohimpanom**	**82.55 246**	*e*P	**P**	**15 10 56.1 -0.6**	
	comp=Z,38nm,1.0s,mb5.4					
ABPO			LR	LR		
	comp=Z,7µm,20.0s,MS6.0					
KSP	**Ksiaz**	**82.78 322**	*e*P	**P**	**15 10 59.0 +1.6**	
KSP			*e*pP	pP	15 11 02.3 -0.9	
KSP			*e*S	S	15 21 16.1 +1.4	
KSP			LMZ		15 52 56.9	
	comp=Z,60µm,19.9s					
KSP	**Ksiaz**	**82.78 322**	*e*P	**P**	**15 10 58.0 +0.6**	
KSP			*e*		15 14 04.0	
KSP			*e*S	S	15 21 13.5 -1.2	
KSP			*e*SS	SS	15 26 37.0 +0.5	
DPC	**Dobruska-Polom**	**82.97 321**	*e*P	**P**	**15 10 59.9 +1.5**	
DPC			*e*		15 14 13.9	
DPC			*e*		15 21 19.6	
DPC			MLR	MLR		
	comp=Z,20µm,18.2s,MS6.5					
DPC	**Dobruska-Polom**	**82.97 321**	*e*P	**P**	**15 10 59.9 +1.5**	
DPC			*e*PP	PP	15 14 13.9 +5.3	
DPC			*e*SKS		15 21 19.6	
DPC			LR	LR		
	comp=Z,20µm,18.2s,MS6.5					
DPC	**Dobruska-Polom**	**82.97 321**	*e*P	**P**	**15 10 59.9 +1.5**	
DPC			*e*PP	PP	15 14 13.9 +5.3	
DPC			*e*S	S	15 21 19.6 +3.0	
DPC			AMS	AMS	15 48 00.0	
	comp=Z,20µm,18.2s					
SKO	**Skopje**	**83.00 312**	*i* P	**P**	**15 11 03.8 +5.0**	
UPC	**Upice**	**83.08 322**	*e*P	**P**	**15 11 01.5 +2.5**	
FOO	**Floro**	**83.20 334**	*e*P	**P**	**15 11 02.8 +3.5**	
FOO			*e*S	S	15 21 21.9 +3.3	
FOO			*e*SS	SS	15 26 56.3 +14	
FOO			AMS	AMS	15 53 30.8	
	comp=Z,35µm,15.1s,MS6.9					
PKSM	**Moragy**	**83.23 317**	⇓P	**P**	**15 11 00.7 +0.9**	
VRAC	**Vranov**	**83.24 320**	⇓P	**P**	**15 11 01.5 +1.7**	
KRUS	**Krusevo**	**83.36 312**	*i* P	**P**	**15 11 03.6 +3.0**	
ZST	**Bratislava**	**83.39 319**	*e*P	**P**	**15 11 02.4 +1.8**	
	comp=Z,212nm,3.1s					
ZST			*e*S	S	15 21 23.2 +2.2	
ZST			*e*SS	SS	15 27 09.3 +24	
ZST			LR	LR		
	comp=Z,7µm,18.0s,MS6.1					
ZST	**Bratislava**	**83.39 319**	*e*P	**P**	**15 11 02.4 +1.8**	
PAF	**Port-aux-Franc**	**83.42 211**	PFAKE		15 11 10.0 +9.5	
PAF			LR	LR		
	comp=Z,15µm,22.0s,MS6.3					
BER	**Bergen**	**83.73 333**	*e*P	**P**	**15 11 03.9 +1.8**	
BER			*e*SKS		15 21 23.6	
BER			*e*SS	SS	15 26 55.8 +5.8	
BER			AMS	AMS	15 52 09.7	
	comp=Z,33µm,18.8s,MS6.7					
OHR	**Ohrid**	**83.78 312**	*i* P	**P**	**15 11 03.2 +0.5**	
PVCC	**Panska Ves**	**83.91 322**	*e*P	**P**	**15 11 03.8 +0.6**	
PVCC			*e*	pP	15 11 09.3 +0.2	
PVCC			*e*		15 21 28.3	
PVCC			MLR	MLR		
	comp=Z,29µm,17.4s,MS6.7					
PVCC	**Panska Ves**	**83.91 322**	*e*P	**P**	**15 11 03.8 +0.6**	
PVCC			*e*	pP	15 11 09.3 +0.2	
PVCC			*e*SKS		15 21 28.3	
PVCC			LR	LR		
	comp=Z,29µm,17.4s,MS6.7					
PVCC	**Panska Ves**	**83.91 322**	*e*P	**P**	**15 11 03.8 +0.6**	
PVCC			*e*pP	pP	15 11 09.3 +0.2	
PVCC			*e*SKS		15 21 28.3	
PVCC			AMS	AMS	15 53 20.0	
	comp=Z,29µm,17.4s					
BRG	**Berggiesshubel**	**84.11 323**	*e*P	**P**	**15 11 04.8 +0.5**	
	comp=Z,241nm,2.3s,mb5.9					
BRG			*e*S	S	15 21 32.5 +4.3	
BRG	**Berggiesshubel**	**84.11 323**	*e*P	**P**	**15 11 04.9 +0.6**	
	comp=Z,18nm,1.5s,mb5.0					
BRG			*i*	pP	15 11 09.1 -1.0	
	comp=Z,85nm,1.8s					
BRG			*i*		15 11 18.1	
	comp=Z,31nm,1.2s					
BRG			*i*		15 11 29.7	
	comp=Z,130nm,1.9s					
BRG			PP	PP	15 14 19.0 +1.0	
BRG			S	S	15 21 31.0 +2.8	
BRG			*e*PKKP	PKKPbc	15 29 18.1 -0.8	
	comp=Z,8.2nm,1.6s					
BRG						
	comp=N,17µm,17.7s					
BRG						
	comp=E,27µm,21.8s					
BRG						
	comp=Z,23µm,16.2s					
PRU	**Pruhonice**	**84.16 322**	*e*P	**P**	**15 11 06.2 +1.7**	
PRU			*e*		15 14 23.3	
PRU			*e*		15 21 30.9	
PRU			MLR	MLR		
	comp=Z,25µm,17.8s,MS6.6					
PRU	**Pruhonice**	**84.16 322**	*e*P	**P**	**15 11 06.2 +1.7**	
PRU			*e*	pP	15 11 10.7 +0.3	
PRU			*e*PP	PP	15 14 23.3 +4.9	
PRU			*e*SKS		15 21 30.9	
PRU			LR	LR		
	comp=Z,25µm,17.8s,MS6.6					
PRU	**Pruhonice**	**84.16 322**	*e*P	**P**	**15 11 06.2 +1.7**	
PRU			*e*x	x	15 11 10.7	
PRU			*e*PP	PP	15 14 23.3 +4.9	
PRU			*e*SKS		15 21 30.9	
PRU			AMS	AMS	15 53 20.0	
	comp=Z,25µm,17.8s					
PRA	**Prague**	**84.19 322**	P	**P**	**15 11 06.0 +1.4**	
PRA			PP	PP	15 14 22.0 +3.4	
PRA			S	S	15 21 30.0 +1.1	
PRA			AMS	AMS	15 48 20.0	
CONA	**Conrad Observa**	**84.26 319**	⇓*i*P	**P**	**15 11 04.4 -0.6**	
	comp=Z,47nm,1.2s,mb5.5					
TIR	**Tirane**	**84.33 312**	P	**P**	**15 11 06.8 +1.2**	
TIR			pmax	pmax		
	comp=Z,113nm,1.1s,mb5.9					
TIR			MLR	MLR		
	comp=Z,17µm,20.0s,MS6.4					
TIR	**Tirane**	**84.33 312**	P	**P**	**15 11 06.8 +1.2**	
	comp=Z,114nm,1.1s,mb5.9					
TIR			LR	LR		
	comp=Z,17µm,20.0s,MS6.4					
CLL	**Collm**	**84.45 323**	*e*P	**P**	**15 11 06.2 +0.2**	
	comp=Z,75nm,1.4s,mb5.6					
CLL			*e*S	S	15 21 35.0 +3.5	
CLL	**Collm**	**84.45 323**	*e*P	**P**	**15 11 06.0 0.0**	
CLL			*i*	pP	15 11 10.5 -1.3	
CLL			*i*		15 11 21.7	
CLL			*e*S	S	15 21 35.0 +3.5	
CLL			LR	LR		
	comp=Z,37µm,18.8s,MS6.8					
CLL	**Collm**	**84.45 323**	*e*P	**P**	**15 11 06.0 0.0**	
CLL			*i* pP	pP	15 11 10.5 -1.3	
	comp=Z,22nm,1.0s					
CLL			*i*		15 11 21.7	
	comp=Z,344nm,2.4s					
CLL			*i*		15 11 30.4	
CLL			*e*PP	PP	15 14 25.0 +4.3	
CLL			*e*		15 14 37.0	
CLL			*e*S	S	15 21 35.0 +3.5	
CLL			*e*SS	SS	15 27 00.0 -1.1	
CLL			*e*		15 28 06.0	
CLL			*e*SSSS		15 33 30.0	
CLL			LmH		15 47 00.0	
	comp=N,58µm,20.7s					
CLL			LmH		15 47 00.0	
	comp=E,45µm,20.8s					
CLL			LmV		15 54 00.0	
	comp=N,24µm,18.2s					
CLL			LmV		15 54 00.0	
	comp=E,39µm,20.3s					
CLL			LmV		15 54 00.0	
	comp=Z,37µm,18.8s					
KMBO	**Kilima Mbogo**	**84.65 267**	P	**P**	**15 11 06.9 -0.8**	
	comp=Z,9.7nm,0.3s,mb5.4,baz=180,slow=20,SNR=2.8					
KMBO			LR	LR	15 47 48.9	
	comp=Z,7µm,20.7s,MS6.0,baz=87,slow=35					
KMBO	**Kilima Mbogo**	**84.65 267**	P	**P**	**15 11 06.9 -0.8**	
KMBO			pmax	pmax		
	comp=Z,10.0nm,0.3s					
KMBO			MLR	MLR		
	comp=Z,7µm,20.7s					
KMBO	**Kilima Mbogo**	**84.65 267**	*e*P	**P**	**15 11 07.8 +0.2**	
	comp=Z,126nm,1.8s,mb5.7					
KMBO			LR	LR		
	comp=Z,7µm,20.0s,MS6.1					
KMBO	**Kilima Mbogo**	**84.65 267**	P	**P**	**15 11 09.3 +1.6**	
	SNR=14					
BSEG	**Bad Segeberg**	**84.67 326**	*e*S	S	15 21 38.6 +5.0	
ARSA	**Arzberg**	**84.76 319**	⇑*i*P	**P**	**15 11 04.9 -2.7**	
	comp=Z,28nm,1.4s,mb5.2					
KHC	**Kasperske Hory**	**85.10 321**	*e*P	**P**	**15 11 10.1 +0.8**	
KHC			*e*		15 21 33.7	
KHC			MLR	MLR		
	comp=Z,24µm,17.9s,MS6.6					
KHC	**Kasperske Hory**	**85.10 321**	*e*P	**P**	**15 11 10.1 +0.8**	
KHC			*e*	pP	15 11 14.9 -0.3	
KHC			*e*		15 11 21.5	
KHC			*e*PP	PP	15 14 18.4 -7.7	
KHC			*e*SKS		15 21 33.7	
KHC			LR	LR		
	comp=Z,24µm,17.9s,MS6.6					
KHC	**Kasperske Hory**	**85.10 321**	*e*P	**P**	**15 11 10.1 +0.8**	
KHC			*e*pP	pP	15 11 14.9 -0.3	
KHC			*e*x	x	15 11 21.5	
KHC			*e*PP	PP	15 14 18.4 -7.7	
KHC			*e*SKS		15 21 33.7	
KHC			AMS	AMS	15 52 50.0	
	comp=Z,24µm,17.9s					
GROS	**Grobnik**	**85.11 318**	*e*P	**P**	**15 11 06.7 -2.7**	
GROS			*e*PP	PP	15 14 31.1 +4.9	
GROS			*e*		15 15 42.4	
GROS			*e*		15 16 41.3	
GROS			*e*S	S	15 21 29.0 -9.3	
GROS			*e*		15 33 14.8	
GEC2	**GERESS Array S**	**85.16 321**	*e*P	**P**	**15 11 10.1 +0.5**	
	comp=Z,76nm,1.8s,mb5.5					
GEC2			*e*S	S	15 21 43.8 +5.2	
TANN	**Tannenbergstha**	**85.16 323**	*e*P	**P**	**15 11 09.9 +0.3**	
	comp=Z,176nm,2.3s,mb5.8					
TANN			*e*S	S	15 21 40.5 +1.9	
NKC	**Novy Kostel**	**85.25 322**	*e*P	**P**	**15 11 11.3 +1.3**	
NKC			*e*		15 21 37.8	
NKC			MLR	MLR		
	comp=Z,28µm,18.8s,MS6.7					
NKC	**Novy Kostel**	**85.25 322**	*e*P	**P**	**15 11 11.3 +1.3**	
NKC			*e*SKS		15 21 37.8	
NKC	**Novy Kostel**	**85.25 322**	*e*P	**P**	**15 11 11.3 +1.3**	
NKC			*e*SKS		15 21 37.8	
NKC			AMS	AMS	15 54 50.0	
	comp=Z,28µm,18.8s					
MOA	**Molln**	**85.27 320**	⇑*i*PcP	PcP	15 11 11.0 -2.3	
	comp=Z,69nm,1.4s					
SOKA	**Soboth**	**85.31 318**	⇑*i*PcP	PcP	15 11 11.8 -1.7	
	comp=Z,35nm,1.6s					
NRDL	**Niedersach Rie**	**85.48 325**	*e*P	**P**	**15 11 11.0 -0.1**	
	comp=Z,122nm,1.5s,mb5.8					
NRDL			*e*S	S	15 21 45.0 +3.3	
WET	**Wettzell**	**85.51 321**	*e*P	**P**	**15 11 12.1 +0.8**	
	comp=Z,177nm,2.5s,mb5.8					
WET			*e*S	S	15 21 47.7 +5.6	
MOX	**Moxa**	**85.53 323**	*e*P	**P**	**15 11 17.7 +6.3**	
	comp=Z,160nm,2.3s,mb5.8					
MOX			*e*		15 14 39.0	
MOX						
	comp=Z,28µm,19.0s					
MOX	**Moxa**	**85.53 323**	*e*P	**P**	**15 11 11.9 +0.5**	
	comp=Z,95nm,1.8s,mb5.7					
MOX			*e*S	S	15 21 46.6 +4.3	
MOX	**Moxa**	**85.53 323**	*e*P	**P**	**15 11 17.7 +6.3**	
MOX			*e*		15 14 39.0	
MOX			pmax	pmax		
	comp=Z,160nm,2.3s,mb5.8					
MOX			MLR	MLR		
	comp=Z,28µm,19.0s,MS6.7					
MOX	**Moxa**	**85.53 323**	*e*P	**P**	**15 11 17.7 +6.3**	
	comp=Z,160nm,2.3s,mb5.8					
MOX			*e*		15 14 39.0	
MOX			LR	LR		
	comp=Z,28µm,19.0s,MS6.7					
SUMG	**Summit**	**85.54 354**	*e*P	**P**	**15 11 12.3 +1.3**	
	comp=Z,55nm,0.8s,mb5.8					
CLZ	**Clausthal**	**85.65 324**	*e*P	**P**	**15 11 12.8 +0.8**	
	comp=Z,135nm,1.6s,mb5.9					
CLZ			*e*S	S	15 21 47.0 +3.6	
BOJS	**Bojanci**	**85.68 317**	*e*P	**P**	**15 11 11.3 -0.9**	
BOJS			*e*S	S	15 21 33.6 -10	
BOJS			*e*		15 27 25.3	
YKA	**Yellowknife Ar**	**85.83 23**	P	**P**	**15 11 11.1 -1.5**	
	comp=Z,7.8nm,0.8s,mb5.0,baz=313,slow=4.6,SNR=16					
YKA	**Yellowknife Ar**	**85.83 23**	P	**P**	**15 11 11.1 -1.5**	
YKA			pmax	pmax		
	comp=Z,8.0nm,0.8s					
LJU	**Ljubljana**	**85.90 318**	*e*P	**P**	**15 11 13.8 +0.4**	
RJOB	**Jochberg**	**86.20 320**	*e*P	**P**	**15 11 15.2 +0.4**	
	comp=Z,60nm,1.8s,mb5.5					
RJOB			*e*S	S	15 21 52.4 +3.5	
GRF	**Grafenberg Arr**	**86.21 322**	*e*P	**P**	**15 11 15.5 +0.7**	
	comp=Z,309nm,2.4s,mb6.1					
GRF			*e*PP	PP	15 14 30.7 -4.3	
GRF			*e*S	S	15 21 47.6 -1.3	
GRF			*e*L		15 54 28.9	
	comp=Z,32µm,20.4s					
GRF	**Grafenberg Arr**	**86.21 322**	*e*P	**P**	**15 11 15.5 +0.7**	
GRF			*e*		15 14 30.7	
GRF			*e*S	S	15 21 47.6 -1.3	
GRF			pmax	pmax		
	comp=Z,309nm,2.4s,mb6.1					
GRF			MLR	MLR		
	comp=Z,32µm,20.4s,MS6.7					
VOY	**Vojsko**	**86.30 318**	*e*	**P**	**15 11 15.3 0.0**	
VOY			*e*	pP	15 11 21.0 -0.2	
VOY			*e*		15 11 28.2	
VOY			*e*		15 11 33.8	
UBBA	**Unterbreizbach**	**86.35 324**	*e*P	**P**	**15 11 15.9 +0.4**	
	comp=Z,82nm,1.8s,mb5.7					
UBBA			*e*S	S	15 21 46.8 -3.5	
PTCC	**Patocco-Chiusa**	**86.47 319**	P	**P**	**15 11 20.5 +4.4**	
TRI	**Trieste**	**86.53 318**	PFAKE		15 11 30.0 +14	
TRI			LR	LR		
	comp=Z,15µm,22.0s,MS6.3					
LRW	**Lerwick**	**86.54 335**	AMS	AMS	15 56 12.2	
	comp=Z,29µm,14.9s,MS6.8					
FVI	**Forni Avoltri**	**86.73 319**	P	**P**	**15 11 21.7 +4.3**	
IBBN	**Ibbenburen**	**86.82 326**	*e*P	**P**	**15 11 18.0 +0.3**	
	comp=Z,84nm,1.2s,mb5.8					
FUR	**Furstenfeldbru**	**86.90 321**	*e*P	**P**	**15 11 19.1 +0.9**	
	comp=Z,583nm,2.7s,mb6.3					
FUR			*e*S	S	15 22 01.1 +5.4	
WTTA	**Wattenberg**	**87.12 320**	⇑*i*P	**P**	**15 11 17.5 -1.8**	
	comp=Z,42nm,1.5s,mb5.4					
ACER	**Acerenza**	**87.27 313**	P	**P**	**15 11 17.3 -2.8**	
SOFL	**Sornfelli, Far**	**87.43 338**	AMS	AMS	15 53 06.8	
	comp=Z,19µm,20.1s,MS6.5					
WTSB	**Winterswijk**	**87.50 326**	*e*P	PcP	15 11 25.3 +2.3	
	comp=Z,59nm,3.4s					
TNS	**Taunus Mts**	**87.51 324**	*e*P	**P**	**15 11 21.7 +0.6**	
	comp=Z,206nm,2.3s,mb6.0					
TNS			*e*S	S	15 22 08.1 +6.6	
BUG	**Bochum--Univer**	**87.53 325**	*e*P	**P**	**15 11 21.5 +0.3**	
	comp=Z,81nm,1.6s,mb5.7					
BUG			*e*S	S	15 22 06.7 +5.1	
TOD	**Tromm**	**87.62 323**	*e*P	**P**	**15 11 25.7 +4.0**

SOI Samo 88.36 310 P **P 15 11 26.9 +1.5**
SOI pmax pmax
comp=Z,250nm,2.4s,mb6.0
SOI Samo 88.36 310 P **P 15 11 26.9 +1.5**
comp=Z,250nm,2.4s,mb6.0
SPAK Spaichingen-Ko 88.39 322 *e*P **P 15 11 29.6 +4.3**
MURB Monte Urbino 88.44 316 P **P 15 11 28.8 +3.1**
LANF Langenberg 88.50 323 *e*P **P 15 11 30.0 +4.1**
BFO Black Forest 88.54 322 *e*P **P 15 11 26.2 +0.2**
comp=Z,232nm,3.4s
BFO *e*S S 15 22 17.5 +6.1
BFO Black Forest 88.54 322 P **P 15 11 27.7 +1.7**
BFO pmax pmax
comp=Z,13nm,1.3s,mb5.1
BFO MLR MLR
comp=Z,24μm,22.0s,MS6.6
BFO Black Forest 88.54 322 P **P 15 11 27.7 +1.7**
comp=Z,13nm,1.3s,mb5.1
BFO LR LR
comp=Z,24μm,22.0s,MS6.6
RUP Ruppelstein 88.55 324 *e*P **P 15 11 29.6 +3.5**
SFI Santa Sofia 88.57 317 P **P 15 11 30.4 +4.1**
HGN Heimansgroeve 88.60 325 *e*P PcP 15 11 29.7 +1.8
comp=Z,37nm,3.3s
HGN Heimansgroeve 88.60 325 *e*PP PP 15 14 54.5 +0.4
HGN Heimansgroeve 88.60 325 *e*S SKSac 15 21 50.4 -4.3
CRE Caprese Michel 88.64 317 P **P 15 11 28.5 +1.9**
MEM Membach 88.64 325 E PcP 15 11 30.6 +2.5
DRV Dumont d'Urvil 88.65 173 P **P 15 11 25.0 -0.9**
DRV Dumont d'Urvil 88.65 173 PP PP 15 14 58.0 +3.1
DRV S S 15 22 00.0 -11
DRV L 15 35 00.0
BEBN Eben Emael 88.72 325 E 15 11 31.1
MNS Montasola 88.74 315 P **P 15 11 30.1 +3.0**
FELD Feldberg im Sc 88.96 322 *e*P **P 15 11 31.5 +3.5**
WLF Walferdange 89.07 324 P **P 15 11 28.7 +0.2**
comp=Z,28nm,1.8s,mb5.3
WLF Walferdange 89.07 324 *e*P **P 15 11 29.1 +0.6**
comp=Z,33nm,1.1s,mb5.6
WLF Walferdange 89.07 324 *e*P **P 15 11 28.4 -0.1**
WLF pmax pmax
comp=Z,36nm,1.1s,mb5.6
WLF MLR MLR
comp=Z,25μm,20.0s,MS6.6
WLF Walferdange 89.07 324 *e*P **P 15 11 28.4 -0.1**
comp=Z,36nm,1.1s,mb5.6
WLF LR LR
comp=Z,25μm,20.0s,MS6.6
CDF Champ du Feu 89.10 322 *e*P **P 15 11 27.5 -1.2**
comp=Z,104nm,1.6s,mb5.6
CDF Champ du Feu 89.10 322 *e*P **P 15 11 27.5 -1.2**
CDF pmax pmax
comp=Z,52nm,1.6s,mb5.6
CDF Champ du Feu 89.10 322 *e*P **P 15 11 27.5 -1.2**
comp=Z,52nm,1.6s,mb5.6
BCLA Clavier 89.12 325 P **P 15 11 29.2 +0.5**
comp=Z,18nm,2.3s,mb5.0
ECH Echery 89.27 322 *e*P **P 15 11 33.0 +3.5**
ECH MLR MLR
comp=Z,17μm,20.0s,MS6.5
VLC Villacollemand 89.37 318 PFAKE 15 11 40.0 +10
VLC LR LR
comp=Z,17μm,20.0s,MS6.5
BBS Basel-Blauen 89.45 322 *e*P **P 15 11 34.3 +3.9**
MOF Molkenrain 89.47 322 *e*P **P 15 11 33.7 +3.3**
GIVF Givet 89.56 325 *e*P **P 15 11 31.1 +0.3**
comp=Z,91nm,1.5s,mb5.6
GIVF Givet 89.56 325 *e*P **P 15 11 31.1 +0.3**
GIVF pmax pmax
comp=Z,46nm,1.5s,mb5.6
GIVF Givet 89.56 325 *e*P **P 15 11 31.1 +0.3**
comp=Z,46nm,1.5s,mb5.6
SNF Seneffe 89.62 325 P **P 15 11 31.8 +0.7**
comp=Z,14nm,2.4s,mb4.9
HINF Hinteralfeld 89.65 322 *e*P **P 15 11 31.6 +0.3**
comp=Z,83nm,1.8s,mb5.5
HINF Hinteralfeld 89.65 322 *e*P **P 15 11 31.6 +0.3**
HINF pmax pmax
comp=Z,41nm,1.8s,mb5.5
HINF Hinteralfeld 89.65 322 *e*P **P 15 11 31.6 +0.3**
comp=Z,41nm,1.8s,mb5.5
BORG Borgarnes 89.66 345 PFAKE 15 11 40.0 +9.0
BORG LR LR
comp=Z,26μm,20.0s,MS6.7
DOU Dourbes 89.68 325 P **P 15 11 32.0 +0.6**
HAU Haudompre 89.84 322 *e*P **P 15 11 30.4 -1.8**
HAU *e*MLR MLR
comp=Z,25μm,19.2s,MS6.3
HAU Haudompre 89.84 322 *e*P **P 15 11 30.4 -1.8**
HAU LR LR
comp=Z,25μm,19.3s,MS6.7
MIR Mirnyy 89.91 191 *e*P **P 15 11 31.0 -0.8**
MIR *e* 15 15 05.0
MIR *e*S SKSac 15 22 05.0 +3.8
MIR PS PS 15 23 24.0 -7.4
MIR pmax pmax
comp=Z,84nm,1.8s,mb5.8
MIR smax
comp=N,3μm,14.0s
MIR smax
comp=E,1μm,12.0s
MIR MLR MLR
comp=N,2μm,20.0s,MS5.7
MIR MLR MLR
comp=E,2μm,20.0s,MS5.7
MIR MLR MLR
comp=Z,4μm,20.0s,MS5.8
BAIF Baives 89.91 325 *e*P **P 15 11 32.8 +0.4**
comp=Z,33nm,1.2s,mb5.2
BAIF Baives 89.91 325 *e*P **P 15 11 32.8 +0.4**
BAIF pmax pmax
comp=Z,17nm,1.2s,mb5.2
BAIF Baives 89.91 325 *e*P **P 15 11 32.8 +0.4**
comp=Z,17nm,1.2s,mb5.2
THEF They Montfort 89.93 323 *e*P **P 15 11 36.7 +4.1**
EDI Edinburgh 90.01 332 AMS AMS 15 54 17.8
comp=Z,39μm,20.7s,MS6.8
EBL Broad Law 90.04 332 P **P 15 11 38.6 +5.7**
EBL Broad Law 90.04 332 *e*P **P 15 11 38.6 +5.7**
KPL Plockton 90.12 334 AMS AMS 15 53 38.0
comp=Z,20μm,19.1s,MS6.6
EAU Auchinoon 90.17 332 P **P 15 11 39.1 +5.5**
EAU Auchinoon 90.17 332 *e*P **P 15 11 39.1 +5.5**
XAL Allendale 90.25 331 P **P 15 11 39.6 +5.7**
XAL Allendale 90.25 331 *e*P **P 15 11 39.6 +5.7**
MEZF Maizieres J'vi 90.30 323 *e*P **P 15 11 33.0 -1.3**
comp=Z,154nm,1.7s,mb5.8
MEZF Maizieres J'vi 90.30 323 *e*P **P 15 11 33.0 -1.3**
comp=Z,154nm,1.7s,mb6.1
NLWA Neilton Lookou 90.34 38 *e*P **P 15 11 35.6 +1.1**
comp=Z,77nm,1.5s,mb5.8
NLWA LR LR
comp=Z,7μm,21.0s,MS6.0
ESK Eskdalemuir 90.40 332 AMb AMB 15 11 41.0
comp=Z,36nm,1.9s,mb5.4
ESK AMS AMS 15 52 48.7
comp=Z,26μm,24.1s,MS6.6
ESK Eskdalemuir 90.40 332 *e*P **P 15 11 39.0 +4.4**
ESK pmax pmax
comp=Z,21nm,1.2s,mb5.3
ESK MLR MLR
comp=Z,32μm,19.0s,MS6.8
ESK Eskdalemuir 90.40 332 *e*P **P 15 11 39.0 +4.4**
comp=Z,21nm,1.2s,mb5.3
ESK LR LR
comp=Z,32μm,19.0s,MS6.8
ESK Eskdalemuir 90.40 332 AMb AMB 15 11 41.0
comp=Z,36nm,1.9s,mb5.4
ESK AMS AMS 15 52 48.7
comp=Z,26μm,24.1s
WDD Wield Dalam 90.43 309 PFAKE 15 11 40.0 +4.8
WDD LR LR
comp=Z,6μm,22.0s,MS6.0
ECK Cauldkaine Hil 90.45 332 P **P 15 11 39.8 +4.9**
ECK Cauldkaine Hil 90.45 332 *e*P **P 15 11 39.8 +4.9**
MBAR Mbarara 90.54 270 PFAKE 15 11 50.0 +14
MBAR LR LR
comp=Z,613nm,19.0s,MS5.1
PGBU Glenifferbraes 90.64 333 AMS AMS 15 54 43.9
comp=Z,34μm,21.4s,MS6.8
CABF La Chapelle 90.73 321 *e*P **P 15 11 36.4 +0.1**
comp=Z,103nm,1.8s,mb5.6
CABF La Chapelle 90.73 321 *e*P **P 15 11 36.4 +0.1**
CABF pmax pmax
comp=Z,51nm,1.8s,mb5.5
CABF La Chapelle 90.73 321 *e*P **P 15 11 36.4 +0.1**
comp=Z,51nm,1.8s,mb5.6
GNW Green Mountain 90.84 37 *e*P **P 15 11 37.4 +0.6**
comp=Z,37nm,1.6s,mb5.5
LPG La Plagne 90.93 320 *e*P **P 15 11 38.5 +1.2**
comp=Z,91nm,1.3s,mb5.7
LPG La Plagne 90.93 320 *e*P **P 15 11 38.5 +1.2**
LPG pmax pmax
comp=Z,46nm,1.3s,mb5.7
LPG La Plagne 90.93 320 *e*P **P 15 11 38.5 +1.2**
comp=Z,46nm,1.3s,mb5.6
LPL La Plagne 90.93 320 *e*P **P 15 11 38.5 +1.2**
comp=Z,83nm,1.2s,mb5.6
LPL La Plagne 90.93 320 *e*P **P 15 11 38.5 +1.2**
LPL pmax pmax
comp=Z,41nm,1.2s,mb5.6
LPL La Plagne 90.93 320 *e*P **P 15 11 38.5 +1.2**
comp=Z,41nm,1.2s,mb5.6
JCW Jim Creek 91.00 37 *e*P **P 15 11 38.8 +1.3**
comp=Z,161nm,1.4s,mb6.2
PGF Pioggiola 91.05 317 *e*P **P 15 11 37.7 -0.2**
comp=Z,256nm,1.4s,mb6.0
PGF Pioggiola 91.05 317 *e*P **P 15 11 37.7 -0.2**
PGF pmax pmax
comp=Z,128nm,1.4s,mb6.1
PGF Pioggiola 91.05 317 *e*P **P 15 11 37.7 -0.2**
comp=Z,128nm,1.4s,mb6.1
RPW Rockport 91.09 36 *e*P **P 15 11 38.9 +1.0**
comp=Z,7.5nm,0.8s,mb5.1
CWF Charnwood Fore 91.15 329 AMS AMS 15 57 34.5
comp=Z,26μm,17.9s,MS6.7
BNI Bardonecchia 91.21 320 PFAKE 15 11 50.0 +11
BNI LR LR
comp=Z,38μm,19.0s,MS6.9
SAOF Saorge 91.23 319 *e*P **P 15 11 45.6 +6.9**
MBDF Montbardon 91.32 319 *e*P **P 15 11 39.2 +0.1**
comp=Z,22nm,0.9s,mb5.2
MBDF Montbardon 91.32 319 *e*P **P 15 11 39.2 +0.1**
MBDF pmax pmax
comp=Z,11nm,0.9s,mb5.2
MBDF Montbardon 91.32 319 *e*P **P 15 11 39.2 +0.1**
comp=Z,11nm,0.9s,mb5.2
GAL1 Galloway 91.36 332 P **P 15 11 43.7 +4.6**
GAL1 AMb AMB 15 11 55.4
comp=Z,29nm,2.9s,mb5.1
GAL1 AMS AMS 15 55 07.5
comp=Z,33μm,21.5s
GAL1 Galloway 91.36 332 *e*P **P 15 11 43.7 +4.6**
GAL1 AMb AMB 15 11 55.4
comp=Z,29nm,2.9s,mb5.1
GAL1 AMS AMS 15 55 07.5
comp=Z,33μm,21.5s,MS6.8
SBF Sospel 91.36 318 *e*P **P 15 11 38.5 -0.8**
comp=Z,138nm,1.2s,mb5.8
SBF Sospel 91.36 318 *e*P **P 15 11 38.5 -0.8**
SBF pmax pmax
comp=Z,69nm,1.2s,mb5.9
SBF Sospel 91.36 318 *e*P **P 15 11 38.5 -0.8**
comp=Z,69nm,1.2s,mb5.9
LOR Lormes 91.65 323 *e*P **P 15 11 38.8 -1.8**
comp=Z,61nm,1.4s,mb5.5,baz=63
LOR *e*MLR MLR
comp=Z,22μm,22.0s,MS6.3
LOR Lormes 91.65 323 *e*P **P 15 11 38.8 -1.8**
LOR pmax pmax
comp=Z,31nm,1.4s,mb5.5
LOR MLR MLR
comp=Z,22μm,22.0s,MS6.6
LOR Lormes 91.65 323 *e*P **P 15 11 38.8 -1.8**
comp=Z,30nm,1.4s,mb5.4
LOR LR LR
comp=Z,22μm,22.0s,MS6.6
ORIF Oris-en-Rattie 91.76 320 *e*P **P 15 11 41.8 +0.7**
comp=Z,233nm,1.9s,mb5.9
ORIF *e*MLR MLR
comp=Z,33μm,19.5s,MS6.5
ORIF Oris-en-Rattie 91.76 320 *e*P **P 15 11 41.8 +0.7**
ORIF pmax pmax
comp=Z,117nm,1.9s,mb5.9
ORIF Oris-en-Rattie 91.76 320 *e*P **P 15 11 41.8 +0.7**
comp=Z,117nm,1.9s,mb5.9
LON Longmire 91.87 38 *e*P **P 15 11 41.8 +0.2**
LON pmax pmax
comp=Z,18nm,1.1s,mb5.3
LON Longmire 91.87 38 *e*P **P 15 11 41.8 +0.1**
comp=Z,18nm,1.1s,mb5.3
SSF Saint Saulge 91.97 323 *e*P **P 15 11 40.2 -1.9**
comp=Z,39nm,1.3s,mb5.3
SSF Saint Saulge 91.97 323 *e*P **P 15 11 40.2 -1.9**
SSF pmax pmax
comp=Z,20nm,1.3s,mb5.3
SSF Saint Saulge 91.97 323 *e*P **P 15 11 40.2 -1.9**
comp=Z,20nm,1.3s,mb5.3
WOL Wolverton 91.98 328 AMS AMS 15 55 25.5
comp=Z,24μm,18.2s,MS6.7
FRF La Foret Royal 92.01 319 *e*P **P 15 11 40.8 -1.5**
comp=Z,196nm,1.7s,mb5.9
FRF La Foret Royal 92.01 319 *e*P **P 15 11 40.8 -1.5**
FRF pmax pmax
comp=Z,98nm,1.7s,mb5.9
FRF La Foret Royal 92.01 319 *e*P **P 15 11 40.8 -1.5**
comp=Z,98nm,1.7s,mb5.9
SMF Signal de Mont 92.01 322 *e*P **P 15 11 40.6 -1.7**
comp=Z,98nm,1.4s,mb5.7
SMF Signal de Mont 92.01 322 *e*P **P 15 11 40.6 -1.7**
SMF pmax pmax
comp=Z,49nm,1.4s,mb5.6
SMF Signal de Mont 92.01 322 *e*P **P 15 11 40.6 -1.7**
comp=Z,49nm,1.4s,mb5.6
HLM1 Long Mynd 92.03 330 P **P 15 11 46.3 +4.1**
HLM1 Long Mynd 92.03 330 *e*P **P 15 11 46.3 +4.1**
WPM1 Penmaenmawr 92.04 330 P **P 15 11 47.1 +4.8**
WPM1 Penmaenmawr 92.04 330 *e*P **P 15 11 47.1 +4.8**
SWN1 Swindon 92.14 328 AMS AMS 15 56 26.8
comp=Z,19μm,18.9s,MS6.5
COR Corvallis 92.17 40 *e*P **P 15 11 43.0 -0.1**
COR MLR MLR
comp=Z,7μm,21.0s,MS6.1
AVF Avril sur Loir 92.21 323 *e*P **P 15 11 41.4 -1.8**
comp=Z,49nm,1.1s,mb5.5
AVF Avril sur Loir 92.21 323 *e*P **P 15 11 41.4 -1.8**
AVF pmax pmax
comp=Z,24nm,1.1s,mb5.4
AVF Avril sur Loir 92.21 323 *e*P **P 15 11 41.4 -1.8**
comp=Z,24nm,1.1s,mb5.5
LMR La Mourre 92.21 318 *e*P **P 15 11 44.0 +0.7**
comp=Z,107nm,1.3s,mb5.7
LMR La Mourre 92.21 318 *e*P **P 15 11 44.0 +0.7**
LMR pmax pmax
comp=Z,53nm,1.3s,mb5.7
LMR La Mourre 92.21 318 *e*P **P 15 11 44.0 +0.7**
comp=Z,53nm,1.3s,mb5.7
ETW Entiat 92.22 36 *e*P **P 15 11 42.9 -0.3**
comp=Z,54nm,1.2s,mb5.8
WLF1 Llynfaes 92.24 331 P **P 15 11 47.9 +4.7**
WLF1 AMb AMB 15 11 48.6
comp=Z,122nm,3.2s
WLF1 AMS AMS 16 00 24.9
comp=Z,79μm,14.7s
WLF1 Llynfaes 92.24 331 *e*P **P 15 11 47.9 +4.7**
WLF1 AMb AMB 15 11 48.6
comp=Z,122nm,3.2s
WLF1 AMS AMS 16 00 24.9
comp=Z,79μm,14.7s,MS7.3
EDM Edmonton 92.32 29 *e*P **P 15 11 43.6 0.0**
VSL Villasalto 92.32 314 PFAKE 15 11 50.0 +6.1
VSL LR LR
comp=Z,8μm,20.0s,MS6.2
SSB Saint Sauveur 92.36 321 PFAKE 15 11 50.0 +6.1
SSB LR LR
comp=Z,17μm,19.0s,MS6.5
MCH1 Michaelchurch 92.42 329 P **P 15 11 48.5 +4.5**
MCH1 AMb AMB 15 12 03.4
comp=Z,31nm,1.8s,mb5.3
MCH1 AMS AMS 16 00 00.3
comp=Z,26μm,14.5s
MCH1 Michaelchurch 92.42 329 *e*P **P 15 11 48.5 +4.5**
MCH1 AMb AMB 15 12 03.4
comp=Z,31nm,1.8s,mb5.3
MCH1 AMS AMS 16 00 00.3
comp=Z,26μm,14.5s,MS6.8
YRE Yr Eifl 92.46 330 P **P 15 11 48.6 +4.4**
YRE Yr Eifl 92.46 330 *e*P **P 15 11 48.6 +4.4**
HTR Trewern Hill 92.50 329 P **P 15 11 49.3 +4.9**
HTR Trewern Hill 92.50 329 *e*P **P 15 11 49.3 +4.9**
VIVF Saint-Julien-l 92.51 320 *e*P **P 15 11 45.1 +0.5**
comp=Z,58nm,1.5s,mb5.5
VIVF Saint-Julien-l 92.51 320 *e*P **P 15 11 45.1 +0.5**
VIVF pmax pmax
comp=Z,29nm,1.5s,mb5.5
VIVF Saint-Julien-l 92.51 320 *e*P **P 15 11 45.1 +0.5**
comp=Z,29nm,1.5s,mb5.5
PLDF La Plantade 92.51 322 *e*P **P 15 11 50.3 +5.7**
BGF Bois d'Agland 92.63 323 *e*P **P 15 11 44.4 -0.7**
comp=Z,59nm,1.5s,mb5.5
BGF Bois d'Agland 92.63 323 *e*P **P 15 11 44.4 -0.7**
BGF pmax pmax
comp=Z,30nm,1.5s,mb5.5
BGF Bois d'Agland 92.63 323 *e*P **P 15 11 44.4 -0.7**
comp=Z,30nm,1.5s,mb5.5
AGO Saint Agoulin 92.75 322 *e*P **P 15 11 50.0 +4.3**
PYM Petit Puy Mans 92.99 322 *e*P **P 15 11 50.8 +4.0**
TCF Toulx Ste Croi 93.14 323 *e*P **P 15 11 45.9 -1.6**
comp=Z,50nm,1.3s,mb5.5
TCF Toulx Ste Croi 93.14 323 *e*P **P 15 11 45.9 -1.6**
TCF pmax pmax
comp=Z,25nm,1.3s,mb5.5
TCF Toulx Ste Croi 93.14 323 *e*P **P 15 11 45.9 -1.6**
comp=Z,25nm,1.3s,mb5.5
OD2 Odessa Site #2 93.24 36 *e*P **P 15 11 48.9 +0.9**
comp=Z,17nm,0.9s,mb5.5
HAWA Hanford 93.36 37 *e*P **P 15 11 50.5 +2.0**
comp=Z,42nm,1.5s,mb5.7
HAWA LR LR
comp=Z,5μm,19.0s,MS6.0
LASF Ste Croix 93.43 320 *e*P **P 15 11 49.4 +0.5**
comp=Z,118nm,1.9s,mb5.7
HUMO Hull Mountain 93.45 42 *e*P **P 15 11 50.1 +1.1**
comp=Z,48nm,1.7s,mb5.7
HUMO LR LR
comp=Z,5μm,21.0s,MS5.9
NEW Newport 93.58 35 *e*P **P 15 11 49.2 -0.3**
NEW pmax pmax
comp=Z,19nm,0.9s
NEW MLR MLR
comp=Z,9μm,21.0s
NEW Newport 93.58 35 *e*P **P 15 11 49.2 -0.2**
comp=Z,19nm,0.9s,mb5.5
NEW LR LR
comp=Z,9μm,21.0s,MS6.2
GRR Gorron 93.58 325 *e*P **P 15 11 49.1 -0.4**
comp=Z,81nm,1.8s,mb5.5
GRR Gorron 93.58 325 *e*P **P 15 11 49.1 -0.4**
GRR pmax pmax
comp=Z,41nm,1.8s,mb5.6
GRR Gorron 93.58 325 *e*P **P 15 11 49.1 -0.4**
comp=Z,41nm,1.8s,mb5.5
JSA Saint Aubin 93.78 327 AMS AMS 15 55 04.9
comp=Z,22μm,21.4s,MS6.6
HTL Hartland 93.78 329 AMS AMS 15 58 57.0
comp=Z,22μm,16.8s,MS6.7
DYA Yadsworthy 93.87 328 AMS AMS 16 00 54.7
comp=Z,19μm,16.2s,MS6.6
CAF Calviac 94.01 321 *e*P **P 15 11 52.6 +1.1**
comp=Z,38nm,1.3s,mb5.4
CAF Calviac 94.01 321 *e*P **P 15 11 52.6 +1.1**
CAF pmax pmax
comp=Z,19nm,1.3s,mb5.4
CAF Calviac 94.01 321 *e*P **P 15 11 52.6 +1.1**
comp=Z,19nm,1.3s,mb5.4
YBH Yreka Blue Hor 94.08 42 P **P 15 11 52.9 +1.0**
YBH pmax pmax
comp=Z,29nm,1.5s
YBH MLR MLR
comp=Z,5μm,21.0s
YBH Yreka Blue Hor 94.08 42 P **P 15 11 52.9 +0.9**
comp=Z,29nm,1.5s,mb5.5
YBH LR LR
comp=Z,5μm,21.0s,MS5.9
RJF Les Rejaudoux 94.11 322 *e*P **P 15 11 51.1 -0.9**
comp=Z,105nm,1.4s,mb5.8
RJF *e*MLR MLR
comp=Z,29μm,21.0s,MS6.4
RJF Les Rejaudoux 94.11 322 *e*P **P 15 11 51.1 -0.9**
RJF pmax pmax
comp=Z,52nm,1.4s,mb5.8
RJF MLR MLR
comp=Z,28μm,21.0s,MS6.7
RJF Les Rejaudoux 94.11 322 *e*P **P 15 11 51.1 -0.9**
comp=Z,52nm,1.4s,mb5.8
RJF LR LR
comp=Z,28μm,21.0s,MS6.7
KEST Kesra 94.20 311 LR LR 16 00 35.9
comp=Z,4μm,20.1s,MS5.8,baz=92,slow=40
MFF Saint Martin d 94.28 324 *e*P **P 15 11 52.6 -0.1**
comp=Z,105nm,1.8s,mb5.7
MFF Saint Martin d 94.28 324 *e*P **P 15 11 52.6 -0.1**
MFF pmax pmax
comp=Z,52nm,1.8s,mb5.7
MFF Saint Martin d 94.28 324 *e*P **P 15 11 52.6 -0.1**
comp=Z,52nm,1.8s,mb5.7
CCA1 Carnmenellis 94.66 329 AMS AMS 15 58 03.6
comp=Z,23μm,20.9s,MS6.6
WALA Waterton Lakes 94.74 33 *e*P **P 15 11 55.8 +1.0**
comp=Z,0.7nm,1.0s
LFF La Frestale 94.77 322 *e*P **P 15 11 55.8 +0.8**
MTLF Montolieu 94.83 320 *e*P **P 15 11 55.8 +0.5**
comp=Z,48nm,1.5s,mb5.4
MTLF Montolieu 94.83 320 *e*P **P 15 11 55.8 +0.5**
MTLF pmax pmax
comp=Z,24nm,1.5s,mb5.4
MTLF Montolieu 94.83 320 *e*P **P 15 11 55.8 +0.5**
comp=Z,24nm,1.5s,mb5.4
BSMT Bassoo Peak 95.06 34 *e*P **P 15 11 57.3 +1.0**
comp=Z,17nm,1.2s,mb5.3
FCC Fort Churchill 95.29 18 P **P 15 11 57.9 +0.8**
comp=Z,0.9nm,1.3s
HOPS Hopland 95.33 45 PFAKE 15 12 10.0 +12
HOPS LR LR
comp=Z,6μm,22.0s,MS6.0
JTMT Jette 95.39 34 *e*P **P 15 11 59.0 +1.2**
comp=Z,9.9nm,1.1s,mb5.2
MOD Modoc 95.48 41 *e*P **P 15 11 58.3 -0.1**
comp=Z,15nm,1.3s,mb5.3
MOD LR LR
comp=Z,2μm,21.0s,MS5.6
BMO Blue Mountains 95.53 37 *e*P **P 15 11 58.3 -0.2**
BMO pmax pmax
comp=Z,6.0nm,1.1s,mb4.9
BMO MLR MLR
comp=Z,7μm,21.0s,MS6.1
BMO Blue Mountains 95.53 37 *e*P **P 15 11 58.3 -0.2**
comp=Z,5.6nm,1.1s,mb4.9
BMO LR LR
comp=Z,7μm,21.0s,MS6.1
PPT Papeete 95.57 107 *e*PP PP 15 15 44.5 -6.1
comp=Z,386nm,27.0s
PPT Papeete 95.57 107 *e*PS PS 15 24 31.7 -4.1
comp=Z,6μm,28.8s
PPT *e*SS SS 15 29 35.3 -9.4
comp=Z,4μm,24.0s
PPT *e*LQ 15 38 09.1
comp=Z,12μm,36.5s
PPT *e*LR LR 15 42 52.2
comp=Z,18μm,31.8s,baz=292
PPT Papeete 95.57 107 LR LR 15 51 49.0
comp=Z,4μm,19.2s,MS5.9,baz=279,slow=34
SWMT Swartz Lake 95.69 34 P **P 15 11 59.5 +0.4**
comp=Z,11nm,1.0s,mb5.2
VAL Valentia 95.78 332 *e*P **P 15 12 03.1 +3.6**
VAL *e*PP PP 15 15 51.9 +1.4
MCCM Marconi Confer 95.91 45 PFAKE 15 12 10.0 +10
MCCM LR LR
comp=Z,5μm,21.0s,MS6.0
FFC Flin Flon 95.98 23 P **P 15 12 00.3 0.0**
comp=Z,90nm,0.9s,mb6.2,SNR=5.3
FFC Flin Flon 95.98 23 *ce*P **P 15 12 00.7 +0.4**
FFC Flin Flon 95.98 23 *e*P **P 15 11 57.5 -2.8**
comp=Z,19nm,1.0s,mb5.5
FFC LR LR
comp=Z,8μm,19.0s,MS6.2
SLMT Seeley Lake 96.12 34 *e*P **P 15 12 01.5 +0.3**
comp=Z,25nm,1.2s,mb5.5
MSO Missoula 96.16 34 *e*P **P 15 12 01.9 +0.7**
comp=Z,10nm,1.3s,mb5.1
MSO LR LR
comp=Z,4μm,20.0s,MS5.9
WVOR Wild Horse Val 96.19 40 *e*P **P 15 12 03.9 +2.3**
WVOR pmax pmax
comp=Z,24nm,1.5s,mb5.4
WVOR MLR MLR
comp=Z,6μm,19.0s,MS6.1
WVOR Wild Horse Val 96.19 40 *e*P **P 15 12 03.9 +2.4**
comp=Z,24nm,1.5s,mb5.4
WVOR LR LR

comp=Z,6µm,19.0s,MS6.1
CHMT Chamberlain Mo 96.46 34 P **P** **15 12 04.5 +1.8**
comp=Z,12nm,1.5s,mb5.1
SJPF Ste Jean 96.99 321 *e*P **P** **15 12 05.8 +0.6**
comp=Z,34nm,1.3s,mb5.3
SJPF Ste Jean 96.99 321 *e*P **P** **15 12 05.8 +0.6**
SJPF pmax pmax
comp=Z,17nm,1.3s,mb5.3
SJPF Ste Jean 96.99 321 *e*P **P** **15 12 05.8 +0.6**
comp=Z,17nm,1.3s,mb5.3
EGMT Eagleton 97.50 32 PFAKE 15 12 20.0 +13
EGMT LR LR
comp=Z,7µm,19.0s,MS6.1
CMB Columbia Colle 97.61 44 *e*P **P** **15 12 06.8 -1.3**
CMB pmax pmax
comp=Z,16nm,0.9s,mb5.5
CMB MLR MLR
comp=Z,7µm,22.0s,MS6.1
CMB Columbia Colle 97.61 44 *e*P **P** **15 12 06.8 -1.3**
comp=Z,16nm,0.9s,mb5.5
CMB LR LR
comp=Z,7µm,22.0s,MS6.1
SAO San Andreas Ge 97.61 46 PFAKE 15 12 20.0 +12
SAO LR LR
comp=Z,4µm,19.0s,MS6.0
TBI Tubuai 97.63 112 *e*PP PP 15 15 58.9 -7.5
comp=Z,494nm,29.5s
TBI *e*SKSac SKSac 15 22 37.6 -7.8
comp=Z,2µm,29.2s
TBI *e*SP SP 15 24 47.6 -8.3
comp=Z,3µm,29.8s
TBI *e*SS SS 15 30 07.1 -6.7
comp=Z,2µm,29.2s
TBI *e*LR LR 15 43 41.7
comp=Z,12µm,33.0s,baz=292
DLMT Dillon 97.82 35 *e*P **P** **15 12 10.5 +1.7**
comp=Z,17nm,1.1s,mb5.5
HLID Hailey 97.97 37 *e*P **P** **15 12 10.3 +0.7**
comp=Z,9.8nm,1.3s,mb5.2
HLID LR LR
comp=Z,9µm,19.0s,MS6.3
LSZ Lusaka 98.01 257 *e*P **P** **15 12 08.9 -1.3**
LSZ pmax pmax
comp=Z,11nm,1.0s,mb5.3
LSZ MLR MLR
comp=Z,9µm,22.0s,MS6.2
LSZ Lusaka 98.01 257 *e*P **P** **15 12 08.9 -1.3**
comp=Z,2.8nm,1.0s,mb4.8
LSZ LR LR
comp=Z,9µm,22.0s,MS6.2
BOZ Bozeman (W) 98.14 34 PFAKE 15 12 20.0 +10
BOZ LR LR
comp=Z,9µm,21.0s,MS6.2
MAW Mawson 98.17 199 *e*P **P** **15 12 09.1 -0.6**
comp=Z,3.1nm,0.9s,mb4.8
MAW *e*S SKSac 15 22 49.2 +3.0
MAW Mawson 98.17 199 P **P** **15 12 07.9 -1.8**
comp=Z,1.7nm,0.5s,mb4.8,baz=31,slow=7.1,SNR=4.8
MAW LR LR 15 52 53.6
comp=Z,2µm,20.3s,MS5.6,baz=47,slow=33
BMN Battle Mountai 98.23 41 PFAKE 15 12 20.0 +9.2
BMN LR LR
comp=Z,6µm,22.0s,MS6.0
NVAR Mina Array Bea 98.73 43 P **P** **15 12 13.8 +0.7**
comp=Z,1.1nm,0.7s,mb4.5,baz=270,slow=5.5,SNR=12
LKWY Lake 99.51 35 PFAKE 15 12 30.0 +14
LKWY LR LR
comp=Z,15µm,20.0s,MS6.5
TPH Tonopah 99.63 43 PFAKE 15 12 30.0 +13
TPH LR LR
comp=Z,5µm,20.0s,MS6.0
RLMT Red Lodge 99.73 34 PFAKE 15 12 30.0 +13
RLMT LR LR
comp=Z,7µm,22.0s,MS6.1
DGMT Dagmar 99.79 29 PFAKE 15 12 30.0 +12
DGMT LR LR
comp=Z,7µm,19.0s,MS6.2
LAO LASA Array 100.15 31 PFAKE 15 12 30.0 +11
LAO LR LR
comp=Z,9µm,20.0s,MS6.3
AHID Auburn Hatcher 100.33 36 PFAKE 15 12 30.0 +10
AHID LR LR
comp=Z,8µm,19.0s,MS6.2
ESLA Sonseca Array 100.73 320 PFAKE 15 12 30.0 +8.3
ESLA LR LR
comp=Z,72µm,19.0s,MS7.2
HWUT Hardware Ranch 100.84 37 PFAKE 15 12 30.0 +7.8
HWUT LR LR
comp=Z,10µm,19.0s,MS6.3
DUG Dugway 101.03 39 PFAKE 15 12 30.0 +7.0
DUG LR LR
comp=Z,5µm,19.0s,MS6.0
PAB San Pablo 101.05 320 PFAKE 15 12 30.0 +6.9
PAB LR LR
comp=Z,12µm,19.0s,MS6.4
BW06 Boulder Array 101.18 35 PFAKE 15 12 30.0 +6.3
BW06 LR LR
comp=Z,9µm,20.0s,MS6.3
PDAR Pinedale Array 101.18 35 P Pdif 15 12 24.5 +0.8
comp=Z,0.2nm,0.3s,baz=327,slow=6.5,SNR=2.1
PDAR PKKPbc PKKPbc 15 28 32.1 -2.7
comp=Z,1.2nm,1.1s,baz=190,slow=4.6,SNR=4.8
GSC Goldstone 101.54 45 P Pdif 15 12 26.8 +1.5
GSC pmax pmax
comp=Z,6.0nm,1.2s
GSC Goldstone 101.54 45 Pdif Pdif 15 12 26.8 +1.5
comp=Z,6.5nm,1.2s
MVO Moncorvo 101.56 323 *e*Pdif Pdif 15 12 34.3 +8.9
MVO Moncorvo 101.56 323 *e*PP PP 15 16 37.4 +2.4
MVO *e*SKSac SKSac 15 23 07.2 +2.7
MVO *e*LR LR 15 47 38.8
comp=Z,15µm,19.5s
ULM Lac du Bonnet 101.80 23 PFAKE 15 12 40.0 +14
ULM LR LR
comp=Z,12µm,21.0s,MS6.4
SBA Scott Base 102.22 171 PFAKE 15 12 40.0 +12
SBA LR LR
comp=Z,5µm,22.0s,MS6.0
MTE Manteigas 102.36 322 *e*Pdif Pdif 15 12 38.4 +9.4
MTE Manteigas 102.36 322 *e*PP PP 15 16 46.6 +5.5
MTE *e*SKSac SKSac 15 23 14.3 +6.0
MTE *e*LR LR 15 48 22.8
comp=Z,20µm,19.5s
MTE Manteigas 102.36 322 PFAKE 15 12 40.0 +11
MTE LR LR
comp=Z,20µm,20.0s,MS6.6
MVU Marysvale 102.47 40 PFAKE 15 12 40.0 +11
MVU LR LR
comp=Z,7µm,21.0s,MS6.1
PFO Pinyon Flat Ob 102.77 46 PFAKE 15 12 40.0 +9.3
PFO LR LR
comp=Z,6µm,21.0s,MS6.1
PMRV Marv??o 102.92 322 *e*Pdif Pdif 15 12 39.6 +8.2
PMRV Marv??o 102.92 322 *e*PP PP 15 16 41.3 -4.0
PMRV *e*SKSac SKSac 15 23 13.9 +2.9
PMRV *e*LR LR 15 48 59.6
comp=Z,16µm,18.9s
RSSD Black Hills 103.07 32 PFAKE 15 12 40.0 +7.9
RSSD LR LR
comp=Z,9µm,21.0s,MS6.3
LBTB Lobatse 103.39 248 PFAKE 15 12 40.0 +6.5
LBTB LR LR
comp=Z,16µm,20.0s,MS6.5
AGMN Agassiz Nation 103.40 24 PFAKE 15 12 40.0 +6.4
AGMN LR LR
comp=Z,18µm,20.0s,MS6.6
PESTR Estremoz 103.41 321 *e*Pdif Pdif 15 12 43.3 +10
PESTR Estremoz 103.41 321 *e*PP PP 15 16 50.9 +2.0
PESTR *e*SKSac SKSac 15 23 15.5 +2.2
PESTR *e*LR LR 15 49 17.7
comp=Z,16µm,18.5s
TAM Tamanrasset 103.53 301 PFAKE 15 12 40.0 +5.9
TAM LR LR
comp=Z,5µm,20.0s,MS6.1
PBAR Barrancos 103.54 320 *e*Pdif Pdif 15 12 42.0 +7.8
PBAR *e*SKSac SKSac 15 23 15.6 +1.7
PBAR *e*LR LR 15 49 24.8
comp=Z,14µm,20.7s
EVOP Sao Brissos 103.94 321 *e*P Pdif 15 12 35.1 -0.9
EVOP *e*PP PP 15 16 53.0 +0.1
EVOP *e*S SKSac 15 23 13.9 -1.9
EVOP *e*S SKSac 15 23 14.0 -1.8
EVOP *e*SS SS 15 31 42.2 +3.0
EVOP AMS AMS 15 58 46.9
comp=E,26µm,17.2s
EVOP Sao Brissos 103.94 321 *e*P Pdif 15 12 35.1 -1.0
EVOP *e* 15 16 52.9
EVOP *e*S SKSac 15 23 13.8 -2.0
EVOP *e*SS SS 15 31 42.2 +2.9
SCHQ Schefferville 104.07 5 PKiKP PKiKP 15 16 51.5 -2.1
comp=E,4.7nm,0.9s,baz=326,slow=3.6,SNR=4.0
SCHQ Schefferville 104.07 5 PFAKE 15 12 50.0 +13
SCHQ LR LR
comp=Z,19µm,20.0s,MS6.6
SFS San Fernando 104.14 319 PFAKE 15 12 50.0 +13
SFS LR LR
comp=Z,33µm,21.0s,MS6.8
PMAFR Mafra 104.33 322 *e*Pdif Pdif 15 12 46.0 +8.3
PMAFR Mafra 104.33 322 *e*PP PP 15 16 55.5 -0.2
PMAFR *e*SKSac SKSac 15 23 23.8 +6.3
PMAFR *e*LR LR 15 49 34.4
comp=Z,13µm,20.6s
LIS Lisbon 104.41 322 *e*PP PP 15 16 55.3 -1.1
LIS *e*S SKSac 15 23 16.3 -1.7
LIS AMS AMS 15 59 27.8
comp=N,29µm,17.2s
LIS Lisbon 104.41 322 *e*PP PP 15 16 55.3 -1.1
LIS *e*S SKSac 15 23 16.3 -1.6
PVAQ Vaqueiros 104.45 320 *e*Pdif Pdif 15 12 47.4 +9.2
PVAQ Vaqueiros 104.45 320 *e*PP PP 15 17 00.1 +3.4
PVAQ *e*SKSac SKSac 15 23 19.8 +1.7
PVAQ *e*LR LR 15 49 17.5
comp=N,14µm,17.0s
MESJ Messejana 104.46 321 *e*P Pdif 15 12 38.0 -0.3
MESJ *e*PP PP 15 16 55.5 -1.2
MESJ *e*S SKSac 15 23 17.3 -0.9
MESJ *e*S SKSac 15 23 17.5 -0.7
MESJ *e*SS SS 15 31 48.1 +1.7
MESJ *e*SS SS 15 31 48.6 +2.2
MESJ AMS AMS 15 59 07.8
comp=E,26µm,17.8s
MESJ Messejana 104.46 321 *e*P Pdif 15 12 37.9 -0.4
MESJ *e* 15 16 55.5
MESJ *e*S SKSac 15 23 17.4 -0.8
MESJ *e*SS SS 15 31 48.0 +1.6
PCVE Castro Verde 104.49 320 *e*Pdif Pdif 15 12 48.7 +10
PCVE Castro Verde 104.49 320 *e*PP PP 15 17 01.3 +4.3
PCVE *e*SKSac SKSac 15 23 24.2 +5.9
PCVE *e*LR LR 15 49 49.7
comp=E,15µm,20.5s
PBDV Barranco-do-Ve 104.68 320 *e*Pdif Pdif 15 12 48.5 +9.2
PBDV *e*SKSac SKSac 15 23 21.8 +2.6
PBDV *e*LR LR 15 49 22.4
comp=E,14µm,21.0s
BOSA Boshof 104.71 245 PFAKE 15 12 50.0 +11
BOSA LR LR
comp=Z,10µm,20.0s,MS6.4
WUAZ Wupatki 104.90 42 PFAKE 15 12 50.0 +10
WUAZ LR LR
comp=Z,6µm,22.0s,MS6.1
MORF Marmelete 105.07 321 *e*SKSac SKSac 15 23 29.6 +8.6
MORF A 16 09 09.8
comp=Z,19µm,20.0s
PFVI Vila Bisbo 105.29 321 *e*Pdif Pdif 15 12 50.9 +8.9
PFVI *e*SKSac SKSac 15 23 29.1 +7.1
PFVI *e*LR LR 15 50 22.8
comp=Z,18µm,18.4s
EYMN Ely 105.31 22 PFAKE 15 17 10.0 +14
EYMN LR LR
comp=Z,12µm,22.0s,MS6.4
ISCO Idaho Springs 105.37 36 PFAKE 15 17 10.0 +14
ISCO LR LR
comp=Z,10µm,22.0s,MS6.3
MVCO Mesa Verde 105.53 39 PFAKE 15 17 10.0 +13
MVCO LR LR
comp=Z,9µm,22.0s,MS6.2
OGNE Ogallala 106.42 33 PFAKE 15 17 10.0 +12
OGNE LR LR
comp=Z,9µm,20.0s,MS6.3
ECSD EROS Data Cent 106.79 28 PFAKE 15 17 10.0 +11
ECSD LR LR
comp=Z,10µm,21.0s,MS6.3
SDCO Great Sand Dun 106.89 37 PFAKE 15 17 10.0 +11
SDCO LR LR
comp=Z,7µm,21.0s,MS6.2
TUC Tucson 107.32 44 PFAKE 15 17 10.0 +10
TUC LR LR
comp=Z,6µm,22.0s,MS6.1
COWI Conover 107.72 22 PFAKE 15 17 10.0 +9.4
COWI LR LR
comp=Z,10µm,20.0s,MS6.4
ANMO Albuquerque 108.28 40 PFAKE 15 17 10.0 +8.0
ANMO LR LR
comp=Z,8µm,22.0s,MS6.2
TSUM Tsumeb 108.85 256 PFAKE 15 17 10.0 +6.6
TSUM LR LR
comp=Z,8µm,20.0s,MS6.3
CBKS Cedar Bluff 109.18 33 PFAKE 15 17 10.0 +6.4
CBKS LR LR
comp=Z,13µm,20.0s,MS6.5
SUR Sutherland 109.37 242 PFAKE 15 17 10.0 +6.0
SUR LR LR
comp=Z,8µm,20.0s,MS6.3
SCIA State Center 109.73 27 PFAKE 15 17 10.0 +5.5
SCIA LR LR
comp=Z,8µm,20.0s,MS6.3
JFWS Jewell Farm 110.06 24 PFAKE 15 17 10.0 +4.9
JFWS LR LR
comp=Z,10µm,19.0s,MS6.4
RKT Rikitea 110.29 108 *e*Pdif Pdif 15 13 01.2 -3.0
comp=Z,125nm,29.8s
RKT Rikitea 110.29 108 *e*PP PP 15 17 39.3 -1.6
comp=Z,469nm,30.0s
RKT *e*SKSac SKSac 15 23 37.1 -6.8
comp=Z,1µm,30.2s
RKT *e*SP SP 15 26 59.3 -9.2
comp=Z,2µm,35.8s
RKT *e*SS SS 15 33 01.0 -6.9
comp=Z,3µm,29.2s
RKT *e*LQ 15 44 51.8
comp=Z,5µm,34.2s
RKT *e*LR LR 15 49 26.6
comp=Z,10µm,25.2s,baz=291
RKT Rikitea 110.29 108 *e*P Pdif 15 13 01.2 -3.0
RKT *e* 15 17 39.3
RKT *e* 15 23 37.1
RKT *e*SP SP 15 26 59.3 -9.2
RKT *e*SS SS 15 33 01.0 -6.9
RKT Rikitea 110.29 108 *e*Pdif Pdif 15 13 01.2 -3.0
RKT *e*PP PP 15 17 39.3 -1.6
RKT *e*SKSac SKSac 15 23 37.1 -6.8
RKT *e*SP SP 15 26 59.3 -9.2
RKT *e*SS SS 15 33 01.0 -6.9
RKT *e*LQ 15 44 51.8
KSU1 Kansas State U 110.49 31 PFAKE 15 17 20.0 +14
KSU1 LR LR
comp=Z,8µm,21.0s,MS6.2
AMTX Amarillo 111.08 37 PFAKE 15 17 20.0 +13
AMTX LR LR
comp=Z,9µm,19.0s,MS6.4
MNTX Cornudas Mount 111.16 42 PFAKE 15 17 20.0 +12
MNTX LR LR
comp=Z,6µm,21.0s,MS6.1
HDIL Hopedale 112.45 25 PFAKE 15 17 20.0 +10
HDIL LR LR
comp=Z,8µm,19.0s,MS6.3
WMOK Wichita Mounta 112.78 35 PFAKE 15 17 20.0 +10
WMOK LR LR
comp=Z,8µm,20.0s,MS6.3
AAM Ann Arbor 112.90 20 PFAKE 15 17 20.0 +9.5
AAM LR LR
comp=Z,12µm,19.0s,MS6.5
LONY Lake Ozonia 113.05 12 PFAKE 15 17 20.0 +9.3
LONY LR LR
comp=Z,10µm,20.0s,MS6.4
PKME Peaks-Kenny Pk 113.28 8 PFAKE 15 17 20.0 +8.9
PKME LR LR
comp=Z,14µm,19.0s,MS6.6
NCB Newcomb 113.74 12 PFAKE 15 17 20.0 +7.9
NCB LR LR
comp=Z,10µm,19.0s,MS6.5
CCM Cathedral Cave 113.77 27 PFAKE 15 17 20.0 +7.7
CCM LR LR
comp=Z,8µm,20.0s,MS6.3
TXAR Lajitas Array 113.86 42 PKP PKiKP 15 17 13.6 +0.9
comp=Z,0.5nm,0.6s,baz=215,slow=1.1,SNR=7.1
TXAR PKKPbc PKKPbc 15 27 58.4 +3.5
comp=Z,0.3nm,0.8s,baz=199,slow=2.5,SNR=3.6
TXAR Lajitas Array 113.86 42 PKP PKiKP 15 17 13.6 +0.9
TXAR PKKPbc PKKPbc 15 27 58.4 +3.5
LBNH Lisbon 113.89 10 PFAKE 15 17 20.0 +7.7
LBNH LR LR
comp=Z,16µm,21.0s,MS6.6
ERPA Erie 114.15 17 PFAKE 15 17 20.0 +7.1
ERPA LR LR
comp=Z,9µm,19.0s,MS6.4
ACSO Alum Creek Sta 114.99 20 PFAKE 15 17 20.0 +5.4
ACSO LR LR
comp=Z,11µm,19.0s,MS6.5
BINY Binghamton 115.07 14 PFAKE 15 17 20.0 +5.3
BINY LR LR
comp=Z,13µm,22.0s,MS6.5
PTCN Pitcairn Islan 115.08 109 PFAKE 15 17 20.0 +4.9
PTCN LR LR
comp=Z,6µm,19.0s,MS6.2
JCT Junction City 115.39 39 PFAKE 15 17 30.0 +14
JCT LR LR
comp=Z,9µm,19.0s,MS6.4
MIAR Mount Ida 115.59 31 PFAKE 15 17 30.0 +14
MIAR LR LR
comp=Z,11µm,21.0s,MS6.5
WCI Wyandotte Cave 115.62 24 PFAKE 15 17 30.0 +14
WCI LR LR
comp=Z,7µm,20.0s,MS6.2
SSPA Standing Stone 116.09 16 PFAKE 15 17 30.0 +13
SSPA LR LR
comp=Z,10µm,19.0s,MS6.5
NVL N'lazarevskaya 116.09 200 *e*PKIKP PKPdf 15 17 27.1 +11
NVL *e*S SP 15 28 02.4 +3.4
NVL *e* 15 34 15.7
NVL pmax pmax
comp=Z,13nm,0.9s
MAIT Maitri 116.12 200 *e*PKPab PKPdf 15 17 14.7 -1.0
MCWV Mont Chateau 116.47 18 PFAKE 15 17 30.0 +13
MCWV LR LR
comp=Z,18µm,21.0s,MS6.7
WVT Waverly 116.84 26 PFAKE 15 17 30.0 +12
WVT LR LR
comp=Z,9µm,22.0s,MS6.4
NATX Nacogdoches 117.26 34 PFAKE 15 17 30.0 +11
NATX LR LR
comp=Z,12µm,19.0s,MS6.5
OXF Oxford 117.55 28 PFAKE 15 17 30.0 +10
OXF LR LR
comp=Z,10µm,19.0s,MS6.5
HKT Hockley 118.04 36 PFAKE 15 17 30.0 +9.3
HKT LR LR
comp=Z,9µm,20.0s,MS6.4
CBN Corbin 118.51 16 PFAKE 15 17 30.0 +8.6
CBN LR LR
comp=Z,13µm,20.0s,MS6.5
BLA Blacksburg 118.56 19 PFAKE 15 17 30.0 +8.5
BLA LR LR
comp=Z,12µm,19.0s,MS6.5
KVTX Kingsville 118.67 40 PFAKE 15 17 30.0 +8.0
KVTX LR LR
comp=Z,8µm,21.0s,MS6.3
TKL Tuckaleechee C 118.83 23 PKIKP PKPdf 15 17 20.5 -1.6
VBMS Vicksburg 118.96 31 PFAKE 15 17 30.0 +7.6
VBMS LR LR
comp=Z,12µm,21.0s,MS6.5
LRAL Lakeview Retre 119.85 27 PFAKE 15 17 30.0 +5.9
LRAL LR LR
comp=Z,7µm,20.0s,MS6.3
DBIC Dimbokro 120.21 291 PKP PKPdf 15 17 23.9 -1.4
comp=Z,4.6nm,0.9s,baz=63,slow=4.5,SNR=3.1
DBIC Dimbokro 120.21 291 PKP PKPdf 15 17 23.9 -1.4
DBIC LR LR
comp=Z,8µm,22.0s,MS6.3
KIC Kosan Boka 120.26 291 *e*PKP1 PKPdf 15 17 26.7 +1.3
comp=Z,24nm,1.0s
TIC Toumodi 120.36 292 *e*PKP1 PKPdf 15 17 27.0 +1.4
comp=Z,20nm,0.2s
LIC Lamto 120.57 291 *e*PKP1 PKPdf 15 17 27.3 +1.3
comp=Z,79nm,1.3s
LIC Lamto 120.57 291 *e*PKIKP PKPdf 15 17 27.7 +1.7
comp=Z,80nm,1.3s
LIC *e*MLR MLR
comp=Z,17µm,22.8s,MS6.3
LIC Lamto 120.57 291 *e*PKPdf PKPdf 15 17 27.7 +1.7
LIC LR LR
comp=Z,8µm,22.8s,MS6.3
GOGA Godfrey 120.94 24 PFAKE 15 17 40.0 +14
GOGA LR LR
comp=Z,11µm,20.0s,MS6.5
CNNC Cliffs of the 121.14 18 PFAKE 15 17 40.0 +13
CNNC LR LR
comp=Z,8µm,20.0s,MS6.3
BRAL Brewton 121.56 28 PFAKE 15 17 40.0 +13
BRAL LR LR
comp=Z,10µm,22.0s,MS6.4
VNA1 Neumayer--Stat 122.33 198 *e*PKPdf PKPdf 15 17 26.3 -1.3
NHSC New Hope 122.39 21 PFAKE 15 17 40.0 +11
NHSC LR LR
comp=Z,14µm,20.0s,MS6.6
DWPF Disney 126.45 25 PFAKE 15 17 50.0 +13
DWPF LR LR
comp=Z,17µm,20.0s,MS6.7
BBSR BB Station 126.54 6 PFAKE 15 17 50.0 +13
BBSR LR LR
comp=Z,8µm,21.0s,MS6.3
SHEL Horse Pasture 129.52 266 PFAKE 15 17 50.0 +7.0
SHEL LR LR
comp=Z,5µm,19.0s,MS6.2
TEIG Tepich 129.88 37 PFAKE 15 17 50.0 +6.3
TEIG LR LR
comp=Z,8µm,21.0s,MS6.4
SACV Santiago Islan 130.14 313 PFAKE 15 17 50.0 +5.8
SACV LR LR
comp=Z,10µm,21.0s,MS6.5
RPN Rapa Nui 133.83 108 PFAKE 15 18 00.0 +9.1
RPN LR LR
comp=Z,3µm,19.0s,MS6.0
TGUH Tegucigalpa,Un 135.31 41 PFAKE 15 18 00.0 +6.0
TGUH LR LR
comp=Z,6µm,21.0s,MS6.3
GRTK Grand Turk 136.00 16 PFAKE 15 18 00.0 +4.9
GRTK LR LR
comp=Z,13µm,22.0s,MS6.6
PMSA Palmer Station 136.22 177 PFAKE 15 18 00.0 +5.9
PMSA LR LR
comp=Z,3µm,20.0s,MS6.1
GTBY Guantanamo Bay 136.25 22 PFAKE 15 18 10.0 +14
GTBY LR LR
comp=Z,9µm,22.0s,MS6.4
MTDJ Mount Denham 136.86 26 PFAKE 15 18 10.0 +13
MTDJ LR LR
comp=Z,9µm,20.0s,MS6.5
SDDR Presa de Saban 138.36 18 PFAKE 15 18 10.0 +10
SDDR LR LR
comp=Z,12µm,20.0s,MS6.6
JTS JuntasAbangare 139.65 42 PFAKE 15 18 10.0 +8.0
JTS LR LR
comp=Z,7µm,21.0s,MS6.4
SJG San Juan 140.39 11 PFAKE 15 18 10.0 +6.7
SJG LR LR
comp=Z,11µm,21.0s,MS6.6
ANWB Willy Bob 141.37 4 PFAKE 15 18 10.0 +4.9
ANWB LR LR
comp=Z,5µm,20.0s,MS6.2
PAYG Puerto Ayora 143.26 60 PFAKE 15 18 20.0 +11
PAYG LR LR
comp=Z,4µm,21.0s,MS6.2
BCIP Isla Barro Col 143.56 36 *e*PKPdf PKPdf 15 18 06.8 -2.3
BCIP LR LR
comp=Z,9µm,22.0s,MS6.5
FDF Fort de France 144.32 4 PFAKE 15 18 20.0 +10
FDF LR LR
comp=Z,6µm,21.0s,MS6.3
BBGH Gun Hill 145.96 1 PFAKE 15 18 20.0 +6.8
BBGH LR LR
comp=Z,13µm,22.0s,MS6.7
GRGR Grenville 146.86 5 PFAKE 15 18 20.0 +5.3
GRGR LR LR
comp=Z,5µm,20.0s,MS6.3
SDV Santo Domingo 148.05 22 PFAKE 15 18 30.0 +13
SDV LR LR
comp=Z,3µm,21.0s,MS6.0
ROSC El Rosal 150.09 32 PKPbc PKPbc 15 18 25.1 +0.1
comp=Z,8.4nm,0.4s,baz=108,slow=22,SNR=7.0
ROSC El Rosal 150.09 32 PKPbc PKPbc 15 18 25.8 +0.8
OTAV Otavalo 151.46 44 *e*PKPbc PKPbc 15 18 28.9 +0.6
OTAV LR LR
comp=Z,4µm,22.0s,MS6.2
RCBR Riachuelo 153.02 301 PFAKE 15 18 30.0 +5.6

RCBR				LR	LR		
	comp=Z,10μm,22.0s,MS6.6						
PLCA	**Paso Flores**	**158.07 156**		PFAKE		15 18 40.0	+10
PLCA				LR	LR		
	comp=Z,4μm,20.0s,MS6.3						
NNA	**Nana**	**160.58 65**		PFAKE		15 18 40.0	+5.9
NNA				LR	LR		
	comp=Z,4μm,22.0s						
TRQA	**Tornquist**	**162.90 172**		PFAKE		15 18 50.0	+14
TRQA				LR	LR		
	comp=Z,8μm,22.0s						
LCO	**Las Campanas**	**166.74 129**		PFAKE		15 18 50.0	+11
LCO				LR	LR		
	comp=Z,7μm,21.0s						
SPB	**Sao Paulo**	**169.09 255**		PFAKE		15 18 50.0	+8.8
SPB				LR	LR		
	comp=Z,9μm,22.0s						
LPAZ	**La Paz**	**170.04 63**		PKP	PKPdf	15 18 42.4	+0.5
	comp=Z,3.5nm,0.9s,baz=2.9,slow=1.5,SNR=12						
LPAZ	**La Paz**	**170.04 63**	*e*	PKPdf	PKPdf	15 18 41.8	-0.1
LPAZ				LR	LR		
	comp=Z,5μm,20.0s						
CPUP	**Villa Florida**	**174.60 195**		PKP	PKPdf	15 18 43.2	-0.5
	comp=Z,2.2nm,0.8s,baz=85,slow=3.4,SNR=5.3						
CPUP				PKPab	PKPab	15 20 15.3	-1.5
	comp=Z,4.9nm,0.8s,baz=107,slow=2.9,SNR=6.0						
CPUP	**Villa Florida**	**174.60 195**		PKIKP	PKPdf	15 18 43.2	-0.5
CPUP						15 20 15.4	
CPUP				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CPUP				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CPUP	**Villa Florida**	**174.60 195**		PKP	PKPdf	15 18 43.2	-0.5
CPUP				PKPab	PKPab	15 20 15.3	-1.5
CPUP				LR	LR		
	comp=Z,2μm,20.0s						

MEX 13 15:11:05.9±0.3, 18°.25N×100°.67W, h56km±24km, MD3.9, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLIG	**Platanillo**	**1.12**	**83**	*i* P	Pn	15 11 24.0	-1.4
PLIG				*i* S	Sn	15 11 38.1	-1.7
CAIG	**El Cayaco**	**1.26**	**162**	*i* P	Pn	15 11 25.8	-1.4
CAIG				*i* S	Sn	15 11 41.1	-2.1
UTMO	**Huajuapan**	**2.76**	**98**	*i* P	Pn	15 11 46.5	-1.2
UTMO				*i* S	Sn	15 12 18.6	-1.3

*IDC **13** 15:23:23.8±5.2, 0°.68S×100°.79E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.3/19, mbtmp3.5/4, Error ellipse: s-maj=274.1km s-min=24.3km az=54.0*
*DJA **13** 15:23:23, 1°.78S×99°.53E, h21km, MLv3.4/4*
*ISCJB **13** 15:23:24.4±1.5, 1°.7S±0°.1×99°.46E±0°.09, h53km±13km, mb3.3/4, Error ellipse: s-maj=23.6km s-min=14.6km az=176.4*
ISC 13 15:23:24.7±2.0, 1°.7S±0°.2×99°.47E±0°.09, h37km±19km, n9, σ0§60/9, mb3.3/4, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**0.54**	**314**	P	**Pn**	**15 23 35.7**	**-0.2**
PDSI	**Padang**	**1.26**	**52**	P	**Pn**	**15 23 45.1**	**-0.8**
PDSI				S	**Sn**	**15 24 01.9**	**+0.3**
PPI	**Padang Panjang**	**1.54**	**37**	P	**Pn**	**15 23 49.4**	**-0.3**
MNSI	**Mandailing Nat**	**2.48**	**2**	P	**Pn**	**15 24 03.7**	**+1.0**
WRA	**Warramunga Arr**	**38.60**	**120**	P	**P**	**15 30 44.0**	**-0.5**
	0.6nm,1.0s,mb3.3,baz=300,slow=9.8,SNR=3.4						
ASAR	**Alice Springs**	**39.85**	**126**	P	**P**	**15 30 55.9**	**+1.0**
	0.2nm,0.5s,mb3.1,baz=299,slow=7.6,SNR=5.0						
MKAR	**Makanchi Array**	**50.60**	**345**	P	**P**	**15 32 19.9**	**+0.1**
	0.2nm,0.7s,mb3.2,baz=157,slow=6.6,SNR=4.2						
ZALV	**Zalesovo Beam**	**56.78**	**350**	P	**P**	**15 33 04.3**	**-0.6**
	0.3nm,0.4s,mb3.7,baz=178,slow=6.5,SNR=4.0						
TXAR	**Lajitas Array**	**144.78**	**37**	PKP	PKPdf	15 42 58.2	-0.1
	0.2nm,0.5s,baz=184,slow=1.8,SNR=3.6						

*JMA **13** 15:27:20.4±0.4, 25°.02N×122°.36E, h24km, M2.4*
TAP 13 15:27:19.6, 24°.64N×122°.14E, h12km±1km, ML3.4, 1D, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILA	**Ilan**	**0.38**	**290**	*e*P	Pg	15 27 27.9	+0.8
ILA	baz=280			*e*S	Sg	15 27 33.3	+1.1
TWB1	**Santiao Chiao**	**0.39**	**340**	*i* P	Pg	15 27 27.9	+0.5
TWB1	baz=347			*i* S	Sg	15 27 32.5	-0.2
ENA	**Nanau**	**0.42**	**240⇓**	*i* P	Pg	15 27 27.8	-0.1
ENA	baz=240			*e*S	Sg	15 27 34.3	+0.9
TWE	**Neicheng**	**0.43**	**281**	*i* P	Pg	15 27 28.4	+0.2
TWE	baz=281			*e*S	Sg	15 27 35.0	+0.9
NWF	**Wu-fen Shan**	**0.54**	**323**	*e*P	Pg	15 27 30.9	+0.7
NWF	baz=316			*e*S	Sg	15 27 38.8	+1.4
TWA	**Mucha**	**0.61**	**304**	*e*P	Pg	15 27 32.1	+0.7
TWA	baz=304			*e*S	Sg	15 27 40.3	+0.9
TAP1	**Taipei**	**0.69**	**306**	*e*P	Pg	15 27 33.4	+0.5
TAP1	baz=299			*e*S	Sg	15 27 42.7	+0.7
NSK	**Sanguang**	**0.71**	**273**	P	Pg	15 27 33.7	+0.3
NSK	baz=273			*e*S	Sg	15 27 43.1	+0.4
NNS	**Nan Shan**	**0.72**	**254**	*e*P	Pg	15 27 34.4	+0.7
NNS	baz=255			*e*S	Sg	15 27 44.2	+1.1
TWD	**Chiawan**	**0.74**	**222**	*e*P	Pg	15 27 33.5	-0.5
TWS1	**Kuangyinshan**	**0.80**	**305**	*e*P	Pg	15 27 36.4	+1.3
TWS1	baz=298			*e*S	Sg	15 27 46.6	+1.0
TWY	**Chenhua**	**0.80**	**323**	*e*P	Pg	15 27 36.1	+1.0
TWY	baz=323			*e*S	Sg	15 27 46.8	+1.1
YOJ	**Yonaguni jima**	**0.82**	**102**	P	Pg	15 27 35.5	+0.1
YOJ				S	Sg	15 27 46.2	+0.1
NCU	**National Centr**	**0.92**	**291**	*e*P	Pg	15 27 38.5	+1.0
NCU	baz=298			*e*S	Sg	15 27 52.1	+2.6
WHF	**Hehuan Shan**	**0.93**	**238**	P	Pg	15 27 37.4	-0.2
WHF	baz=239			*e*S	Sg	15 27 49.7	-0.2
TWT	**Tachien**	**0.95**	**247**	P	Pg	15 27 38.7	+0.6
TWT	baz=247			*e*S	Sg	15 27 51.5	+1.0
NSTT	**Nanjuang**	**1.03**	**270**	*e*P	Pb	15 27 40.0	+0.6
NSTT	baz=261			*e*S	Sb	15 27 54.1	+1.1
ESL	**Shilin**	**1.04**	**218**	*e*P	Pb	15 27 39.4	-0.2
ESL	baz=225			*e*S	Sb	15 27 55.6	+2.4
HSN	**Hsinchu**	**1.07**	**279**	*e*P	Pb	15 27 41.3	+1.2
HSN	baz=281			*e*S	Sb	15 27 56.1	+2.0
NSY	**Sanyi**	**1.27**	**260**	*e*P	Pn	15 27 44.6	+1.3
NSY	baz=261			*e*S	Sb	15 28 03.1	+3.2
TWQ1	**Liyutan**	**1.27**	**257**	*e*P	Pn	15 27 44.8	+1.5
TWQ1	baz=258			*e*S	Sb	15 28 02.5	+2.5

EHY	**Hungye**	**1.35**	**214**	*e*P	Pn	15 27 44.3	0.0
EHY	baz=216			*e*S	Sb	15 28 04.6	+2.4
SMLT	**Sun Moon Lake**	**1.36**	**237**	*e*P	Pn	15 27 45.5	+1.1
SMLT	baz=238			*e*S	Sb	15 28 04.8	+2.6
IRIF	**Iriomote-Funau**	**1.48**	**101**	P	Pn	15 27 44.5	-1.7
IRIF				*e*S	Sn	15 28 03.3	-2.2
TWF1	**Yuli**	**1.49**	**211**	*e*P	Pn	15 27 45.8	-0.5
TWF1	baz=229			*e*S	Sn	15 28 07.3	+1.6
WNT	**Mingjian**	**1.53**	**241**	*e*P	Pn	15 27 50.2	+3.5
YUS	**Yu-Shan**	**1.57**	**224**	P	Pn	15 27 49.4	+2.0
YUS	baz=226			*e*S	Sn	15 28 11.2	+3.4
HATJ	**Hateruma jima**	**1.63**	**110**	*e*S	Sn	15 28 09.1	0.0
ALS	**Alishan**	**1.66**	**228**	*e*P	Pn	15 27 51.1	+2.6
ALS	baz=235			*e*S	Sn	15 28 12.5	+2.8
CHN5	**Tsauling**	**1.69**	**232**	*e*P	Pn	15 27 51.7	+2.7
CHN5	baz=235			*e*S	Sn	15 28 15.8	+5.3
JKRS	**Kuro-shima**	**1.75**	**103**	P	Pn	15 27 49.3	-0.6
JKRS				S	Sn	15 28 10.8	-1.4
ELDTW	**Lidau**	**1.77**	**216**	*e*P	Pn	15 27 51.2	+1.2
ELDTW	baz=218			*e*S	Sn	15 28 14.9	+2.3
JIJ	**Ishigaki jima**	**1.85**	**98**	P	Pn	15 27 50.5	-0.7
JIJ				*e*S	Sn	15 28 11.7	-2.8
CHN4	**Tsaushan**	**1.91**	**228**	*e*P	Pn	15 27 54.9	+2.9
CHN4	baz=231			*e*S	Sn	15 28 19.7	+3.8
WTP	**Ta-pu**	**1.96**	**225**	*e*P	Pn	15 27 55.4	+2.6
WTP	baz=228			*e*S	Sn	15 28 22.3	+4.9
TWK	**Hsinying**	**2.03**	**228**	*e*P	Pn	15 27 56.1	+2.4
TWK	baz=231			*e*S	Sn	15 28 24.2	+5.1
TWG	**Pinlang**	**2.06**	**209**	*e*P	Pn	15 27 55.3	+1.3
TWG	baz=195			*e*S	Sn	15 28 22.3	+2.7
CHN1	**Nanshi**	**2.06**	**226**	*e*P	Pn	15 27 55.9	+1.8
CHN1	baz=230			*e*S	Sn	15 28 24.4	+4.6
SGST	**Jiashian**	**2.10**	**223**	*e*P	Pn	15 27 56.8	+2.1
SGST	baz=211			*e*S	Sn	15 28 25.4	+4.6
SSD	**Sandimen**	**2.33**	**217**	*e*P	Pn	15 28 00.2	+2.3
EAST	**Anshuo**	**2.54**	**208**	*e*P	Pn	15 28 01.5	+0.9
SCZT	**Fangliau**	**2.65**	**212**	*e*P	Pn	15 28 04.2	+1.9

DJA 13 15:33:35, 1°.32N×125°.90E, h20km, MLv3.9/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	**Manado**	**1.07**	**277**	P	Pb	15 33 54.7	-0.1
MNI				S	Sb	15 34 09.3	+1.0
TNTI	**Ternate**	**1.56**	**110**	P	Pn	15 34 01.9	+0.2
KMSI	**Cibinong**	**2.06**	**249**	P	Pn	15 34 08.1	-0.4
SGSI	**Sangihe**	**2.38**	**351**	P	Pn	15 34 14.3	+1.4
SGSI				S	Sn	15 34 43.8	+2.3
LUWI	**Luwuk**	**3.91**	**233**	P	Pn	15 34 35.2	+1.2

*DJA **13** 15:46:40, 21°.81N×121°.19E, h30km, mb4.9/12*
*ISCJB **13** 15:46:41.5±1.1, 21°.18N±0°.02×121°.16E±0°.03, h11km±7km, mb4.4/35, MS4.8/5, Error ellipse: s-maj=5.0km s-min=3.3km az=13.3*
*IDC **13** 15:46:41.1±0.6, 21°.06N×121°.12E, h0km, mb4.1/18, mb1 4.3/19, mb1mx4.2/25, mbtmp4.2/19, ML3.9/1, MS4.9/1, Ms1 4.9/1, ms1mx3.7/36, Error ellipse: s-maj=22.6km s-min=12.7km az=66.0*
*NEIC **13** 15:46:42.3±0.4, 21°.17N×121°.18E, h10km, mb4.6/9, Error ellipse: s-maj=10.7km s-min=6.1km az=84.0*
*JMA **13** 15:46:43.4±0.6, 21°.20N×121°.04E, h107km, M4.1*
*BJI **13** 15:46:43.3, 21°.30N×121°.17E, h18km, mB5.4/8, mb4.3/24, Ms4.9/13, Ms7 4.6/13*
*MOS **13** 15:46:44.1±1.1, 21°.08N×121°.13E, h33km, mb5.0/5, Error ellipse: s-maj=14.3km s-min=8.5km az=107.9*
ISC 13 15:46:43.0±1.0, 21°.18N±0°.02×121°.16E±0°.03, h10km±6km, n104, σ1§14/119, mb4.4/35, MS4.8/5, 2C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBP	**Basco**	**1.05**	**134**	*e*P	**Pg**	**15 47 01.8**	**-1.5**
BBP				*e*S	**Sg**	**15 47 17.9**	**+1.0**
TWG	**Pinlang**	**1.64**	**357**	*e*Pn	**Pn**	**15 47 08.1**	**-3.8**
TPUB	**Ta-pu**	**2.17**	**347**	*e*Pn	**Pn**	**15 47 17.6**	**-1.6**
YULB	**Yu-li**	**2.21**	**3**	*e*Pn	**Pn**	**15 47 16.4**	**-3.4**
SSLB	**Suanglung**	**2.60**	**356**	*e*Pn	**Pn**	**15 47 24.3**	**-0.9**
NACB	**Ninganchiao**	**3.01**	**8**	*e*Pn	**Pn**	**15 47 29.8**	**-0.9**
APYP	**Conner**	**3.30**	**179**	*e*P	**Pn**	**15 47 34.6**	**-0.2**
APYP				*e*S	**Sn**	**15 48 14.3**	**+0.2**
YHNB	**Yeheng**	**3.48**	**3**	*e*Pn	**Pn**	**15 47 35.9**	**-1.3**
ABRA	**Dolores**	**3.54**	**187**	*e*P	**Pn**	**15 47 37.9**	**-0.2**
ABRA				*e*S	**Sn**	**15 48 17.3**	**-2.6**
YOJ	**Yonaguni jima**	**3.69**	**27**	P	**Pn**	**15 47 39.7**	**-0.4**
YOJ				S	**Sn**	**15 48 24.0**	**+0.3**
HATJ	**Hateruma jima**	**3.77**	**40**	P	**Pn**	**15 47 41.6**	**+0.4**
HATJ				S	**Sn**	**15 48 25.4**	**-0.2**
TATO	**Taipei**	**3.79**	**5**	Pn	**Pn**	**15 47 40.0**	**-1.5**
IRIF	**Iriomote-Funau**	**3.94**	**37**	P	**Pn**	**15 47 43.5**	**-0.1**
JKRS	**Kuro-shima**	**4.03**	**40**	P	**Pn**	**15 47 44.4**	**-0.4**
JIJ	**Ishigaki jima**	**4.20**	**40**	P	**Pn**	**15 47 46.9**	**-0.3**
JIJ				S	**Sn**	**15 48 34.9**	**-1.4**
PALP	**Palanan**	**4.26**	**163**	*e*P	**Pn**	**15 47 49.0**	**+0.9**
PALP				*e*S	**Sn**	**15 48 26.1**	**-12**
QZH	**Quanzhou**	**4.43**	**328**	Pn	**Pn**	**15 47 46.3**	**-4.0**
QZH				Sn	**Sn**	**15 48 33.0**	**-9.0**
QZH				LR	LR		
	comp=N,4μm,9.2s						
QZH				LR	LR		
	comp=E,8μm,11.5s						
QZH				LR	LR		
	comp=Z,7μm,14.0s						
JTJ	**Tarama**	**4.75**	**43**	P	**Pn**	**15 47 54.8**	**+0.1**
JTJ				S	**Sn**	**15 48 49.3**	**-0.6**
BOLP	**Bolinao**	**4.91**	**194**	*e*P	**Pn**	**15 47 57.5**	**+0.5**
JOGS	**Gusukube**	**5.29**	**47**	*e*S	**Sn**	**15 49 04.8**	**+1.5**
TGY	**Tagaytay City**	**7.04**	**182**	Pn	**Pn**	**15 48 32.1**	**+5.9**
	comp=Z,14nm,0.3s,baz=174,slow=9.1,SNR=2.8						
QIZ	**Qiongzhong**	**10.84**	**261**	P	**Pn**	**15 49 22.9**	**+4.5**
QIZ				S	**Sn**	**15 51 22.5**	**+2.6**
QIZ				pmax	pmax		
	comp=Z,7.0nm,1.2s						
QIZ	**Qiongzhong**	**10.84**	**261**	Pn	**Pn**	**15 49 16.9**	**-1.5**
	comp=Z,83nm,1.2s						
NJ2	**Nanjing**	**11.02**	**350**	*e*P	**Pn**	**15 49 22.3**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GYA	**Guiyang**	**14.27**	**294**	P	**Pn**	**15 50 04.6**	**-0.5**
GYA				PP		15 50 15.9	
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,80nm,4.3s						
GYA				LR	LR		
	comp=N,1μm,14.9s						
GYA				LR	LR		
	comp=E,850nm,15.0s						
GYA				LR	LR		
	comp=Z,1μm,13.8s						
TIA	**Tai'an**	**15.39**	**348**	*e*P	**Pn**	**15 50 25.3**	**+5.1**
MYLDM	**Lahad Datu**	**16.11**	**190**	P	**Pn**	**15 50 32.8**	**+3.0**
	comp=Z,54nm,1.8s						
XAN	**Xi'an**	**16.77**	**322**	P	**Pn**	**15 50 39.9**	**+1.9**
XAN				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KSRS	**Korea Array**	**17.25**	**18**	P	**Pn**	**15 50 44.8**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=198,slow=11,SNR=38						
KMI	**Kunming**	**17.39**	**287**	P	**Pn**	**15 50 46.1**	**+0.3**
KMI				pP	pP	15 50 48.3	-1.7
KMI				PP		15 51 00.5	
KMI				S	**Sn**	**15 53 58.0**	**-1.4**
KMI				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KMI				LR	LR		
	comp=N,1μm,19.0s						
KMI				LR	LR		
	comp=E,2μm,16.4s						
KMI				LR	LR		
	comp=Z,2μm,17.7s						
SGSI	**Sangihe**	**17.90**	**166**	P	**Pn**	**15 50 50.6**	**-1.7**
	comp=Z,33nm,1.2s						
BJT	**Baijiatuau**	**19.26**	**348**	*e*P	**Pn**	**15 51 08.2**	**-0.4**
BJT				pmax	pmax		
	comp=Z,22nm,0.8s						
BJT	**Baijiatuau**	**19.26**	**348**	*e*P	**Pn**	**15 51 08.2**	**-0.5**
	comp=Z,22nm,0.8s						
MNI	**Manado**	**19.94**	**169**	P	**Pn**	**15 51 17.2**	**+0.2**
	comp=Z,146nm,0.9s						
SBUM	**Sibu**	**20.55**	**206**	P	**P**	**15 51 21.6**	**-0.3**
	comp=Z,16nm,1.2s						
MRSI	**Marisa**	**20.59**	**178**	P	**P**	**15 51 23.0**	**+0.7**
	comp=Z,72nm,1.0s						
KMSI	**Cibinong**	**20.66**	**172**	P	**P**	**15 51 23.6**	**+0.5**
	comp=Z,172nm,1.3s						
CHTO	**Chiang Mai**	**21.01**	**267**	*e*P	**P**	**15 51 29.0**	**+2.1**
CHTO				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.0						
CHTO	**Chiang Mai**	**21.01**	**267**	*e*P	**P**	**15 51 29.0**	**+2.1**
	comp=Z,8.8nm,1.2s,mb4.0						
CMAR	**Chiang Mai Arr**	**21.07**	**267**	P	**P**	**15 51 26.4**	**-1.1**
	comp=Z,1.2nm,0.9s,baz=70,slow=9.7,SNR=9.4						
TNTI	**Ternate**	**21.17**	**163**	P	**P**	**15 51 29.7**	**+1.1**
	comp=Z,34nm,1.1s,mb4.6						
LZH	**Lanzhou**	**21.20**	**318**	*e*P	**P**	**15 51 34.4**	**+5.6**
LZH				pP		15 51 38.6	
LZH				sP	sP	15 51 42.9	+10
LZH				PP		15 51 57.0	
LZH				*e*S	**S**	**15 55 24.3**	**-0.2**
LZH				sS	sS	15 55 32.0	+2.9
LZH				PcP	PcP	15 55 39.8	+5.6
LZH				pmax	pmax		
	comp=Z,32nm,1.2s,mb4.5						
LZH				pmax	pmax		
	comp=Z,130nm,5.4s						
LZH				LR	LR		
	comp=N,1μm,11.8s						
LZH				LR	LR		
	comp=Z,2μm,12.0s,MS4.7						
HHC	**Hu-ho-hao-te**	**21.24**	**340**	*e*P	**P**	**15 51 28.3**	**-0.9**
HHC				S	**S**	**15 55 19.5**	**-5.6**
HHC				pmax	pmax		
	comp=Z,13nm,0.6s,mb4.4						
HHC				pmax	pmax		
	comp=Z,2μm,5.3s						
MAJO	**Matsushiro**	**21.33**	**40**	*e*P	**P**	**15 51 32.0**	**+1.7**
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.0						
MAJO	**Matsushiro**	**21.33**	**40**	*e*P	**P**	**15 51 31.9**	**+1.7**
	comp=Z,7.0nm,0.8s,mb4.0						
MAT	**Matsushiro**	**21.33**	**40**	P	**P**	**15 51 32.0**	**+1.7**
MJAR	**Matsushiro Arr**	**21.33**	**40**	P	**P**	**15 51 31.1**	**+0.9**
	comp=Z,5.1nm,0.8s,mb3.9,baz=229,slow=7.5,SNR=31						
PCI	**Palu**	**21.98**	**184**	P	**P**	**15 51 38.6**	**+1.2**
	comp=Z,54nm,1.2s,mb4.8						
LUWI	**Luwuk**	**22.14**	**176**	P	**P**	**15 51 39.3**	**+0.3**
	comp=Z,2μmcomp=Z,207nm,1.1s,mb5.5						
CN2	**Changchun**	**22.84**	**8**	*e*P	**P**	**15 51 47.3**	**+1.0**
TTSI	**Tana Toraja**	**24.11**	**183**	P	**P**	**15 52 01.0**	**+1.9**
	comp=Z,43nm,0.9s,mb4.8						
MDJ	**Mudanjiang**	**24.40**	**15**	P	**P**	**15 52 00.6**	**-0.8**
MDJ				pP		15 52 03.5	
MDJ				PcP	PcP	15 55 39.3	-1.3
MDJ				S	**S**	**15 56 20.5**	**-0.6**
MDJ				ScP	ScP	15 59 17.6	-1.8
MDJ				PcS	PcS	15 59 19.6	-0.7
MDJ				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.4						
MDJ				LR	LR		
	comp=N,2μm,16.8s,MS4.9						
MDJ				LR	LR		
	comp=E,3μm,19.8s,MS4.9						
MDJ				LR	LR		
	comp=Z,2μm,16.8s,MS4.7						
MDJ	**Mudanjiang**	**24.40**	**15**	*e*P	**P**	**15 52 01.2**	**-0.2**
	comp=Z,12nm,0.8s,mb4.4						
NLAI	**Namlea**	**24.95**	**166**	P	**P**	**15 52 07.5**	**+0.7**
	comp=Z,2μmcomp=Z,135nm,1.0s,mb5.4						
SPSI	**Sidrap Palu**	**25.02**	**183**	P	**P**	**15 52 03.9**	**-3.5**
GTA	**Gaotai**	**25.77**	**320**	*e*P	**P**	**15 52 15.9**	**+1.9**
GTA				pP	pP	15 52 20.3	+3.2
GTA				sP	sP	15 52 23.8	+5.5
GTA				S	**S**	**15 56 42.1**	**-1.1**
GTA				sS	sS	15 56 49.4	+1.2
GTA				SS		15 57 47.4	
GTA				pmax	pmax		
	comp=Z,2μm,5.6s						
GTA				LR	LR		
	comp=N,2μm,15.5s,MS5.1						
GTA				LR	LR		
	comp=E,3μm,14.6s,MS5.1						
GTA				LR	LR		
	comp=Z,2μm,15.8s,MS4.8						
ERM	**Erimo**	**27.83**	**37**	*i* P	**P**	**15 52 34.3**	**+1.8**
ULN	**Ulaanbaatar**	**28.95**	**340**	*e*P	**P**	**15 52 43.1**	**+0.6**
ULN				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.5						
ULN	**Ulaanbaatar**	**28.95**	**340**	*e*P	**P**	**15 52 43.1**	**+0.6**
	comp=Z,9.7nm,1.1s,mb4.5						
ASAJ	**Asahikawa**	**28.97**	**33**	P	**P**	**15 52 43.5**	**+0.8**
	comp=Z,5.2nm,0.6s,mb4.5,baz=242,slow=13,SNR=9.7						
SONM	**Songino Array**	**29.14**	**339**	P	**P**	**15 52 44.5**	**+0.3**
	comp=Z,5.7nm,0.8s,mb4.4,baz=148,slow=12,SNR=5.8						
YSS	**Yuzh-Sakhalins**	**31.12**	**29**	*e*P	**P**	**15 53 00.0**	**-1.7**
YSS	**Yuzh-Sakhalins**	**31.12**	**29**	*e*P	**P**	**15 53 01.3**	**-0.4**
	comp=Z,9.4nm,1.0s,mb4.6						
MOY	**Mondy**	**34.25**	**338**	*e*P	**P**	**15 53 30.6**	**+1.6**
KAKA	**Kakadu**	**35.45**	**161**	*e*P	**P**	**15 53 38.2**	**-1.5**
	comp=Z,13nm,0.8s,mb4.9						
KAKA	**Kakadu**	**35.45**	**161**	*e*P	**P**	**15 53 38.1**	**-1.7**
WMQ	**Urumqi**	**35.77**	**317**	*e*P	**P**	**15 53 41.8**	**-0.4**
WMQ				pP	pP	15 53 46.1	+0.8
WMQ				sP	sP	15 53 48.8	+2.2
WMQ				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.5						
WMQ				pmax	pmax		
	comp=Z,100nm,4.2s						
WMQ				LR	LR		
	comp=N,910nm,18.0s,MS4.8						
WMQ				LR	LR		
	comp=E,1μm,18.0s,MS4.8						
WMQ				LR	LR		
	comp=Z,1μm,21.0s,MS4.6						
FITZ	**Fitzroy Crossi**	**39.28**	**173**	*e*P	**P**	**15 54 10.1**	**-2.1**
	comp=Z,10.0nm,1.1s,mb4.5						
FITZ	**Fitzroy Crossi**	**39.28**	**173**	*e*P	**P**	**15 54 10.6**	**-1.6**
PMG	**Port Moresby**	**39.70**	**137**	*e*P	**P**	**15 54 09.7**	**-6.1**
MK31	**Makanchi Array**	**40.52**	**318**	*e*P	**P**	**15 54 21.6**	**-0.6**
MKAR	**Makanchi Array**	**40.52**	**318**	P	**P**	**15 54 22.6**	**+0.4**
	comp=Z,1.5nm,0.7s,mb3.7,baz=116,slow=10,SNR=20						
MKAR				ScP	ScP	16 00 15.3	+1.1
	comp=Z,0.3nm,0.7s,baz=116,slow=2.8,SNR=4.2						
MKAR				LR	LR	16 13 30.2	
	comp=Z,2μm,19.3s,MS4.9,baz=321,slow=40						
YAK	**Yakutsk**	**41.25**	**6**	*e*P	**P**	**15 54 23.7**	**-4.3**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
YAK	**Yakutsk**	**41.25**	**6**	*e*P	**P**	**15 54 27.4**	**-0.6**
ZALV	**Zalesovo Beam**	**42.77**	**329**	P	**P**	**15 54 40.4**	**-0.2**
	comp=Z,6.4nm,0.6s,mb4.5,baz=116,slow=7.7,SNR=19						
WRAB	**Tennant Creek**	**42.85**	**162**	*e*P	**P**	**15 54 39.2**	**-2.3**
WRAB				pmax	pmax		
	comp=Z,35nm,1.4s,mb4.9						
WRAB	**Tennant Creek**	**42.85**	**162**	*e*P	**P**	**15 54 39.2**	**-2.3**
	comp=Z,35nm,1.4s,mb4.9						
WRA	**Warramunga Arr**	**42.85**	**162**	P	**P**	**15 54 39.2**	**-2.4**
	comp=Z,4.6nm,0.7s,mb4.3,baz=343,slow=9.0,SNR=35						
NVS	**Novosibirsk**	**44.04**	**329**	*e*P	**P**	**15 54 51.0**	**+0.2**

KURK Kurchatov 44.41 322 P P 15 54 53.8 0.0
comp=Z,2.4nm,0.8s,mb4.0,baz=119,slow=7.4,SNR=22
KURK Kurchatov 44.41 322 *ce*P **P 15 54 59.1 +5.3**
KURK pmax pmax
comp=Z,9.0nm,1.2s,mb4.4
KURK Kurchatov 44.41 322 *e*P **P 15 54 53.4 -0.4**
comp=Z,12nm,1.2s,mb4.5
ASAR Alice Springs 46.27 164 P P 15 55 07.8 -1.1
comp=Z,2.7nm,0.8s,mb4.2,baz=345,slow=7.2,SNR=65
CTA Charters Tower 47.80 147 *e*P **P 15 55 20.6 -0.2**
comp=Z,7.8nm,0.8s,mb4.8
CTA Charters Tower 47.80 147 P P 15 55 20.7 -0.1
comp=Z,15nm,1.0s,mb5.0,baz=323,slow=10.0,SNR=8.9
CTA Charters Tower 47.80 147 P P 15 55 20.7 -0.1
CTAO Charters Tower 47.80 147 *e*P **P 15 55 20.6 -0.2**
CTAO pmax pmax
comp=Z,43nm,1.5s,mb5.3
CTAO Charters Tower 47.80 147 *e*P **P 15 55 20.6 -0.2**
comp=Z,43nm,1.5s,mb5.3
BVAR Borovoye Array 50.00 322 P P 15 55 38.4 +1.0
comp=Z,1.8nm,0.9s,mb4.1,baz=114,slow=10.0,SNR=5.4
BRVK Borovoye 50.07 322 *ce*P **P 15 55 41.7 +3.8**
BRVK pmax pmax
comp=Z,11nm,1.7s,mb4.6
STKA Stephens Creek 56.27 159 *e*P **P 15 56 23.3 -0.5**
comp=Z,4.5nm,0.7s,mb4.6
STKA Stephens Creek 56.27 159 P P 15 56 22.9 -0.8
comp=Z,5.9nm,0.8s,mb4.7,baz=345,slow=10,SNR=9.9
ARU Arti 57.50 324 P **P 15 56 30.5 -1.8**
CNB Canberra Magne 62.23 154 *e*P **P 15 57 05.1 +0.1**
KDAK Kodiak Island 70.37 35 *i*P **P 15 57 59.0 +2.0**
ARCES ARCESS Array B 72.31 338 P P 15 58 09.2 +0.7
comp=Z,3.3nm,1.0s,mb4.2,baz=18,slow=5.1,SNR=6.5
MENT Mentasta 73.67 28 *e*P **P 15 58 16.4 -0.2**
FINES FINESS Array B 74.02 330 P P 15 58 18.4 -0.3
comp=Z,1.8nm,0.9s,mb4.0,baz=104,slow=16,SNR=6.2
BRTR Keskin Array B 74.94 307 P P 15 58 24.6 0.0
comp=Z,0.3nm,0.3s,mb3.7,baz=41,slow=9.8,SNR=2.4
AKASG Malin Array Be 75.10 319 P P 15 58 25.8 +0.6
comp=Z,0.5nm,0.4s,mb3.8,baz=61,slow=6.8,SNR=4.2
DAWY Dawson 75.22 27 *e*P **P 15 58 25.1 -0.6**
NOA NORSAR Array B 80.86 332 P P 15 58 57.5 +0.4
comp=Z,0.9nm,0.9s,mb3.7,baz=65,slow=5.4,SNR=2.6
YKA Yellowknife Ar 85.74 23 P P 15 59 21.9 -0.2
comp=Z,1.0nm,0.5s,mb4.3,baz=306,slow=4.6,SNR=4.2
YKA Yellowknife Ar 85.74 23 P P 15 59 21.9 -0.2

SKHL 13 15:47:11.0±0.2, 53.30N×142.83E, h10km, mb3.8/5, 1D, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OKH	**Okha**	**0.26**	**14**	*e*Pg		Pg	15 47 17.5	+1.3
OKH				⇓*i*Pg		Pg	15 47 17.5	+1.3
OKH					AMB	AMB	15 47 17.7	
	999μm,0.4s							
OKH					AMB	AMB	15 47 17.7	
	390nm,0.4s							
OKH					*e*Sg	Sg	15 47 22.2	+2.4
OKH					A		15 47 23.2	
	4μm,0.4s							
OKH					A		15 47 23.2	
	7μm,0.4s							
NKL	**Nikolayevsk**	**1.30**	**264**	*e*Pg		Pg	15 47 37.0	+1.0
NKL					AMB	AMB	15 47 39.0	
	130nm,0.3s							
NKL					*e*Sg	Sg	15 47 55.0	+2.2
NKL					A		15 47 58.0	
	670nm,0.4s							
TYV	**Tymovskoe**	**2.44**	**183**	*e*Pg		Pg	15 47 59.7	+1.9
TYV					AMB	AMB	15 48 03.8	
	18nm,1.0s							
TYV					AMB	AMB	15 48 03.8	
	22nm,1.0s							
TYV					*e*Sg	Sg	15 48 32.5	+3.1
TYV					A		15 48 33.0	
	8.0nm,0.7s							
UGL	**Uglegorsk**	**4.25**	**187**	*e*Sg		Sg	15 49 35.3	+7.8
UGL					A		15 50 06.0	
	73nm,0.4s							
GRNR	**Gornyy**	**4.70**	**240**	*e*Pg		Pg	15 48 44.0	+3.1
GRNR					AMB	AMB	15 48 44.5	
	5.0nm,0.4s							
GRNR					*e*Sg	Sg	15 49 44.0	+2.3
GRNR					A		15 49 45.0	
	11nm,0.4s							
GRNR					A		15 49 45.0	
	15nm,0.4s							
EKMR	**Ekimchan**	**5.95**	**272**	*e*Pg		Pg	15 49 08.5	+3.7
EKMR					AMB	AMB	15 49 09.2	
	3.0nm,0.4s							
EKMR					*e*S	Sn	15 49 48.5	+1.4
EKMR					*e*Sg	Sg	15 50 24.0	+2.3
EKMR					A		15 50 24.3	
	18nm,0.8s							
ZEA	**Zeya**	**9.29**	**279**	*e*Sg		Sn	15 52 09.7	+60
ZEA					A		15 52 12.4	
	9.0nm,1.0s							
KROS	**Kirovskiy**	**9.44**	**283**	*e*Pg		Pn	15 49 52.2	+25
KROS					AMB	AMB	15 49 53.5	
	2.0nm,0.6s							
KROS					*e*Sg	Sn	15 52 11.5	+59
KROS					A		15 52 12.5	
	6.0nm,0.8s							
KROS					A		15 52 12.5	
	5.0nm,0.8s							

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*IDC **13** 16:13:12.1±1.0, 31.51N×103.23E, h0km, mb3.7/8, mb1 3.8/10, mb1mx3.6/24, mbtmp3.6/10, ML3.6/2, Error ellipse: s-maj=34.6km s-min=18.3km az=57.0*
*BJI **13** 16:13:15.1, 31.41N×103.37E, h19km, mb4.2/3, ML4.0/17, Ms3.9/2*
*NEIC **13** 16:13:15.6±2.9, 31.55N×103.28E, h23km±23km, mb3.9/2, Error ellipse: s-maj=13.2km s-min=7.6km az=71.0*
ISC 13 16:13:14.2±1.2, 31.51N±0.04×103.51E±0.04, h6km±9km, n27, σ1.37/35, mb3.8/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.64**	**160**	Pg		**Pg**	**16 13 27.3**	**+0.8**
CD2				Sg		**Sg**	**16 13 38.6**	**+3.8**
CD2				smax				
	comp=N,3μm,0.8s							
CD2				smax				
	comp=E,4μm,0.9s							
LZH	**Lanzhou**	**4.57**	**3**	*e*Pn		**Pn**	**16 14 25.4**	**+1.6**
LZH				Sn		**Sn**	**16 15 19.0**	**+1.8**
LZH				Sg		**Sg**	**16 15 34.6**	**-6.4**
LZH				smax				
	comp=N,120nm,0.8s							
LZH				smax				
	comp=E,280nm,1.0s							
LZH				LR		LR		
	comp=N,1μm,6.4s							
XAN	**Xi'an**	**5.21**	**60**	Pg		**Pg**	**16 14 50.3**	**-3.7**
XAN				Sg		**Sg**	**16 15 59.9**	**-1.7**
XAN				smax				
	comp=N,170nm,0.8s							
XAN				smax				
	comp=E,56nm,1.0s							
ENH	**Enshi**	**5.29**	**102**	*e*P		**Pn**	**16 14 36.3**	**+2.5**
	comp=E,157nm,1.0s							
KMI	**Kunming**	**6.40**	**186**	Pn		**Pn**	**16 14 47.8**	**-1.3**
KMI				Sn		**Sn**	**16 15 52.6**	**-10**
KMI				Sg		**Sg**	**16 16 30.1**	**-10**
KMI				smax				
	comp=N,74nm,2.2s							
KMI				smax				
	comp=E,38nm,1.5s							
WHN	**Wuhan**	**9.36**	**93**	*e*P		**Pn**	**16 15 21.3**	**-8.3**
WHN				S		**Sn**	**16 17 16.0**	**+0.9**
HHC	**Hu-ho-hao-te**	**11.36**	**33**	*e*P		**Pn**	**16 15 57.8**	**+0.8**
HHC				S		**Sn**	**16 18 07.4**	**+3.2**
HHC				pmax		pmax		
	comp=Z,15nm,0.5s							
CMAR	**Chiang Mai Arr**	**13.64**	**199**	Pn		**Pn**	**16 16 27.4**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=3.8,slow=8.7,SNR=4.0							
CMAR				Lg			16 20 30.2	
	comp=Z,0.2nm,0.3s,baz=8.7,slow=27,SNR=4.2							
ODAN	**Odare**	**14.82**	**256**	*e*P		**Pn**	**16 16 45.6**	**+1.3**
	comp=Z,5.1nm,0.6s							
RAMN	**Ramite**	**15.44**	**257**	*e*P		**Pn**	**16 16 53.2**	**+0.6**
JIRN	**Jiri**	**15.54**	**260**	*e*P		**Pn**	**16 16 55.2**	**+1.2**

2008 JUL

	comp=Z,6.7nm,0.4s							
GUN	**Gumba**	**15.73**	**261**	*e*P		**Pn**	**16 16 58.5**	**+2.1**
PKI	**Pulchoki**	**16.23**	**261**	*e*P		**Pn**	**16 17 03.2**	**+0.3**
	comp=Z,22nm,0.7s							
KKN	**Kakani**	**16.27**	**261**	*e*P		**Pn**	**16 17 03.8**	**+0.4**
	comp=Z,25nm,0.9s							
SONM	**Songino Array**	**16.45**	**7**	Pn		**Pn**	**16 17 05.1**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=148,slow=6.8,SNR=2.9							
DMN	**Daman**	**16.47**	**261**	*e*P		**Pn**	**16 17 06.2**	**+0.2**
	comp=Z,26nm,0.9s							
ULN	**Ulaanbaatar**	**16.55**	**8**	*e*P		**Pn**	**16 17 05.6**	**-1.2**
	comp=Z,1.2nm,0.9s							
GKN	**Gorkha**	**16.75**	**263**	*e*P		**Pn**	**16 17 08.8**	**-0.7**
KSRS	**Korea Array**	**20.95**	**67**	P		**P**	**16 17 59.1**	**+1.3**
	comp=Z,3.2nm,0.7s,baz=252,slow=9.8,SNR=16							
MKAR	**Makanchi Array**	**22.34**	**319**	P		**P**	**16 18 09.0**	**-3.6**
	comp=Z,0.7nm,0.8s,mb3.1,baz=126,slow=12,SNR=5.9							
ZALV	**Zalesovo Beam**	**26.13**	**335**	P		**P**	**16 18 46.5**	**-2.3**
	comp=Z,0.3nm,0.3s,mb3.4,baz=146,slow=11,SNR=3.9							
KURK	**Kurchatov**	**26.61**	**323**	P		**P**	**16 18 51.5**	**-1.8**
	comp=Z,1.3nm,0.8s,mb3.5,baz=126,slow=9.3,SNR=4.0							
FINES	**FINESS Array B**	**56.94**	**326**	P		**P**	**16 22 58.6**	**-1.3**
	comp=Z,1.3nm,0.8s,mb4.0,baz=193,slow=36,SNR=2.4							
WRAB	**Tennant Creek**	**59.10**	**146**	*e*P		**P**	**16 23 14.5**	**-1.0**
	comp=Z,14nm,1.5s,mb4.8							
WRA	**Warramunga Arr**	**59.10**	**146**	P		**P**	**16 23 14.7**	**-0.8**
	comp=Z,1.4nm,0.6s,mb4.2,baz=338,slow=7.3,SNR=6.0							
ASAR	**Alice Springs**	**62.11**	**148**	P		**P**	**16 23 35.8**	**-0.2**
	comp=Z,0.5nm,0.8s,mb3.7,baz=324,slow=9.3,SNR=3.4							
NOA	**NORSAR Array B**	**64.04**	**327**	P		**P**	**16 23 46.2**	**-2.2**
	comp=Z,0.7nm,0.8s,mb3.8,baz=75,slow=6.8,SNR=3.2							

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*IDC **13** 16:17:05.3±6.7, 7.46S×119.47E, h293km±74km, mb3.4/7, mb1 3.3/9, mb1mx3.1/23, mbtmp3.3/9, Error ellipse: s-maj=108.4km s-min=24.8km az=55.0*
*NEIC **13** 16:17:05.3±1.4, 7.63S×119.14E, h295km±17km, mb3.5/1, Error ellipse: s-maj=36.5km s-min=8.4km az=51.0*
ISC 13 16:17:03.9±1.5, 7.8S±0.2×119.0E±0.2, h283km±17km, n17, σ0.79/20, mb3.6/7, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.13**	**149**	P		**Pn**	**16 19 51.1**	**+2.7**
	0.3nm,0.3s,baz=343,slow=8.1,SNR=12							
FITZ				S		**S**	**16 22 02.0**	**-1.4**
	0.4nm,0.3s,baz=172,slow=20,SNR=4.6							
FITZ	**Fitzroy Crossi**	**12.13**	**149**	*e*P		**Pn**	**16 19 51.8**	**+3.4**
FITZ				S		**S**	**16 22 02.0**	**-1.4**
KSM	**Kuching**	**12.65**	**316**	P		**Pn**	**16 19 54.8**	**0.0**
KKM	**Kota Kinabalu**	**13.99**	**348**	*e*P		**Pn**	**16 20 10.6**	**-0.4**
KAKA	**Kakadu**	**14.07**	**112**	*e*P		**Pn**	**16 20 12.6**	**+0.7**
WRA	**Warramunga Arr**	**19.14**	**131**	P		**P**	**16 21 06.2**	**-0.7**
	0.3nm,0.3s,baz=304,slow=12,SNR=22							
WRA				S		**S**	**16 24 42.8**	**+14**
	0.3nm,0.3s,baz=306,slow=24,SNR=5.1							
WRAB	**Tennant Creek**	**19.15**	**131**	*e*P		**P**	**16 21 06.2**	**-0.7**
	1.2nm,0.5s							
ASAR	**Alice Springs**	**21.30**	**140**	P		**P**	**16 21 29.4**	**+0.5**
	0.5nm,0.4s,mb3.2,baz=313,slow=8.6,SNR=28							
STKA	**Stephens Creek**	**31.89**	**142**	P		**P**	**16 23 04.7**	**+1.3**
	4.7nm,1.0s,mb4.0,baz=320,slow=12,SNR=2.8							
STKA	**Stephens Creek**	**31.89**	**142**	P		**P**	**16 23 04.1**	**+0.8**
MK31	**Makanchi Array**	**63.37**	**333**	*e*P		**P**	**16 27 03.9**	**+0.4**
MKAR	**Makanchi Array**	**63.37**	**333**	P		**P**	**16 27 04.0**	**+0.6**
	1.0nm,0.3s,mb3.9,baz=158,slow=6.0,SNR=32							
ZALV	**Zalesovo Beam**	**67.90**	**339**	P		**P**	**16 27 31.6**	**-0.4**
	0.6nm,0.4s,mb3.7,baz=106,slow=3.2,SNR=4.8							
KURK	**Kurchatov**	**67.90**	**334**	P		**P**	**16 27 32.1**	**-0.1**
	0.8nm,0.2s,mb4.1,baz=141,slow=6.0,SNR=4.7							
BVAR	**Borovoye Array**	**73.22**	**332**	P		**P**	**16 28 03.3**	**-0.8**
	0.5nm,0.6s,mb3.3,baz=140,slow=5.8,SNR=4.0							
AKTK	**Aktyubinsk**	**78.23**	**325**	P		**P**	**16 28 32.4**	**0.0**
AKTO	**Aktyubinsk**	**78.23**	**325**	P		**P**	**16 28 32.4**	**0.0**
	0.2nm,0.3s,mb3.3,baz=88,slow=6.1,SNR=4.3							

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*MOS **13** 16:24:20.2±1.0, 8.82S×123.99E, h33km, mb5.2/20, Error ellipse: s-maj=15.0km s-min=6.8km az=122.1*
*BJI **13** 16:24:21.5, 9.64S×124.59E, h105km, mB5.2/15, mb5.0/37*
*NEIC **13** 16:24:26.7±1.2, 8.91S×124.01E, h76km±12km, mb4.9/20, Error ellipse: s-maj=12.3km s-min=6.9km az=56.0*
*IDC **13** 16:24:28.1±2.0, 8.81S×123.95E, h85km±17km, mb4.4/18, mb1 4.5/18, mb1mx4.4/21, mbtmp4.4/18, Error ellipse: s-maj=20.5km s-min=10.9km az=66.0*
*ISCJB **13** 16:24:28.5±0.5, 9.22S±0.04×124.13E±0.04, h124km±5km, mb4.9/63, Error ellipse: s-maj=8.2km s-min=4.9km az=139.4*
*DJA **13** 16:24:30, 9.27S×124.07E, h101km, Mw5.3/10*
ISC 13 16:24:29.4±0.4, 9.18S±0.04×124.14E±0.04, h113km±4km, h100km±1.9km: pP-P, n158, σ1.24/160, mb4.9/63, 7C-3D, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**1.96**	**286**	P		**Pn**	**16 25 00.9**	**-1.1**
WSI	**Waingapu**	**3.82**	**262**	P		**Pn**	**16 25 26.2**	**-0.3**
KDI	**Kendari**	**5.40**	**344**	P		**Pn**	**16 25 45.5**	**-2.3**
NLAI	**Namlea**	**6.59**	**27**	P		**Pn**	**16 26 07.0**	**+3.1**
	0.4nm1μm106nm,0.8s							
SPSI	**Sidrap Palu**	**6.76**	**320**	P		**Pn**	**16 26 07.1**	**+0.9**
TTSI	**Tana Toraja**	**7.46**	**325**	P		**Pn**	**16 26 16.6**	**+1.0**
	0.3nm781nm90nm,1.5s							
KNA	**Kununurra**	**7.94**	**146**	P		**Pn**	**16 26 22.0**	**-0.1**
	11nm551nm,0.8s							
LUWI	**Luwuk**	**8.20**	**350**	P		**Pn**	**16 26 27.0**	**+1.3**
	981nm114nm,0.9s							
KAKA	**Kakadu**	**8.87**	**114**	*e*P		**Pn**	**16 26 35.4**	**+0.6**
	89nm,0.3s							
KAKA				*e*S		**Sn**	**16 28 09.4**	**-3.6**
KAKA	**Kakadu**	**8.87**	**114**	*e*Pn		**Pn**	**16 26 35.5**	**+0.6**
	60nm,0.8s							
KAKA	**Kakadu**	**8.87**	**114**	P		**Pn**	**16 26 35.7**	**+0.9**
	3μm267nm,0.6s							
FITZ	**Fitzroy Crossi**	**8.99**	**171**	*e*P		**Sn**	**16 28 11.4**	**-4.4**
	2μm,0.8s							
FITZ	**Fitzroy Crossi**	**8.99**	**171**	P		**Pn**	**16 26 35.8**	**-0.6**
	9.5nm,0.3s,baz=9.1,slow=7.5,SNR=140							
FITZ				S		**Sn**	**16 28 10.2**	**-5.6**
	101nm,0.3s,baz=280,slow=19,SNR=22							
FITZ	**Fitzroy Crossi**	**8.99**	**171**	*e*Pn		**Pn**	**16 26 35.7**	**-0.7**
	4.0nm,0.8s							
FITZ	**Fitzroy Crossi**	**8.99**	**171**	P		**Pn**	**16 26 35.8**	**-0.5**
	3μm165nm,0.6s							
TLE	**Tual**	**9.22**	**68**	P		**Pn**	**16 26 38.2**	**-1.4**
	212nm,0.9s							
PCI	**Palu**	**9.27**	**332**	P		**Pn**	**16 26 40.2**	**0.0**
	60nm,0.8s							
ABJI	**Asem Bagus**	**9.89**	**277**	P		**Pn**	**16 26 46.3**	**-2.4**
	598nm,1.0s							
TNTI	**Ternate**	**10.39**	**18**	P		**Pn**	**16 26 58.0**	**+2.5**
	62nm,1.0s							
SJI	**Sawahan**	**12.32**	**276**	P		**Pn**	**16 27 21.8**	**+0.7**
	2μm91nm,1.0s							
PCJI	**Pacitan**	**12.85**	**273**	P		**Pn**	**16 27 26.0**	**-2.1**
	136nm,0.6s							
WRA	**Warramunga Arr**	**14.55**	**138**	P		**Pn**	**16 27 48.4**	**-1.5**
	12nm,0.3s,baz=320,slow=14,SNR=215							
WRA				S		**Sn**	**16 30 20.1**	**-10**
	16nm,0.3s,baz=312,slow=24,SNR=28							
WRAB	**Tennant Creek**	**14.55**	**138**	*e*P		**Pn**	**16 27 48.8**	**-1.1**
WRAB				pmax		pmax		
	comp=Z,1.0nm,1.6s							
WRAB	**Tennant Creek**	**14.55**	**138**	*e*Pn		**Pn**	**16 27 48.8**	**-1.1**
	comp=Z,1.5nm,1.6s							
WRAB	**Tennant Creek**	**14.55**	**138**	P		**Pn**	**16 27 49.3**	**-0.6**
TSM	**Tawau**	**14.77**	**335**	P		**Pn**	**16 27 54.2**	**+1.4**
MYLDM	**Lahad Datu**	**15.33**	**338**	P		**Pn**	**16 28 02.3**	**+2.5**
SDKM	**Sandakan**	**16.27**	**335**	P		**Pn**	**16 28 12.6**	**+1.2**
BTM	**Bintulu**	**16.51**	**318**	P		**Pn**	**16 28 16.7**	**+2.2**
SBUM	**Sibu**	**16.57**	**314**	P		**Pn**	**16 28 17.5**	**+2.3**
KKM	**Kota Kinabalu**	**17.06**	**332**	P		**Pn**	**16 28 22.4**	**+1.2**
KKM	**Kota Kinabalu**	**17.06**	**332**	*e*P		**Pn**	**16 28 21.4**	**+0.2**
	comp=Z,44nm,0.8s							
ASAR	**Alice Springs**	**17.17**	**148**	P		**Pn**	**16 28 23.2**	**+0.9**
	comp=Z,3.4nm,0.3s,baz=317,slow=11,SNR=124							
ASAR				S		**S**	**16 31 26.5**	**-7.4**
	comp=Z,5.4nm,0.3s,baz=316,slow=19,SNR=18							
KSM	**Kuching**	**17.38**	**307**	*e*P		**Pn**	**16 28 23.7**	**-1.3**
	comp=Z,27nm,0.9s							
KDM	**Kudat**	**17.57**	**335**	P		**Pn**	**16 28 27.8**	**+0.5**
COEN	**Coen**	**19.24**	**106**	*e*P		**P**	**16 28 47.9**	**+2.9**
	comp=Z,403nm,0.8s							
FORT	**Forrest**	**21.80**	**171**	*e*P		**P**	**16 29 15.1**	**+2.8**
	comp=Z,45nm,0.7s,mb4.9							
FORT	**Forrest**	**21.80**	**171**	*e*P		**P**	**16 29 15.2**	**+2.8**
	comp=Z,49nm,0.7s,mb4.9							
PMG	**Port Moresby**	**22.72**	**92**	*ce*P		**P**	**16 29 24.0**	**+1.9**
PMG				pmax		pmax		
	comp=Z,50nm,1.0s							
KLBR	**Kellerberrin**	**23.08**	**194**	*e*P		**P**	**16 29 27.7**	**+2.5**
	comp=Z,11nm,0.6s,mb4.4							
KLBR				*e*S		**S**	**16 33 42.0**	**+14**
TGY	**Tagaytay City**	**23.35**	**352**	P		**P**	**16 29 28.1**	**+0.2**
	comp=Z,126nm,0.5s,mb5.5,baz=191,slow=9.4,SNR=4.7							
KGM	**Kluang**	**23.54**	**297**	P		**P**	**16 29 30.3**	**+0.6**
CTA	**Charters Tower**	**23.95**	**119**	*e*P		**P**	**16 29 37.1**	**+3.7**
	comp=Z,24nm,0.8s,mb4.6							
CTA	**Charters Tower**	**23.95**	**119**	P		**P**	**16 29 37.0**	**+3.6**
	comp=Z,49nm,1.0s,mb4.8,baz=298,slow=11,SNR=28							
CTAO	**Charters Tower**	**23.95**	**119**	*e*P		**P**	**16 29 37.1**	**+3.7**
CTAO				pmax		pmax		
	comp=Z,43nm,0.9s,mb4.8							
CTAO	**Charters Tower**	**23.95**	**119**	*e*P		**P**	**16 29 37.1**	**+3.7**
	comp=Z,43nm,0.9s,mb4.8							
NWAO	**Narrogin (SRO)**	**24.48**	**194**	P		**P**	**16 29 40.7**	**+2.7**
	comp=Z,9.9nm,0.8s,mb4.2,baz=41,slow=8.7,SNR=11							
KTGM	**Kuala Trenggan**	**25.42**	**304**	P		**P**	**16 29 46.6**	**-0.2**
FRIM	**Kepong**	**25.61**	**298**	P		**P**	**16 29 48.3**	**-0.2**
STKA	**Stephens Creek**	**27.79**	**147**	*e*P		**P**	**16 30 11.8**	**+3.9**
	comp=Z,9.8nm,0.8s,mb4.4							
STKA	**Stephens Creek**	**27.79**	**147**	P		**P**	**16 30 11.9**	**+4.1**
	comp=Z,14nm,0.8s,mb4.5,baz=308,slow=6.9,SNR=18							
PSI	**Prapat**	**27.81**	**294**	P		**P**	**16 30 05.8**	**-2.5**
	comp=Z,6.0nm,0.6s,mb4.3,baz=130,slow=6.3,SNR=8.3							
ARMA	**Armidale**	**33.23**	**133**	*e*P		**P**	**16 31 01.3**	**+5.5**
ARMA	**Armidale**	**33.23**	**133**	*e*P		**P**	**16 31 01.6**	**+5.7**
	comp=Z,12nm,0.8s,mb4.8							
YHNB	**Yeheng**	**33.75**	**355**	*e*P		**P**	**16 30 57.7**	**-2.6**
	comp=Z,22nm,1.0s,mb4.9							
TOO	**Toolangi**	**34.22**	**149**	*e*P		**P**	**16 31 10.1**	**+5.9**
NST	**Nakhon Sawan**	**34.28**	**316**	P		**P**	**16 31 06.0**	**+1.0**
CNB	**Canberra Magne**	**34.74**	**142**	*e*P		**P**	**16 31 14.0**	**+5.2**
RIV	**Riverview**	**34.91**	**139**	*e*P		**P**	**16 31 16.2**	**+5.9**
BDT	**Bhumibol Dam**	**36.15**	**317**	P		**P**	**16 31 21.5**	**+0.5**
	comp=Z,27nm,0.7s,mb5.3							
CM31	**Chiang Mai Arr**	**37.05**	**318**	*e*P		**P**	**16 31 29.2**	**+0.5**
	comp=Z,12nm,0.9s,mb4.8							
CMAR	**Chiang Mai Arr**	**37.05**	**318**	P		**P**	**16 31 27.8**	**-0.8**
	comp=Z,14nm,0.9s,mb4.9,baz=144,slow=6.8,SNR=87							
CMAR				ScP		ScP	16 37 26.4	+2.4
	comp=Z,2.2nm,0.9s,baz=164,slow=3.3,SNR=13							
CHG	**Chiang Mai**	**37.30**	**318**	⇑P		**P**	**16 31 31.1**	**+0.3**
	comp=Z,22nm,0.9s,mb5.1							
CHTO	**Chiang Mai**	**37.30**	**318**	*e*P		**P**	**16 31 29.8**	**-1.0**
CHTO				pmax		pmax		
	comp=Z,20nm,0.9s,mb5.0							
CHTO	**Chiang Mai**	**37.30**	**318**	*e*P		**P**	**16 31 29.8**	**-1.0**
	comp=Z,20nm,0.9s,mb5.1							
CHRT	**Chiangrai**	**37.53**	**320**	⇓P		**P**	**16 31 32.5**	**-0.2**
	comp=Z,145nm,0.8s,mb5.9							
GYA	**Guiyang**	**39.28**	**335**	⇑*i*P		**P**	**16 31 48.0**	**+0.7**
GYA				pP		pP	16 32 12.4	-0.5
GYA				sP		sP	16 32 25.0	-0.8
GYA				PP		PP	16 33 25.8	+6.0
GYA				PcP		PcP	16 33 55.3	+1.3
GYA				ScP		ScP	16 37 33.8	+1.4
GYA				S		**S**	**16 37 41.9**	**+2.0**
GYA				sS		sS	16 38 22.4	-1.8
GYA				SS		SS	16 40 33.8	-4.3
GYA				pmax		pmax		
	comp=Z,20nm,0.8s,mb5.0							
GYA				pmax		pmax		
	comp=Z,120nm,4.2s							
GYA				LR		LR		
	comp=N,580nm,17.9s							
GYA				LR		LR		
	comp=E,450nm,17.0s							
GYA				LR		LR		
	comp=Z,510nm,16.8s							
KMI	**Kunming**	**39.97**	**329**	P		**P**	**16 31 55.4**	**+2.4**
KMI				pP		pP	16 32 18.5	-0.2
KMI				sP		sP	16 32 30.3	-1.3
KMI				PP		PP	16 33 31.6	+4.4
KMI				S		**S**	**16 37 52.3**	**+2.2**
KMI				sS		sS	16 38 34.1	-0.5
KMI				pmax		pmax		
	comp=Z,13nm,0.9s,mb4.8							
KMI				LR		LR		
	comp=N,560nm,18.1s							
KMI				LR		LR		
	comp=E,320nm,22.6s							
KMI				LR		LR		
	comp=Z,440nm,24.1s							
NJ2	**Nanjing**	**41.31**	**353**	*e*P		**P**	**16 32 04.4**	**+0.5**
NJ2				pmax		pmax		
	comp=Z,10.0nm,0.6s,mb4.8							
CD2	**Chengdu**	**44.40**	**335**	P		**P**	**16 32 28.0**	**-0.9**
CD2				pP		pP	16 32 50.9	-4.1
CD2				sP		sP	16 33 02.4	-5.3
CD2				PP		PP	16 34 14.4	-0.4
CD2				S		**S**	**16 38 54.8**	**-0.3**
CD2				pmax		pmax		
	comp=Z,20nm,0.7s,mb5.0							
CD2				LR		LR		
	comp=N,830nm,17.2s					

PKI	**Pulchoki**	52.35	315	*e*P	P	16 33 29.5	-0.5
	comp=Z,147nm,0.6s						
PKIN	**Phulchoki**	52.37	315	*e*P	P	16 33 30.1	0.0
	comp=Z,105nm,0.5s,mb6.1						
KKN	**Kakani**	52.58	316	*e*P	P	16 33 31.2	-0.5
	comp=Z,93nm,0.7s,mb5.9						
DMN	**Daman**	52.59	315	*e*P	P	16 33 31.2	-0.5
	comp=Z,158nm,0.9s,mb6.0						
GKN	**Gorkha**	53.16	315	*e*P	P	16 33 35.3	-0.6
	comp=Z,122nm,0.5s						
GTA	**Gaotai**	53.36	337	*e*P	P	16 33 36.5	-0.7
GTA				pP	pP	16 34 01.8	-2.3
GTA				sP	sP	16 34 15.5	-1.2
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.4						
MDJ	**Mudanjiang**	53.77	5	P	P	16 33 39.5	-0.6
MDJ				pP	pP	16 34 00.8	-6.2
MDJ				sP	sP	16 34 16.1	-3.5
MDJ				PcP	PcP	16 34 41.5	-3.1
MDJ				PP	PP	16 35 40.1	-2.3
MDJ				ScP	ScP	16 38 28.3	-3.9
MDJ				PcS	PcS	16 38 41.0	-2.7
MDJ				S	**S**	**16 41 06.3**	**+0.5**
MDJ				sS	sS	16 41 46.9	-5.3
MDJ				ScS	ScS	16 43 16.1	-2.2
MDJ				pmax	pmax		
	comp=Z,64nm,0.9s,mb5.7						
ERM	**Erimo**	53.85	18	*e*P	P	16 33 40.9	+0.2
ERM				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.7						
ULN	**Ulaanbaatar**	58.78	347	*e*P	P	16 34 14.5	-1.1
ULN				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
ULN	**Ulaanbaatar**	58.78	347	*e*P	P	16 34 14.5	-1.1
	comp=Z,9.5nm,1.0s,mb4.8						
SONM	**Songino Array**	58.91	346	P	P	16 34 15.7	-0.7
	comp=Z,4.2nm,0.7s,mb4.6,baz=165,slow=7.2,SNR=7.3						
SDNR	**Sundarnagar**	60.60	314	*e*PKP	P	16 34 29.5	+1.1
THN	**Thein Dam**	62.00	314	*e*PKP	P	16 34 35.0	-2.8
WMQ	**Urumqi**	62.25	331	P	P	16 34 40.8	+1.5
WMQ				pP	pP	16 35 05.0	-1.9
WMQ				sP	sP	16 35 16.1	-3.2
WMQ				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.0						
WMQ				pmax	pmax		
	comp=Z,860nm,7.0s						
TLY	**Talaya**	63.14	346	*e*P	P	16 34 44.3	-0.7
TLY				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
MOY	**Mondy**	63.80	344	*e*P	P	16 34 49.9	+0.5
KSH	**Kashi**	65.86	321	P	P	16 35 03.3	+0.3
KSH				pP	pP	16 35 27.8	-3.1
KSH				PcP	PcP	16 35 34.4	+1.3
KSH				sP	sP	16 35 38.1	-5.1
KSH				PP	PP	16 37 30.5	+1.0
KSH				ScP		16 39 26.4	
KSH				PcS		16 39 36.8	
KSH				S	S	16 43 38.3	-2.8
KSH				ScS	ScS	16 44 45.3	-3.2
KSH				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.9						
KSH				pmax	pmax		
	comp=Z,140nm,6.3s						
KSH				LR	LR		
	comp=N,290nm,11.7s						
KSH				LR	LR		
	comp=E,320nm,12.4s						
KSH				LR	LR		
	comp=Z,400nm,11.4s						
MK31	**Makanchi Array**	67.03	330	*e*P	P	16 35 09.5	-0.8
MKAR	**Makanchi Array**	67.03	330	P	P	16 35 09.7	-0.6
	comp=Z,22nm,0.9s,mb5.0,baz=136,slow=7.9,SNR=131						
KZA	**Kyzart**	67.82	323	P	P	16 35 15.7	+0.3
	SNR=8.1						
KBL	**Kabul**	67.86	313	*e*P	P	16 35 15.3	-0.5
KBL				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.2						
KBL	**Kabul**	67.86	313	*e*P	P	16 35 15.3	-0.5
	comp=Z,29nm,0.8s,mb5.2						
TKM2	**Tokmak 2**	68.12	324	P	P	16 35 16.9	-0.3
	SNR=8.6						
TKM2	**Tokmak 2**	68.12	324	*e*P	P	16 35 16.9	-0.3
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.5						
TKM2	**Tokmak 2**	68.12	324	*e*P	P	16 35 16.9	-0.3
	comp=Z,5.9nm,0.7s,mb4.5						
AAK	**Ala-Archa**	68.60	323	P	P	16 35 20.0	-0.2
	comp=Z,9.1nm,0.5s,mb4.9,baz=133,slow=5.5,SNR=22						
AAK	**Ala-Archa**	68.60	323	P	P	16 35 20.0	-0.2
AML	**Almayashu**	68.79	322	P	P	16 35 22.6	+1.2
	SNR=8.7						
AML	**Almayashu**	68.79	322	P	P	16 35 21.8	+0.4
AML				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.1						
AML	**Almayashu**	68.79	322	P	P	16 35 21.8	+0.4
	comp=Z,23nm,0.8s,mb5.1						
USP	**Ospenovka**	68.97	323	P	P	16 35 22.2	-0.3
	SNR=15						
EKS2	**Erkin-Say**	69.05	323	P	P	16 35 23.3	+0.3
	SNR=15						
EKS2	**Erkin-Say**	69.05	323	*e*P	P	16 35 23.2	+0.2
EKS2				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.8						
EKS2	**Erkin-Say**	69.05	323	*e*P	P	16 35 23.2	+0.2
	comp=Z,15nm,1.0s,mb4.8						
MAW	**Mawson**	70.84	201	P	P	16 35 37.0	+3.4
	comp=Z,1.9nm,0.5s,mb4.2,baz=34,slow=2.0,SNR=9.4						
ZALV	**Zalesovo Beam**	71.11	337	P	P	16 35 33.6	-1.7
	comp=Z,14nm,0.9s,mb4.8,baz=129,slow=4.2,SNR=55						
YAK	**Yakutsk**	71.12	3	*i* P	P	16 35 34.3	-0.9
YAK				pmax	pmax		
	comp=Z,35nm,1.1s,mb5.1						
YAK				pmax	pmax		
	comp=N,9.0nm,1.0s						
YAK	**Yakutsk**	71.12	3	*e*P	P	16 35 34.8	-0.4
	comp=N,29nm,0.8s,mb5.2						
KURK	**Kurchatov**	71.49	331	P	P	16 35 37.0	-0.7
	comp=N,18nm,0.8s,mb5.0,baz=276,slow=17,SNR=51						
KURK	**Kurchatov**	71.49	331	*e*P	P	16 35 37.0	-0.7
KURK				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.1						
KURK	**Kurchatov**	71.49	331	*e*P	P	16 35 36.6	-1.1
	comp=Z,27nm,0.8s,mb5.1						
NVS	**Novosibirsk**	72.40	337	*i* P	P	16 35 40.8	-2.2
SEY	**Seymchan**	75.11	13	*e*P	P	16 35 57.4	-1.3
BVAR	**Borovoye Array**	76.92	330	P	P	16 36 08.7	-0.4
	comp=Z,2.2nm,0.8s,mb4.0,baz=134,slow=8.5,SNR=16						
BRVK	**Borovoye**	76.99	330	*de*P	P	16 36 09.1	-0.5
BRVK				pmax	pmax		
	comp=Z,15nm,2.5s,mb4.3						
SYO	**Syowa Base**	79.53	201⇑	*e*P	P	16 36 25.6	+2.2
SYO	**Syowa Base**	79.53	201⇑	*e*PcP	PcP	16 36 30.4	-0.6
SYO	**Syowa Base**	79.53	201⇑	*ep*P	pP	16 36 51.7	-0.5
AB31	**Akbulak array**	80.69	323	*e*P	P	16 36 28.9	-1.0
AB31				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.3						
ABKAR	**Akbulak array**	80.69	323	*e*P	P	16 36 29.2	-0.7
	comp=Z,16nm,1.0s,mb4.8						
TIXI	**Tiksi**	80.72	2	*e*P	P	16 36 27.9	-1.6
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.5						
TIXI	**Tiksi**	80.72	2	*e*P	P	16 36 29.1	-0.5
	comp=Z,3.7nm,0.3s,mb4.7						
AKTK	**Aktyubinsk**	82.31	324	P	P	16 36 38.4	-0.1
AKTO	**Aktyubinsk**	82.31	324	P	P	16 36 38.4	-0.1
	comp=Z,12nm,0.6s,mb4.9,baz=109,slow=6.4,SNR=56						
RDF	**Al-Radifah**	82.85	301	*e*P	P	16 36 41.4	-0.3
RDF				AMb	AMB	16 36 44.0	
	comp=Z,52nm,1.4s,mb5.2						
NAY	**Al-Naaiem**	83.19	301	*e*P	P	16 36 43.0	-0.4
NAY				AMb	AMB	16 36 45.7	
	comp=Z,20nm,0.9s,mb5.0						
SVE	**Sverdlovsk**	83.70	330⇑	*e*P	P	16 36 45.1	-0.3
SVE				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.0						
ARU	**Arti**	84.55	329	*d i* P	P	16 36 49.3	-0.4
ARU				S	S	16 47 09.7	+2.6
ARU				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.7						
ARU	**Arti**	84.55	329	*e*P	P	16 36 49.1	-0.6
	comp=Z,2.1nm,0.3s,mb4.5						
ZEI	**Tsey**	89.08	313	*e*P	P	16 37 15.0	+3.0
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.4s,mb5.2						
BOSA	**Boshof**	93.36	240	P	P	16 37 35.0	+2.7
	comp=Z,1.9nm,0.8s,mb4.5,baz=100,slow=2.3,SNR=3.5						
BOSA	**Boshof**	93.36	240	P	P	16 37 35.0	+2.7
VORD	**Divnogorie**	93.83	321	*e*P	P	16 37 33.1	-0.7
VORD				pmax	pmax		
	comp=N,10.0nm,0.6s						
VORD				pmax	pmax		
	comp=E,10.0nm,0.6s						
VORD				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb5.2						
VSR	**Storozhevoye**	93.95	321	*e*P	P	16 37 33.3	-1.1
VSR				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb5.1						
VSR				pmax	pmax		
	comp=N,2.0nm,0.4s						
VSR				pmax	pmax		
	comp=E,2.0nm,0.4s						
BRTR	**Keskin Array B**	96.17	309	P	P	16 37 44.4	-0.4
	comp=E,0.7nm,0.8s,mb4.2,baz=132,slow=6.8,SNR=4.1						
BRTR	**Keskin Array B**	96.17	309	*i* P	P	16 37 45.7	+0.9
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AKASG	**Malin Array Be**	100.14	320	P	Pdif	16 38 01.3	-1.0
	comp=Z,1.1nm,0.6s,baz=75,slow=5.3,SNR=5.7						
AKASG	**Malin Array Be**	100.14	320	*i* P	Pdif	16 38 01.5	-0.8
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
EKA	**Eskdalemuir Ar**	118.16	329	PKP	PKPdf	16 43 04.0	+1.0
	comp=Z,0.6nm,0.7s,baz=25,slow=2.2,SNR=4.1						
TXAR	**Lajitas Array**	131.02	59	PKP	PKPdf	16 43 30.2	+1.8
	comp=Z,0.2nm,0.8s,baz=100,slow=0.5,SNR=3.6						
TXAR				SKPbc	SKPbc	16 46 45.7	+2.9
	comp=Z,3.1nm,0.8s,baz=255,slow=3.0,SNR=29						
TXAR	**Lajitas Array**	131.02	59	PKP	PKPdf	16 43 30.2	+1.8
TXAR				SKPbc	SKPbc	16 46 45.7	+2.9
CPUP	**Villa Florida**	144.67	178	PKPbc	PKPdf	16 43 56.3	+2.7
	comp=Z,6.0nm,0.5s,baz=178,slow=1.8,SNR=22						
LPAZ	**La Paz**	151.93	154	PKPbc	PKPbc	16 44 17.0	+4.8
	comp=Z,1.5nm,0.5s,baz=77,slow=2.8,SNR=8.0						
LPAZ				PKPab	PKPab	16 44 27.5	+5.9
	comp=Z,2.4nm,0.5s,baz=160,slow=2.6,SNR=8.2						
ATAH	**Atahualpa**	152.31	125	PKPbc	PKPbc	16 44 18.2	+5.1
	comp=Z,3.4nm,0.7s,baz=39,slow=19,SNR=2.2						
ATAH				PKPab	PKPab	16 44 27.9	+4.6
	comp=Z,5.4nm,0.5s,baz=162,slow=19,SNR=5.0						

*IDC **13** 16:25:08.8±2.6, 38.°45N±21.°69E, h0km, mb3.7/8, mb1 3.7/10, mb1mx3.6/26, mbtmp3.7/10, ML4.0/2, Error ellipse: s-maj=51.7km s-min=21.8km az=13.0*
*NEIC **13** 16:25:09.7, 38.°12N±21.°61E, h24km, ML3.6(ATH), After ATH.*
*ATH **13** 16:25:09.7, 38.°12N±21.°61E, h24km, ML3.6*
*CSEM **13** 16:25:10.9±0.2, 38.°07N±21.°67E, h20km, ML3.6, Error ellipse: s-maj=4.6km s-min=4.0km az=28.0*
*ISCJB **13** 16:25:10.1±0.3, 38.°13N±0.°02×21.°60E±0.°02, h14km±2km, mb3.6/8, Error ellipse: s-maj=2.7km s-min=2.4km az=7.1*
*THE **13** 16:25:10.7, 38.°14N±21.°62E, h12km±1km, ML4.2/16, Error ellipse: s-maj=1.1km s-min=0.7km az=21.0*
ISC 13 16:25:10.8±0.3, 38.°13N±0.°02×21.°62E±0.°02, h14km±2km, n175, σ1§20/253, mb3.6/8, 4C-4D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	0.14	241	*e*Pb	Pg	16 25 14.4	0.0
RLS				*e*Sb	Sg	16 25 18.1	+1.2
RLS	**Riolos of Patr**	0.14	241	*e*PB	Pg	16 25 14.4	0.0
RLS				*e*SB	Sg	16 25 18.1	+1.2
RLS	**Riolos of Patr**	0.14	241	*e*Pb	Pg	16 25 14.4	0.0
RLS				*e*Sb	Sg	16 25 18.1	+1.2
UPR	**University Cam**	0.21	40	*e*PB	Pg	16 25 15.5	+0.1
UPR				*e*SB	Sg	16 25 20.3	+1.7
UPR	**University Cam**	0.21	40	P	Pg	16 25 15.5	+0.1
UPR				S	Sg	16 25 19.8	+1.2
UPR	**University Cam**	0.21	40	*e*Pb	Pg	16 25 15.5	+0.1
UPR				S	Sg	16 25 19.8	+1.2
UPR				*e*Sb	Sg	16 25 20.3	+1.7
LAKA	**Lakka**	0.30	68	P	Pg	16 25 16.6	-0.6
LAKA				S	Sg	16 25 22.1	+0.7
LAKA	**Lakka**	0.30	68	P	Pg	16 25 16.6	-0.6
LAKA				S	Sg	16 25 22.1	+0.7
EFP	**Efpalio**	0.38	37	*e*PB	Pg	16 25 17.8	-0.6
EFP				*e*SB	Sg	16 25 24.5	+1.0
EFP	**Efpalio**	0.38	37	P	Pg	16 25 17.6	-0.8
EFP				S	Sg	16 25 24.1	+0.6
EFP	**Efpalio**	0.38	37	*e*Pb	Pg	16 25 17.8	-0.6
EFP				S	Sg	16 25 24.1	+0.6
EFP				*e*Sb	Sg	16 25 24.5	+1.0
TRIZ	**Trizonia**	0.43	56	P	Pg	16 25 18.6	-0.8
TRIZ				S	Sg	16 25 25.9	+0.7
TRIZ	**Trizonia**	0.43	56	P	Pg	16 25 18.6	-0.8
TRIZ				S	Sg	16 25 25.9	+0.7
KALE	**Kalithea**	0.49	57	P	Pg	16 25 19.4	-1.1
KALE				S	Sg	16 25 28.0	+1.0
KALE	**Kalithea**	0.49	57	P	Pg	16 25 19.4	-1.1
KALE				S	Sg	16 25 28.0	+1.0
GUR	**Goura**	0.60	108	*e*PB	Pg	16 25 21.3	-1.3
GUR				*e*SN	Sg	16 25 31.7	+1.2
GUR	**Goura**	0.60	108	P	Pg	16 25 21.4	-1.2
GUR				S	Sg	16 25 31.7	+1.2
GUR	**Goura**	0.60	108	P	Pg	16 25 21.4	-1.2
GUR				*e*Sn	Sg	16 25 31.7	+1.2
KFL	**Anninata**	0.66	269	P	Pg	16 25 22.6	-1.0
KFL				S	Sg	16 25 33.6	+1.3
KFL	**Anninata**	0.66	269	P	Pg	16 25 22.6	-1.0
KFL				S	Sg	16 25 33.6	+1.3
DSF	**Desfina**	0.77	68	P	Pg	16 25 24.5	-1.3
DSF				S	Sg	16 25 35.7	-0.2
DSF	**Desfina**	0.77	68	P	Pg	16 25 24.5	-1.3
DSF				S	Sg	16 25 35.7	-0.2
EVR	**Evrytania**	0.80	11	*e*Pn	Pg	16 25 25.2	-1.2
EVR				*e*Sn	Sg	16 25 37.4	+0.4
EVR	**Evrytania**	0.80	11	*e*PN	Pg	16 25 25.2	-1.2
EVR				*e*SN	Sg	16 25 37.4	+0.4
EVR	**Evrytania**	0.80	11	*e*Pn	Pg	16 25 25.2	-1.2
EVR				*e*Sn	Sg	16 25 37.4	+0.4
VLS	**Valsamata**	0.81	274	*e*Pn	Pg	16 25 24.5	-2.1
VLS				*e*Sn	Sg	16 25 38.2	+0.9
VLS	**Valsamata**	0.81	274	*e*PN	Pg	16 25 24.5	-2.1
VLS				*e*SN	Sg	16 25 38.2	+0.9
VLS	**Valsamata**	0.81	274	P	Pg	16 25 24.6	-2.0
VLS				S	Sg	16 25 37.7	+0.4
VLS	**Valsamata**	0.81	274	*e*Pn	Pg	16 25 24.5	-2.1
VLS				S	Sg	16 25 37.7	+0.4
VLS				*e*Sn	Sg	16 25 38.2	+0.9
LKD	**Levkas**	0.96	308	*e*Pn	Pg	16 25 28.0	-1.3
LKD	**Levkas**	0.96	308	*e*PN	Pg	16 25 28.0	-1.3
LKD	**Levkas**	0.96	308	*e*Pn	Pg	16 25 28.0	-1.3
VLX	**Vlachokerasia**	0.96	141	*e*PN	Pg	16 25 28.0	-1.5
VLX				*e*SN	Sg	16 25 42.9	+0.8
VLX	**Vlachokerasia**	0.96	141	P	Pg	16 25 29.0	-0.5
VLX				S	Sg	16 25 43.2	+1.1
VLX	**Vlachokerasia**	0.96	141	*e*Pn	Pg	16 25 28.0	-1.5
VLX	**Vlachokerasia**	0.96	141	P	Pg	16 25 29.0	-0.5
VLX				*e*Sn	Sg	16 25 42.9	+0.8
VLX				S	Sg	16 25 43.2	+1.1
ITM	**Ithomi**	0.97	165	*e*Pn	Pg	16 25 28.0	-1.7
ITM				*e*Sn	Sg	16 25 43.0	+0.6
ITM	**Ithomi**	0.97	165	*e*PN	Pg	16 25 28.0	-1.7
ITM				*e*SN	Sg	16 25 43.0	+0.6
ITM	**Ithomi**	0.97	165	P	Pg	16 25 29.2	-0.5
ITM				S	Sg	16 25 44.6	+2.2
ITM	**Ithomi**	0.97	165	*e*Pn	Pg	16 25 28.0	-1.7
ITM	**Ithomi**	0.97	165	P	Pg	16 25 29.2	-0.5
ITM				*e*Sn	Sg	16 25 43.0	+0.6
ITM				S	Sg	16 25 44.6	+2.2
LKD2	**Lefkada island**	1.00	312	P	Pg	16 25 28.5	-1.7
LKD2				S	Sg	16 25 43.9	+0.5
LKD2	**Lefkada island**	1.00	312	P	Pg	16 25 28.5	-1.7
LKD2				S	Sg	16 25 43.9	+0.5
AGG	**Agios Georgios**	1.05	32	*e*Pn	Pg	16 25 30.4	-0.8
AGG				*e*Sn	Sn	16 25 45.6	-0.1
AGG	**Agios Georgios**	1.05	32	*e*PN	Pg	16 25 30.4	-0.8
AGG				*e*SN	Sn	16 25 45.6	-0.1
AGG	**Agios Georgios**	1.05	32	P	Pg	16 25 30.6	-0.6
AGG				S	Sg	16 25 44.9	-0.1
AGG	**Agios Georgios**	1.05	32	P	Pg	16 25 30.6	-0.6
AGG				S	Sg	16 25 44.9	-0.1
AGG				*e*Sn	Sn	16 25 45.6	-0.1
LTK	**Loutraki**	1.07	95	*e*PN	Pg	16 25 30.0	-1.4
LTK				*e*SN	Sg	16 25 44.7	-0.7
LTK	**Loutraki**	1.07	95	P	Pg	16 25 29.8	-1.6
LTK				S	Sg	16 25 45.2	-0.2
LTK	**Loutraki**	1.07	95	P	Pg	16 25 29.8	-1.6
LTK				*e*Sn	Sg	16 25 44.7	-0.7
LTK				S	Sg	16 25 45.2	-0.2
LKR	**Lokris**	1.21	64	*e*Pn	Pn	16 25 32.2	-1.1
LKR				*e*Sn	Sb	16 25 49.0	+0.1
LKR	**Lokris**	1.21	64	*e*PN	Pn	16 25 32.2	-1.1
LKR				*e*SN	Sb	16 25 49.0	+0.1
LKR	**Lokris**	1.21	64	P	Pn	16 25 32.1	-1.2
LKR				S	Sb	16 25 49.0	+0.1
LKR	**Lokris**	1.21	64	*e*Pn	Pn	16 25 32.2	-1.1
LKR				*e*Sn	Sb	16 25 49.0	+0.1
PYL	**PYLOS**	1.23	175	*e*PN	Pn	16 25 32.9	-0.7
PYL				*e*SN	Sn	16 25 50.3	+0.2
PYL	**PYLOS**	1.23	175	P	Pn	16 25 32.9	-0.7
PYL				S	Sb	16 25 51.4	+1.8
PYL	**PYLOS**	1.23	175	*e*Pn	Pn	16 25 32.9	-0.7
PYL				*e*Sn	Sn	16 25 50.3	+0.2
PYL				S	Sb	16 25 51.4	+1.8
ATAL	**Atalanti**	1.24	62	P	Pn	16 25 33.0	-0.7
ATAL				S	Sb	16 25 50.3	+0.5
ATAL	**Atalanti**	1.24	62	P	Pn	16 25 33.0	-0.7
ATAL				S	Sb	16 25 50.3	+0.5
DID	**Didima**	1.42	115	*e*PB	Pn	16 25 35.4	-0.9
DID				*e*SN	Sn	16 25 56.3	+1.5
DID	**Didima**	1.42	115	P	Pn	16 25 35.4	-0.9
DID				S	Sn	16 25 56.2	+1.4
DID	**Didima**	1.42	115	*e*Pb	Pn	16 25 35.4	-0.9
DID				*e*Sn	Sn	16 25 56.3	+1.5
THL	**Klokotos Trika**	1.47	12	*e*PN	Pn	16 25 37.4	+0.5
THL	**Klokotos Trika**	1.47	12	P	Pn	16 25 37.2	+0.3
THL				S	Sn	16 25 55.0	-1.0
THL	**Klokotos Trika**	1.47	12	P	Pn	16 25 37.2	+0.3
THL				S	Sn	16 25 55.0	-1.0
NAIG	**Nisos Aigina**	1.52	103	*e*Pb	Pn	16 25 36.7	-0.9
NAIG	**Nisos Aigina**	1.52	103	*e*PB	Pn	16 25 36.7	-0.9
NAIG	**Nisos Aigina**	1.52	103	*e*Pb	Pn	16 25 36.7	-0.9
JAN	**Janina**	1.64	339	P	Pg	16 25 41.8	-0.6
JAN	**Janina**	1.64	339	P	Pg	16 25 41.8	-0.6
ATH	**Athens Observa**	1.66	95	*e*Pb	Pn	16 25 38.5	-1.1
ATH				*e*Sn	Sn	16 26 01.2	+0.5
ATH	**Athens Observa**	1.66	95	*e*PB	Pn	16 25 38.5	-1.1
ATH				*e*SN	Sn	16 26 01.2	+0.5
ATH	**Athens Observa**	1.66	95	*e*Pb	Pn	16 25 38.5	-1.1
ATH				*e*Sn	Sn	16 26 01.2	+0.5
NEO	**Neokhori**	1.72	46	*e*Pb	Pn	16 25 39.8	-0.6
NEO	**Neokhori**	1.72	46	*e*PB	Pn	16 25 39.8	-0.6
NEO	**Neokhori**	1.72	46	*e*Pb	Pn	16 25 39.8	-0.6
IGT	**Igoumenitsa**	1.73	325	P	Pn	16 25 42.0	+1.5
IGT	**Igoumenitsa**	1.73	325	P	Pn	16 25 42.0	+1.5
VLY	**Voula,Athens**	1.74	98	*e*Pb	Pn	16 25 39.7	-0.9
VLY	**Voula,Athens**	1.74	98	*e*PB	Pn	16 25 39.7	-0.9
VLY	**Voula,Athens**	1.74	98	*e*Pb	Pn	16 25 39.7	-0.9
XOR	**Xorichti**	1.75	44	P	Pn	16 25 40.2	-0.5
XOR	**Xorichti**	1.75	44	P	Pn	16 25 40.8	+0.1
XOR				S	Sn	16 26 03.0	+0.2
XOR	**Xorichti**	1.75	44	P	Pn	16 25 40.8	+0.1
XOR				S	Sn	16 26 03.0	+0.2
VLI	**Veliai**	1.75	143	*e*Pb	Pn	16 25 41.4	+0.6
VLI	**Veliai**	1.75	143	*e*PN	Pn	16 25 41.4	+0.6
VLI	**Veliai**	1.75	143	*e*Pn	Pn	16 25 41.4	+0.6
PTL	**Penteli**	1.77	92	*e*Pb	Pn	16 25 40.0	-1.1
PTL	**Penteli**	1.77	92	*e*PB	Pn	16 25 40.0	-1.1
PTL	**Penteli**	1.77	92	*e*Pb	Pn	16 25 40.0	-1.1
AOS	**Alonnisos**	2.06	59	P	Pn	16 25 45.5	+0.5
AOS	**Alonnisos**	2.06	59	P	Pn	16 25 43.9	-1.1
AOS	**Alonnisos**	2.06	59	P	Pn	16 25 43.9	-1.1
KEK	**Kerkira**	2.13	319	*e*Pb	Pn	16 25 46.2	+0.2
KEK	**Kerkira**	2.13	319	*e*PB	Pn	16 25 46.2	+0.2
KEK	**Kerkira**	2.13	319	P	Pn	16 25 46.2	+0.2
KEK				S	Sn	16 26 12.8	+0.6
KEK	**Kerkira**	2.13	319	*e*Pb	Pn	16 25 46.2	+0.2
KEK				S	Sn	16 26 12.8	+0.6
KZN	**Kozani**	2.18	3	P	Pn	16 25 48.7	+2.0
KZN	**Kozani**	2.18	3	P	Pn	16 25 48.7	+2.0
PAIG	**Paliouri**	2.41	41	P	Pn	16 25 49.3	-0.6
PAIG	**Paliouri**	2.41	41	P	Pn	16 25 48.7	-1.2
PAIG	**Paliouri**	2.41	41	P	Pn	16 25 49.3	-0.6
PLG	**Polygyros**	2.66	32	*e*Pn	Pn	16 25 53.3	+0.1
PLG	**Polygyros**	2.66	32	*e*PN	Pn	16 25 53.3	+0.1
PLG	**Polygyros**	2.66	32	P	Pn	16 25 53.1	-0.1
PLG	**Polygyros**	2.66	32	*e*Pn	Pn	16 25 53.3	+0.1
FNA	**Florina**	2.66	356	P	Pn	16 25 54.2	+0.9
FNA	**Florina**	2.66	356	P	Pn	16 25 54.2	+0.9
THE	**Thessaloniki**	2.

comp=Z,0.7nm,0.4s,mb3.7,baz=280,slow=22,SNR=5.2
KURK Kurchatov 41.61 53 P **P 16 32 56.0 -2.2**
MK31 Makanchi Array 44.59 59 *eP* **P 16 33 20.4 -2.0**
MK31 Makanchi Array 44.59 59 *eP* **P 16 33 20.4 -2.0**
MKAR Makanchi Array 44.59 59 P **P 16 33 20.4 -1.9**
comp=Z,0.8nm,0.5s,mb3.8,baz=281,slow=7.1,SNR=16
ZALV Zalesovo Beam 45.08 48 P **P 16 33 23.7 -2.5**
comp=Z,1.1nm,0.5s,mb4.0,baz=269,slow=9.5,SNR=6.0
ZALV Zalesovo Beam 45.08 48 P **P 16 33 23.7 -2.5**

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*NEIC **13** 16:26:06.1, 19°.50N×65°.31W, h62km, MD3.7(RSPR), After RSPR.*
RSPR 13 16:26:06.1, 19°.50N×65°.31W, h62km±12km, MD3.7/11, MD3.7/11, 15C-15D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STVI	**Saint Thomas**	**1.19**	**164**	⇓*eP*	Pn	16 26 25.9	-0.8
STVI				*eS*	Sn	16 26 41.0	-1.1
STVI	**Saint Thomas**	**1.19**	**164**	⇓*eP*	Pn	16 26 25.9	-0.8
STVI				*eS*	Sn	16 26 41.0	-1.1
TBVI	**Tortola**	**1.26**	**149**	⇑*iP*	Pn	16 26 27.0	-0.6
TBVI	**Tortola**	**1.26**	**149**	⇑*iP*	Pn	16 26 27.1	-0.5
CBYP	**Canovanas**	**1.33**	**203**	⇑*eP*	Pn	16 26 27.6	-0.9
CBYP				*eS*	Sn	16 26 45.0	-0.3
CBYP	**Canovanas**	**1.33**	**203**	⇑*eP*	Pn	16 26 27.6	-0.9
CBYP				*eS*	Sn	16 26 45.0	-0.3
MTP	**Monte Pirata**	**1.41**	**190**	⇑*eP*	Pn	16 26 28.9	-0.8
MTP				*eS*	Sn	16 26 47.1	-0.3
MTP	**Monte Pirata**	**1.41**	**190**	⇑*eP*	Pn	16 26 28.9	-0.8
MTP				*eS*	Sn	16 26 47.9	+0.5
HUMP	**Col San Antoni**	**1.45**	**201**	⇑*eP*	Pn	16 26 29.0	-1.1
HUMP				*eS*	Sn	16 26 47.0	-1.1
HUMP	**Col San Antoni**	**1.45**	**201**	⇑*eP*	Pn	16 26 29.1	-1.0
HUMP				*eS*	Sn	16 26 47.5	-0.6
SJG	**San Juan**	**1.59**	**210**	⇓*eP*	Pn	16 26 31.1	-1.0
SJG	**San Juan**	**1.59**	**210**	*eS*	Sn	16 26 51.0	-0.8
SJG	**San Juan**	**1.59**	**210**	⇑*iP*	Pn	16 26 31.1	-1.0
SJG				*eS*	Sn	16 26 51.3	-0.5
SJG	**San Juan**	**1.59**	**210**	⇓*eP*	Pn	16 26 31.1	-1.0
SJG				*eS*	Sn	16 26 51.0	-0.8
SJG	**San Juan**	**1.59**	**210**	⇓*eP*	Pn	16 26 31.8	-0.3
SJG				*eS*	Sn	16 26 51.0	-0.8
SJG				*eS*	Sn	16 26 51.3	-0.5
AOPR	**Arecibo Observ**	**1.79**	**230**	⇑*eP*	Pn	16 26 34.0	-0.7
AOPR	**Arecibo Observ**	**1.79**	**230**	⇑*eP*	Pn	16 26 34.0	-0.7
CELP	**Cerrillos**	**1.86**	**221**	⇑*eP*	Pn	16 26 35.0	-0.7
CELP	**Cerrillos**	**1.86**	**221**	⇑*eP*	Pn	16 26 35.3	-0.4
LRS	**Lares**	**1.89**	**231**	⇓*eP*	Pn	16 26 35.6	-0.5
LRS	**Lares**	**1.89**	**231**	⇓*eP*	Pn	16 26 35.6	-0.5
OBIP	**Obispado Ponce**	**1.90**	**221**	⇓*eP*	Pn	16 26 35.4	-0.8
OBIP				*eS*	Sn	16 26 58.7	-0.5
OBIP	**Obispado Ponce**	**1.90**	**221**	⇓*eP*	Pn	16 26 35.4	-0.8
OBIP				*eS*	Sn	16 26 58.7	-0.5
ICM	**Isla Caja Muer**	**1.97**	**216**	⇓*eP*	Pn	16 26 36.7	-0.5
ICM	**Isla Caja Muer**	**1.97**	**216**	⇓*eP*	Pn	16 26 36.7	-0.5
AGPR	**Aguadilla, PR**	**1.99**	**239**	*e*Pn	Pn	16 26 37.2	-0.3
GBPR	**Guanica, Bosqu**	**2.13**	**225**	⇑*eP*	Pn	16 26 39.1	-0.3
GBPR	**Guanica, Bosqu**	**2.13**	**225**	⇑*eP*	Pn	16 26 39.6	+0.3
LSP	**Las Mesas**	**2.14**	**232**	⇑*eP*	Pn	16 26 38.7	-0.8
LSP	**Las Mesas**	**2.14**	**232**	⇑*eP*	Pn	16 26 38.7	-0.8
CRPR	**Cabo Rojo, PR**	**2.26**	**229**	⇓*eP*	Pn	16 26 41.1	-0.1
CRPR				*eS*	Sn	16 27 07.4	-0.6
CRPR	**Cabo Rojo, PR**	**2.26**	**229**	⇓*eP*	Pn	16 26 41.9	+0.7
CRPR				*eS*	Sn	16 27 07.4	-0.6
PCDR	**Punta Cana, DR**	**3.07**	**252**	⇓*eP*	Pn	16 26 51.8	-0.4
PCDR	**Punta Cana, DR**	**3.07**	**252**	⇓*eP*	Pn	16 26 51.8	-0.4
SDDR	**Presa de Saban**	**5.67**	**266**	*e*Pn	Pn	16 27 27.9	+0.1
	16nm,0.8s						

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*ATH **13** 16:37:16.8, 38°.10N×21°.62E, h27km±2km, MD3.0/4*
*ISCJB **13** 16:37:18.2±0.6, 38°.17N±0°.04×21°.59E±0°.03, h22km±7km, Error ellipse: s-maj=6.2km s-min=4.2km az=156.0*
*CSEM **13** 16:37:18.0±0.2, 38°.16N×21°.61E, h17km±3km, MD3.0, Error ellipse: s-maj=7.1km s-min=4.2km az=171.0*
*THE **13** 16:37:18.9, 38°.15N×21°.65E, h17km±2km, ML2.5/6, Error ellipse: s-maj=2.5km s-min=0.8km az=12.0*
ISC 13 16:37:18.3±0.5, 38°.17N±0°.04×21°.60E±0°.03, h19km±3km, n26, σ0s95/49, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.15**	**224**	*e*PB	**Pg**	**16 37 22.0**	**-0.6**
RLS				*e*SB	**Sg**	**16 37 25.7**	**+0.2**
RLS	**Riolos of Patr**	**0.15**	**224**	*e*Pb	**Pg**	**16 37 22.0**	**-0.6**
RLS				*e*Sb	**Sg**	**16 37 25.7**	**+0.2**
UPR	**University Cam**	**0.19**	**52**	*e*PB	**Pg**	**16 37 23.2**	**0.0**
UPR	**University Cam**	**0.19**	**52**	*e*Pb	**Pg**	**16 37 23.2**	**0.0**
LAKA	**Lakka**	**0.31**	**76**	P	**Pg**	**16 37 24.4**	**-0.7**
LAKA				S	**Sg**	**16 37 29.7**	**+0.1**
LAKA	**Lakka**	**0.31**	**76**	P	**Pg**	**16 37 24.4**	**-0.7**
LAKA				S	**Sg**	**16 37 29.7**	**+0.1**
EFP	**Efpalio**	**0.36**	**43**	*e*PB	**Pg**	**16 37 25.4**	**-0.5**
EFP				*e*SB	**Sg**	**16 37 32.1**	**+1.1**
EFP	**Efpalio**	**0.36**	**43**	P	**Pg**	**16 37 25.4**	**-0.5**
EFP				S	**Sg**	**16 37 32.3**	**+1.3**
EFP	**Efpalio**	**0.36**	**43**	P	**Pg**	**16 37 25.4**	**-0.5**
EFP				S	**Sg**	**16 37 32.3**	**+1.3**
TRIZ	**Trizonia**	**0.42**	**62**	P	**Pg**	**16 37 26.3**	**-0.8**
TRIZ				S	**Sg**	**16 37 33.8**	**+0.9**
TRIZ	**Trizonia**	**0.42**	**62**	P	**Pg**	**16 37 26.3**	**-0.8**
TRIZ				S	**Sg**	**16 37 33.8**	**+0.9**
KALE	**Kalithea**	**0.48**	**62**	P	**Pg**	**16 37 27.3**	**-0.8**
KALE				S	**Sg**	**16 37 35.5**	**+0.8**
KALE	**Kalithea**	**0.48**	**62**	P	**Pg**	**16 37 27.3**	**-0.8**
KALE				S	**Sg**	**16 37 35.5**	**+0.8**
GUR	**Goura**	**0.63**	**111**	*e*PN	**Pn**	**16 37 29.0**	**-3.3**
GUR	**Goura**	**0.63**	**111**	P	**Pb**	**16 37 29.1**	**-1.7**
GUR				S	**Sb**	**16 37 39.1**	**-0.1**
GUR	**Goura**	**0.63**	**111**	P	**Pb**	**16 37 29.1**	**-1.7**
GUR				S	**Sb**	**16 37 39.1**	**-0.1**
KFL	**Anninata**	**0.64**	**265**	P	**Pb**	**16 37 31.7**	**+0.8**
KFL				S	**Sb**	**16 37 42.1**	**+2.6**
KFL	**Anninata**	**0.64**	**265**	P	**Pb**	**16 37 31.7**	**+0.8**
KFL				S	**Sb**	**16 37 42.1**	**+2.6**
DSF	**Desfina**	**0.77**	**71**	P	**Pb**	**16 37 33.4**	**+0.2**
DSF				S	**Sb**	**16 37 43.5**	**+0.2**
DSF	**Desfina**	**0.77**	**71**	P	**Pb**	**16 37 33.4**	**+0.2**
DSF				S	**Sb**	**16 37 43.5**	**+0.2**
VLS	**Valsamata**	**0.80**	**271**	*e*PB	**Pb**	**16 37 32.1**	**-1.5**
VLS				*e*SN	**Sn**	**16 37 45.5**	**-0.4**
VLS	**Valsamata**	**0.80**	**271**	*e*Pb	**Pb**	**16 37 32.1**	**-1.5**
VLS				*e*Sn	**Sn**	**16 37 45.5**	**-0.4**
VLX	**Vlachokerasia**	**1.01**	**142**	P	**Pb**	**16 37 37.2**	**0.0**
VLX				S	**Sb**	**16 37 51.2**	**+1.1**
VLX	**Vlachokerasia**	**1.01**	**142**	P	**Pb**	**16 37 37.2**	**0.0**
VLX				S	**Sb**	**16 37 51.2**	**+1.1**
ITM	**Ithomi**	**1.02**	**165**	P	**Pb**	**16 37 36.8**	**-0.6**
ITM				S	**Sb**	**16 37 51.4**	**+1.0**
ITM	**Ithomi**	**1.02**	**165**	P	**Pb**	**16 37 36.8**	**-0.6**
ITM				S	**Sb**	**16 37 51.4**	**+1.0**

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*IDC **13** 16:43:46.8±2.9, 4°.68S×101°.77E, h0km, mb3.6/7, mb1 3.7/7, mb1mx3.6/20, mbtmp3.6/7, Error ellipse: s-maj=127.2km s-min=19.9km az=54.0*
*NEIC **13** 16:43:52.2±1.7, 4°.63S×101°.85E, h35km, mb3.9/1, Error ellipse: s-maj=69.4km s-min=12.5km az=56.0*
*ISCJB **13** 16:43:53.4±1.5, 4°.6S±0°.1×102°.0E±0°.1, h62km±11km, mb3.8/8, Error ellipse: s-maj=24.5km s-min=8.7km az=43.3*
*DJA **13** 16:43:54, 4°.63S×102°.03E, h29km, MLv4.0/6*
ISC 13 16:43:54.8±1.5, 4°.6S±0°.1×102°.0E±0°.1, h54km±12km, n20, σ0s86/21, mb3.8/8, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.97**	**79**	P	**Pn**	**16 44 10.3**	**-1.9**
MNAI				S	**Sn**	**16 44 24.4**	**-0.7**
KSI	**Kapahiang**	**1.07**	**33**	P	**Pn**	**16 44 14.0**	**+0.4**
LWLI	**Liwa**	**2.10**	**103**	P	**Pn**	**16 44 28.5**	**+0.9**
MDSI	**Maura Dua**	**2.17**	**88**	P	**Pn**	**16 44 28.0**	**-0.5**
MDSI				S	**Sn**	**16 44 55.2**	**+0.9**
KASI	**Kota Agung**	**2.67**	**111**	P	**Pn**	**16 44 35.7**	**+0.4**
KASI				S	**Sn**	**16 45 06.7**	**+0.3**
KLSI		**2.72**	**93**	P	**Pn**	**16 44 36.0**	**-0.1**
SDSI	**Sungai Dareh**	**3.64**	**351**	P	**Pn**	**16 44 51.9**	**+3.2**
PDSI	**Padang**	**3.93**	**337**	P	**Pn**	**16 44 52.8**	**+0.1**
CGJI	**Cibinong**	**4.21**	**119**	P	**Pn**	**16 44 56.3**	**-0.1**
CMAR	**Chiang Mai Arr**	**23.06**	**353**	P	**P**	**16 48 54.2**	**-1.6**
0.4nm,0.6s,mb3.1,baz=179,slow=9.5,SNR=4.4							
WRA	**Warramunga Arr**	**35.00**	**119**	P	**P**	**16 50 42.3**	**0.0**
0.3nm,0.4s,mb3.6,baz=309,slow=9.3,SNR=5.6							
ASAR	**Alice Springs**	**36.15**	**125**	P	**P**	**16 50 51.9**	**-0.3**
0.2nm,0.4s,mb3.4,baz=297,slow=7.9,SNR=4.3							
SONM	**Songino Array**	**52.31**	**4**	P	**P**	**16 53 01.8**	**+0.9**
1.2nm,0.6s,mb4.0,baz=185,slow=8.9,SNR=3.2							
ULN	**Ulaanbaatar**	**52.39**	**4**	P	**P**	**16 53 02.3**	**+0.9**
0.7nm,0.5s,mb3.9							
MKAR	**Makanchi Array**	**54.02**	**343**	P	**P**	**16 53 13.5**	**0.0**
1.1nm,0.7s,mb3.9,baz=140,slow=7.9,SNR=7.7							
ZALV	**Zalesovo Beam**	**60.04**	**348**	P	**P**	**16 53 55.7**	**-0.3**
1.0nm,0.3s,mb4.3,baz=182,slow=4.6,SNR=8.6							
ZALV	**Zalesovo Beam**	**60.04**	**348**	P	**P**	**16 53 55.7**	**-0.3**
BVAR	**Borovoye Array**	**63.26**	**339**	P	**P**	**16 54 16.9**	**-0.7**
0.5nm,0.5s,mb3.9,baz=124,slow=9.2,SNR=4.8							
TXAR	**Lajitas Array**	**145.39**	**42**	PKPbc	PKPbc	17 03 28.3	+0.9
0.3nm,0.6s,baz=302,slow=2.5,SNR=5.6							
TXAR	**Lajitas Array**	**145.39**	**42**	PKPbc	PKPbc	17 03 28.3	+0.9

IDC 13 16:47:03.6±2.4, 4°.02S×131°.05E, h0km, mb3.9/3, mb1 4.0/5, mb1mx3.6/17, mbtmp3.9/5, ML3.9/1, Error ellipse: s-maj=98.1km s-min=27.3km az=75.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**14.97**	**200**	Pn	Pn	16 50 34.4	-2.2
0.4nm,0.3s,baz=19,slow=7.9,SNR=11							
FITZ				Sn	Sn	16 53 15.9	-7.3
0.2nm,0.3s,baz=182,slow=20,SNR=5.1							
WRA	**Warramunga Arr**	**16.15**	**169**	Pn	Pn	16 50 47.4	-4.7
0.2nm,0.3s,baz=355,slow=13,SNR=13							
WRA				Sn	Sn	16 53 39.3	-13
0.5nm,0.3s,baz=349,slow=24,SNR=9.9							
ASAR	**Alice Springs**	**19.73**	**172**	P	Pn	16 51 35.8	-0.5
0.4nm,0.3s,baz=350,slow=10,SNR=35							
ASAR				S	Sn	16 55 05.1	-14
0.1nm,0.3s,baz=351,slow=28,SNR=5.6							
CMAR	**Chiang Mai Arr**	**38.72**	**306**	P	P	16 54 30.6	+0.8
0.4nm,0.4s,baz=140,slow=6.9,SNR=4.6							
MKAR	**Makanchi Array**	**66.34**	**326**	P	P	16 57 53.9	-0.2
0.2nm,0.5s,baz=115,slow=5.5,SNR=3.7							
KURK	**Kurchatov**	**70.55**	**328**	P	P	16 58 20.1	-0.3
0.8nm,0.2s,baz=124,slow=4.8,SNR=2.9							

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*BJI **13** 16:55:12.3, 23°.39N×143°.67E, h25km, mB4.9/16, mb4.6/24, Ms4.3/13, Ms7 4.1/14*
*IDC **13** 16:55:17.7±0.5, 24°.03N×142°.98E, h0km, mb4.3/21, mb1 4.4/23, mb1mx4.4/29, mbtmp4.3/23, ML3.6/3, MS3.5/2, Ms1 3.5/2, ms1mx2.9/38, Error ellipse: s-maj=18.2km s-min=11.7km az=85.0*
*NEIC **13** 16:55:20.8±0.4, 23°.98N×142°.76E, h15km, mb4.4/18, Error ellipse: s-maj=14.5km s-min=10.4km az=87.0*
*ISCJB **13** 16:55:21.4±0.4, 23°.99N±0°.04×142°.84E±0°.07, h33km, mb4.4/51, MS4.2/4, Error ellipse: s-maj=9.6km s-min=6.2km az=169.8*
*MOS **13** 16:55:21.0±1.1, 23°.96N×142°.91E, h33km, mb4.8/14, Error ellipse: s-maj=16.3km s-min=8.9km az=104.5*
ISC 13 16:55:23.6±0.3, 24°.03N±0°.04×142°.83E±0°.07, h35km, (h33km±3.7km:pP-P), n92, σ1s23/94, mb4.4/51, MS4.2/4, 3C-2D, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.11**	**349**	Pn	**Pn**	**16 56 09.9**	**-0.2**
6.8nm,0.3s,baz=256,slow=21,SNR=13							
CBIJ				Sn	**Sn**	**16 56 46.0**	**-0.2**
105nm,0.3s,baz=114,slow=24,SNR=30							
JHJ	**Hachijo jima 2**	**9.44**	**344**	LR	LR	17 00 33.5	
comp=Z,526nm,20.0s,baz=213,slow=33							
MJAR	**Matsushiro Arr**	**13.09**	**343**	Pn	**Pn**	**16 58 24.3**	**-2.8**
0.6nm,0.3s,baz=161,slow=11,SNR=7.4							
MJAR				Sn	**Sn**	**17 00 49.0**	**-2.4**
0.2nm,0.3s,baz=8.5,slow=28,SNR=4.4							
MAJO	**Matsushiro**	**13.09**	**343**	P	**Pn**	**16 58 22.2**	**-4.9**
MAJO				pmax	pmax		
comp=Z,5.0nm,0.7s							
MAJO	**Matsushiro**	**13.09**	**343**	P	**Pn**	**16 58 22.2**	**-4.9**
comp=Z,5.4nm,0.7s							
MAT	**Matsushiro**	**13.09**	**343**	P	**Pn**	**16 58 26.4**	**-0.7**
MAT				S	**Sn**	**17 00 44.6**	**-6.8**
ERM	**Erimo**	**17.94**	**1**	*e*P	**Pn**	**16 59 32.7**	**+2.5**
KSRS	**Korea Array**	**18.49**	**320**	P	**Pn**	**16 59 35.7**	**-1.3**
comp=Z,0.2nm,0.3s,baz=128,slow=13,SNR=28							
KSRS				LR	LR	17 05 54.9	
comp=Z,86nm,21.6s,baz=40,slow=34							
YULB	**Yu-li**	**19.73**	**273**	P	**Pn**	**16 59 57.9**	**+5.9**
comp=Z,12nm,0.9s							
SSLB	**Suanglung**	**20.00**	**274**	*e*P	**Pn**	**16 59 57.6**	**+2.4**
comp=Z,13nm,0.6s							
ASAJ	**Asahikawa**	**20.04**	**360**	P	**P**	**16 59 53.9**	**+0.3**
comp=Z,0.7nm,0.4s,baz=316,slow=22,SNR=2.0							
TPUB	**Ta-pu**	**20.35**	**272**	P	**P**	**17 00 01.7**	**+4.6**
comp=Z,13nm,0.8s							
NJ2	**Nanjing**	**22.59**	**296**	*e*P	**P**	**17 00 22.0**	**+0.9**
NJ2				pmax	pmax		
comp=Z,20nm,0.5s,mb4.8							
MDJ	**Mudanjiang**	**23.21**	**335**	P	**P**	**17 00 28.5**	**+1.1**
MDJ				pmax	pmax		
comp=Z,5.0nm,1.1s,mb3.9							
CN2	**Changchun**	**24.34**	**328**	*e*P	**P**	**17 00 40.4**	**+2.3**
TIA	**Tai'an**	**25.25**	**305**	*e*P	**P**	**17 00 46.6**	**+0.1**
WHN	**Wuhan**	**26.09**	**291**	*e*P	**P**	**17 00 50.0**	**-4.1**
BJI	**Beijing**	**27.52**	**312**	P	**P**	**17 01 07.4**	**+0.5**
BJI				S	**S**	**17 05 46.0**	**+0.4**
BJI				pmax	pmax		
comp=Z,9.0nm,0.6s,mb4.6							
BJI				pmax	pmax		
comp=Z,390nm,10.6s							
BJI				LR	LR		
comp=N,330nm,21.0s,MS4.1							
BJI				LR	LR		
comp=E,420nm,20.2s,MS4.1							
BJI				LR	LR		
comp=Z,470nm,23.0s,MS4.0							
HHC	**Hu-ho-hao-te**	**31.05**	**310**	*e*P	**P**	**17 01 39.9**	**+1.7**
HHC				sP	sP	17 01 54.0	+1.5
HHC				PP	PP	17 02 42.3	-6.3
HHC				S	**S**	**17 06 40.1**	**-0.9**
HHC				sS	sS	17 06 58.1	+0.4
HHC				ScS	ScS	17 12 10.3	-0.3
HHC				pmax	pmax		
comp=Z,8.0nm,0.5s,mb4.8							
HHC				pmax	pmax		
comp=Z,120nm,6.0s							
HHC				LR	LR		
comp=N,180nm,12.2s,MS4.2							
HHC				LR	LR		
comp=E,240nm,12.3s,MS4.2							
HHC				LR	LR		
comp=Z,220nm,11.6s,MS4.0							
CD2	**Chengdu**	**35.20**	**290**	P	**P**	**17 02 14.4**	**-0.2**
CD2				pP	pP	17 02 24.1	-0.6
CD2				sP	sP	17 02 28.0	-1.0
CD2				PP	PP	17 03 32.6	-2.2
CD2				pmax	pmax		
comp=Z,10.0nm,0.8s,mb4.8							
CD2				pmax	pmax		
comp=Z,390nm,7.7s							
CD2				LR	LR		
comp=N,380nm,12.5s							
CD2				LR	LR		
comp=Z,430nm,19.6s							
LZH	**Lanzhou**	**35.59**	**299**	*e*P	**P**	**17 02 17.3**	**-0.6**
LZH				pP	pP	17 02 26.3	-1.7
LZH				sP	sP	17 02 30.6	-1.7
LZH				PP	PP	17 03 37.5	-1.5
LZH				pmax	pmax		
comp=Z,18nm,1.4s,mb4.8							
LZH				pmax	pmax		
comp=Z,61nm,4.0s							
LZH				LR	LR		
comp=N,440nm,15.4s							
LZH				LR	LR		
comp=Z,610nm,16.4s,MS4.5							
KMI	**Kunming**	**36.38**	**280**	P	**P**	**17 02 23.6**	**-1.2**
KMI				pP	pP	17 02 35.1	+0.2
KMI				sP	sP	17 02 39.3	+0.2
KMI				PP	PP	17 03 47.9	0.0
KMI				S	**S**	**17 08 01.1**	**-2.8**
KMI				pmax	pmax		
comp=Z,6.0nm,0.9s,mb4.5							
KMI				pmax	pmax		
comp=Z,130nm,6.8s							
KMI				LR	LR		
comp=N,200nm,17.2s,MS4.1							
KMI				LR	LR		
comp=E,250nm,19.9s,MS4.1							
KMI				LR	LR		
comp=Z,320nm,21.2s,MS4.1							
YAK	**Yakutsk**	**39.02**	**350**	*e*P	**P**	**17 02 44.6**	**-2.0**
YAK				pmax	pmax		
comp=Z,11nm,1.0s,mb4.5							
YAK	**Yakutsk**	**39.02**	**350**	*e*P	**P**	**17 02 46.0**	**-0.6**
comp=Z,9.1nm,0.8s,mb4.6							
SEY	**Seymchan**	**39.42**	**7**	*ce*P	**P**	**17 02 53.6**	**+3.8**
CHTO	**Chiang Mai**	**41.06**	**271**	*e*P	**P**	**17 03 05.6**	**+1.6**
CHTO				pmax	pmax		
comp=Z,2.0nm,0.8s,mb3.8							
CHTO	**Chiang Mai**	**41.06**	**271**	*e*P	**P**	**17 03 05.6**	**+1.5**
comp=Z,2.1nm,0.8s,mb3.8							
CMAR	**Chiang Mai Arr**	**41.16**	**271**	P	**P**	**17 03 06.7**	**+1.9**
comp=Z,1.7nm,0.6s,mb3.8,baz=61,slow=7.6,SNR=13							
CTA	**Charters Tower**	**43.98**	**175**	*e*P	**P**	**17 03 26.8**	**-0.8**
comp=Z,6.2nm,0.9s,mb4.3							
CTA	**Charters Tower**	**43.98**	**175**	P	**P**	**17 03 26.8**	**-0.8**
comp=Z,8.9nm,0.9s,mb4.5,baz=14,slow=6.3,SNR=4.8							
CTAO	**Charters Tower**	**43.98**	**175**	*e*P	**P**	**17 03 26.6**	**-1.0**
WRAB	**Tennant Creek**	**44.47**	**191**	*e*P	**P**	**17 03 30.7**	**-0.8**
WRAB				pmax	pmax		
comp=Z,9.0nm,0.6s,mb4.7							
WRAB	**Tennant Creek**	**44.47**	**191**	*e*P	**P**	**17 03 30.7**	**-0.9**
comp=Z,8.8nm,0.6s,mb4.7							
WRA	**Warramunga Arr**	**44.48**	**191**	P	**P**	**17 03 30.9**	**-0.7**
comp=Z,4.8nm,0.4s,mb4.6,baz=6.9,slow=7.9,SNR=137							
WRA	**Warramunga Arr**	**44.48**	**191**	P	**P**	**17 03 30.9**	**-0.7**
FITZ	**Fitzroy Crossi**	**45.11**	**203**	*e*P	**P**	**17 03 36.5**	**-0.2**
comp=Z,8.7nm,1.2s,mb4.5							
FITZ	**Fitzroy Crossi**	**45.11**	**203**	P	**P**	**17 03 36.1**	**-0.6**
comp=Z,1.3nm,0.3s,mb4.2,baz=28,slow=9.8,SNR=16							
FITZ	**Fitzroy Crossi**	**45.11**	**203**	*e*P	**P**	**17 03 36.6**	**0.0**
BILL	**Bilibino**	**46.31**	**12**	*e*P	**P**	**17 03 50.3**	**+4.7**
BILL				pmax	pmax		
comp=Z,5.0nm,1.0s,mb4.4							
PSI	**Prapat**	**47.34**	**250**	P	**P**	**17 03 56.1**	**+1.7**
comp=Z,3.5nm,0.8s,mb4.3,baz=104,slow=4.2,SNR=7.6							
ASAR	**Alice Springs**	**48.20**	**191**	P	**P**	**17 03 59.7**	**-1.0**
comp=Z,1.3nm,0.6s,mb4.1,baz=13,slow=8.6,SNR=20							
TIXI	**Tiksi**	**48.31**	**354**	*e*P	**P**	**17 04 03.2**	**+2.1**
TIXI				pmax	pmax		
comp=Z,3.0nm,0.9s,mb4.3							
TIXI	**Tiksi**	**48.31**	**354**	P	**P**	**17 04 04.2**	**+3.1**
WMQ	**Urumqi**	**48.87**	**308**	*e*P	**P**	**17 04 07.0**	**+1.1**
WMQ				pP	pP	17 04 17.0	+0.7
WMQ				sP	sP	17 04 21.0	+0.5
WMQ				pmax	pmax		
comp=Z,6.0nm,1.2s,mb4.5							
WMQ				pmax	pmax		
comp=Z,92nm,5.3s							
ZALV	**Zalesovo Beam**	**52.20**	**321**	P	**P**	**17 04 29.1**	**-1.7**
comp=Z,2.6nm,0.8s,mb4.2,baz=101,slow=6.3,SNR=10							
ZALV				PcP	PcP	17 05 41.7	-0.4
comp=Z,2.3nm,0.7s,baz=113,slow=3.9,SNR=7.1							
MK31	**Makanchi Array**	**52.90**	**311**	*e*P	**P**	**17 04 35.9**	**-0.2**
MKAR	**Makanchi Array**	**52.90**	**311**	P	**P**	**17 04 36.4**	**+0.2**
comp=Z,1.8nm,0.6s,mb4.2,baz=86,slow=9.3,SNR=38							
MKAR				PcP	PcP	17 05 44.5	-0.3
comp=Z,0.8nm,0.7s,baz=86,slow=6.2,SNR=3.8							
KURK	**Kurchatov**	**55.56**	**316**	*de*P	**P**	**17 04 55.4**	**-0.1**
KURK				pmax	pmax		
comp=Z,4.0nm,1.0s,mb4.4							
KURK	**Kurchatov**	**55.56**	**316**	*e*P	**P**	**17 04 54.5**	**-0.9**
comp=Z,3.0nm,0.6s,mb4.5							
STKA	**Stephens Creek**	**55.60**	**181**	P	**P**	**17 04 54.6**	**-1.2**
comp=Z,4.8nm,0.8s,mb4.6,baz=96,slow=18,SNR=3.2							
BVAR	**Borovoye Array**	**60.70**	**319**	P	**P**	**17 05 31.6**	**+0.2**
comp=Z,2.8nm,0.5s,mb4.6,baz=92,slow=7.6,SNR=25							
BRVK	**Borovoye**	**60.77**	**319**	*ce*P	**P**	**17 05 32.0**	**+0.2**
BRVK				pmax	pmax		
comp=Z,6.0nm,1.0s,mb4.7							
BRVK	**Borovoye**	**60.77**	**319**	*e*P	**P**	**17 05 31.4**	**-0.4**
comp=Z,4.5nm,0.9s,mb4.6							
INK	**Inuvik**	**65.58**	**24**	P	**P**	**17 06 03.9**	**+0.5**
comp=Z,1.7nm,0.9s,mb4.0,baz=245,slow=8.7,SNR=3.2							
ARU	**Arti**	**67.21**	**323**	*d i*P	**P**	**17 06 14.2**	**+0.1**
ARU

NOA	**NORSAR Array B**	86.67	339	P	P	17 08 02.7	-0.7
	comp=Z,4.4nm,0.8s,mb4.7,baz=48,slow=4.8,SNR=15						
NOA	**NORSAR Array B**	86.67	339	P	P	17 08 02.7	-0.7
BR131	**Keskin Array S**	88.51	313	P	P	17 08 12.2	-0.5
	comp=Z,1.6nm,0.7s,mb4.5						
BRTR	**Keskin Array B**	88.51	313	P	P	17 08 12.5	-0.2
	comp=Z,2.1nm,0.8s,mb4.5,baz=125,slow=3.6,SNR=9.8						
PLCA	**Paso Flores**	147.50	129	PKPbc	PKPbc	17 15 03.9	-0.2
	comp=Z,3.3nm,0.6s,baz=169,slow=5.2,SNR=7.6						
LPAZ	**La Paz**	149.98	81	PKPbc	PKPbc	17 15 10.3	-0.8
	comp=Z,2.3nm,0.6s,baz=130,slow=24,SNR=4.1						
LPAZ	**La Paz**	149.98	81	PKPbc	PKPbc	17 15 10.3	-0.9

*IDC **13** 16:57:32.1±5.3, 12.°07S×167.°56E, h310km±51km, mb3.8/16, mb1 3.9/16, mb1mx3.8/20, mbtmp3.8/16, Error ellipse: s-maj=21.4km s-min=15.2km az=33.0*
*ISCJB **13** 16:57:33.8±1.8, 12.°10S±0.°09×167.°51E±0.°08, h336km±19km, mb4.2/23, Error ellipse: s-maj=15.3km s-min=11.9km az=167.5*
*NEIC **13** 16:57:34.1±1.3, 12.°04S×167.°51E, h328km±13km, mb4.7/9, Error ellipse: s-maj=10.1km s-min=7.8km az=171.0*
ISC 13 16:57:34.5±1.8, 12.°07S±0.°09×167.°51E±0.°08, h330km±19km, n70, σ0s85/37, mb4.2/23, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	10.00	186	*e*P	Pn	16 59 51.8	-0.6
MSVF	**Nonsavu**	11.63	120	*e*P	Pn	17 00 13.0	+0.8
	37nm,0.8s						
EIDS	**Eidsvold**	20.39	227	*e*P	P	17 01 47.2	-0.3
	14nm,0.6s						
CTA	**Charters Tower**	21.91	246	*e*P	P	17 02 01.9	+0.4
	16nm,0.6s,mb4.4						
CTA	**Charters Tower**	21.91	246	P	P	17 02 02.1	+0.6
	22nm,0.7s,mb4.5,baz=78,slow=12,SNR=34						
CTAO	**Charters Tower**	21.91	246	*e*P	P	17 02 01.2	-0.3
	22nm,0.8s,mb4.5						
ARMA	**Armidale**	23.45	216	*e*P	P	17 02 15.7	+0.3
OUZ	**Omahuta**	23.70	168	*e*P	P	17 02 18.5	+0.9
COEN	**Coen**	23.79	263	*e*P	P	17 02 19.1	+0.6
URZ	**Urewera**	27.45	163	P	P	17 02 50.7	-0.3
	9.4nm,0.7s,mb4.2,baz=308,slow=3.6,SNR=9.5						
URZ	**Urewera**	27.45	163	*e*P	P	17 02 50.8	-0.2
STKA	**Stephens Creek**	30.94	226	*e*P	P	17 03 22.7	+0.9
	7.0nm,0.4s,mb4.2						
STKA	**Stephens Creek**	30.94	226	P	P	17 03 21.9	+0.1
	6.7nm,0.4s,mb4.3,baz=47,slow=9.6,SNR=57						
STKA	**Stephens Creek**	30.94	226	*e*P	P	17 03 22.4	+0.6
RPZ	**Rata Peaks**	31.68	175	P	P	17 03 26.8	-1.2
	14nm,0.5s,mb4.4,baz=9.3,slow=2.8,SNR=14						
WRA	**Warrumunga Arr**	32.79	252	P	P	17 03 37.0	-1.0
	1.7nm,0.4s,mb3.6,baz=80,slow=9.1,SNR=16						
WRA	**Warrumunga Arr**	32.79	252	P	P	17 03 37.0	-1.0
ASAR	**Alice Springs**	33.91	245	P	P	17 03 46.0	-1.5
	1.3nm,0.5s,mb3.4,baz=78,slow=10,SNR=40						
KAKA	**Kakadu**	34.25	265	*e*P	P	17 03 51.6	+1.1
	22nm,0.6s,mb4.6						
KAKA	**Kakadu**	34.25	265	*e*P	P	17 03 51.5	+0.9
	64nm,0.6s,mb5.0						
FITZ	**Fitzroy Crossi**	40.81	256	*e*P	P	17 04 45.1	+0.1
	6.9nm,0.4s,mb4.2						
FITZ	**Fitzroy Crossi**	40.81	256	P	P	17 04 45.3	+0.3
	3.6nm,0.4s,mb3.9,baz=67,slow=5.5,SNR=16						
MJAR	**Matsushiro Arr**	55.68	331	P	P	17 06 35.6	-1.8
	0.5nm,0.6s,mb3.0,baz=162,slow=7.8,SNR=3.9						
SBA	**Scott Base**	65.78	180	*e*P	P	17 07 45.1	+0.8
	23nm,1.2s,mb4.8						
HHC	**Hu-ho-hao-te**	73.73	319	*e*P	P	17 08 34.5	+1.5
HHC				S	S	17 17 38.8	+2.4
HHC				pmax	pmax		
	comp=Z,14nm,0.7s,mb4.8						
HHC				pmax	pmax		
	comp=Z,270nm,7.0s						
CMAR	**Chiang Mai Arr**	74.11	293	P	P	17 08 35.7	0.0
	comp=Z,0.7nm,0.8s,mb3.4,baz=116,slow=4.5,SNR=4.6						
QSPA	**South Pole Qui**	77.94	180	*e*P	P	17 08 56.1	+0.1
	comp=Z,27nm,1.1s,mb4.9						
ULN	**Ulaanbaatar**	80.15	324	*e*P	P	17 09 09.1	+0.8
	comp=Z,2.2nm,1.0s,mb3.8						
SONM	**Songino Array**	80.51	323	P	P	17 09 11.4	+1.1
	comp=Z,1.2nm,0.6s,mb3.8,baz=180,slow=1.2,SNR=3.7						
YBH	**Yreka Blue Hor**	83.38	45	P	P	17 09 25.1	-0.2
	comp=Z,3.3nm,0.9s,mb4.2,baz=259,slow=1.0,SNR=6.4						
COLA	**College**	83.72	18	*e*P	P	17 09 24.9	-1.6
	comp=Z,9.0nm,0.8s,mb4.7						
MAW	**Mawson**	84.43	202	P	P	17 09 29.7	-0.3
	comp=Z,3.4nm,0.7s,mb4.3,baz=130,slow=2.7,SNR=6.9						
NVAR	**Mina Array Bea**	85.36	49	P	P	17 09 35.8	+0.6
	comp=Z,0.6nm,0.6s,mb3.6,baz=358,slow=24,SNR=6.5						
EGAK	**Eagle**	85.75	20	*e*P	P	17 09 36.7	+0.3
	comp=Z,6.1nm,0.7s,mb4.5						
TXAR	**Lajitas Array**	94.80	61	P	P	17 10 19.5	0.0
	comp=Z,0.5nm,0.7s,mb3.7,baz=213,slow=5.7,SNR=6.6						
YKA	**Yellowknife Ar**	95.08	27	P	P	17 10 18.7	-1.3
	comp=Z,1.5nm,0.5s,mb4.2,baz=259,slow=4.9,SNR=6.4						
MKAR	**Makanchi Array**	95.45	317	P	P	17 10 22.2	+0.2
	comp=Z,2.4nm,0.5s,mb4.5,baz=84,slow=6.2,SNR=34						
ARCES	**ARCESS Array B**	117.75	346	PKP	PKPdf	17 15 40.6	-0.5
	comp=Z,1.3nm,0.4s,baz=94,slow=2.0,SNR=29						
JOF	**Joensuu**	120.52	338	*e*p	PKPdf	17 15 45.8	-0.8
	comp=Z,2.1nm,0.4s						
CPUP	**Villa Florida**	122.06	132	PKP	PKPdf	17 15 48.4	-2.4
	comp=Z,0.9nm,0.7s,baz=64,slow=3.7,SNR=3.9						
CPUP	**Villa Florida**	122.06	132	PKP2	PKPdf	17 15 48.4	-2.4
CPUP	**Villa Florida**	122.06	132	PKP	PKPdf	17 15 48.4	-2.4
KAF	**Kangasniemi**	122.81	339	*e*p	PKPdf	17 15 49.8	-1.3
	comp=Z,2.2nm,0.4s						
FINES	**FINESS Array B**	123.35	339	PKP	PKPdf	17 15 51.8	-0.3
	comp=Z,1.0nm,0.4s,baz=67,slow=2.2,SNR=23						
BOSA	**Boshof**	125.53	221	PKP	PKPdf	17 15 57.9	+0.5
	comp=Z,2.3nm,0.9s,baz=90,slow=2.0,SNR=3.3						
BOSA	**Boshof**	125.53	221	PKP	PKPdf	17 15 57.9	+0.5
NB2	**NORSAR Subarra**	128.13	346	PKPdf	PKPdf	17 16 01.2	-0.1
	comp=Z,0.1nm,0.6s,baz=48,slow=2.6						
NOA	**NORSAR Array B**	128.13	346	PKP	PKPdf	17 16 01.4	+0.1
	comp=Z,0.6nm,0.6s,baz=33,slow=2.0,SNR=3.9						
HINF	**Hinteralfeld**	140.85	339	*e*PKP1	PKPdf	17 16 27.3	+1.9
	comp=Z,2.4nm,0.5s						
CABF	**La Chapelle**	142.16	339	*e*PKP1	PKPdf	17 16 24.3	-3.5
	comp=Z,21nm,1.1s						
GRR	**Gorron**	142.51	347	*e*PKP1	PKPdf	17 16 26.3	-2.0
SSF	**Saint Saulge**	142.61	342	*e*PKP1	PKPdf	17 16 26.8	-1.8
	comp=Z,3.4nm,0.6s						
SMF	**Signal de Mont**	142.88	341	*e*PKP1	PKPdf	17 16 25.9	-3.1
SGMF	**Saint Gilles**	142.99	349	*e*PKP1	PKPdf	17 16 26.5	-2.7
BGF	**Bois d'Agland**	143.26	342	*e*PKP1	PKPdf	17 16 27.3	-2.4
	comp=Z,8.1nm,0.6s						
QUIF	**Quistinic**	143.42	349	*e*PKP1	PKPdf	17 16 27.2	-2.8
ORIF	**Oris-en-Rattie**	143.69	338	*e*PKP1	PKPdf	17 16 29.1	-1.4
	comp=Z,15nm,0.7s						
TCF	**Toulx Ste Croi**	143.69	343	*e*PKP1	PKPdf	17 16 28.7	-1.8
	comp=Z,9.1nm,0.8s						
MFF	**Saint Martin d**	144.03	345	*e*PKP1	PKPdf	17 16 29.7	-1.4
	comp=Z,22nm,0.6s						
VIVF	**Saint-Julien-l**	144.17	339	*e*PKP1	PKPdf	17 16 30.9	-0.5
PGF	**Pioggiola**	144.35	332	*e*PKP1	PKPdf	17 16 31.4	-0.4
	comp=Z,36nm,0.8s						
FRF	**La Foret Royal**	144.54	336	*e*PKP1	PKPdf	17 16 31.3	-0.7
	comp=Z,42nm,0.8s						
SMRF	**Simiane la Rot**	144.60	337	*e*PKP1	PKPdf	17 16 32.0	-0.1
	comp=Z,9.7nm,0.7s						
LMR	**La Mourre**	144.78	336	*e*PKP1	PKPdf	17 16 32.0	-0.5
	comp=Z,15nm,0.6s						
RJF	**Les Rejaudoux**	144.79	343	*e*PKP1	PKPdf	17 16 32.6	+0.2
LASF	**Ste Croix**	145.14	339	*e*PKP1	PKPbc	17 16 33.6	+0.2
	comp=Z,17nm,1.0s						
LFF	**La Frestale**	145.34	343	*e*PKP1	PKPbc	17 16 34.0	+0.1
	comp=Z,16nm,0.7s						
MTLF	**Montolieu**	146.34	340	*e*PKP1	PKPbc	17 16 37.2	+0.3
	comp=Z,5.8nm,0.6s						
KEST	**Kesra**	149.27	324	PKPbc	PKPbc	17 16 44.8	-0.1
	comp=Z,1.8nm,0.6s,baz=276,slow=9.5,SNR=6.8						
ESDC	**Sonseca Array**	151.49	346	PKPbc	PKPbc	17 16 50.2	+0.3
	comp=Z,1.2nm,0.5s,baz=357,slow=1.4,SNR=9.2						
ESDC				PKPab	PKPab	17 16 59.4	-0.2
	comp=Z,0.8nm,0.6s,baz=28,slow=4.2,SNR=4.6						

*IDC **13** 17:00:26.1±1.2, 20.°88N×121.°16E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.5/22, mbtmp3.6/5, ML3.3/1, Error ellipse: s-maj=67.3km s-min=20.8km az=68.0*
*NEIC **13** 17:00:26.3±0.7, 21.°05N×121.°20E, h10km, mb3.6/1, Error ellipse: s-maj=36.1km s-min=9.3km az=81.0*

*JMA **13** 17:00:27.8±0.5, 21.°13N×121.°35E, h0km*
*ISCJB **13** 17:00:28.2±0.6, 21.°02N±0.°05×121.°16E±0.°07, h33km, mb3.6/5, Error ellipse: s-maj=10.9km s-min=5.7km az=29.1*
ISC 13 17:00:29.2±2.5, 21.°03N±0.°06×121.°11E±0.°08, h28km±21km, n20, σ0s85/26, mb3.6/5, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	1.79	359	*e*Pn	Pn	17 00 53.9	-4.3
TPUB	**Ta-pu**	2.31	349	*e*Pn	Pn	17 01 03.6	-1.8
YULB	**Yu-li**	2.36	4	*e*Pn	Pn	17 01 06.4	+0.3
SSLB	**Suanglung**	2.75	357	*e*Pn	Pn	17 01 10.3	-1.1
NACB	**Ninganchiao**	3.17	8	*e*Pn	Pn	17 01 16.1	-1.1
YHNB	**Yeheng**	3.63	4	*e*Pn	Pn	17 01 23.6	0.0
YOJ	**Yonaguni jima**	3.84	27	P	Pn	17 01 27.0	+0.5
YOJ				*e*S	Sn	17 02 11.5	+0.8
HATJ	**Hateruma jima**	3.91	39	P	Pn	17 01 27.9	+0.5
HATJ				S	Sn	17 02 12.1	-0.3
IRIF	**Iriomote-Funau**	4.09	36	P	Pn	17 01 30.3	+0.5
IRIF				S	Sn	17 02 17.4	+0.7
JKRS	**Kuro-shima**	4.17	39	P	Pn	17 01 30.8	-0.2
JKRS				*e*S	Sn	17 02 18.7	-0.1
JIJ	**Ishigaki jima**	4.34	40	P	Pn	17 01 33.8	+0.4
JIJ				S	Sn	17 02 21.8	-1.3
JTJ	**Tarama**	4.89	42	P	Pn	17 01 41.7	+0.8
JTJ				S	Sn	17 02 35.7	-0.8
KSRS	**Korea Array**	17.41	18	P	Pn	17 04 31.5	+1.5
	0.1nm,0.3s,baz=198,slow=11,SNR=8.3						
MK31	**Makanchi Array**	40.60	319	P	P	17 08 07.1	+0.7
MKAR	**Makanchi Array**	40.60	319	P	P	17 08 07.1	+0.7
	0.3nm,0.6s,mb3.1,baz=114,slow=11,SNR=4.0						
WRAB	**Tennant Creek**	42.72	161	*e*P	P	17 08 24.4	+0.5
	0.5nm,0.4s,mb3.6						
WRA	**Warramunga Arr**	42.72	162	P	P	17 08 23.3	-0.7
	0.7nm,0.5s,mb3.6,baz=344,slow=9.1,SNR=6.4						
WB2	**Warramunga Arr**	42.73	161	P	P	17 08 22.6	-1.4
ZALV	**Zalesovo Beam**	42.88	329	P	P	17 08 29.2	+4.3
	0.9nm,0.4s,mb3.8,baz=128,slow=9.2,SNR=4.1						
ASAR	**Alice Springs**	46.14	164	P	P	17 08 51.8	+0.5
	0.4nm,0.4s,mb3.7,baz=347,slow=7.2,SNR=9.4						

MAN 13 17:10:11, 12.°39N×123.°63E, h26km, mb4.2, ML3.0, MS2.8, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPH	**Masbate**	0.03	195	⇑*e*P	Pb	17 10 15.8	+0.4
MMPH				*e*S	Sb	17 10 19.2	+0.8
CNP	**Catarman**	1.01	83	*e*P	Pn	17 10 32.2	+2.7
CNP				*e*S	Sb	17 10 43.2	+0.4
PVCP	**Virac**	1.30	23	*e*P	Pn	17 10 33.2	-0.4
PVCP				*e*S	Sn	17 10 46.2	-3.9
AUQP	**San Andres**	1.32	315	*e*P	Pn	17 10 34.1	+0.4

MAN 13 17:17:39, 13.°52N×120.°21E, h32km, mb4.3, ML3.2, MS3.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	0.22	10	*e*P	Pb	17 17 48.0	+2.3
LUBP				*e*S	Sb	17 17 52.0	+1.8
SJMP	**San Jose**	1.38	140	*e*P	Pn	17 18 02.6	+0.6
BUSP	**Coron**	1.50	180	*e*P	Pn	17 18 04.3	+0.5
ABRA	**Dolores**	4.14	7	*e*P	Pn	17 18 35.4	-4.6

*IDC **13** 17:20:41.4±2.0, 3.°82S×100.°49E, h0km, mb3.6/8, mb1 3.7/8, mb1mx3.6/20, mbtmp3.6/8, Error ellipse: s-maj=72.8km s-min=18.6km az=56.0*
*ISCJB **13** 17:20:44.6±1.0, 3.°7S±0.°1×100.°6E±0.°1, h33km, mb3.7/9, Error ellipse: s-maj=22.2km s-min=8.8km az=143.5*
*NEIC **13** 17:20:46.5±1.4, 3.°85S×100.°48E, h35km, mb3.9/1, Error ellipse: s-maj=56.9km s-min=9.2km az=55.0*
*DJA **13** 17:20:47, 3.°11S×101.°32E, h174km, MLv3.8/5*
ISC 13 17:20:47.5±1.0, 3.°7S±0.°1×100.°7E±0.°1, h35km, n20, σ0s83/19, mb3.7/9, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	1.87	90	P	Pn	17 21 17.7	+0.7
PDSI	**Padang**	2.73	355	P	Pn	17 21 28.7	-0.2
SDSI	**Sungai Dareh**	2.79	15	P	Pn	17 21 29.5	-0.2
PPI	**Padang Panjang**	3.19	354	P	Pn	17 21 32.9	-2.3
MDSI	**Maura Dua**	3.54	104	P	Pn	17 21 39.1	-1.0
RGRI	**Rengat**	3.65	26	P	Pn	17 21 33.8	-7.8
CMAR	**Chiang Mai Arr**	22.04	355	P	P	17 25 39.8	+0.6
	0.5nm,0.5s,mb3.2,baz=182,slow=8.3,SNR=5.9						
WRA	**Warramunga Arr**	36.55	119	P	P	17 27 49.8	-0.4
	0.4nm,0.3s,mb3.7,baz=313,slow=9.3,SNR=13						
WRAB	**Tennant Creek**	36.56	119	P	P	17 27 50.7	+0.4
WB2	**Warramunga Arr**	36.56	119	P	P	17 27 50.0	-0.3
ASAR	**Alice Springs**	37.71	125	P	P	17 27 59.9	-0.2
	0.2nm,0.3s,mb3.3,baz=299,slow=7.8,SNR=16						
KSRS	**Korea Array**	48.08	29	P	P	17 29 24.3	+0.6
	1.0nm,1.0s,mb3.8,baz=218,slow=8.7,SNR=7.3						
SONM	**Songino Array**	51.51	5	P	P	17 29 50.6	+1.0
	0.7nm,0.5s,mb3.8,baz=182,slow=8.9,SNR=3.9						
ULN	**Ulaanbaatar**	51.60	5	*e*P	P	17 29 51.8	+1.5
	0.6nm,0.4s,mb3.9						
MK31	**Makanchi Array**	52.80	344	*e*P	P	17 29 59.7	+0.4
MKAR	**Makanchi Array**	52.80	344	P	P	17 29 59.6	+0.4
	0.6nm,0.6s,mb3.7,baz=153,slow=7.5,SNR=7.3						
ZALV	**Zalesovo Beam**	58.91	349	P	P	17 30 42.0	-0.9
	0.5nm,0.4s,mb3.9,baz=199,slow=3.1,SNR=4.2						
ZALV	**Zalesovo Beam**	58.91	349	P	P	17 30 42.0	-0.9
BVAR	**Borovoye Array**	61.97	340	P	P	17 31 03.2	-0.6
	0.8nm,0.5s,mb4.1,baz=139,slow=8.8,SNR=7.6						
TXAR	**Lajitas Array**	145.54	40	PKPbc	PKPbc	17 40 24.2	+1.4
	0.6nm,0.5s,baz=273,slow=1.2,SNR=12						

*ISCJB **13** 17:33:54.9±0.5, 21.°67S±0.°03×68.°11W±0.°04, h104km±3km, mb4.6/34, Error ellipse: s-maj=6.5km s-min=5.3km az=3.1*
*NEIC **13** 17:33:54.2±0.8, 21.°69S×68.°21W, h86km±7km, mb4.8/23, Error ellipse: s-maj=8.5km s-min=6.0km az=58.0*
*IDC **13** 17:33:56.0±2.2, 21.°66S×68.°26W, h102km±18km, mb4.3/12, mb1 4.4/17, mb1mx4.3/20, mbtmp4.2/17, MS2.8/1, Ms1 2.9/1, ms1mx2.6/20, Error ellipse: s-maj=21.6km s-min=12.8km az=59.0*
*BJI **13** 17:33:55.1, 21.°70S×68.°20W, h85km, mB5.2/13, Ms5.3/10, Ms7 5.2/12*
*GUC **13** 17:33:56.7±1.2, 21.°69S×68.°52W, h136km±14km, ML4.5*
ISC 13 17:33:56.1±0.5, 21.°70S±0.°03×68.°12W±0.°04, h98km±3km, n372, σ0s77/359, mb4.6/34, 77C-68D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	1.39	246	⇑*i*P	Pn	17 34 27.7	+6.9
PB04				*i* S	Sn	17 34 51.2	+14
PB04				AML	AML	17 34 57.8	
	comp=E,3μm,0.4s						
PB01	**Plate Boundary**	1.43	297	⇑*i*P	Pn	17 34 22.1	+0.7
PB01				*i* S	Sn	17 34 40.8	+2.5
PB01				AML	AML	17 34 43.4	
	comp=E,6μm,0.3s						
MACH	**Maria Elena**	1.60	252	⇑*i*P	Pn	17 34 23.6	+0.2
MACH				*i* S	Sn	17 34 43.5	+1.2
HMBC	**Humberston**	2.17	310	⇑*i*P	Pn	17 34 30.9	+0.1
HMBC				*i* S	Sn	17 34 56.6	+0.2
HMBC				AML	AML	17 34 58.0	
	comp=N,5μm,0.3s						
CEN1	**Los Morros**	2.55	228	*e*P	Pn	17 34 37.5	+1.7
CEN1				*i* S	Sn	17 35 08.4	+2.8
MECH	**Mejillones**	2.56	237	*e*P	Pn	17 34 35.4	-0.5
MECH				*e*S	Sn	17 35 04.5	-1.4
MECH				AML	AML	17 35 14.5	
	comp=N,2μm,0.8s						
PSGC	**Pisagua**	2.81	318	⇑*i*P	Pn	17 34 38.5	-0.7
PSGC				*e*S	Sn	17 35 11.0	-0.9
PSGC				AML	AML	17 35 16.8	
	comp=E,1μm,0.4s						
MNMC	**Miæe Miæ**	2.91	331	*e*P	Pn	17 34 41.8	+1.3
MNMC				*i* S	Sn	17 35 16.0	+1.7
MNMC				AML	AML	17 35 19.9	
	comp=E,3μm,0.7s						
LPAZ	**La Paz**	5.38	360	P	Pn	17 35 15.8	+1.8
	comp=E,9.2nm,0.3s,baz=170,slow=6.9,SNR=168						
LPAZ				S	Sn	17 36 16.1	+1.4
	baz=201,slow=11,SNR=1.6						
LPAZ				LR	LR	17 36 56.8	
	comp=E,93nm,19.9s,baz=147,slow=34						
LPAZ	**La Paz**	5.38	360	*e*Pn	Pn	17 35 17.9	+3.8
LCO	**Las Campanas**	7.64	197	*e*Pn	Pn	17 35 40.7	-4.0
SIV	**San Ignacio**	8.76	51	P	Pn	17 36 00.6	+0.6
	comp=E,40nm,0.3s,baz=241,slow=12,SNR=620						
SIV				S	Sn	17 37 36.8	-0.3
	comp=E,1.5nm,0.3s,baz=210,slow=22,SNR=3.2						
CFAA	**Coronel Fontan**	9.86	181	P	Pn	17 36 12.4	-2.4
	comp=E,0.4nm,0.3s,baz=354,slow=13,SNR=32						
CFAA				S	Sn	17 37 53.0	-11
	comp=E,0.1nm,0.3s,baz=244,slow=16,SNR=3.0						
CPUP	**Villa Florida**	10.89	117	P	Pn	17 36 29.4	+0.6
	comp=E,1.1nm,0.3s,baz=286,slow=12,SNR=16						
CPUP	**Villa Florida**	10.89	117	*e*P	Pn	17 36 30.9	+2.1
	comp=E,37nm,0.8s						
NNA	**Nana**	12.76	318	P	Pn	17 36 50.9	-3.0
	comp=E,0.9nm,0.3s,baz=185,slow=13,SNR=2.3						
NNA	**Nana**	12.76	318	P	Pn	17 36 50.9	-3.0
ATAH	**Atahualpa**	17.55	324	P	Pn	17 37 49.6	-4.9
	comp=E,0.4nm,0.3s,baz=302,slow=13,SNR=2.5						
PLCA	**Paso Flores**	19.08	186	P	Pn	17 38 11.2	-1.4
	comp=E,0.2nm,0.3s,baz=2.4,slow=10,SNR=5.4						
SPB	**Sao Paulo**	19.19	100	*e*P	Pn	17 38 09.6	-4.5
	comp=E,13nm,0.6s						
OTAV	**Otavalo**	24.02	334	*e*P	P	17 39 02.7	+0.7
	comp=E,9.3nm,1.3s,mb4.0						
SJG	**San Juan**	39.61	3	P	P	17 41 15.4	-2.7
	comp=E,9.4nm,0.6s,mb4.8,baz=53,slow=14,SNR=3.9						
TEIG	**Tepich**	46.09	333	*e*P	P	17 42 09.1	-1.4
	comp=E,17nm,0.4s,mb5.1						
NHSC	**New Hope**	55.70	348	*e*P	P	17 43 21.7	-0.6
	comp=E,48nm,1.0s,mb5.5						
GOGA	**Godfrey**	56.72	345	*e*P	P	17 43 27.1	-2.5
	comp=E,47nm,2.2s,mb5.1						
JSC	**Jenkinsville**	57.06	347	*e*P	P	17 43 30.1	-1.8
LRAL	**Lakeview Retre**	57.34	341	*e*P	P	17 43 32.0	-1.9
	comp=E,1.4nm,0.5s,mb4.2						
CPCT	**Cooper Cave**	58.93	344	*e*P	P	17 43 43.3	-1.6
TKL	**Tuckaleechee C**	58.94	345	*e*P	P	17 43 43.5	-1.6
SWET	**Sewanee**	59.07	343	*e*P	P	17 43 44.5	-1.5
ELN	**Prospectdale**	59.81	348	*e*P	P	17 43 50.7	-0.3
VNA1	**Neumayer--Stat**	59.85	161	*e*P	P	17 43 50.9	0.0
JCT	**Junction City**	60.15	328	*e*P	P	17 43 52.3	-1.2
	comp=E,16nm,0.7s,mb5.2						
WVT	**Waverly**	60.46	342	*e*P	P	17 43 53.3	-2.1
628A	**Black Gap, Mar**	60.92	325	⇑⇑P	P	17 43 58.4	-0.3
	baz=61,SNR=20						
MIAR	**Mount Ida**	60.95	336	*e*P	P	17 43 57.3	-1.5
627A	**Terlingua Ranc**	61.16	325	⇑⇑P	P	17 43 59.3	-1.0
	baz=61,SNR=9.3						
TXAR	**Lajitas Array**	61.21	325	P	P	17 43 59.6	-1.1
	comp=E,1.8nm,0.7s,mb4.2,baz=150,slow=8.8,SNR=22						
626A	**Big Bend Ranch**	61.64	324	⇑⇑P	P	17 44 03.1	-0.5
	baz=62,SNR=13						
428A	**Kincaid Ranch,**	61.80	326	⇓⇓P	P	17 44 03.9	-0.7
	baz=62						
527A	**Woodward Ranch**	61.82	325	P	P	17 44 03.8	-1.0
	baz=62,SNR=9.2						
WCI	**Wyandotte Cave**	62.01	344	*e*P	P	17 44 03.9	-2.0
526A	**Mary Lane Ranc**	62.01	325	⇑⇑P	P	17 44 05.7	-0.3
	baz=62,SNR=14						
MCWV	**Mont Chateau**	62.01	350	*e*P	P	17 44 05.5	-0.3
	comp=E,14nm,0.7s,mb5.1						
427A	**Hayter Ranch,**	62.27	326	⇓⇓P	P	17 44 06.6	-1.1
	baz=62						
SIUC	**Southern Illin**	62.34	341	*e*P	P	17 44 06.0	-2.1
328A	**Wristen Ranch,**	62.38	327	P	P	17 44 07.7	-0.9
	baz=63,SNR=9.4						
426A	**McDonald Obser**	62.45	325	⇑⇑P	P	17 44 08.3	-0.7
	baz=63,SNR=9.4						
326A	**Caldw

Y20A	Horse Springs,	67.28	324	⇓P	P	17 44 40.9	+0.6
	baz=68,SNR=9.5						
W22A	Albuquerque	67.38	326	⇑P	P	17 44 41.5	+0.6
	baz=68						
X21A	Alamocita Cree	67.38	325	⇑P	P	17 44 41.5	+0.6
	baz=68,SNR=13						
TUC	Tucson	67.45	322	eP	P	17 44 40.3	-1.0
	comp=E,7.6nm,1.3s,mb4.4						
V23A	Ortiz Mt. (NFS	67.55	327	⇓P	P	17 44 42.4	+0.5
	baz=68,SNR=9.6						
117A	Oracle	67.61	322	P	P	17 44 42.5	+0.2
	baz=68,SNR=14						
216A	Three Points,	67.61	321	P	P	17 44 42.7	+0.3
	baz=68,SNR=8.5						
LIC	Lamto	67.74	73	eP	P	17 44 43.1	-0.5
	comp=E,74nm,1.4s,mb5.3						
Y19A	Nutrioso	67.80	324	P	P	17 44 44.4	+0.9
	baz=68,SNR=14						
W21A	San Fidel	67.82	326	P	P	17 44 44.1	+0.5
	baz=68,SNR=5.6						
X20A	Quemado	67.83	325	⇑P	P	17 44 44.2	+0.5
	baz=68,SNR=6.9						
TIC	Toumodi	67.93	73	eP	P	17 44 45.4	+0.6
	comp=E,11nm,0.2s,mb5.3						
U23A	El Rito	68.01	328	⇓P	P	17 44 45.1	+0.3
	baz=68						
V22A	San Miguel Ran	68.05	327	P	P	17 44 45.6	+0.5
	baz=68,SNR=10						
KIC	Kosan Boka	68.06	73	eP	P	17 44 45.7	+0.1
	comp=E,26nm,0.5s,mb5.3						
DBIC	Dimbokro	68.09	73	P	P	17 44 46.0	+0.2
	comp=E,12nm,0.6s,mb4.9,baz=226,slow=6.2,SNR=20						
Y18A	Canyon Day Jun	68.10	323	⇑P	P	17 44 45.8	+0.4
	baz=68,SNR=5.6						
S25A	Robets Cordova	68.22	330	P	P	17 44 45.9	-0.2
	baz=68,SNR=7.6						
W20A	Ramah	68.28	325	P	P	17 44 46.9	+0.4
	baz=68,SNR=9.8						
214A	Organ Pipe Nat	68.38	320	⇓P	P	17 44 47.5	+0.3
	baz=69,SNR=12						
U22A	Llaves	68.38	327	P	P	17 44 47.6	+0.5
	baz=69,SNR=5.9						
QSPA	South Pole Qui	68.49	180	eP	P	17 44 47.8	+0.6
	comp=E,17nm,0.8s,mb4.9						
Y17A	Roosevelt	68.49	323	⇑P	P	17 44 48.2	+0.3
	baz=69,SNR=9.8						
S24A	Houchin Ranch,	68.57	329	P	P	17 44 48.9	+0.7
	baz=69,SNR=5.3						
W19A	Sanders	68.74	325	⇑P	P	17 44 49.7	+0.3
	baz=69						
SDCO	Great Sand Dun	68.79	329	eP	P	17 44 49.3	-0.3
U21A	Nageezi	68.83	327	P	P	17 44 50.0	+0.1
	baz=69,SNR=8.5						
T22A	Edith	68.90	327	⇓P	P	17 44 50.7	+0.4
	baz=69,SNR=6.9						
X17A	Forest Lakes	68.94	323	⇓P	P	17 44 51.4	+0.7
	baz=69						
Y16A	Circle Bar Ran	68.99	322	P	P	17 44 51.5	+0.6
	baz=69,SNR=8.1						
114A	Black Gap (USA	68.99	321	⇓P	P	17 44 51.2	+0.2
	baz=69,SNR=9.0						
R24A	Sanders Place,	68.99	330	⇓P	P	17 44 51.3	+0.5
	baz=69,SNR=11						
V19A	Window Rock	69.01	325	⇓P	P	17 44 51.2	+0.2
	baz=69,SNR=7.3						
U20A	Newcomb	69.24	326	⇓P	P	17 44 52.6	+0.2
	baz=69,SNR=12						
X16A	Lo Mia Camp, P	69.36	323	P	P	17 44 53.8	+0.6
	baz=70,SNR=13						
V18A	Ganado	69.48	325	⇓P	P	17 44 53.7	-0.2
	baz=70						
Y15A	Casa Rosa Ranc	69.53	322	⇓P	P	17 44 54.8	+0.5
	baz=70,SNR=5.2						
U19A	Dine' College,	69.53	325	⇑P	P	17 44 53.8	-0.4
	baz=70						
P25A	Willow Gulch B	69.59	331	⇑P	P	17 44 54.8	+0.3
	baz=70						
Q24A	Divide	69.60	330	⇓P	P	17 44 54.9	+0.3
	baz=70,SNR=6.7						
Z13A	Yuma Proving G	69.77	320	⇑P	P	17 44 55.8	0.0
	baz=70,SNR=5.6						
T19A	Beclabito	69.84	326	⇑P	P	17 44 56.3	+0.2
	baz=70,SNR=6.3						
S21A	Coal Bank Pass	69.85	327	⇓P	P	17 44 56.5	+0.4
	baz=70,SNR=5.1						
X15A	Humboldt	69.86	322	P	P	17 44 56.8	+0.5
	baz=70,SNR=12						
MVCO	Mesa Verde	69.86	327	⇑P	P	17 44 56.4	+0.2
	baz=70,SNR=10						
MVCO	Mesa Verde	69.86	327	eP	P	17 44 56.4	+0.1
V17A	Tonalea, Kykot	69.88	324	⇑P	P	17 44 56.8	+0.4
	baz=70,SNR=19						
W16A	Flagstaff	69.90	323	⇓P	P	17 44 57.2	+0.7
	baz=70,SNR=12						
Y14A	Wickenburg	69.91	321	⇑P	P	17 44 56.8	+0.2
	baz=70						
U18A	Rough Rock, Ch	69.98	325	⇑P	P	17 44 57.5	+0.5
	baz=70,SNR=5.5						
WUAZ	Wupatki	70.12	324	P	P	17 44 58.6	+0.7
	baz=70,SNR=13						
WUAZ	Wupatki	70.12	324	eP	P	17 44 58.5	+0.6
ECSD	EROS Data Cent	70.17	338	eP	P	17 44 56.4	-1.6
X14A	Yava	70.22	322	⇑P	P	17 44 59.2	+0.7
	baz=70,SNR=6.7						
S20A	Disappointment	70.27	327	P	P	17 44 59.4	+0.6
	baz=70,SNR=9.8						
R21A	Cimarron	70.28	328	⇓P	P	17 44 59.2	+0.5
	baz=70						
Y13A	Salome	70.30	321	⇓P	P	17 44 59.4	+0.4
	baz=70						
U16A	Tuba City	70.45	324	⇑P	P	17 45 00.3	+0.4
	baz=71,SNR=6.1						
ISCO	Idaho Springs	70.48	330	eP	P	17 44 59.8	-0.2
	comp=E,2.3nm,0.6s,mb4.2						
T18A	Mexican Hat	70.52	326	P	P	17 45 00.2	-0.1
	baz=71,SNR=17						
U17A	Shonto	70.54	325	⇑P	P	17 45 00.9	+0.5
	baz=71,SNR=6.7						
R20A	Redvale	70.55	327	P	P	17 45 01.1	+0.7
	baz=71,SNR=10						
S19A	Harvey Farm, M	70.60	327	⇑P	P	17 45 00.8	0.0
	baz=71						
PV01	Paradox Valley	70.61	327	eP	P	17 45 00.9	+0.2
	comp=E,821nm,1.0s						
SMCO	Snowmass	70.63	329	eP	P	17 45 01.4	+0.5
V15A	Kaibab Nationa	70.79	323	P	P	17 45 02.8	+0.8
	baz=71,SNR=12						
X13A	Yucca	70.85	321	P	P	17 45 02.6	+0.3
	baz=71,SNR=10						
W14A	Seligman	70.86	322	⇑P	P	17 45 02.8	+0.4
	baz=71,SNR=9.7						
DVTC	Desert V Tower	70.87	318	⇓P	P	17 45 02.5	0.0
	baz=71						
T17A	Navajo Res., N	70.91	325	P	P	17 45 03.4	+0.8
	baz=71,SNR=12						
O23A	Lake Granby, G	70.95	330	⇑P	P	17 45 03.3	+0.5
	baz=71						
S18A	Hurst Farm, Bl	71.00	326	P	P	17 45 03.7	+0.5
	baz=71,SNR=18						
R19A	Curley Farm, L	71.08	327	P	P	17 45 02.4	-1.2
	baz=71,SNR=8.0						
BC3	Big Chuckawall	71.16	320	P	P	17 45 04.6	+0.4
	baz=71,SNR=11						
V14A	Boquillas Ranc	71.18	323	⇓P	P	17 45 05.3	+1.0
	baz=71,SNR=8.0						
O22A	Kremmling	71.20	330	P	P	17 45 04.3	-0.1
	baz=71,SNR=9.5						
MONP	Monument Peak	71.22	318	⇓P	P	17 45 05.1	+0.5
	baz=71,SNR=5.2						
BAR	Barrett	71.24	318	eP	P	17 45 04.3	-0.4
W13A	Hualapai Mount	71.24	322	⇓P	P	17 45 05.5	+0.8
	baz=71,SNR=6.3						
U15A	North Rim	71.30	324	P	P	17 45 06.0	+1.0
	baz=72,SNR=18						
IRM	Iron Mountain	71.33	320	P	P	17 45 05.4	+0.2
	baz=72,SNR=8.1						
R18A	Canyonlands Na	71.47	326	P	P	17 45 05.9	-0.1
	baz=72,SNR=8.7						
N23A	Red Feather La	71.51	331	⇓P	P	17 45 06.3	+0.1
	baz=72						
Q19A	Hogan Spring (	71.58	327	P	P	17 45 06.8	+0.2
	baz=72,SNR=6.6						
N22A	Wattenberg Ran	71.67	330	⇑P	P	17 45 07.5	+0.4
	baz=72						
BELC	Belle Mtn. Jos	71.72	320	⇑P	P	17 45 08.0	+0.3
	baz=72						
PFO	Pinyon Flat Ob	71.73	319	⇓P	P	17 45 07.7	0.0
	baz=72						
T15A	Red Dirt Ranch	71.78	324	P	P	17 45 08.9	+1.1
	baz=72,SNR=9.0						
U14A	Mt Trumbull	71.78	323	⇓P	P	17 45 08.7	+0.8
	baz=72,SNR=21						
V13A	Grand Canyon W	71.83	322	P	P	17 45 08.7	+0.5
	baz=72,SNR=16						
S16A	Weppner Ranch,	71.87	325	⇑P	P	17 45 08.6	+0.3
	baz=72,SNR=6.8						
R17A	Hanksville Air	71.92	326	⇑P	P	17 45 08.9	+0.2
	baz=72,SNR=19						
P19A	Cripple Cowboy	71.96	328	P	P	17 45 09.3	+0.4
	baz=72,SNR=26						
O20A	White River Ci	71.99	329	P	P	17 45 09.2	+0.1
	baz=72,SNR=9.5						
GMRC	Granite Mounta	72.06	320	⇑P	P	17 45 09.9	+0.4
	baz=72,SNR=9.9						
T14A	Hurricane	72.19	324	⇑P	P	17 45 11.2	+0.9
	baz=72,SNR=13						
U13A	Pakoon Wash	72.22	323	⇑P	P	17 45 11.0	+0.5
	baz=72,SNR=6.4						
V12A	Nelson	72.24	322	P	P	17 45 10.8	+0.2
	baz=72,SNR=8.4						
SRU	San Rafael	72.34	327	⇑P	P	17 45 11.4	+0.3
	baz=73,SNR=13						
SRU	San Rafael	72.34	327	eP	P	17 45 11.2	0.0
HEC	Hector,Ludlow	72.49	320	P	P	17 45 12.8	+0.7
	baz=73,SNR=8.0						
Q16A	Castle Valley	72.53	326	⇓P	P	17 45 12.8	+0.4
	baz=73,SNR=9.3						
N20A	Spence Gulch,	72.54	329	P	P	17 45 12.4	+0.1
	baz=73,SNR=6.8						
O19A	Miners Draw (B	72.54	328	P	P	17 45 12.4	+0.1
	baz=73,SNR=12						
U12A	Valley of Fire	72.56	322	P	P	17 45 13.1	+0.5
	baz=73,SNR=11						
P18A	Preston Nutter	72.59	327	⇑P	P	17 45 13.5	+0.9
	baz=73,SNR=22						
T13A	Saint George	72.62	323	P	P	17 45 13.7	+0.8
	baz=73,SNR=8.1						
CCUT	Cedar City	72.70	324	eP	P	17 45 14.3	+1.0
P17A	Butcher Ranch,	72.72	327	⇓P	P	17 45 13.8	+0.4
	baz=73,SNR=7.4						
MSU	Marysvale	72.76	325	eP	P	17 45 13.9	+0.2
TMUT	Trail Mountain	72.83	326	eP	P	17 45 15.0	+0.9
ARUT	Antelope Range	72.92	324	eP	P	17 45 15.4	+0.8
	comp=E,51nm,1.1s,mb5.3						
O18A	Roosevelt	72.95	328	⇓P	P	17 45 15.2	+0.5
	baz=73						
S13A	Holt Ranch, En	73.00	323	P	P	17 45 16.1	+1.0
	baz=73,SNR=15						
L21A	Rawlins	73.01	330	P	P	17 45 14.9	-0.2
	baz=73,SNR=9.4						
N19A	John Jarvie Ra	73.03	329	P	P	17 45 15.1	-0.1
	baz=73,SNR=9.1						
GSC	Goldstone	73.10	320	⇑P	P	17 45 16.2	+0.5
	baz=73,SNR=5.7						
GSC	Goldstone	73.10	320	eP	P	17 45 16.1	+0.3
O17A	Robinson Place	73.27	327	⇑P	P	17 45 17.4	+0.7
	baz=74,SNR=20						
R13A	O'Grain Ranch,	73.49	324	⇑P	P	17 45 18.6	+0.7
	baz=74,SNR=8.2						
L20A	Wamsutter	73.49	330	⇓P	P	17 45 18.1	+0.2
	baz=74,SNR=5.4						
T11A	Corn Creek, Al	73.52	322	P	P	17 45 18.8	+0.6
	baz=74,SNR=17						
EDW2	Edwards Air Fo	73.53	319	P	P	17 45 18.1	-0.2
	baz=74,SNR=7.1						
S12A	Delamar Landin	73.57	323	⇓P	P	17 45 19.3	+0.9
	baz=74						
U10A	Ash Meadows, A	73.58	321	P	P	17 45 19.2	+0.7
	baz=74,SNR=6.1						
MPU	Maple Canyon	73.59	327	eP	P	17 45 19.1	+0.6
O16A	Springville	73.66	327	⇓P	P	17 45 19.5	+0.6
	baz=74						
DAU	Daniels Canyon	73.69	327	eP	P	17 45 19.9	+0.8
Q14A	Sevier Lake (B	73.69	325	P	P	17 45 20.0	+0.8
	baz=74,SNR=12						
LRMC	Laurel Mountai	73.75	320	P	P	17 45 19.8	+0.2
	baz=74,SNR=5.1						
NLU	North Lily Min	73.77	326	eP	P	17 45 20.7	+1.1
M18A	Lyman	73.87	328	⇓P	P	17 45 19.8	-0.3
	baz=74						
N17A	Moffit Pass	73.88	328	P	P	17 45 20.9	+0.8
	baz=74,SNR=14						
FURC	Furnace Creek,	73.93	321	⇑P	P	17 45 21.2	+0.6
	baz=74,SNR=6.2						
JLU	Jordanelle	73.93	327	eP	P	17 45 21.2	+0.7
K20A	Yellowstone Ra	74.00	330	⇑P	P	17 45 20.6	-0.3
	baz=74,SNR=7.9						
MPMC	Manual Prospec	74.02	320	P	P	17 45 21.2	+0.1
	baz=74,SNR=7.8						
P14A	Drum Mountains	74.02	325	⇓P	P	17 45 21.8	+0.7
	baz=74,SNR=15						
L19A	Farson	74.04	329	P	P	17 45 21.2	+0.1
	baz=74,SNR=5.2						
Q13A	Wheeler Ranch,	74.07	324	P	P	17 45 21.9	+0.6
	baz=74,SNR=6.2						
M17A	Scullys Gap (B	74.20	328	⇓P	P	17 45 21.7	-0.4
	baz=74,SNR=6.5						
DUG	Dugway	74.33	326	⇓P	P	17 45 23.3	+0.5
	baz=74,SNR=8.3						
DUG	Dugway	74.33	326	eP	P	17 45 23.1	+0.3
ISA	Isabella	74.34	319	⇑P	P	17 45 23.4	+0.4
	baz=74,SNR=8.6						
ISA	Isabella	74.34	319	eP	P	17 45 23.2	+0.1
P13A	Bates Ranch, G	74.43	325	⇓P	P	17 45 24.2	+0.8
	baz=75,SNR=9.6						
R11A	Troy Canyon, C	74.50	323	P	P	17 45 24.4	+0.6
	baz=75,SNR=14						
Q12A	Willow Creek R	74.57	324	⇓P	P	17 45 24.8	+0.5
	baz=75						
CWC	Cottonwood Cre	74.63	320	⇓P	P	17 45 24.9	+0.3
	baz=75						
PDAR	Pinedale Array	74.65	330	P	P	17 45 24.2	-0.4
	comp=E,1.7nm,0.7s,mb3.9,baz=131,slow=7.5,SNR=13						
PKM	Peak Mountain	74.67	318	⇓P	P	17 45 25.4	+0.5
	baz=75,SNR=10.0						
HWUT	Hardware Ranch	74.74	328	eP	P	17 45 24.8	-0.3
L17A	Cokeville	74.77	328	⇑P	P	17 45 25.0	-0.3
	baz=75,SNR=5.6						
S10A	Tonopah Range,	74.78	322	P	P	17 45 25.9	+0.4
	baz=75,SNR=9.9						
K18A	Toltan Ranch,	74.78	329	⇑P	P	17 45 25.8	+0.5
	baz=75,SNR=9.7						
Q11A	Duckwater	74.89	323	P	P	17 45 26.6	+0.5
	baz=75,SNR=9.3						
P12A	McGill	74.92	324	⇑P	P	17 45 26.8	+0.6
	baz=75,SNR=5.3						
L16A	Fish Haven	74.98	328	⇓P	P	17 45 26.5	-0.1
	baz=75						
N14A	Grayback Hills	75.00	326	⇑P	P	17 45 26.8	+0.1
	baz=75,SNR=6.7						
J18A	Kendall Valley	75.21	330	P	P	17 45 27.6	-0.2
	baz=75,SNR=15						
K17A	Gardner Place,	75.29	329	⇓P	P	17 45 28.0	-0.3
	baz=76,SNR=7.5						
Q10A	Clear Creek Ra	75.29	323	⇑P	P	17 45 28.9	+0.5
	baz=76,SNR=5.8						
O12A	Currie	75.40	325	⇑P	P	17 45 29.3	+0.3
	baz=76,SNR=9.2						
L15A	Malad City	75.44	327	⇓P	P	17 45 29.1	-0.1
	baz=76,SNR=13						
MTUM	Tungsten Hills	75.53	321	eP	P	17 45 30.3	+0.5
N13A	Wendover, West	75.54	326	eP	P	17 45 29.6	-0.2
	comp=E,24nm,0.6s,mb5.1						
M14A	Sheep Mountain	75.56	327	P	P	17 45 30.1	+0.2
	baz=76,SNR=7.4						
K16A	Soda Springs	75.67	329	P	P	17 45 31.1	+0.6
	baz=76,SNR=9.0						
REDW	Red Top Meadow	75.72	329	eP	P	17 45 30.2	-0.6
ULM	Lac du Bonnet	75.73	342	P	P	17 45 28.8	-1.8
	comp=E,6.8nm,0.5s,mb4.6,baz=154,slow=6.1,SNR=5.4						
SNOW	Snow Kting Moun	75.75	329	eP	P	17 45 31.5	+0.6
LOHW	Long Hollow	75.79	330	eP	P	17 45 31.0	-0.2
O11A	Cowboy Ranch,	75.80	324	⇓P	P	17 45 31.7	+0.4
	baz=76						
TPAW	Teton Pass	75.86	329	eP	P	17 45 31.4	-0.1
P10A	Eureka	75.88	323	⇑P	P	17 45 32.3	+0.5
	baz=76						
RRI2	Red Ridge	75.93	329	eP	P	17 45 32.3	+0.3
K15A	Arbon	76.02	328	⇓P	P	17 45 32.6	+0.1
	baz=76,SNR=9.1						
SYO	Syowa Base	76.06	159	⇑eP	P	17 45 31.2	-1.2
NVAR	Mina Array Bea	76.10	322	P	P	17 45 33.2	+0.1
	comp=E,2.9nm,0.9s,mb4.0,baz=158,slow=7.1,SNR=19						
NVAR	Mina Array Bea	76.10	322	P	P	17 45 33.2	+0.1
IMW	Indian Meadow	76.16	330	eP	P	17 45 33.1	-0.2
SCHQ	Schefferville	76.23	1	P	P	17 45 31.3	-2.0
	comp=E,4.3nm,0.7s,mb4.3,baz=136,slow=3.5,SNR=7.1						
L13A	Double Diamond	76.30	327	P	P	17 45 34.5	+0.4
	baz=76,SNR=6.9						
M12A	Wells	76.31	326	P	P	17 45 34.3	+0.1
	baz=76,SNR=5.2						
RLMT	Red Lodge	76.34	331	⇑P	P	17 45 34.6	+0.3
	baz=77,SNR=6.0						
RLMT	Red Lodge	76.34	331	eP	P	17 45 34.4	+0.1
J15A	Blackfoot	76.50	328	P	P	17 45 35.6	+0.4
	baz=77,SNR=10						
G18A	Lazy EL Ranch,	76.62	331	P	P	17 45 36.0	+0.2
	baz=77,SNR=7.9						
M11A	Holland Ranch,	76.79	325	⇑P	P	17 45 37.2	+0.4
	baz=77,SNR=8.1						
WAKR	Walker	76.81	321	eP	P	17 45 37.9	+0.9
H16A	Russell Place,	76.92	330	⇓P	P	17 45 38.3	+0.8
	baz=77						
I15A	Monteview	76.98	329	⇑P	P	17 45 38.8	+1.0
	baz=77,SNR=5.9						
J14A	Carey	76.98	328	⇓P	P	17 45 38.7	+0.8
	baz=77,SNR=10						
F18A	Big Timber	77.14	332	P	P	17 45 38.7	-0.1
	baz=77,SNR=12						
K12A	Draper Farm, C	77.18	327	P	P	17 45 39.6	+0.6
	baz=77,SNR=16						
L11A	Cat Creek Ranc	77.29	326	⇓P	P	17 45 40.0	+0.4
	baz=78,SNR=8.8						
J13A	Cove Ranch, Pi	77.36	327	P	P	17 45 40.4	+0.4
	baz=78,SNR=7.0						
I14A	Mackay	77.39	328	P	P	17 45 41.0	+0.8
	baz=78,SNR=8.9						
F17A	Fitzpatrick Pl	77.56	331	P	P	17 45 41.5	+0.4
	baz=78,SNR=5.6						
HLID	Hailey	77.60	327	P	P	17 45 42.0	+0.7
	baz=78,SNR=27						
HLID	Hailey	77.60	327	eP	P	17 45 41.9	+0.5
	comp=E,12nm,0.9s,mb4.6						
L10A	Juniper Basin	77.60	325	P	P	17 45 41.9	+0.5
	baz=78,SNR=11						
I13A	Wildhorse Cree	77.71	328	P	P	17 45 42.7	+0.7
	baz=78,SNR=9.9						
J12A	Stokes Ranch,	77.72	327	P	P	17 45 42.6	+0.6
	baz=78,SNR=9.4						
H14A	Leadore	77.86	329	P	P	17 45 43.4	+0.6
	baz=78,SNR=6.6						
K11A	Parker Ranch,	77.86	326	P	P	17 45 43.1	+0.3
	baz=78,SNR=8.9						
DLMT	Dillon	78.05	330	eP	P	17 45 43.9	+0.2
E17A	Martinsdale	78.08	331	⇑P	P	17 45 44.0	+0.1
	baz=78,SNR=6.4						
I12A	Atlanta	78.13	327	P	P	17 45 44.8	+0.5
	baz=78,SNR=10						
MFID	Camas Ranch	78.21	327	⇑P	P	17 45 45.2	+0.4
	baz=78,SNR=6.2						
H13A	Challis	78.25	328	P	P	17 45 45.4	+0.5
	baz=78,SNR=19						
K10A	MacKenzie Ranc	78.30	326	⇓P	P	17 45 45.5	+0.3
	baz=78,SNR=8.0						
D17A	Six Diamond Ra	78.53	332	⇓P	P	17 45 46.1	-0.3
	baz=79						
H12A	Diamond D Ranc	78.54	328	⇑P	P	17 45 47.1	+0.6
	baz=79,SNR=9.8						
G13A	Cobalt	78.63	329	P	P	17 45 47.5	+0.6
	baz=79,SNR=46						
D16A	Dana Ranch, Ca	78.82	331	P	P	17 45 48.3	+0.3
	baz=79,SNR=8.8						
B18A	Beardsley Farm	79.10	333	⇓P	P	17 45 48.9	-0.5
	baz=79,SNR=7.0						
F13A	Darby	79.18	329	P	P	17 45 50.0	0.0
	baz=79,SNR=19						
H11A	Donnelly	79.22	327	⇑P	P	17 45 50.0	-0.3
	baz=79						
J08A	Circle Bar Ran	79.55	325	⇑P	P	17 45 51.9	-0.1
	baz=80,SNR=6.1						
E13A	Victor	79.59	330	P	P	17 45 52.5	+0.3
	baz=80,SNR=8.3						
G11A	Walters Elk Ra	79.84	328	⇑P	P	17 45 53.7	+0.1
	baz=80,SNR=10.0						
C15A	Salmond Ranch,	79.86	331	P	P	17 45 53.7	+0.1
	baz=80,SNR=16						
SLMT	Seeley Lake	79.86	330	eP	P	17 45 53.7	+0.1
BMO	Blue Mountains	79.98	327	eP	P	17 45 53.9	-0.5
	comp=E,6.3nm,0.9s,mb4.5						
WDC	Whiskeytown Da	79.98	321	eP	P	17 45 52.6	-1.9
	comp=E,4.5nm,0.6s,mb4.5						
F11A	Grangeville	80.14	328	P	P	17 45 55.0	-0.2
	baz=80,SNR=8.0						
D13A	Huson	80.20	330	P	P	17 45 55.3	-0.1
	baz=80,SNR=7.6						
E12A	Beaver Dam Sad	80.23	329	⇓P	P	17 45 55.6	-0.1
	baz=80,SNR=5.4						
SWMT	Swartz Lake	80.29	330	eP	P	17 45 56.2	+0.2
K05A	Summer Lake	80.44	323	⇑P	P	17 45 57.5	+0.6
	baz=81,SNR=7.3						
G09A	Cove	80.52	327	⇑P	P	17 45 57.2	0.0
	baz=81,SNR=14						
I07A	Izee	80.59	325	P	P	17 45 57.9	+0.3
	baz=81,SNR=5.4						
C13A	Hot Springs	80.68	330	⇑P	P	17 45 58.2	+0.2
	baz=81,SNR=6.1						
F10A	Beach Ranch, E	80.73	328	⇓P	P	17 45 58.3	0.0
	baz=81,SNR=6.6						
YBH	Yreka Blue Hor	80.82	322	P	P	17 45 57.7	-1.2
	comp=E,1.7nm,0.6s,mb4.1,baz=45,slow=5.5,SNR=6.6						
BSMT	Bassoo Peak	80.90	330	eP	P	17 45 59.5	+0.3
G08A	Pilot Rock	81.13	326	⇓P	P	17 46 00.3	-0.2
	baz=81						
B13A	Whitefish	81.14	331	⇓P	P	17 46 00.4	0.0
	baz=81						
A13A	Flathead Natio	81.52	331	⇓P	P	17 46 02.5	+0.1
	baz=82						
C11A	Tepee Creek (N	81.58	330	⇓P	P	17 46 02.5	-0.3
	baz=82						
OD2	Odessa Site #2	82.45	328	eP	P	17 46 07.2	-0.1
BOSA	Boshof	82.71	118	P	P	17 46 09.4	+0.1
	comp=E,7.7nm,0.8s,mb4.6,baz=212,slow=3.7,SNR=16						
ETW	Entiat	83.40	327	eP	P	17 46 12.0	-0.3

GTA	**Gaotai**	**159.56**	**28**	*e*PKP	PKPdf	17 53 43.8	+0.4
HHC	**Hu-ho-hao-te**	**160.91**	**1**	*e*PKP	PKPdf	17 53 43.4	-1.4
HHC				PKS		17 57 16.1	
HHC				PP	PP	17 58 11.5	+1.8
HHC				SKS	SKSdf	18 00 43.8	+2.7
HHC				SKKS	SKKSac	18 04 54.5	+4.5
HHC				SS	SS	18 18 18.0	+3.2
HHC				AMB	AMB		
	comp=Z,210nm,9.6s						
HHC				LR	LR		
	comp=N,120nm,20.9s						
HHC				LR	LR		
	comp=E,72nm,20.9s						
HHC				LR	LR		
	comp=Z,83nm,20.3s						
BJI	**Beijing**	**161.36**	**350**	PKP	PKPdf	17 53 45.8	+0.5
LZH	**Lanzhou**	**164.04**	**24**	*e*PKP	PKPdf	17 53 49.3	+1.2
LZH				PKS		17 57 20.0	
LZH				PP	PP	17 58 28.3	+1.5
LZH				AMB	AMB		
	comp=Z,86nm,4.2s						
CMAR	**Chiang Mai Arr**	**167.43**	**103**	PKP	PKPdf	17 53 50.5	-0.8
	comp=Z,0.9nm,1.0s,baz=223,slow=1.2,SNR=4.5						
CD2	**Chengdu**	**168.29**	**37**	PKP	PKPdf	17 53 51.6	0.0
CD2				PKPab	PKPab	17 55 01.3	+0.7
CD2				PKS		17 57 22.8	
CD2				PP	PP	17 58 51.0	+1.9
CD2				SKKS	SKKSac	18 05 32.9	+5.0
CD2				SS	SS	18 19 35.0	+3.1
CD2				AMB	AMB		
	comp=Z,270nm,11.8s						
CD2				LR	LR		
	comp=N,110nm,7.7s						
CD2				LR	LR		
	comp=Z,130nm,7.7s						
KMI	**Kunming**	**170.94**	**66**	PKP	PKPdf	17 53 52.3	-1.0
GYA	**Guiyang**	**173.28**	**44**	PKP	PKPdf	17 53 54.3	-0.1
GYA				PKPab	PKPab	17 55 22.8	0.0
GYA				PKS		17 57 25.8	
GYA				PP	PP	17 59 16.3	+2.0
GYA				SKKS	SKKSac	18 05 58.5	+6.2
GYA				SS	SS	18 20 24.1	+2.5
GYA				AMB	AMB		
	comp=Z,130nm,8.5s						
GYA				LR	LR		
	comp=N,130nm,24.9s						
GYA				LR	LR		
	comp=E,110nm,25.0s						
GYA				LR	LR		
	comp=Z,120nm,24.8s						

ISCJB ***13*** *17:40:52.9±0.9, 14°.2N±0°.1×91°.43W±0°.06, h114km±10km, Error ellipse: s-maj=20.1km s-min=5.8km az=21.1*
CASC ***13*** *17:40:52.9±1.8, 14°.30N×91°.40W, h113km±9km, MD3.3*
MEX ***13*** *17:40:54.5±0.9, 13°.76N×91°.78W, h93km±29km, MD4.0*
ISC 13 17:40:53.6±0.9, 14°.2N±0°.1×91°.42W±0°.05, h111km±10km, n17, σ0°.76/26, 2C-4D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.24**	**301⇑**	*e*P	**Pn**	**17 41 09.4**	**+0.2**
FUG	**Fuego 3**	**0.62**	**66**	*e*P	**Pn**	**17 41 10.8**	**-0.6**
FG6		**0.64**	**55⇓**	*e*P	**Pn**	**17 41 11.2**	**-0.3**
FG6				*e*S	**Sn**	**17 41 23.9**	**-1.2**
TP2	**Tecpan 2**	**0.70**	**34⇓**	*e*P	**Pn**	**17 41 12.1**	**-0.1**
TP2				*e*S	**Sn**	**17 41 27.0**	**+0.9**
PCG	**Pacaya**	**0.82**	**76**	*e*P	**Pn**	**17 41 12.9**	**-0.2**
IXG	**Ixpaco**	**0.94**	**91⇑**	*e*P	**Pn**	**17 41 14.3**	**+0.1**
IXG				*e*S	**Sn**	**17 41 30.4**	**+0.6**
THIG		**1.08**	**311**	*i* P	**Pn**	**17 41 15.8**	**+0.1**
THIG				*i* S	**Sn**	**17 41 32.5**	**0.0**
NBG	**Las Nubes**	**1.11**	**69⇓**	*e*P	**Pn**	**17 41 16.5**	**+0.4**
RBDL	**Robledal**	**1.69**	**92**	*e*P	**Pn**	**17 41 22.4**	**-0.4**
SNJE	**San Jose**	**1.79**	**100**	*e*P	**Pn**	**17 41 23.6**	**-0.5**
MRL	**Marmol**	**1.89**	**62⇓**	*e*P	**Pn**	**17 41 25.8**	**+0.5**
MRL				*e*S	**Sn**	**17 41 48.4**	**-1.0**
MTO2	**Montecristo 2**	**2.01**	**84**	*e*P	**Pn**	**17 41 25.9**	**-0.9**
BOQS	**Boqueron**	**2.13**	**102**	*e*P	**Pn**	**17 41 28.2**	**-0.1**
PCIG		**2.30**	**311**	*i* P	**Pn**	**17 41 31.4**	**+0.9**
PCIG				*i* S	**Sn**	**17 41 58.5**	**-0.2**
LFRS	**El Faro**	**2.36**	**104**	*e*P	**Pn**	**17 41 31.1**	**-0.2**
LFRS				*e*S	**Sn**	**17 42 02.0**	**+1.8**
TGIG		**3.05**	**328**	*i* P	**Pn**	**17 41 41.8**	**+1.5**
TGIG				*i* S	**Sn**	**17 42 21.9**	**+5.6**
HUIG	**Huatulco**	**4.79**	**290**	*i* P	**Pn**	**17 42 02.2**	**-1.4**
HUIG				*i* S	**Sn**	**17 42 52.9**	**-5.2**

BJI ***13*** *17:41:20.7, 23°.72N×143°.64E, h38km, mB4.9/20, mb4.7/33, Ms4.4/19, Ms7 4.3/19*
MOS ***13*** *17:41:25.3±0.9, 24°.03N×142°.99E, h33km, mb4.9/27, Error ellipse: s-maj=12.3km s-min=7.0km az=96.7*
ISCJB ***13*** *17:41:26.0±0.3, 24°.09N±0°.04×143°.04E±0°.04, h33km, mb4.7/80, MS4.0/7, Error ellipse: s-maj=6.0km s-min=5.1km az=173.2*
IDC ***13*** *17:41:27.7±0.6, 24°.07N×143°.01E, h37km±4km, mb4.2/24, mb1 4.3/27, mb1mx4.3/31, mbtmp4.2/27, ML3.8/3, MS3.5/1, Ms1 3.5/1, ms1mx2.5/37, Error ellipse: s-maj=15.3km s-min=10.7km az=84.0*
NEIC ***13*** *17:41:28.0±0.2, 24°.04N×143°.05E, mb4.7/40, Error ellipse: s-maj=6.5km s-min=5.3km az=150.0*
ISC 13 17:41:28.1±0.2, 24°.15N±0°.04×143°.05E±0°.04, h35km, (h40km±1.2km:pP-P), n167, σ19°.03/175, mb4.7/80, MS4.0/7, 5C-2D, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.04**	**345**	Pn	**Pn**	**17 42 14.2**	**+0.5**
	9.8nm,0.3s,baz=159,slow=8.5,SNR=16						
CBIJ				Sn	**Sn**	**17 42 49.7**	**+0.9**
	35nm,0.3s,baz=288,slow=23,SNR=6.3						
JHJ	**Hachijo jima 2**	**9.39**	**343**	Sn	**Sn**	**17 45 22.8**	**-2.4**
	16nm,0.3s,baz=248,slow=23,SNR=6.5						
MJAR	**Matsushiro Arr**	**13.04**	**342**	Pn	**Pn**	**17 44 28.8**	**-2.0**
	0.9nm,0.3s,baz=159,slow=10,SNR=16						
MJAR				Sn	**Sn**	**17 46 50.8**	**-3.7**
	0.2nm,0.3s,baz=282,slow=28,SNR=4.5						
MJAR				LR	LR	17 49 07.3	
	comp=Z,250nm,21.6s,baz=105,slow=35						
MJAR	**Matsushiro Arr**	**13.04**	**342**	P	**Pn**	**17 44 28.8**	**-2.0**
MJAR						17 46 50.8	
MJAR	**Matsushiro Arr**	**13.04**	**342**	Pn	**Pn**	**17 44 28.8**	**-2.0**
MJAR				Sn	**Sn**	**17 46 50.8**	**-3.7**
MJAR				LR	LR	17 49 07.3	
MAJO	**Matsushiro**	**13.04**	**342**	*e*Pn	**Pn**	**17 44 28.7**	**-2.1**
MAT	**Matsushiro**	**13.04**	**342**	P	**Pn**	**17 44 29.5**	**-1.3**
MAT				S	**Sn**	**17 46 48.7**	**-5.9**
ERM	**Erimo**	**17.82**	**0**	*e*P	**Pn**	**17 45 32.8**	**-0.4**
KSRS	**Korea Array**	**18.53**	**319**	Pn	**Pn**	**17 45 41.5**	**-0.5**
	0.4nm,0.3s,baz=128,slow=13,SNR=44						
YHNB	**Yeheng**	**19.74**	**276**	P	**Pn**	**17 45 57.2**	**+0.6**
	13nm,0.7s						
YULB	**Yu-li**	**19.92**	**272**	*e*P	**Pn**	**17 46 00.5**	**+1.8**
	12nm,0.8s						
ASAJ	**Asahikawa**	**19.93**	**359**	P	**Pn**	**17 45 56.7**	**-1.9**
	3.6nm,0.8s,baz=283,slow=18,SNR=3.7						
SSLB	**Suanglung**	**20.19**	**274**	*e*P	**P**	**17 46 03.6**	**+3.8**
	25nm,0.7s						
TWG	**Pinlang**	**20.20**	**271**	P	**P**	**17 45 58.8**	**-1.1**
	12nm,0.4s						
TPUB	**Ta-pu**	**20.54**	**272**	*e*P	**P**	**17 46 06.1**	**+2.4**
	23nm,0.9s						
NJ2	**Nanjing**	**22.71**	**296**	*e*P	**P**	**17 46 27.8**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.3						
YSS	**Yuzh-Sakhalins**	**22.76**	**359**	*e*P	**P**	**17 46 29.0**	**+1.8**
YSS				*e*		17 46 38.2	
YSS	**Yuzh-Sakhalins**	**22.76**	**359**	*e*P	**P**	**17 46 27.3**	**+0.2**
	comp=Z,14nm,0.9s,mb4.4						
MDJ	**Mudanjiang**	**23.18**	**335**	P	**P**	**17 46 32.5**	**+0.8**
MDJ				pP		17 46 40.9	
MDJ				sP	sP	17 46 44.8	-0.7
MDJ				PcP	PcP	17 50 19.8	+0.8
MDJ				S	**S**	**17 50 42.6**	**+1.9**
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.1						
MDJ				LR	LR		
	comp=N,110nm,26.3s,MS3.5						
MDJ				LR	LR		
	comp=E,200nm,24.1s,MS3.5						
MDJ				LR	LR		
	comp=Z,210nm,26.3s,MS3.5						
CN2	**Changchun**	**24.35**	**328**	*e*P	**P**	**17 46 43.4**	**+0.8**
HABR	**Khabarovsk**	**25.09**	**347**	*ce*P	**P**	**17 46 47.2**	**-2.1**
HABR				*PP	pP	17 46 57.0	-2.3
HABR				*e*SP	sP	17 47 01.2	-2.3
HABR				*e*PPP		17 47 30.2	
HABR				*e*		17 50 20.7	
HABR				*e*S	**S**	**17 51 10.2**	**-1.2**
HABR				*e*SS	sS	17 51 26.7	-1.2
HABR				*e*SSS		17 52 17.6	
HABR				*e*		17 57 45.9	
HABR				pmax	pmax		
	comp=Z,46nm,2.2s,mb4.6						
HABR				pmax	pmax		
	comp=N,24nm,2.1s						
HABR				pmax	pmax		
	comp=E,73nm,2.3s						
HABR				MLR	MLR		
	comp=Z,152nm,16.0s,MS3.6						
TIA	**Tai'an**	**25.35**	**304**	*e*P	**P**	**17 46 56.0**	**+4.2**
WHN	**Wuhan**	**26.23**	**290**	⇓P	**P**	**17 47 02.0**	**+2.1**
BJI	**Beijing**	**27.59**	**311**	P	**P**	**17 47 12.1**	**+0.1**
BJI				S	**S**	**17 51 51.8**	**+0.6**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.5						
BJI				pmax	pmax		
	comp=Z,140nm,9.7s						
BJI				LR	LR		
	comp=N,180nm,21.0s,MS3.9						
BJI				LR	LR		
	comp=E,280nm,18.8s,MS3.9						
BJI				LR	LR		
	comp=Z,150nm,22.5s,MS3.5						
HHC	**Hu-ho-hao-te**	**31.13**	**310**	*e*P	**P**	**17 47 44.0**	**+0.7**
HHC				sP	sP	17 47 58.3	+0.7
HHC				PP	PP	17 48 46.6	-7.3
HHC				PcP	PcP	17 50 39.3	+1.3
HHC				S	**S**	**17 52 46.0**	**-0.7**
HHC				ScP	ScP	17 54 17.4	-1.0
HHC				PcS	PcS	17 54 22.8	+0.7
HHC				ScS	ScS	17 58 13.8	-1.6
HHC				pmax	pmax		
	comp=Z,16nm,0.5s,mb5.1						
HHC				pmax	pmax		
	comp=Z,83nm,5.9s						
HHC				LR	LR		
	comp=N,230nm,12.4s,MS4.2						
HHC				LR	LR		
	comp=E,260nm,12.2s,MS4.2						
HHC				LR	LR		
	comp=Z,360nm,12.7s,MS4.2						
GYA	**Guiyang**	**32.91**	**282**	P	**P**	**17 47 58.9**	**-0.2**
GYA				pP	pP	17 48 09.3	+0.1
GYA				PP	PP	17 49 10.0	-3.9
GYA				PcP	PcP	17 50 43.8	+0.7
GYA				S	**S**	**17 53 12.8**	**-1.9**
GYA				sS	sS	17 53 30.6	-0.8
GYA				ScP	ScP	17 54 24.0	-0.7
GYA				ScS	ScS	17 58 23.5	-1.4
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
GYA				pmax	pmax		
	comp=Z,90nm,4.9s						
GYA				LR	LR		
	comp=N,530nm,18.9s,MS4.4						
GYA				LR	LR		
	comp=E,480nm,19.0s,MS4.4						
GYA				LR	LR		
	comp=Z,520nm,18.8s,MS4.3						
CD2	**Chengdu**	**35.35**	**290**	P	**P**	**17 48 20.0**	**-0.3**
CD2				pP	pP	17 48 29.8	-0.7
CD2				sP	sP	17 48 33.6	-1.1
CD2				PP	PP	17 49 39.4	-1.5
CD2				S	**S**	**17 53 50.3**	**-2.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
CD2				pmax	pmax		
	comp=Z,120nm,4.8s						
CD2				LR	LR		
	comp=N,390nm,14.9s						
CD2				LR	LR		
	comp=Z,440nm,23.2s						
LZH	**Lanzhou**	**35.71**	**299**	*e*P	**P**	**17 48 23.8**	**+0.5**
LZH				pP	pP	17 48 36.3	+2.8
LZH				sP	sP	17 48 40.9	+3.2
LZH				PP	PP	17 49 45.0	+0.2
LZH				*e*S	**S**	**17 53 53.1**	**-4.8**
LZH				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.8						
LZH				pmax	pmax		
	comp=Z,94nm,4.8s						
LZH				LR	LR		
	comp=N,1μm,14.2s						
LZH				LR	LR		
	comp=Z,1μm,16.0s,MS4.8						
KMI	**Kunming**	**36.56**	**280**	P	**P**	**17 48 31.4**	**+0.7**
KMI				pP	pP	17 48 40.6	-0.3
KMI				sP	sP	17 48 45.0	-0.1
KMI				PP	PP	17 49 54.8	+0.5
KMI				S	**S**	**17 54 09.8**	**-1.2**
KMI				sS	sS	17 54 26.8	-1.0
KMI				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.4						
KMI				pmax	pmax		
	comp=Z,86nm,4.9s						
KMI				LR	LR		
	comp=N,200nm,18.8s						
KMI				LR	LR		
	comp=E,140nm,25.9s						
KMI				LR	LR		
	comp=Z,360nm,22.3s,MS4.1						
SONM	**Songino Array**	**37.40**	**319**	P	**P**	**17 48 37.9**	**+0.4**
	comp=Z,0.3nm,0.3s,mb3.6,baz=12,slow=31,SNR=3.3						
SONM				PcP	PcP	17 50 55.6	-0.3
	comp=Z,1.2nm,0.8s,baz=119,slow=5.2,SNR=3.5						
YAK	**Yakutsk**	**38.94**	**350**	*e*P	**P**	**17 48 49.6**	**-0.7**
YAK				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.8						
YAK				pmax	pmax		
	comp=N,6.0nm,1.2s						
YAK	**Yakutsk**	**38.94**	**350**	*e*P	**P**	**17 48 50.1**	**-0.3**
SEY	**Seymchan**	**39.28**	**7**	*ce*P	**P**	**17 48 53.7**	**+0.6**
CHTO	**Chiang Mai**	**41.26**	**271**	*e*P	**P**	**17 49 10.4**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.1						
CHTO	**Chiang Mai**	**41.26**	**271**	*e*P	**P**	**17 49 10.4**	**+0.3**
	comp=Z,4.5nm,0.9s,mb4.1						
CMAR	**Chiang Mai Arr**	**41.35**	**271**	P	**P**	**17 49 11.8**	**+1.0**
	comp=Z,2.6nm,0.7s,mb4.0,baz=60,slow=7.9,SNR=28						
CTA	**Charters Tower**	**44.08**	**176**	*e*P	**P**	**17 49 31.4**	**-1.4**
	comp=Z,6.4nm,0.8s,mb4.4						
CTA	**Charters Tower**	**44.08**	**176**	P	**P**	**17 49 30.9**	**-1.9**
	comp=Z,8.8nm,0.8s,mb4.6,baz=3.6,slow=6.7,SNR=8.9						
CTA	**Charters Tower**	**44.08**	**176**	P	**P**	**17 49 30.9**	**-1.9**
CTAO	**Charters Tower**	**44.08**	**176**	*e*P	**P**	**17 49 31.4**	**-1.4**
CTAO				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.6						
CTAO	**Charters Tower**	**44.08**	**176**	*e*P	**P**	**17 49 31.4**	**-1.4**
	comp=Z,8.4nm,0.7s,mb4.6						
WRAB	**Tennant Creek**	**44.62**	**192**	*e*P	**P**	**17 49 35.1**	**-2.1**
WRAB				pmax	pmax		
	comp=Z,15nm,0.7s,mb4.9						
WRAB	**Tennant Creek**	**44.62**	**192**	*e*P	**P**	**17 49 35.1**	**-2.1**
	comp=Z,15nm,0.7s,mb4.9						
WRA	**Warramunga Arr**	**44.63**	**192**	P	**P**	**17 49 35.6**	**-1.7**
	comp=Z,13nm,0.8s,mb4.8,baz=11,slow=8.2,SNR=93						
FITZ	**Fitzroy Crossi**	**45.29**	**204**	*e*P	**P**	**17 49 41.1**	**-1.5**
	comp=Z,10nm,0.9s,mb4.7						
FITZ	**Fitzroy Crossi**	**45.29**	**204**	P	**P**	**17 49 41.4**	**-1.2**
	comp=Z,4.8nm,0.7s,mb4.4,baz=28,slow=9.9,SNR=12						
BILL	**Bilibino**	**46.16**	**12**	*e*P	**P**	**17 49 50.9**	**+2.1**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.3						
LSA	**Lhasa**	**46.29**	**289**	*e*P	**P**	**17 49 52.7**	**+2.2**
LSA				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
LSA	**Lhasa**	**46.29**	**289**	*e*P	**P**	**17 49 52.7**	**+2.2**
	comp=Z,3.2nm,0.7s,mb4.4						
PSI	**Prapat**	**47.56**	**250**	P	**P**	**17 49 59.9**	**-0.7**
	comp=Z,2.7nm,0.3s,mb4.7,baz=321,slow=8.7,SNR=5.3						
TIXI	**Tiksi**	**48.21**	**354**	*e*P	**P**	**17 50 03.8**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
TIXI	**Tiksi**	**48.21**	**354**	*e*P	**P**	**17 50 04.8**	**0.0**
	comp=Z,4.6nm,0.9s,mb4.5						
ASAR	**Alice Springs**	**48.35**	**191**	P	**P**	**17 50 04.2**	**-2.2**
	comp=Z,2.2nm,0.7s,mb4.3,baz=15,slow=11,SNR=38						
WMQ	**Urumqi**	**48.96**	**308**	P	**P**	**17 50 11.6**	**+0.6**
WMQ				pP	pP	17 50 21.6	+0.2
WMQ				sP	sP	17 50 25.6	0.0
WMQ				PP	PP	17 52 04.9	+0.4
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.6						
WMQ				pmax	pmax		
	comp=Z,350nm,8.2s						
TAPN	**Taplejung**	**49.61**	**286**	*e*P	**P**	**17 50 18.6**	**+2.4**
	comp=Z,18nm,0.8s,mb5.2						
ODAN	**Odare**	**49.97**	**286**	*e*P	**P**	**17 50 19.7**	**+0.8**
	comp=Z,23nm,0.9s,mb5.2						
RAMN	**Ramite**	**50.65**	**286**	*e*P	**P**	**17 50 24.9**	**+0.8**
JIRN	**Jiri**	**50.89**	**287**	*e*P	**P**	**17 50 27.6**	**+1.7**
GUN	**Gumba**	**51.12**	**287**	*e*P	**P**	**17 50 29.1**	**+1.5**
	comp=Z,28nm,0.8s,mb5.3						
DMN	**Daman**	**51.84**	**287**	*e*P	**P**	**17 50 34.1**	**+1.1**
GKN	**Gorkha**	**52.18**	**288**	*e*P	**P**	**17 50 36.3**	**+0.7**
	comp=Z,11nm,0.9s,mb4.8						
ZALV	**Zalesovo Beam**	**52.23**	**321**	P	**P**	**17 50 34.2**	**-1.3**
	comp=Z,3.6nm,0.7s,mb4.4,baz=101,slow=7.2,SNR=19						
ZALV				PcP	PcP	17 51 46.2	-0.4
	comp=Z,3.9nm,0.7s,baz=108,slow=4.1,SNR=10.0						
ZALV	**Zalesovo Beam**	**52.23**	**321**	P	**P**	**17 50 34.2**	**-1.3**
ZALV				PcP	PcP	17 51 46.2	-0.4
CHGN	**Chignik**	**52.88**	**37**	*e*P	**P**	**17 50 44.5**	**+4.3**
MK31	**Makanchi Array**	**52.97**	**311**	*e*P	**P**	**17 50 40.8**	**-0.3**
MKAR	**Makanchi Array**	**52.97**	**311**	P	**P**	**17 50 40.7**	**-0.4**
	comp=Z,3.7nm,0.7s,mb4.5,baz=88,slow=9.1,SNR=52						
MKAR				PcP	PcP	17 51 49.6	0.0
	comp=Z,1.0nm,0.6s,baz=85,slow=4.2,SNR=4.8						
MKAR	**Makanchi Array**	**52.97**	**311**	P	**P**	**17 50 40.7**	**-0.4**
MKAR				PcP	PcP	17 51 49.6	+0.1
NVS	**Novosibirsk**	**53.31**	**321**	*e*P	**P**	**17 50 40.4**	**-3.0**
KURK	**Kurchatov**	**55.62**	**316**	P	**P**	**17 50 59.6**	**-0.7**
	comp=Z,9.0nm,0.6s,mb5.0,baz=93,slow=7.9,SNR=34						
KURK	**Kurchatov**	**55.62**	**316**	*ce*P	**P**	**17 50 59.8**	**-0.5**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
KURK	**Kurchatov**	**55.62**	**316**	*e*P	**P**	**17 50 58.7**	**-1.6**
	comp=Z,6.0nm,0.7s,mb4.7						
STKA	**Stephens Creek**	**55.72**	**181**	*e*P	**P**	**17 50 59.4**	**-1.7**
	comp=Z,10nm,1.5s,mb4.6						
STKA	**Stephens Creek**	**55.72**	**181**	P	**P**	**17 50 59.5**	**-1.6**
	comp=Z,5.8nm,0.8s,mb4.7,baz=322,slow=5.4,SNR=8.1						
KDAK	**Kodiak Island**	**56.28**	**36**	P	**P**	**17 51 05.5**	**+0.7**
	comp=Z,4.8nm,0.7s,mb4.7,baz=220,slow=8.1,SNR=4.1						
TRF	**Thorofare Moun**	**58.27**	**29**	*e*P	**P**	**17 51 18.8**	**-0.1**
	comp=Z,8.5nm,1.0s,mb4.7						
PMR	**Palmer**	**58.52**	**31**	*e*P	**P**	**17 51 20.3**	**-0.3**
PMR				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
PMR	**Palmer**	**58.52**	**31**	*e*P	**P**	**17 51 20.3**	**-0.3**
	comp=Z,9.7nm,1.0s,mb4.8						
BMRM	**Bremner River**	**60.65**	**32**	*e*P	**P**	**17 51 36.0**	**+0.7**
	comp=Z,9.5nm,0.8s,mb5.0						
BVAR	**Borovoye Array**	**60.75**	**319**	P	**P**	**17 51 35.9**	**-0.2**
	comp=Z,4.9nm,0.5s,mb4.9,baz=90,slow=7.5,SNR=52						
BRVK	**Borovoye**	**60.81**	**319**	*ce*P	**P**	**17 51 36.6**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9						
BRVK	**Borovoye**	**60.81**	**319**	*e*P	**P**	**17 51 36.2**	**-0.3**
	comp=Z,8.1nm,0.9s,mb4.8						
DAWY	**Dawson**	**63.14**	**29**	*e*P	**P**	**17 51 52.4**	**+0.4**
KBL	**Kabul**	**64.06**	**298**	*e*P	**P**	**17 51 59.2**	**+0.6**
KBL				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
KBL	**Kabul**	**64.06**	**298**	*e*P	**P**	**17 51 59.2**	**+0.6**
	comp=Z,5.8nm,0.6s,mb4.8						
HYT	**Haines Junctio**	**64.12**	**32**	*e*P	**P**	**17 51 59.9**	**+1.5**
INK	**Inuvik**	**65.39**	**24**	P	**P**	**17 52 06.2**	**-0.5**
	comp=Z,1.9nm,0.5s,mb4.4,baz=300,slow=8.7,SNR=8.5						
INK				pP	pP	17 52 18.1	+0.6
	comp=Z,4.9nm,0.7s,baz=322,slow=3.8,SNR=6.7						
SVE	**Sverdlovsk**	**66.04**	**323**	*e*P	**P**	**17 52 10.3**	**-0.7**
SVE				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
ARU	**Arti**	**67.23**	**323**	*d i*P	**P**	**17 52 18.8**	**+0.1**
ARU				*e*		17 54 43.5	
ARU				S	S	18 01 13.8	+2.9
ARU				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.0						
ARU	**Arti**	**67.23**	**323**	*e*P	**P**	**17 52 18.5**	**-0.2**
	comp=Z,10nm,0.7s,mb5.0						
ABKAR	**Akbulak array**	**67.72**	**315**	*e*P	**P**	**17 52 20.9**	**-1.0**
	comp=Z,3.8nm,0.8s,mb4.5						
DLBC	**Dease Lake**	**68.18**	**34**	*e*P	**P**	**17 52 24.8**	**+0.2**
YKA	**Yellowknife Ar**	**74.36**	**28**	P	**P**	**17 53 01.4**	**-0.5**
	comp=Z,5.1nm,0.8s,mb4.5,baz=293,slow=5.6,SNR=9.3						
YKA				pP	pP	17 53 13.2	+0.4
	comp=Z,6.2nm,0.7s,baz=294,slow=5.5,SNR=14						
YKA	**Yellowknife Ar**	**74.36**	**28**	P	**P**	**17 53 01.4**	**-0.5**
YKA				pP	pP	17 53 13.2	+0.4
RES	**Resolute Bay**	**74.73**	**14**	*e*P	**P**	**17 53 03.7**	**-0.2**
RES				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
RES	**Resolute Bay**	**74.73**	**14**	*e*P	**P**	**17 53 03.7**	**-0.1**
	comp=Z,8.3nm,0.8s,mb4.7						
JCW	**Jim Creek**	**75.59**	**43**	*e*P	**P**	**17 53 10.4**	**+1.1**
KEV	**Kevo**	**76.01**	**341**	*e*P	**P**	**17 53 11.6**	**+0.3**
KEV	**Kevo**	**76.01**	**341**	*ep*	**P**	**17 53 11.6**	**+0.3**
ARCES	**ARCESS Array B**	**76.57**	**341**	P	**P**	**17 53 14.2**	**-0.2**
	comp=Z,3.4nm,0.7s,mb4.4,baz=80,slow=10.0,SNR=19						
ARCES				pP	pP	17 53 26.5	+1.1
	comp=Z,2.7nm,0.7s,baz=61,slow=7.6,SNR=4.7						
ARE0	**ARCESS Array S**	**76.57**	**341**	*e*P	**P**	**17 53 15.0**	**+0.5**
YBH	**Yreka Blue Hor**	**77.34**	**50**	*e*P	**P**	**17 53 19.9**	**+0.6**
YBH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
YBH	**Yreka Blue Hor**	**77.

comp=Z,2.2nm,0.8s,baz=264,slow=6.9,SNR=8.4
HLID Hailey 82.23 46 *eP* **P 17 53 46.1 +0.3**
comp=Z,3.4nm,0.9s,mb4.3
LRM Limekiln Ridge 82.48 43 P **P 17 53 48.7 +1.6**
DLMT Dillon 82.60 44 *eP* **P 17 53 47.3 -0.4**
comp=Z,5.3nm,1.1s,mb4.5
KBD Kabd 82.95 299 *eP* **P 17 53 49.8 0.0**
KBD AMb AMB 17 53 52.8
comp=Z,25nm,1.7s,mb5.0
BOZ Bozeman (W) 83.08 43 *eP* **P 17 53 49.8 -0.3**
BOZ pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
BOZ Bozeman (W) 83.08 43 *eP* **P 17 53 49.8 -0.3**
comp=Z,1.9nm,0.7s,mb4.2
RDF Al-Radifah 83.16 298 *eP* **P 17 53 50.9 0.0**
RDF AMb AMB 17 53 52.8
comp=Z,31nm,1.4s,mb5.1
NAY Al-Naaiem 83.28 299 *eP* **P 17 53 51.6 +0.1**
NAY AMb AMB 17 53 52.3
comp=Z,21nm,0.7s,mb5.3
FFC Flin Flon 83.82 32 *i* P **P 17 53 54.7 +0.9**
FFC Flin Flon 83.82 32 *eP* **P 17 53 54.0 +0.2**
comp=Z,11nm,0.9s,mb5.0
IMW Indian Meadow 84.33 44 *eP* **P 17 53 57.6 +1.0**
comp=Z,4.7nm,0.9s,mb4.6
TPAW Teton Pass 84.51 45 *eP* **P 17 53 58.4 +0.9**
comp=Z,5.7nm,1.0s,mb4.7
RLMT Red Lodge 84.79 43 *eP* **P 17 53 59.8 +0.9**
comp=Z,6.6nm,0.8s,mb4.8
DUG Dugway 84.81 48 *eP* **P 17 53 58.8 -0.3**
DUG pmax pmax
comp=Z,6.0nm,1.1s,mb4.6
DUG Dugway 84.81 48 *eP* **P 17 53 58.8 -0.3**
comp=Z,5.8nm,1.1s,mb4.6
AKASG Malin Array Be 85.45 324 P **P 17 54 01.2 -0.9**
comp=Z,1.8nm,0.8s,mb4.2,baz=45,slow=5.5,SNR=9.4
KIEV Kiev 85.46 324 *eP* **P 17 54 00.8 -1.3**
KIEV pmax pmax
comp=Z,3.0nm,0.9s,mb4.4
KIEV Kiev 85.46 324 *eP* **P 17 54 00.8 -1.3**
comp=Z,2.8nm,0.9s,mb4.4
CCUT Cedar City 85.63 51 *eP* **P 17 54 02.8 -0.4**
comp=Z,21nm,2.2s,mb5.0
PDAR Pinedale Array 85.75 45 P **P 17 54 03.8 0.0**
comp=Z,0.9nm,0.7s,mb4.1,baz=262,slow=3.0,SNR=4.3
LAO LASA Array 85.85 40 P **P 17 54 03.9 -0.2**
comp=Z,11nm,0.9s,mb5.1
TMUT Trail Mountain 86.32 48 *eP* **P 17 54 06.7 +0.1**
comp=Z,5.6nm,0.8s,mb4.8
NB2 NORSAR Subarra 86.63 339 P **P 17 54 06.9 -0.8**
comp=Z,8.9nm,0.8s,mb5.0,baz=48,slow=4.8
NB2 NORSAR Subarra 86.63 339 P **P 17 54 06.9 -0.8**
baz=48,slow=4.8
NB2 NORSAR Subarra 86.63 339 P **P 17 54 06.9 -0.8**
NB2 NORSAR Subarra 86.63 339 P **P 17 54 06.9 -0.8**
NOA NORSAR Array B 86.63 339 P **P 17 54 07.2 -0.5**
comp=Z,7.7nm,0.8s,mb5.0,baz=47,slow=4.6,SNR=28
NOA pP pP 17 54 18.5 -0.3
comp=Z,3.2nm,0.8s,baz=46,slow=4.5,SNR=4.6
SRU San Rafael 86.87 48 *eP* **P 17 54 09.4 0.0**
SRU pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
SRU San Rafael 86.87 48 *eP* **P 17 54 09.4 0.0**
comp=Z,4.5nm,0.7s,mb4.8
BR131 Keskin Array S 88.58 313 *eP* **P 17 54 16.2 -1.3**
BRTR Keskin Array B 88.58 313 P **P 17 54 16.7 -0.8**
comp=Z,2.9nm,0.8s,mb4.7,baz=88,slow=3.7,SNR=14
BRTR pP pP 17 54 28.3 -0.3
comp=Z,1.9nm,0.8s,baz=103,slow=3.2,SNR=5.6
MMAI Mount Meron Ar 90.69 307 P **P 17 54 28.0 +0.5**
comp=Z,1.0nm,0.6s,mb4.3,baz=280,slow=41,SNR=3.0
ANMO Albuquerque 91.76 50 P **P 17 54 31.6 -0.9**
ANMO pmax pmax
comp=Z,3.0nm,0.9s
ANMO Albuquerque 91.76 50 P **P 17 54 31.6 -0.9**
comp=Z,3.3nm,0.9s,mb4.7
CLL Collm 93.00 331 *eP* **P 17 54 37.0 -0.8**
CLL Collm 93.00 331 *eP* **P 17 54 37.0 -0.8**
PLCA Paso Flores 147.42 129 PKPbc PKPbc 18 01 07.6 -0.7
comp=Z,6.2nm,0.6s,baz=232,slow=6.4,SNR=16
LPAZ La Paz 149.77 81 PKPbc PKPbc 18 01 16.2 +1.1
comp=Z,4.6nm,0.9s,baz=348,slow=2.8,SNR=5.4
LPAZ La Paz 149.77 81 *e*PKPdf PKPdf 18 01 11.6 +1.3
LPAZ *e*PKPbc PKPbc 18 01 15.3 +0.2
LPAZ PKPbc PKPbc 18 01 16.2 +1.1
CFAA Coronel Fontan 151.43 112 PKPbc PKPbc 18 01 17.8 -0.9
comp=Z,0.6nm,0.8s,baz=285,slow=3.8,SNR=15

*ISCJB **13** 17:44:11.9±4.8,23°.97N±0°.08×142°.9E±0°.2,h17km±32km, mb4.2/18, Error ellipse: s-maj=23.4km s-min=13.5km az=4.5*
*IDC **13** 17:44:16.4±0.8,24°.06N×142°.89E,h36km±6km,mb3.9/11, mb1 4.0/14,mb1mx3.9/26,mbtmp3.9/14,ML3.4/3, Error ellipse: s-maj=22.4km s-min=16.6km az=83.0*
*MOS **13** 17:44:16.7±2.5,24°.00N×142°.50E,h33km,mb4.5/7, Error ellipse: s-maj=23.5km s-min=15.7km az=105.5*
*NEIC **13** 17:44:16.5±0.5,24°.09N×142°.90E,mb4.6/2, Error ellipse: s-maj=15.1km s-min=12.7km az=82.0*
ISC 13 17:44:11.4±4.8,23°.99N±0°.07×142°.9E±0°.1,h4km±29km, h39km±1.2km:pP-P,n38,σ0§99/37,mb4.2/18,2C,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.16**	**348**		Pn	**Pn**	**17 45 03.5**	**+1.4**
	5.6nm,0.3s,baz=281,slow=22,SNR=2.9							
CBIJ					Sn	**Sn**	**17 45 40.5**	**+0.2**
	76nm,0.3s,baz=276,slow=22,SNR=12							
MJAR	**Matsushiro Arr**	**13.15**	**343**		Pn	**Pn**	**17 47 17.9**	**-1.1**
	0.3nm,0.3s,baz=147,slow=23,SNR=3.2							
MJAR	**Matsushiro Arr**	**13.15**	**343**		Pn	**Pn**	**17 47 17.9**	**-1.1**
KSRS	**Korea Array**	**18.57**	**320**		P	**Pn**	**17 48 29.1**	**-0.6**
	0.1nm,0.3s,baz=128,slow=13,SNR=7.1							
SEY	**Seymchan**	**39.44**	**7**	*eP*		**P**	**17 51 48.8**	**+6.4**
CHTO	**Chiang Mai**	**41.14**	**272**	*eP*		**P**	**17 51 56.1**	**-1.0**
CMAR	**Chiang Mai Arr**	**41.24**	**271**		P	**P**	**17 51 59.0**	**+1.1**
	0.9nm,0.7s,mb3.5,baz=60,slow=8.1,SNR=5.9							
WRA	**Warramunga Arr**	**44.46**	**192**		P	**P**	**17 52 24.1**	**+0.3**
	5.9nm,0.9s,mb4.3,baz=17,slow=8.9,SNR=12							
WRA					pP	pP	17 52 34.9	+10
	2.3nm,0.8s,baz=6.4,slow=9.2,SNR=3.5							
WRA	**Warramunga Arr**	**44.46**	**192**		P	**P**	**17 52 24.1**	**+0.3**
WRA					pP	pP	17 52 34.9	+10
BILL	**Bilibino**	**46.33**	**12**	*eP*		**P**	**17 52 41.8**	**+3.6**
BILL					pmax	pmax		
	comp=Z,9.0nm,2.5s,mb4.3							
MKAR	**Makanchi Array**	**52.99**	**311**	*ceP*		**P**	**17 53 32.9**	**+3.6**
MKAR					pmax	pmax		
	comp=Z,2.0nm,0.9s							
KURK	**Kurchatov**	**55.65**	**316**		P	**P**	**17 53 48.3**	**-0.3**
	comp=Z,3.7nm,0.8s,mb4.5,baz=93,slow=7.8,SNR=6.5							
KURK	**Kurchatov**	**55.65**	**316**	*eP*		**P**	**17 53 47.7**	**-0.9**
KURK					pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3							
BVAR	**Borovoye Array**	**60.79**	**319**		P	**P**	**17 54 24.6**	**+0.1**
	comp=Z,1.6nm,0.6s,mb4.3,baz=95,slow=9.7,SNR=5.5							
BRVK	**Borovoye**	**60.85**	**319**	*eP*		**P**	**17 54 24.9**	**0.0**
BRVK					pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.2							
INK	**Inuvik**	**65.58**	**24**		P	**P**	**17 54 56.4**	**+0.4**
	comp=Z,4.1nm,1.1s,mb4.4,baz=235,slow=6.2,SNR=3.2							
ARU	**Arti**	**67.28**	**323**		P	**P**	**17 55 07.3**	**+0.1**
ARU	**Arti**	**67.28**	**323**	*eP*		**P**	**17 55 07.2**	**+0.1**
	comp=Z,4.6nm,1.0s,mb4.5							
YKA	**Yellowknife Ar**	**74.55**	**28**		P	**P**	**17 55 50.0**	**-1.2**
	comp=Z,0.8nm,0.8s,mb3.7,baz=197,slow=31,SNR=2.9							
YKA					pP	pP	17 56 02.0	+10
	comp=Z,1.3nm,0.6s,baz=295,slow=5.4,SNR=4.9							
YKA	**Yellowknife Ar**	**74.55**	**28**		P	**P**	**17 55 50.0**	**-1.2**
YKA					pP	pP	17 56 02.0	+10
ARCES	**ARCESS Array B**	**76.68**	**341**		P	**P**	**17 56 03.7**	**+0.4**
	comp=Z,0.6nm,0.5s,mb3.8,baz=70,slow=8.0,SNR=3.6							
ARCES	**ARCESS Array B**	**76.68**	**341**		P	**P**	**17 56 03.7**	**+0.4**
JOF	**Joensuu**	**78.15**	**334**	*eP*		**P**	**17 56 11.0**	**-0.6**
JOF	**Joensuu**	**78.15**	**334**	*ep*		**P**	**17 56 11.0**	**-0.6**
	comp=Z,13nm,0.9s,mb4.9							
VSR	**Storozhevoye**	**79.77**	**322**	*eP*		**P**	**17 56 21.1**	**+0.3**
VSR					pmax	pmax		
	comp=N,4.0nm,0.5s							
VSR					pmax	pmax		
	comp=E,3.0nm,0.5s							
VSR					pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.8							
KAF	**Kangasniemi**	**80.55**	**335**	*eP*		**P**	**17 56 23.5**	**-1.2**
KAF					pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6							
KAF	**Kangasniemi**	**80.55**	**335**	*eP*		**P**	**17 56 23.5**	**-1.2**
	comp=Z,8.6nm,1.2s,mb4.6							
KAF	**Kangasniemi**	**80.55**	**335**	*ep*		**P**	**17 56 23.5**	**-1.2**
	comp=Z,8.6nm,1.2s,mb4.6							
KIV	**Kislovodsk**	**80.66**	**314**	*eP*		**P**	**17 56 28.6**	**+2.9**
KIV					pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5							
FINES	**FINESS Array B**	**81.02**	**334**		P	**P**	**17 56 27.2**	**-0.1**
	comp=Z,1.1nm,0.5s,mb4.0,baz=59,slow=4.1,SNR=5.9							
NVAR	**Mina Array Bea**	**81.91**	**52**		P	**P**	**17 56 32.7**	**+0.2**
	comp=Z,0.8nm,0.9s,mb3.7,baz=256,slow=6.3,SNR=4.0							
NVAR					pP	pP	17 56 44.3	+11
	comp=Z,0.4nm,0.5s,baz=289,slow=4.5,SNR=3.4							
FFC	**Flin Flon**	**84.02**	**32**	*i* P		**P**	**17 56 48.2**	**+5.2**
NB2	**NORSAR Subarra**	**86.73**	**339**	P		**P**	**17 56 55.5**	**-1.0**
	comp=Z,1.8nm,0.8s,mb4.3,baz=46,slow=5.1							
NOA	**NORSAR Array B**	**86.73**	**339**	P		**P**	**17 56 55.1**	**-1.3**
	comp=Z,3.6nm,0.9s,mb4.6,baz=47,slow=4.8,SNR=7.4							
BRTR	**Keskin Array B**	**88.60**	**313**		P	**P**	**17 57 05.2**	**-0.7**
	comp=Z,0.7nm,0.8s,mb4.1,baz=83,slow=4.2,SNR=4.7							
BRTR	**Keskin Array B**	**88.60**	**313**	*ceP*		**P**	**17 57 08.3**	**+2.4**
BRTR					pmax	pmax		
	comp=Z,1.0nm,0.8s							
PLCA	**Paso Flores**	**147.41**	**129**	PKPbc		PKPbc	18 03 56.2	-0.5
LPAZ	**La Paz**	**149.91**	**81**	PKPbc		PKPbc	18 04 04.0	+0.2
	comp=Z,1.4nm,0.6s,baz=355,slow=8.6,SNR=4.0							
LPAZ				PKPab		PKPab	18 04 10.8	+1.4
	comp=Z,1.7nm,0.5s,baz=28,slow=2.1,SNR=6.3							

NEIC 13 18:03:07.6,56°.31N×168°.32W,h19km,ML3.6(AEIC), After AEIC.,Pribilof Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
SPIA	**Saint Paul Isl**	**1.37**	**310**		P	Pn	18 03 31.1	-0.5
SPIA					S	Sn	18 03 49.1	0.0
AKGG	**Akutan Green G**	**2.50**	**147**		P	Pn	18 03 47.9	+0.7
AKGG					S	Sn	18 04 18.7	+1.6
AKLV	**Akutan Long Va**	**2.54**	**147**		P	Pn	18 03 47.5	-0.2
UNV	**Unalaska Valle**	**2.68**	**156**		P	Pn	18 03 49.2	-0.4
UNV					S	Sn	18 04 24.5	+3.0
SDPT	**Sand Point**	**4.53**	**99**		P	Pn	18 04 15.6	+0.7
ATKA	**Atka Island**	**5.36**	**222**		P	Pn	18 04 25.9	-0.5

TAP 13 18:04:08.4,21°.17N×121°.24E,h79km±1km,ML3.6,D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**0.79**	**337**	*eP*		Pn	18 04 25.4	+0.5
TSEB					*e*S	Sn	18 04 39.3	+2.1
	baz=329							
TWK1	**Hengchun**	**0.87**	**332**		P	Pn	18 04 26.4	+0.6
TWK1					S	Sn	18 04 39.4	+0.6
	baz=333							
LAY	**Lan-yu**	**0.91**	**19**		P	Pn	18 04 26.5	+0.2
LAY					*e*S	Sn	18 04 38.9	-0.7
	baz=19							
HEN	**Hengchun**	**0.95**	**331**	*i* P		Pn	18 04 27.6	+0.8
HEN					*e*S	Sn	18 04 39.4	-1.1
	baz=324							
TAW	**Tawu**	**1.22**	**345**	*eP*		Pn	18 04 31.1	+1.0
TAW					*e*S	Sn	18 04 48.6	+2.2
	baz=345							
EAST	**Anshuo**	**1.26**	**343**	P		Pn	18 04 31.8	+1.2
EAST					*e*S	Sn	18 04 48.2	+1.0
	baz=352							
SCZT	**Fangliau**	**1.32**	**334**	P		Pn	18 04 32.1	+0.8
SCZT					*e*S	Sn	18 04 48.4	-0.3
	baz=329							
TWG	**Pinlang**	**1.65**	**355**	*eP*		Pn	18 04 36.6	+1.1
SSD	**Sandimen**	**1.66**	**340**	*eP*		Pn	18 04 37.1	+1.3
SSD					*e*S	Sn	18 04 56.3	-0.2
	baz=330							
TWM1	**Shoushan**	**1.81**	**335**	*eP*		Pn	18 04 40.2	+2.5
SGST	**Jiashian**	**2.00**	**342**	*eP*		Pn	18 04 42.5	+2.3
ELDTW	**Lidau**	**2.02**	**354**	*eP*		Pn	18 04 43.0	+2.5
CHN1	**Nanshi**	**2.11**	**342**	*eP*		Pn	18 04 43.2	+1.5
CHN1					*e*S	Sn	18 05 06.8	-0.3
	baz=352							
WTP	**Ta-pu**	**2.14**	**344**	*eP*		Pn	18 04 44.2	+2.0
WTP					*e*S	Sn	18 05 07.3	-0.6
	baz=355							
TWF1	**Yuli**	**2.17**	**1**	*eP*		Pn	18 04 43.0	+0.5
CHN4	**Tsaushan**	**2.25**	**345**	*eP*		Pn	18 04 47.3	+3.7
YUS	**Yu-Shan**	**2.32**	**354**	*eP*		Pn	18 04 48.1	+3.6
ALS	**Alishan**	**2.36**	**350**	*eP*		Pn	18 04 47.3	+2.2
ESL	**Shilin**	**2.64**	**4**	*eP*		Pn	18 04 49.9	+1.1
SMLT	**Sun Moon Lake**	**2.72**	**353**	*eP*		Pn	18 04 52.5	+2.7
SMLT					*e*S	Sn	18 05 20.3	-1.5
	baz=345							
PNG	**Penghu**	**2.85**	**327**	*eP*		Pn	18 04 51.9	+0.3
PNG					*e*S	Sn	18 05 25.2	+0.3
	baz=333							
WHF	**Hehuan Shan**	**2.96**	**0**	*eP*		Pn	18 04 57.0	+3.8
NNS	**Nan Shan**	**3.25**	**2**	*eP*		Pn	18 04 59.2	+2.0
NSK	**Sanguang**	**3.49**	**2**	*eP*		Pn	18 05 05.4	+5.1
	baz=353							

*ISCJB **13** 18:07:21.6±4.6,24°.00N±0°.06×142°.7E±0°.2,h13km±29km, mb3.8/11, Error ellipse: s-maj=36.0km s-min=9.7km az=175.5*
*IDC **13** 18:07:26.2±0.9,24°.01N×142°.88E,h35km±7km,mb3.5/10, mb1 3.7/12,mb1mx3.5/25,mbtmp3.5/12,ML3.2/2, Error ellipse: s-maj=32.0km s-min=17.4km az=83.0*
*NEIC **13** 18:07:26.1±0.5,24°.01N×142°.82E,mb4.1/1, Error ellipse: s-maj=21.7km s-min=8.5km az=85.0*
ISC 13 18:07:23.8±5.2,24°.02N±0°.06×142°.8E±0°.2,h17km±32km, h35km±1.5km:pP-P,n17,σ0§47/18,mb3.8/11,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.12**	**350**		Pn	**Pn**	**18 08 11.9**	**-0.3**
	2.7nm,0.3s,baz=274,slow=12,SNR=3.5							
CBIJ					Sn	**Sn**	**18 08 48.7**	**-0.4**
	29nm,0.3s,baz=106,slow=23,SNR=26							
MJAR	**Matsushiro Arr**	**13.10**	**343**		Pn	**Pn**	**18 10 29.3**	**+0.2**
	0.2nm,0.3s,baz=23,slow=32,SNR=4.4							
MJAR	**Matsushiro Arr**	**13.10**	**343**		Pn	**Pn**	**18 10 29.3**	**+0.2**
WRAB	**Tennant Creek**	**44.46**	**191**	*eP*		**P**	**18 15 34.3**	**+0.1**
	1.2nm,0.4s,mb4.0							
WB2	**Warramunga Arr**	**44.47**	**191**	*eP*		**P**	**18 15 34.2**	**0.0**
WRA	**Warramunga Arr**	**44.47**	**191**		P	**P**	**18 15 33.8**	**-0.4**
	1.0nm,0.4s,mb3.9,baz=8.4,slow=7.9,SNR=27							
ASAR	**Alice Springs**	**48.18**	**191**		P	**P**	**18 16 03.0**	**-0.4**
	0.3nm,0.7s,mb3.5,baz=7.8,slow=6.5,SNR=4.0							
MKAR	**Makanchi Array**	**52.90**	**311**		P	**P**	**18 16 39.0**	**+0.1**
	0.4nm,0.6s,mb3.5,baz=89,slow=9.6,SNR=7.2							
KURK	**Kurchatov**	**55.57**	**316**		P	**P**	**18 16 58.5**	**+0.3**
	0.8nm,0.5s,mb4.0,baz=92,slow=8.5,SNR=5.4							
BVAR	**Borovoye Array**	**60.70**	**319**		P	**P**	**18 17 34.5**	**+0.3**
	0.6nm,0.5s,mb4.0,baz=70,slow=9.1,SNR=3.7							
YKA	**Yellowknife Ar**	**74.57**	**28**		P	**P**	**18 19 01.3**	**-0.2**
	0.5nm,0.6s,mb3.6,baz=291,slow=5.8,SNR=2.4							
YKA					pP	pP	18 19 11.0	+3.9
	0.8nm,0.7s,baz=298,slow=5.3,SNR=2.9							
YKA	**Yellowknife Ar**	**74.57**	**28**		P	**P**	**18 19 01.3**	**-0.2**
YKA					pP	pP	18 19 11.0	+3.9
ARCES	**ARCESS Array B**	**76.62**	**341**		P	**P**	**18 19 14.4**	**+1.3**
	1.6nm,1.0s,mb3.9,baz=64,slow=12,SNR=3.3							
ARCES					pP	pP	18 19 25.4	+6.6
	1.8nm,0.8s,baz=69,slow=6.6,SNR=2.7							
ARCES	**ARCESS Array B**	**76.62**	**341**		P	**P**	**18 19 14.4**	**+1.3**
ARCES					pP	pP	18 19 25.4	+6.6
FINES	**FINESS Array B**	**80.95**	**334**		P	**P**	**18 19 37.0**	**-0.1**
	1.0nm,0.5s,mb4.0,baz=70,slow=5.0,SNR=16							
NVAR	**Mina Array Bea**	**81.97**	**52**		P	**P**	**18 19 43.4**	**+0.4**
	0.1nm,0.3s,mb3.3,baz=243,slow=4.0,SNR=2.9							
NVAR					pP	pP	18 19 53.8	+5.2
	0.2nm,0.5s,baz=243,slow=9.3,SNR=3.0							
NOA	**NORSAR Array B**	**86.67**	**339**		P	**P**	**18 20 05.5**	**-0.9**
	0.8nm,0.9s,mb4.0,baz=61,slow=6.6,SNR=3.3							

*IDC **13** 18:13:11.0±3.4,24°.08N×142°.87E,h37km±8km,mb3.4/4, mb1 3.4/6,mb1mx3.2/25,mbtmp3.4/6,ML3.1/2, Error ellipse: s-maj=99.7km s-min=43.0km az=91.0*
*NEIC **13** 18:13:11.0±3.2,24°.23N×143°.14E,mb4.6/1, Error ellipse: s-maj=73.8km s-min=30.9km az=102.0*
ISC 13 18:13:09.9±4.6,24°.1N±0°.3×143°.4E±0°.5,h41km±33km, h39km±1.6km:pP-P,n7,σ1§00/8,mb3.9/5,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.13**	**340**		Pn	**Pn**	**18 13 57.2**	**+0.4**
	2.6nm,0.3s,baz=102,slow=20,SNR=5.0							
CBIJ					Sn	**Sn**	**18 14 33.2**	**+0.2**
	8.4nm,0.3s,baz=265,slow=24,SNR=4.7							
MJAR	**Matsushiro Arr**	**13.14**	**341**		Pn	**Pn**	**18 16 13.2**	**-0.7**
	0.1nm,0.3s,baz=165,slow=5.0,SNR=3.6							
LSA	**Lhasa**	**46.59**	**289**	*eP*		**P**	**18 21 34.9**	**+0.8**
	5.6nm,0.7s,mb4.6							
MKAR	**Makanchi Array**	**53.21**	**311**		P	**P**	**18 22 22.8**	**-1.3**
	0.2nm,0.4s,mb3.4,baz=88,slow=9.3,SNR=4.0							
KURK	**Kurchatov**	**55.84**	**316**		P	**P**	**18 22 42.8**	**-0.3**
	0.2nm,0.4s,mb3.5,baz=91,slow=8.5,SNR=4.1							
KURK					pP	pP	18 22 54.6	-0.2
	0.6nm,0.7s,baz=92,slow=8.8,SNR=4.6							
BVAR	**Borovoye Array**	**60.95**	**319**		P	**P**	**18 23 18.6**	**-0.2**
	0.8nm,0.7s,mb4.0,baz=120,slow=8.5,SNR=2.8							
BVAR					pP	pP	18 23 29.5	-1.2
	0.6nm,0.5s,baz=77,slow=6.5,SNR=3.4							
FINES	**FINESS Array B**	**81.06**	**334**		P	**P**	**18 25 21.4**	**+1.0**
	0.7nm,0.5s,mb3.9,baz=72,slow=6.2,SNR=9.6							
FINES					pP	pP	18 25 32.3	-0.5
	1.4nm,0.8s,baz=116,slow=4.4,SNR=2.8							

*IDC **13** 18:13:13.9±0.9,20°.97N×121°.00E,h0km,mb3.7/7, mb1 3.8/8,mb1mx3.6/23,mbtmp3.8/8,ML3.6/1, Error ellipse: s-maj=38.3km s-min=16.9km az=70.0*
*NEIC **13** 18:13:15.2±0.7,21°.06N×121°.15E,h10km,mb4.0/1, Error ellipse: s-maj=24.7km s-min=9.6km az=85.0*
*TAP **13** 18:13:19.5,21°.37N×121°.29E,h64km±1km,ML3.7,D*
*ISCJB **13** 18:13:21.5±0.8,21°.44N±0°.05×121°.22E±0°.06,h55km±5km, mb3.7/8, Error ellipse: s-maj=9.3km s-min=8.1km az=3.0*
ISC 13 18:13:22.0±0.9,21°.41N±0°.05×121°.21E±0°.06,h41km±8km, n43,σ0§93/65,mb3.7/8,1D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**0.56**	**329**	*i* P		**Pn**	**18 13 33.9**	**+0.3**
TSEB					*i* S	**Sn**	**18 13 44.2**	**+2.4**
	baz=322							
TWK1	**Hengchun**	**0.65**	**325**		P	**Pn**	**18 13 33.8**	**-0.9**
TWK1					S	**Sn**	**18 13 47.2**	**+3.3**
	baz=321							
LAY	**Lan-yu**	**0.70**	**27**	↓*i* P		**Pn**	**18 13 34.2**	**-1.2**
LAY					*e*S	**Sn**	**18 13 44.9**	**-0.2**
	baz=20							
HEN	**Hengchun**	**0.73**	**323**	*i* P		**Pn**	**18 13 34.7**	**-1.2**
HEN					*e*S	**Sn**	**18 13 47.4**	**+1.4**
	baz=321							
TAW	**Tawu**	**0.98**	**343**	*eP*		**Pn**	**18 13 39.0**	**-0.3**
TAW					*e*S	**Sn**	**18 13 52.1**	**+0.1**
	baz=339							
EAST	**Anshuo**	**1.02**	**341**	*eP*		**Pn**	**18 13 37.9**	**-2.0**
EAST					*e*S	**Sn**	**18 13 53.2**	**+0.2**
	baz=338							
SCZT	**Fangliau**	**1.10**	**330**	*eP*		**Pn**	**18 13 39.9**	**-1.0**
SCZT					*e*S	**Sn**	**18 13 55.9**	**+1.0**
	baz=328							
TTN	**Taitung**	**1.33**	**358**	*eP*		**Pn**	**18 13 44.2**	**+0.1**
TTN					*e*S	**Sn**	**18 14 01.5**	**+0.8**
	baz=354							
TWG	**Pinlang**	**1.41**	**355**	Pn		**Pn**	**18 13 43.7**	**-1.5**
SSD	**Sandimen**	**1.43**	**338**	P		**Pn**	**18 13 44.9**	**-0.5**
SSD					*e*S	**Sn**	**18 14 02.7**	**-0.4**
	baz=336							
TWM1	**Shoushan**	**1.58**	**333**	*eP*		**Pn**	**18 13 47.5**	**0.0**
TWM1					*e*S	**Sn**	**18 14 06.5**	**-0.3**
	baz=331							
SGST	**Jiashian**	**1.76**	**341**	*eP*		**Pn**	**18 13 50.3**	**+0.3**
SGST					*e*S	**Sn**	**18 14 10.8**	**-0.3**
	baz=339							
ELDTW	**Lidau**	**1.77**	**354**	*eP*		**Pn**	**18 13 50.0**	**-0.2**
CHN1	**Nanshi**	**1.87**	**340**	*eP*		**Pn**	**18 13 50.7**	**-0.8**
CHN1					*e*S	**Sn**	**18 14 14.6**	**+0.6**
	baz=338							
WTP	**Ta-pu**	**1.90**	**343**	*eP*		**Pn**	**18 13 51.8**	**-0.2**
WTP					*e*S	**Sn**	**18 14 14.5**	**-0.2**
	baz=341							
TWF1	**Yuli**	**1.93**	**2**	P		**Pn**	**18 13 52.4**	**0.0**
TWF1					*e*S	**Sn**	**18 14 15.2**	**-0.2**
TPUB	**Ta-pu**	**1.95**	**344**	*eP*		**Pn**	**18 13 51.9**	**-0.8**
TWK	**Hsinying**	**1.96**	**340**	*eP*		**Pn**	**18 13 52.8**	**+0.1**
	baz=338							
YULB	**Yu-li**	**1.97**	**2**	*eP*		**Pn**	**18 13 53.9**	**+1.0**
CHN4	**Tsaushan**	**2.01**	**344**	*eP*		**Pn**	**18 13 53.4**	**-0.1**
CHN4					*e*S	**Sn**	**18 14 17.6**	**+0.2**
	baz=341							
YUS	**Yu-Shan**	**2.08**	**353**	*eP*		**Pn**	**18 13 54.5**	**+0.2**
YUS					*e*S	**Sn**	**18 14 18.2**	**-0.9**
	baz=351							
EHY	**Hungye**	**2.08**	**3**	*eP*		**Pn**	**18 13 54.2**	**-0.3**
EHY					*e*

0.2nm,0.3s,baz=198,slow=12,SNR=21
MJAR Matsushiro Arr 21.12 41 P **P 18 18 05.8 +2.5**
0.7nm,0.7s,mb3.1,baz=235,slow=8.4,SNR=4.4
ULN Ulaanbaatar 28.75 340 *eP* **P 18 19 16.2 +0.8**
2.3nm,0.9s,mb3.9
SONM Songino Array 28.94 339 P **P 18 19 17.7 +0.6**
1.4nm,0.6s,mb3.8,baz=160,slow=9.2,SNR=11
MK31 Makanchi Array 40.37 318 *eP* **P 18 20 55.2 -0.5**
MKAR Makanchi Array 40.37 318 P **P 18 20 55.4 -0.4**
0.8nm,0.7s,mb3.6,baz=107,slow=12,SNR=6.7
ZALV Zalesovo Beam 42.59 329 P **P 18 21 13.6 -0.2**
2.4nm,0.9s,mb3.9,baz=119,slow=8.6,SNR=10.0
WRA Warramunga Arr 43.06 162 P **P 18 21 11.7 -6.2**
0.6nm,0.4s,mb3.7,baz=344,slow=9.0,SNR=57
KURK Kurchatov 44.25 322 P **P 18 21 26.8 -0.4**
2.8nm,0.9s,mb4.0,baz=110,slow=7.2,SNR=25
ASAR Alice Springs 46.48 164 P **P 18 21 41.0 -4.2**
0.5nm,0.5s,mb3.7,baz=349,slow=11,SNR=15

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*IDC **13** 18:35:34.6±2.1,21.°01N×121.°29E,h0km,mb3.3/4,*
mb1 3.6/4,mb1mx3.3/21,mbtmp3.4/4,Error ellipse:
s-maj=70.8km s-min=25.3km az=49.0
*NEIC **13** 18:35:36.0±0.5,21.°02N×121.°28E,h10km,mb3.7/1,Error*
ellipse: s-maj=17.6km s-min=6.7km az=83.0
*TAP **13** 18:35:38.4,21.°12N×121.°32E,h65km±1km,ML3.7,D*
*ISCJB **13** 18:35:39.1±0.7,21.°15N±0.°05×121.°32E±0.°07,h57km±9km,*
mb3.3/5,Error ellipse: s-maj=11.2km s-min=7.7km
az=162.4

ISC 13 18:35:39.7±0.9,21.°12N±0.°06×121.°30E±0.°07,h41km±13km,
n43,σ0°64/61,mb3.3/5,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**0.86**	**335**	*i* P	**Pn**	**18 35 55.9**	**+0.6**
	baz=330						
TSEB				S	**Sn**	**18 36 08.0**	**+1.3**
	baz=330						
TWK1	**Hengchun**	**0.94**	**331**	P	**Pn**	**18 35 55.6**	**-0.8**
	baz=329						
TWK1				S	**Sn**	**18 36 09.3**	**+0.7**
	baz=329						
LAY	**Lan-yu**	**0.94**	**15**	*i* P	**Pn**	**18 35 55.9**	**-0.6**
	baz=13						
LAY				S	**Sn**	**18 36 09.3**	**+0.5**
	baz=13						
HEN	**Hengchun**	**1.02**	**330**	P	**Pn**	**18 35 57.9**	**+0.3**
	baz=328						
HEN				*e*S	**Sn**	**18 36 11.2**	**+0.5**
	baz=328						
TAW	**Tawu**	**1.28**	**343**	*e*P	**Pn**	**18 36 00.8**	**-0.4**
	baz=342						
EAST	**Anshuo**	**1.32**	**342**	P	**Pn**	**18 36 00.3**	**-1.3**
	baz=341						
EAST				*e*S	**Sn**	**18 36 18.7**	**+0.6**
	baz=341						
SCZT	**Fangliau**	**1.39**	**333**	P	**Pn**	**18 36 01.1**	**-1.6**
	baz=332						
SCZT				S	**Sn**	**18 36 19.5**	**-0.3**
	baz=332						
TTN	**Taitung**	**1.63**	**355**	*e*P	**Pn**	**18 36 05.8**	**-0.2**
	baz=354						
TTN				*e*S	**Sn**	**18 36 24.7**	**-1.0**
	baz=354						
TWG	**Pinlang**	**1.70**	**353**	*e*Pn	**Pn**	**18 36 06.4**	**-0.5**
TWG	**Pinlang**	**1.70**	**353**	*e*P	**Pn**	**18 36 06.3**	**-0.6**
	baz=352						
SSD	**Sandimen**	**1.73**	**339**	*e*P	**Pn**	**18 36 06.9**	**-0.4**
	baz=338						
SSD				*e*S	**Sn**	**18 36 28.6**	**+0.4**
	baz=338						
TWM1	**Shoushan**	**1.88**	**335**	*e*P	**Pn**	**18 36 08.7**	**-0.6**
	baz=334						
TWM1				*e*S	**Sn**	**18 36 31.8**	**0.0**
	baz=334						
SGST	**Jiashian**	**2.06**	**341**	*e*P	**Pn**	**18 36 11.5**	**-0.3**
	baz=340						
SGST				*e*S	**Sn**	**18 36 35.7**	**-0.5**
	baz=340						
ELDTW	**Lidau**	**2.07**	**353**	P	**Pn**	**18 36 12.6**	**+0.6**
	baz=352						
ELDTW				*e*S	**Sn**	**18 36 36.7**	**+0.1**
	baz=352						
CHN1	**Nanshi**	**2.17**	**341**	*e*P	**Pn**	**18 36 13.2**	**-0.1**
	baz=340						
CHN1				*e*S	**Sn**	**18 36 38.8**	**-0.3**
	baz=340						
WTP	**Ta-pu**	**2.21**	**343**	P	**Pn**	**18 36 13.7**	**-0.1**
	baz=342						
WTP				*e*S	**Sn**	**18 36 39.9**	**0.0**
	baz=342						
TWF1	**Yuli**	**2.22**	**0**	*e*P	**Pn**	**18 36 14.3**	**+0.3**
	baz=359						
TPUB	**Ta-pu**	**2.25**	**344**	*e*Pn	**Pn**	**18 36 13.6**	**-0.9**
YULB	**Yu-li**	**2.26**	**0**	*e*P	**Pn**	**18 36 14.1**	**-0.5**
TWK	**Hsinying**	**2.26**	**341**	*e*P	**Pn**	**18 36 14.5**	**-0.1**
	baz=340						
CHN4	**Tsaushan**	**2.31**	**344**	*e*P	**Pn**	**18 36 15.6**	**+0.3**
	baz=343						
CHN4				*e*S	**Sn**	**18 36 41.6**	**-0.9**
	baz=343						
EHY	**Hungye**	**2.37**	**1**	*e*P	**Pn**	**18 36 16.9**	**+0.8**
YUS	**Yu-Shan**	**2.38**	**352**	*e*P	**Pn**	**18 36 16.5**	**+0.3**
	baz=351						
YUS				S	**Sn**	**18 36 44.1**	**0.0**
	baz=351						
ALS	**Alishan**	**2.42**	**349**	P	**Pn**	**18 36 17.2**	**+0.5**
	baz=348						
ALS				*e*S	**Sn**	**18 36 44.5**	**-0.6**
	baz=348						
CHN5	**Tsauling**	**2.53**	**347**	*e*P	**Pn**	**18 36 18.5**	**+0.2**
	baz=346						
CHN5				S	**Sn**	**18 36 47.6**	**-0.2**
	baz=346						
SSLB	**Suanglung**	**2.67**	**353**	*e*P	**Pn**	**18 36 21.8**	**+1.6**
ESL	**Shilin**	**2.68**	**3**	*e*P	**Pn**	**18 36 20.7**	**+0.4**
	baz=2.0						
ESL				*e*S	**Sn**	**18 36 50.9**	**-0.7**
	baz=2.0						
SMLT	**Sun Moon Lake**	**2.77**	**352**	*e*P	**Pn**	**18 36 22.2**	**+0.6**
	baz=352						
WHF	**Hehuan Shan**	**3.01**	**359**	*e*P	**Pn**	**18 36 25.5**	**+0.6**
	baz=359						
NACB	**Ninganchiao**	**3.05**	**5**	*e*P	**Pn**	**18 36 25.9**	**+0.4**
TWQ1	**Liyutan**	**3.25**	**352**	*e*P	**Pn**	**18 36 28.0**	**-0.1**
	baz=351						
NNS	**Nan Shan**	**3.30**	**1**	*e*P	**Pn**	**18 36 29.4**	**+0.5**
ENA	**Nanau**	**3.32**	**7**	*e*P	**Pn**	**18 36 29.7**	**+0.6**
	baz=6.0						
NSTT	**Nanjuang**	**3.50**	**356**	*e*P	**Pn**	**18 36 31.5**	**-0.1**
	baz=355						
YHNB	**Yeheng**	**3.53**	**1**	*e*P	**Pn**	**18 36 33.3**	**+1.3**
NSK	**Sanguang**	**3.54**	**1**	*e*P	**Pn**	**18 36 32.4**	**+0.3**
TWB1	**Santiao Chiao**	**3.92**	**9**	*e*P	**Pn**	**18 36 36.2**	**-1.2**
	baz=9.0						
CMAR	**Chiang Mai Arr**	**21.20**	**267**	P	**P**	**18 40 21.9**	**0.0**
	0.2nm,0.3s,mb2.9,baz=77,slow=10.0,SNR=5.4						
MKAR	**Makanchi Array**	**40.64**	**318**	P	**P**	**18 43 16.9**	**+1.2**
	0.2nm,0.6s,mb2.9,baz=105,slow=8.4,SNR=3.3						
WRAB	**Tennant Creek**	**42.76**	**162**	*e*P	**P**	**18 43 33.2**	**0.0**
	0.5nm,0.3s,mb3.7						
WRA	**Warramunga Arr**	**42.76**	**162**	P	**P**	**18 43 32.9**	**-0.3**
	0.6nm,0.6s,mb3.5,baz=343,slow=9.1,SNR=10						
WB2	**Warramunga Arr**	**42.76**	**162**	*e*P	**P**	**18 43 32.7**	**-0.6**
ASAR	**Alice Springs**	**46.18**	**164**	P	**P**	**18 44 00.8**	**+0.2**
	0.2nm,0.3s,mb3.5,baz=345,slow=7.2,SNR=12						

IDC 13 18:54:02.9±2.4,23.°98N×142.°74E,h0km,mb3.5/6,
mb1 3.6/7,mb1mx3.5/22,mbtmp3.5/7,ML2.8/1,Error
ellipse: s-maj=101.8km s-min=18.8km az=81.0,Volcano
Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.14**	**351**	Pn	Pn	18 54 55.0	+1.3
	1.5nm,0.3s,baz=306,slow=23,SNR=3.1						
CBIJ				Sn	Sn	18 55 31.4	-0.4
	18nm,0.3s,baz=290,slow=23,SNR=20						
SONM	**Songino Array**	**37.34**	**319**	P	P	19 01 16.7	-0.2
	0.1nm,0.3s,baz=156,slow=7.6,SNR=2.6						
WRA	**Warramunga Arr**	**44.42**	**191**	P	P	19 02 15.7	+0.1
	0.4nm,0.3s,baz=8.6,slow=8.0,SNR=14						
ASAR	**Alice Springs**	**48.13**	**191**	P	P	19 02 44.5	-0.2
	0.3nm,0.8s,baz=9.8,slow=7.2,SNR=5.0						
MKAR	**Makanchi Array**	**52.87**	**311**	P	P	19 03 20.6	+0.2
	0.2nm,0.7s,baz=86,slow=8.0,SNR=4.0						
BVAR	**Borovoye Array**	**60.68**	**319**	P	P	19 04 15.9	+0.1
	0.4nm,0.5s,baz=120,slow=8.5,SNR=3.4						
FINES	**FINESS Array B**	**80.95**	**334**	P	P	19 06 18.7	-0.3
	1.8nm,0.9s,baz=76,slow=5.9,SNR=5.7						
FINES				pP		19 06 31.6	
	1.0nm,0.8s,baz=90,slow=5.7,SNR=4.1						

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*ATH **13** 18:56:47.7,37.°81N×21.°37E,h28km±1km,MD3.1/10*
*NEIC **13** 18:56:47.7,37.°81N×21.°37E,h27km,MD3.1(ATH),After*
ATH.
*ISCJB **13** 18:56:49.0±0.5,37.°82N±0.°03×21.°36E±0.°04,h27km±6km,*
Error ellipse: s-maj=5.1km s-min=4.9km az=41.1
*CSEM **13** 18:56:48.3±0.2,37.°83N×21.°36E,h20km,MD3.1,Error*
ellipse: s-maj=5.1km s-min=4.6km az=62.0
*THE **13** 18:56:49.1,37.°82N×21.°38E,h15km±1km,ML2.8/4,Error*
ellipse: s-maj=1.8km s-min=0.5km az=320.0

ISC 13 18:56:49.0±0.5,37.°81N±0.°03×21.°36E±0.°04,h21km±8km,
n51,σ0°97/85,3C,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.26**	**19**	↑*i*Pb	**Pb**	**18 56 54.3**	**-0.9**
RLS				*e*Sb	**Sb**	**18 56 58.9**	**-0.4**
RLS	**Riolos of Patr**	**0.26**	**19**	↑*i*Pb	**Pb**	**18 56 54.3**	**-0.9**
RLS				*e*SB	**Sb**	**18 56 58.9**	**-0.4**
RLS	**Riolos of Patr**	**0.26**	**19**	↑*i*Pb	**Pb**	**18 56 54.3**	**-0.9**
RLS				*e*Sb	**Sb**	**18 56 58.9**	**-0.4**
KFL	**Anninata**	**0.54**	**303**	P	**Pb**	**18 56 59.6**	**-0.2**
KFL				S	**Sb**	**18 57 08.2**	**+1.0**
KFL	**Anninata**	**0.54**	**303**	P	**Pb**	**18 56 59.6**	**-0.2**
KFL				S	**Sb**	**18 57 08.2**	**+1.0**
UPR	**University Cam**	**0.58**	**35**	*e*PN	**Pb**	**18 56 59.5**	**-1.0**
UPR				*e*SN	**Sb**	**18 57 08.7**	**+0.5**
UPR	**University Cam**	**0.58**	**35**	P	**Pb**	**18 57 00.3**	**-0.2**
UPR				S	**Sb**	**18 57 08.9**	**+0.7**
UPR	**University Cam**	**0.58**	**35**	*e*Pn	**Pb**	**18 56 59.5**	**-1.0**
UPR	**University Cam**	**0.58**	**35**	P	**Pb**	**18 57 00.3**	**-0.2**
UPR				S	**Sb**	**18 57 08.9**	**+0.7**
LAKA	**Lakka**	**0.65**	**49**	P	**Pb**	**18 57 00.8**	**-0.9**
LAKA				S	**Sb**	**18 57 10.7**	**+0.4**
LAKA	**Lakka**	**0.65**	**49**	P	**Pb**	**18 57 00.8**	**-0.9**
LAKA				S	**Sb**	**18 57 10.7**	**+0.4**
VLS	**Valsamata**	**0.71**	**301**	*e*Pn	**Pb**	**18 57 01.8**	**-0.9**
VLS				*e*Sn	**Sb**	**18 57 12.9**	**+0.9**
VLS	**Valsamata**	**0.71**	**301**	*e*PN	**Pb**	**18 57 01.8**	**-0.9**
VLS				*e*SN	**Sb**	**18 57 12.9**	**+0.9**
VLS	**Valsamata**	**0.71**	**301**	P	**Pb**	**18 57 02.4**	**-0.3**
VLS				S	**Sb**	**18 57 13.7**	**+1.7**
VLS	**Valsamata**	**0.71**	**301**	*e*Pn	**Pb**	**18 57 01.8**	**-0.9**
VLS	**Valsamata**	**0.71**	**301**	P	**Pb**	**18 57 02.4**	**-0.3**
VLS				*e*Sn	**Sb**	**18 57 12.9**	**+0.9**
VLS				S	**Sb**	**18 57 13.7**	**+1.7**
EFP	**Efpalio**	**0.75**	**35**	*e*PN	**Pb**	**18 57 02.3**	**-1.1**
EFP				*e*SN	**Sb**	**18 57 13.7**	**+0.5**
EFP	**Efpalio**	**0.75**	**35**	P	**Pb**	**18 57 02.5**	**-0.9**
EFP				S	**Sb**	**18 57 14.2**	**+1.0**
EFP	**Efpalio**	**0.75**	**35**	*e*Pn	**Pb**	**18 57 02.3**	**-1.1**
EFP	**Efpalio**	**0.75**	**35**	P	**Pb**	**18 57 02.5**	**-0.9**
EFP				*e*Sn	**Sb**	**18 57 13.7**	**+0.5**
EFP				S	**Sb**	**18 57 14.2**	**+1.0**
ITM	**Ithomi**	**0.78**	**144**	*e*Pn	**Pb**	**18 57 03.1**	**-0.7**
ITM				*e*Sn	**Sb**	**18 57 13.9**	**0.0**
ITM	**Ithomi**	**0.78**	**144**	*e*PN	**Pb**	**18 57 03.1**	**-0.7**
ITM				*e*SN	**Sb**	**18 57 13.9**	**0.0**
ITM	**Ithomi**	**0.78**	**144**	P	**Pb**	**18 57 03.6**	**-0.2**
ITM				S	**Sb**	**18 57 15.8**	**+1.9**
ITM	**Ithomi**	**0.78**	**144**	*e*Pn	**Pb**	**18 57 03.1**	**-0.7**
ITM	**Ithomi**	**0.78**	**144**	P	**Pb**	**18 57 03.6**	**-0.2**
ITM				*e*Sn	**Sb**	**18 57 13.9**	**0.0**
ITM				S	**Sb**	**18 57 15.8**	**+1.9**
GUR	**Goura**	**0.79**	**81**	*e*PN	**Pb**	**18 57 02.9**	**-1.1**
GUR				*e*SN	**Sb**	**18 57 14.2**	**0.0**
GUR	**Goura**	**0.79**	**81**	P	**Pb**	**18 57 03.1**	**-0.9**
GUR				S	**Sb**	**18 57 15.2**	**+1.0**
GUR	**Goura**	**0.79**	**81**	*e*Pn	**Pb**	**18 57 02.9**	**-1.1**
GUR	**Goura**	**0.79**	**81**	P	**Pb**	**18 57 03.1**	**-0.9**
GUR				*e*Sn	**Sb**	**18 57 14.2**	**0.0**
GUR				S	**Sb**	**18 57 15.2**	**+1.0**
TRIZ	**Trizonia**	**0.79**	**45**	P	**Pb**	**18 57 03.6**	**-0.4**
TRIZ				S	**Sb**	**18 57 15.5**	**+1.2**
TRIZ	**Trizonia**	**0.79**	**45**	P	**Pb**	**18 57 03.6**	**-0.4**
TRIZ				S	**Sb**	**18 57 15.5**	**+1.2**
KALE	**Kalithea**	**0.84**	**47**	P	**Pb**	**18 57 04.6**	**-0.4**
KALE				S	**Sb**	**18 57 17.2**	**+1.3**
KALE	**Kalithea**	**0.84**	**47**	P	**Pb**	**18 57 04.6**	**-0.4**
KALE				S	**Sb**	**18 57 17.2**	**+1.3**
VLX	**Vlachokerasia**	**0.92**	**118**	*e*PN	**Pb**	**18 57 06.8**	**+0.5**
VLX	**Vlachokerasia**	**0.92**	**118**	*e*Pn	**Pb**	**18 57 06.8**	**+0.5**
PYL	**PYLOS**	**0.96**	**162**	*e*PN	**Pb**	**18 57 06.7**	**-0.4**
PYL	**PYLOS**	**0.96**	**162**	P	**Pb**	**18 57 06.9**	**-0.2**
PYL				S	**Sb**	**18 57 21.2**	**+1.8**
PYL	**PYLOS**	**0.96**	**162**	*e*Pn	**Pb**	**18 57 06.7**	**-0.4**
PYL	**PYLOS**	**0.96**	**162**	P	**Pb**	**18 57 06.9**	**-0.2**
PYL				S	**Sb**	**18 57 21.2**	**+1.8**
EVR	**Evrytania**	**1.16**	**18**	*e*Pn	**Pn**	**18 57 07.3**	**-2.6**
EVR	**Evrytania**	**1.16**	**18**	*e*PN	**Pn**	**18 57 09.4**	**-0.5**
EVR	**Evrytania**	**1.16**	**18**	*e*Pn	**Pn**	**18 57 07.3**	**-2.6**
LTK	**Loutraki**	**1.29**	**80**	*e*PN	**Pn**	**18 57 11.2**	**-0.5**
LTK	**Loutraki**	**1.29**	**80**	*e*Pn	**Pn**	**18 57 11.2**	**-0.5**
AGG	**Agios Georgios**	**1.43**	**32**	*e*Pn	**Pn**	**18 57 13.8**	**+0.1**
AGG	**Agios Georgios**	**1.43**	**32**	*e*PN	**Pn**	**18 57 13.8**	**+0.1**
AGG	**Agios Georgios**	**1.43**	**32**	*e*Pn	**Pn**	**18 57 13.8**	**+0.1**
DID	**Didima**	**1.52**	**101**	*e*PN	**Pn**	**18 57 15.8**	**+0.9**
DID	**Didima**	**1.52**	**101**	*e*Pn	**Pn**	**18 57 15.8**	**+0.9**
VLI	**Veliai**	**1.67**	**131**	*e*Pb	**Pb**	**18 57 16.5**	**-2.5**
VLI	**Veliai**	**1.67**	**131**	*e*PB	**Pb**	**18 57 16.5**	**-2.5**

CASC 13 18:57:17.2±1.9,12.°78N×88.°64W,h37km±274km,MD3.6,
ML3.4,2D,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSM	**San Miguel**	**0.74**	**29**	*e*P	Pn	18 57 31.5	+0.3
VSM				*e*S	Sn	18 57 42.3	+1.1
BLLM	**Bellamira**	**0.77**	**31**	↓*e*P	Pn	18 57 31.8	+0.2
BLLM				*e*S	Sn	18 57 41.9	+0.1
SNVI	**San Vicente**	**0.85**	**347**	*e*P	Pn	18 57 33.0	+0.3
SNVI				*e*S	Sn	18 57 45.1	+1.1
CNCH	**Conchagua**	**0.93**	**58**	*e*P	Pn	18 57 33.5	-0.2
CNCH				*e*S	Sn	18 57 47.2	+1.4
CNCH				AML	AML	18 57 50.5	
	comp=Z,664nm,0.5s						
LFRS	**El Faro**	**0.94**	**334**	↓*e*P	Pn	18 57 34.1	+0.2
CAHU	**Cacacuatique**	**1.07**	**23**	*e*P	Pn	18 57 36.1	+0.4
CAHU				*e*S	Sn	18 57 50.8	+1.4
CAHU				AML	AML	18 57 55.5	
	comp=Z,1μm,0.3s						
BOQS	**Boqueron**	**1.14**	**327**	*e*P	Pn	18 57 37.2	+0.6
BOQS				*e*S	Sn	18 57 52.7	+1.7
SBLS	**San Blas**	**1.43**	**318**	*e*P	Pn	18 57 41.6	+1.0
SBLS				*e*S	Sn	18 57 58.6	+0.4
CRIN	**San Cristobal**	**1.55**	**93**	*e*P	Pn	18 57 42.2	-0.1
TEL3	**Telica 3**	**1.76**	**96**	*e*P	Pn	18 57 44.5	-0.7
TELN	**Telica**	**1.77**	**95**	*e*P	Pn	18 57 44.9	-0.5
TGUH	**Tegucigalpa,Un**	**1.84**	**46**	*e*P	Pn	18 57 46.9	+0.6
MOMN	**Momotombo**	**2.08**	**100**	*e*P	Pn	18 57 49.8	+0.2
COPN	**Copaltepe**	**2.08**	**106**	*e*P	Pn	18 57 51.1	+1.4
CSAN		**2.24**	**105**	*e*P	Pn	18 57 52.8	+0.9
APYN	**Apoyeque**	**2.30**	**103**	*e*P	Pn	18 57 52.1	-0.5
CRUN	**El Crucero**	**2.42**	**109**	*e*P	Pn	18 57 52.4	-1.8
TICN	**Ticuantepe**	**2.46**	**107**	*e*P	Pn	18 57 55.1	+0.2

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*IDC **13** 18:57:40.4±1.4,11.°73S×166.°85E,h0km,mb4.0/7,*
mb1 4.1/7,mb1mx3.9/16,mbtmp4.0/7,Error ellipse:
s-maj=42.2km s-min=30.9km az=85.0
*ISCJB **13** 18:57:45.0±1.5,11.°8S±0.°2×166.°6E±0.°3,h33km,mb3.9/7,*
Error ellipse: s-maj=40.8km s-min=26.1km az=11.8
*NEIC **13** 18:57:46.4±1.3,11.°73S×166.°74E,h35km,mb3.9/1,Error*
ellipse: s-maj=36.0km s-min=23.1km az=102.0

ISC 13 18:57:46.7±1.5,11.°7S±0.°2×166.°7E±0.°3,h35km,n11,
σ0°62/11,mb3.9/7,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**30.61**	**225**	P	**P**	**19 03 58.4**	**+0.8**
	4.9nm,1.0s,mb4.3,baz=90,slow=10,SNR=3.2						
STKA	**Stephens Creek**	**30.61**	**225**	*e*P	**P**	**19 03 58.5**	**+1.0**
	2.3nm,1.2s,mb3.9						
WRA	**Warramunga Arr**	**32.13**	**251**	P	**P**	**19 04 10.8**	**-0.3**
	0.5nm,0.6s,mb3.5,baz=83,slow=9.1,SNR=6.0						
WRA				PcP	PcP	19 06 59.1	-0.8
	0.6nm,0.9s,baz=74,slow=3.3,SNR=3.5						
WRA	**Warramunga Arr**	**32.13**	**251**	P	**P**	**19 04 10.8**	**-0.3**
WRA				PcP	PcP	19 06 59.1	-0.8
ASAR	**Alice Springs**	**33.33**	**245**	P	**P**	**19 04 20.8**	**-0.8**
	0.6nm,0.7s,mb3.6,baz=66,slow=10,SNR=8.2						
ASAR				PcP	PcP	19 07 01.7	-1.4
	0.4nm,0.9s,baz=71,slow=3.3,SNR=4.3						
CMAR	**Chiang Mai Arr**	**73.24**	**293**	P	**P**	**19 09 15.4**	**+0.7**
	1.6nm,0.8s,mb4.0,baz=124,slow=4.5,SNR=8.3						
QSPA	**South Pole Qui**	**78.28**	**180**	P	**P**	**19 09 42.3**	**-0.2**
	2.8nm,0.9s,mb4.2,baz=48,slow=1.9,SNR=15						
QSPA	**South Pole Qui**	**78.28**	**180**	P	**P**	**19 09 42.3**	**-0.2**
SONM	**Songino Array**	**79.76**	**324**	P	**P**	**19 09 51.5**	**+0.4**
	0.3nm,0.5s,mb3.5,baz=145,slow=5.3,SNR=3.4						
SONM	**Songino Array**	**79.76**	**324**	P	**P**	**19 09 51.5**	**+0.4**
MKAR	**Makanchi Array**	**94.65**	**317**	P	**P**	**19 11 03.4**	**-0.7**
	0.9nm,0.5s,mb4.4,baz=84,slow=5.4,SNR=15						

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*IDC **13** 19:01:06.0±1.4,34.°47S×179.°51W,h0km,mb4.0/4,*
mb1 4.2/5,mb1mx3.9/16,mbtmp4.1/5,ML4.4/1,Error
ellipse: s-maj=36.0km s-min=34.6km az=149.0
*NEIC **13** 19:01:11.4±0.9,34.°82S×179.°54W,h35km,Error ellipse:*
s-maj=21.9km s-min=13.1km az=110.0

ISC 13 19:01:09.9±1.8,34.°82S±0.°05×179.°4W±0.°2,h29km±20km,
n44,σ1°12/52,mb4.1/4,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.30**	**213**	P	**Pn**	**19 02 00.4**	**+0.8**
MXZ				S	**Sn**	**19 02 38.6**	**+0.8**
MXZ	**Matakaoa Point**	**3.30**	**213**	PN	**Pn**	**19 02 00.4**	**+0.8**
MXZ				SN	**Sn**	**19 02 38.6**	**+0.8**
PUZ	**Puketiti**	**3.75**	**209**	PN	**Pn**	**19 02 06.3**	**+0.6**
PUZ				SN	**Sn**	**19 02 50.2**	**+1.3**
CNGZ	**Carnagh Statio**	**4.13**	**207**	PN	**Pn**	**19 02 11.9**	**+1.0**
CNGZ				SN	**Sn**	**19 02 59.5**	**+1.3**
MWZ	**Matawai**	**4.28**	**214**	PN	**Pn**	**19 02 14.4**	**+1.3**
MWZ				SN	**Sn**	**19 03 02.7**	**+0.6**
URZ	**Urewera**	**4.43**	**218**	Pn	**Pn**	**19 02 16.0**	**+0.9**
	15nm,0.3s,baz=18,slow=3.5,SNR=42						
URZ				Sn	**Sn**	**19 03 04.7**	**-1.0**
	12nm,0.3s,baz=135,slow=20,SNR=7.8						
URZ	**Urewera**	**4.43**	**218**	P	**Pn**	**19 02 15.2**	**+0.1**
URZ	**Urewera**	**4.43**	**218**	PN	**Pn**	**19 02 15.2**	**+0.1**
URZ				SN	**Sn**	**19 03 04.3**	**-1.4**
PRGZ	**Paritu Road**	**4.63**	**207**	PN	**Pn**	**19 02 18.0**	**+0.1**
PRGZ				SN	**Sn**	**19 03 11.4**	**+0.7**
KNZ	**Kokohu**	**4.80**	**208**	P	**Pn**	**19 02 20.5**	**+0.3**
KNZ	**Kokohu**	**4.80**	**208**	PN	**Pn**	**19 02 20.5**	**+0.3**
KNZ				SN	**Sn**	**19 03 13.0**	**-1.7**
MHGZ	**Mahia Peninsul**	**4.83**	**206**	PN	**Pn**	**19 02 20.3**	**-0.2**
MHGZ				SN	**Sn**	**19 03 16.4**	**+0.9**
RAHZ	**Arahi**	**4.96**	**213**	PN	**Pn**	**19 02 23.5**	**+1.2**
RAHZ				SN	**Sn**	**19 03 18.9**	**+0.2**
NMHZ	**Naumai**	**5.23**	**214**	PN	**Pn**	**19 02 24.8**	**-1.4**
NMHZ				SN	**Sn**	**19 03 26.0**	**+0.5**
BKZ	**Black Stump Fm**	**5.43**	**216**	PN	**Pn**	**19 02 28.5**	**-0.4**
BKZ				SN	**Sn**	**19 03 28.0**	**-2.4**
MCHZ	**McNeill Hill**	**5.56**	**213**	PN	**Pn**	**19 02 31.4**	**+0.7**
MCHZ				SN	**Sn**	**19 03 33.3**	**-0.3**
CKHZ	**Cape Kidnapper**	**5.58**	**209**	SN	**Sn**	**19 03 31.1**	**-2.9**
OUZ	**Omahuta**	**5.75**	**264**	*e*P	**Pn**	**19 02 33.8**	**+0.6**
	34nm,0.5s						
KAHZ	**Kahuranaki**	**5.78**	**210**	PN	**Pn**	**19 02 32.3**	**-1.4**
BFZ	**Birch Farm**	**6.78**	**209**	P	**Pn**	**19 02 45.0**	**-2.4**
BFZ	**Birch Farm**	**6.78**	**209**	PN	**Pn**	**19 02 45.0**	**-2.5**
BFZ				SN	**Sn**	**19 03 58.4**	**-5.2**
MRZ	**Mangatainoka R**	**7.05**	**213**	PN	**Pn**	**19 02 48.8**	**-2.3**
MRZ				SN	**Sn**	**19 04 03.0**	**-7.2**
SNZO	**South Karori**	**7.96**	**214**	Pn	**Pn**	**19 03 03.6**	**0.0**
CTZ	**Chatham Island**	**9.16**	**167**	PN	**Pn**	**19 03 19.8**	**-0.2**
THZ	**Tophouse**	**9.19**	**219**	SN	**Sn**	**19 04 54.2**	**-8.6**
MQZ	**McQueen's Vall**	**10.79**	**212**	SN	**Sn**	**19 05 28.5**	**-14**
RPZ	**Rata Peaks**	**11.54**	**217**	Pn	**Pn**	**19 03 46.9**	**-5.7**
	0.3nm,0.3s,baz=45,slow=4.3,SNR=2.1						
RPZ				Sn	**Sn**	**19 05 47.8**	**-13**
	0.6nm,0.3s,baz=348,slow=

BLCB			*e*Sg	**Sg**	**19 05 18.2**	**+0.2**
KULA	**Kula-Manisa**	**1.08 138**	*e*PN	**Pn**	**19 05 03.7**	**-0.8**
KULA	**Kula-Manisa**	**1.08 138**	*e*Pn	**Pn**	**19 05 03.7**	**-0.8**
EZN	**Ezine**	**1.20 295**	*e*Pn	**Pn**	**19 05 05.3**	**-0.7**
EZN			*e*SN	**Sn**	**19 05 22.1**	**-0.1**
EZN	**Ezine**	**1.20 295**	*e*Pn	**Pn**	**19 05 05.3**	**-0.7**
EZN			*e*Sn	**Sn**	**19 05 22.1**	**-0.1**
ULDT	**Uludag**	**1.36 52**	*i* P	**Pn**	**19 05 08.7**	**+0.5**
ULDT			*i* S	**Sb**	**19 05 26.9**	**+0.6**
ULDT	**Uludag**	**1.36 52**	*i* P	**Pn**	**19 05 08.7**	**+0.4**
ULDT			*i* S	**Sb**	**19 05 26.9**	**+0.7**
GDZ	**Gediz**	**1.38 99**	*i* P	**Pn**	**19 05 08.6**	**0.0**
GDZ			*i* S	**Sb**	**19 05 27.4**	**+0.6**
GDZ	**Gediz**	**1.38 99**	*i* P	**Pn**	**19 05 08.6**	**+0.1**
GDZ			*i* S	**Sb**	**19 05 27.4**	**+0.6**
GELI	**Tayfur-Gelibol**	**1.45 318**	*e*PN	**Pn**	**19 05 09.2**	**-0.2**
GELI			*e*SN	**Sn**	**19 05 28.8**	**+0.4**
GELI	**Tayfur-Gelibol**	**1.45 318**	*e*Pn	**Pn**	**19 05 09.2**	**-0.2**
GELI			*e*Sn	**Sn**	**19 05 28.8**	**+0.4**
ARMT	**Armutlu**	**1.52 35**	*e*PN	**Pn**	**19 05 10.6**	**+0.2**
ARMT	**Armutlu**	**1.52 35**	*e*Pn	**Pn**	**19 05 10.6**	**+0.2**
GEMT	**Gemlik**	**1.58 45**	*e*PN	**Pn**	**19 05 11.3**	**0.0**
GEMT	**Gemlik**	**1.58 45**	*e*Pn	**Pn**	**19 05 11.3**	**0.0**
ENEZ	**Enez**	**1.86 320**	*e*PN	**Pn**	**19 05 15.1**	**-0.1**
ENEZ	**Enez**	**1.86 320**	*e*Pn	**Pn**	**19 05 15.1**	**0.0**

CASC 13 19:05:52.1±1.6, 11°.04N×85°.76W, h94km±6km, MD3.6, ML2.3, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSN	**San Juan del S**	**0.28**	**341**	*e*P	Pn	19 06 06.1	+0.1
GB1A	**Borinquen Arri**	**0.42**	**122**	*i* P	Pn	19 06 07.3	+0.6
GB1A				*i* S	Sn	19 06 18.8	+1.2
LAPC	**Finca la Perla**	**0.42**	**130**	*i* P	Pn	19 06 06.8	+0.1
LAPC				*i* S	Sn	19 06 17.9	+0.3
NY14	**Universidad de**	**0.45**	**150**	*i* P	Pn	19 06 07.7	+0.7
GPS1	**Guardaparques**	**0.48**	**123**	*i* P	Pn	19 06 07.7	+0.6
GPS2	**Hotel Rinc`‡n**	**0.49**	**125**	*i* P	Pn	19 06 07.5	+0.3
CONN	**Concepcion**	**0.54**	**14**	*e*P	Pn	19 06 08.2	+0.6
CONN				AML	AML	19 06 26.5	
	comp=Z,127nm,0.3s						
CUI	**Cuipilapa**	**0.70**	**123**	*i* P	Pn	19 06 09.0	0.0
AMAS	**Alto Masis**	**0.87**	**119**	*i* P	Pn	19 06 15.3	+4.7
APON	**Apoyo**	**0.92**	**341**	*e*P	Pn	19 06 11.7	+0.4
TICN	**Ticuantepe**	**1.09**	**335**	*e*P	Pn	19 06 13.5	+0.4
CSAN		**1.31**	**330**	*e*P	Pn	19 06 15.7	-0.1
CSAN				*e*S	Sn	19 06 32.8	-0.7
APYN	**Apoyeque**	**1.32**	**334**	*e*P	Pn	19 06 15.9	+0.1
JCR	**Jicaral**	**1.34**	**152**	*e*P	Pn	19 06 16.5	+0.4
JCR				*e*S	Sn	19 06 34.6	+0.3
HUEN		**1.35**	**343**	*e*P	Pn	19 06 16.4	+0.1
COPN	**Copaltepe**	**1.40**	**324**	*e*P	Pn	19 06 16.8	0.0
MOMN	**Momotombo**	**1.56**	**331**	*e*P	Pn	19 06 19.0	+0.2
MOMN				*e*S	Sn	19 06 39.5	+0.4
MOMN				AML	AML	19 06 40.6	
	comp=Z,14nm,0.2s						
CGA2	**Cerro Gallo 2**	**1.63**	**129**	*e*P	Pn	19 06 19.9	+0.2
CGA2				*e*S	Sn	19 06 41.4	+0.7
LEON	**Leon**	**1.76**	**321**	*e*P	Pn	19 06 21.4	0.0
PRS1	**Puriscal**	**1.77**	**126**	*e*P	Pn	19 06 22.3	+0.8
LAJ	**Bijagual**	**1.99**	**126**	*e*P	Pn	19 06 22.4	-2.0
CRIN	**San Cristobal**	**2.08**	**323**	*e*P	Pn	19 06 25.6	+0.1
URSC	**Urasca**	**2.29**	**121**	*e*P	Pn	19 06 29.4	+1.2
BUS	**Buena Vista**	**2.46**	**127**	*e*P	Pn	19 06 32.0	+1.4
BUS				*e*S	Sn	19 07 02.3	+2.3
BAR1		**3.00**	**126**	*e*P	Pn	19 06 39.7	+2.0
BAR1				*e*S	Sn	19 07 13.9	+1.0
ACR	**Cerro Adams**	**3.48**	**133**	*e*P	Pn	19 06 45.4	+1.1
ACR				*e*S	Sn	19 07 23.6	-1.0

MAN 13 19:25:14, 7°.36N×124°.55E, h35km, mb5.0, ML3.9, MS4.0, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.33**	**246**	⇑*i*P	Pn	19 25 24.6	+2.3
CTBH				*i* S	Sn	19 25 30.4	+2.4
BUKP	**Musuan**	**0.72**	**44**	*e*P	Pn	19 25 29.8	+2.0
BUKP				*e*S	Sn	19 25 39.2	+1.6
CGP	**Cagayan de Oro**	**1.10**	**7**	*e*P	Pn	19 25 33.1	+0.2
CGP				*i* S	Sn	19 25 45.4	-1.5
PAGZ	**Pagadian**	**1.26**	**293**	*e*P	Pn	19 25 36.1	+1.0
PAGZ				*e*S	Sn	19 25 51.6	+0.8
IPIL	**Ipil**	**2.01**	**282**	*e*P	Pn	19 25 49.2	+3.7
IPIL				*e*S	Sn	19 26 13.3	+3.9

*ISCJB **13** 19:30:25.3±0.5, 21°.71S±0°.04×67°.01W±0°.05, h177km±4km, mb4.4/43, Error ellipse: s-maj=7.8km s-min=5.5km az=138.7*
*NEIC **13** 19:30:26.4±0.7, 21°.74S×67°.11W, h176km±6km, mb4.4/29, Error ellipse: s-maj=7.9km s-min=5.1km az=70.0*
*IDC **13** 19:30:28.9±0.6, 21°.66S×67°.00W, h196km±5km, mb4.0/13, mb1 4.2/18, mb1mx4.2/21, mbtmp4.1/18, Error ellipse: s-maj=16.3km s-min=8.9km az=74.0*
*GUC **13** 19:30:28.1±0.6, 21°.68S×67°.64W, h220km, ML5.5*

ISC 13 19:30:26.2±0.5, 21°.72S±0°.04×66°.99W±0°.04, h168km±4km, n249, σ0°79/244, mb4.4/43, 74C-81D, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**2.38**	**256**	⇑*i*P	**Pn**	**19 31 14.1**	**+7.3**
PB04				*i* S	**Sn**	**19 31 48.7**	**+15**
PB04				AML	AML	19 31 50.4	
	comp=N,5μm,0.3s						
PB01	**Plate Boundary**	**2.43**	**286**	⇑*i*P	**Pn**	**19 31 08.1**	**+0.8**
PB01				*i* S	**Sn**	**19 31 38.9**	**+3.9**
PB01				AML	AML	19 31 40.2	
	comp=N,22μm,0.2s						
HMBC	**Humberston**	**3.07**	**297**	⇑*i*P	**Pn**	**19 31 15.1**	**0.0**
HMBC				*i* S	**Sn**	**19 31 51.4**	**+1.0**
HMBC				AML	AML	19 31 52.1	
	comp=N,17μm,0.7s						
MNMC	**Miæe Miæ**	**3.55**	**316**	⇑*i*P	**Pn**	**19 31 22.6**	**+1.3**
MNMC				*i* S	**Sn**	**19 32 04.2**	**+2.1**
LPAZ	**La Paz**	**5.51**	**348**	P	**Pn**	**19 31 49.9**	**+3.3**
	comp=N,27nm,0.3s,baz=157,slow=7.1,SNR=622						
LPAZ				S	**Sn**	**19 32 52.4**	**+3.2**
	comp=N,7.2nm,0.3s,baz=132,slow=16,SNR=7.7						
LPAZ	**La Paz**	**5.51**	**348**	*e*Pn	**Pn**	**19 31 49.9**	**+3.2**
LPAZ				*e*Sn	**Sn**	**19 32 53.2**	**+4.0**
SIV	**San Ignacio**	**7.99**	**45**	P	**Pn**	**19 32 20.6**	**+1.2**
	comp=N,161nm,0.3s,baz=236,slow=11,SNR=1317						
SIV				S	**Sn**	**19 33 46.7**	**-2.0**
	comp=N,20nm,0.3s,baz=140,slow=21,SNR=3.0						
LCO	**Las Campanas**	**8.00**	**204**	*e*Pn	**Pn**	**19 32 16.4**	**-3.0**
CFAA	**Coronel Fontan**	**9.91**	**186**	P	**Pn**	**19 32 43.9**	**-0.7**
	comp=N,0.5nm,0.3s,baz=0.1,slow=13,SNR=46						
CFAA				S	**Sn**	**19 34 27.8**	**-6.8**
	comp=N,1.2nm,0.3s,baz=54,slow=8.7,SNR=13						
CFAA	**Coronel Fontan**	**9.91**	**186**	P	**Pn**	**19 32 43.9**	**-0.7**
CFAA				S	**Sn**	**19 34 27.8**	**-6.8**
CPUP	**Villa Florida**	**9.95**	**119**	P	**Pn**	**19 32 46.8**	**+1.6**
	comp=N,3.5nm,0.3s,baz=284,slow=12,SNR=74						
NNA	**Nana**	**13.51**	**314**	P	**Pn**	**19 33 30.8**	**-0.5**
	comp=N,4.2nm,0.3s,baz=173,slow=11,SNR=12						
NNA				S	**Sn**	**19 35 52.4**	**-8.9**
	comp=N,1.8nm,0.3s,baz=196,slow=7.4,SNR=2.7						
NNA	**Nana**	**13.51**	**314**	P	**Pn**	**19 33 30.8**	**-0.5**
NNA				S	**Sn**	**19 35 52.4**	**-8.9**
TRQA	**Tornquist**	**16.84**	**166**	*e*P	**Pn**	**19 34 10.8**	**-1.3**
	comp=N,18nm,0.6s						
SPB	**Sao Paulo**	**18.14**	**100**	*e*P	**P**	**19 34 27.8**	**+2.0**
	comp=N,20nm,0.7s						
ATAH	**Atahualpa**	**18.21**	**321**	P	**P**	**19 34 27.7**	**+1.1**
	comp=N,0.8nm,0.3s,baz=146,slow=6.8,SNR=17						
PLCA	**Paso Flores**	**19.20**	**188**	P	**P**	**19 34 36.7**	**-0.3**
	comp=N,1.2nm,0.3s,baz=6.6,slow=12,SNR=23						
PLCA	**Paso Flores**	**19.20**	**188**	*e*P	**P**	**19 34 36.6**	**-0.4**
	comp=N,22nm,0.8s						
OTAV	**Otavalo**	**24.52**	**331**	*e*P	**P**	**19 35 31.3**	**+0.9**
	comp=N,7.2nm,0.8s,mb4.2						
PCRV	**Puerto La Cruz**	**31.78**	**4**	P	**P**	**19 36 34.6**	**-0.2**
	comp=N,7.6nm,0.4s,mb4.8,baz=130,slow=3.7,SNR=7.9						
USHA	**Ushuaia**	**33.08**	**182**	P	**P**	**19 36 45.5**	**-0.2**
	comp=N,6.7nm,0.7s,mb4.5,baz=342,slow=11,SNR=5.7						
CRPR	**Cabo Rojo, PR**	**39.48**	**360**	*e*P	**P**	**19 37 39.2**	**-1.1**
PMSA	**Palmer Station**	**43.08**	**178**	P	**P**	**19 38 09.9**	**+0.8**
	comp=N,6.8nm,0.8s,mb4.3,baz=335,slow=13,SNR=4.3						
PMSA				pP	pP	19 38 52.4	+6.5
	comp=N,3.7nm,0.5s,baz=48,slow=8.3,SNR=1.8						
PMSA	**Palmer Station**	**43.08**	**178**	P	**P**	**19 38 09.9**	**+0.8**
PMSA				pP	pP	19 38 52.4	+6.5
TEIG	**Tepich**	**46.59**	**332**	*e*P	**P**	**19 38 36.2**	**-1.2**
	comp=N,13nm,0.7s,mb4.7						
LRAL	**Lakeview Retre**	**57.70**	**340**	*e*P	**P**	**19 39 57.0**	**-2.2**
CPCT	**Cooper Cave**	**59.24**	**343**	*e*P	**P**	**19 40 08.3**	**-1.5**
TKL	**Tuckaleechee C**	**59.24**	**344**	*e*P	**P**	**19 40 08.3**	**-1.4**
SWET	**Sewanee**	**59.41**	**342**	*e*P	**P**	**19 40 09.1**	**-1.9**
VNA1	**Neumayer--Stat**	**59.48**	**161**	*e*P	**P**	**19 40 11.3**	**+0.2**
OXF	**Oxford**	**59.85**	**339**	*e*P	**P**	**19 40 12.0**	**-2.0**
	comp=N,22nm,1.0s,mb5.0						
ELN	**Prospectdale**	**60.05**	**347**	*e*P	**P**	**19 40 15.1**	**-0.2**
JCT	**Junction City**	**60.73**	**328**	*e*P	**P**	**19 40 18.8**	**-1.3**
WVT	**Waverly**	**60.82**	**341**	*e*P	**P**	**19 40 18.2**	**-2.3**
	comp=N,49nm,0.7s,mb5.5						
MIAR	**Mount Ida**	**61.40**	**335**	*e*P	**P**	**19 40 22.7**	**-1.8**
628A	**Black Gap, Mar**	**61.54**	**324**	⇑P	**P**	**19 40 25.2**	**-0.3**
baz=62							
627A	**Terlingua Ranc**	**61.79**	**324**	⇓P	**P**	**19 40 26.7**	**-0.5**
baz=62							
TXAR	**Lajitas Array**	**61.85**	**324**	P	**P**	**19 40 26.5**	**-1.1**
	comp=N,0.6nm,0.4s,mb3.8,baz=154,slow=7.7,SNR=18						
TXAR	**Lajitas Array**	**61.85**	**324**	P	**P**	**19 40 26.5**	**-1.1**
528A	**Cox Ranch, San**	**62.02**	**325**	⇓P	**P**	**19 40 27.8**	**-0.9**
baz=62							
626A	**Big Bend Ranch**	**62.27**	**324**	P	**P**	**19 40 30.1**	**-0.3**
baz=62,SNR=6.8							
428A	**Kincaid Ranch,**	**62.41**	**325**	⇓P	**P**	**19 40 30.8**	**-0.5**
baz=63							
526A	**Mary Lane Ranc**	**62.64**	**324**	⇑P	**P**	**19 40 32.5**	**-0.3**
baz=63							
SIUC	**Southern Illin**	**62.71**	**340**	*e*P	**P**	**19 40 31.5**	**-1.7**
328A	**Wristen Ranch,**	**62.99**	**326**	⇑P	**P**	**19 40 34.4**	**-0.7**
baz=63,SNR=5.8							
426A	**McDonald Obser**	**63.08**	**324**	⇑P	**P**	**19 40 35.3**	**-0.5**
baz=63							
FVM	**French Village**	**63.34**	**339**	*e*P	**P**	**19 40 35.5**	**-1.8**
comp=N,15nm,0.6s,mb5.0							
ACSO	**Alum Creek Sta**	**63.41**	**346**	*e*P	**P**	**19 40 36.3**	**-1.4**
CCM	**Cathedral Cave**	**63.68**	**339**	*e*P	**P**	**19 40 37.8**	**-1.8**
	comp=N,28nm,0.6s,mb5.3						
425A	**Indio Mountain**	**63.69**	**324**	⇓P	**P**	**19 40 39.0**	**-0.7**
baz=64,SNR=11							
227A	**Bennet, Jal**	**63.74**	**326**	⇑P	**P**	**19 40 39.4**	**-0.6**
baz=64							
325A	**Bean Ranch, Si**	**64.13**	**324**	⇓P	**P**	**19 40 42.0**	**-0.6**
baz=64,SNR=10							
226A	**Malaga, Loving**	**64.20**	**325**	⇑P	**P**	**19 40 42.9**	**-0.1**
baz=64							
324A	**Moseley Ranch,**	**64.47**	**324**	⇑P	**P**	**19 40 43.4**	**-1.4**
baz=65,SNR=7.4							
MNTX	**Cornudas Mount**	**64.61**	**324**	*e*P	**P**	**19 40 43.8**	**-1.9**
comp=N,1.1nm,0.6s,mb3.9							
225A	**Deer Hill, Car**	**64.62**	**325**	⇓P	**P**	**19 40 45.1**	**-0.7**
baz=65							
Z27A	**Tatum**	**64.72**	**327**	⇑P	**P**	**19 40 45.1**	**-1.3**
baz=65,SNR=6.5							
125A	**Gardner Draw,**	**64.96**	**325**	⇑P	**P**	**19 40 46.4**	**-1.5**
baz=65							
224A	**Cornudas Mount**	**64.97**	**324**	⇑P	**P**	**19 40 47.1**	**-1.0**
baz=65,SNR=9.3							
MSTX	**Muleshoe**	**65.02**	**328**	P	**P**	**19 40 47.4**	**-0.9**
baz=65,SNR=6.0							
Z26A	**Caprock**	**65.08**	**326**	⇓P	**P**	**19 40 47.8**	**-1.0**
baz=65,SNR=5.7							
Y27A	**Causey**	**65.15**	**327**	⇑P	**P**	**19 40 47.9**	**-1.3**
baz=65,SNR=5.5							
124A	**Stringfield Ra**	**65.42**	**325**	⇑P	**P**	**19 40 50.3**	**-0.6**
baz=66							
Z25A	**Roswell**	**65.47**	**326**	⇑P	**P**	**19 40 50.1**	**-1.1**
baz=66,SNR=5.2							
Z24A	**Sheeppen Canyo**	**65.85**	**325**	⇑P	**P**	**19 40 53.1**	**-0.6**
baz=66,SNR=6.3							
Y25A	**Mesa, Roswell**	**65.96**	**326**	⇓P	**P**	**19 40 53.4**	**-1.0**
baz=66							
X26A	**CR and CF Fran**	**66.00**	**327**	⇓P	**P**	**19 40 53.9**	**-0.7**
baz=66							
320A	**Kipp Ranch, An**	**66.10**	**322**	⇓P	**P**	**19 40 55.6**	**+0.3**
baz=66							
220A	**Playas Peak, P**	**66.52**	**322**	⇓P	**P**	**19 40 58.1**	**+0.2**
baz=67,SNR=6.5							
121A	**Cookes Peak, D**	**66.57**	**323**	⇑P	**P**	**19 40 58.8**	**+0.5**
baz=67							
319A	**Douglas**	**66.57**	**321**	⇑P	**P**	**19 40 58.7**	**+0.4**
baz=67							
Z22A	**Elephant Butte**	**66.66**	**324**	⇓P	**P**	**19 40 59.4**	**+0.6**
baz=67,SNR=8.0							
Y23A	**Lovelace Mesa,**	**66.68**	**325**	⇑P	**P**	**19 40 58.7**	**-0.2**
baz=67							
LIC	**Lamto**	**66.73**	**73**	*e*PKP1	**P**	**19 41 00.3**	**+0.5**
comp=N,94nm,1.7s,mb5.3							
W25A	**X Bar L Ranch,**	**66.86**	**327**	⇑P	**P**	**19 40 59.3**	**-0.7**
baz=67							
TIC	**Toumodi**	**66.93**	**72**	*e*PKP1	**P**	**19 41 00.3**	**-0.7**
comp=N,150nm,1.9s,mb5.5							
219A	**White Tail Can**	**67.01**	**322**	⇓P	**P**	**19 41 01.3**	**+0.2**
baz=67							
318A	**Bisbee**	**67.03**	**321**	⇓P	**P**	**19 41 01.4**	**+0.2**
baz=67,SNR=9.6							
KIC	**Kosan Boka**	**67.05**	**73**	*e*PKP1	**P**	**19 41 01.3**	**-0.5**
comp=N,23nm,0.7s,mb5.1							
120A	**U Bar Ranch, L**	**67.05**	**322**	⇓P	**P**	**19 41 01.6**	**+0.2**
baz=67							
Z21A	**St. Cloud Mine**	**67.08**	**324**	⇓P	**P**	**19 41 01.7**	**+0.2**
baz=67,SNR=6.8							
DBIC	**Dimbokro**	**67.09**	**72**	P	**P**	**19 41 00.7**	**-1.3**
comp=N,11nm,0.9s,mb4.7,baz=196,slow=6.1,SNR=9.5							
V25A	**Rancho No Teng**	**67.42**	**328**	⇓P	**P**	**19 41 03.4**	**-0.2**
baz=68							
Z20A	**Nine Sixteen R**	**67.45**	**323**	⇑P	**P**	**19 41 04.3**	**+0.4**
baz=68,SNR=9.3							
Y21A	**Point of Rocks**	**67.61**	**324**	⇑P	**P**	**19 41 04.8**	**-0.1**
baz=68							
V24A	**Rampart Ranch,**	**67.67**	**327**	⇑P	**P**	**19 41 05.1**	**0.0**
baz=68							
ANMO	**Albuquerque**	**67.68**	**326**	*e*P	**P**	**19 41 05.1**	**-0.1**
comp=N,2.3nm,0.7s,mb4.0							
217A	**Green Valley**	**67.76**	**320**	⇑P	**P**	**19 41 05.6**	**-0.2**
baz=68							
U25A	**Circle Dot Ran**	**67.76**	**328**	⇑P	**P**	**19 41 05.7**	**0.0**
baz=68							
118A	**Homack Ranch,**	**67.89**	**322**	⇓P	**P**	**19 41 06.5**	**-0.1**
baz=68							
X21A	**Alamocita Cree**	**68.00**	**324**	⇓P	**P**	**19 41 07.6**	**+0.4**
baz=68,SNR=5.9							
117A	**Oracle**	**68.28**	**321**	⇑P	**P**	**19 41 09.4**	**+0.3**
baz=68							
216A	**Three Points,**	**68.30**	**320**	⇑P	**P**	**19 41 09.3**	**+0.1**
baz=68							
Y19A	**Nutrioso**	**68.44**	**323**	⇓P	**P**	**19 41 10.3**	**+0.3**
baz=69,SNR=6.1							
X20A	**Quemado**	**68.46**	**324**	⇓P	**P**	**19 41 10.4**	**+0.3**
baz=69							
QSPA	**South Pole Qui**	**68.47**	**180**	*e*P	**P**	**19 41 10.2**	**+0.6**
comp=N,19nm,0.8s,mb4.9							
V22A	**San Miguel Ran**	**68.65**	**326**	⇓P	**P**	**19 41 11.4**	**+0.1**
baz=69							
S25A	**Robets Cordova**	**68.78**	**329**	⇓P	**P**	**19 41 12.3**	**+0.4**
baz=69							
W20A	**Ramah**	**68.90**	**324**	⇑P	**P**	**19 41 13.2**	**+0.4**
baz=69							
U22A	**Llaves**	**68.98**	**326**	⇓P	**P**	**19 41 13.6**	**+0.4**
baz=69							
Y17A	**Roosevelt**	**69.16**	**322**	⇑P	**P**	**19 41 14.6**	**+0.2**
baz=69							
SDCO	**Great Sand Dun**	**69.36**	**328**	*e*P	**P**	**19 41 15.6**	**0.0**
comp=N,3.5nm,0.7s,mb4.2							
R24A	**Sanders Place,**	**69.55**	**329**	⇓P	**P**	**19 41 17.0**	**+0.2**
baz=70							
V19A	**Window Rock**	**69.64**	**324**	⇑P	**P**	**19 41 17.2**	**-0.1**
baz=70							
Y16A	**Circle Bar Ran**	**69.65**	**322**	⇑P	**P**	**19 41 17.6**	**+0.1**
baz=70							
X16A	**Lo Mia Camp, P**	**70.02**	**322**	⇓P	**P**	**19 41 19.8**	**+0.1**
baz=70							
S22A	**4UR Ranch, Cre**	**70.02**	**327**	⇑P	**P**	**19 41 20.1**	**+0.5**
baz=70							
Q24A	**Divide**	**70.15**	**329**	⇓P	**P**	**19 41 21.1**	**+0.7**
baz=70							
MVCO	**Mesa Verde**	**70.47**	**326**	⇓P	**P**	**19 41 22.8**	**+0.4**
baz=71							
MVCO	**Mesa Verde**	**70.47**	**326**	*e*P	**P**	**19 41 22.7**	**+0.3**
comp=N,3.8nm,0.5s,mb4.4							
V17A	**Tonalea, Kykot**	**70.53**	**323**	⇓P	**P**	**19 41 23.0**	**+0.3**
baz=71							
X15A	**Humboldt**	**70.53**	**322**	⇓P	**P**	**19 41 22.6**	**-0.2**
baz=71							
W16A	**Flagstaff**	**70.56**	**322**	⇓P	**P**	**19 41 23.1**	**+0.2**
baz=71							
Y14A	**Wickenburg**	**70.59**	**321**	⇓P	**P**	**19 41 23.4**	**+0.2**
baz=71							
WUAZ	**Wupatki**	**70.77**	**323**	⇓P	**P**	**19 41 24.5**	**+0.3**
baz=71							
WUAZ	**Wupatki**	**70.77**	**323**	*e*P	**P**	**19 41 24.7**	**+0.4**
comp=N,4.6nm,0.9s,mb4.2							
R21A	**Cimarron**	**70.86**	**327**	⇓P	**P**	**19 41 24.9**	**+0.2**
baz=71							
S20A	**Disappointment**	**70.86**	**326**	⇓P	**P**	**19 41 25.1**	**+0.4**
baz=71							
X14A	**Yava**	**70.89**	**321**	⇑P	**P**	**19 41 25.6**	**+0.6**
baz=71							
Y13A	**Salome**	**70.99**	**320**	⇑P	**P**	**19 41 25.6**	**0.0**
baz=71							
T18A	**Mexican Hat**	**71.14**	**325**	⇓P	**P**	**19 41 26.6**	**+0.2**
baz=71,SNR=6.2							
R20A	**Redvale**	**71.15**	**327**	⇓P	**P**	**19 41 27.0**	**+0.6**
baz=71,SNR=7.7							
P22A	**Eagle**	**71.42**	**329**	⇓P	**P**	**19 41 28.8**	**+0.7**
baz=72							
V15A	**Kaibab Nationa**	**71.44**	**323**	⇓P	**P**	**19 41 28.6**	**+0.4**
baz=72							
W14A	**Seligman**	**71.53**	**322**	⇑P	**P**	**19 41 29.2**	**+0.4**
baz=72							
S18A	**Hurst Farm, Bl**	**71.61**	**325**	⇑P	**P**	**19 41 29.7**	**+0.5**
baz=72,SNR=7.8							
O22A	**Kremmling**	**71.76**	**329**	⇑P	**P**	**19 41 30.5**	**+0.4**
baz=72,SNR=5.6							
BC3	**Big Chuckawall**	**71.86**	**319**	⇑P	**P**	**19 41 31.1**	**+0.2**
baz=72							
U15A	**North Rim**	**71.94**	**323**	⇓P	**P**	**19 41 31.6**	**+0.3**
baz=72							
N23A	**Red Feather La**	**72.05**	**330**	⇑P	**P**	**19 41 32.3**	**+0.6**
baz=72							
R18A	**Canyonlands Na**	**72.08**	**326**	⇓P	**P**	**19 41 32.0**	**0.0**
baz=72,SNR=5.3							
Q19A	**Hogan Spring (**	**72.18**	**327**	⇓P	**P**	**19 41 33.4**	**+0.8**
baz=72							
T15A	**Red Dirt Ranch**	**72.42**	**323**	⇓P	**P**	**19 41 35.1**	**+1.0**
baz=73							
U14A	**Mt Trumbull**	**72.44**	**322**	⇑P	**P**	**19 41 35.1**	**+1.0**
baz=73,SNR=5.4							
R17A	**Hanksville Air**	**72.53**	**325**	⇑P	**P**	**19 41 35.0**	**+0.3**
baz=73,SNR=6.0							
P19A	**Cripple Cowboy**	**72.55**	**327**	⇑P	**P**	**19 41 35.4**	**+0.6**
baz=73,SNR=15							
O20A	**White River Ci**	**72.56**	**328**	⇓P	**P**	**19 41 35.3**	**+0.5**
baz=73							
N21A	**Black Mountain**	**72.69**	**329**	⇓P	**P**	**19 41 36.3**	**+0.8**
baz=73							
EYMN	**Ely**	**72.75**	**343**	*e*P	**P**	**19 41 34.0**	**-1.7**
SRU	**San Rafael**	**72.95**	**326**	⇓P	**P**	**19 41 37.5**	**+0.4**
baz=73,SNR=16							
SRU	**San Rafael**	**72.95**	**326**	*e*P	**P**	**19 41 37.3**	**+0.2**
comp=N,9.5nm,0.5s,mb4.8							
N20A	**Spence Gulch,**	**73.11**	**328**	⇑P	**P**	**19 41 38.3**	**+0.3**
baz=73,SNR=6.5							
Q16A	**Castle Valley**	**73.14**	**325**	⇑P	**P**	**19 41 38.9**	**+0.6**
baz=73,SNR=7.6							
P18A	**Preston Nutter**	**73.19**	**326**	⇑P	**P**	**19 41 39.2**	**+0.7**
baz=73,SNR=18							
U12A	**Valley of Fire**	**73.23**	**322**	⇓P	**P**	**19 41 39.2**	**+0.4**
baz=73							
P17A	**Butcher Ranch,**	**73.33**	**326**	⇑P	**P**	**19 41 39.8**	**+0.5**
baz=74							
CCUT	**Cedar City**	**73.35**	**323**	*e*P	**P**	**19 41 40.0**	**+0.5**
comp=N,3.6nm,0.7s,mb4.2							
L21A	**Rawlins**	**73.55**	**330**	⇑P	**P**	**19 41 40.9**	**+0.3**
baz=74							
ARUT	**Antelope Range**	**73.56**	**323**	*e*P	**P**	**19 41 41.7**	**+1.0**
comp=N,2.9nm,0.6s,mb4.2							
M20A	**Sweetw

baz=78,SNR=6.8
F18A Big Timber 77.67 331 ⇊P **P 19 42 04.2 +0.3**
baz=78,SNR=7.3
K12A Draper Farm, C 77.78 326 ⇊P **P 19 42 05.5 +0.9**
baz=78,SNR=5.9
L11A Cat Creek Ranc 77.90 325 ⇑P **P 19 42 05.6 +0.3**
baz=78
J13A Cove Ranch, Pi 77.95 327 ⇑P **P 19 42 06.0 +0.4**
baz=78,SNR=6.0
I14A Mackay 77.97 328 ⇑P **P 19 42 06.5 +0.9**
baz=78,SNR=6.6
F17A Fitzpatrick Pl 78.10 330 ⇑P **P 19 42 06.9 +0.6**
baz=78
HLID Hailey 78.19 327 P **P 19 42 08.1 +1.2**
baz=78,SNR=13
HLID Hailey 78.19 327 *eP* **P 19 42 07.3 +0.4**
comp=N,4.2nm,0.7s,mb4.2
L10A Juniper Basin 78.22 325 ⇊P **P 19 42 07.6 +0.5**
baz=78,SNR=7.6
TSUM Tsumeb 78.26 106 *eP* **P 19 42 08.2 +0.3**
comp=N,8.0nm,0.8s,mb4.4
I13A Wildhorse Cree 78.29 327 ⇊P **P 19 42 08.0 +0.6**
baz=78
BOZ Bozeman (W) 78.35 330 *eP* **P 19 42 07.0 -0.7**
comp=N,2.1nm,0.9s,mb3.8
H14A Leadore 78.43 328 ⇊P **P 19 42 08.9 +0.8**
baz=79
K11A Parker Ranch, 78.47 325 ⇑P **P 19 42 08.6 +0.2**
baz=79
H13A Challis 78.83 328 ⇑P **P 19 42 11.2 +0.8**
baz=79
H12A Diamond D Ranc 79.12 327 ⇊P **P 19 42 12.5 +0.7**
baz=79,SNR=6.5
G13A Cobalt 79.20 328 ⇑P **P 19 42 13.0 +0.7**
baz=79,SNR=20
D16A Dana Ranch, Ca 79.35 331 ⇑P **P 19 42 13.6 +0.5**
baz=80,SNR=5.2
B18A Beardsley Farm 79.60 333 ⇊P **P 19 42 14.5 +0.1**
baz=80,SNR=6.0
F13A Darby 79.75 328 ⇑P **P 19 42 15.2 -0.1**
baz=80,SNR=7.5
C15A Salmond Ranch, 80.38 331 ⇊P **P 19 42 18.9 +0.2**
baz=81,SNR=11
BMO Blue Mountains 80.58 326 *eP* **P 19 42 19.9 +0.1**
comp=N,1.7nm,0.8s,mb3.7
D13A Huson 80.75 329 ⇑P **P 19 42 20.7 +0.2**
baz=81
B15A Bradely Ranch, 80.76 331 ⇊P **P 19 42 20.0 -0.6**
baz=81
K05A Summer Lake 81.09 323 ⇑P **P 19 42 23.2 +0.7**
baz=81
I07A Izee 81.22 325 ⇊P **P 19 42 23.4 +0.2**
baz=81
F10A Beach Ranch, E 81.31 327 ⇊P **P 19 42 24.0 +0.4**
baz=82
G08A Pilot Rock 81.73 326 ⇊P **P 19 42 25.9 0.0**
baz=82
BOSA Boshof 81.76 117 P **P 19 42 26.7 +0.2**
comp=N,2.7nm,0.5s,mb4.2,baz=243,slow=5.4,SNR=13
A13A Flathead Natio 82.05 331 ⇑P **P 19 42 27.6 +0.2**
baz=82
TAM Tamanrasset 83.33 62 *eP* **P 19 42 35.2 +0.6**
comp=N,4.3nm,1.0s,mb4.1
MAW Mawson 83.60 163 P **P 19 42 35.6 +0.3**
comp=N,6.2nm,0.7s,mb4.5,baz=208,slow=6.1,SNR=17
ESDC Sonseca Array 84.74 44 P **P 19 42 41.5 +0.1**
comp=N,1.2nm,0.6s,mb3.8,baz=251,slow=4.8,SNR=10.0
ESDC Sonseca Array 84.74 44 P **P 19 42 41.5 +0.1**
YKA Yellowknife Ar 92.00 340 P **P 19 43 14.5 -0.8**
comp=N,2.0nm,0.5s,mb4.4,baz=130,slow=4.7,SNR=16
YKA pP pP 19 44 03.4 +6.0
comp=N,0.6nm,0.6s,baz=131,slow=6.4,SNR=2.4
YKA Yellowknife Ar 92.00 340 P **P 19 43 14.5 -0.8**
YKA pP pP 19 44 03.4 +6.0
ASAR Alice Springs 130.52 205 PKP PKPdf 19 49 16.2 -1.4
comp=N,1.4nm,0.5s,baz=147,slow=1.8,SNR=22
ASAR SKPbc SKPbc 19 52 21.4 -4.1
comp=N,0.8nm,0.8s,baz=146,slow=3.6,SNR=6.0
WRA Warramunga Arr 133.64 208 PKP PKPdf 19 49 22.4 -1.2
comp=N,1.4nm,0.5s,baz=151,slow=1.7,SNR=28
WRA SKPbc SKPbc 19 52 32.8 -3.9
comp=N,1.3nm,0.9s,baz=148,slow=3.0,SNR=5.4
ZALV Zalesovo Beam 141.37 27 PKhKP 19 49 31.3
comp=N,0.5nm,0.4s,baz=335,slow=5.5,SNR=2.7
ZALV PKP PKPdf 19 49 36.6 0.0
comp=N,0.8nm,0.5s,baz=232,slow=1.3,SNR=4.3
ZALV pPKP pPKPdf 19 50 27.8 +7.0
comp=N,0.4nm,0.6s,baz=355,slow=3.5,SNR=1.4
ZALV SKPbc SKPbc 19 52 54.3 -3.7
comp=N,1.4nm,0.7s,baz=298,slow=3.2,SNR=7.4
ZALV Zalesovo Beam 141.37 27 PKP 19 49 31.3
ZALV PKP PKPdf 19 49 36.6 0.0
ZALV pPKP pPKPdf 19 50 27.8 +7.0
ZALV SKPbc SKPbc 19 52 54.3 -3.7
MK31 Makanchi Array 144.74 37 *e*PKP PKPdf 19 49 41.8 -1.0
MKAR Makanchi Array 144.74 37 PKP PKPdf 19 49 42.3 -0.6
comp=N,3.1nm,0.4s,baz=345,slow=2.7,SNR=67
MKAR SKPbc SKPbc 19 53 03.9 -2.5
comp=N,0.9nm,0.8s,baz=316,slow=2.3,SNR=5.9
WMQ Urumqi 149.57 38 *e*PKPbc PKPdf 19 49 51.8 +0.8
SONM Songino Array 153.41 10 PKPbc PKPbc 19 50 03.7 -0.7
comp=N,0.3nm,0.3s,baz=310,slow=1.6,SNR=5.3
SONM PKPab PKPab 19 50 17.1 0.0
comp=N,0.6nm,0.5s,baz=330,slow=1.5,SNR=6.0
SONM pPKPbc pPKPbc 19 50 55.5 +7.2
comp=N,1.9nm,1.0s,baz=300,slow=1.7,SNR=3.9
CN2 Changchun 155.68 338 *e*PKP PKPdf 19 50 00.3 +0.4
HHC Hu-ho-hao-te 160.89 3 *e*PKP PKPdf 19 50 03.6 -2.7
HHC PP PP 19 54 34.6 +2.8
HHC SS SS 20 14 30.8 +0.1
HHC AMB AMB
comp=Z,43nm,9.2s
BJI Beijing 161.54 352 PKP PKPdf 19 50 05.8 -1.2
BJI SS SS 20 14 37.1 -0.5
BJI LR LR
comp=N,61nm,24.7s
BJI LR LR
comp=E,72nm,25.6s
BJI LR LR
comp=Z,15nm,21.8s
CD2 Chengdu 167.65 40 PKP PKPdf 19 50 12.6 0.0
NJ2 Nanjing 168.47 334 *e*PKP PKPdf 19 50 13.1 -0.1
KMI Kunming 169.97 68 PKP PKPdf 19 50 11.8 -2.5
GYA Guiyang 172.52 50 *e*PKP PKPdf 19 50 13.3 -2.2
GYA pPKP pPKPdf 19 50 59.8 -0.2
GYA sPKP 19 51 17.4
GYA PKPab PKPab 19 51 42.0 +0.5
GYA PKS 19 53 45.3
GYA PP PP 19 55 35.4 +2.5
GYA AMB AMB
comp=Z,70nm,8.4s

*IDC **13** 19:30:39.6±1.6, 1°.12N×97°.01E, h0km, mb3.7/7, mb1 3.7/9, mb1mx3.6/22, mbtmp3.6/9, ML3.3/2, Error ellipse: s-maj=42.5km s-min=20.3km az=57.0*
*ISCJB **13** 19:30:42.6±0.8, 1°.18N±0°.09×97°.1E±0°.1, h33km, mb3.7/8, Error ellipse: s-maj=15.9km s-min=11.5km az=147.9*
*NEIC **13** 19:30:44.9±0.6, 1°.19N×97°.10E, h35km, mb3.7/1, Error ellipse: s-maj=11.1km s-min=7.9km az=57.0*
ISC 13 19:30:45.0±0.8, 1°.19N±0°.09×97°.1E±0°.1, h35km, n17, σ0°61/17, mb3.7/8, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.40**	**48**	Pn	**Pn**	**19 31 21.6**	**-0.1**
	4.2nm,0.3s,baz=269,slow=6.1,SNR=14						
IPM	**Ipoh**	**5.07**	**50**	*eP*	**Pn**	**19 31 59.8**	**+1.1**
KULM	**Kulim**	**5.37**	**41**	*eP*	**Pn**	**19 32 02.6**	**-0.2**
	9.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**17.25**	**6**	P	**Pn**	**19 34 42.4**	**-0.9**
	0.1nm,0.3s,baz=189,slow=11,SNR=3.7						
KKM	**Kota Kinabalu**	**19.64**	**75**	*eP*	**Pn**	**19 35 11.3**	**-1.1**
WRA	**Warramunga Arr**	**42.09**	**122**	P	**P**	**19 38 33.9**	**0.0**
	0.4nm,0.5s,mb3.3,baz=302,slow=9.1,SNR=6.3						
WRAB	**Tennant Creek**	**42.09**	**122**	*eP*	**P**	**19 38 34.0**	**+0.1**
WB2	**Warramunga Arr**	**42.09**	**122**	*eP*	**P**	**19 38 33.8**	**-0.2**
ASAR	**Alice Springs**	**43.44**	**127**	P	**P**	**19 38 45.1**	**+0.3**
	0.3nm,0.5s,mb3.3,baz=294,slow=8.7,SNR=5.0						
KSRS	**Korea Array**	**45.89**	**35**	P	**P**	**19 39 04.4**	**+0.2**
	1.1nm,0.7s,mb3.9,baz=219,slow=9.5,SNR=9.3						
SONM	**Songino Array**	**47.15**	**9**	P	**P**	**19 39 14.6**	**+0.7**
	0.4nm,0.4s,mb3.7,baz=186,slow=9.9,SNR=5.7						
MK31	**Makanchi Array**	**47.23**	**346**	*eP*	**P**	**19 39 14.9**	**+0.4**
MKAR	**Makanchi Array**	**47.23**	**346**	P	**P**	**19 39 15.4**	**+0.8**
	0.7nm,0.5s,mb3.9,baz=159,slow=8.8,SNR=13						
ZALV	**Zalesovo Beam**	**53.55**	**351**	P	**P**	**19 40 02.5**	**+0.3**
	1.1nm,0.4s,mb4.1,baz=165,slow=6.2,SNR=8.3						
ZALV	**Zalesovo Beam**	**53.55**	**351**	P	**P**	**19 40 02.5**	**+0.3**
BVAR	**Borovoye Array**	**56.23**	**341**	P	**P**	**19 40 21.1**	**-0.5**
	0.4nm,0.5s,mb3.7,baz=126,slow=7.4,SNR=3.8						
ABKAR	**Akbulak array**	**57.49**	**332**	P	**P**	**19 40 29.7**	**-0.9**
	0.3nm,0.3s,mb3.8						

IDC 13 19:52:31.7±3.2, 24°.02N×142°.80E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/21, mbtmp3.5/3, Error ellipse: s-maj=145.6km s-min=32.9km az=80.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.46**	**191**	P	P	20 00 44.6	-0.1
	0.3nm,0.4s,baz=8.7,slow=7.9,SNR=8.0						
MKAR	**Makanchi Array**	**52.89**	**311**	P	P	20 01 49.9	+0.5
	0.1nm,0.5s,baz=90,slow=8.6,SNR=3.1						
FINES	**FINESS Array B**	**80.95**	**334**	P	P	20 04 47.5	-0.3
	1.6nm,1.0s,baz=69,slow=6.3,SNR=4.4						

*NEIC **13** 20:31:27.8±11.0, 4°.51S×147°.43E, h134km±42km, mb4.5/2, Error ellipse: s-maj=133.9km s-min=36.9km az=213.0*
*IDC **13** 20:31:44.2±4.3, 5°.70S×145°.84E, h109km±53km, mb4.0/3, mb1 4.2/5, mb1mx3.5/16, mbtmp4.1/5, Error ellipse: s-maj=50.4km s-min=30.4km az=123.0*
ISC 13 20:31:42.0±2.1, 5°.8S±0°.1×147°.1E±0°.1, h176km±13km, n16, σ0°93/19, mb4.3/3, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.59**	**179**	*eP*Pn	**Pn**	**20 32 38.4**	**+0.6**
PMG				*eS*	**Sn**	**20 33 20.3**	**-1.0**
COEN	**Coen**	**8.97**	**205**	*eP*	**Pn**	**20 33 52.0**	**+3.9**
CTA	**Charters Tower**	**14.23**	**183**	*eP*	**Pn**	**20 34 58.5**	**+2.8**
	5.2nm,0.6s						
CTA	**Charters Tower**	**14.23**	**183**	P	**Pn**	**20 35 00.7**	**+5.0**
	0.7nm,0.3s,baz=7.9,slow=13,SNR=12						
CTAO	**Charters Tower**	**14.23**	**183**	*eP*	**Pn**	**20 35 00.3**	**+4.6**
	6.1nm,0.6s						
KAKA	**Kakadu**	**15.98**	**244**	*eP*	**Pn**	**20 35 17.8**	**+0.4**
	19nm,0.6s						
KAKA	**Kakadu**	**15.98**	**244**	*eP*	**Pn**	**20 35 18.0**	**+0.6**
	51nm,0.6s						
WRA	**Warramunga Arr**	**18.73**	**220**	P	**P**	**20 35 47.9**	**+0.4**
	3.3nm,0.3s,baz=39,slow=11,SNR=126						
WRA				S	**S**	**20 39 11.3**	**-0.3**
	0.1nm,0.3s,baz=37,slow=22,SNR=6.0						
EIDS	**Eidsvold**	**19.84**	**169**	*eP*	**P**	**20 36 00.1**	**+0.7**
KNA	**Kununurra**	**20.50**	**240**	*eP*	**P**	**20 36 06.0**	**-0.6**
	8.2nm,1.0s						
QLP	**Quilpie**	**20.85**	**187**	*eP*	**P**	**20 36 10.7**	**+0.6**
ASAR	**Alice Springs**	**21.82**	**214**	P	**P**	**20 36 20.7**	**+0.2**
	8.4nm,0.5s,mb4.5,baz=49,slow=8.2,SNR=167						
ASAR				S	**S**	**20 40 10.7**	**+1.0**
	1.2nm,0.9s,baz=37,slow=20,SNR=4.6						
FITZ	**Fitzroy Crossi**	**24.23**	**238**	*eP*	**P**	**20 36 41.6**	**-1.2**
	17nm,0.6s,mb4.8						
FITZ	**Fitzroy Crossi**	**24.23**	**238**	P	**P**	**20 36 41.6**	**-1.2**
	9.8nm,0.5s,mb4.6,baz=68,slow=8.3,SNR=47						
ARMA	**Armidale**	**24.87**	**171**	*eP*	**P**	**20 36 46.7**	**-1.7**
STKA	**Stephens Creek**	**26.45**	**191**	P	**P**	**20 37 11.9**	**+9.2**
	1.9nm,0.7s,mb3.8,baz=23,slow=7.7,SNR=2.9						

*MOS **13** 20:59:46.4±1.7, 47°.96N×155°.43E, h53km, mb4.0/5, Error ellipse: s-maj=21.8km s-min=13.9km az=75.0*
*NEIC **13** 20:59:46.7±1.1, 48°.00N×155°.43E, Error ellipse: s-maj=27.5km s-min=11.2km az=139.0*
*ISCJB **13** 20:59:47.2±2.1, 47°.9N±0°.1×155°.4E±0°.2, h60km±14km, mb3.7/9, MS3.2/2, Error ellipse: s-maj=33.7km s-min=10.7km az=36.2*
*IDC **13** 20:59:47.3±2.0, 48°.09N×155°.44E, h36km±6km, mb3.5/9, mb1 3.6/10, mb1mx3.4/26, mbtmp3.5/10, ML3.4/1, MS3.2/2, Ms1 3.2/2, ms1mx2.6/25, Error ellipse: s-maj=47.7km s-min=23.8km az=157.0*
ISC 13 20:59:48.1±1.8, 47°.9N±0°.1×155°.6E±0°.2, h55km±11km, h37km±.9km: pP-P, n19, σ1°04/20, mb3.7/9, MS3.2/2, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.85**	**7**	*e*PN	**Pn**	**21 00 31.4**	**+0.3**
SKR				*eS*	**Sn**	**21 01 05.0**	**+0.8**
SKR				pmax	pmax		
	comp=Z,50nm,0.4s						
SKR				smax			
	comp=N,90nm,0.6s						
SKR				smax			
	comp=Z,40nm,0.4s						
SKR				MLR	MLR		
	comp=N,600nm,14.0s						
SKR				MLR	MLR		
	comp=E,1μm,14.0s						
SKR				MLR	MLR		
	comp=Z,500nm,14.0s						
PET	**Petropavlovsk**	**5.54**	**20**	*e*PN	**Pn**	**21 01 05.3**	**-2.5**
ASAJ	**Asahikawa**	**9.77**	**252**	Pn	**Pn**	**21 02 07.0**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=36,slow=23,SNR=4.6						
ERM	**Erimo**	**10.55**	**241**	*e*PN	**Pn**	**21 02 15.5**	**-1.0**
KSRS	**Korea Array**	**22.72**	**253**	P	**P**	**21 04 46.1**	**+1.0**
	comp=Z,0.7nm,0.4s,mb3.4,baz=49,slow=10,SNR=4.6						
KSRS	**Korea Array**	**22.72**	**253**	P	**P**	**21 04 46.2**	**+1.1**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.6						
SONM	**Songino Array**	**32.55**	**289**	P	**P**	**21 06 12.8**	**-0.9**
	comp=Z,0.3nm,0.8s,mb3.3,baz=89,slow=7.5,SNR=3.0						
MKAR	**Makanchi Array**	**47.91**	**298**	P	**P**	**21 08 19.6**	**-0.9**
	comp=Z,1.0nm,0.6s,mb4.0,baz=65,slow=8.0,SNR=14						
MKAR				pP	pP	21 08 29.8	-5.2
	comp=Z,0.9nm,0.6s,baz=60,slow=6.8,SNR=6.9						
MKAR				LR	LR	21 30 00.7	
	comp=Z,24nm,20.0s,MS3.2,baz=354,slow=38						
MKAR	**Makanchi Array**	**47.91**	**298**	P	**P**	**21 08 19.6**	**-0.9**
MKAR				*PP	pP	21 08 29.8	-5.2
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR				MLR	MLR		
	comp=Z,24nm,20.0s						
BVAR	**Borovoye Array**	**51.44**	**310**	P	**P**	**21 08 46.3**	**-0.9**
	comp=Z,0.7nm,0.5s,mb3.9,baz=56,slow=9.1,SNR=4.7						
BVAR	**Borovoye Array**	**51.44**	**310**	P	**P**	**21 08 46.3**	**-1.0**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	**FINESS Array B**	**63.74**	**336**	P	**P**	**21 10 13.1**	**-0.4**
	comp=Z,0.4nm,0.4s,mb3.8,baz=24,slow=6.1,SNR=8.7						
FINES				pP	pP	21 10 24.1	-4.4
	comp=Z,0.6nm,0.6s,baz=32,slow=11,SNR=2.0						
FINES	**FINESS Array B**	**63.74**	**336**	P	**P**	**21 10 13.1**	**-0.4**
FINES				*PP	pP	21 10 24.1	-4.5
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	**NORSAR Array B**	**67.70**	**342**	P	**P**	**21 10 38.9**	**-0.1**
	comp=Z,0.3nm,0.6s,mb3.5,baz=25,slow=9.0,SNR=3.5						
NOA				LR	LR	21 45 51.1	
	comp=Z,15nm,18.8s,MS3.2,baz=30,slow=41						
HFS	**Hagfors**	**67.99**	**341**	P	**P**	**21 10 41.0**	**+0.2**
	comp=Z,1.1nm,0.5s,mb4.1,baz=46,slow=4.2,SNR=8.9						
HFS	**Hagfors**	**67.99**	**341**	P	**P**	**21 10 41.0**	**+0.2**
HFS				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TXAR	**Lajitas Array**	**75.50**	**62**	P	**P**	**21 11 27.1**	**+0.6**
	comp=Z,0.2nm,0.5s,mb3.3,baz=298,slow=5.4,SNR=4.1						
BRTR	**Keskin Array B**	**78.70**	**318**	P	**P**	**21 11 46.0**	**+1.7**
	comp=Z,0.7nm,0.8s,mb3.6,baz=48,slow=4.5,SNR=3.1						
BRTR				pP	pP	21 11 56.5	-3.2
	comp=Z,1.1nm,0.9s,baz=26,slow=3.1,SNR=3.7						
BRTR	**Keskin Array B**	**78.70**	**318**	P	**P**	**21 11 46.0**	**+1.7**
BRTR				*PP	pP	21 11 56.6	-3.2
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						

*IDC **13** 21:07:05.1±1.0, 21°.55N×121°.67E, h0km, mb3.3/6, mb1 3.4/7, mb1mx3.3/22, mbtmp3.3/7, ML3.5/1, Error ellipse: s-maj=41.6km s-min=18.7km az=72.0*
*ISCJB **13** 21:07:06.7±0.8, 21°.42N±0°.08×122°.1E±0°.1, h10km, mb3.2/5, Error ellipse: s-maj=21.2km s-min=7.6km az=155.6*
*NEIC **13** 21:07:08.3±0.9, 21°.39N×121°.99E, h10km, Error ellipse: s-maj=27.1km s-min=10.8km az=68.0*
ISC 13 21:07:07.9±0.8, 21°.38N±0°.07×121°.9E±0°.1, h10km, n12, σ1°43/18, mb3.2/5, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**1.65**	**331**	*e*Pn	**Pn**	**21 07 37.3**	**+0.4**
YULB	**Yu-li**	**2.09**	**344**	*e*Pn	**Pn**	**21 07 44.0**	**+1.0**
YULB				Pg	**Pg**	**21 07 49.4**	**+1.4**
YULB				*e*S	**Sg**	**21 08 16.7**	**+1.5**
TPUB	**Ta-pu**	**2.27**	**328**	*e*Pn	**Pn**	**21 07 44.3**	**-1.1**
TPUB				*e*Pg	**Pg**	**21 07 50.5**	**-0.9**
TPUB				*e*S	**Sn**	**21 08 18.4**	**+5.0**
SSLB	**Suanglung**	**2.57**	**339**	*e*Pn	**Pn**	**21 07 51.3**	**+1.8**
SSLB				*e*S	**Sg**	**21 08 28.3**	**-2.1**
YHNB	**Yeheng**	**3.32**	**351**	*e*Pn	**Pn**	**21 08 01.3**	**+1.4**
YHNB				S	**Sn**	**21 08 45.7**	**+6.4**
KSRS	**Korea Array**	**16.84**	**17**	Pn	**Pn**	**21 11 02.0**	**-1.7**
	0.2nm,0.3s,baz=202,slow=9.5,SNR=2.7						
MJAR	**Matsushiro Arr**	**20.71**	**40**	P	**P**	**21 11 47.6**	**-0.8**
	0.3nm,0.3s,baz=198,slow=7.6,SNR=4.9						
SONM	**Songino Array**	**29.22**	**338**	P	**P**	**21 13 06.5**	**-3.2**
	0.3nm,0.6s,mb3.2,baz=131,slow=9.8,SNR=2.4						
MKAR	**Makanchi Array**	**40.86**	**318**	P	**P**	**21 14 47.2**	**-2.6**
	0.2nm,0.6s,mb2.9,baz=110,slow=11,SNR=2.9						
WRA	**Warramunga Arr**	**42.82**	**163**	P	**P**	**21 15 06.3**	**+0.2**
	0.6nm,1.0s,mb3.3,baz=344,slow=9.4,SNR=2.9						
ZALV	**Zalesovo Beam**	**42.98**	**328**	P	**P**	**21 15 02.3**	**-4.8**
	0.4nm,0.5s,mb3.4,baz=134,slow=8.3,SNR=2.4						
ASAR	**Alice Springs**	**46.26**	**165**	P	**P**	**21 15 34.6**	**+1.0**
	0.2nm,0.7s,mb3.2,baz=358,slow=6.9,SNR=3.8						

IDC 13 21:51:06.2±1.9, 2°.66N×126°.53E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/20, mbtmp3.4/4, Error ellipse: s-maj=116.8km s-min=24.2km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.65**	**182**	P	P	21 55 48.3	+0.6
	1.2nm,0.6s,baz=29,slow=8.2,SNR=3.3						
WRA	**Warramunga Arr**	**23.74**	**161**	P	P	21 56 19.8	-0.6
	0.7nm,0.4s,baz=340,slow=11,SNR=10						
ASAR	**Alice Springs**	**27.14**	**165**	P	P	21 56 52.1	+0.8
	0.4nm,0.8s,baz=344,slow=7.7,SNR=3.6						
MKAR	**Makanchi Array**	**58.31**	**326**	P	P	22 01 02.7	-0.3
	0.2nm,0.5s,baz=118,slow=8.0,SNR=6.2						

*CSEM **13** 21:56:00.3, 40°.10N×29°.72W, h5km, ML2.7, After PDA*
PDA 13 21:56:00.3±0.9, 40°.10N×29°.72W, h5km, MD3.7, ML2.7, Error ellipse: s-maj=22.2km s-min=6.7km az=68.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCED	**Cedros**	**1.67**	**151**	*e*P	Pn	21 56 25.2	-4.9
PCED				*e*S	Sn	21 56 43.8	-8.0
PCED				A		21 56 46.4	
	17nm,0.4s						
PCED	**Cedros**	**1.67**	**151**	*e*P	Pn	21 56 25.2	-4.9
PCED				*e*S	Sn	21 56 43.8	-8.0
CALA	**Caldeira**	**1.71**	**152**	*e*P	Pn	21 56 25.9	-4.8
CALA				*e*S	Sn	21 56 45.3	-7.5
CALA	**Caldeira**	**1.71**	**152**	*e*P	Pn	21 56 25.9	-4.8
CALA				*e*S	Sn	21 56 45.3	-7.5
ROSA	**Rosais**	**1.79**	**140**	*e*P	Pn	21 56 27.4	-4.4
ROSA	**Rosais**	**1.79**	**140**	*e*P	Pn	21 56 27.4	-4.4
PCAN	**Candelaria**	**1.89**	**149**	*e*P	Pn	21 56 28.6	-4.6
PCAN				*e*S	Sn	21 56 50.0	-7.4
PCAN				A		21 56 52.2	
	29nm,0.1s						
PCAN	**Candelaria**	**1.89**	**149**	*e*P	Pn	21 56 28.6	-4.6
PCAN				*e*S	Sn	21 56 50.0	-7.4
PMAN	**Manadas**	**1.93**	**139**	*e*P	Pn	21 56 28.7	-5.1
PMAN				*e*S	Sn	21 56 50.5	-7.9
PMAN				A		21 56 52.5	
	13nm,0.1s						
PMAN	**Manadas**	**1.93**	**139**	*e*P	Pn	21 56 28.7	-5.1
PMAN				*e*S	Sn	21 56 50.5	-7.9

*NEIC **13** 22:14:30.3, 19°.49N×65°.32W, h93km, MD3.6(RSPR), After RSPR.*
RSPR 13 22:14:30.3, 19°.49N×65°.32W, h93km±12km, MD3.6/6, MD3.6/6, 10C-6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STVI	**Saint Thomas**	**1.19**	**163⇑**	*e*P	Pn	22 14 51.6	-0.8
STVI				*e*S	Sn	22 15 09.0	+0.1
STVI	**Saint Thomas**	**1.19**	**163⇑**	*e*P	Pn	22 14 51.6	-0.8
STVI				*e*S	Sn	22 15 09.0	+0.1
TBVI	**Tortola**	**1.26**	**148⇓**	*e*P	Pn	22 14 52.8	-0.5
TBVI				*e*S	Sn	22 15 09.8	-0.8
TBVI	**Tortola**	**1.26**	**148⇓**	*e*P	Pn	22 14 52.8	-0.5
TBVI				*e*S	Sn	22 15 09.8	-0.8
CBYP	**Canovanas**	**1.31**	**203**	*e*Pn	Pn	22 14 53.0	-0.9
CBYP				*e*Sn	Sn	22 15 09.9	-1.8
MTP	**Monte Pirata**	**1.40**	**189⇑**	*e*P	Pn	22 14 54.2	-0.8
MTP				*e*S	Sn	22 15 13.4	-0.2
MTP	**Monte Pirata**	**1.40**	**189⇑**	*e*P	Pn	22 14 54.2	-0.8
MTP				*e*S	Sn	22 15 13.4	-0.2
HUMP	**Col San Antoni**	**1.43**	**200⇑**	*e*P	Pn	22 14 54.5	-0.8
HUMP				*e*S	Sn	22 15 13.9	-0.4
HUMP	**Col San Antoni**	**1.43**	**200⇑**	*e*P	Pn	22 14 54.5	-0.8
HUMP				*e*S	Sn	22 15 13.9	-0.4
SJG	**San Juan**	**1.58**	**210⇓**	*e*P	Pn	22 14 57.1	-0.1
SJG				*e*S	Sn	22 15 17.0	-0.5
SJG	**San Juan**	**1.58**	**210⇑**	*e*P	Pn	22 14 56.8	-0.3
SJG				*e*S	Sn	22 15 17.4	-0.2
SJG	**San Juan**	**1.58**	**210⇑**	*e*P	Pn	22 14 56.8	-0.3
SJG	**San Juan**	**1.58**	**210⇓**	*e*P	Pn	22 14 57.1	-0.1
SJG				*e*S	Sn	22 15 17.2	-0.4
SJG				*e*S	Sn	22 15 17.4	-0.2
AOPR	**Arecibo Observ**	**1.77**	**230⇑**	*e*P	Pn	22 14 59.0	-0.6
AOPR	**Arecibo Observ**	**1.77**	**230⇑**	*e*P	Pn	22 14 59.0	-0.6
CELP	**Cerrillos**	**1.84**	**220⇓**	*e*P	Pn	22 15 00.5	0.0
CELP	**Cerrillos**	**1.84**	**220⇓**	*e*P	Pn	22 15 00.5	0.0

IDC 13 22:14:47.3±81.0, 17°.98S×167°.37E, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.7/13, mbtmp4.0/3, MS3.5/5, Ms1 3.6/5, ms1mx3.1/22, Error ellipse: s-maj=1360.0km s-min=119.2km az=71.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**27.07**	**234**	P	P	22 20 31.5	-0.2
	5.8nm,1.1s,baz=90,slow=10,SNR=3.3						
WRA	**Warramunga Arr**	**31.27**	**261**	P	P	22 21 08.8	-0.4
	1.0nm,0.7s,baz=90,slow=9.0,SNR=8.2						
ASAR	**Alice Springs

NNC 13 22:30:17.6±8.6, 38.°44N×48.°98E, h10km±63km, mb4.4,
Error ellipse: s-maj=74.7km s-min=35.3km az=94.0
ISC 13 22:30:08.4±0.5, 37.°80N±0.°02×48.°17E±0.°02, h7km±3km, n318, σ1°11/369, mb4.3/41, MS2.8/5, 8C-14D,
Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISRB	**Sarab**	**0.40**	**274**	Pg	**Pg**	**22 30 15.7**	**-0.5**
ISRB				Sg	**Sg**	**22 30 21.6**	**+0.2**
ISRB	**Sarab**	**0.40**	**274**	⇓*e*Pg	**Pg**	**22 30 15.8**	**-0.4**
ISRB				*e*Sg	**Sg**	**22 30 22.1**	**+0.7**
ISRB				*e*		22 30 22.9	
	comp=Z,5μm,0.1s						
ISRB	**Sarab**	**0.40**	**274**	⇓*e*Pg	**Pg**	**22 30 15.8**	**-0.4**
ISRB				Sg	**Sg**	**22 30 21.6**	**+0.2**
IHRS	**Heris**	**1.03**	**301**	Pg	**Pg**	**22 30 27.3**	**-0.9**
IHRS				Sg	**Sg**	**22 30 39.8**	**-1.8**
IHRS	**Heris**	**1.03**	**301**	*e*Pg	**Pg**	**22 30 27.1**	**-1.1**
IHRS				*e*Sg	**Sg**	**22 30 42.5**	**+0.9**
IHRS				*e*		22 30 46.1	
	comp=Z,49μm,0.1s						
GRMI	**Germi**	**1.03**	**348**	*e*Pg	**Pg**	**22 30 28.0**	**-0.3**
GRMI				*e*Sg	**Sg**	**22 30 44.0**	**+2.3**
GRMI	**Germi**	**1.03**	**348**	*e*Pg	**Pg**	**22 30 28.6**	**+0.4**
GRMI				*e*Sg	**Sg**	**22 30 44.1**	**+2.5**
GRMI				AML	AML	22 30 49.2	
	comp=E,6μm,0.2s						
GRMI				AML	AML	22 30 49.4	
	comp=N,8μm,0.2s						
GRMI	**Germi**	**1.03**	**348**	*e*Pg	**Pg**	**22 30 28.0**	**-0.3**
GRMI				*e*Sg	**Sg**	**22 30 44.2**	**+2.5**
IFTB	**Fath-abad**	**1.42**	**279**	*e*Pn	**Pn**	**22 30 34.7**	**+0.1**
IFTB				*e*Sg	**Sg**	**22 30 54.8**	**+0.7**
GLBA	**Clilabad**	**1.45**	**7**	P	**Pn**	**22 30 36.5**	**+1.4**
	SNR=379						
ITBZ	**Tabriz**	**1.65**	**286**	Pn	**Pn**	**22 30 38.7**	**+0.9**
ITBZ				Sn	**Sn**	**22 31 00.6**	**+1.3**
ITBZ	**Tabriz**	**1.65**	**286**	*e*Pn	**Pn**	**22 30 38.7**	**+0.9**
ITBZ				*e*		22 30 44.3	
	comp=Z,12μm,0.1s						
ITBZ				*e*Sg	**Sg**	**22 31 02.3**	**+0.7**
IAZR	**Azarshahr**	**1.74**	**267**	Pn	**Pn**	**22 30 39.2**	**+0.2**
IAZR				Sg	**Sg**	**22 31 03.3**	**-1.0**
IAZR	**Azarshahr**	**1.74**	**267**	*e*Pn	**Pn**	**22 30 39.3**	**+0.3**
IAZR				*e*		22 30 42.7	
	comp=Z,48μm,0.2s						
IAZR				*e*Sg	**Sg**	**22 31 03.9**	**-0.4**
IAZR	**Azarshahr**	**1.74**	**267**	*e*Pn	**Pn**	**22 30 39.3**	**+0.3**
IAZR				*e*Sg	**Sg**	**22 31 03.9**	**-0.4**
ISHB	**Shabestar**	**2.07**	**284**	Pn	**Pn**	**22 30 45.1**	**+1.5**
ISHB				Sn	**Sn**	**22 31 10.5**	**+0.9**
ISHB	**Shabestar**	**2.07**	**284**	*e*Pn	**Pn**	**22 30 44.4**	**+0.8**
ISHB				*e*		22 30 47.8	
	comp=Z,17μm,0.2s						
ISHB				*e*Sg	**Sg**	**22 31 15.1**	**+0.1**
ALIB	**Äli-Bayra**	**2.25**	**17**	P	**Pn**	**22 30 49.3**	**+3.2**
	SNR=9.1						
NAX	**Nakhchivan**	**2.51**	**304**	P	**Pn**	**22 30 52.9**	**+3.3**
	SNR=53						
BRDA	**Brd**	**2.58**	**343**	P	**Pn**	**22 30 53.5**	**+3.0**
	SNR=31						
IRAZ	**Razeghan**	**2.78**	**149**	Pn	**Pn**	**22 30 52.5**	**-0.8**
IRAZ				Sn	**Sn**	**22 31 27.2**	**+0.2**
IRAZ	**Razeghan**	**2.78**	**149**	⇓*e*Pn	**Pn**	**22 30 52.6**	**-0.7**
IRAZ				*e*		22 31 45.4	
	comp=Z,9μm,0.4s						
IRAZ	**Razeghan**	**2.78**	**149**	⇓*e*Pn	**Pn**	**22 30 52.6**	**-0.7**
IRAZ				Sn	**Sn**	**22 31 27.2**	**+0.2**
SNGE	**Sanandaj**	**2.78**	**194**	*e*Pn	**Pn**	**22 30 53.0**	**-0.3**
SNGE	**Sanandaj**	**2.78**	**194**	*e*Pn	**Pn**	**22 30 53.4**	**+0.1**
SNGE				AML	AML	22 31 34.7	
	comp=E,471nm,0.8s						
SNGE				AML	AML	22 31 35.0	
	comp=N,388nm,0.6s						
SNGE	**Sanandaj**	**2.78**	**194**	*e*Pn	**Pn**	**22 30 53.8**	**+0.5**
THKV	**Tehran--Karaj**	**2.87**	**130**	*e*Pn	**Pn**	**22 30 54.0**	**-0.6**
THKV	**Tehran--Karaj**	**2.87**	**130**	*e*Pn	**Pn**	**22 30 54.8**	**+0.2**
THKV				AML	AML	22 31 39.8	
	comp=E,700nm,0.9s						
THKV				AML	AML	22 31 44.0	
	comp=N,582nm,0.5s						
THKV	**Tehran--Karaj**	**2.87**	**130**	*e*Pn	**Pn**	**22 30 54.8**	**+0.2**
IMHD	**Mahdasht**	**2.91**	**136**	Pn	**Pn**	**22 30 54.7**	**-0.4**
IMHD				Sn	**Sn**	**22 31 31.5**	**+1.2**
IMHD	**Mahdasht**	**2.91**	**136**	*e*Pn	**Pn**	**22 30 54.8**	**-0.3**
IMHD				*e*		22 31 37.5	
	comp=Z,5μm,0.2s						
IMHD	**Mahdasht**	**2.91**	**136**	*e*Pn	**Pn**	**22 30 54.8**	**-0.3**
IMHD				Sn	**Sn**	**22 31 31.5**	**+1.2**
IML	**Ismayilli**	**2.99**	**0**	P	**Pn**	**22 30 58.0**	**+1.8**
	SNR=21						
CHTH	**Charan**	**3.03**	**128**	*e*Pn	**Pn**	**22 30 57.0**	**+0.2**
CHTH	**Charan**	**3.03**	**128**	*e*Pn	**Pn**	**22 30 57.1**	**+0.4**
CHTH	**Charan**	**3.03**	**128**	*e*Pn	**Pn**	**22 30 57.0**	**+0.2**
ILIN	**Lien**	**3.03**	**199**	*e*Pn	**Pn**	**22 30 58.2**	**+1.4**
ILIN	**Lien**	**3.03**	**199**	*e*Pn	**Pn**	**22 30 58.2**	**+1.4**
MAKU	**Maku**	**3.14**	**301**	*e*Pn	**Pn**	**22 31 00.0**	**+1.7**
MAKU	**Maku**	**3.14**	**301**	*e*Pn	**Pn**	**22 31 00.8**	**+2.5**
MAKU	**Maku**	**3.14**	**301**	*e*Pn	**Pn**	**22 31 00.0**	**+1.7**
GANJ	**Ganja**	**3.19**	**334**	P	**Pn**	**22 31 01.3**	**+2.4**
	SNR=7.7						
IR3	**Iran Long-Peri**	**3.26**	**134**	*e*Pn	**Pn**	**22 31 00.3**	**+0.3**
IR3	**Iran Long-Peri**	**3.26**	**134**	*e*Pn	**Pn**	**22 31 00.3**	**+0.3**
SIZA	**Siyzn**	**3.32**	**10**	P	**Pn**	**22 31 03.3**	**+2.5**
	SNR=9.2						
IVIS	**Veis**	**3.44**	**198**	Pn	**Pn**	**22 31 02.6**	**+0.3**
IVIS				Sn	**Sn**	**22 31 43.0**	**-0.2**
IVIS	**Veis**	**3.44**	**198**	*e*Pn	**Pn**	**22 31 02.9**	**+0.6**
IVIS				*e*		22 31 59.7	
	comp=Z,3μm,0.4s						
IVIS	**Veis**	**3.44**	**198**	*e*Pn	**Pn**	**22 31 02.9**	**+0.6**
IVIS				Sn	**Sn**	**22 31 43.0**	**-0.2**
SEKA	**Sheki**	**3.49**	**348**	P	**Pn**	**22 31 04.7**	**+1.7**
	SNR=34						
GNI	**Garni**	**3.56**	**312**	Pn	**Pn**	**22 31 07.8**	**+3.8**
	comp=Z,1.1nm,0.3s,baz=89,slow=2.6,SNR=9.6						
GNI				Pg	**Pg**	**22 31 14.4**	**-2.1**
	comp=Z,7.4nm,0.3s,baz=122,slow=3.0,SNR=47						
GNI				Lg		22 32 04.3	
	comp=Z,14nm,0.3s,baz=17,slow=19,SNR=3.5						
GNI	**Garni**	**3.56**	**312**	*de*P	**Pn**	**22 31 08.8**	**+4.8**
GNI				pmax	pmax		
	comp=Z,285nm,1.7s						
GNI	**Garni**	**3.56**	**312**	*e*Pn	**Pn**	**22 31 07.5**	**+3.5**
GNI				*e*Pg	**Pg**	**22 31 15.7**	**-0.9**
GNI				*e*Sg	**Sg**	**22 32 02.0**	**-0.6**
GNI	**Garni**	**3.56**	**312**	*e*P	**Pn**	**22 31 08.8**	**+4.8**
	comp=Z,285nm,1.7s						
GNI	**Garni**	**3.56**	**312**	*e*Pg	**Pg**	**22 31 15.7**	**-0.8**
ASAO	**Ashtian**	**3.58**	**155**	*e*Pn	**Pn**	**22 31 04.0**	**-0.2**
ASAO				*e*Sg	**Sg**	**22 31 56.0**	**-7.2**
ASAO	**Ashtian**	**3.58**	**155**	*e*Pn	**Pn**	**22 31 04.0**	**-0.2**
ASAO				*e*Sg	**Sg**	**22 31 57.0**	**-6.3**
ASAO	**Ashtian**	**3.58**	**155**	*e*Pn	**Pn**	**22 31 04.3**	**+0.1**
ASAO				*e*Sg	**Sg**	**22 31 57.0**	**-6.2**
IKOM	**Komasi**	**3.66**	**189**	Pn	**Pn**	**22 31 06.1**	**+0.8**
IKOM				Sg	**Sg**	**22 32 03.5**	**-2.3**
IKOM	**Komasi**	**3.66**	**189**	*e*Pn	**Pn**	**22 31 06.1**	**+0.8**
IKOM				*e*Sg	**Sg**	**22 32 05.5**	**-0.3**
IKOM				*e*		22 32 12.9	
	comp=Z,5μm,0.5s						
IKOM	**Komasi**	**3.66**	**189**	Pn	**Pn**	**22 31 06.1**	**+0.8**
IKOM				*e*Sg	**Sg**	**22 32 05.5**	**-0.3**
IGHG	**Ghaleghazi**	**3.70**	**201**	Pn	**Pn**	**22 31 06.5**	**+0.6**
IGHG	**Ghaleghazi**	**3.70**	**201**	*e*	**Pg**	**22 31 18.8**	**-0.5**
	comp=Z,5μm,0.3s						
IGHG				*e*Pn	**Pn**	**22 31 06.5**	**+0.6**
DAMV	**Damavand**	**3.74**	**124**	*e*Pn	**Pn**	**22 31 06.0**	**-0.6**
DAMV	**Damavand**	**3.74**	**124**	*e*Pn	**Pn**	**22 31 06.9**	**+0.4**
DAMV	**Damavand**	**3.74**	**124**	*e*Pn	**Pn**	**22 31 06.9**	**+0.3**
IDMV	**Damavand**	**3.82**	**124**	Pn	**Pn**	**22 31 08.0**	**+0.5**
IDMV	**Damavand**	**3.82**	**124**	*e*	**Pg**	**22 31 27.5**	**+5.9**
	comp=Z,2μm,0.3s						
IDMV				*e*Pn	**Pn**	**22 31 06.9**	**-0.7**
IDMV	**Damavand**	**3.82**	**124**	Pn	**Pn**	**22 31 08.0**	**+0.5**
IVRN	**Varamin**	**4.01**	**133**	*e*Pn	**Pn**	**22 31 10.8**	**+0.6**
IVRN	**Varamin**	**4.01**	**133**	*e*Pn	**Pn**	**22 31 10.8**	**+0.6**
IALA	**Alasht**	**4.09**	**113**	Pn	**Pn**	**22 31 02.5**	**-8.9**
IALA	**Alasht**	**4.09**	**113**	*e*	**Pn**	**22 31 18.0**	**+6.6**
	comp=Z,3μm,0.2s						
IALA				*e*Pn	**Pn**	**22 31 02.6**	**-8.8**
GHVR	**GHOM**	**4.17**	**142**	*e*Pn	**Pn**	**22 31 12.0**	**-0.4**
GHVR	**GHOM**	**4.17**	**142**	*e*Pn	**Pn**	**22 31 12.2**	**-0.2**
GHVR	**GHOM**	**4.17**	**142**	*e*Pn	**Pn**	**22 31 12.2**	**-0.2**
DGRG	**David-gareji**	**4.24**	**330**	P	**Pn**	**22 31 17.5**	**+4.2**
DGRG				S	**Sg**	**22 32 27.9**	**+3.4**
IFIR	**Firoozkooh**	**4.27**	**119**	Pn	**Pn**	**22 31 14.8**	**+1.1**
IFIR				Sn	**Sn**	**22 32 03.0**	**-0.8**
IFIR	**Firoozkooh**	**4.27**	**119**	*e*Pn	**Pn**	**22 31 14.4**	**+0.7**
IFIR				*e*		22 32 16.0	
	comp=Z,800nm,0.2s						
IFIR	**Firoozkooh**	**4.27**	**119**	*e*Pn	**Pn**	**22 31 14.4**	**+0.7**
IFIR				Sn	**Sn**	**22 32 03.0**	**-0.8**
ILAS	**Lasjerd**	**4.55**	**121**	Pn	**Pn**	**22 31 18.2**	**+0.6**
ILAS	**Lasjerd**	**4.55**	**121**	*e*Pn	**Pn**	**22 31 17.9**	**+0.3**
ILAS				*e*		22 31 33.0	
	comp=Z,1μm,0.4s						
ILAS	**Lasjerd**	**4.55**	**121**	*e*Pn	**Pn**	**22 31 17.9**	**+0.3**
ISHM	**Shahmirzad**	**4.57**	**114**	Pn	**Pn**	**22 31 18.2**	**+0.3**
ISHM				Sn	**Sn**	**22 32 10.3**	**-0.9**
ISHM	**Shahmirzad**	**4.57**	**114**	*e*Pn	**Pn**	**22 31 18.3**	**+0.4**
ISHM				*e*		22 31 25.9	
	comp=Z,2μm,0.2s						
ISHM	**Shahmirzad**	**4.57**	**114**	Pn	**Pn**	**22 31 18.2**	**+0.3**
ISHM				Sn	**Sn**	**22 32 10.3**	**-0.9**
MTA	**Mtatsminda**	**4.68**	**327**	P	**Pn**	**22 31 24.9**	**+5.4**
MTA				S	**Sb**	**22 32 24.9**	**-2.4**
IGLO	**Ghaloghah**	**4.71**	**104**	Pn	**Pn**	**22 31 11.4**	**-8.4**
IGLO	**Ghaloghah**	**4.71**	**104**	*e*Pn	**Pn**	**22 31 11.4**	**-8.4**
IGLO				*e*		22 32 16.7	
	comp=Z,3μm,0.2s						
TBLG	**Delisi**	**4.73**	**327**	P	**Pn**	**22 31 25.9**	**+5.8**
TBLG	**Delisi**	**4.73**	**327**	P	**Pn**	**22 31 25.9**	**+5.7**
TBLG				S	**Sg**	**22 32 34.4**	**-6.0**
ISFB	**Sefidab**	**4.76**	**135**	Pn	**Pn**	**22 31 20.4**	**-0.2**
ISFB	**Sefidab**	**4.76**	**135**	*e*Pn	**Pn**	**22 31 20.4**	**-0.2**
ISFB				*e*		22 31 36.5	
	comp=Z,2μm,0.3s						
ISFB	**Sefidab**	**4.76**	**135**	Pn	**Pn**	**22 31 20.4**	**-0.2**
IANJ	**Anjilo**	**5.17**	**115**	Pn	**Pn**	**22 31 27.8**	**+1.6**
IANJ	**Anjilo**	**5.17**	**115**	*e*Pn	**Pn**	**22 31 25.9**	**-0.3**
IANJ				*e*		22 31 45.2	
	comp=Z,580nm,0.3s						
IANJ	**Anjilo**	**5.17**	**115**	*e*Pn	**Pn**	**22 31 25.9**	**-0.3**
MAK	**Makhachkala**	**5.18**	**355**	*e*P	**Pn**	**22 31 24.6**	**-1.7**
MAK				*e*S	**Sn**	**22 32 27.0**	**+0.7**
MAK				pmax	pmax		
	comp=Z,94nm,0.8s						
MAK				MLR	MLR		
	comp=Z,322nm,15.0s						
MAK	**Makhachkala**	**5.18**	**355**	*e*P	**Pn**	**22 31 24.6**	**-1.7**
	comp=Z,322nm,15.0s						
MAK				*e*S	**Sn**	**22 32 27.0**	**+0.7**
GOR	**Gori**	**5.22**	**325**	P	**Pg**	**22 31 45.2**	**-3.2**
IKLH	**Kolahrood**	**5.26**	**147**	Pn	**Pn**	**22 31 28.5**	**+1.1**
IKLH	**Kolahrood**	**5.26**	**147**	*e*Pn	**Pn**	**22 31 28.5**	**+1.1**
IKLH				*e*		22 31 31.6	
	comp=Z,874nm,0.2s						
IKLH	**Kolahrood**	**5.26**	**147**	Pn	**Pn**	**22 31 28.5**	**+1.1**
IPIR	**Pirpir**	**5.57**	**156**	Pn	**Pn**	**22 31 33.1**	**+1.5**
IPIR	**Pirpir**	**5.57**	**156**	*e*Pn	**Pn**	**22 31 32.0**	**+0.4**
IPIR				*e*		22 32 04.1	
	comp=Z,484nm,0.4s						
IPIR	**Pirpir**	**5.57**	**156**	*e*Pn	**Pn**	**22 31 32.0**	**+0.4**
ZEI	**Tsey**	**5.94**	**328**	*e*P	**Pn**	**22 31 40.7**	**+4.0**
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.5s						
IZEF	**Zefreh**	**5.96**	**144**	Pn	**Pn**	**22 31 38.2**	**+1.2**
IZEF	**Zefreh**	**5.96**	**144**	*e*Pn	**Pn**	**22 31 37.6**	**+0.6**
IZEF				*e*		22 31 41.8	
	comp=Z,281nm,0.2s						
IZEF	**Zefreh**	**5.96**	**144**	*e*Pn	**Pn**	**22 31 37.6**	**+0.6**
ONI	**Oni**	**5.99**	**324**	P	**Pb**	**22 31 50.4**	**-2.7**
IGAR	**Gharneh**	**6.25**	**148**	*e*Pn	**Pn**	**22 31 41.2**	**+0.2**
IGAR				*e*		22 31 46.6	
	comp=Z,300nm,0.2s						
NASN	**Na'in**	**6.27**	**141**	*e*Pn	**Pn**	**22 31 41.0**	**-0.2**
NASN	**Na'in**	**6.27**	**141**	*e*Pn	**Pn**	**22 31 41.8**	**+0.5**
NASN	**Na'in**	**6.27**	**141**	*e*Pn	**Pn**	**22 31 41.8**	**+0.6**
KIV	**Kislovodsk**	**7.42**	**328**	*e*P	**Pn**	**22 32 02.4**	**+5.4**
KIV				*e*S	**Sn**	**22 33 27.2**	**+5.8**
KIV				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ISHV	**Shirvan**	**7.57**	**89**	Pn	**Pn**	**22 31 57.1**	**-2.0**
ISHV	**Shirvan**	**7.57**	**89**	*e*Pn	**Pn**	**22 31 57.3**	**-1.8**
ISHV				*e*		22 33 29.5	
	comp=Z,1μm,0.2s						
ISHV	**Shirvan**	**7.57**	**89**	*e*Pn	**Pn**	**22 31 57.3**	**-1.8**
IMEH	**Mehriz**	**8.31**	**138**	Pn	**Pn**	**22 32 09.8**	**+0.5**
IMEH	**Mehriz**	**8.31**	**138**	*e*	**Pn**	**22 32 14.9**	**+5.6**
	comp=Z,128nm,0.3s						
IMEH				*e*Pn	**Pn**	**22 32 09.1**	**-0.2**
IKRD	**Kardeh**	**8.31**	**94**	Pn	**Pn**	**22 32 19.3**	**+10**
IKRD	**Kardeh**	**8.31**	**94**	*e*Pn	**Pn**	**22 32 19.3**	**+10**
IKRD				*e*		22 32 22.9	
	comp=Z,320nm,0.2s						
IAKL	**Akhelmad**	**8.53**	**95**	Pn	**Pn**	**22 32 11.4**	**-1.0**
IAKL	**Akhelmad**	**8.53**	**95**	*e*Pn	**Pn**	**22 32 11.6**	**-0.8**
IAKL				*e*		22 32 14.5	
	comp=Z,358nm,0.2s						
IPAY	**Payeh**	**8.75**	**96**	*e*Pn	**Pn**	**22 32 14.7**	**-0.7**
IPAY				*e*		22 32 20.3	
	comp=Z,428nm,0.2s						
IPAY	**Payeh**	**8.75**	**96**	*e*Pn	**Pn**	**22 32 14.7**	**-0.7**
IMOG	**Moghan**	**9.10**	**97**	Pn	**Pn**	**22 32 20.2**	**+0.1**
IMOG	**Moghan**	**9.10**	**97**	*e*Pn	**Pn**	**22 32 19.9**	**-0.2**
IMOG				*e*		22 32 23.7	
	comp=Z,298nm,0.1s						
IMOG	**Moghan**	**9.10**	**97**	Pn	**Pn**	**22 32 20.2**	**+0.1**
IMYA	**Miami**	**9.65**	**95**	Pn	**Pn**	**22 32 27.7**	**+0.1**
IMYA	**Miami**	**9.65**	**95**	*e*Pn	**Pn**	**22 32 27.1**	**-0.5**
IMYA				*e*		22 32 33.8	
	comp=Z,188nm,0.1s						
IMYA	**Miami**	**9.65**	**95**	Pn	**Pn**	**22 32 27.7**	**+0.1**
ASF	**Jabal al Asfar**	**10.81**	**242**	LR	LR	22 37 28.2	
	comp=Z,69nm,21.3s,baz=353,slow=41						
MMAI	**Mount Meron Ar**	**11.45**	**249**	LR	LR	22 37 58.2	
	comp=Z,38nm,20.8s,baz=70,slow=41						
BRTR	**Keskin Array B**	**11.51**	**284**	Pn	**Pn**	**22 32 54.6**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=102,slow=13,SNR=2.2						
BRTR	**Keskin Array B**	**11.51**	**284**	*i* P	**Pn**	**22 32 59.2**	**+6.1**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BRTR	**Keskin Array B**	**11.51**	**284**	Pn	**Pn**	**22 32 54.6**	**+1.5**
EIL	**Elat**	**13.65**	**237**	LR	LR	22 39 28.0	
	comp=Z,110nm,18.5s,baz=82,slow=41						
AB31	**Akbulak array**	**14.27**	**33**	P	**Pn**	**22 33 26.9**	**-3.8**
	comp=Z,5.0nm,0.7s,baz=223,slow=13,SNR=56						
AB31				⇓S	**Sn**	**22 35 57.1**	**-12**
	comp=Z,1.7nm,0.5s,baz=224,slow=24,SNR=8.7						
ABKAR	**Akbulak array**	**14.27**	**33**	*e*Pn	**Pn**	**22 33 26.6**	**-4.0**
	comp=Z,3.4nm,0.5s						
ABKAR				Sn	**Sn**	**22 36 00.7**	**-8.4**
AKTK	**Aktyubinsk**	**14.46**	**26**	Pn	**Pn**	**22 33 30.4**	**-2.9**
AKTK				Sn	**Sn**	**22 36 02.4**	**-11**
AKTK				LR	LR	22 40 46.6	
AKTO	**Aktyubinsk**	**14.46**	**26**	Pn	**Pn**	**22 33 30.4**	**-2.9**
	comp=Z,2.1nm,0.3s,baz=195,slow=11,SNR=19						
AKTO				Sn	**Sn**	**22 36 02.4**	**-11**
	comp=Z,0.4nm,0.3s,baz=329,slow=17,SNR=5.0						
AKTO				LR	LR	22 40 46.6	
	comp=Z,57nm,18.8s,baz=234,slow=44						
KBL	**Kabul**	**17.16**	**95**	*e*P	**Pn**	**22 34 10.0**	**+1.3**
KBL				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KBL	**Kabul**	**17.16**	**95**	*e*Pn	**Pn**	**22 34 10.0**	**+1.3**
	comp=Z,1.8nm,0.6s						
KBL	**Kabul**	**17.16**	**95**	*e*P	**Pn**	**22 34 10.0**	**+1.3**
	comp=Z,2.0nm,0.6s						
KK31	**Karatay Array**	**17.79**	**66**	P	**Pn**	**22 34 13.6**	**-2.9**
	comp=Z,6.7nm,0.8s,baz=272,slow=6.6,SNR=40						
KK31	**Karatay Array**	**17.79**	**66**	*i* P	**Pn**	**22 34 13.5**	**-2.9**
KK31				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MLR	**Muntele Rosu**	**18.26**	**302**	⇓P	**Pn**	**22 34 28.8**	**+6.6**
AKASG	**Malin Array Be**	**18.65**	**320**	P	**Pn**	**22 34 26.4**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=124,slow=11,SNR=5.9						
AKASG	**Malin Array Be**	**18.65**	**320**	*de*P	**Pn**	**22 34 29.8**	**+2.9**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**18.65**	**320**	P	**Pn**	**22 34 26.4**	**-0.5**
VOIR		**18.85**	**301**	⇓P	**Pn**	**22 34 33.2**	**+3.8**
OBN	**Obninsk**	**19.03**	**339**	*e*P	**Pn**	**22 34 33.6**	**+2.2**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
OBN	**Obninsk**	**19.03**	**339**	*e*P	**Pn**	**22 34 33.6**	**+2.2**
	comp=Z,5.0nm,0.8s						
BURAR	**Bucovina Array**	**19.45**	**308**	⇓P	**Pn**	**22 34 34.1**	**-2.4**
BURAR	**Bucovina Array**	**19.45**	**308**	⇓P	**Pn**	**22 34 34.1**	**-2.4**
BUR08	**Bucovina Ar. S**	**19.47**	**308**	*e*P	**Pn**	**22 34 36.3**	**-0.5**
BUR08	**Bucovina Ar. S**	**19.47**	**308**	*e*P	**Pn**	**22 34 36.3**	**-0.5**
ARU	**Arti**	**19.89**	**17**	*c i*P	**Pn**	**22 34 39.7**	**-2.1**
ARU				*e*		22 34 56.7	
ARU				S	**Sn**	**22 38 20.8**	**-4.6**
ARU				SS		22 38 36.7	
ARU				pmax	pmax		
	comp=Z,20nm,1.0s						
ARU	**Arti**	**19.89**	**17**	*e*P	**Pn**	**22 34 39.7**	**-2.0**
	comp=Z,12nm,0.6s						
ARU				S	**Sn**	**22 38 23.9**	**-1.5**
ARU	**Arti**	**19.89**	**17**	*i* P	**Pn**	**22 34 39.7**	**-2.1**
	comp=Z,20nm,1.0s						
ARU				S	**Sn**	**22 38 23.9**	**-1.5**
AML	**Almayashu**	**20.01**	**70**	*e*P	**P**	**22 34 42.3**	**+0.7**
	comp=Z,165nm,0.8s						
AML	**Almayashu**	**20.01**	**70**	*e*P	**P**	**22 34 42.3**	**+0.7**
	comp=Z,165nm,0.8s						
EKS2	**Erkin-Say**	**20.11**	**68**	*e*P	**P**	**22 34 43.2**	**+0.5**
	comp=Z,8.1nm,0.9s						
EKS2				*e*S	**S**	**22 38 31.1**	**+2.4**
EKS2	**Erkin-Say**	**20.11**	**68**	*e*P	**P**	**22 34 43.2**	**+0.5**
	comp=Z,8.1nm,0.9s						
EKS2				*e*S	**S**	**22 38 31.1**	**+2.3**
AAK	**Ala-Archa**	**20.64**	**68**	P	**P**	**22 34 48.7**	**+0.3**
	comp=Z,1.4nm,0.3s,baz=260,slow=12,SNR=2.9						
AAK	**Ala-Archa**	**20.64**	**68**	P	**P**	**22 34 48.7**	**+0.3**
SVE	**Sverdlovsk**	**20.77**	**20**	*e*P	**P**	**22 34 51.4**	**+1.8**
SVE				*e*S	**S**	**22 38 33.3**	**-8.2**
SVE				pmax	pmax		
	comp=Z,23nm,1.0s						
SVE	**Sverdlovsk**	**20.77**	**20**	*e*P	**P**	**22 34 51.4**	**+1.8**
	comp=Z,23nm,1.0s						
DRGR		**20.79**	**304**	⇑P	**P**	**22 34 51.7**	**+1.7**
DRGR		**20.79**	**304**	⇑P	**P**	**22 34 51.7**	**+1.7**
ZRNK	**Zerenda**	**20.95**	**37**	⇑P	**P**	**22 34 51.2**	**-0.5**
	comp=Z,13nm,1.1s						
ZRNK	**Zerenda**	**20.95**	**37**	P	**P**	**22 34 51.1**	**-0.6**
ZRNK				pmax	pmax		
	comp=Z,13nm,1.1s						
ZRNK	**Zerenda**	**20.95**	**37**	P	**P**	**22 34 51.1**	**-0.6**
	comp=Z,13nm,1.1s						
BRVK	**Borovoye**	**21.63**	**38**	⇑P	**P**	**22 34 58.5**	**-0.5**
	comp=Z,49nm,1.0s,mb4.9						
BRVK	**Borovoye**	**21.63**	**38**	*de*P	**P**	**22 34 59.1**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,34nm,1.0s,mb4.7						
BRVK	**Borovoye**	**21.63**	**38**	*e*P	**P**	**22 34 59.3**	**+0.3**
	comp=Z,31nm,0.9s,mb4.7						
BRVK	**Borovoye**	**21.63**	**38**	*e*P	**P**	**22 34 59.1**	**+0.1**
	comp=Z,34nm,1.0s,mb4.7						
BVAR	**Borovoye Array**	**21.67**	**38**	P	**P**	**22 34 59.5**	**+0.2**
	comp=Z,18nm,0.9s,mb4.5,baz=228,slow=8.9,SNR=68						
BVAR	**Borovoye Array**	**21.67**	**38**	P	**P**	**22 34 59.5**	**+0.1**
BVAR				pmax	pmax		
	comp=Z,19nm,0.9s						
BVAR	**Borovoye Array**	**21.67**	**38**	P	**P**	**22 34

comp=Z,7.5nm,0.9s,mb4.5
NB2 NORSAR Subarra 32.73 327 P **P 22 36 40.5 -0.8**
comp=Z,1.4nm,0.7s,mb4.0,baz=119,slow=7.9
NOA NORSAR Array B 32.73 327 P **P 22 36 41.0 -0.4**
comp=Z,2.5nm,0.8s,mb4.2,baz=121,slow=8.4,SNR=9.6
NOA LR LR 22 52 05.8
comp=Z,18nm,20.5s,MS2.8,baz=115,slow=40
NOA NORSAR Array B 32.73 327 P **P 22 36 41.0 -0.3**
LOR Lormes 33.60 301 *eP* **P 22 36 48.3 -0.8**
LOR Lormes 33.60 301 *eP* **P 22 36 48.3 -0.8**
SMF Signal de Mont 33.62 300 *eP* **P 22 36 48.8 -0.4**
comp=Z,3.7nm,0.7s,mb4.1
SMF Signal de Mont 33.62 300 *eP* **P 22 36 48.8 -0.4**
SMF pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
SMF Signal de Mont 33.62 300 *eP* **P 22 36 48.8 -0.4**
comp=Z,1.9nm,0.7s,mb4.1
SMF Signal de Mont 33.62 300 *eP* **P 22 36 48.8 -0.4**
comp=Z,1.9nm,0.7s,mb4.1
LASF Ste Croix 33.73 295 *eP* **P 22 36 50.0 -0.3**
comp=Z,41nm,1.3s,mb4.9
LASF Ste Croix 33.73 295 *eP* **P 22 36 50.0 -0.3**
comp=Z,20nm,1.3s,mb4.9
SSF Saint Saulge 33.84 300 *eP* **P 22 36 50.8 -0.4**
comp=Z,11nm,1.4s,mb4.3
SSF Saint Saulge 33.84 300 *eP* **P 22 36 50.8 -0.4**
SSF pmax pmax
comp=Z,6.0nm,1.4s,mb4.3
SSF Saint Saulge 33.84 300 *eP* **P 22 36 50.8 -0.4**
comp=Z,5.7nm,1.4s,mb4.3
SSF Saint Saulge 33.84 300 *eP* **P 22 36 50.8 -0.4**
comp=Z,5.7nm,1.4s,mb4.3
AVF Avril sur Loir 33.95 300 *eP* **P 22 36 51.5 -0.6**
comp=Z,6.5nm,1.0s,mb4.2
AVF Avril sur Loir 33.95 300 *eP* **P 22 36 51.5 -0.6**
AVF pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
AVF Avril sur Loir 33.95 300 *eP* **P 22 36 51.5 -0.6**
comp=Z,3.3nm,1.0s,mb4.2
AVF Avril sur Loir 33.95 300 *eP* **P 22 36 51.5 -0.6**
comp=Z,3.2nm,1.0s,mb4.2
ARCES ARCESS Array B 34.06 346 P **P 22 36 53.6 +0.7**
comp=Z,0.5nm,0.6s,mb3.6,baz=146,slow=11,SNR=4.8
ARCES LR LR 22 52 12.1
comp=Z,31nm,20.3s,MS3.0,baz=305,slow=39
ARCES ARCESS Array B 34.06 346 P **P 22 36 53.6 +0.7**
TCF Toulx Ste Croi 34.75 299 *eP* **P 22 36 58.3 -0.8**
comp=Z,12nm,1.2s,mb4.4
TCF Toulx Ste Croi 34.75 299 *eP* **P 22 36 58.3 -0.8**
TCF pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
TCF Toulx Ste Croi 34.75 299 *eP* **P 22 36 58.3 -0.8**
comp=Z,6.1nm,1.2s,mb4.4
TCF Toulx Ste Croi 34.75 299 *eP* **P 22 36 58.3 -0.8**
comp=Z,6.1nm,1.2s,mb4.4
CAF Calviac 34.94 297 *eP* **P 22 37 00.5 -0.3**
comp=Z,6.2nm,0.8s,mb4.3
CAF Calviac 34.94 297 *eP* **P 22 37 00.5 -0.3**
CAF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
CAF Calviac 34.94 297 *eP* **P 22 37 00.5 -0.3**
comp=Z,3.1nm,0.8s,mb4.3
CAF Calviac 34.94 297 *eP* **P 22 37 00.5 -0.3**
comp=Z,3.1nm,0.8s,mb4.3
MTLF Montolieu 34.99 294 *eP* **P 22 37 00.9 -0.3**
comp=Z,18nm,1.3s,mb4.5
MTLF Montolieu 34.99 294 *eP* **P 22 37 00.9 -0.3**
MTLF pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
MTLF Montolieu 34.99 294 *eP* **P 22 37 00.9 -0.3**
comp=Z,8.9nm,1.3s,mb4.5
MTLF Montolieu 34.99 294 *eP* **P 22 37 00.9 -0.3**
comp=Z,8.9nm,1.3s,mb4.5
RJF Les Rejaudoux 35.30 297 *eP* **P 22 37 03.4 -0.4**
comp=Z,19nm,1.4s,mb4.5
RJF Les Rejaudoux 35.30 297 *eP* **P 22 37 03.4 -0.4**
RJF pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
RJF Les Rejaudoux 35.30 297 *eP* **P 22 37 03.4 -0.4**
comp=Z,9.7nm,1.4s,mb4.5
RJF Les Rejaudoux 35.30 297 *eP* **P 22 37 03.4 -0.4**
comp=Z,9.7nm,1.4s,mb4.5
LFF La Frestale 35.88 297 *eP* **P 22 37 08.6 -0.2**
comp=Z,13nm,1.0s,mb4.5
LFF La Frestale 35.88 297 *eP* **P 22 37 08.6 -0.2**
LFF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
LFF La Frestale 35.88 297 *eP* **P 22 37 08.6 -0.2**
comp=Z,6.6nm,1.0s,mb4.5
LFF La Frestale 35.88 297 *eP* **P 22 37 08.6 -0.2**
comp=Z,6.6nm,1.0s,mb4.5
LDF La Druitiere 36.26 303 *eP* **P 22 37 11.2 -0.9**
comp=Z,3.4nm,0.6s,mb4.1
LDF La Druitiere 36.26 303 *eP* **P 22 37 11.2 -0.9**
LDF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
LDF La Druitiere 36.26 303 *eP* **P 22 37 11.2 -0.9**
comp=Z,1.7nm,0.6s,mb4.2
LDF La Druitiere 36.26 303 *eP* **P 22 37 11.2 -0.9**
comp=Z,1.7nm,0.6s,mb4.1
MFF Saint Martin d 36.36 300 *eP* **P 22 37 12.1 -0.8**
comp=Z,10nm,0.9s,mb4.5
MFF Saint Martin d 36.36 300 *eP* **P 22 37 12.1 -0.8**
MFF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
MFF Saint Martin d 36.36 300 *eP* **P 22 37 12.1 -0.8**
comp=Z,5.2nm,0.9s,mb4.5
MFF Saint Martin d 36.36 300 *eP* **P 22 37 12.1 -0.8**
comp=Z,5.2nm,0.9s,mb4.5
FLN La Foliniere 36.50 303 *eP* **P 22 37 12.6 -1.5**
comp=Z,8.9nm,0.8s,mb4.5
FLN La Foliniere 36.50 303 *eP* **P 22 37 12.6 -1.5**
FLN pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
FLN La Foliniere 36.50 303 *eP* **P 22 37 12.6 -1.5**
comp=Z,4.4nm,0.8s,mb4.4
FLN La Foliniere 36.50 303 *eP* **P 22 37 12.6 -1.5**
comp=Z,4.4nm,0.8s,mb4.4
GRR Gorron 36.76 303 *eP* **P 22 37 15.6 -0.7**
comp=Z,19nm,0.8s,mb4.7
GRR Gorron 36.76 303 *eP* **P 22 37 15.6 -0.7**
GRR pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
GRR Gorron 36.76 303 *eP* **P 22 37 15.6 -0.7**
comp=Z,9.6nm,0.8s,mb4.7
GRR Gorron 36.76 303 *eP* **P 22 37 15.6 -0.7**
comp=Z,9.6nm,0.8s,mb4.7
SGMF Saint Gilles 37.90 303 *eP* **P 22 37 25.6 -0.3**
comp=Z,8.4nm,0.8s,mb4.2
SGMF Saint Gilles 37.90 303 *eP* **P 22 37 25.6 -0.3**
SGMF pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
SGMF Saint Gilles 37.90 303 *eP* **P 22 37 25.6 -0.3**
comp=Z,4.2nm,0.8s,mb4.2
SGMF Saint Gilles 37.90 303 *eP* **P 22 37 25.6 -0.3**
comp=Z,4.2nm,0.8s,mb4.2
QUIF Quistinic 38.32 302 *eP* **P 22 37 28.1 -1.5**
comp=Z,22nm,1.2s,mb4.5
QUIF Quistinic 38.32 302 *eP* **P 22 37 28.1 -1.5**
QUIF pmax pmax
comp=Z,11nm,1.2s,mb4.5
QUIF Quistinic 38.32 302 *eP* **P 22 37 28.1 -1.5**
comp=Z,11nm,1.2s,mb4.5
QUIF Quistinic 38.32 302 *eP* **P 22 37 28.1 -1.5**
comp=Z,11nm,1.2s,mb4.5
ROSF Rostrenen 38.37 303 *eP* **P 22 37 28.8 -1.1**
comp=Z,14nm,0.9s,mb4.4
ROSF Rostrenen 38.37 303 *eP* **P 22 37 28.8 -1.1**
ROSF pmax pmax
comp=Z,7.0nm,0.9s,mb4.4
ROSF Rostrenen 38.37 303 *eP* **P 22 37 28.8 -1.1**
comp=Z,6.9nm,0.9s,mb4.4
ROSF Rostrenen 38.37 303 *eP* **P 22 37 28.8 -1.1**
comp=Z,6.9nm,0.9s,mb4.4
EKA Eskdalemuir Ar 38.40 314 P **P 22 37 29.9 -0.2**
comp=Z,2.7nm,0.6s,mb4.2,baz=101,slow=8.2,SNR=17
EKA Eskdalemuir Ar 38.40 314 P **P 22 37 29.9 -0.2**
EKA pmax pmax
comp=Z,3.0nm,0.6s
EKA Eskdalemuir Ar 38.40 314 P **P 22 37 29.9 -0.2**
SPITS Spitsbergen Ar 42.61 351 P **P 22 38 03.8 -0.9**
comp=Z,3.5nm,0.7s,mb4.2,baz=116,slow=4.5,SNR=3.1
SPITS Spitsbergen Ar 42.61 351 P **P 22 38 03.8 -0.8**
SPITS pmax pmax
comp=Z,4.0nm,0.7s
SPITS Spitsbergen Ar 42.61 351 P **P 22 38 03.8 -0.8**
TORD Torodi Ar. Bea 47.98 252 P **P 22 38 47.0 -1.0**
comp=Z,0.9nm,0.9s,mb3.8,baz=63,slow=8.9,SNR=4.2
TORD Torodi Ar. Bea 47.98 252 P **P 22 38 47.0 -1.0**
CMAR Chiang Mai Arr 48.12 99 P **P 22 38 47.9 -1.2**
comp=Z,0.8nm,0.7s,mb3.9,baz=300,slow=8.3,SNR=8.2
CMAR Chiang Mai Arr 48.12 99 P **P 22 38 47.9 -1.2**
CMAR pmax pmax
comp=Z,1.0nm,0.7s
CMAR Chiang Mai Arr 48.12 99 P **P 22 38 47.9 -1.2**
HHC Hu-ho-hao-te 48.18 66 *eP* **P 22 38 50.3 +1.0**
HHC S **S 22 45 48.6 -0.1**
HHC pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
HHC pmax pmax
comp=Z,49nm,6.7s
LSZ Lusaka 56.03 203 P **P 22 39 47.3 -0.6**
comp=Z,2.5nm,1.0s,mb4.2,baz=62,slow=6.4,SNR=3.5
LSZ Lusaka 56.03 203 P **P 22 39 47.3 -0.6**
LSZ pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
LSZ Lusaka 56.03 203 P **P 22 39 47.3 -0.6**
BILL Bilibino 64.84 22 *eP* **P 22 40 47.2 -0.3**
BILL pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
BOSA Boshof 69.46 201 P **P 22 41 15.7 -1.6**
comp=Z,3.2nm,0.8s,mb4.3,baz=32,slow=5.2,SNR=4.6
BOSA Boshof 69.46 201 P **P 22 41 15.7 -1.5**
BOSA pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
BOSA Boshof 69.46 201 P **P 22 41 15.7 -1.5**

DJA 13 22:54:40.1±36S×99.44E, h9km, MLv3.5/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**0.35**	**275**	P		Pg	22 54 47.2	+0.3
SISI				S		Sg	22 54 54.4	+2.8
PDSI	**Padang**	**1.11**	**66**	P		Pg	22 55 00.4	-1.0
PDSI				S		Sg	22 55 16.1	+0.2
PPI	**Padang Panjang**	**1.31**	**47**	P		Pn	22 55 03.9	-0.6
SDSI	**Sungai Dareh**	**2.03**	**78**	P		Pn	22 55 15.6	+1.2
MNSI	**Mandailing Nat**	**2.15**	**4**	P		Pn	22 55 16.5	+0.5

IDC 13 22:54:42.8±61.0, 16°62S×176°99E, h0km, mb4.3/3, mb1 4.5/3, mb1mx3.9/14, mbtmp4.3/3, Error ellipse: s-maj=1083.0km s-min=152.0km az=75.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**35.48**	**238**	P		P	23 01 41.8	+0.6
	1.9nm,0.6s,baz=83,slow=8.1,SNR=3.9							
WRA	**Warramunga Arr**	**40.56**	**259**	P		P	23 02 23.8	-0.5
	0.9nm,0.6s,baz=98,slow=8.4,SNR=5.1							
ASAR	**Alice Springs**	**40.94**	**253**	P		P	23 02 27.1	-0.2
	10nm,0.5s,baz=78,slow=8.5,SNR=151							

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*CSEM **13** 23:08:46.8±0.6, 37°64N×36°33E, h15km, MD2.9, Error ellipse: s-maj=17.5km s-min=11.2km az=171.0*
*ISCJB **13** 23:08:47.8±0.7, 37°39N±0°06×36°34E±0°04, h5km±11km, Error ellipse: s-maj=10.2km s-min=5.7km az=174.1*
*DDA **13** 23:08:48.0, 37°42N×36°36E, h7km±4km, Md2.9*
*ISK **13** 23:08:47.4, 37°45N×36°35E, h11km, MD2.8*
ISC 13 23:08:48.1±0.7, 37°42N±0°05×36°34E±0°04, h12km±8km, n16, σ0°27/24, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ANDN	**Andirin**	**0.16**	**2**	*i* P		**Pg**	**23 08 51.9**	**0.0**
ANDN				*i* S		**Sg**	**23 08 54.6**	**0.0**
ANDN	**Andirin**	**0.16**	**2**	*i* P		**Pg**	**23 08 51.9**	**0.0**
ANDN				*i* S		**Sg**	**23 08 54.6**	**0.0**
KOZT	**Kozan**	**0.41**	**279**	*e*PG		**Pg**	**23 08 56.1**	**-0.2**
KOZT				*e*SG		**Sg**	**23 09 02.3**	**+0.5**
KMRS	**Kahramanmaras**	**0.46**	**79**	*e*PG		**Pg**	**23 08 56.8**	**-0.3**
KMRS				*e*SG		**Sg**	**23 09 03.0**	**-0.1**
KMRS	**Kahramanmaras**	**0.46**	**79**	*e*Pg		**Pg**	**23 08 56.8**	**-0.3**
KMRS				*e*Sg		**Sg**	**23 09 03.0**	**-0.1**
GAZ	**Gaziantep**	**0.74**	**109**	*e*PG		**Pg**	**23 09 02.2**	**-0.2**
GAZ	**Gaziantep**	**0.74**	**109**	*e*Pg		**Pg**	**23 09 02.2**	**-0.2**
KUZU	**Kuzuini**	**0.87**	**137**	*i* P		**Pg**	**23 09 05.3**	**+0.4**
KUZU				*i* S		**Sg**	**23 09 16.1**	**-0.2**
KUZU	**Kuzuini**	**0.87**	**137**	*i* P		**Pg**	**23 09 05.3**	**+0.4**
KUZU				*i* S		**Sg**	**23 09 16.1**	**-0.2**
GZT	**Gaziantep**	**0.98**	**93**	*i* P		**Pb**	**23 09 07.0**	**+0.1**
GZT				*i* S		**Sg**	**23 09 20.1**	**+0.4**
KARA	**Karaisali**	**1.04**	**262**	*e*PG		**Pg**	**23 09 07.6**	**-0.4**
KARA	**Karaisali**	**1.04**	**262**	*e*Pg		**Pg**	**23 09 07.6**	**-0.4**
SARI	**SarD1z-Kayseri**	**1.29**	**13**	*e*PG		**Pg**	**23 09 06.2**	**-6.7**
SARI	**SarD1z-Kayseri**	**1.29**	**13**	*e*Pg		**Pg**	**23 09 06.2**	**-6.7**
MYA	**Malataya**	**1.88**	**61**	*e*PN		**Pn**	**23 09 20.0**	**0.0**
MYA	**Malataya**	**1.88**	**61**	*e*Pn		**Pn**	**23 09 20.0**	**0.0**

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*TEH **13** 23:29:59.3, 27°52N×54°28E, h10km*
*CSEM **13** 23:30:00.7, 27°56N×54°28E, h18km, mb3.1, After NEIC*
*NEIC **13** 23:30:00.7, 27°56N×54°28E, h18km, MN3.1(TEH), After TEH.*
*IDC **13** 23:30:04.7±14.0, 28°51N×54°41E, h0km, mb3.4/5, mb1 3.5/5, mb1mx3.3/24, mbtmp3.5/5, MS2.9/1, Ms1 2.9/1, ms1mx2.2/18, Error ellipse: s-maj=280.5km s-min=37.3km az=0.0*
ISC 13 23:29:59.9±3.1, 27°6N±0°1×54°4E±0°1, h8km±17km, n37, σ0°90/41, mb3.4/4, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ISRV	**Sarvestan**	**2.06**	**328**	Pn		**Pn**	**23 30 35.6**	**+0.8**
ISRV	**Sarvestan**	**2.06**	**328**	*e*Pn		**Pn**	**23 30 35.2**	**+0.4**
ISRV				*e*			23 31 13.9	
	comp=Z,2μm,0.4s							
ISRV	**Sarvestan**	**2.06**	**328**	Pn		**Pn**	**23 30 35.6**	**+0.8**
IPAR	**Pars**	**2.48**	**332**	Pn		**Pn**	**23 30 40.6**	**0.0**
IPAR				Sg		**Sg**	**23 31 19.5**	**-0.2**
IPAR	**Pars**	**2.48**	**332**	*e*Pn		**Pn**	**23 30 40.9**	**+0.3**
IPAR				*e*Sg		**Sg**	**23 31 19.1**	**-0.6**
IPAR				*e*			23 31 19.2	
	comp=Z,558nm,0.3s							
IPAR	**Pars**	**2.48**	**332**	Pn		**Pn**	**23 30 40.6**	**0.0**
IPAR				Sg		**Sg**	**23 31 19.5**	**-0.2**
IMEH	**Mehriz**	**3.74**	**3**	Pn		**Pn**	**23 30 59.2**	**+1.2**
IMEH	**Mehriz**	**3.74**	**3**	*e*Pn		**Pn**	**23 30 58.8**	**+0.8**
IMEH				*e*			23 31 45.9	
	comp=Z,282nm,0.2s							
IMEH	**Mehriz**	**3.74**	**3**	Pn		**Pn**	**23 30 59.2**	**+1.2**
IBAF	**Bafgh**	**4.07**	**15**	Pn		**Pn**	**23 31 02.8**	**+0.3**
IBAF	**Bafgh**	**4.07**	**15**	*e*		**Pg**	**23 31 26.0**	**+8.0**
	comp=Z,188nm,0.2s							
IBAF				*e*Pn		**Pn**	**23 31 03.1**	**+0.6**
IBAF	**Bafgh**	**4.07**	**15**	Pn		**Pn**	**23 31 02.8**	**+0.3**
ISAD	**Sadrabad**	**4.30**	**352**	Pn		**Pn**	**23 31 06.6**	**+1.0**
ISAD	**Sadrabad**	**4.30**	**352**	*e*		**Sn**	**23 31 56.1**	**+0.1**
	comp=Z,221nm,0.2s							
ISAD				*e*Pn		**Pn**	**23 31 06.1**	**+0.5**
ICHK	**Chekchek**	**4.59**	**0**	Pn		**Pn**	**23 31 09.8**	**+0.2**
ICHK	**Chekchek**	**4.59**	**0**	*e*Pn		**Pn**	**23 31 09.9**	**+0.3**
ICHK	**Chekchek**	**4.59**	**0**	Pn		**Pn**	**23 31 09.8**	**+0.2**
IZEF	**Zefreh**	**5.53**	**342**	Pn		**Pn**	**23 31 21.3**	**-1.2**
IZEF	**Zefreh**	**5.53**	**342**	*e*Pn		**Pn**	**23 31 21.4**	**-1.1**
IZEF				*e*			23 31 29.3	
	comp=Z,71nm,0.2s							
IZEF	**Zefreh**	**5.53**	**342**	Pn		**Pn**	**23 31 21.3**	**-1.2**
IPIR	**Pirpir**	**5.86**	**330**	Pn		**Pn**	**23 31 26.6**	**-0.5**
IPIR	**Pirpir**	**5.86**	**330**	*e*		**Pn**	**23 31 27.8**	**+0.7**
	comp=Z,128nm,0.2s							
IPIR	**Pirpir**	**5.86**	**330**	Pn		**Pn**	**23 31 26.6**	**-0.5**
IKLH	**Kolahrood**	**6.15**	**338**	Pn		**Pn**	**23 31 30.1**	**-1.0**
IKLH	**Kolahrood**	**6.15**	**338**	*e*Pn		**Pn**	**23 31 30.5**	**-0.6**
IKLH				*e*			23 31 35.8	
	comp=Z,66nm,0.1s							
IKLH	**Kolahrood**	**6.15**	**338**	Pn		**Pn**	**23 31 30.1**	**-1.0**
BRTR	**Keskin Array B**	**20.99**	**310**	P		**P**	**23 34 45.5**	**+1.8**
	comp=Z,0.5nm,0.6s,baz=134,slow=12,SNR=3.7							
BRTR	**Keskin Array B**	**20.99**	**310**	P		**P**	**23 34 45.5**	**+1.9**
BVAR	**Borovoye Array**	**28.01**	**21**	P		**P**	**23 35 50.6**	**-0.6**
	comp=Z,0.3nm,0.5s,mb3.2,baz=198,slow=8.7,SNR=2.9							
BVAR	**Borovoye Array**	**28.01**	**21**	P		**P**	**23 35 50.6**	**-0.6**
MKAR	**Makanchi Array**	**29.09**	**41**	P		**P**	**23 36 01.4**	**+0.5**
	comp=Z,0.1nm,0.3s,mb3.1,baz=233,slow=8.9,SNR=2.8							
MKAR	**Makanchi Array**	**29.09**	**41**	P		**P**	**23 36 01.4**	**+0.6**
ZALV	**Zalesovo Beam**	**34.48**	**32**	P		**P**	**23 36 47.3**	**-0.8**
	comp=Z,0.5nm,0.4s,mb3.8,baz=233,slow=8.3,SNR=4.1							
FINES	**FINESS Array B**	**38.73**	**339**	P		**P**	**23 37 22.3**	**-2.0**
	comp=Z,0.8nm,0.8s,mb3.5,baz=141,slow=9.0,SNR=3.9							
FINES	**FINESS Array B**	**38.73**	**339**	P		**P**	**23 37 22.3**	**-2.0**
FINES	**FINESS Array B**	**38.73**	**339**	P		**P**	**23 37 22.3**	**-2.0**
KEST	**Kesra**	**38.88**	**294**	LR		LR	23 55 27.8	
	comp=Z,16nm,19.9s,baz=222,slow=40							

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*ISCJB **14** 00:03:31.0±0.5, 36°16N±0°02×23°14E±0°03, h32km±5km, mb3.7/10, Error ellipse: s-maj=4.8km s-min=2.9km az=137.3*
*ATH **14** 00:03:30.4, 36°20N×23°25E, h24km±1km, ML3.1*
*NEIC **14** 00:03:30.4, 36°20N×23°25E, h24km, ML3.8(THE), ML3.1(ATH), After ATH.*
*CSEM **14** 00:03:31.2±0.2, 36°15N×23°20E, h20km, ML3.1, Error ellipse: s-maj=6.3km s-min=3.4km az=39.0*
*THE **14** 00:03:33.5, 36°25N×23°29E, h22km±5km, ML3.8/5, Error ellipse: s-maj=5.1km s-min=1.2km az=194.0*
*IDC **14** 00:03:34.2±2.3, 36°09N×23°25E, h58km±33km, mb3.5/9, mb1 3.6/13, mb1mx3.4/29, mbtmp3.5/13, ML3.5/4, Error ellipse: s-maj=44.6km s-min=16.4km az=12.0*
ISC 14 00:03:31.4±0.5, 36°17N±0°02×23°21E±0°03, h20km±5km, n243, σ1°22/309, mb3.7/10, 3C, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.18**	**308**	⇑*i*Pb		**Pb**	**00 03 35.8**	**-0.5**
KYTH	**Kithira**	**0.18**	**308**	⇑*i*PB		**Pb**	**00 03 35.8**	**-0.5**
KYTH	**Kithira**	**0.18**	**308**	⇑*i*Pb		**Pb**	**00 03 35.8**	**-0.5**
VLI	**Veliai**	**0.59**	**338**	*e*Pn		**Pn**	**00 03 42.6**	**-2.0**
VLI				*e*Sn		**Sb**	**00 03 50.7**	**-0.3**
VLI	**Veliai**	**0.59**	**338**	*e*PN		**Pn**	**00 03 42.6**	**-2.0**
VLI				*e*SN		**Sb**	**00 03 50.7**	**-0.3**
VLI	**Veliai**	**0.59**	**338**	*e*Pn		**Pn**	**00 03 42.6**	**-2.0**
VLI				*e*Sn		**Sb**	**00 03 50.7**	**-0.3**
KARN	**Karanos**	**0.96**	**143**	*e*PN		**Pn**	**00 03 49.8**	**+0.2**
KARN				*e*SN		**Sn**	**00 04 02.2**	**-0.4**
KARN	**Karanos**	**0.96**	**143**	P		**Pb**	**00 03 50.2**	**+0.9**
KARN				S		**Sb**	**00 04 05.4**	**+3.9**
KARN	**Karanos**	**0.96**	**143**	*e*Pn		**Pn**	**00 03 49.8**	**+0.2**
KARN	**Karanos**	**0.96**	**143**	P		**Pb**	**00 03 50.2**	**+0.9**
KARN				*e*Sn		**Sn**	**00 04 02.2**	**-0.4**
KARN				S		**Sb**	**00 04 05.4**	**+3.9**
VAM	**Vamos**	**1.11**	**133**	*e*Pn		**Pn**	**00 03 52.0**	**+0.3**
VAM				*e*Sn		**Sn**	**00 04 07.2**	**+0.9**
VAM	**Vamos**	**1.11**	**133**	*e*PN		**Pn**	**00 03 52.0**	**+0.3**
VAM				*e*SN		**Sn**	**00 04 07.2**	**+0.9**
VAM	**Vamos**	**1.11**	**133**	*e*Pn		**Pn**	**00 03 52.0**	**+0.3**
VAM				*e*Sn		**Sn**	**00 04 07.2**	**+0.9**
DID	**Didima**	**1.34**	**1**	*e*PN		**Pn**	**00 03 54.8**	**-0.1**
DID				*e*SN		**Sn**	**00 04 13.2**	**+1.2**
DID	**Didima**	**1.34**	**1**	P		**Pn**	**00 03 54.7**	**-0.2**
DID				S		**Sn**	**00 04 12.9**	**+0.9**
DID	**Didima**	**1.34**	**1**	*e*Pn		**Pn**	**00 03 54.8**	**-0.1**
DID				S		**Sn**	**00 04 12.9**	**+0.9**
DID				*e*Sn		**Sn**	**00 04 13.2**	**+1.2**
VLX	**Vlachokerasia**	**1.37**	**331**	*e*PN		**Pn**	**00 03 56.0**	**+0.6**
VLX	**Vlachokerasia**	**1.37**	**331**	P		**Pn**	**00 03 56.0**	**+0.6**
VLX				S		**Sn**	**00 04 15.9**	**+2.9**
VLX	**Vlachokerasia**	**1.37**	**331**	*e*Pn		**Pn**	**00 03 56.0**	**+0.6**
VLX				S		**Sn**	**00 04 15.9**	**+2.9**
PYL	**PYLOS**	**1.39**	**302**	*e*PB		**Pb**	**00 03 55.1**	**-1.5**
PYL				*e*SN		**Sn**	**00 04 15.8**	**+2.5**
PYL	**PYLOS**	**1.39**	**302**	P		**Pn**	**00 03 54.9**	**-0.7**
PYL				S		**Sn**	**00 04 15.4**	**+2.1**
PYL	**PYLOS**	**1.39**	**302**	*e*Pb		**Pb**	**00 03 55.1**	**-1.5**
PYL				S		**Sn**	**00 04 15.4**	**+2.1**
PYL				*e*Sn		**Sn**	**00 04 15.8**	**+2.5**
ITM	**Ithomi**	**1.44**	**315**	*e*Pn		**Pn**	**00 03 56.8**	**+0.4**
ITM				*e*Sn		**Sn**	**00 04 16.6**	**+1.9**
ITM	**Ithomi**	**1.44**	**315**	*e*PN		**Pn**	**00 03 56.8**	**+0.4**
ITM				*e*SN		**Sn**	**00 04 16.6**	**+1.9**
ITM	**Ithomi**	**1.44**	**315**	P		**Pn**	**00 03 56.9**	**+0.5**
ITM				S		**Sn**	**00 04 18.4**	**+3.7**
ITM	**Ithomi**	**1.44**	**315**	*e*Pn		**Pn**	**00 03 56.8**	**+0.4**
ITM				*e*Sn		**Sn**	**00 04 16.6**	**+1.9**
ITM				S		**Sn**	**00 04 18.4**	**+3.7**
GVD	**Gavdhos**	**1.51**	**151**	P		**Pn**	**00 04 00.2**	**+3.0**
GVD				*e*Sn		**Sn**	**00 04 15.0**	**-1.3**
GVD	**Gavdhos**	**1.51**	**151**	P		**Pn**	**00 04 00.2**	**+3.0**
GVD	**Gavdhos**	**1.51**	**151**	P		**Pn**	**00 04 00.2**	**+3.0**
GVD				*e*Sn		**Sn**	**00 04 15.0**	**-1.2**
NAIG	**Nisos Aigina**	**1.60**	**8**	*e*Pn		**Pn**	**00 03 58.6**	**+0.1**
NAIG	**Nisos Aigina**	**1.60**	**8**	*e*PN		**Pn**	**00 03 58.6**	**+0.1**
NAIG	**Nisos Aigina**	**1.60**	**8**	*e*Pn		**Pn**	**00 03 58.6**	**+0.1**
IDI	**Anoyia**	**1.62**	**122**	P		**Pn**	**00 03 59.3**	**+0.5**
IDI	**Anoyia**	**1.62**	**122**	P		**Pn**	**00 03 59.3**	**+0.5**
SIVA	**Sivas**	**1.74**	**131**	P		**Pn**	**00 04 03.7**	**+3.3**
SIVA	**Sivas**	**1.74**	**131**	P		**Pn**	**00 04 02.1**	**+1.7**
SIVA				S		**Sn**	**00 04 29.8**	**+7.9**
SIVA	**Sivas**	**1.74**	**131**	P		**Pn**	**00 04 02.1**	**+1.7**
THR5	**Thira Island,**	**1.74**	**81**	P		**Pn**	**00 04 01.1**	**+0.6**
THR5	**Thira Island,**	**1.74**	**81**	P		**Pn**	**00 04 01.1**	**+0.6**
THR5	**Thira Island,**	**1.74**	**81**	P		**Pn**	**00 04 01.1**	**+0.6**
VLY	**Voula,Athens**	**1.74**	**15**	*e*Pn		**Pn**	**00 04 00.5**	**0.0**
VLY				*e*Sn		**Sn**	**00 04 22.6**	**+0.5**
VLY	**Voula,Athens**	**1.74**	**15**	*e*PN		**Pn**	**00 04 00.5**	**0.0**
VLY				*e*SN		**Sn**	**00 04 22.6**	**+0.5**
VLY	**Voula,Athens**	**1.74**	**15**	*e*Pn		**Pn**	**00 04 00.5**	**0.0**
VLY				*e*Sn		**Sn**	**00 04 22.6**	**+0.5**
THR3	**Thira Island,**	**1.79**	**82**	P		**Pn**	**00 04 01.8**	**+0.8**
THR3	**Thira Island,**	**1.79**	**82**	P		**Pn**	**00 04 01.8**	**+0.8**
THR3	**Thira Island,**	**1.79**	**82**	P		**Pn**	**00 04 01.8**	**+0.8**
THR1	**Thera Island**	**1.83**	**83**	P		**Pn**	**00 04 02.4**	**+0.8**
THR1	**Thera Island**	**1.83**	**83**	P		**Pn**	**00 04 02.4**	**+0.8**
ATH	**Athens Observa**	**1.84**	**12**	*e*Pn		**Pn**	**00 04 02.2**	**+0.3**
ATH				*e*Sn		**Sn**	**00 04 25.5**	**+0.9**
ATH	**Athens Observa**	**1.84**

LKR	Lokris	2.48	356	ePn	Pn	00 04 10.9	+0.2
LKR	Lokris	2.48	356	ePN	Pn	00 04 10.9	+0.2
LKR	Lokris	2.48	356	P	Pn	00 04 10.9	+0.2
LKR				S	Sn	00 04 39.7	-0.7
LKR	Lokris	2.48	356	ePn	Pn	00 04 10.9	+0.2
LKR				S	Sn	00 04 39.7	-0.7
ATAL	Atalanti	2.52	357	P	Pn	00 04 11.6	+0.4
ATAL				S	Sn	00 04 41.8	+0.4
ATAL	Atalanti	2.52	357	P	Pn	00 04 11.6	+0.4
ATAL				S	Sn	00 04 41.8	+0.4
ZKR	Zakros	2.66	112	P	Pn	00 04 14.0	+0.9
ZKR	Zakros	2.66	112	P	Pn	00 04 14.0	+0.9
ZKR	Zakros	2.66	112	P	Pn	00 04 14.0	+0.9
VLS	Valsamata	2.90	315	ePn	Pn	00 04 16.6	+0.2
VLS	Valsamata	2.90	315	ePN	Pn	00 04 16.6	+0.2
VLS	Valsamata	2.90	315	P	Pn	00 04 16.6	+0.2
VLS				S	Sn	00 04 51.0	+0.4
VLS	Valsamata	2.90	315	ePn	Pn	00 04 16.6	+0.2
VLS				S	Sn	00 04 51.0	+0.4
AGG	Agios Georgios	2.93	346	ePn	Pn	00 04 17.9	+1.1
AGG	Agios Georgios	2.93	346	ePN	Pn	00 04 17.9	+1.1
AGG	Agios Georgios	2.93	346	P	Pn	00 04 17.8	+1.0
AGG	Agios Georgios	2.93	346	ePn	Pn	00 04 17.9	+1.1
EVR	Evrytania	2.96	338	ePn	Pn	00 04 19.1	+1.9
EVR	Evrytania	2.96	338	ePN	Pn	00 04 19.1	+1.9
EVR	Evrytania	2.96	338	ePn	Pn	00 04 19.1	+1.9
AOS	Alonnisos	3.04	10	P	Pn	00 04 18.8	+0.5
AOS				S	Sn	00 04 53.7	-0.5
AOS	Alonnisos	3.04	10	P	Pn	00 04 18.3	0.0
AOS				S	Sn	00 04 53.7	-0.5
AOS	Alonnisos	3.04	10	P	Pn	00 04 18.8	+0.5
AOS				S	Sn	00 04 53.7	-0.5
NEO	Neokhori	3.13	0	ePn	Pn	00 04 20.1	+0.5
NEO	Neokhori	3.13	0	ePN	Pn	00 04 20.1	+0.5
NEO	Neokhori	3.13	0	ePn	Pn	00 04 20.1	+0.5
XOR	Xorichti	3.19	360	P	Pn	00 04 21.9	+1.5
XOR	Xorichti	3.19	360	P	Pn	00 04 20.9	+0.5
XOR	Xorichti	3.19	360	P	Pn	00 04 20.9	+0.5
LKD	Levkas	3.25	322	ePn	Pn	00 04 23.0	+1.8
LKD	Levkas	3.25	322	ePN	Pn	00 04 23.0	+1.8
LKD	Levkas	3.25	322	ePn	Pn	00 04 23.0	+1.8
SMG	Samos	3.29	61	ePn	Pn	00 04 22.4	+0.7
SMG	Samos	3.29	61	ePN	Pn	00 04 22.4	+0.7
SMG	Samos	3.29	61	ePn	Pn	00 04 22.4	+0.7
LKD2	Lefkada island	3.31	323	P	Pn	00 04 23.4	+1.4
LKD2	Lefkada island	3.31	323	P	Pn	00 04 23.4	+1.4
THL	Klokotos Trika	3.52	345	ePN	Pn	00 04 26.3	+1.4
THL	Klokotos Trika	3.52	345	P	Pn	00 04 26.2	+1.3
THL	Klokotos Trika	3.52	345	ePn	Pn	00 04 26.3	+1.4
SIGR	SIGRI	3.69	34	P	Pn	00 04 27.5	+0.3
SIGR	SIGRI	3.69	34	P	Pn	00 04 27.5	+0.3
PAIG	Paliouri	3.77	5	P	Pn	00 04 28.7	+0.4
PAIG				S	Sn	00 05 08.6	-3.5
PAIG	Paliouri	3.77	5	P	Pn	00 04 28.5	+0.2
PAIG				S	Sn	00 05 08.6	-3.5
PAIG	Paliouri	3.77	5	P	Pn	00 04 28.5	+0.2
PAIG				S	Sn	00 05 08.6	-3.5
PRK	Paraskevi	3.92	37	P	Pn	00 04 30.7	+0.4
PRK				S	Sn	00 05 14.4	-1.3
PRK	Paraskevi	3.92	37	P	Pn	00 04 30.3	0.0
PRK				S	Sn	00 05 14.4	-1.3
PRK	Paraskevi	3.92	37	P	Pn	00 04 30.7	+0.4
PRK				S	Sn	00 05 14.4	-1.3
JAN	Janina	3.95	333	ePn	Pn	00 04 33.1	+2.3
JAN	Janina	3.95	333	ePN	Pn	00 04 33.1	+2.3
JAN	Janina	3.95	333	ePn	Pn	00 04 33.1	+2.3
ARG	Arkhangelos	3.98	88	ePn	Pn	00 04 33.2	+2.0
ARG	Arkhangelos	3.98	88	ePN	Pn	00 04 33.2	+2.0
ARG	Arkhangelos	3.98	88	P	Pn	00 04 33.3	+2.1
ARG	Arkhangelos	3.98	88	ePn	Pn	00 04 33.2	+2.0
LIA	Limnos Island	4.04	22	ePn	Pn	00 04 32.0	0.0
LIA	Limnos Island	4.04	22	ePN	Pn	00 04 32.0	0.0
LIA	Limnos Island	4.04	22	ePn	Pn	00 04 32.0	0.0
IGT	Igoumenitsa	4.06	327	P	Pn	00 04 33.0	+0.7
IGT				S	Sn	00 05 18.6	-0.6
IGT	Igoumenitsa	4.06	327	P	Pn	00 04 33.0	+0.7
IGT				S	Sn	00 05 18.6	-0.6
IGT	Igoumenitsa	4.06	327	P	Pn	00 04 33.0	+0.7
IGT				S	Sn	00 05 18.6	-0.6
OUR	Ouranopolis	4.20	8	P	Pn	00 04 34.4	+0.1
OUR				S	Sn	00 05 21.0	-1.8
OUR	Ouranopolis	4.20	8	P	Pn	00 04 34.2	-0.1
OUR				S	Sn	00 05 21.0	-1.8
OUR	Ouranopolis	4.20	8	P	Pn	00 04 34.4	+0.1
OUR				S	Sn	00 05 21.0	-1.8
PLG	Polygyros	4.20	2	ePn	Pn	00 04 34.6	+0.3
PLG	Polygyros	4.20	2	ePN	Pn	00 04 34.6	+0.3
PLG	Polygyros	4.20	2	ePn	Pn	00 04 34.6	+0.3
HORT	Hortiatis	4.42	359	P	Pn	00 04 39.8	+2.5
HORT	Hortiatis	4.42	359	P	Pn	00 04 39.8	+2.5
KEK	Kerkira	4.45	324	ePn	Pn	00 04 38.0	+0.3
KEK	Kerkira	4.45	324	ePN	Pn	00 04 38.0	+0.3
KEK	Kerkira	4.45	324	P	Pn	00 04 37.8	+0.1
KEK	Kerkira	4.45	324	ePn	Pn	00 04 38.0	+0.3
NEST	Nestorio	4.57	339	P	Pn	00 04 41.8	+2.5
NEST	Nestorio	4.57	339	P	Pn	00 04 41.8	+2.5
FNA	Florina	4.83	343	P	Pn	00 04 44.9	+2.0
FNA	Florina	4.83	343	P	Pn	00 04 44.9	+2.0
BIA	Bitola	5.06	344	ePn	Pn	00 04 49.8	+3.7
NVR	Nevrokopi	5.20	5	ePn	Pn	00 04 47.7	-0.3
NVR	Nevrokopi	5.20	5	ePN	Pn	00 04 47.7	-0.3
NVR	Nevrokopi	5.20	5	ePn	Pn	00 04 47.7	-0.3
ALN	Alexandroupoli	5.22	24	ePn	Pn	00 04 47.9	-0.3
ALN	Alexandroupoli	5.22	24	ePN	Pn	00 04 47.9	-0.3
ALN	Alexandroupoli	5.22	24	ePn	Pn	00 04 47.9	-0.3
KRUS	Krusevo	5.41	344	ePn	Pn	00 04 53.2	+2.3
ISP	Isparta	6.08	72	ePn	Pn	00 04 58.5	-1.5
ISP	Isparta	6.08	72	ePn	Pn	00 04 58.5	-1.6
TAR1	Taranto	6.37	315	ePn	Pn	00 05 03.5	-0.6
PE1	Pezze di Greco	6.48	317	ePn	Pn	00 05 04.7	-0.9
LTRZ	Laterza	6.69	313	Pn	Pn	00 05 07.7	-0.8
LTRZ				Sn	Sn	00 06 16.9	-7.2
LTRZ	Laterza	6.69	313	Pn	Pn	00 05 07.7	-0.8
BARS	Barje	6.73	351	ePn	Pn	00 05 09.2	+0.3
SG1	Sgolgore (BA)	6.93	314	ePn	Pn	00 05 11.0	-0.7
BAI	Bari	6.99	317	ePn	Pn	00 05 12.0	-0.6
VAE	Valguarnera	7.18	283	P	Pn	00 05 19.4	+4.3
	0.5nm,0.3s,baz=109,slow=16,SNR=2.4						
VAE				S	Sn	00 06 36.3	+0.2
	0.9nm,0.3s,baz=275,slow=22,SNR=3.0						
VAE	Valguarnera	7.18	283	P	Pn	00 05 19.4	+4.3
VAE				S	Sn	00 06 36.3	+0.2
VAE	Valguarnera	7.18	283	S	Sn	00 06 36.3	+0.2
CDT	Castel del Mon	7.32	314	ePn	Pn	00 05 16.0	-1.0
STON	Ston	7.93	329	*i* Pn	Pn	00 05 23.5	-2.0
STON				Sn	Sn	00 06 48.4	-6.2
FG5	Orsara di Pugl	8.04	312	Pn	Pn	00 05 26.9	0.0
	9.1nm,0.2s						
FG5	Orsara di Pugl	8.04	312	Pn	Pn	00 05 26.9	0.0
	9.1nm,0.2s						
BBLS	Lazići	8.22	340	ePn	Pn	00 05 28.1	-1.4
DIVS	Divibare	8.29	344	ePn	Pn	00 05 30.5	+0.1
FG2	Serracapriola	8.42	314	Pn	Pn	00 05 31.8	-0.4
	75nm,0.2s						
FG2	Serracapriola	8.42	314	Pn	Pn	00 05 31.8	-0.4
	75nm,0.2s						
BR131	Keskin Array S	8.97	64	ePn	Pn	00 05 42.2	+2.5
	0.5nm,0.4s						
BR131	Keskin Array S	8.97	64	ePn	Pn	00 05 42.2	+2.5
	0.5nm,0.4s						
BRTR	Keskin Array B	8.97	64	P	Pn	00 05 42.7	+3.0
	0.2nm,0.3s,baz=240,slow=15,SNR=8.8						
NRCA	Norcia	10.25	314	Pn	Pn	00 05 58.1	+0.8
	9.6nm,0.4s						
NRCA	Norcia	10.25	314	Pn	Pn	00 05 58.1	+0.8
	9.6nm,0.4s						
NVLJ	Novalja	10.52	325	*i* Pn	Pn	00 05 59.5	-1.5
NVLJ				Sn	Sn	00 07 52.7	-5.4
NVLJ	Novalja	10.52	325	*i* Pn	Pn	00 05 59.4	-1.5
MMAI	Mount Meron Ar	10.53	104	P	Pn	00 06 00.1	-1.0
	0.9nm,0.3s,baz=301,slow=12,SNR=6.2						
BOJS	Bojanci	11.10	330	*i* Pn	Pn	00 06 06.9	-2.0
EIL	Elat	11.80	120	P	Pn	00 06 17.6	-0.9
	0.4nm,0.3s,baz=326,slow=9.3,SNR=11						
EIL	Elat	11.80	120	P	Pn	00 06 17.6	-0.9
MORC	Moravsky Berou	14.21	345	ePn	Pn	00 06 49.4	-2.0
MORC	Moravsky Berou	14.21	345	ePn	Pn	00 06 49.4	-2.0
STU	Stuttgart	16.26	325	ePn	Pn	00 07 16.4	-2.1
STU	Stuttgart	16.26	325	ePn	Pn	00 07 16.4	-2.1
KIV	Kislovodsk	16.79	56	ePn	Pn	00 07 23.7	-1.5
KIV	Kislovodsk	16.79	56	ePn	Pn	00 07 23.7	-1.5
CLL	Collm	16.81	337	ePP	pP	00 07 28.0	-5.1
WLF	Walferdange	18.33	323	P	Pn	00 07 43.1	-1.1
WLF	Walferdange	18.33	323	P	Pn	00 07 43.1	-1.1
ESDC	Sonseca Array	21.69	287	P	P	00 08 20.3	-0.6
	0.3nm,0.5s,mb3.0,baz=77,slow=9.7,SNR=3.8						
ESDC	Sonseca Array	21.69	287	P	P	00 08 20.3	-0.6
HFS	Hagfors	24.76	349	P	P	00 08 49.8	-1.5
	1.3nm,0.3s,mb3.9,baz=160,slow=9.8,SNR=24						
HFS	Hagfors	24.76	349	P	P	00 08 49.8	-1.5
FINES	FINESS Array B	25.36	3	P	P	00 08 55.2	-1.6
	0.8nm,0.6s,mb3.4,baz=174,slow=10,SNR=7.2						
FINES	FINESS Array B	25.36	3	P	P	00 08 55.2	-1.6
NOA	NORSAR Array B	26.04	347	P	P	00 09 03.0	+0.1
	0.3nm,0.6s,mb3.0,baz=151,slow=12,SNR=4.1						
NOA	NORSAR Array B	26.04	347	P	P	00 09 03.0	+0.1
EKA	Eskdalemuir Ar	26.30	325	P	P	00 09 05.6	+0.2
	2.2nm,0.7s,mb3.8,baz=124,slow=8.8,SNR=11						
EKA	Eskdalemuir Ar	26.30	325	P	P	00 09 05.6	+0.2
ARU	Arti	31.22	38	P	P	00 09 47.1	-2.0
ARU	Arti	31.22	38	P	P	00 09 47.1	-2.0
ARCES	ARCESS Array B	33.45	1	P	P	00 10 07.0	-1.5
	0.5nm,0.6s,mb3.6,baz=180,slow=11,SNR=6.9						
ARCES	ARCESS Array B	33.45	1	P	P	00 10 07.0	-1.5
BVAR	Borovoye Array	36.82	48	P	P	00 10 37.4	-0.3
	0.6nm,0.6s,mb3.6,baz=289,slow=9.0,SNR=4.7						
BVAR	Borovoye Array	36.82	48	P	P	00 10 37.4	-0.4
KBL	Kabul	37.15	79	P	P	00 10 38.5	-2.2
KBL	Kabul	37.15	79	P	P	00 10 38.5	-2.3
DBIC	Dimbokro	39.01	228	P	P	00 10 55.0	-1.7
	26nm,1.4s,mb4.8						
DBIC	Dimbokro	39.01	228	P	P	00 10 55.0	-1.6
	26nm,1.4s,mb4.8						
AML	Almayashu	39.13	65	eP	P	00 10 55.4	-2.0
AML	Almayashu	39.13	65	eP	P	00 10 55.4	-2.0
KURK	Kurchatov	41.79	52	eP	P	00 11 17.9	-1.4
KURK	Kurchatov	41.79	52	eP	P	00 11 17.9	-1.4
MK31	Makanchi Array	44.55	57	eP	P	00 11 40.1	-1.5
MK31	Makanchi Array	44.55	57	eP	P	00 11 40.2	-1.5
MKAR	Makanchi Array	44.55	57	P	P	00 11 40.8	-0.8
	1.8nm,0.6s,mb4.1,baz=285,slow=6.8,SNR=21						
MKAR	Makanchi Array	44.55	57	P	P	00 11 40.8	-0.8
ZALV	Zalesovo Beam	45.46	47	P	P	00 11 47.7	-1.1
	1.0nm,0.4s,mb4.0,baz=268,slow=10,SNR=5.3						

NEIC ***14*** *00:12:41.8,31°.41S×69°.50W,h150km,mb4.2/1, MD3.6(GUC),After GUC.*

GUC 14 00:12:41.8±0.7,31°.41S×69°.50W,h150km±12km,MD3.6, ML3.3,4C-2D,San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	Combarbala	1.31	280	⇓*i*P	Pn	00 13 10.1	+0.7
CMCH				*e*S	Sn	00 13 31.6	+1.2
CMCH	Combarbala	1.31	280	⇓*i*P	Pn	00 13 10.1	+0.7
CMCH				*e*S	Sn	00 13 31.6	+1.2
CMCH				AML	AML	00 13 34.5	
	comp=E,2μm,0.5s						
JACH	Jahuel	1.58	216	*e*P	Pn	00 13 12.6	+0.5
JACH				*i* S	Sn	00 13 36.2	+0.8
JACH	Jahuel	1.58	216	*e*P	Pn	00 13 12.6	+0.5
JACH				*i* S	Sn	00 13 36.2	+0.8
TLL	Tololo Astrono	1.67	317	*e*P	Pn	00 13 14.5	+1.3
TLL				*i* S	Sn	00 13 38.6	+1.4
TLL	Tololo Astrono	1.67	317	*e*P	Pn	00 13 14.5	+1.3
TLL				*i* S	Sn	00 13 38.6	+1.4
TLL				AML	AML	00 13 43.6	
	comp=N,236nm,0.4s						
CHNG	Los Chungos	1.77	254	⇓*i*P	Pn	00 13 14.5	+0.2
CHNG				*i* S	Sn	00 13 39.4	+0.2
CHNG				AML	AML	00 13 46.1	
	comp=E,152nm,1.0s						
PEL	Peldehue	2.00	210	⇓*i*P	Pn	00 13 17.5	+0.6
PEL				*i* S	Sn	00 13 44.2	+0.3
PEL				AML	AML	00 13 48.4	
	comp=E,272nm,0.3s						
CLCH	Cerro Calan	2.17	204	*e*P	Pn	00 13 19.6	+0.7
CLCH				*i* S	Sn	00 13 48.3	+0.8
CLCH				AML	AML	00 13 56.6	
	comp=N,160nm,0.4s						
LMEL	Las Melosas	2.51	194	*e*P	Pn	00 13 24.3	+1.4
LMEL				*e*S	Sn	00 13 55.8	+1.0
LMEL	Las Melosas	2.51	194	*e*P	Pn	00 13 24.3	+1.4
LMEL				*e*S	Sn	00 13 55.8	+1.0
LMEL				AML	AML	00 14 07.2	
	comp=N,57nm,0.6s						
LCO	Las Campanas	2.60	336	⇑*i*P	Pn	00 13 25.3	+1.1
LCO				*i* S	Sn	00 13 58.1	+1.2
LCO	Las Campanas	2.60	336	⇑*i*P	Pn	00 13 25.3	+1.1
LCO				*i* S	Sn	00 13 58.1	+1.2
LCO				AML	AML	00 14 00.6	
	comp=E,140nm,0.4s						
TRQA	Tornquist	9.07	139	*e*Pn	Pn	00 14 46.1	-3.2
	comp=E,4.1nm,0.6s						
NNA	Nana	20.48	339	*e*P	P	00 17 08.4	+0.5
OTAV	Otavalo	32.60	343	P	P	00 18 59.6	+0.5
SDV	Santo Domingo	40.08	358	*e*P	P	00 20 02.8	+0.2
	comp=E,9.4nm,0.4s						

IDC 14 00:13:56.3±11.0,21°.03N×144°.69E,h186km±101km, mb3.4/7,mb1 3.5/7,mb1mx3.3/22,mbtmp3.4/7,Error ellipse: s-maj=65.1km s-min=19.9km az=81.0,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	21.89	322	P	P	00 18 34.4	-0.2
	0.6nm,0.3s,baz=150,slow=8.6,SNR=5.9						
SONM	Songino Array	40.74	320	P	P	00 21 19.3	+0.3
	0.3nm,0.4s,baz=157,slow=7.7,SNR=3.0						
WRA	Warramunga Arr	41.96	195	P	P	00 21 29.0	0.0
	0.3nm,0.4s,baz=15,slow=8.8,SNR=3.5						
CMAR	Chiang Mai Arr	43.02	275	P	P	00 21 37.6	-0.1
	0.9nm,0.3s,baz=14,slow=9.4,SNR=5.1						
BVAR	Borovoye Array	64.09	320	P	P	00 24 10.5	+0.1
	1.5nm,0.4s,baz=94,slow=7.6,SNR=13						
ARCES	ARCESS Array B	79.99	342	P	P	00 25 45.0	+0.5
	1.1nm,0.9s,baz=74,slow=8.9,SNR=5.6						
FINES	FINESS Array B	84.38	335	P	P	00 26 06.4	-1.0
	1.6nm,0.9s,baz=46,slow=5.5,SNR=2.5						

DJA ***14*** *00:13:57,2°.99N×96°.81E,h4km,MLv4.0/5*
IDC ***14*** *00:13:58.9±1.2,2°.84N×96°.75E,h34km±4km,mb3.5/9, mb1 3.6/11,mb1mx3.5/23,mbtmp3.5/11,ML3.8/2,Error ellipse: s-maj=46.8km s-min=14.8km az=46.0*
ISCJB ***14*** *00:14:01.0±1.2,2°.96N±0°.06×96°.94E±0°.08,h71km±12km, mb3.7/11,Error ellipse: s-maj=13.8km s-min=10.1km az=168.7*
NEIC ***14*** *00:14:01.1±1.9,2°.91N×96°.88E,h54km±15km,mb3.8/2, Error ellipse: s-maj=21.5km s-min=6.3km az=54.0*

ISC 14 00:14:02.0±1.2,2°.92N±0°.06×96°.91E±0°.09,h62km±12km, h37km±1.9km:pP-P,n33,σ0°.69/37,mb3.8/11,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		0.43	38	P	Pn	00 14 07.2	-6.2
TPTI				S	Sn	00 14 12.6	-9.2
GSI	Gunungsitoli	1.74	158	P	Pn	00 14 29.6	-0.3
TSI	Tuntungan	1.75	71	P	Pn	00 14 30.7	+0.7
TSI				S	Sn	00 14 53.7	+2.4
PSI	Prapat	2.01	93	Pn	Pn	00 14 33.5	-0.1
	11nm,0.3s,baz=306,slow=8.0,SNR=27						
PSI				Sn	Sn	00 15 03.4	+5.7
	29nm,0.3s,baz=95,slow=18,SNR=4.0						
MNSI	Mandailing Nat	3.40	128	P	Pn	00 14 52.8	+0.2
IPM	Ipoh	4.39	69	P	Pn	00 15 06.2	+0.1
KULM	Kulim	4.41	58	*e*Pn	Pn	00 15 06.3	0.0
KULM				*e*Sn	Sn	00 15 55.8	-0.7
KULM	Kulim	4.41	58	P	Pn	00 15 04.7	-1.7
KSM	Kuching	13.46	96	Pn	Pn	00 17 09.2	-1.1
CMAR	Chiang Mai Arr	15.57	7	Pn	Pn	00 17 38.0	+0.2
	0.2nm,0.3s,baz=223,slow=29,SNR=4.1						
KKM	Kota Kinabalu	19.49	80	P	Pn	00 18 24.7	-1.2
BJT	Baijiatuau	40.84	23	*e*P	P	00 21 37.4	-0.2
WRA	Warramunga Arr	43.20	123	P	P	00 21 57.6	+0.5
	1.2nm,0.6s,mb3.8,baz=301,slow=9.2,SNR=5.2						
WRA				pP	pP	00 22 07.3	-5.6
	1.0nm,0.5s,baz=301,slow=9.2,SNR=4.3						
WRA	Warramunga Arr	43.20	123	P	P	00 21 57.6	+0.5
WRA				pP	pP	00 22 07.3	-5.6
WRAB	Tennant Creek	43.20	123	*e*P	P	00 21 57.0	-0.1
	1.2nm,0.6s,mb3.8						
UCH	Uchtor	43.97	336	P	P	00 22 03.4	+0.4
EKS2	Erkin-Say	44.63	336	*e*P	P	00 22 08.3	0.0
	1.0nm,0.5s,mb3.9						
ASAR	Alice Springs	44.67	128	P	P	00 22 09.3	+0.4
	0.3nm,0.4s,mb3.5,baz=299,slow=7.7,SNR=5.7						
ASAR	Alice Springs	44.67	128	P	P	00 22 09.3	+0.4
MK31	Makanchi Array	45.51	346	*e*P	P	00 22 14.8	-0.4
MKAR	Makanchi Array	45.51	346	P	P	00 22 14.6	-0.6
	0.4nm,0.4s,mb3.8,baz=160,slow=9.1,SNR=12						
MKAR				pP	pP	00 22 25.4	-5.7
	0.5nm,0.5s,baz=167,slow=8.8,SNR=4.4						
MKAR				sP	sP	00 22 31.2	-7.1
	0.3nm,0.3s,baz=171,slow=8.6,SNR=3.3						
MKAR	Makanchi Array	45.51	346	P	P	00 22 14.6	-0.6
MKAR				pP	pP	00 22 25.4	-5.7
MKAR				sP	sP	00 22 31.2	-7.1
KURK	Kurchatov	50.07	345	P	P	00 22 50.1	-0.2
ZALV	Zalesovo Beam	51.83	351	P	P	00 23 03.5	0.0
	1.2nm,0.5s,mb4.1,baz=180,slow=7.0,SNR=5.7						
ZALV	Zalesovo Beam	51.83	351	P	P	00 23 03.5	0.0
BVAR	Borovoye Array	54.54	341	P	P	00 23 23.0	-0.5
	0.4nm,0.7s,mb3.6,baz=153,slow=10.0,SNR=4.3						
BVAR				pP	pP	00 23 33.6	-6.3
	0.4nm,0.4s,baz=141,slow=9.6,SNR=4.3						
STKA	Stephens Creek	54.72	133	P	P	00 23 25.2	0.0
AKTK	Aktyubinsk	57.59	332	P	P	00 23 44.9	-0.4
AKTO	Aktyubinsk	57.59	332	P	P	00 23 44.9	-0.4
	0.4nm,0.3s,mb3.9,baz=84,slow=9.2,SNR=4.0						
ARU	Arti	61.50	337	*e*P	P	00 24 12.3	+0.2
BRTR	Keskin Array B	67.75	312	P	P	00 24 53.5	+0.3
	0.7nm,0.7s,mb3.8,baz=141,slow=7.1,SNR=5.2						
FINES	FINESS Array B	78.35	332	P	P	00 25 56.2	+0.8
	0.6nm,0.7s,mb3.6,baz=93,slow=10.0,SNR=3.1						
ARCES	ARCESS Array B	80.83	340	P	P	00 26 10.1	+1.5
	0.6nm,0.7s,mb3.6,baz=102,slow=5.2,SNR=7.5						
ARCES				sP	sP	00 26 23.2	-10
	0.6nm,0.5s,baz=96,slow=7.4,SNR=1.7						

ISCJB ***14*** *00:17:48.5±0.8,32°.38N±0°.03×105°.11E±0°.03,h6km±5km, mb4.2/48,Error ellipse: s-maj=5.8km s-min=4.4km az=148.4*
IDC ***14*** *00:17:49.9±0.7,32°.45N×105°.08E,h0km,mb4.1/14, mb1 4.1/17,mb1mx4.1/28,mbtmp4.0/17,ML3.8/3,MS3.0/3, Ms1 3.0/3,ms1mx2.5/29,Error ellipse: s-maj=29.4km s-min=15.2km az=53.0*
BJI ***14*** *00:17:51.6,32°.42N×105°.16E,h17km,mB4.4/7,mb4.3/11, ML3.9/17,Ms3.9/13,Ms7 3.8/10*
NEIC ***14*** *00:17:51.3±0.2,32°.42N×105°.06E,h10km,mb4.3/34,Error ellipse: s-maj=6.3km s-min=5.1km az=55.0*
SZGRF ***14*** *00:18:27.0,37°.12N×102°.38E,h33km,mb4.5,Gansu, China*

ISC 14 00:17:51.0±0.8,32°.38N±0°.03×105°.08E±0°.03,h9km±5km, n108,σ0s82/121,mb4.2/48,1D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.84	218	⇓*i*Pn	Pn	00 18 25.1	+2.2
CD2				Pg	Pg	00 18 26.8	+0.4
CD2				Sg	Sg	00 18 50.8	+0.5
CD2				smax			
	comp=N,5μm,0.8s						
XAN	Xi'an	3.62	62	Pn	Pn	00 18 47.8	+0.5
XAN				Pg	Pg	00 18 58.8	-1.7
XAN				Sn	Sn	00 19 26.0	-4.2
XAN				Sg	Sg	00 19 40.3	-7.2
XAN				smax			
	comp=N,590nm,0.6s						
XAN				smax			
	comp=E,400nm,0.7s						
LZH	Lanzhou	3.84	345	*e*Pn	Pn	00 18 52.1	+1.8
LZH				Pg	Pb	00 18 59.3	+0.4
LZH				Sn	Sn	00 19 41.6	+6.1
LZH				Sg	Sb	00 19 48.0	+2.5
LZH				smax			
	comp=N,990nm,1.0s						
LZH				smax			
	comp=E,920nm,1.0s						
LZH				LR	LR		
	comp=N,2μm,5.3s						
LZH				LR	LR		
	comp=Z,2μm,6.5s						
ENH	Enshi	4.32	118	*e*Pn	Pn	00 18 57.1	+0.2
ENH				*e*Pg	Pg	00 19 13.5	-0.3
ENH				*e*S

comp=Z,26nm,18.4s,baz=270,slow=37
CN2 Changchun 19.62 49 *e*P **Pn 00 22 20.1 -0.9**
HIA Hailar 20.13 29 *e*P **P 00 22 23.9 -1.3**
comp=Z,13nm,0.8s
MK31 Makanchi Array 22.60 316 *e*P **P 00 22 51.7 0.0**
MKAR Makanchi Array 22.60 316 P **P 00 22 51.4 -0.3**
comp=Z,1.9nm,0.6s,mb3.7,baz=118,slow=12,SNR=14
MKAR Makanchi Array 22.60 316 P **P 00 22 51.4 -0.3**
MDJ Mudanjiang 22.65 50 *e*P **P 00 22 54.5 +2.2**
comp=Z,13nm,1.4s,mb4.2
ZALV Zalesovo Beam 25.96 332 P **P 00 23 23.4 -0.2**
comp=Z,2.8nm,0.5s,mb4.0,baz=138,slow=8.8,SNR=13
ZALV Zalesovo Beam 25.96 332 P **P 00 23 23.4 -0.3**
AML Almayashu 26.68 300 *e*P **P 00 23 30.4 +0.1**
comp=Z,3.5nm,0.8s,mb3.9
KURK Kurchatov 26.75 321 *e*P **P 00 23 30.4 -0.4**
comp=Z,4.7nm,0.8s,mb4.1
MJAR Matsushiro Arr 27.55 72 LR LR 00 36 21.5
comp=Z,26nm,18.2s,baz=285,slow=40
BVAR Borovoye Array 32.33 320 P **P 00 24 20.7 +0.4**
comp=Z,1.0nm,0.6s,mb3.8,baz=117,slow=10,SNR=5.5
BVAR PcP PcP 00 27 08.0 0.0
comp=Z,0.5nm,0.6s,baz=22,slow=4.7,SNR=3.9
BRVK Borovoye 32.40 320 *e*P **P 00 24 20.7 -0.2**
comp=Z,2.0nm,0.7s,mb4.1
ABKAR Akbulak array 37.47 310 *e*P **P 00 25 04.8 +0.1**
comp=Z,0.7nm,0.4s,mb3.8
AKTK Aktyubinsk 38.89 312 P **P 00 25 17.4 +0.8**
AKTO Aktyubinsk 38.89 312 P **P 00 25 17.5 +0.8**
comp=Z,1.2nm,0.7s,mb3.8,baz=98,slow=10,SNR=4.0
ARU Arti 39.95 321 *e*P **P 00 25 25.4 0.0**
comp=Z,5.3nm,0.9s,mb4.3
JOF Joensuu 54.40 327 *e*p **P 00 27 18.3 +0.3**
comp=Z,3.0nm,0.7s,mb4.3
KEV Kevo 55.91 336 *e*P **P 00 27 28.6 -0.2**
comp=Z,4.8nm,0.8s,mb4.6
KEV Kevo 55.91 336 *e*p **P 00 27 27.9 -0.9**
comp=Z,3.6nm,0.5s,mb4.7
ARCES ARCESS Array B 56.44 335 P **P 00 27 32.6 0.0**
comp=Z,2.6nm,0.9s,mb4.3,baz=91,slow=7.3,SNR=6.8
ARCES PcP PcP 00 28 28.7 -0.7
comp=Z,1.0nm,0.6s,baz=102,slow=5.4,SNR=3.6
KAF Kangasniemi 56.78 327 *e*p **P 00 27 34.3 -0.8**
comp=Z,2.5nm,0.8s,mb4.3
BR131 Keskin Array S 56.84 299 *e*P **P 00 27 35.3 -0.6**
comp=Z,1.2nm,0.8s,mb4.0
BR131 *e*PcP PcP 00 28 30.8 -0.8
BR131 PP PP 00 29 42.8 +0.7
BRTR Keskin Array B 56.84 299 P **P 00 27 36.4 +0.5**
comp=Z,1.4nm,0.8s,mb4.0,baz=95,slow=6.6,SNR=7.9
FINES FINESS Array B 56.98 326 P **P 00 27 36.4 -0.2**
comp=Z,2.9nm,0.8s,mb4.3,baz=87,slow=7.6,SNR=10
AKASG Malin Array Be 57.12 313 P **P 00 27 37.5 -0.3**
comp=Z,1.6nm,0.6s,mb4.2,baz=66,slow=7.6,SNR=3.8
CSS Prodhromos 58.55 294 *e*P **P 00 27 46.5 -1.6**
WRA Warramunga Arr 59.09 148 P **P 00 27 52.5 +0.8**
comp=Z,2.3nm,0.6s,mb4.4,baz=342,slow=7.5,SNR=12
ISP Isparta 59.74 298 *e*P **P 00 27 56.2 0.0**
comp=Z,3.2nm,0.3s,mb4.8
ASAR Alice Springs 62.16 150 P **P 00 28 13.6 +0.9**
comp=Z,1.0nm,0.7s,mb4.1,baz=331,slow=6.5,SNR=8.3
HFS Hagfors 63.18 326 P **P 00 28 18.6 -0.5**
comp=Z,2.3nm,0.8s,mb4.3,baz=95,slow=7.4,SNR=6.8
HFS Hagfors 63.18 326 P **P 00 28 18.6 -0.5**
NB2 NORSAR Subarra 64.04 327 P **P 00 28 23.8 -0.9**
comp=Z,3.4nm,0.9s,mb4.4,baz=72,slow=6.9
NOA NORSAR Array B 64.04 327 P **P 00 28 24.1 -0.7**
comp=Z,1.6nm,0.7s,mb4.2,baz=72,slow=6.8,SNR=10
MORC Moravsky Berou 64.57 314 *e*P **P 00 28 28.5 +0.1**
comp=Z,1.5nm,0.7s,mb4.1
GRF Grafenberg Arr 68.39 316 *e*P **P 00 28 52.7 -0.2**
comp=Z,6.0nm,1.3s,mb4.5
GRF Grafenberg Arr 68.39 316 *e*P **P 00 28 52.7 -0.2**
comp=Z,6.0nm,1.3s,mb4.5
STU Stuttgart 69.98 316 P **P 00 29 02.6 -0.2**
CDF Champ du Feu 71.28 316 *e*P **P 00 29 10.7 0.0**
comp=Z,2.6nm,0.6s,mb4.0
CDF Champ du Feu 71.28 316 *e*P **P 00 29 10.7 0.0**
comp=Z,1.3nm,0.6s,mb4.0
WLF Walferdange 71.35 317 P **P 00 29 10.5 -0.6**
HINF Hinteralfeld 71.81 315 *e*P **P 00 29 14.5 +0.6**
GIVF Givet 71.90 318 *e*P **P 00 29 14.5 +0.1**
comp=Z,4.3nm,0.5s,mb4.3
GIVF Givet 71.90 318 *e*P **P 00 29 14.5 +0.1**
comp=Z,2.2nm,0.5s,mb4.3
BAIF Baives 72.27 318 *e*P **P 00 29 16.9 +0.3**
comp=Z,3.5nm,0.6s,mb4.2
BAIF Baives 72.27 318 *e*P **P 00 29 16.9 +0.3**
comp=Z,1.8nm,0.6s,mb4.2
MEZF Maizieres J'vi 72.54 317 *e*P **P 00 29 18.3 0.0**
comp=Z,4.7nm,0.7s,mb4.2
MEZF Maizieres J'vi 72.54 317 *e*P **P 00 29 18.3 0.0**
comp=Z,4.7nm,0.7s,mb4.5
LPG La Plagne 72.98 313 *e*P **P 00 29 21.8 +0.8**
comp=Z,10nm,0.6s,mb4.7
LPG La Plagne 72.98 313 *e*P **P 00 29 21.8 +0.8**
comp=Z,5.1nm,0.6s,mb4.6
LPL La Plagne 72.98 313 *e*P **P 00 29 21.7 +0.7**
comp=Z,10nm,0.6s,mb4.7
LPL La Plagne 72.98 313 *e*P **P 00 29 21.7 +0.7**
comp=Z,5.2nm,0.6s,mb4.6
MBDF Montbardon 73.34 313 *e*P **P 00 29 24.7 +1.6**
comp=Z,7.3nm,0.7s,mb4.4
MBDF Montbardon 73.34 313 *e*P **P 00 29 24.7 +1.6**
comp=Z,3.7nm,0.7s,mb4.4
LOR Lormes 73.85 316 *e*P **P 00 29 25.7 -0.3**
SSF Saint Saulge 74.16 316 *e*P **P 00 29 27.5 -0.4**
comp=Z,3.4nm,0.8s,mb4.0
SSF Saint Saulge 74.16 316 *e*P **P 00 29 27.5 -0.4**
comp=Z,1.7nm,0.8s,mb4.0
SMF Signal de Mont 74.18 315 *e*P **P 00 29 27.7 -0.3**
comp=Z,4.9nm,0.8s,mb4.2
SMF Signal de Mont 74.18 315 *e*P **P 00 29 27.7 -0.3**
comp=Z,2.5nm,0.8s,mb4.2
AVF Avril sur Loir 74.39 316 *e*P **P 00 29 29.0 -0.2**
comp=Z,2.6nm,0.7s,mb4.0
AVF Avril sur Loir 74.39 316 *e*P **P 00 29 29.0 -0.2**
comp=Z,1.3nm,0.7s,mb4.0
VIVF Saint-Julien-l 74.58 313 *e*P **P 00 29 30.4 +0.1**
comp=Z,6.7nm,0.7s,mb4.4
VIVF Saint-Julien-l 74.58 313 *e*P **P 00 29 30.4 +0.1**
comp=Z,3.3nm,0.7s,mb4.4
BGF Bois d'Agland 74.81 316 *e*P **P 00 29 31.6 0.0**
comp=Z,6.4nm,0.8s,mb4.3
BGF Bois d'Agland 74.81 316 *e*P **P 00 29 31.6 0.0**
comp=Z,3.2nm,0.8s,mb4.3
TCF Toulx Ste Croi 75.33 316 *e*P **P 00 29 34.8 +0.2**
comp=Z,2.5nm,0.8s,mb3.9
TCF Toulx Ste Croi 75.33 316 *e*P **P 00 29 34.8 +0.2**
comp=Z,1.3nm,0.8s,mb3.9
LDF La Druitiere 75.45 319 *e*P **P 00 29 34.9 -0.4**
comp=Z,2.4nm,0.6s,mb4.0
LDF La Druitiere 75.45 319 *e*P **P 00 29 34.9 -0.4**
comp=Z,1.2nm,0.6s,mb4.0
GRR Gorron 75.97 319 *e*P **P 00 29 38.2 -0.1**
comp=Z,18nm,1.0s,mb4.6
GRR Gorron 75.97 319 *e*P **P 00 29 38.2 -0.1**
comp=Z,8.9nm,1.0s,mb4.7
CAF Calviac 76.13 315 *e*P **P 00 29 39.7 +0.5**
comp=Z,3.1nm,0.7s,mb4.0
CAF Calviac 76.13 315 *e*P **P 00 29 39.7 +0.5**
comp=Z,1.5nm,0.7s,mb4.0
MFF Saint Martin d 76.54 317 *e*P **P 00 29 41.8 +0.3**
MTLF Montolieu 76.88 313 *e*P **P 00 29 43.6 +0.1**
comp=Z,3.2nm,0.6s,mb4.1
MTLF Montolieu 76.88 313 *e*P **P 00 29 43.6 +0.1**
comp=Z,1.6nm,0.6s,mb4.1
SGMF Saint Gilles 76.99 319 *e*P **P 00 29 44.3 +0.2**
comp=Z,6.9nm,0.7s,mb4.4
SGMF Saint Gilles 76.99 319 *e*P **P 00 29 44.3 +0.2**
comp=Z,3.5nm,0.7s,mb4.4
ROSF Rostrenen 77.34 320 *e*P **P 00 29 46.3 +0.3**
QUIF Quistinic 77.52 319 *e*P **P 00 29 47.0 0.0**
comp=Z,23nm,1.1s,mb4.7
QUIF Quistinic 77.52 319 *e*P **P 00 29 47.0 0.0**
comp=Z,11nm,1.1s,mb4.7
SJPF Ste Jean 79.11 314 *e*P **P 00 29 55.2 -0.7**
comp=Z,8.7nm,1.0s,mb4.4
SJPF Ste Jean 79.11 314 *e*P **P 00 29 55.2 -0.7**
comp=Z,4.3nm,1.0s,mb4.3
YKA Yellowknife Ar 80.23 18 P **P 00 30 01.3 -0.3**
comp=Z,2.2nm,0.7s,mb4.2,baz=328,slow=5.0,SNR=7.5
EVO Evora 85.97 314 *e*P **P 00 30 32.4 +0.6**
comp=Z,20nm,1.1s,mb5.0
FFC Flin Flon 90.17 15 *e*P **P 00 30 50.3 -1.2**
comp=Z,4.3nm,1.0s,mb4.7
TORD Torodi Ar. Bea 94.03 288 P **P 00 31 10.6 +0.4**
comp=Z,0.7nm,1.0s,mb4.1,baz=50,slow=3.7,SNR=3.6

IDC 14 00:34:31.5±32.0, 19°.75N×121°.70E, h0km, mb3.6/3, mb1 3.5/4, mb1mx3.4/22, mbtmp3.5/4, ML2.2/1, MS3.1/1, Ms1 3.1/1, ms1mx2.1/19, Error ellipse: s-maj=577.1km s-min=69.6km az=149.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**18.45**	**16**	P	Pn	00 38 49.0	+0.3
	0.0nm,0.3s,baz=189,slow=10,SNR=3.9						
SONM	**Songino Array**	**30.64**	**340**	P	P	00 40 46.8	-0.7
	0.3nm,0.5s,baz=157,slow=7.8,SNR=2.8						
SONM				LR	LR	00 53 22.8	
	comp=Z,37nm,21.6s,baz=195,slow=37						
MKAR	**Makanchi Array**	**41.92**	**319**	P	P	00 42 24.5	+0.7
	0.6nm,0.7s,baz=113,slow=9.8,SNR=5.4						
ZALV	**Zalesovo Beam**	**44.25**	**329**	P	P	00 42 42.0	-0.6
	0.6nm,0.6s,baz=116,slow=6.6,SNR=2.9						

IDC 14 00:36:32.8±31.0, 19°.19N×122°.13E, h0km, mb3.6/3, mb1 3.6/4, mb1mx3.4/22, mbtmp3.6/4, ML3.6/1, Error ellipse: s-maj=564.0km s-min=67.6km az=149.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**18.89**	**14**	P	Pn	00 40 55.1	-0.2
	0.2nm,0.3s,baz=195,slow=11,SNR=4.7						
SONM	**Songino Array**	**31.31**	**339**	P	P	00 42 54.5	-0.1
	0.3nm,0.5s,baz=148,slow=8.7,SNR=4.2						
MKAR	**Makanchi Array**	**42.60**	**319**	P	P	00 44 31.6	+0.9
	0.4nm,0.7s,baz=111,slow=7.3,SNR=3.0						
ZALV	**Zalesovo Beam**	**44.93**	**330**	P	P	00 44 48.1	-1.2
	0.7nm,0.5s,baz=126,slow=7.5,SNR=3.7						

IDC 14 00:37:21.0±1.0, 5°.87S×151°.30E, h0km, mb4.2/12, mb1 4.4/12, mb1mx4.3/15, mbtmp4.2/12, MS3.5/4, Ms1 3.4/4, ms1mx2.9/17, Error ellipse: s-maj=37.9km s-min=18.5km az=112.0
NEIC 14 00:37:28.6±2.4, 5°.98S×151°.33E, h60km±20km, mb4.3/5, Error ellipse: s-maj=19.6km s-min=13.3km az=88.0
ISC 14 00:37:22.8±5.3, 5°.92S±0°.08×151°.4E±0°.1, h13km±33km, n57, σ1°.02/28, mb4.2/13, MS4.0/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.43**	**230**	*e*Pn	**Pn**	**00 38 46.2**	**+2.6**
	58nm,0.6s						
PMG				*e*Sn	**Sn**	**00 39 46.6**	**+0.6**
HNR	**Honiara**	**9.18**	**113**	LR	LR	00 42 33.5	
	comp=Z,167nm,21.8s,baz=5.3,slow=34						
CTA	**Charters Tower**	**14.94**	**199**	LR	LR	00 45 45.2	
	comp=Z,133nm,21.7s,baz=230,slow=34						
CTAO	**Charters Tower**	**14.94**	**199**	*e*Pn	**Pn**	**00 41 00.9**	**+7.0**
EIDS	**Eidsvold**	**19.34**	**181**	*e*P	**Pn**	**00 41 48.5**	**-0.7**
EIDS	**Eidsvold**	**19.34**	**181**	*e*P	**Pn**	**00 41 48.5**	**-0.7**
	11nm,0.9s						
KAKA	**Kakadu**	**19.86**	**249**	*e*P	**Pn**	**00 41 54.4**	**-1.1**
	28nm,0.5s						
RMQ	**Roma**	**20.61**	**187**	*e*P	**P**	**00 42 02.9**	**+1.0**
	60nm,1.0s						
WRAB	**Tennant Creek**	**21.63**	**228**	*e*P	**P**	**00 42 13.3**	**+0.2**
	15nm,0.8s,mb4.5						
WRA	**Warramunga Arr**	**21.65**	**228**	P	**P**	**00 42 13.1**	**-0.1**
	8.9nm,0.7s,mb4.3,baz=53,slow=11,SNR=12						
QLP	**Quilpie**	**21.65**	**198**	*e*P	**P**	**00 42 12.8**	**-0.4**
ASAR	**Alice Springs**	**24.38**	**222**	P	**P**	**00 42 41.5**	**+0.6**
	9.3nm,0.8s,mb4.3,baz=53,slow=9.4,SNR=30						
CMSA	**Cobar Meteorol**	**26.04**	**191**	*e*P	**P**	**00 42 54.2**	**-1.7**
STKA	**Stephens Creek**	**27.40**	**198**	*e*P	**P**	**00 43 10.3**	**+2.1**
	5.4nm,1.0s,mb4.0						
STKA	**Stephens Creek**	**27.40**	**198**	P	**P**	**00 43 08.3**	**+0.1**
	6.4nm,0.9s,mb4.1,baz=322,slow=14,SNR=3.4						
STKA				LR	LR	00 54 59.8	
	comp=Z,116nm,18.4s,MS3.5,baz=24,slow=39						
STKA	**Stephens Creek**	**27.40**	**198**	*e*P	**P**	**00 43 07.5**	**-0.7**
	2.1nm,1.0s,mb3.6						
STKA				LR	LR	00 54 59.8	
FITZ	**Fitzroy Crossi**	**27.89**	**242**	*e*P	**P**	**00 43 12.4**	**-0.3**
	15nm,0.6s,mb4.8						
FITZ	**Fitzroy Crossi**	**27.89**	**242**	P	**P**	**00 43 12.5**	**-0.2**
	3.1nm,0.5s,mb4.2,baz=33,slow=7.6,SNR=16						
FITZ	**Fitzroy Crossi**	**27.89**	**242**	*e*P	**P**	**00 43 12.4**	**-0.4**
	7.5nm,0.6s,mb4.5						
RAO	**Raoul Island**	**37.13**	**132**	LR	LR	00 56 14.0	
	comp=Z,2μm,18.5s,MS4.8,baz=80,slow=30						
MEEK	**Meekatharra**	**37.40**	**233**	*e*P	**P**	**00 44 33.9**	**-1.9**
KSRS	**Korea Array**	**48.38**	**335**	P	**P**	**00 46 05.3**	**+0.7**
	0.5nm,0.4s,mb3.9,baz=156,slow=8.5,SNR=4.7						
KSRS				pP	pP	00 46 23.6	+15
	0.5nm,0.3s,baz=149,slow=8.6,SNR=5.1						
SONM	**Songino Array**	**66.52**	**329**	P	**P**	**00 48 11.6**	**-0.8**
	2.3nm,1.0s,mb4.2,baz=197,slow=7.2,SNR=6.2						
MKAR	**Makanchi Array**	**80.24**	**319**	P	**P**	**00 49 34.3**	**+0.9**
	0.6nm,0.8s,mb3.6,baz=155,slow=7.9,SNR=4.5						
ZALV	**Zalesovo Beam**	**81.30**	**327**	P	**P**	**00 49 37.8**	**-1.1**
	0.9nm,0.5s,mb3.9,baz=108,slow=4.7,SNR=3.3						
MAW	**Mawson**	**84.00**	**203**	P	**P**	**00 49 53.0**	**+0.3**
	1.6nm,0.8s,mb4.2,baz=90,slow=14,SNR=3.0						
MAW				LR	LR	01 20 51.2	
	comp=Z,40nm,20.0s,MS3.8,baz=70,slow=31						
BVAR	**Borovoye Array**	**89.28**	**323**	P	**P**	**00 50 18.5**	**-0.3**
	0.4nm,0.5s,mb4.0,baz=158,slow=4.7,SNR=2.3						
NVAR	**Mina Array Bea**	**93.89**	**52**	P	**P**	**00 50 42.1**	**+1.6**
	0.9nm,0.7s,mb4.3,baz=254,slow=6.2,SNR=8.0						
YKA	**Yellowknife Ar**	**97.07**	**28**	P	**P**	**00 50 54.4**	**0.0**
	0.9nm,0.7s,mb4.3,baz=267,slow=4.9,SNR=5.4						
YKA	**Yellowknife Ar**	**97.07**	**28**	P	**P**	**00 50 54.4**	**0.0**
AKASG	**Malin Array Be**	**114.56**	**324**	PKiKP	PKiKP	00 56 01.4	-1.4
	0.6nm,0.5s,baz=59,slow=3.1,SNR=4.0						
AKASG	**Malin Array Be**	**114.56**	**324**	PKPdf	PKiKP	00 56 01.4	-1.4
BRTR	**Keskin Array B**	**114.98**	**311**	PKP	PKiKP	00 56 04.3	+0.3
	0.4nm,0.7s,baz=4.8,slow=3.5,SNR=3.6						
NB2	**NORSAR Subarra**	**117.47**	**339**	PKPdf	PKPdf	00 56 07.2	-0.9
	comp=Z,0.5nm,0.7s,baz=45,slow=1.9						
NOA	**NORSAR Array B**	**117.47**	**339**	PKP	PKPdf	00 56 07.7	-0.4
	comp=Z,0.6nm,0.7s,baz=50,slow=1.8,SNR=3.7						
NOA	**NORSAR Array B**	**117.47**	**339**	PKP	PKPdf	00 56 07.7	-0.4
GRF	**Grafenberg Arr**	**125.02**	**329**	*e*PKP	PKPdf	00 56 22.0	-1.0
HAU	**Haudompre**	**128.56**	**331**	*e*PKP1	PKPdf	00 56 29.9	+0.1
	comp=Z,3.9nm,0.5s						
MEZF	**Maizieres J'vi**	**128.83**	**332**	*e*PKP1	PKPdf	00 56 30.1	-0.2
	comp=Z,3.0nm,0.6s						
LPL	**La Plagne**	**130.03**	**328**	*e*PKP1	PKPdf	00 56 32.9	+0.2
LPG	**La Plagne**	**130.04**	**328**	*e*PKP1	PKPdf	00 56 33.5	+0.8
	comp=Z,11nm,1.0s						
LOR	**Lormes**	**130.28**	**331**	*e*PKP1	PKPdf	00 56 33.6	+0.5
	comp=Z,4.8nm,0.8s						
MBDF	**Montbardon**	**130.53**	**327**	*e*PKP1	PKPdf	00 56 33.6	-0.1
	comp=Z,10nm,1.1s						
SSF	**Saint Saulge**	**130.59**	**331**	*e*PKP1	PKPdf	00 56 34.3	+0.6
	comp=Z,7.9nm,1.1s						
SMF	**Signal de Mont**	**130.73**	**331**	*e*PKP1	PKPdf	00 56 34.5	+0.5
	comp=Z,21nm,1.3s						
ORIF	**Oris-en-Rattie**	**130.88**	**328**	*e*PKP1	PKPdf	00 56 34.8	+0.5
	comp=Z,28nm,1.2s						
LDF	**La Druitiere**	**131.07**	**335**	*e*PKP1	PKPdf	00 56 33.6	-1.0
	comp=Z,1.9nm,0.6s						
FLN	**La Foliniere**	**131.09**	**336**	*e*PKP1	PKPdf	00 56 34.3	-0.3
GRR	**Gorron**	**131.53**	**335**	*e*PKP1	PKPdf	00 56 34.5	-1.0
	comp=Z,3.4nm,0.6s						
VIVF	**Saint-Julien-l**	**131.56**	**329**	*e*PKP1	PKPdf	00 56 35.2	-0.4
	comp=Z,7.9nm,1.0s						
LMR	**La Mourre**	**131.58**	**326**	*e*PKP1	PKPdf	00 56 36.0	+0.3
	comp=Z,18nm,1.1s						
SMRF	**Simiane la Rot**	**131.67**	**327**	*e*PKP1	PKPdf	00 56 35.8	-0.1
	comp=Z,39nm,1.2s						
TCF	**Toulx Ste Croi**	**131.77**	**332**	*e*PKP1	PKPdf	00 56 36.7	+0.7
	comp=Z,8.4nm,1.0s						
SGMF	**Saint Gilles**	**132.33**	**337**	*e*PKP1	PKPdf	00 56 35.9	-1.1
	comp=Z,14nm,1.1s						
CAF	**Calviac**	**132.83**	**330**	*e*PKP1	PKPdf	00 56 37.8	-0.2
LFF	**La Frestale**	**133.46**	**331**	*e*PKP1	PKPdf	00 56 38.9	-0.3
	comp=Z,16nm,1.1s						
TORD	**Torodi Ar. Bea**	**149.28**	**286**	PKPbc	PKPbc	00 57 12.0	-0.5
	comp=Z,5.5nm,0.7s,baz=51,slow=4.0,SNR=44						

BJI 14 00:40:29.8, 10°.33N×91°.79E, h26km, mB4.7/6, mb4.5/16, Ms3.9/4, Ms7 3.8/5
IDC 14 00:40:31.0±0.6, 10°.70N×91°.76E, h0km, mb4.2/21, mb1 4.3/22, mb1mx4.2/28, mbtmp4.2/22, ML4.1/1, MS3.4/7, Ms1 3.4/7, ms1mx3.1/21, Error ellipse: s-maj=20.4km s-min=12.5km az=52.0
NEIC 14 00:40:32.2±0.3, 10°.65N×91°.77E, h10km, mb4.5/11, Error ellipse: s-maj=7.2km s-min=6.1km az=46.0
ISCJB 14 00:40:33.4±0.4, 10°.63N±0°.05×91°.76E±0°.04, h33km, mb4.3/33, MS3.6/10, Error ellipse: s-maj=7.8km s-min=6.1km az=5.2
ISC 14 00:40:35.9±0.4, 10°.67N±0°.06×91°.78E±0°.05, h35km, n71, σ0°.88/72, mb4.3/33, MS3.6/10, 1D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	**10.39**	**41**	Pn	**Pn**	**00 43 04.0**	**+1.5**
CMAR	**Chiang Mai Arr**	**10.39**	**41**	Pn	**Pn**	**00 43 02.4**	**-0.1**
	0.4nm,0.3s,baz=235,slow=14,SNR=3.2						
CHTO	**Chiang Mai**	**10.66**	**40**	*e*Pn	**Pn**	**00 43 05.9**	**-0.2**
VIS	**Vishakhapatnam**	**10.78**	**312**	*e*PKP	**Pn**	**00 43 03.6**	**-4.2**
VIS				*e*S	**Sn**	**00 44 55.4**	**-12**
PALK	**Pallekele**	**11.45**	**254**	*e*Pn	**Pn**	**00 43 16.6**	**-0.4**
PALK				*e*Sn	**Sn**	**00 45 12.0**	**-12**
BOK	**Bokaro**	**14.21**	**337**	*e*PKP	**Pn**	**00 43 51.8**	**-3.0**
BOK				AMb	AMB	00 44 02.4	
	comp=Z,15nm,1.5s						
BOK				*e*x	x	00 46 19.5	
TRD	**Trivandrum**	**14.77**	**263**	*e*x	x	00 47 23.5	
AKL	**Akola**	**17.35**	**307**	*e*PKP	**Pn**	**00 44 32.0**	**-3.5**
AKL				AMb	AMB	00 44 47.5	
	comp=Z,47nm,1.9s						
AKL				*e*x	x	00 45 38.2	
AKL				AML	AML	00 46 24.2	
	comp=N,17nm,0.2s						
AKL				AML	AML	00 46 25.5	
	comp=E,15nm,0.3s						
KMI	**Kunming**	**17.75**	**34**	P	**Pn**	**00 44 40.8**	**+0.5**
KMI				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BHPL	**Bhopal**	**18.55**	**314**	*e*PKP	**Pn**	**00 44 45.4**	**-4.7**
BHPL				AMb	AMB	00 44 58.5	
	comp=Z,11nm,1.5s						
BHPL				*e*S	**S**	**00 48 14.7**	**-4.8**
BHPL				AML	AML	00 49 15.8	
	comp=E,4.4nm,0.8s						
BHPL				AML	AML	00 49 17.1	
	comp=N,6.5nm,0.5s						
LSA	**Lhasa**	**18.95**	**358**	*e*P	**Pn**	**00 44 44.0**	**-11**
LSA	**Lhasa**	**18.95**	**358**	*e*P	**Pn**	**00 44 55.3**	**+0.4**
	comp=N,7.8nm,0.5s						
QIZ	**Qiongzhong**	**19.32**	**62**	P	**Pn**	**00 44 58.3**	**-1.2**
QIZ				S	**S**	**00 48 32.3**	**-3.0**
QIZ				LR	LR		
	comp=N,220nm,13.9s						
QIZ				LR	LR		
	comp=Z,260nm,12.3s						
ENH	**Enshi**	**25.54**	**38**	*e*P	**P**	**00 45 59.7**	**-1.7**
	comp=Z,24nm,0.8s,mb4.8						
LZH	**Lanzhou**	**27.57**	**21**	*e*P	**P**	**00 46 20.0**	**+0.3**
LZH				pP	pP	00 46 25.0	-4.7
LZH				sP	sP	00 46 27.5	-6.5
LZH				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.5						
WHN	**Wuhan**	**28.83**	**43**	P	**P**	**00 46 31.0**	**0.0**
WHN				S	**S**	**00 51 20.8**	**+2.1**
WHN				LR	LR		
	comp=Z,310nm,14.0s,MS4.1						
GTA	**Gaotai**	**29.51**	**13**	*e*P	**P**	**00 46 38.1**	**+1.2**
GTA				pP	pP	00 46 43.6	-3.3
GTA				sP	sP	00 46 46.4	-4.8
GTA				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.1						
GTA				pmax	pmax		
	comp=Z,89nm,4.8s						
GTA				LR	LR		
	comp=N,68nm,16.3s,MS3.7						
GTA				LR	LR		
	comp=E,120nm,15.2s,MS3.7						
GTA				LR	LR		
	comp=Z,110nm,15.8s,MS3.6						
YHNB	**Yeheng**	**31.36**	**60**	P	**P**	**00 46 52.5**	**-0.9**
KBL	**Kabul**	**31.55**	**322**	P	**P**	**00 46 55.3**	**+0.3**
HHC	**Hu-ho-hao-te**	**34.77**	**27**	*e*P	**P**	**00 47 24.0**	**+1.0**
HHC				S	**S**	**00 52 51.5**	**+0.4**
HHC				pmax	pmax		
	comp=Z,13nm,0.6s,mb5.0						
HHC				pmax	pmax		
	comp=Z,67nm,6.0s						
TKM2	**Tokmak 2**	**35.09**	**339**	*e*P	**P**	**00 47 25.6**	**-0.1**
	comp=Z,3.0nm,1.1s,mb4.1						
AML	**Almayashu**	**35.12**	**336**	*e*P	**P**	**00 47 27.2**	**+1.2**
	comp=Z,15nm,1.2s,mb4.8						
AAK	**Ala-Archa**	**35.24**	**338**	P	**P**	**00 47 26.6**	**-0.4**
	comp=Z,1.6nm,0.3s,mb4.4,baz=309,slow=5.6,SNR=6.1						
EKS2	**Erkin-Say**	**35.54**	**337**	*e*P	**P**	**00 47 30.3**	**+0.7**
	comp=Z,3.9nm,0.9s,mb4.3						
BJI	**Beijing**	**36.38**	**32**	P	**P**	**00 47 36.9**	**0.0**
BJI				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
BJI				pmax	pmax		
	comp=Z,54nm,3.6s						
BJI				LR	LR		
	comp=N,84nm,16.4s,MS4.0						
BJI				LR	LR		
	comp=E,170nm,16.5s,MS4.0						
BJI				LR	LR		
	comp=Z,86nm,20.5s,MS3.5						
MK31	**Makanchi Array**	**36.90**	**349**	*e*P	**P**	**00 47 41.0**	**-0.2**
MKAR	**Makanchi Array**	**36.90**	**349**	P	**P**	**00 47 41.0**	**-0.1**
	comp=Z,3.7nm,1.0s,mb4.2,baz=169,slow=8.2,SNR=16						
MKAR				LR	LR	01 05 06.1	
	comp=Z,37nm,18.8s,MS3.2,baz=166,slow=40						
MKAR	**Makanchi Array**	**36.90**	**349**	P	**P**	**00 47 41.0**	**-0.1**
MKAR				LR	LR	01 05 06.2	
SONM	**Songino Array**	**39.04**	**16**	P	**P**	**00 47 59.4**

comp=Z,0.4nm,0.4s,mb3.8,baz=82,slow=6.4,SNR=4.3
FINES FINESS Array B 69.17 332 P **P 00 51 38.4 -0.2**
comp=Z,2.7nm,0.8s,mb4.2,baz=147,slow=3.9,SNR=7.5
FINES FINESS Array B 69.17 332 P **P 00 51 38.4 -0.2**
ARCES ARCESS Array B 71.86 340 P **P 00 51 55.0 +0.1**
comp=Z,1.9nm,0.9s,mb4.0,baz=85,slow=6.7,SNR=7.5
ARCES LR LR 01 25 32.7
comp=Z,40nm,19.7s,MS3.7,baz=293,slow=38
ARCES ARCESS Array B 71.86 340 P **P 00 51 55.0 +0.1**
ARCES LR LR 01 25 32.7
BOSA Boshof 75.13 237 P **P 00 52 16.6 +1.8**
comp=Z,3.2nm,0.9s,mb4.3,baz=81,slow=14,SNR=3.5
BOSA LR LR 01 22 59.0
comp=Z,31nm,19.3s,MS3.6,baz=340,slow=34
BOSA Boshof 75.13 237 P **P 00 52 16.6 +1.8**
BOSA LR LR 01 22 59.0
BOSA Boshof 75.13 237 P **P 00 52 15.9 +1.0**
NOA NORSAR Array B 76.17 330 P **P 00 52 19.9 -0.3**
comp=Z,1.2nm,1.0s,mb3.8,baz=93,slow=5.8,SNR=3.0
NOA LR LR 01 29 05.0
comp=Z,29nm,21.4s,MS3.5,baz=245,slow=38
NOA NORSAR Array B 76.17 330 P **P 00 52 19.9 -0.3**
NOA LR LR 01 29 05.0
TORD Torodi Ar. Bea 87.70 283 P **P 00 53 22.9 +1.2**
comp=Z,0.5nm,0.9s,mb3.7,baz=144,slow=5.2,SNR=3.1
MCK McKinley 92.82 23 *e*P **P 00 53 44.3 -0.4**
PDAR Pinedale Array 123.35 19 PKP PKPdf 00 59 30.6 +1.0
comp=Z,0.1nm,0.4s,baz=186,slow=1.3,SNR=4.0
NVAR Mina Array Bea 123.66 28 PKP PKPdf 00 59 32.2 +1.9
comp=Z,0.6nm,0.8s,baz=239,slow=2.9,SNR=5.9
CPUP Villa Florida 146.94 238 PKPbc PKPbc 01 00 17.1 +1.6
comp=Z,1.6nm,0.8s,baz=97,slow=6.9,SNR=5.5

*ISCJB **14** 01:01:03.7±0.6,51.°41N±0.°03×16.°22E±0.°03, h0km, Error ellipse: s-maj=4.6km s-min=2.4km az=18.5*
*CSEM **14** 01:01:04.9±0.3,51.°46N×16.°22E, h2km, ML3.1/10, Error ellipse: s-maj=5.3km s-min=4.5km az=23.0*
*IPEC **14** 01:01:06.4±0.4,51.°44N×16.°42E, h0km, ML1.9/4, Error ellipse: s-maj=3.3km s-min=2.3km az=97.0*
*WAR **14** 01:01:06.9,51.°45N×16.°18E, ML2.4, Mining Induced*
*PRU **14** 01:01:07.0,51.°39N×16.°19E, h0km*
*VIE **14** 01:01:08.3±0.5,51.°19N×16.°20E, h0km, mb2.1/3, ML2.5/4, Error ellipse: s-maj=2.9km s-min=2.6km az=10.0 57 km WNW of Wroclaw Suspected Mining induced.*

ISC 14 01:01:05.0±0.5, 51.°45N±0.°03×16.°20E±0.°03, h0km, n46, σ1°24/80, 4D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.61**	**174**	*e*Pg	**Pg**	**01 01 18.1**	**+1.3**
KSP				*e*Sg	**Sg**	**01 01 26.2**	**+1.4**
KSP	**Ksiaz**	**0.61**	**174**	*i* Pg	**Pg**	**01 01 18.1**	**+1.3**
KSP				*e*Sg	**Sg**	**01 01 26.1**	**+1.3**
KSP	**Ksiaz**	**0.61**	**174**	*e*Pg	**Pg**	**01 01 18.1**	**+1.3**
	baz=7.7						
KSP				*e*Sg	**Sg**	**01 01 25.7**	**+0.9**
	baz=7.7						
UPC	**Upice**	**0.95**	**187**	*e*PG	**Pg**	**01 01 24.2**	**+0.9**
UPC	**Upice**	**0.95**	**187**	Pg	**Pg**	**01 01 24.2**	**+0.9**
DPC	**Dobruska-Polom**	**1.11**	**176**	*e*PG	**Pg**	**01 01 27.0**	**+0.7**
DPC				*e*SG	**Sg**	**01 01 41.3**	**+0.7**
	comp=Z,28nm,0.3s						
DPC	**Dobruska-Polom**	**1.11**	**176**	*e*Pg	**Pg**	**01 01 26.9**	**+0.6**
	baz=3.3						
DPC				*e*Sg	**Sg**	**01 01 41.1**	**+0.5**
	baz=3.3						
PVCC	**Panska Ves**	**1.39**	**229**	*e*PG	**Pg**	**01 01 32.5**	**+0.9**
PVCC				*e*SG	**Sg**	**01 01 50.5**	**+1.0**
	comp=Z,65nm,0.2s						
PVCC	**Panska Ves**	**1.39**	**229**	Pg	**Pg**	**01 01 32.5**	**+0.9**
PVCC				Sg	**Sg**	**01 01 50.5**	**+1.0**
	comp=Z,65nm,0.2s						
BRG	**Berggiesshubel**	**1.53**	**249**	PN	**Pn**	**01 01 33.5**	**-0.1**
BRG				PG	**Pg**	**01 01 35.0**	**+0.6**
BRG				SG	**Sg**	**01 01 55.3**	**+1.0**
	comp=Z,52nm,0.4s						
PRU	**Pruhonice**	**1.81**	**216**	*e*PG	**Pg**	**01 01 39.7**	**+0.1**
PRU				*e*SG	**Sg**	**01 02 03.1**	**+0.1**
	comp=Z,23nm,0.3s						
PRU	**Pruhonice**	**1.81**	**216**	Pg	**Pg**	**01 01 39.7**	**+0.1**
PRU				Sg	**Sg**	**01 02 03.1**	**+0.1**
	comp=Z,23nm,0.3s						
MORC	**Moravsky Berou**	**1.89**	**152**	*e*Pn	**Pn**	**01 01 38.9**	**+0.4**
	baz=337						
MORC				*e*Sg	**Sg**	**01 02 03.4**	**-2.2**
	comp=Z,8.8nm,0.3s,baz=337						
CLL	**Collm**	**2.01**	**267**	*i* Pg	**Pg**	**01 01 43.4**	**-0.1**
CLL				*e*Sg	**Sg**	**01 02 10.0**	**+0.5**
	comp=Z,14nm,0.4s						
OKC	**Ostrava-Krasne**	**2.04**	**142**	*e*PG	**Pg**	**01 01 45.4**	**+1.3**
OKC				*e*SG	**Sg**	**01 02 09.8**	**-0.7**
OKC	**Ostrava-Krasne**	**2.04**	**142**	Pg	**Pg**	**01 01 45.4**	**+1.3**
OKC				Sg	**Sg**	**01 02 09.8**	**-0.7**
VRAC	**Vranov**	**2.16**	**173**	*e*Pg	**Pg**	**01 01 44.0**	**-2.5**
VRAC				*e*Sg	**Sg**	**01 02 12.5**	**-2.0**
	comp=Z,6.9nm,0.2s,baz=357						
TREC	**Trest**	**2.21**	**192**	*e*PN	**Pn**	**01 01 44.9**	**+2.0**
TREC				*e*PG	**Pg**	**01 01 46.9**	**-0.5**
TREC	**Trest**	**2.21**	**192**	Pn	**Pn**	**01 01 44.9**	**+2.0**
KRUC	**Moravsky**	**2.40**	**177**	*e*Pg	**Pg**	**01 01 50.0**	**-1.0**
	baz=0.4						
KRUC				*e*Sg	**Sg**	**01 02 20.8**	**-1.2**
	comp=Z,3.0nm,0.1s,baz=0.4						
OJC	**Ojcow**	**2.60**	**117**	*e*Pg	**Pg**	**01 01 52.8**	**-2.0**
OJC				*e*Sg	**Sg**	**01 02 27.4**	**-1.0**
NKC	**Novy Kostel**	**2.67**	**244**	*e*PG	**Pg**	**01 01 56.8**	**+0.6**
NKC				*e*SG	**Sg**	**01 02 30.7**	**-0.1**
	comp=Z,23nm,0.3s						
NKC	**Novy Kostel**	**2.67**	**244**	Pg	**Pg**	**01 01 56.8**	**+0.6**
NKC				Sg	**Sg**	**01 02 30.7**	**-0.1**
	comp=Z,23nm,0.3s						
JAVC	**Velka Javorina**	**2.77**	**159**	*e*Sg	**Sg**	**01 02 35.2**	**+1.4**
	comp=Z,5.8nm,0.5s						
KHC	**Kasperske Hory**	**2.87**	**217**	*e*PN	**Pn**	**01 01 53.0**	**+1.0**
KHC				*e*PG	**Pg**	**01 01 58.6**	**-1.4**
KHC				*e*SN	**Sn**	**01 02 25.5**	**-1.6**
KHC				*e*SG	**Sg**	**01 02 35.5**	**-1.6**
	comp=Z,5.7nm,0.3s						
KHC	**Kasperske Hory**	**2.87**	**217**	Pn	**Pn**	**01 01 53.0**	**+1.0**
KHC	**Kasperske Hory**	**2.87**	**217**	Pg	**Pg**	**01 01 58.6**	**-1.4**
KHC				Sn	**Sn**	**01 02 25.5**	**-1.6**
KHC				Sg	**Sg**	**01 02 35.5**	**-1.6**
	comp=Z,5.7nm,0.3s						
MOX	**Moxa**	**3.00**	**256**	*e*PG	**Pg**	**01 02 02.7**	**+0.1**
MOX				*i* SG	**Sg**	**01 02 42.7**	**+1.3**
SMOL	**Smolenice**	**3.05**	**164**	*e*	**Pg**	**01 02 05.2**	**+1.8**
SMOL	**Smolenice**	**3.05**	**164**	*e*SG	**Sg**	**01 02 44.2**	**+1.3**
KOLL	**Kolacno**	**3.21**	**153**	*e*SG	**Sg**	**01 02 49.4**	**+1.3**
KOLL	**Kolacno**	**3.21**	**153**	*e*Sg	**Sg**	**01 02 49.4**	**+1.3**
NIE	**Niedzica**	**3.33**	**126**	*e*P	**Pg**	**01 02 10.0**	**+1.2**
NIE				*e*S	**Sg**	**01 02 53.2**	**+1.3**
VYHS	**Vyhne**	**3.42**	**149**	*e*	**Pg**	**01 02 10.0**	**-0.5**
VYHS	**Vyhne**	**3.42**	**149**	*e*SG	**Sg**	**01 02 54.8**	**0.0**
VYHS	**Vyhne**	**3.42**	**149**	*e*Sg	**Sg**	**01 02 54.8**	**0.0**
CONA	**Conrad Observa**	**3.54**	**184**	⇓*i*Pn	**Pn**	**01 02 00.6**	**-0.6**
CONA				⇓*i*Sg	**Sg**	**01 02 56.6**	**-2.0**
	comp=Z,7.3nm,0.4s						
CONA	**Conrad Observa**	**3.54**	**184**	Pn	**Pn**	**01 02 00.6**	**-0.5**
CONA				Sg	**Sg**	**01 02 56.6**	**-2.0**
	comp=Z,7.3nm,0.4s						
GRF	**Grafenberg Arr**	**3.63**	**243**	*e*Sg	**Sg**	**01 02 59.2**	**-2.4**
BSD	**Bornholm Skovb**	**3.75**	**349**	*i* P	**Pn**	**01 02 03.3**	**-0.7**
BSD				*i* S	**Sn**	**01 02 46.2**	**-2.6**
BSD	**Bornholm Skovb**	**3.75**	**349**	*i* P	**Pn**	**01 02 03.3**	**-0.7**
	SNR=49						
BSD				*i* S	**Sn**	**01 02 46.2**	**-2.6**
STHS	**Stebnicka Huta**	**3.82**	**120**	*e*	**Pg**	**01 02 20.6**	**+2.5**
STHS	**Stebnicka Huta**	**3.82**	**120**	*e*SG	**Sg**	**01 03 06.6**	**-1.0**
STHS	**Stebnicka Huta**	**3.82**	**120**	*e*Sg	**Sg**	**01 03 06.6**	**-1.0**
MOA	**Molln**	**3.82**	**200**	⇓*i*Pn	**Pn**	**01 02 05.7**	**+0.7**
MOA				⇓*i*Sg	**Sg**	**01 03 06.2**	**-1.5**
	comp=Z,4.9nm,0.4s						
MOA	**Molln**	**3.82**	**200**	Pn	**Pn**	**01 02 05.7**	**+0.7**
MOA				Sg	**Sg**	**01 03 06.2**	**-1.5**
	comp=Z,4.9nm,0.4s						

*CSEM **14** 01:06:16.4,37.°05N×20.°11E, h19km, MD3.5, After ATH*
*NEIC **14** 01:06:16.4,37.°05N×20.°11E, h19km, MD3.5(ATH), After ATH.*

ATH 14 01:06:16.4,37.°05N×20.°11E, h19km±1km, MD3.5/9,

Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**1.19**	**19**	*e*Pn	Pn	01 06 38.7	+0.7
VLS				*e*Sn	Sn	01 06 55.9	+2.3
VLS	**Valsamata**	**1.19**	**19**	*e*PN	Pn	01 06 38.7	+0.7
VLS				*e*SN	Sn	01 06 55.9	+2.3
VLS	**Valsamata**	**1.19**	**19**	*e*Pn	Pn	01 06 38.7	+0.7
VLS				*e*Sn	Sn	01 06 55.9	+2.3
PYL	**PYLOS**	**1.32**	**96**	*e*PN	Pn	01 06 40.5	+0.8
PYL				*e*SN	Sn	01 06 59.7	+2.9
PYL	**PYLOS**	**1.32**	**96**	*e*Pn	Pn	01 06 40.5	+0.8
PYL				*e*Sn	Sn	01 06 59.7	+2.9
ITM	**Ithomi**	**1.46**	**84**	*e*Pn	Pn	01 06 43.4	+1.7
ITM				*e*Sn	Sn	01 07 03.6	+3.3
ITM	**Ithomi**	**1.46**	**84**	*e*PN	Pn	01 06 43.4	+1.7
ITM				*e*SN	Sn	01 07 03.6	+3.3
ITM	**Ithomi**	**1.46**	**84**	*e*Pn	Pn	01 06 43.4	+1.7
ITM				*e*Sn	Sn	01 07 03.6	+3.3
RLS	**Riolos of Patr**	**1.48**	**47**	*e*Pn	Pn	01 06 44.3	+2.4
RLS				*e*Sn	Sn	01 07 03.9	+3.2
RLS	**Riolos of Patr**	**1.48**	**47**	*e*PN	Pn	01 06 44.2	+2.3
RLS				*e*SN	Sn	01 07 03.9	+3.2
RLS	**Riolos of Patr**	**1.48**	**47**	*e*Pn	Pn	01 06 44.3	+2.4
RLS				*e*Sn	Sn	01 07 03.9	+3.2
VLX	**Vlachokerasia**	**1.84**	**79**	*e*PN	Pn	01 06 49.3	+2.4
VLX	**Vlachokerasia**	**1.84**	**79**	*e*Pn	Pn	01 06 49.3	+2.4
EFP	**Efpalio**	**1.98**	**45**	*e*PN	Pn	01 06 51.6	+2.7
EFP	**Efpalio**	**1.98**	**45**	*e*Pn	Pn	01 06 51.6	+2.7
GUR	**Goura**	**1.98**	**63**	*e*PN	Pn	01 06 51.2	+2.3
GUR	**Goura**	**1.98**	**63**	*e*Pn	Pn	01 06 51.2	+2.3
VLI	**Veliai**	**2.29**	**97**	*e*Pn	Pn	01 06 56.2	+3.1
VLI	**Veliai**	**2.29**	**97**	*e*PN	Pn	01 06 56.2	+3.1
VLI	**Veliai**	**2.29**	**97**	*e*Pn	Pn	01 06 56.2	+3.1
DID	**Didima**	**2.54**	**79**	*e*PN	Pn	01 06 58.8	+2.3
DID	**Didima**	**2.54**	**79**	*e*Pn	Pn	01 06 58.8	+2.3

*NEIC **14** 01:06:59.4, 18.°03N×76.°78W, h16km, MD3.9(JSN), After JSN.*
NEIC Felt at Half Way Tree and Kingston.

JSN 14 01:06:59.6±1.1, 18.°02N×76.°78W, h11km±3km, MD3.9, 11C-7D, Fault plane solution: NP1:φ=249.20000°, δ52.20000°, λ26.60000°., Jamaica region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOJ	**Hope**	**0.03**	**121**	⇑*i*P	Pg	01 07 01.3	-0.2
HOJ				*i* S	Sg	01 07 04.0	+1.1
STH	**Stony Hill**	**0.06**	**333**	⇑*i*P	Pg	01 07 01.3	-0.5
STH				*i* S	Sg	01 07 03.5	+0.1
STH	**Stony Hill**	**0.06**	**333**	⇑*i*P	Pg	01 07 01.3	-0.5
STH				*i* S	Sg	01 07 06.0	+2.6
GWJ	**Greenwich**	**0.07**	**44**	⇓*i*P	Pg	01 07 01.9	0.0
GWJ				*i* S	Sg	01 07 04.1	+0.5
GWJ	**Greenwich**	**0.07**	**44**	⇓*i*P	Pg	01 07 01.9	0.0
GWJ				*i* S	Sg	01 07 04.2	+0.6
YHJ	**Yallahs**	**0.30**	**115**	⇑*i*P	Pg	01 07 05.9	+0.2
YHJ				*i* S	Sg	01 07 09.6	-0.2
BNJ	**Bonny Gate**	**0.34**	**331**	⇓*i*P	Pg	01 07 05.5	-0.9
BNJ	**Bonny Gate**	**0.34**	**331**	⇓*i*P	Pg	01 07 05.5	-0.9
CMJ	**Castle Mountai**	**0.40**	**74**	⇑*i*P	Pg	01 07 07.6	0.0
CMJ				*i* S	Sg	01 07 13.0	0.0
CMJ	**Castle Mountai**	**0.40**	**74**	⇑*i*P	Pg	01 07 07.6	+0.1
CMJ				*i* S	Sg	01 07 13.0	0.0
PCJ	**Portland Cotta**	**0.46**	**232**	⇓*i*P	Pg	01 07 08.0	-0.6
PCJ				*i* S	Sg	01 07 13.7	-0.8
PCJ	**Portland Cotta**	**0.46**	**232**	⇓*i*P	Pg	01 07 08.0	-0.6
BBJ	**Bamboo Saint A**	**0.59**	**308**	⇑*i*P	Pg	01 07 09.9	-1.1
BBJ				*i* S	Sg	01 07 17.4	-1.3
BBJ	**Bamboo Saint A**	**0.59**	**308**	⇑*i*P	Pg	01 07 09.9	-1.1
BBJ				*i* S	Sg	01 07 17.6	-1.2
MTDJ	**Mount Denham**	**0.75**	**286**	⇑*i*Pg	Pg	01 07 12.3	-1.7
MTDJ				*e*Sg	Sg	01 07 22.8	-1.0
MCJ	**Malvern**	**0.87**	**264**	⇑*e*P	Pg	01 07 14.9	-1.5
MCJ				*i* S	Sg	01 07 27.1	-0.6
MCJ	**Malvern**	**0.87**	**264**	⇓*e*P	Pg	01 07 15.0	-1.4
NEJ	**Negril**	**1.49**	**279**	⇑*e*P	Pn	01 07 25.0	-1.4
NEJ				*i* S	Sn	01 07 44.4	-1.4
GTBY	**Guantanamo Bay**	**2.47**	**40**	*e*Pn	Pn	01 07 37.0	-2.8
GTBY				*e*S	Sn	01 08 04.2	-5.8
GTBY				*e*TT		01 09 43.6	
SDDR	**Presa de Saban**	**5.30**	**79**	*e*Pn	Pn	01 08 17.4	-1.3
BCIP	**Isla Barro Col**	**9.29**	**199**	Pn	Pn	01 09 14.2	+0.5
CELP	**Cerrillos**	**9.70**	**88**	Pn	Pn	01 09 18.4	-0.8
CBYP	**Canovanas**	**10.39**	**87**	Pn	Pn	01 09 28.8	+0.1
TGUH	**Tegucigalpa,Un**	**10.83**	**250**	Pn	Pn	01 09 36.5	+1.8
TEIG	**Tepich**	**11.09**	**283**	*e*Pn	Pn	01 09 35.5	-2.7

CSEM 14 01:29:44.3, 38.°76N×45.°35E, h14km, ML3.5, After THR, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAKU	**Maku**	**0.79**	**319**	*e*Pg	Pg	01 29 59.4	-0.2
MAKU				*e*Sg	Sg	01 30 10.5	+0.5
GRMI	**Germi**	**1.99**	**88**	*e*Pg	Pg	01 30 20.6	-1.9
ZNJK	**Zanjan**	**3.37**	**127**	*e*Pn	Pn	01 30 38.8	+2.3
SNGE	**Sanandaj**	**4.00**	**156**	*e*Pn	Pn	01 30 47.2	+2.1
THKV	**Tehran--Karaj**	**5.24**	**121**	*e*Pn	Pn	01 31 04.5	+2.3
ASAO	**Ashtian**	**5.64**	**137**	*e*Pn	Pn	01 31 10.2	+2.5

*TRN **14** 01:33:32.0, 17.°50N×61.°22W, h2km, MD3.5*
*RSPR **14** 01:33:33.2, 17.°79N×60.°85W, h82km±11km, MD4.3/4, MD4.3/4*
*NEIC **14** 01:33:33.2, 17.°79N×60.°85W, h82km, MD4.4(RSPR), After RSPR.*

ISC 14 01:33:32.7±2.0, 17.°63N±0.°08×61.°03W±0.°07, h8km±8km, n29, σ0°69/41, 4C-7D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANWB	**Willy Bob**	**0.72**	**273**	*e*Pn	**Pn**	**01 33 47.6**	**-1.6**
ANWB				*e*S	**Sg**	**01 33 57.3**	**+1.3**
BPA	**Boggy Peak**	**0.98**	**234**	*e*P	**Pg**	**01 33 51.4**	**-0.1**
BPA				*e*S	**Sg**	**01 34 03.2**	**-1.1**
BPA	**Boggy Peak**	**0.98**	**234**	*e*P	**Pg**	**01 33 51.4**	**-0.1**
BPA				*e*S	**Sg**	**01 34 03.2**	**-1.1**
SEG	**Port Louis**	**1.30**	**200**	⇓*i*P	**Pn**	**01 33 56.5**	**-0.7**
DEG	**La Desirade**	**1.31**	**181**	*e*P	**Pn**	**01 33 57.0**	**-0.4**
BCG	**Bois Riant Cap**	**1.64**	**200**	*e*P	**Pn**	**01 34 01.8**	**0.0**
LZG	**Guadaloupe-1**	**1.65**	**206**	*e*P	**Pn**	**01 34 01.8**	**-0.1**
SKI	**Saint Kitts**	**1.66**	**260**	*e*P	**Pn**	**01 34 02.4**	**+0.3**
SKI				*e*S	**Sn**	**01 34 23.8**	**+0.2**
SKI	**Saint Kitts**	**1.66**	**260**	*e*P	**Pn**	**01 34 02.4**	**+0.3**
SKI				*e*S	**Sn**	**01 34 23.8**	**+0.2**
PHG	**Guadaloupe-2**	**1.71**	**200**	*e*P	**Pn**	**01 34 03.4**	**+0.6**
SCG	**Saint Claude**	**1.71**	**201**	*e*P	**Pn**	**01 34 03.5**	**+0.7**
MGG	**Marie-Galante**	**1.73**	**189**	*e*P	**Pn**	**01 34 03.5**	**+0.4**
HMG	**Houelmont**	**1.76**	**201**	*e*P	**Pn**	**01 34 04.3**	**+0.8**
TBG	**Guadaloupe-3**	**1.86**	**199**	*e*P	**Pn**	**01 34 04.5**	**-0.5**
SEUS	**St. Eustatius**	**1.87**	**266**	⇑*e*P	**Pn**	**01 34 05.3**	**+0.4**
SEUS	**St. Eustatius**	**1.87**	**266**	⇑*e*P	**Pn**	**01 34 05.3**	**+0.4**
FDF	**Fort de France**	**2.88**	**182**	*e*Pn	**Pn**	**01 34 19.6**	**+0.6**
STVI	**Saint Thomas**	**3.80**	**281**	⇑*e*P	**Pn**	**01 34 30.4**	**-1.2**
STVI				*e*S	**Sn**	**01 35 16.9**	**+0.3**
STVI	**Saint Thomas**	**3.80**	**281**	⇑*e*P	**Pn**	**01 34 30.4**	**-1.2**
STVI				*e*S	**Sn**	**01 35 16.9**	**+0.3**
MTP	**Monte Pirata**	**4.33**	**277**	⇓*e*P	**Pn**	**01 34 38.8**	**-0.2**
MTP	**Monte Pirata**	**4.33**	**277**	*e*S	**Sn**	**01 35 30.3**	**+0.7**
MTP	**Monte Pirata**	**4.33**	**277**	*e*Pn	**Pn**	**01 34 38.9**	**0.0**
MTP				*e*Sn	**Sn**	**01 35 28.7**	**-0.9**
MTP	**Monte Pirata**	**4.33**	**277**	⇓*e*P	**Pn**	**01 34 38.8**	**-0.2**
MTP				*e*S	**Sn**	**01 35 30.3**	**+0.7**
HUMP	**Col San Antoni**	**4.62**	**277**	⇓*e*P	**Pn**	**01 34 42.8**	**0.0**
HUMP				*e*S	**Sn**	**01 35 37.4**	**+0.7**
HUMP	**Col San Antoni**	**4.62**	**277**	⇓*e*P	**Pn**	**01 34 42.8**	**0.0**
HUMP				*e*S	**Sn**	**01 35 37.4**	**+0.7**
CBYP	**Canovanas**	**4.64**	**279**	⇓*e*P	**Pn**	**01 34 43.6**	**+0.5**
CBYP	**Canovanas**	**4.64**	**279**	*e*Pn	**Pn**	**01 34 42.9**	**-0.2**
CBYP				*e*Sn	**Sn**	**01 35 36.3**	**-0.9**
CBYP	**Canovanas**	**4.64**	**279**	⇓*e*P	**Pn**	**01 34 43.6**	**+0.5**
SJG	**San Juan**	**4.90**	**276**	Pn	**Pn**	**01 34 40.5**	**-6.2**

*ISCJB **14** 01:33:56.8±0.4, 50.°27N±0.°02×3.°66E±0.°02, h6km±2km, Error ellipse: s-maj=2.9km s-min=2.0km az=155.2*

*CSEM **14** 01:33:58.3±0.1, 50.°35N×3.°72E, h10km, ML3.3/28, Error ellipse: s-maj=2.6km s-min=1.7km az=156.0*
*UCC **14** 01:33:58.3±0.4, 50.°40N×3.°75E, h4km±1km, ML2.6*
*NEIC **14** 01:33:59.0, 50.°43N×3.°78E, h4km, ML3.2(LDG), ML3.1(STR), After LDG.*
*LDG **14** 01:33:59.0±0.1, 50.°43N×3.°78E, h4km, Md3.0/2, Ml3.2/41, Error ellipse: s-maj=1.2km s-min=0.8km az=155.0*
*STR **14** 01:34:00.1±0.7, 50.°42N×3.°79E, h5km, Ml3.1, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 14 01:33:58.3±0.3, 50.°34N±0.°01×3.°72E±0.°02, h12km±2km, n140, σ1°11/293, 3C-4D, Belgium

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNF	**Seneffe**	**0.40**	**65**	⇑P	**Pg**	**01 34 04.7**	**-1.4**
SNF				S	**Sg**	**01 34 10.6**	**-0.9**
	comp=Z,160nm,0.3s						
SNF	**Seneffe**	**0.40**	**65**	P	**Pg**	**01 34 04.7**	**-1.5**
SNF				S	**Sg**	**01 34 10.6**	**-0.9**
	comp=Z,160nm,0.3s						
BAIF	**Baives**	**0.42**	**132**	*e*Pg	**Pg**	**01 34 07.8**	**+1.2**
BAIF				*e*Sg	**Sg**	**01 34 13.5**	**+1.3**
	comp=Z,666nm,0.6s						
BAIF	**Baives**	**0.42**	**132**	*e*Pg	**Pg**	**01 34 07.8**	**+1.2**
BAIF				*e*Sg	**Sg**	**01 34 13.5**	**+1.3**
	comp=Z,333nm,0.6s						
DOU	**Dourbes**	**0.61**	**113**	⇓P	**Pg**	**01 34 10.0**	**-0.2**
DOU				S	**Sg**	**01 34 18.7**	**+0.4**
	comp=E,126nm,0.4s						
DOU	**Dourbes**	**0.61**	**113**	P	**Pg**	**01 34 09.9**	**-0.3**
DOU				S	**Sg**	**01 34 18.6**	**+0.4**
	comp=E,126nm,0.4s						
UCC	**Uccle**	**0.61**	**41**	⇑P	**Pg**	**01 34 09.4**	**-0.8**
UCC				S	**Sg**	**01 34 16.1**	**-2.2**
	comp=E,125nm,0.2s						
UCC	**Uccle**	**0.61**	**41**	P	**Pg**	**01 34 09.3**	**-0.9**
UCC				S	**Sg**	**01 34 16.1**	**-2.2**
	comp=E,125nm,0.2s						
GIVF	**Givet**	**0.75**	**108**	*e*Pg	**Pg**	**01 34 12.4**	**-0.3**
GIVF				*e*Sg	**Sg**	**01 34 22.5**	**0.0**
	comp=E,375nm,0.6s						
GIVF	**Givet**	**0.75**	**108**	*e*Pg	**Pg**	**01 34 12.4**	**-0.3**
GIVF				*e*Sg	**Sg**	**01 34 22.5**	**0.0**
	comp=E,188nm,0.6s						
BCLA	**Clavier**	**1.02**	**85**	⇑P	**Pb**	**01 34 16.8**	**-0.9**
BCLA				S	**Sg**	**01 34 32.1**	**+1.0**
	comp=E,334nm,0.4s						
BCLA	**Clavier**	**1.02**	**85**	P	**Pb**	**01 34 16.8**	**-1.0**
BCLA				S	**Sg**	**01 34 32.0**	**+0.9**
	comp=E,334nm,0.4s						
MENF	**Mencas**	**1.02**	**283**	Pg	**Pg**	**01 34 18.8**	**+0.8**
MENF				Sg	**Sg**	**01 34 35.9**	**+4.6**
MENF	**Mencas**	**1.02**	**283**	Pg	**Pg**	**01 34 18.8**	**+0.8**
MENF				Sg	**Sg**	**01 34 35.9**	**+4.6**
BEBN	**Eben Emael**	**1.33**	**69**	⇓P	**Pn**	**01 34 22.2**	**-0.4**
BEBN				S	**Sb**	**01 34 40.3**	**+0.2**
	comp=E,101nm,0.3s						
BEBN	**Eben Emael**	**1.33**	**69**	P	**Pn**	**01 34 22.2**	**-0.4**
BEBN				S	**Sb**	**01 34 40.2**	**+0.1**
	comp=E,101nm,0.3s						
HGN	**Heimansgroeve**	**1.47**	**72**	*e*Pn	**Pn**	**01 34 23.9**	**-0.7**
	baz=260						
HGN	**Heimansgroeve**	**1.47**	**72**	*e*Pg	**Pg**	**01 34 25.9**	**-0.6**
	comp=E,14nm,0.2s						
HGN				*e*Sg	**Sg**	**01 34 43.6**	**-2.1**
HGN	**Heimansgroeve**	**1.47**	**72**	*e*Pg	**Pg**	**01 34 25.9**	**-0.6**
	comp=E,14nm,0.2s						
HGN				*e*Sg	**Sg**	**01 34 43.6**	**-2.1**
MEM	**Membach**	**1.49**	**79**	⇓P	**Pn**	**01 34 25.2**	**+0.4**
MEM				S	**Sn**	**01 34 44.5**	**+0.4**
	comp=E,102nm,0.4s						
MEM	**Membach**	**1.49**	**79**	P	**Pn**	**01 34 25.1**	**+0.4**
MEM				S	**Sn**	**01 34 44.5**	**+0.4**
	comp=E,102nm,0.4s						
WLF	**Walferdange**	**1.71**	**112**	⇓P	**Pn**	**01 34 29.7**	**+1.9**
WLF				S	**Sn**	**01 34 51.2**	**+1.6**
	comp=N,74nm,0.4s						
WLF	**Walferdange**	**1.71**	**112**	*e

LOR eSn Sn 01 35 23.9 +0.7
LOR eSg Sg 01 35 37.7 +0.7
comp=N,7.8nm,0.3s
ECH Echery 3.10 132 Pn Pn 01 34 48.8 +1.9
ECH Echery 3.10 132 ePn Pn 01 34 48.5 +1.6
ECH eSg Sg 01 35 37.6 0.0
ECH Echery 3.10 132 ePn Pn 01 34 48.5 +1.6
ECH eSg Sg 01 35 37.6 -0.1
HYF Humbligny 3.16 193 ePn Pn 01 34 49.1 +1.4
HYF eSn Sn 01 35 25.7 +0.5
HYF eSg Sg 01 35 40.5 +1.0
HYF Humbligny 3.16 193 ePn Pn 01 34 49.1 +1.4
HYF eSn Sn 01 35 25.7 +0.5
HYF eSg Sg 01 35 40.5 +1.0
FLN La Foliniere 3.16 242 ePn Pn 01 34 48.6 +0.9
baz=55
FLN La Foliniere 3.16 242 ePg Pg 01 34 58.6 -0.1
baz=59
FLN eSg Sg 01 35 40.3 +0.7
comp=N,76nm,0.6s
FLN La Foliniere 3.16 242 ePn Pn 01 34 48.6 +0.9
FLN ePg Pg 01 34 58.6 -0.1
FLN eSg Sg 01 35 40.3 +0.7
FLN La Foliniere 3.16 242 ePn Pn 01 34 48.6 +0.9
FLN La Foliniere 3.16 242 ePg Pg 01 34 58.6 -0.1
FLN eSg Sg 01 35 40.3 +0.7
comp=N,38nm,0.6s
HINF Hinteralfeld 3.26 140 ePg Pg 01 35 00.0 -0.7
HINF eSn Sn 01 35 26.9 -0.9
HINF eSg Sg 01 35 42.5 -0.4
comp=N,26nm,0.4s
HINF Hinteralfeld 3.26 140 ePn Pn 01 34 49.8 +0.7
HINF ePg Pg 01 35 00.0 -0.7
HINF eSn Sn 01 35 26.9 -0.9
HINF eSg Sg 01 35 42.5 -0.4
HINF Hinteralfeld 3.26 140 ePn Pn 01 34 49.8 +0.7
HINF Hinteralfeld 3.26 140 ePg Pg 01 35 00.0 -0.7
HINF eSn Sn 01 35 26.9 -0.9
HINF eSg Sg 01 35 42.5 -0.4
comp=N,13nm,0.4s
SSF Saint Saulge 3.28 183 ePn Pn 01 34 50.6 +1.1
SSF eSn Sn 01 35 28.4 0.0
SSF eSg Sg 01 35 44.4 +0.7
comp=N,32nm,0.7s
SSF Saint Saulge 3.28 183 ePn Pn 01 34 50.6 +1.1
SSF eSn Sn 01 35 28.4 0.0
SSF eSg Sg 01 35 44.4 +0.7
comp=N,16nm,0.7s
MOF Molkenrain 3.35 137 Pn Pn 01 34 52.3 +1.9
MOF Molkenrain 3.35 137 Pn Pn 01 34 52.3 +1.9
AVF Avril sur Loir 3.56 184 ePn Pn 01 34 54.5 +1.2
AVF eSn Sn 01 35 35.4 +0.2
AVF eSg Sg 01 35 52.6 +0.1
comp=N,14nm,0.6s
AVF Avril sur Loir 3.56 184 ePn Pn 01 34 54.5 +1.2
AVF eSn Sn 01 35 35.4 +0.2
AVF eSg Sg 01 35 52.6 +0.1
comp=N,7.2nm,0.6s
GRR Gorron 3.57 239 ePg Pg 01 35 06.5 -0.2
GRR eSn Sn 01 35 35.4 -0.1
GRR eSg Sg 01 35 52.9 0.0
comp=N,12nm,0.3s
GRR Gorron 3.57 239 ePn Pn 01 34 54.3 +0.9
GRR ePg Pg 01 35 06.5 -0.2
GRR eSn Sn 01 35 35.4 -0.1
GRR eSg Sg 01 35 52.9 0.0
GRR Gorron 3.57 239 ePn Pn 01 34 54.3 +0.9
GRR Gorron 3.57 239 ePg Pg 01 35 06.5 -0.2
GRR eSn Sn 01 35 35.4 -0.1
GRR eSg Sg 01 35 52.9 0.0
comp=N,6.2nm,0.3s
BFO Black Forest 3.62 122 ePn Pn 01 34 55.0 +0.9
BFO ePg Pg 01 35 08.5 +0.8
BFO Black Forest 3.62 122 ePn Pn 01 34 55.0 +0.9
SMF Signal de Mont 3.70 179 ePn Pn 01 34 56.2 +1.1
SMF eSn Sn 01 35 38.6 0.0
SMF eSg Sg 01 35 57.3 +0.4
comp=N,30nm,0.7s
SMF Signal de Mont 3.70 179 ePn Pn 01 34 56.2 +1.1
SMF eSn Sn 01 35 38.6 0.0
SMF eSg Sg 01 35 57.3 +0.4
comp=N,15nm,0.7s
FELD Feldberg im Sc 3.74 130 Pn Pn 01 34 57.5 +1.8
FELD Feldberg im Sc 3.74 130 Pn Pn 01 34 57.5 +1.8
BGF Bois d'Agland 3.83 189 ePn Pn 01 34 58.3 +1.4
BGF eSn Sn 01 35 41.7 -0.1
BGF eSg Sg 01 36 01.5 +0.4
comp=N,36nm,0.4s
BGF Bois d'Agland 3.83 189 ePn Pn 01 34 58.3 +1.4
BGF eSn Sn 01 35 41.7 -0.1
BGF eSg Sg 01 36 01.5 +0.4
comp=N,18nm,0.4s
CABF La Chapelle 4.05 156 ePn Pn 01 35 01.5 +1.5
CABF eSn Sn 01 35 46.6 -0.7
CABF eSg Sg 01 36 07.9 -0.3
comp=N,42nm,0.8s
CABF La Chapelle 4.05 156 ePn Pn 01 35 01.5 +1.5
CABF eSn Sn 01 35 46.6 -0.7
CABF eSg Sg 01 36 07.9 -0.3
comp=N,21nm,0.8s
TCF Toulx Ste Croi 4.18 195 ePn Pn 01 35 03.5 +1.8
TCF eSn Sn 01 35 49.7 -0.7
TCF eSg Sg 01 36 12.8 +0.5
comp=N,20nm,0.7s
TCF Toulx Ste Croi 4.18 195 ePn Pn 01 35 03.5 +1.8
TCF eSn Sn 01 35 49.7 -0.7
TCF eSg Sg 01 36 12.8 +0.5
comp=N,9.8nm,0.7s
MFF Saint Martin d 4.54 216 ePg Pg 01 35 24.6 -0.5
MFF eSn Sn 01 35 58.2 -1.1
MFF eSg Sg 01 36 23.4 -0.5
comp=N,10nm,0.4s
MFF Saint Martin d 4.54 216 ePn Pn 01 35 07.5 +0.8
MFF ePg Pg 01 35 24.6 -0.5
MFF eSn Sn 01 35 58.2 -1.1
MFF eSg Sg 01 36 23.4 -0.5
MFF Saint Martin d 4.54 216 ePn Pn 01 35 07.5 +0.8
MFF Saint Martin d 4.54 216 ePg Pg 01 35 24.6 -0.5
MFF eSn Sn 01 35 58.2 -1.1
MFF eSg Sg 01 36 23.4 -0.5
comp=N,5.1nm,0.4s
SGMF Saint Gilles 4.61 245 ePn Pn 01 35 08.8 +1.2
SGMF eSn Sn 01 35 59.8 -1.2
SGMF eSg Sg 01 36 25.1 -1.0
comp=N,43nm,1.1s
SGMF Saint Gilles 4.61 245 ePn Pn 01 35 08.8 +1.2
SGMF eSn Sn 01 35 59.8 -1.2
SGMF eSg Sg 01 36 25.1 -1.0
comp=N,22nm,1.1s
ROSF Rostrenen 4.99 249 ePn Pn 01 35 13.0 +0.1
ROSF eSn Sn 01 36 09.2 -1.3
ROSF eSg Sg 01 36 36.9 -1.5
comp=N,9.7nm,0.6s
ROSF Rostrenen 4.99 249 ePn Pn 01 35 13.0 +0.1
ROSF eSn Sn 01 36 09.2 -1.3
ROSF eSg Sg 01 36 36.9 -1.5
comp=N,4.8nm,0.6s
QUIF Quistinic 5.13 244 ePn Pn 01 35 15.5 +0.7
QUIF eSn Sn 01 36 12.5 -1.4
QUIF eSg Sg 01 36 41.2 -1.6
comp=N,21nm,0.7s
QUIF Quistinic 5.13 244 ePn Pn 01 35 15.5 +0.7
QUIF eSn Sn 01 36 12.5 -1.4
QUIF eSg Sg 01 36 41.2 -1.6
comp=N,10nm,0.7s
LPL La Plagne 5.23 156 ePn Pn 01 35 17.1 +0.9
LPL eSn Sn 01 36 15.2 -1.3
comp=N,3.0nm,0.3s
LPL La Plagne 5.23 156 ePn Pn 01 35 17.1 +0.9
LPL eSn Sn 01 36 15.2 -1.3
comp=N,1.5nm,0.3s
RJF Les Rejaudoux 5.25 197 ePn Pn 01 35 17.3 +0.8
RJF eSn Sn 01 36 15.7 -1.2
RJF eSg Sg 01 36 46.0 -0.8
comp=N,12nm,0.7s
RJF Les Rejaudoux 5.25 197 ePn Pn 01 35 17.3 +0.8
RJF eSn Sn 01 36 15.7 -1.2
RJF eSg Sg 01 36 46.0 -0.8
comp=N,5.9nm,0.7s
LPG La Plagne 5.26 156 ePn Pn 01 35 16.9 +0.4
LPG eSn Sn 01 36 15.6 -1.4
comp=N,6.3nm,0.4s
LPG La Plagne 5.26 156 ePn Pn 01 35 16.9 +0.4
LPG eSn Sn 01 36 15.6 -1.4
comp=N,3.2nm,0.4s
VIVF Saint-Julien-l 5.53 173 ePn Pn 01 35 21.0 +0.8
VIVF eSn Sn 01 36 22.0 -1.6
VIVF eSg Sg 01 36 54.3 -1.2
comp=N,20nm,0.8s
VIVF Saint-Julien-l 5.53 173 ePn Pn 01 35 21.0 +0.8
VIVF eSn Sn 01 36 22.0 -1.6
VIVF eSg Sg 01 36 54.3 -1.2
comp=N,9.8nm,0.8s
CAF Calviac 5.53 192 ePn Pn 01 35 21.0 +0.7
CAF eSn Sn 01 36 22.4 -1.4
CAF eSg Sg 01 36 54.6 -1.1
comp=N,5.7nm,0.5s
CAF Calviac 5.53 192 ePn Pn 01 35 21.0 +0.7
CAF eSn Sn 01 36 22.4 -1.4
CAF eSg Sg 01 36 54.6 -1.1
comp=N,2.8nm,0.5s
NKC Novy Kostel 5.60 88 eSG Sg 01 36 52.4 -5.4
ORIF Oris-en-Rattie 5.62 164 ePn Pn 01 35 21.9 +0.4
ORIF eSn Sn 01 36 24.1 -1.8
comp=N,7.2nm,0.4s
ORIF Oris-en-Rattie 5.62 164 ePn Pn 01 35 21.9 +0.4
LFF La Frestale 5.77 202 ePn Pn 01 35 24.5 +1.0
LFF eSn Sn 01 36 27.8 -1.8
LFF eSg Sg 01 37 02.0 -1.2
comp=N,13nm,0.6s
LFF La Frestale 5.77 202 ePn Pn 01 35 24.5 +1.0
LFF eSn Sn 01 36 27.8 -1.8
LFF eSg Sg 01 37 02.0 -1.2
comp=N,6.3nm,0.6s
CLL Collm 5.96 77 eSg Sg 01 37 08.0 -1.5
comp=Z,6.0nm,1.0s
MBDF Montbardon 5.98 159 ePn Pn 01 35 27.1 +0.6
MBDF eSn Sn 01 36 33.0 -1.9
comp=Z,5.0nm,0.5s
MBDF Montbardon 5.98 159 ePn Pn 01 35 27.1 +0.6
LASF Ste Croix 6.27 179 ePn Pn 01 35 31.2 +0.8
LASF eSn Sn 01 36 39.8 -2.1
comp=Z,4.8nm,0.6s
LASF Ste Croix 6.27 179 ePn Pn 01 35 31.2 +0.8
SMRF Simiane la Rot 6.49 168 ePn Pn 01 35 34.3 +0.8
SMRF eSn Sn 01 36 44.8 -2.6
comp=Z,0.9nm,0.2s
SMRF Simiane la Rot 6.49 168 ePn Pn 01 35 34.3 +0.8
KHC Kasperske Hory 6.51 97 eSG Sg 01 37 23.3 -3.6
BRG Berggiesshubel 6.53 81 SG Sg 01 37 25.8 -1.9
comp=Z,2.8nm,0.8s
SBF Sospel 6.96 157 ePn Pn 01 35 40.0 +0.1
SBF eSn Sn 01 36 56.5 -2.4
comp=Z,4.6nm,0.3s
SBF Sospel 6.96 157 ePn Pn 01 35 40.0 +0.1
PRU Pruhonice 6.96 89 eSG Sg 01 37 39.3 -2.3
FRF La Foret Royal 7.07 162 ePn Pn 01 35 41.7 +0.2
FRF eSn Sn 01 36 58.8 -2.9
comp=Z,3.3nm,0.3s
FRF La Foret Royal 7.07 162 ePn Pn 01 35 41.7 +0.2
MTLF Montolieu 7.08 189 ePn Pn 01 35 41.9 +0.4
MTLF eSn Sn 01 36 59.3 -2.5
comp=Z,1.6nm,0.5s
MTLF Montolieu 7.08 189 ePn Pn 01 35 41.9 +0.4
LMR La Mourre 7.26 164 ePn Pn 01 35 44.7 +0.6
LMR eSn Sn 01 37 03.0 -3.5
comp=Z,1.6nm,0.3s
LMR La Mourre 7.26 164 ePn Pn 01 35 44.7 +0.6
EPF Esparros 7.67 199 ePn Pn 01 35 49.3 -0.4
EPF eSn Sn 01 37 12.7 -3.8
comp=Z,1.5nm,0.3s
EPF Esparros 7.67 199 ePn Pn 01 35 49.3 -0.4
SJPF Ste Jean 7.99 207 ePn Pn 01 35 54.2 +0.2
SJPF eSn Sn 01 37 21.1 -3.1
comp=Z,1.2nm,0.5s
SJPF Ste Jean 7.99 207 ePn Pn 01 35 54.2 +0.2
ETSF Etsaut 8.00 203 ePn Pn 01 35 55.1 +0.8
ETSF eSn Sn 01 37 21.6 -3.0
comp=Z,3.2nm,0.6s
ETSF Etsaut 8.00 203 ePn Pn 01 35 55.1 +0.8

MAN 14 02:00:42, 13°.72N×120°.71E, h99km, mb3.9, ML2.6, MS2.3, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.32	132	⇓eP	Pn	02 00 58.5	+1.9
LUBP	Lubang	0.45	272	eP	Pn	02 00 59.0	+1.7
LUBP				eS	Sn	02 01 12.0	+3.2
SJMP	San Jose	1.31	162	eP	Pn	02 01 06.9	+1.0
SJMP				eS	Sn	02 01 25.1	+1.1

IDC 14 02:06:42.6±1.9, 10°.38N×91°.28E, h26km±5km, mb3.7/5, mb1 3.9/6, mb1mx3.5/22, mbtmp3.7/6, ML4.3/1, MS2.8/1, Ms1 2.8/1, ms1mx2.2/25, Error ellipse: s-maj=63.9km s-min=18.2km az=69.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	10.69	134	LR	LR	02 13 58.4	
	comp=Z,50nm,19.5s,baz=182,slow=40						
CMAR	Chiang Mai Arr	10.94	42	Pn	Pn	02 09 19.3	+1.9
	0.7nm,0.3s,baz=213,slow=26,SNR=3.5						
MKAR	Makanchi Array	37.09	350	P	P	02 13 50.9	+0.3
	1.1nm,0.8s,baz=171,slow=8.4,SNR=7.3						
SONM	Songino Array	39.45	16	P	P	02 14 09.6	-0.9
	1.1nm,1.0s,baz=196,slow=8.5,SNR=5.7						
SONM				pP	pP	02 14 18.0	-0.4
	0.5nm,0.7s,baz=193,slow=6.1,SNR=2.9						
ZALV	Zalesovo Beam	43.76	354	P	P	02 14 45.9	+0.1
	0.6nm,0.4s,baz=179,slow=9.8,SNR=4.2						
WRA	Warramunga Arr	52.01	125	P	P	02 15 49.3	-0.8
	0.5nm,0.3s,baz=305,slow=8.5,SNR=5.1						
WRA				pP	pP	02 15 58.7	+0.5
	1.4nm,0.6s,baz=306,slow=8.6,SNR=4.1						
WRA				sP	sP	02 16 01.1	-0.1
	1.0nm,0.5s,baz=306,slow=8.3,SNR=2.6						
ASAR	Alice Springs	53.68	130	P	P	02 16 02.5	0.0
	1.7nm,0.8s,baz=309,slow=6.7,SNR=14						
ASAR				pP	pP	02 16 10.8	+0.3
	1.0nm,0.8s,baz=318,slow=7.1,SNR=5.8						
TXAR	Lajitas Array	137.97	20	PKP	PKPdf	02 26 06.8	+1.2
	0.1nm,0.5s,baz=273,slow=3.3,SNR=3.6						

*ISCJB **14** 02:07:42.0±0.5, 23°.10S±0°.03×70°.45W±0°.08, h41km±4km, mb4.1/9, MS3.6/4, Error ellipse: s-maj=12.1km s-min=5.0km az=11.0*
*IDC **14** 02:07:43.0±0.6, 23°.06S×70°.49W, h32km±3km, mb3.9/7, mb1 4.2/10, mb1mx4.0/16, mbtmp4.0/10, ML4.3/3, MS3.4/9, Ms1 3.4/9, ms1mx3.2/24, Error ellipse: s-maj=23.2km s-min=17.2km az=57.0*
*NEIC **14** 02:07:42.1, 23°.05S×70°.39W, h35km, mb4.2/3, MD4.5(GUC), After GUC.*
*GUC **14** 02:07:42.1±0.7, 23°.05S×70°.39W, h35km±2km, MD4.5, ML4.7*
ISC 14 02:07:42.9±0.6, 23°.10S±0°.03×70°.49W±0°.07, h33km±3km, h32km±1.1km: pP-P, n40, σ0s99/41, mb4.1/9, MS3.6/4, 4C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	Mejillones	0.04	96	eP	Pb	02 07 47.7	-0.7
MECH				eS	Sb	02 07 52.0	-0.2
MECH				AML	AML	02 07 59.2	
	comp=E,139μm,0.6s						
CEN1	Los Morros	0.39	137	⇑iP	Pb	02 07 52.1	+0.2
CEN1				i S	Sb	02 08 00.2	+2.1
ANCH	Antofagasta	0.58	173	⇑iP	Pb	02 07 54.1	-0.8
ANCH				i S	Sb	02 08 02.9	-0.1
ANCH	Antofagasta	0.58	173	⇑iP	Pb	02 07 54.1	-0.8
ANCH				i S	Sb	02 08 02.9	-0.1
MACH	Maria Elena	1.12	37	i P	Pn	02 08 01.1	-1.2
MACH				i S	Sn	02 08 15.2	-1.5
PB04	Plate Boundary	1.24	48	⇓iP	Pn	02 07 56.6	-7.3
PB04				i S	Sn	02 08 07.5	-12
PB04				AML	AML	02 08 09.7	
	comp=E,57μm,0.5s						
PB01	Plate Boundary	2.25	25	⇑iP	Pn	02 08 17.4	-0.4
PB01				i S	Sn	02 08 44.7	+0.3
PB01				AML	AML	02 08 51.9	
	comp=E,6μm,0.4s						
HMBC	Humberston	2.86	11	eP	Pn	02 08 27.2	+0.9
HMBC				i S	Sn	02 09 00.6	+1.0
HMBC				AML	AML	02 09 11.8	
	comp=N,5μm,0.4s						
LCO	Las Campanas	5.89	182	ePn	Pn	02 09 06.7	-1.2
	comp=N,40nm,0.6s						
LCO				eS	Sn	02 10 31.9	+18
LPAZ	La Paz	7.13	19	Pn	Pn	02 09 27.1	+2.1
	comp=N,1.8nm,0.3s,baz=214,slow=5.6,SNR=32						
LPAZ				Sn	Sn	02 11 03.5	+19
	baz=54,slow=20,SNR=1.5						
LPAZ				LR	LR	02 12 24.4	
	comp=N,348nm,19.9s,baz=37,slow=40						
LPAZ	La Paz	7.13	19	ePn	Pn	02 09 27.1	+2.1
LPAZ				Sn	Sn	02 11 03.5	+19
LPAZ				LR	LR	02 12 24.4	
CFAA	Coronel Fontan	8.70	167	Pn	Pn	02 09 46.8	+0.2
	comp=N,0.1nm,0.3s,baz=342,slow=15,SNR=5.6						
CFAA				Sn	Sn	02 11 38.5	+15
	comp=N,0.1nm,0.3s,baz=118,slow=13,SNR=3.4						
CFAA				LR	LR	02 13 32.1	
	comp=N,48nm,19.5s,baz=335,slow=40						
CFAA	Coronel Fontan	8.70	167	Pn	Pn	02 09 46.8	+0.2
CFAA				Sn	Sn	02 11 38.5	+15
CFAA				LR	LR	02 13 32.1	
SIV	San Ignacio	11.35	53	Pn	Pn	02 10 21.5	-1.3
	comp=N,1.5nm,0.3s,baz=248,slow=13,SNR=25						
SIV				Sn	Sn	02 12 28.8	+0.4
	comp=N,0.4nm,0.3s,baz=159,slow=19,SNR=3.1						
CPUP	Villa Florida	12.39	108	Pn	Pn	02 10 38.1	+1.2
	comp=N,0.4nm,0.3s,baz=268,slow=12,SNR=8.3						
CPUP				LR	LR	02 15 50.1	
	comp=N,252nm,21.6s,baz=265,slow=39						
CPUP	Villa Florida	12.39	108	ePn	Pn	02 10 34.0	-3.0
CPUP				LR	LR	02 15 50.1	
TRQA	Tornquist	16.60	156	ePn	Pn	02 11 32.8	-0.3
	comp=N,8.8nm,0.7s						
PLCA	Paso Flores	17.58	180	LR	LR	02 18 08.6	
	comp=N,157nm,18.5s,baz=122,slow=36						
ATAH	Atahualpa	17.60	333	LR	LR	02 19 21.8	
	comp=N,56nm,19.0s,baz=7.4,slow=40						
ROSC	El Rosal	28.04	352	LR	LR	02 23 52.1	
	comp=N,35nm,19.1s,MS3.0,baz=212,slow=35						
TXAR	Lajitas Array	61.13	327	P	P	02 17 53.0	-1.1
	comp=N,0.4nm,0.7s,mb3.7,baz=149,slow=8.1,SNR=5.0						
TXAR				pP	pP	02 18 02.6	-1.6
	comp=N,0.5nm,0.8s,baz=152,slow=7.8,SNR=5.2						
QSPA	South Pole Qui	67.10	180	eP	P	02 18 34.2	+1.6
	comp=N,3.8nm,0.7s,mb4.5						
QSPA				e	pP	02 18 43.2	+0.4
SDCO	Great Sand Dun	68.90	331	eP	P	02 18 44.3	-0.1
	comp=N,1.8nm,0.8s,mb4.0						
DBIC	Dimbokro	70.59	74	P	P	02 18 54.3	-1.1
	comp=N,4.8nm,0.7s,mb4.6,baz=229,slow=8.4,SNR=6.9						
DBIC				pP	pP	02 19 04.8	-0.9
	comp=N,5.2nm,0.8s,baz=262,slow=4.1,SNR=2.4						
PPT	Papeete	73.54	258	LR	LR	02 41 20.3	
	comp=N,130nm,21.1s,MS4.2,baz=269,slow=27						
PDAR	Pinedale Array	74.78	331	P	P	02 19 19.9	+0.3
	comp=N,0.2nm,0.4s,mb3.4,baz=61,slow=34,SNR=2.7						
PDAR				sP	sP	02 19 35.6	+1.8
	comp=N,0.2nm,0.3s,baz=210,slow=5.1,SNR=2.6						
SYO	Syowa Base	75.52	160	⇓eP	P	02 19 23.0	-0.6
NVAR	Mina Array Bea	75.87	323	P	P	02 19 27.2	+1.2
	comp=N,0.4nm,0.7s,mb3.5,baz=150,slow=5.8,SNR=4.6						
ULM	Lac du Bonnet	76.41	344	LR	LR	02 54 12.3	
	comp=N,21nm,19.5s,MS3.5,baz=192,slow=36						
MAW	Mawson	83.22	164	P	P	02 20 06.4	+0.8
	comp=N,2.8nm,0.7s,mb4.4,baz=236,slow=4.8,SNR=7.0						
MAW				pP	pP	02 20 15.5	-0.5
	comp=N,3.8nm,0.8s,baz=251,slow=8.9,SNR=4.7						
BOSA	Boshof	83.98	118	P	P	02 20 10.7	+0.4
	comp=N,3.8nm,0.8s,mb4.6,baz=231,slow=4.7,SNR=8.1						
BOSA				LR	LR	02 54 51.1	
	comp=N,51nm,20.6s,MS3.9,baz=232,slow=34						
YKA	Yellowknife Ar	92.21	341	P	P	02 20 48.4	-0.3
	comp=N,1.1nm,0.7s,mb4.3,baz=133,slow=4.2,SNR=9.1						
YKA				sP	sP	02 21 02.4	-0.7
	comp=N,0.9nm,0.7s,baz=143,slow=4.3,SNR=4.3						
ASAR	Alice Springs	127.82	209	PKP	PKPdf	02 26 45.8	0.0
	comp=N,1.1nm,0.7s,baz=139,slow=2.3,SNR=10.0						
ASAR				pPKP	pPKPdf	02 26 55.2	-1.4
	comp=N,1.4nm,0.8s,baz=145,slow=2.1,SNR=7.5						
ZALV	Zalesovo Beam	144.01	25	PKP	PKPdf	02 27 15.2	+0.5
	comp=N,1.9nm,0.7s,baz=314,slow=3.4,SNR=9.6						
ZALV				pPKP	pPKPdf	02 27 25.5	-0.1
	comp=N,0.4nm,0.4s,baz=225,slow=1.8,SNR=2.7						
EKS2	Erkin-Say	144.56	48	ePKPdf	PKPdf	02 27 15.4	-0.7
AML	Almayashu	144.70	49	ePKPdf	PKPdf	02 27 16.6	+0.4
MKAR	Makanchi Array	147.78	36	PKP	PKPdf	02 27 21.8	+0.4
	comp=N,2.4nm,0.7s,baz=264,slow=3.7,SNR=19						
MKAR				PKPbc	PKPbc	02 27 24.5	+0.2
	comp=N,2.4nm,0.7s,baz=352,slow=2.3,SNR=24						
MKAR				pPKPbc	pPKPbc	02 27 36.1	+1.1
	comp=N,1.4nm,0.7s,baz=324,slow=3.1,SNR=6.0						
MKAR	Makanchi Array	147.78	36	PKP	PKPdf	02 27 21.8	+0.4
MKAR				PKPbc	PKPbc	02 27 24.5	+0.2
MKAR				pPKPbc	pPKPbc	02 27 36.1	+1.1
MJAR	Matsushiro Arr	151.85	305	PKPbc	PKPbc	02 27 34.6	0.0
	comp=N,0.5nm,0.3s,baz=101,slow=1.2,SNR=4.0						
SONM	Songino Array	155.19	5	PKP	PKPdf	02 27 33.3	+0.8
	comp=N,0.4nm,0.7s,baz=300,slow=2.8,SNR=2.7						
SONM				PKPab	PKPab	02 27 55.9	-1.4
	comp=N,1.0nm,0.8s,baz=350,slow=4.4,SNR=3.6						

SKHL 14 02:34:04.3±1.8, 55°.95N×124°.48E, h10km, mb3.8/5, 1D, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLNS	Chul'man	0.92	14	ePg	Pg	02 34 22.0	0.0
CLNS				AMB	AMB	02 34 26.3	
	10.0nm,0.1s						
CLNS				eSg	Sg	02 34 33.3	-0.6
CLNS				A		02 34 39.7	
	257nm,0.5s						
KROS	Kirovskiy	2.09	136	ePn	Pn	02 34 39.4	+0.1
KROS				⇓iPg	Pg	02 34 41.2	-3.0
KROS				AMB	AMB	02 34 41.6	
	16nm,0.4s						
KROS				AMB	AMB	02 34 41.6	
	15nm,0.4s						
KROS				AMB	AMB	02 34 41.6	
	27nm,0.4s						
KROS				eSn	Sn	02 35 05.0	-0.2
KROS				i Sg	Sg	02 35 08.9	-2.4
KROS				A		02 35 12.7	
	49nm,0.5s						
KROS				A		02 35 12.7	
	66nm,0.5s						
KROS				A		02 35 12.7	
	32nm,0.5s						
ZEA	Zeya	2.73	143	ePg	Pg	02 34 53.3	-3.4
ZEA				AMB	AMB	02 34 54.9	
	24nm,0.4s						
ZEA				eSg	Sg	02 35 30.1	-2.0
ZEA				A		02 35 33.1	
	34nm,0.5s						
ZEA				A		02 35 33.1	
	63nm,0.5s						
ZEA				A		02 35 33.1	
	24nm,0.5s						
BMKR	Bomnak	2.78	115	ePn	Pn	02 34 48.0	-0.8
BMKR				ePg	Pg	02 34 53.5	-4.1
BMKR				AMB	AMB	02 34 54.3	
	10.0nm,0.4s						
BMKR				AMB	AMB	02 34 54.3	
	26nm,0.4s						
BMKR				eSn	Sn	02 35 22.8	+0.3
BMKR				eSg	Sg	02 35 31.0	-2.6
BMKR				A		02 35 35.9	
	133nm,0.4s						
BMKR				A		02 35 35.9	
	45nm,0.4s						
TUP	Tupik	3.01	241	ePn	Pn	02 34 53.2	+1.2
TUP				ePg	Pg	02 34 58.5	-3.4
TUP				AMB	AMB	02 35 02.6	
	14nm,0.4s						
TUP				eSn	Sn	02 35 28.2	+0.1
TUP				eSg	Sg	02 35 36.7	-4.2
TUP				A		02 35 46.6	
	33nm,0.7s						
EKMR	Ekimchan	5.71	117	ePg	Pg	02 35 48.0	-5.7
EKMR				eSg	Sg	02 37 03.2	-4.4
EKMR				A		02 37 13.4	
	12nm,0.6s						
EKMR				A		02 37 13.4	
	7.0nm,0.6s						

EKMR A 02 37 13.4
6.0nm,0.6s

*ISCJB **14** 02:36:54.2±0.8, 38°.77N×0°.04×25°.73E±0°.09, h23km±11km, Error ellipse: s-maj=12.4km s-min=5.8km az=171.7*
*CSEM **14** 02:36:54.3±0.1, 38°.78N×25°.75E, h20km, ML3.1/1, Error ellipse: s-maj=3.1km s-min=2.0km az=62.0*
*DDA **14** 02:36:54.1, 38°.82N×25°.83E, h7km±7km, Md2.8*
*THE **14** 02:36:54.0, 38°.79N×25°.68E, h6km±7km, ML3.1/1, Error ellipse: s-maj=8.0km s-min=0.7km az=77.0*
ISC 14 02:36:54.3±0.9, 38°.77N±0°.04×25°.74E±0°.10, h21km±12km, n15, σ0s65/27, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.45**	**12**	P	**Pb**	**02 37 03.0**	**-0.6**
SIGR				S	**Sb**	**02 37 09.5**	**-0.4**
SIGR	**SIGRI**	**0.45**	**12**	P	**Pb**	**02 37 03.0**	**-0.6**
SIGR				S	**Sb**	**02 37 09.5**	**-0.4**
CHOS	**Chios island**	**0.46**	**147**	P	**Pb**	**02 37 03.8**	**+0.2**
CHOS				S	**Sb**	**02 37 10.4**	**+0.4**
CHOS	**Chios island**	**0.46**	**147**	P	**Pb**	**02 37 03.8**	**+0.2**
CHOS				S	**Sb**	**02 37 10.4**	**+0.4**
PRK	**Paraskevi**	**0.63**	**41**	P	**Pb**	**02 37 06.2**	**-0.5**
PRK				S	**Sb**	**02 37 18.0**	**+2.9**
PRK	**Paraskevi**	**0.63**	**41**	P	**Pb**	**02 37 06.2**	**-0.5**
URLA	**Izmir**	**0.79**	**121**	*i* P	**Pb**	**02 37 09.6**	**+0.3**
URLA				*i* S	**Sb**	**02 37 18.7**	**-0.8**
URLA	**Izmir**	**0.79**	**121**	*i* P	**Pb**	**02 37 09.6**	**+0.3**
URLA				*i* S	**Sb**	**02 37 18.7**	**-0.8**
AYVA	**Ayvalik**	**0.92**	**54**	*i* P	**Pb**	**02 37 11.4**	**-0.1**
AYVA				*i* S	**Sb**	**02 37 23.2**	**-0.1**
AYVA	**Ayvalik**	**0.92**	**54**	*i* P	**Pb**	**02 37 11.4**	**-0.1**
AYVA				*i* S	**Sb**	**02 37 23.2**	**-0.1**
BOZC	**Bozcaada**	**1.10**	**13**	*i* P	**Pn**	**02 37 13.9**	**-0.6**
BOZC				*i* S	**Sb**	**02 37 28.5**	**0.0**
LIA	**Limnos Island**	**1.21**	**339**	P	**Pn**	**02 37 15.9**	**0.0**
LIA				S	**Sn**	**02 37 32.1**	**+0.5**
LIA	**Limnos Island**	**1.21**	**339**	P	**Pn**	**02 37 15.9**	**0.0**
LIA				S	**Sn**	**02 37 32.1**	**+0.5**
AOS	**Alonnisos**	**1.50**	**286**	P	**Pn**	**02 37 20.1**	**+0.1**
AOS	**Alonnisos**	**1.50**	**286**	P	**Pn**	**02 37 20.1**	**+0.1**

MAN 14 02:59:28, 6°.31N×122°.45E, h29km, mb4.2, ML3.0, MS2.7, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZMPH	**Zamboanga City**	**0.75**	**329**	⇑*i* P	Pb	02 59 43.3	+0.8
ZMPH				*i* S	Sb	02 59 54.1	+1.8
IPIL	**Ipil**	**1.47**	**5**	*e* P	Pn	02 59 54.5	+1.8
IPIL				*e* S	Sn	03 00 12.1	+1.1
PAGZ	**Pagadian**	**1.79**	**31**	*e* P	Pn	02 59 57.5	+0.6
PAGZ				*e* S	Sn	03 00 17.6	-1.0

*MOS **14** 03:04:34.8±1.0, 40°.46N×48°.01E, h15km, mb4.3/7, Error ellipse: s-maj=19.2km s-min=13.6km az=75.4*
*ISCJB **14** 03:04:38.8±0.3, 40°.14N±0°.03×48°.26E±0°.04, h80km±5km, mb3.7/9, Error ellipse: s-maj=6.0km s-min=3.2km az=39.3*
*CSEM **14** 03:04:39.6±0.2, 40°.18N×48°.25E, h66km, mb3.8/8, Error ellipse: s-maj=5.4km s-min=4.4km az=40.0*
*TEH **14** 03:04:39.4, 40°.00N×48°.27E, h10km*
*NEIC **14** 03:04:41.8±1.3, 40°.56N×48°.08E, h61km±13km, mb3.6/4, Error ellipse: s-maj=19.3km s-min=8.0km az=176.0*
*IDC **14** 03:04:41.9±2.9, 40°.54N×48°.11E, h61km±28km, mb3.5/6, mb1 3.5/10, mb1mx3.4/24, mbtmp3.5/10, ML3.8/3, Error ellipse: s-maj=38.5km s-min=16.5km az=168.0*
ISC 14 03:04:40.3±0.2, 40°.13N±0°.03×48°.22E±0°.03, h74km±5km, n111, σ1s20/131, mb3.7/9, 2C-2D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALIB	**Äli-Bayra**	**0.63**	**106**	P	**Pn**	**03 04 56.1**	**+1.4**
	SNR=108						
BRDA	**Brd**	**0.81**	**280**	P	**Pn**	**03 04 56.5**	**-0.1**
	SNR=41						
BRDA				S	**Sn**	**03 05 08.7**	**-0.1**
GLBA	**Clilabad**	**0.90**	**171**	P	**Pn**	**03 04 57.5**	**-0.3**
	SNR=145						
GLBA				S	**Sn**	**03 05 10.8**	**+0.1**
SIZA	**Siyzn**	**1.08**	**29**	P	**Pn**	**03 05 02.4**	**+2.5**
	SNR=23						
GOBA	**Gobu**	**1.19**	**76**	P	**Pn**	**03 05 03.6**	**+2.3**
	SNR=5.4						
SEKA	**Sheki**	**1.33**	**325**	P	**Pn**	**03 05 02.5**	**-0.6**
	SNR=41						
SEKA				S	**Sn**	**03 05 20.2**	**0.0**
AKT	**Akhty**	**1.40**	**345**	PG	**Pn**	**03 05 05.0**	**+1.0**
AKT	**Akhty**	**1.40**	**345**	Pg	**Pn**	**03 05 05.0**	**+1.0**
NDR	**Nardaran**	**1.43**	**71**	P	**Pn**	**03 05 05.9**	**+1.5**
	SNR=6.0						
KSMR	**Kasumkent**	**1.47**	**357**	*e*PG	**Pn**	**03 05 08.0**	**+3.0**
KSMR	**Kasumkent**	**1.47**	**357**	*e*Pg	**Pn**	**03 05 08.0**	**+3.0**
GANJ	**Ganja**	**1.54**	**290**	P	**Pn**	**03 05 04.4**	**-1.4**
	SNR=7.9						
GANJ				S	**Sn**	**03 05 22.6**	**-2.5**
IHRS	**Heris**	**2.03**	**207**	*e*Pn	**Pn**	**03 05 12.4**	**0.0**
IHRS				*e*Sg	**Sn**	**03 05 37.3**	**+0.5**
IHRS				*e*		03 05 38.3	
	comp=Z,7μm,0.1s						
IHRS	**Heris**	**2.03**	**207**	*e*Pn	**Pn**	**03 05 12.4**	**0.0**
IHRS				*e*Sg	**Sn**	**03 05 37.3**	**+0.5**
KMKR	**Kumukh**	**2.17**	**337**	*e*PN	**Pn**	**03 05 16.0**	**+1.8**
KMKR				pmax	pmax		
	comp=Z,32nm,0.3s						
KMKR	**Kumukh**	**2.17**	**337**	*e*Pn	**Pn**	**03 05 16.0**	**+1.8**
	comp=Z,32nm,0.3s						
NAX	**Nakhchivan**	**2.31**	**246**	P	**Pn**	**03 05 14.4**	**-1.7**
	SNR=20						
ISRB	**Sarab**	**2.34**	**191**	*e*Pn	**Pn**	**03 05 16.8**	**+0.2**
ISRB				*e*		03 05 51.2	
	comp=Z,1μm,0.2s						
ITBZ	**Tabriz**	**2.49**	**221**	*e*Pn	**Pn**	**03 05 19.0**	**+0.5**
ITBZ				*e*		03 05 35.9	
	comp=Z,1μm,0.1s						
ITBZ	**Tabriz**	**2.49**	**221**	*e*Pn	**Pn**	**03 05 19.0**	**+0.5**
DGRG	**David-gareji**	**2.53**	**302**	P	**Pn**	**03 05 19.6**	**+0.5**
DGRG				S	**Sn**	**03 05 50.3**	**+1.4**
GNI	**Garni**	**2.66**	**272**	P	**Pn**	**03 05 22.5**	**+1.6**
	comp=Z,10.0nm,0.3s,baz=323,slow=2.1,SNR=21						
GNI				S	**Sn**	**03 05 59.4**	**+7.2**
	comp=Z,15nm,0.3s,baz=306,slow=16,SNR=5.7						
GNI	**Garni**	**2.66**	**272**	*e*Pn	**Pn**	**03 05 22.1**	**+1.2**
GNI				S	**Sn**	**03 05 59.4**	**+7.2**
GNI	**Garni**	**2.66**	**272**	*e*Pn	**Pn**	**03 05 22.1**	**+1.2**
ISHB	**Shabestar**	**2.74**	**228**	*e*Pn	**Pn**	**03 05 22.5**	**+0.6**
ISHB				*e*		03 05 58.6	
	comp=Z,1μm,0.2s						
MAKU	**Maku**	**2.83**	**255**	*e*Pn	**Pn**	**03 05 23.8**	**+0.6**
IAZR	**Azarshahr**	**3.01**	**216**	*e*	**Sn**	**03 05 52.1**	**-8.4**
	comp=Z,2μm,0.2s						
MTA	**Mtatsminda**	**3.03**	**302**	P	**Pn**	**03 05 33.5**	**+7.7**
MTA				S	**Sn**	**03 06 00.4**	**-0.6**
TBLG	**Delisi**	**3.08**	**302**	*e*PN	**Pn**	**03 05 34.1**	**+7.5**
TBLG				*i* S	**Sn**	**03 06 00.5**	**-1.8**
TBLG	**Delisi**	**3.08**	**302**	P	**Pn**	**03 05 34.1**	**+7.5**
TBLG				S	**Sn**	**03 06 00.5**	**-1.8**
GOR	**Gori**	**3.62**	**302**	P	**Sn**	**03 06 15.8**	**+0.5**
ONI	**Oni**	**4.35**	**306**	P	**Pn**	**03 05 44.7**	**+0.9**
ONI				S	**Sn**	**03 06 34.8**	**+1.6**
IMHD	**Mahdasht**	**4.84**	**156**	*e*Pn	**Pn**	**03 05 51.8**	**+1.2**
IMHD				*e*		03 06 48.9	
	comp=Z,666nm,0.1s						
IMHD	**Mahdasht**	**4.84**	**156**	*e*Pn	**Pn**	**03 05 51.8**	**+1.2**
IRAZ	**Razeghan**	**4.91**	**163**	*e*Pn	**Pn**	**03 05 50.5**	**-1.1**
IRAZ				*e*		03 06 52.3	
	comp=Z,196nm,0.1s						
IRAZ	**Razeghan**	**4.91**	**163**	*e*Pn	**Pn**	**03 05 50.5**	**-1.1**
IPRN	**Peran**	**5.06**	**139**	*e*Pn	**Pn**	**03 05 52.6**	**-1.0**
IPRN				*e*		03 06 50.8	
	comp=Z,8μm,0.1s						
IPRN	**Peran**	**5.06**	**139**	*e*Pn	**Pn**	**03 05 52.6**	**-1.0**
IALA	**Alasht**	**5.43**	**137**	*e*	**Sn**	**03 07 00.2**	**+0.5**
	comp=Z,4μm,0.1s						
IDMV	**Damavand**	**5.46**	**145**	*e*Pn	**Pn**	**03 05 58.4**	**-0.6**
IDMV				*e*		03 07 06.0	
	comp=Z,356nm,0.1s						
IDMV	**Damavand**	**5.46**	**145**	*e*Pn	**Pn**	**03 05 58.4**	**-0.6**
IGLO	**Ghalooghah**	**5.71**	**128**	*e*Pn	**Pn**	**03 06 02.0**	**-0.5**
IGLO				*e*		03 07 07.6	
	comp=Z,3μm,0.1s						
IGLO	**Ghalooghah**	**5.71**	**128**	*e*Pn	**Pn**	**03 06 02.0**	**-0.5**
IFIR	**Firoozkooh**	**5.74**	**140**	*e*Pn	**Pn**	**03 06 02.4**	**-0.5**
IFIR				*e*		03 07 11.5	
	comp=Z,932nm,0.1s						
IFIR	**Firoozkooh**	**5.74**	**140**	*e*Pn	**Pn**	**03 06 02.4**	**-0.5**
IKIA	**Kiasar**	**5.82**	**131**	*e*Pn	**Pn**	**03 06 04.2**	**+0.2**
IKIA				*e*		03 07 10.3	
	comp=Z,1μm,0.1s						
IKIA	**Kiasar**	**5.82**	**131**	*e*Pn	**Pn**	**03 06 04.2**	**+0.2**
ISHM	**Shahmirzad**	**5.89**	**136**	*e*Pn	**Pn**	**03 06 04.6**	**-0.4**
ISHM				*e*		03 07 09.3	
	comp=Z,3μm,0.1s						
ISHM	**Shahmirzad**	**5.89**	**136**	*e*Pn	**Pn**	**03 06 04.6**	**-0.4**
IANJ	**Anjilo**	**6.48**	**134**	*e*Pn	**Pn**	**03 06 12.2**	**-0.8**
IANJ				*e*		03 07 26.0	
	comp=Z,304nm,0.1s						
IANJ	**Anjilo**	**6.48**	**134**	*e*Pn	**Pn**	**03 06 12.2**	**-0.8**
MRVT	**Maraveh tapeh**	**6.62**	**109**	*e*Pn	**Pn**	**03 06 14.3**	**-0.6**
BJRD	**Bojnurd**	**7.57**	**106**	*e*Pn	**Pn**	**03 06 27.2**	**-0.6**
ISHV	**Shirvan**	**7.84**	**106**	*e*Pn	**Pn**	**03 06 31.2**	**-0.4**
ISHV				*e*		03 08 00.6	
	comp=Z,1μm,0.1s						
ISHV	**Shirvan**	**7.84**	**106**	*e*Pn	**Pn**	**03 06 31.2**	**-0.4**
ISFR	**Sfrayin**	**8.25**	**109**	*e*Pn	**Pn**	**03 06 36.7**	**-0.5**
ISFR	**Sfrayin**	**8.25**	**109**	*e*Pn	**Pn**	**03 06 36.7**	**-0.5**
IEMG	**Emamgholi**	**8.59**	**105**	*e*Pn	**Pn**	**03 06 40.2**	**-1.6**
IEMG				*e*		03 06 42.4	
	comp=Z,822nm,0.1s						
IEMG	**Emamgholi**	**8.59**	**105**	*e*Pn	**Pn**	**03 06 40.2**	**-1.6**
IKRD	**Kardeh**	**8.74**	**109**	*e*Pn	**Pn**	**03 06 52.4**	**+8.5**
IKRD				*e*		03 06 55.5	
	comp=Z,260nm,0.1s						
IAKL	**Akhelmad**	**9.00**	**110**	*e*	**Sn**	**03 08 29.0**	**+2.0**
	comp=Z,258nm,0.1s						
IMOG	**Moghan**	**9.64**	**111**	*e*Pn	**Pn**	**03 06 55.9**	**-0.2**
IMOG				*e*		03 06 56.7	
	comp=Z,313nm,0.2s						
IMOG	**Moghan**	**9.64**	**111**	*e*Pn	**Pn**	**03 06 55.9**	**-0.2**
IMYA	**Miami**	**10.09**	**108**	*e*	**Pn**	**03 07 03.0**	**+0.8**
	comp=Z,266nm,0.1s						
IMYA				*e*Pn	**Pn**	**03 07 01.5**	**-0.7**
AB31	**Akbulak array**	**12.35**	**39**	⇑Pn	**Pn**	**03 07 30.2**	**-2.7**
	comp=Z,0.2nm,0.3s,baz=217,slow=11,SNR=9.3						
AB31				⇑Sn	**Sn**	**03 09 40.8**	**-7.8**
	comp=Z,1.5nm,0.4s,baz=225,slow=24,SNR=12						
AB31	**Akbulak array**	**12.35**	**39**	Pn	**Pn**	**03 07 30.2**	**-2.7**
	comp=Z,0.2nm,0.3s,baz=217,SNR=9.3						
ABKAR	**Akbulak array**	**12.35**	**39**	*e*Pn	**Pn**	**03 07 30.4**	**-2.6**
	comp=Z,0.7nm,0.4s						
ABKAR				*e*S	**Sn**	**03 09 41.4**	**-7.1**
ABKAR	**Akbulak array**	**12.35**	**39**	*e*Pn	**Pn**	**03 07 30.4**	**-2.5**
	comp=Z,0.7nm,0.4s						
AKTK	**Aktyubinsk**	**12.39**	**30**	P	**Pn**	**03 07 30.8**	**-2.7**
AKTK				S	**Sn**	**03 09 40.8**	**-8.7**
AKTK	**Aktyubinsk**	**12.39**	**30**	P	**Pn**	**03 07 30.8**	**-2.7**
	comp=Z,1.0nm,0.3s						
AKTO	**Aktyubinsk**	**12.39**	**30**	P	**Pn**	**03 07 30.8**	**-2.7**
	comp=Z,0.3nm,0.3s,baz=197,slow=11,SNR=6.2						
AKTO				S	**Sn**	**03 09 40.8**	**-8.7**
	comp=Z,0.8nm,0.3s,baz=322,slow=22,SNR=16						
AKTO	**Aktyubinsk**	**12.39**	**30**	P	**Pn**	**03 07 30.8**	**-2.7**
AKTO				S	**Sn**	**03 09 40.8**	**-8.7**
AKTO				smax			
	comp=N,1.0nm,0.3s						
KK31	**Karatay Array**	**16.93**	**73**	⇓Pn	**Pn**	**03 08 31.1**	**-1.1**
	comp=N,0.7nm,0.4s,baz=292,slow=12,SNR=15						
KK31				⇓Sn	**Sn**	**03 11 31.7**	**-8.0**
	comp=N,2.5nm,0.7s,baz=272,slow=24,SNR=13						
KK31	**Karatay Array**	**16.93**	**73**	Pn	**Pn**	**03 08 31.1**	**-1.1**
	comp=N,0.7nm,0.4s,SNR=15						
AKASG	**Malin Array Be**	**16.96**	**315**	P	**Pn**	**03 08 28.8**	**-3.8**
	comp=N,0.5nm,0.3s,baz=115,slow=12,SNR=4.3						
AKASG	**Malin Array Be**	**16.96**	**315**	P	**Pn**	**03 08 28.8**	**-3.8**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	**Malin Array Be**	**16.96**	**315**	P	**Pn**	**03 08 28.8**	**-3.8**
AML	**Almayashu**	**19.28**	**76**	*e*P	**Pn**	**03 09 01.6**	**+1.0**
	comp=Z,1.4nm,0.7s						
EKS2	**Erkin-Say**	**19.32**	**74**	*e*P	**Pn**	**03 09 01.2**	**+0.1**
	comp=Z,2.8nm,0.9s						
EKS2				*e*		03 09 15.0	
EKS2	**Erkin-Say**	**19.32**	**74**	*e*P	**Pn**	**03 09 01.2**	**+0.1**
BVAR	**Borovoye Array**	**19.86**	**42**	P	**Pn**	**03 09 06.0**	**-1.3**
	comp=Z,0.5nm,0.3s,baz=216,slow=12,SNR=8.8						
BVAR	**Borovoye Array**	**19.86**	**42**	P	**Pn**	**03 09 06.0**	**-1.4**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BVAR	**Borovoye Array**	**19.86**	**42**	P	**Pn**	**03 09 06.0**	**-1.4**
	comp=Z,1.0nm,0.3s						
TKM2	**Tokmak 2**	**20.66**	**73**	*e*P	**P**	**03 09 17.6**	**+3.8**
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TKM2	**Tokmak 2**	**20.66**	**73**	*e*P	**P**	**03 09 17.6**	**+3.8**
	comp=Z,2.3nm,0.6s						
KURK	**Kurchatov**	**23.66**	**53**	*e*P	**P**	**03 09 46.5**	**+1.8**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.6						
KURK	**Kurchatov**	**23.66**	**53**	*e*P	**P**	**03 09 46.5**	**+1.8**
	comp=Z,1.7nm,0.7s,mb3.5						
KURK	**Kurchatov**	**23.66**	**53**	*e*P	**P**	**03 09 46.5**	**+1.8**
	comp=Z,2.0nm,0.7s,mb3.6						
JOF	**Joensuu**	**24.96**	**342**	*e*P	**P**	**03 09 56.5**	**0.0**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.7						
JOF	**Joensuu**	**24.96**	**342**	*e*p	**P**	**03 09 56.5**	**0.0**
	comp=Z,1.0nm,0.3s,mb3.7						
JOF	**Joensuu**	**24.96**	**342**	*e*P	**P**	**03 09 56.5**	**0.0**
	comp=Z,1.0nm,0.3s,mb3.7						
FINES	**FINESS Array B**	**25.27**	**335**	P	**P**	**03 09 59.7**	**+0.4**
	comp=Z,0.9nm,0.3s,mb3.6,baz=135,slow=8.8,SNR=16						
FINES				sP	pP	03 10 19.0	+2.5
	comp=Z,0.5nm,0.3s,baz=134,slow=9.3,SNR=6.0						
FINES	**FINESS Array B**	**25.27**	**335**	P	**P**	**03 09 59.7**	**+0.4**
FINES				sP	pP	03 10 19.0	+2.5
FINES	**FINESS Array B**	**25.27**	**335**	P	**P**	**03 09 59.7**	**+0.4**
	comp=Z,1.0nm,0.3s,mb3.7						
MK31	**Makanchi Array**	**25.47**	**64**	*e*P	**P**	**03 10 03.2**	**+2.0**
MK31	**Makanchi Array**	**25.47**	**64**	*e*P	**P**	**03 10 03.2**	**+2.0**
MKAR	**Makanchi Array**	**25.47**	**64**	P	**P**	**03 10 03.0**	**+1.8**
	comp=Z,0.8nm,0.6s,mb3.3,baz=270,slow=7.0,SNR=7.7						
MKAR				pP	pP	03 10 18.3	-0.2
	comp=Z,0.6nm,0.7s,baz=265,slow=9.6,SNR=4.0						
MKAR	**Makanchi Array**	**25.47**	**64**	P	**P**	**03 10 03.0**	**+1.8**
	comp=Z,1.0nm,0.6s,mb3.4						
MKAR				pP	pP	03 10 18.3	-0.2
ZALV	**Zalesovo Beam**	**28.16**	**48**	P	**P**	**03 10 26.1**	**+0.8**
	comp=Z,0.7nm,0.3s,mb3.6,baz=266,slow=9.4,SNR=2.5						
ZALV	**Zalesovo Beam**	**28.16**	**48**	P	**P**	**03 10 26.1**	**+0.8**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.7						
HFS	**Hagfors**	**29.31**	**325**	P	**P**	**03 10 35.1**	**-0.4**
	comp=Z,2.5nm,0.9s,mb3.8,baz=122,slow=10.0,SNR=11						
HFS	**Hagfors**	**29.31**	**325**	P	**P**	**03 10 35.1**	**-0.3**
HFS				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HFS	**Hagfors**	**29.31**	**325**	P	**P**	**03 10 35.1**	**-0.3**
	comp=Z,3.0nm,0.9s,mb3.9						
NB2	**NORSAR Subarra**	**30.81**	**325**	P	**P**	**03 10 47.1**	**-1.6**
	comp=Z,0.4nm,0.6s,mb3.3,baz=119,slow=8.6						
NB2	**NORSAR Subarra**	**30.81**	**325**	P	**P**	**03 10 47.1**	**-1.6**
	comp=Z,0.4nm,0.6s,mb3.3,baz=119,slow=8.5,SNR=3.7						
NOA	**NORSAR Array B**	**30.81**	**325**	P	**P**	**03 10 48.4**	**-0.3**
	comp=Z,0.4nm,0.8s,mb3.2,baz=350,slow=16,SNR=3.3						
NOA	**NORSAR Array B**	**30.81**	**325**	P	**P**	**03 10 48.4**	**-0.3**
TLY	**Talaya**	**39.35**	**54**	*e*P	**P**	**03 12 01.9**	**-0.2**
	comp=Z,8.9nm,0.7s,mb4.7						
TLY	**Talaya**	**39.35**	**54**	*e*P	**P**	**03 12 01.9**	**-0.2**
	comp=Z,8.9nm,0.7s,mb4.7						
ESDC	**Sonseca Array**	**39.55**	**287**	P	**P**	**03 12 03.7**	**-0.2**
	comp=Z,0.2nm,0.4s,mb3.3,baz=66,slow=7.3,SNR=5.3						
ESDC	**Sonseca Array**	**39.55**	**287**	P	**P**	**03 12 03.7**	**-0.2**

*MOS **14** 03:33:25.7±1.1, 7°.22N×126°.02E, h33km, mb5.2/18, Error ellipse: s-maj=18.3km s-min=8.3km az=109.1*
*IDC **14** 03:33:29.1±0.4, 7°.27N×126°.11E, h46km±3km, mb4.4/21, mb1 4.5/21, mb1mx4.4/25, mbtmp4.4/21, MS3.4/11, Ms1 3.5/11, ms1mx3.3/23, Error ellipse: s-maj=10.4km s-min=7.8km az=128.0*
*MAN **14** 03:33:29, 7°.13N×125°.96E, h58km, mb5.2, ML4.1, MS4.1*
MAN INTENSITY III - COMPOSTELA VALLEY; INTENSITY II - DAVAO CITY; TAGUM CITY.
*ISCJB **14** 03:33:30.1±0.3, 7°.16N±0°.02×125°.94E±0°.03, h70km±2km, mb4.7/66, Error ellipse: s-maj=5.9km s-min=3.3km az=158.0*
*NEIC **14** 03:33:30.6±0.9, 7°.22N×126°.00E, h61km±8km, mb4.9/18, Error ellipse: s-maj=12.5km s-min=6.1km az=70.0*
NEIC Felt [III PIVS] at Compostela and [II PIVS] at Davao and Tagum.
*DJA **14** 03:33:33, 7°.11N×126°.05E, h39km, mb5.3/18*
ISC 14 03:33:31.5±0.3, 7°.16N±0°.02×125°.92E±0°.03, h67km±2km, h63km±4.0km: pP-P, n169, σ1s13/184, mb4.7/66, 10C-8D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.35**	**255**	P	**Pn**	**03 33 42.3**	**-0.5**
	6μm,0.3s,baz=79,slow=0.6,SNR=890						
DAV				S	**Sn**	**03 33 51.5**	**+0.6**
	4μm,0.3s,baz=68,slow=14,SNR=56						
DAV	**Davao City (W)**	**0.35**	**255**	*e*Pn	**Pn**	**03 33 42.2**	**-0.5**
DAV	**Davao City (W)**	**0.35**	**255**	P	**Pn**	**03 33 42.7**	**-0.1**
MATI	**Mati**	**0.40**	**122**	*e*P	**Pn**	**03 33 41.4**	**-1.8**
MATI				*e*S	**Sn**	**03 33 50.0**	**-1.7**
DMPH	**Davao City--Mi**	**0.41**	**259**	⇑*i*P	**Pn**	**03 33 42.9**	**-0.4**
DMPH				*i* S	**Sn**	**03 33 55.6**	**+3.6**
KCP	**Kidapawan**	**0.84**	**260**	⇑*i*P	**Pn**	**03 33 47.2**	**-0.6**
KCP				*i* S	**Sn**	**03 33 59.6**	**-0.3**
BUKP	**Musuan**	**1.11**	**310**	*e*P	**Pn**	**03 33 50.5**	**-0.8**
BUKP				*e*S	**Sn**	**03 34 05.4**	**-0.6**
GSPH	**General Santos**	**1.44**	**222**	⇓*e*P	**Pn**	**03 33 54.3**	**-1.3**
GSPH				*i* S	**Sn**	**03 34 12.1**	**-1.6**
CTBH	**Cotabato--PC H**	**1.66**	**272**	⇓*i*P	**Pn**	**03 33 57.9**	**-0.6**
CTBH				*i* S	**Sn**	**03 34 18.5**	**-0.5**
CGP	**Cagayan de Oro**	**1.77**	**317**	⇓*e*P	**Pn**	**03 33 59.3**	**-0.7**
CGP				*i* S	**Sn**	**03 34 21.2**	**-0.3**
BUTP	**Butuan**	**1.82**	**351**	*e*P	**Pn**	**03 34 01.4**	**+0.7**
BUTP				*e*S	**Sn**	**03 34 26.0**	**+3.2**
PAGZ	**Pagadian**	**2.60**	**285**	*e*P	**Pn**	**03 34 11.4**	**+0.1**
TBP	**Tagbilaran**	**3.23**	**321**	⇓*e*P	**Pn**	**03 34 21.3**	**+1.4**
TBP				*e*S	**Sn**	**03 34 57.1**	**-0.1**
IPIL	**Ipil**	**3.38**	**281**	*e*P	**Pn**	**03 34 20.9**	**-0.9**
SNPH	**Sibulan**	**3.43**	**309**	⇓*e*P	**Pn**	**03 34 22.9**	**+0.4**
SNPH				*e*S	**Sn**	**03 34 45.0**	**-17**
SGSI	**Sangihe**	**3.48**	**186**	P	**Pn**	**03 34 23.7**	**+0.5**
LLP	**Lapu-Lapu**	**3.68**	**329**	⇓*e*P	**Pn**	**03 34 25.9**	**-0.1**
LLP				*e*S	**Sn**	**03 35 04.5**	**-3.8**
ZMPH	**Zamboanga City**	**3.83**	**267**	⇓*i*P	**Pn**	**03 34 26.5**	**-1.5**
OCLP	**Ormoc**	**4.08**	**342**	*e*P	**Pn**	**03 34 31.1**	**-0.3**
BESP	**Borongan**	**4.44**	**354**	*e*P	**Pn**	**03 34 38.6**	**+2.2**
BESP				*e*S	**Sn**	**03 35 27.5**	**+0.8**
GUIM	**Jordan**	**4.76**	**317**	*e*P	**Pn**	**03 34 40.8**	**0.0**
CNP	**Catarman**	**5.46**	**347**	*e*P	**Pn**	**03 34 50.8**	**+0.5**
MNI	**Manado**	**5.78**	**191**	P	**Pn**	**03 34 54.3**	**-0.5**
	2.4nm7μm549nm,0.7s						
CUYO	**Cuyo Island**	**6.07**	**307**	*e*P	**Pn**	**03 34 59.0**	**+0.3**
OTRP	**Odiongan**	**6.44**	**324**	*e*P	**Pn**	**03 35 04.9**	**+1.2**
TNTI	**Ternate**	**6.51**	**167**	P	**Pn**	**03 35 06.7**	**+2.0**
	2.8nm8μm879nm,0.7s						
PVCP	**Virac**	**6.62**	**345**	*e*P	**Pn**	**03 35 06.5**	**+0.2**
BUSP	**Coron**	**7.41**	**311**	*e*P	**Pn**	**03 35 16.0**	**-1.1**
ENPP	**El Nido**	**7.56**	**303**	*e*P	**Pn**	**03 35 19.2**	**0.0**
MYLDM	**Lahad Datu**	**7.63**	**255**	P	**Pn**	**03 35 27.7**	**+7.6**
	0.1nm37nm,0.9s						
MRSI	**Marisa**	**7.74**	**211**	P	**Pn**	**03 35 22.4**	**+0.9**
	1.2nm3μm198nm,0.6s						
LBMI	**Labuha**	**7.91**	**168**	P	**Pn**	**03 35 26.6**	**+2.7**
	1.2nm3μm356nm,0.7s						
LUBP	**Lubang**	**8.59**	**320**	*e*P	**Pn**	**03 35 35.5**	**+2.4**
LUWI	**Luwuk**	**8.73**	**201**	P	**Pn**	**03 35 37.2**	**+2.1**
	4μm253n

comp=Z,18nm,2.2s,mb4.3
KSRS Korea Array 30.21 3 P **P 03 39 34.8 -0.8**
comp=Z,1.0nm,0.4s,mb3.8,baz=180,slow=9.9,SNR=11
KSRS PcP PcP 03 42 35.9 +0.6
comp=Z,2.0nm,0.8s,baz=191,slow=3.3,SNR=11
KSRS LR LR 03 51 24.1
comp=Z,42nm,20.8s,baz=180,slow=36
XAN Xi'an 31.02 332 P **P 03 39 42.9 +0.1**
XAN pP pP 03 39 59.6 +0.5
XAN sP sP 03 40 08.5 +1.5
XAN PP PP 03 40 47.1 -6.9
XAN S **S 03 44 39.3 -3.7**
XAN pmax pmax
comp=Z,8.0nm,1.0s,mb4.4
XAN pmax pmax
comp=Z,17nm,6.3s
MAT Matsushiro 31.32 19 P **P 03 39 42.2 -3.3**
MJAR Matsushiro Arr 31.32 19 P **P 03 39 42.1 -3.4**
comp=Z,2.6nm,0.7s,mb4.1,baz=196,slow=9.5,SNR=7.2
MJAR LR LR 03 51 28.6
comp=Z,40nm,20.0s,baz=215,slow=35
CD2 Chengdu 31.44 322 P **P 03 39 48.4 +1.8**
CD2 pP pP 03 40 04.8 +1.9
CD2 sP sP 03 40 12.9 +2.1
CD2 S **S 03 44 50.4 +0.7**
CD2 pmax pmax
comp=Z,20nm,0.5s,mb5.1
CD2 pmax pmax
comp=Z,70nm,4.1s
CD2 LR LR
comp=N,170nm,7.7s
CD2 LR LR
comp=Z,160nm,9.5s
ASAR Alice Springs 31.62 166 P **P 03 39 47.6 -0.6**
comp=Z,4.9nm,0.4s,mb4.6,baz=341,slow=6.7,SNR=62
ASAR sP sP 03 40 06.9 -5.4
comp=Z,6.1nm,0.7s,baz=344,slow=7.4,SNR=5.8
ASAR PcP PcP 03 42 39.9 +0.7
comp=Z,3.8nm,0.5s,baz=347,slow=2.7,SNR=10
BJI Beijing 33.88 347 P **P 03 40 07.3 -0.5**
BJI S **S 03 45 26.3 -1.1**
BJI pmax pmax
comp=Z,16nm,0.9s,mb4.8
BJI pmax pmax
comp=Z,26nm,3.6s
LZH Lanzhou 35.17 328 *e*P **P 03 40 21.5 +2.6**
LZH pP pP 03 40 37.8 +2.4
LZH sP sP 03 40 46.3 +3.0
LZH PcP PcP 03 42 50.3 +1.3
LZH *e*S **S 03 45 48.1 +0.8**
LZH pmax pmax
comp=Z,21nm,1.0s,mb4.9
LZH pmax pmax
comp=Z,140nm,5.2s
LZH LR LR
comp=N,1μm,15.4s
LZH LR LR
comp=Z,1μm,16.3s
HHC Hu-ho-hao-te 35.91 341 *e*P **P 03 40 26.4 +1.2**
HHC pP pP 03 40 43.6 +1.9
HHC sP sP 03 40 50.9 +1.3
HHC PP PP 03 41 49.6 +1.6
HHC PcP PcP 03 42 51.8 +0.7
HHC S **S 03 46 00.3 +1.8**
HHC ScP ScP 03 46 32.1 +0.5
HHC PcS PcS 03 46 39.3 +0.9
HHC ScS ScS 03 50 36.1 -0.8
HHC pmax pmax
comp=Z,18nm,0.7s,mb5.1
HHC pmax pmax
comp=Z,63nm,6.5s
HHC LR LR
comp=N,140nm,12.3s
HHC LR LR
comp=E,91nm,12.4s
HHC LR LR
comp=Z,130nm,12.0s
CN2 Changchun 36.50 359 *e*P **P 03 40 32.4 +2.2**
CN2 *e*S **S 03 46 06.4 -1.0**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
CN2 pmax pmax
comp=Z,200nm,4.0s
MDJ Mudanjiang 37.45 4 P **P 03 40 35.3 -2.9**
MDJ pP pP 03 40 51.5 -3.3
MDJ sP sP 03 40 59.0 -3.7
MDJ pmax pmax
comp=Z,7.0nm,1.3s,mb4.4
MDJ pmax pmax
comp=Z,24nm,4.2s
FORT Forrest 37.78 177 *e*P **P 03 40 41.2 0.0**
comp=Z,47nm,0.5s,mb5.6
FORT Forrest 37.78 177 *e*P **P 03 40 41.1 -0.1**
comp=Z,53nm,0.6s,mb5.5
KLBR Kellerberrin 39.32 191 *e*P **P 03 40 53.1 -1.0**
comp=Z,8.8nm,0.4s,mb4.9
ASAJ Asahikawa 39.59 19 P **P 03 40 56.0 -0.2**
comp=Z,3.6nm,0.6s,mb4.4,baz=255,slow=9.7,SNR=5.3
ASAJ sP sP 03 41 13.5 -7.3
comp=Z,3.4nm,0.6s,baz=192,slow=22,SNR=3.1
GTA Gaotai 39.77 328 P **P 03 41 00.4 +2.6**
GTA pP pP 03 41 19.3 +4.8
GTA PcP PcP 03 43 04.3 +1.3
GTA S **S 03 47 01.4 +4.4**
GTA pmax pmax
comp=Z,12nm,1.3s,mb4.6
GTA pmax pmax
comp=Z,100nm,3.9s
GTA LR LR
comp=N,78nm,16.6s
GTA LR LR
comp=E,79nm,18.7s
NWAO Narrogin (SRO) 40.71 191 *e*P **P 03 41 05.3 -0.3**
comp=E,58nm,0.5s,mb5.7
BBOO Buckleboo 40.91 167 *e*P **P 03 41 07.3 +0.1**
comp=E,10nm,0.3s,mb5.1
TAPN Taplejung 41.40 304 *e*P **P 03 41 11.7 +0.3**
ODAN Odare 41.48 303 *e*P **P 03 41 13.3 +1.1**
comp=E,32nm,0.9s,mb5.1
STKA Stephens Creek 41.61 160 *e*P **P 03 41 13.1 +0.1**
comp=E,8.6nm,0.7s,mb4.6
STKA Stephens Creek 41.61 160 P **P 03 41 12.5 -0.5**
comp=E,6.7nm,0.6s,mb4.6,baz=327,slow=7.6,SNR=7.3
STKA sP sP 03 41 30.1 -7.4
comp=E,9.1nm,0.6s,baz=310,slow=3.9,SNR=4.8
STKA Stephens Creek 41.61 160 *e*P **P 03 41 13.1 +0.1**
STKA pmax pmax
comp=Z,13nm,1.8s
STKA Stephens Creek 41.61 160 *e*P **P 03 41 13.1 +0.1**
comp=Z,13nm,1.8s,mb4.3
RAMN Ramite 42.18 303 *e*P **P 03 41 18.9 +1.1**
comp=Z,63nm,1.2s,mb5.2
KLR Kul'dur 42.21 6 *e*P **P 03 41 12.2 -5.5**
GUN Gumba 43.11 304 *e*P **P 03 41 25.2 -0.2**
PKI Pulchoki 43.38 303 *e*P **P 03 41 27.9 +0.3**
KKN Kakani 43.57 303 *e*P **P 03 41 28.8 -0.3**
ULN Ulaanbaatar 43.63 342 *e*P **P 03 41 30.0 +0.8**
ULN pmax pmax
comp=Z,50nm,1.6s,mb5.0
ULN Ulaanbaatar 43.63 342 *e*P **P 03 41 30.0 +0.9**
comp=Z,50nm,1.6s,mb5.0
DMN Daman 43.65 303 *e*P **P 03 41 30.1 +0.4**
comp=Z,32nm,1.0s,mb5.0
SONM Songino Array 43.81 341 P **P 03 41 31.2 +0.6**
comp=Z,8.3nm,0.9s,mb4.5,baz=157,slow=8.6,SNR=42
SONM pP pP 03 41 41.1 -6.4
comp=Z,4.2nm,0.9s,baz=157,slow=8.0,SNR=6.3
SONM sP sP 03 41 48.2 -7.1
comp=Z,2.2nm,0.9s,baz=133,slow=6.3,SNR=2.9
SONM PcP PcP 03 43 16.5 +0.3
comp=Z,2.6nm,0.7s,baz=162,slow=3.8,SNR=6.9
SONM LR LR 04 02 15.5
comp=Z,47nm,18.5s,baz=165,slow=39
SONM Songino Array 43.81 341 P **P 03 41 31.2 +0.6**
SONM *PP pP 03 41 41.1 -6.4
SONM *SP sP 03 41 48.2 -7.1
SONM 03 43 16.5
ARMA Armidale 44.77 148 *e*P **P 03 41 39.1 +0.5**
YNG Young 46.40 154 *e*P **P 03 41 52.0 +0.6**
comp=Z,3.8nm,0.5s,mb4.4
TLY Talaya 48.04 341 *e*P **P 03 42 04.6 +0.7**
TLY *e*S **S 03 49 03.5 +6.4**
TLY pmax pmax
comp=Z,31nm,0.8s,mb5.2
TLY MLR MLR
comp=Z,59nm,23.0s

TLY Talaya 48.04 341 *e*P **P 03 42 04.8 +1.0**
comp=Z,29nm,0.8s,mb5.2
MOY Mondy 48.90 340 *e*P **P 03 42 12.7 +2.2**
MOY pmax pmax
comp=Z,30nm,1.6s,mb5.0
WMQ Urumqi 49.48 324 P **P 03 42 16.6 +1.5**
WMQ pP pP 03 42 32.3 +0.1
WMQ sP sP 03 42 39.3 -0.6
WMQ PcP PcP 03 43 38.5 +2.2
WMQ PP PP 03 44 11.8 +2.0
WMQ *e*S **S 03 49 17.8 +0.2**
WMQ ScS ScS 03 51 59.8 -0.8
WMQ pmax pmax
comp=Z,12nm,1.1s,mb4.7
WMQ pmax pmax
comp=Z,110nm,4.2s
WMQ LR LR
comp=N,84nm,23.6s
WMQ LR LR
comp=E,110nm,28.0s
MK31 Makanchi Array 54.30 324 *e*P **P 03 42 50.6 -0.3**
MKAR Makanchi Array 54.30 324 P **P 03 42 50.8 -0.2**
comp=E,9.2nm,0.5s,mb5.1,baz=118,slow=6.4,SNR=70
MKAR pP pP 03 43 03.7 -4.7
comp=E,5.7nm,0.8s,baz=120,slow=7.4,SNR=5.7
MKAR sP sP 03 43 09.5 -6.5
comp=E,6.5nm,0.8s,baz=110,slow=7.7,SNR=5.4
MKAR PcP PcP 03 43 53.4 -0.8
comp=E,2.0nm,0.6s,baz=139,slow=3.7,SNR=4.9
MKAR LR LR 04 07 30.0
comp=E,51nm,21.4s,baz=173,slow=38
MKAR Makanchi Array 54.30 324 *c*e**P P 03 42 50.7 -0.2**
MKAR pmax pmax
comp=Z,9.0nm,0.5s
ZALV Zalesovo Beam 57.19 332 P **P 03 43 11.7 +0.3**
comp=Z,3.1nm,0.3s,mb4.8,baz=124,slow=6.7,SNR=14
ZALV pP pP 03 43 23.6 -5.4
comp=Z,2.6nm,0.7s,baz=121,slow=7.6,SNR=3.7
ZALV sP sP 03 43 29.9 -6.7
comp=Z,3.8nm,0.8s,baz=130,slow=8.0,SNR=4.0
ZALV PcP PcP 03 44 04.6 -0.7
comp=Z,1.6nm,0.6s,baz=116,slow=3.4,SNR=2.4
ZALV LR LR 04 09 07.4
comp=Z,43nm,20.6s,baz=243,slow=37
ZALV Zalesovo Beam 57.19 332 P **P 03 43 11.7 +0.3**
ZALV *PP pP 03 43 23.6 -5.4
ZALV *SP sP 03 43 29.9 -6.7
ZALV 03 44 04.6
KURK Kurchatov 58.44 327 *c*e**P P 03 43 19.1 -1.1**
KURK pmax pmax
comp=Z,22nm,1.0s,mb5.1
KURK Kurchatov 58.44 327 *e*P **P 03 43 19.6 -0.6**
comp=Z,16nm,0.7s,mb5.2
SEY Seymchan 58.90 14 *e*P **P 03 43 23.9 +0.7**
BVAR Borovoye Array 64.03 326 P **P 03 43 57.4 -0.6**
comp=Z,5.5nm,0.6s,mb4.6,baz=120,slow=8.7,SNR=19
BVAR pP pP 03 44 11.6 -4.2
comp=Z,1.5nm,0.6s,baz=128,slow=9.6,SNR=3.6
BVAR sP sP 03 44 17.2 -6.1
comp=Z,2.8nm,0.8s,baz=120,slow=8.8,SNR=3.7
BVAR Borovoye Array 64.03 326 P **P 03 43 57.4 -0.6**
BVAR *PP pP 03 44 11.6 -4.2
BRVK Borovoye 64.10 326 *c*e**P P 03 43 57.7 -0.8**
BRVK pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
BRVK Borovoye 64.10 326 *e*P **P 03 43 57.2 -1.2**
comp=Z,11nm,0.9s,mb4.7
TIXI Tiksi 64.44 1 *e*P **P 03 43 58.6 -1.8**
TIXI pmax pmax
comp=Z,19nm,0.8s,mb5.0
TIXI Tiksi 64.44 1 *e*P **P 03 43 59.5 -0.9**
comp=Z,15nm,0.6s,mb5.0
ABKAR Akbulak array 69.01 320 *e*P **P 03 44 28.5 -1.4**
comp=Z,2.4nm,0.6s,mb4.2
ARU Arti 71.63 327 *d i*P **P 03 44 45.8 +0.1**
ARU 03 47 20.6
ARU S S 03 54 04.5 +4.7
ARU SS SS 03 58 41.6 +5.3
ARU pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
ARU Arti 71.63 327 *e*P **P 03 44 45.3 -0.4**
comp=Z,5.4nm,0.4s,mb4.7
KDAK Kodiak Island 79.45 33 *c*e**P P 03 45 30.2 -0.2**
PMR Palmer 81.34 29 *e*P **P 03 45 39.2 -1.3**
PMR pmax pmax
comp=Z,9.0nm,0.7s,mb4.7
PMR Palmer 81.34 29 *e*P **P 03 45 39.2 -1.3**
comp=Z,9.3nm,0.7s,mb4.7
COLA College 81.96 25 P **P 03 45 42.8 -0.9**
COLA pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
COLA College 81.96 25 P **P 03 45 42.8 -0.9**
comp=Z,6.7nm,0.9s,mb4.5
BMRM Bremner River 83.54 29 P **P 03 45 52.1 +0.1**
comp=Z,28nm,1.6s,mb4.8
OBN Obninsk 83.81 325 *e*P **P 03 45 53.6 +0.1**
OBN pmax pmax
comp=Z,9.0nm,1.2s,mb4.5
ANN Anapa 83.94 314 *e*P **P 03 45 57.6 +3.3**
ANN *e*PP pP 03 46 08.0 -4.9
ANN *e*PPP 03 51 00.2
ANN *e*S S 03 56 14.1 +1.1
ANN *e*SSS 04 05 08.3
ANN pmax pmax
comp=Z,33nm,1.1s,mb5.1
APA Apatity 84.39 337⇑ *i*P **P 03 45 56.6 +0.4**
APA pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
APA MLR MLR
comp=Z,200nm,18.0s
EGAK Eagle 84.82 25 *e*P **P 03 45 58.0 -0.4**
comp=Z,13nm,0.8s,mb4.9
DAWY Dawson 85.67 26 *e*P **P 03 46 02.6 0.0**
JOF Joensuu 85.78 333 *e*P **P 03 46 01.8 -1.4**
JOF pmax pmax
comp=Z,4.0nm,0.4s,mb4.7
JOF Joensuu 85.78 333 *e*p **P 03 46 01.8 -1.4**
comp=Z,4.3nm,0.4s,mb4.7
KEV Kevo 86.41 340 *e*P **P 03 46 04.5 -1.7**
KEV pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
KEV Kevo 86.41 340 *e*p **P 03 46 04.5 -1.7**
comp=Z,5.6nm,0.9s,mb4.5
ARCES ARCESS Array B 86.97 340 P **P 03 46 08.1 -0.8**
comp=Z,9.6nm,0.8s,mb4.8,baz=86,slow=6.7,SNR=41
ARCES PKKPbc PKKPbc 04 04 01.5 -3.0
comp=Z,0.9nm,0.7s,baz=267,slow=3.3,SNR=9.3
ARCES LR LR 04 27 17.8
comp=Z,28nm,19.5s,baz=260,slow=37
ARE0 ARCESS Array S 86.97 340 P **P 03 46 08.1 -0.8**
SPITS Spitsbergen Ar 86.98 349 P **P 03 46 08.2 -0.7**
comp=Z,7.8nm,0.7s,mb4.8,baz=57,slow=6.2,SNR=17
HYT Haines Junctio 87.00 29 *e*P **P 03 46 09.7 +0.4**
BRTR Keskin Array B 87.23 310 P **P 03 46 11.8 +0.9**
comp=Z,0.8nm,0.6s,mb3.8,baz=125,slow=3.9,SNR=4.6
BRTR LR LR 04 30 17.9
comp=Z,18nm,22.0s,baz=310,slow=39
BRTR Keskin Array B 87.23 310 P **P 03 46 11.8 +0.9**
BRTR LR LR 04 30 17.9
INK Inuvik 87.29 21 P **P 03 46 09.8 -0.7**
comp=Z,3.8nm,0.7s,mb4.5,baz=284,slow=5.5,SNR=8.9
INK Inuvik 87.29 21 *e*P **P 03 46 09.8 -0.7**
INK pmax pmax
comp=Z,4.0nm,0.6s
INK Inuvik 87.29 21 *e*P **P 03 46 09.8 -0.7**
comp=Z,3.9nm,0.6s,mb4.5
KAF Kangasniemi 88.20 332 *e*P **P 03 46 13.9 -1.1**
KAF pmax pmax
comp=Z,5.0nm,0.5s,mb4.8
KAF Kangasniemi 88.20 332 *e*p **P 03 46 13.9 -1.1**
comp=Z,5.0nm,0.5s,mb4.8,baz=73,slow=4.3
FINES FINESS Array B 88.45 332 P **P 03 46 14.6 -1.5**
comp=Z,2.8nm,0.5s,mb4.6,baz=92,slow=4.5,SNR=19
FINES FINESS Array B 88.45 332 P **P 03 46 14.6 -1.6**
KMBO Kilima Mbogo 88.81 269 P **P 03 46 18.7 -0.2**
comp=Z,45nm,0.8s,mb5.5,baz=195,slow=0.7,SNR=3.1
KMBO Kilima Mbogo 88.81 269 *i* P **P 03 46 15.5 -3.4**
DAG Danmarks Havn 93.77 352⇑ *i*P **P 03 46 40.0 -0.6**
DAG pmax pmax
comp=Z,11nm,1.0s,mb5.1
DAG Danmarks Havn 93.77 352⇑ *i*P **P 03 46 40.0 -0.6**
comp=Z,11nm,1.0s,mb5.1
NB2 NORSAR Subarra 95.37 334 P **P 03 46 45.8 -2.4**
comp=Z,2.4nm,0.7s,mb4.7,baz=65,slow=4.6
NOA NORSAR Array B 95.37 334 P **P 03 46 47.2 -1.0**
comp=Z,2.3nm,0.8s,mb4.7,baz=64,slow=4.6,SNR=8.3

NOA LR LR 04 33 40.5
comp=Z,50nm,21.8s,baz=60,slow=38
NOA NORSAR Array B 95.37 334 P **P 03 46 47.2 -1.0**
NOA LR LR 04 33 40.5
YKA Yellowknife Ar 96.72 24 P **P 03 46 53.8 -0.5**
comp=Z,3.8nm,0.7s,mb4.9,baz=300,slow=4.7,SNR=24
YKA Yellowknife Ar 96.72 24 P **P 03 46 53.8 -0.5**
NVAR Mina Array Bea 105.20 47 Pdiff Pdif 03 47 34.2 +1.9
comp=Z,0.5nm,0.7s,baz=262,slow=5.5,SNR=4.3
NVAR Mina Array Bea 105.20 47 Pdif Pdif 03 47 34.2 +1.9
PDAR Pinedale Array 109.29 40 PKiKP PKiKP 03 51 55.4 +1.1
comp=Z,0.3nm,0.6s,baz=307,slow=5.4,SNR=3.5
SCHQ Schefferville 117.32 8 PKP PKPdf 03 52 08.7 -0.6
comp=Z,4.5nm,0.8s,baz=190,slow=5.6,SNR=4.2
TXAR Lajitas Array 120.09 50 PKP PKPdf 03 52 15.4 +0.1
comp=Z,0.7nm,0.7s,baz=244,slow=1.0,SNR=10.0
TXAR sPKP 03 52 32.6
comp=Z,0.4nm,0.6s,baz=359,slow=1.8,SNR=4.0
JCT Junction City 122.38 47 *e*PKiKP PKPdf 03 52 20.0 +0.3
WVT Waverly 126.53 34 PKiKP PKPdf 03 52 27.1 -0.4
PLCA Paso Flores 143.48 159 PKP PKPdf 03 52 57.9 -0.8
comp=Z,2.8nm,0.9s,baz=226,slow=9.6,SNR=4.5
MTP Monte Pirata 152.47 24 *e*PKPdf PKPdf 03 53 13.6 -0.5
MTP PKPbc PKPbc 03 53 21.2 +0.1
ROSC El Rosal 156.53 60 PKP PKPdf 03 53 21.4 +1.5
comp=Z,4.3nm,0.5s,baz=100,slow=6.9,SNR=5.2
LPAZ La Paz 163.53 125 PKP PKPdf 03 53 30.1 +2.4
comp=Z,1.8nm,0.9s,baz=7.8,slow=2.8,SNR=6.9
LPAZ PKPab PKPab 03 54 21.1 +1.8
comp=Z,1.4nm,0.9s,baz=306,slow=1.2,SNR=4.4

IDC ***14*** *03:47:21.4±1.4, 17°.09N×119°.88E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/20, mbtmp3.5/4, MS2.9/1, Ms1 2.9/1, ms1mx2.5/13, Error ellipse: s-maj=66.1km s-min=24.1km az=73.0*
ISCJB ***14*** *03:47:23.9±2.2, 17°.58N±0°.04×119°.96E±0°.06, h9km±17km, mb3.5/3, Error ellipse: s-maj=10.0km s-min=5.8km az=23.2*
MAN ***14*** *03:47:24, 17°.65N×119°.88E, h30km, mb4.9, ML3.8, MS3.8*
ISC 14 03:47:24.7±1.6, 17°.58N±0°.05×119°.96E±0°.07, h15km±8km, n15, σ1§13/22, mb3.5/3, 2C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ABRA	**Dolores**	**0.72**	**84**	*e*P		**Pg**	**03 47 38.9**	**+0.2**
ABRA				*e*S		**Sg**	**03 47 48.6**	**+0.4**
PIP	**Pasuquin**	**0.97**	**40⇑**	*e*P		**Pb**	**03 47 41.8**	**-1.4**
PIP				*e*S		**Sb**	**03 47 54.0**	**-1.8**
BOLP	**Bolinao**	**1.19**	**182**	*e*P		**Pn**	**03 47 45.5**	**-1.3**
BOLP				*e*S		**Sb**	**03 48 01.0**	**-1.2**
APYP	**Conner**	**1.25**	**77**	*e*P		**Pn**	**03 47 46.6**	**-1.1**
APYP				*e*S		**Sb**	**03 48 03.0**	**-1.0**
BCPH	**Baguio City Da**	**1.33**	**154⇓**	*e*P		**Pn**	**03 47 48.0**	**-0.7**
BCPH				*i* S		**Sn**	**03 48 05.9**	**-0.3**
CVP	**Callao Caves**	**1.78**	**86**	*e*P		**Pn**	**03 47 55.5**	**+0.6**
CVP				*e*S		**Sn**	**03 48 17.8**	**+0.6**
CAUP	**Cauayan**	**1.89**	**109**	*e*P		**Pn**	**03 47 58.6**	**+2.2**
SGCP	**Mt. Cagua**	**2.09**	**71**	*e*P		**Pn**	**03 48 00.5**	**+1.3**
PCPH	**Palayan**	**2.28**	**151⇑**	*e*P		**Pn**	**03 48 02.4**	**+0.5**
BALP	**Baler**	**2.40**	**140**	*e*P		**Pn**	**03 48 04.3**	**+0.9**
BALP				*e*S		**Sn**	**03 48 38.6**	**+6.1**
PALP	**Palanan**	**2.41**	**102**	*e*P		**Pn**	**03 48 04.3**	**+0.7**
KSRS	**Korea Array**	**21.00**	**18**	P		**P**	**03 52 11.8**	**+4.2**
	0.5nm,0.5s,baz=216,slow=6.3,SNR=3.6							
KSRS				LR		LR	04 01 36.9	
	comp=Z,28nm,19.3s,baz=190,slow=40							
WRA	**Warramunga Arr**	**39.87**	**159**	P		**P**	**03 54 53.1**	**-4.9**
	0.5nm,0.4s,mb3.6,baz=340,slow=9.3,SNR=2.6							
MKAR	**Makanchi Array**	**42.53**	**322**	P		**P**	**03 55 21.3**	**+1.7**
	0.7nm,0.8s,mb3.4,baz=117,slow=9.7,SNR=5.4							
ASAR	**Alice Springs**	**43.20**	**161**	P		**P**	**03 55 21.0**	**-4.2**
	0.5nm,0.5s,mb3.5,baz=344,slow=7.0,SNR=6.7							

ISCJB ***14*** *03:51:39.8±0.2, 45°.65N±0°.01×10°.48E±0°.01, h9km±1km, mb3.5/3, Error ellipse: s-maj=1.7km s-min=1.4km az=163.9*
ROM ***14*** *03:51:40.8±0.1, 45°.68N×10°.53E, h4km±1km, Md3.1/21, Ml3.5/23, Error ellipse: s-maj=2.5km s-min=1.1km az=84.0*
SZGRF ***14*** *03:51:40.2, 45°.39N×10°.46E, h10km, mb3.9, Northern Italy*
NEIC ***14*** *03:51:40.0, 45°.68N×10°.56E, h2km, ML3.7(LDG), ML3.5(ROM), ML3.7(STR), ML3.6(ZUR), After ROM.*
NEIC Felt [IV] at Lonato, Polpenazze del Garda and Salo; [III] at Brescia, Gardone Riviera, Gavardo and Rivoltella. Also felt at Verona.
CSEM ***14*** *03:51:40.7±0.1, 45°.63N×10°.52E, h8km, ML4.0/30, Error ellipse: s-maj=1.7km s-min=1.3km az=168.0*
VIE ***14*** *03:51:41.1±0.2, 45°.68N×10°.53E, h8km±1km, mb3.3/13, ML3.7/16, Error ellipse: s-maj=1.4km s-min=1.3km az=30.0 56 km SSW of Pinzolo*
ZUR ***14*** *03:51:41.1, 45°.65N×10°.48E, h2km±1km, ML3.6/7*
IDC ***14*** *03:51:41.8±3.4, 45°.68N×10°.68E, h13km±17km, mb3.4/3, mb1 3.6/6, mb1mx3.4/24, mbtmp3.4/6, ML3.3/3, Error ellipse: s-maj=25.2km s-min=17.5km az=179.0*
LDG ***14*** *03:51:42.1±0.1, 45°.62N×10°.60E, h10km, Ml3.7/44, Error ellipse: s-maj=3.2km s-min=2.2km az=161.0*
STR ***14*** *03:51:43.1±0.3, 45°.64N×10°.28E, h5km, Ml3.7, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
PRU ***14*** *03:51:43.2, 45°.69N×10°.75E, h5km*
ISC 14 03:51:41.1±0.2, 45°.634N±0°.010×10°.49E±0°.01, h10km±1km, n396, σ1§12/621, mb3.5/3, 44C-38D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SALO	**Salr**	**0.03**	**123⇑**	*i*Pg		**Pg**	**03 51 42.6**	**-0.3**
SALO				Sg		**Sg**	**03 51 43.9**	**-0.2**
SALO	**Salr**	**0.03**	**123⇑**	*i*Pg		**Pg**	**03 51 42.6**	**-0.3**
SALO				Sg		**Sg**	**03 51 43.9**	**-0.2**
BALD	**Monte Baldo**	**0.24**	**78⇓**	*e*Pg		**Pg**	**03 51 45.1**	**-0.8**
BALD				*e*Sg		**Sg**	**03 51 48.6**	**-0.5**
BALD	**Monte Baldo**	**0.24**	**78**	*e*Pg		**Pg**	**03 51 45.1**	**-0.8**
BALD				*e*Sg		**Sg**	**03 51 48.7**	**-0.4**
MABI	**Malga Bissina**	**0.42**	**2⇓**	*i*Pg		**Pg**	**03 51 49.1**	**-0.2**
MABI				Sg		**Sg**	**03 51 55.5**	**+0.6**
	2μm,0.2s							
MABI	**Malga Bissina**	**0.42**	**2⇓**	*i*Pg		**Pg**	**03 51 49.1**	**-0.2**
MABI				Sg		**Sg**	**03 51 55.5**	**+0.6**
	2μm,0.2s							
MDI	**Monti di Nese**	**0.56**	**285**	Pg		**Pg**	**03 51 52.0**	**0.0**
MDI				Sg		**Sg**	**03 52 01.9**	**+2.5**
	3μm,0.4s							
MDI	**Monti di Nese**	**0.56**	**285**	Pg		**Pg**	**03 51 52.0**	**0.0**
BERNI	**Berninapass**	**0.84**	**337⇓**	*i*P		**Pg**	**03 51 57.2**	**-0.2**
	2μm,0.1s							
BERNI	**Berninapass**	**0.84**	**337**	Pg		**Pg**	**03 51 57.2**	**-0.2**
BERNI				Sg		**Sg**	**03 52 09.9**	**+1.5**
BERNI	**Berninapass**	**0.84**	**337⇓**	*i*P		**Pg**	**03 51 57.2**	**-0.2**
	2μm,0.1s							
BERNI				Sg		**Sg**	**03 52 09.9**	**+1.5**
NOVE	**Novellara**	**0.85**	**169**	Pg		**Pg**	**03 51 57.9**	**+0.4**
	13μm,0.3s							
NOVE	**Novellara**	**0.85**	**169**	Pg		**Pg**	**03 51 57.9**	**+0.4**
	13μm,0.3s							
TEOL	**Teolo**	**0.88**	**108⇓**	*i*Pg		**Pg**	**03 51 56.8**	**-1.2**
TEOL				*i* Sg		**Sg**	**03 52 09.0**	**-0.3**
TEOL	**Teolo**	**0.88**	**108**	*i* Pg		**Pg**	**03 51 56.8**	**-1.1**
TEOL				*i* Sg		**Sg**	**03 52 09.0**	**-0.3**
PRMA	**PARMA**	**0.88**	**188**	Pg		**Pg**	**03 51 59.0**	**+1.0**
	3μm,0.4s							
PRMA	**PARMA**	**0.88**	**188**	Pg		**Pg**	**03 51 59.0**	**+1.0**
	3μm,0.4s							
CTI	**Castel Tesino**	**0.91**	**63**	Pg		**Pg**	**03 51 57.3**	**-1.3**
	178nm,4.6s							
CTI	**Castel Tesino**	**0.91**	**63**	Pg		**Pg**	**03 51 57.3**	**-1.3**
	178nm,4.6s							
CGRP	**Cima Grappa**	**0.95**	**75⇑**	*e*Pg		**Pg**	**03 51 58.3**	**-1.1**
CGRP				*e*Sg		**Sg**	**03 52 11.5**	**-0.3**
CGRP	**Cima Grappa**	**0.95**	**75**	*e*Pg		**Pg**	**03 51 58.3**	**-1.1**
CGRP				*e*Sg		**Sg**	**03 52 11.5**	**-0.2**
RAVA	**Ravarino**	**0.98**	**153**	Pg		**Pg**	**03 52 00.2**	**+0.2**
RAVA				Sg		**Sg**	**03 52 17.0**	**+4.2**
RAVA	**Ravarino**	**0.98**	**153**	Pg		**Pg**	**03 52 00.2**	**+0.2**
APPI	**Appiano**	**0.99**	**31**	Pg		**Pg**	**03 51 59.8**	**-0.3**
APPI	**Appiano**	**0.99**	**31**	Pg		**Pg**	**03 51 59.8**	**-0.3**
FUORN	**Ofenpass-Fuorn**	**1.00**	**351⇓**	*i*P		**Pg**	**03 51 59.7**	**-0.6**
	3μm,0.5s							
FUORN	**Ofenpass-Fuorn**	**1.00**	**351**	Pg		**Pg**	**03 51 59.8**	**-0.5**
FUORN				Sg		**Sg**	**03 52 13.3**	**0.0**

FUORN **Ofenpass-Fuorn** 1.00 351 Pg Pg 03 51 59.8 -0.5
FUORN Sg Sg 03 52 13.3 0.0
VDL **Val di Lei** 1.12 320 *e*P Pb 03 52 02.2 -0.3
2µm,0.8s
VDL **Val di Lei** 1.12 320 *e*P Pb 03 52 02.2 -0.3
2µm,0.8s
BOB **Bobbio (Coli)** 1.14 221 Pg Pg 03 52 04.0 +1.1
1µm,0.4s
BOB **Bobbio (Coli)** 1.14 221 Pg Pg 03 52 04.0 +1.1
1µm,0.4s
MTLO **Montello** 1.14 80⇑*i*Pg Pg 03 52 02.4 -0.6
MTLO *i* Sg Sg 03 52 18.0 +0.3
MTLO **Montello** 1.14 80 *i* Pg Pg 03 52 02.4 -0.6
MTLO *i* Sg Sg 03 52 18.0 +0.2
VARN **Col Varnada, M** 1.19 72⇑*e*Pg Pg 03 52 02.2 -1.6
VARN *e*Sg Sg 03 52 18.9 -0.4
VARN **Col Varnada, M** 1.19 72 *e*Pg Pg 03 52 02.2 -1.6
VARN *e*Sg Sg 03 52 18.9 -0.3
FAU **Forcella Aurin** 1.20 60⇑*i*Pg Pg 03 52 03.0 -1.1
FAU *i* Sg Sg 03 52 19.1 -0.6
FAU **Forcella Aurin** 1.20 60 *i* Pg Pg 03 52 03.0 -1.1
FAU *i* Sg Sg 03 52 19.0 -0.7
ERBM **Eremo** 1.22 183 Pg Pg 03 52 04.9 +0.5
2µm,1.0s
ERBM **Eremo** 1.22 183 Pg Pg 03 52 04.9 +0.5
2µm,1.0s
DAVOX **Davos/Dischmat** 1.22 340⇓*e*P Pn 03 52 03.9 -0.3
3µm,0.4s
DAVOX **Davos/Dischmat** 1.22 340 Pg Pg 03 52 04.2 -0.4
84nm,0.3s,baz=141,slow=12,SNR=112
DAVOX Lg 03 52 22.2
130nm,0.3s,baz=342,slow=17,SNR=13
DAVOX **Davos/Dischmat** 1.22 340 Pg Pg 03 52 04.2 -0.4
DAVOX **Davos/Dischmat** 1.22 340⇓*e*P Pn 03 52 03.9 -0.3
3µm,0.4s
DAVOX **Davos/Dischmat** 1.22 340 Pg Pg 03 52 04.2 -0.4
FIU **Minerbio Fiu** 1.22 144 Pg Pg 03 52 04.2 -0.3
3µm,0.5s
FIU **Minerbio Fiu** 1.22 144 Pg Pg 03 52 04.2 -0.3
3µm,0.5s
ADRI **Adria, Italy** 1.23 118⇓*i*Pg Pg 03 52 04.2 -0.5
ADRI *i* Sg Sg 03 52 22.2 +1.5
ADRI **Adria, Italy** 1.23 118 *i* Pg Pg 03 52 04.2 -0.5
ADRI *i* Sg Sg 03 52 22.2 +1.5
GSCL **Gusciola** 1.28 177 Pg Pg 03 52 06.1 +0.4
GSCL **Gusciola** 1.28 177 Pg Pg 03 52 06.1 +0.4
ZCCA **Zocca** 1.33 165 Pg Pg 03 52 06.8 +0.2
903nm,0.6s
ZCCA **Zocca** 1.33 165 Pg Pg 03 52 06.8 +0.2
903nm,0.6s
FETA **Feichten** 1.40 7⇑*e*Pg Pg 03 52 07.0 -0.9
SNR=264
FETA ⇑*i*Sg Sg 03 52 26.1 +0.1
322nm,0.5s
FETA **Feichten** 1.40 7 Pg Pg 03 52 07.0 -0.9
SNR=264
FETA Sg Sg 03 52 26.1 +0.1
322nm,0.5s
SC2M **Scurtabo** 1.40 209 Pg Pg 03 52 07.6 -0.4
2µm,0.4s
SC2M **Scurtabo** 1.40 209 Pg Pg 03 52 07.6 -0.4
2µm,0.4s
CMPO **Campotto Po** 1.41 138 Pg Pg 03 52 07.6 -0.5
3µm,0.9s
CMPO **Campotto Po** 1.41 138 Pg Pg 03 52 07.6 -0.5
3µm,0.9s
CAE **Caneva** 1.41 74⇓*i*Pg Pn 03 52 06.5 -0.4
CAE *i* Sg Sg 03 52 25.7 -0.8
CAE **Caneva** 1.41 74 *i* Pg Pn 03 52 06.4 -0.4
CAE *i* Sg Sg 03 52 25.7 -0.8
CSO **Casso** 1.43 63⇓*i*Pg Pn 03 52 06.9 -0.2
CSO *i* Sg Sg 03 52 26.4 -0.7
CSO **Casso** 1.43 63 *i* Pg Pn 03 52 06.9 -0.2
CSO *i* Sg Sg 03 52 26.4 -0.7
MTRZ **Monterenzio** 1.44 151 Pg Pg 03 52 09.2 +0.6
1µm,0.7s
MTRZ **Monterenzio** 1.44 151 Pg Pg 03 52 09.2 +0.6
1µm,0.7s
VLC **Villacollemand** 1.48 183 *e*Pn Pn 03 52 08.7 +1.0
VLC *e*Sg Sg 03 52 31.3 +2.7
VLC **Villacollemand** 1.48 183 Pg Pg 03 52 09.0 -0.4
VLC Sg Sg 03 52 30.6 +2.1
852nm,0.8s
VLC **Villacollemand** 1.48 183 *e*Pn Pn 03 52 08.7 +1.0
VLC **Villacollemand** 1.48 183 Pg Pg 03 52 09.0 -0.4
VLC Sg Sg 03 52 30.6 +2.1
852nm,0.8s
AFL **Alpe Faloria** 1.48 52⇑*i*Pg Pg 03 52 08.6 -0.9
AFL *i* Sg Sg 03 52 28.8 +0.1
AFL **Alpe Faloria** 1.48 52 *i* Pg Pg 03 52 08.6 -0.9
AFL *i* Sg Sg 03 52 28.8 +0.2
FUSIO **Fusio** 1.51 303 *e*Pn Pn 03 52 09.4 +1.2
5µm,0.6s
FUSIO **Fusio** 1.51 303 *e*Pn Pn 03 52 09.4 +1.2
5µm,0.6s
CIMO **Cimolais** 1.52 63⇑*e*Pg Pn 03 52 08.1 -0.2
CIMO *e*Sg Sg 03 52 29.1 -0.9
CIMO **Cimolais** 1.52 63 *e*Pg Pn 03 52 08.1 -0.2
CIMO *e*Sg Sg 03 52 29.1 -0.8
FNVD **Fontana Vidola** 1.53 163 Pg Pg 03 52 09.6 -0.9
418nm,0.4s
FNVD **Fontana Vidola** 1.53 163 Pg Pg 03 52 09.6 -0.9
418nm,0.4s
MLNI **Malnisio** 1.57 70⇓*i*Pg Pn 03 52 08.8 -0.2
MLNI *i* Sg Sg 03 52 30.9 -0.7
MLNI **Malnisio** 1.57 70 *i* Pg Pn 03 52 08.8 -0.2
MLNI *i* Sg Sg 03 52 30.9 -0.6
BDI **Bagni Di Lucca** 1.57 177 Pg Pg 03 52 10.6 -0.7
BDI Sg Sg 03 52 32.9 +1.3
836nm,0.8s
BDI **Bagni Di Lucca** 1.57 177 Pg Pg 03 52 10.6 -0.7
BDI Sg Sg 03 52 32.9 +1.3
836nm,0.8s
LLS **Linth-Limmern** 1.59 320⇑*e*Pn Pn 03 52 11.0 +1.7
874nm,0.5s
PLONS **Plons/SG** 1.61 332⇑*e*Pn Pn 03 52 11.3 +1.7
2µm,0.9s
PLONS **Plons/SG** 1.61 332⇑*e*Pn Pn 03 52 11.3 +1.7
DAVA **Damuels** 1.71 346 *e*Pn Pn 03 52 12.8 +1.9
DAVA **Damuels** 1.71 346⇑*e*Pg Pg 03 52 13.0 -0.8
SNR=110
DAVA ⇑*i*Sg Sg 03 52 37.6 +1.7
157nm,0.2s
DAVA **Damuels** 1.71 346 Pg Pg 03 52 13.0 -0.8
SNR=110
DAVA Sg Sg 03 52 37.6 +1.7
157nm,0.2s
MAIM **Mastiano** 1.72 180 Pg Pg 03 52 12.9 -1.2
484nm,0.5s
MAIM **Mastiano** 1.72 180 Pg Pg 03 52 12.9 -1.2
484nm,0.5s
CSMI **Casera Mimoias** 1.74 59⇓*e*Pg Pn 03 52 12.1 +0.8
CSMI *e*Sg Sg 03 52 35.9 -1.2
CSMI **Casera Mimoias** 1.74 59 *e*Pg Pn 03 52 12.1 +0.7
CSMI *e*Sg Sg 03 52 35.9 -1.2
PCP **Piancastagn** 1.76 232 Pg Pn 03 52 13.1 +1.5
451nm,0.6s
PCP **Piancastagn** 1.76 232 Pg Pn 03 52 13.1 +1.5
451nm,0.6s
ORO **Oropa** 1.76 271 Pg Pn 03 52 10.9 -0.7
MOTA **Moosalm** 1.76 14⇑*e*Pg Pg 03 52 14.4 -0.5
SNR=188
MOTA ⇑*i*Sn Sn 03 52 33.9 -0.3
MOTA ⇑*i*Sg Sg 03 52 38.4 +0.7
100nm,0.3s
MOTA **Moosalm** 1.76 14 Pg Pg 03 52 14.4 -0.5
SNR=188
MOTA Sn Sn 03 52 33.9 -0.3
MOTA Sg Sg 03 52 38.4 +0.7
100nm,0.3s
ABTA **Abfaltersbach** 1.79 51 *e*Pg Pn 03 52 13.7 +1.7
SNR=276
ABTA ⇑*i*Sg Sg 03 52 38.0 -0.7
649nm,0.6s
ABTA **Abfaltersbach** 1.79 51 Pg Pn 03 52 13.7 +1.6
SNR=276
ABTA Sg Sg 03 52 38.0 -0.7
649nm,0.6s
WTTA **Wattenberg** 1.81 26 *e*Pn Pn 03 52 13.0 +0.6
WTTA *e*Sn Sn 03 52 38.2 +2.8
WTTA **Wattenberg** 1.81 26⇑*e*Pg Pg 03 52 14.8 -1.1
SNR=84
WTTA ⇑*i*Sg Sg 03 52 38.6 -0.7
544nm,0.4s
WTTA **Wattenberg** 1.81 26 Pg Pg 03 52 14.8 -1.0
SNR=84
WTTA Sg Sg 03 52 38.6 -0.7
544nm,0.4s
MPRI **Monte Prat** 1.85 70⇓*i*Pn Pn 03 52 12.9 +0.1
MPRI *i* Sn Sn 03 52 39.0 +2.8
MPRI **Monte Prat** 1.85 70 *i* Pn Pn 03 52 12.9 +0.1
MPRI *i* Sn Sn 03 52 39.0 +2.8
TLI **Talmassons** 1.85 80⇓*e*Pn Pn 03 52 13.1 +0.2
TLI *e*Sn Sn 03 52 38.4 +2.1
TLI **Talmassons** 1.85 80 *e*Pn Pn 03 52 13.1 +0.2
TLI *e*Sn Sn 03 52 38.4 +2.1
WATA **Walderalm** 1.86 23⇓*e*Pg Pn 03 52 15.1 +2.1
SNR=21
WATA ⇑*i*Sg Sg 03 52 40.5 -0.4
92nm,0.2s
WATA **Walderalm** 1.86 23 Pg Pn 03 52 15.1 +2.1
SNR=21
WATA Sg Sg 03 52 40.5 -0.4
92nm,0.2s
FVI **Forni Avoltri** 1.86 58 Pg Pn 03 52 14.2 +1.2
363nm,0.5s
FVI **Forni Avoltri** 1.86 58 Pg Pn 03 52 14.2 +1.2
363nm,0.5s
RETA **Reutte** 1.86 6⇓*e*Pg Pg 03 52 15.7 -1.1
SNR=38
RETA ⇑*i*Sg Sg 03 52 41.8 +0.9
180nm,0.4s
RETA **Reutte** 1.86 6 Pg Pg 03 52 15.7 -1.1
SNR=38
RETA Sg Sg 03 52 41.8 +0.8
180nm,0.4s
MONC **Moncucco Torin** 1.89 254 Pg Pn 03 52 15.3 +1.9
728nm,0.5s
MONC **Moncucco Torin** 1.89 254 Pg Pn 03 52 15.3 +1.9
728nm,0.5s
FUSE **Fusea** 1.92 65⇑*e*Pn Pn 03 52 13.9 +0.2
FUSE *e*Sn Sn 03 52 38.9 +0.9
FUSE **Fusea** 1.92 65 *e*Pn Pn 03 52 13.9 +0.1
FUSE *e*Sn Sn 03 52 38.9 +1.0
BUA **Buia** 1.93 71⇑*i*Pn Pn 03 52 13.8 -0.1
BUA *i* Sn Sn 03 52 40.5 +2.2
BUA **Buia** 1.93 71 *i* Pn Pn 03 52 13.8 -0.1
BUA *i* Sn Sn 03 52 40.5 +2.3
BOO **Bordano** 1.94 68⇑*i*Pn Pn 03 52 14.1 -0.1
BOO **Bordano** 1.94 68 *i* Pn Pn 03 52 14.1 -0.1
ZOU **Zoufplan** 1.96 61⇓*e*Pn Pn 03 52 15.1 +0.8
ZOU *e*Sn Sn 03 52 42.1 +3.2
ZOU **Zoufplan** 1.96 61 *e*Pn Pn 03 52 15.1 +0.7
ZOU *e*Sn Sn 03 52 42.2 +3.2
SFI **Santa Sofia** 1.98 150 Pg Pn 03 52 14.6 -0.1
297nm,0.7s
BAD **Bernadia** 2.01 72⇓*i*Pn Pn 03 52 14.8 -0.4
BAD *i* Sn Sn 03 52 41.0 +0.7
BAD **Bernadia** 2.01 72 *i* Pn Pn 03 52 14.8 -0.3
BAD *i* Sn Sn 03 52 41.0 +0.7
GMNA **Gemona** 2.02 71 Pg Pn 03 52 14.2 -1.0
807nm,0.6s
VINO **Villanova** 2.04 71⇓*e*Pn Pn 03 52 15.1 -0.5
VINO *e*Sn Sn 03 52 41.3 +0.2
VINO **Villanova** 2.04 71 *e*Pn Pn 03 52 15.1 -0.4
VINO *e*Sn Sn 03 52 41.3 +0.2
ASQU **Asqua** 2.06 153 Pg Pn 03 52 16.3 +0.6
225nm,0.6s
PLRO **Paularo** 2.06 63⇓*e*Pn Pn 03 52 16.7 +0.9
PLRO **Paularo** 2.06 63 *e*Pn Pn 03 52 16.7 +0.9
COLI **Coloredo** 2.08 75⇓*e*Pn Pn 03 52 15.9 -0.1
COLI *e*Sn Sn 03 52 45.3 +3.3
COLI **Coloredo** 2.08 75 *e*Pn Pn 03 52 15.9 -0.1
COLI *e*Sn Sn 03 52 45.3 +3.4
WILA **Wila** 2.09 329⇑*i*Pn Pn 03 52 17.6 +1.4
WILA **Wila** 2.09 329⇑*i*Pn Pn 03 52 17.6 +1.4
LKBD2 **Leukerbad 2** 2.12 291 *e*Pn Pn 03 52 18.2 +1.7
LKBD2 **Leukerbad 2** 2.12 291 *e*Pn Pn 03 52 18.2 +1.7
SABO **M.te Sabotino** 2.20 80⇑*e*Pn Pn 03 52 17.6 -0.1
SABO **M.te Sabotino** 2.20 80 *e*Pn Pn 03 52 17.6 -0.1
DRE **Drenchia** 2.27 75⇑*e*Pn Pn 03 52 17.9 -0.7
DRE *e*Sn Sn 03 52 51.0 +4.4
DRE **Drenchia** 2.27 75 *e*Pn Pn 03 52 17.9 -0.7
DRE *e*Sn Sn 03 52 51.0 +4.4
CRE **Caprese Michel** 2.27 152 Pg Pn 03 52 19.2 +0.6
106nm,0.4s
LSR **Lussari** 2.28 67⇓*e*Pn Pn 03 52 19.4 +0.7
LSR *e*Sn Sn 03 52 52.0 +5.1
LSR **Lussari** 2.28 67 *e*Pn Pn 03 52 19.4 +0.7
ACOM **Acomizza, Ital** 2.29 65⇓*e*Pn Pn 03 52 19.6 +0.7
ACOM **Acomizza, Ital** 2.29 65 *e*Pn Pn 03 52 19.6 +0.6
TRI **Trieste** 2.30 87 *e*Pn Pn 03 52 18.2 -0.8
TRI Sn Sn 03 52 44.8 -2.5
TRI *e*Sg Sg 03 52 51.6 -3.2
TRI **Trieste** 2.30 87 *e*Pn Pn 03 52 18.2 -0.8
TRI Sn Sn 03 52 44.8 -2.5
CADS **Cadrg** 2.34 74 *i* Pn Pn 03 52 18.9 -0.8
CADS *i* Pg Pg 03 52 24.3 -1.6
CADS *i* Sn Sn 03 52 49.7 +1.2
CADS *e* 03 52 54.1
CADS
comp=Z,116nm,0.2s
CADS **Cadrg** 2.34 74 *i* Pn Pn 03 52 18.9 -0.8
CADS *i* Pg Pg 03 52 24.3 -1.6
CADS *i* Sn Sn 03 52 49.7 +1.2
CADS *e* 03 52 54.1
CADS **Cadrg** 2.34 74 *i* Pn Pn 03 52 18.9 -0.7
MRGE **Morge** 2.41 274 Pg Pg 03 52 21.7 -5.5
comp=Z,390nm,0.8s
VOJS **Vojsko** 2.41 79 *i* Pn Pn 03 52 20.0 -0.5
VOJS *i* Pg Pg 03 52 25.5 -1.7
VOJS *e* 03 52 56.3
VOJS
comp=Z,224nm,0.4s
VOJS **Vojsko** 2.41 79 *i* Pn Pn 03 52 20.0 -0.5
VOJS *i* Pg Pg 03 52 25.5 -1.7
VOJS *e* 03 52 56.3
VOJS **Vojsko** 2.41 79 *i* Pn Pn 03 52 20.0 -0.5
MYKA **Terra Mystica** 2.41 64⇓*i*Pn Pn 03 52 20.7 +0.2
MYKA ⇑*i*Sn Sn 03 52 51.0 +0.9
MYKA **Terra Mystica** 2.41 64 Pn Pn 03 52 20.7 +0.2
MYKA Sn Sn 03 52 51.0 +0.9
VOY **Vojsko** 2.41 79 *e*Pn Pn 03 52 20.9 +0.3
VOY *e*Sn Sn 03 52 56.0 +5.8
VOY **Vojsko** 2.41 79 *e*Pn Pn 03 52 20.9 +0.3
GRYON **Gryon** 2.44 286⇓*e*P Pn 03 52 23.3 +2.4
GRYON **Gryon** 2.44 286⇓*e*P Pn 03 52 23.3 +2.4
KBA **Koelnbreinsper** 2.45 53 *e*Pn Pn 03 52 22.9 +1.8
KBA **Koelnbreinsper** 2.45 53⇓*e*Pn Pn 03 52 21.0 -0.1
SNR=9.5
KBA ⇑*i*Sn Sn 03 52 51.0 0.0
KBA ⇑*i*Sg Sg 03 53 00.2 +0.5
comp=Z,250nm,0.6s
KBA **Koelnbreinsper** 2.45 53 Pn Pn 03 52 21.0 -0.1
SNR=9.5
KBA Sn Sn 03 52 51.0 -0.1
KBA Sg Sg 03 53 00.2 +0.5
comp=Z,250nm,0.6s
SULZ **Cheisacher** 2.50 320⇓*e*Pn Pn 03 52 23.3 +1.4
SULZ **Cheisacher** 2.50 320⇓*e*Pn Pn 03 52 23.3 +1.4
SLE **Schleitheim** 2.54 328⇑*i*Pn Pn 03 52 23.4 +1.1
SLE **Schleitheim** 2.54 328⇑*i*Pn Pn 03 52 23.4 +1.1
BALST **Balsthal** 2.57 312⇑*e*Pn Pn 03 52 24.0 +1.2
BALST **Balsthal** 2.57 312⇑*e*Pn Pn 03 52 24.0 +1.2
LPG **La Plagne** 2.63 268 *e*Pn Pn 03 52 24.1 +0.5
LPG *e*Sn Sn 03 52 55.8 +0.3
comp=Z,196nm,0.5s
LPG **La Plagne** 2.63 268 *e*Pn Pn 03 52 24.1 +0.5
LPG *e*Sn Sn 03 52 55.8 +0.3
comp=Z,98nm,0.5s
RJOB **Jochberg** 2.64 36 *e*Pn Pn 03 52 25.3 +1.6
LPL **La Plagne** 2.64 269 *e*Pn Pn 03 52 24.2 +0.5
LPL *e*Sn Sn 03 52 56.0 +0.2
comp=Z,100nm,0.4s
LPL **La Plagne** 2.64 269 *e*Pn Pn 03 52 24.2 +0.5
LPL *e*Sn Sn 03 52 56.0 +0.2
comp=Z,50nm,0.4s
SAOF **Saorge** 2.66 233 P Pn 03 52 25.0 +1.0
SAOF **Saorge** 2.66 233 P Pn 03 52 25.0 +1.0
TORNY **Torny/Romont** 2.70 296⇓*i*Pn Pn 03 52 26.1 +1.5
TORNY **Torny/Romont** 2.70 296⇓*i*Pn Pn 03 52 26.1 +1.5
AUTN **L'Aution** 2.73 234 P Pn 03 52 26.0 +1.1
AUTN **L'Aution** 2.73 234 P Pn 03 52 26.0 +1.1
SPAK **Spaichingen-Ko** 2.73 335 P Pn 03 52 26.1 +1.1
SPAK **Spaichingen-Ko** 2.73 335 P Pn 03 52 26.1 +1.1
KNDS **Knezji Dol** 2.73 91 *i* Pn Pn 03 52 24.6 -0.4
KNDS
comp=Z,155nm,0.3s
KNDS **Knezji Dol** 2.73 91 *i* Pn Pn 03 52 24.6 -0.4
BNI **Bardonecchia** 2.75 259 *e*Pn Pn 03 52 25.0 -0.2
BNI *e*S Sn 03 53 03.8 +5.3
BNI **Bardonecchia** 2.75 259 *e*Pn Pn 03 52 25.0 -0.2
BBS **Basel-Blauen** 2.75 313 P Pn 03 52 26.1 +0.8
BBS **Basel-Blauen** 2.75 313 P Pn 03 52 26.1 +0.8
MBDF **Montbardon** 2.78 252 *e*Pn Pn 03 52 25.0 -0.7
MBDF *e*Sn Sn 03 52 59.0 -0.3
comp=Z,94nm,0.4s
MBDF **Montbardon** 2.78 252 *e*Pn Pn 03 52 25.0 -0.7
MBDF *e*Sn Sn 03 52 59.0 -0.3
comp=Z,47nm,0.4s
SBF **Sospel** 2.81 232 *e*Pn Pn 03 52 26.3 +0.3
SBF *e*Sn Sn 03 52 57.6 -2.3
comp=Z,388nm,0.5s
SBF **Sospel** 2.81 232 *e*Pn Pn 03 52 26.3 +0.3
SBF *e*Sn Sn 03 52 57.6 -2.3
comp=Z,194nm,0.5s
TOUF **Mont Tournerai** 2.82 236 P Pn 03 52 27.4 +1.2
TOUF **Mont Tournerai** 2.82 236 P Pn 03 52 27.4 +1.2
FELD **Feldberg im Sc** 2.82 324 P Pn 03 52 27.1 +0.9
FELD S Sn 03 53 04.0 +3.8
FELD **Feldberg im Sc** 2.82 324 P Pn 03 52 27.1 +0.9
FELD S Sn 03 53 04.0 +3.8
LUCF **Luceram** 2.84 233 P Pn 03 52 27.4 +1.0
LUCF **Luceram** 2.84 233 P Pn 03 52 27.4 +1.0
LJU **Ljubljana** 2.85 80 *e*Pn Pn 03 52 31.0 +4.4
LJU *e*Sn Sn 03 53 08.9 +7.9
BOURR **Bourrignon** 2.86 309⇑*e*Pn Pn 03 52 27.7 +1.0
BOURR **Bourrignon** 2.86 309⇑*e*Pn Pn 03 52 27.7 +1.0
MVIF **Mont Vial** 2.94 235 P Pn 03 52 28.8 +0.9
MVIF **Mont Vial** 2.94 235 P Pn 03 52 28.8 +0.9
OBKA **Obir** 2.96 71 *e*Pn Pn 03 52 28.3 +0.2
OBKA **Obir** 2.96 71⇑*e*Pn Pn 03 52 28.5 +0.4
SNR=7.0
OBKA ⇓*i*Sn Sn 03 53 03.8 +0.2
OBKA ⇓*i*Sg Sg 03 53 18.0 +1.9
comp=Z,228nm,0.4s
OBKA **Obir** 2.96 71 Pn Pn 03 52 28.5 +0.4
SNR=7.0
OBKA Sn Sn 03 53 03.8 +0.2
OBKA Sg Sg 03 53 18.0 +1.9
comp=Z,228nm,0.4s
LOMF **Lomont** 3.06 305 P Pn 03 52 30.1 +0.7
LOMF **Lomont** 3.06 305 P Pn 03 52 30.1 +0.7
GIMEL **St. Georges /** 3.07 289 *e*Pn Pn 03 52 31.1 +1.4
GIMEL **St. Georges /** 3.07 289 *e*Pn Pn 03 52 31.1 +1.4
BRANT **Les Verrieres** 3.08 297⇑*e*Pn Pn 03 52 30.7 +1.0
BRANT **Les Verrieres** 3.08 297⇑*e*Pn Pn 03 52 30.7 +1.0
BFO **Black Forest** 3.08 332 *e*Pn Pn 03 52 31.0 +1.3
BFO *e*Sn Sn 03 53 08.8 +2.3
BFO **Black Forest** 3.08 332 *e*Pn Pn 03 52 31.0 +1.3
BFO *e*Sg Sg 03 53 21.3 +1.5
BFO **Black Forest** 3.08 332 *e*Pn Pn 03 52 31.0 +1.3
BFO *e*Sg Sg 03 53 21.3 +1.5
CALN **Calern** 3.18 235 P Pn 03 52 32.4 +1.2
CALN **Calern** 3.18 235 P Pn 03 52 32.4 +1.2
MOF **Molkenrain** 3.20 315 P Pn 03 52 32.5 +1.1
MOF **Molkenrain** 3.20 315 P Pn 03 52 32.5 +1.1
LIBD **Limburg** 3.20 323 P Pn 03 52 33.2 +1.8
LIBD **Limburg** 3.20 323 P Pn 03 52 33.2 +1.8
CABF **La Chapelle** 3.21 289 *e*Pn Pn 03 52 31.8 +0.2
CABF *e*Sg Sg 03 53 25.5 +1.3
comp=Z,281nm,1.0s
CABF **La Chapelle** 3.21 289 *e*Pn Pn 03 52 31.8 +0.2
CABF *e*Sg Sg 03 53 25.5 +1.3
comp=Z,140nm,1.0s
STU **Stuttgart** 3.26 345 Pn Pn 03 52 35.6 +3.3
STU *e*Pg Pg 03 52 45.3 +1.8
STU **Stuttgart** 3.26 345 Pn Pn 03 52 35.6 +3.4
PGF **Pioggiola** 3.27 200 *e*Pn Pn 03 52 31.7 -0.6
PGF *e*Sn Sn 03 53 08.2 -3.0
comp=Z,33nm,0.2s
PGF **Pioggiola** 3.27 200 *e*Pn Pn 03 52 31.7 -0.6
PGF *e*Sn Sn 03 53 08.2 -3.0
comp=Z,16nm,0.2s
NVLJ **Novalja** 3.28 107 *e*Pn Pn 03 52 31.6 -0.9
NVLJ Sn Sn 03 53 08.5 -3.1
NVLJ **Novalja** 3.28 107 *e*Pn Pn 03 52 31.6 -0.9
NVLJ Sn Sn 03 53 08.5 -3.1
HINF **Hinteralfeld** 3.32 312 *e*Pn Pn 03 52 33.7 +0.6
HINF *e*Sn Sn 03 53 10.6 -1.9
HINF *e*Sg Sg 03 53 26.9 -0.8
comp=Z,168nm,0.5s
HINF **Hinteralfeld** 3.32 312 *e*Pn Pn 03 52 33.7 +0.6
HINF *e*Sn Sn 03 53 10.6 -1.9
HINF *e*Sg Sg 03 53 26.9 -0.8
comp=Z,84nm,0.5s
SOKA **Soboth** 3.33 70⇑*i*Pn Pn 03 52 33.3 +0.2
SOKA **Soboth** 3.33 70 Pn Pn 03 52 33.3 +0.2
ORIF **Oris-en-Rattie** 3.33 259 *e*Pn Pn 03 52 33.5 +0.3
ORIF *e*Sn Sn 03 53 12.6 -0.2
comp=Z,78nm,0.4s
ORIF **Oris-en-Rattie** 3.33 259 *e*Pn Pn 03 52 33.5 +0.3
ORIF *e*Sn Sn 03 53 12.6 -0.2
comp=Z,39nm,0.4s
MOA **Molln** 3.41 48 *e*Pn Pn 03 52 35.6 +1.3
MOA **Molln** 3.41 48⇓*i*Pn Pn 03 52 35.5 +1.2
SNR=28
MOA **Molln** 3.41 48 Pn Pn 03 52 35.5 +1.2
SNR=28
FRF **La Foret Royal** 3.44 234 *e*Pn Pn 03 52 34.8 +0.1
FRF *e*Sn Sn 03 53 13.0 -2.5
comp=Z,145nm,0.6s
FRF **La Foret Royal** 3.44 234 *e*Pn Pn 03 52 34.8 +0.1
FRF *e*Sn Sn 03 53 13.0 -2.5
comp=Z,73nm,0.6s
ECH **Echery** 3.45 320 P Pn 03 52 35.7 +0.9
ECH **Echery** 3.45 320 *e*Pn Pn 03 52 35.9 +1.1
ECH *e*Sn Sn 03 53 16.3 +0.6
ECH *e*Sg Sg 03 53 35.5 +3.8
ECH **Echery** 3.45 320 P Pn 03 52 35.7 +0.9
ECH *e*Sn Sn 03 53 16.3 +0.6
CDF **Champ du Feu** 3.54 323 *e*Pn Pn 03 52 36.9 +0.8
CDF *e*Sn Sn 03 53 15.7 -2.3
comp=Z,117nm,0.6s
CDF **Champ du Feu** 3.54 323 *e*Pn Pn 03 52 36.9 +0.8
CDF *e*Sn Sn 03 53 15.7 -2.3
comp=Z,58nm,0.6s
LMR **La Mourre** 3.66 232 *e*Pn Pn 03 52 37.5 -0.2
LMR *e*Sn Sn 03 53 18.0 -3.0
comp=Z,41nm,0.3s
LMR **La Mourre** 3.66 232 *e*Pn Pn 03 52 37.5 -0.2
LMR *e*Sn Sn 03 53 18.0 -3.0
comp=Z,21nm,0.3s
HAU **Haudompre** 3.70 311 *e*Pn Pn 03 52 39.1 +0.8
HAU *e*Sn Sn 03 53 19.8 -2.2
comp=Z,156nm,0.5s
HAU **Haudompre** 3.70 311 *e*Pn Pn 03 52 39.1 +0.8
HAU *e*Sn Sn 03 53 19.8 -2.2
comp=Z,78nm,0.5s
LANF **Langenberg** 3.81 332 P Pn 03 52 41.1 +1.3
LANF **Langenberg** 3.81 332 P Pn 03 52 41.1 +1.3
ARSA **Arzberg** 3.84 63 *e*Pn Pn 03 52 39.7 -0.5
ARSA **Arzberg** 3.84 63⇑*i*Pn Pn 03 52 39.8 -0.4
ARSA **Arzberg** 3.84 63 Pn Pn 03 52 39.8 -0.4
WET **Wettzell** 3.87 24 *e*Pn Pn 03 52 40.5 -0.1
WET *e*Sn Sn 03 53 27.0 +0.9
SMRF **Simiane la Rot** 3.87 246 *e*Pn Pn 03 52 40.9 +0.3
SMRF *e*Sn Sn 03 53 25.1 -1.0
comp=Z,61nm,0.7s
SMRF **Simiane la Rot** 3.87 246 *e*Pn Pn 03 52 40.9 +0.3
SMRF *e*Sn Sn 03 53 25.1 -1.0
comp=Z,31nm,0.7s
GEC2 **GERESS Array S** 3.89 33 *e*Pn Pn 03 52 40.8 0.0
GEC2 *e*Sn Sn 03 53 26.1 -0.4
AQU **L'Aquila** 3.90 146 *e*Pn Pn 03 52 40.6 -0.3
AQU **L'Aquila** 3.90 146 *e*Pn Pn 03 52 40.6 -0.4
THEF **They Montfort** 4.03 312 P Pn 03 52 43.9 +1.1
THEF **They Montfort** 4.03 312 P Pn 03 52 43.9 +1.1
KHC **Kasperske Hory** 4.08 30 *e*Pn Pn 03 52 43.6 +0.1
KHC *e*Sn Sn 03 53 29.8 -1.5
KHC *e*Sg Sg 03 53 48.6 -3.4
KHC **Kasperske Hory** 4.08 30 *e*PN Pn 03 52 43.6 +0.1
KHC *e*SN Sn 03 53 29.8 -1.5
KHC *e*SG Sg 03 53 48.6 -3.4
comp=Z,57nm,0.5s
KHC **Kasperske Hory** 4.08 30 Pn Pn 03 52 43.6 +0.1
KHC Sn Sn 03 53 29.8 -1.5
KHC Sg Sg 03 53 48.6 -3.4
comp=Z,57nm,0.5s
GRF **Grafenberg Arr** 4.09 7 *e*Pn Pn 03 52 43.3 -0.3

GRF Grafenberg Arr 4.09 7 *e*Pn **Pn 03 52 43.3 -0.3**
VIVF Saint-Julien-I 4.18 261 *e*Pn **Pn 03 52 44.9 0.0**
VIVF *e*Sn **Sn 03 53 32.6 -1.2**
comp=Z,21nm,0.4s
VIVF Saint-Julien-I 4.18 261 *e*Pn **Pn 03 52 44.9 0.0**
VIVF *e*Sn **Sn 03 53 32.6 -1.2**
comp=Z,11nm,0.4s
SSB Saint Sauveur 4.20 267 P **Pn 03 52 45.4 +0.2**
SSB Saint Sauveur 4.20 267 *e*Pn **Pn 03 52 45.5 +0.3**
SSB *e*Sn **Sn 03 53 34.7 +0.4**
SSB Saint Sauveur 4.20 267 P **Pn 03 52 45.4 +0.2**
SSB *e*Sn **Sn 03 53 34.7 +0.4**
CONA Conrad Observa 4.35 56 ‖ *i*Pn **Pn 03 52 47.1 -0.1**
CONA ‖ *i*Sn **Sn 03 53 37.9 +0.1**
CONA Conrad Observa 4.35 56 Pn **Pn 03 52 47.1 -0.1**
CONA Sn **Sn 03 53 37.9 +0.1**
SFTF Sexfontaines 4.53 307 *e*Pn **Pn 03 52 49.9 +0.2**
SFTF *e*Sn **Sn 03 53 39.8 -2.7**
comp=Z,78nm,0.6s
SFTF Sexfontaines 4.53 307 *e*Pn **Pn 03 52 49.9 +0.2**
SFTF *e*Sn **Sn 03 53 39.8 -2.7**
comp=Z,39nm,0.6s
RFYF Reffroy 4.55 313 *e*Pn **Pn 03 52 49.7 -0.2**
RFYF *e*Sn **Sn 03 53 40.0 -2.8**
comp=Z,52nm,0.4s
RFYF Reffroy 4.55 313 *e*Pn **Pn 03 52 49.7 -0.2**
RFYF *e*Sn **Sn 03 53 40.0 -2.8**
comp=Z,26nm,0.4s
RUP Ruppelstein 4.68 332 P **Pn 03 52 53.8 +2.0**
RUP Ruppelstein 4.68 332 P **Pn 03 52 53.8 +2.0**
MEZF Maizieres J'vi 4.69 310 *e*Pn **Pn 03 52 52.9 +1.0**
MEZF *e*Sn **Sn 03 53 43.6 -2.8**
comp=Z,71nm,0.5s
MEZF Maizieres J'vi 4.69 310 *e*Pn **Pn 03 52 52.9 +1.0**
MEZF *e*Sn **Sn 03 53 43.6 -2.8**
comp=Z,36nm,0.5s
SMF Signal de Mont 4.73 285 *e*Pn **Pn 03 52 52.8 +0.4**
SMF *e*Sn **Sn 03 53 45.6 -1.7**
comp=Z,64nm,0.4s
SMF Signal de Mont 4.73 285 *e*Pn **Pn 03 52 52.8 +0.4**
SMF *e*Sn **Sn 03 53 45.6 -1.7**
comp=Z,32nm,0.4s
NKC Novy Kostel 4.79 15 *e*Pn **Pn 03 52 54.7 +1.5**
NKC *e*Sg **Sg 03 54 12.8 -1.9**
NKC Novy Kostel 4.79 15 *e*PN **Pn 03 52 54.7 +1.5**
NKC *e*SG **Sg 03 54 12.8 -1.9**
comp=Z,34nm,0.4s
NKC Novy Kostel 4.79 15 Pn **Pn 03 52 54.7 +1.5**
NKC Sg **Sg 03 54 12.8 -1.9**
comp=Z,34nm,0.4s
PLDF La Plantade 4.81 276 P **Pn 03 52 54.0 +0.4**
PLDF La Plantade 4.81 276 P **Pn 03 52 54.0 +0.4**
LOR Lormes 4.87 292 *e*Pn **Pn 03 52 54.4 +0.1**
LOR *e*Sn **Sn 03 53 48.4 -2.2**
comp=Z,37nm,0.3s
LOR Lormes 4.87 292 *e*Pn **Pn 03 52 54.4 +0.1**
LOR *e*Sn **Sn 03 53 48.4 -2.2**
comp=Z,19nm,0.3s
TANN Tannenbergstha 4.96 15 *e*Pn **Pn 03 52 55.7 +0.1**
TANN *e*Sn **Sn 03 53 53.1 +0.1**
LASF Ste Croix 4.97 254 *e*Pn **Pn 03 52 55.6 -0.1**
LASF *e*Sn **Sn 03 53 51.3 -1.8**
comp=Z,26nm,0.5s
LASF Ste Croix 4.97 254 *e*Pn **Pn 03 52 55.6 -0.1**
LASF *e*Sn **Sn 03 53 51.3 -1.8**
comp=Z,13nm,0.5s
WLF Walferdange 4.98 326 *e*Pn **Pn 03 52 57.5 +1.6**
WLF *e*Pg **Pg 03 53 16.1 -0.4**
WLF *e*Sg **Sg 03 54 23.8 +2.7**
WLF Walferdange 4.98 326 *e*Pn **Pn 03 52 57.5 +1.6**
TREC Trest 4.99 41 *e*PN **Pn 03 52 56.0 0.0**
TREC Trest 4.99 41 Pn **Pn 03 52 56.0 0.0**
SSF Saint Saulge 5.04 289 *e*Pn **Pn 03 52 56.8 +0.1**
SSF *e*Sn **Sn 03 53 52.8 -2.2**
comp=Z,23nm,0.4s
SSF Saint Saulge 5.04 289 *e*Pn **Pn 03 52 56.8 +0.1**
SSF *e*Sn **Sn 03 53 52.8 -2.2**
comp=Z,11nm,0.4s
MOX Moxa 5.07 8 *e*PN **Pn 03 52 56.7 -0.4**
MOX *i* PG **Pg 03 53 18.3 +0.2**
MOX *e*SN **Sn 03 53 55.9 +0.2**
MOX *e*SG **Sg 03 54 22.5 -1.3**
MOX
comp=Z,200nm,12.0s
MOX Moxa 5.07 8 *e*Pn **Pn 03 52 56.4 -0.7**
MOX *e*Sn **Sn 03 53 55.5 -0.2**
MOX Moxa 5.07 8 *e*Pn **Pn 03 52 56.7 -0.4**
MOX *i* Pg **Pg 03 53 18.3 +0.2**
MOX *e*Sn **Sn 03 53 55.9 +0.2**
MOX *e*Sg **Sg 03 54 22.5 -1.3**
MOX Moxa 5.07 8 *e*Pn **Pn 03 52 56.7 -0.4**
AVF Avril sur Loir 5.09 286 *e*Pn **Pn 03 52 57.4 +0.1**
AVF *e*Sn **Sn 03 53 53.9 -2.2**
comp=Z,30nm,0.6s
AVF Avril sur Loir 5.09 286 *e*Pn **Pn 03 52 57.4 +0.1**
AVF *e*Sn **Sn 03 53 53.9 -2.2**
comp=Z,15nm,0.6s
LBL Lubilhac 5.11 268 P **Pn 03 52 57.9 +0.2**
LBL Lubilhac 5.11 268 P **Pn 03 52 57.9 +0.2**
PRU Pruhonice 5.14 31 *e*Pn **Pn 03 52 57.7 -0.4**
comp=Z,22nm,0.5s
PRU *e*Sn **Sn 03 53 55.3 -2.1**
PRU *e*Sg **Sg 03 54 22.4 -3.6**
PRU Pruhonice 5.14 31 *e*PN **Pn 03 52 57.7 -0.4**
PRU *e*SN **Sn 03 53 55.3 -2.1**
PRU *e*SG **Sg 03 54 22.4 -3.6**
comp=Z,22nm,0.5s
PRU Pruhonice 5.14 31 Pn **Pn 03 52 57.7 -0.4**
PRU Sn **Sn 03 53 55.3 -2.1**
PRU Sg **Sg 03 54 22.4 -3.6**
comp=Z,22nm,0.5s
AGO Saint Agoulin 5.16 277 P **Pn 03 52 58.6 +0.3**
AGO Saint Agoulin 5.16 277 P **Pn 03 52 58.6 +0.3**
ZST Bratislava 5.21 58 *e*Pn **Pn 03 53 00.4 +1.4**
ZST *e*Sg **Sg 03 54 27.2 -0.9**
ZST Bratislava 5.21 58 *e*PN **Pn 03 53 00.4 +1.4**
ZST *e*SG **Sg 03 54 27.2 -0.9**
ZST Bratislava 5.21 58 *e*Pn **Pn 03 53 00.4 +1.4**
ZST *e*Sg **Sg 03 54 27.2 -0.9**
PYM Petit Puy Mans 5.24 274 P **Pn 03 52 59.5 0.0**
PYM Petit Puy Mans 5.24 274 P **Pn 03 52 59.5 0.0**
BGF Bois d'Agland 5.40 283 *e*Pn **Pn 03 53 01.4 -0.2**
BGF *e*Sn **Sn 03 54 01.5 -2.2**
comp=Z,52nm,0.3s
BGF Bois d'Agland 5.40 283 *e*Pn **Pn 03 53 01.4 -0.2**
BGF *e*Sn **Sn 03 54 01.5 -2.2**
comp=Z,26nm,0.3s
VRAC Vranov 5.53 46 Pn **Pn 03 53 02.3 -1.2**
comp=Z,0.4nm,0.3s,baz=277,slow=14,SNR=2.7
VRAC Sn **Sn 03 54 02.4 -4.7**
comp=Z,1.2nm,0.3s,baz=294,slow=20,SNR=3.1
VRAC Lg 03 54 33.9
comp=Z,4.7nm,0.3s,baz=172,slow=16,SNR=14
VRAC Vranov 5.53 46 Pn **Pn 03 53 02.3 -1.2**
PVCC Panska Ves 5.61 28 *e*Pn **Pn 03 53 03.9 -0.6**
PVCC Panska Ves 5.61 28 *e*PN **Pn 03 53 03.9 -0.6**
PVCC Panska Ves 5.61 28 Pn **Pn 03 53 03.9 -0.6**
HYF Humbligny 5.67 290 *e*Pn **Pn 03 53 05.3 0.0**
HYF *e*Sn **Sn 03 54 07.3 -3.0**
HYF Humbligny 5.67 290 *e*Pn **Pn 03 53 05.3 0.0**
BRG Berggiesshubel 5.73 22 PN **Pn 03 53 06.0 -0.1**
BRG SN **Sn 03 54 10.4 -1.4**
BRG SG **Sg 03 54 41.6 -3.2**
comp=Z,26nm,0.7s
TCF Toulx Ste Croi 5.81 279 *e*Pn **Pn 03 53 07.6 +0.3**
TCF *e*Sn **Sn 03 54 11.1 -2.8**
comp=Z,19nm,0.3s
TCF Toulx Ste Croi 5.81 279 *e*Pn **Pn 03 53 07.6 +0.3**
STON Ston 5.87 116 *e*Pn **Pn 03 53 07.8 -0.3**
STON Sn **Sn 03 54 10.1 -5.3**
STON Ston 5.87 116 *e*Pn **Pn 03 53 07.8 -0.3**
GIVF Givet 5.87 322 *e*Pn **Pn 03 53 07.5 -0.6**
GIVF *e*Sn **Sn 03 54 12.1 -3.4**
comp=Z,44nm,0.8s
GIVF Givet 5.87 322 *e*Pn **Pn 03 53 07.5 -0.6**
CLL Collm 5.92 15 *e*Pn **Pn 03 53 09.0 +0.3**
CLL *e*Pg **Pg 03 53 36.0 +1.6**
CLL *e*Sg **Sg 03 54 49.0 -1.9**
CLL Collm 5.92 15 *e*Pn **Pn 03 53 09.0 +0.3**
CLL *e*Pg **Pg 03 53 36.0 +1.6**
CLL *e*Sg **Sg 03 54 49.0 -1.9**
comp=Z,22nm,0.8s
CLL Collm 5.92 15 *e*Pn **Pn 03 53 09.0 +0.3**

HGN Heimansgroeve 5.97 331 *e*Pn **Pn 03 53 13.1 +3.7**
HGN Heimansgroeve 5.97 331 *e*Sn **Sn 03 54 21.8 +4.0**
CAF Calviac 5.99 266 *e*Pn **Pn 03 53 09.6 -0.1**
CAF *e*Sn **Sn 03 54 15.6 -2.7**
comp=Z,9.8nm,0.6s
CAF Calviac 5.99 266 *e*Pn **Pn 03 53 09.6 -0.1**
BAIF Baives 6.12 319 *e*Pn **Pn 03 53 11.1 -0.4**
BAIF *e*Sn **Sn 03 54 17.9 -3.6**
BAIF *e*Sg **Sg 03 54 54.3 -3.1**
comp=Z,27nm,0.8s
BAIF Baives 6.12 319 *e*Pn **Pn 03 53 11.1 -0.4**
UPC Upice 6.12 35 *e*Pn **Pn 03 53 10.4 -1.1**
UPC Upice 6.12 35 *e*PN **Pn 03 53 10.4 -1.1**
UPC Upice 6.12 35 Pn **Pn 03 53 10.4 -1.1**
DPC Dobruska-Polom 6.13 38 *e*Pn **Pn 03 53 10.9 -0.7**
comp=Z,18nm,0.6s
DPC *e*Sg **Sg 03 54 51.5 -6.2**
DPC Dobruska-Polom 6.13 38 *e*PN **Pn 03 53 10.9 -0.7**
DPC *e*SG **Sg 03 54 51.5 -6.2**
comp=Z,18nm,0.6s
DPC Dobruska-Polom 6.13 38 Pn **Pn 03 53 10.9 -0.7**
CLZ Clausthal 6.21 359 *e*Pn **Pn 03 53 13.1 +0.3**
MORC Moravsky Berou 6.31 46 *e*Pn **Pn 03 53 13.7 -0.4**
comp=Z,2.5nm,0.6s
MORC Moravsky Berou 6.31 46 *e*Pn **Pn 03 53 13.7 -0.4**
comp=Z,2.5nm,0.6s
RJF Les Rejaudoux 6.32 270 *e*Pn **Pn 03 53 13.9 -0.4**
RJF *e*Sn **Sn 03 54 23.8 -2.7**
comp=Z,14nm,0.8s
RJF Les Rejaudoux 6.32 270 *e*Pn **Pn 03 53 13.9 -0.4**
MTLF Montolieu 6.34 252 *e*Pn **Pn 03 53 14.3 -0.3**
MTLF *e*Sn **Sn 03 54 23.9 -3.2**
comp=Z,2.6nm,0.3s
MTLF Montolieu 6.34 252 *e*Pn **Pn 03 53 14.3 -0.3**
TREB Trebinje 6.36 115 *e*Pn **Pn 03 53 14.0 -0.8**
VYHS Vyhne 6.38 60 *e*Pn **Pn 03 53 14.0 -1.1**
VYHS *e*Pg **Pg 03 53 43.6 +0.4**
VYHS *e*Sg **Sg 03 55 06.3 +0.6**
VYHS Vyhne 6.38 60 *e*PN **Pn 03 53 14.0 -1.1**
VYHS *e*PG **Pg 03 53 43.6 +0.4**
VYHS *e*SG **Sg 03 55 06.3 +0.6**
VYHS Vyhne 6.38 60 *e*Pn **Pn 03 53 14.0 -1.1**
BBLS Lazići 6.59 102 *e*Pn **Pn 03 53 18.2 +0.2**
LFF La Frestale 6.91 268 *e*Pn **Pn 03 53 22.0 -0.4**
LFF *e*Sn **Sn 03 54 37.8 -3.3**
comp=Z,10.0nm,0.6s
LFF La Frestale 6.91 268 *e*Pn **Pn 03 53 22.0 -0.4**
DIVS Divibare 6.92 99 *e*Pn **Pn 03 53 22.8 +0.2**
MFF Saint Martin d 7.46 281 *e*Pn **Pn 03 53 29.4 -0.4**
MFF *e*Sn **Sn 03 54 50.7 -3.7**
comp=Z,15nm,0.6s
MFF Saint Martin d 7.46 281 *e*Pn **Pn 03 53 29.4 -0.4**
EPF Esparros 7.73 254 *e*Pn **Pn 03 53 33.3 -0.3**
EPF *e*Sn **Sn 03 54 57.2 -3.9**
comp=Z,3.3nm,0.6s
EPF Esparros 7.73 254 *e*Pn **Pn 03 53 33.3 -0.3**
LDF La Druitiere 7.82 296 *e*Pn **Pn 03 53 34.2 -0.6**
LDF *e*Sn **Sn 03 54 59.2 -4.2**
comp=Z,11nm,0.5s
LDF La Druitiere 7.82 296 *e*Pn **Pn 03 53 34.2 -0.6**
FLN La Foliniere 8.10 297 *e*Pn **Pn 03 53 38.0 -0.7**
FLN *e*Sn **Sn 03 55 05.6 -4.7**
comp=Z,41nm,1.1s
FLN La Foliniere 8.10 297 *e*Pn **Pn 03 53 38.0 -0.7**
GRR Gorron 8.23 294 *e*Pn **Pn 03 53 39.7 -0.8**
GRR *e*Sn **Sn 03 55 08.6 -4.8**
comp=Z,6.9nm,0.3s
GRR Gorron 8.23 294 *e*Pn **Pn 03 53 39.7 -0.8**
ETSF Etsaut 8.39 255 *e*Pn **Pn 03 53 42.2 -0.4**
ETSF *e*Sn **Sn 03 55 13.0 -4.3**
comp=Z,2.3nm,0.5s
ETSF Etsaut 8.39 255 *e*Pn **Pn 03 53 42.2 -0.4**
SJPF Ste Jean 8.76 257 *e*Pn **Pn 03 53 47.2 -0.6**
SJPF *e*Sn **Sn 03 55 21.6 -4.9**
comp=Z,1.6nm,0.6s
SJPF Ste Jean 8.76 257 *e*Pn **Pn 03 53 47.2 -0.6**
SGMF Saint Gilles 9.30 291 *e*Pn **Pn 03 53 54.3 -0.9**
SGMF *e*Sn **Sn 03 55 34.6 -5.2**
comp=Z,6.5nm,0.4s
SGMF Saint Gilles 9.30 291 *e*Pn **Pn 03 53 54.3 -0.9**
QUIF Quistinic 9.64 289 *e*Pn **Pn 03 53 59.2 -0.6**
QUIF *e*Sn **Sn 03 55 42.7 -5.5**
comp=Z,13nm,0.5s
QUIF Quistinic 9.64 289 *e*Pn **Pn 03 53 59.2 -0.6**
ROSF Rostrenen 9.79 291 *e*Pn **Pn 03 54 01.1 -0.7**
ROSF *e*Sn **Sn 03 55 46.0 -5.7**
comp=Z,6.2nm,0.6s
ROSF Rostrenen 9.79 291 *e*Pn **Pn 03 54 01.1 -0.7**
EKA Eskdalemuir Ar 13.01 323 Pn **Pn 03 54 47.3 +1.5**
comp=Z,0.2nm,0.3s,baz=138,slow=14,SNR=4.0
EKA Eskdalemuir Ar 13.01 323 Pn **Pn 03 54 47.3 +1.5**
HFS Hagfors 14.65 6 Pn **Pn 03 55 13.4 +5.2**
comp=Z,0.1nm,0.3s,baz=188,slow=9.9,SNR=3.5
NOA NORSAR Array B 15.44 1 Pn **Pn 03 55 22.9 +4.2**
comp=Z,0.1nm,0.3s,baz=182,slow=11,SNR=3.4
FINES FINESS Array B 18.26 24 P **Pn 03 55 54.9 +0.5**
comp=Z,0.1nm,0.3s,baz=221,slow=12,SNR=3.1
FINES FINESS Array B 18.26 24 P **Pn 03 55 54.9 +0.6**
ARCES ARCESS Array B 25.13 12 P **P 03 57 04.8 -1.0**
comp=Z,1.0nm,0.9s,mb3.4,baz=205,slow=7.5,SNR=4.1
ARCES ARCESS Array B 25.13 12 P **P 03 57 04.8 -1.0**
ARCES ARCESS Array B 25.13 12 P **P 03 57 04.8 -1.0**
MKAR Makanchi Array 48.07 61 P **P 04 00 19.7 -0.8**
comp=Z,0.2nm,0.4s,mb3.5,baz=292,slow=6.8,SNR=3.4
YKA Yellowknife Ar 63.66 335 P **P 04 02 12.1 +0.2**
comp=Z,0.5nm,0.6s,mb3.7,baz=39,slow=6.4,SNR=6.4
YKA Yellowknife Ar 63.66 335 P **P 04 02 12.1 +0.2**

NEIC ***14*** *04:09:25.3, 36.°29S×179.°41W, h5km, ML3.8(WEL), After WEL.*
WEL 14 04:09:25.1±0.6, 36.°29S×179.°26W, h100km, ML3.9/3, Error ellipse: s-maj=6.6km s-min=6.1km az=0.0, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.33**	**236**	PN	Pn	04 10 02.0	+0.1
MXZ				SN	Sn	04 10 31.0	+0.9
MXZ	**Matakaoa Point**	**2.33**	**236**	P	Pn	04 10 02.0	+0.1
MXZ				S	Sn	04 10 28.7	-1.4
CNGZ	**Carnagh Statio**	**2.98**	**222**	PN	Pn	04 10 11.9	+1.4
MWZ	**Matawai**	**3.28**	**230**	PN	Pn	04 10 16.0	+1.5
MWZ				SN	Sn	04 10 53.3	+0.7
MWZ	**Matawai**	**3.28**	**230**	P	Pn	04 10 15.0	+0.5
MWZ				S	Sn	04 10 53.3	+0.7
URZ	**Urewera**	**3.50**	**235**	PN	Pn	04 10 18.6	+1.1
URZ				SN	Sn	04 10 58.6	+0.6
URZ	**Urewera**	**3.50**	**235**	P	Pn	04 10 18.6	+1.1
MHGZ	**Mahia Peninsul**	**3.64**	**217**	PN	Pn	04 10 20.3	+1.0
KNZ	**Kokohu**	**3.66**	**221**	PN	Pn	04 10 20.1	+0.6
KNZ	**Kokohu**	**3.66**	**221**	P	Pn	04 10 20.1	+0.5
KUZ	**Kuaotunu**	**4.07**	**262**	PN	Pn	04 10 25.8	+0.6
KUZ	**Kuaotunu**	**4.07**	**262**	P	Pn	04 10 25.8	+0.7
KAHZ	**Kahuranaki**	**4.64**	**220**	PN	Pn	04 10 33.0	+0.1
CTZ	**Chatham Island**	**7.71**	**166**	PN	Pn	04 11 17.4	+2.9

ISCJB ***14*** *04:29:03.4±2.1, 53.°35N±0.°07×161.°16W±0.°07, h9km±14km, mb3.8/7, Error ellipse: s-maj=11.3km s-min=6.3km az=168.2*
NEIC ***14*** *04:29:07.2, 53.°21N×161.°13W, h30km, ML3.6(AEIC), After AEIC.*
IDC ***14*** *04:29:11.2±1.5, 53.°44N×159.°74W, h0km, mb3.8/7, mb1 4.1/9, mb1mx3.8/29, mbtmp3.8/9, ML4.0/2, Error ellipse: s-maj=39.7km s-min=20.3km az=27.0*
ISC 14 04:29:05.5±2.5, 53.°37N±0.°07×161.°21W±0.°07, h11km±17km, n23, σ0.85/30, mb3.8/7, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDPT	**Sand Point**	**2.03**	**12**	P	Pn	04 29 39.6	0.0
SDPT				S	Sn	04 30 05.3	+0.4
AKUT	**Akutan**	**2.81**	**288**	*e*Pn	Pn	04 29 50.8	+0.5
AKLV	**Akutan Long Va**	**2.93**	**288**	P	Pn	04 29 52.0	+0.2
AKGG	**Akutan Green G**	**2.96**	**288**	P	Pn	04 29 53.0	+0.7
AKGG				S	Sn	04 30 28.2	+0.5
UNV	**Unalaska Valle**	**3.19**	**281**	*e*Pn	Pn	04 29 55.2	-0.3
UNV				*e*Sn	Sn	04 30 31.9	-1.5
CHGN	**Chignik**	**3.36**	**28**	*e*Pn	Pn	04 29 57.9	+0.1
CHGN				*e*Sn	Sn	04 30 38.1	+0.5
OHAK	**Old Harbor**	**5.95**	**46**	*e*Pn	Pn	04 30 32.0	-1.4
OHAK				*e*Sn	Sn	04 31 37.6	-3.8
KDAK	**Kodiak Island**	**6.59**	**44**	*e*Pn	Pn	04 30 40.8	-1.5
KDAK				Sn	Sn	04 31 51.7	-5.6
KDAK	**Kodiak Island**	**6.59**	**44**	*e*Pn	Pn	04 30 40.7	-1.5
KDAK				*e*Sn	Sn	04 31 52.3	-5.0
RC01	**Rabbit Creek A**	**9.92**	**34**	*e*Pn	Pn	04 31 28.2	+0.5
PMR	**Palmer**	**10.48**	**33**	*e*Pn	Pn	04 31 34.9	-0.6
PPLA	**Purkeypile**	**10.67**	**23**	*e*Pn	Pn	04 31 40.0	+2.0
DLBC	**Dease Lake**	**18.10**	**61**	P	Pn	04 33 16.8	+0.2
DLBC	**Dease Lake**	**18.10**	**61**	P	Pn	04 33 16.8	+0.2
INK	**Inuvik**	**19.88**	**31**	P	Pn	04 33 36.9	-1.0
YKA	**Yellowknife Ar**	**25.82**	**51**	P	P	04 34 36.7	+0.5
YKA	**Yellowknife Ar**	**25.82**	**51**	P	P	04 34 36.7	+0.5
YBH	**Yreka Blue Hor**	**28.13**	**99**	P	P	04 34 57.5	+0.2
NVAR	**Mina Array Bea**	**32.83**	**100**	P	P	04 35 39.9	+1.0
PDAR	**Pinedale Array**	**35.37**	**86**	P	P	04 36 00.1	-0.7
TXAR	**Lajitas Array**	**47.86**	**96**	P	P	04 37 43.5	+0.4
BVAR	**Borovoye Array**	**65.60**	**329**	P	P	04 39 59.9	+11
MKAR	**Makanchi Array**	**66.55**	**318**	P	P	04 40 05.3	+10

IDC ***14*** *04:44:47.4±0.4, 2.°25N×96.°44E, h0km, mb5.1/21, mb1 5.1/23, mb1mx5.1/24, mbtmp5.1/23, ML4.8/2, MS5.2/24, Ms1 5.2/24, ms1mx5.1/30, Error ellipse: s-maj=15.3km s-min=10.7km az=59.0*
ISCJB ***14*** *04:44:50.9±0.1, 2.°20N±0.°02×96.°55E±0.°02, h32km, mb5.5/246, MS5.4/256, Error ellipse: s-maj=3.2km s-min=2.0km az=30.1*
MOS ***14*** *04:44:51.6±1.1, 2.°31N×96.°59E, h33km, mb5.7/88, MS5.3/69, Error ellipse: s-maj=6.8km s-min=3.9km az=117.6*
NEIC ***14*** *04:44:51.6±0.1, 2.°18N×96.°52E, h24km, mb5.5/113, ME5.3, MS5.5/197, MW5.5, Error ellipse: s-maj=4.8km s-min=3.5km az=207.0 Broadband fault plane solution: P waves. NP1:ϕ_s=315.00000°, δ25.00000°, λ105.00000°. NP2:ϕ_s=119.00000°, δ66.00000°, λ83.00000°. Principal axes: T Plg68.0000°, Azm15.0000°; N Plg0.0000°, Azm0.0000°; P Plg21.0000°, Azm214.0000°; Moment Tensor Solution. s81 Moment tensor: Scale 10^{17} Nm; M_{rr}1.51; $M_{\theta\theta}$-1.10; $M_{\phi\phi}$-0.41; $M_{r\theta}$1.48; $M_{\theta\phi}$1.06; $M_{\phi r}$-0.76; Best double couple: $M_0$2.40000×10^{17} NP1:ϕ_s=315.00000°, δ23.00000°, λ105.00000°. NP2:ϕ_s=119.00000°, δ67.00000°, λ84.00000°. Principal axes: T 2.2100, Plg66.0000°, Azm17.0000°; N 0.3300, Plg5.0000°, Azm121.0000°; P -2.5400, Plg22.0000°, Azm213.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt [IV] at Sinabang.
BJI ***14*** *04:44:51.2, 2.°04N×96.°56E, h51km, mB5.8/48, mb5.7/66, Ms5.8/75, Ms7 5.7/62*
SZGRF ***14*** *04:44:52.5, 2.°36N×96.°84E, h36km, mb5.4, MS5.3, Northern Sumatera, Indonesia*
DJA ***14*** *04:44:53, 2.°13N×96.°56E, h28km, Mw5.7/45*
GCMT ***14*** *04:44:54.1±0.2, 1.°83N×96.°28E, h29km, MW5.6, Moment Tensor Solution. s85,c147; s94,c174; Moment tensor: Scale 10^{17}Nm; M_{rr}1.59±.05; $M_{\theta\theta}$-1.27±.03; $M_{\phi\phi}$-0.32±.04; $M_{r\theta}$1.83±.08; $M_{\theta\phi}$1.10±.03; $M_{\phi r}$-1.60±.09; Best double couple: $M_0$3.00000×10^{17} NP1:ϕ_s=293.00000°, δ19.00000°, λ74.00000°. NP2:ϕ_s=130.00000°, δ72.00000°, λ95.00000°. Principal axes: T 2.8400, Plg63.0000°, Azm49.0000°; N 0.3700, Plg5.0000°, Azm309.0000°; P -3.2100, Plg27.0000°, Azm216.0000°; Data Used: II IU IC G CN.*
TEH ***14*** *04:52:00.0, 2.°27N×96.°60E, h49km*
ISC 14 04:44:53.0±0.1, 2.°20N±0.°02×96.°54E±0.°02, h34km, h34km±.8km: pP-P, n915, σ0.97/768, mb5.5/246, MS5.4/256, 52C-26D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**1.23**	**31**	P	Pn	04 45 13.5	-0.3
GSI	**Gunungsitoli**	**1.37**	**131**	P	Pn	04 45 13.8	-1.9
PSI	**Prapat**	**2.46**	**76**	Pn	Pn	04 45 31.0	+0.3
PSI	100nm,0.3s,baz=268,slow=7.7,SNR=277			LR	LR	04 46 12.7	
	comp=Z,28μm,20.9s,baz=61,slow=34						
PSI	**Prapat**	**2.46**	**76**	Pn	Pn	04 45 31.0	+0.3
PSI				LR	LR	04 46 12.7	
MNSI	**Mandailing Nat**	**3.35**	**115**	P	Pn	04 45 42.9	-0.1
SISI	**Saibi**	**4.34**	**144**	P	Pn	04 45 55.1	-1.5
PPI	**Padang Panjang**	**4.68**	**124**	P	Pn	04 46 01.7	+0.4
BKNI	**Bangkinang**	**4.87**	**112**	P	Pn	04 46 04.0	0.0
PDSI	**Padang**	**5.00**	**128**	P	Pn	04 46 06.9	+1.2
IPM	**Ipoh**	**5.02**	**63**	P	Pn	04 46 07.1	+1.2
IPM	**Ipoh**	**5.02**	**63**	P	Pn	04 46 07.1	+1.1
	6.6nm1μm,0.9s						
KULM	**Kulim**	**5.12**	**53**	P	Pn	04 46 08.3	+0.9
KULM	**Kulim**	**5.12**	**53**	*e*Pn	Pn	04 46 08.1	+0.7
	3μm,0.8s						
KULM				*e*Sn	Sn	04 47 05.3	-0.1
KULM	**Kulim**	**5.12**	**53**	P	Pn	04 46 08.3	+0.9
	14nm4μm,0.9s						
FRIM	**Kepong**	**5.19**	**78**	P	Pn	04 46 09.3	+1.1
SDSI	**Sungai Dareh**	**5.80**	**122**	P	Pn	04 46 17.4	+0.7
	3.0nm8μm268nm,0.9s						
KRJI	**Kerinci**	**6.51**	**131**	P	Px	04 46 36.6	
KGM	**Kluang**	**6.78**	**91**	P	Pn	04 46 31.2	+1.0
KTGM	**Kuala Trenggan**	**7.28**	**65**	P	Pn	04 46 38.3	+1.3
MYKOM	**Kota Tinggi**	**7.32**	**93**	P	Pn	04 46 39.5	+1.8
MYKOM	**Kota Tinggi**	**7.32**	**93**	P	Pn	04 46 38.5	+0.9
	2.6nm5μm420nm,1.1s						
KSI	**Kapahiang**	**8.39**	**134**	P	Pn	04 46 52.7	+0.3
	80nm,0.7s						
MNAI	**Manna**	**9.15**	**135**	P	Pn	04 47 02.6	-0.1
	10μm899nm,0.7s						
PMBI	**Palembang**	**9.68**	**122**	P	Pn	04 47 10.4	+0.4
	340nm,0.7s						
MDSI	**Maura Dua**	**10.12**	**131**	P	Pn	04 47 14.5	-1.6
	3μm369nm,0.8s						
LWLI	**Liwa**	**10.39**	**134**	P	Pn	04 47 19.3	-0.4
PPBI	**Pangkal Pinang**	**10.53**	**114**	P	Pn	04 47 23.1	+1.4
	4μm120nm,1.2s						
KLSI		**10.67**	**130**	P	Pn	04 47 22.0	-1.6
	3μm396nm,1.0s						
KLI	**Kotabumi**	**10.88**	**130**	P	Pn	04 47 27.0	+0.6
	8μm294nm,0.8s						
KASI	**Kota Agung**	**11.05**	**134**	P	Pn	04 47 26.9	-1.9
	2μm196nm,0.9s						
TPI	**Tanjungpandan**	**12.16**	**114**	P	Pn	04 47 44.8	+0.9
	2μm198nm,1.4s						
RBSI	**Rajabasa**	**12.18**	**131**	P	Pn	04 47 43.6	-0.7
	3μm148nm,1.2s						
CGJI	**Cibinong**	**12.66**	**134**	P	Px	04 48 02.6	
KSM	**Kuching**	**13.79**	**93**	P	Pn	04 48 08.6	+2.4
KSM	**Kuching**	**13.79**	**93**	*e*Pn	Pn	04 48 07.7	+1.5
	347nm,1.1s						
KSM	**Kuching**	**13.79**	**93**	P	Pn	04 48 08.0	+1.8
	4μm318nm,1.1s						
LEM	**Lembang**	**14.24**	**129**	P	Pn	04 48 12.6	+0.2
	3μm74nm,0.9s						
COCO	**West Island**	**14.30**	**179**	*e*P	Pn	04 48 16.9	+3.7
STKI	**Sintang**	**15.09**	**98**	P	Pn	04 48 25.1	+1.3
	300nm,1.0s						
BDT	**Bhumibol Dam**	**15.14**	**9**	P	Pn	04 48 23.5	-1.0
	22nm,0.8s						
UBT	**Ubonrachathani**	**15.43**	**32**	P	Pn	04 48 34.1	+5.9

CMAR LR LR 04 55 45.2
comp=Z,18μm,20.4s,baz=193,slow=40
PALK Pallekele 16.56 288 *e*P **Pn 04 48 42.6 -0.2**
PALK pmax pmax
comp=Z,234nm,1.1s
PALK Pallekele 16.56 288 *e*Pn **Pn 04 48 42.6 -0.2**
comp=Z,234nm,1.1s
PALK *e*Sn **Sn 04 51 28.1 -18**
CHG Chiang Mai 16.68 8 ⇑P **Pn 04 48 42.0 -2.2**
comp=Z,102nm,1.1s
CHTO Chiang Mai 16.68 8 *e*P **Pn 04 48 43.5 -0.7**
CHTO pmax pmax
comp=Z,151nm,1.3s
CHTO Chiang Mai 16.68 8 *e*Pn **Pn 04 48 43.5 -0.7**
comp=Z,151nm,1.3s
CHTO Chiang Mai 16.68 8 P **Pn 04 48 43.8 -0.4**
comp=Z,3μmcomp=Z,111nm,1.1s
CHTO Chiang Mai 16.68 8 Pn **Pn 04 48 43.5 -0.8**
SNR=51
NGJI Ngawi 17.67 123 P **Pn 04 48 57.2 +0.5**
comp=Z,7μmcomp=Z,136nm,1.2s
CHRT Chiangrai 17.84 10 P **Pn 04 48 59.0 +0.3**
comp=Z,1μm,1.0s
SJI Sawahan 18.12 123 P **Pn 04 49 01.7 -0.5**
comp=Z,7μmcomp=Z,86nm,0.7s
PWJI Pagerwojo 18.30 124 P **Pn 04 49 01.4 -3.1**
comp=Z,74nm,0.9s
KMMI Kalianget 19.68 118 P **Pn 04 49 18.8 -2.2**
comp=Z,4μmcomp=Z,212nm,1.4s
KKM Kota Kinabalu 19.99 78 P **Pn 04 49 24.6 -0.2**
KKM Kota Kinabalu 19.99 78 *e*P **Pn 04 49 23.7 -1.0**
comp=Z,530nm,1.1s
KKM Kota Kinabalu 19.99 78 P **Pn 04 49 23.9 -0.8**
comp=Z,5μmcomp=Z,464nm,1.1s
VIS Vishakhapatnam 20.15 321 *e*PKP **P 04 49 26.1 +1.6**
VIS AMb AMB 04 49 34.5
comp=Z,190nm,1.1s
VIS *i* x x 04 52 56.0
KBKI Kotabaru 20.37 106 P **P 04 49 26.6 -0.4**
comp=Z,131nm,1.2s
TRD Trivandrum 20.46 289⇓*i*P Px 04 49 40.5
TRD *i* S **S 04 53 30.5 +15**
KDM Kudat 20.76 76 P **P 04 49 32.4 +1.1**
SMKI Samarinda 20.84 97 P **P 04 49 33.5 +1.5**
comp=Z,6μmcomp=Z,312nm,1.1s
SDKM Sandakan 20.89 80 P **P 04 49 33.8 +1.2**
QIZ Qiongzhong 21.20 37 P **P 04 49 35.8 -0.1**
QIZ pP 04 49 47.1
QIZ sP sP 04 49 53.0 +3.9
QIZ pmax pmax
comp=Z,44nm,1.1s,mb4.7
QIZ pmax pmax
comp=Z,2μm,13.4s
QIZ LR LR
comp=N,24μm,13.1s,MS5.8
QIZ LR LR
comp=E,13μm,13.1s,MS5.8
QIZ LR LR
comp=Z,48μm,12.4s,MS6.1
QIZ Qiongzhong 21.20 37 *e*P **P 04 49 35.4 -0.4**
comp=Z,113nm,1.0s,mb5.2
QIZ LR LR
comp=Z,13μm,19.0s,MS5.3
SRBI Singaraja 21.25 119 P **P 04 49 37.5 +1.1**
comp=Z,3μmcomp=Z,329nm,1.3s,mb5.5
TSM Tawau 21.40 84 P **P 04 49 38.4 +0.3**
KHKI Kahang-Kahang 21.72 119 P **P 04 49 42.0 +0.5**
comp=Z,2μmcomp=Z,208nm,1.2s,mb5.4
CAL Calcutta 21.73 339⇓*i*P **P 04 49 42.1 +0.6**
CAL *e*S **S 04 53 41.6 +1.4**
MYLDM Lahad Datu 22.11 82 P **P 04 49 46.7 +1.0**
MYLDM Lahad Datu 22.11 82 P **P 04 49 46.9 +1.1**
comp=Z,7μmcomp=Z,569nm,1.0s,mb6.0
BATP Bataraza 22.15 72 *e*P **P 04 49 44.9 -1.2**
AGT Agartala 22.15 347 *i* x **P 04 49 41.0 -5.0**
AGT *i* x x 04 50 59.0
HYB Hyderabad 23.25 312 *e*P **P 04 49 59.0 +1.3**
HYB *e*S **S 04 54 08.0 +0.4**
HYB Hyderabad 23.25 312 *i* P **P 04 49 59.0 +1.3**
HYB *e*S **S 04 54 08.0 +0.4**
PPR Puerto Princes 23.30 70⇓*i*P **P 04 49 57.8 -0.5**
PCI Palu 23.50 97 P **P 04 50 00.3 0.0**
comp=Z,4μmcomp=Z,329nm,1.1s,mb5.7
KMI Kunming 23.56 14 P **P 04 50 01.3 +0.6**
KMI pP 04 50 07.0
KMI PP 04 50 36.3
KMI S **S 04 54 11.9 -0.5**
KMI pmax pmax
comp=Z,150nm,2.0s,mb5.1
KMI pmax pmax
comp=Z,3μm,4.3s
KMI LR LR
comp=N,3μm,16.6s,MS5.5
KMI LR LR
comp=E,12μm,14.0s,MS5.5
KMI LR LR
comp=Z,13μm,14.9s,MS5.5
SHL Shillong 23.66 349 *e*PKP **P 04 50 00.0 -1.6**
SHL *i* S **S 04 54 13.5 -0.5**
BOK Bokaro 23.81 335 *e*PKP **P 04 50 02.6 -0.4**
BOK AMb AMB 04 50 08.0
comp=Z,368nm,1.3s,mb5.7
TTSI Tana Toraja 23.85 103 P **P 04 50 03.6 +0.1**
comp=Z,4μmcomp=Z,162nm,1.5s,mb5.2
SPSI Sidrap Palu 24.01 105 P **P 04 50 13.4 +8.4**
ENPP El Nido 24.41 67 *e*P **P 04 50 07.8 -0.7**
BNSI Bone 24.45 106 P **P 04 50 09.3 +0.3**
comp=Z,7μmcomp=Z,225nm,1.8s,mb5.3
BKSI Bulukumba 24.72 108 P **P 04 50 11.6 +0.2**
comp=Z,4μmcomp=Z,186nm,1.1s,mb5.5
LATR Latur 25.36 311 *ex* **P 04 50 19.2 +2.1**
LATR *e*S **S 04 54 42.1 +0.5**
BUSP Coron 25.39 66 *e*P **P 04 50 16.2 -1.3**
NGP Nagpur 25.40 319 *e*PKP **P 04 50 17.4 -0.1**
NGP *ex* x 04 50 28.5
comp=Z,151nm,1.2s
NGP *e*S **S 04 54 43.7 +1.6**
MRSI Marisa 25.45 93 P **P 04 50 17.9 -0.2**
comp=Z,2μmcomp=Z,129nm,0.9s,mb5.5
DGAR Diego Garcia 25.86 248 PFAKE 04 50 30.0 +8.2
DGAR LR LR
comp=Z,8μm,20.0s,MS5.2
GOA Goa 25.99 302⇓*ex* pP 04 50 33.9 +1.3
GOA AMb AMB 04 50 34.2
comp=Z,13nm,0.2s,mb5.1
GOA *ex* x 04 54 55.8
GYA Guiyang 26.00 21⇑*i*P **P 04 50 22.8 -0.1**
GYA pP pP 04 50 34.4 +1.8
GYA sP sP 04 50 39.9 +3.2
GYA PP 04 51 04.3
GYA PcP PcP 04 53 52.1 +1.3
GYA S **S 04 54 46.3 -5.3**
GYA sS sS 04 55 06.4 -1.2
GYA SS 04 55 53.6
GYA ScP ScP 04 57 26.6 -1.5
GYA pmax pmax
comp=Z,80nm,1.0s,mb5.2
GYA pmax pmax
comp=Z,820nm,6.9s
GYA LR LR
comp=N,16μm,15.2s,MS5.8
GYA LR LR
comp=E,9μm,13.7s,MS5.8
GYA LR LR
comp=Z,23μm,14.0s,MS5.9
ODAN Odare 26.04 341 *e*P **P 04 50 24.2 +1.0**
comp=Z,321nm,0.7s,mb6.0
LUBP Lubang 26.09 63 *e*P **P 04 50 22.6 -1.3**
HKC Hong Kong Obse 26.32 39 *e*P **P 04 50 26.0 +0.1**
RAMN Ramite 26.39 340 *e*P **P 04 50 27.9 +1.5**
comp=Z,420nm,1.0s,mb5.9
GZH Guangzhou 26.39 37 P **P 04 50 30.0 +3.5**
GZH LR LR
comp=N,12μm,13.5s,MS5.9
GZH LR LR
comp=E,19μm,13.6s,MS5.9
GZH LR LR
comp=Z,34μm,14.3s,MS6.0
SJMP San Jose 26.39 66 *e*P **P 04 50 25.9 -0.8**
TAPN Taplejung 26.39 342 *e*P **P 04 50 27.8 +1.4**
comp=Z,798nm,1.0s,mb6.2
LUWI Luwuk 26.43 97 P **P 04 50 25.5 -1.5**
comp=Z,3μmcomp=Z,282nm,0.9s,mb5.8
AKL Akola 26.47 315 *i* P **P 04 50 27.7 +0.5**
AKL *ex* x 04 50 34.9
comp=Z,68nm,1.2s
AKL *i* x x 04 55 13.2
IPIL Ipil 26.51 77 *e*P **P 04 50 28.1 +0.4**
KAD Karad 26.60 306 *e*PKP **P 04 50 30.0 +1.6**
KAD AMb AMB 04 50 45.0
comp=Z,125nm,1.8s,mb5.2
KDI Kendari 26.78 103 P **P 04 50 29.4 -0.7**
comp=Z,2μmcomp=Z,71nm,1.1s,mb5.1
TGY Tagaytay City 26.85 63 P **P 04 50 31.6 +0.9**
comp=Z,299nm,0.3s,mb6.3,baz=156,slow=8.1,SNR=5.5
JIRN Jiri 27.18 340 *e*P **P 04 50 34.1 +0.6**
GUIM Jordan 27.18 71 *e*P **P 04 50 32.5 -1.2**
OTRP Odiongan 27.19 67 *e*P **P 04 50 33.3 -0.5**
PKI Pulchoki 27.38 338 *e*P **P 04 50 36.1 +0.8**
PKI Pulchoki 27.38 338 *e*P **P 04 50 36.3 +1.0**
PKIN Phulchoki 27.39 338 *e*P **P 04 50 36.3 +0.9**
GUN Gumba 27.52 339 *e*P **P 04 50 37.6 +1.0**
POO Poona 27.52 308 *e*PKP **P 04 50 38.0 +1.3**
comp=Z,40nm,1.0s,mb5.0
DMN Daman 27.53 338 *e*P **P 04 50 37.4 +0.7**
comp=Z,189nm,0.8s,mb5.8
KKN Kakani 27.63 338 *e*P **P 04 50 38.2 +0.7**
comp=Z,314nm,0.8s,mb6.0
MMRI Maumere 27.79 113 P **P 04 50 36.1 -3.1**
comp=Z,2μmcomp=Z,106nm,1.2s,mb5.3
LSA Lhasa 27.82 350 P **P 04 50 40.3 +1.1**
LSA S **S 04 55 14.5 -5.7**
LSA pmax pmax
comp=Z,200nm,0.9s,mb5.8
LSA pmax pmax
comp=Z,1μm,14.0s
LSA LR LR
comp=N,4μm,22.0s,MS5.1
LSA LR LR
comp=E,4μm,23.0s,MS5.1
LSA LR LR
comp=Z,7μm,22.0s,MS5.2
LSA Lhasa 27.82 350 *e*P **P 04 50 40.6 +1.4**
LSA pmax pmax
comp=Z,151nm,0.9s,mb5.6
LSA MLR MLR
comp=Z,6μm,20.0s,MS5.2
LSA Lhasa 27.82 350 *e*P **P 04 50 40.6 +1.4**
comp=Z,151nm,0.9s,mb5.6
LSA LR LR
comp=Z,6μm,20.0s,MS5.2
BHPL Bhopal 27.94 320 *e*PKP **P 04 50 41.7 +1.3**
BHPL AMb AMB 04 50 52.2
comp=Z,59nm,0.7s,mb5.3
POLP Polillo Island 27.99 62 *e*P **P 04 50 41.2 +0.3**
GKN Gorkha 28.06 337 *e*P **P 04 50 42.0 +0.6**
comp=Z,424nm,0.9s,mb6.1
BALP Baler 28.10 60 *e*P **P 04 50 40.8 -1.2**
AUQP San Andres 28.12 66 *e*P **P 04 50 41.7 -0.4**
TBP Tagbilaran 28.16 74 *e*P **P 04 50 44.7 +2.2**
ABRA Dolores 28.27 56 *e*P **P 04 50 44.4 +1.0**
APYP Conner 28.81 56 *e*P **P 04 50 47.9 -0.4**
BUKP Musuan 28.96 78 *e*P **P 04 50 49.1 -0.5**
OCLP Ormoc 29.21 71 *e*P **P 04 50 46.9 -5.0**
DAV Davao City (W) 29.34 80 P **P 04 50 54.0 +1.0**
comp=Z,102nm,0.4s,mb5.9,baz=318,slow=2.3,SNR=5.5
DAV Davao City (W) 29.34 80 *e*P **P 04 50 54.6 +1.6**
DAV LR LR
comp=Z,4μm,20.0s,MS5.0
DAV Davao City (W) 29.34 80⇑*i*P **P 04 50 52.4 -0.6**
CD2 Chengdu 29.36 13 P **P 04 50 51.8 -1.1**
CD2 pP pP 04 51 03.5 +0.9
CD2 sP sP 04 51 09.0 +2.3
CD2 PP PP 04 51 48.1 -12
CD2 S **S 04 55 41.1 -3.3**
CD2 sS sS 04 56 01.3 +0.9
CD2 SS SS 04 57 16.0 -34
CD2 pmax pmax
comp=Z,330nm,1.1s,mb6.0
CD2 pmax pmax
comp=Z,1μm,5.9s
CD2 LR LR
comp=N,18μm,13.7s
CD2 LR LR
comp=Z,16μm,14.3s,MS5.8
PVCP Virac 29.56 66 *e*P **P 04 50 54.5 -0.4**
CNP Catarman 29.68 68 *e*P **P 04 50 56.4 +0.4**
ENH Enshi 30.50 22 *e*P **P 04 51 02.0 -1.0**
comp=Z,161nm,0.8s,mb5.8
ENH LR LR
comp=Z,5μm,19.0s,MS5.2
TNTI Ternate 30.85 92 P **P 04 51 05.0 -1.4**
comp=Z,61nm,1.1s,mb5.3
QZH Quanzhou 31.04 41⇑*i*P **P 04 51 06.3 -1.6**
QZH S **S 04 55 58.3 -13**
QZH pmax pmax
comp=Z,530nm,1.1s,mb6.3
QZH pmax pmax
comp=Z,2μm,3.3s
QZH LR LR
comp=N,27μm,15.6s,MS6.1
QZH LR LR
comp=E,16μm,15.0s,MS6.1
QZH LR LR
comp=Z,14μm,18.4s,MS5.6
LBMI Labuha 31.09 95 P **P 04 51 09.5 +1.0**
comp=Z,2μmcomp=Z,110nm,1.5s,mb5.5
PTH Pithoragarh 31.31 332 *e*PKP **P 04 51 10.2 0.0**
TPUB Ta-pu 31.38 46 *e*P **P 04 51 11.0 +0.1**
TWG Pinlang 31.41 47 *e*P **P 04 51 12.0 +0.8**
SONA Sohna 31.87 326 *e*PKP **P 04 51 15.3 +0.2**
SONA AMb AMB 04 51 17.6
comp=Z,107nm,0.6s,mb5.8
SSLB Suanglung 31.92 46 *e*P **P 04 51 15.8 +0.2**
comp=Z,211nm,1.0s,mb5.9
YULB Yu-li 31.92 47 *e*P **P 04 51 16.1 +0.4**
comp=Z,128nm,0.8s,mb5.8
BISR Bishrakh 31.93 327 *e*PKP **P 04 51 15.7 0.0**
BISR AMb AMB 04 51 18.8
comp=Z,175nm,0.4s,mb6.2
AJM Ajmer 32.01 321 *e*PKP **P 04 51 17.0 +0.7**
AJM AMb AMB 04 51 21.8
comp=Z,70nm,1.1s,mb5.4
NDI New Delhi 32.13 327 *e*PKP **P 04 51 16.0 -1.5**
NDI *e*S **S 04 56 29.0 +1.0**
JOSI Joshimath 32.46 332 *e*PKP **P 04 51 21.4 +1.1**
JOSI AMb AMB 04 51 30.5
comp=Z,997nm,0.6s,mb6.8
MBWA Marble Bar 32.48 137 *e*P **P 04 51 20.2 -0.3**
MBWA Marble Bar 32.48 137 *e*P **P 04 51 21.0 +0.5**
comp=Z,656nm,2.8s,mb6.0
MBWA LR LR
comp=Z,5μm,21.0s,MS5.2
MBWA Marble Bar 32.48 137 P pP 04 51 30.1 -0.2
NACB Ninganchiao 32.62 46 *e*P **P 04 51 22.6 +0.9**
YHNB Yeheng 32.77 45 *e*P **P 04 51 23.5 +0.4**
comp=Z,80nm,1.0s,mb5.6
WHN Wuhan 32.85 29 ⇑P **P 04 51 23.8 +0.1**
WHN pP pP 04 51 33.4 -0.1
WHN pmax pmax
comp=Z,210nm,0.9s,mb6.1
WHN pmax pmax
comp=Z,1μm,10.4s
WHN LR LR
comp=N,4μm,9.2s
WHN LR LR
comp=E,17μm,12.4s
WHN LR LR
comp=Z,22μm,14.8s,MS6.0
TATO Taipei 33.04 45 *e*P **P 04 51 26.0 +0.5**
comp=Z,244nm,1.3s,mb6.0
TATO LR LR
comp=Z,3μm,19.0s,MS5.0
TATO Taipei 33.04 45 P **P 04 51 27.1 +1.6**
SNR=6.2
XAN Xi'an 33.72 19 P **P 04 51 29.9 -1.3**
XAN pP pP 04 51 42.9 +1.9
XAN sP sP 04 51 48.8 +3.7
XAN PP PP 04 52 42.5 -5.5
XAN PcP PcP 04 54 13.0 +2.5
XAN S **S 04 56 42.0 -10**
XAN ScS ScS 05 01 49.3 -5.0
XAN pmax pmax
comp=Z,120nm,0.9s,mb5.8
XAN pmax pmax
comp=Z,260nm,13.1s
XAN LR LR
comp=N,8μm,13.9s,MS5.6
XAN LR LR
comp=E,930nm,13.6s,MS5.6
XAN LR LR
comp=Z,5μm,13.3s,MS5.4
KLP Kalpa 33.90 331 *e*PKP **P 04 51 33.4 +0.6**
KLP AMb AMB 04 51 42.0
comp=Z,71nm,1.1s,mb5.5
LZH Lanzhou 34.39 11 *e*P **P 04 51 37.3 +0.3**
LZH pP pP 04 51 47.1 +0.3
LZH sP sP 04 51 52.3 +1.5
LZH PP PP 04 52 56.4 +1.0
LZH PcP PcP 04 54 12.8 +0.5
LZH *e*S **S 04 57 02.0 -0.7**
LZH SS SS 04 59 13.0 -20
LZH pmax pmax
comp=Z,75nm,1.0s,mb5.6
LZH pmax pmax
comp=Z,470nm,4.3s
LZH LR LR
comp=E,9μm,15.3s
LZH LR LR
comp=Z,9μm,18.1s,MS5.5
SDNR Sundarnagar 34.50 330 *e*PKP **P 04 51 38.5 +0.5**
BHK Bhakra 34.71 329 *ex* **P 04 51 35.2 -4.7**
JASL Jaisalmer 34.76 317 *e*PKP **P 04 51 39.9 -0.5**
JASL AMb AMB 04 51 55.0
comp=Z,128nm,0.9s,mb5.8
SWI Sorong 34.85 95 P **P 04 51 41.0 -0.4**
comp=Z,2μmcomp=Z,96nm,1.1s,mb5.6
FITZ Fitzroy Crossi 35.05 126 *e*P **P 04 51 41.0 -2.0**
comp=Z,69nm,0.8s,mb5.6
FITZ *e*S **S 04 57 02.8 -11**
FITZ Fitzroy Crossi 35.05 126 *e*P **P 04 51 41.0 -2.0**
comp=Z,35nm,0.8s,mb5.3
FITZ Fitzroy Crossi 35.05 126 P **P 04 51 41.5 -1.5**
comp=Z,117nm,1.1s,mb5.7
MEEK Meekatharra 35.73 145 *e*P **P 04 51 55.5 +6.8**
THN Thein Dam 35.88 329 *e*PKP **P 04 51 48.1 -1.8**
NJ2 Nanjing 36.38 33 *e*P **P 04 51 54.8 +0.6**
NJ2 pP pP 04 52 03.9 -0.1
NJ2 sP sP 04 52 08.9 +0.9
NJ2 PP PP 04 53 15.3 -2.1
NJ2 S **S 04 57 30.9 -2.5**
NJ2 pmax pmax
comp=Z,140nm,1.1s,mb5.8
NJ2 pmax pmax
comp=Z,770nm,3.8s
NJ2 LR LR
comp=N,2μm,24.0s,MS5.0
NJ2 LR LR
comp=E,1μm,19.0s,MS5.0
NJ2 LR LR
comp=Z,18μm,24.4s
KNA Kununurra 36.52 120 P **P 04 51 54.0 -1.6**
comp=Z,1μmcomp=Z,106nm,1.0s,mb5.6
SSE Sheshan 36.99 36 P **P 04 51 59.3 -0.1**
SSE pP pP 04 52 10.8 +1.5
SSE PP PP 04 53 28.9 +4.7
SSE S **S 04 57 45.8 +3.0**
SSE sS sS 04 58 04.4 +5.4
SSE pmax pmax
comp=Z,86nm,1.1s,mb5.5
SSE pmax pmax
comp=Z,610nm,7.5s
SSE LR LR
comp=N,8μm,14.4s,MS5.7
SSE LR LR
comp=E,3μm,14.4s,MS5.7
SSE LR LR
comp=Z,10μm,14.8s,MS5.8
GTA Gaotai 37.15 4⇑*i*P **P 04 52 00.9 +0.2**
GTA pP pP 04 52 14.3 +3.8
GTA sP sP 04 52 20.8 +6.2
GTA PP PP 04 53 29.8 +4.0
GTA PcP PcP 04 54 21.5 +1.1
GTA S **S 04 57 43.6 -1.4**
GTA sS sS 04 58 04.4 +3.2
GTA SS SS 05 00 14.4 -14
GTA ScS ScS 05 02 11.6 -1.1
GTA pmax pmax
comp=Z,160nm,0.9s,mb5.8
GTA pmax pmax
comp=Z,1μm,4.8s
GTA LR LR
comp=N,6μm,15.5s,MS5.6
GTA LR LR
comp=E,6μm,14.6s,MS5.6
GTA LR LR
comp=Z,6μm,16.6s,MS5.5
TIY Taiyuan 38.24 21 *e*P **P 04 52 09.5 -0.4**
TIY PP PP 04 53 41.3 +3.5
TIY S **S 04 57 56.8 -4.7**
TIY pmax pmax
comp=Z,790nm,4.0s
TIY LR LR
comp=N,19μm,13.4s,MS6.1
TIY LR LR
comp=E,12μm,13.8s,MS6.1
TIY LR LR
comp=Z,21μm,13.7s,MS6.1
KAKA Kakadu 38.60 113 *e*P **P 04 52 12.8 -0.5**
comp=Z,355nm,1.5s,mb5.9
KAKA Kakadu 38.60 113 *e*P **P 04 52 13.0 -0.3**
comp=Z,473nm,1.1s,mb6.1
KAKA *e*pP pP 04 52 21.5 -1.7
KAKA Kakadu 38.60 113 P **P 04 52 13.0 -0.3**
comp=Z,1μmcomp=Z,163nm,0.9s,mb5.8
TIA Tai'an 38.83 27 *e*P **P 04 52 14.1 -0.8**
TIA S **S 04 58 09.0 -1.6**
TIA LR LR
comp=N,11μm,12.8s,MS6.0
TIA LR LR
comp=E,9μm,13.3s,MS6.0
NWAO Narrogin (SRO) 40.05 152 *e*P **P 04 52 27.5 +2.4**
comp=E,113nm,0.8s,mb5.7
NWAO Narrogin (SRO) 40.05 152 P **P 04 52 26.6 +1.6**
comp=E,22nm,1.0s,mb4.8,baz=327,slow=10,SNR=6.2
NWAO Narrogin (SRO) 40.05 152 P **P 04 52 26.5 +1.4**
NWAO pmax pmax
comp=Z,42nm,0.9s
NWAO MLR MLR
comp=Z,4μm,20.0s
NWAO Narrogin (SRO) 40.05 152 P **P 04 52 26.5 +1.5**
comp=Z,42nm,0.9s,mb5.2
NWAO LR LR
comp=Z,4μm,20.0s,MS5.3
BTO Baotou 40.13 16 *e*P **P 04 52 25.8 +0.2**
HHC Hu-ho-hao-te 40.80 18 *e*P **P 04 52 31.3 +0.1**
HHC sP sP 04 52 49.0 +3.9
HHC PP PP 04 54 09.9 +4.2
HHC PcP PcP 04 54 32.3 +0.4
HHC ScP ScP 04 58 17.1 -2.1
HHC PcS PcS 04 58 22.1 -0.5
HHC S **S 04 58 39.6 -0.3**
HHC sS sS 04 59 01.6 +5.4
HHC SS SS 05 01 37.5 -4.3
HHC ScS ScS 05 02 30.1 -3.8
HHC pmax pmax
comp=Z,60nm,0.8s,mb5.3
HHC pmax pmax
comp=Z,2μm,6.0s
HHC LR LR
comp=N,5μm,14.2s,MS5.7
HHC LR LR
comp=E,6μm,14.2s,MS5.7
HHC LR LR
comp=Z,5μm,14.2s,MS5.5
KBL Kabul 41.12 325 *e*P **P 04 52 34.4 +0.4**
KBL pmax pmax
comp=Z,18nm,0.9s,mb4.7
KBL Kabul 41.12 325 *e*P **P 04 52 34.4 +0.5**
comp=Z,18nm,0.9s,mb4.7
KMBL Kambalda 41.17 146 *e*P **P 04 52 35.9 +1.5**
comp=Z,179nm,0.8s,mb5.8
MSEY Mahe Island 41.59 260 *e*P **P 04 52 39.6 +1.5**
MSEY pmax pmax
comp=Z,30nm,1.1s,mb4.8
MSEY MLR MLR
comp=Z,3μm,22.0s,MS5.2
MSEY Mahe Island 41.59 260 *e*P **P 04 52 39.6 +1.5**
comp=Z,30nm,1.1s,mb4.8
MSEY LR LR
comp=Z,3μm,22.0s,MS5.2
KSH Kashi 41.59 336 P **P 04 52 36.3 -1.4**
KSH pP pP 04 52 49.8 +2.2
KSH sP sP 04 52 54.5 +2.9
KSH PP PP 04 54 15.8 +1.5

KSH PcP PcP 04 54 35.8 +1.3
KSH ScP ScP 04 58 20.5 -1.8
KSH PcS PcS 04 58 25.4 -0.4
KSH S **S** **04 58 43.3 -8.4**
KSH sS sS 04 59 07.3 -0.7
KSH SS SS 05 01 46.0 -12
KSH ScS ScS 05 02 34.0 -4.7
KSH pmax pmax
comp=Z,37nm,1.0s,mb5.0
KSH pmax pmax
comp=Z,750nm,4.5s
KSH LR LR
comp=N,4μm,16.8s,MS5.5
KSH LR LR
comp=E,4μm,17.8s,MS5.5
KSH LR LR
comp=Z,5μm,20.7s,MS5.3
BJT Baijiatuau 41.65 23 *e*P **P** **04 52 38.8 +0.6**
BJT pmax pmax
comp=Z,187nm,0.7s
BJT MLR MLR
comp=Z,3μm,19.0s
BJT Baijiatuau 41.65 23 *e*P **P** **04 52 38.8 +0.6**
comp=Z,187nm,0.7s,mb5.8
BJT LR LR
comp=Z,3μm,19.0s,MS5.2
BJI Beijing 41.67 23 P **P** **04 52 39.0 +0.7**
BJI pP pP 04 52 51.3 +3.0
BJI sP sP 04 52 56.3 +4.0
BJI S **S** **04 58 54.4 +1.6**
BJI sS sS 04 59 14.1 +4.9
BJI pmax pmax
comp=Z,290nm,0.9s,mb5.9
BJI pmax pmax
comp=Z,2μm,3.7s
BJI LR LR
comp=N,5μm,16.2s,MS5.8
BJI LR LR
comp=E,7μm,14.5s,MS5.8
BJI LR LR
comp=Z,1μm,19.2s,MS4.9
WMQ Urumqi 42.18 350 P **P** **04 52 42.5 +0.1**
WMQ pP pP 04 52 54.8 +2.4
WMQ sP sP 04 53 00.3 +3.9
WMQ PP PP 04 54 23.8 +3.3
WMQ PcP PcP 04 54 37.3 +1.0
WMQ ScP ScP 04 58 23.0 -1.6
WMQ S **S** **04 58 58.5 -1.7**
WMQ sS sS 04 59 19.3 +2.7
WMQ SS SS 05 02 01.4 -7.7
WMQ ScS ScS 05 02 38.6 -3.6
WMQ pmax pmax
comp=Z,71nm,1.2s,mb5.2
WMQ pmax pmax
comp=Z,1μm,3.6s
WMQ LR LR
comp=N,4μm,20.2s,MS5.5
WMQ LR LR
comp=E,5μm,21.4s,MS5.5
WMQ LR LR
comp=Z,5μm,19.6s,MS5.4
SMPI Sarmi 42.37 95 P **P** **04 52 43.7 -0.8**
comp=Z,4μmcomp=Z,240nm,1.1s,mb5.7
DL2 Dalian 43.12 29 P **P** **04 52 49.9 -0.2**
DL2 S **S** **04 59 13.3 -0.9**
DL2 pmax pmax
comp=Z,160nm,1.0s,mb5.7
DL2 pmax pmax
comp=Z,490nm,6.0s
DL2 LR LR
comp=N,2μm,12.1s,MS5.5
DL2 LR LR
comp=E,3μm,15.5s,MS5.5
DL2 LR LR
comp=Z,3μm,17.3s,MS5.2
WRA Warramunga Arr 43.13 122 P **P** **04 52 49.0 -1.5**
comp=Z,46nm,0.8s,mb5.2,baz=301,slow=9.1,SNR=109
WRA ScP ScP 04 58 29.0 0.0
comp=Z,7.3nm,1.0s,baz=305,slow=3.8,SNR=6.4
WRAB Tennant Creek 43.13 122 P **P** **04 52 50.9 +0.3**
comp=Z,505nm,0.8s,mb6.3,SNR=20
WRAB Tennant Creek 43.13 122 *e*P **P** **04 52 49.6 -1.0**
WRAB pmax pmax
comp=Z,68nm,0.9s,mb5.4
WRAB MLR MLR
comp=Z,4μm,19.0s,MS5.3
WRAB Tennant Creek 43.13 122 *e*P **P** **04 52 49.5 -1.0**
comp=Z,41nm,0.9s,mb5.2
WRAB *e*ScP ScP 04 58 27.0 -2.0
WRAB LR LR
comp=Z,9μm,19.0s,MS5.7
WRAB Tennant Creek 43.13 122 P **P** **04 52 50.0 -0.6**
comp=Z,109nm,1.1s,mb5.5
BSY Bisya 43.27 301 P **P** **04 52 55.8 +4.2**
SNR=7.9
ULHL Ulahol 43.82 338 P **P** **04 52 56.7 +1.0**
SNR=26
KZA Kyzart 44.05 337 P **P** **04 52 59.1 +1.5**
SNR=23
FORT Forrest 44.47 140 *e*P **P** **04 53 01.4 +0.3**
comp=Z,77nm,0.6s,mb5.6
FORT Forrest 44.47 140 *e*P **P** **04 53 01.6 +0.5**
comp=Z,352nm,1.6s,mb5.8
FORT *e*pP pP 04 53 09.8 -1.3
ASAR Alice Springs 44.53 127 P **P** **04 53 00.9 -0.8**
comp=Z,9.0nm,0.7s,mb4.7,baz=304,slow=7.7,SNR=42
ASAR PcP PcP 04 54 44.5 -0.1
comp=Z,9.1nm,0.9s,baz=303,slow=4.0,SNR=5.3
ASAR ScP ScP 04 58 34.7 +0.1
comp=Z,7.4nm,1.0s,baz=305,slow=3.5,SNR=12
ASAR Alice Springs 44.53 127 P **P** **04 53 00.9 -0.8**
ASAR 04 54 44.6
TKM2 Tokmak 2 44.65 338 P **P** **04 53 03.5 +1.1**
SNR=61
TKM2 Tokmak 2 44.65 338 *e*P **P** **04 53 03.2 +0.8**
TKM2 pmax pmax
comp=Z,74nm,1.0s,mb5.5
TKM2 MLR MLR
comp=Z,8μm,22.0s,MS5.6
TKM2 Tokmak 2 44.65 338 *e*P **P** **04 53 03.2 +0.8**
comp=Z,74nm,1.0s,mb5.5
TKM2 LR LR
comp=Z,8μm,22.0s,MS5.6
KBK Karagaybulak 44.66 337 P **P** **04 53 03.9 +1.4**
SNR=51
INCN Inchon 44.69 35 *e*P **P** **04 53 02.6 -0.3**
comp=Z,101nm,1.1s,mb5.6
INCN LR LR
comp=Z,10μm,19.0s,MS5.8
INCN Inchon 44.69 35 P **P** **04 53 02.0 -0.8**
SNR=14
AML Almayashu 44.72 336 P **P** **04 53 04.6 +1.6**
SNR=138
AML Almayashu 44.72 336 *e*P **P** **04 53 04.2 +1.2**
comp=Z,115nm,1.0s,mb5.7
AML LR LR
comp=Z,4μm,22.0s,MS5.3
AAK Ala-Archa 44.82 337 P **P** **04 53 05.1 +1.3**
comp=Z,290nm,1.0s,mb6.1,SNR=19
AAK Ala-Archa 44.82 337 P **P** **04 53 05.2 +1.5**
SNR=22
AAK Ala-Archa 44.82 337 LR LR 05 13 13.1
comp=Z,8μm,21.6s,MS5.6,baz=144,slow=38
FRU Bishkek 44.94 337 *e*P **P** **04 53 05.0 +0.3**
FRU *i* pP 04 53 14.0 -0.7
FRU pmax pmax
comp=Z,700nm,3.0s
CHMS Chumysh 45.03 337 P **P** **04 53 06.1 +0.6**
SNR=13
EKS2 Erkin-Say 45.13 336 P **P** **04 53 07.3 +1.1**
SNR=46
EKS2 Erkin-Say 45.13 336 *e*P **P** **04 53 07.2 +1.0**
comp=Z,44nm,0.8s,mb5.3
EKS2 LR LR
comp=Z,4μm,21.0s,MS5.3
USP Ospenovka 45.36 337 P **P** **04 53 08.3 +0.3**
SNR=136
KSRS Korea Array 45.41 36 P **P** **04 53 08.3 -0.2**
comp=Z,89nm,0.9s,mb5.6,baz=227,slow=8.9,SNR=266
KSRS LR LR 05 15 03.3
comp=Z,6μm,18.1s,MS5.6,baz=229,slow=40
MK31 Makanchi Array 46.12 346 *e*P **P** **04 53 13.8 -0.1**
MKAR Makanchi Array 46.12 346 P **P** **04 53 13.5 -0.4**
comp=Z,133nm,0.7s,mb6.0,baz=160,slow=6.6,SNR=233
MKAR S **S** **04 59 58.7 +1.2**
comp=Z,0.9nm,1.0s,baz=164,slow=32,SNR=1.9
MKAR LR LR 05 16 50.7
comp=Z,2μm,21.5s,MS5.0,baz=160,slow=42
MKAR Makanchi Array 46.12 346 P **P** **04 53 13.5 -0.4**
MKAR S **S** **04 59 58.7 +1.2**
RER Riviere de l'E 46.17 238 PFAKE 04 53 20.0 +5.2
RER LR LR
comp=Z,2μm,22.0s,MS5.1
SONM Songino Array 46.25 9 P **P** **04 53 15.0 0.0**
comp=Z,54nm,0.8s,mb5.5,baz=194,slow=8.0,SNR=147
SONM PcP PcP 04 54 51.9 +1.8
comp=Z,14nm,0.9s,baz=199,slow=2.2,SNR=3.8
SONM LR LR 05 14 58.5
comp=Z,8μm,19.7s,MS5.7,baz=189,slow=39
SONM Songino Array 46.25 9 P **P** **04 53 15.0 0.0**
SONM 04 54 51.9
SNY Shenyang 46.33 28 ⇑P **P** **04 53 14.3 -1.4**
SNY S **S** **05 00 04.4 +3.7**
SNY pmax pmax
comp=Z,110nm,2.3s,mb5.4
SNY pmax pmax
comp=Z,740nm,12.0s
SNY LR LR
comp=N,5μm,20.4s,MS5.6
SNY LR LR
comp=E,4μm,16.8s,MS5.6
SNY LR LR
comp=Z,9μm,13.2s,MS5.9
ULN Ulaanbaatar 46.39 10⇑ *e*P **P** **04 53 16.1 +0.1**
ULN Ulaanbaatar 46.39 10 *e*P **P** **04 53 16.4 +0.4**
comp=Z,52nm,0.9s,mb5.5
ULN *e*PcP PcP 04 54 51.5 +0.9
ULN LR LR
comp=Z,5μm,20.0s,MS5.5
ULN Ulaanbaatar 46.39 10 P **P** **04 53 16.4 +0.4**
comp=Z,1μmcomp=Z,75nm,1.3s,mb5.5
ULN Ulaanbaatar 46.39 10 P **P** **04 53 16.6 +0.5**
SNR=41
KK31 Karatay Array 46.87 334⇑ *e*P **P** **04 53 20.0 +0.1**
IMOG Moghan 48.16 319 *e*P **P** **04 53 29.7 -0.4**
ISRO Mashad 48.20 319 *e*P **P** **04 53 30.0 -0.4**
IBAF Bafgh 48.41 312 *e*P **P** **04 53 29.3 -2.8**
CN2 Changchun 48.72 28 *e*P **P** **04 53 33.5 -0.8**
CN2 *e*pP pP 04 53 46.0 +1.6
CN2 PcP PcP 04 54 57.6 -1.5
CN2 *e*S **S** **05 00 32.3 -2.4**
CN2 SS SS 05 03 58.5 -7.0
CN2 pmax pmax
comp=Z,80nm,0.8s,mb5.8
CN2 pmax pmax
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,6μm,14.0s,MS6.0
CN2 LR LR
comp=E,8μm,14.0s,MS6.0
CN2 LR LR
comp=Z,10μm,15.0s,MS5.9
IAKL Akhelmad 48.84 319 *e*P **P** **04 53 35.0 -0.3**
COEN Coen 48.93 111 *e*P **P** **04 53 36.0 -0.3**
comp=Z,523nm,1.4s,mb6.4
COEN Coen 48.93 111 P **P** **04 53 36.4 0.0**
comp=Z,160nm,1.2s,mb5.9
IMEH Mehriz 49.03 311 *e*P **P** **04 53 35.8 -1.1**
GUMO Guam 49.09 74 PFAKE 04 53 50.0 +12
GUMO LR LR
comp=Z,1μm,20.0s,MS5.0
IKRD Kardeh 49.09 319 *e*P **P** **04 53 32.3 -5.0**
ISRV Sarvestan 49.30 308 *e*P **P** **04 53 40.4 +1.4**
IEMG Emamgholi 49.38 320 *e*P **P** **04 53 39.4 0.0**
MOY Mondy 49.43 4 *e*P **P** **04 53 39.6 0.0**
MOY pmax pmax
comp=Z,240nm,3.1s
IPAR Pars 49.55 308 *e*P **P** **04 53 41.1 +0.2**
ISFR Sfrayin 49.59 319 *e*P **P** **04 53 40.3 -0.8**
TLY Talaya 49.66 6 P **P** **04 53 42.1 +0.8**
comp=Z,216nm,0.9s,mb6.2,SNR=28
TLY Talaya 49.66 6 *c i*P **P** **04 53 41.7 +0.4**
TLY *e* 04 55 07.9
TLY *e* 04 55 39.4
TLY *e*PPP 04 56 30.1
TLY *e*S **S** **05 00 49.5 +1.9**
TLY *e* 05 03 27.8
TLY pmax pmax
comp=Z,50nm,1.1s,mb5.5
TLY MLR MLR
comp=Z,7μm,16.0s,MS5.8
TLY Talaya 49.66 6 *e*P **P** **04 53 42.5 +1.2**
comp=Z,39nm,0.9s,mb5.4
TLY LR LR
comp=Z,7μm,21.0s,MS5.7
TLY Talaya 49.66 6 P **P** **04 53 42.5 +1.1**
SNR=34
ABKT Ailbek 50.02 320 P **P** **04 53 44.1 -0.2**
comp=Z,344nm,0.8s,mb6.4,SNR=9.8
ISHV Shirvan 50.06 319 *e*P **P** **04 53 44.2 -0.4**
CBIJ Chichi jima 50.20 56 LR LR 05 12 45.3
comp=Z,1μm,21.3s,MS4.9,baz=145,slow=33
IRK Irkutsk 50.29 6 *e*P **P** **04 53 46.4 +0.4**
IRK *e* 04 55 43.4
IRK *e*S **S** **05 00 59.6 +3.3**
IRK pmax pmax
comp=Z,165nm,2.7s,mb5.6
KURK Kurchatov 50.66 345 P **P** **04 53 49.4 +0.5**
comp=Z,585nm,0.8s,mb6.6,SNR=64
KURK Kurchatov 50.66 345 *c e*P **P** **04 53 49.1 +0.2**
KURK pmax pmax
comp=Z,129nm,1.2s,mb5.7
KURK Kurchatov 50.66 345 *e*P **P** **04 53 48.9 0.0**
comp=Z,5.0nm,2.0s,mb4.1
KURK LR LR
comp=Z,5μm,22.0s,MS5.5
KURK Kurchatov 50.66 345 P **P** **04 53 48.6 -0.2**
SNR=81
JHJ Hachijo jima 2 50.83 48 LR LR 05 13 23.8
comp=Z,1μm,21.2s,MS5.0,baz=103,slow=34
HIA Hailar 50.91 19 *e*P **P** **04 53 51.2 +0.4**
HIA pmax pmax
comp=Z,130nm,1.1s
HIA MLR MLR
comp=Z,4μm,20.0s
HIA Hailar 50.91 19 *e*P **P** **04 53 51.2 +0.3**
comp=Z,130nm,1.1s,mb5.8
HIA LR LR
comp=Z,4μm,20.0s,MS5.4
MDJ Mudanjiang 51.33 30 P **P** **04 53 54.8 +0.8**
MDJ pP pP 04 54 04.3 +0.1
MDJ sP sP 04 54 08.4 +0.3
MDJ PcP PcP 04 55 09.4 +0.8
MDJ PP PP 04 55 51.6 +0.3
MDJ ScP ScP 04 59 02.1 -0.7
MDJ S **S** **05 01 11.3 +0.3**
MDJ pmax pmax
comp=Z,59nm,1.6s,mb5.3
MDJ pmax pmax
comp=Z,890nm,8.5s
MDJ LR LR
comp=N,6μm,15.2s
MDJ LR LR
comp=Z,7μm,13.7s,MS5.8
MDJ Mudanjiang 51.33 30 *e*P **P** **04 53 54.7 +0.6**
comp=Z,58nm,1.0s,mb5.5
MDJ LR LR
comp=Z,4μm,19.0s,MS5.4
MAJO Matsushiro 51.41 43 *e*P **P** **04 53 55.5 +0.7**
MAJO pmax pmax
comp=Z,96nm,1.3s,mb5.6
MAJO MLR MLR
comp=Z,3μm,20.0s,MS5.2
MAJO Matsushiro 51.41 43 *e*P **P** **04 53 55.5 +0.7**
comp=Z,96nm,1.3s,mb5.6
MAJO LR LR
comp=Z,3μm,20.0s,MS5.2
MAT Matsushiro 51.41 43 P **P** **04 53 54.0 -0.8**
MAT S **S** **05 01 12.0 -0.4**
MJAR Matsushiro Arr 51.41 43 P **P** **04 53 54.9 +0.1**
comp=Z,16nm,0.9s,mb5.0,baz=217,slow=6.6,SNR=43
MJAR PcP PcP 04 55 10.2 +1.1
comp=Z,6.9nm,0.9s,baz=240,slow=3.9,SNR=4.3
MJAR LR LR 05 18 16.2
comp=Z,2μm,19.3s,MS5.2,baz=230,slow=39
MJAR Matsushiro Arr 51.41 43 P **P** **04 53 54.9 +0.1**
MJAR 04 55 10.2
IZEF Zefreh 51.44 311 *e*P **P** **04 53 52.5 -2.6**
VLA Vladivostok 51.48 33 *c i*P **P** **04 53 53.9 -1.3**
VLA pmax pmax
comp=Z,359nm,2.5s,mb5.9
IANJ Anjilo 51.52 315 *e*P **P** **04 53 53.4 -2.2**
CIT Chita 51.65 13 *e*P **P** **04 53 51.4 -4.9**
CIT *e* 04 54 09.8
CIT *e* 04 55 17.2
CIT *e* 04 55 54.6
CIT pmax pmax
comp=Z,765nm,2.6s,mb6.2
PMG Port Moresby 51.73 104 *c e*P **P** **04 53 57.2 -0.4**
PMG pmax pmax
comp=Z,112nm,1.2s
PMG Port Moresby 51.73 104 *e*P **P** **04 53 55.0 -2.6**
comp=Z,86nm,1.0s,mb5.6
PMG LR LR
comp=Z,1μm,20.0s,MS4.9
IKIA Kiasar 52.05 316 *e*P **P** **04 53 59.2 -0.4**
IGLO Ghaloghah 52.10 316 *e*P **P** **04 53 59.8 -0.2**
IKLH Kolahrood 52.20 312 *e*P **P** **04 53 59.2 -1.5**
IFIR Firoozkooh 52.42 315 *e*P **P** **04 54 01.1 -1.3**
IPIR Pirpir 52.44 310 *e*P **P** **04 54 03.3 +0.8**
ZALV Zalesovo Beam 52.47 351 P **P** **04 54 01.9 -0.5**
comp=Z,254nm,0.8s,mb6.2,baz=175,slow=6.0,SNR=211
ZALV S **S** **05 01 27.3 +1.0**
comp=Z,4.1nm,1.0s,baz=176,slow=8.8,SNR=3.8
ZALV LR LR 05 21 04.8
comp=Z,3μm,19.2s,MS5.3,baz=174,slow=42
ZALV Zalesovo Beam 52.47 351 P **P** **04 54 01.9 -0.5**
ZALV S **S** **05 01 27.3 +0.9**
ABPO Ambohimpanom 52.84 244 PFAKE 04 54 20.0 +14
ABPO LR LR
comp=Z,3μm,20.0s,MS5.3
IDMV Damavand 52.91 314 *e*P **P** **04 54 05.6 -0.4**
CTA Charters Tower 53.54 117 *e*P **P** **04 54 10.3 -0.6**
comp=Z,22nm,0.8s,mb5.1
CTA *e*S **S** **05 01 42.8 +0.7**
CTAO Charters Tower 53.54 117 *e*P **P** **04 54 09.4 -1.5**
CTAO pmax pmax
comp=Z,45nm,1.0s,mb5.3
CTAO MLR MLR
comp=Z,3μm,19.0s,MS5.4
CTAO Charters Tower 53.54 117 *e*P **P** **04 54 09.4 -1.5**
comp=Z,45nm,1.0s,mb5.4
CTAO LR LR
comp=Z,3μm,19.0s,MS5.4
CTAO Charters Tower 53.54 117 P **P** **04 54 11.7 +0.8**
comp=Z,49nm,1.8s,mb5.1
NVS Novosibirsk 53.58 350 *e*P **P** **04 54 09.5 -1.0**
NVS *e*S **S** **05 01 34.8 -6.7**
NVS pmax pmax
comp=Z,190nm,1.1s,mb5.9
NVS pmax pmax
comp=N,127nm,1.3s
NVS pmax pmax
comp=E,92nm,1.3s
NVS smax
comp=E,198nm,2.5s
KBD Kabd 53.58 305 *e*P **P** **04 54 12.4 +1.4**
KBD AMb AMB 04 54 35.9
comp=Z,94nm,1.7s,mb5.5
IR3 Iran Long-Peri 53.59 314 *e*P **P** **04 54 09.6 -1.4**
KRAR Krasnoyarsk 53.73 357 *e*P **P** **04 54 12.1 +0.5**
KRAR pmax pmax
comp=Z,350nm,1.2s,mb6.2
NAY Al-Naaiem 53.98 305 *e*P **P** **04 54 14.5 +0.6**
NAY AMb AMB 04 54 23.9
comp=Z,49nm,1.1s,mb5.4
IRAZ Razeghan 54.35 313 *e*P **P** **04 54 16.9 +0.4**
STKA Stephens Creek 54.52 132 *e*P **P** **04 54 17.4 -0.4**
comp=Z,25nm,0.9s,mb5.2
STKA *e*S **S** **05 01 54.8 -0.1**
STKA Stephens Creek 54.52 132 P **P** **04 54 17.4 -0.5**
comp=Z,30nm,0.9s,mb5.3,baz=315,slow=7.5,SNR=25
STKA LR LR 05 20 10.4
comp=Z,4μm,21.6s,MS5.4,baz=298,slow=39
STKA Stephens Creek 54.52 132 *e*P **P** **04 54 17.5 -0.3**
VOSK Vostochnaya 54.65 341 P **P** **04 54 17.0 -1.3**
VOSK pmax pmax
comp=Z,93nm,0.8s,mb5.9
BVAR Borovoye Array 55.09 341 P **P** **04 54 20.5 -1.1**
comp=Z,66nm,0.8s,mb5.7,baz=144,slow=5.5,SNR=120
BRVK Borovoye 55.15 341 P **P** **04 54 21.1 -0.9**
comp=Z,505nm,0.8s,mb6.6,SNR=24
BRVK Borovoye 55.15 341 *c e*P **P** **04 54 21.5 -0.5**
BRVK pmax pmax
comp=Z,89nm,1.0s,mb5.8
BRVK Borovoye 55.15 341 *e*P **P** **04 54 21.3 -0.7**
comp=Z,68nm,0.8s,mb5.7
BRVK LR LR
comp=Z,4μm,20.0s,MS5.5
BRVK Borovoye 55.15 341 P **P** **04 54 21.3 -0.7**
SNR=45
ZRNK Zerenda 55.49 340 P **P** **04 54 23.2 -1.2**
ZRNK pmax pmax
comp=Z,79nm,1.1s,mb5.7
KLR Kul'dur 55.66 27 *d e*P **P** **04 54 21.7 -4.1**
KLR *e*S **S** **05 02 09.0 -0.7**
KLR pmax pmax
comp=E,200nm,2.0s
KLR pmax pmax
comp=Z,330nm,2.0s,mb6.0
KLR pmax pmax
comp=E,600nm,7.5s
KLR pmax pmax
comp=Z,2μm,7.5s
AB31 Akbulak array 56.32 332 *i* P **P** **04 54 29.9 -0.6**
AB31 pmax pmax
comp=Z,81nm,0.8s,mb5.8
AB31 Akbulak array 56.32 332⇑ *e*P **P** **04 54 29.0 -1.5**
ABKAR Akbulak array 56.32 332 *e*P **P** **04 54 30.0 -0.4**
comp=Z,119nm,1.0s,mb5.9
HABR Khabarovsk 56.71 30 *e*P **P** **04 54 32.4 -0.9**
HABR *e**PP pP 04 54 41.5 -2.0
HABR 04 56 38.9
HABR *e*S **S** **05 02 23.9 +0.2**
HABR *e**SS sS 05 02 39.1 -1.4
HABR *e* 05 04 16.9
HABR *e*SS SS 05 06 11.3 -0.6
HABR pmax pmax
comp=E,58nm,0.9s
HABR pmax pmax
comp=Z,95nm,1.1s,mb5.7
HABR pmax pmax
comp=N,19nm,0.9s
HABR MLR MLR
comp=Z,8μm,17.0s,MS5.9
ERM Erimo 57.53 40 *e*P **P** **04 54 39.4 +0.2**
ERM pmax pmax
comp=Z,41nm,0.9s,mb5.5
ERM MLR MLR
comp=Z,2μm,20.0s,MS5.2
ERM Erimo 57.53 40 *e*P **P** **04 54 39.4 +0.2**
comp=Z,41nm,0.9s,mb5.5
ERM LR LR
comp=Z,2μm,20.0s,MS5.2
BHD Baghdad 57.69 308 *e x* x 04 54 42.0
BHD *e x* x 04 02 32.0
ASAJ Asahikawa 58.27 38 LR LR 05 22 33.0
comp=Z,2μm,18.1s,MS5.2,baz=83,slow=39
CLNS Chul'man 58.99 18 *e*P **P** **04 54 49.4 +0.3**
CLNS *e**PP pP 04 54 59.4 0.0
CLNS *e* 04 55 34.4
CLNS *e* 04 57 01.8
CLNS *e*S **S** **05 02 57.2 +4.1**
CLNS pmax pmax
comp=E,20nm,1.0s
CLNS pmax pmax
comp=Z,40nm,1.0s,mb5.4
CLNS pmax pmax
comp=N,23nm,1.0s
CLNS pmax pmax
comp=Z,16nm,1.1s,mb5.0
CLNS pmax pmax
comp=N,22nm,1.6s
CLNS pmax pmax
comp=E,16nm,1.1s
CLNS smax
comp=E,302nm,11.6s
CLNS smax
comp=N,448nm,11.3s
CLNS MLR MLR
comp=E,5μm,14.0s,MS6.0
CLNS MLR MLR
comp=N,7μm,14.0s,MS6.0
CLNS MLR MLR
comp=Z,10μm,13.0s,MS6.1
KMBO Kilima Mbogo 59.36 267 *e*P **P** **04 54 53.2 +0.7**
KMBO *e**PP pP 04 55 01.9 -0.9

KMBO pmax pmax
comp=Z,15nm,1.1s
KMBO MLR MLR
comp=Z,3μm,20.0s
KMBO Kilima Mbogo 59.36 267 *e*P **P** **04 54 53.2 +0.6**
comp=Z,15nm,1.1s,mb4.9
KMBO *e*pP pP 04 55 01.9 -0.9
KMBO LR LR
comp=Z,3μm,20.0s,MS5.5
KMBO Kilima Mbogo 59.36 267 *e*P **P** **04 54 53.1 +0.6**
EIDS Eidsvold 59.46 121 *e*P **P** **04 54 52.4 -0.6**
comp=Z,15nm,0.8s,mb5.1
EIDS *e*pP pP 04 55 01.0 -2.2
MAK Makhachkala 59.54 320 *e*P **P** **04 54 50.6 -2.6**
MAK *i* 04 55 39.2
MAK *e* 04 57 08.7
MAK *e*PPP 04 58 31.1
MAK *e*S **S** **05 02 58.0 -2.8**
MAK *e* 05 04 40.2
MAK *e*SS SS 05 06 50.3 -6.3
MAK pmax pmax
comp=Z,25nm,0.3s,mb5.7
MAK Makhachkala 59.54 320 *e*P **P** **04 54 52.2 -1.0**
YSS Yuzh-Sakhalins 59.90 35*α i*P **P** **04 54 55.4 -0.2**
YSS *i* *PP pP 04 55 05.5 -0.4
YSS *e* 04 57 12.0
YSS *e*S **S** **05 03 04.0 -1.3**
YSS *e*PS 05 03 22.0
YSS pmax pmax
comp=E,90nm,1.0s
YSS pmax pmax
comp=Z,240nm,1.0s,mb6.2
YSS pmax pmax
comp=Z,1μm,5.0s
YSS MLR MLR
comp=N,3μm,15.0s
YSS MLR MLR
comp=Z,3μm,15.0s,MS5.5
YSS Yuzh-Sakhalins 59.90 35 *e*P **P** **04 54 56.2 +0.6**
comp=Z,279nm,1.0s,mb6.2
YSS LR LR
comp=Z,614nm,20.0s,MS4.7
GNI Garni 60.12 316*ce*P **P** **04 54 55.5 -1.7**
GNI pmax pmax
comp=Z,40nm,1.2s
GNI Garni 60.12 316 *e*P **P** **04 54 58.5 +1.2**
comp=Z,73nm,1.1s,mb5.6
GNI LR LR
comp=Z,1μm,20.0s,MS5.0
GNI Garni 60.12 316 P **P** **04 54 57.7 +0.5**
SNR=8.4
TOO Toolangi 60.12 136 *e*P **P** **04 54 58.2 +0.9**
DGRG David-gareji 60.25 318 P **P** **04 54 57.8 -0.3**
DGRG S **S** **05 03 11.7 +1.7**
YUK Yuzh-Kuril'sk 60.25 39⇑ *i*P **P** **04 54 58.5 +0.4**
YUK *i* *PP pP 04 55 08.0 -0.3
YUK *i* 04 57 14.0
YUK *i* PPP 04 58 45.0
YUK *i* S **S** **05 03 01.0 -8.9**
YUK pmax pmax
comp=Z,580nm,1.6s,mb6.4
YUK smax
comp=N,410nm,2.8s
YUK smax
comp=E,530nm,2.8s
YUK MLR MLR
comp=N,1μm,18.0s,MS5.7
YUK MLR MLR
comp=E,4μm,18.0s,MS5.7
YUK MLR MLR
comp=Z,4μm,18.0s,MS5.6
YNG Young 60.69 132 *e*P **P** **04 55 00.9 -0.3**
comp=Z,16nm,0.7s,mb5.3
MTA Mtatsminda 60.75 318 P **P** **04 55 01.6 +0.1**
MTA S **S** **05 03 13.4 -2.9**
TBLG Delisi 60.80 318 P **P** **04 55 02.4 +0.6**
TBLG S **S** **05 03 12.9 -4.1**
TBLG Delisi 60.80 318 P **P** **04 55 02.4 +0.6**
TBLG S **S** **05 03 12.9 -4.1**
GOR Gori 61.33 318 P **P** **04 55 11.9 +6.4**
SVE Sverdlovsk 61.52 338⇓ *e*P **P** **04 55 06.1 -0.3**
SVE *e* 04 57 24.5
SVE *e*S **S** **05 03 20.5 -5.1**
SVE pmax pmax
comp=Z,102nm,0.9s,mb6.0
SVE MLR MLR
comp=Z,3μm,23.0s,MS5.4
CAN Canberra 61.58 132 *e*P **P** **04 55 06.9 -0.4**
CAN pmax pmax
comp=Z,15nm,0.7s,mb5.2
CAN MLR MLR
comp=Z,4μm,21.0s,MS5.5
CAN Canberra 61.58 132 *e*P **P** **04 55 06.9 -0.4**
comp=Z,15nm,0.7s,mb5.2
CAN LR LR
comp=Z,4μm,21.0s,MS5.5
ARMA Armidale 61.66 126 *e*P **P** **04 55 08.9 +1.0**
ARMA Armidale 61.66 126 *e*P **P** **04 55 09.2 +1.4**
comp=Z,27nm,1.1s,mb5.3
ZEI Tsey 61.81 318 *e*P **P** **04 55 08.4 -0.3**
ZEI *e*S **S** **05 03 27.4 -2.4**
ZEI *e* 05 05 00.6
ZEI pmax pmax
comp=Z,105nm,2.3s,mb5.6
CNB Canberra Magne 61.85 132 *e*P **P** **04 55 09.2 +0.2**
ARU Arti 62.01 337*d i*P **P** **04 55 09.3 -0.4**
ARU *e* 04 55 46.7
ARU *e* 04 57 22.8
ARU *e*PPP 04 58 52.3
ARU S **S** **05 03 33.3 +1.5**
ARU 05 04 58.4
ARU SS SS 05 07 30.3 -4.4
ARU pmax pmax
comp=Z,62nm,1.2s,mb5.6
ARU MLR MLR
comp=Z,3μm,18.0s,MS5.6
ARU Arti 62.01 337 *e*P **P** **04 55 09.0 -0.7**
comp=Z,48nm,0.9s,mb5.6
ARU LR LR
comp=Z,4μm,20.0s,MS5.5
ONI Oni 62.03 318 P **P** **04 55 10.1 0.0**
ONI S **S** **05 03 32.3 -0.3**
KIV Kislovodsk 63.12 319 P **P** **04 55 17.3 -0.1**
comp=Z,332nm,0.9s,mb6.5,SNR=5.9
KIV Kislovodsk 63.12 319 *e*P **P** **04 55 16.9 -0.5**
KIV *e* 04 57 33.6
KIV *e*S **S** **05 03 45.0 -1.2**
KIV *e*SS SS 05 07 52.2 -0.4
KIV pmax pmax
comp=Z,140nm,4.3s
KIV pmax pmax
comp=Z,55nm,1.1s,mb5.6
KIV MLR MLR
comp=Z,964nm,18.0s,MS5.0
KIV Kislovodsk 63.12 319 *e*P **P** **04 55 17.1 -0.3**
comp=Z,54nm,0.9s,mb5.7
KIV LR LR
comp=Z,1μm,21.0s,MS5.1
KIV Kislovodsk 63.12 319 P **P** **04 55 17.4 0.0**
SNR=18
HNR Honiara 64.21 102 PFAKE 04 55 40.0 +15
HNR LR LR
comp=Z,820nm,21.0s,MS4.9
YAK Yakutsk 64.65 17 *e*P **P** **04 55 26.3 -0.8**
YAK *e**PP pP 04 55 36.8 -0.7
YAK *e* 04 55 59.8
YAK *e* 04 57 48.4
YAK *e*PPP 04 59 20.8
YAK *i* S **S** **05 04 04.2 -0.4**
YAK *e*S **S** **05 04 04.2 -0.4**
YAK *e* 05 05 13.6
YAK *e*SS SS 05 08 08.7 -7.1
YAK pmax pmax
comp=Z,238nm,1.0s,mb6.2
YAK pmax pmax
comp=E,59nm,1.1s
YAK pmax pmax
comp=N,76nm,1.1s
YAK pmax pmax
comp=Z,21nm,0.9s,mb5.2
YAK pmax pmax
comp=N,7.0nm,0.8s
YAK pmax pmax
comp=E,18nm,0.9s
YAK smax
comp=E,174nm,2.5s
YAK smax
comp=N,299nm,2.2s
YAK MLR MLR
comp=Z,12μm,16.0s,MS6.2
YAK MLR MLR
comp=E,5μm,14.0s,MS6.0
YAK MLR MLR
comp=N,6μm,14.0s,MS6.0
YAK Yakutsk 64.65 17 *e*P **P** **04 55 27.0 -0.1**
comp=N,262nm,1.0s,mb6.2
YAK LR LR
comp=Z,3μm,21.0s,MS5.4
MMAI Mount Meron Ar 64.78 306 P **P** **04 55 27.5 -1.1**
comp=Z,1.8nm,0.3s,mb4.6,baz=97,slow=7.8,SNR=6.0
MMAI LR LR 05 25 34.3
comp=Z,1μm,18.9s,MS5.2,baz=110,slow=38
SOKR Solikamsk 64.91 339*c i*P **P** **04 55 28.7 -0.2**
SOKR S **S** **05 04 05.3 -2.6**
SOKR pmax pmax
comp=Z,120nm,1.0s,mb5.9
SOKR MLR MLR
comp=Z,3μm,22.0s,MS5.5
SOC Sochi 64.94 318 *e*P **P** **04 55 26.3 -3.0**
SOC *e**PP pP 04 55 36.8 -2.9
SOC *e*PPP 04 59 23.1
SOC *e*S **S** **05 04 04.1 -4.7**
SOC *e* 05 05 16.3
SOC pmax pmax
comp=Z,57nm,1.4s,mb5.4
SOC MLR MLR
comp=Z,758nm,19.0s,MS4.9
SOC Sochi 64.94 318 *i*P **P** **04 55 27.9 -1.4**
MBAR Mbarara 65.84 268 PFAKE 04 55 50.0 +14
MBAR LR LR
comp=Z,422nm,20.0s,MS4.6
MBAR Mbarara 65.84 268 *e*P **P** **04 55 34.3 -1.5**
ANN Anapa 66.91 318 *e*P **P** **04 55 29.2 -13**
ANN *e**PP pP 04 55 39.1 -13
ANN pmax pmax
comp=Z,74nm,1.6s,mb5.5
VRHR Novokhopersk 66.93 326 *e*P **P** **04 55 40.9 -1.1**
VRHR *e*S S 05 04 28.0 -4.8
VRHR pmax pmax
comp=E,20nm,0.7s
VRHR pmax pmax
comp=Z,40nm,0.7s,mb5.6
VRHR pmax pmax
comp=N,4.0nm,0.3s
VRHR smax
comp=N,10.0nm,2.8s
VRHR smax
comp=E,10.0nm,2.8s
VRHR smax
comp=Z,3.0nm,2.8s
CSS Prodhromos 66.94 307 *e*P **P** **04 55 41.8 -0.6**
comp=Z,53nm,1.2s,mb5.5
CSS LR LR
comp=Z,3μm,19.0s,MS5.5
BR131 Keskin Array S 67.95 312 *e*P **P** **04 55 47.6 -1.1**
comp=Z,14nm,0.8s,mb5.0
BR131 LR LR
comp=Z,949nm,22.0s,MS5.0
BRTR Keskin Array B 67.95 312 P **P** **04 55 47.5 -1.2**
comp=Z,5.7nm,0.9s,mb4.6,baz=130,slow=6.8,SNR=15
BRTR LR LR 05 27 57.2
comp=Z,797nm,18.5s,MS5.0,baz=92,slow=38
VSR Storozhevoye 68.37 325 *e*P **P** **04 55 49.1 -2.0**
VSR *e**PP pP 04 55 57.8 -3.7
VSR *e*S S 05 04 44.5 -5.6
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,20nm,0.9s
VSR pmax pmax
comp=Z,30nm,0.9s,mb5.3
VSR smax
comp=N,280nm,3.7s
VSR smax
comp=Z,100nm,3.7s
VSR smax
comp=E,80nm,1.8s
VSR MLR MLR
comp=N,470nm,21.0s,MS5.0
VSR MLR MLR
comp=E,780nm,21.0s,MS5.0
VSR MLR MLR
comp=Z,2μm,21.0s,MS5.2
MIR Mirnyy 68.64 182 *e*P **P** **04 55 54.0 +1.5**
MIR pmax pmax
comp=Z,26nm,1.2s,mb5.0
POGA Pongola 68.95 240 *e*P **P** **04 55 53.7 -1.5**
POGA AMb AMB 04 56 03.6
comp=Z,47nm,1.2s,mb5.3
SIM Simferopol' 69.18 318 *e*P **P** **04 55 56.0 -0.3**
SIM *e*S S 05 04 57.0 -2.9
SIM pmax pmax
comp=Z,18nm,0.8s,mb5.0
MSNA Messina 69.25 245 *e*P **P** **04 55 55.6 -1.5**
MSNA AMb AMB 04 56 12.8
comp=Z,42nm,1.6s,mb5.1
SKR Severo-Kuril's 69.43 36 *e*P **P** **04 56 02.0 +4.3**
SKR *e* 04 56 15.4
SKR *e* 04 58 36.0
SKR *e*PPP 05 00 16.0
SKR *e*S S 05 05 10.0 +7.4
SKR *e*PS 05 05 26.0
SKR *e* 05 05 49.0
SKR pmax pmax
comp=N,80nm,1.0s
SKR pmax pmax
comp=E,120nm,1.0s
SKR pmax pmax
comp=Z,360nm,1.0s,mb6.3
SKR pmax pmax
comp=N,1μm,10.0s
SKR pmax pmax
comp=E,1μm,10.0s
SKR pmax pmax
comp=Z,2μm,10.0s
SKR MLR MLR
comp=Z,2μm,18.0s,MS5.4
SKR MLR MLR
comp=N,1μm,14.0s,MS5.4
SKR MLR MLR
comp=E,1μm,14.0s,MS5.4
LSZ Lusaka 69.77 253 *e*P **P** **04 56 00.6 +0.2**
LSZ pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
LSZ MLR MLR
comp=Z,3μm,21.0s,MS5.5
LSZ Lusaka 69.77 253 *e*P **P** **04 56 00.6 +0.2**
comp=Z,1.4nm,0.8s
LSZ LR LR
comp=Z,3μm,21.0s,MS5.5
LSZ Lusaka 69.77 253 *e*P **P** **04 55 59.8 -0.6**
ISP Isparta 69.82 310 P **P** **04 56 01.8 +1.4**
ISP Isparta 69.82 310 *e*P **P** **04 55 60.0 -0.4**
comp=Z,139nm,1.8s,mb5.6
ISP LR LR
comp=Z,2μm,19.0s,MS5.3
ISP Isparta 69.82 310⇑ *i*P **P** **04 56 01.6 +1.2**
OBN Obninsk 71.42 328*ce*P **P** **04 56 09.2 -0.6**
OBN *i* 04 56 15.8
OBN *i* 04 56 30.4
OBN *i* S S 05 05 16.2 -10
OBN pmax pmax
comp=Z,87nm,1.2s,mb5.6
SLR Silverton 71.49 242 *e*P **P** **04 56 10.8 0.0**
SLR AMb AMB 04 56 25.4
comp=Z,64nm,1.8s,mb5.2
ERPM east rand prop 71.65 241 *e*P **P** **04 56 11.5 -0.2**
ERPM AMb AMB 04 56 21.4
comp=Z,34nm,1.3s,mb5.1
PET Petropavlovsk 71.78 34 *i*P **P** **04 56 11.2 -0.7**
PET *e* 04 58 59.3
PET *e*PPP 05 00 35.5
PET *i* S S 05 05 31.9 +2.0
PET pmax pmax
comp=Z,1μm,4.1s
PET pmax pmax
comp=Z,160nm,1.1s,mb5.9
PET pmax pmax
comp=Z,800nm,19.1s
PET MLR MLR
comp=Z,2μm,17.0s,MS5.5
PET MLR MLR
comp=Z,2μm,17.0s
PET Petropavlovsk 71.78 34 *e*P **P** **04 56 12.6 +0.7**
comp=Z,136nm,1.0s,mb5.8
PET LR LR
comp=Z,2μm,19.0s,MS5.3
DZM Mont Dzumac 72.29 114 *e*S S 05 05 31.7 -5.2
comp=Z,3μm,26.1s
DZM *e*LR LR 05 18 02.7
comp=Z,4μm,26.2s
TIXI Tiksi 72.32 10 *i*P **P** **04 56 13.6 -1.3**
TIXI *e* 04 58 56.7
TIXI *e*S S 05 05 33.8 -1.7
TIXI *e* 05 06 14.6
TIXI pmax pmax
comp=Z,79nm,1.5s,mb5.4
TIXI MLR MLR
comp=Z,5μm,18.0s,MS5.9
TIXI Tiksi 72.32 10 *e*P **P** **04 56 14.1 -0.8**
comp=Z,75nm,1.3s,mb5.5
TIXI *e*PP PP 04 58 56.6 +0.7
TIXI LR LR
comp=Z,2μm,20.0s,MS5.4
TLCR 72.85 317⇑ P **P** **04 56 18.0 -0.5**
TLCR 72.85 317⇑ *i*P **P** **04 56 18.0 -0.5**
TIRR Tirgusor 72.94 316 P **P** **04 56 20.5 +1.4**
TIRR Tirgusor 72.94 316 *e*P **P** **04 56 17.9 -1.2**
comp=Z,19nm,0.8s,mb5.1
TIRR Tirgusor 72.94 316⇓ *i*P **P** **04 56 18.6 -0.5**
SEY Seymchan 73.11 23*ce*P **P** **04 56 19.7 0.0**
SEY Seymchan 73.11 23⇑ *e*P **P** **04 56 19.8 +0.1**
KIS Kishinev 73.31 319 *e*P **P** **04 56 19.0 -2.2**
comp=Z,500nm,4.0s
KIS Kishinev 73.31 319 *e*PP PP 04 59 15.0 +10
KIS *e*S S 05 05 42.0 -5.7
KIS LRM 05 31 25.0
comp=Z,1μm,21.0s
KIS Kishinev 73.31 319 *e*P **P** **04 56 19.0 -2.2**
KIS *e* pP 04 56 29.0 -2.7
KIS *e*S S 05 05 42.0 -5.7
KIS pmax pmax
comp=Z,450nm,4.0s
KIS MLR MLR
comp=Z,1μm,21.0s,MS5.1
KIS MLR MLR
comp=Z,1μm,20.0s
PRD Provadia 73.36 315 P **P** **04 56 21.0 -0.6**
MAW Mawson 73.53 193 P **P** **04 56 22.5 +0.4**
comp=Z,3.8nm,0.8s,mb4.4,baz=28,slow=10,SNR=6.6
MAW LR LR 05 26 09.1
comp=Z,875nm,18.6s,MS5.1,baz=40,slow=34
MAW Mawson 73.53 193 *e*P **P** **04 56 23.3 +1.2**
MAW pmax pmax
comp=Z,7.0nm,1.5s
MAW Mawson 73.53 193 *e*P **P** **04 56 23.3 +1.3**
comp=Z,7.4nm,1.5s,mb4.4
LEOM Leova 73.56 318⇑ P **P** **04 56 23.2 +0.5**
LEOM Leova 73.56 318⇑ *i*P **P** **04 56 23.2 +0.5**
LBTB Lobatse 73.74 243 *e*P **P** **04 56 24.6 +0.4**
LBTB pmax pmax
comp=Z,31nm,1.0s,mb5.2
LBTB MLR MLR
comp=Z,3μm,20.0s,MS5.6
LBTB Lobatse 73.74 243 *e*P **P** **04 56 24.6 +0.4**
comp=Z,31nm,1.0s,mb5.2
LBTB LR LR
comp=Z,3μm,20.0s,MS5.6
LBTB Lobatse 73.74 243 *e*P **P** **04 56 24.1 0.0**
LBTB AMb AMB 04 56 39.8
comp=Z,48nm,1.2s,mb5.3
JMB Yambol 73.79 314 P pP 04 56 36.4 +1.7
AKASG Malin Array Be 74.06 322 P **P** **04 56 24.3 -1.3**
comp=Z,9.7nm,0.7s,mb4.8,baz=92,slow=4.7,SNR=28
AKASG PP PP 04 59 10.7 -0.5
comp=Z,0.9nm,0.5s,baz=100,slow=5.8,SNR=4.2
AKASG LR LR 05 31 48.8
comp=Z,960nm,21.5s,MS5.0,baz=105,slow=38
AKASG Malin Array Be 74.06 322 P **P** **04 56 24.3 -1.3**
AKASG 04 59 10.7
AKASG Malin Array Be 74.06 322 P **P** **04 56 24.3 -1.3**
AKASG PP PP 04 59 10.7 -0.5
AKASG LR LR 05 31 48.8
AKBB Malin Array Si 74.06 322 *e*P **P** **04 56 24.3 -1.3**
KIEV Kiev 74.07 322 *e*P **P** **04 56 24.3 -1.3**
KIEV pmax pmax
comp=Z,26nm,0.9s,mb5.2
KIEV MLR MLR
comp=Z,1μm,22.0s,MS5.1
KIEV Kiev 74.07 322 *e*P **P** **04 56 24.3 -1.3**
comp=Z,26nm,0.9s,mb5.2
KIEV LR LR
comp=Z,1μm,22.0s,MS5.1
SWZ Schweizer 74.37 241 *e*P **P** **04 56 27.7 -0.1**
SWZ AMb AMB 04 56 39.7
comp=Z,36nm,1.7s,mb5.0
VRI Vrincioaia 74.44 317 P **P** **04 56 28.7 +0.9**
VRI Vrincioaia 74.44 317⇓ *i*P **P** **04 56 28.4 +0.6**
KDZ Kurdzhali 74.48 313 P pP 04 56 39.1 +0.4
PLOR Plostina 74.48 317 P **P** **04 56 29.0 +0.9**
PLOR Plostina 74.48 317⇓ *i*P **P** **04 56 28.7 +0.6**
TESR 74.64 318 P **P** **04 56 28.7 -0.3**
TESR 74.64 318⇑ *i*P **P** **04 56 28.6 -0.4**
BOSA Boshof 74.70 240 P **P** **04 56 29.3 -0.4**
comp=Z,24nm,1.3s,mb5.0,baz=85,slow=3.5,SNR=7.2
BOSA LR LR 05 26 05.1
comp=Z,2μm,18.8s,MS5.4,baz=63,slow=33
BOSA Boshof 74.70 240 *e*P **P** **04 56 29.4 -0.4**
BOSA *e**PP pP 04 56 38.3 -2.0
BOSA pmax pmax
comp=Z,23nm,1.0s,mb5.1
BOSA MLR MLR
comp=Z,2μm,19.0s,MS5.5
BOSA Boshof 74.70 240 *e*P **P** **04 56 29.4 -0.4**
comp=Z,23nm,1.0s,mb5.0
BOSA *e*pP pP 04 56 38.2 -2.0
BOSA LR LR
comp=Z,2μm,19.0s,MS5.5
BOSA Boshof 74.70 240 *e*P **P** **04 56 29.1 -0.7**
BOSA AMb AMB 04 56 40.5
comp=Z,35nm,1.8s,mb5.0
MLR Muntele Rosu 74.89 317 P **P** **04 56 31.0 +0.5**
MLR Muntele Rosu 74.89 317⇑ *i*P **P** **04 56 30.3 -0.2**
RZN Rozhen 75.00 313 P **P** **04 56 30.3 -0.9**
PLD Plovdiv 75.09 313 P **P** **04 56 30.5 -1.2**
DRV Dumont d'Urvil 75.29 164 P **P** **04 56 33.0 +0.7**
DRV S S 05 06 09.0 -0.1
DRV SS SS 05 10 48.0 -11
VOIR 75.49 316 P **P** **04 56 34.8 +0.9**
PGB Panagyurishte 75.56 313 P **P** **04 56 34.5 +0.1**
MMB Musomiste 75.71 312 P **P** **04 56 35.3 0.0**
BUR01 Bucovina Ar. S 75.84 319 P **P** **04 56 36.5 +0.7**
BURAR Bucovina Array 75.84 319⇑ P **P** **04 56 36.3 +0.4**
BURAR Bucovina Array 75.84 319⇑ *i*P **P** **04 56 36.3 +0.4**
BUR08 Bucovina Ar. S 75.86 319 *e*P **P** **04 56 36.1 +0.1**
MICGM Minsk 75.93 326 *e*P **P** **04 56 34.0 -2.2**
MNK Minsk 75.95 326 *e*P **P** **04 56 34.0 -2.4**
MNK *e* 04 56 53.0
MNK *e*S S 05 06 10.0 -6.9
KKB Krupnik 76.23 313 P **P** **04 56 38.0 -0.3**
VTS Vitosha 76.26 313⇓ P **P** **04 56 38.0 -0.4**
VTS Vitosha 76.26 313⇓ *i*P **P** **04 56 38.0 -0.4**
VAY Valandovo 76.53 312 *i*P **P** **04 56 37.9 -2.1**
NACGM Naroch 76.65 326 *e*P **P** **04 56 37.0 -3.3**
IDID Didziasalis 76.78 327 *e*P **P** **04 56 41.1 +0.1**
IDID AMB AMB 04 56 43.8
comp=Z,20nm,1.1s,mb5.0
JOF Joensuu 76.96 335 *e*P **P** **04 56 40.2 -1.7**
JOF pmax pmax
comp=Z,42nm,1.0s,mb5.3
JOF Joensuu 76.96 335 *ep* **P** **04 56 40.2 -1.7**
comp=Z,42nm,1.0s,mb5.3
PKA Prieska 77.05 239 *e*P **P** **04 56 43.7 +0.6**
PKA AMb AMB 04 56 60.0
comp=Z,10nm,1.6s,mb4.5
DEV Deva 77.06 317⇓ P **P** **04 56 43.7 +0.9**
DEV Deva 77.06 317⇓ *i*P **P** **04 56 43.7 +0.9**
GZR Gura Zlata 77.06 316⇓ P **P** **04 56 44.0 +1.2**
GZR Gura Zlata 77.06 316⇓ *i*P **P** **04 56 44.0 +1.2**
LVV L'vov 77.08 321 *e*P **P** **04 56 42.6 -0.2**
LVV *e* pP 04 56 53.2 -0.2
LVV *e*S S 05 06 28.2 -1.2
LVV *e*PS 05 07 18.2
LVV *e*SS SS 05 11 32.8 +5.8
IIGN Ignalina 77.08 327 *e*P **P** **04 56 42.9 +0.2**

IIGN AMB AMB 04 56 45.5
comp=Z,22nm,1.0s,mb5.0
IZAR Zarasai 77.17 327 *e*P **P 04 56 43.4 +0.1**
IZAR AMB AMB 04 56 45.9
comp=Z,14nm,1.1s,mb4.8
DRGR 77.35 317 ⇑P **P 04 56 45.4 +1.0**
DRGR 77.35 317 P **P 04 56 44.8 +0.3**
DRGR 77.35 317 ⇑*i*P **P 04 56 45.4 +1.0**
KRUS Krusevo 77.52 312 *e*P **P 04 56 42.8 -2.7**
VSU Vasula 77.65 330*c i*P **P 04 56 45.0 -0.9**
LVZ Lovozero 77.67 340 P **P 04 56 45.9 +0.1**
comp=Z,376nm,1.0s,mb6.3,SNR=5.5
LVZ Lovozero 77.67 340⇑*e*P **P 04 56 45.2 -0.6**
LVZ MLR MLR
comp=Z,2μm,21.0s,MS5.5
OHR Ohrid 77.82 311 *e*P **P 04 56 40.4 -6.8**
KWP Kalwaria Pacla 77.88 320 *e*P **P 04 56 47.5 +0.1**
KWP *e*S S 05 06 36.0 -2.1
KWP LMZ 05 36 31.0
comp=Z,1μm,22.5s
KWP Kalwaria Pacla 77.88 320 ⇑P **P 04 56 48.4 +1.0**
KWP LR LR
comp=Z,1μm,21.0s,MS5.1
KWP Kalwaria Pacla 77.88 320⇑*i*P **P 04 56 48.4 +1.1**
BZS Buzias 77.90 316 ⇓P **P 04 56 47.5 0.0**
BZS Buzias 77.90 316⇓*i*P **P 04 56 47.5 0.0**
UZH Uzhgorod 77.96 319 *e*P **P 04 56 49.2 +1.4**
UZH *e* pP 04 56 58.4 0.0
UZH *e* 04 57 04.6
UZH *e*S S 05 06 37.0 -2.0
UZH *e*SS SS 05 11 41.0 +0.6
APA Apatity 77.96 340⇑*i*P **P 04 56 47.5 +0.1**
APA *i* 04 59 45.0
APA *i* S S 05 06 37.0 -1.3
APA *e* 05 06 52.0
APA pmax pmax
comp=Z,52nm,1.0s,mb5.4
APA pmax pmax
comp=Z,700nm,12.0s
APA smax
comp=N,900nm,6.0s
APA smax
comp=E,700nm,6.0s
UPI Upington 78.13 241 *e*P **P 04 56 49.9 +0.7**
SUW Suwalki 78.48 325 *e*P **P 04 56 49.6 -0.9**
SUW *e*pP pP 04 56 59.5 -1.6
SUW *e*S S 05 06 40.7 -3.6
SUW LMZ 05 37 48.0
comp=E,1μm,22.0s
SUW Suwalki 78.48 325 *e*P **P 04 56 49.6 -0.9**
SUW *e**PP pP 04 56 59.5 -1.6
SUW *e*S S 05 06 40.7 -3.6
SUW Suwalki 78.48 325 *e*P **P 04 56 49.8 -0.8**
comp=E,139nm,0.9s,mb5.9
TIR Tirane 78.55 312 PFAKE 04 57 00.0 +8.8
TIR LR LR
comp=Z,857nm,22.0s,MS5.0
CRVS Cervenica-Dubn 78.55 319 *e*P **P 04 56 53.7 +2.6**
comp=Z,57nm,1.3s,mb5.3
CRVS *e*PP pP 04 57 01.7 +0.1
CRVS *e*S S 05 06 42.3 -3.0
CRVS *e*SS SS 05 12 36.0 +47
CRVS LR LR
comp=Z,600nm,20.9s,MS4.9
CRVS Cervenica-Dubn 78.55 319 *e*P **P 04 56 53.7 +2.6**
CRVS *e*pP pP 04 57 01.7 +0.1
CRVS *e*S S 05 06 42.2 -3.1
CRVS *e* 05 12 35.9
STHS Stebnicka Huta 78.78 320 *e*P **P 04 56 53.6 +1.3**
STHS pmax pmax
comp=Z,35nm,1.4s,mb5.1
STHS Stebnicka Huta 78.78 320 *e*P **P 04 56 53.6 +1.3**
comp=Z,35nm,1.4s,mb5.1
STHS *e*PP pP 04 57 03.4 +0.5
STHS Stebnicka Huta 78.78 320 *e*P **P 04 56 53.6 +1.3**
STHS *e*pP pP 04 57 03.4 +0.5
FINES FINESS Array B 78.81 333 P **P 04 56 51.7 -0.5**
comp=Z,24nm,0.8s,mb5.2,baz=102,slow=8.0,SNR=42
FINES LR LR 05 36 50.7
comp=Z,3μm,20.8s,MS5.6,baz=113,slow=40
FINES FINESS Array B 78.81 333 P **P 04 56 51.7 -0.5**
FINES LR LR 05 36 50.7
KAF Kangasniemi 78.89 333 *e*P **P 04 56 50.7 -2.0**
KAF pmax pmax
comp=Z,43nm,0.7s,mb5.5
KAF Kangasniemi 78.89 333 *e*p **P 04 56 50.7 -2.0**
comp=Z,43nm,0.7s,mb5.5,baz=105,slow=5.2
KECS Kecovo 79.12 319 *e*P **P 04 56 54.5 +0.3**
KECS pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
KECS Kecovo 79.12 319 *e*P **P 04 56 54.5 +0.3**
comp=Z,9.0nm,0.8s,mb4.8
KECS *e*PP pP 04 57 04.6 -0.2
KECS Kecovo 79.12 319 *e*P **P 04 56 54.5 +0.3**
KECS *e*pP pP 04 57 04.6 -0.2
SUR Sutherland 79.16 237 PFAKE 04 57 00.0 +5.3
SUR LR LR
comp=Z,3μm,19.0s,MS5.7
SUR Sutherland 79.16 237 *e*P **P 04 56 54.7 0.0**
SUR AMb AMB 04 57 11.7
comp=Z,62nm,1.6s,mb5.3
NIE Niedzica 79.38 320 *e*P **P 04 56 56.5 +0.9**
PSZ Piszkesteto 79.42 318 P **P 04 56 56.2 +0.3**
PSZ Piszkesteto 79.42 318 *e*P **P 04 56 55.6 -0.3**
comp=Z,83nm,1.4s,mb5.5
PSZ LR LR
comp=Z,1μm,21.0s,MS5.2
OJC Ojcow 79.83 321 *e*P **P 04 56 55.4 -2.6**
OJC *e* 04 57 01.9
OJC *e*S S 05 06 54.9 -4.0
OJC *e* 05 07 07.9
BUD Budapest 79.94 318⇑*e*P **P 04 56 55.5 -3.2**
PKSM Moragy 80.04 316 P **P 04 56 59.5 +0.2**
VYHS Vyhne 80.20 319 *e*P **P 04 57 00.1 0.0**
comp=Z,52nm,2.0s,mb5.1
VYHS *e*PP pP 04 57 10.5 -0.2
VYHS *e*S S 05 07 00.6 -2.3
VYHS *e*SS SS 05 12 35.1 +21
VYHS LR LR
comp=Z,500nm,23.3s,MS4.8
VYHS Vyhne 80.20 319 *e*P **P 04 57 00.1 0.0**
VYHS *e*pP pP 04 57 10.5 -0.2
VYHS *e*S S 05 07 00.6 -2.3
VYHS *e*SS SS 05 12 35.1 +21
TSUM Tsumeb 80.30 250 *e*P **P 04 57 01.4 +0.2**
comp=Z,2.9nm,1.0s,mb4.2
TSUM LR LR
comp=Z,1μm,19.0s,MS5.3
RPZ Rata Peaks 80.38 135 LR LR 05 30 15.9
comp=Z,1μm,21.7s,MS5.2,baz=289,slow=34
BILL Bilibino 80.47 21 *e*P **P 04 57 01.1 0.0**
BILL pmax pmax
comp=Z,18nm,0.9s,mb5.0
BILL MLR MLR
comp=Z,5μm,19.0s,MS5.9
BILL Bilibino 80.47 21 *e*P **P 04 57 01.1 0.0**
comp=Z,18nm,0.9s,mb5.0
BILL LR LR
comp=Z,5μm,19.0s,MS5.9
KOLL Kolacno 80.50 319 *e*P **P 04 57 02.3 +0.6**
KOLL *e* pP 04 57 12.1 -0.2
KOLL Kolacno 80.50 319 *e*P **P 04 57 02.3 +0.6**
KOLL *e*pP pP 04 57 12.1 -0.2
SYO Syowa Base 80.75 198⇑*e*P **P 04 57 05.8 +3.2**
SYO Syowa Base 80.75 198⇑*e*PcP PcP 04 57 10.3 +1.1
OKC Ostrava-Krasne 80.83 320 *e*P **P 04 57 03.9 +0.5**
OKC *e**PP pP 04 57 12.9 -1.1
OKC *e* 05 07 08.7
OKC MLR MLR
comp=Z,700nm,20.1s,MS5.0
OKC Ostrava-Krasne 80.83 320 *e*P **P 04 57 03.9 +0.5**
OKC *e*pP pP 04 57 12.9 -1.1
OKC *e*SKS 05 07 08.7
OKC Ostrava-Krasne 80.83 320 *e*P **P 04 57 03.9 +0.5**
OKC *e*pP pP 04 57 12.9 -1.1
OKC *e*S S 05 07 08.7 -0.7
OKC AMS AMS 05 38 10.0
comp=Z,700nm,20.1s
KEV Kevo 80.94 341 *e*P **P 04 57 04.5 +0.9**
KEV pmax pmax
comp=Z,38nm,1.0s,mb5.3
KEV Kevo 80.94 341 *e*P **P 04 57 03.3 -0.3**
comp=Z,9.0nm,1.0s,mb4.7
KEV LR LR
comp=Z,2μm,19.0s,MS5.6
KEV Kevo 80.94 341 *e*p **P 04 57 04.5 +0.9**
comp=Z,38nm,1.0s,mb5.3
MORC Moravsky Berou 81.21 320 P **P 04 57 06.0 +0.5**
MORC Moravsky Berou 81.21 320 *e*P **P 04 57 05.5 0.0**
comp=Z,76nm,1.6s,mb5.4
MORC *e*PP PP 05 00 10.7 -0.4
MORC Moravsky Berou 81.21 320⇓*i*P **P 04 57 06.0 +0.5**
ZST Bratislava 81.32 318 *e*P **P 04 57 07.4 +1.3**
comp=Z,26nm,1.2s,mb5.0
ZST *e* 04 57 14.0
ZST *e*S S 05 07 22.8 +8.3
ZST LR LR
comp=Z,200nm,21.3s,MS4.4
ZST Bratislava 81.32 318 *e*P **P 04 57 07.4 +1.3**
ZST *e*pP pP 04 57 14.0 -2.7
PTRP Pietrapertosa 81.33 310 P **P 04 57 09.2 +2.9**
ARCES ARCESS Array B 81.37 340 P **P 04 57 05.8 -0.1**
comp=Z,31nm,0.8s,mb5.3,baz=100,slow=2.0,SNR=101
ARCES PP PP 05 00 11.6 -0.3
comp=Z,14nm,1.1s,baz=108,slow=7.8,SNR=3.7
ARCES LR LR 05 36 40.9
comp=Z,3μm,21.0s,MS5.6,baz=298,slow=38
ARCES ARCESS Array B 81.37 340 P **P 04 57 05.9 0.0**
ARCES 05 00 11.6
ARE0 ARCESS Array S 81.37 340 *e*P **P 04 57 06.2 +0.3**
KOGS Kog 81.71 316 *e*P **P 04 57 08.1 -0.1**
KOGS *e*S S 05 07 16.4 -2.2
GKP Gorka Klasztor 81.84 323 *e*P **P 04 57 08.2 -0.5**
GKP *e*S S 05 07 17.4 -2.3
GKP LMZ 05 34 10.0
comp=Z,900nm,24.4s
GKP Gorka Klasztor 81.84 323 *e*P **P 04 57 08.2 -0.5**
GKP *e*S S 05 07 17.4 -2.3
GKP MLR MLR
comp=Z,900nm,24.4s,MS5.0
DPC Dobruska-Polom 82.06 320 *e*P **P 04 57 10.2 +0.3**
DPC *e**PP pP 04 57 19.7 -0.9
DPC *e* 05 07 21.5
DPC MLR MLR
comp=Z,1μm,17.6s,MS5.2
DPC Dobruska-Polom 82.06 320 *e*P **P 04 57 10.2 +0.3**
DPC *e*pP pP 04 57 19.7 -0.9
DPC *e*SKS 05 07 21.5
DPC LR LR
comp=Z,1μm,17.6s,MS5.2
DPC Dobruska-Polom 82.06 320 *e*P **P 04 57 10.2 +0.3**
DPC *e*pP pP 04 57 19.7 -0.9
DPC *e*S S 05 07 21.5 -0.6
DPC AMS AMS 05 40 10.0
comp=Z,1μm,17.6s
CONA Conrad Observa 82.12 318⇑*i*P **P 04 57 10.1 -0.1**
comp=Z,13nm,1.0s,mb4.8
KSP Ksiaz 82.13 321 *e*P **P 04 57 10.1 -0.2**
KSP *e*S S 05 07 22.4 -0.4
KSP LMZ 05 38 28.2
comp=Z,2μm,22.7s
KSP Ksiaz 82.13 321 *e*P **P 04 57 10.3 0.0**
KSP *e**PP pP 04 57 20.5 -0.4
KSP *e*S S 05 07 21.6 -1.2
GROS Grobnik 82.23 316 *e*P **P 04 57 10.7 -0.2**
GROS *e*S S 05 07 23.2 -0.8
WDD Wield Dalam 82.24 306 PFAKE 04 57 20.0 +8.8
WDD LR LR
comp=Z,879nm,19.0s,MS5.1
UPC Upice 82.27 321 *e*P **P 04 57 12.2 +1.2**
UPC *e*pP pP 04 57 21.8 +0.1
ARSA Arzberg 82.28 317⇑*i*P **P 04 57 10.9 -0.2**
comp=Z,27nm,1.1s,mb5.1
TREC Trest 82.49 319 *e*P **P 04 57 12.0 -0.2**
TREC *e**PP pP 04 57 21.3 -1.6
TREC *e* 05 07 26.6
TREC MLR MLR
comp=Z,800nm,18.7s,MS5.1
TREC Trest 82.49 319 *e*P **P 04 57 12.0 -0.2**
TREC *e*pP pP 04 57 21.3 -1.6
TREC *e*S S 05 07 26.6 0.0
TREC AMS AMS 05 43 10.0
comp=Z,800nm,18.7s
SOKA Soboth 82.57 317⇓*i*P **P 04 57 12.7 0.0**
comp=Z,35nm,1.0s,mb5.3
SNZO South Karori 82.58 132 PFAKE 04 57 20.0 +7.2
SNZO LR LR
comp=Z,4μm,21.0s,MS5.8
MSVF Nonsavu 82.59 108 PFAKE 04 57 20.0 +6.6
MSVF LR LR
comp=Z,1μm,20.0s,MS5.3
FUNA Funafuti 83.07 99 PFAKE 04 57 30.0 +14
FUNA LR LR
comp=Z,7μm,22.0s,MS6.0
PRU Pruhonice 83.17 320 *e*P **P 04 57 15.7 0.0**
PRU *e**PP pP 04 57 25.0 -1.3
PRU *e* 05 07 33.4
PRU MLR MLR
comp=Z,800nm,19.3s,MS5.1
PRU Pruhonice 83.17 320 *e*P **P 04 57 15.7 0.0**
PRU *e*pP pP 04 57 25.0 -1.3
PRU *e*SKS 05 07 33.4
PRU LR LR
comp=Z,800nm,19.3s,MS5.1
PRU Pruhonice 83.17 320 *e*P **P 04 57 15.7 0.0**
PRU *e*pP pP 04 57 25.0 -1.3
PRU *e*S S 05 07 33.4 0.0
PRU AMS AMS 05 40 10.0
comp=Z,800nm,19.3s
PVCC Panska Ves 83.19 320 *e*P **P 04 57 16.0 +0.2**
PVCC *e* 05 07 31.7
PVCC MLR MLR
comp=Z,1μm,19.9s,MS5.2
PVCC Panska Ves 83.19 320 *e*P **P 04 57 16.0 +0.2**
PVCC *e*SKS 05 07 31.7
PVCC LR LR
comp=Z,1μm,19.9s,MS5.2
PVCC Panska Ves 83.19 320 *e*P **P 04 57 16.0 +0.2**
PVCC *e*S S 05 07 31.7 -2.0
PVCC AMS AMS 05 43 10.0
comp=Z,1μm,19.9s
PRA Prague 83.24 320 P **P 04 57 16.0 -0.1**
PRA pP pP 04 57 27.0 +0.3
TRI Trieste 83.38 316 PFAKE 04 57 30.0 +13
TRI LR LR
comp=Z,739nm,19.0s,MS5.1
BSD Bornholm Skovb 83.40 325 *i* P **P 04 57 14.1 -2.7**
BSD *i* S S 05 07 38.8 +3.2
BSD MLR MLR
comp=Z,830nm,19.0s,MS5.1
BSD Bornholm Skovb 83.40 325 *i* P **P 04 57 14.1 -2.7**
BSD *e* 04 58 25.9
BSD *i* 04 59 58.9
BSD *i* S S 05 07 38.8 +3.2
BSD Bornholm Skovb 83.40 325 *i* P **P 04 57 14.1 -2.7**
BSD *e* 04 58 25.9
BSD *i* 04 59 58.9
BSD *i* S S 05 07 38.8 +3.2
BSD
comp=Z,820nm,19.0s
AQU L'Aquila 83.44 312 *e*P **P 04 57 19.1 +1.8**
comp=Z,53nm,0.9s,mb5.6
AQU LR LR
comp=Z,735nm,19.0s,MS5.1
AQU L'Aquila 83.44 312⇑*i*P **P 04 57 19.1 +1.8**
BRG Berggiesshubel 83.62 321 *e*P **P 04 57 17.9 -0.1**
comp=Z,35nm,1.5s,mb5.3
BRG *e*S S 05 07 38.6 +0.7
BRG Berggiesshubel 83.62 321 *e*P **P 04 57 18.0 0.0**
comp=Z,3.0nm,0.8s,mb4.5
BRG *e* pP 04 57 27.5 -1.2
comp=Z,35nm,1.5s
BRG *e*PP PP 05 00 28.6 -2.2
comp=Z,9.9nm,1.2s
BRG S S 05 07 37.0 -0.9
BRG PS 05 08 27.0
BRG
comp=N,1μm,19.7s
BRG
comp=E,725nm,21.9s
BRG
comp=Z,1μm,18.5s
GEC2 GERESS Array S 83.63 319 *e*P **P 04 57 17.5 -0.6**
comp=Z,58nm,1.4s,mb5.5
GEC2 *e*S S 05 07 38.6 +0.5
TRO Tromso 83.64 340⇑*i*P **P 04 57 16.8 -0.9**
TRO AMb AMB 04 57 29.6
comp=Z,72nm,2.4s,mb5.4
TRO *e*SKS 05 07 36.0
TRO AMS AMS 05 40 02.4
comp=Z,2μm,18.6s,MS5.5
TRO Tromso 83.64 340⇑*i*P **P 04 57 16.8 -0.9**
TRO pmax pmax
comp=Z,72nm,2.4s,mb5.4
TRO MLR MLR
comp=Z,2μm,18.6s,MS5.5
TRO Tromso 83.64 340⇑*i*P **P 04 57 16.8 -0.9**
comp=Z,72nm,2.4s,mb5.4
TRO LR LR
comp=Z,2μm,18.6s,MS5.5
PTCC Patocco-Chiusa 83.70 316 P **P 04 57 19.0 +0.4**
comp=Z,246nm,3.1s
KHC Kasperske Hory 83.73 319 *e*P **P 04 57 18.2 -0.4**
KHC *e**PP pP 04 57 27.6 -1.7
KHC *e* 05 07 39.4
KHC MLR MLR
comp=Z,900nm,19.6s,MS5.2
KHC Kasperske Hory 83.73 319 *e*P **P 04 57 18.2 -0.4**
KHC *e*pP pP 04 57 27.6 -1.7
KHC *e*S S 05 07 39.4 +0.3
KHC AMS AMS 05 40 50.0
comp=Z,900nm,19.6s
URZ Urewera 83.96 129 *e*P **P 04 57 18.8 -1.2**
comp=Z,70nm,1.6s,mb5.5
RJOB Jochberg 84.16 318 *e*P **P 04 57 20.1 -0.8**
comp=Z,24nm,0.9s,mb5.3
RJOB *e*S S 05 07 41.9 -1.7
WET Wettzell 84.19 319 *e*P **P 04 57 20.5 -0.4**
comp=Z,21nm,0.9s,mb5.3
WET *e*S S 05 07 44.1 +0.4
CLL Collm 84.24 321 *e*P **P 04 57 20.9 -0.3**
comp=Z,18nm,1.1s,mb5.1
CLL *e*S S 05 07 45.2 +1.0
CLL Collm 84.24 321 *e*P **P 04 57 21.0 -0.2**
CLL *i* pP 04 57 31.3 -0.5
CLL *e*S S 05 07 44.0 -0.2
CLL pmax pmax
comp=Z,14nm,1.2s,mb5.0
CLL MLR MLR
comp=Z,900nm,20.5s,MS5.1
CLL Collm 84.24 321 *e*P **P 04 57 21.0 -0.2**
comp=Z,14nm,1.2s,mb5.0
CLL *i* pP 04 57 31.3 -0.5
CLL *e*S S 05 07 44.0 -0.2
CLL *e*PKKP PKKPbc 05 15 26.0 -10
CLL LR LR
comp=Z,900nm,20.5s,MS5.1
CLL Collm 84.24 321 *e*P **P 04 57 21.0 -0.2**
comp=Z,14nm,1.2s,mb5.0
CLL *e*pP pP 04 57 28.0 -3.8
CLL *i* sP sP 04 57 31.3 -4.4
comp=Z,20nm,1.1s
CLL *e*PP PP 05 00 48.0 +12
CLL *e*S S 05 07 44.0 -0.2
comp=N,800nm,29.8s
CLL *e*S S 05 07 44.0 -0.2
comp=E,200nm,24.4s
CLL *e*PPS 05 08 55.0
CLL *e*SS SS 05 13 18.0 +4.1
CLL *e*PKKPdf PKKPdf 05 15 26.0 -1.7
CLL *e*SSS 05 16 42.0
CLL *e*SSSS 05 19 31.0
CLL LmV 05 39 00.0
comp=Z,900nm,20.5s
NKC Novy Kostel 84.53 320 *e*P **P 04 57 23.2 +0.6**
NKC *e*S S 05 07 47.9 +0.8
TANN Tannenbergstha 84.53 320 *e*P **P 04 57 22.4 -0.2**
comp=Z,16nm,1.1s,mb5.1
TANN *e*S S 05 07 48.5 +1.4
SFI Santa Sofia 84.65 314 P **P 04 57 25.8 +2.4**
CTI Castel Tesino 84.87 316 P **P 04 57 26.1 +1.6**
WTTA Wattenberg 84.92 317⇓*i*P **P 04 57 23.1 -1.6**
comp=Z,38nm,0.8s,mb5.6
MOX Moxa 85.08 320 *e*(P) **P 04 57 26.7 +1.3**
MOX *e* pP 04 57 35.6 -0.5
comp=Z,63nm,2.0s
MOX
comp=Z,700nm,21.0s
MOX Moxa 85.08 320 *e*P **P 04 57 25.4 0.0**
comp=Z,17nm,1.3s,mb5.0
MOX *e*S S 05 07 50.8 -1.8
MOX Moxa 85.08 320 P **P 04 57 26.7 +1.3**
MOX *e* pP 04 57 35.6 -0.5
MOX pmax pmax
comp=Z,63nm,2.0s,mb5.4
MOX MLR MLR
comp=Z,700nm,21.0s,MS5.0
MOX Moxa 85.08 320 P **P 04 57 26.7 +1.3**
comp=Z,63nm,2.0s,mb5.4
MOX *e* pP 04 57 35.6 -0.5
MOX LR LR
comp=Z,700nm,21.0s,MS5.0
FUR Furstenfeldbru 85.20 318 *e*S S 05 07 52.5 -1.4
MOTA Moosalm 85.29 317⇓*i*P **P 04 57 25.1 -1.5**
comp=Z,18nm,0.8s,mb5.2
GRF Grafenberg Arr 85.29 320 *e*P **P 04 57 26.6 +0.1**
comp=Z,50nm,0.9s,mb5.6
GRF *e*pP pP 04 57 37.1 -0.1
GRF *e*S S 05 07 55.9 +1.2
GRF *e*L 05 41 54.7
comp=Z,1μm,21.8s
GRF Grafenberg Arr 85.29 320 *e*P **P 04 57 26.6 +0.1**
GRF *e**PP pP 04 57 37.1 -0.1
GRF *e*S S 05 07 55.9 +1.2
GRF pmax pmax
comp=Z,50nm,0.9s,mb5.6
GRF MLR MLR
comp=Z,1μm,21.8s,MS5.3
MIDW Midway 85.53 62 PFAKE 04 57 40.0 +12
MIDW LR LR
comp=Z,947nm,21.0s,MS5.2
RETA Reutte 85.53 317⇓*i*P **P 04 57 27.6 -0.2**
comp=Z,33nm,0.8s,mb5.6
FETA Feichten 85.54 317⇑*i*P **P 04 57 28.2 +0.5**
comp=Z,21nm,1.1s,mb5.3
NB2 NORSAR Subarra 85.81 331 P **P 04 57 28.2 -0.6**
comp=Z,1.1nm,0.8s,mb4.1,baz=92,slow=6.2
NOA NORSAR Array B 85.81 331 P **P 04 57 28.2 -0.6**
comp=Z,11nm,1.0s,mb5.0,baz=94,slow=5.0,SNR=15
NOA PP PP 05 00 45.4 -3.0
comp=Z,2.8nm,0.9s,baz=90,slow=8.9,SNR=3.8
NOA LR LR 05 40 17.9
comp=Z,2μm,21.9s,MS5.4,baz=90,slow=39
NOA NORSAR Array B 85.81 331 P **P 04 57 28.2 -0.6**
NOA 05 00 45.4
NOA NORSAR Array B 85.81 331 P **P 04 57 28.2 -0.6**
NOA PP PP 05 00 45.4 -3.0
NOA LR LR 05 40 17.9
SPITS Spitsbergen Ar 85.84 348 P **P 04 57 28.6 -0.1**
comp=Z,23nm,0.8s,mb5.5,baz=40,slow=5.4,SNR=27
CLZ Clausthal 85.90 322 *e*P **P 04 57 29.5 0.0**
comp=Z,27nm,0.9s,mb5.5
CLZ *e*S S 05 07 59.8 -0.8
NAO01 NORSAR Array S 85.96 331 *e*P **P 04 57 29.1 -0.5**
comp=Z,3.0nm,0.8s,mb4.6
NAO01 LR LR
comp=Z,2μm,19.0s,MS5.6
BSEG Bad Segeberg 86.00 324 *e*P **P 04 57 30.6 +0.7**
comp=Z,39nm,1.4s,mb5.4
BSEG *e*S S 05 08 00.2 -1.3
NRDL Niedersach Rie 86.08 322 *e*P **P 04 57 30.5 +0.1**
NRDL *e*S S 05 08 04.0 +1.6
UBBA Unterbreizbach 86.11 321 *e*P **P 04 57 29.6 -0.9**
UBBA *e*S S 05 08 02.7 0.0
DAVA Damuels 86.12 317⇑*i*P **P 04 57 30.6 -0.1**
comp=Z,48nm,1.0s,mb5.7
ADK Adak 86.29 38 PFAKE 04 57 40.0 +8.6
ADK LR LR
comp=Z,649nm,20.0s,MS5.0
VSL Villasalto 86.42 309 PFAKE 04 57 40.0 +7.7
VSL LR LR
comp=Z,541nm,22.0s,MS4.9
KEST Kesra 86.44 305 P **P 04 57 32.8 +0.2**
comp=Z,3.2nm,0.8s,mb4.6,baz=103,slow=2.2,SNR=6.0
KEST LR LR 05 37 13.5
comp=Z,397nm,20.0s,MS4.8,baz=271,slow=36
KEST Kesra 86.44 305 *e*P **P 04 57 33.6 +1.1**
KONO Kongsberg 86.56 329 *e*P **P 04 57 32.3 -0.3**
KONO pmax pmax
comp=Z,45nm,1.1s,mb5.6
KONO MLR MLR
comp=Z,2μm,20.0s,MS5.4
KONO Kongsberg 86.56 329 *e*P **P 04 57 32.2 -0.3**

comp=Z,45nm,1.1s,mb5.6
KONO LR LR
comp=Z,2μm,20.0s,MS5.4
STU Stuttgart 86.60 319 *e*S S 05 08 09.5 +1.9
KBS Kingsbay 86.81 349 *e*P **P 04 57 33.2 -0.3**
KBS *e*SKS 05 07 54.4
KBS AMS AMS 05 41 49.6
comp=Z,2μm,18.7s,MS5.6
KBS Kingsbay 86.81 349 *c e*P **P 04 57 34.7 +1.2**
KBS pmax pmax
comp=Z,22nm,1.0s,mb5.3
TOD Tromm 86.86 319 *e*P **P 04 57 35.0 +0.7**
SPAK Spaichingen-Ko 86.87 318 *e*P **P 04 57 33.7 -0.6**
TNS Taunus Mts 87.09 320 *e*P **P 04 57 35.4 0.0**
comp=Z,42nm,1.0s,mb5.6
TNS *e*S S 05 08 14.0 +1.7
BFO Black Forest 87.17 318 *e*P **P 04 57 35.2 -0.6**
comp=Z,16nm,0.8s,mb5.3
BFO *e*S S 05 08 14.0 +0.9
BFO Black Forest 87.17 318 *e*P **P 04 57 35.5 -0.3**
BFO *e**PP pP 04 57 45.6 -0.9
BFO pmax pmax
comp=Z,16nm,0.9s,mb5.2
BFO MLR MLR
comp=Z,671nm,20.0s,MS5.0
BFO Black Forest 87.17 318 *e*P **P 04 57 35.5 -0.3**
comp=Z,16nm,0.9s,mb5.3
BFO *e*pP pP 04 57 45.6 -0.9
BFO LR LR
comp=Z,671nm,20.0s,MS5.0
LANF Langenberg 87.52 319 *e*P **P 04 57 37.6 +0.1**
IBBN Ibbenburen 87.52 322 *e*P **P 04 57 37.7 +0.3**
comp=Z,63nm,1.1s,mb5.8
BUG Bochum--Univer 87.83 321 *e*P **P 04 57 39.0 +0.1**
comp=Z,49nm,1.1s,mb5.7
BUG *e*S S 05 08 20.6 +1.3
SBF Sospel 87.84 314 *e*P **P 04 57 39.4 +0.3**
comp=Z,159nm,1.3s,mb5.8
SBF Sospel 87.84 314 *e*P **P 04 57 39.4 +0.3**
SBF pmax pmax
comp=Z,80nm,1.3s,mb5.8
SBF Sospel 87.84 314 *e*P **P 04 57 39.4 +0.3**
comp=Z,80nm,1.3s,mb5.8
CDF Champ du Feu 87.88 318 *e*P **P 04 57 38.5 -0.7**
comp=Z,20nm,1.0s,mb5.0
CDF Champ du Feu 87.88 318 *e*P **P 04 57 38.5 -0.7**
CDF pmax pmax
comp=Z,10.0nm,1.0s,mb5.0
CDF Champ du Feu 87.88 318 *e*P **P 04 57 38.5 -0.7**
comp=Z,10nm,1.0s,mb5.0
ECH Echery 87.96 318 *e*P **P 04 57 40.0 +0.4**
ECH Echery 87.96 318 *e*P **P 04 57 39.8 +0.2**
ECH pmax pmax
comp=Z,12nm,0.8s,mb5.2
ECH MLR MLR
comp=Z,740nm,21.0s,MS5.1
ECH Echery 87.96 318 *e*P **P 04 57 39.8 +0.2**
comp=Z,12nm,0.8s,mb5.2
ECH LR LR
comp=Z,740nm,21.0s,MS5.1
SBA Scott Base 88.03 168 *e*P **P 04 57 40.0 +0.7**
SBA pmax pmax
comp=Z,11nm,1.1s,mb5.0
SBA MLR MLR
comp=Z,1μm,20.0s,MS5.3
SBA Scott Base 88.03 168 *e*P **P 04 57 40.0 +0.7**
comp=Z,11nm,1.1s,mb5.0
SBA LR LR
comp=Z,1μm,20.0s,MS5.3
HINF Hinteralfeld 88.17 318 *e*P **P 04 57 40.6 0.0**
LOMF Lomont 88.20 317 *e*P **P 04 57 41.7 +1.0**
LPG La Plagne 88.29 315 *e*P **P 04 57 41.2 0.0**
comp=Z,32nm,0.9s,mb5.2
LPG La Plagne 88.29 315 *e*P **P 04 57 41.2 0.0**
LPG pmax pmax
comp=Z,16nm,0.9s,mb5.2
LPG La Plagne 88.29 315 *e*P **P 04 57 41.2 0.0**
comp=Z,16nm,0.9s,mb5.2
LPL La Plagne 88.31 315 *e*P **P 04 57 41.2 -0.1**
comp=Z,31nm,0.9s,mb5.2
LPL La Plagne 88.31 315 *e*P **P 04 57 41.2 -0.1**
LPL pmax pmax
comp=Z,16nm,0.9s,mb5.2
LPL La Plagne 88.31 315 *e*P **P 04 57 41.2 -0.1**
comp=Z,16nm,0.9s,mb5.2
BNI Bardonecchia 88.36 315 PFAKE 04 57 50.0 +8.5
BNI LR LR
comp=Z,919nm,20.0s,MS5.2
FRF La Foret Royal 88.42 313 *e*P **P 04 57 40.6 -1.3**
comp=Z,92nm,1.3s,mb5.6
FRF La Foret Royal 88.42 313 *e*P **P 04 57 40.6 -1.3**
FRF pmax pmax
comp=Z,46nm,1.3s,mb5.5
FRF La Foret Royal 88.42 313 *e*P **P 04 57 40.6 -1.3**
comp=Z,46nm,1.3s,mb5.5
HAU Haudompre 88.50 318 *e*P **P 04 57 41.5 -0.7**
comp=Z,61nm,1.0s,mb5.6
HAU *e*MLR MLR
comp=Z,1μm,22.5s,MS4.9
HAU Haudompre 88.50 318 *e*P **P 04 57 41.5 -0.7**
HAU pmax pmax
comp=Z,31nm,1.0s,mb5.6
HAU MLR MLR
comp=Z,1μm,22.5s,MS5.2
HAU Haudompre 88.50 318 *e*P **P 04 57 41.5 -0.7**
comp=Z,31nm,1.0s,mb5.6
HAU LR LR
comp=Z,1μm,22.5s,MS5.2
LMR La Mourre 88.52 313 *e*P **P 04 57 42.0 -0.4**
comp=Z,116nm,1.6s,mb5.7
LMR La Mourre 88.52 313 *e*P **P 04 57 42.0 -0.4**
LMR pmax pmax
comp=Z,58nm,1.6s,mb5.7
LMR La Mourre 88.52 313 *e*P **P 04 57 42.0 -0.4**
comp=Z,58nm,1.6s,mb5.7
WLF Walferdange 88.59 319 P **P 04 57 43.2 +0.7**
comp=Z,19nm,2.0s,mb5.1
WLF Walferdange 88.59 319 *e*P **P 04 57 42.7 +0.2**
comp=Z,23nm,1.2s,mb5.4
WLF *e*S S 05 08 28.3 +1.8
WLF Walferdange 88.59 319 PFAKE 04 57 50.0 +7.5
WLF LR LR
comp=Z,778nm,22.0s,MS5.1
MEM Membach 88.65 320 P **P 04 57 42.4 -0.4**
comp=Z,14nm,1.1s,mb5.2
BER Bergen 88.70 330 *e*P **P 04 57 42.4 -0.4**
BER *e*PP PP 05 01 14.1 +2.5
BER *e*SKS 05 08 07.6
BER *e*SS SS 05 14 18.8 0.0
BER AMS AMS 05 41 08.0
comp=Z,1μm,20.1s,MS5.4
CABF La Chapelle 88.72 316 *e*P **P 04 57 43.1 -0.1**
comp=Z,66nm,1.1s,mb5.6
CABF La Chapelle 88.72 316 *e*P **P 04 57 43.1 -0.1**
CABF pmax pmax
comp=Z,33nm,1.1s,mb5.6
CABF La Chapelle 88.72 316 *e*P **P 04 57 43.1 -0.1**
comp=Z,33nm,1.1s,mb5.6
THEF They Montfort 88.74 318 *e*P **P 04 57 43.9 +0.6**
ORIF Oris-en-Rattie 88.93 315 *e*P **P 04 57 45.1 +0.9**
comp=Z,34nm,1.0s,mb5.3
ORIF *e*MLR MLR
comp=Z,1μm,20.5s,MS5.0
ORIF Oris-en-Rattie 88.93 315 *e*P **P 04 57 45.1 +0.9**
ORIF pmax pmax
comp=Z,17nm,1.0s,mb5.3
ORIF Oris-en-Rattie 88.93 315 *e*P **P 04 57 45.1 +0.9**
comp=Z,17nm,1.0s,mb5.3
BCLA Clavier 89.11 320 P **P 04 57 45.2 +0.2**
comp=Z,16nm,2.1s,mb5.0
MEZF Maizieres J'vi 89.35 318 *e*P **P 04 57 45.9 -0.2**
comp=Z,40nm,1.1s,mb5.4
MEZF Maizieres J'vi 89.35 318 *e*P **P 04 57 45.9 -0.2**
comp=Z,40nm,1.1s,mb5.7
GIVF Givet 89.43 320 *e*P **P 04 57 46.4 -0.1**
comp=Z,37nm,1.0s,mb5.4
GIVF Givet 89.43 320 *e*P **P 04 57 46.4 -0.1**
GIVF pmax pmax
comp=Z,18nm,1.0s,mb5.4
GIVF Givet 89.43 320 *e*P **P 04 57 46.4 -0.1**
comp=Z,18nm,1.0s,mb5.4
DOU Dourbes 89.58 320 P **P 04 57 47.3 +0.1**
comp=Z,12nm,2.3s,mb4.8
SNF Seneffe 89.75 320 P **P 04 57 47.6 -0.4**
VIVF Saint-Julien-l 89.79 315 *e*P **P 04 57 48.3 0.0**
BAIF Baives 89.83 320 *e*P **P 04 57 48.6 +0.3**
comp=Z,78nm,0.9s,mb5.7
BAIF Baives 89.83 320 *e*P **P 04 57 48.6 +0.3**
BAIF pmax pmax
comp=Z,39nm,0.9s,mb5.7
BAIF Baives 89.83 320 *e*P **P 04 57 48.6 +0.3**
comp=Z,39nm,0.9s,mb5.7
SSB Saint Sauveur 89.86 315 PFAKE 04 58 00.0 +11
SSB LR LR
comp=Z,607nm,22.0s,MS5.0
TAM Tamanrasset 90.09 293 *e*P **P 04 57 52.0 +1.8**
TAM pmax pmax
comp=Z,21nm,1.1s,mb5.4
TAM MLR MLR
comp=Z,1μm,20.0s,MS5.2
TAM Tamanrasset 90.09 293 *e*P **P 04 57 52.0 +1.8**
comp=Z,21nm,1.1s,mb5.4
TAM LR LR
comp=Z,1μm,20.0s,MS5.2
LOR Lormes 90.22 317 *e*P **P 04 57 50.0 -0.2**
comp=Z,102nm,1.4s,mb5.7,baz=95
LOR *e*MLR MLR
comp=Z,1μm,22.8s,MS4.9
LOR Lormes 90.22 317 *e*P **P 04 57 50.0 -0.2**
LOR pmax pmax
comp=Z,51nm,1.4s,mb5.7
LOR MLR MLR
comp=Z,1μm,22.8s,MS5.2
LOR Lormes 90.22 317 *e*P **P 04 57 50.0 -0.2**
comp=Z,51nm,1.4s,mb5.7
LOR LR LR
comp=Z,1μm,22.8s,MS5.2
SMF Signal de Mont 90.27 317 *e*P **P 04 57 50.1 -0.4**
comp=Z,36nm,1.0s,mb5.4
SMF Signal de Mont 90.27 317 *e*P **P 04 57 50.1 -0.4**
SMF pmax pmax
comp=Z,18nm,1.0s,mb5.4
SMF Signal de Mont 90.27 317 *e*P **P 04 57 50.1 -0.4**
comp=Z,18nm,1.0s,mb5.4
NVL N'lazarevskaya 90.31 199 *e*P **P 04 57 50.0 -0.1**
NVL *e**PP pP 04 57 57.6 -3.3
NVL *e**SP sP 04 58 02.3 -2.4
NVL *e*S SKSac 05 08 14.3 -4.2
NVL *e**SS sS 05 08 47.1 -13
NVL *e*SS SS 05 14 56.9 +15
NVL *e*SSS 05 18 26.4
NVL pmax pmax
comp=Z,5.0nm,0.4s,mb5.2
NVL MLR MLR
comp=Z,1μm,15.0s,MS5.4
MAIT Maitri 90.34 199 *e*P **P 04 57 53.7 +3.4**
LASF Ste Croix 90.41 314 *e*P **P 04 57 51.6 +0.4**
PLDF La Plantade 90.46 316 *e*P **P 04 57 53.8 +2.4**
SSF Saint Saulge 90.47 317 *e*P **P 04 57 51.6 +0.2**
comp=Z,81nm,1.5s,mb5.5
SSF Saint Saulge 90.47 317 *e*P **P 04 57 51.6 +0.2**
SSF pmax pmax
comp=Z,40nm,1.5s,mb5.5
SSF Saint Saulge 90.47 317 *e*P **P 04 57 51.6 +0.2**
comp=Z,40nm,1.5s,mb5.5
AVF Avril sur Loir 90.59 317 *e*P **P 04 57 51.8 -0.2**
comp=Z,56nm,1.2s,mb5.5
AVF Avril sur Loir 90.59 317 *e*P **P 04 57 51.8 -0.2**
AVF pmax pmax
comp=Z,28nm,1.2s,mb5.5
AVF Avril sur Loir 90.59 317 *e*P **P 04 57 51.8 -0.2**
comp=Z,28nm,1.2s,mb5.5
LBL Lubilhac 90.77 315 *e*P **P 04 57 55.7 +2.8**
AGO Saint Agoulin 90.80 316 *e*P **P 04 57 55.7 +2.7**
PYM Petit Puy Mans 90.91 316 *e*P **P 04 57 56.3 +2.8**
BGF Bois d'Agland 90.96 316 *e*P **P 04 57 54.0 +0.3**
comp=Z,87nm,1.1s,mb5.7
BGF Bois d'Agland 90.96 316 *e*P **P 04 57 54.0 +0.3**
BGF pmax pmax
comp=Z,43nm,1.1s,mb5.7
BGF Bois d'Agland 90.96 316 *e*P **P 04 57 54.0 +0.3**
comp=Z,43nm,1.1s,mb5.7
HYF Humbligny 91.05 317 *e*P **P 04 57 54.6 +0.5**
MENF Mencas 91.11 320 *e*P **P 04 57 56.0 +1.7**
TCF Toulx Ste Croi 91.42 316 *e*P **P 04 57 56.2 +0.4**
comp=Z,55nm,1.5s,mb5.4
TCF Toulx Ste Croi 91.42 316 *e*P **P 04 57 56.2 +0.4**
TCF pmax pmax
comp=Z,28nm,1.5s,mb5.4
TCF Toulx Ste Croi 91.42 316 *e*P **P 04 57 56.2 +0.4**
comp=Z,28nm,1.5s,mb5.4
CAF Calviac 91.63 315 *e*P **P 04 57 57.2 +0.4**
comp=Z,33nm,1.2s,mb5.2
CAF Calviac 91.63 315 *e*P **P 04 57 57.2 +0.4**
CAF pmax pmax
comp=Z,16nm,1.2s,mb5.2
CAF Calviac 91.63 315 *e*P **P 04 57 57.2 +0.4**
comp=Z,16nm,1.2s,mb5.2
MTLF Montolieu 91.65 313 *e*P **P 04 57 57.1 +0.1**
comp=Z,38nm,1.1s,mb5.4
MTLF Montolieu 91.65 313 *e*P **P 04 57 57.1 +0.1**
MTLF pmax pmax
comp=Z,19nm,1.1s,mb5.3
MTLF Montolieu 91.65 313 *e*P **P 04 57 57.1 +0.1**
comp=Z,19nm,1.1s,mb5.3
RJF Les Rejaudoux 91.99 315 *e*P **P 04 57 59.0 +0.5**
comp=Z,50nm,1.3s,mb5.4
RJF *e*MLR MLR
comp=Z,757nm,20.0s,MS4.8
RJF Les Rejaudoux 91.99 315 *e*P **P 04 57 59.0 +0.5**
RJF pmax pmax
comp=Z,25nm,1.3s,mb5.4
RJF MLR MLR
comp=Z,760nm,20.0s,MS5.1
RJF Les Rejaudoux 91.99 315 *e*P **P 04 57 59.0 +0.5**
comp=Z,25nm,1.3s,mb5.4
RJF LR LR
comp=Z,760nm,20.0s,MS5.1
QSPA South Pole Qui 92.14 180 PFAKE 04 58 10.0 +12
QSPA LR LR
comp=Z,3μm,19.0s,MS5.7
LFF La Frestale 92.57 315 *e*P **P 04 58 01.7 +0.5**
comp=Z,68nm,1.2s,mb5.6
LFF La Frestale 92.57 315 *e*P **P 04 58 01.7 +0.5**
LFF pmax pmax
comp=Z,34nm,1.2s,mb5.7
LFF La Frestale 92.57 315 *e*P **P 04 58 01.7 +0.5**
comp=Z,34nm,1.2s,mb5.7
LDF La Druitiere 92.77 319 *e*P **P 04 58 01.8 -0.2**
comp=Z,29nm,1.0s,mb5.4
LDF La Druitiere 92.77 319 *e*P **P 04 58 01.8 -0.2**
LDF pmax pmax
comp=Z,15nm,1.0s,mb5.4
LDF La Druitiere 92.77 319 *e*P **P 04 58 01.8 -0.2**
comp=Z,14nm,1.0s,mb5.4
FLN La Foliniere 92.99 319 *e*P **P 04 58 02.9 -0.1**
comp=Z,66nm,1.0s,mb5.7
FLN *e*MLR MLR
comp=Z,1μm,20.2s,MS5.0
FLN La Foliniere 92.99 319 *e*P **P 04 58 02.9 -0.1**
FLN pmax pmax
comp=Z,33nm,1.0s,mb5.7
FLN MLR MLR
comp=Z,1μm,20.3s,MS5.3
FLN La Foliniere 92.99 319 *e*P **P 04 58 02.9 -0.1**
comp=Z,33nm,1.0s,mb5.7
FLN LR LR
comp=Z,1μm,20.3s,MS5.3
MFF Saint Martin d 93.01 317 *e*P **P 04 58 03.1 -0.1**
comp=Z,59nm,1.2s,mb5.6
MFF Saint Martin d 93.01 317 *e*P **P 04 58 03.1 -0.1**
MFF pmax pmax
comp=Z,30nm,1.2s,mb5.6
MFF Saint Martin d 93.01 317 *e*P **P 04 58 03.1 -0.1**
comp=Z,30nm,1.2s,mb5.6
EPF Esparros 93.05 313 *e*P **P 04 58 03.2 -0.2**
JOHN Johnston Islan 93.14 73 PFAKE 04 58 10.0 +5.6
JOHN LR LR
comp=Z,2μm,19.0s,MS5.5
GRR Gorron 93.28 319 *e*P **P 04 58 04.4 0.0**
comp=Z,50nm,1.0s,mb5.6
GRR Gorron 93.28 319 *e*P **P 04 58 04.4 0.0**
GRR pmax pmax
comp=Z,25nm,1.0s,mb5.6
GRR Gorron 93.28 319 *e*P **P 04 58 04.4 0.0**
comp=Z,25nm,1.0s,mb5.6
DAG Danmarks Havn 93.49 348 ⇓ *i*P **P 04 58 04.0 -0.8**
DAG pmax pmax
comp=Z,9.0nm,0.7s,mb5.3
DAG Danmarks Havn 93.49 348 ⇓ *i*P **P 04 58 04.0 -0.8**
comp=Z,8.9nm,0.7s,mb5.3
DAG Danmarks Havn 93.49 348 ⇓ *i*P **P 04 58 04.0 -0.8**
comp=Z,8.9nm,0.7s,mb5.3
ETSF Etsaut 93.72 313 *e*P **P 04 58 05.5 -1.0**
comp=Z,27nm,0.9s,mb5.4
ETSF Etsaut 93.72 313 *e*P **P 04 58 05.5 -1.0**
ETSF pmax pmax
comp=Z,14nm,0.9s,mb5.4
ETSF Etsaut 93.72 313 *e*P **P 04 58 05.5 -1.0**
comp=Z,14nm,0.9s,mb5.4
ESK Eskdalemuir 93.75 326 PFAKE 04 58 20.0 +14
ESK LR LR
comp=Z,676nm,20.0s,MS5.1
SJPF Ste Jean 94.18 313 *e*P **P 04 58 09.9 +1.3**
comp=Z,25nm,1.0s,mb5.3
SJPF Ste Jean 94.18 313 *e*P **P 04 58 09.9 +1.3**
SJPF pmax pmax
comp=Z,13nm,1.0s,mb5.3
SJPF Ste Jean 94.18 313 *e*P **P 04 58 09.9 +1.3**
comp=Z,12nm,1.0s,mb5.3
SGMF Saint Gilles 94.42 319 *e*P **P 04 58 09.5 -0.1**
ALE Alert 94.85 357 P **P 04 58 11.1 +0.1**
comp=Z,136nm,0.8s,mb6.4,SNR=5.4
QUIF Quistinic 94.88 318 *e*P **P 04 58 11.4 -0.3**
ROSF Rostrenen 94.89 319 *e*P **P 04 58 11.5 -0.3**
TTA Tatalina 95.92 26 *e*P **P 04 58 17.5 +1.4**
ESDC Sonseca Array 96.68 310 P **P 04 58 19.9 -0.2**
comp=Z,0.3nm,0.5s,mb4.0,baz=53,slow=4.0,SNR=1.5
ESDC PP PP 05 02 13.9 -1.0
comp=Z,0.8nm,0.5s,baz=63,slow=6.0,SNR=5.0
ESDC LR LR 05 48 54.5
comp=Z,517nm,19.2s,MS5.0,baz=125,slow=40
ESLA Sonseca Array 96.68 310 PFAKE 04 58 30.0 +10
ESLA LR LR
comp=Z,4μm,19.0s,MS5.9
COLD Coldfoot 96.80 21 *e*P **P 04 58 22.0 +1.9**
comp=Z,18nm,1.7s,mb5.2
PAB San Pablo 96.99 310 PFAKE 04 58 30.0 +8.5
PAB LR LR
comp=Z,750nm,19.0s,MS5.2
SCO Scoresbysund 97.14 343 *i* P **P 04 58 17.9 -3.6**
SCO *i* 04 59 50.9
SCO *i* S SKSac 05 09 02.5 +6.6
SCO LR LR
comp=Z,1μm,20.0s,MS5.3
SCO Scoresbysund 97.14 343 *i* P **P 04 58 17.9 -3.6**
SCO *i* 04 59 50.9
SCO *i* S SKSac 05 09 02.5 +6.6
SCO
comp=Z,1μm,20.0s
BPAW Bear Paw Mtn. 97.67 24 *e*P **P 04 58 24.3 +0.3**
comp=Z,20nm,1.1s,mb5.6
TRF Thorofare Moun 98.20 25 *e*P **P 04 58 28.1 +1.6**
comp=Z,7.7nm,1.0s,mb5.2
COLA College 98.62 23 PFAKE 04 58 40.0 +12
COLA LR LR
comp=Z,1μm,19.0s,MS5.4
SFS San Fernando 98.92 307 PFAKE 04 58 40.0 +10
SFS LR LR
comp=Z,1μm,20.0s,MS5.4
KDAK Kodiak Island 99.12 30 P **P 04 58 30.7 0.0**
comp=Z,3.5nm,0.8s,mb5.0,baz=352,slow=4.5,SNR=3.6
KDAK LR LR 05 43 29.5
comp=Z,659nm,21.8s,MS5.1,baz=229,slow=36
MTE Manteigas 99.27 311 PFAKE 04 58 40.0 +8.3
MTE LR LR
comp=Z,601nm,20.0s,MS5.1
BORG Borgarnes 99.55 337 PFAKE 04 58 40.0 +7.6
BORG LR LR
comp=Z,2μm,20.0s,MS5.6
DBIC Dimbokro 101.05 277 PFAKE 04 58 50.0 +11
DBIC LR LR
comp=Z,1μm,19.0s,MS5.4
EGAK Eagle 101.21 22 PFAKE 04 58 50.0 +10
EGAK LR LR
comp=Z,2μm,19.0s,MS5.6
INK Inuvik 101.72 17 P Pdif 04 58 41.0 -1.3
comp=Z,3.2nm,0.8s,baz=16,slow=2.1,SNR=5.2
SHEL Horse Pasture 102.41 254 PFAKE 04 59 00.0 +15
SHEL LR LR
comp=Z,2μm,22.0s,MS5.6
RES Resolute Bay 102.91 3 P Pdif 04 58 46.9 -0.7
comp=Z,5.1nm,0.9s,baz=21,slow=4.9,SNR=4.3
XMAS Kiritimati 105.92 87 PFAKE 05 03 20.0 +5.5
XMAS LR LR
comp=Z,1μm,21.0s,MS5.4
YKA Yellowknife Ar 111.30 15 Pdiff Pdif 04 59 25.6 +0.7
comp=Z,0.6nm,0.7s,baz=332,slow=4.3,SNR=3.9
YKA PP PP 05 04 03.7 +1.0
comp=Z,4.0nm,1.0s,baz=327,slow=7.2,SNR=7.1
YKA Yellowknife Ar 111.30 15 Pdif Pdif 04 59 25.6 +0.7
YKA PP PP 05 04 03.7 +1.0
TBI Tubuai 112.87 114 *e*Sdif Sdif 05 12 02.9 +8.7
comp=Z,460nm,27.2s
TBI *e*SS SS 05 19 50.3 -6.8
comp=Z,750nm,24.5s
TBI *e*LQ 05 32 20.2
comp=Z,1μm,40.2s
TBI *e*LR LR 05 37 00.5
comp=Z,2μm,24.0s
PPT Papeete 113.42 108 *e*Pdif Pdif 04 59 35.6 +1.3
comp=Z,37nm,23.5s
PPT Papeete 113.42 108 *e*PP PP 05 04 09.2 -11
comp=Z,110nm,24.5s
PPT *e*Sdif Sdif 05 12 04.2 +5.4
comp=Z,565nm,27.8s
PPT Papeete 113.42 108 *e*PS PS 05 13 51.6 -4.9
comp=Z,353nm,26.5s
PPT *e*LQ 05 32 31.0
comp=Z,2μm,35.0s
PPT *e*LR LR 05 37 19.0
comp=Z,1μm,28.0s
PPT Papeete 113.42 108 *e*P Pdif 04 59 35.6 +1.3
PPT *e*PS PS 05 13 51.6 -4.9
PPT Papeete 113.42 108 *e*Pdif Pdif 04 59 35.6 +1.3
PPT *e*PP PP 05 04 09.2 -11
PPT *e*Sdif Sdif 05 12 04.2 +5.4
PPT *e*PS PS 05 13 51.6 -4.9
PPT *e*LQ 05 32 31.0
PMSA Palmer Station 116.00 189 PFAKE 05 03 40.0 +7.9
PMSA LR LR
comp=Z,2μm,19.0s,MS5.7
SACV Santiago Islan 118.37 288 PFAKE 05 03 50.0 +12
SACV LR LR
comp=Z,1μm,19.0s,MS5.5
NLWA Neilton Lookou 119.28 30 PFAKE 05 03 50.0 +11
NLWA LR LR
comp=Z,875nm,20.0s,MS5.4
FFC Flin Flon 121.24 12 *c i*PKIKP PKPdf 05 03 43.5 +1.1
FFC Flin Flon 121.24 12 *e*PKPdf PKPdf 05 03 41.5 -0.9
FFC *e*PP PP 05 05 11.9 -0.2
FFC LR LR
comp=Z,1μm,20.0s,MS5.5
COR Corvallis 121.44 32 PFAKE 05 03 50.0 +6.9
COR LR LR
comp=Z,871nm,20.0s,MS5.4
SCHQ Schefferville 121.52 349 PKP PKPdf 05 03 44.1 +1.1
comp=Z,1.8nm,0.7s,baz=18,slow=8.0,SNR=3.5
SCHQ Schefferville 121.52 349 PKP PKPdf 05 03 44.1 +1.1
SCHQ LR LR
comp=Z,2μm,20.0s,MS5.7
NEW Newport 121.83 26 *e*PKIKP PKPdf 05 03 44.1 +0.3
NEW MLR MLR
comp=Z,913nm,19.0s
HAWA Hanford 122.11 29 *e*PKPdf PKPdf 05 03 44.9 +0.5
HAWA LR LR
comp=Z,790nm,22.0s,MS5.3
HUMO Hull Mountain 122.93 34 *e*PKPdf PKPdf 05 03 46.0 0.0
HUMO LR LR
comp=Z,655nm,19.0s,MS5.3
LNOR Lincton Mounta 123.08 28 *e*PKIKP PKPdf 05 03 46.9 +0.6
BSMT Bassoo Peak 123.14 25 *e*PKPdf PKPdf 05 03 46.0 -0.3
YBH Yreka Blue Hor 123.64 35 PFAKE 05 04 00.0 +13
YBH LR LR
comp=Z,506nm,20.0s,MS5.2
SWMT Swartz Lake 123.74 24 *e*PKPdf PKPdf 05 03 47.0 -0.4
SLMT Seeley Lake 124.16 24 *e*PKPdf PKPdf 05 03 48.1 -0.2
BMO Blue Mountains 124.30 29 PFAKE 05 04 00.0 +11
BMO LR LR
comp=Z,593nm,19.0s,MS5.3
MSO Missoula 124.30 25 *e*PKPdf PKPdf 05 03 48.1 -0.5
MSO LR LR
comp=Z,933nm,21.0s,MS5.4
WDC Whiskeytown Da 124.48 36 PFAKE 05 04 00.0 +11
WDC LR LR
comp=Z,587nm,20.0s,MS5.2
CHMT Chamberlain Mo 124.52 24 *e*PKPdf PKPdf 05 03 48.8 -0.2

MOD	**Modoc**	**124.86**	**33**	*e*PKPdf	PKPdf	05 03 50.2	+0.4
MOD				LR	LR		
comp=Z,430nm,20.0s,MS5.1							
EGMT	**Eagleton**	**124.97**	**21**	*e*PKPdf	PKPdf	05 03 49.4	-0.4
EGMT				*e*PP	PP	05 05 40.2	+2.7
EGMT				LR	LR		
comp=Z,1μm,19.0s,MS5.6							
HOPS	**Hopland**	**125.17**	**37**	*e*PKPdf	PKPdf	05 03 51.9	+1.4
HOPS				LR	LR		
comp=Z,655nm,21.0s,MS5.3							
WVOR	**Wild Horse Val**	**125.38**	**32**	*e*PKIKP	PKPdf	05 03 51.1	+0.3
WVOR				*e*		05 05 43.9	
WVOR				MLR	MLR		
comp=Z,622nm,20.0s,MS5.3							
LRM	**Limekiln Ridge**	**125.73**	**25**	*e*PKPdf	PKPdf	05 03 52.1	+0.8
MCCM	**Marconi Confer**	**125.82**	**38**	PFAKE		05 04 00.0	+8.2
MCCM				LR	LR		
comp=Z,596nm,20.0s,MS5.3							
DLMT	**Dillon**	**126.04**	**25**	*e*PKPdf	PKPdf	05 03 52.5	+0.5
BOZ	**Bozeman (W)**	**126.21**	**24**	*e*PKIKP	PKPdf	05 03 52.2	-0.1
BOZ				MLR	MLR		
comp=Z,1μm,19.0s,MS5.6							
DGMT	**Dagmar**	**126.40**	**17**	PFAKE		05 04 00.0	+7.5
DGMT				LR	LR		
comp=Z,2μm,19.0s,MS5.8							
HLID	**Hailey**	**126.64**	**28**	*e*PKPdf	PKPdf	05 03 53.3	+0.1
HLID				*e*PP	PP	05 05 48.6	-0.3
HLID				LR	LR		
comp=Z,850nm,21.0s,MS5.4							
ULM	**Lac du Bonnet**	**126.67**	**10**	PKP	PKPdf	05 03 51.8	-1.2
comp=Z,12nm,0.9s,baz=351,slow=3.5,SNR=7.6							
ULM	**Lac du Bonnet**	**126.67**	**10**	*e*PKPdf	PKPdf	05 03 52.0	-1.0
ULM				LR	LR		
comp=Z,3μm,21.0s,MS5.9							
LAO	**LASA Array**	**127.35**	**20**	*e*PKPdf	PKPdf	05 03 55.4	+1.0
LAO				LR	LR		
comp=Z,1μm,20.0s,MS5.6							
CMB	**Columbia Colle**	**127.40**	**37**	*e*PKIKP	PKPdf	05 03 54.7	-0.1
CMB				*e*		05 05 51.7	
CMB				MLR	MLR		
comp=Z,542nm,21.0s,MS5.2							
BMN	**Battle Mountai**	**127.55**	**32**	PFAKE		05 04 10.0	+15
BMN				LR	LR		
comp=Z,611nm,20.0s,MS5.3							
SAO	**San Andreas Ge**	**127.57**	**39**	PFAKE		05 04 10.0	+15
SAO				LR	LR		
comp=Z,681nm,19.0s,MS5.3							
RLMT	**Red Lodge**	**127.59**	**23**	PFAKE		05 04 10.0	+15
RLMT				LR	LR		
comp=Z,2μm,20.0s,MS5.7							
LKWY	**Lake**	**127.60**	**24**	PFAKE		05 04 10.0	+15
LKWY				LR	LR		
comp=Z,2μm,20.0s,MS5.9							
TPAW	**Teton Pass**	**128.24**	**25**	*e*PKPdf	PKPdf	05 03 56.7	+0.5
TPAW				*e*PP	PP	05 06 02.7	+3.3
LOHW	**Long Hollow**	**128.29**	**25**	*e*PKPdf	PKPdf	05 03 57.1	+0.8
LOHW				*e*PP	PP	05 06 02.2	+2.6
SNOW	**Snow King Moun**	**128.35**	**25**	*e*PKPdf	PKPdf	05 03 57.3	+0.9
SNOW				*e*PP	PP	05 06 03.5	+3.5
NVAR	**Mina Array Bea**	**128.35**	**35**	PKP	PKPdf	05 03 56.8	+0.2
comp=Z,0.7nm,0.5s,baz=8.2,slow=26,SNR=19							
ELK	**Elko**	**128.36**	**31**	*e*PKIKP	PKPdf	05 03 59.4	+2.9
ELK				MLR	MLR		
comp=Z,650nm,22.0s							
ELK	**Elko**	**128.36**	**31**	*e*PKPdf	PKPdf	05 03 59.4	+2.8
N12A	**Clover Valley,**	**128.38**	**30**	*e*PKPdf	PKPdf	05 03 57.9	+1.4
N12A				*e*PP	PP	05 05 59.5	-0.9
REDW	**Red Top Meadow**	**128.39**	**25**	*e*PKPdf	PKPdf	05 03 57.2	+0.7
REDW				*e*PP	PP	05 06 04.6	+4.3
M13A	**Montello**	**128.44**	**29**	PKPdf	PKPdf	05 03 54.0	-2.7
AGMN	**Agassiz Nation**	**128.56**	**11**	PFAKE		05 04 10.0	+13
AGMN				LR	LR		
comp=Z,1μm,21.0s,MS5.6							
AHID	**Auburn Hatcher**	**128.76**	**26**	PFAKE		05 04 10.0	+13
AHID				LR	LR		
comp=Z,1μm,19.0s,MS5.5							
N13A	**Wendover, West**	**128.80**	**30**	*e*PKPdf	PKPdf	05 03 59.0	+1.6
TPH	**Tonopah**	**129.21**	**34**	PFAKE		05 04 10.0	+12
TPH				LR	LR		
comp=Z,742nm,20.0s,MS5.4							
BGU	**Big Grassy Mou**	**129.32**	**29**	*e*PKPdf	PKPdf	05 03 59.5	+1.1
BW06	**Boulder Array**	**129.42**	**25**	PFAKE		05 04 10.0	+12
BW06				LR	LR		
comp=Z,1μm,19.0s,MS5.6							
PDAR	**Pinedale Array**	**129.42**	**25**	PKP	PKPdf	05 03 58.1	-0.3
comp=Z,3.8nm,1.0s,baz=60,slow=0.2,SNR=17							
PDAR				PP	PP	05 06 05.3	-1.7
comp=Z,1.1nm,0.9s,baz=309,slow=2.9,SNR=3.4							
PDAR				SKP		05 07 33.5	
comp=Z,2.4nm,1.1s,baz=278,slow=0.6,SNR=3.6							
HWUT	**Hardware Ranch**	**129.48**	**27**	PFAKE		05 04 10.0	+11
HWUT				LR	LR		
comp=Z,1μm,19.0s,MS5.7							
EYMN	**Ely**	**129.57**	**7**	PFAKE		05 04 10.0	+11
EYMN				LR	LR		
comp=Z,2μm,22.0s,MS5.7							
DUG	**Dugway**	**129.99**	**29**	*e*PKIKP	PKPdf	05 04 00.8	+1.2
DUG				*e*		05 06 10.3	
DUG				MLR	MLR		
comp=Z,627nm,21.0s,MS5.3							
DAC	**Darwin (Calif)**	**130.23**	**36**	PFAKE		05 04 10.0	+10
DAC				LR	LR		
comp=Z,544nm,19.0s,MS5.3							
RSSD	**Black Hills**	**130.34**	**19**	*e*PKIKP	PKPdf	05 04 01.5	+1.3
RSSD				MLR	MLR		
comp=Z,957nm,19.0s,MS5.5							
DAU	**Daniels Canyon**	**130.57**	**28**	*e*PKIKP	PKPdf	05 04 02.8	+2.1
DAU				*e*		05 06 19.2	
PKME	**Peaks-Kenny Pk**	**131.09**	**347**	PFAKE		05 04 10.0	+8.4
PKME				LR	LR		
comp=Z,1μm,20.0s,MS5.6							
RWWY	**Rawlins**	**131.28**	**24**	*e*PKPdf	PKPdf	05 04 03.4	+1.3
TMUT	**Trail Mountain**	**131.47**	**29**	*e*PKPdf	PKPdf	05 04 05.5	+3.0
MVU	**Marysvale**	**131.59**	**30**	PFAKE		05 04 10.0	+7.3
MVU				LR	LR		
comp=Z,718nm,19.0s,MS5.4							
CCUT	**Cedar City**	**131.71**	**32**	*e*PKPdf	PKPdf	05 04 06.5	+3.5
PHWY	**Pilot Hill**	**132.30**	**22**	*e*PKPdf	PKPdf	05 04 05.0	+1.0
RCBR	**Riachuelo**	**132.43**	**264**	PFAKE		05 04 20.0	+15
RCBR				LR	LR		
comp=Z,815nm,19.0s,MS5.5							
LBNH	**Lisbon**	**132.62**	**349**	PFAKE		05 04 10.0	+5.5
LBNH				LR	LR		
comp=Z,1μm,21.0s,MS5.7							
LONY	**Lake Ozonia**	**132.72**	**351**	PFAKE		05 04 10.0	+5.3
LONY				LR	LR		
comp=Z,987nm,20.0s,MS5.5							
PFO	**Pinyon Flat Ob**	**132.72**	**38**	PFAKE		05 04 20.0	+15
PFO				LR	LR		
comp=Z,635nm,20.0s,MS5.3							
ECSD	**EROS Data Cent**	**132.77**	**13**	*e*PKPdf	PKPdf	05 04 05.1	+0.3
ECSD				LR	LR		
comp=Z,2μm,22.0s,MS5.7							
NCB	**Newcomb**	**133.29**	**351**	PFAKE		05 04 20.0	+14
NCB				LR	LR		
comp=Z,989nm,21.0s,MS5.5							
SMCO	**Snowmass**	**133.49**	**25**	*e*PKPdf	PKPdf	05 04 07.8	+1.5
SMCO				*e*PP	PP	05 06 34.0	+0.7
ISCO	**Idaho Springs**	**133.53**	**24**	*e*PKIKP	PKPdf	05 04 08.6	+2.3
ISCO				*e*		05 06 34.3	
ISCO				MLR	MLR		
comp=Z,976nm,19.0s,MS5.5							
PV01	**Paradox Valley**	**133.64**	**28**	*e*PKPdf	PKPdf	05 04 06.9	+0.3
PV01				*e*PP	PP	05 06 38.2	+3.9
OGNE	**Ogallala**	**133.84**	**20**	PFAKE		05 04 20.0	+13
OGNE				LR	LR		
comp=Z,2μm,19.0s,MS5.8							
WUAZ	**Wupatki**	**134.29**	**32**	*e*PKPdf	PKPdf	05 04 09.4	+1.5
WUAZ				LR	LR		
comp=Z,754nm,20.0s,MS5.4							
MVCO	**Mesa Verde**	**134.42**	**28**	*e*PKPdf	PKPdf	05 04 09.7	+1.6
MVCO				LR	LR		
comp=Z,830nm,20.0s,MS5.5							
JFWS	**Jewell Farm**	**134.68**	**7**	PFAKE		05 04 20.0	+12
JFWS				LR	LR		
comp=Z,961nm,20.0s,MS5.5							
SCIA	**State Center**	**135.21**	**10**	PFAKE		05 04 20.0	+11
SCIA				LR	LR		
comp=Z,2μm,21.0s,MS5.7							
BINY	**Binghamton**	**135.29**	**352**	PFAKE		05 04 20.0	+10
BINY				LR	LR		
comp=Z,2μm,20.0s,MS5.8							
SDCO	**Great Sand Dun**	**135.32**	**25**	*e*PKPdf	PKPdf	05 04 11.6	+1.8
SDCO				*e*PP	PP	05 06 40.5	-4.5
SDCO				LR	LR		
comp=Z,1μm,20.0s,MS5.7							
AAM	**Ann Arbor**	**135.70**	**0**	PFAKE		05 04 20.0	+10
AAM				LR	LR		
comp=Z,2μm,20.0s,MS5.8							
ERPA	**Erie**	**135.77**	**356**	PFAKE		05 04 20.0	+10
ERPA				LR	LR		
comp=Z,1μm,19.0s,MS5.6							
CBKS	**Cedar Bluff**	**136.52**	**19**	PFAKE		05 04 20.0	+8.0
CBKS				LR	LR		
comp=Z,1μm,21.0s,MS5.7							
TUC	**Tucson**	**137.01**	**35**	*e*PKIKP	PKPdf	05 04 14.7	+1.6
TUC				MLR	MLR		
comp=Z,618nm,20.0s,MS5.3							
SSPA	**Standing Stone**	**137.06**	**354**	PFAKE		05 04 20.0	+7.1
SSPA				LR	LR		
comp=Z,1μm,20.0s,MS5.6							
HDIL	**Hopedale**	**137.11**	**7**	PFAKE		05 04 20.0	+7.0
HDIL				LR	LR		
comp=Z,1μm,21.0s,MS5.6							
KSU1	**Kansas State U**	**137.16**	**15**	*e*PKPdf	PKPdf	05 04 13.6	+0.4
KSU1				LR	LR		
comp=Z,1μm,20.0s,MS5.7							
ANMO	**Albuquerque**	**137.21**	**28**	*e*PKIKP	PKPdf	05 04 09.7	-3.7
ANMO				*e*		05 04 15.2	
ANMO				MLR	MLR		
comp=Z,1μm,21.0s							
ACSO	**Alum Creek Sta**	**137.77**	**359**	*e*PKPdf	PKPdf	05 04 15.0	+0.8
ACSO				LR	LR		
comp=Z,1μm,20.0s,MS5.6							
BNM	**Barren Site**	**137.78**	**29**	*e*PKPdf	PKPdf	05 04 14.4	0.0
MCWV	**Mont Chateau**	**138.21**	**356**	PFAKE		05 04 30.0	+15
MCWV				LR	LR		
comp=Z,2μm,20.0s,MS5.8							
SPB	**Sao Paulo**	**139.16**	**236**	PFAKE		05 04 30.0	+13
SPB				LR	LR		
comp=Z,957nm,19.0s,MS5.6							
TRQA	**Tornquist**	**139.24**	**206**	PFAKE		05 04 30.0	+13
TRQA				LR	LR		
comp=Z,942nm,20.0s,MS5.5							
CCM	**Cathedral Cave**	**139.30**	**9**	PFAKE		05 04 30.0	+13
CCM				LR	LR		
comp=Z,1μm,19.0s,MS5.7							
AMTX	**Amarillo**	**139.34**	**23**	PFAKE		05 04 30.0	+13
AMTX				LR	LR		
comp=Z,1μm,21.0s,MS5.7							
CBN	**Corbin**	**139.40**	**353**	PFAKE		05 04 30.0	+13
CBN				LR	LR		
comp=Z,1μm,22.0s,MS5.5							
WCI	**Wyandotte Cave**	**139.69**	**3**	PFAKE		05 04 30.0	+12
WCI				LR	LR		
comp=Z,1μm,19.0s,MS5.7							
PLCA	**Paso Flores**	**139.91**	**195**	PFAKE		05 04 30.0	+12
PLCA				LR	LR		
comp=Z,1μm,20.0s,MS5.7							
MNTX	**Cornudas Mount**	**140.38**	**30**	*e*PKPpre	PKPpre	05 04 14.8	
MNTX				*e*PKPdf	PKPdf	05 04 20.1	+0.9
MNTX				LR	LR		
comp=Z,856nm,19.0s,MS5.5							
GDL2	**Guadalupe Moun**	**140.46**	**28**	*e*PKPdf	PKPdf	05 04 19.2	-0.2
WMOK	**Wichita Mounta**	**140.54**	**20**	*e*PKHKP	PKPpre	05 04 12.0	
WMOK				*e*		05 07 13.2	
WMOK				MLR	MLR		
comp=Z,1μm,19.0s,MS5.7							
BLA	**Blacksburg**	**140.69**	**356**	PFAKE		05 04 30.0	+10
BLA				LR	LR		
comp=Z,1μm,20.0s,MS5.7							
BBSR	**BB Station**	**141.29**	**334**	PFAKE		05 04 30.0	+9.1
BBSR				LR	LR		
comp=Z,1μm,19.0s,MS5.7							
WVT	**Waverly**	**141.65**	**6**	*e*PKHKP	PKPpre	05 04 16.0	
WVT				MLR	MLR		
comp=Z,1μm,19.0s,MS5.6							
MIAR	**Mount Ida**	**142.23**	**14**	*e*PKIKP	PKPdf	05 04 18.1	-4.4
MIAR				MLR	MLR		
comp=Z,1μm,20.0s,MS5.7							
TKL	**Tuckaleechee C**	**142.34**	**0**	PKIKP	PKPdf	05 04 21.8	-0.9
CNNC	**Cliffs of the**	**142.39**	**353**	PFAKE		05 04 30.0	+7.2
CNNC				LR	LR		
comp=Z,2μm,21.0s,MS5.8							
CPCT	**Cooper Cave**	**142.53**	**1**	*e*PKPdf	PKPdf	05 04 19.8	-3.2
OXF	**Oxford**	**143.06**	**8**	*e*PKIKP	PKPdf	05 04 20.9	-3.1
OXF				MLR	MLR		
comp=Z,2μm,20.0s,MS5.8							
TXAR	**Lajitas Array**	**143.16**	**30**	PKhKP	PKPpre	05 04 21.0	
comp=Z,4.9nm,1.0s,baz=272,slow=2.0,SNR=21							
TXAR				PKP	PKPdf	05 04 22.5	-1.8
comp=Z,3.7nm,0.9s,baz=258,slow=1.7,SNR=20							
TXAR				PP	PP	05 07 35.9	+2.4
comp=Z,4.7nm,1.2s,baz=306,slow=2.8,SNR=4.7							
TXAR				SKP		05 07 58.9	
comp=Z,5.6nm,1.1s,baz=336,slow=2.7,SNR=5.8							
TXAR				SKPbc	SKPbc	05 08 01.9	+1.6
comp=Z,5.6nm,1.1s,baz=323,slow=1.7,SNR=6.4							
TXAR	**Lajitas Array**	**143.16**	**30**	PKIKP	PKPdf	05 04 21.0	-3.3
TXAR						05 07 35.9	
TXAR	**Lajitas Array**	**143.16**	**30**	PKP	PKPdf	05 04 21.0	-3.3
TXAR				PKP	PKPdf	05 04 22.5	-1.8
TXAR				PP	PP	05 07 35.9	+2.4
TXAR				SKP		05 07 58.9	
TXAR				SKPbc	SKPbc	05 08 01.9	+1.6
JSC	**Jenkinsville**	**143.65**	**357**	*e*PKIKP	PKPdf	05 04 23.8	-1.2
JCT	**Junction City**	**143.96**	**24**	*e*PKIKP	PKPdf	05 04 24.1	-1.6
JCT				MLR	MLR		
comp=Z,1μm,21.0s,MS5.6							
GOGA	**Godfrey**	**144.58**	**0**	*e*PKIKP	PKPdf	05 04 25.2	-1.5
GOGA				MLR	MLR		
comp=Z,924nm,19.0s,MS5.6							
NATX	**Nacogdoches**	**144.59**	**17**	*e*PKPdf	PKPdf	05 04 25.9	-0.8
NATX				LR	LR		
comp=Z,2μm,20.0s,MS5.8							
NHSC	**New Hope**	**144.75**	**355**	*e*PKPdf	PKPdf	05 04 26.5	-0.4
NHSC				LR	LR		
comp=Z,2μm,19.0s,MS5.9							
LRAL	**Lakeview Retre**	**144.79**	**5**	*e*PKPdf	PKPdf	05 04 25.4	-1.6
LRAL				LR	LR		
comp=Z,1μm,20.0s,MS5.7							
VBMS	**Vicksburg**	**145.12**	**10**	*e*PKPdf	PKPdf	05 04 27.8	+0.1
VBMS				LR	LR		
comp=Z,2μm,21.0s,MS5.8							
CPUP	**Villa Florida**	**145.28**	**224**	PKP	PKPdf	05 04 27.0	-1.1
comp=Z,7.6nm,0.7s,baz=97,slow=2.7,SNR=30							
CPUP	**Villa Florida**	**145.28**	**224**	PKP	PKPdf	05 04 27.0	-1.1
CPUP				LR	LR		
comp=Z,174nm,19.0s,MS4.8							
HKT	**Hockley**	**145.91**	**19**	*e*PKP2	PKPab	05 04 29.3	-0.8
HKT				MLR	MLR		
comp=Z,1μm,19.0s,MS5.8							
BRAL	**Brewton**	**146.79**	**6**	*e*PKPbc	PKPbc	05 04 33.6	+1.4
BRAL				LR	LR		
comp=Z,1μm,21.0s,MS5.7							
KVTX	**Kingsville**	**147.32**	**24**	PFAKE		05 04 40.0	+8.5
KVTX				LR	LR		
comp=Z,942nm,19.0s,MS5.6							
DWPF	**Disney**	**149.80**	**356**	PFAKE		05 04 50.0	+14
DWPF				LR	LR		
comp=Z,1μm,20.0s,MS5.7							
LCO	**Las Campanas**	**150.70**	**203**	*e*PKPbc	PKPbc	05 04 42.5	+0.1
LCO				LR	LR		
comp=Z,1μm,20.0s,MS5.7							
ANWB	**Willy Bob**	**150.91**	**314**	PFAKE		05 04 50.0	+13
ANWB				LR	LR		
comp=Z,928nm,20.0s,MS5.6							
FDF	**Fort de France**	**152.22**	**308**	PFAKE		05 04 50.0	+10
FDF				LR	LR		
comp=Z,718nm,20.0s,MS5.5							
GRTK	**Grand Turk**	**153.52**	**334**	PFAKE		05 04 50.0	+8.7
GRTK				LR	LR		
comp=Z,991nm,21.0s,MS5.6							
SJG	**San Juan**	**153.57**	**321**	PFAKE		05 04 50.0	+8.5
SJG				LR	LR		
comp=Z,1μm,20.0s,MS5.7							
GRGR	**Grenville**	**154.07**	**304**	PFAKE		05 04 50.0	+7.7
GRGR				LR	LR		
comp=Z,861nm,20.0s,MS5.6							
SDDR	**Presa de Saban**	**155.78**	**331**	PFAKE		05 04 50.0	+5.5
SDDR				LR	LR		
comp=Z,1μm,20.0s,MS5.7							
GTBY	**Guantanamo Bay**	**156.53**	**340**	PFAKE		05 05 00.0	+15
GTBY				LR	LR		
comp=Z,1μm,20.0s,MS5.7							
TEIG	**Tepich**	**157.22**	**12**	PFAKE		05 05 00.0	+14
TEIG				LR	LR		
comp=Z,974nm,22.0s,MS5.6							
MTDJ	**Mount Denham**	**158.88**	**344**	PFAKE		05 05 00.0	+12
MTDJ				LR	LR		
comp=Z,994nm,21.0s,MS5.6							
LPAZ	**La Paz**	**159.41**	**226**	PKP	PKPdf	05 04 50.4	+1.3
comp=Z,1.1nm,0.8s,baz=73,slow=2.6,SNR=3.8							
LPAZ				PKPab	PKPab	05 05 28.4	+1.7
comp=Z,2.6nm,0.9s,baz=55,slow=4.1,SNR=3.8							
LPAZ				PP	PP	05 09 06.3	-1.0
comp=Z,1.2nm,0.9s,baz=344,slow=2.7,SNR=2.4							
LPAZ	**La Paz**	**159.41**	**226**	PKPdf	PKPdf	05 04 48.2	-0.9
LPAZ				LR	LR		
comp=Z,776nm,20.0s,MS5.5							
SDV	**Santo Domingo**	**163.12**	**311**	PFAKE		05 05 00.0	+6.9
SDV				LR	LR		
comp=Z,581nm,20.0s							
TGUH	**Tegucigalpa,Un**	**163.41**	**13**	PFAKE		05 05 00.0	+6.7
TGUH				LR	LR		
comp=Z,931nm,20.0s							
JTS	**JuntasAbangare**	**167.50**	**7**	PFAKE		05 05 10.0	+13
JTS				LR	LR		
comp=Z,1μm,20.0s							
BCIP	**Isla Barro Col**	**168.14**	**342**	PFAKE		05 05 10.0	+13
BCIP				LR	LR		
comp=Z,1μm,22.0s							
NNA	**Nana**	**168.27**	**214**	PFAKE		05 05 10.0	+13
NNA				LR	LR		
comp=Z,1μm,21.0s							
ROSC	**El Rosal**	**168.49**	**308**	PKP	PKPdf	05 04 57.5	+0.1
comp=Z,3.2nm,0.5s,baz=93,slow=22,SNR=5.5							
ROSC				PP	PP	05 09 53.3	-2.1
comp=Z,1.2nm,0.4s,baz=90,slow=21,SNR=2.3							
PAYG	**Puerto Ayora**	**173.01**	**78**	PFAKE		05 05 10.0	+10
PAYG				LR	LR		
comp=Z,1μm,20.0s							
OTAV	**Otavalo**	**174.43**	**296**	*e*PKPdf	PKPdf	05 05 00.2	-0.2
OTAV				LR	LR		
comp=Z,1μm,19.0s							

DJA 14 05:05:14,2°.67N×97°.56E,h20km,MLv3.5/4,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**0.70**	**327**	P	Pb	05 05 26.7	-0.8
TPTI				S	Sb	05 05 39.0	+2.3
GSI	**Gunungsitoli**	**1.36**	**179**	P	Pn	05 05 37.5	-0.3
MNSI	**Mandailing Nat**	**2.75**	**133**	P	Pn	05 05 57.6	+0.7
PDSI	**Padang**	**4.59**	**141**	P	Pn	05 06 22.9	+0.6

*ISCJB **14** 05:19:05.8±0.5,36°.95N±0°.03×23°.71E±0°.06,h85km±9km, Error ellipse: s-maj=8.2km s-min=4.5km az=154.6*
*ATH **14** 05:19:05.4,36°.91N×23°.77E,h80km±5km,ML2.7*
*NEIC **14** 05:19:05.3,36°.91N×23°.76E,h82km,MG2.7(ATH),After ATH.*
*CSEM **14** 05:19:06.5±0.1,36°.94N×23°.71E,h80km,ML4.7/5,Error ellipse: s-maj=5.5km s-min=2.9km az=61.0*
*THE **14** 05:19:06.9,36°.98N×23°.71E,h22km±5km,ML4.7/5,Error ellipse: s-maj=5.9km s-min=1.4km az=70.0*

ISC 14 05:19:06.6±0.6,36°.95N±0°.03×23°.72E±0°.06,h80km±10km, n76,σ0°.78/97,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLI	**Veliai**	**0.67**	**250**	*e*P	**Pn**	**05 19 21.7**	**-0.2**
VLI				*e*S	**Sn**	**05 19 33.1**	**-0.1**
VLI	**Veliai**	**0.67**	**250**	*e*P	**Pn**	**05 19 21.7**	**-0.2**
VLI				*e*S	**Sn**	**05 19 33.1**	**-0.1**
VLI	**Veliai**	**0.67**	**250**	*e*P	**Pn**	**05 19 21.7**	**-0.2**
VLI				*e*S	**Sn**	**05 19 33.1**	**-0.1**
DID	**Didima**	**0.68**	**326**	*e*P	**Pn**	**05 19 22.0**	**0.0**
DID				*e*S	**Sn**	**05 19 33.5**	**+0.1**
DID	**Didima**	**0.68**	**326**	P	**Pn**	**05 19 22.0**	**0.0**
DID				S	**Sn**	**05 19 34.3**	**+0.9**
DID	**Didima**	**0.68**	**326**	P	**Pn**	**05 19 22.0**	**0.0**
DID				*e*S	**Sn**	**05 19 33.5**	**+0.1**
KYTH	**Kithira**	**0.86**	**220**	*e*P	**Pn**	**05 19 24.1**	**+0.1**
KYTH	**Kithira**	**0.86**	**220**	*e*P	**Pn**	**05 19 24.1**	**+0.1**
KYTH	**Kithira**	**0.86**	**220**	*e*P	**Pn**	**05 19 24.1**	**+0.1**
VLY	**Voula,Athens**	**0.90**	**4**	P	**Pn**	**05 19 25.5**	**+1.0**
VLY	**Voula,Athens**	**0.90**	**4**	P	**Pn**	**05 19 25.5**	**+1.0**
ATH	**Athens Observa**	**1.02**	**0**	*e*P	**Pn**	**05 19 26.0**	**+0.1**
ATH	**Athens Observa**	**1.02**	**0**	*e*P	**Pn**	**05 19 26.0**	**+0.1**
ATH	**Athens Observa**	**1.02**	**0**	*e*P	**Pn**	**05 19 26.0**	**+0.1**
VLX	**Vlachokerasia**	**1.15**	**292**	*e*P	**Pn**	**05 19 27.4**	**0.0**
VLX	**Vlachokerasia**	**1.15**	**292**	P	**Pn**	**05 19 27.4**	**0.0**
VLX				S	**Sn**	**05 19 41.6**	**-1.4**
VLX	**Vlachokerasia**	**1.15**	**292**	P	**Pn**	**05 19 27.4**	**0.0**
VLX				S	**Sn**	**05 19 41.6**	**-1.4**
LTK	**Loutraki**	**1.23**	**331**	*e*P	**Pn**	**05 19 28.1**	**-0.3**
LTK				*e*S	**Sn**	**05 19 45.9**	**+1.1**
LTK	**Loutraki**	**1.23**	**331**	P	**Pn**	**05 19 28.3**	**-0.1**
LTK				S	**Sn**	**05 19 43.8**	**-1.0**
LTK	**Loutraki**	**1.23**	**331**	P	**Pn**	**05 19 28.3**	**-0.1**
LTK				*e*S	**Sn**	**05 19 44.0**	**-0.8**
THR5	**Thira Island,**	**1.42**	**112**	P	**Pn**	**05 19 31.2**	**+0.4**
THR5	**Thira Island,**	**1.42**	**112**	P	**Pn**	**05 19 31.2**	**+0.4**
ITM	**Ithomi**	**1.45**	**280**	*e*P	**Pn**	**05 19 31.8**	**+0.6**
ITM				*e*S	**Sn**	**05 19 51.0**	**+1.2**
ITM	**Ithomi**	**1.45**	**280**	*e*P	**Pn**	**05 19 31.8**	**+0.6**
ITM				*e*S	**Sn**	**05 19 51.0**	**+1.2**
ITM	**Ithomi**	**1.45**	**280**	P	**Pn**	**05 19 31.8**	**+0.6**
ITM				S	**Sn**	**05 19 51.2**	**+1.4**
ITM	**Ithomi**	**1.45**	**280**	P	**Pn**	**05 19 31.8**	**+0.6**
ITM				*e*S	**Sn**	**05 19 51.0**	**+1.2**
KARN	**Karanos**	**1.55**	**174**	*e*P

*IDC **14** 05:20:26.1±3.8, 25°.16N×126°.47E, h0km, mb4.1/4, mb1 4.1/5, mb1mx3.7/23, mbtmp4.0/5, ML3.4/1, Error ellipse: s-maj=83.4km s-min=44.7km az=5.0*
*ISCJB **14** 05:20:49.5±0.4, 26°.79N±0°.09×126°.43E±0°.08, h135km±10km, mb3.8/4, Error ellipse: s-maj=18.3km s-min=4.0km az=142.2*
*JMA **14** 05:20:50.8±0.2, 26°.89N×126°.41E, h123km±3km, M3.6*

ISC 14 05:20:50.4±0.5, 26°.81N±0°.09×126°.42E±0°.08, h130km±10km, n23, σ0°.91/35, mb3.8/4, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKE	**Kume jima 2**	**0.59**	**146**	P	**Pn**	**05 21 10.3**	**+0.4**
JAGN	**Aguni-jima**	**0.77**	**107**	P	**Pn**	**05 21 11.5**	**+0.3**
JAGN				*e*S	**Sn**	**05 21 26.7**	**-0.3**
NAH1	**Naha**	**1.29**	**118**	P	**Pn**	**05 21 16.8**	**+0.6**
NAH1				S	**Sn**	**05 21 35.9**	**+0.2**
JJT2	**Tamagusuku 2**	**1.37**	**119**	P	**Pn**	**05 21 18.0**	**+1.0**
JJT2				*e*S	**Sn**	**05 21 38.8**	**+1.6**
JIH	**Iheya**	**1.40**	**81**	P	**Pn**	**05 21 17.7**	**+0.4**
JIH				*e*S	**Sn**	**05 21 36.9**	**-0.9**
JOW	**Kunigami**	**1.66**	**89**	P	**Pn**	**05 21 20.5**	**+0.3**
JOW				*e*S	**Sn**	**05 21 43.0**	**0.0**
JMJ	**Miyako jima 2**	**2.23**	**207**	P	**Pn**	**05 21 28.2**	**+0.9**
JMJ				*e*S	**Sn**	**05 21 55.7**	**+0.2**
JOGS	**Gusukube**	**2.24**	**204**	*e*S	**Sn**	**05 21 56.9**	**+1.3**
JTK	**Tokunoshima**	**2.45**	**66**	P	**Pn**	**05 21 29.7**	**-0.2**
JTJ	**Tarama**	**2.66**	**216**	P	**Pn**	**05 21 33.2**	**+0.5**
JTJ				*e*S	**Sn**	**05 22 04.6**	**-0.6**
JIJ	**Ishigaki jima**	**3.19**	**221**	P	**Pn**	**05 21 39.3**	**-0.2**
JIJ				*e*S	**Sn**	**05 22 15.8**	**-1.6**
JAM	**Amami Oshima**	**3.24**	**60**	P	**Pn**	**05 21 40.2**	**+0.1**
JAM				*e*S	**Sn**	**05 22 16.0**	**-2.6**
JKRS	**Kuro-shima**	**3.37**	**221**	P	**Pn**	**05 21 42.1**	**+0.3**
JKRS				*e*S	**Sn**	**05 22 20.2**	**-1.3**
IRIF	**Iriomote-Funau**	**3.46**	**225**	P	**Pn**	**05 21 43.3**	**+0.2**
IRIF				*e*S	**Sn**	**05 22 23.1**	**-0.7**
JZK	**Kikaishima**	**3.49**	**64**	*e*S	**Sn**	**05 22 23.4**	**-0.9**
HATJ	**Hateruma jima**	**3.62**	**221**	*e*S	**Sn**	**05 22 27.3**	**-0.3**
JNN	**Nakanoshima**	**4.29**	**44**	P	**Pn**	**05 21 53.9**	**0.0**
JMZ	**Minamidaito 2**	**4.42**	**102**	P	**Pn**	**05 21 53.9**	**-1.8**
JMZ				*e*S	**Sn**	**05 22 41.0**	**-5.5**
KSRS	**Korea Array**	**10.68**	**6**	Pn	**Pn**	**05 23 22.5**	**+2.7**
	0.2nm, 0.3s, baz=184, slow=13, SNR=5.8						
SONM	**Songino Array**	**26.20**	**328**	P	**P**	**05 26 16.6**	**+3.8**
	1.1nm, 0.5s, mb3.7, baz=147, slow=10, SNR=6.7						
MKAR	**Makanchi Array**	**39.94**	**312**	P	**P**	**05 28 11.8**	**0.0**
	0.5nm, 0.3s, mb3.6, baz=96, slow=10, SNR=16						
ZALV	**Zalesovo Beam**	**40.81**	**323**	P	**P**	**05 28 18.5**	**-0.3**
	2.7nm, 0.5s, mb4.2, baz=116, slow=9.3, SNR=7.8						
YKA	**Yellowknife Ar**	**78.67**	**24**	P	**P**	**05 32 38.0**	**+0.2**
	0.9nm, 0.6s, mb3.6, baz=306, slow=5.6, SNR=9.9						

GUC 14 05:30:14.7±0.7, 22°.21S×67°.85W, h200km, ML3.7, 2C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**1.92**	**307**	⇑*i*P	Pn	05 30 53.6	+1.2
PB01				*i*S	Sn	05 31 23.3	+1.6
PB01				AML	AML	05 31 24.3	
	comp=N, 326nm, 0.3s						
CEN1	**Los Morros**	**2.47**	**241**	⇑*i*P	Pn	05 31 02.0	+3.8
CEN1				*i*S	Sn	05 31 38.1	+6.0
ANCH	**Antofagasta**	**2.78**	**238**	*e*P	Pn	05 31 02.8	+1.1
ANCH				*i*S	Sn	05 31 39.0	+0.5
PSGC	**Pisagua**	**3.36**	**320**	*e*P	Pn	05 31 08.7	0.0
PSGC				*i*S	Sn	05 31 50.5	-0.5
MNMC	**Miæe Miæ**	**3.48**	**332**	⇓*i*P	Pn	05 31 11.4	+1.3
MNMC				*i*S	Sn	05 31 54.8	+1.3

DJA 14 05:58:46, 1°.20S×124°.00E, h40km, MLv3.6/3, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**1.24**	**277**	P	Pn	05 59 08.7	+1.9
LUWI				S	Sn	05 59 21.9	-0.4
KMSI	**Cibinong**	**1.76**	**359**	P	Pn	05 59 13.6	-0.5
MRSI	**Marisa**	**2.65**	**309**	P	Pn	05 59 31.4	+5.2
KDI	**Kendari**	**3.07**	**207**	P	Pn	05 59 31.4	-0.6

*NEIC **14** 06:19:57.6, 18°.99N×69°.41W, h57km, MD3.7(RSPR), After RSPR.*

RSPR 14 06:19:57.6, 18°.99N×69°.41W, h57km±3km, MD3.7/7, MD3.7/7, 7C-3D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**1.09**	**116**	⇑*e*P	Pn	06 20 15.9	-0.8
PCDR	**Punta Cana, DR**	**1.09**	**116**	*e*S	Sn	06 20 30.1	-0.8
AGPR	**Aguadilla, PR**	**2.24**	**103**	⇑*e*P	Pn	06 20 32.8	+0.4
AGPR				*e*S	Sn	06 21 00.1	+1.2
LSP	**Las Mesas**	**2.35**	**110**	⇑*e*P	Pn	06 20 35.7	+1.9
CRPR	**Cabo Rojo, PR**	**2.40**	**114**	⇑*e*P	Pn	06 20 36.1	+1.6
CRPR				*e*S	Sn	06 21 02.2	-0.5
LRS	**Lares**	**2.53**	**106**	⇓*e*P	Pn	06 20 37.5	+1.2
LRS				*e*S	Sn	06 21 07.1	+1.1
AOPR	**Arecibo Observ**	**2.60**	**104**	⇓*e*P	Pn	06 20 38.1	+0.9
OBIP	**Obispado Ponce**	**2.83**	**109**	⇓*e*P	Pn	06 20 42.7	+2.4
CELP	**Cerrillos**	**2.84**	**108**	⇓*e*P	Pn	06 20 42.9	+2.3
SJG	**San Juan**	**3.22**	**105**	⇓*e*P	Pn	06 20 46.2	+0.5
SJG	**San Juan**	**3.22**	**105**	⇓*e*P	Pn	06 20 46.2	+0.5
CBYP	**Canovanas**	**3.45**	**101**	*e*Pn	Pn	06 20 48.0	-0.8
CBYP				*e*Sn	Sn	06 21 29.8	+1.3

*IDC **14** 06:56:08.2±1.3, 43°.31N×78°.31E, h0km, mb3.6/2, mb1 3.8/6, mb1mx3.5/27, mbtmp3.6/6, ML3.4/4, Error ellipse: s-maj=19.1km s-min=8.9km az=149.0*
*NEIC **14** 06:56:10.5±1.0, 43°.40N×78°.09E, h10km, Error ellipse: s-maj=20.2km s-min=8.9km az=149.0*
*BJI **14** 06:56:11.4, 43°.47N×78°.43E, h10km, ML3.6/6, Ms3.5/1*
*NNC **14** 06:56:11.0±0.9, 43°.51N×78°.20E, h0km, mb4.0, mpv3.9, Error ellipse: s-maj=14.2km s-min=3.4km az=147.0*
*MOS **14** 06:56:14.1±1.5, 43°.70N×78°.01E, h33km, mb4.2/2, Error ellipse: s-maj=14.3km s-min=9.1km az=80.5*

ISC 14 06:56:13.1±0.6, 43°.59N±0°.04×78°.10E±0°.05, h10km, n45, σ1°.53/58, 9C-6D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAA	**Alma-Ata**	**0.90**	**250**	*i*PG	**Pg**	**06 56 30.0**	**-0.3**
AAA				*e*S	**Sg**	**06 56 43.5**	**+1.6**
AAA				pmax	pmax		
	comp=Z, 2μm, 0.2s						
AAA				smax			
	comp=E, 3μm, 0.2s						
KNDC	**Almaty**	**0.90**	**246**	⇑P	**Pg**	**06 56 29.2**	**-1.2**
	comp=E, 103nm, 0.2s						
KNDC				⇑S	**Sg**	**06 56 42.2**	**0.0**
	comp=E, 434nm, 0.3s						
ULHL	**Ulahol**	**1.91**	**226**	P	**Pn**	**06 56 45.1**	**-0.5**
	SNR=373						
TKM2	**Tokmak 2**	**1.94**	**251**	⇑Pn	**Pn**	**06 56 46.5**	**+0.4**
	comp=E, 67nm, 0.3s						
TKM2				⇓Sn	**Sn**	**06 57 13.6**	**+3.1**
	comp=E, 193nm, 0.2s						
TKM2	**Tokmak 2**	**1.94**	**251**	P	**Pn**	**06 56 46.4**	**+0.3**
	SNR=169						
TKM2	**Tokmak 2**	**1.94**	**251**	*e*Pn	**Pn**	**06 56 44.5**	**-1.6**
TKM2				*e*Sg	**Sg**	**06 57 13.7**	**-1.9**
KBK	**Karagaybulak**	**2.49**	**249**	P	**Pn**	**06 56 56.2**	**+2.7**
	SNR=15						
CHMS	**Chumysh**	**2.51**	**258**	P	**Pn**	**06 56 56.0**	**+2.1**
	SNR=18						
KZA	**Kyzart**	**2.58**	**235**	P	**Pn**	**06 56 56.3**	**+1.4**
	SNR=42						
USP	**Ospenovka**	**2.64**	**264**	P	**Pn**	**06 56 58.6**	**+3.0**
	SNR=14						
AAK	**Ala-Archa**	**2.81**	**251**	P	**Pn**	**06 57 02.0**	**+4.1**
	SNR=19						
AAK	**Ala-Archa**	**2.81**	**251**	Pn	**Pn**	**06 56 59.2**	**+1.2**
	comp=E, 16nm, 0.3s, baz=100, slow=4.8, SNR=20						
AAK				Lg		06 57 38.9	
	comp=E, 27nm, 0.3s, baz=245, slow=21, SNR=3.6						
EKS2	**Erkin-Say**	**3.29**	**255**	P	**Pg**	**06 57 14.0**	**-2.1**
	SNR=21						
EKS2	**Erkin-Say**	**3.29**	**255**	*e*Pn	**Pn**	**06 57 00.5**	**-4.2**
EKS2				*e*Pg	**Pg**	**06 57 13.9**	**-2.2**
EKS2				*e*Sg	**Sg**	**06 57 56.0**	**-2.8**
AML	**Almayashu**	**3.55**	**247**	P	**Pg**	**06 57 15.0**	**-6.1**
	SNR=19						
MK31	**Makanchi Array**	**4.37**	**41**	Pn	**Pn**	**06 57 19.8**	**+0.4**
	comp=E, 2.4nm, 0.2s, baz=216, slow=15, SNR=110						
MK31				⇑Sn	**Sn**	**06 58 10.2**	**0.0**
	comp=E, 3.7nm, 0.2s, baz=215, slow=27, SNR=4.8						
MK31				Lg		06 58 28.4	
	comp=E, 10nm, 0.3s, baz=219, slow=28, SNR=12						
MK31	**Makanchi Array**	**4.37**	**41**	PN	**Pn**	**06 57 19.8**	**+0.4**
MK31						06 58 10.2	
MK31				pmax	pmax		
	comp=Z, 8.0nm, 0.2s						
MK31				smax			
	comp=N, 12nm, 0.2s						
MK31	**Makanchi Array**	**4.37**	**41**	*e*Pn	**Pn**	**06 57 18.6**	**-0.8**
MK31				*e*Sg	**Sg**	**06 58 29.7**	**-3.4**
MKAR	**Makanchi Array**	**4.37**	**41**	Pn	**Pn**	**06 57 19.6**	**+0.2**
	comp=N, 1.4nm, 0.3s, baz=220, slow=17, SNR=55						
MKAR				Pg	**Pg**	**06 57 27.9**	**-8.8**
	comp=N, 5.9nm, 0.3s, baz=219, slow=16, SNR=15						
MKAR				Sn	**Sn**	**06 58 11.5**	**+1.2**
	comp=N, 8.0nm, 0.3s, baz=218, slow=23, SNR=5.1						
MKAR				Lg		06 58 29.6	
	comp=N, 22nm, 0.3s, baz=225, slow=29, SNR=7.5						
MKAR	**Makanchi Array**	**4.37**	**41**	PN	**Pn**	**06 57 19.6**	**+0.2**
MKAR						06 57 27.9	
MKAR						06 58 11.5	
MKAR				pmax	pmax		
	comp=Z, 1.0nm, 0.3s						
MKAR				smax			
	comp=N, 8.0nm, 0.3s						
KSH	**Kashi**	**4.37**	**202**	*e*Pn	**Pn**	**06 57 25.5**	**+6.0**
KSH				*e*Sn	**Sn**	**06 58 17.1**	**+6.7**
KSH				smax			
	comp=N, 75nm, 0.8s						
KSH				smax			
	comp=E, 83nm, 0.7s						
KK31	**Karatay Array**	**5.55**	**268**	⇑Pg	**Pg**	**06 57 54.5**	**-4.9**
	comp=E, 7.0nm, 0.5s, baz=88, slow=16, SNR=4.1						
KK31				⇑Lg		06 59 08.6	
	comp=E, 15nm, 0.4s, baz=84, slow=27						
KK31	**Karatay Array**	**5.55**	**268**	PN	**Pb**	**06 57 46.0**	**-4.0**
KK31				pmax	pmax		
	comp=Z, 8.0nm, 0.4s						
KURK	**Kurchatov**	**7.14**	**3**	⇓Pn	**Pn**	**06 57 58.6**	**+1.2**
	comp=Z, 1.4nm, 0.5s						
KURK				⇓Lg		06 59 59.9	
	comp=Z, 76nm, 0.8s						
KURK	**Kurchatov**	**7.14**	**3**	*e*PN	**Pn**	**06 57 58.5**	**+1.1**
KURK				pmax	pmax		
	comp=Z, 6.0nm, 0.6s						
KURK	**Kurchatov**	**7.14**	**3**	*e*Pn	**Pn**	**06 57 57.1**	**-0.3**
	comp=Z, 6.5nm, 0.6s						
KURK				*e*Sg	**Sg**	**07 00 01.2**	**-0.8**
VOSK	**Vostochnaya**	**10.29**	**335**	⇓Sn	**Sn**	**07 00 40.8**	**+4.8**
	comp=Z, 2.3nm, 0.6s						
VOSK				⇓Lg		07 01 41.1	
	comp=Z, 16nm, 0.8s						
VOSK	**Vostochnaya**	**10.29**	**335**	P	**Pn**	**06 58 38.8**	**-1.9**
VOSK				pmax	pmax		
	comp=Z, 2.0nm, 0.8s						
BVAR	**Borovoye Array**	**10.74**	**334**	Pn	**Pn**	**06 58 46.3**	**-0.5**
	comp=Z, 0.4nm, 0.3s, baz=146, slow=19, SNR=6.1						
BVAR				Sn	**Sn**	**07 00 49.4**	**+2.5**
	comp=Z, 1.0nm, 0.3s, baz=143, slow=24, SNR=5.6						
BVAR				Lg		07 01 58.2	
	comp=Z, 1.1nm, 0.3s, baz=146, slow=26, SNR=5.9						
BVAR	**Borovoye Array**	**10.74**	**334**	*e*P	**Pn**	**06 58 46.2**	**-0.5**
BRVK	**Borovoye**	**10.80**	**334**	⇓Lg		07 01 59.2	
	comp=Z, 40nm, 1.0s						
BRVK	**Borovoye**	**10.80**	**334**	⇑*e*P	**Pn**	**06 58 46.8**	**-0.8**
ZRNK	**Zerenda**	**11.14**	**330**	⇑Sn	**Sn**	**07 00 58.0**	**+1.1**
	comp=Z, 4.0nm, 0.5s						
ZRNK				⇑Lg		07 02 04.7	
	comp=Z, 15nm, 0.7s						
ZRNK	**Zerenda**	**11.14**	**330**	P	**Pn**	**06 58 50.6**	**-1.7**
ZRNK				pmax	pmax		
	comp=Z, 5.0nm, 0.4s						
ZALV	**Zalesovo Beam**	**11.27**	**21**	Pn	**Pn**	**06 58 54.9**	**+0.9**
	comp=Z, 0.4nm, 0.3s, baz=231, slow=12, SNR=4.1						
ZALV				Lg		07 02 12.7	
	comp=Z, 0.6nm, 0.3s, baz=208, slow=25, SNR=5.3						
AB31	**Akbulak array**	**13.73**	**301**	P	**Pn**	**06 59 29.9**	**+2.2**
	comp=Z, 0.2nm, 0.3s, baz=104, slow=74, SNR=7.0						
AB31	**Akbulak array**	**13.73**	**301**	P	**Pn**	**06 59 29.8**	**+2.1**
ABKAR	**Akbulak array**	**13.73**	**301**	Pn	**Pn**	**06 59 21.1**	**-6.5**
SONM	**Songino Array**	**20.16**	**68**	P	**P**	**07 00 45.5**	**-1.9**
	comp=Z, 1.2nm, 0.7s, baz=270, slow=11, SNR=7.3						
SONM	**Songino Array**	**20.16**	**68**	P	**P**	**07 00 45.5**	**-1.8**
SONM				pmax	pmax		
	comp=Z, 1.0nm, 0.7s						
ULN	**Ulaanbaatar**	**20.60**	**68**	*e*P	**P**	**07 00 53.3**	**+1.2**
SOC	**Sochi**	**27.64**	**283**	*e*P	**P**	**07 01 53.3**	**-7.4**
SOC				*e*S	**S**	**07 06 36.2**	**-6.1**
SOC				*e*		07 08 21.0	
YKA	**Yellowknife Ar**	**73.78**	**6**	P	**P**	**07 07 45.0**	**-2.0**
	comp=Z, 0.8nm, 0.6s, baz=348, slow=6.1, SNR=7.8						
YKA				pmax	pmax		
	comp=Z, 1.0nm, 0.6s						
YKA	**Yellowknife Ar**	**73.78**	**6**	P	**P**	**07 07 45.0**	**-2.0**

KRSC 14 06:57:28.3±0.7, 50°.97N×157°.82E, h40km±29km, ML4.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**1.44**	**267**	*i*P	Pn	06 57 50.4	-1.4
ALID				*i*S	Sn	06 58 06.7	-2.8
MIPR	**Malaya Ipel'ka**	**1.47**	**334**	*i*P	Pn	06 57 52.5	+0.3
MIPR				*i*S	Sn	06 58 10.2	+0.1
GRL	**Gorelyy**	**1.59**	**6**	*i*P	Pn	06 57 55.2	+1.3
GRL				*i*S	Sn	06 58 14.8	+1.5
PET	**Petropavlovsk**	**2.12**	**14**	*e*P	Pn	06 58 02.4	+1.2
PET				*i*S	Sn	06 58 27.5	+1.2
AVH	**Avacha**	**2.37**	**13**	*e*P	Pn	06 58 07.5	+2.9
AVH				*e*S	Sn	06 58 35.9	+3.6
NLC	**Nalytchevo**	**2.40**	**23**	P	Pn	06 58 05.1	+0.1
NLC				*i*S	Sn	06 58 31.4	-1.7
SPN	**Mys Shipunski**	**2.53**	**32**	P	Pn	06 58 08.4	+1.6
SPN				*i*S	Sn	06 58 37.0	+0.7
GNL	**Ganaly**	**2.73**	**2**	*i*P	Pn	06 58 11.4	+1.8
GNL				*e*S	Sn	06 58 42.7	+1.4
MKZ	**Mys Kozlova**	**4.31**	**32**	P	Pn	06 58 31.9	+0.7
MKZ				*i*S	Sn	06 59 18.3	-1.8
KBTR	**Krutoberegovo**	**6.03**	**28**	P	Pn	06 58 55.9	+1.1

*IDC **14** 07:16:06.7±1.2, 10°.52N×91°.57E, h0km, mb3.8/9, mb1 3.9/10, mb1mx3.7/24, mbtmp3.8/10, ML4.1/1, Error ellipse: s-maj=55.1km s-min=16.9km az=56.0*
*NEIC **14** 07:16:08.4±0.5, 10°.55N×91°.63E, h10km, mb4.3/5, Error ellipse: s-maj=14.5km s-min=8.7km az=52.0*
*ISCJB **14** 07:16:10.2±0.7, 10°.6N±0°.1×91°.8E±0°.1, h33km, mb4.0/13, Error ellipse: s-maj=20.0km s-min=12.1km az=140.6*

ISC 14 07:16:12.4±0.7, 10°.6N±0°.1×91°.7E±0°.1, h35km, n17, σ0°.64/17, mb4.0/13, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.45**	**41**	Pn	**Pn**	**07 18 40.8**	**+1.0**
	0.4nm, 0.3s, baz=228, slow=14, SNR=4.1						
QIZ	**Qiongzhong**	**19.38**	**62**	*e*P	**Pn**	**07 20 35.3**	**-1.3**
	12nm, 0.9s						
ENH	**Enshi**	**25.60**	**38**	*e*P	**P**	**07 21 43.9**	**+5.5**
	16nm, 0.6s, mb4.7						
AML	**Almayashu**	**35.15**	**336**	*e*P	**P**	**07 23 03.9**	**+1.2**
	1.5nm, 0.5s, mb4.2						
MKAR	**Makanchi Array**	**36.94**	**349**	P	**P**	**07 23 17.6**	**-0.3**
	1.4nm, 0.7s, mb3.9, baz=170, slow=8.3, SNR=14						
MKAR	**Makanchi Array**	**36.94**	**349**	*e*P	**P**	**07 23 17.8**	**-0.1**
ZALV	**Zalesovo Beam**	**43.57**	**354**	P	**P**	**07 24 12.2**	**-0.6**
	0.7nm, 0.4s, mb3.8, baz=159, slow=9.3, SNR=4.3						
FITZ	**Fitzroy Crossi**	**43.98**	**130**	P	**P**	**07 24 16.5**	**-0.1**
	1.3nm, 0.6s, mb3.8, baz=291, slow=8.6, SNR=3.2						
FITZ	**Fitzroy Crossi**	**43.98**	**130**	*e*P	**P**	**07 24 16.7**	**+0.1**
BVAR	**Borovoye Array**	**45.66**	**342**	P	**P**	**07 24 29.4**	**0.0**
	0.3nm, 0.5s, mb3.5, baz=134, slow=8.3, SNR=3.3						
WRA	**Warramunga Arr**	**51.77**	**126**	P	**P**	**07 25 16.9**	**0.0**
	0.4nm, 0.4s, mb3.7, baz=300, slow=9.9, SNR=4.6						
WRAB	**Tennant Creek**	**51.78**	**126**	*e*P	**P**	**07 25 17.5**	**+0.6**
	4.6nm, 1.1s, mb4.3						
ASAR	**Alice Springs**	**53.48**	**130**	P	**P**	**07 25 29.6**	**+0.1**
	0.5nm, 0.5s, mb3.8, baz=309, slow=6.9, SNR=9.5						
FINES	**FINESS Array B**	**69.19**	**332**	P	**P**	**07 27 14.9**	**-0.3**
	1.1nm, 0.6s, mb4.0, baz=98, slow=8.5, SNR=5.2						
ARCES	**ARCESS Array B**	**71.90**	**340**	P	**P**	**07 27 32.1**	**+0.6**
	2.0nm, 1.0s, mb4.0, baz=83, slow=7.4, SNR=5.9						
KHC	**Kasperske Hory**	**74.31**	**318**	*e*P	**P**	**07 27 45.5**	**-0.7**
	2.9nm, 0.6s, mb4.4						
HFS	**Hagfors**	**74.91**	**330**	P	**P**	**07 27 49.1**	**-0.3**
	1.0nm, 0.7s, mb3.9, baz=98, slow=11, SNR=2.2						

*ATH **14** 07:16:38.4, 40°.25N×19°.72E, h3km±3km, MD3.3/5*
*NEIC **14** 07:16:38.4, 40°.25N×19°.72E, h3km, MD3.3(ATH), After ATH.*
*CSEM **14** 07:16:38.4, 40°.25N×19°.72E, h3km, MD3.3, After ATH*
*ISCJB **14** 07:16:42.4±1.0, 40°.12N±0°.05×19°.86E±0°.07, h10km, Error ellipse: s-maj=8.4km s-min=6.3km az=20.9*

ISC 14 07:16:42.3±1.0, 40°.15N±0°.05×19°.81E±0°.08, h10km, n22, σ0°.95/30, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEK	**Kerkira**	**0.43**	**181**	*e*Pg	**Pg**	**07 16 49.0**	**-1.7**
KEK				*e*Sg	**Sg**	**07 16 56.5**	**+0.1**
KEK	**Kerkira**	**0.43**	**181**	*e*PG	**Pg**	**07 16 49.0**	**-1.7**
KEK				*e*SG	**Sg**	**07 16 56.5**	**+0.1**
KEK	**Kerkira**	**0.43**	**181**	*e*Pg	**Pg**	**07 16 49.0**	**-1.7**
KEK				*e*Sg	**Sg**	**07 16 56.5**	**+0.1**
JAN	**Janina**	**0.94**	**121**	*e*Pg	**Pg**	**07 16 58.3**	**-2.0**
JAN				*e*Sg	**Sg**	**07 17 12.4**	**-0.1**
JAN	**Janina**	**0.94**	**121**	*e*PG	**Pg**	**07 16 58.2**	**-2.1**
JAN				*e*SG	**Sg**	**07 17 12.4**	**-0.1**
JAN	**Janina**	**0.94**	**121**	*e*Pg	**Pg**	**07 16 58.3**	**-2.0**
JAN				*e*Sg	**Sg**	**07 17 12.4**	**-0.1**
OHR	**Ohrid**	**1.22**	**38**	*i* Pn	**Pn**	**07 17 05.4**	**0.0**
KRUS	**Krusevo**	**1.64**	**41**	*e*Pn	**Pn**	**07 17 10.3**	**-0.9**
THL	**Klokotos Trika**	**1.79**	**108**	*e*PB	**Pn**	**07 17 14.3**	**+1.1**
THL				*e*SB	**Sg**	**07 17 39.8**	**-0.1**
THL	**Klokotos Trika**	**1.79**	**108**	*e*Pb	**Pn**	**07 17 14.3**	**+1.1**
THL				*e*Sb	**Sg**	**07 17 39.8**	**-0.1**
EVR	**Evrytania**	**1.97**	**128**	*e*Pn	**Pn**	**07 17 16.8**	**+1.1**
EVR	**Evrytania**	**1.97**	**128**	*e*PN	**Pn**	**07 17 16.8**	**+1.1**
EVR	**Evrytania**	**1.97**	**128**	*e*Pn	**Pn**	**07 17 16.8**	**+1.1**
VLS	**Valsamata**	**2.06**	**163**	*e*Pn	**Pn**	**07 17 17.7**	**+0.8**
VLS	**Valsamata**	**2.06**	**163**	*e*PN	**Pn**	**07 17 17.7**	**+0.8**
VLS	**Valsamata**	**2.06**	**163**	*e*Pn	**Pn**	**07 17 17.7**	**+0.8**
AGG	**Agios Georgios**	**2.25**	**119**	*e*Pb	**Pn**	**07 17 19.9**	**+0.4**
AGG	**Agios Georgios**	**2.25**	**119**	*e*PB	**Pn**	**07 17 19.9**	**+0.4**
AGG	**Agios Georgios**	**2.25**	**119**	*e*Pb	**Pn**	**07 17 19.9**	**+0.4**
EFP	**Efpalio**	**2.37**	**136**	*e*PN	**Pn**	**07 17 22.2**	**+1.1**
EFP	**Efpalio**	**2.37**	**136**	*e*Pn	**Pn**	**07 17 22.3**	**+1.2**
VAY	**Valandovo**	**2.40**	**60**	*i* Pn	**Pb**	**07 17 25.5**	**-0.1**

*NIED **14** 07:17:00, 47°.10N×150°.80E, h340km, Mw4.9 Best double couple: M0:2.15000×10^16 NP1:φs=246.00000°, δ89.00000°, λ116.00000°. NP2:φs=339.00000°, δ26.00000°, λ3.00000°.*
*ISCJB **14** 07:17:40.5±0.3, 48°.14N±0°.04×150°.11E±0°.04, h319km±3km, mb4.0/67, Error ellipse: s-maj=6.7km s-min=3.2km az=158.8*
*IDC **14** 07:17:41.7±1.4, 48°.26N×150°.10E, h319km±14km, mb3.7/22, mb1 3.9/25, mb1mx3.8/33, mbtmp3.7/25, Error ellipse: s-maj=11.3km s-min=8.1km az=138.0*
*BJI **14** 07:17:41.4, 48°.12N×149°.93E, h321km, mB4.3/19, mb4.5/29*
*MOS **14** 07:17:41.0±0.8, 48°.24N×150°.06E, h327km, mb3.9/26, Error ellipse: s-maj=10.6km s-min=7.4km az=67.7*
*NEIC **14** 07:17:43.0±0.7, 48°.23N×150°.02E, h331km±8km, mb4.0/33, Error ellipse: s-maj=7.1km s-min=4.4km az=162.0*
*SKHL **14** 07:17:42.5±2.2, 48°.12N×150°.09E, h277km±6km, mb5.3/1, msh5.0/4*

ISC 14 07:17:41.3±0.3, 48°.09N±0°.04×150°.14E±0°.03, h313km±3km, h323km±4.4km: pP-P, n475, σ0°.73/502, mb4.1/67, 151C-150D, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.25**	**210**	*e*PN	**Pn**	**07 18 40.8**	**+0.4**
KUR				*e*S	**S**	**07 19 27.8**	**0.0**
KUR				pmax	pmax		
	comp=Z, 60nm, 0.4s						
KUR				smax			
	comp=N, 380nm, 1.0s						
KUR				smax			
	comp=E, 470nm, 1.0s						
KUR	**Kuril'sk**	**3.25**	**210**	*e*P	**Pn**	**07 18 40.8**	**+0.4**
KUR				AMB	AMB	07 18 41.7	
	comp=E, 60nm, 0.4s						
KUR				*e*S	**S**	**07 19 27.8**	**0.0**
KUR				A		07 19 28.6	
	comp=E,

comp=Z,200nm,0.8s
YSS smax
comp=N,500nm,6.0s
YSS smax
comp=N,60nm,1.1s
YSS Yuzh-Sakhalins 5.13 260 *e*Pn **Pn 07 19 02.9 +2.2**
YSS Yuzh-Sakhalins 5.13 260⇓ *i*P **Pn 07 19 02.6 +1.9**
YSS AMB AMB 07 19 04.0
comp=N,200nm,0.8s
YSS AMB AMB 07 19 04.0
comp=N,100nm,0.8s
YSS AMB AMB 07 19 04.0
comp=N,150nm,0.8s
YSS *e*S **S 07 20 07.0 +2.3**
YSS A 07 20 10.0
comp=N,500nm,6.0s
YSS A 07 20 11.0
comp=N,60nm,1.1s
UGL Uglegorsk 5.45 284 *e*PN **Pn 07 19 06.0 +1.6**
UGL pmax pmax
comp=Z,114nm,0.8s
UGL Uglegorsk 5.45 284 *e*P **Pn 07 19 06.0 +1.6**
UGL AMB AMB 07 19 07.0
comp=Z,114nm,0.8s
UGL *e*S **S 07 20 16.0 +4.6**
UGL A 07 20 24.0
comp=Z,600nm,6.0s
UGL A 07 20 24.0
comp=Z,1μm,8.0s
TYV Tymovskoe 5.62 302 *e*P **Pn 07 19 06.5 +0.3**
TYV AMB AMB 07 19 07.5
comp=Z,26nm,1.0s
TYV AMB AMB 07 19 07.5
comp=Z,14nm,0.6s
TYV *e*S **S 07 20 16.5 +1.7**
TYV A 07 20 20.0
comp=Z,100nm,1.6s
TYV A 07 20 20.0
comp=Z,360nm,2.0s
NEM2 Nemuro 2 5.64 215 P **Pn 07 19 03.6 -3.0**
NEM2 *e*S **S 07 20 07.2 -8.3**
JNK Nakash 5.88 222 P **Pn 07 19 08.7 -0.8**
JTKR Abashiri--Toko 5.98 229 P **Pn 07 19 11.2 +0.5**
JTKR *e*S **S 07 20 21.4 -1.4**
JSE Soyaes 6.08 242 P **Pn 07 19 13.8 +2.0**
JMP Maruseppu 6.24 232 P **Pn 07 19 14.7 +1.0**
JWK2 Keihoku 6.31 247 P **Pn 07 19 17.6 +3.1**
JAK Akkeshi 6.37 219 P **Pn 07 19 12.8 -2.4**
JAK *e*S **S 07 20 23.9 -7.3**
JAR Ashorobuto 6.54 225 P **Pn 07 19 16.7 -0.7**
ASAJ Asahikawa 6.58 236 P **Pn 07 19 19.4 +1.7**
comp=Z,25nm,0.3s,baz=67,slow=12,SNR=121
ASAJ S **S 07 20 37.2 +1.5**
comp=Z,1.2nm,0.3s,baz=18,slow=20,SNR=3.9
ASAJ Asahikawa 6.58 236 PN **Pn 07 19 19.5 +1.8**
ASAJ S **S 07 20 37.3 +1.5**
ASAJ pmax pmax
comp=Z,25nm,0.3s
ASAJ smax
comp=N,1.0nm,0.3s
ASAJ Asahikawa 6.58 236 P **Pn 07 19 19.4 +1.7**
JKK2 Kamakawa 2 6.65 233 P **Pn 07 19 19.6 +0.9**
JOB Onbets 6.82 223 P **Pn 07 19 18.8 -1.8**
JOB *e*S **S 07 20 35.2 -5.9**
JSS Shosan 6.83 240 P **Pn 07 19 23.3 +2.6**
JAR Ashibetsu 7.18 233 P **Pn 07 19 26.2 +1.2**
JFR Furan 7.22 230 P **Pn 07 19 25.7 +0.2**
JFR *e*S **S 07 20 47.0 -3.0**
JCH Churui 7.26 224 P **Pn 07 19 23.6 -2.4**
JCH *e*S **S 07 20 43.6 -7.2**
JHR Hokuryu 7.30 237 P **Pn 07 19 28.7 +2.3**
PET Petropavlovsk 7.33 44 *e*PN **Pn 07 19 25.3 -1.4**
PET *e*S **S 07 20 45.1 -7.0**
PET pmax pmax
comp=Z,47nm,1.1s
PET smax
comp=N,72nm,0.4s
PET smax
comp=E,97nm,0.6s
PET MLR MLR
comp=Z,100nm,16.0s
JBT2 Biratori 2 7.62 229 P **Pn 07 19 29.0 -1.3**
JNBK Urakawa-nobuka 7.80 225 P **Pn 07 19 28.8 -3.7**
JNBK *e*S **S 07 20 53.2 -10**
JEM Erimo 7.83 222 P **Pn 07 19 30.8 -2.0**
JEM *e*S **S 07 20 56.1 -7.3**
ERM Erimo 7.83 222 *e*PN **Pn 07 19 33.7 +0.9**
ERM Erimo 7.83 222 *e*Pn **Pn 07 19 31.0 -1.9**
ERM *e*Sn **S 07 20 54.7 -8.7**
JEW Eniwo 8.05 233 *e*S **S 07 21 06.2 -2.1**
JSK Shakotan 8.25 239 P **Pn 07 19 39.4 +1.4**
JNB Noboribetsu 8.53 232 P **Pn 07 19 39.7 -1.6**
JKB Kayabe 8.94 230 P **Pn 07 19 43.6 -2.8**
JKB *e*S **S 07 21 18.9 -9.5**
JSH Shimam 8.95 236 P **Pn 07 19 46.3 -0.1**
JYM2 Yakumo 2 9.13 233 P **Pn 07 19 47.0 -1.6**
JSR Shiriuchi 9.52 230 P **Pn 07 19 51.2 -2.2**
JSR *e*S **S 07 21 34.0 -7.3**
JOSM Okushiri--Mats 9.64 235 P **Pn 07 19 54.1 -0.7**
JTM Tenmabayashi 9.76 225 P **Pn 07 19 52.9 -3.4**
JTM *e*S **S 07 21 35.3 -11**
TEY Ternei 9.81 257 *i*P **Pn 07 19 59.0 +2.1**
TEY AMB AMB 07 19 59.7
comp=Z,86nm,1.0s
TEY AMB AMB 07 19 59.7
comp=Z,47nm,0.8s
TEY AMB AMB 07 19 59.7
comp=Z,22nm,1.0s
JANG Nango 9.88 222 *e*S **S 07 21 37.5 -12**
HABR Khabarovsk 10.07 278 *e*PN **Pn 07 20 00.5 +0.5**
HABR S **S 07 21 53.4 -0.1**
HABR pmax pmax
comp=N,21nm,1.3s
HABR pmax pmax
comp=Z,48nm,0.8s
HABR pmax pmax
comp=E,66nm,1.0s
JRG Rokugo 11.07 222 P **Pn 07 20 10.8 -1.5**
JRG *e*S **S 07 22 08.4 -12**
KLR Kul'dur 12.22 282⇑ *i*PN **Pn 07 20 25.1 -0.9**
KLR pmax pmax
comp=E,150nm,1.2s
KLR pmax pmax
comp=Z,94nm,1.2s
KLR MLR MLR
comp=Z,700nm,12.0s
MAJO Matsushiro 14.51 222 *e*P **P 07 20 53.8 +1.6**
MAT Matsushiro 14.51 222 P **P 07 20 53.3 +1.1**
MAT *e*S **S 07 23 31.0 +0.4**
MJAR Matsushiro Arr 14.51 222 P **P 07 20 53.7 +1.6**
comp=Z,3.6nm,0.3s,baz=23,slow=12,SNR=64
MJAR Matsushiro Arr 14.51 222 P **P 07 20 53.7 +1.5**
MJAR pmax pmax
comp=Z,4.0nm,0.3s
MJAR Matsushiro Arr 14.51 222 P **P 07 20 53.7 +1.6**
MDJ Mudanjiang 14.60 264 P **P 07 20 53.0 -0.2**
MDJ S **S 07 23 30.9 -1.5**
MDJ PcP PcP 07 25 44.0 +0.6
MDJ pmax pmax
comp=Z,43nm,0.9s
MDJ pmax pmax
comp=Z,23nm,3.9s
MDJ Mudanjiang 14.60 264 *e*Pn **Pn 07 20 54.3 -0.2**
comp=Z,19nm,0.7s
SEY Seymchan 14.94 4 *c i*P **P 07 20 55.8 -0.7**
ZEA Zeya 15.47 300 *e*P **P 07 21 02.7 +0.1**
ZEA AMB AMB 07 21 04.8
comp=Z,29nm,1.0s
CN2 Changchun 17.67 265 *e*P **P 07 21 25.5 -1.0**
CN2 *es*P sP 07 22 48.5 -4.3
CN2 *e*S **S 07 24 27.6 -5.9**
CN2 pmax pmax
comp=Z,40nm,0.6s
CN2 pmax pmax
comp=Z,200nm,5.0s
KSRS Korea Array 19.40 245 P **P 07 21 45.7 +0.8**
comp=Z,2.0nm,0.3s,baz=44,slow=11,SNR=111
KSRS Korea Array 19.40 245 P **P 07 21 45.7 +0.8**
KSRS pmax pmax
comp=Z,2.0nm,0.3s
BJI Beijing 25.54 264 P **P 07 22 41.4 -0.6**
BJI S **S 07 26 36.8 -9.0**
BJI pmax pmax
comp=Z,5.0nm,0.5s,mb4.2
BJI pmax pmax
comp=Z,21nm,3.5s
BJI LR LR
comp=N,63nm,17.3s
BJI LR LR
comp=E,60nm,14.7s
BJI LR LR
comp=Z,27nm,16.6s
TIXI Tiksi 25.63 345 *e*P **P 07 22 39.6 -2.9**
TIXI pmax pmax
comp=Z,5.0nm,1.1s,mb3.9
HHC Hu-ho-hao-te 28.23 270 *e*P **P 07 23 06.5 +0.6**
HHC pP 07 24 06.0
HHC sP sP 07 24 43.8 +2.2
HHC PcP PcP 07 26 12.5 +2.2
HHC S **S 07 27 27.3 -0.8**
HHC sS sS 07 29 15.6 -0.8
HHC ScP ScP 07 29 21.3 +0.4
HHC PcS PcS 07 29 53.4 +0.6
HHC ScS ScS 07 33 12.9 -1.3
HHC pmax pmax
comp=Z,16nm,0.8s,mb4.5
HHC pmax pmax
comp=Z,63nm,5.7s
NJ2 Nanjing 28.55 247 *e*P **P 07 23 11.3 +2.5**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.4
ULN Ulaanbaatar 28.57 286 *i*P **P 07 23 08.4 -0.4**
SONM Songino Array 29.01 286 P **P 07 23 12.1 -0.5**
comp=Z,3.9nm,0.7s,mb4.0,baz=65,slow=9.0,SNR=21
SONM PcP PcP 07 26 12.2 +0.1
comp=Z,0.6nm,0.6s,baz=128,slow=4.2,SNR=3.3
SONM ScP ScP 07 29 22.6 -0.6
comp=Z,0.4nm,0.7s,baz=11,slow=3.0,SNR=3.7
TLY Talaya 29.78 295 *e*P **P 07 23 19.2 -0.2**
TLY pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
TLY Talaya 29.78 295 *e*P **P 07 23 19.2 -0.2**
comp=Z,9.7nm,0.7s,mb4.4
COLD Coldfoot 35.39 35 *e*P **P 07 24 07.1 -0.4**
comp=Z,3.5nm,0.8s,mb3.9
LZH Lanzhou 35.88 268 *e*P **P 07 24 13.5 +1.5**
LZH pP pP 07 25 17.4 +4.3
LZH PP PP 07 25 43.0 +1.9
LZH sP sP 07 25 54.0 +5.0
LZH PcP PcP 07 26 36.1 +4.6
LZH *e*S **S 07 29 30.1 +4.0**
LZH sS sS 07 31 19.3 +2.9
LZH SS SS 07 32 08.4 -9.1
LZH pmax pmax
comp=Z,41nm,1.3s,mb4.8
LZH pmax pmax
comp=Z,170nm,4.7s
GTA Gaotai 36.80 275 P **P 07 24 20.8 +1.0**
GTA pP pP 07 25 24.0 +2.9
GTA sP sP 07 25 57.9 +1.0
GTA pmax pmax
comp=Z,7.0nm,0.7s,mb4.2
CD2 Chengdu 39.04 261 P **P 07 24 38.9 +0.5**
CD2 pP pP 07 25 42.5 +2.1
CD2 sP sP 07 26 18.3 +2.3
CD2 S **S 07 30 13.4 -0.2**
CD2 sS sS 07 32 05.8 +0.7
CD2 SS SS 07 33 12.1 -8.2
CD2 pmax pmax
comp=Z,20nm,0.9s,mb4.5
CD2 pmax pmax
comp=Z,100nm,4.1s
EGAK Eagle 39.22 39 *e*P **P 07 24 38.5 -1.0**
comp=Z,5.7nm,0.6s,mb4.2
GYA Guiyang 40.10 253 P **P 07 24 46.8 -0.4**
ZALV Zalesovo Beam 40.19 304 P **P 07 24 46.3 -1.2**
comp=Z,2.9nm,0.5s,mb3.9,baz=65,slow=7.1,SNR=12
ZALV PcP PcP 07 26 44.1 -0.5
comp=Z,1.4nm,0.4s,baz=64,slow=3.4,SNR=5.2
ZALV Zalesovo Beam 40.19 304 P **P 07 24 46.3 -1.3**
ZALV 07 26 44.2
ZALV pmax pmax
comp=Z,3.0nm,0.5s,mb3.9
INK Inuvik 41.62 33 P **P 07 24 58.2 -0.7**
comp=Z,2.5nm,0.4s,mb3.8,baz=294,slow=6.0,SNR=62
INK Inuvik 41.62 33 *e*P **P 07 24 58.3 -0.6**
INK pmax pmax
comp=Z,3.0nm,0.6s
INK Inuvik 41.62 33 *e*P **P 07 24 58.3 -0.6**
comp=Z,3.0nm,0.6s,mb3.7
HYT Haines Junctio 41.73 45 *e*P **P 07 25 01.0 +1.2**
WMQ Urumqi 42.58 288 *e*P **P 07 25 08.0 +1.1**
KMI Kunming 43.56 256 P **P 07 25 15.1 +0.1**
KMI pmax pmax
comp=Z,12nm,0.8s,mb4.2
MK31 Makanchi Array 44.54 295 *e*P **P 07 25 22.1 -0.3**
MKAR Makanchi Array 44.54 295 P **P 07 25 21.9 -0.5**
comp=Z,3.3nm,0.7s,mb3.7,baz=69,slow=7.8,SNR=30
MKAR pP pP 07 26 28.9 +2.8
comp=Z,0.3nm,0.6s,baz=73,slow=6.4,SNR=1.3
MKAR PcP PcP 07 26 58.7 -0.7
comp=Z,0.3nm,0.3s,baz=65,slow=5.0,SNR=7.4
MKAR ScP ScP 07 30 18.9 -2.1
comp=Z,0.9nm,1.0s,baz=64,slow=3.4,SNR=4.5
KURK Kurchatov 44.95 301 *e*P **P 07 25 24.7 -0.8**
KURK pmax pmax
comp=Z,6.0nm,0.6s,mb4.0
KURK Kurchatov 44.95 301 *e*P **P 07 25 24.7 -0.8**
comp=Z,6.0nm,0.6s,mb4.0
BVAR Borovoye Array 48.45 307 P **P 07 25 51.7 -0.7**
comp=Z,1.4nm,0.4s,mb3.7,baz=58,slow=8.2,SNR=11
BVAR pP pP 07 26 59.9 +2.7
comp=Z,0.4nm,0.5s,baz=52,slow=9.3,SNR=2.3
BVAR PcP PcP 07 27 12.1 -1.1
comp=Z,0.4nm,0.3s,baz=56,slow=2.6,SNR=4.4
BVAR Borovoye Array 48.45 307 P **P 07 25 51.7 -0.7**
BVAR *PP pP 07 26 59.9 +2.7
BVAR 07 27 12.1
BVAR pmax pmax
comp=Z,1.0nm,0.4s
BRVK Borovoye 48.49 307⇓ *i*P **P 07 25 52.0 -0.7**
BRVK pmax pmax
comp=Z,4.0nm,0.8s,mb3.8
RES Resolute Bay 50.21 18 P **P 07 26 04.0 -1.3**
comp=Z,3.7nm,0.7s,mb3.8,baz=326,slow=8.3,SNR=4.4
RES Resolute Bay 50.21 18 P **P 07 26 04.0 -1.3**
RES pmax pmax
comp=Z,4.0nm,0.7s,mb3.9
RES Resolute Bay 50.21 18 P **P 07 26 04.0 -1.3**
CHTO Chiang Mai 50.52 253 *e*P **P 07 26 08.6 +0.2**
CHTO pmax pmax
comp=Z,15nm,1.5s,mb4.1
CHTO Chiang Mai 50.52 253 *e*P **P 07 26 08.6 +0.2**
comp=Z,15nm,1.5s,mb4.1
CMAR Chiang Mai Arr 50.78 253 P **P 07 26 11.1 +0.8**
comp=Z,2.6nm,0.9s,mb3.5,baz=35,slow=7.2,SNR=14
CMAR Chiang Mai Arr 50.78 253 P **P 07 26 11.1 +0.8**
CMAR pmax pmax
comp=Z,3.0nm,0.9s
YKA Yellowknife Ar 51.05 36 P **P 07 26 11.0 -0.7**
comp=Z,3.7nm,0.5s,mb4.0,baz=301,slow=6.9,SNR=36
YKA PcP PcP 07 27 22.1 -0.5
comp=Z,0.6nm,0.7s,baz=314,slow=3.6,SNR=5.5
YKA Yellowknife Ar 51.05 36 P **P 07 26 11.0 -0.7**
YKA 07 27 22.1
YKA pmax pmax
comp=Z,4.0nm,0.5s
YKA Yellowknife Ar 51.05 36 P **P 07 26 11.0 -0.8**
YKA PcP PcP 07 27 22.1 -0.5
AAK Ala-Archa 51.44 294 P **P 07 26 15.5 +0.6**
comp=Z,0.9nm,0.3s,mb3.6,baz=110,slow=6.8,SNR=3.5
AAK Ala-Archa 51.44 294 P **P 07 26 15.5 +0.6**
AAK pmax pmax
comp=Z,1.0nm,0.3s,mb3.6
AML Almayashu 52.22 294 *e*P **P 07 26 21.4 +0.9**
comp=Z,0.9nm,0.8s,mb3.1
ARU Arti 52.66 316 *c i*P **P 07 26 22.6 -1.0**
ARU pP 07 27 25.4 -4.1
ARU 07 28 23.9
ARU SS SS 07 37 07.4 -0.9
ARU pmax pmax
comp=Z,4.0nm,0.8s,mb3.8
GUN Gumba 52.91 272 *e*P **P 07 26 26.9 +1.1**
comp=Z,13nm,0.4s,mb4.6
RAMN Ramite 53.05 271 *e*P **P 07 26 26.9 0.0**
comp=Z,22nm,0.7s,mb4.6
KKN Kakani 53.39 272 *e*P **P 07 26 30.8 +1.5**
comp=Z,9.6nm,0.4s,mb4.5
DMN Daman 53.62 272 *e*P **P 07 26 32.4 +1.4**
comp=Z,11nm,0.5s,mb4.5
GKN Gorkha 53.68 273 *e*P **P 07 26 32.6 +1.2**
comp=Z,10nm,0.4s,mb4.5
NLWA Neilton Lookou 54.81 56⇓P **P 07 26 37.7 -1.5**
baz=55
ARCES ARCESS Array B 55.91 340 P **P 07 26 45.9 -0.8**
comp=Z,1.3nm,0.8s,mb3.4,baz=29,slow=9.5,SNR=3.6
ARCES PcP PcP 07 27 39.9 -1.2
comp=Z,1.4nm,0.8s,baz=31,slow=7.4,SNR=3.6
ARCES ARCESS Array B 55.91 340 P **P 07 26 45.9 -0.8**
ARCES 07 27 39.9
ARCES pmax pmax
comp=Z,1.0nm,0.8s
ARCES ARCESS Array B 55.91 340 P **P 07 26 45.9 -0.8**
ARCES PcP PcP 07 27 39.9 -1.2
ABKAR Akbulak array 56.02 308 *e*P **P 07 26 46.6 -1.1**
comp=Z,1.3nm,0.4s,mb3.7
F04A Amboy 56.48 57⇑P **P 07 26 50.7 -0.3**
baz=56
EDM Edmonton 56.83 46 *e*P **P 07 26 53.0 -0.3**
H04A Detroit Lake 57.36 58⇓P **P 07 26 57.0 -0.2**
baz=57
F07A Phinny Hill Vi 57.89 56⇑P **P 07 27 01.2 +0.4**
baz=58
G06A Carlson Farm, 57.90 57⇓P **P 07 27 01.7 +0.8**
baz=58
E09A Wood Farm, Sta 58.48 54⇓P **P 07 27 04.7 -0.2**
baz=58
C11A Tepee Creek (N 58.67 52⇓P **P 07 27 06.1 -0.1**
baz=58
G08A Pilot Rock 58.80 56⇑P **P 07 27 07.0 -0.1**
baz=59
A13A Flathead Natio 58.95 50⇑P **P 07 27 08.6 +0.5**
baz=59
I07A Izee 59.25 57⇓P **P 07 27 10.4 +0.3**
baz=59
B13A Whitefish 59.27 51⇑P **P 07 27 10.7 +0.4**
baz=59
K05A Summer Lake 59.30 59⇓P **P 07 27 11.4 +0.8**
baz=59
F10A Beach Ranch, E 59.32 54⇑P **P 07 27 10.4 -0.2**
baz=59
A14A Double T Ranch 59.43 50⇓P **P 07 27 11.0 -0.3**
baz=59
G09A Cove 59.45 55⇓P **P 07 27 11.6 +0.1**
baz=59
C13A Hot Springs 59.66 51⇓P **P 07 27 12.7 -0.2**
baz=60
A15A Johnson Ranch, 59.78 49⇓P **P 07 27 12.7 -1.0**
baz=60
G10A Bishop Farm, J 59.81 55⇓P **P 07 27 14.0 +0.1**
baz=60
E12A Beaver Dam Sad 59.93 53⇑P **P 07 27 14.5 -0.2**
baz=60
F11A Grangeville 59.95 54⇓P **P 07 27 14.8 -0.1**
baz=60
BMO Blue Mountains 59.98 55 *e*P **P 07 27 15.5 +0.4**
comp=Z,2.7nm,1.3s,mb3.6
C14A Swan Lake 60.03 51⇓P **P 07 27 15.5 +0.2**
baz=60
SWMT Swartz Lake 60.07 51 *e*P **P 07 27 15.9 +0.3**
D13A Huson 60.09 52⇓P **P 07 27 15.7 -0.1**
baz=60
G11A Walters Elk Ra 60.20 54⇓P **P 07 27 16.5 -0.1**
baz=60,SNR=7.4
B15A Bradely Ranch, 60.29 50⇓P **P 07 27 16.3 -0.8**
baz=60
SLMT Seeley Lake 60.50 51 *e*P **P 07 27 18.8 +0.2**
F12A Elk City 60.52 53⇑P **P 07 27 18.8 0.0**
baz=60,SNR=5.9
MSO Missoula 60.53 52 *e*P **P 07 27 18.9 +0.2**
comp=Z,2.7nm,1.0s,mb3.7
D14A Greenough 60.60 51⇓P **P 07 27 18.7 -0.5**
baz=60,SNR=7.3
C15A Salmond Ranch, 60.62 50⇑P **P 07 27 19.5 +0.2**
baz=60
E13A Victor 60.65 52⇓P **P 07 27 19.2 -0.3**
baz=60
H11A Donnelly 60.79 55⇑P **P 07 27 20.2 -0.3**
baz=61,SNR=7.2
FFC Flin Flon 60.99 39 *i*P **P 07 27 21.8 +0.1**
F13A Darby 61.00 53⇑P **P 07 27 21.4 -0.5**
baz=61
C16A Fuhringer Ranc 61.04 50⇓P **P 07 27 21.9 -0.2**
baz=61
D15A Lincoln 61.14 51⇓P **P 07 27 22.6 -0.2**
baz=61
A18A Metzger Ranch, 61.27 48⇑P **P 07 27 23.2 -0.5**
baz=61
I11A Placerville 61.33 55⇓P **P 07 27 24.0 -0.1**
baz=61
E15A Deer Lodge 61.48 51⇑P **P 07 27 25.1 0.0**
baz=61
G13A Cobalt 61.50 53⇑P **P 07 27 24.7 -0.6**
baz=61
H12A Diamond D Ranc 61.52 54⇑P **P 07 27 25.2 -0.2**
baz=61
K10A MacKenzie Ranc 61.55 57⇓P **P 07 27 25.5 -0.2**
baz=61,SNR=5.6
D16A Dana Ranch, Ca 61.65 50⇑P **P 07 27 26.5 +0.3**
baz=62
B18A Beardsley Farm 61.65 48⇑P **P 07 27 26.1 -0.1**
baz=62
C17A Wharram Farm, 61.66 49⇓P **P 07 27 25.6 -0.6**
baz=62
MFID Camas Ranch 61.72 56⇑P **P 07 27 26.7 -0.1**
baz=62
H13A Challis 61.84 54⇓P **P 07 27 27.4 -0.1**
baz=62,SNR=7.1
I12A Atlanta 61.86 55⇓P **P 07 27 27.8 +0.2**
baz=62,SNR=10
EGMT Eagleton 61.91 49⇓P **P 07 27 27.4 -0.5**
baz=62
F15A Butte 61.94 52⇑P **P 07 27 27.9 -0.2**
baz=62,SNR=5.6
FINES FINESS Array B 61.96 333 P **P 07 27 26.1 -1.9**
comp=Z,1.8nm,0.7s,mb3.8,baz=19,slow=8.8,SNR=5.8
FINES PcP PcP 07 28 03.7 -1.7
comp=Z,0.5nm,0.4s,baz=50,slow=4.3,SNR=3.8
FINES FINESS Array B 61.96 333 P **P 07 27 26.1 -1.9**
FINES 07 28 03.7
FINES pmax pmax
comp=Z,2.0nm,0.7s
FINES FINESS Array B 61.96 333 P **P 07 27 26.1 -1.9**
FINES PcP PcP 07 28 03.7 -1.7
LRM Limekiln Ridge 61.97 52 *e*P **P 07 27 28.9 +0.5**
D17A Six Diamond Ra 62.01 50⇓P **P 07 27 28.5 -0.1**
baz=62
K11A Parker Ranch, 62.03 56⇓P **P 07 27 28.8 0.0**
baz=62
WCN Washoe City 62.15 61⇓P **P 07 27 30.0 +0.3**
baz=62
J12A Stokes Ranch, 62.23 55⇑P **P 07 27 30.7 +0.5**
baz=62
L10A Juniper Basin 62.24 57⇑P **P 07 27 30.7 +0.5**
baz=62
H14A Leadore 62.28 53⇓P **P 07 27 30.6 +0.2**
baz=62
I13A Wildhorse Cree 62.34 54⇓P **P 07 27 30.7 -0.1**
baz=62,SNR=7.7
E17A Martinsdale 62.38 50⇓P **P 07 27 31.4 +0.4**
baz=62
G15A Dillon 62.39 52⇑P **P 07 27 31.3 +0.2**
baz=62,SNR=7.1
HLID Hailey 62.41 55⇓P **P 07 27 31.0 -0.2**
baz=62
HLID Hailey 62.41 55 *e*P **P 07 27 31.9 +0.7**
comp=Z,6.3nm,1.6s,mb4.0
F16A Kennard Place, 62.43 51⇓P **P 07 27 31.4 0.0**
baz=62
D18A Linhart Farms, 62.43 49⇑P **P 07 27 31.4 0.0**
baz=62
BOZ Bozeman (W) 62.52 51⇑P **P 07 27 32.0 0.0**
baz=62,SNR=7.9
BOZ Bozeman (W) 62.52 51 *e*P **P 07 27 32.4 +0.4**
BOZ pmax pmax
comp=Z,3.0nm,0.9s,mb3.9
BOZ Bozeman (W) 62.52 51 *e*P **P 07 27 32.4 +0.5**
comp=Z,3.4nm,0.9s,mb4.0
M10A I.L. Ranch, Tu 62.56 58⇓P **P 07 27 32.2 -0.1**
baz=62
L11A Cat Creek Ranc 62.58 57⇓P **P 07 27 32.7 +0.3**
baz=62,SNR=9.4
CMB Columbia Colle 62.61 63 *e*P **P 07 27 31.6 -1.1**
CMB *e* 07 28 08.1
CMB *e* 07 31 38.5
CMB pmax pmax
comp=Z,3.0nm,0.8s,mb4.0

CMB	Columbia Colle	62.61	63	eP	P	07 27 31.6	-1.0
	comp=Z,2.6nm,0.8s,mb3.9						
CMB				ePcP	PcP	07 28 08.1	-0.4
CMB				eScP	ScP	07 31 38.5	-1.1
I14A	Mackay	62.69	54	⇑P	P	07 27 33.5	+0.4
	baz=62						
G16A	Moss Hill, Enn	62.71	52	⇑P	P	07 27 33.1	-0.1
	baz=62						
F17A	Fitzpatrick Pl	62.85	51	⇓P	P	07 27 34.1	-0.1
	baz=63						
WAKR	Walker	62.86	62	eP	P	07 27 35.1	+0.8
L12A	House Creek Ra	63.01	56	⇑P	P	07 27 35.8	+0.5
	baz=63,SNR=6.5						
M11A	Holland Ranch,	63.04	57	⇓P	P	07 27 35.8	+0.3
	baz=63						
J14A	Carey	63.05	54	⇑P	P	07 27 36.3	+0.8
	baz=63,SNR=9.9						
G17A	Pierce Place,	63.20	51	⇑P	P	07 27 37.2	+0.8
	baz=63						
F18A	Big Timber	63.34	50	⇑P	P	07 27 37.4	0.0
	baz=63						
H16A	Russell Place,	63.35	52	⇑P	P	07 27 37.7	+0.3
	baz=63						
M12A	Wells	63.55	57	⇓P	P	07 27 38.5	-0.2
	baz=63						
NVAR	Mina Array Bea	63.58	61	P	P	07 27 39.3	+0.3
	comp=Z,3.0nm,0.8s,mb4.0,baz=298,slow=7.1,SNR=27						
NVAR				PcP	PcP	07 28 13.0	+0.5
	comp=Z,0.7nm,0.9s,baz=298,slow=3.8,SNR=3.8						
J15A	Blackfoot	63.59	54	⇑P	P	07 27 39.4	+0.4
	baz=63						
L13A	Double Diamond	63.64	56	⇑P	P	07 27 40.1	+0.8
	baz=64						
K14A	Jones Ranch, D	63.76	55	⇑P	P	07 27 40.8	+0.7
	baz=64,SNR=6.0						
I16A	Newdale	63.78	53	⇑P	P	07 27 40.5	+0.3
	baz=64						
N12A	Clover Valley,	63.85	57	⇑P	P	07 27 41.4	+0.7
	baz=64						
P10A	Eureka	63.86	59	⇑P	P	07 27 41.2	+0.4
	baz=64						
H17A	Grant Village	63.91	52	⇑P	P	07 27 41.7	+0.6
	baz=64						
O11A	Cowboy Ranch,	63.98	58	⇑P	P	07 27 41.9	+0.3
	baz=64						
M13A	Montello	64.00	56	eP	P	07 27 42.4	+0.7
K15A	Arbon	64.02	54	⇑P	P	07 27 42.2	+0.4
	baz=64,SNR=5.6						
IMW	Indian Meadow	64.06	53	eP	P	07 27 43.1	+1.1
	comp=Z,1.3nm,0.6s,mb3.7						
L14A	Malta	64.07	55	⇑P	P	07 27 42.5	+0.4
	baz=64,SNR=8.5						
RLMT	Red Lodge	64.11	51	⇑P	P	07 27 42.9	+0.6
	baz=64						
J16A	Bone	64.12	53	⇓P	P	07 27 43.2	+0.8
	baz=64						
DGMT	Dagmar	64.32	45	⇓P	P	07 27 42.9	-0.7
	baz=64						
TPAW	Teton Pass	64.33	53	eP	P	07 27 44.9	+1.1
	comp=Z,4.2nm,0.8s,mb4.1						
M14A	Sheep Mountain	64.36	56	⇓P	P	07 27 43.9	-0.1
	baz=64						
O12A	Currie	64.41	58	⇓P	P	07 27 44.5	+0.2
	baz=64,SNR=6.6						
FRB	Frobisher Bay	64.42	18	P	P	07 27 41.7	-2.3
	comp=Z,4.6nm,0.6s,mb4.3,baz=334,slow=6.7,SNR=8.5						
FRB	Frobisher Bay	64.42	18	P	P	07 27 41.7	-2.3
FRB				pmax	pmax		
	comp=Z,5.0nm,0.6s						
FRB	Frobisher Bay	64.42	18	P	P	07 27 41.7	-2.4
Q10A	Clear Creek Ra	64.43	60	⇑P	P	07 27 44.4	-0.1
	baz=64						
K16A	Soda Springs	64.43	54	⇑P	P	07 27 44.7	+0.3
	baz=64						
LOHW	Long Hollow	64.43	53	eP	P	07 27 45.5	+1.0
	comp=Z,2.1nm,0.8s,mb3.8						
REDW	Red Top Meadow	64.47	53	eP	P	07 27 45.5	+0.8
	comp=Z,14nm,1.6s,mb4.3						
J17A	Brown Place, J	64.54	53	⇓P	P	07 27 45.8	+0.6
	baz=64						
L15A	Malad City	64.56	55	⇓P	P	07 27 45.7	+0.4
	baz=64						
SMMC	Simmler	64.64	65	⇑P	P	07 27 46.2	+0.2
	baz=64						
I18A	Diamond G Ranc	64.79	52	⇓P	P	07 27 47.2	+0.5
	baz=65						
Q11A	Duckwater	64.85	59	⇓P	P	07 27 47.1	-0.1
	baz=65						
P12A	McGill	64.85	58	⇓P	P	07 27 46.9	-0.3
	baz=65						
M15A	Larsen Ranch,	64.89	55	⇑P	P	07 27 47.6	+0.2
	baz=65,SNR=8.9						
N14A	Grayback Hills	64.89	56	⇓P	P	07 27 47.2	-0.2
	baz=65						
S10A	Tonopah Range,	64.92	61	⇓P	P	07 27 47.6	-0.1
	baz=65						
PKM	Peak Mountain	65.03	65	⇓P	P	07 27 48.7	+0.3
	baz=65						
CWC	Cottonwood Cre	65.04	63	⇓P	P	07 27 48.2	-0.3
	baz=65						
L16A	Fish Haven	65.07	54	⇓P	P	07 27 48.8	+0.3
	baz=65						
GRAC	Grapevine Rang	65.08	62	⇑P	P	07 27 48.7	0.0
	baz=65,SNR=12						
Q12A	Willow Creek R	65.19	59	⇑P	P	07 27 49.3	-0.1
	baz=65						
R11A	Troy Canyon, C	65.22	60	⇑P	P	07 27 49.5	-0.1
	baz=65						
N15A	Stansbury Isla	65.24	56	⇓P	P	07 27 49.6	-0.1
	baz=65,SNR=6.1						
HWUT	Hardware Ranch	65.28	55	eP	P	07 27 50.5	+0.6
	comp=Z,2.3nm,0.6s,mb4.0						
L17A	Cokeville	65.32	54	⇓P	P	07 27 50.4	+0.3
	baz=65						
ISA	Isabella	65.33	64	⇓P	P	07 27 49.3	-1.0
	baz=65						
P13A	Bates Ranch, G	65.37	58	⇓P	P	07 27 50.3	-0.2
	baz=65						
K18A	Toltan Ranch,	65.40	53	⇑P	P	07 27 50.8	+0.1
	baz=65,SNR=5.6						
DUG	Dugway	65.55	57	⇓P	P	07 27 51.7	0.0
	baz=65,SNR=10.0						
DUG	Dugway	65.55	57	eP	P	07 27 51.9	+0.3
DUG				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.4						
DUG	Dugway	65.55	57	eP	P	07 27 51.9	+0.3
	comp=Z,3.8nm,0.5s,mb4.4						
BW06	Boulder Array	65.57	53	⇑P	P	07 27 51.6	-0.1
	baz=65,SNR=7.6						
BW06	Boulder Array	65.57	53	eP	P	07 27 52.0	+0.3
	comp=Z,3.8nm,0.8s,mb4.2						
PDAR	Pinedale Array	65.57	53	P	P	07 27 51.6	-0.1
	comp=Z,3.4nm,0.6s,mb4.2,baz=305,slow=2.1,SNR=36						
S11A	Rachel	65.60	60	⇑P	P	07 27 52.3	+0.3
	baz=65						
MPMC	Manual Prospec	65.65	63	⇑P	P	07 27 52.1	-0.3
	baz=66						
O15A	The Old Anders	65.68	56	⇑P	P	07 27 52.8	+0.3
	baz=66						
Q13A	Wheeler Ranch,	65.71	58	⇓P	P	07 27 52.4	-0.3
	baz=66,SNR=9.4						
FURC	Furnace Creek,	65.75	62	⇓P	P	07 27 52.5	-0.4
	baz=66,SNR=8.3						
P14A	Drum Mountains	65.82	57	⇑P	P	07 27 53.6	+0.3
	baz=66						
N16A	Rees Ranch, Co	65.84	55	⇑P	P	07 27 53.6	+0.2
	baz=66						
K19A	Absolon Red Bu	65.90	52	⇑P	P	07 27 53.7	-0.1
	baz=66						
LRMC	Laurel Mountai	65.92	63	⇑P	P	07 27 53.7	-0.4
	baz=66						
BLG	Laguna Peak	66.02	65	⇓P	P	07 27 54.3	-0.4
	baz=66						
U10A	Ash Meadows, A	66.09	62	⇓P	P	07 27 55.7	+0.6
	baz=66						
Q14A	Sevier Lake (B	66.11	58	⇓P	P	07 27 54.8	-0.5
	baz=66,SNR=8.2						
NLU	North Lily Min	66.12	56	eP	P	07 27 55.3	+0.1
	comp=Z,3.8nm,0.8s,mb4.2						
N17A	Moffit Pass	66.13	55	⇑P	P	07 27 55.5	+0.1
	baz=66						
L19A	Farson	66.13	53	⇑P	P	07 27 55.7	+0.4
	baz=66						
EDW2	Edwards Air Fo	66.15	64	⇑P	P	07 27 55.6	+0.1
	baz=66						
S12A	Delamar Landin	66.15	60	⇑P	P	07 27 55.9	+0.4
	baz=66						
T11A	Corn Creek, Al	66.19	60	⇓P	P	07 27 55.4	-0.3
	baz=66,SNR=7.2						
M18A	Lyman	66.22	54	⇑P	P	07 27 55.5	-0.4
	baz=66						
DAU	Daniels Canyon	66.27	56	eP	P	07 27 57.0	+0.8
DAU				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
DAU	Daniels Canyon	66.27	56	eP	P	07 27 57.0	+0.9
	comp=Z,3.8nm,1.0s,mb4.1						
R13A	O'Grain Ranch,	66.27	59	⇑P	P	07 27 56.5	+0.3
	baz=66						
P15A	Leamington	66.27	57	⇑P	P	07 27 55.9	-0.3
	baz=66,SNR=7.4						
K20A	Yellowstone Ra	66.29	52	⇓P	P	07 27 54.9	-1.4
	baz=66						
NOA	NORSAR Array B	66.29	340	P	P	07 27 54.4	-1.6
	comp=Z,0.7nm,0.5s,mb3.6,baz=29,slow=6.6,SNR=5.2						
NOA	NORSAR Array B	66.29	340	P	P	07 27 54.4	-1.6
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MPU	Maple Canyon	66.33	56	eP	P	07 27 57.3	+0.7
	comp=Z,4.3nm,0.7s,mb4.3						
SHOC	Shoshone	66.48	62	⇑P	P	07 27 57.3	-0.3
	baz=66						
HFS	Hagfors	66.48	338	P	P	07 27 55.2	-2.0
	comp=Z,1.2nm,0.3s,mb4.0,baz=51,slow=5.6,SNR=10						
HFS	Hagfors	66.48	338	P	P	07 27 55.2	-2.0
HFS				pmax	pmax		
	comp=Z,1.0nm,0.4s						
HFS	Hagfors	66.48	338	P	P	07 27 55.2	-2.0
GSC	Goldstone	66.57	63	⇑P	P	07 27 58.0	-0.2
	baz=66						
Q15A	Fillmore	66.61	57	⇑P	P	07 27 58.4	0.0
	baz=66						
S13A	Holt Ranch, En	66.74	59	⇑P	P	07 27 59.5	+0.3
	baz=67						
L20A	Wamsutter	66.74	53	⇓P	P	07 27 58.9	-0.2
	baz=66						
N18A	Larsen Ranch,	66.74	54	⇓P	P	07 27 59.1	-0.1
	baz=67						
BFSC	Mount Baldy Ra	66.78	64	⇓P	P	07 27 59.4	-0.1
	baz=67						
TUQ	Turquoise Moun	67.00	62	⇓P	P	07 28 01.1	+0.2
	baz=67						
S14A	Cedar City	67.02	59	⇑P	P	07 28 00.7	-0.2
	baz=67						
V11A	Goodsprings	67.02	62	⇑P	P	07 28 01.1	+0.1
	baz=67						
CCUT	Cedar City	67.05	59	eP	P	07 28 01.8	+0.6
	comp=Z,2.3nm,0.8s,mb4.0						
O18A	Roosevelt	67.05	55	⇑P	P	07 28 01.9	+0.8
	baz=67						
N19A	John Jarvie Ra	67.07	54	⇑P	P	07 28 00.9	-0.4
	baz=67						
T13A	Saint George	67.10	60	⇓P	P	07 28 01.9	+0.4
	baz=67						
HEC	Hector,Ludlow	67.18	63	⇑P	P	07 28 01.7	-0.3
	baz=67,SNR=6.1						
M20A	Sweetwater, Wa	67.19	53	⇓P	P	07 28 02.1	+0.1
	baz=67						
P17A	Butcher Ranch,	67.20	56	⇑P	P	07 28 01.8	-0.2
	baz=67						
BBRC	Big Bear Solar	67.21	64	⇑P	P	07 28 02.3	+0.1
	baz=67						
R15A	Junction	67.21	58	⇓P	P	07 28 02.7	+0.5
	baz=67						
L21A	Rawlins	67.29	52	⇓P	P	07 28 02.4	-0.1
	baz=67						
Q16A	Castle Valley	67.35	57	⇑P	P	07 28 02.5	-0.5
	baz=67						
V12A	Nelson	67.44	61	⇓P	P	07 28 03.5	-0.1
	baz=67						
U13A	Pakoon Wash	67.48	60	⇓P	P	07 28 03.9	+0.1
	baz=67,SNR=7.4						
MURC	Murrieta	67.50	64	⇑P	P	07 28 03.6	-0.4
	baz=67						
O19A	Miners Draw (B	67.52	54	⇓P	P	07 28 03.6	-0.4
	baz=67						
T14A	Hurricane	67.55	59	⇑P	P	07 28 04.5	+0.3
	baz=67						
SRU	San Rafael	67.57	56	⇑P	P	07 28 04.2	-0.2
	baz=67,SNR=14						
SRU	San Rafael	67.57	56	eP	P	07 28 04.7	+0.3
SRU				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.6						
SRU	San Rafael	67.57	56	eP	P	07 28 04.7	+0.3
	comp=Z,8.1nm,0.7s,mb4.6						
N20A	Spence Gulch,	67.61	54	⇑P	P	07 28 04.7	+0.1
	baz=67,SNR=6.3						
R16A	Teasdale	67.61	57	⇑P	P	07 28 05.0	+0.4
	baz=67,SNR=6.8						
GMRC	Granite Mounta	67.61	63	⇑P	P	07 28 04.4	-0.3
	baz=67						
LDFC	Landfair	67.73	62	eP	P	07 28 05.4	0.0
	comp=Z,5.5nm,0.4s,mb4.6						
Q18A	Rafter H Ranch	67.80	56	⇑P	P	07 28 05.7	-0.1
	baz=68						
V13A	Grand Canyon W	67.86	61	⇓P	P	07 28 06.3	+0.1
	baz=68,SNR=5.2						
S16A	Weppner Ranch,	67.94	58	⇑P	P	07 28 06.7	0.0
	baz=68,SNR=7.2						
BELC	Belle Mtn. Jos	67.95	63	⇑P	P	07 28 06.0	-0.8
	baz=68						
R17A	Hanksville Air	67.95	57	⇓P	P	07 28 06.4	-0.3
	baz=68,SNR=7.9						
T15A	Red Dirt Ranch	67.98	59	⇑P	P	07 28 07.1	+0.2
	baz=68						
P19A	Cripple Cowboy	68.06	55	⇓P	P	07 28 07.4	0.0
	baz=68,SNR=5.7						
O20A	White River Ci	68.11	54	⇓P	P	07 28 07.2	-0.5
	baz=68						
IRM	Iron Mountain	68.34	63	⇑P	P	07 28 09.1	-0.1
	baz=68,SNR=5.7						
Q19A	Hogan Spring (	68.38	56	⇑P	P	07 28 08.7	-0.7
	baz=68,SNR=11						
R18A	Canyonlands Na	68.43	56	⇓P	P	07 28 09.2	-0.5
	baz=68,SNR=6.8						
W13A	Hualapai Mount	68.44	61	⇑P	P	07 28 09.6	-0.2
	baz=68						
U15A	North Rim	68.44	59	⇓P	P	07 28 09.9	+0.1
	baz=68,SNR=7.8						
S17A	Black Ridge (B	68.45	57	⇑P	P	07 28 09.6	-0.2
	baz=68						
MONP	Monument Peak	68.46	65	⇑P	P	07 28 09.3	-0.7
	baz=68						
BC3	Big Chuckawall	68.51	63	⇓P	P	07 28 09.9	-0.4
	baz=68						
V14A	Boquillas Ranc	68.53	60	⇓P	P	07 28 10.4	+0.1
	baz=68,SNR=6.9						
N22A	Wattenberg Ran	68.60	52	⇓P	P	07 28 10.7	0.0
	baz=68						
X13A	Yucca	68.83	62	⇓P	P	07 28 11.6	-0.5
	baz=69,SNR=6.8						
W14A	Seligman	68.83	61	⇓P	P	07 28 11.5	-0.7
	baz=69,SNR=6.0						
PDMCI	Parker Dam,Lak	68.85	62	⇓P	P	07 28 12.1	-0.2
	baz=69						
R19A	Curley Farm, L	68.85	56	⇑P	P	07 28 12.3	0.0
	baz=69						
S18A	Hurst Farm, Bl	68.86	57	⇓P	P	07 28 11.9	-0.5
	baz=69,SNR=7.8						
T17A	Navajo Res., N	68.90	58	⇑P	P	07 28 13.2	+0.7
	baz=69						
Q20A	Ridgley Place,	68.92	55	⇓P	P	07 28 12.7	0.0
	baz=69						
V15A	Kaibab Nationa	68.94	60	⇓P	P	07 28 12.9	+0.1
	baz=69						
PV04	Paradox Valley	68.98	56	eP	P	07 28 13.5	+0.5
O22A	Kremmling	69.00	53	⇑P	P	07 28 13.4	+0.3
	baz=69						
WRA	Warramunga Arr	69.18	196	P	P	07 28 14.4	0.0
	comp=Z,2.9nm,0.5s,mb4.2,baz=17,slow=6.6,SNR=20						
WRA	Warramunga Arr	69.18	196	P	P	07 28 14.4	+0.1
WRA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
GLA	Glamis	69.31	63	⇓P	P	07 28 15.3	+0.1
	baz=69						
U16A	Tuba City	69.31	59	⇑P	P	07 28 15.2	+0.1
	baz=69,SNR=6.1						
T18A	Mexican Hat	69.32	57	⇓P	P	07 28 14.6	-0.6
	baz=69,SNR=5.4						
Y13A	Salome	69.37	62	⇓P	P	07 28 15.6	+0.1
	baz=69						
Q21A	Lamborn Mesa,	69.40	55	⇑P	P	07 28 15.7	+0.1
	baz=69						
R20A	Redvale	69.41	56	⇑P	P	07 28 15.7	0.0
	baz=69						
FITZ	Fitzroy Crossi	69.44	205	P	P	07 28 16.9	+1.0
	comp=Z,5.4nm,0.8s,mb4.3,baz=49,slow=3.1,SNR=9.4						
FITZ	Fitzroy Crossi	69.44	205	eP	P	07 28 16.8	+0.9
	comp=Z,4.8nm,0.6s,mb4.4						
X14A	Yava	69.47	61	⇑P	P	07 28 16.3	+0.2
	baz=69						
SMCO	Snowmass	69.48	54	eP	P	07 28 16.4	+0.3
	comp=Z,2.4nm,0.8s,mb4.0						
WUAZ	Wupatki	69.61	59	⇑P	P	07 28 17.3	+0.3
	baz=69						
S20A	Disappointment	69.68	56	⇓P	P	07 28 18.0	+0.6
	baz=70						
Q22A	Crested Butte,	69.74	54	⇑P	P	07 28 17.9	+0.3
	baz=70						
R21A	Cimarron	69.74	55	⇓P	P	07 28 17.7	0.0
	baz=70,SNR=5.9						
Y14A	Wickenburg	69.77	62	⇓P	P	07 28 17.5	-0.4
	baz=70,SNR=5.7						
W16A	Flagstaff	69.82	60	⇑P	P	07 28 18.0	-0.2
	baz=70						
U18A	Rough Rock, Ch	69.83	58	⇓P	P	07 28 18.3	0.0
	baz=70						
X15A	Humboldt	69.84	61	⇑P	P	07 28 18.4	+0.1
	baz=70,SNR=6.4						
V17A	Tonalea, Kykot	69.87	59	⇑P	P	07 28 18.7	+0.2
	baz=70,SNR=16						
Z13A	Yuma Proving G	69.90	63	⇑P	P	07 28 18.5	-0.3
	baz=70,SNR=5.8						
P23A	Jefferson	69.95	53	⇓P	P	07 28 19.2	+0.3
	baz=70						
T19A	Beclabito	70.02	57	⇑P	P	07 28 19.6	+0.2
	baz=70						
MVCO	Mesa Verde	70.04	56	⇓P	P	07 28 19.3	-0.2
	baz=70						
MVCO	Mesa Verde	70.04	56	eP	P	07 28 19.9	+0.3
	comp=Z,4.0nm,0.9s,mb4.2						
S21A	Coal Bank Pass	70.11	56	⇑P	P	07 28 19.9	-0.1
	baz=70,SNR=9.3						
113A	Mohawk Valley,	70.14	63	⇓P	P	07 28 19.3	-0.9
	baz=70						
Y15A	Casa Rosa Ranc	70.16	61	⇑P	P	07 28 20.5	+0.2
	baz=70						
R22A	Saguache, Gunn	70.28	55	⇑P	P	07 28 21.2	+0.3
	baz=70						
U19A	Dine' College,	70.30	57	⇓P	P	07 28 21.4	+0.3
	baz=70						
V18A	Ganado	70.30	58	⇓P	P	07 28 21.5	+0.4
	baz=70						
X16A	Lo Mia Camp, P	70.35	60	⇑P	P	07 28 21.1	-0.3
	baz=70,SNR=6.2						
S22A	4UR Ranch, Cre	70.58	55	⇓P	P	07 28 22.9	+0.1
	baz=70,SNR=7.7						
Q24A	Divide	70.61	53	⇓P	P	07 28 22.6	-0.4
	baz=70						
U20A	Newcomb	70.63	57	⇓P	P	07 28 23.2	+0.2
	baz=70						
114A	Black Gap (USA	70.68	62	⇑P	P	07 28 23.5	+0.1
	baz=70						
Y16A	Circle Bar Ran	70.71	61	⇑P	P	07 28 23.9	+0.3
	baz=70						
T21A	Navajo Lake	70.74	56	⇑P	P	07 28 24.1	+0.4
	baz=70						
P25A	Willow Gulch B	70.74	52	⇑P	P	07 28 23.7	0.0
	baz=70						
X17A	Forest Lakes	70.78	60	⇓P	P	07 28 24.8	+0.8
	baz=71						
T22A	Edith	71.07	56	⇓P	P	07 28 25.9	+0.1
	baz=71,SNR=5.6						
U21A	Nageezi	71.07	56	⇑P	P	07 28 25.9	+0.2
	baz=71						
Z16A	Peralta Trail,	71.12	61	⇓P	P	07 28 26.1	+0.1
	baz=71						
Q25A	Bedland, Calha	71.13	53	⇑P	P	07 28 26.0	0.0
	baz=71						
X18A	Snowflake	71.13	59	⇑P	P	07 28 26.2	+0.1
	baz=71						
R24A	Sanders Place,	71.17	54	⇑P	P	07 28 26.3	0.0
	baz=71,SNR=6.3						
Y17A	Roosevelt	71.21	60	⇑P	P	07 28 26.5	-0.1
	baz=71						
214A	Organ Pipe Nat	71.29	63	⇓P	P	07 28 27.0	0.0
	baz=71						
ECSD	EROS Data Cent	71.38	45	eP	P	07 28 26.4	-1.1
	comp=Z,5.7nm,0.9s,mb4.2						
T23A	Casias Ranch,	71.53	55	⇓P	P	07 28 28.7	+0.3
	baz=71						
W20A	Ramah	71.54	58	⇓P	P	07 28 28.4	-0.1
	baz=71						
S24A	Houchin Ranch,	71.54	54	⇓P	P	07 28 28.6	+0.1
	baz=71						
U22A	Llaves	71.56	56	⇑P	P	07 28 29.0	+0.4
	baz=71						
X19A	St. Johns	71.59	59	⇓P	P	07 28 28.7	-0.1
	baz=71,SNR=6.5						
Y18A	Canyon Day Jun	71.62	60	⇓P	P	07 28 29.4	+0.3
	baz=71						
V22A	San Miguel Ran	71.86	56	⇑P	P	07 28 30.6	+0.2
	baz=72						
Y19A	Nutrioso	71.94	59	⇑P	P	07 28 31.1	+0.2
	baz=72						
X20A	Quemado	71.96	58	⇑P	P	07 28 30.8	-0.2
	baz=72,SNR=5.6						
U23A	El Rito	71.96	56	⇓P	P	07 28 31.1	+0.1
	baz=72,SNR=11						
216A	Three Points,	72.06	62	⇓P	P	07 28 31.7	+0.1
	baz=72						
117A	Oracle	72.08	61	⇓P	P	07 28 31.7	0.0
	baz=72						
T25A	Trinidad	72.34	54	⇓P	P	07 28 33.0	-0.2
	baz=72						
V23A	Ortiz Mt. (NFS	72.39	56	⇑P	P	07 28 34.3	+0.8
	baz=72						
U24A	Moreno Valley	72.41	55	⇑P	P	07 28 34.4	+0.8
	baz=72						
X21A	Alamocita Cree	72.43	58	⇑P	P	07 28 34.3	+0.5
	baz=72						
118A	Homack Ranch,	72.48	61	⇓P	P	07 28 34.3	+0.2
	baz=72						
Y20A	Horse Springs,	72.48	59	⇑P	P	07 28 34.7	+0.6
	baz=72						
217A	Green Valley	72.60	62	⇑P	P	07 28 34.8	0.0
	baz=72						
Y21A	Point of Rocks	72.81	58	⇓P	P	07 28 36.8	+0.8
	baz=73						
SCHQ	Schefferville	72.83	21	P	P	07 28 34.3	-1.4
	comp=Z,2.4nm,0.5s,mb4.1,baz=346,slow=8.3,SNR=6.1						
W23A	Werner Place,	72.83	56	⇑P	P	07 28 36.7	+0.5
	baz=73						
U25A	Circle Dot Ran	72.89	54	⇓P	P	07 28 36.2	-0.2
	baz=73						
ASAR	Alice Springs	72.89	196	P	P	07 28 37.6	+1.2
	comp=Z,6.1nm,0.7s,mb4.4,baz=11,slow=5.5,SNR=83						
ASAR	Alice Springs	72.89	196	P	P	07 28 37.7	+1.3
ASAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
V24A	Rampart Ranch,	72.91	55	⇑P	P	07 28 37.2	+0.6
	baz=73						
218A	Dragoon	72.91	61	⇓P	P	07 28 37.3	+0.7
	baz=73					

comp=Z,0.5nm,0.4s,mb3.5,baz=23,slow=4.0,SNR=3.1
EKA Eskdalemuir Ar 74.54 345 P P 07 28 43.8 -1.8
EKA pmax pmax
comp=Z,1.0nm,0.4s
Y25A Mesa, Roswell 74.56 56 ⇑P P 07 28 44.9 -1.2
baz=74
W27A Bowe Ranch, En 74.61 55 ⇑P P 07 28 46.9 +0.5
baz=74
Z24A Sheeppen Canyo 74.62 57 ⇑P P 07 28 46.9 +0.4
baz=74
X27A F and S Farms, 74.90 55 ⇓P P 07 28 48.1 0.0
baz=75
124A Stringfield Ra 75.03 58 ⇑P P 07 28 48.5 -0.3
baz=75
Z26A Caprock 75.44 56 ⇓P P 07 28 50.7 -0.5
baz=75,SNR=10
224A Cornudas Mount 75.45 58 ⇓P P 07 28 50.8 -0.4
baz=75
125A Gardner Draw, 75.51 57 ⇑P P 07 28 51.5 -0.1
baz=75
MNTX Cornudas Mount 75.81 58 *e*P **P 07 28 53.1 -0.1**
comp=Z,1.7nm,0.9s,mb3.7
Z27A Tatum 75.83 56 ⇓P P 07 28 53.1 -0.2
baz=76
324A Moseley Ranch, 75.95 59 ⇑P P 07 28 53.7 -0.3
baz=76
226A Malaga, Loving 76.27 57 ⇓P P 07 28 55.4 -0.4
baz=76
325A Bean Ranch, Si 76.29 58 ⇓P P 07 28 55.4 -0.6
baz=76
425A Indio Mountain 76.72 59 ⇓P P 07 28 58.1 -0.2
baz=76,SNR=7.3
326A Caldwell Ranch 76.90 58 ⇓P P 07 28 58.9 -0.4
baz=77
WMOK Wichita Mounta 77.16 52 *e*P **P 07 29 00.1 -0.6**
WMOK pmax pmax
comp=Z,3.0nm,1.0s,mb4.0
WMOK Wichita Mounta 77.16 52 *e*P **P 07 29 00.1 -0.6**
comp=Z,2.7nm,1.0s,mb3.9
426A McDonald Obser 77.35 58 ⇓P P 07 29 01.3 -0.6
baz=77
328A Wristen Ranch, 77.51 57 ⇑P P 07 29 02.4 -0.3
baz=77
427A Hayter Ranch, 77.57 58 ⇓P P 07 29 02.2 -0.8
baz=78
526A Mary Lane Ranc 77.77 59 ⇓P P 07 29 03.7 -0.4
baz=78
527A Woodward Ranch 77.98 58 ⇓P P 07 29 04.7 -0.6
baz=78
428A Kincaid Ranch, 78.07 57 ⇓P P 07 29 05.6 -0.2
baz=78
626A Big Bend Ranch 78.13 59 ⇑P P 07 29 06.1 -0.1
baz=78
528A Cox Ranch, San 78.44 58 ⇓P P 07 29 07.8 +0.1
baz=78
TXAR Lajitas Array 78.56 59 P P 07 29 08.2 -0.2
comp=Z,6.5nm,0.6s,mb4.5,baz=296,slow=4.1,SNR=119
TXAR Lajitas Array 78.56 59 P P 07 29 08.3 -0.2
TXAR pmax pmax
comp=Z,7.0nm,0.6s
627A Terlingua Ranc 78.63 59 ⇑P P 07 29 08.4 -0.4
baz=78
628A Black Gap, Mar 78.89 58 ⇓P P 07 29 09.9 -0.3
baz=79
LPAZ La Paz 135.42 58 PKP PKPdf 07 36 24.7 +0.6
comp=Z,0.7nm,0.6s,baz=19,slow=7.1,SNR=4.1
LPAZ La Paz 135.42 58 PKIKP PKPdf 07 36 24.7 +0.5
LPAZ pmax pmax
comp=Z,1.0nm,0.6s
LPAZ La Paz 135.42 58 *e*PKPdf PKPdf 07 36 24.6 +0.4
LPAZ PKP PKPdf 07 36 24.7 +0.6
CPUP Villa Florida 149.45 55 PKPbc PKPbc 07 36 52.5 -0.8
comp=Z,1.6nm,0.4s,baz=309,slow=2.5,SNR=13
CPUP Villa Florida 149.45 55 PKP2 PKPbc 07 36 52.5 -0.9
CPUP pmax pmax
comp=Z,2.0nm,0.4s
PLCA Paso Flores 150.29 91 PKPbc PKPbc 07 36 53.4 -1.6
comp=Z,5.9nm,0.7s,baz=250,slow=4.5,SNR=17
PLCA Paso Flores 150.29 91 PKIKP PKPbc 07 36 53.4 -1.5
PLCA pmax pmax
comp=Z,6.0nm,0.7s

ATH ***14*** *07:24:51.8, 40.°19N×19.°66E, h5km±3km, MD3.5/7*
NEIC ***14*** *07:24:51.8, 40.°19N×19.°66E, h5km, MD3.5(ATH), After ATH.*
THE ***14*** *07:24:52.3, 40.°20N×19.°53E, h6km±2km, Error ellipse: s-maj=3.8km s-min=1.5km az=134.0*
ISCJB ***14*** *07:24:53.1±0.9, 40.°20N±0.°03×19.°66E±0.°07, h10km, Error ellipse: s-maj=7.4km s-min=4.2km az=16.1*
CSEM ***14*** *07:24:54.2±0.6, 40.°13N×19.°71E, h2km, MD3.5, Error ellipse: s-maj=13.9km s-min=6.6km az=104.0*
ISC 14 07:24:51.9±1.2, 40.°20N±0.°03×19.°57E±0.°07, h0km±6km, n41, σ1°15/65, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEK	**Kerkira**	**0.51**	**160**	*e*Pb	**Pg**	**07 25 01.9**	**+0.2**
KEK				*e*Sb	**Sg**	**07 25 08.5**	**+0.1**
KEK	**Kerkira**	**0.51**	**160**	*e*PB	**Pg**	**07 25 01.9**	**+0.2**
KEK				*e*SB	**Sg**	**07 25 08.5**	**+0.1**
KEK	**Kerkira**	**0.51**	**160**	P	**Pg**	**07 25 02.3**	**+0.6**
KEK				S	**Sg**	**07 25 09.8**	**+1.4**
KEK	**Kerkira**	**0.51**	**160**	*e*Pb	**Pg**	**07 25 01.9**	**+0.2**
KEK	**Kerkira**	**0.51**	**160**	P	**Pg**	**07 25 02.3**	**+0.6**
KEK				*e*Sb	**Sg**	**07 25 08.5**	**+0.1**
KEK				S	**Sg**	**07 25 09.8**	**+1.4**
IGT	**Igoumenitsa**	**0.89**	**138**	P	**Pg**	**07 25 08.8**	**-0.1**
IGT				S	**Sg**	**07 25 24.0**	**+3.7**
IGT	**Igoumenitsa**	**0.89**	**138**	P	**Pg**	**07 25 08.8**	**-0.1**
JAN	**Janina**	**1.12**	**118**	*e*Pg	**Pg**	**07 25 11.5**	**-1.9**
JAN				*e*Sb	**Sg**	**07 25 26.6**	**-1.4**
JAN	**Janina**	**1.12**	**118**	*e*PG	**Pg**	**07 25 11.5**	**-1.9**
JAN				*e*SB	**Sg**	**07 25 26.6**	**-1.4**
JAN	**Janina**	**1.12**	**118**	*e*Pg	**Pg**	**07 25 11.5**	**-1.9**
JAN				*e*Sb	**Sg**	**07 25 26.6**	**-1.4**
NEST	**Nestorio**	**1.15**	**79**	P	**Pg**	**07 25 12.0**	**-2.0**
NEST				S	**Sg**	**07 25 30.9**	**+2.0**
NEST	**Nestorio**	**1.15**	**79**	P	**Pg**	**07 25 12.0**	**-2.0**
NEST				S	**Sg**	**07 25 30.9**	**+2.0**
OHR	**Ohrid**	**1.31**	**45**	*e*Pn	**Pn**	**07 25 16.6**	**-0.8**
OHR	**Ohrid**	**1.31**	**45**	P	**Pg**	**07 25 16.9**	**-0.1**
OHR				S	**Sg**	**07 25 35.9**	**+1.9**
OHR	**Ohrid**	**1.31**	**45**	P	**Pg**	**07 25 16.9**	**-0.1**
OHR				S	**Sg**	**07 25 35.9**	**+1.9**
FNA	**Florina**	**1.50**	**66**	P	**Pn**	**07 25 18.3**	**-1.7**
FNA				S	**Sg**	**07 25 40.1**	**+0.1**
FNA	**Florina**	**1.50**	**66**	P	**Pn**	**07 25 18.3**	**-1.7**
FNA				S	**Sg**	**07 25 40.1**	**+0.1**
BIA	**Bitola**	**1.57**	**58**	*i* Pn	**Pn**	**07 25 20.6**	**-0.3**
LKD2	**Lefkada island**	**1.64**	**149**	P	**Pn**	**07 25 20.6**	**-1.3**
LKD2	**Lefkada island**	**1.64**	**149**	P	**Pn**	**07 25 20.6**	**-1.3**
KZN	**Kozani**	**1.69**	**86**	*e*Pg	**Pn**	**07 25 21.9**	**-0.7**
KZN				*e*Sb	**Sb**	**07 25 45.5**	**-0.1**
KZN	**Kozani**	**1.69**	**86**	*e*PG	**Pn**	**07 25 21.9**	**-0.7**
KZN				*e*SB	**Sb**	**07 25 45.5**	**-0.1**
KZN	**Kozani**	**1.69**	**86**	P	**Pn**	**07 25 22.1**	**-0.5**
KZN				S	**Sg**	**07 25 45.8**	**-0.3**
KZN	**Kozani**	**1.69**	**86**	P	**Pn**	**07 25 22.1**	**-0.5**
KZN				*e*Sb	**Sb**	**07 25 45.5**	**-0.1**
KZN				S	**Sg**	**07 25 45.8**	**-0.3**
THL	**Klokotos Trika**	**1.98**	**108**	P	**Pn**	**07 25 27.0**	**+0.3**
THL				S	**Sn**	**07 25 51.4**	**-0.8**
THL	**Klokotos Trika**	**1.98**	**108**	P	**Pn**	**07 25 27.0**	**+0.3**
THL				S	**Sn**	**07 25 51.4**	**-0.8**
EVR	**Evrytania**	**2.15**	**126**	*e*Pg	**Pb**	**07 25 30.8**	**-0.9**
EVR				*e*Sn	**Sb**	**07 25 59.3**	**+0.4**
EVR	**Evrytania**	**2.15**	**126**	*e*PG	**Pb**	**07 25 30.8**	**-0.9**
EVR				*e*SN	**Sb**	**07 25 59.3**	**+0.4**
AGG	**Agios Georgios**	**2.43**	**118**	*e*Pn	**Pn**	**07 25 34.7**	**+1.8**
AGG	**Agios Georgios**	**2.43**	**118**	*e*PN	**Pn**	**07 25 34.7**	**+1.8**
AGG	**Agios Georgios**	**2.43**	**118**	*e*Pn	**Pn**	**07 25 34.7**	**+1.8**
EFP	**Efpalio**	**2.53**	**134**	*e*PN	**Pn**	**07 25 35.7**	**+1.5**
EFP	**Efpalio**	**2.53**	**134**	*e*Pn	**Pn**	**07 25 35.7**	**+1.5**
VAY	**Valandovo**	**2.54**	**63**	*i* Pn	**Pn**	**07 25 34.7**	**+0.4**
RLS	**Riolos of Patr**	**2.59**	**145**	*e*Pn	**Pn**	**07 25 36.7**	**+1.6**
RLS	**Riolos of Patr**	**2.59**	**145**	*e*PN	**Pn**	**07 25 36.7**	**+1.6**
RLS	**Riolos of Patr**	**2.59**	**145**	*e*Pn	**Pn**	**07 25 36.7**	**+1.6**
PLG	**Polygyros**	**2.97**	**85**	*e*Pn	**Pn**	**07 25 41.1**	**+0.9**
PLG	**Polygyros**	**2.97**	**85**	*e*PN	**Pn**	**07 25 41.1**	**+0.9**
PLG	**Polygyros**	**2.97**	**85**	*e*Pn	**Pn**	**07 25 41.1**	**+0.9**
ZAPS	**Zavoj**	**3.84**	**36**	*e*Pn	**Pb**	**07 25 56.1**	**-4.3**

NEIC ***14*** *07:25:49.1±1.2, 25.°17S×177.°16W, h145km±13km, mb3.9/3, Error ellipse: s-maj=20.0km s-min=10.8km az=111.0*
ISCJB ***14*** *07:25:54.1±2.6, 25.°6S±0.°2×177.°6W±0.°2, h175km±21km, mb3.8/8, Error ellipse: s-maj=29.5km s-min=24.3km az=32.9*
IDC ***14*** *07:25:55.3±1.2, 25.°61S×177.°55W, h178km±7km, mb3.5/7, mb1 3.8/9, mb1mx3.6/18, mbtmp3.6/9, Error ellipse: s-maj=24.0km s-min=14.4km az=83.0*
ISC 14 07:25:54.8±2.6, 25.°6S±0.°2×177.°6W±0.°2, h166km±21km, n17, σ0°61/17, mb3.8/8, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.69**	**184**	P	**Pn**	**07 26 51.8**	**+0.3**
75nm,0.3s,baz=30,slow=20,SNR=2.6							
RAO				S	**Sn**	**07 27 35.2**	**-0.6**
214nm,0.3s,baz=218,slow=23,SNR=5.4							
AFI	**Afiamalu**	**12.82**	**26**	P	**Pn**	**07 28 38.4**	**-13**
5.4nm,0.3s,baz=266,slow=20,SNR=7.5							
AFI				S	Sx	07 30 45.0	
4.0nm,0.3s,baz=344,slow=24,SNR=2.0							
AFI	**Afiamalu**	**12.82**	**26**	*e*Pn	**Pn**	**07 28 38.9**	**-12**
AFI				*e*Sn	Sx	07 30 47.1	
URZ	**Urewera**	**13.43**	**198**	P	**Pn**	**07 28 59.6**	**+0.9**
2.7nm,0.3s,baz=307,slow=2.6,SNR=16							
URZ				S	**Sn**	**07 31 15.5**	**-12**
2.2nm,0.3s,baz=327,slow=23,SNR=13							
RPZ	**Rata Peaks**	**20.34**	**204**	P	**P**	**07 30 18.0**	**0.0**
2.2nm,0.4s,baz=349,slow=10,SNR=2.1							
CTA	**Charters Tower**	**33.67**	**272**	P	**P**	**07 32 20.1**	**+0.1**
1.8nm,0.4s,mb4.2,baz=98,slow=15,SNR=2.6							
STKA	**Stephens Creek**	**36.16**	**250**	P	**P**	**07 32 40.5**	**-0.8**
1.7nm,0.6s,mb3.9,baz=94,slow=10,SNR=5.8							
STKA	**Stephens Creek**	**36.16**	**250**	*e*P	**P**	**07 32 43.0**	**+1.7**
ASAR	**Alice Springs**	**43.92**	**262**	p	**P**	**07 33 44.8**	**-0.4**
1.3nm,0.4s,mb3.9,baz=94,slow=8.2,SNR=39							
ASAR				pP	pP	07 34 25.0	+3.2
0.7nm,0.9s,baz=109,slow=8.0,SNR=1.8							
WRAB	**Tennant Creek**	**44.46**	**267**	*e*P	**P**	**07 33 50.0**	**+0.4**
3.1nm,0.9s,mb3.9							
WRA	**Warramunga Arr**	**44.47**	**267**	P	**P**	**07 33 48.9**	**-0.8**
0.6nm,0.6s,mb3.4,baz=104,slow=7.8,SNR=4.8							
WRA				sP	sP	07 34 50.5	+5.6
0.3nm,0.8s,baz=103,slow=7.9,SNR=0.7							
QSPA	**South Pole Qui**	**64.54**	**180**	*e*P	**P**	**07 36 13.6**	**+0.2**
1.8nm,0.6s,mb4.1							
MAW	**Mawson**	**76.96**	**200**	P	**P**	**07 37 28.5**	**+0.1**
2.7nm,0.5s,mb4.2,baz=121,slow=4.8,SNR=12							
MAW	**Mawson**	**76.96**	**200**	*e*P	**P**	**07 37 27.3**	**-1.1**
0.6nm,0.4s,mb3.6							
NVAR	**Mina Array Bea**	**84.46**	**43**	P	**P**	**07 38 08.7**	**0.0**
0.2nm,0.6s,mb3.0,baz=202,slow=4.5,SNR=2.5							
HFS	**Hagfors**	**144.56**	**350**	PKP	PKPdf	07 45 07.2	-3.6
0.8nm,0.4s,baz=107,slow=5.0,SNR=2.5							
HFS				PKiKP	PKiKP	07 45 18.0	+3.5
0.6nm,0.4s,baz=72,slow=4.8,SNR=1.9							
BRTR	**Keskin Array B**	**150.30**	**306**	PKPbc	PKPbc	07 45 24.8	-1.5
0.3nm,0.4s,baz=126,slow=45,SNR=3.6							
BRTR				pPKPbc	pPKPbc	07 46 10.8	+1.1
0.2nm,0.3s,baz=304,slow=20,SNR=1.5							
BRTR				pPKPab	pPKPab	07 46 19.1	+3.7
0.2nm,0.3s,baz=240,slow=6.2,SNR=1.7							

DJA 14 07:26:18, 2.°54N×95.°96E, h30km, MLv3.8/4, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**1.41**	**60**	P	Pn	07 26 41.9	+0.2
TPTI				S	Sn	07 27 00.7	+1.4
GSI	**Gunungsitoli**	**2.03**	**127**	P	Pn	07 26 51.4	+1.2
GSI				S	Sn	07 27 16.3	+1.8
MNSI	**Mandailing Nat**	**4.01**	**116**	P	Pn	07 27 18.3	+0.8
SISI	**Saibi**	**4.95**	**141**	P	Pn	07 27 30.8	+0.4
IPM	**Ipoh**	**5.41**	**69**	P	Pn	07 27 36.0	-0.7
10nm,0.9s							
KULM	**Kulim**	**5.42**	**60**	P	Pn	07 27 38.2	+1.4
13nm,0.8s							
BKNI	**Bangkinang**	**5.53**	**113**	P	Pn	07 27 38.8	+0.4

BJI ***14*** *08:17:06.4, 1.°72N×96.°35E, h27km, mB4.8/31, mb4.9/47, Ms4.4/39, Ms7 4.3/39*
ISCJB ***14*** *08:17:10.0±0.2, 2.°07N±0.°03×96.°43E±0.°03, h29km, mb4.8/77, MS4.1/29, Error ellipse: s-maj=5.2km s-min=2.8km az=44.5*
MOS ***14*** *08:17:10.9±1.2, 2.°16N×96.°51E, h33km, mb5.1/26, MS4.2/4, Error ellipse: s-maj=10.5km s-min=6.4km az=104.7*
IDC ***14*** *08:17:11.5±0.8, 2.°09N×96.°45E, h25km±4km, mb4.1/18, mb1 4.2/20, mb1mx4.2/24, mbtmp4.1/20, ML4.4/2, MS3.8/11, Ms1 3.8/11, ms1mx3.5/37, Error ellipse: s-maj=19.7km s-min=11.9km az=52.0*
DJA ***14*** *08:17:11, 1.°99N×96.°41E, h25km, mb4.9/19*
NEIC ***14*** *08:17:12.2±0.3, 2.°12N×96.°47E, mb4.9/23, Error ellipse: s-maj=6.3km s-min=4.8km az=200.0*
ISC 14 08:17:12.4±0.2, 2.°09N±0.°03×96.°44E±0.°03, h30km, h30km±8km: pP-P, n181, σ1°02/197, mb4.8/77, MS4.1/29, 4C-3D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.38**	**125**	P	**Pn**	**08 17 35.1**	**-0.4**
GSI				S	**Sn**	**08 17 52.4**	**-0.3**
TPTI		**1.38**	**32**	P	**Pn**	**08 17 34.3**	**-1.2**
TPTI				S	**Sn**	**08 17 56.7**	**+4.0**
TSI	**Tuntungan**	**2.54**	**56**	P	**Pn**	**08 17 52.6**	**+1.0**
PSI	**Prapat**	**2.58**	**74**	Pn	**Pn**	**08 17 52.0**	**-0.1**
26nm,0.3s,baz=275,slow=9.6,SNR=120							
PSI				LR	LR	08 18 33.0	
comp=Z,805nm,20.1s,baz=58,slow=32							
PSI	**Prapat**	**2.58**	**74**	Pn	**Pn**	**08 17 52.0**	**-0.1**
PSI				LR	LR	08 18 33.0	
MNSI	**Mandailing Nat**	**3.39**	**112**	P	**Pn**	**08 18 03.1**	**-0.1**
MNSI				S	**Sn**	**08 18 44.8**	**+2.3**
SISI	**Saibi**	**4.30**	**142**	P	**Pn**	**08 18 13.9**	**-1.9**
SISI				S	**Sn**	**08 19 03.9**	**-1.1**
PPI	**Padang Panjang**	**4.70**	**123**	P	**Pn**	**08 18 22.5**	**+1.3**
PPI				S	**Sn**	**08 19 14.9**	**+0.2**
BKNI	**Bangkinang**	**4.92**	**111**	P	**Pn**	**08 18 25.6**	**+1.3**
PDSI	**Padang**	**5.00**	**127**	P	**Pn**	**08 18 26.7**	**+1.2**
IPM	**Ipoh**	**5.16**	**62**	P	**Pn**	**08 18 28.0**	**+0.5**
IPM	**Ipoh**	**5.16**	**62**	P	**Pn**	**08 18 27.5**	**0.0**
0.6nm2μm202nm,0.8s							
KULM	**Kulim**	**5.27**	**53**	P	**Pn**	**08 18 29.2**	**+0.1**
KULM	**Kulim**	**5.27**	**53**	*e*Pn	**Pn**	**08 18 28.9**	**-0.2**
548nm,0.8s							
KULM				*e*Sn	**Sn**	**08 19 31.8**	**+3.0**
KULM	**Kulim**	**5.27**	**53**	P	**Pn**	**08 18 28.8**	**-0.3**
1.9nm5μm642nm,0.8s							
FRIM	**Kepong**	**5.30**	**77**	P	**Pn**	**08 18 30.2**	**+0.6**
SDSI	**Sungai Dareh**	**5.82**	**121**	P	**Pn**	**08 18 37.0**	**+0.3**
0.3nm36nm,0.6s							
KGM	**Kluang**	**6.87**	**90**	P	**Pn**	**08 18 51.9**	**+0.8**
MYKOM	**Kota Tinggi**	**7.41**	**92**	P	**Pn**	**08 18 59.1**	**+0.6**
MYKOM	**Kota Tinggi**	**7.41**	**92**	P	**Pn**	**08 18 58.2**	**-0.3**
0.2nm602nm72nm,1.0s							
KTGM	**Kuala Trenggan**	**7.41**	**64**	P	**Pn**	**08 18 58.6**	**0.0**
MNAI	**Manna**	**9.13**	**135**	P	**Pn**	**08 19 21.7**	**-0.5**
228nm,1.6s							
MNAI				S	**Sn**	**08 20 59.7**	**-4.3**
228nm,1.6s							
MDSI	**Maura Dua**	**10.12**	**130**	P	**Pn**	**08 19 34.6**	**-1.1**
498nm31nm,0.8s							
KLSI		**10.67**	**129**	P	**Pn**	**08 19 42.8**	**-0.5**
48nm,1.0s							
KASI	**Kota Agung**	**11.04**	**133**	P	**Pn**	**08 19 46.9**	**-1.5**
48nm,0.8s							
KASI				S	**Sn**	**08 21 44.3**	**-6.6**
48nm,0.8s							
TPI	**Tanjungpandan**	**12.20**	**113**	P	**Pn**	**08 20 04.5**	**+0.3**
34nm,1.1s							
KSM	**Kuching**	**13.87**	**92**	P	**Pn**	**08 20 28.5**	**+1.4**
KSM	**Kuching**	**13.87**	**92**	*e*Pn	**Pn**	**08 20 28.1**	**+1.1**
KSM	**Kuching**	**13.87**	**92**	P	**Pn**	**08 20 27.5**	**+0.4**
481nm35nm,1.2s							
STKI	**Sintang**	**15.17**	**97**	P	**Pn**	**08 20 49.8**	**+5.2**
CMAR	**Chiang Mai Arr**	**16.45**	**8**	Pn	**Pn**	**08 21 00.2**	**-0.9**
1.2nm,0.3s,baz=198,slow=12,SNR=34							
CMAR				LR	LR	08 27 54.6	
comp=Z,461nm,19.9s,baz=190,slow=39							
CMAR				ScP	ScP	08 29 26.7	+1.7
0.6nm,0.3s,baz=212,slow=2.8,SNR=6.0							
PALK	**Pallekele**	**16.50**	**289**	*e*P	**Pn**	**08 21 04.8**	**+2.9**
PALK				pmax	pmax		
comp=Z,25nm,0.9s							
PALK	**Pallekele**	**16.50**	**289**	*e*P	**Pn**	**08 21 04.8**	**+2.9**
comp=Z,25nm,0.9s							
CHG	**Chiang Mai**	**16.80**	**8**	⇓P	**Pn**	**08 21 04.0**	**-1.5**
comp=Z,15nm,0.8s							
CHTO	**Chiang Mai**	**16.80**	**8**	*e*P	**Pn**	**08 21 03.9**	**-1.6**
CHTO				pmax	pmax		
comp=Z,11nm,0.7s							
CHTO	**Chiang Mai**	**16.80**	**8**	*e*Pn	**Pn**	**08 21 03.9**	**-1.6**
comp=Z,11nm,0.7s							
CHTO	**Chiang Mai**	**16.80**	**8**	P	**Pn**	**08 21 04.3**	**-1.2**
comp=Z,19nm,0.8s							
CHRT	**Chiangrai**	**17.97**	**10**	P	**Pn**	**08 21 19.0**	**-1.1**
comp=Z,105nm,1.0s							
KKM	**Kota Kinabalu**	**20.11**	**78**	P	**P**	**08 21 44.6**	**+0.7**
KKM	**Kota Kinabalu**	**20.11**	**78**	*e*P	**P**	**08 21 43.2**	**-0.7**
comp=Z,37nm,0.8s							
KKM	**Kota Kinabalu**	**20.11**	**78**	P	**P**	**08 21 44.3**	**+0.4**
comp=Z,509nmcomp=Z,58nm,1.1s							
VIS	**Vishakhapatnam**	**20.18**	**321**	*e*PKP	**P**	**08 21 45.9**	**+1.3**
VIS				AMb	AMB	08 21 51.0	
comp=Z,32nm,1.2s							
KDM	**Kudat**	**20.88**	**76**	P	**P**	**08 21 52.9**	**+0.6**
SDKM	**Sandakan**	**21.00**	**80**	P	**P**	**08 21 53.6**	**0.0**
QIZ	**Qiongzhong**	**21.35**	**37**	P	**P**	**08 22 01.8**	**+4.6**
QIZ				S	**S**	**08 25 55.0**	**+2.2**
QIZ				pmax	pmax		
comp=Z,17nm,1.0s,mb4.3							
QIZ				pmax	pmax		
comp=Z,200nm,3.5s							
QIZ				LR	LR		
comp=N,660nm,13.4s,MS4.3							
QIZ				LR	LR		
comp=E,350nm,12.6s,MS4.3							
QIZ				LR	LR		
comp=Z,1μm,13.2s,MS4.5							
MYLDM	**Lahad Datu**	**22.23**	**81**	P	**P**	**08 22 08.1**	**+1.3**
MYLDM	**Lahad Datu**	**22.23**	**81**	P	**P**	**08 22 07.2**	**+0.5**
comp=Z,77nm,1.0s,mb5.1							
HYB	**Hyderabad**	**23.26**	**312**	*e*P	**P**	**08 22 21.5**	**+3.9**
KMI	**Kunming**	**23.69**	**14**	P	**P**	**08 22 22.0**	**+0.3**
KMI				PP		08 22 57.0	
KMI				S	**S**	**08 26 37.1**	**+2.4**
KMI				SS		08 27 30.5	
KMI				pmax	pmax		
comp=Z,19nm,1.4s,mb4.3							
KMI				pmax	pmax		
comp=Z,150nm,3.1s							
KMI				LR	LR		
comp=N,190nm,15.2s,MS4.0							
KMI				LR	LR		
comp=E,330nm,15.2s,MS4.0							
KMI				LR	LR		
comp=Z,330nm,15.2s,MS3.9							
SHL	**Shillong**	**23.75**	**350**	*e*PKP	**P**	**08 22 21.0**	**-1.2**
SHL				*e*S	**S**	**08 26 33.0**	**-2.6**
BOK	**Bokaro**	**23.87**	**336**	*e*PKP	**P**	**08 22 22.2**	**-1.1**
BOK				*e*PKP		08 22 22.8	
BOK				AMb	AMB	08 22 33.5	
comp=Z,158nm,0.2s							
BOK				*ex*	x	08 24 06.4	
BNSI	**Bone**	**24.51**	**105**	P	**P**	**08 22 28.5**	**-0.9**
comp=Z,40nm,2.1s,mb4.6							
BKSI	**Bulukumba**	**24.77**	**107**	P	**P**	**08 22 32.0**	**+0.2**
comp=Z,586nmcomp=Z,27nm,0.9s,mb4.8							
NGP	**Nagpur**	**25.42**	**319**	*e*PKP	**P**	**08 22 38.5**	**+1.0**
NGP				AMb	AMB	08 22 47.5	
comp=Z,19nm,1.2s,mb4.5							
ODAN	**Odare**	**26.11**	**341**	*e*P	**P**	**08 22 45.4**	**+1.7**
comp=Z,66nm,0.6s,mb5.3							
GYA	**Guiyang**	**26.14**	**21**	P	**P**	**08 22 45.8**	**+1.8**
GYA				pP	pP	08 22 55.8	+3.0
GYA				PP		08 23 29.3	
GYA				PcP	PcP	08 26 13.6	+2.6
GYA				S	**S**	**08 27 12.0**	**-1.9**
GYA				pmax	pmax		
comp=Z,20nm,0.8s,mb4.7							
GYA				pmax	pmax		
comp=Z,120nm,4.8s							
GYA				LR	LR		
comp=N,2μm,13.5s,MS4.9							
GYA				LR	LR		
comp=E,2μm,14.2s,MS4.9							
GYA				LR	LR		
comp=Z,2μm,13.7s,MS4.8							
RAMN	**Ramite**	**26.46**	**340**	*e*P	**P**	**08 22 48.1**	**+1.2**
comp=Z,64nm,0.7s,mb5.3							
TAPN	**Taplejung**	**26.47**	**342**	*e*P	**P**	**08 22 48.4**	**+1.4**
comp=Z,114nm,0.8s,mb5.5							
PKI	**Pulchoki**	**27.45**	**338**	*e*P	**P**	**08 22 56.8**	**+1.0**
GUN	**Gumba**	**27.59**	**339**	*e*P	**P**	**08 22 58.0**	**+1.0**
comp=Z,108nm,0.8s,mb5.5							
KKN	**Kakani**	**27.70**	**338**	*e*P	**P**	**08 22 58.7**	**+0.7**
comp=Z,72nm,1.0s,mb5.3							
LSA	**Lhasa**	**27.91**	**350**	P	**P**	**08 23 00.9**	**+1.0**
LSA	**Lhasa**	**27.91**	**350**	*e*P	**P**	**08 23 01.0**	**+1.1**
LSA				pmax	pmax		
comp=Z,21nm,0.7s,mb4.9							
LSA	**Lhasa**	**27.91**	**350**	*e*P	**P**	**08 23 01.0**	**+1.1**
comp=Z,21nm,0.7s,mb4.9							
BHPL	**Bhopal**	**27.96**	**320**	*e*PKP	**P**	**08 23 01.4**	**+1.0**
GKN	**Gorkha**	**28.13**	**337**	*e*P	**P**	**08 23 02.4**	**+0.6**
comp=Z,63nm,0.9s,mb5.3							
CD2	**Chengdu**	**29.49**	**13**	P	**P**	**08 23 12.3**	**-1.6**
CD2				pP	pP	08 23 21.8	-0.9
CD2				PP	PP	08 24 08.1	-13
CD2				S	**S**	**08 28 03.3**	**-3.2**
CD2				pmax	pmax		
comp=Z,40nm,0.9s,mb5.2							
CD2				pmax	pmax		
comp=Z,70nm,3.9s							
CD2				LR	LR		
comp=N,500nm,15.5s							
CD2				LR	LR		
comp=Z,450nm,12.5s,MS4.3							
ENH	**Enshi**	**30.64**	**23**	*e*P	**P**	**08 23 22.7**	**-1.4**
comp=Z,21nm,0.8s,mb5.0		

NJ2 sP sP 08 24 31.3 +3.4
NJ2 PP PP 08 25 43.8 +5.1
NJ2 S **S** **08 29 55.0 -0.7**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.9
NJ2 pmax pmax
comp=Z,60nm,4.2s
NJ2 LR LR
comp=N,300nm,11.8s,MS4.3
NJ2 LR LR
comp=E,180nm,14.1s,MS4.3
GTA Gaotai 37.27 4 P **P** **08 24 21.3 -0.2**
GTA pP pP 08 24 29.3 -1.2
GTA PP PP 08 25 48.4 +1.5
GTA S **S** **08 30 04.6 -2.3**
GTA pmax pmax
comp=Z,17nm,0.8s,mb4.9
GTA pmax pmax
comp=Z,77nm,5.4s
GTA LR LR
comp=N,160nm,16.5s,MS4.1
GTA LR LR
comp=E,190nm,14.1s,MS4.1
GTA LR LR
comp=Z,200nm,15.9s,MS4.0
KAKA Kakadu 38.65 113 *e*P **P** **08 24 33.4 -0.1**
comp=Z,12nm,0.6s,mb4.8
KAKA Kakadu 38.65 113 *e*P **P** **08 24 33.5 +0.1**
comp=Z,36nm,0.6s,mb5.3
KAKA Kakadu 38.65 113 P **P** **08 24 33.5 0.0**
comp=Z,294nmcomp=Z,31nm,0.6s,mb5.2
HHC Hu-ho-hao-te 40.94 18 *e*P **P** **08 24 51.9 -0.2**
HHC sP sP 08 25 06.0 +1.2
HHC PP PP 08 26 30.6 +3.7
HHC PcP PcP 08 26 52.8 +0.6
HHC ScP ScP 08 30 38.4 -1.5
HHC PcS PcS 08 30 42.5 -0.5
HHC S **S** **08 31 01.3 -0.7**
HHC SS SS 08 33 59.0 -5.5
HHC ScS ScS 08 34 52.6 -2.3
HHC pmax pmax
comp=Z,19nm,0.6s,mb4.9
HHC pmax pmax
comp=Z,73nm,6.4s
HHC LR LR
comp=N,310nm,14.1s,MS4.4
HHC LR LR
comp=E,140nm,14.0s,MS4.4
HHC LR LR
comp=Z,270nm,14.2s,MS4.3
KBL Kabul 41.16 325 *e*P **P** **08 24 54.2 +0.1**
KBL pmax pmax
comp=Z,2.0nm,0.4s,mb4.1
KBL Kabul 41.16 325 *e*P **P** **08 24 54.2 +0.1**
comp=Z,1.8nm,0.4s,mb4.0
KSH Kashi 41.65 336 *e*P **P** **08 24 56.9 -1.2**
KSH pP pP 08 25 06.9 -0.2
KSH sP sP 08 25 10.8 0.0
KSH PP PP 08 26 35.4 +0.7
KSH PcP PcP 08 26 56.5 +1.9
KSH PcS PcS 08 30 46.8 +0.9
KSH S **S** **08 31 08.3 -4.4**
KSH SS SS 08 34 07.9 -11
KSH ScS ScS 08 34 56.8 -2.6
KSH pmax pmax
comp=Z,6.0nm,0.7s,mb4.3
KSH pmax pmax
comp=Z,87nm,4.3s
KSH LR LR
comp=N,230nm,7.4s
KSH LR LR
comp=E,130nm,6.4s
KSH LR LR
comp=Z,150nm,6.0s
BJT Baijiatuau 41.79 23 *e*P **P** **08 24 59.9 +0.8**
BJT *e**PP pP 08 25 07.4 -0.8
BJT pmax pmax
comp=Z,21nm,0.6s
BJT Baijiatuau 41.79 23 *e*P **P** **08 24 59.9 +0.7**
comp=Z,21nm,0.6s,mb4.9
BJT *e*pP pP 08 25 07.4 -0.8
BJI Beijing 41.81 23 P **P** **08 24 59.6 +0.3**
BJI pP pP 08 25 09.5 +1.1
BJI PP PP 08 26 37.8 +1.4
BJI S **S** **08 31 14.3 -0.7**
BJI pmax pmax
comp=Z,38nm,0.7s,mb5.1
BJI pmax pmax
comp=Z,66nm,3.5s
BJI LR LR
comp=N,150nm,14.6s,MS4.2
BJI LR LR
comp=E,190nm,12.5s,MS4.2
BJI LR LR
comp=Z,68nm,20.7s
WMQ Urumqi 42.27 351 P **P** **08 25 04.3 +1.3**
WMQ pP pP 08 25 14.1 +2.0
WMQ sP sP 08 25 18.1 +2.3
WMQ PP PP 08 26 45.5 +4.1
WMQ PcP PcP 08 26 58.8 +2.3
WMQ S **S** **08 31 22.0 +0.2**
WMQ SS SS 08 34 24.9 -6.1
WMQ ScS ScS 08 35 01.6 -1.4
WMQ pmax pmax
comp=Z,12nm,0.8s,mb4.6
WMQ pmax pmax
comp=Z,160nm,4.3s
WMQ LR LR
comp=N,140nm,22.0s,MS4.0
WMQ LR LR
comp=E,200nm,26.0s,MS4.0
WMQ LR LR
comp=Z,130nm,21.2s,MS3.8
WRA Warramunga Arr 43.15 122 P **P** **08 25 10.0 -0.5**
comp=Z,5.3nm,0.7s,mb4.4,baz=302,slow=9.1,SNR=27
WRA Warramunga Arr 43.15 122 P **P** **08 25 10.0 -0.5**
WRAB Tennant Creek 43.15 122 *e*P **P** **08 25 10.4 -0.2**
WRAB *e**PP pP 08 25 19.0 -0.6
WRAB pmax pmax
comp=Z,9.0nm,0.7s,mb4.6
WRAB Tennant Creek 43.15 122 *e*P **P** **08 25 10.4 -0.1**
comp=Z,8.6nm,0.7s,mb4.6
WRAB *e*pP pP 08 25 19.0 -0.7
WRAB Tennant Creek 43.15 122 P **P** **08 25 10.3 -0.3**
comp=Z,18nm,1.2s,mb4.7
ASAR Alice Springs 44.53 127 P **P** **08 25 21.3 -0.3**
comp=Z,2.1nm,0.7s,mb4.1,baz=301,slow=8.0,SNR=28
ASAR pP pP 08 25 28.4 -2.3
comp=Z,2.1nm,0.5s,baz=298,slow=7.9,SNR=11
ASAR PcP PcP 08 27 04.8 +0.1
comp=Z,1.1nm,0.8s,baz=301,slow=3.8,SNR=4.6
TKM2 Tokmak 2 44.71 338 *e*P **P** **08 25 23.6 +0.9**
TKM2 *e**PP pP 08 25 32.8 +1.0
TKM2 pmax pmax
comp=Z,23nm,1.3s,mb4.8
TKM2 Tokmak 2 44.71 338 *e*P **P** **08 25 23.6 +0.8**
comp=Z,24nm,1.3s,mb4.9
TKM2 *e*pP pP 08 25 32.8 +0.9
AML Almayashu 44.78 336 *e*P **P** **08 25 24.1 +0.8**
AML *e**PP pP 08 25 32.8 +0.4
AML pmax pmax
comp=Z,30nm,1.1s,mb5.0
AML Almayashu 44.78 336 *e*P **P** **08 25 24.1 +0.7**
comp=Z,30nm,1.1s,mb5.0
AML *e*pP pP 08 25 32.8 +0.4
AAK Ala-Archa 44.89 337 P **P** **08 25 24.4 +0.3**
comp=Z,2.8nm,0.6s,mb4.3,baz=175,slow=11,SNR=6.3
AAK LR LR 08 45 43.3
comp=Z,166nm,21.0s,MS3.9,baz=7.8,slow=38
EKS2 Erkin-Say 45.20 336 *e*P **P** **08 25 27.9 +1.3**
EKS2 *e**PP pP 08 25 36.1 +0.4
EKS2 pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
EKS2 Erkin-Say 45.20 336 *e*P **P** **08 25 27.9 +1.3**
comp=Z,7.1nm,0.8s,mb4.5
EKS2 *e*pP pP 08 25 36.1 +0.4
KS15 Wonju Array Si 45.53 36 *e*P **P** **08 25 29.0 -0.3**
KS15 *e*pP pP 08 25 36.5 -2.0
KS15 *e*sP sP 08 25 41.6 -0.5
KSRS Korea Array 45.56 36 P **P** **08 25 28.7 -0.9**
comp=Z,8.7nm,0.8s,mb4.8,baz=227,slow=9.2,SNR=56
KSRS pP pP 08 25 36.3 -2.4
comp=Z,6.9nm,0.7s,baz=224,slow=8.2,SNR=10
KSRS LR LR 08 46 20.2
comp=Z,164nm,18.8s,MS4.0,baz=62,slow=38

MK31 Makanchi Array 46.20 347 *e*P **P** **08 25 34.5 0.0**
MK31 *e**PP pP 08 25 43.0 -0.6
MKAR Makanchi Array 46.20 347 P **P** **08 25 34.4 0.0**
comp=Z,19nm,0.7s,mb5.1,baz=161,slow=7.8,SNR=189
MKAR pP pP 08 25 42.4 -1.2
comp=Z,32nm,0.8s,baz=162,slow=6.8,SNR=21
MKAR LR LR 08 50 15.5
comp=Z,76nm,18.7s,MS3.7,baz=166,slow=43
MKAR Makanchi Array 46.20 347 P **P** **08 25 34.4 -0.1**
MKAR *PP pP 08 25 42.4 -1.2
MKAR Makanchi Array 46.20 347 P **P** **08 25 34.4 0.0**
MKAR pP pP 08 25 42.4 -1.2
MKAR LR LR 08 50 15.5
SONM Songino Array 46.37 9 P **P** **08 25 35.7 -0.1**
comp=Z,9.9nm,1.0s,mb4.7,baz=189,slow=8.8,SNR=32
SONM pP pP 08 25 43.9 -1.0
comp=Z,12nm,0.7s,baz=191,slow=9.2,SNR=18
SONM LR LR 08 47 27.3
comp=Z,197nm,18.1s,MS4.1,baz=189,slow=39
SONM Songino Array 46.37 9 P **P** **08 25 35.7 -0.1**
SONM *PP pP 08 25 43.9 -1.0
ULN Ulaanbaatar 46.51 10 *e*P **P** **08 25 36.9 0.0**
ULN *e**PP pP 08 25 45.0 -1.0
ULN pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
ULN Ulaanbaatar 46.51 10 *e*P **P** **08 25 36.9 +0.1**
comp=Z,8.9nm,0.9s,mb4.7
ULN *e*pP pP 08 25 45.0 -1.0
ULN Ulaanbaatar 46.51 10 P **P** **08 25 37.0 +0.1**
KK31 Karatay Array 46.93 334 *i* P **P** **08 25 40.5 +0.3**
KK31 pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
CN2 Changchun 48.87 28 *e*P **P** **08 25 54.8 -0.4**
CN2 *e*S **S** **08 32 55.0 -1.9**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,200nm,15.0s,MS4.4
CN2 LR LR
comp=E,200nm,15.0s,MS4.4
CN2 LR LR
comp=Z,300nm,14.0s,MS4.4
MOY Mondy 49.55 4 *e*P **P** **08 25 59.8 -0.5**
TLY Talaya 49.79 6 *e*P **P** **08 26 02.2 +0.1**
TLY *e* 08 27 53.3
TLY *e*PPP 08 28 46.7
TLY pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
TLY MLR MLR
comp=Z,180nm,17.0s,MS4.1
TLY Talaya 49.79 6 *e*P **P** **08 26 02.9 +0.8**
comp=Z,8.2nm,0.8s,mb4.8
TLY *e*pP pP 08 26 11.6 +0.3
TLY *e*sP sP 08 26 16.7 +1.8
KURK Kurchatov 50.74 345 P **P** **08 26 09.0 -0.4**
KURK pmax pmax
comp=Z,20nm,1.0s,mb5.0
KURK Kurchatov 50.74 345 *e*P **P** **08 26 09.4 +0.1**
comp=Z,29nm,1.2s,mb5.1
KURK *e*pP pP 08 26 17.8 -0.8
KURK *e*sP sP 08 26 23.5 +1.3
MDJ Mudanjiang 51.47 30 P **P** **08 26 15.8 +0.8**
MDJ pP pP 08 26 23.3 -0.9
MDJ S **S** **08 33 34.8 +1.7**
MDJ pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
MDJ pmax pmax
comp=Z,36nm,5.1s
MDJ LR LR
comp=N,76nm,21.1s,MS3.9
MDJ LR LR
comp=E,82nm,19.8s,MS3.9
MDJ LR LR
comp=Z,81nm,18.0s,MS3.8
MAT Matsushiro 51.56 43 P **P** **08 26 15.5 -0.3**
MJAR Matsushiro Arr 51.56 43 P **P** **08 26 15.4 -0.3**
comp=Z,0.9nm,0.5s,mb3.9,baz=190,slow=6.8,SNR=5.4
ZALV Zalesovo Beam 52.57 351 P **P** **08 26 22.9 0.0**
comp=Z,38nm,0.7s,mb5.5,baz=179,slow=6.8,SNR=154
ZALV pP pP 08 26 30.7 -1.5
comp=Z,16nm,0.6s,baz=173,slow=6.7,SNR=9.3
ZALV LR LR 08 53 25.1
comp=Z,64nm,20.5s,MS3.6,baz=224,slow=41
ZALV Zalesovo Beam 52.57 351 P **P** **08 26 22.9 0.0**
ZALV *PP pP 08 26 30.7 -1.5
ZALV Zalesovo Beam 52.57 351 P **P** **08 26 22.9 0.0**
ZALV pP pP 08 26 30.7 -1.5
ZALV LR LR 08 53 25.1
NVS Novosibirsk 53.68 351⇑ *i*P **P** **08 26 30.1 -1.0**
NVS *e*S **S** **08 34 00.1 -2.8**
NVS pmax pmax
comp=Z,20nm,0.9s,mb5.0
NVS pmax pmax
comp=N,12nm,0.8s
NVS pmax pmax
comp=E,10.0nm,0.8s
NVS smax
comp=E,18nm,1.8s
STKA Stephens Creek 54.51 132 *e*P **P** **08 26 38.0 +0.4**
comp=E,2.7nm,0.8s,mb4.3
STKA Stephens Creek 54.51 132 P **P** **08 26 37.5 -0.1**
comp=E,3.7nm,0.8s,mb4.5,baz=299,slow=11,SNR=4.9
STKA LR LR 08 52 37.8
comp=E,102nm,20.6s,MS3.9,baz=24,slow=39
VOSK Vostochnaya 54.72 341 P **P** **08 26 38.0 -0.7**
VOSK pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
BVAR Borovoye Array 55.17 341 P **P** **08 26 41.4 -0.5**
comp=Z,7.4nm,0.7s,mb4.8,baz=142,slow=8.6,SNR=43
BVAR pP pP 08 26 49.2 -2.0
comp=Z,5.4nm,0.5s,baz=141,slow=9.6,SNR=11
BVAR Borovoye Array 55.17 341 P **P** **08 26 41.4 -0.5**
BVAR pP pP 08 26 49.2 -2.0
BRVK Borovoye 55.23 341⇑ *i*P **P** **08 26 41.9 -0.5**
BRVK pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
BRVK Borovoye 55.23 341 *e*P **P** **08 26 42.0 -0.4**
comp=Z,9.4nm,0.8s,mb4.9
BRVK *e*pP pP 08 26 50.4 -1.4
ZRNK Zerenda 55.56 340 P **P** **08 26 43.9 -0.9**
ZRNK pmax pmax
comp=Z,12nm,1.3s,mb4.8
KLR Kul'dur 55.81 27 *e*P **P** **08 26 42.2 -4.5**
AB31 Akbulak array 56.38 332 *i* P **P** **08 26 50.4 -0.3**
AB31 pmax pmax
comp=Z,11nm,0.7s,mb5.0
ABKAR Akbulak array 56.38 332 *e*P **P** **08 26 50.5 -0.3**
comp=Z,13nm,0.8s,mb5.0
ABKAR *e*pP pP 08 26 59.5 -0.5
HABR Khabarovsk 56.86 30 P **P** **08 26 52.0 -2.2**
HABR *PP pP 08 27 01.9 -1.6
HABR *e*S **S** **08 34 45.5 -0.2**
HABR *e**SS sS 08 35 02.5 +1.4
HABR *e* 08 36 38.0
HABR *e*SS SS 08 38 35.2 +0.9
HABR MLR MLR
comp=Z,150nm,17.0s,MS4.2
CMSA Cobar Meteorol 57.44 130 *e*P **P** **08 26 59.4 +0.8**
AKTK Aktyubinsk 58.09 332 P **P** **08 27 02.0 -0.8**
AKTK LR LR 08 55 17.9
AKTO Aktyubinsk 58.09 332 P **P** **08 27 02.0 -0.8**
comp=Z,4.9nm,0.8s,mb4.6,baz=128,slow=6.0,SNR=11
AKTO LR LR 08 55 17.9
comp=Z,47nm,20.6s,MS3.6,baz=321,slow=39
KMBO Kilima Mbogo 59.27 267 *e*P **P** **08 27 11.9 +0.2**
KMBO *e**PP pP 08 27 23.0 +1.9
KMBO *e**SP sP 08 27 26.9 +2.2
KMBO pmax pmax
comp=Z,1.0nm,0.2s
KMBO Kilima Mbogo 59.27 267 *e*P **P** **08 27 11.9 +0.2**
comp=Z,1.3nm,0.2s,mb4.6
KMBO *e*pP pP 08 27 22.9 +1.9
KMBO *e*sP sP 08 27 26.9 +2.2
YSS Yuzh-Sakhalins 60.05 35⇑ *i*P **P** **08 27 16.9 +0.4**
YSS *e* pP 08 27 24.0 -1.8
YSS pmax pmax
comp=Z,40nm,1.0s,mb5.4
YSS Yuzh-Sakhalins 60.05 35 *e*P **P** **08 27 16.8 +0.4**
comp=Z,21nm,0.8s,mb5.2
SVE Sverdlovsk 61.59 339 *e*P **P** **08 27 31.2 +4.5**
SVE pmax pmax
comp=Z,32nm,0.9s,mb5.5
ZEI Tsey 61.83 318 *e*P **P** **08 27 24.8 -3.9**

ZEI pmax pmax
comp=Z,9.0nm,0.4s,mb5.2
ARU Arti 62.07 337 *d i*P **P** **08 27 29.0 -1.0**
ARU S **S** **08 35 54.3 +1.5**
ARU SS SS 08 40 02.1 +6.2
ARU pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
ARU Arti 62.07 337 *e*P **P** **08 27 29.8 -0.2**
comp=Z,9.0nm,0.3s,mb5.4
KIV Kislovodsk 63.14 319 *e*P **P** **08 27 33.1 -4.3**
KIV pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
KIV MLR MLR
comp=Z,31nm,18.0s,MS3.5
MMAI Mount Meron Ar 64.77 306 P **P** **08 27 49.2 +0.8**
comp=Z,0.6nm,0.4s,mb4.0,baz=104,slow=10,SNR=2.6
YAK Yakutsk 64.78 17 *e*P **P** **08 27 46.6 -1.2**
YAK *e* pP 08 27 54.5 -2.8
YAK pmax pmax
comp=Z,16nm,0.9s,mb5.0
YAK pmax pmax
comp=N,5.0nm,1.0s
YAK pmax pmax
comp=E,4.0nm,1.1s
YAK MLR MLR
comp=Z,238nm,14.0s,MS4.5
YAK MLR MLR
comp=E,109nm,14.0s,MS4.4
YAK MLR MLR
comp=N,128nm,14.0s,MS4.4
BRTR Keskin Array B 67.95 312 P **P** **08 28 08.5 -0.1**
comp=N,0.5nm,0.5s,mb3.8,baz=120,slow=4.2,SNR=2.9
BR131 Keskin Array S 67.96 312 P **P** **08 28 08.8 +0.2**
VSR Storozhevoye 68.41 325 *e*P **P** **08 28 09.9 -1.3**
VSR pmax pmax
comp=E,5.0nm,0.6s
VSR pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
VSR pmax pmax
comp=N,2.0nm,0.3s
MOS Moscow 71.19 329 *e*P **P** **08 28 23.3 -4.9**
OBN Obninsk 71.47 328 *e*P **P** **08 28 31.6 +1.7**
OBN pmax pmax
comp=Z,13nm,1.1s,mb4.8
TIXI Tiksi 72.45 10 *e*P **P** **08 28 32.9 -2.6**
TIXI pmax pmax
comp=Z,15nm,1.6s,mb4.7
TIXI MLR MLR
comp=Z,132nm,17.0s,MS4.3
TIXI Tiksi 72.45 10 *e*P **P** **08 28 34.9 -0.6**
comp=Z,6.6nm,0.9s,mb4.6
SEY Seymchan 73.25 23⇑ *i*P **P** **08 28 38.9 -1.5**
LBTB Lobatse 73.60 243 *e*P **P** **08 28 44.7 +1.4**
AKASG Malin Array Be 74.09 322 P **P** **08 28 45.1 -0.5**
comp=Z,0.6nm,0.4s,mb3.9,baz=86,slow=5.8,SNR=3.4
BOSA Boshof 74.57 240 P **P** **08 28 48.1 -0.7**
comp=Z,3.1nm,0.8s,mb4.3,baz=127,slow=5.1,SNR=4.6
BUR08 Bucovina Ar. S 75.88 319 *e*P **P** **08 28 57.1 +1.1**
BUR08 *e*pP pP 08 29 06.6 +1.0
APA Apatity 78.03 340⇓ *e*P **P** **08 29 14.2 +6.5**
APA pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
APA MLR MLR
comp=Z,200nm,21.0s,MS4.4
FINES FINESS Array B 78.86 333 P **P** **08 29 11.9 -0.4**
comp=Z,2.7nm,0.7s,mb4.3,baz=88,slow=3.3,SNR=8.7
FINES LR LR 09 08 59.4
comp=Z,72nm,20.5s,MS4.0,baz=7.5,slow=39
ARCES ARCESS Array B 81.45 340 P **P** **08 29 26.6 +0.5**
comp=Z,1.2nm,0.4s,mb4.2,baz=104,slow=5.8,SNR=23
ARCES LR LR 09 12 58.5
comp=Z,55nm,18.2s,MS4.0,baz=94,slow=41
ARE0 ARCESS Array S 81.45 340 *e*P **P** **08 29 27.2 +1.0**
DPC Dobruska-Polom 82.09 320 *e*P pP 08 29 41.5 +1.9
DPC Dobruska-Polom 82.09 320 *e*pP pP 08 29 41.5 +1.9
KHC Kasperske Hory 83.75 319 *e*P pP 08 29 49.4 +1.1
KHC Kasperske Hory 83.75 319 *e*pP pP 08 29 49.4 +1.1
NB2 NORSAR Subarra 85.86 331 P **P** **08 29 48.8 -0.2**
comp=Z,2.6nm,0.8s,mb4.5,baz=90,slow=5.3
NOA NORSAR Array B 85.86 331 P **P** **08 29 49.0 0.0**
comp=Z,0.4nm,0.7s,mb3.8,baz=94,slow=5.0,SNR=2.4
TORD Torodi Ar. Bea 94.15 283 P P **08 30 29.1 +0.2**
comp=Z,0.7nm,1.2s,mb4.0,baz=120,slow=4.6,SNR=2.3
NVAR Mina Array Bea 128.50 35 PKP PKPdf 08 36 17.8 +1.0
comp=Z,0.1nm,0.5s,baz=270,slow=0.9,SNR=3.6
PDAR Pinedale Array 129.56 25 PKP PKPdf 08 36 18.4 -0.2
comp=Z,0.3nm,0.5s,baz=354,slow=1.5,SNR=3.4
TXAR Lajitas Array 143.30 30 PKhKP 08 36 40.4
comp=Z,0.2nm,0.6s,baz=278,slow=2.2,SNR=2.7
TXAR PKP PKPdf 08 36 45.5 +1.1
comp=Z,0.3nm,0.6s,baz=330,slow=1.5,SNR=6.1
JCT Junction City 144.10 24 *e*PKIKP PKPdf 08 36 46.1 +0.3
CPUP Villa Florida 145.13 224 PKPbc PKPbc 08 36 48.0 +0.8
comp=Z,2.6nm,0.8s,baz=60,slow=6.4,SNR=4.0

IDC 14 08:27:59.8±2.9, 18°.07S×173°.08W, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.8/17, mbtmp3.8/3, Error ellipse: s-maj=305.2km s-min=33.1km az=158.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**49.58**	**259**	P	P	08 36 52.9	-0.2
	0.5nm,0.4s,baz=97,slow=7.4,SNR=8.4						
ASAR	**Alice Springs**	**49.62**	**254**	P	P	08 36 53.5	+0.1
	0.9nm,0.6s,baz=91,slow=8.2,SNR=19						
TXAR	**Lajitas Array**	**81.85**	**56**	P	P	08 40 21.4	+0.2
	0.2nm,0.7s,baz=230,slow=5.6,SNR=4.0						

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*ISCJB **14** 08:45:37.7±0.5, 14°.70N±0°.07×52°.52E±0°.07, h10km, mb4.3/31, MS3.3/11, Error ellipse: s-maj=10.8km s-min=8.7km az=41.3*
*IDC **14** 08:45:37.3±0.6, 14°.65N×52°.38E, h0km, mb4.1/18, mb1 4.2/18, mb1mx4.1/27, mbtmp4.1/18, MS3.4/11, Ms1 3.4/11, ms1mx3.2/32, Error ellipse: s-maj=18.6km s-min=15.8km az=87.0*
*CSEM **14** 08:45:38.5±0.3, 14°.74N×52°.59E, h2km, mb4.5/11, Error ellipse: s-maj=13.4km s-min=10.0km az=137.0*
*NEIC **14** 08:45:39.4±0.5, 14°.65N×52°.51E, h10km, mb4.5/5, Error ellipse: s-maj=10.8km s-min=10.2km az=138.0*
*MOS **14** 08:45:41.2±0.9, 14°.70N×52°.42E, h33km, mb4.8/13, Error ellipse: s-maj=16.1km s-min=7.7km az=92.2*
ISC 14 08:45:39.6±0.5, 14°.72N±0°.07×52°.62E±0°.07, h10km, n111, σ19/13/103, mb4.3/31, MS3.3/11, 20C-3D, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABTO	**Aybut**	**2.70**	**14**	P	**Pn**	**08 46 21.5**	**-1.6**
	SNR=8.5						
RBK	**Rabkut**	**3.16**	**29**	P	**Pn**	**08 46 29.5**	**+0.1**
	SNR=201						
MUKL	**Al Mukalla**	**3.48**	**266**	*i* S	Sx	08 46 56.3	
MUKL				AML	AML	08 47 02.9	
	comp=N,900nm,0.5s						
BDHA	**Al Bayda'**	**6.88**	**265**	*e*	**Pn**	**08 47 15.2**	**-5.4**
	baz=87,slow=12						
BDHA				*i* P		08 47 15.2	
BDHA				*i* S	Sx	08 48 13.4	
BSYO	**Bisya**	**9.09**	**28**	P	**Pn**	**08 47 49.5**	**-1.4**
	SNR=8.7						
JMDO	**Jabal Madar**	**9.21**	**34**	P	**Pn**	**08 47 51.9**	**-0.7**
	SNR=15						
SMDO	**Samad**	**9.75**	**31**	P	**Pn**	**08 47 58.1**	**-1.9**
	SNR=10						
HOQ	**Hoqain**	**9.86**	**26**	P	**Pn**	**08 47 59.5**	**-2.0**
ATD	**Arta Tunnel**	**10.03**	**253**	Pn	**Pn**	**08 48 03.8**	**-0.1**
	comp=N,4.6nm,0.3s,baz=215,slow=20,SNR=10.0						
ATD				LR	LR	08 50 51.2	
	comp=N,274nm,20.9s,baz=156,slow=32						
ATD	**Arta Tunnel**	**10.03**	**253**	Pn	**Pn**	**08 48 03.8**	**-0.1**
EIL	**Elat**	**22.07**	**315**	LR	LR	08 59 08.5	
	comp=N,115nm,19.0s,MS3.3,baz=276,slow=37						
ASF	**Jabal al Asfar**	**22.53**	**323**	P	**P**	**08 50 41.9**	**+2.3**
	comp=N,1.8nm,0.5s,mb3.8,baz=176,slow=4.3,SNR=5.2						
ASF				LR	LR	08 58 50.1	
	comp=N,95nm,18.6s,MS3.2,baz=198,slow=35						
MMAI	**Mount Meron Ar**	**24.01**	**322**	LR	LR	08 59 48.8	
	comp=N,106nm,18.6s,MS3.4,baz=125,slow=36						
KBL	**Kabul**	**24.68**	**34**	*e*P	**P**	**08 51 03.3**	**+2.6**
KBL				pmax	pmax		
	comp=Z,50nm,1.1s,mb5.0						
KBL	**Kabul**	**24.68**	**34**	*e*P	**P**	**08 51 03.3**	**+2.6**
	comp=Z,50nm,1.1s,mb5.0						

KBL **Kabul** 24.68 34 *eP* P 08 51 03.3 +2.6
comp=Z,50nm,1.1s,mb5.0
GNI **Garni** 26.25 346 P P 08 51 16.2 +1.3
comp=Z,2.9nm,0.3s,mb4.3,baz=180,slow=4.0,SNR=7.0
GNI LR LR 09 02 32.3
comp=Z,80nm,20.8s,MS3.2,baz=52,slow=39
GNI **Garni** 26.25 346 ⇓*iP* P 08 51 15.9 +0.9
GNI pmax pmax
comp=Z,22nm,1.1s
GNI **Garni** 26.25 346 *iP* P 08 51 15.9 +0.9
comp=Z,22nm,1.1s,mb4.6
ZEI **Tsey** 28.94 347 *eP* P 08 51 39.0 0.0
ZEI pmax pmax
comp=Z,9.0nm,0.5s,mb4.8
ZEI **Tsey** 28.94 347 *eP* P 08 51 39.0 0.0
comp=Z,9.0nm,0.5s,mb4.8
BRTR **Keskin Array B** 29.95 330 P P 08 51 47.6 -0.5
comp=Z,1.1nm,0.8s,mb3.6,baz=146,slow=11,SNR=5.3
BRTR **Keskin Array B** 29.95 330 P P 08 51 47.6 -0.5
KIV **Kislovodsk** 30.34 346 *eP* P 08 51 52.4 +1.0
KIV pmax pmax
comp=Z,19nm,1.1s,mb4.7
KIV MLR MLR
comp=Z,94nm,15.0s,MS3.6
KIV **Kislovodsk** 30.34 346 *eP* P 08 51 52.4 +1.0
comp=Z,94nm,15.0s
AML **Almayashu** 32.82 30 *eP* P 08 52 15.2 +2.0
AML pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
AML **Almayashu** 32.82 30 *eP* P 08 52 15.2 +1.9
comp=Z,2.6nm,0.6s,mb4.3
AML **Almayashu** 32.82 30 *eP* P 08 52 15.1 +1.9
comp=Z,2.6nm,0.6s,mb4.3
ABKAR **Akbulak array** 34.96 8 *eP* P 08 52 32.0 +0.3
comp=Z,10nm,1.0s,mb4.7
ABKAR **Akbulak array** 34.96 8 *eP* P 08 52 32.0 +0.3
comp=Z,10nm,1.0s,mb4.7
AKTK **Aktyubinsk** 35.89 6 P P 08 52 40.1 +0.4
AKTK **Aktyubinsk** 35.89 6 P P 08 52 40.2 +0.5
AKTO **Aktyubinsk** 35.89 6 P P 08 52 40.1 +0.4
comp=Z,7.9nm,1.1s,mb4.6,baz=193,slow=8.0,SNR=18
TIRR **Tirgusor** 36.08 330 ⇑P P 08 52 40.6 -0.8
TIRR **Tirgusor** 36.08 330 ⇑*iP* P 08 52 40.6 -0.8
TIRR **Tirgusor** 36.08 330 P P 08 52 40.6 -0.8
VRHR **Novokhopersk** 37.35 349 *eP* P 08 52 52.4 +0.2
VRHR *e* 08 52 58.9
VRHR pmax pmax
comp=N,20nm,0.7s
VRHR pmax pmax
comp=E,8.0nm,0.7s
VRHR pmax pmax
comp=Z,20nm,0.7s,mb5.1
VRHR **Novokhopersk** 37.35 349 *eP* P 08 52 52.4 +0.2
VRI **Vrincioaia** 37.92 330 ⇑P P 08 52 58.6 +1.5
VRI **Vrincioaia** 37.92 330 ⇑*iP* P 08 52 58.5 +1.4
VRI **Vrincioaia** 37.92 330 ⇑P P 08 52 58.5 +1.4
PLOR **Plostina** 37.95 330 ⇑P P 08 53 00.6 +3.3
PLOR **Plostina** 37.95 330 ⇑*iP* P 08 53 00.6 +3.3
PLOR **Plostina** 37.95 330 P P 08 53 00.6 +3.3
VSR **Storozhevoye** 37.98 346 *eP* P 08 52 56.6 -0.9
VSR *e* 08 53 02.6
VSR pmax pmax
comp=N,7.0nm,0.6s
VSR pmax pmax
comp=E,5.0nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
VSR **Storozhevoye** 37.98 346 *eP* P 08 52 56.6 -0.9
MLR **Muntele Rosu** 38.03 329 ⇑P P 08 53 01.0 +3.0
MLR **Muntele Rosu** 38.03 329 ⇑*iP* P 08 53 01.0 +3.0
MLR **Muntele Rosu** 38.03 329 P P 08 53 01.0 +3.0
TESR 38.43 331 ⇑P P 08 53 01.1 -0.2
TESR 38.43 331 ⇑*iP* P 08 53 01.1 -0.3
TESR 38.43 331 ⇑P P 08 53 01.1 -0.3
BURAR **Bucovina Array** 39.90 331 ⇑P P 08 53 14.2 +0.5
BURAR **Bucovina Array** 39.90 331 ⇑*iP* P 08 53 14.2 +0.5
BURAR **Bucovina Array** 39.90 331 ⇑P P 08 53 14.2 +0.5
MKAR **Makanchi Array** 40.44 32 P P 08 53 19.3 +1.2
comp=Z,1.5nm,0.6s,mb3.9,baz=221,slow=7.7,SNR=14
MKAR LR LR 09 12 42.6
comp=Z,38nm,20.3s,MS3.2,baz=170,slow=40
MKAR **Makanchi Array** 40.44 32 *ceP* P 08 53 19.2 +1.1
MKAR pmax pmax
comp=Z,2.0nm,0.6s
DRGR 40.56 328 ⇑P P 08 53 18.9 -0.2
DRGR 40.56 328 ⇑*iP* P 08 53 18.9 -0.2
DRGR 40.56 328 P P 08 53 18.9 -0.2
AKASG **Malin Array Be** 40.57 337 P P 08 53 18.3 -0.9
comp=Z,3.2nm,0.7s,mb4.1,baz=143,slow=7.3,SNR=12
AKASG **Malin Array Be** 40.57 337 *ceP* P 08 53 18.2 -1.0
AKASG pmax pmax
comp=Z,3.0nm,0.7s
AKASG **Malin Array Be** 40.57 337 P P 08 53 18.3 -0.9
KIEV **Kiev** 40.57 337 *eP* P 08 53 18.3 -0.9
KIEV pmax pmax
comp=Z,9.0nm,1.0s,mb4.3
KIEV **Kiev** 40.57 337 *eP* P 08 53 18.2 -0.9
comp=Z,9.0nm,1.0s,mb4.3
KIEV **Kiev** 40.57 337 *eP* P 08 53 18.2 -1.0
comp=Z,9.0nm,1.0s,mb4.3
BVAR **Borovoye Array** 40.73 16 P P 08 53 21.0 +0.6
comp=Z,3.8nm,0.6s,mb4.2,baz=210,slow=6.9,SNR=21
BVAR **Borovoye Array** 40.73 16 P P 08 53 21.0 +0.6
BRVK **Borovoye** 40.73 16 *c iP* P 08 53 20.6 +0.2
BRVK pmax pmax
comp=Z,4.0nm,0.6s,mb4.2
BRVK **Borovoye** 40.73 16 *i P* P 08 53 20.6 +0.2
comp=Z,4.0nm,0.6s,mb4.2
KURK **Kurchatov** 41.60 25 ⇓*iP* P 08 53 28.3 +0.7
KURK pmax pmax
comp=Z,6.0nm,1.2s,mb4.1
KURK **Kurchatov** 41.60 25 *eP* P 08 53 28.9 +1.3
comp=Z,7.5nm,1.1s,mb4.2
KURK **Kurchatov** 41.60 25 *i P* P 08 53 28.3 +0.7
comp=Z,6.0nm,1.2s,mb4.1
ARU **Arti** 41.87 5 *d iP* P 08 53 29.6 -0.2
ARU S S 08 59 48.8 +1.2
ARU SS SS 09 02 50.5 -3.5
ARU pmax pmax
comp=Z,5.0nm,1.0s,mb4.1
ARU **Arti** 41.87 5 *i P* P 08 53 29.6 -0.2
comp=Z,5.0nm,1.0s,mb4.1
ARU S S 08 59 48.8 +1.2
UZH **Uzhgorod** 42.01 330 *eP* P 08 53 23.0 -8.0
UZH *e* 08 53 29.2
UZH **Uzhgorod** 42.01 330 *eP* P 08 53 23.0 -8.0
OBN **Obninsk** 42.19 346 *eP* P 08 53 32.3 -0.1
OBN pmax pmax
comp=Z,10.0nm,1.2s,mb4.3
OBN **Obninsk** 42.19 346 *eP* P 08 53 32.3 -0.1
comp=Z,10.0nm,1.2s,mb4.3
CMAR **Chiang Mai Arr** 44.46 79 P P 08 53 53.6 +2.3
comp=Z,1.0nm,0.6s,mb3.7,baz=277,slow=9.3,SNR=6.2
CMAR LR LR 09 13 10.2
comp=Z,18nm,18.1s,MS3.0,baz=175,slow=37
CMAR **Chiang Mai Arr** 44.46 79 P P 08 53 53.6 +2.3
NVS **Novosibirsk** 46.55 24 *eP* P 08 54 06.9 -0.4
NVS **Novosibirsk** 46.55 24 *eP* P 08 54 06.9 -0.4
ZALV **Zalesovo Beam** 46.55 26 P P 08 54 07.2 -0.1
comp=Z,5.3nm,0.5s,mb4.7,baz=239,slow=8.5,SNR=20
LBTB **Lobatse** 47.48 214 P P 08 54 13.8 -1.1
comp=Z,7.3nm,0.7s,mb4.7,baz=55,slow=7.6,SNR=12
LBTB LR LR 09 12 46.1
comp=Z,37nm,21.7s,MS3.3,baz=240,slow=34
LBTB **Lobatse** 47.48 214 P P 08 54 13.8 -1.1
LBTB LR LR 09 12 46.1
LBTB **Lobatse** 47.48 214 P P 08 54 13.8 -1.1
TORD **Torodi Ar. Bea** 49.37 275 P P 08 54 25.4 -4.3
comp=Z,0.4nm,0.6s,mb3.6,baz=94,slow=7.2,SNR=3.5
TORD **Torodi Ar. Bea** 49.37 275 P P 08 54 25.4 -4.3
FINES **FINESS Array B** 50.40 344 P P 08 54 36.2 -0.6
comp=Z,3.0nm,0.6s,mb4.5,baz=126,slow=9.7,SNR=12
FINES **FINESS Array B** 50.40 344 P P 08 54 36.2 -0.7
BOSA **Boshof** 50.56 212 LR LR 09 15 14.2
comp=Z,63nm,20.4s,MS3.6,baz=253,slow=35
SONM **Songino Array** 55.12 41 P P 08 55 13.1 +1.0
comp=Z,1.3nm,0.7s,mb4.1,baz=251,slow=7.3,SNR=7.4
SONM LR LR 09 21 48.2
comp=Z,36nm,20.1s,MS3.4,baz=126,slow=39
SONM **Songino Array** 55.12 41 P P 08 55 13.1 +1.1
ESDC **Sonseca Array** 55.12 308 P P 08 55 09.4 -2.7
comp=Z,0.2nm,0.3s,mb3.7,baz=91,slow=9.0,SNR=5.8
ESDC **Sonseca Array** 55.12 308 P P 08 55 09.4 -2.8
ARCES **ARCESS Array B** 57.36 349 P P 08 55 26.6 -1.1
comp=Z,1.7nm,0.8s,mb4.1,baz=134,slow=5.2,SNR=5.6
ARCES **ARCESS Array B** 57.36 349 P P 08 55 26.5 -1.2
KSRS **Korea Array** 69.62 55 P P 08 56 48.5 -0.9
comp=Z,0.8nm,0.6s,mb3.9,baz=266,slow=6.1,SNR=6.3
KSRS LR LR 09 28 43.3
comp=Z,16nm,18.3s,MS3.3,baz=217,slow=37
MAW **Mawson** 82.44 176 P P 08 58 01.3 -0.3
comp=Z,1.0nm,0.5s,mb4.0,baz=341,slow=9.6,SNR=3.9
MAW **Mawson** 82.44 176 P P 08 58 01.3 -0.3
WRA **Warramunga Arr** 87.39 111 P P 08 58 27.2 -0.4
comp=Z,0.5nm,0.6s,mb3.9,baz=301,slow=3.8,SNR=11
WRA **Warramunga Arr** 87.39 111 P P 08 58 27.2 -0.5
ASAR **Alice Springs** 88.07 115 P P 08 58 30.6 -0.2
comp=Z,0.7nm,0.6s,mb4.0,baz=291,slow=4.9,SNR=20
ASAR **Alice Springs** 88.07 115 P P 08 58 30.7 -0.1
PDAR **Pinedale Array** 120.50 345 PKP PKPdf 09 04 30.5 -1.3
comp=Z,0.3nm,0.7s,baz=48,slow=2.2,SNR=3.6
PDAR **Pinedale Array** 120.50 345 PKIKP PKPdf 09 04 30.5 -1.3
NVAR **Mina Array Bea** 126.45 351 PKP PKPdf 09 04 43.6 +0.3
comp=Z,0.7nm,0.8s,baz=27,slow=1.2,SNR=6.0
NVAR **Mina Array Bea** 126.45 351 PKIKP PKPdf 09 04 43.6 +0.3
TXAR **Lajitas Array** 130.58 332 PKP PKPdf 09 04 51.3 -0.1
comp=Z,0.3nm,0.9s,baz=333,slow=1.4,SNR=3.9
TXAR **Lajitas Array** 130.58 332 PKIKP PKPdf 09 04 51.3 -0.1

DJA 14 08:47:29.0±25N×98°43E, h30km, MLv3.6/8, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	1.27	65	P	Pn	08 47 50.6	-0.1
MNSI				S	Sn	08 48 07.1	+0.3
GSI	**Gunungsitoli**	1.35	321	P	Pn	08 47 52.8	+1.0
SISI	**Saibi**	1.70	157	P	Pn	08 47 56.1	-0.5
PPI	**Padang Panjang**	2.09	110	P	Pn	08 48 01.7	-0.3
PPI				S	Sn	08 48 30.3	+3.3
PDSI	**Padang**	2.34	120	P	Pn	08 48 05.8	+0.4
BKNI	**Bangkinang**	2.61	88	P	Pn	08 48 09.4	+0.2
SDSI	**Sungai Dareh**	3.22	111	P	Pn	08 48 18.2	+0.6
KRJI	**Kerinci**	3.82	128	P	Pn	08 48 26.9	+1.1

ISCJB 14 08:53:05.8±0.5, 58°.12S±0°.07×21°.5W±0°.1, h10km, mb4.5/14, MS3.7/6, Error ellipse: s-maj=11.7km s-min=10.2km az=145.1
IDC 14 08:53:06.0±0.5, 58°.09S×21°.56W, h0km, mb4.4/12, mb1 4.5/12, mb1mx4.4/18, mbtmp4.5/12, MS3.8/6, Ms1 3.7/6, ms1mx3.4/22, Error ellipse: s-maj=19.8km s-min=15.3km az=5.0
NEIC 14 08:53:07.4±0.3, 58°.07S×21°.54W, h10km, mb4.7/1, Error ellipse: s-maj=11.1km s-min=8.7km az=162.0
ISC 14 08:53:07.8±0.5, 58°.12S±0°.07×21°.5W±0°.1, h10km, n41, σ0§65/23, mb4.5/14, MS3.7/6, East of South Sandwich Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	13.77	161	*e*	Pn	08 56 21.6	-1.0
VNA1				*e*		08 58 44.6	
MAIT	**Maitri**	18.79	146	*eP*	Pn	08 57 27.0	-0.2
PMSA	**Palmer Station**	21.04	234	P	P	08 57 52.6	+1.4
	3.6nm,0.6s,mb3.9,baz=58,slow=9.5,SNR=2.9						
USHA	**Ushuaia**	25.71	257	P	P	08 58 37.5	-0.2
	3.9nm,0.6s,mb4.1,baz=130,slow=12,SNR=5.8						
USHA				LR	LR	09 06 08.0	
	comp=Z,234nm,20.3s,MS3.7,baz=80,slow=30						
QSPA	**South Pole Qui**	32.12	180	P	P	08 59 35.3	+0.8
	13nm,0.9s,mb4.7,baz=210,slow=4.3,SNR=15						
QSPA	**South Pole Qui**	32.12	180	P	P	08 59 35.3	+0.8
QSPA				*eP*		08 59 35.5	
QSPA				*eP*		08 59 35.9	
PLCA	**Paso Flores**	35.38	278	P	P	09 00 01.7	-1.6
	8.3nm,1.0s,mb4.6,baz=148,slow=6.7,SNR=9.3						
PLCA				LR	LR	09 14 09.7	
	comp=Z,75nm,21.4s,MS3.4,baz=102,slow=36						
PLCA	**Paso Flores**	35.38	278	*eP*	P	09 00 02.2	-1.1
PLCA				LR	LR	09 14 09.7	
MAW	**Mawson**	36.60	140	P	P	09 00 13.4	0.0
	3.9nm,0.8s,mb4.3,baz=245,slow=9.5,SNR=5.2						
MAW				LR	LR	09 12 48.8	
	comp=Z,117nm,19.3s,MS3.7,baz=40,slow=32						
CPUP	**Villa Florida**	40.53	306	P	P	09 00 46.4	-0.5
	5.7nm,0.7s,mb4.3,baz=127,slow=7.5,SNR=23						
CPUP				LR	LR	09 13 46.3	
	comp=Z,60nm,19.7s,MS3.5,baz=142,slow=31						
CPUP	**Villa Florida**	40.53	306	*eP*	P	09 00 46.5	-0.4
CPUP				LR	LR	09 13 46.3	
CFAA	**Coronel Fontan**	41.20	289	P	P	09 00 52.0	-0.3
	0.3nm,0.5s,baz=144,slow=5.9,SNR=8.7						
BOSA	**Boshof**	43.66	68	P	P	09 01 13.2	+0.8
	1.5nm,0.7s,mb3.8,baz=190,slow=17,SNR=4.9						
LBTB	**Lobatse**	46.83	66	P	P	09 01 37.3	-0.3
	1.6nm,0.7s,mb4.1,baz=210,slow=8.1,SNR=2.2						
LPAZ	**La Paz**	54.11	300	P	P	09 02 33.6	+1.0
	5.5nm,0.6s,mb4.6,baz=158,slow=11,SNR=20						
LPAZ				LR	LR	09 24 44.2	
	comp=Z,48nm,20.0s,MS3.6,baz=282,slow=35						
LPAZ	**La Paz**	54.11	300	*eP*	P	09 02 33.2	+0.6
	5.7nm,0.6s,mb4.7						
LPAZ				LR	LR	09 24 44.2	
LIC	**Lamto**	65.50	18	*eP*	P	09 03 51.0	0.0
	80nm,1.6s						
KIC	**Kosan Boka**	65.68	18	*eP*	P	09 03 52.0	-0.2
	13nm,0.7s,mb5.1						
TIC	**Toumodi**	65.92	18	*eP*	P	09 03 53.6	0.0
	15nm,0.7s,mb5.2						
DBIC	**Dimbokro**	65.97	18	P	P	09 03 53.8	-0.2
	4.0nm,0.7s,mb4.6,baz=165,slow=9.3,SNR=6.7						
TORD	**Torodi Ar. Bea**	73.53	24	P	P	09 04 40.8	+0.4
	9.6nm,0.6s,mb4.9,baz=205,slow=6.3,SNR=89						
ROSC	**El Rosal**	75.62	305	P	P	09 04 53.4	+0.6
	3.8nm,0.6s,mb4.5,baz=102,slow=20,SNR=3.7						
ROSC	**El Rosal**	75.62	305	*eP*	P	09 04 52.2	-0.5
STKA	**Stephens Creek**	89.23	166	LR	LR	09 43 58.6	
	comp=Z,203nm,18.8s,MS4.6,baz=25,slow=34						
CMAR	**Chiang Mai Arr**	121.47	106	PKP	PKPdf	09 12 01.4	+0.3
	0.8nm,0.4s,baz=231,slow=3.9,SNR=4.2						
PDAR	**Pinedale Array**	124.06	297	PKP	PKPdf	09 12 04.0	-1.3
	0.3nm,0.6s,baz=114,slow=6.6,SNR=4.1						
FINES	**FINESS Array B**	124.84	26	PKP	PKPdf	09 12 05.1	-1.1
	0.6nm,0.5s,baz=209,slow=2.6,SNR=3.3						
NVAR	**Mina Array Bea**	125.03	288	PKP	PKPdf	09 12 07.8	+0.5
	0.2nm,0.6s,baz=152,slow=4.1,SNR=3.7						
ARCES	**ARCESS Array B**	131.77	20	PKP	PKPdf	09 12 18.4	-0.7
	0.8nm,0.5s,baz=174,slow=1.8,SNR=9.5						
ARCES	**ARCESS Array B**	131.77	20	PKP	PKPdf	09 12 18.4	-0.7
BVAR	**Borovoye Array**	133.32	56	PKP	PKPdf	09 12 22.7	+0.2
	0.3nm,0.4s,baz=318,slow=1.9,SNR=2.8						
MKAR	**Makanchi Array**	134.65	70	PKP	PKPdf	09 12 23.3	-2.0
	0.2nm,0.3s,baz=318,slow=1.6,SNR=4.1						
YKA	**Yellowknife Ar**	139.82	314	PKP	PKPdf	09 12 33.0	-1.3
	1.1nm,0.7s,baz=130,slow=2.1,SNR=6.2						
YKA	**Yellowknife Ar**	139.82	314	PKP	PKPdf	09 12 33.0	-1.3
DLBC	**Dease Lake**	144.05	302	PKP	PKPdf	09 12 40.3	-1.7
	2.8nm,0.9s,baz=142,slow=1.0,SNR=6.6						
SONM	**Songino Array**	147.78	86	PKPbc	PKPbc	09 12 51.3	-0.3
	2.6nm,0.6s,baz=227,slow=3.7,SNR=14						
INK	**Inuvik**	149.40	317	PKPbc	PKPbc	09 12 54.1	-1.0
	4.4nm,0.5s,baz=86,slow=3.4,SNR=24						
INK	**Inuvik**	149.40	317	*e*PKPbc	PKPbc	09 12 54.2	-1.0
DAWY	**Dawson**	150.50	308	*e*PKPdf	PKPdf	09 12 51.6	-0.9
DAWY				*e*PKPbc	PKPbc	09 12 56.9	-1.0
KSRS	**Korea Array**	151.27	123	PKPbc	PKPbc	09 13 00.1	-0.5
	1.0nm,0.8s,baz=210,slow=1.5,SNR=6.6						
EGAK	**Eagle**	151.44	309	*e*PKPdf	PKPdf	09 12 54.7	+0.7
EGAK				*e*PKPbc	PKPbc	09 12 58.8	-1.3

ISK 14 09:36:37.8, 37°.32N×28°.29E, h24km, MD2.4
ISCJB 14 09:36:40.6±0.6, 37°.23N±0°.04×28°.23E±0°.03, h10km, Error ellipse: s-maj=5.3km s-min=3.9km az=5.7
CSEM 14 09:36:40.2±0.2, 37°.23N×28°.21E, h15km, MD2.4, Error ellipse: s-maj=5.2km s-min=4.1km az=9.0
DDA 14 09:36:40.6, 37°.24N×28°.27E, h7km, mb4.6
ISC 14 09:36:41.0±1.1, 37°.23N±0°.04×28°.23E±0°.04, h12km±20km, n15, σ1§00/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	0.10	158	*e*PG	Pg	09 36 43.4	-0.5
YER	**Yerkesik**	0.10	158	*e*Pg	Pg	09 36 43.4	-0.5
MLSB	**Milas**	0.37	280	*e*PG	Pg	09 36 46.8	-1.6
MLSB				*e*SG	Sg	09 36 53.7	+0.3
MLSB	**Milas**	0.37	280	*e*Pg	Pg	09 36 46.8	-1.6
MLSB				*e*Sg	Sg	09 36 53.7	+0.3
TURN	**Turunc**	0.46	140	*i* P	Pg	09 36 49.8	-0.3
TURN				*i* S	Sg	09 36 56.7	+0.4
TURN	**Turunc**	0.46	140	*i* P	Pg	09 36 49.8	-0.3
TURN				*i* S	Sg	09 36 56.7	+0.4
AYDN	**Tasoluk**	0.51	327	*i* P	Pg	09 36 50.3	-0.8
AYDN				*i* S	Sg	09 36 57.9	0.0
AYDN	**Tasoluk**	0.51	327	*i* P	Pg	09 36 50.3	-0.8
AYDN				*i* S	Sg	09 36 57.9	0.0
BDRM	**Kayabasi**	0.65	255	*i* P	Pg	09 36 54.8	+1.1
BDRM				*i* S	Sg	09 37 04.1	+1.9
DAT	**Datca**	0.73	227	*e*PG	Pg	09 36 54.3	-0.8
DAT	**Datca**	0.73	227	*e*Pg	Pg	09 36 54.3	-0.8
BODT	**Bodrum**	0.76	257	*e*PG	Pg	09 36 54.3	-1.4
BODT				*e*SG	Sg	09 37 06.3	+0.7
BODT	**Bodrum**	0.76	257	*e*Pg	Pg	09 36 54.3	-1.3
BODT				*e*Sg	Sg	09 37 06.3	+0.7
DNZL	**Cakiroluk**	0.79	54	*i* P	Pg	09 36 55.8	-0.5
DNZL				*i* S	Sg	09 37 08.4	+1.6
DNZL	**Cakiroluk**	0.79	54	*i* P	Pg	09 36 55.8	-0.5
DNZL				*i* S	Sg	09 37 08.4	+1.7

IDC 14 09:38:09.7±3.0, 53°.47N×87°.92E, h0km, mb1 3.2/2, mb1mx3.0/26, mbtmp3.2/2, ML3.1/2, Error ellipse: s-maj=28.0km s-min=13.8km az=61.0
ISC 14 09:38:12.1±2.2, 53°.51N±0°.08×87°.7E±0°.2, h10km, n5, σ0§67/9, 1C-5D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	1.75	286	Pn	Pn	09 38 41.7	-0.7
	1.8nm,0.3s,baz=104,slow=14,SNR=59						
ZALV				Lg		09 39 08.5	
	8.8nm,0.3s,baz=100,slow=24,SNR=31						
KURK	**Kurchatov**	6.24	247	⇓Pn	Pn	09 39 44.4	+0.3
	1.7nm,0.8s						
KURK				⇓Sn	Sn	09 40 55.8	+0.5
	1.4nm,0.7s						
KURK				⇓Lg		09 41 30.6	
	8.6nm,0.8s						
MK31	**Makanchi Array**	7.56	209	⇓Pn	Pn	09 40 02.2	-0.1
	0.1nm,0.3s,baz=27,slow=14,SNR=7.1						
MK31				⇓Sn	Sn	09 41 26.6	-1.3
	0.7nm,0.7s,baz=33,slow=30,SNR=5.8						
MK31				⇑Lg		09 42 07.2	
	3.5nm,0.8s,baz=27,slow=34,SNR=4.9						
MKAR	**Makanchi Array**	7.56	209	Pn	Pn	09 40 02.4	+0.1
	0.1nm,0.3s,baz=27,slow=13,SNR=8.3						
MKAR				Sn	Sn	09 41 28.8	+0.9
	0.1nm,0.3s,baz=27,slow=26,SNR=4.1						
MKAR				Lg		09 42 08.8	
	0.1nm,0.3s,baz=22,slow=28,SNR=10						
BVAR	**Borovoye Array**	10.36	274	Pn	Pn	09 40 41.4	+0.8
	0.3nm,0.3s,baz=77,slow=14,SNR=2.8						
BVAR				Sn	Sn	09 42 36.3	-0.4
	0.1nm,0.3s,baz=74,slow=23,SNR=3.5						

WEL 14 10:02:06.0±0.3, 37°.20S×176°.61E, h246km±2km, ML3.6/13, Error ellipse: s-maj=5.1km s-min=5.0km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	1.13	160	PN	Pn	10 02 41.2	-0.1
URZ				SN	S	10 03 08.9	-0.2
MWZ	**Matawai**	1.35	148	PN	Pn	10 02 43.0	+0.3
MWZ				SN	S	10 03 11.4	-0.3
MXZ	**Matakaoa Point**	1.40	106	PN	Pn	10 02 43.3	+0.1
MXZ				SN	S	10 03 12.4	0.0
PUZ	**Puketiti**	1.57	124	PN	Pn	10 02 44.4	0.0
CNGZ	**Carnagh Statio**	1.81	136	PN	Pn	10 02 46.7	+0.4
NMHZ	**Naumai**	1.91	175	PN	Pn	10 02 48.0	+0.8
PRGZ	**Paritu Road**	2.00	150	PN	Pn	10 02 48.5	+0.5
KNZ	**Kokohu**	2.01	156	PN	Pn	10 02 47.8	-0.3
MHGZ	**Mahia Peninsul**	2.21	153	PN	Pn	10 02 49.6	-0.4
MCHZ	**McNeill Hill**	2.25	178	PN	Pn	10 02 50.9	+0.6
WNVZ	**Wahianoa**	2.27	200	PN	Pn	10 02 51.2	+0.7
KAHZ	**Kahuranaki**	2.60	175	PN	Pn	10 02 53.5	-0.3
PNHZ	**Pukenui**	2.73	187	PN	Pn	10 02 54.7	-0.5
MRZ	**Mangatainoka R**	3.55	193	PN	Pn	10 03 02.5	-1.8
OGWZ	**Otaki Gorge**	3.79	197	PN	Pn	10 03 04.9	-2.0
TUWZ	**Tuamarina**	4.71	205	PN	Pn	10 03 15.2	-2.7
THZ	**Tophouse**	5.38	211	PN	Pn	10 03 23.3	-2.9

MAN 14 10:06:48, 6°.53N×124°.06E, h596km, mb4.5, ML3.4, MS3.3
NEIC 14 10:06:52.0±0.4, 6°.72N×123°.94E, h576km±5km, mb4.3/19, Error ellipse: s-maj=8.1km s-min=4.2km az=66.0
BJI 14 10:06:51.8, 6°.58N×123°.87E, h589km, mB4.6/1, mb4.7/6
ISCJB 14 10:06:51.3±0.2, 6°.77N±0°.03×123°.98E±0°.04, h583km±3km, mb4.5/57, Error ellipse: s-maj=6.2km s-min=4.3km az=169.4
IDC 14 10:06:52.5±0.4, 6°.72N×123°.91E, h583km±5km, mb3.8/25, mb1 3.8/25, mb1mx3.8/28, mbtmp3.8/25, Error ellipse: s-maj=12.3km s-min=6.7km az=71.0
DJA 14 10:06:53, 6°.82N×123°.89E, h582km, mb4.8/29
ISC 14 10:06:52.2±0.2, 6.76N±0.03×123°.96E±0°.04, h576km±2km, n165, σ1§03/158, mb4.5/57, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAGZ	**Pagadian**	1.22	332	*eP*	P	10 08 00.3	-1.3
BUKP	**Musuan**	1.56	45	*eP*	P	10 08 01.5	-1.1
DAV	**Davao City (W)**	1.64	79	P	P	10 08 03.8	+0.9
	38nm,0.3s,baz=206,slow=4.4,SNR=4.6						
DAV				S	S	10 09 02.9	+2.6
	88nm,0.3s,baz=101,slow=16,SNR=2.7						
DAV	**Davao City (W)**	1.64	79	*eP*	P	10 08 02.6	-0.2
DAV	**Davao City (W)**	1.64	79	P	P	10 08 02.8	-0.1
IPIL	**Ipil**	1.71	307	*eP*	P	10 08 01.1	-2.1
MATI	**Mati**	2.29	85	*eP*	P	10 08 03.7	-1.9
BUTP	**Butuan**	2.74	37	*eP*	P	10 08 07.8	-0.1
TBP	**Tagbilaran**	2.91	358	‖*eP*	P	10 08 10.6	+1.8
SGSI	**Sangihe**	3.43	153	P	P	10 08 10.2	-1.9
LLP	**Lapu-Lapu**	3.53	0	‖*eP*	P	10 08 13.0	+0.3
GUIM	**Jordan**	4.07	341	*eP*	P	10 08 13.7	-2.7
OCLP	**Ormoc**	4.31	9	*eP*	P	10 08 18.4	+0.2
CUYO	**Cuyo Island**	4.99	325	*eP*	P	10 08 23.1	-0.4
MYLDM	**Lahad Datu**	5.65	254	P	P	10 08 30.8	+1.7
	1.9nm5μm568nm,1.0s						
CNP	**Catarman**	5.75	7	*eP*	P	10 08 28.2	-1.7
OTRP	**Odiongan**	5.88	341	*eP*	P	10 08 30.7	-0.3
KMSI	**Cibinong**	6.15	180	P	P	10 08 35.6	+2.1
	1.4nm163nm,0.7s						

1um159nm,0.9s
SBUM Sibu 12.46 250 P **P 10 09 36.1 +0.5**
BKSI Bulukumba 12.60 198 P **P 10 09 38.4 +1.4**
22nm,0.7s
STKI Sintang 14.12 242 P **P 10 09 52.3 -0.2**
72nm,1.1s
BAKI Biak 14.47 123 P **P 10 09 56.7 +0.6**
85nm,0.9s
KSM Kuching 14.59 249 P **P 10 09 56.9 -0.4**
KSM Kuching 14.59 249 *eP* **P 10 09 56.8 -0.6**
KSM Kuching 14.59 249 P **P 10 09 56.7 -0.6**
3um320nm,0.7s
TLE Tual 15.12 144 P **P 10 10 04.1 +1.5**
82nm,0.8s
MMRI Maumere 15.39 186 P **P 10 10 08.2 +3.1**
159nm,0.7s
PBKI Pangkalan Bun 15.46 233 P **P 10 10 05.1 -0.6**
189nm,0.8s
TPUB Ta-pu 16.75 349 *eP* **P 10 10 16.6 -0.8**
34nm,0.6s
TPUB *eS* **S 10 13 04.6 -0.1**
SMPI Sarmi 17.10 120 P **P 10 10 22.3 +1.5**
51nm,1.2s
MYKOM Kota Tinggi 20.65 257 P **P 10 10 52.6 -0.5**
MYKOM Kota Tinggi 20.65 257 P **P 10 10 53.0 -0.1**
28nm,1.1s
KTGM Kuala Trenggan 20.76 267 P **P 10 10 54.3 +0.2**
KAKA Kakadu 21.10 156 *eP* **P 10 10 57.4 +0.3**
13nm,0.6s,mb4.7
KAKA Kakadu 21.10 156 *eP* **P 10 10 55.3 -1.8**
24nm,0.5s,mb5.1
KAKA Kakadu 21.10 156 P **P 10 10 57.6 +0.5**
306nm30nm,0.8s,mb5.0
KGM Kluang 21.11 258 P **P 10 10 57.0 -0.2**
KLSI 22.31 240 P **P 10 11 08.2 +0.2**
57nm,1.0s,mb5.2
FRIM Kepong 22.52 262 P **P 10 11 09.2 -0.6**
KNA Kununurra 22.87 168 P **P 10 11 12.4 -0.4**
698nm66nm,0.8s,mb5.3
IPM Ipoh 22.93 266 P **P 10 11 13.0 -0.6**
KULM Kulim 23.23 268 P **P 10 11 15.6 -0.5**
FITZ Fitzroy Crossi 24.76 176 *eP* **P 10 11 28.6 -1.0**
20nm,0.6s,mb4.9
FITZ *e* 10 14 45.7
FITZ Fitzroy Crossi 24.76 176 P **P 10 11 28.7 -0.9**
6.9nm,0.3s,mb4.8,baz=10,slow=7.4,SNR=90
FITZ PcP PcP 10 14 45.7 -0.5
3.6nm,0.6s,baz=63,slow=1.4,SNR=3.7
FITZ ScP ScP 10 17 29.3 -1.9
0.7nm,0.3s,baz=326,slow=7.3,SNR=4.0
FITZ Fitzroy Crossi 24.76 176 *eP* **P 10 11 28.6 -1.0**
7.2nm,0.6s,mb4.5
FITZ Fitzroy Crossi 24.76 176 P **P 10 11 28.6 -1.0**
44nm,0.9s,mb5.1
PSI Prapat 25.25 262 P **P 10 11 33.8 -0.3**
12nm,0.6s,mb4.7,baz=92,slow=5.2,SNR=19
PSI PcP PcP 10 14 46.4 -1.1
5.3nm,0.8s,baz=346,slow=9.5,SNR=4.5
WHN Wuhan 25.32 340 P **P 10 11 36.4 +2.0**
CBIJ Chichi jima 26.63 38 P **P 10 11 45.5 -0.5**
25nm,0.4s,mb5.2,baz=280,slow=18,SNR=8.5
GSI Gunungsitoli 26.86 260 P **P 10 11 46.9 -1.3**
92nm,0.7s,mb5.5
CMAR Chiang Mai Arr 26.99 298 P **P 10 11 50.3 +1.0**
1.7nm,0.6s,mb3.8,baz=108,slow=6.8,SNR=10
CMAR PcP PcP 10 14 51.5 0.0
0.9nm,0.7s,baz=142,slow=1.2,SNR=6.9
WRAB Tennant Creek 28.43 159 *eP* **P 10 12 00.8 -1.0**
34nm,0.4s,mb5.3
WRAB Tennant Creek 28.43 159 P **P 10 12 00.7 -1.1**
35nm,0.8s,mb5.0
WRA Warramunga Arr 28.43 159 P **P 10 12 00.7 -1.1**
22nm,0.5s,mb5.0,baz=343,slow=9.0,SNR=101
WRA PcP PcP 10 14 54.5 -0.6
4.4nm,0.6s,baz=338,slow=2.9,SNR=13
WRA S **S 10 16 05.0 -4.5**
2.1nm,0.5s,baz=335,slow=13,SNR=5.6
WRA ScP ScP 10 17 40.7 -1.6
3.7nm,0.6s,baz=345,slow=3.3,SNR=15
WRA Warramunga Arr 28.43 159 P **P 10 12 00.7 -1.1**
WRA PcP PcP 10 14 54.5 -0.6
WRA S **S 10 16 05.0 -4.5**
WRA ScP ScP 10 17 40.7 -1.6
KSRS Korea Array 30.76 6 P **P 10 12 22.5 +0.9**
0.8nm,0.5s,mb3.6,baz=182,slow=9.5,SNR=6.5
KSRS ScP ScP 10 17 49.9 +0.3
1.7nm,0.8s,baz=188,slow=3.7,SNR=9.7
ASAR Alice Springs 31.76 162 P **P 10 12 30.1 -0.3**
30nm,0.3s,mb5.4,baz=338,slow=7.5,SNR=1007
ASAR PcP PcP 10 15 02.8 -1.1
4.3nm,0.5s,baz=343,slow=2.3,SNR=13
ASAR S **S 10 16 57.9 -2.7**
9.6nm,0.8s,baz=351,slow=23,SNR=31
ASAR ScP ScP 10 17 51.6 -1.6
1.5nm,0.6s,baz=338,slow=3.5,SNR=5.5
MAJO Matsushiro 32.38 22 *eP* **P 10 12 35.1 -0.3**
9.6nm,0.9s,mb4.4
MAT Matsushiro 32.38 22 P **P 10 12 34.7 -0.7**
MJAR Matsushiro Arr 32.38 22 P **P 10 12 34.6 -0.7**
6.7nm,0.7s,mb4.4,baz=194,slow=9.6,SNR=20
MJAR ScP ScP 10 17 54.9 -0.2
2.4nm,0.8s,baz=213,slow=3.8,SNR=6.6
MJAR Matsushiro Arr 32.38 22 P **P 10 12 34.6 -0.7**
MJAR ScP ScP 10 17 54.9 -0.2
LZH Lanzhou 34.52 331 *eP* **P 10 12 55.0 +1.6**
LZH pmax pmax
comp=Z,17nm,1.3s,mb4.5
CTA Charters Tower 34.54 141 *eP* **P 10 12 54.1 +0.3**
comp=Z,5.1nm,0.4s,mb4.5
CTA Charters Tower 34.54 141 P **P 10 12 53.8 0.0**
comp=Z,6.6nm,0.5s,mb4.5,baz=328,slow=9.3,SNR=11
FORT Forrest 37.53 174 *eP* **P 10 13 17.9 -0.4**
comp=Z,88nm,0.5s,mb5.5
FORT *e* 10 15 20.5
FORT Forrest 37.53 174 *eP* **P 10 13 17.8 -0.4**
comp=Z,107nm,0.6s,mb5.5
KLBR Kellerberrin 38.59 189 *eP* **P 10 13 25.9 -1.0**
comp=Z,20nm,0.4s,mb5.0
GTA Gaotai 39.10 330 P **P 10 13 32.3 +1.5**
GTA pP 10 15 26.3
GTA pmax pmax
comp=Z,9.0nm,0.6s,mb4.5
NWAO Narrogin (SRO) 39.98 189 P **P 10 13 37.5 -0.4**
comp=Z,27nm,0.6s,mb5.0,baz=28,slow=8.5,SNR=12
TAPN Taplejung 40.02 305 *eP* **P 10 13 39.4 +1.0**
comp=Z,16nm,0.6s,mb4.7
TAPN Taplejung 40.02 305 *eP* PP 10 15 27.7 +0.4
ODAN Odare 40.08 304 *eP* **P 10 13 39.5 +0.6**
comp=Z,18nm,0.6s,mb4.8
ASAJ Asahikawa 40.63 21 P **P 10 13 44.0 +1.1**
comp=Z,7.6nm,0.6s,mb4.4,baz=236,slow=12,SNR=13
RAMN Ramite 40.77 304 *eP* **P 10 13 45.2 +0.8**
comp=Z,11nm,0.6s,mb4.6
RAMN Ramite 40.77 304 *eP* PcP 10 15 29.7 -1.8
comp=Z,11nm,0.7s
JIRN Jiri 41.38 305 *eP* **P 10 13 50.2 +1.0**
comp=Z,13nm,0.5s,mb4.7
JIRN Jiri 41.38 305 *eP* PcP 10 15 33.5 0.0
comp=Z,12nm,0.6s
EIDS Eidsvold 41.42 141 *eP* **P 10 13 49.1 -0.4**
comp=Z,14nm,0.8s,mb4.5
GUN Gumba 41.73 305 *eP* **P 10 13 52.8 +0.8**
comp=Z,23nm,0.7s,mb4.8
GUN Gumba 41.73 305 *eP* PcP 10 15 34.5 -0.2
comp=Z,12nm,0.4s
STKA Stephens Creek 41.95 157 *eP* **P 10 13 53.6 0.0**
comp=Z,13nm,0.5s,mb4.7
STKA Stephens Creek 41.95 157 P **P 10 13 53.4 -0.2**
comp=Z,22nm,0.6s,mb4.8,baz=335,slow=7.7,SNR=82
STKA Stephens Creek 41.95 157 *eP* **P 10 13 53.6 +0.1**
comp=Z,4.2nm,0.8s,mb4.0
PKI Pulchoki 41.98 304 *eP* pP 10 15 35.4 +0.5
KKN Kakani 42.17 304 *eP* **P 10 13 55.8 +0.4**
comp=Z,8.3nm,0.4s,mb4.7
KKN Kakani 42.17 304 *eP* pP 10 15 36.0 -0.5
DMN Daman 42.25 304 *eP* pP 10 15 36.4 -0.7
comp=Z,11nm,0.4s
ULN Ulaanbaatar 43.42 343 *eP* **P 10 14 05.5 +0.7**
comp=Z,3.0nm,0.8s,mb3.9
ULN Ulaanbaatar 43.42 343 P **P 10 14 06.2 +1.4**
SONM Songino Array 43.58 343 P **P 10 14 06.6 +0.6**
comp=Z,1.7nm,0.7s,mb3.7,baz=158,slow=9.1,SNR=9.6
SONM PcP PcP 10 15 40.2 -0.3
comp=Z,1.6nm,0.8s,baz=149,slow=3.3,SNR=7.0
SONM ScP ScP 10 18 36.8 -0.9
comp=Z,0.6nm,0.7s,baz=146,slow=5.7,SNR=3.7
ARMA Armidale 45.50 146 *eP* **P 10 14 22.3 +1.2**
ARMA Armidale 45.50 146 *eP* **P 10 14 22.4 +1.4**
comp=Z,17nm,1.0s,mb4.5
TLY Talaya 47.82 343 *eP* **P 10 14 38.5 +0.4**
comp=Z,3.6nm,0.8s,mb4.0
CAN Canberra 48.05 152 *eP* **P 10 14 40.8 +0.7**
comp=Z,13nm,0.8s,mb4.5
CNB Canberra Magne 48.21 152 *eP* **P 10 14 42.0 +0.6**
TOO Toolangi 48.47 157 *eP* **P 10 14 43.9 +0.7**
MK31 Makanchi Array 53.51 325 *eP* **P 10 15 19.7 +0.2**
MKAR Makanchi Array 53.51 325 P **P 10 15 20.2 +0.7**
comp=Z,15nm,0.4s,mb4.7,baz=119,slow=7.9,SNR=247
MKAR PcP PcP 10 16 16.3 -0.7
comp=Z,3.4nm,0.6s,baz=121,slow=4.0,SNR=8.9
MKAR ScP ScP 10 19 19.3 -0.8
comp=Z,1.2nm,0.8s,baz=121,slow=4.7,SNR=5.3
MKAR S **S 10 22 10.6 +0.9**
comp=Z,0.7nm,1.0s,baz=148,slow=14,SNR=4.4
KZA Kyzart 55.53 317 P **P 10 15 35.6 +1.9**
SNR=9.6
TKM2 Tokmak 2 55.66 318 P **P 10 15 35.9 +1.2**
SNR=5.2
USP Ospenovka 56.53 318 P **P 10 15 41.5 +0.8**
SNR=7.3
AML Almayashu 56.60 317 P **P 10 15 42.8 +1.7**
SNR=7.9
AML Almayashu 56.60 317 *eP* **P 10 15 42.1 +0.9**
comp=Z,12nm,0.9s,mb4.1
ZALV Zalesovo Beam 56.66 333 P **P 10 15 40.7 -0.6**
comp=Z,2.4nm,0.4s,mb3.8,baz=125,slow=5.5,SNR=11
ZALV Zalesovo Beam 56.66 333 P **P 10 15 40.7 -0.6**
EKS2 Erkin-Say 56.76 317 P **P 10 15 43.3 +1.1**
SNR=7.2
KBL Kabul 57.50 307 *eP* **P 10 15 47.3 -0.1**
comp=Z,5.1nm,0.6s,mb3.8
KURK Kurchatov 57.72 328 *eP* **P 10 15 48.9 +0.3**
comp=Z,26nm,0.7s,mb4.5
BVAR Borovoye Array 63.29 327 P **P 10 16 25.2 0.0**
comp=Z,9.8nm,1.0s,mb4.1,baz=131,slow=8.1,SNR=25
BVAR PcP PcP 10 16 55.4 -0.6
comp=Z,0.7nm,0.6s,baz=90,slow=4.4,SNR=3.9
BRVK Borovoye 63.36 327 *eP* **P 10 16 25.8 +0.1**
TIXI Tiksi 64.89 2 *eP* **P 10 16 34.8 -0.2**
comp=Z,4.2nm,0.9s,mb3.9
RPZ Rata Peaks 65.81 144 P **P 10 16 41.3 +0.1**
comp=Z,11nm,0.5s,mb4.5,baz=352,slow=5.0
RPZ Rata Peaks 65.81 144 *eP* **P 10 16 40.8 -0.5**
URZ Urewera 66.63 137 *eP* **P 10 16 46.0 -0.4**
ABKAR Akbulak array 68.07 321 *eP* **P 10 16 54.6 -0.4**
comp=Z,6.5nm,0.7s,mb4.2
AKTK Aktyubinsk 69.58 321 P **P 10 17 03.9 -0.2**
AKTO Aktyubinsk 69.58 321 P **P 10 17 03.9 -0.2**
baz=102,slow=9.6
ARU Arti 70.92 328 *eP* **P 10 17 11.0 -0.8**
comp=Z,8.4nm,0.5s,mb4.5
TTA Tatalina 79.47 27 *eP* **P 10 18 00.2 +0.9**
TTA *ePcP* PcP 10 18 06.1 +1.1
BPAW Bear Paw Mtn. 81.80 26 *eP* **P 10 18 12.1 +0.8**
comp=Z,3.4nm,0.6s,mb4.0
ASF Jabal al Asfar 83.96 302 P **P 10 18 23.0 +0.2**
comp=Z,5.2nm,0.7s,mb4.2,baz=268,slow=1.4,SNR=7.6
MMAI Mount Meron Ar 85.16 303 P **P 10 18 28.6 -0.1**
comp=Z,1.2nm,0.5s,mb3.8,baz=123,slow=5.3,SNR=2.9
JOF Joensuu 85.24 333 *ep* **P 10 18 26.9 -1.5**
comp=Z,13nm,0.5s,mb4.8
MAW Mawson 85.64 200 P **P 10 18 28.9 -1.3**
comp=Z,1.9nm,0.7s,mb3.9,baz=55,slow=4.6,SNR=6.4
EIL Elat 85.84 299 P **P 10 18 30.6 -1.3**
comp=Z,3.6nm,0.6s,mb4.2,baz=90,slow=5.1,SNR=3.3
BR131 Keskin Array S 85.97 309 *eP* **P 10 18 31.1 -1.3**
comp=Z,3.7nm,0.8s,mb4.1
BRTR Keskin Array B 85.97 309 P **P 10 18 31.3 -1.1**
comp=Z,2.9nm,0.8s,mb4.0,baz=112,slow=4.5,SNR=14
KEV Kevo 86.11 340 *ep* **P 10 18 31.1 -1.3**
comp=Z,3.9nm,0.8s,mb4.1
ARCES ARCESS Array B 86.67 340 P **P 10 18 33.9 -1.1**
comp=Z,3.3nm,0.7s,mb4.2,baz=89,slow=5.1,SNR=14
KAF Kangasniemi 87.65 332 *ep* **P 10 18 37.5 -2.3**
comp=Z,4.8nm,0.6s,mb4.4
AKASG Malin Array Be 87.81 321 P **P 10 18 38.8 -2.0**
comp=Z,1.2nm,0.6s,mb3.8,baz=84,slow=3.5,SNR=7.3
FINES FINESS Array B 87.87 332 P **P 10 18 39.5 -1.3**
comp=Z,2.4nm,0.5s,mb4.2,baz=59,slow=5.1,SNR=9.7
NB2 NORSAR Subarra 94.86 333 P **P 10 19 10.1 -2.9**
comp=Z,1.8nm,0.7s,mb4.3,baz=68,slow=4.6
NOA NORSAR Array B 94.86 333 P **P 10 19 11.1 -1.9**
comp=Z,1.6nm,0.8s,mb4.2,baz=69,slow=4.6,SNR=5.3
TORD Torodi Ar. Bea 119.34 289 PKP PKPdf 10 24 36.4 -1.4
comp=Z,2.1nm,0.7s,baz=66,slow=2.1,SNR=18
TXAR Lajitas Array 121.83 49 PKP PKPdf 10 24 42.1 -0.1
comp=Z,0.3nm,0.6s,baz=0.0,slow=1.3,SNR=4.4
DBIC Dimbokro 127.22 284 PKP PKPdf 10 24 52.5 -0.4
comp=Z,3.6nm,0.8s,baz=106,slow=9.8,SNR=3.8
PLCA Paso Flores 143.77 161 PKP PKPdf 10 25 22.0 -0.7
comp=Z,13nm,0.8s,baz=225,slow=3.0,SNR=22
CPUP Villa Florida 160.50 177 PKP PKPdf 10 25 46.4 -0.9
comp=Z,0.9nm,0.6s,baz=131,slow=1.8,SNR=5.2
CPUP PKPab PKPab 10 26 31.7 -0.6
comp=Z,1.0nm,0.6s,baz=98,slow=14,SNR=4.5
LPAZ La Paz 164.85 130 PKP PKPdf 10 25 52.3 +0.6
comp=Z,2.1nm,0.9s,baz=192,slow=9.3,SNR=3.9
LPAZ PKPab PKPab 10 26 53.9 +2.1
comp=Z,2.9nm,0.7s,baz=227,slow=2.5,SNR=8.4

*ISCJB **14** 10:15:01.5±0.8, 12°.10S±0°.08×77°.49W±0°.08, h51km, mb3.9/4, Error ellipse: s-maj=12.9km s-min=8.7km az=135.4*
*NEIC **14** 10:15:03.2±0.7, 12°.16S×77°.49W, MG4.0(LIM), Error ellipse: s-maj=18.2km s-min=11.5km az=56.0*
NEIC Felt [III] at Callao and [II] at Chosica, Huaral and Lima.
*IDC **14** 10:15:04.3±2.0, 11°.82S×77°.24W, h52km±7km, mb3.4/4, mb1 3.8/5, mb1mx3.6/16, mbtmp3.4/5, MS3.0/1, Ms1 3.2/1, ms1mx2.7/9, Error ellipse: s-maj=89.8km s-min=30.0km az=43.0*
ISC 14 10:15:03.9±0.8, 12°.09S±0°.08×77°.38W±0°.09, h53km, h53km±.5km:pP-P,n10,σ1s16/11, mb3.9/4, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**0.53**	**79**	*e*Pn	**Pn**	**10 15 15.0**	**-0.7**
NNA				*e*Sn	**Sn**	**10 15 23.3**	**-0.9**
LPAZ	**La Paz**	**9.89**	**116**	P	**Pn**	**10 17 25.6**	**+2.1**
0.1nm,0.3s,baz=298,slow=13,SNR=2.9							
LPAZ				LR	LR	10 21 41.1	
comp=Z,91nm,19.6s,baz=224,slow=40							
OTAV	**Otavalo**	**12.29**	**355**	*e*Pn	**Pn**	**10 17 57.5**	**+1.2**
OTAV				*e*Sn	**Sn**	**10 20 11.1**	**-0.7**
ROSC	**El Rosal**	**17.10**	**10**	Pn	**Pn**	**10 19 01.3**	**+1.9**
PLCA	**Paso Flores**	**29.16**	**169**	P	**P**	**10 20 59.3**	**-0.8**
TXAR	**Lajitas Array**	**48.37**	**329**	P	**P**	**10 23 40.7**	**+0.1**
0.5nm,0.8s,mb3.6,baz=148,slow=9.1,SNR=7.8							
TXAR				pP	pP	10 23 54.3	-0.4
0.5nm,0.6s,baz=154,slow=9.3,SNR=6.7							
PDAR	**Pinedale Array**	**62.04**	**334**	P	**P**	**10 25 17.7**	**-1.2**
0.4nm,0.8s,mb3.6,baz=152,slow=5.9,SNR=3.6							
PDAR				pP	pP	10 25 32.0	-1.3
0.4nm,0.6s,baz=121,slow=11,SNR=4.0							
NVAR	**Mina Array Bea**	**63.15**	**325**	P	**P**	**10 25 27.2**	**+0.8**
0.4nm,0.7s,mb3.7,baz=139,slow=6.0,SNR=5.4							
NVAR				pP	pP	10 25 41.1	+0.1
0.6nm,0.8s,baz=147,slow=7.0,SNR=5.4							
ULM	**Lac du Bonnet**	**64.15**	**347**	P	**P**	**10 25 31.4**	**-1.3**
2.9nm,0.6s,mb4.5,baz=190,slow=6.1,SNR=2.9							
ULM				pP	pP	10 25 45.6	-1.7
3.8nm,0.6s,baz=196,slow=1.1,SNR=2.6							
WRA	**Warramunga Arr**	**135.42**	**225**	PKP	PKPdf	10 34 18.0	-0.9
0.2nm,0.6s,baz=126,slow=1.9,SNR=2.5							

*ATH **14** 10:23:27.5, 38°.15N×21°.60E, h26km±1km, MD3.2/5*
*NEIC **14** 10:23:27.5, 38°.15N×21°.60E, h26km, MD3.2(ATH), After ATH.*
*ISCJB **14** 10:23:28.3±0.4, 38°.17N±0°.03×21°.63E±0°.03, h27km±4km, Error ellipse: s-maj=5.9km s-min=3.7km az=169.9*
*CSEM **14** 10:23:28.1±0.2, 38°.18N×21°.61E, h24km±1km, MD3.2, Error ellipse: s-maj=4.6km s-min=3.4km az=161.0*
*THE **14** 10:23:28.2, 38°.15N×21°.62E, h24km±1km, ML2.8/6, Error ellipse: s-maj=1.7km s-min=0.6km az=24.0*
ISC 14 10:23:28.4±0.4, 38°.17N±0°.03×21°.63E±0°.03, h27km±4km, n41,σ0s82/70, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.17**	**229**	*e*Pb	**Pb**	**10 23 32.9**	**-0.9**
RLS				*e*Sb	**Sb**	**10 23 36.6**	**-0.8**
RLS	**Riolos of Patr**	**0.17**	**229**	*e*PB	**Pb**	**10 23 32.9**	**-0.9**
RLS				*e*SB	**Sb**	**10 23 36.6**	**-0.8**
RLS	**Riolos of Patr**	**0.17**	**229**	*e*Pb	**Pb**	**10 23 32.9**	**-0.9**
RLS				*e*Sb	**Sb**	**10 23 36.6**	**-0.8**
UPR	**University Cam**	**0.17**	**47**	*e*PB	**Pb**	**10 23 33.4**	**-0.5**
UPR	**University Cam**	**0.17**	**47**	P	**Pb**	**10 23 33.6**	**-0.3**
UPR				S	**Sb**	**10 23 37.8**	**+0.2**
UPR	**University Cam**	**0.17**	**47**	P	**Pb**	**10 23 33.6**	**-0.3**
UPR				S	**Sb**	**10 23 37.8**	**+0.2**
LAKA	**Lakka**	**0.29**	**75**	P	**Pb**	**10 23 34.8**	**-0.5**
LAKA				S	**Sb**	**10 23 39.9**	**-0.2**
LAKA	**Lakka**	**0.29**	**75**	P	**Pb**	**10 23 34.8**	**-0.5**
LAKA				S	**Sb**	**10 23 39.9**	**-0.2**
EFP	**Efpalio**	**0.34**	**40**	*e*PB	**Pb**	**10 23 35.6**	**-0.5**
EFP				*e*SB	**Sb**	**10 23 41.8**	**+0.4**
EFP	**Efpalio**	**0.34**	**40**	P	**Pb**	**10 23 35.6**	**-0.5**
EFP				S	**Sb**	**10 23 41.8**	**+0.4**
EFP	**Efpalio**	**0.34**	**40**	P	**Pb**	**10 23 35.6**	**-0.5**
EFP				S	**Sb**	**10 23 41.8**	**+0.4**
TRIZ	**Trizonia**	**0.41**	**60**	P	**Pb**	**10 23 36.7**	**-0.4**
TRIZ				S	**Sb**	**10 23 43.9**	**+0.9**
TRIZ	**Trizonia**	**0.41**	**60**	P	**Pb**	**10 23 36.7**	**-0.4**
TRIZ				S	**Sb**	**10 23 43.9**	**+0.9**
KALE	**Kalithea**	**0.46**	**61**	P	**Pb**	**10 23 37.6**	**-0.4**
KALE				S	**Sb**	**10 23 45.5**	**+0.9**
KALE	**Kalithea**	**0.46**	**61**	P	**Pb**	**10 23 37.6**	**-0.4**
KALE				S	**Sb**	**10 23 45.5**	**+0.9**
GUR	**Goura**	**0.61**	**112**	*e*PN	**Pb**	**10 23 39.8**	**-0.7**
GUR				*e*SN	**Sn**	**10 23 48.9**	**-1.3**
GUR	**Goura**	**0.61**	**112**	P	**Pb**	**10 23 39.8**	**-0.7**
GUR				S	**Sb**	**10 23 49.4**	**+0.7**
GUR	**Goura**	**0.61**	**112**	P	**Pb**	**10 23 39.8**	**-0.7**
GUR				*e*Sn	**Sn**	**10 23 48.9**	**-1.3**
GUR				S	**Sb**	**10 23 49.4**	**+0.7**
KFL	**Anninata**	**0.66**	**265**	P	**Pb**	**10 23 40.9**	**-0.4**
KFL				S	**Sb**	**10 23 51.6**	**+1.4**
KFL	**Anninata**	**0.66**	**265**	P	**Pb**	**10 23 40.9**	**-0.4**
KFL				S	**Sb**	**10 23 51.6**	**+1.4**
DSF	**Desfina**	**0.75**	**71**	P	**Pb**	**10 23 42.2**	**-0.6**
DSF				S	**Sb**	**10 23 53.1**	**+0.4**
DSF	**Desfina**	**0.75**	**71**	P	**Pb**	**10 23 42.2**	**-0.6**
DSF				S	**Sb**	**10 23 53.1**	**+0.4**
EVR	**Evrytania**	**0.76**	**11**	*e*Pb	**Pb**	**10 23 42.4**	**-0.6**
EVR	**Evrytania**	**0.76**	**11**	*e*PB	**Pb**	**10 23 42.4**	**-0.6**
EVR	**Evrytania**	**0.76**	**11**	*e*Pb	**Pb**	**10 23 42.4**	**-0.6**
VLS	**Valsamata**	**0.82**	**271**	*e*Pn	**Pn**	**10 23 43.3**	**-0.8**
VLS				*e*Sn	**Sn**	**10 23 54.4**	**-0.9**
VLS	**Valsamata**	**0.82**	**271**	*e*PN	**Pn**	**10 23 43.3**	**-0.8**
VLS				*e*SN	**Sn**	**10 23 54.4**	**-0.9**
VLS	**Valsamata**	**0.82**	**271**	P	**Pb**	**10 23 43.1**	**-0.8**
VLS				S	**Sb**	**10 23 56.6**	**+2.1**
VLS	**Valsamata**	**0.82**	**271**	P	**Pb**	**10 23 43.1**	**-0.8**
VLS				*e*Sn	**Sn**	**10 23 54.4**	**-0.9**
VLS				S	**Sb**	**10 23 56.6**	**+2.1**
LKD	**Levkas**	**0.94**	**306**	*e*Pn	**Pn**	**10 23 46.0**	**+0.2**
LKD	**Levkas**	**0.94**	**306**	*e*PN	**Pn**	**10 23 46.0**	**+0.2**
LKD	**Levkas**	**0.94**	**306**	*e*Pn	**Pn**	**10 23 46.0**	**+0.2**
LKD2	**Lefkada island**	**0.98**	**310**	P	**Pn**	**10 23 46.3**	**-0.1**
LKD2	**Lefkada island**	**0.98**	**310**	P	**Pn**	**10 23 46.3**	**-0.1**
ITM	**Ithomi**	**1.01**	**166**	P	**Pn**	**10 23 47.1**	**+0.3**
ITM				S	**Sb**	**10 24 01.1**	**+1.0**
ITM	**Ithomi**	**1.01**	**166**	P	**Pn**	**10 23 47.1**	**+0.3**
ITM				S	**Sb**	**10 24 01.1**	**+1.0**
AGG	**Agios Georgios**	**1.02**	**33**	*e*Pn	**Pn**	**10 23 48.4**	**+1.5**
AGG	**Agios Georgios**	**1.02**	**33**	*e*PN	**Pn**	**10 23 48.4**	**+1.5**
AGG	**Agios Georgios**	**1.02**	**33**	*e*Pn	**Pn**	**10 23 48.4**	**+1.5**
PYL	**PYLOS**	**1.27**	**176**	*e*PN	**Pn**	**10 23 51.3**	**+0.9**
PYL	**PYLOS**	**1.27**	**176**	*e*Pn	**Pn**	**10 23 51.3**	**+0.9**

*ISK **14** 10:32:06.9, 37°.97N×30°.92E, h5km, ML3.9*
*NEIC **14** 10:32:07.0, 37°.98N×30°.92E, h5km, mb4.1/15, ML3.9(ISK), After ISK.*
*IDC **14** 10:32:07.4±1.0, 37°.86N×30°.96E, h0km, mb3.7/9, mb1 3.8/13, mb1mx3.8/25, mbtmp3.7/13, ML4.0/4, MS2.9/8, Ms1 2.9/8, ms1mx2.6/33, Error ellipse: s-maj=21.8km s-min=16.9km az=80.0*
*CSEM **14** 10:32:08.8±0.1, 37°.98N×30°.92E, h2km, mb4.3/8, Mw3.2, Error ellipse: s-maj=2.9km s-min=2.3km az=55.0*
*DDA **14** 10:32:08.8, 38°.00N×30°.90E, h34km±1km, Md3.6*
*ISCJB **14** 10:32:08.1±0.4, 37°.99N±0°.01×30°.94E±0°.02, h5km±3km, mb3.9/20, MS2.9/7, Error ellipse: s-maj=2.7km s-min=2.2km az=151.3*
*NIC **14** 10:32:09.7±0.2, 38°.15N×30°.75E, h25km, mb4.1, ML3.7, MW3.2*
ISC 14 10:32:08.7±0.5, 37°.98N±0°.01×30°.93E±0°.02, h1km±3km, n257,σ0s98/296, mb4.0/20, MS2.9/7, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISP	**Isparta**	**0.36**	**244**	PG	**Pg**	**10 32 14.5**	**-1.1**
ISP				*e*SG	**Sg**	**10 32 20.5**	**+0.2**
ISP	**Isparta**	**0.36**	**244**	*e*Pg	**Pg**	**10 32 14.3**	**-1.3**
ISP				*e*Sg	**Sg**	**10 32 20.4**	**+0.2**
ISP	**Isparta**	**0.36**	**244**	*i* Pg	**Pg**	**10 32 14.5**	**-1.1**
ISP				*e*Sg	**Sg**	**10 32 20.5**	**+0.2**
SUTC	**Sutluce-Ispart**	**0.51**	**174**	PG	**Pg**	**10 32 17.4**	**-1.0**
SUTC				*e*SG	**Sg**	**10 32 25.7**	**+0.8**
SUTC	**Sutluce-Ispart**	**0.51**	**174**	*i* Pg	**Pg**	**10 32 17.4**	**-1.0**
SUTC				*e*Sg	**Sg**	**10 32 25.7**	**+0.8**
BCK	**Bucak**	**0.58**	**208**	PG	**Pg**	**10 32 18.2**	**-1.7**
BCK				*e*SG	**Sg**	**10 32 28.1**	**+0.7**
BCK	**Bucak**	**0.58**	**208**	*i* Pg	**Pg**	**10 32 18.2**	**-1.7**
BCK				*e*Sg	**Sg**	**10 32 28.1**	**+0.6**
SHUT	**Suhut-Afyon**	**0.65**	**332**	PG	**Pg**	**10 32 20.8**	**-0.3**
SHUT	**Suhut-Afyon**	**0.65**	**332**	*i* Pg	**Pg**	**10 32 20.8**	**-0.3**
BOLV	**Bolvadin**	**0.74**	**1**	*i* P	**Pg**	**10 32 22.7**	**-0.1**
BOLV				*i* S	**Sg**	**10 32 34.8**	**+2.4**
BOLV	**Bolvadin**	**0.74**	**1**	*i* P	**Pg**	**10 32 22.7**	**-0.1**
BOLV				*i* S	**Sg**	**10 32 34.8**	**+2.4**
KORT	**Korkueli**	**1.08**	**206**	*i* P	**Pg**	**10 32 27.9**	**-1.5**
KORT				*i* S	**Sg**	**10 32 45.5**	**+2.0**
KORT	**Korkueli**	**1.08**	**206**	*i* P	**Pg**	**10 32 27.9**	**-1.5**
KORT				*i* S	**Sg**	**10 32 45.5**	**+2.1**
ANTB	**Antalya**	**1.10**	**192**	PN	**Pg**	**10 32 29.1**	**-0.6**
ANTB	**Antalya**	**1.10**	**192**	*i* Pn	**Pg**	**10 32 29.1**	**-0.7**
KONT	**Konya--Tatoy**	**1.13**	**91**	PN	**Pg**	**10 32 29.7**	**-0.7**
KONT	**Konya--Tatoy**	**1.13**	**91**	*i* Pn	**Pg**	**10 32 29.7**	**-0.7**
LADK	**Ladik-KONYA**	**1.15**	**79**	PN	**Pn**	**10 32 30.1**	**-1.9**
LADK	**Ladik-KONYA**	**1.15**	**79**	*i* Pn	**Pn**	**10 32 30.1**	**-1.9**
KHL	**Karahalli**	**1.16**	**288**	PN	**Pn**	**10 32 29.9**	**-2.3**
KHL	**Karahalli**	**1.16**	**288**	*i* Pn	**Pn**	**10 32 29.9**	**-2.2**
KIZT	**Kizilcal**	**1.17**	**39**	PN	**Pn**	**10 32 30.3**	**-1.9**
KIZT	**Kizilcal**	**1.17**	**39**	*i* Pn	**Pn**	**10 32 30

GDZ	Gediz	1.59 315	*i* P	Pn	10 32 37.1	-0.9
GDZ			*i* S	Sg	10 33 01.4	+1.7
HDMB	Hadim	1.60 129	*e*PN	Pn	10 32 37.2	-0.9
HDMB	Hadim	1.60 129	*e*Pn	Pn	10 32 37.2	-0.9
KULA	Kula-Manisa	1.87 287	*e*PN	Pn	10 32 41.6	-0.2
KULA	Kula-Manisa	1.87 287	*e*Pn	Pn	10 32 41.6	-0.2
BORA	Eskisehir	1.93 349	*i* P	Pn	10 32 41.4	-1.4
BORA	Eskisehir	1.93 349	*i* P	Pn	10 32 41.4	-1.4
DEMI	Demirci	2.04 302	*i* P	Pn	10 32 43.4	-0.8
DEMI			*i* S	Sb	10 33 13.8	+1.4
DEMI	Demirci	2.04 302	*i* P	Pn	10 32 43.3	-0.9
DEMI			*i* S	Sb	10 33 13.8	+1.4
AKAS	Kas	2.04 212	*i* P	Pn	10 32 45.2	+1.0
AKAS			*i* S	Sb	10 33 12.0	-0.4
AKAS	Kas	2.04 212	*i* P	Pn	10 32 45.2	+1.0
AKAS			*i* S	Sb	10 33 12.0	-0.5
SULT	Sultanhani-AKS	2.05 83	*e*PN	Pn	10 32 44.2	-0.1
SULT	Sultanhani-AKS	2.05 83	*e*Pn	Pn	10 32 44.2	-0.1
GAZI	Gazipasa	2.06 147	*i* P	Pn	10 32 45.0	+0.5
GAZI			*i* S	Sb	10 33 13.5	+0.3
GAZI	Gazipasa	2.06 147	*i* P	Pn	10 32 45.0	+0.5
GAZI			*i* S	Sb	10 33 13.5	+0.4
YER	Yerkesik	2.27 249	*e*PN	Pn	10 32 46.9	-0.5
YER	Yerkesik	2.27 249	*e*Pn	Pn	10 32 46.9	-0.4
CAVI	Cavuskoy	2.38 339	*e*PN	Pn	10 32 48.6	-0.3
CAVI	Cavuskoy	2.38 339	*e*Pn	Pn	10 32 48.6	-0.2
AYDN	Tasoluk	2.44 263	*i* P	Pn	10 32 48.8	-0.9
AYDN			*i* S	Sb	10 33 24.8	+0.9
AYDN	Tasoluk	2.44 263	*i* P	Pn	10 32 48.8	-0.9
AYDN			*i* S	Sb	10 33 24.8	+0.9
GULT	Gulveren	2.47 353	*e*PN	Pn	10 32 50.5	+0.4
GULT	Gulveren	2.47 353	*e*Pn	Pn	10 32 50.5	+0.4
MDU	Mudurnu	2.49 5	*e*PN	Pn	10 32 50.4	0.0
MDU	Mudurnu	2.49 5	*e*Pn	Pn	10 32 50.4	0.0
MLSB	Milas	2.60 256	*e*PN	Pn	10 32 51.9	+0.1
MLSB	Milas	2.60 256	*e*Pn	Pn	10 32 51.9	0.0
AKHS	Akhisar	2.61 291	*i* P	Pn	10 32 50.8	-1.2
AKHS			*i* S	Sg	10 33 37.1	+4.6
AKHS	Akhisar	2.61 291	*i* P	Pn	10 32 50.8	-1.2
AKS	Akhisar	2.61 291	*e*PN	Pn	10 32 51.1	-0.9
AKS	Akhisar	2.61 291	*e*Pn	Pn	10 32 51.1	-0.9
ADVT	Abdulvahap	2.62 340	*e*PN	Pn	10 32 51.9	-0.3
ADVT	Abdulvahap	2.62 340	*e*Pn	Pn	10 32 51.9	-0.3
BR131	Keskin Array S	2.74 50	*e*Pn	Pn	10 32 53.7	-0.2
BR131	Keskin Array S	2.74 50	*e*Pn	Pn	10 32 53.7	-0.1
BRTR	Keskin Array B	2.74 50	Pn	Pn	10 32 53.9	+0.1
	4.3nm,0.3s,baz=233,slow=18,SNR=94					
BRTR			Lg		10 33 28.6	
	6.9nm,0.3s,baz=220,slow=29,SNR=8.7					
BRTR	Keskin Array B	2.74 50	Pn	Pn	10 32 53.9	+0.1
SPNC	Sapanca-Adapaz	2.75 350	*e*PN	Pn	10 32 54.5	+0.6
SPNC	Sapanca-Adapaz	2.75 350	*e*Pn	Pn	10 32 54.5	+0.6
GEMT	Gemlik	2.80 332	*e*PN	Pn	10 32 54.5	-0.2
GEMT	Gemlik	2.80 332	*e*Pn	Pn	10 32 54.5	-0.2
IKL	Isikli	2.80 127	*e*PN	Pn	10 32 55.0	+0.3
IKL	Isikli	2.80 127	*e*Pn	Pn	10 32 55.0	+0.3
YLV	Yalova	2.85 335	*e*PN	Pn	10 32 56.1	+0.8
YLV	Yalova	2.85 335	*e*Pn	Pn	10 32 56.1	+0.7
BALB	Balikesir	2.90 306	*e*PN	Pn	10 32 56.1	0.0
BALB	Balikesir	2.90 306	*e*Pn	Pn	10 32 56.1	0.0
IZM	Izmir	2.92 279	*e*PN	Pn	10 32 56.5	+0.2
IZM	Izmir	2.92 279	*e*Pn	Pn	10 32 56.6	+0.3
DAT	Datca	2.95 246	*e*PN	Pn	10 32 56.5	-0.2
DAT	Datca	2.95 246	*e*Pn	Pn	10 32 56.6	-0.1
HRT	Hereke	3.00 341	*e*PN	Pn	10 32 57.6	+0.1
HRT	Hereke	3.00 341	*e*Pn	Pn	10 32 57.6	+0.2
BODT	Bodrum	3.02 253	*e*PN	Pn	10 32 57.6	-0.1
BODT	Bodrum	3.02 253	*e*Pn	Pn	10 32 57.6	-0.1
KCTX	Karacabey (Bur	3.04 320	*e*PN	Pn	10 32 58.1	+0.2
KCTX	Karacabey (Bur	3.04 320	*e*Pn	Pn	10 32 58.1	+0.2
ARMT	Armutlu	3.04 329	*e*PN	Pn	10 32 58.1	+0.1
ARMT	Armutlu	3.04 329	*e*Pn	Pn	10 32 58.1	+0.1
MERS	Mersin	3.07 110	*e*PN	Pn	10 32 59.1	+0.8
MERS	Mersin	3.07 110	*e*Pn	Pn	10 32 59.1	+0.8
BLCB	Balcova	3.09 279	*e*PN	Pn	10 32 59.1	+0.4
BLCB	Balcova	3.09 279	*e*Pn	Pn	10 32 59.1	+0.4
ALFC	Alevga	3.12 154	P	Pn	10 32 59.1	0.0
	16nm,0.6s					
ALFC			S	Sn	10 33 37.6	+0.6
ALFC	Alevga	3.12 154	P	Pn	10 32 59.1	0.0
	16nm,0.6s					
ALFC			S	Sn	10 33 37.6	+0.6
BALY	Balya	3.13 305	*i* P	Pn	10 32 59.0	-0.1
BALY			*i* S	Sg	10 33 47.4	-1.8
BALY	Balya	3.13 305	*i* P	Pn	10 32 59.0	-0.2
LEF	Lefka	3.26 150	*e*PN	Pn	10 33 00.7	-0.4
LEF	Lefka	3.26 150	*e*Pn	Pn	10 33 00.6	-0.4
GONE	Gonen-Balikesi	3.26 310	*e*PN	Pn	10 33 01.1	0.0
GONE	Gonen-Balikesi	3.26 310	*e*Pn	Pn	10 33 01.1	+0.1
PPCY	Paphos	3.29 159	P	Pn	10 33 01.7	+0.3
PPCY	Paphos	3.29 159	P	Pn	10 33 01.7	+0.3
SILT	Sile	3.32 343	*e*PN	Pn	10 33 02.2	+0.4
SILT	Sile	3.32 343	*e*Pn	Pn	10 33 02.2	+0.4
BNT	Bandirma	3.33 316	*e*PN	Pn	10 33 02.2	+0.2
CANT	Cankiri	3.35 38	*e*PN	Pn	10 33 01.7	-0.5
KARA	Karaisali	3.35 101	*e*PN	Pn	10 33 02.2	0.0
KARA	Karaisali	3.35 101	*e*Pn	Pn	10 33 02.2	0.0
MAMC	Mammari	3.35 146	P	Pn	10 33 02.0	-0.3
MAMC	Mammari	3.35 146	P	Pn	10 33 02.0	-0.3
ISK	Istanbul-Kandi	3.41 335	*e*PN	Pn	10 33 03.7	+0.8
ISK	Istanbul-Kandi	3.41 335	*e*Pn	Pn	10 33 03.7	+0.7
LFK	Lefkose	3.41 141	*e*PN	Pn	10 33 03.3	+0.2
LFK	Lefkose	3.41 141	*e*Pn	Pn	10 33 03.3	+0.2
SAFT	Safranbolu	3.53 22	*e*PN	Pn	10 33 04.8	+0.2
SAFT	Safranbolu	3.53 22	*e*Pn	Pn	10 33 04.8	+0.2
EREN	Erenkoy	3.57 132	*e*PN	Pn	10 33 06.3	+1.1
EREN	Erenkoy	3.57 132	*e*Pn	Pn	10 33 06.3	+1.1
CSS	Prodhromos	3.58 147	P	Pn	10 33 05.3	-0.1
	5.7nm,0.9s					
CSS			S	Sn	10 33 49.5	+1.2
CSS	Prodhromos	3.58 147	P	Pn	10 33 05.3	-0.1
	5.7nm,0.9s					
CSS			S	Sn	10 33 49.5	+1.2
KLYT	Kilyos	3.58 337	*e*PN	Pn	10 33 05.3	-0.1
KLYT	Kilyos	3.58 337	*e*Pn	Pn	10 33 05.3	-0.1
BGKT	Bogazkoy	3.61 333	*e*PN	Pn	10 33 05.8	+0.1
BGKT	Bogazkoy	3.61 333	*e*Pn	Pn	10 33 05.8	+0.1
CORM	Corum	3.62 52	*e*PN	Pn	10 33 06.3	+0.4
CORM	Corum	3.62 52	*e*Pn	Pn	10 33 06.3	+0.4
KRBG	Karabiga-Canak	3.71 312	*e*PN	Pn	10 33 07.0	-0.2
KRBG	Karabiga-Canak	3.71 312	*e*Pn	Pn	10 33 07.0	-0.2
CTKS	Kestanelik-??a	3.75 331	*e*PN	Pn	10 33 08.9	+1.1
CTKS	Kestanelik-??a	3.75 331	*e*Pn	Pn	10 33 08.9	+1.1
SLVT	Silivri	3.87 328	*e*PN	Pn	10 33 09.0	-0.3
SLVT	Silivri	3.87 328	*e*Pn	Pn	10 33 09.0	-0.3
TOS	Tosya	3.88 37	*e*PN	Pn	10 33 09.9	+0.4
TOS	Tosya	3.88 37	*e*Pn	Pn	10 33 09.9	+0.4
PHNC	Paralimni	3.88 139	P	Pn	10 33 10.0	+0.5
	4.7nm,0.8s					
PHNC			S	Sn	10 33 57.0	+1.3
PHNC	Paralimni	3.88 139	P	Pn	10 33 10.0	+0.5
	4.7nm,0.8s					
PHNC			S	Sn	10 33 57.0	+1.3
KOZT	Kozan	3.91 96	*e*PN	Pn	10 33 11.4	+1.5
KOZT	Kozan	3.91 96	*e*Pn	Pn	10 33 11.4	+1.4
CEYT	Ceyhan	3.95 103	*e*PN	Pn	10 33 11.4	+1.0
CEYT	Ceyhan	3.95 103	*e*Pn	Pn	10 33 11.4	+0.9
BNN	Bunyan	3.96 76	*e*PN	Pn	10 33 11.4	+0.9
BNN	Bunyan	3.96 76	*e*Pn	Pn	10 33 11.4	+0.8
LPK	Lapseki	4.03 308	*e*PN	Pn	10 33 11.9	+0.4
LPK	Lapseki	4.03 308	*e*Pn	Pn	10 33 12.0	+0.5
EZN	Ezine	4.04 299	*e*PN	Pn	10 33 11.9	+0.3
EZN	Ezine	4.04 299	*e*Pn	Pn	10 33 12.0	+0.3
GELI	Tayfur-Gelibol	4.22 306	*e*PN	Pn	10 33 14.9	+0.7
GELI	Tayfur-Gelibol	4.22 306	*e*Pn	Pn	10 33 14.9	+0.7
ERIK	Erikli-Kesan	4.35 309	*e*PN	Pn	10 33 16.8	+0.7
ERIK	Erikli-Kesan	4.35 309	*e*Pn	Pn	10 33 16.8	+0.8
GADA	Gvkgeada	4.50 301	*e*PN	Pn	10 33 18.7	+0.7
GADA	Gvkgeada	4.50 301	*e*Pn	Pn	10 33 18.7	+0.7
ENEZ	Enez	4.61 308	*e*PN	Pn	10 33 20.0	+0.4
ENEZ	Enez	4.61 308	*e*Pn	Pn	10 33 20.0	+0.4
EDRB	Edirne	5.03 321	*e*PN	Pn	10 33 25.6	+0.3
EDRB	Edirne	5.03 321	*e*Pn	Pn	10 33 25.6	+0.3
MMAI	Mount Meron Ar	6.15 142	Pn	Pn	10 33 40.0	-0.8
	10nm,0.3s,baz=329,slow=11,SNR=17					
MMAI			Sn	Sn	10 34 51.9	+0.2
	6.6nm,0.3s,baz=312,slow=25,SNR=4.3					
MMAI			LR	LR	10 36 35.7	
	comp=Z,126nm,20.1s,baz=275,slow=44					
TIRR	Tirgusor	6.75 344	*e*Pn	Pn	10 33 48.1	-0.8
	8.8nm,0.3s					
TIRR	Tirgusor	6.75 344	*e*Pn	Pn	10 33 48.1	-0.7
	8.8nm,0.3s,baz=230,slow=7.9,SNR=10					
ASF	Jabal al Asfar	7.58 138	Pn	Pn	10 34 02.6	+2.2
	0.8nm,0.3s,baz=230,slow=7.9,SNR=10					
ASF			LR	LR	10 37 21.4	
	comp=Z,76nm,19.5s,baz=3.9,slow=42					
EIL	Elat	8.94 157	Pn	Pn	10 34 16.8	-2.1
	1.9nm,0.3s,baz=320,slow=6.8,SNR=5.1					
EIL			Sn	Sn	10 35 56.9	-3.4
	1.2nm,0.3s,baz=96,slow=17,SNR=2.9					
EIL			LR	LR	10 38 18.9	
	comp=Z,41nm,21.8s,baz=100,slow=42					
EIL	Elat	8.94 157	Pn	Pn	10 34 16.8	-2.2
BUR08	Bucovina Ar. S	10.53 338	*e*Pn	Pn	10 34 37.0	-3.8
AKASG	Malin Array Be	12.78 355	Pn	Pn	10 35 12.3	+0.9
	1.1nm,0.3s,baz=175,slow=12,SNR=4.3					
AKASG	Malin Array Be	12.78 355	Pn	Pn	10 35 12.3	+0.9
VRAC	Vranov	15.33 322	LR	LR	10 41 48.9	
	comp=Z,21nm,19.0s,baz=129,slow=38					
MBDF	Montbardon	19.31 298	*e*P	Pn	10 36 36.3	+0.2
	13nm,0.7s					
MBDF	Montbardon	19.31 298	*e*P	Pn	10 36 36.3	+0.2
	6.3nm,0.7s					
MBDF	Montbardon	19.31 298	*e*P	Pn	10 36 36.3	+0.2
	6.3nm,0.7s					
LPG	La Plagne	19.50 300	*e*P	Pn	10 36 38.7	+0.4
	23nm,1.0s					
LPG	La Plagne	19.50 300	*e*P	Pn	10 36 38.7	+0.4
	12nm,1.0s					
LPG	La Plagne	19.50 300	*e*P	Pn	10 36 38.7	+0.4
	12nm,1.0s					
ORIF	Oris-en-Rattie	19.97 298	*e*P	Pn	10 36 43.8	-0.2
	18nm,1.1s					
ORIF			*e*MLR	MLR		
	comp=Z,50nm,20.0s					
ORIF	Oris-en-Rattie	19.97 298	*e*P	Pn	10 36 43.8	-0.2
	comp=Z,8.9nm,1.1s					
ORIF	Oris-en-Rattie	19.97 298	*e*P	Pn	10 36 43.8	-0.2
	comp=Z,8.9nm,1.1s					
SMRF	Simiane la Rot	20.02 295	*e*P	P	10 36 44.3	+1.4
	comp=Z,15nm,0.9s					
SMRF	Simiane la Rot	20.02 295	*e*P	P	10 36 44.3	+1.4
	comp=Z,15nm,0.9s					
SMRF	Simiane la Rot	20.02 295	*e*P	P	10 36 44.3	+1.4
	comp=Z,7.4nm,0.9s					
CDF	Champ du Feu	20.07 309	*e*P	P	10 36 43.8	+0.4
	comp=Z,5.6nm,0.8s					
CDF	Champ du Feu	20.07 309	*e*P	P	10 36 43.8	+0.4
	comp=Z,2.8nm,0.8s					
CDF	Champ du Feu	20.07 309	*e*P	P	10 36 43.8	+0.4
	comp=Z,2.8nm,0.8s					
HINF	Hinteralfeld	20.12 307	*e*P	P	10 36 45.2	+1.3
HINF	Hinteralfeld	20.12 307	*e*P	P	10 36 45.2	+1.3
CABF	La Chapelle	20.24 303	*e*P	P	10 36 47.6	+2.4
	comp=Z,16nm,1.1s					
CABF	La Chapelle	20.24 303	*e*P	P	10 36 47.6	+2.4
	comp=Z,7.9nm,1.1s					
CABF	La Chapelle	20.24 303	*e*P	P	10 36 47.6	+2.4
	comp=Z,7.9nm,1.1s					
HAU	Haudompre	20.50 307	*e*P	P	10 36 47.8	-0.3
	comp=Z,5.1nm,0.6s					
HAU			*e*MLR	MLR		
	comp=Z,31nm,19.2s,MS2.4					
HAU	Haudompre	20.50 307	*e*P	P	10 36 47.8	-0.3
	comp=Z,2.5nm,0.6s					
HAU			LR	LR		
	comp=Z,30nm,19.3s,MS2.7					
HAU	Haudompre	20.50 307	*e*P	P	10 36 47.8	-0.3
	comp=Z,2.5nm,0.6s					
LOR	Lormes	21.89 304	*e*P	P	10 37 03.2	+0.2
LOR			*e*MLR	MLR		
	comp=Z,73nm,21.0s,MS2.8					
LOR	Lormes	21.89 304	*e*P	P	10 37 03.2	+0.2
LOR			LR	LR		
	comp=Z,70nm,21.0s,MS3.0					
LOR	Lormes	21.89 304	*e*P	P	10 37 03.2	+0.2
SSF	Saint Saulge	22.07 303	*e*P	P	10 37 05.3	+0.4
	comp=Z,3.4nm,0.6s,mb3.6					
SSF	Saint Saulge	22.07 303	*e*P	P	10 37 05.3	+0.4
	comp=Z,1.7nm,0.6s,mb3.6					
SSF	Saint Saulge	22.07 303	*e*P	P	10 37 05.3	+0.4
	comp=Z,1.7nm,0.6s,mb3.6					
AVF	Avril sur Loir	22.10 302	*e*P	P	10 37 05.5	+0.2
AVF	Avril sur Loir	22.10 302	*e*P	P	10 37 05.5	+0.2
MTLF	Montolieu	22.37 293	*e*P	P	10 37 07.4	-0.8
	comp=Z,14nm,1.0s,mb4.0					
MTLF	Montolieu	22.37 293	*e*P	P	10 37 07.4	-0.8
	comp=Z,6.8nm,1.0s,mb4.0					
MTLF	Montolieu	22.37 293	*e*P	P	10 37 07.4	-0.8
	comp=Z,6.8nm,1.0s,mb4.0					
AKTK	Aktyubinsk	22.92 48	P	P	10 37 16.0	+2.1
AKTK	Aktyubinsk	22.92 48	P	P	10 37 16.0	+2.0
AKTO	Aktyubinsk	22.92 48	P	P	10 37 16.0	+2.1
	comp=Z,0.7nm,0.5s,mb3.5,baz=242,slow=12,SNR=2.6					
RJF	Les Rejaudoux	23.08 298	*e*P	P	10 37 15.6	-0.1
RJF			*e*MLR	MLR		
	comp=Z,61nm,18.2s,MS2.8					
RJF	Les Rejaudoux	23.08 298	*e*P	P	10 37 15.6	-0.1
RJF			LR	LR		
	comp=Z,60nm,18.3s,MS3.1					
RJF	Les Rejaudoux	23.08 298	*e*P	P	10 37 15.6	-0.1
LFF	La Frestale	23.58 297	*e*P	P	10 37 20.2	-0.8
LFF	La Frestale	23.58 297	*e*P	P	10 37 20.2	-0.8
FINES	FINESS Array B	23.68 354	P	P	10 37 23.1	+1.4
	comp=Z,1.0nm,0.6s,mb3.5,baz=170,slow=9.3,SNR=2.9					
FINES	FINESS Array B	23.68 354	P	P	10 37 23.1	+1.3
EPF	Esparros	23.73 292	*e*P	P	10 37 22.1	-0.3
	comp=Z,25nm,1.3s,mb4.3					
EPF	Esparros	23.73 292	*e*P	P	10 37 22.1	-0.3
	comp=Z,13nm,1.3s,mb4.3					
EPF	Esparros	23.73 292	*e*P	P	10 37 22.1	-0.3
	comp=Z,13nm,1.3s,mb4.3					
ETSF	Etsaut	24.38 292	*e*P	P	10 37 27.7	-0.7
	comp=Z,14nm,1.0s,mb4.2					
ETSF	Etsaut	24.38 292	*e*P	P	10 37 27.7	-0.7
	comp=Z,7.1nm,1.0s,mb4.2					
ETSF	Etsaut	24.38 292	*e*P	P	10 37 27.7	-0.7
	comp=Z,7.1nm,1.0s,mb4.2					
MFF	Saint Martin d	24.43 301	*e*P	P	10 37 26.0	-2.7
	comp=Z,5.7nm,0.9s,mb3.8					
MFF	Saint Martin d	24.43 301	*e*P	P	10 37 26.0	-2.7
	comp=Z,2.8nm,0.9s,mb3.8					
HFS	Hagfors	24.73 339	LR	LR	10 48 25.4	
	comp=Z,44nm,19.5s,MS3.0,baz=2.0,slow=39					
SJPF	Ste Jean	24.88 292	*e*P	P	10 37 32.2	-0.6
	comp=Z,17nm,1.1s,mb4.4					
SJPF	Ste Jean	24.88 292	*e*P	P	10 37 32.2	-0.6
	comp=Z,8.5nm,1.1s,mb4.4					
SJPF	Ste Jean	24.88 292	*e*P	P	10 37 32.2	-0.6
	comp=Z,8.5nm,1.1s,mb4.4					
GRR	Gorron	25.24 305	*e*P	P	10 37 34.7	-1.4
	comp=Z,11nm,0.7s,mb4.4					
GRR	Gorron	25.24 305	*e*P	P	10 37 34.7	-1.4
	comp=Z,5.4nm,0.7s,mb4.4					
GRR	Gorron	25.24 305	*e*P	P	10 37 34.7	-1.4
	comp=Z,5.4nm,0.7s,mb4.4					
NOA	NORSAR Array B	26.18 338	P	P	10 37 44.5	0.0
	comp=Z,1.0nm,0.9s,mb3.5,baz=156,slow=10,SNR=2.7					
NOA			LR	LR	10 49 47.4	
	comp=Z,39nm,19.0s,MS3.0,baz=170,slow=40					
NOA	NORSAR Array B	26.18 338	P	P	10 37 44.5	0.0
SGMF	Saint Gilles	26.32 304	*e*P	P	10 37 46.0	+0.1
	comp=Z,22nm,1.3s,mb4.3					
SGMF	Saint Gilles	26.32 304	*e*P	P	10 37 46.0	+0.1
	comp=Z,11nm,1.3s,mb4.3					
SGMF	Saint Gilles	26.32 304	*e*P	P	10 37 46.0	+0.1
	comp=Z,11nm,1.3s,mb4.3					
EVO	Evora	30.43 283	*e*P	P	10 38 24.9	+2.2
	comp=Z,55nm,1.7s,mb4.8					
EVOP	Sao Brissos	30.52 283	*e*P	P	10 38 24.9	+1.4
	comp=Z,28nm,1.7s,mb4.9					
ARCES	ARCESS Array B	31.75 356	P	P	10 38 33.2	-0.7
	comp=Z,1.1nm,0.8s,mb3.8,baz=139,slow=8.4,SNR=3.2					
ARCES			LR	LR	10 52 32.2	
	comp=Z,14nm,19.5s,MS2.7,baz=293,slow=38					
ARCES	ARCESS Array B	31.75 356	P	P	10 38 33.2	-0.8
TORD	Torodi Ar. Bea	35.88 234	P	P	10 39 08.5	-1.9
	comp=Z,1.4nm,1.0s,mb3.8,baz=39,slow=8.0,SNR=6.9					
MKAR	Makanchi Array	38.34 60	P	P	10 39 30.0	-1.0
	comp=Z,0.5nm,0.6s,mb3.4,baz=272,slow=8.5,SNR=5.9					
MKAR	Makanchi Array	38.34 60	P	P	10 39 30.0	-1.0
ZALV	Zalesovo Beam	39.68 48	P	P	10 39 40.6	-1.6
	comp=Z,0.5nm,0.4s,mb3.5,baz=265,slow=5.4,SNR=2.3					
SONM	Songino Array	54.09 54	P	P	10 41 34.6	-0.3
	comp=Z,0.2nm,0.3s,mb3.6,baz=282,slow=7.1,SNR=2.9					
SONM	Songino Array	54.09 54	P	P	10 41 34.6	-0.3
KSRS	Korea Array	72.87 56	P	P	10 43 37.6	-1.8
	comp=Z,0.8nm,0.7s,mb4.0,baz=311,slow=6.3,SNR=4.6					
KSRS			LR	LR	11 19 37.9	
	comp=Z,24nm,21.4s,MS3.4,baz=210,slow=39					
YKA	Yellowknife Ar	76.10 344	P	P	10 43 56.7	-1.0
	comp=Z,0.9nm,0.8s,mb3.9,baz=27,slow=6.1,SNR=4.9					

NIED ***14*** *10:41:00, 35.°90N×141.°00E, h41km, Mw3.9 Best double couple: M0:6.79000×10^14 NP1:φs=99.00000°, δ55.00000°, λ98.00000°. NP2:φs=266.00000°, δ36.00000°, λ79.00000°.*
IDC ***14*** *10:41:05.4±1.7, 35.°89N×141.°32E, h0km, mb3.6/4, mb1 3.6/5, mb1mx3.4/24, mbtmp3.5/5, ML3.1/1, Error ellipse: s-maj=42.1km s-min=16.9km az=37.0*
ISCJB ***14*** *10:41:08.5±1.0, 35.°87N±0.°05×141.°09E±0.°08, h29km±5km, mb3.6/4, Error ellipse: s-maj=11.6km s-min=8.2km az=168.2*
JMA ***14*** *10:41:10.4±0.1, 35.°82N×140.°94E, h28km±1km, M3.6*
JMA Felt II J1.
NEIC ***14*** *10:41:10.4, 35.°82N×140.°94E, h28km, MG3.6(JMA), After JMA.*

ISC 14 10:41:09.7±1.0, 35.°87N±0.°05×141.°03E±0.°08, h23km±6km, n15, σ0.°68/20, mb3.5/4, 2C-2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.21	220	⇑P		Pb		10 41 15.5	+0.3
CHOJ				S		Sb		10 41 18.9	-0.1
JYT	Yasato	0.77	298	⇓P		Pb		10 41 23.9	-0.4
JYT				S		Sb		10 41 33.3	-1.0
JCN	Nagara	0.81	237	⇑P		Pb		10 41 25.1	+0.1
JCN				S		Sb		10 41 36.7	+1.2
JHO	Hitachi	0.83	334	⇓P		Pb		10 41 25.7	+0.3
BSO4	Boso 4	1.04	213	P		Pn		10 41 28.7	-0.1
BSO3	Boso 3	1.14	202	P		Pn		10 41 28.6	-1.7
JAG	Ashikaga	1.39	294	P		Pn		10 41 32.8	-0.9
MJAR	Matsushiro Arr	2.38	287	Pn		Pn		10 41 47.2	0.0
	3.7nm,0.3s,baz=96,slow=9.9,SNR=22								
MJAR				Pg		Pn		10 41 51.6	+4.4
	5.1nm,0.3s,baz=88,slow=12,SNR=24								
MJAR				Lg				10 42 28.1	
	6.6nm,0.3s,baz=112,slow=27,SNR=5.9								
MAJO	Matsushiro	2.38	287	*e*Pn		Pn		10 41 47.9	+0.6
MAT	Matsushiro	2.38	287	P		Pn		10 41 47.6	+0.3
MAT				*e*S		Sn		10 42 15.7	0.0
ERM	Erimo	6.36	14	*e*Pn		Pn		10 42 42.4	+0.4
ZALV	Zalesovo Beam	42.48	313	P		P		10 49 03.1	+0.4
	0.4nm,0.3s,mb3.5,baz=101,slow=8.7,SNR=2.6								
MKAR	Makanchi Array	44.48	303	P		P		10 49 19.8	+0.7
	0.6nm,0.6s,mb3.5,baz=88,slow=8.4,SNR=5.8								
WRA	Warramunga Arr	55.86	188	P		P		10 50 44.6	-0.8
	0.8nm,0.8s,mb3.8,baz=4.4,slow=9.2,SNR=8.1								
ASAR	Alice Springs	59.59	188	P		P		10 51 12.2	+0.6
	0.2nm,0.6s,mb3.3,baz=19,slow=12,SNR=5.8								

ISCJB ***14*** *10:46:45.9±0.8, 24.°70N±0.°05×98.°95E±0.°06, h10km, mb3.3/3, Error ellipse: s-maj=8.5km s-min=6.8km az=13.7*
IDC ***14*** *10:46:47.2±1.5, 24.°85N×98.°92E, h0km, mb3.5/3, mb1 3.5/4, mb1mx3.3/25, mbtmp3.4/4, ML3.7/1, Error ellipse: s-maj=40.6km s-min=18.3km az=85.0*
BJI ***14*** *10:46:50.7, 25.°03N×98.°69E, h15km, ML3.6/7, Ms3.3/1, Ms7 3.0/1*

ISC 14 10:46:47.6±0.8, 24.°72N±0.°05×98.°88E±0.°07, h10km, n7, σ1.°04/10, mb3.3/3, 1D, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KMI	Kunming	3.53	83	Pg		Pg		10 47 54.9	-0.4
KMI				Sg		Sg		10 48 41.3	+0.2
KMI				smax					
	comp=N,64nm,0.8s								
KMI				smax					
	comp=E

TSEB				S		Sb	11 08 27.5 +3.8
	baz=341						
TWK1	**Hengchun**	**0.86**	**345**	⇓*i*P		**Pb**	**11 08 15.3 +1.3**
	baz=344						
TWK1				*i* S		**Sb**	**11 08 27.9 +2.5**
	baz=344						
HEN	**Hengchun**	**0.94**	**342**	*i* P		**Pb**	**11 08 15.5 +0.2**
	baz=335						
HEN				S		**Sb**	**11 08 30.2 +2.5**
	baz=335						
LAY	**Lan-yu**	**1.04**	**27**	P		**Pb**	**11 08 15.6 -1.4**
	baz=29						
TAW	**Tawu**	**1.25**	**354**	P		**Pn**	**11 08 19.0 -1.4**
	baz=2.0						
EAST	**Anshuo**	**1.28**	**352**	*i* P		**Pn**	**11 08 20.6 -0.2**
EAST				S		**Sb**	**11 08 37.6 0.0**
SCZT	**Fangliau**	**1.32**	**343**	⇓*i*P		**Pn**	**11 08 21.0 -0.3**
	baz=342						
SCZT				S		**Sn**	**11 08 38.1 -0.6**
	baz=342						
TWP	**Hsiaoliuchiu**	**1.39**	**333**	*e*P		**Pn**	**11 08 21.5 -0.7**
	baz=332						
TWP				*e*S		**Sn**	**11 08 40.9 +0.5**
	baz=332						
TTN	**Taitung**	**1.64**	**3**	P		**Pn**	**11 08 23.9 -1.8**
	baz=4.0						
SSD	**Sandimen**	**1.68**	**347**	*i* P		**Pn**	**11 08 25.8 -0.4**
	baz=337						
TWG	**Pinlang**	**1.71**	**1**	*e*Pn		**Pn**	**11 08 25.5 -1.1**
TWG				*e*Sn		**Sn**	**11 08 47.7 -0.5**
TWG	**Pinlang**	**1.71**	**1**	P		**Pn**	**11 08 25.7 -0.9**
	baz=1.0						
TWM1	**Shoushan**	**1.80**	**341**	P		**Pn**	**11 08 28.3 +0.3**
	baz=341						
SGST	**Jiashian**	**2.01**	**348**	*i* P		**Pn**	**11 08 30.7 -0.1**
	baz=338						
CHN3	**Shinhua**	**2.06**	**342**	*e*P		**Pn**	**11 08 32.3 +0.8**
	baz=331						
CHN3				*e*S		**Sn**	**11 08 57.9 +0.9**
	baz=331						
STYT	**Tauyuan**	**2.06**	**353**	P		**Pn**	**11 08 31.6 0.0**
	baz=3.0						
TAI1	**Yung-k'ang**	**2.07**	**339**	*e*P		**Pn**	**11 08 31.1 -0.5**
	baz=330						
TAI1				*e*S		**Sn**	**11 08 55.9 -1.3**
	baz=330						
ELDTW	**Lidau**	**2.07**	**359**	*e*P		**Pn**	**11 08 31.6 -0.1**
	baz=7.0						
CHN1	**Nanshi**	**2.12**	**347**	P		**Pn**	**11 08 32.1 -0.3**
	baz=336						
WTP	**Ta-pu**	**2.17**	**349**	P		**Pn**	**11 08 32.7 -0.2**
	baz=339						
SCLT	**Jiali**	**2.21**	**339**	*e*S		**Sn**	**11 08 59.6 -0.9**
	baz=331						
TWK	**Hsinying**	**2.21**	**347**	*e*P		**Pn**	**11 08 33.2 -0.3**
	baz=337						
TPUB	**Ta-pu**	**2.22**	**350**	*e*Pn		**Pn**	**11 08 32.9 -0.7**
TWF1	**Yuli**	**2.25**	**6**	P		**Pn**	**11 08 32.9 -1.1**
	baz=6.0						
CHN4	**Tsaushan**	**2.27**	**349**	P		**Pn**	**11 08 34.2 -0.2**
	baz=341						
YULB	**Yu-li**	**2.29**	**6**	*e*Pn		**Pn**	**11 08 33.1 -1.5**
YULB				*e*Sn		**Sn**	**11 09 04.1 +1.6**
YUS	**Yu-Shan**	**2.37**	**358**	P		**Pn**	**11 08 36.5 +0.8**
	baz=358						
EHY	**Hungye**	**2.40**	**6**	*e*P		**Pn**	**11 08 35.2 -1.0**
	baz=6.0						
ALS	**Alishan**	**2.40**	**355**	P		**Pn**	**11 08 36.7 +0.5**
	baz=355						
WDGT	**Dungji**	**2.50**	**329**	*e*S		**Sn**	**11 09 05.9 -1.9**
	baz=329						
CHN5	**Tsauling**	**2.50**	**352**	P		**Pn**	**11 08 37.3 -0.2**
	baz=352						
WGK	**Gukeng**	**2.61**	**350**	*e*P		**Pn**	**11 08 38.7 -0.3**
	baz=350						
WSF	**Szhu**	**2.63**	**343**	*e*P		**Pn**	**11 08 39.0 -0.4**
	baz=336						
SSLB	**Suanglung**	**2.67**	**358**	*e*Pn		**Pn**	**11 08 39.8 0.0**
SSLB				*e*Sn		**Sn**	**11 09 12.5 +0.5**
ESL	**Shilin**	**2.72**	**7**	*e*P		**Pn**	**11 08 40.3 -0.3**
	baz=3.0						
SMLT	**Sun Moon Lake**	**2.77**	**357**	P		**Pn**	**11 08 41.5 +0.3**
	baz=357						
WNT	**Mingjian**	**2.78**	**353**	*e*P		**Pn**	**11 08 41.0 -0.3**
	baz=353						
TYC	**Yuchr**	**2.79**	**356**	P		**Pn**	**11 08 41.7 +0.2**
	baz=357						
TYC				*e*S		**Sn**	**11 09 15.0 0.0**
	baz=357						
PNG	**Penghu**	**2.81**	**331**	P		**Pn**	**11 08 40.1 -1.7**
	baz=330						
PNG				*e*S		**Sn**	**11 09 11.2 -4.3**
	baz=330						
TWD	**Chiawan**	**3.00**	**10**	*e*P		**Pn**	**11 08 42.4 -2.0**
	baz=3.0						
WHF	**Hehuan Shan**	**3.03**	**4**	P		**Pn**	**11 08 46.0 +1.2**
	baz=355						
TCU	**Taichung**	**3.05**	**354**	*e*P		**Pn**	**11 08 42.7 -2.4**
	baz=354						
NACB	**Ninganchiao**	**3.09**	**9**	*e*Pn		**Pn**	**11 08 45.7 0.0**
NACB				*e*Sn		**Sn**	**11 09 24.8 +2.3**
TWT	**Tachien**	**3.13**	**2**	P		**Pn**	**11 08 47.2 +0.9**
	baz=2.0						
TWQ1	**Liyutan**	**3.24**	**356**	P		**Pn**	**11 08 47.1 -0.5**
	baz=4.0						
TWQ1				S		**Sn**	**11 09 24.0 -2.0**
	baz=4.0						
NSY	**Sanyi**	**3.30**	**355**	*e*P		**Pn**	**11 08 48.6 0.0**
	baz=3.0						
ENA	**Nanau**	**3.37**	**11**	*e*P		**Pn**	**11 08 50.1 +0.6**
	baz=3.0						
NSTT	**Nanjuang**	**3.51**	**359**	*e*P		**Pn**	**11 08 48.9 -2.5**
	baz=350						
YHNB	**Yeheng**	**3.56**	**5**	*e*Pn		**Pn**	**11 08 53.0 +0.9**
NSK	**Sanguang**	**3.56**	**5**	*e*P		**Pn**	**11 08 52.9 +0.7**
	baz=353						
TWC	**Suao**	**3.56**	**12**	*e*P		**Pn**	**11 08 53.9 +1.8**
	baz=3.0						
TWE	**Neicheng**	**3.64**	**9**	*e*P		**Pn**	**11 08 53.0 -0.3**
	baz=9.0						
YOJ	**Yonaguni jima**	**3.80**	**28**	P		**Pn**	**11 08 55.9 +0.5**
YOJ				S		**Sn**	**11 09 41.1 +1.2**
TATO	**Taipei**	**3.87**	**6**	*e*Pn		**Pn**	**11 08 57.2 +0.8**
HATJ	**Hateruma jima**	**3.89**	**40**	P		**Pn**	**11 08 56.3 -0.3**
HATJ				S		**Sn**	**11 09 40.7 -1.4**
TWB1	**Santiao Chiao**	**3.98**	**12**	*e*P		**Pn**	**11 08 59.5 +1.6**
	baz=2.0						
TWS1	**Kuangyinshan**	**3.99**	**5**	*e*P		**Pn**	**11 08 54.9 -3.1**
	baz=354						
NWF	**Wu-fen Shan**	**4.00**	**10**	*e*P		**Pn**	**11 08 57.2 -1.0**
	baz=10.0						
IRIF	**Iriomote-Funau**	**4.06**	**37**	P		**Pn**	**11 08 58.7 -0.2**
IRIF				S		**Sn**	**11 09 45.5 -0.7**
KNM	**Kinmen**	**4.08**	**324**	P		**Pn**	**11 08 58.8 -0.5**
	baz=322						
JKRS	**Kuro-shima**	**4.15**	**41**	P		**Pn**	**11 09 00.5 +0.3**
JKRS				*e*S		**Sn**	**11 09 48.2 -0.3**
JIJ	**Ishigaki jima**	**4.32**	**41**	P		**Pn**	**11 09 02.5 -0.1**
JIJ				S		**Sn**	**11 09 52.4 -0.4**
QZH	**Quanzhou**	**4.44**	**330**	Pn		**Pn**	**11 09 03.1 -1.1**
QZH				smax			
	comp=N,200nm,0.8s						
QZH				smax			
	comp=E,300nm,1.1s						
QZH				LR		LR	
	comp=N,840nm,9.5s						
QZH				LR		LR	
	comp=E,990nm,10.6s						
QZH				LR		LR	
	comp=Z,2μm,13.0s						
JTJ	**Tarama**	**4.87**	**43**	P		**Pn**	**11 09 10.3 +0.2**
JTJ				S		**Sn**	**11 10 04.9 -1.4**
GZH	**Guangzhou**	**7.41**	**287**	Pg		**Pn**	**11 09 42.1 -2.9**
GZH				Sg		**Sn**	**11 10 57.9 -11**
GZH				smax			
	comp=N,100nm,0.7s						
GZH				smax			
	comp=E,63nm,0.7s						
QIZ	**Qiongzhong**	**10.73**	**261**	P		**Pn**	**11 10 29.3 -1.3**
QIZ				S		**Sn**	**11 12 29.4 -1.2**
QIZ				LR		LR	
	comp=N,280nm,14.6s						
QIZ				LR		LR	
	comp=Z,330nm,12.0s						
NJ2	**Nanjing**	**11.08**	**350**	*e*P		**Pn**	**11 10 37.6 +2.3**
NJ2				pP			11 10 44.0
NJ2				PP			11 10 45.8
NJ2				sP			11 10 50.4
NJ2				S		**Sn**	**11 12 43.0 +4.1**
NJ2				sS			11 12 55.5
NJ2				pmax		pmax	
	comp=Z,10.0nm,0.5s						
NJ2				pmax		pmax	
	comp=Z,80nm,3.5s						
NJ2				LR		LR	
	comp=N,370nm,13.2s						
NJ2				LR		LR	
	comp=E,370nm,17.0s						
WHN	**Wuhan**	**11.16**	**329**	P		**Pn**	**11 10 39.8 +3.3**
WHN				LR		LR	
	comp=N,910nm,10.2s						
WHN				LR		LR	
	comp=E,320nm,8.0s						
WHN				LR		LR	
	comp=Z,920nm,11.7s						
DAV	**Davao City (W)**	**14.63**	**162**	LR		LR	11 18 33.5
	comp=Z,154nm,18.4s,baz=284,slow=44						
KSRS	**Korea Array**	**17.35**	**19**	P		**Pn**	**11 11 59.5 +0.6**
	comp=Z,1.0nm,0.3s,baz=200,slow=11,SNR=78						
BJT	**Baijiatuau**	**19.31**	**349**	*e*P		**Pn**	**11 12 22.3 -0.6**
BJT				pmax		pmax	
	comp=Z,71nm,1.1s						
BJT	**Baijiatuau**	**19.31**	**349**	*e*P		**Pn**	**11 12 22.3 -0.6**
	comp=Z,71nm,1.1s						
CBIJ	**Chichi jima**	**20.18**	**69**	LR		LR	11 18 01.7
	comp=Z,74nm,22.0s,MS3.0,baz=178,slow=30						
SNY	**Shenyang**	**20.77**	**5**	⇑P		**P**	**11 12 40.8 +3.1**
SNY				pmax		pmax	
	comp=Z,46nm,6.4s						
SNY				LR		LR	
	comp=N,140nm,33.3s						
SNY				LR		LR	
	comp=E,180nm,15.6s						
SNY				LR		LR	
	comp=Z,180nm,15.9s						
CMAR	**Chiang Mai Arr**	**20.96**	**267**	P		**P**	**11 12 42.0 +1.9**
	comp=Z,1.3nm,0.6s,baz=74,slow=9.5,SNR=9.4						
CMAR				PcP		PcP	11 16 48.3 +0.7
	comp=Z,0.7nm,0.4s,baz=53,slow=0.5,SNR=6.9						
CMAR				LR		LR	11 21 51.1
	comp=Z,111nm,19.7s,MS3.2,baz=228,slow=40						
CMAR	**Chiang Mai Arr**	**20.96**	**267**	P		**P**	**11 12 42.0 +1.9**
CMAR							11 16 48.3
MAJO	**Matsushiro**	**21.45**	**41**	*e*P		**P**	**11 12 46.5 +1.3**
MAJO				pmax		pmax	
	comp=Z,15nm,0.7s,mb4.4						
MAJO	**Matsushiro**	**21.45**	**41**	*e*Pn		**P**	**11 12 46.5 +1.3**
	comp=Z,15nm,0.7s,mb4.4						
MAT	**Matsushiro**	**21.45**	**41**	P		**P**	**11 12 46.1 +0.9**
MAT				*e*S		**S**	**11 16 51.0 +8.2**
MJAR	**Matsushiro Arr**	**21.45**	**41**	P		**P**	**11 12 46.9 +1.7**
	comp=Z,6.8nm,0.7s,mb4.1,baz=236,slow=7.7,SNR=24						
CN2	**Changchun**	**22.93**	**8**	*e*P		**P**	**11 12 59.3 -1.5**
CN2				pmax		pmax	
	comp=Z,10.0nm,0.7s,mb4.3						
MDJ	**Mudanjiang**	**24.49**	**15**	P		**P**	**11 13 16.0 +0.1**
MDJ				pmax		pmax	
	comp=Z,24nm,1.0s,mb4.6						
MDJ				pmax		pmax	
	comp=Z,35nm,4.6s						
MDJ				LR		LR	
	comp=N,78nm,18.4s,MS3.3						
MDJ				LR		LR	
	comp=E,43nm,17.3s,MS3.3						
MDJ				LR		LR	
	comp=Z,97nm,18.4s,MS3.3						
MDJ	**Mudanjiang**	**24.49**	**15**	*e*P		**P**	**11 13 16.2 +0.2**
	comp=Z,30nm,1.1s,mb4.6						
GTA	**Gaotai**	**25.76**	**320**	*e*P		**P**	**11 13 28.6 +1.1**
GTA				pP		pP	11 13 33.8 +2.0
GTA				sP		sP	11 13 36.8 +3.2
GTA				pmax		pmax	
	comp=Z,2.0nm,1.4s,mb3.5						
GTA				pmax		pmax	
	comp=Z,48nm,5.1s						
GTA				LR		LR	
	comp=N,120nm,13.7s,MS3.8						
GTA				LR		LR	
	comp=E,130nm,13.1s,MS3.8						
GTA				LR		LR	
	comp=Z,180nm,14.3s,MS3.7						
ULN	**Ulaanbaatar**	**28.98**	**340**	*e*P		**P**	**11 13 56.9 +0.5**
ULN				pmax		pmax	
	comp=Z,9.0nm,0.7s,mb4.6						
ULN	**Ulaanbaatar**	**28.98**	**340**	*e*P		**P**	**11 13 56.9 +0.6**
	comp=Z,8.5nm,0.7s,mb4.6						
ASAJ	**Asahikawa**	**29.09**	**33**	P		**P**	**11 14 00.2 +2.9**
	comp=Z,10nm,0.7s,mb4.7,baz=230,slow=14,SNR=21						
SONM	**Songino Array**	**29.17**	**340**	P		**P**	**11 13 58.6 +0.6**
	comp=Z,7.7nm,0.8s,mb4.5,baz=156,slow=9.0,SNR=32						
SONM				PcP		PcP	11 17 04.7 -0.6
	comp=Z,0.6nm,0.8s,baz=107,slow=1.5,SNR=4.1						
YSS	**Yuzh-Sakhalins**	**31.23**	**29**	*e*P		**P**	**11 14 16.2 -0.1**
TLY	**Talaya**	**33.40**	**340**	*e*P		**P**	**11 14 35.6 +0.4**
TLY				*e*			11 19 44.3
TLY				pmax		pmax	
	comp=Z,5.0nm,0.7s,mb4.5						
TLY				MLR		MLR	
	comp=Z,103nm,18.0s,MS3.6						
FITZ	**Fitzroy Crossi**	**39.22**	**173**	*e*P		**P**	**11 15 24.7 -0.6**
	comp=Z,9.4nm,1.5s,mb4.3						
FITZ	**Fitzroy Crossi**	**39.22**	**173**	P		**P**	**11 15 24.8 -0.5**
	comp=Z,1.8nm,0.6s,mb4.0,baz=353,slow=6.5,SNR=5.7						
MK31	**Makanchi Array**	**40.50**	**319**	*e*P		**P**	**11 15 35.6 -0.1**
MKAR	**Makanchi Array**	**40.50**	**319**	P		**P**	**11 15 36.9 +1.2**
	comp=Z,2.4nm,0.6s,mb4.0,baz=113,slow=9.7,SNR=24						
MKAR				PcP		PcP	11 17 38.0 -0.1
	comp=Z,1.4nm,0.8s,baz=107,slow=4.1,SNR=4.6						
MKAR	**Makanchi Array**	**40.50**	**319**	P		**P**	**11 15 36.9 +1.2**
MKAR				PcP		PcP	11 17 38.0 -0.1
YAK	**Yakutsk**	**41.33**	**6**	*e*P		**P**	**11 15 40.9 -1.4**
YAK				pmax		pmax	
	comp=Z,12nm,1.0s,mb4.5						
YAK				pmax		pmax	
	comp=N,4.0nm,1.1s						
YAK				MLR		MLR	
	comp=Z,120nm,16.0s,MS3.9						
YAK				MLR		MLR	
	comp=N,84nm,16.0s,MS3.7						
YAK				MLR		MLR	
	comp=E,54nm,19.0s,MS3.7						
ZALV	**Zalesovo Beam**	**42.78**	**329**	P		**P**	**11 15 54.7 +0.5**
	comp=E,8.4nm,0.8s,mb4.5,baz=111,slow=8.1,SNR=27						
ZALV	**Zalesovo Beam**	**42.78**	**329**	P		**P**	**11 15 54.7 +0.5**
WRAB	**Tennant Creek**	**42.81**	**161**	*e*P		**P**	**11 15 53.0 -1.8**
WRAB				pmax		pmax	
	comp=Z,5.0nm,0.7s,mb4.3						
WRAB	**Tennant Creek**	**42.81**	**161**	*e*P		**P**	**11 15 53.0 -1.9**
	comp=Z,5.2nm,0.7s,mb4.4						
WRA	**Warramunga Arr**	**42.82**	**161**	P		**P**	**11 15 54.4 -0.5**
	comp=Z,5.5nm,0.6s,mb4.4,baz=343,slow=9.0,SNR=57						
WRA				PcP		PcP	11 17 46.2 +0.2
	comp=Z,1.6nm,0.7s,baz=346,slow=3.6,SNR=6.6						
TKM2	**Tokmak 2**	**43.61**	**311**	*e*P		**P**	**11 16 01.7 +0.6**
TKM2				pmax		pmax	
	comp=Z,2.0nm,0.7s,mb4.0						
TKM2	**Tokmak 2**	**43.61**	**311**	*e*P		**P**	**11 16 01.7 +0.6**
	comp=Z,2.4nm,0.7s,mb4.0						
NVS	**Novosibirsk**	**44.05**	**329**	*e*P		**P**	**11 16 02.6 -1.9**
AAK	**Ala-Archa**	**44.32**	**310**	LR		LR	11 37 10.3
	comp=Z,86nm,19.2s,MS3.7,baz=241,slow=40						
KURK	**Kurchatov**	**44.40**	**322**	*c i*P		**P**	**11 16 07.8 +0.5**
KURK				pmax		pmax	
	comp=Z,13nm,1.2s,mb4.5						
KURK	**Kurchatov**	**44.40**	**322**	*e*P		**P**	**11 16 07.5 +0.2**
	comp=Z,11nm,1.1s,mb4.5						
AML	**Almayashu**	**44.78**	**309**	*e*P		**P**	**11 16 13.0 +2.5**
AML				pmax		pmax	
	comp=Z,12nm,1.0s,mb4.7						
AML	**Almayashu**	**44.78**	**309**	*e*P		**P**	**11 16 13.0 +2.5**
	comp=Z,12nm,1.0s,mb4.7						
ASAR	**Alice Springs**	**46.23**	**164**	P		**P**	**11 16 22.5 +0.4**
	comp=Z,1.5nm,0.5s,mb4.2,baz=345,slow=7.4,SNR=44						
ASAR				PcP		PcP	11 17 58.1 +0.4
	comp=Z,1.3nm,0.8s,baz=358,slow=4.3,SNR=4.9						
CTA	**Charters Tower**	**47.79**	**147**	P		**P**	**11 16 34.5 +0.1**
	comp=Z,2.6nm,0.6s,mb4.4,baz=349,slow=13,SNR=5.1						
CTA	**Charters Tower**	**47.79**	**147**	P		**P**	**11 16 34.5 +0.1**
BVAR	**Borovoye Array**	**49.99**	**322**	P		**P**	**11 16 52.0 +1.1**
	comp=Z,2.3nm,0.7s,mb4.3,baz=110,slow=13,SNR=6.3						
BVAR				PcP		PcP	11 18 10.8 0.0
	comp=Z,2.0nm,0.8s,baz=134,slow=4.3,SNR=5.0						
BRVK	**Borovoye**	**50.07**	**322**	⇑*i*P		**P**	**11 16 52.3 +0.8**
BRVK				pmax		pmax	
	comp=Z,8.0nm,1.3s,mb4.6						
TIXI	**Tiksi**	**50.76**	**3**	*e*P		**P**	**11 16 54.0 -2.4**
TIXI				pmax		pmax	
	comp=Z,9.0nm,1.2s,mb4.6						
TIXI				MLR		MLR	
	comp=Z,129nm,17.0s,MS4.0						
TIXI	**Tiksi**	**50.76**	**3**	*e*P		**P**	**11 16 54.6 -1.9**
	comp=Z,5.6nm,0.8s,mb4.5						
FORT	**Forrest**	**52.02**	**172**	*e*P		**P**	**11 17 06.8 +0.4**
	comp=Z,8.3nm,0.6s,mb4.8						
KLBR	**Kellerberrin**	**52.49**	**184**	*e*P		**P**	**11 17 09.3 -0.5**
	comp=Z,20nm,1.1s,mb5.0						
ABKAR	**Akbulak array**	**55.52**	**316**	*e*P		**P**	**11 17 32.3 +0.4**
	comp=Z,1.5nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**56.24**	**159**	*e*P		**P**	**11 17 38.0 +0.9**
	comp=Z,4.9nm,0.8s,mb4.6						
STKA	**Stephens Creek**	**56.24**	**159**	P		**P**	**11 17 37.9 +0.7**
	comp=Z,5.1nm,0.7s,mb4.7,baz=328,slow=7.9,SNR=11						
SVE	**Sverdlovsk**	**56.46**	**325**	*e*P		**P**	**11 17 39.6 +1.1**
ARU	**Arti**	**57.50**	**324**	*d i*P		**P**	**11 17 46.2 +0.4**
ARU							11 19 51.0
ARU				S		**S**	**11 25 43.5 +0.8**
ARU				pmax		pmax	
	comp=Z,14nm,1.7s,mb4.7						
ARU	**Arti**	**57.50**	**324**	*e*P		**P**	**11 17 45.6 -0.2**
	comp=Z,9.5nm,1.1s,mb4.7						
ARMA	**Armidale**	**59.07**	**149**	*e*P		**P**	**11 17 58.7 +1.6**
ZEI	**Tsey**	**66.72**	**309**	*e*P		**P**	**11 18 48.0 0.0**
ZEI				pmax		pmax	
	comp=Z,10.0nm,0.5s,mb5.1						
KIV	**Kislovodsk**	**67.44**	**310**	*e*P		**P**	**11 18 53.7 +1.1**
KIV				pmax		pmax	
	comp=Z,6.0nm,0.8s,mb4.7						
KIV				MLR		MLR	
	comp=Z,26nm,18.0s,MS3.5						
PPLA	**Purkeypile**	**69.98**	**29**	*e*P		**P**	**11 19 08.2 +0.2**
	comp=Z,6.5nm,0.8s,mb4.6						
RSO	**Redoubt South**	**70.02**	**32**	*e*P		**P**	**11 19 09.4 +1.1**
OHAK	**Old Harbor**	**70.20**	**35**	*e*P		**P**	**11 19 09.3 -0.2**
	comp=Z,88nm,2.2s,mb5.3						
BPAW	**Bear Paw Mtn.**	**70.36**	**28**	*e*P		**P**	**11 19 09.6 -0.8**
	comp=Z,11nm,1.2s,mb4.7						
KDAK	**Kodiak Island**	**70.49**	**35**	*i* P		**P**	**11 19 11.3 +0.1**
KDAK	**Kodiak Island**	**70.49**	**35**	*e*P		**P**	**11 19 10.7 -0.5**
	comp=Z,13nm,1.0s,mb4.8						
TRF	**Thorofare Moun**	**70.76**	**28**	*e*P		**P**	**11 19 12.7 -0.1**
	comp=Z,2.2nm,0.6s,mb4.3						
ANN	**Anapa**	**71.01**	**312**	*e*P		**P**	**11 19 05.9 -8.8**
MCK	**McKinley**	**71.31**	**28**	*e*P		**P**	**11 19 15.9 -0.2**
PMR	**Palmer**	**71.59**	**30**	*e*P		**P**	**11 19 17.1 -0.8**
PMR				pmax		pmax	
	comp=Z,10.0nm,1.0s,mb4.7						
PMR	**Palmer**	**71.59**	**30**	*e*P		**P**	**11 19 17.1 -0.7**
	comp=Z,9.6nm,1.0s,mb4.7						
ARCES	**ARCESS Array B**	**72.34**	**338**	P		**P**	**11 19 22.4 +0.2**
	comp=Z,2.2nm,0.8s,mb4.2,baz=80,slow=10.0,SNR=8.7						
MENT	**Mentasta**	**73.78**	**28**	*e*P		**P**	**11 19 30.3 -0.5**
BMRM	**Bremner River**	**73.86**	**30**	*e*P		**P**	**11 19 31.1 -0.2**
	comp=Z,8.3nm,0.9s,mb4.7						
FINES	**FINESS Array B**	**74.03**	**330**	P		**P**	**11 19 32.3 0.0**
	comp=Z,3.7nm,0.8s,mb4.4,baz=101,slow=6.0,SNR=9.9						
EGAK	**Eagle**	**74.38**	**26**	*e*P		**P**	**11 19 33.9 -0.4**
	comp=Z,17nm,1.5s,mb4.8						
BRTR	**Keskin Array B**	**74.90**	**307**	P		**P**	**11 19 38.6 +0.8**
	comp=Z,1.3nm,0.8s,mb3.9,baz=111,slow=6.9,SNR=6.7						
AKASG	**Malin Array Be**	**75.08**	**319**	P		**P**	**11 19 38.6 -0.1**
	comp=Z,0.4nm,0.4s,mb3.7,baz=61,slow=6.8,SNR=3.2						
DAWY	**Dawson**	**75.33**	**27**	*e*P		**P**	**11 19 39.7 -0.1**
INK	**Inuvik**	**76.12**	**22**	*e*P		**P**	**11 19 43.8 -0.5**
INK				pmax		pmax	
	comp=Z,20nm,1.8s						
INK	**Inuvik**	**76.12**	**22**	*e*P		**P**	**11 19 43.8 -0.4**
	comp=Z,20nm,1.8s,mb4.7						
HYT	**Haines Junctio**	**77.22**	**30**	*e*P		**P**	**11 19 51.5 +0.9**
NB2	**NORSAR Subarra**	**80.88**	**332**	P		**P**	**11 20 09.4 -1.3**
	comp=Z,2.5nm,1.0s,mb4.1,baz=64,slow=5.6						
NOA	**NORSAR Array B**	**80.88**	**332**	P		**P**	**11 20 09.5 -1.2**
	comp=Z,0.6nm,0.6s,mb3.7,baz=58,slow=5.8,SNR=2.7						
NOA				LR		LR	12 01 39.7
	comp=Z,48nm,18.6s,MS3.9,baz=50,slow=40						
YKA	**Yellowknife Ar**	**85.84**	**23**	P		**P**	**11 20 35.5 -0.7**
	comp=Z,2.0nm,0.6s,mb4.5,baz=308,slow=4.9,SNR=14						
YKA	**Yellowknife Ar**	**85.84**	**23**	P		**P**	**11 20 35.5 -0.7**
EDM	**Edmonton**	**92.34**	**29**	*e*P		**P**	**11 21 06.9 -0.3**
FFC	**Flin Flon**	**95.99**	**23**	*i* P		**P**	**11 21 24.9 +1.0**
NVAR	**Mina Array Bea**	**98.76**	**43**	P		**P**	**11 21 37.4 +0.6**
	comp=Z,0.2nm,0.5s,mb3.9,baz=297,slow=4.0,SNR=3.3						

NIED ***14*** *11:18:00,40.00N×139.50E,h8km,Mw3.4 Best double couple:* M_0*1.40000×10*^{14} *NP1:*ϕ_s*222.00000°,*δ*71.00000°,* λ*128.00000°. NP2:*ϕ_s*334.00000°,*δ*42.00000°,*λ*29.00000°.*

JMA 14 11:18:24.6±0.1,40.04N×139.48E,h16km±1km,M3.7, 2C-3D,Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOG2	**Oga 2**	**0.27**	**118**	⇓P	Pg	11 18 30.5	0.0
JOG2				S	Sg	11 18 34.6	+0.2
JIW	**Iwasaki**	**0.68**	**36**	⇑P	Pg	11 18 37.7	-0.3
JIW				S	Sg	11 18 46.8	-0.3
JYW	**Yuwa**	**0.75**	**131**	⇓P	Pg	11 18 38.8	-0.4
JYW				S	Sg	11 18 49.4	+0.2
JAH	**Hinai**	**0.90**	**80**	⇓P	Pb	11 18 41.1	-0.7
JAH				S	Sb	11 18 53.0	-0.5
JRG	**Rokugo**	**1.10**	**125**	⇑P	Pb

0.8nm,0.3s,baz=178,slow=9.7,SNR=35
LPAZ S Sn 11 21 32.9 +7.7
4.9nm,0.3s,baz=228,slow=4.7,SNR=12
CPUP Villa Florida 12.43 129 LR LR 11 28 40.4
comp=Z,162nm,20.1s,baz=77,slow=41
PLCA Paso Flores 22.04 185 LR LR 11 33 36.1
comp=Z,79nm,18.9s,baz=47,slow=36
TXAR Lajitas Array 58.88 324 P P 11 29 54.6 -0.6
0.3nm,0.9s,baz=152,slow=4.1,SNR=2.2
TXAR pP pP 11 30 32.2 -0.3
0.2nm,0.8s,baz=139,slow=7.2,SNR=2.9
TXAR LR LR 11 54 09.6
comp=Z,22nm,20.0s,baz=5.0,slow=35
PDAR Pinedale Array 72.15 329 P P 11 31 21.2 +1.0
0.1nm,0.3s,baz=138,slow=8.2,SNR=2.3
PDAR pP pP 11 31 60.0 +1.1
0.3nm,0.8s,baz=104,slow=2.9,SNR=2.3
TORD Torodi Ar. Bea 75.63 71 P P 11 31 41.0 -0.1
1.7nm,0.7s,baz=250,slow=5.4,SNR=7.3
TORD pP pP 11 32 20.2 +0.2
2.4nm,0.6s,baz=250,slow=5.7,SNR=8.1
YKA Yellowknife Ar 88.87 340 P P 11 32 49.1 +0.4
0.7nm,0.8s,baz=128,slow=4.0,SNR=3.4
YKA pP pP 11 33 28.4 -0.4
1.4nm,0.7s,baz=136,slow=4.7,SNR=6.6
ASAR Alice Springs 132.75 208 PKP PKPdf 11 39 09.5 -0.3
0.2nm,0.8s,baz=113,slow=2.1,SNR=3.6

IDC 14 11:24:12.6±17.0, 23°.25S×175°.05W, h0km, mb4.3/5, mb1 4.5/5, mb1mx4.0/17, mbtmp4.3/5, Error ellipse: s-maj=326.7km s-min=132.4km az=82.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**36.03 267**		P	P	11 31 16.9	+1.0
	5.4nm,0.3s,baz=96,slow=10.0,SNR=12						
STKA	**Stephens Creek**	**39.17 248**		P	P	11 31 41.7	-0.7
	1.4nm,0.4s,baz=85,slow=9.8,SNR=8.2						
ASAR	**Alice Springs**	**46.62 259**		P	P	11 32 42.2	-0.6
	0.6nm,0.3s,baz=101,slow=8.4,SNR=29						
WRA	**Warramunga Arr**	**46.99 264**		P	P	11 32 45.3	-0.5
	3.5nm,0.5s,baz=101,slow=8.3,SNR=61						
FITZ	**Fitzroy Crossi**	**55.41 263**		P	P	11 33 49.7	+0.5
	3.0nm,0.8s,baz=98,slow=10,SNR=6.6						

*LDG **14** 11:44:12.8±0.1, 15°.67S×167°.67E, h120km, Mb4.1/1, Error ellipse: s-maj=21.0km s-min=3.5km az=93.0*
*BJI **14** 11:44:14.6, 16°.20S×168°.00E, h170km, mB4.5/3, mb4.6/5*
*NEIC **14** 11:44:16.6±4.5, 16°.22S×167°.98E, h171km±41km, mb4.7/6, Error ellipse: s-maj=18.7km s-min=10.8km az=55.0*
*ISCJB **14** 11:44:17.9±1.5, 16°.26S±0°.08×168°.0E±0°.1, h195km±14km, mb4.3/20, Error ellipse: s-maj=16.2km s-min=13.3km az=165.5*
*IDC **14** 11:44:18.2±0.8, 16°.26S×168°.00E, h186km±6km, mb3.9/13, mb1 4.1/13, mb1mx4.0/18, mbtmp3.9/13, MS3.1/2, Ms1 3.1/2, ms1mx2.5/23, Error ellipse: s-maj=15.6km s-min=13.5km az=103.0*
ISC 14 11:44:18.5±1.5, 16°.25S±0°.08×168°.0E±0°.1, h186km±13km, h184km±4.6km: pP-P, n83, σ0s82/38, mb4.3/21, 2D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**5.97 190**		*e*P	**Pn**	**11 45 45.4**	**+0.3**
DZM	**Mont Dzumac**	**5.97 194**		*e*P	**Pn**	**11 45 45.4**	**+0.2**
NOUC	**Port Laguerre**	**6.04 195**		*e*P	**Pn**	**11 45 45.5**	**-0.5**
HNR	**Honiara**	**10.37 310**		LR	LR	11 50 12.7	
	comp=Z,84nm,21.1s,baz=276,slow=34						
ARMA	**Armidale**	**20.57 224**		*e*P	**P**	**11 48 43.8**	**+0.8**
ARMA	**Armidale**	**20.57 224**		*e*P	**P**	**11 48 43.3**	**+0.3**
	30nm,1.3s						
CTA	**Charters Tower**	**21.00 256**		*e*P	**P**	**11 48 48.7**	**+1.0**
	9.1nm,1.5s,mb3.9						
CTA	**Charters Tower**	**21.00 256**		P	**P**	**11 48 48.5**	**+0.9**
	4.9nm,0.7s,mb4.0,baz=64,slow=12,SNR=3.3						
CTAO	**Charters Tower**	**21.00 256**		*e*P	**P**	**11 48 44.9**	**-2.8**
RIV	**Riverview**	**23.16 218**		*e*P	**P**	**11 49 09.8**	**+1.3**
URZ	**Urewera**	**23.35 162**		P	**P**	**11 49 10.1**	**-0.1**
	31nm,0.9s,mb4.7,baz=352,slow=5.3,SNR=20						
CNB	**Canberra Magne**	**25.25 218**		*e*P	**P**	**11 49 27.8**	**+0.3**
RPZ	**Rata Peaks**	**27.50 175**		P	**P**	**11 49 47.0**	**-0.5**
	14nm,0.6s,mb4.8,baz=283,slow=2.4,SNR=12						
STKA	**Stephens Creek**	**28.58 232**		*e*P	**P**	**11 49 57.4**	**+0.1**
	5.4nm,0.7s,mb4.4						
STKA	**Stephens Creek**	**28.58 232**		P	**P**	**11 49 57.1**	**-0.2**
	6.8nm,0.7s,mb4.5,baz=58,slow=8.1,SNR=17						
STKA				PcP	PcP	11 53 03.1	-0.6
	5.8nm,0.8s,baz=20,slow=4.4,SNR=5.4						
STKA				ScP	ScP	11 56 27.0	-0.5
	1.6nm,0.7s,baz=27,slow=2.3,SNR=5.5						
TOO	**Toolangi**	**29.08 219**		*e*P	**P**	**11 50 01.8**	**+0.2**
MOO	**Moorlands**	**31.61 210**		*e*P	**P**	**11 50 24.1**	**+0.3**
WRAB	**Tennant Creek**	**32.16 258**		*e*P	**P**	**11 50 27.7**	**-1.2**
WRA	**Warramunga Arr**	**32.17 258**		P	**P**	**11 50 27.5**	**-1.5**
	1.0nm,0.4s,mb3.9,baz=78,slow=6.2,SNR=14						
WRA				PcP	PcP	11 53 12.7	-0.7
	2.6nm,0.8s,baz=86,slow=3.2,SNR=8.2						
WRA				ScP	ScP	11 56 39.2	-0.4
	0.9nm,0.7s,baz=89,slow=3.5,SNR=13						
ASAR	**Alice Springs**	**32.82 251**		P	**P**	**11 50 34.0**	**-0.6**
	13nm,0.7s,mb4.8,baz=76,slow=9.1,SNR=225						
ASAR				pP	pP	11 51 13.5	+0.3
	5.3nm,0.8s,baz=78,slow=8.2,SNR=1.8						
ASAR				PcP	PcP	11 53 14.1	-1.1
	2.0nm,0.7s,baz=91,slow=3.1,SNR=10						
ASAR				ScP	ScP	11 56 41.1	-0.6
	1.8nm,0.8s,baz=95,slow=3.8,SNR=12						
KAKA	**Kakadu**	**34.58 271**		*e*P	**P**	**11 50 50.6**	**+0.7**
	6.4nm,0.4s,mb4.6						
FITZ	**Fitzroy Crossi**	**40.45 261**		*e*P	**P**	**11 51 38.6**	**-0.5**
	28nm,0.7s,mb5.0						
FITZ	**Fitzroy Crossi**	**40.45 261**		*e*P	**P**	**11 51 38.5**	**-0.7**
	18nm,0.9s,mb4.7						
FITZ				*e*pP	pP	11 52 14.5	-4.4
MJAR	**Matsushiro Arr**	**59.57 332**		P	**P**	**11 54 01.8**	**-0.8**
	4.9nm,0.8s,mb4.4,baz=168,slow=8.5,SNR=14						
MAJO	**Matsushiro**	**59.57 332**		*e*P	**P**	**11 54 01.9**	**-0.7**
	6.8nm,0.8s,mb4.5						
MAT	**Matsushiro**	**59.57 332**		P	**P**	**11 54 01.8**	**-0.8**
SBA	**Scott Base**	**61.63 180**		*e*P	**P**	**11 54 16.4**	**+0.5**
	21nm,0.9s,mb5.0						
MDJ	**Mudanjiang**	**69.94 332**		P	**P**	**11 55 09.9**	**+0.5**
MDJ				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.6						
MDJ				pmax	pmax		
	comp=Z,35nm,5.0s						
MDJ	**Mudanjiang**	**69.94 332**		*e*P	**P**	**11 55 09.5**	**+0.1**
	comp=Z,3.5nm,0.4s,mb4.4						
CN2	**Changchun**	**71.30 329**		*e*P	**P**	**11 55 18.3**	**+0.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
QSPA	**South Pole Qui**	**73.79 180**		*e*P	**P**	**11 55 31.7**	**-0.1**
	comp=Z,29nm,0.8s,mb5.1						
CMAR	**Chiang Mai Arr**	**76.20 294**		P	**P**	**11 55 47.7**	**+0.9**
	comp=Z,1.2nm,0.7s,mb3.6,baz=110,slow=4.1,SNR=5.9						
MAW	**Mawson**	**80.75 202**		P	**P**	**11 56 10.6**	**-0.1**
	comp=Z,4.9nm,0.8s,mb4.2,baz=96,slow=6.8,SNR=7.5						
SONM	**Songino Array**	**84.13 323**		P	**P**	**11 56 29.0**	**+0.6**
	comp=Z,1.7nm,0.7s,mb3.9,baz=144,slow=5.4,SNR=10						
SONM				pP	pP	11 57 14.1	-0.1
	comp=Z,0.4nm,0.3s,baz=24,slow=44,SNR=2.6						
GTA	**Gaotai**	**84.22 314**		*e*P	**P**	**11 56 31.1**	**+2.0**
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.4						
SYO	**Syowa Base**	**87.46 196**		‖*e*P	**P**	**11 56 42.0**	**-2.6**
NVAR	**Mina Array Bea**	**87.73 49**		P	**P**	**11 56 46.4**	**0.0**
	comp=Z,0.6nm,0.8s,mb3.5,baz=228,slow=9.1,SNR=7.3						
NVAR				pP	pP	11 57 32.9	+0.4
	comp=Z,0.9nm,0.9s,baz=226,slow=9.5,SNR=3.2						
PDAR	**Pinedale Array**	**95.46 47**		LR	LR	12 33 32.7	
	comp=Z,11nm,20.5s,baz=261,slow=31						
TXAR	**Lajitas Array**	**96.38 61**		P	**P**	**11 57 26.4**	**-0.2**
	comp=Z,0.1nm,0.3s,mb3.6,baz=256,slow=2.7,SNR=3.1						
MKAR	**Makanchi Array**	**98.78 316**		P	**P**	**11 57 37.4**	**+0.5**
	comp=Z,0.6nm,0.8s,mb4.1,baz=94,slow=6.6,SNR=7.1						
ARCES	**ARCESS Array B**	**121.89 345**		PKP	PKPdf	12 02 48.9	-1.0
	comp=Z,2.5nm,0.5s,baz=83,slow=1.8,SNR=26						
ARCES				pPKP	pPKPdf	12 03 37.3	-1.1
	comp=Z,0.8nm,0.7s,baz=79,slow=2.6,SNR=1.7						
BOSA	**Boshof**	**122.66 219**		PKP	PKPdf	12 02 51.7	-1.0
	comp=Z,4.1nm,0.9s,baz=97,slow=4.3,SNR=5.3						
FINES	**FINESS Array B**	**127.39 338**		PKP	PKPdf	12 02 60.0	-0.7
	comp=Z,0.4nm,0.2s,baz=80,slow=2.1,SNR=4.0						
NOA	**NORSAR Array B**	**132.26 345**		PKP	PKPdf	12 03 09.1	-0.8
	comp=Z,0.9nm,0.8s,baz=30,slow=2.0,SNR=3.4						
AKASG	**Malin Array Be**	**132.38 325**		PKP	PKPdf	12 03 09.2	-1.3
	comp=Z,0.3nm,0.3s,baz=68,slow=1.5,SNR=3.3						
BRTR	**Keskin Array B**	**134.02 310**		PKP	PKPdf	12 03 13.3	-0.6
	comp=Z,1.0nm,0.9s,baz=66,slow=3.5,SNR=3.3						
FETA	**Feichten**	**143.99 333**		‖*i*PKPdf	PKPdf	12 03 30.6	-1.2
	comp=Z,8.3nm,0.8s						
CDF	**Champ du Feu**	**144.24 338**		*e*PKP1	PKPdf	12 03 30.8	-1.4
	comp=Z,20nm,0.9s						
HINF	**Hinteralfeld**	**144.89 338**		*e*PKP1	PKPdf	12 03 32.7	-0.6
	comp=Z,14nm,0.6s						
HAU	**Haudompre**	**144.91 338**		*e*PKP1	PKPdf	12 03 33.0	-0.4
	comp=Z,28nm,0.7s						
MEZF	**Maizieres J'vi**	**144.93 340**		*e*PKP1	PKPdf	12 03 33.4	0.0
	comp=Z,25nm,0.7s						
CABF	**La Chapelle**	**146.19 337**		*e*PKP1	PKPbc	12 03 37.4	+0.5
	comp=Z,11nm,0.8s						
FLN	**La Foliniere**	**146.23 346**		*e*PKP1	PKPbc	12 03 36.5	-0.5
	comp=Z,16nm,0.6s						
LDF	**La Druitiere**	**146.31 346**		*e*PKP1	PKPbc	12 03 36.7	-0.5
	comp=Z,7.5nm,0.5s						
LOR	**Lormes**	**146.40 340**		*e*PKP1	PKPbc	12 03 37.5	0.0
	comp=Z,13nm,0.7s						
GRR	**Gorron**	**146.67 346**		*e*PKP1	PKPbc	12 03 38.0	-0.2
	comp=Z,16nm,0.7s						
SSF	**Saint Saulge**	**146.69 341**		*e*PKP1	PKPbc	12 03 38.4	0.0
	comp=Z,23nm,0.7s						
LPL	**La Plagne**	**146.86 336**		*e*PKP1	PKPbc	12 03 39.3	+0.4
	comp=Z,16nm,0.8s						
LPG	**La Plagne**	**146.87 336**		*e*PKP1	PKPbc	12 03 39.4	+0.5
	comp=Z,15nm,0.8s						
SMF	**Signal de Mont**	**146.95 340**		*e*PKP1	PKPbc	12 03 38.7	-0.4
AVF	**Avril sur Loir**	**146.98 340**		*e*PKP1	PKPbc	12 03 38.8	-0.4
	comp=Z,7.8nm,0.9s						
SGMF	**Saint Gilles**	**147.15 348**		*e*PKP1	PKPbc	12 03 39.2	-0.4
	comp=Z,12nm,0.8s						
BGF	**Bois d'Agland**	**147.35 341**		*e*PKP1	PKPbc	12 03 40.0	-0.2
	comp=Z,19nm,0.7s						
MBDF	**Montbardon**	**147.49 335**		*e*PKP1	PKPbc	12 03 40.3	-0.3
QUIF	**Quistinic**	**147.59 349**		*e*PKP1	PKPbc	12 03 40.2	-0.6
ORIF	**Oris-en-Rattie**	**147.69 336**		*e*PKP1	PKPbc	12 03 41.1	-0.1
	comp=Z,9.1nm,0.6s						
TCF	**Toulx Ste Croi**	**147.79 341**		*e*PKP1	PKPbc	12 03 41.1	-0.3
	comp=Z,8.0nm,0.6s						
MFF	**Saint Martin d**	**148.17 344**		*e*PKP1	PKPbc	12 03 42.1	-0.3
	comp=Z,11nm,0.5s						
VIVF	**Saint-Julien-l**	**148.21 337**		*e*PKP1	PKPbc	12 03 42.3	-0.2
	comp=Z,7.9nm,0.7s						
PGF	**Pioggiola**	**148.21 330**		*e*PKP1	PKPbc	12 03 42.4	-0.2
	comp=Z,4.5nm,0.9s						
FRF	**La Foret Royal**	**148.49 334**		*e*PKP1	PKPbc	12 03 42.7	-0.6
	comp=Z,5.3nm,0.5s						
SMRF	**Simiane la Rot**	**148.60 335**		*e*PKP1	PKPbc	12 03 43.7	+0.1
	comp=Z,7.6nm,0.7s						
LMR	**La Mourre**	**148.73 333**		*e*PKP1	PKPbc	12 03 43.4	-0.5
	comp=Z,28nm,0.8s						
RJF	**Les Rejaudoux**	**148.88 341**		*e*PKP1	PKPbc	12 03 44.1	-0.1
	comp=Z,5.2nm,0.6s						
CAF	**Calviac**	**149.05 340**		*e*PKP1	PKPbc	12 03 44.7	0.0
	comp=Z,6.8nm,0.6s						
LASF	**Ste Croix**	**149.17 337**		*e*PKP1	PKPbc	12 03 45.0	0.0
	comp=Z,8.4nm,0.5s						
LFF	**La Frestale**	**149.45 342**		*e*PKP1	PKPbc	12 03 45.5	-0.1
	comp=Z,13nm,0.7s						
MTLF	**Montolieu**	**150.40 339**		*e*PKP1	PKPbc	12 03 47.9	-0.1
	comp=Z,5.9nm,0.6s						
EPF	**Esparros**	**151.30 341**		*e*PKP1	PKPbc	12 03 49.7	-0.4
	comp=Z,3.2nm,0.5s						
SJPF	**Ste Jean**	**151.69 343**		*e*PKP1	PKPbc	12 03 50.9	-0.1
	comp=Z,6.2nm,0.6s						
ETSF	**Etsaut**	**151.69 342**		*e*PKP1	PKPbc	12 03 51.3	+0.3
	comp=Z,8.5nm,0.6s						
TORD	**Torodi Ar. Bea**	**166.39 259**		PKP	PKPdf	12 04 01.0	-1.4
	comp=Z,1.1nm,0.9s,baz=112,slow=0.8,SNR=5.0						
TORD				PKPab	PKPab	12 05 04.0	-1.0
	comp=Z,3.9nm,0.9s,baz=105,slow=3.7,SNR=14						
DBIC	**Dimbokro**	**168.18 217**		PKPab	PKPab	12 05 11.9	-0.9
	comp=Z,2.8nm,0.7s,baz=105,slow=5.9,SNR=3.5						

*IDC **14** 12:02:45.2±3.3, 7°.52S×127°.55E, h124km±30km, mb3.9/10, mb1 4.1/13, mb1mx4.1/19, mbtmp4.0/13, MS2.8/1, Ms1 2.8/1, ms1mx2.0/19, Error ellipse: s-maj=25.9km s-min=12.5km az=69.0*
*NEIC **14** 12:02:47.8±2.2, 7°.63S×127°.52E, h154km±26km, mb4.5/4, Error ellipse: s-maj=18.9km s-min=14.8km az=82.0*
*ISCJB **14** 12:02:49.0±0.7, 7°.79S±0°.04×127°.65E±0°.06, h193km±8km, mb4.0/13, Error ellipse: s-maj=10.4km s-min=5.6km az=157.2*
*DJA **14** 12:02:50, 7°.74S×127°.49E, h190km, MLv4.7/5*
ISC 14 12:02:49.6±0.7, 7.75S±0°.05×127°.57E±0°.07, h175km±8km, n43, σ1s35/48, mb4.1/13, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**4.08**	**9**	P	**Pn**	**12 03 51.7**	**0.0**
NLAI	**Namlea**	**4.50**	**354**	P	**Pn**	**12 03 59.1**	**+2.0**
TLE	**Tual**	**5.54**	**68**	P	**Pn**	**12 04 11.3**	**+0.7**
	1.1nm314nm,0.7s						
KAKA	**Kakadu**	**6.88**	**136**	*e*P	**Pn**	**12 04 30.0**	**+1.9**
	111nm,0.2s						
KAKA				*e*S	**Sn**	**12 05 42.0**	**-3.8**
KAKA	**Kakadu**	**6.88**	**136**	*e*Pn	**Pn**	**12 04 29.8**	**+1.6**
	349nm,0.5s						
KAKA	**Kakadu**	**6.88**	**136**	P	**Pn**	**12 04 29.6**	**+1.5**
	4.8nm338nm,0.6s						
WSI	**Waingapu**	**7.44**	**255**	P	**Pn**	**12 04 34.1**	**-1.5**
KNA	**Kununurra**	**8.04**	**172**	*e*P	**Pn**	**12 04 43.3**	**-0.2**
	61nm,0.2s						
KNA				*e*S	**Sn**	**12 06 07.2**	**-6.4**
KNA	**Kununurra**	**8.04**	**172**	P	**Pn**	**12 04 43.4**	**-0.1**
	9μm568nm,0.9s						
FITZ	**Fitzroy Crossi**	**10.46**	**190**	*e*P	**Pn**	**12 05 13.5**	**-1.8**
	47nm,0.3s						
FITZ				*e*S	**Sn**	**12 07 02.0**	**-10**
FITZ	**Fitzroy Crossi**	**10.46**	**190**	P	**Pn**	**12 05 13.8**	**-1.6**
	13nm,0.3s,baz=21,slow=8.4,SNR=199						
FITZ				S	**Sn**	**12 07 03.5**	**-8.2**
	7.5nm,0.3s,baz=103,slow=18,SNR=9.7						
FITZ				LR	LR	12 09 51.4	
	comp=Z,58nm,21.8s,baz=203,slow=40						
FITZ	**Fitzroy Crossi**	**10.46**	**190**	P	**Pn**	**12 05 13.7**	**-1.6**
	2μm125nm,1.0s						
WRAB	**Tennant Creek**	**13.78**	**152**	*e*Pn	**Pn**	**12 05 56.5**	**-1.3**
	20nm,0.7s						
WRAB				*e*Sn	**Sn**	**12 08 23.2**	**-8.0**
WRAB	**Tennant Creek**	**13.78**	**152**	P	**Pn**	**12 05 57.5**	**-0.3**
WRA	**Warramunga Arr**	**13.79**	**152**	P	**Pn**	**12 05 56.7**	**-1.2**
	3.3nm,0.3s,baz=317,slow=14,SNR=122						
WRA				S	**Sn**	**12 08 23.1**	**-8.1**
	8.9nm,0.3s,baz=320,slow=25,SNR=13						
MBWA	**Marble Bar**	**15.34**	**209**	*e*P	**Pn**	**12 06 17.7**	**+0.6**
MBWA				*e*S	**Sn**	**12 08 55.8**	**-13**
MBWA	**Marble Bar**	**15.34**	**209**	*e*Pn	**Pn**	**12 06 17.4**	**+0.3**
	20nm,0.8s						
COEN	**Coen**	**16.52**	**113**	*e*P	**Pn**	**12 06 33.8**	**+2.3**
COEN				*e*S	**Sn**	**12 09 24.2**	**-12**
ASAR	**Alice Springs**	**16.96**	**160**	P	**Pn**	**12 06 38.7**	**+2.0**
	6.8nm,0.3s,baz=335,slow=10,SNR=408						
ASAR				S	**Sn**	**12 09 36.4**	**-11**
	1.1nm,0.3s,baz=328,slow=19,SNR=5.8						
MEEK	**Meekatharra**	**20.63**	**203**	*e*P	**P**	**12 07 17.7**	**+2.2**
MEEK				*e*S	**S**	**12 11 02.7**	**+6.4**
TGY	**Tagaytay City**	**22.68**	**343**	P	**P**	**12 07 37.0**	**+0.6**
	122nm,0.4s,baz=213,slow=11,SNR=3.7						
FORT	**Forrest**	**22.92**	**179**	*e*P	**P**	**12 07 40.4**	**+2.0**
	12nm,0.6s,mb4.5						
MORW	**Morawa**	**23.83**	**206**	*e*P	**P**	**12 07 49.6**	**+2.9**
NWAO	**Narrogin (SRO)**	**26.83**	**200**	P	**P**	**12 08 15.7**	**+2.0**
	6.2nm,0.8s,mb4.3,baz=170,slow=13,SNR=6.0						
STKA	**Stephens Creek**	**27.33**	**153**	P	**P**	**12 08 20.9**	**+2.7**
	1.5nm,0.6s,mb3.8,baz=353,slow=14,SNR=7.3						
CMSA	**Cobar Meteorol**	**29.09**	**147**	*e*P	**P**	**12 08 37.0**	**+3.2**
PSI	**Prapat**	**30.44**	**289**	P	**P**	**12 08 45.8**	**-0.2**
	5.3nm,0.6s,mb4.5,baz=181,slow=11,SNR=6.6						
CMAR	**Chiang Mai Arr**	**38.42**	**313**	P	**P**	**12 09 54.5**	**+0.1**
	2.0nm,0.6s,mb3.9,baz=143,slow=6.9,SNR=12						
CMAR				PcP	PcP	12 12 06.0	+1.7
	1.2nm,0.5s,baz=170,slow=2.8,SNR=4.8						
KSRS	**Korea Array**	**44.96**	**0**	P	**P**	**12 10 47.1**	**-0.1**
	0.9nm,0.5s,mb3.7,baz=178,slow=9.9,SNR=8.5						
KSRS				PcP	PcP	12 12 26.6	+1.2
	0.6nm,0.7s,baz=188,slow=5.1,SNR=4.2						
MJAR	**Matsushiro Arr**	**45.17**	**12**	P	**P**	**12 10 47.2**	**-1.8**
	1.4nm,0.7s,mb3.7,baz=196,slow=10,SNR=3.6						
MAJO	**Matsushiro**	**45.17**	**12**	P	**P**	**12 10 48.0**	**-1.0**
SONM	**Songino Array**	**58.42**	**343**	P	**P**	**12 12 27.2**	**+0.4**
	1.2nm,0.5s,mb4.0,baz=164,slow=7.7,SNR=8.1						
MK31	**Makanchi Array**	**67.55**	**328**	*e*P	**P**	**12 13 26.4**	**-0.6**
MKAR	**Makanchi Array**	**67.55**	**328**	P	**P**	**12 13 26.9**	**-0.2**
	3.2nm,0.5s,mb4.3,baz=127,slow=7.9,SNR=41						
TKM2	**Tokmak 2**	**69.05**	**322**	*e*P	**P**	**12 13 36.6**	**+0.2**
	1.8nm,0.7s,mb3.9						
ZALV	**Zalesovo Beam**	**71.21**	**335**	P	**P**	**12 13 48.2**	**-1.1**
	3.0nm,0.4s,mb4.3,baz=132,slow=5.7,SNR=13						
KURK	**Kurchatov**	**71.92**	**330**	*e*P	**P**	**12 13 53.0**	**-0.6**
	6.2nm,0.8s,mb4.4						
BVAR	**Borovoye Array**	**77.42**	**329**	P	**P**	**12 14 24.3**	**-0.9**
	0.9nm,0.6s,mb3.6,baz=100,slow=6.3,SNR=5.7						
PDAR	**Pinedale Array**	**119.12**	**45**	PKP	PKPdf	12 21 19.3	+1.4
	0.4nm,0.7s,baz=66,slow=3.7,SNR=4.9						
TORD	**Torodi Ar. Bea**	**126.58**	**281**	PKP	PKPdf	12 21 33.3	+0.4
	0.8nm,0.6s,baz=70,slow=1.5,SNR=7.7						
TXAR	**Lajitas Array**	**127.37**	**59**	PKP	PKPdf	12 21 35.7	+1.5
	0.2nm,0.8s,baz=198,slow=1.8,SNR=4.3						
CPUP	**Villa Florida**	**145.80**	**172**	PKPbc	PKPbc	12 22 10.8	+1.9
	1.1nm,0.4s,baz=184,slow=2.6,SNR=6.2						
LPAZ	**La Paz**	**151.51**	**147**	PKPbc	PKPbc	12 22 27.0	+3.2
	0.9nm,0.4s,baz=39,slow=6.0,SNR=7.0						
LPAZ				PKPab	PKPab	12 22 36.2	+3.5
	1.6nm,0.6s,baz=226,slow=7.4,SNR=6.9						

*NIED **14** 12:18:00, 20°.90N×121°.50E, h5km, Mw4.3 Best double couple: M0:2.84000×10^15 NP1:φ0s8.00000°, δ85.00000°, λ126.00000°. NP2:φ0s105.00000°, δ37.00000°, λ9.00000°.*
*IDC **14** 12:18:20.1±1.1, 20°.99N×121°.10E, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.7/22, mbtmp3.9/7, ML3.8/1, MS3.6/8, Ms1 3.6/8, ms1mx3.2/23, Error ellipse: s-maj=40.1km s-min=18.2km az=68.0*
*BJI **14** 12:18:21.7, 21°.22N×121°.18E, h10km, mB4.5/4, mb4.1/6, Ms3.8/4, Ms7 3.7/4*
*JMA **14** 12:18:21.3±0.5, 20°.86N×121°.50E, h0km, M4.4*
*NEIC **14** 12:18:21.9±0.6, 21°.01N×121°.10E, h10km, mb4.3/3, Error ellipse: s-maj=17.2km s-min=8.2km az=89.0*
*ISCJB **14** 12:18:22.1±1.9, 21°.00N±0°.04×121°.06E±0°.05, h24km±15km, mb3.9/7, MS3.5/8, Error ellipse: s-maj=9.1km s-min=6.0km az=31.8*
ISC 14 12:18:22.8±1.9, 21°.03N±0°.04×121°.02E±0°.05, h13km±13km, n32, σ0s97/39, mb3.9/7, MS3.5/8, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**1.78**	**1**	*e*Pn	**Pn**	**12 18 51.5**	**-1.7**
TPUB	**Ta-pu**	**2.29**	**351**	*e*Pn	**Pn**	**12 18 59.3**	**-0.9**
TPUB				*e*Sn	**Sn**	**12 19 27.2**	**-1.0**
YULB	**Yu-li**	**2.36**	**6**	*e*Pn	**Pn**	**12 19 00.1**	**-1.1**
YULB				*e*Sn	**Sn**	**12 19 30.8**	**+0.7**
SSLB	**Suanglung**	**2.74**	**359**	*e*Pn	**Pn**	**12 19 06.4**	**-0.1**
SSLB				*e*Sn	**Sn**	**12 19 38.7**	**-0.7**
NACB	**Ninganchiao**	**3.17**	**9**	*e*Pn	**Pn**	**12 19 11.8**	**-0.5**
NACB				*e*Sn	**Sn**	**12 19 50.1**	**+0.1**
YHNB	**Yeheng**	**3.63**	**5**	*e*Pn	**Pn**	**12 19 19.8**	**+1.1**
YOJ	**Yonaguni jima**	**3.87**	**28**	P	**Pn**	**12 19 23.5**	**+1.5**
YOJ				*e*S	**Sn**	**12 20 10.1**	**+2.7**
TATO	**Taipei**	**3.95**	**6**	*e*Pn	**Pn**	**12 19 24.3**	**+1.3**
HATJ	**Hateruma jima**	**3.96**	**40**	P	**Pn**	**12 19 23.6**	**+0.4**
HATJ				*e*S	**Sn**	**12 20 08.7**	**-0.8**
IRIF	**Iriomote-Funau**	**4.13**	**37**	P	**Pn**	**12 19 26.0**	**+0.5**
IRIF				*e*S	**Sn**	**12 20 14.3**	**+0.6**

baz=232
NNS Nan Shan 1.08 261 *eP* **Pn 13 14 15.9 0.0**
baz=255
NNS *eS* **Sn 13 14 31.8 +0.3**
baz=255
NSK Sanguang 1.08 273⇓ *iP* **Pn 13 14 15.9 0.0**
baz=267
NSK S **Sn 13 14 31.5 +0.1**
baz=267
TWY Chenhua 1.08 308 *eP* **Pn 13 14 15.7 -0.2**
baz=301
IRIF Iriomote-Funau 1.12 104 P **Pn 13 14 16.1 -0.3**
IRIF S **Sn 13 14 32.4 +0.1**
TWS1 Kuangyinshan 1.13 296 P **Pn 13 14 16.1 -0.4**
baz=296
TWS1 *eS* **Sn 13 14 32.2 -0.3**
baz=296
WHF Hehuan Shan 1.25 248 P **Pn 13 14 18.0 0.0**
baz=247
WHF *eS* **Sn 13 14 35.5 +0.3**
baz=247
NCU National Centr 1.28 286 *eS* **Sn 13 14 36.4 +0.6**
baz=286
HATJ Hateruma jima 1.28 115 P **Pn 13 14 18.5 +0.1**
HATJ *eS* **Sn 13 14 37.7 +1.9**
ESL Shilin 1.29 232 P **Pn 13 14 17.5 -1.0**
baz=226
ESL *eS* **Sn 13 14 34.6 -1.4**
baz=226
TWT Tachien 1.29 254 P **Pn 13 14 19.1 +0.6**
baz=248
TWT S **Sn 13 14 36.5 +0.4**
baz=248
JKRS Kuro-shima 1.39 105 P **Pn 13 14 19.7 0.0**
JKRS *eS* **Sn 13 14 38.5 +0.3**
NSTT Nanjuang 1.40 271 *eP* **Pn 13 14 19.4 -0.4**
baz=271
NSTT S **Sn 13 14 38.2 -0.2**
baz=271
JIJ Ishigaki jima 1.48 99 P **Pn 13 14 20.4 -0.4**
JIJ S **Sn 13 14 39.4 -0.8**
EHY Hungye 1.57 226 *eP* **Pn 13 14 20.7 -1.2**
baz=232
EHY *eS* **Sn 13 14 40.0 -2.1**
baz=232
TWQ1 Liyutan 1.63 261 *eP* **Pn 13 14 22.4 -0.3**
baz=261
TWQ1 *eS* **Sn 13 14 42.5 -1.1**
baz=261
SMLT Sun Moon Lake 1.67 244 *eP* **Pn 13 14 24.1 +0.9**
baz=239
SMLT *eS* **Sn 13 14 44.2 -0.1**
baz=239
TYC Yuchr 1.69 246 *eP* **Pn 13 14 24.1 +0.6**
baz=242
TYC *eS* **Sn 13 14 45.8 +0.9**
baz=242
TWF1 Yuli 1.69 222 *eP* **Pn 13 14 22.4 -1.2**
baz=228
TWF1 *eS* **Sn 13 14 43.4 -1.7**
baz=228
YUS Yu-Shan 1.83 233 *eP* **Pn 13 14 25.7 +0.3**
baz=228
YUS *eS* **Sn 13 14 48.0 -0.2**
baz=228
ALS Alishan 1.93 236 *eP* **Pn 13 14 27.3 +0.7**
baz=229
ALS *eS* **Sn 13 14 50.9 +0.4**
baz=229
JTJ Tarama 1.97 89 *eS* **Sn 13 14 50.7 -0.7**
CHN5 Tsauling 1.98 240 *eP* **Pn 13 14 27.9 +0.6**
baz=231
CHN5 *eS* **Sn 13 14 52.9 +1.2**
baz=231
ELDTW Lidau 1.99 225 *eP* **Pn 13 14 26.4 -1.0**
baz=222
ELDTW *eS* **Sn 13 14 50.5 -1.3**
baz=222
CHN4 Tsaushan 2.18 235 *eP* **Pn 13 14 30.4 +0.5**
baz=235
CHN4 *eS* **Sn 13 14 57.8 +1.5**
baz=235
STYT Tauyuan 2.18 229 *eP* **Pn 13 14 30.3 +0.4**
baz=221
WTP Ta-pu 2.23 233 *eP* **Pn 13 14 31.4 +0.9**
baz=232
WTP *eS* **Sn 13 14 57.7 +0.2**
baz=232
CHN1 Nanshi 2.33 233 *eP* **Pn 13 14 32.4 +0.6**
baz=232
CHN1 *eS* **Sn 13 15 00.1 +0.3**
baz=232
SGST Jiashian 2.35 230 *eP* **Pn 13 14 33.1 +0.9**
baz=229
SGST *eS* **Sn 13 15 01.5 +1.0**
baz=229

IDC 14 13:15:29.8±2.5, **7°.02S**×**155°.75E, h0**km, **mb3.6**/3, **mb1 3.8**/3, **mb1mx3.5**/15, **mbtmp3.6**/3, **MS3.2**/1, **Ms1 3.2**/1, **ms1mx2.3**/19, **Error ellipse: s-maj=62.9km s-min=35.3km az=102.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.42**	**236**	P	P	13 20 51.3	+1.0
	0.5nm,0.8s,baz=61,slow=9.8,SNR=5.7						
ASAR	**Alice Springs**	**26.72**	**229**	P	P	13 21 11.2	+0.1
	0.3nm,0.5s,baz=59,slow=10,SNR=15						
ASAR				PcP	PcP	13 24 33.5	-1.4
	0.1nm,0.7s,baz=67,slow=2.9,SNR=5.5						
FITZ	**Fitzroy Crossi**	**31.33**	**247**	LR	LR	13 33 56.5	
	comp=Z,40nm,19.5s,baz=106,slow=35						
DAV	**Davao City (W)**	**33.19**	**294**	P	P	13 22 08.5	-0.1
	193nm,0.4s,baz=110,slow=23,SNR=12						
MKAR	**Makanchi Array**	**83.92**	**319**	P	P	13 28 02.1	+0.4
	0.8nm,0.7s,baz=103,slow=6.3,SNR=10						

*IDC **14** 13:28:36.3*±*1.1, 27°.46N*×*91°.94E, h0*km*, mb3.7/7, mb1 3.8/8, mb1mx3.6/25, mbtmp3.7/8, ML3.4/1, MS3.0/1, Ms1 3.0/1, ms1mx2.2/30, Error ellipse: s-maj=51.3km s-min=17.3km az=60.0*
*BJI **14** 13:28:38.5, 27°.56N*×*92°.01E, h15*km*, mB4.3/2, mb4.3/6, ML3.5/1*
*ISCJB **14** 13:28:42.5*±*0.9, 27°.36N*±*0°.06*×*91°.96E*±*0°.06, h71*km*±11*km*, mb3.8/9, Error ellipse: s-maj=11.1km s-min=8.0km az=34.7*
*NEIC **14** 13:28:43.6*±*1.5, 27°.42N*×*92°.02E, h61*km*±16*km*, mb4.1/5, Error ellipse: s-maj=20.2km s-min=9.6km az=50.0*
ISC 14 13:28:43.6±0.8, **27°.38N**±**0°.06**×**91°.97E**±**0°.06, h61**km±11km, **n28**, σ1§**14**/31, **mb3.9**/9, **Bhutan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**1.81**	**183**	*iP*	**Pn**	**13 29 08.0**	**-4.4**
SHL				*iS*	**Sn**	**13 29 28.0**	**-6.3**
LSA	**Lhasa**	**2.42**	**343**	Pg	**Pn**	**13 29 22.4**	**+1.6**
LSA				Sg	**Sn**	**13 29 58.5**	**+9.2**
LSA				smax			
	comp=N,130nm,0.6s						
LSA				smax			
	comp=E,440nm,0.6s						
LSA	**Lhasa**	**2.42**	**343**	*eP*	**Pn**	**13 29 22.2**	**+1.4**
GTK	**Gangtok**	**2.98**	**270**	*ex*	**Pn**	**13 29 34.0**	**+5.5**
GTK				*eS*	**Sn**	**13 30 03.0**	**-0.1**
IMP	**Imphal**	**3.13**	**145**	*e*PKP	**Pn**	**13 29 31.0**	**+0.5**
IMP				*ex*	x	13 29 51.0	
AGT	**Agartala**	**3.54**	**191**	*iP*	**Pn**	**13 29 36.0**	**-0.1**
AGT				*ix*	x	13 30 31.0	
BOK	**Bokaro**	**6.55**	**238**	*ex*	**Pn**	**13 30 13.6**	**-3.7**
BOK				*eS*	**Sn**	**13 31 24.6**	**-6.1**
BOK				AML	AML	13 32 02.6	
	comp=E,48nm,0.7s						
BOK				AML	AML	13 32 07.4	
	comp=N,72nm,0.5s						
CMAR	**Chiang Mai Arr**	**10.96**	**143**	Pn	**Pn**	**13 31 15.8**	**-1.8**
	comp=N,0.1nm,0.3s,baz=317,slow=13,SNR=4.9						
VIS	**Vishakhapatnam**	**12.49**	**221**	*ex*	x	13 32 45.1	
VIS				AML	AML	13 33 14.2	
	comp=N,5.6nm,0.1s						
VIS				AML	AML	13 33 22.4	
	comp=E,5.2nm,0.9s						
NGP	**Nagpur**	**13.31**	**245**	*ex*	x	13 34 00.5	
GTA	**Gaotai**	**13.66**	**27**	*e*P	**Pn**	**13 31 50.3**	**-4.1**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BHPL	**Bhopal**	**13.79**	**256**	*e*PKP	**Pn**	**13 31 56.3**	**+0.2**
BHPL				*ex*	x	13 34 16.9	
ENH	**Enshi**	**15.62**	**75**	*eP*	**Pn**	**13 32 20.7**	**+0.7**
	comp=Z,8.5nm,0.6s						
TKM2	**Tokmak 2**	**20.43**	**324**	*eP*	**P**	**13 33 17.1**	**+1.3**
	comp=Z,8.2nm,0.9s						
MK31	**Makanchi Array**	**20.83**	**341**	*eP*	**P**	**13 33 19.7**	**-0.4**
MKAR	**Makanchi Array**	**20.83**	**341**	P	**P**	**13 33 19.7**	**-0.4**
	comp=Z,6.6nm,0.9s,baz=151,slow=13,SNR=39						
KBL	**Kabul**	**20.89**	**296**	P	**P**	**13 33 20.1**	**-0.7**
AML	**Almayashu**	**20.96**	**319**	*eP*	**P**	**13 33 23.5**	**+1.9**
	comp=Z,10nm,0.9s						
HHC	**Hu-ho-hao-te**	**21.00**	**45**	*eP*	**P**	**13 33 22.1**	**+0.1**
HHC				S	**S**	**13 37 06.6**	**-5.9**
HHC				pmax	pmax		
	comp=Z,14nm,0.5s,mb4.5						
HHC				pmax	pmax		
	comp=Z,54nm,5.6s						
SONM	**Songino Array**	**23.33**	**25**	P	**P**	**13 33 44.3**	**-2.0**
	comp=Z,0.7nm,0.9s,mb3.1,baz=214,slow=10.0,SNR=4.6						
SONM				LR	LR	13 43 50.1	
	comp=Z,34nm,20.2s,baz=264,slow=39						
ULN	**Ulaanbaatar**	**23.60**	**26**	*eP*	**P**	**13 33 46.6**	**-2.2**
KURK	**Kurchatov**	**25.43**	**340**	*eP*	**P**	**13 34 04.9**	**-0.5**
	comp=Z,3.8nm,0.9s,mb3.9						
ZALV	**Zalesovo Beam**	**27.06**	**351**	P	**P**	**13 34 20.1**	**0.0**
	comp=Z,0.9nm,0.5s,mb3.5,baz=169,slow=8.6,SNR=5.7						
BVAR	**Borovoye Array**	**30.23**	**334**	P	**P**	**13 34 48.4**	**+0.1**
	comp=Z,0.4nm,0.5s,mb3.4,baz=124,slow=9.2,SNR=3.4						
AKASG	**Malin Array Be**	**52.27**	**314**	P	**P**	**13 37 47.4**	**-1.3**
	comp=Z,1.6nm,0.6s,mb4.2,baz=80,slow=6.6,SNR=5.7						
WRA	**Warramunga Arr**	**62.42**	**134**	P	**P**	**13 39 02.1**	**+1.6**
	comp=Z,0.7nm,0.7s,mb3.9,baz=324,slow=7.2,SNR=3.8						
WRAB	**Tennant Creek**	**62.42**	**134**	*eP*	**P**	**13 39 01.1**	**+0.6**
	comp=Z,2.7nm,0.8s,mb4.4						
ASAR	**Alice Springs**	**64.91**	**137**	P	**P**	**13 39 18.2**	**+1.4**
	comp=Z,0.5nm,0.5s,mb3.8,baz=320,slow=6.8,SNR=6.4						

*NEIC **14** 13:30:19.9*±*0.6, 4°.66N*×*126°.55E, h35*km*, mb4.2/1, Error ellipse: s-maj=34.5km s-min=8.3km az=69.0*
*IDC **14** 13:30:21.5*±*8.1, 4°.59N*×*126°.44E, h47*km*±84*km*, mb3.8/12, mb1 3.9/12, mb1mx3.8/22, mbtmp3.8/12, MS2.8/4, Ms1 2.8/4, ms1mx2.4/34, Error ellipse: s-maj=46.0km s-min=16.8km az=69.0*
*ISCJB **14** 13:30:22.6*±*1.2, 4°.57N*±*0°.08*×*126°.3E*±*0°.1, h75*km*±11*km*, mb3.9/13, Error ellipse: s-maj=24.2km s-min=10.1km az=156.2*
*MAN **14** 13:30:22, 4°.62N*×*126°.36E, h113*km*, mb5.2, ML4.1, MS4.3*
ISC 14 13:30:23.5±1.1, **4°.55N**±**0°.08**×**126°.4E**±**0°.1, h66**km±11km, **n22**, σ0§**74**/21, **mb3.9**/13, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**2.08**	**317**	*eP*	**Pn**	**13 30 55.1**	**-1.0**
MATI	**Mati**	**2.38**	**357**	*eP*	**Pn**	**13 30 59.9**	**-0.3**
BUKP	**Musuan**	**3.55**	**339**	*eP*	**Pn**	**13 31 18.0**	**+1.8**
PAGZ	**Pagadian**	**4.42**	**318**	*eP*	**Pn**	**13 31 27.8**	**-0.3**
PAGZ				*eS*	**Sn**	**13 32 18.2**	**-0.1**
IPIL	**Ipil**	**4.96**	**311**	*eP*	**Pn**	**13 31 35.6**	**+0.1**
FITZ	**Fitzroy Crossi**	**22.52**	**182**	P	**P**	**13 35 17.6**	**-0.3**
	2.7nm,0.6s,mb3.8,baz=20,slow=8.3,SNR=12						
FITZ				LR	LR	13 44 19.6	
	comp=Z,28nm,21.0s,baz=5.7,slow=37						
FITZ	**Fitzroy Crossi**	**22.52**	**182**	*eP*	**P**	**13 35 17.7**	**-0.2**
FITZ				LR	LR	13 44 19.6	
WRAB	**Tennant Creek**	**25.57**	**162**	*eP*	**P**	**13 35 46.2**	**-0.3**
	3.3nm,0.5s,mb4.0						
WRA	**Warramunga Arr**	**25.57**	**162**	P	**P**	**13 35 45.6**	**-0.9**
	6.1nm,1.0s,mb4.0,baz=342,slow=10,SNR=16						
CBIJ	**Chichi jima**	**27.03**	**32**	LR	LR	13 45 09.9	
	comp=Z,37nm,19.8s,baz=121,slow=33						
ASAR	**Alice Springs**	**29.00**	**166**	P	**P**	**13 36 17.6**	**+0.5**
	1.0nm,0.5s,mb3.7,baz=345,slow=7.1,SNR=33						
CMAR	**Chiang Mai Arr**	**30.15**	**299**	P	**P**	**13 36 29.0**	**+1.5**
	0.8nm,0.7s,mb3.5,baz=118,slow=6.5,SNR=4.8						
KSRS	**Korea Array**	**32.77**	**2**	P	**P**	**13 36 50.2**	**-0.1**
	0.8nm,0.6s,mb3.7,baz=185,slow=9.7,SNR=7.2						
KSRS				LR	LR	13 49 17.4	
	comp=Z,6.4nm,19.6s,baz=240,slow=35						
MJAR	**Matsushiro Arr**	**33.64**	**17**	LR	LR	13 49 16.5	
	comp=Z,22nm,21.1s,baz=195,slow=34						
NWAO	**Narrogin (SRO)**	**38.27**	**192**	P	**P**	**13 37 37.5**	**0.0**
	4.9nm,0.8s,mb4.4,baz=55,slow=16,SNR=2.8						
STKA	**Stephens Creek**	**39.02**	**159**	P	**P**	**13 37 44.8**	**+1.0**
	4.1nm,0.9s,mb4.3,baz=317,slow=13,SNR=7.7						
MK31	**Makanchi Array**	**56.68**	**325**	*eP*	**P**	**13 39 59.3**	**-0.8**
MKAR	**Makanchi Array**	**56.68**	**325**	P	**P**	**13 40 00.1**	**0.0**
	0.8nm,0.5s,mb4.0,baz=125,slow=8.2,SNR=12						
ZALV	**Zalesovo Beam**	**59.70**	**333**	P	**P**	**13 40 19.8**	**-1.2**
	0.4nm,0.4s,mb3.8,baz=132,slow=8.3,SNR=2.8						
BVAR	**Borovoye Array**	**66.44**	**327**	P	**P**	**13 41 05.5**	**-0.3**
	0.6nm,0.5s,mb3.7,baz=108,slow=7.0,SNR=2.9						
ARCES	**ARCESS Array B**	**89.56**	**340**	P	**P**	**13 43 13.6**	**+0.2**
	1.4nm,0.8s,mb4.1,baz=81,slow=7.5,SNR=7.7						
FINES	**FINESS Array B**	**90.94**	**332**	P	**P**	**13 43 20.5**	**+0.6**
	1.5nm,0.9s,mb4.1,baz=98,slow=3.6,SNR=3.4						

*IDC **14** 13:36:29.5*±*5.7, 35°.87N*×*77°.16E, h0*km*, mb3.8/4, mb1 3.8/8, mb1mx3.5/27, mbtmp3.7/8, ML3.4/4, Error ellipse: s-maj=91.2km s-min=45.6km az=143.0*
*ISCJB **14** 13:36:35.7*±*1.9, 36°.1N*±*0°.1*×*77°.2E*±*0°.2, h52*km*±14*km*, mb3.8/3, Error ellipse: s-maj=27.4km s-min=14.1km az=35.3*
*NEIC **14** 13:36:37.3*±*1.9, 36°.03N*×*77°.31E, h58*km*±13*km*, mb3.7/1, Error ellipse: s-maj=28.3km s-min=12.8km az=126.0*
*NNC **14** 13:36:45.9*±*11.0, 37°.23N*×*76°.95E, h0*km*, mb3.5, mpv3.5, Error ellipse: s-maj=108.2km s-min=61.8km az=171.0*
ISC 14 13:36:38.1±1.7, **36°.2N**±**0°.1**×**77°.1E**±**0°.2, h53**km±13km, **n19**, σ1§**15**/22, **mb3.8**/3, **1C-3D, Kashmir-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**3.48**	**345**	Pn	**Pn**	**13 37 28.4**	**-1.3**
KSH				Sn	**Sn**	**13 37 57.8**	**-12**
KSH				smax			
	comp=N,140nm,0.5s						
KSH				smax			
	comp=E,140nm,0.6s						
NIL	**Nilore**	**4.05**	**233**	*eP*	**Pn**	**13 37 37.6**	**+0.1**
AML	**Almayashu**	**6.54**	**337**	*eP*	**Pn**	**13 38 14.2**	**+2.6**
	comp=E,4.5nm,0.4s						
AAK	**Ala-Archa**	**6.78**	**343**	Pn	**Pn**	**13 38 18.5**	**+3.6**
	comp=E,0.8nm,0.3s,baz=160,slow=15,SNR=3.2						
EKS2	**Erkin-Say**	**7.00**	**339**	P	**Pn**	**13 38 18.1**	**+0.2**
KK31	**Karatay Array**	**8.61**	**326**	Pn	**Pn**	**13 38 41.1**	**+1.1**
	comp=E,0.8nm,0.3s,baz=147,slow=13,SNR=16						
KK31				⇓Sn	**Sn**	**13 40 07.0**	**-8.6**
	comp=E,1.3nm,0.5s,baz=142,slow=22,SNR=4.5						
MK31	**Makanchi Array**	**11.31**	**18**	⇓Pn	**Pn**	**13 39 15.1**	**-1.7**
	comp=E,0.1nm,0.3s,baz=201,slow=14,SNR=3.7						
MK31				⇓Sn	**Sn**	**13 41 10.2**	**-11**
	comp=E,0.8nm,0.7s,baz=299,slow=47,SNR=4.2						
MK31	**Makanchi Array**	**11.31**	**18**	*eP*	**Pn**	**13 39 15.1**	**-1.7**
MKAR	**Makanchi Array**	**11.31**	**18**	Pn	**Pn**	**13 39 17.4**	**+0.6**
	comp=E,0.2nm,0.3s,baz=200,slow=13,SNR=12						
BVAR	**Borovoye Array**	**17.52**	**346**	P	**Pn**	**13 40 40.1**	**+1.7**
	comp=E,0.3nm,0.3s,baz=184,slow=11,SNR=3.5						
AB31	**Akbulak array**	**18.14**	**322**	⇑P	**Pn**	**13 40 46.3**	**+0.3**
	comp=E,1.0nm,0.4s,baz=103,slow=18,SNR=20						
ABKAR	**Akbulak array**	**18.14**	**322**	*eP*	**Pn**	**13 40 45.5**	**-0.4**
	comp=E,3.6nm,0.7s						
ZALV	**Zalesovo Beam**	**18.58**	**14**	P	**Pn**	**13 40 51.7**	**+0.4**
	comp=E,0.2nm,0.3s,baz=211,slow=12,SNR=3.1						
AKTK	**Aktyubinsk**	**19.85**	**322**	P	**Pn**	**13 41 04.7**	**-1.7**
AKTO	**Aktyubinsk**	**19.85**	**322**	P	**Pn**	**13 41 04.7**	**-1.7**
	comp=E,1.4nm,0.3s,baz=104,slow=11,SNR=10						
FINES	**FINESS Array B**	**40.58**	**325**	P	**P**	**13 44 12.2**	**+0.2**
	comp=E,0.8nm,0.5s,mb3.6,baz=108,slow=12,SNR=4.3						
ARCES	**ARCESS Array B**	**43.40**	**336**	P	**P**	**13 44 35.3**	**+0.3**
	comp=E,1.0nm,0.5s,mb3.8,baz=106,slow=8.9,SNR=9.9						
NB2	**NORSAR Subarra**	**47.64**	**323**	P	**P**	**13 45 08.8**	**+0.3**
	comp=Z,1.3nm,0.7s,mb4.1,baz=90,slow=7.9						
NOA	**NORSAR Array B**	**47.64**	**323**	P	**P**	**13 45 08.9**	**+0.4**
	comp=Z,0.9nm,0.6s,mb4.0,baz=91,slow=7.6,SNR=3.9						

*ISCJB **14** 13:43:09.9*±*0.7, 1°.68N*±*0°.05*×*126°.99E*±*0°.07, h121*km*±6km,*

*ISK **14** 12:56:07.7, 37°.97N*×*30°.92E, h14*km*, MD2.8*
*ISCJB **14** 12:56:09.0*±*0.5, 37°.96N*±*0°.03*×*30°.92E*±*0°.04, h10*km*, Error ellipse: s-maj=4.7km s-min=3.8km az=168.9*
*CSEM **14** 12:56:08.2*±*0.2, 37°.95N*×*30°.98E, h8*km*, MD2.8, Error ellipse: s-maj=4.3km s-min=3.8km az=91.0*
*DDA **14** 12:56:08.5, 37°.94N*×*30°.91E, h8*km*±3km, Md3.0*
ISC 14 12:56:08.7±0.8, **37°.98N**±**0°.03**×**30°.96E**±**0°.05, h0**km±7km, **n26**, σ1§**30**/41, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISP	**Isparta**	**0.38**	**246**	*e*PG	**Pg**	**12 56 14.8**	**-1.2**
ISP				*e*SG	**Sg**	**12 56 20.6**	**-0.3**
ISP	**Isparta**	**0.38**	**246**	*e*Pg	**Pg**	**12 56 14.8**	**-1.2**
ISP				*e*Sg	**Sg**	**12 56 20.6**	**-0.4**
SUTC	**Sutluce-Ispart**	**0.51**	**177**	*e*PG	**Pg**	**12 56 18.1**	**-0.3**
SUTC				*e*SG	**Sg**	**12 56 25.4**	**+0.5**
SUTC	**Sutluce-Ispart**	**0.51**	**177**	*e*Pg	**Pg**	**12 56 18.1**	**-0.3**
SUTC				*e*Sg	**Sg**	**12 56 25.4**	**+0.5**
BCK	**Bucak**	**0.60**	**210**	*e*PG	**Pg**	**12 56 19.4**	**-0.7**
BCK				*e*SG	**Sg**	**12 56 27.8**	**-0.1**
BCK	**Bucak**	**0.60**	**210**	*e*Pg	**Pg**	**12 56 19.5**	**-0.7**
BCK				*e*Sg	**Sg**	**12 56 27.8**	**-0.1**
SHUT	**Suhut-Afyon**	**0.66**	**331**	*e*PG	**Pg**	**12 56 21.1**	**-0.1**
SHUT	**Suhut-Afyon**	**0.66**	**331**	*e*Pg	**Pg**	**12 56 21.1**	**-0.2**
BOLV	**Bolvadin**	**0.73**	**359**	*iP*	**Pg**	**12 56 23.2**	**+0.4**
BOLV				*iS*	**Sg**	**12 56 35.1**	**+2.8**
BOLV	**Bolvadin**	**0.73**	**359**	*iP*	**Pg**	**12 56 23.2**	**+0.4**
BOLV				*iS*	**Sg**	**12 56 35.2**	**+2.8**
KONT	**Konya--Tatoy**	**1.11**	**91**	*e*PN	**Pn**	**12 56 30.0**	**-1.4**
KONT	**Konya--Tatoy**	**1.11**	**91**	*e*Pn	**Pn**	**12 56 30.0**	**-1.4**
LADK	**Ladik-KONYA**	**1.13**	**78**	*e*PN	**Pn**	**12 56 30.3**	**-1.5**
LADK	**Ladik-KONYA**	**1.13**	**78**	*e*Pn	**Pn**	**12 56 30.3**	**-1.5**
KIZT	**Kizilcal**	**1.15**	**39**	*e*PN	**Pn**	**12 56 30.3**	**-1.8**
KIZT	**Kizilcal**	**1.15**	**39**	*e*Pn	**Pn**	**12 56 30.3**	**-1.8**
KHAL	**Karahalli**	**1.22**	**289**	*iP*	**Pg**	**12 56 31.7**	**-0.4**
KHAL				*iS*	**Sg**	**12 56 50.1**	**+2.2**
KHAL	**Karahalli**	**1.22**	**289**	*iP*	**Pg**	**12 56 31.7**	**-0.4**
KHAL				*iS*	**Sg**	**12 56 50.2**	**+2.2**
HDMB	**Hadim**	**1.58**	**129**	*e*PN	**Pn**	**12 56 36.3**	**-1.7**
HDMB	**Hadim**	**1.58**	**129**	*e*Pn	**Pn**	**12 56 36.3**	**-1.7**
GDZ	**Gediz**	**1.60**	**314**	*iP*	**Pn**	**12 56 38.0**	**-0.3**
GDZ				*iS*	**Sn**	**12 56 59.4**	**-0.3**
GDZ	**Gediz**	**1.60**	**314**	*iP*	**Pn**	**12 56 38.0**	**-0.3**
GDZ				*iS*	**Sn**	**12 56 59.3**	**-0.4**
ERMK	**Ermenek**	**2.05**	**130**	*iP*	**Pn**	**12 56 46.7**	**+2.2**
ERMK				*iS*	**Sn**	**12 57 12.1**	**+1.4**
ERMK	**Ermenek**	**2.05**	**130**	*iP*	**Pn**	**12 56 46.7**	**+2.3**
ERMK				*iS*	**Sn**	**12 57 12.1**	**+1.4**
GAZI	**Gazipasa**	**2.05**	**148**	*iP*	**Pn**	**12 56 46.3**	**+1.9**
GAZI				*iS*	**Sn**	**12 57 14.0**	**+3.3**
GAZI	**Gazipasa**	**2.05**	**148**	*iP*	**Pn**	**12 56 46.3**	**+1.8**

*TAP **14** 13:13:53.9, 24°.63N*×*122°.50E, h105*km*, ML3.3, C*
*ISCJB **14** 13:13:54.8*±*0.7, 24°.62N*±*0°.04*×*122°.54E*±*0°.02, h92*km*±6km, Error ellipse: s-maj=6.5km s-min=3.2km az=176.3*
*JMA **14** 13:13:54.3*±*0.2, 24°.81N*×*122°.58E, h96*km*±2km, M2.1*
ISC 14 13:13:55.3±0.7, **24°.62N**±**0°.04**×**122°.54E**±**0°.02, h91**km±6km, **n36**, σ0§**72**/68, **1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.46**	**109**	P	**Pn**	**13 14 09.9**	**+0.1**
YOJ				S	**Sn**	**13 14 21.5**	**+0.9**
TWC	**Suao**	**0.63**	**270**	P	**Pn**	**13 14 10.7**	**-0.5**
	baz=266						
TWC				*eS*	**Sn**	**13 14 22.8**	**-0.3**
	baz=266						
TWB1	**Santiao Chiao**	**0.64**	**308**	*eP*	**Pn**	**13 14 11.1**	**-0.2**
	baz=305						
TWB1				*eS*	**Sn**	**13 14 23.3**	**0.0**
	baz=305						
ENA	**Nanau**	**0.75**	**256**	*iP*	**Pn**	**13 14 12.3**	**-0.1**
	baz=250						
ENA				*eS*	**Sn**	**13 14 25.6**	**+0.4**
	baz=250						
TWE	**Neicheng**	**0.80**	**278**	*eP*	**Pn**	**13 14 13.0**	**+0.1**
	baz=277						
TWE				*eS*	**Sn**	**13 14 26.1**	**0.0**
	baz=277						
NWF	**Wu-fen Shan**	**0.83**	**304**	*eP*	**Pn**	**13 14 13.1**	**-0.1**
	baz=297						
NWF				*eS*	**Sn**	**13 14 27.4**	**+0.9**
	baz=297						
TWA	**Mucha**	**0.94**	**293**	*eP*	**Pn**	**13 14 13.8**	**-0.6**
	baz=286						
TWA				*eS*	**Sn**	**13 14 28.4**	**-0.4**
	baz=286						
TWD	**Chiawan**	**1.01**	**238**	*eP*	**Pn**	**13 14 14.6**	**-0.6**
	baz=232						
TWD				*eS*	**Sn**	**13 14 30.1**	**-0.1**

mb3.8/9, Error ellipse: s-maj=13.0km s-min=6.8km az=149.0
IDC ***14*** *13:43:11.2±3.0, 1°.59N×126°.99E, h115km±24km, mb3.5/6, mb1 3.6/7, mb1mx3.4/19, mbtmp3.5/7, Error ellipse: s-maj=93.4km s-min=12.2km az=70.0*
NEIC ***14*** *13:43:11.3±7.2, 1°.60N×127°.06E, h118km±73km, mb3.9/3, Error ellipse: s-maj=36.4km s-min=16.2km az=72.0*
DJA ***14*** *13:43:11, 1°.71N×126°.97E, h93km, MLv4.3/5*
ISC 14 13:43:10.9±0.7, 1°.67N±0°.05×127°.01E±0°.07, h113km±6km, n20, σ0°91/26, mb3.8/9, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.96**	**158**	P	**Pn**	**13 43 32.5**	**+0.5**
MNI	**Manado**	**2.18**	**264**	P	**Pn**	**13 43 46.5**	**+0.2**
MNI				S	**Sn**	**13 44 13.3**	**+1.5**
LBMI	**Labuha**	**2.34**	**168**	P	**Pn**	**13 43 48.2**	**-0.2**
LBMI				S	**Sn**	**13 44 18.5**	**+2.6**
SGSI	**Sangihe**	**2.49**	**324**	P	**Pn**	**13 43 50.2**	**-0.1**
SGSI				S	**Sn**	**13 44 18.9**	**-0.4**
KMSI	**Cibinong**	**3.21**	**250**	P	**Pn**	**13 43 59.6**	**-0.2**
KMSI				S	**Sn**	**13 44 38.1**	**+1.1**
FITZ	**Fitzroy Crossi**	**19.69**	**184**	P	**P**	**13 47 30.6**	**-0.7**
	0.3nm,0.3s,baz=325,slow=7.5,SNR=10						
FITZ	**Fitzroy Crossi**	**19.69**	**184**	*e*P	**P**	**13 47 31.1**	**-0.2**
WRAB	**Tennant Creek**	**22.64**	**162**	*e*P	**P**	**13 48 01.4**	**-1.4**
	4.5nm,0.6s,mb4.0						
WRA	**Warramunga Arr**	**22.65**	**162**	P	**P**	**13 48 01.7**	**-1.2**
	3.0nm,0.4s,mb4.0,baz=340,slow=11,SNR=21						
WRA				S	**S**	**13 52 02.4**	**+0.1**
	0.8nm,0.9s,baz=334,slow=20,SNR=2.1						
WRA	**Warramunga Arr**	**22.65**	**162**	P	**P**	**13 48 01.7**	**-1.2**
WRA				S	**S**	**13 52 02.4**	**+0.1**
MBWA	**Marble Bar**	**23.78**	**197**	*e*P	**P**	**13 48 12.6**	**-0.6**
	2.2nm,0.5s,mb3.7						
ASAR	**Alice Springs**	**26.06**	**165**	P	**P**	**13 48 33.9**	**0.0**
	0.5nm,0.4s,mb3.3,baz=347,slow=13,SNR=10						
ASAR				ScP	ScP	13 55 27.9	-0.6
	0.3nm,0.5s,baz=345,slow=3.0,SNR=7.3						
STKA	**Stephens Creek**	**36.12**	**159**	P	**P**	**13 50 01.7**	**-0.4**
	1.6nm,0.7s,mb4.0,baz=324,slow=9.8,SNR=7.2						
STKA	**Stephens Creek**	**36.12**	**159**	P	**P**	**13 50 01.7**	**-0.4**
ULN	**Ulaanbaatar**	**49.15**	**342**	P	**P**	**13 51 48.3**	**+1.2**
	1.1nm,0.7s,mb3.9						
SONM	**Songino Array**	**49.33**	**342**	P	**P**	**13 51 49.5**	**+1.0**
	0.8nm,0.6s,mb3.8,baz=152,slow=10,SNR=4.6						
MK31	**Makanchi Array**	**59.40**	**326**	*e*P	**P**	**13 53 02.1**	**+0.7**
MKAR	**Makanchi Array**	**59.40**	**326**	P	**P**	**13 53 02.4**	**+1.0**
	1.0nm,0.3s,mb4.3,baz=117,slow=7.8,SNR=30						
KURK	**Kurchatov**	**63.62**	**328**	*e*P	**P**	**13 53 30.0**	**+0.3**
BVAR	**Borovoye Array**	**69.19**	**327**	P	**P**	**13 54 04.6**	**-0.6**
	0.3nm,0.4s,mb3.5,baz=134,slow=6.4,SNR=3.6						

LDG ***14*** *13:46:18.8±0.1, 43°.97N×9°.03E, h6km, Md2.5/2, Ml2.9/15, Error ellipse: s-maj=2.6km s-min=1.7km az=91.0*
CSEM ***14*** *13:46:18.4±0.1, 44°.02N×8°.96E, h15km, ML2.9/16, Error ellipse: s-maj=3.9km s-min=2.2km az=171.0*
STR ***14*** *13:46:19.7±0.7, 43°.70N×8°.87E, h5km, Ml2.7, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISCJB ***14*** *13:46:19.7±0.5, 44°.09N±0°.03×8°.98E±0°.03, h30km±4km, Error ellipse: s-maj=5.0km s-min=3.3km az=174.0*
ROM ***14*** *13:46:19.5±0.2, 44°.08N×8°.98E, h10km, Md2.4/13, Ml2.5/9, Error ellipse: s-maj=3.3km s-min=1.5km az=180.0*
NEIC ***14*** *13:46:19.5, 44°.08N×8°.98E, h10km, ML2.9(LDG), ML2.6(STR), ML2.5(ROM), After ROM.*
ISC 14 13:46:18.9±0.4, 44°.03N±0°.03×8°.99E±0°.02, h19km±2km, n85, σ0°81/138, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SC2M	**Scurtabo**	**0.54**	**46**	Pg	**Pg**	**13 46 29.3**	**-0.5**
SC2M				Sg	**Sg**	**13 46 36.7**	**-0.4**
SC2M	**Scurtabo**	**0.54**	**46**	Pg	**Pg**	**13 46 29.3**	**-0.5**
SC2M				Sg	**Sg**	**13 46 36.7**	**-0.4**
	741nm,0.3s						
SC2M	**Scurtabo**	**0.54**	**46**	Pg	**Pg**	**13 46 29.3**	**-0.5**
SC2M				Sg	**Sg**	**13 46 36.7**	**-0.4**
	741nm,0.3s						
QLNO	**Quiliano**	**0.55**	**303**	Pg	**Pg**	**13 46 30.3**	**+0.4**
QLNO				Sg	**Sg**	**13 46 37.2**	**-0.1**
QLNO	**Quiliano**	**0.55**	**303**	Pg	**Pg**	**13 46 30.3**	**+0.4**
QLNO				Sg	**Sg**	**13 46 37.2**	**-0.1**
QLNO	**Quiliano**	**0.55**	**303**	Pg	**Pg**	**13 46 30.3**	**+0.4**
QLNO				Sg	**Sg**	**13 46 37.2**	**-0.1**
PCP	**Piancastagn**	**0.60**	**328**	Pg	**Pg**	**13 46 30.7**	**-0.2**
PCP				Sg	**Sg**	**13 46 38.8**	**-0.2**
PCP	**Piancastagn**	**0.60**	**328**	Pg	**Pg**	**13 46 30.7**	**-0.2**
PCP				Sg	**Sg**	**13 46 38.8**	**-0.2**
	302nm,0.3s						
PCP	**Piancastagn**	**0.60**	**328**	Pg	**Pg**	**13 46 30.7**	**-0.2**
PCP				Sg	**Sg**	**13 46 38.8**	**-0.2**
	302nm,0.3s						
IMI	**Imperia**	**0.80**	**262**	Pg	**Pg**	**13 46 34.9**	**+0.4**
IMI				Sg	**Sg**	**13 46 45.7**	**+0.6**
IMI	**Imperia**	**0.80**	**262**	Pg	**Pg**	**13 46 34.9**	**+0.4**
IMI				Sg	**Sg**	**13 46 45.7**	**+0.6**
IMI	**Imperia**	**0.80**	**262**	Pg	**Pg**	**13 46 34.9**	**+0.4**
IMI				Sg	**Sg**	**13 46 45.7**	**+0.6**
BOB	**Bobbio (Coli)**	**0.81**	**24**	Pg	**Pg**	**13 46 34.4**	**-0.3**
BOB	**Bobbio (Coli)**	**0.81**	**24**	Pg	**Pg**	**13 46 34.4**	**-0.3**
	157nm,0.9s						
BOB	**Bobbio (Coli)**	**0.81**	**24**	Pg	**Pg**	**13 46 34.4**	**-0.3**
	157nm,0.9s						
VLC	**Villacollemand**	**1.02**	**82**	Pg	**Pg**	**13 46 38.6**	**0.0**
VLC				Sg	**Sg**	**13 46 51.3**	**-0.7**
VLC	**Villacollemand**	**1.02**	**82**	Pg	**Pg**	**13 46 38.6**	**0.0**
VLC				Sg	**Sg**	**13 46 51.3**	**-0.7**
VLC	**Villacollemand**	**1.02**	**82**	Pg	**Pg**	**13 46 38.6**	**0.0**
VLC				Sg	**Sg**	**13 46 51.3**	**-0.7**
SAOF	**Saorge**	**1.03**	**268**	Pg	**Pg**	**13 46 38.8**	**-0.2**
SAOF				Sg	**Sg**	**13 46 52.4**	**-0.2**
SAOF	**Saorge**	**1.03**	**268**	Pg	**Pg**	**13 46 38.8**	**-0.2**
SAOF				Sg	**Sg**	**13 46 52.4**	**-0.2**
ERBM	**Eremo**	**1.10**	**69**	Pg	**Pg**	**13 46 40.3**	**+0.1**
ERBM	**Eremo**	**1.10**	**69**	Pg	**Pg**	**13 46 40.3**	**+0.1**
	116nm,0.7s						
ERBM	**Eremo**	**1.10**	**69**	Pg	**Pg**	**13 46 40.3**	**+0.1**
	116nm,0.7s						
AUTN	**L'Aution**	**1.13**	**269**	Pg	**Pg**	**13 46 40.3**	**-0.4**
AUTN				Sg	**Sg**	**13 46 55.3**	**-0.2**
AUTN	**L'Aution**	**1.13**	**269**	Pg	**Pg**	**13 46 40.3**	**-0.4**
AUTN				Sg	**Sg**	**13 46 55.3**	**-0.2**
SBF	**Sospel**	**1.13**	**262**	*e*Pn	**Pn**	**13 46 40.0**	**+0.3**
SBF				*e*Sn	**Sn**	**13 46 54.8**	**+0.1**
	70nm,0.2s						
SBF	**Sospel**	**1.13**	**262**	*e*Pn	**Pn**	**13 46 39.9**	**+0.2**
SBF				*e*Sn	**Sn**	**13 46 54.8**	**+0.1**
	68nm,0.3s						
BDI	**Bagni Di Lucca**	**1.16**	**88**	Pg	**Pn**	**13 46 41.0**	**+0.9**
BDI	**Bagni Di Lucca**	**1.16**	**88**	Pg	**Pn**	**13 46 41.0**	**+0.9**
	76nm,0.4s						
BDI	**Bagni Di Lucca**	**1.16**	**88**	Pg	**Pn**	**13 46 41.0**	**+0.9**
	76nm,0.4s						
LUCF	**Luceram**	**1.19**	**264**	Pg	**Pn**	**13 46 41.1**	**+0.6**
LUCF	**Luceram**	**1.19**	**264**	Pg	**Pn**	**13 46 41.1**	**+0.6**
GSCL	**Gusciola**	**1.20**	**74**	Pg	**Pn**	**13 46 42.1**	**+1.5**
GSCL	**Gusciola**	**1.20**	**74**	Pg	**Pn**	**13 46 42.1**	**+1.5**
	28nm,0.3s						
GSCL	**Gusciola**	**1.20**	**74**	Pg	**Pn**	**13 46 42.1**	**+1.5**
	28nm,0.3s						
REVF	**Revere**	**1.21**	**257**	Pg	**Pn**	**13 46 41.0**	**+0.3**
REVF	**Revere**	**1.21**	**257**	Pg	**Pn**	**13 46 41.0**	**+0.3**
TOUF	**Mont Tournerai**	**1.25**	**270**	Pg	**Pn**	**13 46 42.3**	**+0.9**
TOUF	**Mont Tournerai**	**1.25**	**270**	Pg	**Pn**	**13 46 42.3**	**+0.9**
MVIF	**Mont Vial**	**1.33**	**265**	Pg	**Pn**	**13 46 43.1**	**+0.7**
MVIF	**Mont Vial**	**1.33**	**265**	Pg	**Pn**	**13 46 43.1**	**+0.7**
DOI	**San Damiano**	**1.34**	**291**	Pg	**Pn**	**13 46 42.9**	**+0.4**
DOI	**San Damiano**	**1.34**	**291**	Pg	**Pn**	**13 46 42.9**	**+0.4**
	70nm,0.3s						
DOI	**San Damiano**	**1.34**	**291**	Pg	**Pn**	**13 46 42.9**	**+0.4**
	70nm,0.3s						
PZZ	**Stroppo**	**1.43**	**290**	Pg	**Pn**	**13 46 43.9**	**+0.2**
PZZ	**Stroppo**	**1.43**	**290**	Pg	**Pn**	**13 46 43.9**	**+0.2**
	66nm,0.4s						
PZZ	**Stroppo**	**1.43**	**290**	Pg	**Pn**	**13 46 43.9**	**+0.2**
	66nm,0.4s						
PGF	**Pioggiola**	**1.48**	**180**	*e*Pn	**Pn**	**13 46 43.4**	**-1.1**
PGF				*e*Sn	**Sn**	**13 47 00.8**	**-2.5**
	11nm,0.3s						
PGF	**Pioggiola**	**1.48**	**180**	*e*Pn	**Pn**	**13 46 43.4**	**-1.1**
PGF				*e*Sn	**Sn**	**13 47 00.8**	**-2.5**
	5.6nm,0.3s						
CALN	**Calern**	**1.54**	**260**	Pg	**Pn**	**13 46 46.3**	**+1.0**
CALN	**Calern**	**1.54**	**260**	Pg	**Pn**	**13 46 46.3**	**+1.0**
RSP	**Reno Superiore**	**1.66**	**313**	Pg	**Pn**	**13 46 50.1**	**+3.1**
RSP	**Reno Superiore**	**1.66**	**313**	Pg	**Pn**	**13 46 50.1**	**+3.1**
	25nm,0.6s						
RSP	**Reno Superiore**	**1.66**	**313**	Pg	**Pn**	**13 46 50.1**	**+3.1**
	25nm,0.6s						
MBDF	**Montbardon**	**1.73**	**294**	*e*Pg	**Pg**	**13 46 51.7**	**-0.6**
MBDF				*e*Sn	**Sn**	**13 47 10.2**	**+0.6**
	66nm,0.6s						
MBDF	**Montbardon**	**1.73**	**294**	*e*Pn	**Pn**	**13 46 48.4**	**+0.4**
MBDF				*e*Pg	**Pg**	**13 46 51.7**	**-0.6**
MBDF				*e*Sn	**Sn**	**13 47 10.2**	**+0.6**
MBDF	**Montbardon**	**1.73**	**294**	*e*Pn	**Pn**	**13 46 48.4**	**+0.4**
MBDF	**Montbardon**	**1.73**	**294**	*e*Pg	**Pg**	**13 46 51.7**	**-0.6**
MBDF				*e*Sn	**Sn**	**13 47 10.2**	**+0.6**
	33nm,0.6s						
FRF	**La Foret Royal**	**1.76**	**255**	*e*Pn	**Pn**	**13 46 48.7**	**+0.4**
FRF				*e*Sn	**Sn**	**13 47 09.2**	**-0.9**
	53nm,0.2s						
FRF	**La Foret Royal**	**1.76**	**255**	*e*Pn	**Pn**	**13 46 48.7**	**+0.4**
FRF				*e*Sn	**Sn**	**13 47 09.2**	**-0.9**
	26nm,0.2s						
MDI	**Monti di Nese**	**1.82**	**16**	Pg	**Pg**	**13 46 50.9**	**-3.0**
	39nm,0.3s						
LMR	**La Mourre**	**1.93**	**250**	*e*Pn	**Pn**	**13 46 50.6**	**0.0**
LMR				*e*Sn	**Sn**	**13 47 13.1**	**-1.2**
	70nm,0.4s						
LMR	**La Mourre**	**1.93**	**250**	*e*Pn	**Pn**	**13 46 50.6**	**0.0**
LMR				*e*Sn	**Sn**	**13 47 13.1**	**-1.2**
	35nm,0.4s						
LPG	**La Plagne**	**2.17**	**313**	*e*Pn	**Pn**	**13 46 54.3**	**+0.4**
LPG				*e*Sn	**Sn**	**13 47 21.0**	**+0.8**
	21nm,0.7s						
LPG	**La Plagne**	**2.17**	**313**	*e*Pn	**Pn**	**13 46 54.3**	**+0.4**
LPG				*e*Sn	**Sn**	**13 47 21.0**	**+0.8**
	10nm,0.7s						
LPL	**La Plagne**	**2.19**	**314**	*e*Pn	**Pn**	**13 46 54.7**	**+0.5**
LPL				*e*Sn	**Sn**	**13 47 21.6**	**+0.9**
	12nm,0.5s						
LPL	**La Plagne**	**2.19**	**314**	*e*Pn	**Pn**	**13 46 54.7**	**+0.5**
LPL				*e*Sn	**Sn**	**13 47 21.6**	**+0.9**
	6.1nm,0.5s						
ORIF	**Oris-en-Rattie**	**2.40**	**293**	*e*Pn	**Pn**	**13 46 57.5**	**+0.4**
ORIF				*e*Sn	**Sn**	**13 47 25.7**	**-0.1**
	19nm,0.6s						
ORIF	**Oris-en-Rattie**	**2.40**	**293**	*e*Pn	**Pn**	**13 46 57.5**	**+0.4**
ORIF				*e*Sn	**Sn**	**13 47 25.7**	**-0.1**
	9.5nm,0.6s						
SMRF	**Simiane la Rot**	**2.46**	**270**	*e*Pn	**Pn**	**13 46 58.1**	**+0.1**
SMRF				*e*Sn	**Sn**	**13 47 26.8**	**-0.7**
	21nm,0.4s						
SMRF	**Simiane la Rot**	**2.46**	**270**	*e*Pn	**Pn**	**13 46 58.1**	**+0.1**
SMRF				*e*Sn	**Sn**	**13 47 26.8**	**-0.7**
	10nm,0.4s						
VIVF	**Saint-Julien-l**	**3.20**	**286**	*e*Pn	**Pn**	**13 47 07.7**	**-0.4**
VIVF				*e*Sn	**Sn**	**13 47 44.8**	**-0.9**
	4.5nm,0.4s						
VIVF	**Saint-Julien-l**	**3.20**	**286**	*e*Pn	**Pn**	**13 47 07.7**	**-0.4**
VIVF				*e*Sn	**Sn**	**13 47 44.8**	**-0.9**
	2.2nm,0.4s						
CABF	**La Chapelle**	**3.29**	**323**	*e*Pn	**Pn**	**13 47 09.9**	**+0.5**
CABF				*e*Sn	**Sn**	**13 47 47.8**	**-0.2**
	3.8nm,0.5s						
CABF	**La Chapelle**	**3.29**	**323**	*e*Pn	**Pn**	**13 47 09.9**	**+0.5**
CABF				*e*Sn	**Sn**	**13 47 47.8**	**-0.2**
	1.9nm,0.5s						
HINF	**Hinteralfeld**	**4.07**	**339**	*e*Pn	**Pn**	**13 47 20.5**	**+0.5**
HINF				*e*Sn	**Sn**	**13 48 06.1**	**-1.0**
	2.9nm,0.4s						
HINF	**Hinteralfeld**	**4.07**	**339**	*e*Pn	**Pn**	**13 47 20.5**	**+0.5**
HINF				*e*Sn	**Sn**	**13 48 06.1**	**-1.0**
	1.5nm,0.4s						
NVLJ	**Novalja**	**4.26**	**81**	*e*Pn	**Pn**	**13 47 24.7**	**+2.0**
NVLJ				Sn	**Sn**	**13 48 11.0**	**-0.8**
NVLJ	**Novalja**	**4.26**	**81**	*e*Pn	**Pn**	**13 47 24.6**	**+1.9**
NVLJ				Sn	**Sn**	**13 48 10.9**	**-0.9**
CDF	**Champ du Feu**	**4.54**	**345**	*e*Pn	**Pn**	**13 47 27.1**	**+0.6**
CDF				*e*Sn	**Sn**	**13 48 17.8**	**-0.9**
	1.7nm,0.3s						
CDF	**Champ du Feu**	**4.54**	**345**	*e*Pn	**Pn**	**13 47 27.1**	**+0.6**
CDF				*e*Sn	**Sn**	**13 48 17.8**	**-0.9**
	0.9nm,0.3s						
LOR	**Lormes**	**4.84**	**314**	*e*Pn	**Pn**	**13 47 30.9**	**+0.3**
LOR				*e*Sn	**Sn**	**13 48 24.6**	**-1.5**
	2.1nm,0.3s						
LOR	**Lormes**	**4.84**	**314**	*e*Pn	**Pn**	**13 47 30.9**	**+0.3**
LOR				*e*Sn	**Sn**	**13 48 24.6**	**-1.5**
	1.0nm,0.3s						
SSF	**Saint Saulge**	**4.90**	**310**	*e*Pn	**Pn**	**13 47 31.8**	**+0.3**
SSF				*e*Sn	**Sn**	**13 48 26.3**	**-1.3**
	1.2nm,0.4s						
SSF	**Saint Saulge**	**4.90**	**310**	*e*Pn	**Pn**	**13 47 31.8**	**+0.3**
SSF				*e*Sn	**Sn**	**13 48 26.3**	**-1.3**
	0.6nm,0.4s						

DJA 14 13:56:55, 2°.39N×98°.94E, h125km, MLv3.5/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSI	**Tuntungan**	**1.17**	**341**	P	Pn	13 57 21.0	+1.9
MNSI	**Mandailing Nat**	**1.71**	**158**	P	Pn	13 57 26.0	+0.8
GSI	**Gunungsitoli**	**1.74**	**232**	P	Pn	13 57 26.4	+0.8
GSI				S	Sn	13 57 50.0	+1.1
TPTI		**1.96**	**296**	P	Pn	13 57 29.2	+1.0
TPTI				S	Sn	13 57 55.5	+1.9
IPM	**Ipoh**	**2.94**	**45**	P	Pn	13 57 41.1	+0.4
KULM	**Kulim**	**3.35**	**31**	P	Pn	13 57 45.4	-0.7
SISI	**Saibi**	**3.69**	**178**	P	Pn	13 57 51.6	+0.9

NIED ***14*** *13:58:00, 21°.30N×121°.40E, h11km, Mw4.1 Best double couple: M0 1.37000×10^15 NP1:φs 191.00000°, δ89.00000°, λ-169.00000°. NP2:φs 101.00000°, δ79.00000°, λ-1.00000°.*
IDC ***14*** *13:58:08.0±0.6, 21°.04N×120°.98E, h0km, mb4.2/18, mb1 4.3/19, mb1mx4.3/25, mbtmp4.2/19, ML4.1/1, MS3.6/10, Ms1 3.6/10, ms1mx3.3/44, Error ellipse: s-maj=21.5km s-min=12.9km az=65.0*
NEIC ***14*** *13:58:09.7±0.4, 21°.13N×121°.12E, h10km, mb4.6/16, Error ellipse: s-maj=10.3km s-min=7.4km az=89.0*
ISCJB ***14*** *13:58:11.0±0.8, 21°.09N±0°.02×121°.09E±0°.04, h31km±5km, mb4.3/40, MS3.7/19, Error ellipse: s-maj=6.5km s-min=3.8km az=170.9*
TAP ***14*** *13:58:10.9, 21°.13N×120°.88E, h78km, ML4.4, D*
MOS ***14*** *13:58:11.3±1.0, 21°.09N×121°.06E, h33km, mb4.8/12, Error ellipse: s-maj=14.0km s-min=8.0km az=111.2*
BJI ***14*** *13:58:11.0, 21°.23N×120°.98E, h20km, mB4.5/25, mb4.4/34, ML3.9/2, Ms3.9/29, Ms7 3.8/28*
ISC 14 13:58:12.4±0.7, 21°.15N±0°.02×121°.09E±0°.04, h26km±4km, h16km±.6km: pP-P, n141, σ1°08/166, mb4.3/40, MS3.7/19, 2C-2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**0.77**	**347**	*i* P	**Pb**	**13 58 27.7**	**+0.5**
	baz=358						
TSEB				S	**Sb**	**13 58 40.7**	**+3.5**
	baz=358						
TWK1	**Hengchun**	**0.84**	**342**	P	**Pb**	**13 58 27.1**	**-1.2**
	baz=355						
TWK1				S	**Sb**	**13 58 40.8**	**+1.7**
	baz=355						
HEN	**Hengchun**	**0.92**	**339**	*i* P	**Pb**	**13 58 29.1**	**-0.5**
	baz=352						
HEN				S	**Sb**	**13 58 42.8**	**+1.4**
	baz=352						
LAY	**Lan-yu**	**0.99**	**26**	*e*P	**Pn**	**13 58 28.6**	**-2.0**
	baz=35						
LAY				*e*S	**Sb**	**13 58 43.2**	**-0.4**
	baz=35						
TAW	**Tawu**	**1.22**	**352**	P	**Pn**	**13 58 32.8**	**-1.0**
	baz=353						
TAW				*e*S	**Sn**	**13 58 49.6**	**+0.1**
	baz=353						
EAST	**Anshuo**	**1.25**	**350**	P	**Pn**	**13 58 33.5**	**-0.7**
	baz=359						
EAST				S	**Sn**	**13 58 50.6**	**+0.4**
	baz=359						
SCZT	**Fangliau**	**1.29**	**341**	P	**Pn**	**13 58 33.9**	**-1.0**
	baz=349						
SCZT				S	**Sn**	**13 58 50.6**	**-0.8**
	baz=349						
TWP	**Hsiaoliuchiu**	**1.37**	**331**	*e*P	**Pn**	**13 58 35.3**	**-0.5**
	baz=339						
TWP				*e*S	**Sn**	**13 58 53.8**	**+0.5**
	baz=339						
TTN	**Taitung**	**1.60**	**2**	*e*P	**Pn**	**13 58 38.7**	**-0.4**
	baz=9.0						
SSD	**Sandimen**	**1.65**	**345**	P	**Pn**	**13 58 38.7**	**-1.0**
	baz=343						
SSD				*e*S	**Sn**	**13 58 59.5**	**-0.6**
	baz=343						
TWG	**Pinlang**	**1.67**	**360**	*e*Pn	**Pn**	**13 58 36.2**	**-3.8**
TWG	**Pinlang**	**1.67**	**360**	*e*P	**Pn**	**13 58 39.1**	**-0.9**
	baz=12						
TWM1	**Shoushan**	**1.78**	**340**	*e*P	**Pn**	**13 58 41.2**	**-0.3**
	baz=346						
TWM1				*e*S	**Sn**	**13 59 03.1**	**-0.2**
	baz=346						
SGST	**Jiashian**	**1.98**	**347**	P	**Pn**	**13 58 43.7**	**-0.6**
	baz=343						
STYT	**Tauyuan**	**2.03**	**351**	P	**Pn**	**13 58 44.4**	**-0.6**
	baz=6.0						
CHN3	**Shinhua**	**2.03**	**341**	*e*S	**Sn**	**13 59 08.4**	**-1.2**
	baz=336						
ELDTW	**Lidau**	**2.04**	**358**	*e*P	**Pn**	**13 58 44.5**	**-0.5**
	baz=13						
ELDTW				*e*S	**Sn**	**13 59 09.6**	**0.0**
	baz=13						
CHN1	**Nanshi**	**2.10**	**346**	P	**Pn**	**13 58 44.9**	**-1.0**
	baz=342						
WTP	**Ta-pu**	**2.14**	**348**	P	**Pn**	**13 58 45.6**	**-0.8**
	baz=345						
SCLT	**Jiali**	**2.18**	**338**	*e*S	**Sn**	**13 59 12.5**	**-0.8**
	baz=343						
TWK	**Hsinying**	**2.18**	**345**	*e*P	**Pn**	**13 58 46.3**	**-0.8**
	baz=342						
TPUB	**Ta-pu**	**2.19**	**349**	*e*Pn	**Pn**	**13 58 45.8**	**-1.3**
TWF1	**Yuli**	**2.21**	**5**	*e*P	**Pn**	**13 58 45.9**	**-1.5**
	baz=10.0						
CHN4	**Tsaushan**	**2.24**	**348**	*e*P	**Pn**	**13 58 46.8**	**-1.1**
	baz=345						
CHN4				S	**Sn**	**13 59 14.7**	**-0.1**
	baz=345						
YULB	**Yu-li**	**2.25**	**5**	*e*Pn	**Pn**	**13 58 45.9**	**-2.1**
CHN8	**Yiju**	**2.33**	**340**	*e*S	**Sn**	**13 59 15.6**	**-1.4**
	baz=337						
YUS	**Yu-Shan**	**2.34**	**357**	*e*P	**Pn**	**13 58 49.4**	**+0.2**
	baz=11						
YUS				*e*S	**Sn**	**13 59 17.2**	**+0.2**
	baz=11						
EHY	**Hungye**	**2.36**	**5**	*e*P	**Pn**	**13 58 48.3**	**-1.2**
	baz=10.0						
ALS	**Alishan**	**2.37**	**354**	*i* P	**Pn**	**13 58 49.5**	**-0.1**
	baz=358						
CHN5	**Tsauling**	**2.47**	**351**	*e*P	**Pn**	**13 58 50.3**	**-0.7**
	baz=356						
CHN5				*e*S	**Sn**	**13 59 21.2**	**+0.9**
	baz=356						
WGK	**Gukeng**	**2.58**	**349**	*e*P	**Pn**	**13 58 51.9**	**-0.6**
	baz=344						
SSLB	**Suanglung**	**2.63**	**357**	*e*Pn	**Pn**	**13 58 52.1**	**-1.1**
ESL	**Shilin**	**2.68**	**7**	*e*P	**Pn**	**13 58 54.2**	**+0.4**
	baz=11						
SMLT	**Sun Moon Lake**	**2.73**	**356**	*e*P	**Pn**	**13 58 54.7**	**+0.1**
	baz=350						
WNT	**Mingjian**	**2.75**	**352**	*e*P	**Pn**	**13 58 57.7**	**+2.9**
	baz=356						
TYC	**Yuchr**	**2.75**	**356**	*e*P	**Pn**	**13 58 54.9**	**0.0**
	baz=360						
TYC				*e*S	**Sn**	**13 59 28.7**	**+1.3**
	baz=360						
PNG	**Penghu**	**2.80**	**330**	*e*P	**Pn**	**13 58 52.9**	**-2.6**
	baz=333						
PNG				*e*S	**Sn**	**13 59 24.5**	**-3.9**
	baz=333						
WTCT	**Ta-ch'eng**	**2.81**	**345**	*e*S	**Sn**	**13 59 27.7**	**-1.0**
	baz=349						
WHF	**Hehuan Shan**	**2.99**	**3**	*e*P	**Pn**	**13 58 59.0**	**+0.9**
	baz=357						
WHF				*e*S	**Sn**	**13 59 33.4**	**+0.2**
	baz=357						
TCU	**Taichung**	**3.01**	**353**	*e*P	**Pn**	**13 58 58.2**	**-0.3**
	baz=357						
TCU				*e*S	**Sn**	**13 59 34.0**	**+0.3**
	baz=357						
NACB	**Ninganchiao**	**3.05**	**9**	*e*Pn	**Pn**	**13 58 59.0**	**0.0**
TWT	**Tachien**	**3.10**	**2**	*e*P	**Pn**	**13 59 00.1**	**+0.5**
	baz=5.0						
TWQ1	**Liyutan**	**3.20**	**355**	*e*P	**Pn**	**13 59 00.8**	**-0.3**
	baz=358						
TWQ1				*e*S	**Sn**	**13 59 39.2**	**+0.8**
	baz=358						
NSY	**Sanyi**	**3.27**	**355**	*e*P	**Pn**	**13 59 03.1**	**+1.1**
	baz=358						
NNS	**Nan Shan**	**3.29**	**5**	*e*P	**Pn**	**13 59 03.7**	**+1.4**
	baz=359						
ENA	**Nanau**	**3.32**	**10**	*e*P	**Pn**	**13 59 04.2**	**+1.4**
	baz=7.0

comp=Z,10.0nm,0.8s
KSRS Korea Array 17.30 19 P Pn 14 02 12.9 +0.8
comp=Z,0.6nm,0.3s,baz=200,slow=11,SNR=73
KMI Kunming 17.33 287 P Pn 14 02 15.1 +2.5
KMI pP pP 14 02 17.0 -3.8
KMI sP sP 14 02 18.3 -5.7
KMI PP 14 02 28.6
KMI sS sS 14 05 30.4 -14
KMI pmax pmax
comp=Z,5.0nm,0.6s
KMI pmax pmax
comp=Z,58nm,5.2s
KMI LR LR
comp=N,260nm,11.7s
KMI LR LR
comp=E,59nm,10.9s
KMI LR LR
comp=Z,140nm,16.5s
CD2 Chengdu 18.34 306 P Pn 14 02 26.9 +1.9
CD2 pP pP 14 02 30.1 -1.7
CD2 sP sP 14 02 32.8 -2.3
CD2 PP 14 02 42.3
CD2 S **Sn 14 05 49.4 +0.3**
CD2 sS sS 14 05 52.8 -12
CD2 pmax pmax
comp=Z,10.0nm,0.9s
CD2 pmax pmax
comp=Z,90nm,4.4s
CD2 LR LR
comp=N,270nm,10.1s
CD2 LR LR
comp=Z,340nm,10.7s
BJT Baijiatuau 19.28 348 *eP* **Pn 14 02 36.3 +0.1**
BJT pmax pmax
comp=Z,22nm,0.7s
BJT Baijiatuau 19.28 348 *eP* **Pn 14 02 36.3 +0.1**
comp=Z,22nm,0.7s
BJI Beijing 19.30 349 P Pn 14 02 35.3 -1.2
BJI S **Sn 14 06 12.3 +0.2**
BJI pmax pmax
comp=Z,44nm,1.0s
BJI pmax pmax
comp=Z,90nm,3.6s
BJI LR LR
comp=N,170nm,13.3s
BJI LR LR
comp=E,200nm,16.7s
BJI LR LR
comp=Z,120nm,19.3s
CHTO Chiang Mai 20.94 268 *eP* **P 14 02 55.7 +2.3**
CHTO pmax pmax
comp=Z,4.0nm,0.6s
CHTO Chiang Mai 20.94 268 *eP* **P 14 02 55.7 +2.3**
comp=Z,3.8nm,0.6s
CMAR Chiang Mai Arr 21.00 267 P P 14 02 51.7 -2.3
comp=Z,5.7nm,0.8s,mb4.0,baz=209,slow=30,SNR=10
CMAR PcP PcP 14 07 01.4 +0.6
comp=Z,0.8nm,0.8s,baz=357,slow=0.8,SNR=4.9
CMAR LR LR 14 12 04.4
comp=Z,120nm,18.9s,MS3.3,baz=85,slow=40
CMAR Chiang Mai Arr 21.00 267 P P 14 02 51.7 -2.4
CMAR 14 07 01.5
CMAR Chiang Mai Arr 21.00 267 P P 14 02 51.7 -2.3
CMAR PcP PcP 14 07 01.4 +0.6
CMAR LR LR 14 12 04.4
LZH Lanzhou 21.18 318 *eP* **P 14 02 57.3 +1.5**
LZH pP 14 03 01.3
LZH sP sP 14 03 04.3 -1.8
LZH *eS* **S 14 06 46.3 -3.8**
LZH sS sS 14 06 53.8 -7.5
LZH SS 14 07 22.5
LZH pmax pmax
comp=Z,31nm,1.2s,mb4.5
LZH pmax pmax
comp=Z,120nm,4.4s
LZH LR LR
comp=E,370nm,10.9s
LZH LR LR
comp=Z,590nm,11.6s,MS4.2
HHC Hu-ho-hao-te 21.24 340 *eP* **P 14 02 58.0 +1.5**
HHC sP sP 14 03 03.4 -3.4
HHC PP 14 03 21.8
HHC S **S 14 06 48.9 -2.4**
HHC sS sS 14 06 56.3 -6.2
HHC PcP PcP 14 07 01.8 +0.8
HHC SS 14 07 23.4
HHC ScP ScP 14 10 37.6 +1.3
HHC pmax pmax
comp=Z,22nm,0.6s,mb4.7
HHC pmax pmax
comp=Z,110nm,5.9s
HHC LR LR
comp=N,310nm,11.7s,MS4.0
HHC LR LR
comp=E,130nm,11.7s,MS4.0
HHC LR LR
comp=Z,220nm,11.3s,MS3.8
MAJO Matsushiro 21.40 41 *eP* **P 14 02 59.6 +1.4**
MAJO pmax pmax
comp=Z,12nm,0.8s,mb4.3
MAJO Matsushiro 21.40 41 *eP* **P 14 02 59.6 +1.4**
comp=Z,12nm,0.8s,mb4.3
MAT Matsushiro 21.40 41 P P 14 02 59.8 +1.6
MAT *eS* **S 14 07 06.0 +11**
MJAR Matsushiro Arr 21.40 41 P P 14 02 58.9 +0.7
comp=Z,5.2nm,0.8s,mb3.9,baz=236,slow=7.7,SNR=19
CN2 Changchun 22.88 8 *eP* **P 14 03 14.4 +0.5**
CN2 *eS* **S 14 07 19.1 -3.1**
CN2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.3
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,14.0s,MS3.9
CN2 LR LR
comp=E,200nm,14.0s,MS3.9
CN2 LR LR
comp=Z,200nm,16.0s,MS3.6
GTA Gaotai 25.75 320 *eP* **P 14 03 40.9 -0.1**
GTA pP pP 14 03 44.8 -3.7
GTA sP sP 14 03 47.3 -4.3
GTA S **S 14 08 09.0 +0.5**
GTA sS sS 14 08 16.4 -4.6
GTA SS 14 09 14.3
GTA pmax pmax
comp=Z,2.0nm,1.0s,mb3.6
GTA pmax pmax
comp=Z,100nm,5.1s
GTA LR LR
comp=N,140nm,12.6s,MS3.8
GTA LR LR
comp=E,120nm,13.5s,MS3.8
GTA LR LR
comp=Z,160nm,12.9s,MS3.7
ULN Ulaanbaatar 28.96 340 *eP* **P 14 04 09.9 +0.3**
ULN pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
ULN Ulaanbaatar 28.96 340 *eP* **P 14 04 09.9 +0.3**
comp=Z,6.9nm,0.8s,mb4.4
ASAJ Asahikawa 29.04 33 P P 14 04 12.4 +2.0
comp=Z,6.8nm,0.6s,mb4.5,baz=220,slow=12,SNR=16
SONM Songino Array 29.15 339 P P 14 04 11.8 +0.5
comp=Z,6.2nm,0.8s,mb4.4,baz=156,slow=9.3,SNR=28
YSS Yuzh-Sakhalins 31.18 29 *eP* **P 14 04 30.0 +0.7**
YSS Yuzh-Sakhalins 31.18 29 *eP* **P 14 04 28.8 -0.4**
comp=Z,7.7nm,0.8s,mb4.6
TLY Talaya 33.37 340 *eP* **P 14 04 47.4 -1.0**
TLY pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
TLY MLR MLR
comp=Z,105nm,15.0s,MS3.7
TLY Talaya 33.37 340 *eP* **P 14 04 48.6 +0.2**
comp=Z,3.8nm,0.8s,mb4.4
WMQ Urumqi 35.75 317 P P 14 05 10.8 +1.7
WMQ pP pP 14 05 15.3 -1.4
WMQ sP sP 14 05 17.8 -2.1
WMQ PP PP 14 06 31.8 +1.3
WMQ PcP PcP 14 07 38.5 +1.8
WMQ *eS* **S 14 10 46.9 +2.3**
WMQ SS SS 14 13 07.8 -13
WMQ ScS ScS 14 15 26.6 +0.4
WMQ pmax pmax
comp=Z,11nm,1.0s,mb4.7
WMQ pmax pmax
comp=Z,110nm,5.0s
WMQ LR LR
comp=N,47nm,16.2s,MS3.5
WMQ LR LR
comp=E,44nm,16.0s,MS3.5
WMQ LR LR
comp=Z,49nm,16.5s,MS3.4
MK31 Makanchi Array 40.50 318 *eP* **P 14 05 49.6 +0.5**
MKAR Makanchi Array 40.50 318 P P 14 05 49.8 +0.8
comp=Z,2.2nm,0.6s,mb4.1,baz=114,slow=9.6,SNR=30
MKAR PcP PcP 14 07 51.6 +0.3
comp=Z,0.8nm,0.8s,baz=106,slow=4.4,SNR=4.8
YAK Yakutsk 41.29 6 *eP* **P 14 05 54.4 -0.9**
YAK pmax pmax
comp=Z,8.0nm,1.1s,mb4.3
YAK pmax pmax
comp=N,3.0nm,1.2s
YAK MLR MLR
comp=Z,106nm,16.0s,MS3.8
YAK MLR MLR
comp=N,70nm,18.0s
YAK Yakutsk 41.29 6 *eP* **P 14 05 53.7 -1.7**
comp=N,7.8nm,0.6s,mb4.5
KSH Kashi 42.53 306 P P 14 06 09.9 +4.0
KSH pP pP 14 06 14.6 +0.9
KSH sP sP 14 06 16.6 -0.2
KSH PP PP 14 07 52.3 +7.6
KSH PcP PcP 14 08 00.1 +1.9
KSH ScP ScP 14 11 50.8 +3.3
KSH PcS PcS 14 11 51.8 +1.6
KSH S **S 14 12 34.5 +7.7**
KSH sS sS 14 12 42.6 +3.0
KSH ScS ScS 14 16 07.8 +1.9
KSH pmax pmax
comp=Z,10.0nm,1.2s,mb4.4
KSH pmax pmax
comp=Z,63nm,6.5s
KSH LR LR
comp=N,100nm,6.0s
KSH LR LR
comp=E,62nm,7.2s
KSH LR LR
comp=Z,130nm,5.6s
ZALV Zalesovo Beam 42.76 329 P P 14 06 07.7 +0.2
comp=Z,8.7nm,0.8s,mb4.5,baz=111,slow=8.1,SNR=31
ZALV LR LR 14 25 41.6
comp=Z,34nm,18.6s,MS3.3,baz=240,slow=39
WRAB Tennant Creek 42.84 161 *eP* **P 14 06 07.8 -0.7**
WRA Warramunga Arr 42.84 162 P P 14 06 07.3 -1.2
comp=Z,2.4nm,0.7s,mb4.1,baz=343,slow=9.0,SNR=18
WRA PcP PcP 14 07 59.3 -0.1
comp=Z,1.0nm,0.7s,baz=343,slow=3.6,SNR=5.0
NVS Novosibirsk 44.04 329 *eP* **P 14 06 17.3 -0.5**
AAK Ala-Archa 44.32 310 LR LR 14 27 23.1
comp=Z,88nm,18.2s,MS3.7,baz=161,slow=40
KURK Kurchatov 44.39 322 P P 14 06 21.1 +0.4
comp=Z,7.5nm,0.9s,mb4.4,baz=118,slow=7.7,SNR=10
KURK Kurchatov 44.39 322 ||*i P* **P 14 06 21.3 +0.6**
KURK pmax pmax
comp=Z,12nm,1.2s,mb4.5
KURK Kurchatov 44.39 322 *eP* **P 14 06 20.8 +0.1**
comp=Z,12nm,1.3s,mb4.5
AML Almayashu 44.78 309 *eP* **P 14 06 26.1 +2.1**
AML pmax pmax
comp=Z,11nm,1.0s,mb4.6
AML Almayashu 44.78 309 *eP* **P 14 06 26.1 +2.1**
comp=Z,11nm,1.0s,mb4.6
ASAR Alice Springs 46.26 164 P P 14 06 35.4 -0.3
comp=Z,0.5nm,0.6s,mb3.7,baz=346,slow=7.7,SNR=15
BVAR Borovoye Array 49.99 322 P P 14 07 04.9 +0.7
comp=Z,1.8nm,0.7s,mb4.2,baz=114,slow=9.9,SNR=10
BVAR PcP PcP 14 08 22.8 -1.2
comp=Z,1.4nm,0.7s,baz=116,slow=3.4,SNR=4.1
BRVK Borovoye 50.06 322 *c i P* **P 14 07 04.9 +0.1**
BRVK pmax pmax
comp=Z,11nm,1.2s,mb4.8
BRVK Borovoye 50.06 322 *eP* **P 14 07 05.0 +0.2**
comp=Z,6.7nm,0.8s,mb4.7
TIXI Tiksi 50.72 3 *eP* **P 14 07 07.0 -2.5**
TIXI pmax pmax
comp=Z,7.0nm,1.3s,mb4.4
TIXI MLR MLR
comp=Z,135nm,19.0s,MS4.0
TIXI Tiksi 50.72 3 *eP* **P 14 07 07.9 -1.7**
comp=Z,2.2nm,0.6s,mb4.3
ABKAR Akbulak array 55.52 316 *eP* **P 14 07 45.7 +0.4**
comp=Z,0.9nm,0.6s,mb4.0
STKA Stephens Creek 56.26 159 P P 14 07 50.9 +0.2
comp=Z,2.2nm,0.9s,mb4.2,baz=356,slow=9.4,SNR=3.4
SVE Sverdlovsk 56.45 325 *eP* **P 14 07 52.6 +0.8**
SVE pmax pmax
comp=Z,14nm,0.9s,mb5.0
ARU Arti 57.49 324 *d i P* **P 14 07 59.2 +0.1**
ARU *e* 14 10 05.2
ARU S **S 14 15 57.1 +2.3**
ARU SS SS 14 19 45.4 +0.9
ARU pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
GNI Garni 66.47 306 LR LR 14 38 08.9
comp=Z,15nm,19.5s,MS3.2,baz=285,slow=36
KIV Kislovodsk 67.44 310 *eP* **P 14 09 06.3 +0.4**
KIV pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
KIV MLR MLR
comp=Z,22nm,18.0s,MS3.4
BPAW Bear Paw Mtn. 70.31 28 *eP* **P 14 09 23.3 -0.1**
comp=Z,9.1nm,1.2s,mb4.6
KDAK Kodiak Island 70.44 35 *i P* **P 14 09 26.1 +1.8**
KDAK Kodiak Island 70.44 35 *eP* **P 14 09 24.4 +0.2**
comp=Z,5.9nm,0.9s,mb4.5
ANN Anapa 71.02 312 *eP* **P 14 09 19.5 -8.6**
PMR Palmer 71.54 30 *eP* **P 14 09 30.0 -0.9**
PMR pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
PMR Palmer 71.54 30 *eP* **P 14 09 30.0 -0.9**
comp=Z,5.1nm,0.8s,mb4.5
ARCES ARCESS Array B 72.31 338 P P 14 09 35.6 +0.1
comp=Z,1.5nm,0.7s,mb4.0,baz=78,slow=7.9,SNR=5.9
BMRM Bremner River 73.81 30 P P 14 09 44.0 -0.3
comp=Z,3.9nm,0.7s,mb4.5
FINES FINESS Array B 74.02 330 P P 14 09 43.8 -1.8
comp=Z,2.0nm,0.8s,mb4.1,baz=59,slow=7.4,SNR=5.2
ASF Jabal al Asfar 74.32 299 LR LR 14 45 03.4
comp=Z,14nm,19.1s,MS3.3,baz=242,slow=38
BRTR Keskin Array B 74.91 307 P P 14 09 50.3 -0.9
comp=Z,1.3nm,0.8s,mb3.9,baz=88,slow=4.1,SNR=4.9
BRTR Keskin Array B 74.91 307 *ceP* **P 14 09 51.7 +0.5**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
AKASG Malin Array Be 75.08 319 P P 14 09 50.7 -1.3
comp=Z,0.2nm,0.3s,mb3.5,baz=54,slow=9.3,SNR=3.2
DAWY Dawson 75.28 27 *eP* **P 14 09 52.1 -0.7**
EIL Elat 76.62 297 LR LR 14 49 24.4
comp=Z,31nm,18.4s,MS3.7,baz=92,slow=40
URZ Urewera 79.08 138 P P 14 10 13.6 -0.9
comp=Z,6.2nm,1.0s,mb4.5,baz=316,slow=22,SNR=9.6
RPZ Rata Peaks 79.14 146 LR LR 14 46 31.9
comp=Z,128nm,18.7s,MS4.3,baz=39,slow=37
NB2 NORSAR Subarra 80.86 332 P P 14 10 23.4 -0.5
comp=Z,3.4nm,1.1s,mb4.2,baz=58,slow=5.6
NOA NORSAR Array B 80.86 332 P P 14 10 23.6 -0.3
comp=Z,1.1nm,0.7s,mb3.9,baz=60,slow=5.3,SNR=4.8
NOA LR LR 14 50 23.5
comp=Z,52nm,19.1s,MS3.9,baz=55,slow=39
JMIC Jan Mayen 81.73 345 LR LR 14 48 39.4
comp=Z,60nm,21.9s,MS3.9,baz=77,slow=37
YKA Yellowknife Ar 85.80 23 P P 14 10 48.8 -0.5
comp=Z,1.7nm,0.6s,mb4.4,baz=314,slow=4.6,SNR=9.0
YKA Yellowknife Ar 85.80 23 P P 14 10 48.8 -0.5
BORG Borgarnes 89.62 345 LR LR 14 56 41.3
comp=Z,45nm,18.5s,MS3.9,baz=150,slow=39
ESK Eskdalemuir 90.36 332 *i P* **P 14 11 06.8 -4.5**
PDAR Pinedale Array 101.15 35 P Pdif 14 11 59.6 -0.7
comp=Z,1.4nm,0.3s,baz=268,slow=2.7,SNR=16

*IDC **14** 14:09:56.4±1.5, 2°.01N×96°.38E, h0km, mb3.8/7, mb1 3.8/9, mb1mx3.6/23, mbtmp3.7/9, ML3.5/2, Error ellipse: s-maj=47.9km s-min=19.2km az=51.0*
*ISCJB **14** 14:09:59.5±1.1, 2°.1N±0°.1×96°.4E±0°.1, h33km, mb3.8/7, Error ellipse: s-maj=20.7km s-min=13.6km az=40.6*
*NEIC **14** 14:10:01.7±0.7, 2°.06N×96°.47E, h35km, Error ellipse: s-maj=14.3km s-min=9.5km az=221.0*
ISC 14 14:10:01.8±1.1, 2°.1N±0°.1×96°.5E±0°.1, h35km, n12, σ0§54/12, mb3.8/7, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.55**	**74**	Pn	**Pn**	**14 10 40.5**	**-0.2**
	3.0nm,0.3s,baz=272,slow=8.9,SNR=7.5						
KULM	**Kulim**	**5.24**	**53**	*eP*	**Pn**	**14 11 18.0**	**+0.2**
	35nm,0.8s						
CMAR	**Chiang Mai Arr**	**16.45**	**8**	Pn	**Pn**	**14 13 50.5**	**+0.5**
	0.1nm,0.3s,baz=196,slow=12,SNR=5.8						
IMP	**Imphal**	**22.69**	**354**	*e*PKP	**P**	**14 14 59.0**	**-1.4**
WRA	**Warramunga Arr**	**43.12**	**122**	P	**P**	**14 17 58.7**	**-0.5**
	0.6nm,0.7s,mb3.4,baz=303,slow=9.0,SNR=4.1						
ASAR	**Alice Springs**	**44.51**	**127**	P	**P**	**14 18 10.4**	**+0.2**
	0.1nm,0.6s,mb2.9,baz=294,slow=8.3,SNR=6.0						
MK31	**Makanchi Array**	**46.21**	**347**	*eP*	**P**	**14 18 23.0**	**-0.4**
MKAR	**Makanchi Array**	**46.21**	**347**	P	**P**	**14 18 23.4**	**+0.1**
	0.9nm,0.4s,mb4.1,baz=158,slow=9.0,SNR=22						
SONM	**Songino Array**	**46.37**	**9**	P	**P**	**14 18 24.8**	**+0.2**
	0.3nm,0.3s,mb3.6,baz=180,slow=8.5,SNR=2.6						
ZALV	**Zalesovo Beam**	**52.57**	**351**	P	**P**	**14 19 12.2**	**+0.4**
	2.8nm,0.5s,mb4.5,baz=178,slow=7.3,SNR=14						
BVAR	**Borovoye Array**	**55.18**	**341**	P	**P**	**14 19 30.8**	**0.0**
	0.5nm,0.4s,mb3.9,baz=129,slow=7.3,SNR=4.1						
ARCES	**ARCESS Array B**	**81.46**	**340**	P	**P**	**14 22 15.7**	**+0.7**
	3.0nm,1.1s,mb4.1,baz=97,slow=6.5,SNR=3.1						

IDC 14 14:14:21.5±1.8, 8°.18S×123°.66E, h0km, mb3.5/1, mb1 3.7/4, mb1mx3.4/18, mbtmp3.5/4, ML3.5/3, Error ellipse: s-maj=121.8km s-min=27.3km az=63.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.04**	**169**	Pn	Pn	14 16 45.7	-1.4
	0.3nm,0.3s,baz=62,slow=20,SNR=16						
FITZ				Sn	Sn	14 18 24.4	-16
	1.8nm,0.3s,baz=245,slow=21,SNR=17						
WRA	**Warramunga Arr**	**15.61**	**140**	Pn	Pn	14 18 04.5	+1.5
	0.2nm,0.3s,baz=316,slow=12,SNR=6.3						
WRA				Sn	Sn	14 20 43.8	-13
	0.3nm,0.3s,baz=311,slow=24,SNR=8.9						
ASAR	**Alice Springs**	**18.26**	**149**	P	Pn	14 18 36.8	+0.3
	0.1nm,0.3s,baz=327,slow=12,SNR=10.0						
ASAR				S	Sn	14 21 45.4	-16
	0.1nm,0.3s,baz=310,slow=21,SNR=6.7						
MKAR	**Makanchi Array**	**65.94**	**330**	P	P	14 25 09.5	+0.1
	0.2nm,0.5s,baz=133,slow=7.1,SNR=4.1						

*ISCJB **14** 14:24:36.7±1.2, 33°.28N±0°.05×141°.0E±0°.1, h60km±13km, mb3.7/2, Error ellipse: s-maj=14.4km s-min=8.1km az=6.4*
*IDC **14** 14:24:36.5±1.4, 32°.71N×139°.03E, h0km, mb3.6/2, mb1 3.7/3, mb1mx3.3/23, mbtmp3.4/3, ML2.8/1, Error ellipse: s-maj=33.8km s-min=15.6km az=127.0*
*JMA **14** 14:24:36.8±0.2, 33°.32N×141°.02E, h57km, M3.1*
ISC 14 14:24:37.5±1.4, 33°.27N±0°.06×141°.0E±0°.1, h44km±18km, n12, σ0§68/18, mb3.7/2, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**1.00**	**261**	P	**Pn**	**14 24 55.4**	**+0.3**
JHJ2				*eS*	**Sn**	**14 25 08.8**	**+0.8**
JHJ	**Hachijo jima 2**	**1.02**	**262**	Pn	**Pn**	**14 24 54.7**	**-0.8**
	57nm,0.3s,baz=81,slow=23,SNR=147						
JHJ				Sn	**Sn**	**14 25 07.8**	**-0.9**
	155nm,0.3s,baz=75,slow=20,SNR=27						
BSO1	**Boso 1**	**1.38**	**359**	P	**Pn**	**14 24 59.9**	**-0.5**
BSO3	**Boso 3**	**1.58**	**345**	P	**Pn**	**14 25 02.7**	**-0.4**
BSO3				*eS*	**Sn**	**14 25 22.0**	**-0.4**
JKO	**Kozu shima**	**1.80**	**301**	P	**Pn**	**14 25 06.4**	**+0.3**
JKO				*eS*	**Sn**	**14 25 27.6**	**-0.1**
JIM2	**Oshima 3**	**1.94**	**319**	*eS*	**Sn**	**14 25 29.9**	**-1.3**
JIZS	**Izushimoda**	**2.28**	**310**	P	**Pn**	**14 25 13.3**	**+0.7**
JIZS				*eS*	**Sn**	**14 25 39.4**	**0.0**
JOD2	**Odawara 2**	**2.54**	**322**	P	**Pn**	**14 25 16.3**	**+0.1**
JRY	**Ryogami san**	**3.24**	**328**	S	**Sn**	**14 26 03.2**	**0.0**
MJAR	**Matsushiro Arr**	**3.99**	**326**	Pn	**Pn**	**14 25 37.9**	**+1.8**
	0.7nm,0.3s,baz=143,slow=12,SNR=9.0						
MJAR				Sn	**Sn**	**14 26 22.3**	**+0.7**
	0.6nm,0.3s,baz=182,slow=21,SNR=4.4						
WRA	**Warramunga Arr**	**53.29**	**188**	P	**P**	**14 33 51.8**	**-0.2**
	0.5nm,0.4s,mb3.8,baz=4.1,slow=7.6,SNR=7.5						
ASAR	**Alice Springs**	**57.02**	**188**	P	**P**	**14 34 18.6**	**-0.1**
	0.2nm,0.3s,mb3.6,baz=5.7,slow=6.0,SNR=17						

*CSEM **14** 14:31:24.5±0.3, 51°.30N×19°.15E, h1km, ML2.8, Error ellipse: s-maj=6.6km s-min=5.5km az=44.0, Suspected Mining induced.*
*NEIC **14** 14:31:24.6±0.8, 51°.31N×19°.16E, h5km, ML2.8(BRA), Error ellipse: s-maj=11.5km s-min=8.0km az=90.0*
*ISCJB **14** 14:31:26.0±0.7, 51°.11N±0°.04×19°.00E±0°.04, h0km, Error ellipse: s-maj=5.5km s-min=2.9km az=26.5*
*VIE **14** 14:31:27.0±0.7, 49°.82N×20°.14E, h0km, mb2.5/3, ML2.9/4, Error ellipse: s-maj=7.4km s-min=4.3km az=179.0 33 km SSE of Krakow Suspected Mining induced.*
*IDC **14** 14:31:26.3±1.0, 51°.18N×19°.45E, h0km, mb1 3.4/5, mb1mx3.2/24, mbtmp3.4/5, ML3.3/5, Error ellipse: s-maj=15.8km s-min=7.9km az=115.0*
*PRU **14** 14:31:27.5, 51°.13N×19°.12E, h0km*
ISC 14 14:31:24.7±0.6, 51°.25N±0°.03×19°.14E±0°.04, h0km, n61, σ1§45/105, 2C-1D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**1.31**	**208**	*e*Pg	**Pg**	**14 31 51.1**	**+1.3**
RAC				*e*Sg	**Sg**	**14 32 09.6**	**+2.9**
OKC	**Ostrava-Krasne**	**1.54**	**205**	*e*Pg	**Pg**	**14 31 53.2**	**-1.1**
OKC				*e*Sg	**Sg**	**14 32 13.5**	**-0.8**
OKC	**Ostrava-Krasne**	**1.54**	**205**	*e*PG	**Pg**	**14 31 53.2**	**-1.1**
OKC				*e*SG	**Sg**	**14 32 13.5**	**-0.8**
MORC	**Moravsky Berou**	**1.79**	**215**	*e*Pn	**Pn**	**14 31 56.7**	**-0.1**
MORC	**Moravsky Berou**	**1.79**	**215**	*e*Pn	**Pn**	**14 31 57.2**	**+0.4**
MORC				*e*Sg	**Sg**	**14 32 19.6**	**-2.5**
KSP	**Ksiaz**	**1.84**	**258**	*e*Pn	**Pn**	**14 31 57.8**	**+0.3**
KSP				*e*Sn	**Sn**	**14 32 25.7**	**+4.2**
KSP				*e*Sg	**Sg**	**14 32 28.7**	**+4.9**
KSP	**Ksiaz**	**1.84**	**258**	*e*Pn	**Pn**	**14 31 57.9**	**+0.4**
KSP				*e*Pg	**Pg**	**14 32 01.1**	**+1.2**
KSP				*e*Sg	**Sg**	**14 32 26.0**	**+2.2**
KSP	**Ksiaz**	**1.84**	**258**	*e*Pn	**Pn**	**14 31 57.9**	**+0.4**
NIE	**Niedzica**	**1.98**	**157**	*e*Pg	**Pg**	**14 32 02.3**	**-0.3**
NIE				*e*Sg	**Sg**	**14 32 29.9**	**+1.7**
NIE	**Niedzica**	**1.98**	**157**	*e*Pg	**Pg**	**14 32 02.3**	**-0.3**
NIE				*e*Sg	**Sg**	**14 32 29.9**	**+1.7**
DPC	**Dobruska-Polom**	**2.00**	**244**	*e*Pg	**Pg**	**14 32 00.5**	**-2.5**
DPC				*e*Sg	**Sg**	**14 32 25.3**	**-3.6**
DPC	**Dobruska-Polom**	**2.00**	**244**	*e*PG	**Pg**	**14 32 00.5**	**-2.5**
DPC				*e*SG	**Sg**	**14 32 25.3**	**-3.6**
	comp=Z,31nm,0.6s						
LIKS	**Likavka**	**2.20**	**181**	*e*SG	**Sg**	**14 32 35.3**	**0.0**
LIKS	**Likavka**	**2.20**	**181**	*e*Sg	**Sg**	**14 32 35.3**	**0.0**
STHS	**Stebnicka Huta**	**2.27**	**143**	*e*Pn	**Pn**	**14 32 05.8**	**+2.4**
STHS				*e*		14 32 10.7	
STHS				*e*Sg	**Sg**	**14 32 39.3**	**+1.6**
STHS	**Stebnicka Huta**	**2.27**	**143**	*e*PN	**Pn**	**14 32 05.8**	**+2.4**
STHS				*e*		14 32 10.7	
STHS	**Stebnicka Huta**	**2.27**	**143**	*e*Pn	**Pn**	**14 32 05.8**	**+2.4**
STHS				*e*Sg	**Sg**	**14 32 39.3**	**+1.6**
VRAC	**Vranov**	**2.54**	**221**	Pn	**Pn**	**14 32 07.6**	**+0.6**
	comp=Z,2.8nm,0.3s,baz=95,slow=2.3,SNR=4.6						
VRAC				Pg	**Pg**	**14 32 14.4**	**+1.2**
	comp=Z,3.3nm,0.3s,baz=40,slow=16,SNR=16						
VRAC				Lg		14 32 45.7	
	comp=Z,11nm,0.3s,baz=51,slow=12,SNR=6.2						
VRAC	**Vranov**	**2.54**	**221**	Pn	**Pn**	**14 32 07.6**	**+0.6**
VRAC	**Vranov**	**2.54**	**221**	Pg	**Pg**	**14 32 14.4**	**+1.2**
VRAC				*e*Sg	**Sg**	**14 32 45.4**	**-0.7**
KOLL	**Kolacno**	**2.71**	**190**	*e*P	**Pn**	**14 32 18.5**	**+9.0**
KOLL				*e*Sg	**Sg**	**14 32 50.2**	**-1.6**
KOLL	**Kolacno**	**2.71**	**190**	*e*	**Pn**	**14 32 18.5**	**+9.0**
VYHS	**Vyhne**	**2.76**	**184**	*e*Pn	**Pn**	**14 32 10.4**	**+0.3**
VYHS				*e*		14 32 19.0	
VYHS				*e*Sn	**Sn**	**14 32 43.1**	**-1.1**
VYHS	**Vyhne**	**2.76**	**184**	*e*PN	**Pn**	**14 32 10.4**	**+0.3**
VYHS				*e*		14 32 19.0	
VYHS	**Vyhne**	**2.76**	**184**	*e*Pn	**Pn**	**14 32 10.4**	**+0.3**
VYHS				*e*Sn	**Sn**	**14 32 43.1**	**-1.1**
CRVS	**Cervenica-Dubn**	**2.78**	**147**	*e*Pn	**Pn**	**14 32 11.1**	**+0.7**
CRVS				*e*		14 32 19.7	
CRVS				*e*Sg	**Sg**	**14 32 52.5**	**-1.5**

CRVS	**Cervenica-Dubn**	**2.78 147**	*e*PN	**Pn**	**14 32 11.1**	**+0.7**
CRVS			*e*		14 32 19.7	
CRVS	**Cervenica-Dubn**	**2.78 147**	*e*Pn	**Pn**	**14 32 11.1**	**+0.7**
CRVS			*e*Sg	**Sg**	**14 32 52.5**	**-1.5**
KWP	**Kalwaria Pacla**	**2.80 124**	*e*Pn	**Pn**	**14 32 16.5**	**+5.9**
KWP			*e*Sn	**Sn**	**14 32 50.6**	**+5.6**
KWP	**Kalwaria Pacla**	**2.80 124**	*e*Pg	**Pg**	**14 32 15.1**	**-3.1**
KWP	**Kalwaria Pacla**	**2.80 124**	*e*Pn	**Pn**	**14 32 16.5**	**+5.9**
KWP			*e*Sn	**Sn**	**14 32 50.6**	**+5.6**
KECS	**Kecovo**	**2.90 162**	*e*Pn	**Pn**	**14 32 13.9**	**+1.9**
KECS			*e*		14 32 20.7	
KECS			*e*Sg	**Sg**	**14 32 56.3**	**-1.5**
KECS	**Kecovo**	**2.90 162**	*e*PN	**Pn**	**14 32 13.9**	**+1.9**
KECS			*e*		14 32 20.7	
PRU	**Pruhonice**	**3.19 249**	*e*Pn	**Pn**	**14 32 15.2**	**-0.8**
PRU			*e*Pg	**Pg**	**14 32 22.9**	**-2.8**
PRU			*e*Sn	**Sn**	**14 32 55.3**	**+0.7**
PRU			*e*Sg	**Sg**	**14 33 07.0**	**0.0**
PRU	**Pruhonice**	**3.19 249**	*e*PN	**Pn**	**14 32 15.2**	**-0.8**
PRU			*e*PG	**Pg**	**14 32 22.9**	**-2.8**
PRU			*e*SN	**Sn**	**14 32 55.3**	**+0.7**
PRU			*e*SG	**Sg**	**14 33 07.0**	**0.0**
	comp=Z,25nm,0.8s					
PRU	**Pruhonice**	**3.19 249**	Pn	**Pn**	**14 32 15.2**	**-0.8**
PRU			Sn	**Sn**	**14 32 55.3**	**+0.7**
PRU			Sg	**Sg**	**14 33 07.0**	**0.0**
	comp=Z,25nm,0.8s					
BRG	**Berggiesshubel**	**3.30 266**	PG	**Pg**	**14 32 28.4**	**+0.5**
BRG			SG	**Sg**	**14 33 12.6**	**+2.0**
	comp=Z,20nm,0.5s					
CLL	**Collm**	**3.85 273**	*e*Pg	**Pg**	**14 32 40.0**	**+1.5**
CLL			*e*Sg	**Sg**	**14 33 34.0**	**+5.6**
CLL	**Collm**	**3.85 273**	*e*Pg	**Pg**	**14 32 40.0**	**+1.5**
CLL			*e*Sg	**Sg**	**14 33 34.0**	**+5.6**
CONA	**Conrad Observa**	**3.95 214**	⇑*i*Pn	**Pn**	**14 32 21.1**	**-5.3**
CONA			⇑*i*Pg	**Pg**	**14 32 32.2**	**-8.1**
CONA	**Conrad Observa**	**3.95 214**	Pn	**Pn**	**14 32 21.1**	**-5.3**
KHC	**Kasperske Hory**	**4.15 242**	*e*Pn	**Pn**	**14 32 29.8**	**+0.5**
KHC			*e*		14 32 38.1	
KHC			*e*Sg	**Sg**	**14 33 36.4**	**-1.6**
KHC	**Kasperske Hory**	**4.15 242**	*e*PN	**Pn**	**14 32 29.8**	**+0.5**
KHC			*e*x	x	14 32 38.1	
KHC			*e*SG	**Sg**	**14 33 36.4**	**-1.6**
	comp=Z,17nm,0.5s					
KHC	**Kasperske Hory**	**4.15 242**	Pn	**Pn**	**14 32 29.8**	**+0.5**
KHC			Sg	**Sg**	**14 33 36.4**	**-1.6**
	comp=Z,17nm,0.5s					
NKC	**Novy Kostel**	**4.37 259**	*e*SG	**Sg**	**14 33 44.1**	**-0.9**
	comp=Z,20nm,0.6s					
NKC	**Novy Kostel**	**4.37 259**	Sg	**Sg**	**14 33 44.1**	**-0.9**
	comp=Z,20nm,0.6s					
MOA	**Molln**	**4.65 225**	⇓*i*Sg	**Sg**	**14 33 49.7**	**-4.2**
	comp=Z,10nm,0.5s					
MOA	**Molln**	**4.65 225**	Sg	**Sg**	**14 33 49.7**	**-4.2**
	comp=Z,10nm,0.5s					
MOX	**Moxa**	**4.79 266**	(PG)	**Pg**	**14 33 00.6**	**+4.1**
MOX			*e*SG	**Sg**	**14 34 02.6**	**+4.0**
MOX	**Moxa**	**4.79 266**	Pg	**Pg**	**14 33 00.6**	**+4.1**
MOX			*e*Sg	**Sg**	**14 34 02.6**	**+4.0**
BUR08	**Bucovina Ar. S**	**5.35 130**	*e*P	**Pn**	**14 32 47.5**	**+1.8**
BUR08	**Bucovina Ar. S**	**5.35 130**	*e*P	**Pn**	**14 32 47.5**	**+1.8**
AKASG	**Malin Array Be**	**6.39 91**	Pg	**Pg**	**14 33 15.0**	**-12**
	comp=Z,0.5nm,0.3s,baz=280,slow=15,SNR=3.0					
AKASG			Lg		14 34 41.4	
	comp=Z,1.4nm,0.3s,baz=276,slow=29,SNR=5.6					
HFS	**Hagfors**	**9.42 343**	Pn	**Pn**	**14 33 41.3**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=150,slow=12,SNR=11					
HFS			Sn	**Sn**	**14 35 21.9**	**-6.0**
	comp=Z,0.3nm,0.3s,baz=164,slow=21,SNR=4.9					
HFS	**Hagfors**	**9.42 343**	Pn	**Pn**	**14 33 41.3**	**-0.2**
NOA	**NORSAR Array B**	**10.76 339**	Pn	**Pn**	**14 33 57.7**	**-2.1**
	comp=Z,0.3nm,0.3s,baz=145,slow=13,SNR=4.1					
NOA	**NORSAR Array B**	**10.76 339**	Pn	**Pn**	**14 33 57.7**	**-2.1**
FINES	**FINESS Array B**	**10.91 18**	Pn	**Pn**	**14 33 58.9**	**-3.0**
	comp=Z,0.4nm,0.3s,baz=191,slow=11,SNR=5.3					
FINES			Sn	**Sn**	**14 35 54.8**	**-10**
	comp=Z,0.3nm,0.3s,baz=206,slow=26,SNR=3.0					
FINES			Lg		14 37 09.7	
	comp=Z,0.1nm,0.3s,baz=194,slow=29,SNR=2.8					
FINES	**FINESS Array B**	**10.91 18**	Pn	**Pn**	**14 33 58.9**	**-3.0**
FINES			Sn	**Sn**	**14 35 54.8**	**-10**
FINES			Lg		14 37 09.7	
FINES	**FINESS Array B**	**10.91 18**	Pn	**Pn**	**14 33 58.9**	**-3.0**
ARCES	**ARCESS Array B**	**18.60 7**	Pn	**Pn**	**14 35 38.4**	**-4.8**
	comp=Z,0.2nm,0.3s,baz=185,slow=12,SNR=10					

NIED ***14*** *14:35:00, 46°.20N×152°.40E, h32km, Mw3.5 Best double couple: M0=2.12000×10^14 NP1:φs=103.00000°, δ=69.00000°, λ=-121.00000°. NP2:φs=343.00000°, δ=37.00000°, λ=-37.00000°.*

JMA 14 14:35:11.8±0.5, 46°.17N×152°.43E, h30km, M4.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**5.53**	**242**	P	Pn	14 36 31.2	-0.7
NEM2				*e*S	Sn	14 37 29.3	-5.1
JRA	**Rausu**	**5.64**	**249**	P	Pn	14 36 35.7	+2.2
JNK	**Nakash**	**6.06**	**248**	P	Pn	14 36 40.5	+1.3
JNK				*e*S	Sn	14 37 46.1	-1.4
JAK	**Akkeshi**	**6.37**	**243**	P	Pn	14 36 42.7	-0.8
JAK				*e*S	Sn	14 37 49.6	-5.6
JMP	**Maruseppu**	**6.78**	**255**	P	Pn	14 36 52.3	+3.2
JAR	**Ashorobuto**	**6.80**	**248**	P	Pn	14 36 50.9	+1.4
JKK2	**Kamakawa 2**	**7.24**	**255**	P	Pn	14 36 58.6	+3.2
JCH	**Churui**	**7.40**	**245**	*e*S	Sn	14 38 15.6	-5.0
JNB	**Noboribetsu**	**8.96**	**250**	*e*S	Sn	14 38 55.4	-3.6
JKB	**Kayabe**	**9.26**	**247**	*e*S	Sn	14 38 58.6	-7.6

ISCJB ***14*** *14:39:15.9±1.0, 21°.72N±0°.06×143°.1E±0°.2, h304km±10km, mb3.5/14, Error ellipse: s-maj=25.9km s-min=9.0km az=171.8*

IDC ***14*** *14:39:15.7±1.8, 21°.69N×143°.15E, h287km±16km, mb3.2/13, mb1 3.4/16, mb1mx3.4/26, mbtmp3.3/16, Error ellipse: s-maj=21.0km s-min=11.7km az=87.0*

NEIC ***14*** *14:39:18.1±1.0, 21.69N×143.04E, h311km±11km, mb4.0/3, Error ellipse: s-maj=14.9km s-min=7.0km az=80.0*

ISC 14 14:39:16.7±0.9, 21°.77N±0°.06×143°.1E±0°.2, h296km±9km, n27, σ0=90/28, mb3.5/14, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.36**	**352**	P	**Pn**	**14 40 38.6**	**+0.5**
	25nm,0.3s,baz=229,slow=6.9,SNR=9.5						
CBIJ				S	**S**	**14 41 43.9**	**+0.1**
	18nm,0.3s,baz=261,slow=22,SNR=8.8						
GUMO	**Guam**	**8.32**	**168**	*e*Pn	**Pn**	**14 41 15.6**	**+1.3**
JHJ	**Hachijo jima 2**	**11.67**	**346**	P	**Pn**	**14 41 55.7**	**+0.5**
	10nm,0.3s,baz=222,slow=18,SNR=8.5						
JHJ				S	**S**	**14 44 03.3**	**-2.0**
	2.6nm,0.3s,baz=99,slow=19,SNR=2.4						
MJAR	**Matsushiro Arr**	**15.31**	**345**	P	**Pn**	**14 42 38.5**	**-0.3**
	1.0nm,0.3s,baz=166,slow=10,SNR=8.9						
MAJO	**Matsushiro**	**15.31**	**345**	*e*P	**Pn**	**14 42 37.4**	**-1.5**
	3.5nm,0.4s						
MAT	**Matsushiro**	**15.31**	**345**	P	**Pn**	**14 42 38.0**	**-0.8**
KSRS	**Korea Array**	**20.39**	**323**	P	**P**	**14 43 33.4**	**+1.5**
	1.7nm,0.5s,baz=148,slow=8.8,SNR=20						
SONM	**Songino Array**	**39.21**	**320**	P	**P**	**14 46 18.2**	**+1.5**
	0.4nm,0.5s,mb3.1,baz=120,slow=8.5,SNR=3.9						
CMAR	**Chiang Mai Arr**	**41.47**	**274**	P	**P**	**14 46 36.0**	**+0.5**
	0.3nm,0.3s,mb3.0,baz=80,slow=6.6,SNR=3.6						
WRAB	**Tennant Creek**	**42.32**	**192**	*e*P	**P**	**14 46 41.0**	**-1.2**
WRA	**Warramunga Arr**	**42.33**	**192**	P	**P**	**14 46 41.2**	**-1.1**
	0.4nm,0.3s,mb3.1,baz=16,slow=9.1,SNR=5.2						
FITZ	**Fitzroy Crossi**	**43.15**	**205**	P	**P**	**14 46 48.1**	**-0.8**
	1.4nm,0.9s,mb3.2,baz=27,slow=6.8,SNR=3.4						
ASAR	**Alice Springs**	**46.04**	**192**	P	**P**	**14 47 10.1**	**-1.4**
	0.2nm,0.5s,mb2.7,baz=15,slow=14,SNR=6.7						
ZALV	**Zalesovo Beam**	**54.09**	**322**	P	**P**	**14 48 11.6**	**+0.4**
	1.2nm,0.6s,mb3.4,baz=101,slow=7.7,SNR=5.8						
ZALV				PcP	PcP	14 49 11.2	-0.7
	0.9nm,0.4s,baz=147,slow=3.9,SNR=4.3						
MK31	**Makanchi Array**	**54.57**	**313**	*e*P	**P**	**14 48 15.3**	**+0.5**
MKAR	**Makanchi Array**	**54.57**	**313**	P	**P**	**14 48 15.5**	**+0.7**
	0.5nm,0.5s,mb3.2,baz=91,slow=9.1,SNR=7.1						
MKAR				PcP	PcP	14 49 14.1	+0.1
	0.4nm,0.4s,baz=80,slow=3.9,SNR=5.7						
MKAR	**Makanchi Array**	**54.57**	**313**	P	**P**	**14 48 15.5**	**+0.7**
MKAR				PcP	PcP	14 49 14.1	+0.1
KURK	**Kurchatov**	**57.35**	**317**	*e*P	**P**	**14 48 34.3**	**0.0**
	1.0nm,0.4s,mb3.6						
BVAR	**Borovoye Array**	**62.55**	**319**	P	**P**	**14 49 10.1**	**+0.7**
	3.0nm,0.4s,mb4.3,baz=96,slow=7.8,SNR=19						
BVAR	**Borovoye Array**	**62.55**	**319**	P	**P**	**14 49 10.1**	**+0.7**
ABKAR	**Akbulak array**	**69.42**	**316**	*e*P	**P**	**14 49 52.8**	**-0.2**
	2.7nm,0.5s,mb4.2						
YKA	**Yellowknife Ar**	**76.44**	**28**	P	**P**	**14 50 33.6**	**-0.1**
	1.1nm,0.6s,mb3.7,baz=292,slow=6.0,SNR=4.5						
ARCES	**ARCESS Array B**	**78.82**	**341**	P	**P**	**14 50 46.6**	**-0.1**
	3.0nm,0.6s,mb4.2,baz=74,slow=8.9,SNR=24						
ARE0	**ARCESS Array S**	**78.82**	**341**	*e*P	**P**	**14 50 47.2**	**+0.5**
FINES	**FINESS Array B**	**83.07**	**334**	P	**P**	**14 51 08.6**	**-0.5**
	1.4nm,0.4s,mb4.1,baz=90,slow=5.7,SNR=13						
NVAR	**Mina Array Bea**	**83.18**	**51**	P	**P**	**14 51 11.2**	**+1.0**
	0.5nm,0.7s,mb3.5,baz=280,slow=5.1,SNR=4.9						
LPAZ	**La Paz**	**150.04**	**85**	PKPbc	PKPbc	14 58 34.5	+1.4
	1.2nm,0.6s,baz=263,slow=2.9,SNR=5.9						

BJI ***14*** *14:39:22.8, 57°.80N×156°.40W, h128km, mB4.7/4, mb4.7/7*

ISCJB ***14*** *14:39:24.8±0.4, 58°.09N±0°.03×156°.73W±0°.05, h128km±3km, mb4.0/25, Error ellipse: s-maj=5.4km s-min=4.4km az=171.8*

IDC ***14*** *14:39:26.4±1.0, 58°.17N×156°.64W, h133km±8km, mb3.6/15, mb1 3.8/19, mb1mx3.7/30, mbtmp3.6/19, Error ellipse: s-maj=21.8km s-min=10.5km az=24.0*

NEIC ***14*** *14:39:27.9, 57°.84N×156°.37W, h129km, mb4.1/10, After AEIC.*

ISC 14 14:39:26.0±0.3, 58°.06N±0°.03×156°.74W±0°.05, h121km±3km, h133km±2.6km: pP-P, n219, σ0=80/222, mb4.0/25, 69C-76D, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHGN	**Chignik**	**1.99**	**208**	P	**Pn**	**14 39 59.3**	**0.0**
OHAK	**Old Harbor**	**2.04**	**113**	*e*P	**Pn**	**14 39 58.0**	**-1.9**
KDAK	**Kodiak Island**	**2.23**	**95**	P	**Pn**	**14 40 01.1**	**-1.2**
	44nm,0.3s,baz=273,slow=5.2,SNR=351						
KDAK				S	**Sn**	**14 40 25.8**	**-4.4**
	122nm,0.3s,baz=148,slow=23,SNR=29						
KDAK	**Kodiak Island**	**2.23**	**95**	P	**Pn**	**14 40 01.1**	**-1.2**
KDAK				S	**Sn**	**14 40 26.6**	**-3.6**
SVW2	**Sparrevohn**	**3.10**	**10**	*e*P	**Pn**	**14 40 15.8**	**+2.3**
RSO	**Redoubt South**	**3.16**	**39**	*e*Pn	**Pn**	**14 40 15.8**	**+1.5**
SDPT	**Sand Point**	**3.41**	**219**	P	**Pn**	**14 40 17.2**	**-0.5**
SDPT				S	**Sn**	**14 40 55.4**	**-2.2**
BRLK	**Bradley Lake**	**3.48**	**58**	P	**Pn**	**14 40 18.4**	**-0.2**
SLKM	**Skilak Lake**	**4.14**	**51**	P	**Pn**	**14 40 27.9**	**+0.6**
FIB	**Fire Island**	**4.56**	**44**	P	**Pn**	**14 40 34.5**	**+1.6**
RC01	**Rabbit Creek A**	**4.68**	**47**	P	**Pn**	**14 40 34.5**	**+0.1**
TT01	**Tatalina**	**4.87**	**4**	P	**Pn**	**14 40 40.0**	**+3.0**
TTA	**Tatalina**	**4.90**	**4**	*e*P	**Pn**	**14 40 40.4**	**+3.0**
PMR	**Palmer**	**5.22**	**44**	P	**Pn**	**14 40 42.5**	**+0.8**
PPLA	**Purkeypile**	**5.35**	**23**	*e*Pn	**Pn**	**14 40 45.2**	**+1.7**
	54nm,0.8s						
MID	**Middleton Isla**	**5.59**	**71**	P	**Pn**	**14 40 45.4**	**-1.3**
EYAK	**Cordova Ski Ar**	**6.16**	**61**	P	**Pn**	**14 40 53.2**	**-1.2**
CHUM	**Lake Minchumin**	**6.22**	**18**	P	**Pn**	**14 40 57.7**	**+2.5**
TRF	**Thorofare Moun**	**6.26**	**28**	*e*Pn	**Pn**	**14 40 56.0**	**+0.3**
	40nm,0.6s						
DIV	**Divide**	**6.36**	**56**	P	**Pn**	**14 40 56.3**	**-0.8**
AKUT	**Akutan**	**6.40**	**236**	P	**Pn**	**14 40 58.8**	**+1.1**
AKGG	**Akutan Green G**	**6.46**	**237**	P	**Pn**	**14 41 00.0**	**+1.5**
AKLV	**Akutan Long Va**	**6.47**	**237**	P	**Pn**	**14 40 59.3**	**+0.7**
BPAW	**Bear Paw Mtn.**	**6.67**	**22**	*e*Pn	**Pn**	**14 41 01.1**	**-0.2**
	41nm,0.7s						
BMRM	**Bremner River**	**6.83**	**60**	P	**Pn**	**14 41 02.5**	**-0.9**
MCK	**McKinley**	**6.84**	**30**	*e*Pn	**Pn**	**14 41 03.2**	**-0.4**
	33nm,0.5s						
UNV	**Unalaska Valle**	**6.92**	**237**	P	**Pn**	**14 41 04.6**	**-0.1**
COLA	**College**	**8.04**	**28**	*e*Pn	**Pn**	**14 41 18.6**	**-1.2**
	26nm,0.5s						
IM3	**Indian Mountai**	**8.07**	**9**	P	**Pn**	**14 41 22.4**	**+2.1**
BCA3	**Beaver Creek A**	**8.90**	**49**	P	**Pn**	**14 41 30.6**	**-0.8**
PNL	**Peninsula**	**9.13**	**73**	P	**Pn**	**14 41 32.8**	**-1.7**
COLD	**Coldfoot**	**9.67**	**15**	*e*P	**Pn**	**14 41 41.0**	**-0.7**
	7.7nm,0.9s						
EGAK	**Eagle**	**10.03**	**41**	*e*P	**Pn**	**14 41 44.4**	**-2.1**
	10.0nm,0.6s						
DAWY	**Dawson**	**10.31**	**47**	*e*P	**Pn**	**14 41 50.0**	**-0.4**
SKAG	**Skagway**	**11.20**	**74**	*e*P	**Pn**	**14 42 00.6**	**-1.6**
	4.7nm,0.5s						
DLBC	**Dease Lake**	**14.04**	**77**	P	**Pn**	**14 42 38.0**	**-1.2**
	0.2nm,0.3s,baz=286,slow=14,SNR=6.9						
DLBC				S	**Sn**	**14 45 08.8**	**-5.0**
	0.3nm,0.3s,baz=191,slow=24,SNR=3.7						
DLBC	**Dease Lake**	**14.04**	**77**	*e*P	**Pn**	**14 42 38.6**	**-0.6**
INK	**Inuvik**	**14.55**	**36**	P	**Pn**	**14 42 43.0**	**-2.6**
	0.9nm,0.3s,baz=242,slow=15,SNR=19						
INK				S	**Sn**	**14 45 28.4**	**+2.3**
	0.2nm,0.3s,baz=32,slow=26,SNR=6.4						
INK	**Inuvik**	**14.55**	**36**	*e*P	**Pn**	**14 42 42.9**	**-2.7**
	5.6nm,0.8s						
BBB	**Bella Bella**	**17.31**	**98**	P	**Pn**	**14 43 17.1**	**-2.7**
	0.2nm,0.3s,baz=108,slow=9.6,SNR=3.5						
BILL	**Biiibino**	**19.18**	**316**	*e*P	**P**	**14 43 40.9**	**+1.3**
	20nm,1.4s						
YKA	**Yellowknife Ar**	**21.06**	**60**	P	**P**	**14 43 59.0**	**-0.9**
	5.3nm,0.5s,mb4.1,baz=273,slow=9.8,SNR=35						
YKA	**Yellowknife Ar**	**21.06**	**60**	P	**P**	**14 43 59.0**	**-0.9**
EDM	**Edmonton**	**24.62**	**82**	*e*P	**P**	**14 44 34.3**	**-0.3**
H04A	**Detroit Lake**	**25.05**	**107**	⇑P	**P**	**14 44 39.7**	**+1.0**
	baz=25						
E08A	**Dider Farm, El**	**25.44**	**101**	⇑P	**P**	**14 44 42.5**	**+0.4**
	baz=25						
G08A	**Pilot Rock**	**26.29**	**103**	⇑P	**P**	**14 44 49.4**	**-0.4**
	baz=26						
F10A	**Beach Ranch, E**	**26.74**	**100**	⇓P	**P**	**14 44 53.8**	**0.0**
	baz=27						
I07A	**Izee**	**26.85**	**105**	⇑P	**P**	**14 44 54.7**	**-0.1**
	baz=27						
A14A	**Double T Ranch**	**26.88**	**91**	⇓P	**P**	**14 44 55.4**	**+0.4**
	baz=27						
YBH	**Yreka Blue Hor**	**26.95**	**112**	P	**P**	**14 44 56.0**	**+0.3**
	1.9nm,0.6s,mb3.8,baz=312,slow=3.4,SNR=6.2						
A15A	**Johnson Ranch,**	**27.24**	**90**	⇓P	**P**	**14 44 57.4**	**-0.9**
	baz=27						
B14A	**Marquette Ranc**	**27.32**	**92**	⇑P	**P**	**14 44 58.9**	**-0.1**
	baz=27						
E12A	**Beaver Dam Sad**	**27.32**	**97**	⇑P	**P**	**14 44 58.7**	**-0.3**
	baz=27						
C14A	**Swan Lake**	**27.43**	**93**	⇑P	**P**	**14 44 59.5**	**-0.5**
	baz=27						
G11A	**Walters Elk Ra**	**27.62**	**100**	⇑P	**P**	**14 45 01.4**	**-0.3**
	baz=27						
B15A	**Bradely Ranch,**	**27.73**	**91**	⇑P	**P**	**14 45 01.8**	**-0.9**
	baz=28						
F12A	**Elk City**	**27.92**	**98**	⇑P	**P**	**14 45 03.9**	**-0.4**
	baz=28						
H11A	**Donnelly**	**28.23**	**100**	⇑P	**P**	**14 45 06.9**	**-0.2**
	baz=28						
D15A	**Lincoln**	**28.54**	**93**	⇑P	**P**	**14 45 09.6**	**-0.2**
	baz=28						
G13A	**Cobalt**	**28.90**	**98**	⇑P	**P**	**14 45 13.1**	**+0.1**
	baz=29						
H12A	**Diamond D Ranc**	**28.94**	**99**	⇑P	**P**	**14 45 13.3**	**-0.1**
	baz=29						
D16A	**Dana Ranch, Ca**	**29.06**	**92**	⇓P	**P**	**14 45 14.2**	**-0.2**
	baz=29						
K10A	**MacKenzie Ranc**	**29.12**	**104**	⇑P	**P**	**14 45 15.4**	**+0.4**
	baz=29,SNR=5.5						
B18A	**Beardsley Farm**	**29.16**	**89**	⇓P	**P**	**14 45 15.2**	**-0.1**
	baz=29						
MFID	**Camas Ranch**	**29.21**	**102**	⇓P	**P**	**14 45 15.7**	**-0.1**
	baz=29						
H13A	**Challis**	**29.24**	**99**	⇑P	**P**	**14 45 16.1**	**+0.1**
	baz=29						
I12A	**Atlanta**	**29.31**	**101**	⇑P	**P**	**14 45 16.7**	**0.0**
	baz=29						
EGMT	**Eagleton**	**29.40**	**89**	⇑P	**P**	**14 45 16.8**	**-0.6**
	baz=29						
K11A	**Parker Ranch,**	**29.56**	**103**	⇑P	**P**	**14 45 19.2**	**+0.3**
	baz=29						
H14A	**Leadore**	**29.68**	**98**	⇑P	**P**	**14 45 20.0**	**+0.1**
	baz=30						
J12A	**Stokes Ranch,**	**29.71**	**102**	⇑P	**P**	**14 45 20.4**	**+0.2**
	baz=30,SNR=5.7						
I13A	**Wildhorse Cree**	**29.76**	**100**	⇓P	**P**	**14 45 20.8**	**+0.1**
	baz=30						
E17A	**Martinsdale**	**29.79**	**93**	⇑P	**P**	**14 45 20.7**	**-0.1**
	baz=30						
L10A	**Juniper Basin**	**29.83**	**105**	⇓P	**P**	**14 45 21.5**	**+0.2**
	baz=30						
HLID	**Hailey**	**29.85**	**100**	⇓P	**P**	**14 45 21.0**	**-0.4**
	baz=30						
H15A	**Lima**	**30.06**	**97**	⇓P	**P**	**14 45 23.3**	**0.0**
	baz=30						
L11A	**Cat Creek Ranc**	**30.14**	**104**	⇓P	**P**	**14 45 24.4**	**+0.4**
	baz=30						
M10A	**I.L. Ranch, Tu**	**30.20**	**106**	⇑P	**P**	**14 45 25.0**	**+0.4**
	baz=30						
E18A	**Harlowton**	**30.22**	**92**	⇓P	**P**	**14 45 25.2**	**+0.5**
	baz=30						
K12A	**Draper Farm, C**	**30.24**	**102**	⇓P	**P**	**14 45 25.4**	**+0.5**
	baz=30						
F17A	**Fitzpatrick Pl**	**30.25**	**93**	⇓P	**P**	**14 45 25.6**	**+0.6**
	baz=30						
J14A	**Carey**	**30.48**	**100**	⇑P	**P**	**14 45 27.8**	**+0.8**
	baz=30						
H16A	**Russell Place,**	**30.73**	**96**	⇓P	**P**	**14 45 29.3**	**+0.1**
	baz=30						
J15A	**Blackfoot**	**31.00**	**99**	⇑P	**P**	**14 45 31.9**	**+0.3**
	baz=31						
M12A	**Wells**	**31.11**	**104**	⇑P	**P**	**14 45 33.1**	**+0.5**
	baz=31						
IMW	**Indian Meadow**	**31.44**	**97**	*e*P	**P**	**14 45 35.5**	**0.0**
	2.7nm,0.8s,mb4.0						
K15A	**Arbon**	**31.45**	**100**	⇓P	**P**	**14 45 36.5**	**+1.0**
	baz=31						
RLMT	**Red Lodge**	**31.51**	**93**	⇓P	**P**	**14 45 36.6**	**+0.6**
	baz=31						
M13A	**Montello**	**31.54**	**103**	⇑P	**P**	**14 45 37.0**	**+0.6**
	baz=31						
NVAR	**Mina Array Bea**	**31.64**	**111**	P	**P**	**14 45 36.9**	**-0.4**
	0.5nm,0.6s,mb3.4,baz=302,slow=8.8,SNR=6.2						
NVAR				pP	pP	14 46 06.2	+2.5
	0.6nm,0.7s,baz=299,slow=9.6,SNR=3.4						
O11A	**Cowboy Ranch,**	**31.68**	**106**	⇑P	**P**	**14 45 37.9**	**+0.3**
	baz=32						
M14A	**Sheep Mountain**	**31.86**	**102**	⇑P	**P**	**14 45 39.7**	**+0.5**
	baz=32						
TIXI	**Tiksi**	**31.93**	**325**	*e*P	**P**	**14 45 39.0**	**-0.5**
	1.7nm,0.6s,mb4.0						
O12A	**Currie**	**32.04**	**105**	⇓P	**P**	**14 45 41.0**	**+0.2**
	baz=32						
P11A	**Circle Ranch,**	**32.06**	**107**	⇓P	**P**	**14 45 41.5**	**+0.5**
	baz=32						
M15A	**Larsen Ranch,**	**32.36**	**101**	⇑P	**P**	**14 45 43.5**	**0.0**
	baz=32						
J18A	**Kendall Valley**	**32.40**	**97**	⇓P	**P**	**14 45 44.2**	**+0.3**
	baz=32						
N14A	**Grayback Hills**	**32.42**	**103**	⇑P	**P**	**14 45 44.4**	**+0.4**
	baz=32						
L16A	**Fish Haven**	**32.50**	**100**	⇓P	**P**	**14 45 45.2**	**+0.5**
	baz=32						
P12A	**McGill**	**32.55**	**106**	⇑P	**P**	**14 45 45.6**	**+0.4**
	baz=32						
Q11A	**Duckwater**	**32.65**	**108**	⇑P	**P**	**14 45 46.6**	**+0.5**
	baz=32						
S10A	**Tonopah Range,**	**32.89**	**110**	⇑P	**P**	**14 45 48.4**	**+0.3**
	baz=33						
BW06	**Boulder Array**	**32.95**	**97**	⇓P	**P**	**14 45 48.6**	**-0.1**
	baz=33						
PDAR	**Pinedale Array**	**32.95**	**97**	P	**P**	**14 45 48.1**	**-0.5**
	1.1nm,0.7s,mb3.8,baz=317,slow=7.7,SNR=9.2						
PDAR				pP	pP	14 46 16.6	+1.4
	0.2nm,0.3s,baz=0.0,slow=40,SNR=1.9						
P13A	**Bates Ranch, G**	**33.02**	**105**	⇓P	**P**	**14 45 49.2**	**-0.1**
	baz=33						
R11A	**Troy Canyon, C**	**33.06**	**108**	⇓P	**P**	**14 45 49.6**	**-0.1**
	baz=33						
GRAC	**Grapevine Rang**	**33.22**	**112**	⇑P	**P**	**14 45 51.7**	**+0.6**
	baz=33						
K19A	**Absolon Red Bu**	**33.29**	**96**	⇓P	**P**	**14 45 51.5**	**-0.1**
	baz=33						
CWC	**Cottonwood Cre**	**33.32**	**113**	⇓P	**P**	**14 45 52.5**	**+0.6**
	baz=33						
P14A	**Drum Mountains**	**33.41**	**104**	⇓P

baz=40
U25A Circle Dot Ran 40.31 99 ⇑P P 14 46 51.2 +0.1
baz=40,SNR=8.0
118A Homack Ranch, 40.37 108 ⇑P P 14 46 52.3 +0.7
baz=40
V24A Rampart Ranch, 40.37 101 ⇑P P 14 46 52.2 +0.6
baz=40
Y21A Point of Rocks 40.46 105 ⇑P P 14 46 53.1 +0.8
baz=40
V25A Rancho No Teng 40.63 100 ⇓P P 14 46 54.1 +0.4
baz=40
Z20A Nine Sixteen R 40.69 107 ⇓P P 14 46 54.8 +0.6
baz=40
W24A Lazy 6 Ranch, 40.70 101 ⇓P P 14 46 55.0 +0.8
baz=40
Y22A Socorro 40.88 104 ⇓P P 14 46 56.7 +0.9
baz=41
W25A X Bar L Ranch, 41.19 100 ⇑P P 14 46 58.9 +0.6
baz=41
219A White Tail Can 41.24 108 ⇑P P 14 46 59.4 +0.6
baz=41
318A Bisbee 41.33 109 ⇓P P 14 46 59.7 +0.3
baz=41
Y23A Lovelace Mesa, 41.35 103 ⇑P P 14 47 00.2 +0.5
baz=41
Z22A Elephant Butte 41.41 105 ⇑P P 14 47 00.3 +0.2
baz=41,SNR=5.8
121A Cookes Peak, D 41.57 106 ⇓P P 14 47 01.6 +0.2
baz=41
Y24A Capitan 41.68 103 ⇑P P 14 47 02.3 0.0
baz=42
220A Playas Peak, P 41.69 108 ⇓P P 14 47 02.6 +0.2
baz=42
W27A Bowe Ranch, En 42.04 99 ⇑P P 14 47 04.8 -0.4
baz=42
X26A CR and CF Fran 42.04 100 ⇓P P 14 47 05.1 -0.1
baz=42
Y25A Mesa, Roswell 42.07 102 ⇑P P 14 47 05.0 -0.4
baz=42,SNR=9.8
Z24A Sheeppen Canyo 42.18 103 ⇓P P 14 47 06.4 +0.1
baz=42
Z25A Roswell 42.56 102 ⇑P P 14 47 09.1 -0.3
baz=42
124A Stringfield Ra 42.63 104 ⇑P P 14 47 10.0 0.0
baz=42
Y27A Causey 42.89 100 ⇓P P 14 47 11.6 -0.6
baz=43
Z26A Caprock 42.95 102 ⇓P P 14 47 11.6 -0.9
baz=43
MSTX Muleshoe 43.03 100 ⇓P P 14 47 12.9 -0.3
baz=43
125A Gardner Draw, 43.07 103 ⇓P P 14 47 13.8 +0.2
baz=43
224A Cornudas Mount 43.09 104 ⇓P P 14 47 14.1 +0.3
baz=43
Z27A Tatum 43.31 101 ⇓P P 14 47 16.0 +0.5
baz=43
126A Clayton Basin, 43.41 102 ⇓P P 14 47 16.5 +0.2
baz=43
225A Deer Hill, Car 43.42 104 ⇓P P 14 47 16.4 0.0
baz=43
324A Moseley Ranch, 43.61 105 ⇓P P 14 47 17.9 0.0
baz=43
325A Bean Ranch, Si 43.93 104 ⇓P P 14 47 20.1 -0.4
baz=44,SNR=5.3
425A Indio Mountain 44.39 105 ⇑P P 14 47 24.1 0.0
baz=44,SNR=6.5
WMOK Wichita Mounta 44.54 96 *eP* **P 14 47 24.4 -0.9**
2.8nm,1.1s,mb3.9
526A Mary Lane Ranc 45.43 105 ⇓P P 14 47 32.3 -0.1
baz=45
527A Woodward Ranch 45.61 104 ⇓P P 14 47 33.2 -0.6
baz=45
428A Kincaid Ranch, 45.63 103 ⇓P P 14 47 33.9 0.0
baz=45,SNR=8.1
626A Big Bend Ranch 45.82 105 ⇓P P 14 47 34.7 -0.7
baz=46
528A Cox Ranch, San 46.02 103 ⇓P P 14 47 36.9 -0.1
baz=46
TXAR Lajitas Array 46.23 105 P P 14 47 38.0 -0.7
1.3nm,0.8s,mb3.7,baz=315,slow=6.3,SNR=17
SCHQ Schefferville 46.26 53 P P 14 47 37.4 -1.2
2.5nm,0.5s,mb4.2,baz=291,slow=6.2,SNR=7.0
627A Terlingua Ranc 46.28 104 ⇓P P 14 47 38.6 -0.4
baz=46,SNR=5.4
628A Black Gap, Mar 46.51 104 ⇑P P 14 47 40.4 -0.4
baz=46,SNR=6.7
JCT Junction City 47.32 100 *eP* **P 14 47 46.1 -1.1**
2.7nm,0.4s,mb4.3
KSRS Korea Array 51.69 281 P P 14 48 19.1 -1.0
1.1nm,0.8s,mb3.9,baz=49,slow=6.5,SNR=6.5
SONM Songino Array 54.33 305 P P 14 48 39.9 +0.5
5.6nm,0.5s,mb4.8,baz=43,slow=6.5,SNR=48
HHC Hu-ho-hao-te 57.32 296 *eP* **P 14 49 00.8 0.0**
HHC S **S 14 56 44.4 -3.0**
HHC pmax pmax
comp=Z,22nm,0.6s
HHC pmax pmax
comp=Z,68nm,6.3s
ZALV Zalesovo Beam 57.76 322 P P 14 49 02.7 -0.9
comp=Z,0.6nm,0.5s,mb3.9,baz=64,slow=6.8,SNR=4.0
FINES FINESS Array B 60.81 358 P P 14 49 22.6 -2.0
comp=Z,0.9nm,0.6s,mb4.0,baz=16,slow=7.2,SNR=3.2
BVAR Borovoye Array 62.84 330 P P 14 49 36.5 -1.7
comp=Z,0.9nm,0.6s,mb3.9,baz=27,slow=5.9,SNR=4.6
BVAR pP pP 14 50 09.3 +1.7
comp=Z,1.3nm,0.8s,baz=357,slow=3.0,SNR=3.1
GTA Gaotai 63.91 303 *eP* **P 14 49 44.9 -0.6**
GTA pmax pmax
comp=Z,3.0nm,1.2s,mb4.0
MKAR Makanchi Array 64.69 319 P P 14 49 49.0 -1.4
comp=Z,0.4nm,0.6s,mb3.5,baz=39,slow=7.8,SNR=4.5
WMQ Urumqi 65.27 314 *eP* **P 14 49 56.3 +2.1**
CD2 Chengdu 69.05 295 P P 14 50 18.3 0.0
CD2 pP pP 14 50 49.1 +0.9
CD2 sP sP 14 51 03.0 +1.7
CD2 PP PP 14 52 54.3 +2.4
CD2 S S 14 59 10.8 -2.7
CD2 sS sS 15 00 04.6 -0.3
CD2 SS SS 15 03 41.3 +0.4
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.9
CD2 pmax pmax
comp=Z,160nm,5.9s
CD2 LR LR
comp=N,140nm,8.9s
CD2 LR LR
comp=Z,130nm,9.5s
AKASG Malin Array Be 71.49 356 P P 14 50 30.3 -2.5
comp=Z,1.5nm,0.5s,mb4.1,baz=5.8,slow=5.6,SNR=4.8
CMAR Chiang Mai Arr 81.85 292 P P 14 51 30.1 -1.4
comp=Z,1.1nm,0.6s,mb3.8,baz=6.4,slow=5.7,SNR=7.4
BRTR Keskin Array B 82.19 352 P P 14 51 31.9 -1.1
comp=Z,0.8nm,0.7s,mb3.6,baz=58,slow=3.3,SNR=4.8
LBTB Lobatse 146.94 356 PKPbc PKPbc 14 58 52.1 -1.7
comp=Z,6.3nm,0.8s,baz=66,slow=2.5,SNR=7.1
QSPA South Pole Qui 147.85 180 PKPbc PKPbc 14 58 53.0 -1.7
comp=Z,2.5nm,0.8s,baz=51,slow=3.3,SNR=18
BOSA Boshof 150.53 356 PKPbc PKPbc 14 59 01.2 -1.6
comp=Z,4.4nm,0.7s,baz=35,slow=1.3,SNR=5.5

ISCJB ***14*** *14:51:58.9±1.0, 36°.56N±0°.07×71°.49E±0°.10, h113km±10km, mb3.9/4, Error ellipse: s-maj=15.3km s-min=9.0km az=41.9*
NEIC ***14*** *14:52:00.0±1.2, 36°.55N×71°.39E, h113km±13km, mb4.3/5, Error ellipse: s-maj=25.0km s-min=10.7km az=134.0*
IDC ***14*** *14:52:01.5±8.7, 36°.58N×71°.53E, h126km±61km, mb3.3/3, mb1 3.4/7, mb1mx3.1/26, mbtmp3.3/7, Error ellipse: s-maj=76.4km s-min=49.9km az=165.0*
NNC ***14*** *14:52:03.8±7.6, 36°.94N×71°.13E, h150km±149km, mb3.1, mpv4.0, Error ellipse: s-maj=72.8km s-min=41.6km az=8.0*
ISC 14 14:52:00.0±1.0, 36°.53N±0°.08×71°.50E±0°.10, h111km±9km, n29, σ0°85/35, mb3.9/4, 4C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.82**	**226**	*e*Pn	**Pn**	**14 52 43.4**	**-0.3**
KSH	**Kashi**	**4.62**	**48**	Pn	**Pn**	**14 53 05.8**	**-1.9**
KSH				Sn	**Sn**	**14 53 52.8**	**-7.5**
KSH				smax			
	comp=N,130nm,0.3s						
KSH				smax			
	comp=E,100nm,0.3s						
AML	**Almayashu**	**5.85**	**16**	P	**Pn**	**14 53 24.9**	**+0.7**
	SNR=210						
AML	**Almayashu**	**5.85**	**16**	*e*P	**Pn**	**14 53 24.9**	**+0.7**
	comp=E,35nm,0.4s						
AML				*e*S	**Sn**	**14 54 29.0**	**-1.0**
KZA	**Kyzart**	**6.26**	**27**	P	**Pn**	**14 53 30.7**	**+0.9**
	SNR=29						
EKS2	**Erkin-Say**	**6.38**	**15**	P	**Pn**	**14 53 31.9**	**+0.5**
	SNR=66						
EKS2	**Erkin-Say**	**6.38**	**15**	*e*Pn	**Pn**	**14 53 31.8**	**+0.4**
	comp=E,12nm,0.6s						
AAK	**Ala-Archa**	**6.52**	**20**	P	**Pn**	**14 53 34.5**	**+1.2**
	SNR=18						
AAK	**Ala-Archa**	**6.52**	**20**	P	**Pn**	**14 53 34.7**	**+1.3**
	comp=E,8.9nm,0.3s,baz=171,slow=5.8,SNR=28						
AAK				S	**Sn**	**14 54 47.0**	**+0.7**
	comp=E,1.3nm,0.3s,baz=2.2,slow=17,SNR=7.1						
KK31	**Karatay Array**	**6.61**	**354**	⇑P	**Pn**	**14 53 33.4**	**-1.2**
	comp=E,5.2nm,0.2s,baz=179,slow=13,SNR=148						
KK31				⇑S	**Sn**	**14 54 43.3**	**-5.2**
	comp=E,2.8nm,0.3s,baz=176,slow=23,SNR=4.5						
SDNR	**Sundarnagar**	**6.76**	**136**	*e*PKP	**Sn**	**14 54 47.5**	**-4.7**
CHMS	**Chumysh**	**6.93**	**20**	P	**Pn**	**14 53 39.5**	**+0.6**
	SNR=18						
TKM2	**Tokmak 2**	**7.12**	**25**	⇑P	**Pn**	**14 53 42.1**	**+0.6**
	comp=E,3.8nm,0.4s						
TKM2				⇑S	**Sn**	**14 54 59.9**	**-0.9**
	comp=E,1.2nm,0.5s						
TKM2	**Tokmak 2**	**7.12**	**25**	P	**Pn**	**14 53 41.8**	**+0.3**
	SNR=11						
TKM2	**Tokmak 2**	**7.12**	**25**	*e*P	**Pn**	**14 53 41.6**	**+0.1**
	comp=E,7.1nm,0.4s						
MK31	**Makanchi Array**	**13.04**	**35**	*e*P	**Pn**	**14 55 00.3**	**-0.6**
MKAR	**Makanchi Array**	**13.04**	**35**	P	**Pn**	**14 55 01.2**	**+0.3**
	comp=E,0.1nm,0.3s,baz=209,slow=12,SNR=3.5						
MKAR	**Makanchi Array**	**13.04**	**35**	P	**Pn**	**14 55 01.2**	**+0.3**
AB31	**Akbulak array**	**15.26**	**330**	⇓P	**Pn**	**14 55 25.0**	**-4.3**
	comp=E,0.2nm,0.2s,baz=117,slow=14,SNR=5.8						
ABKAR	**Akbulak array**	**15.26**	**330**	*e*P	**Pn**	**14 55 25.5**	**-3.8**
	comp=E,1.2nm,0.3s						
BRVK	**Borovoye**	**16.55**	**357**	P	**Pn**	**14 55 45.4**	**0.0**
	comp=E,2.2nm,0.4s						
AKTK	**Aktyubinsk**	**16.96**	**329**	P	**Pn**	**14 55 51.1**	**+0.8**
AKTO	**Aktyubinsk**	**16.96**	**329**	P	**Pn**	**14 55 51.1**	**+0.8**
	comp=E,0.3nm,0.3s,baz=140,slow=12,SNR=3.8						
ZALV	**Zalesovo Beam**	**19.73**	**24**	P	**P**	**14 56 20.4**	**-0.2**
	comp=E,0.9nm,0.3s,baz=206,slow=9.5,SNR=8.3						
HHC	**Hu-ho-hao-te**	**31.38**	**70**	*e*P	**P**	**14 58 11.1**	**+0.9**
HHC				S	**S**	**15 03 09.3**	**-0.1**
HHC				pmax	pmax		
	comp=Z,14nm,0.6s,mb4.9						
HHC				pmax	pmax		
	comp=Z,32nm,6.3s						
FINES	**FINESS Array B**	**37.69**	**326**	P	**P**	**14 59 03.7**	**-0.6**
	comp=Z,1.0nm,0.8s,mb3.7,baz=128,slow=12,SNR=3.7						
FINES	**FINESS Array B**	**37.69**	**326**	P	**P**	**14 59 03.7**	**-0.6**
ARCES	**ARCESS Array B**	**41.28**	**337**	P	**P**	**14 59 34.0**	**0.0**
	comp=Z,0.4nm,0.4s,mb3.6,baz=112,slow=8.5,SNR=8.8						
NOA	**NORSAR Array B**	**44.60**	**323**	P	**P**	**14 59 59.8**	**-1.0**
	comp=Z,0.5nm,0.6s,mb3.5,baz=96,slow=7.8,SNR=3.3						

NIED ***14*** *14:56:00, 39°.10N×140°.90E, h5km, Mw4.1 Best double couple: M0 1.75000×10^15 NP1:φ0=222.00000°, δ51.00000°, λ122.00000°. NP2:φ0=357.00000°, δ49.00000°, λ57.00000°.*
IDC ***14*** *14:56:39.0±0.6, 39°.10N×140°.74E, h0km, mb4.1/18, mb1 4.2/20, mb1mx4.1/29, mbtmp4.1/20, ML4.0/2, MS3.1/7, Ms1 3.1/7, ms1mx2.8/35, Error ellipse: s-maj=17.7km s-min=13.5km az=104.0*
BJI ***14*** *14:56:39.4, 38°.85N×140°.71E, h8km, mB4.5/6, mb4.6/9, Ms3.6/3, Ms7 3.5/2*
NEIC ***14*** *14:56:40.3, 39°.13N×140°.90E, h11km, mb4.6/5, MW4.1(NIED), After JMA.*
NEIC Recorded [3 JMA] in Miyagi; [2 JMA] in Akita and Iwate; [1 JMA] in Fukushima and Yamagata.
JMA ***14*** *14:56:40.2, 39°.13N×140°.90E, h11km±1km, M4.3*
JMA Felt III J1.
ISCJB ***14*** *14:56:40.1±0.4, 39°.14N±0°.02×140°.91E±0°.03, h20km±3km, mb4.3/32, MS3.2/7, Error ellipse: s-maj=4.7km s-min=3.3km az=27.8*
MOS ***14*** *14:56:41.5±1.0, 39°.10N×140°.92E, h33km, mb4.5/17, Error ellipse: s-maj=11.3km s-min=6.9km az=85.4*
ISC 14 14:56:40.6±0.4, 39°.13N±0°.02×140°.91E±0°.03, h9km±3km, n88, σ1°04/102, mb4.3/32, MS3.2/7, 2C-6D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.29**	**126**	⇓P	**Pg**	**14 56 46.1**	**-0.3**
JMK				S	**Sg**	**14 56 50.4**	**+0.1**
JRG	**Rokugo**	**0.35**	**321**	⇓P	**Pg**	**14 56 47.0**	**-0.4**
JRG				*e*S	**Sg**	**14 56 52.2**	**+0.2**
JOM	**Ohasama**	**0.46**	**40**	⇑P	**Pg**	**14 56 49.1**	**-0.3**
JOM				S	**Sg**	**14 56 55.4**	**0.0**
JYK	**Kaneyama**	**0.48**	**245**	⇓P	**Pg**	**14 56 49.5**	**-0.4**
JYK				S	**Sg**	**14 56 55.8**	**-0.4**
JIO	**Ouri**	**0.75**	**153**	⇓P	**Pg**	**14 56 54.4**	**-0.6**
JIO				S	**Sg**	**14 57 04.9**	**+0.1**
JOU	**Okura**	**0.78**	**195**	⇑P	**Pg**	**14 56 55.3**	**-0.3**
JOU				S	**Sg**	**14 57 05.9**	**+0.1**
MAJO	**Matsushiro**	**3.35**	**221**	*e*P	**Pn**	**14 57 34.3**	**+1.2**
MAT	**Matsushiro**	**3.35**	**221**	P	**Pn**	**14 57 34.4**	**+1.3**
MAT				S	**Sn**	**14 58 14.1**	**+1.1**
MJAR	**Matsushiro Arr**	**3.35**	**221**	Pn	**Pn**	**14 57 34.3**	**+1.2**
	11nm,0.3s,baz=21,slow=7.8,SNR=89						
MJAR				Lg		14 58 26.1	
	9.2nm,0.3s,baz=18,slow=25,SNR=7.4						
ERM	**Erimo**	**3.35**	**30**	*e*P	**Pn**	**14 57 35.5**	**+2.4**
ASAJ	**Asahikawa**	**5.14**	**14**	Pn	**Pn**	**14 57 59.5**	**+1.7**
	3.4nm,0.3s,baz=223,slow=10,SNR=47						
ASAJ				Sn	**Sn**	**14 59 00.0**	**+2.8**
	baz=229,slow=19,SNR=2.7						
ASAJ				LR	LR	15 00 02.7	
	comp=Z,96nm,18.8s,baz=201,slow=39						
ASAJ	**Asahikawa**	**5.14**	**14**	P	**Pn**	**14 57 59.5**	**+1.8**
ASAJ						14 59 00.0	
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,96nm,18.8s						
JHJ	**Hachijo jima 2**	**6.06**	**189**	Pn	**Pn**	**14 58 11.1**	**+0.7**
	comp=Z,26nm,0.3s,baz=86,slow=15,SNR=16						
JHJ				Sn	**Sn**	**14 59 20.9**	**+1.0**
	comp=Z,28nm,0.3s,baz=101,slow=23,SNR=8.6						
YUK	**Yuzh-Kuril'sk**	**6.15**	**36**	*i* P	**Pn**	**14 58 10.3**	**-1.2**
YUK				*i* S	**Sn**	**14 59 21.5**	**-0.5**
YUK				pmax	pmax		
	comp=Z,100nm,0.5s						
YUK				pmax	pmax		
	comp=Z,70nm,0.8s						
YUK				smax			
	comp=E,160nm,0.7s						
YUK				smax			
	comp=N,60nm,0.6s						
YUK				smax			
	comp=E,120nm,0.6s						
YUK				MLR	MLR		
	comp=N,210nm,12.0s						
YUK				MLR	MLR		
	comp=E,180nm,12.0s						
YUK				MLR	MLR		
	comp=Z,160nm,12.0s						
YSS	**Yuzh-Sakhalins**	**7.94**	**9**	*e*P	**Pn**	**14 58 37.9**	**+1.8**
YSS				*e*S	**Sn**	**15 00 10.0**	**+4.0**
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				MLR	MLR		
	comp=Z,300nm,10.0s						
YSS	**Yuzh-Sakhalins**	**7.94**	**9**	*e*Pn	**Pn**	**14 58 37.4**	**+1.3**
	comp=Z,11nm,0.6s						
KUR	**Kuril'sk**	**7.99**	**38**	P	**Pn**	**14 58 38.0**	**+1.2**
KUR				S	**Sn**	**15 00 06.5**	**-0.8**
KUR				pmax	pmax		
	comp=Z,130nm,0.9s						
KUR				smax			
	comp=N,100nm,0.8s						
HABR	**Khabarovsk**	**10.26**	**338**	*e*P	**Pn**	**14 59 10.5**	**+2.7**
HABR				*e*		15 01 06.8	
HABR				pmax	pmax		
	comp=N,9.0nm,2.3s						
HABR				pmax	pmax		
	comp=E,11nm,1.6s						
HABR				pmax	pmax		
	comp=Z,17nm,1.5s						
HABR				MLR	MLR		
	comp=Z,88nm,14.0s						
KSRS	**Korea Array**	**10.35**	**265**	Pn	**Pn**	**14 59 11.5**	**+2.3**
	comp=Z,2.8nm,0.3s,baz=79,slow=14,SNR=49						
KSRS				Sn	**Sn**	**15 01 07.5**	**+2.3**
	comp=Z,2.1nm,0.3s,baz=74,slow=24,SNR=35						
KSRS				LR	LR	15 02 42.9	
	comp=Z,86nm,19.2s,baz=159,slow=36						
KSRS	**Korea Array**	**10.35**	**265**	P	**Pn**	**14 59 11.5**	**+2.3**
KSRS						15 01 07.6	
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.3s						
KSRS				smax			
	comp=N,2.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,87nm,19.2s						
KLR	**Kul'dur**	**12.04**	**330**	*e*P	**Pn**	**14 59 32.3**	**0.0**
KLR				MLR	MLR		
	comp=Z,900nm,12.0s						
CN2	**Changchun**	**12.50**	**297**	*e*P	**Pn**	**14 59 39.9**	**+1.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NJ2	**Nanjing**	**19.25**	**255**	*e*P	**Pn**	**15 01 05.6**	**-0.6**
NJ2				pP	pP	15 01 13.1	+5.3
NJ2				S	**Sn**	**15 04 35.1**	**-7.0**
NJ2				sS	sS	15 04 47.6	+0.3
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,80nm,3.8s						
NJ2				LR	LR		
	comp=N,80nm,10.3s						
NJ2				LR	LR		
	comp=E,80nm,13.2s						
HHC	**Hu-ho-hao-te**	**22.51**	**284**	*e*P	**P**	**15 01 38.8**	**-1.6**
HHC				S	**S**	**15 05 39.6**	**-8.1**
HHC				pmax	pmax		
	comp=Z,11nm,0.5s,mb4.5						
HHC				pmax	pmax		
	comp=Z,56nm,5.3s						
WHN	**Wuhan**	**23.36**	**257**	P	**P**	**15 01 49.4**	**-0.1**
YAK	**Yakutsk**	**23.95**	**347**	*e*P	**P**	**15 01 56.2**	**+1.4**
YAK				*e**PP		15 02 03.4	
YAK				*e*		15 05 39.7	
YAK				*e*S	**S**	**15 06 09.4**	**-1.7**
YAK				*e*SSS		15 07 10.9	
YAK				*e*		15 13 02.7	
YAK				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.2						
YAK				pmax	pmax		
	comp=E,3.0nm,1.4s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
YAK				smax			
	comp=E,25nm,2.4s						
YAK				smax			
	comp=N,27nm,2.5s						
YAK				MLR	MLR		
	comp=Z,63nm,15.0s,MS3.2						
SEY	**Seymchan**	**24.83**	**13**	⇓*iP*	**P**	**15 02 03.5**	**+0.7**
SONM	**Songino Array**	**26.34**	**301**	LR	LR	15 12 42.4	
	comp=Z,43nm,20.0s,MS3.0,baz=229,slow=37						
ZALV	**Zalesovo Beam**	**40.24**	**311**	P	**P**	**15 04 15.8**	**-1.5**
	comp=Z,3.2nm,0.8s,mb4.1,baz=80,slow=8.1,SNR=14						
ZALV				LR	LR	15 21 15.9	
	comp=Z,25nm,18.6s,MS3.1,baz=76,slow=37						
ZALV	**Zalesovo Beam**	**40.24**	**311**	P	**P**	**15 04 15.9**	**-1.4**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.0						
ZALV				MLR	MLR		
	comp=Z,25nm,18.6s,MS3.1						
NVS	**Novosibirsk**	**41.13**	**312**	*e*P	**P**	**15 04 19.7**	**-5.0**
CMAR	**Chiang Mai Arr**	**41.70**	**253**	P	**P**	**15 04 29.4**	**-0.4**
	comp=Z,0.4nm,0.6s,mb3.3,baz=41,slow=6.9,SNR=3.9						
CMAR				LR	LR	15 22 40.7	
	comp=Z,27nm,18.1s,MS3.2,baz=65,slow=38						
MK31	**Makanchi Array**	**42.70**	**300**	*e*P	**P**	**15 04 36.5**	**-1.2**
MKAR	**Makanchi Array**	**42.70**	**300**	P	**P**	**15 04 36.8**	**-0.9**
	comp=Z,2.5nm,0.8s,mb4.0,baz=88,slow=8.8,SNR=19						
MKAR				LR	LR	15 22 38.8	
	comp=Z,19nm,21.8s,MS3.0,baz=67,slow=37						
MKAR	**Makanchi Array**	**42.70**	**300**	*i* P	**P**	**15 04 37.0**	**-0.7**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KURK	**Kurchatov**	**44.35**	**306**	*e*P	**P**	**15 04 50.4**	**-0.5**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
KURK	**Kurchatov**	**44.35**	**306**	*e*P	**P**	**15 04 50.4**	**-0.6**
	comp=Z,4.5nm,0.6s,mb4.4						
KDAK	**Kodiak Island**	**45.83**	**43**	P	**P**	**15 05 03.1**	**+0.5**
	comp=Z,3.3nm,0.7s,mb4.4,baz=297,slow=6.0,SNR=7.1						
KDAK	**Kodiak Island**	**45.83**	**43**	*i* P	**P**	**15 05 07.2**	**+4.7**
ODAN	**Odare**	**45.93**	**271**	*e*P	**P**	**15 05 04.0**	**+0.2**
	comp=Z,12nm,0.8s,mb4.9						
RAMN	**Ramite**	**46.50**	**272**	*e*P	**P**	**15 05 08.3**	**0.0**
	comp=Z,15nm,0.9s,mb4.9						
GUN	**Gumba**	**46.60**	**273**	*e*P	**P**	**15 05 08.5**	**-0.5**
	comp=Z,19nm,0.5s,mb5.3						
KKN	**Kakani**	**47.12**	**274**	*e*P	**P**	**15 05 13.1**	**0.0**
DMN	**Daman**	**47.34**	**274**	*e*P	**P**	**15 05 14.9**	**+0.1**
GKN	**Gorkha**	**47.52**	**274**	*e*P	**P**	**15 05 16.0**	**-0.2**
	comp=Z,19nm,0.9s,mb5.1						
TKM2	**Tokmak 2**	**48.32**	**297**	*e*P	**P**	**15 05 21.9**	**-0.3**
TKM2				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.8						
TKM2	**Tokmak 2**	**48.32**	**297**	*e*P	**P**	**15 05 21.9**	**-0.3**
	comp=Z,12nm,1.2s,mb4.8						
BVAR	**Borovoye Array**	**48.89**	**311**	P	**P**	**15 05 26.2**	**-0.2**
	comp=Z,1.0nm,0.5s,mb4.1,baz=80,slow=8.1,SNR=5.9						
BVAR				PcP	PcP	15 06 50.5	-0.2
	comp=Z,1.1nm,0.6s,baz=62,slow=3.5,SNR=4.1						
BVAR	**Borovoye Array**	**48.89**	**311**	P	**P**	**15 05 26.2**	**-0.3**
BVAR						15 06 50.5	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
PSI	**Prapat**	**52.56**	**237**	P	**P**	**15 05 54.3**	**-0.3**
	comp=Z,3.6nm,0.8s,mb4.4,baz=46,slow=4.8,SNR=3.8						
PSI	**Prapat**	**52.56**	**237**	P	**P**	**15 05 54.3**	**-0.3**
PSI				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
INK	**Inuvik**	**52.72**	**28**	P	**P**	**15 05 55.9**	**+0.8**
	comp=Z,2.0nm,0.6s,mb4.2,baz=300,slow=8.8,SNR=6.5						
INK	**Inuvik**	**52.72**	**28**	P	**P**	**15 05 55.9**	**+0.8**
INK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SVE	**Sverdlovsk**	**53.33**	**318**	*e*P	**P**	**15 05 59.4**	**-0.4**
SVE				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
ARU	**Arti**	**54.55**	**317**	*d iP*	**P**	**15 06 08.5**	**-0.1**
ARU				*e*		15 08 07.2	
ARU				S	**S**	**15 13 48.6**	**+0.9**
ARU				SS	SS	15 17 28.4	-1.3
ARU				pmax	pmax		
	comp=Z,11nm,1.7s,mb4.6						
ARU	**Arti**	**54.55**	**317**	*e*P	**P**	**15 06 06.9**	**-1.7**
	comp=Z,4.8nm,0.9s,mb4.5						
ABKAR	**Akbulak array**	**56.31**	**309**	*e*P	**P**	**15 06 20.7**	**-0.7**
	comp=Z,2.5nm,0.6s,mb4.4						
KBL	**Kabul**	**56.32**	**289**	*e*P	**P**	**15 06 20.9**	**-0.9**
KBL				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
KBL	**Kabul**	**56.32**	**289**	*e*P	**P**	**15 06 20.9**	**-0.9**
	comp=Z,5.7nm,0.8s,mb4.7						
AKTK	**Aktyubinsk**	**57.00**	**311**	P	**P**	**15 06 24.6**	**-1.7**
AKTO	**Aktyubinsk**	**57.00**	**311**	P	**P**	**15 06 24.6**	**-1.7**
	comp=Z,1.5nm,0.7s,mb4.1,baz=68,slow=15,SNR=5.5						
AKTO	**Aktyubinsk**	**57.00**	**311**	P	**P**	**15 06 24.6**	**-1.7**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
WRAB	**Tennant Creek**	**59.07**	**187**	*e*P	**P**	**15 06 39.9**	**-1.1**
WRA	**Warramunga Arr**	**59.08**	**187**	P	**P**	**15 06 39.3**	**-1.8**
	comp=Z,2.7nm,0.5s,mb4.5,baz=5.9,slow=7.3,SNR=33						
WRA	**Warramunga Arr**	**59.08**	**187**	P	**P**	**15 06 39.3**	**-1.8**
WRA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ARCES	**ARCESS Array B**	**61.91**	**339**	P	**P**	**15 06 58.6**	**-1.3**
	comp=Z,1.5nm,0.9s,mb4.1,baz=55,slow=9.1,SNR=4.1						

comp=Z,5.4nm,0.9s,mb4.6,baz=46,slow=8.2,SNR=11
FINES FINESS Array B 66.79 332 P **P 15 07 31.5 -0.5**
FINES pmax pmax
comp=Z,5.0nm,0.9s
KIV Kislovodsk 69.25 310 *e*P **P 15 07 48.5 +0.7**
KIV pmax pmax
comp=Z,15nm,1.0s,mb4.9
KIV MLR MLR
comp=Z,16nm,18.0s,MS3.3
ANN Anapa 71.81 313 *e*P **P 15 08 01.5 -1.9**
ANN *e**PP pP 15 08 11.6 +5.3
ANN *e* 15 10 41.6
ANN *e*PPP 15 12 25.5
ANN *e*S S 15 17 20.5 -3.3
ANN pmax pmax
comp=Z,43nm,1.4s,mb5.2
NB2 NORSAR Subarra 72.11 337 P **P 15 08 04.4 -0.5**
comp=Z,1.2nm,0.7s,mb3.9,baz=40,slow=6.2
NOA NORSAR Array B 72.11 337 P **P 15 08 04.7 -0.3**
comp=Z,1.2nm,0.6s,mb4.0,baz=38,slow=6.0,SNR=6.6
NOA LR LR 15 41 37.1
comp=Z,24nm,21.2s,MS3.4,baz=50,slow=37
NOA NORSAR Array B 72.11 337 P **P 15 08 04.7 -0.2**
NOA pmax pmax
comp=Z,1.0nm,0.6s
AKASG Malin Array Be 72.41 322 P **P 15 08 06.4 -0.5**
comp=Z,1.1nm,0.4s,mb4.2,baz=47,slow=6.0,SNR=6.0
AKASG Malin Array Be 72.41 322 P **P 15 08 06.4 -0.5**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
NVAR Mina Array Bea 74.06 53 P **P 15 08 17.8 +1.0**
comp=Z,0.6nm,0.7s,mb3.7,baz=292,slow=5.0,SNR=6.0
BUR08 Bucovina Ar. S 76.42 321 *e*P **P 15 08 30.3 0.0**
PDAR Pinedale Array 76.48 46 P **P 15 08 31.1 +0.4**
comp=Z,0.5nm,0.5s,mb3.7,baz=5.2,slow=1.6,SNR=6.4
BRTR Keskin Array B 77.18 311 P **P 15 08 34.7 0.0**
comp=Z,0.7nm,0.6s,mb3.8,baz=49,slow=4.3,SNR=4.3
BRTR Keskin Array B 77.18 311 P **P 15 08 34.7 0.0**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
CLL Collm 79.09 330 *e*P **P 15 08 44.0 -1.1**
CLL Collm 79.09 330 *e*P **P 15 08 44.0 -1.1**
TXAR Lajitas Array 89.15 52 P **P 15 09 38.3 +1.6**
comp=Z,0.1nm,0.4s,mb3.5,baz=330,slow=3.7,SNR=3.6
VNA1 Neumayer--Stat 144.60 197 *e*PKPdf PKPdf 15 16 14.4 -1.9
LPAZ La Paz 145.92 56 PKPbc PKPbc 15 16 21.6 +0.7
comp=Z,0.6nm,0.5s,baz=63,slow=2.3,SNR=3.5

WEL 14 14:56:49.3±0.1, 37°.81S×176°.84E, h5km, ML3.5/7, 4C-4D, Error ellipse: s-maj=0.9km s-min=0.7km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARZ	**Manawahe**	**0.22**	**216**	⇑PG	Pg	14 56 54.1	+0.4
MARZ				SG	Sg	14 56 57.1	+0.4
OPRZ	**Ohinepanea**	**0.23**	**260**	⇓PG	Pg	14 56 53.9	+0.1
OPRZ				SG	Sg	14 56 57.2	+0.4
EDRZ	**Edgecumbe**	**0.31**	**195**	⇑PG	Pg	14 56 55.8	+0.5
WIZ	**White Island**	**0.39**	**45**	PG	Pg	14 56 57.4	+0.5
WIZ				SG	Sg	14 57 02.8	+0.8
LIRZ	**Lichensteins R**	**0.41**	**241**	⇓PG	Pg	14 56 57.7	+0.5
MKRZ	**Makatiti**	**0.44**	**221**	PG	Pg	14 56 58.8	+0.9
TGRZ	**Tauranga**	**0.46**	**279**	PG	Pg	14 56 58.4	+0.1
OMRZ	**Omania**	**0.48**	**231**	⇓PG	Pg	14 56 58.8	+0.3
URZ	**Urewera**	**0.50**	**155**	⇑PG	Pg	14 56 59.1	+0.1
TARZ	**Mount Tarawera**	**0.50**	**211**	PG	Pg	14 56 59.8	+0.8
KARZ	**Kaharoa**	**0.52**	**245**	⇓PG	Pg	14 56 59.6	+0.3
RRRZ	**Republican Roa**	**0.59**	**205**	PG	Pg	14 57 00.9	+0.2
UTU	**Utuhina**	**0.63**	**234**	P*	Pb	14 57 02.0	-0.8
MYRZ	**Mayor Island**	**0.71**	**318**	P*	Pb	14 57 03.0	-1.1
HRRZ	**Handcock Road**	**0.73**	**217**	P*	Pb	14 57 03.6	-0.9
MWZ	**Matawai**	**0.76**	**134**	⇑P*	Pb	14 57 04.0	-1.1
PRRZ	**Plateau Road**	**0.78**	**207**	P*	Pb	14 57 04.3	-1.0
ALRZ	**Allen Road**	**0.85**	**207**	P*	Pb	14 57 05.7	-0.9
TOZ	**Tahuroa Road**	**1.06**	**274**	P*	Pb	14 57 08.5	-1.7
RAHZ	**Arahi**	**1.13**	**170**	P*	Pb	14 57 10.0	-1.3
BKZ	**Black Stump Fm**	**1.39**	**191**	P*	Pb	14 57 13.3	-2.4
MKAZ	**Moumakai**	**1.50**	**297**	PN	Pn	14 57 13.6	-3.2
MHGZ	**Mahia Peninsul**	**1.59**	**148**	PN	Pn	14 57 17.7	-0.4
KAHZ	**Kahuranaki**	**1.99**	**179**	PN	Pn	14 57 23.1	-0.5
PXZ	**Pawanui**	**2.22**	**180**	PN	Pn	14 57 25.3	-1.5
TSZ	**Takapari Road**	**2.35**	**197**	PN	Pn	14 57 28.3	-0.3

NIED ***14*** *14:57:00, 21°.00N×121°.40E, h8km, Mw3.7 Best double couple: M0=4.67000×10^14^ NP1:φ=4.00000°, δ=84.00000°, λ=152.00000°. NP2:φ=97.00000°, δ=63.00000°, λ=7.00000°.*
ISCJB ***14*** *14:57:05.8±0.7, 20°.99N±0°.05×121°.16E±0°.10, h33km, mb3.4/3, Error ellipse: s-maj=12.9km s-min=7.2km az=177.7*
TAP ***14*** *14:57:06.2, 21°.20N×121°.15E, h83km, ML3.9, C*
IDC ***14*** *14:57:27.3±1.8, 17°.04N×118°.86E, h0km, mb3.5/3, mb1 3.8/4, mb1mx3.4/21, mbtmp3.5/4, ML3.9/1, Error ellipse: s-maj=70.8km s-min=27.3km az=50.0*
ISC 14 14:57:07.6±0.7, 21°.05N±0°.05×121°.14E±0°.09, h35km, n33, σ0=99/36, mb3.4/3, 1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**0.87**	**345**	P	**Pn**	**14 57 23.3**	**-0.1**
TSEB	baz=333			*e*S	**Sn**	**14 57 35.7**	**+0.9**
TWK1	**Hengchun**	**0.94**	**341**	⇓*i*P	**Pn**	**14 57 23.7**	**-0.6**
TWK1	baz=337			*e*S	**Sn**	**14 57 37.5**	**+1.1**
HEN	**Hengchun**	**1.02**	**339**	*e*P	**Pn**	**14 57 25.3**	**-0.1**
LAY	baz=328 **Lan-yu**	**1.05**	**21**	P	**Pn**	**14 57 24.7**	**-1.1**
LAY	baz=24			*e*S	**Sn**	**14 57 38.3**	**-1.0**
TAW	**Tawu**	**1.32**	**350**	*e*P	**Pn**	**14 57 28.1**	**-1.4**
EAST	baz=357 **Anshou**	**1.35**	**349**	P	**Pn**	**14 57 29.1**	**-0.8**
SCZT	baz=355 **Fangliau**	**1.40**	**340**	P	**Pn**	**14 57 29.5**	**-1.1**
TTN	baz=338 **Taitung**	**1.69**	**0**	*e*P	**Pn**	**14 57 33.8**	**-0.8**
SSD	baz=6.0 **Sandimen**	**1.75**	**344**	*e*P	**Pn**	**14 57 34.3**	**-1.1**
TWG	baz=333 **Pinlang**	**1.76**	**358**	*e*P	**Pn**	**14 57 36.9**	**+1.3**
TWM1	baz=358 **Shoushan**	**1.88**	**339**	*e*P	**Pn**	**14 57 38.0**	**+0.7**
SGST	baz=327 **Jiashian**	**2.08**	**346**	P	**Pn**	**14 57 39.0**	**-1.0**
ELDTW	baz=335 **Lidau**	**2.13**	**357**	*e*P	**Pn**	**14 57 39.7**	**-1.0**
CHN1	baz=1.0 **Nanshi**	**2.20**	**345**	*e*P	**Pn**	**14 57 40.3**	**-1.3**
WTP	baz=344 **Ta-pu**	**2.24**	**348**	*e*P	**Pn**	**14 57 41.1**	**-1.0**
TWF1	baz=347 **Yuli**	**2.29**	**4**	*e*P	**Pn**	**14 57 42.5**	**-0.4**
CHN4	baz=358 **Tsaushan**	**2.34**	**348**	*e*P	**Pn**	**14 57 45.9**	**+2.3**
YUS	baz=357 **Yu-Shan**	**2.43**	**356**	*e*P	**Pn**	**14 57 46.0**	**+1.2**
EHY	baz=356 **Hungye**	**2.45**	**4**	*e*P	**Pn**	**14 57 46.1**	**+1.1**
ALS	baz=4.0 **Alishan**	**2.46**	**353**	*e*P	**Pn**	**14 57 45.3**	**+0.1**
ESL	baz=352 **Shilin**	**2.76**	**6**	*e*P	**Pn**	**14 57 49.5**	**+0.2**
SMLT	baz=6.0 **Sun Moon Lake**	**2.83**	**356**	*e*P	**Pn**	**14 57 50.3**	**+0.1**
TYC	baz=355 **Yuchr**	**2.85**	**355**	*e*P	**Pn**	**14 57 50.6**	**0.0**
PNG	baz=355 **Penghu**	**2.90**	**330**	*e*P	**Pn**	**14 57 48.9**	**-2.4**
WHF	baz=322 **Hehuan Shan**	**3.08**	**2**	*e*P	**Pn**	**14 57 54.4**	**+0.7**
TWT	baz=352 **Tachien**	**3.19**	**1**	*e*P	**Pn**	**14 57 55.9**	**+0.8**
TWQ1	baz=351 **Liyutan**	**3.30**	**354**	*e*P	**Pn**	**14 57 57.0**	**+0.4**
NNS	baz=345 **Nan Shan**	**3.38**	**4**	*e*P	**Pn**	**14 57 59.6**	**+1.8**
ENA	baz=12 **Nanau**	**3.41**	**9**	*e*P	**Pn**	**14 57 58.4**	**+0.2**
NSK	baz=360 **Sanguang**	**3.61**	**3**	*e*P	**Pn**	**14 58 02.1**	**+1.1**
CMAR	baz=355 **Chiang Mai Arr**	**21.05**	**267**	P	**P**	**15 01 49.2**	**+0.6**
WRA	0.2nm,0.3s,mb2.9,baz=66,slow=9.7,SNR=6.5 **Warramunga Arr**	**42.74**	**162**	P	**P**	**15 05 01.1**	**-0.5**
ASAR	0.9nm,0.6s,mb3.7,baz=344,slow=9.1,SNR=8.2 **Alice Springs**	**46.16**	**164**	P	**P**	**15 05 29.7**	**+0.9**
	0.3nm,0.4s,mb3.6,baz=342,slow=6.9,SNR=13						

MOS ***14*** *14:59:15.2±2.2, 52°.75N×108°.27E, h12km, mb4.2/2, Error ellipse: s-maj=22.4km s-min=12.2km az=50.5*
BYKL 14 14:59:14.6±0.3, 53°.24N×107°.78E, h14km±6km, 11C-11D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OGRR	**Ongureny**	**0.42**	**345**	*e*PG	Pg	14 59 23.4	+0.4
OGRR	comp=Z,257nm,0.1s			pmax	pmax		
OGRR	**Ongureny**	**0.42**	**345**	⇓*i*Pg	Pg	14 59 23.3	+0.3
OGRR				*e*Sg	Sg	14 59 28.7	+0.1
OGRR	comp=Z,136nm,0.1s			Pmax			
OGRR	comp=Z,751nm,0.1s			Smax			
MXMB	**Maximikha**	**0.58**	**87**	⇑*i*Pg	Pg	14 59 25.3	-0.7
MXMB				*e*Sg	Sg	14 59 33.5	-0.2
MXMB	comp=Z,212nm,0.1s			Pmax			
MXMB	comp=Z,3μm,0.6s			Smax			
ZRHB	**Zarechye**	**0.79**	**209**	⇓*i*Pg	Pg	14 59 29.9	+0.1
ZRHB				*e*Pb	Pb	14 59 31.3	+1.3
ZRHB				*i* Sg	Sg	14 59 41.3	+1.2
ZRHB				*e*Sb	Sb	14 59 43.7	+3.2
ZRHB	comp=Z,150nm,0.2s			max			
ZRHB	comp=Z,2μm,0.6s			max			
TRG	**Tyrgan**	**0.99**	**242**	*e*PG	Pg	14 59 32.5	-1.2
TRG	comp=Z,230nm,0.1s			pmax	pmax		
TRG	**Tyrgan**	**0.99**	**242**	⇓*i*Pg	Pg	14 59 32.5	-1.2
TRG				⇑*i*Pb	Pb	14 59 34.7	+1.2
TRG				*e*		14 59 38.2	
TRG				*e*Sg	Sg	14 59 46.2	-0.4
TRG	comp=Z,231nm,0.2s			max			
TRG	comp=Z,1μm,0.1s			Smax			
FFNB	**Fofonovo**	**1.35**	**208**	⇓*i*Pg	Pg	14 59 39.0	-1.5
FFNB				⇓*i*Pb	Pb	14 59 39.7	+0.2
FFNB				*i* Sg	Sg	14 59 57.4	-0.5
FFNB	comp=Z,3μm,0.4s			Smax			
KAB	**Kabansk**	**1.38**	**210**	*e*PG	Pg	14 59 39.9	-1.1
KAB				*e*		14 59 59.0	
KAB	comp=Z,163nm,0.4s			pmax	pmax		
KAB	comp=N,2μm,0.6s			smax			
KAB	**Kabansk**	**1.38**	**210**	⇓*i*Pg	Pg	14 59 40.2	-0.8
KAB				*e*Sg	Sg	14 59 58.9	0.0
KAB	comp=N,177nm,0.4s			Pmax			
KAB	comp=N,2μm,0.6s			Smax			
UUDB	**Ulan-Yde**	**1.38**	**183**	⇑*i*Pg	Pg	14 59 39.7	-1.4
UUDB				*e*Sg	Sg	14 59 58.2	-0.7
UUDB	comp=N,67nm,0.1s			Pmax			
UUDB	comp=N,269nm,0.3s			Smax			
SYVR	**Suvo**	**1.39**	**72**	*e*PG	Pg	14 59 39.5	-1.8
SYVR				*e*		14 59 58.1	
SYVR	comp=Z,92nm,0.1s			pmax	pmax		
SYVR	comp=E,338nm,0.3s			smax			
SYVR	**Suvo**	**1.39**	**72**	⇓*i*Pg	Pg	14 59 39.5	-1.8
SYVR				*e*		14 59 47.7	
SYVR				*e*Sg	Sg	14 59 58.3	-1.1
SYVR	comp=E,55nm,0.1s			Pmax			
SYVR	comp=E,324nm,0.3s			Smax			
HRMR	**Khuramsha**	**1.69**	**198**	⇑*i*Pg	Pg	14 59 44.2	-2.8
HRMR				⇓*i*Pg	Pg	14 59 45.4	-1.6
HRMR				*e*Sg	Sg	15 00 07.6	-1.4
LSTR	**Listvyanka**	**2.26**	**234**	⇑*i*Pn	Pn	14 59 52.2	+0.7
LSTR				*e*Pg	Pg	14 59 55.0	-3.0
LSTR				*e*		15 00 20.6	
LSTR				*e*Sg	Sg	15 00 24.0	-3.3
LSTR	comp=E,30nm,0.2s			Pmax			
LSTR	comp=E,98nm,0.4s			Smax			
IRK	**Irkutsk**	**2.35**	**246**	*e*PN	Pn	14 59 57.5	+4.7
IRK				*e*		15 00 25.5	
IRK	comp=Z,44nm,0.1s			pmax	pmax		
IRK	comp=N,848nm,0.4s			smax			
IRK	**Irkutsk**	**2.35**	**246**	*e*	Pn	14 59 33.0	-20
IRK				*e*Sg	Sg	15 00 26.0	-4.2
IRK	comp=N,846nm,0.4s			Smax			
NIZ	**Nizh Angarsk**	**2.74**	**21**	*e*PN	Pn	15 00 03.5	+5.4
NIZ				*e*		15 00 38.4	
NIZ	comp=Z,25nm,0.3s			pmax	pmax		
NIZ	comp=N,96nm,0.5s			smax			
NIZ	**Nizh Angarsk**	**2.74**	**21**	⇑*i*Pn	Pn	14 59 59.3	+1.2
NIZ				*e*Pg	Pg	15 00 03.0	-4.1
NIZ				*e*		15 00 32.9	
NIZ				*e*Sg	Sg	15 00 38.9	-3.7
NIZ	comp=N,23nm,0.4s			Pmax			
NIZ	comp=N,96nm,0.5s			Smax			
TLY	**Talaya**	**2.97**	**240**	*e*PN	Pn	15 00 01.9	+0.6
TLY				*e*		15 00 07.6	
TLY				*e*		15 00 45.0	
TLY	comp=Z,11nm,0.4s			pmax	pmax		
TLY	comp=E,101nm,0.2s			smax			
TLY	**Talaya**	**2.97**	**240**	*e*Pn	Pn	15 00 01.9	+0.6
TLY				*e*Pg	Pg	15 00 08.0	-3.5
TLY				*e*Sg	Sg	15 00 46.2	-3.8
TLY	comp=E,10.0nm,0.2s			Pmax			
TLY	comp=E,107nm,0.2s			Smax			
KMO	**Kumora**	**3.32**	**36**	⇑*i*Pn	Pn	15 00 06.9	+0.9
KMO				*e*		15 00 08.0	
KMO				⇑*i*Pg	Pg	15 00 13.2	-4.9
KMO				*e*PgPg		15 00 16.5	
KMO				*e*Sg	Sg	15 00 56.9	-4.1
KMO	comp=E,27nm,0.6s			max			
KMO	comp=E,78nm,0.9s			Smax			
ARS	**Arshan**	**3.52**	**250**	*e*PN	Pn	15 00 17.9	+9.0
ARS	**Arshan**	**3.52**	**250**	*e*Pn	Pn	15 00 08.4	-0.5
ARS				*e*		15 00 09.9	
ARS				*e*Pg	Pg	15 00 17.2	-4.9
ARS				*i* Sg	Sg	15 01 01.1	-6.6
ARS				*e*SgSg		15 01 04.9	
ARS	comp=E,36nm,0.6s			Pmax			
ARS	comp=E,249nm,0.7s			max			
YOA	**Uoyan**	**3.69**	**37**	*e*PN	Pn	15 00 21.9	+11
YOA	comp=Z,53nm,0.3s			pmax	pmax		
YOA	**Uoyan**	**3.69**	**37**	*e*Sg	Sg	15 01 11.7	-1.4
YOA				*e*		15 01 17.5	
YOA	comp=Z,188nm,1.1s			max			
CIT	**Chita**	**3.72**	**107**	*e*Sg	Sg	15 01 09.1	-4.9
CIT				Smax			
	comp=Z,166nm,0.2s						
MOY	**Mondy**	**4.44**	**252**	⇓*i*Pn	Pn	15 00 24.7	+3.3
MOY				⇓*i*Pg	Pg	15 00 32.5	-7.1
MOY				*e*		15 01 17.4	
MOY				*e*Sg	Sg	15 01 30.1	-6.9
MOY				Pmax			
MOY	comp=Z,12nm,0.6s			Smax			
	comp=Z,89nm,1.0s						
KPC	**Khapcheranga**	**4.56**	**139**	⇓*i*Pn	Pn	15 00 22.1	-1.0
KPC				*e*Pg	Pg	15 00 35.4	-6.5
KPC				*e*Sn	Sn	15 01 12.3	-3.5
KPC				*i* Sg	Sg	15 01 34.8	-6.1
ORL	**Orlik**	**4.88**	**265**	⇑*i*Pn	Pn	15 00 30.8	+3.4
ORL				*e*Sg	Sg	15 01 45.1	-5.9
ORL				max			
	comp=Z,15nm,0.5s						
ORL				Smax			
	comp=Z,81nm,1.0s						
ULN	**Ulaanbaatar**	**5.40**	**185**	*e*	Pn	15 00 40.7	+6.1
ULN				*e*		15 01 38.2	
ULN				*e*Sg	Sg	15 02 01.2	-6.7
TDJR	**Todzha**	**7.13**	**268**	*e*	Pn	15 01 08.1	+10
TDJR				*e*		15 01 24.0	
TDJR				*e*Sg	Sn	15 02 55.4	+36
TUP	**Tupik**	**7.30**	**76**	*e*PN	Pn	15 01 00.2	-0.5
TUP				*e*		15 01 23.9	
TUP				*e*		15 02 59.3	
TUP				pmax	pmax		
	comp=Z,2.0nm,0.4s						
TUP				smax			
	comp=N,44nm,1.0s						
TUP	**Tupik**	**7.30**	**76**	⇑*i*Pn	Pn	15 01 00.4	-0.3
TUP				*e*		15 01 09.6	
TUP				⇑*e*Pg	Pn	15 01 26.2	+25
TUP				*e*		15 02 29.1	
TUP				*i* Sg	Sn	15 03 00.8	+37
TUP				Pmax			
	comp=N,3.0nm,0.9s						
TUP				Smax			
	comp=N,44nm,1.2s						

CASC 14 15:33:31.2±2.4, 8°.33N×82°.77W, h9km±7km, MD3.7, 1C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.47**	**9**	⇓*i*P	Pg	15 33 41.5	+1.1
BRU2				*e*S	Sg	15 33 49.5	+3.0
TBS2		**0.47**	**14**	*e*P	Pg	15 33 48.8	+8.4
TBS2				*e*S	Sg	15 33 57.2	+11
ACR	**Cerro Adams**	**0.51**	**309**	⇑*e*P	Pg	15 33 40.4	-0.7
ACR				*e*S	Sg	15 33 49.4	+1.6
CTCR	**Cotoan**	**0.56**	**1**	⇓*i*P	Pg	15 33 42.7	+0.6
CTCR				*e*S	Sg	15 33 51.3	+1.8
BAR1		**1.05**	**329**	*e*P	Pg	15 33 50.0	-1.5
BAR1				*e*S	Sg	15 34 04.4	-0.8
URSC	**Urasca**	**1.80**	**326**	*e*P	Pn	15 34 01.9	-0.5
URSC				*e*S	Sn	15 34 25.4	0.0
LAJ	**Bijagual**	**2.03**	**319**	*e*P	Pn	15 34 08.9	+3.4
LAJ				*e*S	Sn	15 34 38.8	+7.8
PRS1	**Puriscal**	**2.24**	**317**	⇓*e*P	Pn	15 34 07.6	-0.9
PRS1				*e*S	Sn	15 34 36.5	+0.2
CGA2	**Cerro Gallo 2**	**2.37**	**315**	*e*P	Pn	15 34 11.6	+1.4
CGA2				*e*S	Sn	15 34 40.8	+1.4

SZGRF ***14*** *15:37:39.7, 23°.71S×177°.69W, h33km, South of Fiji Islands*
ISCJB ***14*** *15:38:52.4±1.0, 21°.05S±0°.1×179°.3W±0°.1, h630km±12km, mb4.0/16, Error ellipse: s-maj=17.6km s-min=13.9km az=152.5*
NEIC ***14*** *15:38:52.4±0.9, 20°.97S×179°.17W, h621km±9km, mb4.0/4, Error ellipse: s-maj=13.8km s-min=11.0km az=124.0*
IDC ***14*** *15:38:55.0±2.3, 21°.21S×179°.24W, h654km±30km, mb3.3/9, mb1 3.6/9, mb1mx3.4/15, mbtmp3.3/9, Error ellipse: s-maj=31.1km s-min=11.5km az=160.0*
ISC 14 15:38:53.1±1.0, 21°.05±0°.1×179°.3W±0°.1, h621km±12km, n55, σ0=87/30, mb4.0/16, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.12**	**321**	*e*P	**P**	**15 40 20.4**	**-0.6**
OUZ	**Omahuta**	**15.50**	**202**	*e*P	**P**	**15 42 05.5**	**+0.6**
URZ	**Urewera**	**17.49**	**190**	P	**P**	**15 42 18.6**	**-4.4**
	6.2nm,0.3s,baz=275,slow=2.2,SNR=46						
URZ	**Urewera**	**17.49**	**190**	*e*P	**P**	**15 42 18.4**	**-4.6**
RPZ	**Rata Peaks**	**24.05**	**197**	P	**P**	**15 43 19.6**	**-2.1**
	4.6nm,0.6s,mb4.3,baz=311,slow=15,SNR=6.2						
EIDS	**Eidsvold**	**27.58**	**255**	*e*P	**P**	**15 43 53.2**	**+0.2**
ARMA	**Armidale**	**27.79**	**244**	*e*P	**P**	**15 43 55.8**	**+1.1**
CTA	**Charters Tower**	**32.27**	**265**	*e*P	**P**	**15 44 33.8**	**+0.6**
	6.3nm,0.3s,mb4.7						
CTAO	**Charters Tower**	**32.27**	**265**	*e*P	**P**	**15 44 33.7**	**+0.5**
PMG	**Port Moresby**	**34.31**	**284**	*e*P	**P**	**15 44 50.9**	**+0.5**
STKA	**Stephens Creek**	**36.51**	**245**	*e*P	**P**	**15 45 08.7**	**+0.5**
	1.9nm,0.5s,mb3.9						
STKA	**Stephens Creek**	**36.51**	**245**	P	**P**	**15 45 08.6**	**+0.4**
	2.1nm,0.5s,mb4.0,baz=84,slow=8.9,SNR=16						
STKA	**Stephens Creek**	**36.51**	**245**	*e*P	**P**	**15 45 08.6**	**+0.4**
ASAR	**Alice Springs**	**43.26**	**257**	P	**P**	**15 46 02.1**	**+0.1**
	7.5nm,0.5s,mb4.4,baz=92,slow=8.0,SNR=263						
ASAR				PcP	PcP	15 47 36.3	-0.3
	1.0nm,0.6s,baz=103,slow=3.6,SNR=7.8						
ASAR				ScP	ScP	15 50 33.1	+3.4
	0.3nm,0.6s,baz=104,slow=4.6,SNR=5.1						
ASAR				S	**S**	**15 51 44.4**	**-1.5**
	0.9nm,0.5s,baz=84,slow=8.7,SNR=27						
WRAB	**Tennant Creek**	**43.36**	**263**	*e*P	**P**	**15 46 01.9**	**-0.9**
	3.4nm,0.4s,mb4.2						
WRA	**Warramunga Arr**	**43.37**	**263**	P	**P**	**15 46 02.5**	**-0.3**
	3.4nm,0.3s,mb4.3,baz=97,slow=7.8,SNR=124						
WRA				S	**S**	**15 51 45.1**	**-2.3**
	0.7nm,0.3s,baz=64,slow=21,SNR=16						
KAKA	**Kakadu**	**46.81**	**272**	*e*P	**P**	**15 46 30.6**	**+1.5**
	5.2nm,0.3s,mb4.5						
KAKA	**Kakadu**	**46.81**	**272**	*e*P	**P**	**15 46 30.4**	**+1.3**
FORT	**Forrest**	**48.02**	**247**	*e*P	**P**	**15 46 37.3**	**-0.6**
	14nm,0.6s,mb4.7						
FITZ	**Fitzroy Crossi**	**51.80**	**263**	*e*P	**P**	**15 47 05.9**	**+0.4**
	12nm,1.4s,mb4.0						
SBA	**Scott Base**	**57.30**	**183**	*e*P	**P**	**15 47 44.0**	**+1.1**
	2.0nm,0.8s,mb3.4						
QSPA	**South Pole Qui**	**69.08**	**180**	*e*P	**P**	**15 48 57.3**	**-0.5**
	2.2nm,0.7s,mb3.7						
MJAR	**Matsushiro Arr**	**69.92**	**325**	P	**P**	**15 49 02.8**	**-0.7**
	1.1nm,0.4s,mb3.6,baz=150,slow=5.3,SNR=5.0						
NVAR	**Mina Array Bea**	**82.19**	**44**	P	**P**	**15 50 10.3**	**-0.3**
	0.6nm,0.5s,mb3.4,baz=225,slow=7.3,SNR=7.8						
NVAR	**Mina Array Bea**	**82.19**	**44**	P	**P**	**15 50 10.3**	**-0.3**
TXAR	**Lajitas Array**	**88.31**	**58**	P	**P**	**15 50 40.6**	**+0.3**
	0.9nm,0.8s,mb3.5,baz=218,slow=6.8,SNR=10						
CMAR	**Chiang Mai Arr**	**89.17**	**290**	P	**P**	**15 50 45.6**	**+1.1**
	1.8nm,0.9s,mb3.9,baz=128,slow=2.7,SNR=10.0						
PDAR	**Pinedale Array**	**90.13**	**44**	P	**P**	**15 50 48.0**	**-0.4**
	0.7nm,0.7s,mb3.6,baz=236,slow=2.7,SNR=5.9						
WVT	**Waverly**	**103.18**	**56**	P	Pdif	15 51 48.1	+1.0
	2.7nm,0.6s						
MKAR	**Makanchi Array**	**110.68**	**313**	PKiKP	PKiKP	15 56 14.8	-1.6
	0.1nm,0.4s,baz=163,slow=0.6,SNR=6.3						
MKAR	**Makanchi Array**	**110.68**	**313**	PKPdf	PKiKP	15 56 14.8	-1.7
BVAR	**Borovoye Array**	**118.70**	**320**	PKP	PKPdf	15 56 30.4	-1.2
	1.1nm,0.4s,baz=118,slow=2.8,SNR=7.6						
SPITS	**Spitsbergen Ar**	**122.28**	**356**	PKP	PKPdf	15 56 36.4	-1.5
	2.1nm,0.6s,baz=104,slow=6.1,SNR=6.2						
ARCES	**ARCESS Array B**	**129.19**	**349**	PKP	PKPdf	15 56 50.0	-1.2
	1.4nm,0.5s,baz=47,slow=0.9,SNR=17						
FINES	**FINESS Array B**	**135.91**	**343**	PKP	PKPdf	15 57 03.4	-0.7
	0.8nm,0.5s,baz=63,slow=0.4,SNR=5.7						
AKASG	**Malin Array Be**	**142.86**	**330**	PKP	PKPdf	15 57 13.6	-3.4
	4.8nm,0.4s,baz=43,slow=4.2,SNR=33						
AKBB	**Malin Array Si**	**142.86**	**330**	*e*PKPpre	PKPdf	15 57 13.5	-3.5
KIEV	**Kiev**	**142.87**	**330**	*e*PKPpre	PKPdf	15 57 13.6	-3.5
EKA	**Eskdalemuir Ar**	**145.59**	**4**	PKPbc	PKPbc	15 57 21.9	-1.3
	3.1nm,0.8s,baz=337,slow=1.9,SNR=7.3						
BR131	**Keskin

CLL	Collm	148.26	345	ePKPbc	PKPbc	15 57 30.0	-0.4
CLL	Collm	148.26	345	⇓iPKPbc	PKPbc	15 57 29.8	-0.6
	comp=Z,6.0nm,0.9s						
BRG	Berggiesshubel	148.43	344	ePKPbc	PKPbc	15 57 30.1	-0.7
MOX	Moxa	149.19	346	ePKPbc	PKPbc	15 57 30.9	-1.8
TANN	Tannenbergstha	149.22	345	ePKPbc	PKPbc	15 57 32.4	-0.3
PLN	Plauen	149.22	346	ePKPbc	PKPbc	15 57 31.9	-0.8
WERD	Werda	149.22	345	ePKPbc	PKPbc	15 57 32.1	-0.6
GUNZ	Gunzen	149.29	345	ePKPbc	PKPbc	15 57 32.5	-0.4
NKC	Novy Kostel	149.39	345	ePKPbc	PKPbc	15 57 33.2	+0.1
TNS	Taunus Mts	150.20	350	ePKPbc	PKPbc	15 57 34.4	-0.7
GEC2	GERESS Array S	150.34	343	ePKPbc	PKPbc	15 57 34.7	-0.7

NEIC ***14*** *15:49:33.4±1.1, 10°.27N×91°.01E, h10km, Error ellipse: s-maj=27.4km s-min=15.1km az=68.0*

IDC 14 15:49:32.0±2.0, 10°.31N×91°.06E, h0km, mb3.5/5, mb1 3.6/6, mb1mx3.4/23, mbtmp3.5/6, ML3.5/1, MS2.8/1, Ms1 2.8/1, ms1mx2.2/23, Error ellipse: s-maj=66.7km s-min=21.8km az=66.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	10.80	133		LR	LR	15 56 49.9	
	comp=Z,47nm,18.2s,baz=211,slow=40							
CMAR	Chiang Mai Arr	11.13	42	Pn		Pn	15 52 14.0	+1.4
	0.1nm,0.3s,baz=229,slow=17,SNR=4.2							
MK31	Makanchi Array	37.12	350	eP		P	15 56 45.0	+0.8
MKAR	Makanchi Array	37.12	350	P		P	15 56 44.8	+0.5
	1.4nm,0.8s,baz=171,slow=8.6,SNR=17							
SONM	Songino Array	39.58	16	P		P	15 57 04.0	-0.9
	0.4nm,0.7s,baz=203,slow=11,SNR=3.3							
ZALV	Zalesovo Beam	43.81	355	P		P	15 57 39.5	-0.1
	0.2nm,0.3s,baz=168,slow=7.6,SNR=3.9							
WRA	Warramunga Arr	52.14	125	P		P	15 58 44.4	-0.1
	0.9nm,0.8s,baz=302,slow=10.0,SNR=4.3							
ASAR	Alice Springs	53.80	129	P		P	15 58 57.0	+0.2
	0.3nm,0.7s,baz=307,slow=7.1,SNR=6.2							

BJI ***14*** *15:55:53.9, 63°.50N×123°.80W, h10km, mB4.9/11, mb4.7/15, Ms4.3/5, Ms7 4.1/6*

ISCJB ***14*** *15:55:55.3±0.2, 63°.55N±0°.02×123°.83W±0°.05, h10km, mb4.3/53, MS3.3/11, Error ellipse: s-maj=3.1km s-min=2.6km az=153.2*

PGC ***14*** *15:55:57.9±0.0, 63°.52N×123°.78W, h10km, ML5.0/4, Mw4.2, 234km northwest of Fort Simpson, Nt Northwest Territories, Canada*

NEIC ***14*** *15:55:57.9, 63°.52N×123°.78W, h10km, mb4.3/46, MW4.2(PGC), After PGC.*

IDC ***14*** *15:56:00.4±1.5, 63°.55N×123°.64W, h29km±11km, mb3.9/22, mb1 4.1/27, mb1mx4.0/36, mbtmp4.0/27, ML4.2/3, MS3.1/12, Ms1 3.1/12, ms1mx3.0/34, Error ellipse: s-maj=8.7km s-min=8.2km az=155.0*

ISC 14 15:55:57.3±0.2, 63°.55N±0°.02×123°.71W±0°.04, h10km, (h14km±1.0km: pP-P), n292, σ1s11/305, mb4.3/53, MS3.3/10, 74C-86D, Northwest Territories

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ROMN	Roman Lake	2.63	70	⇑Pn		Pn	15 56 40.8	+1.1
ROMN				⇑Sn		Sn	15 57 12.2	+0.5
ROMN				⇑Sg		Sg	15 57 21.8	+0.1
CTLN	Castor Lake	3.50	72	⇓Pn		Pn	15 56 52.5	+0.8
CTLN				⇓Sn		Sn	15 57 32.5	-0.6
CTLN				⇑Sg		Sg	15 57 48.3	-1.3
YKW3	Yellowknife Ar	4.26	99	⇑Pn		Pn	15 57 02.1	+0.1
YKW3				⇓Sg		Sg	15 58 11.1	-2.8
YKA	Yellowknife Ar	4.28	100	Pn		Pn	15 57 01.4	-1.0
	3.5nm,0.3s,baz=283,slow=13,SNR=61							
YKA				Pg		Pg	15 57 17.8	-1.4
	62nm,0.3s,baz=285,slow=17,SNR=82							
YKA				Sn		Sn	15 57 48.7	-3.7
	30nm,0.3s,baz=287,slow=23,SNR=6.0							
YKA				Lg			15 58 10.6	
	174nm,0.3s,baz=285,slow=30,SNR=19							
YKA	Yellowknife Ar	4.28	100	Pn		Pn	15 57 01.4	-1.0
YKA				Pg		Pg	15 57 17.8	-1.4
YKA				Sn		Sn	15 57 48.7	-3.7
YKA				Lg			15 58 10.6	
FNBB	Fort Nelson	4.69	176	⇓Pn		Pn	15 57 06.8	-1.2
FNBB				⇓Sn		Sn	15 57 59.5	-2.9
JERN	Jeri Cho Mine,	5.79	59	⇑Pn		Pn	15 57 21.3	-1.8
JERN				⇓Sn		Sn	15 58 25.7	-3.8
JERN				⇑Sg		Sg	15 58 58.7	-4.2
DLBC	Dease Lake	5.98	214	Pn		Pn	15 57 25.1	-0.6
	6.3nm,0.3s,baz=27,slow=16,SNR=27							
DLBC				Sn		Sn	15 58 31.8	-2.3
	11nm,0.3s,baz=197,slow=19,SNR=3.8							
DLBC				LR		LR	16 00 05.6	
	comp=Z,109nm,21.4s,baz=334,slow=41							
DLBC	Dease Lake	5.98	214	ePn		Pn	15 57 25.1	-0.6
DLBC	Dease Lake	5.98	214	⇓Pn		Pn	15 57 24.9	-0.8
WHY	Whitehorse	5.99	246	⇓Pn		Pn	15 57 24.1	-1.7
INK	Inuvik	6.23	324	Pn		Pn	15 57 28.4	-0.7
	21nm,0.3s,baz=138,slow=12,SNR=184							
INK				Sn		Sn	15 58 37.4	-2.9
	29nm,0.3s,baz=272,slow=24,SNR=7.1							
INK				Lg			15 59 14.4	
	22nm,0.3s,baz=268,slow=25,SNR=3.1							
INK				LR		LR	16 00 29.1	
	comp=Z,132nm,20.2s,baz=242,slow=43							
INK	Inuvik	6.23	324	ePn		Pn	15 57 27.9	-1.2
	38nm,0.6s							
INK	Inuvik	6.23	324	⇑Pn		Pn	15 57 28.3	-0.9
INK				⇑Sn		Sn	15 58 35.4	-4.9
SKAG	Skagway	6.90	239	eP		Pn	15 57 37.1	-1.3
DAWY	Dawson	6.96	281	eP		Pn	15 57 37.7	-1.5
DAWY	Dawson	6.96	281	⇑Pn		Pn	15 57 37.9	-1.2
DAWY				⇓Sn		Sn	15 58 53.9	-4.4
HYT	Haines Junctio	7.01	253	⇓Pn		Pn	15 57 38.7	-1.1
PLBC	Pleasant Camp	7.31	242	⇓Pn		Pn	15 57 42.7	-1.3
EGAK	Eagle	7.72	287	ePn		Pn	15 57 48.3	-1.2
	97nm,0.6s							
PNL	Peninsula	8.42	250	Pn		Pn	15 57 59.1	0.0
	33nm,0.5s							
SIT	Sitka	8.69	227	eP		Pn	15 58 03.0	+0.2
MENT	Mentasta	9.04	275	ePn		Pn	15 58 05.4	-2.3
FSB	Fort Saint Jam	9.11	182	⇓Pn		Pn	15 58 07.2	-1.4
FSB				⇓Sg		Sn	16 00 38.7	+48
CRAG	Craig	9.40	215	ePn		Pn	15 58 14.9	+2.3
	101nm,1.2s							
RUBB	Prince Rupert	9.84	203	⇑Pn		Pn	15 58 18.4	-0.3
BMRM	Bremner River	10.06	265	ePn		Pn	15 58 22.1	+0.5
	9.2nm,0.4s							
SULB	Vanderhoof	10.31	182	⇓Pn		Pn	15 58 24.1	-1.0
COLA	College	10.58	288	ePn		Pn	15 58 27.5	-1.2
	10nm,0.6s							
UBRB	Upper Baezaeko	10.69	181	⇑Pn		Pn	15 58 29.0	-1.3
COLD	Coldfoot	11.59	300	ePn		Pn	15 58 41.1	-1.4
	16nm,0.5s							
BBB	Bella Bella	11.63	194	Pn		Pn	15 58 44.6	+1.5
	0.5nm,0.3s,baz=226,slow=14,SNR=6.2							
BBB				Lg			16 02 04.1	
	0.7nm,0.3s,baz=338,slow=14,SNR=4.4							
BBB				LR		LR	16 02 51.7	
	comp=Z,32nm,18.0s,baz=18,slow=35							
BBB	Bella Bella	11.63	194	Pn		Pn	15 58 44.6	+1.5
BBB				Lg			16 02 04.1	
BBB				LR		LR	16 02 51.7	
EDM	Edmonton	11.68	148	ePn		Pn	15 58 40.6	-3.2
TRF	Thorofare Moun	11.84	281	ePn		Pn	15 58 45.3	-0.6
	9.1nm,0.5s							
PPLA	Purkeypile	12.81	280	ePn		Pn	15 59 00.2	+1.1
	7.7nm,0.7s							
RSO	Redoubt South	13.92	270	Pn		Pn	15 59 14.2	-0.1
FFC	Flin Flon	14.16	119	ePn		Pn	15 59 12.0	-5.6
	14nm,0.5s							
RES	Resolute Bay	14.93	30	Pn		Pn	15 59 25.9	-2.0
RES				Sn		Sn	16 02 08.7	-4.4
	5.9nm,0.3s,baz=155,slow=22,SNR=7.3							
RES				Lg			16 03 45.4	
	baz=146,slow=24,SNR=4.1							
RES	Resolute Bay	14.93	30	ePn		Pn	15 59 25.2	-2.8
	42nm,0.8s							
FCC	Fort Churchill	14.99	95	ePn		Pn	15 59 25.4	-3.5
	0.5nm,0.6s							
KDAK	Kodiak Island	15.19	261	Pn		Pn	15 59 31.9	+0.3
KDAK	Kodiak Island	15.19	261	ePn		Pn	15 59 33.4	+1.9
	22nm,1.1s							
RPW	Rockport	15.19	174	P		Pn	15 59 35.2	+3.6
	2.3nm,0.5s							
B08A	Colville Reser	15.42	169	⇑P		Pn	15 59 32.6	-2.0
	baz=15							
WALA	Waterton Lakes	15.48	155	ePn		Pn	15 59 31.3	-4.1
	0.4nm,0.5s							
A14A	Double T Ranch	15.66	154	⇑P		Pn	15 59 32.9	-4.8
	baz=16,SNR=15							
NEW	Newport	15.75	164	eP		Pn	15 59 41.4	+2.5
	14nm,0.8s							
A15A	Johnson Ranch,	15.79	153	⇑P		Pn	15 59 34.7	-4.7
	baz=16,SNR=25							
OHAK	Old Harbor	15.82	260	eP		Pn	15 59 41.0	+1.2
	6.6nm,0.6s							
B13A	Whitefish	16.04	157	⇑P		Pn	15 59 38.8	-3.9
	baz=16							
ETW	Entiat	16.09	172	eP		Pn	15 59 48.4	+5.0
	14nm,0.7s							
NLWA	Neilton Lookou	16.20	180	eP		Pn	15 59 43.8	-0.9
	11nm,0.7s							
B14A	Marquette Ranc	16.27	154	⇑P		Pn	15 59 41.0	-4.7
	baz=16							
C11A	Tepee Creek (N	16.28	162	⇓P		Pn	15 59 41.5	-4.3
	baz=16							
OD2	Odessa Site #2	16.43	168	P		Pn	15 59 46.1	-1.6
	6.5nm,0.6s							
B15A	Bradely Ranch,	16.46	153	⇓P		Pn	15 59 43.2	-4.8
	baz=16,SNR=12							
BSMT	Bassoo Peak	16.49	158	eP		Pn	15 59 44.1	-4.4
	12nm,0.9s							
B16A	M & M Farms, S	16.54	151	⇑P		Pn	15 59 43.9	-5.2
	baz=16							
JTMT	Jette	16.68	157	eP		Pn	15 59 47.9	-2.9
	6.1nm,0.7s							
C14A	Swan Lake	16.75	156	⇓P		Pn	15 59 46.7	-5.1
	baz=17							
B17A	L&G Farms, Che	16.86	149	⇑P		Pn	15 59 48.6	-4.6
	baz=17							
SWMT	Swartz Lake	16.96	157	P		Pn	15 59 53.1	-1.3
	8.2nm,0.5s							
C15A	Salmond Ranch,	16.96	154	⇓P		Pn	15 59 50.1	-4.3
	baz=17							
B18A	Beardsley Farm	17.01	147	⇑P		Pn	15 59 49.4	-5.6
	baz=17,SNR=15							
C16A	Fuhringer Ranc	17.11	152	⇑P		Pn	15 59 51.7	-4.7
	baz=17							
D13A	Huson	17.28	158	⇑P		Pn	15 59 53.5	-4.9
	baz=17,SNR=6.0							
SLMT	Seeley Lake	17.30	156	P		Pn	15 59 54.3	-4.4
	48nm,0.5s							
EGMT	Eagleton	17.36	147	⇑P		Pn	15 59 53.8	-5.6
	baz=17,SNR=15							
EGMT	Eagleton	17.36	147	eP		Pn	15 59 53.4	-6.0
	14nm,0.5s							
D14A	Greenough	17.46	156	⇓P		Pn	15 59 55.9	-4.7
	baz=17							
C17A	Wharam Farm,	17.49	150	⇑P		Pn	15 59 56.2	-4.8
	baz=17							
MSO	Missoula	17.62	157	eP		Pn	15 59 57.2	-5.4
	5.0nm,0.6s							
CHMT	Chamberlain Mo	17.66	156	eP		Pn	15 59 59.2	-4.0
	80nm,1.2s							
F04A	Amboy	17.67	177	⇑P		Pn	15 59 59.8	-3.5
	baz=18							
D15A	Lincoln	17.68	154	⇓P		Pn	15 59 59.3	-4.1
	baz=18,SNR=5.5							
E12A	Beaver Dam Sad	17.77	161	⇑P		Pn	16 00 02.0	-2.5
	baz=18							
D16A	Dana Ranch, Ca	17.89	152	⇓P		Pn	16 00 01.6	-4.3
	baz=18,SNR=5.6							
E13A	Victor	17.96	158	⇓P		Pn	16 00 04.1	-2.7
	baz=18							
D17A	Six Diamond Ra	17.96	150	⇑P		Pn	16 00 03.0	-3.9
	baz=18							
LNOR	Lincoln Mounta	17.98	168	eP		Pn	16 00 07.2	+0.1
	4.2nm,0.5s							
F10A	Beach Ranch, E	17.99	165	⇓P		Pn	16 00 06.3	-0.9
	baz=18							
E14A	Clinton	18.10	157	⇑P		Pn	16 00 06.2	-2.4
	baz=18,SNR=7.5							
HRY	Holter Researc	18.14	153	eP		Pn	16 00 04.4	-4.6
	90nm,1.8s							
F11A	Grangeville	18.21	163	⇓P		Pn	16 00 09.2	-0.6
	baz=18							
E16A	East Helena	18.34	153	⇓P		Pn	16 00 08.1	-3.3
	baz=18							
G06A	Carlson Farm,	18.44	173	⇓P		Pn	16 00 12.0	-0.7
	baz=18							
F12A	Elk City	18.46	161	⇓P		Pn	16 00 12.1	-0.8
	baz=18							
G08A	Pilot Rock	18.50	169	⇑P		Pn	16 00 11.7	-1.7
	baz=18							
DGMT	Dagmar	18.51	136	⇑P		Pn	16 00 10.0	-3.6
	baz=18,SNR=16							
DGMT	Dagmar	18.51	136	eP		Pn	16 00 09.0	-4.6
	42nm,0.6s							
F13A	Darby	18.57	159	⇑P		Pn	16 00 12.7	-1.6
	baz=18							
E17A	Martinsdale	18.58	151	⇓P		Pn	16 00 12.4	-2.0
	baz=18							
G09A	Cove	18.62	167	⇓P		Pn	16 00 13.4	-1.4
	baz=19							
G11A	Walters Elk Ra	18.67	163	⇓P		Pn	16 00 14.8	-0.8
	baz=19,SNR=16							
E18A	Harlowton	18.69	149	⇓P		Pn	16 00 14.0	-1.8
	baz=19,SNR=8.2							
F14A	Wisdom	18.71	157	⇑P		Pn	16 00 15.2	-0.7
	baz=19							
F15A	Butte	18.84	155	⇓P		Pn	16 00 16.4	-1.1
	baz=19							
LRM	Limekiln Ridge	18.87	155	eP		Pn	16 00 18.6	+0.7
	22nm,0.6s							
H04A	Detroit Lake	18.93	177	⇑P		Pn	16 00 18.1	-0.5
	baz=19							
BMO	Blue Mountains	19.09	166	eP		Pn	16 00 20.1	-0.5
	1.9nm,0.6s							
F17A	Fitzpatrick Pl	19.15	151	⇓P		Pn	16 00 19.5	-1.8
	baz=19,SNR=7.0							
BOZ	Bozeman (W)	19.20	153	eP		Pn	16 00 22.2	+0.4
	4.0nm,0.3s							
G13A	Cobalt	19.26	159	⇑P		Pn	16 00 21.0	-1.7
	baz=19							
DLMT	Dillon	19.28	156	eP		Pn	16 00 21.4	-1.5
	5.4nm,0.6s							
F18A	Big Timber	19.36	149	⇑P		Pn	16 00 22.3	-1.5
	baz=19							
H11A	Donnelly	19.39	163	⇓P		Pn	16 00 22.1	-2.0
	baz=19							
G15A	Dillon	19.49	156	⇓P		Pn	16 00 24.0	-1.4
	baz=19							
G16A	Moss Hill, Enn	19.56	154	⇓P		Pn	16 00 24.4	-1.8
	baz=20							
I07A	Izee	19.66	171	⇑P		Pn	16 00 25.7	-1.7
	baz=20							
H12A	Diamond D Ranc	19.70	161	⇑P		Pn	16 00 26.2	-1.7
	baz=20							
H13A	Challis	19.78	160	⇓P		Pn	16 00 27.9	-0.9
	baz=20,SNR=11							
H14A	Leadore	19.87	158	⇓P		Pn	16 00 28.7	-1.2
	baz=20,SNR=13							
I10A	Payette	19.90	165	⇓P		Pn	16 00 28.6	-1.7
	baz=20							
G18A	Lazy EL Ranch,	19.95	150	⇑P		Pn	16 00 29.3	-1.6
	baz=20							
ULM	Lac du Bonnet	19.99	119	P		Pn	16 00 27.9	-3.4
	1.2nm,0.3s,baz=317,slow=12,SNR=7.0							
ULM				Lg			16 06 17.0	
	0.7nm,0.3s,baz=59,slow=13,SNR=4.1							
ULM				LR		LR	16 08 30.7	
	comp=Z,95nm,18.7s,baz=314,slow=38							
ULM	Lac du Bonnet	19.99	119	eP		Pn	16 00 27.6	-3.6
	10nm,0.6s							
H15A	Lima	19.99	156	⇓P		Pn	16 00 29.8	-1.6
	baz=20							
SDPT	Sand Point	20.14	263	eP		P	16 00 31.8	+0.6
	30nm,0.6s							
I11A	Placerville	20.18	164	⇑P		P	16 00 31.8	+0.2
	baz=20							
H16A	Russell Place,	20.18	153	⇑P		P	16 00 31.1	-0.5
	baz=20,SNR=5.4							
RLMT	Red Lodge	20.20	149	⇓P		P	16 00 31.5	-0.4
	baz=20							
RLMT	Red Lodge	20.20	149	eP		P	16 00 31.6	-0.4
	12nm,0.7s							
I12A	Atlanta	20.40	162	⇓P		P	16 00 34.0	-0.1
	baz=20,SNR=7.5							
I13A	Wildhorse Cree	20.43	160	⇑P		P	16 00 34.9	+0.5
	baz=20,SNR=5.9							
I14A	Mackay	20.52	158	⇑P		P	16 00 36.2	+0.8
	baz=20							
MFID	Camas Ranch	20.68	164	⇓P		P	16 00 37.3	+0.2
	baz=21,SNR=9.3							
HLID	Hailey	20.73	161	P		P	16 00 38.0	+0.3
	baz=21,SNR=13							
HLID	Hailey	20.73	161	eP		P	16 00 37.7	0.0
	4.6nm,0.6s							
K05A	Summer Lake	20.93	174	⇓P		P	16 00 40.5	+0.7
	baz=21							
J13A	Cove Ranch, Pi	20.93	160	⇓P		P	16 00 40.0	+0.2
	baz=21,SNR=7.9							
J12A	Stokes Ranch,	20.94	162	⇑P		P	16 00 40.2	+0.3
	baz=21,SNR=5.2							
IMW	Indian Meadow	21.01	154	P		P	16 00 41.8	+1.1
	5.2nm,0.6s,mb4.0							
J14A	Carey	21.10	159	⇓P		P	16 00 42.2	+0.6
	baz=21,SNR=13							
K10A	MacKenzie Ranc	21.19	166	⇑P		P	16 00 43.2	+0.7
	baz=21,SNR=24							
J15A	Blackfoot	21.21	157	⇓P		P	16 00 44.0	+1.1
	baz=21,SNR=16							
K11A	Parker Ranch,	21.29	164	⇓P		P	16 00 45.3	+1.6
	baz=21							
LOHW	Long Hollow	21.35	153	eP		P	16 00 45.4	+1.1
	14nm,1.1s,mb4.2							
WVOR	Wild Horse Val	21.36	170	eP		P	16 00 45.5	+1.0
	10nm,0.7s,mb4.3							
TPAW	Teton Pass	21.40	154	eP		P	16 00 45.8	+0.9
	9.6nm,0.7s,mb4.2							
I18A	Diamond G Ranc	21.43	152	⇑P		P	16 00 46.2	+1.0
	baz=21,SNR=9.2							
RRI2	Red Ridge	21.47	155	eP		P	16 00 46.6	+1.0
	7.7nm,0.7s,mb4.1							
J16A	Bone	21.48	155	⇓P		P	16 00 46.4	+0.6
	baz=21							
REDW	Red Top Meadow	21.54	154	P		P	16 00 47.8	+1.4
	8.1nm,0.6s,mb4.3							
K12A	Draper Farm, C	21.57	162	⇓P		P	16 00 47.3	+0.6
	baz=22							
AGMN	Agassiz Nation	21.57	122	eP		P	16 00 46.9	+0.2
	8.6nm,0.6s,mb4.4							
K13A	Stover Farm, H	21.67	160	⇑P		P	16 00 48.4	+0.6
	baz=22							
J18A	Kendall Valley	21.86	152	⇑P		P	16 00 49.9	+0.1
	baz=22							
YBH	Yreka Blue Hor	21.86	178	P		P	16 00 52.0	+2.2
	0.6nm,0.4s,mb3.4,baz=355,slow=10.0,SNR=3.3							
YBH				S		S	16 04 39.4	-12
	0.5nm,0.4s,baz=341,slow=1.6,SNR=3.9							
YBH	Yreka Blue Hor	21.86	178	eP		P	16 00 51.5	+1.7
K15A	Arbon	21.89	157	⇓P		P	16 00 50.3	+0.2
	baz=22							
L11A	Cat Creek Ranc	21.92	164	⇓P		P	16 00 51.6	+1.2
	baz=22,SNR=9.5							
L10A	Juniper Basin	21.92	165	⇓P		P	16 00 50.8	+0.3
	baz=22							
L12A	House Creek Ra	22.04	163	⇓P		P	16 00 52.5	+0.8
	baz=22							
L13A	Double Diamond	22.24	161	⇑P		P	16 00 54.2	+0.3
	baz=22							
BW06	Boulder Array	22.38	152	⇓P		P	16 00 56.1	+0.7
	baz=22,SNR=13							
PDAR	Pinedale Array	22.38	152	P		P	16 00 56.5	+1.2
	3.3nm,0.5s,mb4.0,baz=0.9,slow=8.1,SNR=29							
PDAR				Lg			16 07 49.5	
	0.7nm,0.7s,baz=8.3,slow=22,SNR=2.9							
L14A	Malta	22.41	159	⇓P		P	16 00 55.6	-0.1
	baz=22							
M10A	I.L. Ranch, Tu	22.46	166	⇓P		P	16 00 56.6	+0.3
	baz=22							
K19A	Absolon Red Bu	22.48	150	⇑P		P	16 00 56.6	+0.2
	baz=22,SNR=9.2							
RSSD	Black Hills	22.48	141	eP		P	16 00 58.4	+1.9
	7.1nm,0.5s,mb4.3							
L15A	Malad City	22.57	158	⇑P		P	16 00 58.1	+0.6
	baz=22							
HVU	Hansel Valley	22.73	158	eP		P	16 00 58.5	-0.6
	11nm,0.8s,mb4.3							
K20A	Yellowstone Ra	22.75	150	⇑P		P	16 00 60.0	+0.7
	baz=23,SNR=6.3							
M14A	Sheep Mountain	22.91	160	⇑P		P	16 01 01.7	+0.7
	baz=23							
M13A	Montello	22.93	161	⇓P		P	16 01 01.8	+0.6
	baz=23,SNR=12							
M13A	Montello	22.93	161	eP		P	16 01 01.7	+0.5
M15A	Larsen Ranch,	23.09	158	⇓P		P	16 01 03.0	+0.1
	baz=23,SNR=6.9							
HWUT	Hardware Ranch	23.11	156	eP		P	16 01 03.6	+0.6
	4.8nm,0.7s,mb4.0							
ELK	Elko	23.39	164	P		P	16 01 07.2	+1.2
	1.2nm,0.8s,mb3.4,baz=4.4,slow=13,SNR=3.6							
ELK	Elko	23.39	164	P		P	16 01 07.2	+1.2
EYMN	Ely	23.57	116	eP		P	16 01 07.5	-0.3
	5.7nm,0.5s,mb4.3							
L21A	Rawlins	23.63	148	⇑P		P	16 01 08.4	-0.1
	baz=24							
FRB	Frobisher Bay	23.85	65	P		P	16 01 09.8	-0.5
	3.7nm,0.4s,mb4.1,baz=303,slow=12,SNR=8.2							
FRB	Frobisher Bay	23.85	65	P		P	16 01 09.8	-0.5
O12A	Currie	23.92	163	⇑P		P	16 01 11.2	+0.1
	baz=24							
O11A	Cowboy Ranch,	23.94	165	⇓P		P	16 01 11.7	+0.5
	baz=24							
M21A	Separation Pea	23.98	149	⇑P		P	16 01 11.8	+0.2
	baz=24							
DAU	Daniels Canyon	24.32	156	eP		P	16 01 16.4	+1.7
	7.4nm,0.9s,mb4.1							
N20A	Spence Gulch,	24.51	151	⇑P		P	16 01 17.2	+0.7
	baz=24							
P13A	Bates Ranch, G	24.82	162	⇓P		P	16 01 20.6	+1.3
	baz=25							
P14A	Drum

W27A	Bowe Ranch, En	31.23 146	⇑P		P	16 02 17.1 +0.5
	baz=31					
Y22A	Socorro	31.42 153	⇓P		P	16 02 19.3 +0.9
	baz=31					
Y23A	Lovelace Mesa,	31.62 151	⇑P		P	16 02 21.9 +1.8
	baz=32,SNR=5.9					
Y24A	Capitan	31.76 150	⇓P		P	16 02 22.3 +1.0
	baz=32					
Z20A	Nine Sixteen R	31.90 156	⇓P		P	16 02 23.3 +0.7
	baz=32					
Y25A	Mesa, Roswell	31.93 149	⇓P		P	16 02 23.4 +0.6
	baz=32					
Z22A	Elephant Butte	32.08 153	⇓P		P	16 02 25.1 +0.9
	baz=32					
Y27A	Causey	32.33 147	⇑P		P	16 02 26.5 +0.2
	baz=32					
MSTX	Muleshoe	32.34 146	⇑P		P	16 02 26.9 +0.5
	baz=32					
Z24A	Sheeppen Canyo	32.35 150	⇑P		P	16 02 27.3 +0.8
	baz=32					
214A	Organ Pipe Nat	32.36 163	⇓P		P	16 02 27.5 +0.9
	baz=32					
Z25A	Roswell	32.54 150	⇑P		P	16 02 28.9 +0.8
	baz=32					
121A	Cookes Peak, D	32.62 155	⇓P		P	16 02 29.4 +0.6
	baz=33					
Z26A	Caprock	32.72 148	⇑P		P	16 02 30.4 +0.6
	baz=33					
Z27A	Tatum	32.86 147	⇑P		P	16 02 31.6 +0.6
	baz=33					
219A	White Tail Can	32.87 157	⇑P		P	16 02 32.0 +1.0
	baz=33					
124A	Stringfield Ra	32.93 151	⇓P		P	16 02 32.5 +0.9
	baz=33					
318A	Bisbee	33.29 158	⇑P		P	16 02 35.7 +1.0
	baz=33					
225A	Deer Hill, Car	33.64 150	⇑P		P	16 02 38.6 +0.8
	baz=34,SNR=14					
CLNB	Carlsbad	33.71 149	*eP*		P	16 02 39.5 +1.1
226A	Malaga, Loving	33.85 149	⇓P		P	16 02 40.1 +0.5
	baz=34					
MNTX	Cornudas Mount	33.91 151	*eP*		P	16 02 41.0 +0.9
	1.7nm,0.7s,mb4.1					
324A	Moseley Ranch,	34.14 152	⇓P		P	16 02 42.4 +0.3
	baz=34					
325A	Bean Ranch, Si	34.32 151	⇑P		P	16 02 44.0 +0.3
	baz=34					
328A	Wristen Ranch,	34.80 148	⇑P		P	16 02 48.1 +0.2
	baz=35					
425A	Indio Mountain	34.88 151	⇑P		P	16 02 49.5 +0.9
	baz=35					
426A	McDonald Obser	35.20 150	⇑P		P	16 02 51.6 +0.3
	baz=35					
428A	Kincaid Ranch,	35.46 148	⇓P		P	16 02 53.8 +0.2
	baz=35,SNR=6.3					
526A	Mary Lane Ranc	35.78 150	⇓P		P	16 02 56.3 0.0
	baz=36					
527A	Woodward Ranch	35.80 149	⇓P		P	16 02 56.3 -0.2
	baz=36,SNR=9.3					
626A	Big Bend Ranch	36.25 150	⇑P		P	16 03 00.8 +0.4
	baz=36					
JCT	Junction City	36.42 144	*eP*		P	16 03 01.9 +0.1
	11nm,0.6s,mb5.0					
627A	Terlingua Ranc	36.52 149	⇑P		P	16 03 02.7 +0.1
	baz=36,SNR=7.1					
TXAR	Lajitas Array	36.57 150	P		P	16 03 03.4 +0.3
	1.7nm,0.6s,mb4.1,baz=357,slow=6.8,SNR=35					
TXAR			LR	LR		16 20 05.9
	comp=Z,30nm,20.2s,MS3.1,baz=0.0,slow=40					
628A	Black Gap, Mar	36.60 149	⇑P		P	16 03 03.7 +0.4
	baz=37					
ARCES	ARCESS Array B	45.44 15	P		P	16 04 15.6 0.0
	0.9nm,0.6s,mb3.8,baz=338,slow=6.5,SNR=7.8					
ARCES			PcP	PcP		16 05 55.5 +1.2
	2.6nm,1.0s,baz=320,slow=4.7,SNR=4.1					
ARCES	ARCESS Array B	45.44 15	P		P	16 04 15.6 0.0
ARCES			PcP	PcP		16 05 55.5 +1.2
NOA	NORSAR Array B	51.16 26	P		P	16 04 58.6 -1.2
	1.0nm,0.8s,mb3.8,baz=334,slow=7.8,SNR=2.9					
NOA			LR	LR		16 27 44.7
	comp=Z,23nm,21.1s,MS3.2,baz=345,slow=37					
JOF	Joensuu	52.47 14	*ep*		P	16 05 09.3 -0.2
	2.5nm,0.5s,mb4.4					
HFS	Hagfors	52.48 25	P		P	16 05 09.0 -0.6
	2.6nm,0.7s,mb4.2,baz=323,slow=4.4,SNR=7.3					
HFS			LR	LR		16 26 30.8
	comp=Z,21nm,20.9s,MS3.1,baz=82,slow=35					
KAF	Kangasniemi	52.65 17	*ep*		P	16 05 10.5 -0.4
	5.4nm,1.0s,mb4.4					
EKA	Eskdalemuir Ar	52.86 38	P		P	16 05 11.1 -1.5
	0.5nm,0.7s,mb3.5,baz=344,slow=18,SNR=3.5					
FINES	FINESS Array B	53.26 18	P		P	16 05 15.8 +0.4
	3.8nm,0.6s,mb4.5,baz=353,slow=7.9,SNR=13					
FINES			LR	LR		16 29 27.5
	comp=Z,29nm,19.4s,MS3.3,baz=315,slow=38					
FINES	FINESS Array B	53.26 18	P		P	16 05 15.8 +0.4
FINES			LR	LR		16 29 27.5
CN2	Changchun	59.91 309	*eP*		P	16 06 03.3 +0.4
CN2			*eS*		S	16 14 11.8 -2.7
CN2			pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0					
CN2			pmax	pmax		
	comp=Z,200nm,4.0s					
ARU	Arti	60.34 359	*eP*		P	16 06 06.3 +0.6
	comp=Z,11nm,0.9s,mb4.9					
CLL	Collm	60.57 30	*eP*		P	16 06 08.0 +0.7
CLL			*e*			16 06 29.0
ZALV	Zalesovo Beam	60.75 341	P		P	16 06 08.8 +0.3
	comp=Z,2.6nm,0.6s,mb4.5,baz=3.0,slow=7.2,SNR=16					
ZALV			LR	LR		16 33 32.8
	comp=Z,9.4nm,21.6s,MS2.9,baz=39,slow=37					
SONM	Songino Array	62.15 324	P		P	16 06 19.2 +1.2
	comp=Z,0.8nm,0.6s,mb4.0,baz=19,slow=4.3,SNR=6.0					
SONM			LR	LR		16 37 22.4
	comp=Z,29nm,19.9s,MS3.4,baz=255,slow=40					
BRVK	Borovoye	63.22 351	*eP*		P	16 06 25.6 +0.5
	comp=Z,3.9nm,0.7s,mb4.7					
BVAR	Borovoye Array	63.24 351	P		P	16 06 25.8 +0.6
	comp=Z,1.9nm,0.5s,mb4.5,baz=358,slow=5.6,SNR=13					
AKASG	Malin Array Be	64.12 19	P		P	16 06 31.4 +0.3
	comp=Z,6.0nm,0.6s,mb4.8,baz=344,slow=6.6,SNR=22					
AKASG	Malin Array Be	64.12 19	P		P	16 06 31.4 +0.3
AKBB	Malin Array Si	64.12 19	*eP*		P	16 06 31.1 -0.1
KIEV	Kiev	64.13 19	*eP*		P	16 06 31.4 +0.3
	comp=Z,7.2nm,0.6s,mb4.9					
KSRS	Korea Array	64.59 303	P		P	16 06 34.5 +0.1
	comp=Z,0.7nm,0.7s,mb3.8,baz=24,slow=7.3,SNR=5.2					
KSRS			LR	LR		16 36 22.3
	comp=Z,10nm,18.4s,MS3.1,baz=5.0,slow=38					
AKTK	Aktyubinsk	66.35 359	P		P	16 06 46.0 +0.4
AKTO	Aktyubinsk	66.35 359	P		P	16 06 46.0 +0.4
	comp=Z,2.0nm,0.6s,mb4.3,baz=19,slow=6.7,SNR=7.9					
BJI	Beijing	66.39 314	P		P	16 06 44.1 -1.9
BJI			S	S		16 15 33.0 -2.6
BJI			SS	SS		16 19 49.6 -1.6
BJI			pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6					
BJI			pmax	pmax		
	comp=Z,51nm,6.5s					
BJI			LR	LR		
	comp=N,91nm,25.7s,MS4.0					
BJI			LR	LR		
	comp=E,58nm,24.4s,MS4.0					
BJI			LR	LR		
	comp=Z,18nm,24.4s,MS3.2					
ESDC	Sonseca Array	66.61 47	P		P	16 06 47.6 +0.2
	comp=Z,0.9nm,0.4s,mb4.1,baz=330,slow=7.0,SNR=7.6					
HHC	Hu-ho-hao-te	67.10 317	*eP*		P	16 06 49.3 -1.2
HHC			sP	sP		16 06 54.5 -0.5
HHC			PP	PP		16 09 18.4 +0.6
HHC			ScP			16 11 20.3
HHC			PcS			16 11 21.5
HHC			S	S		16 15 39.9 -4.3
HHC			ScS	ScS		16 16 42.3 -5.5
HHC			SS	SS		16 19 59.8 -2.3
HHC			pmax	pmax		
	comp=Z,12nm,0.6s,mb5.1					
HHC			pmax	pmax		
	comp=Z,47nm,6.6s					
ABKAR	Akbulak array	67.50 357	*eP*		P	16 06 53.3 +0.4
	comp=Z,1.0nm,0.5s,mb4.1					
MK31	Makanchi Array	68.09 341	*eP*		P	16 06 56.5 -0.2
MKAR	Makanchi Array	68.09 341	P		P	16 06 56.6 0.0
	comp=Z,0.8nm,0.6s,mb3.9,baz=5.1,slow=5.9,SNR=17					
WMQ	Urumqi	70.11 336	*eP*		P	16 07 10.6 +1.4
WMQ			pP	pP		16 07 15.3 +2.8
WMQ			sP	sP		16 07 17.6 +3.9
WMQ			pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3					
WMQ			pmax	pmax		
	comp=Z,81nm,5.1s					
NJ2	Nanjing	72.72 308	*eP*		P	16 07 27.3 +2.1
NJ2			pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7					
AML	Almayashu	73.76 347	*eP*		P	16 07 33.2 +2.1
	comp=Z,6.5nm,1.2s,mb4.4					
LZH	Lanzhou	73.77 321	*eP*		P	16 07 31.0 -0.3
LZH			pP	pP		16 07 35.0 +0.4
LZH			sP	sP		16 07 38.0 +2.2
LZH			pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8					
BRTR	Keskin Array B	75.50 18	P		P	16 07 42.9 +1.6
	comp=Z,1.3nm,0.6s,mb4.1,baz=329,slow=2.8,SNR=5.2					
WHN	Wuhan	75.66 311	*eP*		P	16 07 46.8 +4.5
CD2	Chengdu	78.65 320	P		P	16 07 58.1 -1.0
GYA	Guiyang	81.94 316	P		P	16 08 15.4 -1.5
GYA			pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7					
ASF	Jabal al Asfar	83.36 16	P		P	16 08 25.8 +1.6
	comp=Z,2.3nm,0.8s,mb4.2,baz=251,slow=7.3,SNR=4.0					
KMI	Kunming	84.39 319	P		P	16 08 28.8 -0.8
KMI			pP	pP		16 08 32.4 -0.5
KMI			sP	sP		16 08 33.8 -0.3
KMI			PP	PP		16 11 45.1 +1.3
KMI			S	S		16 18 52.6 -2.8
KMI			SS	SS		16 24 23.8 -0.4
KMI			pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.4					
KMI			pmax	pmax		
	comp=Z,52nm,3.6s					
KMI			LR	LR		
	comp=N,48nm,14.8s,MS4.1					
KMI			LR	LR		
	comp=E,45nm,15.9s,MS4.1					
KMI			LR	LR		
	comp=Z,52nm,13.2s,MS4.1					
TORD	Torodi Ar. Bea	92.90 53	P		P	16 09 09.8 -0.5
	comp=Z,0.7nm,0.9s,mb4.1,baz=322,slow=4.1,SNR=4.6					
TORD	Torodi Ar. Bea	92.90 53	P		P	16 09 09.8 -0.5
WRA	Warramunga Arr	112.98 271	PP		PP	16 15 20.9 -2.2
	comp=Z,0.4nm,0.5s,baz=123,slow=7.0,SNR=5.1					
ASAR	Alice Springs	116.42 270	PKP		PKPdf	16 14 40.0 -0.7
	comp=Z,0.3nm,0.7s,baz=38,slow=1.9,SNR=6.4					
STKA	Stephens Creek	120.07 258	PKP		PKPdf	16 14 45.9 -1.6
	comp=Z,3.8nm,1.1s,baz=221,slow=7.6,SNR=4.1					
BOSA	Boshof	139.76 45	PKP		PKPdf	16 15 22.5 -2.2
	comp=Z,0.9nm,0.5s,baz=217,slow=17,SNR=4.2					
BOSA	Boshof	139.76 45	PKP		PKPdf	16 15 22.5 -2.3

ISK ***14*** *16:02:12.3, 40°.74N×27°.36E, h8km, ML3.7*
CSEM ***14*** *16:02:12.9±0.1, 40°.74N×27°.33E, h10km, ML3.7, Error ellipse: s-maj=2.1km s-min=1.9km az=178.0*
NEIC ***14*** *16:02:12.0, 40°.73N×27°.37E, h10km, MD3.6(ATH), ML3.7(ISK), After ISK.*
ISCJB ***14*** *16:02:12.5±0.3, 40°.76N±0°.02×27°.32E±0°.02, h13km±2km, Error ellipse: s-maj=2.8km s-min=2.5km az=170.1*
ATH ***14*** *16:02:12.1, 40°.75N×27°.35E, h29km±8km, MD3.6/8*
DDA ***14*** *16:02:12.5, 40°.73N×27°.39E, h17km±1km, Md3.7*
THE ***14*** *16:02:15.1, 40°.73N×27°.23E, h21km±2km, ML4.1/4, Error ellipse: s-maj=2.2km s-min=0.8km az=302.0*

ISC 14 16:02:13.1±0.3, 40°.74N±0°.02×27°.32E±0°.02, h12km±2km, n188, σ0°.83/226, 13C-16D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MFT	Murefte	0.06	324	PG	Pg	16 02 15.2	-0.1
MFT	Murefte	0.06	324	*i* Pg	Pg	16 02 15.3	0.0
SART	Tekirdag	0.12	244	*i* P	Pg	16 02 16.9	+0.8
SART				*i* S	Sg	16 02 19.7	+1.4
SART	Tekirdag	0.12	244	*i* P	Pg	16 02 16.9	+0.8
SART				*i* S	Sg	16 02 19.7	+1.4
RKY	Sarkoy-Tekirda	0.12	244	PG	Pg	16 02 16.3	+0.2
RKY				*e*SG	Sg	16 02 18.5	+0.2
RKY	Sarkoy-Tekirda	0.12	244	*i* Pg	Pg	16 02 16.3	+0.2
RKY				*e*Sg	Sg	16 02 18.5	+0.2
TKR	Tekirdag	0.29	33	PG	Pg	16 02 19.3	+0.3
TKR				*e*SG	Sg	16 02 23.4	+0.3
TKR	Tekirdag	0.29	33	*i* Pg	Pg	16 02 19.3	+0.2
TKR				*e*Sg	Sg	16 02 23.4	+0.3
KRBG	Karabiga-Canak	0.35	183	PG	Pg	16 02 20.3	+0.3
KRBG				*e*SG	Sg	16 02 25.0	+0.3
KRBG	Karabiga-Canak	0.35	183	*i* Pg	Pg	16 02 20.3	+0.3
KRBG				*e*Sg	Sg	16 02 25.0	+0.3
CRLT	Corlu	0.50	39	PG	Pg	16 02 22.9	+0.2
CRLT	Corlu	0.50	39	*i* Pg	Pg	16 02 23.0	+0.2
LPK	Lapseki	0.57	229	PG	Pg	16 02 24.2	+0.2
LPK	Lapseki	0.57	229	*i* Pg	Pg	16 02 24.2	+0.1
EDC	Edincik	0.57	134	PG	Pg	16 02 23.5	-0.7
EDC	Edincik	0.57	134	*i* Pg	Pg	16 02 23.5	-0.7
BNT	Bandirma	0.60	130	PG	Pg	16 02 23.9	-0.8
BNT	Bandirma	0.60	130	*i* Pg	Pg	16 02 23.9	-0.7
ERIK	Erikli-Kesan	0.62	264	PG	Pg	16 02 25.3	+0.2
ERIK	Erikli-Kesan	0.62	264	*i* Pg	Pg	16 02 25.3	+0.2
GELI	Tayfur-Gelibol	0.73	242	PG	Pg	16 02 26.9	-0.4
GELI	Tayfur-Gelibol	0.73	242	*i* Pg	Pg	16 02 26.9	-0.3
GONE	Gonen-Balikesi	0.75	158	PG	Pg	16 02 27.2	-0.3
GONE	Gonen-Balikesi	0.75	158	*i* Pg	Pg	16 02 27.3	-0.2
SLVT	Silivri	0.83	54	PG	Pg	16 02 28.5	-0.6
SLVT	Silivri	0.83	54	*i* Pg	Pg	16 02 28.5	-0.6
ENEZ	Enez	0.89	270	PG	Pg	16 02 30.2	0.0
ENEZ	Enez	0.89	270	*i* Pg	Pg	16 02 30.2	0.0
KCTX	Karacabey (Bur	0.92	121	PG	Pg	16 02 29.5	-1.3
KCTX	Karacabey (Bur	0.92	121	*i* Pg	Pg	16 02 29.5	-1.3
ELBA	Catalca	0.93	64	*i* P	Pg	16 02 30.2	-0.8
ELBA				*i* S	Sg	16 02 42.5	-0.7
ELBA	Catalca	0.93	64	*i* P	Pg	16 02 30.2	-0.8
ELBA				*i* S	Sg	16 02 42.5	-0.6
ALN	Alexandroupoli	0.98	279	*e*Pn	Pn	16 02 31.4	-1.3
ALN				*e*Sn	Sn	16 02 45.0	-1.5
ALN	Alexandroupoli	0.98	279	*e*PN	Pn	16 02 31.4	-1.3
ALN				*e*SN	Sn	16 02 45.0	-1.5
ALN	Alexandroupoli	0.98	279	P	Pg	16 02 31.6	-0.4
ALN				S	Sg	16 02 44.9	+0.1
ALN	Alexandroupoli	0.98	279	P	Pg	16 02 31.6	-0.4
ALN				S	Sg	16 02 44.9	+0.1
CTKS	Kestanelik-??a	1.02	61	PG	Pg	16 02 31.7	-1.1
CTKS	Kestanelik-??a	1.02	61	*i* Pg	Pg	16 02 31.7	-1.0
BALY	Balya	1.03	167	*i* P	Pb	16 02 31.9	-0.9
BALY				*i* S	Sg	16 02 46.0	-0.2
BALY	Balya	1.03	167	*i* P	Pb	16 02 31.9	-0.9
BALY				*i* S	Sg	16 02 46.0	-0.2
CTYL	Yal??k??y-??at	1.03	45	PG	Pg	16 02 31.7	-1.3
CTYL	Yal??k??y-??at	1.03	45	*i* Pg	Pg	16 02 31.7	-1.3
BALB	Balikesir	1.18	159	PN	Pn	16 02 34.7	-0.7
BALB	Balikesir	1.18	159	*i* Pn	Pn	16 02 34.7	-0.7
BGKT	Bogazkoy	1.18	68	PN	Pn	16 02 33.9	-1.5
BGKT	Bogazkoy	1.18	68	*i* Pn	Pn	16 02 33.9	-1.5
ARMT	Armutlu	1.18	98	PN	Pn	16 02 34.2	-1.3
ARMT	Armutlu	1.18	98	*i* Pn	Pn	16 02 34.2	-1.3
EDRB	Edirne	1.19	339	PN	Pn	16 02 34.9	-0.6
EDRB	Edirne	1.19	339	*i* Pn	Pn	16 02 34.9	-0.6
EZN	Ezine	1.19	220	PN	Pn	16 02 35.1	-0.4
EZN	Ezine	1.19	220	*i* Pn	Pn	16 02 35.1	-0.5
GADA	Gvkgeada	1.22	244	PN	Pn	16 02 35.7	-0.2
GADA	Gvkgeada	1.22	244	*i* Pn	Pn	16 02 35.7	-0.2
ISK	Istanbul-Kandi	1.35	76	PN	Pn	16 02 36.7	-1.1
ISK	Istanbul-Kandi	1.35	76	*i* Pn	Pn	16 02 36.7	-1.1
KLYT	Kilyos	1.40	68	PN	Pn	16 02 37.9	-0.6
KLYT	Kilyos	1.40	68	*i* Pn	Pn	16 02 37.9	-0.5
RDO	Rodhopi	1.41	287	*e*Pn	Pn	16 02 38.1	-0.5
RDO				*e*Sn	Sn	16 02 57.3	+0.2
RDO	Rodhopi	1.41	287	*e*PN	Pn	16 02 38.1	-0.5
RDO				*e*SN	Sn	16 02 57.3	+0.2
RDO	Rodhopi	1.41	287	P	Pn	16 02 38.3	-0.3
RDO				S	Sn	16 02 55.4	-1.7
RDO	Rodhopi	1.41	287	P	Pn	16 02 38.3	-0.3
RDO				S	Sn	16 02 55.4	-1.7
RDO				*e*Sn	Sn	16 02 57.3	+0.2
GEMT	Gemlik	1.45	102	PN	Pn	16 02 39.0	-0.1
GEMT	Gemlik	1.45	102	*i* Pn	Pn	16 02 39.0	-0.2
ULDT	Uludag	1.51	113	*i* P	Pn	16 02 40.1	+0.2
ULDT				*i* S	Sn	16 03 00.2	+0.7
ULDT	Uludag	1.51	113	*i* P	Pn	16 02 40.1	+0.2
ULDT				*i* S	Sn	16 03 00.2	+0.7
AYVA	Ayvalik	1.51	199	*i* P	Pn	16 02 40.9	+0.9
AYVA				*i* S	Sn	16 03 00.2	+0.6
AYVA	Ayvalik	1.51	199	*i* P	Pn	16 02 40.9	+0.9
AYVA				*i* S	Sn	16 03 00.2	+0.6
YLV	Yalova	1.57	96	*e*PN	Pn	16 02 41.1	+0.4
YLV	Yalova	1.57	96	*e*Pn	Pn	16 02 41.1	+0.3
PRK	Paraskevi	1.70	209	*e*Pn	Pn	16 02 42.4	-0.1
PRK				*e*Sn	Sn	16 03 03.6	-0.6
PRK	Paraskevi	1.70	209	*e*PN	Pn	16 02 42.4	-0.1
PRK				*e*SN	Sn	16 03 03.6	-0.6
PRK	Paraskevi	1.70	209	P	Pn	16 02 42.0	-0.5
PRK				S	Sn	16 03 03.5	-0.7
PRK	Paraskevi	1.70	209	P	Pn	16 02 42.0	-0.5
PRK	Paraskevi	1.70	209	*e*Pn	Pn	16 02 42.4	-0.1
PRK				*e*Sn	Sn	16 03 03.6	-0.6
HRT	Hereke	1.78	87	*e*PN	Pn	16 02 43.9	+0.2
HRT	Hereke	1.78	87	*e*Pn	Pn	16 02 43.9	+0.2
SILT	Sile	1.80	76	*e*PN	Pn	16 02 43.3	-0.7
SILT	Sile	1.80	76	*e*Pn	Pn	16 02 43.3	-0.7
JMB	Yambol	1.81	342	P	Pn	16 02 44.4	+0.3
JMB				S	Sn	16 03 06.6	-0.4
JMB	Yambol	1.81	342	P	Pn	16 02 44.4	+0.3
JMB				S	Sn	16 03 06.6	-0.4
LIA	Limnos Island	1.84	243	*e*Pb	Pn	16 02 43.8	-0.7
LIA				*e*Sn	Sn	16 03 08.3	+0.6
LIA	Limnos Island	1.84	243	*e*PN	Pn	16 02 43.8	-0.7
LIA				*e*SN	Sn	16 03 08.3	+0.6
LIA	Limnos Island	1.84	243	P	Pn	16 02 43.8	-0.7
LIA				S	Sn	16 03 06.0	-1.7
LIA	Limnos Island	1.84	243	*e*Pb	Pn	16 02 43.8	-0.7
LIA				S	Sn	16 03 06.0	-1.7
LIA				*e*Sn	Sn	16 03 08.3	+0.6
ADVT	Abdulvahap	1.86	99	*e*PN	Pn	16 02 45.5	+0.7
ADVT	Abdulvahap	1.86	99	*e*Pn	Pn	16 02 45.6	+0.8
AKS	Akhisar	1.90	168	*e*PN	Pn	16 02 46.3	+1.0
AKS	Akhisar	1.90	168	*e*Pn	Pn	16 02 46.3	+1.0
SIGR	SIGRI	1.90	217	P	Pn	16 02 47.4	+2.1
SIGR	SIGRI	1.90	217	P	Pn	16 02 47.4	+2.1
CAVI	Cavuskoy	2.00	105	*e*PN	Pn	16 02 47.3	+0.7
CAVI	Cavuskoy	2.00	105	*e*Pn	Pn	16 02 47.3	+0.7
KAVA	Kavala	2.15	278	P	Pn	16 02 48.2	-0.5
KAVA	Kavala	2.15	278	P	Pn	16 02 48.2	-0.5
SPNC	Sapanca-Adapaz	2.27	90	*e*PN	Pn	16 02 50.7	+0.3
SPNC	Sapanca-Adapaz	2.27	90	*e*Pn	Pn	16 02 50.7	+0.3
GPA	Golpazari	2.32	100	*e*PN	Pn	16 02 51.4	+0.3
GPA	Golpazari	2.32	100	*e*Pn	Pn	16 02 51.4	+0.3
IZM	Izmir	2.34	181	*e*PN	Pn	16 02 52.1	+0.7
IZM	Izmir	2.34	181	*e*Pn	Pn	16 02 52.1	+0.7
BLCB	Balcova	2.36	185	*e*PN	Pn	16 02 52.5	+0.8
BLCB	Balcova	2.36	185	*e*Pn	Pn	16 02 52.5	+0.8
PLD	Plovdiv	2.40	305	P	Pn	16 02 51.9	-0.2
PLD	Plovdiv	2.40	305	P	Pn	16 02 51.9	-0.2
GULT	Gulveren	2.45	96	*e*PN	Pn	16 02 53.6	+0.7
GULT	Gulveren	2.45	96	*e*Pn	Pn	16 02 53.6	+0.7
KULA	Kula-Manisa	2.45	155	*e*PN	Pn	16 02 52.6	-0.3
KULA	Kula-Manisa	2.45	155	*e*Pn	Pn	16 02 52.6	-0.3
CHOS	Chios island	2.55	203	*e*PB	Pb	16 02 55.0	-3.7
CHOS	Chios island	2.55	203	P	Pn	16 02 54.1	-0.1
CHOS				S	Sn	16 03 24.2	-1.0
CHOS	Chios island	2.55	203	P	Pn	16 02 54.1	-0.1
CHOS	Chios island	2.55	203	*e*Pb	Pb	16 02 55.0	-3.7
CHOS				S	Sn	16 03 24.2	-1.0
OUR	Ouranopolis	2.58	262	P	Pn	16 02 53.2	-1.4
OUR	Ouranopolis	2.58	262	P	Pn	16 02 53.3	-1.3
OUR	Ouranopolis	2.58	262	P	Pn	16 02 53.3	-1.3
NVR	Nevrokopi	2.69	284	*e*Pn	Pn	16 02 56.1	0.0
NVR	Nevrokopi	2.69	284	*e*PN	Pn	16 02 56.1	0.0
NVR	Nevrokopi	2.69	284	*e*Pn	Pn	16 02 56.1	0.0
ALT	Altintas	2.73	127	*e*PN	Pn	16 02 56.9	+0.2
ALT	Altintas	2.73	127	*e*Pn	Pn	16 02 56.9	+0.2
KHL	Karahalli	2.96	144	*e*PN	Pn	16 03 00.9	+1.1
KHL	Karahalli	2.96	144	*e*Pn	Pn	16 03 00.9	+1.1
ESKT	Eskisehir	2.97	113	*e*PN	Pn	16 03 00.5	+0.6
ESKT	Eskisehir	2.97	113	*e*Pn	Pn	16 03 00.5	+0.5
MDU	Mudurnu	2.98	94	*e*PN	Pn	16 03 00.9	+0.8
MDU	Mudurnu	2.98	94	*e*Pn	Pn	16 03 00.9	+0.8
PLG	Polygyros	2.98	264	*e*Pn	Pn	16 02 57.2	-2.9
PLG	Polygyros	2.98	264	*e*PN	Pn	16 02 59.5	-0.6
PLG	Polygyros	2.98	264	*e*Pn	Pn	16 02 57.2	-2.9
SOH	Sokhos	3.02	273	P	Pn	16 03 00.2	-0.4
SOH	Sokhos	3.02	273	P	Pn	16 02 59.5	-1.1
SOH	Sokhos	3.02	273	P	Pn	16 03 00.2	-0.4
SMG	Samos	3.05	187	*e*Pn	Pn	16 03 00.1	-1.1
SMG	Samos	3.05	187	*e*PN	Pn	16 03 00.1	-1.1
SMG	Samos	3.05	187	*e*Pn	Pn	16 03 00.1	-1.1
AOS	Alonnisos	3.08	240	P

URZ	Urewera	2.04 243	P	Pn	16 07 59.0	-0.4
MHGZ	Mahia Peninsul	2.15 213	PN	Pn	16 08 00.0	-0.9
KNZ	Kokohu	2.15 219	PN	Pn	16 07 59.8	-1.1
KNZ	Kokohu	2.15 219	P	Pn	16 07 59.8	-1.2
OPRZ	Ohinepanea	2.33 257	PN	Pn	16 08 02.3	-1.0
RAHZ	Arahi	2.41 229	PN	Pn	16 08 03.6	-0.9
TARZ	Mount Tarawera	2.47 248	PN	Pn	16 08 04.9	-0.4
RRRZ	Republican Roa	2.50 246	PN	Pn	16 08 04.8	-0.9
TGRZ	Tauranga	2.54 261	PN	Pn	16 08 05.4	-0.8
KARZ	Kaharoa	2.61 254	PN	Pn	16 08 06.6	-0.6
KARZ	Kaharoa	2.61 254	P	Pn	16 08 06.6	-0.6
PRRZ	Plateau Road	2.65 244	PN	Pn	16 08 06.7	-1.0
NMHZ	Naumai	2.69 229	PN	Pn	16 08 07.6	-0.8
BKZ	Black Stump Fm	2.93 231	PN	Pn	16 08 10.3	-1.3
BKZ	Black Stump Fm	2.93 231	P	Pn	16 08 10.3	-1.3
MCHZ	McNeill Hill	2.98 225	PN	Pn	16 08 11.1	-1.2
KUZ	Kuaotunu	3.03 281	PN	Pn	16 08 11.6	-1.4
KUZ	Kuaotunu	3.03 281	P	Pn	16 08 11.6	-1.3
KAHZ	Kahuranaki	3.15 219	PN	Pn	16 08 12.5	-2.0
WPHZ	Waipukurau	3.57 220	PN	Pn	16 08 17.7	-2.6
PNHZ	Pukenui	3.59 224	PN	Pn	16 08 17.9	-2.7
WNVZ	Wahianoa	3.59 236	PN	Pn	16 08 20.1	-0.6
WNVZ	Wahianoa	3.59 236	P	Pn	16 08 20.1	-0.6
TSZ	Takapari Road	3.82 224	PN	Pn	16 08 21.1	-2.7
TSZ	Takapari Road	3.82 224	P	Pn	16 08 21.1	-2.7
DVHZ	Dannevirke	3.88 220	PN	Pn	16 08 21.6	-3.1
POWZ	Post Office Ro	4.16 222	PN	Pn	16 08 25.7	-2.8
WCZ	Waipu Caves	4.33 288	PN	Pn	16 08 30.5	-0.3
WCZ	Waipu Caves	4.33 288	P	Pn	16 08 30.5	-0.3
MRZ	Mangatainoka R	4.45 221	PN	Pn	16 08 29.1	-3.4
MRZ	Mangatainoka R	4.45 221	P	Pn	16 08 29.1	-3.4
NNZ	Nelson	6.07 229	PN	Pn	16 08 50.7	-4.0
THZ	Tophouse	6.68 227	PN	Pn	16 08 59.1	-4.1
THZ	Tophouse	6.68 227	P	Pn	16 08 59.1	-4.1

IDC 14 16:12:24.9±2.1, 2°71′N×126°05′E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/19, mbtmp3.3/3, Error ellipse: s-maj=190.9km s-min=25.7km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.94 160		P	P	16 17 39.9	-1.0
0.7nm,0.5s,baz=339,slow=10,SNR=7.6							
ASAR	Alice Springs	27.31 164		P		16 18 12.8	+1.3
0.5nm,0.9s,baz=340,slow=8.2,SNR=6.2							
MKAR	Makanchi Array	58.01 326		P	P	16 22 19.2	-0.2
0.2nm,0.4s,baz=121,slow=7.5,SNR=5.9							

SSNC 14 16:18:31.7, 23°30′N×70°58′W, h25km, MD4.4, ML4.5
ISCJB 14 16:18:34.3±1.4, 19°69′N±0°07′×69°85′W±0°03, h10km±10km, mb3.6/4, MS3.0/2, Error ellipse: s-maj=12.7km s-min=4.2km az=14.6
IDC 14 16:18:34.9±1.1, 19°72′N×69°77′W, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.6/21, mbtmp3.6/4, MS3.0/3, Ms1 3.0/3, ms1mx2.8/19, Error ellipse: s-maj=35.0km s-min=31.6km az=20.0
NEIC 14 16:18:35.2±3.7, 19°58′N×69°87′W, h6km±27km, MD4.2(RSPR), Error ellipse: s-maj=17.5km s-min=6.5km az=198.0
NEIC Felt at Nagua.
RSPR 14 16:18:38.2, 19°63′N×69°86′W, h5km±31km, MD4.2/18, MD4.2/18

ISC 14 16:18:34.8±1.7, 19°59′N±0°07′×69°90′W±0°03, h5km±11km, n30, σ1°12/41, mb3.6/4, MS3.0/2, 13C-5D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDDR	Presa de Saban	1.45 245		⇓eP	Pn	16 19 02.1	+0.6
SDDR				eS	Sb	16 19 21.4	+0.5
PCDR	Punta Cana, DR	1.79 127		eS	Sn	16 19 28.9	-0.5
PCDR	Punta Cana, DR	1.79 127		⇓eP	Pn	16 19 05.8	-0.5
GRTK	Grand Turk	2.23 329		⇑eP	Pn	16 19 13.8	+1.4
GRTK				eS	Sn	16 19 45.1	+4.8
IMO	Isla Mona	2.39 128		⇑iP	Pn	16 19 15.5	+0.9
IMO				eS	Sn	16 19 46.0	+1.7
AGPR	Aguadilla, PR	2.86 113		⇓eP	Pn	16 19 20.9	-0.1
AGPR				eS	Sn	16 19 55.0	-0.9
LSP	Las Mesas	3.01 117		⇑eP	Pn	16 19 23.8	+0.7
LSP				eS	Sn	16 19 59.4	-0.2
CRPR	Cabo Rojo, PR	3.08 120		⇓eP	Pn	16 19 25.3	+1.3
CRPR				eS	Sn	16 20 00.7	-0.5
LRS	Lares	3.17 114		⇑eP	Pn	16 19 24.8	-0.4
LRS				eS	Sn	16 20 03.0	-0.4
AOPR	Arecibo Observ	3.22 112		⇑eP	Pn	16 19 26.9	+0.8
GBPR	Guanica, Bosqu	3.28 119		⇑eP	Pn	16 19 27.3	+0.5
GBPR				eS	Sn	16 20 05.1	-1.1
OBIP	Obispado Ponce	3.48 116		⇑eP	Pn	16 19 30.2	+0.7
OBIP				eS	Sn	16 20 10.4	-0.7
CELP	Cerrillos	3.49 115		⇑eP	Pn	16 19 29.4	-0.2
ICM	Isla Caja Muer	3.62 117		⇑eP	Pn	16 19 33.0	+1.5
ICM				eS	Sn	16 20 17.0	+2.5
SJG	San Juan	3.84 112		⇑eP	Pn	16 19 33.3	-1.2
SJG	San Juan	3.84 112		⇓eP	Pn	16 19 33.5	-1.0
CBYP	Canovanas	4.04 108		⇑eP	Pn	16 19 36.2	-1.1
MASC	Masc	4.12 279		iP	Pn	16 19 38.4	+0.1
baz=56							
MASC				iS	Sn	16 20 27.9	+1.0
MASC				e			
MTP	Monte Pirata	4.38 109		⇑eP	Pn	16 19 40.8	-1.1
STVI	Saint Thomas	4.84 104		⇑eP	Pn	16 19 46.6	-1.6
GTBY	Guantanamo Bay	4.92 275		⇑eP	Pn	16 19 48.7	-0.7
RCC	Rio Carpintero	5.47 275		eP	Pn	16 19 55.0	-2.0
RCC				eS	Sn	16 20 57.9	-2.4
comp=N,36nm,0.4s							
RCC				e			
comp=E,43nm,0.5s							
LMGC	Las Mercedes	6.71 275		eP	Pn	16 20 12.2	-1.7
LMGC				eS	Sn	16 21 19.0	-12
comp=N,23nm,0.6s							
LMGC				e			
comp=E,27nm,0.6s							
ROSC	El Rosal	15.27 197		LR	LR	16 28 53.1	
comp=E,28nm,18.7s,baz=172,slow=40							
TXAR	Lajitas Array	32.13 294		P	P	16 25 05.5	+2.2
comp=E,0.4nm,0.9s,mb3.2,baz=82,slow=6.5,SNR=2.7							
TXAR				LR	LR	16 40 07.6	
comp=E,29nm,20.4s,MS3.0,baz=350,slow=40							
LPAZ	La Paz	35.70 177		P	P	16 25 37.8	+3.6
comp=E,0.9nm,0.7s,mb3.8,baz=2.3,slow=4.9,SNR=3.5							
LPAZ				LR	LR	16 40 31.5	
comp=E,30nm,19.6s,MS3.1,baz=170,slow=37							
TORD	Torodi Ar. Bea	58.57 83		P	P	16 29 39.0	-0.1
comp=E,0.4nm,0.5s,mb3.6,baz=289,slow=7.2,SNR=3.7							
TORD	Torodi Ar. Bea	68.57 83		P	P	16 29 39.0	-0.1
ARCES	ARCESS Array B	73.69 21		P	P	16 30 09.7	+0.5
comp=E,1.0nm,0.8s,mb3.8,baz=298,slow=5.8,SNR=4.0							
ASAR	Alice Springs	157.51 255		PKPab	PKPab	16 39 04.4	-0.2
comp=E,0.3nm,0.6s,baz=102,slow=4.5,SNR=7.4							

ISCJB 14 17:02:14.2±0.4, 67°04N±0°02×20°90E±0°08, h0km, Error ellipse: s-maj=4.4km s-min=3.5km az=16.4
IDC 14 17:02:14.9±0.8, 67°15N×20°63E, h0km, mb1 3.0/4, mb1mx2.9/26, mbtmp2.9/4, ML2.6/4, Error ellipse: s-maj=15.5km s-min=6.3km az=117.0
CSEM 14 17:02:15.5±0.2, 67°06N×21°00E, h2km, ML1.9, Error ellipse: s-maj=4.6km s-min=3.3km az=109.0, Mining explosion.
HEL 14 17:02:15.9±0.1, 67°06N×20°99E, h0km, ML2.1, ML1.9(UPP), ML1.7(BER), Explosion
UPP 14 17:02:15.0, 67°06N×21°01E, h0km, ML1.9, Mining explosion.
NAO 14 17:02:16.3±1.0, 67°04N×21°38E, ML2.1
BER 14 17:02:17.6±3.9, 67°10N×20°88E, h0km, ML1.7, ML2.1(NAO), Suspected explosion

ISC 14 17:02:15.2±0.3, 67°05N±0°02×20°92E±0°07, h0km, n59, σ1°07/89, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAJU	Pajala	0.86 91		iP	Pg	17 02 30.6	-1.1
PAJU	Pajala	0.86 91		P	Pg	17 02 30.6	-1.0
KUA	Kurravaara	0.93 346		eP	Pg	17 02 32.5	-0.5
SALU	Saltoluokta	1.00 290		eP	Pg	17 02 34.2	-0.1
SALU	Saltoluokta	1.00 290		P	Pg	17 02 34.1	-0.1
LANU	Lannavaara	1.08 22		eP	Pg	17 02 34.4	-1.4
LANU				eS	Sg	17 02 48.9	-1.0
LANU	Lannavaara	1.08 22		P	Pg	17 02 34.4	-1.5
LANU				S	Sg	17 02 48.8	-1.1
KALU	Kalix	1.55 140		eP	Pn	17 02 42.9	-1.0
KALU	Kalix	1.55 140		P	Pn	17 02 42.9	-1.0
SJUU	Sjulsmark	1.58 170		eP	Pn	17 02 43.9	-0.5
SJUU	Sjulsmark	1.58 170		P	Pn	17 02 43.8	-0.5
HEF	Hetta	1.71 36		eP	Pn	17 02 45.6	-0.6
HEF				eS	Sn	17 03 09.0	+0.2
HEF	Hetta	1.71 36		P	Pn	17 02 45.6	-0.6
HEF				S	Sn	17 03 09.0	+0.2
LILU	Lilltraesk	1.83 194		eP	Pn	17 02 48.0	+0.2
LILU	Lilltraesk	1.83 194		P	Pn	17 02 48.0	+0.2
KIF	Kilpisjarvi	1.96 359		eP	Pn	17 02 50.7	+1.1
KIF				eS	Sn	17 03 17.1	+2.2
KIF				MSG		17 03 21.0	
comp=Z,17nm,0.1s							
KIF	Kilpisjarvi	1.96 359		P	Pn	17 02 50.6	+1.0
KIF				S	Sn	17 03 17.1	+2.2
comp=Z,17nm,0.1s							
RNF	Rovaniemi	2.06 100		eP	Pn	17 02 51.5	+0.5
RNF				eS	Sn	17 03 18.5	+1.1
RNF				MSG		17 03 25.1	
comp=Z,18nm,0.2s							
RNF	Rovaniemi	2.06 100		P	Pn	17 02 51.5	+0.5
RNF				S	Sn	17 03 18.4	+1.0
comp=Z,18nm,0.2s							
KTK1	Kautokeino	2.15 23		eP	Pn	17 02 53.0	+0.8
KTK1				eSg	Sg	17 03 22.1	-2.1
KTK1				AML	AML	17 03 24.7	
comp=Z,12nm,0.4s							
KTK1	Kautokeino	2.15 23		eP	Pn	17 02 53.0	+0.8
KTK1				eSG	Sg	17 03 22.1	-2.1
KTK1				AML	AML	17 03 24.7	
comp=Z,12nm,0.4s							
KTK1	Kautokeino	2.15 23		P	Pn	17 02 53.0	+0.8
KTK1				Sg	Sg	17 03 22.1	-2.1
comp=Z,12nm,0.4s							
SGF	Sodankyl	2.21 77		eP	Pn	17 02 53.6	+0.6
SGF				eS	Sn	17 03 20.9	-0.2
SGF				MSG		17 03 28.9	
comp=Z,7.8nm,0.2s							
SGF	Sodankyl	2.21 77		P	Pn	17 02 53.6	+0.5
SGF				S	Sn	17 03 20.9	-0.2
comp=Z,7.8nm,0.2s							
STEI	Steigen	2.36 295		eSg	Sg	17 03 31.5	+0.7
STEI				AML	AML	17 03 33.5	
comp=Z,5.4nm,0.3s							
STEI	Steigen	2.36 295		eSG	Sg	17 03 31.5	+0.7
STEI				AML	AML	17 03 33.5	
comp=Z,5.4nm,0.3s							
STEI	Steigen	2.36 295		Sg	Sg	17 03 31.5	+0.7
comp=Z,5.4nm,0.3s							
BURU	Burvik	2.49 175		eP	Pn	17 02 57.6	+0.7
BURU	Burvik	2.49 175		P	Pn	17 02 57.5	+0.7
SVAU	Svanoeiden	2.63 193		eP	Pn	17 02 59.4	+0.6
SVAU	Svanoeiden	2.63 193		P	Pn	17 02 59.3	+0.5
TRO	Tromso	2.69 345		eSg	Sg	17 03 38.5	-3.2
TRO				AML	AML	17 03 42.3	
comp=Z,9.9nm,0.5s							
TRO	Tromso	2.69 345		eSG	Sg	17 03 38.5	-3.2
TRO				AML	AML	17 03 42.3	
comp=Z,9.9nm,0.5s							
TRO	Tromso	2.69 345		Sg	Sg	17 03 38.4	-3.2
comp=Z,9.9nm,0.5s							
MOR8	Moi Rana	2.73 254		eSg	Sg	17 03 36.3	-6.5
MOR8				AML	AML	17 03 41.2	
comp=Z,12nm,0.5s							
MOR8	Moi Rana	2.73 254		eSG	Sg	17 03 36.3	-6.5
MOR8				AML	AML	17 03 41.2	
comp=Z,12nm,0.5s							
MOR8	Moi Rana	2.73 254		Sg	Sg	17 03 36.3	-6.6
comp=Z,12nm,0.5s							
ARA0	ARCESS Array S	3.02 32		Pn	Pn	17 03 03.9	-0.3
baz=213,slow=16							
ARA0				Sn	Sn	17 03 41.8	+0.9
baz=216,slow=22							
ARA0	ARCESS Array S	3.02 32		eP	Pn	17 03 03.9	-0.3
ARA0				eS	Sn	17 03 41.8	+0.9
ARA0	ARCESS Array S	3.02 32		P	Pn	17 03 03.8	-0.3
ARA0				S	Sn	17 03 41.8	+0.9
comp=Z,5.5nm,0.6s							
ARCES	ARCESS Array B	3.02 32		Pn	Pn	17 03 04.0	-0.2
comp=Z,0.8nm,0.3s,baz=214,slow=13,SNR=31							
ARCES				Pg	Pg	17 03 07.0	-6.0
comp=Z,0.8nm,0.3s,baz=209,slow=14,SNR=63							
ARCES				Sn	Sn	17 03 42.5	+1.5
comp=Z,1.1nm,0.3s,baz=210,slow=23,SNR=11							
ARCES				Lg		17 03 59.0	
comp=Z,1.1nm,0.3s,baz=232,slow=32,SNR=7.4							
BREU	Bredtraesk	3.32 198		eP	Pn	17 03 08.7	+0.4
BREU	Bredtraesk	3.32 198		P	Pn	17 03 08.7	+0.4
KEV	Kevo	3.52 37		MSG		17 04 10.9	
comp=Z,3.3nm,0.2s							
APA0	Apatity Array	4.71 78		Pn	Pn	17 03 27.1	-0.2
baz=260,slow=12							
APA0	Apatity Array	4.71 78		eP	Pn	17 03 27.1	-0.2
APA0	Apatity Array	4.71 78		P	Pn	17 03 27.1	-0.2
FIA0	FINESS Array S	6.06 156		Pn	Pn	17 03 45.6	-0.3
baz=348,slow=16							
FIA0				Sn	Sn	17 04 55.3	-0.6
baz=348,slow=28							
FIA0				Lg		17 05 25.2	
baz=348,slow=28							
FIA0	FINESS Array S	6.06 156		eP	Pn	17 03 45.6	-0.3
FIA0				eS	Sn	17 04 55.3	-0.6
FIA0				eSG	Sg	17 05 25.2	-4.5
FIA0	FINESS Array S	6.06 156		Pn	Pn	17 03 45.7	-0.2
baz=348,slow=15,SNR=50							
FIA0				S	Sn	17 04 55.2	-0.7
FIA0				Sn	Sn	17 04 55.3	-0.6
baz=348,slow=23,SNR=50							
FIA0				Sg	Sg	17 05 25.2	-4.5
FINES	FINESS Array B	6.06 156		Pn	Pn	17 03 48.3	+2.4
comp=Z,0.3nm,0.3s,baz=345,slow=15,SNR=6.2							
FINES				Sn	Sn	17 04 57.6	+1.8
comp=Z,0.3nm,0.3s,baz=349,slow=22,SNR=5.3							
FINES				Lg		17 05 28.7	
comp=Z,0.4nm,0.3s,baz=357,slow=32,SNR=5.5							
NB2	NORSAR Subarra	7.38 220		Pn	Pn	17 04 06.1	+2.1
baz=23,slow=14							
NB2	NORSAR Subarra	7.38 220		eP	Pn	17 04 06.1	+2.1
NB2	NORSAR Subarra	7.38 220		Pn	Pn	17 04 06.1	+2.1
baz=23,slow=14,SNR=50							
NOA	NORSAR Array B	7.38 220		Pn	Pn	17 04 00.2	-3.7
comp=Z,0.1nm,0.3s,baz=174,slow=18,SNR=2.2							
NOA				Sn	Sn	17 05 26.2	-2.1
comp=Z,0.1nm,0.3s,baz=259,slow=12,SNR=2.5							
NOA				Lg		17 06 05.8	
comp=Z,0.2nm,0.3s,baz=75,slow=16,SNR=3.5							
HFS	Hagfors	7.65 208		Pn	Pn	17 04 08.9	+1.2
baz=30,slow=14							
HFS				Sn	Sn	17 05 33.7	-1.2
baz=26,slow=28							
HFS				Lg		17 06 12.3	
baz=27,slow=28							
HFS	Hagfors	7.65 208		Pn	Pn	17 04 07.3	-0.4
comp=Z,0.2nm,0.3s,baz=25,slow=14,SNR=9.9							
HFS				Sn	Sn	17 05 32.1	-2.9
comp=Z,0.2nm,0.3s,baz=33,slow=24,SNR=4.5							
HFS	Hagfors	7.65 208		eP	Pn	17 04 08.9	+1.2
HFS				eS	Sn	17 05 33.7	-1.2
HFS				eSG	Sg	17 06 12.3	-8.2
HFS	Hagfors	7.65 208		P	Pn	17 04 08.9	+1.2
HFS				S	Sn	17 05 33.7	-1.2

ISCJB 14 17:17:15.1±0.5, 21°0S±0°1×68°6E±0°1, h10km, mb3.9/19, MS4.0/15, Error ellipse: s-maj=15.8km s-min=14.5km az=168.1
IDC 14 17:17:15.3±0.7, 21°00S×68°57E, h0km, mb3.9/16, mb1 4.0/16, mb1mx3.9/26, mbtmp3.9/16, MS3.9/14, Ms1 3.9/14, ms1mx3.7/26, Error ellipse: s-maj=20.4km s-min=18.3km az=169.0
NEIC 14 17:17:16.8±0.5, 20°99S×68°57E, h10km, mb4.1/2, Error ellipse: s-maj=14.1km s-min=12.3km az=144.0

ISC 14 17:17:17.0±0.5, 21°0S±0°1×68°6E±0°1, h10km, n30, σ0°79/24, mb3.9/19, MS4.0/15, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBTB	Lobatse	39.63 256		P	P	17 24 50.3	+1.1
1.9nm,0.8s,mb3.9,baz=105,slow=8.0,SNR=4.0							
BOSA	Boshof	39.87 250		P	P	17 24 50.4	-0.8
1.6nm,0.8s,mb3.8,baz=7.0,slow=22,SNR=3.0							
BOSA				LR	LR	17 39 00.3	
comp=Z,294nm,18.2s,MS4.2,baz=123,slow=33							
MAW	Mawson	46.75 183		LR	LR	17 40 43.0	
comp=Z,120nm,18.6s,MS3.9,baz=176,slow=30							
CMAR	Chiang Mai Arr	49.22 39		P	P	17 26 07.7	+1.8
0.4nm,0.3s,mb3.9,baz=137,slow=25,SNR=4.5							
CMAR				LR	LR	17 44 52.2	
comp=Z,126nm,18.5s,MS3.9,baz=191,slow=34							
ASAR	Alice Springs	60.03 106		P	P	17 27 23.9	-0.5
1.3nm,0.8s,mb4.0,baz=270,slow=6.5,SNR=17							
WRA	Warramunga Arr	61.23 102		P	P	17 27 32.0	-0.6
1.7nm,0.8s,mb4.2,baz=257,slow=6.2,SNR=10							
WRAB	Tennant Creek	61.24 102		eP	P	17 27 32.4	-0.3
STKA	Stephens Creek	65.22 116		LR	LR	17 51 12.9	
comp=Z,140nm,19.6s,MS4.2,baz=205,slow=31							
GTA	Gaotai	66.81 26		eP	P	17 28 09.6	+0.7
GTA				pP	pP	17 28 14.8	+2.7
GTA				sP	sP	17 28 18.6	+5.3
GTA				PP	PP	17 30 30.5	-5.8
GTA				S	S	17 36 41.5	-20
GTA				pmax	pmax		
comp=Z,2.0nm,1.1s,mb4.1							
GTA				LR	LR		
comp=N,88nm,16.8s,MS4.2							
GTA				LR	LR		
comp=E,100nm,16.8s,MS4.2							
GTA				LR	LR		
comp=Z,150nm,24.0s							
MK31	Makanchi Array	68.59 10		eP	P	17 28 19.5	-0.4
MKAR	Makanchi Array	68.59 10		P	P	17 28 19.5	-0.4
comp=Z,0.9nm,0.7s,mb3.8,baz=198,slow=6.4,SNR=11							
MKAR				LR	LR	17 56 34.6	
comp=Z,88nm,21.2s,MS4.0,baz=188,slow=34							
MKAR	Makanchi Array	68.59 10		P	P	17 28 19.5	-0.4
MKAR				LR	LR	17 56 34.6	
BRTR	Keskin Array B	68.64 332		P	P	17 28 20.9	+0.5
comp=Z,0.7nm,0.6s,mb3.8,baz=158,slow=5.6,SNR=4.3							
BRTR				LR	LR	17 56 22.6	
comp=Z,33nm,19.8s,MS3.6,baz=274,slow=34							
QSPA	South Pole Qui	69.13 180		P	P	17 28 23.4	+0.4
comp=Z,1.8nm,0.9s,mb4.0,baz=273,slow=5.1,SNR=5.1							
ABKAR	Akbulak array	70.34 354		eP	P	17 28 30.3	-0.4
comp=Z,0.4nm,0.4s,mb3.7							
AKTK	Aktyubinsk	71.71 353		P	P	17 28 38.9	0.0
AKTO	Aktyubinsk	71.71 353		P	P	17 28 38.9	0.0
comp=Z,0.6nm,0.6s,mb3.7,baz=175,slow=7.5,SNR=3.5							
BVAR	Borovoye Array	73.71 1		P	P	17 28 50.8	0.0
comp=Z,0.7nm,0.7s,mb3.7,baz=229,slow=36,SNR=2.8							
TORD	Torodi Ar. Bea	73.91 291		P	P	17 28 53.5	+0.7
comp=Z,1.0nm,1.0s,mb3.7,baz=106,slow=4.9,SNR=3.9							
ZALV	Zalesovo Beam	75.93 10		P	P	17 29 02.6	-1.0
comp=Z,1.1nm,0.6s,mb4.0,baz=184,slow=5.0,SNR=7.4							
ZALV				LR	LR	18 00 58.4	
comp=Z,32nm,20.5s,MS3.6,baz=255,slow=34							
SONM	Songino Array	76.46 25		P	P	17 29 06.8	0.0
comp=Z,0.3nm,0.7s,mb3.4,baz=204,slow=7.6,SNR=3.7							
SONM				LR	LR	18 02 20.2	
comp=Z,129nm,19.4s,MS4.2,baz=234,slow=35							
DBIC	Dimbokro	77.06 282		LR	LR	17 59 33.6	
comp=Z,107nm,19.5s,MS4.2,baz=58,slow=33							
AKASG	Malin Array Be	79.35 336		P	P	17 29 22.7	-0.1
comp=Z,1.1nm,0.6s,mb4.0,baz=135,slow=4.6,SNR=8.1							
AKASG	Malin Array Be	79.35 336		P	P	17 29 22.7	-0.1
KIEV	Kiev	79.35 336		eP	P	17 29 22.0	-0.8
comp=Z,2.1nm,0.6s,mb4.2							
KSRS	Korea Array	80.60 44		P	P	17 29 31.6	+1.7
comp=Z,0.7nm,0.9s,mb3.6,baz=237,slow=7.6,SNR=4.6							
KSRS				LR	LR	18 04 54.7	
comp=Z,93nm,18.6s,MS4.2,baz=66,slow=36							
MJAR	Matsushiro Art	87.09 49		LR	LR	18 06 18.0	
comp=Z,137nm,21.6s,MS4.3,baz=270,slow=34							
PMSA	Palmer Station	87.10 198		LR	LR	18 07 00.9	
comp=Z,70nm,18.5s,MS4.1,baz=132,slow=34							
HNR	Honiara	87.96 99		LR	LR	18 04 28.7	
comp=Z,52nm,18.0s,MS4.0,baz=55,slow=32							
ARCES	ARCESS Array B	95.34 346		P	P	17 30 39.4	-1.5
comp=Z,1.4nm,0.9s,mb4.4,baz=52,slow=20,SNR=2.9							
ARCES				LR	LR	18 14 46.7	
comp=Z,44nm,21.3s,MS3.9,baz=230,slow=36							

IDC 14 17:22:38.6±0.8, 32°58S×71°86W, h0km, mb4.0/7, mb1 4.1/11, mb1mx4.0/18, mbtmp3.9/11, ML4.0/4, MS3.3/2, Ms1 3.2/2, ms1mx2.8/18, Error ellipse: s-maj=21.1km s-min=17.5km az=155.0
ISCJB 14 17:22:39.4±1.2, 32°55S±0°03×72°13W±0°05, h15km±8km, mb4.0/7, Error ellipse: s-maj=7.2km s-min=4.0km az=164.3
GUC 14 17:22:41.6±0.7, 32°56S×72°01W, h15km±4km, MD4.3, ML4.2
NEIC 14 17:22:41.6, 32°56S×72°01W, h15km, mb4.5/1, ML4.2(GUC), After GUC.

ISC 14 17:22:40.1±0.8, 32°55S±0°02×72°05W±0°05, h10km±4km, n53, σ0°87/82, mb4.0/7, 12C-5D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHA	Instituto Hidr	0.58 144		⇓iP	Pg	17 22 52.0	+0.6
IHA				iS	Sg	17 22 59.8	+0.8
IHA	Instituto Hidr	0.58 144		⇓iP	Pg	17 22 52.0	+0.6
IHA				iS	Sg	17 22 59.8	+0.8
CHNG	Los Chungos	0.81 35		⇓iP	Pg	17 22 55.8	0.0
CHNG				iS	Sg	17 23 07.2	+0.8
CHNG				AML	AML	17 23 09.4	
comp=E,7μm,0.5s							
ROCH	El Roble	0.97 116		⇑iP	Pg	17 22 58.5	-0.2
ROCH				eS	Sg	17 23 11.2	-0.1
ROCH	El Roble	0.97 116		⇑iP	Pg	17 22 58.5	-0.2
ROCH				eS	Sg	17 23 11.2	-0.1
LCCH	Las Cruces	1.00 157		⇑iP	Pg	17 22 58.9	-0.5
LCCH				eS	Sg	17 23 11.9	-0.5
LCCH	Las Cruces	1.00 157		⇑iP	Pg	17 22 58.9	-0.5
LCCH				eS	Sg	17 23 11.9	-0.5
JACH	Jahuel	1.23 96		⇑iP	Pn	17 23

SJCH *e*S **Sn** **17 23 34.5 +0.8**
SJCH San Jose de Ma 1.79 128 *e*P **Pn** **17 23 11.7 +0.8**
SJCH *e*S **Sn** **17 23 34.5 +0.8**
SJCH AML AML 17 23 39.4
comp=E,2µm,0.5s
CACH El Canelo 1.97 143 *e*P **Pn** **17 23 14.6 +1.0**
CACH *i* S **Sn** **17 23 40.7 +2.4**
CACH El Canelo 1.97 143 *e*P **Pn** **17 23 14.6 +1.0**
CACH *i* S **Sn** **17 23 40.7 +2.4**
LMEL Las Melosas 2.01 130⇑ *i*P **Pn** **17 23 14.9 +0.9**
LMEL *i* S **Sn** **17 23 40.6 +1.4**
LMEL Las Melosas 2.01 130⇑ *i*P **Pn** **17 23 14.9 +0.9**
LMEL *i* S **Sn** **17 23 40.6 +1.4**
LMEL AML AML 17 23 46.9
comp=N,4µm,1.1s
CFAA Coronel Fontan 3.37 75 Pn **Pn** **17 23 34.9 +2.2**
comp=N,1.9nm,0.3s,baz=250,slow=12,SNR=94
CFAA Pg **Pg** **17 23 36.6 -8.1**
comp=N,5.7nm,0.3s,baz=251,slow=10.0,SNR=68
CFAA Lg 17 24 22.7
comp=N,9.3nm,0.3s,baz=30,slow=14,SNR=6.3
CFAA Coronel Fontan 3.37 75 Pn **Pn** **17 23 34.9 +2.2**
CFAA Pg **Pg** **17 23 36.6 -8.1**
CFAA Lg 17 24 22.7
LCO Las Campanas 3.72 19 *e*P **Pn** **17 23 37.2 -0.3**
PLCA Paso Flores 8.25 172 Pn **Pn** **17 24 38.8 -0.9**
comp=N,0.5nm,0.3s,baz=348,slow=11,SNR=7.1
TRQA Tornquist 9.89 127 *e*P **Pn** **17 25 02.1 -0.1**
CPUP Villa Florida 14.24 68 Pn **Pn** **17 25 58.1 -3.6**
comp=N,0.3nm,0.3s,baz=92,slow=7.8,SNR=2.3
CPUP Sn **Sn** **17 28 43.0 +3.2**
comp=N,0.5nm,0.3s,baz=201,slow=14,SNR=2.3
CPUP LR LR 17 31 09.0
comp=N,52nm,20.3s,baz=243,slow=36
CPUP Villa Florida 14.24 68 *e*P **Pn** **17 26 00.2 -1.5**
CPUP Sn **Sn** **17 28 43.0 +3.2**
CPUP LR LR 17 31 09.0
LPAZ La Paz 16.58 13 Pn **Pn** **17 26 32.6 0.0**
comp=N,0.1nm,0.3s,baz=200,slow=8.6,SNR=7.0
SIV San Ignacio 19.26 34 P **Pn** **17 27 03.6 -2.2**
comp=N,0.2nm,0.3s,baz=220,slow=11,SNR=13
USHA Ushuaia 22.42 175 LR LR 17 37 28.6
comp=N,146nm,18.5s,baz=334,slow=40
QSPA South Pole Qui 57.68 180 P **P** **17 32 30.3 +0.2**
comp=N,1.4nm,0.7s,mb4.1,baz=180,slow=2.7,SNR=8.8
TXAR Lajitas Array 68.47 331 P **P** **17 33 43.1 +0.8**
comp=N,0.1nm,0.5s,mb3.1,baz=147,slow=7.1,SNR=3.2
TXAR Lajitas Array 68.47 331 P **P** **17 33 43.1 +0.8**
DBIC Dimbokro 74.73 72 *e*P **P** **17 34 19.7 -0.7**
comp=N,3.0nm,0.8s,mb4.3,baz=99,slow=21,SNR=4.3
DBIC Dimbokro 74.73 72 *e*P **P** **17 34 19.2 -1.3**
comp=N,4.1nm,0.8s,mb4.4
BOSA Boshof 80.75 118 P **P** **17 34 53.6 -0.2**
comp=N,1.8nm,0.6s,mb4.2,baz=347,slow=6.2,SNR=4.3
NVAR Mina Array Bea 82.69 325 P **P** **17 35 05.5 +1.8**
comp=N,0.3nm,0.7s,mb3.5,baz=284,slow=15,SNR=2.4
LBTB Lobatse 82.92 115 P **P** **17 35 05.0 -0.3**
comp=N,1.3nm,0.4s,mb4.3,baz=241,slow=4.6,SNR=6.1
TORD Torodi Ar. Bea 83.72 70 P **P** **17 35 08.9 -0.6**
comp=N,2.7nm,0.7s,mb4.5,baz=260,slow=4.6,SNR=13
BVAR Borovoye Array 146.22 41 PKPbc PKPbc 17 42 20.4 +0.2
comp=N,1.1nm,0.5s,baz=289,slow=3.2,SNR=7.2
ZALV Zalesovo Beam 153.00 31 PKPbc PKPbc 17 42 36.9 -0.2
comp=N,1.8nm,0.7s,baz=289,slow=4.6,SNR=7.9
MKAR Makanchi Array 155.80 47 PKPab PKPab 17 43 00.2 -0.3
comp=N,1.1nm,0.7s,baz=289,slow=4.0,SNR=10
HHC Hu-ho-hao-te 171.23 342 *e*PKP PKPdf 17 42 46.4 -2.1
HHC PP PP 17 47 59.8 +1.5
HHC AMB AMB
comp=Z,31nm,9.8s

*CSEM **14** 17:24:08.1,36°.66N×25°.82E,h45km,MD3.1,After ATH*
*NEIC **14** 17:24:08.1,36°.66N×25°.82E,h45km,MD3.1(ATH),After ATH.*

ATH 14 17:24:08.1,36°.66N×25°.82E,h45km,MD3.1/5, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**1.32**	**38**	*e*P	Pn	17 24 31.3	+1.2
SMG	**Samos**	**1.32**	**38**	*e*P	Pn	17 24 31.3	+1.2
SMG	**Samos**	**1.32**	**38**	*e*P	Pn	17 24 31.3	+1.2
NPS	**Neapolis**	**1.41**	**187**	*e*P	Pn	17 24 32.4	+1.2
NPS				*e*S	Sn	17 24 49.5	+1.0
NPS	**Neapolis**	**1.41**	**187**	*e*P	Pn	17 24 32.4	+1.2
NPS				*e*S	Sn	17 24 49.5	+1.0
NPS	**Neapolis**	**1.41**	**187**	*e*P	Pn	17 24 32.4	+1.2
NPS				*e*S	Sn	17 24 49.5	+1.0
IDI	**Anoyia**	**1.56**	**209**	*e*P	Pn	17 24 34.0	+0.6
IDI	**Anoyia**	**1.56**	**209**	*e*P	Pn	17 24 34.0	+0.6
IDI	**Anoyia**	**1.56**	**209**	*e*P	Pn	17 24 34.0	+0.6
ZKR	**Zakros**	**1.57**	**168**	*e*P	Pn	17 24 34.6	+1.0
ZKR	**Zakros**	**1.57**	**168**	*e*P	Pn	17 24 34.6	+1.0
ZKR	**Zakros**	**1.57**	**168**	*e*P	Pn	17 24 34.6	+1.0
KARN	**Karanos**	**1.99**	**231**	*e*P	Pn	17 24 40.7	+1.5
KARN	**Karanos**	**1.99**	**231**	*e*P	Pn	17 24 40.7	+1.5

*ISCJB **14** 17:31:28.4±0.5,10°.38N±0°.02×60°.53W±0°.04,h53km±4km, mb4.4/42,MS3.5/4,Error ellipse: s-maj=6.4km s-min=3.2km az=27.9*
*FUNV **14** 17:31:28.0,10°.39N×60°.29W,h34km,MW4.3*
*TRN **14** 17:31:28.6,10°.38N×60°.37W,h40km,MD4.2*
*IDC **14** 17:31:29.1±0.6,10°.34N×60°.45W,h45km±5km,mb3.9/23, mb1 4.1/26,mb1mx4.1/32,mbtmp4.0/26,ML3.6/2,MS3.5/4, Ms1 3.5/4,ms1mx3.1/26,Error ellipse: s-maj=12.1km s-min=10.0km az=170.0*
*NEIC **14** 17:31:30.0,10°.44N×60°.43W,h43km,mb4.6/20, MD4.2(TRN),After TRN.*

ISC 14 17:31:28.9±0.5,10°.35N±0°.02×60°.46W±0°.03,h39km±4km, h46km±1.1km:pP-P,n130,σ1°07/161,mb4.4/42,MS3.5/4, 20C-3D,Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBH	**Brigand Hill**	**0.61**	**282⇑**	*i*P	Pn	17 31 44.1	+3.0
TBH				*e*S	Sn	17 31 51.7	+2.0
TBH	**Brigand Hill**	**0.61**	**282⇑**	*i*P	Pn	17 31 41.7	+0.6
TBH				*e*S	Sn	17 31 51.7	+2.0
BOT	**Bacolet**	**0.85**	**343⇑**	*e*P	Pn	17 31 44.7	+0.3
BOT				*e*S	Sn	17 31 55.2	-0.3
BOT	**Bacolet**	**0.85**	**343⇑**	*e*P	Pn	17 31 44.7	+0.3
BOT				*e*S	Sn	17 31 55.2	-0.3
TPR	**Prospect**	**0.88**	**340⇑**	*i*P	Pn	17 31 45.8	+1.0
TPR				*e*S	Sn	17 31 56.0	-0.5
TPR	**Prospect**	**0.88**	**340⇑**	*i*P	Pn	17 31 45.8	+1.0
TPR				*e*S	Sn	17 31 56.0	-0.5
TOSP	**Speyside**	**0.94**	**356⇑**	*e*P	Pn	17 31 45.3	-0.3
TOSP				*e*S	Sn	17 31 58.1	+0.2
TRN	**Trinidad (W)**	**0.97**	**288**	*e*P	Pn	17 31 47.8	+1.8
TRN				*e*S	Sn	17 31 59.9	+1.3
TRN	**Trinidad (W)**	**0.97**	**288**	*e*P	Pn	17 31 47.8	+1.8
TRN				*e*S	Sn	17 31 59.9	+1.3
TPP	**Pointe-a-Pierr**	**0.97**	**268**	*e*P	Pn	17 31 47.4	+1.4
TPP				*e*S	Sn	17 32 00.6	+2.0
TPP	**Pointe-a-Pierr**	**0.97**	**268**	*e*P	Pn	17 31 47.4	+1.4
TPP				*e*S	Sn	17 32 00.6	+2.0
TCE	**Chacachacare**	**1.31**	**285⇑**	*i*P	Pn	17 31 52.9	+2.2
TCE				*e*S	Sn	17 32 09.1	+2.0
TCE	**Chacachacare**	**1.31**	**285⇑**	*e*P	Pn	17 31 52.6	+1.8
TCE				*e*S	Sn	17 32 09.1	+2.0
GUIV	**Guiria**	**1.76**	**280⇑**	*i*P	Pn	17 31 57.8	+1.0
GUIV				*e*S	Sn	17 32 19.5	+1.5
GRGR	**Grenville**	**2.12**	**327**	*e*P	Pn	17 32 02.4	+0.5
GRW	**Mount Saint Ca**	**2.15**	**327⇑**	*e*P	Pn	17 32 04.0	+1.8
GRW	**Mount Saint Ca**	**2.15**	**327⇑**	*e*P	Pn	17 32 04.0	+1.8
RIOV	**Rio Grande**	**2.63**	**211**	*e*P	Pn	17 32 08.9	0.0
RIOV				*e*S	Sn	17 32 39.3	-0.3
CRUV	**Carupano**	**2.75**	**277⇑**	*i*P	Pn	17 32 10.1	-0.3
CRUV				*e*S	Sn	17 32 41.2	-1.2
ITEV	**Isla Los Testi**	**2.81**	**291⇑**	*e*P	Pn	17 32 11.3	+0.1
ITEV				*e*S	Sn	17 32 44.0	+0.1
BBGH	**Gun Hill**	**2.91**	**18**	*e*P	Pn	17 32 12.4	-0.3
SVB	**Belmont**	**3.00**	**345⇑**	*e*P	Pn	17 32 13.9	0.0
SVB				*e*S	Sn	17 32 47.4	-1.4
SVB	**Belmont**	**3.00**	**345⇑**	*e*P	Pn	17 32 13.9	0.0
SVB				*e*S	Sn	17 32 47.4	-1.4
SVV	**Soufriere Volc**	**3.04**	**346**	*e*P	Pn	17 32 15.6	+1.2
SVV				*e*S	Sn	17 32 48.8	-0.8
SVV	**Soufriere Volc**	**3.04**	**346**	*e*P	Pn	17 32 15.6	+1.2
SVV				*e*S	Sn	17 32 48.8	-0.8
SSV	**Crater Summit**	**3.04**	**346**	*e*P	Pn	17 32 15.1	+0.6
SSV				*e*S	Sn	17 32 48.6	-1.1
SSV	**Crater Summit**	**3.04**	**346**	*e*P	Pn	17 32 15.1	+0.6
SSV				*e*S	Sn	17 32 48.6	-1.1
ORIV	**Oritupano**	**3.17**	**247⇑**	*i*P	Pn	17 32 17.5	+1.2
ORIV				*e*S	Sn	17 32 52.3	-0.6
MCLT	**Moule a Chique**	**3.37**	**352⇑**	*e*P	Pn	17 32 18.4	-0.6
MCLT				*e*S	Sn	17 32 56.5	-1.3
MCLT	**Moule a Chique**	**3.37**	**352⇑**	*e*P	Pn	17 32 18.4	-0.6
MCLT				*e*S	Sn	17 32 56.5	-1.3
SLB	**Belfond**	**3.50**	**351**	*e*P	Pn	17 32 20.9	+0.1
SLB				*e*S	Sn	17 32 59.9	-1.1
SLB	**Belfond**	**3.50**	**351**	*e*P	Pn	17 32 20.9	+0.1
SLB				*e*S	Sn	17 32 59.9	-1.1
GURV	**El Guri**	**3.65**	**225**	*e*P	Pn	17 32 23.6	+0.6
PCRV	**Puerto La Cruz**	**4.11**	**268**	P	Pn	17 32 29.1	-0.1
8.6nm,0.3s,baz=107,slow=5.4,SNR=42							
PCRV				S	Sn	17 33 16.3	+0.2
22nm,0.3s,baz=216,slow=16,SNR=6.5							
PCRV	**Puerto La Cruz**	**4.11**	**268⇑**	*i*P	Pn	17 32 28.9	-0.3
BIM	**Bigot**	**4.18**	**352**	*e*P	Pn	17 32 30.0	-0.2
BIM				*e*S	Sn	17 33 17.5	-0.3
MVM	**Montagne Vaucl**	**4.20**	**354**	*e*P	Pn	17 32 29.7	-0.7
FDF	**Fort de France**	**4.41**	**351**	*e*P	Pn	17 32 32.6	-0.6
FDF	**Fort de France**	**4.41**	**351**	*e*P	Pn	17 32 32.9	-0.4
FDF				*e*S	Sn	17 33 23.7	+0.3
PRGV	**PARIAGUAN**	**4.42**	**249**	*e*P	Pn	17 32 33.6	+0.2
LUEV	**Luepa**	**4.59**	**193**	*e*S	Sn	17 33 24.0	-3.9
DLPL	**La Plaine**	**5.01**	**351**	*e*P	Pn	17 32 41.8	+0.2
DLPL				*e*S	Sn	17 33 36.5	-1.7
CUPV	**Cœpira**	**5.25**	**267**	*e*P	Pn	17 32 45.0	+0.1
BIRV	**Birongo**	**5.71**	**272**	*e*P	Pn	17 32 51.1	-0.1
BIRV				*e*S	Sn	17 33 53.1	-2.5
HMG	**Houelmont**	**5.72**	**348**	*e*P	Pn	17 32 51.7	+0.3
PHG	**Guadaloupe-2**	**5.74**	**349**	*e*P	Pn	17 32 52.3	+0.6
MERV	**Las Mercedes**	**5.85**	**260**	*e*P	Pn	17 32 52.5	-0.7
LZG	**Guadaloupe-1**	**5.89**	**348**	*e*P	Pn	17 32 53.6	-0.1
SEG	**Port Louis**	**6.10**	**351**	*e*P	Pn	17 32 56.7	+0.2
CAOV	**Caicara del Or**	**6.53**	**243**	*e*P	Pn	17 33 01.9	-0.5
TURV	**Turiamo**	**7.26**	**271**	*e*P	Pn	17 33 10.8	-1.7
SKI	**Saint Kitts**	**7.28**	**343**	*e*P	Pn	17 33 14.8	+2.0
BAUV	**El Baul**	**7.60**	**260**	*e*P	Pn	17 33 16.0	-1.2
MAPV	**Macapo**	**7.89**	**267**	*e*P	Pn	17 33 19.7	-1.5
TEPV	**Terepaima**	**8.60**	**268**	*e*P	Pn	17 33 29.1	-1.9
MTP	**Monte Pirata**	**9.14**	**328**	*e*P	Pn	17 33 37.6	-0.7
13nm,0.5s							
SIQV	**Siquisique**	**9.20**	**273**	*e*P	Pn	17 33 37.9	-1.2
CURV	**Curarigua**	**9.36**	**269**	*e*P	Pn	17 33 40.2	-1.1
CBYP	**Canovanas**	**9.45**	**327**	*e*P	Pn	17 33 44.1	+1.6
27nm,0.7s							
SJG	**San Juan**	**9.48**	**325**	P	Pn	17 33 42.9	0.0
2.1nm,0.3s,baz=318,slow=20,SNR=1.9							
ELOV	**Elorza**	**9.52**	**250**	*e*P	Pn	17 33 42.5	-1.0
SDV	**Santo Domingo**	**10.13**	**263**	P	Pn	17 33 50.0	-2.0
22nm,0.6s							
SDV				*e*S	Sn	17 35 36.6	-7.8
SOCV	**Socops**	**10.46**	**260**	*e*P	Pn	17 33 53.9	-2.5
VIGV	**El Vigia**	**10.86**	**263**	*e*P	Pn	17 34 00.3	-1.5
SDDR	**Presa de Saban**	**13.53**	**311**	*e*P	Pn	17 34 40.2	+1.8
27nm,0.8s							
ROSC	**El Rosal**	**14.79**	**249**	P	Pn	17 34 56.7	+1.3
3.0nm,0.3s,baz=106,slow=9.3,SNR=8.2							
GRTK	**Grand Turk**	**15.10**	**319**	*e*P	Pn	17 34 55.5	-4.0
OTAV	**Otavalo**	**20.52**	**242**	*e*P	P	17 36 08.0	+4.1
11nm,0.8s							
ATAH	**Atahualpa**	**24.91**	**226**	P	P	17 36 50.3	+1.9
8.4nm,0.6s,mb4.4,baz=54,slow=7.9,SNR=7.0							
SIV	**San Ignacio**	**26.18**	**181**	P	P	17 36 58.9	-1.0
2.0nm,0.6s,mb3.9,baz=3.3,slow=11,SNR=7.5							
LPAZ	**La Paz**	**27.54**	**196**	P	P	17 37 12.2	+0.1
0.8nm,0.7s,mb3.5,baz=14,slow=8.1,SNR=3.3							
LPAZ	**La Paz**	**27.54**	**196**	P	P	17 37 12.2	+0.1
LPAZ				*e*P		17 37 12.4	
ELN	**Prospectdale**	**32.41**	**329**	*e*P	P	17 37 55.8	+0.7
TKL	**Tuckaleechee C**	**32.91**	**324**	P	P	17 37 59.5	0.0
1.8nm,0.5s,mb4.3,baz=146,slow=13,SNR=4.4							
SSPA	**Standing Stone**	**33.87**	**336**	*e*P	P	17 38 08.8	+1.0
17nm,1.1s,mb4.9							
CPUP	**Villa Florida**	**36.59**	**175**	P	P	17 38 30.3	-1.0
0.9nm,0.5s,mb3.8,baz=320,slow=7.7,SNR=4.4							
SIUC	**Southern Illin**	**37.55**	**321**	*e*P	P	17 38 39.1	-0.2
22nm,0.8s,mb4.9							
SADO	**Sadowa**	**37.88**	**338**	P	P	17 38 41.7	-0.4
8.7nm,0.7s,mb4.6,baz=155,slow=6.3,SNR=5.3							
SADO	**Sadowa**	**37.88**	**338**	P	P	17 38 41.7	-0.4
CCM	**Cathedral Cave**	**39.02**	**320**	*e*P	P	17 38 50.5	-1.3
8.5nm,0.6s,mb4.7							
CFAA	**Coronel Fontan**	**42.38**	**190**	P	P	17 39 18.6	-0.8
0.2nm,0.3s,baz=318,slow=7.0,SNR=4.0							
CFAA				LR	LR	17 56 47.4	
comp=Z,13nm,18.9s,MS2.9,baz=198,slow=36							
WMOK	**Wichita Mounta**	**42.52**	**311**	*e*P	P	17 39 11.7	-9.0
3.8nm,0.8s,mb4.2							
TXAR	**Lajitas Array**	**44.50**	**301**	P	P	17 39 36.5	-0.2
0.2nm,0.6s,baz=93,slow=8.2,SNR=4.1							
TXAR				PcP	PcP	17 41 21.0	+1.4
0.9nm,0.8s,baz=119,slow=6.9,SNR=3.5							
TXAR				pPcP		17 41 35.6	
1.8nm,0.9s,baz=128,slow=8.1,SNR=5.4							
TXAR	**Lajitas Array**	**44.50**	**301**	P	P	17 39 36.5	-0.2
TXAR				PcP	PcP	17 41 21.0	+1.4
TXAR				pPcP		17 41 35.6	
SCHQ	**Schefferville**	**44.65**	**355**	P	P	17 39 37.6	+0.2
2.8nm,0.5s,mb4.3,baz=217,slow=7.4,SNR=5.7							
SCHQ				LR	LR	17 58 53.6	
comp=Z,59nm,18.1s,MS3.5,baz=276,slow=37							
CPRX	**Cap Rock**	**45.78**	**306**	*e*P	P	17 39 45.9	-0.9
5.7nm,0.8s,mb4.5							
AGMN	**Agassiz Nation**	**48.05**	**329**	*e*P	P	17 40 03.2	-1.0
8.1nm,0.6s,mb4.9							
SDCO	**Great Sand Dun**	**48.70**	**312**	*e*P	P	17 40 08.6	-0.9
2.5nm,0.6s,mb4.4							
ULM	**Lac du Bonnet**	**49.33**	**331**	P	P	17 40 13.1	-1.0
5.9nm,0.4s,mb5.0,baz=128,slow=7.9,SNR=6.3							
ULM				LR	LR	17 59 53.8	
comp=Z,119nm,20.5s,MS3.9,baz=176,slow=34							
ULM	**Lac du Bonnet**	**49.33**	**331**	P	P	17 40 13.1	-1.0
ULM				LR	LR	17 59 53.8	
PV01	**Paradox Valley**	**51.10**	**311**	*e*P	P	17 40 28.4	+0.6
560nm,0.9s							
PDAR	**Pinedale Array**	**53.47**	**316**	P	P	17 40 44.8	-0.5
5.7nm,0.7s,mb4.6,baz=113,slow=9.1,SNR=46							
PDAR				LR	LR	18 04 57.2	
comp=Z,111nm,21.6s,MS3.9,baz=105,slow=38							
FCC	**Fort Churchill**	**54.59**	**339**	*e*P	P	17 40 53.1	0.0
0.4nm,0.6s,mb3.6							
ARUT	**Antelope Range**	**54.67**	**309**	*e*P	P	17 40 54.0	0.0
5.3nm,0.7s,mb4.7							
FFC	**Flin Flon**	**55.05**	**332**	*e*P	P	17 40 55.1	-1.4
4.2nm,0.7s,mb4.6							
DBIC	**Dimbokro**	**55.06**	**89**	P	P	17 40 55.2	-2.0
4.8nm,0.7s,mb4.7,baz=275,slow=7.3,SNR=4.0							
DLMT	**Dillon**	**56.47**	**318**	*e*P	P	17 41 06.9	+0.1
3.8nm,0.8s,mb4.5							
ELK	**Elko**	**56.82**	**312**	P	P	17 41 09.2	-0.3
1.2nm,0.6s,mb4.1,baz=85,slow=8.2,SNR=6.8							
ESDC	**Sonseca Array**	**57.81**	**50**	P	P	17 41 16.2	-0.2
1.4nm,0.5s,mb4.2,baz=265,slow=7.2,SNR=12							
ESDC				pP	pP	17 41 29.0	+0.9
2.2nm,0.8s,baz=254,slow=7.5,SNR=3.1							
NVAR	**Mina Array Bea**	**58.54**	**309**	P	P	17 41 21.3	-0.3
1.3nm,0.6s,mb4.2,baz=94,slow=6.4,SNR=3.6							
BMO	**Blue Mountains**	**59.45**	**316**	*e*P	P	17 41 27.0	-0.8
3.4nm,1.0s,mb4.3							
TORD	**Torodi Ar. Bea**	**60.79**	**81**	P	P	17 41 36.2	-1.2
1.2nm,0.4s,mb4.4,baz=288,slow=5.4,SNR=15							
YBH	**Yreka Blue Hor**	**62.53**	**312**	P	P	17 41 47.5	-1.2
2.2nm,0.6s,mb4.4,baz=76,slow=1.6,SNR=6.8							
YBH				pP	pP	17 42 01.2	+0.8
3.2nm,0.7s,baz=75,slow=3.7,SNR=5.4							
TAM	**Tamanrasset**	**64.00**	**70**	*e*P	P	17 41 59.9	+1.0
3.8nm,0.9s,mb4.4							
YKA	**Yellowknife Ar**	**64.80**	**335**	P	P	17 42 02.3	-1.0
3.3nm,0.5s,mb4.6,baz=110,slow=7.3,SNR=15							
YKA				pP	pP	17 42 15.7	+0.7
5.1nm,0.8s,baz=110,slow=7.5,SNR=9.5							
YKA	**Yellowknife Ar**	**64.80**	**335**	P	P	17 42 02.4	-1.0
YKA				pP	pP	17 42 15.7	+0.6
CLL	**Collm**	**71.65**	**39**	*i* P	P	17 42 47.1	+0.6
comp=Z,7.0nm,1.2s,mb4.5							
CLL				*i* pP	pP	17 42 59.6	+1.3
NB2	**NORSAR Subarra**	**72.15**	**29**	P	P	17 42 51.3	+2.1
comp=Z,6.3nm,1.0s,mb4.5,baz=260,slow=6.2							
NOA	**NORSAR Array B**	**72.15**	**29**	P	P	17 42 50.4	+1.1
comp=Z,1.0nm,0.7s,mb3.8,baz=244,slow=6.1,SNR=3.8							
NOA				pP	pP	17 43 03.5	+2.4
comp=Z,4.2nm,1.0s,baz=257,slow=5.8,SNR=8.2							
BRG	**Berggiesshubel**	**72.20**	**40**	*e*P	P	17 42 50.1	+0.4
comp=Z,2.7nm,0.8s,mb4.2							
BRG				*e*	pP	17 43 03.1	+1.5
comp=Z,4.3nm,0.9s							
INK	**Inuvik**	**74.20**	**338**	*e*P	P	17 43 01.5	+0.3
comp=Z,9.8nm,1.1s,mb4.7							
VYHS	**Vyhne**	**75.23**	**43**	*e*P	P	17 43 08.1	+0.5
comp=Z,11nm,2.5s,mb4.3							
VYHS				*e*	pP	17 43 21.5	+2.0
VYHS	**Vyhne**	**75.23**	**43**	*e*P	P	17 43 08.1	+0.5
VYHS				*e*pP	pP	17 43 21.5	+2.0
DAWY	**Dawson**	**75.91**	**334**	*e*P	P	17 43 12.5	+1.3
EGAK	**Eagle**	**76.73**	**334**	*e*P	P	17 43 16.6	+0.8
comp=Z,8.0nm,0.9s,mb4.7							
DRGR		**77.87**	**44⇓**	*i*P	P	17 43 23.4	+0.8
BMRM	**Bremner River**	**78.18**	**330**	*e*P	P	17 43 25.4	+1.4
comp=Z,4.1nm,0.6s,mb4.5							
ARCES	**ARCESS Array B**	**78.96**	**21**	P	P	17 43 29.1	+0.9
comp=Z,1.5nm,0.8s,mb4.0,baz=308,slow=5.9,SNR=6.0							
FINES	**FINESS Array B**	**79.33**	**29**	P	P	17 43 31.5	+1.2
comp=Z,0.6nm,0.5s,mb3.8,baz=228,slow=4.9,SNR=2.7							
FINES				pP	pP	17 43 43.2	+0.9
comp=Z,4.4nm,0.9s,baz=214,slow=9.2,SNR=5.7							
BUR08	**Bucovina Ar. S**	**79.52**	**43**	*e*P	P	17 43 33.1	+1.5
BURAR	**Bucovina Array**	**79.53**	**43⇓**	*i*P	P	17 43 33.4	+1.7
MLR	**Muntele Rosu**	**80.20**	**45⇓**	*i*P	P	17 43 36.7	+1.4
TRF	**Thorofare Moun**	**80.74**	**333**	*e*P	P	17 43 39.6	+1.8
comp=Z,10nm,1.0s,mb4.7							
BPAW	**Bear Paw Mtn.**	**81.00**	**334**	*e*P	P	17 43 39.9	+0.7
comp=Z,8.5nm,1.1s,mb4.6							
BPAW				*e*		17 43 56.1	
AKASG	**Malin Array Be**	**81.88**	**40**	P	P	17 43 42.8	-1.3
comp=Z,0.2nm,0.3s,mb3.5,baz=263,slow=4.3,SNR=4.0							
RSO	**Redoubt South**	**82.21**	**330**	*e*P	P	17 43 44.0	-1.6
BRTR	**Keskin Array B**	**86.60**	**50**	P	P	17 44 08.3	0.0
comp=Z,1.0nm,1.0s,mb4.0,baz=307,slow=4.5,SNR=4.1							
HHC	**Hu-ho-hao-te**	**128.53**	**8**	*e*PKP	PKPdf	17 50 29.4	-2.6
HHC				PP	PP	17 52 38.3	+2.3
HHC				SS	SS	18 09 48.1	-0.8
HHC				AMB	AMB		
comp=Z,81nm,9.2s							
CMAR	**Chiang Mai Arr**	**144.89**	**35**	PKP	PKPdf	17 51 02.0	-0.6
comp=Z,1.2nm,0.9s,baz=321,slow=5.1,SNR=11							
CMAR				pPKP	pPKPdf	17 51 14.9	-0.4
comp=Z,1.5nm,0.9s,baz=315,slow=4.5,SNR=8.0							
ASAR	**Alice Springs**	**160.95**	**224**	PKP	PKPdf	17 51 26.2	+0.5
comp=Z,0.4nm,1.0s,baz=100,slow=0.9,SNR=3.4							
ASAR				PKPab	PKPab	17 52 08.4	+0.1
comp=Z,0.3nm,0.9s,baz=108,slow=3.0,SNR=3.3							

IDC 14 17:37:00.2±58.0,16°.38S×174°.30W,h0km,mb4.0/3, mb1 4.2/3,mb1mx3.7/15,mbtmp4.0/3,Error ellipse: s-maj=1113.0km s-min=181.9km az=79.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**42.80**	**241**	P	P	17 45 00.5	+0.6
3.1nm,0.9s,baz=68,slow=11,SNR=4.7							
WRA	**Warramunga Arr**	**48.78**	**258**	P	P	17 45 47.4	0.0
0.6nm,0.4s,baz=95,slow=7.2,SNR=8.1							
ASAR	**Alice Springs**	**48.99**	**253**	P	P	17 45 48.4	-0.6
1.6nm,0.5s,baz=93,slow=7.6,SNR=76							

*ISCJB **14** 17:49:10.6±1.1,21°.40S±0°.04×68°.14W±0°.05,h67km±10km, mb4.8/86,Error ellipse: s-maj=7.9km s-min=5.8km az=147.3*
*IDC **14** 17:49:15.0±1.9,21°.54S×68°.28W,h95km±17km,mb4.3/14, mb1 4.4/18,mb1mx4.4/20,mbtmp4.3/18,MS3.4/1, Ms1 3.4/1,ms1mx2.6/25

626A	Big Bend Ranch baz=62,SNR=25	61.42	324	⇑P	P	17 59 21.4 -0.5
428A	Kincaid Ranch, baz=62,SNR=5.1	61.58	326	⇑P	P	17 59 22.1 -0.8
527A	Woodward Ranch baz=62,SNR=8.8	61.60	325	⇓P	P	17 59 22.1 -1.0
MCWV	Mont Chateau 28nm,0.8s,mb5.3	61.74	350	eP	P	17 59 23.7 -0.1
WCI	Wyandotte Cave 26nm,0.7s,mb5.4	61.75	344	eP	P	17 59 22.2 -1.6
526A	Mary Lane Ranc baz=62,SNR=18	61.79	325	⇓P	P	17 59 23.8 -0.6
427A	Hayter Ranch, baz=62,SNR=7.6	62.05	326	⇑P	P	17 59 25.1 -1.0
SIUC	Southern Illin 34nm,0.8s,mb5.4	62.09	341	eP	P	17 59 25.0 -1.2
328A	Wristen Ranch, baz=62	62.16	327	⇓P	P	17 59 26.0 -0.8
426A	McDonald Obser baz=62,SNR=10	62.24	325	⇑P	P	17 59 26.7 -0.7
SSPA	Standing Stone	62.41	352	eP	P	17 59 27.5 -0.7
BLO	Bloomington 53nm,0.9s,mb5.5	62.69	344	eP	P	17 59 28.7 -1.5
FVM	French Village 56nm,0.9s,mb5.5	62.71	340	eP	P	17 59 29.0 -1.3
326A	Caldwell Ranch baz=63,SNR=7.1	62.72	326	⇑P	P	17 59 29.6 -1.0
425A	Indio Mountain baz=63,SNR=24	62.84	325	⇑P	P	17 59 30.6 -0.8
ACSO	Alum Creek Sta 32nm,0.8s,mb5.3	62.88	347	eP	P	17 59 30.5 -0.9
227A	Bennet, Jal baz=63	62.91	327	⇑P	P	17 59 30.8 -1.0
WMOK	Wichita Mounta 2.8nm,0.7s,mb4.3	63.00	332	eP	P	17 59 30.8 -1.5
CCM	Cathedral Cave 30nm,0.8s,mb5.3	63.03	340	eP	P	17 59 30.9 -1.6
325A	Bean Ranch, Si baz=63,SNR=44	63.29	325	⇑P	P	17 59 33.4 -0.9
226A	Malaga, Loving baz=64,SNR=7.4	63.37	326	⇑P	P	17 59 34.3 -0.6
127A	Arkansas Junct baz=64	63.47	327	⇑P	P	17 59 34.4 -1.1
GDL2	Guadalupe Moun	63.62	326	eP	P	17 59 36.4 -0.1
324A	Moseley Ranch, baz=64,SNR=19	63.62	325	⇑P	P	17 59 35.0 -1.5
MNTX	Cornudas Mount 7.6nm,1.1s,mb4.4	63.76	325	eP	P	17 59 35.6 -1.8
225A	Deer Hill, Car baz=64,SNR=6.2	63.78	326	⇑P	P	17 59 36.7 -0.9
126A	Clayton Basin, baz=64	63.79	327	⇑P	P	17 59 36.5 -1.1
Z27A	Tatum baz=64	63.91	328	⇑P	P	17 59 37.0 -1.3
125A	Gardner Draw, baz=64	64.13	326	⇑P	P	17 59 38.5 -1.3
224A	Cornudas Mount baz=64	64.13	325	⇓P	P	17 59 38.6 -1.3
ERPA	Erie 45nm,0.9s,mb5.3	64.17	350	eP	P	17 59 39.5 -0.3
MSTX	Muleshoe baz=64,SNR=15	64.22	328	⇑P	P	17 59 39.1 -1.3
Z26A	Caprock baz=64,SNR=7.2	64.26	327	⇓P	P	17 59 39.5 -1.2
Y27A	Causey baz=64,SNR=10	64.34	328	⇑P	P	17 59 39.7 -1.5
124A	Stringfield Ra baz=65,SNR=8.7	64.58	326	⇓P	P	17 59 41.8 -0.9
Z25A	Roswell baz=65,SNR=5.9	64.65	326	⇑P	P	17 59 41.8 -1.4
Y26A	Elida baz=65	64.70	328	⇑P	P	17 59 42.4 -1.2
X27A	F and S Farms, baz=65	64.92	329	⇑P	P	17 59 43.9 -1.1
123A	Bell Site, Whi baz=65	64.96	325	⇓P	P	17 59 44.2 -1.0
222A	Williams Famil baz=65	65.01	324	⇑P	P	17 59 45.4 -0.1
Z24A	Sheeppen Canyo baz=65,SNR=10	65.02	326	⇓P	P	17 59 44.7 -0.9
Y25A	Mesa, Roswell baz=65,SNR=8.2	65.14	327	⇓P	P	17 59 44.9 -1.5
X26A	CR and CF Fran baz=65,SNR=6.3	65.20	328	⇓P	P	17 59 45.8 -1.0
W27A	Bowe Ranch, En baz=65,SNR=5.6	65.24	329	⇑P	P	17 59 45.8 -1.2
221A	Mesquite Ranch baz=65	65.31	323	⇓P	P	17 59 47.7 +0.2
122A	Conniff Cattle baz=66	65.41	324	⇑P	P	17 59 48.1 0.0
Z23A	Rita Site, Whi baz=66	65.42	325	⇑P	P	17 59 47.8 -0.4
Y24A	Capitan baz=66	65.52	326	⇑P	P	17 59 48.6 -0.2
X25A	Clemmons Ranch baz=66	65.60	327	⇑P	P	17 59 48.2 -1.2
W26A	Owens Ranch, T baz=66	65.61	328	⇑P	P	17 59 48.6 -0.8
220A	Playas Peak, P baz=66,SNR=17	65.65	323	⇓P	P	17 59 49.6 -0.1
319A	Douglas baz=66,SNR=17	65.69	322	⇓P	P	17 59 50.0 +0.1
121A	Cookes Peak, D baz=66,SNR=6.8	65.71	324	⇑P	P	17 59 50.3 +0.2
Z22A	Elephant Butte baz=66,SNR=18	65.81	325	⇑P	P	17 59 50.9 +0.2
Y23A	Lovelace Mesa, baz=66	65.85	326	⇑P	P	17 59 50.4 -0.5
X24A	Lazy VL Ranch, baz=66	66.02	327	⇑P	P	17 59 51.3 -0.8
W25A	X Bar L Ranch, baz=66,SNR=5.1	66.05	328	⇓P	P	17 59 51.3 -0.9
219A	White Tail Can baz=66	66.14	322	⇑P	P	17 59 52.8 0.0
318A	Bisbee baz=66,SNR=16	66.14	321	⇓P	P	17 59 53.0 +0.1
V26A	Tequesquite Ra baz=66,SNR=8.6	66.18	329	⇓P	P	17 59 52.1 -1.0
120A	U Bar Ranch, L baz=66,SNR=6.4	66.19	323	⇓P	P	17 59 53.4 +0.2
Z21A	St. Cloud Mine baz=66,SNR=5.4	66.23	324	⇓P	P	17 59 53.5 +0.1
BNM	Barren Site 22nm,1.7s,mb4.7	66.32	326	eP	P	17 59 53.5 -0.5
Y22A	Socorro baz=66	66.33	325	⇓P	P	17 59 53.9 -0.1
PKME	Peaks-Kenny Pk 25nm,0.8s,mb5.1	66.37	359	eP	P	17 59 56.3 +2.3
X23A	Hourglass Bar baz=66	66.42	326	⇑P	P	17 59 54.4 -0.2
W24A	Lazy 6 Ranch, baz=67	66.52	327	⇑P	P	17 59 54.7 -0.5
218A	Dragoon baz=67,SNR=12	66.57	322	⇑P	P	17 59 55.8 +0.2
Z20A	Nine Sixteen R baz=67,SNR=17	66.59	324	⇓P	P	17 59 56.1 +0.4
V25A	Rancho No Teng baz=67,SNR=13	66.62	328	⇓P	P	17 59 55.1 -0.7
U26A	Atchley Ranch, baz=67,SNR=12	66.64	329	⇓P	P	17 59 55.3 -0.7
119A	Ashpeak Ranch, baz=67	66.73	323	⇑P	P	17 59 56.7 +0.1
Y21A	Point of Rocks baz=67,SNR=16	66.77	325	⇑P	P	17 59 57.5 +0.7
LAZ	Ladron 9.5nm,1.5s,mb4.4	66.78	325	eP	P	17 59 57.5 +0.6
ANMO	Albuquerque 8.1nm,1.0s,mb4.5	66.85	326	eP	P	17 59 57.3 0.0
V24A	Rampart Ranch, baz=67,SNR=7.5	66.86	328	⇑P	P	17 59 56.7 -0.6
W23A	Werner Place, baz=67	66.86	327	⇓P	P	17 59 57.0 -0.3
217A	Green Valley baz=67,SNR=12	66.87	321	⇓P	P	17 59 57.6 0.0
U25A	Circle Dot Ran baz=67,SNR=12	66.97	329	⇓P	P	17 59 57.6 -0.4
118A	Homack Ranch, baz=67,SNR=10	67.01	322	⇑P	P	17 59 58.5 +0.1
Y20A	Horse Springs, baz=67,SNR=14	67.07	324	⇑P	P	17 59 59.1 +0.3
Z19A	T-Link Ranch, baz=67	67.10	323	⇓P	P	17 59 59.5 +0.5
W22A	Albuquerque baz=67	67.16	326	⇓P	P	17 59 59.6 +0.3
X21A	Alamocita Cree baz=67,SNR=17	67.16	325	⇓P	P	17 59 59.7 +0.4
SCIA	State Center 18nm,0.8s,mb5.0	67.16	340	eP	P	17 59 58.1 -1.0
JFWS	Jewell Farm 20nm,0.8s,mb5.0	67.19	343	eP	P	17 59 57.9 -1.4
TUC	Tucson 16nm,1.4s,mb4.7	67.24	322	eP	P	17 59 59.5 -0.3
V23A	Ortiz Mt. (NFS baz=67,SNR=5.7	67.33	327	⇓P	P	18 00 00.4 +0.1
Z18A	Geronimo baz=68	67.38	323	⇑P	P	18 00 00.8 +0.1
U24A	Moreno Valley baz=68	67.40	328	⇓P	P	18 00 00.8 0.0
117A	Oracle baz=68,SNR=17	67.40	322	⇑P	P	18 00 01.0 +0.1
216A	Three Points, baz=68,SNR=11	67.41	321	⇑P	P	18 00 01.2 +0.3
T25A	Trinidad baz=68,SNR=5.4	67.56	329	⇓P	P	18 00 01.7 0.0
Y19A	Nutrioso baz=68,SNR=35	67.59	324	⇑P	P	18 00 02.7 +0.7
W21A	San Fidel baz=68	67.60	326	⇑P	P	18 00 02.1 +0.1
X20A	Quemado baz=68,SNR=12	67.61	325	⇓P	P	18 00 02.6 +0.4
LIC	Lamto 84nm,1.8s,mb5.3	67.65	73	eP	P	18 00 02.8 0.0
Z17A	San Carlos Hig baz=68	67.78	322	⇑P	P	18 00 03.2 0.0
U23A	El Rito baz=68	67.79	327	⇓P	P	18 00 03.2 0.0
V22A	San Miguel Ran baz=68,SNR=10	67.83	327	⇑P	P	18 00 03.9 +0.4
TIC	Toumodi 67nm,1.3s,mb5.3	67.84	73	eP	P	18 00 04.2 +0.2
Y18A	Canyon Day Jun baz=68	67.89	323	⇑P	P	18 00 04.0 +0.1
X19A	St. Johns baz=68	67.96	324	⇑P	P	18 00 04.5 +0.1
KIC	Kosan Boka 32nm,0.5s,mb5.4	67.96	73	eP	P	18 00 05.1 +0.3
S25A	Robets Cordova baz=68,SNR=8.0	67.99	330	⇑P	P	18 00 04.2 -0.2
DBIC	Dimbokro 15nm,0.7s,mb4.9,baz=216,slow=5.5,SNR=22	67.99	73	P	P	18 00 05.5 +0.4
W20A	Ramah baz=68,SNR=7.3	68.06	325	⇓P	P	18 00 05.3 +0.3
V21A	Milan baz=68	68.12	326	⇓P	P	18 00 05.7 +0.4
U22A	Llaves baz=68	68.16	327	⇓P	P	18 00 05.9 +0.4
214A	Organ Pipe Nat baz=68,SNR=13	68.18	320	⇑P	P	18 00 06.1 +0.3
T23A	Casias Ranch, baz=68	68.27	328	⇑P	P	18 00 06.3 +0.1
Y17A	Roosevelt baz=68,SNR=15	68.28	322	⇑P	P	18 00 06.7 +0.3
S24A	Houchin Ranch, baz=68,SNR=5.9	68.34	329	⇓P	P	18 00 06.9 +0.3
Z16A	Peralta Trail, baz=68	68.36	322	⇓P	P	18 00 07.1 +0.3
X18A	Snowflake baz=68	68.40	324	⇓P	P	18 00 07.3 +0.3
V20A	Brimhall baz=69,SNR=6.1	68.55	326	⇓P	P	18 00 08.0 0.0
SDCO	Great Sand Dun 9.6nm,0.9s,mb4.6	68.56	329	eP	P	18 00 08.2 +0.2
U21A	Nageezi baz=69,SNR=7.0	68.61	327	⇓P	P	18 00 08.4 0.0
T22A	Edith baz=69,SNR=6.1	68.68	327	⇑P	P	18 00 09.1 +0.3
W18A	Petrified Fore baz=69	68.72	324	⇓P	P	18 00 09.2 +0.1
X17A	Forest Lakes baz=69	68.73	323	⇓P	P	18 00 09.9 +0.8
R24A	Sanders Place, baz=69,SNR=8.8	68.76	329	⇓P	P	18 00 09.4 +0.2
S23A	Nye Farm, Mont baz=69	68.78	328	⇓P	P	18 00 09.5 +0.1
Y16A	Circle Bar Ran baz=69,SNR=12	68.78	322	⇓P	P	18 00 09.9 +0.5
114A	Black Gap (USA baz=69,SNR=8.9	68.79	320	⇓P	P	18 00 09.7 +0.2
V19A	Window Rock baz=69,SNR=7.0	68.79	325	⇓P	P	18 00 09.9 +0.4
Q25A	Bedland, Calha baz=69	68.91	330	⇑P	P	18 00 09.8 -0.3
T21A	Navajo Lake baz=69	68.98	327	⇑P	P	18 00 10.9 +0.3
U20A	Newcomb baz=69,SNR=5.2	69.02	326	⇓P	P	18 00 10.7 -0.1
X16A	Lo Mia Camp, P baz=69,SNR=11	69.15	323	⇑P	P	18 00 12.2 +0.5
S22A	4UR Ranch, Cre baz=69,SNR=5.3	69.21	328	⇑P	P	18 00 12.1 0.0
W17A	Winslow baz=69	69.22	324	⇑P	P	18 00 12.4 +0.2
Z14A	Wintersburg baz=69	69.26	321	⇓P	P	18 00 12.6 +0.2
V18A	Ganado baz=69	69.27	325	⇓P	P	18 00 12.5 0.0
U19A	Dine' College, baz=69	69.31	325	⇑P	P	18 00 12.4 -0.3
Y15A	Casa Rosa Ranc baz=69,SNR=11	69.32	322	⇓P	P	18 00 13.3 +0.4
113A	Mohawk Valley, baz=69	69.33	320	⇑P	P	18 00 12.8 0.0
P25A	Willow Gulch B baz=70	69.36	331	⇑P	P	18 00 13.0 +0.1
Q24A	Divide baz=70,SNR=6.9	69.37	330	⇑P	P	18 00 13.0 0.0
R22A	Saguache, Gunn baz=70	69.56	328	⇑P	P	18 00 14.1 -0.1
Z13A	Yuma Proving G baz=70,SNR=6.6	69.56	320	⇓P	P	18 00 14.4 +0.1
T19A	Beclabito baz=70	69.62	326	⇑P	P	18 00 14.6 0.0
S21A	Coal Bank Pass baz=70,SNR=5.8	69.63	327	⇑P	P	18 00 14.9 +0.2
MVCO	Mesa Verde 28nm,1.4s,mb4.9	69.64	327	eP	P	18 00 15.2 +0.5
Q23A	Hartsel baz=70	69.64	329	⇓P	P	18 00 14.5 -0.1
X15A	Humboldt baz=70,SNR=6.8	69.65	322	⇓P	P	18 00 15.4 +0.6
V17A	Tonalea, Kykot baz=70,SNR=26	69.67	324	⇓P	P	18 00 15.2 +0.3
W16A	Flagstaff baz=70,SNR=6.3	69.69	323	⇑P	P	18 00 15.8 +0.7
P24A	Kohler Place, baz=70	69.70	330	⇓P	P	18 00 15.0 0.0
Y14A	Wickenburg baz=70,SNR=9.6	69.70	321	⇓P	P	18 00 15.3 +0.2
U18A	Rough Rock, Ch baz=70,SNR=8.0	69.76	325	⇓P	P	18 00 15.9 +0.4
WUAZ	Wupatki 23nm,1.0s,mb5.0	69.91	323	eP	P	18 00 17.2 +0.8
ECSD	EROS Data Cent 9.7nm,1.1s,mb4.5	69.92	338	eP	P	18 00 14.8 -1.4
X14A	Yava baz=70,SNR=6.1	70.01	322	⇓P	P	18 00 17.6 +0.5
S20A	Disappointment baz=70,SNR=9.8	70.05	327	⇓P	P	18 00 17.8 +0.6
R21A	Cimarron baz=70	70.05	328	⇑P	P	18 00 17.4 +0.2
Q22A	Crested Butte, baz=70	70.13	329	⇑P	P	18 00 17.8 +0.2
GLA	Glamis baz=70	70.16	319	⇑P	P	18 00 18.2 +0.2
GLA	Glamis 17nm,1.1s,mb4.8	70.16	319	eP	P	18 00 18.7 +0.7
W15A	Williams baz=70,SNR=6.7	70.17	323	⇑P	P	18 00 18.7 +0.7
U16A	Tuba City baz=70,SNR=7.8	70.24	324	⇑P	P	18 00 18.8 +0.4
ISCO	Idaho Springs 17nm,1.5s,mb4.7	70.25	330	eP	P	18 00 18.9 +0.5
T18A	Mexican Hat baz=70,SNR=11	70.30	326	⇑P	P	18 00 18.6 -0.1
R20A	Redvale baz=70	70.33	327	⇓P	P	18 00 19.4 +0.5
PV01	Paradox Valley 753nm,1.1s	70.38	327	eP	P	18 00 19.2 0.0
SMCO	Snowmass 5.4nm,0.7s,mb4.5	70.40	329	eP	P	18 00 19.9 +0.5
Q21A	Lamborn Mesa, baz=70	70.43	328	⇑P	P	18 00 19.6 +0.1
V15A	Kaibab Nationa baz=71,SNR=15	70.58	323	⇑P	P	18 00 21.2 +0.7
PDMCI	Parker Dam,Lak baz=71	70.62	321	⇑P	P	18 00 20.9 +0.1
P22A	Eagle baz=71	70.63	329	⇓P	P	18 00 20.5 -0.1
X13A	Yucca baz=71,SNR=12	70.65	321	⇑P	P	18 00 21.1 +0.2
W14A	Seligman baz=71,SNR=9.0	70.66	322	⇓P	P	18 00 21.6 +0.7
DVTC	Desert V Tower baz=71	70.67	318	⇑P	P	18 00 21.8 +0.7
SWSC	Sam W. Stewart baz=71	70.68	319	⇓P	P	18 00 21.6 +0.5
T17A	Navajo Res., N baz=71,SNR=16	70.69	325	⇑P	P	18 00 22.1 +0.9
S18A	Hurst Farm, Bl baz=71,SNR=25	70.78	326	⇑P	P	18 00 22.2 +0.5
R19A	Curley Farm, L baz=71	70.86	327	⇑P	P	18 00 22.0 -0.1
Q20A	Ridgley Place, baz=71	70.88	328	⇑P	P	18 00 22.0 -0.2
BC3	Big Chuckawall baz=71,SNR=13	70.96	320	⇓P	P	18 00 23.2 +0.4
V14A	Boquillas Ranc baz=71,SNR=25	70.97	322	⇓P	P	18 00 23.7 +0.9
O22A	Kremmling baz=71,SNR=9.2	70.97	330	⇓P	P	18 00 22.6 -0.1
MONP	Monument Peak baz=71,SNR=5.3	71.03	318	⇓P	P	18 00 23.7 +0.5
W13A	Hualapai Mount baz=71,SNR=5.4	71.04	322	⇓P	P	18 00 24.0 +0.7
BAR	Barrett 17nm,0.9s,mb4.9	71.04	318	eP	P	18 00 23.9 +0.6
T16A	Glen Canyon Da baz=71	71.06	324	⇓P	P	18 00 23.9 +0.6
U15A	North Rim baz=71,SNR=24	71.08	324	⇑P	P	18 00 24.4 +0.9
IRM	Iron Mountain baz=71,SNR=13	71.12	320	⇓P	P	18 00 24.1 +0.3
S17A	Black Ridge (B baz=71	71.16	325	⇓P	P	18 00 24.4 +0.4
R18A	Canyonlands Na baz=71,SNR=8.3	71.25	326	⇑P	P	18 00 24.3 -0.2
P20A	De Beque baz=72	71.34	328	⇑P	P	18 00 24.9 -0.1
Q19A	Hogan Spring (baz=72	71.36	327	⇓P	P	18 00 25.2 +0.1
N22A	Wattenberg Ran baz=72	71.44	330	⇑P	P	18 00 25.6 +0.1
109C	Camp Elliot, M baz=72	71.45	318	⇓P	P	18 00 26.0 +0.2
O21A	Pagoda baz=72	71.45	329	⇑P	P	18 00 24.8 -0.9
BELC	Belle Mtn. Jos baz=72,SNR=6.9	71.52	319	⇓P	P	18 00 26.7 +0.5
PFO	Pinyon Flat Ob baz=72,SNR=5.8	71.54	319	⇓P	P	18 00 26.7 +0.4
PFO	Pinyon Flat Ob 15nm,1.1s,mb4.7	71.54	319	eP	P	18 00 27.1 +0.8
U14A	Mt Trumbull baz=72,SNR=25	71.57	323	⇓P	P	18 00 27.4 +0.9
V13A	Grand Canyon W baz=72,SNR=18	71.62	322	⇑P	P	18 00 27.3 +0.5
S16A	Weppner Ranch, baz=72,SNR=6.4	71.65	325	⇑P	P	18 00 27.1 +0.2
R17A	Hanksville Air baz=72,SNR=25	71.70	326	⇑P	P	18 00 27.4 +0.2
P19A	Cripple Cowboy baz=72,SNR=27	71.74	328	⇑P	P	18 00 27.8 +0.4
W12A	Cal Nev Ari baz=72	71.75	321	⇓P	P	18 00 27.9 +0.3
O20A	White River Ci baz=72	71.76	329	⇓P	P	18 00 27.6 0.0
GMRC	Granite Mounta baz=72,SNR=17	71.86	320	⇑P	P	18 00 28.9 +0.7
N21A	Black Mountain baz=72	71.90	330	⇑P	P	18 00 28.8 +0.4
T14A	Hurricane baz=72,SNR=7.8	71.98	324	⇑P	P	18 00 29.7 +0.8
MURC	Murrieta baz=72	71.99	318	⇑P	P	18 00 29.5 +0.5
R16A	Teasdale baz=72	72.01	325	⇓P	P	18 00 29.3 +0.3
U13A	Pakoon Wash baz=72	72.01	323	⇓P	P	18 00 29.6 +0.4
S15A	Panguitch baz=72	72.03	324	⇓P	P	18 00 29.5 +0.3
V12A	Nelson baz=72	72.04	321	⇑P	P	18 00 29.4 +0.1
SRU	San Rafael baz=72,SNR=5.6	72.12	327	⇑P	P	18 00 29.8 +0.1
SRU	San Rafael 18nm,0.7s,mb5.0	72.12	327	eP	P	18 00 30.2 +0.5
EYMN	Ely 11nm,0.8s,mb4.7	72.17	344	eP	P	18 00 28.5 -1.3
BBRC	Big Bear Solar baz=72	72.26	319	⇑P	P	18 00 31.3 +0.7
HEC	Hector,Ludlow baz=72,SNR=13	72.29	320	⇑P	P	18 00 31.5 +0.7
Q16A	Castle Valley baz=72,SNR=7.2	72.31	326	⇑P	P	18 00 31.0 +0.1
N20A	Spence Gulch, baz=72,SNR=7.2	72.31	329	⇑P	P	18 00 30.8 0.0
O19A	Miners Draw (B baz=72	72.32	328	⇓P	P	18 00 30.5 -0.3
U12A	Valley of Fire baz=72	72.35	322	⇑P	P	18 00 31.7 +0.6
P18A	Preston Nutter baz=72,SNR=16	72.37	327	⇓P	P	18 00 31.6 +0.5
R15A	Junction baz=72	72.38	325	⇓P	P	18 00 31.5 +0.3
L22A	Ellis Ranch, M baz=72	72.40	331	⇑P	P	18 00 31.6 +0.3
T13A	Saint George baz=72,SNR=5.6	72.41	323	⇓P	P	18 00 32.1 +0.7
V11A	Goodsprings baz=72	72.45	321	⇑P	P	18 00 32.1 +0.3
TUQ	Turquoise Moun baz=72	72.46	321	⇓P	P	18 00 32.2 +0.3
CCUT	Cedar City 19nm,0.9s,mb4.9	72.49	324	eP	P	18 00 33.1 +1.2
M21A	Separation Pea baz=73	72.49	330	⇓P	P	18 00 31.9 +0.1
P17A	Butcher Ranch, baz=73,SNR=7.0	72.50	327	⇓P	P	18 00 32.0 0.0
S14A	Cedar City baz=73	72.53	324	⇓P	P	18 00 32.5 +0.3
CIS	Catalina Islan baz=73	72.61	318	⇑P	P	18 00 33.2 +0.5
BFSC	Mount Baldy Ra baz=73,SNR=5.2	72.70	319	⇓P	P	18 00 33.4 +0.2
O18A	Roosevelt baz=73	72.73	328	⇓P	P	18 00 33.6 +0.3
FMP	Fort Macarthur baz=73	72.74	318	⇓P	P	18 00 33.9 +0.4
L21A	Rawlins baz=73,SNR=5.1	72.78	330	⇑P	P	18 00 33.1 -0.4
S13A	Holt Ranch, En baz=73,SNR=6.0	72.78	323	⇓P	P	18 00 34.5 +0.9
M20A	Sweetwater, Wa baz=73	72.79	330	⇓P	P	18 00 33.6 0.0
N19A	John Jarvie Ra baz=73	72.80	329	⇑P	P	18 00 33.6 -0.1
U11A	Corn Creek baz=73	72.83	322	⇑P	P	18 00 34.6 +0.6
R14A	James Farms, M baz=73	72.84	324	⇓P	P	18 00 34.6 +0.6
MWC	Mount Wilson 11nm,0.8s,mb4.8	72.94	318	eP	P	18 00 35.5 +0.8
SHOC	Shoshone baz=73	72.99	321	⇑P	P	18 00 35.5 +0.6
O17A	Robinson Place baz=73,SNR=6.4	73.04	327	⇓P	P	18 00 35.8 +0.7
DECC	Green Verdugo baz=73	73.12	318	⇓P	P	18 00 36.1 +0.3
SNCC	San Nicolas Is baz=73	73.22	317	⇑P	P	18 00 36.2 -0.1
M19A	Rock Springs baz=73	73.26	329	⇓P	P	18 00 36.4 0.0
L20A	Wamsutter baz=73	73.26	330	⇓P	P	18 00 36.5 +0.1
R13A	O'Grain Ranch, baz=73,SNR=7.8	73.27	324	⇑P	P	18 00 37.4 +0.9
T11A	Corn Creek, Al baz=73,SNR=15	73.31	322	⇑P	P	18 00 37.4 +0.6
EDW2	Edwards Air Fo baz=73,SNR=9.1	73.33	319	⇑P	P	18 00 37.0 0.0
P15A	Leamington baz=74	73.37	326	⇓P	P	18 00 37.4 +0.3
U10A	Ash Meadows, A baz=74	73.38	321	⇓P	P	18 00 38.0 +0.8

DAU	Daniels Canyon	73.47	327	eP	P	18 00 38.4 +0.7
Q14A	Sevier Lake (B	73.48	325	⇑P	P	18 00 38.7 +0.9
	baz=74,SNR=17					
BLG	Laguna Peak	73.49	318	⇑P	P	18 00 37.8 -0.1
	baz=74					
LRMC	Laurel Mountai	73.55	320	⇑P	P	18 00 38.6 +0.4
	baz=74,SNR=6.5					
NLU	North Lily Min	73.55	326	eP	P	18 00 39.0 +0.9
	5.5nm,1.0s,mb4.2					
OSI	Osito Adit	73.61	318	⇓P	P	18 00 38.7 +0.1
	baz=74					
M18A	Lyman	73.64	328	⇑P	P	18 00 38.4 -0.3
	baz=74					
N17A	Moffit Pass	73.65	328	⇑P	P	18 00 39.4 +0.7
	baz=74,SNR=11					
JLU	Jordanelle	73.71	327	eP	P	18 00 39.9 +0.9
	10nm,0.9s,mb4.6					
AGMN	Agassiz Nation	73.72	341	eP	P	18 00 37.7 -1.3
	7.3nm,0.9s,mb4.4					
FURC	Furnace Creek,	73.72	321	⇓P	P	18 00 39.7 +0.4
	baz=74					
K20A	Yellowstone Ra	73.77	330	⇓P	P	18 00 38.9 -0.4
	baz=74,SNR=7.9					
P14A	Drum Mountains	73.80	325	⇑P	P	18 00 40.3 +0.7
	baz=74,SNR=14					
L19A	Farson	73.81	329	⇑P	P	18 00 39.8 +0.1
	baz=74					
MPMC	Manual Prospec	73.82	320	⇑P	P	18 00 39.9 +0.1
	baz=74,SNR=9.8					
Q13A	Wheeler Ranch,	73.86	324	⇓P	P	18 00 40.5 +0.5
	baz=74,SNR=5.9					
S11A	Rachel	73.89	322	⇓P	P	18 00 41.0 +0.8
	baz=74					
N16A	Rees Ranch, Co	73.91	327	⇓P	P	18 00 40.7 +0.5
	baz=74					
M17A	Scullys Gap (B	73.97	328	⇓P	P	18 00 40.2 -0.4
	baz=74					
O15A	The Old Anders	73.99	326	⇓P	P	18 00 41.2 +0.5
	baz=74					
L18A	Fontenelle, Gr	74.00	329	⇑P	P	18 00 40.6 -0.1
	baz=74,SNR=5.4					
DUG	Dugway	74.11	326	eP	P	18 00 41.8 +0.4
	9.7nm,1.1s,mb4.5					
K19A	Absolon Red Bu	74.13	330	⇑P	P	18 00 41.0 -0.5
	baz=74					
ISA	Isabella	74.15	319	⇓P	P	18 00 42.3 +0.6
	baz=74,SNR=21					
ISA	Isabella	74.15	319	eP	P	18 00 42.1 +0.4
	15nm,0.8s,mb4.8					
P13A	Bates Ranch, G	74.21	325	⇓P	P	18 00 42.6 +0.6
	baz=74,SNR=9.6					
R11A	Troy Canyon, C	74.29	323	⇓P	P	18 00 43.2 +0.7
	baz=74,SNR=16					
Q12A	Willow Creek R	74.36	324	⇑P	P	18 00 43.3 +0.4
	baz=74,SNR=6.4					
GRAC	Grapevine Rang	74.39	321	⇑P	P	18 00 43.6 +0.5
	baz=74					
BW06	Boulder Array	74.42	330	eP	P	18 00 42.9 -0.2
	4.1nm,1.1s,mb4.1					
PDAR	Pinedale Array	74.42	330	P	P	18 00 42.5 -0.6
	1.4nm,0.8s,mb3.8,baz=141,slow=5.7,SNR=12					
CWC	Cottonwood Cre	74.43	320	⇑P	P	18 00 44.0 +0.7
	baz=74					
HWUT	Hardware Ranch	74.52	328	eP	P	18 00 43.6 -0.1
	8.4nm,0.8s,mb4.5					
L17A	Cokeville	74.54	328	⇑P	P	18 00 43.5 -0.4
	baz=75					
K18A	Toltan Ranch,	74.55	329	⇑P	P	18 00 44.1 +0.2
	baz=75					
S10A	Tonopah Range,	74.57	322	⇑P	P	18 00 44.6 +0.5
	baz=75,SNR=16					
Q11A	Duckwater	74.68	323	⇑P	P	18 00 45.1 +0.4
	baz=75,SNR=15					
P12A	McGill	74.71	324	⇓P	P	18 00 45.4 +0.5
	baz=75,SNR=5.1					
SPUT	South Promonto	74.74	327	eP	P	18 00 45.5 +0.5
	8.2nm,0.8s,mb4.5					
L16A	Fish Haven	74.75	328	⇓P	P	18 00 44.8 -0.3
	baz=75					
BGU	Big Grassy Mou	74.76	326	eP	P	18 00 44.6 -0.5
	11nm,1.4s,mb4.4					
N14A	Grayback Hills	74.78	326	⇓P	P	18 00 45.1 -0.2
	baz=75					
SMMC	Simmler	74.85	318	⇑P	P	18 00 46.2 +0.4
	baz=75,SNR=6.8					
M15A	Larsen Ranch,	74.85	327	⇑P	P	18 00 45.5 -0.2
	baz=75,SNR=8.6					
TIN	Tinemaha	74.93	321	⇑P	P	18 00 47.0 +0.8
	baz=75					
J18A	Kendall Valley	74.98	330	⇓P	P	18 00 46.1 -0.3
	baz=75,SNR=11					
K17A	Gardner Place,	75.06	329	⇓P	P	18 00 46.7 -0.1
	baz=75					
Q10A	Clear Creek Ra	75.08	323	⇑P	P	18 00 47.7 +0.6
	baz=75,SNR=7.5					
O12A	Currie	75.19	325	⇓P	P	18 00 47.8 +0.2
	baz=75,SNR=12					
L15A	Malad City	75.22	327	⇑P	P	18 00 47.6 -0.1
	baz=75,SNR=8.1					
P11A	Circle Ranch,	75.23	324	⇓P	P	18 00 48.4 +0.5
	baz=75					
HVU	Hansel Valley	75.25	327	eP	P	18 00 46.0 -2.0
	6.9nm,0.9s,mb4.4					
I18A	Diamond G Ranc	75.26	330	⇑P	P	18 00 48.1 +0.1
	baz=75					
MTUM	Tungsten Hills	75.33	321	eP	P	18 00 49.3 +0.8
M14A	Sheep Mountain	75.34	327	⇓P	P	18 00 48.3 -0.1
	baz=75,SNR=12					
J17A	Brown Place, J	75.42	329	⇑P	P	18 00 49.1 +0.2
	baz=76					
K16A	Soda Springs	75.44	328	⇓P	P	18 00 49.5 +0.5
	baz=76					
ULM	Lac du Bonnet	75.47	342	P	P	18 00 47.5 -1.5
	6.3nm,0.5s,mb4.6,baz=138,slow=3.7,SNR=7.4					
ULM	Lac du Bonnet	75.47	342	eP	P	18 00 47.5 -1.5
	7.1nm,0.6s,mb4.6					
LOHW	Long Hollow	75.56	330	eP	P	18 00 49.9 +0.2
	24nm,1.8s,mb4.6					
O11A	Cowboy Ranch,	75.58	324	⇓P	P	18 00 50.3 +0.4
	baz=76					
TPAW	Teton Pass	75.63	329	eP	P	18 00 50.4 +0.4
	6.9nm,0.8s,mb4.4					
M13A	Montello	75.66	326	⇓P	P	18 00 50.0 -0.3
	baz=76					
M13A	Montello	75.66	326	eP	P	18 00 50.4 +0.1
	3.4nm,0.8s,mb4.1					
P10A	Eureka	75.67	323	⇓P	P	18 00 51.1 +0.7
	baz=76					
L14A	Malta	75.67	327	⇓P	P	18 00 50.3 -0.1
	baz=76					
RRI2	Red Ridge	75.70	329	eP	P	18 00 51.2 +0.7
	16nm,1.0s,mb4.7					
I17A	Pilgrim Ck.	75.78	330	⇓P	P	18 00 51.7 +0.8
	baz=76					
J16A	Bone	75.78	329	⇑P	P	18 00 51.2 +0.2
	baz=76					
K15A	Arbon	75.80	328	⇑P	P	18 00 51.2 +0.1
	baz=76					
NVAR	Mina Array Bea	75.90	322	P	P	18 00 52.0 +0.3
	3.8nm,0.9s,mb4.1,baz=158,slow=7.7,SNR=25					
IMW	Indian Meadow	75.93	330	eP	P	18 00 52.3 +0.5
	14nm,1.3s,mb4.5					
SCHQ	Schefferville	75.95	1	P	P	18 00 50.9 -0.7
	9.8nm,0.7s,mb4.7,baz=176,slow=2.5,SNR=9.8					
SCHQ	Schefferville	75.95	1	eP	P	18 00 51.2 -0.4
	11nm,0.8s,mb4.6					
K14A	Jones Ranch, D	76.02	327	⇑P	P	18 00 52.1 -0.2
	baz=76					
L13A	Double Diamond	76.07	327	⇑P	P	18 00 52.9 +0.3
	baz=76,SNR=8.0					
M12A	Wells	76.09	326	⇓P	P	18 00 53.1 +0.3
	baz=76					
RLMT	Red Lodge	76.10	331	eP	P	18 00 53.0 +0.3
	52nm,1.9s,mb4.9					
J15A	Blackfoot	76.28	328	⇓P	P	18 00 54.1 +0.3
	baz=76,SNR=10					
SYO	Syowa Base	76.31	159	⇑eP	P	18 00 52.8 -0.9
SYO	Syowa Base	76.31	159	⇓ePcP	PcP	18 01 05.6 +0.4
N10A	Dunphy	76.45	324	⇓P	P	18 00 55.1 +0.3
	baz=76					
K13A	Stover Farm, H	76.55	327	⇑P	P	18 00 55.7 +0.3
	baz=77					
M11A	Holland Ranch,	76.57	325	⇑P	P	18 00 55.7 +0.3
	baz=77,SNR=5.7					
WAKR	Walker	76.61	321	eP	P	18 00 56.7 +0.9
TOA0	Torodi Ar. Sit	76.62	70	eP	P	18 00 56.4 0.0
TORD	Torodi Ar. Bea	76.62	70	P	P	18 00 56.9 +0.5
	5.9nm,0.4s,mb4.6,baz=256,slow=5.8,SNR=104					
L12A	House Creek Ra	76.67	326	⇑P	P	18 00 56.4 +0.4
	baz=77,SNR=7.2					
H16A	Russell Place,	76.69	330	⇑P	P	18 00 56.8 +0.8
	baz=77					
I15A	Monteview	76.75	329	⇑P	P	18 00 57.1 +0.7
	baz=77					
J14A	Carey	76.76	328	⇓P	P	18 00 57.0 +0.6
	baz=77,SNR=7.7					
F18A	Big Timber	76.91	332	⇓P	P	18 00 57.3 +0.1
	baz=77,SNR=9.6					
K12A	Draper Farm, C	76.96	326	⇑P	P	18 00 58.2 +0.6
	baz=77,SNR=13					
M10A	I.L. Ranch, Tu	77.03	325	⇓P	P	18 00 58.4 +0.4
	baz=77					
L11A	Cat Creek Ranc	77.07	326	⇓P	P	18 00 58.5 +0.3
	baz=77,SNR=8.7					
J13A	Cove Ranch, Pi	77.14	327	⇓P	P	18 00 58.9 +0.3
	baz=77,SNR=6.3					
I14A	Mackay	77.17	328	⇓P	P	18 00 59.3 +0.5
	baz=77,SNR=5.8					
H15A	Lima	77.28	329	⇓P	P	18 00 59.9 +0.5
	baz=77					
F17A	Fitzpatrick Pl	77.33	331	⇓P	P	18 00 59.6 0.0
	baz=77					
HLID	Hailey	77.38	327	eP	P	18 01 00.6 +0.7
	14nm,1.0s,mb4.6					
L10A	Juniper Basin	77.38	325	⇓P	P	18 01 00.2 +0.2
	baz=78					
I13A	Wildhorse Cree	77.48	328	⇓P	P	18 01 01.2 +0.6
	baz=78,SNR=9.5					
J12A	Stokes Ranch,	77.50	327	⇑P	P	18 01 01.0 +0.4
	baz=78,SNR=6.1					
E18A	Harlowton	77.51	332	⇓P	P	18 01 00.3 -0.3
	baz=78					
BOZ	Bozeman (W)	77.58	330	eP	P	18 01 01.1 +0.1
	7.4nm,1.5s,mb4.2					
G15A	Dillon	77.62	330	⇓P	P	18 01 01.5 +0.2
	baz=78,SNR=5.0					
H14A	Leadore	77.63	329	⇓P	P	18 01 01.8 +0.5
	baz=78,SNR=6.7					
K11A	Parker Ranch,	77.64	326	⇓P	P	18 01 01.8 +0.4
	baz=78,SNR=9.0					
DLMT	Dillon	77.81	330	eP	P	18 01 03.0 +0.6
	16nm,1.4s,mb4.6					
E17A	Martinsdale	77.84	331	⇓P	P	18 01 02.3 -0.2
	baz=78					
I12A	Atlanta	77.91	327	⇓P	P	18 01 03.4 +0.5
	baz=78,SNR=7.8					
MFID	Camas Ranch	77.99	327	⇓P	P	18 01 03.7 +0.3
	baz=78,SNR=7.5					
H13A	Challis	78.03	328	⇑P	P	18 01 04.1 +0.6
	baz=78,SNR=18					
K10A	MacKenzie Ranc	78.08	326	⇑P	P	18 01 04.0 +0.1
	baz=78,SNR=9.0					
LRM	Linekiln Ridge	78.09	330	eP	P	18 01 04.5 +0.6
F15A	Butte	78.12	330	⇓P	P	18 01 03.8 -0.2
	baz=78					
E16A	East Helena	78.27	331	⇓P	P	18 01 05.1 +0.3
	baz=78					
D17A	Six Diamond Ra	78.30	332	⇑P	P	18 01 04.6 -0.3
	baz=78,SNR=5.0					
H12A	Diamond D Ranc	78.31	328	⇓P	P	18 01 05.5 +0.4
	baz=78,SNR=10					
G13A	Cobalt	78.40	329	⇑P	P	18 01 06.1 +0.5
	baz=78,SNR=34					
F14A	Wisdom	78.51	330	⇑P	P	18 01 06.8 +0.6
	baz=79					
D16A	Dana Ranch, Ca	78.59	331	⇓P	P	18 01 06.8 +0.2
	baz=79,SNR=6.0					
E15A	Deer Lodge	78.63	330	⇑P	P	18 01 06.9 +0.1
	baz=79					
WVOR	Wild Horse Val	78.79	324	eP	P	18 01 05.9 -1.9
	2.7nm,0.9s,mb4.1					
B18A	Beardsley Farm	78.86	333	⇑P	P	18 01 07.8 -0.2
	baz=79					
F13A	Darby	78.95	329	⇑P	P	18 01 08.8 +0.2
	baz=79,SNR=15					
H11A	Donnelly	79.00	327	⇓P	P	18 01 09.1 +0.2
	baz=79					
E14A	Clinton	79.02	330	⇓P	P	18 01 09.4 +0.5
	baz=79					
D15A	Lincoln	79.03	331	⇑P	P	18 01 09.6 +0.6
	baz=79					
C16A	Fuhringer Ranc	79.26	332	⇑P	P	18 01 09.6 -0.6
	baz=79					
A18A	Metzger Ranch,	79.30	333	⇓P	P	18 01 09.9 -0.5
	baz=79					
J08A	Circle Bar Ran	79.33	325	⇓P	P	18 01 11.0 +0.2
	baz=79					
TSUM	Tsumeb	79.34	106	eP	P	18 01 12.8 +1.3
	103nm,2.8s,mb5.2					
MOD	Modoc	79.36	323	eP	P	18 01 11.1 +0.2
	18nm,1.1s,mb4.8					
E13A	Victor	79.36	330	⇓P	P	18 01 10.7 -0.1
	baz=80					
F12A	Elk City	79.38	329	⇓P	P	18 01 10.9 0.0
	baz=80,SNR=5.7					
MSO	Missoula	79.53	330	eP	P	18 01 12.2 +0.5
	4.3nm,1.3s,mb4.1					
C15A	Salmond Ranch,	79.62	331	⇓P	P	18 01 12.2 +0.1
	baz=80,SNR=9.8					
G11A	Walters Elk Ra	79.62	328	⇓P	P	18 01 12.3 +0.1
	baz=80					
BMO	Blue Mountains	79.76	327	eP	P	18 01 13.0 0.0
	9.4nm,0.9s,mb4.6					
KCPM	Cahto Peak	79.83	320	eP	P	18 01 14.5 +0.9
	5.1nm,0.9s,mb4.3					
F11A	Grangeville	79.91	328	⇓P	P	18 01 13.6 -0.2
	baz=80					
D13A	Huson	79.97	330	⇑P	P	18 01 13.6 -0.5
	baz=80					
G10A	Bishop Farm, J	79.97	327	⇑P	P	18 01 14.6 +0.5
	baz=80,SNR=6.0					
E12A	Beaver Dam Sad	80.00	329	⇑P	P	18 01 14.2 0.0
	baz=80					
B15A	Bradely Ranch,	80.00	332	⇑P	P	18 01 13.6 -0.6
	baz=80					
K05A	Summer Lake	80.23	323	⇑P	P	18 01 16.2 +0.6
	baz=80,SNR=12					
G09A	Cove	80.30	327	⇓P	P	18 01 16.2 +0.3
	baz=80,SNR=20					
B14A	Marquette Ranc	80.36	331	⇑P	P	18 01 15.7 -0.5
	baz=80					
I07A	Izee	80.38	325	⇓P	P	18 01 16.6 +0.3
	baz=80,SNR=8.4					
C13A	Hot Springs	80.44	330	⇑P	P	18 01 16.5 -0.1
	baz=80					
F10A	Beach Ranch, E	80.50	328	⇑P	P	18 01 16.9 -0.1
	baz=81					
YBH	Yreka Blue Hor	80.61	322	eP	P	18 01 16.4 -1.3
	32nm,2.0s,mb4.8					
B13A	Whitefish	80.90	331	⇑P	P	18 01 18.8 -0.2
	baz=81					
G08A	Pilot Rock	80.91	326	⇓P	P	18 01 19.3 +0.1
	baz=81					
B12A	Libby	81.49	330	⇑P	P	18 01 22.2 +0.1
	baz=82					
HAWA	Hanford	81.95	327	eP	P	18 01 25.0 +0.4
	9.9nm,0.8s,mb4.7					
OD2	Odessa Site #2	82.22	328	eP	P	18 01 25.9 -0.1
HOOD	Mount Hood Mea	82.34	325	eP	P	18 01 25.9 -0.8
	40nm,0.9s,mb5.2					
BOSA	Boshof	82.82	118	P	P	18 01 30.1 +0.4
	1.5nm,0.3s,mb4.2,baz=190,slow=5.4,SNR=7.0					
ETW	Entiat	83.17	327	eP	P	18 01 31.2 +0.3
B08A	Colville Reser	83.19	328	⇑P	P	18 01 30.5 -0.5
	baz=83					
EDM	Edmonton	84.01	335	eP	P	18 01 33.8 -1.4
MAW	Mawson	84.19	163	P	P	18 01 35.9 0.0
	0.7nm,0.3s,mb3.9,baz=214,slow=5.7,SNR=7.1					
JCW	Jim Creek	84.37	327	eP	P	18 01 36.2 -0.9
ESDC	Sonseca Array	85.25	44	P	P	18 01 42.3 +0.6
	0.2nm,0.3s,baz=252,slow=4.4,SNR=6.4					
YKA	Yellowknife Ar	91.36	340	P	P	18 02 09.4 -0.8
	9.7nm,0.6s,mb5.1,baz=134,slow=4.5,SNR=45					
YKA	Yellowknife Ar	91.36	340	P	P	18 02 09.4 -0.8
CLL	Collm	101.08	39	ePdif	Pdif	18 02 54.0 -0.8
ASAR	Alice Springs	130.32	207	PKP	PKPdf	18 08 14.7 -0.9
	1.5nm,0.9s,baz=137,slow=1.9,SNR=10					
ABKAR	Akbulak array	130.59	43	ePKPdf	PKPdf	18 08 16.0 +0.8
WRA	Warramunga Arr	133.40	210	PKP	PKPdf	18 08 20.4 -1.1
	1.3nm,0.7s,baz=159,slow=1.7,SNR=13					
BVAR	Borovoye Array	135.31	35	PKP	PKPdf	18 08 23.9 -0.1
	0.7nm,0.7s,baz=323,slow=2.2,SNR=6.1					
ZALV	Zalesovo Beam	141.56	26	PKhKP		18 08 31.7
	1.4nm,0.6s,baz=318,slow=2.0,SNR=5.9					
ZALV				PKP	PKPdf	18 08 36.2 +0.8
	2.6nm,0.7s,baz=298,slow=3.2,SNR=8.7					
ZALV	Zalesovo Beam	141.56	26	PKP		18 08 31.7
ZALV				PKP	PKPdf	18 08 36.2 +0.8
MK31	Makanchi Array	145.13	36	ePKPdf	PKPdf	18 08 42.0 +0.1
MKAR	Makanchi Array	145.13	36	PKPbc	PKPbc	18 08 41.9 +0.3
	15nm,0.8s,baz=323,slow=3.5,SNR=137					
ERM	Erimo	146.69	315	ePKPdf	PKPdf	18 08 47.4 +2.6
WMQ	Urumqi	149.96	36	ePKPbc	PKPdf	18 08 51.0 +1.0
MJAR	Matsushiro Arr	152.61	309	PKPbc	PKPbc	18 09 00.3 -1.1
	2.7nm,0.7s,baz=76,slow=2.0,SNR=8.8					
MAJO	Matsushiro	152.61	309	ePKPbc	PKPbc	18 09 00.5 -0.9
MAT	Matsushiro	152.61	309	PKP	PKPbc	18 09 00.3 -1.1
SONM	Songino Array	153.28	8	PKP	PKPdf	18 08 55.4 +0.5
	1.1nm,1.0s,baz=343,slow=4.6,SNR=5.3					
SONM				PKPbc	PKPbc	18 09 02.5 0.0
	1.1nm,0.7s,baz=328,slow=1.1,SNR=7.0					
SONM				PKPab	PKPab	18 09 14.0 -0.6
	1.0nm,0.8s,baz=323,slow=2.8,SNR=5.5					
ULN	Ulaanbaatar	153.33	7	ePKPdf	PKPdf	18 08 55.5 +0.6
CN2	Changchun	155.00	336	ePKPbc	PKPdf	18 09 00.0 +2.5
CN2				PP	PP	18 13 03.4 +5.8
KSRS	Korea Array	158.84	323	PKP	PKPdf	18 09 02.8 +0.2
	1.1nm,0.8s,baz=38,slow=1.6,SNR=7.4					
KSRS				PKPab	PKPab	18 09 38.4 -0.4
	1.2nm,0.6s,baz=77,slow=4.2,SNR=7.9					
HHC	Hu-ho-hao-te	160.63	1	ePKP	PKPdf	18 09 02.6 -1.9
HHC				PKS		18 12 34.8
HHC				PP	PP	18 13 29.3 +1.2
HHC				SKS	SKSdf	18 16 02.4 +0.4
HHC				SKKS	SKKSac	18 20 11.9 +2.2
HHC				SS	SS	18 33 34.6 +1.8
HHC				AMB	AMB	
	comp=Z,50nm,9.6s					
HHC				LR	LR	
	comp=N,99nm,21.8s					
HHC				LR	LR	
	comp=E,120nm,21.5s					
HHC				LR	LR	
	comp=Z,86nm,20.8s					
HHC	Hu-ho-hao-te	160.63	1	SS	PKPdf	18 09 02.5 -2.0
BJI	Beijing	161.09	350	PKP	PKPdf	18 09 05.4 +0.4
BJI				LR	LR	
	comp=N,100nm,27.6s					
BJI				LR	LR	
	comp=E,70nm,27.1s					
BJI				LR	LR	
	comp=Z,23nm,22.8s					
LZH	Lanzhou	163.78	24	ePKP	PKPdf	18 09 10.3 +2.5
NJ2	Nanjing	167.73	331	ePKP	PKPdf	18 09 13.8 +2.6
CD2	Chengdu	168.06	36	PKP	PKPdf	18 09 12.5 +1.1
CD2				PKPab	PKPab	18 10 21.4 +2.0
CD2				PKS		18 12 43.8
CD2				PP	PP	18 14 11.0 +3.2
CD2				AMB	AMB	
	comp=Z,80nm,6.5s					
CD2				LR	LR	
	comp=N,130nm,7.0s					
CD2				LR	LR	
	comp=Z,140nm,7.7s					
WHN	Wuhan	170.65	347	PKPbc	PKPdf	18 09 20.1 +7.1
KMI	Kunming	170.81	65	PKP	PKPdf	18 09 12.8 -0.4
GYA	Guiyang	173.07	43	ePKP	PKPdf	18 09 14.0 -0.3
GYA				PKPab	PKPab	18 10 43.3 +1.5
GYA				PKS		18 12 45.8
GYA				PP	PP	18 14 36.0 +2.9
GYA				SKKS	SKKSac	18 21 16.3 +3.9
GYA				SS	SS	18 35 42.6 +2.3
GYA				AMB	AMB	
	comp=Z,120nm,8.2s					
GYA				LR	LR	
	comp=N,130nm,25.5s					
GYA				LR	LR	
	comp=E,110nm,26.2s					
GYA				LR	LR	
	comp=Z,120nm,24.7s					

DJA 14 18:00:32.9°.06S×110°.47E,h10km,MLv3.6/8,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	Pacitan	1.11	39	P	Pb	18 00 51.3	-2.0
PCJI				S	Sg	18 01 06.7	-1.1
UGM	Wanagama	1.14	3	P	Pb	18 00 52.9	-0.9
UGM				S	Sb	18 01 08.4	-0.3
YOGI	Yogyakarta	1.25	352	P	Pn	18 00 53.6	-1.9
YOGI				S	Sb	18 01 11.3	-0.5
PWJI	Pagerwojo	1.68	52	P	Pn	18 00 59.9	-1.5
PWJI				S	Sn	18 01 24.4	+1.5
SJI	Sawahan	1.84	44	P	Pn	18 01 02.8	-0.8
SJI				S	Sn	18 01 28.2	+1.2
NGJI	Ngawi	1.95	30	P	Pn	18 01 08.1	+3.0
SMRI	Semarang	2.00	359	P	Pn	18 01 07.0	+1.2
GMJI	Gumukmas	3.04	75	P	Pn	18 01 20.6	+0.4

JMA 14 18:02:30.5°.0.5,23°.90N×121°.75E,h0km,M3.2

TAP 14 18:02:32.5,24°.20N×121°.80E,h8km,ML3.8,9C-4D,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	Heping Village	0.12	336	*i* P	Pg	18 02 35.5	+0.2
	baz=340						
EHP				*i* S	Sg	18 02 37.8	+0.7
	baz=340						
TWD	Chiawan	0.22	238	*i* P	Pg	18 02 37.3	+0.4
	baz=250						
TWD				S	Sg	18 02 40.5	+0.7
	baz=250						
ENA	Nanau	0.24	348	⇑*i* P	Pg	18 02 37.6	+0.3
	baz=348						
ENA				*e* S	Sg	18 02 41.0	+0.5
	baz=348						
HWA	Hwalien	0.28	219	*e* P	Pg	18 02 39.6	+1.6
	baz=236						
TWC	Suao	0.41	7	⇑*i* P	Pg	18 02 40.9	+0.2
	baz=4.0						
TWC				*e* S	Sg	18 02 46.4	+0.3
	baz=4.0						
ESF	Shoufeng Towns	0.42	219	*e* P	Pg	18 02 39.0	-1.7
	baz=233						
NNS	Nan Shan	0.46	302	⇑*i* P	Pg	18 02 41.9	+0.5
	baz=304						
NNS				*e* S	Sg	18 02 48.0	+0.6
	baz=304						
WHF	Hehuan Shan	0.49	264	⇑*i* P	Pg	18 02 42.5	+0.5
	baz=266						
WHF				*e* S	Sg	18 02 49.1	+0.7
	baz=266						
ESL	Shilin	0.51	221	*e* P	Pg	18 02 42.7	+0.4
	baz=233						
ESL				*e* S	Sg	18 02 50.4	+1.5
	baz=233						
TWE	Neicheng	0.54	347	⇑*i* P	Pg	18 02 43.4	+0.5
	baz=347						
TWE				S	Sg	18 02 51.0	+1.1
	baz=347						
ILA	Ilan	0.57	356	*e* P	Pg	18 02 44.0	+0.4
	baz=347						
ILA				*e* S	Sg	18 02 52.3	+1.3
	baz=347						
TWT	Tachien	0.57	276	⇑P	Pg	18 02 44.5	+1.0
	baz=277						
TWT				*e* S	Sg	18 02 54.7	+3.8
	baz=277						

TAP1 *e*S Sg 18 03 02.1 +1.3
baz=342
SMLT Sun Moon Lake 0.88 249 ⇓*i*P Pg 18 02 50.0 +0.7
baz=252
SMLT *e*S Sg 18 03 03.1 +2.3
baz=252
TYC Yuchr 0.91 251 ⇓P Pg 18 02 50.4 +0.5
baz=255
TWQ1 Liyutan 0.95 279 *e*P Pg 18 02 52.8 +2.0
baz=283
NCU National Centr 0.95 324 *e*P Pg 18 02 52.5 +1.7
baz=326
NCU *e*S Sg 18 03 07.1 +4.0
baz=326
TWF1 Yuli 0.96 209 *e*P Pg 18 02 50.2 -0.7
baz=225
TWS1 Kuangyinshan 0.96 339 *e*P Pg 18 02 52.0 +0.9
baz=339
TWS1 *e*S Sg 18 03 07.1 +3.5
baz=339
HSN Hsinchu 0.96 309 *e*P Pg 18 02 51.5 +0.4
baz=304
NSY Sanyi 0.97 283 *e*P Pg 18 02 52.7 +1.6
baz=287
TCU Taichung 1.02 268 *e*P Pg 18 02 54.2 +2.0
baz=270
TCU *e*S Sg 18 03 10.3 +4.8
baz=270
YUS Yu-Shan 1.04 228 *i*P Pg 18 02 53.3 +0.7
baz=231
YUS *e*S Sg 18 03 08.3 +2.2
baz=231
WNT Mingjian 1.06 253 *e*P Pg 18 02 54.7 +1.8
baz=249
WNT *e*S Sg 18 03 10.6 +3.8
baz=249
TWY Chenhua 1.09 351 *e*P Pg 18 02 53.6 +0.1
baz=350
ALS Alishan 1.14 233 ⇑*i*P Pg 18 02 55.1 +0.8
baz=237
ALS *e*S Sg 18 03 11.1 +2.1
baz=237
YOJ Yonaguni jima 1.14 76 P Pg 18 02 55.1 +0.7
YOJ *e*S Sg 18 03 12.3 +3.1
CHN5 Tsauling 1.18 240 ⇓*i*P Pb 18 02 56.5 +1.3
baz=243
CHN5 *e*S Sg 18 03 13.9 +3.3
baz=243
ELDTW Lidau 1.23 216 *e*P Pb 18 02 54.5 -1.6
baz=221
WGK Gukeng 1.24 246 *e*P Pn 18 02 57.3 +1.1
baz=251
CHN4 Tsaushan 1.39 233 *e*P Pn 18 02 59.7 +1.6
baz=237
CHN4 *e*S Sb 18 03 19.5 +2.9
baz=237
WTCT Ta-ch'eng 1.42 257 *e*P Pn 18 02 59.7 +1.0
baz=260
WTCT *e*S Sn 18 03 20.3 +2.6
baz=260
WTP Ta-pu 1.44 229 P Pn 18 03 00.1 +1.2
baz=233
WTP *e*S Sn 18 03 20.3 +2.3
baz=233
TWK Hsinying 1.51 233 *e*P Pn 18 03 01.1 +1.2
baz=237
TWK *e*S Sn 18 03 23.1 +3.2
baz=237
CHN1 Nanshi 1.54 229 P Pn 18 03 01.9 +1.6
baz=233
CHN1 *e*S Sn 18 03 24.0 +3.6
baz=233
SGST Jiashian 1.57 225 ⇓*i*P Pn 18 03 02.3 +1.6
baz=229
SGST *e*S Sn 18 03 24.8 +3.6
baz=229
CHN8 Yiju 1.68 240 *e*P Pn 18 03 04.0 +1.7
baz=245
CHN8 *e*S Sn 18 03 27.7 +3.7
baz=245
CHN3 Shinhua 1.72 230 *e*P Pn 18 03 05.1 +2.3
baz=238
IRIF Iriomote-Funau 1.77 85 P Pn 18 03 03.7 +0.2
IRIF *e*S Sn 18 03 28.5 +2.3
SCLT Jiali 1.79 236 *e*P Pn 18 03 05.8 +2.1
baz=241
SCLT *e*S Sn 18 03 30.1 +3.5
baz=241
SSD Sandimen 1.80 217 *e*P Pn 18 03 04.4 +0.6
baz=235
SSD *e*S Sn 18 03 30.2 +3.4
baz=235
HATJ Hateruma jima 1.84 94 *e*S Sn 18 03 29.3 +1.4
TWM1 Shoushan 1.86 223 *e*P Pn 18 03 07.6 +2.9
baz=229
EAST Anshuo 2.00 206 *e*P Pn 18 03 08.9 +2.2
baz=200
JKRS Kuro-shima 2.02 88 P Pn 18 03 08.0 +1.1
SCZT Fangliau 2.11 211 *e*P Pn 18 03 09.2 +1.0
baz=222
PNG Penghu 2.15 253 *e*P Pn 18 03 09.0 +0.4
baz=259
PNG *e*S Sn 18 03 37.6 +2.2
baz=259
JIJ Ishigaki jima 2.15 85 P Pn 18 03 09.0 +0.3
TWK1 Hengchun 2.42 202 *e*P Pn 18 03 12.8 +0.3
baz=197
JTJ Tarama 2.69 80 P Pn 18 03 17.8 +1.7
KNM Kinmen 3.08 275 *e*P Pn 18 03 23.6 +2.1
baz=280

ISCJB ***14*** *18:22:03.9±1.3, 10°.45N±0°.07×60°.51W±0°.08, h89km±9km, Error ellipse: s-maj=12.4km s-min=11.0km az=174.1*
FUNV ***14*** *18:22:04.7, 10°.44N×60°.32W, h36km, MW3.4*
TRN ***14*** *18:22:07.6, 10°.64N×60°.63W, h79km, MD3.5*
NEIC ***14*** *18:22:07.6, 10°.64N×60°.63W, h79km, MD3.5(TRN), After TRN.*
ISC 14 18:22:05.2±1.3, 10°.47N±0°.07×60°.51W±0°.08, h81km±10km, n18, σ0°91/30, 5C, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBH	**Brigand Hill**	**0.55**	**272**	⇑*i*P	**Pn**	**18 22 20.2**	**+0.8**
TBH				*e*S	**Sn**	**18 22 31.4**	**+1.4**
TBH	**Brigand Hill**	**0.55**	**272**	⇑*i*P	**Pn**	**18 22 20.2**	**+0.8**
TBH				*e*S	**Sn**	**18 22 31.4**	**+1.4**
BOT	**Bacolet**	**0.72**	**343**	*e*S	**Sn**	**18 22 32.8**	**-0.3**
TPR	**Prospect**	**0.76**	**340**	*e*P	**Pn**	**18 22 21.7**	**+0.1**
TPR				*e*S	**Sn**	**18 22 32.1**	**-1.6**
TPR	**Prospect**	**0.76**	**340**	*e*P	**Pn**	**18 22 21.7**	**+0.1**
TPR				*e*S	**Sn**	**18 22 32.1**	**-1.6**
TRN	**Trinidad (W)**	**0.90**	**282**	*e*P	**Pn**	**18 22 24.4**	**+1.3**
TRN				*e*S	**Sn**	**18 22 35.4**	**-1.1**
TRN	**Trinidad (W)**	**0.90**	**282**	*e*P	**Pn**	**18 22 24.4**	**+1.3**
TRN				*e*S	**Sn**	**18 22 35.4**	**-1.1**
TCE	**Chacachacare**	**1.25**	**281**	*e*P	**Pn**	**18 22 28.8**	**+1.5**
TCE				*e*S	**Sn**	**18 22 43.0**	**-0.9**
TCE	**Chacachacare**	**1.25**	**281**	*e*P	**Pn**	**18 22 28.8**	**+1.5**
TCE				*e*S	**Sn**	**18 22 43.0**	**-0.9**
GUIV	**Guiria**	**1.70**	**276**	⇑*e*P	**Pn**	**18 22 33.5**	**+0.5**
GUIV				*e*S	**Sn**	**18 22 55.2**	**+1.0**
CRUV	**Carupano**	**2.69**	**275**	⇑*i*P	**Pn**	**18 22 45.8**	**-0.6**
CRUV				*e*S	**Sn**	**18 23 17.6**	**-0.4**
RIOV	**Rio Grande**	**2.71**	**209**	*e*P	**Pn**	**18 22 46.6**	**-0.1**
RIOV				*e*S	**Sn**	**18 23 15.7**	**-2.9**
ITEV	**Isla Los Testi**	**2.73**	**289**	⇑*e*P	**Pn**	**18 22 46.9**	**+0.1**
ITEV				*e*S	**Sn**	**18 23 18.8**	**-0.1**
ORIV	**Oritupano**	**3.18**	**244**	*e*P	**Pn**	**18 22 53.4**	**+0.4**
PCRV	**Puerto La Cruz**	**4.07**	**266**	*e*P	**Pn**	**18 23 05.6**	**+0.5**
BIRV	**Birongo**	**5.67**	**271**	*e*P	**Pn**	**18 23 27.0**	**+0.2**
CAOV	**Caicara del Or**	**6.54**	**242**	*e*P	**Pn**	**18 23 38.6**	**-0.2**
BAUV	**El Baul**	**7.58**	**259**	*e*P	**Pn**	**18 23 52.1**	**-0.9**

ISCJB ***14*** *18:39:59.9±0.6, 27°.98S±0°.04×66°.61W±0°.06, h169km±6km, mb4.3/27, Error ellipse: s-maj=8.0km s-min=6.3km az=3.0*
GUC ***14*** *18:39:59.6±0.8, 28°.06S×66°.70W, h202km±89km, ML5.8*
NEIC ***14*** *18:40:00.9±0.6, 27°.93S×66°.49W, h163km±6km, mb4.6/13, Error ellipse: s-maj=8.3km s-min=5.4km az=77.0*
IDC ***14*** *18:40:01.3±0.5, 28°.02S×66°.47W, h166km±4km, mb4.0/15, mb1 4.1/21, mb1mx4.1/26, mbtmp4.0/21, MS3.1/2, Ms1 3.1/2, ms1mx2.7/24, Error ellipse: s-maj=12.3km s-min=8.9km az=91.0*
ISC 14 18:40:00.3±0.6, 27°.96S±0°.04×66°.56W±0°.06, h157km±6km, n80, σ0°91/60, mb4.3/27, 5C-3D, Catamarca Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**3.79**	**253**	*e*P	**Pn**	**18 40 58.9**	**+0.9**
LCO				*i*S	**Sn**	**18 41 44.0**	**+1.0**
LCO				AML	AML	18 41 46.2	
	comp=N,6μm,0.3s						
CFAA	**Coronel Fontan**	**3.92**	**202**	P	**Pn**	**18 41 00.7**	**+1.0**
	comp=N,18nm,0.3s,baz=14,slow=12,SNR=1191						
CFAA				S	**Sn**	**18 41 45.1**	**-0.7**
	comp=N,16nm,0.3s,baz=8.0,slow=13,SNR=14						
TLL	**Tololo Astrono**	**4.32**	**238**	⇑*i*P	**Pn**	**18 41 06.2**	**+1.3**
TLL				*i*S	**Sn**	**18 41 55.5**	**+0.3**
OVCH	**Ovalle**	**4.84**	**236**	*e*P	**Pn**	**18 41 11.3**	**-0.4**
OVCH				*i*S	**Sn**	**18 42 06.0**	**-1.4**
CMCH	**Combarbala**	**5.02**	**229**	⇓*i*P	**Pn**	**18 41 13.6**	**-0.5**
CMCH				*i*S	**Sn**	**18 42 10.6**	**-1.1**
CHNG	**Los Chungos**	**5.80**	**226**	*i*P	**Pn**	**18 41 22.5**	**-1.9**
CHNG				*i*S	**Sn**	**18 42 27.1**	**-3.2**
FCH	**Farellones**	**6.24**	**210**	*e*P	**Pn**	**18 41 31.2**	**+1.0**
PEL	**Peldehue**	**6.27**	**214**	⇓*i*P	**Pn**	**18 41 30.2**	**-0.4**
CLCH	**Cerro Calan**	**6.41**	**211**	⇑*i*P	**Pn**	**18 41 32.5**	**+0.1**
LMEL	**Las Melosas**	**6.65**	**207**	⇑*i*P	**Pn**	**18 41 36.2**	**+0.5**
CHCH	**Chadas Angostu**	**6.92**	**210**	⇑*i*P	**Pn**	**18 41 39.0**	**-0.1**
CACH	**El Canelo**	**7.05**	**208**	*e*P	**Pn**	**18 41 41.6**	**+0.6**
CPUP	**Villa Florida**	**8.38**	**81**	P	**Pn**	**18 41 58.7**	**0.0**
	comp=N,1.4nm,0.3s,baz=247,slow=12,SNR=72						
CPUP				LR	LR	18 45 31.2	
	comp=N,118nm,19.1s,baz=67,slow=40						
CPUP	**Villa Florida**	**8.38**	**81**	P	**Pn**	**18 41 58.7**	**0.0**
CPUP				LR	LR	18 45 31.1	
TRQA	**Tornquist**	**10.77**	**160**	*e*P	**Pn**	**18 42 31.1**	**+0.8**
	comp=N,34nm,0.9s						
LPAZ	**La Paz**	**11.71**	**353**	P	**Pn**	**18 42 43.2**	**+0.6**
	comp=N,5.2nm,0.3s,baz=159,slow=7.1,SNR=75						
LPAZ				S	**Sn**	**18 44 51.4**	**-0.9**
	comp=N,0.6nm,0.3s,baz=250,slow=20,SNR=6.2						
SIV	**San Ignacio**	**12.95**	**24**	P	**Pn**	**18 42 58.7**	**0.0**
	comp=N,2.2nm,0.3s,baz=212,slow=14,SNR=84						
PLCA	**Paso Flores**	**13.16**	**193**	P	**Pn**	**18 43 02.9**	**+1.7**
	comp=N,0.4nm,0.3s,baz=13,slow=16,SNR=8.6						
NNA	**Nana**	**18.58**	**327**	P	**P**	**18 44 06.0**	**+0.5**
	comp=N,1.0nm,0.3s,baz=197,slow=10,SNR=3.0						
CAM4	**Nova Friburgo**	**22.40**	**81**	⇓*i*P	**P**	**18 44 45.9**	**-0.2**
CAM4				*i*		18 44 48.3	
CAM4				*i*		18 44 50.6	
CAM4				*i*		18 44 54.1	
ROSC	**El Rosal**	**33.48**	**346**	LR	LR	19 01 47.5	
	comp=N,33nm,18.6s,baz=9.4,slow=39						
PMSA	**Palmer Station**	**36.86**	**178**	P	**P**	**18 46 51.3**	**-1.8**
	comp=N,7.0nm,0.9s,mb4.3,baz=4.0,slow=7.1,SNR=5.7						
TEIG	**Tepich**	**52.31**	**334**	*e*P	**P**	**18 48 55.5**	**-0.5**
	comp=N,5.5nm,0.5s,mb4.4						
QSPA	**South Pole Qui**	**62.26**	**180**	*e*P	**P**	**18 50 05.9**	**+0.9**
	comp=N,20nm,0.8s,mb5.0						
LRAL	**Lakeview Retre**	**63.69**	**341**	P	**P**	**18 50 14.2**	**-0.7**
JCT	**Junction City**	**66.22**	**329**	*e*P	**P**	**18 50 31.6**	**+0.3**
	comp=N,11nm,0.8s,mb4.7						
WVT	**Waverly**	**66.83**	**341**	*e*P	**P**	**18 50 34.1**	**-0.9**
	comp=N,9.0nm,0.6s,mb4.8						
TXAR	**Lajitas Array**	**67.13**	**325**	P	**P**	**18 50 37.8**	**+0.7**
	comp=N,2.4nm,0.9s,mb4.0,baz=150,slow=8.2,SNR=16						
MIAR	**Mount Ida**	**67.22**	**336**	*e*P	**P**	**18 50 37.4**	**-0.2**
	comp=N,7.9nm,1.3s,mb4.4						
DBIC	**Dimbokro**	**68.73**	**70**	P	**P**	**18 50 45.3**	**-2.2**
	comp=N,4.1nm,0.6s,mb4.3,baz=206,slow=6.5,SNR=9.9						
CCM	**Cathedral Cave**	**69.62**	**339**	*e*P	**P**	**18 50 52.1**	**-0.4**
	comp=N,9.3nm,0.8s,mb4.6						
SYO	**Syowa Base**	**69.73**	**158**	⇑*e*P	**P**	**18 50 51.6**	**-1.2**
MNTX	**Cornudas Mount**	**69.91**	**325**	*e*P	**P**	**18 50 53.6**	**-0.7**
	comp=N,4.1nm,1.4s,mb4.0						
ANMO	**Albuquerque**	**73.06**	**327**	P	**P**	**18 51 14.3**	**+1.2**
	comp=N,3.0nm,0.7s,mb4.2,baz=154,slow=5.3,SNR=6.2						
ANMO	**Albuquerque**	**73.06**	**327**	P	**P**	**18 51 14.3**	**+1.2**
SUR	**Sutherland**	**73.56**	**118**	P	**P**	**18 51 16.9**	**+0.5**
	comp=N,3.5nm,0.6s,mb4.3,baz=250,slow=7.9,SNR=7.6						
TSUM	**Tsumeb**	**76.24**	**105**	P	**P**	**18 51 31.9**	**0.0**
	comp=N,2.1nm,0.9s,mb3.8,baz=196,slow=7.3,SNR=3.7						
ECSD	**EROS Data Cent**	**76.48**	**338**	*e*P	**P**	**18 51 32.5**	**-0.1**
	comp=N,9.2nm,1.1s,mb4.3						
MAW	**Mawson**	**77.56**	**162**	P	**P**	**18 51 38.7**	**+0.3**
	comp=N,9.5nm,0.8s,mb4.5,baz=236,slow=7.5,SNR=17						
TOA0	**Torodi Ar. Sit**	**77.65**	**68**	*e*P	**P**	**18 51 38.4**	**-1.4**
TORD	**Torodi Ar. Bea**	**77.65**	**68**	P	**P**	**18 51 38.6**	**-1.2**
	comp=N,5.9nm,0.8s,mb4.3,baz=267,slow=5.7,SNR=37						
TORD				pP	pP	18 52 20.0	+1.7
	comp=N,2.4nm,0.7s,baz=259,slow=5.5,SNR=2.8						
BOSA	**Boshof**	**78.60**	**116**	P	**P**	**18 51 44.3**	**-0.6**
	comp=N,3.9nm,0.6s,mb4.2,baz=284,slow=6.5,SNR=13						
BOSA				pP	pP	18 52 25.0	+1.5
	comp=N,1.6nm,0.6s,baz=176,slow=12,SNR=1.9						
RWWY	**Rawlins**	**78.84**	**330**	*e*P	**P**	**18 51 47.1**	**+1.5**
	comp=N,16nm,0.9s,mb4.6						
AGMN	**Agassiz Nation**	**80.33**	**341**	*e*P	**P**	**18 51 53.6**	**0.0**
	comp=N,5.0nm,0.7s,mb4.2						
LBTB	**Lobatse**	**80.45**	**113**	*e*P	**P**	**18 51 54.8**	**-0.2**
	comp=N,8.2nm,1.0s,mb4.3						
PDAR	**Pinedale Array**	**80.74**	**329**	P	**P**	**18 51 56.5**	**+0.6**
	comp=N,2.4nm,0.6s,mb4.0,baz=130,slow=7.6,SNR=17						
ELK	**Elko**	**81.92**	**325**	P	**P**	**18 52 03.0**	**+0.8**
	comp=N,4.1nm,0.8s,mb4.1,baz=74,slow=3.9,SNR=6.1						
ULM	**Lac du Bonnet**	**82.09**	**341**	P	**P**	**18 52 02.5**	**-0.4**
	comp=N,3.6nm,0.6s,mb4.2,baz=140,slow=5.3,SNR=2.9						
ULM	**Lac du Bonnet**	**82.09**	**341**	P	**P**	**18 52 02.5**	**-0.4**
CASY	**Casey**	**86.04**	**179**	*e*P	**P**	**18 52 23.6**	**+0.8**
YBH	**Yreka Blue Hor**	**86.59**	**321**	P	**P**	**18 52 25.7**	**0.0**
	comp=N,2.7nm,0.7s,mb4.2,baz=60,slow=7.1,SNR=5.6						
LSZ	**Lusaka**	**87.05**	**106**	*e*P	**P**	**18 52 30.4**	**+1.8**
	comp=N,10nm,1.1s,mb4.6						
ESDC	**Sonseca Array**	**88.99**	**43**	P	**P**	**18 52 37.8**	**+0.7**
	comp=N,0.3nm,0.5s,mb3.5,baz=246,slow=4.7,SNR=2.9						
YKA	**Yellowknife Ar**	**97.96**	**340**	P	**P**	**18 53 18.1**	**+0.3**
	comp=N,0.3nm,0.6s,mb3.9,baz=190,slow=4.8,SNR=3.3						
IMA2	**Indian Mountai**	**114.06**	**334**	*e*P	PKiKP	18 58 18.0	-1.9
ASAR	**Alice Springs**	**125.01**	**203**	PKP	PKPdf	18 58 41.7	-0.7
	comp=N,4.3nm,0.7s,baz=137,slow=1.9,SNR=83						
ASAR				pPKP	pPKPdf	18 59 25.5	+1.7
	comp=N,1.6nm,0.7s,baz=140,slow=2.0,SNR=5.1						
WRA	**Warramunga Arr**	**128.27**	**205**	PKP	PKPdf	18 58 48.4	-0.4
	comp=N,3.4nm,0.3s,baz=168,slow=2.0,SNR=35						
WRA				pPKP	pPKPdf	18 59 33.6	+3.5
	comp=N,2.5nm,0.7s,baz=169,slow=1.7,SNR=5.7						
FITZ	**Fitzroy Crossi**	**132.71**	**196**	PKP	PKPdf	18 58 57.5	+0.3
	comp=N,2.5nm,0.7s,baz=190,slow=4.1,SNR=4.3						
BVAR	**Borovoye Array**	**139.65**	**40**	PKP	PKPdf	18 59 09.3	+0.4
	comp=N,0.6nm,0.6s,baz=259,slow=1.5,SNR=4.9						
YAK	**Yakutsk**	**144.26**	**347**	*e*P	PKPdf	18 59 15.3	-1.5
EKS2	**Erkin-Say**	**144.80**	**55**	P	PKPdf	18 59 18.5	0.0
SNR=11							
EKS2	**Erkin-Say**	**144.80**	**55**	*e*P	PKPdf	18 59 18.7	+0.3
AML	**Almayashu**	**144.85**	**56**	P	PKPdf	18 59 19.0	+0.5
SNR=9.9							
AML	**Almayashu**	**144.85**	**56**	*e*P	PKPdf	18 59 19.0	+0.5
USP	**Ospenovka**	**145.19**	**54**	P	PKPbc	18 59 19.8	+0.7
SNR=8.9							
KURK	**Kurchatov**	**145.25**	**40**	*e*PKPdf	PKPdf	18 59 19.2	+0.3
AAK	**Ala-Archa**	**145.33**	**55**	P	PKPdf	18 59 21.0	+1.6
SNR=13							
CHMS	**Chumysh**	**145.43**	**54**	P	PKPdf	18 59 20.4	+0.9
SNR=12							
KBK	**Karagaybulak**	**145.65**	**54**	P	PKPdf	18 59 22.1	+2.2
SNR=10							
ZALV	**Zalesovo Beam**	**146.63**	**31**	PKPbc	PKPbc	18 59 21.9	-1.1
	comp=N,11nm,0.8s,baz=293,slow=3.2,SNR=28						
ZALV				pPKPbc	pPKPbc	19 00 06.7	+2.7
	comp=N,4.9nm,0.5s,baz=298,slow=4.0,SNR=4.8						
ZALV	**Zalesovo Beam**	**146.63**	**31**	PKPbc	PKPbc	18 59 21.9	-1.1
ZALV				pPKPbc	pPKPbc	19 00 06.7	+2.7
MK31	**Makanchi Array**	**149.20**	**44**	*e*PKPbc	PKPbc	18 59 30.1	0.0
MKAR	**Makanchi Array**	**149.20**	**44**	PKPbc	PKPbc	18 59 30.2	+0.2
	comp=N,6.8nm,0.8s,baz=302,slow=2.7,SNR=61						
MKAR				pPKPbc	pPKPbc	19 00 12.1	+0.9
	comp=N,4.4nm,0.9s,baz=321,slow=3.1,SNR=3.9						
YSS	**Yuzh-Sakhalins**	**150.25**	**317**	*e*PKPbc	PKPbc	18 59 32.7	+0.1
PSI	**Prapat**	**151.40**	**148**	PKPbc	PKPbc	18 59 35.6	-0.7
	comp=N,7.5nm,0.6s,baz=185,slow=4.2,SNR=8.6						
MJAR	**Matsushiro Arr**	**157.42**	**299**	PKPab	PKPab	19 00 10.9	+0.8
	comp=N,1.3nm,0.6s,baz=174,slow=2.0,SNR=4.8						
SONM	**Songino Array**	**159.41**	**14**	PKP	PKPdf	18 59 40.7	+0.9
	comp=N,1.7nm,1.0s,baz=316,slow=0.5,SNR=9.3						
SONM				PKPab	PKPab	19 00 19.3	+1.1
	comp=N,1.5nm,0.9s,baz=322,slow=4.6,SNR=6.9						
CMAR	**Chiang Mai Arr**	**163.67**	**122**	PKP	PKPdf	18 59 44.6	-0.5
	comp=N,1.0nm,1.0s,baz=264,slow=1.1,SNR=6.3						
CMAR				pPKP	pPKPdf	19 00 30.1	+3.4
	comp=N,1.7nm,1.0s,baz=261,slow=1.9,SNR=4.7						
CMAR				PKPab	PKPab	19 00 37.6	-0.2
	comp=N,0.7nm,0.9s,baz=248,slow=4.9,SNR=4.7						
KSRS	**Korea Array**	**164.58**	**312**	PKP	PKPdf	18 59 46.2	+0.8
	comp=N,0.4nm,0.4s,baz=98,slow=1.5,SNR=6.7						
KSRS				pPKP	pPKPdf	19 00 32.1	+5.1
	comp=N,0.9nm,0.9s,baz=150,slow=1.4,SNR=3.8						
KSRS				PKPab	PKPab	19 00 42.2	+0.8
	comp=N,1.6nm,0.8s,baz=66,slow=3.8,SNR=7.8						
HHC	**Hu-ho-hao-te**	**167.05**	**6**	*e*PKP	PKPdf	18 59 43.9	-3.3
HHC				PP	PP	19 04 40.1	+0.6
HHC				SS	SS	19 25 08.0	-2.3
HHC				AMB	AMB		
	comp=Z,89nm,9.5s						

IDC ***14*** *18:45:51.6±1.7, 45°.34N×121°.17W, h0km, mb1 3.8/6, mb1mx3.5/27, mbtmp3.5/6, ML3.4/6, Error ellipse: s-maj=17.8km s-min=10.4km az=143.0*
BJI ***14*** *18:45:52.0, 44°.77N×121°.51W, h22km, mB5.0/8, mb4.9/12, Ms4.5/5, Ms7 4.2/5*
ISCJB ***14*** *18:45:53.7±0.1, 45°.13N±0°.01×120°.84W±0°.02, h10km, mb4.9/7, MS4.0/2, Error ellipse: s-maj=1.9km s-min=1.6km az=6.6*
NEIC ***14*** *18:45:55.0, 45°.13N×120°.95W, h21km, mb3.8/4, MD4.2(SEA), MW3.8(SLM), After SEA.*
NEIC Felt [III] at Bend and Prineville. Felt at Antelope, Redmond, Terrebonne, The Dalles and Wasco. Also felt at Centerville, Washington.
PNSN ***14*** *18:45:55.2, 45°.13N×120°.95W, h17km, MD4.2, Fault plane solution: NP1:φs165.00000°, δ60.00000°, NP2: φs255.00000°, δ90.00000°, Principal axes: T Plg21.0000°, Azm124.0000°; P Plg21.0000°, Azm26.0000°;*
ISC 14 18:45:55.1±0.3, 45°.15N±0°.01×120°.93W±0°.02, h15km±3km, n201, σ0°87/239, mb4.9/7, MS4.0/2, 52C-78D, Washington-Oregon border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CROR	**Criterion Ridg**	**0.18**	**193**	⇑P	**Pg**	**18 45 59.6**	**+0.2**
VTHM	**Trough**	**0.27**	**84**	⇑P	**Pg**	**18 46 01.3**	**+0.5**
VGB	**Gordon Butte**	**0.38**	**17**	⇓P	**Pg**	**18 46 03.7**	**+0.8**
VFP	**Flag Point**	**0.41**	**294**	⇑P	**Pg**	**18 46 03.8**	**+0.4**
VBEM	**Beaver Butte**	**0.47**	**259**	⇑P	**Pg**	**18 46 04.6**	**+0.1**
HOOD	**Mount Hood Mea**	**0.54**	**289**	⇑P	**Pg**	**18 46 05.5**	**-0.2**
VLL	**Laurance Lake**	**0.61**	**301**	⇑P	**Pg**	**18 46 07.1**	**0.0**
VIPM	**Ingram Point**	**0.68**	**161**	⇑P	**Pg**	**18 46 08.0**	**-0.5**
GMO	**Grizzlie Mount**	**0.71**	**181**	⇓P	**Pg**	**18 46 08.2**	**-0.8**
BPO	**Bald Peter**	**0.73**	**227**	⇓P	**Pg**	**18 46 08.8**	**-0.6**
APM	**Augspurger Mou**	**0.79**	**318**	⇑P	**Pg**	**18 46 10.5**	**+0.1**
GL2	**New Goldendale**	**0.81**	**5**	⇓P	**Pg**	**18 46 11.0**	**+0.1**
JBO	**Jordan Butte**	**0.83**	**68**	⇓P	**Pb**	**18 46 11.3**	**0.0**
GULW	**Guler Mountain**	**0.90**	**329**	⇑P	**Pb**	**18 46 12.3**	**-0.1**
GT2	**Goat Mountain**	**0.95**	**271**	⇑P	**Pb**	**18 46 12.5**	**-0.7**
H04A	**Detroit Lake**	**1.01**	**243**	⇓P	**Pb**	**18 46 13.0**	**-1.3**
baz=1.0							
H04A				⇓S	**Sb**	**18 46 26.3**	**-0.9**
baz=1.0							
BKCOR	**Black Crater**	**1.01**	**213**	⇓P	**Pb**	**18 46 13.5**	**-0.8**
F07A	**Phinny Hill Vi**	**1.02**	**43**	P	**Pb**	**18 46 14.5**	**-0.1**
baz=1.1,SNR=183							
F07A				⇓S	**Sb**	**18 46 28.6**	**+0.8**
baz=1.1							
G04A	**Mulino**	**1.09**	**273**	⇓P	**Pb**	**18 46 14.8**	**-0.9**
baz=1.1,SNR=165							
G04A				⇓S	**Sb**	**18 46 30.0**	**+0.2**
baz=1.1							
ASR	**Mount Adams--S**	**1.10**	**335**	⇑P	**Pb**	**18 46 15.7**	**-0.1**
BEND	**Bend**	**1.12**	**195**	⇓P	**Pb**	**18 46 15.0**	**-1.2**
SSOR	**Sweet Springs**	**1.12**	**255**	P	**Pb**	**18 46 15.2**	**-1.0**
HUOR	**Husband**	**1.22**	**213**	⇓P	**Pn**	**18 46 16.8**	**-0.8**
CDFW	**Cedar Flats**	**1.24**	**321**	⇓P	**Pn**	**18 46 17.5**	**-0.4**
MTMW	**Mount Mitchell**	**1.25**	**315**	⇑P	**Pn**	**18 46 17.5**	**-0.5**
WIFE	**Three Sisters-**	**1.26**	**210**	⇓P	**Pn**	**18 46 17.3**	**-0.8**
F04A	**Amboy**	**1.30**	**307**	P	**Pn**	**18 46 18.4**	**-0.3**
baz=1.3,SNR=189							
F04A				⇑S	**Sb**	**18 46 35.8**	**0.0**
baz=1.3							
JLK	**June Lake**	**1.31**	**320**	P	**Pn**	**18 46 18.7**	**-0.1**
PINOR	**Pine Mountain**	**1.34**	**178**	P	**Pn**	**18 46 18.9**	**-0.4**
HSR	**South Ridge**	**1.34**	**320**	P	**Pn**	**18 46 19.7**	**+0.4**
ESD	**East Dome**	**1.35**	**321**	P	**Pn**	**18 46 19.7**	**+0.4**
PRW	**Prosser**	**1.37**	**39**	⇓P	**Pn**	**18 46 19.6**	**-0.1**
SOSW	**Source of Smit**	**1.38**	**323**	P	**Pn**	**18 46 19.7**	**-0.1**
LVP	**Lakeview Peak**	**1.38**	**312**	⇑P	**Pn**	**18 46 19.6**	**-0.2**
SHW	**Mount Saint He**	**1.38**	**319**	P	**Pn**	**18 46 19.9**	**+0.1**
G08A	**Pilot Rock**	**1.40**	**84**	P	**Pn**	**18 46 19.7**	**-0.4**
baz=1.4,SNR=679							
G08A				⇓S	**Sn**	**18 46 38.0**	**-0.3**
baz=1.4							
STD	**Studebaker Rid**	**1.41**	**321**	P	**Pn**	**18 46 20.3**	**+0.1**
FL2	**Flat Top 2**	**1.44**	**317**	⇓P	**Pn**	**18 46 20.9**	**+0.3**
NCOR	**Newberry Crate**	**1.46**	**186**	⇓P	**Pn**	**18 46 21.0**	**+0.2**
I07A	**Izee**	**1.48**	**136**	P	**Pn**	**18 46 21.1**	**-0.1**
baz=1.5,SNR=1000							
I07A				⇑S	**Sn**	**18 46 40.9**	**+0.7**

baz=2.4,SNR=78
E09A ⇓S **Sn** **18 47 02.2 -0.2**
baz=2.4
K05A Summer Lake 2.43 179 ⇓P **Pn** **18 46 34.8 +0.6**
baz=2.4,SNR=137
K05A ⇓Sb **Sb** **18 47 09.2 +1.1**
baz=2.4
ETW Entiat 2.49 9 *e*Pn **Pn** **18 46 35.5 +0.5**
ETW *e*Sb **Sb** **18 47 04.3 -5.5**
J08A Circle Bar Ran 2.52 135 P **Pn** **18 46 35.1 -0.4**
baz=2.5,SNR=46
BMO Blue Mountains 2.59 95 *e*Pn **Pn** **18 46 36.4 0.0**
G10A Bishop Farm, J 2.70 86 ⇓P **Pn** **18 46 37.7 -0.2**
baz=2.7,SNR=12
G10A ⇓Sb **Sb** **18 47 17.7 +1.8**
baz=2.7
OD2 Odessa Site #2 2.72 34 *e*Pn **Pn** **18 46 37.4 -0.8**
F10A Beach Ranch, E 2.73 71 ⇓P **Pn** **18 46 38.1 -0.2**
baz=2.7
F10A ⇓S **Sn** **18 47 10.8 -0.2**
baz=2.7
GNW Green Mountain 2.74 332 *e*Pn **Pn** **18 46 39.6 +1.1**
HUMO Hull Mountain 2.94 211 *e*P **Pn** **18 46 41.1 0.0**
NLWA Neilton Lookou 3.03 319 *e*Pb **Pb** **18 46 46.9 -1.8**
JCW Jim Creek 3.12 348 *e*Pn **Pn** **18 46 44.8 +1.1**
I10A Payette 3.14 108 ⇓P **Pn** **18 46 43.9 0.0**
baz=3.1,SNR=24
I10A ⇑Sb **Sb** **18 47 30.3 +1.8**
baz=3.1
WVOR Wild Horse Val 3.19 148 *e*P **Pn** **18 46 43.8 -0.9**
MOD Modoc 3.28 172 *e*Pn **Pn** **18 46 47.1 +1.1**
G11A Walters Elk Ra 3.30 84 ⇑P **Pn** **18 46 46.2 0.0**
baz=3.3,SNR=24
G11A ⇑Sb **Sb** **18 47 35.0 +1.7**
baz=3.3
RPW Rockport 3.32 353 *e*Pb **Pb** **18 46 51.1 -2.5**
KEBM Edson Butte 3.35 228 *e*Pn **Pn** **18 46 47.2 +0.4**
B06A Marblemount 3.39 354 ⇓Sb **Sb** **18 47 38.8 +3.1**
baz=3.4
B08A Colville Reser 3.39 18 ⇑P **Pn** **18 46 46.8 -0.6**
baz=3.4,SNR=11
F11A Grangeville 3.44 76 ⇑P **Pn** **18 46 48.0 0.0**
baz=3.4,SNR=9.6
F11A ⇓S **Sn** **18 47 28.1 -0.4**
baz=3.4
J10A Berg Farm, Mel 3.45 119 ⇓P **Pn** **18 46 47.4 -0.9**
baz=3.4
J10A ⇑Sb **Sb** **18 47 41.0 +3.4**
baz=3.4
H11A Donnelly 3.52 96 ⇑P **Pn** **18 46 49.4 +0.1**
baz=3.5,SNR=39
H11A ⇓Sb **Sb** **18 47 42.9 +3.2**
baz=3.5
YBH Yreka Blue Hor 3.66 201 Pn **Pn** **18 46 52.4 +1.3**
3.3nm,0.3s,baz=20,slow=15,SNR=42
YBH Pg **Pg** **18 47 00.6 -4.6**
5.2nm,0.3s,baz=34,slow=14,SNR=22
YBH Lg 18 47 47.8
2.7nm,0.3s,baz=46,slow=8.6,SNR=3.2
YBH Yreka Blue Hor 3.66 201 *e*Pn **Pn** **18 46 52.2 +1.2**
I11A Placerville 3.77 107 ⇓P **Pn** **18 46 52.2 -0.4**
baz=3.8,SNR=15
K10A MacKenzie Ranc 3.77 128 ⇑P **Pn** **18 46 52.3 -0.4**
baz=3.8,SNR=25
A05A Maple Falls 3.93 349 ⇑Sb **Sb** **18 47 54.5 +3.3**
baz=3.9
F12A Elk City 4.04 79 ⇑P **Pn** **18 46 56.3 -0.1**
baz=4.0,SNR=15
F12A ⇓S **Sn** **18 47 43.2 -0.2**
baz=4.0
MFID Camas Ranch 4.06 114 ⇓P **Pn** **18 46 56.0 -0.6**
baz=4.0,SNR=13
MFID ⇓S **Sn** **18 47 44.3 +0.6**
baz=4.0
NEW Newport 4.07 39 *e*Pn **Pn** **18 46 55.5 -1.2**
K11A Parker Ranch, 4.26 122 ⇓P **Pn** **18 46 59.2 -0.2**
baz=4.3,SNR=26
H12A Diamond D Ranc 4.36 96 ⇓P **Pn** **18 47 01.1 +0.3**
baz=4.4,SNR=11
H12A ⇑S **Sn** **18 47 50.6 -0.8**
baz=4.4
I12A Atlanta 4.37 106 ⇑P **Pn** **18 47 00.3 -0.6**
baz=4.4,SNR=19
L10A Juniper Basin 4.47 132 ⇑P **Pn** **18 47 02.1 -0.1**
baz=4.5,SNR=17
C12B Naegeli Ranch, 4.56 54 ⇑S **Sn** **18 47 54.0 -2.1**
baz=4.6
J12A Stokes Ranch, 4.61 112 ⇓P **Pn** **18 47 03.7 -0.5**
baz=4.6,SNR=6.7
J12A ⇓Sb **Sb** **18 48 14.9 +4.0**
baz=4.6
F13A Darby 4.69 80 ⇑P **Pn** **18 47 05.8 +0.5**
baz=4.7
F13A ⇓S **Sn** **18 47 59.1 -0.2**
baz=4.7
WDC Whiskeytown Da 4.72 195 *e*Pn **Pn** **18 47 08.0 +2.3**
G13A Cobalt 4.74 88 ⇓P **Pn** **18 47 06.7 +0.7**
baz=4.7
G13A ⇓Sb **Sb** **18 48 19.6 +4.8**
baz=4.7
KHMM Horse Mountain 4.74 207 *e*Pn **Pn** **18 47 08.2 +2.2**
H13A Challis 4.79 95 ⇓P **Pn** **18 47 07.0 +0.4**
baz=4.8
L11A Cat Creek Ranc 4.80 127 ⇑P **Pn** **18 47 06.7 -0.1**
baz=4.8,SNR=19
E13A Victor 4.89 72 ⇓P **Pn** **18 47 08.0 0.0**
baz=4.9,SNR=11
E13A ⇓S **Sn** **18 48 03.4 -0.9**
baz=4.9
D13A Huson 4.90 64 ⇓P **Pn** **18 47 07.8 -0.3**
baz=4.9
D13A ⇓S **Sn** **18 48 03.0 -1.6**
baz=4.9
HLID Hailey 4.94 106 *e*Pn **Pn** **18 47 08.0 -0.7**
B12A Libby 4.95 46 ⇓P **Pn** **18 47 08.9 +0.1**
baz=5.0
BSMT Bassoo Peak 5.03 55 *e*Pn **Pn** **18 47 09.8 -0.1**
I13A Wildhorse Cree 5.03 102 ⇓P **Pn** **18 47 09.9 0.0**
baz=5.0,SNR=7.8
I13A ⇓S **Sn** **18 48 08.5 +0.8**
baz=5.0
MSO Missoula 5.15 69 *e*P **Pn** **18 47 10.9 -0.8**
25nm,0.7s
J13A Cove Ranch, Pi 5.16 108 ⇑P **Pn** **18 47 11.5 -0.2**
baz=5.2
A12A Yaak River Ran 5.23 42 ⇓P **Pn** **18 47 13.1 +0.5**
baz=5.2,SNR=6.2
A12A ⇑S **Sn** **18 48 11.4 -1.1**
baz=5.2
JTMT Jette 5.28 58 *e*Pn **Pn** **18 47 12.3 -1.0**
SWMT Swartz Lake 5.35 61 *e*Pn **Pn** **18 47 14.5 +0.2**
H14A Leadore 5.40 93 ⇑P **Pn** **18 47 15.2 +0.2**
baz=5.4,SNR=8.5
BMN Battle Mountai 5.45 149 P **Pn** **18 47 12.4 -3.4**
I14A Mackay 5.49 100 ⇓P **Pn** **18 47 16.3 +0.1**
baz=5.5,SNR=7.6
YBMT Yellow Bay 5.49 58 *e*Pn **Pn** **18 47 13.5 -2.8**
YBMT *e*Sg **Sg** **18 48 48.0 -3.3**
D14A Greenough 5.51 67 ⇑P **Pn** **18 47 16.4 -0.1**
baz=5.5
SLMT Seeley Lake 5.57 65 *e*Pn **Pn** **18 47 17.2 -0.2**
CHMT Chamberlain Mo 5.63 69 *e*Pn **Pn** **18 47 18.4 +0.2**
J14A Carey 5.63 106 ⇓P **Pn** **18 47 18.2 0.0**
baz=5.6
KCPM Cahto Peak 5.80 201 *e*Pn **Pn** **18 47 23.1 +2.5**
OHCM Honcut 5.83 184 *e*Pn **Pn** **18 47 27.6 +6.7**
DLMT Dillon 5.89 85 *e*P **Pn** **18 47 22.0 +0.2**
26nm,0.8s
E15A Deer Lodge 5.94 75 ⇑P **Pn** **18 47 22.4 0.0**
baz=5.9
G15A Dillon 5.97 87 ⇑P **Pn** **18 47 23.5 +0.6**
baz=6.0
LRM Limekiln Ridge 6.00 81 *e*Pn **Pn** **18 47 23.3 0.0**
ELK Elko 6.07 135 Pn **Pn** **18 47 29.1 +4.8**
0.3nm,0.3s,baz=311,slow=12,SNR=9.2
ELK Pg **Pg** **18 47 41.1 -10**
0.7nm,0.3s,baz=310,slow=11,SNR=14
ELK Lg 18 49 07.8
1.2nm,0.3s,baz=151,slow=16,SNR=3.5
ELK Elko 6.07 135 P **Pn** **18 47 24.5 +0.2**
19nm,0.7s
ELK Pn **Pn** **18 47 29.1 +4.8**
ELK Pg **Pg** **18 47 41.1 -10**
ELK Lg 18 49 07.8
N12A Clover Valley, 6.09 133 *e*P **Pn** **18 47 20.7 -3.9**
D15A Lincoln 6.15 69 ⇓P **Pn** **18 47 24.9 -0.4**
baz=6.2
M13A Montello 6.23 125 *e*Pn **Pn** **18 47 28.4 +2.0**
C15A Salmond Ranch, 6.32 63 ⇑P **Pn** **18 47 27.1 -0.5**
baz=6.3
HOPS Hopland 6.36 195 *e*P **Pn** **18 47 28.0 -0.2**
6.6nm,0.8s
A14A Double T Ranch 6.39 51 ⇓P **Pn** **18 47 29.0 +0.3**
baz=6.4,SNR=19
HRY Holter Researc 6.54 73 P **Pn** **18 47 27.7 -2.9**
B15A Bradely Ranch, 6.56 58 ⇓P **Pn** **18 47 30.6 -0.4**
baz=6.6,SNR=16
BOZ Bozeman (W) 6.57 82 *e*Pn **Pn** **18 47 30.7 -0.4**
WAKR Walker 6.74 170 *e*Pn **Pn** **18 47 38.4 +4.9**
A15A Johnson Ranch, 6.78 53 ⇑P **Pn** **18 47 34.0 0.0**
baz=6.8
HVU Hansel Valley 6.83 117 P **Pn** **18 47 35.1 +0.5**
NVAR Mina Array Bea 7.00 163 Pn **Pn** **18 47 41.6 +4.6**
0.5nm,0.3s,baz=340,slow=12,SNR=26
NVAR Lg 18 49 42.5
0.3nm,0.3s,baz=204,slow=35,SNR=2.9
CMB Columbia Colle 7.12 177 *e*Pn **Pn** **18 47 31.0 -7.7**
RRI2 Red Ridge 7.14 101 *e*Pn **Pn** **18 47 37.5 -1.4**
DCID1 Drake Creek 7.16 99 Pn **Pn** **18 47 46.0 +6.8**
DCID1 *e*Sg Sn 18 49 40.2 +40
BGU Big Grassy Mou 7.17 123 *e*Pn **Pn** **18 47 40.2 +0.9**
15nm,0.8s
YFT Old Faithful 7.22 92 Pn **Pn** **18 47 39.6 -0.4**
YFT *e*Sg Sn 18 49 44.3 +43
IMW Indian Meadow 7.25 96 *e*Pn **Pn** **18 47 43.8 +3.3**
TPAW Teton Pass 7.35 100 Pn **Pn** **18 47 42.5 +0.7**
D17A Six Diamond Ra 7.39 71 ⇑P **Pn** **18 47 42.2 -0.2**
baz=7.4
C17A Wharram Farm, 7.46 67 ⇑P **Pn** **18 47 43.1 -0.2**
baz=7.5
REDW Red Top Meadow 7.46 100 Pn **Pn** **18 47 43.9 +0.6**
LOHW Long Hollow 7.56 98 *e*Pn **Pn** **18 47 43.6 -1.0**
HWUT Hardware Ranch 7.69 114 Pn **Pn** **18 47 48.2 +1.8**
DUG Dugway 7.77 127 *e*P **Pn** **18 47 46.5 -1.0**
EGMT Eagleton 8.22 66 *e*P **Pn** **18 47 53.0 -0.7**
10nm,0.8s
RLMT Red Lodge 8.25 86 *e*Pn **Pn** **18 47 54.0 -0.1**
JLU Jordanelle 8.32 120 *e*Pn **Pn** **18 47 59.3 +4.3**
PDAR Pinedale Array 8.55 102 Pn **Pn** **18 48 01.9 +3.6**
0.1nm,0.3s,baz=300,slow=13,SNR=5.0
PDAR Lg 18 50 29.5
0.1nm,0.3s,baz=336,slow=21,SNR=3.4
DAU Daniels Canyon 8.55 120 *e*Pn **Pn** **18 47 58.0 -0.2**
ARUT Antelope Range 9.26 140 P **Pn** **18 48 08.8 +0.8**
9.9nm,0.7s
CCUT Cedar City 9.49 141 *e*Pn **Pn** **18 48 13.5 +2.4**
SDCO Great Sand Dun 13.73 117 *e*P **Pn** **18 49 18.3 +9.2**
2.4nm,0.6s
ANMO Albuquerque 15.03 128 Pn **Pn** **18 49 30.1 +3.2**
0.1nm,0.3s,baz=313,slow=14,SNR=2.3
FFC Flin Flon 15.47 45 *e*Pn **Pn** **18 49 32.4 -0.1**
7.6nm,1.0s
BNM Barren Site 15.54 130 P **Pn** **18 49 32.2 -1.2**
5.6nm,1.0s
YKA Yellowknife Ar 17.75 10 P **Pn** **18 49 59.5 -1.9**
0.2nm,0.3s,baz=194,slow=12,SNR=4.9
YKA Yellowknife Ar 17.75 10 P **Pn** **18 49 59.5 -1.9**
MNTX Cornudas Mount 18.09 133 *e*Pn **Pn** **18 50 05.2 -0.6**
4.2nm,0.9s
PNL Peninsula 18.29 329 *e*Pn **Pn** **18 50 13.6 +5.6**
19nm,0.6s
CN2 Changchun 73.61 316 *e*P **P** **18 57 27.9 +0.3**
CN2 *e*S S 19 06 54.1 -3.0
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
CN2 pmax pmax
comp=Z,300nm,6.0s
BJI Beijing 80.92 319 P **P** **18 58 06.3 -2.3**
BJI S S 19 08 12.8 -3.8
BJI SS SS 19 13 26.6 -2.8
BJI pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
BJI pmax pmax
comp=Z,64nm,5.3s
BJI LR LR
comp=N,74nm,25.9s,MS4.0
BJI LR LR
comp=E,57nm,27.6s,MS4.0
BJI LR LR
comp=Z,14nm,22.8s,MS3.3
HHC Hu-ho-hao-te 82.32 323 *e*P **P** **18 58 14.6 -1.4**
HHC S S 19 08 26.3 -4.8
HHC pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
HHC pmax pmax
comp=Z,58nm,6.8s
WMQ Urumqi 87.82 340 *e*P **P** **18 58 44.0 +0.5**
WMQ pP pP 18 58 50.4 +1.8
WMQ sP sP 18 58 53.1 +2.7
WMQ pmax pmax
comp=Z,5.0nm,1.2s,mb4.6
WMQ pmax pmax
comp=Z,75nm,5.6s
WHN Wuhan 89.45 315 P **P** **18 58 46.8 -4.6**
LZH Lanzhou 89.57 325 *e*P **P** **18 58 48.5 -3.4**
LZH pmax pmax
comp=Z,14nm,1.0s,mb5.2
CD2 Chengdu 94.08 323 P **P** **18 59 12.0 -0.9**
GYA Guiyang 96.58 318 *e*P **P** **18 59 23.0 -1.4**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb5.2
KMI Kunming 99.53 321 P **P** **18 59 37.5 -0.2**
KMI pP pP 18 59 42.9 +0.1
KMI sP sP 18 59 45.4 +0.8
KMI PP PP 19 03 43.6 +3.1
KMI S S 19 11 04.4 -5.6
KMI sS sS 19 11 14.4 -4.1
KMI SS SS 19 17 56.3 -2.5
KMI pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
KMI pmax pmax
comp=Z,52nm,4.1s
KMI LR LR
comp=N,48nm,15.4s,MS4.3
KMI LR LR
comp=E,59nm,13.3s,MS4.3
KMI LR LR
comp=Z,60nm,8.0s

NEIC ***14*** *18:50:55.0, 16°.59N×98°.03W, h46km, MD3.7(MEX), After MEX.*
MEX 14 18:50:55.0±0.6, 16°.70N×98°.07W, h37km±35km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.31**	**191**	*i* P	Pn	18 51 02.0	-1.2
PNIG				*e*S	Sn	18 51 06.8	-2.0
PNIG	**Pinotepa**	**0.31**	**191**	*i* P	Pn	18 51 02.0	-1.2
PNIG				*e*S	Sn	18 51 06.8	-2.0
VHO	**Vista Hermosa**	**1.33**	**74**	*i* P	Pn	18 51 13.3	-3.7
VHO				*e*S	Sn	18 51 32.0	-1.6
VHO	**Vista Hermosa**	**1.33**	**74**	*i* P	Pn	18 51 15.8	-1.3
VHO				*i* S	Sn	18 51 31.5	-2.1
ACX	**Acapulco**	**1.72**	**276**	*i* P	Pn	18 51 30.0	+7.5
ACX				*i* S	Sn	18 51 41.8	-1.5
ACX	**Acapulco**	**1.72**	**276**	*i* P	Pn	18 51 22.0	-0.5
MEIG	**Mezcala**	**1.92**	**310**	*i* P	Pn	18 51 21.9	-3.3
MEIG				*i* S	Sn	18 51 47.1	-1.1
CAIG	**El Cayaco**	**2.13**	**280**	*i* P	Pn	18 51 27.8	-0.3
CAIG				*e*S	Sn	18 51 52.9	-0.6
CAIG	**El Cayaco**	**2.13**	**280**	*i* P	Pn	18 51 25.3	-2.9
CAIG				*i* S	Sn	18 51 51.5	-1.9

ISCJB ***14*** *18:55:51.7±2.0, 6°.9S±0°.1×125°.3E±0°.2, h497km±29km, mb3.5/8, Error ellipse: s-maj=39.9km s-min=11.8km az=155.4*
NEIC ***14*** *18:55:52.8±1.9, 6°.85S×125°.43E, h499km±29km, mb3.5/2, Error ellipse: s-maj=30.8km s-min=15.8km az=59.0*
IDC ***14*** *18:55:54.4±1.8, 6°.96S×125°.29E, h523km±22km, mb3.1/7, mb1 3.3/10, mb1mx3.2/19, mbtmp3.1/10, Error ellipse: s-maj=41.7km s-min=10.5km az=69.0*
ISC 14 18:55:53.6±1.5, 6°.9S±0°.1×125°.3E±0°.2, h509km±21km, n16, σ0°74/17, mb3.5/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.10**	**179**	*e*P	**P**	**18 58 22.5**	**-0.2**
6.8nm,0.2s							
FITZ	**Fitzroy Crossi**	**11.10**	**179**	P	**P**	**18 58 22.5**	**-0.2**
1.3nm,0.3s,baz=19,slow=8.2,SNR=131							
WRAB	**Tennant Creek**	**15.60**	**147**	*e*P	**P**	**18 59 08.9**	**-1.1**
WRA	**Warramunga Arr**	**15.60**	**147**	P	**P**	**18 59 10.1**	**+0.1**
1.3nm,0.3s,baz=323,slow=11,SNR=39							
ASAR	**Alice Springs**	**18.56**	**155**	P	**P**	**18 59 39.0**	**+0.4**
1.1nm,0.3s,baz=332,slow=8.1,SNR=98							
ASAR				S	**S**	**19 02 41.5**	**-0.6**
0.0nm,0.3s,baz=340,slow=18,SNR=4.3							
ASAR				ScP	ScP	19 06 27.1	-2.1
0.0nm,0.3s,baz=350,slow=2.2,SNR=4.5							
STKA	**Stephens Creek**	**29.08**	**151**	*e*P	**P**	**19 01 12.9**	**+0.4**
1.6nm,0.3s,mb4.1							
STKA	**Stephens Creek**	**29.08**	**151**	P	**P**	**19 01 13.0**	**+0.5**
2.0nm,0.3s,mb4.2,baz=334,slow=8.9,SNR=26							
STKA	**Stephens Creek**	**29.08**	**151**	*e*P	**P**	**19 01 12.6**	**+0.1**
0.5nm,0.5s,mb3.4							
ARMA	**Armidale**	**33.97**	**137**	*e*P	**P**	**19 01 56.0**	**+1.6**
KSRS	**Korea Array**	**44.22**	**3**	P	**P**	**19 03 17.6**	**+0.5**
0.4nm,0.4s,mb3.3,baz=181,slow=10.0,SNR=4.8							
MJAR	**Matsushiro Ar**	**44.90**	**15**	P	**P**	**19 03 21.5**	**-0.9**
1.4nm,0.6s,mb3.7,baz=189,slow=8.7,SNR=5.4							
LSA	**Lhasa**	**49.05**	**320**	*e*P	**P**	**19 03 54.9**	**+1.0**
1.9nm,0.7s,mb3.7							
SONM	**Songino Array**	**57.04**	**345**	P	**P**	**19 04 50.9**	**+0.3**
0.8nm,0.7s,mb3.0,baz=162,slow=11,SNR=6.7							
MKAR	**Makanchi Array**	**65.71**	**329**	P	**P**	**19 05 47.2**	**-0.2**
1.2nm,0.6s,mb3.6,baz=121,slow=7.7,SNR=20							
ZALV	**Zalesovo Beam**	**69.55**	**336**	P	**P**	**19 06 09.9**	**-0.9**
1.2nm,0.4s,mb3.8,baz=134,slow=5.2,SNR=6.4							
BVAR	**Borovoye Array**	**75.59**	**329**	P	**P**	**19 06 45.3**	**-0.4**
0.3nm,0.3s,mb3.2,baz=123,slow=5.5,SNR=4.3							

IDC 14 19:08:22.5±49.0, 18°.07S×176°.07W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.8/15, mbtmp4.0/3, Error ellipse: s-maj=911.9km s-min=164.5km az=80.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.51**	**242**	P	P	19 16 03.9	+0.5
4.4nm,1.0s,baz=79,slow=6.0,SNR=4.5							
WRA	**Warramunga Arr**	**46.79**	**259**	P	P	19 16 54.1	-0.1
0.6nm,0.3s,baz=98,slow=7.4,SNR=13							
ASAR	**Alice Springs**	**46.89**	**254**	P	P	19 16 54.5	-0.5
0.8nm,0.4s,baz=87,slow=8.4,SNR=37							

NEIC ***14*** *19:34:20.9, 37°.95S×176°.73E, h108km, MG3.7(WEL), After WEL.*
WEL 14 19:34:20.7±0.4, 37°.95S×176°.73E, h109km±2km, ML3.7/6, Error ellipse: s-maj=2.2km s-min=1.8km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARZ	**Manawahe**	**0.06**	**228**	PN	Pn	19 34 35.6	-0.2
OPRZ	**Ohinepanea**	**0.17**	**305**	PN	Pn	19 34 35.8	-0.1
TARZ	**Mount Tarawera**	**0.34**	**212**	PN	Pn	19 34 37.0	+0.5
KARZ	**Kaharoa**	**0.39**	**259**	PN	Pn	19 34 36.9	+0.1
KARZ	**Kaharoa**	**0.39**	**259**	P	Pn	19 34 36.9	+0.1
RRRZ	**Republican Roa**	**0.43**	**203**	PN	Pn	19 34 37.0	-0.1
URZ	**Urewera**	**0.43**	**137**	PN	Pn	19 34 36.6	-0.4
URZ				SN	Sn	19 34 49.3	0.0
URZ	**Urewera**	**0.43**	**137**	P	Pn	19 34 36.6	-0.5
PRRZ	**Plateau Road**	**0.61**	**206**	PN	Pn	19 34 38.3	0.0
ALRZ	**Allen Road**	**0.69**	**206**	PN	Pn	19 34 39.0	+0.1
MWZ	**Matawai**	**0.74**	**122**	PN	Pn	19 34 39.2	-0.1
MWZ				SN	Sn	19 34 53.9	+0.5
MWZ	**Matawai**	**0.74**	**122**	P	Pn	19 34 39.2	-0.1
MWZ				S	Sn	19 34 53.7	+0.4
RAHZ	**Arahi**	**1.01**	**164**	PN	Pn	19 34 42.2	+0.3
NMHZ	**Naumai**	**1.15**	**177**	PN	Pn	19 34 44.0	+0.6
BKZ	**Black Stump Fm**	**1.23**	**189**	PN	Pn	19 34 44.1	-0.3
BKZ	**Black Stump Fm**	**1.23**	**189**	P	Pn	19 34 44.1	-0.3
CNGZ	**Carnagh Statio**	**1.28**	**115**	PN	Pn	19 34 45.5	+0.6
KNZ	**Kokohu**	**1.30**	**146**	PN	Pn	19 34 44.7	-0.5
KNZ	**Kokohu**	**1.30**	**146**	P	Pn	19 34 44.7	-0.5
MXZ	**Matakaoa Point**	**1.30**	**74**	PN	Pn	19 34 45.9	+0.7
MXZ	**Matakaoa Point**	**1.30**	**74**	P	Pn	19 34 45.9	+0.7
PRGZ	**Paritu Road**	**1.33**	**138**	PN	Pn	19 34 45.2	-0.3
KRVZ	**Karewarewa**	**1.43**	**216**	PN	Pn	19 34 47.1	+0.4
WTVZ	**West Tongariro**	**1.47**	**217**	PN	Pn	19 34 47.3	+0.2
WTVZ	**West Tongariro**	**1.47**	**217**	P	Pn	19 34 47.3	+0.2
OTVZ	**Oturere**	**1.48**	**214**	PN	Pn	19 34 47.6	+0.4
MCHZ	**McNeill Hill**	**1.50**	**181**	PN	Pn	19 34 47.3	-0.2
NGZ	**Ngauruhoe**	**1.52**	**215**	PN	Pn	19 34 48.2	+0.6
NGZ	**Ngauruhoe**	**1.52**	**215**	P	Pn	19 34 48.2	+0.5
TWVZ	**Taurewa**	**1.52**	**222**	PN	Pn	19 34 47.9	+0.2
TWVZ	**Taurewa**	**1.52**	**222**	P	Pn	19 34 47.9	+0.2
MHGZ	**Mahia Peninsul**	**1.52**	**143**	PN	Pn	19 34 47.4	-0.3
WPVZ	**Whakapapa**	**1.56**	**216**	PN	Pn	19 34 48.8	+0.5
TUVZ	**Tukino**	**1.57**	**212**	PN	Pn	19 34 48.5	+0.2
TUVZ	**Tukino**	**1.57**	**212**	P	Pn	19 34 48.5	+0.2
HIZ	**Hauiti**	**1.58**	**248**	PN	Pn	19 34 48.8	+0.4
HIZ	**Hauiti**	**1.58**	**248**	P	Pn	19 34 48.8	+0.3
FWVZ	**Far West T-bar**	**1.60**	**215**	PN	Pn	19 34 49.0	+0.3
FWVZ	**Far West T-bar**	**1.60**	**215**	P	Pn	19 34 49.0	+0.3
TRVZ	**Turoa**	**1.64**	**214**	PN	Pn	19 34 49.4	+0.2
WNVZ	**Wahianoa**	**1.64**	**212**	PN	Pn	19 34 49.2	0.0
WNVZ	**Wahianoa**	**1.64**	**212**	P	Pn	19 34 49.2	0.0
MOVZ	**Moawhango**	**1.65**	**207**	PN	Pn	19 34 48.7	-0.6
MOVZ	**Moawhango**	**1.65**	**207**	P	Pn	19 34 48.7	-0.6
PKVZ	**Pokaka**	**1.73**	**219**	PN	Pn	19 34 50.3	+0.1
CKHZ	**Cape Kidnapper**	**1.73**	**171**	PN	Pn	19 34 49.5	-0.8
MTVZ	**Mangateitei**	**1.75**	**214**	PN	Pn	19 34 50.4	0.0
KAHZ	**Kahuranaki**	**1.85**	**177**	PN	Pn	19 34 50.9	-0.9
VRZ	**Vera Road**	**1.95**	**232**	PN	Pn	19 34 53.3	+0.4
PNHZ	**Pukenui**	**2.01**	**192**	PN	Pn	19 34 52.4	-1.3
PXZ	**Pawanui**	**2.09**	**177**	PN	Pn	19 34 53.8	-0.9
TSZ	**Takapari Road**	**2.20**	**196**	PN	Pn	19 34 53.5	-2.6
TSZ	**Takapari Road**	**2.20**	**196**	P	Pn	19 34 53.5	-2.6
WAZ	**Wanganui**	**2.27**	**216**	PN	Pn	19 34 56.7	-0.4
WAZ	**Wanganui**	**2.27**	**216**	P	Pn	19 34 56.7	-0.3
PRHZ	**Porangahau**	**2.32**	**182**	PN	Pn	19 34 56.3	-1.4
DVHZ	**Dannevirke**	**2.39**	**190**	PN	Pn	19 34 56.5	-2.2
BFZ	**Birch Farm**	**2.76**	**188**	PN	Pn	19 35 00.9	-2.6
BFZ	**Birch Farm**	**2.76**	**188**	P	Pn	19 35 00.9	-2.6
MRZ	**Mangatainoka R**	**2.86**	**198**	PN	Pn	19 35 01.9	-2.9
MRZ	**Mangatainoka R**	**2.86**	**198**	P	Pn	19 35 01.9	-2.9
TIWZ	**Tintock**	**2.90**	**193**	PN	Pn	19 35 02.6	-2.7
HOWZ	**Holdsworth Sta**	**3.10**	**197**	PN	Pn	19 35 04.7	-3.3
OGWZ	**Otaki Gorge**	**3.11**	**202**	PN	Pn	19 35 05.2	-2.9
TMWZ	**Te Maipa**	**3.23**	**191**	PN	Pn	19 35 06.7	-2.9
KIW	**Kapiti Island**	**3.24**	**205**	PN	Pn	19 35 06.7	-3.1
KIW	**Kapiti Island**	**3.24**	**205**	P	Pn	19 35 06.7	-3.1
MTW	**Mount Morrison**	**3.35**	**196**	PN	Pn	19 35 07.5	-3.7
MTW	**Mount Morrison**	**3.35**	**196**	P	Pn	19 35 07.5	-3.8
CAW	**Cannon Point**	**3.41**	**202**	PN	Pn	19 35 08.7	-3.5
CAW	**Cannon Point**	**3.41**	**202**	P	Pn	19 35 08.7	-3.4
TRWZ	**Traveller**	**3.54**	**193**	PN	Pn	19 35 10.3	-3.5
DUWZ	**D'Urville Isla**	**3.59**	**216**	PN	Pn	19 35 11.4	-3.1
MSWZ	**Moikau Station**	**3.65**	**198**	PN	Pn	19 35 11.3	-4.0
SNZO	**South Karori**	**3.71**	**204**	PN	Pn	19 35 12.2	-3.9
SNZO	**South Karori**	**3.71**	**204**	P	Pn	19 35 12.2	-3.9
TCW	**Tory Channel**	**3.77**	**209**	PN	Pn	19 35 13.1	-3.8
TCW	**Tory Channel**	**3.77**	**209**	P	Pn	19 35 13.1	-3.9
PLWZ	**Palliser**	**3.80**	**197**	PN	Pn	19 35 13.0	-4.3
TUWZ	**Tuamarina**	**4.09**	**211**	PN	Pn	19 35 17.2	-4.1
NNZ	**Nelson**	**4.17**	**217**	PN	Pn	19 35 18.9	-3.4
NNZ	**Nelson**	**4.17**	**217**	P	Pn	19 35 18.9	-3.4
QRZ	**Quartz Range**	**4.35**	**227**	PN	Pn	19 35 21.5	-3.1
QRZ	**Quartz Range**	**4.35**	**227**	P	Pn	19 35 21.5	-3.1
THZ	**Tophouse**	**4.82**	**216**	PN	Pn	19 35 27.3	-3.7
THZ	**Tophouse**	**4.82**	**216**	P	Pn	19 35 27.3	-3.7
KHZ	**Kahutara**	**5.09**	**208**	PN	Pn	19 35 30.2	-4.5
KHZ	**Kahutara**	**5.09**	**208**	P	Pn	19 35 30.2	-4.5
DSZ	**Denniston Nort**	**5.37**	**223**	PN	Pn	19 35 33.5	-4.9
LTZ	**Lake Taylor**	**5.91**	**214**	PN	Pn	19 35 40.4	-5.4
LTZ	**Lake Taylor**	**5.91**	**214**	P	Pn

ISC 14 19:51:59.7±0.6, 38°.85N±0°.03×43°.63E±0°.06, h14km±7km, n16, σ0°89/27, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.32**	**216**	*e*PG	**Pg**	**19 52 06.0**	**-0.3**
VANB				*e*SG	**Sg**	**19 52 12.2**	**+1.5**
VANB	**Van**	**0.32**	**216**	*e*Pg	**Pg**	**19 52 06.0**	**-0.2**
VANB				*e*Sg	**Sg**	**19 52 12.2**	**+1.6**
TVAN	**Van**	**0.37**	**208**	*i* P	**Pg**	**19 52 06.2**	**-1.0**
TVAN				*i* S	**Sg**	**19 52 12.2**	**+0.1**
TVAN	**Van**	**0.37**	**208**	*i* P	**Pg**	**19 52 06.2**	**-0.9**
TVAN				*i* S	**Sg**	**19 52 12.2**	**+0.1**
CLDR	**Caldiran**	**0.37**	**38**	*e*PG	**Pg**	**19 52 06.6**	**-0.6**
CLDR				*e*SG	**Sg**	**19 52 12.4**	**+0.2**
CLDR	**Caldiran**	**0.37**	**38**	*e*Pg	**Pg**	**19 52 06.6**	**-0.6**
CLDR				*e*Sg	**Sg**	**19 52 12.4**	**+0.2**
VANT	**Van**	**0.52**	**214**	*e*PG	**Pg**	**19 52 10.4**	**+0.5**
TUTA	**Tutak**	**0.84**	**311**	*i* P	**Pg**	**19 52 14.8**	**-1.1**
TUTA				*i* S	**Sg**	**19 52 27.0**	**0.0**
TUTA	**Tutak**	**0.84**	**311**	*i* P	**Pg**	**19 52 14.8**	**-1.2**
TUTA				*i* S	**Sg**	**19 52 27.0**	**0.0**
AGRB	**Hanur-Agry**	**0.88**	**326**	*e*PG	**Pg**	**19 52 16.3**	**-0.4**
AGRB				*e*SG	**Sg**	**19 52 28.4**	**+0.2**
AGRB	**Hanur-Agry**	**0.88**	**326**	*e*Pg	**Pg**	**19 52 16.3**	**-0.4**
AGRB				*e*Sg	**Sg**	**19 52 28.4**	**+0.2**
HAKT	**HAKKARI**	**1.29**	**177**	*i* P	**Pn**	**19 52 17.4**	**-5.9**
HAKT				*i* S	**Sb**	**19 52 38.5**	**-1.7**
GNI	**Garni**	**1.56**	**33**	*e*PN	**Pn**	**19 52 28.3**	**+1.4**
GNI	**Garni**	**1.56**	**33**	*e*Pn	**Pn**	**19 52 28.3**	**+1.4**
CUKT	**Cukurca**	**1.60**	**181**	*e*PN	**Pn**	**19 52 28.6**	**+1.1**
CUKT	**Cukurca**	**1.60**	**181**	*e*Pn	**Pn**	**19 52 28.6**	**+1.1**

*IDC **14** 19:56:33.0±0.8, 31°.63N×104°.25E, h0km, mb3.9/12, mb1 4.1/14, mb1mx4.0/26, mbtmp3.9/14, ML3.7/2, MS3.4/6, Ms1 3.4/6, ms1mx2.9/43, Error ellipse: s-maj=25.8km s-min=15.1km az=50.0*

*ISCJB **14** 19:56:33.8±1.2, 31°.54N±0°.03×104°.11E±0°.04, h15km±7km, mb4.1/28, MS3.3/7, Error ellipse: s-maj=5.6km s-min=5.0km az=42.0*

*NEIC **14** 19:56:34.6±0.3, 31°.62N×104°.16E, h10km, mb4.0/8, Error ellipse: s-maj=6.9km s-min=5.7km az=76.0*

*BJI **14** 19:56:35.1, 31°.51N×104°.26E, h17km, mB4.5/8, mb4.5/16, ML4.4/20, Ms4.0/19, Ms7 3.8/19*

*MOS **14** 19:56:35.3±0.8, 31°.56N×104°.18E, h33km, mb4.3/15, Error ellipse: s-maj=13.5km s-min=8.7km az=106.6*

ISC 14 19:56:33.4±0.9, 31°.62N±0°.02×104°.16E±0°.03, h4km±5km, n93, σ1°32/107, mb4.1/28, MS3.3/7, 2C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.79**	**206**	⇑*i*Pg	**Pg**	**19 56 49.0**	**+0.6**
CD2				Sg	**Sg**	**19 56 59.4**	**+0.8**
CD2	comp=N,12μm,0.8s			smax			
CD2	comp=E,13μm,0.7s			smax			
LZH	**Lanzhou**	**4.46**	**357**	*e*Pn	**Pn**	**19 57 45.3**	**+3.4**
LZH				Pg	**Pb**	**19 57 55.3**	**+3.0**
LZH				Sn	**Sn**	**19 58 39.8**	**+5.5**
LZH				Sg	**Sg**	**19 58 54.9**	**-1.9**
LZH	comp=N,350nm,0.8s			smax			
LZH	comp=E,690nm,1.0s			smax			
XAN	**Xi'an**	**4.68**	**58**	Pn	**Pn**	**19 57 45.8**	**+1.0**
XAN				Pg	**Pg**	**19 58 00.8**	**-2.2**
XAN				Sg	**Sg**	**19 59 00.8**	**-2.9**
XAN	comp=N,750nm,0.7s			smax			
XAN	comp=E,400nm,0.8s			smax			
ENH	**Enshi**	**4.77**	**105**	*e*P	**Pn**	**19 57 48.3**	**+2.3**
GYA	**Guiyang**	**5.59**	**156**	Pn	**Pn**	**19 57 58.3**	**+1.0**
GYA				Sn	**Sn**	**19 59 01.6**	**-0.4**
GYA				Sg	**Sg**	**19 59 23.5**	**-9.4**
GYA	comp=N,460nm,0.7s			smax			
GYA	comp=E,550nm,0.8s			smax			
KMI	**Kunming**	**6.59**	**191**	Pn	**Pn**	**19 58 12.8**	**+1.7**
KMI				Sn	**Sn**	**19 59 21.6**	**-5.1**
KMI	comp=N,110nm,0.8s			smax			
KMI	comp=E,92nm,0.8s			smax			
KMI	comp=N,630nm,11.0s			LR	LR		
KMI	comp=E,670nm,9.2s			LR	LR		
KMI	comp=Z,720nm,11.2s			LR	LR		
GTA	**Gaotai**	**8.54**	**337**	*e*P	**Pn**	**19 58 45.1**	**+7.3**
GTA				pP		19 58 48.8	
GTA				sP		19 58 51.3	
GTA				S	**Sn**	**20 00 26.9**	**+12**
GTA				sS		20 00 30.8	
GTA	comp=Z,3.0nm,0.8s			pmax	pmax		
GTA	comp=N,580nm,13.2s			LR	LR		
GTA	comp=E,880nm,11.4s			LR	LR		
GTA	comp=Z,100nm,10.5s			LR	LR		
WHN	**Wuhan**	**8.80**	**94**	P	**Pn**	**19 58 42.8**	**+1.3**
WHN				S	**Sn**	**20 00 19.5**	**-1.7**
WHN	comp=N,3μm,7.8s			LR	LR		
WHN	comp=E,2μm,7.2s			LR	LR		
WHN	comp=Z,2μm,12.8s			LR	LR		
BTO	**Baotou**	**10.14**	**26**	*e*P	**Pn**	**19 58 56.3**	**-3.5**
BTO				S	**Sn**	**20 00 50.8**	**-3.1**
BTO	comp=E,140nm,4.4s			LR	LR		
BTO	comp=N,320nm,11.3s			smax			
HHC	**Hu-ho-hao-te**	**10.98**	**31**	*e*P	**Pn**	**19 59 09.8**	**-1.4**
HHC				PP		19 59 18.9	
HHC				S	**Sn**	**20 01 12.6**	**-1.8**
HHC				SS		20 01 27.3	
HHC	comp=Z,8.0nm,0.5s			pmax	pmax		
HHC	comp=Z,96nm,4.7s			pmax	pmax		
HHC	comp=N,770nm,8.5s			LR	LR		
HHC	comp=E,380nm,8.1s			LR	LR		
HHC	comp=Z,530nm,8.7s			LR	LR		
LSA	**Lhasa**	**11.37**	**264**	P	**Pn**	**19 59 17.8**	**+1.2**
LSA	**Lhasa**	**11.37**	**264**	*e*P	**Pn**	**19 59 17.7**	**+1.1**
LSA	comp=Z,5.0nm,0.6s			pmax	pmax		
LSA	**Lhasa**	**11.37**	**264**	*e*P	**Pn**	**19 59 17.7**	**+1.1**
	comp=Z,5.1nm,0.6s						
NJ2	**Nanjing**	**12.51**	**84**	*e*P	**Pn**	**19 59 35.8**	**+3.7**
NJ2				pP		19 59 42.8	
NJ2				PP		19 59 47.0	
NJ2				sP		19 59 48.0	
NJ2				S	**Sn**	**20 01 56.0**	**+4.1**
NJ2				sS		20 02 07.0	
NJ2	comp=Z,10.0nm,0.6s			pmax	pmax		
NJ2	comp=Z,40nm,3.5s			pmax	pmax		
NJ2	comp=N,360nm,9.6s			LR	LR		
NJ2	comp=E,810nm,13.2s			LR	LR		
NJ2	comp=Z,3μm,14.2s			LR	LR		
BJI	**Beijing**	**12.86**	**46**	P	**Pn**	**19 59 35.5**	**-1.5**
BJI	comp=Z,6.0nm,0.5s			pmax	pmax		
BJI	comp=N,520nm,15.7s			LR	LR		
BJI	comp=E,320nm,15.7s			LR	LR		
BJI	comp=Z,120nm,14.9s			LR	LR		
QIZ	**Qiongzhong**	**13.54**	**156**	P	**Pn**	**19 59 44.9**	**-1.5**
QIZ				S	**Sn**	**20 02 15.3**	**-2.1**
QIZ	comp=N,290nm,13.2s			LR	LR		
QIZ	comp=E,330nm,14.5s			LR	LR		
QIZ	comp=Z,290nm,9.4s			LR	LR		
CHTO	**Chiang Mai**	**13.59**	**201**	*e*P	**Pn**	**19 59 47.2**	**+0.2**
CHTO	comp=Z,7.0nm,0.8s			pmax	pmax		
CHTO	**Chiang Mai**	**13.59**	**201**	*e*P	**Pn**	**19 59 47.2**	**+0.2**
	comp=Z,6.6nm,0.8s						
CM31	**Chiang Mai Arr**	**13.93**	**201**	*e*P	**Pn**	**19 59 52.8**	**+1.2**
CM31	comp=Z,13nm,0.7s			*e*		20 00 01.1	
CMAR	**Chiang Mai Arr**	**13.93**	**201**	Pn	**Pn**	**19 59 51.5**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=13,slow=12,SNR=27						
TAPN	**Taplejung**	**14.94**	**258**	*e*P	**Pn**	**20 00 04.4**	**-1.0**
	comp=Z,28nm,0.9s						
ODAN	**Odare**	**15.38**	**256**	*e*P	**Pn**	**20 00 09.0**	**-2.3**
	comp=Z,26nm,0.8s						
RAMN	**Ramite**	**16.01**	**258**	*e*P	**Pn**	**20 00 17.1**	**-2.4**
	comp=Z,16nm,0.7s						
JIRN	**Jiri**	**16.11**	**260**	*e*P	**Pn**	**20 00 19.3**	**-1.5**
	comp=Z,20nm,0.7s						
SONM	**Songino Array**	**16.29**	**5**	Pn	**Pn**	**20 00 24.4**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=186,slow=11,SNR=13						
SONM				LR	LR	20 07 15.9	
	comp=Z,191nm,19.1s,baz=194,slow=40						
GUN	**Gumba**	**16.30**	**262**	*e*P	**Pn**	**20 00 22.8**	**-0.4**
	comp=Z,108nm,1.0s						
ULN	**Ulaanbaatar**	**16.38**	**7**	*e*P	**Pn**	**20 00 28.6**	**+4.5**
ULN	comp=Z,2.0nm,0.8s			pmax	pmax		
ULN	**Ulaanbaatar**	**16.38**	**7**	*e*P	**Pn**	**20 00 28.6**	**+4.6**
	comp=Z,2.5nm,0.8s						
PKI	**Pulchoki**	**16.80**	**261**	*e*P	**Pn**	**20 00 27.6**	**-2.0**
KKN	**Kakani**	**16.84**	**262**	*e*P	**Pn**	**20 00 27.8**	**-2.3**
	comp=Z,36nm,0.8s						
DMN	**Daman**	**17.04**	**261**	*e*P	**Pn**	**20 00 30.5**	**-2.1**
	comp=Z,44nm,0.9s						
GKN	**Gorkha**	**17.32**	**263**	*e*P	**Pn**	**20 00 33.3**	**-2.8**
	comp=Z,31nm,0.7s						
KSRS	**Korea Array**	**20.40**	**67**	P	**P**	**20 01 11.8**	**+0.4**
	comp=Z,10.0nm,0.7s,baz=257,slow=10,SNR=64						
KSRS				LR	LR	20 09 02.6	
	comp=Z,66nm,19.1s,MS3.0,baz=160,slow=37						
CN2	**Changchun**	**20.71**	**48**	⇓P	**P**	**20 01 16.9**	**+2.3**
CN2	comp=Z,60nm,0.6s			pmax	pmax		
CN2	comp=Z,200nm,5.0s			pmax	pmax		
CN2	comp=N,200nm,11.0s,MS3.9			LR	LR		
CN2	comp=E,200nm,11.0s,MS3.9			LR	LR		
CN2	comp=Z,200nm,12.0s,MS3.7			LR	LR		
MK31	**Makanchi Array**	**22.63**	**318**	*e*P	**P**	**20 01 36.1**	**+0.9**
MKAR	**Makanchi Array**	**22.63**	**318**	P	**P**	**20 01 36.2**	**+1.0**
	comp=Z,0.8nm,0.6s,mb3.4,baz=121,slow=11,SNR=13						
MKAR				LR	LR	20 11 16.1	
	comp=Z,87nm,21.4s,MS3.2,baz=124,slow=39						
MKAR	**Makanchi Array**	**22.63**	**318**	P	**P**	**20 01 36.2**	**+1.0**
MKAR	comp=Z,1.0nm,0.6s			pmax	pmax		
MKAR	comp=Z,87nm,21.4s			MLR	MLR		
MDJ	**Mudanjiang**	**23.74**	**50**	P	**P**	**20 01 48.8**	**+2.1**
MDJ	comp=Z,10.0nm,1.1s,mb4.2			pmax	pmax		
MDJ	comp=Z,27nm,3.6s			pmax	pmax		
MDJ	comp=N,58nm,21.2s,MS3.0			LR	LR		
MDJ	comp=E,27nm,25.4s,MS3.0			LR	LR		
MDJ	comp=Z,45nm,15.9s			LR	LR		
MDJ	**Mudanjiang**	**23.74**	**50**	*e*P	**P**	**20 01 47.9**	**+1.2**
	comp=Z,2.5nm,0.4s,mb4.0						
AAK	**Ala-Archa**	**25.96**	**303**	LR	LR	20 13 43.7	
	comp=Z,72nm,20.2s,MS3.2,baz=30,slow=40						
ZALV	**Zalesovo Beam**	**26.28**	**334**	P	**P**	**20 02 09.8**	**+0.1**
	comp=Z,2.3nm,0.7s,mb3.8,baz=135,slow=9.3,SNR=11						
ZALV	**Zalesovo Beam**	**26.28**	**334**	P	**P**	**20 02 09.8**	**+0.1**
ZALV	comp=Z,2.0nm,0.7s,mb3.8			pmax	pmax		
ZALV	**Zalesovo Beam**	**26.28**	**334**	P	**P**	**20 02 09.8**	**+0.1**
AML	**Almayashu**	**26.41**	**302**	*e*P	**P**	**20 02 11.7**	**+0.7**
	comp=Z,3.3nm,0.8s,mb3.9						
KURK	**Kurchatov**	**26.87**	**323**	*e*P	**P**	**20 02 15.4**	**+0.4**
MJAR	**Matsushiro Arr**	**28.53**	**71**	P	**P**	**20 02 28.3**	**-1.8**
	comp=Z,1.6nm,0.6s,mb3.9,baz=273,slow=11,SNR=4.9						
MJAR				LR	LR	20 12 47.4	
	comp=Z,58nm,21.0s,MS3.2,baz=100,slow=34						
MJAR	**Matsushiro Arr**	**28.53**	**71**	P	**P**	**20 02 28.3**	**-1.8**
MJAR	comp=Z,2.0nm,0.6s			pmax	pmax		
MJAR	comp=Z,58nm,21.0s			MLR	MLR		
KBL	**Kabul**	**29.48**	**285**	*e*P	**P**	**20 02 39.1**	**+0.5**
KBL	comp=Z,2.0nm,0.7s,mb4.0			pmax	pmax		
KBL	**Kabul**	**29.48**	**285**	*e*P	**P**	**20 02 39.1**	**+0.5**
	comp=Z,2.0nm,0.7s,mb4.0						
BVAR	**Borovoye Array**	**32.42**	**321**	P	**P**	**20 03 04.1**	**-0.2**
	comp=Z,0.7nm,0.7s,mb3.6,baz=174,slow=39,SNR=4.7						
BVAR	**Borovoye Array**	**32.42**	**321**	P	**P**	**20 03 04.1**	**-0.2**
BVAR	comp=Z,1.0nm,0.7s			pmax	pmax		
ABKAR	**Akbulak array**	**37.37**	**311**	*e*P	**P**	**20 03 47.5**	**+0.5**
	comp=Z,1.3nm,0.7s,mb3.9						
ARU	**Arti**	**40.06**	**322**	*c i*P	**P**	**20 04 10.0**	**+0.5**
ARU				*e*		20 05 41.8	
ARU				S	**S**	**20 10 16.3**	**+0.4**
ARU				SS	SS	20 13 08.4	-4.3
ARU	comp=Z,8.0nm,1.7s,mb4.2			pmax	pmax		
ARU	**Arti**	**40.06**	**322**	*e*P	**P**	**20 04 09.1**	**-0.4**
	comp=Z,4.2nm,0.8s,mb4.2						
TIXI	**Tiksi**	**42.24**	**11**	*e*P	**P**	**20 04 26.0**	**-1.3**
TIXI	comp=Z,2.0nm,0.6s,mb3.9			pmax	pmax		
TIXI	**Tiksi**	**42.24**	**11**	*e*P	**P**	**20 04 25.9**	**-1.3**
	comp=Z,2.0nm,0.6s,mb3.9						
JOF	**Joensuu**	**54.62**	**328**	*e*P	**P**	**20 06 04.1**	**+1.3**
JOF	comp=Z,2.0nm,0.7s,mb4.3			pmax	pmax		
JOF	**Joensuu**	**54.62**	**328**	*e*p	**P**	**20 06 04.1**	**+1.3**
	comp=Z,1.5nm,0.7s,mb4.1						
KEV	**Kevo**	**56.28**	**336**	*e*P	**P**	**20 06 14.7**	**0.0**
KEV	comp=Z,7.0nm,1.0s,mb4.7			pmax	pmax		
KEV	**Kevo**	**56.28**	**336**	*e*p	**P**	**20 06 14.7**	**0.0**
	comp=Z,6.8nm,1.0s,mb4.6						
BRTR	**Keskin Array B**	**56.53**	**299**	P	**P**	**20 06 17.9**	**+1.0**
	comp=Z,0.3nm,0.6s,mb3.5,baz=321,slow=27,SNR=2.8						
ARCES	**ARCESS Array B**	**56.81**	**336**	P	**P**	**20 06 19.0**	**+0.6**
	comp=Z,0.9nm,0.6s,mb4.0,baz=64,slow=8.2,SNR=6.3						
ARCES	**ARCESS Array B**	**56.81**	**336**	P	**P**	**20 06 19.0**	**+0.6**
ARCES	comp=Z,1.0nm,0.6s			pmax	pmax		
KAF	**Kangasniemi**	**56.99**	**327**	*e*P	**P**	**20 06 23.5**	**+3.7**
KAF	comp=Z,6.0nm,0.9s,mb4.6			pmax	pmax		
KAF	**Kangasniemi**	**56.99**	**327**	*e*p	**P**	**20 06 23.5**	**+3.7**
	comp=Z,5.6nm,0.9s,mb4.6						
FINES	**FINESS Array B**	**57.17**	**326**	P	**P**	**20 06 21.7**	**+0.6**
	comp=Z,0.9nm,0.4s,mb4.1,baz=94,slow=5.9,SNR=6.8						
FINES	**FINESS Array B**	**57.17**	**326**	P	**P**	**20 06 21.7**	**+0.6**
FINES	comp=Z,1.0nm,0.4s			pmax	pmax		
WRAB	**Tennant Creek**	**58.87**	**146**	*e*P	**P**	**20 06 33.9**	**+0.4**
WRAB	comp=Z,7.0nm,0.8s,mb4.7			pmax	pmax		
WRAB	**Tennant Creek**	**58.87**	**146**	*e*P	**P**	**20 06 33.9**	**+0.4**
	comp=Z,7.0nm,0.8s,mb4.7						
WRA	**Warramunga Arr**	**58.87**	**146**	P	**P**	**20 06 33.4**	**-0.1**
	comp=Z,2.1nm,0.7s,mb4.3,baz=337,slow=7.7,SNR=12						
WRA	**Warramunga Arr**	**58.87**	**146**	P	**P**	**20 06 33.4**	**-0.1**
WRA	comp=Z,2.0nm,0.7s			pmax	pmax		
KWP	**Kalwaria Pacla**	**61.39**	**313**	*e*P	**P**	**20 06 46.8**	**-3.8**
ASAR	**Alice Springs**	**61.90**	**149**	P	**P**	**20 06 54.6**	**+0.4**
	comp=Z,0.8nm,0.7s,mb4.0,baz=339,slow=6.5,SNR=12						
ASAR	**Alice Springs**	**61.90**	**149**	P	**P**	**20 06 54.6**	**+0.4**
ASAR	comp=Z,1.0nm,0.7s			pmax	pmax		
NB2	**NORSAR Subarra**	**64.25**	**327**	P	**P**	**20 07 09.0**	**-0.4**
	comp=Z,1.2nm,0.6s,mb4.1,baz=73,slow=6.9						
NOA	**NORSAR Array B**	**64.25**	**327**	P	**P**	**20 07 09.4**	**0.0**
	comp=Z,1.7nm,0.9s,mb4.1,baz=73,slow=6.7,SNR=4.2						
NOA	**NORSAR Array B**	**64.25**	**327**	P	**P**	**20 07 09.4**	**0.0**
NOA	comp=Z,2.0nm,0.9s			pmax	pmax		
NOA	**NORSAR Array B**	**64.25**	**327**	P	**P**	**20 07 09.4**	**0.0**
VRAC	**Vranov**	**65.28**	**314**	LR	LR	20 37 06.7	
	comp=Z,38nm,19.2s,MS3.6,baz=244,slow=37						
CLL	**Collm**	**66.72**	**317**	*e*P	**P**	**20 07 25.0**	**-0.5**
CLL	**Collm**	**66.72**	**317**	*e*P	**P**	**20 07 25.0**	**-0.5**
CLL				*i* (sP)	sP	20 07 29.8	+2.7
PPLA	**Purkeypile**	**68.19**	**29**	*e*P	**P**	**20 07 34.8**	**+0.2**
HINF	**Hinteralfeld**	**71.81**	**315**	*e*P	**P**	**20 07 57.8**	**+0.7**
MEZF	**Maizieres J'vi**	**72.56**	**316**	*e*P	**P**	**20 08 02.1**	**+0.5**
LPG	**La Plagne**	**72.93**	**313**	*e*P	**P**	**20 08 04.7**	**+0.8**
	comp=Z,10nm,0.9s,mb4.5						
LPL	**La Plagne**	**72.94**	**313**	*e*P	**P**	**20 08 04.8**	**+0.9**
	comp=Z,5.8nm,0.6s,mb4.4						
SMF	**Signal de Mont**	**74.17**	**315**	*e*P	**P**	**20 08 11.1**	**0.0**
	comp=Z,5.9nm,0.8s,mb4.3						
AVF	**Avril sur Loir**	**74.39**	**316**	*e*P	**P**	**20 08 12.4**	**0.0**
	comp=Z,10nm,1.1s,mb4.4						
TCF	**Toulx Ste Croi**	**75.32**	**315**	*e*P	**P**	**20 08 18.1**	**+0.3**
	comp=Z,9nm,0.8s,mb4.0						
LDF	**La Druitiere**	**75.50**	**318**	*e*P	**P**	**20 08 19.4**	**+0.6**
	comp=Z,1.6nm,0.6s,mb3.8						
YKA	**Yellowknife Ar**	**81.19**	**17**	P	**P**	**20 08 50.1**	**+0.1**
	comp=Z,0.8nm,0.8s,mb3.7,baz=189,slow=35,SNR=3.0						
YKA	**Yellowknife Ar**	**81.19**	**17**	P	**P**	**20 08 50.1**	**+0.1**
YKA	comp=Z,1.0nm,0.8s			pmax	pmax		
EVO	**Evora**	**85.92**	**313**	*e*P	**P**	**20 09 12.7**	**-2.1**
	comp=Z,12nm,1.0s,mb4.8						

*ISCJB **14** 19:58:27.7±0.8, 26°.2S±0°.1×70°.8E±0°.2, h10km, mb4.2/19, MS3.5/6, Error ellipse: s-maj=22.9km s-min=18.0km az=155.8*

*IDC **14** 19:58:27.8±0.9, 26°.14S×70°.81E, h0km, mb4.1/11, mb1 4.2/11, mb1mx4.0/24, mbtmp4.1/11, MS3.5/6, Ms1 3.5/6, ms1mx3.1/31, Error ellipse: s-maj=29.2km s-min=21.7km az=60.0*

*NEIC **14** 19:58:29.4±0.6, 26°.14S×70°.84E, h10km, mb4.5/5, Error ellipse: s-maj=19.0km s-min=14.6km az=65.0*

ISC 14 19:58:29.7±0.8, 26°.2S±0°.1×70°.8E±0°.2, h10km, n27, σ0°90/23, mb4.2/19, MS3.5/6, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**39.61**	**48**	LR	LR	20 18 30.4	
	comp=Z,74nm,19.4s,MS3.5,baz=233,slow=30						
BOSA	**Boshof**	**40.33**	**256**	LR	LR	20 19 38.1	
	comp=Z,52nm,18.2s,MS3.4,baz=244,slow=32						
MAW	**Mawson**	**41.75**	**185**	LR	LR	20 19 35.8	
	comp=Z,99nm,21.4s,MS3.7,baz=188,slow=30						
CMAR	**Chiang Mai Arr**	**52.10**	**35**	P	**P**	**20 07 40.9**	**+0.7**
	3.3nm,1.0s,mb4.2,baz=223,slow=7.6,SNR=17						
CMAR				LR	LR	20 24 30.3	
	comp=Z,46nm,20.8s,MS3.5,baz=169,slow=30						
CHTO	**Chiang Mai**	**52.40**	**34**	*e*P	**P**	**20 07 42.7**	**+0.3**
	6.5nm,1.3s,mb4.4						
ASAR	**Alice Springs**	**56.79**	**102**	P	**P**	**20 08 13.9**	**-0.4**
	1.0nm,0.5s,mb4.1,baz=252,slow=6.4,SNR=15						
WRA	**Warramunga Arr**	**58.31**	**98**	P	**P**	**20 08 24.5**	**-0.6**
	0.9nm,0.5s,mb4.0,baz=257,slow=9.6,SNR=5.1						
LSA	**Lhasa**	**58.87**	**21**	*e*P	**P**	**20 08 26.5**	**-2.2**
QSPA	**South Pole Qui**	**63.98**	**180**	P	**P**	**20 09 03.0**	**+0.4**
	1.7nm,0.8s,mb4.1,baz=258,slow=3.3,SNR=6.2						
EKS2	**Erkin-Say**	**68.53**	**2**	*e*P	**P**	**20 09 33.0**	**+0.8**
	4.3nm,1.2s,mb4.2						
AAK	**Ala-Archa**	**68.53**	**3**	P	**P**	**20 09 32.3**	**+0.1**
	1.0nm,0.3s,mb4.2,baz=302,slow=12,SNR=4.8						
LZH	**Lanzhou**	**69.32**	**28**	*e*P	**P**	**20 09 40.0**	**+2.7**
LZH				pP	pP	20 09 45.3	+4.7
LZH				sP	sP	20 09 47.5	+5.7
LZH				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.8						
GTA	**Gaotai**	**70.63**	**23**	*e*P	**P**	**20 09 46.0**	**+0.7**
GTA				pP	pP	20 09 51.5	+3.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.5s,mb4.1						
MK31	**Makanchi Array**	**73.35**	**8**	*e*P	**P**	**20 10 00.8**	**-0.6**
MKAR	**Makanchi Array**	**73.35**	**8**	P	**P**	**20 10 00.6**	**-0.8**
	comp=Z,3.1nm,0.8s,mb4.3,baz=196,slow=6.2,SNR=31						
MKAR	**Makanchi Array**	**73.35**	**8**	P	**P**	**20 10 00.6**	**-0.8**
BRTR	**Keskin Array B**	**74.14**	**331**	P	**P**	**20 10 06.5**	**+0.3**
	comp=Z,0.9nm,0.7s,mb3.8,baz=163,slow=9.0,SNR=5.5						
ABKAR	**Akbulak array**	**75.69**	**353**	*e*P	**P**	**20 10 14.7**	**-0.2**
	comp=Z,9.7nm,1.1s,mb4.7						
HHC	**Hu-ho-hao-te**	**76.66**	**31**	*e*P	**P**	**20 10 22.3**	**+1.6**
HHC				S	S	20 20 08.3	+1.1
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
HHC				pmax	pmax		
	comp=Z,100nm,7.1s						
KURK	**Kurchatov**	**76.84**	**5**	*e*P	**P**	**20 10 21.6**	**+0.2**
	comp=Z,7.0nm,1.3s,mb4.4						
TORD	**Torodi Ar. Bea**	**77.69**	**291**	P	**P**	**20 10 27.2**	**+0.2**
	comp=Z,1.2nm,0.9s,mb3.8,baz=108,slow=5.2,SNR=4.6						
BVAR	**Borovoye Array**	**78.84**	**360**	P	**P**	**20 10 31.4**	**-1.1**
	comp=Z,0.8nm,0.8s,mb3.7,baz=145,slow=5.4,SNR=5.8						
BRVK	**Borovoye**	**78.88**	**360**	*e*P	**P**	**20 10 32.4**	**-0.4**
	comp=Z,2.7nm,0.9s,mb4.2						
SONM	**Songino Array**	**80.31**	**23**	P	**P**	**20 10 40.6**	**0.0**
	comp=Z,1.1nm,1.0s,mb3.8,baz=220,slow=3.5,SNR=7.4						
ZALV	**Zalesovo Beam**	**80.69**	**8**	P	**P**	**20 10 41.7**	**-0.8**
	comp=Z,2.0nm,0.8s,mb4.1,baz=200,slow=3.9,SNR=7.9						
ZALV				LR	LR	20 42 29.8	
	comp=Z,10nm,18.5s,MS3.2,baz=83,slow=33						
ZALV	**Zalesovo Beam**	**80.69**	**8**	P	**P**	**20 10 41.7**	**-0.8**
ZALV				LR	LR	20 42 29.8	
KSRS	**Korea Array**	**82.95**	**42**	LR	LR	20 46 34.4	
	comp=Z,22nm,19.3s,MS3.5,baz=189,slow=35						

IDC 14 20:25:13.1±6.9, 63°.13S×179°.68E, h0km, mb3.9/3, mb1 4.0/3, mb1mx3.8/10, mbtmp3.9/3, MS3.8/7, Ms1 3.7/7, ms1mx3.5/16, Error ellipse: s-maj=268.6km s-min=28.5km az=63.0, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**20.08**	**342**	LR	LR	20 34 51.5	
	comp=Z,16nm,21.6s,baz=344,slow=29						
QSPA	**South Pole Qui**	**26.97**	**180**	P	P	20 30 55.8	+0.1
	3.8nm,0.9s,baz=40,slow=3.7,SNR=10						
QSPA				LR	LR	20 40 25.2	
	comp=Z,215nm,18.6s,baz=226,slow=34						
STKA	**Stephens Creek**	**39.43**	**304**	LR	LR	20 47 54.5	
	comp=Z,26nm,20.7s,baz=22,slow=34						
MAW	**

σ1°17′8, mb3.5/3, MS3.1/2, Northeastern Somalia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MUKL	Al Mukalla	2.75	336	*i* P	Pg	20 37 11.4	-1.2
MUKL				*i* S	Sn	20 37 38.9	+1.5
MUKL				AML	AML	20 37 41.0	
	comp=E,736nm,0.3s						
BDHA	Al Bayda'	4.94	295	*e*	Pg	20 37 56.1	+1.5
	baz=107,slow=16						
BDHA				*i* P	Pg	20 37 56.4	+1.9
BDHA				*i* S	Sg	20 38 57.5	-1.1
ATD	Arta Tunnel	7.21	267	LR	LR	20 41 03.3	
	comp=E,69nm,20.3s,baz=31,slow=39						
MKAR	Makanchi Array	44.02	32	P	P	20 44 26.4	-1.3
	comp=E,0.4nm,0.5s,mb3.4,baz=220,slow=8.3,SNR=6.6						
CMAR	Chiang Mai Arr	47.37	76	P	P	20 44 55.2	+0.6
	comp=E,0.9nm,0.7s,mb3.8,baz=274,slow=8.2,SNR=8.1						
CMAR				LR	LR	21 02 44.8	
	comp=E,19nm,20.9s,MS3.0,baz=185,slow=34						
SONM	Songino Array	58.75	41	P	P	20 46 18.1	0.0
	comp=E,0.2nm,0.7s,mb3.3,baz=258,slow=5.3,SNR=2.5						
KSRS	Korea Array	73.14	54	LR	LR	21 23 25.9	
	comp=E,14nm,20.9s,MS3.2,baz=120,slow=39						

*ISCJB **14** 21:06:19.0±0.3, 38.°40S±0.°03×175.°79E±0.°05, h191km±2km, mb3.8/6, Error ellipse: s-maj=6.8km s-min=4.5km az=22.5*
*IDC **14** 21:06:18.9±0.6, 38.°63S×175.°90E, h174km±8km, mb3.5/3, mb1 3.7/4, mb1mx3.5/13, mbtmp3.6/4, Error ellipse: s-maj=27.6km s-min=14.1km az=138.0*
*WEL **14** 21:06:20.5±0.3, 38.°29S×175.°85E, h179km±2km, ML5.1/21, Error ellipse: s-maj=1.7km s-min=1.4km az=90.0*
*NEIC **14** 21:06:20.5, 38.°29S×175.°85E, h179km, mb3.7/3, After WEL.*

ISC 14 21:06:20.0±0.3, 38.°40S±0.°03×175.°79E±0.°05, h184km±2km, n166, σ1°10′174, mb3.8/6, 9C-3D, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WATZ	Wairara	0.32	188	PN	Pn	21 06 45.0	+0.4
WATZ	Wairara	0.32	188	P	Pn	21 06 45.0	+0.4
ALRZ	Allen Road	0.47	111	PN	Pn	21 06 45.4	+0.3
RATZ	Rangitukua	0.47	181	PN	Pn	21 06 45.4	+0.3
KARZ	Kaharoa	0.52	44	⇑PN	Pn	21 06 44.8	-0.6
KARZ	Kaharoa	0.52	44	P	Pn	21 06 44.8	-0.6
OMRZ	Omania	0.54	58	⇑PN	Pn	21 06 45.0	-0.5
HATZ	Hinemaiaia	0.55	154	SN	Sn	21 07 05.6	+0.4
KATZ	Kakaramea	0.58	187	PN	Pn	21 06 46.3	+0.7
KATZ	Kakaramea	0.58	187	P	Pn	21 06 46.3	+0.7
RITZ	Rihia Road	0.58	175	PN	Pn	21 06 46.6	+1.0
RITZ	Rihia Road	0.58	175	P	Pn	21 06 46.6	+1.0
TARZ	Mount Tarawera	0.59	74	PN	Pn	21 06 45.6	0.0
TOZ	Tahuroa Road	0.70	341	⇑PN	Pn	21 06 45.7	-0.6
TOZ	Tahuroa Road	0.70	341	P	Pn	21 06 45.3	-1.0
KRVZ	Karewarewa	0.71	189	PN	Pn	21 06 46.8	+0.6
KRVZ				SN	Sn	21 07 08.5	+1.9
TWVZ	Taurewa	0.73	202	PN	Pn	21 06 47.0	+0.7
WTVZ	West Tongariro	0.74	192	PN	Pn	21 06 47.1	+0.7
WTVZ	West Tongariro	0.74	192	P	Pn	21 06 47.1	+0.7
HIZ	Hauiti	0.74	260	⇓PN	Pn	21 06 46.5	+0.1
HIZ	Hauiti	0.74	260	P	Pn	21 06 46.1	-0.3
TGRZ	Tauranga	0.76	30	⇑PN	Pn	21 06 45.8	-0.8
TGRZ				SN	Sn	21 07 05.6	-1.4
OTVZ	Oturere	0.77	187	PN	Pn	21 06 47.6	+1.0
NGZ	Ngauruhoe	0.79	190	PN	Pn	21 06 47.5	+0.8
NGZ	Ngauruhoe	0.79	190	P	Pn	21 06 47.5	+0.8
MARZ	Manawahe	0.81	60	PN	Pn	21 06 46.4	-0.5
MARZ	Manawahe	0.81	60	P	Pn	21 06 46.4	-0.5
OPRZ	Ohinepanea	0.82	48	⇑PN	Pn	21 06 46.0	-0.9
OPRZ				SN	Sn	21 07 05.4	-2.2
WPVZ	Whakapapa	0.83	193	PN	Pn	21 06 47.8	+0.8
FWVZ	Far West T-bar	0.88	192	PN	Pn	21 06 48.2	+0.9
TUVZ	Tukino	0.88	187	PN	Pn	21 06 48.2	+1.0
TUVZ	Tukino	0.88	187	P	Pn	21 06 48.2	+0.9
TRVZ	Turoa	0.92	192	PN	Pn	21 06 48.7	+1.2
WNVZ	Wahianoa	0.94	189	PN	Pn	21 06 48.7	+1.0
BKZ	Black Stump Fm	0.95	145	⇑PN	Pn	21 06 48.2	+0.5
BKZ	Black Stump Fm	0.95	145	P	Pn	21 06 48.2	+0.5
PKVZ	Pokaka	0.96	201	PN	Pn	21 06 48.7	+0.9
MOVZ	Moawhango	1.01	182	PN	Pn	21 06 48.7	+0.5
MOVZ				SN	Sn	21 07 08.7	-1.4
MOVZ	Moawhango	1.01	182	P	Pn	21 06 48.7	+0.5
MTVZ	Mangateitei	1.02	194	PN	Pn	21 06 49.2	+1.0
URZ	Urewera	1.05	83	⇑PN	Pn	21 06 47.5	-1.0
URZ	Urewera	1.05	83	P	Pn	21 06 47.4	-1.0
	323nm,0.3s,baz=268,slow=4.5,SNR=603						
URZ				S	Sn	21 07 07.2	-3.2
	419nm,0.3s,baz=321,slow=8.1,SNR=14						
URZ	Urewera	1.05	83	P	Pn	21 06 47.3	-1.2
NMHZ	Naumai	1.06	132	PN	Pn	21 06 49.9	+1.3
VRZ	Vera Road	1.09	227	⇓PN	Pn	21 06 49.6	+0.9
VRZ	Vera Road	1.09	227	P	Pn	21 06 49.5	+0.8
RAHZ	Arahi	1.14	118	PN	Pn	21 06 49.9	+0.7
RAHZ				SN	Sn	21 07 11.7	-0.1
MYRZ	Mayor Island	1.17	18	⇑PN	Pn	21 06 48.6	-0.9
MCHZ	McNeill Hill	1.27	146	PN	Pn	21 06 51.7	+1.5
MWZ	Matawai	1.37	88	⇑PN	Pn	21 06 50.6	-0.5
MWZ	Matawai	1.37	88	P	Pn	21 06 50.6	-0.5
RAEZ	Rainy Point	1.41	230	PN	Pn	21 06 52.8	+1.4
RAEZ	Rainy Point	1.41	230	P	Pn	21 06 52.8	+1.4
DREZ	Durham Road	1.47	237	PN	Pn	21 06 53.3	+1.3
WAZ	Wanganui	1.50	204	PN	Pn	21 06 53.2	+0.9
WAZ	Wanganui	1.50	204	P	Pn	21 06 53.2	+1.0
PNHZ	Pukenui	1.55	168	PN	Pn	21 06 53.6	+0.9
NEZ	North Egmont	1.58	236	PN	Pn	21 06 54.7	+1.6
NEZ	North Egmont	1.58	236	P	Pn	21 06 54.7	+1.6
KNZ	Kokohu	1.60	114	PN	Pn	21 06 53.7	+0.4
KNZ	Kokohu	1.60	114	P	Pn	21 06 53.7	+0.4
DFE	Dawson Falls	1.61	234	PN	Pn	21 06 54.9	+1.6
DFE	Dawson Falls	1.61	234	P	Pn	21 06 54.9	+1.6
CKHZ	Cape Kidnapper	1.61	142	PN	Pn	21 06 54.6	+1.3
PKE	Pukeiti	1.62	240	⇓PN	Pn	21 06 54.7	+1.3
PKE	Pukeiti	1.62	240	P	Pn	21 06 54.7	+1.3
KAHZ	Kahuranaki	1.64	149	PN	Pn	21 06 54.9	+1.3
KUZ	Kuaotunu	1.65	358	PN	Pn	21 06 52.3	-1.4
KUZ	Kuaotunu	1.65	358	P	Pn	21 06 52.3	-1.5
TSZ	Takapari Road	1.67	175	PN	Pn	21 06 54.8	+0.9
TSZ	Takapari Road	1.67	175	P	Pn	21 06 54.8	+0.9
PRGZ	Paritu Road	1.72	108	PN	Pn	21 06 54.9	+0.5
NWEZ	Newall Road	1.74	239	PN	Pn	21 06 55.9	+1.3
NWEZ	Newall Road	1.74	239	P	Pn	21 06 55.9	+1.3
WPHZ	Waipukurau	1.74	163	PN	Pn	21 06 55.6	+0.9
WTAZ	Waiatarua	1.75	326	PN	Pn	21 06 54.3	-0.5
WTAZ	Waiatarua	1.75	326	P	Pn	21 06 54.3	-0.5
MHGZ	Mahia Peninsul	1.82	115	PN	Pn	21 06 56.2	+0.8
PXZ	Pawanui	1.84	153	PN	Pn	21 06 56.5	+0.9
PXZ				SN	Sn	21 07 23.0	-0.2
CNGZ	Carnagh Statio	1.90	93	PN	Pn	21 06 56.7	+0.4
DVHZ	Dannevirke	1.93	171	PN	Pn	21 06 57.0	+0.5
PRHZ	Porangahau	1.98	161	PN	Pn	21 06 58.0	+0.9
PRHZ				SN	Sn	21 07 25.1	-0.9
POWZ	Post Office Ro	2.00	180	PN	Pn	21 06 57.7	+0.5
MXZ	Matakaoa Point	2.16	68	PN	Pn	21 06 58.4	-0.7
MXZ				SN	Sn	21 07 27.5	-1.8
MXZ	Matakaoa Point	2.16	68	P	Pn	21 06 58.4	-0.7
MXZ				S	Sn	21 07 27.5	-1.8
MRZ	Mangatainoka R	2.27	184	PN	Pn	21 07 00.3	+0.1
MRZ	Mangatainoka R	2.27	184	P	Pn	21 07 00.3	+0.1
BFZ	Birch Farm	2.31	171	PN	Pn	21 07 01.0	+0.3
BFZ	Birch Farm	2.31	171	P	Pn	21 07 01.0	+0.3
TIWZ	Tintock	2.38	178	PN	Pn	21 07 01.8	+0.3
OGWZ	Otaki Gorge	2.47	191	PN	Pn	21 07 02.6	+0.1
HOWZ	Holdsworth Sta	2.51	185	PN	Pn	21 07 02.8	-0.2
KIW	Kapiti Island	2.56	195	PN	Pn	21 07 03.2	-0.3
KIW	Kapiti Island	2.56	195	P	Pn	21 07 03.2	-0.3
TMWZ	Te Maipa	2.71	178	PN	Pn	21 07 05.2	-0.1
CAW	Cannon Point	2.77	191	PN	Pn	21 07 05.6	-0.3
CAW	Cannon Point	2.77	191	P	Pn	21 07 05.6	-0.4
MTW	Mount Morrison	2.77	184	PN	Pn	21 07 05.5	-0.5
MTW	Mount Morrison	2.77	184	P	Pn	21 07 05.5	-0.5
DUWZ	D'Urville Isla	2.80	210	PN	Pn	21 07 05.9	-0.5
WEL	Wellington	2.99	195	PN	Pn	21 07 08.1	-0.5
WEL	Wellington	2.99	195	P	Pn	21 07 08.1	-0.6
TRWZ	Traveller	3.00	181	PN	Pn	21 07 08.4	-0.3
SNZO	South Karori	3.03	196	PN	Pn	21 07 08.3	-0.8
SNZO	South Karori	3.03	196	P	Pn	21 07 08.5	-0.6
MSWZ	Moikau Station	3.04	188	PN	Pn	21 07 08.6	-0.7
MSWZ	Moikau Station	3.04	188	P	Pn	21 07 08.6	-0.7
TCW	Tory Channel	3.04	202	PN	Pn	21 07 08.7	-0.6
TCW	Tory Channel	3.04	202	P	Pn	21 07 08.7	-0.6
BHW	Baring Head	3.09	193	PN	Pn	21 07 09.1	-0.8
PLWZ	Palliser	3.20	187	PN	Pn	21 07 10.2	-0.9
TUWZ	Tuamarina	3.35	204	PN	Pn	21 07 11.9	-1.0
NNZ	Nelson	3.38	213	PN	Pn	21 07 12.2	-1.2
NNZ	Nelson	3.38	213	P	Pn	21 07 12.2	-1.1
QRZ	Quartz Range	3.50	225	PN	Pn	21 07 13.2	-1.6
QRZ	Quartz Range	3.50	225	P	Pn	21 07 13.2	-1.6
CMWZ	Cape Campbell	3.56	199	PN	Pn	21 07 14.7	-1.0
CMWZ	Cape Campbell	3.56	199	P	Pn	21 07 14.7	-0.9
OUZ	Omahuta	3.62	330	*e*Pn	Pn	21 07 15.8	-0.7
BSWZ	Blackbirch Sta	3.62	203	PN	Pn	21 07 15.5	-0.9
BSWZ	Blackbirch Sta	3.62	203	P	Pn	21 07 15.5	-0.9
THZ	Tophouse	4.03	212	PN	Pn	21 07 19.9	-1.6
THZ	Tophouse	4.03	212	P	Pn	21 07 19.9	-1.6
DSZ	Denniston Nort	4.53	221	PN	Pn	21 07 25.7	-2.2
DSZ	Denniston Nort	4.53	221	P	Pn	21 07 25.7	-2.2
LTZ	Lake Taylor	5.13	210	PN	Pn	21 07 32.9	-2.7
LTZ	Lake Taylor	5.13	210	P	Pn	21 07 32.9	-2.8
CRLZ	Canterbury Las	5.70	204	PN	Pn	21 07 40.4	-2.6
MQZ	McQueen's Vall	5.81	203	PN	Pn	21 07 41.5	-3.0
RPZ	Rata Peaks	6.41	212	P	Pn	21 07 50.2	-2.0
	12nm,0.3s,baz=14,slow=1.8,SNR=87						
RPZ				S	Sn	21 08 59.0	-6.1
	48nm,0.3s,baz=22,slow=17,SNR=22						
RPZ	Rata Peaks	6.41	212	*e*Pn	Pn	21 07 49.9	-2.3
RPZ				*e*Sn	Sn	21 08 59.2	-5.8
FOZ	Fox Glacier	6.92	220	PN	Pn	21 07 55.8	-3.2
FOZ	Fox Glacier	6.92	220	P	Pn	21 07 55.8	-3.2
LBZ	Lake Benmore	7.32	213	PN	Pn	21 08 01.6	-2.5
LBZ	Lake Benmore	7.32	213	P	Pn	21 08 01.6	-2.6
ODZ	Otahua Downs	7.67	208	PN	Pn	21 08 07.0	-1.9
ODZ	Otahua Downs	7.67	208	P	Pn	21 08 07.0	-1.8
JCZ	Jackson Bay	7.76	221	PN	Pn	21 08 05.9	-4.1
WKZ	Wanaka	8.18	216	PN	Pn	21 08 11.8	-3.7
WKZ	Wanaka	8.18	216	P	Pn	21 08 11.8	-3.7
EAZ	Earnscleugh	8.37	213	PN	Pn	21 08 15.5	-2.4
EAZ	Earnscleugh	8.37	213	P	Pn	21 08 15.5	-2.4
TUZ	Tuapeka	8.83	209	PN	Pn	21 08 21.3	-2.6
TUZ	Tuapeka	8.83	209	P	Pn	21 08 21.3	-2.6
MLZ	Mavora Lakes	8.97	217	PN	Pn	21 08 24.5	-1.3
MLZ	Mavora Lakes	8.97	217	P	Pn	21 08 24.5	-1.3
AFI	Afiamalu	26.76	28	P	P	21 11 42.6	-0.2
STKA	Stephens Creek	28.60	273	P	P	21 12 01.1	+2.2
	3.2nm,1.0s,mb4.0,baz=360,slow=16,SNR=4.3						
FUNA	Funafuti	29.90	7	P	P	21 12 09.4	-1.1
CTAO	Charters Tower	31.38	297	P	P	21 12 24.0	+0.5
ASAR	Alice Springs	38.44	280	P	P	21 13 24.8	+0.8
	1.0nm,0.3s,mb4.0,baz=118,slow=6.0,SNR=59						
SBA	Scott Base	39.75	183	*e*P	P	21 13 35.2	+1.1
WRAB	Tennant Creek	40.20	285	*e*P	P	21 13 38.9	+0.4
	1.5nm,0.8s,mb3.7						
WRA	Warramunga Arr	40.20	285	P	P	21 13 38.9	+0.4
	0.4nm,0.4s,mb3.4,baz=122,slow=8.2,SNR=19						
WRA	Warramunga Arr	40.20	285	P	P	21 13 38.9	+0.4
NWAO	Narrogin (SRO)	47.20	258	*e*P	P	21 14 35.5	+1.3
FITZ	Fitzroy Crossi	47.94	280	*e*P	P	21 14 41.0	+1.0
	1.2nm,0.7s,mb3.6						
QSPA	South Pole Qui	51.73	180	*e*P	P	21 15 12.1	+4.4
	2.8nm,0.4s,mb4.2						
MAW	Mawson	63.00	203	P	P	21 16 28.6	+2.0
DAV	Davao City (W)	64.94	303	P	P	21 16 40.7	+0.6
MIDW	Midway	66.57	7	P	P	21 16 49.9	-0.2
TWG	Pinlang	79.61	310	P	P	21 18 07.2	+0.5
ARCES	ARCESS Array B	144.99	342	PKPbc	PKPdf	21 25 32.6	-1.3
	0.8nm,0.7s,baz=72,slow=4.0,SNR=8.9						
DBIC	Dimbokro	148.41	179	PKPbc	PKPbc	21 25 44.6	-0.5
	3.6nm,0.9s,baz=200,slow=3.5,SNR=2.9						
FINES	FINESS Array B	150.28	331	PKP	PKPdf	21 25 42.7	-0.1
	0.5nm,0.3s,baz=326,slow=36,SNR=4.9						
FINES				PKPbc	PKPbc	21 25 47.6	-0.6
	4.6nm,1.1s,baz=50,slow=2.2,SNR=5.1						
FINES				PKPab	PKPab	21 25 57.2	+2.0
	4.1nm,1.1s,baz=42,slow=3.1,SNR=5.4						
FINES	FINESS Array B	150.28	331	PKP	PKPdf	21 25 42.7	-0.1
FINES				PKPbc	PKPbc	21 25 47.6	-0.6
FINES				PKPab	PKPab	21 25 57.2	+2.0

KRSC 14 21:08:50.2±0.9, 55.°58N×165.°97E, h22km±22km, ML3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	Bering	0.38	180	*i* P	Pb	21 08 58.7	+0.5
BKI				*i* S	Sb	21 09 04.6	+1.0
KBTR	Krutoberegovo	1.88	291	*e*P	Pn	21 09 20.3	-0.7
KBTR				*e*S	Sn	21 09 42.6	-1.4
MKZ	Mys Kozlova	2.65	249	P	Pn	21 09 33.0	+1.5
MKZ				*e*S	Sn	21 10 04.3	+1.5
KLY	Klyuchi	3.08	286	S	Sn	21 10 13.0	-0.5
KRSR	Krestovskiy	3.11	284	S	Sn	21 10 15.2	+0.9
KMNR	Kamenistaya	3.25	275	P	Pn	21 09 41.9	+2.1
KMNR				S	Sn	21 10 19.8	+2.0
KPT	Kopyto	3.27	279	P	Pn	21 09 41.8	+1.8
KPT				S	Sn	21 10 19.7	+1.5
KOZ	Kozyrevsk	3.47	280	P	Pn	21 09 45.5	+2.7
KOZ				S	Sn	21 10 26.2	+3.0
SRDR	Sredinnyy	3.59	284	P	Pn	21 09 46.6	+2.1
SRDR				S	Sn	21 10 28.4	+2.2
SPN	Mys Shipunski	4.28	237	S	Sn	21 10 42.7	-0.3
NLC	Nalytchevo	4.56	241	P	Pn	21 10 00.1	+2.3
NLC				S	Sn	21 10 50.6	+0.5
AVH	Avacha	4.82	244	P	Pn	21 10 04.7	+3.4
AVH				S	Sn	21 10 58.6	+2.2
GNL	Ganaly	5.03	251	P	Pn	21 10 07.1	+2.9
ALID	Alaid	7.83	237	P	Pn	21 10 47.1	+4.5

*CSEM **14** 21:27:18.7, 37.°57N×24.°80W, h5km, ML3.2, After PDA*

PDA 14 21:27:18.7±0.9, 37.°57N×24.°80W, h5km, MD3.8, ML3.2, Error ellipse: s-maj=8.4km s-min=2.0km az=72.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BART	Pico Bartolome	0.36	305	*i* P	Pg	21 27 24.9	-0.7
BART				*e*S	Sg	21 27 29.9	-0.4
BART				A		21 27 30.8	
	1μm,0.2s						
BART	Pico Bartolome	0.36	305	*i* P	Pg	21 27 24.9	-0.7
BART				*e*S	Sg	21 27 29.9	-0.4
PSMN	Pico do Norte,	0.61	201	*e*P	Pg	21 27 28.9	-1.4
PSMN				*e*S	Sg	21 27 36.9	-1.3
PSMN	Pico do Norte,	0.61	201	*e*P	Pg	21 27 28.9	-1.4
PSMN				*e*S	Sg	21 27 36.9	-1.3
PSMA	Santa Maria	0.63	205	*e*P	Pg	21 27 29.2	-1.6
PSMA				*e*S	Sg	21 27 37.2	-1.9
PSMA				A		21 27 38.0	
	265nm,0.2s						
PDA	Ponta Delgada	0.71	285	*e*P	Pg	21 27 30.4	-1.9
PDA	Ponta Delgada	0.71	285	*e*P	Pg	21 27 30.4	-1.9
ADH	Angra Heroismo	2.20	300	*e*S	Sn	21 28 15.5	-8.1
ADH				A		21 28 17.4	
	27nm,0.2s						
ADH	Angra Heroismo	2.20	300	*e*S	Sn	21 28 15.5	-8.1
PID	Ribeirinha	2.76	289	*e*P	Pn	21 27 59.5	-4.1
PID				*e*S	Sn	21 28 29.1	-8.2
PID	Ribeirinha	2.76	289	*e*P	Pn	21 27 59.5	-4.1
PID				*e*S	Sn	21 28 29.1	-8.2
ROSA	Rosais	2.94	294	*e*P	Pn	21 28 01.9	-4.2
ROSA				*e*S	Sn	21 28 33.6	-8.2
ROSA	Rosais	2.94	294	*e*P	Pn	21 28 01.9	-4.2
ROSA				*e*S	Sn	21 28 33.6	-8.2
PCAN	Candelaria	3.04	288	*e*P	Pn	21 28 03.0	-4.5
PCAN				*e*S	Sn	21 28 36.6	-7.7
PCAN				A		21 28 39.9	
	14nm,0.3s						
PCAN	Candelaria	3.04	288	*e*P	Pn	21 28 03.0	-4.5
PCAN				*e*S	Sn	21 28 36.6	-7.7
CALA	Caldeira	3.24	289	*e*P	Pn	21 28 05.9	-4.3
CALA				*e*S	Sn	21 28 40.8	-8.3
CALA	Caldeira	3.24	289	*e*P	Pn	21 28 05.9	-4.3
CALA				*e*S	Sn	21 28 40.8	-8.3

CASC 14 21:59:25.0±2.2, 8.°40N×82.°91W, h5km±13km, MD3.8, 2C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	Cerro Adams	0.36	315	⇑*e*P	Pg	21 59 32.3	+0.3
ACR				*e*S	Sg	21 59 38.4	+1.7
BRU2	Volcan	0.45	29	*e*S	Sg	21 59 43.0	+3.3
TBS2		0.47	33	⇑*i*P	Pg	21 59 28.6	-5.5
TBS2				*e*S	Sg	21 59 37.5	-2.7
CTCR	Cotoan	0.52	17	⇓*i*P	Pg	21 59 36.1	+1.0
CTCR				*e*S	Sg	21 59 44.3	+2.5
BAR1		0.93	335	⇓*e*P	Pg	21 59 42.4	-0.5
BAR1				*e*S	Sg	21 59 56.5	+1.5
BUS	Buena Vista	1.42	324	*e*P	Pn	21 59 50.9	-0.6
URSC	Urasca	1.67	329	*e*P	Pn	21 59 54.3	-0.5
URSC				*e*S	Sn	22 00 16.0	-0.6
LAJ	Bijagual	1.88	321	*e*P	Pn	22 00 00.9	+3.0
PRS1	Puriscal	2.10	319	⇓*e*P	Pn	22 00 02.0	+1.3
CGA2	Cerro Gallo 2	2.22	317	*e*P	Pn	22 00 04.1	+1.6

*NEIC **14** 22:04:51.3, 32.°11S×72.°08W, h31km, ML3.2(GUC), After GUC.*

GUC 14 22:04:51.3±0.7, 32.°11S×72.°08W, h31km±3km, MD3.9, ML3.2, 4C-2D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	Los Chungos	0.55	66	⇓*i*P	Pb	22 05 01.5	-1.1
CHNG				*i* S	Sb	22 05 10.5	+0.4
ROCH	El Roble	1.25	134	*e*P	Pn	22 05 13.5	+0.9
ROCH				*e*S	Sn	22 05 30.0	+1.7
ROCH	El Roble	1.25	134	*e*P	Pn	22 05 13.5	+0.9
ROCH				*e*S	Sn	22 05 30.0	+1.7
CMCH	Combarbala	1.31	45	⇑*i*P	Pn	22 05 14.2	+0.8
CMCH				*i* S	Sn	22 05 31.7	+1.7
CMCH	Combarbala	1.31	45	⇑*i*P	Pn	22 05 14.2	+0.8
CMCH				*i* S	Sn	22 05 31.7	+1.7
CMCH				AML	AML	22 05 36.9	
	comp=E,2μm,0.6s						
JACH	Jahuel	1.38	115	⇑*i*P	Pn	22 05 15.7	+1.3
JACH				*e*S	Sn	22 05 33.8	+2.2
JACH	Jahuel	1.38	115	⇑*i*P	Pn	22 05 15.7	+1.3
JACH				*e*S	Sn	22 05 33.8	+2.2
PEL	Peldehue	1.57	131	⇓*i*P	Pn	22 05 18.1	+1.1
PEL				*i* S	Sn	22 05 38.8	+2.6
PEL				AML	AML	22 05 44.5	
	comp=N,797nm,0.5s						
TACH	Talagante	1.81	148	*e*P	Pn	22 05 21.9	+1.5
TACH	Talagante	1.81	148	*e*P	Pn	22 05 21.9	+1.5
CLCH	Cerro Calan	1.83	135	*e*P	Pn	22 05 21.9	+1.3
CLCH				*e*S	Sn	22 05 45.6	+3.0
CLCH				AML	AML	22 05 54.1	
	comp=E,375nm,0.5s						
FCH	Farellones	1.94	129	*e*P	Pn	22 05 24.4	+2.3
FCH				*e*S	Sn	22 05 48.9	+3.6
FCH				AML	AML	22 05 57.9	
	comp=N,151nm,0.3s						
PCH	Pirque	2.00	139	*e*P	Pn	22 05 24.6	+1.7
PCH	Pirque	2.00	139	*e*P	Pn	22 05 24.6	+1.7
CHCH	Chadas Angostu	2.18	147	*e*P	Pn	22 05 26.8	+1.4
CHCH	Chadas Angostu	2.18	147	*e*P	Pn	22 05 26.8	+1.4
LMEL	Las Melosas	2.34	138	*e*P	Pn	22 05 29.7	+2.0
LMEL				*e*S	Sn	22 05 58.2	+2.8
LMEL	Las Melosas	2.34	138	*e*P	Pn	22 05 29.7	+2.0
LMEL				*e*S	Sn	22 05 58.2	+2.8
LMEL				AML	AML	22 06 13.3	
	comp=N,122nm,1.0s						
LCO	Las Campanas	3.31	21	*e*Pn	Pn	22 05 41.3	+0.3
LCO				*e*Sn	Sn	22 06 22.8	+3.5

*NOU **14** 22:20:07.7±1.5, 20.°40S×168.°43E, h10km, MD2.7, ML3.7*
*ISCJB **14** 22:20:10.8±0.6, 20.°47S±0.°06×168.°05E±0.°07, h36km, mb3.9/7, MS3.3/2, Error ellipse: s-maj=10.8km s-min=5.8km az=38.6*
*IDC **14** 22:20:12.9±1.0, 20.°52S×167.°99E, h35km±6km, mb3.7/6, mb1 4.0/7, mb1mx3.8/14, mbtmp3.8/7, ML3.8/1, MS3.4/3, Ms1 3.4/3, ms1mx2.9/20, Error ellipse: s-maj=32.6km s-min=21.2km az=159.0*
*NEIC **14** 22:20:14.8±3.6, 20.°60S×168

LPL	La Plagne	150.71	333	ePKP1	PKPab	22 40 12.3	+4.4
	comp=Z,3.8nm,0.8s						
SMF	Signal de Mont	150.93	337	ePKP1	PKPab	22 40 11.3	+2.5
	comp=Z,5.0nm,0.9s						
ORIF	Oris-en-Rattie	151.55	333	ePKP1	PKPab	22 40 13.8	+2.4
	comp=Z,4.9nm,0.8s						
VIVF	Saint-Julien-l	152.11	334	ePKP1	PKPab	22 40 14.3	+0.5
	comp=Z,7.0nm,0.9s						

*NEIC **14** 22:36:58.5±0.5, 10°.67S×74°.58W, h10km, mb4.7/46, ML4.1(LIM), Error ellipse: s-maj=11.8km s-min=9.7km az=88.0*

NEIC Felt [III] at Huancabamba and [II] at Oxapampa and Pozuzo.

*ISCJB **14** 22:37:01.5±0.4, 10°.12S±0°.05×75°.11W±0°.06, h10km, mb4.6/56, MS3.6/6, Error ellipse: s-maj=8.9km s-min=7.3km az=157.5*

*IDC **14** 22:37:01.5±0.6, 10°.23S×75°.39W, h0km, mb4.3/13, mb1 4.4/16, mb1mx4.3/23, mbtmp4.2/16, ML4.0/3, MS3.6/7, Ms1 3.6/7, ms1mx3.1/28, Error ellipse: s-maj=15.5km s-min=12.1km az=89.0*

ISC 14 22:37:03.2±0.4, 10°.16S±0°.06×75°.03W±0°.06, h10km, n334, σ0°56/323, mb4.6/56, MS3.6/6, 112C-124D, Central Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**2.55**	**224**	Pn	**Pn**	**22 37 40.7**	**-3.9**
	113nm,0.3s,baz=29,slow=13,SNR=225						
NNA				Sn	**Sn**	**22 38 08.1**	**-7.6**
	48nm,0.3s,baz=342,slow=19,SNR=8.2						
NNA				LR	LR	22 38 09.0	
	comp=Z,671nm,19.6s,baz=242,slow=30						
NNA				Lg		22 38 13.2	
	230nm,0.3s,baz=143,slow=20,SNR=18						
NNA	**Nana**	**2.55**	**224**	ePn	**Pn**	**22 37 40.4**	**-4.2**
NNA				eSn	**Sn**	**22 38 13.7**	**-2.0**
ATAH	**Atahualpa**	**4.48**	**312**	Pn	**Pn**	**22 38 11.4**	**+0.1**
	17nm,0.3s,baz=133,slow=9.4,SNR=63						
ATAH				Sn	**Sn**	**22 39 05.9**	**+2.4**
	baz=234,slow=19,SNR=1.5						
LPAZ	**La Paz**	**9.07**	**133**	Pn	**Pn**	**22 39 18.7**	**+4.5**
	0.2nm,0.3s,baz=318,slow=12,SNR=7.1						
LPAZ				Lg		22 41 55.8	
	0.7nm,0.3s,baz=270,slow=20,SNR=5.2						
LPAZ	**La Paz**	**9.07**	**133**	ePn	**Pn**	**22 38 59.7**	**-15**
LPAZ				Lg		22 41 55.8	
OTAV	**Otavalo**	**10.87**	**342**	ePn	**Pn**	**22 39 43.5**	**+4.4**
SIV	**San Ignacio**	**14.78**	**115**	Pn	**Pn**	**22 40 35.5**	**+3.1**
	0.5nm,0.3s,baz=309,slow=12,SNR=20						
SIV				Lg		22 44 55.5	
	1.3nm,0.3s,baz=36,slow=23,SNR=4.4						
ROSC	**El Rosal**	**14.93**	**3**	Pn	**Pn**	**22 40 38.3**	**+3.8**
	1.1nm,0.3s,baz=276,slow=19,SNR=1.9						
ROSC				Lg		22 45 01.1	
	1.5nm,0.3s,baz=105,slow=20,SNR=2.4						
ROSC	**El Rosal**	**14.93**	**3**	ePn	**Pn**	**22 40 38.1**	**+3.6**
LCO	**Las Campanas**	**19.19**	**168**	P	**Pn**	**22 41 16.6**	**-12**
	41nm,1.9s						
SDV	**Santo Domingo**	**19.42**	**13**	eP	**Pn**	**22 41 29.5**	**-1.4**
	10nm,0.8s						
CFAA	**Coronel Fontan**	**22.25**	**165**	P	**P**	**22 41 60.0**	**-0.4**
	0.3nm,0.4s,baz=334,slow=9.5,SNR=5.5						
JTS	**Juntas,Ibangare**	**22.59**	**334**	P	**P**	**22 42 03.4**	**-0.7**
	1.9nm,0.3s,mb4.0,baz=319,slow=20,SNR=2.4						
PCRV	**Puerto La Cruz**	**22.69**	**27**	LR	LR	22 51 38.7	
	comp=Z,156nm,20.7s,MS3.4,baz=46,slow=38						
CPUP	**Villa Florida**	**23.22**	**136**	P	**P**	**22 42 11.0**	**+0.4**
	1.8nm,0.6s,mb3.7,baz=304,slow=12,SNR=9.0						
CPUP				LR	LR	22 53 01.2	
	comp=Z,74nm,20.1s,MS3.1,baz=305,slow=41						
CPUP	**Villa Florida**	**23.22**	**136**	P	**P**	**22 42 11.0**	**+0.4**
CPUP				LR	LR	22 53 01.2	
SJG	**San Juan**	**29.42**	**17**	P	**P**	**22 43 07.1**	**0.0**
	9.9nm,0.6s,mb4.8,baz=251,slow=3.5,SNR=3.6						
AOPR	**Arecibo Observ**	**29.48**	**16**	eP	**P**	**22 43 04.9**	**-2.7**
	20nm,1.0s,mb4.8						
MTP	**Monte Pirata**	**29.59**	**18**	P	**P**	**22 43 07.1**	**-1.6**
TEIG	**Tepich**	**32.89**	**337**	eP	**P**	**22 43 38.4**	**+0.7**
	26nm,1.4s,mb5.0						
DWPF	**Disney**	**38.54**	**351**	eP	**P**	**22 44 28.1**	**+2.0**
	5.7nm,0.7s,mb4.4						
LRAL	**Lakeview Retre**	**44.44**	**346**	eP	**P**	**22 45 14.2**	**-0.2**
	7.8nm,1.0s,mb4.4						
SWET	**Sewanee**	**46.29**	**348**	eP	**P**	**22 45 28.2**	**-0.9**
OXF	**Oxford**	**46.47**	**344**	eP	**P**	**22 45 29.3**	**-1.3**
	27nm,1.0s,mb5.1						
ELN	**Prospectdale**	**47.44**	**354**	eP	**P**	**22 45 37.7**	**-0.3**
WVT	**Waverly**	**47.59**	**346**	eP	**P**	**22 45 37.3**	**-2.0**
	2.4nm,0.7s,mb4.3						
UALR	**University of**	**47.60**	**341**	eP	**P**	**22 45 39.5**	**+0.1**
	11nm,0.8s,mb5.0						
628A	**Black Gap, Mar**	**47.69**	**327**	⇓P	**P**	**22 45 40.1**	**-0.1**
	baz=49,SNR=9.6						
MIAR	**Mount Ida**	**47.81**	**339**	eP	**P**	**22 45 41.3**	**+0.3**
	6.4nm,0.8s,mb4.7						
627A	**Terlingua Ranc**	**47.94**	**326**	⇓P	**P**	**22 45 41.3**	**-0.8**
	baz=50						
TXAR	**Lajitas Array**	**48.00**	**326**	P	**P**	**22 45 41.8**	**-0.8**
	2.7nm,0.8s,mb4.3,baz=147,slow=8.9,SNR=28						
TXAR				PcP	PcP	22 47 09.5	-1.2
	0.6nm,0.8s,baz=140,slow=5.9,SNR=3.7						
528A	**Cox Ranch, San**	**48.17**	**327**	⇓P	**P**	**22 45 43.3**	**-0.5**
	baz=50						
626A	**Big Bend Ranch**	**48.43**	**325**	⇓P	**P**	**22 45 45.7**	**-0.2**
	baz=50,SNR=26						
428A	**Kincaid Ranch,**	**48.56**	**328**	⇑P	**P**	**22 45 46.6**	**-0.3**
	baz=50						
527A	**Woodward Ranch**	**48.60**	**326**	⇓P	**P**	**22 45 46.8**	**-0.4**
	baz=50,SNR=8.7						
526A	**Mary Lane Ranc**	**48.80**	**326**	⇑P	**P**	**22 45 48.4**	**-0.3**
	baz=50						
427A	**Hayter Ranch,**	**49.03**	**327**	⇓P	**P**	**22 45 49.9**	**-0.6**
	baz=51						
328A	**Wristen Ranch,**	**49.14**	**328**	⇑P	**P**	**22 45 51.1**	**-0.2**
	baz=51,SNR=6.7						
426A	**McDonald Obser**	**49.23**	**327**	⇓P	**P**	**22 45 51.7**	**-0.4**
	baz=51,SNR=6.2						
SIUC	**Southern Illin**	**49.44**	**345**	eP	**P**	**22 45 52.7**	**-0.8**
	24nm,0.6s,mb5.4						
326A	**Caldwell Ranch**	**49.71**	**327**	⇑P	**P**	**22 45 55.1**	**-0.5**
	baz=51,SNR=7.1						
425A	**Indio Mountain**	**49.85**	**326**	⇑P	**P**	**22 45 56.2**	**-0.5**
	baz=51,SNR=12						
WMOK	**Wichita Mounta**	**50.00**	**334**	P	**P**	**22 45 59.0**	**+1.2**
FVM	**French Village**	**50.01**	**344**	eP	**P**	**22 45 57.2**	**-0.6**
	14nm,0.8s,mb5.0						
OLIL	**Olney**	**50.14**	**347**	eP	**P**	**22 45 57.8**	**-1.1**
	10nm,0.8s,mb4.9						
325A	**Bean Ranch, Si**	**50.28**	**326**	⇑P	**P**	**22 45 59.6**	**-0.4**
	baz=52,SNR=7.2						
CCM	**Cathedral Cave**	**50.30**	**343**	eP	**P**	**22 45 59.0**	**-1.0**
	3.8nm,0.7s,mb4.5						
226A	**Malaga, Loving**	**50.35**	**328**	⇓P	**P**	**22 46 00.6**	**0.0**
	baz=52,SNR=5.0						
127A	**Arkansas Junct**	**50.45**	**329**	⇓P	**P**	**22 46 00.6**	**-0.7**
	baz=52						
324A	**Moseley Ranch,**	**50.62**	**326**	⇓P	**P**	**22 46 01.6**	**-1.0**
	baz=52,SNR=7.3						
ACSO	**Alum Creek Sta**	**50.67**	**352**	eP	**P**	**22 46 02.5**	**-0.3**
	16nm,1.0s,mb4.9						
126A	**Clayton Basin,**	**50.77**	**328**	⇓P	**P**	**22 46 03.5**	**-0.2**
	baz=52						
225A	**Deer Hill, Car**	**50.77**	**327**	⇓P	**P**	**22 46 03.4**	**-0.4**
	baz=52,SNR=5.8						
Z27A	**Tatum**	**50.89**	**329**	⇓P	**P**	**22 46 03.4**	**-1.2**
	baz=52						
CPRX	**Cap Rock**	**50.99**	**329**	eP	**P**	**22 46 06.1**	**+0.7**
	9.7nm,1.2s,mb4.6						
125A	**Gardner Draw,**	**51.11**	**328**	⇑P	**P**	**22 46 05.5**	**-0.8**
	baz=53						
224A	**Cornudas Mount**	**51.13**	**326**	⇓P	**P**	**22 46 05.7**	**-0.7**
	baz=53,SNR=6.8						
MSTX	**Muleshoe**	**51.19**	**330**	⇓P	**P**	**22 46 05.9**	**-1.0**
	baz=53						
Z26A	**Caprock**	**51.24**	**329**	⇓P	**P**	**22 46 07.1**	**-0.1**
	baz=53,SNR=6.5						
Y27A	**Causey**	**51.32**	**330**	⇓P	**P**	**22 46 06.7**	**-1.1**
	baz=53						
124A	**Stringfield Ra**	**51.57**	**327**	⇑P	**P**	**22 46 09.3**	**-0.4**
	baz=53						
Z25A	**Roswell**	**51.63**	**328**	⇑P	**P**	**22 46 09.7**	**-0.4**
	baz=53						
Z24A	**Sheeppen Canyo**	**52.01**	**328**	⇑P	**P**	**22 46 12.8**	**-0.1**
	baz=54,SNR=9.7						
222A	**Williams Famil**	**52.02**	**325**	⇓P	**P**	**22 46 12.9**	**-0.2**
	baz=54,SNR=7.2						
Y25A	**Mesa, Roswell**	**52.12**	**329**	⇑P	**P**	**22 46 13.5**	**-0.3**
	baz=54						
HDIL	**Hopedale**	**52.15**	**346**	eP	**P**	**22 46 13.1**	**-0.9**
	13nm,0.6s,mb5.0						
X26A	**CR and CF Fran**	**52.17**	**330**	⇓P	**P**	**22 46 13.6**	**-0.5**
	baz=54						
W27A	**Bowe Ranch, En**	**52.22**	**331**	⇑P	**P**	**22 46 14.6**	**+0.1**
	baz=54,SNR=6.2						
Z23A	**Rita Site, Whi**	**52.42**	**327**	⇓P	**P**	**22 46 16.0**	**0.0**
	baz=54						
X25A	**Clemmons Ranch**	**52.58**	**329**	⇑P	**P**	**22 46 17.0**	**-0.2**
	baz=54						
220A	**Playas Peak, P**	**52.69**	**324**	⇓P	**P**	**22 46 17.9**	**-0.2**
	baz=54,SNR=12						
121A	**Cookes Peak, D**	**52.73**	**325**	⇑P	**P**	**22 46 18.0**	**-0.4**
	baz=54						
319A	**Douglas**	**52.75**	**323**	⇓P	**P**	**22 46 18.4**	**-0.1**
	baz=54,SNR=8.3						
Z22A	**Elephant Butte**	**52.81**	**326**	⇓P	**P**	**22 46 18.8**	**-0.1**
	baz=54						
Y23A	**Lovelace Mesa,**	**52.84**	**327**	⇓P	**P**	**22 46 19.2**	**+0.1**
	baz=54						
KSU1	**Kansas State U**	**52.96**	**339**	eP	**P**	**22 46 19.9**	**-0.1**
X24A	**Lazy VL Ranch,**	**53.00**	**328**	⇓P	**P**	**22 46 19.4**	**-0.9**
	baz=54						
W25A	**X Bar L Ranch,**	**53.02**	**330**	⇑P	**P**	**22 46 19.9**	**-0.6**
	baz=54,SNR=5.7						
V26A	**Tequesquite Ra**	**53.16**	**331**	⇓P	**P**	**22 46 20.9**	**-0.5**
	baz=55						
219A	**White Tail Can**	**53.19**	**323**	⇑P	**P**	**22 46 21.4**	**-0.3**
	baz=55,SNR=8.9						
120A	**U Bar Ranch, L**	**53.22**	**324**	⇓P	**P**	**22 46 22.0**	**0.0**
	baz=55						
318A	**Bisbee**	**53.22**	**322**	⇓P	**P**	**22 46 21.9**	**-0.1**
	baz=55,SNR=7.5						
Z21A	**St. Cloud Mine**	**53.24**	**326**	⇓P	**P**	**22 46 22.1**	**0.0**
	baz=55						
BNM	**Barren Site**	**53.31**	**327**	eP	**P**	**22 46 22.5**	**-0.1**
	1.8nm,0.8s,mb4.0						
Y22A	**Socorro**	**53.33**	**327**	⇑P	**P**	**22 46 23.0**	**+0.3**
	baz=55						
W24A	**Lazy 6 Ranch,**	**53.49**	**329**	⇑P	**P**	**22 46 23.3**	**-0.6**
	baz=55						
V25A	**Rancho No Teng**	**53.59**	**330**	⇑P	**P**	**22 46 24.4**	**-0.2**
	baz=55,SNR=7.1						
Z20A	**Nine Sixteen R**	**53.61**	**325**	⇓P	**P**	**22 46 24.8**	**-0.1**
	baz=55,SNR=11						
U26A	**Atchley Ranch,**	**53.62**	**331**	⇑P	**P**	**22 46 24.4**	**-0.4**
	baz=55						
218A	**Dragoon**	**53.63**	**323**	⇑P	**P**	**22 46 24.7**	**-0.3**
	baz=55						
Y21A	**Point of Rocks**	**53.77**	**326**	⇑P	**P**	**22 46 26.3**	**+0.3**
	baz=55,SNR=10						
119A	**Ashpeak Ranch,**	**53.77**	**324**	⇓P	**P**	**22 46 26.1**	**+0.1**
	baz=55						
LAZ	**Ladron**	**53.77**	**327**	eP	**P**	**22 46 26.5**	**+0.5**
	4.2nm,1.3s,mb4.2						
V24A	**Rampart Ranch,**	**53.83**	**329**	⇑P	**P**	**22 46 26.3**	**-0.1**
	baz=55						
ANMO	**Albuquerque**	**53.83**	**328**	P	**P**	**22 46 25.3**	**-1.1**
	1.8nm,0.8s,mb4.0,baz=124,slow=9.2,SNR=4.2						
U25A	**Circle Dot Ran**	**53.94**	**331**	⇓P	**P**	**22 46 26.9**	**-0.2**
	baz=56						
217A	**Gren Valley**	**53.96**	**322**	⇑P	**P**	**22 46 27.1**	**-0.3**
	baz=56						
118A	**Homack Ranch,**	**54.06**	**323**	⇓P	**P**	**22 46 27.8**	**-0.4**
	baz=56,SNR=5.9						
Y20A	**Horse Springs,**	**54.08**	**326**	⇓P	**P**	**22 46 28.4**	**+0.2**
	baz=56						
X21A	**Alamocita Cree**	**54.15**	**327**	⇓P	**P**	**22 46 29.0**	**+0.2**
	baz=56,SNR=11						
V23A	**Ortiz Mt. (NFS**	**54.30**	**329**	⇑P	**P**	**22 46 30.1**	**+0.3**
	baz=56						
TUC	**Tucson**	**54.31**	**322**	eP	**P**	**22 46 29.8**	**-0.2**
	3.2nm,0.8s,mb4.3						
117A	**Oracle**	**54.47**	**323**	eP	**P**	**22 46 30.7**	**-0.4**
	baz=56,SNR=9.6						
216A	**Three Points,**	**54.51**	**322**	⇑P	**P**	**22 46 31.4**	**0.0**
	baz=56						
T25A	**Trinidad**	**54.53**	**331**	⇓P	**P**	**22 46 31.5**	**0.0**
	baz=56,SNR=7.3						
Y19A	**Nutrioso**	**54.60**	**325**	⇓P	**P**	**22 46 32.4**	**+0.3**
	baz=56						
X20A	**Quemado**	**54.62**	**326**	⇓P	**P**	**22 46 32.1**	**-0.1**
	baz=56						
U23A	**El Rito**	**54.76**	**329**	⇓P	**P**	**22 46 33.6**	**+0.4**
	baz=56						
SADO	**Sadowa**	**54.79**	**356**	P	**P**	**22 46 33.4**	**+0.2**
	4.4nm,0.9s,mb4.5,baz=105,slow=12,SNR=3.1						
SADO				LR	LR	23 12 25.2	
	comp=Z,37nm,18.9s,MS3.5,baz=232,slow=39						
V22A	**San Miguel Ran**	**54.81**	**328**	⇑P	**P**	**22 46 33.7**	**+0.2**
	baz=56						
Z17A	**San Carlos Hig**	**54.83**	**324**	⇓P	**P**	**22 46 33.6**	**-0.1**
	baz=56						
Y18A	**Canyon Day Jun**	**54.92**	**324**	⇓P	**P**	**22 46 34.1**	**-0.3**
	baz=56						
S25A	**Robets Cordova**	**54.96**	**332**	⇓P	**P**	**22 46 34.5**	**-0.1**
	baz=56						
X19A	**St. Johns**	**54.97**	**325**	⇑P	**P**	**22 46 34.8**	**+0.1**
	baz=56						
116A	**Eloy**	**55.04**	**322**	⇓P	**P**	**22 46 35.3**	**0.0**
	baz=57						
W20A	**Ramah**	**55.05**	**327**	⇑P	**P**	**22 46 35.2**	**-0.1**
	baz=57,SNR=5.7						
U22A	**Llaves**	**55.14**	**329**	⇑P	**P**	**22 46 36.2**	**+0.3**
	baz=57						
214A	**Organ Pipe Nat**	**55.31**	**321**	⇓P	**P**	**22 46 36.9**	**-0.3**
	baz=57,SNR=9.2						
S24A	**Houchin Ranch,**	**55.32**	**331**	⇑P	**P**	**22 46 37.2**	**+0.1**
	baz=57						
X18A	**Snowflake**	**55.42**	**325**	⇑P	**P**	**22 46 38.0**	**+0.1**
	baz=57						
W19A	**Sanders**	**55.53**	**326**	⇑P	**P**	**22 46 39.0**	**+0.2**
	baz=57						
SDCO	**Great Sand Dun**	**55.54**	**331**	eP	**P**	**22 46 38.9**	**+0.2**
	6.6nm,0.9s,mb4.7						
U21A	**Nageezi**	**55.59**	**328**	⇓P	**P**	**22 46 39.6**	**+0.5**
	baz=57						
W18A	**Petrified Fore**	**55.73**	**326**	⇓P	**P**	**22 46 40.5**	**+0.4**
	baz=57						
X17A	**Forest Lakes**	**55.77**	**324**	⇓P	**P**	**22 46 40.5**	**+0.1**
	baz=57						
Y16A	**Circle Bar Ran**	**55.83**	**323**	⇓P	**P**	**22 46 41.3**	**+0.4**
	baz=57,SNR=7.3						
114A	**Black Gap (USA**	**55.89**	**321**	⇓P	**P**	**22 46 41.2**	**-0.2**
	baz=57,SNR=6.6						
U20A	**Newcomb**	**56.00**	**328**	⇑P	**P**	**22 46 42.1**	**0.0**
	baz=58						
S22A	**4UR Ranch, Cre**	**56.19**	**330**	⇑P	**P**	**22 46 43.5**	**+0.1**
	baz=58						
X16A	**Lo Mia Camp, P**	**56.19**	**324**	⇑P	**P**	**22 46 43.4**	**-0.1**
	baz=58,SNR=9.0						
Y15A	**Casa Rosa Ranc**	**56.39**	**323**	⇑P	**P**	**22 46 45.1**	**+0.2**
	baz=58						
R22A	**Saguache, Gunn**	**56.53**	**330**	⇓P	**P**	**22 46 46.1**	**+0.2**
	baz=58						
S21A	**Coal Bank Pass**	**56.60**	**329**	⇑P	**P**	**22 46 46.7**	**+0.4**
	baz=58						
T19A	**Beclabito**	**56.61**	**327**	⇑P	**P**	**22 46 46.7**	**+0.3**
	baz=58						
MVCO	**Mesa Verde**	**56.62**	**328**	⇓P	**P**	**22 46 46.5**	**0.0**
	baz=58						
Z13A	**Yuma Proving G**	**56.67**	**321**	⇑P	**P**	**22 46 47.1**	**+0.1**
	baz=58						
V17A	**Tonalea, Kykot**	**56.68**	**325**	⇓P	**P**	**22 46 47.0**	**0.0**
	baz=58,SNR=17						
X15A	**Humboldt**	**56.70**	**323**	⇓P	**P**	**22 46 47.5**	**+0.3**
	baz=58						
W16A	**Flagstaff**	**56.72**	**324**	⇓P	**P**	**22 46 47.7**	**+0.4**
	baz=58						
WUAZ	**Wupatki**	**56.94**	**325**	⇑P	**P**	**22 46 48.8**	**0.0**
	baz=58,SNR=7.3						
WUAZ	**Wupatki**	**56.94**	**325**	eP	**P**	**22 46 49.2**	**+0.4**
	12nm,1.1s,mb4.9						
S20A	**Disappointment**	**57.02**	**329**	⇑P	**P**	**22 46 49.6**	**+0.3**
	baz=58						
X14A	**Yava**	**57.08**	**323**	⇓P	**P**	**22 46 50.3**	**+0.4**
	baz=59						
ECSD	**EROS Data Cent**	**57.12**	**341**	eP	**P**	**22 46 49.2**	**-0.7**
	7.7nm,0.8s,mb4.8						
U16A	**Tuba City**	**57.25**	**325**	⇑P	**P**	**22 46 51.0**	**0.0**
	baz=59						
T18A	**Mexican Hat**	**57.29**	**327**	⇑P	**P**	**22 46 50.9**	**-0.4**
	baz=59,SNR=7.3						
R20A	**Redvale**	**57.30**	**329**	⇑P	**P**	**22 46 51.4**	**0.0**
	baz=59						
U17A	**Shonto**	**57.32**	**326**	⇓P	**P**	**22 46 51.2**	**-0.3**
	baz=59						
S19A	**Harvey Farm, M**	**57.36**	**328**	⇑P	**P**	**22 46 51.5**	**-0.2**
	baz=59						
PV01	**Paradox Valley**	**57.36**	**329**	eP	**P**	**22 46 52.0**	**+0.3**
	622nm,1.1s						
SMCO	**Snowmass**	**57.38**	**331**	eP	**P**	**22 46 53.3**	**+1.5**
	5.7nm,1.2s,mb4.5						
P22A	**Eagle**	**57.60**	**331**	⇑P	**P**	**22 46 53.6**	**+0.2**
	baz=59						
V15A	**Kaibab Nationa**	**57.61**	**324**	⇓P	**P**	**22 46 53.6**	**+0.1**
	baz=59						
T17A	**Navajo Res., N**	**57.69**	**326**	⇓P	**P**	**22 46 54.2**	**+0.1**
	baz=59,SNR=12						
O23A	**Lake Granby, G**	**57.70**	**332**	⇑P	**P**	**22 46 54.2**	**+0.1**
	baz=59						
W14A	**Seligman**	**57.71**	**323**	⇓P	**P**	**22 46 54.6**	**+0.3**
	baz=59						
X13A	**Yucca**	**57.73**	**322**	⇑P	**P**	**22 46 54.5**	**+0.1**
	baz=59						
S18A	**Hurst Farm, Bl**	**57.77**	**327**	⇓P	**P**	**22 46 54.6**	**0.0**
	baz=59,SNR=6.5						
PV10	**Paradox Valley**	**57.78**	**329**	eP	**P**	**22 46 54.2**	**-0.5**
O22A	**Kremmling**	**57.95**	**332**	⇑P	**P**	**22 46 55.5**	**-0.3**
	baz=60						
V14A	**Boquillas Ranc**	**58.02**	**324**	⇓P	**P**	**22 46 56.8**	**+0.4**
	baz=60,SNR=7.4						
BC3	**Big Chuckawall**	**58.10**	**320**	⇓P	**P**	**22 46 57.5**	**+0.5**
	baz=60						
W13A	**Hualapai Mount**	**58.10**	**323**	⇑P	**P**	**22 46 57.2**	**+0.1**
	baz=60,SNR=12						
U15A	**North Rim**	**58.11**	**325**	⇑P	**P**	**22 46 57.3**	**+0.3**
	baz=60,SNR=6.9						
R18A	**Canyonlands Na**	**58.23**	**328**	⇓P	**P**	**22 46 57.8**	**-0.1**
	baz=60						
IRM	**Iron Mountain**	**58.24**	**321**	⇓P	**P**	**22 46 57.9**	**-0.1**
	baz=60,SNR=16						
Q19A	**Hogan Spring (**	**58.34**	**329**	⇑P	**P**	**22 46 58.8**	**+0.2**
	baz=60						
T15A	**Red Dirt Ranch**	**58.58**	**325**	⇓P	**P**	**22 47 00.4**	**+0.1**
	baz=60						
U14A	**Mt Trumbull**	**58.61**	**324**	⇑P	**P**	**22 47 00.9**	**+0.4**
	baz=60,SNR=9.5						
S16A	**Weppner Ranch,**	**58.65**	**326**	⇑P	**P**	**22 47 00.9**	**+0.1**
	baz=60						
BELC	**Belle Mtn. Jos**	**58.66**	**320**	⇓P	**P**	**22 47 01.8**	**+0.8**
	baz=60						
V13A	**Grand Canyon W**	**58.68**	**323**	⇓P	**P**	**22 47 00.7**	**-0.3**
	baz=60						
R17A	**Hanksville Air**	**58.68**	**328**	⇑P	**P**	**22 47 00.8**	**-0.2**
	baz=60,SNR=6.5						
PFO	**Pinyon Flat Ob**	**58.70**	**320**	⇓P	**P**	**22 47 01.6**	**+0.3**
	baz=60						
PFO	**Pinyon Flat Ob**	**58.70**	**320**	eP	**P**	**22 47 01.3**	**+0.1**
	7.1nm,1.0s,mb4.7						
P19A	**Cripple Cowboy**	**58.71**	**330**	⇑P	**P**	**22 47 01.1**	**-0.1**
	baz=60						
N21A	**Black Mountain**	**58.88**	**332**	⇑P	**P**	**22 47 02.9**	**+0.6**
	baz=60						
Q18A	**Rafter H Ranch**	**58.89**	**328**	⇓P	**P**	**22 47 02.7**	**+0.3**
	baz=60						
GMRC	**Granite Mounta**	**58.97**	**321**	⇑P	**P**	**22 47 03.1**	**0.0**
	baz=60,SNR=6.9						
R16A	**Teasdale**	**59.00**	**327**	⇓P	**P**	**22 47 03.3**	**+0.1**
	baz=60						
U13A	**Pakoon Wash**	**59.06**	**324**	⇑P	**P**	**22 47 04.0**	**+0.4**
	baz=61						
SRU	**San Rafael**	**59.10**	**328**	⇑P	**P**	**22 47 03.7**	**-0.2**
	baz=61						
V12A	**Nelson**	**59.11**	**323**	⇓P	**P**	**22 47 03.9**	**-0.1**
	baz=61						
MURC	**Murrieta**	**59.17**	**319**	⇑P	**P**	**22 47 04.6**	**+0.1**
	baz=61						
N20A	**Spence Gulch,**	**59.29**	**331**	⇑P	**P**	**22 47 05.0**	**-0.2**
	baz=61						
P18A	**Preston Nutter**	**59.34**	**329**	⇑P	**P**	**22 47 05.8**	**+0.2**
	baz=61						
HEC	**Hector,Ludlow**	**59.41**	**321**	⇑P	**P**	**22 47 06.5**	**+0.3**
	baz=61						
T13A	**Saint George**	**59.44**	**324**	⇑P	**P**	**22 47 06.8**	**+0.5**
	baz=61						
M21A	**Separation Pea**	**59.47**	**332**	⇑P	**P**	**22 47 06.9**	**+0.5**
	baz=61						
P17A	**Butcher Ranch,**	**59.48**	**328**	⇓P	**P**	**22 47 07.0**	**+0.5**
	baz=61						
CCUT	**Cedar City**	**59.51**	**325**	eP	**P**	**22 47 08.0**	**+1.2**
	3.8nm,1.0s,mb4.4						
MSU	**Marysvale**	**59.54**	**327**	P	**P**	**22 47 07.5**	**+0.5**
	5.4nm,1.2s,mb4.5						
TUQ	**Turquoise Moun**	**59.56**	**322**	⇓P	**P**	**22 47 07.5**	**+0.3**
	baz=61						
L21A	**Rawlins**	**59.76**	**332**	⇓P	**P**	**22 47 08.5**	**+0.1**
	baz=61						
S13A	**Holt Ranch, En**	**59.81**	**325**	⇓P	**P

P12A	McGill	61.72 326	⇑P	P	22 47 22.0 +0.2
	baz=63,SNR=5.8				
N14A	Grayback Hills	61.77 328	⇓P	P	22 47 21.8 -0.3
	baz=63,SNR=6.0				
Q10A	Clear Creek Ra	62.11 324	⇓P	P	22 47 24.6 +0.1
	baz=64				
O12A	Currie	62.18 326	⇑P	P	22 47 24.8 -0.1
	baz=64,SNR=6.3				
L15A	Malad City	62.20 329	⇓P	P	22 47 24.8 -0.1
	baz=64,SNR=5.5				
HVU	Hansel Valley	62.23 329	eP	P	22 47 26.3 +1.1
	7.7nm,0.9s,mb4.8				
M14A	Sheep Mountain	62.32 328	⇓P	P	22 47 25.5 -0.3
	baz=64,SNR=8.3				
O11A	Cowboy Ranch,	62.59 326	⇑P	P	22 47 27.7 +0.1
	baz=64				
M13A	Montello	62.64 328	⇑P	P	22 47 28.0 0.0
	baz=64				
L14A	Malta	62.65 329	⇓P	P	22 47 28.0 0.0
	baz=64				
RRI2	Red Ridge	62.67 331	eP	P	22 47 28.4 +0.3
	21nm,1.1s,mb5.2				
ULM	Lac du Bonnet	62.85 345	P	P	22 47 28.4 -0.8
	8.3nm,0.8s,mb4.9,baz=149,slow=6.1,SNR=5.6				
NVAR	Mina Array Bea	62.97 323	P	P	22 47 29.9 -0.2
	2.6nm,0.9s,mb4.4,baz=145,slow=7.5,SNR=16				
K14A	Jones Ranch, D	62.99 329	⇓P	P	22 47 30.4 +0.1
	baz=64				
L13A	Double Diamond	63.05 328	⇑P	P	22 47 30.9 +0.2
	baz=65				
M12A	Wells	63.08 327	⇓P	P	22 47 30.8 -0.1
	baz=65				
J15A	Blackfoot	63.25 330	⇑P	P	22 47 32.3 +0.4
	baz=65				
G18A	Lazy EL Ranch,	63.38 333	⇓P	P	22 47 32.8 0.0
	baz=65				
M11A	Holland Ranch,	63.56 327	⇑P	P	22 47 34.5 +0.4
	baz=65				
H16A	Russell Place,	63.67 332	⇓P	P	22 47 35.3 +0.6
	baz=65				
WAKR	Walker	63.69 322	eP	P	22 47 35.6 +0.6
J14A	Carey	63.73 330	⇓P	P	22 47 35.4 +0.3
	baz=65				
F18A	Big Timber	63.91 334	⇓P	P	22 47 36.4 +0.1
	baz=65,SNR=9.3				
K12A	Draper Farm, C	63.94 328	⇑P	P	22 47 37.1 +0.5
	baz=66				
L11A	Cat Creek Ranc	64.06 327	⇑P	P	22 47 37.5 +0.2
	baz=66,SNR=6.7				
I14A	Mackay	64.14 330	⇑P	P	22 47 38.2 +0.4
	baz=66				
F17A	Fitzpatrick Pl	64.32 333	⇓P	P	22 47 39.8 +0.8
	baz=66				
HLID	Hailey	64.35 329	⇑P	P	22 47 39.8 +0.5
	baz=66				
HLID	Hailey	64.35 329	eP	P	22 47 39.9 +0.6
	2.3nm,1.0s,mb4.2				
L10A	Juniper Basin	64.38 327	⇑P	P	22 47 39.5 +0.1
	baz=66,SNR=5.6				
PAHR	Pah Rah Range	64.43 323	eP	P	22 47 40.9 +1.0
	12nm,1.0s,mb4.9				
I13A	Wildhorse Cree	64.46 330	⇑P	P	22 47 40.3 +0.4
	baz=66				
E18A	Harlowton	64.51 334	⇓P	P	22 47 40.5 +0.3
	baz=66				
BOZ	Bozeman (W)	64.56 332	⇓P	P	22 47 40.6 +0.1
	baz=66				
BOZ	Bozeman (W)	64.56 332	eP	P	22 47 40.4 -0.2
	4.4nm,1.3s,mb4.3				
K11A	Parker Ranch,	64.62 328	⇑P	P	22 47 41.2 +0.2
	baz=66				
E17A	Martinsdale	64.84 333	⇑P	P	22 47 42.6 +0.3
	baz=66				
I12A	Atlanta	64.88 329	⇓P	P	22 47 43.0 +0.3
	baz=66				
D18A	Linhart Farms,	64.95 335	⇓P	P	22 47 43.6 +0.6
	baz=66				
MFID	Camas Ranch	64.97 328	⇓P	P	22 47 43.4 +0.2
	baz=66,SNR=11				
H13A	Challis	65.00 330	⇓P	P	22 47 43.4 0.0
	baz=66				
K10A	MacKenzie Ranc	65.07 327	⇓P	P	22 47 44.1 +0.1
	baz=67,SNR=6.6				
H12A	Diamond D Ranc	65.28 330	⇑P	P	22 47 45.6 +0.3
	baz=67,SNR=5.9				
G13A	Cobalt	65.37 330	⇑P	P	22 47 45.9 +0.1
	baz=67				
I11A	Placerville	65.39 329	⇓P	P	22 47 46.0 +0.1
	baz=67				
D16A	Dana Ranch, Ca	65.58 333	⇑P	P	22 47 47.4 +0.2
	baz=67				
EGMT	Eagleton	65.58 335	⇑P	P	22 47 47.0 -0.1
	baz=67				
EGMT	Eagleton	65.58 335	eP	P	22 47 46.6 -0.6
	7.3nm,0.8s,mb4.8				
E15A	Deer Lodge	65.61 332	⇑P	P	22 47 47.3 0.0
	baz=67				
C17A	Wharram Farm,	65.70 334	⇑P	P	22 47 47.9 0.0
	baz=67				
WVOR	Wild Horse Val	65.80 326	eP	P	22 47 48.0 -0.7
	3.3nm,1.1s,mb4.3				
B18A	Beardsley Farm	65.89 335	⇑P	P	22 47 49.2 +0.1
	baz=67				
G12A	Big Creek, Yel	65.93 330	⇓P	P	22 47 49.4 0.0
	baz=68				
E14A	Clinton	65.99 332	⇓P	P	22 47 49.8 0.0
	baz=68				
C16A	Fuhringer Ranc	66.25 334	⇑P	P	22 47 51.8 +0.4
	baz=68				
A18A	Metzger Ranch,	66.33 336	⇓P	P	22 47 51.9 0.0
	baz=68				
E13A	Victor	66.34 332	⇑P	P	22 47 52.6 +0.6
	baz=68				
F12A	Elk City	66.35 330	⇓P	P	22 47 52.7 +0.6
	baz=68				
MOD	Modoc	66.38 325	eP	P	22 47 52.6 +0.2
	13nm,1.3s,mb4.8				
MSO	Missoula	66.51 332	eP	P	22 47 54.1 +1.0
	7.3nm,1.2s,mb4.6				
C15A	Salmond Ranch,	66.61 333	⇓P	P	22 47 54.4 +0.6
	baz=68,SNR=9.7				
B16A	M & M Farms, S	66.71 334	⇑P	P	22 47 54.4 0.0
	baz=68				
F11A	Grangeville	66.88 330	⇓P	P	22 47 55.5 0.0
	baz=68				
B15A	Bradely Ranch,	67.00 334	⇑P	P	22 47 56.6 +0.4
	baz=68				
C14A	Swan Lake	67.12 333	⇑P	P	22 47 56.9 0.0
	baz=69				
K05A	Summer Lake	67.25 325	⇓P	P	22 47 58.4 +0.5
	baz=69,SNR=5.3				
G09A	Cove	67.27 329	⇓P	P	22 47 58.0 0.0
	baz=69,SNR=7.7				
I07A	Izee	67.37 327	⇑P	P	22 47 58.9 +0.3
	baz=69,SNR=8.7				
C13A	Hot Springs	67.43 332	⇓P	P	22 47 58.9 -0.1
	baz=69				
A15A	Johnson Ranch,	67.58 334	⇑P	P	22 48 00.0 +0.2
	baz=69				
YBH	Yreka Blue Hor	67.67 323	P	P	22 47 58.3 -2.3
	3.8nm,1.1s,mb4.4,baz=132,slow=5.5,SNR=6.0				
A14A	Double T Ranch	67.87 334	⇑P	P	22 48 01.8 +0.1
	baz=69				
G08A	Pilot Rock	67.89 328	⇑P	P	22 48 02.2 +0.3
	baz=69				
WALA	Waterton Lakes	68.15 334	eP	P	22 48 03.4 -0.1
	0.1nm,0.8s				
A13A	Flathead Natio	68.28 333	⇑P	P	22 48 04.6 +0.3
	baz=70				
E09A	Wood Farm, Sta	68.31 329	⇓P	P	22 48 04.7 +0.2
	baz=70				
C11A	Tepee Creek (N	68.32 331	⇑P	P	22 48 04.8 +0.2
	baz=70				
A12A	Yaak River Ran	68.83 333	⇑P	P	22 48 08.3 +0.6
	baz=70				
OD2	Odessa Site #2	69.19 330	eP	P	22 48 10.8 +0.8
DBIC	Dimbokro	71.85 80	P	P	22 48 28.4 +1.4
	5.1nm,0.9s,mb4.5,baz=232,slow=10.0,SNR=3.2				
DBIC		LR	LR		23 17 15.9
	comp=Z,76nm,19.9s,MS4.0,baz=139,slow=33				
DBIC	Dimbokro	71.85 80	eP	P	22 48 29.0 +2.0
DBIC		LR	LR		23 17 15.9
YKA	Yellowknife Ar	78.63 342	P	P	22 49 03.9 -1.0
	1.9nm,0.8s,mb4.1,baz=136,slow=6.1,SNR=12				
YKA	Yellowknife Ar	78.63 342	P	P	22 49 03.9 -1.0
DLBC	Dease Lake	81.49 334	eP	P	22 49 21.7 +1.2
ESDC	Sonseca Array	82.23 47	P	P	22 49 27.9 +3.0
	1.6nm,0.8s,mb4.0,baz=261,slow=6.0,SNR=9.0				
SUMG	Summit	85.92 10	P	P	22 49 37.9 -5.1
	6.5nm,0.9s,mb4.9				
DAWY	Dawson	88.28 337	eP	P	22 49 54.4 -0.2
INK	Inuvik	88.36 342	eP	P	22 49 54.8 -0.1
	14nm,0.9s,mb5.2				
EGAK	Eagle	89.29 337	eP	P	22 49 59.4 +0.1
	8.4nm,0.9s,mb5.1				
RSO	Redoubt South	92.78 331	eP	P	22 50 15.7 +0.1
BPAW	Bear Paw Mtn.	93.01 335	eP	P	22 50 15.1 -1.5
	3.2nm,0.8s,mb4.8				
BOSA	Boshof	94.08 120	LR	LR	23 29 49.2
	comp=Z,68nm,20.0s,MS4.1,baz=262,slow=34				
AKTK	Aktyubinsk	124.36 34	PKP	PKPdf	22 56 03.4 +0.8
AKTO	Aktyubinsk	124.36 34	PKP	PKPdf	22 56 03.4 +0.8
	1.0nm,0.7s,baz=315,slow=2.9,SNR=4.4				
BVAR	Borovoye Array	129.00 26	PKP	PKPdf	22 56 12.3 +1.1
	0.8nm,0.7s,baz=163,slow=1.5,SNR=6.1				
CTAO	Charters Tower	129.46 233	ePKPdf	PKPdf	22 56 04.5 -8.7
ZALV	Zalesovo Beam	133.44 16	PKP	PKPdf	22 56 20.1 +0.4
	1.0nm,0.4s,baz=288,slow=1.7,SNR=8.8				
ASAR	Alice Springs	136.06 220	PKP	PKPdf	22 56 25.1 -0.4
	1.0nm,0.8s,baz=155,slow=2.1,SNR=9.2				
WRA	Warramunga Arr	138.40 224	PKP	PKPdf	22 56 29.1 -0.9
	1.7nm,0.9s,baz=128,slow=1.8,SNR=7.5				
MKAR	Makanchi Array	138.71 24	PKP	PKPdf	22 56 30.2 +0.5
	0.8nm,0.8s,baz=353,slow=1.9,SNR=9.5				
SONM	Songino Array	142.43 358	PKhKP	PKPpre	22 56 32.2
	0.2nm,0.4s,baz=15,slow=6.1,SNR=2.9				
SONM		PKP	PKPdf	22 56 37.7 +1.3	
	0.9nm,0.8s,baz=19,slow=0.3,SNR=6.7				
KSRS	Korea Array	145.85 326	PKPbc	PKPbc	22 56 43.0 -0.3
	8.4nm,0.9s,baz=45,slow=3.2,SNR=38				
HHC	Hu-ho-hao-te	148.88 350	ePKPbc	PKPdf	22 56 42.4 -5.2
HHC		PP	PP	23 00 22.3 +1.6	
HHC		SS	SS	23 19 33.8 +3.1	
HHC		AMB	AMB		
	comp=Z,50nm,9.4s				
CMAR	Chiang Mai Arr	169.89 35	PKPab	PKPab	22 58 28.2 +1.7
	comp=Z,0.7nm,0.3s,baz=317,slow=5.8,SNR=6.2				

*ISCJB **14** 23:05:33.9±3.6, 1°.44N±0°.06×96°.33E±0°.09, h15km±27km, mb3.6/6, Error ellipse: s-maj=14.8km s-min=10.7km az=11.0*
*IDC **14** 23:05:33.6±2.2, 1°.40N×96°.21E, h0km, mb3.7/3, mb1 3.7/5, mb1mx3.5/21, mbtmp3.6/5, ML4.4/1, Error ellipse: s-maj=55.4km s-min=28.5km az=52.0*
*NEIC **14** 23:05:38.5±0.5, 1°.44N×96°.35E, h35km, mb3.8/3, Error ellipse: s-maj=11.5km s-min=7.3km az=79.0*

ISC 14 23:05:34.8±4.2, **1°.44N**±0°.07×**96°.33E**±0°.08, **h7**km±28km, **n19**, σ0s**54**/20, **mb3.6**/6, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	2.92	62	Pn	Pn	23 06 23.0	+1.3
	1.9nm,0.3s,baz=290,slow=9.4,SNR=6.5						
KULM	Kulim	5.76	48	ePn	Pn	23 06 59.9	-0.8
	13nm,0.6s						
KULM				Sn	Sn	23 08 07.0	-0.1
COCO	West Island	13.55	178	Pn	Pn	23 08 47.3	-0.3
CMAR	Chiang Mai Arr	17.10	8	Pn	Pn	23 09 33.3	-1.1
	0.5nm,0.3s,baz=204,slow=11,SNR=4.1						
CHTO	Chiang Mai	17.45	8	Pn	Pn	23 09 39.6	+0.8
ENH	Enshi	31.27	22	P	P	23 11 55.7	+0.3
NACB	Ninganchiao	33.29	45	eP	P	23 12 12.8	-0.4
NWAO	Narrogin (SRO)	39.48	152	eP	P	23 13 06.4	+0.5
WRAB	Tennant Creek	42.91	122	P	P	23 13 33.6	-0.8
	0.4nm,0.5s,mb3.4						
ASAR	Alice Springs	44.23	127	P	P	23 13 45.4	+0.3
	0.1nm,0.4s,mb2.9,baz=336,slow=13,SNR=4.1						
UCH	Uchtor	45.08	337	eP	P	23 13 51.7	+0.2
EKS2	Erkin-Say	45.74	337	P	P	23 13 56.9	+0.2
MK31	Makanchi Array	46.80	347	eP	P	23 14 05.1	+0.1
MKAR	Makanchi Array	46.80	347	P	P	23 14 05.1	+0.1
	0.3nm,0.4s,mb3.6,baz=152,slow=6.5,SNR=10						
ULN	Ulaanbaatar	47.17	10	eP	P	23 14 07.3	-0.4
KURK	Kurchatov	51.34	346	eP	P	23 14 39.5	-0.2
	1.3nm,0.8s,mb3.9						
MAJO	Matsushiro	52.10	43	eP	P	23 14 45.7	0.0
ZALV	Zalesovo Beam	53.19	352	P	P	23 14 53.6	+0.3
	1.3nm,0.5s,mb4.1,baz=170,slow=7.2,SNR=7.6						
BRVK	Borovoye	55.80	341	P	P	23 15 12.4	0.0
	1.0nm,1.0s,mb3.8						

*ISCJB **14** 23:34:42.4±0.2, 63°.08N±0°.02×150°.91W±0°.06, h131km±2km, mb3.9/20, Error ellipse: s-maj=4.3km s-min=3.9km az=170.5*
*IDC **14** 23:34:43.1±2.3, 63°.18N×151°.04W, h114km±23km, mb3.6/15, mb1 3.7/19, mb1mx3.6/29, mbtmp3.6/19, Error ellipse: s-maj=16.9km s-min=16.3km az=146.0*
*NEIC **14** 23:34:44.0, 63°.08N×150°.88W, h125km, mb4.1/8, After AEIC.*

ISC 14 23:34:43.6±0.2, **63°.08N**±0°.02×**150°.90W**±0°.06, **h125**km±2km, **n72**, σ0s**76**/92, **mb4.0**/20, **Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRF	Thorofare Moun	0.46	37	P	Pn	23 35 02.1	+0.3
TRF				S	Sn	23 35 16.6	+1.0
PPLA	Purkeypile	0.61	253	P	Pn	23 35 03.4	+0.6
PPLA				S	Sn	23 35 17.9	+0.8
RND	Reindeer	0.98	70	P	Pn	23 35 06.1	+0.3
RND				S	Sn	23 35 23.1	+0.4
BPAW	Bear Paw Mtn.	1.02	358	P	Pn	23 35 06.2	+0.1
BPAW				S	Sn	23 35 23.0	-0.3
CHUM	Lake Minchumin	1.02	322	P	Pn	23 35 06.5	+0.4
CHUM				S	Sn	23 35 23.2	-0.1
MCK	McKinley	1.10	53	P	Pn	23 35 07.4	+0.5
MCK				S	Sn	23 35 24.6	-0.1
GHO	Glory Hole Cre	1.60	144	P	Pn	23 35 13.2	+0.8
DHY	Denali Highway	1.61	89	P	Pn	23 35 12.9	+0.4
DHY				S	Sn	23 35 35.8	+1.3
PMR	Palmer	1.71	150	eP	Pn	23 35 13.6	-0.1
PMR				S	Sn	23 35 36.7	+0.1
SML	Sawmill	1.75	136	P	Pn	23 35 14.2	+0.1
SML				S	Sn	23 35 38.2	+0.7
FIB	Fire Island	1.95	170	P	Pn	23 35 17.3	+0.7
RC01	Rabbit Creek A	2.07	164	P	Pn	23 35 18.2	+0.1
RC01				eS	Sn	23 35 43.4	-1.2
COLA	College	2.25	35	P	Pn	23 35 20.3	+0.1
COLA				eS	Sn	23 35 47.6	-0.8
TTA	Tatalina	2.33	269	eP	Pn	23 35 21.4	0.0
TTA				eS	Sn	23 35 49.6	-0.8
TT01	Tatalina	2.34	268	P	Pn	23 35 21.2	-0.3
SLKM	Skilak Lake	2.60	173	P	Pn	23 35 25.0	+0.2
RSO	Redoubt South	2.77	199	ePn	Pn	23 35 27.5	+0.5
RSO				eSn	Sn	23 35 60.0	-0.4
SVW2	Sparrevohn	2.97	230	eP	Pn	23 35 29.7	+0.2
DIV	Divide	3.11	127	ePn	Pn	23 35 30.5	-0.9
DIV				eSn	Sn	23 36 06.6	-1.6
DOT	Dot Lake	3.13	76	P	Pn	23 35 31.8	+0.1
IM3	Indian Mountai	3.16	338	P	Pn	23 35 32.2	+0.2
MENT	Mentasta	3.28	89	ePn	Pn	23 35 32.9	-0.7
MENT				Sn	Sn	23 36 07.9	-4.3
BMRM	Bremner River	3.65	123	P	Pn	23 35 37.5	-1.0
BCA3	Beaver Creek A	4.15	86	P	Pn	23 35 44.8	-0.3
COLD	Coldfoot	4.17	4	P	Pn	23 35 46.0	+0.6
COLD				eS	Sn	23 36 30.8	-2.6
MID	Middleton Isla	4.28	147	P	Pn	23 35 47.0	+0.1
EGAK	Eagle	4.62	64	P	Pn	23 35 51.2	-0.2
BM3	Burnt Mountain	5.09	28	P	Pn	23 35 58.0	+0.3
DAWY	Dawson	5.24	74	P	Pn	23 35 59.7	+0.1
KDAK	Kodiak Island	5.38	190	P	Pn	23 36 00.6	-1.0
	13nm,0.3s,baz=326,slow=16,SNR=212						
KDAK				S	Sn	23 36 59.0	-3.4
	17nm,0.3s,baz=162,slow=19,SNR=14						
KDAK	Kodiak Island	5.38	190	P	Pn	23 36 00.5	-1.2
KDAK				eS	Sn	23 37 00.5	-1.9
OHAK	Old Harbor	6.00	193	eP	Pn	23 36 09.0	-0.9
PNL	Peninsula	6.50	117	P	Pn	23 36 16.5	-0.2
SKAG	Skagway	8.33	109	ePn	Pn	23 36 41.0	-0.4
INK	Inuvik	8.86	46	P	Pn	23 36 48.4	0.0
	0.6nm,0.3s,baz=243,slow=14,SNR=16						
INK				S	Sn	23 38 24.3	-1.9
	0.1nm,0.3s,baz=122,slow=18,SNR=4.9						
INK	Inuvik	8.86	46	ePn	Pn	23 36 47.8	-0.6
	5.6nm,0.6s						
INK				eSn	Sn	23 38 24.2	-2.0
BESE	Bessie Mountai	9.03	113	P	Pn	23 36 50.1	-0.7
DLBC	Dease Lake	11.19	105	P	Pn	23 37 20.4	+0.7
	0.1nm,0.3s,baz=276,slow=10,SNR=5.9						
DLBC	Dease Lake	11.19	105	P	Pn	23 37 20.4	+0.7
YKA	Yellowknife Ar	16.48	76	P	Pn	23 38 28.3	+1.2
	0.6nm,0.3s,baz=282,slow=9.4,SNR=9.6						
RES	Resolute Bay	22.18	36	P	P	23 39 30.2	+1.2
	2.9nm,0.3s,mb4.0,baz=247,slow=15,SNR=9.3						
RES	Resolute Bay	22.18	36	eP	P	23 39 29.8	+0.8
	3.5nm,0.4s,mb4.0						
PDAR	Pinedale Array	31.35	111	P	P	23 40 53.9	+1.9
	0.2nm,0.5s,mb3.1,baz=307,slow=3.3,SNR=3.2						
SPITS	Spitsbergen Ar	38.76	4	P	P	23 41 55.2	+0.2
	3.9nm,0.4s,mb4.5,baz=1.4,slow=7.8,SNR=41						
MIDW	Midway	38.89	219	eP	P	23 41 57.1	+0.5
	65nm,0.8s						
TXAR	Lajitas Array	45.27	116	P	P	23 42 49.9	+1.5
	0.1nm,0.5s,baz=335,slow=4.0,SNR=4.6						
OXF	Oxford	47.03	97	P	P	23 43 03.0	+0.8
ARCES	ARCESS Array B	47.64	2	P	P	23 43 06.0	-0.3
	1.6nm,0.6s,mb4.0,baz=7.8,slow=7.3,SNR=28						
ARE0	ARCESS Array S	47.64	2	eP	P	23 43 06.1	-0.3
KSRS	Korea Array	53.50	282	P	P	23 43 52.0	+1.2
	1.4nm,0.5s,mb4.2,baz=28,slow=7.1,SNR=6.5						
SONM	Songino Array	53.80	305	P	P	23 43 54.0	+1.2
	0.4nm,0.7s,mb3.5,baz=19,slow=5.8,SNR=3.8						
INCN	Inchon	54.05	283	eP	P	23 43 54.9	+0.1
	22nm,0.4s						
NOA	NORSAR Array B	55.46	10	P	P	23 44 04.1	-0.4
	1.0nm,0.8s,mb3.9,baz=350,slow=7.2,SNR=3.3						
ZALV	Zalesovo Beam	55.48	324	P	P	23 44 04.5	-0.4
	0.8nm,0.5s,mb4.0,baz=20,slow=8.9,SNR=5.1						
FINES	FINESS Array B	55.77	2	P	P	23 44 05.9	-0.9
	1.7nm,0.7s,mb4.2,baz=13,slow=8.6,SNR=6.4						
BRVK	Borovoye	59.79	333	eP	P	23 44 34.6	-0.3
	0.9nm,0.4s,mb4.2						
BVAR	Borovoye Array	59.80	333	P	P	23 44 34.8	-0.2
	1.2nm,0.3s,mb4.3,baz=42,slow=6.1,SNR=13						
KURK	Kurchatov	60.03	326	eP	P	23 44 36.3	-0.3
	1.5nm,0.6s,mb4.2						
OBN	Obninsk	62.00	355	eP	P	23 44 49.9	+0.1
	7.9nm,0.4s,mb5.1						
MK31	Makanchi Array	62.64	322	eP	P	23 44 53.3	-1.0
MKAR	Makanchi Array	62.64	322	P	P	23 44 53.4	-0.8
	0.7nm,0.4s,mb4.0,baz=49,slow=7.4,SNR=10						
MKAR	Makanchi Array	62.64	322	P	P	23 44 53.4	-0.8
AKTK	Aktyubinsk	64.55	340	P	P	23 45 06.5	-0.1
AKTO	Aktyubinsk	64.55	340	P	P	23 45 06.5	-0.1
	2.3nm,0.7s,mb4.1,baz=26,slow=7.3,SNR=9.4						
ABKAR	Akbulak array	65.38	338	eP	P	23 45 12.1	0.0
	1.1nm,0.6s,mb3.9						
AKASG	Malin Array Be	66.56	360	P	P	23 45 18.9	-0.7
	3.5nm,0.6s,mb4.4,baz=1.6,slow=6.4,SNR=12						
EKS2	Erkin-Say	68.75	326	eP	P	23 45 33.9	+0.4
	1.0nm,0.6s,mb3.8						
AML	Almayashu	69.27	326	eP	P	23 45 37.9	+1.2
	1.2nm,0.6s,mb3.9						
BUR08	Bucovina Ar. S	69.58	3	eP	P	23 45 38.1	-0.4
KIV	Kislovodsk	72.76	350	eP	P	23 45 57.4	-0.4
LSA	Lhasa	75.33	307	P	P	23 46 14.2	+1.3
BRTR	Keskin Array B	77.47	356	P	P	23 46 24.3	-0.5
	0.3nm,0.4s,mb3.3,baz=338,slow=3.8,SNR=4.0						

*ISCJB **14** 23:38:54.4±0.4, 43°.33N±0°.04×144°.36E±0°.06, h143km±2km, mb3.8/12, Error ellipse: s-maj=7.6km s-min=7.0km az=152.7*
*IDC **14** 23:38:56.8±2.7, 43°.45N×144°.33E, h144km±14km, mb3.4/7, mb1 3.5/7, mb1mx3.2/23, mbtmp3.4/7, Error ellipse: s-maj=47.6km s-min=24.4km az=68.0*
*JMA **14** 23:38:56.0±0.1, 43°.35N×144°.35E, h138km±1km, M3.3*
*NEIC **14** 23:38:56.1, 43°.35N×144°.35E, h138km, mb4.0/3, After JMA.*

ISC 14 23:38:55.8±0.4, **43°.34N**±0°.04×**144°.35E**±0°.06, **h138**km±2km, **n34**, σ0s**73**/47, **mb3.8**/12, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNK	Nakash	0.37	47	P	Pn	23 39 15.3	+0.3
JNK				eS	Sn	23 39 29.8	+0.1
JAK	Akkeshi	0.42	143	P	Pn	23 39 15.6	+0.3
JAK				eS	Sn	23 39 30.1	0.0
JAR	Ashorobuto	0.42	265	P	Pn	23 39 15.9	+0.6
JAR				eS	Sn	23 39 30.5	+0.4
JOB	Onbets	0.57	221	P	Pn	23 39 16.8	+0.7
JOB				eS	Sn	23 39 31.7	+0.2
JTKR	Abashiri--Toko	0.71	333	P	Pn	23 39 17.3	+0.3
JTKR				eS	Sn	23 39 33.0	-0.2
JRA	Rausu	0.82	43	P	Pn	23 39 18.2	+0.4
JMP	Maruseppu	0.98	313	P	Pn	23 39 19.4	+0.2
JMP				eS	Sn	23 39 36.4	-0.6
NEM2	Nemuro 2	1.02	88	P	Pn	23 39 19.3	-0.2
NEM2				eS	Sn	23 39 36.1	-1.4
JCH	Churui	1.02	225	P	Pn	23 39 19.7	+0.1
JCH				eS	Sn	23 39 37.1	-0.5
JKK2	Kamakawa 2	1.28	295	P	Pn	23 39 22.4	+0.4
JKK2				eS	Sn	23 39 42.1	0.0
JFR	Furan	1.29	263	P	Pn	23 39 22.8	+0.6
ASAJ	Asahikawa	1.49	302	P	Pn	23 39 25.2	+0.9
	13nm,0.3s,baz=120,slow=11,SNR=30						
ASAJ				S	Sn	23 39 46.6	+0.6
	4.6nm,0.3s,baz=73,slow=19,SNR=38						
JNBK	Urakawa-nobuka	1.58	229	P	Pn	23 39 25.1	-0.2
JNBK				eS	Sn	23 39 46.5	-1.3
ERM	Erimo	1.59	214	ePn	Pn	23 39 26.8	+1.4
ERM				eSn	Sn	23 39 45.0	-2.9
JSE	Soyaes	2.06	323	P	Pn	23 39 30.9	+0.1
JSE				eS	Sn	23 39 57.0	-0.8
YSS	Yuzh-Sakhalins	3.79	343	Pn	Pn	23 39 52.5	-0.3
SONM	Songino Array	26.75	293	P	P	23 44 22.8	+0.5
	1.2nm,0.4s,mb3.9,baz=84,slow=8.5,SNR=9.8						
GUMO	Guam	29.64	179	eP	P	23 44 48.0	-0.3
ZALV	Zalesovo Beam	39.62	307	P	P	23 46 13.1	-0.4
	0.5nm,0.4s,mb3.5,baz=81,slow=8.9,SNR=3.3						
MKAR	Makanchi Array	42.97	297	P

KARP			eSB	Sn	23 54 42.0	-2.5
KARP	**Karpathos**	0.22 338	ePb	Pn	23 54 37.7	-2.0
KARP			eSb	Sn	23 54 42.0	-2.5
ZKR	**Zakros**	0.89 256	ePb	Pn	23 54 48.1	-0.5
ZKR			eSn	Sn	23 55 01.9	+1.6
ZKR			S	Sn	23 55 02.2	+1.9
ZKR	**Zakros**	0.89 256	ePB	Pn	23 54 48.1	-0.5
ZKR			eSN	Sn	23 55 01.9	+1.6
ZKR	**Zakros**	0.89 256	P	Pn	23 54 48.2	-0.4
ZKR			S	Sn	23 55 02.2	+1.9
ZKR	**Zakros**	0.89 256	ePb	Pn	23 54 48.1	-0.5
ZKR			eSn	Sn	23 55 01.9	+1.6
ZKR			S	Sn	23 55 02.2	+1.9
ARG	**Arkhangelos**	1.12 39	ePn	Pn	23 54 52.4	+0.5
ARG			S	Sn	23 55 04.6	-1.4
ARG	**Arkhangelos**	1.12 39	ePN	Pn	23 54 52.4	+0.5
ARG	**Arkhangelos**	1.12 39	P	Pn	23 54 52.6	+0.7
ARG			S	Sn	23 55 04.6	-1.4
ARG	**Arkhangelos**	1.12 39	ePn	Pn	23 54 52.4	+0.5
ARG			S	Sn	23 55 04.6	-1.4
NIS1	**Nisyros Isl.**	1.26 357	P	Pn	23 54 52.9	-0.9
NIS1			S	Sn	23 55 09.3	-0.2
NIS1	**Nisyros Isl.**	1.26 357	P	Pn	23 54 52.9	-0.9
NIS1			S	Sn	23 55 09.3	-0.2
NPS	**Neapolis**	1.35 267	ePn	Pn	23 54 56.1	+1.0
NPS	**Neapolis**	1.35 267	ePN	Pn	23 54 56.1	+1.0
NPS	**Neapolis**	1.35 267	ePn	Pn	23 54 56.1	+1.0
DAT	**Datca**	1.41 10	ePN	Pn	23 54 55.7	-0.2
DAT			eSN	Sn	23 55 17.1	+3.9
DAT	**Datca**	1.41 10	ePn	Pn	23 54 55.7	-0.1
DAT			eSn	Sn	23 55 17.1	+3.9
LAST	**Lasithi**	1.47 263	ePn	Pn	23 54 58.0	+1.3
LAST			eSn	Sn	23 55 16.6	+1.9
LAST			S	Sn	23 55 17.7	+3.0
LAST	**Lasithi**	1.47 263	ePN	Pn	23 54 58.0	+1.3
LAST			eSN	Sn	23 55 16.6	+1.9
LAST	**Lasithi**	1.47 263	P	Pn	23 54 58.1	+1.4
LAST			S	Sn	23 55 17.7	+3.0
LAST	**Lasithi**	1.47 263	P	Pn	23 54 58.1	+1.4
LAST			eSn	Sn	23 55 16.6	+1.9
LAST			S	Sn	23 55 17.7	+3.0
BODT	**Bodrum**	1.72 1	ePN	Pn	23 54 59.7	-0.4
BODT			eSN	Sn	23 55 24.5	+3.7
BODT	**Bodrum**	1.72 1	ePn	Pn	23 54 59.7	-0.4
BODT			eSn	Sn	23 55 24.5	+3.7
THR1	**Thera Island**	1.79 306	P	Pn	23 55 00.8	-0.3
THR1	**Thera Island**	1.79 306	P	Pn	23 55 00.8	-0.3
THR2	**Thira island,**	1.85 307	P	Pn	23 55 01.5	-0.4
THR2	**Thira island,**	1.85 307	P	Pn	23 55 01.5	-0.4
THR3	**Thira Island,**	1.85 306	P	Pn	23 55 01.9	0.0
THR3	**Thira Island,**	1.85 306	P	Pn	23 55 01.9	0.0
THR3	**Thira Island,**	1.85 306	P	Pn	23 55 01.9	0.0
THR5	**Thira Island,**	1.89 305	P	Pn	23 55 02.4	-0.1
THR5	**Thira Island,**	1.89 305	P	Pn	23 55 02.4	-0.1
THR5	**Thira Island,**	1.89 305	P	Pn	23 55 02.4	-0.1
IDI	**Anoyia**	1.94 269	ePn	Pn	23 55 03.7	+0.5
IDI	**Anoyia**	1.94 269	ePN	Pn	23 55 03.7	+0.5
IDI	**Anoyia**	1.94 269	ePn	Pn	23 55 03.7	+0.5
YER	**Yerkesik**	1.97 24	ePN	Pn	23 55 03.7	+0.1
YER			eSN	Sn	23 55 31.6	+4.6
YER	**Yerkesik**	1.97 24	ePn	Pn	23 55 03.7	+0.1
YER			eSn	Sn	23 55 31.6	+4.6
MLSB	**Milas**	1.99 12	ePN	Pn	23 55 03.6	-0.2
MLSB	**Milas**	1.99 12	ePn	Pn	23 55 03.7	-0.2
SIVA	**Sivas**	2.04 262	P	Pn	23 55 06.9	+2.5
SIVA	**Sivas**	2.04 262	P	Pn	23 55 06.9	+2.5
SIVA	**Sivas**	2.04 262	P	Pn	23 55 06.9	+2.5
KSL	**Kastellorizon**	2.05 66	ePn	Pn	23 55 05.8	+1.1
KSL	**Kastellorizon**	2.05 66	ePN	Pn	23 55 05.8	+1.1
KSL	**Kastellorizon**	2.05 66	ePn	Pn	23 55 05.8	+1.1
APE	**Apeiranthos**	2.22 321	ePN	Pn	23 55 04.8	-2.2
APE	**Apeiranthos**	2.22 321	ePn	Pn	23 55 06.0	-1.0
APE			S	Sn	23 55 31.3	-1.9
APE			eSn	Sn	23 55 31.4	-1.8
APE	**Apeiranthos**	2.22 321	ePN	Pn	23 55 06.0	-1.0
APE			eSN	Sn	23 55 31.4	-1.8
APE	**Apeiranthos**	2.22 321	P	Pn	23 55 06.4	-0.6
APE			S	Sn	23 55 31.3	-1.9
APE	**Apeiranthos**	2.22 321	ePn	Pn	23 55 06.0	-1.0
APE	**Apeiranthos**	2.22 321	P	Pn	23 55 06.4	-0.6
APE			eSn	Sn	23 55 31.4	-1.8
SMG	**Samos**	2.39 352	ePn	Pn	23 55 08.0	-1.3
SMG	**Samos**	2.39 352	ePN	Pn	23 55 08.0	-1.3
SMG	**Samos**	2.39 352	ePn	Pn	23 55 08.0	-1.3
VAM	**Vamos**	2.50 272	ePn	Pn	23 55 11.4	+0.5
VAM	**Vamos**	2.50 272	ePN	Pn	23 55 11.4	+0.5
VAM	**Vamos**	2.50 272	ePn	Pn	23 55 11.4	+0.5
GLHS	**Glhisar (BURDU**	2.56 44	ePN	Pn	23 55 11.9	+0.3
GLHS	**Glhisar (BURDU**	2.56 44	ePn	Pn	23 55 12.0	+0.4
ELL	**Elmali**	2.56 56	ePN	Pn	23 55 11.6	-0.1
ELL	**Elmali**	2.56 56	ePn	Pn	23 55 11.6	-0.1
GVD	**Gavdhos**	2.65 260	ePn	Pn	23 55 14.4	+1.5
GVD			S	Sn	23 55 49.5	+5.7
GVD	**Gavdhos**	2.65 260	P	Pn	23 55 15.1	+2.2
GVD	**Gavdhos**	2.65 260	ePn	Pn	23 55 14.4	+1.5
GVD	**Gavdhos**	2.65 260	P	Pn	23 55 15.1	+2.2
GVD			S	Sn	23 55 49.5	+5.6
DENT	**Denizli**	2.80 30	ePN	Pn	23 55 16.1	+1.1
DENT	**Denizli**	2.80 30	ePn	Pn	23 55 16.1	+1.2
BLCB	**Balcova**	3.04 357	ePN	Pn	23 55 18.1	-0.2
BLCB	**Balcova**	3.04 357	P	Pn	23 55 18.2	-0.1
BLCB	**Balcova**	3.04 357	P	Pn	23 55 18.2	-0.1
BLCB	**Balcova**	3.04 357	P	Pn	23 55 18.2	-0.1
IZM	**Izmir**	3.05 360	ePN	Pn	23 55 19.3	+0.9
IZM	**Izmir**	3.05 360	ePn	Pn	23 55 19.3	+0.9
ANTB	**Antalya**	3.15 59	ePN	Pn	23 55 20.7	+0.8
ANTB	**Antalya**	3.15 59	ePn	Pn	23 55 20.7	+0.9
CHOS	**Chios island**	3.19 343	ePN	Pn	23 55 19.9	-0.4
CHOS	**Chios island**	3.19 343	P	Pn	23 55 19.7	-0.6
CHOS			S	Sn	23 55 56.2	-0.9
CHOS	**Chios island**	3.19 343	ePn	Pn	23 55 19.9	-0.4
CHOS			S	Sn	23 55 56.2	-0.9
KULA	**Kula-Manisa**	3.36 19	ePN	Pn	23 55 23.0	+0.3
KULA	**Kula-Manisa**	3.36 19	ePn	Pn	23 55 23.0	+0.4
BCK	**Bucak**	3.42 51	ePN	Pn	23 55 23.9	+0.5
BCK	**Bucak**	3.42 51	ePn	Pn	23 55 23.9	+0.5
KHL	**Karahalli**	3.48 31	ePN	Pn	23 55 24.8	+0.5
KHL	**Karahalli**	3.48 31	ePn	Pn	23 55 24.8	+0.4
AKS	**Akhisar**	3.56 7	ePN	Pn	23 55 26.7	+1.3
AKS	**Akhisar**	3.56 7	ePn	Pn	23 55 26.7	+1.3
KYTH	**Kithira**	3.56 286	ePn	Pn	23 55 25.4	0.0
KYTH	**Kithira**	3.56 286	ePN	Pn	23 55 25.4	0.0
KYTH	**Kithira**	3.56 286	ePn	Pn	23 55 25.4	0.0
SUTC	**Sutluce-Ispart**	3.69 54	ePN	Pn	23 55 29.0	+1.8
SUTC	**Sutluce-Ispart**	3.69 54	ePn	Pn	23 55 29.0	+1.8
VLI	**Veliai**	3.77 293	ePn	Pn	23 55 28.4	+0.2
VLI	**Veliai**	3.77 293	ePN	Pn	23 55 28.4	+0.2
VLI	**Veliai**	3.77 293	ePn	Pn	23 55 28.4	+0.2
ATHU	**Athens Univers**	3.83 314	P	Pn	23 55 30.3	+1.1
ATHU	**Athens Univers**	3.83 314	P	Pn	23 55 30.3	+1.1
ATH	**Athens Observa**	3.88 314	ePn	Pn	23 55 30.3	+0.5
ATH	**Athens Observa**	3.88 314	ePN	Pn	23 55 30.3	+0.5
ATH	**Athens Observa**	3.88 314	ePn	Pn	23 55 30.3	+0.5
NAIG	**Nisos Aigina**	3.88 310	ePn	Pn	23 55 30.8	+1.0
NAIG	**Nisos Aigina**	3.88 310	ePN	Pn	23 55 30.8	+1.0
NAIG	**Nisos Aigina**	3.88 310	ePn	Pn	23 55 30.8	+1.0
DID	**Didima**	3.90 305	ePN	Pn	23 55 30.9	+0.8
DID	**Didima**	3.90 305	P	Pn	23 55 30.9	+0.8
DID			S	Sn	23 56 16.0	+1.4
DID	**Didima**	3.90 305	ePn	Pn	23 55 30.9	+0.8
DID			S	Sn	23 56 16.0	+1.4
PRK	**Paraskevi**	3.98 349	ePn	Pn	23 55 30.5	-0.6
PRK			S	Sn	23 56 16.0	-0.5
PRK	**Paraskevi**	3.98 349	ePN	Pn	23 55 30.5	-0.6
PRK	**Paraskevi**	3.98 349	P	Pn	23 55 30.4	-0.7
PRK			S	Sn	23 56 16.0	-0.5
PRK	**Paraskevi**	3.98 349	ePn	Pn	23 55 30.5	-0.6
PRK			S	Sn	23 56 16.0	-0.5
SHUT	**Suhut-Afyon**	4.15 38	ePN	Pn	23 55 34.7	+1.2
SHUT	**Suhut-Afyon**	4.15 38	ePn	Pn	23 55 34.7	+1.2
BALB	**Balikesir**	4.32 6	ePN	Pn	23 55 37.2	+1.4
BALB	**Balikesir**	4.32 6	ePn	Pn	23 55 37.2	+1.4
ALT	**Altintas**	4.35 31	ePN	Pn	23 55 37.2	+1.0
ALT	**Altintas**	4.35 31	ePn	Pn	23 55 37.2	+1.0
LTK	**Loutraki**	4.37 309	ePN	Pn	23 55 37.2	+0.7
LTK	**Loutraki**	4.37 309	P	Pn	23 55 38.0	+1.5
LTK			S	Sn	23 56 27.3	+1.1
LTK	**Loutraki**	4.37 309	ePn	Pn	23 55 37.2	+0.7
LTK	**Loutraki**	4.37 309	P	Pn	23 55 38.0	+1.5
LTK			S	Sn	23 56 27.3	+1.1
VLX	**Vlachokerasia**	4.43 299	ePN	Pn	23 55 38.6	+1.2
VLX	**Vlachokerasia**	4.43 299	P	Pn	23 55 38.7	+1.3
VLX			S	Sn	23 56 29.1	+1.4
VLX	**Vlachokerasia**	4.43 299	P	Pn	23 55 38.7	+1.3
VLX			S	Sn	23 56 29.1	+1.4
HDMB	**Hadim**	4.53 68	ePN	Pn	23 55 39.7	+1.0
HDMB	**Hadim**	4.53 68	ePn	Pn	23 55 39.7	+1.0
EZN	**Ezine**	4.54 351	ePN	Pn	23 55 38.5	-0.3
EZN	**Ezine**	4.54 351	ePn	Pn	23 55 38.5	-0.3
LEF	**Lefka**	4.61 91	ePN	Pn	23 55 39.0	-0.8
LEF	**Lefka**	4.61 91	ePn	Pn	23 55 39.0	-0.9
ITM	**Ithomi**	4.69 295	P	Pn	23 55 43.0	+2.1
ITM	**Ithomi**	4.69 295	P	Pn	23 55 43.0	+2.1
ITM	**Ithomi**	4.69 295	P	Pn	23 55 43.0	+2.1
GUR	**Goura**	4.73 305	ePN	Pn	23 55 43.5	+2.0
GUR	**Goura**	4.73 305	P	Pn	23 55 43.5	+2.0
GUR			S	Sn	23 56 35.0	-0.1
GUR	**Goura**	4.73 305	ePn	Pn	23 55 43.5	+2.0
GUR			S	Sn	23 56 35.0	-0.1
PYL	**PYLOS**	4.73 291	ePN	Pn	23 55 42.5	+1.0
PYL	**PYLOS**	4.73 291	ePn	Pn	23 55 42.5	+1.0
LKR	**Lokris**	4.75 315	ePn	Pn	23 55 42.4	+0.7
LKR	**Lokris**	4.75 315	ePN	Pn	23 55 42.4	+0.7
LKR	**Lokris**	4.75 315	ePn	Pn	23 55 42.4	+0.7
LIA	**Limnos Island**	4.84 341	ePn	Pn	23 55 42.1	-0.9
LIA	**Limnos Island**	4.84 341	ePN	Pn	23 55 42.1	-0.9
LIA	**Limnos Island**	4.84 341	P	Pn	23 55 42.9	-0.1
LIA			S	Sn	23 56 36.4	-1.4
LIA	**Limnos Island**	4.84 341	ePn	Pn	23 55 42.1	-0.9
LIA	**Limnos Island**	4.84 341	P	Pn	23 55 42.9	-0.1
LIA			S	Sn	23 56 36.4	-1.4
KONT	**Konya--Tatoy**	4.85 56	ePN	Pn	23 55 44.6	+1.4
KONT	**Konya--Tatoy**	4.85 56	ePn	Pn	23 55 44.6	+1.4
CSS	**Prodhromos**	4.99 93	ePN	Pn	23 55 43.9	-1.1
CSS	**Prodhromos**	4.99 93	ePn	Pn	23 55 43.0	-2.0
	26nm,0.6s					
CSS			eSn	Sn	23 56 41.0	-0.4
CSS	**Prodhromos**	4.99 93	P	Pn	23 55 43.8	-1.2
CSS	**Prodhromos**	4.99 93	ePn	Pn	23 55 43.9	-1.1
CSS			eSn	Sn	23 56 41.0	-0.4
LADK	**Ladik-KONYA**	4.99 54	ePN	Pn	23 55 46.4	+1.4
LADK	**Ladik-KONYA**	4.99 54	ePn	Pn	23 55 46.4	+1.3
ESKT	**Eskisehir**	5.05 33	ePN	Pn	23 55 47.7	+1.7
ESKT	**Eskisehir**	5.05 33	ePn	Pn	23 55 47.7	+1.8
NEO	**Neokhori**	5.10 322	ePn	Pn	23 55 47.1	+0.5
NEO	**Neokhori**	5.10 322	ePN	Pn	23 55 47.1	+0.5
NEO	**Neokhori**	5.10 322	ePn	Pn	23 55 47.1	+0.5
KIZT	**Kizilcal**	5.11 45	ePN	Pn	23 55 47.7	+1.1
KIZT	**Kizilcal**	5.11 45	ePn	Pn	23 55 47.7	+1.0
LFK	**Lefkose**	5.13 89	ePN	Pn	23 55 46.9	-0.1
LFK	**Lefkose**	5.13 89	ePn	Pn	23 55 46.9	0.0
EFP	**Efpalio**	5.28 307	ePN	Pn	23 55 50.9	+1.8
EFP	**Efpalio**	5.28 307	ePn	Pn	23 55 50.9	+1.8
IKL	**Isikli**	5.30 78	ePN	Pn	23 55 49.9	+0.6
IKL	**Isikli**	5.30 78	ePn	Pn	23 55 49.9	+0.6
AGG	**Agios Georgios**	5.39 314	ePn	Pn	23 55 52.2	+1.7
AGG	**Agios Georgios**	5.39 314	ePN	Pn	23 55 52.2	+1.7
AGG	**Agios Georgios**	5.39 314	P	Pn	23 55 52.3	+1.8
AGG	**Agios Georgios**	5.39 314	ePn	Pn	23 55 52.2	+1.7
RLS	**Riolos of Patr**	5.39 302	ePn	Pn	23 55 52.9	+2.4
RLS	**Riolos of Patr**	5.39 302	ePN	Pn	23 55 52.9	+2.4
RLS	**Riolos of Patr**	5.39 302	ePn	Pn	23 55 52.9	+2.4
SULT	**Sultanhani-AKS**	5.77 59	ePN	Pn	23 55 57.0	+1.2
SULT	**Sultanhani-AKS**	5.77 59	ePn	Pn	23 55 57.0	+1.2
VLS	**Valsamata**	6.06 300	ePn	Pn	23 56 00.6	+0.9
VLS	**Valsamata**	6.06 300	ePN	Pn	23 56 00.6	+0.9
VLS	**Valsamata**	6.06 300	ePn	Pn	23 56 00.6	+0.9
LKD	**Levkas**	6.27 304	ePn	Pn	23 56 04.8	+2.2
LKD	**Levkas**	6.27 304	ePN	Pn	23 56 04.8	+2.2
LKD	**Levkas**	6.27 304	ePn	Pn	23 56 04.8	+2.2
BR131	**Keskin Array S**	6.69 47	ePn	Pn	23 56 09.0	+0.6
BR131			eSn	Sn	23 57 24.4	+1.0
BR131	**Keskin Array S**	6.69 47	ePn	Pn	23 56 09.0	+0.6
BR131			eSn	Sn	23 57 24.4	+1.0
BRTR	**Keskin Array B**	6.69 47	Pn	Pn	23 56 08.8	+0.4
	0.4nm,0.3s,baz=221,slow=16,SNR=17					
BRTR			Sn	Sn	23 57 24.2	+0.8
	0.3nm,0.3s,baz=218,slow=25,SNR=3.7					
BRTR	**Keskin Array B**	6.69 47	Pn	Pn	23 56 08.8	+0.4
BRTR			Sn	Sn	23 57 24.2	+0.8
MMAI	**Mount Meron Ar**	7.13 107	Pn	Pn	23 56 12.6	-1.9
	3.2nm,0.3s,baz=310,slow=12,SNR=20					
MMAI			Sn	Sn	23 57 32.6	-1.7
	5.3nm,0.3s,baz=283,slow=26,SNR=7.2					
VTS	**Vitosha**	7.90 338	⊓/P	Pn	23 56 29.0	+4.0
EIL	**Elat**	8.61 129	Pn	Pn	23 56 33.6	-1.1
	1.6nm,0.3s,baz=346,slow=8.2,SNR=15					
EIL			Sn	Sn	23 58 04.5	-6.0
	2.0nm,0.3s,baz=24,slow=20,SNR=4.6					
EIL	**Elat**	8.61 129	Pn	Pn	23 56 33.7	-1.1
ASF	**Jabal al Asfar**	8.62 109	Pn	Pn	23 56 33.7	-1.2
	0.3nm,0.3s,baz=168,slow=17,SNR=2.7					
ASF			Sn	Sn	23 58 12.7	+1.8
	0.1nm,0.3s,baz=336,slow=18,SNR=1.8					
TIRR	**Tirgusor**	9.15 5	⊓/P	Pn	23 56 42.8	+0.7
TIRR	**Tirgusor**	9.15 5	⊓/P	Pn	23 56 42.8	+0.7
MLR	**Muntele Rosu**	10.19 355	⊓/P	Pn	23 56 58.3	+2.0
MLR	**Muntele Rosu**	10.19 355	⊓/P	Pn	23 56 58.3	+2.0
VOIR		10.22 351	⊓/P	Pn	23 56 58.6	+1.8
VOIR		10.22 351	⊓/P	Pn	23 56 58.6	+1.8
VRI	**Vrincioaia**	10.52 358	⊓/P	Pn	23 57 05.2	+4.3
VAE	**Valguarnera**	10.57 285	Sn	Sn	23 58 52.7	-6.2
	1.8nm,0.3s,baz=31,slow=19,SNR=5.2					
AKASG	**Malin Array Be**	15.42 5	Pn	Pn	23 58 06.7	-0.6
	0.8nm,0.3s,baz=196,slow=12,SNR=4.8					
AKASG	**Malin Array Be**	15.42 5	Pn	Pn	23 58 06.7	-0.7
PGF	**Pioggiola**	15.91 302	ePn	Pn	23 58 07.6	-6.2
KHC	**Kasperske Hory**	17.07 328	eP	Pn	23 58 29.0	+0.6
KHC	**Kasperske Hory**	17.07 328	eP	Pn	23 58 29.0	+0.6
KHC	**Kasperske Hory**	17.07 328	eP	Pn	23 58 29.0	+0.6
DAVOX	**Davos/Dischmat**	17.35 316	LR	LR	00 05 37.8	
	comp=Z,42nm,18.2s,baz=107,slow=39					
MBDF	**Montbardon**	18.24 307	eP	Pn	23 58 38.7	-4.2
	6.1nm,0.8s					
MBDF	**Montbardon**	18.24 307	eP	Pn	23 58 38.7	-4.2
	3.0nm,0.8s					
LPG	**La Plagne**	18.57 309	eP	Pn	23 58 45.1	-1.9
LPL	**La Plagne**	18.59 309	eP	Pn	23 58 45.7	-1.5
LPL	**La Plagne**	18.59 309	eP	Pn	23 58 45.7	-1.5
CABF	**La Chapelle**	19.49 312	eP	Pn	23 58 55.4	-2.6
	14nm,0.9s					
CABF	**La Chapelle**	19.49 312	eP	Pn	23 58 55.4	-2.6
	6.8nm,0.9s					
CABF	**La Chapelle**	19.49 312	eP	Pn	23 58 55.4	-2.6
	6.8nm,0.9s					
HINF	**Hinteralfeld**	19.64 316	eP	Pn	23 58 56.5	-3.2
HINF	**Hinteralfeld**	19.64 316	eP	Pn	23 58 56.5	-3.2
VIVF	**Saint-Julien-l**	19.67 306	eP	Pn	23 58 57.3	-2.8
	4.0nm,0.7s					
VIVF	**Saint-Julien-l**	19.67 306	eP	Pn	23 58 57.3	-2.8
	2.0nm,0.7s					
VIVF	**Saint-Julien-l**	19.67 306	eP	Pn	23 58 57.3	-2.8
	2.0nm,0.7s					
CDF	**Champ du Feu**	19.73 318	eP	Pn	23 58 56.7	-4.0
	2.0nm,0.6s					
CDF	**Champ du Feu**	19.73 318	eP	Pn	23 58 56.7	-4.0
	1.0nm,0.6s					
LASF	**Ste Croix**	19.96 303	eP	Pn	23 59 01.4	-2.1
	34nm,1.5s					
LASF	**Ste Croix**	19.96 303	eP	Pn	23 59 01.4	-2.1
	17nm,1.5s					
SMF	**Signal de Mont**	20.90 310	eP	P	23 59 09.8	-2.0
	4.4nm,0.8s					
SMF	**Signal de Mont**	20.90 310	eP	P	23 59 09.8	-2.0
	2.2nm,0.8s					
LOR	**Lormes**	21.15 311	eP	P	23 59 12.6	-1.9
LOR			eMLR	MLR		
	comp=Z,32nm,18.5s,MS2.4					
LOR	**Lormes**	21.15 311	eP	P	23 59 12.6	-1.9
LOR			LR	LR		
	comp=Z,30nm,18.5s,MS2.7					
AVF	**Avril sur Loir**	21.26 310	eP	P	23 59 14.5	-1.3
AVF	**Avril sur Loir**	21.26 310	eP	P	23 59 14.5	-1.3
SSF	**Saint Saulge**	21.28 311	eP	P	23 59 13.5	-2.4
	comp=Z,5.3nm,0.7s,mb3.7					
SSF	**Saint Saulge**	21.28 311	eP	P	23 59 13.5	-2.4
	comp=Z,2.7nm,0.7s,mb3.7					
CAF	**Calviac**	21.44 304	eP	P	23 59 16.2	-1.5
	comp=Z,48nm,1.8s,mb4.2					
CAF	**Calviac**	21.44 304	eP	P	23 59 16.2	-1.5
	comp=Z,24nm,1.8s,mb4.2					
CAF	**Calviac**	21.44 304	eP	P	23 59 16.2	-1.5
	comp=Z,24nm,1.8s,mb4.2					
TCF	**Toulx Ste Croi**	21.80 308	eP	P	23 59 21.1	-0.4
TCF	**Toulx Ste Croi**	21.80 308	eP	P	23 59 21.1	-0.4
RJF	**Les Rejaudoux**	21.93 305	eP	P	23 59 23.2	+0.3
	comp=Z,44nm,1.8s,mb4.3					
RJF			eMLR	MLR		
	comp=Z,42nm,20.0s,MS2.5					
RJF	**Les Rejaudoux**	21.93 305	eP	P	23 59 23.2	+0.3
	comp=Z,22nm,1.8s,mb4.3					
RJF			LR	LR		
	comp=Z,40nm,20.0s,MS2.8					
RJF	**Les Rejaudoux**	21.93 305	eP	P	23 59 23.2	+0.3
	comp=Z,22nm,1.8s,mb4.3					
BAIF	**Baives**	22.31 318	eP	P	23 59 24.9	-2.0
	comp=Z,6.5nm,0.8s,mb3.8					
BAIF	**Baives**	22.31 318	eP	P	23 59 24.9	-2.0
	comp=Z,3.3nm,0.8s,mb3.8					
SJPF	**Ste Jean**	23.32 298	eP	P	23 59 35.4	-2.2
	comp=Z,30nm,1.4s,mb4.2					
SJPF	**Ste Jean**	23.32 298	eP	P	23 59 35.4	-2.2
	comp=Z,15nm,1.4s,mb4.2					
MFF	**Saint Martin d**	23.44 307	eP	P	23 59 37.1	-1.7
	comp=Z,5.8nm,0.9s,mb3.7					
MFF	**Saint Martin d**	23.44 307	eP	P	23 59 37.1	-1.7
	comp=Z,9.9nm,0.9s,mb3.7					
MFF	**Saint Martin d**	23.44 307	eP	P	23 59 37.1	-1.7
	comp=Z,9.9nm,0.9s,mb3.7					
LDF	**La Druitiere**	24.14 312	eP	P	23 59 43.2	-1.9
	comp=Z,5.5nm,0.9s,mb3.7					
LDF	**La Druitiere**	24.14 312	eP	P	23 59 43.2	-1.9
	comp=Z,2.8nm,0.9s,mb3.7					
FLN	**La Foliniere**	24.42 312	eP	P	23 59 46.3	-1.4
	comp=Z,10nm,1.1s,mb3.9					
FLN			eMLR	MLR		
	comp=Z,32nm,21.7s,MS2.5					
FLN	**La Foliniere**	24.42 312	eP	P	23 59 46.3	-1.4
	comp=Z,5.3nm,1.1s,mb3.9					
FLN			LR	LR		
	comp=Z,30nm,21.7s,MS2.7					
FLN	**La Foliniere**	24.42 312	eP	P	23 59 46.3	-1.4
	comp=Z,5.2nm,1.1s,mb3.9					
GRR	**Gorron**	24.51 311	eP	P	23 59 46.4	-2.2
	comp=Z,14nm,1.0s,mb4.1					
GRR	**Gorron**	24.51 311	eP	P	23 59 46.4	-2.2
	comp=Z,6.8nm,1.0s,mb4.1					
ESDC	**Sonseca Array**	25.08 289	P	P	23 59 52.3	-1.5
	comp=Z,0.2nm,0.4s,mb3.0,baz=82,slow=9.9,SNR=5.5					
ESDC	**Sonseca Array**	25.08 289	P	P	23 59 52.3	-1.5
SGMF	**Saint Gilles**	25.52 310	eP	P	23 59 55.6	-2.2
	comp=Z,39nm,1.5s,mb4.4					
SGMF	**Saint Gilles**	25.52 310	eP	P	23 59 55.6	-2.2
	comp=Z,20nm,1.5s,mb4.4					
QUIF	**Quistinic**	25.80 308	eP	P	23 59 58.7	-1.6
	comp=Z,25nm,1.3s,mb4.3					
QUIF	**Quistinic**	25.80 308	e

TURN	**Turunc**	**1.84**	**36**	*i* P		**Pn**	**00 31 44.3**	**-3.9**
TURN				*i* S		**Sn**	**00 32 07.1**	**-3.8**
TURN	**Turunc**	**1.84**	**36**	*i* P		**Pn**	**00 31 44.3**	**-3.9**
TURN				*i* S		**Sn**	**00 32 07.1**	**-3.8**
THR5	**Thira Island,**	**1.85**	**304**	P		**Pn**	**00 31 48.1**	**-0.2**
THR5	**Thira Island,**	**1.85**	**304**	P		**Pn**	**00 31 48.1**	**-0.2**
IDI	**Anoyia**	**1.93**	**268**	*e*Pn		**Pn**	**00 31 49.9**	**+0.5**
IDI	**Anoyia**	**1.93**	**268**	*e*Pn		**Pn**	**00 31 49.9**	**+0.5**
IDI	**Anoyia**	**1.93**	**268**	*e*Pn		**Pn**	**00 31 49.9**	**+0.5**
YER	**Yerkesik**	**1.93**	**25**	*e*PN		**Pn**	**00 31 49.1**	**-0.3**
YER				*e*SN		**Sn**	**00 32 14.3**	**+1.1**
YER	**Yerkesik**	**1.93**	**25**	*e*Pn		**Pn**	**00 31 49.2**	**-0.3**
YER				*e*Sn		**Sn**	**00 32 14.3**	**+1.2**
MLSB	**Milas**	**1.95**	**13**	*e*PN		**Pn**	**00 31 49.8**	**+0.1**
MLSB	**Milas**	**1.95**	**13**	*e*Pn		**Pn**	**00 31 49.8**	**+0.1**
SIVA	**Sivas**	**2.03**	**260**	*e*Pn		**Pn**	**00 31 52.4**	**+1.7**
SIVA	**Sivas**	**2.03**	**260**	*e*PN		**Pn**	**00 31 52.4**	**+1.7**
SIVA	**Sivas**	**2.03**	**260**	P		**Pn**	**00 31 52.3**	**+1.6**
SIVA				S		**Sn**	**00 32 21.2**	**+5.8**
SIVA	**Sivas**	**2.03**	**260**	*e*Pn		**Pn**	**00 31 52.4**	**+1.7**
AKAS	**Kas**	**2.10**	**66**	*i* P		**Pn**	**00 31 51.8**	**0.0**
AKAS				*i* S		**Sn**	**00 32 18.3**	**+1.1**
AKAS	**Kas**	**2.10**	**66**	*i* P		**Pn**	**00 31 51.8**	**+0.1**
AKAS				*i* S		**Sn**	**00 32 18.3**	**+1.2**
APE	**Apeiranthos**	**2.17**	**321**	*e*PN		**Pn**	**00 31 51.9**	**-0.9**
APE	**Apeiranthos**	**2.17**	**321**	*e*Pn		**Pn**	**00 31 51.4**	**-1.4**
APE	**Apeiranthos**	**2.17**	**321**	*e*PN		**Pn**	**00 31 51.4**	**-1.4**
APE	**Apeiranthos**	**2.17**	**321**	P		**Pn**	**00 31 52.2**	**-0.6**
APE				S		**Sn**	**00 32 16.9**	**-2.2**
APE	**Apeiranthos**	**2.17**	**321**	*e*Pn		**Pn**	**00 31 51.4**	**-1.4**
APE	**Apeiranthos**	**2.17**	**321**	P		**Pn**	**00 31 52.2**	**-0.6**
APE				S		**Sn**	**00 32 16.9**	**-2.2**
AYDN	**Tasoluk**	**2.33**	**13**	*i* P		**Pn**	**00 31 55.5**	**+0.7**
AYDN				*e*S		**Sn**	**00 32 17.2**	**-5.6**
AYDN	**Tasoluk**	**2.33**	**13**	*i* P		**Pn**	**00 31 55.6**	**+0.8**
AYDN				*e*S		**Sn**	**00 32 17.2**	**-5.6**
SMG	**Samos**	**2.34**	**352**	*e*Pn		**Pn**	**00 31 53.5**	**-1.5**
SMG	**Samos**	**2.34**	**352**	*e*PN		**Pn**	**00 31 53.5**	**-1.5**
SMG	**Samos**	**2.34**	**352**	*e*Pn		**Pn**	**00 31 53.5**	**-1.5**
VAM	**Vamos**	**2.49**	**271**	*e*Pn		**Pn**	**00 31 57.7**	**+0.6**
VAM	**Vamos**	**2.49**	**271**	*e*PN		**Pn**	**00 31 57.7**	**+0.6**
VAM	**Vamos**	**2.49**	**271**	*e*Pn		**Pn**	**00 31 57.7**	**+0.6**
GLHS	**Gihisar (BURDU**	**2.54**	**45**	*e*PN		**Pn**	**00 31 58.0**	**+0.3**
GLHS	**Gihisar (BURDU**	**2.54**	**45**	*e*Pn		**Pn**	**00 31 58.0**	**+0.3**
ELL	**Elmali**	**2.55**	**57**	*e*PN		**Pn**	**00 31 57.9**	**0.0**
ELL	**Elmali**	**2.55**	**57**	*e*Pn		**Pn**	**00 31 57.9**	**0.0**
GOLH	**Golhisar**	**2.63**	**45**	*i* P		**Pn**	**00 32 00.4**	**+1.4**
GOLH				*i* S		**Sn**	**00 32 35.1**	**+4.9**
GOLH	**Golhisar**	**2.63**	**45**	*i* P		**Pn**	**00 32 00.4**	**+1.4**
GVD	**Gavdhos**	**2.65**	**259**	*e*Pn		**Pn**	**00 32 04.9**	**+5.7**
GVD				S		**Sn**	**00 32 42.4**	**+12**
DNZL	**Cakiroluk**	**2.72**	**32**	*i* P		**Pn**	**00 32 01.4**	**+1.1**
DNZL				*i* S		**Sn**	**00 32 39.4**	**+6.9**
DNZL	**Cakiroluk**	**2.72**	**32**	*i* P		**Pn**	**00 32 01.4**	**+1.2**
KARN	**Karanos**	**2.72**	**271**	P		**Pn**	**00 32 00.7**	**+0.5**
KARN	**Karanos**	**2.72**	**271**	P		**Pn**	**00 32 00.7**	**+0.5**
DENT	**Denizli**	**2.77**	**31**	*e*PN		**Pn**	**00 31 59.8**	**-1.1**
DENT	**Denizli**	**2.77**	**31**	*e*Pn		**Pn**	**00 31 59.8**	**-1.1**
KORT	**Korkueli**	**2.98**	**56**	*i* P		**Pn**	**00 32 05.1**	**+1.2**
KORT	**Korkueli**	**2.98**	**56**	*i* P		**Pn**	**00 32 05.1**	**+1.2**
BLCB	**Balcova**	**3.00**	**357**	*e*PN		**Pn**	**00 32 03.4**	**-0.6**
BLCB	**Balcova**	**3.00**	**357**	*e*Pn		**Pn**	**00 32 03.4**	**-0.7**
IZM	**Izmir**	**3.00**	**0**	*e*PN		**Pn**	**00 32 03.1**	**-1.1**
IZM	**Izmir**	**3.00**	**0**	*e*Pn		**Pn**	**00 32 03.1**	**-1.1**
CHOS	**Chios island**	**3.14**	**343**	P		**Pn**	**00 32 05.1**	**-0.9**
CHOS				S		**Sn**	**00 32 42.2**	**-0.7**
CHOS	**Chios island**	**3.14**	**343**	P		**Pn**	**00 32 05.1**	**-0.9**
CHOS				S		**Sn**	**00 32 42.2**	**-0.7**
ANTB	**Antalya**	**3.15**	**60**	*e*PN		**Pn**	**00 32 05.8**	**-0.3**
ANTB	**Antalya**	**3.15**	**60**	*e*Pn		**Pn**	**00 32 05.8**	**-0.3**
KULA	**Kula-Manisa**	**3.32**	**20**	*e*PN		**Pn**	**00 32 08.6**	**+0.1**
KULA	**Kula-Manisa**	**3.32**	**20**	*e*Pn		**Pn**	**00 32 08.6**	**+0.1**
BCK	**Bucak**	**3.40**	**52**	*e*PN		**Pn**	**00 32 09.5**	**-0.1**
BCK	**Bucak**	**3.40**	**52**	*e*Pn		**Pn**	**00 32 09.5**	**-0.1**
KHL	**Karahalli**	**3.45**	**31**	*e*PN		**Pn**	**00 32 10.4**	**+0.1**
KHL	**Karahalli**	**3.45**	**31**	*e*Pn		**Pn**	**00 32 10.4**	**+0.1**
AKS	**Akhisar**	**3.51**	**7**	*e*PN		**Pn**	**00 32 10.9**	**-0.3**
AKS	**Akhisar**	**3.51**	**7**	*e*Pn		**Pn**	**00 32 10.9**	**-0.3**
KYTH	**Kithira**	**3.53**	**286**	*e*Pn		**Pn**	**00 32 11.3**	**-0.1**
KYTH	**Kithira**	**3.53**	**286**	*e*PN		**Pn**	**00 32 11.3**	**-0.1**
KYTH	**Kithira**	**3.53**	**286**	*e*Pn		**Pn**	**00 32 11.3**	**-0.1**
SUTC	**Sutluce-Ispart**	**3.68**	**54**	*e*PN		**Pn**	**00 32 13.2**	**-0.2**
SUTC	**Sutluce-Ispart**	**3.68**	**54**	*e*Pn		**Pn**	**00 32 13.2**	**-0.2**
VLI	**Veliai**	**3.73**	**292**	*e*Pn		**Pn**	**00 32 13.5**	**-0.7**
VLI	**Veliai**	**3.73**	**292**	*e*PN		**Pn**	**00 32 13.5**	**-0.7**
VLI	**Veliai**	**3.73**	**292**	*e*Pn		**Pn**	**00 32 13.5**	**-0.7**
DEMI	**Demirci**	**3.83**	**17**	*i* P		**Pn**	**00 32 16.2**	**+0.7**
DEMI				*i* S		**Sn**	**00 32 59.0**	**-0.9**
DEMI	**Demirci**	**3.83**	**17**	*i* P		**Pn**	**00 32 16.2**	**+0.6**
DEMI				*i* S		**Sn**	**00 32 59.0**	**-0.9**
DID	**Didima**	**3.86**	**304**	P		**Pn**	**00 32 16.7**	**+0.8**
DID	**Didima**	**3.86**	**304**	P		**Pn**	**00 32 16.7**	**+0.8**
PRK	**Paraskevi**	**3.93**	**349**	*e*Pn		**Pn**	**00 32 16.2**	**-0.7**
PRK	**Paraskevi**	**3.93**	**349**	*e*PN		**Pn**	**00 32 16.2**	**-0.7**
PRK	**Paraskevi**	**3.93**	**349**	*e*Pn		**Pn**	**00 32 16.2**	**-0.7**
GDZ	**Gediz**	**4.10**	**25**	*i* P		**Pn**	**00 32 19.4**	**+0.1**
GDZ	**Gediz**	**4.10**	**25**	*i* P		**Pn**	**00 32 19.4**	**+0.1**
SHUT	**Suhut-Afyon**	**4.12**	**39**	*e*PN		**Pn**	**00 32 19.2**	**-0.3**
SHUT	**Suhut-Afyon**	**4.12**	**39**	*e*Pn		**Pn**	**00 32 19.2**	**-0.3**
GAZI	**Gazipasa**	**4.21**	**77**	*i* P		**Pn**	**00 32 19.6**	**-1.2**
GAZI				*i* S		**Sn**	**00 33 06.1**	**-3.1**
GAZI	**Gazipasa**	**4.21**	**77**	*i* P		**Pn**	**00 32 19.6**	**-1.1**
GAZI				*i* S		**Sn**	**00 33 06.1**	**-3.1**
ALT	**Altintas**	**4.32**	**31**	*e*PN		**Pn**	**00 32 21.5**	**-0.7**
ALT	**Altintas**	**4.32**	**31**	*e*Pn		**Pn**	**00 32 21.5**	**-0.7**
BALY	**Balya**	**4.35**	**4**	*i* P		**Pn**	**00 32 22.7**	**0.0**
BALY				*i* S		**Sn**	**00 33 16.2**	**+3.4**
BALY	**Balya**	**4.35**	**4**	*i* P		**Pn**	**00 32 22.7**	**0.0**
BALY				*i* S		**Sn**	**00 33 16.2**	**+3.4**
HDMB	**Hadim**	**4.52**	**68**	*e*PN		**Pn**	**00 32 24.3**	**-0.8**
HDMB	**Hadim**	**4.52**	**68**	*e*Pn		**Pn**	**00 32 24.3**	**-0.8**
LEF	**Lefka**	**4.63**	**92**	*e*PN		**Pn**	**00 32 24.7**	**-1.8**
LEF	**Lefka**	**4.63**	**92**	*e*Pn		**Pn**	**00 32 24.7**	**-1.8**
GONE	**Gonen-Balikesi**	**4.66**	**4**	*e*PN		**Pn**	**00 32 27.5**	**+0.5**
GONE	**Gonen-Balikesi**	**4.66**	**4**	*e*Pn		**Pn**	**00 32 27.5**	**+0.5**
GUR	**Goura**	**4.69**	**304**	P		**Pn**	**00 32 29.2**	**+1.9**
GUR	**Goura**	**4.69**	**304**	P		**Pn**	**00 32 29.2**	**+1.9**
ERMK	**Ermenek**	**4.76**	**73**	*i* P		**Pn**	**00 32 29.6**	**+1.2**
ERMK				*i* S		**Sn**	**00 33 24.1**	**+1.2**
ERMK	**Ermenek**	**4.76**	**73**	*i* P		**Pn**	**00 32 29.5**	**+1.2**
ERMK				*i* S		**Sn**	**00 33 24.0**	**+1.1**
DSF	**Desfina**	**4.83**	**310**	P		**Pn**	**00 32 31.1**	**+1.8**
DSF	**Desfina**	**4.83**	**310**	P		**Pn**	**00 32 31.1**	**+1.8**
KONT	**Konya--Tatoy**	**4.84**	**57**	*e*PN		**Pn**	**00 32 29.8**	**+0.4**
KONT	**Konya--Tatoy**	**4.84**	**57**	*e*Pn		**Pn**	**00 32 29.8**	**+0.4**
GADA	**Gvkgeada**	**4.91**	**348**	*e*PN		**Pn**	**00 32 30.7**	**+0.3**
GADA	**Gvkgeada**	**4.91**	**348**	*e*Pn		**Pn**	**00 32 30.7**	**+0.3**
KCTX	**Karacabey (Bur**	**4.95**	**10**	*e*PN		**Pn**	**00 32 30.7**	**-0.2**
KCTX	**Karacabey (Bur**	**4.95**	**10**	*e*Pn		**Pn**	**00 32 30.7**	**-0.2**
BNT	**Bandirma**	**4.99**	**6**	*e*PN		**Pn**	**00 32 32.0**	**+0.6**
BNT	**Bandirma**	**4.99**	**6**	*e*Pn		**Pn**	**00 32 32.0**	**+0.6**
KDHN	**Kadinhani**	**5.00**	**50**	*i* P		**Pn**	**00 32 32.4**	**+0.8**
KDHN	**Kadinhani**	**5.00**	**50**	*i* P		**Pn**	**00 32 32.4**	**+0.8**
CSS	**Prodhromos**	**5.00**	**93**	*e*PN		**Pn**	**00 32 31.1**	**-0.5**
CSS	**Prodhromos**	**5.00**	**93**	*e*Pn		**Pn**	**00 32 31.1**	**-0.6**
GELI	**Tayfur-Gelibol**	**5.04**	**353**	*e*PN		**Pn**	**00 32 32.1**	**0.0**
GELI	**Tayfur-Gelibol**	**5.04**	**353**	*e*Pn		**Pn**	**00 32 32.1**	**0.0**
KIZT	**Kizilcal**	**5.08**	**45**	*e*PN		**Pn**	**00 32 32.6**	**-0.2**
KIZT	**Kizilcal**	**5.08**	**45**	*e*Pn		**Pn**	**00 32 32.6**	**-0.2**
IKL	**Isikli**	**5.30**	**79**	*e*PN		**Pn**	**00 32 35.4**	**-0.4**
IKL	**Isikli**	**5.30**	**79**	*e*Pn		**Pn**	**00 32 35.4**	**-0.4**
KARA	**Karaisali**	**6.58**	**71**	*e*PN		**Pn**	**00 32 53.6**	**+0.3**
KARA	**Karaisali**	**6.58**	**71**	*e*Pn		**Pn**	**00 32 53.6**	**+0.3**
BR131	**Keskin Array S**	**6.67**	**48**	*e*Pn		**Pn**	**00 32 54.0**	**-0.5**
	0.9nm,0.4s							
BR131				*e*Sn		**Sn**	**00 34 09.4**	**-0.5**
BR131	**Keskin Array S**	**6.67**	**48**	*e*Pn		**Pn**	**00 32 54.0**	**-0.6**
	0.9nm,0.4s							
BR131				*e*Sn		**Sn**	**00 34 09.4**	**-0.5**

*NEIC **15** 00:55:39.4, 37°.92N×21°.40E, h25km, MD3.0(ATH), After ATH.*
*ATH **15** 00:55:39.4, 37°.92N×21°.40E, h25km±2km, MD3.0/8*
*ISCJB **15** 00:55:40.0±0.5, 37°.89N±0°.02×21°.47E±0°.03, h5km±4km, Error ellipse: s-maj=3.9km s-min=3.5km az=139.3*
*THE **15** 00:55:40.6, 37°.91N×21°.49E, h0km±2km, ML3.2/10, Error ellipse: s-maj=2.7km s-min=0.9km az=233.0*

*CSEM **15** 00:55:40.0±0.2, 37°.90N×21°.46E, h10km, MD3.0, Error ellipse: s-maj=3.9km s-min=3.4km az=68.0*
ISC 15 00:55:40.7±0.4,**37°.89N**±0°.02×**21°.48E**±0°.03,**h11**km±3km,
n62,σ1§**16**/103,**Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.17**	**357**	*e*Pb	**Pg**	**00 55 43.7**	**-0.7**
RLS				*e*Sb	**Sg**	**00 55 48.9**	**+1.9**
RLS	**Riolos of Patr**	**0.17**	**357**	*e*PB	**Pg**	**00 55 43.7**	**-0.7**
RLS				*e*SB	**Sg**	**00 55 48.9**	**+1.9**
RLS	**Riolos of Patr**	**0.17**	**357**	*e*Pb	**Pg**	**00 55 43.7**	**-0.7**
RLS				*e*Sb	**Sg**	**00 55 48.9**	**+1.9**
UPR	**University Cam**	**0.46**	**32**	*e*PB	**Pg**	**00 55 49.7**	**-0.1**
UPR				*e*SB	**Sg**	**00 55 56.6**	**+0.7**
UPR	**University Cam**	**0.46**	**32**	P	**Pg**	**00 55 49.3**	**-0.5**
UPR				S	**Sg**	**00 55 56.4**	**+0.5**
UPR	**University Cam**	**0.46**	**32**	P	**Pg**	**00 55 49.3**	**-0.5**
UPR	**University Cam**	**0.46**	**32**	*e*Pb	**Pg**	**00 55 49.7**	**-0.1**
UPR				S	**Sg**	**00 55 56.4**	**+0.5**
LAKA	**Lakka**	**0.53**	**48**	P	**Pg**	**00 55 50.6**	**-0.4**
LAKA				S	**Sg**	**00 55 57.8**	**-0.2**
LAKA	**Lakka**	**0.53**	**48**	P	**Pg**	**00 55 50.6**	**-0.4**
LAKA				S	**Sg**	**00 55 57.8**	**-0.2**
KFL	**Anninata**	**0.59**	**292**	P	**Pg**	**00 55 50.8**	**-1.3**
KFL				S	**Sg**	**00 56 02.1**	**+2.2**
KFL	**Anninata**	**0.59**	**292**	P	**Pg**	**00 55 50.8**	**-1.3**
KFL				S	**Sg**	**00 56 02.1**	**+2.2**
EFP	**Efpalio**	**0.63**	**32**	*e*PN	**Pg**	**00 55 52.2**	**-0.8**
EFP				*e*SN	**Sg**	**00 56 01.0**	**-0.3**
EFP	**Efpalio**	**0.63**	**32**	P	**Pg**	**00 55 51.7**	**-1.3**
EFP				S	**Sg**	**00 56 01.9**	**+0.6**
EFP	**Efpalio**	**0.63**	**32**	P	**Pg**	**00 55 51.7**	**-1.3**
EFP	**Efpalio**	**0.63**	**32**	*e*Pn	**Pg**	**00 55 52.3**	**-0.7**
EFP				S	**Sg**	**00 56 01.9**	**+0.6**
TRIZ	**Trizonia**	**0.67**	**44**	P	**Pg**	**00 55 52.9**	**-0.8**
TRIZ				S	**Sg**	**00 56 02.4**	**0.0**
TRIZ	**Trizonia**	**0.67**	**44**	P	**Pg**	**00 55 52.9**	**-0.8**
TRIZ				S	**Sg**	**00 56 02.4**	**0.0**
GUR	**Goura**	**0.69**	**86**	*e*PN	**Pn**	**00 55 53.6**	**-2.8**
GUR	**Goura**	**0.69**	**86**	P	**Pg**	**00 55 53.4**	**-0.6**
GUR				S	**Sg**	**00 56 03.7**	**+0.7**
GUR	**Goura**	**0.69**	**86**	P	**Pg**	**00 55 53.4**	**-0.6**
GUR				S	**Sg**	**00 56 03.7**	**+0.7**
KALE	**Kalithea**	**0.72**	**46**	P	**Pg**	**00 55 53.9**	**-0.8**
KALE				S	**Sg**	**00 56 04.0**	**-0.2**
KALE	**Kalithea**	**0.72**	**46**	P	**Pg**	**00 55 53.9**	**-0.8**
KALE				S	**Sg**	**00 56 04.0**	**-0.2**
VLS	**Valsamata**	**0.76**	**293**	*e*Pn	**Pn**	**00 55 53.2**	**-4.1**
VLS	**Valsamata**	**0.76**	**293**	*e*PN	**Pn**	**00 55 53.2**	**-4.1**
VLS	**Valsamata**	**0.76**	**293**	P	**Pg**	**00 55 54.8**	**-0.6**
VLS				S	**Sg**	**00 56 07.2**	**+1.9**
VLS	**Valsamata**	**0.76**	**293**	P	**Pg**	**00 55 54.8**	**-0.6**
VLS				S	**Sg**	**00 56 07.2**	**+1.9**
ITM	**Ithomi**	**0.79**	**153**	P	**Pg**	**00 55 54.1**	**-1.9**
ITM				S	**Sg**	**00 56 07.3**	**+0.9**
ITM	**Ithomi**	**0.79**	**153**	P	**Pg**	**00 55 54.1**	**-1.9**
ITM				S	**Sg**	**00 56 07.3**	**+0.9**
ITM	**Ithomi**	**0.79**	**153**	P	**Pg**	**00 55 54.1**	**-1.9**
ITM				S	**Sg**	**00 56 07.3**	**+0.9**
VLX	**Vlachokerasia**	**0.88**	**126**	*e*PN	**Pn**	**00 55 58.7**	**-0.4**
VLX				*e*SN	**Sn**	**00 56 11.0**	**-0.9**
VLX	**Vlachokerasia**	**0.88**	**126**	P	**Pg**	**00 55 58.3**	**+0.6**
VLX				S	**Sg**	**00 56 10.9**	**+1.6**
VLX	**Vlachokerasia**	**0.88**	**126**	P	**Pg**	**00 55 58.3**	**+0.6**
VLX	**Vlachokerasia**	**0.88**	**126**	*e*Pn	**Pn**	**00 55 58.7**	**-0.4**
VLX				*e*Sn	**Sn**	**00 56 11.0**	**-0.9**
DSF	**Desfina**	**0.98**	**58**	P	**Pg**	**00 55 58.4**	**-1.1**
DSF				S	**Sg**	**00 56 12.5**	**+0.2**
DSF	**Desfina**	**0.98**	**58**	P	**Pg**	**00 55 58.4**	**-1.1**
DSF				S	**Sg**	**00 56 12.5**	**+0.2**
PYL	**PYLOS**	**1.01**	**168**	*e*PN	**Sg**	**00 55 59.7**	**-0.5**
PYL	**PYLOS**	**1.01**	**168**	P	**Pg**	**00 55 59.7**	**-0.5**
PYL	**PYLOS**	**1.01**	**168**	P	**Pg**	**00 55 59.7**	**-0.5**
EVR	**Evrytania**	**1.06**	**14**	*e*Pn	**Pn**	**00 55 59.7**	**-1.8**
EVR	**Evrytania**	**1.06**	**14**	*e*PN	**Pn**	**00 55 59.7**	**-1.8**
EVR	**Evrytania**	**1.06**	**14**	*e*Pn	**Pn**	**00 55 59.7**	**-1.8**
LKD2	**Lefkada island**	**1.10**	**325**	P	**Pb**	**00 56 00.6**	**-1.2**
LKD2				S	**Sb**	**00 56 17.1**	**+0.8**
LKD2	**Lefkada island**	**1.10**	**325**	P	**Pb**	**00 56 00.6**	**-1.2**
LKD2				S	**Sb**	**00 56 17.1**	**+0.8**
LTK	**Loutraki**	**1.19**	**83**	*e*PN	**Pn**	**00 56 02.4**	**-0.8**
LTK	**Loutraki**	**1.19**	**83**	P	**Pb**	**00 56 01.6**	**-1.6**
LTK				S	**Sb**	**00 56 20.1**	**+1.6**
LTK	**Loutraki**	**1.19**	**83**	P	**Pb**	**00 56 01.6**	**-1.6**
LTK	**Loutraki**	**1.19**	**83**	*e*Pn	**Pn**	**00 56 02.4**	**-0.8**
LTK				S	**Sb**	**00 56 20.1**	**+1.6**
AGG	**Agios Georgios**	**1.31**	**30**	P	**Pn**	**00 56 05.0**	**0.0**
AGG				S	**Sb**	**00 56 22.2**	**-0.1**
AGG	**Agios Georgios**	**1.31**	**30**	P	**Pn**	**00 56 05.0**	**0.0**
AGG				S	**Sb**	**00 56 22.2**	**-0.1**
AGG	**Agios Georgios**	**1.31**	**30**	P	**Pn**	**00 56 05.0**	**0.0**
AGG				S	**Sb**	**00 56 22.2**	**-0.1**
LKR	**Lokris**	**1.42**	**57**	P	**Pn**	**00 56 07.9**	**+1.5**
LKR				S	**Sn**	**00 56 27.2**	**+2.1**
LKR	**Lokris**	**1.42**	**57**	P	**Pn**	**00 56 06.1**	**-0.3**
LKR				S	**Sn**	**00 56 27.2**	**+2.1**
LKR	**Lokris**	**1.42**	**57**	P	**Pn**	**00 56 06.1**	**-0.3**
LKR				S	**Sn**	**00 56 27.2**	**+2.1**
DID	**Didima**	**1.45**	**105**	P	**Pn**	**00 56 07.5**	**+0.7**
DID				S	**Sn**	**00 56 29.2**	**+3.4**
DID	**Didima**	**1.45**	**105**	P	**Pn**	**00 56 07.5**	**+0.7**
DID				S	**Sn**	**00 56 29.2**	**+3.4**
VLI	**Veliai**	**1.65**	**135**	*e*Pn	**Pn**	**00 56 11.1**	**+1.5**
VLI	**Veliai**	**1.65**	**135**	*e*PN	**Pn**	**00 56 11.1**	**+1.5**
VLI	**Veliai**	**1.65**	**135**	*e*Pn	**Pn**	**00 56 11.1**	**+1.5**
THL	**Klokotos Trika**	**1.72**	**14**	*e*PN	**Pn**	**00 56 11.1**	**+0.5**
THL	**Klokotos Trika**	**1.72**	**14**	*e*Pn	**Pn**	**00 56 11.1**	**+0.5**
VLY	**Voula,Athens**	**1.83**	**90**	P	**Pn**	**00 56 15.5**	**+3.4**
VLY	**Voula,Athens**	**1.83**	**90**	P	**Pn**	**00 56 15.5**	**+3.4**

*NEIC **15** 00:56:24.8, 16°.11N×97°.54W, h16km, MD3.6(MEX), After MEX.*
MEX 15 00:56:24.8±0.6,**16°.11N**×**97°.54W**,**h16**km±999km,**MD3.6**,
Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.63**	**297**	*i* P	Pg	00 56 34.9	-2.3
PNIG				*e*S	Sg	00 56 43.4	-2.3
PNIG	**Pinotepa**	**0.63**	**297**	*i* P	Pg	00 56 34.9	-2.3
PNIG				*e*S	Sg	00 56 43.4	-2.3
VHO	**Vista Hermosa**	**1.23**	**39**	*i* P	Pn	00 56 44.2	-3.1
VHO				*e*S	Sb	00 56 58.2	-5.2
VHO	**Vista Hermosa**	**1.23**	**39**	*i* P	Pn	00 56 44.2	-3.1
VHO				*e*S	Sb	00 56 58.2	-5.2
HUIG	**Huatulco**	**1.42**	**104**	*i* P	Pn	00 56 47.2	-2.6
HUIG				*e*S	Sn	00 57 02.6	-5.6
HUIG	**Huatulco**	**1.42**	**104**	*i* P	Pn	00 56 47.2	-2.6
HUIG				*e*S	Sn	00 57 02.6	-5.6
TPIG	**Tehuac#an**	**2.31**	**4**	*i* P	Pn	00 56 59.4	-2.8
TPIG				*e*S	Sn	00 57 26.9	-3.3
MEIG	**Mezcala**	**2.69**	**313**	*i* S	Sn	00 57 36.6	-3.1
CAIG	**El Cayaco**	**2.78**	**290**	*i* P	Pn	00 57 04.2	-4.4
CAIG				*e*S	Sn	00 57 39.4	-2.4
CAIG	**El Cayaco**	**2.78**	**290**	*i* P	Pn	00 57 06.6	-2.1
CAIG				*i* S	Sn	00 57 37.5	-4.3

*IDC **15** 01:09:24.0±4.9, 7°.46S×128°.54E, h126km±44km, mb3.9/6, mb1 4.2/9, mb1mx3.9/18, mbtmp4.0/9, MS2.7/1, Ms1 2.7/1, ms1mx2.0/22, Error ellipse: s-maj=46.1km s-min=16.1km az=59.0*
*NEIC **15** 01:09:27.4±1.9, 7°.55S×128°.54E, h162km±21km, mb4.4/2, Error ellipse: s-maj=17.7km s-min=13.6km az=214.0*
ISC 15 01:09:29.4±1.2,**7°.77S**±0°.06×**128°.57E**±0°.07,**h193**km±13km,
n32,σ1§**08**/42,**mb4.3**/14,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.21**	**142**	*e*P	**Pn**	**01 11 00.2**	**+0.8**
	59nm,0.1s						
KAKA				*e*S	**Sn**	**01 12 07.8**	**-2.7**
KAKA	**Kakadu**	**6.21**	**142**	*e*Pn	**Pn**	**01 11 00.2**	**+0.8**
	298nm,0.5s						
KAKA				*e*Sn	**Sn**	**01 12 07.9**	**-2.5**
KNA	**Kununurra**	**7.93**	**179**	*e*P	**Pn**	**01 11 23.8**	**+2.0**
	97nm,0.3s						
KNA				*e*S	**Sn**	**01 12 49.2**	**-1.9**
FITZ	**Fitzroy Crossi**	**10.65**	**195**	*e*P	**Pn**	**01 11 57.7**	**+0.5**
	70nm,0.4s						
FITZ				*e*S	**Sn**	**01 13 52.9**	**-3.1**
FITZ	**Fitzroy Crossi**	**10.65**	**195**	P	**Pn**	**01 11 57.5**	**+0.2**
	13nm,0.3s,baz=32,slow=9.1,SNR=174						
FITZ				S	**Sn**	**01 13 54.2**	**-1.9**
	5.1nm,0.3s,baz=116,slow=24,SNR=3.7						
FITZ				LR	LR	01 16 48.3	
	comp=Z,45nm,22.0s,baz=336,slow=41						
FITZ	**Fitzroy Crossi**	**10.65**	**195**	*e*Pn	**Pn**	**01 11 57.7**	**+0.4**
FITZ				S	**Sn**	**01 13 54.2**	**-1.8**
FITZ				LR	LR	01 16 48.3	
WRAB	**Tennant Creek**	**13.32**	**156**	*e*Pn	**Pn**	**01 12 31.8**	**+0.6**
	11nm,0.6s						
WRAB				*e*Sn	**Sn**	**01 14 54.5**	**-5.3**
WRA	**Warramunga Arr**	**13.33**	**156**	P	**Pn**	**01 12 31.3**	**+0.1**
	1.3nm,0.3s,baz=338,slow=13,SNR=8.6						
COEN	**Coen**	**15.60**	**114**	*e*P	**Pn**	**01 13 00.4**	**+1.0**
COEN				*e*S	**S**	**01 15 42.5**	**-10**
COEN	**Coen**	**15.60**	**114**	*e*Pn	**Pn**	**01 13 01.0**	**+1.6**
	51nm,0.5s						
COEN				*e*Sn	**Sn**	**01 15 46.0**	**-8.3**
MBWA	**Marble Bar**	**15.81**	**212**	*e*P	**Pn**	**01 13 05.0**	**+3.2**
MBWA				*e*S	**S**	**01 15 56.1**	**-1.1**
MBWA	**Marble Bar**	**15.81**	**212**	*e*Pn	**Pn**	**01 13 04.7**	**+2.8**
	9.7nm,0.6s						
MBWA				*e*Sn	**Sn**	**01 16 00.7**	**+1.6**
ASAR	**Alice Springs**	**16.61**	**163**	P	**Pn**	**01 13 14.7**	**+3.2**
	2.5nm,0.3s,baz=341,sl

ASAR	**Alice Springs**	**37.17 167**	P	**P**	**01 35 16.4**	**+0.4**
	comp=Z,1.9nm,0.6s,mb4.1,baz=351,slow=7.1,SNR=15					
ASAR			PcP	PcP	01 37 36.1	+0.7
	comp=Z,1.4nm,0.7s,baz=349,slow=3.1,SNR=5.1					
SONM	**Songino Array**	**38.40 339**	P	**P**	**01 35 26.8**	**+0.7**
	comp=Z,0.7nm,0.5s,mb3.7,baz=135,slow=11,SNR=2.6					
FORT	**Forrest**	**43.40 177**	*e*P	**P**	**01 36 06.3**	**-1.2**
	comp=Z,19nm,0.6s,mb5.0					
KMBL	**Kambalda**	**44.05 184**	*e*P	**P**	**01 36 11.6**	**-1.1**
	comp=Z,87nm,0.6s					
NWAO	**Narrogin (SRO)**	**46.15 190**	*e*P	**P**	**01 36 28.1**	**-1.3**
	comp=Z,136nm,1.0s					
NWAO	**Narrogin (SRO)**	**46.15 190**	P	**P**	**01 36 28.2**	**-1.2**
	comp=Z,13nm,0.8s,mb4.9,baz=357,slow=12,SNR=5.1					
NWAO	**Narrogin (SRO)**	**46.15 190**	P	**P**	**01 36 28.2**	**-1.2**
BBOO	**Buckleboo**	**46.46 168**	*e*P	**P**	**01 36 33.0**	**+1.2**
	comp=Z,11nm,1.1s,mb4.7					
STKA	**Stephens Creek**	**47.03 161**	*e*P	**P**	**01 36 37.1**	**+0.9**
	comp=Z,2.8nm,0.8s,mb4.2					
STKA	**Stephens Creek**	**47.03 161**	P	**P**	**01 36 36.4**	**+0.2**
	comp=Z,3.3nm,0.7s,mb4.4,baz=341,slow=6.8,SNR=4.7					
CMSA	**Cobar Meteorol**	**48.16 157**	*e*P	**P**	**01 36 46.2**	**+1.2**
MK31	**Makanchi Array**	**49.57 322**	*e*P	**P**	**01 36 56.4**	**+0.6**
MKAR	**Makanchi Array**	**49.57 322**	P	**P**	**01 36 56.2**	**+0.5**
	comp=Z,4.1nm,0.7s,mb4.5,baz=115,slow=8.4,SNR=35					
ZALV	**Zalesovo Beam**	**52.06 331**	P	**P**	**01 37 14.7**	**+0.3**
	comp=Z,2.3nm,0.6s,mb4.3,baz=123,slow=6.7,SNR=8.9					
AML	**Almayashu**	**53.43 313**	*e*P	**P**	**01 37 26.1**	**+1.4**
	comp=Z,3.1nm,0.8s,mb4.3					
KURK	**Kurchatov**	**53.57 325**	*e*P	**P**	**01 37 26.1**	**+0.6**
	comp=Z,14nm,0.9s,mb4.9					
BVAR	**Borovoye Array**	**59.17 325**	P	**P**	**01 38 05.4**	**+0.1**
	comp=Z,2.2nm,0.7s,mb4.3,baz=109,slow=6.8,SNR=6.7					
ABKAR	**Akbulak array**	**64.48 319**	*e*P	**P**	**01 38 41.0**	**-0.1**
	comp=Z,1.9nm,0.6s,mb4.3					
ARU	**Arti**	**66.71 326**	*e*P	**P**	**01 38 55.1**	**-0.3**
	comp=Z,4.1nm,0.6s,mb4.6					
COLD	**Coldfoot**	**76.08 24**	*e*P	**P**	**01 39 53.1**	**+1.4**
	comp=Z,3.0nm,0.8s,mb4.3					
ARCES	**ARCESS Array B**	**81.57 340**	P	**P**	**01 40 22.4**	**+0.6**
	comp=Z,3.0nm,0.8s,mb4.2,baz=78,slow=7.2,SNR=16					
MMAI	**Mount Meron Ar**	**83.22 302**	P	**P**	**01 40 30.6**	**-0.5**
	comp=Z,1.0nm,0.6s,mb4.1,baz=67,slow=8.0,SNR=2.6					
FINES	**FINESS Array B**	**83.32 331**	P	**P**	**01 40 31.2**	**+0.1**
	comp=Z,3.6nm,1.0s,mb4.4,baz=60,slow=4.6,SNR=8.5					
FINES	**FINESS Array B**	**83.32 331**	P	**P**	**01 40 31.2**	**+0.1**
BRTR	**Keskin Array B**	**83.36 309**	P	**P**	**01 40 30.5**	**-1.2**
	comp=Z,0.5nm,0.8s,mb3.6,baz=106,slow=4.1,SNR=3.6					
AKASG	**Malin Array Be**	**84.14 321**	P	**P**	**01 40 36.8**	**+1.3**
	comp=Z,0.1nm,0.3s,mb3.5,baz=67,slow=8.2,SNR=4.3					
NOA	**NORSAR Array B**	**90.17 334**	LR	LR	02 26 27.3	
	comp=Z,26nm,18.7s,MS3.7,baz=80,slow=39					
PLCA	**Paso Flores**	**148.82 156**	PKPbc	PKPbc	01 47 54.3	+2.3
	comp=Z,2.2nm,0.7s,baz=168,slow=9.2,SNR=4.8					

*NEIC **15** 01:51:58.9, 32°.57S×72°.04W, h15km, ML3.2(GUC), After GUC.*

GUC 15 01:51:58.9±0.7, 32°.57S×72°.04W, h15km±7km, MD3.9, ML3.2, 3C-9D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHA	**Instituto Hidr**	**0.57**	**143**	⇓*i*P	Pg	01 52 09.5	-0.6
IHA				*i* S	Sg	01 52 17.6	-0.1
IHA	**Instituto Hidr**	**0.57**	**143**	⇓*i*P	Pg	01 52 09.5	-0.6
IHA				*i* S	Sg	01 52 17.6	-0.1
CHNG	**Los Chungos**	**0.82**	**34**	⇓*i*P	Pb	01 52 13.4	-1.5
CHNG				*e*S	Sg	01 52 25.0	-0.8
ROCH	**El Roble**	**0.96**	**115**	⇓*i*P	Pb	01 52 16.2	-1.0
ROCH				*i* S	Sb	01 52 29.7	0.0
ROCH	**El Roble**	**0.96**	**115**	⇓*i*P	Pb	01 52 16.2	-1.0
ROCH				*i* S	Sb	01 52 29.7	0.0
PEL	**Peldehue**	**1.28**	**117**	⇑*i*P	Pn	01 52 21.4	-0.8
PEL				*i* S	Sb	01 52 38.0	-0.9
PEL				AML	AML	01 52 42.4	
	comp=E,2μm,0.3s						
TACH	**Talagante**	**1.43**	**140**	⇓*i*P	Pn	01 52 23.6	-0.7
TACH				*i* S	Sn	01 52 41.7	-1.0
TACH	**Talagante**	**1.43**	**140**	⇓*i*P	Pn	01 52 23.6	-0.7
TACH				*i* S	Sn	01 52 41.7	-1.0
SAN	**Santiago**	**1.46**	**128**	*e*P	Pn	01 52 23.5	-1.2
SAN				*i* S	Sn	01 52 42.9	-0.6
SAN	**Santiago**	**1.46**	**128**	*e*P	Pn	01 52 23.5	-1.2
SAN				*i* S	Sn	01 52 42.9	-0.6
SAN				AML	AML	01 52 46.9	
	comp=N,386nm,0.4s						
CLCH	**Cerro Calan**	**1.51**	**123**	⇑*i*P	Pn	01 52 24.8	-0.6
CLCH				*i* S	Sn	01 52 44.5	-0.4
CLCH				AML	AML	01 52 50.0	
	comp=E,588nm,0.4s						
ANTU	**Antumapu**	**1.55**	**130**	*e*P	Pn	01 52 25.7	-0.2
ANTU				*e*S	Sn	01 52 45.8	0.0
ANTU	**Antumapu**	**1.55**	**130**	*e*P	Pn	01 52 25.7	-0.2
ANTU				*e*S	Sn	01 52 45.8	0.0
ANTU				AML	AML	01 52 51.1	
	comp=N,542nm,0.5s						
FCH	**Farellones**	**1.66**	**118**	⇑*i*P	Pn	01 52 29.9	+2.4
FCH				*i* S	Sn	01 52 52.2	+3.8
FCH				AML	AML	01 52 54.5	
	comp=E,542nm,0.3s						
PCH	**Pirque**	**1.66**	**130**	*e*P	Pn	01 52 27.5	+0.1
PCH				*i* S	Sn	01 52 48.7	+0.2
PCH	**Pirque**	**1.66**	**130**	*e*P	Pn	01 52 27.5	+0.1
PCH				*i* S	Sn	01 52 48.7	+0.2
CHCH	**Chadas Angostu**	**1.79**	**140**	⇓*i*P	Pn	01 52 29.5	+0.2
CHCH				*i* S	Sn	01 52 51.9	+0.2
CHCH	**Chadas Angostu**	**1.79**	**140**	⇓*i*P	Pn	01 52 29.5	+0.2
CHCH				*i* S	Sn	01 52 51.9	+0.2
CACH	**El Canelo**	**1.96**	**142**	*e*P	Pn	01 52 32.2	+0.6
CACH				*i* S	Sn	01 52 58.7	+2.8
CACH	**El Canelo**	**1.96**	**142**	*e*P	Pn	01 52 32.2	+0.6
CACH				*i* S	Sn	01 52 58.7	+2.8
LMEL	**Las Melosas**	**2.00**	**130**	*e*P	Pn	01 52 32.9	+0.7
LMEL				*i* S	Sn	01 52 58.4	+1.5
LMEL	**Las Melosas**	**2.00**	**130**	*e*P	Pn	01 52 32.9	+0.7
LMEL				*i* S	Sn	01 52 58.4	+1.5
LCO	**Las Campanas**	**3.73**	**18**	*e*Pn	Pn	01 52 55.1	-0.9
LCO				*e*S	Sn	01 53 49.5	+10

DJA 15 02:28:22, 2°.07S×100°.60E, h7km, MLv3.7/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**0.86**	**91**	P	Pg	02 28 39.4	+0.8
KRJI				S	Sg	02 28 50.7	+0.9
PDSI	**Padang**	**1.16**	**353**	P	Pg	02 28 43.1	-1.2
PDSI				S	Sg	02 28 59.5	+0.2
SDSI	**Sungai Dareh**	**1.40**	**36**	P	Pn	02 28 47.6	-0.4
SDSI				S	Sb	02 29 06.2	-0.4
PPI	**Padang Panjang**	**1.61**	**353**	P	Pn	02 28 50.8	-0.1
PPI				S	Sn	02 29 13.5	+1.5
SISI	**Saibi**	**1.68**	**296**	P	Pn	02 28 51.3	-0.5

*ISCJB **15** 02:38:41.3±1.4, 21°.00N±0°.04×121°.14E±0°.09, h7km±9km, mb3.5/5, Error ellipse: s-maj=13.7km s-min=6.6km az=170.3*
*IDC **15** 02:38:42.6±1.1, 21°.04N×120°.91E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.6/22, mbtmp3.7/6, MS2.9/1, Ms1 2.9/1, ms1mx2.4/25, Error ellipse: s-maj=69.7km s-min=19.7km az=69.0*
*NEIC **15** 02:38:43.8±0.7, 21°.12N×121°.08E, h10km, Error ellipse: s-maj=27.1km s-min=8.8km az=85.0*
*TAP **15** 02:38:44.5, 21°.21N×121°.20E, h81km±1km, ML3.8, C*

ISC 15 02:38:43.7±1.9, 21°.10N±0°.05×121°.17E±0°.08, h12km±13km, n37, σ0°.96/47, mb3.5/5, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**0.83**	**343**	P	**Pb**	**02 39 01.4**	**+1.4**
	baz=330						
TSEB				*e*S	**Sb**	**02 39 13.7**	**+2.5**
	baz=330						
TWK1	**Hengchun**	**0.90**	**338**	*i* P	**Pb**	**02 39 02.0**	**+0.8**
	baz=329						
TWK1				*i* S	**Sb**	**02 39 14.8**	**+1.6**
	baz=329						
HEN	**Hengchun**	**0.98**	**336**	P	**Pb**	**02 39 02.7**	**+0.1**
	baz=325						
HEN				S	**Sb**	**02 39 16.8**	**+1.3**
	baz=325						
LAY	**Lan-yu**	**1.00**	**21**	*i* P	**Pb**	**02 39 02.4**	**-0.5**
	baz=22						
LAY				S	**Sb**	**02 39 16.1**	**0.0**
	baz=22						
TAW	**Tawu**	**1.27**	**349**	*e*P	**Pn**	**02 39 06.5**	**-0.8**
	baz=355						
EAST	**Anshuo**	**1.31**	**347**	P	**Pn**	**02 39 07.3**	**-0.5**
	baz=354						
EAST				S	**Sb**	**02 39 23.7**	**-1.2**
	baz=354						
SCZT	**Fangliau**	**1.36**	**338**	*i* P	**Pn**	**02 39 07.7**	**-0.8**
	baz=330						
SCZT				S	**Sn**	**02 39 24.6**	**-1.8**
	baz=330						
SSD	**Sandimen**	**1.71**	**343**	*e*P	**Pn**	**02 39 12.3**	**-0.9**
	baz=347						
TWG	**Pinlang**	**1.71**	**357**	*e*Pn	**Pn**	**02 39 12.8**	**-0.6**
TWG				*e*Sn	**Sn**	**02 39 38.6**	**+3.5**
TWG	**Pinlang**	**1.71**	**357**	*e*P	**Pn**	**02 39 12.4**	**-0.9**
	baz=356						
TWM1	**Shoushan**	**1.85**	**338**	*e*P	**Pn**	**02 39 14.3**	**-0.9**
	baz=336						
SGST	**Jiashian**	**2.04**	**345**	*e*P	**Pn**	**02 39 17.4**	**-0.4**
	baz=334						
STYT	**Tauyuan**	**2.09**	**350**	*e*P	**Pn**	**02 39 18.2**	**-0.2**
	baz=348						
CHN1	**Nanshi**	**2.16**	**344**	*e*P	**Pn**	**02 39 18.4**	**-1.0**
	baz=353						
WTP	**Ta-pu**	**2.19**	**347**	*e*P	**Pn**	**02 39 19.1**	**-0.8**
	baz=345						
TPUB	**Ta-pu**	**2.24**	**347**	*e*Pn	**Pn**	**02 39 19.7**	**-0.9**
TPUB				*e*Sn	**Sn**	**02 39 55.3**	**+7.1**
TWF1	**Yuli**	**2.24**	**3**	*e*P	**Pn**	**02 39 19.7**	**-0.9**
	baz=357						
TWK	**Hsinying**	**2.25**	**344**	*e*P	**Pn**	**02 39 20.9**	**+0.3**
	baz=353						
YULB	**Yu-li**	**2.28**	**3**	*e*Pn	**Pn**	**02 39 21.4**	**+0.3**
YULB				*e*S	**Sn**	**02 39 49.7**	**+0.5**
CHN4	**Tsaushan**	**2.30**	**347**	*e*P	**Pn**	**02 39 21.5**	**+0.1**
	baz=345						
YUS	**Yu-Shan**	**2.38**	**355**	*e*P	**Pn**	**02 39 22.4**	**-0.1**
	baz=354						
ALS	**Alishan**	**2.42**	**352**	*e*P	**Pn**	**02 39 22.8**	**-0.3**
	baz=351						
CHN5	**Tsauling**	**2.52**	**350**	*e*P	**Pn**	**02 39 23.9**	**-0.6**
	baz=349						
SSLB	**Suanglung**	**2.68**	**356**	*e*Pn	**Pn**	**02 39 27.6**	**+1.0**
SMLT	**Sun Moon Lake**	**2.78**	**355**	*e*P	**Pn**	**02 39 27.7**	**-0.3**
	baz=354						
TYC	**Yuchr**	**2.80**	**354**	*e*P	**Pn**	**02 39 27.3**	**-1.1**
	baz=354						
WHF	**Hehuan Shan**	**3.03**	**2**	*e*P	**Pn**	**02 39 31.7**	**+0.3**
	baz=351						
NACB	**Ninganchiao**	**3.08**	**7**	*e*Pn	**Pn**	**02 39 31.9**	**-0.3**
YHNB	**Yeheng**	**3.56**	**3**	*e*Pn	**Pn**	**02 39 40.2**	**+1.6**
YHNB				*e*S	**Sn**	**02 40 25.9**	**+5.3**
KSRS	**Korea Array**	**17.32**	**18**	P	**Pn**	**02 42 47.9**	**+2.7**
	baz=198,slow=10,SNR=6.5						
SONM	**Songino Array**	**29.21**	**339**	P	**P**	**02 44 45.1**	**+0.1**
	1.2nm,0.8s,mb3.7,baz=152,slow=11,SNR=6.6						
MKAR	**Makanchi Array**	**40.58**	**318**	P	**P**	**02 46 23.4**	**+0.4**
	0.5nm,0.7s,mb3.2,baz=116,slow=8.5,SNR=5.0						
MKAR				LR	LR	03 05 34.1	
	comp=Z,14nm,19.3s,baz=84,slow=40						
MKAR	**Makanchi Array**	**40.58**	**318**	P	**P**	**02 46 23.4**	**+0.4**
MKAR				LR	LR	03 05 34.1	
WRA	**Warramunga Arr**	**42.78**	**162**	P	**P**	**02 46 41.5**	**+0.3**
	0.4nm,0.4s,mb3.5,baz=343,slow=9.1,SNR=6.2						
WRA	**Warramunga Arr**	**42.78**	**162**	P	**P**	**02 46 41.5**	**+0.2**
ZALV	**Zalesovo Beam**	**42.84**	**329**	P	**P**	**02 46 41.4**	**0.0**
	1.4nm,0.7s,mb3.8,baz=110,slow=8.5,SNR=5.6						
ASAR	**Alice Springs**	**46.19**	**164**	P	**P**	**02 47 10.1**	**+1.6**
	0.2nm,0.3s,mb3.5,baz=349,slow=7.4,SNR=5.2						

*ISCJB **15** 02:44:17.6±0.6, 37°.04N±0°.03×29°.22E±0°.03, h5km±5km, Error ellipse: s-maj=5.6km s-min=3.6km az=15.2*
*CSEM **15** 02:44:17.9±0.2, 37°.06N×29°.23E, h8km, MD3.1, Error ellipse: s-maj=4.7km s-min=2.9km az=11.0*
*DDA **15** 02:44:17.9, 37°.06N×29°.21E, h7km±7km, Md3.2*
*ISK **15** 02:44:17.2, 37°.05N×29°.22E, h6km, MD3.1*

ISC 15 02:44:18.3±0.5, 37°.05N±0°.03×29°.23E±0°.03, h9km±4km, n48, σ0°.89/66, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.24**	**64**	PG	**Pg**	**02 44 22.6**	**-0.7**
GLHS				*e*SG	**Sg**	**02 44 27.0**	**+0.5**
GLHS	**Glhisar (BURDU**	**0.24**	**64**	*i* Pg	**Pg**	**02 44 22.6**	**-0.6**
GLHS				*e*Sg	**Sg**	**02 44 27.0**	**+0.5**
GOLH	**Golhisar**	**0.33**	**55**	*i* P	**Pg**	**02 44 23.5**	**-1.3**
GOLH				*i* S	**Sg**	**02 44 30.1**	**+0.9**
GOLH	**Golhisar**	**0.33**	**55**	*i* P	**Pg**	**02 44 23.5**	**-1.3**
GOLH				*i* S	**Sg**	**02 44 30.1**	**+0.9**
ELL	**Elmali**	**0.62**	**118**	*e*PG	**Pg**	**02 44 29.2**	**-1.2**
ELL				*e*SG	**Sg**	**02 44 38.7**	**+0.2**
ELL	**Elmali**	**0.62**	**118**	*e*Pg	**Pg**	**02 44 29.2**	**-1.1**
ELL				*e*Sg	**Sg**	**02 44 38.7**	**+0.2**
DNZL	**Cakiroluk**	**0.66**	**348**	*i* P	**Pg**	**02 44 30.1**	**-0.9**
DNZL				*i* S	**Sg**	**02 44 41.6**	**+2.0**
DNZL	**Cakiroluk**	**0.66**	**348**	*i* P	**Pg**	**02 44 30.1**	**-0.9**
DNZL				*i* S	**Sg**	**02 44 41.6**	**+2.0**
DENT	**Denizli**	**0.72**	**348**	*e*PG	**Pg**	**02 44 30.9**	**-1.3**
DENT				*e*SG	**Sg**	**02 44 41.6**	**-0.1**
DENT	**Denizli**	**0.72**	**348**	*e*Pg	**Pg**	**02 44 30.9**	**-1.3**
DENT				*e*Sg	**Sg**	**02 44 41.6**	**0.0**
YER	**Yerkesik**	**0.76**	**277**	*e*PG	**Pg**	**02 44 32.1**	**-0.8**
YER				*e*SG	**Sg**	**02 44 43.9**	**+1.1**
YER	**Yerkesik**	**0.76**	**277**	*e*Pg	**Pg**	**02 44 32.1**	**-0.8**
YER				*e*Sg	**Sg**	**02 44 43.9**	**+1.1**
AKAS	**Kas**	**0.87**	**159**	*i* P	**Pg**	**02 44 31.0**	**-4.0**
AKAS				*i* S	**Sg**	**02 44 48.6**	**+2.4**
AKAS	**Kas**	**0.87**	**159**	*i* P	**Pg**	**02 44 31.0**	**-4.0**
AKAS				*i* S	**Sg**	**02 44 48.7**	**+2.4**
ANTB	**Antalya**	**1.15**	**97**	*e*PN	**Pn**	**02 44 39.5**	**-1.0**
ANTB	**Antalya**	**1.15**	**97**	*e*Pn	**Pn**	**02 44 39.5**	**-1.0**
BCK	**Bucak**	**1.16**	**69**	*e*PN	**Pn**	**02 44 39.9**	**-0.8**
BCK				*e*SN	**Sn**	**02 44 57.3**	**+0.7**
BCK	**Bucak**	**1.16**	**69**	*e*Pn	**Pn**	**02 44 39.9**	**-0.8**
BCK				*e*Sn	**Sn**	**02 44 57.3**	**+0.6**
MLSB	**Milas**	**1.18**	**282**	*e*PN	**Pn**	**02 44 40.0**	**-1.0**
MLSB	**Milas**	**1.18**	**282**	*e*Pn	**Pn**	**02 44 40.0**	**-0.9**
AYDN	**Tasoluk**	**1.23**	**300**	*i* P	**Pn**	**02 44 40.3**	**-1.4**
AYDN				*i* S	**Sb**	**02 44 58.8**	**+1.1**
AYDN	**Tasoluk**	**1.23**	**300**	*i* P	**Pn**	**02 44 40.3**	**-1.4**
AYDN				*i* S	**Sb**	**02 44 58.8**	**+1.1**
KHL	**Karahalli**	**1.29**	**10**	*e*PN	**Pn**	**02 44 42.5**	**0.0**
KHL	**Karahalli**	**1.29**	**10**	*e*Pn	**Pn**	**02 44 42.5**	**0.0**
DAT	**Datca**	**1.36**	**257**	*e*PN	**Pn**	**02 44 43.9**	**+0.5**
DAT	**Datca**	**1.36**	**257**	*e*Pn	**Pn**	**02 44 43.9**	**+0.5**
SUTC	**Sutluce-Ispart**	**1.48**	**73**	*e*PN	**Pn**	**02 44 45.4**	**+0.4**
SUTC	**Sutluce-Ispart**	**1.48**	**73**	*e*Pn	**Pn**	**02 44 45.4**	**+0.4**
KULA	**Kula-Manisa**	**1.53**	**343**	*e*PN	**Pn**	**02 44 45.5**	**-0.2**
KULA	**Kula-Manisa**	**1.53**	**343**	*e*Pn	**Pn**	**02 44 45.5**	**-0.2**
BODT	**Bodrum**	**1.53**	**271**	*e*PN	**Pn**	**02 44 45.7**	**0.0**
BODT	**Bodrum**	**1.53**	**271**	*e*Pn	**Pn**	**02 44 45.7**	**0.0**
SHUT	**Suhut-Afyon**	**1.83**	**35**	*e*PN	**Pn**	**02 44 50.1**	**+0.2**
SHUT	**Suhut-Afyon**	**1.83**	**35**	*e*Pn	**Pn**	**02 44 50.1**	**+0.2**
IZM	**Izmir**	**2.06**	**311**	*e*PN	**Pn**	**02 44 53.1**	**+0.1**
IZM	**Izmir**	**2.06**	**311**	*e*Pn	**Pn**	**02 44 53.1**	**+0.1**
ALT	**Altintas**	**2.12**	**19**	*e*PN	**Pn**	**02 44 53.8**	**-0.1**
ALT	**Altintas**	**2.12**	**19**	*e*Pn	**Pn**	**02 44 53.8**	**-0.1**
AKS	**Akhisar**	**2.14**	**329**	*e*PN	**Pn**	**02 44 54.3**	**+0.2**
AKS	**Akhisar**	**2.14**	**329**	*e*Pn	**Pn**	**02 44 54.3**	**+0.2**
BLCB	**Balcova**	**2.19**	**308**	*e*PN	**Pn**	**02 44 54.8**	**0.0**
BLCB	**Balcova**	**2.19**	**308**	*e*Pn	**Pn**	**02 44 54.8**	**+0.1**
HDMB	**Hadim**	**2.61**	**91**	*e*PN	**Pn**	**02 45 01.1**	**+0.5**
HDMB	**Hadim**	**2.61**	**91**	*e*Pn	**Pn**	**02 45 01.1**	**+0.5**
KONT	**Konya--Tatoy**	**2.65**	**69**	*e*PN	**Pn**	**02 45 02.1**	**+0.9**
KONT	**Konya--Tatoy**	**2.65**	**69**	*e*Pn	**Pn**	**02 45 02.1**	**+1.0**
KIZT	**Kizilcal**	**2.78**	**48**	*e*PN	**Pn**	**02 45 03.0**	**0.0**
KIZT	**Kizilcal**	**2.78**	**48**	*e*Pn	**Pn**	**02 45 03.0**	**0.0**

MAN 15 02:55:30, 16°.10N×121°.97E, h28km, mb4.8, ML3.7, MS3.8, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALP	**Baler**	**0.52**	**227**	*e*P	Pb	02 55 41.2	+0.5
BALP				*e*S	Sb	02 55 43.2	-4.7
CAUP	**Cauayan**	**0.86**	**350**	*e*P	Pn	02 55 45.7	-0.5
CAUP				*e*S	Sb	02 55 50.1	-7.3
PCPH	**Palayan**	**1.00**	**238**	⇑*e*P	Pn	02 55 47.8	-0.3
PCPH				*i* S	Sn	02 56 01.7	+0.4
PALP	**Palanan**	**1.05**	**24**	*e*P	Pn	02 55 50.9	+1.9
PALP				*e*S	Sn	02 56 01.6	-1.1
POLP	**Polilio Island**	**1.36**	**181**	*e*P	Pn	02 55 53.3	+0.2
CVP	**Callao Caves**	**1.61**	**355**	*e*P	Pn	02 55 56.0	-0.5
CVP				*e*S	Sn	02 56 15.2	-1.1
APYP	**Conner**	**1.89**	**338**	*e*P	Pn	02 56 01.2	+0.8
ABRA	**Dolores**	**1.96**	**322**	*e*P	Pn	02 56 03.0	+1.6
BOLP	**Bolinao**	**2.00**	**278**	*e*P	Pn	02 56 04.1	+2.2

*ISCJB **15** 02:57:25.5±0.7, 36°.99N±0°.04×29°.24E±0°.04, h3km±8km, Error ellipse: s-maj=6.5km s-min=5.3km az=23.5*
*CSEM **15** 02:57:25.6±0.2, 37°.00N×29°.25E, h2km, MD2.8, Error ellipse: s-maj=6.6km s-min=4.3km az=3.0*
*DDA **15** 02:57:26.7, 37°.06N×29°.18E, h3km, Md3.0*
*ISK **15** 02:57:26.0, 37°.00N×29°.30E, h8km, MD2.8*

ISC 15 02:57:25.6±0.6, 36°.99N±0°.04×29°.22E±0°.03, h1km±7km, n30, σ0°.99/43, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.28**	**54**	*e*PG	**Pg**	**02 57 30.5**	**-0.4**
GLHS				*e*SG	**Sg**	**02 57 34.9**	**+0.4**
GLHS	**Glhisar (BURDU**	**0.28**	**54**	*e*Pg	**Pg**	**02 57 30.5**	**-0.4**
GLHS				*e*Sg	**Sg**	**02 57 34.9**	**+0.4**
GOLH	**Golhisar**	**0.36**	**48**	*i* P	**Pg**	**02 57 32.3**	**-0.3**
GOLH				*i* S	**Sg**	**02 57 38.9**	**+1.6**
GOLH	**Golhisar**	**0.36**	**48**	*i* P	**Pg**	**02 57 32.3**	**-0.3**
GOLH				*i* S	**Sg**	**02 57 38.9**	**+1.5**
ELL	**Elmali**	**0.60**	**114**	*e*PG	**Pg**	**02 57 37.0**	**-0.1**
ELL				*e*SG	**Sg**	**02 57 45.2**	**+0.2**
ELL	**Elmali**	**0.60**	**114**	*e*Pg	**Pg**	**02 57 37.0**	**-0.2**
ELL				*e*Sg	**Sg**	**02 57 45.2**	**+0.2**
DNZL	**Cakiroluk**	**0.71**	**349**	*i* P	**Pg**	**02 57 36.7**	**-2.5**
DNZL				*i* S	**Sg**	**02 57 48.7**	**+0.3**
DNZL	**Cakiroluk**	**0.71**	**349**	*i* P	**Pg**	**02 57 36.7**	**-2.5**
DNZL				*i* S	**Sg**	**02 57 48.7**	**+0.3**
YER	**Yerkesik**	**0.76**	**281**	*e*PG	**Pg**	**02 57 42.3**	**+2.0**
YER	**Yerkesik**	**0.76**	**281**	*e*Pg	**Pg**	**02 57 42.3**	**+2.1**
AKAS	**Kas**	**0.82**	**158**	*i* P	**Pg**	**02 57 40.9**	**-0.4**
AKAS				*i* S	**Sg**	**02 57 56.8**	**+4.9**
AKAS	**Kas**	**0.82**	**158**	*i* P	**Pg**	**02 57 40.9**	**-0.4**
MLSB	**Milas**	**1.19**	**285**	*e*PN	**Pn**	**02 57 50.6**	**+1.2**
MLSB	**Milas**	**1.19**	**285**	*e*Pn	**Pn**	**02 57 50.6**	**+1.2**
AYDN	**Tasoluk**	**1.26**	**302**	*i* P	**Pg**	**02 57 48.7**	**-1.0**
AYDN				*i* S	**Sg**	**02 58 06.2**	**+0.1**
AYDN	**Tasoluk**	**1.26**	**302**	*i* P	**Pg**	**02 57 48.7**	**-1.1**
AYDN				*i* S	**Sg**	**02 58 06.2**	**+0.1**
DAT	**Datca**	**1.34**	**259**	*e*PN	**Pn**	**02 57 52.9**	**+1.4**
DAT	**Datca**	**1.34**	**259**	*e*Pn	**Pn**	**02 57 52.9**	**+1.4**
BDRM	**Kayabasi**	**1.42**	**273**	*i* P	**Pn**	**02 57 50.5**	**-2.1**
BDRM				*i* S	**Sg**	**02 58 11.1**	**-0.2**
BDRM	**Kayabasi**	**1.42**	**273**	*i* P	**Pn**	**02 57 50.5**	**-2.1**
BDRM				*i* S	**Sg**	**02 58 11.1**	**-0.2**
SUTC	**Sutluce-Ispart**	**1.50**	**71**	*e*PN	**Pn**	**02 57 52.9**	**-0.7**
SUTC	**Sutluce-Ispart**	**1.50**	**71**	*e*Pn	**Pn**	**02 57 52.9**	**-0.8**
BODT	**Bodrum**	**1.53**	**273**	*e*PN	**Pn**	**02 57 54.5**	**+0.5**
BODT	**Bodrum**	**1.53**	**273**	*e*Pn	**Pn**	**02 57 54.5**	**+0.4**
KULA	**Kula-Manisa**	**1.58**	**344**	*e*PN	**Pn**	**02 57 54.7**	**-0.1**
KULA	**Kula-Manisa**	**1.58**	**344**	*e*Pn	**Pn**	**02 57 54.7**	**-0.1**
**SH

comp=N,1.5nm,0.9s,mb3.9,baz=94,slow=5.1,SNR=3.2
EKA Eskdalemuir Ar 84.22 325 P P 03 28 44.4 -0.8
comp=N,1.4nm,0.6s,mb4.3,baz=92,slow=5.8,SNR=7.9
PDAR Pinedale Array 123.10 19 PKP PKPdf 03 35 10.8 +0.3
comp=N,0.3nm,0.6s,baz=88,slow=4.1,SNR=2.9
NVAR Mina Array Bea 123.35 28 PKP PKPdf 03 35 12.3 +1.2
comp=N,0.2nm,0.5s,baz=282,slow=1.6,SNR=3.4
TXAR Lajitas Array 137.27 21 PKP PKPdf 03 35 37.0 -0.7
comp=N,0.1nm,0.5s,baz=91,slow=0.2,SNR=4.6
CPUP Villa Florida 147.34 238 PKPbc PKPbc 03 35 58.0 0.0
comp=N,0.5nm,0.4s,baz=90,slow=10,SNR=4.6
CFAA Coronel Fontan 152.49 218 PKPbc PKPbc 03 36 11.0 +0.5
comp=N,0.1nm,0.6s,baz=174,slow=4.6,SNR=3.9

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*BGS **15** 03:26:21.3±1.8, 34°.83N×28°.80E, h52km, mb6.3, MS5.8*
*SZGRF **15** 03:26:31.9, 35°.96N×28°.27E, h33km, mb6.7, Eastern Mediterranean Sea*
*NIC **15** 03:26:32.7±0.2, 35°.69N×27°.85E, h65km, mb5.9, ML5.9*
NIC Felt earthquake; Maximum Intensity 3; DODECANESE ISLANDS, GREECE - Felt I=III MM at Paphos, Polis, Limassol and Nicosi.
*DJA **15** 03:26:33, 35°.72N×27°.97E, h13km, Mw6.4/31*
*BJI **15** 03:26:33.0, 36°.23N×27°.49E, h56km, mB6.0/35, mb5.9/35, Ms6.1/76, Ms7 5.9/60*
*PDG **15** 03:26:33.0±0.6, 35°.86N×27°.90E, h20km±2km, MD6.5/9, ML6.3/10, Error ellipse: s-maj=1.2km s-min=0.9km az=90.0*
*MOS **15** 03:26:33.4±1.0, 35°.77N×27°.95E, h76km, mb6.6/112, MS6.0/96, Error ellipse: s-maj=4.3km s-min=1.8km az=116.6*
*ISK **15** 03:26:33.7, 35°.80N×27°.88E, h32km, ML6.4*
*ISCJB **15** 03:26:34.9±0.1, 35°.918N±0°.009×27°.827E±0°.008, h63km, mb6.4/476, Error ellipse: s-maj=1.4km s-min=0.9km az=9.6*
*CSEM **15** 03:26:34.3±0.1, 35°.73N×27°.86E, h58km, mb6.4/99, Ms5.7, Mw6.4, Error ellipse: s-maj=2.0km s-min=1.4km az=22.0*
*ATH **15** 03:26:34.5, 35°.85N×27°.92E, h56km±1km, ML6.2*
*NEIC **15** 03:26:34.7±0.1, 35°.80N×27°.86E, h52km, mb6.5/286, ME6.8, MW6.4, MW6.3, Error ellipse: s-maj=2.8km s-min=1.9km az=19.0 Broadband fault plane solution: P waves. NP1:φs=5.00000°, δ65.00000°, λ175.00000°. NP2:φs=97.00000°, δ85.00000°, λ25.00000°. Principal axes: T Plg21.0000°, Azm324.0000°; N Plg0.0000°, Azm0.0000°; P Plg14.0000°, Azm228.0000°; Moment Tensor Solution. s149 Moment tensor: Scale 10^18 Nm; Mrr0.08; Mθθ0.53; Mφφ-0.61; Mrθ1.73; Mθφ2.66; Mφr0.37; Best double couple: M0=3.20000×10^18 NP1:φs=3.00000°, δ59.00000°, λ173.00000°. NP2:φs=97.00000°, δ84.00000°, λ31.00000°. Principal axes: T 3.4400, Plg25.0000°, Azm324.0000°; N -0.4400, Plg58.0000°, Azm106.0000°; P -3.0000, Plg16.0000°, Azm226.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC One person killed on Rhodes. Felt [VII] at Trianta, [VI] at Lardos, [V] at Rodos and [III] at Iraklion and Kos. Also felt at Afantou, Antimacheia, Ayios Nikolaos, Chania, Gazion, Ierapetra, Kallithea, Karpathos, Kissamos, Kolimvarion, Kremasti, Masari, Neapolis, Oia, Rethymnon, Soroni, Thira and on Simi. Felt [V] at Marmaris, [IV] at Alanya and Bodrum and [III] at Fethiye, Turkey. Also felt at Antalya, Aydin, Izmir, Kusadasi, Milas, Mugla, Soke and Urla. Felt [III] at Paphos and [II] at Limassol, Cyprus. Also felt at Kyrenia, Nicosia and Polis. Felt [III] at Alexandria, Al Jizah and Cairo, Egypt. Also felt at Al Maks, Az Zaqaziq, Damanhur, Fa'id and Tanta. Felt at Kefar Sava, Haifa and Ramat Gan, Israel; at Beirut, Lebanon; at Ramallah, West Bank and at Damascus, Syria.
*IDC **15** 03:26:34.8±0.7, 36°.05N×27°.72E, h44km±5km, mb6.0/38, mb1 6.0/42, mb1mx6.0/42, mbtmp5.9/42, ML4.6/2, MS5.9/28, Ms1 5.9/28, ms1mx5.7/40 Error ellipse: s-maj=7.4km s-min=6.6km az=142.0*
*SGS **15** 03:26:35.8, 35°.78N×27°.95E, h56km*
*PDA **15** 03:26:35.9, 36°.03N×27°.70E, h52km, Mw6.4*
*THE **15** 03:26:35.5, 35°.83N×28°.03E, h33km±3km, ML7.0/10, Error ellipse: s-maj=3.3km s-min=0.8km az=105.0*
*DDA **15** 03:26:36.4, 36°.01N×27°.97E, h57km±11km, Ml6.1*
*SFS **15** 03:26:36.0, 35°.98N×27°.79E, h68km, ML6.4*
*HLW **15** 03:26:37.0, 35°.40N×28°.09E, h33km±69km, Md4.3, Ml6.2*
*GCMT **15** 03:26:39.8±0.1, 35°.67N×27°.69E, h42km, MW6.4, Moment Tensor Solution. s107,c247; s99,c188; Moment tensor: Scale 10^18Nm; Mrr-1.22±.03; Mθθ-0.04±.03; Mφφ 1.26±.03; Mrθ2.56±.04; Mθφ3.96±.03; Mφr0.38±.04; Best double couple: M0=4.80000×10^18 NP1:φs=357.00000°, δ55.00000°, λ-169.00000°. NP2:φs=261.00000°, δ81.00000°, λ-36.00000°. Principal axes: T 5.2400, Plg18.0000°, Azm314.0000°; N -0.8000, Plg53.0000°, Azm69.0000°; P -4.4400, Plg31.0000°, Azm213.0000°; Data Used: II IU CN IC G. Mantle waves from 106 sta. Surface waves: sta=116, comp=270, per= 50.*
*NSSC **15** 03:26:54, 35°.78N×29°.90E, h40km*
*TEH **15** 03:29:00.0, 35°.98N×27°.79E, h68km*
ISC 15 03:26:36.5±0.1, 35°.923N±0°.009×27°.804E±0°.008, h65km, h65km±2.0km:pP-P, n3609, σ1°12/3699, mb6.3/475, 689C-290D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.39**	**42**	⇓*i*P	**Pn**	**03 26 45.9**	**-2.0**
ARG				*e*S	**Sn**	**03 26 54.1**	**-2.1**
ARG	**Arkhangelos**	**0.39**	**42**	⇓*i*P	**Pn**	**03 26 45.9**	**-2.0**
ARG				*e*S	**Sn**	**03 26 54.1**	**-2.1**
ARG	**Arkhangelos**	**0.39**	**42**	P	**Pn**	**03 26 45.5**	**-2.4**
ARG				S	**Sn**	**03 26 50.3**	**-5.9**
ARG	**Arkhangelos**	**0.39**	**42**	⇓*i*P	**Pn**	**03 26 45.9**	**-2.0**
ARG				*e*S	**Sn**	**03 26 54.1**	**-2.1**
KARP	**Karpathos**	**0.64**	**235**	⇓*i*P	**Pn**	**03 26 48.9**	**-1.5**
KARP				*e*S	**Sn**	**03 26 59.4**	**-1.2**
KARP	**Karpathos**	**0.64**	**235**	⇓*i*P	**Pn**	**03 26 48.9**	**-1.5**
KARP				*e*S	**Sn**	**03 26 59.4**	**-1.2**
KARP	**Karpathos**	**0.64**	**235**	⇓*i*P	**Pn**	**03 26 48.9**	**-1.5**
KARP				*e*S	**Sn**	**03 26 59.4**	**-1.2**
DAT	**Datca**	**0.82**	**347**	PG	**Pn**	**03 26 52.4**	**-0.2**
DAT	**Datca**	**0.82**	**347**	*i* Pg	**Pn**	**03 26 52.4**	**-0.2**
NIS1	**Nisyros Isl.**	**0.85**	**323**	P	**Pn**	**03 26 52.3**	**-0.5**
NIS1				S	**Sn**	**03 27 06.0**	**+1.1**
NIS1	**Nisyros Isl.**	**0.85**	**323**	P	**Pn**	**03 26 52.3**	**-0.5**
NIS1				S	**Sn**	**03 27 06.0**	**+1.1**
TURN	**Turunc**	**1.15**	**34**	⇓*i*P	**Pn**	**03 26 53.7**	**-3.0**
TURN				*i* S	**Sn**	**03 27 08.0**	**-3.7**
TURN	**Turunc**	**1.15**	**34**	*i* P	**Pn**	**03 26 53.7**	**-3.0**
BDRM	**Kayabasi**	**1.18**	**346**	P	**Pn**	**03 26 56.7**	**-0.4**
BDRM				S	**Sn**	**03 27 12.9**	**+0.5**
BDRM	**Kayabasi**	**1.18**	**346**	⇑*i*P	**Pn**	**03 26 56.7**	**-0.3**
BDRM				*i* S	**Sn**	**03 27 12.9**	**+0.6**
BDRM	**Kayabasi**	**1.18**	**346**	*i* P	**Pn**	**03 26 56.7**	**-0.4**
BDRM				*i* S	**Sn**	**03 27 12.9**	**+0.5**
BODT	**Bodrum**	**1.20**	**341**	PN	**Pn**	**03 26 57.2**	**-0.3**
BODT				*e*SN	**Sn**	**03 27 13.2**	**+0.2**
BODT	**Bodrum**	**1.20**	**341**	Pn	**Pn**	**03 26 56.5**	**-0.9**
BODT				Sg	**Sn**	**03 27 14.5**	**+1.5**
BODT	**Bodrum**	**1.20**	**341**	Pn	**Pn**	**03 26 56.5**	**-0.9**
BODT				*e*Sn	**Sn**	**03 27 13.2**	**+0.2**
BODT				Sg	**Sn**	**03 27 14.5**	**+1.5**
YER	**Yerkesik**	**1.27**	**18**	PN	**Pn**	**03 26 58.5**	**+0.2**
YER				*e*SN	**Sn**	**03 27 14.7**	**+0.2**
YER	**Yerkesik**	**1.27**	**18**	Pn	**Pn**	**03 26 57.5**	**-0.8**
YER	**Yerkesik**	**1.27**	**18**	P	**Pn**	**03 26 57.5**	**-0.8**
YER	**Yerkesik**	**1.27**	**18**	*i* Pn	**Pn**	**03 26 58.5**	**+0.2**
YER				*e*Sn	**Sn**	**03 27 14.7**	**+0.2**
MLSB	**Milas**	**1.37**	**359**	PN	**Pn**	**03 26 59.3**	**-0.3**
MLSB	**Milas**	**1.37**	**359**	Pn	**Pn**	**03 26 59.5**	**-0.1**
MLSB	**Milas**	**1.37**	**359**	Pn	**Pn**	**03 26 59.5**	**-0.1**
KSL	**Kastellorizon**	**1.46**	**81**	*e*P	**Pn**	**03 26 58.5**	**-2.3**
KSL	**Kastellorizon**	**1.46**	**81**	*e*P	**Pn**	**03 26 58.5**	**-2.3**
AKAS	**Kas**	**1.49**	**77**	P	**Pn**	**03 26 59.1**	**-2.1**
AKAS	**Kas**	**1.49**	**77**	⇓*i*P	**Pn**	**03 26 59.2**	**-2.0**
AKAS				*i* S	**Sn**	**03 27 14.6**	**-5.2**
AKAS	**Kas**	**1.49**	**77**	P	**Pn**	**03 26 59.1**	**-2.1**
AKAS				*i* S	**Sn**	**03 27 14.6**	**-5.2**
ZKR	**Zakros**	**1.52**	**239**	⇓*i*P	**Pn**	**03 27 01.9**	**+0.2**
ZKR				*e*S	**Sn**	**03 27 21.1**	**+0.5**
ZKR	**Zakros**	**1.52**	**239**	⇓*i*P	**Pn**	**03 27 01.9**	**+0.2**
ZKR				*e*S	**Sn**	**03 27 21.1**	**+0.5**
ZKR	**Zakros**	**1.52**	**239**	P	**Pn**	**03 27 01.8**	**+0.1**
ZKR				S	**Sn**	**03 27 21.3**	**+0.7**
ZKR	**Zakros**	**1.52**	**239**	⇓*i*P	**Pn**	**03 27 01.9**	**+0.2**
ZKR				*e*S	**Sn**	**03 27 21.1**	**+0.5**
GCAM	**G?zelcaml?**	**1.83**	**346**	⇑*i*P	**Pn**	**03 27 06.0**	**+0.2**
GCAM				*i* S	**Sn**	**03 27 28.5**	**+0.5**
GCAM	**G?zelcaml?**	**1.83**	**346**	*i* P	**Pn**	**03 27 06.0**	**+0.2**
GCAM				*i* S	**Sn**	**03 27 28.5**	**+0.5**
GLHS	**Glhisar (BURDU**	**1.84**	**47**	PN	**Pn**	**03 27 05.2**	**-0.7**
GLHS	**Glhisar (BURDU**	**1.84**	**47**	Pn	**Pn**	**03 27 04.6**	**-1.3**
GLHS	**Glhisar (BURDU**	**1.84**	**47**	*i* Pn	**Pn**	**03 27 05.2**	**-0.7**
ELL	**Elmali**	**1.89**	**64**	PN	**Pn**	**03 27 05.7**	**-0.9**
ELL	**Elmali**	**1.89**	**64**	Pn	**Pn**	**03 27 05.0**	**-1.5**
ELL	**Elmali**	**1.89**	**64**	P	**Pn**	**03 27 05.0**	**-1.5**
ELL	**Elmali**	**1.89**	**64**	*i* Pn	**Pn**	**03 27 05.7**	**-0.8**
NPS	**Neapolis**	**1.90**	**250**	*e*P	**Pn**	**03 27 07.0**	**+0.2**
NPS				*e*S	**Sn**	**03 27 29.2**	**-0.5**
NPS	**Neapolis**	**1.90**	**250**	*e*P	**Pn**	**03 27 07.0**	**+0.2**
NPS				*e*S	**Sn**	**03 27 29.2**	**-0.5**
NPS	**Neapolis**	**1.90**	**250**	*e*P	**Pn**	**03 27 07.0**	**+0.2**
NPS				*e*S	**Sn**	**03 27 29.2**	**-0.5**
GOLH	**Golhisar**	**1.93**	**47**	⇓*i*P	**Pn**	**03 27 07.2**	**+0.1**
GOLH				*i* S	**Sn**	**03 27 33.3**	**+2.9**
GOLH	**Golhisar**	**1.93**	**47**	*i* P	**Pn**	**03 27 07.2**	**+0.1**
GOLH				*i* S	**Sn**	**03 27 33.3**	**+3.0**
SMG	**Samos**	**1.94**	**337**	⇑*i*P	**Pn**	**03 27 07.6**	**+0.3**
SMG				*e*S	**Sn**	**03 27 32.4**	**+1.7**
SMG	**Samos**	**1.94**	**337**	⇑*i*P	**Pn**	**03 27 07.6**	**+0.3**
SMG				*e*S	**Sn**	**03 27 32.4**	**+1.7**
SMG	**Samos**	**1.94**	**337**	⇑*i*P	**Pn**	**03 27 07.6**	**+0.3**
SMG				*e*S	**Sn**	**03 27 32.4**	**+1.7**
LAST	**Lasithi**	**2.04**	**249**	⇓*i*P	**Pn**	**03 27 08.5**	**-0.1**
LAST	**Lasithi**	**2.04**	**249**	⇓*i*P	**Pn**	**03 27 08.5**	**-0.1**
LAST	**Lasithi**	**2.04**	**249**	P	**Pn**	**03 27 08.3**	**-0.3**
LAST				S	**Sn**	**03 27 33.7**	**+0.6**
LAST	**Lasithi**	**2.04**	**249**	⇓*i*P	**Pn**	**03 27 08.5**	**-0.1**
DENT	**Denizli**	**2.08**	**28**	*e*PN	**Pn**	**03 27 08.3**	**-0.8**
DENT	**Denizli**	**2.08**	**28**	Pn	**Pn**	**03 27 08.7**	**-0.4**
DENT	**Denizli**	**2.08**	**28**	Pn	**Pn**	**03 27 08.7**	**-0.4**
APE	**Apeiranthos**	**2.16**	**303**	*e*PN	**Pn**	**03 27 10.6**	**+0.4**
APE	**Apeiranthos**	**2.16**	**303**	*e*P	**Pn**	**03 27 10.7**	**+0.5**
APE				*e*S	**Sn**	**03 27 38.3**	**+2.4**
APE	**Apeiranthos**	**2.16**	**303**	*e*P	**Pn**	**03 27 10.7**	**+0.5**
APE				*e*S	**Sn**	**03 27 38.3**	**+2.4**
APE	**Apeiranthos**	**2.16**	**303**	P	**Pn**	**03 27 10.1**	**-0.1**
APE	**Apeiranthos**	**2.16**	**303**	P	**Pn**	**03 27 10.1**	**-0.1**
APE	**Apeiranthos**	**2.16**	**303**	*e*Pn	**Pn**	**03 27 10.6**	**+0.4**
APE				*e*S	**Sn**	**03 27 38.3**	**+2.4**
KORT	**Korkueli**	**2.32**	**62**	⇓*i*P	**Pn**	**03 27 12.0**	**-0.4**
KORT				*i* S	**Sn**	**03 27 40.9**	**+1.1**
KORT	**Korkueli**	**2.32**	**62**	*i* P	**Pn**	**03 27 12.0**	**-0.4**
KORT				*i* S	**Sn**	**03 27 40.9**	**+1.1**
IDI	**Anoyia**	**2.46**	**256**	*e*Pn	**Pn**	**03 27 14.3**	**0.0**
IDI				*e*S	**Sn**	**03 27 43.1**	**-0.1**
IDI	**Anoyia**	**2.46**	**256**	*e*P	**Pn**	**03 27 14.5**	**+0.2**
IDI				*e*S	**Sn**	**03 27 44.4**	**+1.2**
IDI	**Anoyia**	**2.46**	**256**	*e*Pn	**Pn**	**03 27 14.3**	**0.0**
IDI				*e*S	**Sn**	**03 27 43.1**	**-0.1**
ANTB	**Antalya**	**2.50**	**66**	*e*PN	**Pn**	**03 27 14.4**	**-0.4**
ANTB	**Antalya**	**2.50**	**66**	*e*Pn	**Pn**	**03 27 14.4**	**-0.4**
IZM	**Izmir**	**2.51**	**350**	*e*PN	**Pn**	**03 27 16.7**	**+1.8**
IZM	**Izmir**	**2.51**	**350**	Pn	**Pn**	**03 27 16.9**	**+1.9**
IZM	**Izmir**	**2.51**	**350**	*e*Pn	**Pn**	**03 27 16.7**	**+1.8**
KDAG	**Bornova**	**2.51**	**350**	⇑*i*P	**Pn**	**03 27 14.7**	**-0.3**
KDAG				*i* S	**Sn**	**03 27 37.4**	**-7.1**
KDAG	**Bornova**	**2.51**	**350**	*i* P	**Pn**	**03 27 14.7**	**-0.3**
BLCB	**Balcova**	**2.53**	**346**	*e*PN	**Pn**	**03 27 15.4**	**+0.2**
BLCB				*e*SN	**Sn**	**03 27 45.9**	**+0.9**
BLCB	**Balcova**	**2.53**	**346**	P	**Pn**	**03 27 14.5**	**-0.8**
BLCB	**Balcova**	**2.53**	**346**	P	**Pn**	**03 27 14.5**	**-0.8**
BLCB	**Balcova**	**2.53**	**346**	P	**Pn**	**03 27 14.5**	**-0.8**
BLCB	**Balcova**	**2.53**	**346**	*e*Pn	**Pn**	**03 27 15.4**	**+0.1**
BLCB				*e*Sn	**Sn**	**03 27 45.9**	**+0.9**
SIVA	**Sivas**	**2.60**	**251**	*e*P	**Pn**	**03 27 17.3**	**+1.0**
SIVA				*e*S	**Sn**	**03 27 48.2**	**+1.4**
SIVA	**Sivas**	**2.60**	**251**	*e*P	**Pn**	**03 27 17.3**	**+1.0**
SIVA				*e*S	**Sn**	**03 27 48.2**	**+1.4**
SIVA	**Sivas**	**2.60**	**251**	P	**Pn**	**03 27 17.3**	**+1.0**
SIVA				S	**Sn**	**03 27 49.5**	**+2.7**
SIVA	**Sivas**	**2.60**	**251**	*e*P	**Pn**	**03 27 17.3**	**+1.0**
SIVA				*e*S	**Sn**	**03 27 48.2**	**+1.4**
URLA	**Izmir**	**2.62**	**339**	⇑*i*P	**Pn**	**03 27 16.6**	**+0.2**
URLA				*i* S	**Sn**	**03 27 49.7**	**+2.6**
URLA	**Izmir**	**2.62**	**339**	*i* P	**Pn**	**03 27 16.6**	**+0.2**
URLA				*i* S	**Sn**	**03 27 49.7**	**+2.6**
KULA	**Kula-Manisa**	**2.67**	**15**	*e*PN	**Pn**	**03 27 16.8**	**-0.4**
KULA	**Kula-Manisa**	**2.67**	**15**	*e*Pn	**Pn**	**03 27 16.8**	**-0.4**
BCK	**Bucak**	**2.71**	**55**	*e*PN	**Pn**	**03 27 17.3**	**-0.5**
BCK	**Bucak**	**2.71**	**55**	Pn	**Pn**	**03 27 17.3**	**-0.5**
BCK	**Bucak**	**2.71**	**55**	*e*Pn	**Pn**	**03 27 17.3**	**-0.5**
KHL	**Karahalli**	**2.76**	**29**	*e*PN	**Pn**	**03 27 17.8**	**-0.6**
KHL	**Karahalli**	**2.76**	**29**	Pn	**Pn**	**03 27 18.6**	**+0.2**
KHL	**Karahalli**	**2.76**	**29**	*e*Pn	**Pn**	**03 27 17.8**	**-0.6**
KHAL	**Karahalli**	**2.79**	**28**	⇓*i*P	**Pn**	**03 27 17.9**	**-0.9**
KHAL				*i* S	**Sn**	**03 27 52.1**	**+0.8**
KHAL	**Karahalli**	**2.79**	**28**	*i* P	**Pn**	**03 27 17.9**	**-0.9**
KHAL				*i* S	**Sn**	**03 27 52.1**	**+0.8**
CHOS	**Chios island**	**2.83**	**331**	⇑*i*P	**Pn**	**03 27 20.0**	**+0.7**
CHOS	**Chios island**	**2.83**	**331**	P	**Pn**	**03 27 19.6**	**+0.3**
CHOS				S	**Sn**	**03 27 55.1**	**+2.9**
CHOS	**Chios island**	**2.83**	**331**	P	**Pn**	**03 27 19.6**	**+0.3**
CHOS				S	**Sn**	**03 27 55.1**	**+2.9**
AKHS	**Akhisar**	**2.95**	**0**	⇑*i*P	**Pn**	**03 27 20.6**	**-0.4**
AKHS				*i* S	**Sn**	**03 27 55.1**	**-0.1**
AKHS	**Akhisar**	**2.95**	**0**	*i* P	**Pn**	**03 27 20.5**	**-0.5**
AKHS				*i* S	**Sn**	**03 27 55.1**	**-0.1**
AKS	**Akhisar**	**2.95**	**0**	*e*PN	**Pn**	**03 27 20.5**	**-0.4**
AKS	**Akhisar**	**2.95**	**0**	Pn	**Pn**	**03 27 20.5**	**-0.5**
AKS	**Akhisar**	**2.95**	**0**	*e*Pn	**Pn**	**03 27 20.5**	**-0.5**
VAM	**Vamos**	**2.98**	**261**	*e*P	**Pn**	**03 27 21.9**	**+0.5**
VAM				*e*S	**Sn**	**03 27 57.5**	**+1.6**
VAM	**Vamos**	**2.98**	**261**	*e*P	**Pn**	**03 27 21.9**	**+0.5**
VAM				*e*S	**Sn**	**03 27 57.5**	**+1.6**
VAM	**Vamos**	**2.98**	**261**	*e*P	**Pn**	**03 27 21.9**	**+0.5**
VAM				*e*S	**Sn**	**03 27 57.5**	**+1.6**
SUTC	**Sutluce-Ispart**	**3.00**	**58**	*e*PN	**Pn**	**03 27 20.9**	**-0.8**
SUTC	**Sutluce-Ispart**	**3.00**	**58**	*e*Pn	**Pn**	**03 27 20.9**	**-0.7**
DEMI	**Demirci**	**3.20**	**13**	⇑*i*P	**Pn**	**03 27 23.8**	**-0.5**
DEMI				*i* S	**Sn**	**03 28 02.0**	**+0.8**
DEMI	**Demirci**	**3.20**	**13**	*i* P	**Pn**	**03 27 23.8**	**-0.5**
DEMI				*i* S	**Sn**	**03 28 02.0**	**+0.8**
KARN	**Karanos**	**3.21**	**262**	*e*P	**Pn**	**03 27 26.0**	**+1.5**
KARN				*e*S	**Sn**	**03 28 02.6**	**+1.1**
KARN	**Karanos**	**3.21**	**262**	P	**Pn**	**03 27 24.4**	**-0.1**
KARN	**Karanos**	**3.21**	**262**	*e*P	**Pn**	**03 27 26.0**	**+1.5**
KARN				*e*S	**Sn**	**03 28 02.6**	**+1.1**
GVD	**Gavdhos**	**3.22**	**251**	*e*Pn	**Pn**	**03 27 25.0**	**+0.3**
GVD				*e*S	**Sn**	**03 28 02.0**	**+0.1**
GVD	**Gavdhos**	**3.22**	**251**	*e*P	**Pn**	**03 27 25.6**	**+0.9**
GVD				*e*S	**Sn**	**03 28 02.8**	**+0.9**
GVD	**Gavdhos**	**3.22**	**251**	P	**Pn**	**03 27 24.8**	**+0.1**
GVD	**Gavdhos**	**3.22**	**251**	*e*Pn	**Pn**	**03 27 25.0**	**+0.3**
GVD	**Gavdhos**	**3.22**	**251**	*e*P	**Pn**	**03 27 25.6**	**+0.9**
GVD				*e*S	**Sn**	**03 28 02.0**	**+0.1**
SHUT	**Suhut-Afyon**	**3.42**	**39**	*e*PN	**Pn**	**03 27 27.2**	**-0.2**
SHUT	**Suhut-Afyon**	**3.42**	**39**	*e*Pn	**Pn**	**03 27 27.2**	**-0.2**
AYVA	**Ayvalik**	**3.49**	**346**	⇑*i*P	**Pn**	**03 27 28.5**	**+0.1**
AYVA				*i* S	**Sn**	**03 28 11.7**	**+3.2**
AYVA	**Ayvalik**	**3.49**	**346**	*i* P	**Pn**	**03 27 28.5**	**+0.1**
AYVA				*i* S	**Sn**	**03 28 11.7**	**+3.2**
PRK	**Paraskevi**	**3.53**	**340**	⇑*i*P	**Pn**	**03 27 29.7**	**+0.8**
PRK	**Paraskevi**	**3.53**	**340**	⇑*i*P	**Pn**	**03 27 29.7**	**+0.8**
PRK	**Paraskevi**	**3.53**	**340**	P	**Pn**	**03 27 29.6**	**+0.7**
PRK				S	**Sn**	**03 28 11.4**	**+1.9**
PRK	**Paraskevi**	**3.53**	**340**	P	**Pn**	**03 27 29.6**	**+0.7**
PRK				S	**Sn**	**03 28 11.4**	**+1.9**
ALT	**Altintas**	**3.62**	**30**	*e*PN	**Pn**	**03 27 29.4**	**-0.8**
ALT	**Altintas**	**3.62**	**30**	Pn	**Pn**	**03 27 29.4**	**-0.8**
ALT	**Altintas**	**3.62**	**30**	*e*Pn	**Pn**	**03 27 29.4**	**-0.8**
SIGR	**SIGRI**	**3.63**	**335**	P	**Pn**	**03 27 30.7**	**+0.5**
SIGR	**SIGRI**	**3.63**	**335**	P	**Pn**	**03 27 30.7**	**+0.5**
SIGR	**SIGRI**	**3.63**	**335**	P	**Pn**	**03 27 30.7**	**+0.5**
GAZI	**Gazipasa**	**3.67**	**84**	P	**Pn**	**03 27 27.7**	**-3.1**
GAZI				S	**Sn**	**03 28 06.8**	**-6.0**
GAZI	**Gazipasa**	**3.67**	**84**	*i* P	**Pn**	**03 27 27.8**	**-3.0**
GAZI				*i* S	**Sn**	**03 28 06.9**	**-5.9**
GAZI	**Gazipasa**	**3.67**	**84**	*i* P	**Pn**	**03 27 27.8**	**-3.0**
GAZI				S	**Sn**	**03 28 06.8**	**-6.0**
BALB	**Balikesir**	**3.71**	**1**	*e*PN	**Pn**	**03 27 31.6**	**+0.3**
BALB	**Balikesir**	**3.71**	**1**	Pn	**Pn**	**03 27 31.3**	**-0.1**
BALB	**Balikesir**	**3.71**	**1**	Pn	**Pn**	**03 27 31.3**	**-0.1**
VLY	**Voula,Athens**	**3.75**	**302**	*e*P	**Pn**	**03 27 33.5**	**+1.7**
VLY				*e*S	**Sn**	**03 28 16.3**	**+1.6**
VLY	**Voula,Athens**	**3.75**	**302**	*e*P	**Pn**	**03 27 33.5**	**+1.7**
VLY				*e*S	**Sn**	**03 28 16.3**	**+1.6**
VLY	**Voula,Athens**	**3.75**	**302**	*e*P	**Pn**	**03 27 33.5**	**+1.7**
VLY				*e*S	**Sn**	**03 28 16.3**	**+1.6**
BOLV	**Bolvadin**	**3.75**	**41**	⇓*i*P	**Pn**	**03 27 31.4**	**-0.5**
BOLV				*i* S	**Sn**	**03 28 12.4**	**-2.4**
BOLV	**Bolvadin**	**3.75**	**41**	*i* P	**Pn**	**03 27 31.4**	**-0.5**
BOLV				*i* S	**Sn**	**03 28 12.4**	**-2.4**
PTL	**Penteli**	**3.80**	**305**	*e*P	**Pn**	**03 27 34.3**	**+1.7**
PTL	**Penteli**	**3.80**	**305**	*e*P	**Pn**	**03 27 34.3**	**+1.7**
PTL	**Penteli**	**3.80**	**305**	*e*P	**Pn**	**03 27 34.3**	**+1.7**
ATHU	**Athens Univers**	**3.81**	**304**	P	**Pn**	**03 27 34.6**	**+1.9**
ATHU				S	**Sn**	**03 28 20.3**	**+4.0**
ATHU	**Athens Univers**	**3.81**	**304**	P	**Pn**	**03 27 34.6**	**+1.9**
BALY	**Balya**	**3.81**	**358**	⇑*i*P	**Pn**	**03 27 32.6**	**-0.1**
BALY				*i* S	**Sn**	**03 28 17.9**	**+1.6**
BALY	**Balya**	**3.81**	**358**	*i* P	**Pn**	**03 27 32.7**	**-0.1**
BALY				*i* S	**Sn**	**03 28 17.9**	**+1.6**
PPCY	**Paphos**	**3.85**	**104**	P	**Pn**	**03 27 29.2**	**-4.1**
PPCY	**Paphos**	**3.85**	**104**	P	**Pn**	**03 27 29.2**	**-4.1**
ATH	**Athens Observa**	**3.86**	**303**	*e*P	**Pn**	**03 27 35.4**	**+2.0**
ATH	**Athens Observa**	**3.86**	**303**	*e*P	**Pn**	**03 27 35.4**	**+2.0**
ATH	**Athens Observa**	**3.86**	**303**	*e*P	**Pn**	**03 27 35.4**	**+2.0**
KYTH	**Kithira**	**3.88**	**277**	*e*P	**Pn**	**03 27 34.2**	**+0.6**
KYTH	**Kithira**	**3.88**	**277**	*e*P	**Pn**	**03 27 34.2**	**+0.6**
KYTH	**Kithira**	**3.88**	**277**	*e*P	**Pn**	**03 27 34.2**	**+0.6**
HDMB	**Hadim**	**3.92**	**73**	*e*PN	**Pn**	**03 27 33.1**	**-1.2**
HDMB	**Hadim**	**3.92**	**73**	*e*Pn	**Pn**	**03 27 33.0**	**-1.2**
NAIG	**Nisos Aigina**	**3.92**	**299**	*e*P	**Pn**	**03 27 35.6**	**+1.4**
NAIG	**Nisos Aigina**	**3.92**	**299**	*e*P	**Pn**	**03 27 35.6**	**+1.4**
NAIG	**Nisos Aigina**	**3.92**	**299**	*e*P	**Pn**	**03 27 35.6**	**+1.4**
ALFC	**Alevga** 57nm,0.6s	**3.98**	**100**	P	**Pn**	**03 27 31.1**	**-4.0**
ALFC				S	**Sn**	**03 28 17.0**	**-3.5**
ALFC	**Alevga** 57nm,0.6s	**3.98**	**100**	P	**Pn**	**03 27 31.1**	**-4.0**
ALFC				S	**Sn**	**03 28 17.0**	**-3.5**
DID	**Didima**	**4.00**	**295**	*e*P	**Pn**	**03 27 36.7**	**+1.5**
DID	**Didima**	**4.00**	**295**	P	**Pn**	**03 27 36.4**	**+1.2**
DID				S	**Sn**	**03 28 24.7**	**+3.9**
DID	**Didima**	**4.00**	**295**	P	**Pn**	**03 27 36.4**	**+1.2**
VLI	**Veliai**	**4.01**	**283**	*e*P	**Pn**	**03 27 36.7**	**+1.3**
VLI				*e*S	**Sn**	**03 28 22.0**	**

ERIK	**Erikli-Kesan**	**4.85 348**	*e*PN	**Pn**	**03 27 47.5**	**+0.6**
ERIK	**Erikli-Kesan**	**4.85 348**	*e*Pn	**Pn**	**03 27 47.5**	**+0.6**
HMAT	**Matruh**	**4.85 187**	AMP		03 28 00.0	
	comp=E,81000µm,0.7s,logA/T=8.1,baz=192					
MFT	**Murefte**	**4.87 355**	*e*PN	**Pn**	**03 27 49.1**	**+1.9**
MFT	**Murefte**	**4.87 355**	*e*Pn	**Pn**	**03 27 49.1**	**+1.9**
DSF	**Desfina**	**4.89 302**	P	**Pn**	**03 27 49.3**	**+1.8**
DSF	**Desfina**	**4.89 302**	P	**Pn**	**03 27 49.3**	**+1.8**
ITM	**Ithomi**	**4.89 287**	*e*P	**Pn**	**03 27 50.4**	**+2.8**
ITM	**Ithomi**	**4.89 287**	*e*P	**Pn**	**03 27 50.4**	**+2.8**
ITM	**Ithomi**	**4.89 287**	P	**Pn**	**03 27 49.8**	**+2.2**
ITM	**Ithomi**	**4.89 287**	*e*P	**Pn**	**03 27 50.4**	**+2.8**
SLUM		**4.92 207**	P	**Pn**	**03 27 45.1**	**-2.9**
	baz=213					
SLUM			AMP		03 28 00.0	
	comp=N,161000µm,0.7s,logA/T=8.3,baz=213					
SLUM			S	**Sn**	**03 28 34.1**	**-9.4**
	baz=213					
SLUM		**4.92 207**	P	**Pn**	**03 27 45.1**	**-2.8**
SLUM			S	**Sn**	**03 28 34.1**	**-9.4**
NEO	**Neokhori**	**4.96 314**	*e*P	**Pn**	**03 27 50.8**	**+2.3**
NEO	**Neokhori**	**4.96 314**	*e*P	**Pn**	**03 27 50.8**	**+2.3**
NEO	**Neokhori**	**4.96 314**	*e*P	**Pn**	**03 27 50.8**	**+2.3**
ENEZ	**Enez**	**4.98 345**	*e*PN	**Pn**	**03 27 49.6**	**+0.9**
ENEZ	**Enez**	**4.98 345**	*e*Pn	**Pn**	**03 27 49.6**	**+0.9**
GULT	**Gulveren**	**4.98 25**	*e*PN	**Pn**	**03 27 48.8**	**+0.1**
GULT	**Gulveren**	**4.98 25**	*e*Pn	**Pn**	**03 27 48.8**	**+0.1**
PYL	**PYLOS**	**4.99 283**	*e*P	**Pn**	**03 27 50.9**	**+2.1**
PYL	**PYLOS**	**4.99 283**	*e*P	**Pn**	**03 27 50.9**	**+2.1**
MAGT	**Magosa**	**5.02 98**	Pn	**Pn**	**03 27 46.4**	**-2.8**
MAGT	**Magosa**	**5.02 98**	Pn	**Pn**	**03 27 46.4**	**-2.8**
XOR	**Xorichti**	**5.02 315**	P	**Pn**	**03 27 50.8**	**+1.5**
XOR	**Xorichti**	**5.02 315**	P	**Pn**	**03 27 50.8**	**+1.5**
XOR	**Xorichti**	**5.02 315**	P	**Pn**	**03 27 50.8**	**+1.5**
LTBQ	**Tobruq**	**5.03 221**	*i* P	**Pn**	**03 27 47.7**	**-1.7**
	comp=N,7µm,0.6s,SNR=23					
TKR	**Tekirdag**	**5.06 358**	*e*PN	**Pn**	**03 27 51.4**	**+1.6**
TKR	**Tekirdag**	**5.06 358**	*e*Pn	**Pn**	**03 27 51.4**	**+1.6**
SULT	**Sultanhani-AKS**	**5.10 62**	*e*PN	**Pn**	**03 27 50.2**	**-0.1**
SULT	**Sultanhani-AKS**	**5.10 62**	Pn	**Pn**	**03 27 49.3**	**-1.1**
SULT	**Sultanhani-AKS**	**5.10 62**	Pn	**Pn**	**03 27 49.3**	**-1.1**
HRT	**Hereke**	**5.11 16**	*e*PN	**Pn**	**03 27 52.0**	**+1.5**
HRT	**Hereke**	**5.11 16**	*e*Pn	**Pn**	**03 27 52.0**	**+1.6**
SPNC	**Sapanca-Adapaz**	**5.15 22**	*e*PN	**Pn**	**03 27 52.3**	**+1.3**
SPNC	**Sapanca-Adapaz**	**5.15 22**	*e*Pn	**Pn**	**03 27 52.3**	**+1.3**
KALE	**Kalithea**	**5.15 300**	P	**Pn**	**03 27 53.3**	**+2.3**
KALE			S	**Sn**	**03 28 53.0**	**+3.9**
ALN	**Alexandroupoli**	**5.15 345**	*e*P	**Pn**	**03 27 52.2**	**+1.1**
ALN	**Alexandroupoli**	**5.15 345**	*e*P	**Pn**	**03 27 52.2**	**+1.1**
ALN	**Alexandroupoli**	**5.15 345**	P	**Pn**	**03 27 51.5**	**+0.4**
ALN	**Alexandroupoli**	**5.15 345**	P	**Pn**	**03 27 51.5**	**+0.4**
PAIG	**Paliouri**	**5.16 322**	P	**Pn**	**03 27 52.5**	**+1.4**
PAIG	**Paliouri**	**5.16 322**	P	**Pn**	**03 27 52.5**	**+1.4**
PAIG	**Paliouri**	**5.16 322**	P	**Pn**	**03 27 52.5**	**+1.4**
PHNC	**Paralimni**	**5.17 98**	P	**Pn**	**03 27 48.1**	**-3.2**
	comp=N,113nm,1.2s					
PHNC			S	**Sn**	**03 28 46.9**	**-2.6**
PHNC	**Paralimni**	**5.17 98**	P	**Pn**	**03 27 48.1**	**-3.2**
	comp=N,113nm,1.2s					
PHNC			S	**Sn**	**03 28 46.9**	**-2.6**
TRIZ	**Trizonia**	**5.19 300**	P	**Pn**	**03 27 53.9**	**+2.4**
TRIZ			S	**Sn**	**03 28 53.9**	**+3.9**
EREN	**Erenkoy**	**5.19 92**	*e*PN	**Pn**	**03 27 50.6**	**-1.1**
EREN	**Erenkoy**	**5.19 92**	Pn	**Pn**	**03 27 48.2**	**-3.5**
EREN	**Erenkoy**	**5.19 92**	Pn	**Pn**	**03 27 48.2**	**-3.5**
CRLT	**Corlu**	**5.20 359**	*e*PN	**Pn**	**03 27 53.0**	**+1.3**
CRLT	**Corlu**	**5.20 359**	*e*Pn	**Pn**	**03 27 53.0**	**+1.3**
LAKA	**Lakka**	**5.20 298**	P	**Pn**	**03 27 54.2**	**+2.5**
LAKA			S	**Sn**	**03 28 53.9**	**+3.6**
ISK	**Istanbul-Kandi**	**5.23 10**	*e*PN	**Pn**	**03 27 53.9**	**+1.8**
ISK	**Istanbul-Kandi**	**5.23 10**	*e*Pn	**Pn**	**03 27 53.9**	**+1.8**
MDU	**Mudurnu**	**5.27 30**	*e*PN	**Pn**	**03 27 52.8**	**+0.1**
MDU	**Mudurnu**	**5.27 30**	*e*Pn	**Pn**	**03 27 52.8**	**+0.1**
BGKT	**Bogazkoy**	**5.30 8**	*e*PN	**Pn**	**03 27 55.4**	**+2.3**
BGKT	**Bogazkoy**	**5.30 8**	*e*Pn	**Pn**	**03 27 55.4**	**+2.3**
SLVT	**Silivri**	**5.31 3**	*e*PN	**Pn**	**03 27 54.3**	**+1.1**
SLVT	**Silivri**	**5.31 3**	*e*Pn	**Pn**	**03 27 54.3**	**+1.1**
EFP	**Efpalio**	**5.33 300**	*e*P	**Pn**	**03 27 56.3**	**+2.8**
EFP	**Efpalio**	**5.33 300**	P	**Pn**	**03 27 56.1**	**+2.6**
CTKS	**Kestanelik-??a**	**5.33 6**	*e*PN	**Pn**	**03 27 55.1**	**+1.5**
CTKS	**Kestanelik-??a**	**5.33 6**	*e*Pn	**Pn**	**03 27 55.1**	**+1.6**
OUR	**Ouranopolis**	**5.33 327**	P	**Pn**	**03 27 54.7**	**+1.1**
OUR	**Ouranopolis**	**5.33 327**	P	**Pn**	**03 27 54.7**	**+1.1**
OUR	**Ouranopolis**	**5.33 327**	P	**Pn**	**03 27 54.7**	**+1.1**
AGG	**Agios Georgios**	**5.34 307**	*e*P	**Pn**	**03 27 56.3**	**+2.7**
AGG	**Agios Georgios**	**5.34 307**	*e*P	**Pn**	**03 27 56.3**	**+2.7**
AGG	**Agios Georgios**	**5.34 307**	P	**Pn**	**03 27 56.0**	**+2.4**
AGG	**Agios Georgios**	**5.34 307**	*e*P	**Pn**	**03 27 56.3**	**+2.7**
UPR	**University Cam**	**5.36 298**	*e*P	**Pn**	**03 27 57.0**	**+3.2**
KLYT	**Kilyos**	**5.41 10**	*e*PN	**Pn**	**03 27 56.6**	**+2.0**
KLYT	**Kilyos**	**5.41 10**	*e*Pn	**Pn**	**03 27 56.6**	**+2.0**
SILT	**Sile**	**5.42 15**	*e*PN	**Pn**	**03 27 55.3**	**+0.6**
SILT	**Sile**	**5.42 15**	*e*Pn	**Pn**	**03 27 55.3**	**+0.6**
MERS	**Mersin**	**5.50 78**	*e*PN	**Pn**	**03 27 54.7**	**-1.2**
MERS	**Mersin**	**5.50 78**	*e*Pn	**Pn**	**03 27 54.7**	**-1.1**
RLS	**Riolos of Patr**	**5.50 295**	*e*P	**Pn**	**03 27 58.8**	**+3.0**
RLS	**Riolos of Patr**	**5.50 295**	*e*P	**Pn**	**03 27 58.8**	**+3.0**
RLS	**Riolos of Patr**	**5.50 295**	*e*P	**Pn**	**03 27 58.8**	**+3.0**
BBAL	**Bala**	**5.55 48**	⇓*i*P	**Pn**	**03 27 55.6**	**-0.9**
BBAL			*i* S	Sn	03 29 32.6	+34
CTYL	**Yal??k??y-??at**	**5.56 4**	*e*PN	**Pn**	**03 27 58.7**	**+2.1**
CTYL	**Yal??k??y-??at**	**5.56 4**	*e*Pn	**Pn**	**03 27 58.7**	**+2.1**
LOD	**Lodumlu**	**5.57 43**	*e*PN	**Pn**	**03 27 56.5**	**-0.3**
LOD	**Lodumlu**	**5.57 43**	Pn	**Pn**	**03 27 56.4**	**-0.4**
LOD	**Lodumlu**	**5.57 43**	*e*Pn	**Pn**	**03 27 56.5**	**-0.3**
PLG	**Polygyros**	**5.62 324**	*e*P	**Pn**	**03 27 59.2**	**+1.8**
PLG	**Polygyros**	**5.62 324**	*e*P	**Pn**	**03 27 59.2**	**+1.8**
PLG	**Polygyros**	**5.62 324**	*e*P	**Pn**	**03 27 59.2**	**+1.8**
EVR	**Evrytania**	**5.63 304**	*e*P	**Pn**	**03 28 01.1**	**+3.5**
EVR	**Evrytania**	**5.63 304**	*e*P	**Pn**	**03 28 01.1**	**+3.5**
EVR	**Evrytania**	**5.63 304**	*e*P	**Pn**	**03 28 01.1**	**+3.5**
KAVA	**Kavala**	**5.69 334**	P	**Pn**	**03 27 59.5**	**+1.2**
KAVA	**Kavala**	**5.69 334**	P	**Pn**	**03 27 59.5**	**+1.2**
THL	**Klokotos Trika**	**5.85 310**	*e*P	**Pn**	**03 28 03.3**	**+2.7**
THL	**Klokotos Trika**	**5.85 310**	P	**Pn**	**03 28 02.9**	**+2.3**
HORT	**Hortiatis**	**5.96 323**	P	**Pn**	**03 28 04.6**	**+2.5**
HORT	**Hortiatis**	**5.96 323**	P	**Pn**	**03 28 04.6**	**+2.5**
HORT	**Hortiatis**	**5.96 323**	P	**Pn**	**03 28 04.6**	**+2.5**
EDRB	**Edirne**	**5.97 352**	*e*PN	**Pn**	**03 28 04.3**	**+2.0**
EDRB	**Edirne**	**5.97 352**	*e*Pn	**Pn**	**03 28 04.3**	**+2.0**
BR131	**Keskin Array S**	**5.98 49**	*e*Pn	**Pn**	**03 28 01.1**	**-1.2**
BR131	**Keskin Array S**	**5.98 49**	*e*Pn	**Pn**	**03 28 01.1**	**-1.2**
BRTR	**Keskin Array B**	**5.98 49**	P	**Pn**	**03 28 01.0**	**-1.3**
	comp=N,27nm,0.3s,baz=221,slow=13,SNR=277					
BRTR			S	**Sn**	**03 29 09.0**	**-0.4**
	comp=N,46nm,0.3s,baz=218,slow=25,SNR=3.3					
BRTR			ScP	ScP	03 38 29.0	+2.9
	comp=N,2.7nm,0.3s,baz=183,slow=2.3,SNR=22					
BRTR	**Keskin Array B**	**5.98 49**	P	**Pn**	**03 28 01.0**	**-1.3**
BRTR			S	**Sn**	**03 29 09.0**	**-0.4**
BRTR	**Keskin Array B**	**5.98 49**	P	**Pn**	**03 28 01.0**	**-1.3**
BRTR			S	**Sn**	**03 29 09.0**	**-0.4**
KARA	**Karaisali**	**5.98 75**	*e*PN	**Pn**	**03 28 01.5**	**-1.0**
KARA	**Karaisali**	**5.98 75**	*e*Pn	**Pn**	**03 28 01.5**	**-1.0**
SOH	**Sokhos**	**6.01 326**	*e*P	**Pn**	**03 28 05.4**	**+2.6**
SOH	**Sokhos**	**6.01 326**	*e*P	**Pn**	**03 28 05.4**	**+2.6**
SOH	**Sokhos**	**6.01 326**	P	**Pn**	**03 28 05.3**	**+2.5**
SOH	**Sokhos**	**6.01 326**	*e*P	**Pn**	**03 28 05.4**	**+2.6**
THE	**Thessaloniki**	**6.05 322**	P	**Pn**	**03 28 06.0**	**+2.7**
THE	**Thessaloniki**	**6.05 322**	P	**Pn**	**03 28 06.0**	**+2.7**
THE	**Thessaloniki**	**6.05 322**	P	**Pn**	**03 28 06.0**	**+2.7**
KDZE	**Karadeniz Ereo**	**6.09 27**	*e*PN	**Pn**	**03 28 06.2**	**+2.3**
KDZE	**Karadeniz Ereo**	**6.09 27**	*e*Pn	**Pn**	**03 28 06.2**	**+2.3**
KRTS	**Karatas**	**6.15 82**	*e*PN	**Pn**	**03 28 04.0**	**-0.8**
KRTS	**Karatas**	**6.15 82**	*e*Pn	**Pn**	**03 28 04.0**	**-0.8**
VLS	**Valsamata**	**6.19 293**	*e*P	**Pn**	**03 28 06.9**	**+1.6**
VLS	**Valsamata**	**6.19 293**	*e*P	**Pn**	**03 28 06.9**	**+1.6**
VLS	**Valsamata**	**6.19 293**	*e*P	**Pn**	**03 28 06.9**	**+1.6**
NVR	**Nevrokopi**	**6.24 332**	*e*P	**Pn**	**03 28 08.0**	**+2.1**
NVR	**Nevrokopi**	**6.24 332**	*e*P	**Pn**	**03 28 08.0**	**+2.1**
NVR	**Nevrokopi**	**6.24 332**	*e*P	**Pn**	**03 28 08.0**	**+2.1**
AVNT	**Avonos**	**6.30 61**	⇓*i*P	**Pn**	**03 28 05.7**	**-1.0**
AVNT			*i* S	**Sn**	**03 29 11.3**	**-6.0**
AVNT	**Avonos**	**6.30 61**	*i* P	**Pn**	**03 28 05.7**	**-1.0**
LKD	**Levkas**	**6.34 298**	*e*P	**Pn**	**03 28 09.7**	**+2.4**
LKD	**Levkas**	**6.34 298**	*e*P	**Pn**	**03 28 09.7**	**+2.4**
LKD	**Levkas**	**6.34 298**	*e*P	**Pn**	**03 28 09.7**	**+2.4**
LKD2	**Lefkada island**	**6.37 299**	P	**Pn**	**03 28 09.4**	**+1.7**
LKD2	**Lefkada island**	**6.37 299**	P	**Pn**	**03 28 09.4**	**+1.7**
AANS		**6.38 151**	P	**Pn**	**03 28 02.7**	**-5.2**
	baz=150					
AANS			AMP		03 29 00.0	
	baz=150					
KZN	**Kozani**	**6.46 314**	*e*P	**Pn**	**03 28 12.4**	**+3.4**
KZN	**Kozani**	**6.46 314**	*e*P	**Pn**	**03 28 12.4**	**+3.4**
KZN	**Kozani**	**6.46 314**	P	**Pn**	**03 28 11.8**	**+2.8**
KZN	**Kozani**	**6.46 314**	*e*P	**Pn**	**03 28 12.4**	**+3.4**
CEYT	**Ceyhan**	**6.49 78**	*e*PN	**Pn**	**03 28 09.2**	**-0.3**
CEYT	**Ceyhan**	**6.49 78**	*e*Pn	**Pn**	**03 28 09.2**	**-0.2**
CANT	**Cankiri**	**6.54 43**	*e*PN	**Pn**	**03 28 11.6**	**+1.5**
SAFT	**Safranbolu**	**6.54 34**	*e*PN	**Pn**	**03 28 09.9**	**-0.2**
SAFT	**Safranbolu**	**6.54 34**	*e*Pn	**Pn**	**03 28 09.9**	**-0.2**
JMB	**Yambol**	**6.60 352**	P	**Pn**	**03 28 12.6**	**+1.7**
JMB	**Yambol**	**6.60 352**	P	**Pn**	**03 28 12.6**	**+1.7**
JMB	**Yambol**	**6.60 352**	P	**Pn**	**03 28 12.6**	**+1.7**
PLD	**Plovdiv**	**6.63 340**	P	**Pn**	**03 28 11.9**	**+0.7**
KOZT	**Kozan**	**6.63 74**	*e*PN	**Pn**	**03 28 10.8**	**-0.5**
JAN	**Janina**	**6.65 306**	*e*P	**Pn**	**03 28 14.8**	**+3.3**
JAN	**Janina**	**6.65 306**	*e*P	**Pn**	**03 28 14.8**	**+3.3**
JAN	**Janina**	**6.65 306**	*e*P	**Pn**	**03 28 14.8**	**+3.3**
MATL	**Matarih**	**6.66 109**	*e*Pn	**Pn**	**03 28 06.3**	**-5.3**
MATL	**Matarih**	**6.66 109**	*e*Pn	**Pn**	**03 28 06.3**	**-5.4**
HLW	**Helwan**	**6.74 153**	P	**Pn**	**03 28 07.9**	**-5.0**
	baz=152					
HLW	**Helwan**	**6.74 153**	P	**Pn**	**03 28 07.9**	**-4.9**
BHL	**Bhannes**	**6.76 105**	*e*Pn	**Pn**	**03 28 06.4**	**-6.6**
BHL	**Bhannes**	**6.76 105**	*e*Pn	**Pn**	**03 28 06.4**	**-6.6**
HTY	**Hatay**	**6.76 86**	*e*PN	**Pn**	**03 28 12.6**	**-0.5**
VAY	**Valandovo**	**6.77 324**	⇑*i*Pn	**Pn**	**03 28 15.2**	**+2.0**
VAY	**Valandovo**	**6.77 324**	P	**Pn**	**03 28 14.4**	**+1.2**
OFRI	**'Ofer**	**6.79 117**	Pn	**Pn**	**03 28 07.9**	**-5.7**
OFRI	**'Ofer**	**6.79 117**	Pn	**Pn**	**03 28 07.9**	**-5.7**
SLNF	**Slenfeh**	**6.85 90**	⇑P	**Pn**	**03 28 09.0**	**-5.4**
SLNF			⇑S	Sn	03 29 04.0	-27
SLNF	**Slenfeh**	**6.85 90**	⇑*i*P	**Pn**	**03 28 09.5**	**-4.9**
CORM	**Corum**	**6.86 50**	*e*PN	**Pn**	**03 28 15.6**	**+1.2**
CORM	**Corum**	**6.86 50**	*e*Pn	**Pn**	**03 28 15.6**	**+1.2**
KOT	**Kottamia**	**6.87 149**	P	**Pn**	**03 28 09.0**	**-5.6**
	baz=149					
KOT			AMP		03 29 00.0	
	comp=E,19000µm,0.5s,logA/T=7.6,baz=149					
KOT			S	**Sn**	**03 29 18.3**	**-13**
	baz=149					
KOT	**Kottamia**	**6.87 149**	P	**Pn**	**03 28 09.0**	**-5.6**
HWQ	**Hawqa**	**6.87 101**	*e*Pn	**Pn**	**03 28 09.8**	**-4.9**
HWQ	**Hawqa**	**6.87 101**	*e*Pn	**Pn**	**03 28 09.8**	**-4.8**
MMAI	**Mount Meron Ar**	**6.91 113**	P	**Pn**	**03 28 10.7**	**-4.5**
	comp=E,295nm,0.3s,baz=313,slow=11,SNR=180					
MMAI			S	**Sn**	**03 29 25.4**	**-7.1**
	comp=E,3µm,0.3s,baz=305,slow=26,SNR=18					
IGT	**Igoumenitsa**	**6.93 304**	P	**Pn**	**03 28 17.3**	**+1.9**
IGT	**Igoumenitsa**	**6.93 304**	P	**Pn**	**03 28 17.3**	**+1.9**
AMAG	**Maghara**	**6.94 138**	P	**Pn**	**03 28 09.0**	**-6.6**
	baz=136					
AMAG	**Maghara**	**6.94 138**	P	**Pn**	**03 28 09.0**	**-6.6**
SWA2		**6.95 197**	P	**Pn**	**03 28 12.1**	**-3.6**
	baz=201					
SWA2		**6.95 197**	P	**Pn**	**03 28 12.1**	**-3.6**
HHAG	**Hagoal**	**6.96 148**	P	**Pn**	**03 28 09.8**	**-6.1**
	baz=147					
HHAG			AMP		03 29 00.0	
	comp=E,21000µm,0.4s,logA/T=7.7,baz=147					
HHAG	**Hagoal**	**6.96 148**	P	**Pn**	**03 28 09.8**	**-6.1**
FNA	**Florina**	**7.00 316**	P	**Pn**	**03 28 19.7**	**+3.3**
FNA	**Florina**	**7.00 316**	P	**Pn**	**03 28 19.7**	**+3.3**
BIDA	**Albida**	**7.01 95**	⇑P	**Pn**	**03 28 10.0**	**-6.5**
BIDA			⇑S	Sn	03 29 07.0	-28
BIDA	**Albida**	**7.01 95**	⇑*i*P	**Pn**	**03 28 10.8**	**-5.7**
YOZ	**Yozgat**	**7.01 56**	*e*PN	**Pn**	**03 28 16.4**	**-0.1**
YOZ	**Yozgat**	**7.01 56**	*e*Pn	**Pn**	**03 28 16.4**	**-0.1**
WRDH	**Warideh**	**7.01 91**	⇑P	**Pn**	**03 28 12.0**	**-4.6**
WRDH	**Warideh**	**7.01 91**	⇑*i*P	**Pn**	**03 28 12.4**	**-4.2**
BTCH	**Batrach**	**7.02 87**	⇓P	**Pn**	**03 28 11.0**	**-5.6**
BTCH			⇓S	Sn	03 29 09.0	-26
BTCH	**Batrach**	**7.02 87**	⇓*i*P	**Pn**	**03 28 11.4**	**-5.2**
KSDI	**Kefar Szold**	**7.03 111**	Pn	**Pn**	**03 28 11.7**	**-5.1**
KSDI	**Kefar Szold**	**7.03 111**	Pn	**Pn**	**03 28 11.7**	**-5.1**
RCY	**Rachaya**	**7.04 108**	*e*Pn	**Pn**	**03 28 12.6**	**-4.3**
RCY	**Rachaya**	**7.04 108**	*e*Pn	**Pn**	**03 28 12.6**	**-4.3**
SLTI	**Sal'it**	**7.04 119**	Pn	**Pn**	**03 28 11.4**	**-5.5**
SLTI	**Sal'it**	**7.04 119**	Pn	**Pn**	**03 28 11.4**	**-5.5**
ANDN	**Andirin**	**7.05 74**	⇓*i*P	**Pn**	**03 28 14.1**	**-3.0**
ANDN			*i* S	**Sn**	**03 29 31.1**	**-4.7**
ANDN	**Andirin**	**7.05 74**	*i* P	**Pn**	**03 28 14.1**	**-3.0**
TOS	**Tosya**	**7.06 42**	*e*PN	**Pn**	**03 28 17.5**	**+0.3**
TOS	**Tosya**	**7.06 42**	*e*Pn	**Pn**	**03 28 17.5**	**+0.4**
BRBR	**Barbar**	**7.17 108**	⇑P	**Pn**	**03 28 13.0**	**-5.6**
BRBR	**Barbar**	**7.17 108**	⇑*i*P	**Pn**	**03 28 13.9**	**-4.7**
BIA	**Bitola**	**7.19 317**	P	**Pn**	**03 28 21.7**	**+2.8**
BIA	**Bitola**	**7.19 317**	*i* Pn	**Pn**	**03 28 21.6**	**+2.7**
BIA			*e*Sn	**Sn**	**03 29 49.9**	**+11**
BIA	**Bitola**	**7.19 317**	P	**Pn**	**03 28 21.7**	**+2.8**
DRWC	**Darouich**	**7.19 82**	⇑P	**Pn**	**03 28 14.0**	**-5.0**
DRWC			⇑S	Sn	03 29 13.0	-26
DRWC	**Darouich**	**7.19 82**	⇑*i*P	**Pn**	**03 28 14.4**	**-4.6**
MMLI	**Mount Malkishu**	**7.21 117**	Pn	**Pn**	**03 28 13.1**	**-6.1**
MMLI	**Mount Malkishu**	**7.21 117**	Pn	**Pn**	**03 28 13.1**	**-6.1**
FKH	**Fakeheh**	**7.25 101**	*e*Pn	**Pn**	**03 28 15.8**	**-4.0**
FKH	**Fakeheh**	**7.25 101**	*e*Pn	**Pn**	**03 28 15.8**	**-4.0**
MARH	**Ras Al Marh**	**7.37 102**	⇑P	**Pn**	**03 28 16.0**	**-5.4**
MARH			⇑S	Sn	03 29 17.0	-27
MARH	**Ras Al Marh**	**7.37 102**	⇑*i*P	**Pn**	**03 28 17.0**	**-4.4**
QASN	**Qassioun**	**7.37 106**	⇑P	**Pn**	**03 28 17.0**	**-4.5**
QASN			⇑S	Sn	03 29 18.0	-26
QASN	**Qassioun**	**7.37 106**	⇑*i*P	**Pn**	**03 28 17.3**	**-4.2**
KEK	**Kerkira**	**7.38 303**	*e*P	**Pn**	**03 28 24.6**	**+3.1**
KEK	**Kerkira**	**7.38 303**	*e*P	**Pn**	**03 28 24.6**	**+3.1**
KEK	**Kerkira**	**7.38 303**	*e*P	**Pn**	**03 28 24.6**	**+3.1**
KZIT	**Kziot**	**7.44 130**	Pn	**Pn**	**03 28 17.1**	**-5.3**
KZIT	**Kziot**	**7.44 130**	Pn	**Pn**	**03 28 17.1**	**-5.3**
KRUS	**Krusevo**	**7.47 319**	*i* Pn	**Pn**	**03 28 25.7**	**+2.9**
KMRS	**Kahramanmaras**	**7.47 75**	*e*PN	**Pn**	**03 28 22.1**	**-0.8**
KMRS	**Kahramanmaras**	**7.47 75**	*e*Pn	**Pn**	**03 28 22.1**	**-0.7**
RTMI	**Retamim**	**7.53 128**	Pn	**Pn**	**03 28 18.1**	**-5.5**
RTMI	**Retamim**	**7.53 128**	Pn	**Pn**	**03 28 18.1**	**-5.5**
OHR	**Ohrid**	**7.55 315**	⇑*i*Pn	**Pn**	**03 28 27.0**	**+3.2**
OHR	**Ohrid**	**7.55 315**	P	**Pn**	**03 28 27.0**	**+3.2**
VTS	**Vitosha**	**7.55 333**	P	**Pn**	**03 28 26.6**	**+2.7**
VTS	**Vitosha**	**7.55 333**	P	**Pn**	**03 28 26.6**	**+2.7**
VTS	**Vitosha**	**7.55 333**	⇑*i*P	**Pn**	**03 28 26.5**	**+2.6**
VTS	**Vitosha**	**7.55 333**	⇑*i*P	**Pn**	**03 28 26.5**	**+2.6**
TOTH	**TOTAH**	**7.55 107**	⇑P	**Pn**	**03 28 19.0**	**-4.9**
TOTH			⇑S	Sn	03 29 21.0	-27
TOTH	**TOTAH**	**7.55 107**	⇑*i*P	**Pn**	**03 28 19.9**	**-4.0**
SARI	**SarD1z-Kayseri**	**7.60 66**	*e*PN	**Pn**	**03 28 20.6**	**-4.0**
SARI	**SarD1z-Kayseri**	**7.60 66**	*e*Pn	**Pn**	**03 28 20.6**	**-4.0**
YTIR	**Yattir**	**7.61 125**	Pn	**Pn**	**03 28 19.6**	**-5.1**
YTIR	**Yattir**	**7.61 125**	Pn	**Pn**	**03 28 19.6**	**-5.1**
AWBH		**7.64 173**	P	**Pn**	**03 28 20.5**	**-4.6**
	baz=174					
AWBH		**7.64 173**	P	**Pn**	**03 28 20.5**	**-4.6**
GAZ	**Gaziantep**	**7.67 78**	*e*PN	**Pn**	**03 28 25.3**	**-0.3**
GAZ	**Gaziantep**	**7.67 78**	*e*Pn	**Pn**	**03 28 25.3**	**-0.3**
BZK	**Bozkurt**	**7.72 37**	*e*PN	**Pn**	**03 28 26.4**	**+0.2**
BZK	**Bozkurt**	**7.72 37**	*e*Pn	**Pn**	**03 28 26.4**	**+0.2**
BYBT	**Boyabat**	**7.76 42**	*e*PN	**Pn**	**03 28 27.5**	**+0.7**
BYBT	**Boyabat**	**7.76 42**	*e*Pn	**Pn**	**03 28 27.5**	**+0.7**
SKO	**Skopje**	**7.81 323**	⇑*i*Pn	**Pn**	**03 28 31.1**	**+3.6**
SKO	**Skopje**	**7.81 323**	P	**Pn**	**03 28 30.7**	**+3.3**
RABH	**Abou Rabah**	**7.84 98**	⇓P	**Pn**	**03 28 24.0**	**-3.9**
RABH			⇓S	Sn	03 29 29.0	-26
RABH	**Abou Rabah**	**7.84 98**	⇓*i*P	**Pn**	**03 28 24.6**	**-3.3**
HNKL	**Nakhl**	**7.92 137**	P	**Pn**	**03 28 23.4**	**-5.5**
	baz=136					
HNKL			AMP		03 29 00.0	
	comp=E,20000µm,0.5s,logA/T=7.6,baz=136					
HNKL	**Nakhl**	**7.92 137**	P	**Pn**	**03 28 23.4**	**-5.5**
ZIMR		**7.95 347**	⇑P	**Pn**	**03 28 30.8**	**+1.5**
ZIMR		**7.95 347**	⇑*i*P	**Pn**	**03 28 30.8**	**+1.5**
ROOS	**tl_alroos**	**7.97 100**	⇑P	**Pn**	**03 28 25.0**	**-4.7**
ROOS			⇑S	Sn	03 29 31.0	-27
ROOS	**tl_alroos**	**7.97 100**	⇑*i*P	**Pn**	**03 28 25.5**	**-4.2**
SALA	**Sala**	**8.05 111**	⇑P	**Pn**	**03 28 26.0**	**-4.8**
SALA			⇑S	Sn	03 29 35.0	-25
SALA	**Sala**	**8.05 111**	⇑*i*P	**Pn**	**03 28 26.7**	**-4.1**
LJBD	**Adjabya**	**8.08 234**	*i* P	**Pn**	**03 28 28.8**	**-2.4**
	comp=E,10µm,0.9s,SNR=22					
DIKM	**Dikmen**	**8.16 43**	*e*PN	**Pn**	**03 28 33.2**	**+1.1**
DIKM	**Dikmen**	**8.16 43**	*e*Pn	**Pn**	**03 28 33.3**	**+1.2**
TOKT	**Tokat**	**8.17 55**	*e*PN	**Pn**	**03 28 31.7**	**-0.6**
TOKT	**Tokat**	**8.17 55**	*e*Pn	**Pn**	**03 28 31.7**	**-0.6**
ZFRI	**Zfri**	**8.17 129**	Pn	**Pn**	**03 28 26.4**	**-6.0**
ZFRI	**Zfri**	**8.17 129**	Pn	**Pn**	**03 28 26.4**	**-6.0**
KRMI	**Paran Flat**	**8.20 133**	Pn	**Pn**	**03 28 27.0**	**-5.8**
KRMI	**Paran Flat**	**8.20 133**	Pn	**Pn**	**03 28 27.0**	**-5.8**
PRNI	**Paran**	**8.20 131**	P	**Pn**	**03 28 27.5**	**-5.4**
SLMH	**Al Salmeh**	**8.20 85**	⇓P	**Pn**	**03 28 28.0**	**-4.8**
SLMH			⇓S	Sn	03 29 37.0	-27
TIR	**Tirane**	**8.24 313**	*e*P	**Pn**	**03 28 35.7**	**+2.4

BDAS	Al Bad'	9.69 138	P	Pn	03 28 47.2	-6.0
HCY	Herceg Novi	9.72 315	⇑iPn	Pn	03 28 54.9	+1.4
HCY			eSn	Sn	03 30 41.0	-0.1
HCY	Herceg Novi	9.72 315	P	Pn	03 28 53.7	+0.2
HCY	Herceg Novi	9.72 315	P	Pn	03 28 53.7	+0.2
HCY	Herceg Novi	9.72 315	⇑iPn	Pn	03 28 54.9	+1.4
HCY			eSn	Sn	03 30 41.0	-0.1
VOIR		9.73 348	P	Pn	03 28 54.2	+0.6
VOIR		9.73 348	⇓iP	Pn	03 28 54.8	+1.2
VOIR		9.73 348	⇑iP	ScS	03 42 06.5	+2.5
VOIR		9.73 348	P	Pn	03 28 54.8	+1.2
SVIS	Svilajnac	9.74 331	P	Pn	03 28 56.4	+2.7
PETR		9.80 358	P	Pn	03 28 55.1	+0.5
PETR		9.80 358	⇓iP	Pn	03 28 55.2	+0.6
PETR		9.80 358	⇓iP	Pn	03 28 55.2	+0.6
LTRZ	Laterza	9.82 302	Pn	Pn	03 28 54.5	-0.4
	comp=Z,8μm,1.7s					
LTRZ	Laterza	9.82 302	Pn	Pn	03 28 54.5	-0.4
	comp=Z,8μm,1.7s					
PLE	Pljevlja	9.83 321	⇑iPn	Pn	03 28 57.6	+2.6
PLE			eSn	Sn	03 30 43.4	-0.4
PLE	Pljevlja	9.83 321	P	Pn	03 28 58.3	+3.3
PLE	Pljevlja	9.83 321	⇑iPn	Pn	03 28 57.6	+2.6
PLE	Pljevlja	9.83 321	P	Pn	03 28 58.3	+3.3
ORI	Oriolo Calabro	9.87 298	P	Pn	03 28 54.9	-0.6
ORI			pmax	pmax		
	comp=Z,8μm,1.1s					
ORI	Oriolo Calabro	9.87 298	Pn	Pn	03 28 54.9	-0.6
	comp=Z,8μm,1.1s					
ORI	Oriolo Calabro	9.87 298	P	Pn	03 28 54.9	-0.6
	comp=Z,8μm,1.1s					
EZC	Erzincan	9.90 64	ePN	Pn	03 28 56.3	+0.3
ESPY	Espiye-Giresun	9.91 57	ePN	Pn	03 28 55.9	-0.2
ESPY	Espiye-Giresun	9.91 57	ePn	Pn	03 28 55.9	-0.2
SCLL	Scilla	9.94 287	Pn	Pn	03 28 56.5	0.0
SCLL	Scilla	9.94 287	Pn	Pn	03 28 56.5	0.0
PLOR	Plostina	9.96 355	P	Pn	03 28 58.0	+1.3
PLOR	Plostina	9.96 355	⇑iP	Pn	03 28 57.2	+0.5
PLOR	Plostina	9.96 355	⇑iP	ScS	03 42 07.1	+2.8
PLOR	Plostina	9.96 355	P	Pn	03 28 58.0	+1.3
VRI	Vrincioaia	9.97 356	⇓P	Pn	03 28 58.0	+1.2
VRI	Vrincioaia	9.97 356	P	Pn	03 28 57.5	+0.6
VRI	Vrincioaia	9.97 356	⇓iP	Pn	03 28 58.0	+1.2
VRI	Vrincioaia	9.97 356	⇓iP	ScS	03 42 05.1	+0.7
VRI	Vrincioaia	9.97 356	P	Pn	03 28 58.0	+1.2
BRY	Bratogost	9.99 317	⇓iPn	Pn	03 28 58.5	+1.3
BRY			eSn	Sn	03 30 48.4	+0.8
BRY	Bratogost	9.99 317	⇓iPn	Pn	03 28 58.5	+1.3
BRY			eSn	Sn	03 30 48.4	+0.8
UPM	Unac-Piva	9.99 319	⇓iPn	Pn	03 28 59.6	+2.4
UPM			eSn	Sn	03 30 48.5	+0.8
UPM	Unac-Piva	9.99 319	P	Pn	03 28 59.7	+2.5
UPM	Unac-Piva	9.99 319	⇓iPn	Pn	03 28 59.6	+2.4
UPM			eSn	Sn	03 30 48.5	+0.8
BAI	Bari	10.00 304	ePn	Pn	03 28 57.8	+0.5
SG1	Sgolgore (BA)	10.02 303	ePn	Pn	03 28 56.8	-0.8
TRUS	Trudelj	10.04 328	⇑iPn	Pn	03 28 58.4	+0.6
DIVS	Divibare	10.12 326	P	Pn	03 29 01.7	+2.7
DIVS	Divibare	10.12 326	P	ScS	03 42 02.7	-2.0
DIVS	Divibare	10.12 326	⇑iPn	Pn	03 29 01.4	+2.4
DOPR	Dopca	10.20 350	⇓iP	Pn	03 29 01.5	+1.5
DOPR	Dopca	10.20 350	⇓iP	ScS	03 42 07.8	+3.0
DOPR	Dopca	10.20 350	⇓iP	Pn	03 29 01.5	+1.5
GZR	Gura Zlata	10.20 340	P	Pn	03 29 00.5	+0.5
GZR	Gura Zlata	10.20 340	⇓iP	Pn	03 29 00.3	+0.3
GZR	Gura Zlata	10.20 340	⇓iP	ScS	03 42 06.8	+2.0
GZR	Gura Zlata	10.20 340	P	Pn	03 29 00.5	+0.5
AGST	Augusta-Monte	10.20 281	Pn	Pn	03 28 57.7	-2.4
	comp=Z,7μm,1.7s					
AGST	Augusta-Monte	10.20 281	Pn	Pn	03 28 57.7	-2.4
	comp=Z,7μm,1.7s					
SIM	Simferopol'	10.21 26	deP	Pn	03 29 00.5	+0.3
SIM			eS	Sn	03 31 01.0	+7.9
SIM			pmax	pmax		
	comp=Z,3μm,0.3s					
SIM			MLR	MLR		
	comp=Z,32μm,11.0s					
SIM	Simferopol'	10.21 26	eP	Pn	03 29 00.5	+0.3
	comp=Z,3μm,0.3s					
BBLS	Lazići	10.22 323	P	Pn	03 29 03.4	+3.1
BBLS	Lazići	10.22 323	⇑iPn	Pn	03 29 02.9	+2.6
BBLS	Lazići	10.22 323	P	Pn	03 29 03.4	+3.1
GUMT	Gumushane	10.24 60	ePN	Pn	03 29 00.9	+0.3
GUMT	Gumushane	10.24 60	ePn	Pn	03 29 00.9	+0.2
HAVL	Avola	10.27 280	Pn	Pn	03 28 58.0	-3.0
HAVL	Avola	10.27 280	Pn	Pn	03 28 58.0	-3.0
PTRP	Pietrapertosa	10.31 300	Pn	Pn	03 29 01.8	+0.2
	comp=Z,20μm,1.4s					
PTRP	Pietrapertosa	10.31 300	Pn	Pn	03 29 01.8	+0.2
	comp=Z,10μm,1.4s					
SSY	Sortino	10.32 281	Pn	Pn	03 28 58.2	-3.5
SSY	Sortino	10.32 281	Pn	Pn	03 28 58.2	-3.5
CDT	Castel del Mon	10.40 303	ePn	Pn	03 29 03.4	+0.6
CDT			eSn	Sn	03 30 59.3	+1.7
HDK1	Dakhla	10.44 172	P	Pn	03 28 58.8	-4.7
	baz=173					
HDK1	Dakhla	10.44 172	P	Pn	03 28 58.8	-4.6
LSRT	Sirt	10.48 246	iP	Pn	03 28 59.2	-4.8
	SNR=22					
ACER	Acerenza	10.50 301	Pn	Pn	03 29 03.0	-1.2
	comp=Z,8μm,1.0s					
ACER	Acerenza	10.50 301	Pn	Pn	03 29 03.0	-1.2
	comp=Z,8μm,1.0s					
BINT	Bingol	10.51 70	ePN	Pn	03 29 04.0	-0.4
BINT	Bingol	10.51 70	ePn	Pn	03 29 04.0	-0.4
MDB	Medias	10.53 347	P	Pn	03 29 06.8	+2.3
MDB	Medias	10.53 347	⇑iP	Pn	03 29 06.7	+2.2
MDB	Medias	10.53 347	P	Pn	03 29 06.9	+2.4
HMDC	Modica	10.54 279	Pn	Pn	03 29 02.0	-2.8
HMDC	Modica	10.54 279	Pn	Pn	03 29 02.0	-2.8
LEOM	Leova	10.55 2	P	Pn	03 29 05.7	+1.0
LEOM	Leova	10.55 2	⇑iP	Pn	03 29 05.6	+0.9
LEOM	Leova	10.55 2	P	Pn	03 29 05.7	+1.0
HVZN	Vizzini	10.61 281	Pn	Pn	03 29 02.6	-3.0
HVZN	Vizzini	10.61 281	Pn	Pn	03 29 02.6	-3.0
TESR		10.61 356	P	Pn	03 29 04.9	-0.8
TESR		10.61 356	⇑iP	Pn	03 29 05.0	-0.7
TESR		10.61 356	⇑iP	ScS	03 42 07.3	+1.8
TESR		10.61 356	P	Pn	03 29 04.9	-0.8
DEV	Deva	10.62 341	⇑iP	Pn	03 29 06.6	+0.9
DEV	Deva	10.62 341	P	Pn	03 29 06.6	+0.9
AKRG	Al Kharijah	10.64 167	P	Pn	03 29 01.1	-5.1
	baz=167					
GTR	Jabal at Tayr	10.65 166	P	Pn	03 29 00.8	-5.5
	baz=167					
GTR	Jabal at Tayr	10.65 166	P	Pn	03 29 00.8	-5.5
KTUT	Trabzon	10.65 58	ePN	Pn	03 29 06.0	-0.2
KTUT	Trabzon	10.65 58	ePn	Pn	03 29 06.0	-0.3
TBKS	Tabuk	10.67 134	P	Pn	03 29 00.7	-5.8
TBKS	Tabuk	10.67 134	P	Pn	03 29 00.7	-5.8
HSFG		10.70 149	P	Pn	03 29 00.9	-6.0
	baz=148					
HSFG		10.70 149	P	Pn	03 29 00.9	-6.0
BZS	Buzias	10.76 336	P	Pn	03 29 08.1	+0.5
BZS	Buzias	10.76 336	⇑iP	Pn	03 29 07.9	+0.3
BZS	Buzias	10.76 336	⇓iP	ScS	03 42 09.5	+3.7
BZS	Buzias	10.76 336	P	Pn	03 29 08.1	+0.5
WDD	Wield Dalam	10.78 274	ePn	Pn	03 29 05.5	-2.4
	comp=Z,4μm,0.7s					
WDD			eSn	Sn	03 30 58.5	-8.4
WDD	Wield Dalam	10.78 274	ePn	Pn	03 29 05.5	-2.5
	comp=Z,4μm,0.7s					
WDD			eSn	Sn	03 30 58.5	-8.4
MRLC	Muro Lucano	10.81 300	Pn	Pn	03 29 06.6	-1.7
	comp=Z,8μm,1.6s					
MRLC	Muro Lucano	10.81 300	Pn	Pn	03 29 06.6	-1.7
	comp=Z,8μm,1.6s					
VAE	Valguarnera	10.87 282	P	Pn	03 29 08.1	-1.0
	comp=Z,24nm,0.3s,baz=54,slow=6.5,SNR=63					
VAE			S	Sn	03 31 02.6	-6.5
	comp=Z,514nm,0.3s,baz=90,slow=20,SNR=7.0					
VAE	Valguarnera	10.87 282	P	Pn	03 29 08.1	-1.1
VAE			S	Sn	03 31 02.6	-6.5
MS1	Monte Sant'Ang	10.90 306	ePn	Pn	03 29 09.8	+0.1
MS1			eSn	Sn	03 31 09.2	-0.7
TIM	Timisoara	10.99 335	P	Pn	03 29 12.5	+1.7
TIM	Timisoara	10.99 335	⇑iP	Pn	03 29 12.1	+1.2
TIM	Timisoara	10.99 335	P	Pn	03 29 12.5	+1.6
FGSL	Fruska Gora	11.04 329	⇑iPn	Pn	03 29 13.0	+1.5
KIS	Kishinev	11.09 4	⇑eP	Pn	03 29 10.0	-2.2
	comp=Z,3μm,2.0s					
KIS			iS	Sn	03 31 13.0	-1.5
KIS			eL		03 32 10.0	
KIS			LRM		03 32 50.0	
	comp=Z,180μm,26.0s					
KIS	Kishinev	11.09 4	ceP	Pn	03 29 10.0	-2.2
KIS			iS	Sn	03 31 13.0	-1.5
KIS			pmax	pmax		
	comp=Z,7μm,6.0s					
KIS			pmax	pmax		
	comp=Z,3.0nm,2.0s					
KIS			MLR	MLR		
	comp=Z,180μm,26.0s					
KIS			MLR	MLR		
	comp=Z,87μm,20.0s					
KIS	Kishinev	11.09 4	P	Pn	03 29 13.4	+1.2
KIS	Kishinev	11.09 4	⇓iP	Pn	03 29 14.2	+2.0
KIS	Kishinev	11.09 4	⇓iP	ScS	03 42 14.8	+8.4
KIS	Kishinev	11.09 4	P	Pn	03 29 13.4	+1.2
DBAS	Duba	11.13 139	P	Pn	03 29 06.9	-5.9
DBAS	Duba	11.13 139	P	Pn	03 29 06.9	-5.9
LMSR	Misrath	11.20 255	iP	Pn	03 29 09.9	-3.9
	comp=Z,2μm,0.6s,SNR=22					
IAS	Iasi	11.26 359	⇓P	Pn	03 29 15.8	+1.3
IAS	Iasi	11.26 359	⇓iP	Pn	03 29 15.8	+1.3
IAS	Iasi	11.26 359	P	Pn	03 29 15.8	+1.3
MRB1	Monte Rocchett	11.31 301	Pn	Pn	03 29 14.3	-0.9
	comp=Z,29μm,1.7s					
MRB1	Monte Rocchett	11.31 301	Pn	Pn	03 29 14.3	-0.9
	comp=Z,10μm,1.7s					
LZLA	Zalla	11.36 233	iP	Pn	03 29 11.6	-4.4
	comp=Z,5μm,1.0s,SNR=22					
EZM	Erzurum	11.42 66	ePN	Pn	03 29 17.2	+0.5
PSB1	Pescosannita	11.46 301	Pn	Pn	03 29 16.5	-0.8
	comp=Z,11μm,1.4s					
PSB1	Pescosannita	11.46 301	Pn	Pn	03 29 16.5	-0.8
	comp=Z,10μm,1.4s					
ANN	Anapa	11.51 37	diP	Pn	03 29 16.0	-1.8
ANN			eS	Sn	03 31 22.1	-2.5
ANN			pmax	pmax		
	comp=Z,664nm,1.5s					
ANN			MLR	MLR		
	comp=Z,31μm,11.0s					
ANN	Anapa	11.51 37	⇓iP	Pn	03 29 15.9	-1.9
ANN	Anapa	11.51 37	⇓iP	Pn	03 29 15.9	-1.9
DRGR		11.51 342	⇑iP	Pn	03 29 18.4	+0.5
DRGR		11.51 342	⇑iP	Pn	03 29 18.4	+0.5
DRGR		11.51 342	P	Pn	03 29 18.3	+0.4
PZAR	Pazar-Rize	11.51 59	ePN	Pn	03 29 17.9	0.0
PZAR	Pazar-Rize	11.51 59	ePn	Pn	03 29 18.0	0.0
CIGN	Sant'Elia a Pi	11.57 304	Pn	Pn	03 29 18.2	-0.6
	comp=Z,4μm,1.2s					
CIGN	Sant'Elia a Pi	11.57 304	Pn	Pn	03 29 18.2	-0.6
	comp=Z,4μm,1.2s					
HQSR		11.60 149	P	Pn	03 29 13.2	-6.1
	baz=149					
HQSR		11.60 149	P	Pn	03 29 13.2	-6.1
HDK2	Wahat Dakhilah	11.61 175	P	Pn	03 29 13.9	-5.5
	baz=175					
HDK2	Wahat Dakhilah	11.61 175	P	Pn	03 29 13.9	-5.5
WJHS		11.74 139	P	Pn	03 29 15.3	-5.9
WJHS		11.74 139	P	Pn	03 29 15.3	-5.8
HEDF	Idfu	11.74 155	P	Pn	03 29 14.8	-6.5
	baz=155					
HEDF	Idfu	11.74 155	P	Pn	03 29 14.8	-6.4
SGG	Gregorio Mates	11.82 302	Pn	Pn	03 29 20.9	-1.3
	comp=Z,10μm,1.6s					
SGG	Gregorio Mates	11.82 302	Pn	Pn	03 29 20.9	-1.3
	comp=Z,10μm,1.6s					
BUR01	Bucovina Ar. S	11.84 351	P	Pn	03 29 23.5	+1.2
BUR01	Bucovina Ar. S	11.84 351	P	Pn	03 29 23.5	+1.1
BURAR	Bucovina Array	11.84 351	P	Pn	03 29 24.1	+1.7
BURAR	Bucovina Array	11.84 351	⇑iP	Pn	03 29 23.3	+0.9
BURAR	Bucovina Array	11.84 351	⇑iP	Pn	03 29 23.3	+0.9
BUR08	Bucovina Ar. S	11.87 351	ePn	Pn	03 29 23.3	+0.5
BUR08	Bucovina Ar. S	11.87 351	ePn	Pn	03 29 23.3	+0.5
SOC	Sochi	11.93 47	diP	Pn	03 29 22.1	-1.6
SOC			e		03 31 32.2	
SOC			pmax	pmax		
	comp=Z,327nm,1.1s					
SOC			MLR	MLR		
	comp=Z,61μm,16.0s					
SOC	Sochi	11.93 47	iP	Pn	03 29 22.1	-1.6
	comp=Z,327nm,1.1s					
BIDS	Bi'r al Bayda'	11.94 137	P	Pn	03 29 18.3	-5.5
BIDS	Bi'r al Bayda'	11.94 137	P	Pn	03 29 18.3	-5.5
USI	Ustica	11.97 288	Pn	Pn	03 29 21.1	-3.2
	comp=Z,3μm,0.6s					
USI	Ustica	11.97 288	Pn	Pn	03 29 21.1	-3.2
	comp=Z,3μm,0.6s					
MIDA	Miranda	12.01 302	Pn	Pn	03 29 24.0	-0.8
	comp=Z,11μm,1.7s					
MIDA	Miranda	12.01 302	Pn	Pn	03 29 24.0	-0.8
	comp=Z,10μm,1.7s					
HADB		12.06 149	P	Pn	03 29 19.6	-6.0
	baz=149					
HADB		12.06 149	P	Pn	03 29 19.6	-5.9
RFI	Roccamonfina	12.06 301	Pn	Pn	03 29 25.7	+0.2
	comp=Z,435nm,1.4s					
RFI	Roccamonfina	12.06 301	Pn	Pn	03 29 25.7	+0.2
	comp=Z,435nm,1.4s					
RNI2	Rionero Sannit	12.11 303	Pn	Pn	03 29 25.6	-0.5
	comp=Z,3μm,1.4s					
RNI2	Rionero Sannit	12.11 303	Pn	Pn	03 29 25.6	-0.5
	comp=Z,3μm,1.4s					
BCA	Borcka	12.12 59	ePN	Pn	03 29 25.8	-0.5
BCA	Borcka	12.12 59	ePn	Pn	03 29 25.8	-0.4
BMR	Baia Mare	12.17 346	⇑P	Pn	03 29 28.2	+1.3
BMR	Baia Mare	12.17 346	⇑iP	Pn	03 29 28.2	+1.3
BMR	Baia Mare	12.17 346	P	Pn	03 29 28.2	+1.3
LJFR	Jufra	12.19 239	iP	Pn	03 29 21.3	-6.0
	comp=Z,7μm,1.0s,SNR=22					
LKFR	Kufra	12.38 200	iP	Pn	03 29 26.2	-3.6
	comp=Z,2μm,1.0s,SNR=22					
PKSM	Moragy	12.38 329	P	Pn	03 29 30.4	+0.7
PKSM	Moragy	12.38 329	⇑iP	Pn	03 29 30.5	+0.8
PKSM	Moragy	12.38 329	P	Pn	03 29 30.5	+0.8
EMRS	Mersa Alam	12.45 149	P	Pn	03 29 25.4	-5.4
	baz=148					
EMRS	Mersa Alam	12.45 149	P	Pn	03 29 25.4	-5.4
PKSN	Nyarlorinc	12.47 334	eP	Pn	03 29 33.7	+2.7
VVLD	Villa Vallelon	12.54 303	Pn	Pn	03 29 30.7	-1.2
	comp=Z,4μm,1.8s					
VVLD	Villa Vallelon	12.54 303	Pn	Pn	03 29 30.7	-1.2
	comp=Z,4μm,1.8s					
AGRB	Hanur-Agry	12.56 69	ePN	Pn	03 29 31.4	-0.9
AGRB	Hanur-Agry	12.56 69	ePn	Pn	03 29 31.4	-0.9
VANB	Van	12.70 73	ePN	Pn	03 29 33.8	-0.4
VANB	Van	12.70 73	ePn	Pn	03 29 33.8	-0.4
GUAR	Guarcino	12.72 302	Pn	Pn	03 29 33.1	-1.3
	comp=Z,2μm,1.0s					
GUAR	Guarcino	12.72 302	Pn	Pn	03 29 33.1	-1.3
	comp=Z,2μm,1.0s					
CUKT	Cukurca	12.77 79	ePN	Pn	03 29 34.6	-0.6
CUKT	Cukurca	12.77 79	ePn	Pn	03 29 34.6	-0.6
GHAR	Gharyan	12.78 257	iP	Pn	03 29 30.5	-4.9
	comp=Z,354nm,0.8s,SNR=22					
LSHF	Shwairf	12.83 246	iP	Pn	03 29 30.9	-5.1
	comp=Z,910nm,0.8s,SNR=22					
PKS9	Tamasi	12.83 329	eP	Pn	03 29 37.6	+1.7
AAHD	Abu Hadid	12.87 159	P	Pn	03 29 31.0	-5.5
	baz=159					
AAHD	Abu Hadid	12.87 159	P	Pn	03 29 31.0	-5.6
TERO	Teramo	12.87 306	Pn	Pn	03 29 35.2	-1.2
	comp=Z,3μm,0.9s					
TERO	Teramo	12.87 306	Pn	Pn	03 29 35.2	-1.2
	comp=Z,3μm,0.9s					
SISC	Sisak	12.88 321	ePn	Pn	03 29 41.0	+4.4
AQU	L'Aquila	12.88 304	P	Pn	03 29 38.5	+1.8
AQU	L'Aquila	12.88 304	ePn	Pn	03 29 38.2	+1.5
AQU			eSn	Sn	03 31 52.2	-6.0
AQU	L'Aquila	12.88 304	⇑iP	Pn	03 29 36.0	-0.7
AQU	L'Aquila	12.88 304	⇑iP	ScS	03 42 18.1	+7.8
AQU	L'Aquila	12.88 304	ePn	Pn	03 29 38.2	+1.5
AQU	L'Aquila	12.88 304	P	Pn	03 29 38.5	+1.8
AQU			eSn	Sn	03 31 52.2	-6.0
KARS	Kars	12.89 64	ePN	Pn	03 29 36.2	-0.5
KARS	Kars	12.89 64	ePn	Pn	03 29 36.2	-0.5
AKRL	Khor El Raml	12.94 159	P	Pn	03 29 31.1	-6.4
	baz=159					
AKRL	Khor El Raml	12.94 159	P	Pn	03 29 31.1	-6.4
CERT	Cerreto	13.01 302	Pn	Pn	03 29 36.6	-1.7
	comp=Z,12μm,1.4s					
CERT	Cerreto	13.01 302	Pn	Pn	03 29 36.6	-1.7
	comp=Z,10μm,1.4s					
FIAM	Fiamignano	13.04 303	Pn	Pn	03 29 38.4	-0.4
	comp=Z,4μm,1.0s					
FIAM	Fiamignano	13.04 303	Pn	Pn	03 29 38.4	-0.4
	comp=Z,4μm,1.0s					
ASHG	Umm Shaghir	13.05 164	P	Pn	03 29 32.8	-6.3
	baz=164					
ASHG	Umm Shaghir	13.05 164	P	Pn	03 29 32.8	-6.2
HAGS	Hagol	13.07 150	P	Pn	03 29 34.4	-4.9
	baz=149					
HAGS	Hagol	13.07 150	P	Pn	03 29 34.4	-4.9
NVLJ	Novalja	13.10 315	ePn	Pn	03 29 41.0	+1.4
NVLJ			Sn	Sn	03 32 01.1	-2.5
RDP	Rocca di Papa	13.12 301	P	Pn	03 29 38.9	-1.0
RDP			pmax	pmax		
	comp=Z,4μm,0.9s					
RDP	Rocca di Papa	13.12 301	Pn	Pn	03 29 38.9	-1.0
	comp=Z,4μm,0.9s					
RDP	Rocca di Papa	13.12 301	P	Pn	03 29 38.9	-1.0
	comp=Z,4μm,0.9s					
CLDR	Caldiran	13.19 71	ePN	Pn	03 29 38.6	-2.2
CLDR	Caldiran	13.19 71	ePn	Pn	03 29 38.7	-2.1
MTCE	Montecelio	13.20 302	Pn	Pn	03 29 39.2	-1.8
	comp=Z,3μm,1.0s					
MTCE	Montecelio	13.20 302	Pn	Pn	03 29 39.2	-1.8
	comp=Z,3μm,1.0s					
BUD	Budapest	13.27 333	⇑eP	Pn	03 29 44.4	+2.5
BUD	Budapest	13.27 333	P	Pn	03 29 43.8	+1.9
AOI	Ancona	13.31 309	Pn	Pn	03 29 41.0	-1.4
	comp=Z,4μm,1.0s					
AOI	Ancona	13.31 309	Pn	Pn	03 29 41.0	-1.4
	comp=Z,4μm,1.0s					
UZH	Uzhgorod	13.33 344	eP	Pn	03 29 42.6	-0.1
UZH			eS	Sn	03 32 11.0	+2.0
UZH			MLR	MLR		
	comp=N,60μm,12.0s					
UZH			MLR	MLR		
	comp=E,42μm,12.0s					
UZH			MLR	MLR		
	comp=Z,46μm,12.0s					
PSZ	Piszkesteto	13.34 336	P	Pn	03 29 43.7	+0.8
PSZ	Piszkesteto	13.34 336	ePn	Pn	03 29 42.9	0.0
PSZ	Piszkesteto	13.34 336	⇑iP	Pn	03 29 43.0	+0.1
PSZ	Piszkesteto	13.34 336	ePn	Pn	03 29 42.9	0.0
UMJS	Umm Lajj	13.43 140	P	Pn	03 29 38.8	-5.4
UMJS	Umm Lajj	13.43 140	P	Pn	03 29 38.8	-5.4
BOJS	Bojanci	13.48 319	⇑iPn	Pn	03 29 43.6	-1.2
BOJS			e		03 32 12.1	
	comp=Z,6μm,12.0s					
BOJS	Bojanci	13.48 319	⇑iPn	Pn	03 29 43.6	-1.2
BOJS			e		03 32 12.1	
BOJS	Bojanci	13.48 319	⇑iPn	Pn	03 29 43.6	-1.2
	comp=Z,86μm,12.0s					
CING	Cingoli	13.48 308	Pn	Pn	03 29 42.8	-2.0
CING	Cingoli	13.48 308	Pn	Pn	03 29 42.8	-2.0
CRES	Cresnjev	13.59 320	P	Pn	03 29 46.7	+0.5
CRES	Cresnjev	13.59 320	P	Pn	03 29 46.7	+0.5
KOGS	Kog	13.63 324	⇑ePn	Pn	03 29 46.1	-0.6
KOGS	Kog	13.63 324	⇑ePn	Pn	03 29 46.1	-0.6
HKFR	Khafra	13.63 166	P	Pn	03 29 41.8	-5.1
	baz=166					
HKFR	Khafra	13.63 166	P	Pn	03 29 41.8	-5.1
KECS	Kecovo	13.66 339	eP	Pn	03 29 47.2	+0.1
KECS			pmax	pmax		
	comp=Z,836nm,1.2s					
KECS	Kecovo	13.66 339	eP	Pn	03 29 47.2	+0.1
	comp=Z,836nm,1.2s					
KECS			e		03 29 57.5	
KECS			e		03 42 14.5	
KECS	Kecovo	13.66 339	ePN	Pn	03 29 47.2	+0.1
KECS	Kecovo	13.66 339	eP	Pn	03 29 57.5	+10
KECS			eSCS	ScS	03 42 14.5	+2.6
TOLF	Tolfa	13.73 301	Pn	Pn	03 29 46.1	-1.9
	comp=Z,3μm,1.3s					
TOLF	Tolfa	13.73 301	Pn	Pn	03 29 46.1	-1.9
	comp=Z,3μm,1.3s					
CRVS	Cervenica-Dubn	13.78 342	eP	Pn	03 29 49.1	+0.4
CRVS			eS	Sn	03 32 31.4	+11
CRVS			pmax	pmax		
	comp=Z,882nm,1.0s					
CRVS	Cervenica-Dubn	13.78 342	eP	Pn	03 29 49.1	+0.4
	comp=Z,882nm,1.0s					
CRVS			e		03 30 00.6	
CRVS			eS	Sn	03 32 31.4	+11
CRVS			e		03 42 14.0	
CRVS	Cervenica-Dubn	13.78 342	ePN	Pn	03 29 49.1	+0.4
CRVS	Cervenica-Dubn	13.78 342	eP	Px	03 30 00.6	
CRVS			e		03 32 31.4	
CRVS			eSCS	ScS	03 42 14.0	+1.8
CRVS	Cervenica-Dubn	13.78 342	eP	Pn	03 29 49.1	+0.4
ONI	Oni	13.82 56	P	Pn	03 29 48.4	-0.9
MURB	Monte Urbino	13.86 307	Pn	Pn	03 29 48.9	-0.9
	comp=Z,7μm,0.9s					
MURB	Monte Urbino	13.86 307	Pn	Pn	03 29 48.9	-0.9
	comp=Z,7μm,0.9s					
VISS	Visnje	13.90 319	⇑iPn	Pn	03 29 48.4	-1.8
VISS			e		03 32 23.8	
VISS						
	comp=Z,62nm,10.7s					
VISS	Visnje	13.90 319	⇑iPn	Pn	03 29 48.4	-1.8
VISS			e		03 32 23.8	
VISS	Visnje	13.90 319	⇑iPn	Pn	03 29 48.4	-1.8
	comp=Z,60μm,10.7s					
BHD	Baghdad	13.91 96	ex	x	03 29 44.0	
BHD			ex	x	03 32 22.0	
KIV	Kislovodsk	13.94 50	diP	Pn	03 29 49.

KWP	**Kalwaria Pacla**	**14.20 346**	⇓*i*P	ScS	03 42 01.5	-12
KWP	**Kalwaria Pacla**	**14.20 346**	*e*Pn	**Pn**	**03 29 55.5**	**+1.4**
	comp=N,2μm,0.9s					
VYHS	**Vyhne**	**14.20 335**	*e*P	**Pn**	**03 29 54.0**	**-0.1**
VYHS			*e*S	**Sn**	**03 32 38.1**	**+8.1**
VYHS			pmax	pmax		
	comp=Z,4μm,1.0s					
VYHS	**Vyhne**	**14.20 335**	*e*P	**Pn**	**03 29 54.0**	**-0.1**
	comp=Z,4μm,1.0s					
VYHS			*e*		03 30 00.8	
VYHS			*e*S	**Sn**	**03 32 38.1**	**+8.1**
VYHS			*e*		03 42 16.0	
VYHS			*e*		03 42 40.8	
VYHS	**Vyhne**	**14.20 335**	*e*PN	**Pn**	**03 29 54.0**	**-0.1**
VYHS	**Vyhne**	**14.20 335**	*e*P	**Pn**	**03 30 00.8**	**+6.7**
VYHS	**Vyhne**	**14.20 335**	*e*SN	**Sn**	**03 32 38.1**	**+8.1**
VYHS	**Vyhne**	**14.20 335**	*e*SCS	ScS	03 42 16.0	+2.8
VYHS			*e*		03 42 40.8	
VYHS	**Vyhne**	**14.20 335**	*e*P	**Pn**	**03 29 54.0**	**-0.1**
LJU	**Ljubljana**	**14.22 319**⇑	*e*Pn	**Pn**	**03 29 54.4**	**0.0**
LJU			*e*		03 32 43.9	
LJU						
	comp=Z,236nm,10.8s					
LJU	**Ljubljana**	**14.22 319**⇑	*e*Pn	**Pn**	**03 29 54.4**	**0.0**
LJU			*e*		03 32 43.9	
LJU	**Ljubljana**	**14.22 319**⇑	*e*Pn	**Pn**	**03 29 54.4**	**-0.1**
	comp=Z,70μm,10.8s					
ZAVS	**Zavodnje**	**14.22 321**	*e*Pn	**Pn**	**03 29 54.0**	**-0.5**
RSM	**Repubblica di**	**14.22 309**	P	**Pn**	**03 29 53.8**	**-0.7**
RSM			pmax	pmax		
	comp=Z,1μm,0.9s					
RSM	**Repubblica di**	**14.22 309**	Pn	**Pn**	**03 29 53.8**	**-0.7**
	comp=Z,1μm,0.9s					
RSM	**Repubblica di**	**14.22 309**	Pn	**Pn**	**03 29 53.8**	**-0.7**
	comp=Z,1μm,0.9s					
STHS	**Stebnicka Huta**	**14.31 342**	*e*P	**Pn**	**03 29 58.6**	**+2.9**
STHS			pmax	pmax		
	comp=Z,1μm,0.9s					
STHS	**Stebnicka Huta**	**14.31 342**	*e*P	**Pn**	**03 29 58.6**	**+2.9**
	comp=Z,1μm,0.9s					
STHS			*e*		03 30 05.1	
STHS			*e*		03 42 15.8	
STHS	**Stebnicka Huta**	**14.31 342**	*e*PN	**Pn**	**03 29 58.6**	**+2.9**
STHS	**Stebnicka Huta**	**14.31 342**	*e*P	**Pn**	**03 30 05.1**	**+9.4**
STHS			*e*SCS	ScS	03 42 15.8	+2.4
STHS	**Stebnicka Huta**	**14.31 342**	*e*P	**Pn**	**03 29 58.6**	**+2.9**
HSHL	**Bi'r Shalatayn**	**14.37 151**	P	**Pn**	**03 29 52.1**	**-4.5**
	baz=150					
SOKA	**Soboth**	**14.39 322**⇑	*i*Pn	**Pn**	**03 29 56.1**	**-0.6**
	comp=Z,11μm,2.1s					
SOKA	**Soboth**	**14.39 322**	Pn	**Pn**	**03 29 56.1**	**-0.5**
	comp=Z,11μm,2.1s					
CRE	**Caprese Michel**	**14.40 307**	P	**Pn**	**03 29 56.1**	**-0.7**
CRE			pmax	pmax		
	comp=Z,1μm,0.8s					
CRE	**Caprese Michel**	**14.40 307**	Pn	**Pn**	**03 29 56.1**	**-0.7**
	comp=Z,1μm,0.8s					
CRE	**Caprese Michel**	**14.40 307**	Pn	**Pn**	**03 29 56.1**	**-0.7**
	comp=Z,1μm,0.8s					
TBLG	**Delisi**	**14.41 61**	P	**Pn**	**03 29 56.8**	**-0.2**
TBLG	**Delisi**	**14.41 61**	P	**Pn**	**03 29 56.8**	**-0.2**
ISHB	**Shabestar**	**14.41 75**	*e*P	**Pn**	**03 29 57.0**	**0.0**
KOLL	**Kolacno**	**14.42 334**	*e*P	**Pn**	**03 29 57.8**	**+0.7**
KOLL			*e*		03 30 04.0	
KOLL			*e*		03 42 14.9	
KOLL	**Kolacno**	**14.42 334**	*e*PN	**Pn**	**03 29 57.8**	**+0.7**
KOLL	**Kolacno**	**14.42 334**	*e*P	**Pn**	**03 30 04.0**	**+6.9**
KOLL			*e*SCS	ScS	03 42 14.9	+1.2
KOLL	**Kolacno**	**14.42 334**	*e*P	**Pn**	**03 29 57.8**	**+0.7**
TRI	**Trieste**	**14.42 317**	*e*P	**Pn**	**03 29 55.0**	**-2.1**
TRI			*e*		03 32 40.1	
TRI			pmax	pmax		
	comp=Z,5μm,0.9s					
TRI	**Trieste**	**14.42 317**	*e*Pn	**Pn**	**03 29 55.0**	**-2.1**
	comp=Z,5μm,0.9s					
TRI			*e*Sn	**Sn**	**03 32 40.1**	**+4.5**
TRI	**Trieste**	**14.42 317**	*e*Pn	**Pn**	**03 29 55.0**	**-2.1**
	comp=Z,5μm,0.9s					
TRI			*e*Sn	**Sn**	**03 32 40.1**	**+4.6**
MTA	**Mtatsminda**	**14.44 61**	P	**Pn**	**03 29 56.9**	**-0.4**
MAON	**Monte Argentar**	**14.46 302**	Pn	**Pn**	**03 29 56.4**	**-1.3**
	comp=Z,4μm,1.0s					
MAON	**Monte Argentar**	**14.46 302**	Pn	**Pn**	**03 29 56.4**	**-1.3**
	comp=Z,4μm,1.0s					
OBKA	**Obir**	**14.52 321**	P	**Pn**	**03 29 59.4**	**+1.1**
OBKA	**Obir**	**14.52 321**⇑	*i*Pn	**Pn**	**03 29 57.5**	**-0.8**
	comp=Z,25μm,5.6s,SNR=339					
OBKA	**Obir**	**14.52 321**	Pn	**Pn**	**03 29 57.5**	**-0.8**
	comp=Z,25μm,5.6s,SNR=339					
OBKA	**Obir**	**14.52 321**	P	**Pn**	**03 29 59.4**	**+1.1**
VOY	**Vojsko**	**14.55 318**	*e*Pn	**Pn**	**03 29 56.0**	**-2.8**
VOY			*e*		03 29 58.7	
VOY	**Vojsko**	**14.55 318**	*e*Pn	**Pn**	**03 29 56.0**	**-2.8**
ARSA	**Arzberg**	**14.56 325**	P	**Pn**	**03 30 00.0**	**+1.1**
ARSA	**Arzberg**	**14.56 325**⇑	*i*Pn	**Pn**	**03 29 58.9**	**0.0**
	comp=Z,24μm,5.8s,SNR=398					
ARSA	**Arzberg**	**14.56 325**	Pn	**Pn**	**03 29 58.9**	**0.0**
	comp=Z,24μm,5.8s,SNR=398					
ARSA	**Arzberg**	**14.56 325**	P	**Pn**	**03 30 00.0**	**+1.1**
NIE	**Niedzica**	**14.56 340**	*e*P	**Pn**	**03 29 59.3**	**+0.4**
NIE			e		03 30 02.9	
NIE			*e*PP		03 30 09.2	
NIE			e		03 33 03.3	
LIKS	**Likavka**	**14.59 337**	*e*P	**Pn**	**03 30 04.4**	**+5.1**
LIKS	**Likavka**	**14.59 337**	*e*P	**Pn**	**03 30 04.4**	**+5.1**
LIKS	**Likavka**	**14.59 337**	*e*P	**Pn**	**03 30 04.4**	**+5.1**
ZST	**Bratislava**	**14.59 330**	*e*P	**Pn**	**03 29 59.8**	**+0.5**
ZST			pmax	pmax		
	comp=Z,2μm,1.0s					
ZST	**Bratislava**	**14.59 330**	*e*P	**Pn**	**03 29 59.8**	**+0.5**
	comp=Z,2μm,1.0s					
ZST			*e*		03 30 06.6	
ZST			*e*S	**Sn**	**03 32 53.3**	**+14**
ZST	**Bratislava**	**14.59 330**	*e*PN	**Pn**	**03 29 59.8**	**+0.5**
ZST	**Bratislava**	**14.59 330**	*e*P	**Pn**	**03 30 06.6**	**+7.3**
ZST			*e*S	**Sn**	**03 32 53.3**	**+14**
ZST	**Bratislava**	**14.59 330**	*e*P	**Pn**	**03 29 59.8**	**+0.5**
SFI	**Santa Sofia**	**14.60 308**	P	**Pn**	**03 30 02.2**	**+2.8**
SFI			pmax	pmax		
	comp=Z,4μm,0.7s					
SFI	**Santa Sofia**	**14.60 308**	Pn	**Pn**	**03 30 02.2**	**+2.8**
	comp=Z,4μm,0.7s					
SFI	**Santa Sofia**	**14.60 308**	P	**Pn**	**03 30 02.2**	**+2.8**
	comp=Z,4μm,0.7s					
IAZR	**Azarshahr**	**14.67 78**	*e*P	**Pn**	**03 30 01.1**	**+0.7**
IAZR	**Azarshahr**	**14.67 78**	*e*P	**Pn**	**03 30 01.1**	**+0.7**
SMOL	**Smolenice**	**14.72 332**	*e*P	**Pn**	**03 30 04.9**	**+3.9**
SMOL			*e*		03 30 08.7	
SMOL	**Smolenice**	**14.72 332**	*e*PN	**Pn**	**03 30 04.9**	**+3.9**
SMOL	**Smolenice**	**14.72 332**	*e*P	**Pn**	**03 30 08.7**	**+7.7**
SMOL	**Smolenice**	**14.72 332**	*e*P	**Pn**	**03 30 04.9**	**+3.9**
CADS	**Cadrg**	**14.76 319**⇑	*e*Pn	**Pn**	**03 30 00.0**	**-1.5**
CADS	**Cadrg**	**14.76 319**⇑	*e*Pn	**Pn**	**03 30 00.0**	**-1.5**
DGRG	**David-gareji**	**14.78 63**	P	**Pn**	**03 30 01.9**	**0.0**
KIEV	**Kiev**	**14.80 3**	*e*P	**Pn**	**03 29 59.7**	**-2.3**
KIEV			*e*		03 32 43.9	
KIEV			pmax	pmax		
	comp=Z,2μm,1.1s					
KIEV	**Kiev**	**14.80 3**	*e*Pn	**Pn**	**03 29 59.7**	**-2.3**
	comp=Z,2μm,1.1s					
KIEV			*e*Sn	**Sn**	**03 32 43.9**	**-0.8**
AKASG	**Malin Array Be**	**14.81 4**	P	**Pn**	**03 29 59.5**	**-2.5**
	comp=Z,1.6nm,0.3s,baz=192,slow=13,SNR=57					
AKASG			S	**Sn**	**03 32 43.4**	**-1.5**
	baz=47,slow=18,SNR=1.8					
AKASG			LR	LR	03 36 30.3	
	comp=Z,45μm,20.5s,baz=195,slow=40					
AKASG			ScP	ScP	03 38 38.5	+1.4
	comp=Z,12nm,0.3s,baz=198,slow=1.4,SNR=32					
AKASG	**Malin Array Be**	**14.81 4**	P	**Pn**	**03 29 59.6**	**-2.5**
AKASG			S	**Sn**	**03 32 43.4**	**-1.4**
AKASG	**Malin Array Be**	**14.81 4**	P	**Pn**	**03 29 59.5**	**-2.6**
AKASG			S	**Sn**	**03 32 43.3**	**-1.5**
AKBB	**Malin Array Si**	**14.81 4**	*e*P	**Pn**	**03 29 59.7**	**-2.4**
AKBB	**Malin Array Si**	**14.81 4**	*e*Pn	**Pn**	**03 29 59.7**	**-2.4**
ITBZ	**Tabriz**	**14.82 76**	*e*P	**Pn**	**03 30 02.1**	**-0.3**
CONA	**Conrad Observa**	**14.91 327**⇑	*i*Pn	**Pn**	**03 30 03.6**	**+0.2**
	comp=Z,28μm,5.8s,SNR=66					
CONA	**Conrad Observa**	**14.91 327**	Pn	**Pn**	**03 30 03.6**	**+0.2**
	comp=Z,28μm,5.8s,SNR=66					
JAVC	**Velka Javorina**	**14.92 333**	P	**Pn**	**03 30 06.0**	**+2.5**
VSL	**Villasalto**	**15.01 289**	*e*Pn	**Pn**	**03 30 02.4**	**-2.4**
VSL			*e*Sn	**Sn**	**03 32 51.0**	**+1.0**
VSL			*e*ScP	ScP	03 38 40.1	+2.4
VSL	**Villasalto**	**15.01 289**	*e*Pn	**Pn**	**03 30 02.4**	**-2.4**
VSL			*e*Sn	**Sn**	**03 32 51.0**	**+1.0**
MYKA	**Terra Mystica**	**15.07 320**⇑	*i*Pn	**Pn**	**03 30 04.7**	**-0.8**
	comp=Z,10μm,2.7s					
MYKA	**Terra Mystica**	**15.07 320**	Pn	**Pn**	**03 30 04.7**	**-0.8**
	comp=Z,10μm,2.7s					
PTCC	**Patocco-Chiusa**	**15.08 318**	Pn	**Pn**	**03 30 04.3**	**-1.3**
PTCC	**Patocco-Chiusa**	**15.08 318**	Pn	**Pn**	**03 30 04.3**	**-1.3**
FIU	**Minerbio Fiu**	**15.17 310**	P	**Pn**	**03 30 08.3**	**+1.5**
FIU	**Minerbio Fiu**	**15.17 310**	P	**Pn**	**03 30 08.3**	**+1.5**
FNVD	**Fontana Vidola**	**15.18 308**	P	**Pn**	**03 30 06.7**	**-0.3**
FNVD	**Fontana Vidola**	**15.18 308**	P	**Pn**	**03 30 06.7**	**-0.3**
ZCCA	**Zocca**	**15.36 308**	Pn	**Pn**	**03 30 10.6**	**+1.4**
	comp=Z,10μm,1.6s					
ZCCA	**Zocca**	**15.36 308**	Pn	**Pn**	**03 30 10.6**	**+1.4**
	comp=Z,10μm,1.6s					
PII	**Pisa**	**15.37 306**	P	**Pn**	**03 30 09.1**	**-0.3**
PII	**Pisa**	**15.37 306**	Pn	**Pn**	**03 30 09.1**	**-0.3**
OJC	**Ojcow**	**15.43 340**	*e*P	**Pn**	**03 30 07.3**	**-2.7**
OJC			pmax	pmax		
	comp=Z,2μm,0.8s					
OJC	**Ojcow**	**15.43 340**	*e*Pn	**Pn**	**03 30 07.3**	**-2.7**
	comp=Z,2μm,0.8s					
OJC	**Ojcow**	**15.43 340**	*e*Pn	**Pn**	**03 30 07.3**	**-2.7**
	comp=Z,2μm,0.8s					
IGHG	**Ghaleghazi**	**15.44 90**	*e*P	**Pn**	**03 30 11.1**	**+0.7**
IGHG	**Ghaleghazi**	**15.44 90**	*e*P	**Pn**	**03 30 11.1**	**+0.7**
RAVA	**Ravarino**	**15.46 310**	P	**Pn**	**03 30 14.5**	**+4.0**
RAVA	**Ravarino**	**15.46 310**	P	**Pn**	**03 30 14.5**	**+4.0**
BDI	**Bagni Di Lucca**	**15.47 307**	P	**Pn**	**03 30 09.4**	**-1.3**
KBA	**Koelnbreinsper**	**15.51 320**⇓	*i*Pn	**Pn**	**03 30 11.6**	**+0.4**
	comp=Z,14μm,1.1s,SNR=1167					
KBA	**Koelnbreinsper**	**15.51 320**	Pn	**Pn**	**03 30 11.6**	**+0.4**
	comp=Z,14μm,1.1s,SNR=1000					
KBA	**Koelnbreinsper**	**15.51 320**	P	**Pn**	**03 30 12.8**	**+1.6**
IHRS	**Heris**	**15.53 75**	*e*P	**Pn**	**03 30 11.3**	**-0.2**
MOA	**Molln**	**15.58 324**	P	**Pn**	**03 30 14.2**	**+2.2**
MOA	**Molln**	**15.58 324**⇑	*i*Pn	**Pn**	**03 30 12.8**	**+0.7**
	comp=Z,35μm,4.7s,SNR=663					
MOA	**Molln**	**15.58 324**	P	**Pn**	**03 30 14.2**	**+2.2**
OKC	**Ostrava-Krasne**	**15.58 336**⇑	*i*P	**Pn**	**03 30 12.1**	**0.0**
OKC			*e*S	**S**	**03 33 13.9**	**-1.7**
OKC	**Ostrava-Krasne**	**15.58 336**⇑	*i*P	**Pn**	**03 30 12.1**	**0.0**
OKC			*e*S	**S**	**03 33 13.9**	**-1.7**
OKC			*e*ScP	ScP	03 38 39.3	+0.8
OKC			*e*ScS	ScS	03 42 17.6	+0.9
OKC	**Ostrava-Krasne**	**15.58 336**⇑	*i*P	**Pn**	**03 30 12.1**	**0.0**
OKC			*e*S	**S**	**03 33 13.9**	**-1.7**
OKC			AMS	AMS	03 37 20.0	
	comp=Z,53μm,12.1s					
OKC			*e*SCP	ScP	03 38 39.3	+0.8
OKC			*e*SCS	ScS	03 42 17.6	+0.9
OKC	**Ostrava-Krasne**	**15.58 336**⇑	*i*P	**Pn**	**03 30 12.1**	**0.0**
OKC			*e*S	**S**	**03 33 13.9**	**-1.7**
IVIS	**Veis**	**15.63 90**	*e*P	**Pn**	**03 30 11.8**	**-1.0**
IVIS	**Veis**	**15.63 90**	*e*P	**Pn**	**03 30 11.8**	**-1.0**
VLC	**Villacollemand**	**15.65 307**	*e*Pn	**Pn**	**03 30 11.6**	**-1.4**
	comp=Z,1μm,1.0s					
VLC			*e*Sn	**Sn**	**03 33 04.8**	**-0.6**
VLC	**Villacollemand**	**15.65 307**	*e*Pn	**Pn**	**03 30 11.6**	**-1.4**
	comp=Z,1μm,1.0s					
VLC			*e*Sn	**Sn**	**03 33 04.8**	**-0.6**
ILIN	**Lien**	**15.65 88**	*e*P	**Pn**	**03 30 12.9**	**-0.2**
ILIN	**Lien**	**15.65 88**	*e*P	**Pn**	**03 30 12.9**	**-0.2**
VRAC	**Vranov**	**15.69 332**	P	**Pn**	**03 30 13.9**	**+0.5**
	comp=Z,25nm,0.3s,baz=147,slow=11,SNR=151					
VRAC			S	**S**	**03 33 04.6**	**-13**
	comp=Z,1.0nm,0.3s,baz=65,slow=17,SNR=1.4					
VRAC			LR	LR	03 36 49.4	
	comp=Z,56μm,20.2s,baz=147,slow=40					
VRAC			ScP	ScP	03 38 40.7	+2.0
	comp=Z,4.3nm,0.3s,baz=111,slow=3.5,SNR=18					
VRAC	**Vranov**	**15.69 332**	P	**Pn**	**03 30 15.9**	**+2.5**
VRAC	**Vranov**	**15.69 332**⇑	*i*P	**Pn**	**03 30 13.2**	**-0.2**
VRAC	**Vranov**	**15.69 332**	*i* Pn	**Pn**	**03 30 13.3**	**-0.1**
VRAC	**Vranov**	**15.69 332**	P	**Pn**	**03 30 16.0**	**+2.6**
MORC	**Moravsky Berou**	**15.73 335**	*e*P	**Pn**	**03 30 15.0**	**+1.0**
MORC			pmax	pmax		
	comp=Z,8μm,1.0s					
MORC	**Moravsky Berou**	**15.73 335**	*e*Pn	**Pn**	**03 30 15.0**	**+1.0**
	comp=Z,8μm,1.0s					
MORC			*e*ScP	ScP	03 38 41.9	+3.2
MORC	**Moravsky Berou**	**15.73 335**⇑	*i*P	**Pn**	**03 30 14.6**	**+0.6**
MORC	**Moravsky Berou**	**15.73 335**	*i* Pn	**Pn**	**03 30 14.1**	**+0.1**
MORC	**Moravsky Berou**	**15.73 335**	*e*P	**Pn**	**03 30 15.0**	**+1.0**
	comp=Z,8μm,1.0s					
ABTA	**Abfaltersbach**	**15.74 318**⇑	*i*Pn	**Pn**	**03 30 13.7**	**-0.4**
	comp=Z,7μm,2.6s,SNR=1286					
ABTA	**Abfaltersbach**	**15.74 318**	Pn	**Pn**	**03 30 13.7**	**-0.4**
	comp=Z,7μm,2.6s,SNR=1000					
RAC	**Raciborz**	**15.78 337**⇑	*e*P	**Pn**	**03 30 14.9**	**+0.3**
RAC			*e*S	**S**	**03 33 16.5**	**-3.1**
RAC	**Raciborz**	**15.78 337**⇑	*e*P	**Pn**	**03 30 14.9**	**+0.3**
RAC			*e*S	**S**	**03 33 16.5**	**-3.1**
CTI	**Castel Tesino**	**15.82 315**	P	**Pn**	**03 30 15.4**	**+0.3**
CTI	**Castel Tesino**	**15.82 315**	P	**Pn**	**03 30 15.4**	**+0.3**
PGF	**Pioggiola**	**15.99 300**⇑	*i*P	**Pn**	**03 30 15.8**	**-1.4**
PGF	**Pioggiola**	**15.99 300**⇑	*i*P	**Pn**	**03 30 15.8**	**-1.4**
ISRB	**Sarab**	**16.01 77**	*e*P	**Pn**	**03 30 16.6**	**-1.0**
ISRB	**Sarab**	**16.01 77**	*e*P	**Pn**	**03 30 16.6**	**-1.0**
TREC	**Trest**	**16.12 330**⇑	*i*P	**Pn**	**03 30 18.4**	**-0.4**
TREC			*e*S	**S**	**03 33 18.7**	**-7.8**
TREC	**Trest**	**16.12 330**⇑	*i*P	**Pn**	**03 30 18.4**	**-0.4**
TREC			*e*S	**S**	**03 33 18.7**	**-7.8**
TREC			*e*SCP	ScP	03 38 41.4	+1.9
TREC			*e*SCS	ScS	03 42 18.5	+0.3
RJOB	**Jochberg**	**16.23 321**	*e*P	**Pn**	**03 30 19.9**	**-0.3**
	comp=Z,3μm,1.3s					
IKOM	**Komasi**	**16.23 90**	*e*P	**Pn**	**03 30 19.0**	**-1.4**
IKOM	**Komasi**	**16.23 90**	*e*P	**Pn**	**03 30 19.0**	**-1.4**
APPI	**Appiano**	**16.30 315**	Pn	**Pn**	**03 30 21.8**	**+0.6**
APPI	**Appiano**	**16.30 315**	Pn	**Pn**	**03 30 21.8**	**+0.6**
ABSA	**Djebel Ababsia**	**16.44 277**	P	**Pn**	**03 30 24.0**	**+1.1**
ABSA	**Djebel Ababsia**	**16.44 277**	P	**Pn**	**03 30 24.0**	**+1.1**
CMAH	**Djebel Manchou**	**16.46 278**	P	**Pn**	**03 30 24.7**	**+1.5**
CMAH	**Djebel Manchou**	**16.46 278**	P	**Pn**	**03 30 24.7**	**+1.5**
MABI	**Malga Bissina**	**16.48 313**	P	**Pn**	**03 30 22.8**	**-0.6**
MABI	**Malga Bissina**	**16.48 313**	P	**Pn**	**03 30 22.8**	**-0.6**
LGHD	**Ghdames**	**16.49 254**	*i* P	**Pn**	**03 30 20.6**	**-3.0**
	comp=Z,2μm,1.9s,SNR=42					
BOB	**Bobbio (Coli)**	**16.52 308**	P	**Pn**	**03 30 23.6**	**-0.3**
WTTA	**Wattenberg**	**16.54 318**⇑	*i*Pn	**Pn**	**03 30 24.6**	**+0.6**
	comp=Z,23μm,3.1s,SNR=2527					
WTTA	**Wattenberg**	**16.54 318**	Pn	**Pn**	**03 30 24.6**	**+0.5**
	comp=Z,23μm,3.1s,SNR=1000					
WTTA	**Wattenberg**	**16.54 318**	P	**Pn**	**03 30 25.9**	**+1.8**
WATA	**Walderalm**	**16.61 318**⇑	*i*Pn	**Pn**	**03 30 25.5**	**+0.5**
	comp=Z,8μm,1.1s,SNR=1728					
WATA	**Walderalm**	**16.61 318**	P	**Pn**	**03 30 25.5**	**+0.5**
	comp=Z,8μm,1.1s,SNR=1000					
DPC	**Dobruska-Polom**	**16.65 334**⇑	*i*P	**Pn**	**03 30 26.3**	**+0.9**
DPC			*e*S	**S**	**03 33 36.4**	**-0.8**
DPC	**Dobruska-Polom**	**16.65 334**⇑	*i*P	**Pn**	**03 30 26.3**	**+0.9**
DPC			*e*S	**S**	**03 33 36.4**	**-0.8**
DPC			*e*ScP	ScP	03 38 42.2	+1.7
DPC			*e*ScS	ScS	03 42 20.3	+0.7
DPC			*e*		03 42 47.1	
DPC	**Dobruska-Polom**	**16.65 334**⇑	*i*P	**Pn**	**03 30 26.3**	**+0.9**
DPC			*e*S	**S**	**03 33 36.4**	**-0.8**
DPC			AMS	AMS	03 38 00.0	
	comp=Z,45μm,15.1s					
DPC			*e*SCP	ScP	03 38 42.2	+1.7
DPC			*e*SCS	ScS	03 42 20.3	+0.7
DPC			*ex*	x	03 42 47.1	
DPC	**Dobruska-Polom**	**16.65 334**	*i* P	**Pn**	**03 30 26.3**	**+0.9**
DPC			*e*S	**S**	**03 33 36.4**	**-0.8**
MAK	**Makhachkala**	**16.74 59**	*e*P	**Pn**	**03 30 27.7**	**+1.0**
MAK			pmax	pmax		
	comp=Z,10μm,1.6s					
MAK			MLR	MLR		
	comp=Z,27μm,14.0s					
MAK	**Makhachkala**	**16.74 59**	*e*P	**Pn**	**03 30 27.7**	**+1.0**
	comp=Z,27μm,14.0s					
BRMO	**Bormio**	**16.79 314**	P	**Pn**	**03 30 27.4**	**+0.1**
BRMO	**Bormio**	**16.79 314**	P	**Pn**	**03 30 27.4**	**+0.1**
KHC	**Kasperske Hory**	**16.82 326**⇑	*i*P	**Pn**	**03 30 28.3**	**+0.7**
KHC			*e*S	**S**	**03 33 37.1**	**-3.6**
KHC	**Kasperske Hory**	**16.82 326**⇑	*i*P	**Pn**	**03 30 28.3**	**+0.7**
KHC			*e*S	**S**	**03 33 37.1**	**-3.6**
KHC			*e*ScP	ScP	03 38 42.8	+1.9
KHC			*e*ScS	ScS	03 42 19.6	-0.6
KHC			*e*		03 42 49.6	
KHC	**Kasperske Hory**	**16.82 326**⇑	*i*P	**Pn**	**03 30 28.3**	**+0.7**
KHC			*e*S	**S**	**03 33 37.1**	**-3.6**
KHC			AMS	AMS	03 37 50.0	
	comp=Z,76μm,24.4s					
KHC			*e*SCP	ScP	03 38 42.8	+1.9
KHC			*e*SCS	ScS	03 42 19.6	-0.6
KHC			*ex*	x	03 42 49.6	
KHC	**Kasperske Hory**	**16.82 326**	*i* P	**Pn**	**03 30 28.3**	**+0.7**
KHC			*e*S	**S**	**03 33 37.1**	**-3.6**
MOTA	**Moosalm**	**16.87 318**⇑	*i*Pn	**Pn**	**03 30 28.9**	**+0.7**
	comp=Z,4μm,1.1s,SNR=1979					
MOTA	**Moosalm**	**16.87 318**	Pn	**Pn**	**03 30 28.9**	**+0.6**
	comp=Z,4μm,1.1s,SNR=1000					
MOTA	**Moosalm**	**16.87 318**	P	**Pn**	**03 30 29.9**	**+1.6**
UPC	**Upice**	**16.89 333**⇑	*i*P	**Pn**	**03 30 29.1**	**+0.7**
UPC			*e*ScP	ScP	03 38 41.6	+0.6
UPC			*e*ScS	ScS	03 42 22.9	+2.6
UPC	**Upice**	**16.89 333**⇑	*i*P	**Pn**	**03 30 29.1**	**+0.7**
UPC			*e*SCP	ScP	03 38 41.6	+0.6
UPC			*e*SCS	ScS	03 42 22.9	+2.6
UPC	**Upice**	**16.89 333**	*i* P	**Pn**	**03 30 29.1**	**+0.7**
FETA	**Feichten**	**16.89 316**⇑	*i*P	**Pn**	**03 30 30.0**	**+1.5**
	comp=Z,16μm,1.1s,SNR=9138					
FETA	**Feichten**	**16.89 316**	P	**Pn**	**03 30 30.0**	**+1.5**
	comp=Z,16μm,1.1s,SNR=1000					
CAEH	**'Ain El Ouahch**	**16.90 279**	P	**Pn**	**03 30 28.8**	**+0.1**
CAEH	**'Ain El Ouahch**	**16.90 279**	P	**Pn**	**03 30 28.8**	**+0.1**
FUORN	**Ofenpass-Fuorn**	**16.93 315**⇑	*i*P	**Pn**	**03 30 29.6**	**+0.6**
FUORN	**Ofenpass-Fuorn**	**16.93 315**⇑	*i*P	**Pn**	**03 30 29.6**	**+0.6**
BERNI	**Berninapass**	**16.96 314**⇑	*i*P	**Pn**	**03 30 29.9**	**+0.5**
BERNI	**Berninapass**	**16.96 314**⇑	*i*P	**Pn**	**03 30 29.9**	**+0.5**
WAR	**Warsaw**	**17.01 346**	*e*P	**Pn**	**03 30 29.8**	**-0.2**
	comp=Z,12μm,1.4s					
WAR			*e*pP	pP	03 30 41.6	-2.8
WAR			*e*S	**S**	**03 33 43.9**	**-0.7**
WAR			LMZ		03 36 26.2	
	comp=Z,79μm,32.9s					
WAR	**Warsaw**	**17.01 346**	P	**Pn**	**03 30 33.2**	**+3.3**
WAR	**Warsaw**	**17.01 346**	*e*P	**Pn**	**03 30 29.8**	**-0.1**
	comp=Z,6.2nm,1.4s					
CKFL	**Kef-Lekhel**	**17.04 278**	P	**Pn**	**03 30 30.7**	**+0.3**
CKFL	**Kef-Lekhel**	**17.04 278**	P	**Pn**	**03 30 30.7**	**+0.3**
PRU	**Pruhonice**	**17.05 330**⇑	*i*P	**Pn**	**03 30 31.1**	**+0.7**
PRU			*e*S	**S**	**03 33 42.3**	**-3.0**
PRU	**Pruhonice**	**17.05 330**⇑	*i*P	**Pn**	**03 30 31.1**	**+0.7**
PRU			*e*S	**S**	**03 33 42.3**	**-3.0**
PRU			*e*ScP	ScP	03 38 43.1	+1.8
PRU			*e*ScS	ScS	03 42 24.5	+3.7
PRU	**Pruhonice**	**17.05 330**⇑	*i*P	**Pn**	**03 30 31.1**	**+0.7**
PRU			*e*S	**S**	**03 33 42.3**	**-3.0**
PRU			AMS	AMS	03 36 30.0	
	comp=Z,50μm,23.4s					
PRU			*e*SCP	ScP	03 38 43.1	+1.8
PRU			*e*SCS	ScS	03 42 24.5	+3.7
PRU	**Pruhonice**	**17.05 330**	*i* P	**Pn**	**03 30 31.1**	**+0.7**
PRU			*e*S	**S**	**03 33 42.3**	**-3.0**
QLNO	**Quiliano**	**17.06 305**	P	**Pn**	**03 30 27.9**	**-2.6**
QLNO	**Quiliano**	**17

STV	Sant Anna di V	17.71	304	P	Pn	03 30 37.3 -1.2
LIENZ	Kamor/St.Gall	17.75	315⇑	iP	Pn	03 30 39.1 +0.1
LIENZ	Kamor/St.Gall	17.75	315⇑	iP	Pn	03 30 39.1 +0.1
VOR	Voronezh	17.78	24⇓	iP	Pn	03 30 37.0 -2.3
VOR				eS	S	03 33 47.0 -13
VOR				pmax	pmax	
	comp=Z,2µm,1.2s					
VOR	Voronezh	17.78	24	i P	Pn	03 30 37.0 -2.3
	comp=Z,2µm,1.2s					
LLS	Linth-Limmern	17.79	314⇑	iP	Pn	03 30 39.9 +0.4
FUSIO	Fusio	17.79	312⇑	iP	Pn	03 30 39.3 -0.3
FUSIO	Fusio	17.79	312⇑	iP	Pn	03 30 39.3 -0.3
CALN	Calern	17.83	302	eP	Pn	03 30 40.2 +0.1
CALN	Calern	17.83	302	eP	Pn	03 30 40.2 +0.1
DOI	San Damiano	17.85	305	P	Pn	03 30 43.2 +2.9
FRF	La Foret Royal	17.94	302⇑	iP	Pn	03 30 39.8 -1.6
	comp=Z,8µm,1.0s					
FRF	La Foret Royal	17.94	302⇑	iP	Pn	03 30 39.8 -1.6
FRF				pmax	pmax	
	comp=Z,4µm,1.0s					
FRF	La Foret Royal	17.94	302⇑	iP	Pn	03 30 39.8 -1.6
	comp=Z,4µm,1.0s					
FRF	La Foret Royal	17.94	302⇑	iP	Pn	03 30 39.8 -1.6
	comp=Z,4µm,1.0s					
LMR	La Mourre	17.97	301⇑	iP	Pn	03 30 39.8 -1.9
	comp=Z,5µm,1.0s					
LMR	La Mourre	17.97	301⇑	iP	Pn	03 30 39.8 -1.9
LMR				pmax	pmax	
	comp=Z,2µm,1.0s					
LMR	La Mourre	17.97	301⇑	iP	Pn	03 30 39.8 -1.9
	comp=Z,2µm,1.0s					
LMR	La Mourre	17.97	301⇑	iP	Pn	03 30 39.8 -1.9
	comp=Z,2µm,1.0s					
BRG	Berggiesshubel	17.97	331	eP	Pn	03 30 41.4 -0.3
	comp=Z,2µm,1.0s					
BRG				eS	S	03 34 02.9 -1.3
BRG	Berggiesshubel	17.97	331⇑	iP	Pn	03 30 41.9 +0.2
	comp=Z,1µm,0.9s					
BRG				i		03 30 47.1
	comp=Z,3µm,1.3s					
BRG				S	S	03 34 03.0 -1.2
BRG				eSCP	ScP	03 38 45.1 +1.9
	comp=Z,110nm,1.1s					
BRG				eSCS	ScS	03 42 24.6 +1.1
	comp=Z,21nm,1.8s					
BRG						
	comp=N,449µm,18.5s					
BRG						
	comp=E,299µm,11.4s					
BRG						
	comp=Z,513µm,12.0s					
BRG	Berggiesshubel	17.97	331⇑	iP	Pn	03 30 41.9 +0.2
BRG				S	S	03 34 03.0 -1.2
BRG				pmax	pmax	
	comp=Z,889nm,0.9s					
BRG				MLR	MLR	
	comp=N,269µm,18.5s					
BRG				MLR	MLR	
	comp=E,179µm,11.4s					
BRG				MLR	MLR	
	comp=Z,307µm,12.0s					
BRG	Berggiesshubel	17.97	331	i P	Pn	03 30 41.9 +0.2
	comp=Z,889nm,0.9s					
IRAZ	Razeghan	17.99	85	eP	Pn	03 30 43.8 +1.8
CKHR	Kef el Ahmar	18.04	277	P	Pn	03 30 44.2 +1.5
KBD	Kabd	18.05	106	eP	Pn	03 30 39.5 -3.4
KBD				AMb	AMB	03 31 02.8
	comp=Z,2µm,1.1s					
RDF	Al-Radifah	18.05	107	eP	Pn	03 30 41.9 -1.0
RDF				AMb	AMB	03 31 02.3
	comp=Z,3µm,1.2s					
MUO	Muotathal	18.07	314⇑	iP	Pn	03 30 42.9 0.0
MUO	Muotathal	18.07	314⇑	iP	Pn	03 30 42.9 0.0
RSP	Reno Superiore	18.09	307	P	Pn	03 30 39.7 -3.5
HDH	Heidenheim-Cha	18.10	320	P	Pn	03 30 43.1 -0.2
HDH	Heidenheim-Cha	18.10	320	P	Pn	03 30 43.1 -0.2
SET	Setif	18.11	277	P	Pn	03 30 45.0 +1.4
NKC	Novy Kostel	18.12	327⇑	iP	Pn	03 30 43.1 -0.4
NKC				eS	S	03 34 06.2 +0.1
NKC	Novy Kostel	18.12	327⇑	iP	Pn	03 30 43.1 -0.4
NKC				eS	S	03 34 06.2 +0.1
NKC				eScP	ScP	03 38 44.5 +0.9
NKC	Novy Kostel	18.12	327⇑	iP	Pn	03 30 43.1 -0.4
NKC				eS	S	03 34 06.2 +0.1
NKC				AMS	AMS	03 38 30.0
	comp=Z,51µm,12.4s					
NKC				eSCP	ScP	03 38 44.5 +0.9
NKC	Novy Kostel	18.12	327	i P	Pn	03 30 43.1 -0.4
NKC				eS	S	03 34 06.2 +0.1
VRHR	Novokhopersk	18.13	29	eP	Pn	03 30 46.9 +3.3
VRHR				pmax	pmax	
	comp=N,1µm,1.0s					
VRHR				pmax	pmax	
	comp=Z,1µm,1.0s					
VRHR				pmax	pmax	
	comp=E,320nm,0.5s					
SURF	Saint Ours	18.13	305	eP	Pn	03 30 43.6 -0.1
SURF	Saint Ours	18.13	305	eP	Pn	03 30 43.6 -0.1
BNALP	Bannalp	18.14	313⇑	iP	Pn	03 30 43.2 -0.6
BNALP	Bannalp	18.14	313⇑	iP	Pn	03 30 43.2 -0.6
WILA	Wila	18.14	315⇑	iP	Pn	03 30 43.4 -0.4
WILA	Wila	18.14	315⇑	iP	Pn	03 30 43.4 -0.4
WEIN	Weingarten	18.16	315⇑	iP	Pn	03 30 43.6 -0.4
WEIN	Weingarten	18.16	315⇑	iP	Pn	03 30 43.6 -0.4
TANN	Tannenbergstha	18.25	327	eP	Pn	03 30 44.6 -0.5
	comp=Z,6µm,1.0s					
TANN				eS	S	03 34 08.7 -0.3
HASLI	Hasliberg/Brie	18.25	312⇑	iP	Pn	03 30 44.7 -0.4
HASLI	Hasliberg/Brie	18.25	312⇑	iP	Pn	03 30 44.7 -0.4
MBDF	Montbardon	18.25	305⇑	iP	Pn	03 30 43.6 -1.5
	comp=Z,4µm,0.7s					
MBDF	Montbardon	18.25	305⇑	iP	Pn	03 30 43.6 -1.5
MBDF				pmax	pmax	
	comp=Z,2µm,0.7s					
MBDF	Montbardon	18.25	305⇑	iP	Pn	03 30 43.6 -1.5
	comp=Z,2µm,0.7s					
MBDF	Montbardon	18.25	305⇑	iP	Pn	03 30 43.6 -1.5
	comp=Z,2µm,0.7s					
SISB	Singen-Schiene	18.26	316	P	Pn	03 30 45.2 0.0
SISB	Singen-Schiene	18.26	316	P	Pn	03 30 45.2 0.0
GUNZ	Gunzen	18.27	327	eP	Pn	03 30 45.2 -0.1
	comp=Z,6µm,1.0s					
STEIN	Stein am Rhein	18.30	316⇑	iP	Pn	03 30 44.9 -0.9
STEIN	Stein am Rhein	18.30	316⇑	iP	Pn	03 30 44.9 -0.9
ZUR	Degenried	18.31	315⇑	iP	Pn	03 30 44.9 -0.9
ZUR	Degenried	18.31	315⇑	iP	Pn	03 30 44.9 -0.9
GRF	Grafenberg Arr	18.31	324	eP	Pn	03 30 44.8 -1.0
	comp=Z,7µm,1.2s					
GRF				eS	S	03 34 10.8 +0.4
GRF	Grafenberg Arr	18.31	324	eP	Pn	03 30 44.8 -1.0
GRF				eS	S	03 34 10.8 +0.4
GRF				pmax	pmax	
	comp=Z,7µm,1.2s					
GRF	Grafenberg Arr	18.31	324	eP	Pn	03 30 44.8 -1.0
	comp=Z,7µm,1.2s					
GRF				eS	S	03 34 10.8 +0.4
GRF				ePcS	PcS	03 38 45.6 -5.1
GRF	Grafenberg Arr	18.31	324	eP	Pn	03 30 44.8 -1.0
	comp=Z,7µm,1.2s					
GRF				eS	S	03 34 10.8 +0.4
GRFO	Grafenberg	18.31	324	P	Pn	03 30 45.0 -0.8
GRFO				ePn	Pn	03 30 45.3 -0.5
GRFO	Grafenberg	18.31	324	P	Pn	03 30 45.0 -0.8
GRFO	Grafenberg	18.31	324	ePn	Pn	03 30 45.3 -0.5
WERD	Werda	18.34	327	eP	Pn	03 30 45.8 -0.4
	comp=Z,5µm,1.1s					
SUW	Suwalki	18.37	351	eP	Pn	03 30 45.2 -1.4
	comp=Z,10µm,1.1s					
SUW				epP	pP	03 30 59.3 -0.1
SUW				eS	S	03 34 08.9 -2.9
SUW				LMZ		03 38 00.8
	comp=Z,48µm,23.9s					
SUW	Suwalki	18.37	351	eP	Pn	03 30 45.2 -1.3
SUW				eS	S	03 34 08.9 -2.9
SUW				pmax	pmax	
	comp=Z,10µm,1.1s					
SUW				MLR	MLR	
	comp=Z,48µm,23.9s					
SUW	Suwalki	18.37	351	ePn	Pn	03 30 45.0 -1.5
	comp=Z,6µm,1.0s					
SUW	Suwalki	18.37	351	eP	Pn	03 30 45.2 -1.3
	comp=Z,48µm,23.9s					
DIX	Grande Dixence	18.39	310⇑	iP	Pn	03 30 46.1 -0.7
DIX	Grande Dixence	18.39	310⇑	iP	Pn	03 30 46.1 -0.7
GUT	Gutenstein	18.39	317	P	Pn	03 30 46.5 -0.3
GUT	Gutenstein	18.39	317	P	Pn	03 30 46.5 -0.3
LKBD	Leukerbad	18.39	311⇑	iP	Pn	03 30 46.4 -0.4
LKBD	Leukerbad	18.39	311⇑	iP	Pn	03 30 46.4 -0.4
FLACH	Flaach	18.42	315⇑	iP	Pn	03 30 46.5 -0.7
FLACH	Flaach	18.42	315⇑	iP	Pn	03 30 46.5 -0.7
BNI	Bardonecchia	18.43	306	eP	Pn	03 30 46.3 -1.0
BNI				eS	S	03 34 08.0 -5.3
BNI				pmax	pmax	
	comp=Z,2µm,0.9s					
BNI	Bardonecchia	18.43	306	ePn	Pn	03 30 46.3 -1.1
	comp=Z,2µm,0.9s					
BNI				eS	S	03 34 08.0 -5.3
BNI	Bardonecchia	18.43	306	eP	Pn	03 30 46.3 -1.0
	comp=Z,2µm,0.9s					
BNI				eS	S	03 34 08.0 -5.3
BUCH	Bad Urach	18.48	318	P	Pn	03 30 47.1 -0.7
BUCH	Bad Urach	18.48	318	P	Pn	03 30 47.1 -0.7
WIMIS	Wimmis	18.52	312⇑	iP	Pn	03 30 47.1 -1.3
WIMIS	Wimmis	18.52	312⇑	iP	Pn	03 30 47.1 -1.3
IMHD	Mahdasht	18.55	84	eP	Pn	03 30 48.3 -0.5
LPG	La Plagne	18.56	307⇑	iP	Pn	03 30 47.2 -1.7
	comp=Z,5µm,0.7s					
LPG	La Plagne	18.56	307⇑	iP	Pn	03 30 47.2 -1.7
LPG				pmax	pmax	
	comp=Z,2µm,0.7s					
LPG	La Plagne	18.56	307⇑	iP	Pn	03 30 47.2 -1.7
	comp=Z,2µm,0.7s					
LPG	La Plagne	18.56	307⇑	iP	Pn	03 30 47.2 -1.7
	comp=Z,2µm,0.7s					
SLE	Schleitheim	18.57	316⇑	iP	Pn	03 30 48.2 -0.7
SLE	Schleitheim	18.57	316	P	Pn	03 30 47.5 -1.4
SLE	Schleitheim	18.57	316⇑	iP	Pn	03 30 48.2 -0.7
MICGM	Minsk	18.58	0⇑	iP	Pn	03 30 44.0 -5.0
MNK	Minsk	18.58	0⇑	iP	Pn	03 30 44.0 -5.0
MNK				eS	S	03 34 02.0 -14
MNK				pmax	pmax	
	comp=N,2µm,1.0s					
MNK				pmax	pmax	
	comp=Z,3µm,1.0s					
MNK				MLR	MLR	
	comp=E,51µm,12.0s					
MNK				MLR	MLR	
	comp=Z,63µm,10.0s					
MNK				MLR	MLR	
	comp=N,31µm,10.0s					
LPL	La Plagne	18.58	307⇑	iP	Pn	03 30 47.6 -1.5
	comp=N,5µm,0.8s					
LPL	La Plagne	18.58	307⇑	iP	Pn	03 30 47.6 -1.5
LPL				pmax	pmax	
	comp=Z,3µm,0.8s					
LPL	La Plagne	18.58	307⇑	iP	Pn	03 30 47.6 -1.5
	comp=Z,3µm,0.8s					
LPL	La Plagne	18.58	307⇑	iP	Pn	03 30 47.6 -1.5
	comp=Z,3µm,0.8s					
SENIN	Lac Senin/Sane	18.58	310⇑	iP	Pn	03 30 47.4 -1.7
SENIN	Lac Senin/Sane	18.58	310⇑	iP	Pn	03 30 47.4 -1.7
SPAK	Spaichingen-Ko	18.59	317	eP	Pn	03 30 49.5 +0.3
SPAK	Spaichingen-Ko	18.59	317	eP	Pn	03 30 49.5 +0.3
GRYON	Gryon	18.65	310⇑	iP	Pn	03 30 48.2 -1.7
GRYON	Gryon	18.65	310⇑	iP	Pn	03 30 48.2 -1.7
SULZ	Cheisacher	18.66	314⇑	iP	Pn	03 30 49.0 -1.1
SULZ	Cheisacher	18.66	314⇑	iP	Pn	03 30 49.0 -1.1
CLL	Collm	18.69	330	eP	Pn	03 30 49.3 -1.0
	comp=Z,4µm,0.9s					
CLL	Collm	18.69	330	eP	Pn	03 30 50.0 -0.3
CLL				eS	S	03 34 22.0 +3.5
CLL				pmax	pmax	
	comp=Z,4µm,0.9s					
CLL				MLR	MLR	
	comp=Z,49µm,22.5s					
CLL	Collm	18.69	330	eP	Pn	03 30 50.0 -0.3
	comp=Z,4µm,0.9s					
CLL				i		03 30 52.1
CLL				eS	S	03 34 22.0 +3.5
CLL				i ScP	ScP	03 38 45.4 +0.6
CLL				eScS	ScS	03 42 25.0 -0.8
CLL	Collm	18.69	330	eP	Pn	03 30 50.0 -0.3
CLL				i Pmax		03 30 51.7
CLL				ePlp		03 30 51.0
	comp=Z,22µm,17.4s					
CLL				i		03 30 52.1
	comp=Z,4µm,0.9s					
CLL				i		03 30 56.8
CLL				i pP	pP	03 31 03.1 +0.2
CLL				eS	S	03 34 22.0 +3.5
	comp=N,14µm,26.6s					
CLL				eS	S	03 34 22.0 +3.5
	comp=E,42µm,18.4s					
CLL				eSS		03 34 51.0
CLL				i ScP	ScP	03 38 45.4 +0.6
	comp=Z,492nm,1.8s					
CLL				ePcS	PcS	03 38 51.0 -0.5
CLL				e		03 39 19.0
CLL				eScS	ScS	03 42 25.0 -0.8
CLL				esScS		03 42 52.0
CLL	Collm	18.69	330	eP	Pn	03 30 50.0 -0.3
	comp=Z,4µm,0.9s					
SALAN	Lac Salanfe	18.69	310⇑	iP	Pn	03 30 48.5 -1.9
SALAN	Lac Salanfe	18.69	310⇑	iP	Pn	03 30 48.5 -1.9
AKF	Akfadou	18.75	279	P	Pn	03 30 51.8 +0.6
STU	Stuttgart	18.75	319	eP	Pn	03 30 49.9 -1.2
	comp=Z,7µm,0.9s					
STU				eS	S	03 34 22.3 +2.4
STU	Stuttgart	18.75	319	eP	Pn	03 30 50.5 -0.6
STU				pmax	pmax	
	comp=Z,6µm,0.9s					
STU	Stuttgart	18.75	319	ePn	Pn	03 30 50.5 -0.6
	comp=Z,6µm,0.9s					
STU	Stuttgart	18.75	319	eP	Pn	03 30 50.5 -0.6
	comp=Z,6µm,0.9s					
AIGLE	Aigle	18.79	310⇑	iP	Pn	03 30 49.9 -1.7
AIGLE	Aigle	18.79	310⇑	iP	Pn	03 30 49.9 -1.7
MOX	Moxa	18.79	327	c iP	Pn	03 30 51.2 -0.4
	comp=Z,7µm,1.1s					
MOX				e		03 31 02.2
MOX				e		03 34 27.0
MOX						
	comp=Z,13µm,21.0s					
MOX	Moxa	18.79	327	eP	Pn	03 30 50.6 -1.0
	comp=Z,8µm,1.0s					
MOX	Moxa	18.79	327⇑	iP	Pn	03 30 51.2 -0.4
	comp=Z,7µm,1.1s					
MOX				e		03 31 02.2
MOX				e		03 34 27.0
MOX	Moxa	18.79	327	i P	Pn	03 30 51.2 -0.4
	comp=Z,7µm,1.1s					
SMRF	Simiane la Rot	18.81	302⇑	iP	Pn	03 30 50.1 -1.7
	comp=Z,3µm,1.0s					
SMRF	Simiane la Rot	18.81	302⇑	iP	Pn	03 30 50.1 -1.7
	comp=Z,3µm,1.0s					
SMRF	Simiane la Rot	18.81	302⇑	iP	Pn	03 30 50.1 -1.7
	comp=Z,1µm,1.0s					
BALST	Balsthal	18.81	314⇑	iP	Pn	03 30 49.9 -1.9
BALST	Balsthal	18.81	314⇑	iP	Pn	03 30 49.9 -1.9
GDM	Grand'Maison	18.86	306	eP	Pn	03 30 51.0 -1.4
GDM	Grand'Maison	18.86	306	eP	Pn	03 30 51.0 -1.4
GKP	Gorka Klasztor	18.87	340	eP	Pn	03 30 51.9 -0.6
	comp=Z,16µm,1.0s					
GKP				epP	pP	03 30 58.8 -6.2
GKP				eS	S	03 34 22.3 +0.1
GKP				LMZ		03 39 36.7
	comp=Z,101µm,18.8s					
GKP	Gorka Klasztor	18.87	340	P	Pn	03 30 51.4 -1.1
GKP	Gorka Klasztor	18.87	340	eP	Pn	03 30 51.9 -0.6
SIND	Sindeldorf	18.89	321	P	Pn	03 30 51.7 -1.0
SIND	Sindeldorf	18.89	321	P	Pn	03 30 51.7 -1.0
LBG	Lerchenberg	18.90	318	P	Pn	03 30 52.6 -0.3
LBG	Lerchenberg	18.90	318	P	Pn	03 30 52.6 -0.3
FELD	Feldberg im Sc	18.91	315	eP	Pn	03 30 51.9 -1.1
FELD	Feldberg im Sc	18.91	315	eP	Pn	03 30 51.9 -1.1
ORIF	Oris-en-Rattie	18.91	305⇑	iP	Pn	03 30 50.9 -2.2
	comp=Z,6µm,1.1s					
ORIF				eMLR	MLR	
	comp=Z,60µm,23.0s					
ORIF	Oris-en-Rattie	18.91	305⇑	iP	Pn	03 30 50.9 -2.2
ORIF				pmax	pmax	
	comp=Z,3µm,1.1s					
ORIF	Oris-en-Rattie	18.91	305⇑	iP	Pn	03 30 50.9 -2.2
	comp=Z,3µm,1.1s					
ORIF	Oris-en-Rattie	18.91	305⇑	iP	Pn	03 30 50.9 -2.2
	comp=Z,3µm,1.1s					
BFO	Black Forest	18.97	317	Pn	Pn	03 30 53.2 -0.5
	comp=Z,30µm,1.1s					
BFO	Black Forest	18.97	317	eP	Pn	03 30 52.0 -1.7
	comp=Z,5µm,1.0s					
BFO	Black Forest	18.97	317	eP	Pn	03 30 52.8 -0.9
BFO				pmax	pmax	
	comp=Z,5µm,1.0s					
BFO	Black Forest	18.97	317	eP	Pn	03 30 52.8 -0.9
	comp=Z,5µm,1.0s					
BFO				eScP	ScP	03 38 46.3 +0.9
BFO	Black Forest	18.97	317	eP	Pn	03 30 52.8 -0.9
	comp=Z,5µm,1.0s					
MAHO	Mahon	18.98	289	P	Pn	03 30 52.8 -1.1
MAHO	Mahon	18.98	289	P	Pn	03 30 52.8 -1.1
TORNY	Torny/Romont	18.98	311⇑	iP	Pn	03 30 52.1 -1.8
TORNY	Torny/Romont	18.98	311⇑	iP	Pn	03 30 52.1 -1.8
BBS	Basel-Blauen	18.98	314	eP	Pn	03 30 54.3 +0.4
BBS	Basel-Blauen	18.98	314	eP	Pn	03 30 54.3 +0.4
NACGM	Naroch	18.99	358	eP	Pn	03 30 48.0 -5.9
KIZ	Kirchzarten	19.00	315	P	Pn	03 30 52.6 -1.5
KIZ	Kirchzarten	19.00	315	P	Pn	03 30 52.6 -1.5
FBB	Freiburg im Br	19.06	315	P	Pn	03 30 58.6 +3.8
FBB	Freiburg im Br	19.06	315	P	Pn	03 30 58.6 +3.8
BOURR	Bourrignon	19.11	313⇑	iP	Pn	03 30 53.2 -2.2
BOURR	Bourrignon	19.11	313⇑	iP	Pn	03 30 53.2 -2.2
GRN	Grenoble	19.12	306	eP	Pn	03 30 51.7 -3.8
GRN	Grenoble	19.12	306	eP	Pn	03 30 51.7 -3.8
LIBD	Limburg	19.28	316	eP	Pn	03 30 58.4 +1.0
LIBD	Limburg	19.28	316	eP	Pn	03 30 58.4 +1.0
GIMEL	St. Georges /	19.30	310⇑	iP	Pn	03 30 55.3 -2.4
GIMEL	St. Georges /	19.30	310⇑	iP	Pn	03 30 55.3 -2.4
RUE	Ruedersdorf	19.31	333	eP	Pn	03 30 56.0 -1.7
	comp=Z,11µm,1.1s					
RUE				eS	S	03 34 37.0 +6.0
RUE	Ruedersdorf	19.31	333	eP	Pn	03 30 56.3 -1.4
	comp=Z,7µm,0.9s					
RUE				eS	S	03 34 36.0 +5.0
RUE	Ruedersdorf	19.31	333	eP	Pn	03 30 56.3 -1.4
	comp=Z,7µm,0.9s					
RUE				eS	S	03 34 36.0 +5.0
LOMF	Lomont	19.33	313	eP	Pn	03 30 58.6 +0.6
LOMF	Lomont	19.33	313	eP	Pn	03 30 58.6 +0.6
IPIR	Pirpir	19.34	93	eP	Pn	03 30 57.3 -0.9
BRANT	Les Verrieres	19.35	311⇑	iP	Pn	03 30 56.1 -2.2
BRANT	Les Verrieres	19.35	311⇑	iP	Pn	03 30 56.1 -2.2
AKET	Djebel Ketaf	19.35	277	P	Pn	03 30 56.9 -1.5
AKET	Djebel Ketaf	19.35	277	P	Pn	03 30 56.9 -1.5
MOF	Molkenrain	19.40	314	eP	Pn	03 30 57.5 -1.3
MOF	Molkenrain	19.40	314	eP	Pn	03 30 57.5 -1.3
IDID	Didziasalis	19.41	358	eP	Pn	03 30 57.5 -1.4
IDID				AMB	AMB	03 31 01.7
	comp=Z,428nm,0.9s					
IDID	Didziasalis	19.41	358	eP	Pn	03 30 57.5 -1.4
	comp=Z,428nm,0.9s,SNR=34					
CABF	La Chapelle	19.44	310⇑	iP	Pn	03 30 56.8 -2.6
	comp=Z,6µm,0.8s					
CABF	La Chapelle	19.44	310⇑	iP	Pn	03 30 56.8 -2.6
CABF				pmax	pmax	
	comp=Z,3µm,0.8s					
CABF	La Chapelle	19.44	310⇑	iP	Pn	03 30 56.8 -2.6
	comp=Z,3µm,0.8s					
CABF	La Chapelle	19.44	310⇑	iP	Pn	03 30 56.8 -2.6
	comp=Z,3µm,0.8s					
TOD	Tromm	19.46	321	eP	Pn	03 30 58.4 -1.1
TOD	Tromm	19.46	321	eP	Pn	03 30 58.4 -1.1
IIGN	Ignalina	19.46	357	eP	Pn	03 30 58.1 -1.4
IIGN				AMB	AMB	03 31 03.3
	comp=Z,386nm,1.1s					
IIGN	Ignalina	19.46	357	eP	Pn	03 30 58.1 -1.4
	comp=Z,386nm,1.1s,SNR=34					
HINF	Hinteralfeld	19.54	314⇑	iP	Pn	03 30 58.0 -2.5
	comp=Z,5µm,1.1s					
HINF	Hinteralfeld	19.54	314⇑	iP	Pn	03 30 58.0 -2.5
HINF				pmax	pmax	
	comp=Z,2µm,1.1s					
HINF	Hinteralfeld	19.54	314⇑	iP	Pn	03 30 58.0 -2.5
	comp=Z,2µm,1.1s					
HINF	Hinteralfeld	19.54	314⇑	iP	Pn	03 30 58.0 -2.5
	comp=Z,2µm,1.1s					
ECH	Echery	19.57	315	eP	Pn	03 31 00.3 -0.5
ECH	Echery	19.57	315	eP	Pn	03 30 59.3 -1.5
ECH				pmax	pmax	
	comp=Z,2µm,0.9s					
ECH	Echery	19.57	315	eP	Pn	03 30 59.3 -1.5
	comp=Z,2µm,0.9s					
ECH				eScP	ScP	03 38 47.9 +1.0
ECH	Echery	19.57	315	eP	Pn	03 30 59.3 -1.5
	comp=Z,2µm,0.9s					
CDF	Champ du Feu	19.61	316⇑	iP	Pn	03 30 59.3 -2.0
	comp=Z,13µm,0.9s					
CDF	Champ du Feu	19.61	316⇑	iP	Pn	03 30 59.3 -2.0
CDF				pmax	pmax	
	comp=Z,7µm,0.9s					
CDF	Champ du Feu	19.61	316⇑	iP	Pn	03 30 59.3 -2.0
	comp=Z,7µm,0.9s					
CDF	Champ du Feu	19.61	316⇑	iP	Pn	03 30 59.3 -2.0
	comp=Z,7µm,0.9s					
LANF	Langenberg	19.62	318	eP	Pn	03 31 00.8 -0.7
LANF	Langenberg	19.62	318	eP	Pn	03 31 00.8 -0.7
IDMV	Damavand	19.66	84	eP	Pn	03 31 01.0 -1.0
KTD	Kalmit	19.67	319	eP	Pn	03 31 01.2 -0.8
KTD	Kalmit	19.67	319	eP	Pn	03 31 01.2 -0.8
VIVF	Saint-Julien-l	19.70	304⇑	iP	Pn	03 30 58.9 -3.5
	comp=Z,9µm,0.8s					
VIVF	Saint-Julien-l	19.70	304⇑	iP	Pn	03 30 58.9 -3.5
VIVF				pmax	pmax	
	comp=Z,4µm,0.8s					
VIVF	Saint-Julien-l	19.70	304⇑	iP	Pn	03 30 58.9 -3.5
	comp=Z,4µm,0.8s					
VIVF	Saint-Julien-l	19.70	304⇑	iP	Pn	03 30 58.9 -3.5
	comp=Z,4µm,0.8s					
ADJB	Djebel Djouab	19.70	278	P	Pn	03 31 00.8 -1.7
ADJB	Djebel Djouab	19.70	278	P	Pn	03 31 00.8 -1.7
IKLH	Kolahrood	19.73	91	eP	Pn	03 31 01.5 -1.4
IPRN	Peran	19.82	82	eP	Pn	03 31 02.4 -1.6
IZAR	Zarasai	19.86	357	eP	Pn	03 31 02.3 -1.8
IZAR				AMB	AMB	03 31 11.3
	comp=Z,570nm,0.9s					
IZAR	Zarasai	19.86	357	eP	Pn	03 31 02.3 -1.9
	comp=Z,570nm,0.9s,SNR=34					
HAU	Haudompre	19.93	314⇑	iP	Pn	03 31 02.7 -2.4
	comp=Z,9µm,1.1s					
HAU				eMLR	MLR	
	comp=Z,56µm,21.5s					
HAU	Haudompre	19.93	314⇑	iP	Pn	03 31 02.7 -2.4
HAU				pmax	pmax	
	comp=Z,4µm,1.1s					
HAU				MLR	MLR	
	comp=Z,56µm,21.5s					
HAU	Haudompre	19.93	314⇑	iP	Pn	03 31 02.7

comp=Z,2μm,0.9s
OBN eS S 03 34 47.0 -0.1
CLZ Clausthal 20.19 327 eP P 03 31 04.5 -1.2
comp=Z,2μm,1.2s
IALA Alasht 20.22 82 eP P 03 31 07.2 +1.0
IFIR Firoozkooh 20.23 83 eP P 03 31 06.2 -0.1
IFIR Firoozkooh 20.23 83 eP P 03 31 06.2 -0.1
THEF They Montfort 20.25 314 eP P 03 31 07.2 +0.8
THEF They Montfort 20.25 314 eP P 03 31 07.2 +0.8
ABH Alteburg 20.28 320 eP P 03 31 07.1 +0.5
ABH Alteburg 20.28 320 eP P 03 31 07.1 +0.5
EJON La Jonquera 20.34 296 P P 03 31 05.5 -1.9
comp=Z,729nm,1.1s
EJON La Jonquera 20.34 296 P P 03 31 05.6 -1.8
comp=Z,729nm,1.1s
IGAR Gharneh 20.35 93 eP P 03 31 08.9 +1.3
SJAF Saint Jean de 20.35 296 eP P 03 31 06.1 -1.4
SJAF Saint Jean de 20.35 296 eP P 03 31 06.1 -1.4
RUP Ruppelstein 20.43 319 eP P 03 31 08.9 +0.6
RUP Ruppelstein 20.43 319 eP P 03 31 08.9 +0.6
ILAS Lasjerd 20.44 84 eP P 03 31 08.8 +0.3
IZEF Zefreh 20.45 91 eP P 03 31 08.8 +0.2
CFON Fontmartina 20.57 294 P P 03 31 08.9 -0.9
comp=Z,799nm,0.7s
CFON Fontmartina 20.57 294 P P 03 31 08.9 -0.9
comp=Z,799nm,0.7s
ISHM Shahmirzad 20.64 83 eP P 03 31 11.8 +1.0
LRDF Laroque-de-Fa 20.69 297 eP P 03 31 10.0 -1.2
LRDF Laroque-de-Fa 20.69 297 eP P 03 31 10.0 -1.2
PLDF La Plantade 20.77 306 eP P 03 31 11.1 -0.9
PLDF La Plantade 20.77 306 eP P 03 31 11.1 -0.9
LBL Lubilhac 20.77 304 eP P 03 31 11.7 -0.4
LBL Lubilhac 20.77 304 eP P 03 31 11.7 -0.4
SMF Signal de Mont 20.87 308⇑iP P 03 31 12.0 -1.1
comp=Z,10μm,0.9s
SMF Signal de Mont 20.87 308⇑iP P 03 31 12.0 -1.1
SMF pmax pmax
comp=Z,5μm,0.9s
SMF Signal de Mont 20.87 308⇑iP P 03 31 12.0 -1.1
comp=Z,5μm,0.9s
SMF Signal de Mont 20.87 308⇑iP P 03 31 12.0 -1.1
comp=Z,5μm,0.9s
WLF Walferdange 20.90 318 P P 03 31 13.0 -0.4
comp=Z,2μm,1.0s
WLF Walferdange 20.90 318 eP P 03 31 12.8 -0.6
comp=Z,4μm,1.0s
WLF Walferdange 20.90 318 eP P 03 31 13.0 -0.4
WLF pmax pmax
comp=Z,4μm,1.0s
WLF MLR MLR
comp=Z,49μm,21.0s
WLF Walferdange 20.90 318 eP P 03 31 13.0 -0.4
comp=Z,4μm,1.0s
WLF eScP ScP 03 38 52.3 +2.3
WLF LR LR
comp=Z,49μm,21.0s
WLF Walferdange 20.90 318 eP P 03 31 13.0 -0.4
comp=Z,49μm,21.0s
IKIA Kiasar 20.91 82 eP P 03 31 13.7 +0.1
IKIA Kiasar 20.91 82 eP P 03 31 13.7 +0.1
MOS Moscow 20.93 16αiP P 03 31 13.7 +0.1
MOS eS S 03 35 01.8 -1.2
MOS eSS 03 35 22.2
MOS pmax pmax
comp=Z,6μm,2.1s
MOS pmax pmax
comp=Z,2μm,1.4s
MOS MLR MLR
comp=Z,29μm,19.0s
MOS Moscow 20.93 16 iP P 03 31 13.7 +0.1
comp=Z,2μm,1.4s
MEZF Maizieres J'vi 20.93 314⇑iP P 03 31 13.2 -0.5
comp=Z,11μm,1.2s,baz=115
MEZF Maizieres J'vi 20.93 314⇑iP P 03 31 13.2 -0.5
comp=Z,11μm,1.2s
MEZF Maizieres J'vi 20.93 314⇑iP P 03 31 13.2 -0.5
comp=Z,6μm,1.2s,baz=115
CARF Carcanieres 20.96 297 eP P 03 31 12.4 -1.7
CARF Carcanieres 20.96 297 eP P 03 31 12.4 -1.7
VALF Valcebollere 20.97 296 eP P 03 31 13.6 -0.6
VALF Valcebollere 20.97 296 eP P 03 31 13.6 -0.6
IGLO Ghaloghah 20.99 81 eP P 03 31 14.0 -0.5
IGLO Ghaloghah 20.99 81 eP P 03 31 14.0 -0.5
MTLF Montolieu 21.00 298⇑iP P 03 31 13.4 -1.1
comp=Z,7μm,1.4s,mb6.5
MTLF Montolieu 21.00 298⇑iP P 03 31 13.4 -1.1
MTLF pmax pmax
comp=Z,3μm,1.4s,mb6.5
MTLF Montolieu 21.00 298⇑iP P 03 31 13.4 -1.1
comp=Z,3μm,1.4s,mb6.5
MTLF Montolieu 21.00 298⇑iP P 03 31 13.4 -1.1
comp=Z,3μm,1.4s,mb6.5
CLLI Llivia 21.02 296 P P 03 31 13.8 -0.8
CLLI Llivia 21.02 296 P P 03 31 13.8 -0.9
CFF Clermont-Ferra 21.04 305 P P 03 31 15.2 +0.4
PYM Petit Puy Mans 21.10 305 eP P 03 31 14.9 -0.6
PYM Petit Puy Mans 21.10 305 eP P 03 31 14.9 -0.6
LOR Lormes 21.11 310⇑iP P 03 31 14.6 -1.0
comp=Z,2μm,0.7s,mb6.3,baz=118
LOR eMLR MLR
comp=Z,52μm,20.2s
LOR Lormes 21.11 310⇑iP P 03 31 14.6 -1.0
LOR pmax pmax
comp=Z,1μm,0.7s,mb6.3
LOR MLR MLR
comp=Z,52μm,20.3s
LOR Lormes 21.11 310⇑iP P 03 31 14.6 -1.0
comp=Z,1μm,0.7s,mb6.3
LOR LR LR
comp=Z,52μm,20.3s
LOR Lormes 21.11 310⇑iP P 03 31 14.6 -1.0
comp=Z,1μm,0.7s,mb6.3,baz=118
AGO Saint Agoulin 21.12 306 eP P 03 31 15.0 -0.7
AGO Saint Agoulin 21.12 306 eP P 03 31 15.0 -0.7
BSD Bornholm Skovb 21.14 339⇑iP P 03 31 13.6 -2.3
BSD iS S 03 35 03.8 -3.5
BSD pmax pmax
comp=Z,2μm,0.9s,mb6.3
BSD MLR MLR
comp=Z,52μm,20.0s
BSD Bornholm Skovb 21.14 339⇑iP P 03 31 13.6 -2.3
comp=Z,2μm,0.9s,mb6.3
BSD iS S 03 35 03.8 -3.5
BSD
comp=Z,52μm,20.0s
RGN Rugen 21.16 336 eP P 03 31 14.8 -1.2
comp=Z,6μm,0.9s,mb6.9
RGN eS S 03 35 03.2 -4.3
RGN Rugen 21.16 336 eP P 03 31 15.1 -0.9
comp=Z,6μm,0.8s,mb7.0
RGN eS S 03 35 05.8 -1.8
RGN Rugen 21.16 336 eP P 03 31 15.1 -0.9
comp=Z,6μm,0.8s,mb7.0
IANJ Anjilo 21.20 84 eP P 03 31 15.1 -1.6
IANJ Anjilo 21.20 84 eP P 03 31 15.1 -1.6
EIBI Ibiza 21.20 286 P P 03 31 17.2 +0.4
comp=Z,970nm,1.2s,mb6.0
EIBI Ibiza 21.20 286 P P 03 31 17.2 +0.5
comp=Z,970nm,1.2s,mb6.0
EBNR Beni Rached 21.21 279 P P 03 31 17.5 +0.6
EBNR Beni Rached 21.21 279 P P 03 31 17.5 +0.6
AVF Avril sur Loir 21.24 308⇑iP P 03 31 15.7 -1.3
comp=Z,3μm,0.7s,mb6.5
AVF Avril sur Loir 21.24 308⇑iP P 03 31 15.7 -1.3
AVF pmax pmax
comp=Z,2μm,0.7s,mb6.5
AVF Avril sur Loir 21.24 308⇑iP P 03 31 15.7 -1.3
comp=Z,2μm,0.7s,mb6.5
AVF Avril sur Loir 21.24 308⇑iP P 03 31 15.7 -1.3
comp=Z,2μm,0.7s,mb6.5
SSF Saint Saulge 21.25 309⇑iP P 03 31 16.2 -0.9
comp=Z,16μm,0.8s,mb7.1
SSF Saint Saulge 21.25 309⇑iP P 03 31 16.2 -0.9
SSF pmax pmax
comp=Z,8μm,0.8s,mb7.1
SSF Saint Saulge 21.25 309⇑iP P 03 31 16.2 -0.9
comp=Z,8μm,0.8s,mb7.1
SSF Saint Saulge 21.25 309⇑iP P 03 31 16.2 -0.9
comp=Z,8μm,0.8s,mb7.1
EMIR Miracle 21.26 294 P P 03 31 17.3 0.0
comp=Z,3μm,0.9s,mb6.6
EMIR Miracle 21.26 294 P P 03 31 17.3 0.0
comp=Z,3μm,0.9s,mb6.6
BUG Bochum--Univer 21.36 323 eP P 03 31 17.1 -1.2
comp=Z,4μm,1.1s,mb6.7
BUG eS S 03 35 06.3 -5.3
BUG Bochum--Univer 21.36 323 P P 03 31 17.6 -0.7
BUG Bochum--Univer 21.36 323 P P 03 31 17.6 -0.7
ECHA Ech Chlef 21.36 278 P P 03 31 19.0 +0.5
ECHA Ech Chlef 21.36 278 P P 03 31 19.0 +0.5
BGF Bois d'Agland 21.48 307⇑iP P 03 31 18.8 -0.8
comp=Z,6μm,0.9s,mb6.6
BGF Bois d'Agland 21.48 307⇑iP P 03 31 18.8 -0.8
BGF pmax pmax
comp=Z,3μm,0.9s,mb6.7
BGF Bois d'Agland 21.48 307⇑iP P 03 31 18.8 -0.8
comp=Z,3μm,0.9s,mb6.7
BGF Bois d'Agland 21.48 307⇑iP P 03 31 18.8 -0.8
comp=Z,3μm,0.9s,mb6.6
CAF Calviac 21.49 303⇑iP P 03 31 19.2 -0.5
comp=Z,6μm,1.1s,mb6.5
CAF Calviac 21.49 303⇑iP P 03 31 19.2 -0.5
CAF pmax pmax
comp=Z,3μm,1.1s,mb6.5
CAF Calviac 21.49 303⇑iP P 03 31 19.2 -0.5
comp=Z,3μm,1.1s,mb6.5
CAF Calviac 21.49 303⇑iP P 03 31 19.2 -0.5
comp=Z,3μm,1.1s,mb6.5
MEM Membach 21.51 320 P P 03 31 19.4 -0.4
comp=Z,2μm,1.1s,mb6.3
MEM Membach 21.51 320 P P 03 31 19.4 -0.4
comp=Z,2μm,1.1s,mb6.3
ETRT Tiaret 21.52 276 P P 03 31 20.0 -0.2
ETRT Tiaret 21.52 276 P P 03 31 20.0 -0.2
EPOB Poblet 21.53 293 P P 03 31 19.0 -1.2
comp=Z,1μm,0.8s,mb6.3
EPOB Poblet 21.53 293 P P 03 31 19.0 -1.2
comp=Z,1μm,0.8s,mb6.3
EANR 'Ain N'Sour 21.60 278 P P 03 31 21.0 0.0
EANR 'Ain N'Sour 21.60 278 P P 03 31 21.0 0.0
CSOR Sort 21.61 295 P P 03 31 20.9 -0.2
comp=Z,3μm,1.1s,mb6.6
CSOR Sort 21.61 295 P P 03 31 20.9 -0.2
comp=Z,3μm,1.1s,mb6.6
HGN Heimansgroeve 21.63 320⇑eP P 03 31 20.1 -1.1
comp=Z,2μm,1.2s,mb6.2
HGN Heimansgroeve 21.63 320 epP pP 03 31 38.1 +3.0
HGN Heimansgroeve 21.63 320 eS S 03 35 15.8 -1.1
HGN Heimansgroeve 21.63 320 P P 03 31 20.1 -1.1
HGN Heimansgroeve 21.63 320 P P 03 31 20.1 -1.1
SALF Salau 21.63 296 eP P 03 31 20.8 -0.5
SALF Salau 21.63 296 eP P 03 31 20.8 -0.5
IBBN Ibbenburen 21.69 325 eP P 03 31 20.5 -1.3
comp=Z,2μm,1.1s,mb6.4
IBBN eS S 03 35 12.6 -5.3
IBBN Ibbenburen 21.69 325 P P 03 31 21.0 -0.8
IBBN Ibbenburen 21.69 325 P P 03 31 21.0 -0.8
BSEG Bad Segeberg 21.75 331 eP P 03 31 20.1 -2.3
comp=Z,2μm,1.0s,mb6.5
BSEG eS S 03 35 13.1 -6.0
BSEG Bad Segeberg 21.75 331 P P 03 31 20.8 -1.6
BSEG Bad Segeberg 21.75 331 P P 03 31 20.8 -1.6
BCLA Clavier 21.77 319 P P 03 31 22.2 -0.5
comp=Z,3μm,1.2s,mb6.5
BCLA Clavier 21.77 319 P P 03 31 22.1 -0.6
comp=Z,3μm,1.2s,mb6.5
BEBN Eben Emael 21.79 320 P P 03 31 22.4 -0.4
comp=Z,525nm,1.1s,mb5.8
BEBN Eben Emael 21.79 320 P P 03 31 22.4 -0.4
comp=Z,525nm,1.1s,mb5.8
TCF Toulx Ste Croi 21.80 306⇑iP P 03 31 22.2 -0.8
comp=Z,3μm,0.8s,mb6.4
TCF Toulx Ste Croi 21.80 306⇑iP P 03 31 22.2 -0.8
TCF pmax pmax
comp=Z,2μm,0.8s,mb6.4
TCF Toulx Ste Croi 21.80 306⇑iP P 03 31 22.2 -0.8
comp=Z,2μm,0.8s,mb6.4
TCF Toulx Ste Croi 21.80 306⇑iP P 03 31 22.2 -0.8
comp=Z,2μm,0.8s,mb6.4
ISAD Sadrabad 21.82 93 eP P 03 31 24.5 +1.1
GIVF Givet 21.86 318⇑iP P 03 31 22.7 -0.9
comp=Z,4μm,0.9s,mb6.5
GIVF Givet 21.86 318⇑iP P 03 31 22.7 -0.9
GIVF pmax pmax
comp=Z,2μm,0.9s,mb6.5
GIVF Givet 21.86 318⇑iP P 03 31 22.7 -0.9
comp=Z,2μm,0.9s,mb6.5
GIVF Givet 21.86 318⇑iP P 03 31 22.7 -0.9
comp=Z,2μm,0.9s,mb6.5
HYF Humbligny 21.87 309⇑iP P 03 31 24.4 +0.6
HYF Humbligny 21.87 309⇑iP P 03 31 24.4 +0.6
WTSB Winterswijk 21.92 324⇑eP P 03 31 22.8 -1.4
comp=Z,1μm,1.4s,mb6.0
WTSB Winterswijk 21.92 324⇑eP P 03 31 22.8 -1.4
comp=Z,1μm,1.4s,mb6.0
MELF Melles 21.96 297 eP P 03 31 25.3 +0.5
MELF Melles 21.96 297 eP P 03 31 25.3 +0.5
RJF Les Rejaudoux 21.96 303⇑iP P 03 31 24.2 -0.6
comp=Z,5μm,1.0s,mb6.5
RJF eMLR MLR
comp=Z,52μm,22.5s
RJF Les Rejaudoux 21.96 303⇑iP P 03 31 24.2 -0.6
RJF pmax pmax
comp=Z,2μm,1.0s,mb6.5
RJF MLR MLR
comp=Z,52μm,22.5s
RJF Les Rejaudoux 21.96 303⇑iP P 03 31 24.2 -0.6
comp=Z,2μm,1.0s,mb6.5
RJF LR LR
comp=Z,52μm,22.5s
RJF Les Rejaudoux 21.96 303⇑iP P 03 31 24.2 -0.6
comp=Z,2μm,1.0s,mb6.5
DOU Dourbes 21.98 317 P P 03 31 23.8 -1.1
comp=Z,945nm,1.2s,mb6.0
DOU Dourbes 21.98 317 P P 03 31 23.8 -1.1
comp=Z,945nm,1.2s,mb6.0
IPAR Pars 22.02 99 eP P 03 31 25.4 -0.1
ERTA Horta de San J 22.05 291 P P 03 31 24.8 -0.9
comp=Z,832nm,0.7s,mb6.2
ERTA Horta de San J 22.05 291 P P 03 31 24.8 -1.0
comp=Z,832nm,0.7s,mb6.2
OPLO Oploo 22.18 322 P P 03 31 26.8 -0.2
OPLO Oploo 22.18 322 P P 03 31 26.8 -0.2
BAIF Baives 22.18 317⇑iP P 03 31 26.0 -1.0
comp=Z,7μm,1.0s,mb6.6
BAIF Baives 22.18 317⇑iP P 03 31 26.0 -1.0
BAIF pmax pmax
comp=Z,3μm,1.0s,mb6.6
BAIF Baives 22.18 317⇑iP P 03 31 26.0 -1.0
comp=Z,3μm,1.0s,mb6.6
BAIF Baives 22.18 317⇑iP P 03 31 26.0 -1.0
comp=Z,3μm,1.0s,mb6.6
RESF Ens 22.26 296 eP P 03 31 26.9 -1.0
RESF Ens 22.26 296 eP P 03 31 26.9 -1.0
EPF Esparros 22.29 297⇑iP P 03 31 26.8 -1.5
comp=Z,801nm,0.7s,mb5.8
EPF Esparros 22.29 297⇑iP P 03 31 26.8 -1.5
EPF pmax pmax
comp=Z,400nm,0.7s,mb5.9
EPF Esparros 22.29 297⇑iP P 03 31 26.8 -1.5
comp=Z,400nm,0.7s,mb5.9
EPF Esparros 22.29 297⇑iP P 03 31 26.8 -1.5
comp=Z,400nm,0.7s,mb5.8
ICHK Chekchek 22.31 92 eP P 03 31 28.4 -0.2
ICHK Chekchek 22.31 92 eP P 03 31 28.4 -0.2
SNF Seneffe 22.37 318 P P 03 31 28.2 -0.8
comp=Z,1μm,1.4s,mb6.0
SNF Seneffe 22.37 318 P P 03 31 28.2 -0.8
comp=Z,1μm,1.4s,mb6.0
EBIE Bielsa 22.38 296 P P 03 31 29.0 -0.2
comp=Z,1μm,1.2s,mb6.2
EBIE Bielsa 22.38 296 P P 03 31 29.0 -0.3
comp=Z,1μm,1.2s,mb6.2
COP Copenhagen 22.39 337 P P 03 31 28.3 -0.8
LFF La Frestale 22.40 302⇑iP P 03 31 28.5 -0.9
comp=Z,3μm,0.8s,mb6.4
LFF La Frestale 22.40 302⇑iP P 03 31 28.5 -0.9
LFF pmax pmax
comp=Z,2μm,0.8s,mb6.4
LFF La Frestale 22.40 302⇑iP P 03 31 28.5 -0.9
comp=Z,2μm,0.8s,mb6.4
LFF La Frestale 22.40 302⇑iP P 03 31 28.5 -0.9
comp=Z,2μm,0.8s,mb6.4
EBEN Beniarda 22.43 286 P P 03 31 29.4 -0.4
comp=Z,718nm,0.8s,mb6.0
EBEN Beniarda 22.43 286 P P 03 31 29.4 -0.4
comp=Z,718nm,0.8s,mb6.0
UCC Uccle 22.48 319 P P 03 31 30.6 +0.3
comp=Z,1μm,1.2s,mb6.2
UCC Uccle 22.48 319 P P 03 31 30.5 +0.3
comp=Z,1μm,1.2s,mb6.2
LABF Labassere 22.49 297 eP P 03 31 30.8 +0.4
LABF Labassere 22.49 297 eP P 03 31 30.8 +0.4
VIEF Viey 22.50 296 eP P 03 31 30.5 0.0
VIEF Viey 22.50 296 eP P 03 31 30.5 0.0
WIT Witteveen 22.52 325⇑eP P 03 31 29.2 -1.4
comp=Z,5μm,1.2s,mb6.7
WIT Witteveen 22.52 325⇑eP P 03 31 29.2 -1.4
comp=Z,5μm,1.2s,mb6.7
VSU Vasula 22.56 359c iP P 03 31 30.0 -1.0
VSU pmax pmax
comp=Z,660nm,0.9s,mb6.0
VSU Vasula 22.56 359⇑iP P 03 31 30.1 -0.9
VSU Vasula 22.56 359⇑iP P 03 31 30.1 -0.9
GOTU Gotland 22.63 347 P P 03 31 30.5 -1.2
EMOS Mosqueruela 22.63 290 P P 03 31 31.7 -0.2
comp=Z,439nm,1.1s,mb5.7
EMOS Mosqueruela 22.63 290 P P 03 31 31.7 -0.2
comp=Z,439nm,1.1s,mb5.7
ESAC San Caprasio 22.72 293 P P 03 31 31.5 -1.3
comp=Z,2μm,0.9s,mb6.4
ESAC San Caprasio 22.72 293 P P 03 31 31.5 -1.3
comp=Z,2μm,0.9s,mb6.4
IMEH Mehriz 22.74 94 eP P 03 31 32.6 -0.5
IMEH Mehriz 22.74 94 eP P 03 31 32.6 -0.5
REYF Montagne du Re 22.83 297 eP P 03 31 34.2 +0.2
REYF Montagne du Re 22.83 297 eP P 03 31 34.2 +0.2
HLG Helgoland 22.91 329 eP P 03 31 30.1 -4.6
comp=Z,3μm,1.0s,mb6.5
ETSF Etsaut 22.93 296⇑iP P 03 31 34.3 -0.7
comp=Z,2μm,0.8s,mb6.2
ETSF Etsaut 22.93 296⇑iP P 03 31 34.3 -0.7
ETSF pmax pmax
comp=Z,1μm,0.8s,mb6.2
ETSF Etsaut 22.93 296⇑iP P 03 31 34.3 -0.7
comp=Z,1μm,0.8s,mb6.2
ETSF Etsaut 22.93 296⇑iP P 03 31 34.3 -0.7
comp=Z,1μm,0.8s,mb6.2
USTO Oran 22.96 278 P P 03 31 38.0 +2.6
ECHE Chera 23.00 288 P P 03 31 36.5 +0.7
ECHE pmax pmax
comp=Z,856nm,0.6s,mb6.2
ECHE Chera 23.00 288 P P 03 31 36.5 +0.7
comp=Z,856nm,0.6s,mb6.2
ECHE Chera 23.00 288 P P 03 31 36.5 +0.7
comp=Z,856nm,0.6s,mb6.2
CART Cartagena 23.10 283 eP P 03 31 35.6 -1.3
comp=Z,846nm,0.8s,mb6.1
CART eScP ScP 03 38 58.4 +2.5
CART Cartagena 23.10 283 iP P 03 31 34.8 -2.1
ORDF Ordiarp 23.24 297 eP P 03 31 37.0 -1.1
ORDF Ordiarp 23.24 297 eP P 03 31 37.0 -1.1
EMUR La Murta 23.27 283 P P 03 31 37.5 -0.9
comp=Z,730nm,0.9s,mb6.0
EMUR La Murta 23.27 283 P P 03 31 37.5 -1.0
comp=Z,730nm,0.9s,mb6.0
TAM Tamanrasset 23.35 242 eP P 03 31 40.0 +0.7
TAM MLR MLR
comp=Z,22μm,21.0s
TAM Tamanrasset 23.35 242 eP P 03 31 40.0 +0.7
SJPF Ste Jean 23.44 297⇑iP P 03 31 39.9 0.0
comp=Z,5μm,0.9s,mb6.5
SJPF Ste Jean 23.44 297⇑iP P 03 31 39.9 0.0
SJPF pmax pmax
comp=Z,2μm,0.9s,mb6.5
SJPF Ste Jean 23.44 297⇑iP P 03 31 39.9 0.0
comp=Z,2μm,0.9s,mb6.5
SJPF Ste Jean 23.44 297⇑iP P 03 31 39.9 0.0
comp=Z,2μm,0.9s,mb6.5
MFF Saint Martin d 23.45 306⇑iP P 03 31 39.2 -0.7
comp=Z,5μm,1.0s,mb6.5
MFF Saint Martin d 23.45 306⇑iP P 03 31 39.2 -0.7
MFF pmax pmax
comp=Z,2μm,1.0s,mb6.5
MFF Saint Martin d 23.45 306⇑iP P 03 31 39.2 -0.7
comp=Z,2μm,1.0s,mb6.5
MFF Saint Martin d 23.45 306⇑iP P 03 31 39.2 -0.7
comp=Z,2μm,1.0s,mb6.5
IBAF Bafgh 23.45 93 eP P 03 31 41.2 +1.1
ETOB Tobarra 23.47 285 P P 03 31 40.1 -0.2
comp=Z,873nm,0.9s,mb6.1
ETOB Tobarra 23.47 285 P P 03 31 40.1 -0.1
comp=Z,873nm,0.9s,mb6.1
OSSF Osses 23.49 297 eP P 03 31 39.5 -0.8
OSSF Osses 23.49 297 eP P 03 31 39.5 -0.8
MENF Mencas 23.57 316 eP P 03 31 39.6 -1.4
MENF Mencas 23.57 316 eP P 03 31 39.6 -1.4
ODZI Dziouia 23.58 277 P P 03 31 42.0 +0.7
EALK Alkurruntz 23.66 297 P P 03 31 41.8 -0.1
comp=Z,657nm,0.9s,mb6.0
EALK Alkurruntz 23.66 297 P P 03 31 41.8 -0.1
comp=Z,657nm,0.9s,mb6.0
SRPE Suurupi 23.66 356 P P 03 31 41.1 -0.6
SRPE Suurupi 23.66 356 P P 03 31 41.1 -0.6
ETOR Torete 23.85 291 P P 03 31 43.5 -0.2
ETOR pmax pmax
comp=Z,339nm,0.8s,mb5.7
ETOR Torete 23.85 291 P P 03 31 43.5 -0.2
comp=Z,339nm,0.8s,mb5.7
ETOR Torete 23.85 291 P P 03 31 43.5 -0.2
comp=Z,339nm,0.8s,mb5.7
PUL Pulkovo 23.91 3⇑iP P 03 31 43.7 -0.4
PUL Pulkovo 23.91 3 iP P 03 31 43.7 -0.4
LDF La Druitiere 24.09 310⇑iP P 03 31 44.5 -1.3
comp=Z,8μm,0.9s,mb6.8
LDF La Druitiere 24.09 310⇑iP P 03 31 44.5 -1.3
LDF pmax pmax
comp=Z,4μm,0.9s,mb6.7
LDF La Druitiere 24.09 310⇑iP P 03 31 44.5 -1.3
comp=Z,4μm,0.9s,mb6.7
LDF La Druitiere 24.09 310⇑iP P 03 31 44.5 -1.3
comp=Z,4μm,0.9s,mb6.8
MUD Monsted U'grnd 24.10 334⇑iP P 03 31 44.9 -0.9
comp=Z,1μm,0.9s,mb6.3
MUD iS S 03 36 07.4 +8.7
MUD
comp=Z,47μm,18.0s
MUD Monsted U'grnd 24.10 334 P P 03 31 45.6 -0.2
VAN Vannovskaya 24.26 76 eP P 03 31 48.4 +0.9
VAN Vannovskaya 24.26 76 eP P 03 31 48.4 +0.9
ABKT Ailbek 24.27 76 P P 03 31 47.0 -0.6
comp=Z,2μm,1.1s,mb6.4
FLN La Foliniere 24.37 311⇑iP P 03 31 46.9 -1.4
comp=Z,6μm,0.8s,mb6.7,baz=117
FLN eMLR MLR
comp=Z,33μm,21.8s
FLN La Foliniere 24.37 311⇑iP P 03 31 46.9 -1.4
FLN pmax pmax
comp=Z,3μm,0.8s,mb6.7
FLN MLR MLR
comp=Z,33μm,21.8s
FLN La Foliniere 24.37 311⇑iP P 03 31 46.9 -1.4
comp=Z,3μm,0.8s,mb6.7
FLN LR LR
comp=Z,33μm,21.8s
FLN La Foliniere 24.37 311⇑iP P 03 31 46.9 -1.4
comp=Z,3μm,0.8s,mb6.7,baz=117
MEF Metsahovi 24.41 356 P P 03 31 47.6 -1.0
MEF Metsahovi 24.41 356 P P 03 31 47.6 -1.0
ELSH Elham, Standar 24.42 317 P P 03 31 47.9 -0.9
ELSH AMb AMB 03 31 53.7
comp=Z,4μm,0.9s,mb6.7
ELSH 03 36 00.7
ELSH AMS AMS 03 41 06.8
comp=Z,47μm,28.7s
ELSH Elham, Standar 24.42 317⇑eP P 03 31 47.9 -0.9
ELSH AMb AMB 03 31 53.7
comp=Z,4μm,0.9s,mb6.7
ELSH e 03 36 00.7
ELSH AMS AMS 03 41 06.8
comp=Z,47μm,28.7s
ELSH Elham, Standar 24.42 317⇑eP P 03 31 47.9 -0.9
comp=Z,4μm,0.9s,mb6.7
GRR Gorron 24.47 309⇑iP P 03 31 47.9 -1.4
comp=Z,14μm,0.9s,mb7.0
GRR Gorron 24.47 309⇑iP P 03 31 47.9 -1.4
GRR pmax pmax
comp=Z,7μm,0.9s,mb7.0
GRR Gorron 24.47 309⇑iP P 03 31 47.9 -1.4
comp=Z,7μm,0.9s,mb7.0
GRR Gorron 24.47 309⇑iP P 03 31 47.9 -1.4
comp=Z,7μm,0.9s,mb7.0
EBER Berja 24.67 281 P P 03 31 52.0 +0.7
comp=Z,2μm,0.7s,mb6.6
EBER Berja 24.67 281 P P 03 31 52.0 +0.8
comp=Z,2μm,0.7s,mb6.6
EQES Quesada 24.72 284 P P 03 31 51.6 0.0

comp=Z,3μm,1.0s,mb6.6
EQES Quesada 24.72 284 P **P 03 31 51.7 0.0**
comp=Z,3μm,1.0s,mb6.6
EALB Alboran 24.92 279 P **P 03 31 55.3 +1.8**
comp=Z,1μm,0.7s,mb6.4
EALB Alboran 24.92 279 P **P 03 31 55.3 +1.8**
comp=Z,1μm,0.7s,mb6.4
ELAN Lanestosa 25.06 296 P **P 03 31 54.5 -0.1**
comp=Z,3μm,0.8s,mb6.7
ELAN Lanestosa 25.06 296 P **P 03 31 54.5 -0.2**
comp=Z,3μm,0.8s,mb6.7
AEU East Anglia Un 25.10 320 P **P 03 31 53.1 -1.8**
AEU East Anglia Un 25.10 320⇑ *e*P **P 03 31 53.1 -1.8**
AEU East Anglia Un 25.10 320⇑ *e*P **P 03 31 53.1 -1.8**
ECOG Cogollos-Vega 25.17 282 P **P 03 31 55.9 +0.2**
ECOG pmax pmax
comp=Z,465nm,0.8s,mb6.0
ECOG Cogollos-Vega 25.17 282 P **P 03 31 55.9 +0.2**
comp=Z,465nm,0.8s,mb6.0
ECOG Cogollos-Vega 25.17 282 P **P 03 31 55.9 +0.2**
comp=Z,465nm,0.8s,mb6.0
EGUA Guajares 25.22 281 P **P 03 31 56.4 +0.2**
EBAN Banos Encina 25.25 285 P **P 03 31 56.6 +0.1**
EBAN Banos Encina 25.25 285 P **P 03 31 56.6 +0.1**
ABA1 Baconsthorpe 25.28 320 P **P 03 31 55.8 -0.8**
ABA1 Baconsthorpe 25.28 320 *e*P **P 03 31 55.8 -0.8**
ABA1 Baconsthorpe 25.28 320 *e*P **P 03 31 55.8 -0.8**
ESDC Sonseca Array 25.31 288 P **P 03 31 57.1 +0.1**
comp=Z,2μm,0.7s,mb6.6,baz=81,slow=9.3,SNR=542
ESDC S **S 03 36 18.8 +0.5**
comp=Z,7.9nm,0.9s,baz=36,slow=16,SNR=3.6
ESDC ScP ScP 03 39 04.3 +2.5
comp=Z,111nm,0.8s,baz=57,slow=2.6,SNR=34
ESDC P3KPbc 04 04 58.6
comp=Z,0.2nm,0.4s,baz=280,slow=5.0,SNR=4.7
ESDC Sonseca Array 25.31 288 P **P 03 31 57.1 +0.2**
comp=Z,1μm,0.7s,mb6.5
ESDC Sonseca Array 25.31 288 P **P 03 31 57.1 +0.1**
comp=Z,1μm,0.7s,mb6.5
ESLA Sonseca Array 25.31 288 *e*P **P 03 31 57.4 +0.5**
comp=Z,374nm,0.8s,mb5.9
ESLA *e*ScP ScP 03 39 03.8 +1.9
ESLA LR LR
comp=Z,94μm,22.0s
ESLA Sonseca Array 25.31 288 *e*P **P 03 31 57.4 +0.4**
ERON Agron 25.39 282 P **P 03 31 57.9 +0.1**
ERON Agron 25.39 282 P **P 03 31 57.8 +0.1**
GUD Guadarrama 25.44 290 P **P 03 31 58.5 +0.3**
GUD pmax pmax
comp=Z,3μm,1.5s,mb6.5
GUD Guadarrama 25.44 290 P **P 03 31 58.5 +0.3**
comp=Z,3μm,1.5s,mb6.5
GUD Guadarrama 25.44 290 P **P 03 31 58.5 +0.3**
comp=Z,3μm,1.5s,mb6.5
SGMF Saint Gilles 25.50 308⇑ *i*P **P 03 31 57.1 -1.5**
comp=Z,4μm,1.0s,mb6.5
SGMF Saint Gilles 25.50 308⇑ *i*P **P 03 31 57.1 -1.5**
SGMF pmax pmax
comp=Z,2μm,1.0s,mb6.5
SGMF Saint Gilles 25.50 308⇑ *i*P **P 03 31 57.1 -1.5**
comp=Z,2μm,1.0s,mb6.5
SGMF Saint Gilles 25.50 308⇑ *i*P **P 03 31 57.1 -1.5**
comp=Z,2μm,1.0s,mb6.5
JSA Saint Aubin 25.56 311 P **P 03 31 57.5 -1.6**
JSA AMb AMB 03 32 03.1
comp=Z,3μm,1.1s,mb6.6
JSA AMS AMS 03 42 39.5
comp=Z,31μm,21.9s
JSA Saint Aubin 25.56 311⇑ *e*P **P 03 31 57.5 -1.6**
JSA AMb AMB 03 32 03.1
comp=Z,3μm,1.1s,mb6.6
JSA AMS AMS 03 42 39.5
comp=Z,31μm,21.9s
JSA Saint Aubin 25.56 311 P **P 03 31 58.2 -1.0**
JSA Saint Aubin 25.56 311⇑ *e*P **P 03 31 57.5 -1.7**
comp=Z,3μm,1.1s,mb6.6
FINES FINESS Array B 25.57 358 P **P 03 31 57.8 -1.2**
comp=Z,656nm,0.8s,mb6.1,baz=159,slow=10,SNR=198
FINES S **S 03 36 21.9 0.0**
comp=Z,105nm,0.8s,baz=159,slow=13,SNR=3.4
FINES ScP ScP 03 39 03.2 +1.1
comp=Z,83nm,0.7s,baz=105,slow=4.3,SNR=7.7
FINES LR LR 03 42 48.3
comp=Z,38μm,20.7s,baz=172,slow=38
FINES P3KPbc 04 04 55.5
comp=Z,8.7nm,0.8s,baz=46,slow=8.2,SNR=14
FINES FINESS Array B 25.57 358 P **P 03 31 57.8 -1.2**
FINES S **S 03 36 21.9 0.0**
FINES FINESS Array B 25.57 358 P **P 03 31 57.8 -1.2**
FINES S **S 03 36 21.9 0.0**
FINES ScP ScP 03 39 03.2 +1.1
FINES LR LR 03 42 48.3
FINES *e* 04 04 55.5
FINES FINESS Array B 25.57 358 P **P 03 31 57.8 -1.2**
FINES S **S 03 36 21.9 0.0**
ELOJ Sierra Loja 25.65 282 P **P 03 31 59.3 -0.8**
ELOJ pmax pmax
comp=Z,395nm,0.8s,mb5.9
ELOJ Sierra Loja 25.65 282 P **P 03 31 59.3 -0.8**
comp=Z,395nm,0.8s,mb5.9
ELOJ Sierra Loja 25.65 282 P **P 03 31 59.3 -0.8**
comp=Z,395nm,0.8s,mb5.9
QUIF Quistinic 25.79 307⇑ *i*P **P 03 31 59.8 -1.5**
comp=Z,2μm,0.9s,mb6.3
QUIF Quistinic 25.79 307⇑ *i*P **P 03 31 59.8 -1.5**
QUIF pmax pmax
comp=Z,1μm,0.9s,mb6.3
QUIF Quistinic 25.79 307⇑ *i*P **P 03 31 59.8 -1.5**
comp=Z,1μm,0.9s,mb6.3
QUIF Quistinic 25.79 307⇑ *i*P **P 03 31 59.8 -1.5**
comp=Z,1μm,0.9s,mb6.3
EADA Adamuz 25.88 285 P **P 03 32 02.0 -0.1**
comp=Z,648nm,0.8s,mb6.1
EADA Adamuz 25.88 285 P **P 03 32 02.0 -0.1**
comp=Z,648nm,0.8s,mb6.1
HFS Hagfors 25.89 344 P **P 03 32 00.6 -1.3**
comp=Z,3μm,0.9s,mb6.7,baz=168,slow=10,SNR=272
HFS S **S 03 36 25.2 -1.8**
comp=Z,26nm,0.8s,baz=99,slow=18,SNR=1.6
HFS ScP ScP 03 39 04.0 +1.0
comp=Z,58nm,0.8s,baz=180,slow=2.5,SNR=5.9
HFS LR LR 03 43 05.0
comp=Z,50μm,21.8s,baz=151,slow=38
HFS P3KPbc 04 04 54.8
comp=Z,3.8nm,0.9s,baz=268,slow=8.9,SNR=5.2
HFS Hagfors 25.89 344 P **P 03 32 00.6 -1.4**
HFS S **S 03 36 25.2 -1.8**
HFS Hagfors 25.89 344 P **P 03 32 00.6 -1.3**
HFS S **S 03 36 25.2 -1.8**
HFS ScP ScP 03 39 04.0 +1.0
HFS LR LR 03 43 05.0
HFS *e* 04 04 54.8
HFS Hagfors 25.89 344 P **P 03 32 00.6 -1.4**
EMAL Malaga-Limoner 25.92 281 P **P 03 32 02.4 -0.1**
EMAL Malaga-Limoner 25.92 281 P **P 03 32 02.4 -0.1**
EMAL *i*S **S 03 36 26.8 -1.2**
DHBB Dhamar BB 25.94 141 *e*P **P 03 32 05.4 +2.5**
DHBB AMb AMB 03 32 08.3
comp=Z,3μm,1.9s,mb6.3
ROSF Rostrenen 25.98 308⇑ *i*P **P 03 32 01.0 -2.0**
comp=Z,3μm,0.8s,mb6.5
ROSF Rostrenen 25.98 308⇑ *i*P **P 03 32 01.0 -2.0**
ROSF pmax pmax
comp=Z,2μm,0.8s,mb6.5
ROSF Rostrenen 25.98 308⇑ *i*P **P 03 32 01.0 -2.0**
comp=Z,2μm,0.8s,mb6.5
ROSF Rostrenen 25.98 308⇑ *i*P **P 03 32 01.0 -2.0**
comp=Z,2μm,0.8s,mb6.5
AKTK Aktyubinsk 26.15 47 P **P 03 32 04.3 -0.2**
AKTK S **S 03 36 32.0 +0.6**
AKTK ScP ScP 03 39 06.8 +2.7
AKTK LR LR 03 46 34.1
AKTK *e* 04 04 54.4
AKTK Aktyubinsk 26.15 47 P **P 03 32 04.3 -0.2**
AKTK S **S 03 36 32.0 +0.6**
AKTO Aktyubinsk 26.15 47 P **P 03 32 04.3 -0.2**
comp=Z,531nm,0.9s,mb6.0,baz=248,slow=8.1,SNR=177
AKTO S **S 03 36 32.0 +0.6**
comp=Z,17nm,0.8s,baz=117,slow=19,SNR=1.3
AKTO ScP ScP 03 39 06.8 +2.7
comp=Z,88nm,0.7s,baz=194,slow=1.9,SNR=10.0
AKTO LR LR 03 46 34.1
comp=Z,25μm,19.7s,baz=127,slow=46
AKTO P3KPbc 04 04 54.4
comp=Z,4.8nm,0.8s,baz=62,slow=3.8,SNR=17
AKTO Aktyubinsk 26.15 47 P **P 03 32 04.3 -0.2**

AKTO S **S 03 36 32.1 +0.7**
ASUD Al Ashush, Dub 26.22 108 P **P 03 32 07.9 +2.6**
SNR=18
EMIJ Mijas 26.22 281 P **P 03 32 04.6 -0.6**
comp=Z,3μm,1.6s,mb6.5
EMIJ Mijas 26.22 281 P **P 03 32 04.6 -0.6**
comp=Z,3μm,1.6s,mb6.5
KAF Kangasniemi 26.23 358 *e*P **P 03 32 03.6 -1.4**
KAF pmax pmax
comp=Z,313nm,0.7s,mb5.8
KAF Kangasniemi 26.23 358 *e*P **P 03 32 03.6 -1.4**
comp=Z,313nm,0.7s,mb5.8
KAF Kangasniemi 26.23 358 *e*p **P 03 32 03.6 -1.4**
comp=Z,313nm,0.7s,mb5.8
KAF Kangasniemi 26.23 358 *e*P **P 03 32 03.6 -1.4**
comp=Z,313nm,0.7s,mb5.8
SWN1 Swindon 26.23 316 P **P 03 32 03.8 -1.4**
SWN1 AMb AMB 03 32 10.9
comp=Z,5μm,1.1s,mb6.8
SWN1 AMS AMS 03 44 04.2
comp=Z,36μm,16.4s
SWN1 Swindon 26.23 316 *e*P **P 03 32 03.8 -1.4**
SWN1 AMb AMB 03 32 10.9
comp=Z,5μm,1.1s,mb6.8
SWN1 AMS AMS 03 44 04.2
comp=Z,36μm,16.4s
SWN1 Swindon 26.23 316 *e*P **P 03 32 03.8 -1.4**
comp=Z,5μm,1.1s,mb6.8
UDYN Al 'Udayn 26.24 142 *e*P **P 03 32 08.1 +2.5**
UDYN AMb AMB 03 32 10.5
comp=Z,488nm,1.6s,mb5.7
NAZ Nazwa, Dubai 26.29 107 ⇑P **P 03 32 07.3 +1.4**
SNR=31
BANOM Banah 26.32 104 P **P 03 32 08.6 +2.3**
SNR=14
EARI Arriondas 26.36 296 P **P 03 32 06.4 0.0**
comp=Z,2μm,0.8s,mb6.5
EARI Arriondas 26.36 296 P **P 03 32 06.4 0.0**
comp=Z,2μm,0.8s,mb6.5
OSL Oslo 26.45 341 *e*P **P 03 32 05.4 -1.7**
OSL AMb AMB 03 32 10.9
comp=Z,1μm,1.0s,mb6.3
OSL *e*pP pP 03 32 21.6 -1.1
OSL Oslo 26.45 341 *e*P **P 03 32 05.4 -1.7**
comp=Z,1μm,1.0s,mb6.4
OSL Oslo 26.45 341 *e*P **P 03 32 05.4 -1.7**
comp=Z,1μm,1.0s,mb6.3,SNR=41
OSL *e*pP pP 03 32 21.6 -1.1
SNR=139
BST Brest 26.48 308 *e*P **P 03 32 06.5 -1.0**
BST Brest 26.48 308 *e*P **P 03 32 06.5 -1.0**
CWF Charnwood Fore 26.50 318 P **P 03 32 05.6 -2.0**
CWF AMb AMB 03 32 10.3
comp=Z,819nm,1.3s,mb6.1
CWF AMS AMS 03 36 30.6
CWF AMS AMS 03 42 22.4
comp=Z,27μm,18.7s
CWF Charnwood Fore 26.50 318⇑ *e*P **P 03 32 05.6 -2.0**
CWF AMb AMB 03 32 10.3
comp=Z,819nm,1.3s,mb6.1
CWF *e* 03 36 30.6
CWF AMS AMS 03 42 22.4
comp=Z,27μm,18.7s
CWF Charnwood Fore 26.50 318⇑ *e*P **P 03 32 05.6 -2.0**
comp=Z,819nm,1.3s,mb6.1
KONO Kongsberg 26.52 339⇑ *i*P **P 03 32 05.7 -2.1**
KONO AMb AMB 03 32 13.5
comp=Z,2μm,0.8s,mb6.6
KONO *e*S **S 03 36 39.1 +2.0**
KONO AMS AMS 03 42 32.2
comp=Z,25μm,21.3s
KONO Kongsberg 26.52 339 *e*P **P 03 32 06.3 -1.4**
KONO pmax pmax
comp=Z,16nm,0.8s
KONO MLR MLR
comp=Z,26μm,19.0s
KONO Kongsberg 26.52 339 *e*P **P 03 32 06.3 -1.4**
comp=Z,16nm,0.8s
KONO *e*ScP ScP 03 39 06.4 +1.4
KONO LR LR
comp=Z,26μm,19.0s
KONO Kongsberg 26.52 339 *e*P **P 03 32 06.3 -1.4**
comp=Z,26μm,19.0s
KONO *e*S **S 03 36 39.1 +2.0**
SNR=39
ECAB El Cabril 26.54 285 P **P 03 32 08.2 0.0**
comp=Z,2μm,0.9s,mb6.5
ECAB El Cabril 26.54 285 P **P 03 32 08.2 0.0**
comp=Z,2μm,0.9s,mb6.5
LIJA Lijar 26.67 282 *i*P **P 03 32 08.7 -0.6**
HATD Hatta, Dubai 26.73 107 P **P 03 32 12.2 +2.2**
SNR=28
ASHO Ashiyiah 26.75 107 P **P 03 32 12.2 +2.0**
SNR=39
EJIF Jimena Fronter 26.79 281 P **P 03 32 10.0 -0.4**
EJIF pmax pmax
comp=Z,1μm,0.8s,mb6.4
EJIF Jimena Fronter 26.79 281 P **P 03 32 10.0 -0.4**
comp=Z,1μm,0.8s,mb6.4
EJIF Jimena Fronter 26.79 281 P **P 03 32 10.0 -0.4**
comp=Z,1μm,0.8s,mb6.4
SUF Sumiainen 26.84 358 P **P 03 32 09.9 -0.6**
KBI1 Birley Grange 26.86 319 P **P 03 32 08.1 -2.8**
KBI1 Birley Grange 26.86 319⇑ *e*P **P 03 32 08.1 -2.8**
MDT Midelt 26.87 273 P **P 03 32 11.8 +0.6**
comp=Z,459nm,0.8s,mb6.1,baz=84,slow=11,SNR=124
MDT S **S 03 36 41.6 -1.5**
comp=Z,23nm,0.9s,baz=209,slow=19,SNR=1.4
MDT ScP ScP 03 39 09.5 +2.9
comp=Z,63nm,0.8s,baz=87,slow=3.9,SNR=7.4
MDT LR LR 03 44 03.2
comp=Z,10μm,20.4s,baz=74,slow=39
MDT Midelt 26.87 273 P **P 03 32 11.8 +0.6**
MDT S **S 03 36 41.6 -1.5**
MDT ScP ScP 03 39 09.5 +2.9
MDT LR LR 03 44 03.2
MDT Midelt 26.87 273 P **P 03 32 11.8 +0.6**
MDT S **S 03 36 41.6 -1.5**
ZFT Errachidia 26.88 271 *i*P **P 03 32 12.0 +0.8**
KWE Weaver Farm 26.92 319 P **P 03 32 09.2 -2.1**
KWE Weaver Farm 26.92 319⇑ *e*P **P 03 32 09.2 -2.1**
KWE Weaver Farm 26.92 319⇑ *e*P **P 03 32 09.2 -2.2**
DESE Dese 26.92 154 *e*P **P 03 32 14.0 +2.3**
DESE *e*S **S 03 36 44.6 +0.5**
EPLA Plasencia 26.93 289 P **P 03 32 11.3 -0.3**
EPLA pmax pmax
comp=Z,718nm,0.8s,mb6.2
EPLA Plasencia 26.93 289 P **P 03 32 11.3 -0.2**
comp=Z,718nm,0.8s,mb6.2
EPLA Plasencia 26.93 289 P **P 03 32 11.3 -0.3**
comp=Z,718nm,0.8s,mb6.2
AB31 Akbulak array 26.93 50 *i*P **P 03 32 12.2 +0.7**
AB31 Akbulak array 26.93 50 *i*P **P 03 32 12.2 +0.7**
ABKAR Akbulak array 26.93 50 *e*P **P 03 32 12.4 +0.9**
comp=Z,0.4nm,0.9s
ABKAR *e*ScP ScP 03 39 09.2 +2.8
ABKAR Akbulak array 26.93 50 *e*P **P 03 32 12.4 +0.9**
ESPR Espera 27.04 282 P **P 03 32 11.4 -1.2**
comp=Z,865nm,0.9s,mb6.3
ESPR Espera 27.04 282 P **P 03 32 11.4 -1.2**
comp=Z,865nm,0.9s,mb6.3
BDHA Al Bayda' 27.06 139 *e*P **P 03 32 15.4 +2.5**
DYA Yadsworthy 27.06 312 P **P 03 32 10.9 -1.8**
DYA AMb AMB 03 32 18.3
comp=Z,1μm,1.0s,mb6.3
DYA AMS AMS 03 36 38.2
DYA AMS AMS 03 45 13.0
comp=Z,21μm,16.0s
DYA Yadsworthy 27.06 312⇑ *e*P **P 03 32 10.9 -1.8**
DYA AMb AMB 03 32 18.3
comp=Z,1μm,1.0s,mb6.3
DYA *e* 03 36 38.2
DYA AMS AMS 03 45 13.0
comp=Z,21μm,16.0s
DYA Yadsworthy 27.06 312 P **P 03 32 11.7 -1.0**
DYA Yadsworthy 27.06 312 P **P 03 32 11.7 -1.0**
JOF Joensuu 27.11 4 *e*P **P 03 32 11.3 -1.6**
JOF Joensuu 27.11 4 *e*p **P 03 32 11.3 -1.6**
comp=Z,357nm,0.9s,mb5.9
JOF Joensuu 27.11 4 *e*P **P 03 32 11.3 -1.6**
MCH1 Michaelchurch 27.11 316 P **P 03 32 10.3 -2.8**
MCH1 AMb AMB 03 32 18.9
comp=Z,710nm,1.1s,mb6.1
MCH1 AMS AMS 03 35 40.7
MCH1 AMS AMS 03 44 18.6
comp=Z,34μm,22.7s

MCH1 Michaelchurch 27.11 316⇑ *e*P **P 03 32 10.3 -2.8**
MCH1 AMb AMB 03 32 18.9
comp=Z,710nm,1.1s,mb6.1
MCH1 *e* 03 35 40.7
MCH1 AMS AMS 03 44 18.6
comp=Z,34μm,22.7s
MCH1 Michaelchurch 27.11 316⇑ *e*P **P 03 32 10.3 -2.8**
comp=Z,710nm,1.1s,mb6.1
GIBL Gibalbin 27.13 282 *i*P **P 03 32 13.4 0.0**
STNC Stoke 27.15 319 P **P 03 32 12.1 -1.3**
STNC 03 36 24.0
STNC Stoke 27.15 319⇑ *e*P **P 03 32 12.1 -1.3**
STNC *e* 03 36 24.0
STNC Stoke 27.15 319⇑ *e*P **P 03 32 12.1 -1.3**
CZD Col de Zad 27.16 274 *i*P **P 03 32 12.0 -1.8**
NAO01 NORSAR Array S 27.18 342 *e*P **P 03 32 12.8 -0.9**
comp=Z,14nm,0.4s
NAO01 *e*ScP ScP 03 39 08.8 +1.9
NAO01 LR LR
comp=Z,44μm,19.0s
NAO01 NORSAR Array S 27.18 342 *e*P **P 03 32 12.8 -0.8**
STAV Stavanger 27.20 335 *e*P **P 03 32 14.1 +0.3**
STAV Stavanger 27.20 335 *e*P **P 03 32 14.1 +0.3**
SNR=40
HEX Exmoor 27.21 314 P **P 03 32 12.1 -1.9**
HEX Exmoor 27.21 314⇑ *e*P **P 03 32 12.1 -1.9**
HEX Exmoor 27.21 314⇑ *e*P **P 03 32 12.1 -1.9**
HLM1 Long Mynd 27.26 317 P **P 03 32 12.3 -2.1**
HLM1 Long Mynd 27.26 317⇑ *e*P **P 03 32 12.3 -2.1**
HLM1 Long Mynd 27.26 317⇑ *e*P **P 03 32 12.3 -2.1**
CNIL Conil 27.27 281 *i*P **P 03 32 15.2 +0.5**
NB2 NORSAR Subarra 27.27 342 P **P 03 32 13.0 -1.4**
comp=Z,1μm,0.8s,mb6.4,baz=150,slow=9.3
NB2 NORSAR Subarra 27.27 342 P **P 03 32 13.0 -1.4**
comp=Z,1μm,0.8s,mb6.4,baz=150,slow=9.0
NOA NORSAR Array B 27.27 342 P **P 03 32 12.9 -1.5**
comp=Z,1μm,0.9s,mb6.4,baz=147,slow=8.9,SNR=371
NOA PcP PcP 03 35 34.1 +1.6
comp=Z,68nm,0.8s,baz=129,slow=3.3,SNR=4.5
NOA S **S 03 36 50.4 +1.6**
comp=Z,17nm,0.8s,baz=52,slow=23,SNR=2.2
NOA ScP ScP 03 39 07.7 +0.5
comp=Z,109nm,0.8s,baz=135,slow=4.2,SNR=11
NOA LR LR 03 45 02.8
comp=Z,36μm,18.6s,baz=140,slow=41
NOA P3KPbc 04 04 48.6
comp=Z,3.5nm,0.9s,baz=334,slow=4.4,SNR=6.6
NOA NORSAR Array B 27.27 342 P **P 03 32 12.9 -1.5**
NOA 03 35 34.1
NOA S **S 03 36 50.4 +1.6**
NOA NORSAR Array B 27.27 342 P **P 03 32 12.9 -1.5**
NOA PcP PcP 03 35 34.1 +1.6
NOA S **S 03 36 50.4 +1.6**
NOA ScP ScP 03 39 07.7 +0.5
NOA LR LR 03 45 02.8
NOA *e* 04 04 48.6
NOA NORSAR Array B 27.27 342 P **P 03 32 12.9 -1.5**
NOA NORSAR Array B 27.27 342 PcP PcP 03 35 34.1 +1.6
NOA S **S 03 36 50.4 +1.6**
BLS5 Blasjo 27.32 336 *e*P **P 03 32 13.4 -1.4**
BLS5 AMb AMB 03 32 17.1
comp=Z,518nm,0.8s,mb6.1
BLS5 *e*ScP ScP 03 39 08.7 +1.4
BLS5 Blasjo 27.32 336 *e*P **P 03 32 13.4 -1.4**
comp=Z,518nm,0.8s,mb6.1
BLS5 Blasjo 27.32 336 *e*P **P 03 32 13.4 -1.4**
comp=Z,518nm,0.8s,mb6.1,SNR=40
VAF Ylistaro 27.33 355 P **P 03 32 13.7 -1.2**
RSA Sarsar 27.36 278 *i*P **P 03 32 15.0 -0.5**
SFS San Fernando 27.37 281 *e*P **P 03 32 15.6 0.0**
SFS *e*S **S 03 36 58.4 +7.4**
SFS pmax pmax
comp=Z,2μm,0.9s,mb6.6
SFS MLR MLR
comp=Z,17μm,19.0s
SFS San Fernando 27.37 281 *e*P **P 03 32 15.6 -0.1**
comp=Z,2μm,0.9s,mb6.6
SFS *e*S **S 03 36 58.4 +7.5**
SFS LR LR
comp=Z,17μm,19.0s
SFS San Fernando 27.37 281 *e*P **P 03 32 15.6 0.0**
comp=Z,2μm,0.9s,mb6.6
SFS *e*S **S 03 36 58.4 +7.4**
ECAL Calabor 27.41 293 P **P 03 32 15.6 -0.3**
comp=Z,1μm,0.8s,mb6.4
ECAL Calabor 27.41 293 P **P 03 32 15.6 -0.3**
comp=Z,1μm,0.8s,mb6.4
PBRG Braganca 27.41 293 *e*P **P 03 32 15.7 -0.2**
comp=Z,2μm,1.2s,mb6.4
PBRG *e*S **S 03 36 51.4 0.0**
EMIN Mina Concepcio 27.56 284 P **P 03 32 17.1 -0.2**
comp=Z,2μm,0.8s,mb6.7
EMIN Mina Concepcio 27.56 284 P **P 03 32 17.1 -0.2**
comp=Z,2μm,0.8s,mb6.7
KMY Karmoy 27.56 335 *e*P **P 03 32 15.6 -1.4**
KMY AMb AMB 03 32 19.0
comp=Z,332nm,1.0s,mb5.8
KMY *e*pP pP 03 32 29.5 -3.2
KMY Karmoy 27.56 335 *e*P **P 03 32 15.6 -1.4**
comp=Z,332nm,1.0s,mb5.8
KMY Karmoy 27.56 335 *e*P **P 03 32 15.6 -1.5**
comp=Z,332nm,1.0s,mb5.8,SNR=40
KMY *e*pP pP 03 32 29.5 -3.2
SNR=140
HTL Hartland 27.59 313 P **P 03 32 15.9 -1.5**
HTL AMb AMB 03 32 21.5
comp=Z,954nm,1.0s,mb6.3
HTL 03 37 08.9
HTL AMS AMS 03 43 38.1
comp=Z,25μm,25.7s
HTL Hartland 27.59 313⇑ *e*P **P 03 32 15.9 -1.5**
HTL AMb AMB 03 32 21.5
comp=Z,954nm,1.0s,mb6.3
HTL *e* 03 37 08.9
HTL AMS AMS 03 43 38.1
comp=Z,25μm,25.7s
HTL Hartland 27.59 313⇑ *e*P **P 03 32 15.9 -1.5**
comp=Z,954nm,1.0s,mb6.3
MVO Moncorvo 27.62 292 *e*P **P 03 32 17.7 -0.1**
comp=Z,3μm,0.9s,mb6.8
MVO *e*S **S 03 36 54.9 +0.1**
MVO Moncorvo 27.62 292 P **P 03 32 17.7 -0.1**
MVO Moncorvo 27.62 292 *e*P **P 03 32 17.7 -0.1**
comp=Z,3μm,0.9s,mb6.8
MVO *e*S **S 03 36 54.9 +0.1**
ODD1 Odda 27.64 337 *e*P **P 03 32 16.3 -1.4**
ODD1 AMb AMB 03 32 21.1
comp=Z,792nm,0.9s,mb6.2
ODD1 Odda 27.64 337 *e*P **P 03 32 16.3 -1.4**
comp=Z,792nm,0.9s,mb6.2
ODD1 Odda 27.64 337 *e*P **P 03 32 16.3 -1.4**
comp=Z,792nm,0.9s,mb6.2,SNR=40
ERUA La Rua 27.72 294 P **P 03 32 18.6 -0.1**
ERUA pmax pmax
comp=Z,567nm,0.9s,mb6.1
ERUA La Rua 27.72 294 P **P 03 32 18.6 -0.1**
comp=Z,567nm,0.9s,mb6.1
ERUA La Rua 27.72 294 P **P 03 32 18.6 -0.1**
comp=Z,567nm,0.9s,mb6.1
EBAD Badajoz 27.73 286 P **P 03 32 18.1 -0.6**
comp=Z,760nm,0.8s,mb6.3
EBAD Badajoz 27.73 286 P **P 03 32 18.1 -0.7**
comp=Z,760nm,0.8s,mb6.3
CCA1 Carnmenellis 27.77 311 P **P 03 32 17.2 -1.8**
CCA1 AMb AMB 03 32 22.8
comp=Z,538nm,1.0s,mb6.0
CCA1 03 36 59.5
CCA1 AMS AMS 03 43 43.5
comp=Z,29μm,26.7s
CCA1 Carnmenellis 27.77 311⇑ *e*P **P 03 32 17.2 -1.8**
CCA1 AMb AMB 03 32 22.8
comp=Z,538nm,1.0s,mb6.0
CCA1 *e* 03 36 59.5
CCA1 AMS AMS 03 43 43.5
comp=Z,29μm,26.7s
CCA1 Carnmenellis 27.77 311⇑ *e*P **P 03 32 17.2 -1.8**
comp=Z,538nm,1.0s,mb6.0
EPON Pontenova 27.77 296 P **P 03 32 19.0 -0.1**
comp=Z,2μm,1.1s,mb6.7
EPON Pontenova 27.77 296 P **P 03 32 19.0 -0.1**
comp=Z,2μm,1.1s,mb6.7
PBAR Barrancos 27.80 285 *e*P **P 03 32 19.3 -0.2**
comp=Z,2μm,2.0s,mb6.3
PBAR *e*S **S 03 36 57.7 0.0**
PBAR Barrancos 27.80 285 *e*P **P 03 32 19.3 -0.2**

comp=Z,2μm,2.0s,mb6.3
PBAR eS S 03 36 57.7 0.0
ARQ Araqi 27.83 109 ⇑P P 03 32 20.4 +0.6
SNR=67
ATD Arta Tunnel 27.84 147 P P 03 32 21.0 +1.1
comp=Z,24nm,0.9s,baz=317,slow=8.2,SNR=8.3
ATD S S 03 37 05.9 +7.3
comp=Z,3.1nm,0.3s,baz=108,slow=19,SNR=2.1
ATD LR LR 03 44 52.2
comp=Z,20μm,20.6s,baz=168,slow=39
PMRV Marv??o 27.97 288 eP P 03 32 20.5 -0.4
comp=Z,1μm,1.4s,mb6.3
PMRV eS S 03 37 00.5 +0.2
PMRV Marv??o 27.97 288 eP P 03 32 20.5 -0.4
comp=Z,1μm,1.4s,mb6.3
PMRV eS S 03 37 00.5 +0.2
XAL Allendale 28.00 322 P P 03 32 19.8 -1.2
XAL Allendale 28.00 322⇑eP P 03 32 19.8 -1.2
XAL Allendale 28.00 322⇑eP P 03 32 19.8 -1.2
PCBR Castelo Branco 28.01 289 eP P 03 32 20.8 -0.5
comp=Z,2μm,1.2s,mb6.4
PCBR eS S 03 37 02.2 +1.3
PCBR Castelo Branco 28.01 289 eP P 03 32 20.8 -0.5
comp=Z,2μm,1.2s,mb6.4
PCBR eS S 03 37 02.2 +1.3
MTE Manteigas 28.03 290 eP P 03 32 21.3 -0.2
comp=Z,2μm,1.4s,mb6.5
MTE eS S 03 37 01.8 +0.5
MTE Manteigas 28.03 290 eP P 03 32 21.4 0.0
comp=Z,835nm,0.9s,mb6.3
MTE eScP ScP 03 39 12.9 +3.0
MTE LR LR
comp=Z,23μm,21.0s
MTE Manteigas 28.03 290 eP P 03 32 21.5 0.0
MTE eS S 03 37 01.8 +0.5
PVRL Vila Real 28.14 292 eP P 03 32 22.2 -0.2
comp=Z,908nm,1.7s,mb6.0
PVRL eS S 03 37 10.9 +8.0
PVRL Vila Real 28.14 292 eP P 03 32 22.2 -0.2
comp=Z,908nm,1.7s,mb6.0
WPM1 Penmaenmawr 28.14 318 P P 03 32 19.7 -2.6
WPM1 Penmaenmawr 28.14 318⇑eP P 03 32 19.7 -2.6
WPM1 Penmaenmawr 28.14 318⇑eP P 03 32 19.7 -2.6
PESTR Estremoz 28.17 287 eP P 03 32 22.2 -0.5
comp=Z,2μm,1.1s,mb6.5
PESTR eS S 03 37 03.5 +0.1
PESTR Estremoz 28.17 287 eP P 03 32 22.2 -0.5
comp=Z,2μm,1.1s,mb6.5
PESTR eS S 03 37 03.5 +0.1
EGRO El Granado 28.23 284 P P 03 32 22.9 -0.4
comp=Z,2μm,0.9s,mb6.6
EGRO El Granado 28.23 284 P P 03 32 22.9 -0.4
comp=Z,2μm,0.9s,mb6.6
YLL Llanberis 28.23 318 P P 03 32 20.9 -2.2
YLL Llanberis 28.23 318⇑eP P 03 32 20.9 -2.2
YLL Llanberis 28.23 318⇑eP P 03 32 21.0 -2.1
PVIS Viseu 28.29 291 eP P 03 32 23.9 +0.2
comp=Z,2μm,1.1s,mb6.6
PVIS eS S 03 37 07.5 +2.2
PVIS Viseu 28.29 291 eP P 03 32 23.9 +0.2
comp=Z,2μm,1.1s,mb6.6
PVIS eS S 03 37 07.5 +2.2
HOQ Hoqain 28.30 108 P P 03 32 25.6 +1.6
SNR=42
YRE Yr Eifl 28.31 317 P P 03 32 21.5 -2.3
YRE Yr Eifl 28.31 317⇑eP P 03 32 21.5 -2.3
YRE Yr Eifl 28.31 317⇑eP P 03 32 21.5 -2.3
EGD Espegrend 28.37 336 eP P 03 32 23.4 -0.8
EGD epP pP 03 32 37.4 -2.5
EGD Espegrend 28.37 336 eP P 03 32 23.4 -0.8
PCAB Cabril 28.37 293 eP P 03 32 24.2 -0.3
comp=Z,2μm,1.2s,mb6.5
PCAB eS S 03 37 10.1 +3.5
PCAB Cabril 28.37 293 eP P 03 32 24.2 -0.3
comp=Z,2μm,1.2s,mb6.5
ELOB Lobios 28.39 293 P P 03 32 25.3 +0.6
comp=Z,920nm,0.9s,mb6.3
ELOB Lobios 28.39 293 P P 03 32 25.3 +0.6
comp=Z,920nm,0.9s,mb6.3
WME Myndd Eilian 28.41 318 P P 03 32 22.2 -2.5
WME Myndd Eilian 28.41 318⇑eP P 03 32 22.2 -2.5
WME Myndd Eilian 28.41 318⇑eP P 03 32 22.2 -2.5
BER Bergen 28.42 336 eP P 03 32 24.6 0.0
BER epP pP 03 32 37.7 -2.6
BER eS S 03 37 09.3 +2.4
BER AMS AMS 03 45 16.6
comp=Z,34μm,23.0s
BER Bergen 28.42 336⇑iP P 03 32 24.7 +0.1
BER LR LR
comp=Z,34μm,23.0s
BER Bergen 28.42 336 iP P 03 32 24.7 +0.1
comp=Z,34μm,23.0s
BER epP pP 03 32 37.7 -2.6
SNR=140
BER eS S 03 37 09.3 +2.4
SNR=39
WLF1 Llynfaes 28.42 318 P P 03 32 22.9 -1.9
WLF1 AMb AMB 03 32 27.8
comp=Z,794nm,2.0s,mb5.9
WLF1 03 36 57.0
WLF1 AMS AMS 03 43 16.1
comp=Z,87μm,31.0s
WLF1 Llynfaes 28.42 318⇑eP P 03 32 22.9 -1.9
WLF1 AMb AMB 03 32 27.8
comp=Z,794nm,2.0s,mb5.9
WLF1 e 03 36 57.0
WLF1 AMS AMS 03 43 16.1
comp=Z,87μm,31.0s
WLF1 Llynfaes 28.42 318⇑eP P 03 32 22.9 -1.9
comp=Z,794nm,2.0s,mb5.9
RUND Rundenannen 28.43 337 eP P 03 32 24.7 0.0
RUND epP pP 03 32 38.0 -2.5
RUND Rundenannen 28.43 337 eP P 03 32 24.7 0.0
PVAQ Vaqueiros 28.43 284 eP P 03 32 24.7 -0.4
comp=Z,3μm,1.2s,mb6.8
PVAQ eS S 03 37 07.6 0.0
PVAQ Vaqueiros 28.43 284 eP P 03 32 24.7 -0.4
comp=Z,3μm,1.2s,mb6.8
PVAQ eS S 03 37 07.6 0.0
PBEJ Beja 28.47 285 eP P 03 32 25.2 -0.2
comp=Z,2μm,1.9s,mb6.3
PBEJ eS S 03 37 09.6 +1.4
PBEJ Beja 28.47 285 eP P 03 32 25.2 -0.2
comp=Z,2μm,1.9s,mb6.3
PBEJ eS S 03 37 09.6 +1.4
XDE Dent Fell 28.48 321 P P 03 32 23.2 -2.1
XDE Dent Fell 28.48 321⇑eP P 03 32 23.2 -2.1
XDE Dent Fell 28.48 321⇑eP P 03 32 23.2 -2.1
YRC Rhoscolyn 28.50 318 P P 03 32 23.8 -1.6
YRC Rhoscolyn 28.50 318⇑eP P 03 32 23.8 -1.6
YRC Rhoscolyn 28.50 318⇑eP P 03 32 23.8 -1.7
EVO Evora 28.53 286 eP P 03 32 26.2 +0.3
comp=Z,377nm,0.8s,mb5.8
EVO eMLR MLR
comp=Z,8μm,21.9s
EVO Evora 28.53 286 eP P 03 32 25.7 -0.2
comp=Z,813nm,1.5s,mb6.1
EVO eS S 03 37 08.9 -0.2
EVO Evora 28.53 286 P P 03 32 25.5 -0.4
EVO Evora 28.53 286 P P 03 32 25.5 -0.4
EVO eS S 03 37 08.9 -0.2
ASK Askoy 28.54 337 eP P 03 32 23.6 -2.1
ASK epP pP 03 32 39.5 -1.9
TZC Tazercounte 28.58 272 iP P 03 32 25.0 -1.4
MUKL Al Mukalla 28.60 133 eP P 03 32 28.9 +2.2
EVOP Sao Brissos 28.61 286 eP P 03 32 26.6 0.0
EVOP AMb AMB 03 32 31.4
comp=Z,872nm,1.6s,mb6.1
EVOP eS S 03 37 11.0 +0.5
EVOP eS S 03 37 11.1 +0.6
EVOP Sao Brissos 28.61 286 eP P 03 32 26.6 -0.1
EVOP eS S 03 37 10.9 +0.4
EVOP Sao Brissos 28.61 286 eP P 03 32 26.2 -0.5
comp=Z,189nm,0.8s,mb5.8
EVOP eS S 03 37 10.9 +0.4
ECK Cauldkaine Hil 28.62 322 P P 03 32 24.4 -2.1
ECK Cauldkaine Hil 28.62 322⇑eP P 03 32 24.4 -2.1
ECK Cauldkaine Hil 28.62 322⇑eP P 03 32 24.4 -2.1
PBDV Barranco-do-Ve 28.62 283 eP P 03 32 26.7 -0.1
comp=Z,4μm,1.2s,mb6.9
PBDV eS S 03 37 11.0 +0.3
PBDV Barranco-do-Ve 28.62 283 eP P 03 32 26.7 -0.1
comp=Z,4μm,1.2s,mb6.9
PBDV eS S 03 37 11.0 +0.3

PCVE Castro Verde 28.66 284 eP P 03 32 26.7 -0.3
comp=Z,1μm,1.2s,mb6.4
PCVE eS S 03 37 10.8 -0.3
PCVE Castro Verde 28.66 284 eP P 03 32 26.7 -0.3
comp=Z,1μm,1.2s,mb6.4
PCVE eS S 03 37 10.8 -0.3
BSY Bisya 28.67 109 P P 03 32 29.3 +2.0
SNR=42
EKA Eskdalemuir Ar 28.71 322 P P 03 32 25.7 -1.6
comp=Z,231nm,0.9s,mb5.8,baz=111,slow=7.3,SNR=114
EKA PcP PcP 03 35 38.0 +1.9
comp=Z,88nm,0.9s,baz=115,slow=2.6,SNR=6.5
EKA ScP ScP 03 39 13.2 +1.5
comp=Z,92nm,0.8s,baz=124,slow=4.4,SNR=19
EKA Eskdalemuir Ar 28.71 322 P P 03 32 25.7 -1.6
EKA Eskdalemuir Ar 28.71 322 PcP PcP 03 35 38.0 +1.9
ESK Eskdalemuir 28.73 322 P P 03 32 26.3 -1.1
comp=Z,3μm,1.0s,mb6.8,SNR=14
ESK Eskdalemuir 28.73 322 P P 03 32 24.8 -2.7
ESK AMb AMB 03 32 35.8
comp=Z,402nm,0.9s,mb6.0
ESK 03 37 03.3
ESK AMS AMS 03 42 41.2
comp=Z,21μm,27.1s
ESK Eskdalemuir 28.73 322⇑eP P 03 32 24.8 -2.7
ESK AMb AMB 03 32 35.8
comp=Z,402nm,0.9s,mb6.0
ESK e 03 37 03.3
ESK AMS AMS 03 42 41.2
comp=Z,21μm,27.1s
ESK Eskdalemuir 28.73 322 iP P 03 32 26.6 -0.8
ESK Eskdalemuir 28.73 322 eP P 03 32 26.1 -1.3
comp=Z,391nm,0.9s,mb6.0
ESK eScP ScP 03 39 13.2 +1.4
ESK LR LR
comp=Z,16μm,21.0s
ESK Eskdalemuir 28.73 322 iP P 03 32 26.6 -0.8
PTOM Tomar 28.74 288 eP P 03 32 27.6 -0.2
comp=Z,2μm,1.1s,mb6.5
PTOM eS S 03 37 13.5 +1.1
PTOM Tomar 28.74 288 eP P 03 32 27.6 -0.2
comp=Z,2μm,1.1s,mb6.5
PTOM eS S 03 37 13.5 +1.1
ESY Stoneypath 28.74 324 P P 03 32 26.3 -1.3
ESY Stoneypath 28.74 324⇑eP P 03 32 26.3 -1.3
ESY Stoneypath 28.74 324⇑eP P 03 32 26.3 -1.3
HYA Hoyanger 28.75 338 eP P 03 32 27.8 +0.2
HYA AMb AMB 03 32 31.9
comp=Z,490nm,0.9s,mb6.1
HYA epP pP 03 32 41.7 -1.7
HYA Hoyanger 28.75 338 eP P 03 32 27.8 +0.2
comp=Z,490nm,0.9s,mb6.1
HYA Hoyanger 28.75 338 eP P 03 32 27.8 +0.2
comp=Z,490nm,0.9s,mb6.1,SNR=40
HYA epP pP 03 32 41.7 -1.6
SNR=140
MESJ Messejana 28.77 285 eP P 03 32 27.9 -0.1
MESJ AMb AMB 03 32 32.5
comp=Z,2μm,1.2s,mb6.5
MESJ eS S 03 37 13.2 +0.3
MESJ eS S 03 37 13.8 +0.8
MESJ Messejana 28.77 285 eP P 03 32 27.9 -0.2
comp=Z,2μm,1.2s,mb6.5
MESJ eS S 03 37 13.2 +0.3
MESJ Messejana 28.77 285 eP P 03 32 27.9 -0.2
comp=Z,2μm,1.2s,mb6.5
MESJ eS S 03 37 13.2 +0.3
STS Santiago 28.77 295 P P 03 32 28.1 +0.1
STS pmax pmax
comp=Z,366nm,0.7s,mb6.1
STS Santiago 28.77 295 P P 03 32 28.1 0.0
comp=Z,366nm,0.7s,mb6.1
STS Santiago 28.77 295 P P 03 32 28.0 0.0
comp=Z,366nm,0.7s,mb6.1
PTO Porto 28.81 292 eP P 03 32 28.9 +0.5
comp=Z,2μm,1.1s,mb6.6
PTO Porto 28.81 292 eP P 03 32 28.9 +0.5
comp=Z,2μm,1.1s,mb6.6
EZAM Zamans 28.87 294 P P 03 32 29.4 +0.5
EZAM pmax pmax
comp=Z,2μm,1.1s,mb6.7
EZAM Zamans 28.87 294 P P 03 32 29.4 +0.6
comp=Z,2μm,1.1s,mb6.7
EZAM Zamans 28.87 294 P P 03 32 29.4 +0.5
comp=Z,2μm,1.1s,mb6.7
EBL Broad Law 28.87 323 P P 03 32 27.7 -1.1
EBL Broad Law 28.87 323⇑eP P 03 32 27.7 -1.1
EBL Broad Law 28.87 323⇑eP P 03 32 27.7 -1.1
GCD Castle Douglas 28.88 321 P P 03 32 27.3 -1.5
GCD Castle Douglas 28.88 321⇑eP P 03 32 27.3 -1.5
GCD Castle Douglas 28.88 321⇑eP P 03 32 27.3 -1.5
ALMR Almeirim 28.91 287 eP P 03 32 29.2 -0.1
ALMR Almeirim 28.91 287 eP P 03 32 29.1 -0.2
ALMR Almeirim 28.91 287 eP P 03 32 29.1 -0.2
AVE Averroes 29.01 275 P P 03 32 31.7 +1.5
AVE Averroes 29.01 275 P P 03 32 31.7 +1.5
EDI Edinburgh 29.02 323 P P 03 32 26.3 -3.7
EDI AMb AMB 03 32 32.4
comp=Z,685nm,0.8s,mb6.3
EDI 03 37 12.2
EDI AMS AMS 03 46 40.0
comp=Z,20μm,15.1s
EDI Edinburgh 29.02 323⇑eP P 03 32 26.3 -3.7
EDI AMb AMB 03 32 32.4
comp=Z,685nm,0.8s,mb6.3
EDI e 03 37 12.2
EDI AMS AMS 03 46 40.0
comp=Z,20μm,15.1s
EMAZ Mazaricos 29.09 295 P P 03 32 30.8 0.0
comp=Z,2μm,0.9s,mb6.6
EMAZ Mazaricos 29.09 295 P P 03 32 30.8 0.0
comp=Z,2μm,0.9s,mb6.6
EAU Auchinoon 29.11 323 P P 03 32 28.6 -2.3
EAU Auchinoon 29.11 323 eP P 03 32 28.6 -2.3
EAU Auchinoon 29.11 323 eP P 03 32 28.6 -2.2
SUE Sulen 29.11 337 eP P 03 32 30.1 -0.7
SUE AMb AMB 03 32 33.4
comp=Z,400nm,0.7s,mb6.2
SUE Sulen 29.11 337 eP P 03 32 30.1 -0.7
comp=Z,400nm,0.7s,mb6.2
SUE Sulen 29.11 337 eP P 03 32 30.1 -0.7
comp=Z,400nm,0.7s,mb6.2,SNR=40
SMDO Samad 29.16 108 P P 03 32 33.4 +1.8
SNR=43
ARU Arti 29.17 36 P P 03 32 31.7 +0.3
comp=Z,2μm,1.2s,mb6.5,SNR=27
ARU Arti 29.17 36*c* iP P 03 32 31.0 -0.4
ARU e*PP pP 03 32 47.6 +0.5
ARU e 03 33 27.2
ARU e 03 35 35.6
ARU S S 03 37 18.7 -0.1
ARU SS SS 03 38 52.5 -32
ARU pmax pmax
comp=Z,391nm,1.7s,mb5.8
ARU Arti 29.17 36 eP P 03 32 31.3 0.0
comp=Z,2μm,2.1s,mb6.4
ARU eScP ScP 03 39 16.0 +2.8
ARU LR LR
comp=Z,23μm,22.0s
ARU Arti 29.17 36 iP P 03 32 31.0 -0.4
comp=Z,391nm,1.7s,mb5.8
ARU Arti 29.17 36 ePcP PcP 03 35 35.6 -1.7
ARU S S 03 37 18.7 -0.1
MORF Marmelete 29.18 284 eP P 03 32 31.6 -0.1
comp=Z,757nm,1.7s,mb6.0
MORF eS S 03 37 19.2 -0.2
MORF Marmelete 29.18 284 eP P 03 32 31.6 -0.1
MORF eS S 03 37 19.8 +0.4
MORF Marmelete 29.18 284 eP P 03 32 31.6 -0.1
comp=Z,757nm,1.7s,mb6.0
MORF eS S 03 37 19.2 -0.2
ABTO Aybut 29.21 123 P P 03 32 35.0 +2.9
SNR=9.7
PTEO Sao Teotonio 29.21 284 eP P 03 32 31.7 -0.2
comp=Z,2μm,1.5s,mb6.6
PTEO eS S 03 37 19.9 +0.1
PTEO Sao Teotonio 29.21 284 eP P 03 32 31.7 -0.2
comp=Z,2μm,1.5s,mb6.6
PTEO eS S 03 37 19.9 +0.1
OUL Oulu 29.22 358 P P 03 32 30.1 -1.6
GAL1 Galloway 29.27 321 P P 03 32 29.8 -2.6
GAL1 AMb AMB 03 32 35.9
comp=Z,309nm,1.1s,mb5.9
GAL1 03 37 06.4
GAL1 AMS AMS 03 42 37.9

comp=Z,23μm,35.3s
GAL1 Galloway 29.27 321⇑eP P 03 32 29.8 -2.6
GAL1 AMb AMB 03 32 35.9
comp=Z,309nm,1.1s,mb5.9
GAL1 e 03 37 06.4
GAL1 AMS AMS 03 42 37.9
comp=Z,23μm,35.3s
GAL1 Galloway 29.27 321 P P 03 32 33.4 +1.1
GAL1 Galloway 29.27 321 P P 03 32 33.4 +1.1
EBH Black Hill 29.34 324 P P 03 32 31.1 -1.8
EBH Black Hill 29.34 324 eP P 03 32 31.1 -1.8
EBH Black Hill 29.34 324 eP P 03 32 31.0 -1.9
PFVI Vila Bisbo 29.35 283 eP P 03 32 32.7 -0.5
comp=Z,904nm,1.4s,mb6.2
PFVI eS S 03 37 21.4 -0.6
PFVI Vila Bisbo 29.35 283 P P 03 32 33.5 +0.3
PFVI Vila Bisbo 29.35 283 P P 03 32 33.5 +0.3
PFVI eS S 03 37 21.4 -0.6
LIS Lisbon 29.39 287 eP P 03 32 33.6 +0.1
LIS AMb AMB 03 32 40.2
comp=Z,2μm,1.5s,mb6.6
LIS eS S 03 37 23.9 +1.2
LIS eS S 03 37 24.2 +1.5
LIS Lisbon 29.39 287 eP P 03 32 33.6 0.0
comp=Z,2μm,1.5s,mb6.6
LIS eS S 03 37 23.9 +1.2
LIS Lisbon 29.39 287 eP P 03 32 33.6 0.0
comp=Z,2μm,1.5s,mb6.6
FOO Floro 29.44 338 eP P 03 32 31.0 -2.7
FOO eS S 03 37 20.1 -2.7
FOO AMS AMS 03 44 49.0
comp=Z,27μm,26.1s
PMAFR Mafra 29.47 287 eP P 03 32 34.5 +0.2
comp=Z,2μm,1.3s,mb6.5
PMAFR eS S 03 37 26.6 +2.7
PMAFR Mafra 29.47 287 eP P 03 32 34.5 +0.2
comp=Z,2μm,1.3s,mb6.5
DSB Dublin 29.50 317 eP P 03 32 32.8 -1.5
comp=Z,202nm,0.9s,mb5.8
DSB eScP ScP 03 39 15.8 +1.5
DSB Dublin 29.50 317 eP P 03 32 32.8 -1.5
MOL Molde 29.50 341⇑iP P 03 32 33.1 -1.2
MOL ePP PP 03 33 42.6 +0.9
MOL eS S 03 37 24.8 +0.9
MOL AMS AMS 03 46 16.1
comp=Z,27μm,21.1s
MOL Molde 29.50 341⇑iP P 03 32 33.1 -1.1
SNR=40
JMDO Jabal Madar 29.57 109 P P 03 32 36.9 +1.6
SNR=31
DLF Lyons Farm 29.60 317⇑iP P 03 32 33.3 -1.9
DLF Lyons Farm 29.60 317⇑iP P 03 32 33.3 -1.9
PGBU Glenifferbraes 29.60 322 P P 03 32 33.2 -2.0
PGBU AMb AMB 03 32 35.6
comp=Z,341nm,3.4s
PGBU 03 37 01.8
PGBU AMS AMS 03 43 20.2
comp=Z,22μm,29.0s
PGBU Glenifferbraes 29.60 322⇑eP P 03 32 33.2 -2.0
PGBU AMb AMB 03 32 35.6
comp=Z,341nm,3.4s
PGBU e 03 37 01.8
PGBU AMS AMS 03 43 20.2
comp=Z,22μm,29.0s
GMM Mts of Mourne 29.66 319 P P 03 32 33.2 -2.4
GMM Mts of Mourne 29.66 319⇑eP P 03 32 33.2 -2.4
GMM Mts of Mourne 29.66 319⇑eP P 03 32 33.2 -2.5
EAB Aberfoyle 29.71 323 P P 03 32 35.1 -1.1
EAB Aberfoyle 29.71 323⇑eP P 03 32 35.1 -1.1
EAB Aberfoyle 29.71 323⇑eP P 03 32 35.1 -1.1
RBK Rabkut 29.73 121 P P 03 32 39.7 +3.0
SNR=11
DCN Croghan 30.03 316 eP P 03 32 38.0 -1.1
DCN Croghan 30.03 316 eP P 03 32 38.0 -1.1
MSF Maaselka 30.04 1 P P 03 32 37.6 -1.3
WBK Wadi Bani Khal 30.11 108 P P 03 32 44.3 +4.3
SNR=24
NSS Namsos 30.19 346 eP P 03 32 37.9 -2.5
NSS AMb AMB 03 32 45.5
comp=Z,392nm,0.0s
NSS eS S 03 37 37.6 +2.9
NSS AMS AMS 03 46 26.8
comp=Z,43μm,16.0s
SOKR Solikamsk 30.21 29*c* iP P 03 32 40.4 -0.1
SOKR S S 03 37 34.3 -0.8
SOKR pmax pmax
comp=Z,430nm,0.7s,mb6.2
SOKR MLR MLR
comp=Z,38μm,21.0s
SOKR Solikamsk 30.21 29 iP P 03 32 40.4 -0.1
comp=Z,430nm,0.7s,mb6.2
SVE Sverdlovsk 30.36 36⇑eP P 03 32 42.3 +0.4
SVE eS S 03 37 35.3 -2.2
SVE pmax pmax
comp=Z,490nm,0.9s,mb6.1
SVE Sverdlovsk 30.36 36 eP P 03 32 42.3 +0.4
comp=Z,490nm,0.9s,mb6.1
LRW Lerwick 30.57 332 P P 03 32 41.5 -2.2
LRW AMb AMB 03 32 46.3
comp=Z,1μm,0.9s,mb6.7
LRW 03 37 13.7
LRW AMS AMS 03 45 39.4
comp=Z,23μm,21.3s
LRW Lerwick 30.57 332⇑eP P 03 32 41.5 -2.2
LRW AMb AMB 03 32 46.3
comp=Z,1μm,0.9s,mb6.7
LRW e 03 37 13.7
LRW AMS AMS 03 45 39.4
comp=Z,23μm,21.3s
LRW Lerwick 30.57 332 P P 03 32 42.9 -0.8
LRW Lerwick 30.57 332 P P 03 32 42.9 -0.8
ORE Reay 30.68 327 P P 03 32 43.3 -1.4
ORE Reay 30.68 327 eP P 03 32 43.3 -1.4
ORE Reay 30.68 327 eP P 03 32 43.3 -1.4
KSB Sheil Bridge 30.74 324 P P 03 32 43.3 -1.9
KSB Sheil Bridge 30.74 324⇑eP P 03 32 43.3 -1.9
KSB Sheil Bridge 30.74 324⇑eP P 03 32 43.3 -1.9
KAR1 Arisaig 30.79 324 P P 03 32 44.4 -1.3
KAR1 Arisaig 30.79 324⇑eP P 03 32 44.4 -1.3
KAR1 Arisaig 30.79 324⇑eP P 03 32 44.4 -1.3
WAL1 Walls 30.81 331 P P 03 32 43.2 -2.6
WAL1 Walls 30.81 331⇑eP P 03 32 43.2 -2.6
KAC Achnashellach 30.82 325 P P 03 32 43.7 -2.3
KAC Achnashellach 30.82 325⇑eP P 03 32 43.7 -2.3
KAC Achnashellach 30.82 325⇑eP P 03 32 43.7 -2.3
KPL Plockton 30.91 324 P P 03 32 45.3 -1.4
KPL AMb AMB 03 32 48.5
comp=Z,285nm,1.0s,mb6.0
KPL 03 37 33.5
KPL AMS AMS 03 46 51.3
comp=Z,22μm,18.3s
KPL Plockton 30.91 324⇑eP P 03 32 45.3 -1.4
KPL AMb AMB 03 32 48.5
comp=Z,285nm,1.0s,mb6.0
KPL e 03 37 33.5
KPL AMS AMS 03 46 51.3
comp=Z,22μm,18.3s
KPL Plockton 30.91 324 P P 03 32 46.7 0.0
KPL Plockton 30.91 324 P P 03 32 46.7 0.0
RSC Scourie 31.20 326 P P 03 32 47.8 -1.5
RSC Scourie 31.20 326 eP P 03 32 47.8 -1.5
RRR Rubha Reidh 31.24 325 P P 03 32 47.0 -2.6
RRR Rubha Reidh 31.24 325 eP P 03 32 47.0 -2.6
RRR Rubha Reidh 31.24 325 eP P 03 32 47.0 -2.6
MOR8 Moi Rana 31.29 350 eP P 03 32 49.0 -1.0
MOR8 AMb AMB 03 32 53.2
comp=Z,242nm,0.9s,mb5.9
MOR8 eScP ScP 03 39 21.6 +1.7
MOR8 Moi Rana 31.29 350 eP P 03 32 49.0 -1.0
comp=Z,242nm,0.9s,mb5.9
MOR8 Moi Rana 31.29 350 eP P 03 32 49.0 -1.0
comp=Z,242nm,0.9s,mb5.9
VAL Valentia 31.30 313 eP P 03 32 44.9 -5.4
VAL Valentia 31.30 313⇑iS S 03 37 50.0 -2.3
VAL Valentia 31.30 313 P P 03 32 50.7 +0.4
VAL Valentia 31.30 313 P P 03 32 50.7 +0.4
SGF Sodankyl 31.57 359 P P 03 32 51.6 -0.9
FLOS Flostrand 31.61 349 eP P 03 32 52.4 -0.3
FLOS AMb AMB 03 32 57.0
comp=Z,945nm,1.4s,mb6.3
STOK Stokkvaagen 31.66 349 eP P 03 32 52.9 -0.2
STOK eS S 03 37 59.0 +1.5
STOK Stokkvaagen 31.66 349 eP P 03 32 52.9 -0.3

RRH Rhenigidale 31.68 325 P **P 03 32 52.2 -1.2**
RRH Rhenigidale 31.68 325⇑ *eP* **P 03 32 52.2 -1.2**
KONS Konsvik 31.79 349 *eP* **P 03 32 54.3 -0.1**
APA Apatity 31.85 4⇓ *iP* **P 03 32 54.0 -0.9**
APA *i* pP 03 33 12.0 +1.3
APA *i* S **S 03 38 00.0 -0.6**
APA pmax pmax
comp=Z,310nm,1.0s,mb6.0
APA pmax pmax
comp=Z,3μm,10.0s
APA MLR MLR
comp=Z,19μm,10.0s
LVZ Lovozero 32.26 5⇑ *iP* **P 03 32 57.4 -1.1**
LVZ MLR MLR
comp=Z,25μm,21.0s
LVZ Lovozero 32.26 5⇑ *iP* **P 03 32 57.4 -1.1**
TORD Torodi Ar. Bea 32.65 233 P **P 03 33 02.3 -0.1**
comp=Z,2μm,0.7s,mb7.0,baz=36,slow=8.2,SNR=12
TORD S **S 03 38 11.9 -2.0**
comp=Z,19nm,0.7s,baz=56,slow=16,SNR=4.5
STEI Steigen 32.84 351 *eP* **P 03 33 03.0 -0.5**
STEI AMb AMB 03 33 06.5
comp=Z,761nm,0.8s,mb6.6
KTK1 Kautokeino 33.24 357 *eP* **P 03 33 05.6 -1.4**
KTK1 *eS* **S 03 38 25.0 +3.0**
KTK1 Kautokeino 33.24 357 *eP* **P 03 33 07.7 +0.7**
KTK1 Kautokeino 33.24 357 *eP* **P 03 33 07.7 +0.7**
ZRNK Zerenda 33.43 46 *i* P **P 03 33 09.5 +0.7**
ZRNK Zerenda 33.43 46 *i* P **P 03 33 09.5 +0.7**
KK31 Karatay Array 33.43 64 *i* P **P 03 33 09.6 +0.6**
KK31 Karatay Array 33.43 64 *i* P **P 03 33 09.6 +0.6**
KBL Kabul 33.54 80 *eP* **P 03 33 12.0 +2.0**
KBL pmax pmax
comp=Z,125nm,1.0s,mb5.7
KBL Kabul 33.54 80 *eP* **P 03 33 12.0 +2.0**
comp=Z,125nm,1.0s,mb5.7
KBL Kabul 33.54 80 *eP* **P 03 33 12.0 +2.0**
comp=Z,125nm,1.0s,mb5.7
ARCES ARCESS Array B 33.69 359 P **P 03 33 09.6 -1.4**
comp=Z,787nm,1.0s,mb6.5,baz=172,slow=7.9,SNR=312
ARCES S **S 03 38 26.1 -3.0**
comp=Z,116nm,0.8s,baz=180,slow=16,SNR=6.6
ARCES ScP ScP 03 39 29.6 +1.5
comp=Z,65nm,0.6s,baz=169,slow=3.3,SNR=9.8
ARCES LR LR 03 47 39.4
comp=Z,27μm,20.2s,baz=353,slow=38
ARCES P3KPbc 04 04 20.0
comp=Z,6.5nm,0.8s,baz=350,slow=6.6,SNR=21
ARCES ARCESS Array B 33.69 359 P **P 03 33 09.6 -1.3**
ARCES S **S 03 38 26.1 -3.0**
ARCES ARCESS Array B 33.69 359 P **P 03 33 09.6 -1.4**
ARCES S **S 03 38 26.1 -3.0**
ARCES ScP ScP 03 39 29.6 +1.5
ARCES LR LR 03 47 39.4
ARCES *e* 04 04 20.0
ARCES ARCESS Array B 33.69 359 P **P 03 33 09.6 -1.3**
ARE0 ARCESS Array S 33.69 359 *eP* **P 03 33 09.3 -1.7**
ARE0 *eS* **S 03 38 28.1 -0.9**
ARE0 ARCESS Array S 33.69 359 *eP* **P 03 33 09.3 -1.6**
KEV Kevo 33.89 360 *eP* **P 03 33 11.3 -1.4**
KEV pmax pmax
comp=Z,224nm,0.9s,mb6.0
KEV Kevo 33.89 360 *eP* **P 03 33 11.3 -1.4**
comp=Z,224nm,0.9s,mb6.0
KEV Kevo 33.89 360 *ep* **P 03 33 11.3 -1.4**
comp=Z,224nm,0.9s,mb6.0
KEV Kevo 33.89 360 *eP* **P 03 33 11.3 -1.4**
comp=Z,224nm,0.9s,mb6.0
SOFL Sornfelli, Far 33.98 331 AMS AMS 03 45 45.0
comp=Z,24μm,27.1s
SOFL Sornfelli, Far 33.98 331 P **P 03 33 17.1 +3.6**
TRO Tromso 34.12 354⇑ *iP* **P 03 33 13.3 -1.3**
TRO AMb AMB 03 33 17.6
comp=Z,503nm,0.3s,mb6.9
TRO *eS* **S 03 38 36.8 +1.2**
TRO AMS AMS 03 48 18.3
comp=Z,17μm,19.4s
TRO Tromso 34.12 354 P **P 03 33 13.1 -1.5**
TRO Tromso 34.12 354 P **P 03 33 13.1 -1.5**
BRVK Borovoye 34.20 46 P **P 03 33 16.9 +1.3**
comp=Z,839nm,0.9s,mb6.6,SNR=49
BRVK Borovoye 34.20 46*c iP* **P 03 33 16.2 +0.6**
BRVK pmax pmax
comp=Z,141nm,1.0s,mb5.8
BRVK MLR MLR
comp=Z,35μm,22.0s
BRVK Borovoye 34.20 46 *eP* **P 03 33 16.3 +0.7**
comp=Z,248nm,1.2s,mb5.9
BRVK *e*ScP ScP 03 39 33.5 +3.2
BRVK LR LR
comp=Z,29μm,20.0s
BRVK Borovoye 34.20 46 *eP* **P 03 33 16.3 +0.7**
BRVK Borovoye 34.20 46 P **P 03 33 16.2 +0.6**
SNR=101
BVAR Borovoye Array 34.26 47 P **P 03 33 16.6 +0.6**
comp=Z,162nm,1.0s,mb5.8,baz=256,slow=6.0,SNR=82
BVAR ScP ScP 03 39 33.5 +3.1
comp=Z,30nm,0.7s,baz=256,slow=3.1,SNR=7.5
BVAR LR LR 03 50 52.2
comp=Z,430nm,18.3s,baz=110,slow=43
BVAR P3KPbc 04 04 19.0
comp=Z,3.4nm,0.8s,baz=88,slow=4.7,SNR=12
BVAR Borovoye Array 34.26 47 P **P 03 33 16.6 +0.6**
BVAR ScP ScP 03 39 33.5 +3.1
BVAR LR LR 03 50 52.2
BVAR *e* 04 04 19.0
BVAR Borovoye Array 34.26 47 P **P 03 33 16.6 +0.5**
VOSK Vostochnaya 34.55 47 P **P 03 33 18.7 +0.2**
VOSK pmax pmax
comp=Z,249nm,0.9s,mb6.0
EFAM Famara 35.30 271 P **P 03 33 27.5 +2.2**
comp=Z,248nm,0.8s,mb6.1
EFAM Famara 35.30 271 P **P 03 33 27.5 +2.1**
comp=Z,248nm,0.8s,mb6.1
AML Almayashu 35.84 66 P **P 03 33 32.8 +3.0**
SNR=23
AML Almayashu 35.84 66 *eP* **P 03 33 30.9 +1.1**
comp=Z,6.0nm,0.4s
AML LR LR
comp=Z,11μm,19.0s
AML Almayashu 35.84 66 *eP* **P 03 33 30.9 +1.1**
comp=Z,6.0nm,0.4s
EKS2 Erkin-Say 35.86 65 P **P 03 33 31.4 +1.4**
SNR=41
EKS2 Erkin-Say 35.86 65 *eP* **P 03 33 31.6 +1.6**
comp=Z,8.9nm,1.8s
EKS2 LR LR
comp=Z,15μm,22.0s
EKS2 Erkin-Say 35.86 65 *eP* **P 03 33 31.6 +1.7**
comp=Z,8.9nm,1.8s
PMPS Porto Santo 36.26 279 *eP* **P 03 33 35.1 +1.6**
comp=Z,2μm,1.6s,mb6.7
PMPS *eS* **S 03 39 11.1 +1.7**
USP Ospenovka 36.34 64 P **P 03 33 34.9 +0.9**
SNR=21
AAK Ala-Archa 36.38 65 P **P 03 33 37.3 +2.9**
comp=Z,710nm,0.6s,mb6.8,SNR=16
AAK Ala-Archa 36.38 65 P **P 03 33 37.4 +3.0**
SNR=28
AAK Ala-Archa 36.38 65 P **P 03 33 35.6 +1.2**
comp=Z,20nm,0.4s,mb5.4,baz=222,slow=3.9,SNR=32
AAK Ala-Archa 36.38 65 *eP* **P 03 33 36.0 +1.6**
AAK pmax pmax
comp=Z,139nm,0.8s,mb5.9
AAK MLR MLR
comp=Z,16μm,21.0s
AAK Ala-Archa 36.38 65 *eP* **P 03 33 36.0 +1.5**
comp=Z,139nm,0.8s,mb5.9
AAK *e*ScP ScP 03 39 40.8 +2.4
AAK LR LR
comp=Z,16μm,21.0s
AAK Ala-Archa 36.38 65 *eP* **P 03 33 36.0 +1.6**
UCH Uchtor 36.44 66 P **P 03 33 36.5 +1.5**
SNR=33
UCH Uchtor 36.44 66 *eP* **P 03 33 37.0 +2.1**
comp=Z,90nm,0.8s,mb5.8
UCH LR LR
comp=Z,8μm,20.0s
UCH Uchtor 36.44 66 *eP* **P 03 33 37.0 +2.1**
comp=Z,90nm,0.8s,mb5.8
MBAR Mbarara 36.44 175 P **P 03 33 35.1 0.0**
comp=Z,738nm,1.1s,mb6.5,SNR=43
MBAR Mbarara 36.44 175*d iP* **P 03 33 34.5 -0.6**
MBAR Mbarara 36.44 175 PFAKE 03 33 50.0 +15
MBAR LR LR
comp=Z,706nm,22.0s

MBAR Mbarara 36.44 175 *eP* **P 03 33 35.6 +0.5**
FRU Bishkek 36.46 65 *eP* **P 03 33 36.0 +0.9**
FRU *i* pP 03 33 54.0 +3.0
FRU *eS* **S 03 39 11.2 -0.9**
FRU *e* 03 39 45.0
FRU pmax pmax
comp=Z,540nm,1.8s,mb6.2
FRU pmax pmax
comp=Z,900nm,2.5s,mb6.3
FRU smax
comp=E,3μm,4.8s
CHMS Chumysh 36.54 64 P **P 03 33 37.0 +1.3**
SNR=20
KBK Karagaybulak 36.72 65 P **P 03 33 40.0 +2.8**
SNR=18
PMAR Madeira 36.83 278 *eP* **P 03 33 40.4 +2.1**
comp=E,2μm,1.2s,mb6.9
PMAR *eS* **S 03 39 21.9 +3.9**
KZA Kyzart 37.00 66 P **P 03 33 44.2 +4.5**
SNR=34
TKM2 Tokmak 2 37.17 64 P **P 03 33 43.5 +2.5**
SNR=34
TKM2 Tokmak 2 37.17 64 *eP* **P 03 33 43.5 +2.4**
TKM2 pmax pmax
comp=Z,6.0nm,0.4s
TKM2 MLR MLR
comp=Z,10μm,21.0s
TKM2 Tokmak 2 37.17 64 *eP* **P 03 33 43.5 +2.4**
comp=Z,6.0nm,0.4s
TKM2 *e*ScP ScP 03 39 44.4 +3.1
TKM2 LR LR
comp=Z,10μm,21.0s
JASL Jaisalmer 37.61 91 *e*PKP **P 03 33 44.5 -0.5**
ULHL Ulahol 37.71 65 P **P 03 33 50.3 +4.6**
SNR=11
KMBO Kilima Mbogo 37.90 165 P **P 03 33 49.3 +1.8**
comp=Z,68nm,0.9s,mb5.5,baz=8.2,slow=9.9,SNR=15
KMBO PcP PcP 03 36 06.0 +3.5
comp=Z,55nm,0.9s,baz=52,slow=3.6,SNR=6.1
KMBO S **S 03 39 39.5 +5.1**
comp=Z,5.2nm,0.3s,baz=180,slow=20,SNR=1.8
KMBO LR LR 03 50 03.3
comp=Z,32μm,18.8s,baz=334,slow=37
KMBO Kilima Mbogo 37.90 165 P **P 03 33 49.3 +1.8**
KMBO 03 36 06.1
KMBO MLR MLR
comp=Z,25μm,22.0s
KMBO Kilima Mbogo 37.90 165 *eP* **P 03 33 49.9 +2.4**
KMBO AMb AMB 03 34 21.4
comp=Z,1μm,1.4s,mb6.5
KMBO Kilima Mbogo 37.90 165 ⇓P **P 03 33 50.2 +2.7**
SNR=17
KSH Kashi 37.91 70 P **P 03 33 47.0 -0.5**
KSH pP pP 03 34 05.4 +1.9
KSH PP PP 03 35 18.4 +3.4
KSH PcP PcP 03 36 02.5 +0.2
KSH S **S 03 39 32.0 -2.4**
KSH ScP ScP 03 39 42.5 -1.7
KSH PcS PcS 03 39 50.6 -0.5
KSH SS SS 03 42 11.5 -11
KSH ScS ScS 03 43 49.1 -4.2
KSH pmax pmax
comp=Z,3μm,4.8s
KSH LR LR
comp=N,5μm,13.0s
KSH LR LR
comp=E,5μm,13.9s
KSH LR LR
comp=Z,9μm,20.7s
AAA Alma-Ata 38.11 64 *i* P **P 03 33 52.9 +3.8**
AAA pmax pmax
comp=Z,2μm,9.3s
AAA MLR MLR
comp=Z,11μm,18.0s
CCAN Las Canadas 38.15 271 P **P 03 33 51.7 +2.2**
comp=Z,354nm,1.0s,mb6.2
CCAN Las Canadas 38.15 271 P **P 03 33 51.7 +2.2**
comp=Z,354nm,1.0s,mb6.2
BHJ Bhuj 38.24 98 *e*PKP **P 03 33 49.5 -0.9**
BJO Bjornoya 38.89 356⇑ *iP* **P 03 33 55.6 +0.4**
BJO AMb AMB 03 33 57.9
comp=Z,637nm,1.3s,mb6.3
BJO *e*PP PP 03 35 25.3 +0.1
BJO *e*ScP ScP 03 39 48.5 +1.3
BJO AMS AMS 03 48 35.3
comp=Z,14μm,21.1s
BJO1 Bjornoya 38.90 356⇑ *iP* **P 03 33 55.6 +0.3**
comp=Z,637nm,1.3s,mb6.3
BJO1 LR LR
comp=Z,14μm,21.1s
BJO1 Bjornoya 38.90 356⇑ *iP* **P 03 33 55.6 +0.3**
comp=Z,637nm,1.3s,mb6.3
EHIG Higuera 38.99 272 P **P 03 33 59.5 +2.9**
comp=Z,1μm,1.0s,mb6.6
EHIG Higuera 38.99 272 P **P 03 33 59.5 +2.9**
comp=Z,1μm,1.0s,mb6.6
KURK Kurchatov 39.02 52 P **P 03 33 56.6 0.0**
comp=Z,1μm,0.7s,mb6.9
KURK Kurchatov 39.02 52 *eP* **P 03 33 57.2 +0.6**
KURK *e* 03 39 50.7
KURK pmax pmax
comp=Z,474nm,1.1s,mb6.2
KURK MLR MLR
comp=Z,19μm,21.0s
KURK Kurchatov 39.02 52 *eP* **P 03 33 57.2 +0.6**
comp=Z,474nm,1.1s,mb6.2
KURK *e*ScP ScP 03 39 50.7 +2.5
KURK LR LR
comp=Z,19μm,21.0s
KURK Kurchatov 39.02 52 *eP* **P 03 33 57.2 +0.6**
KURK Kurchatov 39.02 52 P **P 03 33 57.5 +0.9**
SNR=113
THN Thein Dam 39.48 81 *e*PKP **P 03 34 01.0 +0.3**
THN *ex* x 03 39 50.8
JMIC Jan Mayen 39.99 342 *eP* **P 03 34 00.8 -3.5**
JMIC AMb AMB 03 34 08.1
comp=Z,814nm,1.9s,mb6.2
JMIC *e*ScP ScP 03 39 52.2 +0.7
JMIC *e*SS SS 03 43 08.5 +4.9
JMIC AMS AMS 03 48 07.3
comp=Z,14μm,36.7s
JMIC Jan Mayen 39.99 342 PcP PcP 03 36 10.6 +2.3
comp=Z,246nm,0.8s,baz=220,slow=1.9,SNR=5.1
JMIC LR LR 03 52 07.2
comp=Z,15μm,20.4s,baz=123,slow=38
JMIC Jan Mayen 39.99 342 *eP* **P 03 34 00.8 -3.5**
comp=Z,814nm,1.9s,mb6.2
JMIC LR LR
comp=Z,14μm,36.7s
JNW Jan Mayen West 39.99 342 *eP* **P 03 34 05.0 +0.6**
BHK Bhakra 40.38 82 *ex* **P 03 34 04.8 -3.3**
BHK *ex* x 03 34 27.8
SDNR Sundarnagar 40.80 82 *e*PKP **P 03 34 10.5 -1.0**
SDNR *ex* x 03 40 04.5
AJM Ajmer 40.83 90 *e*PKP **P 03 34 12.5 +0.6**
BORG Borgarnes 40.93 330 P **P 03 34 13.4 +1.2**
comp=Z,2μm,0.9s,mb6.8,SNR=15
BORG Borgarnes 40.93 330 PcP PcP 03 36 13.3 +2.0
baz=135,slow=5.9
BORG ScP ScP 03 39 59.0 +3.7
comp=Z,125nm,0.8s,baz=127,slow=4.9,SNR=18
BORG LR LR 03 51 18.4
comp=Z,10μm,19.9s,baz=117,slow=36
BORG Borgarnes 40.93 330 *eP* **P 03 34 12.9 +0.7**
BORG *e* 03 36 15.2
BORG pmax pmax
comp=Z,292nm,1.0s
BORG MLR MLR
comp=Z,16μm,22.0s
BORG Borgarnes 40.93 330 *eP* **P 03 34 12.9 +0.7**
comp=Z,292nm,1.0s,mb6.1
BORG *e*PcP PcP 03 36 15.2 +3.8
BORG *e*ScP ScP 03 39 58.5 +3.1
BORG LR LR
comp=Z,16μm,22.0s
BORG Borgarnes 40.93 330 *eP* **P 03 34 12.9 +0.7**
comp=Z,292nm,1.0s,mb6.1
BHV Bhavnagar 40.98 98 *ex* **P 03 34 15.8 +2.6**
HSP Hornsund 41.55 356 *eP* **P 03 34 16.9 -0.2**
MK31 Makanchi Array 41.55 57 *i* P **P 03 34 18.6 +1.1**
MK31 pmax pmax
comp=Z,64nm,0.4s,mb5.7
MK31 Makanchi Array 41.55 57 *eP* **P 03 34 18.3 +0.7**
MK31 *e*ScP ScP 03 40 01.3 +3.2
MK31 Makanchi Array 41.55 57 *eP* **P 03 34 18.3 +0.8**

MKAR Makanchi Array 41.55 57 P **P 03 34 18.1 +0.5**
comp=Z,122nm,0.8s,mb5.7,baz=278,slow=6.9,SNR=114
MKAR ScP ScP 03 40 01.0 +2.9
comp=Z,68nm,0.7s,baz=272,slow=4.0,SNR=12
MKAR S **S 03 40 32.0 +3.4**
comp=Z,24nm,0.8s,baz=258,slow=6.8,SNR=2.7
MKAR PKKPbc 03 58 37.5
comp=Z,0.9nm,0.6s,baz=31,slow=2.8,SNR=3.6
MKAR Makanchi Array 41.55 57 P **P 03 34 18.1 +0.5**
MKAR ScP ScP 03 40 01.0 +2.9
MKAR S **S 03 40 32.0 +3.4**
MKAR PKKPbc 03 58 37.5
DBIC Dimbokro 41.74 234 P **P 03 34 18.5 -0.9**
comp=Z,626nm,0.8s,mb6.4,baz=23,slow=9.3,SNR=186
DBIC ScP ScP 03 40 02.4 +3.0
comp=Z,44nm,0.7s,baz=9.8,slow=5.4,SNR=3.9
DBIC S **S 03 40 30.4 -1.6**
comp=Z,58nm,0.8s,baz=270,slow=20,SNR=11
DBIC LR LR 03 55 27.4
comp=Z,12μm,18.1s,baz=209,slow=42
DBIC Dimbokro 41.74 234 *eP* **P 03 34 18.6 -0.8**
DBIC pmax pmax
comp=Z,16nm,0.8s
DBIC MLR MLR
comp=Z,15μm,22.0s
DBIC Dimbokro 41.74 234 *eP* **P 03 34 18.6 -0.8**
comp=Z,16nm,0.8s
DBIC *e*ScP ScP 03 40 01.7 +2.3
DBIC LR LR
comp=Z,15μm,22.0s
DBIC Dimbokro 41.74 234 *eP* **P 03 34 18.9 -0.5**
DBIC Dimbokro 41.74 234 *eP* **P 03 34 18.6 -0.8**
TIC Toumodi 41.87 234 *eP* **P 03 34 19.6 -0.9**
comp=Z,2μm,1.1s,mb6.7
TIC Toumodi 41.87 234 *eP* **P 03 34 19.6 -0.9**
TIC pmax pmax
comp=Z,2μm,1.1s,mb6.7
TIC Toumodi 41.87 234 *eP* **P 03 34 19.6 -0.9**
comp=Z,2μm,1.1s,mb6.7
KIC Kosan Boka 41.90 233 *eP* **P 03 34 19.9 -0.8**
comp=Z,1μm,0.8s,mb6.6
KIC Kosan Boka 41.90 233 *eP* **P 03 34 19.9 -0.8**
comp=Z,1μm,0.8s,mb6.6
BART Pico Bartolome 41.96 289 *eP* **P 03 34 22.1 +1.1**
comp=Z,1μm,1.1s,mb6.5
BART Pico Bartolome 41.96 289 *eP* **P 03 34 22.1 +1.1**
comp=Z,1μm,1.1s,mb6.5
NDI New Delhi 42.02 85 *e*PKP **P 03 34 21.5 -0.1**
NDI *ex* x 03 44 16.0
NVS Novosibirsk 42.02 45⇑ *iP* **P 03 34 21.8 +0.5**
NVS *i* 03 36 04.3
NVS *i* S **S 03 40 36.2 +0.9**
NVS *i* SSS 03 44 20.5
NVS pmax pmax
comp=N,309nm,1.4s
NVS pmax pmax
comp=Z,716nm,1.4s,mb6.2
NVS pmax pmax
comp=E,227nm,0.8s
NVS pmax pmax
comp=Z,712nm,1.8s,mb6.1
NVS pmax pmax
comp=N,309nm,1.4s
NVS pmax pmax
comp=E,261nm,1.4s
NVS smax
comp=N,575nm,1.6s
NVS smax
comp=E,91nm,1.6s
PSMN Pico do Norte, 42.08 288 *eP* **P 03 34 26.2 +4.2**
PSMN Pico do Norte, 42.08 288 *eP* **P 03 34 26.2 +4.2**
DDI Dehra Dun 42.08 83 *ex* **P 03 34 30.0 +7.9**
PSMA Santa Maria 42.13 288 *eP* **P 03 34 23.1 +0.7**
comp=E,1μm,1.3s,mb6.5
LIC Lamto 42.19 233 *eP* **P 03 34 22.2 -0.9**
comp=E,3μm,1.0s,mb7.0
LIC Lamto 42.19 233 *eP* **P 03 34 22.0 -1.1**
comp=E,2μm,1.0s,mb6.6
LIC *e*MLR MLR
comp=Z,14μm,22.7s
LIC Lamto 42.19 233 *eP* **P 03 34 22.0 -1.1**
comp=Z,1μm,1.0s,mb6.6
LIC LR LR
comp=Z,7μm,22.7s
LIC Lamto 42.19 233 *eP* **P 03 34 22.0 -1.1**
comp=Z,1μm,1.0s,mb6.6
GRON Grota Negra 42.24 289 *eP* **P 03 34 24.0 +0.7**
comp=Z,226nm,0.8s,mb6.0
PDA Ponta Delgada 42.35 289 *eP* **P 03 34 25.5 +1.4**
PDA Ponta Delgada 42.35 289 *eP* **P 03 34 25.5 +1.4**
PSET Sete Cidades 42.37 289 *eP* **P 03 34 25.4 +1.0**
comp=Z,327nm,1.3s,mb5.9
PSET Sete Cidades 42.37 289 *eP* **P 03 34 25.4 +1.0**
comp=Z,327nm,1.3s,mb5.9
SPITS Spitsbergen Ar 42.64 357 ScP ScP 03 40 04.2 +2.2
comp=Z,112nm,0.8s,baz=141,slow=25,SNR=6.3
SPITS LR LR 03 52 59.9
comp=Z,22μm,21.1s,baz=140,slow=37
ZALV Zalesovo Beam 42.92 47 P **P 03 34 28.2 -0.3**
comp=Z,116nm,0.6s,mb5.8,baz=268,slow=8.5,SNR=133
ZALV ScP ScP 03 40 06.4 +2.9
comp=Z,25nm,0.7s,baz=265,slow=4.4,SNR=4.5
ZALV S **S 03 40 50.4 +1.9**
comp=Z,5.8nm,0.6s,baz=278,slow=10.0,SNR=3.4
ZALV LR LR 03 56 17.1
comp=Z,12μm,20.7s,baz=264,slow=42
ZALV Zalesovo Beam 42.92 47 P **P 03 34 28.2 -0.3**
ZALV S **S 03 40 50.4 +1.9**
ZALV Zalesovo Beam 42.92 47 P **P 03 34 28.2 -0.3**
ADH Angra Heroismo 43.32 291 *eP* **P 03 34 33.5 +1.5**
comp=Z,977nm,1.5s,mb6.3
ADH Angra Heroismo 43.32 291 *eP* **P 03 34 33.5 +1.5**
comp=Z,977nm,1.5s,mb6.3
SCO Scoresbysund 43.42 338⇑ *iP* **P 03 34 32.6 +0.3**
SCO *i* 03 36 08.8
SCO pmax pmax
comp=Z,430nm,0.8s,mb6.2
SCO MLR MLR
comp=Z,11μm,25.0s
SCO Scoresbysund 43.42 338⇑ *iP* **P 03 34 32.6 +0.3**
SCO *i* 03 36 08.8
SCO Scoresbysund 43.42 338⇑ *iP* **P 03 34 32.6 +0.3**
comp=Z,434nm,0.8s,mb6.2
SCO *i* 03 36 08.8
SCO
comp=Z,11μm,25.0s
SCO Scoresbysund 43.42 338 *i* P **P 03 34 32.6 +0.3**
comp=Z,430nm,0.8s,mb6.2
KBS Kingsbay 43.61 356⇑ *iP* **P 03 34 33.5 -0.3**
KBS AMb AMB 03 34 37.8
comp=Z,935nm,1.0s,mb6.5
KBS *eS* **S 03 41 00.2 +2.0**
KBS *e*SS SS 03 44 17.5 +2.8
KBS AMS AMS 03 50 50.4
comp=Z,12μm,23.9s
KBS Kingsbay 43.61 356*c iP* **P 03 34 33.3 -0.5**
KBS pmax pmax
comp=Z,1μm,1.0s,mb6.5
KBS Kingsbay 43.61 356 *eP* **P 03 34 33.5 -0.3**
comp=Z,1μm,1.0s,mb6.5
KBS *e*ScP ScP 03 40 06.9 +1.0
KBS LR LR
comp=Z,13μm,21.0s
KBS Kingsbay 43.61 356⇑ *iP* **P 03 34 33.5 -0.3**
comp=Z,935nm,1.0s,mb6.5,SNR=35
PMAN Manadas 43.98 291 *eP* **P 03 34 38.5 +1.2**
comp=Z,1μm,1.3s,mb6.5
PMAN Manadas 43.98 291 *eP* **P 03 34 38.5 +1.2**
comp=Z,1μm,1.3s,mb6.5
POO Poona 44.02 101 *e*PKP **P 03 34 37.5 -0.4**
PID Ribeirinha 44.05 291 *eP* **P 03 34 39.8 +2.0**
PID Ribeirinha 44.05 291 *eP* **P 03 34 39.8 +2.0**
ROSA Rosais 44.07 291 *eP* **P 03 34 40.5 +2.5**
ROSA Rosais 44.07 291 *eP* **P 03 34 40.5 +2.5**
PCAN Candelaria 44.32 291 *eP* **P 03 34 42.7 +2.7**
comp=Z,2μm,1.1s,mb6.8
PCAN Candelaria 44.32 291 *eP* **P 03 34 42.7 +2.7**
comp=Z,2μm,1.1s,mb6.8
HOR Horta 44.41 291 *eP* **P 03 34 45.2 +4.4**
PCED Cedros 44.44 291 *eP* **P 03 34 43.2 +2.2**
comp=Z,812nm,0.9s,mb6.5
PCED Cedros 44.44 291 *eP* **P 03 34 43.2 +2.2**
comp=Z,812nm,0.9s,mb6.5
CALA Caldeira 44.45 291 *eP* **P 03 34 43.1 +2.0**
CALA Caldeira 44.45 291 *eP* **P 03 34 43.1 +2.0**
BHPL Bhopal 44.53 92 *e*PKP **P 03 34 42.1 +0.2**

KAD	**Karad**	**44.96**	**102**	*e*PKP	**P**	**03 34 44.9**	**-0.4**
AKL	**Akola**	**45.44**	**96**	*e*PKP	**P**	**03 34 49.1**	**0.0**
AKL				*i* x	x	03 41 48.3	
GOA	**Goa**	**45.70**	**104**	*e*PKP	**P**	**03 34 53.0**	**+1.8**
GOA				*ex*	x	03 41 54.9	
WMQ	**Urumqi**	**45.75**	**61**	P	**P**	**03 34 52.0**	**+0.7**
WMQ				pP	pP	03 35 09.0	+1.2
WMQ				sP	sP	03 35 17.1	+1.9
WMQ				PcP	PcP	03 36 29.5	+1.4
WMQ				PP	PP	03 36 40.0	+0.6
WMQ				ScP	ScP	03 40 15.8	+0.5
WMQ				S	**S**	**03 41 30.0**	**0.0**
WMQ				sS	sS	03 41 56.3	-1.5
WMQ				ScS	ScS	03 44 39.9	-1.2
WMQ				SS	SS	03 44 46.5	-8.3
WMQ				pmax	pmax		
	comp=Z,280nm,1.1s,mb5.9						
WMQ				pmax	pmax		
	comp=Z,4μm,5.0s						
WMQ				LR	LR		
	comp=N,17μm,26.0s						
WMQ				LR	LR		
	comp=E,10μm,20.8s						
WMQ				LR	LR		
	comp=Z,13μm,19.2s						
DAG	**Danmarks Havn**	**45.80**	**347***j*	*i*P	**P**	**03 34 50.8**	**-0.5**
DAG				*i*		03 36 29.4	
DAG				pmax	pmax		
	comp=Z,670nm,1.0s,mb6.3						
DAG	**Danmarks Havn**	**45.80**	**347**	*i* P	**P**	**03 34 50.8**	**-0.5**
DAG				*i*		03 36 29.4	
DAG				*i*		03 40 16.0	
DAG	**Danmarks Havn**	**45.80**	**347***j*	*i*P	**P**	**03 34 50.8**	**-0.5**
	comp=Z,670nm,1.0s,mb6.3						
DAG				*i*		03 36 29.4	
DAG				*i*		03 40 16.0	
LATR	**Latur**	**46.25**	**99**	*e*PKP	**P**	**03 34 56.3**	**+0.7**
LATR				*ex*	x	03 36 50.5	
NGP	**Nagpur**	**46.86**	**94**	*e*PKP	**P**	**03 35 01.4**	**+1.1**
NGP				*e*S	**S**	**03 41 47.3**	**+1.0**
KRAR	**Krasnoyarsk**	**47.51**	**44**⇓	*i*P	**P**	**03 35 06.3**	**+1.4**
KRAR	**Krasnoyarsk**	**47.51**	**44**	*i* P	**P**	**03 35 06.3**	**+1.4**
MSEY	**Mahe Island**	**48.00**	**141**	P	**P**	**03 35 10.4**	**+1.3**
	comp=Z,1μm,1.1s,mb6.6,SNR=8.7						
MSEY	**Mahe Island**	**48.00**	**141**	*e*P	**P**	**03 35 11.2**	**+2.1**
MSEY				pmax	pmax		
	comp=Z,356nm,1.3s,mb6.0						
MSEY				MLR	MLR		
	comp=Z,10μm,22.0s						
MSEY	**Mahe Island**	**48.00**	**141**	*e*P	**P**	**03 35 11.2**	**+2.1**
	comp=Z,356nm,1.3s,mb6.0						
MSEY				LR	LR		
	comp=Z,10μm,22.0s						
MSEY	**Mahe Island**	**48.00**	**141**	P	**P**	**03 35 10.6**	**+1.5**
	SNR=9.7						
GKN	**Gorkha**	**48.28**	**83**	*e*P	**P**	**03 35 11.6**	**+0.3**
	comp=Z,1μm,1.1s,mb6.6						
GKN	**Gorkha**	**48.28**	**83**	*e*P	**P**	**03 35 11.6**	**+0.3**
GKN	**Gorkha**	**48.28**	**83**	*e*P	**P**	**03 35 11.6**	**+0.3**
HYB	**Hyderabad**	**48.39**	**99**	*e*P	**P**	**03 35 13.0**	**+0.8**
HYB				*e*S	**S**	**03 42 10.0**	**+2.0**
HYB				pmax	pmax		
	comp=Z,300nm,1.0s,mb6.1						
HYB	**Hyderabad**	**48.39**	**99**	*e*P	**P**	**03 35 13.0**	**+0.8**
	comp=Z,300nm,1.0s,mb6.1						
HYB				*e*S	**S**	**03 42 10.0**	**+2.0**
HYB	**Hyderabad**	**48.39**	**99**	*i* P	**P**	**03 35 13.0**	**+0.8**
	comp=Z,150nm,1.0s,mb5.8						
HYB				*e*sP	sP	03 35 32.0	-4.1
HYB				*e*S	**S**	**03 42 10.0**	**+2.0**
HYB				LR	LR	03 49 20.0	
	comp=Z,15nm,20.0s						
HYB	**Hyderabad**	**48.39**	**99**	*e*P	**P**	**03 35 13.0**	**+0.8**
	comp=Z,300nm,1.0s,mb6.1						
DMN	**Daman**	**48.82**	**83**	*e*P	**P**	**03 35 16.0**	**+0.6**
	comp=Z,537nm,0.8s,mb6.5						
DMN	**Daman**	**48.82**	**83**	*e*P	**P**	**03 35 16.0**	**+0.6**
DMN	**Daman**	**48.82**	**83**	*e*P	**P**	**03 35 16.0**	**+0.6**
KKN	**Kakani**	**48.89**	**83**	*e*P	**P**	**03 35 16.1**	**+0.2**
	comp=Z,329nm,0.6s,mb6.4						
KKN	**Kakani**	**48.89**	**83**	*e*P	**P**	**03 35 16.1**	**+0.2**
KKN	**Kakani**	**48.89**	**83**	*e*P	**P**	**03 35 16.1**	**+0.2**
KKN	**Kakani**	**48.89**	**83**	*e*P	**P**	**03 35 16.1**	**+0.2**
SUMG	**Summit**	**49.05**	**339**	*e*P	**P**	**03 35 16.4**	**-0.1**
	comp=Z,411nm,0.8s,mb6.4						
SUMG				*e*PcP	PcP	03 36 41.6	+2.3
SUMG				*e*ScP	ScP	03 40 30.8	+2.1
SUMG	**Summit**	**49.05**	**339**	*e*P	**P**	**03 35 16.4**	**-0.1**
	comp=Z,411nm,0.8s,mb6.4						
PKIN	**Phulchoki**	**49.07**	**83**	*e*P	**P**	**03 35 18.0**	**+0.7**
	comp=Z,391nm,0.9s,mb6.3						
PKI	**Pulchoki**	**49.08**	**83**	*e*P	**P**	**03 35 17.9**	**+0.5**
	comp=Z,996nm,1.2s,mb6.6						
PKI	**Pulchoki**	**49.08**	**83**	*e*P	**P**	**03 35 18.0**	**+0.6**
PKI	**Pulchoki**	**49.08**	**83**	*e*P	**P**	**03 35 18.0**	**+0.6**
PKI	**Pulchoki**	**49.08**	**83**	*e*P	**P**	**03 35 18.0**	**+0.6**
GUN	**Gumba**	**49.32**	**82**	*e*P	**P**	**03 35 20.0**	**+0.8**
	comp=Z,1μm,1.2s,mb6.7						
GUN	**Gumba**	**49.32**	**82**	*e*P	**P**	**03 35 20.0**	**+0.8**
GUN	**Gumba**	**49.32**	**82**	*e*P	**P**	**03 35 20.0**	**+0.8**
JIRN	**Jiri**	**49.67**	**82**	*e*P	**P**	**03 35 22.6**	**+0.7**
	comp=Z,235nm,0.6s,mb6.3						
JIRN	**Jiri**	**49.67**	**82**	*e*P	**P**	**03 35 22.6**	**+0.7**
JIRN	**Jiri**	**49.67**	**82**	*e*P	**P**	**03 35 22.6**	**+0.7**
SACV	**Santiago Islan**	**50.27**	**259**	P	**P**	**03 35 29.2**	**+2.7**
	comp=Z,1μm,1.0s,mb6.8,SNR=12						
SACV	**Santiago Islan**	**50.27**	**259**	*e*P	**P**	**03 35 29.2**	**+2.7**
	comp=Z,244nm,0.9s,mb6.1						
SACV				LR	LR		
	comp=Z,8μm,20.0s						
RAMN	**Ramite**	**50.31**	**83**	*e*P	**P**	**03 35 26.8**	**+0.1**
	comp=Z,463nm,0.9s,mb6.4						
RAMN	**Ramite**	**50.31**	**83**	*e*P	**P**	**03 35 26.8**	**+0.1**
RAMN	**Ramite**	**50.31**	**83**	*e*P	**P**	**03 35 26.8**	**+0.1**
LSZ	**Lusaka**	**50.92**	**180**	LR	LR	03 58 21.0	
	comp=Z,12μm,19.0s,baz=7.8,slow=37						
LSZ	**Lusaka**	**50.92**	**180**	*e*P	**P**	**03 35 31.6**	**+0.4**
LSZ				*e*		03 36 50.4	
LSZ				pmax	pmax		
	comp=Z,194nm,0.8s,mb6.2						
LSZ				MLR	MLR		
	comp=Z,16μm,19.0s						
LSZ	**Lusaka**	**50.92**	**180**	*e*P	**P**	**03 35 31.6**	**+0.3**
	comp=Z,194nm,0.8s,mb6.2						
LSZ				*e*PcP	PcP	03 36 50.4	+3.5
LSZ				LR	LR		
	comp=Z,16μm,19.0s						
LSZ	**Lusaka**	**50.92**	**180**	*e*P	**P**	**03 35 31.9**	**+0.6**
LSZ	**Lusaka**	**50.92**	**180**	P	**P**	**03 35 32.0**	**+0.7**
	SNR=56						
ODAN	**Odare**	**50.98**	**83**	*e*P	**P**	**03 35 32.2**	**+0.4**
	comp=Z,469nm,1.1s,mb6.4						
ODAN	**Odare**	**50.98**	**83**	*e*P	**P**	**03 35 32.2**	**+0.4**
ODAN	**Odare**	**50.98**	**83**	*e*P	**P**	**03 35 32.2**	**+0.4**
TAPN	**Taplejung**	**51.03**	**82**	*e*P	**P**	**03 35 32.7**	**+0.6**
	comp=Z,349nm,0.8s,mb6.5						
TAPN	**Taplejung**	**51.03**	**82**	*e*P	**P**	**03 35 32.7**	**+0.6**
TAPN	**Taplejung**	**51.03**	**82**	*e*P	**P**	**03 35 32.7**	**+0.6**
BOK	**Bokaro**	**51.14**	**87**	*e*PKP	**P**	**03 35 32.5**	**-0.5**
VIS	**Vishakhapatnam**	**52.08**	**95**	*e*PKP	**P**	**03 35 38.9**	**-1.1**
VIS				*i* S	**S**	**03 43 00.8**	**+1.6**
MDRS	**Chennai**	**52.17**	**102**	*e*PKP	**P**	**03 35 38.7**	**-2.1**
MDRS				*ex*	x	03 35 46.7	
MDRS				*ex*	x	03 43 30.2	
TRD	**Trivandrum**	**52.34**	**109**⇓	*ex*	pP	03 35 57.5	-1.3
TRD				*ex*	x	03 42 57.5	
LSA	**Lhasa**	**52.79**	**78**	P	**P**	**03 35 47.4**	**+2.2**
LSA				PP	PP	03 37 46.1	+1.1
LSA				S	**S**	**03 43 11.5**	**+2.7**
LSA				ScS	ScS	03 45 24.4	-4.7
LSA				pmax	pmax		
	comp=Z,90nm,1.1s,mb5.7						
LSA				pmax	pmax		
	comp=Z,740nm,10.0s						
LSA				LR	LR		
	comp=N,69μm,29.0s						
LSA				LR	LR		
	comp=E,13μm,28.0s						
LSA				LR	LR		
	comp=Z,15μm,26.0s						
LSA	**Lhasa**	**52.79**	**78**	*e*P	**P**	**03 35 47.2**	**+2.0**
LSA				pmax	pmax		
	comp=Z,116nm,0.6s,mb6.1						
LSA				MLR	MLR		
	comp=Z,11μm,21.0s						
LSA	**Lhasa**	**52.79**	**78**	*e*P	**P**	**03 35 47.2**	**+2.0**
	comp=Z,116nm,0.6s,mb6.1						
LSA				*e*ScP	ScP	03 40 51.0	+5.4
LSA				LR	LR		
	comp=Z,11μm,21.0s						
LSA	**Lhasa**	**52.79**	**78**	*e*P	**P**	**03 35 47.2**	**+2.0**
MOY	**Mondy**	**52.90**	**48**	*e*P	**P**	**03 35 48.3**	**+2.6**
MOY				pmax	pmax		
	comp=Z,14nm,1.8s						
CAL	**Calcutta**	**53.71**	**87**	*ex*	**S**	**03 43 26.5**	**+5.0**
TLY	**Talaya**	**54.50**	**48**	P	**P**	**03 35 59.5**	**+2.1**
	comp=Z,590nm,1.3s,mb6.5,SNR=28						
TLY	**Talaya**	**54.50**	**48**	*e*P	**P**	**03 35 58.7**	**+1.3**
TLY				*e*S	**S**	**03 43 35.0**	**+3.7**
TLY				pmax	pmax		
	comp=Z,201nm,1.1s,mb6.1						
TLY				MLR	MLR		
	comp=Z,12μm,20.0s						
TLY	**Talaya**	**54.50**	**48**	*e*P	**P**	**03 35 58.8**	**+1.4**
	comp=Z,192nm,1.1s,mb6.0						
TLY				LR	LR		
	comp=Z,13μm,20.0s						
TLY	**Talaya**	**54.50**	**48**	*e*P	**P**	**03 35 58.8**	**+1.4**
	comp=Z,192nm,1.1s,mb6.0						
ALE	**Alert**	**54.64**	**351**	P	**P**	**03 35 57.0**	**-1.0**
	comp=Z,7μm,0.9s,mb7.7						
IRK	**Irkutsk**	**54.73**	**47**⇑	*i*P	**P**	**03 35 58.8**	**-0.2**
IRK				*e*S	**S**	**03 43 37.6**	**+3.2**
IRK				pmax	pmax		
	comp=Z,559nm,1.8s,mb6.3						
IRK	**Irkutsk**	**54.73**	**47**	*i* P	**P**	**03 35 58.8**	**-0.2**
	comp=Z,559nm,1.8s,mb6.3						
SHL	**Shillong**	**55.17**	**82**	*e*PKP	**P**	**03 36 02.0**	**-0.6**
SHL				*ex*	x	03 43 40.0	
AGT	**Agartala**	**55.44**	**84**	*i* P	**P**	**03 36 03.0**	**-1.6**
AGT				*i* x	x	03 37 22.0	
TSUM	**Tsumeb**	**55.67**	**192**	*e*P	**P**	**03 36 06.3**	**+0.2**
	comp=Z,399nm,1.0s,mb6.4						
TSUM				LR	LR		
	comp=Z,30μm,19.0s						
TSUM	**Tsumeb**	**55.67**	**192**	*e*P	**P**	**03 36 06.3**	**+0.2**
	comp=Z,399nm,1.0s,mb6.4						
GTA	**Gaotai**	**55.70**	**63**	⇑P	**P**	**03 36 07.3**	**+1.1**
GTA				pP	pP	03 36 25.1	+2.0
GTA				sP	sP	03 36 31.9	+1.4
GTA				PP	PP	03 38 12.8	+1.9
GTA				ScP	ScP	03 41 01.8	+3.6
GTA				S	**S**	**03 43 48.1**	**+0.3**
GTA				sS	sS	03 44 14.8	-1.6
GTA				ScS	ScS	03 45 50.9	+1.4
GTA				SS	SS	03 47 33.9	+0.4
GTA				pmax	pmax		
	comp=Z,100nm,1.0s,mb5.8						
GTA				pmax	pmax		
	comp=Z,660nm,6.8s						
GTA				LR	LR		
	comp=N,8μm,22.6s						
GTA				LR	LR		
	comp=E,7μm,19.3s						
GTA				LR	LR		
	comp=Z,11μm,20.2s						
PALK	**Pallekele**	**56.00**	**107**	*e*P	**P**	**03 36 09.5**	**+0.8**
PALK				pmax	pmax		
	comp=Z,326nm,1.3s,mb6.2						
PALK	**Pallekele**	**56.00**	**107**	*e*P	**P**	**03 36 09.5**	**+0.9**
	comp=Z,326nm,1.3s,mb6.2						
IMP	**Imphal**	**57.18**	**82**	*e*PKP	**P**	**03 36 18.0**	**+1.1**
IMP				*ex*	x	03 37 26.0	
OPO	**Ambohidratompo**	**57.22**	**158**	P	**P**	**03 36 18.3**	**+1.2**
	comp=Z,276nm,0.9s,mb6.3,baz=334,slow=4.9,SNR=64						
SONM	**Songino Array**	**57.33**	**52**	P	**P**	**03 36 18.5**	**+0.8**
	comp=Z,20nm,0.4s,mb5.5,baz=285,slow=8.6,SNR=84						
SONM				S	**S**	**03 44 11.9**	**+2.9**
	comp=Z,4.2nm,0.9s,baz=326,slow=13,SNR=2.8						
SONM				LR	LR	04 04 49.4	
	comp=Z,16μm,20.3s,baz=287,slow=40						
SONM	**Songino Array**	**57.33**	**52**	P	**P**	**03 36 18.5**	**+0.8**
SONM				S	**S**	**03 44 11.9**	**+2.8**
SONM	**Songino Array**	**57.33**	**52**	P	**P**	**03 36 18.5**	**+0.8**
SONM				S	**S**	**03 44 11.9**	**+2.8**
ABPO	**Ambohimpanom**	**57.65**	**158**	P	**P**	**03 36 22.4**	**+2.3**
	comp=Z,729nm,0.9s,mb6.7,SNR=13						
ABPO	**Ambohimpanom**	**57.65**	**158**	*e*P	**P**	**03 36 21.9**	**+1.8**
ABPO				pmax	pmax		
	comp=Z,196nm,0.8s,mb6.2						
ABPO				MLR	MLR		
	comp=Z,18μm,19.0s						
ABPO	**Ambohimpanom**	**57.65**	**158**	*e*P	**P**	**03 36 21.9**	**+1.8**
	comp=Z,196nm,0.8s,mb6.2						
ABPO				LR	LR		
	comp=Z,18μm,19.0s						
ULN	**Ulaanbaatar**	**57.74**	**51**	*e*P	**P**	**03 36 21.3**	**+0.8**
ULN				pmax	pmax		
	comp=Z,140nm,0.9s,mb6.0						
ULN				MLR	MLR		
	comp=Z,11μm,20.0s						
ULN	**Ulaanbaatar**	**57.74**	**51**	*e*P	**P**	**03 36 21.3**	**+0.8**
	comp=Z,140nm,0.9s,mb6.0						
ULN				LR	LR		
	comp=Z,11μm,20.0s						
ULN	**Ulaanbaatar**	**57.74**	**51**	P	**P**	**03 36 21.2**	**+0.7**
	comp=Z,3μmcomp=Z,188nm,0.9s,mb6.1						
ULN	**Ulaanbaatar**	**57.74**	**51**	*e*P	**P**	**03 36 21.3**	**+0.8**
	comp=Z,11μm,20.0s						
ULN	**Ulaanbaatar**	**57.74**	**51**	P	**P**	**03 36 21.8**	**+1.3**
	SNR=87						
MSNA	**Messina**	**57.99**	**178**	P	**P**	**03 36 23.3**	**+0.9**
MSNA	**Messina**	**57.99**	**178**	*e*P	**P**	**03 36 23.9**	**+1.5**
MSNA				AMb	AMB	03 36 26.8	
	comp=Z,910nm,1.1s,mb6.7						
TIXI	**Tiksi**	**59.69**	**21***c*	*i*P	**P**	**03 36 33.4**	**-0.3**
TIXI				*e*		03 38 46.3	
TIXI				*e*PPP		03 40 09.0	
TIXI				*e*S	**S**	**03 44 39.7**	**+0.7**
TIXI				*e**SS	sS	03 45 09.0	+1.1
TIXI				*e*		03 46 16.2	
TIXI				pmax	pmax		
	comp=Z,589nm,1.1s,mb6.5						
TIXI				pmax	pmax		
	comp=E,81nm,0.8s						
TIXI				pmax	pmax		
	comp=N,117nm,1.0s						
TIXI				pmax	pmax		
	comp=Z,547nm,5.8s						
TIXI				smax			
	comp=E,809nm,5.6s						
TIXI				smax			
	comp=N,2μm,6.0s						
TIXI				MLR	MLR		
	comp=N,14μm,18.0s						
TIXI				MLR	MLR		
	comp=Z,23μm,20.0s						
TIXI				MLR	MLR		
	comp=E,6μm,20.0s						
TIXI	**Tiksi**	**59.69**	**21**	*e*P	**P**	**03 36 33.7**	**0.0**
	comp=E,445nm,0.8s,mb6.5						
TIXI				LR	LR		
	comp=Z,24μm,20.0s						
TIXI	**Tiksi**	**59.69**	**21**	*i* P	**P**	**03 36 33.4**	**-0.3**
	comp=Z,547nm,5.8s						
LZH	**Lanzhou**	**59.92**	**65**	⇑P	**P**	**03 36 36.9**	**+1.0**
LZH				pP	pP	03 36 53.9	+0.9
LZH				sP	sP	03 37 01.0	+0.7
LZH				PP	PP	03 38 51.0	+2.5
LZH				S	**S**	**03 44 43.0**	**-0.1**
LZH				sS	sS	03 45 11.3	-0.7
LZH				SS	SS	03 48 42.0	+2.0
LZH				pmax	pmax		
	comp=Z,150nm,1.0s,mb6.0						
LZH				pmax	pmax		
	comp=Z,470nm,4.6s						
LZH				LR	LR		
	comp=E,7μm,16.3s						
LZH				LR	LR		
	comp=Z,12μm,18.4s						
DGAR	**Diego Garcia**	**60.14**	**127**	PFAKE		03 36 50.0	+12
DGAR				LR	LR		
	comp=Z,7μm,21.0s						
SHEL	**Horse Pasture**	**60.59**	**218**	*e*P	**P**	**03 36 41.2**	**+0.7**
SHEL				pmax	pmax		
	comp=Z,268nm,0.9s,mb6.3						
SHEL				MLR	MLR		
	comp=Z,5μm,22.0s						
SHEL	**Horse Pasture**	**60.59**	**218**	*e*P	**P**	**03 36 41.2**	**+0.7**
	comp=Z,268nm,0.9s,mb6.3						
SHEL				LR	LR		
	comp=Z,5μm,22.0s						
LBTB	**Lobatse**	**60.64**	**182**	*e*P	**P**	**03 36 41.7**	**+1.0**
LBTB				MLR	MLR		
	comp=Z,16μm,22.0s						
LBTB	**Lobatse**	**60.64**	**182**	*e*P	**P**	**03 36 41.6**	**+1.0**
LBTB				*e*ScP	ScP	03 41 22.7	+2.8
LBTB				LR	LR		
	comp=Z,16μm,22.0s						
LBTB	**Lobatse**	**60.64**	**182**	*e*P	**P**	**03 36 42.2**	**+1.5**
LBTB				AMb	AMB	03 36 45.0	
	comp=Z,778nm,1.0s,mb6.7						
FRB	**Frobisher Bay**	**61.10**	**330**	LR	LR	04 03 26.2	
	comp=Z,8μm,20.8s,baz=68,slow=36						
SLR	**Silverton**	**61.33**	**180**	*e*P	**P**	**03 36 47.1**	**+1.8**
SLR				AMb	AMB	03 36 49.8	
	comp=Z,805nm,1.0s,mb6.7						
KSR	**Koster**	**61.45**	**181**	*e*P	**P**	**03 36 48.0**	**+1.8**
KSR				AMb	AMB	03 36 50.5	
	comp=Z,378nm,1.0s,mb6.4						
ERPM	**east rand prop**	**61.93**	**180**	*e*P	**P**	**03 36 50.4**	**+1.0**
ERPM				AMb	AMB	03 36 53.1	
	comp=Z,734nm,1.0s,mb6.7						
CD2	**Chengdu**	**62.10**	**71**	P	**P**	**03 36 51.1**	**+0.4**
CD2				pP	pP	03 37 09.1	+1.2
CD2				sP	sP	03 37 17.8	+2.6
CD2				PP	PP	03 39 11.0	+3.2
CD2				S	**S**	**03 45 08.4**	**-2.6**
CD2				sS	sS	03 45 39.1	-0.9
CD2				SS	SS	03 49 13.3	-1.0
CD2				pmax	pmax		
	comp=Z,280nm,0.8s,mb6.3						
CD2				pmax	pmax		
	comp=Z,2μm,5.9s						
CD2				LR	LR		
	comp=N,8μm,23.8s						
CD2				LR	LR		
	comp=Z,8μm,20.6s						
BTO	**Baotou**	**62.46**	**58**	*e*P	**P**	**03 36 52.9**	**-0.1**
SWZ	**Schweizer**	**62.81**	**182**	*e*P	**P**	**03 36 55.8**	**+0.6**
SWZ				AMb	AMB	03 36 58.9	
	comp=Z,434nm,1.0s,mb6.3						
POGA	**Pongola**	**63.05**	**176**	P	**P**	**03 36 58.4**	**+1.6**
POGA	**Pongola**	**63.05**	**176**	*e*P	**P**	**03 36 58.0**	**+1.2**
POGA				AMb	AMB	03 37 01.2	
	comp=Z,401nm,1.0s,mb6.3						
HHC	**Hu-ho-hao-te**	**63.42**	**57**	*e*P	**P**	**03 36 59.3**	**0.0**
HHC				pP	pP	03 37 16.9	+0.4
HHC				sP	sP	03 37 23.4	-0.4
HHC				PcP	PcP	03 37 35.6	-0.1
HHC				PP	PP	03 39 20.5	+1.4
HHC				ScP	ScP	03 41 31.6	-0.7
HHC				PcS		03 41 37.3	
HHC				S	**S**	**03 45 24.5**	**-2.6**
HHC				sS	sS	03 45 53.1	-3.2
HHC				ScS	ScS	03 46 42.3	-4.4
HHC				SS	SS	03 49 33.6	-0.8
HHC				pmax	pmax		
	comp=Z,800nm,6.5s						
HHC				LR	LR		
	comp=N,13μm,16.9s						
HHC				LR	LR		
	comp=E,7μm,16.5s						
HHC				LR	LR		
	comp=Z,11μm,16.8s						
RES	**Resolute Bay**	**63.48**	**346**	*e*P	**P**	**03 36 58.7**	**-0.5**
RES				pmax	pmax		
	comp=Z,317nm,0.9s,mb6.2						
RES	**Resolute Bay**	**63.48**	**346**	*e*P	**P**	**03 36 58.7**	**-0.4**
	comp=Z,317nm,0.9s,mb6.2						
RES	**Resolute Bay**	**63.48**	**346**	*e*P	**P**	**03 36 58.7**	**-0.5**
	comp=Z,317nm,0.9s,mb6.2						
SCHQ	**Schefferville**	**63.99**	**320**	P	**P**	**03 37 02.1**	**-0.7**
	comp=Z,307nm,0.8s,mb6.2,baz=66,slow=6.6,SNR=138						
SCHQ				S	**S**	**03 45 34.4**	**+0.6**
	comp=Z,22nm,0.8s,baz=286,slow=20,SNR=7.8						
SCHQ				LR	LR	04 04 53.1	
	comp=Z,8μm,21.8s,baz=72,slow=36						
SCHQ				PKP2ab		04 06 06.7	
	comp=Z,12nm,0.9s,baz=270,slow=3.1,SNR=7.9						
SCHQ	**Schefferville**	**63.99**	**320**	*e*P	**P**	**03 37 01.7**	**-1.1**
	comp=Z,10nm,0.6s						
SCHQ				LR	LR		
	comp=Z,11μm,22.0s						
KMI	**Kunming**	**64.03**	**77**	P	**P**	**03 37 05.5**	**+1.9**
KMI				pP	pP	03 37 18.8	-2.1
KMI				sP	sP	03 37 25.3	-2.8
KMI				PP	PP	03 39 26.3	+1.4
KMI				S	**S**	**03 45 35.5**	**+0.3**
KMI				sS	sS	03 45 57.8	-6.6
KMI				SS	SS	03 49 45.8	+1.1
KMI				pmax	pmax		
	comp=Z,85nm,0.8s,mb5.6						
KMI				pmax	pmax		
	comp=Z,350nm,5.6s						
KMI				LR	LR		
	comp=N,5μm,27.4s						
KMI				LR	LR		
	comp=E,5μm,27.4s						
KMI				LR	LR		
	comp=Z,6μm,32.5s						
YAK	**Yakutsk**	**64.13**	**31**	*e*P	**P**	**03 37 02.6**	**-1.0**
YAK				*e*		03 37 35.7	
YAK				*e*		03 39 35.7	
YAK				*e*S	**S**	**03 45 33.9**	**-1.4**
YAK				pmax	pmax		
	comp=Z,321nm,0.9s,mb6.2						
YAK				pmax	pmax		
	comp=E,79nm,1.2s						
YAK				pmax	pmax		
	comp=N,66nm,1.4s						
YAK				smax			
	comp=N,3μm,5.8s						
YAK				MLR	MLR		
	comp=E,11μm,21.0s						
YAK				MLR	MLR		
	comp=N,6μm,18.0s						
YAK				MLR	MLR		
	comp=Z,11μm,21.0s						
YAK	**Yakutsk**	**64.13**	**31**	*e*P	**P**	**03 37 04.2**	**+0.6**
	comp=Z,337nm,0.8s,mb6.2						
YAK				LR	LR		
	comp=Z,15μm,19.0s						
YAK	**Yakutsk**	**64.13**	**31**	*e*P	**P**	**03 37 02.6**	**-1.0**
	comp=Z,66nm,1.4s,mb5.3						
CHG	**Chiang Mai**	**64.17**	**85**	⇓P	**P**	**03 37 05.4**	**+0.9**
	comp=Z,159nm,0.9s,mb5.8						
CHTO	**Chiang Mai**	**64.17**	**85**	*e*P	**P**	**03 37 04.8**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,246nm,1.3s,mb5.9						
CHTO				MLR	MLR		
	comp=Z,5μm,22.0s						
CHTO	**Chiang Mai**	**64.17**	**85**	*e*P	**P**	**03 37 04.8**	**+0.2**
	comp=Z,246nm,1.3s,mb5.9						
CHTO				LR	LR		
	comp=Z,5μm,22.0s						
CHTO	**Chiang Mai**	**64.17**	**85**	P	**P**	**03 37 06.4**	**+1.9**
	comp=Z,2μmcomp=Z,175nm,1.5s,mb5.7						
CHTO	**Chiang Mai**	**64.17**	**85**	*e*P	**P**	**03 37 04.8**	**+0.3**
	comp=Z,246nm,1.3s,mb5.9						
CHTO	**Chiang Mai**	**64.17**

comp=Z,974nm,1.0s,mb6.6
CLNS Chul'man 64.35 37 *e*P **P 03 37 04.9 -0.2**
CLNS *e**PP pP 03 37 22.7 +0.3
CLNS *e* 03 37 33.8
CLNS *e* 03 39 27.2
CLNS *e*PPP 03 40 59.6
CLNS *e*S **S 03 45 38.3 +0.2**
CLNS *e* 03 46 43.6
CLNS *e*SSS 03 52 34.1
CLNS pmax pmax
comp=Z,189nm,1.0s,mb5.9
CLNS pmax pmax
comp=E,69nm,0.8s
CLNS pmax pmax
comp=N,63nm,1.1s
CLNS pmax pmax
comp=E,58nm,1.0s
CLNS pmax pmax
comp=N,78nm,1.0s
CLNS pmax pmax
comp=Z,51nm,1.0s,mb5.3
CLNS smax
comp=E,3μm,12.9s
CLNS smax
comp=N,2μm,11.4s
CLNS MLR MLR
comp=Z,12μm,22.0s
CLNS MLR MLR
comp=N,8μm,19.0s
CLNS MLR MLR
comp=E,6μm,21.0s
CLNS Chul'man 64.35 37 *e*P **P 03 37 04.9 -0.2**
comp=E,63nm,1.1s,mb5.4
CM31 Chiang Mai Arr 64.35 85 *e*P **P 03 37 07.9 +2.1**
comp=E,206nm,1.1s,mb5.9
CM31 LR LR
comp=Z,4μm,22.0s
CMAR Chiang Mai Arr 64.35 85 P **P 03 37 06.0 +0.3**
comp=Z,31nm,1.0s,mb5.1,baz=300,slow=6.9,SNR=58
CMAR PKPPKP 04 05 55.1
comp=Z,0.8nm,0.4s,baz=79,slow=1.0,SNR=6.0
CMAR LR LR 04 11 02.5
comp=Z,4μm,21.9s,baz=291,slow=41
CMAR Chiang Mai Arr 64.35 85 P **P 03 37 06.0 +0.3**
XAN Xi'an 64.56 65 P **P 03 37 06.8 -0.1**
XAN pP pP 03 37 17.8 -6.4
XAN S **S 03 45 37.8 -3.7**
XAN LR LR
comp=N,7μm,24.1s
XAN LR LR
comp=E,3μm,28.4s
XAN LR LR
comp=Z,2μm,22.1s
HIA Hailar 64.95 46 *e*P **P 03 37 10.2 +1.0**
HIA pmax pmax
comp=Z,224nm,0.9s
HIA MLR MLR
comp=Z,12μm,22.0s
HIA Hailar 64.95 46 *e*P **P 03 37 10.2 +0.9**
comp=Z,224nm,0.9s,mb6.0
HIA LR LR
comp=Z,12μm,22.0s
HIA Hailar 64.95 46 *e*P **P 03 37 10.1 +0.9**
comp=Z,224nm,0.9s,mb6.0
BDT Bhumibol Dam 65.03 86 P **P 03 37 10.0 -0.2**
comp=Z,98nm,1.0s,mb5.6
TIY Taiyuan 65.42 60 *e*P **P 03 37 15.3 +2.9**
TIY pP pP 03 37 28.3 -1.4
TIY S S 03 45 52.4 +0.5
TIY sS sS 03 46 20.6 -0.6
TIY pmax pmax
comp=Z,1μm,5.1s
TIY LR LR
comp=N,5μm,15.9s
TIY LR LR
comp=E,5μm,17.9s
TIY LR LR
comp=Z,12μm,26.0s
PKA Prieska 65.42 185 *e*P **P 03 37 12.8 +0.5**
PKA AMb AMB 03 37 15.9
comp=Z,168nm,1.1s,mb5.8
GYA Guiyang 66.46 74 P **P 03 37 19.3 0.0**
GYA pP pP 03 37 38.9 +2.3
GYA PP PP 03 39 48.9 +2.8
GYA ScP 03 41 42.6
GYA PcS 03 41 52.8
GYA S S 03 46 04.8 -0.1
GYA SKS 03 47 06.3
GYA SS SS 03 50 25.0 +2.6
GYA pmax pmax
comp=Z,100nm,3.4s
GYA LR LR
comp=N,6μm,16.8s
GYA LR LR
comp=E,5μm,18.6s
GYA LR LR
comp=Z,4μm,17.4s
ENH Enshi 66.76 69 *e*P **P 03 37 23.5 +2.3**
comp=Z,266nm,1.0s,mb6.0
ENH S S 03 46 11.3 +2.8
ENH LR LR
comp=Z,8μm,21.0s
NST Nakhon Sawan 66.79 87 P **P 03 37 22.5 +1.0**
BJI Beijing 66.92 57 P **P 03 37 22.5 +0.5**
BJI pP pP 03 37 39.8 +0.4
BJI sP sP 03 37 45.9 -0.7
BJI PP PP 03 39 51.8 +2.0
BJI S S 03 46 13.3 +3.2
BJI sS sS 03 46 38.8 -0.7
BJI SS SS 03 50 25.5 -3.4
BJI LR LR
comp=N,9μm,19.1s
BJI LR LR
comp=E,4μm,22.9s
BJI LR LR
comp=Z,8μm,22.9s
BJT Baijiatuau 66.93 57 *e*P **P 03 37 22.5 +0.5**
BJT pmax pmax
comp=Z,191nm,0.8s
BJT MLR MLR
comp=Z,7μm,20.0s
BJT Baijiatuau 66.93 57 *e*P **P 03 37 22.5 +0.4**
comp=Z,191nm,0.8s,mb6.0
BJT LR LR
comp=Z,7μm,20.0s
BJT Baijiatuau 66.93 57 *e*P **P 03 37 22.5 +0.5**
comp=Z,7μm,20.0s
NNT Nongplab 68.14 90 P **P 03 37 32.2 +2.1**
SUR Sutherland 68.26 186 *e*P **P 03 37 31.6 +1.3**
comp=Z,500nm,0.8s,mb6.4
SUR LR LR
comp=Z,24μm,19.0s
SUR Sutherland 68.26 186 P **P 03 37 31.0 +0.7**
comp=Z,4μm,0.7s,mb7.3,SNR=27
SUR Sutherland 68.26 186 *e*P **P 03 37 31.4 +1.2**
SUR AMb AMB 03 37 35.8
comp=Z,458nm,0.8s,mb6.4
SUR Sutherland 68.26 186 P **P 03 37 31.6 +1.3**
SNR=15
GRM Grahamstown 68.89 181 P **P 03 37 36.8 +2.6**
GRM Grahamstown 68.89 181 *e*P **P 03 37 37.1 +3.0**
GRM AMb AMB 03 37 39.1
comp=Z,314nm,0.9s,mb6.1
TIA Tai'an 69.43 60 P **P 03 37 37.9 +0.1**
TIA S S 03 46 43.3 +3.2
TIA LR LR
comp=N,2μm,12.5s
PKME Peaks-Kenny Pk 69.96 312 *e*P **P 03 37 41.3 +0.4**
comp=N,368nm,1.0s,mb6.2
PKME LR LR
comp=Z,9μm,21.0s
PKME Peaks-Kenny Pk 69.96 312 *e*P **P 03 37 41.3 +0.4**
comp=Z,368nm,1.0s,mb6.2
WHN Wuhan 70.27 66 ⇑P **P 03 37 43.3 +0.2**
WHN pP pP 03 37 59.8 -0.7
WHN sP sP 03 38 06.8 -1.0
WHN S S 03 46 51.8 +1.7
WHN sS sS 03 47 17.3 -2.4
WHN LR LR
comp=N,8μm,16.3s
WHN LR LR
comp=E,9μm,15.1s
WHN LR LR
comp=Z,14μm,19.5s
ELIM Elim 70.56 187 *e*P **P 03 37 46.2 +1.8**
SNY Shenyang 70.91 52 ⇑P **P 03 37 46.1 -0.6**
SNY PP PP 03 40 20.4 -3.8
SNY S S 03 46 57.3 +0.1
SNY pmax pmax
comp=Z,850nm,6.0s
SNY LR LR
comp=N,8μm,25.7s
SNY LR LR
comp=E,6μm,25.9s
SNY LR LR
comp=Z,9μm,19.4s
CN2 Changchun 71.05 49 ⇑P **P 03 37 47.8 +0.2**
CN2 *e*sP sP 03 38 11.0 -1.3
CN2 PP PP 03 40 27.3 +2.0
CN2 *e*S S 03 46 59.3 +0.5
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,10μm,24.0s
CN2 LR LR
comp=E,7μm,24.0s
CN2 LR LR
comp=Z,8μm,21.0s
DL2 Dalian 71.15 55 ⇑P **P 03 37 51.6 +3.4**
DL2 sP sP 03 38 14.0 +1.0
DL2 S S 03 47 02.5 +2.5
DL2 sS sS 03 47 21.0 -8.7
DL2 pmax pmax
comp=Z,370nm,3.6s
DL2 LR LR
comp=N,3μm,24.9s
DL2 LR LR
comp=E,1μm,26.1s
DL2 LR LR
comp=Z,3μm,23.9s
TPTI 71.43 100 P **P 03 37 51.3 +1.0**
comp=Z,2μmcomp=Z,116nm,0.8s,mb5.7
TPTI 71.43 100 P **P 03 37 51.3 +1.0**
comp=Z,2μmcomp=Z,116nm,0.8s,mb5.7
KLR Kul'dur 71.77 42 ⇓*i*P **P 03 37 47.8 -4.0**
KLR *e*S S 03 47 05.0 -1.8
KLR pmax pmax
comp=E,130nm,1.4s
KLR pmax pmax
comp=Z,250nm,1.4s,mb5.8
KLR pmax pmax
comp=Z,2μm,10.5s
KLR smax
comp=N,3μm,11.0s
KLR smax
comp=E,4μm,11.0s
BILL Bilibino 71.78 15⇑*e*P **P 03 37 51.4 -0.1**
BILL *i* 03 40 27.9
BILL *e*S S 03 47 06.2 -0.2
BILL *e*SS SS 03 52 22.7 +40
BILL pmax pmax
comp=Z,560nm,1.2s,mb6.3
BILL MLR MLR
comp=Z,13μm,21.0s
BILL Bilibino 71.78 15 *e*P **P 03 37 51.4 -0.1**
comp=Z,423nm,1.0s,mb6.2
BILL *e*S S 03 47 08.0 +1.7
BILL LR LR
comp=Z,8μm,21.0s
BILL Bilibino 71.78 15 *e*P **P 03 37 51.4 -0.1**
comp=Z,423nm,1.0s,mb6.2
BILL *e*S S 03 47 08.0 +1.6
SNG Songkhla 71.91 94 P **P 03 37 53.0 -0.2**
comp=Z,42nm,0.9s,mb5.3
SEY Seymchan 72.02 23⇑*i*P **P 03 37 53.7 +0.7**
SEY Seymchan 72.02 23⇑*i*P **P 03 37 53.7 +0.7**
LBNH Lisbon 72.09 312 *e*P **P 03 37 54.7 +0.9**
LBNH pmax pmax
comp=Z,408nm,0.8s,mb6.3
LBNH MLR MLR
comp=Z,7μm,20.0s
LBNH Lisbon 72.09 312 *e*P **P 03 37 54.7 +0.9**
comp=Z,408nm,0.8s,mb6.3
LBNH LR LR
comp=Z,7μm,20.0s
LBNH Lisbon 72.09 312 *e*P **P 03 37 54.7 +0.9**
comp=Z,408nm,0.8s,mb6.3
TSI Tuntungan 72.40 99 P **P 03 37 56.6 +0.5**
RCBR Riachuelo 72.61 249 *e*P **P 03 37 58.8 +1.5**
comp=Z,129nm,0.9s,mb5.8
RCBR *e*PP PP 03 40 41.1 +1.4
RCBR LR LR
comp=Z,12μm,19.0s
NJ2 Nanjing 72.79 63 *e*P **P 03 37 59.0 +0.8**
NJ2 pP pP 03 38 18.4 +2.6
NJ2 PP PP 03 40 45.3 +4.8
NJ2 S S 03 47 17.5 -1.6
NJ2 sS sS 03 47 50.5 +1.6
NJ2 pmax pmax
comp=Z,70nm,0.9s,mb5.5
NJ2 pmax pmax
comp=Z,910nm,4.8s
NJ2 LR LR
comp=N,2μm,14.8s
NJ2 LR LR
comp=E,1μm,15.6s
NJ2 LR LR
comp=Z,2μm,17.7s
QIZ Qiongzhong 72.80 79 P **P 03 38 00.6 +2.2**
QIZ pP pP 03 38 17.6 +1.6
QIZ sP sP 03 38 24.5 +1.3
QIZ S S 03 47 22.8 +3.2
QIZ sS sS 03 47 49.9 +0.6
QIZ LR LR
comp=N,6μm,31.9s
QIZ LR LR
comp=E,2μm,31.4s
QIZ LR LR
comp=Z,3μm,28.3s
QIZ Qiongzhong 72.80 79 *e*P **P 03 37 60.0 +1.6**
comp=Z,362nm,1.4s,mb6.0
QIZ LR LR
comp=Z,2μm,21.0s
GSI Gunungsitoli 72.92 101 P **P 03 38 02.1 +2.9**
comp=Z,3μmcomp=Z,192nm,1.2s,mb5.8
GSI Gunungsitoli 72.92 101 P **P 03 38 02.2 +3.0**
comp=Z,3μmcomp=Z,193nm,1.2s,mb5.8
KULM Kulim 73.03 96 P **P 03 38 01.3 +1.5**
KULM Kulim 73.03 96 *e*P **P 03 38 00.9 +1.1**
comp=Z,234nm,1.1s,mb5.9
KULM LR LR
comp=Z,4μm,20.0s
KULM Kulim 73.03 96 P **P 03 38 01.3 +1.5**
comp=Z,2μmcomp=Z,198nm,1.2s,mb5.8
MDJ Mudanjiang 73.12 47 P **P 03 37 59.1 -0.8**
MDJ pP pP 03 38 15.6 -1.9
MDJ sP sP 03 38 22.5 -2.2
MDJ S S 03 47 21.1 -1.3
MDJ sS sS 03 47 49.3 -2.9
MDJ ScS ScS 03 48 01.3 -1.1
MDJ SS SS 03 52 02.1 -1.7
MDJ pmax pmax
comp=Z,560nm,6.6s
MDJ LR LR
comp=N,8μm,30.8s
MDJ LR LR
comp=E,6μm,31.5s
MDJ LR LR
comp=Z,7μm,26.9s
MDJ Mudanjiang 73.12 47 *e*P **P 03 38 01.5 +1.6**
comp=Z,60nm,0.8s,mb5.5
MDJ LR LR
comp=Z,7μm,20.0s
MDJ Mudanjiang 73.12 47 *e*P **P 03 38 01.5 +1.6**
comp=Z,60nm,0.8s,mb5.5
GZH Guangzhou 73.39 73 P **P 03 38 04.8 +3.0**
GZH S S 03 47 28.5 +2.4
GZH LR LR
comp=N,3μm,26.4s
GZH LR LR
comp=E,5μm,25.9s
LONY Lake Ozonia 73.47 313 *e*P **P 03 38 02.2 +0.3**
comp=E,380nm,0.9s,mb6.2
LONY LR LR
comp=Z,6μm,20.0s
LONY Lake Ozonia 73.47 313 *e*P **P 03 38 02.2 +0.2**
comp=Z,380nm,0.9s,mb6.2
NCB Newcomb 73.62 313 *e*P **P 03 38 03.6 +0.7**
comp=Z,150nm,1.0s,mb5.7
NCB LR LR
comp=Z,5μm,20.0s
NCB Newcomb 73.62 313 *e*P **P 03 38 03.6 +0.7**
comp=Z,150nm,1.0s,mb5.7
BBSR BB Station 73.66 298 *e*P **P 03 38 04.3 +1.0**
comp=Z,411nm,0.9s,mb6.2
BBSR LR LR
comp=Z,3μm,21.0s
BBSR BB Station 73.66 298 *e*P **P 03 38 04.3 +1.0**
comp=Z,411nm,0.9s,mb6.2
IPM Ipoh 73.80 96 P **P 03 38 05.9 +1.5**
IPM Ipoh 73.80 96 P **P 03 38 06.5 +2.1**
IPM Ipoh 73.80 96 P **P 03 38 05.7 +1.3**
comp=Z,2μmcomp=Z,101nm,1.5s,mb5.3
IPM Ipoh 73.80 96 P **P 03 38 06.5 +2.1**
HABR Khabarovsk 73.99 41*c e*P **P 03 38 04.9 0.0**
HABR *e* pP 03 38 18.9 -3.6
HABR *e**PP pP 03 38 22.7 +0.2
HABR *e**SP sP 03 38 31.0 +1.3
HABR *e* 03 40 48.8
HABR *e**SS sS 03 48 01.9 0.0
HABR *e* 03 48 07.0
HABR *e*SS SS 03 52 15.7 -1.1
HABR pmax pmax
comp=Z,272nm,1.4s,mb5.8
HABR pmax pmax
comp=N,19nm,0.3s
HABR pmax pmax
comp=Z,1μm,3.9s
HABR pmax pmax
comp=E,105nm,0.9s
HABR MLR MLR
comp=Z,6μm,24.0s
FCC Fort Churchill 74.04 333 *e*P **P 03 38 04.2 -0.8**
comp=Z,12nm,0.9s
FCC Fort Churchill 74.04 333 *e*P **P 03 38 04.2 -0.8**
comp=Z,12nm,0.9s
MNSI Mandailing Nat 74.82 100 P **P 03 38 12.7 +2.4**
comp=Z,99nm,1.0s,mb5.5
MNSI Mandailing Nat 74.82 100 P **P 03 38 13.4 +3.1**
comp=Z,99nm,1.0s,mb5.5
SSE Sheshan 74.98 62 P **P 03 38 10.6 -0.4**
SSE sP sP 03 38 31.8 -4.0
SSE S S 03 47 43.5 -0.3
SSE sS sS 03 48 08.5 -5.2
SSE LR LR
comp=N,5μm,29.2s
SSE LR LR
comp=E,7μm,29.2s
SSE LR LR
comp=Z,4μm,29.8s
FRIM Kepong 75.02 97 P **P 03 38 13.7 +2.3**
KTGM Kuala Trenggan 75.02 94 P **P 03 38 13.1 +1.7**
INK Inuvik 75.15 353 *e*P **P 03 38 10.4 -0.9**
INK S S 03 47 42.4 -1.9
INK pmax pmax
comp=Z,487nm,1.0s
INK Inuvik 75.15 353 *e*P **P 03 38 10.4 -0.9**
comp=Z,487nm,1.0s,mb6.2
INK S S 03 47 42.4 -1.9
INK Inuvik 75.15 353 *e*P **P 03 38 10.4 -0.9**
comp=Z,487nm,1.0s,mb6.2
INCN Inchon 75.24 54 *e*P **P 03 38 13.1 +0.7**
comp=Z,205nm,1.1s,mb5.8
INCN LR LR
comp=Z,6μm,20.0s
INCN Inchon 75.24 54 *e*P **P 03 38 13.1 +0.7**
comp=Z,205nm,1.1s,mb5.8
VLA Vladivostok 75.34 47*c i*P **P 03 38 12.5 -0.3**
VLA pmax pmax
comp=Z,497nm,0.9s,mb6.2
VLA Vladivostok 75.34 47⇑*i*P **P 03 38 12.6 -0.2**
VLA Vladivostok 75.34 47⇑*i*P **P 03 38 12.6 -0.2**
BINY Binghamton 75.69 312 *e*P **P 03 38 15.5 +0.6**
comp=Z,422nm,0.8s,mb6.2
BINY LR LR
comp=Z,6μm,22.0s
BINY Binghamton 75.69 312 *e*P **P 03 38 15.5 +0.6**
comp=Z,422nm,0.8s,mb6.2
SISI Saibi 75.70 102 P **P 03 38 17.9 +2.5**
comp=Z,3μmcomp=Z,169nm,1.2s,mb5.6
SISI Saibi 75.70 102 P **P 03 38 18.6 +3.2**
comp=Z,3μmcomp=Z,170nm,1.2s,mb5.6
SADO Sadowa 76.03 315 P **P 03 38 17.1 +0.4**
comp=Z,344nm,0.8s,mb6.1
SADO S S 03 47 53.2 -1.7
comp=Z,5.9nm,0.8s,baz=335,slow=17,SNR=2.4
SADO Sadowa 76.03 315 P **P 03 38 17.1 +0.4**
KSRS Korea Array 76.10 54 P **P 03 38 17.4 +0.1**
comp=Z,106nm,0.8s,mb5.6,baz=304,slow=4.5,SNR=20
KSRS S S 03 47 57.2 +1.3
comp=Z,0.5nm,0.3s,baz=284,slow=11,SNR=6.3
KSRS LR LR 04 17 50.7
comp=Z,8μm,20.9s,baz=303,slow=40
KSRS Korea Array 76.10 54 P **P 03 38 17.4 +0.1**
KSRS S S 03 47 57.3 +1.4
KSRS pmax pmax
comp=Z,106nm,0.8s,mb5.6
KSRS smax
comp=N,1.0nm,0.3s
PPI Padang Panjang 76.22 101 P **P 03 38 19.2 +0.9**
comp=N,6μmcomp=N,135nm,1.2s,mb5.5
PPI Padang Panjang 76.22 101 P **P 03 38 20.5 +2.2**
comp=N,6μmcomp=N,135nm,1.2s,mb5.5
BKNI Bangkinang 76.27 100 P **P 03 38 19.9 +1.3**
comp=N,353nm,1.3s,mb5.9
BKNI Bangkinang 76.27 100 P **P 03 38 20.4 +1.8**
QZH Quanzhou 76.42 69⇓*i*P **P 03 38 21.6 +2.3**
QZH S S 03 47 58.0 -1.8
QZH SKS 03 48 19.3
QZH LR LR
comp=N,7μm,20.6s
QZH LR LR
comp=E,4μm,16.8s
QZH LR LR
comp=Z,14μm,26.2s
PDSI Padang 76.55 101 P **P 03 38 23.1 +3.0**
comp=Z,410nm,1.1s,mb6.1
PDSI Padang 76.55 101 P **P 03 38 22.2 +2.1**
comp=Z,410nm,1.1s,mb6.1
KGM Kluang 77.10 97 P **P 03 38 26.3 +3.0**
COLD Coldfoot 77.16 359 *e*P **P 03 38 23.0 +0.3**
comp=Z,378nm,0.3s,mb6.6
COLD Coldfoot 77.16 359 *e*P **P 03 38 23.0 +0.3**
comp=Z,378nm,0.3s,mb6.6
SDSI Sungai Dareh 77.33 100 P **P 03 38 24.3 -0.2**
comp=Z,3μmcomp=Z,201nm,1.6s,mb5.6
SDSI Sungai Dareh 77.33 100 P **P 03 38 25.8 +1.3**
comp=Z,3μmcomp=Z,201nm,1.6s,mb5.6
YKA Yellowknife Ar 77.37 343 P **P 03 38 22.9 -1.1**
comp=Z,308nm,0.8s,mb6.1,baz=33,slow=5.4,SNR=223
YKA PKKPbc PKKPbc 03 57 29.5 +1.1
comp=Z,0.6nm,0.7s,baz=191,slow=1.4,SNR=3.9
YKA Yellowknife Ar 77.37 343 P **P 03 38 22.9 -1.0**
MYKOM Kota Tinggi 77.66 97 P **P 03 38 28.6 +2.2**
MYKOM Kota Tinggi 77.66 97 P **P 03 38 28.4 +2.0**
comp=Z,1μmcomp=Z,92nm,1.4s,mb5.3
RGRI Rengat 77.70 99 P PcP 03 38 38.9 +2.4
SSPA Standing Stone 77.77 311 *e*P **P 03 38 27.0 +0.4**
comp=Z,261nm,0.9s,mb6.0
SSPA LR LR
comp=Z,9μm,21.0s
SSPA Standing Stone 77.77 311 *e*P **P 03 38 27.0 +0.4**
comp=Z,261nm,0.9s,mb6.0
KRJI Kerinci 78.05 101 P sP 03 38 48.2 -5.2
TNA Tin City 78.11 7 *e*P **P 03 38 28.9 +0.9**
comp=Z,375nm,1.0s,mb6.1
TNA Tin City 78.11 7 *e*P **P 03 38 28.9 +0.9**
comp=Z,375nm,1.0s,mb6.1
ERPA Erie 78.13 314 *e*P **P 03 38 28.9 +0.3**
comp=Z,704nm,0.7s,mb6.5
ERPA LR LR
comp=Z,8μm,20.0s
ERPA Erie 78.13 314 *e*P **P 03 38 28.9 +0.3**
comp=Z,704nm,0.7s,mb6.5
TATO Taipei 78.58 68 *e*P **P 03 38 33.5 +2.1**
comp=Z,572nm,1.6s,mb6.2
TATO LR LR
comp=Z,7μm,21.0s
TATO Taipei 78.58 68 *e*P **P 03 38 33.5 +2.1**
comp=Z,572nm,1.6s,mb6.2
YHNB Yeheng 78.67 68 *e*P **P 03 38 32.8 +0.9**
comp=Z,203nm,1.1s,mb5.9
YHNB LR LR
comp=Z,7μm,22.0s
YHNB Yeheng 78.67 68 *e*P **P 03 38 32.8 +0.9**
comp=Z,203nm,1.1s,mb5.9
SSLB Suanglung 78.85 69 *e*P **P 03 38 36.8 +3.9**
comp=Z,92nm,1.0s,mb5.6

SSLB Suanglung 78.85 69 *e*P **P 03 38 36.8 +3.9**
comp=Z,92nm,1.0s,mb5.6
TPUB Ta-pu 78.88 69 *e*P **P 03 38 34.5 +1.5**
comp=Z,166nm,1.0s,mb5.8
TPUB Ta-pu 78.88 69 *e*P **P 03 38 34.5 +1.5**
comp=Z,166nm,1.0s,mb5.8
CBN Corbin 78.91 309 *e*P **P 03 38 33.2 +0.3**
comp=Z,572nm,0.8s,mb6.5
CBN LR LR
comp=Z,6μm,21.0s
CBN Corbin 78.91 309 *e*P **P 03 38 33.2 +0.2**
comp=Z,572nm,0.8s,mb6.5
YSS Yuzh-Sakhalins 78.99 39α *i*P **P 03 38 34.5 +1.3**
YSS *e**PP pP 03 38 52.0 +1.0
YSS *i* S S 03 48 28.0 +1.2
YSS *e*PPS 03 49 24.0
YSS *e*SS SS 03 53 34.0 +1.7
YSS pmax pmax
comp=E,200nm,1.0s
YSS pmax pmax
comp=Z,400nm,1.0s,mb6.2
YSS pmax pmax
comp=Z,2μm,4.0s
YSS smax
comp=E,4μm,8.0s
YSS smax
comp=N,4μm,6.0s
YSS Yuzh-Sakhalins 78.99 39 *e*P **P 03 38 33.9 +0.7**
comp=N,412nm,0.9s,mb6.3
YSS LR LR
comp=Z,3μm,20.0s
YSS Yuzh-Sakhalins 78.99 39 *e*P **P 03 38 33.9 +0.7**
comp=Z,412nm,0.9s,mb6.3
EGAK Eagle 79.26 355 *e*P **P 03 38 34.2 -0.1**
comp=Z,370nm,0.9s,mb6.2
EGAK LR LR
comp=Z,6μm,20.0s
EGAK Eagle 79.26 355 *e*P **P 03 38 34.2 -0.1**
comp=Z,370nm,0.9s,mb6.2
YULB Yu-li 79.33 69 *e*P **P 03 38 37.7 +2.2**
comp=Z,201nm,1.1s,mb5.9
YULB Yu-li 79.33 69 *e*P **P 03 38 37.7 +2.2**
comp=Z,201nm,1.1s,mb5.9
GAMB Gambell 79.43 9 *e*P **P 03 38 35.7 +0.4**
comp=Z,102nm,1.2s,mb5.5
GAMB Gambell 79.43 9 *e*P **P 03 38 35.7 +0.4**
comp=Z,102nm,1.2s,mb5.5
COLA College 79.48 358 *e*P **P 03 38 35.4 -0.1**
COLA pmax pmax
comp=Z,345nm,1.0s,mb6.1
COLA MLR MLR
comp=Z,5μm,21.0s
COLA College 79.48 358 *e*P **P 03 38 35.4 -0.1**
comp=Z,345nm,1.0s,mb6.1
COLA LR LR
comp=Z,5μm,21.0s
COLA College 79.48 358 *e*P **P 03 38 35.4 -0.1**
comp=Z,345nm,1.0s,mb6.1
TWG Pinlang 79.48 70 *e*P **P 03 38 38.4 +2.1**
comp=Z,201nm,1.0s,mb5.9
TWG Pinlang 79.48 70 *e*P **P 03 38 38.4 +2.1**
comp=Z,201nm,1.0s,mb5.9
ANWB Willy Bob 79.53 284 *e*P **P 03 38 37.7 +1.1**
comp=Z,970nm,0.8s,mb6.7
ANWB LR LR
comp=Z,4μm,21.0s
ANWB Willy Bob 79.53 284 *e*P **P 03 38 37.7 +1.1**
comp=Z,970nm,0.8s,mb6.7
MCWV Mont Chateau 79.55 312 *e*P **P 03 38 37.0 +0.6**
comp=Z,761nm,0.8s,mb6.6
MCWV LR LR
comp=Z,9μm,20.0s
MCWV Mont Chateau 79.55 312 *e*P **P 03 38 37.0 +0.6**
comp=Z,761nm,0.8s,mb6.6
DAWY Dawson 79.83 354 *e*P **P 03 38 37.7 +0.2**
DAWY Dawson 79.83 354 *e*P **P 03 38 37.7 +0.2**
SFG Saint Francois 79.86 283 *e*P **P 03 38 41.1 +2.6**
KSI Kapahiang 79.89 102 P **P 03 38 41.5 +2.9**
comp=Z,329nm,0.8s,mb6.2
KSI Kapahiang 79.89 102 P **P 03 38 42.5 +3.9**
comp=Z,517nm,1.0s,mb6.3
FFC Flin Flon 79.95 333 P **P 03 38 37.3 -1.0**
comp=Z,6μm,1.0s,mb7.4
FFC Flin Flon 79.95 333 *i* P **P 03 38 37.6 -0.7**
FFC Flin Flon 79.95 333 *e*P **P 03 38 37.7 -0.6**
comp=Z,906nm,0.9s,mb6.6
FFC LR LR
comp=Z,11μm,20.0s
FFC Flin Flon 79.95 333 *e*P **P 03 38 37.7 -0.6**
comp=Z,906nm,0.9s,mb6.6
SEG Port Louis 80.02 283 *e*P **P 03 38 41.4 +2.1**
AAM Ann Arbor 80.13 316 *e*P **P 03 38 39.3 -0.2**
AAM pmax pmax
comp=Z,271nm,0.8s,mb6.1
AAM MLR MLR
comp=Z,6μm,20.0s
AAM Ann Arbor 80.13 316 *e*P **P 03 38 39.3 -0.2**
comp=Z,270nm,0.8s,mb6.1
AAM LR LR
comp=Z,6μm,20.0s
AAM Ann Arbor 80.13 316 *e*P **P 03 38 39.3 -0.2**
comp=Z,270nm,0.8s,mb6.1
MGG Marie-Galante 80.14 282 *e*P **P 03 38 42.9 +2.9**
BBGH Gun Hill 80.31 279 PFAKE 03 38 50.0 +9.1
BBGH LR LR
comp=Z,6μm,22.0s
BPAW Bear Paw Mtn. 80.31 359 *e*P **P 03 38 39.8 -0.2**
comp=Z,37nm,0.9s,mb5.2
BPAW Bear Paw Mtn. 80.31 359 *e*P **P 03 38 39.8 -0.2**
comp=Z,37nm,0.9s,mb5.2
SMRT St. Maarten 80.33 285 P **P 03 38 42.6 +1.7**
SMRT St. Maarten 80.33 285 P **P 03 38 42.6 +1.7**
PHG Guadaloupe-2 80.35 283 *e*P **P 03 38 43.5 +2.4**
SCG Saint Claude 80.37 283 *e*P **P 03 38 43.5 +2.3**
LZG Guadaloupe-1 80.38 283 *e*P **P 03 38 42.6 +1.4**
HMG Houelmont 80.41 283 *e*P **P 03 38 43.5 +2.1**
TBG Guadaloupe-3 80.44 283 *e*P **P 03 38 43.7 +2.1**
EYMN Ely 80.48 324 *e*P **P 03 38 40.6 -0.7**
comp=Z,549nm,1.1s,mb6.3
EYMN LR LR
comp=Z,8μm,21.0s
EYMN Ely 80.48 324 *e*P **P 03 38 40.6 -0.7**
comp=Z,549nm,1.1s,mb6.3
SEUS St. Eustatius 80.57 285 P **P 03 38 45.5 +3.3**
COWI Conover 80.58 321 *e*P **P 03 38 41.5 -0.3**
comp=Z,1μm,0.9s,mb6.8
COWI LR LR
comp=Z,6μm,20.0s
COWI Conover 80.58 321 *e*P **P 03 38 41.5 -0.4**
comp=Z,1μm,0.9s,mb6.8
JNU Nakatsue 80.59 56 P **P 03 38 43.4 +1.3**
JNU Nakatsue 80.59 56 P **P 03 38 43.4 +1.3**
MCK McKinley 80.65 359 *e*P **P 03 38 41.3 -0.6**
MCK pmax pmax
comp=Z,978nm,1.0s,mb6.6
MCK McKinley 80.65 359 *e*P **P 03 38 41.3 -0.5**
comp=Z,978nm,1.0s,mb6.6
MCK McKinley 80.65 359 *e*P **P 03 38 41.3 -0.6**
comp=Z,978nm,1.0s,mb6.6
FDF Fort de France 80.68 281 PFAKE 03 38 50.0 +7.1
FDF LR LR
comp=Z,1μm,19.0s
SABA Saba 80.70 285 P **P 03 38 45.3 +2.3**
COCO West Island 80.71 112 PFAKE 03 38 50.0 +7.1
COCO LR LR
comp=Z,5μm,21.0s
BIM Bigot 80.74 281 *e*P **P 03 38 45.0 +1.8**
ASAJ Asahikawa 80.79 41 P **P 03 38 43.4 +0.3**
comp=Z,130nm,0.7s,mb5.9,baz=300,slow=7.6,SNR=51
ASAJ Asahikawa 80.79 41 P **P 03 38 43.4 +0.4**
ASAJ pmax pmax
comp=Z,130nm,0.7s
ASAJ Asahikawa 80.79 41 P **P 03 38 43.7 +0.7**
ASAJ Asahikawa 80.79 41 P **P 03 38 43.7 +0.7**
ULM Lac du Bonnet 80.86 327 P **P 03 38 42.6 -0.6**
comp=Z,1μm,0.9s,mb6.8,baz=41,slow=4.7,SNR=221
ULM S S 03 48 43.5 -2.9
comp=Z,18nm,1.0s,baz=242,slow=19,SNR=7.4
ULM PKKPbc PKKPbc 03 57 22.0 +1.5
comp=Z,5.3nm,0.8s,baz=357,slow=4.3,SNR=3.9
ULM LR LR 04 13 21.0
comp=Z,7μm,20.8s,baz=46,slow=35
ULM Lac du Bonnet 80.86 327 *e*P **P 03 38 42.5 -0.7**
comp=Z,970nm,0.8s,mb6.7
ULM LR LR
comp=Z,19μm,22.0s
ULM Lac du Bonnet 80.86 327 *e*P **P 03 38 42.5 -0.7**
comp=Z,970nm,0.8s,mb6.7
TRF Thorofare Moun 80.95 359 *e*P **P 03 38 42.9 -0.6**
comp=Z,100nm,0.3s,mb6.1
TRF Thorofare Moun 80.95 359 *e*P **P 03 38 42.9 -0.6**
comp=Z,100nm,0.3s,mb6.1
CNNC Cliffs of the 81.04 307 *e*P **P 03 38 44.9 +0.4**
comp=Z,308nm,0.9s,mb6.1
CNNC LR LR
comp=Z,6μm,22.0s
CNNC Cliffs of the 81.04 307 *e*P **P 03 38 44.9 +0.4**
comp=Z,308nm,0.9s,mb6.1
ACSO Alum Creek Sta 81.07 314 *e*P **P 03 38 44.4 -0.2**
comp=Z,526nm,0.8s,mb6.4
ACSO LR LR
comp=Z,6μm,20.0s
ACSO Alum Creek Sta 81.07 314 *e*P **P 03 38 44.4 -0.2**
comp=Z,526nm,0.8s,mb6.4
PETK Petropavlovsk- 81.25 28 P **P 03 38 45.5 +0.3**
comp=Z,165nm,0.9s,mb5.9,baz=26,slow=2.2,SNR=116
BLA Blacksburg 81.43 310 *e*P **P 03 38 46.5 0.0**
BLA pmax pmax
comp=Z,166nm,0.9s,mb5.9
BLA MLR MLR
comp=Z,4μm,21.0s
BLA Blacksburg 81.43 310 *e*P **P 03 38 46.5 0.0**
comp=Z,166nm,0.9s,mb5.9
BLA LR LR
comp=Z,4μm,21.0s
BLA Blacksburg 81.43 310 *e*P **P 03 38 46.5 0.0**
comp=Z,166nm,0.9s,mb5.9
TTA Tatalina 81.44 2 *e*P **P 03 38 46.5 +0.4**
TTA pmax pmax
comp=Z,307nm,1.0s,mb6.1
TTA Tatalina 81.44 2 *e*P **P 03 38 46.5 +0.4**
comp=Z,307nm,1.0s,mb6.1
TTA Tatalina 81.44 2 *e*P **P 03 38 46.5 +0.4**
comp=Z,307nm,1.0s,mb6.1
PPLA Purkeypile 81.52 360 *e*P **P 03 38 46.0 -0.6**
comp=Z,773nm,0.3s,mb7.0
PPLA Purkeypile 81.52 360 *e*P **P 03 38 46.0 -0.5**
comp=Z,773nm,0.3s,mb7.0
TRIS Tristan da Cun 81.61 211 PFAKE 03 39 00.0 +13
TRIS LR LR
comp=Z,6μm,19.0s
ELN Prospectdale 81.62 310 *e*P **P 03 38 47.8 +0.3**
ELN Prospectdale 81.62 310 *e*P **P 03 38 47.8 +0.2**
MDSI Maura Dua 81.65 102 P **P 03 38 48.5 +0.5**
comp=Z,3μmcomp=Z,244nm,1.2s,mb5.9
MDSI Maura Dua 81.65 102 P **P 03 38 48.9 +0.9**
comp=Z,3μmcomp=Z,244nm,1.2s,mb5.9
PET Petropavlovsk 81.67 28c*e*P **P 03 38 47.5 0.0**
PET *e**PP pP 03 39 05.8 +0.4
PET *e**SP sP 03 39 14.2 +1.7
PET *e* 03 41 56.7
PET *e*S S 03 48 50.4 -4.3
PET *e*PS 03 49 37.0
PET *e*PPS 03 50 01.4
PET pmax pmax
comp=Z,107nm,0.8s,mb5.7
PET pmax pmax
comp=Z,1μm,13.6s
PET pmax pmax
comp=Z,1μm,13.2s
PET pmax pmax
comp=Z,1μm,9.1s
PET pmax pmax
comp=Z,1μm,18.6s
PET smax
comp=N,1μm,14.4s
PET smax
comp=E,1μm,14.2s
PET smax
comp=N,2μm,17.9s
PET smax
comp=E,2μm,20.1s
PET MLR MLR
comp=Z,9μm,21.0s
PET MLR MLR
comp=Z,6μm,20.0s
PET Petropavlovsk 81.67 28⇑*i*P **P 03 38 47.7 +0.2**
PET LR LR
comp=Z,7μm,22.0s
PET Petropavlovsk 81.67 28⇑*i*P **P 03 38 47.7 +0.2**
LWLI Liwa 81.87 102 P **P 03 38 50.2 +1.0**
comp=Z,468nm,0.8s,mb6.3
KLSI 82.21 102 P **P 03 38 50.6 -0.3**
comp=Z,3μmcomp=Z,246nm,1.7s,mb5.8
KLSI 82.21 102 P **P 03 38 52.0 +1.1**
comp=Z,3μmcomp=Z,245nm,1.7s,mb5.8
AGMN Agassiz Nation 82.28 326 *e*P **P 03 38 50.0 -0.8**
comp=Z,519nm,0.9s,mb6.4
AGMN LR LR
comp=Z,4μm,19.0s
AGMN Agassiz Nation 82.28 326 *e*P **P 03 38 50.0 -0.8**
comp=Z,519nm,0.9s,mb6.4
CBYP Canovanas 82.37 287 *e*P **P 03 38 52.4 +0.7**
comp=Z,662nm,0.9s,mb6.5
CBYP Canovanas 82.37 287 *e*P **P 03 38 52.4 +0.6**
comp=Z,662nm,0.9s,mb6.5
ERM Erimo 82.50 43 P **P 03 38 53.9 +1.8**
comp=Z,861nm,1.1s,mb6.5,SNR=8.9
ERM Erimo 82.50 43 P **P 03 38 52.9 +0.8**
ERM *e*S S 03 49 05.5 +1.9
ERM pmax pmax
comp=Z,374nm,1.3s,mb6.1
ERM MLR MLR
comp=Z,9μm,19.0s
ERM Erimo 82.50 43 P **P 03 38 52.9 +0.9**
comp=Z,374nm,1.3s,mb6.1
ERM *e*S S 03 49 05.5 +1.9
ERM LR LR
comp=Z,9μm,19.0s
ERM Erimo 82.50 43 P **P 03 38 52.9 +0.8**
comp=Z,374nm,1.3s,mb6.1
ERM Erimo 82.50 43 *e*S S 03 49 05.5 +1.9
KASI Kota Agung 82.52 102 P **P 03 38 53.7 +1.1**
comp=Z,3μmcomp=Z,283nm,1.0s,mb6.0
KASI Kota Agung 82.52 102 P **P 03 38 57.5 +4.9**
comp=Z,3μmcomp=Z,283nm,1.0s,mb6.0
GRGR Grenville 82.56 280 *e*P **P 03 38 53.6 +0.8**
comp=Z,1μm,0.9s,mb6.7
GRGR LR LR
comp=Z,1μm,22.0s
GRGR Grenville 82.56 280 *e*P **P 03 38 53.7 +0.9**
comp=Z,1μm,0.9s,mb6.7
YUK Yuzh-Kuril'sk 82.58 40⇑*i*P **P 03 38 52.7 +0.3**
YUK *i* *PP pP 03 39 14.1 +3.8
YUK *i* 03 42 08.9
YUK *i* PPP 03 43 48.3
YUK *i* S S 03 49 04.1 -0.2
YUK *i* SS SS 03 54 29.4 +3.6
YUK pmax pmax
comp=Z,800nm,1.3s,mb6.4
YUK pmax pmax
comp=N,240nm,0.7s
YUK pmax pmax
comp=E,170nm,0.7s
YUK pmax pmax
comp=Z,2μm,1.6s,mb6.6
YUK smax
comp=N,4μm,5.6s
YUK smax
comp=E,1μm,2.8s
SJG San Juan 82.69 287 P **P 03 38 53.4 0.0**
comp=E,395nm,1.0s,mb6.2,baz=18,slow=3.6,SNR=26
SJG S S 03 49 09.4 +3.2
comp=E,28nm,0.9s,baz=337,slow=14,SNR=6.7
SJG San Juan 82.69 287 *e*P **P 03 38 53.8 +0.4**
SJG pmax pmax
comp=Z,300nm,0.8s
SJG MLR MLR
comp=Z,3μm,22.0s
SJG San Juan 82.69 287 *e*P **P 03 38 53.8 +0.4**
comp=Z,300nm,0.8s,mb6.2
SJG LR LR
comp=Z,3μm,22.0s
SJG San Juan 82.69 287 *e*P **P 03 38 53.8 +0.4**
comp=Z,300nm,0.8s,mb6.2
PMR Palmer 82.80 359 *e*P **P 03 38 53.1 -0.1**
PMR pmax pmax
comp=Z,1μm,1.1s,mb6.6
PMR Palmer 82.80 359 *e*P **P 03 38 53.1 -0.1**
comp=Z,1μm,1.1s,mb6.6
PMR Palmer 82.80 359 *e*P **P 03 38 53.1 -0.1**
comp=Z,1μm,1.1s,mb6.6
KSM Kuching 83.06 93 P **P 03 38 59.3 +3.9**
KSM Kuching 83.06 93 *e*P **P 03 38 58.4 +3.0**
comp=Z,156nm,1.1s,mb5.8
KSM LR LR
comp=Z,4μm,22.0s
KSM Kuching 83.06 93 P **P 03 38 58.8 +3.4**
comp=Z,3μmcomp=Z,131nm,1.3s,mb5.6
ICM Isla Caja Muer 83.10 287 *e*P **P 03 38 56.0 +0.5**
ICM Isla Caja Muer 83.10 287 *e*P **P 03 38 56.0 +0.4**
DIV Divide 83.15 357 *e*P **P 03 38 55.1 +0.1**
comp=Z,340nm,0.9s,mb6.2
DIV Divide 83.15 357 *e*P **P 03 38 55.1 +0.1**
comp=Z,340nm,0.9s,mb6.2
MAJO Matsushiro 83.20 49 *e*P **P 03 38 56.1 +0.3**
MAJO pmax pmax
comp=Z,97nm,0.8s,mb5.7
MAJO MLR MLR
comp=Z,7μm,22.0s
MAJO Matsushiro 83.20 49 *e*P **P 03 38 56.1 +0.3**
comp=Z,97nm,0.8s,mb5.7
MAJO LR LR
comp=Z,7μm,22.0s
MAJO Matsushiro 83.20 49 *e*P **P 03 38 56.1 +0.3**
comp=Z,97nm,0.8s,mb5.7
MAT Matsushiro 83.20 49 P **P 03 38 55.7 -0.1**
MAT S S 03 49 07.0 -3.9
MJAR Matsushiro Arr 83.20 49 P **P 03 38 56.0 +0.2**
comp=Z,93nm,0.9s,mb5.6,baz=307,slow=4.7,SNR=71
MJAR S S 03 49 17.2 +6.3
comp=Z,2.2nm,1.0s,baz=76,slow=15,SNR=4.6
MJAR PKKPbc PKKPbc 03 57 18.5 +3.6
comp=Z,1.0nm,0.7s,baz=140,slow=3.9,SNR=4.2
MJAR LR LR 04 19 43.9
comp=Z,6μm,20.7s,baz=305,slow=38
MJAR Matsushiro Arr 83.20 49 P **P 03 38 56.0 +0.2**
AGPR Aguadilla, PR 83.23 288 *e*P **P 03 38 57.7 +1.5**
comp=Z,1μm,0.9s,mb6.8
AGPR Aguadilla, PR 83.23 288 *e*P **P 03 38 57.7 +1.5**
comp=Z,1μm,0.9s,mb6.8
BMRM Bremner River 83.26 356 *e*P **P 03 38 55.3 -0.2**
comp=Z,508nm,1.0s,mb6.3
BMRM Bremner River 83.26 356 *e*P **P 03 38 55.3 -0.3**
comp=Z,508nm,1.0s,mb6.3
RC01 Rabbit Creek A 83.31 359 *e*P **P 03 38 55.8 -0.1**
comp=Z,208nm,0.3s,mb6.4
RC01 Rabbit Creek A 83.31 359 *e*P **P 03 38 55.8 -0.1**
comp=Z,208nm,0.3s,mb6.4
JFWS Jewell Farm 83.35 319 *e*P **P 03 38 55.8 -0.6**
JFWS pmax pmax
comp=Z,471nm,0.9s,mb6.3
JFWS MLR MLR
comp=Z,10μm,21.0s
JFWS Jewell Farm 83.35 319 *e*P **P 03 38 55.8 -0.6**
comp=Z,471nm,0.9s,mb6.3
JFWS LR LR
comp=Z,10μm,21.0s
JFWS Jewell Farm 83.35 319 *e*P **P 03 38 55.8 -0.6**
comp=Z,471nm,0.9s,mb6.3
TPI Tanjungpandan 83.40 98 P **P 03 38 58.6 +1.5**
comp=Z,2μmcomp=Z,119nm,1.2s,mb5.6
TPI Tanjungpandan 83.40 98 P **P 03 39 00.6 +3.5**
comp=Z,2μmcomp=Z,119nm,1.2s,mb5.6
CRPR Cabo Rojo, PR 83.49 287 *e*P **P 03 38 58.4 +0.8**
comp=Z,345nm,1.0s,mb6.1
CRPR Cabo Rojo, PR 83.49 287 *e*P **P 03 38 58.4 +0.8**
comp=Z,345nm,1.0s,mb6.1
JSC Jenkinsville 83.80 308 *e*P **P 03 38 59.7 +0.8**
JSC Jenkinsville 83.80 308 *e*P **P 03 38 59.7 +0.8**
BLO Bloomington 83.83 315 *e*P **P 03 38 58.8 -0.1**
BLO pmax pmax
comp=Z,779nm,0.8s,mb6.6
BLO Bloomington 83.83 315 *e*P **P 03 38 58.8 -0.1**
comp=Z,779nm,0.8s,mb6.6
BLO Bloomington 83.83 315 *e*P **P 03 38 58.8 -0.1**
comp=Z,779nm,0.8s,mb6.6
NHSC New Hope 83.84 307 *e*P **P 03 38 59.9 +0.7**
comp=Z,514nm,0.9s,mb6.4
NHSC LR LR
comp=Z,7μm,22.0s
NHSC New Hope 83.84 307 *e*P **P 03 38 59.9 +0.7**
comp=Z,514nm,0.9s,mb6.4
SKAG Skagway 83.94 351 *e*P **P 03 38 59.5 +0.4**
comp=Z,294nm,1.1s,mb6.0
SKAG Skagway 83.94 351 *e*P **P 03 38 59.5 +0.4**
comp=Z,294nm,1.1s,mb6.0
RSO Redoubt South 83.96 0 *e*P **P 03 38 58.7 -0.5**
RSO Redoubt South 83.96 0 *e*P **P 03 38 58.7 -0.5**
SBUM Sibu 84.05 91 P **P 03 39 03.9 +3.4**
comp=Z,3μmcomp=Z,120nm,1.2s,mb5.6
CGJI Cibinong 84.12 102 P **P 03 39 00.9 +0.1**
comp=Z,315nm,1.6s,mb5.9
CGJI Cibinong 84.12 102 P **P 03 39 01.1 +0.3**
comp=Z,315nm,1.6s,mb5.9
PNL Peninsula 84.17 354 *e*P **P 03 39 00.3 0.0**
comp=Z,364nm,0.9s,mb6.2
PNL Peninsula 84.17 354 *e*P **P 03 39 00.3 0.0**
comp=Z,364nm,0.9s,mb6.2
SBJI Serang 84.18 102 P **P 03 39 03.3 +2.2**
comp=Z,343nm,1.5s,mb6.0
DLBC Dease Lake 84.18 348 *e*P **P 03 39 01.1 +0.8**
DLBC Dease Lake 84.18 348 *e*P **P 03 39 01.1 +0.7**
WCI Wyandotte Cave 84.32 314 *e*P **P 03 39 01.4 -0.1**
WCI pmax pmax
comp=Z,535nm,0.9s,mb6.4
WCI MLR MLR
comp=Z,8μm,19.0s
WCI Wyandotte Cave 84.32 314 *e*P **P 03 39 01.4 -0.1**
comp=Z,535nm,0.9s,mb6.4
WCI LR LR
comp=Z,8μm,19.0s
WCI Wyandotte Cave 84.32 314 *e*P **P 03 39 01.4 -0.1**
comp=Z,535nm,0.9s,mb6.4
HDIL Hopedale 84.46 317 *e*P **P 03 39 02.0 -0.1**
comp=Z,606nm,0.8s,mb6.5
HDIL LR LR
comp=Z,6μm,20.0s
HDIL Hopedale 84.46 317 *e*P **P 03 39 02.0 -0.1**
comp=Z,606nm,0.8s,mb6.5
TKL Tuckaleechee C 84.50 310 P **P 03 39 02.7 +0.3**
comp=Z,735nm,0.9s,mb6.5,baz=87,slow=5.7,SNR=230
TKL Tuckaleechee C 84.50 310 P **P 03 39 02.7 +0.3**
TKL pmax pmax
comp=Z,735nm,0.9s,mb6.5
TKL Tuckaleechee C 84.50 310 *e*P **P 03 39 02.5 +0.1**
TKL Tuckaleechee C 84.50 310 *e*P **P 03 39 02.5 +0.1**
GRTK Grand Turk 84.52 292 P **P 03 39 03.8 +1.0**
comp=Z,902nm,0.8s,mb6.8
GRTK LR LR
comp=Z,3μm,19.0s
GRTK Grand Turk 84.52 292 P **P 03 39 03.8 +1.0**
comp=Z,902nm,0.8s,mb6.8
STKI Sintang 84.83 94 P **P 03 39 08.1 +3.7**
comp=Z,182nm,1.6s,mb5.8
STKI Sintang 84.83 94 P **P 03 39 08.5 +4.1**
comp=Z,182nm,1.6s,mb5.8
MID Middleton Isla 84.88 357 *e*P **P 03 39 05.9 +2.0**
MID pmax pmax
comp=Z,791nm,0.9s,mb6.6
MID Middleton Isla 84.88 357 *e*P **P 03 39 05.9 +2.1**
comp=Z,791nm,0.9s,mb6.6
MID Middleton Isla 84.88 357 *e*P **P 03 39 05.9 +2.0**
comp=Z,791nm,0.9s,mb6.6
OLIL Olney 85.03 315 *e*P **P 03 39 04.8 -0.2**
comp=Z,737nm,0.8s,mb6.7
OLIL Olney 85.03 315 *e*P **P 03 39 04.8 -0.2**
comp=Z,737nm,0.8s,mb6.7
EDM Edmonton 85.03 338 *e*P **P 03 39 04.4 -0.4**
EDM Edmonton 85.03 338 *e*P **P 03 39 04.4 -0.4**
CPCT Cooper Cave 85.09 311 *e*P **P 03 39 06.3 +0.9**
CPCT Cooper Cave 85.09 311 *e*P **P 03 39 06.3 +0.9**
KDM Kudat 85.21 85 P **P 03 39 10.8 +4.5**
KKM Kota Kinabalu 85.21 86 P **P 03 39 10.2 +3.9**
KKM Kota Kinabalu 85.21 86 *e*P **P 03 39 08.9 +2.6**
comp=Z,174nm,1.4s,mb5.8
KKM LR LR
comp=Z,3μm,21.0s
KKM Kota Kinabalu 85.21 86 P **P 03 39 14.4 +8.1**
SCIA State Center 85.62 320 *e*P **P 03 39 07.4 -0.5**
comp=Z,915nm,0.8s,mb6.8
SCIA LR LR
comp=Z,5μm,20.0s
SCIA State Center 85.62 320 *e*P **P 03 39 07.4 -0.5**
comp=Z,915nm,0.8s,mb6.8
DGMT Dagmar 85.73 330 ⇑P **P 03 39 08.4 +0.1**
baz=85
DGMT Dagmar 85.73 330 *e*P **P 03 39 08.5 +0.2**
comp=Z,640nm,0.8s,mb6.6
DGMT LR LR
comp=Z,7μm,21.0s

DGMT	Dagmar	85.73	330	eP	P	03 39 08.5	+0.2
	comp=Z,640nm,0.8s,mb6.6						
GOGA	Godfrey	85.77	309	eP	P	03 39 09.2	+0.4
GOGA				pmax	pmax		
	comp=Z,32nm,0.4s,mb5.6						
GOGA				MLR	MLR		
	comp=Z,5μm,22.0s						
GOGA	Godfrey	85.77	309	eP	P	03 39 09.2	+0.4
	comp=Z,32nm,0.4s,mb5.6						
GOGA				LR	LR		
	comp=Z,5μm,22.0s						
GOGA	Godfrey	85.77	309	eP	P	03 39 09.2	+0.4
	comp=Z,32nm,0.4s,mb5.6						
LEM	Lembang	85.78	101	P	P	03 39 08.7	-0.4
	comp=Z,4μmcomp=Z,147nm,2.2s,mb5.5						
LEM	Lembang	85.78	101	P	P	03 39 18.1	+9.0
ECSD	EROS Data Cent	86.00	323	eP	P	03 39 09.4	-0.3
	comp=Z,702nm,0.8s,mb6.6						
ECSD				LR	LR		
	comp=Z,7μm,20.0s						
ECSD	EROS Data Cent	86.00	323	eP	P	03 39 09.4	-0.3
	comp=Z,702nm,0.8s,mb6.6						
PCRV	Puerto La Cruz	86.07	280	P	P	03 39 09.9	-0.7
	comp=Z,116nm,1.0s,mb5.8,baz=36,slow=5.2,SNR=27						
PCRV				S	S	03 49 27.3	-13
	comp=Z,9.8nm,1.0s,baz=305,slow=20,SNR=6.2						
PCRV	Puerto La Cruz	86.07	280	P	P	03 39 09.9	-0.7
SWET	Sewanee	86.11	311	eP	P	03 39 10.1	-0.4
SWET	Sewanee	86.11	311	eP	P	03 39 10.1	-0.4
SDDR	Presa de Saban	86.13	291	eP	P	03 39 12.4	+1.5
	comp=Z,757nm,0.8s,mb6.7						
SDDR				LR	LR		
	comp=Z,7μm,22.0s						
SDDR	Presa de Saban	86.13	291	eP	P	03 39 12.4	+1.6
	comp=Z,757nm,0.8s,mb6.7						
SDKM	Sandakan	86.24	86	P	P	03 39 14.9	+3.4
SIT	Sitka	86.28	351	eP	P	03 39 11.6	+0.7
SIT				pmax	pmax		
	comp=Z,556nm,0.9s,mb6.5						
SIT	Sitka	86.28	351	eP	P	03 39 11.6	+0.7
	comp=Z,556nm,0.9s,mb6.5						
SIT	Sitka	86.28	351	eP	P	03 39 11.6	+0.7
	comp=Z,556nm,0.9s,mb6.5						
SLM	Saint Louis	86.31	316	eP	P	03 39 11.4	0.0
SLM				pmax	pmax		
	comp=Z,907nm,0.8s,mb6.8						
SLM	Saint Louis	86.31	316	eP	P	03 39 11.4	0.0
	comp=Z,908nm,0.8s,mb6.8						
SLM	Saint Louis	86.31	316	eP	P	03 39 11.4	0.0
	comp=Z,908nm,0.8s,mb6.8						
SIUC	Southern Illin	86.37	315	eP	P	03 39 11.5	-0.2
	comp=Z,1μm,0.9s,mb6.9						
SIUC				ePP	PP	03 42 35.4	+2.5
SIUC	Southern Illin	86.37	315	eP	P	03 39 11.5	-0.2
	comp=Z,1μm,0.9s,mb6.9						
JHJ	Hachijo jima 2	86.41	51	P	P	03 39 12.5	+0.6
	comp=Z,129nm,0.9s,mb5.9,baz=168,slow=4.9,SNR=4.8						
WVT	Waverly	86.64	313	eP	P	03 39 12.1	-1.0
WVT				e		03 42 34.2	
WVT				pmax	pmax		
	comp=Z,318nm,0.8s,mb6.3						
WVT				MLR	MLR		
	comp=Z,6μm,19.0s						
WVT	Waverly	86.64	313	eP	P	03 39 12.1	-1.0
	comp=Z,318nm,0.8s,mb6.3						
WVT				ePP	PP	03 42 34.2	-1.0
WVT				LR	LR		
	comp=Z,6μm,19.0s						
WVT	Waverly	86.64	313	eP	P	03 39 12.1	-1.0
	comp=Z,318nm,0.8s,mb6.3						
KDAK	Kodiak Island	86.65	0	P	P	03 39 13.0	+0.3
	comp=Z,6μm,0.9s,mb7.5						
KDAK	Kodiak Island	86.65	0	S	SKSac	03 49 29.3	-4.2
	comp=Z,11nm,1.0s,baz=7.3,slow=8.7,SNR=4.6						
KDAK	Kodiak Island	86.65	0	eP	P	03 39 12.8	+0.1
KDAK				S	SKSac	03 49 28.1	-5.4
KDAK				pmax	pmax		
	comp=Z,778nm,0.8s,mb6.7						
KDAK				MLR	MLR		
	comp=Z,6μm,21.0s						
KDAK	Kodiak Island	86.65	0	eP	P	03 39 12.8	+0.1
	comp=Z,778nm,0.8s,mb6.7						
KDAK				S	SKSac	03 49 28.1	-5.4
KDAK				LR	LR		
	comp=Z,6μm,21.0s						
KDAK	Kodiak Island	86.65	0	eP	P	03 39 12.8	+0.1
	comp=Z,778nm,0.8s,mb6.7						
FVM	French Village	86.87	316	eP	P	03 39 14.2	+0.1
FVM				eS	S	03 49 48.1	+1.0
FVM				pmax	pmax		
	comp=Z,1μm,0.8s,mb6.8						
FVM	French Village	86.87	316	eP	P	03 39 14.2	0.0
	comp=Z,1μm,0.8s,mb6.8						
FVM				eS	S	03 49 48.1	+0.9
FVM	French Village	86.87	316	eP	P	03 39 14.2	+0.1
	comp=Z,1μm,0.8s,mb6.8						
SMY	Shemya	86.96	20	eP	P	03 39 14.9	+0.6
SMY				pmax	pmax		
	comp=Z,398nm,1.1s,mb6.3						
SMY	Shemya	86.96	20	eP	P	03 39 14.8	+0.6
	comp=Z,398nm,1.1s,mb6.3						
SMY	Shemya	86.96	20	eP	P	03 39 14.9	+0.6
	comp=Z,398nm,1.1s,mb6.3						
UTMT	University of	87.11	314	eP	P	03 39 16.0	+0.6
	comp=Z,501nm,1.0s,mb6.4						
UTMT	University of	87.11	314	eP	P	03 39 16.0	+0.7
	comp=Z,501nm,1.0s,mb6.4						
OHAK	Old Harbor	87.21	1	eP	P	03 39 15.5	+0.1
	comp=Z,851nm,0.9s,mb6.7						
OHAK				ePP	PP	03 42 40.3	+1.4
OHAK				eS	SKSac	03 49 33.8	-3.1
OHAK	Old Harbor	87.21	1	eP	P	03 39 15.5	+0.1
	comp=Z,851nm,0.9s,mb6.7						
A18A	Metzger Ranch,	87.52	334	⇓P	P	03 39 16.9	-0.2
	baz=87						
CRAG	Craig	87.52	349	eP	P	03 39 17.6	+0.7
	comp=Z,184nm,1.0s,mb6.1						
CRAG	Craig	87.52	349	eP	P	03 39 17.6	+0.7
	comp=Z,184nm,1.0s,mb6.1						
PVMO	Portageville	87.54	314	eP	P	03 39 17.9	+0.4
	comp=Z,1μm,0.9s,mb7.0						
PVMO	Portageville	87.54	314	eP	P	03 39 17.9	+0.5
	comp=Z,1μm,0.9s,mb7.0						
MYLDM	Lahad Datu	87.56	85	P	P	03 39 21.8	+3.9
	comp=Z,3μmcomp=Z,243nm,1.2s,mb6.1						
TSM	Tawau	87.57	86	P	P	03 39 21.5	+3.6
DWPF	Disney	87.85	303	eP	P	03 39 19.7	+0.7
	comp=Z,845nm,0.8s,mb6.8						
DWPF				LR	LR		
	comp=Z,4μm,22.0s						
DWPF	Disney	87.85	303	eP	P	03 39 19.7	+0.7
	comp=Z,845nm,0.8s,mb6.8						
B18A	Beardsley Farm	87.93	333	⇑P	P	03 39 19.1	+0.1
	baz=88						
LAO	LASA Array	87.98	330	eP	P	03 39 19.8	+0.5
	comp=Z,507nm,0.8s,mb6.6						
LAO				LR	LR		
	comp=Z,7μm,21.0s						
LAO	LASA Array	87.98	330	eP	P	03 39 19.8	+0.5
	comp=Z,507nm,0.8s,mb6.6						
CHGN	Chignik	87.98	3	eP	P	03 39 18.6	-0.5
CHGN	Chignik	87.98	3	eP	P	03 39 18.6	-0.5
GNAR	Gosnell	88.04	314	eP	P	03 39 19.8	0.0
	comp=Z,7μm,0.9s,mb7.7						
GNAR	Gosnell	88.04	314	eP	P	03 39 19.8	0.0
	comp=Z,7μm,0.9s,mb7.7						
CAM4	Nova Friburgo	88.19	241	⇓iP	P	03 39 23.1	+2.5
CAM4				i		03 39 24.2	
CAM4				i		03 39 26.3	
CAM4				i		03 39 29.1	
CAM4				i	pP	03 39 36.7	-2.0
CAM4				i	pP	03 39 45.5	+6.8
CAM4				i		03 39 50.7	
CAM4				i		03 39 52.2	
CAM4				i		03 39 55.7	
CAM4				i		03 40 03.1	
LRAL	Lakeview Retre	88.23	310	eP	P	03 39 20.7	-0.1
	comp=Z,262nm,0.8s,mb6.3						
LRAL				LR	LR		
	comp=Z,6μm,22.0s						
LRAL	Lakeview Retre	88.23	310	eP	P	03 39 20.7	-0.1
	comp=Z,262nm,0.8s,mb6.3						
EGMT	Eagleton	88.23	333	⇓P	P	03 39 20.7	+0.2
	baz=88						
EGMT	Eagleton	88.23	333	eP	P	03 39 20.7	+0.3
	comp=Z,164nm,0.8s,mb6.1						
EGMT				LR	LR		
	comp=Z,9μm,20.0s						
EGMT	Eagleton	88.23	333	eP	P	03 39 20.7	+0.2
	comp=Z,164nm,0.8s,mb6.1						
B17A	L&G Farms, Che	88.39	334	⇓P	P	03 39 20.4	-0.8
	baz=88,SNR=185						
GTBY	Guantanamo Bay	88.44	293	eP	P	03 39 23.1	+1.1
	comp=Z,231nm,1.1s,mb6.1						
GTBY				LR	LR		
	comp=Z,3μm,20.0s						
GTBY	Guantanamo Bay	88.44	293	eP	P	03 39 23.1	+1.1
	comp=Z,231nm,1.1s,mb6.1						
A15A	Johnson Ranch,	88.48	335	⇑P	P	03 39 21.0	-0.6
	baz=88,SNR=1000						
MET	Memphis--Engin	88.58	313	eP	P	03 39 22.7	+0.3
	comp=Z,590nm,0.9s,mb6.6						
MET	Memphis--Engin	88.58	313	eP	P	03 39 22.7	+0.3
	comp=Z,590nm,0.9s,mb6.6						
B16A	M & M Farms, S	88.61	334	⇑P	P	03 39 21.6	-0.6
	baz=88,SNR=142						
OXF	Oxford	88.69	313	eP	P	03 39 21.8	-1.1
OXF				pmax	pmax		
	comp=Z,238nm,0.9s,mb6.2						
OXF				MLR	MLR		
	comp=Z,11μm,22.0s						
OXF	Oxford	88.69	313	eP	P	03 39 21.8	-1.1
	comp=Z,238nm,0.9s,mb6.2						
OXF				LR	LR		
	comp=Z,11μm,22.0s						
OXF	Oxford	88.69	313	eP	P	03 39 21.8	-1.1
	comp=Z,238nm,0.9s,mb6.2						
HBAR	Harrisburg	88.70	314	eP	P	03 39 24.2	+1.3
HBAR	Harrisburg	88.70	314	eP	P	03 39 24.2	+1.3
A14A	Double T Ranch	88.72	336	⇓P	P	03 39 22.3	-0.5
	baz=88,SNR=815						
WALA	Waterton Lakes	88.81	336	eP	P	03 39 22.4	-0.7
	comp=Z,1.8nm,0.8s						
WALA	Waterton Lakes	88.81	336	eP	P	03 39 22.4	-0.7
	comp=Z,1.8nm,0.8s						
SDPT	Sand Point	88.81	5	eP	P	03 39 22.7	-0.4
	comp=Z,657nm,0.8s,mb6.7						
SDPT	Sand Point	88.81	5	eP	P	03 39 22.7	-0.4
	comp=Z,657nm,0.8s,mb6.7						
C17A	Wharram Farm,	88.93	333	⇑P	P	03 39 23.1	-0.7
	baz=88,SNR=606						
D18A	Linhart Farms,	88.94	333	⇑P	P	03 39 24.0	+0.2
	baz=89						
B15A	Bradely Ranch,	88.99	335	⇑P	P	03 39 23.3	-0.8
	baz=89,SNR=951						
A13A	Flathead Natio	89.08	336	⇑P	P	03 39 23.9	-0.6
	baz=89,SNR=98						
RSSD	Black Hills	89.12	328	eP	P	03 39 24.7	0.0
RSSD				pmax	pmax		
	comp=Z,426nm,0.9s,mb6.5						
RSSD				MLR	MLR		
	comp=Z,5μm,20.0s						
RSSD	Black Hills	89.12	328	eP	P	03 39 24.7	-0.1
	comp=Z,426nm,0.9s,mb6.5						
RSSD				LR	LR		
	comp=Z,5μm,20.0s						
RSSD	Black Hills	89.12	328	eP	P	03 39 24.7	0.0
	comp=Z,426nm,0.9s,mb6.5						
C16A	Fuhringer Ranc	89.14	334	⇓P	P	03 39 23.9	-0.9
	baz=89,SNR=520						
NGJI	Ngawi	89.17	100	P	P	03 39 32.3	+6.9
	comp=Z,156nm,1.8s,mb5.7						
NGJI	Ngawi	89.17	100	P	pP	03 39 37.4	-6.1
B14A	Marquette Ranc	89.19	335	⇑P	P	03 39 24.3	-0.7
	baz=89,SNR=331						
D17A	Six Diamond Ra	89.31	333	⇑P	P	03 39 25.3	-0.3
	baz=89,SNR=400						
KSU1	Kansas State U	89.43	320	eP	P	03 39 25.8	-0.5
	comp=Z,257nm,0.7s,mb6.4						
KSU1				LR	LR		
	comp=Z,6μm,19.0s						
KSU1	Kansas State U	89.43	320	eP	P	03 39 25.8	-0.5
	comp=Z,257nm,0.7s,mb6.4						
C15A	Salmond Ranch,	89.47	335	⇓P	P	03 39 25.5	-0.8
	baz=89,SNR=293						
C15A				⇓SKSac	SKSac	03 49 49.1	-1.7
	baz=89						
A12A	Yaak River Ran	89.48	337	⇓P	P	03 39 25.8	-0.5
	baz=89,SNR=11						
A12A				⇑SKSac	SKSac	03 49 48.8	-2.1
	baz=89						
E18A	Harlowton	89.51	332	⇑P	P	03 39 26.8	+0.3
	baz=89						
E18A				⇑SKSac	SKSac	03 49 50.3	-0.8
	baz=89						
AKUT	Akutan	89.54	8	eP	P	03 39 26.6	+0.1
	comp=Z,217nm,1.0s,mb6.2						
AKUT	Akutan	89.54	8	eP	P	03 39 26.6	+0.1
	comp=Z,217nm,1.0s,mb6.2						
B13A	Whitefish	89.58	336	⇑P	P	03 39 26.5	-0.3
	baz=89,SNR=341						
B13A				⇑SKSac	SKSac	03 49 50.0	-1.4
	baz=89						
SJI	Sawahan	89.63	100	P	P	03 39 28.7	+1.2
	comp=Z,128nm,0.7s,mb6.2						
SJI	Sawahan	89.63	100	P	pP	03 39 42.4	-3.3
BRAL	Brewton	89.63	309	eP	P	03 39 27.5	+0.1
	comp=Z,938nm,0.9s,mb6.9						
BRAL				LR	LR		
	comp=Z,8μm,21.0s						
BRAL	Brewton	89.63	309	eP	P	03 39 27.5	+0.1
	comp=Z,938nm,0.9s,mb6.9						
D16A	Dana Ranch, Ca	89.73	334	⇓P	P	03 39 27.3	-0.2
	baz=89,SNR=1000						
BBB	Bella Bella	89.77	345	P	P	03 39 27.9	+0.3
	comp=Z,65nm,0.9s,mb5.8,baz=192,slow=4.8,SNR=6.9						
BBB	Bella Bella	89.77	345	P	P	03 39 27.9	+0.3
PWJI	Pagerwojo	89.83	100	P	P	03 39 29.9	+1.4
PWJI	Pagerwojo	89.83	100	P	P	03 39 30.1	+1.6
	comp=Z,190nm,1.2s,mb6.1						
C14A	Swan Lake	89.87	335	⇓P	P	03 39 28.0	-0.1
	baz=90,SNR=634						
B12A	Libby	89.87	337	⇓P	P	03 39 27.6	-0.5
	baz=90,SNR=25						
YBMT	Yellow Bay	89.87	335	eP	P	03 39 28.2	+0.1
	comp=Z,473nm,0.9s,mb6.6						
YBMT	Yellow Bay	89.87	335	eP	P	03 39 28.2	0.0
	comp=Z,473nm,0.9s,mb6.6						
E17A	Martinsdale	89.95	333	⇓P	P	03 39 28.8	+0.2
	baz=90,SNR=472						
ADK	Adak	89.97	15	PFAKE		03 39 40.0	+11
ADK				LR	LR		
	comp=Z,4μm,22.0s						
F18A	Big Timber	89.99	332	⇓P	P	03 39 28.9	+0.1
	baz=90,SNR=141						
D15A	Lincoln	90.06	334	⇑P	P	03 39 28.7	-0.3
	baz=90,SNR=353						
JTMT	Jette	90.07	335	eP	P	03 39 29.2	+0.1
	comp=Z,367nm,0.9s,mb6.5						
JTMT	Jette	90.07	335	eP	P	03 39 29.2	+0.1
	comp=Z,367nm,0.9s,mb6.5						
GCMT	Greycliff	90.07	332	eP	P	03 39 30.0	+0.9
	comp=Z,228nm,0.5s,mb6.6						
GCMT	Greycliff	90.07	332	eP	P	03 39 30.0	+0.9
	comp=Z,228nm,0.5s,mb6.6						
HRY	Holter Researc	90.10	334	eP	P	03 39 29.1	-0.1
	comp=Z,1μm,0.7s,mb7.1						
HRY				e	pP	03 39 42.9	-4.4
HRY	Holter Researc	90.10	334	eP	P	03 39 29.1	-0.1
BSMT	Bassoo Peak	90.14	336	eP	P	03 39 29.3	-0.1
	comp=Z,163nm,0.8s,mb6.2						
BSMT	Bassoo Peak	90.14	336	eP	P	03 39 29.3	-0.1
	comp=Z,163nm,0.8s,mb6.2						
SWMT	Swartz Lake	90.18	335	eP	P	03 39 29.4	-0.2
	comp=Z,181nm,0.4s,mb6.6						
SWMT	Swartz Lake	90.18	335	eP	P	03 39 29.4	-0.2
	comp=Z,181nm,0.4s,mb6.6						
E16A	East Helena	90.19	333	⇑P	P	03 39 29.7	0.0
	baz=90,SNR=159						
C13A	Hot Springs	90.22	336	⇓P	P	03 39 29.6	-0.2
	baz=90						
UALR	University of	90.22	315	eP	P	03 39 30.0	-0.1
	comp=Z,224nm,0.8s,mb6.3						
UALR	University of	90.22	315	eP	P	03 39 30.0	-0.1
	comp=Z,224nm,0.8s,mb6.3						
SLMT	Seeley Lake	90.23	335	eP	P	03 39 29.3	-0.6
	comp=Z,343nm,0.9s,mb6.5						
SLMT	Seeley Lake	90.23	335	eP	P	03 39 29.3	-0.6
	comp=Z,343nm,0.9s,mb6.5						
F17A	Fitzpatrick Pl	90.35	332	⇑P	P	03 39 31.0	+0.5
	baz=90,SNR=709						
D14A	Greenough	90.38	335	⇑P	P	03 39 30.0	-0.6
	baz=90,SNR=732						
G18A	Lazy EL Ranch,	90.42	331	⇑P	P	03 39 30.4	-0.3
	baz=90,SNR=60						
CHMT	Chamberlain Mo	90.43	334	eP	P	03 39 30.2	-0.6
	comp=Z,6μm,0.4s						
CHMT	Chamberlain Mo	90.43	334	eP	P	03 39 30.2	-0.6
	comp=Z,6μm,0.4s						
RLMT	Red Lodge	90.47	331	⇓P	P	03 39 31.4	+0.4
	baz=90,SNR=156						
RLMT	Red Lodge	90.47	331	eP	P	03 39 31.3	+0.3
	comp=Z,32nm,1.0s,mb5.4						
RLMT				epP	pP	03 39 45.4	-3.7
RLMT				esP	sP	03 39 53.4	-2.8
RLMT				LR	LR		
	comp=Z,9μm,21.0s						
RLMT	Red Lodge	90.47	331	eP	P	03 39 31.3	+0.3
	comp=Z,32nm,1.0s,mb5.4						
RLMT				epP	pP	03 39 45.4	-3.7
CMJ	Castle Mountai	90.48	293	⇓eP	P	03 39 32.5	+1.0
CMJ	Castle Mountai	90.48	293	iP	P	03 39 33.9	+2.3
CMJ	Castle Mountai	90.48	293	iP	P	03 39 33.8	+2.3
C12B	Naegeli Ranch,	90.50	336	⇓P	P	03 39 30.7	-0.4
	baz=90						
NEW	Newport	90.53	337	eP	P	03 39 31.1	-0.1
NEW				pmax	pmax		
	comp=Z,164nm,0.8s						
NEW				MLR	MLR		
	comp=Z,8μm,19.0s						
NEW	Newport	90.53	337	eP	P	03 39 31.1	-0.1
	comp=Z,164nm,0.8s,mb6.2						
NEW				LR	LR		
	comp=Z,8μm,19.0s						
NEW	Newport	90.53	337	eP	P	03 39 31.1	-0.1
	comp=Z,164nm,0.8s,mb6.2						
C11A	Tepee Creek (N	90.63	337	⇑P	P	03 39 31.1	-0.6
	baz=90,SNR=121						
E15A	Deer Lodge	90.64	334	⇓P	P	03 39 31.6	-0.1
	baz=90,SNR=30						
D13A	Huson	90.69	335	⇑P	P	03 39 31.6	-0.4
	baz=90,SNR=243						
OGNE	Ogallala	90.72	324	eP	P	03 39 32.3	0.0
	comp=Z,565nm,0.9s,mb6.7						
OGNE				LR	LR		
	comp=Z,7μm,21.0s						
OGNE	Ogallala	90.72	324	eP	P	03 39 32.3	0.0
	comp=Z,565nm,0.9s,mb6.7						
MSO	Missoula	90.74	335	eP	P	03 39 31.9	-0.3
	comp=Z,164nm,1.0s,mb6.1						
MSO				LR	LR		
	comp=Z,10μm,20.0s						
MSO	Missoula	90.74	335	eP	P	03 39 31.9	-0.3
	comp=Z,164nm,1.0s,mb6.1						
GWJ	Greenwich	90.78	293	⇓eP	P	03 39 34.5	+1.5
GWJ	Greenwich	90.78	293	iP	P	03 39 35.2	+2.3
F16A	Kennard Place,	90.81	333	⇓P	P	03 39 32.7	+0.1
	baz=90,SNR=196						
HOJ	Hope	90.84	293	⇓eP	P	03 39 34.5	+1.3
HOJ	Hope	90.84	293	iP	P	03 39 36.5	+3.3
HOJ	Hope	90.84	293	iP	P	03 39 36.5	+3.3
STH	Stony Hill	90.84	293	⇓eP	P	03 39 34.6	+1.5
STH				iP		03 39 35.9	
STH	Stony Hill	90.84	293	iP	P	03 39 35.9	+2.7
STH	Stony Hill	90.84	293	iP	P	03 39 35.9	+2.7
G17A	Pierce Place,	90.87	332	⇑P	P	03 39 33.7	+0.8
	baz=90,SNR=410						
BOZ	Bozeman (W)	90.93	333	⇑P	P	03 39 33.7	+0.5
	baz=90,SNR=752						
BOZ	Bozeman (W)	90.93	333	eP	P	03 39 33.6	+0.5
BOZ				pmax	pmax		
	comp=Z,319nm,0.8s,mb6.5						
BOZ				MLR	MLR		
	comp=Z,8μm,21.0s						
BOZ	Bozeman (W)	90.93	333	eP	P	03 39 33.6	+0.4
	comp=Z,319nm,0.8s,mb6.5						
BOZ				LR	LR		
	comp=Z,8μm,21.0s						
BOZ	Bozeman (W)	90.93	333	eP	P	03 39 33.6	+0.5
	comp=Z,319nm,0.8s,mb6.5						
E14A	Clinton	90.94	334	⇑P	P	03 39 33.1	0.0
	baz=91,SNR=244						
VBMS	Vicksburg	90.94	312	eP	P	03 39 34.0	+0.6
	comp=Z,506nm,0.8s,mb6.7						
VBMS				LR	LR		
	comp=Z,10μm,20.0s						
VBMS	Vicksburg	90.94	312	eP	P	03 39 34.0	+0.5
	comp=Z,506nm,0.8s,mb6.7						
BBJ	Bamboo Saint A	90.99	293	⇓iP	P	03 39 35.2	+1.3
BBJ	Bamboo Saint A	90.99	293	iP	P	03 39 36.1	+2.2
BBJ	Bamboo Saint A	90.99	293	iP	P	03 39 36.1	+2.2
D12A	Red Ives Fores	91.03	336	⇑P	P	03 39 32.8	-0.7
	baz=91						
F15A	Butte	91.08	333	⇑P	P	03 39 33.8	0.0
	baz=91,SNR=279						
LRM	Limekiln Ridge	91.08	333	eP	P	03 39 34.0	+0.1
	comp=Z,1μm,0.9s,mb7.0						
LRM	Limekiln Ridge	91.08	333	eP	P	03 39 34.0	+0.2
	comp=Z,1μm,0.9s,mb7.0						
MIAR	Mount Ida	91.10	315	eP	P	03 39 34.4	+0.3
MIAR				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.4						
MIAR				MLR	MLR		
	comp=Z,9μm,22.0s						
MIAR	Mount Ida	91.10	315	eP	P	03 39 34.4	+0.3
	comp=Z,27nm,0.9s,mb5.4						
MIAR				LR	LR		
	comp=Z,9μm,22.0s						
MIAR	Mount Ida	91.10	315	eP	P	03 39 34.4	+0.3
	comp=Z,27nm,0.9s,mb5.4						
B08A	Colville Reser	91.12	339	⇑P	P	03 39 33.1	-0.9
	baz=91,SNR=121						
E13A	Victor	91.17	335	⇓P	P	03 39 33.8	-0.4
	baz=91,SNR=146						
CBKS	Cedar Bluff	91.25	322	eP	P	03 39 34.5	-0.3
CBKS				pmax	pmax		
	comp=Z,365nm,0.9s,mb6.5						
CBKS				MLR	MLR		
	comp=Z,10μm,21.0s						
CBKS	Cedar Bluff	91.25	322	eP	P	03 39 34.5	-0.2
	comp=Z,365nm,0.9s,mb6.5						
CBKS				LR	LR		
	comp=Z,10μm,21.0s						
CBKS	Cedar Bluff	91.25	322	eP	P	03 39 34.5	-0.3
	comp=Z,365nm,0.9s,mb6.5						
MTDJ	Mount Denham	91.29	294	eP	P	03 39 37.1	+1.8
	comp=Z,138nm,0.9s,mb6.1						
MTDJ				LR	LR		
	comp=Z,2μm,21.0s						
MTDJ	Mount Denham	91.29	294	eP	P	03 39 37.1	+1.8
	comp=Z,138nm,0.9s,mb6.1						
PCJ	Portland Cotta	91.31	293	⇓eP	P	03 39 36.2	+0.8
PCJ	Portland Cotta	91.31	293	iP	P	03 39 36.6	+1.2
PCJ	Portland Cotta	91.31	293	iP	P	03 39 36.6	+1.2
A05A	Maple Falls	91.31	341	⇑P	P	03 39 32.9	-1.9
	baz=91,S

comp=Z,442nm,0.9s,mb6.7
SDV LR LR
comp=Z,814nm,20.0s
SDV Santo Domingo 91.61 282 *e*P **P 03 39 37.5 +0.7**
comp=Z,442nm,0.9s,mb6.7
YFT Old Faithful 91.64 332 *e*P **P 03 39 39.3 +2.8**
comp=Z,341nm,1.0s,mb6.5
G15A Dillon 91.66 333 ⇓P **P 03 39 36.7 +0.2**
baz=91,SNR=505
E12A Beaver Dam Sad 91.66 336 ⇓P **P 03 39 35.6 -0.9**
baz=91,SNR=390
RPW Rockport 91.66 340 *e*P **P 03 39 36.1 -0.4**
comp=Z,36nm,0.8s,mb5.7
RPW Rockport 91.66 340 *e*P **P 03 39 36.1 -0.3**
comp=Z,36nm,0.8s,mb5.7
F13A Darby 91.78 335 ⇓P **P 03 39 37.0 -0.1**
baz=91,SNR=933
OD2 Odessa Site #2 91.80 338 P **P 03 39 37.0 -0.2**
OD2 Odessa Site #2 91.80 338 P **P 03 39 37.0 -0.1**
L22A Ellis Ranch, M 91.85 328 ⇑P **P 03 39 37.4 0.0**
baz=92
NEJ Negril 91.86 294⇑*e*P **P 03 39 39.9 +1.9**
NEJ Negril 91.86 294 *i* P **P 03 39 39.9 +1.9**
NEJ Negril 91.86 294 *i* P **P 03 39 39.9 +2.0**
I18A Diamond G Ranc 91.88 331 ⇓P **P 03 39 37.8 +0.2**
baz=92
WTV Waterville 91.89 339 P **P 03 39 37.2 -0.3**
WTV Waterville 91.89 339 P **P 03 39 37.2 -0.4**
I17A Pilgrim Ck. 91.99 331 ⇑P **P 03 39 38.9 +0.9**
baz=92,SNR=32
PGC Sidney 91.99 341 *e*P **P 03 39 38.2 +0.2**
comp=Z,11nm,0.9s,mb5.1
PGC Sidney 91.99 341 *e*P **P 03 39 38.2 +0.2**
comp=Z,11nm,0.9s,mb5.1
JCW Jim Creek 92.00 340 P **P 03 39 37.2 -0.8**
JCW Jim Creek 92.00 340 P **P 03 39 37.2 -0.9**
PHWY Pilot Hill 92.01 327 *e*P **P 03 39 38.4 +0.1**
comp=Z,904nm,0.9s,mb7.0
PHWY Pilot Hill 92.01 327 *e*P **P 03 39 38.4 +0.2**
comp=Z,904nm,0.9s,mb7.0
ETW Entiat 92.09 339 *e*P **P 03 39 38.3 -0.1**
comp=Z,302nm,1.0s,mb6.5
ETW Entiat 92.09 339 *e*P **P 03 39 38.3 -0.2**
comp=Z,302nm,1.0s,mb6.5
F12A Elk City 92.13 335 ⇓P **P 03 39 38.0 -0.7**
baz=92,SNR=349
K20A Yellowstone Ra 92.14 329 ⇓P **P 03 39 37.8 -1.0**
baz=92,SNR=211
IMW Indian Meadow 92.15 332 *e*P **P 03 39 39.8 +1.0**
comp=Z,218nm,0.9s,mb6.4
IMW Indian Meadow 92.15 332 *e*P **P 03 39 39.8 +1.0**
comp=Z,218nm,0.9s,mb6.4
DAV Davao City (W) 92.15 80 PFAKE 03 39 50.0 +11
DAV LR LR
comp=Z,3μm,20.0s
D08A Wollman Farm, 92.16 338 ⇓P **P 03 39 38.4 -0.4**
baz=92,SNR=54
PCI Palu 92.17 90 P **P 03 39 45.2 +5.8**
comp=Z,2μmcomp=Z,107nm,1.4s,mb5.9
H15A Lima 92.18 333 ⇓P **P 03 39 39.5 +0.5**
baz=92,SNR=579
K19A Absolon Red Bu 92.22 330 ⇓P **P 03 39 37.9 -1.2**
baz=92,SNR=239
LOHW Long Hollow 92.26 331 *e*P **P 03 39 39.7 +0.4**
comp=Z,105nm,1.0s,mb6.0
LOHW Long Hollow 92.26 331 *e*P **P 03 39 39.7 +0.4**
comp=Z,105nm,1.0s,mb6.0
L21A Rawlins 92.31 328 ⇓P **P 03 39 38.9 -0.6**
baz=92,SNR=225
F11A Grangeville 92.32 336 ⇑P **P 03 39 38.1 -1.5**
baz=92,SNR=78
G13A Cobalt 92.35 334 ⇓P **P 03 39 39.3 -0.4**
baz=92,SNR=761
J18A Kendall Valley 92.37 331 ⇓P **P 03 39 39.9 0.0**
baz=92
I16A Newdale 92.38 332 ⇑P **P 03 39 41.1 +1.2**
baz=92,SNR=194
E09A Wood Farm, Sta 92.41 337 ⇓P **P 03 39 39.4 -0.5**
baz=92,SNR=106
SNOW Snow King Moun 92.45 331 *e*P **P 03 39 40.9 +0.7**
comp=Z,139nm,0.8s,mb6.2
SNOW Snow King Moun 92.45 331 *e*P **P 03 39 40.9 +0.7**
comp=Z,139nm,0.8s,mb6.2
SPB Sao Paulo 92.45 243 *e*P **P 03 39 43.3 +2.9**
comp=Z,47nm,0.8s,mb5.8
SPB LR LR
comp=Z,9μm,21.0s
H14A Leadore 92.45 333 ⇑P **P 03 39 40.6 +0.4**
baz=92,SNR=287
RWWY Rawlins 92.46 328 *e*P **P 03 39 40.1 -0.2**
comp=Z,389nm,1.0s,mb6.6
RWWY Rawlins 92.46 328 *e*P **P 03 39 40.1 -0.2**
comp=Z,389nm,1.0s,mb6.6
TPAW Teton Pass 92.50 331 *e*P **P 03 39 40.6 +0.2**
comp=Z,147nm,1.1s,mb6.1
TPAW Teton Pass 92.50 331 *e*P **P 03 39 40.7 +0.3**
comp=Z,147nm,1.1s,mb6.1
DCID1 Drake Creek 92.50 331 *e*P **P 03 39 41.8 +1.4**
comp=Z,341nm,0.9s,mb6.7
DCID1 Drake Creek 92.50 331 *e*P **P 03 39 41.8 +1.3**
comp=Z,341nm,0.9s,mb6.7
J17A Brown Place, J 92.51 331 ⇑P **P 03 39 40.7 +0.2**
baz=92,SNR=16
BW06 Boulder Array 92.55 330 ⇓P **P 03 39 39.7 -1.0**
baz=92,SNR=118
BW06 Boulder Array 92.55 330 *e*P **P 03 39 39.8 -1.0**
comp=Z,445nm,0.4s,mb7.2
BW06 LR LR
comp=Z,5μm,20.0s
BW06 Boulder Array 92.55 330 *e*P **P 03 39 39.8 -0.9**
comp=Z,445nm,0.4s,mb7.2
PDAR Pinedale Array 92.55 330 P **P 03 39 40.4 -0.3**
comp=Z,91nm,0.8s,mb6.1,baz=75,slow=3.5,SNR=201
PDAR S SKSac 03 50 09.5 +0.9
comp=Z,7.3nm,0.8s,baz=45,slow=11,SNR=20
PDAR PKKPbc PKKPbc 03 56 54.1 +1.5
comp=Z,1.1nm,0.8s,baz=216,slow=2.5,SNR=4.2
PDAR LR LR 04 24 37.4
comp=Z,5μm,21.0s,baz=39,slow=38
PDAR Pinedale Array 92.55 330 P **P 03 39 40.4 -0.3**
REDW Red Top Meadow 92.57 331 *e*P **P 03 39 41.1 +0.4**
comp=Z,118nm,0.9s,mb6.2
REDW Red Top Meadow 92.57 331 *e*P **P 03 39 41.1 +0.3**
comp=Z,118nm,0.9s,mb6.2
F10A Beach Ranch, E 92.59 336 ⇓P **P 03 39 39.9 -0.9**
baz=92,SNR=246
M21A Separation Pea 92.60 328 ⇓P **P 03 39 40.4 -0.5**
baz=92,SNR=450
I15A Monteview 92.65 333 ⇓P **P 03 39 42.0 +0.8**
baz=92,SNR=96
L20A Wamsutter 92.68 329 ⇓P **P 03 39 40.8 -0.5**
baz=92,SNR=136
G12A Big Creek, Yel 92.70 335 ⇑P **P 03 39 40.1 -1.3**
baz=92,SNR=185
E08A Dider Farm, El 92.71 338 ⇓P **P 03 39 41.2 -0.2**
baz=92,SNR=58
RRI2 Red Ridge 92.76 331 *e*P **P 03 39 42.2 +0.5**
comp=Z,232nm,0.8s,mb6.6
EBG Ellensburg 92.79 339 P **P 03 39 41.5 -0.2**
EBG Ellensburg 92.79 339 P **P 03 39 41.5 -0.2**
H13A Challis 92.81 334 ⇓P **P 03 39 41.9 0.0**
baz=92
GNW Green Mountain 92.83 341 *e*P **P 03 39 41.8 -0.1**
comp=Z,160nm,0.9s,mb6.3
GNW Green Mountain 92.83 341 *e*P **P 03 39 41.8 -0.1**
comp=Z,160nm,0.9s,mb6.3
P25A Willow Gulch B 92.85 325 ⇑P **P 03 39 42.2 0.0**
baz=92,SNR=332
K18A Toltan Ranch, 92.86 330 ⇑P **P 03 39 41.8 -0.3**
baz=92,SNR=206
N22A Wattenberg Ran 92.86 327 ⇑P **P 03 39 42.0 -0.2**
baz=92,SNR=109
PAF Port-aux-Franc 92.86 154 PFAKE 03 39 50.0 +8.4
PAF LR LR
comp=Z,9μm,19.0s
E07A Sunnyside 92.89 338 ⇓P **P 03 39 41.8 -0.4**
baz=92,SNR=21
J16A Bone 92.94 332 ⇓P **P 03 39 42.9 +0.5**
baz=93,SNR=121
D05A Enumclaw 92.94 340 ⇑P **P 03 39 41.8 -0.6**
baz=92,SNR=33
HAWA Hanford 92.94 338 *e*P **P 03 39 42.8 +0.3**
comp=Z,370nm,0.9s,mb6.7
HAWA LR LR
comp=Z,5μm,20.0s
HAWA Hanford 92.94 338 *e*P **P 03 39 42.8 +0.4**
comp=Z,370nm,0.9s,mb6.7
RSW Rattlesnake Hi 92.96 338 *e*P **P 03 39 42.8 +0.2**
comp=Z,333nm,1.0s,mb6.6
RSW Rattlesnake Hi 92.96 338 *e*P **P 03 39 42.8 +0.3**
comp=Z,333nm,1.0s,mb6.6
LNOR Lincton Mounta 93.03 337 *e*P **P 03 39 42.0 -0.8**
LNOR pmax pmax
comp=Z,66nm,0.8s,mb6.0
LNOR Lincton Mounta 93.03 337 *e*P **P 03 39 42.0 -0.8**
comp=Z,66nm,0.8s,mb6.0
LNOR Lincton Mounta 93.03 337 *e*P **P 03 39 42.0 -0.8**
comp=Z,66nm,0.8s,mb6.0
L19A Farson 93.03 330 ⇑P **P 03 39 42.1 -0.8**
baz=93,SNR=135
H12A Diamond D Ranc 93.04 334 ⇓P **P 03 39 41.9 -1.1**
baz=93,SNR=171
M20A Sweetwater, Wa 93.04 328 ⇓P **P 03 39 42.8 -0.2**
baz=93,SNR=205
I14A Mackay 93.07 333 ⇓P **P 03 39 43.6 +0.5**
baz=93,SNR=314
MRSI Marisa 93.08 87 P **P 03 39 47.9 +4.3**
K17A Gardner Place, 93.11 331 ⇑P **P 03 39 42.7 -0.6**
baz=93,SNR=76
J15A Blackfoot 93.15 332 ⇑P **P 03 39 44.2 +0.8**
baz=93,SNR=291
G10A Bishop Farm, J 93.16 336 ⇑P **P 03 39 42.1 -1.4**
baz=93,SNR=35
AHID Auburn Hatcher 93.17 331 *e*P **P 03 39 43.9 +0.3**
comp=Z,266nm,0.9s,mb6.6
AHID LR LR
comp=Z,11μm,22.0s
AHID Auburn Hatcher 93.17 331 *e*P **P 03 39 43.9 +0.4**
comp=Z,266nm,0.9s,mb6.6
P24A Kohler Place, 93.20 325 ⇓P **P 03 39 43.2 -0.6**
baz=93,SNR=22
NLWA Neilton Lookou 93.26 341 ⇑P **P 03 39 43.6 -0.2**
baz=93,SNR=39
NLWA Neilton Lookou 93.26 341 *e*P **P 03 39 44.4 +0.6**
comp=Z,149nm,0.9s,mb6.3
NLWA LR LR
comp=Z,11μm,21.0s
NLWA Neilton Lookou 93.26 341 *e*P **P 03 39 44.4 +0.5**
comp=Z,149nm,0.9s,mb6.3
WPW White Pass 93.26 339 P **P 03 39 44.1 +0.2**
WPW White Pass 93.26 339 P **P 03 39 44.1 +0.2**
LON Longmire 93.29 340 *e*P **P 03 39 43.4 -0.6**
LON pmax pmax
comp=Z,69nm,0.9s,mb6.0
LON Longmire 93.29 340 *e*P **P 03 39 43.4 -0.6**
comp=Z,69nm,0.9s,mb6.0
LON Longmire 93.29 340 *e*P **P 03 39 43.4 -0.6**
comp=Z,69nm,0.9s,mb6.0
ISCO Idaho Springs 93.29 326 *e*P **P 03 39 44.1 -0.1**
ISCO pmax pmax
comp=Z,172nm,0.9s,mb6.4
ISCO MLR MLR
comp=Z,6μm,20.0s
ISCO Idaho Springs 93.29 326 *e*P **P 03 39 44.1 -0.1**
comp=Z,172nm,0.9s,mb6.4
ISCO LR LR
comp=Z,6μm,20.0s
ISCO Idaho Springs 93.29 326 *e*P **P 03 39 44.1 -0.1**
comp=Z,172nm,0.9s,mb6.4
K16A Soda Springs 93.31 331 ⇑P **P 03 39 44.1 -0.1**
baz=93,SNR=68
H11A Donnelly 93.31 335 ⇑P **P 03 39 43.4 -0.8**
baz=93,SNR=40
I13A Withorse Cree 93.33 333 ⇓P **P 03 39 44.4 +0.1**
baz=93,SNR=741
N21A Black Mountain 93.36 328 ⇑P **P 03 39 44.1 -0.3**
baz=93,SNR=263
Q25A Bedland, Calha 93.37 325 ⇓P **P 03 39 44.0 -0.5**
baz=93,SNR=84
G09A Cove 93.39 336 ⇓P **P 03 39 43.3 -1.2**
baz=93,SNR=132
O22A Kremmling 93.42 327 ⇑P **P 03 39 44.2 -0.6**
baz=93,SNR=159
M19A Rock Springs 93.44 329 ⇑P **P 03 39 44.2 -0.6**
baz=93,SNR=176
L18A Fontenelle, Gr 93.45 330 ⇓P **P 03 39 44.2 -0.7**
baz=93,SNR=80
F07A Phinny Hill Vi 93.51 338 ⇑P **P 03 39 45.2 +0.1**
baz=93,SNR=54
BMO Blue Mountains 93.61 336 *e*P **P 03 39 44.4 -1.1**
comp=Z,2μm,1.0s,mb7.3
BMO LR LR
comp=Z,11μm,22.0s
BMO Blue Mountains 93.61 336 *e*P **P 03 39 44.4 -1.1**
comp=Z,2μm,1.0s,mb7.3
N20A Spence Gulch, 93.62 328 ⇑P **P 03 39 45.3 -0.4**
baz=93,SNR=162
J14A Carey 93.62 333 ⇓P **P 03 39 45.9 +0.3**
baz=93,SNR=412
L17A Cokeville 93.64 331 ⇓P **P 03 39 44.8 -0.9**
baz=93,SNR=36
P23A Jefferson 93.74 326 ⇑P **P 03 39 46.3 +0.1**
baz=93,SNR=442
NATX Nacogdoches 93.74 314 *e*P **P 03 39 47.3 +0.9**
comp=Z,242nm,0.9s,mb6.5
NATX LR LR
comp=Z,6μm,20.0s
NATX Nacogdoches 93.74 314 *e*P **P 03 39 47.3 +0.9**
comp=Z,242nm,0.9s,mb6.5
HLID Hailey 93.74 333 ⇑P **P 03 39 45.9 -0.3**
baz=93,SNR=144
HLID Hailey 93.74 333 *e*P **P 03 39 46.2 0.0**
comp=Z,84nm,1.0s,mb6.0
HLID LR LR
comp=Z,8μm,21.0s
HLID Hailey 93.74 333 *e*P **P 03 39 46.2 0.0**
comp=Z,84nm,1.0s,mb6.0
Q24A Divide 93.75 325 ⇓P **P 03 39 45.8 -0.5**
baz=93,SNR=116
G08A Pilot Rock 93.76 337 ⇓P **P 03 39 45.6 -0.6**
baz=93,SNR=103
O21A Pagoda 93.78 327 ⇑P **P 03 39 45.9 -0.5**
baz=93,SNR=89
K15A Arbon 93.79 332 ⇑P **P 03 39 46.7 +0.3**
baz=93,SNR=321
J13A Cove Ranch, Pi 93.80 333 ⇓P **P 03 39 46.4 0.0**
baz=93,SNR=80
I12A Atlanta 93.80 334 ⇑P **P 03 39 45.9 -0.6**
baz=93,SNR=283
WMOK Wichita Mounta 93.85 318 *e*P **P 03 39 46.5 -0.3**
WMOK pmax pmax
comp=Z,722nm,0.8s,mb7.1
WMOK MLR MLR
comp=Z,8μm,22.0s
WMOK Wichita Mounta 93.85 318 *e*P **P 03 39 46.5 -0.3**
comp=Z,722nm,0.8s,mb7.1
WMOK LR LR
comp=Z,8μm,22.0s
WMOK Wichita Mounta 93.85 318 *e*P **P 03 39 46.5 -0.3**
comp=Z,722nm,0.8s,mb7.1
M18A Lyman 93.88 330 ⇓P **P 03 39 45.8 -1.0**
baz=94,SNR=50
L16A Fish Haven 93.94 331 ⇓P **P 03 39 46.8 -0.3**
baz=94,SNR=120
N19A John Jarvie Ra 93.95 329 ⇓P **P 03 39 46.3 -0.9**
baz=94,SNR=163
E03A Lebam 93.96 341 ⇑P **P 03 39 47.0 -0.1**
baz=94
P22A Eagle 93.97 327 ⇑P **P 03 39 46.5 -0.8**
baz=94,SNR=118
I11A Placerville 93.98 335 ⇑P **P 03 39 46.3 -1.0**
baz=94,SNR=78
M17A Scullys Gap (B 94.09 330 ⇑P **P 03 39 46.8 -1.0**
baz=94,SNR=120
N18A Larsen Ranch, 94.09 329 ⇓P **P 03 39 46.8 -1.0**
baz=94
Q23A Hartsel 94.11 326 ⇓P **P 03 39 47.1 -0.9**
baz=94,SNR=7.0
I10A Payette 94.12 335 ⇓P **P 03 39 47.6 -0.3**
baz=94,SNR=52
K14A Jones Ranch, D 94.16 332 ⇑P **P 03 39 48.2 +0.1**
baz=94,SNR=177
O20A White River Ci 94.18 328 ⇑P **P 03 39 47.4 -0.8**
baz=94,SNR=239
F04A Amboy 94.21 340 ⇓P **P 03 39 47.6 -0.7**
baz=94,SNR=18
J12A Stokes Ranch, 94.26 334 ⇑P **P 03 39 48.1 -0.4**
baz=94,SNR=104
R24A Sanders Place, 94.32 325 ⇓P **P 03 39 48.6 -0.4**
baz=94,SNR=121
L15A Malad City 94.32 331 ⇑P **P 03 39 48.3 -0.5**
baz=94,SNR=71
HWUT Hardware Ranch 94.33 331 *e*P **P 03 39 48.5 -0.4**
comp=Z,415nm,0.9s,mb6.8
HWUT LR LR
comp=Z,12μm,22.0s
HWUT Hardware Ranch 94.33 331 *e*P **P 03 39 48.5 -0.4**
comp=Z,415nm,0.9s,mb6.8
MFID Camas Ranch 94.37 334 ⇓P **P 03 39 49.0 -0.1**
baz=94,SNR=379
SMCO Snowmass 94.41 326 *e*P **P 03 39 49.3 0.0**
comp=Z,48nm,0.8s,mb5.9
SMCO Snowmass 94.41 326 *e*P **P 03 39 49.3 0.0**
comp=Z,48nm,0.8s,mb5.9
K13A Stover Farm, H 94.41 333 ⇓P **P 03 39 49.6 +0.4**
baz=94,SNR=160
O19A Miners Draw (B 94.43 328 ⇑P **P 03 39 48.6 -0.8**
baz=94,SNR=90
S25A Robets Cordova 94.45 324 ⇑P **P 03 39 49.0 -0.6**
baz=94,SNR=294
F03A Seaside 94.53 340 ⇓P **P 03 39 49.0 -0.8**
baz=94,SNR=10.0
HOOD Mount Hood Mea 94.55 339 *e*P **P 03 39 50.2 +0.4**
comp=Z,849nm,1.0s,mb7.1
HOOD *e*PP PP 03 43 40.2 +3.0
HOOD Mount Hood Mea 94.55 339 *e*P **P 03 39 50.2 +0.4**
comp=Z,849nm,1.0s,mb7.1
N17A Moffit Pass 94.60 330 ⇓P **P 03 39 49.2 -0.9**
baz=94,SNR=101
L14A Malta 94.62 332 ⇓P **P 03 39 50.2 0.0**
baz=94,SNR=186
Q22A Crested Butte, 94.64 326 ⇓P **P 03 39 50.2 -0.1**
baz=94,SNR=452
HVU Hansel Valley 94.66 332 *e*P **P 03 39 50.5 +0.1**
HVU pmax pmax
comp=Z,207nm,0.9s,mb6.6
HVU Hansel Valley 94.66 332 *e*P **P 03 39 50.5 +0.1**
comp=Z,207nm,0.9s,mb6.6
HVU Hansel Valley 94.66 332 *e*P **P 03 39 50.5 +0.1**
comp=Z,207nm,0.9s,mb6.6
J10A Berg Farm, Mel 94.69 335 ⇓P **P 03 39 50.2 -0.3**
baz=94
K12A Draper Farm, C 94.72 333 ⇓P **P 03 39 50.7 +0.1**
baz=94,SNR=158
P20A De Beque 94.77 327 ⇓P **P 03 39 50.0 -1.0**
baz=94
M15A Larsen Ranch, 94.80 331 ⇑P **P 03 39 50.6 -0.5**
baz=94,SNR=173
O18A Roosevelt 94.83 329 ⇑P **P 03 39 50.3 -0.9**
baz=94,SNR=31
S24A Houchin Ranch, 94.84 324 ⇑P **P 03 39 50.8 -0.5**
baz=94,SNR=143
L13A Double Diamond 94.84 332 ⇓P **P 03 39 51.9 +0.6**
baz=94,SNR=196
T25A Trinidad 94.86 324 ⇑P **P 03 39 51.2 -0.3**
baz=94,SNR=231
G04A Mulino 94.89 339 ⇑P **P 03 39 51.1 -0.2**
baz=94,SNR=36
N16A Rees Ranch, Co 94.89 330 ⇑P **P 03 39 50.9 -0.6**
baz=94,SNR=26
SDCO Great Sand Dun 94.89 325 *e*P **P 03 39 50.9 -0.7**
comp=Z,193nm,1.0s,mb6.5
SDCO LR LR
comp=Z,11μm,21.0s
SDCO Great Sand Dun 94.89 325 *e*P **P 03 39 50.8 -0.8**
comp=Z,193nm,1.0s,mb6.5
P19A Cripple Cowboy 94.92 328 ⇓P **P 03 39 50.7 -0.9**
baz=94,SNR=39
SPUT South Promonto 94.94 331 *e*P **P 03 39 51.7 0.0**
comp=Z,83nm,0.9s,mb6.2
SPUT *e*PP PP 03 43 42.3 +1.8
SPUT South Promonto 94.94 331 *e*P **P 03 39 51.7 0.0**
comp=Z,83nm,0.9s,mb6.2
Q21A Lamborn Mesa, 94.96 327 ⇑P **P 03 39 51.3 -0.6**
baz=95,SNR=61
K11A Parker Ranch, 95.01 334 ⇑P **P 03 39 52.3 +0.3**
baz=95,SNR=227
I07A Izee 95.01 337 ⇑P **P 03 39 52.3 +0.3**
baz=95,SNR=148
R22A Saguache, Gunn 95.08 326 ⇑P **P 03 39 52.7 +0.3**
baz=95,SNR=249
M14A Sheep Mountain 95.12 332 ⇑P **P 03 39 52.5 0.0**
baz=95,SNR=222
U26A Atchley Ranch, 95.12 323 ⇑P **P 03 39 52.3 -0.3**
baz=95,SNR=256
JLU Jordanelle 95.14 330 *e*P **P 03 39 52.4 -0.3**
comp=Z,21nm,0.7s,mb5.7
JLU Jordanelle 95.14 330 *e*P **P 03 39 52.4 -0.2**
comp=Z,21nm,0.7s,mb5.7
S23A Nye Farm, Mont 95.16 325 ⇑P **P 03 39 52.7 0.0**
baz=95,SNR=25
Q20A Ridgley Place, 95.18 327 ⇑P **P 03 39 51.5 -1.3**
baz=95,SNR=127
CTU Camp Tracy 95.18 330 *e*P **P 03 39 53.4 +0.6**
comp=Z,187nm,1.0s,mb6.5
CTU Camp Tracy 95.18 330 *e*P **P 03 39 53.4 +0.6**
comp=Z,187nm,1.0s,mb6.5
L12A House Creek Ra 95.19 333 ⇓P **P 03 39 53.3 +0.5**
baz=95,SNR=151
O17A Robinson Place 95.19 329 ⇑P **P 03 39 52.2 -0.6**
baz=95,SNR=76
DAU Daniels Canyon 95.22 330 *e*P **P 03 39 53.2 +0.2**
DAU pmax pmax
comp=Z,475nm,0.7s,mb7.0
DAU Daniels Canyon 95.22 330 *e*P **P 03 39 53.2 +0.2**
comp=Z,475nm,0.7s,mb7.0
DAU Daniels Canyon 95.22 330 *e*P **P 03 39 53.2 +0.2**
comp=Z,475nm,0.7s,mb7.0
AMTX Amarillo 95.27 320 *e*P **P 03 39 53.2 -0.1**
comp=Z,46nm,0.9s,mb5.9
AMTX LR LR
comp=Z,8μm,21.0s
AMTX Amarillo 95.27 320 *e*P **P 03 39 53.2 -0.1**
comp=Z,46nm,0.9s,mb5.9
H04A Detroit Lake 95.28 339 ⇑P **P 03 39 52.7 -0.5**
baz=95
K10A MacKenzie Ranc 95.30 335 ⇓P **P 03 39 52.9 -0.4**
baz=95,SNR=36
N15A Stansbury Isla 95.32 331 ⇓P **P 03 39 52.9 -0.6**
baz=95,SNR=83
J08A Circle Bar Ran 95.33 336 ⇓P **P 03 39 52.7 -0.7**
baz=95,SNR=83
R21A Cimarron 95.33 326 ⇑P **P 03 39 53.1 -0.5**
baz=95,SNR=115
NOQ North Oquirrh 95.36 331 *e*P **P 03 39 53.2 -0.5**
comp=Z,60nm,1.0s,mb6.0
NOQ North Oquirrh 95.36 331 *e*P **P 03 39 53.2 -0.5**
comp=Z,60nm,1.0s,mb6.0
L11A Cat Creek Ranc 95.44 334 ⇑P **P 03 39 54.2 +0.2**
baz=95,SNR=114
U25A Circle Dot Ran 95.44 323 ⇓P **P 03 39 53.8 -0.3**
baz=95,SNR=257
P18A Preston Nutter 95.46 329 ⇓P **P 03 39 53.3 -0.8**
baz=95,SNR=146
BGU Big Grassy Mou 95.49 331 *e*P **P 03 39 54.2 -0.1**
comp=Z,184nm,0.9s,mb6.5
BGU Big Grassy Mou 95.49 331 *e*P **P 03 39 54.2 0.0**
comp=Z,184nm,0.9s,mb6.5
O16A Springville 95.49 330 ⇑P **P 03 39 53.8 -0.5**
baz=95
S22A 4UR Ranch, Cre 95.51 325 ⇑P **P 03 39 54.0 -0.3**
baz=95,SNR=387
M13A Montello 95.55 332 ⇑P **P 03 39 54.5 0.0**
baz=95,SNR=298
M13A Montello 95.55 332 *e*P **P 03 39 54.9 +0.4**
comp=Z,3μm,1.0s,mb7.6
M13A Montello 95.55 332 *e*P **P 03 39 54.9 +0.4**
comp=Z,3μm,1.0s,mb7.6
Q19A Hogan Spring (95.60 328 ⇓P **P 03 39 53.8 -0.9**
baz=95
N14A Grayback Hills 95.62 331 ⇑P **P 03 39 54.5 -0.3**
baz=95,SNR=233
V26A Tequesquite Ra 95.62 322 ⇑P **P 03 39 53.8 -1.1**
baz=95,SNR=109
COR Corvallis 95.69 340 *e*P **P 03 39 56.3 +1.2**
COR pmax pmax
comp=Z,144nm,1.0s,mb6.4
COR MLR MLR
comp=Z,7μm,21.0s
COR Corvallis 95.69 340 *e*P **P 03 39 56.3 +1.3**
comp=Z,144nm,1.0s,mb6.4
COR LR LR
comp=Z,7μm,21.0s
COR Corvallis 95.69 340 *e*P **P 03 39 56.3 +1.2**
comp=Z,144nm,1.0s,mb6.4
MPU Maple Canyon 95.71 330 *e*P **P 03 39 55.3 +0.1**
comp=Z,38nm,0.9s,mb5.8
MPU Maple Canyon 95.71 330 *e*P **P 03 39 55.3 +0.1**
comp=Z,38nm,0.9s,mb5.8
T23A Casias Ranch, 95.72 325 ⇓P **P 03 39 55.3 -0.1**
baz=95,SNR=152
HKT Hockley 95.74 313 *e*P **P 03 39 55.6 0.0**
HKT pmax pmax
comp=Z,37nm,0.8s,mb5.9

HKT MLR MLR
comp=Z,9µm,21.0s
HKT Hockley 95.74 313 *eP* **P 03 39 55.6 0.0**
comp=Z,37nm,0.8s,mb5.9
HKT LR LR
comp=Z,9µm,21.0s
HKT Hockley 95.74 313 *eP* **P 03 39 55.6 0.0**
comp=Z,37nm,0.8s,mb5.9
L10A Juniper Basin 95.77 334 ⇑P **P 03 39 55.5 0.0**
baz=95,SNR=37
M12A Wells 95.79 333 ⇑P **P 03 39 56.1 +0.6**
baz=95,SNR=393
P17A Butcher Ranch, 95.80 329 ⇑P **P 03 39 54.5 -1.1**
baz=95,SNR=8.2
O15A The Old Anders 95.82 331 ⇑P **P 03 39 55.7 -0.1**
baz=95
W27A Bowe Ranch, En 95.83 321 ⇓P **P 03 39 55.0 -0.9**
baz=96,SNR=144
R20A Redvale 95.85 327 ⇓P **P 03 39 55.1 -0.8**
baz=96,SNR=121
Q18A Rafter H Ranch 95.85 328 ⇓P **P 03 39 54.7 -1.2**
baz=96
PV04 Paradox Valley 95.91 327 *eP* **P 03 39 55.7 -0.5**
PV04 Paradox Valley 95.91 327 *eP* **P 03 39 55.7 -0.5**
NLU North Lily Min 95.94 330 *eP* **P 03 39 56.1 -0.2**
comp=Z,84nm,0.8s,mb6.2
NLU North Lily Min 95.94 330 *eP* **P 03 39 56.1 -0.2**
comp=Z,84nm,0.8s,mb6.2
PV01 Paradox Valley 95.98 327 *eP* **P 03 39 56.5 0.0**
comp=Z,478nm,0.8s,mb7.0
PV01 Paradox Valley 95.98 327 *eP* **P 03 39 56.5 0.0**
comp=Z,478nm,0.8s,mb7.0
V25A Rancho No Teng 95.99 323 ⇑P **P 03 39 55.8 -0.8**
baz=96,SNR=43
N13A Wendover, West 96.00 332 ⇑P **P 03 39 56.6 +0.1**
baz=96,SNR=52
N13A Wendover, West 96.00 332 *eP* **P 03 39 57.4 +0.8**
comp=Z,122nm,0.9s,mb6.3
N13A Wendover, West 96.00 332 *eP* **P 03 39 57.4 +0.8**
comp=Z,122nm,0.9s,mb6.3
SRU San Rafael 96.01 329 ⇓P **P 03 39 55.6 -1.1**
baz=96,SNR=230
SRU San Rafael 96.01 329 *eP* **P 03 39 55.7 -0.9**
comp=Z,2µm,0.7s,mb7.6
SRU San Rafael 96.01 329 *eP* **P 03 39 55.7 -0.9**
comp=Z,2µm,0.7s,mb7.6
S21A Coal Bank Pass 96.02 326 ⇓P **P 03 39 56.6 -0.1**
baz=96,SNR=242
DUG Dugway 96.03 331 ⇑P **P 03 39 56.5 -0.2**
baz=96,SNR=276
DUG Dugway 96.03 331 *eP* **P 03 39 56.4 -0.3**
DUG pmax pmax
comp=Z,131nm,0.9s,mb6.4
DUG MLR MLR
comp=Z,5µm,20.0s
DUG Dugway 96.03 331 *eP* **P 03 39 56.4 -0.3**
comp=Z,131nm,0.9s,mb6.4
DUG LR LR
comp=Z,5µm,20.0s
DUG Dugway 96.03 331 *eP* **P 03 39 56.4 -0.3**
comp=Z,131nm,0.9s,mb6.4
P16A Fountain Green 96.06 330 ⇓P **P 03 39 56.6 -0.3**
baz=96,SNR=11
M11A Holland Ranch, 96.10 333 ⇓P **P 03 39 57.5 +0.5**
baz=96,SNR=85
S20A Disappointment 96.14 327 ⇓P **P 03 39 56.9 -0.3**
baz=96,SNR=72
T22A Edith 96.14 325 ⇓P **P 03 39 57.2 -0.1**
baz=96,SNR=148
TMUT Trail Mountain 96.14 329 *eP* **P 03 39 58.3 +1.0**
comp=Z,157nm,0.9s,mb6.4
TMUT Trail Mountain 96.14 329 *eP* **P 03 39 58.3 +1.1**
comp=Z,157nm,0.9s,mb6.4
R19A Curley Farm, L 96.15 327 ⇓P **P 03 39 56.9 -0.4**
baz=96,SNR=79
W26A Owens Ranch, T 96.17 322 ⇑P **P 03 39 57.0 -0.4**
baz=96,SNR=87
X27A F and S Farms, 96.18 321 ⇓P **P 03 39 58.0 +0.5**
baz=96,SNR=6.9
WVOR Wild Horse Val 96.20 336 *eP* **P 03 39 57.5 +0.1**
WVOR pmax pmax
comp=Z,74nm,0.9s,mb6.1
WVOR MLR MLR
comp=Z,13µm,20.0s
WVOR Wild Horse Val 96.20 336 *eP* **P 03 39 57.5 0.0**
comp=Z,74nm,0.9s,mb6.1
WVOR LR LR
comp=Z,13µm,20.0s
WVOR Wild Horse Val 96.20 336 *eP* **P 03 39 57.5 +0.1**
comp=Z,74nm,0.9s,mb6.1
M10A I.L. Ranch, Tu 96.29 334 ⇓P **P 03 39 58.2 +0.4**
baz=96,SNR=76
N12A Clover Valley, 96.32 333 ⇑P **P 03 39 58.5 +0.5**
baz=96,SNR=100
N12A Clover Valley, 96.32 333 *eP* **P 03 39 58.6 +0.6**
comp=Z,150nm,0.9s,mb6.4
N12A Clover Valley, 96.32 333 *eP* **P 03 39 58.6 +0.6**
comp=Z,150nm,0.9s,mb6.4
P15A Leamington 96.35 330 ⇓P **P 03 39 57.7 -0.4**
baz=96,SNR=48
R18A Canyonlands Na 96.35 328 ⇓P **P 03 39 57.1 -1.1**
baz=96,SNR=134
U23A El Rito 96.36 324 ⇑P **P 03 39 57.9 -0.4**
baz=96,SNR=143
V24A Rampart Ranch, 96.40 323 ⇓P **P 03 39 58.3 -0.2**
baz=96,SNR=138
W25A X Bar L Ranch, 96.41 322 ⇓P **P 03 39 57.7 -0.8**
baz=96,SNR=94
Q16A Castle Valley 96.45 329 ⇓P **P 03 39 57.6 -1.0**
baz=96,SNR=79
T21A Navajo Lake 96.45 326 ⇑P **P 03 39 58.3 -0.3**
baz=96,SNR=26
ELK Elko 96.49 333 P **P 03 39 59.4 +0.6**
comp=Z,93nm,0.9s,mb6.2,baz=41,slow=3.6,SNR=126
ELK S SKSac 03 50 33.1 +3.2
comp=Z,19nm,1.1s,baz=315,slow=24,SNR=19
ELK Elko 96.49 333 *eP* **P 03 39 59.7 +0.9**
ELK pmax pmax
comp=Z,107nm,0.9s
ELK MLR MLR
comp=Z,8µm,22.0s
ELK Elko 96.49 333 *eP* **P 03 39 59.7 +0.9**
comp=Z,107nm,0.9s,mb6.3
ELK LR LR
comp=Z,8µm,22.0s
ELK Elko 96.49 333 *eP* **P 03 39 59.7 +0.9**
comp=Z,107nm,0.9s,mb6.3
MSTX Muleshoe 96.54 321 ⇑P **P 03 39 58.2 -1.0**
baz=96,SNR=61
O13A Hicks Ranch, I 96.54 331 ⇓P **P 03 39 59.3 +0.3**
baz=96,SNR=10
S19A Harvey Farm, M 96.55 327 ⇓P **P 03 39 58.3 -0.8**
baz=96,SNR=342
N11A Elko Archery C 96.61 333 ⇑P **P 03 39 59.7 +0.4**
baz=96,SNR=91
X26A CR and CF Fran 96.61 322 ⇓P **P 03 39 58.7 -0.8**
baz=96,SNR=122
U22A Llaves 96.63 325 ⇑P **P 03 39 59.6 +0.1**
baz=96,SNR=163
P14A Drum Mountains 96.65 331 ⇑P **P 03 39 59.2 -0.3**
baz=96,SNR=182
K05A Summer Lake 96.67 337 ⇓P **P 03 40 00.1 +0.6**
baz=96,SNR=177
R17A Hanksville Air 96.67 328 ⇓P **P 03 39 58.5 -1.2**
baz=96,SNR=142
MVCO Mesa Verde 96.71 326 ⇓P **P 03 39 59.3 -0.6**
baz=96,SNR=40
MVCO Mesa Verde 96.71 326 *eP* **P 03 39 59.5 -0.3**
comp=Z,76nm,1.1s,mb6.0
MVCO LR LR
comp=Z,5µm,19.0s
MVCO Mesa Verde 96.71 326 *eP* **P 03 39 59.5 -0.3**
comp=Z,76nm,1.1s,mb6.0
O12A Currie 96.72 332 ⇑P **P 03 39 59.8 0.0**
baz=96,SNR=39
Y27A Causey 96.81 321 ⇑P **P 03 39 59.3 -1.1**
baz=96,SNR=114
V23A Ortiz Mt. (NFS 96.83 324 ⇑P **P 03 40 00.6 +0.2**
baz=96,SNR=59
Q15A Fillmore 96.88 330 ⇓P **P 03 39 60.0 -0.6**
baz=96,SNR=98
W24A Lazy 6 Ranch, 96.88 323 ⇑P **P 03 40 00.3 -0.3**
baz=96,SNR=125
ROSC El Rosal 96.94 281 P **P 03 40 01.8 +0.5**
comp=Z,43nm,1.0s,mb5.8,baz=99,slow=14,SNR=11
ROSC S SKSac 03 50 35.7 +2.6
comp=Z,23nm,0.9s,baz=92,slow=24,SNR=21
ROSC LR LR 04 21 28.3
comp=Z,2µm,20.8s,baz=275,slow=34
ROSC El Rosal 96.94 281 *eP* **P 03 40 03.1 +1.8**
ROSC El Rosal 96.94 281 *eP* **P 03 40 03.1 +1.8**
U21A Nageezi 96.97 325 ⇓P **P 03 40 00.4 -0.6**
baz=97,SNR=92
S18A Hurst Farm, Bl 96.97 328 ⇑P **P 03 40 00.2 -0.9**
baz=97,SNR=139
N10A Dunphy 96.98 333 ⇓P **P 03 40 00.7 -0.3**
baz=97
V22A San Miguel Ran 97.03 324 ⇑P **P 03 40 00.9 -0.4**
baz=97,SNR=71
X25A Clemmons Ranch 97.06 322 ⇓P **P 03 40 00.9 -0.6**
baz=97,SNR=12
R16A Teasdale 97.11 329 ⇑P **P 03 40 00.9 -0.7**
baz=97,SNR=54
Y26A Elida 97.12 321 ⇓P **P 03 40 00.9 -0.8**
baz=97,SNR=71
P13A Bates Ranch, G 97.14 331 ⇓P **P 03 40 01.4 -0.3**
baz=97,SNR=172
O11A Cowboy Ranch, 97.18 333 ⇓P **P 03 40 02.1 +0.2**
baz=97,SNR=51
MOD Modoc 97.23 337 *eP* **P 03 40 02.6 +0.5**
comp=Z,223nm,1.0s,mb6.5
MOD LR LR
comp=Z,11µm,21.0s
MOD Modoc 97.23 337 *eP* **P 03 40 02.6 +0.5**
comp=Z,223nm,1.0s,mb6.5
MVU Marysvale 97.23 329 PFAKE 03 40 10.0 +7.8
MVU LR LR
comp=Z,11µm,22.0s
Q14A Sevier Lake (B 97.25 330 ⇑P **P 03 40 02.4 +0.2**
baz=97,SNR=202
T19A Beclabito 97.26 326 ⇓P **P 03 40 01.7 -0.6**
baz=97,SNR=65
W23A Werner Place, 97.28 324 ⇑P **P 03 40 02.1 -0.3**
baz=97,SNR=33
Z27A Tatum 97.28 320 ⇑P **P 03 40 01.7 -0.8**
baz=97,SNR=44
O10A Cortez Mining, 97.35 333 ⇓P **P 03 40 02.8 +0.1**
baz=97,SNR=25
S17A Black Ridge (B 97.37 328 ⇓P **P 03 40 01.6 -1.2**
baz=97,SNR=9.7
T18A Mexican Hat 97.38 327 ⇓P **P 03 40 02.1 -0.8**
baz=97,SNR=240
U20A Newcomb 97.41 326 ⇑P **P 03 40 02.2 -0.8**
baz=97,SNR=11
HUMO Hull Mountain 97.41 339 *eP* **P 03 40 03.1 +0.2**
comp=Z,54nm,0.9s,mb6.0
HUMO LR LR
comp=Z,7µm,21.0s
HUMO Hull Mountain 97.41 339 *eP* **P 03 40 03.1 +0.2**
comp=Z,54nm,0.9s,mb6.0
X24A Lazy VL Ranch, 97.41 323 ⇑P **P 03 40 02.4 -0.6**
baz=97,SNR=13
V21A Milan 97.47 325 ⇑P **P 03 40 02.9 -0.4**
baz=97,SNR=10
P12A McGill 97.47 332 ⇑P **P 03 40 03.1 -0.1**
baz=97,SNR=83
BMN Battle Mountai 97.49 334 *eP* **P 03 40 03.7 +0.4**
BMN pmax pmax
comp=Z,90nm,0.9s,mb6.2
BMN MLR MLR
comp=Z,6µm,20.0s
BMN Battle Mountai 97.49 334 *eP* **P 03 40 03.7 +0.4**
comp=Z,90nm,0.9s,mb6.2
BMN LR LR
comp=Z,6µm,20.0s
BMN Battle Mountai 97.49 334 *eP* **P 03 40 03.7 +0.4**
comp=Z,90nm,0.9s,mb6.2
R15A Junction 97.50 329 ⇓P **P 03 40 03.6 +0.2**
baz=97,SNR=55
Y25A Mesa, Roswell 97.56 322 ⇑P **P 03 40 03.1 -0.6**
baz=97,SNR=48
Q13A Wheeler Ranch, 97.57 331 ⇓P **P 03 40 03.7 0.0**
baz=97,SNR=89
ANMO Albuquerque 97.60 324 P **P 03 40 04.4 +0.5**
comp=Z,35nm,0.8s,mb5.9,baz=63,slow=4.7,SNR=95
ANMO PKKPbc PKKPbc 03 56 41.6 +2.5
comp=Z,2.3nm,0.9s,baz=213,slow=5.8,SNR=5.3
ANMO Albuquerque 97.60 324 *eP* **P 03 40 03.5 -0.4**
comp=Z,0.6nm,0.4s
ANMO LR LR
comp=Z,5µm,19.0s
ANMO Albuquerque 97.60 324 *eP* **P 03 40 03.5 -0.4**
comp=Z,0.6nm,0.4s
JCT Junction City 97.63 316 *eP* **P 03 40 04.1 0.0**
JCT pmax pmax
comp=Z,50nm,1.0s,mb6.0
JCT MLR MLR
comp=Z,8µm,20.0s
JCT Junction City 97.63 316 *eP* **P 03 40 04.1 -0.1**
comp=Z,50nm,1.0s,mb6.0
JCT LR LR
comp=Z,8µm,20.0s
JCT Junction City 97.63 316 *eP* **P 03 40 04.1 0.0**
comp=Z,50nm,1.0s,mb6.0
S16A Weppner Ranch, 97.63 329 ⇑P **P 03 40 03.6 -0.4**
baz=97,SNR=186
W22A Albuquerque 97.70 324 ⇑P **P 03 40 04.8 +0.4**
baz=97,SNR=18
Z26A Caprock 97.71 321 ⇑P **P 03 40 03.8 -0.6**
baz=97,SNR=266
TEIG Tepich 97.72 302 *eP* **P 03 40 05.9 +1.2**
comp=Z,63nm,0.9s,mb6.2
TEIG LR LR
comp=Z,3µm,22.0s
TEIG Tepich 97.72 302 *eP* **P 03 40 05.9 +1.2**
comp=Z,63nm,0.9s,mb6.2
P11A Circle Ranch, 97.72 332 ⇑P **P 03 40 04.5 +0.1**
baz=97,SNR=12
R14A James Farms, M 97.73 330 ⇑P **P 03 40 04.4 -0.1**
baz=97
X23A Hourglass Bar 97.77 323 ⇓P **P 03 40 04.4 -0.2**
baz=97,SNR=21
U19A Dine' College, 97.78 326 ⇓P **P 03 40 03.8 -1.0**
baz=97,SNR=52
Q12A Willow Creek R 97.81 332 ⇓P **P 03 40 04.9 +0.1**
baz=97,SNR=40
CPRX Cap Rock 97.84 321 *eP* **P 03 40 05.0 0.0**
comp=Z,144nm,0.9s,mb6.5
CPRX Cap Rock 97.84 321 *eP* **P 03 40 05.0 0.0**
comp=Z,144nm,0.9s,mb6.5
V20A Brimhall 97.85 325 ⇑P **P 03 40 04.5 -0.5**
baz=98,SNR=31
127A Arkansas Junct 97.86 320 ⇓P **P 03 40 04.3 -0.9**
baz=98,SNR=52
T17A Navajo Res., N 97.91 328 ⇑P **P 03 40 04.4 -0.8**
baz=98,SNR=51
Y24A Capitan 97.92 322 ⇑P **P 03 40 04.5 -0.9**
baz=98,SNR=62
P10A Eureka 97.93 333 ⇑P **P 03 40 05.2 -0.1**
baz=98,SNR=119
U18A Rough Rock, Ch 97.98 327 ⇓P **P 03 40 04.7 -0.8**
baz=98,SNR=52
S15A Panguitch 97.99 329 ⇑P **P 03 40 05.7 +0.1**
baz=98,SNR=42
W21A San Fidel 98.03 324 ⇓P **P 03 40 05.4 -0.5**
baz=98
Z25A Roswell 98.08 321 ⇑P **P 03 40 05.6 -0.5**
baz=98,SNR=85
YBH Yreka Blue Hor 98.14 338 P **P 03 40 05.6 -0.6**
comp=Z,64nm,0.9s,mb6.1,baz=58,slow=4.4,SNR=84
YBH S SKSac 03 50 39.7 +1.4
comp=Z,12nm,1.1s,baz=148,slow=21,SNR=7.6
YBH PKKPbc PKKPbc 03 56 39.0 +1.1
comp=Z,4.0nm,1.0s,baz=115,slow=3.8,SNR=8.5
YBH Yreka Blue Hor 98.14 338 *eP* **P 03 40 05.6 -0.6**
YBH pmax pmax
comp=Z,61nm,0.9s
YBH MLR MLR
comp=Z,4µm,20.0s
YBH Yreka Blue Hor 98.14 338 *eP* **P 03 40 05.6 -0.6**
comp=Z,61nm,0.9s,mb6.1
YBH LR LR
comp=Z,4µm,20.0s
YBH Yreka Blue Hor 98.14 338 *eP* **P 03 40 05.6 -0.6**
comp=Z,61nm,0.9s,mb6.1
U17A Shonto 98.18 327 ⇑P **P 03 40 05.8 -0.6**
baz=98,SNR=41
V19A Window Rock 98.19 326 ⇑P **P 03 40 06.0 -0.6**
baz=98
T16A Glen Canyon Da 98.22 328 ⇓P **P 03 40 05.7 -0.9**
baz=98
R13A O'Grain Ranch, 98.22 330 ⇓P **P 03 40 06.8 +0.2**
baz=98,SNR=46
126A Clayton Basin, 98.22 321 ⇑P **P 03 40 06.2 -0.6**
baz=98,SNR=86
Y23A Lovelace Mesa, 98.22 323 ⇑P **P 03 40 06.3 -0.4**
baz=98,SNR=33
X22A Bernardo 98.23 324 ⇑P **P 03 40 07.1 +0.3**
baz=98,SNR=20
S14A Cedar City 98.25 330 ⇑P **P 03 40 06.9 +0.1**
baz=98,SNR=79
Q11A Duckwater 98.30 332 ⇓P **P 03 40 06.5 -0.5**
baz=98,SNR=93
SIV San Ignacio 98.31 256 P **P 03 40 08.7 +1.4**
comp=Z,4.4nm,0.8s,mb5.0,baz=92,slow=6.1,SNR=26
SIV PKKPbc PKKPbc 03 56 41.0 +3.8
comp=Z,2.2nm,0.5s,baz=196,slow=1.9,SNR=14
SIV San Ignacio 98.31 256 P **P 03 40 08.7 +1.4**
BNM Barren Site 98.33 323 *eP* **P 03 40 07.7 +0.5**
comp=Z,531nm,0.9s,mb7.1
BNM Barren Site 98.33 323 *eP* **P 03 40 07.7 +0.5**
comp=Z,531nm,0.9s,mb7.1
ARUT Antelope Range 98.34 330 *eP* **P 03 40 07.5 +0.3**
ARUT Antelope Range 98.34 330 *eP* **P 03 40 07.5 +0.3**
227A Bennet, Jal 98.34 320 ⇓P **P 03 40 06.7 -0.6**
baz=98,SNR=34
R12A Pony Springs, 98.34 331 ⇓P **P 03 40 06.8 -0.4**
baz=98,SNR=18
Z24A Sheeppen Canyo 98.36 322 ⇑P **P 03 40 06.8 -0.5**
baz=98,SNR=184
LAZ Ladron 98.37 324 *eP* **P 03 40 07.9 +0.6**
comp=Z,9µm,0.4s
LAZ Ladron 98.37 324 *eP* **P 03 40 07.9 +0.5**
comp=Z,9µm,0.4s
W20A Ramah 98.42 325 ⇓P **P 03 40 06.9 -0.7**
baz=98,SNR=14
CLNB Carlsbad 98.45 320 *eP* **P 03 40 08.0 +0.2**
comp=Z,26nm,0.8s,mb5.8
CLNB Carlsbad 98.45 320 *eP* **P 03 40 08.0 +0.2**
comp=Z,26nm,0.8s,mb5.8
LENM Lemitar 98.48 323 *eP* **P 03 40 08.8 +0.9**
comp=Z,37nm,0.9s,mb5.9
LENM Lemitar 98.48 323 *eP* **P 03 40 08.8 +0.9**
comp=Z,37nm,0.9s,mb5.9
CCUT Cedar City 98.51 330 *eP* **P 03 40 08.7 +0.7**
comp=Z,91nm,0.9s,mb6.3
CCUT Cedar City 98.51 330 *eP* **P 03 40 08.7 +0.7**
comp=Z,91nm,0.9s,mb6.3
Y22D IRIS PASSCAL I 98.53 323 ⇓P **P 03 40 07.7 -0.4**
baz=98
125A Gardner Draw, 98.54 321 ⇓P **P 03 40 07.1 -1.1**
baz=98,SNR=112
T15A Red Dirt Ranch 98.56 329 ⇑P **P 03 40 07.4 -0.8**
baz=98
328A Wristen Ranch, 98.58 319 ⇑P **P 03 40 07.6 -0.8**
baz=98,SNR=90
V18A Ganado 98.59 326 ⇓P **P 03 40 08.1 -0.3**
baz=98
Q10A Clear Creek Ra 98.60 332 ⇑P **P 03 40 08.1 -0.3**
baz=98,SNR=79
X21A Alamocita Cree 98.64 324 ⇓P **P 03 40 08.7 +0.1**
baz=98,SNR=85
BCIP Isla Barro Col 98.65 288 PFAKE 03 40 20.0 +11
BCIP LR LR
comp=Z,2µm,20.0s
Y22A Socorro 98.67 323 ⇓P **P 03 40 08.3 -0.4**
baz=98,SNR=37
S13A Holt Ranch, En 98.69 330 ⇓P **P 03 40 08.6 -0.1**
baz=98,SNR=33
R11A Troy Canyon, C 98.71 332 ⇓P **P 03 40 08.7 -0.1**
baz=98,SNR=43
226A Malaga, Loving 98.73 320 ⇓P **P 03 40 08.3 -0.8**
baz=98,SNR=118
KVTX Kingsville 98.73 313 PFAKE 03 40 20.0 +11
KVTX LR LR
comp=Z,5µm,20.0s
GDL2 Guadalupe Moun 98.75 321 *eP* **P 03 40 08.9 -0.2**
comp=Z,531nm,0.9s,mb7.1
GDL2 Guadalupe Moun 98.75 321 *eP* **P 03 40 08.9 -0.2**
comp=Z,531nm,0.9s,mb7.1
U16A Tuba City 98.76 327 ⇓P **P 03 40 08.9 -0.2**
baz=98,SNR=103
T14A Hurricane 98.82 329 ⇓P **P 03 40 09.0 -0.3**
baz=98,SNR=34
W19A Sanders 98.84 326 ⇑P **P 03 40 09.0 -0.5**
baz=98
Z23A Rita Site, Whi 98.85 322 ⇓P **P 03 40 09.5 0.0**
baz=98,SNR=54
X20A Quemado 98.90 325 ⇑P **P 03 40 09.6 -0.2**
baz=98
124A Stringfield Ra 98.91 322 ⇑P **P 03 40 09.3 -0.5**
baz=99,SNR=64
Y21A Point of Rocks 98.95 324 ⇑P **P 03 40 10.0 +0.1**
baz=99,SNR=79
W18A Petrified Fore 99.00 326 ⇑P **P 03 40 09.8 -0.4**
baz=99,SNR=8.3
U15A North Rim 99.02 328 ⇓P **P 03 40 09.6 -0.7**
baz=99,SNR=232
428A Kincaid Ranch, 99.03 318 ⇓P **P 03 40 10.0 -0.4**
baz=99,SNR=40
V17A Tonalea, Kykot 99.05 327 ⇑P **P 03 40 10.0 -0.4**
baz=99,SNR=91
225A Deer Hill, Car 99.06 321 ⇓P **P 03 40 10.4 -0.1**
baz=99,SNR=25
S12A Delamar Landin 99.06 331 ⇑P **P 03 40 10.2 -0.2**
baz=99,SNR=36
WDC Whiskeytown Da 99.14 338 *eP* **P 03 40 10.6 -0.1**
WDC *e* 03 44 11.7
WDC pmax pmax
comp=Z,40nm,0.9s,mb6.0
WDC MLR MLR
comp=Z,8µm,22.0s
WDC Whiskeytown Da 99.14 338 *eP* **P 03 40 10.6 0.0**
comp=Z,40nm,0.9s,mb6.0
WDC *e*PP PP 03 44 11.7 -0.9
WDC LR LR
comp=Z,8µm,22.0s
WDC Whiskeytown Da 99.14 338 *eP* **P 03 40 10.6 -0.1**
comp=Z,40nm,0.9s,mb6.0
T13A Saint George 99.19 330 ⇓P **P 03 40 11.1 +0.1**
baz=99,SNR=90
Z22A Elephant Butte 99.22 323 ⇓P **P 03 40 10.7 -0.5**
baz=99,SNR=13
326A Caldwell Ranch 99.25 320 ⇑P **P 03 40 10.9 -0.4**
baz=99,SNR=117
427A Hayter Ranch, 99.31 319 ⇑P **P 03 40 11.0 -0.7**
baz=99,SNR=66
Y20A Horse Springs, 99.36 324 ⇑P **P 03 40 11.8 -0.1**
baz=99,SNR=35
X19A St. Johns 99.37 325 ⇑P **P 03 40 11.4 -0.4**
baz=99,SNR=17
123A Bell Site, Whi 99.37 322 ⇓P **P 03 40 11.8 -0.1**
baz=99,SNR=12
S11A Rachel 99.38 331 ⇓P **P 03 40 12.0 +0.1**
baz=99,SNR=15
WCN Washoe City 99.38 335 ⇑P **P 03 40 11.8 0.0**
baz=99
WUAZ Wupatki 99.40 327 ⇑P **P 03 40 12.0 0.0**
baz=99,SNR=38
WUAZ Wupatki 99.40 327 *eP* **P 03 40 12.5 +0.6**
comp=Z,124nm,0.9s,mb6.4
WUAZ LR LR
comp=Z,6µm,21.0s
WUAZ Wupatki 99.40 327 *eP* **P 03 40 12.5 +0.6**
comp=Z,124nm,0.9s,mb6.4
U14A Mt Trumbull 99.41 329 ⇓P **P 03 40 11.2 -0.7**
baz=99,SNR=148
224A Cornudas Mount 99.45 321 ⇑P **P 03 40 11.4 -0.8**
baz=99,SNR=69
S10A Tonopah Range, 99.47 332 ⇑P 03 40 11.7
baz=99
W17A Winslow 99.47 327 ⇑P Pdif 03 40 11.9 -0.2
baz=99,SNR=5.7
V15A Kaibab Nationa 99.49 328 ⇑P Pdif 03 40 12.4 +0.2
baz=99,SNR=130
Z21A St. Cloud Mine 99.52 323 ⇑P Pdif 03 40 12.2 -0.2
baz=99,SNR=32
528A Cox Ranch, San 99.52 318 ⇓P Pdif 03 40 12.2 -0.1
baz=99,SNR=60
T11A Corn Creek, Al 99.53 331 ⇑P Pdif 03 40 12.4 0.0
baz=99,SNR=50
TPH Tonopah 99.57 333 PFAKE 03 40 20.0 +7.4
TPH LR LR
comp=Z,9µm,22.0s
X18A Snowflake 99.58 326 ⇑P Pdif 03 40 11.9 -0.8
baz=99,SNR=14
NVAR Mina Array Bea 99.65 334 P Pdif 03 40 13.2 +0.2
comp=Z,46nm,0.8s,baz=38,slow=3.6,SNR=145
NVAR S SKSac 03 50 49.3 +3.3
comp=Z,3.5nm,0.9s,baz=95,slow=17,SNR=5.2
NVAR PKKPbc PKKPbc 03 56 36.8 +3.1
comp=Z,3.9nm,0.8s,baz=198,slow=4.9,SNR=14
NVAR Mina Array Bea 99.65 334 P Pdif 03 40 13.1 +0.2
MNTX Cornudas Mount 99.68 321 PFAKE 03 40 20.0 +6.9

MNTX LR LR
comp=Z,7μm,21.0s
122A Conniff Cattle 99.69 323 ⇓P Pdif 03 40 12.5 -0.6
baz=99,SNR=10
325A Bean Ranch, Si 99.72 320 ⇑P Pdif 03 40 12.7 -0.5
baz=99,SNR=18
U13A Pakoon Wash 99.73 330 ⇑P Pdif 03 40 13.1 -0.2
baz=99,SNR=64
Y19A Nutrioso 99.74 325 ⇓P Pdif 03 40 13.6 +0.3
baz=99,SNR=35
T12A Moapa 99.77 330 ⇑P Pdif 03 40 13.1 -0.4
baz=99
426A McDonald Obser 99.79 319 ⇓P Pdif 03 40 13.4 -0.2
baz=100,SNR=283
W16A Flagstaff 99.82 327 ⇑P Pdif 03 40 13.7 0.0
baz=100,SNR=25
324A Moseley Ranch, 99.93 321 ⇑P Pdif 03 40 13.5 -0.7
baz=100,SNR=381
U12A Valley of Fire 99.95 330 ⇑P Pdif 03 40 14.0 -0.2
baz=100,SNR=6.2
223A Chaparral, Ant 99.96 322 ⇓P Pdif 03 40 14.3 0.0
baz=100,SNR=8.2
527A Woodward Ranch 99.98 319 ⇓P Pdif 03 40 14.1 -0.3
baz=100,SNR=48
V14A Boquillas Ranc 100.04 329 ⇑P Pdif 03 40 15.0 +0.3
baz=100,SNR=213
W15A Williams 100.07 328 ⇑P Pdif 03 40 15.2 +0.4
baz=100,SNR=37
628A Black Gap, Mar 100.10 318 ⇑P Pdif 03 40 15.0 +0.1
baz=100,SNR=100
Z20A Nine Sixteen R 100.12 324 ⇓P Pdif 03 40 15.2 +0.2
baz=100,SNR=120
X17A Forest Lakes 100.13 326 ⇓P Pdif 03 40 15.1 +0.1
baz=100,SNR=69
425A Indio Mountain 100.20 320 ⇑P Pdif 03 40 15.3 -0.1
baz=100,SNR=49
121A Cookes Peak, D 100.20 323 ⇑P Pdif 03 40 15.4 0.0
baz=100,SNR=30
222A Williams Famil 100.22 322 ⇑P Pdif 03 40 15.7 +0.2
baz=100,SNR=21
V13A Grand Canyon W 100.22 329 ⇓P Pdif 03 40 15.4 -0.1
baz=100
Y18A Canyon Day Jun 100.25 325 ⇓P Pdif 03 40 16.0 +0.4
baz=100,SNR=27
Z19A T-Link Ranch, 100.29 325 ⇓P Pdif 03 40 15.8 0.0
baz=100
526A Mary Lane Ranc 100.30 319 ⇓P Pdif 03 40 16.0 +0.2
baz=100
U11A Corn Creek 100.30 331 ⇑P Pdif 03 40 15.7 -0.1
baz=100
X16A Lo Mia Camp, P 100.35 327 ⇑P Pdif 03 40 16.0 0.0
baz=100,SNR=88
W14A Seligman 100.39 328 ⇓P Pdif 03 40 16.5 +0.3
baz=100,SNR=105
627A Terlingua Ranc 100.40 318 ⇑P Pdif 03 40 16.2 -0.1
baz=100,SNR=105
MLAC Mammoth Lakes 100.55 334 ⇑P Pdif 03 40 16.7 -0.2
baz=100,SNR=8.5
GRAC Grapevine Rang 100.57 332 ⇑P Pdif 03 40 17.2 +0.1
baz=100
120A U Bar Ranch, L 100.60 324 ⇑P Pdif 03 40 17.5 +0.3
baz=100,SNR=37
221A Mesquite Ranch 100.63 323 ⇓P Pdif 03 40 17.8 +0.5
baz=100,SNR=8.3
TXAR Lajitas Array 100.64 318 P Pdif 03 40 17.8 +0.4
comp=Z,23nm,0.8s,baz=62,slow=3.4,SNR=132
TXAR PP PP 03 44 25.1 +0.5
comp=Z,15nm,0.8s,baz=49,slow=5.7,SNR=4.9
TXAR Lajitas Array 100.64 318 P Pdif 03 40 17.8 +0.4
TXAR PP PP 03 44 25.1 +0.5
TXAR Lajitas Array 100.64 318 P Pdif 03 40 17.8 +0.5
TXAR Lajitas Array 100.64 318 PP PP 03 44 25.1 +0.5
X15A Humboldt 100.64 327 ⇓P Pdif 03 40 17.7 +0.4
baz=100,SNR=113
U10A Ash Meadows, A 100.68 331 ⇓P Pdif 03 40 17.9 +0.4
baz=100,SNR=27
Y17A Roosevelt 100.69 326 ⇓P Pdif 03 40 17.7 +0.2
baz=100,SNR=53
V12A Nelson 100.69 330 ⇑P Pdif 03 40 17.8 +0.3
baz=100,SNR=120
626A Big Bend Ranch 100.72 319 ⇓P Pdif 03 40 17.3 -0.4
baz=100,SNR=44
CMB Columbia Colle 100.74 335 PFAKE 03 40 30.0 +12
CMB LR LR
comp=Z,6μm,21.0s
119A Ashpeak Ranch, 100.74 324 ⇑P Pdif 03 40 17.9 +0.2
baz=100,SNR=11
HOPS Hopland 100.75 337 PFAKE 03 40 30.0 +12
HOPS LR LR
comp=Z,8μm,19.0s
Y16A Circle Bar Ran 100.82 326 ⇓P Pdif 03 40 18.1 -0.1
baz=100,SNR=72
Z18A Geronimo 100.82 325 ⇓P Pdif 03 40 18.4 +0.3
baz=100
V11A Goodsprings 100.83 330 ⇑P Pdif 03 40 18.3 +0.1
baz=100,SNR=57
W13A Hualapai Mount 100.83 329 ⇓P Pdif 03 40 18.3 +0.1
baz=100,SNR=66
FURC Furnace Creek, 100.84 332 ⇑P Pdif 03 40 18.3 0.0
baz=100,SNR=17
TIN Tinemaha 100.84 333 ⇓P Pdif 03 40 18.3 +0.1
baz=100
Z17A San Carlos Hig 100.85 325 ⇑P Pdif 03 40 18.5 +0.2
baz=100,SNR=24
X14A Yava 100.94 328 ⇑P Pdif 03 40 18.9 +0.3
baz=101,SNR=50
W12A Cal Nev Ari 101.06 330 ⇑P Pdif 03 40 19.4 +0.2
baz=101,SNR=34
220A Playas Peak, P 101.08 323 ⇑P Pdif 03 40 19.3 0.0
baz=101,SNR=32
SHOC Shoshone 101.11 331 ⇑P Pdif 03 40 19.3 -0.1
baz=101
TGUH Tegucigalpa,Un 101.12 296 PFAKE 03 40 30.0 +11
TGUH LR LR
comp=Z,4μm,22.0s
Y15A Casa Rosa Ranc 101.14 327 ⇑P Pdif 03 40 19.6 +0.1
baz=101,SNR=58
118A Homack Ranch, 101.16 325 ⇑P Pdif 03 40 19.7 0.0
baz=101
X13A Yucca 101.24 329 ⇓P Pdif 03 40 20.2 +0.2
baz=101,SNR=101
Z16A Peralta Trail, 101.25 326 ⇑P Pdif 03 40 20.1 +0.1
baz=101,SNR=16
DAC Darwin (Calif) 101.29 332 PFAKE 03 40 30.0 +10
DAC LR LR
comp=Z,8μm,22.0s
CPUP Villa Florida 101.30 246 P Pdif 03 40 21.2 +1.0
comp=Z,1.4nm,0.7s,baz=100,slow=20,SNR=6.1
CPUP Villa Florida 101.30 246 P Pdif 03 40 21.2 +1.0
CPUP LR LR
comp=Z,996nm,20.0s
CPUP Villa Florida 101.30 246 P Pdif 03 40 21.2 +0.9
CWC Cottonwood Cre 101.33 333 ⇑P Pdif 03 40 20.3 -0.1
baz=101
219A White Tail Can 101.35 324 ⇓P Pdif 03 40 20.7 +0.2
baz=101,SNR=54
TUQ Turquoise Moun 101.38 330 ⇑P Pdif 03 40 21.0 +0.4
baz=101,SNR=12
NEE2 Needles Airpor 101.42 329 ⇓P Pdif 03 40 20.9 +0.1
baz=101
MPMC Manual Prospec 101.44 332 ⇑P Pdif 03 40 20.9 0.0
baz=101
Y14A Wickenburg 101.44 328 ⇑P Pdif 03 40 20.7 -0.2
baz=101,SNR=16
MCCM Marconi Confer 101.46 337 PFAKE 03 40 30.0 +9.0
MCCM LR LR
comp=Z,9μm,22.0s
117A Oracle 101.58 325 ⇑P Pdif 03 40 21.8 +0.2
baz=101,SNR=57
Z15A Gila River Ind 101.62 327 ⇑P Pdif 03 40 21.7 0.0
baz=101
PDMCI Parker Dam,Lak 101.62 329 ⇓P Pdif 03 40 21.6 -0.1
baz=101,SNR=66
218A Dragoon 101.75 324 ⇑P Pdif 03 40 22.4 +0.1
baz=101,SNR=50
TUC Tucson 101.82 325 PFAKE 03 40 30.0 +7.4
TUC LR LR
comp=Z,6μm,21.0s
GMRC Granite Mounta 101.84 330 ⇑P Pdif 03 40 22.8 +0.1
baz=102,SNR=29
GSC Goldstone 101.84 331 ⇓P Pdif 03 40 23.1 +0.4
baz=102
JTS JuntasAbangare 101.85 292 P Pdif 03 40 22.9 +0.2
comp=Z,5.4nm,0.7s,baz=314,slow=14,SNR=5.1
JTS JuntasAbangare 101.85 292 P Pdif 03 40 22.9 +0.2
JTS LR LR
comp=Z,3μm,21.0s
JTS JuntasAbangare 101.85 292 P Pdif 03 40 22.9 +0.2

RCTC Rector, Farmer 101.87 333 ⇓P Pdif 03 40 22.7 -0.1
baz=102
319A Douglas 101.88 323 ⇓P Pdif 03 40 22.9 0.0
baz=102,SNR=11
Y13A Salome 101.91 328 ⇑P Pdif 03 40 23.1 +0.1
baz=102
Z14A Wintersburg 101.91 327 ⇑P Pdif 03 40 22.9 -0.1
baz=102,SNR=12
116A Eloy 102.03 326 ⇑P Pdif 03 40 23.5 0.0
baz=102
LRMC Laurel Mountai 102.03 332 ⇓P Pdif 03 40 23.9 +0.4
baz=102
HEC Hector,Ludlow 102.06 330 ⇓P Pdif 03 40 24.0 +0.3
baz=102,SNR=14
ISA Isabella 102.17 332 ⇑P Pdif 03 40 24.3 +0.2
baz=102
318A Bisbee 102.17 324 ⇑P Pdif 03 40 24.0 -0.1
baz=102,SNR=42
IRM Iron Mountain 102.17 329 ⇓P Pdif 03 40 24.5 +0.4
baz=102
SAO San Andreas Ge 102.25 335 PFAKE 03 40 40.0 +16
SAO LR LR
comp=Z,8μm,21.0s
217A Green Valley 102.28 325 ⇓P Pdif 03 40 24.6 0.0
baz=102,SNR=37
RRX Edison Barstow 102.29 331 ⇑P Pdif 03 40 25.7 +1.1
baz=102
Z13A Yuma Proving G 102.36 328 ⇓P Pdif 03 40 24.8 -0.2
baz=102,SNR=28
216A Three Points, 102.39 325 ⇓P Pdif 03 40 25.0 0.0
baz=102,SNR=13
114A Black Gap (USA 102.40 327 ⇓P Pdif 03 40 25.0 -0.1
baz=102,SNR=9.0
BELC Belle Mtn. Jos 102.65 330 ⇓P Pdif 03 40 28.3 +2.0
baz=102
EDW2 Edwards Air Fo 102.67 332 ⇑P Pdif 03 40 27.4 +1.0
baz=102
BC3 Big Chuckawall 102.73 329 ⇑P Pdif 03 40 27.7 +1.1
baz=102
113A Mohawk Valley, 102.77 328 ⇑P Pdif 03 40 27.5 +0.7
baz=102
ARVC Arvin 102.77 332 ⇓P Pdif 03 40 27.5 +0.7
baz=102
APG El Apazote 102.78 299 P Pdif 03 40 29.4 +2.6
comp=Z,16nm,0.8s,baz=90,slow=17
BBRC Big Bear Solar 102.80 331 ⇓P Pdif 03 40 27.0 +0.1
baz=102
GUMO Guam 102.87 63 PFAKE 03 40 40.0 +13
GUMO LR LR
comp=Z,3μm,22.0s
GLA Glamis 102.99 328 ⇑P Pdif 03 40 28.1 +0.3
baz=103
OTAV Otavalo 102.99 280 PFAKE 03 40 40.0 +12
OTAV LR LR
comp=Z,3μm,21.0s
214A Organ Pipe Nat 103.04 326 ⇓P Pdif 03 40 27.9 -0.1
baz=103,SNR=15
SMMC Simmler 103.04 333 ⇑P Pdif 03 40 28.6 +0.6
baz=103
BFSC Mount Baldy Ra 103.11 331 ⇓P Pdif 03 40 29.2 +0.9
baz=103
PFO Pinyon Flat Ob 103.18 330 ⇓P Pdif 03 40 29.7 +1.1
baz=103
PFO Pinyon Flat Ob 103.18 330 PFAKE 03 40 40.0 +11
PFO LR LR
comp=Z,7μm,19.0s
OSI Osito Adit 103.19 332 ⇑P Pdif 03 40 29.5 +0.8
baz=103
112A Yuma 103.32 328 ⇑P Pdif 03 40 29.6 +0.3
baz=103
DECC Green Verdugo 103.36 332 ⇓P Pdif 03 40 30.8 +1.4
baz=103
MURC Murrieta 103.49 331 ⇑P Pdif 03 40 31.4 +1.4
baz=103
SWSC Sam W. Stewart 103.49 329 ⇑P Pdif 03 40 31.8 +1.8
baz=103
MBWA Marble Bar 103.60 106 PFAKE 03 40 40.0 +10
MBWA LR LR
comp=Z,3μm,20.0s
SBC Santa Barbara 103.71 333 ⇑P Pdif 03 40 32.6 +1.6
baz=103
BLG Laguna Peak 103.76 332 ⇑P Pdif 03 40 31.5 +0.3
baz=103
MONP Monument Peak 103.79 330 ⇓P Pdif 03 40 32.6 +1.3
baz=103
DVTC Desert V Tower 103.86 329 ⇓P Pdif 03 40 32.7 +1.1
baz=104
109C Camp Elliot, M 104.07 330 ⇑P Pdif 03 40 33.8 +1.3
baz=104
BSC Santa Cruz Isl 104.08 333 ⇓P Pdif 03 40 33.5 +0.8
baz=104
LPAZ La Paz 104.09 260 Pdiff Pdif 03 40 35.4 +2.7
comp=Z,2.0nm,0.9s,baz=49,slow=4.8,SNR=8.3
LPAZ PP PP 03 44 53.9 +2.2
comp=Z,10nm,1.0s,baz=58,slow=15,SNR=3.9
LPAZ La Paz 104.09 260 Pdif Pdif 03 40 35.4 +2.7
LPAZ PP PP 03 44 53.9 +2.2
LPAZ LR LR
comp=Z,5μm,21.0s
CMIG Matias Romero 104.40 304 Pdiff Pdif 03 40 35.3 +1.3
comp=Z,7.2nm,0.9s,baz=37,slow=4.1,SNR=10
CMIG PKKPbc PKKPbc 03 56 23.0 +3.6
comp=Z,2.4nm,0.8s,baz=207,slow=11,SNR=3.5
SNCC San Nicolas Is 104.70 332 ⇑P Pdif 03 40 36.1 +0.7
baz=104
SYO Syowa Base 104.98 176⇑ *e*P Pdif 03 40 37.7 +1.0
MAW Mawson 106.56 167 *e*P Pdif 03 40 49.6 +6.0
comp=Z,6.5nm,0.8s
MAW Mawson 106.56 167 *e*PKP PKiKP 03 44 55.4 +2.4
comp=Z,9.7nm,0.9s
MAW *e*SKS SKSac 03 51 19.1 +2.9
MAW *ep*SKS 03 51 46.2
MAW *e*PKKP PKKPbc 03 56 15.8 +1.2
MAW Mawson 106.56 167 Pdiff Pdif 03 40 48.7 +5.1
comp=Z,8.6nm,0.8s,baz=301,slow=7.7,SNR=18
MAW PKiKP PKiKP 03 44 55.6 +2.6
comp=Z,7.3nm,0.9s,baz=319,slow=4.8,SNR=5.2
MAW PKKPbc PKKPbc 03 56 16.2 +1.6
comp=Z,19nm,0.8s,baz=167,slow=1.7,SNR=18
MAW Mawson 106.56 167 Pdif Pdif 03 40 48.7 +5.1
MAW PKPdf PKiKP 03 44 55.6 +2.6
MAW PKKPbc PKKPbc 03 56 16.2 +1.6
MAW LR LR
comp=Z,12μm,22.0s
FITZ Fitzroy Crossi 106.60 101 *e*P Pdif 03 40 46.4 +2.6
comp=Z,17nm,1.8s
MAIT Maitri 107.02 186 *e*PKPab Pdif 03 40 47.6 +1.9
MAIT *e*PP PKiKP 03 44 42.8 -11
MAIT *e*S PS 03 54 36.8 +3.6
MAIT *e*SS SS 03 59 47.8 -26
ATAH Atahualpa 107.26 274 Pdiff Pdif 03 40 50.5 +3.8
comp=Z,5.3nm,0.7s,baz=58,slow=6.1,SNR=3.7
NWAO Narrogin (SRO) 108.01 118 PFAKE 03 45 10.0 +13
NWAO LR LR
comp=Z,4μm,22.0s
NNA Nana 108.75 269 PFAKE 03 45 10.0 +11
NNA LR LR
comp=Z,4μm,22.0s
VNA1 Neumayer--Stat 109.39 192 *e*Pdiff Pdif 03 41 02.8 +6.6
VNA1 *e* 03 45 00.7
VNA1 *e* 03 45 15.8
VNA1 *e* 03 56 04.4
VNA1 *e* 03 56 16.6
TRQA Tornquist 110.86 238 PFAKE 03 45 10.0 +8.0
TRQA LR LR
comp=Z,5μm,22.0s
MIDW Midway 111.94 24 PFAKE 03 45 20.0 +15
MIDW LR LR
comp=Z,2μm,22.0s
CFAA Coronel Fontan 112.18 246 PKKPbc PKKPbc 03 55 57.4 +2.1
comp=Z,0.4nm,0.7s,baz=255,slow=2.8,SNR=7.0
WAKE Wake Island 112.68 42 PFAKE 03 45 20.0 +14
WAKE LR LR
comp=Z,3μm,21.0s
LCO Las Campanas 112.77 250 PFAKE 03 45 20.0 +14
LCO LR LR
comp=Z,4μm,21.0s
PAYG Puerto Ayora 112.89 287 PFAKE 03 45 20.0 +13
PAYG LR LR
comp=Z,1μm,20.0s
MIR Mirnyy 113.52 157 *e*PKIKP PKiKP 03 45 09.0 +2.9
MIR pmax pmax
comp=Z,39nm,1.2s
WRA Warramunga Arr 114.54 98 PKiKP PKiKP 03 45 09.8 +0.3
comp=Z,11nm,0.8s,baz=303,slow=1.9,SNR=24
WRA PP PP 03 46 12.3 +4.9
comp=Z,7.5nm,1.1s,baz=308,slow=7.7,SNR=4.7

WRA SKP 03 48 40.9
comp=Z,3.4nm,0.6s,baz=334,slow=1.7,SNR=4.9
WRA PKKPbc PKKPbc 03 55 49.9 +2.9
comp=Z,8.4nm,0.9s,baz=116,slow=3.5,SNR=13
WRA Warramunga Arr 114.54 98 PKIKP PKiKP 03 45 09.8 +0.3
WRA 03 46 12.4
WRA Warramunga Arr 114.54 98 PKPdf PKiKP 03 45 09.8 +0.3
WRA PP PP 03 46 12.3 +4.9
WRA SKP 03 48 40.9
WRA PKKPbc PKKPbc 03 55 49.9 +2.8
WRAB Tennant Creek 114.55 97 *e*PKIKP PKiKP 03 45 10.5 +1.0
WRAB MLR MLR
comp=Z,2μm,22.0s
WRAB Tennant Creek 114.55 97 P PKiKP 03 45 12.4 +2.9
FORT Forrest 114.95 111 *e*PKP PKiKP 03 45 07.5 -2.5
comp=Z,20nm,0.6s
FORT *ep*PKP 03 45 30.1
FORT *e*PKKP PKKPbc 03 55 48.1 +2.2
ASAR Alice Springs 116.07 101 PKP PKPdf 03 45 12.3 0.0
comp=Z,18nm,0.8s,baz=327,slow=1.7,SNR=38
ASAR PKKPbc PKKPbc 03 55 43.9 +2.0
comp=Z,16nm,1.0s,baz=122,slow=3.6,SNR=28
ASAR Alice Springs 116.07 101 PKIKP PKPdf 03 45 12.4 0.0
PLCA Paso Flores 117.99 238 PKP PKPdf 03 45 16.7 +1.2
comp=Z,24nm,1.0s,baz=70,slow=1.0,SNR=13
PLCA SKP 03 48 48.3
comp=Z,14nm,0.9s,baz=141,slow=1.0,SNR=6.0
PLCA Paso Flores 117.99 238 *e*PKPdf PKPdf 03 45 17.2 +1.7
PLCA LR LR
comp=Z,4μm,21.0s
PLCA Paso Flores 117.99 238 *e*PKIKP PKPdf 03 45 17.2 +1.7
COEN Coen 118.53 87 *e*PKPdf PKPdf 03 45 18.3 +0.9
COEN Coen 118.53 87 *e*PKIKP PKPdf 03 45 18.3 +1.0
PMG Port Moresby 119.17 80 PFAKE 03 45 30.0 +11
PMG LR LR
comp=Z,1μm,20.0s
CASY Casey 119.51 153 PFAKE 03 45 30.0 +12
CASY LR LR
comp=Z,7μm,22.0s
USHA Ushuaia 121.83 223 PKP PKPdf 03 45 23.7 +1.2
comp=Z,10nm,0.9s,baz=45,slow=2.5,SNR=6.3
USHA SKP 03 48 55.5
comp=Z,15nm,1.0s,baz=157,slow=2.9,SNR=3.9
USHA Ushuaia 121.83 223 PKIKP PKPdf 03 45 23.7 +1.2
PMSA Palmer Station 122.62 211 PKP PKPdf 03 45 24.9 +1.2
comp=Z,32nm,0.9s,baz=64,slow=1.7,SNR=17
PMSA SKP 03 48 56.4
comp=Z,21nm,0.9s,baz=6.6,slow=4.7,SNR=4.7
PMSA Palmer Station 122.62 211 *e*PKPdf PKPdf 03 45 25.2 +1.5
PMSA LR LR
comp=Z,5μm,22.0s
PMSA Palmer Station 122.62 211 *e*PKIKP PKPdf 03 45 25.2 +1.5
KIP Kipapa 122.70 6 *e*PKIKP PKPdf 03 45 28.4 +3.1
KIP MLR MLR
comp=Z,3μm,21.0s
CTA Charters Tower 124.25 91 *e*PKP PKPdf 03 45 29.0 +0.8
comp=Z,36nm,0.8s
CTA *ep*PKP pPKPdf 03 45 49.6 +2.6
CTA Charters Tower 124.25 91 PKP PKPdf 03 45 28.7 +0.5
comp=Z,48nm,0.9s,baz=296,slow=2.8,SNR=27
CTA PKKPbc PKKPbc 03 55 15.5 +4.1
comp=Z,9.1nm,0.9s,baz=90,slow=3.9,SNR=4.8
CTA Charters Tower 124.25 91 PKP PKPdf 03 45 28.7 +0.5
CTA PKKPbc PKKPbc 03 55 15.5 +4.1
CTA Charters Tower 124.25 91 PKIKP PKPdf 03 45 28.7 +0.5
CTAO Charters Tower 124.25 91 *e*PKIKP PKPdf 03 45 31.0 +2.8
CTAO MLR MLR
comp=Z,3μm,22.0s
POHA Pohakuloa 124.53 4 PFAKE 03 45 40.0 +11
POHA LR LR
comp=Z,4μm,20.0s
JOHN Johnston Islan 125.12 20 PFAKE 03 45 40.0 +10
JOHN LR LR
comp=Z,6μm,21.0s
QSPA South Pole Qui 125.77 180 *e*PKPdf PKPdf 03 45 30.7 +1.3
QSPA *e*PP PP 03 47 25.4 +2.3
QSPA LR LR
comp=Z,8μm,21.0s
QSPA South Pole Qui 125.77 180 *e*PKIKP PKPdf 03 45 30.7 +1.3
STKA Stephens Creek 125.84 106 *e*PKP PKPdf 03 45 33.2 +2.3
comp=Z,38nm,0.9s
STKA Stephens Creek 125.84 106 PKP PKPdf 03 45 31.5 +0.6
comp=Z,52nm,0.9s,baz=327,slow=2.4,SNR=37
STKA Stephens Creek 125.84 106 *e*PKPdf PKPdf 03 45 32.7 +1.8
HNR Honiara 129.23 71 PFAKE 03 45 50.0 +12
HNR LR LR
comp=Z,1μm,22.0s
TOO Toolangi 130.87 112 *e*PKP PKPdf 03 45 43.1 +2.8
TOO *e*SKP 03 49 01.0
DRV Dumont d'Urvil 131.14 151 PP PP 03 47 58.0 -0.6
DRV SS SS 04 05 15.0 -10
DRV L 04 21 00.0
DRV R 04 27 00.0
CNB Canberra Magne 133.12 107 *e*PKP PKPdf 03 45 47.7 +3.0
CNB *ep*PKP pPKPdf 03 46 05.5 +2.0
CNB *e*SKP 03 49 08.5
ARMA Armidale 133.20 100 *e*PKP PKPdf 03 45 49.3 +4.3
ARMA *e*SKP 03 49 11.0
ARMA *e*SKKP 03 58 28.0
ARMA Armidale 133.20 100 *e*PKPdf PKPdf 03 45 49.3 +4.4
MOO Moorlands 133.44 117 *e*PKP PKPdf 03 45 48.1 +3.1
MOO *e*SKP 03 49 10.8
SBA Scott Base 134.47 169 *e*PKIKP PKPdf 03 45 45.8 -0.2
SBA MLR MLR
comp=Z,9μm,21.0s
SBA Scott Base 134.47 169 *e*PKIKP PKPdf 03 45 45.8 -0.2
DZM Mont Dzumac 141.57 80 *e*PKIKP PKPdf 03 46 03.5 +2.9
comp=Z,74nm,1.0s
DZM *e*SS SS 04 07 40.3 +9.1
comp=Z,6μm,28.9s
DZM *e*LR LR 04 32 06.9
comp=Z,7μm,26.1s
DZM Mont Dzumac 141.57 80 *e*PKPdf PKPdf 03 46 03.0 +2.4
XMAS Kiritimati 141.91 9 PFAKE 03 46 10.0 +8.4
XMAS LR LR
comp=Z,4μm,20.0s
FUNA Funafuti 142.26 51 PFAKE 03 46 10.0 +7.9
FUNA LR LR
comp=Z,16μm,20.0s
MSVF Nonsavu 148.04 63 *e*PKPdf PKPdf 03 46 15.4 +3.5
MSVF *e*PKPbc PKPbc 03 46 19.0 +3.9
MSVF LR LR
comp=Z,3μm,22.0s
APZ The Paps 148.51 123 PKP PKPbc 03 46 16.7 +1.3
JCZ Jackson Bay 149.23 117 PKP PKPbc 03 46 18.1 +0.7
FOZ Fox Glacier 149.92 116 PKP PKPbc 03 46 20.4 +1.4
ODZ Otahua Downs 150.52 120 *e*PKPbc PKPbc 03 46 22.5 +2.0
ODZ Otahua Downs 150.52 120 PKP PKPbc 03 46 22.2 +1.7
TAOE Nuku Hiva Isla 150.90 335 *e*PKPdf PKPdf 03 46 20.5 +3.9
TAOE *e*PKPbc PKPbc 03 46 25.0 +2.7
RPZ Rata Peaks 150.91 117 PKPbc PKPbc 03 46 23.1 +1.7
comp=Z,209nm,0.9s,baz=167,slow=1.8,SNR=57
RPZ Rata Peaks 150.91 117 *e*PKPbc PKPbc 03 46 22.8 +1.4
RPZ Rata Peaks 150.91 117 PKP PKPbc 03 46 22.7 +1.3
RPZ Rata Peaks 150.91 117 *e*PKPbc PKPbc 03 46 22.8 +1.4
LTZ Lake Taylor 151.83 115 PKP PKPbc 03 46 24.2 +0.6
AFI Afiamalu 151.90 44 PKPbc PKPbc 03 46 26.0 +1.5
comp=Z,304nm,0.9s,baz=298,slow=3.3,SNR=15
AFI Afiamalu 151.90 44 *e*PKPdf PKPdf 03 46 21.3 +3.3
AFI PKPbc PKPbc 03 46 26.0 +1.5
AFI *e*PKPbc PKPbc 03 46 27.9 +3.3
AFI LR LR
comp=Z,3μm,21.0s
AFI Afiamalu 151.90 44 *e*PKIKP PKPbc 03 46 21.3 -3.3
AFI Afiamalu 151.90 44 PKPbc PKPbc 03 46 26.0 +1.4
OUZ Omahuta 152.25 99 *e*PKPbc PKPbc 03 46 28.1 +3.3
SNZO South Karori 153.69 112 *e*PKPdf PKPdf 03 46 23.6 +3.7
SNZO *e*PKPbc PKPbc 03 46 29.8 +2.0
SNZO LR LR
comp=Z,5μm,21.0s
URZ Urewera 155.46 105 PKP PKPdf 03 46 22.4 -0.1
comp=Z,11nm,1.0s,baz=18,slow=6.4,SNR=4.5
URZ PKPab PKPab 03 46 49.3 +0.8
comp=Z,42nm,0.9s,baz=255,slow=1.2,SNR=9.1
URZ Urewera 155.46 105 *e*PKPdf PKPdf 03 46 24.1 +1.6
RAO Raoul Island 157.37 80 PFAKE 03 46 40.0 +15
RAO LR LR
comp=Z,4μm,22.0s
PTCN Pitcairn Islan 158.15 294 PFAKE 03 46 40.0 +14
PTCN LR LR
comp=Z,3μm,20.0s
PMOR Pomariorio Ree 158.81 348 *e*PKIKP PKPdf 03 46 31.3 +3.9
comp=Z,101nm,1.0s
PMOR Pomariorio Ree 158.81 348 *e*PKPab PKPab 03 47 05.8 +2.6

comp=Z,212nm,1.2s
PMOR Pomariorio Ree 158.81 348 *e*PKPdf PKPdf 03 46 31.3 +3.9
PMOR *e*PKPab PKPab 03 47 05.8 +2.6
TIAR Tiarei 161.53 351 *e*PKPab PKPab 03 47 18.1 +3.1
comp=Z,288nm,1.0s
PPT Papeete 161.57 352 *e*PKIKP PKPdf 03 46 33.9 +3.5
comp=Z,73nm,1.2s
PPT Papeete 161.57 352 *e*PKPab PKPab 03 47 18.3 +3.1
comp=Z,162nm,1.0s
PPT *e*SS SS 04 11 14.2 +5.3
comp=Z,2μm,26.0s
PPT *e*LR LR 04 41 29.1
comp=Z,12μm,26.2s
PPT Papeete 161.57 352 PKPab PKPab 03 47 16.1 +0.9
comp=Z,195nm,0.9s,baz=35,slow=4.7,SNR=15
PPT Papeete 161.57 352 PKP2 PKPab 03 47 16.1 +0.9
PPT pmax pmax
comp=Z,195nm,0.9s
PPT Papeete 161.57 352 *e*PKPdf PKPdf 03 46 33.9 +3.5
PPT *e*PKPab PKPab 03 47 18.3 +3.1
MEH Mehetia 161.65 347 *e*PKIKP PKPdf 03 46 34.2 +3.7
comp=Z,101nm,1.1s
MEH Mehetia 161.65 347 *e*PKPab PKPab 03 47 19.0 +3.5
comp=Z,175nm,0.9s
MEH Mehetia 161.65 347 *e*PKPdf PKPdf 03 46 34.2 +3.7
MEH *e*PKPab PKPab 03 47 19.0 +3.5
PAE Paea 161.66 352 *e*PKPab PKPab 03 47 18.6 +3.0
comp=Z,62nm,0.9s
RAR Rarotonga 163.91 26 PFAKE 03 46 40.0 +7.4
RAR LR LR
comp=Z,6μm,21.0s
TBI Tubuai 167.25 349 *e*PKIKP PKPdf 03 46 39.4 +4.1
comp=Z,175nm,0.8s
TBI *e*SS SS 04 12 11.8 +4.6
comp=Z,2μm,30.5s
TBI *e*LR LR 04 44 10.0
comp=Z,11μm,29.0s

NOU ***15*** *03:35:04.4±1.4, 20°.61S×168°.76E, h10km, MD2.6, ML4.1*
ISCJB ***15*** *03:35:05.4±3.0, 20°.89S±0°.08×168°.63E±0°.07, h18km±22km, mb4.7/16, MS3.8/2, Error ellipse: s-maj=16.0km s-min=7.8km az=144.1*
LDG ***15*** *03:35:06.7±0.3, 20°.55S×168°.35E, h10km, Mb5.5/2, Error ellipse: s-maj=28.5km s-min=5.1km az=130.0*
SZGRF ***15*** *03:35:08.3, 21°.56S×169°.40E, h39km, Southeast of Loyalty Islands*
IDC ***15*** *03:35:09.9±1.0, 20°.94S×168°.59E, h39km±6km, mb4.3/10, mb1 4.5/11, mb1mx4.4/18, mbtmp4.3/11, ML4.1/1, MS3.8/3, Ms1 3.8/3, ms1mx3.4/26, Error ellipse: s-maj=22.4km s-min=19.4km az=114.0*
NEIC ***15*** *03:35:15.0±0.5, 21°.24S×168°.01E, mb4.8/8, Error ellipse: s-maj=22.8km s-min=13.7km az=161.0*
ISC 15 03:35:06.0±2.9, 20°.92S±0°.07×168°.60E±0°.08, h10km±19km, h39km±.7km:pP-P, n101, σ0.9 84/38, mb4.7/16, MS3.8/2, 1D, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.01**	**232**	*e*P	**Pn**	**03 35 39.4**	**-0.6**
BAYA				*e*S	**Sn**	**03 36 05.7**	**+0.4**
BAYA				AMP		03 36 06.1	
	comp=Z,254nm,0.7s						
DZM	**Mont Dzumac**	**2.31**	**240**	*e*P	**Pn**	**03 35 42.8**	**-1.3**
DZM				*e*S	**Sn**	**03 36 13.2**	**+0.6**
DZM				AMP		03 36 18.8	
	comp=Z,14μm,1.1s						
DZM	**Mont Dzumac**	**2.31**	**240**	*e*Pn	**Pn**	**03 35 43.7**	**-0.4**
DZM				*e*Sn	**Sn**	**03 36 13.0**	**+0.4**
NORM	**Noumea**	**2.36**	**236**	*e*P	**Pn**	**03 35 45.0**	**+0.2**
NORM				*e*S	**Sn**	**03 36 12.6**	**-1.3**
NORM				AMP		03 36 16.2	
	comp=Z,2μm,3.3s						
ONTRN	**Noumea**	**2.43**	**235**	*e*S	**Sn**	**03 36 14.5**	**-1.0**
ONTRN				AMP		03 36 17.7	
	comp=Z,3μm,4.7s						
NOUC	**Port Laguerre**	**2.44**	**241**	*e*P	**Pn**	**03 35 45.6**	**-0.3**
NOUC				*e*S	**Sn**	**03 36 16.8**	**+1.0**
NOUC				AMP		03 36 19.1	
	comp=Z,636nm,5.5s						
HNR	**Honiara**	**14.14**	**323**	LR	LR	03 42 09.9	
	comp=Z,130nm,19.3s,baz=140,slow=30						
ARMA	**Armidale**	**17.97**	**235**	*e*P	**Pn**	**03 39 19.3**	**+3.4**
ARMA				*e*		03 39 30.1	
ARMA	**Armidale**	**17.97**	**235**	Pn	**Pn**	**03 39 09.6**	**-6.4**
	comp=Z,62nm,1.6s						
URZ	**Urewera**	**18.79**	**159**	P	**Pn**	**03 39 25.7**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=319,slow=4.5,SNR=14						
CTA	**Charters Tower**	**20.94**	**268**	*e*P	**P**	**03 39 51.7**	**+2.6**
	comp=Z,11nm,1.0s						
CTA	**Charters Tower**	**20.94**	**268**	P	**P**	**03 39 50.1**	**+1.0**
	comp=Z,9.4nm,0.8s,baz=99,slow=12,SNR=5.8						
CTA				LR	LR	03 47 13.0	
	comp=Z,303nm,21.4s,MS3.6,baz=85,slow=34						
CTAO	**Charters Tower**	**20.94**	**268**	*e*P	**P**	**03 39 47.8**	**-1.4**
	comp=Z,117nm,2.0s						
CNB	**Canberra Magne**	**22.16**	**226**	*e*P	**P**	**03 40 03.7**	**+1.7**
CNB				*e*		03 40 15.2	
CNB				*e*		03 40 25.4	
RPZ	**Rata Peaks**	**22.83**	**175**	P	**P**	**03 40 09.7**	**+0.7**
	comp=Z,15nm,1.1s,mb4.4,baz=85,slow=12,SNR=5.5						
PMG	**Port Moresby**	**23.61**	**296**	*e*P	**P**	**03 40 18.7**	**+1.2**
	comp=Z,36nm,1.1s,mb4.7						
STKA	**Stephens Creek**	**26.46**	**240**	*e*P	**P**	**03 40 44.4**	**+1.1**
	comp=Z,6.4nm,0.8s,mb4.2						
STKA				*e*		03 40 54.7	
STKA	**Stephens Creek**	**26.46**	**240**	P	**P**	**03 40 43.8**	**+0.5**
	comp=Z,9.1nm,0.8s,mb4.3,baz=65,slow=8.2,SNR=9.2						
STKA				pP	pP	03 40 54.4	+8.0
	comp=Z,7.6nm,0.9s,baz=86,slow=12,SNR=5.3						
STKA				LR	LR	03 51 09.5	
	comp=Z,428nm,19.6s,MS4.0,baz=30,slow=36						
STKA	**Stephens Creek**	**26.46**	**240**	*e*P	**P**	**03 40 44.4**	**+1.1**
	comp=Z,6.0nm,1.3s,mb4.0						
STKA				pP	pP	03 40 54.4	+8.0
STKA				LR	LR	03 51 09.5	
WRAB	**Tennant Creek**	**32.08**	**266**	*e*P	**P**	**03 41 32.1**	**-1.2**
	comp=Z,12nm,1.2s,mb4.6						
WRA	**Warramunga Arr**	**32.08**	**266**	P	**P**	**03 41 32.3**	**-1.1**
	comp=Z,7.8nm,1.0s,mb4.5,baz=93,slow=9.1,SNR=9.4						
WRA				pP	pP	03 41 43.3	+6.8
	comp=Z,4.7nm,0.9s,baz=93,slow=8.1,SNR=6.0						
ASAR	**Alice Springs**	**32.17**	**259**	P	**P**	**03 41 33.8**	**-0.4**
	comp=Z,16nm,0.8s,mb4.9,baz=82,slow=9.0,SNR=125						
ASAR				pP	pP	03 41 44.6	+7.5
	comp=Z,16nm,0.7s,baz=85,slow=9.1,SNR=21						
FORT	**Forrest**	**37.61**	**246**	*e*P	**P**	**03 42 20.9**	**-0.1**
	comp=Z,19nm,0.8s,mb4.9						
FITZ	**Fitzroy Crossi**	**40.50**	**266**	*e*P	**P**	**03 42 45.4**	**0.0**
	comp=Z,34nm,0.8s,mb5.0						
FITZ				*e*		03 42 56.5	
FITZ	**Fitzroy Crossi**	**40.50**	**266**	*e*P	**P**	**03 42 45.9**	**+0.5**
	comp=Z,43nm,1.3s,mb4.9						
FITZ				*ep*P	pP	03 42 56.7	+8.2
MBWA	**Marble Bar**	**45.46**	**261**	*e*P	**P**	**03 43 25.9**	**+0.4**
	comp=Z,21nm,0.8s,mb5.0						
MBWA				*ep*P	pP	03 43 37.2	+8.6
KLBR	**Kellerberrin**	**46.46**	**246**	*e*P	**P**	**03 43 32.9**	**-0.5**
	comp=Z,41nm,1.0s,mb5.3						
NWAO	**Narrogin (SRO)**	**46.93**	**244**	*e*P	**P**	**03 43 36.9**	**0.0**
	comp=Z,57nm,1.3s,mb5.3						
MJAR	**Matsushiro Arr**	**63.95**	**333**	P	**P**	**03 45 38.8**	**-0.5**
	comp=Z,4.6nm,0.9s,mb4.5,baz=172,slow=7.6,SNR=5.4						
KSRS	**Korea Array**	**69.55**	**326**	P	**P**	**03 46 16.0**	**+1.0**
	comp=Z,0.6nm,0.5s,mb3.8,baz=149,slow=2.9,SNR=4.3						
CMAR	**Chiang Mai Arr**	**78.65**	**295**	P	**P**	**03 47 09.3**	**+0.7**
	comp=Z,4.4nm,0.9s,mb4.4,baz=132,slow=4.6,SNR=10						
CMAR				pP	pP	03 47 21.1	+9.2
	comp=Z,4.3nm,0.8s,baz=134,slow=3.6,SNR=4.2						
ULN	**Ulaanbaatar**	**87.85**	**324**	P	**P**	**03 47 55.2**	**-0.3**
SONM	**Songino Array**	**88.19**	**323**	P	**P**	**03 47 56.8**	**-0.3**
	comp=Z,7.3nm,0.9s,mb4.9,baz=146,slow=4.3,SNR=13						
SONM				pP	pP	03 48 09.2	+8.8
	comp=Z,1.6nm,0.8s,baz=140,slow=9.1,SNR=2.1						
YBH	**Yreka Blue Hor**	**88.92**	**44**	P	**P**	**03 47 59.6**	**-1.1**
	comp=Z,2.6nm,0.8s,mb4.6,baz=252,slow=4.4,SNR=4.2						
AKASG	**Malin Array Be**	**136.48**	**323**	PKP	PKPdf	03 54 27.1	-0.9
	comp=Z,0.4nm,0.4s,baz=84,slow=0.9,SNR=4.3						
AKASG				pPKP	pPKPdf	03 54 40.0	+8.7
	comp=Z,0.7nm,0.5s,baz=60,slow=2.2,SNR=2.8						
BRTR	**Keskin Array B**	**137.34**	**306**	PKP	PKPdf	03 54 27.7	-2.3
	comp=Z,1.9nm,1.0s,baz=131,slow=5.4,SNR=5.2						
VYHS	**Vyhne**	**143.35**	**326**	*e*P	PKPdf	03 54 37.8	-2.7
VYHS	**Vyhne**	**143.35**	**326**	PDIF	PKPdf	03 54 37.8	-2.7
DPC	**Dobruska-Polom**	**143.39**	**330**	*e*PKP	PKPdf	03 54 37.6	-2.9
DPC				*e*		03 54 49.5	
DPC	**Dobruska-Polom**	**143.39**	**330**	*e*PKP	PKPdf	03 54 37.6	-2.9
DPC				*ex*	x	03 54 49.5	
UPC	**Upice**	**143.42**	**330**	*e*PKP	PKPdf	03 54 37.5	-3.1
UPC				*e*		03 54 48.7	
UPC	**Upice**	**143.42**	**330**	*e*PKP	PKPdf	03 54 37.5	-3.1
UPC				*ex*	x	03 54 48.7	
PVCC	**Panska Ves**	**144.06**	**332**	*e*PKP	PKPdf	03 54 39.8	-1.9
PVCC				*e*		03 54 51.9	
PVCC	**Panska Ves**	**144.06**	**332**	*e*PKP	PKPdf	03 54 39.8	-1.9
PVCC				*ex*	x	03 54 51.9	
BRG	**Berggiesshubel**	**144.09**	**332**	*e*PKPbc	PKPdf	03 54 39.8	-1.9
BRG				*ep*PKPbc		03 54 51.6	
BRG	**Berggiesshubel**	**144.09**	**332**	*i* PKP	PKPdf	03 54 39.8	-1.9
	comp=Z,18nm,1.2s						
BRG				*i*		03 54 51.6	
	comp=Z,12nm,1.0s						
BRG				*e*PKS		03 58 07.8	
	comp=Z,2.2nm,0.8s						
BRG				*e*PP	PP	03 58 19.6	+24
	comp=Z,3.5nm,0.5s						
BRG				*e*		04 05 29.8	
	comp=Z,5.8nm,1.2s						
BRG				*e*		04 14 38.1	
	comp=Z,3.7nm,0.7s						
CLL	**Collm**	**144.16**	**334**	*e*PKPbc	PKPdf	03 54 39.7	-2.2
CLL				*ep*PKPbc		03 54 51.7	
CLL	**Collm**	**144.16**	**334**	⇓*i*PKPpre	PKPdf	03 54 39.3	-2.6
	comp=Z,15nm,1.3s						
CLL				*i* PKiKP	PKiKP	03 54 51.4	+6.0
	comp=Z,11nm,0.9s						
PRU	**Pruhonice**	**144.46**	**331**	*e*PKP	PKPdf	03 54 41.7	-0.7
PRU				*e*		03 54 53.3	
PRU	**Pruhonice**	**144.46**	**331**	*e*PKP	PKPdf	03 54 41.7	-0.7
PRU				*ex*	x	03 54 53.3	
TREC	**Trest**	**144.50**	**329**	*e*PKP	PKPdf	03 54 41.1	-1.4
TREC				*ex*	x	03 54 53.0	
CLZ	**Clausthal**	**144.78**	**336**	*e*PKPbc	PKPdf	03 54 42.3	-0.6
TANN	**Tannenbergstha**	**145.06**	**333**	*e*PKPbc	PKPbc	03 54 43.2	+0.4
TANN				*ep*PKPbc	pPKPbc	03 54 55.2	+9.0
EKA	**Eskdalemuir Ar**	**145.08**	**352**	PKPbc	PKPbc	03 54 40.3	-2.5
	comp=Z,1.9nm,0.7s,baz=21,slow=1.1,SNR=7.6						
NKC	**Novy Kostel**	**145.20**	**333**	*e*PKP	PKPdf	03 54 43.4	-0.3
NKC				*e*		03 54 54.9	
NKC	**Novy Kostel**	**145.20**	**333**	*e*PKP	PKPdf	03 54 43.4	-0.3
NKC				*ep*PKP	pPKPdf	03 54 54.9	+7.8
MOX	**Moxa**	**145.24**	**334**	*e*P	PKPbc	03 54 42.9	-0.5
	comp=Z,12nm,1.4s						
MOX				*e*		03 54 55.3	
MOX	**Moxa**	**145.24**	**334**	*e*PKPbc	PKPbc	03 54 43.6	+0.2
MOX				*ep*PKPbc	pPKPbc	03 54 55.4	+8.6
CONA	**Conrad Observa**	**145.24**	**327**	P	PKPbc	03 54 44.1	+0.6
	comp=Z,39nm,1.5s						
IBBN	**Ibbenburen**	**145.32**	**339**	*e*PKPbc	PKPbc	03 54 43.6	0.0
KHC	**Kasperske Hory**	**145.51**	**331**	*e*PKP	PKPdf	03 54 44.2	-0.1
KHC				*ep*PKP	pPKPdf	03 54 56.5	+8.8
GEC2	**GERESS Array S**	**145.66**	**330**	*e*PKPbc	PKPbc	03 54 45.2	+0.4
UBBA	**Unterbreizbach**	**145.74**	**336**	*e*PKPbc	PKPbc	03 54 45.4	+0.4
UBBA				*ep*PKPbc	pPKPbc	03 54 57.7	+9.3
WET	**Wettzell**	**145.82**	**331**	*e*PKPbc	PKPbc	03 54 45.9	+0.6
WET				*ep*PKPbc	pPKPbc	03 54 57.6	+8.9
GRF	**Grafenberg Arr**	**146.13**	**333**	*e*PKPbc	PKPbc	03 54 46.7	+0.5
BUG	**Bochum--Univer**	**146.22**	**339**	*e*PKPbc	PKPbc	03 54 46.4	0.0
SOKA	**Soboth**	**146.49**	**326**	P	PKPdf	03 54 47.3	+1.3
	comp=Z,14nm,1.2s						
TNS	**Taunus Mts**	**146.81**	**337**	*e*PKPbc	PKPbc	03 54 48.3	+0.1
TNS				*ep*PKPbc	pPKPbc	03 55 00.3	+8.7
WLF	**Walferdange**	**148.10**	**338**	*e*PKPbc	PKPbc	03 54 52.2	+0.4
GIVF	**Givet**	**148.17**	**340**	*e*PKP1	PKPbc	03 54 51.2	-0.7
FETA	**Feichten**	**148.36**	**331**	P	PKPbc	03 54 51.1	-1.4
	comp=Z,13nm,1.3s						
BFO	**Black Forest**	**148.38**	**335**	*e*PKPbc	PKPbc	03 54 52.2	-0.4
BAIF	**Baives**	**148.40**	**341**	*e*PKP1	PKPbc	03 54 52.0	-0.5
CDF	**Champ du Feu**	**148.73**	**336**	*e*PKP1	PKPbc	03 54 52.7	-0.8
	comp=Z,7.5nm,0.8s						
DAVOX	**Davos/Dischmat**	**148.93**	**331**	PKPbc	PKPbc	03 54 53.7	-0.3
	comp=Z,5.7nm,0.7s,baz=60,slow=4.2,SNR=7.4						
HINF	**Hinteralfeld**	**149.38**	**336**	*e*PKP1	PKPbc	03 54 54.3	-0.8
	comp=Z,17nm,1.2s						
HAU	**Haudompre**	**149.42**	**336**	*e*PKP1	PKPbc	03 54 54.4	-0.8
	comp=Z,11nm,0.9s						
MEZF	**Maizieres J'vi**	**149.47**	**338**	*e*PKP1	PKPbc	03 54 55.0	-0.3
	comp=Z,17nm,0.8s						
CABF	**La Chapelle**	**150.67**	**335**	*e*PKP1	PKPbc	03 54 58.1	-0.2
	comp=Z,23nm,1.0s						
LOR	**Lormes**	**150.94**	**338**	*e*PKP1	PKPbc	03 54 58.0	-0.9
	comp=Z,11nm,1.0s						
SSF	**Saint Saulge**	**151.24**	**339**	*e*PKP1	PKPbc	03 54 58.7	-0.9
	comp=Z,6.3nm,0.9s						
LPL	**La Plagne**	**151.29**	**333**	*e*PKP1	PKPbc	03 54 59.5	-0.3
	comp=Z,9.5nm,0.9s						
LPG	**La Plagne**	**151.29**	**333**	*e*PKP1	PKPbc	03 54 59.6	-0.2
	comp=Z,8.2nm,1.0s						
GRR	**Gorron**	**151.31**	**345**	*e*PKP1	PKPbc	03 54 59.8	+0.1
	comp=Z,14nm,1.1s						
SMF	**Signal de Mont**	**151.48**	**338**	*e*PKP1	PKPbc	03 55 00.9	+0.7
AVF	**Avril sur Loir**	**151.53**	**338**	*e*PKP1	PKPbc	03 54 59.0	-1.3
	comp=Z,8.7nm,1.1s						
SGMF	**Saint Gilles**	**151.81**	**347**	*e*PKP1	PKPbc	03 55 00.7	-0.2
ORIF	**Oris-en-Rattie**	**152.13**	**333**	*e*PKP1	PKPbc	03 55 01.0	-0.7
	comp=Z,13nm,1.0s						
QUIF	**Quistinic**	**152.25**	**348**	*e*PKP1	PKPbc	03 55 00.7	-1.2
SBF	**Sospel**	**152.26**	**330**	*e*PKP1	PKPbc	03 55 01.9	-0.2
	comp=Z,27nm,0.9s						
TCF	**Toulx Ste Croi**	**152.35**	**339**	*e*PKP1	PKPbc	03 55 02.7	+0.5
VIVF	**Saint-Julien-l**	**152.68**	**335**	*e*PKP1	PKPbc	03 55 02.3	-0.6
MFF	**Saint Martin d**	**152.78**	**343**	*e*PKP1	PKPbc	03 55 03.8	+0.7
	comp=Z,12nm,1.2s						
FRF	**La Foret Royal**	**152.86**	**330**	*e*PKP1	PKPbc	03 55 02.3	-1.1
	comp=Z,12nm,0.9s						
SMRF	**Simiane la Rot**	**153.01**	**332**	*e*PKP1	PKPbc	03 55 02.9	-0.8
	comp=Z,12nm,1.1s						
LMR	**La Mourre**	**153.10**	**330**	*e*PKP1	PKPbc	03 55 03.0	-0.9
	comp=Z,18nm,1.0s						
RJF	**Les Rejaudoux**	**153.45**	**339**	*e*PKP1	PKPbc	03 55 04.7	+0.1
CAF	**Calviac**	**153.59**	**338**	*e*PKP1	PKPbc	03 55 05.7	+0.7
LFF	**La Frestale**	**154.02**	**340**	*e*PKP1	PKPbc	03 55 05.0	-0.9
	comp=Z,12nm,1.1s						
MTLF	**Montolieu**	**154.91**	**336**	*e*PKP1	PKPbc	03 55 08.4	+0.6
ETSF	**Etsaut**	**156.27**	**340**	*e*PKP1	PKPdf	03 55 09.5	+8.5

MAN 15 03:35:11.19°.65N×121°.15E, h30km, mb4.7, ML3.6, MS3.6, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBP	**Basco**	**1.10**	**44**	*e*P	Pn	03 35 31.1	+0.8
BBP				*e*S	Sn	03 35 45.3	+0.9
PIP	**Pasuquin**	**1.41**	**201**	⇓*i*P	Pn	03 35 34.6	-0.1
PIP				*e*S	Sn	03 35 53.3	+1.1
APYP	**Conner**	**1.78**	**177**	*e*P	Pn	03 35 33.5	-6.3
APYP				*e*S	Sn	03 36 02.9	+1.4
ABRA	**Dolores**	**2.04**	**192**	*e*P	Pn	03 35 44.6	+1.4
CVP	**Callao Caves**	**2.04**	**162**	*e*P	Pn	03 35 45.1	+1.8
CVP				*e*S	Sn	03 36 10.0	+2.2
CAUP	**Cauayan**	**2.77**	**167**	*e*P	Pn	03 35 58.5	+5.2
SCZP	**Santa Cruz**	**4.03**	**197**	*e*P	Pn	03 36 13.9	+3.2

NEIC ***15*** *03:39:43.0, 31°.81S×72°.23W, h4km, ML4.0(GUC), After GUC.*
GUC 15 03:39:43.0±0.9, 31°.81S×72°.23W, h4km±3km, MD4.2, ML4.0, 9C-6D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.63**	**96**	⇓*i*P	Pg	03 39 56.1	+1.0
CHNG				*i* S	Sg	03 40 05.0	+1.9
CMCH	**Combarbala**	**1.23**	**59**	⇑*i*P	Pg	03 40 06.1	-0.5
CMCH				*i* S	Sg	03 40 22.9	+0.4
CMCH	**Combarbala**	**1.23**	**59**	⇑*i*P	Pg	03 40 06.1	-0.5
CMCH				*i* S	Sg	03 40 22.9	+0.4
CMCH				AML	AML	03 40 25.7	
	comp=N,21μm,0.8s						
OVCH	**Ovalle**	**1.49**	**37**	*e*P	Pn	03 40 10.0	-0.6
OVCH				*i* S	Sn	03 40 30.2	-0.3
OVCH	**Ovalle**	**1.49**	**37**	*e*P	Pn	03 40 10.0	-0.6
OVCH				*i* S	Sn	03 40 30.2	-0.3
OVCH				AML	AML	03 40 39.5	
	comp=N,2μm,0.5s						
ROCH	**El Roble**	**1.55**	**139**	⇑*i*P	Pn	03 40 11.6	+0.2
ROCH				*i* S	Sn	03 40 32.8	+0.9
ROCH	**El Roble**	**1.55**	**139**	⇑*i*P	Pn	03 40 11.6	+0.2
ROCH				*i* S	Sn	03 40 32.8	+0.9
PEL	**Peldehue**	**1.86**	**136**	⇓*i*P	Pn	03 40 15.9	+0.3
PEL				*i* S	Sn	03 40 40.8	+1.2
PEL				AML	AML	03 40 47.9	
	comp=E,3μm,0.4s						
TLL	**Tololo Astrono**	**2.05**	**37**	*e*P	Pn	03 40 19.5	+1.3
TLL				*i* S	Sn	03 40 46.4	+2.2
TLL	**Tololo Astrono**	**2.05**	**37**	*e*P	Pn	03 40 19.5	+1.3
TLL				*i* S	Sn	03 40 46.4	+2.2
TLL				AML	AML	03 40 58.4	
	comp=N,2μm,0.8s						
CLCH	**Cerro Calan**	**2.13**	**138**	⇑*i*P	Pn	03 40 19.7	+0.4
CLCH				*i* S	Sn	03 40 48.6	+2.4
CLCH				AML	AML	03 40 58.7	
	comp=E,2μm,0.5s						
TACH	**Talagante**	**2.13**	**150**	⇑*i*P	Pn	03 40 20.1	+0.7
TACH				*i* S	Sn	03 40 48.6	+2.2
TACH	**Talagante**	**2.13**	**150**	⇑*i*P	Pn	03 40 20.1	+0.7
TACH				*i* S	Sn	03 40 48.6	+2.2
ANTU	**Antumapu**	**2.21**	**143**	*e*P	Pn	03 40 21.4	+0.9
ANTU	**Antumapu**	**2.21**	**143**	*e*P	Pn	03 40 21.4	+0.9
ANTU				AML	AML	03 40 58.9	
	comp=E,947nm,0.7s						
FCH	**Farellones**	**2.23**	**133**	AML	AML	03 40 54.8	
	comp=E,638nm,0.4s						
PCH	**Pirque**	**2.31**	**142**	*e*P	Pn	03 40 22.6	+0.7
PCH	**Pirque**	**2.31**	**142**	*e*P	Pn	03 40 22.6	+0.7
CHCH	**Chadas Angostu**	**2.50**	**148**	⇓*i*P	Pn	03 40 25.3	+0.9
CHCH				*i* S	Sn	03 40 57.8	+2.5
CHCH	**Chadas Angostu**	**2.50**	**148**	⇓*i*P	Pn	03 40 25.3	+0.9
CHCH				*i* S	Sn	03 40 57.8	+2.5
LMEL	**Las Melosas**	**2.65**	**140**	⇑*i*P	Pn	03 40 27.5	+0.9
LMEL	**Las Melosas**	**2.65**	**140**	⇑*i*P	Pn	03 40 27.5	+0.9
LMEL				AML	AML	03 41 14.5	
	comp=N,476nm,0.6s						
CACH	**El Canelo**	**2.67**	**150**	⇓*i*P	Pn	03 40 28.6	+1.7
CACH	**El Canelo**	**2.67**	**150**	⇓*i*P	Pn	03 40 28.6	+1.7
LCO	**Las Campanas**	**3.09**	**26**	*e*Pn	Pn	03 40 33.0	+0.4
LCO				*e*S	Sn	03 41 14.1	+4.1
PLCA	**Paso Flores**	**9.00**	**172**	*e*Pn	Pn	03 41 54.0	+0.2
TRQA	**Tornquist**	**10.46**	**129**	*e*Pn	Pn	03 42 13.6	-0.2

DDA ***15*** *03:46:50.3, 34°.92N×27°.54E, h12km, Md3.8*
IDC ***15*** *03:46:55.4±1.6, 35°.29N×27°.70E, h0km, mb3.5/3, mb1 3.6/6, mb1mx3.5/23, mbtmp3.5/6, ML3.4/3, Error ellipse: s-maj=34.0km s-min=22.9km az=13.0*
ISK ***15*** *03:46:56.3, 35°.28N×27°.72E, h5km, ML3.8*
THE ***15*** *03:46:57.8, 35°.33N×27°.96E, h0km±2km, ML4.8/1, Error ellipse: s-maj=8.7km s-min=1.4km az=128.0*
ISCJB ***15*** *03:46:57.9±0.6, 35°.24N±0°.03×27°.86E±0°.03, h22km±6km, mb3.4/3, Error ellipse: s-maj=5.2km s-min=3.4km az=170.5*
ATH ***15*** *03:46:58.8, 35°.38N×27°.83E, h30km±2km, MD3.7/13*
NEIC ***15*** *03:46:58.8, 35°.38N×27°.83E, h30km, MD3.7(ATH), After ATH.*
CSEM ***15*** *03:46:59.9±0.2, 35°.38N×27°.79E, h15km, MD3.7, Error ellipse: s-maj=5.8km s-min=3.2km az=159.0*
ISC 15 03:46:58.5±0.7, 35°.30N±0°.03×27°.84E±0°.02, h13km±5km, n130, σ1.9 22/167, mb3.4/3, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.61**	**295**	*e*Pn	**Pg**	**03 47 09.9**	**-0.5**
KARP				*e*Sn	**Sg**	**03 47 19.1**	**+0.7**
KARP	**Karpathos**	**0.61**	**295**	*e*Pn	**Pg**	**03 47 09.9**	**-0.5**
KARP				*e*SN	**Sg**	**03 47 19.1**	**+0.7**
KARP	**Karpathos**	**0.61**	**295**	*e*Pn	**Pg**	**03 47 09.9**	**-0.5**
ARG	**Arkhangelos**	**0.95**	**14**	*e*Pn	**Pn**	**03 47 15.8**	**-1.8**
ARG				*e*Sn	**Sn**	**03 47 29.2**	**-1.8**
ARG	**Arkhangelos**	**0.95**	**14**	*e*PN	**Pn**	**03 47 15.8**	**-1.8**
ARG				*e*SN	**Sn**	**03 47 29.2**	**-1.8**
ARG	**Arkhangelos**	**0.95**	**14**	P	**Pg**	**03 47 16.0**	**-0.8**
ARG				S	**Sg**	**03 47 29.5**	**+0.3**
ARG	**Arkhangelos**	**0.95**	**14**	P	**Pg**	**03 47 16.0**	**-0.8**
ARG				*e*Sn	**Sn**	**03 47 29.2**	**-1.8**
ARG				S	**Sg**	**03 47 29.5**	**+0.3**
ZKR	**Zakros**	**1.34**	**263**	*e*Pn	**Pn**	**03 47 23.3**	**+0.3**
ZKR	**Zakros**	**1.34**

VAM	Vamos	2.98	273	*e*Pn	Pn	03 47 47.5	+2.0
VAM	Vamos	2.98	273	*e*PN	Pn	03 47 47.5	+2.0
VAM	Vamos	2.98	273	*e*Pn	Pn	03 47 47.5	+2.0
BCK	Bucak	3.10	45	*e*PN	Pn	03 47 47.9	+0.7
BCK	Bucak	3.10	45	*e*Pn	Pn	03 47 47.9	+0.7
GVD	Gavdhos	3.11	263	*e*Pn	Pn	03 47 48.7	+1.4
GVD	Gavdhos	3.11	263	*e*PN	Pn	03 47 48.7	+1.4
GVD	Gavdhos	3.11	263	*e*Pn	Pn	03 47 48.7	+1.4
IZM	Izmir	3.13	352	*e*PN	Pn	03 47 47.9	+0.3
IZM	Izmir	3.13	352	*e*Pn	Pn	03 47 47.9	+0.3
BLCB	Balcova	3.15	349	*e*PN	Pn	03 47 47.9	0.0
BLCB	Balcova	3.15	349	*e*Pn	Pn	03 47 47.9	0.0
KARN	Karanos	3.21	273	*e*PN	Pn	03 47 50.7	+2.0
KARN	Karanos	3.21	273	P	Pn	03 47 49.8	+1.1
KARN	Karanos	3.21	273	P	Pn	03 47 49.8	+1.1
KARN	Karanos	3.21	273	*e*Pn	Pn	03 47 50.7	+2.0
KULA	Kula-Manisa	3.28	11	*e*PN	Pn	03 47 49.7	0.0
KULA	Kula-Manisa	3.28	11	*e*Pn	Pn	03 47 49.7	0.0
KHL	Karahalli	3.31	24	*e*PN	Pn	03 47 52.0	+1.9
KHL	Karahalli	3.31	24	*e*Pn	Pn	03 47 52.0	+1.9
SUTC	Sutluce-Ispart	3.35	49	*e*PN	Pn	03 47 52.0	+1.3
SUTC	Sutluce-Ispart	3.35	49	*e*Pn	Pn	03 47 52.0	+1.3
CHOS	Chios island	3.40	336	*e*PN	Pn	03 47 51.1	-0.2
CHOS	Chios island	3.40	336	P	Pn	03 47 50.5	-0.8
CHOS	Chios island	3.40	336	P	Pn	03 47 50.5	-0.8
CHOS	Chios island	3.40	336	*e*Pn	Pn	03 47 51.1	-0.2
AKS	Akhisar	3.58	360	*e*PN	Pn	03 47 54.5	+0.7
AKS	Akhisar	3.58	360	*e*Pn	Pn	03 47 54.5	+0.8
GAZI	Gazipasa	3.76	74	*i* P	Pn	03 47 54.5	-1.7
GAZI				*i* S	Sn	03 48 33.7	-6.7
GAZI	Gazipasa	3.76	74	*i* P	Pn	03 47 54.5	-1.8
SHUT	Suhut-Afyon	3.91	33	*e*PN	Pn	03 47 59.8	+1.4
SHUT	Suhut-Afyon	3.91	33	*e*Pn	Pn	03 47 59.8	+1.5
KYTH	Kithira	4.03	286	*e*PN	Pn	03 48 00.2	+0.3
KYTH	Kithira	4.03	286	*e*Pn	Pn	03 48 00.2	+0.3
KYTH	Kithira	4.03	286	*e*Pn	Pn	03 48 00.2	+0.3
HDMB	Hadim	4.11	65	*e*PN	Pn	03 48 02.8	+1.6
HDMB	Hadim	4.11	65	*e*Pn	Pn	03 48 02.8	+1.7
ALT	Altintas	4.17	25	*e*PN	Pn	03 48 03.0	+1.1
ALT	Altintas	4.17	25	*e*Pn	Pn	03 48 03.0	+1.1
VLI	Veliai	4.22	291	*e*Pn	Pn	03 48 02.2	-0.4
VLI	Veliai	4.22	291	*e*PN	Pn	03 48 02.2	-0.4
VLI	Veliai	4.22	291	*e*Pn	Pn	03 48 02.2	-0.4
ERMK	Ermenek	4.33	70	*i* P	Pn	03 48 05.6	+1.5
ERMK				*i* S	Sn	03 48 54.9	+0.4
ERMK	Ermenek	4.33	70	*i* P	Pn	03 48 05.6	+1.5
ERMK				*i* S	Sn	03 48 54.9	+0.5
KONT	Konya--Tatoy	4.50	53	*e*PN	Pn	03 48 08.4	+2.1
KONT	Konya--Tatoy	4.50	53	*e*Pn	Pn	03 48 08.5	+2.1
KIZT	Kizilcal	4.82	41	*e*PN	Pn	03 48 12.0	+1.2
KIZT	Kizilcal	4.82	41	*e*Pn	Pn	03 48 12.0	+1.2
LIA	Limnos Island	5.05	336	*e*PN	Pn	03 48 15.0	+0.9
LIA	Limnos Island	5.05	336	*e*PN	Pn	03 48 15.0	+0.9
LIA	Limnos Island	5.05	336	*e*Pn	Pn	03 48 15.0	+0.9
BRTR	Keskin Array B	6.39	44	Pn	Pn	03 48 33.1	+0.8
	0.2nm,0.3s,baz=267,slow=22,SNR=6.0						
BRTR				Sn	Sn	03 49 45.4	+0.2
	0.4nm,0.3s,baz=211,slow=27,SNR=6.2						
BRTR	Keskin Array B	6.39	44	Pn	Pn	03 48 33.2	+0.9
BRTR				Sn	Sn	03 49 45.3	+0.2
BR131	Keskin Array S	6.39	44	*e*Pn	Pn	03 48 29.6	-2.8
BR131				*e*S	Sn	03 49 39.9	-5.2
MMAI	Mount Meron Ar	6.67	108	Pn	Pn	03 48 34.9	-1.4
	6.3nm,0.3s,baz=298,slow=13,SNR=16						
MMAI				Sn	Sn	03 49 48.8	-3.4
	3.4nm,0.3s,baz=305,slow=26,SNR=4.3						
HWQ	Hawqa	6.75	96	*e*Pn	Pn	03 48 36.4	-1.0
RCY	Rachaya	6.84	103	*e*Pn	Pn	03 48 37.8	-0.8
EIL	Elat	8.22	131	Pn	Pn	03 48 57.6	+0.1
	0.3nm,0.3s,baz=328,slow=19,SNR=4.8						
EIL				Sn	Sn	03 50 26.7	-3.5
	1.3nm,0.3s,baz=325,slow=20,SNR=7.0						
EIL	Elat	8.22	131	Pn	Pn	03 48 57.7	+0.2
ESDC	Sonseca Array	25.54	289	P	P	03 52 24.6	-2.3
	1.2nm,0.6s,mb3.6,baz=84,slow=9.3,SNR=7.8						
ARCES	ARCESS Array B	34.32	359	P	P	03 53 43.0	-1.4
	0.4nm,0.7s,mb3.5,baz=186,slow=7.8,SNR=3.5						
ARCES	ARCESS Array B	34.32	359	P	P	03 53 43.0	-1.4
MKAR	Makanchi Array	41.87	57	P	P	03 54 48.2	-0.1
	0.2nm,0.6s,mb3.0,baz=273,slow=8.7,SNR=2.1						
MKAR	Makanchi Array	41.87	57	P	P	03 54 48.2	-0.1

*JMA **15** 03:53:15.9±0.4, 22°.46N×121°.15E, h0km, M3.8*
*TAP **15** 03:53:18.2, 22°.49N×121°.02E, h10km, ML4.0, B*
*NEIC **15** 03:53:19.8±4.8, 22°.67N×121°.27E, h10km, MG3.8(JMA), Error ellipse: s-maj=49.0km s-min=14.4km az=170.0*
ISC 15 03:53:17.6±0.5, 22°.44N±0°.02×121°.17E±0°.03, h0km±4km, n66, σ1°.24/105, 10C-6D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAW	Tawu	0.27	252	⇓*i*P	Pg	03 53 22.3	-0.5
TAW	baz=225			*i* S	Sg	03 53 25.0	-1.3
EAST	Anshuo	0.31	259	⇓*i*P	Pg	03 53 22.6	-0.9
EAST	baz=234			*e*S	Sg	03 53 25.4	-2.1
TTN	Taitung	0.31	356	P	Pg	03 53 25.6	+2.0
TTN	baz=8.0			*e*S	Sg	03 53 32.0	+4.4
TWG	Pinlang	0.39	346	*e*Pg	Pg	03 53 24.9	-0.1
TWG	Pinlang	0.39	346	P	Pg	03 53 25.3	+0.2
TWG	baz=357			*i* S	Sg	03 53 30.9	+0.8
SCZT	Fangliau	0.52	262	⇑*i*P	Pg	03 53 26.4	-1.2
SCZT	baz=260			S	Sg	03 53 31.9	-2.4
LAY	Lan-yu	0.53	139	⇑P	Pg	03 53 30.8	+2.9
SSD	baz=117 Sandimen	0.58	301	⇑*i*P	Pg	03 53 27.0	-1.9
SSD	baz=313			*e*S	Sg	03 53 32.4	-4.1
HEN	Hengchun	0.59	223	P	Pg	03 53 29.7	+0.7
HEN	baz=218			S	Sg	03 53 38.4	+1.6
TSEB	Hengchuen, Pin	0.60	205	⇑*i*P	Pg	03 53 31.0	+1.9
TSEB	baz=180			*e*S	Sg	03 53 40.3	+3.4
TWK1	Hengchun	0.60	214	⇑*i*P	Pg	03 53 30.2	+1.0
TWK1	baz=210			*e*S	Sg	03 53 39.6	+2.6
ELDTW	Lidau	0.76	349	⇓*i*P	Pg	03 53 31.5	-0.6
ELDTW	baz=12			*e*S	Sg	03 53 43.0	+1.0
TWP	Hsiaoliuchiu	0.76	263	*e*P	Pg	03 53 33.6	+1.5
TWM1	baz=257 Shoushan	0.79	299	⇑P	Pg	03 53 32.5	-0.3
KAU	baz=311 Kaohsiung	0.81	279	*e*P	Pg	03 53 34.4	+1.2
STYT	baz=277 Tauyuan	0.81	332	⇑*i*P	Pg	03 53 32.3	-1.0
STYT	baz=340			*e*S	Sg	03 53 41.4	-2.4
SGST	Jiashian	0.84	320	⇑*i*P	Pg	03 53 32.9	-0.8
SGST	baz=330			*e*S	Sg	03 53 43.6	-1.0
TWF1	Yuli	0.91	7	*e*P	Pg	03 53 32.6	-2.5
TWF1	baz=15			*e*S	Sg	03 53 46.7	-0.3
CHN1	Nanshi	0.95	321	⇑P	Pg	03 53 35.4	-0.5
CHN1	baz=330			*e*S	Sg	03 53 48.9	+0.7
WTP	Ta-pu	0.95	327	⇑*i*P	Pg	03 53 35.4	-0.5
WTP	baz=337			*e*S	Sg	03 53 49.4	+1.2
YULB	Yu-li	0.95	7	*e*Pg	Pg	03 53 33.8	-2.1
CHN3	Shinhua	0.98	310	*e*P	Pg	03 53 37.6	+1.3
CHN3	baz=318			*e*S	Sg	03 53 51.1	+2.1
TPUB	Ta-pu	0.99	330	*e*Pg	Pg	03 53 36.1	-0.5
TWK	Hsinying	1.03	322	P	Pg	03 53 37.4	-0.1
TWK	baz=328			*e*S	Sg	03 53 50.5	-0.5
CHN4	baz=328 Tsaushan	1.05	329	P	Pg	03 53 37.8	0.0
CHN4	baz=346			*e*S	Sg	03 53 52.6	+1.2
TAI1	baz=346 Yung-k'ang	1.06	304	*e*P	Pg	03 53 38.2	+0.4
YUS	baz=308 Yu-Shan	1.06	349	⇓*e*P	Pg	03 53 37.2	-0.8
EHY	baz=6.0 Hungye	1.07	7	*e*P	Pg	03 53 35.9	-2.2
ALS	baz=30 Alishan	1.11	342	⇓P	Pg	03 53 38.5	-0.6
ALS	baz=358			*e*S	Sg	03 53 54.2	+0.7
SCLT	baz=358 Jiali	1.16	309	*e*P	Pg	03 53 39.6	-0.3
SCLT	baz=313			*e*S	Sg	03 53 56.1	+1.1
CHN5	baz=313 Tsauling	1.24	338	P	Pg	03 53 40.8	-0.5
CHN5	baz=355			*e*S	Sg	03 53 58.2	+0.8
CHN8	baz=355 Yiju	1.26	316	*e*P	Pg	03 53 41.0	-0.9
CHN8	baz=320			*e*S	Sg	03 53 58.2	0.0
SSLB	baz=320 Suanglung	1.35	351	*e*Pn	Pn	03 53 42.1	-1.7
WGK	Gukeng	1.36	336	*e*P	Pg	03 53 43.4	-0.3
WGK	baz=339			*e*S	Sg	03 54 02.7	+1.4
ESL	baz=339 Shilin	1.39	10	*e*P	Pn	03 53 42.0	-2.2
SMLT	baz=28 Sun Moon Lake	1.46	350	*e*P	Pn	03 53 44.5	-0.7
SMLT	baz=2.0			*e*S	Sg	03 54 05.9	+1.4
TYC	baz=2.0 Yuchr	1.48	349	⇓*i*P	Pn	03 53 45.8	+0.2
TYC	baz=1.0			*e*S	Sg	03 54 06.6	+1.3
WNT	baz=1.0 Mingjian	1.50	343	P	Pn	03 53 46.0	+0.2
WNT	baz=327			*e*S	Sg	03 54 06.3	+0.5
TWD	baz=327 Chiawan	1.68	13	*e*P	Pn	03 53 47.4	-0.8
WHF	baz=16 Hehuan Shan	1.70	3	*e*P	Pn	03 53 46.8	-1.7
WHF	baz=4.0			*e*S	Sn	03 54 12.6	+1.7
TCU	baz=4.0 Taichung	1.76	345	*e*P	Pn	03 53 50.0	+0.6
TCU	baz=347			*e*S	Sn	03 54 13.3	+0.9
NACB	baz=347 Ninganchiao	1.77	13	*e*Pn	Pn	03 53 46.0	-3.5
NACB				*e*S	Sn	03 54 15.2	+2.6
TWT	Tachien	1.80	0	*e*P	Pn	03 53 49.1	-0.9
PNG	baz=10.0 Penghu	1.86	307	*e*P	Pn	03 53 47.9	-2.9
PNG	baz=310			*e*S	Sn	03 54 10.2	-4.8
TWQ1	baz=9.0 Liyutan	1.93	349	*e*P	Pn	03 53 52.6	+0.9
TWQ1	baz=350			*e*S	Sn	03 54 18.7	+2.0
NNS	baz=350 Nan Shan	2.00	5	*e*P	Pn	03 53 54.4	+1.7
NSY	baz=25 Sanyi	2.00	349	*e*P	Pn	03 53 52.8	+0.2
NSY	baz=9.0			*e*S	Sn	03 54 19.3	+0.8
ENA	baz=9.0 Nanau	2.04	15	*e*P	Pn	03 53 52.7	-0.6
NSTT	baz=28 Nanjuang	2.18	356	*e*P	Pn	03 53 56.3	+1.1
YHNB	Yeheng	2.22	5	*e*Pn	Pn	03 53 54.6	-1.1
NSK	Sanguang	2.23	4	*e*P	Pn	03 53 57.2	+1.4
TWC	baz=24 Suao	2.24	16	*e*P	Pn	03 53 55.7	-0.3
TWE	baz=28 Neicheng	2.31	11	*e*P	Pn	03 53 57.9	+0.9
TATO	baz=24 Taipei	2.54	6	*e*Pn	Pn	03 53 58.1	-1.9
TWA	Mucha	2.55	8	*e*P	Pn	03 54 01.2	+0.9
YOJ	baz=23 Yonaguni jima	2.62	40	P	Pn	03 54 00.5	-0.8
YOJ				*e*S	Sn	03 54 33.4	-0.4
TWS1	Kuangyinshan	2.66	5	*e*P	Pn	03 54 04.0	+2.4
TWB1	baz=24 Santiao Chiao	2.66	16	*e*P	Pn	03 54 01.3	-0.5
NWF	baz=25 Wu-fen Shan	2.67	12	*e*P	Pn	03 54 01.6	-0.3
HATJ	baz=22 Hateruma jima	2.91	56	P	Pn	03 54 04.4	-0.7
HATJ				*e*S	Sn	03 54 39.8	-0.9
IRIF	Iriomote-Funau	3.01	51	P	Pn	03 54 06.4	-0.2
IRIF				*e*S	Sn	03 54 44.9	+1.5
JKRS	Kuro-shima	3.16	55	P	Pn	03 54 08.5	-0.1
JKRS				*e*S	Sn	03 54 47.8	+0.8
KNM	Kinmen	3.19	309	*e*P	Pn	03 54 05.8	-3.3
JIJ	baz=311 Ishigaki jima	3.33	54	P	Pn	03 54 10.9	-0.1
JIJ				*e*S	Sn	03 54 50.3	-1.0
QZH	Quanzhou	3.43	317	Pn	Pn	03 54 10.1	-2.3
QZH				Sn	Sn	03 54 47.3	-6.5
QZH				smax			
	comp=N,110nm,0.8s						
QZH				smax			
	comp=E,140nm,0.8s						
JTJ	Tarama	3.91	55	P	Pn	03 54 19.0	+0.1
JTJ				*e*S	Sn	03 55 05.0	-0.5

*NEIC **15** 03:53:29.3, 37°.67S×177°.40E, h59km, ML3.8(WEL), After WEL.*
WEL 15 03:53:29.1±0.1, 37°.68S×177°.39E, h64km±1km, ML3.7/10, Error ellipse: s-maj=1.1km s-min=0.9km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	White Island	0.22	313	P*	Pn	03 53 38.9	-0.2
WIZ				S*	Sn	03 53 46.5	+0.2
WIZ	White Island	0.22	313	P	Pn	03 53 38.9	-0.2
URZ	Urewera	0.62	201	P*	Pn	03 53 42.1	-0.6
URZ				S*	Sn	03 53 52.7	+0.1
URZ	Urewera	0.62	201	*e*Pn	Pn	03 53 42.0	-0.7
URZ				*e*Sn	Sn	03 53 52.9	+0.3
MARZ	Manawahe	0.65	241	P*	Pn	03 53 42.7	-0.3
MARZ				S*	Sn	03 53 53.3	+0.2
MARZ	Manawahe	0.65	241	P	Pn	03 53 42.7	-0.2
MWZ	Matawai	0.67	171	P*	Pn	03 53 42.7	-0.4
MWZ				S*	Sn	03 53 53.5	0.0
MWZ	Matawai	0.67	171	P	Pn	03 53 42.7	-0.5
MWZ				S	Sn	03 53 53.9	+0.4
EDRZ	Edgecumbe	0.67	230	P*	Pn	03 53 43.2	0.0
EDRZ				*e*S*	Sn	03 53 53.9	+0.3
EDRZ	Edgecumbe	0.67	230	P	Pn	03 53 43.2	0.0
OPRZ	Ohinepanea	0.68	255	P*	Pn	03 53 43.0	-0.3
MXZ	Matakaoa Point	0.74	81	P*	Pn	03 53 44.5	+0.5
MXZ				*e*S*	Sn	03 53 55.5	+0.6
MXZ	Matakaoa Point	0.74	81	P	Pn	03 53 44.5	+0.5
PUZ	Puketiti	0.79	120	PN	Pn	03 53 44.6	-0.1
PUZ				*e*SN	Sn	03 53 55.6	-0.5
PUZ	Puketiti	0.79	120	P	Pn	03 53 44.6	0.0
MKRZ	Makatiti	0.86	237	P*	Pn	03 53 45.9	+0.4
MKRZ	Makatiti	0.86	237	P	Pn	03 53 45.9	+0.4
TARZ	Mount Tarawera	0.89	231	P*	Pn	03 53 46.3	+0.3
TGRZ	Tauranga	0.90	266	P*	Pn	03 53 45.7	-0.2
RRRZ	Republican Roa	0.96	226	P*	Pn	03 53 47.0	+0.2
KARZ	Kaharoa	0.97	249	P*	Pn	03 53 46.7	-0.2
KARZ				S*	Sn	03 53 59.3	-0.8
KARZ	Kaharoa	0.97	249	P	Pn	03 53 46.7	-0.2
KARZ				S	Sn	03 53 59.3	-0.8
MYRZ	Mayor Island	1.00	293	P*	Pn	03 53 47.3	+0.1
CNGZ	Carnagh Statio	1.03	142	PN	Pn	03 53 47.6	-0.1
PRRZ	Plateau Road	1.14	224	P*	Pn	03 53 48.5	-0.5
ALRZ	Allen Road	1.21	223	P*	Pn	03 53 49.9	-0.1
RAHZ	Arahi	1.26	191	PN	Pn	03 53 50.9	+0.2
PRGZ	Paritu Road	1.30	163	PN	Pn	03 53 50.9	-0.3
KNZ	Kokohu	1.36	171	PN	Pn	03 53 51.4	-0.5
KNZ	Kokohu	1.36	171	P	Pn	03 53 51.4	-0.6
NMHZ	Naumai	1.49	198	PN	Pn	03 53 54.1	+0.4
MHGZ	Mahia Peninsul	1.53	165	PN	Pn	03 53 53.6	-0.6
KUZ	Kuaotunu	1.62	304	PN	Pn	03 53 55.1	-0.4
KUZ	Kuaotunu	1.62	304	P	Pn	03 53 55.1	-0.4
BKZ	Black Stump Fm	1.65	205	P*	Pn	03 53 55.6	-0.2
MCHZ	McNeill Hill	1.85	197	PN	Pn	03 53 58.0	-0.5
MKAZ	Moumakai	1.86	287	PN	Pn	03 53 58.7	0.0
MKAZ	Moumakai	1.86	287	P	Pn	03 53 58.7	0.0
KATZ	Kakaramea	1.86	225	P*	Pn	03 53 59.4	+0.8
KATZ	Kakaramea	1.86	225	P	Pn	03 53 59.4	+0.7
KRVZ	Karewarewa	1.97	224	P*	Pn	03 54 00.9	+0.7
OTVZ	Oturere	2.01	222	P*	Pn	03 53 59.2	-1.6
NGZ	Ngauruhoe	2.05	223	P*	Pn	03 53 59.1	-2.2
NGZ	Ngauruhoe	2.05	223	P	Pn	03 53 59.1	-2.2
TWVZ	Taurewa	2.07	227	P*	Pn	03 54 02.2	+0.7
TWVZ	Taurewa	2.07	227	P	Pn	03 54 02.2	+0.6
TUVZ	Tukino	2.09	220	P*	Pn	03 54 02.1	+0.3
TUVZ	Tukino	2.09	220	P	Pn	03 54 02.1	+0.3
WPVZ	Whakapapa	2.10	223	P*	Pn	03 54 02.6	+0.6
KAHZ	Kahuranaki	2.15	191	PN	Pn	03 54 01.1	-1.6
MOVZ	Moawhango	2.15	216	P*	Pn	03 54 02.0	-0.6
MOVZ	Moawhango	2.15	216	P	Pn	03 54 02.0	-0.6
WNVZ	Wahianoa	2.17	220	P*	Pn	03 54 03.0	+0.1
WNVZ	Wahianoa	2.17	220	P	Pn	03 54 03.0	+0.2
MTVZ	Mangateitei	2.28	221	P*	Pn	03 54 04.4	+0.1
PXZ	Pawanui	2.39	190	PN	Pn	03 54 03.4	-2.5
PNHZ	Pukenui	2.42	202	PN	Pn	03 54 04.2	-2.1
WPHZ	Waipukurau	2.50	197	PN	Pn	03 54 05.2	-2.2
TSZ	Takapari Road	2.63	205	PN	Pn	03 54 07.2	-1.9
TSZ	Takapari Road	2.63	205	P	Pn	03 54 07.2	-1.9
PRHZ	Porangahau	2.65	193	PN	Pn	03 54 06.8	-2.7
DVHZ	Dannevirke	2.79	200	PN	Pn	03 54 08.3	-3.0
POWZ	Post Office Ro	2.99	204	PN	Pn	03 54 11.8	-2.2
DFE	Dawson Falls	3.06	236	P	Pn	03 54 20.3	+5.3
BFZ	Birch Farm	3.13	196	*e*PN	Pn	03 54 12.3	-3.6
MRZ	Mangatainoka R	3.30	205	PN	Pn	03 54 14.8	-3.4
MRZ	Mangatainoka R	3.30	205	P	Pn	03 54 14.8	-3.4
TIWZ	Tintock	3.31	200	PN	Pn	03 54 15.4	-3.0
HOWZ	Holdsworth Sta	3.53	204	PN	Pn	03 54 17.8	-3.6
OGWZ	Otaki Gorge	3.58	208	PN	Pn	03 54 19.0	-3.0
TMWZ	Te Maipa	3.62	198	PN	Pn	03 54 18.7	-3.9
KIW	Kapiti Island	3.72	210	PN	Pn	03 54 20.5	-3.4
KIW	Kapiti Island	3.72	210	P	Pn	03 54 20.5	-3.5
MTW	Mount Morrison	3.77	202	PN	Pn	03 54 20.4	-4.3
MTW	Mount Morrison	3.77	202	P	Pn	03 54 20.4	-4.3
CAW	Cannon Point	3.87	207	PN	Pn	03 54 22.1	-3.9
CAW	Cannon Point	3.87	207	P	Pn	03 54 22.1	-4.0
PAWZ	Paruwai Farm	4.00	202	PN	Pn	03 54 23.9	-3.9
SNZO	South Karori	4.18	209	PN	Pn	03 54 25.8	-4.5
SNZO	South Karori	4.18	209	*e*Pn	Pn	03 54 25.9	-4.4
PLWZ	Palliser	4.22	202	PN	Pn	03 54 25.6	-5.2
TCW	Tory Channel	4.28	213	PN	Pn	03 54 27.4	-4.2
TCW	Tory Channel	4.28	213	P	Pn	03 54 27.4	-4.2
TUWZ	Tuamarina	4.60	214	PN	Pn	03 54 31.8	-4.2
BSWZ	Blackbirch Sta	4.86	213	PN	Pn	03 54 35.2	-4.4
QRZ	Quartz Range	4.91	229	PN	Pn	03 54 37.3	-3.0
CTZ	Chatham Island	7.57	145	PN	Pn	03 55 15.8	-0.9
CTZ				SN	Sn	03 56 30.7	-10

*ISCJB **15** 03:58:38.2±0.9, 35°.47N±0°.05×27°.56E±0°.05, h25km±7km, Error ellipse: s-maj=10.0km s-min=5.0km az=145.7*
*CSEM **15** 03:58:38.7±0.4, 35°.47N×27°.55E, h20km, MD3.3, Error ellipse: s-maj=11.0km s-min=4.8km az=152.0*
*DDA **15** 03:58:38.4, 35°.50N×27°.32E, h28km, Md3.4*
*ISK **15** 03:58:39.4, 35°.50N×27°.75E, h28km, MD3.4*
*ATH **15** 03:58:40.4, 35°.64N×27°.30E, h30km±2km, MD3.3/4*
*NEIC **15** 03:58:40.4, 35°.64N×27°.30E, h30km, MD3.3(ATH), After ATH.*
ISC 15 03:58:39.1±0.9, 35°.49N±0°.05×27°.53E±0°.05, h22km±7km, n49, σ0°.96/68, 9C-6D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.30	281	⇑*e*Pb	Pb	03 58 45.8	-0.1
KARP				*e*Sb	Sb	03 58 50.5	0.0
KARP	Karpathos	0.30	281	⇑*e*PB	Pb	03 58 45.8	-0.1
KARP				*e*SB	Sb	03 58 50.5	0.0
KARP	Karpathos	0.30	281	⇑*e*Pb	Pb	03 58 45.8	-0.1
KARP				*e*Sb	Sb	03 58 50.5	0.0
ARG	Arkhangelos	0.87	34	⇓*e*Pn	Pn	03 58 58.7	+2.6
ARG				*e*Sn	Sn	03 59 10.0	+1.9
ARG	Arkhangelos	0.87	34	⇓*e*PN	Pn	03 58 58.7	+2.6
ARG				*e*SN	Sn	03 59 10.0	+1.9
ARG	Arkhangelos	0.87	34	⇓*e*Pn	Pn	03 58 58.7	+2.6
ARG				*e*Sn	Sn	03 59 10.0	+1.9
ZKR	Zakros	1.13	251	⇓*e*Pb	Pb	03 58 59.1	-0.9
ZKR				*e*Sn	Sn	03 59 14.4	-0.1
ZKR	Zakros	1.13	251	⇓*e*PB	Pb	03 58 59.1	-0.9
ZKR				*e*SN	Sn	03 59 14.4	-0.1
ZKR	Zakros	1.13	251	⇓*e*Pb	Pb	03 58 59.1	-0.9
ZKR				*e*Sn	Sn	03 59 14.4	-0.1
DAT	Datca	1.24	2	*e*PN	Pn	03 59 01.6	+0.6
DAT				*e*SN	Sn	03 59 17.0	-0.1
DAT	Datca	1.24	2	*e*Pn	Pn	03 59 01.7	+0.6
DAT				*e*Sn	Sn	03 59 17.0	-0.1
BDRM	Kayabasi	1.57	358	*i* P	Pn	03 59 06.7	+1.0
BDRM				*i* S	Sn	03 59 25.4	0.0
BDRM	Kayabasi	1.57	358	*i* P	Pn	03 59 06.7	+1.0
BDRM				*i* S	Sn	03 59 25.4	0.0
BODT	Bodrum	1.58	354	*e*PN	Pn	03 59 06.3	+0.6
BODT	Bodrum	1.58	354	*e*Pn	Pn	03 59 06.3	+0.5
NPS	Neapolis	1.58	262	P	Pn	03 59 06.6	+0.9
NPS	Neapolis	1.58	262	P	Pn	03 59 06.6	+0.9
TURN	Turunc	1.63	32	*i* P	Pn	03 59 04.8	-1.7
TURN				*i* S	Sn	03 59 21.2	-5.7
LAST	Lasithi	1.71	259	*e*Pn	Pn	03 59 08.9	+1.4
LAST	Lasithi	1.71	259	*e*PN	Pn	03 59 08.9	+1.4
LAST	Lasithi	1.71	259	*e*Pn	Pn	03 59 08.9	+1.4
YER	Yerkesik	1.75	20	*e*PN	Pn	03 59 08.3	+0.2
MLSB	Milas	1.81	6	*e*PN	Pn	03 59 09.7	+0.7
MLSB				*e*SN	Sn	03 59 30.3	-1.0
IDI	Anoyia	2.

ATH 15 04:08:03.1, 35°.69N×27°.52E, h26km±1km, MD3.2/5
ISC 15 04:08:00.6±1.0, 35°.48N±0°.05×27°.77E±0°.05, h9km±6km, n42, σ1s10/61, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.51	278	ePb	Pg	04 08 10.4	0.0
KARP				eSb	Sg	04 08 16.4	-0.6
KARP	Karpathos	0.51	278	ePB	Pg	04 08 10.4	0.0
KARP				eSB	Sg	04 08 16.4	-0.6
KARP	Karpathos	0.51	278	ePb	Pg	04 08 10.4	0.0
KARP				eSb	Sg	04 08 16.4	-0.6
ARG	Arkhangelos	0.79	21	ePn	Pg	04 08 17.5	+1.6
ARG	Arkhangelos	0.79	21	ePN	Pg	04 08 17.5	+1.6
ARG	Arkhangelos	0.79	21	ePn	Pg	04 08 17.5	+1.6
DAT	Datca	1.26	353	ePN	Pn	04 08 24.2	-0.2
DAT				eSN	Sn	04 08 42.5	+1.0
DAT	Datca	1.26	353	ePn	Pn	04 08 24.2	-0.2
DAT				eSn	Sn	04 08 42.5	+1.0
TURN	Turunc	1.55	25	iP	Pn	04 08 26.6	-1.8
TURN				iS	Sn	04 08 46.1	-2.5
TURN	Turunc	1.55	25	iP	Pn	04 08 26.6	-1.8
TURN				iS	Sn	04 08 46.1	-2.5
BDRM	Kayabasi	1.61	351	iP	Pn	04 08 29.1	-0.2
BDRM				iS	Sn	04 08 49.6	-0.5
BDRM	Kayabasi	1.61	351	iP	Pn	04 08 29.0	-0.2
BDRM				iS	Sn	04 08 49.6	-0.5
BODT	Bodrum	1.63	347	ePN	Pn	04 08 29.3	-0.2
BODT				eSN	Sn	04 08 52.7	+2.1
BODT	Bodrum	1.63	347	ePn	Pn	04 08 29.3	-0.2
BODT				eSn	Sn	04 08 52.7	+2.1
AKAS	Kas	1.67	62	iP	Pn	04 08 27.1	-2.9
AKAS				iS	Sn	04 08 52.3	+0.7
AKAS	Kas	1.67	62	iP	Pn	04 08 27.1	-3.0
AKAS				iS	Sn	04 08 52.3	+0.7
YER	Yerkesik	1.71	14	ePN	Pn	04 08 31.9	+1.4
YER	Yerkesik	1.71	14	ePn	Pn	04 08 31.9	+1.3
NPS	Neapolis	1.78	264	ePn	Pn	04 08 31.9	+0.4
NPS	Neapolis	1.78	264	ePN	Pn	04 08 31.9	+0.4
NPS	Neapolis	1.78	264	ePn	Pn	04 08 31.9	+0.4
MLSB	Milas	1.82	0	ePN	Pn	04 08 32.4	+0.4
MLSB	Milas	1.82	0	ePn	Pn	04 08 32.4	+0.3
LAST	Lasithi	1.90	261	ePn	Pn	04 08 34.1	+0.8
LAST	Lasithi	1.90	261	ePN	Pn	04 08 34.1	+0.8
LAST	Lasithi	1.90	261	ePn	Pn	04 08 34.1	+0.8
ELL	Elmali	2.15	53	ePN	Pn	04 08 37.3	+0.7
ELL	Elmali	2.15	53	ePn	Pn	04 08 37.3	+0.7
AYDN	Tasoluk	2.18	2	iP	Pn	04 08 37.3	+0.2
AYDN				iS	Sn	04 09 03.1	-1.2
AYDN	Tasoluk	2.18	2	iP	Pn	04 08 37.3	+0.2
AYDN				iS	Sn	04 09 03.1	-1.2
GOLH	Golhisar	2.27	39	iP	Pn	04 08 39.6	+1.3
GOLH				iS	Sn	04 09 11.5	+5.0
GOLH	Golhisar	2.27	39	iP	Pn	04 08 39.6	+1.2
IDI	Anoyia	2.36	266	ePn	Pn	04 08 39.5	-0.1
IDI	Anoyia	2.36	266	ePN	Pn	04 08 39.5	-0.1
IDI	Anoyia	2.36	266	ePn	Pn	04 08 39.5	-0.1
APE	Apeiranthos	2.41	312	ePN	Pn	04 08 39.1	-1.2
APE	Apeiranthos	2.41	312	ePn	Pn	04 08 39.0	-1.3
APE	Apeiranthos	2.41	312	ePN	Pn	04 08 39.0	-1.3
APE	Apeiranthos	2.41	312	ePn	Pn	04 08 39.1	-1.2
DNZL	Cakiroluk	2.44	24	iP	Pg	04 08 46.4	-0.9
DNZL				iS	Sg	04 09 23.2	+4.3
GAZI	Gazipasa	3.77	77	iP	Pn	04 08 58.6	-0.2
GAZI				iS	Sn	04 09 39.2	-4.2
GAZI	Gazipasa	3.77	77	iP	Pn	04 08 58.7	-0.2
GAZI				iS	Sn	04 09 39.2	-4.1

ISK 15 04:14:31.9, 35°.63N×27°.45E, h5km, MD3.1
NEIC 15 04:14:33.4, 35°.69N×27°.29E, h29km, MD3.2(ATH), After ATH.
ATH 15 04:14:33.6, 35°.74N×27°.24E, h25km±1km, MD3.2/7
CSEM 15 04:14:34.6±0.3, 35°.65N×27°.33E, h20km, MD3.2, Error ellipse: s-maj=10.0km s-min=4.0km az=144.0
ISCJB 15 04:14:34.4±0.6, 35°.63N±0°.06×27°.33E±0°.05, h25km±5km, Error ellipse: s-maj=11.6km s-min=4.3km az=146.2
DDA 15 04:14:35.2, 35°.95N×26°.98E, h28km±2km, Md2.9
ISC 15 04:14:34.6±0.7, 35°.61N±0°.06×27°.35E±0°.06, h23km±5km, n39, σ1s95/68, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.17	248	ePb	Pb	04 14 39.2	-0.4
KARP				eSb	Sb	04 14 43.8	+0.8
KARP	Karpathos	0.17	248	ePB	Pb	04 14 39.2	-0.4
KARP				eSB	Sb	04 14 43.8	+0.8
KARP	Karpathos	0.17	248	ePb	Pb	04 14 39.2	-0.4
KARP				eSb	Sb	04 14 43.8	+0.8
ARG	Arkhangelos	0.87	46	ePn	Pn	04 14 50.5	-0.9
ARG				eSn	Sn	04 15 02.6	-0.8
ARG	Arkhangelos	0.87	46	ePN	Pn	04 14 50.5	-0.9
ARG				eSN	Sn	04 15 02.6	-0.8
ARG	Arkhangelos	0.87	46	ePn	Pn	04 14 50.5	-0.9
ARG				eSn	Sn	04 15 02.6	-0.8
ZKR	Zakros	1.05	242	ePb	Pb	04 14 52.5	-1.6
ZKR	Zakros	1.05	242	ePN	Pn	04 14 53.5	-0.4
DAT	Datca	1.13	9	ePn	Pn	04 14 54.3	-0.7
DAT				eSN	Sn	04 15 10.4	+0.6
DAT	Datca	1.13	9	ePn	Pn	04 14 54.3	-0.7
DAT				eSn	Sn	04 15 10.4	+0.6
BODT	Bodrum	1.45	359	ePN	Pn	04 14 60.0	+0.7
BODT				eSN	Sn	04 15 20.8	+3.1
BODT	Bodrum	1.45	359	ePn	Pn	04 15 00.0	+0.7
BODT				eSn	Sn	04 15 20.8	+3.2
NPS	Neapolis	1.46	257	ePn	Pn	04 15 00.3	+0.8
NPS				eSn	Sn	04 15 18.4	+0.4
NPS	Neapolis	1.46	257	ePN	Pn	04 14 59.5	0.0
NPS				eSN	Sn	04 15 18.4	+0.4
NPS	Neapolis	1.46	257	ePn	Pn	04 15 00.3	+0.8
NPS				eSn	Sn	04 15 18.4	+0.4
LAST	Lasithi	1.60	254	ePn	Pn	04 15 01.9	+0.6
LAST				eSn	Sn	04 15 21.9	+0.7
LAST	Lasithi	1.60	254	ePN	Pn	04 15 01.9	+0.6
LAST				eSN	Sn	04 15 21.9	+0.7
LAST	Lasithi	1.60	254	ePn	Pn	04 15 01.9	+0.6
LAST				eSn	Sn	04 15 21.9	+0.7
TURN	Turunc	1.61	38	eP	Pn	04 15 00.2	-1.4
TURN				iS	Sn	04 15 18.1	-3.6
TURN	Turunc	1.61	38	eP	Pn	04 15 00.2	-1.4
TURN				iS	Sn	04 15 18.1	-3.6
YER	Yerkesik	1.70	26	ePN	Pn	04 15 03.2	+0.5
YER	Yerkesik	1.70	26	ePn	Pn	04 15 03.2	+0.5
MLSB	Milas	1.71	11	ePN	Pn	04 15 03.7	+0.7
MLSB	Milas	1.71	11	ePn	Pn	04 15 03.7	+0.7
IDI	Anoyia	2.04	262	ePn	Pn	04 15 07.1	-0.3
IDI				eS	Sn	04 15 31.7	-0.4
IDI	Anoyia	2.04	262	ePB	Pn	04 15 07.4	0.0
IDI				eSN	Sn	04 15 31.9	-0.2
IDI	Anoyia	2.04	262	ePn	Pn	04 15 07.4	0.0
IDI				eSn	Sn	04 15 31.9	-0.2
APE	Apeiranthos	2.07	315	ePN	Pn	04 15 09.7	+1.8
APE	Apeiranthos	2.07	315	ePn	Pn	04 15 06.5	-1.4
APE				eSn	Sn	04 15 31.5	-1.4
APE	Apeiranthos	2.07	315	ePB	Pn	04 15 06.5	-1.4
APE				eSN	Sn	04 15 31.5	-1.4
APE	Apeiranthos	2.07	315	ePn	Pn	04 15 06.5	-1.4
APE				eSn	Sn	04 15 31.5	-1.4
AYDN	Tasoluk	2.09	12	iP	Pn	04 15 08.1	-0.1
AYDN				iS	Sn	04 15 33.0	-0.4
AYDN	Tasoluk	2.09	12	iP	Pn	04 15 08.1	0.0
AYDN				iS	Sn	04 15 33.0	-0.4
ELL	Elmali	2.36	60	ePN	Pn	04 15 12.1	+0.2
ELL	Elmali	2.36	60	ePn	Pn	04 15 12.1	+0.3
GOLH	Golhisar	2.41	47	iP	Pn	04 15 13.4	+0.8
GOLH				iS	Sn	04 15 45.6	+4.3
GOLH	Golhisar	2.41	47	iP	Pn	04 15 13.4	+0.9
GOLH				iS	Sn	04 15 45.6	+4.3
DNZL	Cakiroluk	2.48	33	eP	Pn	04 15 15.2	+1.7
DNZL				iS	Sn	04 15 49.8	+6.7
DNZL	Cakiroluk	2.48	33	eP	Pn	04 15 15.2	+1.7

ISCJB 15 04:20:37.4±0.7, 35°.82N±0°.04×27°.96E±0°.05, h59km±10km, Error ellipse: s-maj=8.9km s-min=4.6km az=135.6
ISK 15 04:20:37.1, 35°.82N×27°.46E, h20km, MD3.1
CSEM 15 04:20:38.7±0.4, 35°.87N×27°.88E, h48km±8km, MD3.2, Error ellipse: s-maj=10.1km s-min=5.0km az=131.0

ATH 15 04:20:38.6, 35°.91N×27°.78E, h44km±1km, MD3.2/7
DDA 15 04:20:39.0, 36°.07N×28°.05E, h28km±2km, Md3.0
NEIC 15 04:20:38.6, 35°.91N×27°.78E, h44km, MD3.2(ATH), After ATH.
ISC 15 04:20:38.1±0.7, 35°.82N±0°.04×27°.97E±0°.05, h53km±11km, n43, σ1s87/69, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	Arkhangelos	0.42	18	eP	Pn	04 20 49.3	+0.6
ARG				eS	Sn	04 20 56.8	+0.6
ARG	Arkhangelos	0.42	18	eP	Pn	04 20 49.3	+0.6
ARG				eS	Sn	04 20 56.8	+0.6
ARG	Arkhangelos	0.42	18	eP	Pn	04 20 49.3	+0.6
ARG				eS	Sn	04 20 56.8	+0.6
KARP	Karpathos	0.71	248	eP	Pn	04 20 51.7	-0.4
KARP				eS	Sn	04 21 01.8	-0.4
KARP	Karpathos	0.71	248	eP	Pn	04 20 51.7	-0.4
KARP				eS	Sn	04 21 01.8	-0.4
KARP	Karpathos	0.71	248	eP	Pn	04 20 51.7	-0.4
KARP				eS	Sn	04 21 01.8	-0.4
DAT	Datca	0.96	341	ePG	Pn	04 20 55.4	0.0
DAT				eSG	Sn	04 21 08.6	+0.5
DAT	Datca	0.96	341	ePg	Pn	04 20 55.4	0.0
DAT				eSg	Sn	04 21 08.6	+0.5
TURN	Turunc	1.17	26	iP	Pn	04 20 57.1	-1.1
TURN				iS	Sn	04 21 10.9	-2.2
TURN	Turunc	1.17	26	iP	Pn	04 20 57.1	-1.1
TURN				iS	Sn	04 21 10.9	-2.2
BDRM	Kayabasi	1.31	341	iP	Pn	04 20 59.8	-0.3
BDRM				iS	Sn	04 21 16.2	-0.3
BDRM	Kayabasi	1.31	341	iP	Pn	04 20 59.8	-0.3
BDRM				iS	Sn	04 21 16.2	-0.3
YER	Yerkesik	1.34	11	ePN	Pn	04 21 02.9	+2.4
YER	Yerkesik	1.34	11	ePn	Pn	04 21 02.9	+2.5
BODT	Bodrum	1.35	337	ePN	Pn	04 21 00.2	-0.4
BODT				eSN	Sn	04 21 16.7	-0.7
BODT	Bodrum	1.35	337	ePn	Pn	04 21 00.2	-0.4
BODT				eSn	Sn	04 21 16.7	-0.7
AKAS	Kas	1.39	72	iP	Pn	04 21 02.5	+1.3
AKAS				iS	Sn	04 21 17.1	-1.4
AKAS	Kas	1.39	72	iP	Pn	04 21 02.5	+1.3
AKAS				iS	Sn	04 21 17.1	-1.4
MLSB	Milas	1.48	354	ePN	Pn	04 21 03.1	+0.7
MLSB	Milas	1.48	354	ePn	Pn	04 21 03.1	+0.7
ZKR	Zakros	1.59	244	eP	Pn	04 21 04.8	+0.9
ZKR				eS	Sn	04 21 22.9	-0.4
ZKR	Zakros	1.59	244	eP	Pn	04 21 04.8	+0.9
ZKR				eS	Sn	04 21 22.9	-0.4
ZKR	Zakros	1.59	244	eP	Pn	04 21 04.8	+0.9
ZKR				eS	Sn	04 21 22.9	-0.4
ELL	Elmali	1.82	59	ePN	Pn	04 21 13.9	+6.9
AYDN	Tasoluk	1.84	358	iP	Pn	04 21 08.2	+0.9
AYDN				iS	Sn	04 21 29.9	+0.5
AYDN	Tasoluk	1.84	358	iP	Pn	04 21 08.2	+0.9
AYDN				iS	Sn	04 21 29.9	+0.5
NPS	Neapolis	2.00	255	eP	Pn	04 21 09.6	+0.2
NPS	Neapolis	2.00	255	eP	Pn	04 21 09.6	+0.2
NPS	Neapolis	2.00	255	eP	Pn	04 21 09.6	+0.2
DNZL	Cakiroluk	2.06	25	iP	Pn	04 21 14.6	+4.4
DNZL				iS	Sn	04 21 42.7	+7.9
DNZL	Cakiroluk	2.06	25	iP	Pn	04 21 14.6	+4.3
LAST	Lasithi	2.13	253	eP	Pn	04 21 11.1	-0.2
LAST	Lasithi	2.13	253	eP	Pn	04 21 11.1	-0.2
LAST	Lasithi	2.13	253	eP	Pn	04 21 11.1	-0.2
APE	Apeiranthos	2.33	303	eP	Pn	04 21 13.8	-0.1
APE	Apeiranthos	2.33	303	eP	Pn	04 21 13.8	-0.1
APE	Apeiranthos	2.33	303	eP	Pn	04 21 13.8	-0.1
IDI	Anoyia	2.56	259	ePn	Pn	04 21 15.5	-1.7
IDI				eS	Sn	04 21 47.0	-0.1
IDI	Anoyia	2.56	259	eP	Pn	04 21 17.2	+0.1
IDI	Anoyia	2.56	259	ePn	Pn	04 21 15.5	-1.6
IDI	Anoyia	2.56	259	eP	Pn	04 21 17.2	+0.1
IDI				eS	Sn	04 21 47.0	-0.1
KHAL	Karahalli	2.82	25	eP	Pn	04 21 21.2	+0.5
KHAL				iS	Sn	04 21 52.9	-0.7
KHAL	Karahalli	2.82	25	eP	Pn	04 21 21.2	+0.5
KHAL				iS	Sn	04 21 52.8	-0.7

BJI 15 04:29:02.1, 44°.40N×129°.70W, h20km, mB5.1/4, mb4.9/7
IDC 15 04:29:02.3±1.2, 44°.11N×129°.92W, h0km, mb3.9/10, mb1 4.0/14, mb1mx3.9/26, mbtmp3.8/14, ML3.4/4, Error ellipse: s-maj=36.1km s-min=13.9km az=37.0
ISCJB 15 04:29:04.0±1.3, 44°.44N±0°.04×129°.63W±0°.05, h13km±9km, mb4.3/19, Error ellipse: s-maj=6.3km s-min=6.1km az=136.7
NEIC 15 04:29:05.1±0.7, 44°.43N×129°.71W, h10km, mb4.1/13, Error ellipse: s-maj=8.8km s-min=6.3km az=74.0
ISC 15 04:29:05.8±1.6, 44°.42N±0°.04×129°.77W±0°.05, h18km±10km, n83, σ1s92/92, mb4.3/19, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEBO	Mount Hebo	4.35	77	ePn	Pn	04 30 08.7	-2.3
HEBO				eSn	Sn	04 31 03.1	+1.8
KMOR	Kings Mountain	4.62	73	P	Pn	04 30 12.2	-2.4
COR	Corvallis	4.63	86	ePn	Pn	04 30 12.5	-2.3
COR				eSn	Sn	04 31 04.0	-4.2
WISH	Wishkah	4.99	55	P	Pn	04 30 19.1	-0.6
NLWA	Neilton Lookou	5.08	52	ePn	Pn	04 30 20.1	-0.8
NLWA				eSn	Sn	04 31 19.3	+0.2
HUMO	Hull Mountain	5.28	108	ePn	Pn	04 30 21.1	-2.6
4.8nm,0.6s							
HUMO				eSn	Sn	04 31 20.7	-3.4
HDW	Hoodsport	5.68	53	P	Pn	04 30 29.0	-0.2
GNW	Green Mountain	5.77	55	ePn	Pn	04 30 29.2	-1.2
13nm,0.5s							
YBH	Yreka Blue Hor	5.83	115	Pn	Pn	04 30 31.8	+0.5
0.2nm,0.3s,baz=310,slow=10,SNR=8.0							
YBH				Sn	Sn	04 31 35.7	-1.9
baz=81,slow=22,SNR=1.7							
YBH	Yreka Blue Hor	5.83	115	ePn	Pn	04 30 31.1	-0.2
10nm,0.9s							
HOOD	Mount Hood Mea	5.84	78	ePn	Pn	04 30 30.1	-1.3
HOOD				eS	Sn	04 31 35.3	-2.6
LON	Longmire	6.05	65	ePn	Pn	04 30 32.4	-2.0
PGC	Sidney	6.07	44	ePn	Pn	04 30 34.0	-0.6
PGC				eSn	Sn	04 31 43.7	+0.1
WDC	Whiskeytown Da	6.58	123	ePn	Pn	04 30 40.9	-0.7
JCW	Jim Creek	6.61	52	ePn	Pn	04 30 41.8	-0.2
JCW				eSn	Sn	04 31 57.7	+0.9
RPW	Rockport	6.98	52	ePn	Pn	04 30 47.3	+0.2
RPW				eSn	Sn	04 32 06.7	+0.7
ETW	Entiat	7.30	61	ePn	Pn	04 30 52.0	+0.5
MOD	Modoc	7.37	107	Pn	Pn	04 30 53.9	+1.4
7.6nm,1.0s							
HOPS	Hopland	7.38	135	ePn	Pn	04 30 50.2	-2.5
RSW	Rattlesnake Hi	7.43	71	ePn	Pn	04 30 55.0	+1.7
HAWA	Hanford	7.47	71	ePn	Pn	04 30 53.8	0.0
OD2	Odessa Site #2	8.27	65	ePn	Pn	04 31 03.1	-1.6
WVOR	Wild Horse Val	8.35	100	ePn	Pn	04 31 06.8	+0.9
5.5nm,1.0s							
BMO	Blue Mountains	8.90	83	ePn	Pn	04 31 11.7	-1.8
2.6nm,0.8s							
PAHR	Pah Rah Range	9.05	118	ePn	Pn	04 31 17.9	+2.4
CMB	Columbia Colle	9.52	129	ePn	Pn	04 31 21.7	-0.2
WAKR	Walker	9.75	124	ePn	Pn	04 31 26.2	+1.1
NVAR	Mina Array Bea	10.48	121	Pn	Pn	04 31 35.5	+0.3
0.1nm,0.3s,baz=289,slow=13,SNR=16							
BSMT	Bassoo Peak	10.95	66	ePn	Pn	04 31 40.8	-0.7
HLID	Hailey	11.10	89	ePn	Pn	04 31 45.1	+1.6
6.3nm,1.0s							
JTMT	Jette	11.26	67	ePn	Pn	04 31 45.7	0.0
ELK	Elko	11.33	104	Pn	Pn	04 31 48.2	+1.6
0.0nm,0.3s,baz=282,slow=17,SNR=5.2							
ELK	Elko	11.33	104	Pn	Pn	04 31 48.2	+1.6
MSO	Missoula	11.35	72	ePn	Pn	04 31 46.2	-0.7
SWMT	Swartz Lake	11.40	69	ePn	Pn	04 31 48.5	+0.8
SLMT	Seeley Lake	11.70	70	ePn	Pn	04 31 51.9	+0.1
CHMT	Chamberlain Mo	11.82	72	ePn	Pn	04 31 53.6	+0.2
ISA	Isabella	12.30	131	ePn	Pn	04 31 59.9	-0.1
BOZ	Bozeman (W)	12.89	78	ePn	Pn	04 32 08.3	+0.2
IMW	Indian Meadow	13.54	86	ePn	Pn	04 32 18.7	+1.9
TPAW	Teton Pass	13.59	87	ePn	Pn	04 32 19.3	+1.7
HWUT	Hardware Ranch	13.62	96	ePn	Pn	04 32 17.9	0.0
REDW	Red Top Meadow	13.69	88	ePn	Pn	04 32 19.6	+0.7
LOHW	Long Hollow	13.82	87	ePn	Pn	04 32 21.7	+1.0
ARUT	Antelope Range	13.97	113	ePn	Pn	04 32 23.7	+0.9
7.4nm,1.0s							
CCUT	Cedar City	14.16	113	ePn	Pn	04 32 26.3	+1.0
PDAR	Pinedale Array	14.74	89	Pn	Pn	04 32 37.0	+3.7
0.1nm,0.3s,baz=287,slow=12,SNR=10							
LAO	LASA Array	16.64	74	ePn	Pn	04 32 58.3	+0.4
8.7nm,0.8s							
PV04	Paradox Valley	16.75	104	ePn	Pn	04 32 58.8	-0.7
PV01	Paradox Valley	17.11	104	Pn	Pn	04 33 03.2	-0.7
2μm,1.4s							
MVCO	Mesa Verde	17.61	107	ePn	Pn	04 33 11.3	+1.1
41nm,1.8s							
DGMT	Dagmar	18.05	68	ePn	Pn	04 33 15.9	+0.4
36nm,1.4s							
RSSD	Black Hills	18.41	82	eP	Pn	04 33 19.2	-0.8
8.4nm,1.2s							
ISCO	Idaho Springs	18.49	96	ePn	Pn	04 33 21.0	+0.1
7.8nm,1.0s							
TUC	Tucson	19.13	123	ePn	Pn	04 33 28.2	-0.5
9.6nm,1.4s							
SDCO	Great Sand Dun	19.43	102	eP	Pn	04 33 31.7	-0.7
4.2nm,0.9s							
LAZ	Ladron	20.09	112	eP	P	04 33 39.3	+1.0
2.9nm,1.0s							
YKA	Yellowknife Ar	20.13	21	P	P	04 33 42.5	+4.0
1.3nm,0.8s,baz=213,slow=11,SNR=9.3							
YKA	Yellowknife Ar	20.13	21	P	P	04 33 42.5	+4.0
ANMO	Albuquerque	20.22	110	P	P	04 33 42.0	+2.2
1.9nm,0.9s,baz=305,slow=12,SNR=7.8							
LPM	Los Pinos Moun	20.48	112	ePn	P	04 33 45.2	+2.7
BNM	Barren Site	20.58	112	eP	P	04 33 44.3	+0.7
7.7nm,1.2s							
FFC	Flin Flon	20.63	50	eP	P	04 33 44.0	+0.1
63nm,2.2s							
AMTX	Amarillo	23.54	104	eP	P	04 34 14.0	-1.1
12nm,0.9s,mb4.3							
ULM	Lac du Bonnet	23.56	64	P	P	04 34 17.5	+2.3
6.3nm,0.8s,mb4.1,baz=269,slow=9.1,SNR=4.4							
ECSD	EROS Data Cent	23.74	80	eP	P	04 34 16.1	-0.9
8.9nm,1.0s,mb4.2							
TXAR	Lajitas Array	25.60	117	P	P	04 34 33.2	-0.8
0.4nm,0.7s,mb3.0,baz=290,slow=6.3,SNR=8.3							
TXAR	Lajitas Array	25.60	117	P	P	04 34 33.2	-0.8
WMOK	Wichita Mounta	25.64	101	eP	P	04 34 34.2	-0.1
21nm,1.4s,mb4.5							
MDJ	Mudanjiang	66.81	310	P	P	04 39 53.0	-3.1
MDJ				pmax	pmax		
comp=Z,2.0nm,0.7s,mb4.3							
MDJ				pmax	pmax		
comp=Z,280nm,10.8s							
NOA	NORSAR Array B	70.22	19	P	P	04 40 18.2	+1.1
comp=Z,1.2nm,0.8s,mb3.9,baz=330,slow=6.2,SNR=3.5							
FINES	FINESS Array B	72.69	12	P	P	04 40 33.5	+1.5
comp=Z,2.2nm,0.9s,mb4.1,baz=339,slow=10,SNR=2.9							
SONM	Songino Array	75.72	325	P	P	04 40 52.1	+2.1
comp=Z,0.9nm,0.8s,mb3.8,baz=34,slow=4.0,SNR=5.3							
ZALV	Zalesovo Beam	77.65	340	P	P	04 41 01.1	+0.3
comp=Z,0.8nm,0.4s,mb4.0,baz=25,slow=4.9,SNR=3.8							
HHC	Hu-ho-hao-te	78.83	317	eP	P	04 41 05.8	-1.7
HHC				S	S	04 51 00.6	-3.9
HHC				pmax	pmax		
comp=Z,11nm,0.7s,mb4.9							
HHC				pmax	pmax		
comp=Z,270nm,8.5s							
LPAZ	La Paz	82.39	122	P	P	04 41 26.1	-0.7
comp=Z,2.9nm,0.9s,mb4.2,baz=347,slow=4.3,SNR=10							
AKASG	Malin Array Be	83.52	13	P	P	04 41 32.4	+0.2
comp=Z,0.4nm,0.4s,mb4.0,baz=335,slow=4.0,SNR=4.7							
MKAR	Makanchi Array	84.86	339	P	P	04 41 39.9	+0.7
comp=Z,0.1nm,0.3s,mb3.5,baz=350,slow=7.3,SNR=2.6							
GTA	Gaotai	85.34	324	eP	P	04 41 33.5	-8.2
GTA				pP	pP	04 41 36.8	-11
GTA				sP	sP	04 41 39.4	-10
GTA				pmax	pmax		
comp=Z,3.0nm,0.7s,mb4.5							
WMQ	Urumqi	86.01	334	eP	P	04 41 45.1	+0.2
WMQ				pP	pP	04 41 49.8	-1.1
WMQ				sP	sP	04 41 52.1	-0.9
WMQ				pmax	pmax		
comp=Z,4.0nm,1.2s,mb4.5							
WMQ				pmax	pmax		
comp=Z,69nm,5.6s							
LZH	Lanzhou	86.29	319	eP	P	04 41 46.5	0.0
LZH				pmax	pmax		
comp=Z,14nm,1.0s,mb5.2							
GYA	Guiyang	92.64	312	P	P	04 42 15.0	-1.6
GYA				pmax	pmax		
comp=Z,10.0nm,1.0s,mb5.2							
KMI	Kunming	95.78	314	P	P	04 42 30.1	-0.9
KMI				pmax	pmax		
comp=Z,5.0nm,0.6s,mb5.1							

IDC 15 04:41:22.3±2.4, 22°.43S×148°.07E, h0km, mb3.7/2, mb1 3.7/6, mb1mx3.6/14, mbtmp3.6/6, ML3.5/4, MS3.7/1, Ms1 3.7/1, ms1mx2.8/25, Error ellipse: s-maj=30.2km s-min=18.3km az=84.0, Queensland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	2.88	324	Pn	Pn

AKAS	Kas	1.50	75	*i* P		Pn	04 45 59.0 +0.6
AKAS				*i* S		Sn	04 46 16.3 -0.6
ZKR	Zakros	1.50	241	*e*P		Pn	04 45 58.5 +0.1
ZKR	Zakros	1.50	241	*e*P		Pn	04 45 58.5 +0.1
ZKR	Zakros	1.50	241	*e*P		Pn	04 45 58.5 +0.1
AYDN	Tasoluk	1.80	2	*i* P		Pn	04 46 03.4 +0.9
AYDN	Tasoluk	1.80	2	*i* P		Pn	04 46 03.4 +0.9
NPS	Neapolis	1.89	252	*e*P		Pn	04 46 02.6 -1.1
NPS	Neapolis	1.89	252	*e*P		Pn	04 46 02.6 -1.1
NPS	Neapolis	1.89	252	*e*P		Pn	04 46 02.6 -1.1
GOLH	Golhisar	1.97	45	*i* P		Pn	04 46 06.5 +1.7
GOLH	Golhisar	1.97	45	*i* P		Pn	04 46 06.5 +1.7
SMG	Samos	2.01	337	*e*P		Pn	04 46 05.1 -0.3
SMG				*e*S		Sn	04 46 29.3 -0.1
SMG	Samos	2.01	337	*e*P		Pn	04 46 05.1 -0.3
SMG				*e*S		Sn	04 46 29.3 -0.1
SMG	Samos	2.01	337	*e*P		Pn	04 46 05.1 -0.3
SMG				*e*S		Sn	04 46 29.3 -0.1
LAST	Lasithi	2.03	251	*e*P		Pn	04 46 06.3 +0.7
LAST	Lasithi	2.03	251	*e*P		Pn	04 46 06.3 +0.7
LAST	Lasithi	2.03	251	*e*P		Pn	04 46 06.3 +0.7
IDI	Anoyia	2.45	258	*e*Pn		Pn	04 46 11.4 0.0
IDI	Anoyia	2.45	258	*e*Pn		Pn	04 46 11.4 0.0
GAZI	Gazipasa	3.67	83	*i* P		Pn	04 46 26.9 -1.1
GAZI				*i* S		Sn	04 47 03.0 -6.9
GAZI	Gazipasa	3.67	83	*i* P		Pn	04 46 26.9 -1.1
KYTH	Kithira	3.90	278	*e*P		Pn	04 46 32.1 +0.9
KYTH	Kithira	3.90	278	*e*P		Pn	04 46 32.1 +0.9
KYTH	Kithira	3.90	278	*e*P		Pn	04 46 32.1 +0.9
VLI	Veliai	4.04	284	*e*P		Pn	04 46 33.8 +0.7
VLI	Veliai	4.04	284	*e*P		Pn	04 46 33.8 +0.7
VLI	Veliai	4.04	284	*e*P		Pn	04 46 33.8 +0.7

IDC 15 04:56:48.6±1.6, 20°.87N×145°.48E, h0km, mb3.8/8, mb1 3.9/8, mb1mx3.7/24, mbtmp3.8/8, MS3.8/1, Ms1 3.8/1, ms1mx2.7/30, Error ellipse: s-maj=46.8km s-min=28.0km az=87.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	22.48	321	P	P	05 01 49.8	+0.3
	3.2nm,0.7s,baz=147,slow=8.9,SNR=19						
DAV	Davao City (W)	23.64	237	LR	LR	05 11 31.2	
	comp=Z,235nm,18.4s,baz=181,slow=37						
SONM	Songino Array	41.34	320	P	P	05 04 35.1	-1.0
	0.2nm,0.3s,baz=132,slow=6.4,SNR=3.3						
FITZ	Fitzroy Crossi	43.34	208	P	P	05 04 52.4	-0.2
	3.3nm,1.0s,baz=34,slow=11,SNR=2.9						
ZALV	Zalesovo Beam	56.19	322	P	P	05 06 31.0	+0.9
	0.6nm,0.5s,baz=106,slow=11,SNR=2.4						
MKAR	Makanchi Array	56.83	313	P	P	05 06 34.2	-0.6
	0.6nm,0.7s,baz=101,slow=7.5,SNR=5.7						
BVAR	Borovoye Array	64.69	320	P	P	05 07 28.8	+0.6
	0.5nm,0.6s,baz=132,slow=13,SNR=2.4						
YKA	Yellowknife Ar	76.18	28	P	P	05 08 38.0	-0.3
	0.2nm,0.5s,baz=292,slow=5.3,SNR=4.0						
FINES	FINESS Array B	84.84	335	P	P	05 09 25.6	+0.8
	0.9nm,0.6s,baz=126,slow=5.9,SNR=3.5						

*IDC **15** 04:58:17.6±3.5, 37°.07S×177°.81E, h142km±20km, mb3.6/5, mb1 3.7/5, mb1mx3.6/15, mbtmp3.6/5, Error ellipse: s-maj=53.4km s-min=30.9km az=44.0*

*ISCJB **15** 04:58:19.6±0.7, 37°.38S±0°.05×177°.40E±0°.08, h164km±3km, mb3.8/5, Error ellipse: s-maj=10.7km s-min=7.7km az=164.7*

*WEL **15** 04:58:20.5±0.3, 37°.14S×177°.50E, h139km±2km, ML4.5/17, Error ellipse: s-maj=2.3km s-min=1.8km az=0.0*

*NEIC **15** 04:58:20.5, 37°.14S×177°.50E, h139km, MG4.5(WEL), After WEL.*

ISC 15 04:58:20.4±0.6, 37°.36S±0°.05×177°.40E±0°.07, h157km±4km, n118, σ1°.32/125, mb3.8/5, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	White Island	0.24	225	PN	Pn	04 58 40.1	-1.5
WIZ				SN	Sn	04 58 55.8	-1.9
WIZ	White Island	0.24	225	P	Pn	04 58 40.1	-1.5
WIZ				S	Sn	04 58 58.1	+0.3
MXZ	Matakaoa Point	0.75	106	PN	Pn	04 58 42.1	-1.8
MXZ				SN	Sn	04 58 59.2	-2.7
MXZ	Matakaoa Point	0.75	106	P	Pn	04 58 42.4	-1.5
MXZ				S	Sn	04 58 59.9	-2.0
OPRZ	Ohinepanea	0.83	234	PN	Pn	04 58 44.3	-0.1
MARZ	Manawahe	0.85	222	PN	Pn	04 58 44.9	+0.3
MARZ	Manawahe	0.85	222	P	Pn	04 58 44.9	+0.3
EDRZ	Edgecumbe	0.91	215	PN	Pn	04 58 45.8	+0.7
EDRZ	Edgecumbe	0.91	215	P	Pn	04 58 45.8	+0.7
MYRZ	Mayor Island	0.93	274	PN	Pn	04 58 44.6	-0.7
URZ	Urewera	0.93	194	PN	Pn	04 58 45.5	+0.3
URZ				SN	Sn	04 59 04.7	+0.4
URZ	Urewera	0.93	194	P	Pn	04 58 45.5	+0.3
	52nm,0.3s,baz=280,slow=2.1,SNR=740						
URZ				S	Sn	04 59 05.0	+0.7
	347nm,0.3s,baz=263,slow=23,SNR=88						
URZ	Urewera	0.93	194	P	Pn	04 58 45.5	+0.3
MWZ	Matawai	0.98	174	PN	Pn	04 58 46.0	+0.4
MWZ				SN	Sn	04 59 05.5	+0.5
MWZ	Matawai	0.98	174	P	Pn	04 58 46.0	+0.4
PUZ	Puketiti	0.98	137	PN	Pn	04 58 45.1	-0.6
PUZ				SN	Sn	04 59 03.8	-1.3
PUZ	Puketiti	0.98	137	P	Pn	04 58 45.1	-0.6
MKRZ	Makatiti	1.07	223	PN	Pn	04 58 48.0	+1.6
TARZ	Mount Tarawera	1.13	219	PN	Pn	04 58 48.2	+1.3
KARZ	Kaharoa	1.13	234	PN	Pn	04 58 47.6	+0.7
RRRZ	Republican Roa	1.21	215	PN	Pn	04 58 49.0	+1.5
CNGZ	Carnagh Statio	1.29	151	PN	Pn	04 58 49.3	+0.9
PRRZ	Plateau Road	1.39	215	PN	Pn	04 58 50.6	+1.3
ALRZ	Allen Road	1.46	215	PN	Pn	04 58 51.5	+1.4
KUZ	Kuaotunu	1.48	294	PN	Pn	04 58 48.4	-1.8
KUZ	Kuaotunu	1.48	294	P	Pn	04 58 48.4	-1.8
TOZ	Tahuroa Road	1.55	256	PN	Pn	04 58 48.4	-2.6
TOZ	Tahuroa Road	1.55	256	P	Pn	04 58 48.4	-2.6
RAHZ	Arahi	1.57	189	PN	Pn	04 58 52.5	+1.3
PRGZ	Paritu Road	1.61	166	PN	Pn	04 58 52.4	+0.9
KNZ	Kokohu	1.67	173	PN	Pn	04 58 53.2	+0.9
KNZ	Kokohu	1.67	173	P	Pn	04 58 53.2	+0.9
NMHZ	Naumai	1.80	195	PN	Pn	04 58 55.3	+1.7
MKAZ	Moumakai	1.80	277	PN	Pn	04 58 51.3	-2.4
MKAZ	Moumakai	1.80	277	P	Pn	04 58 51.3	-2.4
MHSZ	Mahia Peninsul	1.83	168	PN	Pn	04 58 55.2	+1.1
BKZ	Black Stump Fm	1.94	201	PN	Pn	04 58 56.5	+1.2
BKZ	Black Stump Fm	1.94	201	P	Pn	04 58 56.5	+1.3
KATZ	Kakaramea	2.10	219	PN	Pn	04 58 58.8	+1.7
KRVZ	Karewarewa	2.22	218	PN	Pn	04 59 00.2	+1.8
WTVZ	West Tongariro	2.26	219	PN	Pn	04 59 00.5	+1.6
OTVZ	Oturere	2.26	217	PN	Pn	04 59 00.6	+1.7
NGZ	Ngauruhoe	2.30	217	PN	Pn	04 59 01.2	+1.8
NGZ	Ngauruhoe	2.30	217	P	Pn	04 59 01.2	+1.8
TWVZ	Taurewa	2.31	222	PN	Pn	04 59 01.1	+1.6
TWVZ	Taurewa	2.31	222	P	Pn	04 59 01.1	+1.6
CKHZ	Cape Kidnapper	2.31	186	PN	Pn	04 59 00.5	+0.9
HIZ	Hauiti	2.32	239	PN	Pn	04 58 59.0	-0.6
HIZ	Hauiti	2.32	239	P	Pn	04 58 59.0	-0.6
WPVZ	Whakapapa	2.35	218	PN	Pn	04 59 01.7	+1.7
FWVZ	Far West T-bar	2.39	217	PN	Pn	04 59 02.0	+1.6
FWVZ	Far West T-bar	2.39	217	P	Pn	04 59 02.0	+1.6
MOVZ	Moawhango	2.42	212	PN	Pn	04 59 01.6	+0.8
MOVZ	Moawhango	2.42	212	P	Pn	04 59 01.6	+0.8
TRVZ	Turoa	2.42	216	PN	Pn	04 59 02.4	+1.6
WNVZ	Wahianoa	2.42	215	PN	Pn	04 59 02.2	+1.4
WNVZ	Wahianoa	2.42	215	P	Pn	04 59 02.2	+1.3
KAHZ	Kahuranaki	2.47	189	PN	Pn	04 59 02.3	+0.9
PKVZ	Pokaka	2.52	219	PN	Pn	04 59 03.4	+1.5
MTVZ	Mangateitei	2.53	216	PN	Pn	04 59 03.6	+1.5
PXZ	Pawanui	2.70	189	PN	Pn	04 59 04.7	+0.4
PNHZ	Pukenui	2.72	200	PN	Pn	04 59 04.7	+0.2
WPHZ	Waipukurau	2.81	195	PN	Pn	04 59 05.8	+0.3
TSZ	Takapari Road	2.92	202	PN	Pn	04 59 06.7	-0.3
PRHZ	Porangahau	2.96	191	PN	Pn	04 59 07.7	+0.2
WAZ	Wanganui	3.05	218	PN	Pn	04 59 09.8	+1.2
DVHZ	Dannevirke	3.09	198	PN	Pn	04 59 08.8	-0.3
POWZ	Post Office Ro	3.29	202	PN	Pn	04 59 11.4	-0.2
BFZ	Birch Farm	3.44	195	PN	Pn	04 59 13.1	-0.4
BFZ	Birch Farm	3.44	195	P	Pn	04 59 13.1	-0.4
MRZ	Mangatainoka R	3.59	203	PN	Pn	04 59 14.7	-0.8
TIWZ	Tintock	3.61	199	PN	Pn	04 59 15.3	-0.4
OUZ	Omahuta	3.74	304	*e*Pn	Pn	04 59 16.4	-1.1
HOWZ	Holdsworth Sta	3.83	202	PN	Pn	04 59 17.4	-1.1
OGWZ	Otaki Gorge	3.87	206	PN	Pn	04 59 18.4	-0.6
TMWZ	Te Maipa	3.92	197	PN	Pn	04 59 18.5	-1.2
KIW	Kapiti Island	4.00	208	PN	Pn	04 59 19.8	-0.9
KIW	Kapiti Island	4.00	208	P	Pn	04 59 19.8	-0.9
MTW	Mount Morrison	4.07	201	PN	Pn	04 59 20.2	-1.4
MTW	Mount Morrison	4.07	201	P	Pn	04 59 20.2	-1.5
TRWZ	Traveller	4.25	198	PN	Pn	04 59 22.8	-1.1
PAWZ	Paruwai Farm	4.30	200	PN	Pn	04 59 23.0	-1.6
PAWZ	Paruwai Farm	4.30	200	P	Pn	04 59 23.0	-1.6
MSWZ	Moikau Station	4.38	202	PN	Pn	04 59 24.2	-1.5
MSWZ	Moikau Station	4.38	202	P	Pn	04 59 24.2	-1.5
SNZO	South Karori	4.46	207	PN	Pn	04 59 25.2	-1.6
SNZO	South Karori	4.46	207	P	Pn	04 59 25.2	-1.6
PLWZ	Palliser	4.52	201	PN	Pn	04 59 25.7	-1.9
TCW	Tory Channel	4.55	211	PN	Pn	04 59 26.4	-1.5
TCW	Tory Channel	4.55	211	P	Pn	04 59 26.4	-1.5
TUWZ	Tuamarina	4.87	212	PN	Pn	04 59 30.4	-1.7
NNZ	Nelson	4.96	218	PN	Pn	04 59 31.8	-1.4
NNZ	Nelson	4.96	218	P	Pn	04 59 31.8	-1.5
BSWZ	Blackbirch Sta	5.13	211	PN	Pn	04 59 33.9	-1.7
BSWZ	Blackbirch Sta	5.13	211	P	Pn	04 59 33.9	-1.7
QRZ	Quartz Range	5.13	226	PN	Pn	04 59 34.2	-1.4
QRZ	Quartz Range	5.13	226	P	Pn	04 59 34.2	-1.4
THZ	Tophouse	5.60	217	PN	Pn	04 59 40.1	-1.7
THZ	Tophouse	5.60	217	P	Pn	04 59 40.1	-1.7
DSZ	Denniston Nort	6.16	223	PN	Pn	04 59 47.5	-1.7
LTZ	Lake Taylor	6.69	214	PN	Pn	04 59 54.1	-2.2
LTZ	Lake Taylor	6.69	214	P	Pn	04 59 54.1	-2.2
MQZ	McQueen's Vall	7.30	208	PN	Pn	05 00 00.9	-3.4
MQZ	McQueen's Vall	7.30	208	P	Pn	05 00 00.9	-3.4
CTZ	Chatham Island	7.83	146	PN	Pn	05 00 16.8	+5.4
RPZ	Rata Peaks	7.98	215	P	Pn	05 00 11.7	-1.7
	1.2nm,0.3s,baz=77,slow=6.5,SNR=5.8						
RPZ				S	Sn	05 01 37.2	-5.1
	2.8nm,0.3s,baz=359,slow=22,SNR=8.0						
LBZ	Lake Benmore	8.89	216	*e*PN	Pn	05 00 23.0	-2.5
ODZ	Otahua Downs	9.21	211	PN	Pn	05 00 26.9	-2.8
ODZ	Otahua Downs	9.21	211	P	Pn	05 00 26.9	-2.8
STKA	Stephens Creek	29.85	270	P	P	05 04 15.9	+3.0
	0.9nm,0.7s,mb3.6,baz=104,slow=17,SNR=2.9						
ASAR	Alice Springs	39.54	278	P	P	05 05 37.2	+1.1
	1.5nm,0.7s,mb3.7,baz=125,slow=8.7,SNR=14						
FORT	Forrest	41.02	264	*e*P	P	05 05 49.6	+1.4
WRAB	Tennant Creek	41.19	283	*e*P	P	05 05 50.5	+0.9
WRA	Warramunga Arr	41.19	283	P	P	05 05 49.7	0.0
	0.8nm,0.3s,mb3.9,baz=121,slow=7.8,SNR=10						
FITZ	Fitzroy Crossi	49.03	278	P	P	05 06 52.1	+0.6
	2.1nm,0.8s,mb3.8,baz=127,slow=5.1,SNR=3.5						
MAW	Mawson	64.45	203	P	P	05 08 41.0	+1.6
	1.6nm,0.6s,mb4.0,baz=130,slow=9.0,SNR=4.8						
ARCES	ARCESS Array B	144.37	343	PKP	PKPdf	05 17 34.2	-2.4
	1.1nm,0.5s,baz=67,slow=3.7,SNR=20						
BRTR	Keskin Array B	151.68	286	PKPbc	PKPbc	05 17 54.9	-1.1
	0.8nm,0.6s,baz=116,slow=5.6,SNR=3.7						

*IDC **15** 05:07:10.3±0.6, 47°.21S×12°.20W, h0km, mb4.3/14, mb1 4.3/14, mb1mx4.3/18, mbtmp4.3/14, MS5.1/14, Ms1 5.1/14, ms1mx5.1/14, Error ellipse: s-maj=22.4km s-min=14.2km az=171.0*

*ISCJB **15** 05:07:11.9±0.4, 47°.15S±0°.08×12°.5W±0°.1, h10km, mb4.8/32, MS5.3/208, Error ellipse: s-maj=12.1km s-min=10.8km az=24.9*

*NEIC **15** 05:07:11.9±0.4, 47°.37S×12°.17W, h10km, mb5.2/18, MS5.3/192, Error ellipse: s-maj=17.6km s-min=10.0km az=159.0*

*GCMT **15** 05:07:18.7±0.2, 47°.56S×11°.93W, h18km, MW5.7, Moment Tensor Solution. s72,c102; s54,c61; Moment tensor: Scale 10^{17}Nm; M_{rr}-0.79±.09; $M_{\theta\theta}$2.91±.09; $M_{\phi\phi}$-2.12±.08; $M_{r\theta}$-0.43±.21; $M_{\theta\phi}$-4.03±.08; $M_{\phi r}$-0.55±.21; Best double couple: $M_0$4.80000×10^{17} NP1:ϕ_s344.00000°, δ82.00000°, λ-7.00000°. NP2:ϕ_s75.00000°, δ83.00000°, λ-172.00000°. Principal axes: T 5.1500, Plg1.0000°, Azm209.0000°; N -0.6600, Plg79.0000°, Azm113.0000°; P -4.4900, Plg11.0000°, Azm299.0000°; Data Used: II IU CN G IC. Surface waves: sta=100, comp=184, per= 50.*

ISC 15 05:07:14.9±0.5, 47°.16S±0°.08×12°.8W±0°.1, h10km, n291, σ1°.33/55, mb4.8/32, MS5.3/208, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	23.67	176	*e*P	P	05 12 25.7	-0.6
VNA1				*e*		05 12 28.2	
VNA1				*e*		05 12 29.4	
MAIT	Maitri	26.45	162	*e*P	P	05 12 51.6	0.0
SUR	Sutherland	29.48	72	LR	LR	05 22 10.6	
	comp=Z,3μm,19.0s,MS5.0,baz=44,slow=31						
SUR	Sutherland	29.48	72	PFAKE		05 13 30.0	+11
SUR				LR	LR		
	comp=Z,4μm,22.0s,MS5.0						
SHEL	Horse Pasture	31.65	13	PFAKE		05 13 50.0	+12
SHEL				LR	LR		
	comp=Z,4μm,21.0s,MS5.0						
PMSA	Palmer Station	32.49	218	P	P	05 13 38.2	-7.0
	comp=Z,3.7nm,0.7s,mb4.3,baz=352,slow=5.4,SNR=1.7						
PMSA	Palmer Station	32.49	218	P	P	05 13 38.2	-7.0
PMSA				LR	LR		
	comp=Z,5μm,19.0s,MS5.2						
BOSA	Boshof	34.84	72	P	P	05 13 59.5	-6.5
	comp=Z,4.0nm,0.9s,mb4.4,baz=144,slow=4.0,SNR=4.8						
BOSA				LR	LR	05 25 12.4	
	comp=Z,4μm,19.7s,MS5.1,baz=229,slow=31						
USHA	Ushuaia	35.01	236	P	P	05 14 07.3	0.0
	comp=Z,10nm,0.8s,mb4.8,baz=51,slow=8.7,SNR=7.2						
USHA				LR	LR	05 23 49.8	
	comp=Z,1μm,21.6s,MS4.6,baz=74,slow=28						
SPB	Sao Paulo	36.29	298	PFAKE		05 14 30.0	+11
SPB				LR	LR		
	comp=Z,4μm,22.0s,MS5.1						
TRQA	Tornquist	36.79	266	*e*P	P	05 14 22.8	+0.1
	comp=Z,100nm,1.5s,mb5.4						
TRQA				LR	LR		
	comp=Z,6μm,20.0s,MS5.4						
TSUM	Tsumeb	37.31	52	P	P	05 14 20.2	-7.0
	comp=Z,5.5nm,0.8s,mb4.5,baz=213,slow=7.7,SNR=12						
TSUM	Tsumeb	37.31	52	*e*P	P	05 14 19.3	-7.9
	comp=Z,15nm,1.0s,mb4.8						
TSUM				LR	LR		
	comp=Z,3μm,19.0s,MS5.1						
LBTB	Lobatse	37.56	68	P	P	05 14 23.2	-6.1
	comp=Z,2.3nm,0.6s,mb4.1,baz=238,slow=11,SNR=4.9						
LBTB	Lobatse	37.56	68	P	P	05 14 23.2	-6.1
LBTB				LR	LR		
	comp=Z,3μm,21.0s,MS5.1						
CPUP	Villa Florida	40.62	285	P	P	05 14 54.8	-0.2
	comp=Z,2.0nm,0.6s,mb3.9,baz=117,slow=6.8,SNR=7.6						
CPUP				LR	LR	05 29 36.3	
	comp=Z,2μm,20.4s,MS5.0,baz=120,slow=33						
CPUP	Villa Florida	40.62	285	*e*P	P	05 14 54.7	-0.3
CPUP				LR	LR		
	comp=Z,541nm,22.0s,MS4.4						
PLCA	Paso Flores	41.25	257	P	P	05 15 00.8	+0.8
	comp=Z,4.5nm,1.1s,mb4.0,baz=140,slow=5.1,SNR=3.0						
PLCA				LR	LR	05 31 07.4	
	comp=Z,3μm,19.3s,MS5.2,baz=114,slow=34						
PLCA	Paso Flores	41.25	257	*e*P	P	05 15 02.5	+2.5
	comp=Z,34nm,1.4s,mb4.8						
PLCA				LR	LR		
	comp=Z,4μm,19.0s,MS5.3						
MAW	Mawson	42.28	147	P	P	05 15 03.1	-5.0
	comp=Z,1.2nm,0.6s,mb3.7,baz=274,slow=16,SNR=3.7						
MAW				LR	LR	05 29 01.3	
	comp=Z,1μm,19.7s,MS4.9,baz=352,slow=31						
MAW	Mawson	42.28	147	P	P	05 15 03.7	-4.4
	comp=Z,10.0nm,1.6s,mb4.2						
QSPA	South Pole Qui	43.10	180	P	P	05 15 10.0	-4.6
	comp=Z,8.4nm,0.9s,mb4.5,baz=219,slow=3.8,SNR=13						
QSPA	South Pole Qui	43.10	180	*e*P	P	05 15 09.3	-5.3
	comp=Z,62nm,1.4s,mb5.1						
QSPA				LR	LR		
	comp=Z,5μm,19.0s,MS5.4						
CFAA	Coronel Fontan	44.64	270	P	P	05 15 27.1	-0.5
	comp=Z,1.7nm,0.8s,mb3.9,baz=127,slow=7.9,SNR=21						
RCBR	Riachuelo	45.71	327	*e*P	P	05 15 33.5	-2.6
RCBR				LR	LR		
	comp=Z,3μm,20.0s,MS5.2						
LSZ	Lusaka	46.48	61	*e*P	P	05 15 34.8	-7.5
	comp=Z,7.1nm,0.9s,mb4.6						
LSZ				LR	LR		
	comp=Z,3μm,20.0s,MS5.3						
LCO	Las Campanas	47.91	271	*e*P	P	05 15 53.3	0.0
	comp=Z,39nm,1.0s,mb5.4						
LCO				LR	LR		
	comp=Z,6μm,22.0s,MS5.5						
SIV	San Ignacio	50.43	291	P	P	05 16 12.3	-0.4
	comp=Z,6.6nm,0.8s,mb4.7,baz=138,slow=7.4,SNR=24						
PAF	Port-aux-Franc	52.61	125	PFAKE		05 16 30.0	+1.4
PAF				LR	LR		
	comp=Z,2μm,21.0s,MS5.0						
LIC	Lamto	53.59	10	*e*P	P	05 16 35.6	-0.5
	comp=Z,112nm,1.5s,mb5.6						
LIC	Lamto	53.59	10	*e*P	P	05 16 35.0	-1.1
	comp=Z,133nm,1.5s,mb5.3						
LIC	Lamto	53.59	10	*e*P	P	05 16 35.0	-1.1
	comp=Z,67nm,1.5s,mb5.3						
KIC	Kosan Boka	53.76	10	*e*P	P	05 16 36.6	-0.8
	comp=Z,48nm,1.2s,mb5.3						
TIC	Toumodi	54.01	10	*e*P	P	05 16 38.4	-0.8
	comp=Z,87nm,1.4s,mb5.5						
DBIC	Dimbokro	54.05	10	LR	LR	05 33 39.2	
	comp=Z,2μm,21.0s,MS5.2,baz=168,slow=29						
DBIC	Dimbokro	54.05	10	PFAKE		05 16 50.0	+10
DBIC				LR	LR		
	comp=Z,703nm,19.0s,MS4.7						
LPAZ	La Paz	54.79	285	P	P	05 16 43.7	-1.3
	comp=Z,2.6nm,0.6s,mb4.4,baz=110,slow=5.0,SNR=12						
LPAZ				LR	LR	05 38 46.7	
	comp=Z,3μm,21.7s,MS5.3,baz=135,slow=34						
LPAZ	La Paz	54.79	285	*e*P	P	05 16 43.9	-1.1
	comp=Z,26nm,1.4s,mb5.1						
LPAZ				LR	LR		
	comp=Z,3μm,21.0s,MS5.3						
SBA	Scott Base	55.27	180	*e*P	P	05 16 47.4	-0.3
	comp=Z,22nm,0.9s,mb5.2						
SBA				LR	LR		
	comp=Z,2μm,20.0s,MS5.1						
ABPO	Ambohimpanom	55.99	81	PFAKE		05 17 00.0	+6.4
ABPO				LR	LR		
	comp=Z,2μm,20.0s,MS5.2						
CASY	Casey	58.89	157	PFAKE		05 17 20.0	+6.6
CASY				LR	LR		
	comp=Z,3μm,19.0s,MS5.4						
MBAR	Mbarara	59.84	53	PFAKE		05 17 30.0	+9.3
MBAR				LR	LR		
	comp=Z,427nm,20.0s,MS4.6						
SACV	Santiago Islan	62.60	348	PFAKE		05 17 50.0	+11
SACV				LR	LR		
	comp=Z,980nm,20.0s,MS5.0						
KMBO	Kilima Mbogo	63.10	59	LR	LR	05 42 20.8	
	comp=Z,2μm,19.2s,MS5.3,baz=206,slow=34						
KMBO	Kilima Mbogo	63.10	59	PFAKE		05 17 50.0	+7.3
KMBO				LR	LR		
	comp=Z,2μm,21.0s,MS5.2						
NNA	Nana	63.70	281	P	P	05 17 51.2	+4.6
	comp=Z,2.7nm,0.4s,mb4.7,baz=179,slow=8.5,SNR=2.2						
NNA	Nana	63.70	281	P	P	05 17 51.2	+4.6
NNA				LR	LR		
	comp=Z,3μm,21.0s,MS5.4						
DRV	Dumont d'Urvil	64.62	168	S	S	05 26 45.0	+14
DRV				L		05 34 00.0	
DRV				R		05 38 00.0	
ATAH	Atahualpa	68.29	283	P	P	05 18 20.5	+4.3
	comp=Z,5.8nm,0.6s,mb4.8,baz=152,slow=8.4,SNR=6.4						
TAM	Tamanrasset	71.56	18	*e*P	P	05 18 32.3	-3.7
	comp=Z,6.1nm,0.9s,mb4.5						
TAM				LR	LR		
	comp=Z,2μm,21.0s,MS5.3						
MSEY	Mahe Island	71.88	77	PFAKE		05 18 50.0	+12
MSEY				LR	LR		
	comp=Z,950nm,19.0s,MS5.1						
BBGH	Gun Hill	73.13	312	PFAKE		05 19 00.0	+14
BBGH				LR	LR		
	comp=Z,2μm,19.0s,MS5.5						
PCRV	Puerto La Cruz	73.33	306	P	P	05 18 50.1	+3.3
	comp=Z,9.6nm,0.8s,mb4.8,baz=146,slow=11,SNR=4.2						
GRGR	Grenville	73.35	310	PFAKE		05 19 00.0	+13
GRGR				LR	LR		
	comp=Z,854nm,20.0s,MS5.0						
OTAV	Otavalo	73.84	288	*e*P	P	05 18 49.9	0.0
	comp=Z,65nm,1.5s,mb5.3						
OTAV				LR	LR		
	comp=Z,2μm,19.0s,MS5.4						
ROSC	El Rosal	74.77	295	P	P	05 18 55.9	+0.6
	comp=Z,2.4nm,0.4s,mb4.5,baz=157,slow=9.4,SNR=4.5						

SNZO	**South Karori**	**91.67**	**186**	PFAKE		05 20 30.0	+7.8
SNZO				LR	LR		
comp=Z,1μm,20.0s,MS5.3							
AQU	**L'Aquila**	**92.10**	**19**	PFAKE		05 20 30.0	+6.2
AQU				LR	LR		
comp=Z,838nm,21.0s,MS5.2							
LFF	**La Frestale**	**92.48**	**10**	*e*P	**P**	**05 20 26.4**	**+0.9**
CAF	**Calviac**	**92.63**	**11**	*e*P	**P**	**05 20 28.0**	**+1.9**
TIR	**Tirane**	**92.78**	**24**	PFAKE		05 20 40.0	+13
TIR				LR	LR		
comp=Z,635nm,21.0s,MS5.0							
VLC	**Villacollemand**	**93.20**	**16**	PFAKE		05 20 40.0	+11
VLC				LR	LR		
comp=Z,1μm,21.0s,MS5.4							
BNI	**Bardonecchia**	**93.41**	**14**	PFAKE		05 20 40.0	+10
BNI				LR	LR		
comp=Z,2μm,22.0s,MS5.4							
SMF	**Signal de Mont**	**94.55**	**11**	*e*P	**P**	**05 20 36.9**	**+2.0**
AVF	**Avril sur Loir**	**94.62**	**11**	*e*P	**P**	**05 20 36.7**	**+1.4**
comp=Z,16nm,1.3s,mb5.0							
AVF	**Avril sur Loir**	**94.62**	**11**	*e*P	**P**	**05 20 36.7**	**+1.4**
comp=Z,7.8nm,1.3s,mb5.0							
TEIG	**Tepich**	**95.19**	**294**	PFAKE		05 20 50.0	+11
TEIG				LR	LR		
comp=Z,892nm,22.0s,MS5.2							
TRI	**Trieste**	**95.38**	**18**	PFAKE		05 20 50.0	+11
TRI				LR	LR		
comp=Z,800nm,21.0s,MS5.2							
BR131	**Keskin Array S**	**95.89**	**34**	PFAKE		05 20 50.0	+8.8
BR131				LR	LR		
comp=Z,477nm,20.0s,MS5.0							
BRTR	**Keskin Array B**	**95.89**	**34**	P	**P**	**05 20 39.0**	**-2.2**
comp=Z,0.4nm,0.4s,mb4.2,baz=213,slow=8.8,SNR=3.5							
BRTR				LR	LR	06 05 02.7	
comp=Z,500nm,20.9s,MS5.0,baz=292,slow=36							
ECH	**Echery**	**96.56**	**13**	PFAKE		05 20 50.0	+5.9
ECH				LR	LR		
comp=Z,1μm,19.0s,MS5.3							
BFO	**Black Forest**	**96.86**	**14**	PFAKE		05 20 50.0	+4.5
BFO				LR	LR		
comp=Z,1μm,22.0s,MS5.3							
DWPF	**Disney**	**97.06**	**304**	PFAKE		05 21 00.0	+13
DWPF				LR	LR		
comp=Z,2μm,21.0s,MS5.5							
WLF	**Walferdange**	**97.83**	**12**	PFAKE		05 21 00.0	+10
WLF				LR	LR		
comp=Z,900nm,20.0s,MS5.3							
STKA	**Stephens Creek**	**98.02**	**158**	LR	LR	06 04 20.3	
comp=Z,952nm,18.4s,MS5.3,baz=314,slow=35							
KHC	**Kasperske Hory**	**98.60**	**17**	AMS	AMS	05 59 20.0	
comp=Z,900nm,24.5s							
PSZ	**Piszkesteto**	**98.89**	**22**	PFAKE		05 21 00.0	+5.4
PSZ				LR	LR		
comp=Z,451nm,19.0s,MS5.0							
TREC	**Trest**	**99.15**	**18**	AMS	AMS	06 00 10.0	
comp=Z,800nm,22.4s							
NKC	**Novy Kostel**	**99.43**	**16**	AMS	AMS	06 01 40.0	
comp=Z,600nm,20.1s							
PRU	**Pruhonice**	**99.61**	**17**	AMS	AMS	05 59 50.0	
comp=Z,600nm,21.5s							
TBI	**Tubuai**	**99.68**	**220**	*e*SS	SS	05 39 26.8	+4.7
TBI				*e*LR	LR	05 53 33.2	
comp=Z,675nm,28.2s							
comp=Z,3μm,31.2s							
MBWA	**Marble Bar**	**99.69**	**136**	PFAKE		05 21 10.0	+11
MBWA				LR	LR		
comp=Z,1μm,21.0s,MS5.4							
PVCC	**Panska Ves**	**100.13**	**17**	AMS	AMS	06 00 20.0	
comp=Z,1μm,23.5s							
NHSC	**New Hope**	**100.20**	**308**	PFAKE		05 21 10.0	+8.8
NHSC				LR	LR		
comp=Z,1μm,21.0s,MS5.4							
OKC	**Ostrava-Krasne**	**100.25**	**20**	AMS	AMS	06 04 20.0	
comp=Z,500nm,19.5s							
DPC	**Dobruska-Polom**	**100.33**	**18**	AMS	AMS	06 01 40.0	
comp=Z,800nm,21.2s							
CLL	**Collm**	**100.56**	**16**	*e*SS	SS	05 39 47.0	+11
CLL				LmV		06 02 00.0	
comp=Z,800nm,21.1s							
CLL				LmV(360		07 34 00.0	
comp=Z,100nm,19.0s							
CNNC	**Cliffs of the**	**100.64**	**311**	PFAKE		05 21 10.0	+6.9
CNNC				LR	LR		
comp=Z,987nm,20.0s,MS5.3							
GNI	**Garni**	**100.87**	**41**	PFAKE		05 21 10.0	+5.8
GNI				LR	LR		
comp=Z,601nm,20.0s,MS5.1							
KWP	**Kalwaria Pacla**	**101.19**	**23**	PFAKE		05 21 10.0	+4.4
KWP				LR	LR		
comp=Z,1μm,20.0s,MS5.4							
GOGA	**Godfrey**	**102.22**	**306**	PFAKE		05 21 20.0	+10
GOGA				LR	LR		
comp=Z,1μm,20.0s,MS5.4							
ESK	**Eskdalemuir**	**102.42**	**6**	PFAKE		05 21 20.0	+8.9
ESK				LR	LR		
comp=Z,689nm,22.0s,MS5.1							
BRAL	**Brewton**	**102.46**	**302**	PFAKE		05 21 20.0	+8.8
BRAL				LR	LR		
comp=Z,1μm,21.0s,MS5.4							
CBN	**Corbin**	**102.67**	**313**	PFAKE		05 21 20.0	+7.8
CBN				LR	LR		
comp=Z,601nm,20.0s,MS5.1							
KIV	**Kislovodsk**	**103.08**	**38**	PFAKE		05 21 20.0	+6.0
KIV				LR	LR		
comp=Z,928nm,20.0s,MS5.3							
BLA	**Blacksburg**	**103.46**	**311**	PFAKE		05 21 30.0	+14
BLA				LR	LR		
comp=Z,841nm,19.0s,MS5.3							
LRAL	**Lakeview Retre**	**103.92**	**304**	PFAKE		05 21 30.0	+12
LRAL				LR	LR		
comp=Z,1μm,20.0s,MS5.4							
KIEV	**Kiev**	**103.97**	**26**	PFAKE		05 21 30.0	+12
KIEV				LR	LR		
comp=Z,362nm,20.0s,MS4.9							
PKME	**Peaks-Kenny Pk**	**104.56**	**323**	PFAKE		05 21 30.0	+9.4
PKME				LR	LR		
comp=Z,835nm,20.0s,MS5.3							
PPT	**Papeete**	**104.78**	**223**	*e*SS	SS	05 40 41.9	+9.0
comp=Z,1μm,24.8s							
PPT				*e*LR	LR	05 55 58.9	
comp=Z,3μm,30.2s							
SSPA	**Standing Stone**	**104.80**	**314**	PFAKE		05 25 50.0	+14
SSPA				LR	LR		
comp=Z,807nm,20.0s,MS5.3							
LBNH	**Lisbon**	**104.86**	**320**	PFAKE		05 25 50.0	+14
LBNH				LR	LR		
comp=Z,609nm,21.0s,MS5.1							
MCWV	**Mont Chateau**	**105.02**	**313**	PFAKE		05 25 50.0	+13
MCWV				LR	LR		
comp=Z,899nm,20.0s,MS5.3							
BINY	**Binghamton**	**105.09**	**317**	PFAKE		05 25 50.0	+13
BINY				LR	LR		
comp=Z,674nm,21.0s,MS5.2							
VBMS	**Vicksburg**	**105.36**	**301**	PFAKE		05 25 50.0	+12
VBMS				LR	LR		
comp=Z,650nm,20.0s,MS5.2							
NCB	**Newcomb**	**105.67**	**319**	PFAKE		05 25 50.0	+12
NCB				LR	LR		
comp=Z,726nm,20.0s,MS5.2							
LONY	**Lake Ozonia**	**106.33**	**319**	PFAKE		05 25 50.0	+11
LONY				LR	LR		
comp=Z,740nm,22.0s,MS5.2							
OXF	**Oxford**	**106.36**	**303**	PFAKE		05 25 50.0	+11
OXF				LR	LR		
comp=Z,2μm,20.0s,MS5.6							
KVTX	**Kingsville**	**106.53**	**293**	PFAKE		05 25 50.0	+10
KVTX				LR	LR		
comp=Z,980nm,22.0s,MS5.3							
WVT	**Waverly**	**106.64**	**305**	PFAKE		05 25 50.0	+10
WVT				LR	LR		
comp=Z,937nm,21.0s,MS5.3							
HKT	**Hockley**	**106.93**	**296**	PFAKE		05 25 50.0	+9.4
HKT				LR	LR		
comp=Z,1μm,22.0s,MS5.3							
ERPA	**Erie**	**106.95**	**314**	PFAKE		05 25 50.0	+10
ERPA				LR	LR		
comp=Z,797nm,20.0s,MS5.3							
WRAB	**Tennant Creek**	**106.96**	**148**	PFAKE		05 25 50.0	+8.9
WRAB				LR	LR		
comp=Z,702nm,20.0s,MS5.2							
ACSO	**Alum Creek Sta**	**107.05**	**311**	PFAKE		05 25 50.0	+10
ACSO				LR	LR		
comp=Z,620nm,19.0s,MS5.2							
WCI	**Wyandotte Cave**	**107.32**	**308**	PFAKE		05 25 50.0	+9.0
WCI				LR	LR		
comp=Z,754nm,22.0s,MS5.2							
NATX	**Nacogdoches**	**107.49**	**298**	PFAKE		05 25 50.0	+8.4
NATX				LR	LR		
comp=Z,864nm,22.0s,MS5.3							
KONO	**Kongsberg**	**108.01**	**12**	PFAKE		05 25 50.0	+8.4
KONO				LR	LR		
comp=Z,616nm,20.0s,MS5.2							
MIAR	**Mount Ida**	**108.80**	**301**	PFAKE		05 25 50.0	+6.1
MIAR				LR	LR		
comp=Z,701nm,21.0s,MS5.2							
AAM	**Ann Arbor**	**108.91**	**312**	PFAKE		05 25 50.0	+6.1
AAM				LR	LR		
comp=Z,1μm,20.0s,MS5.4							
NAO01	**NORSAR Array S**	**109.34**	**12**	PFAKE		05 25 50.0	+5.9
NAO01				LR	LR		
comp=Z,881nm,22.0s,MS5.3							
KULM	**Kulim**	**109.72**	**104**	PFAKE		05 25 50.0	+3.7
KULM				LR	LR		
comp=Z,445nm,20.0s,MS5.0							
JCT	**Junction City**	**109.76**	**294**	PFAKE		05 26 00.0	+14
JCT				LR	LR		
comp=Z,774nm,22.0s,MS5.2							
OBN	**Obninsk**	**110.05**	**28**	PFAKE		05 25 50.0	+4.4
OBN				LR	LR		
comp=Z,560nm,20.0s,MS5.1							
CTAO	**Charters Tower**	**110.46**	**159**	PFAKE		05 26 00.0	+12
CTAO				LR	LR		
comp=Z,1μm,20.0s,MS5.5							
HDIL	**Hopedale**	**110.61**	**308**	PFAKE		05 26 00.0	+13
HDIL				LR	LR		
comp=Z,1μm,21.0s,MS5.5							
DZM	**Mont Dzumac**	**111.10**	**179**	*e*SS	SS	05 42 01.9	+4.6
comp=Z,2μm,30.2s							
DZM				*e*LR	LR	05 58 42.0	
comp=Z,2μm,24.8s							
NIL	**Nilore**	**111.34**	**63**	PFAKE		05 26 00.0	+11
NIL				LR	LR		
comp=Z,98nm,19.0s,MS4.4							
WMOK	**Wichita Mounta**	**112.04**	**298**	PFAKE		05 26 00.0	+10
WMOK				LR	LR		
comp=Z,808nm,21.0s,MS5.3							
JFWS	**Jewell Farm**	**112.77**	**309**	PFAKE		05 26 00.0	+8.9
JFWS				LR	LR		
comp=Z,996nm,22.0s,MS5.4							
KSM	**Kuching**	**113.03**	**115**	PFAKE		05 26 00.0	+7.4
KSM				LR	LR		
comp=Z,413nm,19.0s,MS5.0							
SCIA	**State Center**	**113.68**	**307**	PFAKE		05 26 00.0	+7.1
SCIA				LR	LR		
comp=Z,1μm,21.0s,MS5.4							
KSU1	**Kansas State U**	**113.70**	**302**	PFAKE		05 26 00.0	+7.0
KSU1				LR	LR		
comp=Z,926nm,19.0s,MS5.4							
AMTX	**Amarillo**	**113.90**	**296**	PFAKE		05 26 00.0	+6.4
AMTX				LR	LR		
comp=Z,748nm,21.0s,MS5.3							
MNTX	**Cornudas Mount**	**114.11**	**291**	PFAKE		05 26 00.0	+5.9
MNTX				LR	LR		
comp=Z,567nm,21.0s,MS5.2							
COWI	**Conover**	**114.38**	**312**	PFAKE		05 26 00.0	+5.9
COWI				LR	LR		
comp=Z,974nm,22.0s,MS5.4							
MSVF	**Nonsavu**	**114.68**	**191**	PFAKE		05 26 00.0	+4.3
MSVF				LR	LR		
comp=Z,1μm,21.0s,MS5.5							
CBKS	**Cedar Bluff**	**115.33**	**300**	PFAKE		05 26 10.0	+14
CBKS				LR	LR		
comp=Z,1μm,19.0s,MS5.5							
ECSD	**EROS Data Cent**	**116.76**	**306**	PFAKE		05 26 10.0	+11
ECSD				LR	LR		
comp=Z,818nm,20.0s,MS5.3							
EYMN	**Ely**	**116.82**	**312**	PFAKE		05 26 10.0	+11
EYMN				LR	LR		
comp=Z,855nm,19.0s,MS5.4							
ANMO	**Albuquerque**	**116.91**	**293**	PFAKE		05 26 10.0	+11
ANMO				LR	LR		
comp=Z,1μm,20.0s,MS5.5							
AML	**Almayashu**	**117.22**	**57**	PFAKE		05 26 10.0	+10
AML				LR	LR		
comp=Z,683nm,22.0s,MS5.2							
EKS2	**Erkin-Say**	**117.61**	**56**	PFAKE		05 26 10.0	+10
EKS2				LR	LR		
comp=Z,528nm,20.0s,MS5.2							
UCH	**Uchtor**	**117.75**	**57**	PFAKE		05 26 10.0	+9.3
UCH				LR	LR		
comp=Z,641nm,20.0s,MS5.2							
TUC	**Tucson**	**117.98**	**288**	PFAKE		05 26 10.0	+8.5
TUC				LR	LR		
comp=Z,764nm,20.0s,MS5.3							
AAK	**Ala-Archa**	**118.00**	**57**	PFAKE		05 26 10.0	+8.8
AAK				LR	LR		
comp=Z,513nm,19.0s,MS5.2							
CM31	**Chiang Mai Arr**	**118.03**	**93**	PFAKE		05 26 10.0	+8.0
CM31				LR	LR		
comp=Z,923nm,20.0s,MS5.4							
OGNE	**Ogallala**	**118.05**	**301**	PFAKE		05 26 10.0	+8.6
OGNE				LR	LR		
comp=Z,988nm,21.0s,MS5.4							
CHTO	**Chiang Mai**	**118.28**	**92**	PFAKE		05 26 10.0	+7.5
CHTO				LR	LR		
comp=Z,922nm,20.0s,MS5.4							
TKM2	**Tokmak 2**	**118.81**	**57**	PFAKE		05 26 10.0	+7.3
TKM2				LR	LR		
comp=Z,552nm,19.0s,MS5.2							
ARU	**Arti**	**119.11**	**37**	PFAKE		05 26 10.0	+7.1
ARU				LR	LR		
comp=Z,789nm,22.0s,MS5.3							
AGMN	**Agassiz Nation**	**119.28**	**311**	PFAKE		05 26 10.0	+6.5
AGMN				LR	LR		
comp=Z,896nm,20.0s,MS5.4							
ISCO	**Idaho Springs**	**119.46**	**298**	PFAKE		05 26 10.0	+5.9
ISCO				LR	LR		
comp=Z,1μm,20.0s,MS5.5							
MVCO	**Mesa Verde**	**119.62**	**294**	PFAKE		05 26 10.0	+5.5
MVCO				LR	LR		
comp=Z,788nm,19.0s,MS5.4							
KEV	**Kevo**	**120.18**	**15**	PFAKE		05 26 10.0	+5.5
KEV				LR	LR		
comp=Z,1μm,22.0s,MS5.4							
LSA	**Lhasa**	**120.22**	**78**	PFAKE		05 26 10.0	+4.1
LSA				LR	LR		
comp=Z,1μm,21.0s,MS5.5							
KKM	**Kota Kinabalu**	**120.24**	**117**	PFAKE		05 26 10.0	+3.5
KKM				LR	LR		
comp=Z,207nm,19.0s,MS4.8							
WUAZ	**Wupatki**	**120.38**	**291**	PFAKE		05 26 20.0	+14
WUAZ				LR	LR		
comp=Z,845nm,20.0s,MS5.4							
ULM	**Lac du Bonnet**	**120.50**	**312**	PFAKE		05 26 20.0	+14
ULM				LR	LR		
comp=Z,1μm,22.0s,MS5.4							
PMG	**Port Moresby**	**120.93**	**157**	PFAKE		05 26 20.0	+12
PMG				LR	LR		
comp=Z,1μm,20.0s,MS5.6							
RSSD	**Black Hills**	**121.18**	**303**	PFAKE		05 26 20.0	+13
RSSD				LR	LR		
comp=Z,1μm,20.0s,MS5.6							
BRVK	**Borovoye**	**122.22**	**45**	PFAKE		05 26 20.0	+11
BRVK				LR	LR		
comp=Z,889nm,20.0s,MS5.4							
BVAR	**Borovoye Array**	**122.25**	**45**	PKP	PKPdf	05 26 03.9	-5.1
comp=Z,0.9nm,0.4s,baz=208,slow=4.3,SNR=2.9							
PFO	**Pinyon Flat Ob**	**122.49**	**286**	PFAKE		05 26 20.0	+10
PFO				LR	LR		
comp=Z,495nm,20.0s,MS5.2							
MVU	**Marysvale**	**122.74**	**293**	PFAKE		05 26 20.0	+10
MVU				LR	LR		
comp=Z,1μm,20.0s,MS5.5							
HNR	**Honiara**	**123.30**	**171**	PFAKE		05 26 20.0	+7.6
HNR				LR	LR		
comp=Z,892nm,21.0s,MS5.4							
FUNA	**Funafuti**	**123.55**	**194**	PFAKE		05 26 20.0	+7.1
FUNA				LR	LR		
comp=Z,11μm,19.0s,MS6.5							
PDAR	**Pinedale Array**	**123.62**	**299**	PKP	PKPdf	05 26 12.2	+0.2
comp=Z,0.8nm,0.8s,baz=116,slow=3.4,SNR=7.1							
BW06	**Boulder Array**	**123.62**	**299**	PFAKE		05 26 20.0	+8.0
BW06				LR	LR		
comp=Z,1μm,20.0s,MS5.5							
DGMT	**Dagmar**	**123.82**	**307**	PFAKE		05 26 20.0	+7.8
DGMT				LR	LR		
comp=Z,760nm,21.0s,MS5.3							
LAO	**LASA Array**	**123.93**	**304**	PFAKE		05 26 20.0	+7.5
LAO				LR	LR		
comp=Z,677nm,19.0s,MS5.3							
DUG	**Dugway**	**124.11**	**294**	PFAKE		05 26 20.0	+7.0
DUG				LR	LR		
comp=Z,820nm,20.0s,MS5.4							
HWUT	**Hardware Ranch**	**124.16**	**296**	PKPdf	PKPdf	05 26 10.4	-2.7
HWUT				LR	LR		
comp=Z,778nm,19.0s,MS5.4							
AHID	**Auburn Hatcher**	**124.55**	**298**	PFAKE		05 26 20.0	+6.2
AHID				LR	LR		
comp=Z,1μm,19.0s,MS5.6							
RLMT	**Red Lodge**	**124.80**	**301**	PFAKE		05 26 20.0	+5.8
RLMT				LR	LR		
comp=Z,860nm,21.0s,MS5.4							
DAC	**Darwin (Calif)**	**124.85**	**288**	PFAKE		05 26 20.0	+5.4
DAC				LR	LR		
comp=Z,585nm,22.0s,MS5.2							
TPAW	**Teton Pass**	**124.87**	**299**	PKPdf	PKPdf	05 26 12.4	-2.0
MKAR	**Makanchi Array**	**124.94**	**57**	PKP	PKPdf	05 26 12.5	-1.8
comp=Z,0.3nm,0.7s,baz=302,slow=2.3,SNR=3.2							
KURK	**Kurchatov**	**125.09**	**51**	PFAKE		05 26 20.0	+5.5
KURK				LR	LR		
comp=Z,626nm,19.0s,MS5.3							
KMI	**Kunming**	**125.12**	**90**	PKP	PKPdf	05 26 12.5	-2.9
LKWY	**Lake**	**125.15**	**300**	PFAKE		05 26 20.0	+5.1
LKWY				LR	LR		
comp=Z,2μm,20.0s,MS5.7							
N13A	**Wendover, West**	**125.36**	**294**	PKPdf	PKPdf	05 26 13.0	-2.4
TPH	**Tonopah**	**125.67**	**290**	PFAKE		05 26 30.0	+14
TPH				LR	LR		
comp=Z,719nm,22.0s,MS5.3							
QIZ	**Qiongzhong**	**125.81**	**101**	PKP	PKPdf	05 26 11.9	-5.0
QIZ				PP	PP	05 28 04.0	-5.6
QIZ				SS	SS	05 45 02.3	-8.1
QIZ				LR	LR		
comp=N,460nm,20.6s							
QIZ				LR	LR		
comp=Z,720nm,19.8s,MS5.3							
QIZ	**Qiongzhong**	**125.81**	**101**	PFAKE		05 26 20.0	+3.1
QIZ				LR	LR		
comp=Z,777nm,21.0s,MS5.3							
ELK	**Elko**	**125.94**	**294**	PFAKE		05 26 30.0	+13
ELK				LR	LR		
comp=Z,1μm,20.0s,MS5.6							
FFC	**Flin Flon**	**126.14**	**314**	PFAKE		05 26 30.0	+14
FFC				LR	LR		
comp=Z,776nm,21.0s,MS5.4							
WMQ	**Urumqi**	**126.46**	**62**	*e*PKP	PKPdf	05 26 13.8	-3.6
WMQ				LR	LR		
comp=N,380nm,19.2s,MS5.2							
WMQ				LR	LR		
comp=E,440nm,22.1s,MS5.2							
WMQ				LR	LR		
comp=Z,280nm,20.8s,MS4.9							
BOZ	**Bozeman (W)**	**126.47**	**300**	PFAKE		05 26 30.0	+13
BOZ				LR	LR		
comp=Z,147nm,19.0s,MS4.7							
DAV	**Davao City (W)**	**126.56**	**125**	PFAKE		05 26 30.0	+11
DAV				LR	LR		
comp=Z,412nm,20.0s,MS5.1							
NVAR	**Mina Array Bea**	**126.56**	**290**	PKP	PKPdf	05 26 17.1	-0.6
comp=Z,0.1nm,0.3s,baz=127,slow=3.8,SNR=2.6							
EGMT	**Eagleton**	**126.67**	**304**	PFAKE		05 26 30.0	+12
EGMT				LR	LR		
comp=Z,553nm,19.0s,MS5.2							
KBS	**Kingsbay**	**126.68**	**6**	PFAKE		05 26 30.0	+13
KBS				LR	LR		
comp=Z,506nm,20.0s,MS5.2							
DLMT	**Dillon**	**126.89**	**300**	PKPdf	PKPdf	05 26 16.8	-1.4
HLID	**Hailey**	**127.00**	**297**	PFAKE		05 26 30.0	+12
HLID				LR	LR		
comp=Z,932nm,19.0s,MS5.5							
BMN	**Battle Mountai**	**127.01**	**292**	PFAKE		05 26 30.0	+11
BMN				LR	LR		
comp=Z,1μm,20.0s,MS5.5							
HRY	**Holter Researc**	**127.16**	**301**	*e*PKPdf	PKPdf	05 26 21.0	+2.4
SAO	**San Andreas Ge**	**127.65**	**286**	PFAKE		05 26 30.0	+10
SAO				LR	LR		
comp=Z,571nm,19.0s,MS5.3							
CMB	**Columbia Colle**	**127.69**	**288**	PFAKE		05 26 30.0	+10
CMB				LR	LR		
comp=Z,382nm,19.0s,MS5.1							
MSO	**Missoula**	**128.46**	**301**	PFAKE		05 26 30.0	+8.9
MSO				LR	LR		
comp=Z,492nm,22.0s,MS5.2							
GYA	**Guiyang**	**128.67**	**91**	Pdif	Pdif	05 23 02.0	-5.7
GYA				PKP	PKPdf	05 26 19.4	-2.8
GYA				PP	PP	05 28 27.9	-0.6
GYA				PKS		05 29 52.3	
GYA				SKKS	SKKSac	05 35 16.5	-9.0
GYA				SS	SS	05 45 40.3	-5.8
GYA				AMB	AMB		
comp=Z,820nm,7.8s							
GYA				LR	LR		
comp=N,380nm,22.8s,MS5.1							
GYA				LR	LR		
comp=E,240nm,23.6s,MS5.1							
GYA				LR	LR		
comp=Z,330nm,22.4s,MS5.0							
WVOR	**Wild Horse Val**	**129.00**	**294**	PKPdf	PKPdf	05 26 20.4	-1.9
WVOR				LR	LR		
comp=Z,653nm,21.0s,MS5.3							
MCCM	**Marconi Confer**	**129.37**	**287**	PFAKE		05 26 30.0	+6.8
MCCM				LR	LR		
comp=Z,549nm,21.0s,MS5.2							
BMO	**Blue Mountains**	**129.45**	**297**	*e*PKPdf	PKPdf	05 26 22.0	-1.1
BMO				LR	LR		
comp=Z,1μm,20.0s,MS5.5							
CD2	**Chengdu**	**129.48**	**85**	PKP	PKPdf	05 26 21.5	-2.1
CD2				PP	PP	05 28 34.3	+0.4
CD2				PKS		05 29 56.6	
CD2				SKS	SKSdf	05 33 31.8	-3.3
CD2				SKKS	SKKSac	05 35 25.5	-4.9
CD2				SS	SS	05 45 52.4	-3.8
CD2				AMB	AMB		
comp=Z,130nm,8.9s							
CD2				LR	LR		
comp=N,390nm,19.6s							
CD2				LR	LR		
comp=Z,430nm,20.8s,MS5.1							
MOD	**Modoc**	**129.76**	**292**	PFAKE		05 26 30.0	+6.2
MOD				LR	LR		
comp=Z,541nm,19.0s,MS5.3							
HOPS	**Hopland**	**129.97**	**287**	PFAKE		05 26 30.0	+5.7
HOPS				LR	LR		
comp=Z,690nm,21.0s,MS5.3							
ZALV	**Zalesovo Beam**	**130.02**	**50**	PKP	PKPdf	05 26 21.7	-2.1
comp=Z,0.4nm,0.4s,baz=289,slow=4.4,SNR=2.2							
WDC	**Whiskeytown Da**	**130.48**	**290**	PFAKE		05 26 30.0	+4.8
WDC				LR	LR		
comp=Z,482nm,20.0s,MS5.2							
NEW	**Newport**	**131.04**	**301**	PFAKE		05 26 40.0	+14
NEW				LR	LR		
comp=Z,610nm,19.0s,MS5.3							
YBH	**Yreka Blue Hor**	**131.20**	**291**	PFAKE		05 26 40.0	+14
YBH				LR	LR		
comp=Z,538nm,21.0s,MS5.2							
HAWA	**Hanford**	**131.57**	**298**	PFAKE		05 26 40.0	+13
HAWA				LR	LR		
comp=Z,1μm,20.0s,MS5.6							
GTA	**Gaotai**	**131.72**	**73**	PKP	PKPdf	05 26 19.3	-8.3
GTA				sPKP		05 26 27.1	
GTA				PP	PP	05 28 47.9	-0.4
GTA				SKS	SKSdf	05 33 31.8	-6.9
GTA				SKKS	SKKSac	05 35 38.8	-5.0
GTA				SS	SS	05 46 18.8	-4.7
GTA				AMB	AMB		
comp=Z,180nm,8.9s							
GTA				LR	LR		
comp=N,420nm,20.2s,MS5.3

ENH	**Enshi**	**133.00**	**90**	PFAKE			05 26 40.0	+10
ENH				LR	LR			
comp=Z,702nm,20.0s,MS5.4								
COR	**Corvallis**	**133.01**	**294**	PFAKE			05 26 40.0	+10
COR				LR	LR			
comp=Z,631nm,19.0s,MS5.3								
NLWA	**Neilton Lookou**	**134.67**	**297**	PFAKE			05 26 40.0	+7.2
NLWA				LR	LR			
comp=Z,870nm,19.0s,MS5.5								
YKA	**Yellowknife Ar**	**135.41**	**320**	PKP	PKPdf		05 26 31.8	-1.9
comp=Z,0.3nm,0.4s,baz=104,slow=1.7,SNR=7.7								
YKA	**Yellowknife Ar**	**135.41**	**320**	PKP	PKPdf		05 26 31.8	-1.9
YHNB	**Yeheng**	**137.39**	**105**	PFAKE			05 26 50.0	+11
YHNB				LR	LR			
comp=Z,494nm,19.0s,MS5.3								
TATO	**Taipei**	**137.68**	**105**	PFAKE			05 26 50.0	+11
TATO				LR	LR			
comp=Z,439nm,20.0s,MS5.2								
POHA	**Pohakuloa**	**139.22**	**241**	PFAKE			05 26 50.0	+7.9
POHA				LR	LR			
comp=Z,587nm,19.0s,MS5.3								
TLY	**Talaya**	**139.57**	**59**	PFAKE			05 26 50.0	+8.3
TLY				LR	LR			
comp=Z,622nm,20.0s,MS5.3								
SONM	**Songino Array**	**139.85**	**66**	PKP	PKPdf		05 26 38.8	-3.6
comp=Z,0.3nm,0.3s,baz=270,slow=0.4,SNR=2.9								
HHC	**Hu-ho-hao-te**	**140.21**	**78**	*e*PKP	PKPdf		05 26 37.4	-5.9
HHC				PP	PP		05 29 37.6	-4.2
HHC				PKS			05 30 11.5	
HHC				SKS	SKSdf		05 33 46.3	-7.0
HHC				SKKS	SKKSac		05 36 27.5	-7.2
HHC				SS	SS		05 47 56.6	-8.5
HHC				AMB	AMB			
comp=Z,350nm,9.7s								
HHC				LR	LR			
comp=N,280nm,20.1s,MS5.3								
HHC				LR	LR			
comp=E,510nm,20.0s,MS5.3								
HHC				LR	LR			
comp=Z,500nm,20.3s,MS5.3								
ULN	**Ulaanbaatar**	**140.27**	**66**	PFAKE			05 26 50.0	+6.8
ULN				LR	LR			
comp=Z,576nm,20.0s,MS5.3								
NJ2	**Nanjing**	**140.46**	**95**	*e*PKP	PKPdf		05 26 38.6	-5.4
NJ2				sPKP			05 26 50.8	
NJ2				PP	PP		05 29 38.5	-4.8
NJ2				PKS			05 30 12.5	
NJ2				AMB	AMB			
comp=Z,80nm,7.4s								
NJ2				LR	LR			
comp=N,130nm,18.0s,MS5.0								
NJ2				LR	LR			
comp=E,160nm,15.8s,MS5.0								
NJ2				LR	LR			
comp=Z,290nm,16.5s,MS5.1								
GUMO	**Guam**	**141.67**	**143**	PFAKE			05 26 50.0	+3.3
GUMO				LR	LR			
comp=Z,358nm,20.0s,MS5.1								
DLBC	**Dease Lake**	**141.80**	**311**	*e*PKPdf	PKPdf		05 26 39.4	-6.2
BJT	**Baijiatuao**	**142.91**	**82**	PFAKE			05 27 00.0	+12
BJT				LR	LR			
comp=Z,435nm,20.0s,MS5.2								
BJI	**Beijing**	**142.93**	**82**	PKP	PKPdf		05 26 42.8	-5.4
BJI				PP	PP		05 29 53.3	-5.0
BJI				AMB	AMB			
comp=Z,190nm,7.5s								
BJI				LR	LR			
comp=N,380nm,18.8s,MS5.4								
BJI				LR	LR			
comp=E,440nm,18.8s,MS5.4								
BJI				LR	LR			
comp=Z,310nm,24.5s								
INK	**Inuvik**	**143.92**	**327**	PKP	PKPdf		05 26 45.8	-3.2
comp=Z,2.3nm,0.5s,baz=11,slow=5.5,SNR=6.7								
INK	**Inuvik**	**143.92**	**327**	*e*PKPdf	PKPdf		05 26 45.9	-3.1
SKAG	**Skagway**	**144.67**	**312**	*e*PKPdf	PKPdf		05 26 49.4	-1.2
DAWY	**Dawson**	**146.65**	**320**	*e*PKPbc	PKPbc		05 26 53.6	-1.9
EGAK	**Eagle**	**147.34**	**321**	*e*PKPdf	PKPdf		05 26 54.1	-0.8
EGAK				LR	LR			
comp=Z,830nm,20.0s,MS5.5								
MENT	**Mentasta**	**148.70**	**318**	*e*PKPbc	PKPbc		05 26 59.8	-1.3
HIA	**Hailar**	**148.71**	**68**	PFAKE			05 27 10.0	+12
HIA				LR	LR			
comp=Z,483nm,21.0s,MS5.3								
INCN	**Inchon**	**148.79**	**93**	PFAKE			05 27 10.0	+12
INCN				LR	LR			
comp=Z,568nm,20.0s,MS5.4								
BMRM	**Bremner River**	**149.31**	**315**	*e*PKPbc	PKPbc		05 27 02.1	-0.6
TIXI	**Tiksi**	**149.64**	**23**	*e*PKPdf	PKPdf		05 26 56.8	-1.8
KSRS	**Korea Array**	**149.66**	**94**	PKPbc	PKPdf		05 26 58.0	-1.7
comp=Z,0.9nm,0.7s,baz=255,slow=4.4,SNR=4.0								
COLA	**College**	**150.13**	**323**	*e*PKPbc	PKPbc		05 27 03.0	-1.6
COLA				LR	LR			
comp=Z,704nm,21.0s,MS5.4								
COLD	**Coldfoot**	**150.32**	**328**	*e*PKPbc	PKPbc		05 27 03.1	-1.8
MCK	**McKinley**	**150.87**	**321**	PKPbc	PKPbc		05 27 03.1	-3.3
PMR	**Palmer**	**151.40**	**316**	PKPdf	PKPdf		05 26 58.0	-3.6
PMR				*e*PKPbc	PKPbc		05 27 06.0	-1.7
TRF	**Thorofare Moun**	**151.53**	**320**	*e*PKPbc	PKPbc		05 27 05.3	-2.6
BPAW	**Bear Paw Mtn.**	**151.65**	**322**	*e*PKPbc	PKPbc		05 27 04.3	-3.9
WAKE	**Wake Island**	**152.20**	**179**	PFAKE			05 27 10.0	+5.9
WAKE				LR	LR			
comp=Z,608nm,20.0s,MS5.4								
PPLA	**Purkeypile**	**152.50**	**320**	*e*PKPbc	PKPbc		05 27 08.4	-1.8
KDAK	**Kodiak Island**	**153.69**	**309**	PFAKE			05 27 10.0	+5.0
KDAK				LR	LR			
comp=Z,669nm,20.0s,MS5.5								
MDJ	**Mudanjiang**	**153.86**	**82**	PFAKE			05 27 10.0	+4.3
MDJ				LR	LR			
comp=Z,566nm,20.0s,MS5.4								
YAK	**Yakutsk**	**154.13**	**41**	PFAKE			05 27 10.0	+4.5
YAK				LR	LR			
comp=Z,557nm,20.0s,MS5.4								
MAJO	**Matsushiro**	**156.07**	**106**	PFAKE			05 27 20.0	+11
MAJO				LR	LR			
comp=Z,489nm,21.0s,MS5.3								
MJAR	**Matsushiro Arr**	**156.07**	**106**	PKPab	PKPab		05 27 32.4	-4.1
comp=Z,0.6nm,0.3s,baz=240,slow=1.0,SNR=2.5								
MIDW	**Midway**	**157.57**	**218**	PFAKE			05 27 20.0	+8.8
MIDW				LR	LR			
comp=Z,554nm,20.0s,MS5.4								
BILL	**Bilibino**	**159.05**	**1**	PFAKE			05 27 20.0	+8.2
BILL				LR	LR			
comp=Z,892nm,22.0s,MS5.6								
ERM	**Erimo**	**162.15**	**98**	PFAKE			05 27 20.0	+4.0
ERM				LR	LR			
comp=Z,507nm,21.0s								
YSS	**Yuzh-Sakhalins**	**163.35**	**82**	PFAKE			05 27 20.0	+3.0
YSS				LR	LR			
comp=Z,142nm,20.0s								
ADK	**Adak**	**168.51**	**300**	PFAKE			05 27 30.0	+9.1
ADK				LR	LR			
comp=Z,644nm,20.0s								
PET	**Petropavlovsk**	**171.96**	**40**	PFAKE			05 27 30.0	+7.2
PET				LR	LR			
comp=Z,1μm,21.0s								

*ISK **15** 05:07:33.6, 35°.88N×27°.71E, h22km, MD3.1*
*ATH **15** 05:07:34.0, 35°.90N×27°.81E, h49km±4km, MD3.1/5*
*NEIC **15** 05:07:34.0, 35°.90N×27°.81E, h49km, MD3.1(ATH), After ATH.*
*ISCJB **15** 05:07:34.2±0.7, 35°.88N±0°.04×27°.87E±0°.05, h54km±9km, Error ellipse: s-maj=7.5km s-min=6.0km az=154.3*
*DDA **15** 05:07:35.7, 36°.22N×28°.08E, h8km±8km, Md3.0*
*CSEM **15** 05:07:35.3±0.4, 35°.92N×27°.78E, h33km±5km, MD3.1, Error ellipse: s-maj=8.2km s-min=5.8km az=145.0*

ISC 15 05:07:34.7±0.7,**35°.88N**±0°.04×**27°.89E**±0°.05,**h49**km±11km, **n45**,σ1**°22**/64,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.39**	**30**	*e*P	**Pn**	**05 07 44.8**	**+0.1**
ARG				*e*S	**Sn**	**05 07 52.6**	**+0.8**
ARG	**Arkhangelos**	**0.39**	**30**	*e*P	**Pn**	**05 07 44.8**	**+0.1**
ARG				*e*S	**Sn**	**05 07 52.6**	**+0.8**
ARG	**Arkhangelos**	**0.39**	**30**	*e*P	**Pn**	**05 07 44.8**	**+0.1**
ARG				*e*S	**Sn**	**05 07 52.6**	**+0.8**
KARP	**Karpathos**	**0.68**	**241**	*e*P	**Pn**	**05 07 47.5**	**-0.6**
KARP				*e*S	**Sn**	**05 07 57.5**	**-0.3**
KARP	**Karpathos**	**0.68**	**241**	*e*P	**Pn**	**05 07 47.5**	**-0.6**
KARP				*e*S	**Sn**	**05 07 57.5**	**-0.3**
KARP	**Karpathos**	**0.68**	**241**	*e*P	**Pn**	**05 07 47.5**	**-0.6**
KARP				*e*S	**Sn**	**05 07 57.5**	**-0.3**
DAT	**Datca**	**0.89**	**344**	PG	**Pn**	**05 07 50.7**	**-0.2**
DAT				*e*SG	**Sn**	**05 08 03.3**	**+0.5**
DAT	**Datca**	**0.89**	**344**	*i* Pg	**Pn**	**05 07 50.7**	**-0.2**
DAT				*e*Sg	**Sn**	**05 08 03.3**	**+0.5**
TURN	**Turunc**	**1.15**	**30**	*i* P	**Pn**	**05 07 52.2**	**-2.3**
TURN				*i* S	**Sn**	**05 08 06.2**	**-2.8**
TURN	**Turunc**	**1.15**	**30**	*i* P	**Pn**	**05 07 52.2**	**-2.3**
TURN				*i* S	**Sn**	**05 08 06.2**	**-2.9**
BDRM	**Kayabasi**	**1.24**	**343**	*i* P	**Pn**	**05 07 55.0**	**-0.7**
BDRM				*i* S	**Sn**	**05 08 11.0**	**-0.3**
BDRM	**Kayabasi**	**1.24**	**343**	*i* P	**Pn**	**05 07 55.0**	**-0.7**
BDRM				*i* S	**Sn**	**05 08 11.0**	**-0.3**
BODT	**Bodrum**	**1.27**	**339**	*e*PN	**Pn**	**05 07 55.7**	**-0.4**
BODT				*e*SN	**Sn**	**05 08 12.2**	**+0.2**
BODT	**Bodrum**	**1.27**	**339**	*e*Pn	**Pn**	**05 07 55.7**	**-0.4**
BODT				*e*Sn	**Sn**	**05 08 12.2**	**+0.1**
YER	**Yerkesik**	**1.30**	**14**	*e*PN	**Pn**	**05 07 57.8**	**+1.3**
YER	**Yerkesik**	**1.30**	**14**	*e*Pn	**Pn**	**05 07 57.8**	**+1.4**
MLSB	**Milas**	**1.42**	**356**	*e*PN	**Pn**	**05 07 59.0**	**+0.9**
MLSB	**Milas**	**1.42**	**356**	*e*Pn	**Pn**	**05 07 59.0**	**+0.9**
AKAS	**Kas**	**1.44**	**75**	*i* P	**Pn**	**05 07 58.0**	**-0.3**
AKAS				*i* S	**Sn**	**05 08 14.6**	**-1.5**
AKAS	**Kas**	**1.44**	**75**	*i* P	**Pn**	**05 07 58.0**	**-0.3**
AKAS				*i* S	**Sn**	**05 08 14.6**	**-1.5**
AYDN	**Tasoluk**	**1.78**	**360**	*i* P	**Pn**	**05 08 03.4**	**+0.4**
AYDN				*i* S	**Sn**	**05 08 22.7**	**-1.8**
AYDN	**Tasoluk**	**1.78**	**360**	*i* P	**Pn**	**05 08 03.4**	**+0.3**
AYDN				*i* S	**Sn**	**05 08 22.7**	**-1.8**
GLHS	**Glhisar (BURDU**	**1.82**	**45**	*e*PN	**Pn**	**05 08 06.0**	**+2.4**
GLHS	**Glhisar (BURDU**	**1.82**	**45**	*e*Pn	**Pn**	**05 08 06.0**	**+2.4**
ELL	**Elmali**	**1.85**	**61**	*e*PN	**Pn**	**05 08 06.5**	**+2.5**
ELL	**Elmali**	**1.85**	**61**	*e*Pn	**Pn**	**05 08 06.5**	**+2.5**
GOLH	**Golhisar**	**1.91**	**44**	*i* P	**Pn**	**05 08 05.7**	**+0.9**
GOLH	**Golhisar**	**1.91**	**44**	*i* P	**Pn**	**05 08 05.7**	**+0.8**
SMG	**Samos**	**2.01**	**336**	*e*P	**Pn**	**05 08 06.2**	**0.0**
SMG	**Samos**	**2.01**	**336**	*e*P	**Pn**	**05 08 06.2**	**0.0**
SMG	**Samos**	**2.01**	**336**	*e*P	**Pn**	**05 08 06.2**	**0.0**
DNZL	**Cakiroluk**	**2.04**	**27**	*e*P	**Pn**	**05 08 08.7**	**+2.2**
DNZL	**Cakiroluk**	**2.04**	**27**	*e*P	**Pn**	**05 08 08.7**	**+2.2**
LAST	**Lasithi**	**2.09**	**251**	*e*P	**Pn**	**05 08 07.9**	**+0.6**
LAST	**Lasithi**	**2.09**	**251**	*e*P	**Pn**	**05 08 07.9**	**+0.6**
LAST	**Lasithi**	**2.09**	**251**	*e*P	**Pn**	**05 08 07.9**	**+0.6**
APE	**Apeiranthos**	**2.24**	**303**	*e*PN	**Pn**	**05 08 09.0**	**-0.4**
APE	**Apeiranthos**	**2.24**	**303**	*e*Pn	**Pn**	**05 08 09.0**	**-0.4**
SUTC	**Sutluce-Ispart**	**2.97**	**57**	*e*PN	**Pn**	**05 08 22.6**	**+3.3**
SUTC	**Sutluce-Ispart**	**2.97**	**57**	*e*Pn	**Pn**	**05 08 22.6**	**+3.3**
GAZI	**Gazipasa**	**3.60**	**83**	*i* P	**Pn**	**05 08 26.1**	**-1.9**
GAZI				*i* S	**Sn**	**05 09 03.1**	**-6.3**
GAZI	**Gazipasa**	**3.60**	**83**	*i* P	**Pn**	**05 08 26.1**	**-1.9**
KYTH	**Kithira**	**3.95**	**277**	*e*P	**Pn**	**05 08 32.6**	**-0.2**
KYTH	**Kithira**	**3.95**	**277**	*e*P	**Pn**	**05 08 32.6**	**-0.2**
KYTH	**Kithira**	**3.95**	**277**	*e*P	**Pn**	**05 08 32.6**	**-0.2**

*IDC **15** 05:11:19.5±1.6, 13°.92N×87°.37W, h0km, mb3.5/3, mb1 4.0/5, mb1mx3.7/19, mbtmp3.6/5, ML3.7/2, MS2.9/1, Ms1 2.9/1, ms1mx2.8/21, Error ellipse: s-maj=39.6km s-min=17.5km az=31.0*
*ISCJB **15** 05:11:20.2±0.6, 12°.71N±0°.07×88°.14W±0°.06, h66km±8km, mb3.5/3, Error ellipse: s-maj=14.9km s-min=3.8km az=34.5*
*CASC **15** 05:11:20.7±2.0, 12°.73N×88°.13W, h58km±22km, MD3.8, ML4.0*

ISC 15 05:11:21.1±0.5,**12°.70N**±0°.07×**88°.14W**±0°.05,**h57**km±9km, **n32**,σ0**°70**/44,**mb3.5**/3,**3D,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	**0.64**	**27**	↓*e*P	**Pn**	**05 11 34.6**	**+0.1**
CNCH				*e*S	**Sn**	**05 11 45.2**	**+0.9**
VSM	**San Miguel**	**0.74**	**349**	*e*P	**Pn**	**05 11 35.5**	**-0.2**
BLLM	**Bellamira**	**0.74**	**352**	↓*i* P	**Pn**	**05 11 35.7**	**-0.1**
BLLM				*e*S	**Sn**	**05 11 45.4**	**-1.1**
CRIN	**San Cristobal**	**1.06**	**90**	*e*P	**Pn**	**05 11 40.1**	**+0.3**
CRIN				*e*S	**Sn**	**05 11 55.5**	**+1.8**
CRIN				AML	AML	05 12 04.4	
comp=N,4μm,0.9s							
CAHU	**Cacacuatique**	**1.07**	**356**	*e*P	**Pn**	**05 11 40.4**	**+0.5**
CAHU				*e*S	**Sn**	**05 11 53.0**	**-0.8**
SNVI	**San Vicente**	**1.14**	**323**	*e*P	**Pn**	**05 11 40.4**	**-0.5**
SNVI				*e*S	**Sn**	**05 11 55.2**	**-0.3**
LEON	**Leon**	**1.25**	**103**	*e*P	**Pn**	**05 11 41.5**	**-0.8**
LEON				AML	AML	05 11 58.5	
comp=Z,3μm,0.3s							
TELN	**Telica**	**1.28**	**94**	*e*P	**Pn**	**05 11 43.0**	**+0.3**
LFRS	**El Faro**	**1.29**	**316**	↓*e*P	**Pn**	**05 11 42.1**	**-0.7**
LBRS	**Las Brisas**	**1.36**	**320**	*e*P	**Pn**	**05 11 43.6**	**-0.2**
CNGN	**Cerro Negro**	**1.42**	**98**	*e*P	**Pn**	**05 11 44.9**	**+0.3**
CNGN				*e*S	**Sn**	**05 11 61.8**	**-0.5**
BOQS	**Boqueron**	**1.52**	**313**	*e*P	**Pn**	**05 11 45.6**	**-0.3**
BOQS				*e*S	**Sn**	**05 12 04.7**	**+0.1**
MOMN	**Momotombo**	**1.58**	**100**	*e*P	**Pn**	**05 11 46.9**	**0.0**
MOMN				*e*S	**Sn**	**05 12 06.4**	**+0.1**
TGUH	**Tegucigalpa,Un**	**1.59**	**32**	*e*P	**Pn**	**05 11 48.1**	**+1.1**
COPN	**Copaltepe**	**1.59**	**109**	*e*P	**Pn**	**05 11 46.2**	**-0.8**
CSAN		**1.75**	**107**	*e*P	**Pn**	**05 11 49.0**	**-0.1**
APYN	**Apoyeque**	**1.81**	**105**	*e*P	**Pn**	**05 11 49.6**	**-0.2**
SBLS	**San Blas**	**1.84**	**308**	*e*P	**Pn**	**05 11 50.9**	**+0.6**
XAVN	**Gruta Xavier**	**1.85**	**107**	*e*P	**Pn**	**05 11 50.2**	**-0.3**
MGAN	**Managua**	**1.93**	**106**	*e*P	**Pn**	**05 11 51.0**	**-0.5**
MGAN				*e*S	**Sn**	**05 12 13.7**	**-0.9**
HUEN		**1.95**	**100**	*e*P	**Pn**	**05 11 51.6**	**-0.3**
TICN	**Ticuantepe**	**1.98**	**109**	*e*P	**Pn**	**05 11 52.0**	**-0.2**
MASN	**Masaya**	**2.06**	**110**	*e*P	**Pn**	**05 11 53.8**	**+0.4**
APON	**Apoyo**	**2.17**	**111**	*e*P	**Pn**	**05 11 54.7**	**-0.1**
SSN	**San Juan del S**	**2.63**	**122**	*e*P	**Pn**	**05 12 01.8**	**+0.7**
CONN	**Concepcion**	**2.70**	**114**	*e*P	**Pn**	**05 12 02.5**	**+0.4**
APG	**El Apazote**	**3.22**	**316**	Pn	**Pn**	**05 12 09.6**	**+0.4**
baz=90,slow=10							
APG				Pg	**Pn**	**05 12 18.3**	**+9.1**
baz=90,slow=17							
APG				LR	LR	05 12 49.6	
comp=Z,199nm,21.5s,baz=271,slow=28							
APG				Lg		05 13 01.9	
JTS	**JuntasAbangare**	**3.93**	**127**	Pn	**Pn**	**05 12 26.7**	**+7.7**
comp=Z,23nm,0.3s,baz=312,slow=20,SNR=51							
JTS				Sn	**Sn**	**05 13 19.0**	**+15**
comp=Z,7.1nm,0.3s,baz=315,slow=22,SNR=10							
CMIG	**Matias Romero**	**7.85**	**305**	Pn	**Pn**	**05 13 14.6**	**+2.0**
comp=Z,0.2nm,0.3s,baz=141,slow=11,SNR=7.5							
CMIG				Sn	**Sn**	**05 14 46.8**	**+6.7**
comp=Z,0.2nm,0.3s,baz=85,slow=18,SNR=2.8							
TXAR	**Lajitas Array**	**21.96**	**321**	P	**P**	**05 16 11.2**	**+1.1**
comp=Z,1.3nm,0.6s,mb3.5,baz=139,slow=11,SNR=23							
PDAR	**Pinedale Array**	**35.24**	**332**	P	**P**	**05 18 10.2**	**+0.2**
comp=Z,0.3nm,0.5s,mb3.5,baz=122,slow=8.8,SNR=4.3							
YKA	**Yellowknife Ar**	**53.20**	**345**	P	**P**	**05 20 31.7**	**-1.5**
comp=Z,0.4nm,0.7s,mb3.4,baz=133,slow=8.7,SNR=5.5							

*ISCJB **15** 05:29:43.2±1.6, 35°.93N±0°.09×27°.92E±0°.08, h33km, Error ellipse: s-maj=14.9km s-min=7.0km az=27.6*
*CSEM **15** 05:29:43.0±0.8, 35°.97N×27°.94E, h20km, ML2.3, Error ellipse: s-maj=17.9km s-min=8.7km az=31.0*
*DDA **15** 05:29:44.0, 36°.18N×28°.15E, h8km±5km, Md2.8*
*ISK **15** 05:29:43.5, 35°.98N×27°.51E, h24km, ML2.3*

ISC 15 05:29:42.6±1.8,**35°.90N**±0°.09×**27°.90E**±0°.08,**h31**km±11km, **n15**,σ1**°08**/27,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAT	**Datca**	**0.87**	**343**	*e*PG	**Pb**	**05 29 59.1**	**-0.1**
DAT				*e*SG	**Sb**	**05 30 09.9**	**-0.6**
DAT	**Datca**	**0.87**	**343**	*e*Pg	**Pb**	**05 29 59.1**	**-0.1**
DAT				*e*Sg	**Sb**	**05 30 09.9**	**-0.6**
TURN	**Turunc**	**1.13**	**30**	*i* P	**Pn**	**05 30 01.8**	**-0.5**
TURN				*i* S	**Sn**	**05 30 15.8**	**-0.9**
TURN	**Turunc**	**1.13**	**30**	*i* P	**Pn**	**05 30 01.8**	**-0.5**
TURN				*i* S	**Sn**	**05 30 15.8**	**-1.0**
BDRM	**Kayabasi**	**1.22**	**343**	*i* P	**Pn**	**05 30 03.9**	**+0.3**
BDRM				*i* S	**Sn**	**05 30 19.7**	**+0.7**
BDRM	**Kayabasi**	**1.22**	**343**	*i* P	**Pn**	**05 30 03.9**	**+0.3**
BDRM				*i* S	**Sn**	**05 30 19.7**	**+0.7**
BODT	**Bodrum**	**1.25**	**338**	*e*PN	**Pn**	**05 30 03.9**	**-0.1**
BODT				*e*SN	**Sn**	**05 30 18.6**	**-1.3**
BODT	**Bodrum**	**1.25**	**338**	*e*Pn	**Pn**	**05 30 03.9**	**-0.1**
BODT				*e*Sn	**Sn**	**05 30 18.6**	**-1.3**
YER	**Yerkesik**	**1.27**	**14**	*e*PN	**Pn**	**05 30 06.5**	**+2.2**
YER	**Yerkesik**	**1.27**	**14**	*e*Pn	**Pn**	**05 30 06.6**	**+2.3**
AKAS	**Kas**	**1.43**	**76**	*i* P	**Pn**	**05 30 07.2**	**+0.8**
AKAS				*i* S	**Sn**	**05 30 23.0**	**-1.1**
AKAS	**Kas**	**1.43**	**76**	*i* P	**Pn**	**05 30 07.2**	**+0.8**
AKAS				*i* S	**Sn**	**05 30 23.0**	**-1.1**
AYDN	**Tasoluk**	**1.76**	**360**	*i* P	**Pn**	**05 30 12.3**	**+1.3**
AYDN				*i* S	**Sn**	**05 30 33.2**	**+0.9**
AYDN	**Tasoluk**	**1.76**	**360**	*i* P	**Pn**	**05 30 12.3**	**+1.3**
AYDN				*i* S	**Sn**	**05 30 33.2**	**+0.9**
APE	**Apeiranthos**	**2.23**	**302**	*e*PN	**Pn**	**05 30 15.4**	**-2.1**

JMA 15 05:41:55.8, 37°.15N×136°.59E, h10km±1km, **M3.9, 2C-3D, Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.27**	**146**	↓P	Pg	05 42 01.5	+0.2
JJH				S	Sg	05 42 05.6	+0.6
JSZ	**Suzu**	**0.69**	**64**	↓P	Pg	05 42 08.7	-0.3
JSZ				*e*S	Sg	05 42 18.0	0.0
JHG	**Hegura jima**	**0.74**	**21**	↑P	Pg	05 42 09.9	-0.3
JHG				*e*S	Sg	05 42 21.3	+1.4
JTT	**Ttatey**	**0.81**	**132**	↓P	Pg	05 42 11.2	-0.1
JTT				*e*S	Sg	05 42 22.4	+0.5
JKG	**Kaga**	**0.90**	**193**	↑P	Pg	05 42 12.7	-0.3
JKG				*e*S	Sg	05 42 25.0	+0.3
MAT	**Matsushiro**	**1.43**	**115**	P	Pn	05 42 20.9	-0.9
MAT				S	Sn	05 42 41.0	+0.3

*ISCJB **15** 06:29:17.9±0.3, 29°.69N±0°.03×139°.07E±0°.05, h418km±3km, mb3.9/40, Error ellipse: s-maj=7.4km s-min=4.8km az=164.8*
*BJI **15** 06:29:17.7, 29°.40N×138°.63E, h429km, mB4.6/4, mb4.5/10*
*IDC **15** 06:29:18.2±0.6, 29°.71N×139°.02E, h404km±6km, mb3.5/23, mb1 3.6/29, mb1mx3.6/34, mbtmp3.5/29, Error ellipse: s-maj=11.5km s-min=7.1km az=78.0*
*JMA **15** 06:29:18.2±0.2, 29°.76N×139°.42E, h429km±4km, M4.3*
*NEIC **15** 06:29:18.9±0.6, 29°.74N×138°.92E, h410km±6km, mb4.3/19, Error ellipse: s-maj=6.2km s-min=4.6km az=105.0*

ISC 15 06:29:18.6±0.3,**29°.70N**±0°.03×**139°.07E**±0°.05,**h408**km±3km, **n93**,σ1**°15**/108,**mb3.9**/40,**Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**3.46**	**10**	P	**Pn**	**06 30 27.6**	**+1.4**
JHJ2				S	**S**	**06 31 20.1**	**-1.0**
JHJ	**Hachijo jima 2**	**3.47**	**10**	P	**Pn**	**06 30 27.4**	**+1.2**
80nm,0.3s,baz=168,slow=10,SNR=18							
JHJ				S	**S**	**06 31 20.1**	**-1.1**
196nm,0.3s,baz=72,slow=22,SNR=19							
CBIJ	**Chichi jima**	**3.77**	**133**	P	**Pn**	**06 30 28.8**	**-0.4**
20nm,0.3s,baz=106,slow=23,SNR=18							
CBIJ				S	**S**	**06 31 24.2**	**-2.1**
357nm,0.3s,baz=284,slow=21,SNR=33							
CBIJ	**Chichi jima**	**3.77**	**133**	P	**Pn**	**06 30 28.6**	**-0.6**
CBIJ				*e*S	**S**	**06 31 24.8**	**-1.5**
JHHJ	**Haha-jima-NKT**	**4.11**	**137**	P	**Pn**	**06 30 31.7**	**-0.6**
JHHJ				S	**S**	**06 31 30.9**	**-1.1**
JWZ	**Kozaga**	**4.78**	**324**	P	**Pn**	**06 30 40.8**	**+2.2**
JIE	**Ise**	**5.09**	**337**	P	**Pn**	**06 30 44.2**	**+2.4**
JKN2	**Miekihoku**	**5.12**	**333**	P	**Pn**	**06 30 44.1**	**+2.0**
BSO1	**Boso 1**	**5.20**	**18**	P	**Pn**	**06 30 43.1**	**+0.2**
BSO1				S	**S**	**06 31 49.9**	**-1.8**
BSO3	**Boso 3**	**5.23**	**13**	P	**Pn**	**06 30 44.3**	**+1.0**
HMMJ	**Hamamatsu 2**	**5.27**	**348**	P	**Pn**	**06 30 45.6**	**+1.9**
HMMJ				S	**S**	**06 31 52.6**	**-0.4**
JOD2	**Odawara 2**	**5.55**	**0**	P	**Pn**	**06 30 46.9**	**+0.3**
JNY	**Yasuok**	**5.74**	**350**	P	**Pn**	**06 30 50.2**	**+1.6**
JAO	**Obara**	**5.76**	**345**	P	**Pn**	**06 30 50.9**	**+2.1**
JAO				S	**S**	**06 32 02.8**	**+0.3**
JEG	**Eigenji**	**5.88**	**338**	P	**Pn**	**06 30 53.0**	**+2.9**
JHU	**Hanno**	**6.14**	**2**	P	**Pn**	**06 30 52.2**	**-0.7**
JHU			

MBWA	Marble Bar	53.88	203	*e*P	P	06 38 01.5	-0.3
	comp=Z,5.2nm,0.5s,mb4.0						
KDAK	Kodiak Island	53.97	38	P	P	06 38 02.5	+0.5
	comp=Z,1.2nm,0.3s,mb3.6,baz=249,slow=3.9,SNR=6.1						
BVAR	Borovoye Array	54.28	316	P	P	06 38 03.8	-0.4
	comp=Z,4.2nm,0.5s,mb4.0,baz=92,slow=7.8,SNR=23						
BVAR				PcP	PcP	06 39 02.0	-0.4
	comp=Z,2.1nm,0.6s,baz=96,slow=4.5,SNR=7.5						
ARU	Arti	60.69	321	*e*P	P	06 38 47.5	-0.8
	comp=Z,1.6nm,0.4s,mb3.8						
ARMA	Armidale	60.97	168	*e*P	P	06 38 51.5	+1.1
	comp=Z,2.6nm,0.7s,mb3.8						
FORT	Forrest	61.05	191	*e*P	P	06 38 51.3	+0.4
	comp=Z,35nm,0.5s,mb5.0						
FORT	Forrest	61.05	191	*e*P	P	06 38 51.0	+0.1
	comp=Z,47nm,0.7s,mb5.0						
STKA	Stephens Creek	61.28	178	*e*P	P	06 38 53.1	+0.7
	comp=Z,3.2nm,0.4s,mb4.1						
STKA	Stephens Creek	61.28	178	P	P	06 38 52.8	+0.4
	comp=Z,4.0nm,0.4s,mb4.2,baz=340,slow=8.1,SNR=5.0						
INK	Inuvik	61.82	25	P	P	06 38 55.4	-0.2
	comp=Z,0.6nm,0.3s,mb3.6,baz=318,slow=6.9,SNR=8.0						
INK	Inuvik	61.82	25	*e*P	P	06 38 55.1	-0.5
	comp=Z,1.5nm,0.7s,mb3.6						
KLBR	Kellerberrin	64.23	200	*e*P	P	06 39 11.2	-0.5
	comp=Z,90nm,1.6s,mb5.0						
NWAO	Narrogin (SRO)	65.63	200	P	P	06 39 20.8	+0.2
	comp=Z,18nm,0.5s,mb4.9,baz=35,slow=6.6,SNR=23						
NWAO	Narrogin (SRO)	65.63	200	P	P	06 39 20.8	+0.2
KEV	Kevo	69.62	340	*e*p	P	06 39 43.9	-0.8
	comp=Z,1.0nm,0.5s,mb3.6						
ARCES	ARCESS Array B	70.18	340	P	P	06 39 47.9	-0.2
	comp=Z,1.8nm,0.4s,mb3.9,baz=74,slow=8.7,SNR=35						
YKA	Yellowknife Ar	71.16	28	P	P	06 39 53.7	-0.3
	comp=Z,0.8nm,0.6s,mb3.5,baz=300,slow=6.0,SNR=12						
YKA	Yellowknife Ar	71.16	28	P	P	06 39 53.7	-0.3
JOF	Joensuu	71.53	333	*e*p	P	06 39 54.9	-1.3
	comp=Z,3.4nm,0.6s,mb4.0						
KAF	Kangasniemi	73.94	333	*e*p	P	06 40 08.6	-1.6
	comp=Z,2.1nm,0.4s,mb4.1						
FINES	FINESS Array B	74.40	333	P	P	06 40 12.2	-0.6
	comp=Z,2.9nm,0.5s,mb4.2,baz=66,slow=5.3,SNR=11						
RDF	Al-Radifah	77.47	296	*e*P	P	06 40 30.6	-0.1
RDF				AMb	AMB	06 40 33.1	
	comp=Z,27nm,1.0s,mb4.8						
NAY	Al-Naaiem	77.57	297	*e*P	P	06 40 30.0	-1.1
NAY				AMb	AMB	06 40 30.6	
	comp=Z,13nm,0.8s,mb4.6						
RAR	Rarotonga	77.62	123	P	P	06 40 31.6	+0.2
	comp=Z,2.9nm,0.4s,mb4.2,baz=83,slow=6.4,SNR=3.6						
AKASG	Malin Array Be	78.90	322	P	P	06 40 37.0	-0.9
	comp=Z,1.1nm,0.5s,mb3.8,baz=51,slow=5.8,SNR=4.9						
NB2	NORSAR Subarra	80.17	337	P	P	06 40 43.1	-1.4
	comp=Z,1.8nm,0.5s,mb4.0,baz=45,slow=4.8						
NOA	NORSAR Array B	80.17	337	P	P	06 40 43.7	-0.7
	comp=Z,2.3nm,0.6s,mb4.0,baz=46,slow=5.0,SNR=9.0						
NOA	NORSAR Array B	80.17	337	P	P	06 40 43.7	-0.7
NVAR	Mina Array Bea	81.04	51	P	P	06 40 51.0	+1.5
	comp=Z,0.8nm,0.7s,mb3.6,baz=292,slow=6.0,SNR=9.7						
ELK	Elko	81.85	48	P	P	06 40 54.5	+0.9
	comp=Z,0.4nm,0.4s,mb3.5,baz=333,slow=9.0,SNR=3.8						
BR131	Keskin Array S	82.23	311	*e*P	P	06 40 55.3	-0.3
	comp=Z,2.0nm,0.7s,mb4.0						
BRTR	Keskin Array B	82.23	311	P	P	06 40 55.5	-0.2
	comp=Z,3.8nm,0.8s,mb4.2,baz=88,slow=4.2,SNR=17						
BUR08	Bucovina Ar. S	82.82	321	*e*P	P	06 40 58.2	-0.3
HWUT	Hardware Ranch	83.70	45	*e*P	P	06 41 04.2	+1.2
	comp=Z,2.7nm,0.8s,mb4.0						
DUG	Dugway	83.71	47	*e*P	P	06 41 03.7	+0.7
	comp=Z,1.5nm,0.6s,mb3.9						
PDAR	Pinedale Array	84.26	44	P	P	06 41 06.2	+0.5
	comp=Z,0.6nm,0.9s,mb3.3,baz=117,slow=0.3,SNR=4.6						
FRB	Frobisher Bay	84.34	12	P	P	06 41 05.2	-0.6
	comp=Z,2.0nm,0.5s,mb4.1,baz=269,slow=7.9,SNR=5.0						
ANMO	Albuquerque	90.86	48	P	P	06 41 38.5	+1.3
	comp=Z,0.5nm,0.4s,mb3.7,baz=285,slow=16,SNR=4.9						
TXAR	Lajitas Array	96.19	51	P	P	06 42 03.0	+1.3
	comp=Z,0.2nm,0.4s,mb3.6,baz=304,slow=3.4,SNR=6.5						
TXAR	Lajitas Array	96.19	51	P	P	06 42 03.0	+1.3
LPAZ	La Paz	151.71	68	PKPbc	PKPbc	06 48 27.5	+1.3
	comp=Z,0.6nm,0.5s,baz=87,slow=2.7,SNR=7.5						

IDC 15 06:30:40.5±3.5, 15°.04S×173°.44W, h0km, mb4.1/2, mb1 4.3/2, mb1mx3.7/17, mbtmp4.1/2, Error ellipse: s-maj=246.0km s-min=25.7km az=151.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	1.96	55	Pn	Pn	06 31 15.2	+0.1
	50nm,0.3s,baz=256,slow=20,SNR=46						
AFI				Sn	Sn	06 31 37.6	-2.8
	153nm,0.3s,baz=63,slow=23,SNR=14						
WRA	Warramunga Arr	49.89	256	P	P	06 39 36.1	0.0
	0.2nm,0.4s,baz=91,slow=7.0,SNR=4.7						
ASAR	Alice Springs	50.19	252	P	P	06 39 38.3	0.0
	2.2nm,0.4s,baz=90,slow=7.6,SNR=24						
BRTR	Keskin Array B	145.85	321	PKPbc	PKPbc	06 50 21.2	-0.8
	0.3nm,0.4s,baz=58,slow=14,SNR=2.5						

CSEM 15 06:31:57.6±0.2, 35°.50N×27°.93E, h2km, MD3.7, Error ellipse: s-maj=4.9km s-min=4.4km az=97.0
ISK 15 06:31:58.6, 35°.60N×27°.76E, h2km, ML3.3
ATH 15 06:31:59.4, 35°.59N×27°.86E, h31km±1km, MD3.7/13
NEIC 15 06:31:59.3, 35°.58N×27°.86E, h30km, MD3.7(ATH), After ATH.
DDA 15 06:32:00.4, 35°.78N×27°.97E, h24km±2km, Md3.5, Ml3.4
HLW 15 06:32:01.7, 35°.40N×28°.07E, h31km±52km, Md3.4, Ml3.5
ISC 15 06:31:59.6±1.0, 35°.49N±0°.02×27°.88E±0°.03, h20km±9km, n98, σ1°29/123, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.59	276	*e*Pn	Pn	06 32 10.7	-2.1
KARP				*e*Sn	Sb	06 32 19.1	0.0
KARP	Karpathos	0.59	276	*e*PN	Pn	06 32 10.7	-2.1
KARP				*e*SN	Sb	06 32 19.1	0.0
KARP	Karpathos	0.59	276	*e*Pn	Pn	06 32 10.7	-2.1
ARG	Arkhangelos	0.75	15	*e*Pn	Pn	06 32 13.2	-1.8
ARG				*e*Sn	Sn	06 32 23.2	-2.6
ARG	Arkhangelos	0.75	15	*e*PN	Pn	06 32 13.2	-1.8
ARG				*e*SN	Sn	06 32 23.2	-2.6
ARG	Arkhangelos	0.75	15	*e*Pn	Pn	06 32 13.2	-1.8
DAT	Datca	1.26	349	*e*PN	Pn	06 32 21.4	-0.6
DAT				*e*SN	Sn	06 32 37.7	-0.7
DAT	Datca	1.26	349	*e*Pn	Pn	06 32 21.4	-0.6
DAT				*e*Sn	Sn	06 32 37.7	-0.7
ZKR	Zakros	1.41	255	*e*Pn	Pn	06 32 25.3	+1.2
ZKR				*e*Sn	Sn	06 32 43.9	+1.8
ZKR	Zakros	1.41	255	*e*PN	Pn	06 32 25.3	+1.2
ZKR				*e*SN	Sn	06 32 43.9	+1.8
ZKR	Zakros	1.41	255	*e*Pn	Pn	06 32 25.3	+1.2
ZKR				*e*Sn	Sn	06 32 43.9	+1.8
TURN	Turunc	1.50	23	*i* P	Pn	06 32 22.7	-2.5
TURN				*i* S	Sn	06 32 39.9	-4.4
TURN	Turunc	1.50	23	*i* P	Pn	06 32 22.7	-2.6
TURN				*i* S	Sn	06 32 39.9	-4.3
KSL	Kastellorizon	1.53	64	*e*Pb	Pn	06 32 26.0	+0.3
KSL	Kastellorizon	1.53	64	*e*PN	Pn	06 32 26.0	+0.3
AKAS	Kas	1.58	62	*i* P	Pn	06 32 26.3	-0.1
AKAS				*i* S	Sn	06 32 46.3	0.0
AKAS	Kas	1.58	62	*i* P	Pn	06 32 26.3	-0.1
AKAS				*i* S	Sn	06 32 46.3	0.0
BDRM	Kayabasi	1.61	347	*i* P	Pn	06 32 25.6	-1.3
BDRM				*i* S	Sn	06 32 44.7	-2.3
BDRM	Kayabasi	1.61	347	*i* P	Pn	06 32 25.6	-1.2
BDRM				*i* S	Sn	06 32 44.7	-2.3
BODT	Bodrum	1.64	344	*e*PN	Pn	06 32 27.6	+0.4
BODT	Bodrum	1.64	344	*e*Pn	Pn	06 32 27.6	+0.4
YER	Yerkesik	1.67	11	*e*PN	Pn	06 32 28.7	+1.1
YER				*e*SN	Sn	06 32 50.8	+2.3
YER	Yerkesik	1.67	11	*e*Pn	Pn	06 32 28.7	+1.0
YER				*e*Sn	Sn	06 32 50.8	+2.3
MLSB	Milas	1.81	357	*e*PN	Pn	06 32 29.8	+0.4
MLSB	Milas	1.81	357	*e*Pn	Pn	06 32 29.8	+0.3
NPS	Neapolis	1.87	264	*e*Pb	Pb	06 32 32.9	-0.1
NPS				*e*Sb	Sb	06 32 54.9	-1.0
NPS	Neapolis	1.87	264	*e*PN	Pn	06 32 30.8	+0.4
NPS				*e*SB	Sb	06 32 54.9	-1.0
NPS	Neapolis	1.87	264	*e*Pb	Pb	06 32 32.9	-0.1
XRY	Khrisi	1.90	252	*e*Pn	Pn	06 32 31.9	+1.2
XRY	Khrisi	1.90	252	*e*PN	Pn	06 32 31.9	+1.2
XRY	Khrisi	1.90	252	*e*Pn	Pn	06 32 31.9	+1.2
LAST	Lasithi	1.99	261	*e*Pb	Pb	06 32 33.5	-1.6
LAST	Lasithi	1.99	261	*e*PB	Pb	06 32 33.5	-1.6
ELL	Elmali	2.07	52	*e*PN	Pn	06 32 35.6	+2.6
ELL	Elmali	2.07	52	*e*Pn	Pn	06 32 35.6	+2.5
GLHS	Glhisar (BURDU	2.11	38	*e*PN	Pn	06 32 36.0	+2.3
GLHS	Glhisar (BURDU	2.11	38	*e*Pn	Pn	06 32 36.0	+2.3
AYDN	Tasoluk	2.17	360	*i* P	Pn	06 32 33.9	-0.6
AYDN	Tasoluk	2.17	360	*i* P	Pn	06 32 33.9	-0.6
GOLH	Golhisar	2.21	37	*i* P	Pn	06 32 35.9	+0.8
GOLH				*i* S	Sn	06 32 59.6	-2.1
GOLH	Golhisar	2.21	37	*i* P	Pn	06 32 35.8	+0.8
GOLH				*i* S	Sn	06 32 59.6	-2.1
SMG	Samos	2.37	340	*e*Pn	Pn	06 32 36.6	-0.6
SMG	Samos	2.37	340	*e*PN	Pn	06 32 36.6	-0.6
SMG	Samos	2.37	340	*e*Pn	Pn	06 32 36.6	-0.6
DNZL	Cakiroluk	2.39	23	*i* P	Pn	06 32 37.5	0.0
DNZL	Cakiroluk	2.39	23	*i* P	Pn	06 32 37.5	0.0
DENT	Denizli	2.44	22	*e*PN	Pn	06 32 39.9	+1.7
DENT	Denizli	2.44	22	*e*Pn	Pn	06 32 39.9	+1.7
IDI	Anoyia	2.45	266	*e*Pn	Pn	06 32 40.1	+1.7
IDI	Anoyia	2.45	266	*e*PN	Pn	06 32 40.1	+1.7
IDI	Anoyia	2.45	266	*e*Pn	Pn	06 32 40.1	+1.7
APE	Apeiranthos	2.47	310	*e*PN	Pn	06 32 39.4	+0.7
APE	Apeiranthos	2.47	310	*e*Pn	Pn	06 32 38.2	-0.4
APE	Apeiranthos	2.47	310	*e*PN	Pn	06 32 38.2	-0.4
APE	Apeiranthos	2.47	310	*e*Pn	Pn	06 32 39.4	+0.8
SIVA	Sivas	2.56	260	*e*Pn	Pn	06 32 41.1	+1.3
SIVA	Sivas	2.56	260	*e*PN	Pn	06 32 41.1	+1.3
SIVA	Sivas	2.56	260	*e*Pn	Pn	06 32 41.1	+1.3
URLA	Izmir	3.05	341	*i* P	Pn	06 32 45.0	-1.5
URLA	Izmir	3.05	341	*i* P	Pn	06 32 45.0	-1.5
KULA	Kula-Manisa	3.08	11	*e*PN	Pn	06 32 48.6	+1.5
KULA	Kula-Manisa	3.08	11	*e*Pn	Pn	06 32 48.6	+1.5
KHL	Karahalli	3.12	24	*e*PN	Pn	06 32 49.9	+2.4
KHL	Karahalli	3.12	24	*e*Pn	Pn	06 32 49.9	+2.4
KHAL	Karahalli	3.15	24	*i* P	Pn	06 32 46.9	-1.1
KHAL	Karahalli	3.15	24	*i* P	Pn	06 32 46.9	-1.1
SUTC	Sutluce-Ispart	3.20	51	*e*PN	Pn	06 32 51.3	+2.6
SUTC	Sutluce-Ispart	3.20	51	*e*Pn	Pn	06 32 51.3	+2.6
HDMB	Hadim	4.00	67	*e*PN	Pn	06 33 03.8	+4.1
HDMB	Hadim	4.00	67	*e*Pn	Pn	06 33 03.8	+4.1
KYTH	Kithira	4.01	283	*e*Pn	Pn	06 33 00.7	+0.9
KYTH	Kithira	4.01	283	*e*PN	Pn	06 33 00.7	+0.9
KYTH	Kithira	4.01	283	*e*Pn	Pn	06 33 00.7	+0.9
VLI	Veliai	4.19	288	*e*Pn	Pn	06 33 02.7	+0.5
VLI	Veliai	4.19	288	*e*PN	Pn	06 33 02.7	+0.5
VLI	Veliai	4.19	288	*e*Pn	Pn	06 33 02.7	+0.5
KONT	Konya--Tatoy	4.35	54	*e*PN	Pn	06 33 08.7	+4.2
KONT	Konya--Tatoy	4.35	54	*e*Pn	Pn	06 33 08.7	+4.2
HMAT	Matruh	4.43	189	P	Pn	06 33 07.1	+1.4
HMAT	baz=191			S	Sn	06 33 54.8	-1.8
HMAT	baz=191						
HMAT	Matruh	4.43	189	P	Pn	06 33 07.1	+1.5
HMAT				S	Sn	06 33 54.8	-1.8
KOT	Kottamia	6.47	148	P	Pn	06 33 32.7	-0.8
KOT	baz=148						
KOT	Kottamia	6.47	148	P	Pn	06 33 32.7	-0.9
SWA2		6.56	199	P	Pn	06 33 34.9	+0.1
SWA2	baz=201			S	Sn	06 34 47.7	-1.3
SWA2	baz=201						
SWA2				AMP		06 35 00.0	
	comp=N,30μm,0.3s,logA/T=5.0,baz=201						
SWA2		6.56	199	P	Pn	06 33 34.9	+0.1
AMAG	Maghara	6.58	136	P	Pn	06 33 34.4	-0.8
AMAG	baz=136						
AMAG	Maghara	6.58	136	P	Pn	06 33 34.4	-0.8
SUZ		7.01	142	P	Pn	06 33 41.8	+0.7
SUZ	baz=142						
SUZ		7.01	142	P	Pn	06 33 41.8	+0.8
HNKL	Nakhl	7.56	135	P	Pn	06 33 48.3	-0.3
HNKL	baz=136			S	Sn	06 35 08.6	-5.0
HNKL	baz=136						
HNKL	Nakhl	7.56	135	P	Pn	06 33 48.3	-0.2
HFRF	Wahat Farafira	8.32	177	P	Pn	06 33 58.8	-0.2
HFRF	baz=178						
HFRF	Wahat Farafira	8.32	177	P	Pn	06 33 58.8	-0.3
HBST	Basata	8.52	135	P	Pn	06 34 01.4	-0.4
HBST	baz=135						
HBST	Basata	8.52	135	P	Pn	06 34 01.4	-0.4
TR2		8.64	143	P	Pn	06 34 02.9	-0.6
TR2	baz=144						
TR2		8.64	143	P	Pn	06 34 02.9	-0.6
HKAT	Jabal Katrina	8.67	142	P	Pn	06 34 03.4	-0.4
HKAT	baz=142						
HKAT	Jabal Katrina	8.67	142	P	Pn	06 34 03.4	-0.4

ISCJB 15 06:40:28.7±0.5, 41°.19N±0°.03×23°.89E±0°.03, h8km±6km, Error ellipse: s-maj=4.4km s-min=4.2km az=34.9
CSEM 15 06:40:29.2±0.2, 41°.15N×23°.91E, h15km, ML2.7/5, Error ellipse: s-maj=3.8km s-min=3.1km az=98.0
THE 15 06:40:29.8, 41°.11N×23°.95E, h1km±2km, ML2.7/5, Error ellipse: s-maj=2.5km s-min=0.6km az=334.0
SKO 15 06:40:30.4, 41°.17N×23°.91E, h0km
BEO 15 06:40:31.2±0.8, 41°.18N×23°.85E, h28km±7km, ML2.1/3
ISC 15 06:40:29.5±0.4, 41°.16N±0°.02×23°.91E±0°.04, h10km±7km, n22, σ0°79/42, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAVA	Kavala	0.48	109	P	Pg	06 40 38.5	-0.5
KAVA				S	Sg	06 40 44.6	-0.7
KAVA	Kavala	0.48	109	P	Pg	06 40 38.5	-0.5
KAVA				S	Sg	06 40 44.6	-0.7
SOH	Sokhos	0.54	232	P	Pg	06 40 40.2	+0.3
SOH				S	Sg	06 40 47.9	+1.0
SOH	Sokhos	0.54	232	P	Pg	06 40 40.2	+0.3
SOH				S	Sg	06 40 47.9	+1.0
OUR	Ouranopolis	0.82	176	P	Pg	06 40 44.6	-0.8
OUR				S	Sg	06 40 55.8	-0.3
OUR	Ouranopolis	0.82	176	P	Pg	06 40 44.6	-0.8
OUR				S	Sg	06 40 55.8	-0.3
HORT	Hortiatis	0.83	228	P	Pg	06 40 45.5	0.0
HORT				S	Sg	06 40 56.9	+0.7
HORT	Hortiatis	0.83	228	P	Pg	06 40 45.5	0.0
HORT				S	Sg	06 40 56.9	+0.7
PLG	Polygyros	0.86	204	P	Pg	06 40 45.3	-0.7
PLG				S	Sg	06 40 57.5	+0.4
PLG	Polygyros	0.86	204	P	Pg	06 40 45.3	-0.7
PLG				S	Sg	06 40 57.5	+0.4
VAY	Valandovo	1.02	280	*e*Pg	Pg	06 40 49.2	0.0
VAY				*e*Sg	Sg	06 41 02.8	+0.3
VAY	Valandovo	1.02	280	*i* Pg	Pg	06 40 49.3	+0.1
VAY				*i* Sg	Sg	06 41 03.0	+0.5
VAY	Valandovo	1.02	280	*e*Pg	Pg	06 40 49.2	0.0
PLD	Plovdiv	1.12	32	*e*Pg	Pg	06 40 52.4	+1.3
PLD				*e*Sg	Sg	06 41 06.8	+1.2
PLD	Plovdiv	1.12	32	*e*Pg	Pg	06 40 52.4	+1.3
PLD				*e*Sg	Sg	06 41 06.8	+1.2
VTS	Vitosha	1.53	340	*e*Pg	Pg	06 40 57.6	-1.2
VTS				*e*Sg	Sg	06 41 19.0	+0.4
VTS	Vitosha	1.53	340	*e*Pg	Pg	06 40 57.6	-1.2
VTS				*e*Sg	Sg	06 41 19.0	+0.4
ALN	Alexandroupoli	1.64	98	P	Pn	06 40 57.5	-0.9
ALN				S	Sn	06 41 21.3	+1.8
ALN	Alexandroupoli	1.64	98	P	Pn	06 40 57.5	-0.9
BARS	Barje	2.28	317	*e*Pn	Pn	06 41 06.2	-1.0
BARS				*e*Sg	Sg	06 41 42.2	-0.5
BARS	Barje	2.28	317	*e*Pn	Pn	06 41 06.2	-1.0
BARS				*e*Sg	Sg	06 41 42.2	-0.5
ZAPS	Zavoj	2.32	336	*e*Pn	Pn	06 41 07.6	-0.2
ZAPS				*e*Sg	Sg	06 41 43.5	-0.5

ISCJB 15 06:47:05.0±0.6, 12°.87S±0°.10×169°.5E±0°.1, h600km, mb4.0/16, Error ellipse: s-maj=15.1km s-min=12.5km az=21.5
IDC 15 06:47:08.2±2.4, 12°.88S×169°.41E, h626km±30km, mb3.3/11, mb1 3.5/11, mb1mx3.4/18, mbtmp3.3/11, Error ellipse: s-maj=20.4km s-min=18.4km az=26.0
NEIC 15 06:47:09.5±4.0, 12°.96S×169°.39E, h646km±53km, mb4.3/8, Error ellipse: s-maj=27.8km s-min=13.7km az=199.0
ISC 15 06:47:06.3±0.6, 12°.84S±0°.10×169°.4E±0°.1, h600km, n32, σ0°75/21, mb4.0/16, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	26.22	166	P	P	06 51 55.5	+0.3
	6.9nm,0.5s,mb4.5,baz=285,slow=2.4,SNR=12						
URZ	Urewera	26.22	166	*e*P	P	06 51 55.0	-0.1
	6.2nm,0.6s,mb4.4						
SNZO	South Karori	28.73	172	*e*P	P	06 52 16.1	-0.8
	23nm,0.5s,mb5.1						
RPZ	Rata Peaks	30.80	178	P	P	06 52 35.1	+0.4
	5.5nm,0.7s,mb4.3,baz=1.7,slow=2.7,SNR=4.7						
RPZ	Rata Peaks	30.80	178	*e*P	P	06 52 35.4	+0.8
	11nm,0.9s,mb4.5						
STKA	Stephens Creek	31.80	229	P	P	06 52 44.5	+1.0
	2.7nm,0.5s,mb4.1,baz=51,slow=7.1,SNR=9.3						
STKA	Stephens Creek	31.80	229	*e*P	P	06 52 44.6	+1.1
	0.5nm,0.6s,mb3.3						
WRAB	Tennant Creek	34.33	253	*e*P	P	06 53 04.4	-0.4
	5.3nm,0.5s,mb4.4						
WRA	Warramunga Arr	34.34	253	P	P	06 53 04.5	-0.4
	5.8nm,0.5s,mb4.5,baz=85,slow=8.7,SNR=49						
ASAR	Alice Springs	35.32	247	P	P	06 53 12.8	-0.1
	6.6nm,0.4s,mb4.6,baz=75,slow=9.5,SNR=87						
ASAR				PcP	PcP	06 55 24.4	-1.7
	0.2nm,0.6s,baz=54,slow=2.3,SNR=4.3						
ASAR				ScP	ScP	06 58 13.6	-2.1
	0.4nm,0.6s,baz=73,slow=3.2,SNR=4.6						
KAKA	Kakadu	36.05	266	*e*P	P	06 53 19.2	+0.1
FORT	Forrest	42.06	238	*e*P	P	06 54 06.7	-0.4
	11nm,0.5s,mb4.7						
FITZ	Fitzroy Crossi	42.45	257	*e*P	P	06 54 10.2	-0.1
	1.8nm,0.5s,mb3.9						
PETK	Petropavlovsk-	66.45	352	P	P	06 56 57.9	+0.8
	1.4nm,0.7s,mb3.5,baz=140,slow=6.0,SNR=4.2						
PETK	Petropavlovsk-	66.45	352	P	P	06 56 57.9	+0.8
CMAR	Chiang Mai Arr	76.13	293	P	P	06 57 54.9	+0.6
	0.8nm,0.3s,mb3.6,baz=130,slow=3.9,SNR=4.3						
PMR	Palmer	81.04	19	*e*P	P	06 58 18.9	-0.5
	3.2nm,1.0s,mb3.7						
SONM	Songino Array	82.25	323	P	P	06 58 26.4	+0.5
	0.5nm,0.7s,mb3.2,baz=131,slow=4.0,SNR=2.6						
NVAR	Mina Array Bea	84.46	49	P	P	06 58 38.4	+1.3
	0.3nm,0.6s,mb3.0,baz=226,slow=7.3,SNR=2.2						
YKA	Yellowknife Ar	94.92	27	P	P	06 59 23.3	-1.8
	0.9nm,0.8s,mb4.0,baz=254,slow=4.4,SNR=8.1						
MKAR	Makanchi Array	97.30	316	P	P	06 59 35.4	-0.7
	0.4nm,0.5s,mb3.9,baz=81,slow=7.5,SNR=5.7						
ARCES	ARCESS Array B	118.95	346	PKP	PKPdf	07 04 45.1	-1.9
	1.2nm,0.5s,baz=87,slow=2.4,SNR=24						
CDF	Champ du Feu	141.56	341	*e*PKP1	PKPdf	07 05 27.9	-2.3
GRR	Gorron	143.65	349	*e*PKP1	PKPdf	07 05 32.0	-1.9
	10nm,0.6s						
SSF	Saint Saulge	143.90	344	*e*PKP1	PKPdf	07 05 33.0	-1.3
	4.8nm,0.5s						
SGMF	Saint Gilles	144.07	351	*e*PKP1	PKPdf	07 05 33.3	-1.3
SMF	Signal de Mont	144.18	343	*e*PKP1	PKPdf	07 05 34.0	-0.9
	5.6nm,0.5s						
AVF	Avril sur Loir	144.19	344	*e*PKP1	PKPdf	07 05 34.0	-0.9
	5.4nm,0.6s						
LPG	La Plagne	144.28	339	*e*PKP1	PKPdf	07 05 35.2	+0.1
	3.6nm,0.6s						
TCF	Toulx Ste Croi	144.96	345	*e*PKP1	PKPdf	07 05 35.5	-0.7
	2.2nm,0.4s						
ORIF	Oris-en-Rattie	145.08	339	*e*PKP1	PKPbc	07 05 36.7	-0.7
	5.5nm,0.6s						
MFF	Saint Martin d	145.22	347	*e*PKP1	PKPbc	07 05 36.0	-1.8

MOS 15 06:47:36.6±0.9, 86°.81N×62°.52E, h10km, mb5.0/46, MS4.0/5, Error ellipse: s-maj=99.9km s-min=4.7km az=89.7
BJI 15 06:47:36.6, 86°.80N×62°.10E, h20km, mB5.0/22, mb4.7/32, Ms4.5/22, MS7 4.4/24
CSEM 15 06:47:36.6±0.1, 86°.79N×62°.85E, h2km, mb4.7/25, Error ellipse: s-maj=5.9km s-min=3.8km az=121.0
*ISCJB 15 06:47:36.6±1.2, 86°.83N±0°.02×61°.7E±0°.6, h10km±7km, mb4.7/143, MS4.2/21, Error ellipse: s-maj=5.3km

comp=Z,43nm,1.2s
APA MLR MLR
comp=Z,500nm,15.0s
APA Apatity 19.80 213 *i* P **Pn 06 52 08.0 -2.1**
comp=Z,43nm,1.2s
MOR8 Moi Rana 21.92 233 *e*P **P 06 52 31.9 +0.5**
MOR8 Moi Rana 21.92 233 *e*P **P 06 52 31.9 +0.4**
SNR=34
BILL Bilibino 23.09 68⇑*e*P **P 06 52 43.6 -0.2**
BILL *e* 06 53 08.7
BILL *e*S **S 06 56 49.7 -4.8**
BILL pmax pmax
comp=Z,14nm,1.2s,mb4.3
BILL MLR MLR
comp=Z,400nm,20.0s,MS3.9
BILL Bilibino 23.09 68 *e*P **P 06 52 43.1 -0.7**
comp=Z,6.7nm,0.4s,mb4.4
BILL *e* 06 52 53.6
BILL Bilibino 23.09 68 *e*P **P 06 52 43.1 -0.7**
JOF Joensuu 24.52 214 *e*P **P 06 52 56.8 -0.8**
JOF Joensuu 24.52 214 *e*p **P 06 52 56.8 -0.8**
comp=Z,9.3nm,0.6s,mb4.5
JOF Joensuu 24.52 214 *e*P **P 06 52 56.8 -0.8**
INK Inuvik 24.94 14 P **P 06 53 00.1 -1.2**
comp=Z,4.4nm,0.6s,mb4.2,baz=0.2,slow=14,SNR=14
INK Inuvik 24.94 14 *e*P **P 06 53 00.2 -1.1**
INK pmax pmax
comp=Z,232nm,3.0s
INK Inuvik 24.94 14 *e*P **P 06 53 00.2 -1.1**
comp=Z,232nm,3.0s
INK Inuvik 24.94 14 *e*P **P 06 53 00.2 -1.1**
comp=Z,232nm,3.0s
KAF Kangasniemi 25.50 220 *e*P **P 06 53 07.5 +1.1**
KAF pmax pmax
comp=Z,10.0nm,0.9s,mb4.3
KAF Kangasniemi 25.50 220 *e*P **P 06 53 07.5 +1.1**
comp=Z,10nm,0.9s,mb4.4
KAF Kangasniemi 25.50 220 *e*p **P 06 53 07.5 +1.1**
comp=Z,10nm,0.9s,mb4.4
KAF Kangasniemi 25.50 220 *e*P **P 06 53 07.5 +1.1**
comp=Z,10nm,0.9s,mb4.4
COLD Coldfoot 25.69 29 *e*P **P 06 53 06.9 -1.2**
comp=Z,22nm,0.8s,mb4.8
COLD *e* 06 53 15.4
COLD *e* 06 53 30.9
COLD Coldfoot 25.69 29 *e*P **P 06 53 06.9 -1.2**
FINES FINESS Array B 26.18 220 P **P 06 53 12.9 +0.3**
comp=Z,9.0nm,0.8s,mb4.3,baz=33,slow=7.3,SNR=14
FINES PcP PcP 06 56 38.3 -0.6
comp=Z,3.4nm,0.8s,baz=97,slow=4.8,SNR=4.6
FINES LR LR 07 03 32.1
comp=Z,466nm,20.1s,MS4.0,baz=82,slow=36
FINES FINESS Array B 26.18 220 P **P 06 53 12.9 +0.3**
FINES 06 56 38.3
FINES FINESS Array B 26.18 220 P **P 06 53 12.9 +0.3**
NB2 NORSAR Subarra 27.20 236 P **P 06 53 22.4 +0.7**
comp=Z,2.1nm,0.8s,mb3.7,baz=342,slow=6.9
NB2 NORSAR Subarra 27.20 236 P **P 06 53 22.4 +0.7**
baz=342,slow=6.9,SNR=28
NOA NORSAR Array B 27.20 236 P **P 06 53 24.0 +2.3**
comp=Z,1.7nm,0.8s,mb3.6,baz=4.5,slow=8.9,SNR=4.2
NOA NORSAR Array B 27.20 236 P **P 06 53 24.0 +2.3**
NOA NORSAR Array B 27.20 236 P **P 06 53 24.0 +2.3**
SEY Seymchan 27.42 83 *e*P **P 06 53 22.8 -0.9**
SEY Seymchan 27.42 83 *e*P **P 06 53 22.8 -0.9**
HFS Hagfors 27.99 233 P **P 06 53 31.5 +2.7**
comp=Z,2.9nm,0.8s,mb4.0,baz=248,slow=7.8,SNR=3.3
HFS Hagfors 27.99 233 P **P 06 53 31.5 +2.7**
EGAK Eagle 28.36 21 *e*P **P 06 53 31.1 -1.0**
comp=Z,12nm,1.3s,mb4.4
EGAK *e* 06 53 40.3
EGAK Eagle 28.36 21 *e*P **P 06 53 31.1 -1.0**
BPAW Bear Paw Mtn. 28.80 30 *e*P **P 06 53 35.0 -1.0**
comp=Z,6.7nm,1.1s,mb4.3
BPAW Bear Paw Mtn. 28.80 30 *e*P **P 06 53 35.0 -1.0**
comp=Z,6.7nm,1.1s,mb4.3
DAWY Dawson 29.10 19 *e*P **P 06 53 38.0 -0.8**
DAWY *e* 06 53 45.2
DAWY Dawson 29.10 19 *e*P **P 06 53 38.0 -0.7**
TRF Thorofare Moun 29.47 29 *e*P **P 06 53 41.7 -0.2**
comp=Z,30nm,1.8s,mb4.7
TRF Thorofare Moun 29.47 29 *e*P **P 06 53 41.7 -0.3**
comp=Z,30nm,1.8s,mb4.7
PPLA Purkeypile 29.97 31 *e*P **P 06 53 46.2 -0.2**
comp=Z,48nm,1.4s,mb5.0
PPLA *e* 06 53 56.3
PPLA Purkeypile 29.97 31 *e*P **P 06 53 46.2 -0.2**
SVE Sverdlovsk 30.14 182 *e*P **P 06 53 51.8 +3.9**
SVE pmax pmax
comp=Z,12nm,0.7s,mb4.7
MENT Mentasta 30.15 23 *e*P **P 06 53 48.1 +0.2**
MENT *e* 06 53 57.0
MENT Mentasta 30.15 23 *e*P **P 06 53 48.1 +0.1**
ARU Arti 30.54 184*c i*P **P 06 53 52.4 +0.9**
ARU 06 54 48.8
ARU S **S 06 58 55.5 +2.8**
ARU SS ScP 07 00 27.0 -5.0
ARU pmax pmax
comp=Z,20nm,2.5s,mb4.5
ARU Arti 30.54 184 *e*P **P 06 53 52.5 +1.0**
comp=Z,16nm,1.4s,mb4.7
ARU Arti 30.54 184 *i*P **P 06 53 52.4 +0.9**
comp=Z,20nm,2.5s,mb4.5
YKA Yellowknife Ar 30.88 357 P **P 06 53 53.1 -1.3**
comp=Z,2.8nm,0.9s,mb4.1,baz=1.1,slow=8.6,SNR=23
YKA PcP PcP 06 56 49.6 -0.9
comp=Z,0.9nm,0.9s,baz=349,slow=3.0,SNR=4.5
YKA Yellowknife Ar 30.88 357 P **P 06 53 53.1 -1.3**
RC01 Rabbit Creek A 31.85 29 *e*P **P 06 54 02.1 -0.9**
comp=Z,14nm,0.9s,mb4.8
RC01 Rabbit Creek A 31.85 29 *e*P **P 06 54 02.1 -0.9**
comp=Z,14nm,0.9s,mb4.8
OBN Obninsk 32.19 208⇓*e*P **P 06 54 05.0 -1.0**
OBN *e*S **S 06 59 11.1 -7.4**
OBN pmax pmax
comp=Z,21nm,1.1s,mb4.9
OBN MLR MLR
comp=Z,300nm,18.0s,MS4.0
OBN Obninsk 32.19 208 *e*P **P 06 54 05.0 -1.0**
comp=Z,21nm,1.1s,mb4.9
NVS Novosibirsk 32.36 157 *e*P **P 06 54 06.0 -1.5**
NVS Novosibirsk 32.36 157 *e*P **P 06 54 06.0 -1.5**
HYT Haines Junctio 32.39 18 *e*P **P 06 54 08.3 +0.6**
HYT Haines Junctio 32.39 18 *e*P **P 06 54 08.3 +0.6**
ZALV Zalesovo Beam 33.29 155 P **P 06 54 15.7 0.0**
comp=Z,1.1nm,0.6s,mb4.0,baz=1.5,slow=12,SNR=5.9
ZALV PcP PcP 06 56 56.0 -1.3
comp=Z,1.4nm,0.6s,baz=298,slow=3.2,SNR=4.7
BRVK Borovoye 33.95 171 *e*P **P 06 54 23.3 +1.9**
BRVK pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
BRVK Borovoye 33.95 171 *e*P **P 06 54 23.3 +2.0**
comp=Z,3.5nm,0.5s,mb4.5
BRVK Borovoye 33.95 171 *e*P **P 06 54 23.3 +1.9**
comp=Z,3.5nm,0.5s,mb4.5
BVAR Borovoye Array 33.98 171 P **P 06 54 22.4 +0.8**
comp=Z,2.5nm,0.7s,mb4.3,baz=342,slow=7.8,SNR=10.0
BVAR PcP PcP 06 56 58.8 -0.4
comp=Z,2.3nm,0.8s,baz=318,slow=2.0,SNR=3.8
BVAR Borovoye Array 33.98 171 P **P 06 54 22.4 +0.7**
BVAR Borovoye Array 33.98 171 PcP PcP 06 56 58.8 -0.5
DLBC Dease Lake 34.89 11 *e*P **P 06 54 30.2 +0.8**
DLBC *e* 06 54 38.2
DLBC Dease Lake 34.89 11 *e*P **P 06 54 30.2 +0.8**
KDAK Kodiak Island 35.08 32 P **P 06 54 30.6 -0.6**
comp=Z,3.2nm,0.6s,mb4.4,baz=12,slow=8.2,SNR=5.8
KDAK LR LR 07 08 12.4
comp=Z,325nm,20.7s,MS4.1,baz=322,slow=35
KDAK Kodiak Island 35.08 32 P **P 06 54 30.5 -0.6**
OHAK Old Harbor 35.62 33 *e*P **P 06 54 34.8 -1.0**
comp=Z,22nm,0.9s,mb5.1
OHAK *e* 06 54 42.4
OHAK Old Harbor 35.62 33 *e*P **P 06 54 34.8 -1.0**
VSR Storozhevoye 36.03 205 *e*P **P 06 54 39.0 -0.3**
VSR pmax pmax
comp=N,5.0nm,0.5s
VSR pmax pmax
comp=E,5.0nm,0.5s
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
VSR Storozhevoye 36.03 205 *e*P **P 06 54 39.0 -0.3**
MOY Mondy 36.07 138 *e*P **P 06 54 39.9 +0.2**
MOY pmax pmax
comp=Z,22nm,2.2s,mb4.7
MOY Mondy 36.07 138 *e*P **P 06 54 39.9 +0.2**
comp=Z,22nm,2.2s,mb4.7
VRHR Novokhopersk 36.09 202 *e*P **P 06 54 39.5 -0.4**
VRHR pmax pmax
comp=E,10.0nm,0.7s
VRHR pmax pmax
comp=Z,20nm,0.7s,mb5.2
VRHR pmax pmax
comp=N,5.0nm,0.4s
VRHR Novokhopersk 36.09 202 *e*P **P 06 54 39.5 -0.4**
comp=N,5.0nm,0.4s,mb4.8
TLY Talaya 36.16 135 *e*P **P 06 54 39.9 -0.5**
TLY pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
TLY Talaya 36.16 135 *e*P **P 06 54 39.9 -0.5**
comp=Z,3.0nm,0.7s,mb4.3
KURK Kurchatov 36.40 162 *e*P **P 06 54 42.5 0.0**
KURK pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
KURK Kurchatov 36.40 162 *e*P **P 06 54 42.5 -0.1**
comp=Z,3.3nm,0.7s,mb4.4
KURK *e* 06 54 52.6
KURK Kurchatov 36.40 162 *e*P **P 06 54 42.5 0.0**
comp=Z,3.0nm,0.7s,mb4.3
AKASG Malin Array Be 36.82 215 P **P 06 54 46.2 +0.2**
comp=Z,6.5nm,0.9s,mb4.5,baz=1.8,slow=8.9,SNR=17
AKASG PcP PcP 06 57 06.8 -0.9
comp=Z,0.7nm,0.4s,baz=1.3,slow=3.6,SNR=4.2
AKASG LR LR 07 10 25.0
comp=Z,359nm,18.7s,MS4.2,baz=5.0,slow=37
AKASG Malin Array Be 36.82 215 P **P 06 54 46.2 +0.1**
AKASG 06 57 06.8
AKASG Malin Array Be 36.82 215 P **P 06 54 46.2 +0.2**
AKASG PcP PcP 06 57 06.8 -0.9
AKASG LR LR 07 10 25.1
AKASG Malin Array Be 36.82 215 P **P 06 54 46.2 +0.1**
AKBB Malin Array Si 36.82 215 *e*P **P 06 54 46.8 +0.7**
AKBB Malin Array Si 36.82 215 *e*P **P 06 54 46.8 +0.7**
KIEV Kiev 36.83 215 *e*P **P 06 54 46.5 +0.4**
KIEV *e* 06 54 52.9
KIEV pmax pmax
comp=Z,8.0nm,0.8s,mb4.6
KIEV Kiev 36.83 215 *e*P **P 06 54 46.5 +0.4**
comp=Z,7.6nm,0.8s,mb4.6
KIEV *e* 06 54 52.9
KIEV Kiev 36.83 215 *e*P **P 06 54 46.5 +0.4**
comp=Z,8.0nm,0.8s,mb4.6
CLL Collm 36.84 232 *e*P **P 06 54 56.0 +10**
CLL Collm 36.84 232 *e*(sP) sP 06 54 56.0 +6.3
CLL *e*PP PP 06 56 11.0 +1.2
CLL *e*PcP PcP 06 57 07.0 -0.7
SCHQ Schefferville 37.44 312 P **P 06 54 52.2 +0.9**
comp=Z,4.3nm,1.0s,mb4.2,baz=335,slow=11,SNR=3.5
SCHQ Schefferville 37.44 312 P **P 06 54 52.2 +0.9**
PETK Petropavlovsk- 37.51 80 P **P 06 54 50.9 -1.0**
comp=Z,1.1nm,0.8s,mb3.6,baz=111,slow=3.3,SNR=3.6
OJC Ojcow 37.64 225 *e*P **P 06 54 53.8 +0.8**
ABKAR Akbulak array 37.72 182 *e*P **P 06 54 55.0 +1.3**
comp=Z,3.0nm,0.8s,mb4.1
KWP Kalwaria Pacla 38.12 222 *e*P **P 06 54 59.9 +2.8**
comp=Z,9.3nm,0.2s,mb5.2
FFC Flin Flon 38.56 345 *e*P **P 06 54 59.8 -0.9**
FFC pmax pmax
comp=Z,7.0nm,1.4s,mb4.2
FFC Flin Flon 38.56 345 *e*P **P 06 54 59.8 -0.9**
comp=Z,7.2nm,1.4s,mb4.2
KLR Kul'dur 39.94 107 *e*P **P 06 55 07.6 -4.7**
KLR MLR MLR
comp=Z,900nm,13.0s,MS4.8
BUR08 Bucovina Ar. S 40.01 219 *e*P **P 06 55 14.9 +2.0**
BUR08 *e* 06 55 28.1
BUR08 Bucovina Ar. S 40.01 219 *e*P **P 06 55 14.9 +2.0**
FLN La Foliniere 40.03 246 *e*P **P 06 55 12.7 -0.3**
FLN La Foliniere 40.03 246 *e*P **P 06 55 12.7 -0.3**
ULN Ulaanbaatar 40.11 132 *e*P **P 06 55 13.3 -0.4**
ULN pmax pmax
comp=Z,8.0nm,1.1s,mb4.4
ULN Ulaanbaatar 40.11 132 *e*P **P 06 55 13.3 -0.5**
comp=Z,8.4nm,1.1s,mb4.4
ULN Ulaanbaatar 40.11 132 *e*P **P 06 55 13.3 -0.4**
comp=Z,8.4nm,1.1s,mb4.4
SONM Songino Array 40.11 133 P **P 06 55 14.4 +0.7**
comp=Z,2.9nm,0.8s,mb4.0,baz=344,slow=7.6,SNR=20
SONM PcP PcP 06 57 18.1 +0.2
comp=Z,3.7nm,0.9s,baz=334,slow=3.4,SNR=8.8
SONM Songino Array 40.11 133 P **P 06 55 14.4 +0.7**
EDM Edmonton 40.17 356 *e*P **P 06 55 14.4 +0.2**
EDM *e* 06 55 22.0
EDM Edmonton 40.17 356 *e*P **P 06 55 14.4 +0.2**
LDF La Druitiere 40.18 245 *e*P **P 06 55 13.9 -0.4**
LDF La Druitiere 40.18 245 *e*P **P 06 55 13.9 -0.4**
MK31 Makanchi Array 40.39 158 *e*P **P 06 55 16.0 -0.1**
MK31 Makanchi Array 40.39 158 *e*P **P 06 55 16.0 -0.1**
MKAR Makanchi Array 40.39 158 P **P 06 55 15.6 -0.6**
comp=Z,1.3nm,0.8s,mb3.7,baz=5.3,slow=6.6,SNR=14
MKAR PcP PcP 06 57 17.9 -1.0
comp=Z,2.5nm,1.1s,baz=26,slow=6.7,SNR=3.8
GRR Gorron 40.42 246 *e*P **P 06 55 16.1 -0.2**
comp=Z,33nm,0.9s,mb4.8
GRR Gorron 40.42 246 *e*P **P 06 55 16.1 -0.2**
GRR pmax pmax
comp=Z,16nm,0.9s,mb4.8
GRR Gorron 40.42 246 *e*P **P 06 55 16.1 -0.2**
comp=Z,16nm,0.9s,mb4.8
GRR Gorron 40.42 246 *e*P **P 06 55 16.1 -0.2**
comp=Z,16nm,0.9s,mb4.8
ROSF Rostrenen 40.60 249 *e*P **P 06 55 17.5 -0.3**
comp=Z,7.8nm,0.7s,mb4.1
ROSF Rostrenen 40.60 249 *e*P **P 06 55 17.5 -0.3**
ROSF pmax pmax
comp=Z,4.0nm,0.7s,mb4.2
ROSF Rostrenen 40.60 249 *e*P **P 06 55 17.5 -0.3**
comp=Z,3.9nm,0.7s,mb4.2
ROSF Rostrenen 40.60 249 *e*P **P 06 55 17.5 -0.3**
comp=Z,3.9nm,0.7s,mb4.2
SGMF Saint Gilles 40.64 248 *e*P **P 06 55 18.2 +0.1**
comp=Z,36nm,1.0s,mb4.6
SGMF Saint Gilles 40.64 248 *e*P **P 06 55 18.2 +0.1**
SGMF pmax pmax
comp=Z,18nm,1.0s,mb4.7
SGMF Saint Gilles 40.64 248 *e*P **P 06 55 18.2 +0.1**
comp=Z,18nm,1.0s,mb4.7
SGMF Saint Gilles 40.64 248 *e*P **P 06 55 18.2 +0.1**
comp=Z,18nm,1.0s,mb4.7
QUIF Quistinic 41.01 249 *e*P **P 06 55 21.4 +0.2**
comp=Z,34nm,1.0s,mb4.6
QUIF Quistinic 41.01 249 *e*P **P 06 55 21.4 +0.2**
QUIF pmax pmax
comp=Z,17nm,1.0s,mb4.6
QUIF Quistinic 41.01 249 *e*P **P 06 55 21.4 +0.2**
comp=Z,17nm,1.0s,mb4.6
QUIF Quistinic 41.01 249 *e*P **P 06 55 21.4 +0.2**
comp=Z,17nm,1.0s,mb4.6
LOR Lormes 41.30 241 *e*P **P 06 55 23.8 +0.2**
comp=Z,5.7nm,0.7s,mb4.0
LOR Lormes 41.30 241 *e*P **P 06 55 23.8 +0.2**
LOR pmax pmax
comp=Z,3.0nm,0.7s,mb4.0
LOR Lormes 41.30 241 *e*P **P 06 55 23.8 +0.2**
comp=Z,2.8nm,0.7s,mb4.0
LOR Lormes 41.30 241 *e*P **P 06 55 23.8 +0.2**
comp=Z,5.0nm,0.7s,mb4.3
AVF Avril sur Loir 41.80 242 *e*P **P 06 55 28.1 +0.4**
comp=Z,8.3nm,0.8s,mb4.1
AVF Avril sur Loir 41.80 242 *e*P **P 06 55 28.1 +0.4**
AVF pmax pmax
comp=Z,4.0nm,0.8s,mb4.1
AVF Avril sur Loir 41.80 242 *e*P **P 06 55 28.1 +0.4**
comp=Z,4.2nm,0.8s,mb4.1
AVF Avril sur Loir 41.80 242 *e*P **P 06 55 28.1 +0.4**
comp=Z,8.0nm,0.8s,mb4.4
SMF Signal de Mont 41.92 241 *e*P **P 06 55 29.4 +0.7**
SMF Signal de Mont 41.92 241 *e*P **P 06 55 29.4 +0.7**
BGF Bois d'Agland 42.06 242 *e*P **P 06 55 30.2 +0.4**
BGF Bois d'Agland 42.06 242 *e*P **P 06 55 30.2 +0.4**
MFF Saint Martin d 42.16 245 *e*P **P 06 55 31.2 +0.5**
comp=Z,14nm,0.9s,mb4.3
MFF Saint Martin d 42.16 245 *e*P **P 06 55 31.2 +0.5**
MFF pmax pmax
comp=Z,7.0nm,0.9s,mb4.3
MFF Saint Martin d 42.16 245 *e*P **P 06 55 31.2 +0.5**
comp=Z,7.1nm,0.9s,mb4.3
MFF Saint Martin d 42.16 245 *e*P **P 06 55 31.2 +0.5**
comp=Z,14nm,0.9s,mb4.6
TCF Toulx Ste Croi 42.36 243 *e*P **P 06 55 32.5 +0.3**
TCF Toulx Ste Croi 42.36 243 *e*P **P 06 55 32.5 +0.3**
YSS Yuzh-Sakhalins 42.82 96 *e*P **P 06 55 35.0 -0.9**
YSS *e* 06 55 43.5
ULM Lac du Bonnet 42.94 339 P **P 06 55 36.5 -0.4**
comp=Z,3.6nm,0.6s,mb4.3,baz=31,slow=5.9,SNR=3.0
ULM LR LR 07 14 48.0
comp=Z,226nm,18.3s,MS4.1,baz=133,slow=38
ULM Lac du Bonnet 42.94 339 *e*P **P 06 55 36.4 -0.5**
comp=Z,4.2nm,0.7s,mb4.3
ULM *e* 06 55 44.8
KIV Kislovodsk 43.21 200 *e*P **P 06 55 40.5 +1.3**
KIV pmax pmax
comp=Z,18nm,1.0s,mb4.8
KIV MLR MLR
comp=Z,174nm,17.0s,MS4.0
WMQ Urumqi 43.49 153 *e*P **P 06 55 42.6 +1.2**
WMQ pP pP 06 55 47.1 +3.2
WMQ sP sP 06 55 49.6 +4.7
WMQ PP PP 06 57 25.8 +3.6
WMQ PcP PcP 06 57 31.0 +1.8
WMQ pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
WMQ pmax pmax
comp=Z,150nm,4.8s
WMQ LR LR
comp=N,220nm,20.1s,MS4.3
WMQ LR LR
comp=E,340nm,24.6s,MS4.3
WMQ LR LR
comp=Z,260nm,20.8s,MS4.1
MAK Makhachkala 44.12 195 *e*P **P 06 55 43.9 -2.6**
MAK *e*S **S 07 02 19.4 +0.4**
MAK *e* 07 05 39.5
MAK pmax pmax
comp=Z,27nm,0.4s,mb5.3
MAK MLR MLR
comp=Z,357nm,20.0s,MS4.3
TKM2 Tokmak 2 44.15 166 *e*P **P 06 55 47.7 +1.0**
TKM2 *e* 06 55 56.9
TKM2 pmax pmax
comp=Z,10.0nm,1.1s,mb4.5
TKM2 Tokmak 2 44.15 166 *e*P **P 06 55 47.7 +0.9**
comp=Z,10.0nm,1.1s,mb4.5
TKM2 *e* 06 55 56.9
FRU Bishkek 44.22 167 *e*P **P 06 55 47.5 +0.2**
WALA Waterton Lakes 44.34 356 *e*P **P 06 55 49.2 +1.0**
comp=Z,0.9nm,1.4s
WALA *e* 06 55 56.0
ZEI Tsey 44.37 199 *e*P **P 06 55 48.3 -0.2**
ZEI pmax pmax
comp=Z,11nm,0.4s,mb4.9
A15A Johnson Ranch, 44.42 355 ⇑P **P 06 55 48.5 -0.4**
baz=44,SNR=8.8
AAK Ala-Archa 44.42 167 *e*P **P 06 55 50.7 +1.8**
AAK *e* 06 55 58.3
AAK pmax pmax
comp=Z,14nm,1.1s,mb4.6
AAK Ala-Archa 44.42 167 *e*P **P 06 55 50.7 +1.8**
comp=Z,14nm,1.1s,mb4.6
AAK *e* 06 55 58.3
AAK Ala-Archa 44.42 167 *e*P **P 06 55 50.7 +1.8**
comp=Z,14nm,1.1s,mb4.6
A14A Double T Ranch 44.43 356 ⇑P **P 06 55 48.5 -0.3**
baz=44,SNR=12
MDJ Mudanjiang 44.43 109 P **P 06 55 47.9 -1.0**
MDJ ScP ScP 07 01 24.3 +0.2
MDJ PcS PcS 07 01 25.8 +0.3
MDJ S **S 07 02 21.8 -1.6**
MDJ pmax pmax
comp=Z,8.0nm,1.0s,mb4.4
MDJ pmax pmax
comp=Z,40nm,3.4s
MDJ LR LR
comp=N,75nm,23.9s,MS3.6
MDJ LR LR
comp=E,41nm,26.0s,MS3.6
MDJ LR LR
comp=Z,94nm,22.4s,MS3.7
UCH Uchtor 44.83 167 *e*P **P 06 55 54.0 +1.8**
comp=Z,490nm,0.6s
UCH *e* 06 56 03.5
DGMT Dagmar 44.85 347 ⇑P **P 06 55 52.6 +0.4**
baz=45
DGMT Dagmar 44.85 347 *e*P **P 06 55 53.3 +1.0**
comp=Z,26nm,1.1s,mb5.0
DGMT *e* 06 56 00.5
AGMN Agassiz Nation 44.89 339 *e*P **P 06 55 51.9 -0.6**
comp=Z,23nm,1.0s,mb5.0
AGMN *e* 06 56 00.0
B16A M & M Farms, S 44.98 354 ⇓P **P 06 55 53.5 +0.2**
baz=45
B18A Beardsley Farm 44.98 352 ⇑P **P 06 55 53.2 -0.2**
baz=45
CN2 Changchun 45.02 114 *e*P **P 06 55 54.1 +0.4**
CN2 *e*S **S 07 02 30.3 -1.8**
CN2 LR LR
comp=N,200nm,14.0s,MS4.3
CN2 LR LR
comp=E,200nm,14.0s,MS4.3
CN2 LR LR
comp=Z,300nm,13.0s,MS4.4
B13A Whitefish 45.03 357 ⇓P **P 06 55 54.0 +0.4**
baz=45
B08A Colville Reser 45.05 1 ⇓P **P 06 55 53.9 0.0**
baz=45
B15A Bradely Ranch, 45.08 355 ⇑P **P 06 55 53.2 -0.9**
baz=45,SNR=5.2
B17A L&G Farms, Che 45.09 353 ⇑P **P 06 55 53.5 -0.7**
baz=45
NEW Newport 45.14 359 *e*P **P 06 55 55.8 +1.2**
NEW *e* 06 56 02.9
NEW pmax pmax
comp=Z,37nm,1.3s
NEW Newport 45.14 359 *e*P **P 06 55 55.8 +1.2**
comp=Z,37nm,1.3s,mb5.1
NEW *e* 06 56 02.9
EGMT Eagleton 45.35 352 ⇑P **P 06 55 55.9 -0.3**
baz=45
EGMT Eagleton 45.35 352 *e*P **P 06 55 56.3 +0.1**
comp=Z,21nm,1.1s,mb4.9
EGMT *e* 06 56 03.5
YBMT Yellow Bay 45.54 356 *e*P **P 06 55 57.9 +0.1**
YBMT *e* 06 56 05.4
BSMT Bassoo Peak 45.55 357 *e*P **P 06 55 59.1 +1.3**
BSMT *e* 06 56 06.0
C11A Tepee Creek (N 45.57 358 ⇑P **P 06 55 57.6 -0.3**
baz=45
C16A Fuhringer Ranc 45.59 354 ⇓P **P 06 55 58.2 0.0**
baz=45
C15A Salmond Ranch, 45.62 355 ⇑P **P 06 55 57.9 -0.5**
baz=45,SNR=6.6
C14A Swan Lake 45.63 356 ⇑P **P 06 55 58.8 +0.4**
baz=45
JTMT Jette 45.66 356 *e*P **P 06 55 59.5 +0.8**
JTMT *e* 06 56 07.0
C13A Hot Springs 45.72 357 ⇓P **P 06 55 59.2 0.0**
baz=46
GNW Green Mountain 45.83 5 *e*P **P 06 56 01.2 +1.1**
comp=Z,12nm,1.4s,mb4.7
GNW *e* 06 56 07.8
SWMT Swartz Lake 45.89 356 *e*P **P 06 56 01.8 +1.2**
SWMT *e* 06 56 08.8
SLMT Seeley Lake 46.16 356 *e*P **P 06 56 03.5 +0.8**
SLMT *e* 06 56 11.2
D05A Enumclaw 46.21 4 ⇑P **P 06 56 01.3 -1.7**
baz=46,SNR=6.7
D17A Six Diamond Ra 46.23 353 ⇑P **P 06 56 02.2 -1.0**
baz=46,SNR=7.9
D13A Huson 46.31 357 ⇑P **P 06 56 03.8 0.0**
baz=46
D14A Greenough 46.32 356 ⇑P **P 06 56 04.1 +0.2**
baz=46,SNR=6.2
D12A Red Ives Fores 46.35 358 ⇑P **P 06 56 03.3 -0.9**
baz=46
D15A Lincoln 46.35 355 ⇑P **P 06 56 03.5 -0.7**
baz=46
D16A Dana Ranch, Ca 46.36 354 ⇓P **P 06 56 03.7 -0.5**
baz=46
CHMT Chamberlain Mo 46.48 356 *e*P **P 06 56 05.7 +0.5**
CHMT *e* 06 56 13.3
MSO Missoula 46.57 356 *e*P **P 06 56 06.2 +0.3**
comp=Z,32nm,1.3s,mb5.1
MSO *e* 06 56 13.9
LON Longmire 46.65 4 *e*P **P 06 56 07.6 +1.1**
LON *e* 06 56 14.5
LON pmax pmax
comp=Z,18nm,1.0s,mb5.0
LON Longmire 46.65 4 *e*P **P 06 56 07.6 +1.1**

comp=Z,18nm,1.0s,mb5.0
LON e 06 56 14.5
LAO LASA Array 46.66 349 eP **P 06 56 07.2 +0.7**
comp=Z,24nm,1.1s,mb5.0
LAO e 06 56 14.6
NAC Naches 46.67 3 P **P 06 56 14.4 +7.7**
HRY Holter Researc 46.68 354 eP **P 06 56 06.8 0.0**
HRY e 06 56 14.1
WPW White Pass 46.71 3 P **P 06 56 15.2 +8.2**
E18A Harlowton 46.81 352 ⇓P **P 06 56 07.6 -0.2**
baz=47,SNR=6.4
E16A East Helena 46.86 354 ⇑P **P 06 56 07.6 -0.5**
baz=47
E09A Wood Farm, Sta 46.90 0 ⇑P **P 06 56 08.4 0.0**
baz=47
E17A Martinsdale 46.92 353 ⇓P **P 06 56 08.0 -0.7**
baz=47,SNR=7.6
E13A Victor 46.96 356 ⇓P **P 06 56 08.8 -0.2**
baz=47,SNR=6.8
E15A Deer Lodge 46.97 355 ⇓P **P 06 56 08.5 -0.5**
baz=47,SNR=7.7
E14A Clinton 46.98 356 ⇑P **P 06 56 09.3 +0.2**
baz=47
E12A Beaver Dam Sad 46.99 358 ⇑P **P 06 56 09.0 -0.2**
baz=47
HAWA Hanford 47.02 1 eP **P 06 56 09.5 +0.2**
comp=Z,16nm,1.0s,mb4.9
HAWA e 06 56 16.7
HHC Hu-ho-hao-te 47.30 128 eP **P 06 56 11.0 -0.7**
HHC PcP PcP 06 57 42.8 +0.4
HHC PP PP 06 58 01.1 -1.3
HHC ScP ScP 07 01 35.3 -0.8
HHC PcS PcS 07 01 36.5 -1.1
HHC S **S 07 03 01.4 -3.4**
HHC ScS ScS 07 06 02.3 -3.0
HHC pmax pmax
comp=Z,19nm,0.6s,mb5.2
HHC pmax pmax
comp=Z,140nm,7.1s
HHC LR LR
comp=N,220nm,16.0s,MS4.4
HHC LR LR
comp=E,220nm,16.4s,MS4.4
HHC LR LR
comp=Z,240nm,16.1s,MS4.2
F18A Big Timber 47.47 352 ⇑P **P 06 56 13.0 0.0**
baz=47
F17A Fitzpatrick Pl 47.48 353 ⇑P **P 06 56 13.0 0.0**
baz=47,SNR=8.7
F11A Grangeville 47.52 358 ⇓P **P 06 56 13.0 -0.3**
baz=47
F15A Butte 47.55 355 ⇑P **P 06 56 13.8 +0.2**
baz=47
KSH Kashi 47.56 165 eP **P 06 56 16.5 +2.9**
KSH pP pP 06 56 20.9 +4.7
KSH sP sP 06 56 23.3 +6.2
KSH PcP PcP 06 57 46.6 +3.2
KSH PP PP 06 58 07.3 +2.5
KSH PcS PcS 07 01 40.6 +1.9
KSH S **S 07 03 10.1 +1.7**
KSH pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
KSH pmax pmax
comp=Z,100nm,6.5s
KSH LR LR
comp=N,210nm,9.0s
KSH LR LR
comp=E,250nm,8.2s
KSH LR LR
comp=Z,210nm,6.8s
LRM Limekiln Ridge 47.57 355 eP **P 06 56 14.3 +0.6**
LRM e 06 56 21.6
F14A Wisdom 47.59 356 ⇓P **P 06 56 14.2 +0.4**
baz=47
F16A Kennard Place, 47.61 354 ⇑P **P 06 56 14.5 +0.6**
baz=47
F13A Darby 47.61 357 ⇑P **P 06 56 14.2 +0.2**
baz=47
F12A Elk City 47.65 357 ⇑P **P 06 56 14.0 -0.3**
baz=47
BR131 Keskin Array S 47.65 210 eP **P 06 56 17.9 +3.5**
comp=Z,4.8nm,0.8s,mb4.6
BRTR Keskin Array B 47.65 210 P **P 06 56 16.3 +1.9**
comp=Z,3.0nm,0.8s,mb4.3,baz=8.1,slow=5.6,SNR=11
BRTR PcP PcP 06 57 44.4 +0.7
comp=Z,1.2nm,0.8s,baz=310,slow=1.9,SNR=3.2
BRTR LR LR 07 18 23.6
comp=Z,166nm,20.5s,MS4.0,baz=3.2,slow=39
BRTR Keskin Array B 47.65 210 i P **P 06 56 16.2 +1.8**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
BOZ Bozeman (W) 47.74 354 ⇓P **P 06 56 15.2 +0.2**
baz=48
BOZ Bozeman (W) 47.74 354 eP **P 06 56 16.2 +1.2**
BOZ e 06 56 23.7
BOZ pmax pmax
comp=Z,25nm,1.3s,mb5.1
BOZ Bozeman (W) 47.74 354 eP **P 06 56 16.2 +1.2**
comp=Z,25nm,1.3s,mb5.1
BOZ e 06 56 23.7
JBO Jordan Butte 47.95 2 P **P 06 56 25.4 +8.8**
DLMT Dillon 48.03 355 eP **P 06 56 17.8 +0.5**
comp=Z,14nm,0.9s,mb5.0
DLMT e 06 56 25.6
G17A Pierce Place, 48.06 353 ⇓P **P 06 56 18.1 +0.6**
baz=48
G10A Bishop Farm, J 48.12 359 ⇓P **P 06 56 18.5 +0.6**
baz=48
G08A Pilot Rock 48.12 1 ⇓P **P 06 56 18.7 +0.8**
baz=48
G09A Cove 48.13 360 ⇑P **P 06 56 18.8 +0.7**
baz=48
G16A Moss Hill, Enn 48.16 354 ⇑P **P 06 56 18.0 -0.3**
baz=48
G04A Mulino 48.20 4 ⇓P **P 06 56 19.6 +1.1**
baz=48
G15A Dillon 48.23 355 ⇑P **P 06 56 19.0 +0.2**
baz=48
RLMT Red Lodge 48.25 352 ⇓P **P 06 56 19.0 0.0**
baz=48
RLMT Red Lodge 48.25 352 eP **P 06 56 17.6 -1.3**
comp=Z,12nm,1.4s,mb4.7
RLMT e 06 56 26.7
GTA Gaotai 48.27 140 eP **P 06 56 19.5 +0.3**
GTA pP pP 06 56 23.0 +1.3
GTA sP sP 06 56 26.3 +3.7
GTA PcP PcP 06 57 45.5 -0.4
GTA S **S 07 03 17.3 -1.2**
GTA SS SS 07 06 40.6 -6.7
GTA pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
GTA pmax pmax
comp=Z,200nm,4.2s
GTA LR LR
comp=N,120nm,15.2s,MS4.2
GTA LR LR
comp=E,170nm,16.7s,MS4.2
GTA LR LR
comp=Z,200nm,17.8s,MS4.2
G13A Cobalt 48.31 356 ⇓P **P 06 56 19.1 -0.3**
baz=48
BMO Blue Mountains 48.56 359 eP **P 06 56 23.0 +1.7**
comp=Z,23nm,1.6s,mb5.0
H16A Russell Place, 48.69 354 ⇓P **P 06 56 22.7 +0.4**
baz=48,SNR=7.4
H11A Donnelly 48.70 358 ⇓P **P 06 56 22.2 -0.3**
baz=48
H04A Detroit Lake 48.72 4 ⇓P **P 06 56 23.5 +0.9**
baz=48
H14A Leadore 48.78 356 ⇓P **P 06 56 23.3 +0.2**
baz=48,SNR=10.0
H13A Challis 48.84 356 ⇓P **P 06 56 23.9 +0.4**
baz=49
H12A Diamond D Ranc 48.86 357 ⇓P **P 06 56 23.7 +0.1**
baz=49
VIPM Ingram Point 48.90 2 P **P 06 56 32.5 +8.5**
YFT Old Faithful 48.94 353 eP **P 06 56 28.3 +4.1**
comp=Z,21nm,1.1s,mb5.1
RSSD Black Hills 49.20 347 eP **P 06 56 26.8 +0.5**
RSSD e 06 56 34.8
RSSD pmax pmax
comp=Z,18nm,1.0s,mb5.1
RSSD Black Hills 49.20 347 eP **P 06 56 26.8 +0.6**
comp=Z,18nm,1.0s,mb5.1
RSSD e 06 56 34.8
RSSD Black Hills 49.20 347 eP **P 06 56 26.8 +0.5**
comp=Z,18nm,1.0s,mb5.1
ESDC Sonseca Array 49.27 248 P **P 06 56 28.5 +1.7**
comp=Z,0.6nm,0.3s,mb4.1,baz=1.6,slow=7.6,SNR=5.1
ESDC Sonseca Array 49.27 248 P **P 06 56 28.5 +1.7**
ESDC Sonseca Array 49.27 248 P **P 06 56 28.5 +1.6**
I07A Izee 49.33 1 ⇑P **P 06 56 27.5 +0.2**
baz=49
I15A Monteview 49.40 355 ⇑P **P 06 56 28.4 +0.6**
baz=49
I17A Pilgrim Ck. 49.46 353 ⇑P **P 06 56 29.1 +0.8**
baz=49
ECSD EROS Data Cent 49.47 340 eP **P 06 56 28.3 0.0**
comp=Z,35nm,1.1s,mb5.3
ECSD e 06 56 36.2
ECSD EROS Data Cent 49.47 340 eP **P 06 56 28.3 0.0**
I14A Mackay 49.47 356 ⇑P **P 06 56 28.8 +0.4**
baz=49
I13A Wildhorse Cree 49.49 356 ⇓P **P 06 56 28.4 -0.1**
baz=49,SNR=15
IMW Indian Meadow 49.49 353 eP **P 06 56 30.7 +2.2**
comp=Z,45nm,1.6s,mb5.2
IMW e 06 56 37.6
IMW Indian Meadow 49.49 353 eP **P 06 56 30.7 +2.2**
I11A Placerville 49.50 358 ⇓P **P 06 56 28.2 -0.3**
baz=49
I16A Newdale 49.52 354 ⇓P **P 06 56 28.9 +0.2**
baz=49,SNR=13
I12A Atlanta 49.61 357 ⇑P **P 06 56 29.7 +0.2**
baz=49
I18A Diamond G Ranc 49.68 352 ⇑P **P 06 56 30.9 +1.0**
baz=49
LOHW Long Hollow 49.77 353 eP **P 06 56 32.2 +1.6**
comp=Z,14nm,1.3s,mb4.8
LOHW e 06 56 39.4
LOHW Long Hollow 49.77 353 eP **P 06 56 32.2 +1.6**
DCID1 Drake Creek 49.79 354 eP **P 06 56 32.4 +1.6**
DCID1 e 06 56 39.5
DCID1 Drake Creek 49.79 354 eP **P 06 56 32.4 +1.6**
HLID Hailey 49.84 357 ⇑P **P 06 56 31.8 +0.6**
baz=50
HLID Hailey 49.84 357 eP **P 06 56 31.8 +0.6**
comp=Z,19nm,1.8s,mb4.8
HLID e 06 56 39.0
HLID Hailey 49.84 357 eP **P 06 56 31.8 +0.6**
TPAW Teton Pass 49.90 353 eP **P 06 56 33.2 +1.7**
comp=Z,20nm,1.1s,mb5.1
TPAW e 06 56 39.7
TPAW Teton Pass 49.90 353 eP **P 06 56 33.2 +1.6**
SNOW Snow King Moun 49.92 353 eP **P 06 56 33.0 +1.2**
comp=Z,5.2nm,0.8s,mb4.6
SNOW e 06 56 40.3
SNOW Snow King Moun 49.92 353 eP **P 06 56 33.0 +1.2**
MFID Camas Ranch 49.99 358 ⇑P **P 06 56 32.2 -0.1**
baz=50
J15A Blackfoot 49.99 355 ⇑P **P 06 56 32.9 +0.6**
baz=50
J13A Cove Ranch, Pi 50.01 356 ⇑P **P 06 56 33.0 +0.6**
baz=50
J17A Brown Place, J 50.02 353 ⇑P **P 06 56 33.5 +1.0**
baz=50
REDW Red Top Meadow 50.02 353 eP **P 06 56 33.6 +1.1**
comp=Z,15nm,1.2s,mb4.9
REDW e 06 56 41.2
REDW Red Top Meadow 50.02 353 eP **P 06 56 33.6 +1.1**
RRI2 Red Ridge 50.04 354 eP **P 06 56 34.0 +1.3**
comp=Z,33nm,1.4s,mb5.2
RRI2 e 06 56 41.1
J08A Circle Bar Ran 50.05 0 ⇓P **P 06 56 33.4 +0.6**
baz=50
J14A Carey 50.08 356 ⇓P **P 06 56 32.9 -0.1**
baz=50,SNR=7.9
J16A Bone 50.12 354 ⇑P **P 06 56 33.9 +0.6**
baz=50
JFWS Jewell Farm 50.14 334 eP **P 06 56 33.2 -0.3**
JFWS e 06 56 41.3
JFWS pmax pmax
comp=Z,19nm,1.3s,mb5.0
JFWS Jewell Farm 50.14 334 eP **P 06 56 33.2 -0.2**
comp=Z,19nm,1.3s,mb5.0
JFWS e 06 56 41.3
JFWS Jewell Farm 50.14 334 eP **P 06 56 33.2 -0.3**
comp=Z,19nm,1.3s,mb5.0
J12A Stokes Ranch, 50.16 357 ⇓P **P 06 56 34.5 +1.0**
baz=50
J18A Kendall Valley 50.17 352 ⇑P **P 06 56 34.4 +0.8**
baz=50
K19A Absolon Red Bu 50.55 351 ⇓P **P 06 56 35.9 -0.6**
baz=50
BW06 Boulder Array 50.61 352 ⇑P **P 06 56 36.7 -0.3**
baz=50,SNR=8.4
BW06 Boulder Array 50.61 352 eP **P 06 56 37.1 +0.1**
comp=Z,18nm,1.2s,mb4.9
BW06 e 06 56 44.4
PDAR Pinedale Array 50.61 352 P **P 06 56 37.2 +0.2**
comp=Z,2.7nm,0.8s,mb4.2,baz=357,slow=5.9,SNR=16
PDAR LR LR 07 18 34.7
comp=Z,152nm,18.2s,MS4.0,baz=16,slow=37
K10A MacKenzie Ranc 50.63 359 ⇑P **P 06 56 37.2 +0.1**
baz=50
K11A Parker Ranch, 50.64 358 ⇓P **P 06 56 37.5 +0.3**
baz=50
K05A Summer Lake 50.68 3 ⇑P **P 06 56 39.2 +1.7**
baz=50
K20A Yellowstone Ra 50.71 351 ⇑P **P 06 56 38.5 +0.8**
baz=50
K15A Arbon 50.71 355 ⇓P **P 06 56 38.4 +0.6**
baz=50
K18A Toltan Ranch, 50.74 352 ⇑P **P 06 56 37.9 -0.1**
baz=50,SNR=6.0
K12A Draper Farm, C 50.77 357 ⇓P **P 06 56 38.1 -0.1**
baz=50,SNR=7.3
K14A Jones Ranch, D 50.85 355 ⇓P **P 06 56 38.7 -0.1**
baz=51,SNR=9.0
WVOR Wild Horse Val 50.98 1 eP **P 06 56 40.3 +0.6**
WVOR e 06 56 48.3
WVOR pmax pmax
comp=Z,17nm,1.1s,mb4.9
WVOR Wild Horse Val 50.98 1 eP **P 06 56 40.3 +0.6**
comp=Z,17nm,1.1s,mb4.9
WVOR e 06 56 48.3
L11A Cat Creek Ranc 51.24 358 ⇑P **P 06 56 42.2 +0.5**
baz=51,SNR=9.2
L12A House Creek Ra 51.26 357 ⇓P **P 06 56 42.3 +0.5**
baz=51
L19A Farson 51.27 352 ⇑P **P 06 56 41.6 -0.4**
baz=51,SNR=6.7
L20A Wamsutter 51.36 351 ⇓P **P 06 56 41.5 -1.1**
baz=51
L14A Malta 51.36 355 ⇓P **P 06 56 42.6 -0.1**
baz=51,SNR=5.8
L16A Fish Haven 51.37 354 ⇑P **P 06 56 42.5 -0.3**
baz=51,SNR=5.3
L15A Malad City 51.39 355 ⇑P **P 06 56 42.4 -0.4**
baz=51,SNR=5.6
L21A Rawlins 51.39 350 ⇑P **P 06 56 42.3 -0.6**
baz=51,SNR=6.8
KSRS Korea Array 51.48 112 P **P 06 56 41.3 -2.3**
comp=Z,1.8nm,0.8s,mb4.0,baz=347,slow=7.4,SNR=7.9
MOD Modoc 51.50 2 eP **P 06 56 45.2 +1.5**
comp=Z,23nm,1.1s,mb5.0
MOD e 06 56 52.5
HVU Hansel Valley 51.62 355 eP **P 06 56 45.0 +0.4**
HVU e 06 56 52.0
HVU pmax pmax
comp=Z,15nm,0.9s,mb4.9
HVU Hansel Valley 51.62 355 eP **P 06 56 45.0 +0.4**
comp=Z,16nm,0.9s,mb4.9
HVU e 06 56 52.0
RWWY Rawlins 51.67 350 eP **P 06 56 44.9 -0.1**
comp=Z,41nm,1.2s,mb5.2
RWWY e 06 56 52.1
YBH Yreka Blue Hor 51.67 5 P **P 06 56 46.0 +1.1**
comp=Z,0.9nm,0.9s,mb3.7,baz=321,slow=17,SNR=2.0
LZH Lanzhou 51.73 137 P **P 06 56 45.9 +0.4**
LZH eS **S 07 04 05.1 -1.8**
LZH pmax pmax
comp=Z,31nm,1.4s,mb5.0
LZH pmax pmax
comp=Z,90nm,4.2s
LZH LR LR
comp=N,220nm,13.4s
LZH LR LR
comp=Z,460nm,15.8s,MS4.6
M21A Separation Pea 51.75 350 ⇓P **P 06 56 45.3 -0.2**
baz=52,SNR=7.5
HWUT Hardware Ranch 51.78 354 eP **P 06 56 46.4 +0.6**
comp=Z,54nm,1.3s,mb5.3
HWUT e 06 56 53.8
M10A I.L. Ranch, Tu 51.89 359 ⇑P **P 06 56 46.9 +0.3**
baz=52,SNR=7.3
M14A Sheep Mountain 51.90 356 ⇑P **P 06 56 46.9 +0.3**
baz=52,SNR=7.1
M17A Scullys Gap (B 51.91 353 ⇑P **P 06 56 46.7 -0.1**
baz=52
M15A Larsen Ranch, 51.93 355 ⇑P **P 06 56 46.7 -0.2**
baz=52,SNR=6.1
M18A Lyman 51.95 352 ⇓P **P 06 56 47.2 +0.1**
baz=52,SNR=5.1
M11A Holland Ranch, 51.98 358 ⇓P **P 06 56 47.9 +0.6**
baz=52,SNR=6.6
M12A Wells 51.99 357 ⇑P **P 06 56 48.2 +0.8**
baz=52,SNR=8.1
PHWY Pilot Hill 52.03 348 eP **P 06 56 46.8 -0.8**
comp=Z,11nm,1.0s,mb4.8
PHWY e 06 56 55.5
M13A Montello 52.04 356 eP **P 06 56 48.3 +0.6**
comp=Z,13nm,1.3s,mb4.7
M13A e 06 56 56.0
SPUT South Promonto 52.09 355 eP **P 06 56 49.2 +1.1**
comp=Z,27nm,1.3s,mb5.0
SPUT e 06 56 56.2
LTIM Timbered Crate 52.23 3 P **P 06 56 57.7 +8.6**
OGNE Ogallala 52.34 345 eP **P 06 56 50.5 +0.5**
comp=Z,49nm,1.1s,mb5.3
OGNE e 06 56 57.6
N18A Larsen Ranch, 52.40 352 ⇓P **P 06 56 50.5 +0.1**
baz=52,SNR=6.5
BGU Big Grassy Mou 52.47 355 eP **P 06 56 51.2 +0.3**
comp=Z,22nm,1.4s,mb4.9
BGU e 06 56 58.9
N19A John Jarvie Ra 52.48 352 ⇓P **P 06 56 51.1 +0.1**
baz=52,SNR=5.8
N16A Rees Ranch, Co 52.50 354 ⇑P **P 06 56 51.1 -0.1**
baz=52
N15A Stansbury Isla 52.50 355 ⇑P **P 06 56 51.3 +0.1**
baz=52,SNR=5.4
N20A Spence Gulch, 52.53 351 ⇓P **P 06 56 51.5 +0.1**
baz=52
N22A Wattenberg Ran 52.54 349 ⇑P **P 06 56 50.7 -0.8**
baz=52
N13A Wendover, West 52.55 356 ⇑P **P 06 56 51.6 +0.1**
baz=52
N14A Grayback Hills 52.55 355 ⇓P **P 06 56 52.1 +0.7**
baz=52
N12A Clover Valley, 52.55 357 eP **P 06 56 51.7 +0.2**
comp=Z,9.7nm,1.4s,mb4.5
N12A e 06 57 00.7
N21A Black Mountain 52.60 350 ⇓P **P 06 56 51.8 0.0**
baz=52
ACSO Alum Creek Sta 52.62 326 eP **P 06 56 52.1 +0.1**
comp=Z,34nm,1.3s,mb5.1
ACSO e 06 57 00.4
ELK Elko 52.66 357 P **P 06 56 53.2 +0.9**
comp=Z,0.9nm,0.8s,mb3.8,baz=331,slow=6.7,SNR=4.6
JLU Jordanelle 52.79 354 eP **P 06 56 54.1 +0.8**
comp=Z,15nm,1.3s,mb4.8
JLU e 06 57 01.0
WDC Whiskeytown Da 52.82 4 eP **P 06 56 54.2 +0.7**
WDC e 06 57 00.6
WDC pmax pmax
comp=Z,16nm,1.3s,mb4.8
WDC Whiskeytown Da 52.82 4 eP **P 06 56 54.2 +0.7**
comp=Z,16nm,1.3s,mb4.8
WDC e 06 57 00.6
MJAR Matsushiro Arr 52.94 101 P **P 06 56 52.2 -2.2**
comp=Z,1.3nm,0.8s,mb3.9,baz=358,slow=7.8,SNR=5.2
BMN Battle Mountai 52.98 359 eP **P 06 56 55.3 +0.6**
BMN e 06 57 02.3
BMN pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
BMN Battle Mountai 52.98 359 eP **P 06 56 55.3 +0.6**
comp=Z,8.0nm,1.1s,mb4.6
BMN e 06 57 02.3
MCWV Mont Chateau 53.09 323 eP **P 06 56 55.4 -0.1**
comp=Z,42nm,1.5s,mb5.2
O18A Roosevelt 53.11 352 ⇑P **P 06 56 55.8 +0.1**
baz=53,SNR=7.6
O12A Currie 53.13 357 ⇓P **P 06 56 56.5 +0.7**
baz=53
O16A Springville 53.18 354 ⇑P **P 06 56 56.1 0.0**
baz=53
O22A Kremmling 53.18 349 ⇑P **P 06 56 56.2 0.0**
baz=53,SNR=11
O17A Robinson Place 53.19 353 ⇓P **P 06 56 56.6 +0.3**
baz=53
DUG Dugway 53.20 355 ⇑P **P 06 56 56.5 +0.1**
baz=53
DUG Dugway 53.20 355 eP **P 06 56 57.0 +0.7**
DUG pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
DUG Dugway 53.20 355 eP **P 06 56 57.0 +0.7**
comp=Z,9.9nm,0.9s,mb4.7
O20A White River Ci 53.23 351 ⇑P **P 06 56 56.9 +0.3**
baz=53,SNR=5.7
O11A Cowboy Ranch, 53.27 358 ⇓P **P 06 56 57.0 +0.1**
baz=53
MPU Maple Canyon 53.37 354 eP **P 06 56 57.9 +0.3**
comp=Z,34nm,1.5s,mb5.0
MPU e 06 57 05.5
MPU Maple Canyon 53.37 354 eP **P 06 56 57.9 +0.3**
ISCO Idaho Springs 53.53 348 eP **P 06 56 58.9 +0.1**
ISCO e 06 57 06.8
ISCO pmax pmax
comp=Z,17nm,1.3s,mb4.8
ISCO Idaho Springs 53.53 348 eP **P 06 56 58.9 +0.1**
comp=Z,17nm,1.3s,mb4.8
ISCO e 06 57 06.8
ISCO Idaho Springs 53.53 348 eP **P 06 56 58.9 +0.1**
comp=Z,17nm,1.3s,mb4.8
P19A Cripple Cowboy 53.73 351 ⇑P **P 06 57 00.1 -0.2**
baz=54
P18A Preston Nutter 53.75 353 ⇑P **P 06 57 00.7 +0.3**
baz=54,SNR=6.9
P22A Eagle 53.75 349 ⇑P **P 06 57 00.7 +0.3**
baz=54
P16A Fountain Green 53.78 354 ⇓P **P 06 57 00.7 +0.2**
baz=54
P10A Eureka 53.78 359 ⇑P **P 06 57 00.8 +0.2**
baz=54
P14A Drum Mountains 53.80 355 ⇓P **P 06 57 00.7 0.0**
baz=54,SNR=9.3
P25A Willow Gulch B 53.80 347 ⇓P **P 06 57 00.9 +0.2**
baz=54,SNR=5.7
P20A De Beque 53.86 351 ⇓P **P 06 57 00.5 -0.7**
baz=54
P17A Butcher Ranch, 53.91 353 ⇑P **P 06 57 01.9 +0.3**
baz=54,SNR=5.1
P12A McGill 53.93 357 ⇑P **P 06 57 02.0 +0.3**
baz=54,SNR=6.2
P13A Bates Ranch, G 53.94 356 ⇑P **P 06 57 01.9 +0.2**
baz=54,SNR=9.5
P23A Jefferson 53.96 348 ⇑P **P 06 57 02.4 +0.5**
baz=54,SNR=8.3
XAN Xi'an 53.98 131 P **P 06 57 01.5 -0.6**
OHCM Honcut 54.06 3 eP **P 06 57 03.2 +0.6**
TMUT Trail Mountain 54.09 354 eP **P 06 57 02.7 -0.1**
comp=Z,16nm,1.0s,mb4.9
TMUT e 06 57 11.4
KSU1 Kansas State U 54.09 339 eP **P 06 57 02.2 -0.7**
comp=Z,21nm,0.8s,mb5.1
KSU1 e 06 57 09.9
WCN Washoe City 54.10 2 ⇑P **P 06 57 02.8 -0.2**
baz=54
SMCO Snowmass 54.17 349 eP **P 06 57 04.2 +0.8**
comp=Z,11nm,1.0s,mb4.7
SMCO e 06 57 11.9
OLIL Olney 54.26 331 eP **P 06 57 03.7 -0.4**
comp=Z,27nm,1.1s,mb5.1
SRU San Rafael 54.27 353 ⇓P **P 06 57 04.2 0.0**
baz=54
SRU San Rafael 54.27 353 eP **P 06 57 04.7 +0.5**
SRU e 06 57 11.9
SRU pmax pmax
comp=Z,23nm,1.4s,mb4.9
SRU San Rafael 54.27 353 eP **P 06 57 04.7 +0.5**
comp=Z,23nm,1.4s,mb4.9
SRU e 06 57 11.9
Q18A Rafter H Ranch 54.27 352 ⇓P **P 06 57 03.5 -0.7**
baz=54
Q12A Willow Creek R 54.36 357 ⇓P **P 06 57 05.2 +0.3**
baz=54
Q24A Divide 54.36 348 ⇓P **P 06 57 05.0 +0.2**
baz=54
Q15A Fillmore 54.39 355 ⇑P **P 06 57 05.8 +0.7**

baz=54,SNR=5.6
HOPS Hopland 54.40 5 eP P 06 57 05.8 +0.7
comp=Z,37nm,1.3s,mb5.2
HOPS e 06 57 13.3
Q25A Bedland, Calha 54.40 347 ⇓P P 06 57 04.8 -0.4
baz=54
Q14A Sevier Lake (B 54.41 355 ⇑P P 06 57 05.5 +0.3
baz=54,SNR=8.2
Q19A Hogan Spring (54.41 352 ⇑P P 06 57 04.9 -0.4
baz=54
Q13A Wheeler Ranch, 54.44 356 ⇑P P 06 57 05.2 -0.2
baz=54
Q16A Castle Valley 54.47 353 ⇑P P 06 57 05.4 -0.2
baz=54,SNR=11
Q22A Crested Butte, 54.48 349 ⇑P P 06 57 05.7 0.0
baz=54
Q21A Lamborn Mesa, 54.52 350 ⇓P P 06 57 05.8 -0.2
baz=54,SNR=6.1
Q11A Duckwater 54.56 358 ⇑P P 06 57 06.4 +0.2
baz=54,SNR=10
Q10A Clear Creek Ra 54.58 358 ⇓P P 06 57 06.4 0.0
baz=54,SNR=8.8
WAKR Walker 54.90 1 eP P 06 57 09.9 +1.2
R17A Hanksville Air 54.96 353 ⇓P P 06 57 09.2 0.0
baz=55,SNR=5.6
PV04 Paradox Valley 54.97 351 eP P 06 57 10.1 +0.8
PV04 e 06 57 17.0
NVAR Mina Array Bea 54.98 0 P P 06 57 10.1 +0.8
comp=Z,1.5nm,0.8s,mb4.1,baz=1.6,slow=4.5,SNR=14
JSRW J. Sargeant Re 54.98 321 eP P 06 57 09.8 +0.5
R21A Cimarron 54.98 350 ⇑P P 06 57 09.4 0.0
baz=55,SNR=5.6
R18A Canyonlands Na 54.99 352 ⇓P P 06 57 09.6 +0.2
baz=55,SNR=6.2
R11A Troy Canyon, C 55.05 358 ⇓P P 06 57 10.2 +0.4
baz=55,SNR=16
R12A Pony Springs, 55.07 357 ⇓P P 06 57 10.2 +0.2
baz=55,SNR=5.7
R19A Curley Farm, L 55.08 352 ⇑P P 06 57 09.9 -0.2
baz=55,SNR=6.9
R14A James Farms, M 55.09 355 ⇑P P 06 57 10.3 +0.2
baz=55
R24A Sanders Place, 55.09 348 ⇑P P 06 57 10.7 +0.5
baz=55
R16A Teasdale 55.10 354 ⇑P P 06 57 10.0 -0.2
baz=55,SNR=5.5
R22A Saguache, Gunn 55.12 349 ⇓P P 06 57 11.2 +0.9
baz=55,SNR=6.7
R20A Redvale 55.17 351 ⇓P P 06 57 10.4 -0.3
baz=55,SNR=5.9
R13A O'Grain Ranch, 55.22 356 ⇓P P 06 57 11.4 +0.4
baz=55
PV01 Paradox Valley 55.23 351 eP P 06 57 11.3 +0.2
comp=Z,3μm,1.3s
PV01 e 06 57 18.9
S10A Tonopah Range, 55.48 359 ⇑P P 06 57 13.3 +0.4
baz=55
S20A Disappointment 55.53 351 ⇑P P 06 57 13.3 0.0
baz=55,SNR=6.2
BLA Blacksburg 55.55 324 eP P 06 57 13.0 -0.4
BLA pmax pmax
comp=Z,21nm,1.0s,mb5.1
BLA Blacksburg 55.55 324 eP P 06 57 13.0 -0.4
comp=Z,22nm,1.0s,mb5.1
SDCO Great Sand Dun 55.59 348 eP P 06 57 13.0 -0.7
comp=Z,6.6nm,1.1s,mb4.6
SDCO e 06 57 21.1
S22A 4UR Ranch, Cre 55.60 349 ⇑P P 06 57 14.4 +0.6
baz=55,SNR=12
ARUT Antelope Range 55.61 356 eP P 06 57 13.9 +0.1
ARUT e 06 57 22.2
ARUT pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
ARUT Antelope Range 55.61 356 eP P 06 57 13.9 +0.1
comp=Z,5.5nm,1.2s,mb4.5
ARUT e 06 57 22.2
S19A Harvey Farm, M 55.62 351 ⇓P P 06 57 14.3 +0.4
baz=55,SNR=7.0
S14A Cedar City 55.63 355 ⇓P P 06 57 14.2 +0.2
baz=55,SNR=5.2
S25A Robets Cordova 55.66 347 ⇓P P 06 57 13.9 -0.3
baz=55
S16A Weppner Ranch, 55.66 354 ⇓P P 06 57 14.3 0.0
baz=55,SNR=6.7
S18A Hurst Farm, Bl 55.68 352 ⇑P P 06 57 14.4 0.0
baz=55,SNR=16
S24A Houchin Ranch, 55.69 348 ⇓P P 06 57 14.5 0.0
baz=55
S21A Coal Bank Pass 55.69 350 ⇓P P 06 57 14.5 0.0
baz=56,SNR=5.8
S15A Panguitch 55.71 355 ⇓P P 06 57 15.4 +0.7
baz=56
S17A Black Ridge (B 55.74 353 ⇑P P 06 57 15.4 +0.6
baz=56
S11A Rachel 55.76 358 ⇑P P 06 57 15.5 +0.6
baz=56,SNR=9.4
S12A Delamar Landin 55.79 357 ⇓P P 06 57 15.9 +0.7
baz=56,SNR=7.5
S13A Holt Ranch, En 55.81 356 ⇑P P 06 57 15.9 +0.6
baz=56,SNR=7.1
CCUT Cedar City 55.84 356 eP P 06 57 16.4 +0.9
comp=Z,15nm,1.4s,mb4.8
CCUT e 06 57 23.8
MVCO Mesa Verde 56.15 351 ⇓P P 06 57 18.3 +0.6
baz=56,SNR=6.7
MVCO Mesa Verde 56.15 351 eP P 06 57 18.8 +1.0
comp=Z,44nm,1.3s,mb5.3
MVCO e 06 57 26.0
T11A Corn Creek, Al 56.16 357 ⇓P P 06 57 17.9 0.0
baz=56,SNR=7.6
T25A Trinidad 56.18 347 ⇑P P 06 57 17.5 -0.5
baz=56
T18A Mexican Hat 56.23 352 ⇑P P 06 57 18.2 -0.1
baz=56,SNR=14
T14A Hurricane 56.33 355 ⇑P P 06 57 18.9 -0.1
baz=56,SNR=6.7
T22A Edith 56.33 349 ⇑P P 06 57 18.9 -0.1
baz=56,SNR=5.9
T21A Navajo Lake 56.36 350 ⇓P P 06 57 19.1 -0.1
baz=56
T15A Red Dirt Ranch 56.37 355 ⇓P P 06 57 19.0 -0.3
baz=56,SNR=6.8
T13A Saint George 56.38 356 ⇑P P 06 57 19.4 0.0
baz=56,SNR=7.3
T17A Navajo Res., N 56.38 353 ⇑P P 06 57 19.1 -0.3
baz=56
NJ2 Nanjing 56.40 121 eP P 06 57 20.4 +0.8
NJ2 pmax pmax
comp=Z,30nm,0.6s,mb5.5
T19A Beclabito 56.53 351 ⇓P P 06 57 20.4 -0.1
baz=56,SNR=5.7
T12A Moapa 56.67 357 ⇓P P 06 57 21.0 -0.5
baz=56
U17A Shonto 56.78 353 ⇓P P 06 57 22.3 +0.1
baz=56
WVT Waverly 56.85 331 eP P 06 57 22.4 -0.4
WVT e 06 57 30.3
WVT pmax pmax
comp=Z,15nm,1.1s,mb4.9
WVT Waverly 56.85 331 eP P 06 57 22.4 -0.4
comp=Z,15nm,1.1s,mb4.9
WVT e 06 57 30.3
CD2 Chengdu 56.88 137 P P 06 57 24.1 +1.0
CD2 pP pP 06 57 28.5 +2.9
CD2 sP sP 06 57 30.1 +3.5
CD2 PP PP 06 59 31.6 +2.5
CD2 S **S 07 05 14.9 -1.6**
CD2 SS SS 07 09 02.1 -2.0
CD2 pmax pmax
comp=Z,20nm,0.8s,mb5.2
CD2 pmax pmax
comp=Z,160nm,9.5s
CD2 LR LR
comp=N,240nm,9.5s
CD2 LR LR
comp=Z,210nm,11.9s,MS4.5
U26A Atchley Ranch, 56.91 346 ⇑P P 06 57 23.1 -0.1
baz=57
U25A Circle Dot Ran 56.91 347 ⇑P P 06 57 22.7 -0.5
baz=57,SNR=7.0
U21A Nageezi 56.92 350 ⇑P P 06 57 23.2 -0.1
baz=57,SNR=5.3
FURC Furnace Creek, 56.93 359 ⇓P P 06 57 22.9 -0.4
baz=57
U18A Rough Rock, Ch 56.95 352 ⇑P P 06 57 23.2 -0.3
baz=57,SNR=5.7
U15A North Rim 56.96 355 ⇑P P 06 57 23.0 -0.5
baz=57,SNR=7.1
CWC Cottonwood Cre 56.96 0 ⇓P P 06 57 24.0 +0.4
baz=57
U12A Valley of Fire 56.96 357 ⇓P P 06 57 24.1 +0.6
baz=57
U22A Llaves 56.97 349 ⇓P P 06 57 23.6 +0.1
baz=57
U14A Mt Trumbull 56.97 355 ⇓P P 06 57 23.5 -0.1
baz=57,SNR=7.5
U13A Pakoon Wash 56.98 356 ⇓P P 06 57 23.7 +0.1
baz=57,SNR=12
U23A El Rito 57.01 349 ⇓P P 06 57 23.6 -0.3
baz=57,SNR=9.4
U19A Dine' College, 57.07 352 ⇓P P 06 57 23.9 -0.5
baz=57,SNR=6.9
TKL Tuckaleechee C 57.20 327 eP P 06 57 24.6 -0.7
TKL e 06 57 32.8
U16A Tuba City 57.24 353 ⇑P P 06 57 25.9 +0.4
baz=57,SNR=6.1
MPMC Manual Prospec 57.34 360 ⇓P P 06 57 26.5 +0.3
baz=57,SNR=7.7
V22A San Miguel Ran 57.43 349 ⇓P P 06 57 25.7 -1.2
baz=57
V25A Rancho No Teng 57.48 347 ⇓P P 06 57 26.6 -0.6
baz=57,SNR=8.0
SHOC Shoshone 57.50 358 ⇓P P 06 57 27.8 +0.4
baz=57,SNR=5.4
V26A Tequesquite Ra 57.51 346 ⇑P P 06 57 26.3 -1.2
baz=57,SNR=6.1
V13A Grand Canyon W 57.54 356 ⇑P P 06 57 27.7 +0.1
baz=57
V20A Brimhall 57.56 351 ⇓P P 06 57 27.1 -0.6
baz=57
V11A Goodsprings 57.56 358 ⇑P P 06 57 28.0 +0.3
baz=57
V15A Kaibab Nationa 57.56 354 ⇓P P 06 57 27.7 -0.1
baz=57,SNR=5.7
V23A Ortiz Mt. (NFS 57.59 349 ⇓P P 06 57 28.1 +0.1
baz=57,SNR=5.6
V24A Rampart Ranch, 57.60 348 ⇓P P 06 57 27.8 -0.3
baz=57,SNR=6.4
V18A Ganado 57.66 352 ⇑P P 06 57 28.2 -0.3
baz=57
V12A Nelson 57.67 357 ⇓P P 06 57 28.4 -0.1
baz=57,SNR=7.0
SWET Sewanee 57.71 329 eP P 06 57 27.8 -1.0
SWET e 06 57 35.7
ISA Isabella 57.74 0 ⇓P P 06 57 28.8 -0.3
baz=58
ISA Isabella 57.74 0 eP P 06 57 29.3 +0.3
ISA pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
ISA Isabella 57.74 0 eP P 06 57 29.2 +0.2
comp=Z,4.9nm,1.1s,mb4.5
ENH Enshi 57.75 131 eP P 06 57 28.7 -0.5
comp=Z,19nm,1.0s,mb5.1
V17A Tonalea, Kykot 57.75 353 ⇓P P 06 57 29.8 +0.6
baz=58,SNR=30
V14A Boquillas Ranc 57.75 355 ⇓P P 06 57 29.4 +0.3
baz=58,SNR=13
WUAZ Wupatki 57.86 354 ⇓P P 06 57 30.0 +0.1
baz=58,SNR=7.2
WUAZ Wupatki 57.86 354 eP P 06 57 30.5 +0.6
comp=Z,30nm,1.1s,mb5.2
WUAZ e 06 57 37.6
LRMC Laurel Mountai 57.92 360 ⇑P P 06 57 29.9 -0.5
baz=58
TUQ Turquoise Moun 57.96 358 ⇑P P 06 57 30.9 +0.3
baz=58
W25A X Bar L Ranch, 58.09 347 ⇑P P 06 57 30.6 -1.0
baz=58
GSC Goldstone 58.10 359 ⇑P P 06 57 31.5 -0.1
baz=58
GSC Goldstone 58.10 359 eP P 06 57 32.8 +1.3
GSC pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
GSC Goldstone 58.10 359 eP P 06 57 32.8 +1.2
comp=Z,5.2nm,1.0s,mb4.5
W24A Lazy 6 Ranch, 58.11 348 ⇓P P 06 57 31.2 -0.4
baz=58,SNR=5.6
W23A Werner Place, 58.17 349 ⇓P P 06 57 31.5 -0.6
baz=58
W14A Seligman 58.17 355 ⇑P P 06 57 32.0 -0.1
baz=58,SNR=8.8
W15A Williams 58.20 354 ⇑P P 06 57 32.4 +0.1
baz=58,SNR=6.1
W26A Owens Ranch, T 58.21 346 ⇑P P 06 57 31.9 -0.4
baz=58
W20A Ramah 58.23 351 ⇓P P 06 57 31.7 -0.8
baz=58,SNR=5.7
W27A Bowe Ranch, En 58.23 346 ⇓P P 06 57 31.9 -0.6
baz=58
W19A Sanders 58.25 352 ⇓P P 06 57 32.7 +0.1
baz=58
W16A Flagstaff 58.28 354 ⇓P P 06 57 33.0 +0.1
baz=58,SNR=6.7
W13A Hualapai Mount 58.29 356 ⇓P P 06 57 33.0 +0.1
baz=58,SNR=5.6
W17A Winslow 58.29 353 ⇓P P 06 57 32.7 -0.2
baz=58,SNR=5.3
ANMO Albuquerque 58.38 349 P P 06 57 33.0 -0.6
comp=Z,2.3nm,0.8s,mb4.2,baz=344,slow=7.2,SNR=7.9
ANMO Albuquerque 58.38 349 eP P 06 57 33.4 -0.2
ANMO e 06 57 41.0
ANMO pmax pmax
comp=Z,10.0nm,1.0s
ANMO Albuquerque 58.38 349 eP P 06 57 33.4 -0.2
comp=Z,9.7nm,1.0s,mb4.8
ANMO e 06 57 41.0
WMOK Wichita Mounta 58.49 341 eP P 06 57 33.5 -0.8
WMOK e 06 57 41.4
WMOK pmax pmax
comp=Z,31nm,1.3s,mb5.2
WMOK Wichita Mounta 58.49 341 eP P 06 57 33.5 -0.8
comp=Z,31nm,1.3s,mb5.2
WMOK e 06 57 41.4
JSC Jenkinsville 58.50 324 eP P 06 57 34.1 -0.3
JSC e 06 57 42.3
OXF Oxford 58.51 332 eP P 06 57 33.7 -0.7
OXF e 06 57 42.3
OXF pmax pmax
comp=Z,16nm,1.1s,mb5.0
OXF Oxford 58.51 332 eP P 06 57 33.7 -0.8
comp=Z,16nm,1.1s,mb5.0
OXF e 06 57 42.3
EDW2 Edwards Air Fo 58.52 360 ⇑P P 06 57 34.4 -0.1
baz=58,SNR=5.5
MIAR Mount Ida 58.57 336 eP P 06 57 34.4 -0.5
MIAR e 06 57 42.3
MIAR pmax pmax
comp=Z,21nm,1.0s,mb5.1
MIAR Mount Ida 58.57 336 eP P 06 57 34.4 -0.5
comp=Z,21nm,1.0s,mb5.1
MIAR e 06 57 42.3
GMRC Granite Mounta 58.62 358 ⇓P P 06 57 35.4 +0.3
baz=58
X23A Hourglass Bar 58.75 349 ⇑P P 06 57 35.5 -0.6
baz=58
X26A CR and CF Fran 58.75 346 ⇓P P 06 57 35.9 -0.2
baz=58
X25A Clemmons Ranch 58.79 347 ⇑P P 06 57 36.0 -0.4
baz=59
X13A Yucca 58.80 356 ⇓P P 06 57 36.2 -0.2
baz=59
X20A Quemado 58.81 351 ⇑P P 06 57 36.1 -0.4
baz=59
X18A Snowflake 58.84 352 ⇑P P 06 57 36.3 -0.4
baz=59
X15A Humboldt 58.90 354 ⇓P P 06 57 37.1 -0.1
baz=59,SNR=5.8
X21A Alamocita Cree 58.90 350 ⇓P P 06 57 36.9 -0.2
baz=59
X14A Yava 58.91 355 ⇓P P 06 57 37.0 -0.2
baz=59,SNR=5.3
X19A St. Johns 58.93 352 ⇑P P 06 57 36.8 -0.6
baz=59,SNR=9.2
X16A Lo Mia Camp, P 58.96 354 ⇓P P 06 57 37.9 +0.3
baz=59,SNR=7.8
LPM Los Pinos Moun 59.02 349 eP P 06 57 37.7 -0.3
X17A Forest Lakes 59.03 353 ⇓P P 06 57 38.4 +0.3
baz=59
PDMCI Parker Dam,Lak 59.09 356 ⇑P P 06 57 38.6 +0.1
baz=59,SNR=5.4
BFSC Mount Baldy Ra 59.16 360 ⇓P P 06 57 38.4 -0.6
baz=59
MWC Mount Wilson 59.17 0 eP P 06 57 39.5 +0.5
MWC e 06 57 47.7
MWC pmax pmax
comp=Z,37nm,1.4s,mb5.2
MWC Mount Wilson 59.17 0 eP P 06 57 39.5 +0.5
comp=Z,37nm,1.4s,mb5.2
MWC e 06 57 47.7
BNM Barren Site 59.19 349 eP P 06 57 38.0 -1.2
comp=Z,9.3nm,1.3s,mb4.7
BNM e 06 57 46.9
IRM Iron Mountain 59.23 357 ⇓P P 06 57 39.1 -0.4
baz=59,SNR=6.1
Y21A Point of Rocks 59.34 350 ⇓P P 06 57 40.3 +0.1
baz=59
Y25A Mesa, Roswell 59.39 347 ⇑P P 06 57 40.0 -0.6
baz=59
BELC Belle Mtn. Jos 59.39 358 ⇑P P 06 57 40.9 +0.3
baz=59
Y24A Capitan 59.40 348 ⇑P P 06 57 39.9 -0.7
baz=59
Y23A Lovelace Mesa, 59.40 348 ⇑P P 06 57 40.0 -0.6
baz=59
Y22A Socorro 59.40 349 ⇑P P 06 57 40.1 -0.6
baz=59
Y19A Nutrioso 59.40 352 ⇓P P 06 57 40.6 0.0
baz=59,SNR=6.5
Y27A Causey 59.41 346 ⇑P P 06 57 39.6 -1.1
baz=59,SNR=6.0
Y15A Casa Rosa Ranc 59.43 355 ⇑P P 06 57 40.4 -0.4
baz=59
GOGA Godfrey 59.43 327 eP P 06 57 39.7 -1.2
GOGA e 06 57 47.9
GOGA pmax pmax
comp=Z,16nm,1.1s,mb5.0
GOGA Godfrey 59.43 327 eP P 06 57 39.7 -1.2
comp=Z,16nm,1.1s,mb5.0
GOGA e 06 57 47.9
Y20A Horse Springs, 59.44 351 ⇓P P 06 57 40.5 -0.4
baz=59
Y16A Circle Bar Ran 59.50 354 ⇑P P 06 57 40.9 -0.4
baz=59,SNR=8.3
Y13A Salome 59.57 356 ⇑P P 06 57 42.0 +0.1
baz=59
Y18A Canyon Day Jun 59.59 352 ⇓P P 06 57 41.9 0.0
baz=59,SNR=5.9
NHSC New Hope 59.63 323 eP P 06 57 42.1 -0.2
comp=Z,56nm,1.1s,mb5.5
Y17A Roosevelt 59.67 353 ⇑P P 06 57 42.3 -0.2
baz=59,SNR=5.2
BC3 Big Chuckawall 59.74 358 ⇑P P 06 57 42.9 0.0
baz=60
LRAL Lakeview Retre 59.91 330 eP P 06 57 43.0 -1.1
comp=Z,5.2nm,0.7s,mb4.7
LRAL e 06 57 51.0
Z24A Sheeppen Canyo 59.99 348 ⇑P P 06 57 44.3 -0.4
baz=60
Z26A Caprock 60.03 346 ⇑P P 06 57 44.1 -0.9
baz=60,SNR=5.5
Z25A Roswell 60.03 347 ⇑P P 06 57 43.9 -1.1
baz=60,SNR=8.5
Z16A Peralta Trail, 60.03 354 ⇓P P 06 57 44.6 -0.4
baz=60,SNR=5.9
Z17A San Carlos Hig 60.07 353 ⇓P P 06 57 45.2 0.0
baz=60
Z22A Elephant Butte 60.08 349 ⇑P P 06 57 45.0 -0.4
baz=60
Z15A Gila River Ind 60.09 354 ⇑P P 06 57 45.5 +0.2
baz=60
Z13A Yuma Proving G 60.19 356 ⇓P P 06 57 46.0 0.0
baz=60
Z20A Nine Sixteen R 60.24 351 ⇓P P 06 57 46.2 -0.2
baz=60
MONP Monument Peak 60.50 358 ⇑P P 06 57 48.4 +0.2
baz=60
119A Ashpeak Ranch, 60.59 352 ⇑P P 06 57 48.3 -0.5
baz=60
113A Mohawk Valley, 60.62 356 ⇑P P 06 57 48.8 -0.2
baz=60,SNR=5.4
124A Stringfield Ra 60.62 348 ⇑P P 06 57 48.8 -0.2
baz=60,SNR=7.3
114A Black Gap (USA 60.63 355 ⇑P P 06 57 48.5 -0.5
baz=60
125A Gardner Draw, 60.65 347 ⇓P P 06 57 48.2 -1.0
baz=60,SNR=5.4
126A Clayton Basin, 60.65 346 ⇓P P 06 57 48.4 -0.9
baz=60
118A Homack Ranch, 60.72 352 ⇑P P 06 57 49.5 -0.2
baz=60
DVTC Desert V Tower 60.73 358 ⇓P P 06 57 49.8 0.0
baz=60
117A Oracle 60.80 353 ⇓P P 06 57 50.2 0.0
baz=61,SNR=8.9
120A U Bar Ranch, L 60.80 351 ⇑P P 06 57 50.3 0.0
baz=61
121A Cookes Peak, D 60.81 350 ⇑P P 06 57 49.6 -0.7
baz=61,SNR=5.7
116A Eloy 60.81 354 ⇑P P 06 57 50.3 0.0
baz=61
TUC Tucson 61.06 353 eP P 06 57 52.3 +0.3
TUC e 06 57 59.2
TUC pmax pmax
comp=Z,15nm,1.0s,mb5.1
TUC Tucson 61.06 353 eP P 06 57 52.3 +0.4
comp=Z,15nm,1.0s,mb5.1
TUC e 06 57 59.2
GDL2 Guadalupe Moun 61.10 347 eP P 06 57 51.4 -0.9
GDL2 e 06 57 59.4
226A Malaga, Loving 61.24 347 ⇓P P 06 57 52.5 -0.7
baz=61
224A Cornudas Mount 61.24 348 ⇓P P 06 57 52.7 -0.5
baz=61
227A Bennet, Jal 61.28 346 ⇑P P 06 57 53.3 -0.1
baz=61
219A White Tail Can 61.35 352 ⇑P P 06 57 53.7 -0.3
baz=61,SNR=6.6
216A Three Points, 61.37 354 ⇑P P 06 57 54.0 -0.1
baz=61
218A Dragoon 61.39 352 ⇑P P 06 57 54.1 -0.1
baz=61,SNR=7.5
214A Organ Pipe Nat 61.42 355 ⇓P P 06 57 53.4 -1.0
baz=61
GYA Guiyang 61.43 134 P P 06 57 56.9 +2.3
GYA PP PP 07 00 14.8 +5.4
GYA ScP ScP 07 02 38.8 +0.9
GYA SS SS 07 10 18.4 +2.9
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.2
GYA pmax pmax
comp=Z,110nm,5.0s
GYA LR LR
comp=N,580nm,18.8s,MS4.8
GYA LR LR
comp=E,440nm,19.6s,MS4.8
GYA LR LR
comp=Z,530nm,18.4s,MS4.7
220A Playas Peak, P 61.44 351 ⇑P P 06 57 54.4 -0.2
baz=61,SNR=10
217A Green Valley 61.59 353 ⇓P P 06 57 55.8 +0.2
baz=61
324A Moseley Ranch, 61.87 348 ⇑P P 06 57 56.3 -1.2
baz=62
328A Wristen Ranch, 61.90 345 ⇑P P 06 57 56.6 -1.1
baz=62,SNR=6.5
318A Bisbee 61.92 352 ⇑P P 06 57 57.4 -0.5
baz=62
BRAL Brewton 61.93 330 eP P 06 57 56.8 -1.1
comp=Z,50nm,0.8s,mb5.7
BRAL e 06 58 04.3
325A Bean Ranch, Si 61.94 347 ⇓P P 06 57 57.3 -0.6
baz=62
326A Caldwell Ranch 61.98 346 ⇓P P 06 57 57.4 -0.8
baz=62
427A Hayter Ranch, 62.44 346 ⇓P P 06 58 00.6 -0.7
baz=62,SNR=9.1
425A Indio Mountain 62.52 347 ⇑P P 06 58 01.4 -0.4
baz=62,SNR=34
428A Kincaid Ranch, 62.55 345 ⇓P P 06 58 01.6 -0.4
baz=62,SNR=23
KMI Kunming 62.61 138 P P 06 58 04.6 +2.1
KMI pP pP 06 58 07.4 +2.3
KMI PP PP 07 00 24.4 +4.6
KMI S **S 07 06 30.6 +0.3**
KMI SS SS 07 10 35.9 +2.0
KMI pmax pmax
comp=Z,7.0nm,0.6s,mb5.0
KMI pmax pmax
comp=Z,39nm,3.6s
KMI LR LR
comp=N,120nm,18.4s,MS4.3

KMI LR LR
comp=E,170nm,18.4s,MS4.3
KMI LR LR
comp=Z,150nm,19.7s,MS4.2
426A McDonald Obser 62.62 346 ⇑P **P 06 58 01.6 -1.0**
baz=62,SNR=15
JCT Junction City 62.75 342 *e*P **P 06 58 02.8 -0.6**
JCT *e* 06 58 10.7
JCT pmax pmax
comp=Z,55nm,1.1s,mb5.6
JCT Junction City 62.75 342 *e*P **P 06 58 02.8 -0.6**
comp=Z,55nm,1.1s,mb5.6
JCT *e* 06 58 10.7
528A Cox Ranch, San 63.11 345 ⇓P **P 06 58 05.1 -0.8**
baz=63,SNR=6.1
527A Woodward Ranch 63.14 346 ⇓P **P 06 58 05.0 -0.9**
baz=63
526A Mary Lane Ranc 63.23 347 ⇑P **P 06 58 05.8 -0.8**
baz=63
626A Big Bend Ranch 63.74 347 ⇓P **P 06 58 09.2 -0.8**
baz=64
628A Black Gap, Mar 63.79 345 ⇓P **P 06 58 09.1 -1.2**
baz=64,SNR=14
627A Terlingua Ranc 63.83 346 ⇑P **P 06 58 09.6 -0.9**
baz=64,SNR=13
TXAR Lajitas Array 63.95 346 P **P 06 58 10.7 -0.7**
comp=Z,5.3nm,0.9s,mb4.6,baz=359,slow=3.1,SNR=35
TXAR LR LR 07 27 16.0
comp=Z,310nm,18.5s,MS4.5,baz=325,slow=37
CMAR Chiang Mai Arr 69.10 142 P **P 06 58 43.4 -1.0**
comp=Z,5.0nm,0.8s,mb4.5,baz=347,slow=7.3,SNR=19
LIC Lamto 82.57 247 *e*P **P 07 00 01.3 -0.1**
comp=Z,65nm,1.4s,mb5.2
LIC Lamto 82.57 247 *e*P **P 07 00 01.3 -0.1**
comp=Z,33nm,1.4s,mb5.2
LIC Lamto 82.57 247 *e*P **P 07 00 01.3 -0.1**
comp=Z,33nm,1.4s,mb5.2
STKA Stephens Creek 121.07 102 PKP PKPdf 07 06 27.3 -3.0
comp=Z,1.3nm,0.6s,baz=0.0,slow=3.0,SNR=3.6
MAW Mawson 154.25 179 PKPbc PKPbc 07 07 36.6 0.0
comp=Z,1.7nm,0.7s,baz=70,slow=9.0,SNR=4.6
MAW PKPab PKPab 07 07 50.6 -0.1
comp=Z,1.9nm,0.8s,baz=318,slow=10,SNR=4.1

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*ISCJB **15** 06:51:39.6±0.3,33°.61N±0°.02×54°.43E±0°.04,h10km, Error ellipse: s-maj=4.6km s-min=3.0km az=176.6*
*CSEM **15** 06:51:39.6±0.2,33°.65N×54°.41E,h2km,ML3.9, Error ellipse: s-maj=4.5km s-min=3.6km az=91.0*
*TEH **15** 06:51:40.5,33°.67N×54°.40E,h6km*
*THR **15** 06:51:40.1±0.9,33°.68N×54°.38E,h15km±12km,ML3.9*
*NEIC **15** 06:51:40.0,33°.70N×54°.40E,h5km,ML3.8(THR), MN4.0(TEH), After TEH.*

ISC 15 06:51:40.8±0.3,33°.62N±0°.02×54°.36E±0°.03,h10km,n84, σ1°.06/103,4D,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ICHK	**Chekchek**	**1.37**	**178**	Pg	**Pg**	**Pg**	**06 52 05.4**	**-1.7**
ICHK				Sg		**Sg**	**06 52 24.8**	**-0.2**
ICHK	**Chekchek**	**1.37**	**178**	*e*Sg		**Sg**	**06 52 25.0**	**0.0**
ICHK				*e*Pn		**Pn**	**06 52 05.6**	**-0.4**
ICHK				*e*			06 52 29.6	
comp=Z,28μm,0.1s								
NASN	**Na'in**	**1.54**	**238**	Pg		**Pn**	**06 52 08.0**	**-0.2**
NASN	**Na'in**	**1.54**	**238**	*e*Pg		**Pn**	**06 52 09.2**	**+0.9**
NASN				AML		AML	06 52 34.5	
comp=N,864nm,0.3s								
NASN				AML		AML	06 52 35.0	
comp=E,764nm,0.4s								
NASN	**Na'in**	**1.54**	**238**	*e*Pg		**Pn**	**06 52 08.9**	**+0.7**
ISAD	**Sadrabad**	**1.80**	**199**	Pn		**Pn**	**06 52 13.1**	**+1.3**
ISAD	**Sadrabad**	**1.80**	**199**	*e*Pn		**Pn**	**06 52 12.8**	**+1.0**
ISAD				*e*Sg		**Sg**	**06 52 38.9**	**+0.4**
ISAD				*e*			06 52 43.2	
comp=Z,25μm,0.1s								
ISAD	**Sadrabad**	**1.80**	**199**	*e*Pn		**Pn**	**06 52 12.8**	**+1.0**
ISAD				*e*Sg		**Sg**	**06 52 38.9**	**+0.4**
IZEF	**Zefreh**	**1.85**	**248**	⇓*e*Pn		**Pn**	**06 52 13.6**	**+1.1**
IZEF				*e*Sg		**Sg**	**06 52 40.1**	**-0.1**
IZEF				*e*			06 52 42.2	
comp=Z,18μm,0.2s								
IZEF	**Zefreh**	**1.85**	**248**	⇓*e*Pn		**Pn**	**06 52 13.6**	**+1.1**
IZEF				*e*Sg		**Sg**	**06 52 40.1**	**-0.1**
IANJ	**Anjilo**	**1.88**	**349**	*e*Pn		**Pn**	**06 52 11.8**	**-1.1**
IANJ				*e*			06 52 39.3	
comp=Z,7μm,0.1s								
IANJ	**Anjilo**	**1.88**	**349**	*e*Pn		**Pn**	**06 52 11.8**	**-1.1**
ISFB	**Sefidab**	**1.91**	**293**	Pn		**Pn**	**06 52 14.1**	**+0.8**
ISFB				Sg		**Sg**	**06 52 40.2**	**-1.8**
ISFB	**Sefidab**	**1.91**	**293**	⇓*e*Pn		**Pn**	**06 52 13.7**	**+0.4**
ISFB				*e*Sg		**Sg**	**06 52 39.9**	**-2.1**
ISFB				*e*			06 52 41.9	
comp=Z,9μm,0.2s								
ISFB	**Sefidab**	**1.91**	**293**	⇓*e*Pn		**Pn**	**06 52 13.7**	**+0.4**
ISFB				Sg		**Sg**	**06 52 40.2**	**-1.8**
ILAS	**Lasjerd**	**2.10**	**327**	Pn		**Pn**	**06 52 17.8**	**+1.8**
ILAS	**Lasjerd**	**2.10**	**327**	*e*Pn		**Pn**	**06 52 15.8**	**-0.2**
ILAS				*e*Sg		**Sg**	**06 52 45.8**	**-2.6**
ILAS				*e*			06 52 59.0	
comp=Z,7μm,0.3s								
ILAS	**Lasjerd**	**2.10**	**327**	*e*Pn		**Pn**	**06 52 15.8**	**-0.2**
ILAS				*e*Sg		**Sg**	**06 52 45.8**	**-2.6**
IMEH	**Mehriz**	**2.24**	**174**	Pn		**Pn**	**06 52 19.0**	**+1.2**
IMEH	**Mehriz**	**2.24**	**174**	*e*Pn		**Pn**	**06 52 18.9**	**+1.1**
IMEH				*e*Sg		**Sg**	**06 52 51.1**	**-1.5**
IMEH				*e*			06 52 56.3	
comp=Z,7μm,0.1s								
IMEH	**Mehriz**	**2.24**	**174**	*e*Pn		**Pn**	**06 52 18.9**	**+1.1**
IMEH				*e*Sg		**Sg**	**06 52 51.1**	**-1.5**
IBAF	**Bafgh**	**2.27**	**153**	Pn		**Pn**	**06 52 18.9**	**+0.6**
IBAF				Sg		**Sg**	**06 52 52.0**	**-1.6**
IBAF	**Bafgh**	**2.27**	**153**	*e*Pn		**Pn**	**06 52 18.7**	**+0.4**
IBAF				*e*Sg		**Sg**	**06 52 52.0**	**-1.6**
IBAF				*e*			06 52 56.8	
comp=Z,17μm,0.2s								
IBAF	**Bafgh**	**2.27**	**153**	*e*Pn		**Pn**	**06 52 18.7**	**+0.4**
IBAF				*e*Sg		**Sg**	**06 52 52.0**	**-1.6**
IGAR	**Gharneh**	**2.29**	**239**	*e*Pn		**Pn**	**06 52 19.7**	**+1.1**
IGAR				*e*Sg		**Sg**	**06 52 53.4**	**-1.1**
IGAR				*e*			06 52 58.0	
comp=Z,5μm,0.2s								
IKLH	**Kolahrood**	**2.34**	**263**	Pn		**Pn**	**06 52 21.2**	**+1.9**
IKLH	**Kolahrood**	**2.34**	**263**	*e*Pn		**Pn**	**06 52 20.1**	**+0.8**
IKLH				*e*Sg		**Sg**	**06 52 53.8**	**-2.3**
IKLH				*e*			06 52 54.9	
comp=Z,9μm,0.2s								
IKLH	**Kolahrood**	**2.34**	**263**	*e*Pn		**Pn**	**06 52 20.1**	**+0.8**
ISHM	**Shahmirzad**	**2.35**	**338**	Pn		**Pn**	**06 52 19.1**	**-0.3**
ISHM	**Shahmirzad**	**2.35**	**338**	*e*Pn		**Pn**	**06 52 19.3**	**-0.1**
ISHM				*e*			06 52 56.3	
comp=Z,7μm,0.2s								
ISHM	**Shahmirzad**	**2.35**	**338**	*e*Pn		**Pn**	**06 52 19.3**	**-0.1**
IFIR	**Firoozkooh**	**2.41**	**327**	Pn		**Pn**	**06 52 19.4**	**-0.8**
IFIR	**Firoozkooh**	**2.41**	**327**	*e*Pn		**Pn**	**06 52 19.6**	**-0.6**
IFIR				*e*			06 52 59.2	
comp=Z,5μm,0.2s								
IFIR	**Firoozkooh**	**2.41**	**327**	*e*Pn		**Pn**	**06 52 19.6**	**-0.6**
IVRN	**Varamin**	**2.57**	**303**	Pn		**Pn**	**06 52 22.4**	**-0.1**
IVRN	**Varamin**	**2.57**	**303**	*e*Pn		**Pn**	**06 52 22.6**	**+0.1**
IVRN				*e*Pn		**Pn**	**06 52 22.7**	**+0.2**
IVRN				*e*			06 52 31.1	
comp=Z,5μm,0.2s								
IVRN	**Varamin**	**2.57**	**303**	*e*Pn		**Pn**	**06 52 22.6**	**+0.1**
IKIA	**Kiasar**	**2.64**	**348**	Pn		**Pn**	**06 52 23.6**	**+0.2**
IKIA	**Kiasar**	**2.64**	**348**	*e*Pn		**Pn**	**06 52 23.5**	**+0.1**
IKIA				*e*			06 53 07.2	
comp=Z,2μm,0.3s								
IKIA	**Kiasar**	**2.64**	**348**	*e*Pn		**Pn**	**06 52 23.5**	**+0.1**
IDMV	**Damavand**	**2.74**	**316**	Pn		**Pn**	**06 52 24.8**	**+0.1**
IDMV	**Damavand**	**2.74**	**316**	*e*Pn		**Pn**	**06 52 24.9**	**+0.2**
IDMV				*e*			06 52 30.4	
comp=Z,3μm,0.3s								
IDMV	**Damavand**	**2.74**	**316**	*e*Pn		**Pn**	**06 52 24.9**	**+0.2**
IALA	**Alasht**	**2.77**	**333**	*e*Pn		**Pn**	**06 52 25.6**	**+0.5**
IALA				*e*			06 53 17.4	
comp=Z,3μm,0.3s								
IALA	**Alasht**	**2.77**	**333**	*e*Pn		**Pn**	**06 52 25.6**	**+0.5**
DAMV	**Damavand**	**2.81**	**316**	Pn		**Pn**	**06 52 26.0**	**+0.3**
DAMV	**Damavand**	**2.81**	**316**	*e*Pn		**Pn**	**06 52 26.1**	**+0.4**
DAMV	**Damavand**	**2.81**	**316**	*e*Pn		**Pn**	**06 52 26.1**	**+0.4**
IGLO	**Ghaloghah**	**2.91**	**352**	Pn		**Pn**	**06 52 28.7**	**+1.6**
IGLO	**Ghaloghah**	**2.91**	**352**	*e*Pn		**Pn**	**06 52 28.9**	**+1.8**
IGLO				*e*			06 53 26.3	
comp=Z,2μm,0.3s								
IGLO	**Ghaloghah**	**2.91**	**352**	Pn		**Pn**	**06 52 28.7**	**+1.6**
IPIR	**Pirpir**	**3.06**	**253**	Pn		**Pn**	**06 52 32.0**	**+2.9**
IPIR	**Pirpir**	**3.06**	**253**	*e*Pn		**Pn**	**06 52 32.1**	**+3.0**
IPIR				*e*			06 53 28.4	
comp=Z,3μm,0.2s								
IPIR	**Pirpir**	**3.06**	**253**	Pn		**Pn**	**06 52 32.0**	**+2.9**
IPRN	**Peran**	**3.10**	**328**	Pn		**Pn**	**06 52 30.5**	**+0.8**
IPRN	**Peran**	**3.10**	**328**	*e*Pn		**Pn**	**06 52 30.2**	**+0.5**
IPRN				*e*			06 53 28.0	
comp=Z,5μm,0.5s								
IPRN	**Peran**	**3.10**	**328**	*e*Pn		**Pn**	**06 52 30.2**	**+0.5**
CHTH	**Charan**	**3.50**	**311**	Pn		**Pn**	**06 52 35.0**	**-0.3**
CHTH	**Charan**	**3.50**	**311**	*e*Pn		**Pn**	**06 52 35.8**	**+0.5**
CHTH	**Charan**	**3.50**	**311**	*e*Pn		**Pn**	**06 52 35.8**	**+0.5**
THKV	**Tehran--Karaj**	**3.67**	**310**	*e*Pn		**Pn**	**06 52 38.9**	**+1.4**
THKV				AML		AML	06 53 48.3	
comp=N,143nm,0.5s								
THKV				AML		AML	06 53 48.8	
comp=E,172nm,0.5s								
IMHD	**Mahdasht**	**3.67**	**305**	*e*Pn		**Pn**	**06 52 37.5**	**-0.1**
IMHD				*e*			06 53 46.3	
comp=Z,1μm,0.2s								
IMHD	**Mahdasht**	**3.67**	**305**	*e*Pn		**Pn**	**06 52 37.5**	**-0.1**
ITEG	**Tejag**	**3.75**	**100**	*e*Pn		**Pn**	**06 52 38.4**	**-0.2**
ITEG				*e*			06 53 42.2	
comp=Z,5μm,0.2s								
ITEG	**Tejag**	**3.75**	**100**	*e*Pn		**Pn**	**06 52 38.4**	**-0.2**
KRBR	**Kerman**	**4.16**	**150**	Pn		**Pn**	**06 52 46.0**	**+1.6**
KRBR	**Kerman**	**4.16**	**150**	*e*Pn		**Pn**	**06 52 46.2**	**+1.8**
KRBR				AML		AML	06 54 02.9	
comp=N,272nm,0.7s								
KRBR				AML		AML	06 54 06.6	
comp=E,234nm,0.6s								
KRBR	**Kerman**	**4.16**	**150**	*e*Pn		**Pn**	**06 52 46.2**	**+1.8**
MRVT	**Maraveh tapeh**	**4.27**	**19**	*e*Pn		**Pn**	**06 52 45.6**	**-0.1**
MRVT	**Maraveh tapeh**	**4.27**	**19**	*e*Pn		**Pn**	**06 52 45.7**	**-0.1**
ISRV	**Sarvestan**	**4.36**	**194**	*e*Pn		**Pn**	**06 52 47.5**	**+0.5**
ISRV	**Sarvestan**	**4.36**	**194**	*e*Pn		**Pn**	**06 52 47.5**	**+0.5**
ISFR	**Sfrayin**	**4.54**	**40**	*e*Pn		**Pn**	**06 52 48.4**	**-1.0**
ISFR				*e*			06 54 08.9	
comp=Z,2μm,0.3s								
ISFR	**Sfrayin**	**4.54**	**40**	*e*Pn		**Pn**	**06 52 48.4**	**-1.0**
IAKL	**Akhelmad**	**4.67**	**49**	*e*Pn		**Pn**	**06 52 50.3**	**-1.0**
IAKL				*e*			06 54 20.6	
comp=Z,540nm,0.5s								
ISHV	**Shirvan**	**4.76**	**34**	Pn		**Pn**	**06 52 51.8**	**-0.7**
ISHV	**Shirvan**	**4.76**	**34**	*e*Pn		**Pn**	**06 52 51.7**	**-0.8**
ISHV				*e*			06 54 35.6	
comp=Z,1μm,0.4s								
ISHV	**Shirvan**	**4.76**	**34**	Pn		**Pn**	**06 52 51.8**	**-0.7**
BJRD	**Bojnurd**	**4.77**	**31**	*e*Pn		**Pn**	**06 52 52.8**	**+0.2**
BJRD	**Bojnurd**	**4.77**	**31**	*e*Pn		**Pn**	**06 52 52.8**	**+0.2**
IEMG	**Emamgholi**	**5.16**	**42**	*e*Pn		**Pn**	**06 52 57.1**	**-0.9**
IEMG				*e*			06 53 20.8	
comp=Z,215nm,0.3s								
IEMG	**Emamgholi**	**5.16**	**42**	*e*Pn		**Pn**	**06 52 57.1**	**-0.9**
ZNJK	**Zanjan**	**5.55**	**305**	*e*Pn		**Pn**	**06 53 04.3**	**+0.9**
ZNJK	**Zanjan**	**5.55**	**305**	*e*Pn		**Pn**	**06 53 04.3**	**+0.8**

GUC 15 07:09:41.0±0.4,31°.84S×72°.03W,h8km±1km,MD3.5, ML2.8,2C-1D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.46**	**96**	⇓*i*P		Pg	07 09 50.4	+0.5
CHNG				*i* S		Sg	07 09 57.3	+1.5
CMCH	**Combarbala**	**1.10**	**53**	*e*P		Pg	07 10 01.3	-0.8
CMCH				*i* S		Sg	07 10 16.5	+0.1
CMCH				AML		AML	07 10 18.1	
comp=E,2μm,0.6s								
PEL	**Peldehue**	**1.73**	**139**	⇑*i*P		Pn	07 10 11.1	-0.3
PEL				*i* S		Sn	07 10 34.2	+0.6
PEL				AML		AML	07 10 42.0	
comp=N,148nm,0.9s								
TLL	**Tololo Astrono**	**1.97**	**33**	*e*P		Pn	07 10 15.5	+0.9
TLL				*i* S		Sn	07 10 41.4	+1.9
TLL				AML		AML	07 10 48.9	
comp=N,83nm,0.6s								
CLCH	**Cerro Calan**	**2.00**	**141**	⇑*i*P		Pn	07 10 15.3	+0.2
CLCH				*i* S		Sn	07 10 41.9	+1.5
CLCH				AML		AML	07 11 00.8	
comp=E,67nm,0.5s								
FCH	**Farellones**	**2.09**	**136**	*e*P		Pn	07 10 17.6	+1.2
FCH				AML		AML	07 10 49.0	
comp=E,51nm,0.4s								

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*ISCJB **15** 07:12:22.0±0.7,37°.03N±0°.03×29°.16E±0°.04,h0km±8km, Error ellipse: s-maj=5.5km s-min=5.0km az=178.3*
*ISK **15** 07:12:21.6,37°.06N×29°.21E,h2km,MD2.9*
*DDA **15** 07:12:22.2,37°.05N×29°.13E,h13km±6km,Md2.9*
*CSEM **15** 07:12:22.2±0.1,37°.05N×29°.17E,h2km,MD2.9, Error ellipse: s-maj=2.1km s-min=1.3km az=18.0*

ISC 15 07:12:22.7±0.6,37°.04N±0°.03×29°.17E±0°.04,h8km±6km, n34,σ0°.87/50,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.29**	**65**	*e*PG		**Pg**	**07 12 27.7**	**-0.7**
GLHS				*e*SG		**Sg**	**07 12 31.9**	**-0.3**
GLHS	**Glhisar (BURDU**	**0.29**	**65**	*e*Pg		**Pg**	**07 12 27.7**	**-0.7**
GLHS				*e*Sg		**Sg**	**07 12 31.9**	**-0.3**
GOLH	**Golhisar**	**0.37**	**57**	*i* P		**Pg**	**07 12 29.3**	**-0.6**
GOLH				*i* S		**Sg**	**07 12 36.1**	**+1.2**
GOLH	**Golhisar**	**0.37**	**57**	*i* P		**Pg**	**07 12 29.3**	**-0.6**
GOLH				*i* S		**Sg**	**07 12 36.1**	**+1.3**
TURN	**Turunc**	**0.48**	**251**	*i* P		**Pg**	**07 12 35.5**	**+3.5**
TURN	**Turunc**	**0.48**	**251**	*i* P		**Pg**	**07 12 35.5**	**+3.5**
ELL	**Elmali**	**0.66**	**116**	*e*PG		**Pg**	**07 12 34.9**	**-0.4**
ELL				*e*SG		**Sg**	**07 12 44.4**	**+0.5**
ELL	**Elmali**	**0.66**	**116**	*e*Pg		**Pg**	**07 12 34.9**	**-0.4**
ELL				*e*Sg		**Sg**	**07 12 44.4**	**+0.5**
DNZL	**Cakiroluk**	**0.66**	**351**	*i* P		**Pg**	**07 12 34.6**	**-0.9**
DNZL	**Cakiroluk**	**0.66**	**351**	*i* P		**Pg**	**07 12 34.6**	**-0.8**
YER	**Yerkesik**	**0.72**	**278**	*e*PG		**Pg**	**07 12 37.0**	**+0.5**
YER	**Yerkesik**	**0.72**	**278**	*e*Pg		**Pg**	**07 12 37.0**	**+0.5**
DENT	**Denizli**	**0.73**	**351**	*e*PG		**Pg**	**07 12 35.9**	**-0.8**
DENT				*e*SG		**Sg**	**07 12 46.8**	**+0.7**
DENT	**Denizli**	**0.73**	**351**	*e*Pg		**Pg**	**07 12 35.9**	**-0.8**
DENT				*e*Sg		**Sg**	**07 12 46.8**	**+0.7**
AKAS	**Kas**	**0.87**	**156**	*i* P		**Pg**	**07 12 37.6**	**-1.8**
AKAS				*i* S		**Sg**	**07 12 54.7**	**+4.0**
AKAS	**Kas**	**0.87**	**156**	*i* P		**Pg**	**07 12 37.7**	**-1.7**
AKAS				*i* S		**Sg**	**07 12 54.7**	**+4.0**
MLSB	**Milas**	**1.14**	**284**	*e*PN		**Pn**	**07 12 44.6**	**-0.4**
MLSB	**Milas**	**1.14**	**284**	*e*Pn		**Pn**	**07 12 44.6**	**-0.4**
AYDN	**Tasoluk**	**1.21**	**302**	*i* P		**Pn**	**07 12 44.5**	**-1.3**
AYDN				*i* S		**Sb**	**07 13 01.2**	**-0.2**
AYDN	**Tasoluk**	**1.21**	**302**	*i* P		**Pn**	**07 12 44.5**	**-1.3**
AYDN				*i* S		**Sb**	**07 13 01.2**	**-0.2**
DAT	**Datca**	**1.31**	**257**	*e*PN		**Pn**	**07 12 48.5**	**+1.2**
DAT	**Datca**	**1.31**	**257**	*e*Pn		**Pn**	**07 12 48.5**	**+1.2**
KHL	**Karahalli**	**1.32**	**12**	*e*PN		**Pn**	**07 12 46.4**	**-0.9**
KHL	**Karahalli**	**1.32**	**12**	*e*Pn		**Pn**	**07 12 46.4**	**-0.9**
KHAL	**Karahalli**	**1.36**	**11**	*i* P		**Pn**	**07 12 47.7**	**-0.2**
KHAL				*i* S		**Sb**	**07 13 07.0**	**+1.2**
KHAL	**Karahalli**	**1.36**	**11**	*i* P		**Pn**	**07 12 47.7**	**-0.2**
KHAL				*i* S		**Sb**	**07 13 07.0**	**+1.2**
BDRM	**Kayabasi**	**1.38**	**272**	*i* P		**Pn**	**07 12 48.1**	**-0.1**
BDRM				*i* S		**Sb**	**07 13 05.9**	**-0.6**
BDRM	**Kayabasi**	**1.38**	**272**	*i* P		**Pn**	**07 12 48.1**	**-0.1**
BDRM				*i* S		**Sb**	**07 13 05.9**	**-0.6**
BODT	**Bodrum**	**1.49**	**272**	*e*PN		**Pn**	**07 12 50.6**	**+0.9**
BODT	**Bodrum**	**1.49**	**272**	*e*Pn		**Pn**	**07 12 50.6**	**+0.9**
SUTC	**Sutluce-Ispart**	**1.52**	**73**	*e*PN		**Pn**	**07 12 50.6**	**+0.4**
SUTC	**Sutluce-Ispart**	**1.52**	**73**	*e*Pn		**Pn**	**07 12 50.6**	**+0.4**
KULA	**Kula-Manisa**	**1.53**	**345**	*e*PN		**Pn**	**07 12 50.6**	**+0.3**
KULA	**Kula-Manisa**	**1.53**	**345**	*e*Pn		**Pn**	**07 12 50.6**	**+0.3**

IDC 15 07:33:00.3±1.0,13°.32N×125°.65E,h0km,mb3.8/7, mb1 4.0/7,mb1mx3.7/20,mbtmp3.8/7,Error ellipse: s-maj=46.8km s-min=17.3km az=69.0,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**24.12**	**4**	P		P	07 38 17.1	-0.7
1.5nm,0.8s,baz=179,slow=10.0,SNR=6.5								
CMAR	**Chiang Mai Arr**	**26.18**	**285**	P		P	07 38 36.3	-0.4
0.6nm,0.3s,baz=97,slow=8.1,SNR=4.9								
WRA	**Warramunga Arr**	**34.14**	**165**	P		P	07 39 45.3	-1.9
0.5nm,0.7s,baz=342,slow=10,SNR=4.7								
ASAR	**Alice Springs**	**37.64**	**168**	P		P	07 40 18.1	+0.9
1.3nm,0.7s,baz=347,slow=7.4,SNR=16								
SONM	**Songino Array**	**37.97**	**339**	P		P	07 40 20.5	+0.8
0.5nm,0.6s,baz=149,slow=9.2,SNR=4.0								
STKA	**Stephens Creek**	**47.47**	**162**	P		P	07 41 37.5	+0.4
4.6nm,0.7s,baz=342,slow=7.8,SNR=8.6								
MKAR	**Makanchi Array**	**49.26**	**321**	P		P	07 41 51.0	+0.2
0.7nm,0.8s,baz=117,slow=7.4,SNR=5.3								

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*CSEM **15** 07:58:30.7±1.8,35°.97N×28°.20E,h5km,ML2.5, Error ellipse: s-maj=28.3km s-min=18.4km az=165.0*
*ISK **15** 07:58:33.9,36°.11N×28°.02E,h5km,ML2.5*

ISC 15 07:58:31.1±2.7,36°.00N±0°.1×28°.18E±0°.09,h5km±10km,n10, σ1°.21/18,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.88**	**327**	*e*PG		**Pg**	**07 58 48.9**	**+0.8**
DAT				*e*SG		**Sg**	**07 58 59.7**	**+0.1**
DAT	**Datca**	**0.88**	**327**	*e*Pg		**Pg**	**07 58 48.9**	**+0.8**
DAT				*e*Sg		**Sg**	**07 58 59.7**	**+0.1**
TURN	**Turunc**	**0.94**	**21**	*i* P		**Pg**	**07 58 47.7**	**-1.5**
TURN	**Turunc**	**0.94**	**21**	*i* P		**Pg**	**07 58 47.7**	**-1.5**
TURN				*i* S		**Sg**	**07 59 00.7**	**-0.8**
YER	**Yerkesik**	**1.15**	**4**	*e*PG		**Pg**	**07 58 55.0**	**+1.9**
YER				*e*SG		**Sg**	**07 59 10.6**	**+2.7**
YER	**Yerkesik**	**1.15**	**4**	*e*Pg		**Pg**	**07 58 55.0**	**+1.9**
YER				*e*Sg		**Sg**	**07 59 10.6**	**+2.7**
BDRM	**Kayabasi**	**1.23**	**331**	*i* P		**Pg**	**07 58 53.4**	**-1.2**
BDRM	**Kayabasi**	**1.23**	**331**	*i* P		**Pg**	**07 58 53.4**	**-1.2**
BDRM				*i* S		**Sg**	**07 59 09.7**	**-0.8**
BODT	**Bodrum**	**1.28**	**327**	*e*PN		**Pn**	**07 58 56.2**	**+0.6**
BODT				*e*SN		**Sn**	**07 59 12.7**	**-0.4**
BODT	**Bodrum**	**1.28**	**327**	*e*Pn		**Pn**	**07 58 56.2**	**+0.6**
BODT				*e*Sn		**Sn**	**07 59 12.7**	**-0.4**

MAN 15 08:15:14,11°.34N×122°.86E,h21km,mb4.3,ML3.2,MS3.0, 1C-1D,Panay

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RCP	**Roxas**	**0.24**	**332**	⇑*i*P		Pb	08 15 21.5	+1.6
RCP				*i* S		Sb	08 15 27.2	+3.3
GUIM	**Jordan**	**0.76**	**201**	*e*P		Pb	08 15 28.7	+0.1
GUIM				*e*S		Sb	08 15 38.5	0.0
OTRP	**Odiongan**	**1.31**	**321**	*e*P		Pn	08 15 36.5	-0.5
OTRP				*e*S		Sn	08 15 50.4	-3.5
CUYO	**Cuyo Island**	**1.88**	**255**	*e*P		Pn	08 15 45.5	+0.6
SNPH	**Sibulan**	**2.02**	**170**	⇓*i*P		Pn	08 15 47.5	+0.6
SNPH				*i* S		Sn	08 16 15.5	+4.0

IDC 15 08:19:49.3±1.4,15°.45S×178°.38W,h0km,mb4.0/6, mb1 4.3/6,mb1mx3.9/19,mbtmp4.0/6,Error ellipse: s-maj=53.5km s-min=28.9km az=174.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.95**	**257**	P		P	08 26 36.6	+2.0
2.7nm,0.6s,baz=100,slow=6.1,SNR=3.8								
WRA	**Warramunga Arr**	**45.16**	**257**	P		P	08 28 07.3	-0.9
0.5nm,0.4s,baz=93,slow=8.0,SNR=20								
ASAR	**Alice Springs**	**45.53**	**252**	P		P	08 28 11.0	-0.1
8.2nm,0.5s,baz=84,slow=8.6,SNR=162								
FITZ	**Fitzroy Crossi**	**53.50**	**259**	P		P	08 29 11.2	-0.8
1.3nm,0.9s,baz=100,slow=6.1,SNR=2.6								
QSPA	**South Pole Qui**	**74.59**	**180**	P		P	08 31 30.3	+0.5
1.0nm,0.7s,baz=343,slow=19,SNR=9.9								
TXAR	**Lajitas Array**	**84.66**	**58**	P		P	08 32 25.5	+0.2
0.3nm,0.8s,baz=206,slow=7.1,SNR=4.0								

**IDC 15 08:30:29.7±1.7,7°.85S×124°.13E,h0km,mb3.4/1, mb1 3.6/4,mb1mx3.5/19,mbtmp3.5/4,ML3.2/3,Error ellipse: s-maj=122.4km s-min

ELBA	**Catalca**	**1.08 44**	⇑*i*P	**Pg**	**09 20 09.6**	**-0.7**
ELBA			*i*S	**Sg**	**09 20 23.9**	**-0.4**
ELBA	**Catalca**	**1.08 44**	*i*P	**Pg**	**09 20 09.6**	**-0.7**
ELBA			*i*S	**Sg**	**09 20 24.0**	**-0.4**
ARMT	**Armutlu**	**1.11 80**	*e*PN	**Pg**	**09 20 10.2**	**-0.6**
ARMT	**Armutlu**	**1.11 80**	*e*Pn	**Pg**	**09 20 10.3**	**-0.5**
MDNY	**Mudanya-Bursa**	**1.11 90**	*e*PN	**Pg**	**09 20 10.0**	**-0.9**
MDNY	**Mudanya-Bursa**	**1.11 90**	*e*Pn	**Pg**	**09 20 10.0**	**-0.9**
DURS	**Dursunbey**	**1.12 134**	⇓*i*P	**Pg**	**09 20 10.1**	**-0.9**
DURS			*i*S	**Sg**	**09 20 26.4**	**+1.0**
DURS	**Dursunbey**	**1.12 134**	*i*P	**Pg**	**09 20 10.1**	**-0.9**
DURS			*i*S	**Sg**	**09 20 26.4**	**+1.0**
ALN	**Alexandroupoli**	**1.17 297**	*e*P	**Pb**	**09 20 11.5**	**-0.6**
ALN			*e*S	**Sg**	**09 20 27.3**	**0.0**
ALN	**Alexandroupoli**	**1.17 297**	*e*P	**Pb**	**09 20 11.5**	**-0.6**
ALN			*e*S	**Sg**	**09 20 27.3**	**0.0**
ALN	**Alexandroupoli**	**1.17 297**	P	**Pb**	**09 20 11.6**	**-0.5**
ALN			S	**Sg**	**09 20 27.4**	**+0.1**
ALN	**Alexandroupoli**	**1.17 297**	*e*P	**Pb**	**09 20 11.5**	**-0.6**
ALN			*e*S	**Sg**	**09 20 27.3**	**0.0**
GADA	**Gvkgeada**	**1.19 262**	*e*PN	**Pn**	**09 20 11.6**	**-0.8**
GADA	**Gvkgeada**	**1.19 262**	*e*Pn	**Pn**	**09 20 11.6**	**-0.8**
CTKS	**Kestanelik-??a**	**1.19 43**	*e*PN	**Pn**	**09 20 11.4**	**-1.0**
CTKS	**Kestanelik-??a**	**1.19 43**	*e*Pn	**Pn**	**09 20 11.4**	**-1.0**
AYVA	**Ayvalik**	**1.21 208**	⇑*i*P	**Pb**	**09 20 12.0**	**-0.7**
AYVA			*i*S	**Sb**	**09 20 29.2**	**+0.8**
AYVA	**Ayvalik**	**1.21 208**	*i*P	**Pb**	**09 20 12.0**	**-0.7**
AYVA			*i*S	**Sb**	**09 20 29.2**	**+0.8**
CTYL	**Yal??k??y-??at**	**1.28 30**	*e*PN	**Pn**	**09 20 12.7**	**-1.0**
CTYL	**Yal??k??y-??at**	**1.28 30**	*e*Pn	**Pn**	**09 20 12.7**	**-1.0**
BGKT	**Bogazkoy**	**1.30 51**	*e*PN	**Pn**	**09 20 12.9**	**-1.1**
BGKT	**Bogazkoy**	**1.30 51**	*e*Pn	**Pn**	**09 20 12.9**	**-1.1**
ULDT	**Uludag**	**1.33 100**	⇑*i*P	**Pn**	**09 20 13.5**	**-0.8**
ULDT			*i*S	**Sb**	**09 20 31.9**	**+0.1**
ULDT	**Uludag**	**1.33 100**	*i*P	**Pn**	**09 20 13.5**	**-0.9**
ULDT			*i*S	**Sb**	**09 20 31.9**	**+0.1**
GEMT	**Gemlik**	**1.34 87**	*e*PN	**Pn**	**09 20 14.9**	**+0.3**
GEMT	**Gemlik**	**1.34 87**	*e*Pn	**Pn**	**09 20 14.9**	**+0.3**
ISK	**Istanbul-Kandi**	**1.42 60**	*e*PN	**Pn**	**09 20 13.8**	**-1.8**
ISK	**Istanbul-Kandi**	**1.42 60**	*e*Pn	**Pn**	**09 20 13.9**	**-1.7**
PRK	**Paraskevi**	**1.44 219**	*e*P	**Pn**	**09 20 15.2**	**-0.7**
PRK			*e*S	**Sn**	**09 20 34.4**	**-0.5**
PRK	**Paraskevi**	**1.44 219**	*e*P	**Pn**	**09 20 15.2**	**-0.7**
PRK			*e*S	**Sn**	**09 20 34.4**	**-0.5**
PRK	**Paraskevi**	**1.44 219**	P	**Pn**	**09 20 15.3**	**-0.6**
PRK			S	**Sn**	**09 20 35.6**	**+0.7**
PRK	**Paraskevi**	**1.44 219**	P	**Pn**	**09 20 15.3**	**-0.6**
PRK			*e*S	**Sn**	**09 20 34.4**	**-0.5**
YLV	**Yalova**	**1.50 82**	*e*PN	**Pn**	**09 20 17.2**	**+0.6**
YLV	**Yalova**	**1.50 82**	*e*Pn	**Pn**	**09 20 17.2**	**+0.5**
KLYT	**Kilyos**	**1.51 54**	*e*PN	**Pn**	**09 20 15.8**	**-1.0**
KLYT	**Kilyos**	**1.51 54**	*e*Pn	**Pn**	**09 20 15.8**	**-1.0**
AKS	**Akhisar**	**1.52 169**	*e*PN	**Pn**	**09 20 16.6**	**-0.5**
AKS	**Akhisar**	**1.52 169**	*e*Pn	**Pn**	**09 20 16.6**	**-0.5**
AKHS	**Akhisar**	**1.52 169**	⇑*i*P	**Pn**	**09 20 16.3**	**-0.8**
AKHS			*i*S	**Sn**	**09 20 36.5**	**-0.6**
AKHS	**Akhisar**	**1.52 169**	*i*P	**Pn**	**09 20 16.3**	**-0.8**
AKHS			*i*S	**Sn**	**09 20 36.5**	**-0.6**
EDRB	**Edirne**	**1.56 341**	*e*PN	**Pn**	**09 20 17.7**	**+0.1**
EDRB	**Edirne**	**1.56 341**	*e*Pn	**Pn**	**09 20 17.7**	**+0.2**
RDO	**Rodhopi**	**1.63 299**	*e*P	**Pn**	**09 20 18.3**	**-0.2**
RDO	**Rodhopi**	**1.63 299**	*e*P	**Pn**	**09 20 18.3**	**-0.2**
RDO	**Rodhopi**	**1.63 299**	P	**Pn**	**09 20 18.3**	**-0.2**
RDO	**Rodhopi**	**1.63 299**	*e*P	**Pn**	**09 20 18.3**	**-0.2**
DEMI	**Demirci**	**1.66 143**	⇓*i*P	**Pn**	**09 20 18.7**	**-0.3**
DEMI			*i*S	**Sn**	**09 20 40.8**	**+0.4**
DEMI	**Demirci**	**1.66 143**	*i*P	**Pn**	**09 20 18.7**	**-0.2**
DEMI			*i*S	**Sn**	**09 20 40.8**	**+0.4**
SIGR	**SIGRI**	**1.68 227**	P	**Pn**	**09 20 18.4**	**-0.8**
SIGR			S	**Sn**	**09 20 41.4**	**+0.5**
SIGR	**SIGRI**	**1.68 227**	P	**Pn**	**09 20 18.4**	**-0.8**
SIGR			S	**Sn**	**09 20 41.4**	**+0.5**
SIGR	**SIGRI**	**1.68 227**	P	**Pn**	**09 20 18.4**	**-0.8**
SIGR			S	**Sn**	**09 20 41.4**	**+0.5**
HRT	**Hereke**	**1.76 75**	*e*PN	**Pn**	**09 20 19.2**	**-1.1**
HRT	**Hereke**	**1.76 75**	*e*Pn	**Pn**	**09 20 19.2**	**-1.1**
ADVT	**Abdulvahap**	**1.77 87**	*e*PN	**Pn**	**09 20 20.7**	**+0.3**
ADVT	**Abdulvahap**	**1.77 87**	*e*Pn	**Pn**	**09 20 20.7**	**+0.3**
LIA	**Limnos Island**	**1.79 255**	*e*P	**Pn**	**09 20 20.8**	**+0.1**
LIA	**Limnos Island**	**1.79 255**	*e*P	**Pn**	**09 20 20.8**	**+0.1**
LIA	**Limnos Island**	**1.79 255**	P	**Pn**	**09 20 21.3**	**+0.6**
LIA			S	**Sn**	**09 20 45.2**	**+1.7**
LIA	**Limnos Island**	**1.79 255**	*e*P	**Pn**	**09 20 20.8**	**+0.1**
LIA			S	**Sn**	**09 20 45.2**	**+1.7**
SILT	**Sile**	**1.85 65**	*e*PN	**Pn**	**09 20 20.6**	**-1.0**
SILT	**Sile**	**1.85 65**	*e*Pn	**Pn**	**09 20 20.6**	**-1.0**
CAVI	**Cavuskoy**	**1.85 95**	*e*PN	**Pn**	**09 20 21.8**	**+0.2**
CAVI	**Cavuskoy**	**1.85 95**	*e*Pn	**Pn**	**09 20 21.8**	**+0.2**
IZM	**Izmir**	**1.98 184**	*e*PN	**Pn**	**09 20 23.7**	**+0.4**
IZM	**Izmir**	**1.98 184**	*e*Pn	**Pn**	**09 20 23.7**	**+0.4**
KDZ	**Kurdzhali**	**1.98 311**	P	**Pn**	**09 20 23.4**	**0.0**
KDZ			Pg	**Pg**	**09 20 27.1**	**-0.5**
KDZ	**Kurdzhali**	**1.98 311**	P	**Pn**	**09 20 23.4**	**0.0**
BLCB	**Balcova**	**2.01 189**	*e*PN	**Pn**	**09 20 24.5**	**+0.7**
BLCB	**Balcova**	**2.01 189**	P	**Pn**	**09 20 23.1**	**-0.7**
BLCB	**Balcova**	**2.01 189**	P	**Pn**	**09 20 23.1**	**-0.7**
BLCB	**Balcova**	**2.01 189**	P	**Pn**	**09 20 23.1**	**-0.7**
BLCB	**Balcova**	**2.01 189**	*e*Pn	**Pn**	**09 20 24.5**	**+0.7**
GDZ	**Gediz**	**2.04 128**	*i*P	**Pn**	**09 20 24.0**	**-0.2**
GDZ			*i*S	**Sn**	**09 20 52.8**	**+3.1**
GDZ	**Gediz**	**2.04 128**	*i*P	**Pn**	**09 20 24.0**	**-0.1**
GDZ			*i*S	**Sn**	**09 20 52.8**	**+3.0**
KULA	**Kula-Manisa**	**2.09 152**	*e*PN	**Pn**	**09 20 24.6**	**-0.3**
KULA	**Kula-Manisa**	**2.09 152**	*e*Pn	**Pn**	**09 20 24.6**	**-0.2**
URLA	**Izmir**	**2.11 198**	*i*P	**Pn**	**09 20 24.1**	**-1.1**
URLA	**Izmir**	**2.11 198**	*i*P	**Pn**	**09 20 24.1**	**-1.1**
JMB	**Yambol**	**2.18 343**	P	**Pn**	**09 20 26.3**	**+0.2**
JMB			S	**Sn**	**09 20 55.1**	**+1.8**
JMB	**Yambol**	**2.18 343**	P	**Pn**	**09 20 26.3**	**+0.2**
JMB			S	**Sn**	**09 20 55.1**	**+1.8**
JMB	**Yambol**	**2.18 343**	P	**Pn**	**09 20 27.0**	**+0.9**
JMB	**Yambol**	**2.18 343**	P	**Pn**	**09 20 26.3**	**+0.2**
JMB			S	**Sn**	**09 20 55.1**	**+1.8**
DIM	**Dimitrovgrad**	**2.20 320**	P	**Pn**	**09 20 26.0**	**-0.4**
DIM			Pg	**Pg**	**09 20 30.4**	**-1.3**
DIM	**Dimitrovgrad**	**2.20 320**	P	**Pn**	**09 20 26.0**	**-0.4**
GPA	**Golpazari**	**2.20 91**	*e*PN	**Pn**	**09 20 26.8**	**+0.4**
GPA	**Golpazari**	**2.20 91**	*e*Pn	**Pn**	**09 20 26.8**	**+0.4**
SPNC	**Sapanca-Adapaz**	**2.22 81**	*e*PN	**Pn**	**09 20 26.8**	**+0.2**
SPNC	**Sapanca-Adapaz**	**2.22 81**	*e*Pn	**Pn**	**09 20 26.8**	**+0.2**
CHOS	**Chios island**	**2.25 209**	*e*P	**Pn**	**09 20 26.1**	**-1.0**
CHOS	**Chios island**	**2.25 209**	P	**Pn**	**09 20 26.3**	**-0.8**
CHOS			S	**Sn**	**09 20 56.7**	**+1.6**
CHOS	**Chios island**	**2.25 209**	P	**Pn**	**09 20 26.3**	**-0.8**
CHOS			S	**Sn**	**09 20 56.7**	**+1.6**
KAVA	**Kavala**	**2.30 287**	P	**Pn**	**09 20 27.3**	**-0.5**
KAVA			S	**Sn**	**09 20 53.5**	**-2.8**
KAVA	**Kavala**	**2.30 287**	P	**Pn**	**09 20 27.3**	**-0.5**
KAVA			S	**Sn**	**09 20 53.5**	**-2.8**
GULT	**Gulveren**	**2.36 88**	*e*PN	**Pn**	**09 20 29.4**	**+0.9**
GULT	**Gulveren**	**2.36 88**	*e*Pn	**Pn**	**09 20 29.4**	**+0.9**
BORA	**Eskisehir**	**2.37 101**	*i*P	**Pn**	**09 20 28.3**	**-0.4**
BORA			*i*S	**Sn**	**09 21 05.9**	**+7.9**
BORA	**Eskisehir**	**2.37 101**	*i*P	**Pn**	**09 20 28.3**	**-0.4**
RZN	**Rozhen**	**2.44 303**	*i*P	**Pn**	**09 20 29.7**	**+0.1**
RZN	**Rozhen**	**2.44 303**	*i*P	**Pn**	**09 20 29.7**	**+0.1**
ALT	**Altintas**	**2.45 122**	*e*PN	**Pn**	**09 20 30.6**	**+0.7**
ALT	**Altintas**	**2.45 122**	*e*Pn	**Pn**	**09 20 30.6**	**+0.8**
KHAL	**Karahalli**	**2.56 141**	*i*P	**Pn**	**09 20 31.4**	**+0.1**
KHAL			*i*S	**Sn**	**09 21 08.2**	**+5.5**
KHAL	**Karahalli**	**2.56 141**	*i*P	**Pn**	**09 20 31.4**	**+0.1**
KHL	**Karahalli**	**2.62 141**	*e*PN	**Pn**	**09 20 32.5**	**+0.4**
KHL	**Karahalli**	**2.62 141**	*e*Pn	**Pn**	**09 20 32.5**	**+0.4**
OUR	**Ouranopolis**	**2.63 270**	P	**Pn**	**09 20 31.1**	**-1.2**
OUR			S	**Sn**	**09 21 05.1**	**+0.6**
OUR	**Ouranopolis**	**2.63 270**	P	**Pn**	**09 20 31.1**	**-1.2**
OUR			S	**Sn**	**09 21 05.1**	**+0.6**
OUR	**Ouranopolis**	**2.63 270**	P	**Pn**	**09 20 31.1**	**-1.2**
OUR			S	**Sn**	**09 21 05.1**	**+0.6**
HENT	**Hendek**	**2.68 79**	*i*P	**Pn**	**09 20 31.8**	**-1.2**
HENT	**Hendek**	**2.68 79**	*i*P	**Pn**	**09 20 31.8**	**-1.2**
PLD	**Plovdiv**	**2.69 311**	P	**Pn**	**09 20 33.0**	**0.0**
PLD	**Plovdiv**	**2.69 311**	P	**Pn**	**09 20 33.0**	**0.0**
PLD	**Plovdiv**	**2.69 311**	*i*P	**Pn**	**09 20 33.0**	**0.0**
PLD	**Plovdiv**	**2.69 311**	P	**Pn**	**09 20 33.0**	**0.0**
AYDN	**Tasoluk**	**2.73 172**	⇑*i*P	**Pn**	**09 20 32.8**	**-0.9**
AYDN			*i*S	**Sn**	**09 21 02.8**	**-4.2**
AYDN	**Tasoluk**	**2.73 172**	*i*P	**Pn**	**09 20 32.8**	**-0.9**
AYDN			*i*S	**Sn**	**09 21 02.8**	**-4.1**
ESKT	**Eskisehir**	**2.77 107**	*e*PN	**Pn**	**09 20 35.1**	**+1.0**
ESKT	**Eskisehir**	**2.77 107**	*e*Pn	**Pn**	**09 20 35.1**	**+1.0**
PRD	**Provadia**	**2.82 360**	P	**Pn**	**09 20 35.4**	**+0.5**
PRD	**Provadia**	**2.82 360**	P	**Pn**	**09 20 35.4**	**+0.5**
NVR	**Nevrokopi**	**2.88 291**	*e*P	**Pn**	**09 20 35.1**	**-0.5**
NVR	**Nevrokopi**	**2.88 291**	*e*P	**Pn**	**09 20 35.1**	**-0.5**
NVR	**Nevrokopi**	**2.88 291**	*e*P	**Pn**	**09 20 35.1**	**-0.5**
MDU	**Mudurnu**	**2.89 87**	*e*PN	**Pn**	**09 20 36.2**	**+0.4**
MDU	**Mudurnu**	**2.89 87**	*e*Pn	**Pn**	**09 20 36.2**	**+0.3**
DNZL	**Cakiroluk**	**2.96 154**	*i*P	**Pn**	**09 20 38.0**	**+1.1**
DNZL	**Cakiroluk**	**2.96 154**	*i*P	**Pn**	**09 20 38.0**	**+1.1**
AOS	**Alonnisos**	**2.99 247**	P	**Pn**	**09 20 37.6**	**+0.4**
AOS			S	**Sn**	**09 21 14.0**	**+0.8**
AOS	**Alonnisos**	**2.99 247**	P	**Pn**	**09 20 37.6**	**+0.4**
AOS			S	**Sn**	**09 21 14.0**	**+0.8**
AOS	**Alonnisos**	**2.99 247**	P	**Pn**	**09 20 37.6**	**+0.4**
AOS			S	**Sn**	**09 21 14.0**	**+0.8**
SHUT	**Suhut-Afyon**	**3.03 126**	*e*PN	**Pn**	**09 20 38.1**	**+0.4**
SHUT	**Suhut-Afyon**	**3.03 126**	*e*Pn	**Pn**	**09 20 38.1**	**+0.4**
PLG	**Polygyros**	**3.04 271**	*e*P	**Pn**	**09 20 37.2**	**-0.7**
PLG	**Polygyros**	**3.04 271**	*e*P	**Pn**	**09 20 37.2**	**-0.7**
PLG	**Polygyros**	**3.04 271**	P	**Pn**	**09 20 37.4**	**-0.5**
PLG	**Polygyros**	**3.04 271**	P	**Pn**	**09 20 37.4**	**-0.5**
MMB	**Musomiste**	**3.05 295**	*i*P	**Pn**	**09 20 37.7**	**-0.4**
MMB	**Musomiste**	**3.05 295**	*i*P	**Pn**	**09 20 37.7**	**-0.4**
SZH	**Strazhica**	**3.10 339**	P	**Pn**	**09 20 38.7**	**0.0**
SZH	**Strazhica**	**3.10 339**	P	**Pn**	**09 20 38.7**	**0.0**
SOH	**Sokhos**	**3.13 279**	*e*P	**Pn**	**09 20 38.7**	**-0.5**
SOH	**Sokhos**	**3.13 279**	*e*P	**Pn**	**09 20 38.7**	**-0.5**
SOH	**Sokhos**	**3.13 279**	*e*P	**Pn**	**09 20 38.7**	**-0.5**
BOLV	**Bolvadin**	**3.19 120**	*i*P	**Pn**	**09 20 40.4**	**+0.4**
BOLV			*e*S	**Sg**	**09 21 29.7**	**-2.1**
BOLV	**Bolvadin**	**3.19 120**	*i*P	**Pn**	**09 20 40.3**	**+0.4**
KDZE	**Karadeniz Ereo**	**3.19 72**	*e*PN	**Pn**	**09 20 40.4**	**+0.5**
KDZE	**Karadeniz Ereo**	**3.19 72**	*e*Pn	**Pn**	**09 20 40.4**	**+0.5**
PVL	**Pavlikeni**	**3.24 332**	P	**Pn**	**09 20 40.9**	**+0.2**
PVL	**Pavlikeni**	**3.24 332**	P	**Pn**	**09 20 40.9**	**+0.2**
PGB	**Panagyurishte**	**3.27 313**	*i*P	**Pn**	**09 20 40.9**	**-0.2**
PGB	**Panagyurishte**	**3.27 313**	*i*P	**Pn**	**09 20 40.9**	**-0.2**
SVRH	**Sivrihisar-ESK**	**3.28 105**	*e*PN	**Pn**	**09 20 42.3**	**+1.1**
SVRH	**Sivrihisar-ESK**	**3.28 105**	*e*Pn	**Pn**	**09 20 42.3**	**+1.1**
NEO	**Neokhori**	**3.41 253**	*e*P	**Pn**	**09 20 43.4**	**+0.4**
NEO	**Neokhori**	**3.41 253**	*e*P	**Pn**	**09 20 43.4**	**+0.4**
NEO	**Neokhori**	**3.41 253**	*e*P	**Pn**	**09 20 43.4**	**+0.4**
GOLH	**Golhisar**	**3.55 151**	*i*P	**Pn**	**09 20 45.4**	**+0.5**
GOLH	**Golhisar**	**3.55 151**	*i*P	**Pn**	**09 20 45.4**	**+0.5**
KKB	**Krupnik**	**3.60 296**	P	**Pn**	**09 20 45.6**	**-0.1**
KKB	**Krupnik**	**3.60 296**	P	**Pn**	**09 20 45.6**	**-0.1**
APE	**Apeiranthos**	**3.62 205**	*e*PN	**Pn**	**09 20 47.7**	**+1.8**
APE	**Apeiranthos**	**3.62 205**	⇑*i*P	**Pn**	**09 20 44.8**	**-1.1**
APE	**Apeiranthos**	**3.62 205**	⇑*i*P	**Pn**	**09 20 44.8**	**-1.1**
APE	**Apeiranthos**	**3.62 205**	*e*Pn	**Pn**	**09 20 47.7**	**+1.8**
KIZT	**Kizilcal**	**3.75 112**	*e*PN	**Pn**	**09 20 48.8**	**+1.1**
KIZT	**Kizilcal**	**3.75 112**	*e*Pn	**Pn**	**09 20 48.8**	**+1.2**
VAY	**Valandovo**	**3.80 286**	*e*Pn	**Pn**	**09 20 46.2**	**-2.2**
VTS	**Vitosha**	**3.87 306**	P	**Pn**	**09 20 49.6**	**+0.3**
VTS	**Vitosha**	**3.87 306**	P	**Pn**	**09 20 49.6**	**+0.3**
VTS	**Vitosha**	**3.87 306**	P	**Pn**	**09 20 49.6**	**+0.3**
VTS	**Vitosha**	**3.87 306**	⇑*i*P	**Pn**	**09 20 49.7**	**+0.4**
VTS	**Vitosha**	**3.87 306**	S	**Sn**	**09 21 38.9**	**+4.1**
VTS	**Vitosha**	**3.87 306**	P	**Pn**	**09 20 49.6**	**+0.3**
VTS			S	**Sn**	**09 21 38.9**	**+4.1**
MPEP	**Malo Peshtene**	**4.06 318**	*i*P	**Pn**	**09 20 52.0**	**+0.1**
SAFT	**Safranbolu**	**4.08 76**	*e*PN	**Pn**	**09 20 54.1**	**+1.8**
SAFT	**Safranbolu**	**4.08 76**	*e*Pn	**Pn**	**09 20 54.1**	**+1.9**
LOD	**Lodumlu**	**4.12 95**	*e*PN	**Pn**	**09 20 54.1**	**+1.3**
LOD	**Lodumlu**	**4.12 95**	*e*Pn	**Pn**	**09 20 54.1**	**+1.4**
TIRR	**Tirgusor**	**4.14 10**	*e*PN	**Pn**	**09 20 54.3**	**+1.2**
TIRR			*e*Sn	**Sn**	**09 21 40.2**	**-1.5**
TIRR	**Tirgusor**	**4.14 10**	⇑*i*P	**Pn**	**09 20 51.6**	**-1.5**
TIRR	**Tirgusor**	**4.14 10**	⇑*i*P	**Pn**	**09 20 51.6**	**-1.5**
TIRR	**Tirgusor**	**4.14 10**	*e*Pn	**Pn**	**09 20 54.3**	**+1.2**
TIRR			S	**Sn**	**09 21 39.2**	**-2.5**
TIRR			*e*Sn	**Sn**	**09 21 40.2**	**-1.5**
KONT	**Konya--Tatoy**	**4.54 121**	*e*PN	**Pn**	**09 21 00.1**	**+1.6**
KONT	**Konya--Tatoy**	**4.54 121**	*e*Pn	**Pn**	**09 21 00.1**	**+1.6**
BR131	**Keskin Array S**	**4.81 96**	*e*Pn	**Pn**	**09 21 03.5**	**+1.2**
BR131	**Keskin Array S**	**4.81 96**	*e*Pn	**Pn**	**09 21 03.5**	**+1.3**
CFR	**Carcaliu**	**4.83 6**	⇑*i*P	**Pn**	**09 21 01.8**	**-0.7**
CFR	**Carcaliu**	**4.83 6**	⇑*i*P	**Pn**	**09 21 01.8**	**-0.7**
BARS	**Barje**	**4.86 302**	⇓*i*Pn	**Pn**	**09 21 03.4**	**+0.4**
TLCR		**4.91 12**	⇑*i*P	**Pn**	**09 21 02.1**	**-1.6**
TLCR		**4.91 12**	⇑*i*P	**Pn**	**09 21 02.1**	**-1.6**
MLR	**Muntele Rosu**	**5.23 348**	⇑*i*P	**Pn**	**09 21 09.2**	**+1.3**
MLR	**Muntele Rosu**	**5.23 348**	⇑*i*P	**Pn**	**09 21 09.2**	**+1.3**
MLR			S	**Sn**	**09 22 09.3**	**+0.9**
BOLS	**Boljevac**	**5.34 312**	*e*Pn	**Pn**	**09 21 08.7**	**-0.8**
VOIR		**5.35 342**	⇓*i*P	**Pn**	**09 21 09.9**	**+0.2**
VOIR		**5.35 342**	⇓*i*P	**Pn**	**09 21 09.9**	**+0.2**
VOIR			S	**Sn**	**09 22 09.7**	**-1.7**
PLOR	**Plostina**	**5.50 354**	⇑*i*P	**Pn**	**09 21 11.6**	**-0.1**
PLOR	**Plostina**	**5.50 354**	⇑*i*P	**Pn**	**09 21 11.6**	**-0.1**
PLOR			S	**Sn**	**09 22 15.6**	**+0.5**
VRI	**Vrincioaia**	**5.51 355**	⇓*i*P	**Pn**	**09 21 11.5**	**-0.4**
VRI	**Vrincioaia**	**5.51 355**	⇓*i*P	**Pn**	**09 21 11.5**	**-0.4**
DOPR	**Dopca**	**5.78 346**	⇑*i*P	**Pn**	**09 21 16.2**	**+0.6**
DOPR	**Dopca**	**5.78 346**	⇑*i*P	**Pn**	**09 21 16.2**	**+0.6**
GRUS	**Gruza**	**6.10 307**	*e*Pn	**Pn**	**09 21 18.7**	**-1.2**
TESR		**6.16 355**	⇑*i*P	**Pn**	**09 21 21.3**	**+0.6**
TESR		**6.16 355**	⇑*i*P	**Pn**	**09 21 21.3**	**+0.6**
DIVS	**Divibare**	**6.65 306**	*e*Pn	**Pn**	**09 21 27.0**	**-0.6**
BZS	**Buzias**	**6.75 323**	⇑*i*P	**Pn**	**09 21 27.8**	**-1.1**
BZS	**Buzias**	**6.75 323**	⇑*i*P	**Pn**	**09 21 27.8**	**-1.1**
DRGR		**7.27 333**	⇑*i*P	**Pn**	**09 21 36.5**	**+0.5**
DRGR		**7.27 333**	⇑*i*P	**Pn**	**09 21 36.5**	**+0.5**
BURAR	**Bucovina Array**	**7.41 348**	⇓*i*P	**Pn**	**09 21 39.3**	**+1.4**
BURAR	**Bucovina Array**	**7.41 348**	⇓*i*P	**Pn**	**09 21 39.3**	**+1.4**
BUR08	**Bucovina Ar. S**	**7.44 348**	*e*Pn	**Pn**	**09 21 39.1**	**+0.8**
BUR08			*e*Sn	**Sn**	**09 23 03.4**	**+0.6**
BUR08	**Bucovina Ar. S**	**7.44 348**	*e*Pn	**Pn**	**09 21 39.1**	**+0.8**
BUR08			*e*Sn	**Sn**	**09 23 03.4**	**+0.5**
PKSM	**Moragy**	**8.66 315**	⇓*i*P	**Pn**	**09 21 55.0**	**-0.1**
PKSM	**Moragy**	**8.66 315**	⇓*i*P	**Pn**	**09 21 55.0**	**-0.1**

IDC ***15*** *09:26:20.0±0.5, 31°.54N×104°.15E, h0km, mb4.7/20, mb1 4.8/22, mb1mx4.7/29, mbtmp4.7/22, ML3.9/2, MS3.8/13, Ms1 3.8/13, ms1mx3.6/31, Error ellipse: s-maj=17.2km s-min=11.8km az=51.0*

ISCJB ***15*** *09:26:20.7±0.8, 31°.50N±0°.02×104°.13E±0°.02, h12km±5km, mb4.9/165, MS4.1/34, Error ellipse: s-maj=3.4km s-min=2.8km az=35.1*

BJI ***15*** *09:26:21.4, 31°.48N×104°.27E, h15km, mB4.8/21, mb4.8/31, ML4.9/21, Ms4.6/48, Ms7 4.4/39*

NEIC ***15*** *09:26:22.2±0.1, 31°.56N×104°.12E, h10km, mb5.0/98, MS4.3/6, Error ellipse: s-maj=4.1km s-min=3.0km az=41.0*

NEIC Felt at Nanchong.

MOS ***15*** *09:26:23.5±1.0, 31°.53N×104°.22E, h33km, mb5.1/75, MS4.2/18, Error ellipse: s-maj=6.9km s-min=4.3km az=113.8*

DJA ***15*** *09:26:28, 30°.41N×103°.29E, h27km, mb5.5/28*

SZGRF ***15*** *09:26:36.4, 32°.76N×103°.35E, h33km, mb5.3, MS4.5, Sichuan, China*

ISC 15 09:26:21.6±0.7, 31°.54N±0°.02×104°.12E±0°.02, h5km±4km, h13km±1.3km:pP-P, n456, σ1§27/457, mb4.9/165, MS4.1/34, 31C-14D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.70**	**207**	⇑*i*Pg	**Pg**	**09 26 35.3**	**+0.3**
CD2				Sg	**Sg**	**09 26 45.6**	**+1.5**
CD2				smax			
	comp=N,48μm,0.9s						
LZH	**Lanzhou**	**4.54**	**357**	Pn	**Pn**	**09 27 33.3**	**+2.3**
LZH				Sg	**Sg**	**09 28 46.5**	**-1.0**
LZH				smax			
	comp=N,1μm,0.8s						
LZH				smax			
	comp=E,1μm,0.7s						
LZH				LR	LR		
	comp=E,10μm,6.4s						
LZH				LR	LR		
	comp=Z,13μm,7.3s						
XAN	**Xi'an**	**4.75**	**57**	Pn	**Pn**	**09 27 33.5**	**-0.3**
XAN				Sn	**Sn**	**09 28 29.5**	**+0.3**
XAN				Sg	**Sg**	**09 28 53.1**	**-1.0**
XAN				smax			
	comp=N,4μm,1.0s						
XAN				smax			
	comp=E,2μm,0.7s						
XAN				LR	LR		
	comp=N,2μm,8.8s						
XAN				LR	LR		
	comp=E,1μm,10.4s						
ENH	**Enshi**	**4.78**	**104**	*e*Pn	**Pn**	**09 27 33.8**	**-0.4**
ENH				*e*Sn	**Sn**	**09 28 31.2**	**+1.2**
GYA	**Guiyang**	**5.53**	**156**	Pn	**Pn**	**09 27 45.3**	**+0.7**
GYA				Sn	**Sn**	**09 28 50.0**	**+1.5**
GYA				smax			
	comp=N,230nm,0.8s						
GYA				smax			
	comp=E,190nm,0.8s						
KMI	**Kunming**	**6.51**	**191**	⇑Pn	**Pn**	**09 27 58.9**	**+0.9**
KMI				Sn	**Sn**	**09 29 10.8**	**-1.8**
KMI				smax			
	comp=N,380nm,0.9s						
KMI				smax			
	comp=E,590nm,0.7s						
KMI				LR	LR		
	comp=N,4μm,9.2s						
KMI				LR	LR		
	comp=E,6μm,9.7s						
KMI				LR	LR		
	comp=Z,2μm,11.8s						
GTA	**Gaotai**	**8.60**	**337**	⇓P	**Pn**	**09 28 30.6**	**+3.9**
GTA				pP		09 28 34.6	
GTA				sP		09 28 36.8	
GTA				S	**Sn**	**09 30 07.8**	**+3.7**
GTA				sS		09 30 13.5	
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,100nm,6.8s						
GTA				LR	LR		
	comp=N,2μm,13.1s						
GTA				LR	LR		
	comp=E,2μm,11.7s						
GTA				LR	LR		
	comp=Z,2μm,13.7s	

SSE LR LR
comp=Z,2μm,9.9s
TAPN Taplejung 14.89 258 *e*P **Pn 09 29 50.6 -2.2**
comp=Z,96nm,1.0s
BDT Bhumibol Dam 14.97 199 P **Pn 09 29 57.0 +3.1**
comp=Z,36nm,1.0s
ODAN Odare 15.34 257 *e*P **Pn 09 29 55.9 -2.8**
comp=Z,66nm,0.5s
RAMN Ramite 15.96 258 *e*P **Pn 09 30 04.1 -2.8**
comp=Z,86nm,0.8s
JIRN Jiri 16.07 261 *e*P **Pn 09 30 06.1 -2.2**
comp=Z,391nm,1.4s
GUN Gumba 16.25 262 *e*P **Pn 09 30 08.4 -2.3**
comp=Z,184nm,0.8s
SONM Songino Array 16.37 5 Pn **Pn 09 30 11.3 -0.7**
comp=Z,0.1nm,0.3s,baz=189,slow=14,SNR=30
SONM Lg 09 35 03.2
baz=181,slow=28,SNR=3.5
SONM LR LR 09 37 04.3
comp=Z,406nm,18.1s,baz=186,slow=39
ULN Ulaanbaatar 16.46 7 *e*P **Pn 09 30 13.7 +0.6**
ULN pmax pmax
comp=Z,39nm,1.5s
ULN Ulaanbaatar 16.46 7 *e*P **Pn 09 30 13.7 +0.6**
comp=Z,39nm,1.5s
TATO Taipei 16.63 109 *e*P **Pn 09 30 17.5 +2.0**
comp=Z,22nm,0.8s
YHNB Yeheng 16.68 110 *e*P **Pn 09 30 17.7 +1.6**
comp=Z,63nm,1.1s
PKI Pulchoki 16.75 261 *e*P **Pn 09 30 14.7 -2.3**
comp=Z,100nm,0.6s
PKIN Phulchoki 16.76 261 *e*P **Pn 09 30 14.7 -2.4**
comp=Z,150nm,0.7s
SSLB Suanglung 16.78 113 *e*P **Pn 09 30 18.5 +1.1**
comp=Z,81nm,0.9s
TPUB Ta-pu 16.78 115 *e*P **Pn 09 30 19.6 +2.2**
comp=Z,43nm,0.9s
KKN Kakani 16.80 262 *e*P **Pn 09 30 15.0 -2.6**
comp=Z,71nm,0.5s
DMN Daman 17.00 262 *e*P **Pn 09 30 17.8 -2.3**
comp=Z,181nm,0.9s
NACB Ninganchiao 17.09 111 *e*P **Pn 09 30 22.6 +1.3**
comp=Z,87nm,1.1s
YULB Yu-li 17.25 114 *e*P **Pn 09 30 24.7 +1.4**
comp=Z,22nm,0.8s
GKN Gorkha 17.28 263 *e*P **Pn 09 30 21.3 -2.3**
comp=Z,132nm,0.7s
TWG Pinlang 17.39 116 *e*P **Pn 09 30 26.5 +1.5**
WMQ Urumqi 17.83 318 P **Pn 09 30 33.5 +3.1**
WMQ pP pP 09 30 37.1 +4.5
WMQ sP sP 09 30 40.5 +7.3
WMQ PP 09 30 48.4
WMQ *e*S **Sn 09 33 50.6 +1.2**
WMQ sS sS 09 33 56.3 -2.4
WMQ SS 09 34 12.8
WMQ PcP PcP 09 35 10.5 +3.2
WMQ pmax pmax
comp=Z,21nm,0.9s
WMQ pmax pmax
comp=Z,180nm,4.6s
WMQ LR LR
comp=N,380nm,18.2s
WMQ LR LR
comp=E,340nm,19.2s
BOK Bokaro 17.89 249 *e*PKP **Pn 09 30 27.5 -3.7**
SNY Shenyang 18.64 51 ⇑P **Pn 09 30 44.0 +3.7**
SNY S **Sn 09 34 08.4 -0.6**
SNY pmax pmax
comp=Z,21nm,0.6s
SNY pmax pmax
comp=Z,260nm,5.9s
SNY LR LR
comp=E,600nm,14.5s
SNY LR LR
comp=Z,450nm,16.2s
INCN Inchon 19.46 66 *e*P **Pn 09 30 50.3 +0.1**
comp=Z,29nm,0.6s
TLY Talaya 20.13 359 *e*P **P 09 30 59.5 +3.3**
TLY *e*SS 09 35 20.0
TLY pmax pmax
comp=Z,6.0nm,0.6s
TLY MLR MLR
comp=Z,350nm,10.0s,MS4.0
MOY Mondy 20.24 354 *e*P **P 09 30 59.2 +1.7**
MOY pmax pmax
comp=Z,33nm,1.7s
KS15 Wonju Array Si 20.43 67 *e*P **P 09 31 00.4 +0.8**
KSRS Korea Array 20.46 67 P **P 09 31 00.1 0.0**
comp=Z,31nm,0.7s,baz=258,slow=10,SNR=131
KSRS LR LR 09 39 13.2
comp=Z,77nm,21.0s,MS3.0,baz=79,slow=38
KSRS Korea Array 20.46 67 P **P 09 31 00.1 +0.1**
KSRS pmax pmax
comp=Z,31nm,0.7s
KSRS MLR MLR
comp=Z,77nm,21.0s,MS3.0
IRK Irkutsk 20.69 0 *e*P **P 09 31 03.6 +1.3**
IRK pmax pmax
comp=Z,55nm,0.9s
CN2 Changchun 20.78 48 *e*P **P 09 31 04.6 +1.2**
CN2 *es*P sP 09 31 11.6 +6.0
CN2 *e*S **S 09 34 49.5 -6.2**
CN2 pmax pmax
comp=Z,20nm,0.6s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,500nm,14.0s,MS4.2
CN2 LR LR
comp=E,500nm,14.0s,MS4.2
HIA Hailar 21.26 29 *e*P **P 09 31 10.1 +1.6**
HIA pmax pmax
comp=Z,29nm,0.9s
HIA Hailar 21.26 29 *e*P **P 09 31 10.1 +1.5**
comp=Z,29nm,0.9s,mb4.6
DDI Dehra Dun 22.38 274 *ex* x 09 31 21.0
DDI *ex* x 09 33 36.5
MK31 Makanchi Array 22.66 318 P **P 09 31 23.9 +0.3**
MK31 pmax pmax
comp=Z,61nm,1.1s,mb4.9
MK31 Makanchi Array 22.66 318 *e*P **P 09 31 24.2 +0.7**
MKAR Makanchi Array 22.66 318 P **P 09 31 24.2 +0.6**
comp=Z,23nm,0.9s,mb4.6,baz=119,slow=13,SNR=48
MKAR LR LR 09 41 06.1
comp=Z,700nm,18.3s,MS4.1,baz=133,slow=39
MKAR Makanchi Array 22.66 318 P **P 09 31 24.2 +0.6**
MKAR LR LR 09 41 06.1
SDNR Sundarnagar 23.13 277 *e*PKP **P 09 31 26.5 -2.1**
VIS Vishakhapatnam 23.32 239 *e*PKP **P 09 31 27.0 -3.7**
VIS AMb AMB 09 31 29.6
comp=Z,34nm,0.4s,mb5.2
NDI New Delhi 23.43 270 *e*PKP **P 09 31 29.5 -2.3**
BHK Bhakra 23.61 277 *ex* x 09 31 34.0
MDJ Mudanjiang 23.81 50 P **P 09 31 34.9 -0.5**
MDJ pP 09 31 37.8
MDJ sP sP 09 31 39.3 +1.7
MDJ S **S 09 35 50.9 -0.4**
MDJ sS sS 09 35 55.9 +2.0
MDJ ScP ScP 09 38 57.1 -0.4
MDJ PcS PcS 09 38 58.3 +0.4
MDJ pmax pmax
comp=Z,11nm,1.3s,mb4.1
MDJ LR LR
comp=N,120nm,11.2s,MS4.1
MDJ LR LR
comp=E,330nm,12.1s,MS4.1
MDJ LR LR
comp=Z,360nm,14.6s,MS4.0
MDJ Mudanjiang 23.81 50 *e*P **P 09 31 35.6 +0.2**
comp=Z,37nm,0.9s,mb4.8
THN Thein Dam 24.08 280 *e*PKP **P 09 31 35.9 -2.1**
KSH Kashi 24.18 297 *e*P **P 09 31 42.4 +3.6**
KSH PP 09 32 17.8
KSH PcP PcP 09 35 22.5 +3.0
KSH S **S 09 35 59.0 +1.6**
KSH sS sS 09 36 05.8 +5.8
KSH SS 09 36 52.3
KSH ScP ScP 09 38 59.5 +0.8
KSH PcS PcS 09 39 01.3 +2.1
KSH ScS ScS 09 42 45.5 -0.4
KSH pmax pmax
comp=Z,19nm,1.0s,mb4.5
KSH pmax pmax
comp=Z,300nm,4.2s
KSH LR LR
comp=N,1μm,14.0s,MS4.6
KSH LR LR
comp=E,820nm,14.0s,MS4.6
KSH LR LR
comp=Z,500nm,15.0s,MS4.1
ORY Orie 24.31 347 *i*P **P 09 31 41.5 +1.7**
NGP Nagpur 24.68 251 *e*PKP **P 09 31 40.1 -3.4**
VLA Vladivostok 24.81 54 *c i*P **P 09 31 44.0 -0.5**
VLA pmax pmax
comp=Z,51nm,0.9s,mb5.0
BHPL Bhopal 25.06 257 *e*PKP **P 09 31 43.5 -3.4**
BHPL AMb AMB 09 31 56.7
comp=Z,45nm,1.0s,mb5.0
TKM2 Tokmak 2 25.28 305 *e*P **P 09 31 49.4 +0.7**
TKM2 pmax pmax
comp=Z,17nm,0.9s,mb4.6
TKM2 Tokmak 2 25.28 305 *e*P **P 09 31 49.4 +0.7**
comp=Z,17nm,0.9s,mb4.6
KRAR Krasnoyarsk 25.71 345 *e*P **P 09 31 52.8 +0.3**
KRAR pmax pmax
comp=Z,13nm,0.7s,mb4.6
UCH Uchtor 25.86 303 *e*P **P 09 31 55.6 +1.6**
comp=Z,45nm,1.1s,mb4.9
FRU Bishkek 25.94 304 *e*P **P 09 31 58.0 +3.2**
FRU *e* 09 32 44.0
AAK Ala-Archa 25.97 304 P **P 09 31 55.3 +0.2**
comp=Z,5.2nm,0.5s,mb4.3,baz=144,slow=6.5,SNR=8.7
AAK LR LR 09 43 50.3
comp=Z,662nm,19.1s,MS4.2,baz=289,slow=40
AAK Ala-Archa 25.97 304 P **P 09 31 55.3 +0.2**
AAK pmax pmax
comp=Z,5.0nm,0.5s,mb4.3
AAK MLR MLR
comp=Z,662nm,19.1s,MS4.2
AAK Ala-Archa 25.97 304 *e*P **P 09 31 56.1 +1.0**
comp=Z,8.3nm,0.7s,mb4.4
AAK LR LR 09 43 50.3
AJM Ajmer 26.23 266 *e*PKP **P 09 31 53.9 -3.6**
AJM AMb AMB 09 32 01.1
comp=Z,23nm,0.6s,mb4.9
KULM Kulim 26.31 188 *e*P **P 09 31 57.5 -0.9**
comp=Z,7.5nm,0.5s,mb4.5
ZAA0 Zalesovo Array 26.34 334 *e*P **P 09 31 58.2 0.0**
ZALV Zalesovo Beam 26.34 334 P **P 09 31 58.1 -0.1**
comp=Z,15nm,0.7s,mb4.6,baz=135,slow=9.5,SNR=31
ZALV LR LR 09 43 21.3
comp=Z,149nm,19.0s,MS3.5,baz=149,slow=39
AML Almayashu 26.42 302 *e*P **P 09 32 00.9 +1.8**
comp=Z,15nm,0.8s,mb4.6
EKS2 Erkin-Say 26.49 303 *e*P **P 09 32 00.4 +0.7**
comp=Z,9.9nm,0.9s,mb4.3
AKL Akola 26.55 253 *ex* x 09 31 53.8
KURK Kurchatov 26.91 323 *e*P **P 09 32 02.8 -0.6**
KURK pmax pmax
comp=Z,38nm,1.3s,mb4.8
KURK Kurchatov 26.91 323 *e*P **P 09 32 03.8 +0.4**
comp=Z,31nm,1.1s,mb4.7
HYB Hyderabad 27.10 245 *e*P **P 09 32 08.0 +2.6**
HYB Hyderabad 27.10 245 *i*P **P 09 32 08.0 +2.6**
KLR Kul'dur 27.25 42 *e*P **P 09 32 02.7 -3.8**
KLR MLR MLR
comp=N,900nm,12.0s,MS4.7
KLR MLR MLR
comp=E,800nm,12.0s,MS4.7
KLR MLR MLR
comp=Z,3μm,12.0s,MS5.1
NVS Novosibirsk 27.62 334 *e*P **P 09 32 13.1 +3.4**
KKM Kota Kinabalu 27.78 153 *e*P **P 09 32 10.9 -0.6**
comp=Z,64nm,1.2s,mb5.1
KKM Kota Kinabalu 27.78 153 P **P 09 32 11.2 -0.3**
comp=Z,469nmcomp=Z,47nm,1.0s,mb5.1
MAJO Matsushiro 28.59 71 *e*P **P 09 32 16.9 -1.7**
MAJO pmax pmax
comp=Z,15nm,0.5s,mb5.0
MAJO Matsushiro 28.59 71 *e*P **P 09 32 16.9 -1.8**
comp=Z,15nm,0.5s,mb5.0
MAT Matsushiro 28.59 71 P **P 09 32 16.6 -2.0**
MAT S **S 09 37 07.0 -0.4**
MJAR Matsushiro Arr 28.59 71 P **P 09 32 17.4 -1.3**
comp=Z,6.2nm,0.6s,mb4.5,baz=279,slow=10,SNR=24
MJAR LR LR 09 44 31.7
comp=Z,79nm,18.2s,MS3.4,baz=205,slow=38
HABR Khabarovsk 28.84 45 *e*P **P 09 32 24.3 +3.6**
HABR PPP 09 33 16.7
HABR *e* 09 35 26.2
HABR S **S 09 37 08.2 -2.9**
HABR *e* 09 43 02.0
HABR pmax pmax
comp=Z,41nm,2.5s,mb4.7
HABR pmax pmax
comp=E,11nm,1.2s
HABR pmax pmax
comp=N,7.0nm,0.8s
HABR MLR MLR
comp=Z,230nm,17.0s,MS3.9
KK31 Karatay Array 28.93 303 P **P 09 32 21.4 -0.2**
KK31 pmax pmax
comp=Z,3.0nm,0.5s,mb4.3
PSI Prapat 29.00 191 P **P 09 32 22.2 -0.2**
comp=Z,14nm,0.7s,mb4.8,baz=343,slow=9.1,SNR=12
KBL Kabul 29.47 285 *e*P **P 09 32 27.4 +0.9**
KBL pmax pmax
comp=Z,19nm,1.0s,mb4.8
KBL Kabul 29.47 285 *e*P **P 09 32 27.4 +0.9**
comp=Z,19nm,1.0s,mb4.8
MYLDM Lahad Datu 29.49 150 P **P 09 32 28.3 +1.6**
comp=Z,777nmcomp=Z,67nm,1.4s,mb5.2
POO Poona 30.22 252 *e*PKP **P 09 32 28.4 -4.8**
POO AMb AMB 09 32 31.0
comp=Z,34nm,1.1s,mb5.0
KSM Kuching 30.47 168 *e*P **P 09 32 35.4 0.0**
comp=Z,8.7nm,0.4s,mb4.8
KAD Karad 30.60 249 *e*PKP **P 09 32 31.0 -5.6**
VOSK Vostochnaya 32.00 321 P **P 09 32 50.5 +1.9**
VOSK pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
SDSI Sungai Dareh 32.39 185 P **P 09 32 49.9 -2.5**
comp=Z,25nm,0.8s,mb5.1
BVAR Borovoye Array 32.46 321 P **P 09 32 52.7 +0.1**
comp=Z,4.2nm,0.6s,mb4.4,baz=113,slow=9.1,SNR=19
BVAR PcP PcP 09 35 38.3 -1.3
comp=Z,1.3nm,0.6s,baz=101,slow=1.5,SNR=3.8
BRVK Borovoye 32.53 321 *ce*P **P 09 32 53.1 -0.1**
BRVK pmax pmax
comp=Z,13nm,1.0s,mb4.8
BRVK Borovoye 32.53 321 *e*P **P 09 32 53.2 0.0**
comp=Z,9.1nm,0.8s,mb4.8
ASAJ Asahikawa 32.59 56 P **P 09 32 52.9 -1.0**
comp=Z,8.5nm,0.7s,mb4.8,baz=269,slow=11,SNR=13
ASAJ Asahikawa 32.59 56 P **P 09 32 52.9 -1.0**
ASAJ pmax pmax
comp=Z,9.0nm,0.7s
ZRNK Zerenda 33.17 320 P **P 09 33 00.2 +1.4**
ZRNK pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
YSS Yuzh-Sakhalins 33.27 51 *e*P **P 09 32 58.2 -1.6**
YSS MLR MLR
comp=E,500nm,14.0s
YSS MLR MLR
comp=Z,500nm,14.0s,MS4.4
YSS Yuzh-Sakhalins 33.27 51 *e*P **P 09 32 59.8 +0.1**
comp=Z,33nm,1.2s,mb5.1
YAK Yakutsk 34.69 21 *e*P **P 09 33 12.4 +0.5**
YAK pmax pmax
comp=Z,18nm,0.4s,mb5.3
YAK Yakutsk 34.69 21 *e*P **P 09 33 12.4 +0.4**
comp=Z,18nm,0.4s,mb5.4
MRSI Marisa 35.20 148 P **P 09 33 14.4 -2.4**
comp=Z,34nm,0.6s,mb5.5
MDSI Maura Dua 35.82 180 P **P 09 33 18.9 -3.2**
comp=Z,31nm,0.8s,mb5.3
KBKI Kotabaru 36.49 159 P **P 09 33 27.5 -0.4**
comp=Z,67nm,0.9s,mb5.6
AB31 Akbulak array 37.40 311 *i*P **P 09 33 34.7 -0.6**
AB31 pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
ABKAR Akbulak array 37.40 311 *e*P **P 09 33 35.0 -0.2**
comp=Z,5.4nm,0.7s,mb4.5
TTSI Tana Toraja 37.50 154 P **P 09 33 36.4 0.0**
comp=Z,91nm,0.8s,mb5.7
SPSI Sidrap Palu 38.32 154 P **P 09 33 43.3 -0.1**
BNSI Bone 38.85 154 P **P 09 33 43.8 -4.0**
comp=Z,89nm,0.9s,mb5.5
LBMI Labuha 38.93 141 P **P 09 33 46.8 -1.7**
comp=Z,84nm,0.7s,mb5.6
SVE Sverdlovsk 39.16 323 *e*P **P 09 33 54.6 +4.6**
SVE pmax pmax
comp=Z,42nm,1.1s,mb5.1
BKSI Bulukumba 39.71 155 P **P 09 33 51.1 -3.9**
comp=Z,458nmcomp=Z,39nm,0.8s,mb5.2
SJI Sawahan 39.73 168 P **P 09 33 56.0 +0.8**
comp=Z,73nm,0.8s,mb5.4
PWJI Pagerwojo 40.02 168 P **P 09 33 53.6 -3.9**
comp=Z,54nm,1.4s,mb5.1
ARU Arti 40.10 322 *d i*P **P 09 33 57.7 -0.1**
ARU *e* 09 35 27.7
ARU S **S 09 40 06.0 +1.7**
ARU SS SS 09 42 58.8 -2.6
ARU pmax pmax
comp=Z,14nm,0.8s,mb4.7
ARU Arti 40.10 322 *e*P **P 09 33 58.0 +0.1**
comp=Z,37nm,0.8s,mb5.2
NLAI Namlea 40.92 143 P **P 09 34 06.1 +1.1**
comp=Z,75nm,0.7s,mb5.4
GUMO Guam 41.36 106 *e*P **P 09 34 08.9 +0.1**
GUMO pmax pmax
comp=Z,40nm,0.8s,mb5.1
GUMO Guam 41.36 106 *e*P **P 09 34 08.8 +0.1**
comp=Z,40nm,0.8s,mb5.1
SOKR Solikamsk 42.05 326 *d i*P **P 09 34 18.2 +4.4**
SOKR pmax pmax
comp=Z,50nm,0.9s,mb5.1
SOKR MLR MLR
comp=Z,220nm,15.0s,MS4.2
TIXI Tiksi 42.33 11 *e*P **P 09 34 12.1 -3.8**
TIXI pmax pmax
comp=Z,5.0nm,0.9s,mb4.1
TIXI MLR MLR
comp=Z,154nm,11.0s,MS4.2
TIXI Tiksi 42.33 11 *e*P **P 09 34 14.7 -1.3**
comp=Z,3.9nm,0.7s,mb4.2
MMRI Maumere 43.55 153 P **P 09 34 23.7 -2.8**
comp=Z,2μmcomp=Z,205nm,1.0s,mb5.8
SEY Seymchan 43.70 30 *e*P **P 09 34 26.2 -1.0**
SMPI Sarmi 46.80 129 P **P 09 34 53.4 +1.0**
comp=Z,82nm,1.0s,mb5.6
GNI Garni 48.12 298 LR LR 09 58 45.8
comp=Z,106nm,19.4s,MS3.8,baz=181,slow=40
KIV Kislovodsk 49.09 303 *e*P **P 09 35 10.1 +0.3**
KIV pmax pmax
comp=Z,15nm,1.1s,mb4.9
KIV MLR MLR
comp=Z,132nm,16.0s,MS4.0
VRHR Novokhopersk 49.26 312 *e*P **P 09 35 10.9 -0.1**
VRHR pmax pmax
comp=E,30nm,0.7s
VRHR pmax pmax
comp=Z,30nm,0.7s,mb5.4
VRHR pmax pmax
comp=N,5.0nm,0.3s
BILL Bilibino 50.78 25 ⇓*e*P **P 09 35 21.0 -1.3**
BILL *e* 09 37 14.2
BILL *e*S **S 09 42 30.6 -7.5**
BILL pmax pmax
comp=Z,10.0nm,2.5s,mb4.3
BILL MLR MLR
comp=Z,200nm,14.0s,MS4.3
VSR Storozhevoye 50.80 313 *e*P **P 09 35 22.4 -0.3**
VSR pmax pmax
comp=N,8.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,0.6s
VSR pmax pmax
comp=Z,20nm,0.6s,mb5.2
KAKA Kakadu 51.71 144 *e*P **P 09 35 28.2 -1.7**
comp=Z,20nm,0.6s,mb5.2
KAKA Kakadu 51.71 144 *e*P **P 09 35 28.3 -1.5**
comp=Z,74nm,0.7s,mb5.7
KAKA Kakadu 51.71 144 P **P 09 35 28.5 -1.4**
comp=Z,420nmcomp=Z,60nm,0.8s,mb5.6
OBN Obninsk 52.17 318 ⇑*e*P **P 09 35 34.3 +1.4**
OBN *e* 09 37 32.0
OBN *e*S **S 09 42 49.4 -8.2**
OBN pmax pmax
comp=Z,13nm,1.0s,mb4.8
OBN MLR MLR
comp=Z,200nm,20.0s,MS4.2
KNA Kununurra 52.63 150 P **P 09 35 36.1 -0.6**
comp=Z,499nm,0.7s,comp=Z,4μm
LVZ Lovozero 53.48 334 *e*P **P 09 35 41.2 -1.2**
LVZ pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
FITZ Fitzroy Crossi 53.50 154 ⇓*i*P **P 09 35 42.0 -1.1**
comp=Z,23nm,0.7s,mb5.2
FITZ Fitzroy Crossi 53.50 154 *e*P **P 09 35 42.1 -0.9**
comp=Z,21nm,1.0s,mb5.0
FITZ Fitzroy Crossi 53.50 154 P **P 09 35 42.3 -0.8**
comp=Z,55nm,1.0s,mb5.4
APA Apatity 53.92 333 ⇑*e*P **P 09 35 46.0 +0.4**
APA pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
APA MLR MLR
comp=Z,700nm,14.0s,MS4.9
MBWA Marble Bar 54.49 162 *e*P **P 09 35 49.7 -0.6**
comp=Z,20nm,0.9s,mb5.0
JOF Joensuu 54.67 328 *e*P **P 09 35 49.1 -2.0**
JOF Joensuu 54.67 328 *ep* **P 09 35 49.1 -2.0**
comp=Z,7.2nm,0.7s,mb4.8
ASF Jabal al Asfar 56.21 290 LR LR 10 04 09.6
comp=Z,83nm,19.2s,MS3.8,baz=110,slow=40
KEV Kevo 56.34 336 *e*P **P 09 36 01.6 -1.5**
KEV pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
KEV Kevo 56.34 336 *e*P **P 09 36 01.6 -1.5**
comp=Z,9.4nm,0.7s,mb4.9
KEV Kevo 56.34 336 *ep* **P 09 36 01.6 -1.5**
comp=Z,9.4nm,0.7s,mb4.9
BR131 Keskin Array S 56.54 299 *e*P **P 09 36 08.3 +3.4**
comp=Z,1.4nm,0.5s,mb4.2
BRTR Keskin Array B 56.54 299 P **P 09 36 04.9 -0.1**
comp=Z,2.2nm,0.7s,mb4.3,baz=102,slow=6.3,SNR=12
BRTR LR LR 10 06 38.5
comp=Z,40nm,19.8s,MS3.5,baz=288,slow=43
ARCES ARCESS Array B 56.87 336 P **P 09 36 06.2 -0.6**
comp=Z,3.4nm,0.6s,mb4.6,baz=85,slow=8.1,SNR=22
ARCES PcP PcP 09 37 04.8 +2.5
comp=Z,3.7nm,0.6s,baz=98,slow=6.6,SNR=5.5
ARCES LR LR 10 02 23.9
comp=Z,91nm,18.9s,MS3.9,baz=102,slow=38
ARCES ARCESS Array B 56.87 336 P **P 09 36 06.2 -0.6**
ARCES 09 37 04.8
ARE0 ARCESS Array S 56.87 336 *e*P **P 09 36 06.7 -0.1**
KAF Kangasniemi 57.04 327 *e*P **P 09 36 06.6 -1.5**
KAF pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
KAF Kangasniemi 57.04 327 *e*P **P 09 36 06.6 -1.5**
comp=Z,8.2nm,0.7s,mb4.9
KAF Kangasniemi 57.04 327 *ep* **P 09 36 06.6 -1.5**
comp=Z,8.2nm,0.7s,mb4.9
AKASG Malin Array Be 57.10 313 P **P 09 36 07.5 -1.2**
comp=Z,5.2nm,0.5s,mb4.8,baz=67,slow=7.5,SNR=9.4
AKBB Malin Array Si 57.10 313 *e*P **P 09 36 11.1 +2.3**
KIEV Kiev 57.11 313 *e*P **P 09 36 11.0 +2.2**
KIEV pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
KIEV Kiev 57.11 313 *e*P **P 09 36 11.0 +2.2**
comp=Z,5.6nm,0.6s,mb4.8
MMAI Mount Meron Ar 57.14 291 LR LR 10 05 03.9
comp=Z,81nm,18.8s,MS3.9,baz=60,slow=41
FINES FINESS Array B 57.22 326 P **P 09 36 08.2 -1.2**
comp=Z,14nm,0.7s,mb5.1,baz=77,slow=6.8,SNR=14
VSU Vasula 57.26 322 *e*P **P 09 36 09.1 -0.7**
VSU pmax pmax
comp=Z,17nm,0.7s,mb5.2
IDID Didziasalis 57.74 319 *e*P **P 09 36 13.2 0.0**
IDID AMB AMB 09 36 17.9
comp=Z,13nm,1.0s,mb4.9
NACGM Naroch 57.79 318 *e* **P 09 36 14.0 +0.4**
PMG Port Moresby 57.91 127 *e*P **P 09 36 14.5 -0.4**
PMG pmax pmax
comp=Z,15nm,0.7s
PMG Port Moresby 57.91 127 *e*P **P 09 36 14.5 -0.4**
comp=Z,15nm,0.7s,mb5.1
PMG Port Moresby 57.91 127 P **P 09 36 17.3 +2.4**
comp=Z,25nm,1.4s,mb5.1
IZAR Zarasai 57.95 319 *e*P **P 09 36 14.9 +0.2**
IZAR AMB AMB 09 36 19.3
comp=Z,11nm,0.8s,mb5.0
IIGN Ignalina 58.03 319 *e*P **P 09 36 15.3 +0.1**
IIGN AMB AMB 09 36 20.0
comp=Z,14nm,0.7s,mb5.1
COEN Coen 58.73 134 *e*P **P 09 36 20.3 -0.3**
comp=Z,195nm,0.7s
COEN Coen 58.73 134 P **P 09 36 20.3 -0.3**

comp=Z,158nm,0.8s,mb6.1
WRAB Tennant Creek 58.82 146 *e*P **P 09 36 20.7 -0.4**
WRAB pmax pmax
comp=Z,47nm,0.8s,mb5.6
WRAB Tennant Creek 58.82 146 *e*P **P 09 36 20.7 -0.5**
comp=Z,47nm,0.8s,mb5.6
WRAB Tennant Creek 58.82 146 P **P 09 36 20.5 -0.6**
comp=Z,71nm,0.9s,mb5.7
WRA Warramunga Arr 58.83 146 P **P 09 36 20.6 -0.5**
comp=Z,24nm,0.5s,mb5.5,baz=339,slow=7.8,SNR=435
TIRR Tirgusor 59.05 306 ⇑P **P 09 36 23.2 +0.6**
TIRR Tirgusor 59.05 306 ⇑*i*P **P 09 36 23.2 +0.6**
VRI Vrincioaia 59.83 308 ⇑P **P 09 36 29.9 +2.0**
VRI Vrincioaia 59.83 308 ⇑*i*P **P 09 36 29.9 +2.0**
PLOR Plostina 59.89 308 ⇑P **P 09 36 29.3 +1.0**
PLOR Plostina 59.89 308 ⇑*i*P **P 09 36 29.3 +1.0**
SUW Suwalki 60.03 318 *e*P **P 09 36 31.6 +2.5**
SUW pmax pmax
comp=Z,48nm,0.7s,mb5.6
SUW Suwalki 60.03 318 *e*P **P 09 36 31.6 +2.5**
comp=Z,48nm,0.7s,mb5.6
BURAR Bucovina Array 60.37 310 ⇓P **P 09 36 34.4 +2.9**
BURAR Bucovina Array 60.37 310 ⇓*i*P **P 09 36 34.4 +2.9**
BUR08 Bucovina Ar. S 60.37 310 *e*P **P 09 36 34.7 +3.1**
MLR Muntele Rosu 60.46 308 ⇑P **P 09 36 34.7 +2.5**
MLR Muntele Rosu 60.46 308 ⇑*i*P **P 09 36 34.7 +2.5**
VOIR 61.08 308 ⇑P **P 09 36 38.9 +2.4**
VOIR 61.08 308 ⇑*i*P **P 09 36 38.9 +2.4**
KWP Kalwaria Pacla 61.42 313 *e*P **P 09 36 38.6 -0.1**
KWP pmax pmax
comp=Z,42nm,0.9s,mb5.6
KWP Kalwaria Pacla 61.42 313 *e*P **P 09 36 38.6 -0.1**
comp=Z,42nm,0.9s,mb5.6
KWP Kalwaria Pacla 61.42 313 ⇑*i*P **P 09 36 42.3 +3.6**
ASAR Alice Springs 61.85 149 P **P 09 36 41.5 -0.4**
comp=Z,11nm,0.6s,mb5.1,baz=338,slow=6.7,SNR=155
TRPA Tarpa 61.95 311 ⇑*i*P **P 09 36 44.8 +2.5**
DRGR 62.24 310 ⇑P **P 09 36 45.0 +0.8**
DRGR 62.24 310 ⇑*i*P **P 09 36 45.0 +0.8**
STHS Stebnicka Huta 62.40 313 *e*P **P 09 36 49.0 +3.7**
STHS pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
STHS Stebnicka Huta 62.40 313 *e*P **P 09 36 49.0 +3.7**
comp=Z,5.8nm,0.9s,mb4.7
STHS Stebnicka Huta 62.40 313 *e*P **P 09 36 49.0 +3.7**
CRVS Cervenica-Dubn 62.41 312 *e*P **P 09 36 51.8 +6.4**
CRVS Cervenica-Dubn 62.41 312 *e*P **P 09 36 51.8 +6.4**
OJC Ojcow 63.05 314 *e*P **P 09 36 50.7 +1.1**
KECS Kecovo 63.16 312 *e*P **P 09 36 54.2 +3.9**
KECS pmax pmax
comp=Z,3.0nm,0.7s,mb4.5
KECS Kecovo 63.16 312 *e*P **P 09 36 54.2 +3.9**
comp=Z,2.9nm,0.7s,mb4.5
KECS Kecovo 63.16 312 *e*P **P 09 36 54.2 +3.9**
PSZ Piszkesteto 63.71 312 ⇑P **P 09 36 56.8 +2.8**
PSZ Piszkesteto 63.71 312 ⇑*i*P **P 09 36 56.8 +2.8**
KLBR Kellerberrin 64.10 167 *e*P **P 09 36 56.2 -0.4**
comp=Z,12nm,0.4s,mb5.3
OKC Ostrava-Krasne 64.19 314 *e*P **P 09 36 57.3 +0.2**
OKC *e*pP pP 09 37 00.9 +2.1
OKC Ostrava-Krasne 64.19 314 *e*P **P 09 36 57.3 +0.2**
OKC *e*pP pP 09 37 00.9 +2.1
OKC AMS AMS 10 06 00.0
comp=Z,300nm,18.6s
VYHS Vyhne 64.19 313 *e*P **P 09 37 00.5 +3.3**
VYHS pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
VYHS Vyhne 64.19 313 *e*P **P 09 37 00.5 +3.3**
comp=Z,3.9nm,0.9s,mb4.4
VYHS Vyhne 64.19 313 *e*P **P 09 37 00.5 +3.3**
NB2 NORSAR Subarra 64.30 327 P **P 09 36 56.3 -1.4**
comp=Z,8.1nm,0.7s,mb4.9,baz=72,slow=6.5
NOA NORSAR Array B 64.30 327 P **P 09 36 56.3 -1.4**
comp=Z,7.1nm,0.7s,mb4.8,baz=77,slow=6.1,SNR=26
NOA LR LR 10 06 40.2
comp=Z,75nm,20.2s,MS3.9,baz=300,slow=38
KOLL Kolacno 64.44 313 *e*P **P 09 37 02.9 +4.1**
KOLL Kolacno 64.44 313 *e*P **P 09 37 02.9 +4.1**
MORC Moravsky Berou 64.58 314 *e*P **P 09 36 58.8 -0.9**
MORC pmax pmax
comp=Z,14nm,0.8s,mb5.0
MORC Moravsky Berou 64.58 314 *e*P **P 09 36 58.8 -0.9**
comp=Z,14nm,0.8s,mb5.0
MORC Moravsky Berou 64.58 314 ⇓*i*P **P 09 37 02.3 +2.6**
UNV Unalaska Valle 64.86 41 *e*P **P 09 37 02.4 +1.0**
comp=Z,116nm,1.6s,mb5.7
KSP Ksiaz 64.97 316 *e*P **P 09 37 05.5 +3.3**
DPC Dobruska-Polom 65.12 315 *e*P **P 09 37 03.0 -0.2**
DPC MLR MLR
comp=Z,300nm,15.1s,MS4.6
DPC Dobruska-Polom 65.12 315 *e*P **P 09 37 03.0 -0.2**
DPC *e*pP pP 09 37 07.2 +2.3
DPC *e* 10 01 49.0
DPC LR LR
comp=Z,300nm,15.1s,MS4.6
DPC Dobruska-Polom 65.12 315 *e*P **P 09 37 03.0 -0.2**
DPC *e*pP pP 09 37 07.2 +2.3
DPC *ex* x 10 01 49.0
DPC AMS AMS 10 06 20.0
comp=Z,300nm,15.1s
UPC Upice 65.26 315 *e*P **P 09 37 04.7 +0.6**
UPC *e*pP pP 09 37 08.3 +2.6
UPC Upice 65.26 315 *e*P **P 09 37 04.7 +0.6**
UPC *e*pP pP 09 37 08.3 +2.6
NWAO Narrogin (SRO) 65.30 168 *e*P **P 09 37 04.5 +0.1**
NWAO pmax pmax
comp=Z,14nm,0.6s
NWAO Narrogin (SRO) 65.30 168 *e*P **P 09 37 04.5 +0.1**
comp=Z,14nm,0.6s,mb5.2
VRAC Vranov 65.31 314 ⇓P **P 09 37 08.3 +3.8**
VRAC Vranov 65.31 314 ⇓*i*P **P 09 37 08.3 +3.8**
CTA Charters Tower 65.33 136 ⇓*i*P **P 09 37 04.4 -0.4**
comp=Z,6.5nm,0.6s,mb4.8
CTAO Charters Tower 65.33 136 *e*P **P 09 37 04.5 -0.3**
CTAO pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
CTAO Charters Tower 65.33 136 *e*P **P 09 37 04.5 -0.3**
comp=Z,5.7nm,0.5s,mb4.9
TREC Trest 66.00 314 *e*pP pP 09 37 13.1 +2.5
TREC AMS AMS 10 07 00.0
comp=Z,200nm,13.3s
FORT Forrest 66.01 158 *e*P **P 09 37 08.7 -0.3**
comp=Z,29nm,0.8s,mb5.4
PVCC Panska Ves 66.11 316 *e*pP pP 09 37 13.4 +2.1
PVCC AMS AMS 10 07 10.0
comp=Z,300nm,19.4s
CONA Conrad Observa 66.26 313 ⇑*i*sP sP 09 37 14.1 +1.2
comp=Z,8.5nm,0.8s
PRU Pruhonice 66.32 315 *e*pP pP 09 37 15.0 +2.4
PRU *ex* x 10 02 33.4
PRU AMS AMS 10 07 10.0
comp=Z,300nm,16.5s
BRG Berggiesshubel 66.36 316 *e*P **P 09 37 14.4 +3.2**
comp=Z,19nm,0.7s,mb5.2
BRG Berggiesshubel 66.36 316 *e*P **P 09 37 10.7 -0.5**
comp=Z,5.0nm,0.7s,mb4.6
BRG *i* 09 37 14.3
comp=Z,19nm,0.7s
BRG
comp=N,150nm,23.8s
BRG
comp=E,205nm,15.6s
BRG
comp=Z,200nm,15.4s
CLL Collm 66.75 317 *e*P **P 09 37 16.6 +2.9**
comp=Z,14nm,0.9s,mb5.0
CLL Collm 66.75 317 *e*P **P 09 37 11.0 -2.7**
CLL *i* 09 37 16.5
CLL *i* PcP PcP 09 37 40.4 -2.2
CLL LR LR
comp=Z,100nm,18.3s,MS4.1
CLL Collm 66.75 317 *e*P **P 09 37 13.0 -0.7**
CLL *i* pP pP 09 37 16.5 +1.1
comp=Z,14nm,0.9s
CLL *i* (PcP) PcP 09 37 40.4 -2.2
CLL LmV 10 10 00.0
comp=Z,100nm,18.3s
COLD Coldfoot 67.07 24 *e*P **P 09 37 14.9 -0.6**
comp=Z,6.9nm,0.8s,mb4.7
KHC Kasperske Hory 67.22 315 *e*P **P 09 37 14.2 -2.5**
KHC *e**PP pP 09 37 20.3 +1.9
KHC MLR MLR
comp=Z,300nm,14.0s,MS4.7
KHC Kasperske Hory 67.22 315 *e*P **P 09 37 19.9 +3.2**
comp=Z,3.7nm,0.6s,mb4.6
KHC *e* 10 02 57.8
KHC LR LR
comp=Z,300nm,14.0s,MS4.7
KHC Kasperske Hory 67.22 315 *e*P **P 09 37 14.2 -2.5**
KHC *e*pP pP 09 37 20.3 +1.9
KHC *ex* x 10 02 57.8
KHC AMS AMS 10 07 40.0
comp=Z,300nm,14.0s
SOKA Soboth 67.24 312 ⇑*i*sP sP 09 37 19.9 +0.7
comp=Z,10.0nm,0.7s
GEC2 GERESS Array S 67.25 314 *e*P **P 09 37 20.3 +3.4**
comp=Z,10.0nm,0.8s,mb4.9
BSEG Bad Segeberg 67.28 320 *e*P **P 09 37 20.6 +3.6**
comp=Z,38nm,0.8s,mb5.5
MOA Molln 67.28 313 ⇑*i*sP sP 09 37 20.7 +1.3
comp=Z,8.7nm,1.0s
TANN Tannenbergstha 67.41 316 *e*P **P 09 37 21.0 +3.1**
comp=Z,13nm,0.9s,mb5.0
NKC Novy Kostel 67.48 316 *e*pP pP 09 37 21.9 +1.9
NKC AMS AMS 10 08 00.0
comp=Z,300nm,12.2s
PDKS Podkum 67.50 311 *i* P **P 09 37 18.0 -0.5**
PDKS *e*pP pP 09 37 21.7 +1.5
WET Wettzell 67.64 315 *e*P **P 09 37 22.7 +3.3**
comp=Z,7.0nm,0.9s,mb4.7
VISS Visnje 67.70 311 *i* pP pP 09 37 22.9 +1.4
MOX Moxa 67.81 317 *e*P **P 09 37 23.6 +3.2**
comp=Z,6.0nm,0.7s,mb4.7
NRDL Niedersach Rie 67.95 319 *e*P **P 09 37 24.1 +2.8**
comp=Z,23nm,0.9s,mb5.2
CLZ Clausthal 68.06 318 *e*P **P 09 37 25.4 +3.4**
comp=Z,26nm,0.7s,mb5.4
KBA Koelnbreinsper 68.16 313 ⇑*i*sP sP 09 37 25.8 +0.9
comp=Z,8.3nm,0.6s
BPAW Bear Paw Mtn. 68.21 27 *e*P **P 09 37 22.2 -0.4**
PPLA Purkeypile 68.28 29 *e*P **P 09 37 22.9 -0.2**
comp=Z,12nm,0.7s,mb5.0
ROBS Robic 68.38 212 *i* P **P 09 37 22.8 -1.3**
ROBS *i* pP pP 09 37 26.3 +0.5
GRF Grafenberg Arr 68.42 316 *e*P **P 09 37 27.8 +3.5**
comp=Z,33nm,0.7s,mb5.5
GRF *e*L 10 08 50.5
comp=Z,273nm,18.9s
GRF Grafenberg Arr 68.42 316 *e*P **P 09 37 27.8 +3.5**
GRF pmax pmax
comp=Z,33nm,0.7s,mb5.5
GRF MLR MLR
comp=Z,300nm,18.9s,MS4.5
UBBA Unterbreizbach 68.69 317 *e*P **P 09 37 28.6 +2.7**
comp=Z,5.0nm,0.8s,mb4.5
TRF Thorofare Moun 68.78 28 *e*P **P 09 37 26.7 +0.4**
comp=Z,3.2nm,0.7s,mb4.4
FUR Furstenfeldbru 69.01 314 *e*P **P 09 37 32.0 +4.1**
comp=Z,62nm,0.9s,mb5.5
COLA College 69.03 26 *e*P **P 09 37 27.4 -0.4**
COLA pmax pmax
comp=Z,13nm,0.9s,mb4.9
COLA College 69.03 26 *e*P **P 09 37 27.4 -0.4**
comp=Z,13nm,0.9s,mb4.9
RSO Redoubt South 69.14 31 *e*P **P 09 37 28.7 +0.1**
WTTA Wattenberg 69.15 313 ⇑*i*sP sP 09 37 31.8 +0.7
comp=Z,13nm,0.8s
WATA Walderalm 69.16 313 ⇑*i*sP sP 09 37 31.4 +0.2
comp=Z,6.9nm,0.5s
MCK McKinley 69.18 27 *e*P **P 09 37 27.9 -0.8**
IBBN Ibbenburen 69.35 319 *e*P **P 09 37 32.0 +2.0**
comp=Z,12nm,0.5s,mb5.1
MOTA Moosalm 69.45 314 ⇓*i*pP pP 09 37 32.7 +0.3
comp=Z,9.5nm,0.6s
FETA Feichten 69.82 313 ⇓*i*sP sP 09 37 35.9 +0.6
comp=Z,20nm,0.8s
TNS Taus Mts 69.84 317 *e*P **P 09 37 36.4 +3.4**
comp=Z,14nm,0.9s,mb4.9
PMR Palmer 70.16 29 *e*P **P 09 37 33.4 -1.4**
PMR pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
PMR Palmer 70.16 29 *e*P **P 09 37 33.4 -1.4**
comp=Z,10nm,1.0s,mb4.7
DAVA Damuels 70.23 314 ⇑*i*sP sP 09 37 38.9 +1.1
comp=Z,7.1nm,0.8s
SML Sawmill 70.38 29 *e*P **P 09 37 35.5 -0.6**
SML pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
SML Sawmill 70.38 29 *e*P **P 09 37 35.5 -0.7**
comp=Z,2.2nm,0.7s,mb4.2
OHAK Old Harbor 70.40 34 *e*P **P 09 37 35.2 -1.1**
comp=Z,38nm,1.6s,mb5.1
KDAK Kodiak Island 70.47 34 *e*P **P 09 37 35.9 -0.9**
BFO Black Forest 70.72 315 *e*P **P 09 37 41.4 +2.9**
comp=Z,16nm,1.0s,mb4.9
KMBO Kilima Mbogo 71.02 256 P **P 09 37 40.2 -0.6**
comp=Z,10nm,0.9s,mb4.8,baz=359,slow=24,SNR=5.3
KMBO Kilima Mbogo 71.02 256 P **P 09 37 40.2 -0.6**
CDF Champ du Feu 71.32 316 *e*P **P 09 37 41.5 -0.6**
comp=Z,32nm,0.7s,mb5.0
CDF Champ du Feu 71.32 316 *e*P **P 09 37 41.5 -0.6**
CDF pmax pmax
comp=Z,16nm,0.7s,mb5.1
CDF Champ du Feu 71.32 316 *e*P **P 09 37 41.5 -0.6**
comp=Z,16nm,0.7s,mb5.1
WLF Walferdange 71.41 317 P **P 09 37 43.3 +0.6**
comp=Z,25nm,1.0s,mb5.1
WLF AP pP 09 37 46.8 +2.4
WLF Walferdange 71.41 317 *e*P **P 09 37 46.6 +3.9**
comp=Z,40nm,0.8s,mb5.4
WLF Walferdange 71.41 317 *e*P **P 09 37 43.7 +1.0**
WLF pmax pmax
comp=Z,36nm,0.9s,mb5.3
WLF Walferdange 71.41 317 *e*P **P 09 37 43.7 +1.0**
comp=Z,36nm,0.9s,mb5.3
ECH Echery 71.47 316 *e*P **P 09 37 42.5 -0.6**
ECH pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
ECH Echery 71.47 316 *e*P **P 09 37 42.5 -0.6**
comp=Z,8.0nm,0.9s,mb4.7
EGAK Eagle 71.50 24 *e*P **P 09 37 41.9 -1.0**
comp=Z,3.4nm,0.7s,mb4.4
BCLA Clavier 71.56 318 P **P 09 37 43.3 -0.2**
BCLA AP pP 09 37 47.0 +1.8
MENT Mentasta 71.61 27 *e*P **P 09 37 43.1 -0.4**
INK Inuvik 71.74 19 *e*P **P 09 37 43.4 -0.9**
INK pmax pmax
comp=Z,13nm,0.9s
INK Inuvik 71.74 19 *e*P **P 09 37 43.4 -0.9**
comp=Z,13nm,0.9s,mb4.9
HINF Hinteralfeld 71.84 315 *e*P **P 09 37 44.4 -0.9**
comp=Z,24nm,0.8s,mb4.9
HINF Hinteralfeld 71.84 315 *e*P **P 09 37 44.4 -0.9**
HINF pmax pmax
comp=Z,12nm,0.8s,mb4.9
HINF Hinteralfeld 71.84 315 *e*P **P 09 37 44.4 -0.9**
comp=Z,12nm,0.8s,mb4.9
GIVF Givet 71.98 318 *e*P **P 09 37 45.7 -0.4**
comp=Z,24nm,0.8s,mb4.9
GIVF Givet 71.98 318 *e*P **P 09 37 45.7 -0.4**
GIVF pmax pmax
comp=Z,12nm,0.8s,mb4.9
GIVF Givet 71.98 318 *e*P **P 09 37 45.7 -0.4**
comp=Z,12nm,0.8s,mb4.9
HAU Haudompre 72.05 316 *e*P **P 09 37 45.7 -0.9**
comp=Z,16nm,0.8s,mb4.7
HAU *e*MLR MLR
comp=Z,187nm,18.0s,MS4.1
HAU Haudompre 72.05 316 *e*P **P 09 37 45.7 -0.9**
HAU pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
HAU MLR MLR
comp=Z,190nm,18.0s,MS4.4
HAU Haudompre 72.05 316 *e*P **P 09 37 45.7 -0.9**
comp=Z,8.3nm,0.8s,mb4.7
HAU LR LR
comp=Z,190nm,18.0s,MS4.4
DOU Dourbes 72.11 318 AP pP 09 37 50.6 +2.0
EIDS Eidsvold 72.22 136 *e*P **P 09 37 47.8 +0.1**
comp=Z,14nm,0.8s,mb5.0
BMRM Bremner River 72.35 28 *e*P **P 09 37 47.9 -0.2**
comp=Z,13nm,0.7s,mb5.0
BAIF Baives 72.35 318 *e*P **P 09 37 48.0 -0.3**
comp=Z,21nm,0.8s,mb4.8
BAIF Baives 72.35 318 *e*P **P 09 37 48.0 -0.3**
BAIF pmax pmax
comp=Z,11nm,0.8s,mb4.8
BAIF Baives 72.35 318 *e*P **P 09 37 48.0 -0.3**
comp=Z,11nm,0.8s,mb4.8
STKA Stephens Creek 72.36 147 ⇓*i*P **P 09 37 47.6 -0.8**
comp=Z,10nm,0.6s,mb4.9
STKA Stephens Creek 72.36 147 P **P 09 37 47.7 -0.8**
comp=Z,14nm,0.7s,mb5.0,baz=324,slow=7.4,SNR=50
STKA Stephens Creek 72.36 147 *e*P **P 09 37 47.6 -0.8**
comp=Z,2.5nm,0.8s,mb4.2
DAWY Dawson 72.54 24 *e*P **P 09 37 48.2 -0.9**
CABF La Chapelle 72.86 314 *e*P **P 09 37 50.7 -0.7**
comp=Z,21nm,1.0s,mb4.7
CABF La Chapelle 72.86 314 *e*P **P 09 37 50.7 -0.7**
CABF pmax pmax
comp=Z,11nm,1.0s,mb4.7
CABF La Chapelle 72.86 314 *e*P **P 09 37 50.7 -0.7**
comp=Z,11nm,1.0s,mb4.7
PGF Pioggiola 72.88 310 *e*P **P 09 37 51.4 -0.2**
comp=Z,32nm,0.7s,mb5.0
PGF Pioggiola 72.88 310 *e*P **P 09 37 51.4 -0.2**
PGF pmax pmax
comp=Z,16nm,0.7s,mb5.1
PGF Pioggiola 72.88 310 *e*P **P 09 37 51.4 -0.2**
comp=Z,16nm,0.7s,mb5.1
LPG La Plagne 72.96 313 *e*P **P 09 37 52.3 +0.3**
comp=Z,84nm,0.7s,mb5.5
LPG La Plagne 72.96 313 *e*P **P 09 37 52.3 +0.3**
LPG pmax pmax
comp=Z,42nm,0.7s,mb5.5
LPG La Plagne 72.96 313 *e*P **P 09 37 52.3 +0.3**
comp=Z,42nm,0.7s,mb5.5
LPL La Plagne 72.97 313 *e*P **P 09 37 52.2 +0.1**
comp=Z,75nm,0.7s,mb5.4
LPL La Plagne 72.97 313 *e*P **P 09 37 52.2 +0.1**
LPL pmax pmax
comp=Z,38nm,0.7s,mb5.4
LPL La Plagne 72.97 313 *e*P **P 09 37 52.2 +0.1**
comp=Z,38nm,0.7s,mb5.4
SUMG Summit 73.02 349 *e*P **P 09 37 52.0 +0.1**
comp=Z,7.3nm,1.0s,mb4.6
BNI Bardonecchia 73.22 313 *e*P **P 09 37 53.4 -0.1**
BNI pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
BNI Bardonecchia 73.22 313 *e*P **P 09 37 53.4 -0.1**
comp=Z,10.0nm,0.8s,mb4.8
SBF Sospel 73.29 311 *e*P **P 09 37 53.3 -0.7**
comp=Z,81nm,0.8s,mb5.4
SBF Sospel 73.29 311 *e*P **P 09 37 53.3 -0.7**
SBF pmax pmax
comp=Z,40nm,0.8s,mb5.4
SBF Sospel 73.29 311 *e*P **P 09 37 53.3 -0.7**
comp=Z,40nm,0.8s,mb5.4
MBDF Montbardon 73.31 312 *e*P **P 09 37 54.1 0.0**
comp=Z,20nm,0.7s,mb4.8
MBDF Montbardon 73.31 312 *e*P **P 09 37 54.1 0.0**
MBDF pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
MBDF Montbardon 73.31 312 *e*P **P 09 37 54.1 0.0**
comp=Z,10nm,0.7s,mb4.9
ORIF Oris-en-Rattie 73.78 313 *e*P **P 09 37 56.4 -0.5**
comp=Z,25nm,0.7s,mb4.9
ORIF *e*MLR MLR
comp=Z,327nm,19.2s,MS4.3
ORIF Oris-en-Rattie 73.78 313 *e*P **P 09 37 56.4 -0.5**
ORIF pmax pmax
comp=Z,12nm,0.7s,mb4.9
ORIF Oris-en-Rattie 73.78 313 *e*P **P 09 37 56.4 -0.5**
comp=Z,12nm,0.7s,mb5.0
LOR Lormes 73.89 316 *e*P **P 09 37 56.3 -1.1**
comp=Z,14nm,0.8s,mb4.7,baz=54
LOR *e*MLR MLR
comp=Z,147nm,21.8s,MS3.9
LOR Lormes 73.89 316 *e*P **P 09 37 56.3 -1.1**
LOR pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
LOR MLR MLR
comp=Z,150nm,21.8s,MS4.2
LOR Lormes 73.89 316 *e*P **P 09 37 56.3 -1.1**
comp=Z,6.8nm,0.8s,mb4.6
LOR LR LR
comp=Z,150nm,21.8s,MS4.2
SSF Saint Saulge 74.20 316 *e*P **P 09 37 58.3 -1.0**
comp=Z,16nm,0.7s,mb4.7
SSF Saint Saulge 74.20 316 *e*P **P 09 37 58.3 -1.0**
SSF pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
SSF Saint Saulge 74.20 316 *e*P **P 09 37 58.3 -1.0**
comp=Z,7.9nm,0.7s,mb4.8
SMF Signal de Mont 74.20 315 *e*P **P 09 37 58.5 -0.8**
comp=Z,52nm,0.8s,mb5.2
SMF Signal de Mont 74.20 315 *e*P **P 09 37 58.5 -0.8**
SMF pmax pmax
comp=Z,26nm,0.8s,mb5.2
SMF Signal de Mont 74.20 315 *e*P **P 09 37 58.5 -0.8**
comp=Z,26nm,0.8s,mb5.2
AVF Avril sur Loir 74.42 316 *e*P **P 09 37 59.8 -0.8**
comp=Z,34nm,0.8s,mb5.0
AVF Avril sur Loir 74.42 316 *e*P **P 09 37 59.8 -0.8**
AVF pmax pmax
comp=Z,17nm,0.8s,mb5.0
AVF Avril sur Loir 74.42 316 *e*P **P 09 37 59.8 -0.8**
comp=Z,17nm,0.8s,mb5.0
VIVF Saint-Julien-l 74.56 313 *e*P **P 09 38 00.8 -0.6**
comp=Z,16nm,0.8s,mb4.7
VIVF Saint-Julien-l 74.56 313 *e*P **P 09 38 00.8 -0.6**
VIVF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
VIVF Saint-Julien-l 74.56 313 *e*P **P 09 38 00.8 -0.6**
comp=Z,8.1nm,0.8s,mb4.7
PNL Peninsula 75.21 28 *e*P **P 09 38 05.2 +0.3**
comp=Z,14nm,0.8s,mb4.9
HYT Haines Junctio 75.23 26 *e*P **P 09 38 04.8 -0.2**
TCF Toulx Ste Croi 75.36 315 *e*P **P 09 38 05.5 -0.5**
comp=Z,28nm,0.9s,mb4.9
TCF Toulx Ste Croi 75.36 315 *e*P **P 09 38 05.5 -0.5**
TCF pmax pmax
comp=Z,14nm,0.9s,mb4.9
TCF Toulx Ste Croi 75.36 315 *e*P **P 09 38 05.5 -0.5**
comp=Z,14nm,0.9s,mb4.9
LASF Ste Croix 75.45 313 *e*P **P 09 38 06.3 -0.3**
comp=Z,25nm,0.9s,mb4.8
LDF La Druitiere 75.54 318 *e*P **P 09 38 06.0 -1.0**
comp=Z,11nm,0.7s,mb4.6
LDF La Druitiere 75.54 318 *e*P **P 09 38 06.0 -1.0**
LDF pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
LDF La Druitiere 75.54 318 *e*P **P 09 38 06.0 -1.0**
comp=Z,5.5nm,0.7s,mb4.6
FLN La Foliniere 75.65 319 *e*P **P 09 38 06.7 -0.9**
FLN *e*MLR MLR
comp=Z,187nm,22.0s,MS4.0
FLN La Foliniere 75.65 319 *e*P **P 09 38 06.7 -0.9**
FLN LR LR
comp=Z,190nm,22.0s,MS4.4
GRR Gorron 76.06 318 *e*P **P 09 38 09.4 -0.6**
comp=Z,41nm,0.7s,mb5.1
GRR Gorron 76.06 318 *e*P **P 09 38 09.4 -0.6**
GRR pmax pmax
comp=Z,20nm,0.7s,mb5.2
GRR Gorron 76.06 318 *e*P **P 09 38 09.4 -0.6**
comp=Z,20nm,0.7s,mb5.2
CAF Calviac 76.14 314 *e*P **P 09 38 10.4 -0.1**
comp=Z,24nm,0.8s,mb4.9
CAF Calviac 76.14 314 *e*P **P 09 38 10.4 -0.1**
CAF pmax pmax
comp=Z,12nm,0.8s,mb4.9
CAF Calviac 76.14 314 *e*P **P 09 38 10.4 -0.1**
comp=Z,12nm,0.8s,mb4.9
MBAR Mbarara 76.19 261 *e*P **P 09 38 13.1 +1.8**
RJF Les Rejaudoux 76.28 315 *e*P **P 09 38 11.2 -0.1**
comp=Z,33nm,1.0s,mb4.9
RJF *e*MLR MLR
comp=Z,113nm,19.8s,MS3.9
RJF Les Rejaudoux 76.28 315 *e*P **P 09 38 11.2 -0.1**
RJF pmax pmax
comp=Z,17nm,1.0s,mb4.9
RJF MLR MLR
comp=Z,110nm,19.8s,MS4.2
RJF Les Rejaudoux 76.28 315 *e*P **P 09 38 11.2 -0.1**
comp=Z,17nm,1.0s,mb4.9
RJF LR LR
comp=Z,110nm,19.8s,MS4.2
ARMA Armidale 76.35 139 *e*P **P 09 38 12.4 +0.7**
ARMA Armidale 76.35 139 *e*P **P 09 38 12.9 +1.1**
MFF Saint Martin d 76.59 317 *e*P **P 09 38 12.5 -0.5**
comp=Z,20nm,0.7s,mb4.9
MFF Saint Martin d 76.59 317 *e*P **P 09 38 12.5 -0.5**
MFF pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
MFF Saint Martin d 76.59 317 *e*P **P 09 38 12.5 -0.5**
comp=Z,9.9nm,0.7s,mb4.8
MTLF Montolieu 76.85 313 *e*P **P 09 38 14.1 -0.5**
comp=Z,11nm,0.8s,mb4.5

MTLF	**Montolieu**	**76.85**	**313**	*e*P	**P**	**09 38 14.1**	**-0.5**
MTLF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
MTLF	**Montolieu**	**76.85**	**313**	*e*P	**P**	**09 38 14.1**	**-0.5**
	comp=Z,5.6nm,0.8s,mb4.5						
LFF	**La Frestale**	**76.93**	**315**	*e*P	**P**	**09 38 15.0**	**0.0**
	comp=Z,24nm,0.7s,mb4.9						
LFF	**La Frestale**	**76.93**	**315**	*e*P	**P**	**09 38 15.0**	**0.0**
LFF				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.9						
LFF	**La Frestale**	**76.93**	**315**	*e*P	**P**	**09 38 15.0**	**0.0**
	comp=Z,12nm,0.7s,mb4.9						
SKAG	**Skagway**	**76.94**	**27**	*e*P	**P**	**09 38 15.2**	**+0.4**
	comp=Z,16nm,0.8s,mb5.0						
SGMF	**Saint Gilles**	**77.09**	**319**	*e*P	**P**	**09 38 15.6**	**-0.2**
	comp=Z,32nm,0.8s,mb5.0						
SGMF	**Saint Gilles**	**77.09**	**319**	*e*P	**P**	**09 38 15.6**	**-0.2**
SGMF				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.0						
SGMF	**Saint Gilles**	**77.09**	**319**	*e*P	**P**	**09 38 15.6**	**-0.2**
	comp=Z,16nm,0.8s,mb5.0						
ROSF	**Rostrenen**	**77.45**	**319**	*e*P	**P**	**09 38 17.6**	**-0.2**
	comp=Z,30nm,1.0s,mb4.9						
ROSF	**Rostrenen**	**77.45**	**319**	*e*P	**P**	**09 38 17.6**	**-0.2**
ROSF				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
ROSF	**Rostrenen**	**77.45**	**319**	*e*P	**P**	**09 38 17.6**	**-0.2**
	comp=Z,15nm,1.0s,mb4.9						
QUIF	**Quistinic**	**77.62**	**319**	*e*P	**P**	**09 38 18.4**	**-0.4**
	comp=Z,31nm,1.1s,mb4.8						
QUIF	**Quistinic**	**77.62**	**319**	*e*P	**P**	**09 38 18.4**	**-0.4**
QUIF				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.9						
QUIF	**Quistinic**	**77.62**	**319**	*e*P	**P**	**09 38 18.4**	**-0.4**
	comp=Z,16nm,1.1s,mb4.8						
CAN	**Canberra**	**78.74**	**144**	*e*P	**P**	**09 38 25.2**	**+0.2**
CAN				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
CAN	**Canberra**	**78.74**	**144**	*e*P	**P**	**09 38 25.2**	**+0.2**
	comp=Z,7.7nm,0.8s,mb4.7						
TOO	**Toolangi**	**78.86**	**148**	*e*P	**P**	**09 38 25.5**	**-0.1**
CNB	**Canberra Magne**	**78.92**	**144**	*e*P	**P**	**09 38 25.6**	**-0.4**
DLBC	**Dease Lake**	**79.65**	**26**	*e*P	**P**	**09 38 30.1**	**+0.3**
YKA	**Yellowknife Ar**	**81.27**	**17**	P	**P**	**09 38 37.5**	**-0.9**
	comp=Z,3.5nm,0.6s,mb4.5,baz=328,slow=5.3,SNR=83						
YKA	**Yellowknife Ar**	**81.27**	**17**	P	**P**	**09 38 37.5**	**-0.9**
ESDC	**Sonseca Array**	**82.74**	**312**	P	**P**	**09 38 46.4**	**-0.1**
	comp=Z,0.3nm,0.3s,mb3.8,baz=26,slow=7.1,SNR=2.8						
EVO	**Evora**	**85.95**	**313**	*e*P	**P**	**09 39 02.2**	**-0.7**
EVO				*e*MLR	MLR		
	comp=Z,110nm,20.2s,MS4.0						
LSZ	**Lusaka**	**86.33**	**250**	*e*P	**P**	**09 39 04.8**	**-0.2**
LSZ				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.4						
LSZ	**Lusaka**	**86.33**	**250**	*e*P	**P**	**09 39 04.8**	**-0.2**
	comp=Z,25nm,1.1s,mb5.4						
POHA	**Pohakuloa**	**88.25**	**68**	*e*P	**P**	**09 39 14.8**	**+0.4**
FCC	**Fort Churchill**	**88.77**	**9**	*e*P	**P**	**09 39 15.0**	**-1.0**
	comp=Z,0.2nm,1.0s						
EDM	**Edmonton**	**89.52**	**21**	*e*P	**P**	**09 39 19.9**	**+0.2**
FFC	**Flin Flon**	**91.19**	**15**	*e*P	**P**	**09 39 26.4**	**-1.1**
FFC				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.6						
FFC	**Flin Flon**	**91.19**	**15**	*e*P	**P**	**09 39 26.4**	**-1.1**
	comp=Z,3.4nm,0.9s,mb4.7						
NEW	**Newport**	**92.39**	**26**	*e*P	**P**	**09 39 33.6**	**+0.4**
WALA	**Waterton Lakes**	**92.89**	**24**	*e*P	**P**	**09 39 35.6**	**+0.1**
	comp=Z,0.1nm,0.9s						
TORD	**Torodi Ar. Bea**	**93.52**	**288**	P	**P**	**09 39 38.0**	**-1.0**
	comp=Z,2.7nm,1.0s,mb4.6,baz=54,slow=4.4,SNR=5.8						
BSMT	**Bassoo Peak**	**93.60**	**25**	*e*P	**P**	**09 39 40.0**	**+1.3**
SWMT	**Swartz Lake**	**94.17**	**25**	*e*P	**P**	**09 39 42.1**	**+0.7**
SLMT	**Seeley Lake**	**94.58**	**25**	*e*P	**P**	**09 39 43.8**	**+0.5**
	comp=Z,3.5nm,1.3s,mb4.6						
QSPA	**South Pole Qui**	**121.31**	**180**	*e*PKPdf	PKPdf	09 45 13.2	-1.3
ROSC	**El Rosal**	**143.78**	**357**	PKP	PKPdf	09 45 57.2	-1.4
	comp=Z,3.6nm,0.5s,baz=24,slow=12,SNR=2.6						
ROSC	**El Rosal**	**143.78**	**357**	PKP	PKPdf	09 45 57.2	-1.4
ROSC				*e*PKPdf	PKPdf	09 45 59.7	+1.1
OTAV	**Otavalo**	**148.30**	**5**	*e*PKPdf	PKPdf	09 46 06.8	+0.5
OTAV				*e*PKPbc	PKPbc	09 46 10.4	+0.8
OTAV				*e*PKPab	PKPab	09 46 13.1	+0.5

IDC ***15*** *09:41:20.1±71.0, 18°.99S×172°.44E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/15, mbtmp3.7/3, Error ellipse: s-maj=1209.0km s-min=144.6km az=76.0*
NOU ***15*** *09:41:54.8±0.9, 19°.70S×168°.11E, h10km, MD2.5, ML2.9*
ISC 15 09:41:59.6±3.1, 20°.2S±0°.2×168°.3E±0°.4, h35km, n6, σ1§11/8, mb3.7/3, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.36**	**215**	*e*S	**Sn**	**09 43 05.1**	**+1.5**
DZM	**Mont Dzumac**	**2.55**	**223**	*e*P	**Pn**	**09 42 36.7**	**-1.8**
DZM				*e*S	**Sn**	**09 43 07.5**	**-0.9**
DZM				AMP		09 43 15.4	
	comp=Z,296nm,2.0s						
NOUC	**Port Laguerre**	**2.67**	**225**	*e*P	**Pn**	**09 42 38.9**	**-1.2**
NOUC				*e*S	**Sn**	**09 43 11.5**	**+0.3**
NOUC				AMP		09 43 24.4	
	comp=Z,30nm,3.4s						
STKA	**Stephens Creek**	**26.61**	**239**	P	**P**	**09 47 36.1**	**+1.4**
	comp=Z,1.4nm,0.8s,mb3.5,baz=108,slow=9.6,SNR=2.9						
WRA	**Warramunga Arr**	**31.89**	**265**	P	**P**	**09 48 21.7**	**-0.2**
	comp=Z,1.1nm,0.9s,mb3.7,baz=96,slow=8.7,SNR=3.1						
ASAR	**Alice Springs**	**32.07**	**257**	P	**P**	**09 48 24.1**	**+0.7**
	comp=Z,0.8nm,0.5s,mb3.8,baz=87,slow=9.0,SNR=5.1						

DDA ***15*** *09:44:46.6, 35°.73N×27°.60E, h36km±1km, Md2.8*
ATH ***15*** *09:44:46.5, 35°.64N×27°.76E, h13km±2km, MD3.6/4*
CSEM ***15*** *09:44:46.8±0.3, 35°.74N×27°.67E, h2km, MD3.6, Error ellipse: s-maj=9.7km s-min=5.1km az=145.0*
NEIC ***15*** *09:44:46.5, 35°.65N×27°.76E, h12km, MD3.6(ATH), After ATH.*
ISC 15 09:44:46.9±0.8, 35°.77N±0°.04×27°.62E±0°.05, h2km±6km, n47, σ1§19/69, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.43**	**240**	*e*Pb	**Pg**	**09 44 56.3**	**+1.1**
KARP	**Karpathos**	**0.43**	**240**	*e*PB	**Pg**	**09 44 56.3**	**+1.1**
KARP	**Karpathos**	**0.43**	**240**	*e*Pb	**Pg**	**09 44 56.3**	**+1.1**
ARG	**Arkhangelos**	**0.61**	**42**	*e*Pb	**Pg**	**09 44 59.0**	**+0.4**
ARG	**Arkhangelos**	**0.61**	**42**	*e*PB	**Pg**	**09 44 59.0**	**+0.4**
ARG	**Arkhangelos**	**0.61**	**42**	*e*Pb	**Pg**	**09 44 59.0**	**+0.4**
BDRM	**Kayabasi**	**1.30**	**354**	*i*P	**Pg**	**09 45 11.6**	**-0.4**
BDRM				*i*S	**Sg**	**09 45 29.5**	**+0.7**
BDRM	**Kayabasi**	**1.30**	**354**	*i*P	**Pg**	**09 45 11.6**	**-0.4**
BDRM				*i*S	**Sg**	**09 45 29.5**	**+0.6**
ZKR	**Zakros**	**1.32**	**241**	*e*Pb	**Pb**	**09 45 12.1**	**-0.3**
ZKR	**Zakros**	**1.32**	**241**	*e*PB	**Pb**	**09 45 12.1**	**-0.3**
ZKR	**Zakros**	**1.32**	**241**	*e*Pb	**Pb**	**09 45 12.1**	**-0.3**
TURN	**Turunc**	**1.36**	**35**	*i*P	**Pn**	**09 45 08.5**	**-4.4**
TURN				*i*S	**Sg**	**09 45 25.3**	**-5.3**
TURN	**Turunc**	**1.36**	**35**	*i*P	**Pn**	**09 45 08.5**	**-4.4**
TURN				*i*S	**Sg**	**09 45 25.3**	**-5.3**
KSL	**Kastellorizon**	**1.64**	**76**	*e*Pb	**Pb**	**09 45 15.8**	**-2.0**
KSL	**Kastellorizon**	**1.64**	**76**	*e*PB	**Pb**	**09 45 15.8**	**-2.0**
KSL	**Kastellorizon**	**1.64**	**76**	*e*Pb	**Pb**	**09 45 15.8**	**-2.0**
AKAS	**Kas**	**1.68**	**73**	*i*P	**Pn**	**09 45 16.5**	**-0.7**
AKAS				*i*S	**Sn**	**09 45 39.0**	**-0.3**
AKAS	**Kas**	**1.68**	**73**	*i*P	**Pn**	**09 45 16.5**	**-0.7**
AKAS				*i*S	**Sn**	**09 45 39.0**	**-0.3**
XRY	**Khrisi**	**1.81**	**241**	*e*Pg	**Pg**	**09 45 20.6**	**-1.0**
XRY	**Khrisi**	**1.81**	**241**	*e*PG	**Pg**	**09 45 20.6**	**-1.0**
XRY	**Khrisi**	**1.81**	**241**	*e*Pg	**Pg**	**09 45 20.6**	**-1.0**
LAST	**Lasithi**	**1.85**	**252**	*e*Pn	**Pn**	**09 45 20.9**	**+1.3**
LAST	**Lasithi**	**1.85**	**252**	*e*PN	**Pn**	**09 45 20.9**	**+1.3**
LAST	**Lasithi**	**1.85**	**252**	*e*Pn	**Pn**	**09 45 20.9**	**+1.3**
AYDN	**Tasoluk**	**1.90**	**6**	*i*P	**Pn**	**09 45 20.5**	**+0.1**
AYDN				*i*S	**Sn**	**09 45 45.0**	**+0.1**
AYDN	**Tasoluk**	**1.90**	**6**	*i*P	**Pn**	**09 45 20.5**	**+0.1**
AYDN				*i*S	**Sn**	**09 45 45.0**	**+0.1**
GOLH	**Golhisar**	**2.15**	**46**	*i*P	**Pn**	**09 45 25.2**	**+1.5**
GOLH				*i*S	**Sn**	**09 45 54.6**	**+3.7**
GOLH	**Golhisar**	**2.15**	**46**	*i*P	**Pn**	**09 45 25.2**	**+1.5**
GOLH				*i*S	**Sn**	**09 45 54.6**	**+3.7**
DNZL	**Cakiroluk**	**2.24**	**30**	*i*P	**Pn**	**09 45 26.8**	**+1.9**
DNZL				*i*S	**Sn**	**09 45 58.8**	**+5.7**
DNZL	**Cakiroluk**	**2.24**	**30**	*i*P	**Pn**	**09 45 26.8**	**+1.9**
DNZL				*i*S	**Sn**	**09 45 58.8**	**+5.7**
IDI	**Anoyia**	**2.28**	**259**	*e*Pn	**Pn**	**09 45 25.6**	**+0.1**
IDI	**Anoyia**	**2.28**	**259**	*e*PB	**Pb**	**09 45 26.9**	**-1.8**
IDI	**Anoyia**	**2.28**	**259**	*e*Pn	**Pn**	**09 45 25.6**	**+0.1**
KORT	**Korkueli**	**2.52**	**60**	*i*P	**Pn**	**09 45 30.0**	**+1.1**
KORT				*i*S	**Sn**	**09 46 02.4**	**+2.2**
KORT	**Korkueli**	**2.52**	**60**	*i*P	**Pn**	**09 45 30.0**	**+1.1**
KORT				*i*S	**Sn**	**09 46 02.4**	**+2.2**
URLA	**Izmir**	**2.72**	**343**	*i*P	**Pn**	**09 45 30.4**	**-1.1**
URLA	**Izmir**	**2.72**	**343**	*i*P	**Pn**	**09 45 30.4**	**-1.2**
KHAL	**Karahalli**	**3.00**	**29**	*i*P	**Pn**	**09 45 35.9**	**+0.4**
KHAL				*i*S	**Sn**	**09 46 07.5**	**-4.5**
KHAL	**Karahalli**	**3.00**	**29**	*i*P	**Pn**	**09 45 35.9**	**+0.5**
KHAL				*i*S	**Sn**	**09 46 07.5**	**-4.5**
KARN	**Karanos**	**3.04**	**264**	*e*PN	**Pn**	**09 45 37.8**	**+1.8**
KARN	**Karanos**	**3.04**	**264**	*e*Pn	**Pn**	**09 45 37.8**	**+1.8**
DEMI	**Demirci**	**3.38**	**15**	*i*P	**Pn**	**09 45 41.2**	**+0.5**
DEMI				*i*S	**Sn**	**09 46 20.4**	**-1.1**
DEMI	**Demirci**	**3.38**	**15**	*i*P	**Pn**	**09 45 41.2**	**+0.5**
DEMI				*i*S	**Sn**	**09 46 20.4**	**-1.1**
GAZI	**Gazipasa**	**3.83**	**82**	*i*P	**Pn**	**09 45 44.7**	**-2.2**
GAZI				*i*S	**Sn**	**09 46 26.4**	**-6.2**
GAZI	**Gazipasa**	**3.83**	**82**	*i*P	**Pn**	**09 45 44.7**	**-2.2**
GAZI				*i*S	**Sn**	**09 46 26.4**	**-6.2**
BALY	**Balya**	**3.97**	**360**	*i*P	**Pn**	**09 45 48.2**	**-0.6**
BALY				*i*S	**Sn**	**09 46 34.5**	**-1.3**
BALY	**Balya**	**3.97**	**360**	*i*P	**Pn**	**09 45 48.2**	**-0.6**
BALY				*i*S	**Sn**	**09 46 34.5**	**-1.3**

ISCJB ***15*** *09:46:22.0±1.2, 29°.49N±0°.05×51°.98E±0°.05, h5km±10km, mb3.5/5, MS2.9/2, Error ellipse: s-maj=8.4km s-min=5.8km az=144.3*
TEH ***15*** *09:46:22.4, 29°.39N×51°.93E, h8km*
CSEM ***15*** *09:46:23.0±0.2, 29°.48N×52°.01E, h2km, ML3.8, Error ellipse: s-maj=7.0km s-min=5.0km az=161.0*
NEIC ***15*** *09:46:24.5, 29°.64N×52°.02E, h15km, ML3.4(THR), After THR.*
SGS ***15*** *09:46:26.1, 29°.49N×51°.84E, h14km*
KISR ***15*** *09:46:26.4±1.2, 29°.30N×51°.86E, h33km, ML3.4*
IDC ***15*** *09:46:26.2±5.8, 29°.96N×51°.93E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.5/24, mbtmp3.7/6, ML3.5/1, MS3.0/2, Ms1 3.0/2, ms1mx2.4/26, Error ellipse: s-maj=106.2km s-min=40.9km az=12.0*
ISC 15 09:46:23.1±1.3, 29°.49N±0°.05×51°.98E±0°.05, h0km±10km, n65, σ0§94/71, mb3.6/5, MS2.9/2, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHI	**Shiraz**	**0.48**	**72**	*e*Sg	**Sg**	**09 46 40.2**	**+1.6**
IPAR	**Pars**	**0.99**	**69**	*e*Pg	**Pg**	**09 46 40.4**	**-1.6**
IPAR				*e*Sg	**Sg**	**09 46 55.5**	**+0.6**
IPAR				*e*		09 46 56.7	
	comp=Z,14μm,0.2s						
IPAR	**Pars**	**0.99**	**69**	*e*Pg	**Pg**	**09 46 40.4**	**-1.6**
IPAR				*e*Sg	**Sg**	**09 46 55.5**	**+0.6**
ISRV	**Sarvestan**	**0.99**	**96**	*e*Pg	**Pg**	**09 46 41.1**	**-1.0**
ISRV				*e*		09 47 04.7	
	comp=Z,22μm,0.1s						
ISRV	**Sarvestan**	**0.99**	**96**	*e*Pg	**Pg**	**09 46 41.1**	**-1.0**
ISAD	**Sadrabad**	**2.82**	**31**	*e*Pn	**Pn**	**09 47 09.6**	**+0.2**
ISAD				*e*		09 48 07.2	
	comp=Z,3μm,0.3s						
ISAD	**Sadrabad**	**2.82**	**31**	*e*Pn	**Pn**	**09 47 09.6**	**+0.2**
IGAR	**Gharneh**	**2.90**	**1**	*e*Pn	**Pn**	**09 47 10.8**	**+0.3**
IGAR				*e*		09 48 06.4	
	comp=Z,2μm,0.3s						
IMEH	**Mehriz**	**2.96**	**50**	*e*Pn	**Pn**	**09 47 11.0**	**-0.2**
IMEH				*e*		09 47 34.4	
	comp=Z,1μm,0.3s						
IMEH	**Mehriz**	**2.96**	**50**	*e*Pn	**Pn**	**09 47 11.0**	**-0.2**
IPIR	**Pirpir**	**3.32**	**344**	*e*Pn	**Pn**	**09 47 17.0**	**+0.8**
IPIR				*e*		09 48 27.1	
	comp=N,3μm,0.5s						
IPIR	**Pirpir**	**3.32**	**344**	*e*Pn	**Pn**	**09 47 17.0**	**+0.8**
NASN	**Na'in**	**3.37**	**12**	*e*Pn	**Pn**	**09 47 17.0**	**+0.1**
NASN	**Na'in**	**3.37**	**12**	*e*Pn	**Pn**	**09 47 17.1**	**+0.2**
IZEF	**Zefreh**	**3.40**	**5**	*e*Pn	**Pn**	**09 47 17.7**	**+0.3**
IZEF				*e*		09 47 35.2	
	comp=Z,870nm,0.2s						
IZEF	**Zefreh**	**3.40**	**5**	*e*Pn	**Pn**	**09 47 17.7**	**+0.3**
ICHK	**Chekchek**	**3.44**	**37**	*e*Pn	**Pn**	**09 47 17.9**	**0.0**
ICHK				*e*		09 47 29.4	
	comp=Z,2μm,0.3s						
ICHK	**Chekchek**	**3.44**	**37**	*e*Pn	**Pn**	**09 47 17.9**	**0.0**
UMR	**Umm Al-Rimmam**	**3.72**	**272**	*e*P	**Pn**	**09 47 24.2**	**+2.5**
UMR				*e*S	**Sn**	**09 48 06.2**	**-0.1**
UMR				AML	AML	09 48 09.2	
	comp=Z,72nm,0.3s						
IBAF	**Bafgh**	**3.73**	**55**	*e*Pn	**Pn**	**09 47 22.1**	**+0.2**
IBAF				*e*		09 47 41.5	
	comp=Z,1μm,0.2s						
IBAF	**Bafgh**	**3.73**	**55**	*e*Pn	**Pn**	**09 47 22.1**	**+0.2**
KBD	**Kabd**	**3.76**	**266**	*e*P	**Pn**	**09 47 23.5**	**+1.2**
KBD				*e*S	**Sn**	**09 48 07.9**	**+0.7**
KBD				AML	AML	09 48 11.0	
	comp=Z,47nm,0.4s						
KBD	**Kabd**	**3.76**	**266**	*e*P	**Pn**	**09 47 23.5**	**+1.2**
KBD				*e*S	**Sn**	**09 48 07.9**	**+0.7**
SHGR	**Shooshtar-Gavs**	**3.78**	**314**	*e*Pn	**Pn**	**09 47 23.0**	**+0.4**
SHGR	**Shooshtar-Gavs**	**3.78**	**314**	*e*Pn	**Pn**	**09 47 23.4**	**+0.8**
IKLH	**Kolahrood**	**3.83**	**355**	*e*Pn	**Pn**	**09 47 22.7**	**-0.5**
IKLH				*e*		09 47 46.4	
	comp=Z,1μm,0.2s						
IKLH	**Kolahrood**	**3.83**	**355**	*e*Pn	**Pn**	**09 47 22.7**	**-0.5**
RDF	**Al-Radifah**	**3.92**	**263**	*e*P	**Pn**	**09 47 26.0**	**+1.5**
RDF				*e*S	**Sn**	**09 48 10.6**	**-0.6**
RDF				AML	AML	09 48 18.7	
	comp=Z,69nm,0.5s						
RDF	**Al-Radifah**	**3.92**	**263**	*e*P	**Pn**	**09 47 26.0**	**+1.5**
RDF				*e*S	**Sn**	**09 48 10.6**	**-0.5**
KRBR	**Kerman**	**4.18**	**82**	*e*Pn	**Pn**	**09 47 29.0**	**+0.9**
KRBR	**Kerman**	**4.18**	**82**	*e*Pn	**Pn**	**09 47 29.5**	**+1.4**
SLWS		**4.83**	**195**	P	**Pn**	**09 47 36.4**	**-0.6**
SLWS		**4.83**	**195**	P	**Pn**	**09 47 36.3**	**-0.7**
ISFB	**Sefidab**	**4.85**	**3**	*e*Pn	**Pn**	**09 47 36.7**	**-0.6**
ISFB				*e*		09 47 40.9	
	comp=Z,650nm,0.1s						
ISFB	**Sefidab**	**4.85**	**3**	*e*Pn	**Pn**	**09 47 36.7**	**-0.6**
GHVR	**GHOM**	**5.01**	**353**	*e*Pn	**Pn**	**09 47 39.0**	**-0.4**
GHVR	**GHOM**	**5.01**	**353**	*e*Pn	**Pn**	**09 47 39.3**	**-0.1**
ASAO	**Ashtian**	**5.31**	**342**	*e*Pn	**Pn**	**09 47 43.0**	**-0.5**
ASAO	**Ashtian**	**5.31**	**342**	*e*Pn	**Pn**	**09 47 43.9**	**+0.4**
IVRN	**Varamin**	**5.49**	**358**	*e*Pn	**Pn**	**09 47 45.8**	**-0.3**
IVRN				*e*Pn	**Pn**	**09 47 45.8**	**-0.3**
IVRN				*e*		09 47 50.8	
	comp=Z,927nm,0.2s						
IVRN	**Varamin**	**5.49**	**358**	*e*Pn	**Pn**	**09 47 45.8**	**-0.3**
BTHS		**5.52**	**191**	P	**Pn**	**09 47 45.8**	**-0.7**
BTHS		**5.52**	**191**	P	**Pn**	**09 47 45.8**	**-0.7**
DAMV	**Damavand**	**6.12**	**360**	*e*Pn	**Pn**	**09 47 54.0**	**-0.7**
DAMV	**Damavand**	**6.12**	**360**	*e*Pn	**Pn**	**09 47 54.8**	**+0.1**
IPRN	**Peran**	**6.74**	**2**	*e*Pn	**Pn**	**09 48 02.5**	**-0.7**
IPRN	**Peran**	**6.74**	**2**	*e*Pn	**Pn**	**09 48 02.5**	**-0.7**
SNGE	**Sanandaj**	**6.82**	**326**	*e*Pn	**Pn**	**09 48 04.0**	**-0.4**
SNGE	**Sanandaj**	**6.82**	**326**	*e*Pn	**Pn**	**09 48 04.9**	**+0.5**
ASYS		**7.01**	**255**	P	**Pn**	**09 48 05.4**	**-1.6**
ASYS		**7.01**	**255**	P	**Pn**	**09 48 05.4**	**-1.6**
BRTR	**Keskin Array B**	**18.19**	**309**	P	**Pn**	**09 50 36.3**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=126,slow=12,SNR=8.8						
BRTR	**Keskin Array B**	**18.19**	**309**	P	**Pn**	**09 50 36.3**	**-0.7**
AKTK	**Aktyubinsk**	**21.41**	**11**	P	**P**	**09 51 10.9**	**-1.4**
AKTK	**Aktyubinsk**	**21.41**	**11**	P	**P**	**09 51 10.9**	**-1.4**
AKTO	**Aktyubinsk**	**21.41**	**11**	P	**P**	**09 51 10.9**	**-1.4**
	comp=Z,1.5nm,0.6s,mb3.5,baz=188,slow=9.1,SNR=6.5						
AAK	**Ala-Archa**	**22.35**	**48**	LR	LR	10 00 47.5	
	comp=Z,42nm,20.1s,MS2.9,baz=202,slow=39						
BVAR	**Borovoye Array**	**27.12**	**25**	P	**P**	**09 52 06.5**	**-1.1**
	comp=Z,0.4nm,0.3s,mb3.6,baz=214,slow=9.2,SNR=3.2						
BVAR	**Borovoye Array**	**27.12**	**25**	P	**P**	**09 52 06.5**	**-1.0**
MKAR	**Makanchi Array**	**29.19**	**45**	P	**P**	**09 52 25.5**	**-0.5**
	comp=Z,0.8nm,0.9s,mb3.5,baz=240,slow=8.1,SNR=3.3						
MKAR	**Makanchi Array**	**29.19**	**45**	P	**P**	**09 52 25.5**	**-0.6**
ZALV	**Zalesovo Beam**	**34.10**	**35**	P	**P**	**09 53 10.5**	**+1.3**
	comp=Z,0.5nm,0.3s,mb3.9,baz=231,slow=9.1,SNR=3.5						
SONM	**Songino Array**	**45.27**	**50**	P	**P**	**09 54 43.9**	**+1.7**
	comp=Z,0.3nm,0.4s,mb3.6,baz=256,slow=5.8,SNR=3.0						
SONM	**Songino Array**	**45.27**	**50**	P	**P**	**09 54 43.9**	**+1.7**
KSRS	**Korea Array**	**62.28**	**61**	LR	LR	10 27 40.6	
	comp=Z,9.5nm,20.5s,MS2.9,baz=95,slow=40						

CSEM ***15*** *09:46:26.3, 64°.76N×17°.28W, h9km, ML3.7, After REY*
REY 15 09:46:26.3, 64°.76N×17°.28W, h9km, ML3.7, ML3.0, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGRF	**Grimsfjall**	**0.36**	**179**	P	**Pg**	09 46 33.1	-0.2
IKRE	**Kreppuhraun**	**0.39**	**87**	P	**Pg**	09 46 33.5	-0.3
IKRE				S	**Sg**	09 46 39.1	+0.1
IMKO	**Mokollar**	**0.46**	**61**	P	**Pg**	09 46 34.9	-0.3
IMKO				S	**Sg**	09 46 41.1	-0.1
IBRU	**Bruarjokull**	**0.52**	**82**	P	**Pg**	09 46 35.8	-0.5
IBRU				S	**Sg**	09 46 43.0	-0.1
ISKR	**Skrokkalda**	**0.52**	**247**	P	**Pg**	09 46 35.8	-0.5
ISVA	**Svartarkot**	**0.58**	**1**	P	**Pg**	09 46 36.8	-0.6
ISVA				S	**Sg**	09 46 44.9	-0.1
IHVA	**Hvannstoosfjol**	**0.63**	**72**	P	**Pg**	09 46 37.7	-0.8
IHVA				S	**Sg**	09 46 46.5	-0.3
IVSH	**V-Sauoahnukur**	**0.67**	**85**	P	**Pg**	09 46 38.2	-1.0
IVSH				S	**Sg**	09 46 47.3	-0.6
IADA	**Aoalbol**	**0.77**	**70**	P	**Pg**	09 46 40.0	-1.2
IADA				S	**Sg**	09 46 50.3	-0.9
IKAL	**Kalfafell**	**0.84**	**192**	P	**Pg**	09 46 41.0	-1.4
IKAL				S	**Sg**	09 46 52.8	-0.5
IREN	**Reynihlio**	**0.90**	**10**	P	**Pg**	09 46 42.2	-1.4
IREN				S	**Sg**	09 46 54.1	-1.2
IVAT	**Vatnsfell**	**0.92**	**231**	P	**Pg**	09 46 42.5	-1.4
IVAT				S	**Sg**	09 46 54.9	-0.8
IFAG	**Fagurholsmyri**	**0.93**	**163**	P	**Pg**	09 46 42.5	-1.7
IFAG				S	**Sg**	09 46 55.0	-1.3
IGLU	**Glumsstadir**	**0.96**	**76**	P	**Pg**	09 46 43.1	-1.7
IGLU				S	**Sg**	09 46 56.0	-1.3
IKVO	**Krokottuvotn**	**0.97**	**10**	P	**Pg**	09 46 43.2	-1.7
IKVO				S	**Sg**	09 46 56.4	-1.1
IHVE	**Hveravellir**	**0.98**	**277**	P	**Pg**	09 46 43.0	-2.2
IHVE				S	**Sg**	09 46 57.0	-0.9
IGRS	**Grimsstaoir**	**1.00**	**29**	P	**Pg**	09 46 44.0	-1.6
IGRS				S	**Sg**	09 46 57.8	-0.8
IGRA	**Granastaoir**	**1.17**	**354**	P	**Pb**	09 46 46.2	-2.3
IGRA				S	**Sb**	09 47 02.0	-1.7
IHLA	**Hella**	**1.27**	**339**	P	**Pn**	09 46 48.2	-2.0
IHLA				S	**Sb**	09 47 05.0	-1.8
IHED	**Heoinshofoi**	**1.32**	**360**	P	**Pn**	09 46 48.7	-2.1
IHED				S	**Sb**	09 47 06.8	-1.4
IGYG	**Gygjarholskot**	**1.36**	**250**	P	**Pn**	09 46 49.5	-1.8
IGYG				S	**Sb**	09 47 07.9	-1.3
IGIL	**Gilhagi**	**1.38**	**16**	P	**Pn**	09 46 49.6	-2.0
IGIL				S	**Sb**	09 47 08.4	-1.3
IHAU	**Haukadalur**	**1.41**	**237**	P	**Pn**	09 46 50.5	-1.6
IHVO	**Lagu-

IVOS	Vogsosar	2.13 247	P	Pn	09 48 01.5	-0.5

JMA 15 09:47:32.0±0.2,31°.72N×140°.71E,h57km,M3.6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.58	332	P	Pn	09 47 58.5	+0.8
JKO	Kozu shima	2.79	332	P	Pn	09 48 15.4	+1.2
BSO1	Boso 1	2.93	4	P	Pn	09 48 17.5	+1.3
BSO2	Boso 2	3.02	1	eS	Sn	09 48 55.1	+2.7
BSO3	Boso 3	3.08	357	P	Pn	09 48 19.4	+1.3
JIM2	Oshima 3	3.18	341	P	Pn	09 48 20.8	+1.3
JOD2	Odawara 2	3.79	339	P	Pn	09 48 29.3	+1.5
JNY	Yasuok	4.34	328	P	Pn	09 48 36.6	+1.2
JYT	Yasato	4.52	355	P	Pn	09 48 39.7	+1.9
JRY	Ryogami san	4.54	341	P	Pn	09 48 39.2	+1.0
CBIJ	Chichi jima	4.78	164	P	Pn	09 48 41.2	-0.3
JAG	Ashikaga	4.81	348	P	Pn	09 48 41.8	0.0
JHO	Hitachi	4.88	359	P	Pn	09 48 42.4	-0.4
JHO				eS	Sn	09 49 36.0	-1.9
JMK	Ichinoseki	7.23	3	P	Pn	09 49 13.9	-1.0
JMK				eS	Sn	09 50 31.4	-4.2

*DJA **15** 10:32:22, 17°.80S×173°.62W, h29km, mb5.6/9*
*ISCJB **15** 10:33:19.8±0.6, 17°.18S±0°.05×177°.31W±0°.04, h365km±6km, mb4.7/61, Error ellipse: s-maj=9.3km s-min=4.9km az=154.5*
*NEIC **15** 10:33:20.4±0.9, 17°.15S×177°.24W, h363km±8km, mb4.7/34, Error ellipse: s-maj=13.9km s-min=7.6km az=145.0*
*IDC **15** 10:33:21.5±1.4, 17°.26S×177°.21W, h377km±13km, mb4.2/14, mb1 4.4/15, mb1mx4.4/18, mbtmp4.3/15, Error ellipse: s-maj=16.0km s-min=9.7km az=144.0*
*SZGRF **15** 10:33:26.2, 16°.63S×177°.19W, h33km, Fiji Islands region*
ISC 15 10:33:20.9±0.7,17°.20S±0°.05×177°.27W±0°.04, h364km±6km, h387km±1.8km:pP-P,n309,c0s77/180, mb4.7/61,52C-64D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.50	263	ePn	Pn	10 34 33.7	-2.2
MSVF				eSn	S	10 35 50.0	+13
AFI	Afiamalu	6.22	59	P	Pn	10 34 54.6	-0.2
	30nm,0.3s,baz=231,slow=13,SNR=40						
AFI				S	S	10 36 06.3	-4.7
	44nm,0.3s,baz=217,slow=10,SNR=8.3						
AFI	Afiamalu	6.22	59	ePn	Pn	10 34 54.8	+0.1
	90nm,0.4s						
AFI				eS	S	10 36 10.9	-0.1
FUNA	Funafuti	9.29	338	ePn	Pn	10 35 31.2	+0.7
	175nm,0.7s						
FUNA				eS	S	10 37 18.1	+1.4
RAO	Raoul Island	12.01	183	S	S	10 38 11.9	-3.3
	113nm,0.3s,baz=0.0,slow=20,SNR=6.5						
DZM	Mont Dzumac	16.09	250	eP	P	10 36 48.2	+1.4
URZ	Urewera	21.55	192	P	P	10 37 40.2	-1.8
	7.7nm,0.3s,mb4.4,baz=9.1,slow=19,SNR=32						
URZ				S	S	10 41 17.6	+2.6
	1.9nm,0.5s,baz=49,slow=19,SNR=4.4						
HNR	Honiara	23.46	286	P	P	10 38 01.5	+2.0
	249nm,0.8s,mb5.5,baz=112,slow=2.1,SNR=7.1						
EIDS	Eidsvold	30.53	249	eP	P	10 39 02.0	-0.1
	41nm,0.8s,mb4.7						
ARMA	Armidale	31.24	239	⇓iP	P	10 39 09.4	+1.2
ARMA	Armidale	31.24	239	eP	P	10 39 09.4	+1.3
	10nm,0.7s,mb4.2						
CTA	Charters Tower	34.64	259	⇓iP	P	10 39 37.6	+0.1
	15nm,0.6s,mb4.4						
CTAO	Charters Tower	34.64	259	eP	P	10 39 37.9	+0.3
	12nm,0.6s,mb4.3						
CTAO	Charters Tower	34.64	259	P	P	10 39 37.7	+0.2
	36nm,1.1s,mb4.5						
CNB	Canberra Magne	34.72	232	eP	P	10 39 38.8	+0.8
CAN	Canberra	35.00	232	eP	P	10 39 41.3	+1.0
	11nm,0.8s,mb4.1						
PMG	Port Moresby	35.43	278	eP	P	10 39 46.3	+2.0
	68nm,1.0s,mb4.8						
PMG	Port Moresby	35.43	278	P	P	10 39 46.8	+2.5
	66nm,1.0s,mb4.8						
COEN	Coen	38.20	269	eP	P	10 40 08.3	+0.9
	59nm,0.5s,mb5.1						
COEN	Coen	38.20	269	P	P	10 40 08.2	+0.8
	108nm,1.1s,mb5.0						
TOO	Toolangi	38.46	231	eP	P	10 40 09.8	+0.6
STKA	Stephens Creek	39.92	241	⇓iP	P	10 40 22.1	+0.8
	44nm,0.6s,mb4.9						
STKA	Stephens Creek	39.92	241	P	P	10 40 22.1	+0.8
	57nm,0.6s,mb5.0,baz=89,slow=9.4,SNR=203						
STKA	Stephens Creek	39.92	241	eP	P	10 40 22.2	+0.9
SMPI	Sarmi	45.81	284	P	P	10 41 08.6	+0.3
	75nm,0.6s,mb5.0						
WRAB	Tennant Creek	45.83	259	eP	P	10 41 07.4	-0.9
	16nm,0.7s,mb4.3						
WRAB	Tennant Creek	45.83	259	P	P	10 41 07.0	-1.3
	25nm,0.8s,mb4.4						
WRA	Warramunga Arr	45.84	259	P	P	10 41 07.2	-1.2
	12nm,0.6s,mb4.2,baz=95,slow=7.5,SNR=132						
WRA				PcP	PcP	10 42 38.1	-0.8
	1.8nm,0.4s,baz=91,slow=3.4,SNR=5.3						
WRA				ScP	ScP	10 45 55.0	-1.6
	1.2nm,0.8s,baz=90,slow=4.2,SNR=6.0						
WRA				S	S	10 47 25.9	+1.4
	0.7nm,0.8s,baz=95,slow=14,SNR=4.8						
ASAR	Alice Springs	46.03	254	P	P	10 41 09.6	-0.3
	109nm,0.6s,mb5.2,baz=89,slow=8.0,SNR=2301						
ASAR				PcP	PcP	10 42 38.5	-1.0
	3.8nm,0.7s,baz=93,slow=5.0,SNR=4.4						
ASAR				ScP	ScP	10 45 56.2	-1.2
	0.7nm,0.6s,baz=100,slow=4.7,SNR=5.5						
ASAR				S	S	10 47 22.3	-4.9
	3.7nm,0.9s,baz=89,slow=16,SNR=18						
GUMO	Guam	48.31	307	P	P	10 41 26.8	-0.4
	47nm,0.7s,mb4.8,baz=125,slow=16,SNR=6.5						
KAKA	Kakadu	48.69	268	eP	P	10 41 29.4	-0.8
	53nm,0.3s,mb5.2						
KAKA	Kakadu	48.69	268	eP	P	10 41 29.5	-0.7
	196nm,0.5s,mb5.6						
KAKA	Kakadu	48.69	268	P	P	10 41 30.0	-0.2
	2μm176nm,0.6s,mb5.5						
TLE	Tual	50.19	277	P	P	10 41 42.4	+0.9
	101nm,1.1s,mb5.0						
FORT	Forrest	51.29	244	eP	P	10 41 48.1	-1.3
	37nm,0.5s,mb4.9						
FORT	Forrest	51.29	244	eP	P	10 41 48.6	-0.7
	44nm,0.6s,mb4.9						
KNA	Kununurra	51.63	263	P	P	10 41 51.1	-0.9
	1μm150nm,0.8s,mb5.4						
FITZ	Fitzroy Crossi	54.22	260	⇓iP	P	10 42 10.1	-0.7
	13nm,0.8s,mb4.3						
FITZ	Fitzroy Crossi	54.22	260	P	P	10 42 10.4	-0.4
	4.4nm,0.4s,mb4.1,baz=116,slow=3.6,SNR=36						
FITZ	Fitzroy Crossi	54.22	260	eP	P	10 42 10.3	-0.5
	4.4nm,0.5s,mb4.0						
FITZ	Fitzroy Crossi	54.22	260	P	P	10 42 10.0	-0.8
KLBR	Kellerberrin	60.12	243	eP	P	10 42 50.0	-1.4
	124nm,2.0s,mb5.0						
MJAR	Matsushiro Arr	68.00	322	P	P	10 43 40.9	-1.0
	11nm,0.5s,mb4.8,baz=161,slow=6.3,SNR=37						
MJAR	Matsushiro Arr	68.00	322	P	P	10 43 40.9	-1.1
MAJO	Matsushiro	68.00	322	eP	P	10 43 41.0	-1.0
	21nm,0.9s,mb4.9						
MAT	Matsushiro	68.00	322	P	P	10 43 40.9	-1.1
TWG	Pinlang	72.22	301	eP	P	10 44 05.9	-1.8
	19nm,0.4s,mb5.2						
YULB	Yu-li	72.31	302	eP	P	10 44 07.2	-0.9
	9.8nm,0.6s,mb4.7						
TPUB	Ta-pu	72.81	302	eP	P	10 44 09.8	-1.3
	70nm,0.8s,mb5.4						
PETK	Petropavlovsk-	73.28	345	P	P	10 44 12.2	-0.9
	15nm,0.7s,mb4.9,baz=142,slow=5.0,SNR=67						
YSS	Yuzh-Sakhalins	73.28	333	eP	P	10 44 13.2	-0.1
	38nm,1.1s,mb5.0						
KSM	Kuching	73.68	277	eP	P	10 44 16.4	+0.1
	12nm,0.9s,mb4.6						
KSRS	Korea Array	74.91	318	P	P	10 44 23.1	+0.3
	9.3nm,0.7s,mb4.7,baz=129,slow=6.6,SNR=40						
MONP	Monument Peak	76.53	49	⇓P	P	10 44 31.9	-0.1
	baz=77						
OHAK	Old Harbor	76.79	13	eP	P	10 44 31.6	-1.3
	18nm,1.2s,mb4.7						
BELC	Belle Mtn. Jos	77.40	48	⇑P	P	10 44 37.0	+0.2
	baz=78						
IRM	Iron Mountain	78.09	49	⇑P	P	10 44 40.7	+0.1
	baz=78						
NVAR	Mina Array Bea	78.16	43	P	P	10 44 40.0	-0.9
	0.9nm,0.7s,mb3.6,baz=226,slow=9.2,SNR=9.2						
MDJ	Mudanjiang	78.24	324	P	P	10 44 41.3	+0.1
MDJ				pP	pP	10 46 08.8	+5.1
MDJ				S	S	10 54 04.0	-1.2
MDJ				ScS	ScS	10 54 24.3	-2.6
MDJ				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.6						
MDJ				pmax	pmax		
	comp=Z,37nm,3.0s						
MDJ	Mudanjiang	78.24	324	eP	P	10 44 41.6	+0.4
	comp=Z,8.5nm,0.7s,mb4.6						
NJ2	Nanjing	78.34	309	eP	P	10 44 43.3	+1.3
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
113A	Mohawk Valley,	78.40	50	⇓P	P	10 44 42.4	+0.1
	baz=78						
Z13A	Yuma Proving G	78.69	50	⇓P	P	10 44 44.1	+0.2
	baz=79						
214A	Organ Pipe Nat	78.72	51	⇑P	P	10 44 44.0	0.0
	baz=79						
PDMCI	Parker Dam,Lak	78.88	49	⇓P	P	10 44 45.3	+0.4
	baz=79						
S10A	Tonopah Range,	79.03	45	⇓P	P	10 44 45.6	0.0
	baz=79						
114A	Black Gap (USA	79.05	51	⇑P	P	10 44 45.8	0.0
	baz=79						
X13A	Yucca	79.25	49	⇑P	P	10 44 47.4	+0.6
	baz=79						
Y14A	Wickenburg	79.53	50	⇑P	P	10 44 48.4	+0.1
	baz=80						
216A	Three Points,	79.76	52	⇓P	P	10 44 49.8	+0.2
	baz=80						
116A	Eloy	79.83	51	⇑P	P	10 44 50.5	+0.5
	baz=80						
X14A	Yava	79.87	49	⇑P	P	10 44 50.2	+0.1
	baz=80						
Y15A	Casa Rosa Ranc	80.03	50	⇑P	P	10 44 51.3	+0.3
	baz=80						
S12A	Delamar Landin	80.04	46	⇓P	P	10 44 51.4	+0.4
	baz=80						
W14A	Seligman	80.09	48	⇑P	P	10 44 52.0	+0.7
	baz=80						
CN2	Changchun	80.14	322	eP	P	10 44 51.3	0.0
CN2				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.9						
Q11A	Duckwater	80.14	44	⇑P	P	10 44 52.0	+0.6
	baz=80						
X15A	Humboldt	80.35	49	⇑P	P	10 44 53.1	+0.5
	baz=80						
117A	Oracle	80.56	52	⇑P	P	10 44 54.4	+0.5
	baz=81						
U14A	Mt Trumbull	80.61	47	⇓P	P	10 44 54.4	+0.3
	baz=81						
318A	Bisbee	80.61	53	⇑P	P	10 44 54.7	+0.6
	baz=81						
Y16A	Circle Bar Ran	80.62	50	⇓P	P	10 44 54.7	+0.6
	baz=81						
218A	Dragoon	80.81	53	⇑P	P	10 44 55.8	+0.6
	baz=81						
X16A	Lo Mia Camp, P	80.89	50	⇑P	P	10 44 55.9	+0.3
	baz=81						
RC01	Rabbit Creek A	81.08	13	eP	P	10 44 54.7	-1.2
	comp=Z,2.2nm,0.6s,mb4.1						
219A	White Tail Can	81.42	53	⇑P	P	10 44 58.7	+0.3
	baz=82						
K10A	MacKenzie Ranc	81.44	40	⇑P	P	10 44 58.3	+0.1
	baz=82						
Y18A	Canyon Day Jun	81.64	51	⇑P	P	10 44 59.7	+0.3
	baz=82						
L11A	Cat Creek Ranc	81.81	41	⇑P	P	10 45 00.4	+0.3
	baz=82						
V17A	Tonalea, Kykot	81.93	49	⇓P	P	10 45 01.2	+0.3
	baz=82						
220A	Playas Peak, P	81.94	53	⇓P	P	10 45 01.5	+0.5
	baz=82						
M12A	Wells	81.96	42	⇓P	P	10 45 01.2	+0.3
	baz=82						
BMRM	Bremner River	82.19	15	eP	P	10 45 00.3	-1.3
	comp=Z,21nm,1.2s,mb4.8						
Y19A	Nutrioso	82.30	51	⇑P	P	10 45 03.1	+0.3
	baz=82,SNR=5.3						
Z20A	Nine Sixteen R	82.42	52	⇑P	P	10 45 04.0	+0.5
	baz=82						
MFID	Camas Ranch	82.43	40	⇓P	P	10 45 03.9	+0.6
	baz=82						
X19A	St. Johns	82.48	51	⇓P	P	10 45 03.9	+0.2
	baz=82						
V18A	Ganado	82.59	49	⇓P	P	10 45 04.9	+0.6
	baz=83						
S17A	Black Ridge (B	82.86	47	⇓P	P	10 45 05.5	-0.1
	baz=83						
U18A	Rough Rock, Ch	82.96	49	⇓P	P	10 45 06.0	-0.1
	baz=83						
F10A	Beach Ranch, E	82.98	38	⇑P	P	10 45 06.3	+0.3
	baz=83						
H11A	Donnelly	83.00	39	⇓P	P	10 45 06.7	+0.5
	baz=83						
M14A	Sheep Mountain	83.01	43	⇓P	P	10 45 06.5	+0.2
	baz=83						
I12A	Atlanta	83.06	40	⇓P	P	10 45 07.0	+0.6
	baz=83						
TRF	Thorofare Moun	83.09	12	eP	P	10 45 04.6	-1.6
	comp=Z,14nm,0.7s,mb4.9						
X20A	Quemado	83.12	51	⇓P	P	10 45 07.3	+0.3
	baz=83						
K13A	Stover Farm, H	83.12	42	⇓P	P	10 45 07.3	+0.5
	baz=83						
T18A	Mexican Hat	83.28	48	⇓P	P	10 45 08.0	+0.3
	baz=83						
W20A	Ramah	83.37	50	⇑P	P	10 45 08.6	+0.4
	baz=83						
U19A	Dine' College,	83.38	49	⇓P	P	10 45 08.4	+0.1
	baz=83						
HLID	Hailey	83.38	41	⇓P	P	10 45 08.7	+0.5
	baz=84						
HLID	Hailey	83.38	41	eP	P	10 45 08.5	+0.3
	comp=Z,1.8nm,0.7s,mb4.0						
J13A	Cove Ranch, Pi	83.45	41	⇓P	P	10 45 08.9	+0.4
	baz=84						
BPAW	Bear Paw Mtn.	83.55	11	eP	P	10 45 06.2	-2.3
	comp=Z,2.9nm,0.7s,mb4.2						
M15A	Larsen Ranch,	83.58	43	⇑P	P	10 45 09.3	+0.1
	baz=84						
MCK	McKinley	83.62	12	eP	P	10 45 07.0	-1.8
	comp=Z,27nm,0.9s,mb5.1						
H12A	Diamond D Ranc	83.62	40	⇓P	P	10 45 09.5	+0.2
	baz=84						
K14A	Jones Ranch, D	83.65	42	⇓P	P	10 45 09.4	-0.1
	baz=84						
J14A	Carey	83.82	41	⇓P	P	10 45 10.9	+0.6
	baz=84						
F12A	Elk City	84.02	38	⇑P	P	10 45 11.2	0.0
	baz=84						
BJI	Beijing	84.05	315	P	P	10 45 12.0	+0.4
BJI				pP	pP	10 46 41.5	+6.1
BJI				pmax	pmax		
	comp=Z,21nm,0.7s,mb5.1						
BJI				pmax	pmax		
	comp=Z,83nm,3.8s						
MENT	Mentasta	84.09	15	eP	P	10 45 10.4	-0.8
324A	Moseley Ranch,	84.10	55	⇓P	P	10 45 12.0	0.0
	baz=84						
O17A	Robinson Place	84.11	45	⇑P	P	10 45 12.2	+0.4
	baz=84						
425A	Indio Mountain	84.22	55	⇑P	P	10 45 12.9	+0.2
	baz=84,SNR=6.6						
MNTX	Cornudas Mount	84.28	55	eP	P	10 45 13.2	+0.3
	comp=Z,2.0nm,1.1s,mb3.9						
G13A	Cobalt	84.29	39	⇑P	P	10 45 12.7	+0.1
	baz=84						
224A	Cornudas Mount	84.33	54	⇑P	P	10 45 13.2	+0.1
	baz=84,SNR=6.4						
626A	Big Bend Ranch	84.41	57	⇑P	P	10 45 13.9	+0.3
	baz=84						
325A	Bean Ranch, Si	84.47	55	⇓P	P	10 45 13.7	-0.1
	baz=84,SNR=5.2						
J15A	Blackfoot	84.55	42	⇓P	P	10 45 14.5	+0.6
	baz=85						
C11A	Tepee Creek (N	84.56	36	⇑P	P	10 45 13.8	0.0
	baz=85						
U21A	Nageezi	84.56	49	⇑P	P	10 45 14.9	+0.7
	baz=85						
F13A	Darby	84.59	39	⇑P	P	10 45 14.4	+0.3
	baz=85						
526A	Mary Lane Ranc	84.64	56	⇓P	P	10 45 14.6	-0.2
	baz=85						
TXAR	Lajitas Array	84.70	57	P	P	10 45 15.8	+0.8
	comp=Z,3.0nm,0.8s,mb4.2,baz=219,slow=7.1,SNR=41						
DLBC	Dease Lake	84.76	23	eP	P	10 45 14.5	-0.1
ENH	Enshi	84.78	304	eP	P	10 45 15.9	+0.5
	comp=Z,71nm,1.1s,mb5.4						
COLA	College	84.85	12	eP	P	10 45 13.4	-1.5
	comp=Z,22nm,0.7s,mb5.1						
225A	Deer Hill, Car	84.88	54	⇓P	P	10 45 16.1	+0.2
	baz=85						
MAW	Mawson	84.89	199	P	P	10 45 14.8	-0.5
	comp=Z,1.3nm,0.6s,mb4.0,baz=96,slow=5.1,SNR=6.6						
426A	McDonald Obser	84.93	56	⇑P	P	10 45 16.2	0.0
	baz=85,SNR=6.8						
627A	Terlingua Ranc	84.97	57	⇑P	P	10 45 16.4	+0.1
	baz=85,SNR=10						
527A	Woodward Ranch	85.06	57	⇓P	P	10 45 16.6	-0.2
	baz=85,SNR=5.5						
Y24A	Capitan	85.15	52	⇑P	P	10 45 16.8	-0.4
	baz=85						
628A	Black Gap, Mar	85.38	57	⇑P	P	10 45 18.1	-0.3
	baz=85,SNR=5.3						
226A	Malaga, Loving	85.42	55	⇑P	P	10 45 18.2	-0.4
	baz=85						
427A	Hayter Ranch,	85.50	56	⇑P	P	10 45 19.1	+0.2
	baz=86,SNR=6.2						
GYA	Guiyang	85.64	299	P	P	10 45 19.8	+0.1
GYA				pP	pP	10 46 50.3	+6.4
GYA				PP	PP	10 48 48.0	+3.1
GYA				SKS		10 55 04.3	
GYA				S	S	10 55 18.3	-2.5
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
528A	Cox Ranch, San	85.72	57	⇓P	P	10 45 20.1	+0.1
	baz=86						
BILL	Bilibino	85.84	354	eP	P	10 45 18.9	-0.8
	comp=Z,27nm,1.0s,mb5.0						
H16A	Russell Place,	85.93	41	⇑P	P	10 45 20.7	0.0
	baz=86						
PDAR	Pinedale Array	86.09	43	P	P	10 45 20.9	-0.6
	comp=Z,0.3nm,0.5s,baz=206,slow=6.0,SNR=5.9						
DAWY	Dawson	86.11	16	eP	P	10 45 20.5	-0.7
EGAK	Eagle	86.25	15	eP	P	10 45 21.0	-0.8
	comp=Z,6.1nm,1.0s,mb4.4						
D15A	Lincoln	86.30	38	⇓P	P	10 45 22.1	-0.4
	baz=86						
COLD	Coldfoot	86.52	10	eP	P	10 45 22.3	-0.7
	comp=Z,3.9nm,0.7s,mb4.3						
B14A	Marquette Ranc	86.53	37	⇓P	P	10 45 23.2	-0.3
	baz=87						
V25A	Rancho No Teng	86.54	51	⇑P	P	10 45 23.0	-0.9
	baz=87						
C15A	Salmond Ranch,	86.62	38	⇓P	P	10 45 23.6	-0.4
	baz=87						
XAN	Xi'an	86.70	307	P	P	10 45 24.8	+0.1
XAN				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.5						
XAN				pmax	pmax		
	comp=Z,16nm,6.9s						
A14A	Double T Ranch	86.76	36	⇑P	P	10 45 24.3	-0.3
	baz=87						
HHC	Hu-ho-hao-te	87.56	314	eP	P	10 45 28.5	-0.1
HHC				pP	pP	10 46 56.9	+3.7
HHC				PP	PP	10 49 02.8	+2.9
HHC				SKS		10 55 17.1	
HHC				S	S	10 55 36.0	-2.5
HHC				SS	SS	11 01 36.3	+1.8
HHC				pmax	pmax		
	comp=Z,21nm,0.7s,mb5.1						
HHC				pmax	pmax		
	comp=Z,93nm,7.1s						
KMI	Kunming	88.48	297	P	P	10 45 34.8	+1.5
KMI				pP	pP	10 47 04.1	+6.0
KMI				PP	PP	10 49 10.5	+2.9
KMI				SKS		10 55 24.9	
KMI				S	S	10 55 44.3	-3.5
KMI				SS	SS	11 01 49.5	+1.1
KMI				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.5						
KMI				pmax	pmax		
	comp=Z,37nm,4.1s						
CD2	Chengdu	89.61	302	P	P	10 45 39.8	+1.4
CD2				pP	pP	10 47 08.8	+5.5
CD2				PP	PP	10 49 20.4	+4.0
CD2				SKS		10 55 32.1	
CD2				S	S	10 55 56.3	-1.6
CD2				sS	sS	10 58 32.8	+4.1
CD2				SS	SS	11 02 08.1	+3.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
CD2				pmax	pmax		
	comp=Z,110nm,5.5s						
CMAR	Chiang Mai Arr	89.68	289	P	P	10 45 39.4	+0.4
	comp=Z,6.8nm,1.0s,mb4.5,baz=102,slow=2.8,SNR=30						
CHTO	Chiang Mai	89.79	290	eP	P	10 45 40.0	+0.5
	comp=Z,5.8nm,0.8s,mb4.6						
INK	Inuvik	90.92	15	eP	P	10 45 42.0	-1.6
	comp=Z,4.9nm,0.9s,mb4.4						
LZH	Lanzhou	91.33	307	eP	P	10 45 47.1	+0.9
LZH				pmax	pmax		
	comp=Z,26nm,1.2s,mb5.0						
LZH				pmax	pmax		
	comp=Z,190nm,4.9s						
YKA	Yellowknife Ar	93.24	24	P	P	10 45 52.9	-1.4
	comp=Z,1.6nm,0.7s,mb4.2,baz=245,slow=4.6,SNR=20						
YKA	Yellowknife Ar	93.24	24	P	P	10 45 52.9	-1.4
SONM	Songino Array	93.73	319	P	P	10 45 55.8	-1.2
	comp=Z,0.8nm,0.5s,mb4.0,baz=120,slow=3.4,SNR=5.2						
GTA	Gaotai	95.43	309	eP	P	10 46 05.1	+0.2
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
BVAR	Borovoye Array	116.98	321	PKP	PKPdf	10 51 20.9	-1.8
	comp=Z,4.9nm,0.3s,baz=109,slow=3.0,SNR=19						
SPITS	Spitsbergen Ar	118.63	357	PKP	PKPdf	10 51 23.6	-1.7
	comp=Z,1.8nm,0.7s,baz=31,slow=1.1,SNR=4.2						
ARU	Arti	122.86	327	ePKPdf	PKPdf	10 51 32.4	-1.4
AKTK	Aktyubinsk	125.03	320	PKP	PKPdf	10 51 36.9	-1.3
AKTO	Aktyubinsk	125.03	320	PKP	PKPdf	10 51 36.9	-1.3
	comp=Z,2.0nm,0.7s,baz=48,slow=1.0,SNR=6.9						
ARCES	ARCESS Array B	125.81	350	PKP	PKPdf	10 51 37.6	-1.5
	comp=Z,5.4nm,0.7s,baz=47,slow=1.0,SNR=30						
FINES	FINESS Array B	132.80	345	PKP	PKPdf	10 51 51.4	-1.2
	comp=Z,1.8nm,0.6s,baz=32,slow=5.0,SNR=6.0						
FINES	FINESS Array B	132.80	345	PKP	PKPdf	10 51 51.4	-1.2
AKASG	Malin Array Be	140.43	334	PKhKP	PKPpre	10 52 00.4	
	comp=Z,1.4nm,0.4s,baz=41,slow=3.9,SNR=6.8						
KWP	Kalwaria Pacla	143.84	338

MORC	Moravsky Berou	145.37	343	⇓*i*P	PKPdf	10 52 15.7	-0.1
PVCC	Panska Ves	145.42	347	*e*PKP	PKPdf	10 52 16.0	+0.1
PVCC	Panska Ves	145.42	347	*e*PKP	PKPdf	10 52 16.0	+0.1
KECS	Kecovo	145.60	339	*e*PKP	PKPdf	10 52 16.6	+0.4
KECS	Kecovo	145.60	339	*e*PKP	PKPdf	10 52 16.6	+0.4
BUG	Bochum--Univer	145.65	355	*e*PKPbc	PKPbc	10 52 15.7	-1.6
DOPR	Dopca	145.68	332	⇑*i*P	PKPdf	10 52 17.7	+1.3
ASF	Jabal al Asfar	145.74	302	PKPbc	PKPbc	10 52 18.0	-0.2
	comp=Z,11nm,0.7s,baz=45,slow=1.4,SNR=16						
MLR	Muntele Rosu	145.78	330	⇓*i*P	PKPdf	10 52 16.8	+0.2
MOX	Moxa	145.88	350	*e*PKPbc	PKPbc	10 52 16.7	-1.3
PRU	Pruhonice	145.93	346	*e*PKP	PKPdf	10 52 17.6	+0.8
PRU	Pruhonice	145.93	346	*e*PKP	PKPdf	10 52 17.6	+0.8
WERD	Werda	145.95	349	*e*PKPbc	PKPbc	10 52 17.3	-0.9
TANN	Tannenbergstha	145.96	349	*e*PKPbc	PKPbc	10 52 17.0	-1.2
GUNZ	Gunzen	146.03	349	*e*PKPbc	PKPbc	10 52 17.6	-0.8
VRAC	Vranov	146.06	344	⇑*i*P	PKPdf	10 52 18.0	+1.0
VYHS	Vyhne	146.13	341	*e*PKP	PKPdf	10 52 18.2	+1.1
VYHS	Vyhne	146.13	341	*e*PKP	PKPdf	10 52 18.2	+1.1
NKC	Novy Kostel	146.13	349	*e*PKP	PKPdf	10 52 17.9	+0.8
NKC	Novy Kostel	146.13	349	*e*PKP	PKPdf	10 52 17.9	+0.8
DRGR		146.18	335	⇓*i*P	PKPdf	10 52 18.0	+0.7
KOLL	Kolacno	146.19	341	*e*PKP	PKPdf	10 52 18.6	+1.4
KOLL	Kolacno	146.19	341	*e*PKP	PKPdf	10 52 18.6	+1.4
VOIR		146.23	331	⇓*i*P	PKPdf	10 52 18.8	+1.4
PSZ	Piszkesteto	146.28	339	*e*PKPbc	PKPbc	10 52 18.4	-0.8
PSZ	Piszkesteto	146.28	339	⇑*i*P	PKPbc	10 52 19.5	+0.3
HGN	Heimansgroeve	146.42	356	*e*PKP	PKPdf	10 52 17.7	+0.2
	comp=Z,15nm,0.8s						
MEM	Membach	146.57	356	PKPbc	PKPbc	10 52 18.7	-1.2
MMAI	Mount Meron Ar	146.66	304	PKPbc	PKPbc	10 52 20.7	-0.1
	comp=Z,20nm,0.5s,baz=64,slow=5.7,SNR=26						
TNS	Taunus Mts	146.74	353	*e*PKPbc	PKPbc	10 52 19.6	-0.8
SNF	Seneffe	146.75	358	PKPbc	PKPbc	10 52 19.7	-0.7
SNF				PKPab	PKPab	10 52 21.5	-1.1
BCLA	Clavier	146.80	357	PKPab	PKPab	10 52 21.3	-1.5
GRF	Grafenberg Arr	146.87	350	*e*PKPbc	PKPbc	10 52 20.1	-0.7
KHC	Kasperske Hory	146.96	347	*e*PKP	PKPdf	10 52 19.9	+1.4
BUD	Budapest	146.96	340	⇑*e*PKP	PKPdf	10 52 18.8	+0.2
WET	Wettzell	147.09	348	*e*PKPbc	PKPbc	10 52 21.6	+0.2
GIVF	Givet	147.14	358	*e*PKP1	PKPbc	10 52 20.4	-1.1
	comp=Z,17nm,0.6s						
DOU	Dourbes	147.15	358	PKPbc	PKPbc	10 52 20.5	-1.0
DOU				PKPab	PKPab	10 52 23.1	-1.1
GEC2	GERESS Array S	147.20	347	*e*PKPbc	PKPbc	10 52 20.6	-1.1
BAIF	Baives	147.20	358	*e*PKP1	PKPbc	10 52 20.7	-1.0
	comp=Z,13nm,0.6s						
WLF	Walferdange	147.50	356	PKPbc	PKPbc	10 52 22.4	-0.1
WLF	Walferdange	147.50	356	*e*PKPbc	PKPbc	10 52 22.3	-0.2
CSS	Prodhromos	147.50	309	*e*PKPbc	PKPbc	10 52 21.0	-2.0
CSS				*e*PKPab	PKPab	10 52 24.9	-1.3
CONA	Conrad Observa	147.52	343	⇓*i*PKPbc	PKPbc	10 52 22.1	-0.5
	comp=Z,13nm,0.6s						
MOA	Molln	148.00	345	⇓*i*PKPbc	PKPbc	10 52 22.9	-1.0
	comp=Z,10.0nm,1.1s						
FLN	La Foliniere	148.41	4	*e*PKP1	PKPbc	10 52 23.5	-1.4
	comp=Z,19nm,0.5s						
RJOB	Jochberg	148.44	347	*e*PKPbc	PKPbc	10 52 23.9	-1.1
ROSF	Rostrenen	148.56	8	*e*PKP1	PKPbc	10 52 23.7	-1.6
	comp=Z,8.3nm,0.7s						
LDF	La Druitiere	148.60	4	*e*PKP1	PKPbc	10 52 23.8	-1.6
	comp=Z,6.8nm,0.5s						
BFO	Black Forest	148.62	353	*e*PKPbc	PKPbc	10 52 24.3	-1.1
BFO	Black Forest	148.62	353	*e*PKPdf	PKPdf	10 52 20.4	-0.9
BFO				*e*PKPbc	PKPbc	10 52 24.4	-1.0
BFO				*e*PKPab	PKPab	10 52 29.1	-1.1
CDF	Champ du Feu	148.65	354	*e*PKP1	PKPbc	10 52 24.6	-0.9
	comp=Z,25nm,0.7s						
MEZF	Maizieres J'vi	148.72	357	*e*PKP1	PKPbc	10 52 24.9	-0.8
	comp=Z,16nm,0.7s						
SGMF	Saint Gilles	148.73	7	*e*PKP1	PKPbc	10 52 24.2	-1.5
	comp=Z,12nm,0.5s						
GRR	Gorron	148.76	5	*e*PKP1	PKPbc	10 52 24.5	-1.3
	comp=Z,23nm,0.6s						
SOKA	Soboth	148.89	344	⇓*i*PKPbc	PKPbc	10 52 24.7	-1.4
	comp=Z,10nm,1.0s						
KBA	Koelnbreinsper	148.94	346	⇓*i*PKPbc	PKPbc	10 52 24.7	-1.6
	comp=Z,8.3nm,0.5s						
WATA	Walderalm	149.08	348	⇓*i*PKPbc	PKPbc	10 52 25.4	-1.1
	comp=Z,7.4nm,0.6s						
RETA	Reutte	149.08	349	⇓*i*PKPbc	PKPbc	10 52 25.5	-1.1
	comp=Z,10nm,0.9s						
WTTA	Wattenberg	149.13	348	⇓*i*PKPbc	PKPbc	10 52 25.9	-0.9
	comp=Z,25nm,0.6s						
HAU	Haudompre	149.13	355	*e*PKP1	PKPbc	10 52 25.6	-1.1
	comp=Z,19nm,0.5s						
MOTA	Moosalm	149.16	349	⇓*i*PKPbc	PKPbc	10 52 25.6	-1.2
	comp=Z,6.0nm,0.7s						
HINF	Hinteralfeld	149.28	355	*e*PKP1	PKPbc	10 52 25.8	-1.3
	comp=Z,10nm,0.7s						
MYKA	Terra Mystica	149.29	345	⇑*i*PKPbc	PKPbc	10 52 25.1	-2.0
	comp=Z,8.5nm,0.5s						
DAVA	Damuels	149.42	350	⇓*i*PKPbc	PKPbc	10 52 26.5	-0.9
	comp=Z,25nm,1.1s						
ABTA	Abfaltersbach	149.44	347	⇑*i*PKPbc	PKPbc	10 52 25.9	-1.6
	comp=Z,14nm,0.6s						
FETA	Feichten	149.54	349	⇓*i*PKPbc	PKPbc	10 52 26.9	-0.9
	comp=Z,20nm,1.0s						
LJU	Ljubljana	149.61	344	*i* PKPbc	PKPbc	10 52 26.7	-1.2
CRNS	Crni Vrh	149.65	344	*i* PKPbc	PKPbc	10 52 26.5	-1.5
VISS	Visnje	149.75	343	*i* PKPbc	PKPbc	10 52 27.1	-1.2
LOR	Lormes	150.00	358	*e*PKP1	PKPbc	10 52 27.9	-0.9
	comp=Z,26nm,0.5s						
SSF	Saint Saulge	150.22	359	*e*PKP1	PKPbc	10 52 28.4	-0.9
	comp=Z,19nm,0.6s						
AVF	Avril sur Loir	150.49	359	*e*PKP1	PKPbc	10 52 28.6	-1.4
	comp=Z,9.9nm,0.6s						
CABF	La Chapelle	150.54	355	*e*PKP1	PKPbc	10 52 29.7	-0.4
	comp=Z,36nm,0.6s						
MFF	Saint Martin d	150.59	4	*e*PKP1	PKPbc	10 52 28.9	-1.3
	comp=Z,12nm,0.7s						
SMF	Signal de Mont	150.62	358	*e*PKP1	PKPbc	10 52 29.8	-0.5
	comp=Z,6.6nm,0.5s						
BGF	Bois d'Agland	150.73	360	*e*PKP1	PKPbc	10 52 29.5	-1.0
	comp=Z,2.0nm,0.6s						
TCF	Toulx Ste Croi	150.99	1	*e*PKP1	PKPbc	10 52 29.9	-1.3
	comp=Z,16nm,0.8s						
LPL	La Plagne	151.57	354	*e*PKP1	PKPbc	10 52 32.4	-0.1
LPG	La Plagne	151.59	354	*e*PKP1	PKPbc	10 52 32.4	-0.1
	comp=Z,9.3nm,0.7s						
RJF	Les Rejaudoux	151.96	2	*e*PKP1	PKPbc	10 52 32.1	-1.3
	comp=Z,7.3nm,0.7s						
BNI	Bardonecchia	152.04	354	*e*PKPbc	PKPbc	10 52 33.3	-0.3
BNI				*e*PKPab	PKPab	10 52 44.2	-0.2
ORIF	Oris-en-Rattie	152.24	355	*e*PKP1	PKPbc	10 52 33.3	-0.7
	comp=Z,5.4nm,0.5s						
MBDF	Montbardon	152.35	354	*e*PKP1	PKPbc	10 52 33.5	-0.8
	comp=Z,12nm,0.6s						
CAF	Calviac	152.35	1	*e*PKP1	PKPbc	10 52 33.3	-1.0
VIVF	Saint-Julien-l	152.38	357	*e*PKP1	PKPbc	10 52 33.5	-0.8
	comp=Z,5.4nm,0.6s						
SBF	Sospel	153.12	352	*e*PKP1	PKPbc	10 52 35.1	-0.9
LASF	Ste Croix	153.19	358	*e*PKP1	PKPbc	10 52 35.4	-0.7
	comp=Z,8.0nm,0.7s						
SMRF	Simiane la Rot	153.20	355	*e*PKP1	PKPbc	10 52 35.4	-0.8
MTLF	Montolieu	153.94	1	*e*PKP1	PKPbc	10 52 37.4	-0.4
PGF	Pioggiola	154.18	349	*e*PKP1	PKPbc	10 52 37.6	-0.7
	comp=Z,16nm,0.9s						

ISCJB ***15*** *10:35:43.8±0.4, 35°.46N±0°.02×119°.11W±0°.03, h26km±3km, Error ellipse: s-maj=3.7km s-min=3.0km az=165.2*
NEIC ***15*** *10:35:44.0, 35°.49N×119°.11W, h24km, ML3.1(PAS), After PAS.*

ISC 15 10:35:43.7±0.6, 35°.45N±0°.02×119°.13W±0°.03, h17km±3km, n48, σ0°66/73, 28C-25D, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARVC	Arvin	0.40	143	⇑P	Pg	10 35 52.5	+0.5
	baz=0.4						
ARVC				⇓S	Sg	10 35 58.5	+1.0
	baz=0.4						
ISA	Isabella	0.57	68	⇑P	Pg	10 35 54.6	-0.4
	baz=0.5,SNR=1000						
ISA				⇑S	Sg	10 36 02.0	-0.6
	baz=0.5						
ISA	Isabella	0.57	68	*e*Pg	Pg	10 35 54.5	-0.5
ISA				*e*Sg	Sg	10 36 02.2	-0.5
SMMC	Simmler	0.73	259	⇑P	Pb	10 35 57.4	-0.5
	baz=0.7						
SMMC				⇓S	Sb	10 36 07.5	-0.1
	baz=0.7						
RCTC	Rector, Farmer	0.86	354	P	Pb	10 35 58.6	-1.6
	baz=0.8,SNR=211						
RCTC				⇓S	Sb	10 36 08.9	-2.5
	baz=0.8						
OSI	Osito Adit	0.90	158	⇑P	Pb	10 36 00.3	-0.4
	baz=0.9,SNR=16						
OSI				⇑S	Sb	10 36 12.4	0.0
	baz=0.9						
OSI	Osito Adit	0.90	158	*e*Pg	Pg	10 36 00.3	-0.9
OSI				*e*Sg	Sg	10 36 12.6	-0.4
EDW2	Edwards Air Fo	1.09	121	P	Pb	10 36 03.8	-0.2
	baz=1.1,SNR=252						
EDW2				⇓S	Sb	10 36 17.8	-0.2
	baz=1.1						
SBC	Santa Barbara	1.12	206	⇑P	Pn	10 36 04.9	+0.3
	baz=1.2						
LRMC	Laurel Mountai	1.17	88	⇓P	Pn	10 36 05.2	-0.1
	baz=1.2,SNR=155						
LRMC				⇑Sb	Sb	10 36 20.5	+0.2
	baz=1.2						
CWC	Cottonwood Cre	1.30	40	⇑P	Pn	10 36 07.1	0.0
	baz=1.3,SNR=68						
CWC				⇓Sb	Sb	10 36 23.7	-0.4
	baz=1.3						
BLG	Laguna Peak	1.34	178	P	Pn	10 36 07.6	0.0
	baz=1.4,SNR=194						
BLG				⇓Sb	Sb	10 36 26.1	+1.0
	baz=1.4						
DECC	Green Verdugo	1.36	151	⇓P	Pn	10 36 08.4	+0.5
	baz=1.4						
DECC				⇑Sb	Sb	10 36 26.7	+0.8
	baz=1.4						
MPMC	Manual Prospec	1.46	65	⇓P	Pn	10 36 09.6	+0.3
	baz=1.4						
MPMC				⇑Sb	Sb	10 36 29.0	+0.3
	baz=1.4						
PASC	Pasadena Art C	1.49	149	*e*Pn	Pn	10 36 09.6	-0.1
PASC				*e*Sn	Sn	10 36 29.6	+0.8
MWC	Mount Wilson	1.51	144	*e*Pn	Pn	10 36 09.9	+0.1
MWC				*e*Sn	Sn	10 36 28.8	-0.3
BSC	Santa Cruz Isl	1.51	196	⇓P	Pn	10 36 09.5	-0.5
	baz=1.6,SNR=41						
BFSC	Mount Baldy Ra	1.71	135	⇑P	Pn	10 36 12.8	+0.1
	baz=1.7,SNR=32						
BFSC				⇑S	Sn	10 36 33.8	-0.3
	baz=1.7						
TIN	Tinemaha	1.76	24	⇓P	Pn	10 36 14.9	+1.6
	baz=1.7,SNR=60						
TIN				⇑Sb	Sb	10 36 37.3	+0.1
	baz=1.7						
FMP	Fort Macarthur	1.86	158	⇑S	Sn	10 36 37.9	-0.1
	baz=1.9						
GSC	Goldstone	1.90	94	⇑P	Pn	10 36 15.4	+0.1
	baz=1.9,SNR=6.8						
GSC	Goldstone	1.90	94	*e*Pn	Pn	10 36 15.5	+0.2
CIS	Catalina Islan	2.12	163	⇑P	Pn	10 36 18.0	-0.4
	baz=2.2,SNR=13						
CIS				⇓S	Sn	10 36 44.0	-0.4
	baz=2.2						
BBRC	Big Bear Solar	2.17	123	⇓P	Pn	10 36 18.8	-0.2
	baz=2.2,SNR=32						
BBRC				⇑S	Sn	10 36 45.1	-0.3
	baz=2.2						
MLAC	Mammoth Lakes	2.19	6	⇓P	Pn	10 36 21.4	+2.1
	baz=2.2						
SNCC	San Nicolas Is	2.22	189	⇑S	Sn	10 36 46.5	-0.3
	baz=2.3						
SAO	San Andreas Ge	2.29	306	*e*Pn	Pn	10 36 20.4	-0.3
SAO				*e*Sn	Sn	10 36 48.4	-0.1
SHOC	Shoshone	2.36	78	⇑P	Pn	10 36 21.6	0.0
	baz=2.3,SNR=19						
HEC	Hector,Ludlow	2.37	104	⇑P	Pn	10 36 21.9	+0.1
	baz=2.4						
MURC	Murrieta	2.44	139	⇓S	Sn	10 36 51.5	-0.6
	baz=2.5						
U10A	Ash Meadows, A	2.46	66	⇑P	Pn	10 36 23.4	+0.3
	baz=2.4,SNR=15						
TUQ	Turquoise Moun	2.61	89	⇑P	Pn	10 36 25.1	-0.1
	baz=2.6,SNR=16						
CMB	Columbia Colle	2.77	339	*e*Pn	Pn	10 36 27.0	-0.2
CMB				*e*Sn	Sn	10 37 01.7	+1.4
PFO	Pinyon Flat Ob	2.87	129	⇓P	Pn	10 36 28.4	-0.2
	baz=2.9,SNR=6.3						
PFO				⇑S	Sn	10 37 02.2	-0.5
	baz=2.9						
PFO	Pinyon Flat Ob	2.87	129	*e*Pn	Pn	10 36 28.7	+0.1
PFO				*e*Sn	Sn	10 37 03.0	+0.2
GMRC	Granite Mounta	2.92	102	P	Pn	10 36 28.7	-0.6
	baz=2.9,SNR=14						
GMRC				⇓S	Sn	10 37 02.8	-1.1
	baz=2.9						
BELC	Belle Mtn. Jos	2.95	118	⇑P	Pn	10 36 29.8	0.0
	baz=3.0,SNR=11						
V11A	Goodsprings	3.03	82	⇓P	Pn	10 36 31.0	+0.2
	baz=3.0,SNR=14						
MONP	Monument Peak	3.40	138	⇑S	Sn	10 37 16.0	+0.2
	baz=3.4						
V12A	Nelson	3.49	84	P	Pn	10 36 37.7	+0.5
	baz=3.5,SNR=16						
IRM	Iron Mountain	3.52	110	⇓P	Pn	10 36 37.2	-0.3
	baz=3.5						
IRM				⇑S	Sn	10 37 17.4	-1.3
	baz=3.5						
V13A	Grand Canyon W	4.21	83	⇓P	Pn	10 36 47.5	+0.5
	baz=4.2,SNR=17						
U13A	Pakoon Wash	4.30	76	⇓P	Pn	10 36 49.2	+1.0
	baz=4.3,SNR=13						
W13A	Hualapai Mount	4.30	93	⇓P	Pn	10 36 48.4	+0.1
	baz=4.3,SNR=24						
X13A	Yucca	4.43	100	⇓P	Pn	10 36 49.8	-0.3
	baz=4.4,SNR=13						
V14A	Boquillas Ranc	4.91	86	⇓P	Pn	10 36 57.7	+1.0
	baz=4.9,SNR=8.5						
W14A	Seligman	4.95	91	⇓P	Pn	10 36 57.9	+0.7
	baz=4.9,SNR=13						
X15A	Humboldt	5.74	98	⇑P	Pn	10 37 08.4	+0.4
	baz=5.7,SNR=5.0						

IDC ***15*** *10:49:50.6±2.1, 6°.89S×128°.78E, h0km, mb3.6/1, mb1 3.8/4, mb1mx3.6/18, mbtmp3.6/4, ML3.6/3, Error ellipse: s-maj=97.8km s-min=27.3km az=75.0*
NEIC ***15*** *10:50:04.6±3.3, 7°.45S×128°.23E, h127km±37km, mb4.7/2, Error ellipse: s-maj=34.5km s-min=28.3km az=71.0*
ISCJB ***15*** *10:50:08.0±3.7, 7°.8S±0°.2×128°.4E±0°.2, h194km±45km, mb3.6/2, Error ellipse: s-maj=35.7km s-min=18.9km az=135.7*

ISC 15 10:50:09.2±4.2, 7°.8S±0°.2×128°.4E±0°.2, h188km±52km, n8, σ0°86/12, mb3.7/2, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	6.30	141	*e*Pn	Pn	10 51 40.2	+0.1
	100nm,0.6s						
KAKA				*e*Sn	Sn	10 52 51.4	-0.6
FITZ	Fitzroy Crossi	10.53	194	Pn	Pn	10 52 36.2	+0.6
	0.2nm,0.3s,baz=8.8,slow=12,SNR=11						
FITZ				Sn	Sn	10 54 32.4	-0.4
	0.8nm,0.3s,baz=359,slow=20,SNR=6.7						
FITZ	Fitzroy Crossi	10.53	194	*e*Pn	Pn	10 52 36.8	+1.3
FITZ				*e*Sn	Sn	10 54 31.6	-1.3
FITZ				Sn	Sn	10 54 32.4	-0.4
WRAB	Tennant Creek	13.36	155	*e*Pn	Pn	10 53 13.1	+1.6
WRA	Warramunga Arr	13.36	155	Pn	Pn	10 53 10.9	-0.7
	0.3nm,0.3s,baz=334,slow=14,SNR=33						
WRA				Sn	Sx	10 55 35.8	
	0.9nm,0.3s,baz=333,slow=22,SNR=13						
ASAR	Alice Springs	16.61	162	P	Pn	10 53 55.7	+4.2
	0.5nm,0.3s,baz=343,slow=11,SNR=62						
ASAR				S	Sx	10 56 55.7	
	0.2nm,0.3s,baz=346,slow=26,SNR=5.2						
MKAR	Makanchi Array	68.04	328	P	P	11 00 48.4	+0.2
	0.3nm,0.5s,mb3.3,baz=116,slow=6.7,SNR=2.6						
KURK	Kurchatov	72.39	329	*e*P	P	11 01 13.7	-0.9
	1.2nm,0.3s,mb4.1						

IDC ***15*** *10:53:37.6±1.0, 0°.78N×25°.86W, h0km, mb3.8/8, mb1 4.0/8, mb1mx3.8/24, mbtmp3.8/8, MS3.6/18, Ms1 3.6/18, ms1mx3.5/29, Error ellipse: s-maj=48.7km s-min=18.9km az=157.0*
ISCJB ***15*** *10:53:38.0±0.7, 0°.9N±0°.3×25°.9W±0°.1, h10km, mb4.1/11, MS3.7/18, Error ellipse: s-maj=40.5km s-min=12.0km az=163.8*
NEIC ***15*** *10:53:39.0±0.6, 0°.71N×25°.87W, h10km, mb4.1/2, Error ellipse: s-maj=30.1km s-min=10.9km az=159.0*

GCMT ***15*** *10:53:43.6±0.5, 0°.89N×26°.01W, h25km±1km, MW4.8, Moment Tensor Solution. s18,c23; s66,c86; Moment tensor: Scale 10^16^Nm; M_{rr}=0.30±.12; $M_{\theta\theta}$0.74±.13; $M_{\phi\phi}$-0.44±.12; $M_{r\theta}$-0.30±.22; $M_{\theta\phi}$-2.21±.10; $M_{\phi r}$0.27±.23; Best double couple: $M_0$2.30000×10^16^ NP1:φ262.00000°, δ83.00000°, λ175.00000°. NP2:φ353.00000°, δ85.00000°, λ7.00000°. Principal axes: T 2.4900, Plg8.0000°, Azm218.0000°; N -0.3500, Plg82.0000°, Azm31.0000°; P -2.1400, Plg1.0000°, Azm127.0000°; Data Used: IU II IC CN G.*

ISC 15 10:53:39.9±0.7, 0°.9N±0°.3×26°.0W±0°.1, h10km, n27, σ1°93/13, mb4.1/11, MS3.7/18, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIC	Lamto	21.55	75	*e*PKIKP	P	10 58 32.3	+2.7
	108nm,1.5s,mb5.0						
TIC	Toumodi	21.66	74	*e*PKIKP	P	10 58 32.4	+1.6
	11nm,0.2s,mb4.9						
DBIC	Dimbokro	21.82	74	P	P	10 58 31.6	-1.0
	6.4nm,0.7s,mb4.2,baz=240,slow=16,SNR=4.8						
DBIC				LR	LR	11 04 21.7	
	comp=Z,230nm,19.3s,MS3.6,baz=237,slow=30						
DBIC	Dimbokro	21.82	74	*e*P	P	10 58 32.1	-0.4
	10.0nm,0.8s,mb4.3						
KIC	Kosan Boka	21.86	75	*e*PKIKP	P	10 58 31.9	-1.0
	17nm,0.6s,mb4.6						
TORD	Torodi Ar. Bea	29.98	65	P	P	10 59 47.7	-1.1
	1.8nm,0.8s,mb3.9,baz=248,slow=9.2,SNR=6.1						
SIV	San Ignacio	38.51	243	P	P	11 01 02.2	-0.6
	0.6nm,0.9s,mb3.3,baz=71,slow=9.7,SNR=3.9						
CPUP	Villa Florida	40.59	226	LR	LR	11 17 39.8	
	comp=Z,172nm,19.0s,MS3.9,baz=33,slow=36						
ESDC	Sonseca Array	43.51	25	LR	LR	11 17 43.7	
	comp=Z,36nm,20.3s,MS3.3,baz=290,slow=33						
LPAZ	La Paz	44.98	246	P	P	11 01 56.3	+0.6
	1.6nm,0.9s,mb3.8,baz=83,slow=5.3,SNR=4.6						
LPAZ				LR	LR	11 19 52.4	
	comp=Z,104nm,20.9s,MS3.7,baz=46,slow=35						
LPAZ	La Paz	44.98	246	*e*P	P	11 01 55.4	-0.3
	1.2nm,0.7s,mb3.8						
DAVOX	Davos/Dischmat	55.37	29	LR	LR	11 24 53.8	
	comp=Z,53nm,19.7s,MS3.6,baz=83,slow=34						
BOSA	Boshof	57.09	125	LR	LR	11 23 24.2	
	comp=Z,102nm,19.4s,MS3.9,baz=112,slow=31						
PLCA	Paso Flores	57.92	219	LR	LR	11 29 19.3	
	comp=Z,85nm,18.8s,MS3.9,baz=100,slow=37						
VRAC	Vranov	60.41	31	LR	LR	11 28 54.9	
	comp=Z,31nm,20.3s,MS3.4,baz=237,slow=35						
SCHQ	Schefferville	63.26	335	LR	LR	11 28 34.7	
	comp=Z,42nm,20.5s,MS3.6,baz=142,slow=33						
MMAI	Mount Meron Ar	65.73	54	LR	LR	11 32 27.4	
	comp=Z,39nm,18.9s,MS3.6,baz=170,slow=36						
NOA	NORSAR Array B	66.35	19	LR	LR	11 33 53.1	
	comp=Z,25nm,19.5s,MS3.4,baz=270,slow=36						
BRTR	Keskin Array B	66.42	47	P	P	11 04 29.2	-0.2
	0.9nm,0.7s,mb3.9,baz=270,slow=2.5,SNR=4.2						
BRTR				LR	LR	11 34 25.5	
	comp=Z,48nm,18.0s,MS3.8,baz=26,slow=37						
AKASG	Malin Array Be	67.98	34	P	P	11 04 38.5	-0.7
	4.1nm,0.8s,mb4.5,baz=238,slow=7.8,SNR=9.8						
JMIC	Jan Mayen	70.90	6	LR	LR	11 27 30.8	
	comp=Z,31nm,20.0s,MS3.6,baz=222,slow=29						
FINES	FINESS Array B	72.00	23	LR	LR	11 35 06.5	
	comp=Z,46nm,18.3s,MS3.8,baz=260,slow=34						
ARCES	ARCESS Array B	76.50	16	LR	LR	11 35 11.6	
	comp=Z,33nm,20.1s,MS3.6,baz=135,slow=33						
TXAR	Lajitas Array	78.85	300	P	P	11 05 44.2	+0.6
	0.7nm,0.9s,mb3.6,baz=122,slow=6.1,SNR=6.0						
TXAR				LR	LR	11 36 25.4	
	comp=Z,36nm,22.0s,MS3.7,baz=225,slow=32						
PDAR	Pinedale Array	84.69	313	P	P	11 06 14.7	+0.5
	0.3nm,0.9s,mb3.4,baz=42,slow=4.1,SNR=2.3						
PDAR				LR	LR	11 38 45.5	
	comp=Z,60nm,19.9s,MS4.0,baz=88,slow=32						
AKTO	Aktyubinsk	85.47	40	LR	LR	11 47 44.2	
	comp=Z,22nm,21.3s,MS3.5,baz=303,slow=38						
ASAR	Alice Springs	150.10	141	PKPbc	PKPbc	11 13 30.1	-1.7
	1.1nm,1.1s,baz=223,slow=2.3,SNR=3.1						

MAN 15 11:17:34, 11°.75N×124°.23E, h17km, mb4.5, ML3.3, MS3.2, 1D, Leyte

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

TEIG	**Tepich**	**8.12**	**7**	*e*Pn		**Pn**	**11 35 56.4**	**+1.9**
JCT	**Junction City**	**20.72**	**334**	*e*P		**P**	**11 38 37.2**	**+0.2**
	comp=E,2.9nm,0.4s							
TXAR	**Lajitas Array**	**21.75**	**324**	P		**P**	**11 38 50.4**	**+2.2**
	comp=E,1.6nm,0.5s,mb3.7,baz=147,slow=12,SNR=30							
GOGA	**Godfrey**	**21.86**	**13**	*e*P		**P**	**11 38 48.7**	**-0.6**
	comp=E,5.0nm,0.7s,mb4.0							
OXF	**Oxford**	**22.30**	**360**	*e*P		**P**	**11 38 54.8**	**+0.8**
	comp=E,14nm,1.0s,mb4.4							
MIAR	**Mount Ida**	**22.67**	**351**	*e*P		**P**	**11 38 58.0**	**+0.1**
	comp=E,4.6nm,0.6s,mb4.1							
TKL	**Tuckaleechee C**	**23.96**	**11**	P		**P**	**11 39 09.3**	**-1.6**
	comp=E,4.2nm,0.7s,mb4.0,baz=186,slow=10,SNR=6.4							
TKL				LR		LR	11 50 34.9	
	comp=E,21nm,19.3s,baz=4.9,slow=42							
TKL	**Tuckaleechee C**	**23.96**	**11**	P		**P**	**11 39 09.3**	**-1.6**
TKL				LR		LR	11 50 34.9	
SADO	**Sadowa**	**33.68**	**13**	P		**P**	**11 40 34.7**	**-2.8**
	comp=E,3.1nm,0.6s,mb4.4,baz=229,slow=9.3,SNR=3.2							
PDAR	**Pinedale Array**	**35.26**	**334**	P		**P**	**11 40 49.9**	**-1.3**
	comp=E,0.3nm,0.5s,mb3.5,baz=128,slow=12,SNR=4.7							
REDW	**Red Top Meadow**	**36.30**	**333**	P		**P**	**11 41 00.9**	**+0.8**
	comp=E,4.9nm,0.6s,mb4.6							
REDW				*e*			11 41 13.9	
NVAR	**Mina Array Bea**	**36.81**	**320**	P		**P**	**11 41 07.9**	**+3.3**
	comp=E,0.1nm,0.4s,mb3.0,baz=128,slow=12,SNR=3.9							
YKA	**Yellowknife Ar**	**53.48**	**346**	P		**P**	**11 43 15.4**	**-1.2**
	comp=E,1.2nm,0.9s,mb3.8,baz=140,slow=8.0,SNR=14							

ISCJB ***15*** *11:59:23.1±0.6, 23°.03S±0°.04×68°.51W±0°.07, h95km±8km, mb3.7/5, Error ellipse: s-maj=10.7km s-min=6.4km az=4.5*
GUC ***15*** *11:59:24.3±0.9, 22°.79S×69°.38W, h177km±8km, ML4.6*
IDC ***15*** *11:59:24.8±0.8, 23°.13S×68°.54W, h98km±6km, mb3.6/5, mb1 3.9/10, mb1mx3.8/18, mbtmp3.7/10, MS2.6/1, Ms1 2.7/1, ms1mx2.2/17, Error ellipse: s-maj=23.9km s-min=16.0km az=81.0*
NEIC ***15*** *11:59:24.3, 22°.79S×69°.38W, h177km, mb4.0/1, After GUC.*

ISC 15 11:59:24.0±0.5, 23°.06S±0°.04×68°.53W±0°.06, h87km±8km, n26, σ1°.16/34, mb3.7/5, 4C-5D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**1.18**	**312**	⇑*i*P		**Pn**	**11 59 51.4**	**+5.8**
PB04				*i* S		**Sn**	**12 00 11.7**	**+10**
PB04				AML	AML		12 00 16.4	
	comp=N,12μm,0.3s							
CEN1	**Los Morros**	**1.57**	**257**	⇓*i*P		**Pn**	**11 59 52.9**	**+2.4**
CEN1				*i* S		**Sn**	**12 00 15.8**	**+5.3**
CEN1				AML	AML		12 00 20.7	
	comp=N,5μm,0.7s							
MECH	**Mejillones**	**1.76**	**268**	⇑*i*P		**Pn**	**11 59 52.8**	**-0.2**
MECH				*i* S		**Sn**	**12 00 16.2**	**+1.1**
MECH				AML	AML		12 00 21.8	
	comp=E,8μm,0.4s							
ANCH	**Antofagasta**	**1.83**	**250**	⇑*i*P		**Pn**	**11 59 53.3**	**-0.6**
ANCH				*i* S		**Sn**	**12 00 16.5**	**-0.1**
ANCH	**Antofagasta**	**1.83**	**250**	⇑*i*P		**Pn**	**11 59 53.3**	**-0.6**
ANCH				*i* S		**Sn**	**12 00 16.5**	**-0.1**
PB01	**Plate Boundary**	**2.19**	**336**	⇓*i*P		**Pn**	**11 59 59.4**	**+0.7**
PB01				*i* S		**Sn**	**12 00 25.9**	**+0.8**
PB01				AML	AML		12 00 29.6	
	comp=N,8μm,0.3s							
HMBC	**Humberston**	**3.04**	**335**	⇓*i*P		**Pn**	**12 00 09.1**	**-0.9**
PSGC	**Pisagua**	**3.75**	**336**	⇓*i*P		**Pn**	**12 00 17.3**	**-2.3**
PSGC				*i* S		**Sn**	**12 00 58.1**	**-4.5**
PSGC				AML	AML		12 01 16.8	
	comp=E,1μm,0.4s							
MNMC	**Miæe Miæ**	**4.03**	**346**	⇓*i*P		**Pn**	**12 00 22.8**	**-0.6**
MNMC				*i* S		**Sn**	**12 01 08.0**	**-1.5**
LCO	**Las Campanas**	**6.24**	**198**	*e*Pn		**Pn**	**12 00 51.7**	**-1.8**
	comp=E,65nm,0.8s							
LCO				*e*Sn		**Sn**	**12 02 08.7**	**+5.4**
LPAZ	**La Paz**	**6.74**	**3**	P		**Pn**	**12 01 02.8**	**+2.4**
	comp=E,1.8nm,0.3s,baz=194,slow=6.4,SNR=34							
LPAZ				LR		LR	12 03 14.3	
	comp=E,49nm,21.5s,baz=193,slow=34							
LPAZ	**La Paz**	**6.74**	**3**	*e*Pn		**Pn**	**12 01 02.9**	**+2.5**
	comp=E,13nm,0.7s							
LPAZ				LR		LR	12 03 14.3	
CFAA	**Coronel Fontan**	**8.52**	**178**	P		**Pn**	**12 01 24.1**	**-0.4**
	comp=E,0.3nm,0.3s,baz=355,slow=12,SNR=16							
CFAA				S		**Sn**	**12 02 56.4**	**-2.6**
	comp=E,0.2nm,0.3s,baz=312,slow=16,SNR=2.7							
SIV	**San Ignacio**	**9.94**	**46**	P		**Pn**	**12 01 43.7**	**-0.3**
	comp=E,17nm,0.3s,baz=253,slow=10.0,SNR=185							
SIV				S		**Sn**	**12 03 28.1**	**-5.7**
	comp=E,0.6nm,0.3s,baz=311,slow=24,SNR=4.9							
CPUP	**Villa Florida**	**10.70**	**110**	P		**Pn**	**12 01 55.6**	**+1.4**
	comp=E,0.6nm,0.3s,baz=273,slow=12,SNR=22							
TRQA	**Tornquist**	**15.97**	**161**	*e*P		**Pn**	**12 03 04.2**	**+0.8**
	comp=E,5.5nm,0.7s							
PLCA	**Paso Flores**	**17.71**	**185**	P		**Pn**	**12 03 24.7**	**0.0**
	comp=E,0.2nm,0.3s,baz=19,slow=8.3,SNR=3.7							
TXAR	**Lajitas Array**	**62.10**	**325**	P		**P**	**12 09 35.6**	**-0.1**
	comp=E,0.2nm,0.6s,mb3.4,baz=143,slow=7.2,SNR=4.1							
PDAR	**Pinedale Array**	**75.63**	**330**	P		**P**	**12 10 59.6**	**+0.3**
	comp=E,0.4nm,0.5s,mb3.4,baz=145,slow=5.4,SNR=4.7							
NVAR	**Mina Array Bea**	**76.93**	**322**	P		**P**	**12 11 07.8**	**+1.0**
	comp=E,0.3nm,0.7s,mb3.2,baz=123,slow=5.5,SNR=4.9							
TORD	**Torodi Ar. Bea**	**77.56**	**70**	P		**P**	**12 11 11.1**	**+0.3**
	comp=E,2.8nm,0.5s,mb4.3,baz=257,slow=5.6,SNR=16							
TORD				pP		pP	12 11 35.0	+1.3
	comp=E,1.9nm,0.6s,baz=252,slow=6.0,SNR=4.2							
TORD				sP		sP	12 11 47.6	+4.4
	comp=E,1.4nm,0.7s,baz=254,slow=5.5,SNR=3.0							
TORD	**Torodi Ar. Bea**	**77.56**	**70**	P		**P**	**12 11 11.1**	**+0.3**
TORD				pP		pP	12 11 35.0	+1.3
TORD				sP		sP	12 11 47.6	+4.4
YKA	**Yellowknife Ar**	**92.76**	**340**	P		**P**	**12 12 25.2**	**-0.8**
	comp=E,1.4nm,0.8s,mb4.3,baz=136,slow=4.6,SNR=22							
YKA				pP		pP	12 12 51.2	+1.8
	comp=E,0.3nm,0.7s,baz=137,slow=4.6,SNR=2.7							
ASAR	**Alice Springs**	**128.69**	**207**	PKP	PKPdf		12 18 21.3	-0.5
	comp=E,0.3nm,0.6s,baz=110,slow=1.4,SNR=6.3							
ZALV	**Zalesovo Beam**	**143.20**	**26**	PKP	PKPdf		12 18 46.0	-1.5
	comp=E,1.6nm,0.8s,baz=305,slow=2.9,SNR=5.0							
MKAR	**Makanchi Array**	**146.67**	**38**	PKPbc	PKPbc		12 18 54.8	-0.7
	comp=E,3.1nm,0.8s,baz=318,slow=2.9,SNR=19							
MKAR				pPKPbc	pPKPbc		12 19 22.1	+2.5
	comp=E,0.9nm,0.7s,baz=293,slow=3.4,SNR=3.7							

KRSC ***15*** *12:03:19.9±1.7, 51°.58N×153°.38E, h469km±59km, ML4.5*
BJI ***15*** *12:03:21.6, 52°.26N×152°.73E, h413km, mB4.3/4, mb4.3/4*
MOS ***15*** *12:03:22.9±0.7, 52°.13N×152°.71E, h433km, mb4.5/2, Error ellipse: s-maj=19.0km s-min=10.4km az=54.7*
ISCJB ***15*** *12:03:22.8±0.3, 52°.10N±0°.08×152°.7E±0°.1, h432km±7km, mb3.7/20, Error ellipse: s-maj=17.4km s-min=7.2km az=43.1*
IDC ***15*** *12:03:23.9±1.4, 52°.00N×152°.74E, h430km±17km, mb3.2/14, mb1 3.2/17, mb1mx3.1/29, mbtmp3.1/17, Error ellipse: s-maj=16.8km s-min=9.6km az=147.0*
NEIC ***15*** *12:03:23.4±0.5, 51°.97N×152°.78E, h427km±9km, mb3.9/2, Error ellipse: s-maj=16.4km s-min=7.7km az=141.0*

ISC 15 12:03:23.7±0.3, 52°.07N±0°.09×152°.8E±0°.1, h428km±7km, n49, σ0°.91/56, mb3.7/20, 1C, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**2.12**	**123**	*i* P		**P**	**12 04 21.7**	**-1.3**
MIPR	**Malaya Ipel'ka**	**2.48**	**84**	*i* P		**P**	**12 04 24.6**	**-0.6**
SKR	**Severo-Kuril's**	**2.52**	**122**	⇑*i*PN		**P**	**12 04 28.4**	**+2.8**
SKR				*e*S		**S**	**12 05 17.0**	**+1.3**
SKR				pmax	pmax			
	comp=E,40nm,0.6s							
SKR				pmax	pmax			
	comp=Z,80nm,0.6s							
SKR				smax				
	comp=N,80nm,0.5s							
SKR				smax				
	comp=E,40nm,0.5s							
PETK	**Petropavlovsk-**	**3.20**	**69**	P		**P**	**12 04 30.3**	**-0.2**
	comp=E,8.7nm,0.3s,baz=248,slow=4.9,SNR=118							
GNL	**Ganaly**	**3.54**	**61**	*i* P		**P**	**12 04 33.4**	**+0.1**
PET	**Petropavlovsk**	**3.73**	**73**	*e*PN		**P**	**12 04 34.5**	**-0.5**
PET				*e*S		**S**	**12 05 31.5**	**-1.5**
PET				pmax	pmax			
	comp=Z,200nm,1.4s							
PET				pmax	pmax			
	comp=Z,159nm,0.7s							
PET				smax				
	comp=N,49nm,0.8s							
PET				smax				
	comp=E,30nm,0.3s							
PET	**Petropavlovsk**	**3.73**	**73**	*i* P		**P**	**12 04 35.2**	**+0.2**
PET				*i* S		**S**	**12 05 29.1**	**-3.9**
PET	**Petropavlovsk**	**3.73**	**73**	*e*Pn		**P**	**12 04 34.4**	**-0.6**
AVH	**Avacha**	**3.84**	**69**	*i* P		**P**	**12 04 36.5**	**+0.6**
KMNR	**Kamenistaya**	**5.77**	**47**	P		**P**	**12 04 56.0**	**+1.4**
KMNR				*i* S		**S**	**12 06 06.6**	**-2.3**
SRDR	**Sredinnyy**	**5.91**	**41**	P		**P**	**12 04 56.8**	**+0.8**
MKZ	**Mys Kozlova**	**5.93**	**62**	*i* P		**P**	**12 04 55.0**	**-1.4**
MKZ				*i* S		**S**	**12 06 04.8**	**-7.3**
KLY	**Klyuchi**	**6.29**	**44**	P		**P**	**12 05 01.8**	**+1.7**
KLY				*i* S		**S**	**12 06 17.9**	**-1.1**
KBTR	**Krutoberegovo**	**7.22**	**51**	*e*P		**P**	**12 05 10.7**	**+0.6**
KBTR				*i* S		**S**	**12 06 30.6**	**-6.8**
YSS	**Yuzh-Sakhalins**	**8.27**	**236**	*e*PN		**P**	**12 05 23.0**	**+1.2**
YSS				pmax	pmax			
	comp=Z,30nm,0.6s							
YSS	**Yuzh-Sakhalins**	**8.27**	**236**	*e*Pn		**P**	**12 05 22.7**	**+1.0**
	comp=Z,16nm,0.5s							
ASAJ	**Asahikawa**	**10.45**	**224**	P		**P**	**12 05 45.9**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=50,slow=7.2,SNR=6.8							
ASAJ	**Asahikawa**	**10.45**	**224**	PN		**P**	**12 05 45.9**	**+0.2**
ASAJ				pmax	pmax			
	comp=Z,1.0nm,0.3s							
ERM	**Erimo**	**11.98**	**217**	*e*PN		**P**	**12 05 59.2**	**-3.4**
ERM				pmax	pmax			
	comp=Z,8.0nm,0.4s							
ERM	**Erimo**	**11.98**	**217**	*e*Pn		**P**	**12 05 59.2**	**-3.4**
	comp=Z,8.3nm,0.4s							
MAJO	**Matsushiro**	**18.63**	**219**	*e*P		**P**	**12 07 12.9**	**-0.7**
MAJO				pmax	pmax			
	comp=Z,2.0nm,0.4s							
MAJO	**Matsushiro**	**18.63**	**219**	*e*P		**P**	**12 07 12.9**	**-0.7**
	comp=Z,2.5nm,0.4s							
MJAR	**Matsushiro Arr**	**18.63**	**219**	P		**P**	**12 07 12.7**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=8.8,slow=9.0,SNR=5.2							
KSRS	**Korea Array**	**22.74**	**240**	P		**P**	**12 07 50.8**	**-0.3**
	comp=Z,1.5nm,0.7s,mb3.5,baz=36,slow=10,SNR=6.8							
KSRS	**Korea Array**	**22.74**	**240**	P		**P**	**12 07 50.8**	**-0.3**
KSRS				pmax	pmax			
	comp=Z,2.0nm,0.7s,mb3.7							
SONM	**Songino Array**	**29.72**	**280**	P		**P**	**12 08 53.7**	**+0.9**
	comp=Z,0.3nm,0.3s,mb3.1,baz=61,slow=7.4,SNR=2.6							
KDAK	**Kodiak Island**	**31.18**	**58**	P		**P**	**12 09 06.0**	**+0.7**
	comp=Z,2.6nm,0.7s,mb3.6,baz=313,slow=6.9,SNR=2.7							
INK	**Inuvik**	**37.38**	**36**	P		**P**	**12 09 58.1**	**+0.6**
	comp=Z,1.7nm,0.3s,mb3.8,baz=287,slow=5.9,SNR=24							
INK	**Inuvik**	**37.38**	**36**	P		**P**	**12 09 58.2**	**+0.6**
INK				pmax	pmax			
	comp=Z,2.0nm,0.3s							
INK	**Inuvik**	**37.38**	**36**	*e*P		**P**	**12 09 58.1**	**+0.5**
	comp=Z,1.2nm,0.3s,mb3.7							
MK31	**Makanchi Array**	**44.48**	**292**	*e*P		**P**	**12 10 54.9**	**+0.1**
MKAR	**Makanchi Array**	**44.48**	**292**	P		**P**	**12 10 54.8**	**0.0**
	comp=Z,1.1nm,0.3s,mb3.6,baz=66,slow=7.5,SNR=22							
RES	**Resolute Bay**	**45.89**	**20**	P		**P**	**12 11 05.4**	**+0.1**
	comp=Z,0.8nm,0.5s,mb3.3,baz=93,slow=3.0,SNR=4.0							
YKA	**Yellowknife Ar**	**46.88**	**39**	P		**P**	**12 11 13.2**	**+0.3**
	comp=Z,1.1nm,0.4s,mb3.5,baz=304,slow=7.0,SNR=22							
YKA	**Yellowknife Ar**	**46.88**	**39**	P		**P**	**12 11 13.2**	**+0.3**
BVAR	**Borovoye Array**	**47.43**	**306**	P		**P**	**12 11 17.4**	**+0.1**
	comp=Z,0.7nm,0.5s,mb3.2,baz=64,slow=6.8,SNR=3.9							
AAK	**Ala-Archa**	**51.42**	**292**	P		**P**	**12 11 47.8**	**+0.7**
	comp=Z,1.2nm,0.3s,mb3.6,baz=307,slow=4.1,SNR=3.6							
CMAR	**Chiang Mai Arr**	**53.59**	**252**	P		**P**	**12 12 03.7**	**+0.6**
	comp=Z,0.6nm,0.4s,mb3.1,baz=30,slow=6.9,SNR=4.9							
TAPN	**Taplejung**	**53.75**	**269**	*e*P		**P**	**12 12 04.6**	**+0.4**
	comp=Z,15nm,0.6s,mb4.4							
RAMN	**Ramite**	**54.73**	**270**	*e*P		**P**	**12 12 10.3**	**-0.8**
	comp=Z,52nm,0.9s,mb4.8							
KKN	**Kakani**	**54.94**	**271**	*e*P		**P**	**12 12 12.5**	**-0.1**
	comp=Z,18nm,0.5s,mb4.5							
PKI	**Pulchoki**	**55.02**	**271**	*e*P		**P**	**12 12 12.8**	**-0.3**
PKIN	**Phulchoki**	**55.02**	**271**	*e*P		**P**	**12 12 12.8**	**-0.3**
	comp=Z,11nm,0.6s,mb4.2							
DMN	**Daman**	**55.18**	**271**	*e*P		**P**	**12 12 13.8**	**-0.4**
	comp=Z,18nm,0.6s,mb4.4							
GKN	**Gorkha**	**55.18**	**272**	*e*P		**P**	**12 12 14.0**	**-0.3**
	comp=Z,20nm,0.8s,mb4.4							
FINES	**FINESS Array B**	**59.15**	**333**	P		**P**	**12 12 40.8**	**-0.3**
	comp=Z,1.2nm,0.5s,mb3.5,baz=34,slow=8.4,SNR=5.4							
AKASG	**Malin Array Be**	**67.03**	**325**	P		**P**	**12 13 31.3**	**-0.9**
	comp=Z,0.5nm,0.3s,mb3.5,baz=33,slow=7.0,SNR=2.4							
TXAR	**Lajitas Array**	**75.12**	**61**	P		**P**	**12 14 21.3**	**+0.9**
	comp=Z,0.1nm,0.5s,mb2.7,baz=272,slow=5.0,SNR=3.1							
ASAR	**Alice Springs**	**77.19**	**198**	P		**P**	**12 14 30.9**	**-0.9**
	comp=Z,1.6nm,0.6s,mb3.8,baz=10,slow=5.1,SNR=25							

ISCJB ***15*** *12:07:11.6±0.7, 13°.7N±0°.1×144°.7E±0°.2, h130km±5km, mb3.6/13, Error ellipse: s-maj=27.7km s-min=22.0km az=145.1*
IDC ***15*** *12:07:12.0±0.7, 13°.70N×144°.95E, h123km±5km, mb3.4/9, mb1 3.6/9, mb1mx3.5/22, mbtmp3.4/9, Error ellipse: s-maj=31.9km s-min=21.4km az=80.0*
NEIC ***15*** *12:07:12.6±0.9, 13°.67N×144°.86E, h131km±8km, mb4.0/4, Error ellipse: s-maj=22.1km s-min=19.4km az=69.0*

ISC 15 12:07:12.6±0.7, 13°.7N±0°.1×144°.9E±0°.2, h127km±6km, n20, σ0°.78/21, mb3.7/13, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.11**	**173**	P		**Pn**	**12 07 30.3**	**+0.5**
	baz=333,slow=9.0							
GUMO				S		**Sn**	**12 07 42.5**	**-0.4**
	1μm,0.3s,baz=302,slow=23,SNR=158							
GUMO	**Guam**	**0.11**	**173**	*e*Pn		**Pn**	**12 07 30.4**	**+0.6**
GUMO				*e*Sn		**Sn**	**12 07 42.8**	**-0.1**
MJAR	**Matsushiro Arr**	**23.51**	**346**	P		**P**	**12 12 09.1**	**-2.0**
	0.7nm,0.6s,mb3.2,baz=164,slow=9.6,SNR=4.7							
KSRS	**Korea Array**	**28.06**	**330**	P		**P**	**12 12 51.9**	**-0.2**
	0.8nm,0.6s,mb3.4,baz=145,slow=10,SNR=3.6							
ASAR	**Alice Springs**	**38.65**	**196**	P		**P**	**12 14 23.1**	**-0.8**
	0.4nm,0.6s,mb3.4,baz=17,slow=10,SNR=6.9							
ASAR	**Alice Springs**	**38.65**	**196**	P		**P**	**12 14 23.1**	**-0.8**
SONM	**Songino Array**	**46.63**	**325**	P		**P**	**12 15 29.0**	**+0.9**
	0.4nm,0.6s,mb3.4,baz=140,slow=9.1,SNR=2.5							
SONM				PcP	PcP		12 17 00.5	+0.6
	0.5nm,0.6s,baz=138,slow=3.7,SNR=3.6							
MKAR	**Makanchi Array**	**61.40**	**316**	P		**P**	**12 17 16.4**	**+1.1**
	1.5nm,0.5s,mb4.2,baz=90,slow=8.6,SNR=16							
BVAR	**Borovoye Array**	**69.83**	**322**	P		**P**	**12 18 09.6**	**+0.2**
	0.7nm,0.3s,mb3.9,baz=109,slow=8.6,SNR=6.1							
ABKAR	**Akbulak array**	**76.45**	**318**	*e*P		**P**	**12 18 48.4**	**0.0**
	0.4nm,0.4s,mb3.5							
YKA	**Yellowknife Ar**	**82.77**	**27**	P		**P**	**12 19 20.8**	**-1.4**
	0.6nm,0.6s,mb3.6,baz=286,slow=5.2,SNR=12							
YKA	**Yellowknife Ar**	**82.77**	**27**	P		**P**	**12 19 20.8**	**-1.4**
BMO	**Blue Mountains**	**85.92**	**45**	*e*P		**P**	**12 19 38.9**	**+0.3**
	1.5nm,0.9s,mb3.9							
BSMT	**Bassoo Peak**	**86.78**	**42**	*e*P		**P**	**12 19 43.0**	**+0.3**
	5.0nm,1.1s,mb4.4							
NVAR	**Mina Array Bea**	**86.86**	**51**	P		**P**	**12 19 44.2**	**+0.9**
	0.6nm,0.6s,mb3.7,baz=269,slow=6.1,SNR=7.7							
NVAR	**Mina Array Bea**	**86.86**	**51**	P		**P**	**12 19 44.2**	**+0.9**
ARCES	**ARCESS Array B**	**86.97**	**342**	P		**P**	**12 19 43.0**	**-0.1**
	1.5nm,0.9s,mb3.9,baz=80,slow=7.5,SNR=6.3							
HLID	**Hailey**	**88.28**	**46**	*e*P		**P**	**12 19 50.5**	**+0.6**
	1.9nm,1.1s,mb4.0							
ARUT	**Antelope Range**	**90.72**	**51**	*e*P		**P**	**12 20 01.1**	**-0.4**
DBIC	**Dimbokro**	**143.75**	**302**	PKP	PKPdf		12 26 31.4	-2.3
	2.1nm,0.7s,baz=37,slow=3.1,SNR=3.1							

IDC 15 12:33:59.0±10.0, 6°.26S×146°.89E, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.4/16, mbtmp3.5/4, ML3.3/1, Error ellipse: s-maj=154.7km s-min=65.9km az=27.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.27**	**221**	P	Pn	12 38 14.1	0.0
	0.1nm,0.3s,baz=39,slow=12,SNR=6.2						
ASAR	**Alice Springs**	**21.34**	**214**	P		P 12 38 48.0	+0.2
	0.3nm,0.3s,baz=50,slow=8.8,SNR=13						
FITZ	**Fitzroy Crossi**	**23.84**	**239**	P		P 12 39 14.0	-0.2
	1.0nm,0.7s,baz=83,slow=14,SNR=4.3						
STKA	**Stephens Creek**	**25.96**	**190**	P		P 12 39 33.3	0.0
	2.2nm,0.9s,baz=337,slow=15,SNR=2.5						

NIED ***15*** *12:37:00, 35°.50N×139°.00E, h20km, Mw3.9 Best double couple: M0 9.17000×10^14 NP1: φ0=23.00000°, δ73.00000°, λ68.00000°. NP2: φ0=257.00000°, δ28.00000°, λ141.00000°.*
ISCJB ***15*** *12:37:13.9±0.4, 35°.50N±0°.03×139°.03E±0°.05, h32km±3km, mb3.9/18, Error ellipse: s-maj=7.0km s-min=4.3km az=176.7*
JMA ***15*** *12:37:14.9, 35°.53N×138°.98E, h21km±1km, M4.1 Broadband fault plane solution: P waves. NP1: φ0=232.00000°, δ38.00000°, λ97.00000°. NP2: φ0=43.00000°, δ52.00000°, λ85.00000°. Principal axes: T Plg82.0000°, Azm284.0000°; N Plg4.0000°, Azm46.0000°; P Plg7.0000°, Azm137.0000°;*
JMA Felt III J1.
IDC ***15*** *12:37:14.5±0.5, 35°.51N×138°.90E, h24km±3km, mb3.7/15, mb1 3.8/18, mb1mx3.8/27, mbtmp3.7/18, ML3.8/3, MS3.1/4, Ms1 3.1/4, ms1mx2.6/32 Error ellipse: s-maj=18.3km s-min=8.8km az=70.0*
NEIC ***15*** *12:37:14.9, 35°.53N×138°.98E, h21km, mb4.3/2, After JMA.*
NEIC Felt in Akishima and at Atsugi and Sagamihara.

ISC 15 12:37:14.7±0.4, 35°.51N±0°.03×138°.99E±0°.05, h24km±3km, n37, σ0°.78/47, mb3.9/18, 3C-5D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOD2	**Odawara 2**	**0.26**	**161**	⇓P		**Pb**	**12 37 20.9**	**0.0**
JOD2				S		**Sb**	**12 37 25.5**	**+0.3**
JYN	**Shimob**	**0.36**	**269**	⇓P		**Pb**	**12 37 22.4**	**-0.1**
JYN				S		**Sb**	**12 37 28.4**	**+0.6**
JHU	**Hanno**	**0.42**	**35**	⇑P		**Pb**	**12 37 23.3**	**-0.2**
JHU				S		**Sb**	**12 37 29.3**	**-0.2**
JRY	**Ryogami san**	**0.51**	**352**	⇓P		**Pb**	**12 37 24.6**	**-0.4**
JRY				S		**Sb**	**12 37 31.5**	**-0.6**
SHZ3	**Shizuoka 3**	**0.77**	**235**	⇑P		**Pb**	**12 37 29.7**	**+0.3**
JIZS	**Izushimoda**	**0.79**	**186**	⇓P		**Pb**	**12 37 29.3**	**-0.5**
JIZS				S		**Sb**	**12 37 40.3**	**+0.3**
JIM2	**Oshima 3**	**0.87**	**155**	⇓P		**Pb**	**12 37 30.3**	**-0.7**
JAG	**Ashikaga**	**0.99**	**22**	⇑P		**Pn**	**12 37 32.6**	**-0.5**
MJAR	**Matsushiro Arr**	**1.21**	**329**	Pg		**Pn**	**12 37 35.6**	**-0.4**
	292nm,0.3s,baz=138,slow=15,SNR=1502							
MJAR				Lg			12 37 51.0	
	477nm,0.3s,baz=208,slow=28,SNR=25							
MAJO	**Matsushiro**	**1.21**	**329**	*e*Pn		**Pn**	**12 37 36.1**	**0.0**
MAJO				*e*Sn		**Sn**	**12 37 51.9**	**+0.1**
MAT	**Matsushiro**	**1.21**	**329**	P		**Pn**	**12 37 36.5**	**+0.4**
MAT				S		**Sn**	**12 37 52.0**	**+0.3**
JHJ	**Hachijo jima 2**	**2.47**	**164**	Pn		**Pn**	**12 37 55.2**	**+1.8**
	130nm,0.3s,baz=312,slow=2.8,SNR=131							
JHJ				Sn		**Sn**	**12 38 26.3**	**+3.4**
	34nm,0.3s,baz=76,slow=22,SNR=7.6							
CBIJ	**Chichi jima**	**8.82**	**161**	Pn		**Pn**	**12 39 20.2**	**-0.5**
	7.8nm,0.3s,baz=278,slow=9.2,SNR=4.5							
CBIJ				Sn		**Sn**	**12 40 50.4**	**-8.9**
	5.6nm,0.3s,baz=261,slow=22,SNR=3.1							
CBIJ				LR	LR		12 42 27.3	
	comp=Z,57nm,18.7s,baz=233,slow=35							
ASAJ	**Asahikawa**	**9.04**	**17**	Pn		**Pn**	**12 39 24.9**	**+1.4**
	0.4nm,0.3s,baz=274,slow=10,SNR=5.3							
ASAJ				Sn		**Sn**	**12 41 06.7**	**+2.3**
	0.1nm,0.3s,baz=15,slow=33,SNR=2.3							
ASAJ				LR	LR		12 43 14.1	
	comp=Z,69nm,19.3s,baz=179,slow=40							
KSRS	**Korea Array**	**9.12**	**286**	Pn		**Pn**	**12 39 27.9**	**+3.2**
	0.2nm,0.3s,baz=94,slow=14,SNR=5.1							
K

KARP	**Karpathos**	**0.67 242**	*e*P	**Pn**	**12 58 42.5**	**-0.4**
KARP			*e*S	**Sn**	**12 58 52.5**	**+0.1**
DAT	**Datca**	**0.90 344**	*e*PG	**Pn**	**12 58 46.1**	**+0.2**
DAT			*e*SG	**Sn**	**12 58 58.9**	**+1.0**
DAT	**Datca**	**0.90 344**	*e*Pg	**Pn**	**12 58 46.1**	**+0.2**
DAT			*e*Sg	**Sn**	**12 58 58.9**	**+1.1**
TURN	**Turunc**	**1.16 30**	*i* P	**Pn**	**12 58 47.5**	**-2.0**
TURN			*i* S	**Sn**	**12 59 01.6**	**-2.7**
TURN	**Turunc**	**1.16 30**	*i* P	**Pn**	**12 58 47.5**	**-2.0**
TURN			*i* S	**Sn**	**12 59 01.6**	**-2.6**
BDRM	**Kayabasi**	**1.25 344**	*i* P	**Pn**	**12 58 50.4**	**-0.3**
BDRM			*i* S	**Sn**	**12 59 06.1**	**-0.2**
BDRM	**Kayabasi**	**1.25 344**	*i* P	**Pn**	**12 58 50.4**	**-0.3**
BDRM			*i* S	**Sn**	**12 59 06.1**	**-0.2**
BODT	**Bodrum**	**1.28 339**	*e*PN	**Pn**	**12 58 51.5**	**+0.3**
BODT			*e*SN	**Sn**	**12 59 07.9**	**+0.8**
BODT	**Bodrum**	**1.28 339**	*e*Pn	**Pn**	**12 58 51.5**	**+0.4**
BODT			*e*Sn	**Sn**	**12 59 07.9**	**+0.8**
YER	**Yerkesik**	**1.31 14**	*e*PN	**Pn**	**12 58 51.5**	**0.0**
YER	**Yerkesik**	**1.31 14**	*e*Pn	**Pn**	**12 58 51.5**	**0.0**
MLSB	**Milas**	**1.43 357**	*e*PN	**Pn**	**12 58 53.4**	**+0.2**
MLSB	**Milas**	**1.43 357**	*e*Pn	**Pn**	**12 58 53.4**	**+0.3**
AKAS	**Kas**	**1.44 75**	*i* P	**Pn**	**12 58 53.1**	**-0.2**
AKAS			*i* S	**Sn**	**12 59 11.4**	**+0.3**
AKAS	**Kas**	**1.44 75**	*i* P	**Pn**	**12 58 53.1**	**-0.2**
AKAS			*i* S	**Sn**	**12 59 11.4**	**+0.3**
AYDN	**Tasoluk**	**1.79 360**	*i* P	**Pn**	**12 58 58.7**	**+0.6**
AYDN			*i* S	**Sn**	**12 59 20.3**	**+0.6**
AYDN	**Tasoluk**	**1.79 360**	*i* P	**Pn**	**12 58 58.7**	**+0.6**
AYDN			*i* S	**Sn**	**12 59 20.3**	**+0.7**
NPS	**Neapolis**	**1.94 253**	*e*P	**Pn**	**12 59 00.3**	**+0.1**
NPS			*e*S	**Sn**	**12 59 23.2**	**-0.2**
NPS	**Neapolis**	**1.94 253**	*e*P	**Pn**	**12 59 00.3**	**+0.1**
NPS			*e*S	**Sn**	**12 59 23.2**	**-0.2**
NPS	**Neapolis**	**1.94 253**	*e*P	**Pn**	**12 59 00.3**	**+0.1**
NPS			*e*S	**Sn**	**12 59 23.2**	**-0.2**
SMG	**Samos**	**2.02 336**	*e*P	**Pn**	**12 59 01.3**	**+0.1**
SMG	**Samos**	**2.02 336**	*e*P	**Pn**	**12 59 01.3**	**+0.1**
SMG	**Samos**	**2.02 336**	*e*P	**Pn**	**12 59 01.3**	**+0.1**
XRY	**Khrisi**	**2.04 242**	*e*P	**Pn**	**12 59 02.9**	**+1.4**
XRY	**Khrisi**	**2.04 242**	*e*P	**Pn**	**12 59 02.9**	**+1.4**
XRY	**Khrisi**	**2.04 242**	*e*P	**Pn**	**12 59 02.9**	**+1.4**
DNZL	**Cakiroluk**	**2.05 27**	*i* P	**Pn**	**12 59 03.0**	**+1.4**
DNZL			*i* S	**Sn**	**12 59 34.0**	**+8.0**
DNZL	**Cakiroluk**	**2.05 27**	*i* P	**Pn**	**12 59 03.0**	**+1.4**
APE	**Apeiranthos**	**2.24 303**	*e*PN	**Pn**	**12 59 01.9**	**-2.3**
APE	**Apeiranthos**	**2.24 303**	*e*P	**Pn**	**12 59 04.0**	**-0.3**
APE			*e*S	**Sn**	**12 59 29.1**	**-1.6**
APE	**Apeiranthos**	**2.24 303**	*e*P	**Pn**	**12 59 04.0**	**-0.3**
APE			*e*S	**Sn**	**12 59 29.1**	**-1.6**
APE	**Apeiranthos**	**2.24 303**	*e*Pn	**Pn**	**12 59 02.0**	**-2.3**
APE	**Apeiranthos**	**2.24 303**	*e*P	**Pn**	**12 59 04.0**	**-0.3**
APE			*e*S	**Sn**	**12 59 29.1**	**-1.6**

NIED ***15*** *13:00:00,20.°80N×121.°20E,h17km,Mw4.6 Best double couple: M0=7.81000×10^15 NP1:φs=94.00000°,δ82.00000°, λ47.00000°. NP2:φs=356.00000°,δ43.00000°,λ168.00000°.*
TAP ***15*** *13:00:09.2,20.°99N×121.°13E,h46km±1km,ML4.9,D*
BJI ***15*** *13:00:09.1,21.°14N×121.°12E,h26km,mB4.6/24,mb4.5/39, ML4.1/4,Ms4.4/41,Ms7 4.3/36*
ISCJB ***15*** *13:00:09.8±0.6,21.°07N±0.°02×121.°13E±0.°03,h29km±4km, mb4.6/81,MS4.1/30,Error ellipse: s-maj=4.3km s-min=3.2km az=157.3*
NEIC ***15*** *13:00:09.5±2.8,21.°14N×121.°17E,h13km±16km,mb4.8/33, Error ellipse: s-maj=7.0km s-min=6.8km az=144.0*
MOS ***15*** *13:00:10.6±1.1,21.°10N×121.°14E,h33km,mb5.0/30, MS4.2/8,Error ellipse: s-maj=9.3km s-min=5.9km az=110.2*
IDC ***15*** *13:00:12.9±5.1,21.°04N×121.°07E,h33km±39km,mb4.2/22, mb1 4.3/23,mb1mx4.2/28,mbtmp4.3/23,ML4.8/1,MS3.9/18, Ms1 4.0/18,ms1mx3.8/29,Error ellipse: s-maj=16.1km s-min=11.4km az=61.0*
MAN ***15*** *13:00:20,20.°33N×121.°59E,h15km,mb5.3,ML4.3,MS4.5*
ISC 15 13:00:10.2±0.7,21.°11N±0.°02×121.°13E±0.°03,h17km±4km, h18km±3.4km:pP-P,n246,σ1=09/264,mb4.6/81,MS4.1/30, 8C-9D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC	Res
TSEB	**Hengchuen, Pin**	**0.82**	**345**	*e*P	**Pb**	**13 00 26.1**		**0.0**
	baz=344							
TSEB				S	**Sb**	**13 00 40.1**		**+3.3**
	baz=344							
TWK1	**Hengchun**	**0.89**	**340**	P	**Pb**	**13 00 26.8**		**-0.4**
	baz=342							
TWK1				*i* S	**Sb**	**13 00 40.9**		**+2.1**
	baz=342							
HEN	**Hengchun**	**0.97**	**338**	P	**Pb**	**13 00 28.9**		**+0.3**
	baz=340							
HEN				S	**Sb**	**13 00 42.5**		**+1.4**
	baz=340							
LAY	**Lan-yu**	**1.01**	**23**	*e*P	**Pb**	**13 00 27.9**		**-1.4**
	baz=20							
BBP	**Basco**	**1.02**	**130**	*e*P	**Pb**	**13 00 29.0**		**-0.5**
BBP				*e*S	**Sb**	**13 00 39.4**		**-3.2**
TAW	**Tawu**	**1.27**	**350**	*e*P	**Pn**	**13 00 31.6**		**-1.5**
	baz=351							
TAW				*e*S	**Sb**	**13 00 49.1**		**-0.5**
	baz=351							
EAST	**Anshuo**	**1.30**	**348**	*e*P	**Pn**	**13 00 31.9**		**-1.7**
	baz=349							
EAST				*e*S	**Sn**	**13 00 50.5**		**-0.1**
	baz=349							
SCZT	**Fangliau**	**1.35**	**339**	⇓*i*P	**Pn**	**13 00 33.9**		**-0.4**
	baz=341							
SCZT				*e*S	**Sn**	**13 00 50.7**		**-1.1**
	baz=341							
TWP	**Hsiaoliuchiu**	**1.43**	**330**	*e*P	**Pn**	**13 00 34.8**		**-0.5**
	baz=332							
ECL	**Taimali**	**1.49**	**354**	*e*P	**Pn**	**13 00 33.8**		**-2.5**
	baz=354							
TTN	**Taitung**	**1.64**	**1**	*e*P	**Pn**	**13 00 37.4**		**-0.9**
KAU	**Kaohsiung**	**1.64**	**332**	*e*P	**Pn**	**13 00 37.6**		**-0.8**
	baz=334							
SSD	**Sandimen**	**1.70**	**344**	⇓P	**Pn**	**13 00 38.7**		**-0.4**
	baz=345							
TWG	**Pinlang**	**1.71**	**358**	*e*Pn	**Pn**	**13 00 36.9**		**-2.3**
TWG	**Pinlang**	**1.71**	**358**	*e*Pn	**Pn**	**13 00 38.1**		**-1.1**
	baz=358							
TWM1	**Shoushan**	**1.83**	**339**	*e*P	**Pn**	**13 00 40.9**		**-0.1**
	baz=340							
SGST	**Jiashian**	**2.03**	**346**	⇓P	**Pn**	**13 00 43.6**		**-0.1**
	baz=346							
ELDTW	**Lidau**	**2.08**	**357**	*e*P	**Pn**	**13 00 42.5**		**-1.8**
	baz=357							
STYT	**Tauyuan**	**2.08**	**350**	*e*P	**Pn**	**13 00 44.3**		**0.0**
	baz=351							
CHN3	**Shinhua**	**2.09**	**340**	*e*P	**Pn**	**13 00 44.5**		**+0.1**
	baz=341							
TAI1	**Yung-k'ang**	**2.10**	**337**	*e*P	**Pn**	**13 00 44.1**		**-0.5**
	baz=337							
CHN1	**Nanshi**	**2.14**	**345**	⇓*i*P	**Pn**	**13 00 45.0**		**-0.3**
	baz=345							
WTP	**Ta-pu**	**2.18**	**347**	*e*P	**Pn**	**13 00 45.3**		**-0.5**
	baz=348							
TWK	**Hsinying**	**2.23**	**345**	*e*P	**Pn**	**13 00 45.9**		**-0.6**
	baz=345							
TPUB	**Ta-pu**	**2.23**	**348**	*e*Pn	**Pn**	**13 00 45.6**		**-0.9**
SCLT	**Jiali**	**2.23**	**337**	*e*P	**Pn**	**13 00 45.6**		**-0.9**
	baz=338							
TWF1	**Yuli**	**2.24**	**4**	*e*P	**Pn**	**13 00 45.6**		**-1.0**
	baz=3.0							
YULB	**Yu-li**	**2.28**	**4**	*e*Pn	**Pn**	**13 00 45.2**		**-1.9**
YUS	**Yu-Shan**	**2.38**	**356**	*e*P	**Pn**	**13 00 48.8**		**+0.4**
	baz=356							
EHY	**Hungye**	**2.40**	**4**	*e*P	**Pn**	**13 00 47.9**		**-0.8**
	baz=4.0							
ALS	**Alishan**	**2.41**	**353**	*e*P	**Pn**	**13 00 49.1**		**+0.2**
	baz=353							
CHN5	**Tsauling**	**2.52**	**351**	*e*P	**Pn**	**13 00 49.9**		**-0.4**
	baz=350							
WDGT	**Dungji**	**2.54**	**328**	*e*P	**Pn**	**13 00 48.3**		**-2.4**
	baz=329							
WGK	**Gukeng**	**2.62**	**349**	*e*P	**Pn**	**13 00 51.3**		**-0.5**
	baz=349							
SSLB	**Suanglung**	**2.67**	**357**	*e*Pn	**Pn**	**13 00 51.7**		**-0.8**
ESL	**Shilin**	**2.71**	**6**	*e*P	**Pn**	**13 00 54.0**		**+0.9**
	baz=5.0							
SMLT	**Sun Moon Lake**	**2.77**	**356**	*e*P	**Pn**	**13 00 54.3**		**+0.4**
	baz=355							
WNT	**Mingjian**	**2.79**	**352**	*e*P	**Pn**	**13 00 53.9**		**-0.2**
	baz=352							
TYC	**Yuchr**	**2.80**	**355**	⇓P	**Pn**	**13 00 54.5**		**+0.3**
	baz=355							
PNG	**Penghu**	**2.85**	**330**	*e*P	**Pn**	**13 00 52.3**		**-2.6**
	baz=330							
HWA	**Hwalien**	**2.89**	**9**	*e*P	**Pn**	**13 00 56.5**		**+1.0**
	baz=8.0							
TWD	**Chiawan**	**2.99**	**8**	*e*P	**Pn**	**13 00 57.6**		**+0.8**
	baz=8.0							
WHF	**Hehuan Shan**	**3.03**	**2**	*e*P	**Pn**	**13 00 58.4**		**+1.0**
	baz=2.0							
WHF				*e*S	**Sn**	**13 01 33.5**		**+0.2**
	baz=2.0							
TCU	**Taichung**	**3.06**	**352**	*e*P	**Pn**	**13 00 57.2**		**-0.6**
	baz=352							
NACB	**Ninganchiao**	**3.08**	**8**	*e*Pn	**Pn**	**13 00 57.5**		**-0.6**
TWT	**Tachien**	**3.13**	**1**	*e*P	**Pn**	**13 00 58.5**		**-0.4**
APYP	**Conner**	**3.23**	**178**	*e*P	**Pn**	**13 01 01.4**		**+1.3**
APYP				*e*S	**Sn**	**13 01 31.7**		**-6.5**
TWQ1	**Liyutan**	**3.24**	**354**	*e*P	**Pn**	**13 01 00.4**		**0.0**
	baz=354							
TWQ1				*e*S	**Sn**	**13 01 37.2**		**-1.4**
	baz=354							
NSY	**Sanyi**	**3.31**	**354**	*e*P	**Pn**	**13 01 01.9**		**+0.6**
	baz=354							
NNS	**Nan Shan**	**3.33**	**4**	*e*P	**Pn**	**13 01 03.1**		**+1.6**
	baz=3.0							
ENA	**Nanau**	**3.35**	**10**	*e*P	**Pn**	**13 01 02.6**		**+0.7**
	baz=9.0							
ABRA	**Dolores**	**3.46**	**187**	*e*P	**Pn**	**13 01 04.8**		**+1.4**
ABRA				*e*S	**Pg**	**13 01 16.2**		**-0.4**
NSTT	**Nanjuang**	**3.51**	**358**	*e*P	**Pn**	**13 01 04.2**		**+0.1**
	baz=358							
TWC	**Suao**	**3.55**	**11**	*e*P	**Pn**	**13 01 06.0**		**+1.4**
	baz=10.0							
YHNB	**Yeheng**	**3.56**	**4**	*e*Pn	**Pn**	**13 01 05.2**		**+0.6**
NSK	**Sanguang**	**3.56**	**3**	*e*P	**Pn**	**13 01 05.9**		**+1.2**
	baz=3.0							
TWE	**Neicheng**	**3.63**	**8**	*e*P	**Pn**	**13 01 06.9**		**+1.2**
	baz=7.0							
TAP01	**Taipei**	**3.87**	**5**	*e*Pn	**Pn**	**13 01 11.1**		**+2.2**
TWA	**Mucha**	**3.88**	**6**	*e*P	**Pn**	**13 01 11.2**		**+2.1**
	baz=6.0							
TAP1	**Taipei**	**3.93**	**5**	*e*P	**Pn**	**13 01 08.5**		**-1.4**
	baz=5.0							
TWB1	**Santiao Chiao**	**3.96**	**11**	*e*P	**Pn**	**13 01 11.7**		**+1.4**
	baz=11							
TWS1	**Kuangyinshan**	**3.99**	**4**	*e*P	**Pn**	**13 01 10.6**		**+0.1**
	baz=3.0							
NWF	**Wu-fen Shan**	**3.99**	**9**	*e*P	**Pn**	**13 01 12.1**		**+1.4**
	baz=8.0							
KNM	**Kinmen**	**4.13**	**323**	*e*P	**Pn**	**13 01 10.5**		**-2.1**
	baz=322							
TWY	**Chenhua**	**4.17**	**6**	*e*P	**Pn**	**13 01 14.1**		**+1.0**
	baz=5.0							
CAUP	**Cauayan**	**4.19**	**171**	*e*P	**Pn**	**13 01 19.1**		**+5.7**
PALP	**Palanan**	**4.20**	**163**	*e*P	**Pn**	**13 01 19.9**		**+6.3**
QZH	**Quanzhou**	**4.48**	**329**	Pn	**Pn**	**13 01 15.5**		**-1.8**
QZH				Sn	**Sn**	**13 02 02.3**		**-6.8**
QZH				smax				
	comp=N,210nm,0.7s							
QZH				smax				
	comp=E,320nm,1.0s							
QZH				LR	LR			
	comp=N,3μm,12.6s							
QZH				LR	LR			
	comp=E,4μm,11.8s							
QZH				LR	LR			
	comp=Z,5μm,10.8s							
GZH	**Guangzhou**	**7.48**	**287**	Pn	**Pn**	**13 01 54.9**		**-3.7**
GZH				smax				
	comp=N,110nm,0.6s							
GZH				smax				
	comp=E,99nm,0.7s							
SSE	**Sheshan**	**9.95**	**0**	P	**Pn**	**13 02 29.8**		**-2.6**
SSE				S	**Sn**	**13 04 25.1**		**+1.4**
SSE				pmax	pmax			
	comp=Z,28nm,0.8s							
SSE				pmax	pmax			
	comp=Z,34nm,5.8s							
SSE				LR	LR			
	comp=N,890nm,14.7s							
SSE				LR	LR			
	comp=E,500nm,15.1s							
SSE				LR	LR			
	comp=Z,1μm,15.3s							
QIZ	**Qiongzhong**	**10.81**	**261**	P	**Pn**	**13 02 43.3**		**-0.9**
QIZ				pP		13 02 46.9		
QIZ				S	**Sn**	**13 04 45.8**		**+1.0**
QIZ				pmax	pmax			
	comp=Z,13nm,0.6s							
QIZ				LR	LR			
	comp=N,660nm,15.1s							
QIZ				LR	LR			
	comp=E,420nm,14.4s							
QIZ				LR	LR			
	comp=Z,810nm,15.1s							
NJ2	**Nanjing**	**11.09**	**350**	*e*P	**Pn**	**13 02 51.4**		**+3.3**
NJ2				pP		13 02 54.1		
NJ2				sP		13 02 56.9		
NJ2				PP		13 02 59.5		
NJ2				S	**Sn**	**13 04 56.0**		**+4.3**
NJ2				sS		13 05 04.0		
NJ2				pmax	pmax			
	comp=Z,10.0nm,1.2s							
NJ2				pmax	pmax			
	comp=Z,70nm,4.7s							
NJ2				LR	LR			
	comp=N,1μm,14.7s							
NJ2				LR	LR			
	comp=E,760nm,13.6s							
NJ2				LR	LR			
	comp=Z,1μm,14.5s							
WHN	**Wuhan**	**11.20**	**328**	*e*P	**Pn**	**13 02 53.0**		**+3.4**
WHN				pP		13 02 57.0		
WHN				S	**Sn**	**13 04 54.3**		**-0.2**
WHN				LR	LR			
	comp=N,670nm,10.0s							
WHN				LR	LR			
	comp=E,950nm,12.2s							
ENH	**Enshi**	**13.90**	**313**	Pn	**Pn**	**13 03 26.2**		**-0.3**
GYA	**Guiyang**	**14.27**	**295**	P	**Pn**	**13 03 32.1**		**+0.5**
GYA				SS		13 06 30.3		
GYA				pmax	pmax			
	comp=Z,10.0nm,1.0s							
GYA				pmax	pmax			
	comp=Z,90nm,4.3s							
GYA				LR	LR			
	comp=N,1μm,14.0s							
GYA				LR	LR			
	comp=E,880nm,15.2s							
GYA				LR	LR			
	comp=Z,1μm,13.9s							
DAV	**Davao City (W)**	**14.60**	**162**	LR	LR	13 09 29.1		
	comp=Z,350nm,19.5s,baz=266,slow=38							
XAN	**Xi'an**	**16.81**	**323**	P	**Pn**	**13 04 04.3**		**-0.5**
XAN				pP	pP	13 04 07.6		-4.1
XAN				sP	sP	13 04 11.5		-2.5
XAN				PP		13 04 17.9		
XAN				S	**Sn**	**13 07 12.1**		**+1.0**
XAN				LR	LR			
	comp=N,400nm,15.7s							
XAN				LR	LR			
	comp=E,190nm,13.3s							
KSRS	**Korea Array**	**17.33**	**18**	P	**Pn**	**13 04 12.4**		**+1.1**
	comp=E,3.1nm,0.3s,baz=199,slow=10,SNR=113							
KSRS				LR	LR	13 12 43.1		
	comp=E,376nm,18.1s,baz=202,slow=43							
KMI	**Kunming**	**17.38**	**287**	P	**Pn**	**13 04 13.9**		**+1.8**
KMI				pP	pP	13 04 16.1		-2.1
KMI				sP	sP	13 04 17.5		-2.9
KMI				PP		13 04 26.8		
KMI				S	**Sn**	**13 07 26.0**		**+0.8**
KMI				sS	sS	13 07 29.8		-11
KMI				SS		13 07 47.6		
KMI				LR	LR			
	comp=N,970nm,11.9s							
KMI				LR	LR			
	comp=E,280nm,11.9s							
KMI				LR	LR			
	comp=Z,560nm,15.8s							
JHS	**Saijyo**	**17.40**	**35**	P	**Pn**	**13 04 13.4**		**+1.2**
CD2	**Chengdu**	**18.39**	**306**	P	**Pn**	**13 04 24.9**		**+0.4**
CD2				pP	pP	13 04 28.5		-0.8
CD2				sP	sP	13 04 30.9		-0.6
CD2				PP		13 04 40.5		
CD2				S	**Sn**	**13 07 47.5**		**-2.2**
CD2				sS	sS	13 07 52.3		-9.5
CD2				SS		13 08 09.9		
CD2				pmax	pmax			
	comp=Z,40nm,0.7s							
CD2				pmax	pmax			
	comp=Z,100nm,8.8s							
CD2				LR	LR			
	comp=N,1μm,12.5s							
CD2				LR	LR			
	comp=Z,1μm,15.5s							
JWT	**Wachi**	**18.88**	**39**	P	**Pn**	**13 04 32.4**		**+2.0**
BJT	**Baijiatuau**	**19.32**	**348**	*e*P	**Pn**	**13 04 35.3**		**-0.4**
BJT				pmax	pmax			
	comp=Z,146nm,1.1s							
BJT	**Baijiatuau**	**19.32**	**348**	*e*Pn	**Pn**	**13 04 35.3**		**-0.4**
	comp=Z,146nm,1.1s							
BJI	**Beijing**	**19.34**	**348**	P	**Pn**	**13 04 34.9**		**-1.0**
BJI				S	**Sn**	**13 08 12.5**		**+0.1**
BJI				pmax	pmax			
	comp=Z,97nm,1.1s							
BJI				LR	LR			
	comp=N,610nm,16.6s							
BJI				LR	LR			
	comp=E,460nm,15.4s							
CBIJ	**Chichi jima**	**20.11**	**69**	P	**P**	**13 04 45.2**		**+1.9**
	comp=E,33nm,0.7s,baz=279,slow=23,SNR=3.3							
CBIJ				LR	LR	13 10 47.6		
	comp=E,315nm,19.3s,MS3.7,baz=280,slow=31							
JGF	**Kuroka**	**20.27**	**41**	P	**P**	**13 04 46.8**		**+1.9**
CHTO	**Chiang Mai**	**20.98**	**268**	*e*P	**P**	**13 04 53.4**		**+0.7**
	comp=E,5.6nm,0.8s							
CMAR	**Chiang Mai Arr**	**21.04**	**267**	P	**P**	**13 04 54.4**		**+0.9**
	comp=E,7.5nm,0.7s,mb4.1,baz=74,slow=9.2,SNR=57							
CMAR				LR	LR	13 14 11.7		
	comp=E,441nm,18.7s,MS3.9,baz=87,slow=40							
JOD2	**Odawara 2**	**21.15**	**44**	P	**P**	**13 04 58.1**		**+3.6**
LZH	**Lanzhou**	**21.24**	**318**	⇑P	**P**	**13 04 57.5**		**+2.1**
LZH				pP		13 05 00.8		
LZH				sP	sP	13 05 02.6		+0.1
LZH				S	**S**	**13 08 51.0**		**+0.2**
LZH				sS	sS	13 08 56.0		-2.7
LZH				SS		13 09 23.0		
LZH				pmax	pmax			
	comp=Z,51nm,1.4s,mb4.7							
LZH				pmax	pmax			
	comp=Z,120nm,4.0s							
LZH				LR	LR			
	comp=E,800nm,11.9s							
LZH				LR	LR			
	comp=Z,980nm,13.0s,MS4.4							
HHC	**Hu-ho-hao-te**	**21.30**	**340**	*e*P	**P**	**13 04 57.3**		**+1.3**
HHC				sP	sP	13 05 02.4		-0.7
HHC				PP		13 05 20.9		
HHC				S	**S**	**13 08 48.5**		**-3.4**
HHC				PcP	PcP	13 09 02.4		+2.1
HHC				SS		13 09 22.3		
HHC				ScP	ScP	13 12 36.8		+0.3
HHC				PcS	PcS	13 12 38.5		+0.2
HHC				pmax	pmax			
	comp=Z,40nm,1.0s,mb4.7							
HHC				pmax	pmax			
	comp=Z,160nm,5.3s							
HHC				LR	LR			
	comp=N,760nm,10.9s,MS4.4							
HHC				LR	LR			
	comp=E,490nm,10.9s,MS4.4							
HHC				LR	LR			
	comp=Z,630nm,10.9s,MS4.3							
MAJO	**Matsushiro**	**21.41**	**40**	*e*P	**P**	**13 04 58.7**		**+1.5**
MAJO				pmax	pmax			
	comp=Z,17nm,0.8s,mb4.4							
MAJO	**Matsushiro**	**21.41**	**40**	*e*P	**P**	**13 04 58.7**		**+1.5**
	comp=Z,17nm,0.8s,mb4.4							
MAT	**Matsushiro**	**21.41**	**40**	P	**P**	**13 04 59.4**		**+2.2**
MJAR	**Matsushiro Arr**	**21.41**	**40**	P	**P**	**13 04 58.9**		**+1.6**
	comp=Z,6.8nm,0.6s,mb4.1,baz=231,slow=8.2,SNR=32							
MJAR				LR	LR	13 14 03.8		
	comp=Z,172nm,19.5s,MS3.5,baz=225,slow=39							
JRY	**Ryogami san**	**21.50**	**42**	P	**P**	**13 04 59.9**		**+1.7**
BTO	**Baotou**	**21.62**	**337**	*e*P	**P**	**13 04 59.3**		**-0.1**
JSD	**Sado**	**22.45**	**38**	P	**P**	**13 05 09.0**		**+0.7**
CN2	**Changchun**	**22.92**	**8**	*e*P	**P**	**13 05 11.6**		**-1.6**
CN2				*e*S	**S**	**13 09 17.3**		**-5.2**
CN2				pmax	pmax			
	comp=Z,20nm,1.0s,mb4.5							
CN2				pmax	pmax			
	comp=Z,200nm,3.0s							
CN2				LR	LR			
	comp=N,800nm,17.0s,MS4.3							
CN2				LR	LR			
	comp=E,600nm,17.0s,MS4.3							
CN2				LR	LR			
	comp=Z,700nm,17.0s,MS4.2							
JYA	**Atsumi**	**23.66**	**38**	P	**P**	**13 05 19.9**		**-1.0**
VLA	**Vladivostok**	**23.73**	**20**	*d i* P	**P**	**13 05 21.6**		**+0.1**
VLA				pmax	pmax			
	comp=Z,44nm,1.3s,mb4.7							
JMM	**Marumori**	**23.84**	**41**	P	**P**	**13 05 21.4**		**-1.1**
GUMO	**Guam**	**23.84**	**104**	P	**P**	**13 05 24.1**		**+1.3**
	comp=Z,29nm,0.7s,mb4.8,baz=193,slow=13,SNR=3.7							
GUMO				LR	LR	13 14 28.6		
	comp=Z,204nm,18.3s,MS3.6,baz=89,slow=36							
MDJ	**Mudanjiang**	**24.47**	**15**	P	**P**	**13 05 28.3**		**0.0**
MDJ				pP		13 05 31.3		
MDJ				S	**S**	**13 09 49.6**		**+1.9**
MDJ				sS	sS	13 09 54.3		-2.0
MDJ				ScP	ScP	13 12 45.0		+0.2
MDJ				PcS	PcS	13 12 46.4		-0.1
MDJ				pmax	pmax			
	comp=Z,39nm,1.0s,mb4.8							
MDJ				LR	LR			
	comp=N,390nm,17.6s,MS4.0							
MDJ				LR	LR			
	comp=E,270nm,16.7s,MS4.0							
MDJ				LR	LR			
	comp=Z,630nm,16.9s,MS4.2							
MDJ	**Mudanjiang**	**24.47**	**15**	*e*P	**P**	**13 05 27.8**		**-0.5**
	comp=Z,40nm,0.9s,mb4.8							
JOM	**Ohasama**	**25.16**	**39**	P	**P**	**13 05 33.9**		**-0.7**
GTA	**Gaotai**	**25.81**	**320**	*e*P	**P**	**13 05 41.8**		**+1.3**
GTA				pP	pP	13 05 45.6		-0.1
GTA				sP	sP	13 05 48.1		+0.2
GTA				S	**S**	**13 10 12.6**		**+3.4**
GTA				sS	sS	13 10 19.5		+1.7
GTA				pmax	pmax			
	comp=Z,5.0nm,1.3s,mb3.9							
GTA				pmax	pmax			
	comp=Z,87nm,5.3s							
GTA				LR	LR			
	comp=N,290nm,13.1s,MS4.2						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SONM				PcP	PcP	13 09 17.4	-0.4
	comp=Z,0.4nm,0.4s,baz=170,slow=4.4,SNR=3.7						
KLR	Kul'dur	29.32	14	eP	P	13 06 08.3	-3.5
KLR				MLR	MLR		
	comp=Z,900nm,16.0s,MS4.5						
HABR	Khabarovsk	29.50	19	P	P	13 06 12.9	-0.6
HABR				e*PP	pP	13 06 21.3	+2.6
HABR				e*SP	sP	13 06 25.3	+4.4
HABR						13 07 06.2	
HABR				eS	S	13 11 05.5	-1.7
HABR				eSS	SS	13 12 33.6	-39
HABR				e		13 13 01.2	
HABR				e		13 16 49.6	
HABR				pmax	pmax		
	comp=N,21nm,2.5s						
HABR				pmax	pmax		
	comp=E,21nm,2.7s						
HABR				pmax	pmax		
	comp=Z,30nm,2.8s,mb4.5						
HABR				MLR	MLR		
	comp=Z,224nm,19.0s,MS3.8						
YSS	Yuzh-Sakhalins	31.20	29	eP	P	13 06 28.0	-0.4
YSS				e		13 06 35.0	
YSS				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.3						
YSS	Yuzh-Sakhalins	31.20	29	eP	P	13 06 28.4	0.0
	comp=Z,21nm,0.9s,mb5.0						
JIRN	Jiri	32.41	289	eP	P	13 06 40.3	+0.9
	comp=Z,27nm,0.6s,mb5.2						
GUN	Gumba	32.70	289	eP	P	13 06 42.6	+0.7
	comp=Z,28nm,0.7s,mb5.3						
PKI	Pulchoki	33.10	288	eP	P	13 06 45.5	+0.1
	comp=Z,7.6nm,0.5s,mb4.9						
PKIN	Phulchoki	33.11	288	eP	P	13 06 45.5	0.0
	comp=Z,11nm,0.6s,mb5.0						
KKN	Kakani	33.22	289	eP	P	13 06 46.5	0.0
	comp=Z,19nm,0.8s,mb5.1						
DMN	Daman	33.37	288	eP	P	13 06 47.6	-0.1
	comp=Z,18nm,0.8s,mb5.0						
TLY	Talaya	33.42	340	eP	P	13 06 48.2	+0.3
TLY				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
TLY				MLR	MLR		
	comp=Z,296nm,16.0s,MS4.1						
TLY	Talaya	33.42	340	eP	P	13 06 48.0	+0.1
	comp=Z,8.9nm,0.8s,mb4.8						
IRK	Irkutsk	33.72	341	⇓iP	P	13 06 50.7	+0.2
IRK				pmax	pmax		
	comp=Z,35nm,1.4s,mb5.1						
GKN	Gorkha	33.80	289	eP	P	13 06 50.7	-0.9
	comp=Z,17nm,0.7s,mb5.1						
WMQ	Urumqi	35.80	317	P	P	13 07 08.8	+0.2
WMQ				pP	pP	13 07 13.3	-0.6
WMQ				sP	sP	13 07 15.8	-0.3
WMQ				PP	PP	13 08 29.8	-0.2
WMQ				PcP	PcP	13 09 36.5	+0.4
WMQ				eS	S	13 12 44.9	-0.4
WMQ				SS	SS	13 15 05.8	-16
WMQ				ScS	ScS	13 17 24.6	-2.0
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
WMQ				pmax	pmax		
	comp=Z,180nm,4.8s						
WMQ				LR	LR		
	comp=N,160nm,16.4s,MS4.0						
WMQ				LR	LR		
	comp=E,150nm,17.0s,MS4.0						
WMQ				LR	LR		
	comp=Z,180nm,18.0s,MS3.9						
FITZ	Fitzroy Crossi	39.21	173	eP	P	13 07 35.7	-2.0
	comp=Z,6.9nm,1.2s,mb4.3						
PMG	Port Moresby	39.67	137	eP	P	13 07 41.4	-0.2
MK31	Makanchi Array	40.55	318	eP	P	13 07 48.7	+0.1
MKAR	Makanchi Array	40.55	318	P	P	13 07 49.2	+0.7
	comp=Z,4.1nm,0.6s,mb4.2,baz=114,slow=9.4,SNR=43						
MKAR				PcP	PcP	13 09 50.6	-0.1
	comp=Z,1.1nm,0.7s,baz=87,slow=4.5,SNR=4.1						
MKAR	Makanchi Array	40.55	318	ceP	P	13 07 49.2	+0.6
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KRAR	Krasnoyarsk	40.70	336	eP	P	13 07 50.4	+0.7
KRAR				pmax	pmax		
	comp=Z,28nm,1.2s,mb4.8						
COEN	Coen	41.02	146	eP	P	13 07 51.5	-1.3
KSH	Kashi	42.59	306	P	P	13 08 09.3	+3.9
KSH				pP	pP	13 08 13.4	+2.6
KSH				sP	sP	13 08 16.1	+3.2
KSH				PP	PP	13 09 51.3	+7.1
KSH				PcP	PcP	13 10 00.0	+2.4
KSH				ScP	ScP	13 13 49.5	+1.7
KSH				PcS	PcS	13 13 50.9	+1.3
KSH				S	S	13 14 33.3	+5.8
KSH				sS	sS	13 14 41.6	+5.3
KSH				SS	SS	13 17 39.3	+1.7
KSH				ScS	ScS	13 18 07.0	+0.6
KSH				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.6						
KSH				pmax	pmax		
	comp=Z,40nm,3.2s						
KSH				LR	LR		
	comp=N,230nm,8.8s						
KSH				LR	LR		
	comp=E,150nm,7.9s						
KSH				LR	LR		
	comp=Z,270nm,9.2s						
WRAB	Tennant Creek	42.79	162	eP	P	13 08 06.0	-1.1
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
WRAB	Tennant Creek	42.79	162	eP	P	13 08 06.0	-1.1
	comp=Z,9.3nm,0.9s,mb4.5						
WRA	Warramunga Arr	42.79	162	P	P	13 08 06.2	-1.0
	comp=Z,4.9nm,0.7s,mb4.3,baz=344,slow=9.0,SNR=42						
WRA				PcP	PcP	13 09 58.1	-0.3
	comp=Z,0.9nm,0.6s,baz=338,slow=4.0,SNR=4.1						
ZAA0	Zalesovo Array	42.82	329	eP	P	13 08 06.8	-0.3
ZALV	Zalesovo Beam	42.82	329	P	P	13 08 07.2	+0.1
	comp=Z,6.3nm,0.6s,mb4.5,baz=117,slow=8.5,SNR=33						
ZALV				PcP	PcP	13 09 57.4	-0.6
	comp=Z,0.9nm,0.6s,baz=122,slow=5.2,SNR=2.1						
ZALV				LR	LR	13 27 39.0	
	comp=Z,114nm,19.7s,MS3.8,baz=256,slow=38						
ZALV	Zalesovo Beam	42.82	329	P	P	13 08 07.2	+0.2
ZALV						13 09 57.4	
PET	Petropavlovsk	42.89	33	eP	P	13 08 06.7	-1.0
PET				eS	S	13 14 29.2	-2.3
PET				pmax	pmax		
	comp=Z,27nm,1.0s,mb4.9						
TKM2	Tokmak 2	43.67	311	eP	P	13 08 15.4	+1.3
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
TKM2	Tokmak 2	43.67	311	eP	P	13 08 15.4	+1.3
	comp=Z,5.5nm,0.8s,mb4.3						
NVS	Novosibirsk	44.09	329	i P	P	13 08 15.5	-1.8
FRU	Bishkek	44.34	310	eP	P	13 08 17.0	-2.5
AAK	Ala-Archa	44.38	310	P	P	13 08 21.0	+1.2
	comp=Z,1.8nm,0.4s,mb4.1,baz=268,slow=1.5,SNR=5.0						
AAK				LR	LR	13 29 32.4	
	comp=Z,355nm,18.9s,MS4.3,baz=186,slow=40						
KURK	Kurchatov	44.45	322	eP	P	13 08 20.3	+0.1
KURK				pmax	pmax		
	comp=Z,29nm,1.3s,mb4.8						
KURK	Kurchatov	44.45	322	eP	P	13 08 20.3	+0.1
	comp=Z,29nm,1.3s,mb4.8						
AML	Almayashu	44.84	309	eP	P	13 08 25.5	+2.0
AML				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.8						
AML	Almayashu	44.84	309	eP	P	13 08 25.5	+2.0
	comp=Z,19nm,1.1s,mb4.8						
EKS2	Erkin-Say	44.90	310	eP	P	13 08 25.2	+1.2
EKS2				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
EKS2	Erkin-Say	44.90	310	eP	P	13 08 25.2	+1.2
	comp=Z,2.4nm,0.7s,mb4.1						
MTSU	Mount Surprise	45.13	148	eP	P	13 08 26.4	+0.4
	comp=Z,24nm,0.6s,mb5.2						
ASAR	Alice Springs	46.21	164	P	P	13 08 34.2	-0.2
	comp=Z,0.9nm,0.3s,mb4.1,baz=346,slow=6.8,SNR=18						
ASAR				PcP	PcP	13 10 09.5	-0.6
	comp=Z,0.7nm,0.8s,baz=358,slow=2.8,SNR=3.1						
SEY	Seymchan	46.88	19	eP	P	13 08 39.4	+0.1
CTA	Charters Tower	47.75	147	eP	P	13 08 46.8	+0.3
	comp=Z,6.7nm,1.1s,mb4.6						
HNR	Honiara	48.73	125	LR	LR	13 26 02.5	
	comp=Z,64nm,18.2s,MS3.6,baz=330,slow=32						
BVAR	Borovoye Array	50.04	322	P	P	13 09 04.4	+0.7
	comp=Z,1.5nm,0.6s,mb4.2,baz=103,slow=9.0,SNR=13						
BVAR				PcP	PcP	13 10 23.3	-0.1
	comp=Z,1.9nm,0.6s,baz=113,slow=3.9,SNR=6.3						
BRVK	Borovoye	50.11	322	c iP	P	13 09 04.6	+0.3
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.7						
BRVK	Borovoye	50.11	322	eP	P	13 09 03.4	-1.0
	comp=Z,5.1nm,0.6s,mb4.7						
TIXI	Tiksi	50.76	3	eP	P	13 09 06.4	-2.5
TIXI				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.7						
TIXI	Tiksi	50.76	3	eP	P	13 09 07.2	-1.7
	comp=Z,6.0nm,0.6s,mb4.7						
BILL	Bilibino	54.59	19	⇓eP	P	13 09 36.2	-1.1
BILL				e		13 11 43.7	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.3						
BILL				MLR	MLR		
	comp=Z,200nm,18.0s,MS4.2						
BBOO	Buckleboo	55.48	165	eP	P	13 09 43.9	-0.2
	comp=Z,14nm,1.3s,mb4.8						
ABKAR	Akbulak array	55.58	316	eP	P	13 09 43.7	-1.0
	comp=Z,1.9nm,0.6s,mb4.3						
STKA	Stephens Creek	56.21	159	eP	P	13 09 49.5	+0.1
	comp=Z,2.2nm,0.6s,mb4.4						
STKA	Stephens Creek	56.21	159	P	P	13 09 49.8	+0.4
	comp=Z,3.0nm,0.6s,mb4.5,baz=330,slow=7.6,SNR=8.6						
STKA	Stephens Creek	56.21	159	eP	P	13 09 49.0	-0.4
STKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
STKA	Stephens Creek	56.21	159	eP	P	13 09 49.0	-0.4
	comp=Z,1.2nm,0.8s,mb4.0						
SVE	Sverdlovsk	56.51	325	⇑eP	P	13 09 47.2	-4.1
SVE				eS	S	13 17 29.1	-13
SVE				eSS	SS	13 21 23.7	-5.1
SVE				eSSS		13 23 44.4	
SVE				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.0						
SVE				MLR	MLR		
	comp=Z,245nm,16.0s,MS4.4						
AKTK	Aktyubinsk	56.96	317	P	P	13 09 55.0	+0.4
AKTK				LR	LR	13 36 29.0	
AKTO	Aktyubinsk	56.96	317	P	P	13 09 55.0	+0.4
	comp=Z,1.6nm,0.7s,mb4.2,baz=120,slow=13,SNR=6.2						
AKTO				LR	LR	13 36 29.0	
	comp=Z,148nm,18.2s,MS4.1,baz=296,slow=38						
ARU	Arti	57.55	324	c iP	P	13 09 58.1	-0.5
ARU				e		13 12 01.3	
ARU				S	S	13 17 55.3	-0.2
ARU				SS	SS	13 21 42.6	-2.6
ARU				pmax	pmax		
	comp=Z,11nm,1.7s,mb4.6						
ARU	Arti	57.55	324	P	P	13 09 56.1	-2.5
	comp=Z,4.4nm,0.6s,mb4.7						
ARMA	Armidale	59.03	149	eP	P	13 10 10.3	+1.0
DZM	Mont Dzumac	61.62	131	eLR	LR	13 28 45.9	
	comp=Z,134nm,21.9s						
CNB	Canberra Magne	62.17	154	eP	P	13 10 31.0	+0.4
GNI	Garni	66.53	306	eP	P	13 11 00.1	+0.8
GNI				pmax	pmax		
	comp=Z,22nm,1.2s						
KIV	Kislovodsk	67.50	310	eP	P	13 11 06.1	+0.7
KIV				eS	S	13 20 00.5	-0.6
KIV				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.9						
KIV				MLR	MLR		
	comp=Z,92nm,18.0s,MS4.0						
APA	Apatity	69.83	336	⇑eP	P	13 11 19.4	-0.1
APA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
APA				MLR	MLR		
	comp=Z,200nm,12.0s,MS4.6						
OBN	Obninsk	69.89	322	⇓iP	P	13 11 20.6	+0.5
OBN				e		13 13 53.6	
OBN				eS	S	13 20 24.6	-4.4
OBN				pmax	pmax		
	comp=Z,28nm,1.7s,mb4.9						
OBN				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.2						
PPLA	Purkeypile	69.94	29	eP	P	13 11 20.4	+0.1
	comp=Z,38nm,1.6s,mb5.1						
COLD	Coldfoot	70.23	24	eP	P	13 11 22.1	+0.1
	comp=Z,12nm,1.2s,mb4.7						
BPAW	Bear Paw Mtn.	70.32	28	eP	P	13 11 21.9	-0.7
	comp=Z,24nm,1.3s,mb5.0						
KDAK	Kodiak Island	70.45	35	i P	P	13 11 23.1	-0.4
KDAK	Kodiak Island	70.45	35	eP	P	13 11 22.9	-0.5
	comp=Z,31nm,1.4s,mb5.0						
TRF	Thorofare Moun	70.72	28	eP	P	13 11 25.1	+0.1
	comp=Z,3.3nm,0.7s,mb4.4						
MCK	McKinley	71.27	28	eP	P	13 11 27.2	-1.2
MCK				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.0						
MCK	McKinley	71.27	28	eP	P	13 11 27.2	-1.1
	comp=Z,29nm,1.3s,mb5.0						
JOF	Joensuu	71.36	331	eP	P	13 11 27.6	-1.3
JOF	Joensuu	71.36	331	ep	P	13 11 27.6	-1.3
	comp=Z,1.8nm,0.4s,mb4.3						
COLA	College	71.54	27	P	P	13 11 29.1	-0.9
COLA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
COLA	College	71.54	27	P	P	13 11 29.1	-0.9
	comp=Z,3.2nm,0.8s,mb4.3						
PMR	Palmer	71.55	30	eP	P	13 11 29.0	-1.1
PMR				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.9						
PMR	Palmer	71.55	30	eP	P	13 11 29.0	-1.1
	comp=Z,18nm,1.2s,mb4.9						
KEV	Kevo	71.81	339	eP	P	13 11 30.3	-1.2
KEV				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
KEV	Kevo	71.81	339	eP	P	13 11 30.3	-1.2
	comp=Z,3.3nm,0.6s,mb4.4						
KEV	Kevo	71.81	339	ep	P	13 11 30.3	-1.2
	comp=Z,3.3nm,0.6s,mb4.4						
ARCES	ARCESS Array B	72.37	338	P	P	13 11 34.9	+0.1
	comp=Z,2.0nm,0.6s,mb4.2,baz=73,slow=8.1,SNR=10						
MENT	Mentasta	73.74	28	eP	P	13 11 42.8	-0.3
KAF	Kangasniemi	73.80	331	eP	P	13 11 44.5	+1.1
KAF				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
KAF	Kangasniemi	73.80	331	eP	P	13 11 44.5	+1.1
	comp=Z,1.4nm,0.5s,mb4.2						
KAF	Kangasniemi	73.80	331	ep	P	13 11 44.5	+1.1
	comp=Z,1.4nm,0.5s,mb4.2						
BMRM	Bremner River	73.82	30	eP	P	13 11 42.8	-0.8
	comp=Z,8.2nm,0.9s,mb4.7						
FINES	FINESS Array B	74.07	330	P	P	13 11 47.4	+2.3
	comp=Z,3.2nm,0.7s,mb4.3,baz=49,slow=6.1,SNR=8.8						
FINES				LR	LR	13 47 43.5	
	comp=Z,104nm,19.9s,MS4.1,baz=140,slow=38						
EGAK	Eagle	74.35	26	eP	P	13 11 44.8	-1.9
	comp=Z,5.8nm,0.7s,mb4.6						
BRTR	Keskin Array B	74.97	307	P	P	13 11 51.4	+0.7
	comp=Z,0.9nm,0.7s,mb3.8,baz=108,slow=6.6,SNR=6.4						
BRTR				LR	LR	13 48 31.7	
	comp=Z,23nm,18.1s,MS3.5,baz=291,slow=39						
AKASG	Malin Array Be	75.14	319	P	P	13 11 50.9	-0.5
	comp=Z,0.3nm,0.2s,mb3.8,baz=68,slow=5.0,SNR=5.5						
AKASG	Malin Array Be	75.14	319	ceP	P	13 11 52.4	+1.0
DAWY	Dawson	75.29	27	eP	P	13 11 51.8	-0.3
MMAI	Mount Meron Ar	75.37	300	LR	LR	13 49 17.3	
	comp=Z,65nm,20.9s,MS3.9,baz=70,slow=39						
INK	Inuvik	76.09	22	eP	P	13 11 55.7	-0.9
INK				pmax	pmax		
	comp=Z,28nm,1.4s						
INK	Inuvik	76.09	22	eP	P	13 11 55.7	-0.8
	comp=Z,28nm,1.4s,mb5.0						
SKAG	Skagway	78.69	30	eP	P	13 12 11.6	+0.3
	comp=Z,15nm,1.2s,mb4.8						
NB2	NORSAR Subarra	80.91	332	P	P	13 12 22.9	-0.4
	comp=Z,2.6nm,0.8s,mb4.2,baz=54,slow=6.5						
NOA	NORSAR Array B	80.91	332	P	P	13 12 23.2	-0.1
	comp=Z,1.4nm,0.7s,mb4.0,baz=60,slow=5.3,SNR=3.9						
NOA				LR	LR	13 54 01.0	
	comp=Z,197nm,18.3s,MS4.5,baz=65,slow=40						
BRG	Berggiesshubel	84.14	323	eP	P	13 12 40.6	+0.2
	comp=Z,6.8nm,1.3s,mb4.6						
BRG	Berggiesshubel	84.14	323	eP	P	13 12 40.6	+0.3
BRG				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.4						
CSNA	Conrad Observa	84.29	319	⇑iPcP	PcP	13 12 42.3	-2.6
	comp=Z,4.7nm,1.2s						
CLL	Collm	84.47	323	eP	P	13 12 41.0	-1.0
CLL	Collm	84.47	323	eP	P	13 12 41.0	-1.0
KMBO	Kilima Mbogo	84.69	267	LR	LR	13 52 13.0	
	comp=Z,84nm,18.6s,MS4.2,baz=90,slow=37						
SUMG	Summit	85.54	354	eP	P	13 12 47.0	0.0
SUMG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SUMG	Summit	85.54	354	eP	P	13 12 47.0	-0.1
	comp=Z,4.7nm,0.7s,mb4.8						
YKA	Yellowknife Ar	85.82	23	P	P	13 12 47.7	-0.8
	comp=Z,2.9nm,0.6s,mb4.7,baz=308,slow=4.9,SNR=48						
YKA	Yellowknife Ar	85.82	23	P	P	13 12 47.7	-0.8
EDM	Edmonton	92.30	29	eP	P	13 13 19.8	+0.4
PPT	Papeete	95.53	107	ePS	PS	13 26 07.2	-4.1
	comp=Z,60nm,24.5s						
PPT				eLR	LR	13 44 24.0	
	comp=Z,81nm,26.8s						
PPT	Papeete	95.53	107	LR	LR	13 52 14.1	
	comp=Z,284nm,21.0s,MS4.7,baz=309,slow=33						
NVAR	Mina Array Bea	98.71	43	P	P	13 13 49.3	+0.4
	comp=Z,0.3nm,0.6s,mb4.0,baz=288,slow=5.0,SNR=4.3						
DBIC	Dimbokro	120.24	292	PKP	PKPdf	13 19 01.8	+0.5
	comp=Z,10nm,1.1s,baz=81,slow=4.4,SNR=3.5						
PMSA	Palmer Station	136.22	177	PKP	PKPdf	13 19 30.7	+0.6
	comp=Z,11nm,0.4s,baz=289,slow=13,SNR=7.8						
USHA	Ushuaia	145.56	170	PKPbc	PKPbc	13 19 48.8	+1.4
	comp=Z,4.4nm,0.7s,baz=246,slow=6.3,SNR=4.6						
LPAZ	La Paz	170.00	63	PKP	PKPdf	13 20 19.9	+2.1
	comp=Z,1.3nm,0.9s,baz=150,slow=1.2,SNR=3.5						
LPAZ	La Paz	170.00	63	PKP	PKPdf	13 20 19.9	+2.1

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*IDC **15** 13:12:56.1±3.2, 30°.25S×177°.89W, h44^{km}±36^{km}, mb3.7/3, mb1 3.8/3, mb1mx3.5/14, mbtmp3.7/3, Error ellipse: s-maj=40.5km s-min=30.4km az=96.0*

*ISCJB **15** 13:12:57.1±1.8, 30°.1S±0°.1×178°.0W±0°.3, h68^{km}±14^{km}, mb4.4/5, Error ellipse: s-maj=41.4km s-min=18.9km az=22.8*

*NEIC **15** 13:13:00.1±1.0, 29°.66S×178°.14W, h78^{km}±15^{km}, mb4.7/2, Error ellipse: s-maj=32.8km s-min=22.1km az=216.0*

ISC 15 13:12:58.6±1.8, **30°.0S**±0°.1×**178°.0W**±0°.3, **h69**^{km}±12^{km}, **n13**, σ0^s.**96**/15, **mb4.4**/5, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	0.79	4	P	Pn	13 13 13.3	-1.2
	223nm,0.3s,baz=90,slow=19,SNR=14						
RAO				S	Sn	13 13 26.9	+0.7
	859nm,0.3s,baz=94,slow=22,SNR=12						
OUZ	Omahuta	8.78	232	eP	Pn	13 15 02.9	+0.1
	5.7nm,0.7s						
URZ	Urewera	9.15	205	P	Pn	13 14 56.6	-11
	0.2nm,0.3s,baz=112,slow=9.4,SNR=7.1						
URZ				S	Sn	13 16 35.6	-14
	1.4nm,0.3s,baz=92,slow=22,SNR=16						
URZ	Urewera	9.15	205	ePn	Pn	13 14 56.8	-11
URZ				S	Sn	13 16 35.6	-14
STKA	Stephens Creek	34.58	256	P	P	13 19 41.5	+0.7
	4.8nm,0.8s,mb4.4,baz=92,slow=9.2,SNR=8.5						
STKA	Stephens Creek	34.58	256	eP	P	13 19 41.2	+0.3
ASAR	Alice Springs	43.15	267	P	P	13 20 52.2	-0.3
	0.6nm,0.5s,mb3.5,baz=103,slow=7.2,SNR=7.2						
WRAB	Tennant Creek	44.09	272	eP	P	13 20 59.7	-0.5
SBA	Scott Base	48.40	184	eP	P	13 21 35.8	+2.6
	4.0nm,0.4s,mb4.6						
QSPA	South Pole Qui	60.07	180	P	P	13 22 57.0	-1.0
	1.3nm,0.9s,mb3.9,baz=342,slow=5.8,SNR=4.2						
QSPA	South Pole Qui	60.07	180	eP	P	13 23 02.3	+4.4
	4.4nm,0.9s,mb4.5						
HHC	Hu-ho-hao-te	96.00	314	eP	P	13 26 18.3	+0.3
HHC				S	S	13 37 26.8	-4.1
HHC				pmax	pmax		
	comp=Z,11nm,0.7s,mb5.4						
HHC				pmax	pmax		
	comp=Z,80nm,7.9s						
FINES	FINESS Array B	144.81	340	PKPbc	PKPdf	13 32 26.4	-0.4
	comp=Z,0.7nm,0.3s,baz=72,slow=4.5,SNR=7.0						

GUC 15 13:21:24.5±0.5, **19°.74S**×**68°.81W**, **h5**^{km}±8^{km}, **ML3.5**, **2C**, **Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNMC	Miæe Miæ	0.96	309	⇑iP	Pg	13 21 41.8	-1.1
MNMC				i S	Sg	13 21 54.6	-0.8
MNMC				AML	AML	13 21 59.1	
	comp=N,1μm,0.4s						
HMBC	Humberston	1.15	242	i P	Pg	13 21 44.7	-1.9
HMBC				i S	Sg	13 21 59.8	-1.7
HMBC				AML	AML	13 22 00.6	
	comp=N,4μm,0.5s						
PSGC	Pisagua	1.25	276	⇑iP	Pg	13 21 46.2	-2.3
PSGC				i S	Sg	13 22 02.6	-2.0
PSGC				AML	AML	13 22 04.0	
	comp=N,422nm,0.7s						
PB04	Plate Boundary	2.59	194	eP	Pn	13 22 13.6	+6.5
PB04				eS	Sn	13 22 49.7	+11
PB04				AML	AML	13 23 01.2	
	comp=E,666nm,0.7s						

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*NIED **15** 13:23:00, 35°.50N×139°.00E, h11^{km}, Mw4.1 Best double couple: M₀1.57000×10^{15} NP1:φ$_s$60.00000°, δ75.00000°, λ120.00000°. NP2:φ$_s$174.00000°, δ33.00000°, λ28.00000°.*

*ISCJB **15** 13:23:06.0±0.3, 35°.50N±0°.02×139°.03E±0°.04, h32^{km}±2^{km}, mb4.1/23, MS3.5/5, Error ellipse: s-maj=5.7km s-min=3.6km az=178.6*

*MOS **15** 13:23:05.4±1.1, 35°.42N×139°.08E, h33^{km}, mb4.8/2, Error ellipse: s-maj=14.5km s-min=7.9km az=102.7*

*JMA **15** 13:23:06.7±0.1, 35°.53N×138°.99E, h21^{km}±1^{km}, M4.3 Broadband fault plane solution: P waves. NP1: φ$_s$186.00000°, δ39.00000°, λ32.00000°. NP2:φ$_s$70.00000°, δ70.00000°, λ124.00000°. Principal axes: T Plg52.0000°, Azm20.0000°; N Plg32.0000°, Azm237.0000°; P Plg18.0000°, Azm135.0000°;*

JMA Felt III J1.

*NEIC **15** 13:23:06.6±0.4, 35°.49N×138°.95E, mb4.6/4, MW4.1(NIED) Error ellipse: s-maj=10.2km s-min=8.3km az=87.0*

NEIC Felt in Akishima, Ayase and at Tokyo. Recorded [3 JMA] in Kanagawa and Yamanashi; [2 JMA] in Shizuoka and Tokyo; [1 JMA] in Chiba, Gumma, Nagano and Saitama.

*IDC **15** 13:23:06.5±0.5, 35°.52N×138°.96E, h21^{km}±3^{km}, mb3.9/18, mb1 4.1/21, mb1mx4.0/28, mbtmp4.0/21, ML4.2/3, MS3.5/7, Ms1 3.5/7, ms1mx3.1/33, Error ellipse: s-maj=16.0km s-min=8.2km az=72.0*

ISC 15 13:23:06.6±0.4, **35°.51N**±0°.02×**138°.98E**±0°.04, **h22**^{km}±3^{km}, **h25**^{km}±.5^{km}**:pP-P**, **n59**, σ0^s.**86**/70, **mb4.1**/23, **MS3.5**/5, **5C-3D**, **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOD2	Odawara 2	0.26	161	⇑P	Pb	13 23 12.7	-0.1
JOD2				S	Sb	13 23 17.2	+0.3
JYN	Shimob	0.36	268	⇓P	Pb	13 23 14.2	-0.2
JYN				S	Sb	13 23 20.0	+0.4
JHU	Hanno	0.42	35	⇑P	Pb	13 23 15.1	-0.3
JHU				S	Sb	13 23 21.3	0.0
JRY	Ryogami san	0.51	353	⇓P	Pb	13 23 16.5	-0.5
JRY				S	Sb	13 23 23.3	-0.7
SHZ3	Shizuoka 3	0.77	235	⇑P	Pb	13 23 21.6	+0.2
SHZ3				S	Sb	13 23 32.8	+1.4
JIZS	Izushimoda	0.79	186	⇑P	Pb	13 23 21.2	-0.5
JIZS				S	Sb	13 23 32.1	+0.1
JIM2	Oshima 3	0.87	155	⇓P	Pb	13 23 22.1	-1.0
JIM2				S	Sb	13 23 34.5	+0.2
JAG	Ashikaga	0.99	23	⇑P	Pb	13 23 24.5	-0.6
JAG				eS	Sb	13 23 37.8	+0.1
MJAR	Matsushiro Arr	1.21	329	Pg	Pn	13 23 27.4	-0.8
	482nm,0.3s,baz=136,slow=15,SNR=2079						
MJAR				Lg		13 23 42.5	
	1μm,0.3s,baz=69,slow=33,SNR=38						
MAJO	Matsushiro	1.21	329	eP	Pn	13 23 28.5	+0.2
MAJO				eS	Sn	13 23 43.8	-0.2
MAT	Matsushiro	1.21	329	P	Pn	13 23 28.3	+0.1
MAT				S	Sn	13 23 43.9	-0.1
JHJ	Hachijo jima 2	2.47	164	Pn	Pn	13 23 46.8	+1.1
	345nm,0.3s,baz=122,slow=13,SNR=220						
JHJ				Sn	Sn	13 24 18.4	+3.2
	94nm,0.3s,baz=265,slow=20,SNR=10						
ERM	Erimo	7.27	25	P	Pn	13 24 52.1	+0.6
ERM				pmax	pmax		
	comp=Z,11nm,0.8s						
ERM	Erimo	7.27	25	Pn	Pn	13 24 52.1	+0.6
	comp=Z,11nm,0.8s						

CBIJ Chichi jima 8.82 161 Pn **Pn 13 25 11.7 -1.2**
comp=Z,22nm,0.3s,baz=281,slow=11,SNR=10
CBIJ Sn **Sn 13 26 51.3 -0.3**
comp=Z,4.9nm,0.3s,baz=290,slow=19,SNR=2.8
CBIJ LR LR 13 28 21.0
comp=Z,144nm,19.8s,baz=149,slow=36
ASAJ Asahikawa 9.03 17 Pn **Pn 13 25 17.3 +1.6**
comp=Z,0.9nm,0.3s,baz=233,slow=12,SNR=6.7
ASAJ Sn **Sn 13 26 58.7 +1.9**
comp=Z,0.3nm,0.3s,baz=109,slow=30,SNR=2.1
ASAJ Asahikawa 9.03 17 P **Pn 13 25 17.3 +1.6**
ASAJ 13 26 58.7
ASAJ pmax pmax
comp=Z,1.0nm,0.3s
KSRS Korea Array 9.12 286 Pn **Pn 13 25 21.7 +4.9**
comp=Z,0.2nm,0.3s,baz=101,slow=13,SNR=4.2
KSRS LR LR 13 28 44.9
comp=Z,197nm,18.0s,baz=158,slow=37
YSS Yuzh-Sakhalins 11.78 13 eP **Pn 13 25 54.0 +0.7**
KLR Kul'dur 14.71 341 eP **Pn 13 26 40.0 +6.8**
PETK Petropavlovsk- 22.00 31 P **P 13 28 00.6 +1.5**
comp=Z,1.2nm,0.8s,mb3.4,baz=214,slow=6.5,SNR=5.2
GUMO Guam 22.46 165 LR LR 13 35 21.4
comp=Z,120nm,20.8s,MS3.3,baz=260,slow=33
SONM Songino Array 27.07 307 P **P 13 28 48.7 +1.2**
comp=Z,0.4nm,0.3s,mb3.4,baz=124,slow=7.7,SNR=2.8
SONM LR LR 13 39 52.9
comp=Z,118nm,19.8s,MS3.5,baz=302,slow=37
DAV Davao City (W) 30.86 207 P **P 13 29 23.2 +1.7**
comp=Z,162nm,0.4s,baz=74,slow=8.7,SNR=2.6
ZALV Zalesovo Beam 41.52 314 P **P 13 30 53.0 +1.0**
comp=Z,2.0nm,0.6s,mb3.9,baz=79,slow=5.5,SNR=5.9
ZALV PcP PcP 13 32 48.0 -1.3
comp=Z,1.2nm,0.6s,baz=164,slow=1.4,SNR=3.8
ZALV LR LR 13 48 21.1
comp=Z,18nm,18.8s,MS3.0,baz=32,slow=36
ZALV Zalesovo Beam 41.52 314 P **P 13 30 53.0 +0.9**
ZALV 13 32 48.0
MK31 Makanchi Array 43.28 303 eP **P 13 31 05.6 -0.9**
MKAR Makanchi Array 43.28 303 P **P 13 31 06.0 -0.5**
comp=Z,0.3nm,0.3s,mb3.5,baz=98,slow=9.3,SNR=2.3
MKAR LR LR 13 49 44.7
comp=Z,49nm,20.9s,MS3.4,baz=119,slow=37
KURK Kurchatov 45.35 309 eP **P 13 31 21.7 -1.3**
KURK pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
KURK Kurchatov 45.35 309 eP **P 13 31 21.7 -1.2**
comp=Z,6.4nm,0.8s,mb4.5
KDAK Kodiak Island 49.54 41 P **P 13 31 55.3 -0.2**
comp=Z,4.2nm,0.6s,mb4.7,baz=273,slow=5.2,SNR=7.6
KDAK sP sP 13 32 04.1 -0.7
comp=Z,3.0nm,0.6s,baz=272,slow=5.7,SNR=3.0
KDAK Kodiak Island 49.54 41 P **P 13 31 55.3 -0.2**
KDAK sP sP 13 32 04.1 -0.7
BVAR Borovoye Array 50.16 313 P **P 13 32 00.4 +0.2**
comp=Z,0.3nm,0.5s,mb3.6,baz=57,slow=10,SNR=2.4
WRAB Tennant Creek 55.31 185 eP **P 13 32 37.1 -1.5**
WRA Warramunga Arr 55.32 185 P **P 13 32 37.3 -1.4**
comp=Z,1.5nm,0.5s,mb4.3,baz=1.0,slow=7.6,SNR=35
WRA pP pP 13 32 44.1 -1.4
comp=Z,1.3nm,0.4s,baz=1.0,slow=7.6,SNR=5.7
WRA sP sP 13 32 48.3 +0.2
comp=Z,1.2nm,0.4s,baz=1.2,slow=7.7,SNR=7.2
ABKAR Akbulak array 57.42 310 eP **P 13 32 52.4 -1.0**
comp=Z,1.2nm,0.5s,mb4.2
AKTK Aktyubinsk 58.23 312 P **P 13 32 59.9 +0.8**
AKTO Aktyubinsk 58.23 312 P **P 13 32 59.9 +0.8**
comp=Z,1.2nm,0.3s,mb4.3,baz=69,slow=12,SNR=3.8
ASAR Alice Springs 59.05 185 P **P 13 33 04.8 -0.2**
comp=Z,0.8nm,0.8s,mb3.8,baz=12,slow=7.5,SNR=7.9
ASAR pP pP 13 33 11.9 +0.1
comp=Z,0.5nm,0.6s,baz=17,slow=11,SNR=3.3
ASAR Alice Springs 59.05 185 P **P 13 33 04.8 -0.2**
ASAR pP pP 13 33 11.9 +0.1
ARCES ARCESS Array B 64.72 339 P **P 13 33 42.1 -0.5**
comp=Z,1.4nm,0.7s,mb4.1,baz=66,slow=9.4,SNR=7.3
YKA Yellowknife Ar 66.10 29 P **P 13 33 51.1 -0.6**
comp=Z,0.8nm,0.8s,mb3.8,baz=296,slow=6.4,SNR=7.5
JOF Joensuu 66.37 332 eP **P 13 33 51.9 -1.5**
JOF Joensuu 66.37 332 ep **P 13 33 51.9 -1.5**
comp=Z,3.6nm,0.5s,mb4.7
KAF Kangasniemi 68.75 332 eP **P 13 34 07.3 -1.1**
KAF pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
KAF Kangasniemi 68.75 332 eP **P 13 34 07.3 -1.1**
comp=Z,2.8nm,0.5s,mb4.5
KAF Kangasniemi 68.75 332 ep **P 13 34 07.3 -1.1**
comp=Z,2.8nm,0.5s,mb4.5
FINES FINESS Array B 69.24 332 P **P 13 34 10.9 -0.6**
comp=Z,3.9nm,0.7s,mb4.5,baz=72,slow=6.2,SNR=9.2
FINES pP pP 13 34 18.4 0.0
comp=Z,4.4nm,0.9s,baz=88,slow=5.9,SNR=3.9
SUMG Summit 72.19 359 eP **P 13 34 29.9 +0.6**
comp=Z,5.6nm,0.6s,mb4.7
AKASG Malin Array Be 74.28 322 P **P 13 34 41.4 -0.6**
comp=Z,1.8nm,0.6s,mb4.2,baz=44,slow=7.5,SNR=6.5
NB2 NORSAR Subarra 74.82 337 P **P 13 34 44.2 -0.7**
comp=Z,1.3nm,0.6s,mb4.0,baz=40,slow=6.2
NOA NORSAR Array B 74.82 337 P **P 13 34 44.5 -0.4**
comp=Z,2.9nm,0.8s,mb4.3,baz=41,slow=5.9,SNR=8.0
NOA sP sP 13 34 55.2 +0.7
comp=Z,1.3nm,0.7s,baz=42,slow=5.9,SNR=3.7
NOA NORSAR Array B 74.82 337 P **P 13 34 44.5 -0.4**
NOA sP sP 13 34 55.2 +0.7
NVAR Mina Array Bea 77.47 52 P **P 13 35 01.4 +1.0**
comp=Z,1.1nm,0.7s,mb3.9,baz=285,slow=5.4,SNR=12
NVAR Mina Array Bea 77.47 52 P **P 13 35 01.4 +1.0**
BRTR Keskin Array B 78.37 311 P **P 13 35 06.2 +0.7**
comp=Z,0.7nm,0.6s,mb3.7,baz=96,slow=2.5,SNR=3.7
PDAR Pinedale Array 80.13 44 P **P 13 35 14.8 -0.1**
comp=Z,0.9nm,0.8s,mb3.8,baz=286,slow=6.1,SNR=5.0
PPT Papeete 85.74 115 LR LR 14 10 56.4
comp=Z,227nm,18.8s,MS4.6,baz=314,slow=34
TXAR Lajitas Array 92.61 51 P **P 13 36 16.8 0.0**
comp=Z,0.5nm,0.5s,mb4.2,baz=310,slow=3.4,SNR=8.6

*IDC **15** 13:24:30.6±0.7, 28°.27N×103°.65E, h0km, mb3.9/11, mb1 4.0/13, mb1mx3.9/25, mbtmp3.9/13, ML3.9/2, MS3.2/3, Ms1 3.2/3, ms1mx2.6/34, Error ellipse: s-maj=24.0km s-min=14.2km az=69.0*
*BJI **15** 13:24:31.9, 28°.16N×103°.53E, h16km, mB4.8/5, mb4.5/5, ML4.1/19, Ms4.0/7, Ms7 3.5/6*
*NEIC **15** 13:24:32.3±0.5, 28°.27N×103°.58E, h10km, mb4.0/2, Error ellipse: s-maj=13.9km s-min=9.5km az=74.0*
ISC 15 13:24:32.0±1.0, 28°.26N±0°.03×103°.54E±0°.05, h5km±6km, n28, σ1°.26/40, mb3.9/13, MS2.9/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.64**	**4**	Pn	**Pn**	**13 25 17.5**	**+2.2**
CD2				Pg	**Pb**	**13 25 20.8**	**+1.0**
CD2				Sn	**Sn**	**13 25 52.8**	**+5.0**
CD2				Sg	**Sb**	**13 25 56.1**	**+3.5**
CD2				smax			
	comp=N,2μm,0.8s						
KMI	**Kunming**	**3.21**	**193**	Pn	**Pn**	**13 25 23.3**	**+0.2**
KMI				Pg	**Pb**	**13 25 29.3**	**-0.2**
KMI				Sg	**Sb**	**13 26 08.8**	**-0.1**
KMI				smax			
	comp=N,100nm,1.2s						
KMI				smax			
	comp=E,120nm,0.9s						
KMI				LR	LR		
	comp=N,1μm,8.2s						
KMI				LR	LR		
	comp=E,2μm,7.1s						
KMI				LR	LR		
	comp=Z,740nm,9.5s						
GYA	**Guiyang**	**3.31**	**122**	Pn	**Pn**	**13 25 25.8**	**+1.4**
GYA				Pg	**Pg**	**13 25 34.8**	**-0.5**
GYA				Sn	**Sn**	**13 26 05.3**	**+1.2**
GYA				Sg	**Sg**	**13 26 17.4**	**-0.8**
GYA				smax			
	comp=N,420nm,0.8s						
GYA				smax			
	comp=E,290nm,0.8s						
ENH	**Enshi**	**5.56**	**67**	eP	**Pn**	**13 25 56.6**	**+1.1**
	comp=E,65nm,0.7s						
XAN	**Xi'an**	**7.37**	**37**	Pn	**Pn**	**13 26 20.8**	**+0.5**
XAN				Sn	**Sn**	**13 27 42.5**	**-1.9**
XAN				Sg	**Sg**	**13 28 27.6**	**-1.1**
XAN				smax			
	comp=N,150nm,1.1s						
XAN				smax			
	comp=E,72nm,1.1s						
LZH	**Lanzhou**	**7.80**	**2**	ePg	**Pg**	**13 27 02.8**	**+1.4**
LZH				Sg	**Sg**	**13 28 40.0**	**-2.5**
LZH				smax			
	comp=N,52nm,1.0s						
LZH				smax			
	comp=E,61nm,1.0s						
LZH				LR	LR		
	comp=E,1μm,5.6s						
LZH				LR	LR		
	comp=Z,1μm,7.1s						
WHN	**Wuhan**	**9.70**	**74**	P	**Pn**	**13 26 53.6**	**+1.4**
WHN				S	**Sn**	**13 28 35.8**	**-5.7**
WHN				LR	LR		
	comp=N,2μm,10.5s						
WHN				LR	LR		
	comp=E,460nm,8.0s						
WHN				LR	LR		
	comp=Z,840nm,9.7s						
CMAR	**Chiang Mai Arr**	**10.63**	**204**	Pn	**Pn**	**13 27 06.6**	**+1.6**
	comp=Z,0.4nm,0.3s,baz=15,slow=12,SNR=13						
CMAR				Lg		13 30 10.3	
	baz=18,slow=29,SNR=3.5						
CMAR				LR	LR	13 31 19.6	
	comp=Z,158nm,18.1s,baz=25,slow=38						
CMAR	**Chiang Mai Arr**	**10.63**	**204**	Pn	**Pn**	**13 27 06.6**	**+1.5**
CMAR				Lg		13 30 10.3	
CMAR				LR	LR	13 31 19.6	
HHC	**Hu-ho-hao-te**	**14.18**	**26**	eP	**Pn**	**13 27 54.6**	**+1.2**
HHC				S	**Sn**	**13 30 33.1**	**+1.9**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,130nm,5.4s						
SONM	**Songino Array**	**19.66**	**6**	P	**Pn**	**13 29 02.4**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=154,slow=8.2,SNR=5.6						
KSRS	**Korea Array**	**22.39**	**60**	P	**P**	**13 29 30.5**	**-0.7**
	comp=Z,2.6nm,0.6s,mb3.8,baz=240,slow=10,SNR=14						
KSRS				LR	LR	13 37 40.8	
	comp=Z,51nm,18.1s,MS3.0,baz=240,slow=36						
MK31	**Makanchi Array**	**24.89**	**324**	eP	**P**	**13 29 54.9**	**-0.8**
MKAR	**Makanchi Array**	**24.89**	**324**	P	**P**	**13 29 56.1**	**+0.4**
	comp=Z,2.1nm,0.7s,mb3.8,baz=119,slow=9.8,SNR=12						
PSI	**Prapat**	**25.70**	**191**	P	**P**	**13 30 04.9**	**+1.6**
	comp=Z,3.7nm,0.6s,mb4.1,baz=63,slow=4.5,SNR=3.9						
ZALV	**Zalesovo Beam**	**29.10**	**337**	P	**P**	**13 30 32.5**	**-0.9**
	comp=Z,0.6nm,0.4s,mb3.6,baz=134,slow=8.3,SNR=3.3						
DAV	**Davao City (W)**	**29.64**	**131**	LR	LR	13 42 27.2	
	comp=Z,28nm,21.3s,MS2.9,baz=223,slow=36						
BVAR	**Borovoye Array**	**34.77**	**325**	P	**P**	**13 31 22.9**	**-0.3**
	comp=Z,0.2nm,0.5s,mb3.3,baz=139,slow=11,SNR=2.6						
ABKAR	**Akbulak array**	**39.25**	**314**	P	**P**	**13 32 00.8**	**-0.5**
	comp=Z,0.7nm,0.5s,mb3.6						
TIXI	**Tiksi**	**45.62**	**11**	P	**P**	**13 32 51.7**	**-1.3**
WRAB	**Tennant Creek**	**56.41**	**145**	eP	**P**	**13 34 12.7**	**-2.0**
	comp=Z,2.4nm,0.5s,mb4.5						
WRA	**Warramunga Arr**	**56.42**	**145**	P	**P**	**13 34 13.1**	**-1.6**
	comp=Z,0.6nm,0.3s,mb4.1,baz=335,slow=8.3,SNR=16						
BRTR	**Keskin Array B**	**57.75**	**301**	P	**P**	**13 34 25.4**	**+1.3**
	comp=Z,0.4nm,0.5s,mb3.7,baz=100,slow=7.5,SNR=1.5						
AKASG	**Malin Array Be**	**58.99**	**314**	P	**P**	**13 34 31.6**	**-1.0**
	comp=Z,2.2nm,0.7s,mb4.3,baz=72,slow=6.7,SNR=7.9						
ASAR	**Alice Springs**	**59.34**	**147**	P	**P**	**13 34 33.0**	**-2.2**
	comp=Z,1.8nm,0.6s,mb4.3,baz=326,slow=6.6,SNR=12						
NOA	**NORSAR Array B**	**66.79**	**328**	P	**P**	**13 35 22.7**	**-1.6**
	comp=Z,1.0nm,0.8s,mb3.9,baz=43,slow=8.1,SNR=3.4						
NOA	**NORSAR Array B**	**66.79**	**328**	P	**P**	**13 35 22.7**	**-1.6**
STKA	**Stephens Creek**	**69.92**	**146**	P	**P**	**13 35 44.4**	**+0.3**
	comp=Z,1.4nm,0.6s,mb4.1,baz=323,slow=10,SNR=3.4						

*DDA **15** 13:32:12.5, 38°.50N×43°.61E, h7km, Md3.2*
*ISCJB **15** 13:32:14.5±0.9, 38°.57N±0°.04×43°.53E±0°.09, h7km±7km, Error ellipse: s-maj=11.4km s-min=6.4km az=168.7*
*ISK **15** 13:32:14.8, 38°.58N×43°.47E, h4km, MD2.7*
*CSEM **15** 13:32:15.3±0.3, 38°.57N×43°.47E, h2km, MD2.7, Error ellipse: s-maj=9.0km s-min=5.6km az=91.0*
ISC 15 13:32:15.0±0.9, 38°.57N±0°.04×43°.5E±0°.1, h9km±11km, n14, σ0°.99/21, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVAN	**Van**	**0.07**	**237**	*i* P	**Pg**	**13 32 15.7**	**-1.4**
TVAN				*i* S	**Sg**	**13 32 19.8**	**+1.1**
TVAN	**Van**	**0.07**	**237**	*i* P	**Pg**	**13 32 15.7**	**-1.5**
TVAN				*i* S	**Sg**	**13 32 19.8**	**+1.1**
VANB	**Van**	**0.08**	**289**	PG	**Pg**	**13 32 16.0**	**-1.3**
VANB				*e*SG	**Sg**	**13 32 19.1**	**+0.2**
VANB	**Van**	**0.08**	**289**	*i* Pg	**Pg**	**13 32 16.0**	**-1.3**
VANB				*e*Sg	**Sg**	**13 32 19.1**	**+0.3**
VANT	**Van**	**0.23**	**229**	PG	**Pg**	**13 32 19.9**	**+0.2**
CLDR	**Caldiran**	**0.67**	**30**	*e*PG	**Pg**	**13 32 28.4**	**+0.5**
CLDR	**Caldiran**	**0.67**	**30**	*e*Pg	**Pg**	**13 32 28.4**	**+0.5**
TUTA	**Tutak**	**0.98**	**328**	*i* P	**Pg**	**13 32 32.3**	**-1.7**
TUTA				*i* S	**Sg**	**13 32 48.0**	**+1.3**
TUTA	**Tutak**	**0.98**	**328**	*i* P	**Pg**	**13 32 32.3**	**-1.6**
TUTA				*i* S	**Sg**	**13 32 48.0**	**+1.3**
HAKT	**HAKKARI**	**1.02**	**170**	*i* P	**Pg**	**13 32 29.8**	**-4.9**
HAKT				*i* S	**Sg**	**13 32 47.7**	**-0.3**
AGRB	**Hanur-Agry**	**1.08**	**339**	*e*PG	**Pg**	**13 32 35.8**	**+0.1**
AGRB	**Hanur-Agry**	**1.08**	**339**	*e*Pg	**Pg**	**13 32 35.8**	**+0.1**
CUKT	**Cukurca**	**1.32**	**176**	*e*PN	**Pg**	**13 32 41.5**	**+1.0**
CUKT	**Cukurca**	**1.32**	**176**	*e*Pn	**Pg**	**13 32 41.5**	**+1.1**

*NEIC **15** 13:36:48.6±3.6, 6°.91S×129°.38E, h144km±33km, mb4.4/3, Error ellipse: s-maj=32.2km s-min=21.8km az=192.0*
*IDC **15** 13:36:50.1±5.1, 7°.07S×129°.13E, h161km±51km, mb3.5/3, mb1 3.7/6, mb1mx3.3/19, mbtmp3.5/6, Error ellipse: s-maj=41.2km s-min=21.8km az=55.0*
*ISCJB **15** 13:36:51.2±1.8, 7°.20S±0°.09×129°.35E±0°.09, h171km±17km, mb4.0/3, Error ellipse: s-maj=14.5km s-min=14.1km az=6.0*
ISC 15 13:36:50.5±1.5, 7°.12S±0°.08×129°.32E±0°.10, h151km±13km, n20, σ1°.23/30, mb4.0/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.34**	**151**	eP	**Pn**	**13 38 23.1**	**+1.2**
	20nm,0.2s						
KAKA				eS	**Sn**	**13 39 32.2**	**-1.2**
KAKA	**Kakadu**	**6.34**	**151**	eP	**Pn**	**13 38 23.1**	**+1.2**
	52nm,0.3s						
KAKA				eS	**Sn**	**13 39 32.9**	**-0.5**
KNA	**Kununurra**	**8.59**	**184**	eP	**Pn**	**13 38 53.7**	**+1.9**
	9.6nm,0.2s						
KNA				eS	**Sn**	**13 40 25.7**	**-1.7**
FITZ	**Fitzroy Crossi**	**11.49**	**198**	eP	**Pn**	**13 39 30.7**	**+0.6**
	19nm,1.5s						
FITZ				eS	**Sn**	**13 41 32.4**	**-4.8**
FITZ	**Fitzroy Crossi**	**11.49**	**198**	P	**Pn**	**13 39 30.6**	**+0.5**
	0.7nm,0.3s,baz=33,slow=13,SNR=28						
FITZ				S	**Sn**	**13 41 34.3**	**-2.9**
	2.0nm,0.3s,baz=98,slow=23,SNR=9.5						
FITZ	**Fitzroy Crossi**	**11.49**	**198**	eP	**Pn**	**13 39 30.6**	**+0.5**
FITZ				S	**Sn**	**13 41 34.3**	**-2.9**
WRAB	**Tennant Creek**	**13.64**	**160**	eP	**Pn**	**13 39 56.4**	**-1.4**
	12nm,0.7s						
WRA	**Warramunga Arr**	**13.64**	**160**	P	**Pn**	**13 39 57.2**	**-0.7**
	0.4nm,0.3s,baz=340,slow=12,SNR=22						
WRA				S	**Sn**	**13 42 25.0**	**-4.0**
	1.5nm,0.3s,baz=332,slow=22,SNR=8.8						
COEN	**Coen**	**15.21**	**118**	eP	**Pn**	**13 40 17.3**	**-0.3**
COEN				eS	**S**	**13 42 52.4**	**-15**
MBWA	**Marble Bar**	**16.75**	**213**	eP	**Pn**	**13 40 38.6**	**+2.2**
ASAR	**Alice Springs**	**17.03**	**166**	P	**Pn**	**13 40 41.1**	**+1.4**
	1.3nm,0.3s,baz=345,slow=9.3,SNR=78						
ASAR				S	**S**	**13 43 49.0**	**+0.2**
	0.4nm,0.3s,baz=346,slow=24,SNR=6.8						
CTA	**Charters Tower**	**20.87**	**130**	P	**P**	**13 41 21.3**	**+0.5**
	4.1nm,0.7s,baz=292,slow=12,SNR=5.0						
CTAO	**Charters Tower**	**20.87**	**130**	eP	**P**	**13 41 21.1**	**+0.3**
	3.3nm,0.7s						
QLP	**Quilpie**	**24.00**	**145**	eP	**P**	**13 41 51.7**	**+0.4**
STKA	**Stephens Creek**	**27.16**	**157**	eP	**P**	**13 42 20.0**	**+0.3**
	2.7nm,0.8s,mb3.9						
STKA	**Stephens Creek**	**27.16**	**157**	P	**P**	**13 42 20.0**	**+0.3**
	2.3nm,0.4s,mb4.2,baz=340,slow=9.2,SNR=16						
STKA	**Stephens Creek**	**27.16**	**157**	eP	**P**	**13 42 19.4**	**-0.4**
CMSA	**Cobar Meteorol**	**28.70**	**150**	eP	**P**	**13 42 34.3**	**+0.8**
HHC	**Hu-ho-hao-te**	**50.45**	**343**	eP	**P**	**13 45 32.3**	**-0.5**
HHC				S	**S**	**13 52 34.0**	**-0.8**
HHC				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.7						
HHC				pmax	pmax		
	comp=Z,85nm,6.9s						
MKAR	**Makanchi Array**	**67.96**	**327**	P	**P**	**13 47 30.5**	**-2.5**
	comp=Z,0.4nm,0.6s,mb3.4,baz=127,slow=8.1,SNR=5.5						

WEL 15 13:49:26.5±0.7, 36°.53S×178°.21E, h12km, ML3.6/4, Error ellipse: s-maj=4.6km s-min=4.4km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.04**	**176**	P*	Pb	13 49 45.2	-1.3
PUZ	**Puketiti**	**1.55**	**179**	PN	Pn	13 49 52.7	-1.1
PUZ				SN	Sn	13 50 12.8	-1.0
PUZ				SN	Sn	13 50 12.9	-0.9
OPRZ	**Ohinepanea**	**1.87**	**225**	P*	Pb	13 49 56.9	-3.6
MWZ	**Matawai**	**1.89**	**197**	P*	Pb	13 49 57.2	-3.6
MWZ				S*	Sb	13 50 19.6	-4.8
URZ	**Urewera**	**1.94**	**206**	P*	Pb	13 49 57.8	-4.0
URZ				S*	Sb	13 50 20.4	-5.5
NMHZ	**Naumai**	**2.80**	**203**	PN	Pn	13 50 09.4	-1.6
KAHZ	**Kahuranaki**	**3.43**	**197**	PN	Pn	13 50 16.4	-3.3
PXZ	**Pawanui**	**3.66**	**196**	PN	Pn	13 50 17.9	-4.9
BFZ	**Birch Farm**	**4.43**	**200**	PN	Pn	13 50 28.0	-5.4
MRZ	**Mangatainoka R**	**4.62**	**206**	PN	Pn	13 50 30.0	-6.0

IDC 15 13:59:08.7±11.0, 6°.36S×149°.44E, h279km±91km, mb3.1/3, mb1 3.3/4, mb1mx2.9/16, mbtmp3.1/4, MS3.3/1, Ms1 3.2/1, ms1mx2.3/12, Error ellipse: s-maj=92.1km s-min=30.3km az=91.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.94**	**226**	P	P	14 03 19.3	-1.0
	0.4nm,0.3s,baz=50,slow=10,SNR=26						
WRA				PcP	PcP	14 07 23.9	-0.5
	0.1nm,0.3s,baz=44,slow=2.1,SNR=5.9						
ASAR	**Alice Springs**	**22.79**	**219**	P	P	14 03 48.1	+0.5
	1.3nm,0.8s,baz=54,slow=8.9,SNR=19						
FITZ	**Fitzroy Crossi**	**25.98**	**241**	P	P	14 04 17.3	+0.8
	1.0nm,0.4s,baz=41,slow=8.4,SNR=9.7						
STKA	**Stephens Creek**	**26.42**	**195**	LR	LR	14 14 35.8	
	comp=Z,60nm,19.4s,baz=24,slow=35						
SONM	**Songino Array**	**65.92**	**330**	P	P	14 09 25.4	+0.5
	0.3nm,0.5s,baz=145,slow=5.3,SNR=1.9						
TORD	**Torodi Ar. Bea**	**147.53**	**284**	PKPbc	PKPbc	14 18 20.1	-1.0
	3.1nm,0.7s,baz=52,slow=2.7,SNR=15						

*NEIC **15** 13:59:49.8, 35°.35N×22°.48E, h37km, MD3.6(ATH), After ATH.*
*CSEM **15** 13:59:49.8, 35°.35N×22°.48E, h37km, MD3.6, After ATH*
ATH 15 13:59:49.8, 35°.35N×22°.48E, h37km±1km, MD3.6/4, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**1.03**	**26**	*e*Pn	Pn	14 00 09.4	+1.6
KYTH	**Kithira**	**1.03**	**26**	*e*Pn	Pn	14 00 09.4	+1.6
KYTH	**Kithira**	**1.03**	**26**	*e*Pn	Pn	14 00 09.4	+1.6
VAM	**Vamos**	**1.41**	**87**	*e*Pn	Pn	14 00 14.9	+2.0
VAM	**Vamos**	**1.41**	**87**	*e*PN	Pn	14 00 14.9	+2.0
VAM	**Vamos**	**1.41**	**87**	*e*Pn	Pn	14 00 14.9	+2.0
VLI	**Veliai**	**1.42**	**15**	*e*Pb	Pn	14 00 14.4	+1.4
VLI				*e*Sn	Sn	14 00 33.2	+2.8
VLI	**Veliai**	**1.42**	**15**	*e*PB	Pn	14 00 14.4	+1.4
VLI				*e*SN	Sn	14 00 33.2	+2.8
VLI	**Veliai**	**1.42**	**15**	*e*Pb	Pn	14 00 14.4	+1.4
VLI				*e*Sn	Sn	14 00 33.2	+2.8
PYL	**PYLOS**	**1.65**	**339**	*e*PN	Pn	14 00 18.2	+1.9
PYL	**PYLOS**	**1.65**	**339**	*e*Pn	Pn	14 00 18.2	+1.9
ITM	**Ithomi**	**1.88**	**346**	*e*Pn	Pn	14 00 21.4	+2.0
ITM	**Ithomi**	**1.88**	**346**	*e*PN	Pn	14 00 21.4	+2.0
ITM	**Ithomi**	**1.88**	**346**	*e*Pn	Pn	14 00 21.4	+2.0
DID	**Didima**	**2.24**	**16**	*e*PN	Pn	14 00 26.6	+2.3
DID	**Didima**	**2.24**	**16**	*e*Pn	Pn	14 00 25.0	+0.7
GUR	**Goura**	**2.58**	**358**	*e*PN	Pn	14 00 31.2	+2.1
GUR	**Goura**	**2.58**	**358**	*e*Pn	Pn	14 00 31.2	+2.1

*ISCJB **15** 14:00:27.7±1.4, 44°.01N±0°.07×86°.55E±0°.06, h3km±9km, mb3.5/4, Error ellipse: s-maj=12.5km s-min=6.4km az=24.9*
*IDC **15** 14:00:29.1±1.0, 43°.55N×86°.48E, h0km, mb3.5/4, mb1 3.6/7, mb1mx3.4/26, mbtmp3.5/7, ML3.5/3, Error ellipse: s-maj=41.8km s-min=13.8km az=45.0*
*BJI **15** 14:00:32.0, 43°.90N×86°.84E, h12km, mB4.2/2, mb4.2/2, ML3.5/10*
*NNC **15** 14:00:34.7±1.7, 44°.00N×86°.58E, h31km±12km, mb3.8, mpv3.5, Error ellipse: s-maj=13.3km s-min=11.8km az=92.0*
*NEIC **15** 14:00:34.8±2.5, 43°.71N×86°.41E, h41km±24km, mb4.2/1, Error ellipse: s-maj=35.3km s-min=13.1km az=194.0*
ISC 15 14:00:30.9±1.3, 43°.99N±0°.06×86°.69E±0°.06, h13km±8km, n21, σ1°.02/31, mb3.5/4, 5C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**0.74**	**103**	⇑*i*Pg	**Pg**	**14 00 44.5**	**-0.8**
WMQ				Sg	**Sg**	**14 00 54.5**	**-0.6**
WMQ				smax			
	comp=N,400nm,0.3s						
WMQ				smax			
	comp=E,480nm,0.3s						
MK31	**Makanchi Array**	**4.18**	**314**	Pn	**Pn**	**14 01 38.1**	**+3.8**
	comp=E,1.4nm,0.2s,baz=134,slow=14,SNR=169						
MK31				⇓Sn	**Sn**	**14 02 28.4**	**+5.4**
	comp=E,5.8nm,0.3s,baz=209,slow=7.1,SNR=6.2						
MK31				⇑Lg		14 02 46.6	
	comp=E,59nm,0.8s,baz=130,slow=26,SNR=10						
MK31	**Makanchi Array**	**4.18**	**314**	*e*Pn	**Pn**	**14 01 38.3**	**+4.0**
MK31				*e*Sn	**Sn**	**14 02 28.6**	**+5.7**
MKAR	**Makanchi Array**	**4.18**	**314**	Pn	**Pn**	**14 01 38.2**	**+3.9**
	comp=E,4.0nm,0.3s,baz=132,slow=14,SNR=54						
MKAR				Sn	**Sn**	**14 02 29.2**	**+6.2**
	comp=E,8.1nm,0.3s,baz=130,slow=18,SNR=8.3						
MKAR				Lg		14 02 48.2	
	comp=E,15nm,0.3s,baz=132

comp=Z,0.8nm,0.3s,baz=82,slow=8.6,SNR=3.1
YKA Yellowknife Ar 72.50 10 P **P 14 11 58.9 +2.2**
comp=Z,0.1nm,0.3s,mb3.2,baz=335,slow=5.9,SNR=3.2
WRAB Tennant Creek 77.12 134 *e*P **P 14 12 23.7 -0.4**
comp=Z,2.3nm,0.9s,mb4.1
WRA Warramunga Arr 77.13 135 P **P 14 12 23.5 -0.6**
baz=338,slow=5.1
TORD Torodi Ar. Bea 77.42 276 P **P 14 12 26.0 0.0**
comp=Z,0.2nm,0.5s,mb3.3,baz=39,slow=4.6,SNR=6.5
ASAR Alice Springs 80.02 137 P **P 14 12 39.2 -0.7**
comp=Z,0.3nm,0.7s,mb3.3,baz=326,slow=5.2,SNR=7.5

ISCJB ***15*** *14:06:53.5±1.5, 18°.0S±0°.2×178°.6W±0°.2, h573km±15km, mb3.6/6, Error ellipse: s-maj=31.0km s-min=28.4km az=149.7*
NEIC ***15*** *14:06:54.0±1.4, 18°.04S×178°.56W, h568km±13km, mb3.4/1, Error ellipse: s-maj=27.3km s-min=22.9km az=111.0*
IDC ***15*** *14:06:54.6±6.8, 17°.89S×178°.59W, h573km±75km, mb3.1/6, mb1 3.3/6, mb1mx3.0/18, mbtmp3.1/6, Error ellipse: s-maj=43.0km s-min=25.3km az=30.0*
ISC 15 14:06:54.5±1.5, 17°.9S±0°.2×178°.6W±0°.2, h571km±15km, n14, σ0°56/12, mb3.6/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.16**	**272**	*e*P	**P**	**14 08 12.3**	**+0.1**
OUZ	**Omahuta**	**18.59**	**200**	*e*P	**P**	**14 10 32.8**	**-3.9**
RPZ	**Rata Peaks**	**27.18**	**197**	P	**P**	**14 11 52.7**	**-0.3**
4.3nm,0.8s,mb4.2,baz=346,slow=4.2,SNR=2.3							
STKA	**Stephens Creek**	**38.45**	**241**	P	**P**	**14 13 29.2**	**+0.9**
1.5nm,0.4s,mb3.8,baz=96,slow=11,SNR=7.7							
STKA	**Stephens Creek**	**38.45**	**241**	*e*P	**P**	**14 13 29.2**	**+0.9**
WRAB	**Tennant Creek**	**44.42**	**260**	*e*P	**P**	**14 14 14.9**	**-0.6**
ASAR	**Alice Springs**	**44.59**	**254**	P	**P**	**14 14 16.8**	**-0.1**
7.3nm,0.6s,mb4.4,baz=88,slow=8.1,SNR=250							
ASAR				PcP	PcP	14 15 46.9	-0.4
0.5nm,0.5s,baz=105,slow=3.8,SNR=8.6							
FITZ	**Fitzroy Crossi**	**52.82**	**261**	P	**P**	**14 15 17.7**	**0.0**
0.4nm,0.3s,mb3.2,baz=117,slow=4.5,SNR=7.6							
QSPA	**South Pole Qui**	**72.16**	**180**	P	**P**	**14 17 22.0**	**+0.6**
1.1nm,0.8s,mb3.4,baz=35,slow=3.2,SNR=7.8							
QSPA	**South Pole Qui**	**72.16**	**180**	*e*P	**P**	**14 17 21.9**	**+0.5**
0.8nm,0.7s,mb3.3							
TXAR	**Lajitas Array**	**86.17**	**58**	P	**P**	**14 18 36.0**	**-0.1**
0.1nm,0.3s,mb2.9,baz=233,slow=5.6,SNR=4.6							
TXAR	**Lajitas Array**	**86.17**	**58**	P	**P**	**14 18 36.0**	**-0.1**
BR131	**Keskin Array S**	**144.62**	**315**	*e*PKPbc	PKPdf	14 25 27.6	+0.8
BRTR	**Keskin Array B**	**144.62**	**315**	PKP	PKPdf	14 25 26.3	-0.5
0.6nm,0.5s,baz=114,slow=1.5,SNR=5.2							

ISCJB ***15*** *14:19:22.4±1.0, 49°.24N±0°.04×156°.15E±0°.07, h22km±7km, mb4.5/84, MS3.9/30, Error ellipse: s-maj=9.7km s-min=3.7km az=42.0*
KRSC ***15*** *14:19:23.2±1.1, 49°.25N×157°.12E, h10km±10km, ML4.9*
BJI ***15*** *14:19:23.6, 49°.21N×156°.36E, h42km, mB4.7/18, mb4.6/31, Ms4.3/22, Ms7 4.2/22*
MOS ***15*** *14:19:25.9±1.2, 49°.34N×156°.11E, h49km, mb4.9/33, Error ellipse: s-maj=9.6km s-min=5.0km az=88.1*
NEIC ***15*** *14:19:25.3±1.6, 49°.25N×156°.15E, h32km±11km, mb4.6/36, MS4.0/6, Error ellipse: s-maj=9.0km s-min=4.9km az=138.0*
IDC ***15*** *14:19:26.8±0.5, 49°.27N×156°.11E, h45km±4km, mb3.9/20, mb1 4.1/23, mb1mx4.0/28, mbtmp3.9/23, MS3.7/13, Ms1 3.7/13, ms1mx3.3/35, Error ellipse: s-maj=15.4km s-min=10.1km az=148.0*
SZGRF ***15*** *14:19:34.2, 50°.70N×156°.33E, h33km, mb4.7, MS4.0, Kuril Islands, Russia*
ISC 15 14:19:26.0±0.6, 49°.25N±0°.05×156°.13E±0°.07, h35km±4km, h46km±1.2km: pP-P, n223, σ0°97/235, mb4.5/84, MS3.9/30, 20C-6D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**1.67**	**347**	*i*P	**Pn**	**14 19 55.1**	**+2.4**
ALID				*i*S	**Sn**	**14 20 18.5**	**+5.7**
MIPR	**Malaya Ipel'ka**	**3.06**	**7**	*e*P	**Pn**	**14 20 12.9**	**+1.1**
MIPR				*e*S	**Sn**	**14 20 49.0**	**+1.9**
GRL	**Gorelyy**	**3.53**	**20**	*i*P	**Pn**	**14 20 18.8**	**+0.5**
GRL				*i*S	**Sn**	**14 20 58.8**	**0.0**
PETK	**Petropavlovsk-**	**3.99**	**14**	P	**Pn**	**14 20 25.7**	**+1.1**
6.7nm,0.3s,baz=172,slow=13,SNR=296							
PETK				LR	LR	14 22 11.1	
comp=Z,419nm,19.2s,baz=252,slow=41							
PET	**Petropavlovsk**	**4.10**	**22⇑**	*i*PN	**Pn**	**14 20 25.7**	**-0.4**
PET				*e*S	**Sn**	**14 21 12.5**	**-0.3**
PET				pmax	pmax		
comp=Z,12nm,0.6s							
PET				pmax	pmax		
comp=Z,78nm,0.6s							
PET				smax			
comp=N,50nm,0.7s							
PET				smax			
comp=E,60nm,0.7s							
PET				MLR	MLR		
comp=Z,505nm,17.0s							
PET	**Petropavlovsk**	**4.10**	**22**	*e*P	**Pn**	**14 20 25.7**	**-0.4**
PET				*i*S	**Sn**	**14 21 11.2**	**-1.6**
PET	**Petropavlovsk**	**4.10**	**22**	*e*P	**Pn**	**14 20 25.7**	**-0.5**
SDLR	**Sedlovina**	**4.39**	**22**	*i*P	**Pn**	**14 20 29.9**	**-0.2**
SDLR				*i*S	**Sn**	**14 21 17.3**	**-2.7**
SPN	**Mys Shipunski**	**4.57**	**31**	*e*P	**Pn**	**14 20 31.2**	**-1.3**
SPN				*i*S	**Sn**	**14 21 20.5**	**-3.8**
GNL	**Ganaly**	**4.60**	**14**	*e*P	**Pn**	**14 20 34.4**	**+1.5**
KII	**Karymskiy**	**5.22**	**22**	P	**Pn**	**14 20 42.5**	**+1.0**
KII				*i*S	**Sn**	**14 21 41.2**	**+0.8**
MKZ	**Mys Kozlova**	**6.34**	**31**	*e*P	**Pn**	**14 20 54.5**	**-2.4**
MKZ				*i*S	**Sn**	**14 22 02.1**	**-6.0**
KUR	**Kuril'sk**	**6.91**	**238**	*e*PN	**Pn**	**14 21 06.0**	**+1.3**
KUR				pmax	pmax		
comp=Z,90nm,0.7s							
KMNR	**Kamenistaya**	**6.98**	**19**	P	**Pn**	**14 21 05.7**	**0.0**
SRDR	**Sredinnyy**	**7.41**	**16**	P	**Pn**	**14 21 12.3**	**+0.8**
KBTR	**Krutoberegovo**	**8.06**	**28**	*e*P	**Pn**	**14 21 18.8**	**-1.7**
KBTR				*i*S	**Sn**	**14 22 45.5**	**-4.8**
YUK	**Yuzh-Kuril'sk**	**8.78**	**237⇑**	*i*PN	**Pn**	**14 21 30.0**	**-0.3**
YUK				*i*S	**Sn**	**14 23 24.6**	**+17**
YUK				pmax	pmax		
comp=N,90nm,0.5s							
YUK				pmax	pmax		
comp=Z,120nm,0.5s							
YUK				pmax	pmax		
comp=E,30nm,0.3s							
YUK				pmax	pmax		
comp=Z,100nm,0.8s							
YUK				smax			
comp=N,300nm,1.5s							
YUK				smax			
comp=E,200nm,1.5s							
YUK				MLR	MLR		
comp=N,100nm,12.0s							
YUK				MLR	MLR		
comp=E,300nm,12.0s							
YUK				MLR	MLR		
comp=Z,300nm,12.0s							
YSS	**Yuzh-Sakhalins**	**9.24**	**261**	*e*PN	**Pn**	**14 21 40.2**	**+3.5**
YSS				MLR	MLR		
comp=Z,500nm,14.0s							
YSS				MLR	MLR		
comp=E,500nm,16.0s							
YSS	**Yuzh-Sakhalins**	**9.24**	**261**	*e*P	**Pn**	**14 21 38.4**	**+1.8**
comp=E,13nm,0.6s							
ASAJ	**Asahikawa**	**10.62**	**246**	P	**Pn**	**14 21 58.0**	**+2.5**
comp=E,4.7nm,0.3s,baz=75,slow=15,SNR=39							
ASAJ				LR	LR	14 25 52.0	
comp=E,346nm,18.6s,baz=11,slow=36							
ASAJ	**Asahikawa**	**10.62**	**246**	PN	**Pn**	**14 21 58.0**	**+2.5**
ASAJ				pmax	pmax		
comp=Z,5.0nm,0.3s							
ASAJ				MLR	MLR		
comp=Z,346nm,18.7s							
ERM	**Erimo**	**11.60**	**236**	*e*PN	**Pn**	**14 22 08.1**	**-0.8**
ERM				pmax	pmax		
comp=Z,14nm,0.5s							
ERM	**Erimo**	**11.60**	**236**	*e*P	**Pn**	**14 22 08.1**	**-0.9**
comp=Z,14nm,0.5s							
SEY	**Seymchan**	**13.87**	**353**	*e*P	**Pn**	**14 22 39.4**	**-0.5**
HABR	**Khabarovsk**	**13.90**	**275**	P	**Pn**	**14 22 37.9**	**-2.4**
KLR	**Kul'dur**	**15.91**	**279**	*e*P	**Pn**	**14 23 06.8**	**-0.2**
KLR				MLR	MLR		
comp=Z,2μm,12.0s							
MAJO	**Matsushiro**	**18.21**	**232**	*e*P	**Pn**	**14 23 34.4**	**-1.4**
MAJO				pmax	pmax		
comp=Z,13nm,0.4s							
MAJO	**Matsushiro**	**18.21**	**232**	*e*P	**Pn**	**14 23 34.4**	**-1.4**
comp=Z,13nm,0.4s							
MAT	**Matsushiro**	**18.21**	**232**	P	**Pn**	**14 23 34.8**	**-1.0**
MJAR	**Matsushiro Arr**	**18.21**	**232**	P	**Pn**	**14 23 36.5**	**+0.7**
comp=Z,0.2nm,0.3s,baz=33,slow=9.4,SNR=6.7							
MJAR				LR	LR	14 31 31.5	
comp=Z,168nm,19.3s,baz=40,slow=40							
MJAR	**Matsushiro Arr**	**18.21**	**232**	P	**Pn**	**14 23 36.5**	**+0.7**
MJAR				LR	LR	14 31 31.5	
MDJ	**Mudanjiang**	**18.66**	**266**	P	**Pn**	**14 23 39.5**	**-1.8**
MDJ				pP	pP	14 23 49.6	-0.3
MDJ				sP	sP	14 23 54.9	+0.5
MDJ				S	**S**	**14 27 06.8**	**-4.5**
MDJ				sS	sS	14 27 26.4	+0.5
MDJ				ScP	ScP	14 31 39.3	-1.2
MDJ				PcS	PcS	14 31 44.0	-0.6
YAK	**Yakutsk**	**19.48**	**321**	P	**Pn**	**14 23 48.3**	**-2.6**
YAK				pmax	pmax		
comp=Z,23nm,1.2s							
YAK				MLR	MLR		
comp=Z,242nm,16.8s							
YAK	**Yakutsk**	**19.48**	**321**	P	**Pn**	**14 23 48.7**	**-2.3**
comp=Z,22nm,0.5s							
BILL	**Bilibino**	**19.52**	**11⇑**	*e*P	**Pn**	**14 23 48.6**	**-2.8**
BILL				*e*S	**S**	**14 27 23.6**	**-4.6**
BILL				pmax	pmax		
comp=Z,11nm,1.0s							
BILL				MLR	MLR		
comp=Z,300nm,17.0s							
BILL	**Bilibino**	**19.52**	**11**	*e*P	**Pn**	**14 23 48.0**	**-3.3**
comp=Z,5.9nm,0.6s							
CLNS	**Chul'man**	**20.12**	**304**	*e*P	**P**	**14 23 59.2**	**+2.7**
CLNS				*e*		14 24 17.4	
CLNS				*e*SS		14 28 03.6	
CLNS				*e*		14 28 09.6	
CLNS				pmax	pmax		
comp=Z,18nm,0.8s							
CLNS				pmax	pmax		
comp=E,14nm,0.8s							
CLNS				pmax	pmax		
comp=N,9.0nm,0.9s							
CLNS				pmax	pmax		
comp=Z,12nm,1.1s							
CLNS				pmax	pmax		
comp=E,8.0nm,0.8s							
CLNS				pmax	pmax		
comp=N,8.0nm,1.1s							
CLNS				MLR	MLR		
comp=Z,349nm,13.0s,MS3.9							
CLNS				MLR	MLR		
comp=N,102nm,14.0s,MS3.8							
CLNS				MLR	MLR		
comp=E,240nm,13.0s,MS3.8							
CN2	**Changchun**	**21.71**	**267**	*e*P	**P**	**14 24 13.8**	**0.0**
CN2				*e*S	**S**	**14 28 05.3**	**-6.6**
CN2				pmax	pmax		
comp=Z,10.0nm,0.5s,mb4.5							
CN2				LR	LR		
comp=N,200nm,14.0s,MS3.8							
CN2				LR	LR		
comp=E,200nm,14.0s,MS3.8							
CN2				LR	LR		
comp=Z,200nm,14.0s,MS3.7							
KSRS	**Korea Array**	**23.51**	**251**	P	**P**	**14 24 33.1**	**+0.4**
comp=Z,5.4nm,1.0s,mb4.0,baz=51,slow=9.6,SNR=16							
KSRS				pP		14 24 45.6	
comp=Z,2.8nm,0.6s,baz=46,slow=10,SNR=5.4							
KSRS	**Korea Array**	**23.51**	**251**	P	**P**	**14 24 33.2**	**+0.4**
KSRS				*PP		14 24 45.6	
KSRS				pmax	pmax		
comp=Z,5.0nm,1.0s,mb3.9							
KSRS				pmax	pmax		
comp=Z,3.0nm,0.6s,mb3.9							
TIXI	**Tiksi**	**25.71**	**340**	*e*P	**P**	**14 24 49.8**	**-2.7**
TIXI				pmax	pmax		
comp=Z,11nm,0.8s,mb4.4							
TIXI				MLR	MLR		
comp=Z,262nm,16.0s,MS3.9							
COLD	**Coldfoot**	**32.12**	**36**	*e*P	**P**	**14 25 48.8**	**-0.7**
comp=Z,2.9nm,0.8s,mb4.2							
HHC	**Hu-ho-hao-te**	**32.19**	**272**	*e*P	**P**	**14 25 49.4**	**-0.9**
HHC				pP	pP	14 26 00.8	+0.4
HHC				sP	sP	14 26 06.3	+1.6
HHC				PP	PP	14 26 56.9	-6.4
HHC				PcP	PcP	14 28 38.0	-0.4
HHC				S	**S**	**14 30 57.4**	**-3.3**
HHC				sS	sS	14 31 16.4	-1.0
HHC				ScP	ScP	14 32 17.0	-2.1
HHC				PcS	PcS	14 32 21.6	-1.6
HHC				SS	SS	14 32 52.3	-27
HHC				ScS	ScS	14 36 13.5	-4.4
HHC				pmax	pmax		
comp=Z,15nm,0.6s,mb5.0							
HHC				pmax	pmax		
comp=Z,72nm,5.5s							
HHC				LR	LR		
comp=N,180nm,11.6s,MS4.2							
HHC				LR	LR		
comp=E,190nm,11.8s,MS4.2							
HHC				LR	LR		
comp=Z,220nm,11.7s,MS4.1							
SONM	**Songino Array**	**32.48**	**287**	P	**P**	**14 25 52.2**	**-0.7**
comp=Z,0.3nm,0.3s,mb3.6,baz=52,slow=9.3,SNR=3.2							
SONM				LR	LR	14 40 24.1	
comp=Z,202nm,18.8s,MS3.8,baz=285,slow=39							
NJ2	**Nanjing**	**32.68**	**252**	*e*P	**P**	**14 25 56.6**	**+1.9**
NJ2				pmax	pmax		
comp=Z,20nm,0.5s,mb5.3							
TLY	**Talaya**	**32.91**	**295**	*e*P	**P**	**14 25 56.4**	**-0.1**
TLY				pmax	pmax		
comp=Z,8.0nm,1.0s,mb4.6							
TLY				MLR	MLR		
comp=Z,118nm,13.0s,MS3.8							
COLA	**College**	**32.92**	**41**	*e*P	**P**	**14 25 55.9**	**-0.6**
COLA				pmax	pmax		
comp=Z,5.0nm,0.7s,mb4.5							
COLA	**College**	**32.92**	**41**	*e*P	**P**	**14 25 55.9**	**-0.7**
comp=Z,5.1nm,0.7s,mb4.6							
EGAK	**Eagle**	**35.78**	**41**	*e*P	**P**	**14 26 19.7**	**-1.6**
comp=Z,4.8nm,0.7s,mb4.5							
INK	**Inuvik**	**38.45**	**34**	P	**P**	**14 26 44.1**	**+0.3**
comp=Z,4.1nm,0.9s,mb4.2,baz=311,slow=4.8,SNR=9.3							
INK				pP	pP	14 26 55.9	+1.8
comp=Z,4.0nm,0.7s,baz=269,slow=8.6,SNR=5.9							
INK	**Inuvik**	**38.45**	**34**	*e*P	**P**	**14 26 43.8**	**-0.1**
INK				pmax	pmax		
comp=Z,4.0nm,0.8s							
INK	**Inuvik**	**38.45**	**34**	*e*P	**P**	**14 26 43.8**	**0.0**
comp=Z,4.1nm,0.8s,mb4.2							
LZH	**Lanzhou**	**39.86**	**271**	*e*P	**P**	**14 26 56.3**	**+0.3**
LZH				pP	pP	14 27 08.8	+2.6
LZH				sP	sP	14 27 14.1	+3.7
LZH				pmax	pmax		
comp=Z,14nm,1.0s,mb4.7							
GTA	**Gaotai**	**40.61**	**278**	*e*P	**P**	**14 27 02.6**	**+0.4**
GTA				pP	pP	14 27 14.8	+2.4
GTA				sP	sP	14 27 19.9	+3.3
GTA				PP	PP	14 28 41.0	+5.1
GTA				S	**S**	**14 33 10.3**	**+1.1**
GTA				sS	sS	14 33 30.1	+3.9
GTA				SS	SS	14 36 07.9	-1.9
GTA				pmax	pmax		
comp=Z,4.0nm,0.8s,mb4.1							
GTA				pmax	pmax		
comp=Z,54nm,3.8s							
GTA				LR	LR		
comp=N,130nm,14.6s,MS4.2							
GTA				LR	LR		
comp=E,210nm,15.5s,MS4.2							
GTA				LR	LR		
comp=Z,310nm,16.0s,MS4.3							
ZALV	**Zalesovo Beam**	**42.83**	**305**	P	**P**	**14 27 18.8**	**-1.3**
comp=Z,2.0nm,0.7s,mb4.0,baz=64,slow=7.4,SNR=8.6							
ZALV				PcP	PcP	14 29 09.3	-1.4
comp=Z,1.0nm,0.7s,baz=96,slow=6.0,SNR=4.2							
ZALV				LR	LR	14 47 05.0	
comp=Z,52nm,18.7s,MS3.5,baz=72,slow=39							
ZALV	**Zalesovo Beam**	**42.83**	**305**	P	**P**	**14 27 18.8**	**-1.3**
ZALV						14 29 09.3	
CD2	**Chengdu**	**43.12**	**265**	P	**P**	**14 27 22.8**	**0.0**
CD2				pP	pP	14 27 35.0	+1.9
CD2				sP	sP	14 27 40.4	+3.1
CD2				PP	PP	14 29 05.4	+2.3
CD2				S	**S**	**14 33 44.5**	**-2.0**
CD2				sS	sS	14 34 05.3	+1.8
CD2				SS	SS	14 36 51.0	-8.6
CD2				pmax	pmax		
comp=Z,10.0nm,0.9s,mb4.5							
CD2				pmax	pmax		
comp=Z,110nm,4.5s							
CD2				LR	LR		
comp=N,300nm,8.3s							
CD2				LR	LR		
comp=Z,160nm,5.9s							
GYA	**Guiyang**	**44.23**	**258**	P	**P**	**14 27 31.8**	**0.0**
GYA				pP	pP	14 27 43.8	+1.7
GYA				sP	sP	14 27 50.0	+3.7
GYA				PcP	PcP	14 29 17.3	+1.4
GYA				PP	PP	14 29 18.3	+3.2
GYA				ScP	ScP	14 33 03.8	-1.1
GYA				S	**S**	**14 34 02.9**	**0.0**
GYA				sS	sS	14 34 22.1	+2.2
GYA				SS	SS	14 37 13.0	-8.4
GYA				pmax	pmax		
comp=Z,10.0nm,1.0s,mb4.5							
GYA				pmax	pmax		
comp=Z,80nm,5.2s							
GYA				LR	LR		
comp=N,460nm,18.0s,MS4.6							
GYA				LR	LR		
comp=E,430nm,19.2s,MS4.6							
GYA				LR	LR		
comp=Z,440nm,18.9s,MS4.4							
WMQ	**Urumqi**	**45.93**	**290**	*e*P	**P**	**14 27 46.8**	**+1.7**
WMQ				pP	pP	14 27 59.1	+3.6
WMQ				sP	sP	14 28 04.4	+4.8
WMQ				PP	PP	14 29 35.0	+2.2
WMQ				pmax	pmax		
comp=Z,7.0nm,0.6s,mb4.8							
WMQ				pmax	pmax		
comp=Z,190nm,5.4s							
WMQ				LR	LR		
comp=N,51nm,16.0s,MS3.7							
WMQ				LR	LR		
comp=E,48nm,16.0s,MS3.7							
WMQ				LR	LR		
comp=Z,78nm,18.5s,MS3.7							
MK31	**Makanchi Array**	**47.61**	**297**	*e*P	**P**	**14 27 56.6**	**-1.6**
MKAR	**Makanchi Array**	**47.61**	**297**	P	**P**	**14 27 57.3**	**-0.8**
comp=Z,3.4nm,0.9s,mb4.4,baz=64,slow=7.4,SNR=30							
MKAR				PcP	PcP	14 29 30.0	+2.7
comp=Z,0.8nm,0.9s,baz=40,slow=7.6,SNR=2.5							
MKAR				LR	LR	14 49 30.6	
comp=Z,218nm,18.7s,MS4.2,baz=63,slow=38							
MKAR	**Makanchi Array**	**47.61**	**297**	*ce*P	**P**	**14 27 57.5**	**-0.7**
MKAR				pmax	pmax		
comp=Z,3.0nm,0.9s							
QIZ	**Qiongzhong**	**47.68**	**248**	P	**P**	**14 27 55.3**	**-3.7**
QIZ				S	**S**	**14 34 49.0**	**-3.6**
QIZ				LR	LR		
comp=E,59nm,14.0s							
QIZ				LR	LR		
comp=Z,100nm,13.7s,MS4.0							
KMI	**Kunming**	**47.69**	**260**	P	**P**	**14 27 59.8**	**+0.8**
KMI				pP	pP	14 28 11.1	+1.7
KMI				sP	sP	14 28 16.3	+2.7
KMI				PP	PP	14 29 51.3	+0.6
KMI				S	**S**	**14 34 51.4**	**-1.1**
KMI				sS	sS	14 35 12.0	+2.3
KMI				SS	SS	14 38 14.3	-6.5
KMI				pmax	pmax		
comp=Z,8.0nm,1.1s,mb4.7							
KMI				pmax	pmax		
comp=Z,100nm,4.8s							
KMI				LR	LR		
comp=N,110nm,15.4s,MS4.0							
KMI				LR	LR		
comp=E,91nm,19.7s,MS4.0							
KMI				LR	LR		
comp=Z,85nm,14.9s,MS3.8							
KURK	**Kurchatov**	**47.69**	**303**	*d*iP	**P**	**14 27 58.1**	**-0.6**
KURK				pmax	pmax		
comp=Z,12nm,0.8s,mb5.0							
KURK	**Kurchatov**	**47.69**	**303**	*e*P	**P**	**14 27 57.9**	**-0.8**
comp=Z,12nm,0.9s,mb4.9							
YKA	**Yellowknife Ar**	**47.71**	**39**	P	**P**	**14 27 58.5**	**-0.2**
comp=Z,1.9nm,0.9s,mb4.1,baz=297,slow=7.9,SNR=16							
YKA				pP	pP	14 28 11.4	+2.2
comp=Z,0.8nm,0.6s,baz=297,slow=7.4,SNR=5.4							
RES	**Resolute Bay**	**47.81**	**20**	P	**P**	**14 27 59.4**	**+0.1**
comp=Z,3.8nm,0.8s,mb4.5,baz=292,slow=9.1,SNR=6.7							
RES	**Resolute Bay**	**47.81**	**20**	P	**P**	**14 27 59.4**	**+0.1**
BVAR	**Borovoye Array**	**50.85**	**309**	P	**P**	**14 28 22.0**	**-0.8**
comp=Z,3.9nm,0.8s,mb4.4,baz=60,slow=9.0,SNR=18							
BVAR				PcP	PcP	14 29 42.6	+3.6
comp=Z,1.2nm,0.6s,baz=76,slow=6.3,SNR=3.8							
BRVK	**Borovoye**	**50.88**	**309**	*c*iP	**P**	**14 28 22.2**	**-0.9**
BRVK				pmax	pmax		
comp=Z,9.0nm,1.0s,mb4.7							
SVE	**Sverdlovsk**	**53.38**	**317⇑**	*e*P	**P**	**14 28 41.1**	**-0.5**
SVE				pmax	pmax		
comp=Z,11nm,0.8s,mb4.8							
ARU	**Arti**	**54.54**	**317**	*c*iP	**P**	**14 28 48.8**	**-1.2**
ARU				*e*		14 30 49.7	
ARU				S	**S**	**14 36 27.9**	**+1.4**
ARU				SS	SS	14 40 08.6	0.0
ARU				pmax	pmax		
comp=Z,15nm,0.8s,mb5.1							
ARU	**Arti**	**54.54**	**317**	*e*P	**P**	**14 28 48.5**	**-1.5**
comp=Z,12nm,0.8s,mb5.0							
AAK	**Ala-Archa**	**54.54**	**296**	LR	LR	14 53 51.5	
comp=Z,194nm,18.6s,MS4.2,baz=25,slow=38							
CHTO	**Chiang Mai**	**54.65**	**257**	*e*P	**P**	**14 28 52.1**	**+0.8**
CHTO				pmax	pmax		
comp=Z,12nm,1.0s,mb4.9							
CHTO	**Chiang Mai**	**54.65**	**257**	*e*P	**P**	**14 28 52.1**	**+0.8**
comp=Z,12nm,1.0s,mb4.9							
CMAR	**Chiang Mai Arr**	**54.92**	**257**	P	**P**	**14 28 54.5**	**+1.2**
comp=Z,5.7nm,1.0s,mb4.5,baz=30,slow=6.9,SNR=19							
ARCES	**ARCESS Array B**	**56.15**	**341**	P	**P**	**14 28 59.2**	**-2.2**
comp=Z,1.2nm,0.7s,mb4.0,baz=40,slow=13,SNR=3.0							
ARCES				LR	LR	14 58 00.5	
comp=Z,72nm,18.4s,MS3.8,baz=101,slow=41							
FFC	**Flin Flon**	**57.52**	**42**	*i*P	**P**	**14 29 12.2**	**+0.8**
SUMG	**Summit**	**58.05**	**5**	*e*P	**P**	**14 29 15.4**	**+0.6**
comp=Z,11nm,0.9s,mb4.9							
ABKAR	**Akbulak array**	**58.38**	**310**	*e*P	**P**	**14 29 16.4**	**-1.0**
comp=Z,3.0nm,0.5s,mb4.6							
HNR	**Honiara**	**58.52**	**176**	LR	LR	14 50 25.0	
comp=Z,55nm,19.5s,MS3.7,baz=173,slow=32							
NVAR	**Mina Array Bea**	**59.51**	**65**	P	**P**	**14 29 25.8**	**+0.3**
comp=Z,0.9nm,0.8s,mb3.9,baz=277,slow=7.3,SNR=7.3							
NVAR				pP	pP	14 29 38.2	+2.1
comp=Z,0.7nm,0.7s,baz=310,slow=7.0,SNR=3.8							
PDAR	**Pinedale Array**	**61.66**	**57**	P	**P**	**14 29 40.5**	**+0.5**
comp=Z,1.5nm,0.9s,mb4.1,baz=336,slow=3.3,SNR=11							
PDAR				pP	pP	14 29 52.7	+2.0
comp=Z,1.5nm,0.9s,baz=336,slow=3.3,SNR=3.6							
FINES	**FINESS Array B**	**62.63**	**336**	P	**P**	**14 29 45.0**	**-1.2**
comp=Z,0.5nm,0.4s,mb4.0,baz=17,slow=12,SNR=3

comp=Z,32nm,18.0s,MS3.6
AKASG Malin Array Be 70.57 327 P **P 14 30 35.9 -1.2**
comp=Z,0.9nm,0.5s,mb4.0,baz=33,slow=7.1,SNR=2.9
AKASG pP pP 14 30 50.4 +2.5
comp=Z,1.8nm,0.5s,baz=32,slow=5.9,SNR=5.4
AKASG Malin Array Be 70.57 327 P **P 14 30 35.9 -1.2**
AKASG pP pP 14 30 50.4 +2.5
WRA Warramunga Arr 71.56 202 P **P 14 30 42.2 -1.0**
comp=Z,1.9nm,0.9s,mb4.0,baz=21,slow=6.6,SNR=8.2
WRA pP pP 14 30 54.8 +0.7
comp=Z,1.2nm,0.7s,baz=20,slow=6.9,SNR=3.0
STHS Stebnicka Huta 74.34 331 *e*P **P 14 31 00.0 +0.5**
STHS pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
STHS Stebnicka Huta 74.34 331 *e*P **P 14 31 00.0 +0.5**
comp=Z,1.9nm,0.9s,mb4.0
STHS Stebnicka Huta 74.34 331 *e*P **P 14 31 00.0 +0.5**
TXAR Lajitas Array 74.53 63 P **P 14 31 00.6 -0.4**
comp=Z,2.1nm,0.9s,mb4.1,baz=307,slow=4.7,SNR=22
CRVS Cervenica-Dubn 74.72 331 *e*P **P 14 31 01.5 -0.3**
CRVS pmax pmax
comp=Z,4.0nm,1.3s,mb4.2
CRVS Cervenica-Dubn 74.72 331 *e*P **P 14 31 01.5 -0.3**
comp=Z,4.1nm,1.3s,mb4.2
CRVS Cervenica-Dubn 74.72 331 *e*P **P 14 31 01.5 -0.3**
DPC Dobruska-Polom 74.97 335 *e*P **P 14 31 04.5 +1.3**
DPC AMS AMS 15 08 00.0
comp=Z,200nm,6.2s
CLL Collm 74.99 337 *e*P **P 14 31 02.4 -0.9**
comp=Z,8.0nm,0.9s,mb4.7
CLL Collm 74.99 337 *i* P **P 14 31 03.3 0.0**
CLL pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
CLL Collm 74.99 337 *i* P **P 14 31 03.3 0.0**
comp=Z,9.0nm,1.1s,mb4.6
CLL Collm 74.99 337 *i* P **P 14 31 03.3 0.0**
comp=Z,9.0nm,1.1s,mb4.6
MORC Moravsky Berou 75.14 334 ⇓P **P 14 31 04.2 0.0**
MORC Moravsky Berou 75.14 334 *e*P **P 14 31 03.6 -0.6**
comp=Z,6.5nm,1.0s,mb4.5
MORC Moravsky Berou 75.14 334 ⇓*i*P **P 14 31 04.2 0.0**
CLZ Clausthal 75.15 339 *e*P **P 14 31 04.6 +0.4**
comp=Z,13nm,1.1s,mb4.8
ASAR Alice Springs 75.24 201 P **P 14 31 04.9 0.0**
comp=Z,0.8nm,0.9s,mb3.6,baz=7.1,slow=5.1,SNR=6.4
ASAR pP pP 14 31 17.7 +1.9
comp=Z,0.5nm,0.5s,baz=16,slow=5.1,SNR=4.5
PVCC Panska Ves 75.29 336 AMS AMS 15 08 10.0
comp=Z,200nm,17.0s
KECS Kecovo 75.40 331 *e*P **P 14 31 06.1 +0.4**
KECS pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
KECS Kecovo 75.40 331 *e*P **P 14 31 06.1 +0.4**
comp=Z,2.2nm,1.0s,mb4.0
KECS Kecovo 75.40 331 *e*P **P 14 31 06.1 +0.4**
PRU Pruhonice 75.79 336 *e*P **P 14 31 09.2 +1.3**
PRU MLR MLR
comp=Z,100nm,19.9s,MS4.1
PRU Pruhonice 75.79 336 *e*P **P 14 31 09.2 +1.3**
PRU LR LR
comp=Z,100nm,19.9s,MS4.1
PRU Pruhonice 75.79 336 *e*P **P 14 31 09.2 +1.3**
PRU AMS AMS 15 08 20.0
comp=Z,100nm,19.9s
VYHS Vyhne 75.90 332 *e*P **P 14 31 08.9 +0.4**
VYHS pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
VYHS Vyhne 75.90 332 *e*P **P 14 31 08.9 +0.4**
comp=Z,2.3nm,1.1s,mb4.0
VYHS Vyhne 75.90 332 *e*P **P 14 31 08.9 +0.4**
TANN Tannenbergstha 75.95 337 *e*P **P 14 31 08.8 0.0**
comp=Z,5.0nm,1.2s,mb4.3
MOX Moxa 75.95 338 *e*P **P 14 31 08.4 -0.4**
comp=Z,6.0nm,1.0s,mb4.5
WERD Werda 75.96 337 *e*P **P 14 31 09.8 +0.9**
GUNZ Gunzen 76.03 337 *e*P **P 14 31 10.2 +0.9**
NKC Novy Kostel 76.12 337 AMS AMS 15 09 20.0
comp=Z,100nm,9.9s
MLR Muntele Rosu 76.15 326 ⇑P **P 14 31 10.1 +0.1**
MLR Muntele Rosu 76.15 326 ⇑*i*P **P 14 31 10.1 +0.1**
DRGR 76.15 329 ⇑P **P 14 31 10.5 +0.5**
DRGR 76.15 329 ⇑*i*P **P 14 31 10.5 +0.5**
TREC Trest 76.16 335 AMS AMS 15 09 00.0
comp=Z,100nm,15.8s
VOIR 76.52 327 ⇑P **P 14 31 13.1 +1.0**
VOIR 76.52 327 ⇑*i*P **P 14 31 13.1 +1.0**
ROTZ Rotzenmuhle 76.61 337 *e*P **P 14 31 12.7 +0.1**
comp=Z,7.0nm,1.3s,mb4.4
KHC Kasperske Hory 76.83 336 *e*P **P 14 31 14.2 +0.4**
KHC MLR MLR
comp=Z,200nm,11.6s,MS4.7
KHC Kasperske Hory 76.83 336 *e*P **P 14 31 14.2 +0.4**
KHC AMS AMS 15 09 00.0
comp=Z,200nm,11.6s
GRF Grafenberg Arr 76.93 337 *e*P **P 14 31 14.4 0.0**
comp=Z,10.0nm,0.8s,mb4.8
GRF *e*L 15 11 28.1
comp=Z,67nm,19.6s
GRF Grafenberg Arr 76.93 337 *e*P **P 14 31 14.4 0.0**
GRF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
GRF MLR MLR
comp=Z,100nm,19.6s,MS4.1
WET Wettzell 77.01 336 *e*P **P 14 31 15.6 +0.8**
comp=Z,9.0nm,1.1s,mb4.6
TNS Taunus Mts 77.11 339 *e*P **P 14 31 15.4 +0.1**
comp=Z,13nm,0.7s,mb5.0
MEM Membach 77.28 341 P **P 14 31 16.7 +0.4**
comp=Z,8.9nm,1.2s,mb4.6
BCLA Clavier 77.61 341 P **P 14 31 18.5 +0.4**
BR131 Keskin Array S 77.92 318 *e*P **P 14 31 20.3 +0.2**
comp=Z,6.8nm,0.9s,mb4.6
BRTR Keskin Array B 77.92 318 P **P 14 31 20.0 0.0**
comp=Z,7.0nm,1.0s,mb4.6,baz=62,slow=3.2,SNR=28
BRTR pP pP 14 31 31.8 +0.7
comp=Z,2.5nm,0.8s,baz=56,slow=2.3,SNR=6.0
BRTR LR LR 15 12 27.5
comp=Z,29nm,18.5s,MS3.6,baz=15,slow=41
BRTR Keskin Array B 77.92 318 P **P 14 31 20.0 -0.1**
BRTR *PP pP 14 31 31.8 +0.8
BRTR Keskin Array B 77.92 318 P **P 14 31 20.0 -0.1**
BRTR pP pP 14 31 31.8 +0.7
BRTR LR LR 15 12 27.6
GIVF Givet 78.01 342 *e*P **P 14 31 20.1 -0.3**
comp=Z,20nm,0.8s,mb4.8
GIVF Givet 78.01 342 *e*P **P 14 31 20.1 -0.3**
GIVF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
GIVF Givet 78.01 342 *e*P **P 14 31 20.1 -0.3**
comp=Z,9.8nm,0.8s,mb4.8
BAIF Baives 78.18 342 *e*P **P 14 31 21.2 -0.1**
comp=Z,11nm,0.7s,mb4.6
BAIF Baives 78.18 342 *e*P **P 14 31 21.2 -0.1**
BAIF pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
BAIF Baives 78.18 342 *e*P **P 14 31 21.2 -0.1**
comp=Z,5.7nm,0.7s,mb4.6
SOKA Soboth 78.66 334 ⇑*i*P **P 14 31 24.5 +0.4**
comp=Z,12nm,1.1s,mb4.7
KBA Koelnbreinsper 78.77 335 ⇑*i*P **P 14 31 25.6 +0.9**
comp=Z,29nm,1.1s,mb5.1
BFO Black Forest 78.90 339 *e*P **P 14 31 25.1 -0.2**
comp=Z,6.0nm,0.9s,mb4.5
WTTA Wattenberg 79.06 336 ⇑*i*P **P 14 31 27.1 +0.8**
comp=Z,13nm,0.8s,mb4.9
CDF Champ du Feu 79.07 339 *e*P **P 14 31 26.2 -0.1**
MOTA Moosalm 79.13 337 ⇓*i*P **P 14 31 27.4 +0.8**
comp=Z,17nm,1.0s,mb4.9
KBD Kabd 79.33 302 *e*P **P 14 31 27.6 -0.5**
KBD AMb AMB 14 31 29.4
comp=Z,36nm,1.2s,mb5.2
MEZF Maizieres J'vi 79.48 341 *e*P **P 14 31 28.7 +0.2**
DAVA Damuels 79.50 337 ⇓*i*P **P 14 31 29.3 +0.7**
comp=Z,12nm,1.1s,mb4.8
FETA Feichten 79.53 337 ⇑*i*P **P 14 31 29.6 +0.8**
comp=Z,8.7nm,1.0s,mb4.7
NAY Al-Naaiem 79.53 303 *e*P **P 14 31 28.7 -0.4**
NAY AMb AMB 14 31 30.7
comp=Z,23nm,1.1s,mb5.0
RDF Al-Radifah 79.61 302 *e*P **P 14 31 29.6 0.0**
RDF AMb AMB 14 31 30.2
comp=Z,31nm,1.2s,mb5.1
VTS Vitosha 79.64 327 ⇑P **P 14 31 29.6 +0.1**
VTS Vitosha 79.64 327 ⇑*i*P **P 14 31 29.6 +0.1**
HAU Haudompre 79.67 340 *e*P **P 14 31 29.3 -0.2**
comp=Z,7.7nm,0.7s,mb4.4
HAU *e*MLR MLR
comp=Z,52nm,18.2s,MS3.6
HAU Haudompre 79.67 340 *e*P **P 14 31 29.3 -0.2**
HAU pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
HAU MLR MLR
comp=Z,50nm,18.3s,MS3.9
HAU Haudompre 79.67 340 *e*P **P 14 31 29.3 -0.2**
comp=Z,3.8nm,0.7s,mb4.4
HAU LR LR
comp=Z,50nm,18.3s,MS3.9
FLN La Foliniere 80.31 345 *e*P **P 14 31 32.9 -0.1**
comp=Z,15nm,0.7s,mb4.7
FLN *e*MLR MLR
comp=Z,60nm,20.0s,MS3.6
FLN La Foliniere 80.31 345 *e*P **P 14 31 32.9 -0.1**
FLN pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
FLN MLR MLR
comp=Z,60nm,20.0s,MS3.9
FLN La Foliniere 80.31 345 *e*P **P 14 31 32.9 -0.1**
comp=Z,7.6nm,0.7s,mb4.7
FLN LR LR
comp=Z,60nm,20.0s,MS3.9
GRR Gorron 80.74 345 *e*P **P 14 31 35.4 +0.1**
comp=Z,28nm,0.9s,mb4.9
GRR Gorron 80.74 345 *e*P **P 14 31 35.4 +0.1**
GRR pmax pmax
comp=Z,14nm,0.9s,mb4.9
GRR Gorron 80.74 345 *e*P **P 14 31 35.4 +0.1**
comp=Z,14nm,0.9s,mb4.9
LOR Lormes 80.91 341 *e*P **P 14 31 36.1 -0.1**
comp=Z,13nm,0.8s,mb4.6
LOR *e*MLR MLR
comp=Z,63nm,18.8s,MS3.7
LOR Lormes 80.91 341 *e*P **P 14 31 36.1 -0.1**
LOR pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
LOR MLR MLR
comp=Z,60nm,18.8s,MS4.0
LOR Lormes 80.91 341 *e*P **P 14 31 36.1 -0.1**
comp=Z,6.3nm,0.8s,mb4.6
LOR LR LR
comp=Z,60nm,18.8s,MS4.0
CABF La Chapelle 81.04 340 *e*P **P 14 31 37.1 +0.2**
SGMF Saint Gilles 81.15 346 *e*P **P 14 31 37.7 +0.2**
comp=Z,8.5nm,0.6s,mb4.5
SGMF Saint Gilles 81.15 346 *e*P **P 14 31 37.7 +0.2**
SGMF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
SGMF Saint Gilles 81.15 346 *e*P **P 14 31 37.7 +0.2**
comp=Z,4.3nm,0.6s,mb4.6
SSF Saint Saulge 81.18 341 *e*P **P 14 31 37.6 0.0**
comp=Z,5.9nm,0.6s,mb4.4
SSF Saint Saulge 81.18 341 *e*P **P 14 31 37.6 0.0**
SSF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
SSF Saint Saulge 81.18 341 *e*P **P 14 31 37.6 0.0**
comp=Z,3.0nm,0.6s,mb4.4
ROSF Rostrenen 81.18 346 *e*P **P 14 31 37.8 +0.1**
comp=Z,19nm,0.9s,mb4.7
ROSF Rostrenen 81.18 346 *e*P **P 14 31 37.8 +0.1**
ROSF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
ROSF Rostrenen 81.18 346 *e*P **P 14 31 37.8 +0.1**
comp=Z,9.6nm,0.9s,mb4.7
AVF Avril sur Loir 81.47 341 *e*P **P 14 31 39.3 +0.1**
comp=Z,8.3nm,0.6s,mb4.5
AVF Avril sur Loir 81.47 341 *e*P **P 14 31 39.3 +0.1**
AVF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
AVF Avril sur Loir 81.47 341 *e*P **P 14 31 39.3 +0.1**
comp=Z,4.2nm,0.6s,mb4.5
SMF Signal de Mont 81.50 341 *e*P **P 14 31 39.5 +0.1**
comp=Z,5.5nm,0.7s,mb4.3
SMF Signal de Mont 81.50 341 *e*P **P 14 31 39.5 +0.1**
SMF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
SMF Signal de Mont 81.50 341 *e*P **P 14 31 39.5 +0.1**
comp=Z,2.8nm,0.7s,mb4.3
BGF Bois d'Agland 81.79 342 *e*P **P 14 31 41.1 +0.2**
LPL La Plagne 81.92 339 *e*P **P 14 31 42.5 +0.9**
comp=Z,14nm,0.7s,mb4.7
LPL La Plagne 81.92 339 *e*P **P 14 31 42.5 +0.9**
LPL pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
LPL La Plagne 81.92 339 *e*P **P 14 31 42.5 +0.9**
comp=Z,7.0nm,0.7s,mb4.7
LPG La Plagne 81.94 339 *e*P **P 14 31 42.8 +1.1**
comp=Z,17nm,0.9s,mb4.7
LPG La Plagne 81.94 339 *e*P **P 14 31 42.8 +1.1**
LPG pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
LPG La Plagne 81.94 339 *e*P **P 14 31 42.8 +1.1**
comp=Z,8.6nm,0.9s,mb4.7
TCF Toulx Ste Croi 82.18 342 *e*P **P 14 31 43.3 +0.3**
comp=Z,5.3nm,0.8s,mb4.2
TCF Toulx Ste Croi 82.18 342 *e*P **P 14 31 43.3 +0.3**
TCF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
TCF Toulx Ste Croi 82.18 342 *e*P **P 14 31 43.3 +0.3**
comp=Z,2.7nm,0.8s,mb4.2
MFF Saint Martin d 82.33 344 *e*P **P 14 31 44.3 +0.6**
comp=Z,8.9nm,0.7s,mb4.5
MFF Saint Martin d 82.33 344 *e*P **P 14 31 44.3 +0.6**
MFF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
MFF Saint Martin d 82.33 344 *e*P **P 14 31 44.3 +0.6**
comp=Z,4.4nm,0.7s,mb4.5
MMAI Mount Meron Ar 82.63 313 P **P 14 31 46.5 +0.9**
comp=Z,4.1nm,0.5s,mb4.7,baz=44,slow=7.3,SNR=6.5
MMAI pP pP 14 31 58.0 +1.5
comp=Z,9.0nm,0.7s,baz=41,slow=8.2,SNR=6.6
MBDF Montbardon 82.66 339 *e*P **P 14 31 45.8 +0.3**
comp=Z,2.4nm,0.4s,mb4.3
MBDF Montbardon 82.66 339 *e*P **P 14 31 45.8 +0.3**
MBDF pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
MBDF Montbardon 82.66 339 *e*P **P 14 31 45.8 +0.3**
comp=Z,1.2nm,0.4s,mb4.3
ORIF Oris-en-Rattie 82.69 339 *e*P **P 14 31 46.4 +0.8**
ORIF *e*MLR MLR
comp=Z,48nm,21.0s,MS3.5
VIVF Saint-Julien-l 83.02 340 *e*P **P 14 31 48.0 +0.6**
RJF Les Rejaudoux 83.26 342 *e*P **P 14 31 48.9 +0.3**
RJF *e*MLR MLR
comp=Z,74nm,18.2s,MS3.8
RJF Les Rejaudoux 83.26 342 *e*P **P 14 31 48.9 +0.3**
RJF LR LR
comp=Z,70nm,18.3s,MS4.1
SBF Sospel 83.31 338 *e*P **P 14 31 48.9 0.0**
SMRF Simiane la Rot 83.65 339 *e*P **P 14 31 50.2 -0.4**
LFF La Frestale 83.77 343 *e*P **P 14 31 51.4 +0.2**
ESDC Sonseca Array 89.73 345 LR LR 15 19 45.0
comp=Z,22nm,18.7s,MS3.6,baz=40,slow=40
SYO Syowa Base 144.11 213⇓*e*P PKPdf 14 38 52.0 -4.4
CPUP Villa Florida 145.47 61 PKPbc PKPbc 14 38 58.5 -1.7
comp=Z,0.5nm,0.5s,baz=342,slow=6.4,SNR=4.6
CPUP pPKPbc pPKPbc 14 39 12.5 +1.0
comp=Z,0.4nm,0.3s,baz=259,slow=5.2,SNR=2.2
CPUP Villa Florida 145.47 61 PKPbc PKPbc 14 38 58.5 -1.7
CPUP pPKPbc pPKPbc 14 39 12.5 +1.0

IDC 15 14:39:00.1±1.2, 26°.65S×69°.93E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.6/20, mbtmp3.7/5, MS3.3/4, Ms1 3.3/4, ms1mx3.0/21, Error ellipse: s-maj=44.1km s-min=26.8km az=172.0, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**39.45**	**257**	P	P	14 46 32.4	+0.1
	12nm,1.3s,baz=50,slow=7.9,SNR=3.5						
BOSA				LR	LR	14 59 10.4	
	comp=Z,48nm,20.7s,baz=348,slow=31						
MAW	**Mawson**	**41.20**	**184**	LR	LR	15 00 45.5	
	comp=Z,57nm,19.1s,baz=117,slow=32						
CMAR	**Chiang Mai Arr**	**52.95**	**35**	P	P	14 48 18.7	+0.2
	0.4nm,0.4s,baz=226,slow=5.5,SNR=4.5						
CMAR				LR	LR	15 08 48.3	
	comp=Z,31nm,19.6s,baz=173,slow=34						
ASAR	**Alice Springs**	**57.45**	**102**	P	P	14 48 52.4	+1.3
	0.2nm,0.8s,baz=258,slow=6.6,SNR=3.7						
WRA	**Warramunga Arr**	**59.01**	**98**	P	P	14 49 01.1	-1.0
	0.4nm,0.9s,baz=246,slow=10.0,SNR=2.7						
MKAR	**Makanchi Array**	**73.95**	**9**	P	P	14 50 37.0	0.0
	0.4nm,0.8s,baz=172,slow=5.2,SNR=3.0						
MKAR				LR	LR	15 18 03.4	
	comp=Z,13nm,21.3s,baz=100,slow=32						

*IDC **15** 14:44:02.5±13.0, 22°.38S×179°.43W, h506km±133km, mb3.5/6, mb1 3.6/7, mb1mx3.2/18, mbtmp3.4/7, Error ellipse: s-maj=105.2km s-min=44.4km az=31.0*
*ISCJB **15** 14:44:08.6±1.5, 22°.8S±0°.1×179°.7W±0°.2, h571km±18km, mb4.1/8, Error ellipse: s-maj=33.5km s-min=15.0km az=163.5*
*NEIC **15** 14:44:08.9±1.4, 22°.89S×179°.76W, h556km±15km, mb4.0/1, Error ellipse: s-maj=27.2km s-min=20.0km az=70.0*

ISC 15 14:44:09.0±1.5, 22°.8S±0°.2×179°.6W±0°.2, h567km±20km, n25, σ1°15/25, mb4.1/8, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.50**	**336**	*e*P	P	14 45 44.0	-0.2
URZ	**Urewera**	**15.66**	**190**	P	P	14 47 23.4	-1.0
	0.5nm,0.3s,baz=347,slow=14,SNR=3.9						
URZ				S	S	14 49 59.9	-3.9
	0.1nm,0.3s,baz=233,slow=20,SNR=2.2						
URZ	**Urewera**	**15.66**	**190**	*e*P	P	14 47 22.7	-1.6
URZ				S	S	14 49 59.9	-3.9
ARMA	**Armidale**	**26.75**	**247**	*e*P	P	14 49 05.7	+1.5
EIDS	**Eidsvold**	**26.85**	**259**	*e*P	P	14 49 05.3	+0.2
EIDS	**Eidsvold**	**26.85**	**259**	*e*P	P	14 49 05.3	+0.2
RMQ	**Roma**	**28.94**	**256**	*e*P	P	14 49 24.6	+1.3
	4.0nm,0.6s,mb4.2						
CNB	**Canberra Magne**	**29.71**	**238**	*e*P	P	14 49 31.3	+1.4
CTA	**Charters Tower**	**31.84**	**268**	*e*P	P	14 49 47.7	-0.6
	4.5nm,0.9s,mb4.0						
CTA	**Charters Tower**	**31.84**	**268**	P	P	14 49 48.2	-0.1
	3.4nm,0.4s,mb4.3,baz=110,slow=8.8,SNR=11						
CTA	**Charters Tower**	**31.84**	**268**	P	P	14 49 48.2	-0.2
CTAO	**Charters Tower**	**31.84**	**268**	*e*P	P	14 49 48.0	-0.3
CMSA	**Cobar Meteorol**	**31.96**	**247**	*e*P	P	14 49 49.5	+0.3
TOO	**Toolangi**	**33.34**	**236**	*e*P	P	14 50 01.6	+0.8
STKA	**Stephens Creek**	**35.46**	**247**	*e*P	P	14 50 19.0	+0.4
	2.6nm,0.4s,mb4.1						
STKA	**Stephens Creek**	**35.46**	**247**	P	P	14 50 19.0	+0.4
	3.2nm,0.4s,mb4.2,baz=87,slow=9.7,SNR=31						
STKA	**Stephens Creek**	**35.46**	**247**	*e*P	P	14 50 19.0	+0.4
ASAR	**Alice Springs**	**42.57**	**259**	P	P	14 51 15.2	-0.7
	5.9nm,0.8s,mb4.2,baz=84,slow=6.1,SNR=11						
WRAB	**Tennant Creek**	**42.83**	**265**	*e*P	P	14 51 15.6	-2.4
	3.4nm,0.7s,mb4.0						
WRA	**Warramunga Arr**	**42.84**	**265**	P	P	14 51 16.4	-1.6
	2.5nm,0.2s,mb4.3,baz=96,slow=8.3,SNR=173						
FITZ	**Fitzroy Crossi**	**51.27**	**265**	P	P	14 52 20.1	-1.3
	2.7nm,0.4s,mb3.9,baz=104,slow=6.9,SNR=5.9						
QSPA	**South Pole Qui**	**67.27**	**180**	*e*P	P	14 54 08.6	+1.5
CMAR	**Chiang Mai Arr**	**89.48**	**290**	P	P	14 56 07.2	+0.6
	0.6nm,0.6s,mb3.6,baz=150,slow=4.1,SNR=5.4						
NACGM	**Naroch**	**142.38**	**335**	*e*LR	LR	15 03 12.0	
BRTR	**Keskin Array B**	**147.19**	**309**	PKPbc	PKPbc	15 02 47.3	-1.7
	0.5nm,0.5s,baz=137,slow=8.4,SNR=3.3						

*IDC **15** 14:48:15.2±3.0, 7°.35S×129°.10E, h119km±29km, mb3.3/2, mb1 3.5/5, mb1mx3.2/18, mbtmp3.3/5, Error ellipse: s-maj=25.6km s-min=8.8km az=34.0*

ISC 15 14:48:18.2±5.8, 7°.5S±0°.3×129°.0E±0°.4, h147km±57km, n7, σ0°78/8, mb3.3/2, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNA	**Kununurra**	**8.20**	**182**	*e*P	Pn	14 50 14.9	+0.5
	5.3nm,0.2s						
KNA				*e*S	Sn	14 51 41.5	-4.2
FITZ	**Fitzroy Crossi**	**11.04**	**197**	*e*P	Pn	14 50 52.9	+0.9
	2.8nm,0.3s						
FITZ				*e*S	Sx	14 52 49.6	
FITZ	**Fitzroy Crossi**	**11.04**	**197**	P	Pn	14 50 51.9	-0.1
	0.5nm,0.3s,baz=42,slow=14,SNR=22						
FITZ				S	Sx	14 52 48.7	
	0.4nm,0.3s,baz=319,slow=6.5,SNR=2.0						
WRA	**Warramunga Arr**	**13.40**	**158**	P	Pn	14 51 22.2	-0.4
	0.6nm,0.3s,baz=343,slow=13,SNR=9.7						
WRA				S	Sx	14 53 41.3	
	1.1nm,0.3s,baz=334,slow=22,SNR=12						
ASAR	**Alice Springs**	**16.74**	**164**	P	Pn	14 52 04.1	0.0
	0.4nm,0.3s,baz=341,slow=9.6,SNR=11						
ASAR				S	Sx	14 55 04.6	
	0.3nm,0.3s,baz=334,slow=23,SNR=7.0						
STKA	**Stephens Creek**	**26.93**	**156**	P	Pn	14 53 46.3	+0.5
	1.5nm,0.8s,mb3.6,baz=348,slow=14,SNR=3.6						
MKAR	**Makanchi Array**	**68.12**	**327**	P	Pn	14 59 01.7	-0.4
	0.2nm,0.6s,mb3.0,baz=132,slow=7.9,SNR=3.7						

*NEIC **15** 15:04:33.9, 37°.36S×179°.42E, h12km, ML4.0(WEL), After WEL.*
*WEL **15** 15:04:34.4±0.4, 37°.38S×179°.40E, h12km, ML3.9/7, Error ellipse: s-maj=3.1km s-min=3.0km az=90.0*
*IDC **15** 15:04:43.4±2.1, 37°.92S×178°.83E, h90km±22km, mb3.6/3, mb1 3.7/4, mb1mx3.5/16, mbtmp3.6/4, Error ellipse: s-maj=68.2km s-min=22.6km az=163.0*

ISC 15 15:04:33.1±1.4, 37°.49S±0°.08×179°.7E±0°.1, h37km±16km, n62, σ1°21/64, mb3.4/2, 1D, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.08**	**266**	P*	Pn	15 04 50.4	-1.3
MXZ				S*	Sn	15 05 02.7	-2.7
MXZ	**Matakaoa Point**	**1.08**	**266**	P	Pn	15 04 50.4	-1.3
MXZ				S	Sn	15 05 02.7	-2.7
PUZ	**Puketiti**	**1.26**	**242**	⇓P*	Pn	15 04 55.2	+1.1
PUZ				S*	Sn	15 05 10.2	+0.5
PUZ	**Puketiti**	**1.26**	**242**	P	Pn	15 04 55.2	+1.1
PUZ				S	Sn	15 05 11.3	+1.6
CNGZ	**Carnagh Statio**	**1.52**	**229**	PN	Pn	15 05 00.1	+2.4
MWZ	**Matawai**	**1.89**	**243**	PN	Pn	15 05 03.5	+0.7
MWZ	**Matawai**	**1.89**	**243**	P	Pn	15 05 03.5	+0.7
MHGZ	**Mahia Peninsul**	**2.16**	**219**	PN	Pn	15 05 08.6	+2.1
URZ	**Urewera**	**2.16**	**248**	PN	Pn	15 05 07.5	+1.0
URZ				SN	Sn	15 05 32.0	-0.1
URZ	**Urewera**	**2.16**	**248**	P	Pn	15 05 07.7	+1.2
	26nm,0.3s,baz=62,slow=3.6,SNR=233						
URZ				S	Sn	15 05 32.2	+0.1
	61nm,0.3s,baz=122,slow=22,SNR=7.0						
URZ	**Urewera**	**2.16**	**248**	P	Pn	15 05 07.5	+1.0
KNZ	**Kokohu**	**2.19**	**225**	PN	Pn	15 05 08.4	+1.5
KNZ	**Kokohu**	**2.19**	**225**	P	Pn	15 05 08.4	+1.5
EDRZ	**Edgecumbe**	**2.40**	**254**	PN	Pn	15 05 10.5	+0.8
EDRZ	**Edgecumbe**	**2.40**	**254**	P	Pn	15 05 10.5	+0.7
MARZ	**Manawahe**	**2.42**	**257**	PN	Pn	15 05 10.5	+0.4
MARZ	**Manawahe**	**2.42**	**257**	P	Pn	15 05 10.5	+0.4
RAHZ	**Arahi**	**2.48**	**234**	PN	Pn	15 05 12.3	+1.4
TARZ	**Mount Tarawera**	**2.61**	**253**	PN	Pn	15 05 13.6	+0.9
KARZ	**Kaharoa**	**2.76**	**258**	PN	Pn	15 05 15.1	+0.3
KARZ	**Kaharoa**	**2.76**	**258**	P	Pn	15 05 15.1	+0.3
NMHZ	**Naumai**	**2.76**	**234**	PN	Pn	15 05 16.2	+1.4
BKZ	**Black Stump Fm**	**3.00**	**235**	PN	Pn	15 05 19.1	+1.0
BKZ				SN	Sn	15 05 52.6	-0.2
BKZ	**Black Stump Fm**	**3.00**	**235**	P	Pn	15 05 19.1	+1.0
MCHZ	**McNeill Hill**	**3.04**	**229**	PN	Pn	15 05 19.8	+1.3
KAHZ	**Kahuranaki**	**3.17**	**223**	PN	Pn	15 05 21.3	+0.9
KUZ	**Kuaotunu**	**3.24**	**282**	PN	Pn	15 05 19.6	-1.7
KUZ	**Kuaotunu**	**3.24**	**282**	P	Pn	15 05 19.6	-1.7
PXZ	**Pawanui**	**3.35**	**220**	PN	Pn	15 05 23.4	+0.6
WPHZ	**Waipukurau**	**3.60**	**223**	PN	Pn	15 05 26.6	+0.3
PNHZ	**Pukenui**	**3.63**	**227**	PN	Pn	15 05 26.8	0.0
WNVZ	**Wahianoa**	**3.68**	**239**	PN	Pn	15 05 28.5	+1.0
WNVZ	**Wahianoa**	**3.68**	**239**	P	Pn	15 05 28.5	+1.1
TSZ	**Takapari Road**	**3.87**	**227**	PN	Pn	15 05 29.8	-0.2
TSZ	**Takapari Road**	**3.87**	**227**	P	Pn	15 05 29.8	-0.2
DVHZ	**Dannevirke**	**3.91**	**223**	PN	Pn	15 05 30.3	-0.3
BFZ	**Birch Farm**	**4.15**	**219**	PN	Pn	15 05 33.2	-0.7
BFZ	**Birch Farm**	**4.15**	**219**	P	Pn	15 05 33.2	-0.6
TIWZ	**Tintock**	**4.40**	**221**	PN	Pn	15 05 36.6	-0.7
MRZ	**Mangatainoka R**	**4.49**	**224**	PN	Pn	15 05 37.9	-0.6
MRZ	**Mangatainoka R**	**4.49**	**224**	P	Pn	15 05 37.9	-0.6
TMWZ	**Te Maipa**	**4.65**	**218**	PN	Pn	15 05 39.5	-1.2
MTW	**Mount Morrison**	**4.88**	**220**	SN	Sx	15 06 37.4	
KIW	**Kapiti Island**	**5.00**	**226**	PN	Pn	15 05 44.3	-1.1
KIW				SN	Sx	15 06 39.0	
KIW	**Kapiti Island**	**5.00**

SNZO South Karori 5.41 224 *e*Pn **Pn 15 05 50.2 -1.0**
TUWZ Tuamarina 5.92 227 PN **Pn 15 05 55.8 -2.4**
NNZ Nelson 6.13 231 *e*Pn **Pn 15 05 59.1 -2.0**
NNZ SN Sx 15 07 05.7
NNZ Nelson 6.13 231 *e*P **Pn 15 05 59.1 -1.9**
NNZ S Sx 15 07 05.7
QRZ Quartz Range 6.47 237 *e*PN **Pn 15 06 04.0 -1.6**
QRZ SN Sx 15 07 12.8
QRZ Quartz Range 6.47 237 *e*P **Pn 15 06 04.0 -1.7**
QRZ S Sx 15 07 12.8
THZ Tophouse 6.74 229 PN **Pn 15 06 07.2 -2.2**
THZ SN Sx 15 07 20.3
THZ Tophouse 6.74 229 P **Pn 15 06 07.2 -2.2**
THZ S Sx 15 07 20.3
MOZ McQueen's Vall 8.18 218 SN Sx 15 07 52.6
RPZ Rata Peaks 9.03 224 P **Pn 15 06 39.5 -1.2**
0.3nm,0.3s,baz=45,slow=2.9,SNR=4.8
RPZ S Sx 15 08 12.3
1.4nm,0.3s,baz=146,slow=24,SNR=10
ODZ Otahua Downs 10.14 219 *e*P **Pn 15 06 53.4 -2.7**
RAR Rarotonga 24.09 53 P pP 15 09 57.9 +2.4
9.4nm,0.7s,baz=117,slow=6.8,SNR=2.5
ASAR Alice Springs 41.35 276 P **P 15 12 15.9 +0.5**
0.6nm,0.5s,mb3.6,baz=116,slow=6.5,SNR=14
WRA Warramunga Arr 42.98 281 P **P 15 12 29.1 +0.4**
0.6nm,0.5s,mb3.6,baz=122,slow=8.0,SNR=5.0
ARCES ARCESS Array B 145.00 344 PKPbc PKPbc 15 24 08.5 +4.0
0.8nm,0.7s,baz=108,slow=2.9,SNR=6.0
FINES FINESS Array B 150.91 334 PKPbc PKPbc 15 24 24.1 +3.4
1.3nm,0.7s,baz=48,slow=2.8,SNR=3.4

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*WEL **15** 15:09:13.0±0.3, 37°.34S×179°.40E, h12km, ML3.9/6, Error ellipse: s-maj=2.9km s-min=2.7km az=0.0*
*NEIC **15** 15:09:12.1, 37°.35S×179°.39E, h5km, ML3.9(WEL), After WEL.*
*IDC **15** 15:09:18.4±5.0, 38°.19S×179°.46E, h75km±38km, mb3.2/1, mb1 3.5/2, mb1mx3.3/14, mbtmp3.4/2, ML3.2/1, Error ellipse: s-maj=40.7km s-min=34.5km az=62.0*
ISC 15 15:09:10.0±1.6, 37°.42S±0°.08×179°.53E±0°.08, h6km±9km, n43, σ1°.08/50, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.98**	**261**	P*	**Pb**	**15 09 29.2**	**-0.2**
MXZ				S*	**Sb**	**15 09 40.8**	**-1.7**
MXZ	**Matakaoa Point**	**0.98**	**261**	P	**Pg**	**15 09 29.2**	**+0.4**
MXZ				S	**Sg**	**15 09 40.8**	**-0.8**
PUZ	**Puketiti**	**1.20**	**237**	P*	**Pb**	**15 09 34.1**	**+1.0**
PUZ				S*	**Sb**	**15 09 50.2**	**+1.4**
PUZ	**Puketiti**	**1.20**	**237**	P	**Pb**	**15 09 34.1**	**+1.0**
PUZ				S	**Sb**	**15 09 50.2**	**+1.4**
CNGZ	**Carnagh Statio**	**1.49**	**224**	PN	**Pn**	**15 09 39.2**	**+1.9**
MWZ	**Matawai**	**1.83**	**239**	PN	**Pn**	**15 09 42.5**	**+0.7**
MWZ				SN	**Sn**	**15 10 06.0**	**+0.6**
MWZ	**Matawai**	**1.83**	**239**	P	**Pn**	**15 09 42.5**	**+0.6**
MWZ				S	**Sn**	**15 10 06.0**	**+0.7**
URZ	**Urewera**	**2.09**	**246**	PN	**Pn**	**15 09 46.6**	**+1.1**
URZ				SN	**Sn**	**15 10 11.1**	**-0.7**
URZ	**Urewera**	**2.09**	**246**	P	**Pn**	**15 09 46.6**	**+1.1**
17nm,0.3s,baz=66,slow=3.3,SNR=71							
URZ				S	**Sn**	**15 10 11.3**	**-0.5**
60nm,0.3s,baz=136,slow=23,SNR=32							
URZ	**Urewera**	**2.09**	**246**	P	**Pn**	**15 09 46.6**	**+1.1**
MHGZ	**Mahia Peninsul**	**2.15**	**216**	PN	**Pn**	**15 09 47.7**	**+1.4**
KNZ	**Kokohu**	**2.16**	**222**	PN	**Pn**	**15 09 47.3**	**+0.8**
KNZ	**Kokohu**	**2.16**	**222**	P	**Pn**	**15 09 47.3**	**+0.8**
OPRZ	**Ohinepanea**	**2.40**	**259**	PN	**Pn**	**15 09 50.0**	**+0.3**
RAHZ	**Arahi**	**2.44**	**231**	PN	**Pn**	**15 09 51.2**	**+0.9**
TARZ	**Mount Tarawera**	**2.53**	**250**	PN	**Pn**	**15 09 52.6**	**+1.1**
RRRZ	**Republican Roa**	**2.56**	**248**	PN	**Pn**	**15 09 52.2**	**+0.3**
NMHZ	**Naumai**	**2.72**	**231**	PN	**Pn**	**15 09 55.2**	**+1.1**
BKZ	**Black Stump Fm**	**2.96**	**233**	PN	**Pn**	**15 09 58.1**	**+0.7**
BKZ	**Black Stump Fm**	**2.96**	**233**	P	**Pn**	**15 09 58.1**	**+0.7**
MCHZ	**McNeill Hill**	**3.00**	**227**	PN	**Pn**	**15 09 58.7**	**+0.7**
KAHZ	**Kahuranaki**	**3.15**	**220**	PN	**Pn**	**15 10 00.1**	**0.0**
PXZ	**Pawanui**	**3.34**	**218**	PN	**Pn**	**15 10 02.4**	**-0.2**
MKAZ	**Moumakai**	**3.49**	**274**	PN	**Pn**	**15 10 04.6**	**-0.2**
MKAZ	**Moumakai**	**3.49**	**274**	P	**Pn**	**15 10 04.6**	**-0.2**
PNHZ	**Pukenui**	**3.60**	**225**	PN	**Pn**	**15 10 05.7**	**-0.6**
WNVZ	**Wahianoa**	**3.63**	**237**	PN	**Pn**	**15 10 07.5**	**+0.9**
PRHZ	**Porangahau**	**3.63**	**218**	PN	**Pn**	**15 10 06.1**	**-0.5**
DVHZ	**Dannevirke**	**3.89**	**221**	PN	**Pn**	**15 10 09.4**	**-0.9**
BFZ	**Birch Farm**	**4.14**	**217**	PN	**Pn**	**15 10 12.3**	**-1.3**
MRZ	**Mangatainoka R**	**4.46**	**222**	PN	**Pn**	**15 10 16.5**	**-1.6**
MRZ	**Mangatainoka R**	**4.46**	**222**	P	**Pn**	**15 10 16.5**	**-1.6**
HOWZ	**Holdsworth Sta**	**4.67**	**221**	PN	**Pn**	**15 10 19.8**	**-1.1**
PAWZ	**Paruwai Farm**	**5.07**	**218**	PN	**Pn**	**15 10 24.0**	**-2.5**
PAWZ	**Paruwai Farm**	**5.07**	**218**	P	**Pn**	**15 10 24.0**	**-2.5**
OUZ	**Omahuta**	**5.27**	**293**	PN	**Pn**	**15 10 29.7**	**+0.5**
OUZ	**Omahuta**	**5.27**	**293**	P	**Pn**	**15 10 29.7**	**+0.5**
THZ	**Tophouse**	**6.70**	**228**	PN	**Pn**	**15 10 46.3**	**-2.6**
THZ	**Tophouse**	**6.70**	**228**	P	**Pn**	**15 10 46.3**	**-2.6**
RPZ	**Rata Peaks**	**9.00**	**223**	P	**Pn**	**15 11 18.4**	**-2.0**
0.3nm,0.3s,baz=90,slow=6.1,SNR=2.7							
RPZ				S	**Sn**	**15 12 51.0**	**-11**
1.0nm,0.3s,baz=356,slow=21,SNR=9.4							
ASAR	**Alice Springs**	**41.23**	**276**	P	**P**	**15 16 55.0**	**-0.8**
0.5nm,0.7s,baz=119,slow=7.2,SNR=10							
ARCES	**ARCESS Array B 144.90 344**			PKPbc	PKPdf	15 28 46.0	-0.8
1.9nm,1.0s,baz=46,slow=3.5,SNR=5.5							
FINES	**FINESS Array B 150.80 334**			PKPbc	PKPbc	15 29 03.8	+1.6
0.8nm,0.6s,baz=64,slow=3.2,SNR=3.5							

MAN 15 15:28:37, 7°.65N×124°.69E, h32km, mb4.8, ML3.7, MS3.8, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.43**	**58**	*e*P	Pb	15 28 48.9	+2.4
BUKP				*e*S	Sb	15 28 55.3	+2.3
CTBH	**Cotabato--PC H**	**0.61**	**226⇑**	*i*P	Pb	15 28 50.9	+1.5
CTBH				*i* S	Sb	15 28 59.9	+2.1
CGP	**Cagayan de Oro**	**0.80**	**0⇑**	*e*P	Pn	15 28 51.6	-0.5
CGP				*i* S	Sn	15 29 01.8	-1.1
PAGZ	**Pagadian**	**1.31**	**279**	*e*P	Pn	15 28 59.8	+0.7
PAGZ				*e*S	Sn	15 29 12.4	-3.1

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*CSEM **15** 15:31:06.6, 46°.23N×6°.98E, h-1km±3km, ML1.2, Suspected Mining explosion. After ZUR*
ZUR 15 15:31:06.6, 46°.23N×6°.98E, h-1km±3km, ML1.2/4, 4C, Suspected Mining explosion., Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALAN	**Lac Salanfe**	**0.09**	**182⇑**	*i*Pg		15 31 08.6	
161nm,0.7s							
SALAN				*e*Sg		15 31 10.2	
161nm,0.7s							
SALAN	**Lac Salanfe**	**0.09**	**182⇑**	*i*Pg		15 31 08.6	
161nm,0.7s							
SALAN				*e*Sg		15 31 10.2	
161nm,0.7s							
GRYON	**Gryon**	**0.09**	**79⇑**	*i*Pg		15 31 08.8	
67nm,1.1s							
GRYON				*e*Sg		15 31 10.4	
67nm,1.1s							
GRYON	**Gryon**	**0.09**	**79⇑**	*i*Pg		15 31 08.8	
67nm,1.1s							
GRYON				*e*Sg		15 31 10.4	
67nm,1.1s							
AIGLE	**Aigle**	**0.11**	**351**	*e*Pg		15 31 09.1	
241nm,1.0s							
AIGLE				*e*Sg		15 31 11.2	
241nm,1.0s							
AIGLE	**Aigle**	**0.11**	**351**	*e*Pg		15 31 09.1	
241nm,1.0s							
AIGLE				*e*Sg		15 31 11.2	
241nm,1.0s							
SENIN	**Lac Senin/Sane**	**0.26**	**59**	*e*Pg		15 31 11.9	
71nm,0.4s							
SENIN				*e*Sg		15 31 16.2	
71nm,0.4s							
SENIN	**Lac Senin/Sane**	**0.26**	**59**	*e*Pg		15 31 11.9	
71nm,0.4s							
SENIN				*e*Sg		15 31 16.2	
71nm,0.4s							

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*NIED **15** 15:45:00, 27°.80N×142°.30E, h47km, Mw4.1 Best double couple: M0 1.51000×10^15 NP1:φ=152.00000°, λ73.00000°. NP2:φ=50.00000°, δ17.00000°, λ167.00000°.*
*ISCJB **15** 15:45:16.9±0.5, 27°.86N±0°.04×141°.9E±0°.2, h64km±8km, mb4.0/8, Error ellipse: s-maj=29.3km s-min=4.5km az=169.3*
*IDC **15** 15:45:16.6±0.8, 27°.60N×141°.27E, h28km±5km, mb3.7/6, mb1 3.9/8, mb1mx3.6/23, mbtmp3.8/8, ML4.1/2, Error ellipse: s-maj=26.4km s-min=13.0km az=70.0*
*NEIC **15** 15:45:17.2±0.8, 27°.56N×141°.21E, mb4.5/1, MW4.1(NIED), Error ellipse: s-maj=39.0km s-min=11.4km az=82.0*
*JMA **15** 15:45:18.9±0.1, 27°.77N×142°.27E, h63km, M4.6*
ISC 15 15:45:18.5±0.5, 27°.81N±0°.05×141°.9E±0°.2, h60km±7km, h28km±3.2km: pP-P, n29, σ1°.08/39, mb4.0/8, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**0.74**	**163**	Pn	**Pn**	**15 45 33.1**	**-0.1**
286nm,0.3s,baz=270,slow=20,SNR=199							
CBIJ				Sn	**Sn**	**15 45 43.4**	**-0.7**
1μm,0.3s,baz=97,slow=23,SNR=34							
CBIJ	**Chichi jima**	**0.74**	**163**	P	**Pn**	**15 45 33.1**	**-0.2**
CBIJ				S	**Sn**	**15 45 43.5**	**-0.5**
JHHJ	**Haha-jima-NKT**	**1.19**	**170**	P	**Pn**	**15 45 38.9**	**-0.2**
JHHJ				S	**Sn**	**15 45 54.2**	**-0.2**
JHJ2	**Mitsune**	**5.59**	**341**	P	**Pn**	**15 46 39.4**	**+0.3**
JHJ2				S	**Sn**	**15 47 42.1**	**+0.1**
JHJ	**Hachijo jima 2**	**5.61**	**341**	Pn	**Pn**	**15 46 39.4**	**+0.1**
11nm,0.3s,baz=223,slow=20,SNR=31							
JHJ				Sn	**Sn**	**15 47 40.8**	**-1.6**
11nm,0.3s,baz=89,slow=22,SNR=4.8							
BSO1	**Boso 1**	**6.87**	**353**	P	**Pn**	**15 46 56.1**	**-0.5**
BSO1				S	**Sn**	**15 48 11.9**	**-1.5**
BSO3	**Boso 3**	**7.08**	**350**	P	**Pn**	**15 46 59.5**	**+0.1**
BSO4	**Boso 4**	**7.29**	**350**	P	**Pn**	**15 47 03.6**	**+1.3**
BSO4				S	**Sn**	**15 48 24.6**	**+1.0**
JOD2	**Odawara 2**	**7.82**	**343**	P	**Pn**	**15 47 10.1**	**+0.6**
HMMJ	**Hamamatsu 2**	**7.90**	**334**	P	**Pn**	**15 47 14.4**	**+3.8**
JHU	**Hanno**	**8.33**	**345**	P	**Pn**	**15 47 17.7**	**+1.2**
JHU				S	**Sn**	**15 48 47.2**	**-1.9**
MJAR	**Matsushiro Arr**	**9.26**	**341**	Pn	**Pn**	**15 47 29.2**	**-0.1**
3.0nm,0.3s,baz=155,slow=9.8,SNR=21							
MJAR				Sn	**Sn**	**15 49 11.8**	**-0.1**
0.5nm,0.3s,baz=241,slow=33,SNR=4.1							
MAJO	**Matsushiro**	**9.26**	**341**	*e*P	**Pn**	**15 47 31.0**	**+1.7**
13nm,0.4s							
MAT	**Matsushiro**	**9.26**	**341**	P	**Pn**	**15 47 31.1**	**+1.8**
MAT				S	**Sn**	**15 49 11.8**	**-0.2**
MAT	**Matsushiro**	**9.26**	**341**	P	**Pn**	**15 47 31.3**	**+2.0**
ERM	**Erimo**	**14.21**	**4**	*e*P	**Pn**	**15 48 34.0**	**-2.5**
ASAJ	**Asahikawa**	**16.28**	**2**	Pn	**Pn**	**15 49 03.0**	**-0.2**
0.6nm,0.3s,baz=214,slow=15,SNR=7.2							
HHC	**Hu-ho-hao-te**	**28.10**	**305**	*e*P	**P**	**15 51 03.9**	**-0.7**
HHC				S	**S**	**15 55 42.9**	**-2.4**
HHC				pmax	pmax		
comp=Z,17nm,0.5s,mb4.9							
HHC				pmax	pmax		
comp=Z,73nm,5.3s							
WRAB	**Tennant Creek**	**48.02**	**190**	*e*P	**P**	**15 53 51.7**	**-0.1**
comp=Z,2.2nm,0.4s,mb4.5							
WRA	**Warramunga Arr**	**48.03**	**190**	P	**P**	**15 53 51.8**	**-0.1**
comp=Z,2.4nm,0.5s,mb4.5,baz=14,slow=8.9,SNR=43							
WRA				pP	pP	15 53 59.5	-7.8
comp=Z,1.3nm,0.4s,baz=15,slow=8.8,SNR=6.1							
WRA				PcP	PcP	15 55 19.6	+0.6
comp=Z,0.7nm,0.6s,baz=10.0,slow=3.8,SNR=4.0							
MK31	**Makanchi Array**	**49.85**	**309**	P	**P**	**15 54 06.2**	**+0.7**
MKAR	**Makanchi Array**	**49.85**	**309**	PcP	PcP	15 55 27.1	+1.7
comp=Z,0.7nm,0.7s,baz=92,slow=7.3,SNR=3.7							
ASAR	**Alice Springs**	**51.76**	**189**	P	**P**	**15 54 19.5**	**-0.6**
comp=Z,0.3nm,0.3s,mb3.6,baz=0.4,slow=5.2,SNR=8.5							
ASAR				PcP	PcP	15 55 33.6	+1.0
comp=Z,0.3nm,0.7s,baz=25,slow=4.6,SNR=2.8							
BVAR	**Borovoye Array**	**57.37**	**317**	P	**P**	**15 54 58.6**	**-1.8**
comp=Z,0.7nm,0.3s,mb4.1,baz=74,slow=23,SNR=9.9							
BVAR				pP	pP	15 55 08.8	-7.5
comp=Z,0.7nm,0.3s,baz=98,slow=8.8,SNR=4.5							
BRVK	**Borovoye**	**57.43**	**317**	P	**P**	**15 55 01.5**	**+0.6**
YKA	**Yellowknife Ar**	**71.62**	**28**	P	**P**	**15 56 38.5**	**+5.2**
comp=Z,0.1nm,0.5s,mb3.0,baz=333,slow=6.2,SNR=4.3							
YKA	**Yellowknife Ar**	**71.62**	**28**	P	**P**	**15 56 38.5**	**+5.2**
FINES	**FINESS Array B**	**77.21**	**334**	P	**P**	**15 57 08.5**	**+2.8**
comp=Z,1.0nm,0.6s,mb3.9,baz=76,slow=5.9,SNR=3.4							
FINES				pP	pP	15 57 16.7	-5.6
comp=Z,0.7nm,0.4s,baz=73,slow=5.9,SNR=1.8							
FINES				sP	sP	15 57 22.3	-6.6
comp=Z,1.4nm,0.6s,baz=63,slow=4.7,SNR=2.4							
AKASG	**Malin Array Be**	**81.92**	**324**	P	**P**	**15 57 32.5**	**+1.1**
comp=Z,0.4nm,0.3s,mb3.8,baz=51,slow=4.7,SNR=2.4							

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*IDC **15** 15:54:40.3±3.6, 20°.80S×178°.76W, h545km±34km, mb3.3/5, mb1 3.5/5, mb1mx3.2/15, mbtmp3.3/5, Error ellipse: s-maj=78.5km s-min=26.2km az=154.0*
*ISCJB **15** 15:54:41.0±3.2, 21°.1S±0°.5×178°.8W±0°.3, h564km±28km, mb4.0/7, Error ellipse: s-maj=94.7km s-min=24.1km az=151.4*
*NEIC **15** 15:54:41.9±2.6, 20°.96S×178°.75W, h568km±19km, mb4.4/2, Error ellipse: s-maj=71.4km s-min=18.4km az=149.0*
ISC 15 15:54:41.5±3.2, 21°.1S±0°.5×178°.7W±0°.3, h557km±26km, n15, σ0°.59/11, mb4.0/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.55**	**318**	*e*P	**P**	**15 56 08.3**	**+0.1**
DZM	**Mont Dzumac**	**13.82**	**263**	P	**P**	**15 57 38.9**	**0.0**
EIDS	**Eidsvold**	**28.02**	**256**	*e*P	**P**	**15 59 48.3**	**-0.2**
CTAO	**Charters Tower**	**32.75**	**265**	*e*P	**P**	**16 00 29.4**	**+0.2**
8.3nm,0.5s,mb4.5							
STKA	**Stephens Creek**	**36.90**	**245**	P	**P**	**16 01 04.5**	**+0.9**
3.3nm,0.6s,mb4.0,baz=93,slow=9.0,SNR=25							
STKA	**Stephens Creek**	**36.90**	**245**	*e*P	**P**	**16 01 04.5**	**+0.9**
ASAR	**Alice Springs**	**43.71**	**257**	P	**P**	**16 01 58.0**	**-0.1**
3.6nm,0.5s,mb4.2,baz=92,slow=8.2,SNR=151							
ASAR				PcP	PcP	16 03 32.0	-0.6
0.6nm,0.6s,baz=102,slow=3.4,SNR=8.0							
ASAR				ScP	ScP	16 06 32.6	+1.2
0.5nm,0.7s,baz=108,slow=4.1,SNR=5.4							
WRAB	**Tennant Creek**	**43.83**	**263**	*e*P	**P**	**16 01 58.2**	**-0.7**
1.7nm,0.3s,mb4.0							
WRA	**Warramunga Arr**	**43.84**	**263**	P	**P**	**16 01 58.1**	**-0.9**
1.5nm,0.3s,mb4.0,baz=96,slow=7.3,SNR=95							
TXAR	**Lajitas Array**	**87.97**	**58**	P	**P**	**16 06 32.5**	**-0.3**
0.9nm,1.1s,mb3.4,baz=213,slow=6.7,SNR=5.3							
CMAR	**Chiang Mai Arr**	**89.69**	**290**	P	**P**	**16 06 42.0**	**+1.0**
0.4nm,0.5s,mb3.5,baz=137,slow=4.5,SNR=3.8							
BVAR	**Borovoye Array**	**119.12**	**320**	PKP	PKPdf	16 12 24.8	-2.3
0.4nm,0.4s,baz=141,slow=5.5,SNR=3.6							
AKASG	**Malin Array Be**	**143.23**	**330**	PKhKP		16 13 07.7	
1.7nm,0.4s,baz=43,slow=4.3,SNR=12							
BRTR	**Keskin Array B**	**146.75**	**311**	PKPbc	PKPbc	16 13 19.8	-1.7
0.7nm,0.4s,baz=136,slow=4.0,SNR=5.0							
MMAI	**Mount Meron Ar**	**147.53**	**299**	PKPbc	PKPbc	16 13 23.3	-0.4
1.2nm,0.4s,baz=84,slow=5.9,SNR=3.0							

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*DDA **15** 16:29:09.9, 39°.45N×25°.95E, h7km±4km, Md2.9*
*ISCJB **15** 16:29:10.2±0.5, 39°.44N±0°.02×25°.92E±0°.04, h7km±4km, Error ellipse: s-maj=5.2km s-min=3.5km az=173.8*
*CSEM **15** 16:29:10.4±0.2, 39°.42N×25°.90E, h10km, ML2.9/4, Error ellipse: s-maj=4.7km s-min=3.4km az=78.0*
*ISK **15** 16:29:10.1, 39°.50N×25°.83E, h11km, MD2.9*
*THE **15** 16:29:11.0, 39°.41N×25°.93E, h13km, ML2.9/4, Error ellipse: s-maj=0.9km s-min=0.4km az=57.0*
ISC 15 16:29:10.8±0.5, 39°.43N±0°.02×25°.92E±0°.04, h10km±4km, n39, σ0°.77/61, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.22**	**194**	P	**Pg**	**16 29 15.7**	**+0.4**
SIGR				S	**Sg**	**16 29 19.0**	**+0.6**
SIGR	**SIGRI**	**0.22**	**194**	P	**Pg**	**16 29 15.7**	**+0.4**
SIGR				S	**Sg**	**16 29 19.0**	**+0.6**
PRK	**Paraskevi**	**0.33**	**124**	P	**Pg**	**16 29 17.4**	**+0.2**
PRK				S	**Sg**	**16 29 21.9**	**+0.3**
PRK	**Paraskevi**	**0.33**	**124**	P	**Pg**	**16 29 17.4**	**+0.2**
PRK				S	**Sg**	**16 29 21.9**	**+0.3**
EZN	**Ezine**	**0.51**	**38**	*e*PG	**Pg**	**16 29 20.5**	**-0.2**
EZN				*e*SG	**Sg**	**16 29 28.1**	**+0.8**
EZN	**Ezine**	**0.51**	**38**	*e*Pg	**Pg**	**16 29 20.5**	**-0.1**
EZN				*e*Sg	**Sg**	**16 29 28.1**	**+0.8**
AYVA	**Ayvalik**	**0.61**	**101**	*i* P	**Pg**	**16 29 22.1**	**-0.4**
AYVA				*i* S	**Sg**	**16 29 30.7**	**+0.3**
AYVA	**Ayvalik**	**0.61**	**101**	*i* P	**Pg**	**16 29 22.1**	**-0.4**
AYVA				*i* S	**Sg**	**16 29 30.7**	**+0.2**
LIA	**Limnos Island**	**0.74**	**310**	P	**Pg**	**16 29 25.3**	**+0.2**
LIA				S	**Sg**	**16 29 36.4**	**+1.6**
LIA	**Limnos Island**	**0.74**	**310**	P	**Pg**	**16 29 25.3**	**+0.2**
LIA				S	**Sg**	**16 29 36.4**	**+1.6**
GADA	**Gvkgeada**	**0.76**	**359**	*e*PG	**Pg**	**16 29 23.7**	**-1.8**
GADA				*e*SG	**Sg**	**16 29 34.6**	**-0.9**
GADA	**Gvkgeada**	**0.76**	**359**	*e*Pg	**Pg**	**16 29 23.7**	**-1.8**
GADA				*e*Sg	**Sg**	**16 29 34.6**	**-0.9**
CHOS	**Chios island**	**1.04**	**174**	P	**Pg**	**16 29 30.0**	**-0.8**
CHOS				S	**Sg**	**16 29 44.5**	**+0.1**
CHOS	**Chios island**	**1.04**	**174**	P	**Pg**	**16 29 30.0**	**-0.8**
CHOS				S	**Sg**	**16 29 44.5**	**+0.1**
LPK	**Lapseki**	**1.14**	**34**	*e*PN	**Pg**	**16 29 32.3**	**-0.5**
LPK				*e*SN	**Sg**	**16 29 47.5**	**-0.1**
LPK	**Lapseki**	**1.14**	**34**	*e*Pn	**Pg**	**16 29 32.3**	**-0.4**
LPK				*e*Sn	**Sg**	**16 29 47.5**	**-0.1**
URLA	**Izmir**	**1.19**	**154**	*i* P	**Pb**	**16 29 31.9**	**-1.4**
URLA				*i* S	**Sb**	**16 29 48.2**	**-0.5**
URLA	**Izmir**	**1.19**	**154**	*i* P	**Pb**	**16 29 31.9**	**-1.4**
URLA				*i* S	**Sb**	**16 29 48.2**	**-0.5**
ENEZ	**Enez**	**1.32**	**8**	*e*PN	**Pn**	**16 29 33.7**	**-1.5**
ENEZ	**Enez**	**1.32**	**8**	*e*Pn	**Pn**	**16 29 33.7**	**-1.5**
ERIK	**Erikli-Kesan**	**1.32**	**20**	*e*PN	**Pn**	**16 29 34.4**	**-0.9**
ERIK	**Erikli-Kesan**	**1.32**	**20**	*e*Pn	**Pn**	**16 29 34.4**	**-0.8**
BALY	**Balya**	**1.35**	**76**	*i* P	**Pn**	**16 29 35.8**	**+0.2**
BALY				*i* S	**Sb**	**16 29 52.7**	**-0.7**
BALY	**Balya**	**1.35**	**76**	*i* P	**Pn**	**16 29 35.8**	**+0.2**
BALY				*i* S	**Sb**	**16 29 52.7**	**-0.6**
KRBG	**Karabiga-Canak**	**1.43**	**47**	*e*PN	**Pn**	**16 29 36.9**	**+0.2**
KRBG	**Karabiga-Canak**	**1.43**	**47**	*e*Pn	**Pn**	**16 29 36.9**	**+0.2**
GONE	**Gonen-Balikesi**	**1.49**	**65**	*e*PN	**Pn**	**16 29 38.4**	**+0.9**
GONE				*e*SN	**Sn**	**16 29 58.3**	**+1.2**
GONE	**Gonen-Balikesi**	**1.49**	**65**	*e*Pn	**Pn**	**16 29 38.4**	**+0.8**
GONE				*e*Sn	**Sn**	**16 29 58.3**	**+1.2**
RKY	**Sarkoy-Tekirda**	**1.58**	**37**	*e*PN	**Pn**	**16 29 38.6**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.58**	**37**	*e*Pn	**Pn**	**16 29 38.6**	**-0.3**
SART	**Tekirdag**	**1.59**	**37**	*i* P	**Pn**	**16 29 39.4**	**+0.5**
SART	**Tekirdag**	**1.59**	**37**	*i* P	**Pn**	**16 29 39.4**	**+0.5**
BNT	**Bandirma**	**1.79**	**58**	*e*PN	**Pn**	**16 29 41.9**	**+0.1**
KCTX	**Karacabey (Bur**	**2.05**	**65**	*e*PN	**Pn**	**16 29 45.8**	**+0.5**
KCTX	**Karacabey (Bur**	**2.05**	**65**	*e*Pn	**Pn**	**16 29 45.8**	**+0.5**
ARMT	**Armutlu**	**2.53**	**62**	*e*PN	**Pn**	**16 29 52.5**	**+0.7**
ARMT	**Armutlu**	**2.53**	**62**	*e*Pn	**Pn**	**16 29 52.5**	**+0.7**
CTKS	**Kestanelik-??a**	**2.68**	**47**	*e*PN	**Pn**	**16 29 54.7**	**+0.8**
CTKS	**Kestanelik-??a**	**2.68**	**47**	*e*Pn	**Pn**	**16 29 54.7**	**+0.8**

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*ISCJB **15** 16:46:43.3±0.7, 39°.67N±0°.05×27°.90E±0°.04, h7km±5km, Error ellipse: s-maj=8.0km s-min=4.7km az=5.2*
*DDA **15** 16:46:43.6, 39°.70N×27°.88E, h7km±3km, Md2.7*
*ISK **15** 16:46:43.2, 39°.70N×27°.87E, h5km, ML1.9*
*CSEM **15** 16:46:43.4±0.2, 39°.68N×27°.89E, h8km, ML1.9, Error ellipse: s-maj=5.6km s-min=3.8km az=19.0*
ISC 15 16:46:43.5±0.7, 39°.65N±0°.05×27°.88E±0°.04, h11km±4km, n32, σ0°.76/43, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.01**	**154**	*e*PG	**Pg**	**16 46 45.2**	**-0.1**
BALB	**Balikesir**	**0.01**	**154**	*e*Pg	**Pg**	**16 46 45.2**	**-0.1**
BALY	**Balya**	**0.22**	**295**	*i* P	**Pg**	**16 46 47.7**	**-0.3**
BALY				*i* S	**Sg**	**16 46 52.0**	**+0.9**
BALY	**Balya**	**0.22**	**295**	*i* P	**Pg**	**16 46 47.7**	**-0.3**
BALY				*i* S	**Sg**	**16 46 52.0**	**+0.9**
GONE	**Gonen-Balikesi**	**0.42**	**340**	*e*PG	**Pg**	**16 46 51.1**	**-0.7**
GONE	**Gonen-Balikesi**	**0.42**	**340**	*e*Pg	**Pg**	**16 46 51.1**	**-0.7**
KCTX	**Karacabey (Bur**	**0.72**	**31**	*e*PG	**Pg**	**16 46 56.3**	**-1.1**
KCTX	**Karacabey (Bur**	**0.72**	**31**	*e*Pg	**Pg**	**16 46 56.3**	**-1.1**
KRBG	**Karabiga-Canak**	**0.87**	**329**	*e*PG	**Pg**	**16 46 59.8**	**-0.4**
KRBG				*e*SG	**Sg**	**16 47 11.4**	**-0.1

FDF	**Fort de France**	**0.94**	**234**	*e*Pg	**Pg**	**17 09 41.4**	**-1.0**
FDF				*e*Sg	**Sg**	**17 09 53.1**	**-1.6**
FDF	**Fort de France**	**0.94**	**234**	*e*P	**Pb**	**17 09 42.0**	**-0.3**
FDF				*e*S	**Sb**	**17 09 54.0**	**-0.7**
DWS	**Wesley**	**0.95**	**287**	*e*P	**Pb**	**17 09 43.2**	**+0.5**
DWS				*e*S	**Sb**	**17 09 56.0**	**+0.9**
DWS	**Wesley**	**0.95**	**287**	*e*P	**Pb**	**17 09 43.2**	**+0.5**
DWS				*e*S	**Sb**	**17 09 56.0**	**+0.9**
DFBT	**Forest Bistro**	**0.96**	**267**	*e*P	**Pb**	**17 09 43.1**	**+0.4**
DFBT				*e*S	**Sb**	**17 09 54.8**	**-0.4**
DFBT	**Forest Bistro**	**0.96**	**267**	*e*P	**Pb**	**17 09 43.1**	**+0.4**
DFBT				*e*S	**Sb**	**17 09 54.8**	**-0.4**
DSHT	**Scott's Head**	**0.97**	**266**	*e*P	**Pb**	**17 09 43.4**	**+0.4**
DSHT				*e*S	**Sb**	**17 09 56.0**	**+0.3**
DSHT	**Scott's Head**	**0.97**	**266**	*e*P	**Pb**	**17 09 43.4**	**+0.4**
DSHT				*e*S	**Sb**	**17 09 56.0**	**+0.3**
MDN	**Morne-Daniel**	**0.99**	**272**	*e*P	**Pb**	**17 09 43.9**	**+0.6**
MDN				*e*S	**Sb**	**17 09 56.9**	**+0.7**
MDN	**Morne-Daniel**	**0.99**	**272**	*e*P	**Pb**	**17 09 43.9**	**+0.6**
MDN				*e*S	**Sb**	**17 09 56.9**	**+0.7**
BIM	**Bigot**	**1.02**	**222⇑**	*e*P	**Pb**	**17 09 43.6**	**-0.2**
BIM			⇑	*e*S	**Sb**	**17 09 56.4**	**-0.7**
MGG	**Marie-Galante**	**1.11**	**305**	*e*P	**Pb**	**17 09 44.6**	**-0.7**
DEG	**La Desirade**	**1.22**	**327**	*e*P	**Pn**	**17 09 44.7**	**-2.3**
TBG	**Guadaloupe-3**	**1.35**	**295**	*e*P	**Pn**	**17 09 47.5**	**-1.3**
SLW	**Petit Monier**	**1.38**	**204**	*e*P	**Pn**	**17 09 48.6**	**-0.4**
SLW				*e*S	**Sn**	**17 10 05.6**	**-1.5**
PHG	**Guadaloupe-2**	**1.43**	**301**	*e*P	**Pn**	**17 09 49.5**	**-0.3**
BCG	**Bois Riant Cap**	**1.45**	**303**	*e*P	**Pn**	**17 09 49.7**	**-0.4**
SEG	**Port Louis**	**1.56**	**316**	*e*P	**Pn**	**17 09 51.4**	**-0.3**
SLB	**Belfond**	**1.59**	**204**	*e*P	**Pn**	**17 09 52.6**	**+0.6**
SLB				*e*S	**Sn**	**17 10 12.3**	**-0.1**
SLB	**Belfond**	**1.59**	**204**	*e*P	**Pn**	**17 09 52.6**	**+0.6**
SLB				*e*S	**Sn**	**17 10 12.3**	**-0.1**
LZG	**Guadaloupe-1**	**1.60**	**302**	*e*P	**Pn**	**17 09 51.9**	**-0.3**
MCLT	**Moule a Chique**	**1.66**	**200**	*e*P	**Pn**	**17 09 53.7**	**+0.7**
MCLT				*e*S	**Sn**	**17 10 14.5**	**+0.3**
MCLT	**Moule a Chique**	**1.66**	**200**	*e*P	**Pn**	**17 09 53.7**	**+0.7**
MCLT				*e*S	**Sn**	**17 10 14.5**	**+0.3**
SSV	**Crater Summit**	**2.11**	**202**	*e*P	**Pn**	**17 10 00.4**	**+1.3**
SSV				*e*S	**Sn**	**17 10 24.9**	**-0.3**
SSV	**Crater Summit**	**2.11**	**202**	*e*P	**Pn**	**17 10 00.4**	**+1.3**
SSV				*e*S	**Sn**	**17 10 24.9**	**-0.3**
SVV	**Soufriere Volc**	**2.12**	**203**	*e*P	**Pn**	**17 10 01.0**	**+1.6**
SVV				*e*S	**Sn**	**17 10 25.9**	**+0.3**
SVV	**Soufriere Volc**	**2.12**	**203**	*e*P	**Pn**	**17 10 00.8**	**+1.4**
SVV				*e*S	**Sn**	**17 10 25.9**	**+0.3**
SVB	**Belmont**	**2.18**	**203**	*e*P	**Pn**	**17 10 00.7**	**+0.5**
SVB				*e*S	**Sn**	**17 10 27.6**	**+0.6**
SVB	**Belmont**	**2.18**	**203**	*e*P	**Pn**	**17 10 00.7**	**+0.5**
SVB				*e*S	**Sn**	**17 10 27.6**	**+0.6**

CASC 15 17:14:42.6±3.1, 11°27N×86°49W, h18km±12km, MD3.7, ML3.6, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSN	**San Juan del S**	**0.62**	**87**	*e*P	Pg	17 14 54.4	-0.5
SSN				*e*S	Sg	17 15 03.7	+0.4
SSN				AML	AML	17 15 05.7	
	comp=Z,2μm,0.5s						
APON	**Apoyo**	**0.77**	**32**	*e*P	Pb	17 14 57.6	+0.2
TICN	**Ticuantepe**	**0.80**	**18**	*e*P	Pb	17 14 58.3	+0.3
XAVN	**Gruta Xavier**	**0.89**	**10**	*e*P	Pb	17 14 59.6	0.0
XAVN				*e*S	Sb	17 15 11.3	+0.2
CONN	**Concepcion**	**0.90**	**71**	*e*P	Pb	17 14 59.1	-0.5
MGAN	**Managua**	**0.91**	**15**	*e*P	Pb	17 14 59.5	-0.4
MGAN				*e*S	Sb	17 15 11.7	+0.1
COPN	**Copaltepe**	**0.92**	**354**	*e*P	Pb	17 14 59.9	0.0
CSAN		**0.92**	**4**	*e*P	Pb	17 14 59.8	-0.2
APYN	**Apoyeque**	**0.97**	**8**	*e*P	Pb	17 15 00.7	-0.3
APYN				*e*S	Sb	17 15 14.1	+0.7
HUEN		**1.11**	**16**	*e*P	Pn	17 15 02.2	-1.1
MOMN	**Momotombo**	**1.14**	**357**	*e*P	Pn	17 15 03.3	-0.4
LAPC	**Finca la Perla**	**1.15**	**115**	*i* P	Pn	17 15 02.0	-1.8
LAPC				*i* S	Sb	17 15 16.0	-2.5
GB1A	**Borinquen Arri**	**1.16**	**112**	*i* P	Pn	17 15 02.3	-1.6
LEON	**Leon**	**1.21**	**341**	*e*P	Pn	17 15 04.3	-0.3
GPS3	**Bodega del ICE**	**1.21**	**115**	*i* P	Pn	17 15 02.9	-1.7
CNGN	**Cerro Negro**	**1.25**	**350**	*e*P	Pn	17 15 04.5	-0.6
TELN	**Telica**	**1.37**	**346**	*e*P	Pn	17 15 07.0	+0.1
TELN				*e*S	Sn	17 15 24.9	+0.3
VCR	**Vista de Mar**	**1.41**	**143**	*e*P	Pn	17 15 11.6	+4.2
CUI	**Cuipilapa**	**1.43**	**115**	*i* P	Pn	17 15 06.5	-1.2
CRIN	**San Cristobal**	**1.53**	**339**	*e*P	Pn	17 15 09.2	+0.2
CRIN				*e*S	Sn	17 15 27.6	-0.8
JCR	**Jicaral**	**1.95**	**136**	*e*P	Pn	17 15 14.6	-0.2
JCR				*e*S	Sn	17 15 41.4	+2.6
CGA2	**Cerro Gallo 2**	**2.34**	**122**	*e*P	Pn	17 15 23.2	+3.0
CGA2				*e*S	Sn	17 15 51.2	+2.7
PRS1	**Puriscal**	**2.49**	**121**	*e*P	Pn	17 15 24.7	+2.4
LAJ	**Bijagual**	**2.71**	**121**	*e*P	Pn	17 15 22.6	-2.7
URSC	**Ursasca**	**3.02**	**118**	*e*P	Pn	17 15 29.8	+0.3
BUS	**Buena Vista**	**3.18**	**122**	*e*P	Pn	17 15 31.2	-0.5
BAR1		**3.72**	**122**	*e*P	Pn	17 15 38.0	-1.1
BAR1				*e*S	Sn	17 16 18.9	-3.6

IDC 15 17:29:05.3±2.4, 10°48N×91°38E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.3/22, mbtmp3.5/4, ML3.8/1, Error ellipse: s-maj=73.0km s-min=28.5km az=68.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.79**	**42**	Pn	Pn	17 31 41.3	+0.1
	0.2nm,0.3s,baz=214,slow=17,SNR=4.3						
MKAR	**Makanchi Array**	**37.00**	**350**	P	P	17 36 16.5	0.0
	0.2nm,0.6s,baz=169,slow=8.4,SNR=4.0						
WRA	**Warramunga Arr**	**51.99**	**126**	P	P	17 38 16.5	-0.2
	0.5nm,1.0s,baz=306,slow=8.3,SNR=5.6						
ASAR	**Alice Springs**	**53.67**	**130**	P	P	17 38 29.2	+0.1
	0.5nm,0.8s,baz=305,slow=6.8,SNR=9.1						

*ISCJB **15** 17:34:30.6±0.4, 50°15N±0°03×18°40E±0°03, h0km, Error ellipse: s-maj=4.1km s-min=2.3km az=16.3*
*IPEC **15** 17:34:31.9±0.2, 50°08N×18°52E, h4km±1km, ML1.8/4, Error ellipse: s-maj=1.9km s-min=1.1km az=163.0*
*CSEM **15** 17:34:32.3±0.3, 50°12N×18°37E, h2km, ML2.8/10, Error ellipse: s-maj=6.8km s-min=3.4km az=13.0*
*WAR **15** 17:34:32.9, 50°06N×18°43E*
*PRU **15** 17:34:33.4, 50°11N×18°39E, h0km*
*VIE **15** 17:34:33.5±0.4, 49°68N×18°51E, h0km, mb1.7/3, ML2.3/4, Error ellipse: s-maj=2.7km s-min=1.8km az=83.0 25 km SE of Ostrava Suspected Mining induced.*

ISC 15 17:34:32.6±0.4, 50°09N±0°03×18°39E±0°03, h0km, n39, σ1°23/73, 2C-1D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.13**	**265**	*e*Pg	**Pg**	**17 34 36.7**	**+1.7**
RAC				*e*Sg	**Sg**	**17 34 39.8**	**+3.2**
OKC	**Ostrava-Krasne**	**0.30**	**212**	*e*PG	**Pg**	**17 34 39.0**	**+0.7**
OKC				*e*SG	**Sg**	**17 34 43.5**	**+1.3**
	comp=Z,98nm,0.5s						
OKC	**Ostrava-Krasne**	**0.30**	**212**	*e*Pg	**Pg**	**17 34 38.7**	**+0.4**
	baz=44						
OKC				Sg	**Sg**	**17 34 43.5**	**+1.3**
	comp=Z,98nm,0.5s						
MORC	**Moravsky Berou**	**0.63**	**240**	*e*Pg	**Pg**	**17 34 45.2**	**+0.5**
MORC				*e*Sg	**Sg**	**17 34 54.1**	**+1.2**
	comp=Z,19nm,0.1s,baz=64						
OJC	**Ojcow**	**0.91**	**82**	*e*Pg	**Pg**	**17 34 47.3**	**-2.8**
OJC				*e*Sg	**Sg**	**17 35 00.1**	**-1.8**
JAVC	**Velka Javorina**	**1.32**	**201**	*e*Pg	**Pg**	**17 34 58.2**	**+0.3**
	baz=24						
JAVC				*e*Sg	**Sg**	**17 35 17.0**	**+2.0**
	comp=Z,7.3nm,0.2s						
DPC	**Dobruska-Polom**	**1.35**	**282**	*e*PG	**Pg**	**17 34 58.6**	**+0.1**
DPC				*e*SG	**Sg**	**17 35 16.9**	**+0.9**
	comp=Z,30nm,0.5s						
DPC	**Dobruska-Polom**	**1.35**	**282**	Pg	**Pg**	**17 34 58.6**	**+0.1**
DPC				Sg	**Sg**	**17 35 16.9**	**+0.9**
	comp=Z,30nm,0.5s						
VRAC	**Vranov**	**1.41**	**237**	*e*Pg	**Pg**	**17 34 59.2**	**-0.3**
VRAC				*e*Sg	**Sg**	**17 35 17.6**	**-0.1**
	comp=Z,13nm,0.2s,baz=57						
NIE	**Niedzica**	**1.42**	**118**	*e*Pg	**Pg**	**17 34 59.7**	**0.0**
NIE				*e*Sg	**Sg**	**17 35 19.2**	**+1.1**
NIE	**Niedzica**	**1.42**	**118**	*e*Pg	**Pg**	**17 34 59.7**	**0.0**
NIE				*e*Sg	**Sg**	**17 35 19.2**	**+1.1**
KOLL	**Kolacno**	**1.52**	**180**	*e*PN	**Pn**	**17 35 02.4**	**+1.5**
KOLL				*e*SN	**Sn**	**17 35 21.3**	**0.0**
KOLL	**Kolacno**	**1.52**	**180**	*e*Pn	**Pn**	**17 35 02.4**	**+1.5**
KOLL				*e*Sn	**Sn**	**17 35 21.3**	**0.0**
KSP	**Ksiaz**	**1.54**	**300**	*e*Pn	**Pn**	**17 35 01.2**	**0.0**
KSP				*e*Pg	**Pg**	**17 35 04.2**	**+2.3**
KSP				*e*Sn	**Sn**	**17 35 23.0**	**+1.2**
KSP				*e*Sg	**Sg**	**17 35 26.1**	**+4.2**
KSP	**Ksiaz**	**1.54**	**300**	*e*Pg	**Pg**	**17 34 59.9**	**-2.1**
KSP				*e*Sg	**Sg**	**17 35 21.7**	**-0.2**
UPC	**Upice**	**1.58**	**286**	*e*PG	**Pg**	**17 35 03.4**	**+0.6**
UPC				*e*SG	**Sg**	**17 35 24.0**	**+0.7**
UPC	**Upice**	**1.58**	**286**	Pg	**Pg**	**17 35 03.4**	**+0.6**
UPC				Sg	**Sg**	**17 35 24.0**	**+0.7**
VYHS	**Vyhne**	**1.63**	**170**	*e*PN	**Pn**	**17 35 02.1**	**-0.3**
VYHS				*e*SN	**Sn**	**17 35 23.1**	**-1.0**
VYHS	**Vyhne**	**1.63**	**170**	*e*Pn	**Pn**	**17 35 02.1**	**-0.3**
VYHS				*e*Sn	**Sn**	**17 35 23.1**	**-1.0**
KRUC	**Moravsky**	**1.66**	**232**	*e*Pn	**Pn**	**17 35 02.5**	**-0.4**
	baz=53						
KRUC				*e*Sg	**Sg**	**17 35 25.1**	**-0.7**
	comp=Z,7.7nm,0.2s,baz=53						
STHS	**Stebnicka Huta**	**1.97**	**109**	*e*PN	**Pn**	**17 35 10.7**	**+3.6**
STHS				*e*SG	**Sg**	**17 35 37.5**	**+1.7**
STHS	**Stebnicka Huta**	**1.97**	**109**	*e*Pn	**Pn**	**17 35 10.7**	**+3.6**
STHS				*e*Sg	**Sg**	**17 35 37.5**	**+1.7**
TREC	**Trest**	**2.05**	**248**	*e*PG	**Pg**	**17 35 09.8**	**-2.0**
TREC	**Trest**	**2.05**	**248**	Pg	**Pg**	**17 35 09.8**	**-2.0**
KECS	**Kecovo**	**2.12**	**139**	*e*PN	**Pn**	**17 35 08.5**	**-0.7**
KECS				*e*SN	**Sn**	**17 35 35.4**	**-0.7**
CRVS	**Cervenica-Dubn**	**2.33**	**120**	*e*PN	**Pn**	**17 35 15.6**	**+3.5**
CRVS				*e*SG	**Sg**	**17 35 47.2**	**-0.2**
CRVS	**Cervenica-Dubn**	**2.33**	**120**	*e*Pn	**Pn**	**17 35 15.6**	**+3.5**
CRVS				*e*Sg	**Sg**	**17 35 47.2**	**-0.2**
PRU	**Pruhonice**	**2.48**	**269**	*e*PG	**Pg**	**17 35 18.3**	**-1.8**
PRU				*e*SG	**Sg**	**17 35 51.5**	**-0.8**
	comp=Z,6.4nm,0.4s						
PRU	**Pruhonice**	**2.48**	**269**	Pg	**Pg**	**17 35 18.3**	**-1.8**
PRU				Sg	**Sg**	**17 35 51.5**	**-0.8**
	comp=Z,6.4nm,0.4s						
CONA	**Conrad Observa**	**2.73**	**218**	↓*e*Pg	**Pg**	**17 35 21.1**	**-3.9**
CONA	**Conrad Observa**	**2.73**	**218**	Pg	**Pg**	**17 35 21.1**	**-3.8**
BRG	**Berggiesshubel**	**2.95**	**287**	PG	**Pg**	**17 35 28.0**	**-1.0**
BRG				SG	**Sg**	**17 36 06.4**	**-0.8**
	comp=Z,3.3nm,0.5s						
KHC	**Kasperske Hory**	**3.27**	**255**	*e*PG	**Pg**	**17 35 33.2**	**-2.1**
KHC				*e*SG	**Sg**	**17 36 16.9**	**-0.8**
	comp=Z,7.4nm,0.7s						
KHC	**Kasperske Hory**	**3.27**	**255**	Pg	**Pg**	**17 35 33.2**	**-2.1**
KHC				Sg	**Sg**	**17 36 16.9**	**-0.8**
	comp=Z,7.4nm,0.7s						
MOA	**Molln**	**3.53**	**232**	↑*i*Pn	**Pn**	**17 35 27.3**	**-1.3**
MOA				⇑*i*Sg	**Sg**	**17 36 24.0**	**-1.8**
	comp=Z,4.3nm,0.6s						
MOA	**Molln**	**3.53**	**232**	Pn	**Pn**	**17 35 27.3**	**-1.2**
MOA				Sg	**Sg**	**17 36 24.0**	**-1.8**
	comp=Z,4.3nm,0.6s						
CLL	**Collm**	**3.63**	**292**	*e*Sg	**Sg**	**17 36 31.0**	**+1.7**
NKC	**Novy Kostel**	**3.82**	**274**	*e*SG	**Sg**	**17 36 35.1**	**-0.2**
	comp=Z,4.6nm,0.6s						
NKC	**Novy Kostel**	**3.82**	**274**	Sg	**Sg**	**17 36 35.1**	**-0.2**
	comp=Z,4.6nm,0.6s						

*ISCJB **15** 17:41:12.6±0.5, 45°46N±0°03×26°19E±0°04, h141km±5km, Error ellipse: s-maj=4.8km s-min=4.4km az=169.5*
*BUC **15** 17:41:13.2±0.7, 45°44N×26°22E, h144km±7km, MD4.5/2, Error ellipse: s-maj=5.5km s-min=4.6km az=335.0*
*NEIC **15** 17:41:13.8, 45°46N×26°24E, h136km, MG3.6(BUC), After BUC.*
*CSEM **15** 17:41:13.2±0.3, 45°44N×26°18E, h141km±3km, MD4.5/2, Error ellipse: s-maj=4.7km s-min=4.2km az=12.0*
*BEO **15** 17:41:14.2±0.9, 45°62N×26°22E, h70km, ML3.1/7*
*SOF **15** 17:41:14.0, 45°45N×26°14E, h28km, MD3.1*

ISC 15 17:41:13.2±0.5, 45°46N±0°03×26°21E±0°04, h143km±5km, n123, σ0°88/169, 41C-52D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLR	**Muntele Rosu**	**0.19**	**279**	⇑P	**Pn**	**17 41 33.4**	**+0.9**
MLR				S	**Sn**	**17 41 47.8**	**+0.7**
MLR	**Muntele Rosu**	**0.19**	**279**	↑*i*P	**Pn**	**17 41 33.4**	**+0.9**
MLR				*i* S	**Sn**	**17 41 47.8**	**+0.7**
MLR	**Muntele Rosu**	**0.19**	**279**	↑*i*P	**Pn**	**17 41 33.4**	**+0.9**
MLR	**Muntele Rosu**	**0.19**	**279**	↑*i*P	**Pn**	**17 41 33.4**	**+0.9**
MLR				*i* S	**Sn**	**17 41 47.8**	**+0.7**
ISR	**Istrita**	**0.41**	**145**	↑*i*P	**Pn**	**17 41 34.3**	**+1.1**
ISR	**Istrita**	**0.41**	**145**	↑*i*P	**Pn**	**17 41 34.3**	**+1.1**
ISR	**Istrita**	**0.41**	**145**	↑*i*P	**Pn**	**17 41 34.3**	**+1.1**
PLOR	**Plostina**	**0.50**	**38**	↑P	**Pn**	**17 41 34.1**	**+0.5**
PLOR				*i* S	**Sn**	**17 41 49.5**	**+0.3**
PLOR	**Plostina**	**0.50**	**38**	↑*i*P	**Pn**	**17 41 34.1**	**+0.5**
PLOR	**Plostina**	**0.50**	**38**	↑*i*P	**Pn**	**17 41 34.1**	**+0.5**
PLOR				*i* S	**Sn**	**17 41 49.5**	**+0.3**
VRI	**Vrincioaia**	**0.54**	**42**	⇑P	**Pn**	**17 41 34.6**	**+0.7**
VRI				S	**Sn**	**17 41 49.9**	**+0.3**
VRI	**Vrincioaia**	**0.54**	**42**	↑*i*P	**Pn**	**17 41 34.6**	**+0.8**
VRI				*i* S	**Sn**	**17 41 49.9**	**+0.3**
VRI	**Vrincioaia**	**0.54**	**42**	↑*i*P	**Pn**	**17 41 34.6**	**+0.8**
VRI	**Vrincioaia**	**0.54**	**42**	↑*i*P	**Pn**	**17 41 34.6**	**+0.8**
VRI				*i* S	**Sn**	**17 41 49.9**	**+0.3**
PETR		**0.76**	**70**	↓P	**Pn**	**17 41 36.4**	**+1.2**
PETR		**0.76**	**70**	↓*i*P	**Pn**	**17 41 36.4**	**+1.1**
PETR		**0.76**	**70**	↓*i*P	**Pn**	**17 41 36.4**	**+1.1**
PETR		**0.76**	**70**	↓*i*P	**Pn**	**17 41 36.4**	**+1.1**
DOPR	**Dopca**	**0.77**	**312**	↓*i*P	**Pn**	**17 41 35.6**	**+0.3**
DOPR	**Dopca**	**0.77**	**312**	↓*i*P	**Pn**	**17 41 35.6**	**+0.3**
DOPR	**Dopca**	**0.77**	**312**	↓*i*P	**Pn**	**17 41 35.6**	**+0.3**
SULR		**0.78**	**178**	⇑P	**Pn**	**17 41 36.2**	**+0.8**
SULR				S	**Sn**	**17 41 51.7**	**-0.7**
SULR		**0.78**	**178**	↑*i*P	**Pn**	**17 41 36.2**	**+0.7**
SULR				*i* S	**Sn**	**17 41 51.7**	**-0.7**
SULR		**0.78**	**178**	↑*i*P	**Pn**	**17 41 36.2**	**+0.7**
SULR		**0.78**	**178**	↑*i*P	**Pn**	**17 41 36.2**	**+0.7**
SULR				*i* S	**Sn**	**17 41 51.7**	**-0.7**
VOIR		**0.82**	**269**	↓P	**Pn**	**17 41 36.0**	**+0.3**
VOIR				S	**Sn**	**17 41 52.9**	**+0.1**
VOIR		**0.82**	**269**	↑*i*P	**Pn**	**17 41 36.0**	**+0.3**
VOIR				*i* S	**Sn**	**17 41 52.8**	**0.0**
VOIR		**0.82**	**269**	↑*i*P	**Pn**	**17 41 36.0**	**+0.3**
VOIR		**0.82**	**269**	↑*i*P	**Pn**	**17 41 36.0**	**+0.3**
VOIR				*i* S	**Sn**	**17 41 52.8**	**0.0**
TESR		**1.09**	**16**	↓P	**Pn**	**17 41 38.5**	**+0.5**
TESR				S	**Sn**	**17 41 56.4**	**-0.7**
TESR		**1.09**	**16**	↓*i*P	**Pn**	**17 41 38.5**	**+0.5**
TESR				*i* S	**Sn**	**17 41 56.4**	**-0.7**
TESR		**1.09**	**16**	↓*i*P	**Pn**	**17 41 38.5**	**+0.5**
TESR		**1.09**	**16**	↓*i*P	**Pn**	**17 41 38.5**	**+0.5**
TESR				*i* S	**Sn**	**17 41 56.4**	**-0.7**
AMRR	**Amara**	**1.17**	**136**	↓P	**Pn**	**17 41 39.5**	**+0.8**
AMRR				S	**Sn**	**17 41 58.7**	**+0.5**
AMRR	**Amara**	**1.17**	**136**	↑*i*P	**Pn**	**17 41 39.5**	**+0.8**
AMRR				*i* S	**Sn**	**17 41 58.7**	**+0.5**
AMRR	**Amara**	**1.17**	**136**	↑*i*P	**Pn**	**17 41 39.5**	**+0.8**
AMRR	**Amara**	**1.17**	**136**	↑*i*P	**Pn**	**17 41 39.5**	**+0.8**
AMRR				*i* S	**Sn**	**17 41 58.7**	**+0.5**
CFR	**Carcaliu**	**1.39**	**101**	↓P	**Pn**	**17 41 41.0**	**+0.1**
CFR				S	**Sn**	**17 42 00.7**	**-1.4**
CFR	**Carcaliu**	**1.39**	**101**	↓*i*P	**Pn**	**17 41 41.0**	**+0.1**
CFR				*i* S	**Sn**	**17 42 00.7**	**-1.4**
CFR	**Carcaliu**	**1.39**	**101**	↓*i*P	**Pn**	**17 41 41.0**	**+0.1**
CFR	**Carcaliu**	**1.39**	**101**	↓*i*P	**Pn**	**17 41 41.0**	**+0.1**
CFR				*i* S	**Sn**	**17 42 00.7**	**-1.4**
CVD	**Cernavoda**	**1.73**	**131**	⇑P	**Pn**	**17 41 45.0**	**+0.4**
CVD				S	**Sn**	**17 42 07.6**	**-1.1**
CVD	**Cernavoda**	**1.73**	**131**	↑*i*P	**Pn**	**17 41 45.0**	**+0.3**
CVD				*i* S	**Sn**	**17 42 07.6**	**-1.2**
CVD	**Cernavoda**	**1.73**	**131**	↑*i*P	**Pn**	**17 41 45.0**	**+0.3**
CVD	**Cernavoda**	**1.73**	**131**	↑*i*P	**Pn**	**17 41 45.0**	**+0.3**
CVD				*i* S	**Sn**	**17 42 07.6**	**-1.2**
LEOM	**Leova**	**1.74**	**54**	↓*i*P	**Pn**	**17 41 45.4**	**+0.6**
LEOM				*i* S	**Sn**	**17 42 08.6**	**-0.5**
LEOM	**Leova**	**1.74**	**54**	↓*i*P	**Pn**	**17 41 45.4**	**+0.6**
LEOM	**Leova**	**1.74**	**54**	↓*i*P	**Pn**	**17 41 45.4**	**+0.6**
LEOM				*i* S	**Sn**	**17 42 08.6**	**-0.5**
TIRR	**Tirgusor**	**1.86**	**122**	⇑P	**Pn**	**17 41 46.5**	**+0.4**
TIRR				S	**Sn**	**17 42 10.0**	**-1.4**
TIRR	**Tirgusor**	**1.86**	**122**	⇑*i*P	**Pn**	**17 41 46.5**	**+0.4**
TIRR				*i* S	**Sn**	**17 42 10.0**	**-1.4**
TIRR	**Tirgusor**	**1.86**	**122**	⇑*i*P	**Pn**	**17 41 46.5**	**+0.4**
TIRR	**Tirgusor**	**1.86**	**122**	⇑*i*P	**Pn**	**17 41 46.5**	**+0.4**
TIRR				*i* S	**Sn**	**17 42 10.0**	**-1.4**
TLCR		**1.86**	**98**	↓P	**Pn**	**17 41 46.6**	**+0.5**
TLCR				S	**Sn**	**17 42 10.6**	**-0.7**
TLCR		**1.86**	**98**	↓*i*P	**Pn**	**17 41 46.6**	**+0.5**
TLCR				*i* S	**Sn**	**17 42 10.6**	**-0.8**
TLCR		**1.86**	**98**	↓*i*P	**Pn**	**17 41 46.6**	**+0.5**
TLCR		**1.86**	**98**	↓*i*P	**Pn**	**17 41 46.6**	**+0.5**
TLCR				*i* S	**Sn**	**17 42 10.6**	**-0.8**
ZIMR		**1.90**	**199**	*i* S	**Sn**	**17 42 11.5**	**-0.8**
ZIMR		**1.90**	**199**	S	**Sn**	**17 42 11.5**	**-0.8**
IAS	**Iasi**	**1.97**	**28**	*i* S	**Sn**	**17 42 12.7**	**-1.0**
IAS	**Iasi**	**1.97**	**28**	S	**Sn**	**17 42 12.7**	**-1.0**
IAS	**Iasi**	**1.97**	**28**	*i* S	**Sn**	**17 42 12.7**	**-1.0**
CRAR	**CRAIOVA**	**2.06**	**237**	*i* S	**Sn**	**17 42 14.4**	**-1.1**
CRAR	**CRAIOVA**	**2.06**	**237**	S	**Sn**	**17 42 14.4**	**-1.1**
CRAR	**CRAIOVA**	**2.06**	**237**	*i* S	**Sn**	**17 42 14.4**	**-1.1**
SZH	**Strazhica**	**2.20**	**185**	*i* P	**Pn**	**17 41 50.4**	**+0.1**
SZH	**Strazhica**	**2.20**	**185**	*i* P	**Pn**	**17 41 50.4**	**+0.1**
BURAR	**Bucovina Array**	**2.26**	**343**	↓P	**Pn**	**17 41 52.5**	**+1.7**
BURAR	**Bucovina Array**	**2.26**	**343**	↓P	**Pn**	**17 41 52.5**	**+1.6**
BURAR	**Bucovina Array**	**2.26**	**343**	↓*i*P	**Pn**	**17 41 52.5**	**+1.6**
BURAR	**Bucovina Array**	**2.26**	**343**	↓*i*P	**Pn**	**17 41 52.5**	**+1.6**
PSN	**Preselentsi**	**2.27**	**141**	*i* P	**Pn**	**17 41 51.8**	**+0.7**
PSN	**Preselentsi**	**2.27**	**141**	*i* P	**Pn**	**17 41 51.8**	**+0.7**
BUR08	**Bucovina Ar. S**	**2.29**	**343**	*e*Pn	**Pn**	**17 41 53.0**	**+1.7**
BUR08				*e*Sn	**Sn**	**17 42 19.1**	**-1.6**
BUR08	**Bucovina Ar. S**	**2.29**	**343**	*e*Pn	**Pn**	**17 41 53.0**	**+1.7**
BUR08				*e*Sn	**Sn**	**17 42 19.1**	**-1.6**
PVL	**Pavlikeni**	**2.33**	**196**	P	**Pn**	**17 41 52.0**	**+0.2**
PVL	**Pavlikeni**	**2.33**	**196**	P	**Pn**	**17 41 52.0**	**+0.2**
KIS	**Kishinev**	**2.38**	**49**	↓*i*P	**Pn**	**17 41 51.6**	**-0.7**
	400nm,0.6s						
KIS				*i* S	**Sn**	**17 42 20.0**	**-2.4**
	600nm,0.8s						
KIS	**Kishinev**	**2.38**	**49**	↓P	**Pn**	**17 41 52.7**	**+0.4**
KIS				S	**Sn**	**17 42 20.8**	**-1.6**
KIS	**Kishinev**	**2.38**	**49**	↓*i*P	**Pn**	**17 41 52.7**	**+0.4**
KIS	**Kishinev**	**2.38**	**49**	↓*i*P	**Pn**	**17 41 52.7**	**+0.4**
KIS	**Kishinev**	**2.38**	**49**	↓*i*P	**Pn**	**17 41 52.7**	**+0.4**
KIS				*i* S	**Sn**	**17 42 20.0**	**-2.4**
	600nm,0.8s						
PRD	**Provadia**	**2.42**	**159**	*i* P	**Pn**	**17 41 53.7**	**+0.8**
PRD	**Provadia**	**2.

Error ellipse: s-maj=8.9km s-min=5.3km az=136.0
*ISK **15** 17:45:17.0, 35.9°N×27.6°E, h23km, ML2.3*
*DDA **15** 17:45:17.2, 36.07°N×28.03°E, h7km±3km, Md3.0*
ISC 15 17:45:17.1±0.7, 35.84N±0.04×27.81E±0.05, h55km±11km, n39, σ0.79/58, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.46**	**35**	*eP*	**Pn**	**17 45 28.3**	**+0.1**
ARG				*eS*	**Sn**	**17 45 36.6**	**+0.5**
ARG	**Arkhangelos**	**0.46**	**35**	*eP*	**Pn**	**17 45 28.3**	**+0.1**
ARG				*eS*	**Sn**	**17 45 36.6**	**+0.5**
ARG	**Arkhangelos**	**0.46**	**35**	*eP*	**Pn**	**17 45 28.3**	**+0.1**
ARG				*eS*	**Sn**	**17 45 36.6**	**+0.5**
KARP	**Karpathos**	**0.60**	**241**	*eP*	**Pn**	**17 45 29.6**	**-0.2**
KARP				*eS*	**Sn**	**17 45 39.1**	**+0.1**
KARP	**Karpathos**	**0.60**	**241**	*eP*	**Pn**	**17 45 29.6**	**-0.2**
KARP				*eS*	**Sn**	**17 45 39.1**	**+0.1**
KARP	**Karpathos**	**0.60**	**241**	*eP*	**Pn**	**17 45 29.6**	**-0.2**
KARP				*eS*	**Sn**	**17 45 39.1**	**+0.1**
DAT	**Datca**	**0.90**	**348**	*eP*	**Pn**	**17 45 33.8**	**+0.2**
DAT				*eS*	**Sn**	**17 45 46.0**	**+0.2**
DAT	**Datca**	**0.90**	**348**	*eP*	**Pn**	**17 45 33.8**	**+0.2**
DAT				*eS*	**Sn**	**17 45 46.0**	**+0.2**
TURN	**Turunc**	**1.21**	**32**	*i P*	**Pn**	**17 45 36.0**	**-1.8**
TURN				*i S*	**Sn**	**17 45 50.1**	**-3.1**
TURN	**Turunc**	**1.21**	**32**	*i P*	**Pn**	**17 45 36.0**	**-1.8**
TURN				*i S*	**Sn**	**17 45 50.1**	**-3.1**
BDRM	**Kayabasi**	**1.25**	**347**	*i P*	**Pn**	**17 45 38.2**	**-0.1**
BDRM				*i S*	**Sn**	**17 45 54.1**	**-0.1**
BDRM	**Kayabasi**	**1.25**	**347**	*i P*	**Pn**	**17 45 38.2**	**-0.1**
BDRM				*i S*	**Sn**	**17 45 54.1**	**-0.1**
BODT	**Bodrum**	**1.28**	**342**	*e*PN	**Pn**	**17 45 38.3**	**-0.4**
BODT				*e*SN	**Sn**	**17 45 54.3**	**-0.5**
BODT	**Bodrum**	**1.28**	**342**	*e*Pn	**Pn**	**17 45 38.3**	**-0.4**
BODT				*e*Sn	**Sn**	**17 45 54.3**	**-0.5**
YER	**Yerkesik**	**1.35**	**16**	*e*PN	**Pn**	**17 45 40.8**	**+1.2**
YER	**Yerkesik**	**1.35**	**16**	*e*Pn	**Pn**	**17 45 40.8**	**+1.2**
ZKR	**Zakros**	**1.48**	**241**	*e*P	**Pn**	**17 45 41.5**	**+0.1**
ZKR	**Zakros**	**1.48**	**241**	*e*P	**Pn**	**17 45 41.5**	**+0.1**
ZKR	**Zakros**	**1.48**	**241**	*e*P	**Pn**	**17 45 41.5**	**+0.1**
AKAS	**Kas**	**1.51**	**74**	*i P*	**Pn**	**17 45 41.8**	**0.0**
AKAS				*i S*	**Sn**	**17 45 59.9**	**-0.5**
AKAS	**Kas**	**1.51**	**74**	*i P*	**Pn**	**17 45 41.8**	**0.0**
AKAS				*i S*	**Sn**	**17 45 59.9**	**-0.5**
AYDN	**Tasoluk**	**1.82**	**2**	*i P*	**Pn**	**17 45 46.7**	**+0.7**
AYDN				*i S*	**Sn**	**17 46 08.0**	**+0.2**
AYDN	**Tasoluk**	**1.82**	**2**	*i P*	**Pn**	**17 45 46.7**	**+0.8**
AYDN				*i S*	**Sn**	**17 46 08.0**	**+0.2**
NPS	**Neapolis**	**1.88**	**253**	*e*P	**Pn**	**17 45 45.7**	**-1.1**
NPS	**Neapolis**	**1.88**	**253**	*e*P	**Pn**	**17 45 45.7**	**-1.1**
NPS	**Neapolis**	**1.88**	**253**	*e*P	**Pn**	**17 45 45.7**	**-1.1**
GOLH	**Golhisar**	**1.98**	**45**	*i P*	**Pn**	**17 45 49.9**	**+1.7**
GOLH				*i S*	**Sn**	**17 46 19.2**	**+7.3**
GOLH	**Golhisar**	**1.98**	**45**	*i P*	**Pn**	**17 45 49.9**	**+1.7**
LAST	**Lasithi**	**2.02**	**251**	*e*P	**Pn**	**17 45 48.4**	**-0.2**
LAST	**Lasithi**	**2.02**	**251**	*e*P	**Pn**	**17 45 48.4**	**-0.2**
LAST	**Lasithi**	**2.02**	**251**	*e*P	**Pn**	**17 45 48.4**	**-0.2**
APE	**Apeiranthos**	**2.20**	**304**	*e*PN	**Pn**	**17 45 51.5**	**+0.3**
APE	**Apeiranthos**	**2.20**	**304**	*e*P	**Pn**	**17 45 51.2**	**0.0**
APE	**Apeiranthos**	**2.20**	**304**	*e*P	**Pn**	**17 45 51.2**	**0.0**
APE	**Apeiranthos**	**2.20**	**304**	*e*P	**Pn**	**17 45 51.2**	**0.0**
APE	**Apeiranthos**	**2.20**	**304**	*e*Pn	**Pn**	**17 45 51.5**	**+0.3**
IDI	**Anoyia**	**2.44**	**258**	*e*P	**Pn**	**17 45 55.3**	**+0.9**
IDI	**Anoyia**	**2.44**	**258**	*e*P	**Pn**	**17 45 55.3**	**+0.9**
IDI	**Anoyia**	**2.44**	**258**	*e*P	**Pn**	**17 45 55.3**	**+0.9**

*ISCJB **15** 18:04:22.2±0.4, 43.75N±0.04×105.20W±0.05, h0km, mb3.8/4, Error ellipse: s-maj=5.7km s-min=4.5km az=136.3*
*NEIC **15** 18:04:23.8±0.3, 43.75N×105.18W, h0km, ML3.3, Error ellipse: s-maj=5.1km s-min=4.2km az=143.0, Suspected Mining explosion.*
NEIC 65 km [40 miles] SSE of Gillette.
*IDC **15** 18:04:25.1±0.9, 44.04N×105.78W, h0km, mb3.7/4, mb1 3.7/10, mb1mx3.6/27, mbtmp3.5/10, ML3.3/6, Error ellipse: s-maj=23.5km s-min=7.7km az=145.0*
ISC 15 18:04:23.9±0.3, 43.76N±0.04×105.18W±0.05, h0km, n55, σ1.9/10/56, mb3.8/4, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.90**	**66**	*e*Pg	**Pg**	**18 04 42.4**	**+1.2**
PHWY	**Pilot Hill**	**2.47**	**185**	*e*Pn	**Pn**	**18 05 05.5**	**+0.2**
RWWY	**Rawlins**	**2.55**	**217**	*e*Pn	**Pn**	**18 05 07.2**	**+0.7**
LAO	**LASA Array**	**3.02**	**346**	*e*Pn	**Pn**	**18 05 12.3**	**-0.6**
RLMT	**Red Lodge**	**3.23**	**296**	*e*Pn	**Pn**	**18 05 15.3**	**-0.5**
BW06	**Boulder Array**	**3.35**	**254**	*e*Pn	**Pn**	**18 05 17.3**	**-0.1**
PDAR	**Pinedale Array**	**3.35**	**254**	Pn	**Pn**	**18 05 17.1**	**-0.3**
	3.6nm,0.3s,baz=64,slow=16,SNR=58						
PDAR				Pg	**Pg**	**18 05 21.9**	**-6.2**
	8.9nm,0.3s,baz=66,slow=19,SNR=55						
PDAR				Lg		18 06 02.3	
	20nm,0.3s,baz=70,slow=32,SNR=16						
OGNE	**Ogallala**	**3.66**	**139**	*e*Pn	**Pn**	**18 05 20.2**	**-1.4**
GCMT	**Greycliff**	**3.78**	**304**	Pn	**Pn**	**18 05 22.7**	**-0.7**
LKWY	**Lake**	**3.84**	**284**	*e*Pn	**Pn**	**18 05 23.9**	**-0.2**
LOHW	**Long Hollow**	**3.94**	**270**	*e*Pn	**Pn**	**18 05 25.8**	**+0.3**
ISCO	**Idaho Springs**	**3.97**	**185**	*e*Pn	**Pn**	**18 05 27.2**	**+1.2**
SNOW	**Snow King Moun**	**4.06**	**268**	*e*Pn	**Pn**	**18 05 33.1**	**+5.9**
YFT	**Old Faithful**	**4.13**	**282**	*e*Pn	**Pn**	**18 05 30.2**	**+2.0**
REDW	**Red Top Meadow**	**4.14**	**266**	*e*Pn	**Pn**	**18 05 30.3**	**+2.0**
IMW	**Indian Meadow**	**4.17**	**274**	*e*Pn	**Pn**	**18 05 28.5**	**-0.2**
TPAW	**Teton Pass**	**4.20**	**268**	*e*Pn	**Pn**	**18 05 28.9**	**-0.2**
YMR	**Madison River**	**4.25**	**284**	Pn	**Pn**	**18 05 33.1**	**+3.2**
AHID	**Auburn Hatcher**	**4.43**	**259**	Pn	**Pn**	**18 05 33.7**	**+1.4**
RRI2	**Red Ridge**	**4.48**	**267**	*e*Pn	**Pn**	**18 05 32.5**	**-0.5**
DGMT	**Dagmar**	**4.76**	**8**	*e*Pn	**Pn**	**18 05 38.3**	**+1.5**
SMCO	**Snowmass**	**4.77**	**197**	*e*Pn	**Pn**	**18 05 39.7**	**+2.7**
HWUT	**Hardware Ranch**	**5.17**	**248**	*e*Pn	**Pn**	**18 05 38.1**	**-4.4**
	8.4nm,0.5s						
EGMT	**Eagleton**	**5.33**	**325**	*e*Pn	**Pn**	**18 05 44.0**	**-0.6**
	40nm,0.6s						
HRY	**Holter Researc**	**5.54**	**304**	*e*Pn	**Pn**	**18 05 47.1**	**-0.5**
	19nm,0.6s						
DAU	**Daniels Canyon**	**5.62**	**236**	*e*Pn	**Pn**	**18 05 47.2**	**-1.4**
	11nm,0.5s						
JLU	**Jordanelle**	**5.62**	**238**	*e*Pn	**Pn**	**18 05 46.7**	**-2.0**
	10.0nm,0.6s						
HVU	**Hansel Valley**	**5.93**	**253**	*e*Pn	**Pn**	**18 05 52.7**	**-0.2**
	11nm,0.7s						
PV04	**Paradox Valley**	**6.05**	**209**	*e*Pn	**Pn**	**18 05 54.1**	**-0.5**
MPU	**Maple Canyon**	**6.10**	**234**	*e*Pn	**Pn**	**18 05 54.8**	**-0.4**
	13nm,0.7s						
SRU	**San Rafael**	**6.14**	**223**	*e*Pn	**Pn**	**18 05 54.6**	**-1.1**
	13nm,0.5s						
PV01	**Paradox Valley**	**6.18**	**206**	*e*Pn	**Pn**	**18 05 57.0**	**+0.6**
	588nm,0.7s						
ECSD	**EROS Data Cent**	**6.21**	**87**	*e*Pn	**Pn**	**18 05 56.8**	**+0.1**
	2.9nm,0.6s						
TMUT	**Trail Mountain**	**6.35**	**227**	*e*Pn	**Pn**	**18 05 58.7**	**0.0**
	14nm,0.7s						
CBKS	**Cedar Bluff**	**6.42**	**138**	*e*Pg	**Pg**	**18 06 24.7**	**-2.2**
	19nm,0.6s						
BGU	**Big Grassy Mou**	**6.47**	**247**	*e*Pn	**Pn**	**18 05 60.0**	**-0.3**
HLID	**Hailey**	**6.70**	**271**	*e*Pn	**Pn**	**18 06 04.8**	**+1.3**
	1.2nm,0.6s						
DUG	**Dugway**	**6.71**	**241**	*e*Pn	**Pn**	**18 06 01.6**	**-2.0**
	4.6nm,0.5s						
MVCO	**Mesa Verde**	**7.01**	**202**	*e*Pn	**Pn**	**18 06 10.2**	**+2.4**
M13A	**Montello**	**7.05**	**253**	*e*Pn	**Pn**	**18 06 08.8**	**+0.5**
	2.8nm,0.6s						
MSU	**Marysvale**	**7.44**	**228**	*e*Pn	**Pn**	**18 06 13.9**	**+0.2**
	15nm,0.7s						
AGMN	**Agassiz Nation**	**7.91**	**52**	*e*Pn	**Pn**	**18 06 19.6**	**-0.5**
	13nm,0.6s						
ELK	**Elko**	**8.04**	**251**	Pn	**Pn**	**18 06 21.1**	**-0.9**
	0.2nm,0.3s,baz=42,slow=14,SNR=2.9						
CCUT	**Cedar City**	**8.78**	**228**	*e*Pn	**Pn**	**18 06 32.4**	**+0.4**
	2.9nm,0.7s						
ULM	**Lac du Bonnet**	**9.08**	**41**	Pn	**Pn**	**18 06 37.7**	**+1.6**
	1.0nm,0.3s,baz=230,slow=11,SNR=3.6						
ULM				Lg		18 09 07.8	
	0.5nm,0.3s,baz=135,slow=19,SNR=4.5						
WUAZ	**Wupatki**	**9.51**	**212**	*e*Pn	**Pn**	**18 06 42.4**	**+0.3**
	7.7nm,0.7s						
NVAR	**Mina Array Bea**	**11.24**	**246**	Pn	**Pn**	**18 07 06.0**	**+0.3**
	0.1nm,0.3s,baz=52,slow=12,SNR=5.3						
YBH	**Yreka Blue Hor**	**13.04**	**267**	Pn	**Pn**	**18 07 34.5**	**+4.1**
	0.2nm,0.3s,baz=135,slow=4.9,SNR=5.8						
TXAR	**Lajitas Array**	**14.45**	**175**	Pn	**Pn**	**18 07 57.4**	**+7.8**
	0.0nm,0.3s,baz=352,slow=9.2,SNR=5.0						
YKA	**Yellowknife Ar**	**19.56**	**347**	P	**Pn**	**18 08 51.0**	**-3.1**
YKA	**Yellowknife Ar**	**19.56**	**347**	P	**Pn**	**18 08 51.0**	**-3.1**
	0.1nm,0.3s,baz=154,slow=12,SNR=4.4						
ZALV	**Zalesovo Beam**	**82.29**	**354**	P	**P**	**18 16 45.3**	**-1.6**
	0.6nm,0.5s,mb4.0,baz=40,slow=4.7,SNR=3.7						
BVAR	**Borovoye Array**	**83.52**	**3**	P	**P**	**18 16 53.3**	**0.0**
	0.3nm,0.6s,mb3.7,baz=24,slow=11,SNR=2.7						
SONM	**Songino Array**	**84.64**	**339**	P	**P**	**18 16 59.1**	**+0.1**
	0.2nm,0.6s,mb3.5,baz=1.8,slow=4.4,SNR=2.4						
MKAR	**Makanchi Array**	**89.59**	**355**	P	**P**	**18 17 22.6**	**-0.5**
	0.5nm,0.7s,mb3.9,baz=11,slow=5.1,SNR=8.4						

NEIC 15 18:21:17.9, 51.71N×179.19W, h4km, ML3.7(AEIC), After AEIC., Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**1.00**	**251**	P	Pg	18 21 36.9	-0.1
AMKA				S	Sg	18 21 51.9	+2.0
ADK	**Adak**	**1.57**	**83**	P	Pn	18 21 45.9	-0.6
ADK				S	Sn	18 22 08.0	+0.7
FX1	**Attu Island--F**	**4.84**	**287**	P	Pn	18 22 32.4	+1.0
SPIA	**Saint Paul Isl**	**7.56**	**40**	P	Pn	18 23 08.8	0.0
AKGG	**Akutan Green G**	**8.35**	**67**	P	Pn	18 23 21.1	+1.5
EGAK	**Eagle**	**23.46**	**42**	*e*Pn	P	18 26 25.4	-2.8

*NEIC **15** 18:21:24.9±1.6, 44.35N×128.91W, h10km, mb3.9/2, Error ellipse: s-maj=19.4km s-min=8.1km az=71.0*
*IDC **15** 18:21:27.8±5.5, 44.57N×128.40W, h0km, mb3.3/1, mb1 3.6/5, mb1mx3.4/25, mbtmp3.3/5, ML3.2/3, MS3.1/5, Ms1 3.1/5, ms1mx2.7/20, Error ellipse: s-maj=116.0km s-min=19.6km az=62.0*
ISC 15 18:21:25.2±2.2, 44.34N±0.05×128.9W±0.2, h10km±19km, n33, σ1.9/02/34, mb3.4/2, MS3.2/4, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COR	**Corvallis**	**4.01**	**85**	*e*Pn	**Pn**	**18 22 26.3**	**-0.2**
COR				*e*Sn	**Sn**	**18 23 00.1**	**-14**
KMOR	**Kings Mountain**	**4.05**	**69**	P	**Pn**	**18 22 26.6**	**-0.5**
NLWA	**Neilton Lookou**	**4.65**	**47**	*e*Pn	**Pn**	**18 22 34.9**	**-0.5**
NLWA				*e*Sn	**Sn**	**18 23 30.3**	**+1.0**
HUMO	**Hull Mountain**	**4.66**	**110**	*e*Pn	**Pn**	**18 22 34.5**	**-0.9**
HUMO				*e*Sn	**Sn**	**18 23 28.2**	**-1.3**
RVW	**Rose Valley**	**4.71**	**65**	P	**Pn**	**18 22 35.4**	**-0.7**
OOW	**Octopus West**	**4.72**	**42**	P	**Pn**	**18 22 36.0**	**-0.3**
FL2	**Flat Top 2**	**4.98**	**66**	P	**Pn**	**18 22 40.5**	**+0.7**
MTMW	**Mount Mitchell**	**5.02**	**68**	P	**Pn**	**18 22 40.9**	**+0.5**
OSD	**Olympics--Snow**	**5.02**	**44**	P	**Pn**	**18 22 40.4**	**0.0**
YBH	**Yreka Blue Hor**	**5.23**	**118**	Pn	**Pn**	**18 22 45.3**	**+2.0**
	0.2nm,0.3s,baz=297,slow=11,SNR=11						
YBH				Sn	**Sn**	**18 23 43.9**	**+0.3**
	0.2nm,0.3s,baz=17,slow=19,SNR=2.0						
PFB	**Port Renfrew**	**5.23**	**34**	P	**Pn**	**18 22 42.7**	**-0.6**
GULW	**Guler Mountain**	**5.40**	**70**	P	**Pn**	**18 22 46.7**	**+1.0**
ASR	**Mount Adams--S**	**5.46**	**68**	P	**Pn**	**18 22 47.6**	**+1.1**
BLN	**Blyn Mountain**	**5.51**	**46**	P	**Pn**	**18 22 47.9**	**+0.7**
PGC	**Sidney**	**5.72**	**39**	*e*Pn	**Pn**	**18 22 49.3**	**-0.8**
PGC				*e*Sn	**Sn**	**18 23 55.9**	**+0.3**
HOPS	**Hopland**	**6.89**	**139**	Pn	**Pn**	**18 23 01.4**	**-4.8**
WVOR	**Wild Horse Val**	**7.71**	**101**	*e*Pn	**Pn**	**18 23 15.5**	**-1.9**
BBB	**Bella Bella**	**7.87**	**4**	Pn	**Pn**	**18 23 19.2**	**-0.3**
	0.3nm,0.3s,baz=164,slow=20,SNR=10						
BBB				LR	LR	18 25 46.6	
	comp=Z,35nm,18.0s,baz=260,slow=34						
BMO	**Blue Mountains**	**8.29**	**82**	*e*Pn	**Pn**	**18 23 24.1**	**-1.2**
NEW	**Newport**	**9.04**	**60**	*e*Pn	**Pn**	**18 23 35.8**	**+0.1**
NVAR	**Mina Array Bea**	**9.91**	**123**	Pn	**Pn**	**18 23 51.2**	**+3.7**
	0.1nm,0.3s,baz=284,slow=13,SNR=6.5						
BSMT	**Bassoo Peak**	**10.41**	**65**	*e*Pn	**Pn**	**18 23 54.3**	**0.0**
	3.7nm,0.9s						
HLID	**Hailey**	**10.47**	**89**	*e*Pn	**Pn**	**18 23 56.9**	**+1.6**
	5.0nm,1.0s						
CHMT	**Chamberlain Mo**	**11.25**	**71**	*e*Pn	**Pn**	**18 24 05.7**	**-0.2**
ISA	**Isabella**	**11.78**	**134**	*e*Pn	**Pn**	**18 24 14.0**	**+0.9**
YKA	**Yellowknife Ar**	**19.99**	**20**	P	**P**	**18 25 58.1**	**+0.7**
	0.0nm,0.3s,baz=208,slow=11,SNR=4.7						
FFC	**Flin Flon**	**20.20**	**50**	*e*P	**P**	**18 25 58.5**	**-1.3**
	7.2nm,1.1s						
ULM	**Lac du Bonnet**	**23.03**	**63**	LR	LR	18 34 54.9	
	comp=Z,55nm,21.6s,MS3.0,baz=287,slow=36						
INK	**Inuvik**	**24.15**	**356**	LR	LR	18 35 44.2	
	comp=Z,44nm,19.0s,MS3.0,baz=228,slow=36						
TXAR	**Lajitas Array**	**25.01**	**118**	P	**P**	**18 26 51.8**	**+2.7**
	0.8nm,1.0s,mb3.2,baz=309,slow=5.7,SNR=5.5						
WMOK	**Wichita Mounta**	**25.01**	**102**	*e*P	**P**	**18 26 47.2**	**-1.8**
	1.9nm,0.8s,mb3.7						
SCHQ	**Schefferville**	**40.31**	**52**	LR	LR	18 45 47.2	
	comp=Z,62nm,18.6s,MS3.5,baz=193,slow=37						
BORG	**Borgarnes**	**57.57**	**29**	LR	LR	18 56 20.3	
	comp=Z,30nm,18.2s,MS3.4,baz=257,slow=37						

WEL 15 18:23:59.6±0.5, 37.47S×176.82E, h150km±3km, ML3.6/3, 1C, Error ellipse: s-maj=3.3km s-min=2.9km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPRZ	**Ohinepanea**	**0.43**	**209**	⇑Pn	Pn	18 24 20.5	0.0
MARZ	**Manawahe**	**0.52**	**193**	PN	Pn	18 24 21.2	+0.2
URZ	**Urewera**	**0.82**	**164**	PN	Pn	18 24 22.6	-0.3
URZ				SN	Sn	18 24 40.9	+0.2
MWZ	**Matawai**	**1.03**	**147**	PN	Pn	18 24 24.4	-0.1
MWZ				SN	Sn	18 24 43.7	+0.1
PRRZ	**Plateau Road**	**1.08**	**198**	PN	Pn	18 24 25.3	+0.3
MXZ	**Matakoa Point**	**1.19**	**95**	PN	Pn	18 24 26.4	+0.4
MXZ				SN	Sn	18 24 47.0	+0.9
PUZ	**Puketiti**	**1.29**	**118**	PN	Pn	18 24 26.7	-0.2
RAHZ	**Arahi**	**1.46**	**172**	PN	Pn	18 24 28.8	+0.2
CNGZ	**Carnagh Statio**	**1.49**	**133**	PN	Pn	18 24 29.6	+0.6
NMHZ	**Naumai**	**1.62**	**180**	PN	Pn	18 24 31.0	+0.6
PRGZ	**Paritu Road**	**1.67**	**150**	PN	Pn	18 24 31.2	+0.3
KNZ	**Kokohu**	**1.69**	**157**	PN	Pn	18 24 30.9	-0.2
BKZ	**Black Stump Fm**	**1.71**	**189**	PN	Pn	18 24 30.7	-0.6
MHGZ	**Mahia Peninsul**	**1.88**	**153**	PN	Pn	18 24 33.4	+0.1
WTVZ	**West Tongariro**	**1.90**	**210**	PN	Pn	18 24 33.8	+0.2
OTVZ	**Oturere**	**1.92**	**208**	PN	Pn	18 24 34.0	+0.4
TWVZ	**Taurewa**	**1.93**	**214**	PN	Pn	18 24 34.4	+0.5
MCHZ	**McNeill Hill**	**1.97**	**183**	PN	Pn	18 24 34.6	+0.4
WPVZ	**Whakapapa**	**2.00**	**210**	PN	Pn	18 24 35.0	+0.4
TUVZ	**Tukino**	**2.01**	**207**	PN	Pn	18 24 34.9	+0.1
FWVZ	**Far West T-bar**	**2.04**	**209**	PN	Pn	18 24 35.5	+0.4
WNVZ	**Wahianoa**	**2.08**	**207**	PN	Pn	18 24 35.5	-0.1
MOVZ	**Moawhango**	**2.10**	**203**	PN	Pn	18 24 35.2	-0.6
PKVZ	**Pokaka**	**2.15**	**212**	PN	Pn	18 24 36.6	+0.1
MTVZ	**Mangateitei**	**2.18**	**209**	PN	Pn	18 24 36.7	-0.1
VRZ	**Vera Road**	**2.31**	**224**	PN	Pn	18 24 39.1	+0.7
KAHZ	**Kahuranaki**	**2.32**	**179**	PN	Pn	18 24 37.6	-0.8
PNHZ	**Pukenui**	**2.48**	**191**	PN	Pn	18 24 39.2	-1.3
PXZ	**Pawanui**	**2.56**	**179**	PN	Pn	18 24 40.1	-1.2
WPHZ	**Waipukurau**	**2.60**	**186**	PN	Pn	18 24 40.5	-1.4
TSZ	**Takapari Road**	**2.67**	**194**	PN	Pn	18 24 41.2	-1.5
WAZ	**Wanganui**	**2.69**	**212**	PN	Pn	18 24 42.4	-0.6
PRHZ	**Porangahau**	**2.79**	**183**	PN	Pn	18 24 42.5	-1.8
DVHZ	**Dannevirke**	**2.87**	**190**	PN	Pn	18 24 43.2	-2.0
POWZ	**Post Office Ro**	**3.03**	**195**	PN	Pn	18 24 45.3	-1.9
BFZ	**Birch Farm**	**3.23**	**188**	PN	Pn	18 24 47.4	-2.4
MRZ	**Mangatainoka R**	**3.33**	**196**	PN	Pn	18 24 48.4	-2.6
TIWZ	**Tintock**	**3.38**	**192**	PN	Pn	18 24 49.2	-2.5
HOWZ	**Holdsworth Sta**	**3.57**	**196**	PN	Pn	18 24 51.2	-2.9
OGWZ	**Otaki Gorge**	**3.58**	**200**	PN	Pn	18 24 51.6	-2.7
KIW	**Kapiti Island**	**3.69**	**203**	PN	Pn	18 24 52.6	-3.2
TMWZ	**Te Maipa**	**3.70**	**191**	PN	Pn	18 24 53.1	-2.7
MTW	**Mount Morrison**	**3.82**	**195**	PN	Pn	18 24 54.0	-3.4
CAW	**Cannon Point**	**3.88**	**200**	PN	Pn	18 24 54.8	-3.3
TRWZ	**Traveller**	**4.02**	**192**	PN	Pn	18 24 56.7	-3.2
PAWZ	**Paruwai Farm**	**4.05**	**195**	PN	Pn	18 24 56.8	-3.6
PAWZ				SN	Sn	18 25 41.4	-6.3
MSWZ	**Moikau Station**	**4.12**	**197**	PN	Pn	18 24 57.5	-3.8
SNZO	**South Karori**	**4.17**	**202**	PN	Pn	18 24 58.0	-3.9
BHW	**Baring Head**	**4.21**	**200**	PN	Pn	18 24 58.9	-3.5
TCW	**Tory Channel**	**4.22**	**207**	PN	Pn	18 24 58.8	-3.9
PLWZ	**Palliser**	**4.27**	**196**	PN	Pn	18 24 59.3	-3.9
TUWZ	**Tuamarina**	**4.54**	**208**	PN	Pn	18 25 02.6	-4.1
NNZ	**Nelson**	**4.59**	**214**	SN	Sn	18 25 55.7	-4.7
QRZ	**Quartz Range**	**4.72**	**224**	PN	Pn	18 25 05.9	-3.4
BSWZ	**Blackbirch Sta**	**4.81**	**207**	PN	Pn	18 25 06.5	-3.8
THZ	**Tophouse**	**5.24**	**214**	PN	Pn	18 25 12.4	-3.8
LTZ	**Lake Taylor**	**6.34**	**212**	PN	Pn	18 25 25.7	-5.1
MQZ	**McQueen's Vall**	**6.99**	**206**	PN	Pn	18 25 33.0	-6.4
MQZ				SN	Sn	18 26 46.8	-11
ODZ	**Otahua Downs**	**8.88**	**210**	PN	Pn	18 25 59.0	-5.5

IDC 15 18:40:44.3±4.4, 6.23S×128.53E, h372km±50km, mb2.3/1, mb1 2.8/4, mb1mx2.6/18, mbtmp2.6/4, Error ellipse: s-maj=69.3km s-min=18.2km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.14**	**193**	P	P	18 43 24.8	-1.8
	0.1nm,0.3s,baz=38,slow=11,SNR=6.3						
FITZ				S	S	18 45 42.4	+1.7
	0.1nm,0.3s,baz=96,slow=9.2,SNR=2.1						
WRA	**Warramunga Arr**	**14.76**	**158**	P	P	18 43 55.4	+0.2
	0.5nm,0.3s,baz=332,slow=13,SNR=14						
WRA				S	S	18 46 32.2	-1.3
	0.1nm,0.3s,baz=337,slow=20,SNR=3.4						
ASAR	**Alice Springs**	**18.09**	**164**	P	P	18 44 31.6	+0.4
	0.2nm,0.3s,baz=343,slow=12,SNR=16						
ASAR				S	S	18 47 40.0	+1.0
	0.1nm,0.3s,baz=345,slow=21,SNR=2.7						
MKAR	**Makanchi Array**	**66.79**	**327**	P	P	18 50 57.0	+0.1
	0.1nm,0.5s,baz=116,slow=7.9,SNR=3.0						

*IDC **15** 18:54:29.2±2.6, 9.67N×125.21E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.5/21, mbtmp3.7/4, Error ellipse: s-maj=220.8km s-min=27.0km az=64.0*
*ISCJB **15** 18:54:37.8±1.0, 9.98N±0.06×126.0E±0.1, h98km±12km, mb3.6/4, Error ellipse: s-maj=19.3km s-min=10.4km az=172.6*
*MAN **15** 18:54:39, 9.98N×125.90E, h33km, mb4.7, ML3.6, MS3.6*
ISC 15 18:54:38.9±1.0, 9.98N±0.06×126.0E±0.1, h90km±12km, n11, σ0.96/13, mb3.6/4, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**1.70**	**342**	*e*P	**Pn**	**18 55 06.5**	**-0.7**
CGP	**Cagayan de Oro**	**1.97**	**220**	⇑*e*P	**Pn**	**18 55 09.7**	**-1.1**
CGP				*e*S	**Sn**	**18 55 33.1**	**-1.9**
LLP	**Lapu-Lapu**	**2.00**	**280**	*e*P	**Pn**	**18 55 11.2**	**0.0**
TBP	**Tagbilaran**	**2.10**	**262**	*e*P	**Pn**	**18 55 14.3**	**+1.8**
TBP				*e*S	**Sn**	**18 55 38.8**	**+0.8**
BUKP	**Musuan**	**2.27**	**203**	*e*P	**Pn**	**18 55 15.1**	**+0.3**
CNP	**Cataman**	**2.83**	**333**	*e*P	**Pn**	**18 55 21.8**	**-0.3**
**M

CPUP Villa Florida 12.25 110 Pn **Pn 19 20 38.7 +2.1**
comp=E,3.1nm,0.3s,baz=272,slow=11,SNR=26
CPUP Villa Florida 12.25 110 *e*Pn **Pn 19 20 38.4 +1.7**
NNA Nana 12.33 328 Pn **Pn 19 20 36.4 -1.4**
comp=E,1.7nm,0.3s,baz=137,slow=13,SNR=2.3
NNA LR LR 19 24 56.3
comp=E,504nm,20.5s,baz=146,slow=36
NNA Nana 12.33 328 *e*Pn **Pn 19 20 35.0 -2.8**
TRQA Tornquist 16.93 157 *e*Pn **Pn 19 21 37.2 -1.5**
comp=E,39nm,0.6s
ATAH Atahualpa 17.30 331 P **Pn 19 21 48.8 +5.2**
comp=E,0.3nm,0.3s,baz=62,slow=14,SNR=4.0
PLCA Paso Flores 18.08 181 P **Pn 19 21 53.1 +0.1**
comp=E,0.1nm,0.3s,baz=2.7,slow=15,SNR=4.3
PLCA LR LR 19 29 10.4
comp=E,640nm,18.6s,baz=188,slow=38
PLCA Paso Flores 18.08 181 *e*P **Pn 19 21 53.9 +0.9**
comp=E,55nm,1.6s
SPB Sao Paulo 20.92 97 *e*P **P 19 22 23.1 -1.2**
comp=E,27nm,0.6s
OTAV Otavalo 24.10 339 *e*P **P 19 22 56.0 -1.1**
comp=E,13nm,0.9s,mb4.3
ROSC El Rosal 27.59 351 LR LR 19 35 15.4
comp=E,307nm,18.3s,MS3.9,baz=25,slow=38
PAYG Puerto Ayora 29.30 315 P **P 19 23 44.9 +0.9**
comp=E,27nm,0.8s,mb5.0
FDF Fort de France 38.13 14 *e*P **P 19 24 57.0 -3.7**
SJG San Juan 40.65 6 P **P 19 25 18.7 -2.8**
comp=E,7.0nm,0.2s,mb4.8,baz=12,slow=20,SNR=3.9
SJG San Juan 40.65 6 P **P 19 25 17.3 -4.3**
comp=E,27nm,1.0s,mb4.8
MTDJ Mount Denham 41.21 349 *e*P **P 19 25 17.9 -8.2**
comp=E,28nm,0.9s,mb4.9
PMSA Palmer Station 42.35 176 P **P 19 25 36.5 +1.5**
comp=E,10nm,0.8s,mb4.5,baz=7.2,slow=8.3,SNR=6.9
PMSA Palmer Station 42.35 176 *e*P **P 19 25 36.0 +1.0**
comp=E,19nm,1.0s,mb4.7
GTBY Guantanamo Bay 42.54 353 P **P 19 25 35.3 -1.8**
comp=E,26nm,0.9s,mb5.0
TEIG Tepich 46.10 336 *e*P **P 19 26 03.6 -1.9**
comp=E,6.5nm,0.6s,mb4.7
BBSR BB Station 54.91 6 *e*P **P 19 27 05.5 -6.4**
comp=E,114nm,1.3s,mb5.7
RKT Rikitea 59.26 256 *e*LR LR 19 45 20.5
comp=E,581nm,28.0s,baz=110
SWET Sewanee 59.41 345 *e*P **P 19 27 41.6 -2.1**
VNA1 Neumayer--Stat 59.64 160 *e*P **P 19 27 45.2 +0.3**
JCT Junction City 59.97 330 *e*P **P 19 27 46.8 -0.8**
comp=E,9.9nm,0.8s,mb4.9
ELN Prospectdale 60.34 350 *e*P **P 19 27 48.4 -1.6**
628A Black Gap, Mar 60.62 327 ⇓P **P 19 27 51.3 -0.8**
baz=61
WVT Waverly 60.76 344 *e*P **P 19 27 50.2 -2.6**
comp=E,13nm,0.9s,mb5.1
627A Terlingua Ranc 60.84 327 ⇓P **P 19 27 52.9 -0.7**
baz=61
TXAR Lajitas Array 60.89 327 P **P 19 27 52.9 -1.0**
comp=E,0.8nm,0.8s,mb3.9,baz=151,slow=7.9,SNR=8.1
TXAR LR LR 19 51 13.4
comp=E,65nm,20.7s,MS3.8,baz=0.0,slow=33
MIAR Mount Ida 61.03 338 *e*P **P 19 27 53.0 -1.8**
comp=E,18nm,1.0s,mb5.2
MIAR *e* pP 19 28 02.3 -2.7
528A Cox Ranch, San 61.12 328 ⇓P **P 19 27 54.5 -1.0**
baz=61
626A Big Bend Ranch 61.30 326 ⇑P **P 19 27 56.3 -0.4**
baz=62,SNR=9.7
527A Woodward Ranch 61.52 327 ⇓P **P 19 27 57.5 -0.7**
baz=62
428A Kincaid Ranch, 61.53 328 ⇓P **P 19 27 57.5 -0.7**
baz=62
526A Mary Lane Ranc 61.69 327 ⇑P **P 19 27 58.9 -0.4**
baz=62,SNR=7.2
427A Hayter Ranch, 61.98 328 ⇓P **P 19 28 00.5 -0.8**
baz=62
328A Wristen Ranch, 62.13 329 ⇓P **P 19 28 01.4 -0.8**
baz=62
426A McDonald Obser 62.15 327 ⇑P **P 19 28 01.9 -0.6**
baz=62
SIUC Southern Illin 62.62 343 *e*P **P 19 28 02.1 -3.3**
comp=E,15nm,0.8s,mb5.2
SIUC *e* pP 19 28 12.5 -3.2
326A Caldwell Ranch 62.65 328 ⇑P **P 19 28 05.1 -0.6**
baz=63
425A Indio Mountain 62.73 326 ⇓P **P 19 28 05.7 -0.5**
baz=63
227A Bennet, Jal 62.88 329 ⇑P **P 19 28 06.8 -0.5**
baz=63
WMOK Wichita Mounta 63.17 334 *e*P **P 19 28 09.6 +0.4**
comp=E,1.6nm,0.8s,mb4.2
FVM French Village 63.20 342 *e*P **P 19 28 07.5 -1.8**
comp=E,23nm,0.9s,mb5.3
FVM *e* pP 19 28 16.3 -3.2
226A Malaga, Loving 63.32 328 ⇓P **P 19 28 09.5 -0.6**
baz=64
127A Arkansas Junct 63.46 329 ⇓P **P 19 28 10.1 -1.0**
baz=64
324A Moseley Ranch, 63.51 326 ⇑P **P 19 28 10.4 -1.0**
baz=64
GDL2 Guadalupe Moun 63.56 328 *e*P **P 19 28 11.1 -0.6**
comp=E,3.4nm,0.9s,mb4.4
ACSO Alum Creek Sta 63.64 349 *e*P **P 19 28 10.3 -1.8**
comp=E,28nm,1.1s,mb5.2
ACSO *e* pP 19 28 19.2 -3.2
MNTX Cornudas Mount 63.66 327 *e*P **P 19 28 10.3 -2.2**
comp=E,7.9nm,1.2s,mb4.6
225A Deer Hill, Car 63.71 327 ⇓P **P 19 28 12.2 -0.6**
baz=64
126A Clayton Basin, 63.75 328 ⇑P **P 19 28 12.3 -0.7**
baz=64
Z27A Tatum 63.92 329 ⇓P **P 19 28 12.9 -1.2**
baz=64
224A Cornudas Mount 64.04 327 ⇑P **P 19 28 13.7 -1.2**
baz=64
125A Gardner Draw, 64.08 328 ⇑P **P 19 28 14.2 -1.0**
baz=64
Z26A Caprock 64.25 329 ⇑P **P 19 28 15.5 -0.7**
baz=64,SNR=6.0
MSTX Muleshoe 64.25 330 ⇓P **P 19 28 15.0 -1.3**
baz=64
Y27A Causey 64.36 330 ⇑P **P 19 28 15.9 -1.1**
baz=64
124A Stringfield Ra 64.50 327 ⇑P **P 19 28 17.6 -0.3**
baz=65,SNR=6.9
Z25A Roswell 64.61 328 ⇑P **P 19 28 17.9 -0.7**
baz=65
222A Williams Famil 64.87 326 ⇑P **P 19 28 20.0 -0.4**
baz=65
Z24A Sheeppen Canyo 64.97 328 ⇑P **P 19 28 20.3 -0.7**
baz=65
X26A CR and CF Fran 65.22 330 ⇓P **P 19 28 21.6 -1.0**
baz=65
W27A Bowe Ranch, En 65.30 331 ⇑P **P 19 28 22.1 -0.9**
baz=66
220A Playas Peak, P 65.47 325 ⇑P **P 19 28 24.4 +0.2**
baz=66
319A Douglas 65.47 324 ⇑P **P 19 28 24.0 -0.2**
baz=66
Y24A Capitan 65.48 328 ⇓P **P 19 28 24.1 -0.1**
baz=66
121A Cookes Peak, D 65.56 325 ⇑P **P 19 28 24.7 -0.1**
baz=66
X25A Clemmons Ranch 65.60 329 ⇓P **P 19 28 24.0 -1.0**
baz=66
W26A Owens Ranch, T 65.64 330 ⇓P **P 19 28 25.1 -0.2**
baz=66
Z22A Elephant Butte 65.71 327 ⇓P **P 19 28 25.9 +0.2**
baz=66,SNR=8.4
Y23A Lovelace Mesa, 65.79 328 ⇓P **P 19 28 25.8 -0.5**
baz=66
318A Bisbee 65.91 323 ⇓P **P 19 28 27.0 -0.1**
baz=66
219A White Tail Can 65.93 324 ⇓P **P 19 28 27.7 +0.5**
baz=66
120A U Bar Ranch, L 66.02 325 ⇑P **P 19 28 28.0 +0.2**
baz=66
W25A X Bar L Ranch, 66.07 330 ⇑P **P 19 28 27.4 -0.6**
baz=66
MAIT Maitri 66.19 159 *e*P **P 19 28 29.5 +1.1**
MAIT *e* 19 28 43.5
BNM Barren Site 66.25 327 *e*P **P 19 28 25.8 -3.5**
comp=E,10nm,1.2s,mb4.7
218A Dragoon 66.34 323 ⇓P **P 19 28 30.8 +0.9**
baz=66
Z20A Nine Sixteen R 66.44 325 ⇑P **P 19 28 30.9 +0.5**
baz=67
W24A Lazy 6 Ranch, 66.51 329 ⇑P **P 19 28 30.4 -0.4**
baz=67
119A Ashpeak Ranch, 66.55 325 ⇑P **P 19 28 31.7 +0.5**
baz=67
217A Green Valley 66.62 323 ⇓P **P 19 28 32.2 +0.6**
baz=67
V25A Rancho No Teng 66.65 330 ⇑P **P 19 28 31.1 -0.6**
baz=67,SNR=5.7
Y21A Point of Rocks 66.66 327 ⇓P **P 19 28 32.1 +0.2**
baz=67
LAZ Ladron 66.70 327 *e*P **P 19 28 32.8 +0.6**
comp=E,7.0nm,1.3s,mb4.5
ANMO Albuquerque 66.81 328 *e*P **P 19 28 32.4 -0.4**
comp=E,13nm,1.3s,mb4.8
W23A Werner Place, 66.82 328 ⇓P **P 19 28 32.4 -0.5**
baz=67
V24A Rampart Ranch, 66.86 329 ⇓P **P 19 28 32.7 -0.4**
baz=67
Y20A Horse Springs, 66.95 326 ⇑P **P 19 28 34.3 +0.6**
baz=67
TUC Tucson 67.01 323 *e*P **P 19 28 33.5 -0.6**
comp=E,16nm,1.5s,mb4.8
U25A Circle Dot Ran 67.02 330 ⇑P **P 19 28 33.7 -0.3**
baz=67,SNR=6.8
X21A Alamocita Cree 67.06 327 ⇓P **P 19 28 34.9 +0.5**
baz=67,SNR=6.3
216A Three Points, 67.15 323 ⇓P **P 19 28 34.5 -0.5**
baz=67
117A Oracle 67.18 323 ⇓P **P 19 28 35.7 +0.5**
baz=67
V23A Ortiz Mt. (NFS 67.31 329 ⇓P **P 19 28 36.1 +0.1**
baz=68
Y19A Nutrioso 67.44 325 ⇑P **P 19 28 37.8 +0.9**
baz=68,SNR=6.9
X20A Quemado 67.50 326 ⇑P **P 19 28 37.9 +0.7**
baz=68
W21A San Fidel 67.53 327 ⇓P **P 19 28 37.8 +0.5**
baz=68
T25A Trinidad 67.62 331 ⇑P **P 19 28 37.8 -0.1**
baz=68
116A Eloy 67.71 323 ⇑P **P 19 28 39.5 +0.9**
baz=68
Y18A Canyon Day Jun 67.72 325 ⇑P **P 19 28 39.0 +0.5**
baz=68
U23A El Rito 67.79 329 ⇑P **P 19 28 38.9 -0.1**
baz=68
V22A San Miguel Ran 67.80 328 ⇑P **P 19 28 39.5 +0.5**
baz=68,SNR=7.7
214A Organ Pipe Nat 67.89 322 ⇓P **P 19 28 40.7 +1.0**
baz=68
W20A Ramah 67.96 327 ⇑P **P 19 28 40.7 +0.6**
baz=68
S25A Robets Cordova 68.07 331 ⇓P **P 19 28 40.4 -0.2**
baz=68,SNR=6.2
Y17A Roosevelt 68.09 324 ⇓P **P 19 28 41.7 +0.8**
baz=68
U22A Llaves 68.14 329 ⇓P **P 19 28 41.4 +0.2**
baz=68
S24A Houchin Ranch, 68.40 331 ⇓P **P 19 28 42.8 0.0**
baz=69
V20A Brimhall 68.47 327 ⇑P **P 19 28 43.8 +0.5**
baz=69
U21A Nageezi 68.57 328 ⇑P **P 19 28 44.1 +0.2**
baz=69,SNR=5.5
Y16A Circle Bar Ran 68.57 324 ⇓P **P 19 28 44.8 +0.9**
baz=69
SDCO Great Sand Dun 68.62 330 *e*P **P 19 28 43.7 -0.4**
comp=E,13nm,1.1s,mb4.8
R24A Sanders Place, 68.84 331 ⇑P **P 19 28 45.3 -0.2**
baz=69
U20A Newcomb 68.95 328 ⇑P **P 19 28 46.4 +0.2**
baz=69
X16A Lo Mia Camp, P 68.96 324 ⇑P **P 19 28 47.3 +1.0**
baz=69
T21A Navajo Lake 68.96 329 ⇑P **P 19 28 46.6 +0.4**
baz=69
Q25A Bedland, Calha 69.02 332 ⇑P **P 19 28 47.0 +0.3**
baz=69
Y15A Casa Rosa Ranc 69.10 323 ⇓P **P 19 28 48.2 +1.0**
baz=69
S22A 4UR Ranch, Cre 69.23 330 ⇓P **P 19 28 47.9 -0.1**
baz=69,SNR=7.5
U19A Dine' College, 69.23 327 ⇑P **P 19 28 48.1 +0.1**
baz=69
Z13A Yuma Proving G 69.28 322 ⇓P **P 19 28 49.4 +1.0**
baz=69
X15A Humboldt 69.44 324 ⇑P **P 19 28 50.2 +0.9**
baz=70
Y14A Wickenburg 69.46 323 ⇓P **P 19 28 49.9 +0.4**
baz=70
Q24A Divide 69.46 331 ⇓P **P 19 28 49.1 -0.2**
baz=70,SNR=5.9
P25A Willow Gulch B 69.49 332 ⇓P **P 19 28 50.5 +1.0**
baz=70
W16A Flagstaff 69.52 325 ⇓P **P 19 28 50.6 +0.9**
baz=70
V17A Tonalea, Kykot 69.53 325 ⇓P **P 19 28 50.3 +0.5**
baz=70,SNR=5.8
T19A Beclabito 69.56 327 ⇓P **P 19 28 50.4 +0.4**
baz=70
R22A Saguache, Gunn 69.59 330 ⇓P **P 19 28 51.0 +0.9**
baz=70
MVCO Mesa Verde 69.60 328 ⇓P **P 19 28 50.6 +0.3**
baz=70
MVCO Mesa Verde 69.60 328 *e*P **P 19 28 50.2 -0.1**
comp=E,17nm,1.2s,mb4.8
S21A Coal Bank Pass 69.62 329 ⇑P **P 19 28 50.6 +0.3**
baz=70
U18A Rough Rock, Ch 69.67 327 ⇑P **P 19 28 51.0 +0.3**
baz=70
WUAZ Wupatki 69.75 325 ⇑P **P 19 28 52.0 +0.8**
baz=70
WUAZ Wupatki 69.75 325 *e*P **P 19 28 51.2 0.0**
comp=E,8.9nm,0.9s,mb4.7
X14A Yava 69.79 323 ⇑P **P 19 28 52.5 +1.0**
baz=70
LIC Lamto 69.80 74 *e*P **P 19 28 51.7 -0.3**
comp=E,91nm,1.3s,mb5.5
LIC Lamto 69.80 74 *e*P **P 19 28 51.8 -0.2**
comp=E,32nm,0.8s,mb5.0
LIC *e*MLR MLR
comp=Z,238nm,21.8s,MS4.1
LIC Lamto 69.80 74 *e*P **P 19 28 51.8 -0.2**
comp=Z,16nm,0.8s,mb5.0
LIC LR LR
comp=Z,120nm,21.8s,MS4.1
W15A Williams 69.98 324 ⇓P **P 19 28 53.5 +0.9**
baz=70
TIC Toumodi 69.99 74 *e*P **P 19 28 52.9 -0.3**
comp=Z,78nm,1.3s,mb5.5
S20A Disappointment 70.02 329 ⇑P **P 19 28 53.4 +0.5**
baz=70
R21A Cimarron 70.07 329 ⇓P **P 19 28 53.5 +0.4**
baz=70
U16A Tuba City 70.10 326 ⇓P **P 19 28 53.8 +0.4**
baz=70
KIC Kosan Boka 70.11 74 *e*P **P 19 28 53.8 -0.1**
comp=Z,46nm,0.8s,mb5.5
DBIC Dimbokro 70.15 74 P **P 19 28 54.2 0.0**
comp=Z,23nm,0.8s,mb5.2,baz=227,slow=5.6,SNR=16
DBIC LR LR 19 58 01.8
comp=Z,191nm,21.2s,MS4.3,baz=250,slow=34
DBIC Dimbokro 70.15 74 *e*P **P 19 28 53.8 -0.4**
comp=Z,31nm,1.0s,mb5.2
DBIC *e* 19 29 07.2
T18A Mexican Hat 70.22 327 ⇑P **P 19 28 54.4 +0.3**
baz=70
R20A Redvale 70.32 329 ⇑P **P 19 28 54.9 +0.2**
baz=70
S19A Harvey Farm, M 70.33 328 ⇓P **P 19 28 54.8 +0.1**
baz=70,SNR=8.9
ECSD EROS Data Cent 70.34 340 *e*P **P 19 28 51.7 -2.9**
comp=Z,4.3nm,0.7s,mb4.5
ECSD *e* pP 19 29 02.1 -2.9
ISCO Idaho Springs 70.35 332 *e*P **P 19 28 53.4 -1.3**
comp=Z,20nm,1.5s,mb4.8
ISCO *e* pP 19 29 03.6 -1.6
PV01 Paradox Valley 70.37 329 *e*P **P 19 28 54.8 -0.1**
PV01 *e* pP 19 29 04.7 -0.7
X13A Yucca 70.40 323 ⇑P **P 19 28 56.0 +0.8**
baz=70
V15A Kaibab Nationa 70.41 325 ⇓P **P 19 28 56.1 +0.9**
baz=71
W14A Seligman 70.44 324 ⇓P **P 19 28 56.2 +0.7**
baz=71
SMCO Snowmass 70.45 330 *e*P **P 19 28 55.4 -0.1**
comp=Z,6.5nm,0.6s,mb4.7
T17A Navajo Res., N 70.59 326 ⇓P **P 19 28 56.6 +0.3**
baz=71
BC3 Big Chuckawall 70.65 321 ⇑P **P 19 28 56.8 +0.1**
baz=71
MONP Monument Peak 70.67 320 ⇓P **P 19 28 57.5 +0.6**
baz=71
BAR Barrett 70.67 320 P **P 19 28 57.2 +0.3**
comp=Z,4.7nm,0.8s,mb4.5
BAR *e* pP 19 29 06.2 -1.2
S18A Hurst Farm, Bl 70.72 327 ⇑P **P 19 28 57.6 +0.5**
baz=71,SNR=13
V14A Boquillas Ranc 70.77 324 ⇓P **P 19 28 58.5 +1.0**
baz=71
W13A Hualapai Mount 70.80 323 ⇑P **P 19 28 58.4 +0.7**
baz=71
IRM Iron Mountain 70.83 322 ⇑P **P 19 28 59.1 +1.3**
baz=71
U15A North Rim 70.93 325 ⇓P **P 19 28 59.2 +0.8**
baz=71,SNR=5.8
O22A Kremmling 71.06 331 ⇑P **P 19 28 58.9 -0.1**
baz=71
PFO Pinyon Flat Ob 71.20 320 ⇑P **P 19 29 02.0 +2.0**
baz=71
R18A Canyonlands Na 71.21 328 ⇓P **P 19 28 60.0 -0.1**
baz=71,SNR=5.1
Q19A Hogan Spring (71.35 329 ⇓P **P 19 29 01.1 +0.2**
baz=72
N23A Red Feather La 71.39 332 ⇓P **P 19 29 01.4 +0.4**
baz=72
U14A Mt Trumbull 71.39 324 ⇑P **P 19 29 02.1 +0.9**
baz=72,SNR=7.9
V13A Grand Canyon W 71.41 324 ⇓P **P 19 29 02.0 +0.7**
baz=72
T15A Red Dirt Ranch 71.42 325 ⇑P **P 19 29 02.2 +0.8**
baz=72
N22A Wattenberg Ran 71.54 332 ⇑P **P 19 29 02.6 +0.6**
baz=72
S16A Weppner Ranch, 71.55 326 ⇑P **P 19 29 02.5 +0.4**
baz=72
GMRC Granite Mounta 71.57 322 ⇑P **P 19 29 03.5 +1.1**
baz=72
R17A Hanksville Air 71.64 327 ⇓P **P 19 29 02.9 +0.3**
baz=72,SNR=9.5
P19A Cripple Cowboy 71.75 329 ⇑P **P 19 29 03.6 +0.3**
baz=72,SNR=7.8
V12A Nelson 71.80 323 ⇓P **P 19 29 04.8 +1.1**
baz=72
O20A White River Ci 71.80 330 ⇑P **P 19 29 04.0 +0.4**
baz=72
U13A Pakoon Wash 71.82 324 ⇑P **P 19 29 04.5 +0.7**
baz=72
T14A Hurricane 71.82 325 ⇓P **P 19 29 04.5 +0.7**
baz=72
Q18A Rafter H Ranch 71.88 328 ⇑P **P 19 29 04.3 +0.2**
baz=72
R16A Teasdale 71.92 327 ⇑P **P 19 29 04.5 +0.2**
baz=72
TBI Tubuai 72.05 252 *e*S S 19 38 24.6 -0.9
comp=Z,69nm,29.5s
TBI *e*LR LR 19 51 19.1
comp=Z,202nm,24.0s
SRU San Rafael 72.08 328 ⇑P **P 19 29 05.5 +0.2**
baz=72
SRU San Rafael 72.08 328 *e*P **P 19 29 04.6 -0.7**
comp=Z,12nm,0.9s,mb4.8
SRU *e* pP 19 29 14.8 -0.9
U12A Valley of Fire 72.14 324 ⇓P **P 19 29 06.7 +1.0**
baz=72
Q16A Castle Valley 72.25 327 ⇑P **P 19 29 06.6 +0.3**
baz=72
CCUT Cedar City 72.34 325 *e*P **P 19 29 07.6 +0.8**
comp=Z,15nm,1.1s,mb4.8
CCUT *e* pP 19 29 17.3 0.0
O19A Miners Draw (B 72.34 330 ⇓P **P 19 29 06.9 +0.1**
baz=72,SNR=6.0
P18A Preston Nutter 72.35 329 ⇓P **P 19 29 07.3 +0.4**
baz=72,SNR=9.0
N20A Spence Gulch, 72.37 331 ⇑P **P 19 29 06.9 -0.1**
baz=72,SNR=5.4
MSU Marysvale 72.44 327 *e*P **P 19 29 07.3 -0.2**
comp=Z,52nm,1.2s,mb5.3
MSU *e* pP 19 29 17.5 -0.4
P17A Butcher Ranch, 72.47 328 ⇑P **P 19 29 08.1 +0.5**
baz=73
ARUT Antelope Range 72.55 325 *e*P **P 19 29 08.9 +0.8**
comp=Z,15nm,1.0s,mb4.9
ARUT *e* pP 19 29 18.2 -0.3
RWWY Rawlins 72.59 332 *e*P **P 19 29 08.1 -0.2**
comp=Z,4.7nm,0.7s,mb4.5
RWWY *e* pP 19 29 17.6 -1.1
M21A Separation Pea 72.59 332 ⇓P **P 19 29 08.5 +0.2**
baz=73
S13A Holt Ranch, En 72.62 325 ⇑P **P 19 29 09.5 +1.0**
baz=73
N19A John Jarvie Ra 72.84 330 ⇓P **P 19 29 09.9 +0.2**
baz=73
M20A Sweetwater, Wa 72.86 331 ⇑P **P 19 29 09.9 0.0**
baz=73
L21A Rawlins 72.88 332 ⇓P **P 19 29 09.7 -0.3**
baz=73,SNR=7.9
O17A Robinson Place 73.03 329 ⇓P **P 19 29 11.3 +0.5**
baz=73,SNR=5.9
T11A Corn Creek, Al 73.10 324 ⇓P **P 19 29 12.4 +1.0**
baz=73
R13A O'Grain Ranch, 73.12 325 ⇑P **P 19 29 12.4 +0.9**
baz=73
U10A Ash Meadows, A 73.13 323 ⇓P **P 19 29 12.4 +0.8**
baz=73
N18A Larsen Ranch, 73.13 330 ⇓P **P 19 29 12.0 +0.5**
baz=73
RSSD Black Hills 73.30 335 *e*P **P 19 29 12.1 -0.3**
comp=Z,8.8nm,0.9s,mb4.7
MPU Maple Canyon 73.32 328 *e*P **P 19 29 11.2 -1.4**
comp=Z,16nm,1.0s,mb4.9
L20A Wamsutter 73.35 331 ⇑P **P 19 29 12.5 -0.2**
baz=74
Q14A Sevier Lake (B 73.37 326 ⇓P **P 19 29 13.6 +0.7**
baz=74,SNR=6.2
DAU Daniels Canyon 73.44 328 *e*P **P 19 29 13.7 +0.4**
comp=Z,3.4nm,0.8s,mb4.3
DAU *e* pP 19 29 23.1 -0.7
MPMC Manual Prospec 73.53 322 ⇑P **P 19 29 14.5 +0.5**
baz=74
R12A Pony Springs, 73.57 325 ⇑P **P 19 29 15.3 +1.1**
baz=74
M18A Lyman 73.67 330 ⇓P **P 19 29 14.5 -0.1**
baz=74
JLU Jordanelle 73.68 328 *e*P **P 19 29 15.0 +0.2**
comp=Z,6.6nm,1.1s,mb4.5
JLU *e* pP 19 29 24.5 -0.8
P14A Drum Mountains 73.71 327 ⇓P **P 19 29 15.7 +0.7**
baz=74,SNR=6.1
Q13A Wheeler Ranch, 73.73 326 ⇓P **P 19 29 15.9 +0.9**
baz=74
ISA Isabella 73.82 321 *e*P **P 19 29 16.1 +0.4**
comp=Z,4.6nm,1.0s,mb4.4
K20A Yellowstone Ra 73.87 332 ⇓P **P 19 29 15.6 -0.2**
baz=74
L19A Farson 73.88 331 ⇓P **P 19 29 15.9 +0.1**
baz=74
PPT Papeete 73.95 257 *e*S S 19 38 45.3 -1.9
comp=Z,113nm,27.8s
PPT *e*LR LR 19 52 15.5
comp=Z,408nm,27.5s,baz=98
PPT Papeete 73.95 257 LR LR 19 52 47.0
comp=Z,330nm,18.2s,MS4.7,baz=128,slow=28
M17A Scullys Gap (B 73.99 329 ⇓P **P 19 29 16.7 +0.2**
baz=74
DUG Dugway 74.04 327 ⇓P **P 19 29 17.3 +0.4**
baz=74
DUG Dugway 74.04 327 *e*P **P 19 29 16.6 -0.2**
comp=Z,13nm,1.0s,mb4.8
L18A Fontenelle, Gr 74.05 330 ⇑P **P 19 29 17.0 +0.2**
baz=74
P13A Bates Ranch, G 74.10 326 ⇑P **P 19 29 17.7 +0.5**
baz=74
R11A Troy Canyon, C 74.11 324 ⇑P **P 19 29 17.8 +0.5**
baz=74
Q12A Willow Creek R 74.21 325 ⇑P **P 19 29 17.7 -0.2**
baz=74
K19A Absolon Red Bu 74.22 331 ⇑P **P 19 29 17.6 -0.2**
baz=74
S10A Tonopah Range, 74.35 323 ⇑P **P 19 29 18.5 -0.3**
baz=74
PDAR Pinedale Array 74.50 331 P **P 19 29 18.6 -0.8**
comp=Z,0.5nm,0.4s,mb3.8,baz=141,slow=6.8,SNR=6.1
BW06 Boulder Array 74.50 331 ⇑P **P 19 29 19.5 +0.1**
baz=75
Q11A Duckwater 74.51 325 ⇓P **P 19 29 19.7 +0.1**
baz=75
HWUT Hardware Ranch 74.52 329 P **P 19 29 18.9 -0.7**

comp=Z,9.0nm,0.5s,mb5.0
SBA Scott Base 74.54 191 P P 19 29 20.7 +1.3
comp=Z,6.6nm,1.0s,mb4.5
SBA e pP 19 29 30.2 +0.4
P12A McGill 74.57 326 ⇓P P 19 29 20.2 +0.2
baz=75
K18A Toltan Ranch, 74.61 331 ⇓P P 19 29 20.3 +0.2
baz=75
BGU Big Grassy Mou 74.70 328 eP P 19 29 20.6 -0.1
comp=Z,8.5nm,1.2s,mb4.5
SPUT South Promonto 74.71 328 eP P 19 29 19.9 -0.8
comp=Z,10nm,1.0s,mb4.7
SPUT e pP 19 29 29.8 -1.4
N14A Grayback Hills 74.72 328 ⇓P P 19 29 21.0 +0.2
baz=75
M15A Larsen Ranch, 74.83 328 ⇑P P 19 29 21.2 -0.2
baz=75
J18A Kendall Valley 75.05 331 ⇓P P 19 29 22.9 +0.2
baz=75
O12A Currie 75.08 326 ⇑P P 19 29 22.7 -0.1
baz=75
K17A Gardner Place, 75.10 330 ⇓P P 19 29 22.9 -0.1
baz=75
AHID Auburn Hatcher 75.20 330 eP P 19 29 23.2 -0.3
comp=Z,12nm,0.6s,mb5.0
AHID e pP 19 29 32.6 -1.4
L15A Malad City 75.21 329 ⇑P P 19 29 23.9 +0.3
baz=75
HVU Hansel Valley 75.23 328 eP P 19 29 22.5 -1.2
comp=Z,6.4nm,0.9s,mb4.5
HVU e pP 19 29 32.9 -1.3
N13A Wendover, West 75.24 327 ⇑P P 19 29 24.3 +0.5
baz=75
N13A Wendover, West 75.24 327 P P 19 29 23.8 +0.1
comp=Z,10nm,0.7s,mb4.9
M14A Sheep Mountain 75.30 328 ⇑P P 19 29 24.2 +0.1
baz=76
I18A Diamond G Ranc 75.35 331 ⇓P P 19 29 24.2 -0.2
baz=76
O11A Cowboy Ranch, 75.45 326 ⇓P P 19 29 25.7 +0.7
baz=76
K16A Soda Springs 75.47 330 ⇓P P 19 29 25.4 +0.3
baz=76
P10A Eureka 75.50 325 ⇑P P 19 29 25.9 +0.6
baz=76
REDW Red Top Meadow 75.55 331 P P 19 29 24.8 -0.7
comp=Z,14nm,1.1s,mb4.8
M13A Montello 75.59 327 ⇑P P 19 29 25.9 +0.1
baz=76
LOHW Long Hollow 75.63 331 eP P 19 29 25.7 -0.3
comp=Z,3.6nm,0.9s,mb4.3
LOHW e pP 19 29 35.2 -1.3
L14A Malta 75.65 328 ⇓P P 19 29 26.6 +0.5
baz=76
NVAR Mina Array Bea 75.66 323 P P 19 29 26.1 -0.2
comp=Z,1.4nm,0.8s,mb3.9,baz=148,slow=5.3,SNR=3.8
TPAW Teton Pass 75.69 331 eP P 19 29 25.8 -0.5
comp=Z,11nm,1.0s,mb4.7
RRI2 Red Ridge 75.75 330 P P 19 29 26.5 -0.2
comp=Z,18nm,1.0s,mb5.0
RRI2 e pP 19 29 36.4 -0.8
K15A Arbon 75.80 329 ⇓P P 19 29 26.9 0.0
baz=76
SYO Syowa Base 75.88 160⇓eP P 19 29 26.4 -0.7
SYO Syowa Base 75.88 160⇓epP pP 19 29 30.0 -7.7
M12A Wells 76.01 327 ⇑P P 19 29 28.8 +0.6
baz=76
ULM Lac du Bonnet 76.02 343 P P 19 29 26.3 -1.7
comp=Z,2.9nm,0.5s,mb4.5,baz=153,slow=7.5,SNR=2.8
L13A Double Diamond 76.03 328 ⇑P P 19 29 28.7 +0.4
baz=76
RLMT Red Lodge 76.24 333 ⇓P P 19 29 29.3 -0.1
baz=76
RLMT Red Lodge 76.24 333 eP P 19 29 29.3 -0.1
comp=Z,3.4nm,0.7s,mb4.4
RLMT e pP 19 29 38.6 -1.3
LAO LASA Array 76.29 335 eP P 19 29 29.2 -0.4
comp=Z,10nm,1.0s,mb4.7
LAO e 19 29 35.6
J15A Blackfoot 76.31 330 ⇓P P 19 29 30.0 +0.2
baz=76
M11A Holland Ranch, 76.47 326 ⇓P P 19 29 31.5 +0.7
baz=77
G18A Lazy EL Ranch, 76.53 333 ⇓P P 19 29 30.9 -0.1
baz=77,SNR=8.8
CMB Columbia Colle 76.57 321 P P 19 29 30.4 -1.0
L12A House Creek Ra 76.61 327 ⇓P P 19 29 32.2 +0.7
baz=77
J14A Carey 76.76 329 ⇓P P 19 29 33.0 +0.6
baz=77
H16A Russell Place, 76.78 331 ⇓P P 19 29 32.8 +0.3
baz=77
I15A Monteview 76.79 330 ⇑P P 19 29 33.3 +0.7
baz=77
K12A Draper Farm, C 76.91 328 ⇓P P 19 29 33.9 +0.7
baz=77,SNR=6.3
GCMT Greycliff 76.95 333 eP P 19 29 33.0 -0.4
comp=Z,10nm,1.0s,mb4.7
GCMT e pP 19 29 42.8 -1.1
L11A Cat Creek Ranc 76.99 327 ⇓P P 19 29 34.6 +0.9
baz=77
DGMT Dagmar 77.03 338 ⇑P P 19 29 34.0 +0.2
baz=77
DGMT Dagmar 77.03 338 eP P 19 29 33.4 -0.3
comp=Z,28nm,0.9s,mb5.2
DGMT e pP 19 29 43.0 -1.3
F18A Big Timber 77.06 333 ⇑P P 19 29 34.0 0.0
baz=77,SNR=9.8
J13A Cove Ranch, Pi 77.13 329 ⇑P P 19 29 35.3 +0.9
baz=77
SCHQ Schefferville 77.17 2 P P 19 29 33.3 -1.1
comp=Z,5.2nm,0.8s,mb4.5,baz=181,slow=4.8,SNR=4.8
SCHQ LR LR 20 05 18.7
comp=Z,66nm,18.5s,MS4.0,baz=12,slow=37
SCHQ Schefferville 77.17 2 eP P 19 29 32.7 -1.7
comp=Z,13nm,1.1s,mb4.8
SCHQ e pP 19 29 42.9 -2.0
I14A Mackay 77.19 329 ⇓P P 19 29 35.6 +0.8
baz=77
L10A Juniper Basin 77.29 326 ⇓P P 19 29 35.8 +0.4
baz=77
HLID Hailey 77.37 329 ⇓P P 19 29 36.3 +0.5
baz=78
HLID Hailey 77.37 329 eP P 19 29 35.7 -0.1
comp=Z,12nm,1.0s,mb4.8
HLID e pP 19 29 45.6 -0.7
F17A Fitzpatrick Pl 77.46 332 ⇑P P 19 29 36.4 +0.2
baz=78,SNR=5.7
J12A Stokes Ranch, 77.47 328 ⇓P P 19 29 36.9 +0.5
baz=78
I13A Wildhorse Cree 77.49 329 ⇑P P 19 29 37.1 +0.7
baz=78,SNR=5.0
K11A Parker Ranch, 77.57 327 ⇓P P 19 29 37.4 +0.5
baz=78
E18A Harlowton 77.67 333 ⇓P P 19 29 37.2 -0.2
baz=78,SNR=5.5
H14A Leadore 77.67 330 ⇓P P 19 29 37.7 +0.2
baz=78
BOZ Bozeman (W) 77.68 332 ⇑P P 19 29 37.4 -0.1
baz=78
BOZ Bozeman (W) 77.68 332 eP P 19 29 36.0 -1.5
comp=Z,6.1nm,1.1s,mb4.4
BOZ e pP 19 29 46.3 -1.7
G15A Dillon 77.69 331 ⇓P P 19 29 37.7 +0.2
baz=78
I12A Atlanta 77.89 328 ⇓P P 19 29 39.4 +0.7
baz=78
DLMT Dillon 77.89 331 eP P 19 29 38.9 +0.2
comp=Z,2.0nm,0.8s,mb4.1
MFID Camas Ranch 77.94 328 ⇑P P 19 29 39.3 +0.3
baz=78
E17A Martinsdale 77.98 333 ⇑P P 19 29 39.1 -0.1
baz=78
K10A MacKenzie Ranc 78.00 327 ⇓P P 19 29 40.0 +0.7
baz=78
H13A Challis 78.04 329 ⇓P P 19 29 39.9 +0.4
baz=78
LRM Limekiln Ridge 78.18 331 eP P 19 29 40.2 0.0
comp=Z,50nm,1.0s,mb5.4
LRM e pP 19 29 49.8 -1.1
F15A Butte 78.21 331 ⇓P P 19 29 40.5 +0.1
baz=78
H12A Diamond D Ranc 78.32 329 ⇓P P 19 29 41.4 +0.3
baz=78
G13A Cobalt 78.43 330 ⇑P P 19 29 42.2 +0.6
baz=79,SNR=24
D17A Six Diamond Ra 78.46 333 ⇓P P 19 29 41.6 -0.1
baz=79,SNR=7.3

F14A Wisdom 78.58 331 ⇓P P 19 29 42.5 0.0
baz=79
HRY Holter Researc 78.60 332 eP P 19 29 40.5 -2.0
comp=Z,10.0nm,0.9s,mb4.8
HRY e pP 19 29 52.4 -0.7
D16A Dana Ranch, Ca 78.73 333 ⇑P P 19 29 43.6 +0.3
baz=79,SNR=11
E15A Deer Lodge 78.73 332 ⇑P P 19 29 43.4 +0.1
baz=79
EGMT Eagleton 78.77 334 ⇓P P 19 29 43.0 -0.4
baz=79
EGMT Eagleton 78.77 334 eP P 19 29 42.5 -0.9
comp=Z,2.4nm,0.8s,mb4.2
EGMT e pP 19 29 50.5 -3.5
C17A Wharram Farm, 78.87 333 ⇓P P 19 29 43.8 -0.2
baz=79
G12A Big Creek, Yel 78.97 329 ⇑P P 19 29 44.8 +0.1
baz=79
F13A Darby 79.00 330 ⇑P P 19 29 45.1 +0.3
baz=79,SNR=13
B18A Beardsley Farm 79.07 334 ⇑P P 19 29 45.0 -0.1
baz=79
E14A Clinton 79.10 331 ⇓P P 19 29 45.7 +0.4
baz=79
MOD Modoc 79.17 324 eP P 19 29 45.9 0.0
comp=Z,3.9nm,0.9s,mb4.3
MOD e pP 19 29 54.9 -1.5
CHMT Chamberlain Mo 79.37 332 eP P 19 29 46.3 -0.5
comp=Z,3.5nm,1.1s,mb4.2
CHMT e pP 19 29 56.0 -1.4
B17A L&G Farms, Che 79.41 334 ⇑P P 19 29 46.5 -0.4
baz=80
F12A Elk City 79.41 330 ⇑P P 19 29 47.2 +0.2
baz=80
C16A Fuhringer Ranc 79.41 333 ⇓P P 19 29 46.8 -0.2
baz=80,SNR=5.8
E13A Victor 79.43 331 ⇑P P 19 29 47.6 +0.5
baz=80
A18A Metzger Ranch, 79.52 335 ⇑P P 19 29 46.8 -0.7
baz=80,SNR=5.4
D14A Greenough 79.61 332 ⇑P P 19 29 47.8 -0.3
baz=80
BMO Blue Mountains 79.72 328 eP P 19 29 48.2 -0.5
comp=Z,9.0nm,1.0s,mb4.7
BMO e pP 19 29 58.0 -1.3
C15A Salmond Ranch, 79.76 332 ⇑P P 19 29 48.9 +0.1
baz=80
G10A Bishop Farm, J 79.95 328 ⇑P P 19 29 50.9 +0.9
baz=80
E12A Beaver Dam Sad 80.04 330 ⇑P P 19 29 50.7 +0.3
baz=80
D13A Huson 80.05 331 ⇓P P 19 29 50.6 +0.2
baz=80
K05A Summer Lake 80.06 325 ⇓P P 19 29 51.5 +0.8
baz=80
B15A Bradely Ranch, 80.15 333 ⇑P P 19 29 50.4 -0.6
baz=80,SNR=5.6
SWMT Swartz Lake 80.16 332 eP P 19 29 50.4 -0.6
comp=Z,5.4nm,0.9s,mb4.5
C14A Swan Lake 80.24 332 ⇓P P 19 29 51.6 +0.1
baz=80
A16A West Butte Ran 80.25 334 ⇓P P 19 29 51.4 -0.1
baz=80
G09A Cove 80.26 328 ⇑P P 19 29 52.3 +0.7
baz=80
I07A Izee 80.27 326 ⇓P P 19 29 52.1 +0.4
baz=80,SNR=5.3
YBH Yreka Blue Hor 80.38 323 eP P 19 29 50.9 -1.5
comp=Z,2.9nm,1.1s,mb4.1
D12A Red Ives Fores 80.42 331 ⇓P P 19 29 52.9 +0.4
baz=81
F10A Beach Ranch, E 80.50 329 ⇑P P 19 29 53.4 +0.5
baz=81
C13A Hot Springs 80.54 331 ⇓P P 19 29 53.5 +0.5
baz=81
A15A Johnson Ranch, 80.74 333 ⇑P P 19 29 53.7 -0.5
baz=81
BSMT Bassoo Peak 80.76 331 eP P 19 29 54.4 +0.1
comp=Z,3.6nm,1.0s,mb4.3
BSMT e pP 19 30 04.0 -0.9
TSUM Tsumeb 80.83 107 eP P 19 29 56.5 +1.1
comp=Z,28nm,0.9s,mb5.2
G08A Pilot Rock 80.85 327 ⇓P P 19 29 55.1 +0.2
baz=81
A14A Double T Ranch 81.03 333 ⇓P P 19 29 55.0 -0.7
baz=81,SNR=5.3
WALA Waterton Lakes 81.30 333 eP P 19 29 56.6 -0.5
comp=Z,0.4nm,0.9s
WALA e pP 19 30 06.2 -1.5
C11A Tepee Creek (N 81.41 331 ⇓P P 19 29 57.8 0.0
baz=82
A13A Flathead Natio 81.42 332 ⇑P P 19 29 57.9 +0.2
baz=82,SNR=7.8
B12A Libby 81.58 331 ⇑P P 19 29 58.8 +0.1
baz=82
G06A Carlson Farm, 81.66 327 ⇑P P 19 29 58.8 -0.2
baz=82
FFC Flin Flon 81.71 342 eP P 19 29 57.5 -1.6
comp=Z,2.7nm,0.9s,mb4.2
HAWA Hanford 81.92 328 eP P 19 30 00.3 -0.1
comp=Z,19nm,0.9s,mb5.0
HAWA e pP 19 30 09.6 -1.4
RSW Rattlesnake Hi 81.94 328 eP P 19 30 01.0 +0.4
comp=Z,6.0nm,0.6s,mb4.7
RSW e pP 19 30 10.4 -0.8
OD2 Odessa Site #2 82.23 329 eP P 19 30 01.7 -0.4
comp=Z,33nm,1.0s,mb5.2
OD2 e pP 19 30 11.2 -1.4
PFVI Vila Bisbo 82.83 45 eLR LR 20 33 52.7
comp=Z,325nm,18.0s
MORF Marmelete 83.05 45 eLR LR 20 33 55.9
ETW Entiat 83.16 328 eP P 19 30 06.0 -0.8
comp=Z,11nm,0.8s,mb4.9
ETW e pP 19 30 16.1 -1.4
FCC Fort Churchill 83.45 348 eP P 19 30 06.4 -1.7
comp=Z,0.2nm,0.9s
FCC e pP 19 30 16.4 -2.3
PBDV Barranco-do-Ve 83.48 45 eLR LR 20 33 43.7
comp=Z,281nm,20.0s
PMAFR Mafra 83.60 43 eLR LR 20 33 14.7
comp=Z,348nm,20.0s
MAW Mawson 83.61 164 P P 19 30 10.1 +1.0
comp=Z,12nm,0.8s,mb5.1,baz=218,slow=6.5,SNR=25
MAW LR LR 20 07 29.1
comp=Z,154nm,18.5s,MS4.4,baz=3.9,slow=36
MAW Mawson 83.61 164 eP P 19 30 09.6 +0.5
comp=Z,3.0nm,0.9s,mb4.4
MAW e pP 19 30 19.1 -0.5
PCVE Castro Verde 83.64 45 eLR LR 20 33 48.6
comp=Z,241nm,22.0s
PVAQ Vaqueiros 83.72 45 eLR LR 20 34 03.0
comp=Z,235nm,22.0s
BOSA Boshof 83.95 118 P P 19 30 12.2 +0.6
comp=Z,13nm,0.8s,mb5.1,baz=242,slow=6.7,SNR=20
EVO Evora 84.16 44 eP P 19 30 12.1 -0.2
comp=Z,16nm,1.0s,mb4.8
EVO eMLR MLR
comp=Z,88nm,19.8s,MS3.8
EDM Edmonton 84.27 336 eP P 19 30 10.6 -1.8
JCW Jim Creek 84.34 328 eP P 19 30 11.5 -1.4
comp=Z,21nm,1.1s,mb5.2
PTOM Tomar 84.53 43 eP P 19 30 15.3 +1.2
comp=Z,33nm,1.0s,mb5.4
PBAR Barrancos 84.59 45 eP P 19 30 16.0 +1.5
comp=Z,14nm,1.6s,mb4.8
PBAR eLR LR 20 33 59.9
comp=Z,313nm,20.0s
PESTR Estremoz 84.63 44 eP P 19 30 15.9 +1.3
comp=Z,17nm,1.8s,mb4.9
PESTR eLR LR 20 33 55.6
comp=Z,255nm,20.0s
PMRV Marv??o 85.07 44 eP P 19 30 17.6 +0.8
comp=Z,14nm,1.8s,mb4.8
PMRV eLR LR 20 33 41.9
comp=Z,284nm,20.0s
PVIS Viseu 85.48 42 eP P 19 30 19.8 +0.9
comp=Z,24nm,1.8s,mb5.0
MTE Manteigas 85.52 43 eP P 19 30 19.8 +0.7
comp=Z,24nm,1.0s,mb5.4
MTE eLR LR 20 33 29.3
comp=Z,203nm,20.0s
PVRL Vila Real 85.92 42 eP P 19 30 21.8 +0.8
MVO Moncorvo 86.28 42 eP P 19 30 23.3 +0.5
comp=Z,22nm,2.0s,mb5.0
MVO eLR LR 20 33 37.3
comp=Z,168nm,20.0s
TAM Tamanrasset 86.34 64 eP P 19 30 24.2 +0.7
comp=Z,12nm,1.1s,mb5.0

PBRG Braganca 86.82 42 eP P 19 30 25.0 -0.4
comp=Z,19nm,2.1s,mb5.0
ESDC Sonseca Array 87.42 45 P P 19 30 29.1 +0.7
comp=Z,2.7nm,1.1s,mb4.4,baz=234,slow=2.7,SNR=7.0
SJPF Ste Jean 90.97 43 eP P 19 30 45.4 +0.4
comp=Z,21nm,1.0s,mb5.1
SJPF Ste Jean 90.97 43 eP P 19 30 45.4 +0.4
comp=Z,10nm,1.0s,mb5.1
ETSF Etsaut 91.28 44 eP P 19 30 46.8 +0.4
comp=Z,17nm,1.1s,mb5.0
ETSF Etsaut 91.28 44 eP P 19 30 46.8 +0.4
comp=Z,8.3nm,1.1s,mb5.0
LSZ Lusaka 91.68 107 eP P 19 30 51.0 +2.0
YKA Yellowknife Ar 91.84 341 P P 19 30 47.2 -1.4
comp=Z,2.8nm,0.8s,mb4.6,baz=138,slow=4.5,SNR=18
YKA Yellowknife Ar 91.84 341 P P 19 30 47.2 -1.4
EPF Esparros 91.92 44 eP P 19 30 49.6 +0.2
comp=Z,7.1nm,0.9s,mb4.7
EPF Esparros 91.92 44 eP P 19 30 49.6 +0.2
comp=Z,3.5nm,0.9s,mb4.7
ROSF Rostrenen 92.43 38 eP P 19 30 50.8 -0.8
comp=Z,22nm,1.1s,mb5.1
ROSF Rostrenen 92.43 38 eP P 19 30 50.8 -0.8
comp=Z,11nm,1.1s,mb5.1
SGMF Saint Gilles 92.80 38 eP P 19 30 52.3 -1.0
comp=Z,5.0nm,0.7s,mb4.7
SGMF Saint Gilles 92.80 38 eP P 19 30 52.3 -1.0
comp=Z,2.5nm,0.7s,mb4.8
LFF La Frestale 93.10 42 eP P 19 30 54.6 -0.2
comp=Z,15nm,0.7s,mb5.2
LFF La Frestale 93.10 42 eP P 19 30 54.6 -0.2
comp=Z,7.5nm,0.7s,mb5.2
MTLF Montolieu 93.27 44 eP P 19 30 55.3 -0.4
comp=Z,10nm,1.2s,mb4.8
MTLF Montolieu 93.27 44 eP P 19 30 55.3 -0.4
comp=Z,5.2nm,1.2s,mb4.8
MFF Saint Martin d 93.38 40 eP P 19 30 55.7 -0.3
comp=Z,11nm,0.8s,mb5.0
MFF Saint Martin d 93.38 40 eP P 19 30 55.7 -0.3
comp=Z,5.6nm,0.8s,mb5.0
RJF Les Rejaudoux 93.76 42 eP P 19 30 57.4 -0.4
comp=Z,8.7nm,0.8s,mb4.9
RJF eMLR MLR
comp=Z,103nm,21.0s,MS4.0
RJF Les Rejaudoux 93.76 42 eP P 19 30 57.4 -0.4
comp=Z,4.3nm,0.8s,mb4.9
RJF LR LR
comp=Z,100nm,21.0s,MS4.2
GRR Gorron 93.84 39 eP P 19 30 56.1 -2.0
comp=Z,30nm,1.1s,mb5.3
GRR Gorron 93.84 39 eP P 19 30 56.1 -2.0
comp=Z,15nm,1.1s,mb5.3
FLN La Foliniere 94.25 38 eP P 19 30 57.8 -2.2
comp=Z,74nm,1.6s,mb5.6
FLN eMLR MLR
comp=Z,84nm,21.5s,MS3.9
FLN La Foliniere 94.25 38 eP P 19 30 57.8 -2.2
comp=Z,37nm,1.6s,mb5.6
FLN LR LR
comp=Z,80nm,21.5s,MS4.2
DLBC Dease Lake 94.65 333 eP P 19 31 01.1 -0.5
DLBC e pP 19 31 10.3 -2.0
TCF Toulx Ste Croi 94.65 42 eP P 19 31 01.2 -0.7
comp=Z,3.9nm,0.7s,mb4.7
TCF Toulx Ste Croi 94.65 42 eP P 19 31 01.2 -0.7
comp=Z,2.0nm,0.7s,mb4.7
LASF Ste Croix 94.67 44 eP P 19 31 01.9 -0.1
comp=Z,14nm,1.3s,mb4.9
BGF Bois d'Agland 95.17 41 eP P 19 31 03.8 -0.5
comp=Z,10nm,0.8s,mb5.0
BGF Bois d'Agland 95.17 41 eP P 19 31 03.8 -0.5
comp=Z,5.2nm,0.8s,mb5.0
VIVF Saint-Julien-l 95.54 44 eP P 19 31 05.3 -0.7
AVF Avril sur Loir 95.58 41 eP P 19 31 06.2 0.0
comp=Z,3.6nm,0.7s,mb4.6
AVF Avril sur Loir 95.58 41 eP P 19 31 06.2 0.0
comp=Z,1.8nm,0.7s,mb4.6
SSF Saint Saulge 95.80 41 eP P 19 31 06.1 -1.0
SMF Signal de Mont 95.82 42 eP P 19 31 06.9 -0.3
comp=Z,16nm,1.0s,mb5.1
SMF Signal de Mont 95.82 42 eP P 19 31 06.9 -0.3
comp=Z,7.9nm,1.0s,mb5.1
LOR Lormes 96.11 41 eP P 19 31 07.6 -0.9
comp=Z,5.0nm,0.6s,mb4.8
LOR eMLR MLR
comp=Z,84nm,22.5s,MS3.9
LOR Lormes 96.11 41 eP P 19 31 07.6 -0.9
comp=Z,2.5nm,0.6s,mb4.8
LOR LR LR
comp=Z,80nm,22.5s,MS4.1
ORIF Oris-en-Rattie 96.34 44 eP P 19 31 09.3 -0.3
comp=Z,3.3nm,0.7s,mb4.6
ORIF eMLR MLR
comp=Z,161nm,22.5s,MS4.2
ORIF Oris-en-Rattie 96.34 44 eP P 19 31 09.3 -0.3
comp=Z,1.6nm,0.7s,mb4.6
MBDF Montbardon 96.83 44 eP P 19 31 12.3 +0.4
comp=Z,4.1nm,0.6s,mb4.7
MBDF Montbardon 96.83 44 eP P 19 31 12.3 +0.4
comp=Z,2.0nm,0.6s,mb4.7
SBF Sospel 96.90 45 eP P 19 31 10.7 -1.5
MEZF Maizieres J'vi 97.38 40 eP P 19 31 13.7 -0.5
BAIF Baives 97.56 39 eP P 19 31 13.4 -1.6
HINF Hinteralfeld 98.17 42 eP P 19 31 17.1 -0.8
CDF Champ du Feu 98.68 41 eP P 19 31 19.6 -0.5
DZM Mont Dzumac 109.22 235 eLR LR 20 08 26.1
comp=Z,149nm,22.6s
BRTR Keskin Array B 114.40 55 PKP PKiKP 19 36 20.9 -0.1
comp=Z,0.4nm,0.5s,baz=217,slow=1.6,SNR=3.9
MMAI Mount Meron Ar 114.55 63 PKP PKiKP 19 36 21.6 +0.2
comp=Z,1.0nm,0.4s,baz=50,slow=2.6,SNR=3.7
ASAR Alice Springs 128.41 208 PKP PKPdf 19 36 47.5 -0.8
comp=Z,2.7nm,0.8s,baz=137,slow=1.9,SNR=26
AKTK Aktyubinsk 131.22 42 PKP PKPdf 19 36 53.9 +1.1
AKTO Aktyubinsk 131.22 42 PKP PKPdf 19 36 53.9 +1.1
comp=Z,1.5nm,0.9s,baz=103,slow=0.7,SNR=5.5
WRA Warramunga Arr 131.42 211 PKP PKPdf 19 36 53.8 -0.4
comp=Z,1.4nm,0.5s,baz=144,slow=1.5,SNR=34
WRAB Tennant Creek 131.43 211 ePKPdf PKPdf 19 36 54.8 +0.6
ABKAR Abkulak array 132.74 43 ePKPdf PKPdf 19 36 55.1 -0.6
BVAR Borovoye Array 137.35 35 PKhKP PKPpre 19 36 55.3
comp=Z,0.3nm,0.5s,baz=229,slow=43,SNR=1.9
BVAR PKP PKPdf 19 37 04.7 +0.5
comp=Z,1.3nm,0.7s,baz=276,slow=2.7,SNR=11
ZAA0 Zalesovo Array 143.43 25 ePKPdf PKPdf 19 37 11.7 -3.5
ZALV Zalesovo Beam 143.43 25 PKhKP PKPpre 19 37 11.7
comp=Z,8.3nm,0.8s,baz=321,slow=4.3,SNR=18
ZALV PKP PKPdf 19 37 15.2 +0.1
comp=Z,7.2nm,0.7s,baz=310,slow=1.9,SNR=15
EKS2 Erkin-Say 144.00 48 P PKPdf 19 37 15.5 -1.0
SNR=5.8
EKS2 Erkin-Say 144.00 48 ePKPdf PKPdf 19 37 15.0 -1.5
AML Almayashu 144.14 49 P PKPdf 19 37 16.8 0.0
SNR=6.1
AML Almayashu 144.14 49 ePKPdf PKPdf 19 37 16.1 -0.7
AAK Ala-Archa 144.50 47 P PKPdf 19 37 16.7 -0.6
SNR=8.4
AAK Ala-Archa 144.50 47 PKP PKPdf 19 37 17.7 +0.3
comp=Z,11nm,0.8s,baz=220,slow=2.8,SNR=30
AAK Ala-Archa 144.50 47 ePKPdf PKPdf 19 37 17.3 -0.1
CHMS Chumysh 144.52 47 P PKPdf 19 37 17.2 -0.3
SNR=7.6
UCH Uchtor 144.66 48 P PKPdf 19 37 18.5 +0.8
SNR=32
UCH Uchtor 144.66 48 ePKPdf PKPdf 19 37 18.0 +0.3
KBK Karagaybulak 144.79 47 P PKPdf 19 37 18.5 +0.6
SNR=21
POO Poona 146.10 90 ePKP PKPdf 19 37 22.0 +1.1
ERM Erimo 146.13 313 ePKPdf PKPdf 19 37 21.9 +1.7
ERM e 19 37 31.5
KSH Kashi 146.68 52 PKPbc PKPbc 19 37 22.8 -0.1
KSH AMB AMB
comp=Z,160nm,4.9s
MK31 Makanchi Array 147.20 36 ePKPdf PKPdf 19 37 21.6 -0.2
MKAR Makanchi Array 147.20 36 PKP PKPdf 19 37 22.0 +0.1
comp=Z,13nm,0.8s,baz=327,slow=1.6,SNR=72
MKAR PKPbc PKPbc 19 37 24.1 0.0
comp=Z,13nm,0.8s,baz=326,slow=2.7,SNR=76
NDI New Delhi 150.03 72 ex PKPbc 19 37 30.0 -2.0
HYB Hyderabad 150.18 94 i PKP PKPbc 19 37 32.5 -0.2
DDI Dehra Dun 150.59 68 ex PKPbc 19 37 33.6 +0.3
MJAR Matsushiro Arr 151.81 306 PKPbc PKPbc 19 37 34.9 -1.1
comp=Z,2.3nm,0.7s,baz=82,slow=1.3,SNR=7.0
MJAR PKPab PKPab 19 37 44.6 -0.4
comp=Z,4.2nm,0.9s,baz=70,slow=0.8,SNR=9.5
MAJO Matsushiro 151.81 306 ePKPdf PKPdf 19 37 30.8 +1.2
MAJO ePKPbc PKPbc 19 37 35.6 -0.4

MAJO				*e*PKPab	PKPab	19 37 54.3	+9.2
MAT	**Matsushiro**	**151.81**	**306**	APKP	PKPbc	19 37 35.5	-0.5
WMQ	**Urumqi**	**152.03**	**36**	*e*PKPbc	PKPdf	19 37 29.1	-0.5
WMQ				LR	LR		
	comp=N,53nm,22.8s,MS4.6						
WMQ				LR	LR		
	comp=E,85nm,22.1s,MS4.6						
WMQ				LR	LR		
	comp=Z,59nm,26.6s,MS4.3						
MDJ	**Mudanjiang**	**152.70**	**328**	PKPbc	PKPdf	19 37 30.8	+0.2
MDJ				AMB	AMB		
	comp=Z,22nm,4.1s						
SONM	**Songino Array**	**154.67**	**5**	PKP	PKPdf	19 37 33.5	+0.2
	comp=Z,1.6nm,0.9s,baz=315,slow=1.6,SNR=11						
SONM				PKPbc	PKPbc	19 37 41.8	-0.1
	comp=Z,1.6nm,0.8s,baz=314,slow=1.5,SNR=8.5						
SONM				PKPab	PKPab	19 37 56.8	+0.2
	comp=Z,2.5nm,0.9s,baz=346,slow=3.3,SNR=7.5						
SONM				PP	PP	19 41 31.4	+0.1
	comp=Z,1.1nm,1.1s,baz=357,slow=3.0,SNR=3.7						
ULN	**Ulaanbaatar**	**154.69**	**4**	*e*PKPdf	PKPdf	19 37 34.2	+0.9
ULN				*e*PKPab	PKPab	19 37 56.7	0.0
GTA	**Gaotai**	**161.19**	**25**	*e*PKP	PKPdf	19 37 42.1	+0.5
GTA				pPKP	pPKPdf	19 37 50.9	-1.7
GTA				sPKP		19 37 55.6	
GTA				SKS	SKSdf	19 44 41.8	-2.4
GTA				AMB	AMB		
	comp=Z,55nm,8.9s						
GTA				LR	LR		
	comp=N,120nm,16.4s						
GTA				LR	LR		
	comp=E,140nm,21.1s						
GTA				LR	LR		
	comp=Z,120nm,16.0s						
HHC	**Hu-ho-hao-te**	**161.75**	**356**	*e*PKP	PKPdf	19 37 37.5	-4.6
HHC				PKS		19 41 09.9	
HHC				AMB	AMB		
	comp=Z,65nm,9.2s						
HHC				LR	LR		
	comp=N,110nm,21.7s						
HHC				LR	LR		
	comp=E,90nm,20.7s						
HHC				LR	LR		
	comp=Z,85nm,21.6s						
LZH	**Lanzhou**	**165.58**	**20**	*e*PKP	PKPdf	19 37 41.5	-4.3
CMAR	**Chiang Mai Arr**	**168.98**	**110**	PKP	PKPdf	19 37 48.6	-0.2
	comp=Z,0.7nm,0.8s,baz=303,slow=2.9,SNR=5.6						
CMAR				PKPab	PKPab	19 39 00.4	+0.3
	comp=Z,1.3nm,0.8s,baz=254,slow=5.4,SNR=9.6						
CD2	**Chengdu**	**170.10**	**32**	PKP	PKPdf	19 37 51.3	+2.1
KMI	**Kunming**	**173.03**	**67**	PKP	PKPdf	19 37 49.3	-1.4
GYA	**Guiyang**	**175.19**	**36**	*e*PKP	PKPdf	19 37 50.0	-1.4
GYA				PKPab	PKPab	19 39 27.8	+0.5
GYA				PKS		19 41 21.0	
GYA				PP	PP	19 43 21.9	+2.8
GYA				AMB	AMB		
	comp=Z,110nm,8.0s						

NEIC ***15*** *19:32:57.2, 37.°92S×177.°71E, h62km, ML4.0(WEL), After WEL.*

WEL 15 19:32:57.2±0.2, 37.°93S×177.°72E, h60km±2km, ML4.0/18, 2C-4D, Error ellipse: s-maj=1.3km s-min=1.1km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MWZ	**Matawai**	**0.44**	**200**	⇓PN	Pn	19 33 08.7	+0.1
MWZ				*e*SN	Sn	19 33 15.8	-1.0
MWZ				SN	Sn	19 33 16.8	0.0
MWZ	**Matawai**	**0.44**	**200**	P	Pn	19 33 08.7	+0.1
MWZ				S	Sn	19 33 17.5	+0.7
PUZ	**Puketiti**	**0.45**	**109**	⇑PN	Pn	19 33 08.9	+0.2
PUZ				SN	Sn	19 33 17.6	+0.5
PUZ				SN	Sn	19 33 17.7	+0.7
PUZ	**Puketiti**	**0.45**	**109**	P	Pn	19 33 08.9	+0.2
PUZ				S	Sn	19 33 17.6	+0.6
WIZ	**White Island**	**0.58**	**313**	PN	Pn	19 33 09.4	-0.6
WIZ	**White Island**	**0.58**	**313**	P	Pn	19 33 09.4	-0.6
URZ	**Urewera**	**0.59**	**235**	⇓PN	Pn	19 33 09.9	-0.2
URZ				SN	Sn	19 33 19.0	-0.5
URZ				SN	Sn	19 33 19.3	-0.3
URZ	**Urewera**	**0.59**	**235**	P	Pn	19 33 09.9	-0.2
MXZ	**Matakaoa Point**	**0.59**	**52**	PN	Pn	19 33 11.0	+0.8
MXZ	**Matakaoa Point**	**0.59**	**52**	P	Pn	19 33 11.0	+0.8
MXZ				S	Sn	19 33 22.0	+2.4
CNGZ	**Carnagh Statio**	**0.68**	**146**	⇓PN	Pn	19 33 11.7	+0.5
EDRZ	**Edgecumbe**	**0.80**	**256**	PN	Pn	19 33 12.7	+0.1
EDRZ	**Edgecumbe**	**0.80**	**256**	P	Pn	19 33 12.8	+0.2
MARZ	**Manawahe**	**0.83**	**265**	PN	Pn	19 33 12.6	-0.4
MARZ	**Manawahe**	**0.83**	**265**	P	Pn	19 33 12.9	-0.1
OPRZ	**Ohinepanea**	**0.92**	**275**	⇑PN	Pn	19 33 13.8	-0.4
PRGZ	**Paritu Road**	**1.01**	**173**	PN	Pn	19 33 14.8	-0.5
TARZ	**Mount Tarawera**	**1.01**	**252**	PN	Pn	19 33 15.6	+0.3
MKRZ	**Makatiti**	**1.01**	**257**	PN	Pn	19 33 15.8	+0.4
MKRZ	**Makatiti**	**1.01**	**257**	P	Pn	19 33 15.8	+0.4
RRRZ	**Republican Roa**	**1.04**	**246**	PN	Pn	19 33 15.8	+0.1
LIRZ	**Lichensteins R**	**1.06**	**265**	PN	Pn	19 33 15.9	-0.1
LIRZ	**Lichensteins R**	**1.06**	**265**	P	Pn	19 33 15.9	-0.1
KNZ	**Kokohu**	**1.10**	**182**	PN	Pn	19 33 15.9	-0.6
KNZ	**Kokohu**	**1.10**	**182**	P	Pn	19 33 15.9	-0.6
RAHZ	**Arahi**	**1.11**	**206**	PN	Pn	19 33 16.9	+0.2
KARZ	**Kaharoa**	**1.17**	**265**	PN	Pn	19 33 17.4	-0.1
KARZ	**Kaharoa**	**1.17**	**265**	P	Pn	19 33 17.4	-0.1
TGRZ	**Tauranga**	**1.17**	**279**	PN	Pn	19 33 17.1	-0.4
TGRZ	**Tauranga**	**1.17**	**279**	P	Pn	19 33 17.1	-0.4
PRRZ	**Plateau Road**	**1.19**	**241**	PN	Pn	19 33 17.8	0.0
HRRZ	**Handcock Road**	**1.22**	**247**	PN	Pn	19 33 18.5	+0.3
MHGZ	**Mahia Peninsul**	**1.24**	**173**	PN	Pn	19 33 17.9	-0.5
ALRZ	**Allen Road**	**1.26**	**239**	⇓PN	Pn	19 33 18.7	0.0
NMHZ	**Naumai**	**1.37**	**211**	PN	Pn	19 33 20.7	+0.5
BKZ	**Black Stump Fm**	**1.57**	**217**	PN	Pn	19 33 23.1	+0.2
BKZ	**Black Stump Fm**	**1.57**	**217**	P	Pn	19 33 23.1	+0.3
MCHZ	**McNeill Hill**	**1.71**	**207**	PN	Pn	19 33 24.5	-0.3
TOZ	**Tahuroa Road**	**1.77**	**276**	PN	Pn	19 33 25.3	-0.2
TOZ	**Tahuroa Road**	**1.77**	**276**	P	Pn	19 33 25.3	-0.2
RITZ	**Rihia Road**	**1.80**	**234**	PN	Pn	19 33 26.6	+0.6
RITZ	**Rihia Road**	**1.80**	**234**	P	Pn	19 33 26.6	+0.7
CKHZ	**Cape Kidnapper**	**1.80**	**196**	PN	Pn	19 33 24.8	-1.2
KATZ	**Kakaramea**	**1.91**	**236**	PN	Pn	19 33 28.0	+0.7
KATZ	**Kakaramea**	**1.91**	**236**	P	Pn	19 33 28.0	+0.6
KUZ	**Kuaotunu**	**1.98**	**306**	PN	Pn	19 33 27.8	-0.6
KUZ	**Kuaotunu**	**1.98**	**306**	P	Pn	19 33 27.8	-0.6
KAHZ	**Kahuranaki**	**1.98**	**199**	PN	Pn	19 33 27.2	-1.2
KRVZ	**Karewarewa**	**2.01**	**234**	PN	Pn	19 33 29.2	+0.4
OTVZ	**Oturere**	**2.03**	**232**	PN	Pn	19 33 29.4	+0.3
WTVZ	**West Tongariro**	**2.05**	**234**	PN	Pn	19 33 29.8	+0.5
WTVZ	**West Tongariro**	**2.05**	**234**	P	Pn	19 33 29.8	+0.5
NGZ	**Ngauruhoe**	**2.08**	**232**	PN	Pn	19 33 30.1	+0.3
NGZ	**Ngauruhoe**	**2.08**	**232**	P	Pn	19 33 30.1	+0.4
TUVZ	**Tukino**	**2.10**	**230**	PN	Pn	19 33 30.2	+0.1
TWVZ	**Taurewa**	**2.12**	**237**	P	Pn	19 33 31.2	+0.8
WPVZ	**Whakapapa**	**2.13**	**232**	PN	Pn	19 33 30.9	+0.5
MOVZ	**Moawhango**	**2.14**	**225**	PN	Pn	19 33 30.2	-0.3
MOVZ	**Moawhango**	**2.14**	**225**	P	Pn	19 33 30.2	-0.3
WNVZ	**Wahianoa**	**2.17**	**229**	PN	Pn	19 33 31.1	+0.1
WNVZ	**Wahianoa**	**2.17**	**229**	P	Pn	19 33 31.1	+0.1
MKAZ	**Moumakai**	**2.19**	**291**	PN	Pn	19 33 31.3	+0.1
MKAZ	**Moumakai**	**2.19**	**291**	P	Pn	19 33 31.3	+0.1
PXZ	**Pawanui**	**2.21**	**197**	PN	Pn	19 33 29.2	-2.2
MTVZ	**Mangateitei**	**2.29**	**230**	PN	Pn	19 33 33.0	+0.5
PKVZ	**Pokaka**	**2.31**	**233**	PN	Pn	19 33 33.6	+0.8
PNHZ	**Pukenui**	**2.31**	**210**	PN	Pn	19 33 31.3	-1.6
HIZ	**Hauiti**	**2.33**	**254**	P	Pn	19 33 34.4	+1.2
WPHZ	**Waipukurau**	**2.36**	**205**	PN	Pn	19 33 31.7	-1.8
PRHZ	**Porangahau**	**2.49**	**199**	PN	Pn	19 33 33.0	-2.3
VRZ	**Vera Road**	**2.61**	**242**	P	Pn	19 33 37.2	+0.2
DVHZ	**Dannevirke**	**2.66**	**206**	PN	Pn	19 33 35.0	-2.7
WAZ	**Wanganui**	**2.81**	**229**	PN	Pn	19 33 40.1	+0.4
WAZ	**Wanganui**	**2.81**	**229**	P	Pn	19 33 40.2	+0.5
POWZ	**Post Office Ro**	**2.89**	**211**	PN	Pn	19 33 38.5	-2.3
RAEZ	**Rainy Point**	**2.94**	**241**	P	Pn	19 33 43.3	+1.8
BFZ	**Birch Farm**	**2.98**	**202**	PN	Pn	19 33 39.0	-3.0
BFZ	**Birch Farm**	**2.98**	**202**	P	Pn	19 33 39.0	-3.0
NEZ	**North Egmont**	**3.14**	**244**	P	Pn	19 33 46.4	+2.2
DFE	**Dawson Falls**	**3.16**	**243**	P	Pn	19 33 46.7	+2.2
TIWZ	**Tintock**	**3.18**	**206**	PN	Pn	19 33 42.1	-2.7
MRZ	**Mangatainoka R**	**3.20**	**211**	PN	Pn	19 33 42.0	-3.0
MRZ	**Mangatainoka R**	**3.20**	**211**	P	Pn	19 33 42.0	-3.0
WCZ	**Waipu Caves**	**3.35**	**305**	PN	Pn	19 33 47.7	+0.6
WCZ	**Waipu Caves**	**3.35**	**305**	P	Pn	19 33 47.7	+0.6
HOWZ	**Holdsworth Sta**	**3.43**	**209**	PN	Pn	19 33 44.8	-3.3
TMWZ	**Te Maipa**	**3.48**	**203**	PN	Pn	19 33 45.1	-3.7
OGWZ	**Otaki Gorge**	**3.50**	**214**	PN	Pn	19 33 46.2	-2.9
KIW	**Kapiti Island**	**3.65**	**216**	PN	Pn	19 33 48.3	-2.9
KIW	**Kapiti Island**	**3.65**	**216**	P	Pn	19 33 48.3	-2.9
MTW	**Mount Morrison**	**3.66**	**207**	PN	Pn	19 33 47.3	-4.0
MTW	**Mount Morrison**	**3.66**	**207**	P	Pn	19 33 47.3	-4.0
CAW	**Cannon Point**	**3.78**	**212**	PN	Pn	19 33 49.2	-3.8
CAW	**Cannon Point**	**3.78**	**212**	P	Pn	19 33 49.2	-3.8
TRWZ	**Traveller**	**3.81**	**204**	PN	Pn	19 33 49.3	-4.0
PAWZ	**Paruwai Farm**	**3.88**	**206**	PN	Pn	19 33 50.3	-4.0
PAWZ	**Paruwai Farm**	**3.88**	**206**	P	Pn	19 33 50.3	-4.0
MSWZ	**Moikau Station**	**3.97**	**208**	PN	Pn	19 33 51.4	-4.2
MSWZ	**Moikau Station**	**3.97**	**208**	P	Pn	19 33 51.4	-4.2
SNZO	**South Karori**	**4.10**	**214**	PN	Pn	19 33 53.2	-4.2
SNZO	**South Karori**	**4.10**	**214**	P	Pn	19 33 53.2	-4.2
PLWZ	**Palliser**	**4.11**	**207**	PN	Pn	19 33 53.0	-4.5
TCW	**Tory Channel**	**4.23**	**218**	PN	Pn	19 33 55.6	-3.5
TCW	**Tory Channel**	**4.23**	**218**	P	Pn	19 33 55.6	-3.5
TUWZ	**Tuamarina**	**4.55**	**219**	PN	Pn	19 33 60.0	-3.6
NNZ	**Nelson**	**4.70**	**224**	PN	Pn	19 34 02.2	-3.3
NNZ	**Nelson**	**4.70**	**224**	P	Pn	19 34 02.2	-3.3
BSWZ	**Blackbirch Sta**	**4.80**	**217**	PN	Pn	19 34 03.2	-3.7
BSWZ	**Blackbirch Sta**	**4.80**	**217**	P	Pn	19 34 03.2	-3.8
QRZ	**Quartz Range**	**4.96**	**233**	PN	Pn	19 34 05.9	-3.1
QRZ	**Quartz Range**	**4.96**	**233**	P	Pn	19 34 05.9	-3.2
THZ	**Tophouse**	**5.33**	**223**	PN	Pn	19 34 10.6	-3.6
THZ	**Tophouse**	**5.33**	**223**	P	Pn	19 34 10.6	-3.6
LTZ	**Lake Taylor**	**6.39**	**219**	PN	Pn	19 34 23.8	-4.9
LTZ	**Lake Taylor**	**6.39**	**219**	P	Pn	19 34 23.8	-4.9
MQZ	**McQueen's Vall**	**6.94**	**212**	PN	Pn	19 34 30.7	-5.5
MQZ	**McQueen's Vall**	**6.94**	**212**	P	Pn	19 34 30.7	-5.4
CTZ	**Chatham Island**	**7.22**	**145**	*e*PN	Pn	19 34 38.4	-1.6
WVZ	**Waitaha Valley**	**7.40**	**224**	*e*PN	Pn	19 34 39.7	-2.8
RPZ	**Rata Peaks**	**7.68**	**219**	PN	Pn	19 34 42.1	-4.2
RPZ	**Rata Peaks**	**7.68**	**219**	P	Pn	19 34 42.1	-4.2
FOZ	**Fox Glacier**	**8.30**	**225**	PN	Pn	19 34 49.8	-4.9
FOZ	**Fox Glacier**	**8.30**	**225**	P	Pn	19 34 49.8	-5.0
LBZ	**Lake Benmore**	**8.60**	**219**	PN	Pn	19 34 54.3	-4.5
LBZ	**Lake Benmore**	**8.60**	**219**	P	Pn	19 34 54.3	-4.6
EAZ	**Earnscleugh**	**9.64**	**218**	PN	Pn	19 35 07.5	-5.6
EAZ	**Earnscleugh**	**9.64**	**218**	P	Pn	19 35 07.5	-5.6
TUZ	**Tuapeka**	**10.03**	**214**	PN	Pn	19 35 13.1	-5.3
TUZ	**Tuapeka**	**10.03**	**214**	P	Pn	19 35 13.1	-5.3
SYZ	**Scrubby Hill**	**10.70**	**214**	*e*PN	Pn	19 35 21.7	-5.8

IDC 15 20:17:26.9±4.3, 23.°72S×178.°20W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.8/14, mbtmp4.1/3, Error ellipse: s-maj=208.3km s-min=48.3km az=145.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**36.32**	**248**	P	P	20 24 32.7	+0.2
	3.0nm,0.7s,baz=106,slow=11,SNR=6.7						
ASAR	**Alice Springs**	**43.69**	**260**	P	P	20 25 33.4	-0.5
	2.7nm,0.9s,baz=93,slow=7.4,SNR=29						
CMAR	**Chiang Mai Arr**	**91.02**	**290**	P	P	20 30 34.3	+0.7
	0.5nm,0.8s,baz=132,slow=2.7,SNR=5.1						
HFS	**Hagfors**	**142.67**	**350**	PKP	PKPdf	20 37 00.8	-0.7
	1.2nm,0.4s,baz=64,slow=3.4,SNR=11						
BRTR	**Keskin Array B**	**148.77**	**308**	PKPbc	PKPbc	20 37 15.4	-1.0
	0.6nm,0.6s,baz=105,slow=2.8,SNR=2.8						
MMAI	**Mount Meron Ar**	**149.12**	**295**	PKPbc	PKPbc	20 37 17.3	-0.3
	0.8nm,0.5s,baz=83,slow=4.8,SNR=4.4						

IDC 15 20:22:22.4±7.0, 23.°74N×108.°61W, h0km, mb1 3.6/3, mb1mx3.5/20, mbtmp3.1/3, ML3.5/3, Error ellipse: s-maj=88.3km s-min=34.7km az=157.0, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**7.11**	**37**	Pn	Pn	20 24 07.1	-0.6
	0.1nm,0.3s,baz=217,slow=18,SNR=3.6						
TXAR				Lg		20 26 07.6	
	0.1nm,0.3s,baz=223,slow=31,SNR=4.0						
NVAR	**Mina Array Bea**	**16.81**	**333**	Pn	Pn	20 26 22.7	+3.6
	0.1nm,0.3s,baz=150,slow=11,SNR=3.4						
PDAR	**Pinedale Array**	**18.99**	**358**	P	Pn	20 26 46.2	+0.2
	0.1nm,0.3s,baz=175,slow=12,SNR=3.9						

ISCJB ***15*** *20:25:59.8±0.4, 43.°03N±0.°05×29.°18W±0.°06, h10km, mb4.2/42, MS3.5/24, Error ellipse: s-maj=6.9km s-min=6.3km az=6.6*

IDC ***15*** *20:26:00.8±1.5, 43.°22N×29.°11W, h0km, mb4.1/15, mb1 4.2/16, mb1mx4.0/32, mbtmp4.1/16, ML4.8/1, MS3.6/22, Ms1 3.6/22, ms1mx3.5/34, Error ellipse: s-maj=49.8km s-min=14.6km az=175.0*

CSEM ***15*** *20:26:01.6±0.2, 43.°09N×29.°17W, h10km, mb4.4/24, Error ellipse: s-maj=8.6km s-min=6.7km az=177.0*

NEIC ***15*** *20:26:02.3±0.5, 43.°18N×29.°13W, h10km, mb4.3/41, Error ellipse: s-maj=13.0km s-min=5.8km az=186.0*

ISC 15 20:26:01.7±0.4, 43.°02N±0.°05×29.°15W±0.°06, h10km, n188, σ1§16/169, mb4.2/42, MS3.5/24, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCED	**Cedros**	**4.40**	**175**	*e*P	**Pn**	**20 27 08.3**	**-0.3**
PCED	**Cedros**	**4.40**	**175**	*e*P	**Pn**	**20 27 08.3**	**-0.3**
CALA	**Caldeira**	**4.45**	**175**	*e*P	**Pn**	**20 27 10.5**	**+1.3**
CALA	**Caldeira**	**4.45**	**175**	*e*P	**Pn**	**20 27 10.5**	**+1.3**
PMAN	**Manadas**	**4.46**	**169**	*e*P	**Pn**	**20 27 07.3**	**-2.0**
PID	**Ribeirinha**	**4.64**	**170**	*e*P	**Pn**	**20 27 09.4**	**-2.5**
PDA	**Ponta Delgada**	**5.90**	**152**	*e*P	**Pn**	**20 27 28.9**	**-0.3**
PDA	**Ponta Delgada**	**5.90**	**152**	*e*P	**Pn**	**20 27 28.9**	**-0.3**
PTOM	**Tomar**	**15.95**	**95**	*e*P	**Pn**	**20 29 50.8**	**+4.8**
	29nm,1.3s						
PTOM	**Tomar**	**15.95**	**95**	*e*P	**Pn**	**20 29 50.8**	**+4.8**
	29nm,1.3s						
MTE	**Manteigas**	**16.34**	**92**	*e*P	**Pn**	**20 29 53.4**	**+2.3**
	20nm,1.6s						
MTE	**Manteigas**	**16.34**	**92**	*e*P	**Pn**	**20 29 53.4**	**+2.3**
	20nm,1.6s						
PTEO	**Sao Teotonio**	**16.51**	**102**	*e*P	**Pn**	**20 29 51.2**	**-2.1**
	49nm,2.2s						
PFVI	**Vila Bisbo**	**16.62**	**104**	*e*P	**Pn**	**20 29 53.6**	**-1.1**
	90nm,1.3s						
PFVI	**Vila Bisbo**	**16.62**	**104**	P	**Pn**	**20 29 53.9**	**-0.8**
EVO	**Evora**	**16.62**	**99**	*e*P	**Pn**	**20 29 51.2**	**-3.5**
EVO				*e*MLR	MLR		
	comp=Z,441nm,20.2s						
EVO	**Evora**	**16.62**	**99**	*e*P	**Pn**	**20 29 51.3**	**-3.4**
	comp=Z,24nm,1.1s						
MORF	**Marmelete**	**16.66**	**103**	*e*P	**Pn**	**20 29 54.0**	**-1.3**
	comp=Z,66nm,1.9s						
EPLA	**Plasencia**	**17.51**	**92**	P	**Pn**	**20 30 04.0**	**-1.9**
	comp=Z,112nm,2.9s						
EMIN	**Mina Concepcio**	**17.89**	**99**	P	**Pn**	**20 30 11.8**	**+1.3**
	comp=Z,30nm,2.1s						
EMIN	**Mina Concepcio**	**17.89**	**99**	P	**Pn**	**20 30 11.8**	**+1.2**
	comp=Z,30nm,2.1s						
ELAN	**Lanestosa**	**18.76**	**81**	P	**Pn**	**20 30 20.9**	**-0.2**
	comp=Z,86nm,3.1s						
ELAN	**Lanestosa**	**18.76**	**81**	P	**Pn**	**20 30 20.9**	**-0.2**
	comp=Z,86nm,3.1s						
ROSF	**Rostrenen**	**18.80**	**65**	*e*P	**Pn**	**20 30 19.7**	**-1.9**
	comp=Z,49nm,1.3s						
ROSF	**Rostrenen**	**18.80**	**65**	*e*P	**Pn**	**20 30 19.7**	**-1.9**
	comp=Z,25nm,1.3s						
ROSF	**Rostrenen**	**18.80**	**65**	*e*P	**Pn**	**20 30 19.7**	**-1.9**
	comp=Z,25nm,1.3s						
QUIF	**Quistinic**	**18.83**	**66**	*e*P	**Pn**	**20 30 21.3**	**-0.7**
	comp=Z,65nm,1.7s						
QUIF	**Quistinic**	**18.83**	**66**	*e*P	**Pn**	**20 30 21.3**	**-0.7**
	comp=Z,32nm,1.7s						
QUIF	**Quistinic**	**18.83**	**66**	*e*P	**Pn**	**20 30 21.3**	**-0.7**
	comp=Z,32nm,1.7s						
ESPR	**Espera**	**18.86**	**101**	P	**Pn**	**20 30 24.9**	**+2.4**
	comp=Z,26nm,1.8s						
ESDC	**Sonseca Array**	**19.18**	**91**	P	**Pn**	**20 30 26.3**	**0.0**
ESDC	comp=Z,0.6nm,0.3s,baz=285,slow=13,SNR=8.7			LR	LR	20 36 01.3	
	comp=Z,129nm,21.9s,baz=290,slow=31						
ESDC	**Sonseca Array**	**19.18**	**91**	P	**Pn**	**20 30 27.1**	**+0.8**
	comp=Z,1.0nm,0.9s						
ESDC	**Sonseca Array**	**19.18**	**91**	P	**Pn**	**20 30 27.1**	**+0.8**
	comp=Z,1.0nm,0.9s						
ESLA	**Sonseca Array**	**19.18**	**91**	*e*P	**Pn**	**20 30 26.6**	**+0.3**
	comp=Z,0.6nm,0.8s						
ESLA	**Sonseca Array**	**19.18**	**91**	*e*P	**Pn**	**20 30 26.6**	**+0.3**
	comp=Z,0.6nm,0.8s						
SGMF	**Saint Gilles**	**19.27**	**65**	*e*P	**Pn**	**20 30 24.7**	**-2.6**
	comp=Z,49nm,1.4s						
SGMF	**Saint Gilles**	**19.27**	**65**	*e*P	**Pn**	**20 30 24.7**	**-2.6**
	comp=Z,24nm,1.4s						
SGMF	**Saint Gilles**	**19.27**	**65**	*e*P	**Pn**	**20 30 24.7**	**-2.6**
	comp=Z,24nm,1.4s						
EBAN	**Banos Encina**	**19.83**	**96**	P	**Pn**	**20 30 38.5**	**+4.4**
	comp=Z,4.3nm,0.6s						
ELOJ	**Sierra Loja**	**19.97**	**99**	P	**Pn**	**20 30 38.1**	**+2.3**
	comp=Z,15nm,1.4s						
ETOR	**Torete**	**20.25**	**87**	P	**P**	**20 30 37.8**	**+0.7**
	comp=Z,3.6nm,0.8s						
ETOR	**Torete**	**20.25**	**87**	P	**P**	**20 30 37.8**	**+0.7**
	comp=Z,3.6nm,0.8s						
SJPF	**Ste Jean**	**20.37**	**80**	*e*P	**P**	**20 30 39.7**	**+1.4**
SJPF	**Ste Jean**	**20.37**	**80**	*e*P	**P**	**20 30 39.7**	**+1.4**
GRR	**Gorron**	**20.41**	**65**	*e*P	**P**	**20 30 39.0**	**+0.3**
	comp=Z,37nm,1.0s						
GRR	**Gorron**	**20.41**	**65**	*e*P	**P**	**20 30 39.0**	**+0.3**
	comp=Z,18nm,1.0s						
GRR	**Gorron**	**20.41**	**65**	*e*P	**P**	**20 30 39.0**	**+0.3**
	comp=Z,18nm,1.0s						
FLN	**La Foliniere**	**20.69**	**64**	*e*P	**P**	**20 30 42.2**	**+0.4**
	comp=Z,41nm,1.0s						
FLN				*e*MLR	MLR		
	comp=Z,236nm,22.5s,MS3.2						
FLN	**La Foliniere**	**20.69**	**64**	*e*P	**P**	**20 30 42.2**	**+0.4**
	comp=Z,20nm,1.0s						
FLN				LR	LR		
	comp=Z,240nm,22.5s,MS3.5						
FLN	**La Foliniere**	**20.69**	**64**	*e*P	**P**	**20 30 42.2**	**+0.4**
	comp=Z,20nm,1.0s						
MFF	**Saint Martin d**	**20.83**	**70**	*e*P	**P**	**20 30 43.4**	**+0.1**
	comp=Z,25nm,1.2s						
MFF	**Saint Martin d**	**20.83**	**70**	*e*P	**P**	**20 30 43.4**	**+0.1**
	comp=Z,12nm,1.2s						
MFF	**Saint Martin d**	**20.83**	**70**	*e*P	**P**	**20 30 43.4**	**+0.1**
	comp=Z,12nm,1.2s						
EHUE	**Huescar**	**20.84**	**95**	P	**P**	**20 30 47.5**	**+4.0**
	comp=Z,6.9nm,1.1s						
EKA	**Eskdalemuir Ar**	**20.84**	**45**	P	**P**	**20 30 43.2**	**-0.1**
	comp=Z,3.1nm,0.7s,baz=242,slow=9.1,SNR=6.4						
EKA	**Eskdalemuir Ar**	**20.84**	**45**	P	**P**	**20 30 43.2**	**-0.1**
ETSF	**Etsaut**	**20.89**	**81**	*e*P	**P**	**20 30 44.6**	**+0.7**
	comp=Z,62nm,1.6s						
ETSF	**Etsaut**	**20.89**	**81**	*e*P	**P**	**20 30 44.6**	**+0.7**
	comp=Z,31nm,1.6s						
ETSF	**Etsaut**	**20.89**	**81**	*e*P	**P**	**20 30 44.6**	**+0.7**
	comp=Z,31nm,1.6s						
LDF	**La Druitiere**	**20.92**	**64**	*e*P	**P**	**20 30 44.5**	**+0.3**
	comp=Z,14nm,0.9s						
LDF	**La Druitiere**	**20.92**	**64**	*e*P	**P**	**20 30 44.5**	**+0.3**
	comp=Z,7.2nm,0.9s						
LDF	**La Druitiere**	**20.92**	**64**	*e*P	**P**	**20 30 44.5**	**+0.3**
	comp=Z,7.2nm,0.9s						
EBIE	**Bielsa**	**21.44**	**81**	P	**P**	**20 30 51.4**	**+1.6**
	comp=Z,4.3nm,0.9s,mb3.8						
EBIE	**Bielsa**	**21.44**	**81**	P	**P**	**20 30 51.4**	**+1.6**
	comp=Z,4.3nm,0.9s,mb3.8						
EPF	**Esparros**	**21.52**	**80**	*e*P	**P**	**20 30 51.2**	**+0.5**
	comp=Z,46nm,1.3s

HINF	Hinteralfeld	25.57	67	*e*P		P	20 31 30.2	-0.4
	comp=Z,14nm,1.5s,mb4.3							
HINF	Hinteralfeld	25.57	67	*e*P		P	20 31 30.2	-0.4
	comp=Z,14nm,1.5s,mb4.3							
BNI	Bardonecchia	25.71	73	P		P	20 31 33.0	+1.0
	comp=Z,15nm,1.5s,mb4.3							
BNI	Bardonecchia	25.71	73	P		P	20 31 33.0	+1.0
	comp=Z,15nm,1.5s,mb4.3							
SFJD	Kangerlussuaq	26.70	341	LR		LR	20 39 51.8	
	comp=Z,105nm,19.8s,MS3.4,slow=31							
SCHQ	Schefferville	27.09	309	P		P	20 31 49.3	+5.0
	comp=Z,2.2nm,0.6s,mb3.9,baz=117,slow=9.0,SNR=3.7							
SCHQ				LR		LR	20 40 30.3	
	comp=Z,147nm,20.3s,MS3.5,baz=335,slow=32							
SCHQ	Schefferville	27.09	309	*e*P		P	20 31 49.0	+4.7
	comp=Z,3.6nm,0.9s,mb3.9							
SCHQ				LR		LR	20 40 30.3	
DAVOX	Davos/Dischmat	27.70	69	LR		LR	20 41 21.0	
	comp=Z,144nm,18.0s,MS3.6,baz=262,slow=33							
KONO	Kongsberg	28.83	41	*e*P		P	20 32 01.0	+1.3
	comp=Z,15nm,1.0s,mb4.7							
KONO	Kongsberg	28.83	41	*e*P		P	20 32 01.0	+1.3
	comp=Z,15nm,1.0s,mb4.7							
CLL	Collm	29.49	59	*e*P		P	20 32 07.0	+1.3
CLL	Collm	29.49	59	*e*P		P	20 32 07.0	+1.3
CLL				Lm			20 42 00.0	
	comp=Z,100nm,18.5s							
CLL	Collm	29.49	59	*e*P		P	20 32 07.0	+1.3
NOA	NORSAR Array B	30.02	39	LR		LR	20 42 54.4	
	comp=Z,36nm,18.1s,MS3.1,baz=265,slow=34							
FRB	Frobisher Bay	30.58	326	LR		LR	20 41 33.5	
	comp=Z,86nm,19.6s,MS3.4,baz=218,slow=31							
HFS	Hagfors	30.95	41	LR		LR	20 42 58.4	
	comp=Z,54nm,18.4s,MS3.2,baz=272,slow=33							
VRAC	Vranov	31.90	63	LR		LR	20 44 40.3	
	comp=Z,94nm,18.4s,MS3.5,baz=263,slow=35							
VAE	Valguarnera	33.42	85	LR		LR	20 44 31.9	
	comp=Z,269nm,19.8s,MS4.0,baz=280,slow=33							
TAM	Tamanrasset	35.07	114	P		P	20 33 02.6	+7.7
	comp=Z,1.0nm,0.7s,mb3.9							
FINES	FINESS Array B	37.14	41	P		P	20 33 12.1	0.0
	comp=Z,3.2nm,0.9s,mb4.2,baz=244,slow=6.0,SNR=5.1							
FINES				LR		LR	20 48 58.6	
	comp=Z,47nm,19.1s,MS3.3,baz=292,slow=37							
FINES	FINESS Array B	37.14	41	P		P	20 33 12.1	-0.1
ARCES	ARCESS Array B	38.23	28	LR		LR	20 47 11.9	
	comp=Z,26nm,21.1s,MS3.0,baz=66,slow=33							
DBIC	Dimbokro	42.06	142	LR		LR	20 49 48.2	
	comp=Z,98nm,18.4s,MS3.7,baz=318,slow=34							
TKL	Tuckaleechee C	42.24	279	P		P	20 33 56.2	+1.2
	comp=Z,5.3nm,0.5s,mb4.5,baz=122,slow=15,SNR=5.1							
TKL				LR		LR	20 49 58.7	
	comp=Z,52nm,18.5s,MS3.4,baz=18,slow=34							
TKL	Tuckaleechee C	42.24	279	P		P	20 33 56.2	+1.2
ULM	Lac du Bonnet	44.98	303	LR		LR	20 51 26.3	
	comp=Z,131nm,19.6s,MS3.9,baz=196,slow=34							
BRTR	Keskin Array B	46.26	72	P		P	20 34 27.4	+0.3
	comp=Z,2.1nm,0.9s,mb4.1,baz=282,slow=5.8,SNR=10							
BRTR				LR		LR	20 55 29.1	
	comp=Z,41nm,18.6s,MS3.4,baz=298,slow=38							
BRTR	Keskin Array B	46.26	72	P		P	20 34 27.4	+0.3
YKA	Yellowknife Ar	51.02	323	P		P	20 35 02.9	-0.5
	comp=Z,1.4nm,0.8s,mb3.9,baz=68,slow=7.8,SNR=6.1							
YKA	Yellowknife Ar	51.02	323	P		P	20 35 02.9	-0.5
YKA	Yellowknife Ar	51.02	323	P		P	20 35 02.9	-0.5
ROSC	El Rosal	55.09	240	LR		LR	20 55 19.6	
	comp=Z,51nm,21.4s,MS3.6,baz=182,slow=32							
INK	Inuvik	55.71	334	P		P	20 35 37.7	-0.1
	comp=Z,1.9nm,0.8s,mb4.2,baz=70,slow=7.2,SNR=4.5							
INK	Inuvik	55.71	334	P		P	20 35 37.7	-0.1
PDAR	Pinedale Array	56.64	300	P		P	20 35 44.2	-0.6
	comp=Z,2.2nm,0.9s,mb4.2,baz=60,slow=7.2,SNR=12							
PDAR				LR		LR	20 59 39.3	
	comp=Z,66nm,18.0s,MS3.8,baz=70,slow=36							
PDAR	Pinedale Array	56.64	300	P		P	20 35 44.2	-0.6
PDAR				LR		LR	20 59 39.3	
PDAR	Pinedale Array	56.64	300	P		P	20 35 44.2	-0.6
AKTK	Aktyubinsk	56.92	50	P		P	20 35 46.2	-0.5
AKTK	Aktyubinsk	56.92	50	P		P	20 35 46.2	-0.5
AKTO	Aktyubinsk	56.92	50	P		P	20 35 46.2	-0.5
	comp=Z,2.3nm,0.7s,mb4.3,baz=306,slow=7.1,SNR=8.8							
TXAR	Lajitas Array	59.85	283	P		P	20 36 07.9	+0.4
	comp=Z,0.3nm,0.7s,mb3.4,baz=72,slow=8.0,SNR=4.4							
TXAR				LR		LR	21 03 22.1	
	comp=Z,68nm,18.2s,MS3.8,baz=5.0,slow=38							
TXAR	Lajitas Array	59.85	283	P		P	20 36 07.9	+0.5
ELK	Elko	61.31	300	P		P	20 36 18.8	+1.5
	comp=Z,3.0nm,0.9s,mb4.4,baz=60,slow=5.5,SNR=12							
ELK	Elko	61.31	300	P		P	20 36 18.8	+1.5
BVAR	Borovoye Array	62.07	42	P		P	20 36 21.5	-0.7
	comp=Z,1.5nm,0.9s,mb4.1,baz=294,slow=4.7,SNR=8.8							
YBH	Yreka Blue Hor	65.37	305	P		P	20 36 44.9	+0.7
	comp=Z,0.6nm,0.3s,mb4.1,baz=117,slow=2.3,SNR=2.6							
YBH	Yreka Blue Hor	65.37	305	P		P	20 36 44.9	+0.8
KURK	Kurchatov	67.51	41	*e*P		P	20 36 56.9	-0.8
	comp=Z,8.1nm,0.9s,mb4.8							
KURK	Kurchatov	67.51	41	*e*P		P	20 36 56.9	-0.8
	comp=Z,8.1nm,0.9s,mb4.8							
ZAA0	Zalesovo Array	68.15	36	*e*P		P	20 37 01.0	-0.6
ZAA0	Zalesovo Array	68.15	36	*e*P		P	20 37 01.0	-0.6
ZALV	Zalesovo Beam	68.15	36	P		P	20 37 00.8	-0.8
	comp=Z,3.2nm,0.8s,mb4.4,baz=302,slow=8.4,SNR=12							
EKS2	Erkin-Say	70.25	50	*e*P		P	20 37 15.4	+0.6
	comp=Z,2.1nm,0.8s,mb4.1							
EKS2	Erkin-Say	70.25	50	*e*P		P	20 37 15.4	+0.6
	comp=Z,2.1nm,0.8s,mb4.1							
UCH	Uchtor	70.94	50	*e*P		P	20 37 20.6	+1.5
	comp=Z,6.0nm,1.2s,mb4.4							
UCH	Uchtor	70.94	50	*e*P		P	20 37 20.6	+1.5
	comp=Z,6.0nm,1.2s,mb4.4							
MK31	Makanchi Array	71.96	42	*e*P		P	20 37 23.5	-1.6
MK31	Makanchi Array	71.96	42	*e*P		P	20 37 23.5	-1.6
MKAR	Makanchi Array	71.96	42	P		P	20 37 24.7	-0.5
	comp=Z,5.8nm,1.0s,mb4.5,baz=319,slow=5.3,SNR=27							
MKAR				LR		LR	21 08 48.6	
	comp=Z,21nm,19.1s,MS3.4,baz=322,slow=36							
MKAR	Makanchi Array	71.96	42	P		P	20 37 24.7	-0.5
MKAR				LR		LR	21 08 48.6	
TLY	Talaya	77.19	28	*e*P		P	20 37 55.0	-0.4
	comp=Z,2.7nm,1.0s,mb4.1							
TLY	Talaya	77.19	28	*e*P		P	20 37 55.0	-0.4
	comp=Z,2.7nm,1.0s,mb4.1							
LSZ	Lusaka	78.23	124	P		P	20 38 01.8	+0.1
	comp=Z,1.8nm,0.8s,mb4.0							
LSZ	Lusaka	78.23	124	P		P	20 38 01.8	+0.2
	comp=Z,1.8nm,0.8s,mb4.0							
SONM	Songino Array	81.39	29	P		P	20 38 18.0	-0.5
	comp=Z,1.2nm,0.9s,mb3.8,baz=323,slow=4.5,SNR=8.6							
SONM	Songino Array	81.39	29	P		P	20 38 18.0	-0.5
BOSA	Boshof	87.05	134	LR		LR	21 17 13.3	
	comp=Z,114nm,19.8s,MS4.3,baz=200,slow=35							
QSPA	South Pole Qui	132.90	180	*e*PKPdf		PKPdf	20 45 17.2	+1.7
QSPA	South Pole Qui	132.90	180	*e*PKIKP		PKPdf	20 45 17.2	+1.7
SBA	Scott Base	144.47	186	PKPdf		PKPdf	20 45 36.2	-0.6
SBA	Scott Base	144.47	186	PKIKP		PKPdf	20 45 36.2	-0.5
CASY	Casey	147.99	150	*e*PKPdf		PKPdf	20 45 44.5	+1.5
CASY	Casey	147.99	150	*e*PKIKP		PKPdf	20 45 44.5	+1.6

WEL 15 20:52:18.3±0.3, 38°57S×176°12E, h109km±3km, ML3.5/16, Error ellipse: s-maj=1.9km s-min=1.7km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARZ	Mount Tarawera	0.45	43	PN	Pn	20 52 34.7	0.0
RITZ	Rihia Road	0.46	206	PN	Pn	20 52 35.0	+0.2
KATZ	Kakaramea	0.53	219	PN	Pn	20 52 35.3	+0.1
KRVZ	Karewarewa	0.65	215	PN	Pn	20 52 36.2	+0.1
BKZ	Black Stump Fm	0.67	154	PN	Pn	20 52 36.1	-0.2
BKZ				SN	Sn	20 52 48.9	-0.9
WTVZ	West Tongariro	0.69	217	PN	Pn	20 52 36.5	+0.1
OTVZ	Oturere	0.70	211	PN	Pn	20 52 36.9	+0.4
NGZ	Ngauruhoe	0.73	213	PN	Pn	20 52 37.0	+0.2
TWVZ	Taurewa	0.74	226	PN	Pn	20 52 36.9	+0.1
NMHZ	Naumai	0.76	135	PN	Pn	20 52 37.7	+0.6
NMHZ				SN	Sn	20 52 51.9	+0.8
WPVZ	Whakapapa	0.78	215	PN	Pn	20 52 37.6	+0.3
TUVZ	Tukino	0.79	207	PN	Pn	20 52 37.7	+0.3
RAHZ	Arahi	0.83	115	PN	Pn	20 52 38.0	+0.3
RAHZ				SN	Sn	20 52 52.6	+0.3
URZ	Urewera	0.83	69	PN	Pn	20 52 37.3	-0.5
URZ				SN	Sn	20 52 51.4	-1.0
WNVZ	Wahianoa	0.86	208	PN	Pn	20 52 38.3	+0.2
MOVZ	Moawhango	0.89	199	PN	Pn	20 52 38.0	-0.3
PKVZ	Pokaka	0.94	220	PN	Pn	20 52 39.0	+0.2
MTVZ	Mangateitei	0.96	212	PN	Pn	20 52 39.2	+0.2
MCHZ	McNeill Hill	0.99	153	PN	Pn	20 52 40.5	+1.3
MCHZ				SN	Sn	20 52 55.5	+0.4
MWZ	Matawai	1.13	79	PN	Pn	20 52 40.7	0.0
KNZ	Kokohu	1.30	111	PN	Pn	20 52 42.7	0.0
PNHZ	Pukenui	1.35	177	PN	Pn	20 52 42.6	-0.6
KAHZ	Kahuranaki	1.36	155	PN	Pn	20 52 43.5	+0.2
PRGZ	Paritu Road	1.42	105	PN	Pn	20 52 44.1	0.0
WAZ	Wanganui	1.48	216	PN	Pn	20 52 44.6	-0.2
TSZ	Takapari Road	1.50	185	PN	Pn	20 52 44.2	-0.8
MHGZ	Mahia Peninsul	1.51	113	PN	Pn	20 52 45.3	+0.1
WPHZ	Waipukurau	1.52	171	PN	Pn	20 52 44.3	-0.9
CNGZ	Carnagh Statio	1.64	88	PN	Pn	20 52 47.0	+0.4
DVHZ	Dannevirke	1.73	179	PN	Pn	20 52 46.6	-1.3
PRHZ	Porangahau	1.75	167	PN	Pn	20 52 47.3	-0.8
PUZ	Puketiti	1.75	74	PN	Pn	20 52 48.0	-0.1
POWZ	Post Office Ro	1.85	188	PN	Pn	20 52 48.1	-1.2
MXZ	Matakaoa Point	1.99	61	PN	Pn	20 52 51.5	+0.4
BFZ	Birch Farm	2.12	177	PN	Pn	20 52 51.1	-1.6
MRZ	Mangatainoka R	2.14	191	PN	Pn	20 52 51.1	-1.8
TIWZ	Tintock	2.22	185	PN	Pn	20 52 52.3	-1.7
OGWZ	Otaki Gorge	2.37	198	PN	Pn	20 52 54.0	-1.9
HOWZ	Holdsworth Sta	2.38	191	PN	Pn	20 52 53.9	-2.2
KIW	Kapiti Island	2.48	202	PN	Pn	20 52 55.1	-2.2
TMWZ	Te Maipa	2.55	184	PN	Pn	20 52 56.0	-2.2
MTW	Mount Morrison	2.63	190	PN	Pn	20 52 56.8	-2.6
CAW	Cannon Point	2.67	197	PN	Pn	20 52 57.4	-2.4
PAWZ	Paruwai Farm	2.86	191	PN	Pn	20 52 59.6	-2.9
MSWZ	Moikau Station	2.92	193	PN	Pn	20 53 00.2	-3.0
SNZO	South Karori	2.95	201	PN	Pn	20 53 00.5	-3.0
TCW	Tory Channel	3.00	208	PN	Pn	20 53 01.4	-2.9
PLWZ	Palliser	3.08	192	PN	Pn	20 53 02.0	-3.2
TUWZ	Tuamarina	3.32	210	PN	Pn	20 53 05.4	-3.0
NNZ	Nelson	3.39	218	PN	Pn	20 53 06.4	-2.9
QRZ	Quartz Range	3.58	230	PN	Pn	20 53 09.5	-2.4
THZ	Tophouse	4.04	217	PN	Pn	20 53 14.7	-3.3
LTZ	Lake Taylor	5.13	214	PN	Pn	20 53 27.8	-5.0
MQZ	McQueen's Vall	5.77	206	SN	Sn	20 54 36.6	-10

NEIC 15 21:35:15.7, 32°58S×71°99W, h27km, ML2.6(GUC), After GUC.

GUC 15 21:35:15.7±0.7, 32°58S×71°99W, h27km±4km, MD3.6, ML2.6, 6C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	Los Chungos	0.81	311	⇑*i*P	Pb	21 35 30.0	-1.1
CHNG				*i* S	Sb	21 35 41.5	-0.2
CHNG				AML	AML	21 35 43.8	
	comp=E,154nm,0.3s						
ROCH	El Roble	0.92	116	*e*P	Pn	21 35 32.3	-0.4
ROCH				*e*S	Sb	21 35 45.4	+0.7
ROCH	El Roble	0.92	116	*e*P	Pn	21 35 32.3	-0.4
ROCH				*e*S	Sb	21 35 45.4	+0.7
LCCH	Las Cruces	0.96	158	*e*P	Pn	21 35 33.0	-0.5
LCCH				*i* S	Sb	21 35 45.6	-0.5
LCCH	Las Cruces	0.96	158	*e*P	Pn	21 35 33.0	-0.5
LCCH				*i* S	Sb	21 35 45.6	-0.5
JACH	Jahuel	1.19	95	⇑*i*P	Pn	21 35 36.5	0.0
JACH				*i* S	Sn	21 35 52.6	+0.8
JACH	Jahuel	1.19	95	⇑*i*P	Pn	21 35 36.5	0.0
JACH				*i* S	Sn	21 35 52.6	+0.8
PEL	Peldehue	1.24	118	⇑*i*P	Pn	21 35 37.5	+0.3
PEL				*i* S	Sn	21 35 53.8	+0.8
PEL				AML	AML	21 35 58.3	
	comp=E,579nm,0.3s						
RCDM	Rinconada Maip	1.35	133	*e*P	Pn	21 35 39.5	+0.7
RCDM				*i* S	Sn	21 35 56.2	+0.5
RCDM	Rinconada Maip	1.35	133	*e*P	Pn	21 35 39.5	+0.7
RCDM				*i* S	Sn	21 35 56.2	+0.5
RCDM				AML	AML	21 36 01.5	
	comp=E,199nm,0.4s						
TACH	Talagante	1.39	141	*e*P	Pn	21 35 39.8	+0.5
TACH				*i* S	Sn	21 35 57.7	+0.9
TACH	Talagante	1.39	141	*e*P	Pn	21 35 39.8	+0.5
TACH				*i* S	Sn	21 35 57.7	+0.9
CLCH	Cerro Calan	1.47	124	*e*P	Pn	21 35 41.0	+0.5
CLCH				*i* S	Sn	21 36 00.5	+1.7
CLCH				AML	AML	21 36 12.5	
	comp=N,213nm,0.6s						
FCH	Farellones	1.61	118	⇓*i*P	Pn	21 35 44.1	+1.7
FCH				*e*S	Sn	21 36 05.4	+3.1
FCH				AML	AML	21 36 07.3	
	comp=E,161nm,0.2s						
PCH	Pirque	1.62	130	⇓*i*P	Pn	21 35 43.6	+1.1
PCH				*i* S	Sn	21 36 04.2	+1.7
PCH	Pirque	1.62	130	⇓*i*P	Pn	21 35 43.6	+1.1
PCH				*i* S	Sn	21 36 04.2	+1.7
CHCH	Chadas Angostu	1.76	141	*e*P	Pn	21 35 45.3	+1.0
CHCH				*i* S	Sn	21 36 07.9	+2.0
CHCH	Chadas Angostu	1.76	141	*e*P	Pn	21 35 45.3	+1.0
CHCH				*i* S	Sn	21 36 07.9	+2.0
LMEL	Las Melosas	1.96	131	⇑*i*P	Pn	21 35 48.7	+1.5
LMEL				*i* S	Sn	21 36 14.0	+3.1
LMEL	Las Melosas	1.96	131	⇑*i*P	Pn	21 35 48.7	+1.5
LMEL				*i* S	Sn	21 36 14.0	+3.1

ATH 15 21:54:47.7, 39°37N×26°30E, h26km, MD3.6/9
ISCJB 15 21:54:48.5±0.4, 39°41N±0°02×26°24E±0°03, h10km±3km, Error ellipse: s-maj=4.0km s-min=3.1km az=1.0
CSEM 15 21:54:48.9±0.1, 39°40N×26°22E, h10km, MD3.6, Error ellipse: s-maj=3.4km s-min=2.8km az=126.0
THE 15 21:54:49.4, 39°38N×26°27E, h10km±1km, ML3.4/5, Error ellipse: s-maj=1.2km s-min=0.3km az=219.0
NEIC 15 21:54:49.0, 39°52N×26°38E, h2km, MD3.6(ATH), MD3.2(ISK), After ISK.
ISK 15 21:54:49.6, 39°49N×26°37E, h6km, MD3.2
SOF 15 21:54:50.0, 39°70N×26°31E, h2km, MD2.7

ISC 15 21:54:49.2±0.4, 39°41N±0°02×26°25E±0°03, h10km±3km, n115, σ0°84/141, 2C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	Paraskevi	0.17	173	⇑*i*Pb	Pg	21 54 52.4	-0.4
PRK				*e*Sb	Sg	21 54 56.3	+1.1
PRK	Paraskevi	0.17	173	⇑*i*PB	Pg	21 54 52.4	-0.4
PRK				*e*SB	Sg	21 54 56.3	+1.1
PRK	Paraskevi	0.17	173	P	Pg	21 54 52.4	-0.4
PRK				S	Sg	21 54 55.0	-0.2
PRK	Paraskevi	0.17	173	P	Pg	21 54 52.4	-0.4
PRK				S	Sg	21 54 55.0	-0.2
PRK				*e*Sb	Sg	21 54 56.3	+1.1
SIGR	SIGRI	0.36	237	P	Pg	21 54 56.2	-0.2
SIGR	SIGRI	0.36	237	P	Pg	21 54 56.6	+0.2
SIGR				S	Sg	21 55 02.1	+0.9
SIGR	SIGRI	0.36	237	P	Pg	21 54 56.2	-0.2
SIGR				S	Sg	21 55 02.1	+0.9
EZN	Ezine	0.42	8	*e*PG	Pg	21 54 57.1	-0.3
EZN				*e*SG	Sg	21 55 02.2	-0.8
EZN	Ezine	0.42	8	*e*Pg	Pg	21 54 57.1	-0.3
EZN				*e*Sg	Sg	21 55 02.2	-0.8
GADA	Gvkgeada	0.82	341	*e*PG	Pg	21 55 04.9	-0.2
GADA				*e*SG	Sg	21 55 16.4	+0.6
GADA	Gvkgeada	0.82	341	*e*Pg	Pg	21 55 04.9	-0.2
GADA				*e*Sg	Sg	21 55 16.4	+0.6
LIA	Limnos Island	0.95	301	*e*Pn	Pg	21 55 07.7	+0.1
LIA				*e*Sn	Sg	21 55 21.0	+1.0
LIA	Limnos Island	0.95	301	*e*PN	Pg	21 55 07.7	+0.1
LIA				*e*SN	Sg	21 55 21.0	+1.0
LIA	Limnos Island	0.95	301	P	Pg	21 55 07.9	+0.3
LIA				S	Sg	21 55 22.0	+2.0
LIA	Limnos Island	0.95	301	*e*Pn	Pg	21 55 07.7	+0.1
LIA				*e*Sn	Sg	21 55 21.0	+1.0
LIA				S	Sg	21 55 22.0	+2.0
GELI	Tayfur-Gelibol	1.00	10	*e*PG	Pg	21 55 07.9	-0.5
GELI	Tayfur-Gelibol	1.00	10	*e*Pg	Pg	21 55 07.9	-0.6
CHOS	Chios island	1.03	188	*e*PN	Pg	21 55 07.6	-1.5
CHOS				*e*SN	Sg	21 55 21.1	-1.4
CHOS	Chios island	1.03	188	P	Pg	21 55 07.9	-1.2
CHOS				S	Sg	21 55 22.9	+0.4
CHOS	Chios island	1.03	188	*e*Pn	Pg	21 55 07.6	-1.5
CHOS	Chios island	1.03	188	P	Pg	21 55 07.9	-1.2
CHOS				S	Sg	21 55 22.9	+0.4
LPK	Lapseki	1.04	22	*e*PG	Pg	21 55 08.1	-1.0
LPK	Lapseki	1.04	22	*e*Pg	Pg	21 55 08.1	-1.1
ERIK	Erikli-Kesan	1.27	9	*e*PN	Pn	21 55 12.6	-0.5
ERIK	Erikli-Kesan	1.27	9	*e*Pn	Pn	21 55 12.6	-0.5
GONE	Gonen-Balikesi	1.28	60	*e*PN	Pn	21 55 11.9	-1.2
GONE	Gonen-Balikesi	1.28	60	*e*Pn	Pn	21 55 11.9	-1.2
BALB	Balikesir	1.28	79	*e*PN	Pn	21 55 12.1	-1.1
BALB				*e*SN	Sn	21 55 29.0	-1.4
BALB	Balikesir	1.28	79	*e*Pn	Pn	21 55 12.1	-1.1
BALB				*e*Sn	Sn	21 55 29.0	-1.4
IZM	Izmir	1.28	142	*e*PN	Pn	21 55 13.8	+0.7
ENEZ	Enez	1.32	357	*e*PN	Pn	21 55 13.6	-0.1
ENEZ	Enez	1.32	357	*e*Pn	Pn	21 55 13.6	-0.2
AKS	Akhisar	1.33	113	*e*PN	Pn	21 55 14.4	+0.6
AKS	Akhisar	1.33	113	*e*Pn	Pn	21 55 14.4	+0.6
RKY	Sarkoy-Tekirda	1.46	29	*e*PN	Pn	21 55 15.3	-0.3
RKY	Sarkoy-Tekirda	1.46	29	*e*Pn	Pn	21 55 15.3	-0.3
ALN	Alexandroupoli	1.49	354	*e*PN	Pn	21 55 15.3	-0.7
ALN				*e*SN	Sn	21 55 35.5	-0.1
ALN	Alexandroupoli	1.49	354	*e*PN	Pn	21 55 15.3	-0.7
ALN				*e*SN	Sn	21 55 35.5	-0.1
ALN	Alexandroupoli	1.49	354	P	Pn	21 55 15.5	-0.5
ALN				S	Sn	21 55 35.8	+0.2
ALN	Alexandroupoli	1.49	354	P	Pn	21 55 15.5	-0.5
ALN				*e*Sn	Sn	21 55 35.5	-0.1
ALN				S	Sn	21 55 35.8	+0.2
EDC	Edincik	1.56	53	*e*PN	Pn	21 55 16.6	-0.3
EDC	Edincik	1.56	53	*e*Pn	Pn	21 55 16.6	-0.3
MFT	Murefte	1.59	30	*e*PN	Pn	21 55 17.3	0.0
MFT	Murefte	1.59	30	*e*Pn	Pn	21 55 17.3	0.0
BNT	Bandirma	1.60	53	*e*PN	Pn	21 55 16.4	-1.1
SMG	Samos	1.76	165	*e*Pn	Pn	21 55 17.9	-1.8
SMG	Samos	1.76	165	*e*PN	Pn	21 55 17.9	-1.8
SMG	Samos	1.76	165	*e*Pn	Pn	21 55 17.9	-1.8
KCTX	Karacabey (Bur	1.83	62	*e*PN	Pn	21 55 20.1	-0.6
KCTX	Karacabey (Bur	1.83	62	*e*Pn	Pn	21 55 20.1	-0.7
OUR	Ouranopolis	1.97	299	P	Pn	21 55 22.2	-0.4
OUR	Ouranopolis	1.97	299	P	Pn	21 55 22.2	-0.4
OUR	Ouranopolis	1.97	299	P	Pn	21 55 22.2	-0.4
CRLT	Corlu	2.06	33	*e*PN	Pn	21 55 23.0	-0.9
CRLT	Corlu	2.06	33	*e*Pn	Pn	21 55 23.0	-0.8
KAVA	Kavala	2.07	321	P	Pn	21 55 23.9	0.0
KAVA	Kavala	2.07	321	P	Pn	21 55 23.9	0.0
KULA	Kula-Manisa	2.08	115	*e*PN	Pn	21 55 26.1	+1.9
KULA	Kula-Manisa	2.08	115	*e*Pn	Pn	21 55 26.1	+1.9
MDNY	Mudanya-Bursa	2.24	64	*e*PN	Pn	21 55 26.8	+0.5
MDNY	Mudanya-Bursa	2.24	64	*e*Pn	Pn	21 55 26.8	+0.4
ARMT	Armutlu	2.32	59	*e*PN	Pn	21 55 27.9	+0.6
ARMT	Armutlu	2.32	59	*e*Pn	Pn	21 55 28.0	+0.6
KDZ	Kurdzhali	2.32	344	*i* P	Pn	21 55 27.3	-0.2
KDZ	Kurdzhali	2.32	344	*i* P	Pn	21 55 27.3	-0.2
SLVT	Silivri	2.36	39	*e*PN	Pn	21 55 28.1	+0.1
SLVT	Silivri	2.36	39	*e*Pn	Pn	21 55 28.1	+0.2
APE	Apeiranthos	2.41	194	*e*PN	Pn	21 55 26.9	-1.7
APE	Apeiranthos	2.41	194	*e*PN	Pn	21 55 26.9	-1.7
APE	Apeiranthos	2.41	194	*e*Pn	Pn	21 55 26.9	-1.7
MLSB	Milas	2.43	150	*e*PN	Pn	21 55 32.1	+3.2
MLSB	Milas	2.43	150	*e*Pn	Pn	21 55 32.1	+3.1
EDRB	Edirne	2.46	9	*e*PN	Pn	21 55 29.8	+0.4
EDRB	Edirne	2.46	9	*e*Pn	Pn	21 55 29.8	+0.4
CTKS	Kest

ITM				*e*SN	Sg	22 19 47.1	0.0
ITM	**Ithomi**	**0.51**	**63**	*e*Pn	Pg	22 19 39.8	-0.5
ITM				*e*Sn	Sg	22 19 47.1	0.0
VLX	**Vlachokerasia**	**0.92**	**62**	*e*PN	Pn	22 19 48.1	-0.4
VLX				*e*SN	Sn	22 20 00.3	-1.1
VLX	**Vlachokerasia**	**0.92**	**62**	*e*Pn	Pn	22 19 48.1	-0.4
VLX				*e*Sn	Sn	22 20 00.3	-1.1
RLS	**Riolos of Patr**	**1.11**	**4**	*e*Pn	Pn	22 19 51.4	+0.2
RLS				*e*Sn	Sn	22 20 06.9	+0.7
RLS	**Riolos of Patr**	**1.11**	**4**	*e*PN	Pn	22 19 51.4	+0.2
RLS				*e*SN	Sn	22 20 06.9	+0.7
RLS	**Riolos of Patr**	**1.11**	**4**	*e*Pn	Pn	22 19 51.4	+0.2
RLS				*e*Sn	Sn	22 20 06.9	+0.7
GUR	**Goura**	**1.26**	**38**	*e*PN	Pn	22 19 53.4	+0.2
GUR				*e*SN	Sn	22 20 11.6	+1.7
GUR	**Goura**	**1.26**	**38**	*e*Pn	Pn	22 19 53.4	+0.2
GUR				*e*Sn	Sn	22 20 11.6	+1.7
VLI	**Veliai**	**1.29**	**100**	*e*Pn	Pn	22 19 54.7	+1.1
VLI				*e*Sn	Sn	22 20 12.5	+1.9
VLI	**Veliai**	**1.29**	**100**	*e*PN	Pn	22 19 54.7	+1.1
VLI				*e*SN	Sn	22 20 12.5	+1.9
VLI	**Veliai**	**1.29**	**100**	*e*Pn	Pn	22 19 54.7	+1.1
VLI				*e*Sn	Sn	22 20 12.5	+1.9
VLS	**Valsamata**	**1.37**	**334**	*e*Pn	Pn	22 19 56.3	+1.5
VLS	**Valsamata**	**1.37**	**334**	*e*PN	Pn	22 19 56.3	+1.5
VLS	**Valsamata**	**1.37**	**334**	*e*Pn	Pn	22 19 56.3	+1.5
KYTH	**Kithira**	**1.50**	**116**	*e*Pn	Pn	22 19 58.4	+1.8
KYTH	**Kithira**	**1.50**	**116**	*e*PN	Pn	22 19 58.4	+1.8
KYTH	**Kithira**	**1.50**	**116**	*e*Pn	Pn	22 19 58.4	+1.8
EFP	**Efpalio**	**1.54**	**16**	*e*Pn	Pn	22 19 58.7	+1.6
EFP	**Efpalio**	**1.54**	**16**	*e*Pn	Pn	22 19 58.7	+1.6
DID	**Didima**	**1.60**	**69**	*e*PN	Pn	22 19 59.9	+2.0
DID	**Didima**	**1.60**	**69**	*e*Pn	Pn	22 19 59.9	+2.0
LKR	**Lokris**	**2.14**	**37**	*e*Pn	Pn	22 20 07.9	+2.6
LKR	**Lokris**	**2.14**	**37**	*e*PN	Pn	22 20 07.9	+2.6
LKR	**Lokris**	**2.14**	**37**	*e*Pn	Pn	22 20 07.9	+2.6
AGG	**Agios Georgios**	**2.21**	**20**	*e*Pn	Pn	22 20 08.9	+2.6
AGG	**Agios Georgios**	**2.21**	**20**	*e*PN	Pn	22 20 08.9	+2.6
AGG	**Agios Georgios**	**2.21**	**20**	*e*Pn	Pn	22 20 08.9	+2.6

MEX 15 22:30:48.9±0.8, 17°.05N×94°.90W, h144km±16km, MD3.8, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.72**	**223**	*i* P	Pn	22 31 18.4	-2.0
HUIG				*i* S	Sn	22 31 42.8	-1.8
TGIG		**1.72**	**99**	*i* P	Pn	22 31 20.0	-0.5
TGIG				*i* S	Sn	22 31 42.3	-2.3
VHO	**Vista Hermosa**	**1.75**	**271**	*i* P	Pn	22 31 20.4	-0.4
VHO				*i* S	Sn	22 31 43.8	-1.4
PCIG		**2.09**	**129**	*i* P	Pn	22 31 24.3	-0.5
PCIG				*i* S	Sn	22 31 50.5	-1.8
PNIG	**Pinotepa**	**3.16**	**259**	*i* P	Pn	22 31 35.9	-2.1
PNIG				*i* S	Sn	22 32 14.4	-1.7

*ISCJB **15** 22:42:25.4±0.8, 35°.90N±0°.07×27°.97E±0°.07, h57km±11km, Error ellipse: s-maj=13.8km s-min=5.9km az=144.0*
*NEIC **15** 22:42:26.0, 35°.93N×27°.86E, h48km, MD3.3(ATH), After ATH.*
*ATH **15** 22:42:26.0, 35°.93N×27°.86E, h48km±3km, MD3.3/6*
*CSEM **15** 22:42:26.1±0.3, 35°.88N×27°.97E, h49km±7km, MD3.3, Error ellipse: s-maj=10.8km s-min=5.0km az=140.0*

ISC 15 22:42:26.1±0.8, 35°.90N±0°.07×27°.96E±0°.07, h54km±12km, n26, σ0s71/37, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.34**	**23**	*e*P	**Pn**	**22 42 36.2**	**+0.3**
ARG				*e*S	**Sn**	**22 42 43.6**	**+0.6**
ARG	**Arkhangelos**	**0.34**	**23**	*e*P	**Pn**	**22 42 36.2**	**+0.3**
ARG				*e*S	**Sn**	**22 42 43.6**	**+0.6**
ARG	**Arkhangelos**	**0.34**	**23**	*e*P	**Pn**	**22 42 36.2**	**+0.3**
ARG				*e*S	**Sn**	**22 42 43.6**	**+0.6**
KARP	**Karpathos**	**0.74**	**242**	*e*P	**Pn**	**22 42 39.7**	**-0.8**
KARP				*e*S	**Sn**	**22 42 50.7**	**-0.3**
KARP	**Karpathos**	**0.74**	**242**	*e*P	**Pn**	**22 42 39.7**	**-0.8**
KARP				*e*S	**Sn**	**22 42 50.7**	**-0.3**
KARP	**Karpathos**	**0.74**	**242**	*e*P	**Pn**	**22 42 39.7**	**-0.8**
KARP				*e*S	**Sn**	**22 42 50.7**	**-0.3**
TURN	**Turunc**	**1.10**	**28**	*i* P	**Pn**	**22 42 44.1**	**-1.1**
TURN	**Turunc**	**1.10**	**28**	*i* P	**Pn**	**22 42 44.1**	**-1.1**
TURN				*i* S	**Sn**	**22 42 57.8**	**-1.6**
BDRM	**Kayabasi**	**1.23**	**340**	*i* P	**Pn**	**22 42 47.0**	**0.0**
BDRM	**Kayabasi**	**1.23**	**340**	*i* P	**Pn**	**22 42 47.0**	**0.0**
AKAS	**Kas**	**1.37**	**76**	*i* P	**Pn**	**22 42 49.3**	**+0.4**
AKAS	**Kas**	**1.37**	**76**	*i* P	**Pn**	**22 42 49.3**	**+0.4**
AKAS				*i* S	**Sn**	**22 43 06.2**	**+0.2**
ZKR	**Zakros**	**1.62**	**242**	*e*P	**Pn**	**22 42 52.8**	**+0.5**
ZKR				*e*S	**Sn**	**22 43 11.9**	**-0.3**
ZKR	**Zakros**	**1.62**	**242**	*e*P	**Pn**	**22 42 52.8**	**+0.5**
ZKR				*e*S	**Sn**	**22 43 11.9**	**-0.3**
ZKR	**Zakros**	**1.62**	**242**	*e*P	**Pn**	**22 42 52.8**	**+0.5**
ZKR				*e*S	**Sn**	**22 43 11.9**	**-0.3**
AYDN	**Tasoluk**	**1.76**	**358**	*i* P	**Pn**	**22 42 55.6**	**+1.4**
AYDN	**Tasoluk**	**1.76**	**358**	*i* P	**Pn**	**22 42 55.6**	**+1.5**
SMG	**Samos**	**2.02**	**334**	*e*P	**Pn**	**22 42 58.1**	**+0.4**
SMG	**Samos**	**2.02**	**334**	*e*P	**Pn**	**22 42 58.1**	**+0.4**
SMG	**Samos**	**2.02**	**334**	*e*P	**Pn**	**22 42 58.1**	**+0.4**
LAST	**Lasithi**	**2.16**	**251**	*e*P	**Pn**	**22 42 59.7**	**+0.1**
LAST	**Lasithi**	**2.16**	**251**	*e*P	**Pn**	**22 42 59.7**	**+0.1**
LAST	**Lasithi**	**2.16**	**251**	*e*P	**Pn**	**22 42 59.7**	**+0.1**
IDI	**Anoyia**	**2.58**	**257**	*e*P	**Pn**	**22 43 05.5**	**+0.2**
IDI	**Anoyia**	**2.58**	**257**	*e*P	**Pn**	**22 43 05.5**	**+0.2**
IDI	**Anoyia**	**2.58**	**257**	*e*P	**Pn**	**22 43 05.5**	**+0.2**

GUC 15 23:04:26.2±0.7, 22°.42S×70°.30W, h37km±2km, MD3.7, ML3.1, 4C, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACH	**Maria Elena**	**0.55**	**66**	⇑*i*P	Pn	23 04 38.1	+0.5
MACH				*i* S	Sn	23 04 46.4	+0.8
MECH	**Mejillones**	**0.69**	**191**	*e*P	Pn	23 04 39.7	+0.1
MECH				*e*S	Sn	23 04 49.2	+0.1
MECH				AML	AML	23 04 53.7	
	comp=N,1μm,0.3s						
PB04	**Plate Boundary**	**0.77**	**79**	⇑*i*P	Pn	23 04 33.1	-7.4
PB04				*i* S	Sn	23 04 37.6	-13
PB04				AML	AML	23 04 37.9	
	comp=N,8μm,0.1s						
CEN1	**Los Morros**	**0.97**	**174**	*e*P	Pn	23 04 46.5	+3.1
CEN1				*i* S	Sn	23 05 02.0	+6.1
CEN1				AML	AML	23 05 06.5	
	comp=N,266nm,0.2s						
ANCH	**Antofagasta**	**1.26**	**184**	⇑*i*P	Pn	23 04 47.8	+0.5
ANCH				*i* S	Sn	23 05 05.0	+2.0
PB01	**Plate Boundary**	**1.57**	**29**	⇑*i*P	Pn	23 04 53.1	+1.5
PB01				*i* S	Sn	23 05 13.7	+3.1
PB01				AML	AML	23 05 19.0	
	comp=N,276nm,0.3s						

*ISCJB **15** 23:11:49.0±0.8, 10°.39N±0°.07×62°.34W±0°.03, h21km±12km, Error ellipse: s-maj=11.3km s-min=5.3km az=172.0*
*TRN **15** 23:11:49.0, 10°.06N×62°.10W, h3km, MD3.1*
*FUNV **15** 23:11:49.5, 10°.40N×62°.35W, h18km, MW2.5*

ISC 15 23:11:48.9±0.8, 10°.38N±0°.06×62°.35W±0°.03, h20km±6km, n7, σ0s88/14, 2C, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.29**	**25**	⇑*i*P	**Pg**	**23 11 55.4**	**0.0**
GUIV				*e*S	**Sg**	**23 11 59.5**	**-0.4**
GUNV	**Guanoco**	**0.62**	**249**	⇑*i*P	**Pg**	**23 12 01.0**	**-0.4**
GUNV				*e*S	**Sg**	**23 12 10.9**	**+1.1**
TCE	**Chacachacare**	**0.67**	**62**	*e*P	**Pb**	**23 12 02.6**	**+0.7**
TCE				*e*S	**Sb**	**23 12 13.8**	**+3.1**
CRUV	**Carupano**	**0.92**	**289**	*e*P	**Pb**	**23 12 05.4**	**-0.8**
CRUV				*e*S	**Sb**	**23 12 17.1**	**-0.9**
TRN	**Trinidad (W)**	**0.97**	**74**	*e*P	**Pb**	**23 12 06.5**	**-0.6**
TRN				*e*S	**Sb**	**23 12 19.0**	**-0.4**
ITEV	**Isla Los Testi**	**1.23**	**322**	*e*P	**Pn**	**23 12 12.0**	**+0.9**
ITEV				*e*S	**Sb**	**23 12 27.5**	**+0.4**
TBH	**Brigand Hill**	**1.27**	**85**	*e*P	**Pn**	**23 12 11.0**	**-0.5**
TBH				*e*S	**Sb**	**23 12 24.0**	**-4.0**

IDC 15 23:30:44.2±3.5, 4°.05S×101°.09E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.5/20, mbtmp3.6/5, Error ellipse: s-maj=121.0km s-min=62.1km az=61.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**22.47**	**355**	P	P	23 35 46.0	+0.9
	0.8nm,0.3s,baz=183,slow=8.3,SNR=4.2						
SONM	**Songino Array**	**51.88**	**5**	P	P	23 39 53.6	-0.7
	0.5nm,0.6s,baz=192,slow=13,SNR=4.5						
MKAR	**Makanchi Array**	**53.28**	**344**	P	P	23 40 05.7	+0.8
	0.5nm,0.6s,baz=157,slow=8.8,SNR=5.1						
ZALV	**Zalesovo Beam**	**59.37**	**349**	P	P	23 40 47.6	-0.5
	0.3nm,0.3s,baz=182,slow=4.0,SNR=3.6						
BVAR	**Borovoye Array**	**62.47**	**340**	P	P	23 41 08.9	-0.3
	0.4nm,0.6s,baz=182,slow=3.8,SNR=3.4						
TXAR	**Lajitas Array**	**145.61**	**40**	PKPbc	PKPbc	23 50 25.2	-0.2
	0.2nm,0.5s,baz=209,slow=1.5,SNR=5.7						

*ISK **15** 23:33:59.6, 35°.82N×27°.64E, h22km, MD3.2*
*ISCJB **15** 23:34:01.8±0.7, 35°.87N±0°.04×27°.77E±0°.05, h54km±10km, Error ellipse: s-maj=8.8km s-min=4.5km az=40.0*
*CSEM **15** 23:34:02.5±0.3, 35°.90N×27°.75E, h36km±4km, MD3.5, Error ellipse: s-maj=6.7km s-min=3.9km az=132.0*
*ATH **15** 23:34:02.0, 35°.92N×27°.67E, h39km±1km, MD3.5/7*
*NEIC **15** 23:34:02.0, 35°.92N×27°.67E, h39km, MD3.5(ATH), After ATH.*
*DDA **15** 23:34:03.3, 36°.18N×28°.06E, h10km±5km, Md2.8*

ISC 15 23:34:02.5±0.7, 35°.87N±0°.04×27°.78E±0°.05, h48km±12km, n52, σ0s79/74, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.45**	**39**	*e*Pb	**Pn**	**23 34 13.1**	**+0.1**
ARG				*e*Sb	**Sn**	**23 34 21.0**	**+0.4**
ARG	**Arkhangelos**	**0.45**	**39**	*e*PB	**Pn**	**23 34 13.1**	**+0.1**
ARG				*e*SB	**Sn**	**23 34 21.0**	**+0.4**
ARG	**Arkhangelos**	**0.45**	**39**	*e*Pb	**Pn**	**23 34 13.1**	**+0.1**
ARG				*e*Sb	**Sn**	**23 34 21.0**	**+0.4**
KARP	**Karpathos**	**0.59**	**238**	*e*Pn	**Pn**	**23 34 14.2**	**-0.5**
KARP				*e*Sn	**Sn**	**23 34 22.9**	**-0.6**
KARP	**Karpathos**	**0.59**	**238**	*e*PN	**Pn**	**23 34 14.2**	**-0.5**
KARP				*e*SN	**Sn**	**23 34 22.9**	**-0.6**
KARP	**Karpathos**	**0.59**	**238**	*e*Pn	**Pn**	**23 34 14.2**	**-0.5**
KARP				*e*Sn	**Sn**	**23 34 22.9**	**-0.6**
DAT	**Datca**	**0.88**	**350**	*e*PG	**Pn**	**23 34 18.3**	**-0.2**
DAT				*e*SG	**Sn**	**23 34 30.5**	**+0.3**
DAT	**Datca**	**0.88**	**350**	*e*Pg	**Pn**	**23 34 18.3**	**-0.2**
DAT				*e*Sg	**Sn**	**23 34 30.5**	**+0.3**
TURN	**Turunc**	**1.21**	**33**	*i* P	**Pn**	**23 34 20.4**	**-2.6**
TURN	**Turunc**	**1.21**	**33**	*i* P	**Pn**	**23 34 20.4**	**-2.6**
BDRM	**Kayabasi**	**1.23**	**348**	*i* P	**Pn**	**23 34 22.7**	**-0.5**
BDRM	**Kayabasi**	**1.23**	**348**	*i* P	**Pn**	**23 34 22.7**	**-0.5**
BODT	**Bodrum**	**1.25**	**343**	*e*PN	**Pn**	**23 34 21.8**	**-1.8**
BODT				*e*SN	**Sn**	**23 34 39.3**	**0.0**
BODT	**Bodrum**	**1.25**	**343**	*e*Pn	**Pn**	**23 34 21.8**	**-1.8**
BODT				*e*Sn	**Sn**	**23 34 39.3**	**0.0**
YER	**Yerkesik**	**1.33**	**18**	*e*PN	**Pn**	**23 34 24.8**	**+0.2**
YER				*e*SN	**Sn**	**23 34 43.4**	**+2.1**
YER	**Yerkesik**	**1.33**	**18**	*e*Pn	**Pn**	**23 34 24.8**	**+0.1**
YER				*e*Sn	**Sn**	**23 34 43.4**	**+2.2**
MLSB	**Milas**	**1.43**	**0**	*e*PN	**Pn**	**23 34 25.9**	**-0.1**
MLSB	**Milas**	**1.43**	**0**	*e*Pn	**Pn**	**23 34 25.9**	**-0.1**
ZKR	**Zakros**	**1.48**	**240**	*e*Pn	**Pn**	**23 34 27.4**	**+0.8**
ZKR				*e*Sn	**Sn**	**23 34 46.0**	**+1.3**
ZKR	**Zakros**	**1.48**	**240**	*e*PN	**Pn**	**23 34 27.4**	**+0.8**
ZKR				*e*SN	**Sn**	**23 34 46.0**	**+1.3**
ZKR	**Zakros**	**1.48**	**240**	*e*Pn	**Pn**	**23 34 27.4**	**+0.8**
ZKR				*e*Sn	**Sn**	**23 34 46.0**	**+1.3**
AKAS	**Kas**	**1.53**	**76**	*i* P	**Pn**	**23 34 26.5**	**-0.8**
AKAS	**Kas**	**1.53**	**76**	*i* P	**Pn**	**23 34 26.5**	**-0.8**
AYDN	**Tasoluk**	**1.79**	**3**	*i* P	**Pn**	**23 34 31.3**	**+0.3**
AYDN				*i* S	**Sn**	**23 34 52.5**	**-0.1**
AYDN	**Tasoluk**	**1.79**	**3**	*i* P	**Pn**	**23 34 31.3**	**+0.3**
AYDN				*i* S	**Sn**	**23 34 52.5**	**-0.1**
NPS	**Neapolis**	**1.86**	**252**	*e*Pn	**Pn**	**23 34 31.9**	**0.0**
NPS				*e*Sb	**Sn**	**23 34 53.6**	**-0.6**
NPS	**Neapolis**	**1.86**	**252**	*e*PN	**Pn**	**23 34 31.9**	**0.0**
NPS				*e*SB	**Sn**	**23 34 53.6**	**-0.6**
NPS	**Neapolis**	**1.86**	**252**	*e*Pn	**Pn**	**23 34 31.9**	**0.0**
ELL	**Elmali**	**1.94**	**62**	*e*PN	**Pn**	**23 34 33.3**	**+0.4**
ELL	**Elmali**	**1.94**	**62**	*e*Pn	**Pn**	**23 34 33.3**	**+0.4**
GOLH	**Golhisar**	**1.98**	**46**	*i* P	**Pn**	**23 34 34.1**	**+0.5**
GOLH				*i* S	**Sn**	**23 35 02.9**	**+5.6**
GOLH	**Golhisar**	**1.98**	**46**	*i* P	**Pn**	**23 34 34.1**	**+0.5**
SMG	**Samos**	**1.99**	**338**	*e*Pn	**Pn**	**23 34 33.2**	**-0.4**
SMG	**Samos**	**1.99**	**338**	*e*PN	**Pn**	**23 34 33.2**	**-0.4**
SMG				*e*SN	**Sn**	**23 34 57.3**	**0.0**
SMG	**Samos**	**1.99**	**338**	*e*Pn	**Pn**	**23 34 33.2**	**-0.4**
SMG				*e*Sn	**Sn**	**23 34 57.3**	**0.0**
LAST	**Lasithi**	**2.00**	**250**	*e*Pn	**Pn**	**23 34 34.0**	**+0.2**
LAST	**Lasithi**	**2.00**	**250**	*e*PN	**Pn**	**23 34 34.0**	**+0.2**
LAST	**Lasithi**	**2.00**	**250**	*e*Pn	**Pn**	**23 34 34.0**	**+0.2**
DNZL	**Cakiroluk**	**2.09**	**29**	*i* P	**Pn**	**23 34 39.4**	**+4.4**
DNZL	**Cakiroluk**	**2.09**	**29**	*i* P	**Pn**	**23 34 39.4**	**+4.4**
APE	**Apeiranthos**	**2.17**	**304**	*e*PN	**Pn**	**23 34 35.4**	**-0.7**
APE	**Apeiranthos**	**2.17**	**304**	*e*Pn	**Pn**	**23 34 35.8**	**-0.3**
APE	**Apeiranthos**	**2.17**	**304**	*e*PN	**Pn**	**23 34 35.8**	**-0.3**
APE	**Apeiranthos**	**2.17**	**304**	*e*Pn	**Pn**	**23 34 35.8**	**-0.3**
IDI	**Anoyia**	**2.42**	**257**	*e*Pn	**Pn**	**23 34 39.9**	**+0.3**
IDI	**Anoyia**	**2.42**	**257**	*e*PN	**Pn**	**23 34 39.9**	**+0.3**
IDI	**Anoyia**	**2.42**	**257**	*e*Pn	**Pn**	**23 34 39.9**	**+0.3**
VAM	**Vamos**	**2.95**	**262**	*e*Pn	**Pn**	**23 34 47.8**	**+1.0**
VAM	**Vamos**	**2.95**	**262**	*e*PN	**Pn**	**23 34 47.8**	**+1.0**
VAM	**Vamos**	**2.95**	**262**	*e*Pn	**Pn**	**23 34 47.8**	**+1.0**
DEMI	**Demirci**	**3.26**	**13**	*i* P	**Pn**	**23 34 51.1**	**+0.1**
DEMI	**Demirci**	**3.26**	**13**	*i* P	**Pn**	**23 34 51.1**	**0.0**

*NEIC **15** 23:34:30.7, 32°.20S×72°.15W, h23km, ML2.9(GUC), After GUC.*

GUC 15 23:34:30.7±0.7, 32°.20S×72°.15W, h23km±3km, MD3.5, ML2.9, 4C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.64**	**60**	⇑*i*P	Pb	23 34 42.2	-1.0
CHNG				*i* S	Sb	23 34 51.7	0.0
ROCH	**El Roble**	**1.23**	**129**	*i* P	Pn	23 34 52.7	+0.2
ROCH				*i* S	Sn	23 35 09.2	+0.7
ROCH	**El Roble**	**1.23**	**129**	*i* P	Pn	23 34 52.7	+0.2
ROCH				*i* S	Sn	23 35 09.2	+0.7
JACH	**Jahuel**	**1.40**	**110**	*e*P	Pn	23 34 55.1	+0.2
JACH				*i* S	Sn	23 35 13.4	+0.7
JACH	**Jahuel**	**1.40**	**110**	*e*P	Pn	23 34 55.1	+0.2
JACH				*i* S	Sn	23 35 13.4	+0.7
CMCH	**Combarbala**	**1.42**	**44**	*e*P	Pn	23 34 55.0	-0.1
CMCH				*i* S	Sn	23 35 14.3	+1.3
CMCH	**Combarbala**	**1.42**	**44**	*e*P	Pn	23 34 55.0	-0.1
CMCH				*i* S	Sn	23 35 14.3	+1.3
CMCH				AML	AML	23 35 17.6	
	comp=E,804nm,0.5s						
PEL	**Peldehue**	**1.56**	**128**	⇑*i*P	Pn	23 34 57.9	+0.9
PEL				*i* S	Sn	23 35 17.4	+1.0
PEL				AML	AML	23 35 19.6	
	comp=N,347nm,0.4s						
RCDM	**Rinconada Maip**	**1.71**	**139**	*e*P	Pn	23 34 59.7	+0.6
RCDM				*i* S	Sn	23 35 21.6	+1.3
RCDM	**Rinconada Maip**	**1.71**	**139**	*e*P	Pn	23 34 59.7	+0.6
RCDM				*i* S	Sn	23 35 21.6	+1.3
RCDM				AML	AML	23 35 28.1	
	comp=E,140nm,0.4s						
TACH	**Talagante**	**1.77**	**145**	*e*P	Pn	23 35 00.9	+0.9
TACH				*i* S	Sn	23 35 24.0	+2.2
TACH	**Talagante**	**1.77**	**145**	*e*P	Pn	23 35 00.9	+0.9
TACH				*i* S	Sn	23 35 24.0	+2.2
CLCH	**Cerro Calan**	**1.81**	**132**	*e*P	Pn	23 35 01.2	+0.8
CLCH				*i* S	Sn	23 35 24.9	+2.2
CLCH				AML	AML	23 35 42.3	
	comp=E,147nm,0.8s						
FCH	**Farellones**	**1.93**	**126**	*e*P	Pn	23 35 01.4	-0.7
FCH				*i* S	Sn	23 35 29.2	+3.5
FCH				AML	AML	23 35 34.9	
	comp=E,74nm,0.2s						
PCH	**Pirque**	**1.98**	**136**	*e*P	Pn	23 35 04.0	+1.2
PCH				*i* S	Sn	23 35 29.3	+2.5
PCH	**Pirque**	**1.98**	**136**	*e*P	Pn	23 35 04.0	+1.2
PCH				*i* S	Sn	23 35 29.3	+2.5
CHCH	**Chadas Angostu**	**2.14**	**144**	*e*P	Pn	23 35 06.2	+1.2
CHCH	**Chadas Angostu**	**2.14**	**144**	*e*P	Pn	23 35 06.2	+1.2
CACH	**El Canelo**	**2.31**	**146**	*e*P	Pn	23 35 09.8	+2.4
CACH				*e*S	Sn	23 35 39.3	+4.1
CACH	**El Canelo**	**2.31**	**146**	*e*P	Pn	23 35 09.8	+2.4
CACH				*e*S	Sn	23 35 39.3	+4.1
LMEL	**Las Melosas**	**2.32**	**136**	⇑*i*P	Pn	23 35 09.0	+1.5
LMEL				*i* S	Sn	23 35 38.2	+2.9
LMEL	**Las Melosas**	**2.32**	**136**	⇑*i*P	Pn	23 35 09.0	+1.5
LMEL				*i* S	Sn	23 35 38.2	+2.9
LMEL				AML	AML	23 35 45.0	
	comp=N,92nm,0.2s						
TLL	**Tololo Astrono**	**2.33**	**30**	*e*P	Pn	23 35 09.5	+1.8
TLL	**Tololo Astrono**	**2.33**	**30**	*e*P	Pn	23 35 09.5	+1.8
TLL				AML	AML	23 35 49.4	
	comp=N,82nm,0.6s						

*DDA **15** 23:35:28.8, 39°.52N×39°.86E, h7km±1km, Md3.0*
*CSEM **15** 23:35:30.5±0.2, 39°.59N×39°.77E, h2km, MD3.2, Error ellipse: s-maj=4.4km s-min=3.9km az=112.0*

ISK 15 23:35:29.6, 39°.57N×39°.77E, h2km, MD3.2, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZC	**Erzincan**	**0.37**	**300**	*e*PG	Pg	23 35 38.0	+1.3
PTK	**Pertek**	**0.73**	**204**	*e*PG	Pg	23 35 44.7	+1.0
PTK				*e*SG	Sg	23 35 55.4	+2.2
PTK	**Pertek**	**0.73**	**204**	*e*Pg	Pg	23 35 44.7	+1.0
PTK				*e*Sg	Sg	23 35 55.4	+2.2
BINT	**Bingol**	**0.89**	**141**	*e*PG	Pg	23 35 47.2	+0.6
BINT				*e*SG	Sg	23 36 00.8	+2.7
BINT	**Bingol**	**0.89**	**141**	*e*Pg	Pg	23 35 47.2	+0.6
BINT				*e*Sg	Sg	23 36 00.8	+2.7
GUMT	**Gumushane**	**0.92**	**346**	*e*PG	Pg	23 35 47.5	+0.2
GUMT	**Gumushane**	**0.92**	**346**	*e*Pg	Pg	23 35 47.5	+0.2
KEMA	**Kemaliye**	**1.03**	**254**	*i* P	Pg	23 35 49.5	+0.1
KEMA				*i* S	Sg	23 36 05.2	+2.4
KEMA	**Kemaliye**	**1.03**	**254**	*i* P	Pg	23 35 49.5	+0.1
KEMA				*i* S	Sg	23 36 05.2	+2.4
BNGL	**BINGOL**	**1.23**	**119**	*i* P	Pg	23 35 50.8	-2.4
SVRC	**Sivrice-ELAZID**	**1.24**	**197**	*e*PN	Pn	23 35 54.6	+0.7
SVRC	**Sivrice-ELAZID**	**1.24**	**197**	*e*Pn	Pn	23 35 54.7	+0.8
MACK	**Trabzon**	**1.38**	**360**	*i* P	Pn	23 35 56.1	+0.3
MACK				*i* S	Sg	23 36 12.2	-1.7
MACK	**Trabzon**	**1.38**	**360**	*i* P	Pn	23 35 56.1	+0.3
MACK				*i* S	Sg	23 36 12.1	-1.7
KTUT	**Trabzon**	**1.42**	**360**	*e*PN	Pn	23 35 56.9	+0.5
KTUT	**Trabzon**	**1.42**	**360**	*e*Pn	Pn	23 35 56.9	+0.5
ESPY	**Espiye-Giresun**	**1.57**	**330**	*e*PN	Pn	23 35 59.9	+1.4
ESPY	**Espiye-Giresun**	**1.57**	**330**	*e*Pn	Pn	23 35 59.9	+1.5
MYA	**Malataya**	**1.62**	**221**	*e*PN	Pn	23 35 59.8	+0.6
MYA	**Malataya**	**1.62**	**221**	*e*Pn	Pn	23 35 59.8	+0.6
DARE	**Darende-Malaty**	**1.65**	**249**	*e*PN	Pn	23 36 07.0	+7.5
GRSN	**GIRESUNGRSN**	**1.78**	**320**	*i* P	Pn	23 36 02.5	+1.1
GRSN	**GIRESUNGRSN**	**1.78**	**320**	*i* P	Pn	23 36 02.5	+1.2
DDEM	**Demirkent**	**2.01**	**48**	*i* P	Pn	23 36 05.4	+0.8
DDEM	**Demirkent**	**2.01**	**48**	*i* P	Pn	23 36 05.4	+0.8
DBAD	**Bademkaya**	**2.07**	**45**	*i* P	Pn	23 36 05.3	0.0
DBAD	**Bademkaya**	**2.07**	**45**	*i* P	Pn	23 36 05.3	0.0
SVSK	**Karacayir**	**2.17**	**280**	*e*PN	Pn	23 36 08.8	+2.1
SVSK	**Karacayir**	**2.17**	**280**	*e*Pn	Pn	23 36 08.8	+2.1
DAGI	**Agillar**	**2.23**	**47**	*i* P	Pn

TRQA	Tornquist	14.20	164	*e*Pn	Pn	23 50 08.6	+0.2		
	33nm,0.6s								
TRQA				*e*S	Sn	23 52 52.3	+6.4		
PLCA	Paso Flores	16.50	190	P	Pn	23 50 36.8	0.0		
	0.5nm,0.3s,baz=3.7,slow=11,SNR=7.0								
PLCA	Paso Flores	16.50	190	*e*P	Pn	23 50 36.8	0.0		
	7.8nm,0.5s								
SPB	Sao Paulo	17.85	91	P	Pn	23 50 52.0	-1.2		
	15nm,0.8s								
SDV	Santo Domingo	33.34	353	*e*P	P	23 53 17.5	-0.3		
	9.1nm,1.1s,mb4.4								
RCBR	Riachuelo	35.09	63	*e*P	P	23 53 33.1	+0.2		
JTS	JuntasAbangare	38.75	331	P	P	23 54 04.2	+0.3		
PMSA	Palmer Station	40.35	178	*e*P	P	23 54 16.9	+0.4		
	3.7nm,0.6s,mb4.2								
TEIG	Tepich	49.03	333	*e*P	P	23 55 24.9	-0.8		
	2.2nm,0.5s,mb4.0								
VNA1	Neumayer--Stat	56.90	160	*e*	P	23 56 22.7	-0.1		
WVT	Waverly	63.41	341	*e*P	P	23 57 05.8	-1.7		
	3.3nm,0.6s,mb4.3								
MIAR	Mount Ida	63.89	336	*e*P	P	23 57 09.6	-1.0		
	1.8nm,0.4s,mb4.2								
TXAR	Lajitas Array	64.08	325	P	P	23 57 11.9	-0.1		
	1.0nm,0.7s,mb3.7,baz=153,slow=8.1,SNR=10								
QSPA	South Pole Qui	65.75	180	*e*P	P	23 57 22.5	+0.5		
	6.7nm,0.4s,mb4.8								
WMOK	Wichita Mounta	66.17	332	*e*P	P	23 57 24.4	-0.9		
	2.3nm,0.3s,mb4.5								
DBIC	Dimbokro	67.90	71	P	P	23 57 35.9	-0.9		
	2.9nm,0.4s,mb4.3,baz=213,slow=7.1,SNR=11								
DBIC	Dimbokro	67.90	71	*e*P	P	23 57 36.0	-0.8		
	3.5nm,0.5s,mb4.3								
ANMO	Albuquerque	69.96	326	*e*P	P	23 57 49.5	+0.5		
	2.4nm,0.8s,mb4.0								
SDCO	Great Sand Dun	71.70	329	*e*P	P	23 57 60.0	+0.5		
	1.7nm,0.6s,mb4.0								
ECSD	EROS Data Cent	73.12	338	*e*P	P	23 58 06.5	-1.2		
	6.3nm,1.1s,mb4.3								
SBA	Scott Base	73.25	190	P	P	23 58 08.3	+0.2		
SMCO	Snowmass	73.54	329	*e*P	P	23 58 10.8	+0.5		
	2.0nm,0.7s,mb4.0								
SRU	San Rafael	75.23	326	*e*P	P	23 58 19.8	-0.3		
	3.3nm,0.6s,mb4.1								
RSSD	Black Hills	76.24	333	*e*P	P	23 58 25.4	-0.2		
	2.1nm,0.8s,mb3.8								
ISA	Isabella	77.13	319	*e*P	P	23 58 29.5	-1.4		
TSUM	Tsumeb	77.49	105	*e*P	P	23 58 33.0	-0.3		
	2.1nm,0.7s,mb3.9								
PDAR	Pinedale Array	77.56	329	P	P	23 58 33.2	+0.2		
	0.8nm,0.5s,mb3.6,baz=129,slow=7.1,SNR=9.1								
HWUT	Hardware Ranch	77.64	327	*e*P	P	23 58 33.7	+0.2		
ELK	Elko	78.87	325	P	P	23 58 41.3	+0.9		
	2.0nm,0.9s,mb3.8,baz=114,slow=12								
NVAR	Mina Array Bea	78.92	321	P	P	23 58 41.7	+1.0		
	0.9nm,0.7s,mb3.5,baz=149,slow=6.5,SNR=7.0								
BOSA	Boshof	80.48	117	P	P	23 58 50.8	+1.3		
	4.1nm,0.8s,mb4.1,baz=272,slow=7.2,SNR=9.1								
HLID	Hailey	80.50	327	*e*P	P	23 58 50.3	+1.3		
	5.5nm,0.8s,mb4.2								
MCMT	McKenzie Canyo	80.68	329	*e*P	P	23 58 51.2	+1.2		
	2.5nm,0.9s,mb3.8								
MAW	Mawson	80.98	163	P	P	23 58 51.7	+0.3		
	4.7nm,0.6s,mb4.3,baz=214,slow=5.3,SNR=22								
MAW	Mawson	80.98	163	*e*P	P	23 58 51.0	-0.3		
LSZ	Lusaka	88.33	106	*e*P	P	23 59 29.5	+0.3		
CASY	Casey	89.53	179	*e*P	P	23 59 33.8	0.0		
	4.7nm,0.7s,mb4.5								
YKA	Yellowknife Ar	94.57	340	P	P	23 59 56.3	-0.6		
	1.4nm,0.7s,mb4.3,baz=133,slow=4.5,SNR=12								
YKA	Yellowknife Ar	94.57	340	P	P	23 59 56.3	-0.6		
BRG	Berggiesshubel	103.13	40	*e*(P)	PKiKP	00 04 48.2	-6.2		
	6.0nm,1.2s								
ASAR	Alice Springs	128.06	204	PKP	PKPdf	00 05 41.7	-1.0		
	2.0nm,0.6s,baz=136,slow=1.9,SNR=23								
WRA	Warramunga Arr	131.24	207	PKP	PKPdf	00 05 48.3	-0.6		
	1.7nm,0.4s,baz=155,slow=1.9,SNR=30								
MKAR	Makanchi Array	146.85	40	PKPbc	PKPbc	00 06 18.4	0.0		
	7.8nm,0.6s,baz=310,slow=2.8,SNR=30								

BGS ***15*** *23:52:02.8±1.9, 32°.93N×30°.70E, h52km, mb5.0*
SZGRF ***15*** *23:52:19.7, 34°.52N×28°.89E, h33km, mb5.4, Eastern Mediterranean Sea*
PDG ***15*** *23:52:34.5±0.7, 35°.76N×27°.96E, h14km±2km, ML5.0/9, Error ellipse: s-maj=1.0km s-min=0.8km az=90.0*
DDA ***15*** *23:52:34.1, 35°.61N×27°.70E, h28km, Ml5.2*
ISK ***15*** *23:52:36.2, 35°.76N×27°.87E, h49km, ML5.0*
ISCJB ***15*** *23:52:36.0±0.1, 35°.74N±0°.01×27°.925E±0°.010, h57km, mb5.1/241, MS3.8/36, Error ellipse: s-maj=1.5km s-min=1.0km az=19.6*
NIC ***15*** *23:52:36.9±0.3, 35°.72N×27°.95E, h70km, mb4.8, ML4.5, MW4.2, Dodecanese Islands, Greece 27km. SE Kattavia*
CSEM ***15*** *23:52:37.4±0.1, 35°.75N×27°.93E, h56km, mb5.2/99, ML5.0/10, Mw4.6, Error ellipse: s-maj=2.6km s-min=1.7km az=12.0*
BJI ***15*** *23:52:37.8, 35°.90N×27°.90E, h68km, mB4.9/16, mb4.8/23, Ms4.8/13, Ms7 4.5/11*
ATH ***15*** *23:52:37.8, 35°.87N×27°.90E, h58km±1km, ML4.8*
NEIC ***15*** *23:52:37.8, 35°.87N×27°.90E, h58km, mb5.2/179, After ATH.*
IDC ***15*** *23:52:38.5±0.6, 36°.00N×27°.73E, h55km±3km, mb4.6/32, mb1 4.7/36, mb1mx4.7/37, mbtmp4.6/36, MS3.7/27, Ms1 3.8/27, ms1mx3.7/35, Error ellipse: s-maj=11.9km s-min=9.4km az=167.0*
MOS ***15*** *23:52:38.5±1.1, 35°.88N×27°.87E, h80km, mb5.3/72, Error ellipse: s-maj=3.8km s-min=1.9km az=117.3*
GCMT ***15*** *23:52:38.8±0.3, 35°.67N×27°.75E, h42km±1km, MW4.9, Moment Tensor Solution. s33,c36; s61,c87; Moment tensor: Scale 10^16^Nm; Mrr-0.97±.17; Mθθ0.30±.12; Mφφ0.68±.11; Mrθ1.21±.12; Mrφ2.85±.09; Mθφ0.11±.12; Best double couple: M0 3.20000×10^16^ NP1:φs360.00000°, δ63.00000°, λ-169.00000°. NP2:φs265.00000°, δ80.00000°, λ-27.00000°. Principal axes: T 3.5300, Plg12.0000°, Azm315.0000°; N -0.7600, Plg61.0000°, Azm67.0000°; P -2.7700, Plg26.0000°, Azm219.0000°; Data Used: II IU IC CN G.*
THE ***15*** *23:52:41.3, 35°.95N×27°.80E, h26km±4km, ML5.5/10 Error ellipse: s-maj=4.5km s-min=0.4km az=113.0*
HLW ***15*** *23:52:45.4, 35°.01N×28°.20E, h32km±56km, Md4.1, Ml6.3*
NSSC ***15*** *23:52:50, 35°.75N×29°.28E, h38km*
ISC 15 23:52:37.8±0.1, 35°.75N±0°.01×27°.923E±0°.009, h59km, h59km±2.8km: pP-P, n2108, σ1911/2250, mb5.1/239, MS3.8/36, 329C-177D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.49**	**19**	‖*iP*	**Pn**	**23 52 49.5**	**-0.1**
ARG				S	**Sn**	23 52 55.7	-2.5
ARG				*e*S	**Sn**	23 52 57.4	-0.8
ARG	**Arkhangelos**	**0.49**	**19**	‖*iP*	**Pn**	23 52 49.5	-0.1
ARG				*e*S	**Sn**	23 52 57.4	-0.8
ARG	**Arkhangelos**	**0.49**	**19**	P	**Pn**	23 52 49.6	0.0
ARG				S	**Sn**	23 52 55.7	-2.5
ARG	**Arkhangelos**	**0.49**	**19**	P	**Pn**	23 52 49.6	0.0
ARG				S	**Sn**	23 52 55.7	-2.5
KARP	**Karpathos**	**0.65**	**252**	‖*iP*	**Pn**	23 52 52.5	+1.1
KARP				*e*S	**Sn**	23 53 02.6	+1.3
KARP	**Karpathos**	**0.65**	**252**	‖*iP*	**Pn**	23 52 52.5	+1.1
KARP				*e*S	**Sn**	23 53 02.6	+1.3
KARP	**Karpathos**	**0.65**	**252**	‖*iP*	**Pn**	23 52 52.5	+1.1
KARP				*e*S	**Sn**	23 53 02.6	+1.3
NIS1	**Nisyros Isl.**	**1.04**	**325**	P	**Pn**	23 52 55.7	-0.6
NIS1	**Nisyros Isl.**	**1.04**	**325**	P	**Pn**	23 52 55.7	-0.6
TURN	**Turunc**	**1.25**	**26**	*i*P	**Pn**	23 52 57.0	-2.0
TURN				*i*S	**Sn**	23 53 10.8	-4.1
TURN	**Turunc**	**1.25**	**26**	*i*P	**Pn**	23 52 57.0	-2.1
TURN				*i*S	**Sn**	23 53 10.8	-4.2
BDRM	**Kayabasi**	**1.37**	**344**	⇑*iP*	**Pn**	23 53 00.0	-0.7
BDRM				*i*S	**Sn**	23 53 16.3	-1.6
BDRM	**Kayabasi**	**1.37**	**344**	*i*P	**Pn**	23 53 00.0	-0.7
BDRM				*i*S	**Sn**	23 53 16.3	-1.5
BODT	**Bodrum**	**1.40**	**340**	PN	**Pn**	23 53 00.5	-0.6
BODT				*e*SN	**Sn**	23 53 16.4	-2.2
BODT	**Bodrum**	**1.40**	**340**	Pn	**Pn**	23 52 59.6	-1.5
BODT				Sg	**Sn**	23 53 16.6	-2.0
BODT	**Bodrum**	**1.40**	**340**	Pn	**Pn**	23 52 59.6	-1.5
BODT				Sg	**Sn**	23 53 16.6	-2.0
KSL	**Kastellorizon**	**1.41**	**73**	*e*P	**Pn**	23 53 01.9	+0.8
KSL	**Kastellorizon**	**1.41**	**73**	*e*P	**Pn**	23 53 01.9	+0.8
KSL	**Kastellorizon**	**1.41**	**73**	*e*P	**Pn**	23 53 01.9	+0.8
YER	**Yerkesik**	**1.41**	**12**	P	**Pn**	23 53 01.8	+0.5
YER	**Yerkesik**	**1.41**	**12**	P	**Pn**	23 53 01.8	+0.5
AKAS	**Kas**	**1.45**	**70**	‖*iP*	**Pn**	23 53 02.6	+0.9
AKAS				*i*S	**Sn**	23 53 20.8	+1.1
AKAS	**Kas**	**1.45**	**70**	*i*P	**Pn**	23 53 02.6	+0.9
AKAS				*i*S	**Sn**	23 53 20.8	+1.1
ZKR	**Zakros**	**1.53**	**246**	‖*iP*	**Pn**	23 53 05.2	+2.4
ZKR				*e*S	**Sn**	23 53 24.1	+2.4
ZKR				S	**Sn**	23 53 25.0	+3.3
ZKR	**Zakros**	**1.53**	**246**	‖*iP*	**Pn**	23 53 05.2	+2.4
ZKR				*e*S	**Sn**	23 53 24.1	+2.4
ZKR	**Zakros**	**1.53**	**246**	P	**Pn**	23 53 05.4	+2.6
ZKR				S	**Sn**	23 53 25.0	+3.3
ZKR	**Zakros**	**1.53**	**246**	P	**Pn**	23 53 05.4	+2.6
ZKR				S	**Sn**	23 53 25.0	+3.3
MLSB	**Milas**	**1.55**	**356**	PN	**Pn**	23 53 03.0	-0.1
MLSB				*e*SN	**Sn**	23 53 21.2	-1.0
MLSB	**Milas**	**1.55**	**356**	Pn	**Pn**	23 53 02.9	-0.2
MLSB	**Milas**	**1.55**	**356**	Pn	**Pn**	23 53 02.9	-0.2
MLSB				*e*Sn	**Sn**	23 53 21.2	-0.9
ELL	**Elmali**	**1.89**	**58**	PN	**Pn**	23 53 09.2	+1.5
ELL	**Elmali**	**1.89**	**58**	Pn	**Pn**	23 53 08.6	+0.9
ELL	**Elmali**	**1.89**	**58**	P	**Pn**	23 53 08.6	+0.9
GLHS	**Gihisar (BURDU**	**1.89**	**42**	PN	**Pn**	23 53 08.8	+1.1
GLHS	**Gihisar (BURDU**	**1.89**	**42**	Pn	**Pn**	23 53 08.8	+1.1
GLHS	**Gihisar (BURDU**	**1.89**	**42**	*i* Pn	**Pn**	23 53 08.8	+1.1
AYDN	**Tasoluk**	**1.91**	**359**	⇑*iP*	**Pn**	23 53 08.0	0.0
AYDN				*i* S	**Sn**	23 53 29.4	-1.5
AYDN	**Tasoluk**	**1.91**	**359**	*i* P	**Pn**	23 53 08.0	0.0
AYDN				*i* S	**Sn**	23 53 29.4	-1.5
NPS	**Neapolis**	**1.95**	**256**	*e*P	**Pn**	23 53 09.9	+1.4
NPS				*e*S	**Sn**	23 53 32.5	+0.7
NPS	**Neapolis**	**1.95**	**256**	*e*P	**Pn**	23 53 09.9	+1.4
NPS				*e*S	**Sn**	23 53 32.5	+0.7
NPS	**Neapolis**	**1.95**	**256**	*e*P	**Pn**	23 53 09.9	+1.4
NPS				*e*S	**Sn**	23 53 32.5	+0.7
GOLH	**Golhisar**	**1.99**	**41**	‖*iP*	**Pn**	23 53 10.5	+1.5
GOLH	**Golhisar**	**1.99**	**41**	*i* P	**Pn**	23 53 10.5	+1.5
GCAM	**G?zelcaml?**	**2.02**	**344**	⇑*iP*	**Pn**	23 53 09.2	-0.3
GCAM	**G?zelcaml?**	**2.02**	**344**	*i* P	**Pn**	23 53 09.2	-0.3
LAST	**Lasithi**	**2.08**	**254**	*e*P	**Pn**	23 53 12.0	+1.7
LAST				*e*S	**Sn**	23 53 37.0	+1.9
LAST				S	**Sn**	23 53 37.2	+2.1
LAST	**Lasithi**	**2.08**	**254**	*e*P	**Pn**	23 53 12.0	+1.7
LAST				*e*S	**Sn**	23 53 37.0	+1.9
LAST	**Lasithi**	**2.08**	**254**	P	**Pn**	23 53 12.6	+2.3
LAST				S	**Sn**	23 53 37.2	+2.1
LAST	**Lasithi**	**2.08**	**254**	P	**Pn**	23 53 12.6	+2.3
LAST				S	**Sn**	23 53 37.2	+2.1
THR1	**Thera Island**	**2.09**	**288**	P	**Pn**	23 53 10.7	+0.3
	8μm,0.6s						
THR1				S	**Sn**	23 53 34.5	-0.8
THR1	**Thera Island**	**2.09**	**288**	P	**Pn**	23 53 10.7	+0.3
	8μm,0.6s						
DNZL	**Cakiroluk**	**2.14**	**25**	‖*iP*	**Pn**	23 53 11.6	+0.5
DNZL	**Cakiroluk**	**2.14**	**25**	*i* P	**Pn**	23 53 11.6	+0.5
SMG	**Samos**	**2.14**	**336**	*e*P	**Pn**	23 53 10.5	-0.6
SMG				*e*S	**Sn**	23 53 35.3	-1.3
SMG	**Samos**	**2.14**	**336**	*e*P	**Pn**	23 53 10.5	-0.6
SMG				*e*S	**Sn**	23 53 35.3	-1.3
SMG	**Samos**	**2.14**	**336**	*e*P	**Pn**	23 53 10.5	-0.6
SMG				*e*S	**Sn**	23 53 35.3	-1.3
THR3	**Thira Island,**	**2.15**	**289**	P	**Pn**	23 53 11.5	+0.3
THR3	**Thira Island,**	**2.15**	**289**	P	**Pn**	23 53 11.5	+0.3
THR3	**Thira Island,**	**2.15**	**289**	P	**Pn**	23 53 11.5	+0.3
THR5	**Thira Island,**	**2.19**	**288**	P	**Pn**	23 53 12.3	+0.5
THR5	**Thira Island,**	**2.19**	**288**	P	**Pn**	23 53 12.3	+0.5
THR5	**Thira Island,**	**2.19**	**288**	P	**Pn**	23 53 12.3	+0.5
DENT	**Denizli**	**2.19**	**24**	PN	**Pn**	23 53 11.9	+0.1
DENT	**Denizli**	**2.19**	**24**	Pn	**Pn**	23 53 12.0	+0.2
DENT	**Denizli**	**2.19**	**24**	*i* Pn	**Pn**	23 53 11.9	+0.1
KORT	**Korkueli**	**2.32**	**57**	‖*iP*	**Pn**	23 53 15.3	+1.7
KORT	**Korkueli**	**2.32**	**57**	*i* P	**Pn**	23 53 15.3	+1.7
APE	**Apeiranthos**	**2.34**	**305**	PN	**Pn**	23 53 13.9	+0.1
APE	**Apeiranthos**	**2.34**	**305**	⇑*iP*	**Pn**	23 53 13.9	+0.1
APE				S	**Sn**	23 53 39.7	-1.6
APE	**Apeiranthos**	**2.34**	**305**	⇑*iP*	**Pn**	23 53 13.9	+0.1
APE	**Apeiranthos**	**2.34**	**305**	P	**Pn**	23 53 13.9	+0.1
APE				S	**Sn**	23 53 39.7	-1.6
APE	**Apeiranthos**	**2.34**	**305**	P	**Pn**	23 53 13.9	+0.1
ANTB	**Antalya**	**2.49**	**62**	PN	**Pn**	23 53 17.7	+1.8
ANTB	**Antalya**	**2.49**	**62**	*i* Pn	**Pn**	23 53 17.6	+1.8
IDI	**Anoyia**	**2.52**	**260**	*e*P	**Pn**	23 53 17.2	+1.0
IDI				*e*S	**Sn**	23 53 47.0	+1.3
IDI	**Anoyia**	**2.52**	**260**	*e*P	**Pn**	23 53 17.2	+1.0
IDI				*e*S	**Sn**	23 53 47.0	+1.3
IDI	**Anoyia**	**2.52**	**260**	*e*P	**Pn**	23 53 17.2	+1.0
IDI				*e*S	**Sn**	23 53 47.0	+1.3
SIVA	**Sivas**	**2.65**	**255**	P	**Pn**	23 53 20.6	+2.6
SIVA	**Sivas**	**2.65**	**255**	P	**Pn**	23 53 20.6	+2.6
SIVA	**Sivas**	**2.65**	**255**	P	**Pn**	23 53 20.6	+2.6
IZM	**Izmir**	**2.70**	**349**	PN	**Pn**	23 53 20.3	+1.6
IZM	**Izmir**	**2.70**	**349**	Pn	**Pn**	23 53 19.3	+0.6
IZM	**Izmir**	**2.70**	**349**	P	**Pn**	23 53 19.3	+0.6
KDAG	**Bornova**	**2.70**	**349**	⇑*iP*	**Pn**	23 53 18.1	-0.7
KDAG	**Bornova**	**2.70**	**349**	*i* P	**Pn**	23 53 18.1	-0.6
BLCB	**Balcova**	**2.72**	**345**	PN	**Pn**	23 53 18.4	-0.7
BLCB	**Balcova**	**2.72**	**345**	P	**Pn**	23 53 18.8	-0.3
BLCB				S	**Sn**	23 53 49.0	-1.8
BLCB	**Balcova**	**2.72**	**345**	P	**Pn**	23 53 18.8	-0.3
BLCB				S	**Sn**	23 53 49.0	-1.8
BLCB	**Balcova**	**2.72**	**345**	*i* Pn	**Pn**	23 53 18.4	-0.7
BLCB	**Balcova**	**2.72**	**345**	P	**Pn**	23 53 18.8	-0.3
BCK	**Bucak**	**2.74**	**51**	PN	**Pn**	23 53 20.6	+1.3
BCK	**Bucak**	**2.74**	**51**	Pn	**Pn**	23 53 20.2	+0.9
BCK	**Bucak**	**2.74**	**51**	P	**Pn**	23 53 20.2	+0.9
URLA	**Izmir**	**2.81**	**338**	⇑*iP*	**Pn**	23 53 19.8	-0.5
URLA	**Izmir**	**2.81**	**338**	*i* P	**Pn**	23 53 19.8	-0.5
KULA	**Kula-Manisa**	**2.82**	**12**	PN	**Pn**	23 53 19.9	-0.5
KULA	**Kula-Manisa**	**2.82**	**12**	*i* Pn	**Pn**	23 53 19.9	-0.5
KHL	**Karahalli**	**2.87**	**26**	*e*PN	**Pn**	23 53 20.8	-0.3
KHL	**Karahalli**	**2.87**	**26**	*e*Pn	**Pn**	23 53 20.8	-0.3
KHAL	**Karahalli**	**2.90**	**25**	‖*iP*	**Pn**	23 53 21.2	-0.3
KHAL	**Karahalli**	**2.90**	**25**	*i* P	**Pn**	23 53 21.2	-0.3
SUTC	**Sutluce-Ispart**	**3.02**	**54**	*e*PN	**Pn**	23 53 24.8	+1.7
SUTC	**Sutluce-Ispart**	**3.02**	**54**	*e*Pn	**Pn**	23 53 24.8	+1.7
CHOS	**Chios island**	**3.03**	**331**	⇑*iP*	**Pn**	23 53 23.0	-0.2
CHOS				*e*S	**Sn**	23 53 56.4	-1.8
CHOS	**Chios island**	**3.03**	**331**	P	**Pn**	23 53 23.1	-0.1
CHOS				S	**Sn**	23 53 56.2	-2.0
CHOS	**Chios island**	**3.03**	**331**	P	**Pn**	23 53 23.1	-0.1
CHOS				*e*S	**Sn**	23 53 56.4	-1.8
VAM	**Vamos**	**3.05**	**265**	*e*P	**Pn**	23 53 25.4	+1.8
VAM	**Vamos**	**3.05**	**265**	*e*P	**Pn**	23 53 25.4	+1.8
VAM	**Vamos**	**3.05**	**265**	*e*P	**Pn**	23 53 25.4	+1.8
AKHS	**Akhisar**	**3.13**	**358**	⇑*iP*	**Pn**	23 53 23.8	-0.7
AKHS	**Akhisar**	**3.13**	**358**	*i* P	**Pn**	23 53 23.8	-0.8
AKS	**Akhisar**	**3.13**	**358**	*e*PN	**Pn**	23 53 24.0	-0.6
AKS	**Akhisar**	**3.13**	**358**	*e*Pn	**Pn**	23 53 24.0	-0.6
GVD	**Gavdhos**	**3.27**	**255**	*e*Pn	**Pn**	23 53 28.0	+1.6
GVD				*e*Sn	**Sn**	23 54 04.2	+0.1
GVD	**Gavdhos**	**3.27**	**255**	*e*Pn	**Pn**	23 53 28.0	+1.5
GVD				*e*Sn	**Sn**	23 54 04.2	+0.1
KARN	**Karanos**	**3.28**	**265**	P	**Pn**	23 53 28.7	+2.0
KARN				S	**Sn**	23 54 05.7	+1.2
KARN	**Karanos**	**3.28**	**265**	P	**Pn**	23 53 28.7	+2.0
KARN				S	**Sn**	23 54 05.7	+1.2
DEMI	**Demirci**	**3.35**	**11**	‖*iP*	**Pn**	23 53 27.0	-0.6
DEMI	**Demirci**	**3.35**	**11**	*i* P	**Pn**	23 53 27.0	-0.6
SHUT	**Suhut-Afyon**	**3.50**	**36**	*e*PN	**Pn**	23 53 29.7	+0.1
SHUT	**Suhut-Afyon**	**3.50**	**36**	*e*Pn	**Pn**	23 53 29.7	0.0
GDZ	**Gediz**	**3.56**	**20**	‖*iP*	**Pn**	23 53 30.1	-0.4
GDZ	**Gediz**	**3.56**	**20**	*i* P	**Pn**	23 53 30.1	-0.4
GAZI	**Gazipasa**	**3.59**	**81**	⇑*iP*	**Pn**	23 53 30.9	-0.1
GAZI	**Gazipasa**	**3.59**	**81**	*i* P	**Pn**	23 53 30.9	-0.1
AYVA	**Ayvalik**	**3.69**	**345**	⇑*iP*	**Pn**	23 53 31.6	-0.6
AYVA	**Ayvalik**	**3.69**	**345**	*i* P	**Pn**	23 53 31.6	-0.6
PPCY	**Paphos**	**3.72**	**102**	P	**Pn**	23 53 32.4	-0.3
PPCY	**Paphos**	**3.72**	**102**	P	**Pn**	23 53 32.4	-0.3
PRK	**Paraskevi**	**3.73**	**340**	*e*P	**Pn**	23 53 32.5	-0.3
PRK				*e*S	**Sn**	23 54 13.6	-1.9
PRK	**Paraskevi**	**3.73**	**340**	*e*P	**Pn**	23 53 32.5	-0.3
PRK				*e*S	**Sn**	23 54 13.6	-1.9
PRK	**Paraskevi**	**3.73**	**340**	P	**Pn**	23 53 33.0	+0.2
PRK				S	**Sn**	23 54 13.4	-2.1
PRK	**Paraskevi**	**3.73**	**340**	P	**Pn**	23 53 33.0	+0.2
PRK				*e*S	**Sn**	23 54 13.6	-1.9
ALT	**Altintas**	**3.73**	**27**	*e*PN	**Pn**	23 53 32.6	-0.2
ALT	**Altintas**	**3.73**	**27**	P	**Pn**	23 53 32.7	-0.1
ALT	**Altintas**	**3.73**	**27**	*e*Pn	**Pn**	23 53 32.7	-0.1
BOLV	**Bolvadin**	**3.82**	**38**	‖*iP*	**Pn**	23 53 34.3	+0.2
BOLV	**Bolvadin**	**3.82**	**38**	*i* P	**Pn**	23 53 34.3	+0.2
SIGR	**SIGRI**	**3.83**	**335**	P	**Pn**	23 53 34.1	-0.1
SIGR				S	**Sn**	23 54 15.7	-2.2
SIGR	**SIGRI**	**3.83**	**335**	P	**Pn**	23 53 34.1	-0.1
SIGR				S	**Sn**	23 54 15.7	-2.2
SIGR	**SIGRI**	**3.83**	**335**	P	**Pn**	23 53 34.1	-0.1
ALFC	**Alevga**	**3.86**	**97**	P	**Pn**	23 53 34.5	-0.1
	61nm,0.2s						
ALFC				S	**Sn**	23 54 19.3	+0.6
ALFC	**Alevga**	**3.86**	**97**	P	**Pn**	23 53 34.5	-0.1
	61nm,0.2s						
ALFC				S	**Sn**	23 54 19.3	+0.6
HDMB	**Hadim**	**3.88**	**70**	*e*PN	**Pn**	23 53 36.5	+1.6
HDMB	**Hadim**	**3.88**	**70**	*e*Pn	**Pn**	23 53 36.5	+1.7
BALB	**Balikesir**	**3.88**	**360**	*e*PN	**Pn**	23 53 34.6	-0.3
BALB	**Balikesir**	**3.88**	**360**	Pn	**Pn**	23 53 34.8	-0.2
BALB	**Balikesir**	**3.88**	**360**	*e*Pn	**Pn**	23 53 34.6	-0.3
VLY	**Voula,Athens**	**3.92**	**304**	⇑*iP*	**Pn**	23 53 36.6	+1.1
VLY				*e*S	**Sn**	23 54 20.1	-0.1
VLY	**Voula,Athens**	**3.92**	**304**	⇑*iP*	**Pn**	23 53 36.6	+1.1
VLY				*e*S	**Sn**	23 54 20.1	-0.1
VLY	**Voula,Athens**	**3.92**	**304**	⇑*iP*	**Pn**	23 53 36.6	+1.1
VLY				*e*S	**Sn**	23 54 20.1	-0.1
PTL	**Penteli**	**3.98**	**306**	⇑*iP*	**Pn**	23 53 37.5	+1.2
PTL	**Penteli**	**3.98**	**306**	⇑*iP*	**Pn**	23 53 37.5	+1.2
PTL	**Penteli**	**3.98**	**306**	⇑*iP*	**Pn**	23 53 37.5	+1.2
ATHU	**Athens Univers**	**3.99**	**305**	P	**Pn**	23 53 37.8	+1.4
ATHU	**Athens Univers**	**3.99**	**305**	P	**Pn**	23 53 37.8	+1.4
BALY	**Balya**	**3.99**	**357**	⇑*iP*	**Pn**	23 53 35.8	-0.6
BALY	**Balya**	**3.99**	**357**	*i* P	**Pn**	23 53 35.8	-0.6
KYTH	**Kithira**	**4.00**	**279**	*e*P	**Pn**	23 53 37.6	+1.1
KYTH	**Kithira**	**4.00**	**279**	*e*P	**Pn**	23 53 37.6	+1.1
KYTH	**Kithira**	**4.00**	**279**	*e*P	**Pn**	23 53 37.6	+1.1
ATH	**Athens Observa**	**4.04**	**305**	*e*P	**Pn**	23 53 38.5	+1.5
ATH				*e*S	**Sn

SULT	Sultanhani-AKS	5.10	60	Pn	Pn	23 53 52.3	+0.7
GULT	Gulveren	5.10	23	ePN	Pn	23 53 52.1	+0.5
GULT	Gulveren	5.10	23	ePn	Pn	23 53 52.1	+0.5
PYL	PYLOS	5.12	285	eP	Pn	23 53 53.6	+1.7
PYL	PYLOS	5.12	285	P	Pn	23 53 53.3	+1.4
PYL	PYLOS	5.12	285	P	Pn	23 53 53.3	+1.4
NEO	Neokhori	5.15	315	P	Pn	23 53 53.4	+1.1
NEO	Neokhori	5.15	315	P	Pn	23 53 53.4	+1.1
ENEZ	Enez	5.17	345	ePN	Pn	23 53 53.1	+0.6
ENEZ	Enez	5.17	345	ePn	Pn	23 53 53.1	+0.6
XOR	Xorichti	5.21	315	P	Pn	23 53 53.8	+0.7
XOR	Xorichti	5.21	315	P	Pn	23 53 53.8	+0.7
XOR	Xorichti	5.21	315	P	Pn	23 53 53.8	+0.7
HRT	Hereke	5.25	15	ePN	Pn	23 53 55.4	+1.8
HRT	Hereke	5.25	15	ePn	Pn	23 53 55.4	+1.8
SPNC	Sapanca-Adapaz	5.27	20	ePN	Pn	23 53 54.8	+0.8
SPNC	Sapanca-Adapaz	5.27	20	ePn	Pn	23 53 54.8	+0.8
KALE	Kalithea	5.32	301	P	Pn	23 53 56.6	+2.0
KALE				S	Sn	23 54 53.9	-0.7
KALE	Kalithea	5.32	301	P	Pn	23 53 56.6	+2.0
ALN	Alexandroupoli	5.35	345	eP	Pn	23 53 54.9	-0.1
ALN	Alexandroupoli	5.35	345	eP	Pn	23 53 54.9	-0.1
ALN	Alexandroupoli	5.35	345	P	Pn	23 53 55.5	+0.5
ALN				S	Sn	23 54 53.3	-1.9
ALN	Alexandroupoli	5.35	345	P	Pn	23 53 55.5	+0.5
PAIG	Paliouri	5.36	322	P	Pn	23 53 55.9	+0.8
PAIG	Paliouri	5.36	322	P	Pn	23 53 55.9	+0.8
PAIG	Paliouri	5.36	322	P	Pn	23 53 55.9	+0.8
TRIZ	Trizonia	5.36	301	P	Pn	23 53 57.3	+2.2
TRIZ				S	Sn	23 54 54.9	-0.5
TRIZ	Trizonia	5.36	301	P	Pn	23 53 57.3	+2.2
LAKA	Lakka	5.37	299	P	Pn	23 53 57.4	+2.1
LAKA				S	Sn	23 54 55.0	-0.7
LAKA	Lakka	5.37	299	P	Pn	23 53 57.4	+2.1
MDU	Mudurnu	5.38	28	ePN	Pn	23 53 56.1	+0.8
MDU	Mudurnu	5.38	28	ePn	Pn	23 53 56.1	+0.8
ISK	Istanbul-Kandi	5.38	9	ePN	Pn	23 53 56.0	+0.5
ISK	Istanbul-Kandi	5.38	9	ePn	Pn	23 53 56.0	+0.6
MERS	Mersin	5.45	76	ePN	Pn	23 53 58.3	+2.0
MERS	Mersin	5.45	76	ePn	Pn	23 53 58.3	+2.0
BGKT	Bogazkoy	5.46	7	ePN	Pn	23 53 57.7	+1.2
SLVT	Silivri	5.48	2	ePN	Pn	23 53 57.7	+1.0
EFP	Efpalio	5.50	301	eP	Pn	23 53 59.4	+2.3
EFP	Efpalio	5.50	301	P	Pn	23 53 59.4	+2.3
EFP	Efpalio	5.50	301	P	Pn	23 53 59.4	+2.3
AGG	Agios Georgios	5.52	308	eP	Pn	23 53 59.5	+2.1
AGG	Agios Georgios	5.52	308	eP	Pn	23 53 59.5	+2.1
AGG	Agios Georgios	5.52	308	P	Pn	23 53 58.3	+0.9
AGG	Agios Georgios	5.52	308	P	Pn	23 53 58.3	+0.9
UPR	University Cam	5.52	299	eP	Pn	23 54 00.1	+2.7
OUR	Ouranopolis	5.53	327	P	Pn	23 53 58.3	+0.8
OUR	Ouranopolis	5.53	327	P	Pn	23 53 58.3	+0.8
OUR	Ouranopolis	5.53	327	P	Pn	23 53 58.3	+0.8
SILT	Sile	5.56	14	ePN	Pn	23 53 59.5	+1.6
HENT	Hendek	5.58	24	⇓iP	Pn	23 53 58.3	+0.2
LOD	Lodumlu	5.63	41	ePN	Pn	23 53 59.6	+0.7
RLS	Riolos of Patr	5.66	296	eP	Pn	23 54 01.1	+1.8
RLS	Riolos of Patr	5.66	296	eP	Pn	23 54 01.1	+1.8
CTYL	Yal??k??y-??at	5.72	3	ePN	Pn	23 54 00.6	+0.5
GULE	Gulek	5.73	72	⇓iP	Pn	23 54 01.2	+1.0
GULE	Gulek	5.73	72	iP	Pn	23 54 01.2	+1.0
EVR	Evrytania	5.81	305	eP	Pn	23 54 03.8	+2.5
EVR	Evrytania	5.81	305	eP	Pn	23 54 03.8	+2.5
PLG	Polygyros	5.81	324	P	Pn	23 54 02.4	+1.1
PLG	Polygyros	5.81	324	P	Pn	23 54 02.4	+1.1
KAVA	Kavala	5.88	334	P	Pn	23 54 03.1	+0.8
KAVA	Kavala	5.88	334	P	Pn	23 54 03.1	+0.8
KARA	Karaisali	5.94	73	ePN	Pn	23 54 04.7	+1.7
BRTR	Keskin Array B	6.02	47	P	Pn	23 54 04.3	+0.2
BRTR	comp=E,6.6nm,0.3s,baz=218,slow=11,SNR=217			S	Sn	23 55 10.8	-0.9
BRTR	comp=E,5.1nm,0.3s,baz=324,slow=30,SNR=6.0			LR	LR	23 57 03.0	
BRTR	comp=E,873nm,18.5s,baz=7.6,slow=44			ScP	ScP	00 04 30.4	+1.8
BRTR	comp=E,0.1nm,0.3s,baz=172,slow=1.8,SNR=7.9						
BRTR	Keskin Array B	6.02	47	P	Pn	23 54 04.4	+0.2
BRTR				S	Sn	23 55 10.8	-0.9
BRTR	Keskin Array B	6.02	47	P	Pn	23 54 04.3	+0.2
BRTR				S	Sn	23 55 10.8	-0.9
BRTR				LR	LR	23 57 03.0	
BRTR				ScP	ScP	00 04 30.4	+1.8
BRTR	Keskin Array B	6.02	47	P	Pn	23 54 04.3	+0.1
BRTR				S	Sn	23 55 10.8	-0.9
THL	Klokotos Trika	6.04	311	eP	Pn	23 54 06.2	+1.8
THL	Klokotos Trika	6.04	311	P	Pn	23 54 05.7	+1.3
THL	Klokotos Trika	6.04	311	P	Pn	23 54 05.7	+1.3
KRTS	Karatas	6.08	80	ePN	Pn	23 54 05.8	+0.7
HORT	Hortiatis	6.15	323	P	Pn	23 54 08.1	+2.1
HORT	Hortiatis	6.15	323	P	Pn	23 54 08.1	+2.1
EDRB	Edirne	6.16	352	ePN	Pn	23 54 05.9	-0.2
AANS		6.18	151	P	Pn	23 54 05.6	-0.8
	baz=149						
KFL	Anninata	6.18	295	P	Pn	23 54 07.7	+1.3
KFL	Anninata	6.18	295	P	Pn	23 54 07.7	+1.3
KDZE	Karadeniz Ereo	6.20	25	ePN	Pn	23 54 07.7	+1.0
KDZ	Kurdzhali	6.21	342	P	Pn	23 54 07.3	+0.5
SOH	Sokhos	6.21	326	eP	Pn	23 54 08.4	+1.6
SOH	Sokhos	6.21	326	eP	Pn	23 54 08.4	+1.6
SOH	Sokhos	6.21	326	P	Pn	23 54 07.6	+0.8
SOH	Sokhos	6.21	326	P	Pn	23 54 07.6	+0.8
THE	Thessaloniki	6.25	323	P	Pn	23 54 08.2	+0.9
THE	Thessaloniki	6.25	323	P	Pn	23 54 08.2	+0.9
THE	Thessaloniki	6.25	323	P	Pn	23 54 08.2	+0.9
AVNT	Avonos	6.30	59	⇓iP	Pn	23 54 08.9	+0.9
AVNT	Avonos	6.30	59	iP	Pn	23 54 08.9	+0.9
VLS	Valsamata	6.35	295	eP	Pn	23 54 10.8	+2.1
VLS	Valsamata	6.35	295	eP	Pn	23 54 10.8	+2.1
VLS	Valsamata	6.35	295	P	Pn	23 54 10.0	+1.3
VLS	Valsamata	6.35	295	P	Pn	23 54 10.0	+1.3
CDAG	Cicekdag	6.41	51	⇓iP	Pn	23 54 09.8	+0.3
CDAG	Cicekdag	6.41	51	iP	Pn	23 54 09.8	+0.3
NVR	Nevrokopi	6.43	332	P	Pn	23 54 10.4	+0.6
NVR	Nevrokopi	6.43	332	P	Pn	23 54 10.4	+0.6
CEYT	Ceyhan	6.44	76	ePN	Pn	23 54 10.0	+0.1
CEYT	Ceyhan	6.44	76	Pn	Pn	23 54 10.2	+0.3
CEYT	Ceyhan	6.44	76	Pn	Pn	23 54 10.2	+0.3
RZN	Rozhen	6.44	338	P	Pn	23 54 10.6	+0.7
RZN	Rozhen	6.44	338	Pn	Pn	23 54 09.6	-0.3
RZN	Rozhen	6.44	338	P	Pn	23 54 10.6	+0.7
MATL	Matarih	6.51	108	ePn	Pn	23 54 09.5	-1.4
MATL	Matarih	6.51	108	ePn	Pn	23 54 09.5	-1.4
LKD	Levkas	6.51	299	eP	Pn	23 54 12.7	+1.8
LKD	Levkas	6.51	299	eP	Pn	23 54 12.7	+1.8
HLW	Helwan	6.54	153	AMP		23 55 00.0	
	comp=E,1581000µm,0.2s,logA/T=9.9,baz=151						
LKD2	Lefkada island	6.54	300	P	Pn	23 54 12.5	+1.2
LKD2	Lefkada island	6.54	300	P	Pn	23 54 12.5	+1.2
DIM	Dimitrovgrad	6.56	344	P	Pn	23 54 11.8	+0.2
DIM	Dimitrovgrad	6.56	344	P	Pn	23 54 11.8	+0.2
KOZT	Kozan	6.59	72	ePN	Pn	23 54 12.4	+0.5
BHL	Bhannes	6.62	104	ePn	Pn	23 54 10.0	-2.4
BHL	Bhannes	6.62	104	ePn	Pn	23 54 10.0	-2.4
OFRI	'Ofer	6.63	116	Pn	Pn	23 54 10.5	-2.1
OFRI	'Ofer	6.63	116	Pn	Pn	23 54 10.5	-2.1
SAFT	Safranbolu	6.63	33	ePN	Pn	23 54 12.8	+0.3
KZN	Kozani	6.65	315	eP	Pn	23 54 15.2	+2.4
KZN	Kozani	6.65	315	eP	Pn	23 54 15.2	+2.4
KZN	Kozani	6.65	315	P	Pn	23 54 15.0	+2.2
KZN	Kozani	6.65	315	P	Pn	23 54 15.0	+2.2
KOT	Kottamia	6.67	149	P	Pn	23 54 12.4	-0.7
	baz=147						
MMB	Musomiste	6.69	332	P	Pn	23 54 13.9	+0.6
MMB	Musomiste	6.69	332	Pn	Pn	23 54 13.2	-0.1
MMB	Musomiste	6.69	332	P	Pn	23 54 13.9	+0.6
HWQ	Hawqa	6.75	100	ePn	Pn	23 54 12.9	-1.2
HWQ	Hawqa	6.75	100	ePn	Pn	23 54 12.9	-1.2
AMAG	Maghara	6.75	137	P	Pn	23 54 12.6	-1.6
	baz=134						
SLNF	Slenfeh	6.76	89	⇑P	Pn	23 54 13.0	-1.3
SLNF				⇑S	Sn	23 55 13.0	-17
SLNF	Slenfeh	6.76	89	⇑iP	Pn	23 54 13.3	-1.0
SLNF				⇑iS	Sn	23 55 13.8	-16
MMAI	Mount Meron Ar	6.76	112	P	Pn	23 54 12.9	-1.4
	comp=E,45nm,0.3s,baz=302,slow=12,SNR=440						
MMAI				S	Sn	23 55 28.3	-1.6
	comp=E,168nm,0.3s,baz=2.8,slow=36,SNR=9.4						
HHAG	Hagoal	6.76	148	P	Pn	23 54 13.4	-1.0
	baz=145						
JMB	Yambol	6.79	352	P	Pn	23 54 15.7	+1.0
JMB	Yambol	6.79	352	P	Pn	23 54 15.7	+1.0
JMB	Yambol	6.79	352	P	Pn	23 54 15.5	+0.8
JMB	Yambol	6.79	352	P	Pn	23 54 15.7	+1.0
SWA2		6.81	198	P	Pn	23 54 15.6	+0.5
	baz=203						
PLD	Plovdiv	6.82	339	P	Pn	23 54 16.1	+0.9
PLD	Plovdiv	6.82	339	P	Pn	23 54 16.1	+0.9
PLD	Plovdiv	6.82	339	P	Pn	23 54 16.2	+1.0
PLD	Plovdiv	6.82	339	P	Pn	23 54 16.1	+0.9
JAN	Janina	6.83	307	eP	Pn	23 54 18.9	+3.6
JAN	Janina	6.83	307	eP	Pn	23 54 18.9	+3.6
SLTI	Sal'it	6.87	119	Pn	Pn	23 54 13.9	-1.9
SLTI				S	Sn	23 55 29.4	-3.2
SLTI	Sal'it	6.87	119	Pn	Pn	23 54 13.9	-1.9
SLTI				S	Sn	23 55 29.4	-3.2
KSDI	Kefar Szold	6.88	110	Pn	Pn	23 54 14.9	-1.1
KSDI	Kefar Szold	6.88	110	Pn	Pn	23 54 14.9	-1.1
RCY	Rachaya	6.89	107	ePn	Pn	23 54 15.2	-0.9
RCY	Rachaya	6.89	107	ePn	Pn	23 54 15.2	-0.9
BIDA	Albida	6.90	94	⇑P	Pn	23 54 15.0	-1.2
BIDA				⇑S	Sn	23 55 16.0	-17
BIDA	Albida	6.90	94	⇑iP	Pn	23 54 15.3	-0.9
BIDA				⇑iS	Sn	23 55 16.2	-17
CORM	Corum	6.90	48	ePN	Pn	23 54 17.9	+1.7
WRDH	Warideh	6.92	90	⇑P	Pn	23 54 14.0	-2.5
WRDH	Warideh	6.92	90	⇑iP	Pn	23 54 14.9	-1.6
BTCH	Batrach	6.94	85	⇑P	Pn	23 54 15.0	-1.7
BTCH				⇑S	Sn	23 55 17.0	-17
BTCH	Batrach	6.94	85	⇑iP	Pn	23 54 15.4	-1.3
BTCH				⇑iS	Sn	23 55 17.4	-17
VAY	Valandovo	6.97	325	iPn	Pn	23 54 18.9	+0.9
VAY	Valandovo	6.97	325	Pn	Pn	23 54 18.9	+1.8
ILGA	Ilgaz	6.98	39	⇓iP	Pn	23 54 17.2	-0.1
ILGA	Ilgaz	6.98	39	iP	Pn	23 54 17.2	-0.1
BRBR	Barbar	7.02	107	⇓P	Pn	23 54 17.0	-0.9
BRBR				⇓S	Sn	23 55 22.0	-14
BRBR	Barbar	7.02	107	⇓iP	Pn	23 54 17.4	-0.5
BRBR				⇓iS	Sn	23 55 22.2	-14
YOZ	Yozgat	7.03	54	ePN	Pn	23 54 19.4	+1.3
MMLI	Mount Malkishu	7.04	116	Pn	Pn	23 54 16.4	-1.8
MMLI	Mount Malkishu	7.04	116	Pn	Pn	23 54 16.4	-1.8
HAWK	Haweek	7.06	98	⇑P	Pn	23 54 17.0	-1.4
HAWK				⇑S	Sn	23 55 20.0	-17
HAWK	Haweek	7.06	98	⇑iP	Pn	23 54 17.4	-1.0
HAWK				⇑iS	Sn	23 55 20.5	-17
IGT	Igoumenitsa	7.11	304	P	Pn	23 54 20.4	+1.3
IGT	Igoumenitsa	7.11	304	P	Pn	23 54 20.4	+1.3
IGT	Igoumenitsa	7.11	304	P	Pn	23 54 20.4	+1.3
FKH	Fakeheh	7.12	104	ePn	Pn	23 54 18.6	-0.6
FKH	Fakeheh	7.12	100	ePn	Pn	23 54 18.6	-0.7
DRWC	Darouich	7.12	80	⇑P	Pn	23 54 19.0	-0.3
DRWC	Darouich	7.12	80	⇑iP	Pn	23 54 19.1	-0.2
TOS	Tosya	7.13	40	ePN	Pn	23 54 20.1	+0.8
TOS	Tosya	7.13	40	Pn	Pn	23 54 19.9	+0.6
TOS	Tosya	7.13	40	Pn	Pn	23 54 19.9	+0.6
NEST	Nestorio	7.15	313	P	Pn	23 54 22.1	+2.5
NEST	Nestorio	7.15	313	P	Pn	23 54 22.1	+2.5
KKB	Krupnik	7.18	330	P	Pn	23 54 21.3	+1.2
KKB	Krupnik	7.18	330	Pn	Pn	23 54 20.8	+0.7
KKB	Krupnik	7.18	330	P	Pn	23 54 21.3	+1.2
BALT	Daday	7.18	35	⇓iP	Pn	23 54 20.8	+0.6
BALT	Daday	7.18	35	iP	Pn	23 54 20.8	+0.7
FNA	Florina	7.20	316	P	Pn	23 54 22.2	+1.9
FNA	Florina	7.20	316	P	Pn	23 54 22.2	+1.9
FNA	Florina	7.20	316	P	Pn	23 54 22.2	+1.9
HMDT	Nahal Hemdat	7.21	117	Pn	Pn	23 54 19.3	-1.2
HMDT	Nahal Hemdat	7.21	117	Pn	Pn	23 54 19.3	-1.2
QASN	Qassioun	7.23	105	⇑P	Pn	23 54 20.0	-0.8
QASN				⇑S	Sn	23 55 26.0	-15
QASN	Qassioun	7.23	105	⇑iP	Pn	23 54 20.8	0.0
QASN				⇑iS	Sn	23 55 26.3	-15
MARH	Ras Al Marh	7.24	101	⇑P	Pn	23 54 20.0	-0.9
MARH	Ras Al Marh	7.24	101	⇑iP	Pn	23 54 20.7	-0.2
KZIT	Kziot	7.26	130	Pn	Pn	23 54 20.5	-0.6
KZIT	Kziot	7.26	130	Pn	Pn	23 54 20.5	-0.6
TCHB	Talchebab	7.34	112	⇓P	Pn	23 54 21.0	-1.3
TCHB	Talchebab	7.34	112	⇓iP	Pn	23 54 22.0	-0.3
RTMI	Retamim	7.34	128	Pn	Pn	23 54 21.0	-1.3
RTMI	Retamim	7.34	128	Pn	Pn	23 54 21.0	-1.3
ROIA	ROIAK	7.35	357	Pn	Pn	23 54 23.4	+1.1
ROIA	ROIAK	7.35	357	Pn	Pn	23 54 23.4	+1.1
PINB	Pinarbasi	7.37	64	⇓iP	Pn	23 54 24.3	+1.6
PINB	Pinarbasi	7.37	64	iP	Pn	23 54 24.3	+1.6
BIA	Bitola	7.38	317	iP	Pn	23 54 24.0	+1.2
BIA	Bitola	7.38	317	iPn	Pn	23 54 24.5	+1.7
BIA	Bitola	7.38	317	P	Pn	23 54 24.0	+1.2
BIA	Bitola	7.38	317	P	Pn	23 54 24.0	+1.2
PGB	Panagyurishte	7.39	338	P	Pn	23 54 23.2	+0.3
PGB	Panagyurishte	7.39	338	Pn	Pn	23 54 23.6	+0.7
TOTH	TOTAH	7.41	106	⇑P	Pn	23 54 23.0	-0.2
TOTH				⇑S	Sn	23 55 30.0	-16
TOTH	TOTAH	7.41	106	⇑iP	Pn	23 54 23.4	+0.2
TOTH				⇑iS	Sn	23 55 30.4	-15
YTIR	Yattir	7.43	124	Pn	Pn	23 54 22.8	-0.7
YTIR	Yattir	7.43	124	Pn	Pn	23 54 22.8	-0.7
PRD	Provadia	7.45	357	P	Pn	23 54 23.2	-0.6
PRD	Provadia	7.45	357	P	Pn	23 54 23.2	-0.6
KUZU	Kuzuini	7.46	79	⇓iP	Pn	23 54 22.6	-1.3
KUZU	Kuzuini	7.46	79	iP	Pn	23 54 22.6	-1.4
DSI	Dead Sea	7.48	122	Pn	Pn	23 54 23.3	-0.9
DSI	Dead Sea	7.48	122	Pn	Pn	23 54 23.3	-0.9
NEF	NEVSHA	7.52	356	Pn	Pn	23 54 24.7	0.0
KEK	Kerkira	7.56	304	eP	Pn	23 54 27.1	+1.9
KEK	Kerkira	7.56	304	eP	Pn	23 54 27.1	+1.9
KEK	Kerkira	7.56	304	P	Pn	23 54 26.6	+1.4
KEK	Kerkira	7.56	304	P	Pn	23 54 26.6	+1.4
SARI	SarD1z-Kayseri	7.59	65	ePN	Pn	23 54 22.9	-2.8
MZDA	Masada	7.63	123	Pn	Pn	23 54 25.3	-0.9
MZDA				S	Sn	23 55 48.1	-3.1
MZDA	Masada	7.63	123	Pn	Pn	23 54 25.3	-0.9
MZDA				S	Sn	23 55 48.1	-3.1
SZH	Strazhica	7.66	349	Pn	Pn	23 54 25.7	-0.9
SZH				Sn	Sn	23 55 50.8	-1.2
SZH	Strazhica	7.66	349	P	Pn	23 54 26.4	-0.2
SZH	Strazhica	7.66	349	Pn	Pn	23 54 25.7	-0.9
SZH	Strazhica	7.66	349	P	Pn	23 54 26.4	-0.2
SZH				Sn	Sn	23 55 50.8	-1.2
KRUS	Krusevo	7.67	319	ePn	Pn	23 54 28.9	+2.2
HNKL	Nakhl	7.72	137	P	Pn	23 54 26.6	-0.9
	baz=134						
PVL	Pavlikeni	7.72	346	Pn	Pn	23 54 27.3	-0.1
PVL				Sn	Sn	23 55 51.0	-2.4
PVL	Pavlikeni	7.72	346	P	Pn	23 54 27.3	-0.1
PVL	Pavlikeni	7.72	346	Pn	Pn	23 54 27.3	-0.1
PVL				Sn	Sn	23 55 51.0	-2.4
OHR	Ohrid	7.74	316	P	Pn	23 54 29.1	+1.4
OHR	Ohrid	7.74	316	iPn	Pn	23 54 30.1	+2.4
OHR	Ohrid	7.74	316	P	Pn	23 54 29.1	+1.4
OHR	Ohrid	7.74	316	P	Pn	23 54 29.1	+1.4
VTS	Vitosha	7.75	333	⇑P	Pn	23 54 29.4	+1.6
VTS	Vitosha	7.75	333	eP	Pn	23 54 29.9	+2.1
VTS	Vitosha	7.75	333	eP	Pn	23 54 29.9	+2.1
VTS	Vitosha	7.75	333	P	Pn	23 54 28.7	+0.9
VTS	Vitosha	7.75	333	P	Pn	23 54 29.5	+1.7
VTS	Vitosha	7.75	333	⇑iP	Pn	23 54 29.4	+1.6
VTS	Vitosha	7.75	333	P	Pn	23 54 28.7	+0.9
BZK	Bozkurt	7.81	36	ePN	Pn	23 54 29.5	+0.9
BZK	Bozkurt	7.81	36	Pn	Pn	23 54 29.0	+0.4
BZK	Bozkurt	7.81	36	Pn	Pn	23 54 29.0	+0.4
BYBT	Boyabat	7.83	41	ePN	Pn	23 54 29.6	+0.7
BYBT	Boyabat	7.83	41	Pn	Pn	23 54 28.1	-0.8
BYBT	Boyabat	7.83	41	Pn	Pn	23 54 28.1	-0.8
ROOS	tl_alroos	7.85	99	⇑P	Pn	23 54 29.0	-0.2
ROOS				⇑S	Sn	23 55 39.0	-18
ROOS	tl_alroos	7.85	99	⇑iP	Pn	23 54 29.2	0.0
ROOS				⇑iS	Sn	23 55 39.4	-17
SALA	Sala	7.90	110	⇑P	Pn	23 54 29.0	-0.9
SALA				⇑S	Sn	23 55 42.0	-16
SALA	Sala	7.90	110	⇑iP	Pn	23 54 30.0	+0.1
SALA				⇑iS	Sn	23 55 42.5	-15
GZT	Gaziantep	7.92	75	⇓iP	Pn	23 54 30.1	-0.2
PSN	Preselentsi	7.93	1	P	Pn	23 54 29.9	-0.3
PSN	Preselentsi	7.93	1	Pn	Pn	23 54 30.8	+0.6
ZFRI	Zfri	7.99	128	Pn	Pn	23 54 29.1	-2.1
ZFRI	Zfri	7.99	128	Pn	Pn	23 54 29.1	-2.1
SKO	Skopje	8.01	323	iPn	Pn	23 54 34.4	+3.0
SKO	Skopje	8.01	323	P	Pn	23 54 34.2	+2.8
KRMI	Paran Flat	8.01	133	Pn	Pn	23 54 30.0	-1.5
KRMI	Paran Flat	8.01	133	Pn	Pn	23 54 30.0	-1.5
PRNI	Paran	8.02	130	Pn	Pn	23 54 30.3	-1.3
PRNI				S	Sn	23 55 56.1	-4.7
PRNI	Paran	8.02	130	Pn	Pn	23 54 30.3	-1.3
PRNI				S	Sn	23 55 56.1	-4.7
MPEP	Malo Peshtene	8.25	338	Pn	Pn	23 54 35.7	+1.0
MPEP	Malo Peshtene	8.25	338	Pn	Pn	23 54 35.7	+1.0
HRFI	Mount Harif	8.26	132	Pn	Pn	23 54 33.1	-1.8
HRFI	Mount Harif	8.26	132	Pn	Pn	23 54 33.1	-1.8
ASF	Jabal al Asfar	8.26	113	P	Pn	23 54 34.3	-0.6
	comp=E,6.9nm,0.3s,baz=177,slow=6.5,SNR=67						
ASF				S	Sn	23 56 04.3	-2.5
	comp=E,6.7nm,0.3s,baz=150,slow=20,SNR=4.0						
ASF				LR	LR	23 58 25.7	
	comp=E,308nm,20.4s,baz=22,slow=41						
ASF	Jabal al Asfar	8.26	113	P	Pn	23 54 34.3	-0.6
ASF				S	Sn	23 56 04.3	-2.5
ZALF	Zalf	8.28	107	⇑P	Pn	23 54 35.0	-0.1
ZALF				⇑S	Sn	23 55 51.0	-16
ZALF	Zalf	8.28	107	⇑iP	Pn	23 54 35.2	+0.1
ZALF				⇑iS	Sn	23 55 51.3	-16
KVT	Kavak	8.30	48	ePN	Pn	23 54 36.3	+0.9
KVT	Kavak	8.30	48	Pn	Pn	23 54 36.5	+1.1
KVT	Kavak	8.30	48	Pn	Pn	23 54 36.5	+1.1
HRDS	Abu Rudays	8.36	146	P	Pn	23 54 35.9	-0.4
	baz=144						
TIR	Tirane	8.43	314	eP	Pn	23 54 40.6	+3.5
TIR	Tirane	8.43	314	eP	Pn	23 54 40.6	+3.5
TIR	Tirane	8.43	314	P	Pn	23 54 38.9	+1.8
TIR	Tirane	8.43	314	P	Pn	23 54 38.9	+1.8
EIL	Elat	8.47	134	P	Pn	23 54 36.2	-1.6
	comp=E,28nm,0.3s,baz=328,slow=7.9,SNR=292						
EIL				S	Sn	23 56 06.2	-5.7
	comp=E,37nm,0.3s,baz=301,slow=18,SNR=10						
EIL				LR	LR	23 59 45.7	
	comp=E,485nm,18.6s,baz=310,slow=49						
EIL	Elat	8.47	134	Pn	Pn	23 54 36.3	-1.5
EIL	Elat	8.47	134	Pn	Pn	23 54 36.3	-1.5
BARS	Barje	8.50	328	⇑iPn	Pn	23 54 39.2	+1.2
ATAB	Bozova	8.52	75	⇓iP	Pn	23 54 37.3	-1.0
ATAB	Bozova	8.52	75	iP	Pn	23 54 37.3	-1.0
GRB	Gharib	8.52	150	P	Pn	23 54 36.9	-1.5
	baz=148						
HFRF	Wahat Farafira	8.58	178	P	Pn	23 54 38.9	-0.4
	baz=179						
SCTE	Santa Cesarea	8.63	303	eP	Pn	23 54 40.3	+0.4
HBST	Basata	8.69	137	P	Pn	23 54 40.1	-0.6
	baz=134						
TIRR	Tirgusor	8.71	2	⇓P	Pn	23 54 41.4	+0.5
TIRR	Tirgusor	8.71	2	ePn	Pn	23 54

baz=167
GTR Jabal at Tayr 10.46 167 P **Pn 23 55 03.8 -1.1**
baz=167
PTRP Pietrapertosa 10.48 301 P **Pn 23 55 05.0 -0.2**
PTRP Pietrapertosa 10.48 301 P **Pn 23 55 05.0 -0.2**
HSFG 10.49 149 P **Pn 23 55 04.2 -1.2**
baz=148
CDT Castel del Mon 10.57 304 *e*Pn **Pn 23 55 06.2 -0.3**
STON Ston 10.64 315 *e*Pn **Pn 23 55 06.9 -0.5**
STON Sn **Sn 23 57 00.1 -4.7**
HMDC Modica 10.67 280 P **Pn 23 55 07.1 -0.7**
HMDC Modica 10.67 280 P **Pn 23 55 07.1 -0.7**
ACER Acerenza 10.68 302 P **Pn 23 55 06.9 -0.9**
ACER Acerenza 10.68 302 P **Pn 23 55 06.9 -0.9**
LEOM Leova 10.72 1 P **Pn 23 55 09.9 +1.5**
LEOM Leova 10.72 1⇑ *i*P **Pn 23 55 09.4 +1.0**
HVZN Vizzini 10.73 282 P **Pn 23 55 07.7 -1.0**
HVZN Vizzini 10.73 282 P **Pn 23 55 07.7 -1.0**
TESR 10.80 355⇑P **Pn 23 55 09.5 +0.1**
TESR 10.80 355⇑ *i*P **Pn 23 55 09.5 +0.1**
TESR 10.80 355⇑P **Pn 23 55 09.5 +0.1**
KOPT Kop Dagi 10.81 63⇓ *i*P **Pn 23 55 13.0 +3.3**
SLNA Salina 10.82 289 P **Pn 23 55 09.1 -0.7**
SLNA Salina 10.82 289 P **Pn 23 55 09.1 -0.7**
WDD Wield Dalam 10.88 275 *e*Pn **Pn 23 55 09.4 -1.4**
comp=Z,196nm,0.5s
WDD *e*Sn **Sn 23 56 59.6 -11**
WDD Wield Dalam 10.88 275 *e*Pn **Pn 23 55 09.4 -1.3**
comp=Z,196nm,0.5s
WDD *e*Sn **Sn 23 56 59.6 -11**
BZS Buzias 10.95 336⇓P **Pn 23 55 11.5 -0.1**
BZS Buzias 10.95 336⇓ *i*P **Pn 23 55 11.5 -0.1**
BZS Buzias 10.95 336 P **Pn 23 55 11.4 -0.2**
MRLC Muro Lucano 10.98 301 P **Pn 23 55 09.3 -2.7**
MRLC Muro Lucano 10.98 301 P **Pn 23 55 09.3 -2.7**
VAE Valguarnera 11.00 283 P **Pn 23 55 11.7 -0.6**
comp=Z,4.3nm,0.3s,baz=65,slow=19,SNR=11
VAE S **Sn 23 56 59.3 -14**
comp=Z,4.4nm,0.3s,baz=218,slow=12,SNR=3.7
VAE Valguarnera 11.00 283 P **Pn 23 55 11.7 -0.6**
VAE S **Sn 23 56 59.3 -14**
VAE Valguarnera 11.00 283 P **Pn 23 55 11.7 -0.6**
VAE S **Sn 23 56 59.3 -14**
RAFF Raffo Rosso 11.02 282 P **Pn 23 55 12.2 -0.3**
RAFF Raffo Rosso 11.02 282 P **Pn 23 55 12.2 -0.3**
SGO Sicignano 11.03 300 P **Pn 23 55 11.1 -1.6**
MS1 Monte Sant'Ang 11.08 306 *e*Pn **Pn 23 55 13.4 0.0**
MSAG Monte S. Angel 11.11 306 P **Pn 23 55 13.6 -0.1**
MSAG Monte S. Angel 11.11 306 P **Pn 23 55 13.6 -0.1**
SGRT San Giovanni R 11.24 306 P **Pn 23 55 17.0 +1.5**
SGRT San Giovanni R 11.24 306 P **Pn 23 55 17.0 +1.5**
KIS Kishinev 11.26 3 *e*P **Pn 23 55 15.0 -0.8**
KIS *e*S **Sn 23 57 18.0 -1.9**
KIS *e*Li 23 57 42.0
KIS *e*Lg2 23 58 28.0
KIS *e*Rg 23 59 05.0
KIS Kishinev 11.26 3 *e*P **Pn 23 55 15.0 -0.8**
KIS *e*S **Sn 23 57 18.0 -1.9**
RGNG Rignano Grg 11.30 305 P **Pn 23 55 16.1 -0.3**
RGNG Rignano Grg 11.30 305 P **Pn 23 55 16.1 -0.3**
CSLB Castelbuono 11.32 285 P **Pn 23 55 17.3 +0.6**
FG5 Orsara di Pugl 11.35 303 P **Pn 23 55 16.9 -0.1**
FG5 Orsara di Pugl 11.35 303 P **Pn 23 55 16.9 -0.1**
GIB Gibilmanna 11.36 285 P **Pn 23 55 17.1 0.0**
HQSR 11.40 149 P **Pn 23 55 16.5 -1.3**
baz=148
HDK2 Wahat Dakhilah 11.43 175 P **Pn 23 55 17.6 -0.6**
baz=176
MRB1 Monte Rocchett 11.48 302 P **Pn 23 55 20.8 +1.9**
MRB1 Monte Rocchett 11.48 302 P **Pn 23 55 20.8 +1.9**
HEDF Idfu 11.54 155 P **Pn 23 55 17.9 -1.9**
baz=155
FAVR Favara 11.57 282 P **Pn 23 55 22.9 +2.8**
FAVR Favara 11.57 282 P **Pn 23 55 22.9 +2.8**
ANN Anapa 11.59 36 *e*P **Pn 23 55 18.9 -1.4**
ANN *e*S **Sn 23 57 26.3 -1.7**
ANN pmax pmax
comp=Z,37nm,1.4s
ANN MLR MLR
comp=Z,129nm,9.0s
PSB1 Pescosannita 11.63 302 P **Pn 23 55 22.7 +1.8**
PSB1 Pescosannita 11.63 302 P **Pn 23 55 22.7 +1.8**
FG2 Serracapriola 11.65 305 P **Pn 23 55 21.2 +0.1**
FG2 Serracapriola 11.65 305 P **Pn 23 55 21.2 +0.1**
DRGR 11.71 342⇓P **Pn 23 55 22.4 +0.6**
DRGR 11.71 342 P **Pn 23 55 22.1 +0.2**
DRGR 11.71 342⇓ *i*P **Pn 23 55 22.4 +0.6**
DRGR 11.71 342 P **Pn 23 55 22.1 +0.3**
CIGN Sant'Elia a Pi 11.75 304 P **Pn 23 55 23.9 +1.4**
CIGN Sant'Elia a Pi 11.75 304 P **Pn 23 55 23.9 +1.4**
HADB 11.86 149 P **Pn 23 55 22.5 -1.6**
baz=148
SOC Sochi 11.98 46 *e*P **Pn 23 55 25.8 +0.1**
SOC *e* 23 57 37.0
SOC pmax pmax
comp=Z,13nm,1.1s
SOC MLR MLR
comp=Z,320nm,15.0s
SGG Gregorio Mates 12.00 302 P **Pn 23 55 28.4 +2.5**
SGG Gregorio Mates 12.00 302 P **Pn 23 55 28.4 +2.5**
BUR01 Bucovina Ar. S 12.03 351 P **Pn 23 55 27.5 +1.3**
BUR01 Bucovina Ar. S 12.03 351 P **Pn 23 55 27.5 +1.3**
BURAR Bucovina Array 12.03 351 P **Pn 23 55 28.0 +1.8**
BURAR Bucovina Array 12.03 351⇑ *i*P **Pn 23 55 27.5 +1.3**
BURAR Bucovina Array 12.03 351 P **Pn 23 55 28.0 +1.8**
BUR08 Bucovina Ar. S 12.06 351 *e*Pn **Pn 23 55 27.3 +0.7**
BUR08 Sn **Sn 23 57 38.4 -0.9**
BUR08 Bucovina Ar. S 12.06 351 *e*Pn **Pn 23 55 27.3 +0.7**
BUR08 Sn **Sn 23 57 38.4 -1.0**
USI Ustica 12.12 288 P **Pn 23 55 25.1 -2.4**
USI Ustica 12.12 288 P **Pn 23 55 25.1 -2.4**
BLY Banja Luka 12.16 321 P **Pn 23 55 29.0 +0.9**
BLY Banja Luka 12.16 321 P **Pn 23 55 29.0 +0.9**
MIDA Miranda 12.19 303 P **Pn 23 55 27.5 -1.0**
MIDA Miranda 12.19 303 P **Pn 23 55 27.5 -1.0**
RFI Roccamonfina 12.24 301 P **Pn 23 55 30.2 +1.0**
RFI Roccamonfina 12.24 301 P **Pn 23 55 30.2 +1.0**
EMRS Mersa Alam 12.25 149 P **Pn 23 55 28.4 -1.0**
baz=148
RNI2 Rionero Sannit 12.28 303 P **Pn 23 55 33.2 +3.4**
RNI2 Rionero Sannit 12.28 303 P **Pn 23 55 33.2 +3.4**
BMR Baia Mare 12.36 346 P **Pn 23 55 31.8 +1.0**
ERC Erice 12.49 285 P **Pn 23 55 36.3 +3.7**
ERC Erice 12.49 285 P **Pn 23 55 36.3 +3.7**
SDI San Donato 12.52 303 P **Pn 23 55 36.4 +3.4**
PKSM Moragy 12.58 329⇑P **Pn 23 55 35.7 +2.0**
PKSM Moragy 12.58 329⇑ *i*P **Pn 23 55 35.7 +2.0**
PKSM Moragy 12.58 329 P **Pn 23 55 34.5 +0.8**
VVLD Villa Vallelon 12.71 303 P **Pn 23 55 38.6 +3.0**
VVLD Villa Vallelon 12.71 303 P **Pn 23 55 38.6 +3.0**
HAGS Hagol 12.87 150 P **Pn 23 55 37.0 -0.8**
baz=149
GUAR Guarcino 12.89 302 P **Pn 23 55 40.0 +1.9**
GUAR Guarcino 12.89 302 P **Pn 23 55 40.0 +1.9**
TRPA Tarpa 13.00 344⇓ *i*P **Pn 23 55 39.5 0.0**
TERO Teramo 13.05 306 P **Pn 23 55 41.9 +1.7**
TERO Teramo 13.05 306 P **Pn 23 55 41.9 +1.7**
AQU L'Aquila 13.06 305 *e*P **Pn 23 55 41.5 +1.1**
AQU L'Aquila 13.06 305⇑ *i*P **Pn 23 55 43.2 +2.8**
AQU L'Aquila 13.06 305 *e*Pn **Pn 23 55 41.5 +1.1**
CERT Cerreto 13.18 302 P **Pn 23 55 42.2 +0.2**
CERT Cerreto 13.18 302 P **Pn 23 55 42.2 +0.2**
FIAM Fiamignano 13.22 304 P **Pn 23 55 44.4 +1.9**
FIAM Fiamignano 13.22 304 P **Pn 23 55 44.4 +1.9**
RDP Rocca di Papa 13.29 301 P **Pn 23 55 45.5 +2.0**
NVLJ Novalja 13.30 315 *i* Pn **Pn 23 55 42.8 -0.8**
NVLJ Sn **Sn 23 58 03.2 -6.4**
MA9 Marino 13.34 301 P **Pn 23 55 44.7 +0.6**
MA9 Marino 13.34 301 P **Pn 23 55 44.7 +0.6**
MTCE Montecelio 13.38 302 P **Pn 23 55 44.6 0.0**
MTCE Montecelio 13.38 302 P **Pn 23 55 44.6 0.0**
NRCA Norcia 13.47 306 P **Pn 23 55 45.3 -0.6**
NRCA Norcia 13.47 306 P **Pn 23 55 45.3 -0.6**
BUD Budapest 13.47 333⇑ *e*P **Pn 23 55 45.1 -0.8**
BUD *es*P 23 55 53.4
AOI Ancona 13.49 310 P **Pn 23 55 47.1 +0.8**
AOI Ancona 13.49 310 P **Pn 23 55 47.1 +0.8**
PSZ Piszkesteto 13.54 336 P **Pn 23 55 46.2 -0.7**
PSZ Piszkesteto 13.54 336⇑ *e*Pn **Pn 23 55 45.2 -1.6**
comp=Z,273nm,0.8s
PSZ *e* 23 55 53.2
PSZ Piszkesteto 13.54 336⇑ *i*P **Pn 23 55 53.3 +6.4**
PSZ Piszkesteto 13.54 336⇑ *e*Pn **Pn 23 55 45.2 -1.7**
MNS Montasola 13.56 304 P **Pn 23 55 46.2 -1.0**
CING Cingoli 13.67 308 P **Pn 23 55 47.8 -0.8**
CING Cingoli 13.67 308 P **Pn 23 55 47.8 -0.8**
BOJS Bojanci 13.68 319 *i* Pn **Pn 23 55 47.9 -0.9**
BOJS *i* P 23 55 51.8
BOJS *i* Sn **Sn 23 58 15.3 -3.6**
BOJS *e* 23 58 36.1
BOJS Bojanci 13.68 319 *i* Pn **Pn 23 55 47.9 -0.8**
SNTG Esanatoglia 13.77 307 P **Pn 23 55 49.2 -0.8**
SNTG Esanatoglia 13.77 307 P **Pn 23 55 49.2 -0.8**
BHD Baghdad 13.80 96 *ex* x 23 55 47.0
BHD *ex* x 23 58 19.0
ONI Oni 13.84 56 P **Pn 23 55 51.1 +0.2**
KECS Kecovo 13.86 339 *e*P **Pn 23 55 53.5 +2.4**
KECS *e* 23 55 59.2
KECS Kecovo 13.86 339 *e*PN **Pn 23 55 53.5 +2.4**
KECS Kecovo 13.86 339 *e*P **Pn 23 55 59.2 +8.1**
ASS Assisi 13.87 306 P **Pn 23 55 51.3 0.0**
TOLF Tolfa 13.90 302 P **Pn 23 55 52.3 +0.6**
TOLF Tolfa 13.90 302 P **Pn 23 55 52.3 +0.6**
AADN Adndan 13.94 166 P **Pn 23 55 51.2 -1.2**
baz=166
GNI Garni 13.98 67 *d i*P **Pn 23 55 54.7 +2.0**
GNI pmax pmax
comp=Z,51nm,1.3s
GNI Garni 13.98 67 *e*Pn **Pn 23 55 54.0 +1.3**
comp=Z,49nm,1.1s
GNI Garni 13.98 67 *e*Pn **Pn 23 55 54.0 +1.3**
comp=Z,49nm,1.1s
KIV Kislovodsk 13.98 50 P **Pn 23 56 01.2 +8.5**
comp=Z,221nm,0.8s,SNR=5.0
KIV Kislovodsk 13.98 50 *e*P **Pn 23 55 52.5 -0.2**
KIV *e*S **Sn 23 58 27.1 +0.9**
KIV pmax pmax
comp=Z,31nm,1.0s
KIV MLR MLR
comp=Z,115nm,13.0s
KIV Kislovodsk 13.98 50 *e*Pn **Pn 23 55 54.2 +1.5**
KIV Kislovodsk 13.98 50 *e*Pn **Pn 23 55 54.2 +1.5**
CRVS Cervenica-Dubn 13.98 342 *e*P **Pn 23 55 55.5 +2.8**
CRVS MLR MLR
comp=Z,200nm,26.5s
CRVS Cervenica-Dubn 13.98 342 *e*P **Pn 23 55 55.5 +2.8**
CRVS *e* 23 56 00.8
CRVS Cervenica-Dubn 13.98 342 *e*PN **Pn 23 55 55.5 +2.8**
CRVS Cervenica-Dubn 13.98 342 *e*P **Pn 23 56 00.8 +8.1**
CRVS Cervenica-Dubn 13.98 342 *e*P **Pn 23 55 55.5 +2.8**
MURB Monte Urbino 14.05 307 P **Pn 23 55 54.9 +1.3**
MURB Monte Urbino 14.05 307 P **Pn 23 55 54.9 +1.3**
GOR Gori 14.05 59 P **Pn 23 55 54.8 +1.0**
FSSB Fossombrone 14.09 309 P **Pn 23 55 52.7 -1.4**
FSSB Fossombrone 14.09 309 P **Pn 23 55 52.7 -1.4**
MGAB Montegabbione 14.16 305 P **Pn 23 55 55.6 +0.4**
MGAB Montegabbione 14.16 305 P **Pn 23 55 55.6 +0.4**
PIEI Pieia 14.17 308 P **Pn 23 55 54.5 -0.7**
PIEI Pieia 14.17 308 P **Pn 23 55 54.5 -0.7**
ZEI Tsey 14.21 56 *e*P **Pn 23 55 54.8 -1.0**
ZEI pmax pmax
comp=Z,66nm,1.0s
LATE Laterza 14.25 304 P **Pn 23 55 56.4 +0.1**
LATE Laterza 14.25 304 P **Pn 23 55 56.4 +0.1**
CDCA Citt' di Caste 14.32 307 P **Pn 23 56 00.1 +2.8**
CDCA Citt' di Caste 14.32 307 P **Pn 23 56 00.1 +2.8**
BADI Badiali 14.34 307 P **Pn 23 55 58.2 +0.7**
BADI Badiali 14.34 307 P **Pn 23 55 58.2 +0.7**
LVV L'vov 14.35 350 *e*P **Pn 23 56 03.0 +5.5**
LVV MLR MLR
comp=N,100nm,12.0s
LVV MLR MLR
comp=E,80nm,12.0s
LVV MLR MLR
comp=Z,110nm,12.0s
KWP Kalwaria Pacla 14.39 346⇑ *e*P **Pn 23 55 58.5 +0.4**
KWP MLR MLR
comp=Z,400nm,18.4s
KWP Kalwaria Pacla 14.39 346 *e*Pn **Pn 23 55 56.6 -1.4**
comp=Z,34nm,0.9s
KWP P 23 55 59.9
KWP Kalwaria Pacla 14.39 346⇑ *i*P **Pn 23 56 06.2 +8.1**
KWP Kalwaria Pacla 14.39 346 *e*Pn **Pn 23 55 56.7 -1.4**
comp=Z,34nm,0.9s
VYHS Vyhne 14.39 335 *e*P **Pn 23 55 57.0 -1.2**
VYHS MLR MLR
comp=Z,200nm,26.9s
VYHS Vyhne 14.39 335 *e*P **Pn 23 55 57.0 -1.2**
VYHS P 23 56 00.4
VYHS *e* 23 56 00.5
VYHS *e* 23 56 04.2
VYHS *e*S **Sn 23 58 53.3 +17**
VYHS Vyhne 14.39 335 *e*PN **Pn 23 55 57.0 -1.2**
VYHS *e* 23 56 00.5
VYHS Vyhne 14.39 335 *e*P **Pn 23 56 04.2 +6.0**
VYHS *e*S **Sn 23 58 53.3 +17**
VYHS Vyhne 14.39 335 P **Pn 23 56 00.4 +2.2**
VYHS *e*S **Sn 23 58 53.3 +17**
RSM Repubblica di 14.41 309 P **Pn 23 55 59.5 +1.1**
TBLG Delisi 14.41 60 *e*P **Pn 23 55 59.9 +1.5**
TBLG Delisi 14.41 60 P **Pn 23 55 59.9 +1.4**
LJU Ljubljana 14.41 320 *i* Pn **Pn 23 55 59.3 +0.9**
LJU *i* P 23 56 03.4
LJU *e* 23 58 49.9
LJU Ljubljana 14.41 320 *i* Pn **Pn 23 55 59.3 +0.8**
ZAVS Zavodnje 14.42 322 *e*Pn **Pn 23 55 59.4 +0.9**
MTA Mtatsminda 14.44 61 P **Pn 23 55 59.6 +0.9**
STHS Stebnicka Huta 14.51 342 *e*P **Pn 23 55 57.2 -2.4**
STHS *e* 23 56 05.9
STHS Stebnicka Huta 14.51 342 *e*PN **Pn 23 55 57.2 -2.4**
STHS Stebnicka Huta 14.51 342 *e*P **Pn 23 56 05.9 +6.3**
STHS Stebnicka Huta 14.51 342 *e*P **Pn 23 55 57.2 -2.4**
JAVS Javornik 14.57 318 *i* Pn **Pn 23 56 01.0 +0.6**
JAVS Javornik 14.57 318 *i* Pn **Pn 23 56 01.0 +0.6**
CRE Caprese Michel 14.58 307 P **Pn 23 56 02.6 +2.0**
SOKA Soboth 14.58 322⇑ *i*Pn **Pn 23 56 01.4 +0.8**
comp=Z,170nm,0.8s
TRI Trieste 14.62 317 *e*P **Pn 23 56 00.9 -0.2**
TRI 23 58 37.5
TRI pmax pmax
comp=Z,275nm,0.6s
TRI Trieste 14.62 317 *e*Pn **Pn 23 56 00.9 -0.2**
comp=Z,276nm,0.6s
TRI *e* 23 56 06.0
TRI Sn **Sn 23 58 37.5 -4.2**
TRI Trieste 14.62 317 *e*Pn **Pn 23 56 00.9 -0.2**
KOLL Kolacno 14.62 334 *e*P **Pn 23 56 02.5 +1.4**
KOLL *e* 23 56 06.6
KOLL Kolacno 14.62 334 *e*PN **Pn 23 56 02.5 +1.4**
KOLL Kolacno 14.62 334 *e*P **Pn 23 56 06.5 +5.4**
KOLL Kolacno 14.62 334 *e*P **Pn 23 56 02.5 +1.4**
MAON Monte Argentar 14.64 302 P **Pn 23 56 00.4 -1.0**
MAON Monte Argentar 14.64 302 P **Pn 23 56 00.4 -1.0**
OBKA Obir 14.71 321⇑ *i*Pn **Pn 23 56 02.4 +0.1**
comp=Z,146nm,1.0s,SNR=54
VOJS Vojsko 14.75 318 *i* Pn **Pn 23 56 02.8 -0.1**
VOJS *i* P 23 56 07.3
VOJS *e*Sn **Sn 23 58 45.5 -4.5**
VOJS *i* 23 58 56.6
VOJS Vojsko 14.75 318 *i* Pn **Pn 23 56 02.8 0.0**
NIE Niedzica 14.75 340 *e*P **Pn 23 56 06.1 +3.2**
NIE Niedzica 14.75 340 *e*P **Pn 23 56 06.1 +3.2**
ARSA Arzberg 14.76 325⇓ *i*P **Pn 23 56 04.8 +1.9**
comp=Z,93nm,0.7s,SNR=49
DGRG David-gareji 14.78 62 P **Pn 23 56 03.4 +0.2**
SFI Santa Sofia 14.78 308 P **Pn 23 56 04.4 +1.2**
ZST Bratislava 14.79 331 *e*P **Pn 23 56 05.6 +2.2**
ZST MLR MLR
comp=Z,400nm,12.7s
ZST Bratislava 14.79 331 *e*P **Pn 23 56 05.6 +2.2**
ZST *e* 23 56 08.5
ZST *e*S **Sn 23 58 57.0 +11**
ZST Bratislava 14.79 331 *e*PN **Pn 23 56 05.6 +2.2**
ZST Bratislava 14.79 331 *e*P **Pn 23 56 08.5 +5.1**
ZST *e*S **Sn 23 58 57.0 +11**
ZST Bratislava 14.79 331 *e*P **Pn 23 56 05.6 +2.2**
CADS Cadrg 14.96 319 *e*Pn **Pn 23 56 05.5 +0.1**
KIEV Kiev 14.97 3 *e*P **Pn 23 56 05.4 -0.2**
KIEV pmax pmax
comp=Z,42nm,0.6s
KIEV Kiev 14.97 3 *e*Pn **Pn 23 56 05.3 -0.3**
comp=Z,42nm,0.6s
KIEV *e* 23 56 09.3
KIEV *e*S **Sn 23 59 00.8 +11**
KIEV Kiev 14.97 3 *e*Pn **Pn 23 56 05.3 -0.3**
AKASG Malin Array Be 14.97 3 P **Pn 23 56 04.8 -0.9**
comp=Z,21nm,0.3s,baz=192,slow=11,SNR=50
AKASG S **Sn 23 58 51.1 +0.8**
baz=347,slow=34,SNR=2.3
AKASG ScP ScP 00 04 40.6 +0.8
comp=Z,0.4nm,0.3s,baz=231,slow=0.8,SNR=9.4
AKASG Malin Array Be 14.97 3 *ce*P **Pn 23 56 06.9 +1.2**
AKASG pmax pmax
comp=Z,53nm,0.5s
AKASG Malin Array Be 14.97 3 P **Pn 23 56 04.8 -0.9**
AKASG S **Sn 23 58 51.1 +0.8**
VMG Vicchio 15.00 308 P **Pn 23 56 08.0 +1.9**
VMG Vicchio 15.00 308 P **Pn 23 56 08.0 +1.9**
COLI Coloredo 15.09 318⇑ *i*P **Pn 23 56 07.0 -0.2**
COLI Coloredo 15.09 318⇑P **Pn 23 56 07.0 -0.2**
CONA Conrad Observa 15.11 327⇓ *i*Pn **Pn 23 56 07.5 +0.1**
comp=Z,38nm,1.0s,SNR=19
SEI Scarperia 15.16 308 P **Pn 23 56 10.0 +1.8**
SEI Scarperia 15.16 308 P **Pn 23 56 10.0 +1.8**
VSL Villasalto 15.16 290 *e*Pn **Pn 23 56 07.8 -0.4**
comp=Z,73nm,0.9s
VSL Villasalto 15.16 290 *e*Pn **Pn 23 56 07.8 -0.4**
comp=Z,73nm,0.9s
LSR Lussari 15.22 319⇑ *e*P **Pn 23 56 10.0 +1.0**
LSR Lussari 15.22 319⇑ *e*P **Pn 23 56 10.0 +1.0**
BAD Bernadia 15.23 318⇑ *i*P **Pn 23 56 09.0 0.0**
BAD Bernadia 15.23 318⇑ *i*P **Pn 23 56 09.0 0.0**
GMNA Gemona 15.25 318 P **Pn 23 56 10.1 +0.8**
GMNA Gemona 15.25 318 P **Pn 23 56 10.1 +0.8**
MYKA Terra Mystica 15.26 320⇑ *i*Pn **Pn 23 56 09.3 -0.2**
comp=Z,127nm,0.7s
BUA Buia 15.28 318⇓ *i*P **Pn 23 56 10.0 +0.3**
BUA Buia 15.28 318⇓ *i*P **Pn 23 56 10.0 +0.3**
FIU Minerbio Fiu 15.36 310 P **Pn 23 56 12.1 +1.4**
FIU Minerbio Fiu 15.36 310 P **Pn 23 56 12.1 +1.4**
FNVD Fontana Vidola 15.36 308 P **Pn 23 56 12.3 +1.5**
FNVD Fontana Vidola 15.36 308 P **Pn 23 56 12.3 +1.5**
MPRI Monte Prat 15.37 318⇓ *i*P **Pn 23 56 11.0 +0.2**
MPRI Monte Prat 15.37 318⇓ *i*P **Pn 23 56 11.0 +0.2**
PLRO Paularo 15.47 319⇓ *i*P **Pn 23 56 13.0 +0.8**
PLRO Paularo 15.47 319⇓ *i*P **Pn 23 56 13.0 +0.8**
ZCCA Zocca 15.54 309 P **Pn 23 56 14.1 +1.0**
ZCCA Zocca 15.54 309 P **Pn 23 56 14.1 +1.0**
PII Pisa 15.55 306 P **Pn 23 56 12.6 -0.6**
OJC Ojcow 15.62 340 *e*P **Pn 23 56 14.8 +0.8**
OJC *e*PP 23 56 26.5
OJC *e*S **S 23 59 10.1 -8.2**
OJC Ojcow 15.62 340 *e*P **Pn 23 56 14.8 +0.8**
RAVA Ravarino 15.65 310 P **Pn 23 56 15.8 +1.4**
RAVA Ravarino 15.65 310 P **Pn 23 56 15.8 +1.4**
BDI Bagni Di Lucca 15.65 307 P **Pn 23 56 13.6 -0.9**
MAIM Mastiano 15.66 307 Pn **Pn 23 56 13.8 -0.8**
MAIM Mastiano 15.66 307 Pn **Pn 23 56 13.8 -0.8**
KBA Koelnbreinsper 15.71 321⇑ *i*Pn **Pn 23 56 15.8 +0.7**
comp=Z,687nm,1.2s,SNR=142
CSMI Casera Mimoias 15.72 318⇓ *i*P **Pn 23 56 15.0 -0.3**
CSMI Casera Mimoias 15.72 318⇓ *i*P **Pn 23 56 15.0 -0.3**
MOA Molln 15.78 324⇑ *i*Pn **Pn 23 56 16.0 0.0**
comp=Z,92nm,0.8s,SNR=84
OKC Ostrava-Krasne 15.78 336 *e*P **Pn 23 56 18.8 +2.7**
OKC *e*S **S 23 59 36.5 +15**
OKC Ostrava-Krasne 15.78 336⇑ *e*P **Pn 23 56 18.8 +2.7**
OKC *e*XS sS 23 59 36.5 -5.5
OKC AMS AMS 00 03 20.0
comp=Z,300nm,7.9s
OKC Ostrava-Krasne 15.78 336 *e*P **Pn 23 56 18.8 +2.7**
OKC *e*S **S 23 59 36.5 +15**
VLC Villacollemand 15.83 307 *e*Pn **Pn 23 56 15.9 -0.9**
comp=Z,40nm,0.9s
VLC Villacollemand 15.83 307 *e*Pn **Pn 23 56 15.9 -0.9**
comp=Z,40nm,0.9s
VRAC Vranov 15.89 332 P **Pn 23 56 18.7 +1.3**
comp=Z,13nm,0.3s,baz=146,slow=10,SNR=224
VRAC LR LR 00 02 50.8
comp=Z,261nm,19.7s,baz=149,slow=39
VRAC Vranov 15.89 332⇓ *i*P **Pn 23 56 21.3 +3.8**
VRAC Vranov 15.89 332 P **Pn 23 56 18.7 +1.2**
ERBM Eremo 15.93 308 P **Pn 23 56 18.7 +0.7**
ERBM Eremo 15.93 308 P **Pn 23 56 18.7 +0.7**
MORC Moravsky Berou 15.93 335 *e*P **Pn 23 56 18.2 +0.2**
MORC pmax pmax
comp=Z,225nm,1.1s
MORC Moravsky Berou 15.93 335 *e*Pn **Pn 23 56 18.2 +0.2**
comp=Z,225nm,1.1s
MORC Moravsky Berou 15.93 335⇑ *i*P **Pn 23 56 21.2 +3.2**
MORC Moravsky Berou 15.93 335 *e*Pn **Pn 23 56 18.2 +0.2**
comp=Z,225nm,1.1s
ABTA Abfaltersbach 15.94 318⇑ *i*Pn **Pn 23 56 18.3 +0.2**
comp=Z,217nm,0.8s,SNR=136
RAC Raciborz 15.98 337 *e*P **Pn 23 56 22.3 +3.7**
RAC Raciborz 15.98 337 *e*P **Pn 23 56 22.3 +3.7**
CTI Castel Tesino 16.01 315 P **Pn 23 56 18.5 -0.5**
PGF Pioggiola 16.16 301⇑ *i*P **Pn 23 56 18.6 -2.3**
comp=Z,219nm,0.8s
PGF Pioggiola 16.16 301⇑ *i*P **Pn 23 56 18.6 -2.3**
PGF pmax pmax
comp=Z,110nm,0.8s
PGF Pioggiola 16.16 301⇑ *i*P **Pn 23 56 18.6 -2.3**
comp=Z,110nm,0.8s
TREC Trest 16.32 330 *e*P **Pn 23 56 25.2 +2.4**
TREC *e*S **S 23 59 24.7 -7.8**
TREC AMS AMS 00 04 50.0
comp=Z,300nm,9.6s
TREC Trest 16.32 330⇑ *e*P **Pn 23 56 25.2 +2.4**
TREC *e*S **S 23 59 24.7 -7.8**
TREC AMS AMS 00 04 50.0
comp=Z,300nm,9.6s
RJOB Jochberg 16.42 321 *e*P **Pn 23 56 23.8 -0.4**
comp=Z,96nm,0.7s
ABSA Djebel Ababsia 16.55 278 P **Pn 23 56 28.9 +3.0**
ABSA Djebel Ababsia 16.55 278 P **Pn 23 56 28.9 +3.0**
CMAH Djebel Manchou 16.58 279 P **Pn 23 56 28.7 +2.5**
CMAH Djebel Manchou 16.58 279 P **Pn 23 56 28.7 +2.5**
WTTA Wattenberg 16.73 318⇑ *i*P **Pn 23 56 29.3 +1.3**
comp=Z,268nm,1.1s,SNR=75
WTTA Wattenberg 16.73 318 P **Pn 23 56 29.8 +1.8**
MAK Makhachkala 16.75 59 *e*P **Pn 23 56 30.4 +2.1**
MAK pmax pmax
comp=Z,378nm,0.9s
MAK MLR MLR
comp=Z,269nm,16.0s
WATA Walderalm 16.81 319 *i* P **Pn 23 56 30.5 +1.5**
comp=Z,111nm,0.6s,SNR=47
DPC Dobruska-Polom 16.85 334 *e*P **Pn 23 56 30.2 +0.8**
DPC *e*S **S 23 59 45.5 +2.3**
DPC Dobruska-Polom 16.85 334 *e*P **Pn 23 56 30.2 +0.8**
DPC *e*S **S 23 59 45.5 +2.3**
DPC AMS AMS 00 03 50.0
comp=Z,200nm,12.9s
DPC Dobruska-Polom 16.85 334 *e*P **Pn 23 56 30.2 +0.8**
DPC *e*S **S 23 59 45.5 +2.3**
KHC Kasperske Hory 17.02 326⇑ *i*P **Pn 23 56 32.8 +1.3**
KHC *e* 23 56 41.0
KHC *e*S S 00 00 08.8 +22
KHC Kasperske Hory 17.02 326⇑ *i*P **Pn 23 56 32.8 +1.3**
KHC *ep*P pP 23 56 41.0 -4.3
KHC *e*S S 00 00 08.8 +22
KHC AMS AMS 00 03 40.0
comp=Z,300nm,14.3s
KHC Kasperske Hory 17.02 326⇑ *i*P **Pn 23 56 32.8 +1.3**
CAEH 'Ain El Ouahch 17.03 280 P **Pn 23 56 34.0 +2.2**
CAEH 'Ain El Ouahch 17.03 280 P **Pn 23 56 34.0 +2.2**
MOTA Moosalm 17.07 318⇑ *i*P **Pn 23 56 33.3 +1.1**
comp=Z,92nm,0.6s,SNR=76
FETA Feichten 17.09 316 *i* P **Pn 23 56 33.5 +1.0**
comp=Z,606nm,1.1s,SNR=370
UPC Upice 17.09 333⇑ *e*P **Pn 23 56 33.7 +1.3**
UPC Upice 17.09 333 *e*P **Pn 23 56 33.7 +1.3**
CKFL Kef-Lekhel 17.16 278 P **Pn 23 56 34.0 +0.6**
CKFL Kef-Lekhel 17.16 278 P **Pn 23 56 34.0 +0.6**
WAR Warsaw 17.20 346 *e*P **Pn 23 56 34.9 +1.1**
PRU Pruhonice 17.24 330 *e*P **Pn 23 56 35.0 +0.7**
PRU *e*S **S 00 00 10.0 +19**
PRU Pruhonice 17.24 330⇑ *e*P **Pn 23 56 35.0 +0.7**
PRU *e*S **S 00 00 10.0 +19**
PRU AMS AMS 00 05 40.0
comp=Z,200nm,13.5s
PRU Pruhonice 17.24 330 *e*P **Pn 23 56 35.0 +0.7**
PRU *e*S **S 00 00 10.0 +19**
KSP Ksiaz 17.27 334⇑ *e*P **Pn 23 56 34.5 -0.1**
KSP *e*S **S 23 59 47.2 -4.5**

KSP	Ksiaz	17.27 334⇑	eP	Pn	23 56 34.5	-0.1
KSP			eS	S	23 59 47.2	-4.5
RETA	Reutte	17.34 318⇑	iP	Pn	23 56 35.5	-0.1
comp=Z,122nm,0.9s,SNR=109						
WET	Wettzell	17.35 325	eP	Pn	23 56 35.6	0.0
comp=Z,132nm,0.9s						
WET	Wettzell	17.35 325	P	Pn	23 56 36.2	+0.6
WET	Wettzell	17.35 325	P	Pn	23 56 36.2	+0.6
CASM	Ain Smara	17.35 278	P	Pn	23 56 35.8	0.0
CASM	Ain Smara	17.35 278	P	Pn	23 56 35.8	0.0
DAVOX	Davos/Dischmat	17.43 315	P	Pn	23 56 35.8	-0.9
comp=Z,10nm,0.3s,baz=126,slow=11,SNR=54						
DAVOX	Davos/Dischmat	17.43 315	P	Pn	23 56 35.8	-0.9
CTEI	Djebel Teioual	17.44 277	P	Pn	23 56 37.0	+0.2
CTEI	Djebel Teioual	17.44 277	P	Pn	23 56 37.0	+0.2
VSR	Storozhevoye	17.45 24	eP	Pn	23 56 36.5	-0.3
VSR			pmax	pmax		
comp=N,4.0nm,0.6s						
VSR			pmax	pmax		
comp=E,5.0nm,0.6s						
VSR			pmax	pmax		
comp=Z,9.0nm,0.6s						
VSR			MLR	MLR		
comp=N,220nm,21.0s						
VSR			MLR	MLR		
comp=Z,390nm,21.0s						
VSR			MLR	MLR		
comp=E,260nm,23.0s						
FUR	Furstenfeldbru	17.48 320	eP	Pn	23 56 37.1	-0.2
comp=Z,411nm,0.9s						
FUR	Furstenfeldbru	17.48 320	P	Pn	23 56 37.4	+0.1
FUR	Furstenfeldbru	17.48 320	P	Pn	23 56 37.4	+0.1
MON	Monaco	17.64 303	P	Pn	23 56 40.0	+0.8
MON	Monaco	17.64 303	P	Pn	23 56 40.0	+0.8
SAOF	Saorge	17.64 304	eP	Pn	23 56 38.0	-1.2
SAOF	Saorge	17.64 304	eP	Pn	23 56 38.0	-1.2
PVCC	Panska Ves	17.65 331	eP	Pn	23 56 40.0	+0.6
PVCC			eS	S	00 00 00.1	+0.5
PVCC	Panska Ves	17.65 331⇑	eP	Pn	23 56 40.0	+0.6
PVCC			eS	S	00 00 00.1	+0.5
PVCC			AMS	AMS	00 03 30.0	
comp=Z,300nm,21.5s						
PVCC	Panska Ves	17.65 331	eP	Pn	23 56 40.0	+0.6
PVCC			eS	S	00 00 00.1	+0.5
SBF	Sospel	17.68 304⇑	iP	Pn	23 56 38.1	-1.6
comp=Z,322nm,0.7s						
SBF	Sospel	17.68 304⇑	iP	Pn	23 56 38.1	-1.6
SBF			pmax	pmax		
comp=Z,161nm,0.7s						
SBF	Sospel	17.68 304⇑	iP	Pn	23 56 38.1	-1.6
comp=Z,161nm,0.7s						
REVF	Revere	17.68 303	eP	Pn	23 56 38.1	-1.6
REVF	Revere	17.68 303	eP	Pn	23 56 38.1	-1.6
DAVA	Damuels	17.71 316	P	Pn	23 56 40.0	-0.1
DAVA	Damuels	17.71 316⇑	iP	Pn	23 56 40.0	-0.1
comp=Z,221nm,0.7s,SNR=150						
DAVA	Damuels	17.71 316	P	Pn	23 56 40.0	-0.1
AUTN	L'Aution	17.73 304	eP	Pn	23 56 39.1	-1.2
AUTN	L'Aution	17.73 304	eP	Pn	23 56 39.1	-1.2
LUCF	Luceram	17.75 304	eP	Pn	23 56 39.4	-1.2
LUCF	Luceram	17.75 304	eP	Pn	23 56 39.4	-1.2
DFRA	Djebel Bou Aff	17.82 279	P	Pn	23 56 42.0	+0.4
DFRA	Djebel Bou Aff	17.82 279	P	Pn	23 56 42.0	+0.4
TOUF	Mont Tournerai	17.85 304	eP	Pn	23 56 41.1	-0.8
TOUF	Mont Tournerai	17.85 304	eP	Pn	23 56 41.1	-0.8
MVIF	Mont Vial	17.88 303	eP	Pn	23 56 41.1	-1.1
MVIF	Mont Vial	17.88 303	eP	Pn	23 56 41.1	-1.1
VOR	Voronezh	17.90 23	P	Pn	23 56 42.0	-0.3
VOR			pmax	pmax		
comp=Z,200nm,1.0s						
CALN	Calern	18.01 303	eP	Pn	23 56 42.6	-1.2
CALN	Calern	18.01 303	eP	Pn	23 56 42.6	-1.2
ROTZ	Rotzenmuhle	18.10 326	eP	Pn	23 56 43.6	-1.2
comp=Z,201nm,1.0s						
FRF	La Foret Royal	18.11 302⇑	iP	Pn	23 56 43.0	-2.1
comp=Z,267nm,0.9s						
FRF	La Foret Royal	18.11 302⇑	iP	Pn	23 56 43.0	-2.1
FRF			pmax	pmax		
comp=Z,133nm,0.9s						
FRF	La Foret Royal	18.11 302⇑	iP	Pn	23 56 43.0	-2.1
comp=Z,133nm,0.9s						
LMR	La Mourre	18.14 301⇑	iP	Pn	23 56 43.2	-2.2
comp=Z,204nm,1.2s						
LMR	La Mourre	18.14 301⇑	iP	Pn	23 56 43.2	-2.2
LMR			pmax	pmax		
comp=Z,102nm,1.2s						
LMR	La Mourre	18.14 301⇑	iP	Pn	23 56 43.2	-2.2
comp=Z,102nm,1.2s						
CKHR	Kef el Ahmar	18.16 277	P	Pn	23 56 46.7	+1.0
CKHR	Kef el Ahmar	18.16 277	P	Pn	23 56 46.7	+1.0
BRG	Berggiesshubel	18.17 331	eP	Pn	23 56 45.0	-0.7
comp=Z,109nm,1.0s						
BRG	Berggiesshubel	18.17 331	i P	Pn	23 56 45.2	-0.5
comp=Z,14nm,0.8s						
BRG			i		23 56 48.5	
comp=Z,110nm,1.1s						
BRG			i SP		23 57 06.3	
comp=Z,20nm,0.9s						
BRG			S	S	00 00 06.0	-4.1
BRG						
comp=N,237nm,16.0s						
BRG						
comp=E,521nm,22.8s						
BRG						
comp=Z,1μm,22.1s						
BRG	Berggiesshubel	18.17 331	i P	Pn	23 56 45.2	-0.5
BRG			S	S	00 00 06.0	-4.1
BRG			pmax	pmax		
comp=Z,9.0nm,0.8s						
BRG			MLR	MLR		
comp=N,142nm,16.0s						
BRG			MLR	MLR		
comp=E,312nm,22.8s						
BRG			MLR	MLR		
comp=Z,709nm,22.1s						
BRG	Berggiesshubel	18.17 331	P	Pn	23 56 46.2	+0.5
BRG	Berggiesshubel	18.17 331	P	Pn	23 56 46.2	+0.5
SET	Setif	18.23 278	P	Pn	23 56 48.0	+1.4
SET	Setif	18.23 278	P	Pn	23 56 48.0	+1.4
VRHR	Novokhopersk	18.24 29	eP	Pn	23 56 48.6	+2.1
VRHR			eS	S	00 00 06.7	-3.6
VRHR			pmax	pmax		
comp=N,9.0nm,0.6s						
VRHR			pmax	pmax		
comp=E,10.0nm,0.6s						
VRHR			pmax	pmax		
comp=Z,10.0nm,0.6s						
VRHR			smax			
comp=N,30nm,4.4s						
VRHR			smax			
comp=Z,10.0nm,4.4s						
VRHR			smax			
comp=E,4.0nm,2.2s						
HDH	Heidenheim-Cha	18.30 320	P	Pn	23 56 46.4	-0.8
HDH	Heidenheim-Cha	18.30 320	P	Pn	23 56 46.4	-0.8
SURF	Saint Ours	18.31 305	eP	Pn	23 56 45.9	-1.5
SURF	Saint Ours	18.31 305	eP	Pn	23 56 45.9	-1.5
NKC	Novy Kostel	18.32 327	eP	Pn	23 56 46.9	-0.6
NKC			eS	S	00 00 34.7	+22
NKC	Novy Kostel	18.32 327⇑	eP	Pn	23 56 46.9	-0.6
NKC			eXS	sS	00 00 34.7	+0.9
NKC			AMS	AMS	00 04 30.0	
comp=E,300nm,14.4s						
NKC	Novy Kostel	18.32 327	eP	Pn	23 56 46.9	-0.6
NKC			eS	S	00 00 34.7	+22
MBDF	Montbardon	18.43 306⇑	iP	Pn	23 56 46.7	-2.2
comp=E,240nm,0.7s						
MBDF	Montbardon	18.43 306⇑	iP	Pn	23 56 46.7	-2.2
MBDF			pmax	pmax		
comp=Z,120nm,0.7s						
MBDF	Montbardon	18.43 306⇑	iP	Pn	23 56 46.7	-2.2
comp=Z,120nm,0.7s						
TANN	Tannenbergstha	18.45 327	eP	Pn	23 56 47.9	-1.1
comp=Z,164nm,1.1s						
SISB	Singen-Schiene	18.45 316	P	Pn	23 56 48.3	-0.8
SISB	Singen-Schiene	18.45 316	P	Pn	23 56 48.3	-0.8
GUNZ	Gunzen	18.47 327	eP	Pn	23 56 48.0	-1.3
comp=Z,231nm,1.2s						
GRFO	Grafenberg	18.51 324	P	Pn	23 56 48.9	-0.8
GRF	Grafenberg Arr	18.51 324	eP	Pn	23 56 48.6	-1.1
comp=Z,244nm,0.9s						
GRF	Grafenberg Arr	18.51 324	eP	Pn	23 56 48.6	-1.1
GRF			pmax	pmax		
comp=Z,244nm,0.9s						
GRF	Grafenberg Arr	18.51 324	eP	Pn	23 56 48.6	-1.1
comp=Z,244nm,0.9s						
WERD	Werda	18.54 327	eP	Pn	23 56 49.0	-1.1
comp=Z,153nm,0.8s						
SUW	Suwalki	18.56 351⇑	eP	Pn	23 56 48.0	-2.3
SUW			eS	S	00 00 16.9	-0.8
SUW			pmax	pmax		
comp=Z,200nm,0.9s						
SUW			MLR	MLR		
comp=Z,200nm,26.1s						
SUW	Suwalki	18.56 351	eP	Pn	23 56 48.1	-2.2
comp=Z,168nm,0.8s						
SUW	Suwalki	18.56 351	eP	Pn	23 56 48.1	-2.2
comp=Z,168nm,0.8s						
GUT	Gutenstein	18.58 317	P	Pn	23 56 49.0	-1.7
GUT	Gutenstein	18.58 317	P	Pn	23 56 49.0	-1.7
BNI	Bardonecchia	18.61 306	eP	Pn	23 56 49.7	-1.4
BNI			pmax	pmax		
comp=Z,45nm,0.7s						
BNI	Bardonecchia	18.61 306	ePn	Pn	23 56 49.7	-1.4
comp=Z,45nm,0.7s						
BNI	Bardonecchia	18.61 306	ePn	Pn	23 56 49.7	-1.4
comp=Z,45nm,0.7s						
BUCH	Bad Urach	18.67 319	P	Pn	23 56 50.3	-1.4
BUCH	Bad Urach	18.67 319	P	Pn	23 56 50.3	-1.4
LPG	La Plagne	18.74 308⇑	iP	Pn	23 56 50.7	-1.9
comp=Z,211nm,0.7s						
LPG	La Plagne	18.74 308⇑	iP	Pn	23 56 50.7	-1.9
LPG			pmax	pmax		
comp=Z,105nm,0.7s						
LPG	La Plagne	18.74 308⇑	iP	Pn	23 56 50.7	-1.9
comp=Z,105nm,0.7s						
MICGM	Minsk	18.75 360	eP	Pn	23 56 48.0	-4.6
MNK	Minsk	18.75 360	eP	Pn	23 56 48.0	-4.6
MNK			pmax	pmax		
comp=Z,680nm,0.8s						
LPL	La Plagne	18.76 308⇑	iP	Pn	23 56 50.9	-1.9
comp=Z,328nm,0.6s						
LPL	La Plagne	18.76 308⇑	iP	Pn	23 56 50.9	-1.9
LPL			pmax	pmax		
comp=Z,164nm,0.6s						
LPL	La Plagne	18.76 308⇑	iP	Pn	23 56 50.9	-1.9
comp=Z,164nm,0.6s						
SPAK	Spaichingen-Ko	18.78 317	eP	Pn	23 56 51.8	-1.3
SPAK	Spaichingen-Ko	18.78 317	eP	Pn	23 56 51.8	-1.3
AKF	Akfadou	18.87 280	P	Pn	23 56 55.5	+1.3
AKF	Akfadou	18.87 280	P	Pn	23 56 55.5	+1.3
CLL	Collm	18.89 330	eP	Pn	23 56 52.6	-1.7
comp=Z,122nm,0.6s						
CLL	Collm	18.89 330⇓	iP	Pn	23 56 53.3	-1.0
CLL			eS	S	00 00 23.0	-1.5
CLL			pmax	pmax		
comp=Z,126nm,0.7s						
CLL	Collm	18.89 330⇓	iP	Pn	23 56 53.3	-1.0
comp=Z,126nm,0.7s						
CLL			i		23 56 55.5	
CLL			eS	S	00 00 23.0	-1.5
CLL			eScP	ScP	00 04 48.0	+0.3
CLL	Collm	18.89 330⇓	iP	Pn	23 56 53.3	-1.0
comp=Z,126nm,0.7s						
CLL			ePIp		23 56 54.0	
comp=Z,100nm,17.7s						
CLL			i		23 56 55.5	
CLL			eS	S	00 00 23.0	-1.5
CLL			e		00 00 53.0	
CLL			eScP	ScP	00 04 48.0	+0.3
CLL			ePcS	PcS	00 04 53.0	-0.8
CLL	Collm	18.89 330⇓	iP	Pn	23 56 53.3	-1.0
STU	Stuttgart	18.95 319	eP	Pn	23 56 53.4	-1.6
comp=Z,347nm,0.8s						
STU	Stuttgart	18.95 319	eP	Pn	23 56 53.8	-1.2
STU			pmax	pmax		
comp=Z,332nm,0.8s						
STU	Stuttgart	18.95 319	ePn	Pn	23 56 53.8	-1.2
comp=Z,332nm,0.8s						
STU	Stuttgart	18.95 319	ePn	Pn	23 56 53.8	-1.2
comp=Z,332nm,0.8s						
SMRF	Simiane la Rot	18.98 302⇑	iP	Pn	23 56 53.4	-2.1
comp=Z,100nm,0.9s						
SMRF	Simiane la Rot	18.98 302⇑	iP	Pn	23 56 53.4	-2.1
comp=Z,100nm,0.9s						
MOX	Moxa	18.99 327	i P	Pn	23 56 54.4	-1.1
comp=Z,250nm,1.2s						
MOX						
comp=Z,200nm,17.0s						
MOX	Moxa	18.99 327	eP	Pn	23 56 53.7	-1.8
comp=Z,286nm,1.0s						
MOX	Moxa	18.99 327	i P	Pn	23 56 54.4	-1.1
comp=Z,250nm,1.2s						
GDM	Grand'Maison	19.04 306	eP	Pn	23 56 54.4	-1.8
GDM	Grand'Maison	19.04 306	eP	Pn	23 56 54.4	-1.8
GKP	Gorka Klasztor	19.07 340⇑	eP	Pn	23 56 54.8	-1.6
GKP			eS	S	00 00 26.1	-2.0
GKP			pmax	pmax		
comp=Z,200nm,0.4s						
GKP			MLR	MLR		
comp=Z,500nm,18.2s						
GKP	Gorka Klasztor	19.07 340	P	Pn	23 56 54.5	-1.9
GKP	Gorka Klasztor	19.07 340	P	Pn	23 56 54.5	-1.9
SIND	Sindeldorf	19.08 321	P	Pn	23 56 55.1	-1.6
SIND	Sindeldorf	19.08 321	P	Pn	23 56 55.1	-1.6
ORIF	Oris-en-Rattie	19.09 305⇑	iP	Pn	23 56 54.1	-2.7
comp=Z,99nm,0.6s						
ORIF			eMLR	MLR		
comp=Z,250nm,21.2s						
ORIF	Oris-en-Rattie	19.09 305⇑	iP	Pn	23 56 54.1	-2.7
ORIF			pmax	pmax		
comp=Z,49nm,0.6s						
ORIF	Oris-en-Rattie	19.09 305⇑	iP	Pn	23 56 54.1	-2.7
comp=Z,49nm,0.6s						
LBG	Lerchenberg	19.10 318	P	Pn	23 56 55.7	-1.1
LBG	Lerchenberg	19.10 318	P	Pn	23 56 55.7	-1.1
FELD	Feldberg im Sc	19.10 315	eP	Pn	23 56 54.9	-1.9
FELD	Feldberg im Sc	19.10 315	eP	Pn	23 56 54.9	-1.9
BFO	Black Forest	19.16 317	Pn	Pn	23 56 56.6	-1.0
comp=Z,1μm,0.5s,SNR=74						
BFO	Black Forest	19.16 317	eP	Pn	23 56 55.6	-2.0
comp=Z,115nm,0.6s						
BFO	Black Forest	19.16 317	ePn	Pn	23 56 56.2	-1.4
comp=Z,0.4nm,0.6s						
BFO	Black Forest	19.16 317	ePn	Pn	23 56 56.2	-1.4
comp=Z,0.4nm,0.6s						
NACGM	Naroch	19.17 358	e	Pn	23 56 52.0	-5.6
BBS	Basel-Blauen	19.17 314	eP	Pn	23 56 55.9	-1.8
BBS	Basel-Blauen	19.17 314	eP	Pn	23 56 55.9	-1.8
ATAF	Djebel Tarf	19.17 277	P	Pn	23 57 00.3	+2.4
ATAF	Djebel Tarf	19.17 277	P	Pn	23 57 00.3	+2.4
KIZ	Kirchzarten	19.19 316	P	Pn	23 56 56.1	-1.8
KIZ	Kirchzarten	19.19 316	P	Pn	23 56 56.1	-1.8
AKET	Djebel Ketaf	19.47 278	P	Pn	23 57 01.1	-0.3
AKET	Djebel Ketaf	19.47 278	P	Pn	23 57 01.1	-0.3
LIBD	Limburg	19.47 316	eP	Pn	23 56 59.8	-1.5
LIBD	Limburg	19.47 316	eP	Pn	23 56 59.8	-1.5
RUE	Ruedersdorf	19.51 333	eP	Pn	23 56 59.3	-2.3
comp=Z,357nm,0.9s						
RUE	Ruedersdorf	19.51 333⇑	iP	Pn	23 56 59.2	-2.5
comp=Z,368nm,1.0s						
RUE	Ruedersdorf	19.51 333⇑	iP	Pn	23 56 59.2	-2.4
comp=Z,368nm,1.0s						
LOMF	Lomont	19.52 313	eP	Pn	23 57 00.0	-1.8
LOMF	Lomont	19.52 313	eP	Pn	23 57 00.0	-1.8
IDID	Didziasalis	19.59 358	eP	Pn	23 56 59.6	-2.9
IDID	Didziasalis	19.59 358	eP	Pn	23 56 59.6	-2.9
SNR=34						
MOF	Molkenrain	19.59 315	eP	Pn	23 57 00.4	-2.2
MOF	Molkenrain	19.59 315	eP	Pn	23 57 00.4	-2.2
CABF	La Chapelle	19.63 310⇑	iP	Pn	23 57 00.0	-3.2
comp=Z,203nm,0.6s						
CABF	La Chapelle	19.63 310⇑	iP	Pn	23 57 00.0	-3.2
CABF			pmax	pmax		
comp=Z,102nm,0.6s						
CABF	La Chapelle	19.63 310⇑	iP	Pn	23 57 00.0	-3.2
comp=Z,102nm,0.6s						
IIGN	Ignalina	19.64 357	eP	Pn	23 57 00.2	-2.9
IIGN	Ignalina	19.64 357	eP	Pn	23 57 00.2	-3.0
SNR=34						
TOD	Tromm	19.66 321	eP	Pn	23 57 01.3	-2.1
TOD	Tromm	19.66 321	eP	Pn	23 57 01.3	-2.1
HINF	Hinteralfeld	19.73 314⇑	iP	Pn	23 57 01.0	-3.3
comp=Z,106nm,0.9s						
HINF	Hinteralfeld	19.73 314⇑	iP	Pn	23 57 01.0	-3.3
HINF			pmax	pmax		
comp=Z,53nm,0.9s						
HINF	Hinteralfeld	19.73 314⇑	iP	Pn	23 57 01.0	-3.3
comp=Z,53nm,0.9s						
ECH	Echery	19.76 315	eP	Pn	23 57 03.4	-1.3
ECH	Echery	19.76 315	eP	Pn	23 57 02.2	-2.5
ECH			pmax	pmax		
comp=Z,140nm,0.8s						
ECH	Echery	19.76 315	eP	Pn	23 57 02.2	-2.5
comp=Z,140nm,0.8s						
ECH	Echery	19.76 315	eP	Pn	23 57 03.4	-1.3
CDF	Champ du Feu	19.80 316⇑	iP	Pn	23 57 02.3	-2.8
comp=Z,630nm,0.8s						
CDF	Champ du Feu	19.80 316⇑	iP	Pn	23 57 02.3	-2.8
CDF			pmax	pmax		
comp=Z,315nm,0.8s						
CDF	Champ du Feu	19.80 316⇑	iP	Pn	23 57 02.3	-2.8
comp=Z,315nm,0.8s						
LANF	Langenberg	19.82 318	eP	Pn	23 57 02.9	-2.4
LANF	Langenberg	19.82 318	eP	Pn	23 57 02.9	-2.4
ADJB	Djebel Djouab	19.82 278	P	Pn	23 57 04.3	-1.2
ADJB	Djebel Djouab	19.82 278	P	Pn	23 57 04.3	-1.2
KTD	Kalmit	19.86 319	eP	Pn	23 57 03.9	-1.9
KTD	Kalmit	19.86 319	eP	Pn	23 57 03.9	-1.9
VIVF	Saint-Julien-l	19.88 304⇑	iP	Pn	23 57 02.0	-4.1
comp=Z,203nm,0.7s						
VIVF	Saint-Julien-l	19.88 304⇑	iP	Pn	23 57 02.0	-4.1
VIVF			pmax	pmax		
comp=Z,102nm,0.7s						
VIVF	Saint-Julien-l	19.88 304⇑	iP	Pn	23 57 02.0	-4.1
comp=Z,102nm,0.7s						
IZAR	Zarasai	20.04 357	eP	P	23 57 04.5	-1.1
IZAR	Zarasai	20.04 357	eP	P	23 57 04.5	-1.1
SNR=34						
SSB	Saint Sauveur	20.11 305	eP	P	23 57 04.8	-1.7
SSB			pmax	pmax		
comp=Z,26nm,0.6s						
SSB	Saint Sauveur	20.11 305	eP	P	23 57 04.8	-1.7
comp=Z,26nm,0.6s						
SSB	Saint Sauveur	20.11 305	eP	P	23 57 04.8	-1.7
comp=Z,26nm,0.6s						
HAU	Haudompre	20.12 314⇑	iP	P	23 57 05.8	-0.8
comp=Z,223nm,0.7s						
HAU			eMLR	MLR		
comp=Z,259nm,21.2s,MS3.2						
HAU	Haudompre	20.12 314⇑	iP	P	23 57 05.8	-0.8
HAU			pmax	pmax		
comp=Z,111nm,0.7s						
HAU			MLR	MLR		
comp=Z,260nm,21.3s,MS3.5						
HAU	Haudompre	20.12 314⇑	iP	P	23 57 05.8	-0.8
comp=Z,111nm,0.7s						
HAU			LR	LR		
comp=Z,260nm,21.3s,MS3.5						
LASF	Ste Croix	20.20 302⇑	iP	P	23 57 05.6	-1.9
comp=Z,89nm,0.7s						
TNS	Taunus Mts	20.22 322	eP	P	23 57 06.4	-1.2
comp=Z,533nm,0.8s						
ETOS	Mallorca	20.23 289	⇑P	P	23 57 09.5	+1.6
comp=Z,67nm,0.7s						
ETOS	Mallorca	20.23 289	⇑P	P	23 57 09.5	+1.6
comp=Z,67nm,0.7s						
OBN	Obninsk	20.26 14⇑	eP	P	23 57 07.6	-0.5
OBN			eS	S	00 00 50.4	-1.5
OBN			pmax	pmax		
comp=Z,79nm,0.8s						
OBN			MLR	MLR		
comp=Z,300nm,22.0s,MS3.6						
OBN	Obninsk	20.26 14	eP	P	23 57 07.7	-0.4
comp=Z,88nm,0.6s						
OBN	Obninsk	20.26 14	eP	P	23 57 07.7	-0.4
comp=Z,88nm,0.6s						
CLZ	Clausthal	20.39 328	eP	P	23 57 08.4	-1.1
comp=Z,60nm,0.9s						
THEF	They Montfort	20.44 314	eP	P	23 57 09.5	-0.6
THEF	They Montfort	20.44 314	eP	P	23 57 09.5	-0.6
ABH	Alteburg	20.47 320	eP	P	23 57 09.9	-0.5
ABH	Alteburg	20.47 320	eP	P	23 57 09.9	-0.5
EJON	La Jonquera	20.51 297	P	P	23 57 10.3	-0.5
comp=Z,39nm,0.8s						
EJON	La Jonquera	20.51 297	P	P	23 57 10.3	-0.6
comp=Z,39nm,0.8s						
SJAF	Saint Jean de	20.52 297	eP	P	23 57 09.2	-1.8
SJAF	Saint Jean de	20.52 297	eP	P	23 57 09.2	-1.8
RUP	Ruppelstein	20.63 319	eP	P	23 57 11.5	-0.6
RUP	Ruppelstein	20.63 319	eP	P	23 57 11.5	-0.6
CFON	Fontmartina	20.73 295	P	P	23 57 12.2	-1.0
comp=Z,87nm,0.8s						
CFON	Fontmartina	20.73 295	P	P	23 57 12.2	-1.0
comp=Z,87nm,0.8s						
FILF	Fillols	20.77 297	eP	P	23 57 13.0	-0.7
FILF	Fillols	20.77 297	eP	P	23 57 13.0	-0.7
LRDF	Laroque-de-Fa	20.86 298	eP	P	23 57 13.0	-1.6
LRDF	Laroque-de-Fa	20.86 298	eP	P	23 57 13.0	-1.6
PLDF	La Plantade	20.95 307	eP	P	23 57 15.2	-0.4
PLDF	La Plantade	20.95 307	eP	P	23 57 15.2	-0.4
LBL	Lubilhac	20.95 304	eP	P	23 57 16.4	+0.8
LBL	Lubilhac	20.95 304	eP	P	23 57 16.4	+0.8
SMF	Signal de Mont	21.06 309⇑	iP	P	23 57 15.1	-1.6
comp=Z,217nm,0.6s,mb5.3						
SMF	Signal de Mont	21.06 309⇑	iP	P	23 57 15.1	-1.6
SMF			pmax	pmax		
comp=Z,109nm,0.6s,mb5.4						
SMF	Signal de Mont	21.06 309⇑	iP	P	23 57 15.1	-1.6
comp=Z,109nm,0.6s,mb5.4						
MOS	Moscow	21.07 15	eP	P	23 57 13.8	-2.9
MOS			eS	S	00 01 03.7	-4.0
MOS			pmax	pmax		
comp=Z,500nm,3.4s						
MOS			pmax	pmax		
comp=Z,63nm,0.9s,mb5.0						
WLF	Walferdange	21.09 318	P	P	23 57 17.1	0.0
comp=Z,61nm,1.1s,mb4.8						
WLF	Walferdange	21.09 318	eP	P	23 57 16.1	-1.0
comp=Z,98nm,0.9s,mb5.1						
WLF	Walferdange	21.09 318	eP	P	23 57 16.2	-0.9
WLF			pmax	pmax		
comp=Z,89nm,0.8s,mb5.2						
WLF	Walferdange	21.09 318	eP	P	23 57 16.2	-0.9
comp=Z,89nm,0.8s,mb5.2						
WLF	Walferdange	21.09 318	eP	P	23 57 16.2	-0.9
comp=Z,89nm,0.8s,mb5.2						
MEZF	Maizieres J'vi	21.12 314⇑	iP	P	23 57 16.8	-0.6
comp=Z,423nm,0.8s,mb5.5,baz=116						
MEZF	Maizieres J'vi	21.12 314⇑	iP	P	23 57 16.8	-0.6
comp=Z,423nm,0.8s,mb5.8						
CARF	Carcanieres	21.12 297	eP	P	23 57 15.5	-2.0
CARF	Carcanieres	21.12 297	eP	P	23 57 15.5	-2.0
VALF	Valcebollere	21.13 296	eP	P	23 57 16.7	-0.9
VALF	Valcebollere	21.13 296	eP	P	23 57 16.7	-0.9
MTLF	Montolieu	21.17 299⇑	iP	P	23 57 16.5	-1.5
comp=Z,78nm,0.5s,mb5.0						
MTLF	Montolieu	21.17 299⇑	iP	P	23 57 16.5	-1.5
MTLF			pmax	pmax		
comp=Z,39nm,0.5s,mb5.0						
MTLF	Montolieu	21.17 299⇑	iP	P	23 57 16.5	-1.5
comp=Z,39nm,0.5s,mb5.0						
CLLI	Llivia	21.18 296	P	P	23 57 17.9	-0.2
CLLI	Llivia	21.18 296	P	P	23 57 17.9	-0.2
PYM	Petit Puy Mans	21.28 306	eP	P	23 57 19.2	+0.1
PYM	Petit Puy Mans	21.28 306	eP	P	23 57 19.2	+0.1
LOR	Lormes	21.29 310⇑	iP	P	23 57 17.7	-1.5
comp=Z,70nm,0.5s,mb4.9,baz=119						
LOR			eMLR	MLR		
comp=Z,256nm,

comp=Z,120nm,0.7s,mb5.3
EMIR Miracle 21.42 295 ⇑P P 23 57 21.1 +0.4
comp=Z,120nm,0.7s,mb5.3
AVF Avril sur Loir 21.42 309⇑*i*P P 23 57 19.1 -1.6
comp=Z,103nm,0.6s,mb5.1
AVF Avril sur Loir 21.42 309⇑*i*P P 23 57 19.1 -1.6
AVF pmax pmax
comp=Z,52nm,0.6s,mb5.0
AVF Avril sur Loir 21.42 309⇑*i*P P 23 57 19.1 -1.6
comp=Z,52nm,0.6s,mb5.0
SSF Saint Saulge 21.43 309⇑*i*P P 23 57 19.3 -1.4
comp=Z,296nm,0.6s,mb5.5
SSF Saint Saulge 21.43 309⇑*i*P P 23 57 19.3 -1.4
SSF pmax pmax
comp=Z,148nm,0.6s,mb5.5
SSF Saint Saulge 21.43 309⇑*i*P P 23 57 19.3 -1.4
comp=Z,148nm,0.6s,mb5.5
BUG Bochum–Univer 21.56 323 *e*P P 23 57 20.4 -1.7
comp=Z,124nm,1.1s,mb5.2
BGF Bois d'Agland 21.66 308⇑*i*P P 23 57 21.9 -1.3
comp=Z,128nm,0.5s,mb5.3
BGF Bois d'Agland 21.66 308⇑*i*P P 23 57 21.9 -1.3
BGF pmax pmax
comp=Z,64nm,0.5s,mb5.3
BGF Bois d'Agland 21.66 308⇑*i*P P 23 57 21.9 -1.3
comp=Z,64nm,0.5s,mb5.3
CAF Calviac 21.66 303⇑*i*P P 23 57 22.3 -0.9
comp=Z,126nm,0.9s,mb5.0
CAF Calviac 21.66 303⇑*i*P P 23 57 22.3 -0.9
CAF pmax pmax
comp=Z,63nm,0.9s,mb5.0
CAF Calviac 21.66 303⇑*i*P P 23 57 22.3 -0.9
comp=Z,63nm,0.9s,mb5.0
EPOB Poblet 21.68 293 ⇑P P 23 57 22.2 -1.3
comp=Z,60nm,0.7s,mb5.1
EPOB Poblet 21.68 293 ⇑P P 23 57 22.2 -1.3
comp=Z,60nm,0.7s,mb5.1
MEM Membach 21.70 320 P P 23 57 23.4 -0.2
CSOR Sort 21.78 296 ⇑P P 23 57 24.1 -0.3
comp=Z,178nm,0.6s,mb5.7
CSOR Sort 21.78 296 ⇑P P 23 57 24.1 -0.4
comp=Z,178nm,0.6s,mb5.7
SALF Salau 21.80 297 *e*P P 23 57 23.5 -1.2
SALF Salau 21.80 297 *e*P P 23 57 23.5 -1.2
HGN Heimansgroeve 21.83 320 *e*P P 23 57 23.3 -1.7
comp=Z,38nm,0.8s,mb4.9
IBBN Ibbenburen 21.89 325 *e*P P 23 57 23.7 -1.8
comp=Z,50nm,0.7s,mb5.0
MLS Moulis 21.90 297 *e*P sP 23 57 53.2 +6.9
MLS Moulis 21.90 297 *e*P sP 23 57 53.2 +6.9
BSEG Bad Segeberg 21.95 331 *e*P P 23 57 25.0 -1.2
comp=Z,120nm,0.8s,mb5.4
BCLA Clavier 21.97 319 P P 23 57 26.4 -0.1
comp=Z,76nm,1.4s,mb4.9
BEBN Eben Emael 21.98 320 P P 23 57 26.0 -0.6
comp=Z,13nm,0.9s,mb4.3
TCF Toulx Ste Croi 21.98 307⇑*i*P P 23 57 25.3 -1.3
comp=Z,137nm,1.0s,mb5.0
TCF Toulx Ste Croi 21.98 307⇑*i*P P 23 57 25.3 -1.3
TCF pmax pmax
comp=Z,69nm,1.0s,mb5.0
TCF Toulx Ste Croi 21.98 307⇑*i*P P 23 57 25.3 -1.3
comp=Z,69nm,1.0s,mb5.0
GIVF Givet 22.06 318⇑*i*P P 23 57 25.2 -2.2
HYF Humbligny 22.06 309⇑*i*P P 23 57 26.5 -0.9
WTSB Winterswijk 22.12 324 *e*P P 23 57 25.9 -2.1
comp=Z,32nm,0.9s,mb4.8
MELF Melles 22.13 297 *e*P P 23 57 27.9 -0.3
MELF Melles 22.13 297 *e*P P 23 57 27.9 -0.3
RJF Les Rejaudoux 22.14 304⇑*i*P P 23 57 27.3 -1.0
comp=Z,98nm,0.8s,mb5.0
RJF *e*MLR MLR
comp=Z,273nm,22.2s,MS3.3
RJF Les Rejaudoux 22.14 304⇑*i*P P 23 57 27.3 -1.0
RJF pmax pmax
comp=Z,49nm,0.8s,mb5.0
RJF MLR MLR
comp=Z,270nm,22.3s,MS3.6
RJF Les Rejaudoux 22.14 304⇑*i*P P 23 57 27.3 -1.0
comp=Z,49nm,0.8s,mb5.0
RJF LR LR
comp=Z,270nm,22.3s,MS3.6
DOU Dourbes 22.18 317 P P 23 57 27.4 -1.3
comp=Z,27nm,0.9s,mb4.7
ERTA Horta de San J 22.21 292 ⇓P P 23 57 28.8 -0.3
comp=Z,50nm,0.6s,mb5.1
ERTA Horta de San J 22.21 292 ⇓P P 23 57 28.8 -0.3
comp=Z,50nm,0.6s,mb5.1
BAIF Baives 22.37 317⇑*i*P P 23 57 29.0 -1.7
comp=Z,146nm,0.7s,mb5.2
BAIF Baives 22.37 317⇑*i*P P 23 57 29.0 -1.7
BAIF pmax pmax
comp=Z,73nm,0.7s,mb5.2
BAIF Baives 22.37 317⇑*i*P P 23 57 29.0 -1.7
comp=Z,73nm,0.7s,mb5.2
RESF Ens 22.42 297 *e*P P 23 57 30.0 -1.3
RESF Ens 22.42 297 *e*P P 23 57 30.0 -1.3
EPF Esparros 22.46 297⇑*i*P P 23 57 29.9 -1.8
comp=Z,39nm,0.6s,mb4.7
EPF Esparros 22.46 297⇑*i*P P 23 57 29.9 -1.8
EPF pmax pmax
comp=Z,19nm,0.6s,mb4.7
EPF Esparros 22.46 297⇑*i*P P 23 57 29.9 -1.8
comp=Z,19nm,0.6s,mb4.7
EBIE Bielsa 22.55 296 P P 23 57 31.9 -0.8
comp=Z,20nm,0.4s,mb4.9
EBIE Bielsa 22.55 296 P P 23 57 31.9 -0.8
comp=Z,20nm,0.4s,mb4.9
SNF Seneffe 22.57 318 P P 23 57 32.2 -0.6
comp=Z,24nm,1.1s,mb4.5
EBEN Beniarda 22.57 286 P P 23 57 33.3 +0.4
comp=Z,29nm,0.7s,mb4.8
EBEN Beniarda 22.57 286 P P 23 57 33.3 +0.3
comp=Z,29nm,0.7s,mb4.8
LFF La Frestale 22.57 302⇑*i*P P 23 57 31.8 -1.1
comp=Z,72nm,0.7s,mb4.9
LFF La Frestale 22.57 302⇑*i*P P 23 57 31.8 -1.1
LFF pmax pmax
comp=Z,36nm,0.7s,mb4.9
LFF La Frestale 22.57 302⇑*i*P P 23 57 31.8 -1.1
comp=Z,36nm,0.7s,mb4.9
LABF Labassere 22.65 297 *e*P P 23 57 33.5 -0.3
LABF Labassere 22.65 297 *e*P P 23 57 33.5 -0.3
VIEF Viey 22.66 297 *e*P P 23 57 32.4 -1.5
VIEF Viey 22.66 297 *e*P P 23 57 32.4 -1.5
VSU Vasula 22.74 358 *e*P P 23 57 33.1 -1.4
VSU pmax pmax
comp=Z,62nm,0.8s,mb5.1
EMOS Mosqueruela 22.78 290 P P 23 57 35.8 +0.7
comp=Z,90nm,1.4s,mb5.0
EMOS Mosqueruela 22.78 290 P P 23 57 35.8 +0.6
comp=Z,90nm,1.4s,mb5.0
ESAC San Caprasio 22.88 294 P P 23 57 36.3 +0.1
comp=Z,57nm,0.4s,mb5.4
ESAC San Caprasio 22.88 294 P P 23 57 36.3 +0.1
comp=Z,57nm,0.4s,mb5.4
REYF Montagne du Re 22.99 297 *e*P P 23 57 36.4 -1.0
REYF Montagne du Re 22.99 297 *e*P P 23 57 36.4 -1.0
ETSF Etsaut 23.09 297⇑*i*P P 23 57 37.9 -0.5
comp=Z,46nm,0.4s,mb4.9
ETSF Etsaut 23.09 297⇑*i*P P 23 57 37.9 -0.5
ETSF pmax pmax
comp=Z,23nm,0.4s,mb5.0
ETSF Etsaut 23.09 297⇑*i*P P 23 57 37.9 -0.5
comp=Z,23nm,0.4s,mb5.0
ECHE Chera 23.14 288 P P 23 57 39.6 +0.6
ECHE pmax pmax
comp=Z,119nm,1.0s,mb5.3
ECHE Chera 23.14 288 P P 23 57 39.6 +0.6
comp=Z,119nm,1.0s,mb5.3
ECHE Chera 23.14 288 P P 23 57 39.6 +0.6
comp=Z,119nm,1.0s,mb5.3
CART Cartagena 23.24 283 *e*P P 23 57 39.4 -0.5
CART Cartagena 23.24 283 *e*P P 23 57 39.4 -0.5
TAM Tamanrasset 23.35 243 *e*P P 23 57 42.9 +1.8
comp=Z,3.9nm,0.6s,mb4.0
TAM Tamanrasset 23.35 243 *e*P P 23 57 42.9 +1.8
comp=Z,3.9nm,0.6s,mb4.0
EMUR La Murta 23.41 284 P P 23 57 41.3 -0.2
comp=Z,82nm,1.3s,mb5.0
EMUR La Murta 23.41 284 P P 23 57 41.3 -0.1
comp=Z,82nm,1.3s,mb5.0
ORDF Ordiarp 23.41 297 *e*P P 23 57 40.2 -1.2
ORDF Ordiarp 23.41 297 *e*P P 23 57 40.2 -1.2
SJPF Ste Jean 23.60 297⇑*i*P P 23 57 43.0 -0.2
comp=Z,65nm,0.5s,mb5.0
SJPF Ste Jean 23.60 297⇑*i*P P 23 57 43.0 -0.2
SJPF pmax pmax
comp=Z,33nm,0.5s,mb5.0
SJPF Ste Jean 23.60 297⇑*i*P P 23 57 43.0 -0.2
comp=Z,33nm,0.5s,mb5.0
ETOB Tobarra 23.61 286 P P 23 57 43.9 +0.6
comp=Z,76nm,1.3s,mb5.0
ETOB Tobarra 23.61 286 P P 23 57 43.8 +0.5
comp=Z,76nm,1.3s,mb5.0
MFF Saint Martin d 23.63 306⇑*i*P P 23 57 42.2 -1.1
comp=Z,201nm,0.7s,mb5.4
MFF Saint Martin d 23.63 306⇑*i*P P 23 57 42.2 -1.1
MFF pmax pmax
comp=Z,100nm,0.7s,mb5.3
MFF Saint Martin d 23.63 306⇑*i*P P 23 57 42.2 -1.1
comp=Z,100nm,0.7s,mb5.4
OSSF Osses 23.65 297 *e*P P 23 57 43.2 -0.4
OSSF Osses 23.65 297 *e*P P 23 57 43.2 -0.4
EALK Alkurruntz 23.82 297 P P 23 57 45.9 +0.7
comp=Z,60nm,1.0s,mb5.0
EALK Alkurruntz 23.82 297 P P 23 57 45.9 +0.7
comp=Z,60nm,1.0s,mb5.0
ELIZ Elizondo 23.83 297 P P 23 57 45.9 +0.7
ELIZ pmax pmax
comp=Z,40nm,0.5s,mb5.1
ELIZ Elizondo 23.83 297 P P 23 57 45.9 +0.6
comp=Z,40nm,0.5s,mb5.1
ELIZ Elizondo 23.83 297 P P 23 57 45.9 +0.7
comp=Z,40nm,0.5s,mb5.1
ETOR Torete 24.01 291 P P 23 57 47.0 +0.1
ETOR pmax pmax
comp=Z,40nm,0.4s,mb5.2
ETOR Torete 24.01 291 P P 23 57 47.0 +0.2
comp=Z,40nm,0.4s,mb5.2
ETOR Torete 24.01 291 P P 23 57 47.0 +0.1
comp=Z,40nm,0.4s,mb5.2
PUL Pulkovo 24.08 3⇑*i*P P 23 57 46.2 -1.1
PUL pmax pmax
comp=Z,123nm,0.9s,mb5.3
ABKT Ailbek 24.22 76 P P 23 57 50.7 +1.9
comp=Z,106nm,1.1s,mb5.2,SNR=9.1
ENIJ Nijar 24.25 282 P P 23 57 49.3 +0.2
ENIJ pmax pmax
comp=Z,101nm,0.7s,mb5.4
ENIJ Nijar 24.25 282 P P 23 57 49.3 +0.2
comp=Z,101nm,0.7s,mb5.4
ENIJ Nijar 24.25 282 P P 23 57 49.3 +0.2
comp=Z,101nm,0.7s,mb5.4
LDF La Druitiere 24.27 311⇑*i*P P 23 57 47.2 -2.0
comp=Z,231nm,0.7s,mb5.4
LDF La Druitiere 24.27 311⇑*i*P P 23 57 47.2 -2.0
LDF pmax pmax
comp=Z,116nm,0.7s,mb5.4
LDF La Druitiere 24.27 311⇑*i*P P 23 57 47.2 -2.0
comp=Z,116nm,0.7s,mb5.4
MUD Monsted U'grnd 24.30 334 *e*P P 23 57 47.8 -1.6
MUD pmax pmax
comp=Z,26nm,0.9s,mb4.7
MUD Monsted U'grnd 24.30 334 *i*P P 23 57 47.8 -1.6
comp=Z,26nm,0.9s,mb4.7
MUD Monsted U'grnd 24.30 334 *e*P P 23 57 47.8 -1.6
EVIA Vianos 24.36 286 P P 23 57 50.3 +0.2
EVIA pmax pmax
comp=Z,53nm,0.6s,mb5.2
EVIA Vianos 24.36 286 P P 23 57 50.3 +0.2
comp=Z,53nm,0.6s,mb5.1
EVIA Vianos 24.36 286 P P 23 57 50.3 +0.2
comp=Z,53nm,0.6s,mb5.1
ECRI Cripan 24.48 296 P P 23 57 51.5 +0.4
ECRI pmax pmax
comp=Z,56nm,0.5s,mb5.2
ECRI Cripan 24.48 296 P P 23 57 51.5 +0.4
comp=Z,56nm,0.5s,mb5.2
ECRI Cripan 24.48 296 P P 23 57 51.5 +0.4
comp=Z,56nm,0.5s,mb5.2
EHUE Huescar 24.48 284 P P 23 57 51.5 +0.3
EHUE pmax pmax
comp=Z,42nm,1.1s,mb4.8
EHUE Huescar 24.48 284 P P 23 57 51.5 +0.3
comp=Z,42nm,1.1s,mb4.8
EHUE Huescar 24.48 284 P P 23 57 51.5 +0.3
comp=Z,42nm,1.1s,mb4.8
FLN La Foliniere 24.56 311⇑*i*P P 23 57 50.1 -1.7
comp=Z,315nm,0.5s,mb5.8,baz=113
FLN *e*MLR MLR
comp=Z,172nm,22.8s,MS3.2
FLN La Foliniere 24.56 311⇑*i*P P 23 57 50.1 -1.7
FLN pmax pmax
comp=Z,157nm,0.5s,mb5.8
FLN MLR MLR
comp=Z,170nm,22.8s,MS3.5
FLN La Foliniere 24.56 311⇑*i*P P 23 57 50.1 -1.7
comp=Z,157nm,0.5s,mb5.8
FLN LR LR
comp=Z,170nm,22.8s,MS3.5
GRR Gorron 24.66 310⇑*i*P P 23 57 50.7 -2.0
comp=Z,595nm,0.5s,mb6.0
GRR Gorron 24.66 310⇑*i*P P 23 57 50.7 -2.0
comp=Z,298nm,0.5s,mb6.1
EBER Berja 24.80 282 P P 23 57 55.4 +1.2
comp=Z,94nm,0.7s,mb5.4
EBER Berja 24.80 282 P P 23 57 55.4 +1.2
comp=Z,94nm,0.7s,mb5.4
EQES Quesada 24.86 284 ⇑P P 23 57 54.9 +0.2
comp=Z,62nm,0.6s,mb5.3
EQES Quesada 24.86 284 ⇑P P 23 57 54.9 +0.3
comp=Z,62nm,0.6s,mb5.3
ELAN Lanestosa 25.22 297 P P 23 57 58.1 +0.2
comp=Z,115nm,0.9s,mb5.4
ELAN Lanestosa 25.22 297 P P 23 57 58.1 +0.2
comp=Z,115nm,0.9s,mb5.4
ECOG Cogollos-Vega 25.30 283 P P 23 57 58.9 +0.2
ECOG pmax pmax
comp=Z,14nm,0.6s,mb4.7
ECOG Cogollos-Vega 25.30 283 P P 23 57 58.9 +0.2
comp=Z,14nm,0.6s,mb4.7
ECOG Cogollos-Vega 25.30 283 P P 23 57 58.9 +0.2
comp=Z,14nm,0.6s,mb4.7
EGUA Guajares 25.35 282 P P 23 57 59.2 +0.1
comp=Z,482nm,0.8s,mb6.1
EGUA Guajares 25.35 282 P P 23 57 59.2 +0.1
comp=Z,482nm,0.8s,mb6.1
EBAN Banos Encina 25.39 285 P P 23 57 59.8 +0.3
EBAN pmax pmax
comp=Z,53nm,0.8s,mb5.1
EBAN Banos Encina 25.39 285 P P 23 57 59.8 +0.3
comp=Z,52nm,0.8s,mb5.1
EBAN Banos Encina 25.39 285 P P 23 57 59.8 +0.3
comp=Z,52nm,0.8s,mb5.1
ESDC Sonseca Array 25.45 288 P P 23 58 00.3 +0.3
comp=Z,86nm,0.8s,mb5.4,baz=84,slow=9.8,SNR=364
ESDC pP pP 23 58 12.4 -2.2
comp=Z,6.8nm,0.5s,baz=81,slow=11,SNR=3.2
ESDC ScP ScP 00 05 06.2 +1.5
comp=Z,2.2nm,0.6s,baz=48,slow=2.9,SNR=8.6
ESDC Sonseca Array 25.45 288 P P 23 58 00.3 +0.3
comp=Z,109nm,0.7s,mb5.5
ESDC Sonseca Array 25.45 288 P P 23 58 00.3 +0.2
comp=Z,109nm,0.7s,mb5.5
ESLA Sonseca Array 25.45 288 *e*P P 23 58 00.1 +0.1
comp=Z,14nm,0.7s,mb4.6
ESLA Sonseca Array 25.45 288 *e*P P 23 58 00.1 0.0
comp=Z,14nm,0.7s,mb4.6
ERON Agron 25.52 282 P P 23 58 00.9 +0.3
comp=Z,19nm,0.8s,mb4.7
ERON Agron 25.52 282 P P 23 58 00.9 +0.2
comp=Z,19nm,0.8s,mb4.7
GUD Guadarrama 25.60 291 P P 23 58 01.7 +0.4
GUD pmax pmax
comp=Z,49nm,0.6s,mb5.2
GUD Guadarrama 25.60 291 P P 23 58 01.7 +0.4
comp=Z,49nm,0.6s,mb5.2
GUD Guadarrama 25.60 291 P P 23 58 01.7 +0.4
comp=Z,49nm,0.6s,mb5.2
SGMF Saint Gilles 25.69 309⇑*i*P P 23 58 00.1 -1.9
comp=Z,116nm,0.5s,mb5.3
SGMF Saint Gilles 25.69 309⇑*i*P P 23 58 00.1 -1.9
SGMF pmax pmax
comp=Z,58nm,0.5s,mb5.4
SGMF Saint Gilles 25.69 309⇑*i*P P 23 58 00.1 -1.9
comp=Z,58nm,0.5s,mb5.4
FINES FINESS Array B 25.74 358 P P 23 58 01.1 -1.3
comp=Z,25nm,0.6s,mb4.9,baz=159,slow=11,SNR=112
FINES pP pP 23 58 14.6 -2.4
comp=Z,14nm,0.8s,baz=169,slow=11,SNR=3.4
FINES PcP PcP 00 01 31.9 +1.1
comp=Z,2.4nm,0.4s,baz=211,slow=1.0,SNR=4.2
FINES LR LR 00 08 48.6
comp=Z,204nm,20.5s,MS3.6,baz=176,slow=38
FINES FINESS Array B 25.74 358 P **P 23 58 01.1 -1.3**
FINES *PP pP 23 58 14.6 -2.3
FINES 00 01 31.9
FINES FINESS Array B 25.74 358 P **P 23 58 01.1 -1.3**
FINES pP pP 23 58 14.6 -2.3
JSA Saint Aubin 25.75 311 P **P 23 58 00.4 -2.2**
JSA AMb AMB 23 58 03.2
comp=Z,108nm,0.8s,mb5.4
JSA Saint Aubin 25.75 311 *e*P **P 23 58 00.4 -2.2**
JSA AMb AMB 23 58 03.2
comp=Z,108nm,0.8s,mb5.4
JSA Saint Aubin 25.75 311 *e*P **P 23 58 00.4 -2.2**
comp=Z,108nm,0.8s,mb5.4
PAB San Pablo 25.76 288 *e*P **P 23 58 03.1 +0.3**
PAB pmax pmax
comp=Z,109nm,0.9s,mb5.4
PAB San Pablo 25.76 288 *e*P **P 23 58 03.0 +0.3**
comp=Z,109nm,0.9s,mb5.4
PAB San Pablo 25.76 288 *e*P **P 23 58 03.0 +0.2**
comp=Z,109nm,0.9s,mb5.4
ELOJ Sierra Loja 25.78 283 P **P 23 58 02.8 -0.2**
ELOJ pmax pmax
comp=Z,19nm,0.8s,mb4.7
ELOJ Sierra Loja 25.78 283 P **P 23 58 02.8 -0.2**
comp=Z,19nm,0.8s,mb4.7
ELOJ Sierra Loja 25.78 283 P **P 23 58 02.8 -0.2**
comp=Z,19nm,0.8s,mb4.7
QUIF Quistinic 25.98 308⇑*i*P P 23 58 02.9 -1.8
comp=Z,96nm,0.5s,mb5.3
QUIF Quistinic 25.98 308⇑*i*P P 23 58 02.9 -1.8
QUIF pmax pmax
comp=Z,48nm,0.5s,mb5.3
QUIF Quistinic 25.98 308⇑*i*P P 23 58 02.9 -1.8
comp=Z,48nm,0.5s,mb5.3
EADA Adamuz 26.01 285 P **P 23 58 05.2 +0.1**
comp=Z,37nm,0.8s,mb5.0
EADA Adamuz 26.01 285 P **P 23 58 05.2 +0.1**
comp=Z,37nm,0.8s,mb5.0
HFS Hagfors 26.08 344 P **P 23 58 03.9 -1.5**
comp=Z,91nm,0.7s,mb5.4,baz=140,slow=12,SNR=106
HFS pP pP 23 58 17.7 -2.3
comp=Z,14nm,0.7s,baz=172,slow=13,SNR=3.2
HFS LR LR 00 09 16.5
comp=Z,159nm,19.9s,MS3.5,baz=150,slow=39
HFS Hagfors 26.08 344 P **P 23 58 03.9 -1.6**
HFS *PP pP 23 58 17.7 -2.3
HFS Hagfors 26.08 344 P **P 23 58 03.9 -1.6**
HFS pP pP 23 58 17.7 -2.3
HFA0 Hagfors New Ar 26.09 344 P **P 23 58 03.0 -2.5**
HFA0 Hagfors New Ar 26.09 344 P **P 23 58 03.0 -2.5**
ROSF Rostrenen 26.17 308⇑*i*P P 23 58 03.9 -2.5
comp=Z,127nm,0.5s,mb5.4
ROSF Rostrenen 26.17 308⇑*i*P P 23 58 03.9 -2.5
ROSF pmax pmax
comp=Z,63nm,0.5s,mb5.4
ROSF Rostrenen 26.17 308⇑*i*P P 23 58 03.9 -2.5
comp=Z,64nm,0.5s,mb5.4
AKTK Aktyubinsk 26.20 47 P **P 23 58 07.8 +1.1**
AKTK ScP ScP 00 05 07.3 +0.7
AKTK LR LR 00 12 12.7
AKTK Aktyubinsk 26.20 47 P **P 23 58 07.8 +1.1**
AKTO Aktyubinsk 26.20 47 P **P 23 58 07.8 +1.1**
comp=Z,13nm,0.8s,mb4.5,baz=255,slow=12,SNR=33
AKTO ScP ScP 00 05 07.3 +0.7
comp=Z,2.1nm,0.7s,baz=209,slow=2.3,SNR=4.3
AKTO LR LR 00 12 12.7
comp=Z,128nm,18.2s,MS3.5,baz=100,slow=45
EMIJ Mijas 26.35 281 P **P 23 58 08.2 0.0**
comp=Z,73nm,0.9s,mb5.2
EMIJ Mijas 26.35 281 P **P 23 58 08.2 +0.1**
comp=Z,73nm,0.9s,mb5.2
KAF Kangasniemi 26.41 358 *e*P **P 23 58 06.2 -2.2**
KAF pmax pmax
comp=Z,10.0nm,0.5s,mb4.6
KAF Kangasniemi 26.41 358 *e*P **P 23 58 06.2 -2.2**
comp=Z,9.8nm,0.5s,mb4.6
KAF Kangasniemi 26.41 358 *e*p **P 23 58 06.2 -2.2**
comp=Z,9.8nm,0.5s,mb4.6
KAF Kangasniemi 26.41 358 *e*P **P 23 58 06.2 -2.2**
comp=Z,9.8nm,0.5s,mb4.6
SWN1 Swindon 26.42 316 P **P 23 58 06.0 -2.7**
SWN1 AMb AMB 23 58 11.4
comp=Z,175nm,1.5s,mb5.4
SWN1 Swindon 26.42 316 *e*P **P 23 58 06.0 -2.7**
SWN1 AMb AMB 23 58 11.4
comp=Z,175nm,1.5s,mb5.4
SWN1 Swindon 26.42 316 *e*P **P 23 58 06.0 -2.7**
comp=Z,175nm,1.5s,mb5.4
EARI Arriondas 26.52 297 ⇑P P 23 58 09.4 -0.2
comp=Z,64nm,0.7s,mb5.3
EARI Arriondas 26.52 297 ⇑P P 23 58 09.4 -0.2
comp=Z,64nm,0.7s,mb5.3
OSL Oslo 26.65 341 *e*P **P 23 58 09.2 -1.4**
OSL AMb AMB 23 58 11.2
comp=Z,61nm,0.9s,mb5.2
OSL Oslo 26.65 341 *e*P **P 23 58 09.2 -1.4**
comp=Z,61nm,0.9s,mb5.1
OSL Oslo 26.65 341 *e*P **P 23 58 09.2 -1.4**
comp=Z,61nm,0.9s,mb5.2,SNR=41
ECAB El Cabril 26.68 285 ⇑P P 23 58 11.2 +0.1
comp=Z,48nm,0.6s,mb5.2
ECAB El Cabril 26.68 285 ⇑P P 23 58 11.2 0.0
comp=Z,48nm,0.6s,mb5.2
CWF Charnwood Fore 26.70 319 P **P 23 58 09.0 -2.1**
CWF AMb AMB 23 58 11.8
comp=Z,43nm,2.5s,mb4.5
CWF Charnwood Fore 26.70 319 *e*P **P 23 58 09.0 -2.1**
CWF AMb AMB 23 58 11.8
comp=Z,43nm,2.5s,mb4.5
CWF Charnwood Fore 26.70 319 *e*P **P 23 58 09.0 -2.1**
comp=Z,43nm,2.5s,mb4.5
KONO Kongsberg 26.72 339 *e*P **P 23 58 09.6 -1.7**
KONO AMb AMB 23 58 13.6
comp=Z,78nm,1.0s,mb5.2
KONO Kongsberg 26.72 339 *e*P **P 23 58 09.0 -2.3**
KONO pmax pmax
comp=Z,121nm,1.2s,mb5.3
KONO Kongsberg 26.72 339 *e*P **P 23 58 09.0 -2.3**
comp=Z,122nm,1.2s,mb5.3
KONO Kongsberg 26.72 339 *e*P **P 23 58 09.6 -1.7**
comp=Z,78nm,1.0s,mb5.2,SNR=41
LIJA Lijar 26.80 282 *i*P **P 23 58 11.9 -0.4**
EJIF Jimena Fronter 26.92 281 P **P 23 58 13.4 +0.1**
EJIF pmax pmax
comp=Z,30nm,0.6s,mb5.0
EJIF Jimena Fronter 26.92 281 P **P 23 58 13.4 +0.1**
comp=Z,30nm,0.6s,mb5.0
EJIF Jimena Fronter 26.92 281 P **P 23 58 13.4 +0.1**
comp=Z,30nm,0.6s,mb5.0
ABKAR Akbulak array 26.96 50 *e*P **P 23 58 14.6 +1.0**
comp=Z,0.2nm,0.2s
ABKAR Akbulak array 26.96 50 *e*P **P 23 58 14.6 +1.0**
comp=Z,0.2nm,0.2s
MDT Midelt 26.98 273 P **P 23 58 13.6 -0.2**
comp=Z,40nm,1.0s,mb4.9,baz=84,slow=12,SNR=28
MDT LR LR 00 10 39.6
comp=Z,92nm,20.2s,MS3.3,baz=86,slow=40
MDT Midelt 26.98 273 P **P 23 58 13.6 -0.3**
HGH Gray Hill 27.05 316 P **P 23 58 13.0 -1.2**
HGH Gray Hill 27.05 316 *e*P **P 23 58 13.0 -1.2**
HGH Gray Hill 27.05 316 *e*P **P 23 58 13.0 -1.3**
KBI1 Birley Grange 27.06 320 P **P 23 58 13.1 -1.3**
KBI1 Birley Grange 27.06 320 *e*P **P 23 58 13.1 -1.3**
KBI1 Birley Grange 27.06 320 *e*P **P 23 58 13.1 -1.3**
EPLA Plasencia 27.07 289 P **P 23 58 14.4 -0.3**
EPLA pmax pmax
comp=Z,41nm,0.8s,mb5.0
EPLA Plasencia 27.07 289 P **P 23 58 14.4 -0.2**
comp=Z,41nm,0.8s,mb5.0
EPLA Plasencia 27.07 289 P **P 23 58 14.4 -0.3**
comp=Z,41nm,0.8s,mb5.0
KWE Weaver Farm 27.11 319 P **P 23 58 12.9 -2.0**
KWE Weaver Farm 27.11 319 *e*P **P 23 58 12.9 -2.0**
KWE Weaver Farm 27.11 319 *e*P **P 23 58 12.9 -2.0**
ESPR Espera 27.17 282 P **P 23 58 14.9 -0.6**
comp=Z,39nm,1.1s,mb4.8
ESPR Espera 27.17 282 P **P 23 58 14.9 -0.6**
comp=Z,39nm,1.1s,mb4.8
DYA Yadsworthy 27.25 313 P **P 23 58 13.4 -2.7**
DYA AMb AMB 23 58 18.3
comp=Z,41nm,1.2s,mb4.8
DYA Yadsworthy 27.25 313 *e*P **P 23 58 13.4 -2.7**
DYA AMb AMB 23 58 18.3
comp=Z,41nm,1.2s,mb4.8
DYA Yadsworthy 27.25 313 *e*P **P 23 58 13.4 -2.7**

comp=Z,41nm,1.2s,mb4.8
JOF Joensuu 27.28 3 *e*P **P 23 58 13.8 -2.4**
JOF Joensuu 27.28 3 *e*p **P 23 58 13.8 -2.4**
comp=Z,6.4nm,0.4s,mb4.5
JOF Joensuu 27.28 3 *e*P **P 23 58 13.8 -2.4**
MCH1 Michaelchurch 27.30 316 P **P 23 58 14.8 -1.7**
MCH1 AMb AMB 23 58 18.4
comp=Z,48nm,1.4s,mb4.8
MCH1 Michaelchurch 27.30 316 *e*P **P 23 58 14.8 -1.7**
MCH1 AMb AMB 23 58 18.4
comp=Z,48nm,1.4s,mb4.8
MCH1 Michaelchurch 27.30 316 *e*P **P 23 58 14.8 -1.8**
comp=Z,48nm,1.4s,mb4.8
NAO01 NORSAR Array S 27.38 342 *e*P **P 23 58 15.9 -1.2**
comp=Z,97nm,0.9s,mb5.3
NAO01 NORSAR Array S 27.38 342 *e*P **P 23 58 15.9 -1.2**
comp=Z,97nm,0.9s,mb5.3
HEX Exmoor 27.40 314 P **P 23 58 16.0 -1.5**
HEX Exmoor 27.40 314 *e*P **P 23 58 16.0 -1.5**
HEX Exmoor 27.40 314 *e*P **P 23 58 16.0 -1.5**
HLM1 Long Mynd 27.46 317 P **P 23 58 15.3 -2.6**
HLM1 Long Mynd 27.46 317 *e*P **P 23 58 15.3 -2.6**
NB2 NORSAR Subarra 27.46 342 P **P 23 58 16.2 -1.7**
comp=Z,35nm,0.7s,mb5.0,baz=147,slow=9.3
NB2 NORSAR Subarra 27.46 342 P **P 23 58 16.2 -1.7**
SNR=41
NOA NORSAR Array B 27.46 342 P **P 23 58 16.1 -1.8**
comp=Z,37nm,0.8s,mb5.0,baz=147,slow=8.6,SNR=68
NOA LR LR 00 11 04.1
comp=Z,149nm,18.2s,MS3.6,baz=155,slow=41
NOA NORSAR Array B 27.46 342 P **P 23 58 16.1 -1.8**
HTR Trewern Hill 27.49 316 P **P 23 58 15.7 -2.5**
HTR Trewern Hill 27.49 316 *e*P **P 23 58 15.7 -2.5**
HTR Trewern Hill 27.49 316 *e*P **P 23 58 15.7 -2.5**
SFS San Fernando 27.50 282 P **P 23 58 17.7 -0.8**
SFS San Fernando 27.50 282 P **P 23 58 17.7 -0.8**
BLS5 Blasjo 27.51 336 *e*P **P 23 58 17.1 -1.3**
BLS5 Blasjo 27.51 336 *e*P **P 23 58 17.1 -1.3**
SNR=41
ECAL Calabor 27.57 294 P **P 23 58 18.9 -0.1**
comp=Z,124nm,0.9s,mb5.5
ECAL Calabor 27.57 294 P **P 23 58 18.9 -0.1**
comp=Z,124nm,0.9s,mb5.5
PBRG Braganca 27.57 293 *e*P **P 23 58 18.9 -0.1**
comp=Z,66nm,0.8s,mb5.3
PBRG Braganca 27.57 293 *e*P **P 23 58 18.9 -0.1**
comp=Z,66nm,0.8s,mb5.3
ATD Arta Tunnel 27.64 147 LR LR 00 10 51.3
comp=Z,120nm,19.2s,MS3.5,baz=33,slow=39
EMIN Mina Concepcio 27.70 285 P **P 23 58 20.4 +0.1**
comp=Z,74nm,0.6s,mb5.5
EMIN Mina Concepcio 27.70 285 P **P 23 58 20.4 +0.1**
comp=Z,74nm,0.6s,mb5.5
KMY Karmoy 27.76 335 *e*P **P 23 58 19.6 -1.0**
KMY Karmoy 27.76 335 *e*P **P 23 58 19.6 -1.0**
SNR=41
MVO Moncorvo 27.78 292 *e*P **P 23 58 20.9 0.0**
comp=Z,84nm,0.6s,mb5.5
MVO Moncorvo 27.78 292 P **P 23 58 20.9 0.0**
MVO Moncorvo 27.78 292 *e*P **P 23 58 20.9 0.0**
comp=Z,84nm,0.6s,mb5.5
HTL Hartland 27.78 313 P **P 23 58 17.8 -3.1**
HTL AMb AMB 23 58 21.3
comp=Z,63nm,2.5s,mb4.8
HTL Hartland 27.78 313 *e*P **P 23 58 17.8 -3.1**
HTL AMb AMB 23 58 21.3
comp=Z,63nm,2.5s,mb4.8
ODD1 Odda 27.84 337 *e*P **P 23 58 20.5 -0.7**
ODD1 Odda 27.84 337 *e*P **P 23 58 20.5 -0.7**
SNR=41
EBAD Badajoz 27.87 287 P **P 23 58 21.4 -0.4**
comp=Z,32nm,1.2s,mb4.8
EBAD Badajoz 27.87 287 P **P 23 58 21.4 -0.4**
comp=Z,32nm,1.2s,mb4.8
ERUA La Rua 27.88 294 P **P 23 58 21.9 +0.1**
ERUA pmax pmax
comp=Z,14nm,0.6s,mb4.8
ERUA La Rua 27.88 294 P **P 23 58 21.9 0.0**
comp=Z,14nm,0.6s,mb4.8
ERUA La Rua 27.88 294 P **P 23 58 21.9 +0.1**
comp=Z,14nm,0.6s,mb4.8
EPON Pontenova 27.93 296 P **P 23 58 22.0 -0.3**
comp=Z,152nm,1.0s,mb5.6
EPON Pontenova 27.93 296 P **P 23 58 22.0 -0.3**
comp=Z,152nm,1.0s,mb5.6
PBAR Barrancos 27.94 285 *e*P **P 23 58 22.3 -0.2**
comp=Z,72nm,1.3s,mb5.1
PBAR Barrancos 27.94 285 *e*P **P 23 58 22.3 -0.2**
comp=Z,72nm,1.3s,mb5.1
CCA1 Carnmenellis 27.95 311 P **P 23 58 20.2 -2.1**
CCA1 AMb AMB 23 58 22.6
comp=Z,42nm,0.9s,mb5.1
CCA1 Carnmenellis 27.95 311 *e*P **P 23 58 20.2 -2.1**
CCA1 AMb AMB 23 58 22.6
comp=Z,42nm,0.9s,mb5.1
CCA1 Carnmenellis 27.95 311 *e*P **P 23 58 20.2 -2.2**
comp=Z,42nm,0.9s,mb5.1
PMRV Marv??o 28.11 288 *e*P **P 23 58 23.5 -0.5**
comp=Z,58nm,1.3s,mb5.0
PMRV Marv??o 28.11 288 *e*P **P 23 58 23.5 -0.5**
comp=Z,58nm,1.3s,mb5.0
MTE Manteigas 28.18 290 *e*P **P 23 58 24.1 -0.5**
comp=Z,45nm,1.5s,mb4.9
MTE Manteigas 28.18 290 *e*P **P 23 58 23.4 -1.2**
comp=Z,27nm,0.8s,mb4.9
MTE Manteigas 28.18 290 *e*P **P 23 58 24.1 -0.5**
comp=Z,45nm,1.5s,mb4.9
PVRL Vila Real 28.29 292 *e*P **P 23 58 25.4 -0.1**
comp=Z,38nm,2.5s,mb4.6
PVRL Vila Real 28.29 292 *e*P **P 23 58 25.4 -0.1**
comp=Z,38nm,2.5s,mb4.6
PESTR Estremoz 28.31 287 *e*P **P 23 58 25.3 -0.4**
comp=Z,52nm,1.1s,mb5.1
PESTR Estremoz 28.31 287 *e*P **P 23 58 25.3 -0.4**
comp=Z,52nm,1.1s,mb5.1
WPM1 Penmaenmawr 28.33 318 P **P 23 58 24.1 -1.6**
WPM1 Penmaenmawr 28.33 318 *e*P **P 23 58 24.1 -1.6**
WPM1 Penmaenmawr 28.33 318 *e*P **P 23 58 24.1 -1.6**
EGRO El Granado 28.37 284 P **P 23 58 26.4 +0.2**
comp=Z,72nm,0.8s,mb5.3
EGRO El Granado 28.37 284 P **P 23 58 26.4 +0.2**
comp=Z,72nm,0.8s,mb5.3
PVIS Viseu 28.44 291 *e*P **P 23 58 27.0 +0.2**
comp=Z,64nm,1.2s,mb5.1
PVIS Viseu 28.44 291 *e*P **P 23 58 27.0 +0.2**
comp=Z,64nm,1.2s,mb5.1
YRE Yr Eifl 28.50 317 P **P 23 58 25.7 -1.6**
YRE Yr Eifl 28.50 317 *e*P **P 23 58 25.7 -1.6**
YRE Yr Eifl 28.50 317 *e*P **P 23 58 25.7 -1.5**
PCAB Cabril 28.53 293 *e*P **P 23 58 27.6 0.0**
comp=Z,60nm,1.0s,mb5.3
PCAB Cabril 28.53 293 *e*P **P 23 58 27.6 0.0**
comp=Z,60nm,1.0s,mb5.3
ELOB Lobios 28.55 293 P **P 23 58 27.9 0.0**
comp=Z,35nm,0.8s,mb5.1
ELOB Lobios 28.55 293 P **P 23 58 27.9 +0.1**
comp=Z,35nm,0.8s,mb5.1
PVAQ Vaqueiros 28.57 284 *e*P **P 23 58 27.9 -0.1**
comp=Z,97nm,1.4s,mb5.3
PVAQ Vaqueiros 28.57 284 *e*P **P 23 58 27.9 -0.1**
comp=Z,97nm,1.4s,mb5.3
PBEJ Beja 28.61 285 *e*P **P 23 58 28.4 0.0**
comp=Z,59nm,1.4s,mb5.1
PBEJ Beja 28.61 285 *e*P **P 23 58 28.4 0.0**
comp=Z,59nm,1.4s,mb5.1
EVO Evora 28.67 286 *e*P **P 23 58 29.6 +0.7**
EVO *e*MLR MLR
comp=Z,80nm,21.3s,MS3.0
ASK Askoy 28.73 337 *e*P **P 23 58 27.3 -1.9**
PBDV Barranco-do-Ve 28.76 284 *e*P **P 23 58 29.8 +0.1**
comp=Z,118nm,0.9s,mb5.6
PBDV Barranco-do-Ve 28.76 284 *e*P **P 23 58 29.8 +0.1**
comp=Z,118nm,0.9s,mb5.6
ECK Cauldkaine Hil 28.82 322 P **P 23 58 28.4 -1.6**
ECK Cauldkaine Hil 28.82 322 *e*P **P 23 58 28.4 -1.6**
ECK Cauldkaine Hil 28.82 322 *e*P **P 23 58 28.4 -1.6**
PTOM Tomar 28.89 289 *e*P **P 23 58 30.6 -0.2**
comp=Z,58nm,1.1s,mb5.2
PTOM Tomar 28.89 289 *e*P **P 23 58 30.6 -0.2**
comp=Z,58nm,1.1s,mb5.2
EKA Eskdalemuir Ar 28.91 322 P **P 23 58 29.2 -1.6**
comp=Z,6.9nm,0.6s,mb4.6,baz=121,slow=10,SNR=26
EKA PcP PcP 00 01 40.0 +1.4
comp=Z,2.3nm,0.7s,baz=106,slow=2.4,SNR=4.5
EKA ScP ScP 00 05 13.8 -1.0
comp=Z,1.8nm,0.7s,baz=101,slow=3.9,SNR=5.6

EKA Eskdalemuir Ar 28.91 322 P **P 23 58 29.2 -1.6**
EKA Eskdalemuir Ar 28.91 322 PcP PcP 00 01 40.0 +1.5
ESK Eskdalemuir 28.92 322 P **P 23 58 27.9 -3.0**
ESK AMb AMB 23 58 34.8
comp=Z,28nm,2.8s,mb4.5
ESK Eskdalemuir 28.92 322 *e*P **P 23 58 27.9 -3.0**
ESK AMb AMB 23 58 34.8
comp=Z,28nm,2.8s,mb4.5
ESK Eskdalemuir 28.92 322 *e*P **P 23 58 29.8 -1.1**
ESK pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
ESK Eskdalemuir 28.92 322 *e*P **P 23 58 29.8 -1.2**
comp=Z,9.9nm,0.6s,mb4.7
STS Santiago 28.94 295 P **P 23 58 31.0 -0.2**
STS pmax pmax
comp=Z,20nm,0.7s,mb5.0
STS Santiago 28.94 295 P **P 23 58 31.0 -0.2**
comp=Z,20nm,0.7s,mb5.0
STS Santiago 28.94 295 P **P 23 58 31.0 -0.2**
comp=Z,20nm,0.7s,mb5.0
HYA Hoyanger 28.95 338 *e*P **P 23 58 30.8 -0.4**
HYA Hoyanger 28.95 338 *e*P **P 23 58 30.8 -0.3**
SNR=40
EZAM Zamans 29.03 294 P **P 23 58 32.4 +0.3**
comp=Z,134nm,0.9s,mb5.7
EZAM Zamans 29.03 294 P **P 23 58 32.3 +0.3**
comp=Z,134nm,0.9s,mb5.7
EDI Edinburgh 29.22 323 P **P 23 58 30.9 -2.7**
EDI AMb AMB 23 58 31.4
comp=Z,63nm,3.9s
EDI Edinburgh 29.22 323 *e*P **P 23 58 30.9 -2.7**
EDI AMb AMB 23 58 31.4
comp=Z,63nm,3.9s
EMAZ Mazaricos 29.25 296 P **P 23 58 34.2 +0.2**
comp=Z,64nm,0.7s,mb5.5
EMAZ Mazaricos 29.25 296 P **P 23 58 34.2 +0.2**
comp=Z,64nm,0.7s,mb5.5
ARU Arti 29.26 35*c i*P **P 23 58 33.4 -0.5**
ARU *e* 23 59 28.6
ARU S **S 00 03 22.4 +0.1**
ARU SS SS 00 04 50.8 -37
ARU pmax pmax
comp=Z,10.0nm,1.2s,mb4.4
ARU Arti 29.26 35 *e*P **P 23 58 33.8 -0.1**
comp=Z,5.6nm,0.6s,mb4.5
ARU Arti 29.26 35 *e*P **P 23 58 33.8 -0.1**
comp=Z,5.6nm,0.6s,mb4.5
EBH Black Hill 29.54 324 P **P 23 58 33.7 -2.7**
EBH Black Hill 29.54 324 *e*P **P 23 58 33.7 -2.7**
PMAFR Mafra 29.62 287 *e*P **P 23 58 37.9 +0.6**
comp=Z,86nm,1.8s,mb5.2
PMAFR Mafra 29.62 287 *e*P **P 23 58 37.9 +0.6**
comp=Z,86nm,1.8s,mb5.2
DLF Lyons Farm 29.79 317 *e*P **P 23 58 28.8 -10**
EAB Aberfoyle 29.91 323 P **P 23 58 37.6 -2.1**
EAB Aberfoyle 29.91 323 *e*P **P 23 58 37.6 -2.1**
EAB Aberfoyle 29.91 323 *e*P **P 23 58 37.6 -2.1**
SOKR Solikamsk 30.32 29*c i*P **P 23 58 43.9 +0.7**
SOKR pmax pmax
comp=Z,10.0nm,0.7s,mb4.7
NSS Namsos 30.39 346 *e*P **P 23 58 41.5 -2.3**
NSS Namsos 30.39 346 *e*P **P 23 58 41.5 -2.3**
SNR=40
SVE Sverdlovsk 30.44 36⇑*e*P **P 23 58 45.4 +1.0**
SVE pmax pmax
comp=Z,14nm,0.9s,mb4.7
MOR8 Moi Rana 31.48 350⇑*i*P **P 23 58 53.7 +0.3**
MOR8 Moi Rana 31.48 350⇑*i*P **P 23 58 53.7 +0.3**
SNR=40
FLOS Flostrand 31.79 349 *e*P **P 23 58 55.7 -0.4**
KONS Konsvik 31.98 349 *e*P **P 23 58 57.4 -0.5**
APA Apatity 32.02 4⇑*i*P **P 23 58 57.4 -0.7**
APA *e*PPP 00 00 09.6
APA *e*S **S 00 03 57.0 -8.4**
APA pmax pmax
comp=Z,18nm,0.6s,mb5.1
APA MLR MLR
comp=Z,300nm,12.0s,MS4.2
LVZ Lovozero 32.42 5*c e*P **P 23 59 01.3 -0.4**
LVZ pmax pmax
comp=Z,22nm,1.2s,mb4.9
STEI Steigen 33.03 351 *e*P **P 23 59 06.0 -1.0**
KTK1 Kautokeino 33.42 357 *e*P **P 23 59 09.4 -0.9**
KTK1 Kautokeino 33.42 357 *e*P **P 23 59 09.4 -0.9**
SNR=39
KBL Kabul 33.47 80 *e*P **P 23 59 12.7 +1.5**
KBL pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
KBL Kabul 33.47 80 *e*P **P 23 59 12.7 +1.5**
comp=Z,6.6nm,1.1s,mb4.5
KBL Kabul 33.47 80 *e*P **P 23 59 12.7 +1.5**
comp=Z,6.6nm,1.1s,mb4.5
ARCES ARCESS Array B 33.87 358 P **P 23 59 13.0 -1.2**
comp=Z,16nm,0.8s,mb5.0,baz=168,slow=9.3,SNR=82
ARCES PP PP 00 00 22.2 -9.4
comp=Z,5.4nm,0.7s,baz=195,slow=3.8,SNR=3.8
ARCES ScP ScP 00 05 30.4 -0.8
comp=Z,3.6nm,0.9s,baz=160,slow=3.9,SNR=5.4
ARCES LR LR 00 13 39.8
comp=Z,137nm,19.9s,MS3.7,baz=351,slow=38
ARCES ARCESS Array B 33.87 358 P **P 23 59 13.0 -1.2**
ARCES 00 00 22.3
ARCES ARCESS Array B 33.87 358 P **P 23 59 13.0 -1.2**
ARE0 ARCESS Array S 33.87 358 *e*P **P 23 59 12.7 -1.5**
ARE0 PP PP 00 00 31.0 -0.6
ARE0 ARCESS Array S 33.87 358 PP PP 00 00 31.0 -0.7
ARE0 ARCESS Array S 33.87 358 *e*P **P 23 59 12.7 -1.5**
KEV Kevo 34.07 359 *e*P **P 23 59 14.2 -1.8**
KEV pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
KEV Kevo 34.07 359 *e*P **P 23 59 14.2 -1.8**
comp=Z,5.9nm,0.7s,mb4.6
KEV Kevo 34.07 359 *e*p **P 23 59 14.2 -1.8**
comp=Z,5.9nm,0.7s,mb4.6
KEV Kevo 34.07 359 *e*P **P 23 59 14.2 -1.8**
comp=Z,5.9nm,0.7s,mb4.6
BRVK Borovoye 34.26 46 *e*P **P 23 59 19.0 +1.2**
BRVK pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
BRVK Borovoye 34.26 46 *e*P **P 23 59 17.3 -0.4**
BRVK Borovoye 34.26 46 *e*P **P 23 59 17.3 -0.5**
TRO Tromso 34.30 354 *e*P **P 23 59 16.4 -1.6**
TRO Tromso 34.30 354 *e*P **P 23 59 16.4 -1.6**
SNR=39
BVAR Borovoye Array 34.31 46 P **P 23 59 19.8 +1.5**
comp=Z,1.8nm,0.7s,mb4.1,baz=249,slow=7.5,SNR=11
BVAR Borovoye Array 34.31 46 P **P 23 59 19.8 +1.6**
EKS2 Erkin-Say 35.84 65 *e*P **P 23 59 32.1 +0.5**
comp=Z,5.3nm,0.8s,mb4.5
EKS2 Erkin-Say 35.84 65 *e*P **P 23 59 32.1 +0.5**
comp=Z,5.2nm,0.8s,mb4.5
MBAR Mbarara 36.26 175 *e*P **P 23 59 37.2 +1.8**
MBAR Mbarara 36.26 175 *e*P **P 23 59 37.2 +1.8**
AAK Ala-Archa 36.37 65 LR LR 00 14 47.5
comp=Z,62nm,21.1s,MS3.4,baz=94,slow=36
AAK Ala-Archa 36.37 65 *e*P **P 23 59 37.2 +1.1**
AAK *e*PP PP 00 01 00.0 +0.4
AAK Ala-Archa 36.37 65 *e*PP PP 00 01 00.0 +0.3
AAK Ala-Archa 36.37 65 *e*P **P 23 59 37.2 +1.1**
UCH Uchtor 36.42 65 P **P 23 59 37.4 +0.9**
UCH Uchtor 36.42 65 P **P 23 59 37.4 +0.9**
FRU Bishkek 36.44 64 *e*P pP 23 59 49.5 -2.1
KMBO Kilima Mbogo 37.70 165 P **P 23 59 52.0 +4.4**
comp=Z,1.1nm,0.7s,mb3.7,baz=0.1,slow=24,SNR=3.4
KMBO Kilima Mbogo 37.70 165 P **P 23 59 52.1 +4.5**
KMBO pmax pmax
comp=Z,1.0nm,0.7s
KMBO Kilima Mbogo 37.70 165 *e*P **P 23 59 51.9 +4.3**
KSH Kashi 37.88 70 *e*P **P 23 59 49.4 +0.4**
KSH pmax pmax
comp=Z,13nm,1.2s,mb4.5
KSH pmax pmax
comp=Z,74nm,4.2s
KSH LR LR
comp=N,67nm,4.3s
KSH LR LR
comp=E,110nm,5.5s
KSH LR LR
comp=Z,190nm,5.6s
KURK Kurchatov 39.05 51 P **P 23 59 59.3 +0.7**
comp=Z,48nm,0.6s,mb5.4,SNR=8.0
KURK Kurchatov 39.05 51⇑*i*P **P 23 59 59.1 +0.5**
KURK pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
KURK Kurchatov 39.05 51 *e*P **P 23 59 58.5 -0.1**

comp=Z,9.6nm,0.7s,mb4.6
KURK *e* pP 00 00 13.0 -0.7
KURK *e*PP PP 00 01 27.1 -1.8
KURK Kurchatov 39.05 51 *e*P **P 23 59 58.5 -0.1**
JMIC Jan Mayen 40.18 342 LR LR 00 17 36.8
comp=Z,109nm,20.3s,MS3.7,baz=73,slow=38
BORG Borgarnes 41.13 330 P **P 00 00 15.6 0.0**
comp=Z,12nm,0.9s,mb4.5,baz=83,slow=8.1,SNR=3.8
BORG Borgarnes 41.13 330 P **P 00 00 15.6 0.0**
MK31 Makanchi Array 41.56 57 *e*P **P 00 00 19.9 +0.5**
MK31 *e* pP 00 00 34.4 -0.2
MK31 Makanchi Array 41.56 57 *e*P **P 00 00 19.9 +0.5**
MKAR Makanchi Array 41.56 57 P **P 00 00 21.0 +1.6**
comp=Z,4.7nm,0.7s,mb4.2,baz=275,slow=7.8,SNR=33
MKAR pP pP 00 00 34.9 +0.3
comp=Z,11nm,0.9s,baz=275,slow=7.5,SNR=7.6
MKAR Makanchi Array 41.56 57 P **P 00 00 21.0 +1.6**
MKAR pP pP 00 00 34.9 +0.3
MKAR Makanchi Array 41.56 57 P **P 00 00 21.0 +1.6**
MKAR pP pP 00 00 34.9 +0.3
DBIC Dimbokro 41.72 234 P **P 00 00 22.1 +1.1**
comp=Z,7.0nm,0.4s,mb4.6,baz=27,slow=8.6,SNR=28
DBIC Dimbokro 41.72 234 P **P 00 00 22.1 +1.1**
DBIC pmax pmax
comp=Z,7.0nm,0.4s
DBIC Dimbokro 41.72 234 *e*P **P 00 00 21.7 +0.7**
DBIC *e*pP pP 00 00 36.0 -0.2
DBIC Dimbokro 41.72 234 *e*P **P 00 00 21.7 +0.7**
DBIC *e*pP pP 00 00 36.0 -0.2
TIC Toumodi 41.84 234 *e*P **P 00 00 22.8 +0.8**
comp=Z,12nm,0.3s,mb5.0
TIC Toumodi 41.84 234 *e*P **P 00 00 22.8 +0.8**
TIC pmax pmax
comp=Z,12nm,0.3s,mb5.0
TIC Toumodi 41.84 234 *e*P **P 00 00 22.8 +0.8**
comp=Z,12nm,0.3s,mb5.0
KIC Kosan Boka 41.87 233 *e*P **P 00 00 23.1 +0.8**
comp=Z,37nm,0.6s,mb5.2
KIC Kosan Boka 41.87 233 *e*P **P 00 00 23.1 +0.8**
comp=Z,37nm,0.6s,mb5.2
NVS Novosibirsk 42.08 45 *e*P **P 00 00 25.1 +1.6**
NVS *i* 00 02 04.2
NVS *i* S **S 00 06 38.9 +0.5**
NVS *i* 00 10 21.4
NVS pmax pmax
comp=E,8.0nm,1.0s
NVS pmax pmax
comp=Z,14nm,1.0s,mb4.5
NVS pmax pmax
comp=N,1.0nm,0.7s
NVS pmax pmax
comp=Z,12nm,1.4s,mb4.3
NVS pmax pmax
comp=N,7.0nm,1.5s
NVS pmax pmax
comp=E,3.0nm,0.8s
NVS smax
comp=N,21nm,1.4s
NVS smax
comp=E,3.0nm,0.6s
LIC Lamto 42.16 234 *e*P **P 00 00 25.4 +0.8**
comp=E,93nm,1.0s,mb5.3
LIC Lamto 42.16 234⇑*i*P **P 00 00 25.4 +0.8**
LIC *e*MLR MLR
comp=Z,74nm,18.5s,MS3.3
LIC Lamto 42.16 234⇑*i*P **P 00 00 25.4 +0.8**
LIC LR LR
comp=Z,40nm,18.5s,MS3.3
LIC Lamto 42.16 234⇑*i*P **P 00 00 25.4 +0.8**
SPITS Spitsbergen Ar 42.82 357 P **P 00 00 29.0 -0.2**
comp=Z,12nm,0.4s,mb4.9,baz=156,slow=6.4,SNR=31
SPITS LR LR 00 19 00.5
comp=Z,106nm,20.1s,MS3.7,baz=115,slow=37
SPITS Spitsbergen Ar 42.82 357 P **P 00 00 29.0 -0.2**
SPITS LR LR 00 19 00.5
SPITS Spitsbergen Ar 42.82 357 P **P 00 00 29.0 -0.3**
ZALV Zalesovo Beam 42.97 47 P **P 00 00 31.2 +0.5**
comp=Z,4.8nm,0.5s,mb4.5,baz=268,slow=8.1,SNR=14
ZALV pP pP 00 00 46.1 +0.2
comp=Z,6.7nm,0.5s,baz=270,slow=8.6,SNR=8.9
ZALV ScP ScP 00 06 08.0 +1.9
comp=Z,2.8nm,0.6s,baz=303,slow=4.6,SNR=9.8
ZALV LR LR 00 22 16.2
comp=Z,62nm,20.4s,MS3.5,baz=264,slow=41
ZALV Zalesovo Beam 42.97 47 P **P 00 00 31.3 +0.6**
ZALV *PP pP 00 00 46.1 +0.2
SCO Scoresbysund 43.61 338 *i* P **P 00 00 35.5 -0.2**
SCO Scoresbysund 43.61 338 *i* P **P 00 00 35.5 -0.2**
SCO Scoresbysund 43.61 338 *i* P **P 00 00 35.5 -0.2**
KBS Kingsbay 43.79 356⇑*i*P **P 00 00 36.5 -0.6**
KBS AMb AMB 00 00 37.9
comp=Z,49nm,0.8s,mb5.3
KBS Kingsbay 43.79 356*c i*P **P 00 00 37.0 -0.1**
KBS pmax pmax
comp=Z,33nm,1.0s,mb5.0
KBS Kingsbay 43.79 356⇑*i*P **P 00 00 36.5 -0.6**
comp=Z,49nm,0.8s,mb5.3
KBS Kingsbay 43.79 356⇑*i*P **P 00 00 36.5 -0.6**
comp=Z,49nm,0.8s,mb5.3,SNR=36
WMQ Urumqi 45.75 61 P **P 00 00 56.0 +2.9**
WMQ pP pP 00 01 14.5 +6.1
WMQ sP sP 00 01 23.5 +8.2
WMQ PcP PcP 00 02 32.8 +2.9
WMQ PP PP 00 02 44.8 +3.8
WMQ *e*S **S 00 07 33.3 +1.1**
WMQ ScS ScS 00 10 41.9 -1.6
WMQ SS SS 00 10 50.8 -6.1
WMQ pmax pmax
comp=Z,15nm,1.2s,mb4.8
WMQ pmax pmax
comp=Z,140nm,6.0s
WMQ LR LR
comp=N,110nm,26.0s
WMQ LR LR
comp=Z,59nm,22.2s,MS3.5
WMQ Urumqi 45.75 61 P **P 00 00 56.0 +2.9**
WMQ pP pP 00 01 14.5 +6.1
WMQ PcP PcP 00 02 32.8 +2.9
WMQ PP PP 00 02 44.8 +3.8
WMQ *e*S **S 00 07 33.3 +1.1**
WMQ ScS ScS 00 10 41.9 -1.6
WMQ pmax pmax
comp=Z,15nm,1.2s,mb4.8
WMQ pmax pmax
comp=Z,140nm,6.0s
WMQ LR LR
comp=N,110nm,26.0s
WMQ LR LR
comp=Z,59nm,22.2s,MS3.5
DAG Danmarks Havn 45.99 347⇓*i*P **P 00 00 53.9 -0.7**
DAG pmax pmax
comp=Z,13nm,0.6s,mb5.0
DAG Danmarks Havn 45.99 347⇓*i*P **P 00 00 53.9 -0.7**
comp=Z,13nm,0.6s,mb5.0
GKN Gorkha 48.21 82 *e*P **P 00 01 14.6 +2.1**
comp=Z,83nm,1.0s,mb5.7
GKN Gorkha 48.21 82 *e*P **P 00 01 14.6 +2.1**
HYB Hyderabad 48.27 98 *e*P **P 00 01 16.0 +3.0**
DMN Daman 48.75 83 *e*P **P 00 01 18.8 +2.1**
comp=Z,44nm,0.7s,mb5.6
DMN Daman 48.75 83 *e*P **P 00 01 18.8 +2.1**
KKN Kakani 48.81 82 *e*P **P 00 01 19.0 +1.9**
comp=Z,40nm,0.9s,mb5.5
KKN Kakani 48.81 82 *e*P **P 00 01 19.0 +1.9**
PKIN Phulchoki 49.00 83 *e*P **P 00 01 20.3 +1.8**
PKI Pulchoki 49.01 83 *e*P **P 00 01 20.6 +2.0**
comp=Z,42nm,0.8s,mb5.5
PKI Pulchoki 49.01 83 *e*P **P 00 01 20.6 +2.0**
SUMG Summit 49.25 339 *e*P **P 00 01 19.5 -0.3**
comp=Z,14nm,0.4s,mb5.3
SUMG *e*PcP PcP 00 02 42.6 +0.7
SUMG Summit 49.25 339 *e*P **P 00 01 19.5 -0.3**
comp=Z,14nm,0.4s,mb5.3
GUN Gumba 49.25 82 *e*P **P 00 01 22.8 +2.3**
GUN Gumba 49.25 82 *e*P **P 00 01 22.8 +2.3**
JIRN Jiri 49.60 82 *e*P **P 00 01 25.5 +2.3**
JIRN Jiri 49.60 82 *e*P **P 00 01 25.5 +2.3**
RAMN Ramite 50.23 83 *e*P **P 00 01 29.8 +1.9**
comp=Z,28nm,0.8s,mb5.3
RAMN Ramite 50.23 83 *e*P **P 00 01 29.8 +1.9**
LSZ Lusaka 50.74 180 LR LR 00 23 10.1
comp=Z,152nm,20.5s,MS4.0,baz=2.9,slow=36
LSZ Lusaka 50.74 180 *e*P **P 00 01 33.1 +1.4**
LSZ *e* 00 02 48.9
LSZ Lusaka 50.74 180 *e*P **P 00 01 33.1 +1.4**

LSZ Lusaka 50.74 180 *e*PcP PcP 00 02 48.9 +0.8
ODAN Odare 50.91 82 *e*P **P 00 01 35.1 +2.1**
ODAN Odare 50.91 82 *e*P **P 00 01 35.1 +2.1**
TAPN Taplejung 50.96 82 *e*P **P 00 01 35.6 +2.2**
comp=Z,56nm,1.0s,mb5.5
TAPN Taplejung 50.96 82 *e*P **P 00 01 35.6 +2.2**
LSA Lhasa 52.73 77 *e*P **P 00 01 47.7 +1.1**
LSA pmax pmax
comp=Z,3.0nm,0.4s,mb4.6
LSA Lhasa 52.73 77 *e*P **P 00 01 47.7 +1.1**
comp=Z,3.3nm,0.4s,mb4.6
LSA Lhasa 52.73 77 *e*P **P 00 01 47.7 +1.1**
comp=Z,3.3nm,0.4s,mb4.6
ALE Alert 54.82 351 P **P 00 02 00.9 -0.2**
comp=Z,317nm,0.6s,mb6.5,SNR=8.9
TSUM Tsumeb 55.52 192 LR LR 00 27 36.1
comp=Z,213nm,19.7s,MS4.2,baz=350,slow=38
TSUM Tsumeb 55.52 192 *e*P **P 00 02 08.9 +2.1**
TSUM Tsumeb 55.52 192 *e*P **P 00 02 08.9 +2.1**
GTA Gaotai 55.69 63 *e*P **P 00 02 10.0 +2.0**
GTA pP pP 00 02 20.0 -3.7
GTA sP sP 00 02 23.8 -6.7
GTA pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
PALK Pallekele 55.85 107 P **P 00 02 10.9 +1.4**
PALK Pallekele 55.85 107 P **P 00 02 10.9 +1.4**
SONM Songino Array 57.36 52 P **P 00 02 21.9 +2.2**
comp=Z,3.0nm,0.7s,mb4.4,baz=287,slow=7.7,SNR=23
SONM pP pP 00 02 37.0 +1.5
comp=Z,3.0nm,0.5s,baz=288,slow=7.8,SNR=9.0
SONM LR LR 00 30 47.6
comp=Z,106nm,19.4s,MS4.0,baz=280,slow=40
SONM Songino Array 57.36 52 P **P 00 02 21.9 +2.2**
SONM *PP pP 00 02 37.0 +1.5
SONM Songino Array 57.36 52 P **P 00 02 21.9 +2.2**
SONM pP pP 00 02 37.0 +1.5
ULN Ulaanbaatar 57.77 51 *e*P **P 00 02 23.1 +0.5**
ULN *e* pP 00 02 39.1 +0.7
ULN pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
ULN Ulaanbaatar 57.77 51 *e*P **P 00 02 23.1 +0.6**
comp=Z,7.0nm,1.0s,mb4.7
ULN *e* pP 00 02 39.1 +0.7
ULN Ulaanbaatar 57.77 51 *e*P **P 00 02 23.1 +0.5**
TIXI Tiksi 59.82 21 *e*P **P 00 02 36.0 -0.4**
TIXI pmax pmax
comp=Z,14nm,0.9s,mb5.0
TIXI MLR MLR
comp=Z,85nm,15.0s,MS4.0
FRB Frobisher Bay 61.30 330 LR LR 00 28 19.2
comp=Z,102nm,20.9s,MS4.0,baz=354,slow=35
CD2 Chengdu 62.07 71 P **P 00 02 54.6 +2.3**
CD2 pP pP 00 03 14.1 +5.8
CD2 sP sP 00 03 22.8 +7.8
CD2 PP PP 00 05 14.3 +5.0
CD2 S **S 00 11 11.6 -1.2**
CD2 sS sS 00 11 45.0 +5.2
CD2 SS SS 00 15 16.8 +0.8
CD2 pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
CD2 pmax pmax
comp=Z,90nm,6.9s
CD2 LR LR
comp=N,110nm,7.7s
CD2 LR LR
comp=Z,120nm,5.9s
CD2 Chengdu 62.07 71 P **P 00 02 54.6 +2.3**
CD2 pP pP 00 03 14.1 +5.8
CD2 PP PP 00 05 14.3 +5.0
CD2 S **S 00 11 11.6 -1.2**
CD2 sS sS 00 11 45.0 +5.2
CD2 pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
CD2 pmax pmax
comp=Z,90nm,6.9s
CD2 LR LR
comp=N,110nm,7.7s
CD2 LR LR
comp=Z,120nm,5.9s
HHC Hu-ho-hao-te 63.43 57 *e*P **P 00 03 03.3 +2.1**
HHC pP pP 00 03 24.1 +6.9
HHC sP sP 00 03 33.5 +10
HHC PcP PcP 00 03 39.4 +1.8
HHC PP PP 00 05 25.0 +4.0
HHC ScP ScP 00 07 33.3 -1.5
HHC PcS 00 07 41.5
HHC S **S 00 11 27.9 -1.7**
HHC sS sS 00 12 02.8 +6.2
HHC ScS ScS 00 12 44.9 -4.3
HHC SS SS 00 15 37.1 +0.3
HHC pmax pmax
comp=Z,9.0nm,0.6s,mb5.1
HHC pmax pmax
comp=Z,71nm,7.6s
HHC LR LR
comp=N,130nm,15.1s,MS4.3
HHC LR LR
comp=E,91nm,15.2s,MS4.3
HHC LR LR
comp=Z,130nm,15.9s,MS4.2
HHC Hu-ho-hao-te 63.43 57 *e*P **P 00 03 03.3 +2.1**
HHC pP pP 00 03 24.1 +6.9
HHC PcP PcP 00 03 39.4 +1.8
HHC PP PP 00 05 25.0 +4.0
HHC ScP ScP 00 07 33.3 -1.5
HHC PcS 00 07 41.5
HHC S **S 00 11 27.9 -1.7**
HHC sS sS 00 12 02.8 +6.2
HHC ScS ScS 00 12 44.9 -4.3
HHC pmax pmax
comp=Z,9.0nm,0.6s,mb5.1
HHC pmax pmax
comp=Z,71nm,7.6s
HHC LR LR
comp=N,130nm,15.1s,MS4.3
HHC LR LR
comp=E,91nm,15.2s,MS4.3
HHC LR LR
comp=Z,130nm,15.9s,MS4.2
BOSA Boshof 64.07 183 P **P 00 03 08.2 +2.8**
comp=Z,9.8nm,0.9s,mb4.8,baz=346,slow=11,SNR=9.8
BOSA LR LR 00 30 04.7
comp=Z,123nm,21.8s,MS4.0,baz=270,slow=35
BOSA Boshof 64.07 183 P **P 00 03 08.2 +2.9**
CHTO Chiang Mai 64.08 85 *e*P **P 00 03 05.8 0.0**
CHTO Chiang Mai 64.08 85 *e*P **P 00 03 05.8 0.0**
SCHQ Schefferville 64.19 320 P **P 00 03 05.1 -0.9**
comp=Z,17nm,0.5s,mb5.3,baz=62,slow=6.1,SNR=71
SCHQ LR LR 00 27 38.6
comp=Z,68nm,19.9s,MS3.8,baz=223,slow=33
SCHQ Schefferville 64.19 320 P **P 00 03 05.1 -0.9**
SCHQ LR LR 00 27 38.6
SCHQ Schefferville 64.19 320 P **P 00 03 05.1 -0.9**
CMAR Chiang Mai Arr 64.27 85 P **P 00 03 08.8 +1.8**
comp=Z,0.9nm,0.3s,mb4.2,baz=299,slow=7.9,SNR=8.4
CMAR LR LR 00 35 41.8
comp=Z,47nm,20.7s,MS3.7,baz=94,slow=40
CMAR Chiang Mai Arr 64.27 85 P **P 00 03 08.9 +1.9**
GYA Guiyang 66.41 74⇑ *i*P **P 00 03 21.8 +1.0**
GYA pP pP 00 03 42.6 +5.6
GYA sP sP 00 03 52.4 +8.8
GYA PP PP 00 05 50.6 +3.1
GYA ScP 00 07 45.5
GYA PcS 00 07 55.3
GYA S S 00 12 04.8 -1.8
GYA sS sS 00 12 39.0 +5.1
GYA SKS 00 13 07.6
GYA SS SS 00 16 23.3 -0.6
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,130nm,5.3s
GYA LR LR
comp=N,580nm,18.9s,MS4.9
GYA LR LR
comp=E,520nm,19.2s,MS4.9
GYA LR LR
comp=Z,610nm,18.7s,MS4.8
GYA Guiyang 66.41 74⇑ *i*P **P 00 03 21.8 +1.0**
GYA pP pP 00 03 42.6 +5.6
GYA PP PP 00 05 50.6 +3.1
GYA ScP 00 07 45.5
GYA PcS 00 07 55.3
GYA S S 00 12 04.8 -1.8
GYA sS sS 00 12 39.0 +5.1
GYA SKS 00 13 07.6
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,130nm,5.3s
GYA LR LR
comp=N,580nm,18.9s,MS4.9
GYA LR LR
comp=E,520nm,19.2s,MS4.9
GYA LR LR
comp=Z,610nm,18.7s,MS4.8
ENH Enshi 66.74 69 *e*P **P 00 03 22.3 -0.5**
comp=Z,19nm,0.8s,mb5.2
ENH Enshi 66.74 69 *e*P **P 00 03 22.3 -0.5**
comp=Z,19nm,0.8s,mb5.2
WHN Wuhan 70.25 66 P PcP 00 04 05.1 -1.1
KLR Kul'dur 71.83 42 *e*P **P 00 03 51.0 -3.0**
BILL Bilibino 71.92 15⇑ *e*P **P 00 03 54.5 +0.3**
BILL *e* 00 06 31.6
BILL eS S 00 13 04.9 -5.4
BILL pmax pmax
comp=Z,17nm,1.2s,mb4.8
BILL MLR MLR
comp=Z,100nm,20.0s,MS4.1
SEY Seymchan 72.14 23⇑ *i*P **P 00 03 56.9 +1.3**
NCB Newcomb 73.81 313 *e*P **P 00 04 05.2 -0.7**
NCB Newcomb 73.81 313 *e*P **P 00 04 05.2 -0.6**
FCC Fort Churchill 74.23 333 *e*P **P 00 04 07.3 -0.7**
comp=Z,0.5nm,0.9s
FCC Fort Churchill 74.23 333 *e*P **P 00 04 07.3 -0.7**
comp=Z,0.5nm,0.9s
INK Inuvik 75.33 353 P **P 00 04 13.5 -0.7**
comp=Z,8.2nm,0.6s,mb4.8,baz=25,slow=9.9,SNR=23
INK Inuvik 75.33 353 P **P 00 04 13.5 -0.7**
INK pmax pmax
comp=Z,8.0nm,0.6s
INK Inuvik 75.33 353 *e*P **P 00 04 13.0 -1.2**
comp=Z,14nm,0.9s,mb4.9
INK Inuvik 75.33 353 *e*P **P 00 04 13.0 -1.2**
comp=Z,14nm,0.9s,mb4.9
BINY Binghamton 75.88 312 *e*P **P 00 04 16.9 -0.9**
comp=Z,7.7nm,0.6s,mb4.8
BINY Binghamton 75.88 312 *e*P **P 00 04 16.9 -0.9**
comp=Z,7.7nm,0.6s,mb4.8
KSRS Korea Array 76.13 54 P **P 00 04 20.1 +0.8**
comp=Z,1.8nm,0.6s,mb4.2,baz=311,slow=4.6,SNR=5.3
KSRS pP pP 00 04 35.6 -0.1
comp=Z,5.5nm,0.9s,baz=305,slow=5.3,SNR=6.4
KSRS LR LR 00 41 42.2
comp=Z,60nm,21.6s,MS3.9,baz=317,slow=39
KSRS Korea Array 76.13 54 P **P 00 04 20.1 +0.8**
KSRS *PP pP 00 04 35.6 -0.1
KSRS pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
KSRS pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
KSRS MLR MLR
comp=Z,60nm,21.6s,MS3.9
SADO Sadowa 76.22 315 P **P 00 04 20.2 +0.5**
comp=Z,11nm,0.6s,mb5.0,baz=37,slow=4.5,SNR=16
SADO Sadowa 76.22 315 P **P 00 04 20.2 +0.5**
YKA Yellowknife Ar 77.56 343 P **P 00 04 26.2 -0.7**
comp=Z,9.0nm,0.7s,mb4.8,baz=30,slow=5.3,SNR=49
YKA pP pP 00 04 40.9 -2.4
comp=Z,2.4nm,0.8s,baz=34,slow=5.4,SNR=3.5
YKA Yellowknife Ar 77.56 343 P **P 00 04 26.2 -0.7**
YKA pP pP 00 04 40.9 -2.4
YKA Yellowknife Ar 77.56 343 P **P 00 04 26.2 -0.7**
YKA pP pP 00 04 40.9 -2.5
ERPA Erie 78.32 314 *e*P **P 00 04 31.4 -0.1**
comp=Z,24nm,0.6s,mb5.3
ERPA Erie 78.32 314 *e*P **P 00 04 31.4 -0.1**
comp=Z,24nm,0.6s,mb5.3
COLA College 79.65 358 *e*P **P 00 04 37.9 -0.5**
COLA pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
COLA College 79.65 358 *e*P **P 00 04 37.9 -0.5**
comp=Z,9.6nm,0.8s,mb4.8
COLA College 79.65 358 *e*P **P 00 04 37.8 -0.6**
comp=Z,9.6nm,0.8s,mb4.8
MCWV Mont Chateau 79.74 312 *e*P **P 00 04 39.4 0.0**
comp=Z,19nm,0.6s,mb5.2
MCWV Mont Chateau 79.74 312 *e*P **P 00 04 39.3 0.0**
comp=Z,19nm,0.6s,mb5.2
DAWY Dawson 80.01 354 *e*P **P 00 04 40.3 0.0**
DAWY Dawson 80.01 354 *e*P **P 00 04 40.3 0.0**
FFC Flin Flon 80.15 333 P **P 00 04 41.1 -0.1**
comp=Z,262nm,0.6s,mb6.3,SNR=23
FFC Flin Flon 80.15 333 *i*P **P 00 04 40.8 -0.4**
BPAW Bear Paw Mtn. 80.48 360 *e*P **P 00 04 42.6 -0.3**
comp=Z,21nm,0.9s,mb5.1
BPAW Bear Paw Mtn. 80.48 360 *e*P **P 00 04 42.6 -0.2**
comp=Z,21nm,0.9s,mb5.1
COWI Conover 80.78 321 *e*P **P 00 04 44.8 0.0**
comp=Z,45nm,0.8s,mb5.5
COWI Conover 80.78 321 *e*P **P 00 04 44.8 0.0**
comp=Z,45nm,0.8s,mb5.5
MCK McKinley 80.82 359 *e*P **P 00 04 43.4 -1.3**
MCK pmax pmax
comp=Z,32nm,1.1s,mb5.2
MCK McKinley 80.82 359 *e*P **P 00 04 43.4 -1.2**
comp=Z,32nm,1.1s,mb5.2
MCK McKinley 80.82 359 *e*P **P 00 04 43.4 -1.3**
comp=Z,32nm,1.1s,mb5.2
ULM Lac du Bonnet 81.06 327 P **P 00 04 45.7 -0.5**
comp=Z,54nm,0.6s,mb5.7,baz=48,slow=4.9,SNR=40
ULM LR LR 00 37 12.3
comp=Z,77nm,21.3s,MS4.0,baz=335,slow=33
ULM Lac du Bonnet 81.06 327 *e*P **P 00 04 45.7 -0.5**
comp=Z,36nm,0.6s,mb5.5
ULM Lac du Bonnet 81.06 327 *e*P **P 00 04 45.7 -0.5**
comp=Z,36nm,0.6s,mb5.5
TRF Thorofare Moun 81.13 359 *e*P **P 00 04 46.0 -0.2**
comp=Z,20nm,0.8s,mb5.1
TRF Thorofare Moun 81.13 359 *e*P **P 00 04 46.0 -0.3**
comp=Z,20nm,0.8s,mb5.1
ACSO Alum Creek Sta 81.26 314 *e*P **P 00 04 47.3 -0.2**
comp=Z,13nm,0.7s,mb5.0
ACSO Alum Creek Sta 81.26 314 *e*P **P 00 04 47.3 -0.1**
comp=Z,13nm,0.7s,mb5.0
PETK Petropavlovsk- 81.36 28 P **P 00 04 46.5 -1.1**
comp=Z,4.3nm,1.0s,mb4.3,baz=328,slow=5.3,SNR=4.4
PETK pP pP 00 05 03.5 -0.8
comp=Z,2.3nm,0.8s,baz=318,slow=2.0,SNR=3.0
PETK LR LR 00 45 24.8
comp=Z,42nm,19.2s,MS3.8,baz=122,slow=39
PETK Petropavlovsk- 81.36 28 P **P 00 04 46.6 -1.1**
PETK *PP pP 00 05 03.5 -0.8
PETK Petropavlovsk- 81.36 28 P **P 00 04 46.5 -1.2**
PETK pP pP 00 05 03.5 -0.8
PPLA Purkeypile 81.69 0 *e*P **P 00 04 48.4 -0.9**
comp=Z,38nm,0.5s,mb5.6
PPLA Purkeypile 81.69 0 *e*P **P 00 04 48.4 -0.9**
comp=Z,38nm,0.5s,mb5.6
ELN Prospectdale 81.81 310 *e*P **P 00 04 49.7 -0.7**
ELN Prospectdale 81.81 310 *e*P **P 00 04 49.7 -0.7**
AGMN Agassiz Nation 82.48 326 *e*P **P 00 04 52.5 -1.2**
comp=Z,12nm,0.8s,mb4.9
AGMN Agassiz Nation 82.48 326 *e*P **P 00 04 52.5 -1.2**
comp=Z,12nm,0.8s,mb4.9
PMR Palmer 82.97 359 P **P 00 04 55.6 -0.4**
PMR pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
PMR Palmer 82.97 359 P **P 00 04 55.6 -0.4**
comp=Z,9.8nm,0.5s,mb5.1
PMR Palmer 82.97 359 P **P 00 04 55.6 -0.4**
comp=Z,9.8nm,0.5s,mb5.1
MJAR Matsushiro Arr 83.24 50 P **P 00 04 58.8 +1.0**
comp=Z,0.9nm,0.3s,mb4.2,baz=310,slow=4.7,SNR=5.4
MJAR pP pP 00 05 14.2 -0.4
comp=Z,4.1nm,0.8s,baz=302,slow=5.1,SNR=4.7
MJAR LR LR 00 45 30.9
comp=Z,62nm,18.0s,MS4.0,baz=220,slow=38
MJAR Matsushiro Arr 83.24 50 P **P 00 04 58.8 +0.9**
MJAR *PP pP 00 05 14.2 -0.3
MJAR Matsushiro Arr 83.24 50 P **P 00 04 58.8 +1.0**
MJAR pP pP 00 05 14.2 -0.4
MJAR LR LR 00 45 30.9
MJAR Matsushiro Arr 83.24 50 P **P 00 04 58.8 +0.9**
MJAR pP pP 00 05 14.2 -0.3
BMRM Bremner River 83.44 356 *e*P **P 00 04 57.8 -0.6**
comp=Z,11nm,0.8s,mb5.0
BMRM Bremner River 83.44 356 *e*P **P 00 04 57.8 -0.6**
comp=Z,11nm,0.8s,mb5.0
RC01 Rabbit Creek A 83.49 359 *e*P **P 00 04 58.9 +0.2**
comp=Z,32nm,0.7s,mb5.5
RC01 Rabbit Creek A 83.49 359 *e*P **P 00 04 58.9 +0.2**
comp=Z,32nm,0.7s,mb5.5
JFWS Jewell Farm 83.54 319 *e*P **P 00 04 58.8 -0.5**
JFWS pmax pmax
comp=Z,13nm,0.5s,mb5.3
JFWS Jewell Farm 83.54 319 *e*P **P 00 04 58.8 -0.5**
comp=Z,13nm,0.5s,mb5.3
JFWS Jewell Farm 83.54 319 *e*P **P 00 04 58.8 -0.5**
comp=Z,13nm,0.5s,mb5.3
PNL Peninsula 84.36 354 *e*P **P 00 05 03.0 -0.1**
comp=Z,16nm,1.1s,mb5.0
PNL Peninsula 84.36 354 *e*P **P 00 05 03.0 -0.1**
comp=Z,16nm,1.1s,mb5.0
DLBC Dease Lake 84.37 349 P **P 00 05 03.5 +0.4**
comp=Z,9.2nm,0.9s,mb4.9,baz=8.2,slow=6.4,SNR=14
DLBC Dease Lake 84.37 349 *e*P **P 00 05 02.8 -0.4**
DLBC Dease Lake 84.37 349 *e*P **P 00 05 02.8 -0.4**
HDIL Hopedale 84.65 317 *e*P **P 00 05 04.7 -0.2**
comp=Z,19nm,0.5s,mb5.5
HDIL *e* pP 00 05 20.5 -1.2
HDIL Hopedale 84.65 317 *e*P **P 00 05 04.7 -0.3**
TKL Tuckaleechee C 84.68 311 P **P 00 05 04.6 -0.7**
comp=Z,24nm,0.8s,mb5.4,baz=93,slow=5.6,SNR=42
TKL Tuckaleechee C 84.68 311 *e*P **P 00 05 04.8 -0.5**
TKL Tuckaleechee C 84.68 311 *e*P **P 00 05 04.8 -0.4**
OLIL Olney 85.22 315 *e*P **P 00 05 08.0 +0.1**
comp=Z,34nm,0.8s,mb5.5
OLIL Olney 85.22 315 *e*P **P 00 05 07.9 0.0**
comp=Z,34nm,0.8s,mb5.5
EDM Edmonton 85.23 338 *e*P **P 00 05 07.3 -0.3**
EDM Edmonton 85.23 338 *e*P **P 00 05 07.3 -0.3**
CPCT Cooper Cave 85.28 311 *e*P **P 00 05 08.8 +0.6**
CPCT Cooper Cave 85.28 311 *e*P **P 00 05 08.8 +0.6**
SCIA State Center 85.81 320 *e*P **P 00 05 10.3 -0.4**
comp=Z,44nm,0.6s,mb5.9
SCIA State Center 85.81 320 *e*P **P 00 05 10.3 -0.4**
comp=Z,44nm,0.6s,mb5.9
DGMT Dagmar 85.93 330⇑P **P 00 05 11.9 +0.7**
baz=86
DGMT Dagmar 85.93 330 *e*P **P 00 05 10.7 -0.4**
comp=Z,26nm,0.6s,mb5.6
DGMT Dagmar 85.93 330 *e*P **P 00 05 10.7 -0.5**
comp=Z,26nm,0.6s,mb5.6
GOGA Godfrey 85.95 309 *e*P **P 00 05 11.2 -0.4**
GOGA pmax pmax
comp=Z,10.0nm,0.8s,mb5.1
GOGA Godfrey 85.95 309 *e*P **P 00 05 11.2 -0.4**
comp=Z,10nm,0.8s,mb5.1
GOGA Godfrey 85.95 309 *e*P **P 00 05 11.2 -0.4**
comp=Z,10nm,0.8s,mb5.1
ECSD EROS Data Cent 86.19 323 *e*P **P 00 05 12.4 -0.2**
comp=Z,38nm,0.5s,mb5.9
ECSD EROS Data Cent 86.19 323 *e*P **P 00 05 12.4 -0.2**
comp=Z,38nm,0.5s,mb5.9
SDDR Presa de Saban 86.28 291 *e*P **P 00 05 15.1 +1.6**
comp=Z,48nm,0.7s,mb5.8
SDDR Presa de Saban 86.28 291 *e*P **P 00 05 15.1 +1.7**
comp=Z,48nm,0.7s,mb5.8
SWET Sewanee 86.30 311 *e*P **P 00 05 13.3 0.0**
SWET Sewanee 86.30 311 *e*P **P 00 05 13.3 0.0**
SLM Saint Louis 86.50 316 *e*P **P 00 05 14.2 0.0**
SLM Saint Louis 86.50 316 *e*P **P 00 05 14.2 0.0**
SIUC Southern Illin 86.56 315 *e*P **P 00 05 14.3 -0.2**
comp=Z,51nm,0.9s,mb5.8
SIUC Southern Illin 86.56 315 *e*P **P 00 05 14.3 -0.2**
comp=Z,51nm,0.9s,mb5.8
KDAK Kodiak Island 86.83 0 *i*P **P 00 05 17.2 +1.8**
WVT Waverly 86.83 313 *e*P **P 00 05 15.0 -0.9**
WVT pmax pmax
comp=Z,11nm,0.8s,mb5.1
WVT Waverly 86.83 313 *e*P **P 00 05 15.0 -0.9**
comp=Z,11nm,0.8s,mb5.2
WVT Waverly 86.83 313 *e*P **P 00 05 15.0 -0.9**
comp=Z,11nm,0.8s,mb5.2
A18A Metzger Ranch, 87.72 334⇓P **P 00 05 20.1 +0.2**
baz=87,SNR=18
B18A Beardsley Farm 88.13 333⇓P **P 00 05 22.2 +0.4**
baz=88,SNR=28
LAO LASA Array 88.17 330 *e*P **P 00 05 20.8 -1.3**
comp=Z,15nm,0.6s,mb5.4
LAO LASA Array 88.17 330 *e*P **P 00 05 20.8 -1.3**
comp=Z,15nm,0.6s,mb5.4
LRAL Lakeview Retre 88.42 310 *e*P **P 00 05 23.8 +0.3**
comp=Z,11nm,0.5s,mb5.4
LRAL Lakeview Retre 88.42 310 *e*P **P 00 05 23.8 +0.3**
comp=Z,11nm,0.5s,mb5.4
EGMT Eagleton 88.43 333⇑P **P 00 05 23.6 +0.3**
baz=88,SNR=29
EGMT Eagleton 88.43 333 *e*P **P 00 05 23.5 +0.2**
comp=Z,63nm,1.0s,mb5.8
EGMT Eagleton 88.43 333 *e*P **P 00 05 23.5 +0.2**
comp=Z,63nm,1.0s,mb5.8
B17A L&G Farms, Che 88.59 334⇑P **P 00 05 23.7 -0.3**
baz=88,SNR=7.5
A15A Johnson Ranch, 88.68 335⇑P **P 00 05 24.3 -0.1**
baz=88,SNR=23
B16A M & M Farms, S 88.81 334⇓P **P 00 05 24.9 -0.1**
baz=88,SNR=15
OXF Oxford 88.88 313 *e*P **P 00 05 23.0 -2.7**
OXF Oxford 88.88 313 *e*P **P 00 05 23.0 -2.7**
A14A Double T Ranch 88.92 336⇓P **P 00 05 25.6 +0.1**
baz=88,SNR=21
WALA Waterton Lakes 89.00 336 *e*P **P 00 05 25.7 -0.3**
comp=Z,0.1nm,0.4s
WALA Waterton Lakes 89.00 336 *e*P **P 00 05 25.7 -0.3**
comp=Z,0.1nm,0.4s
D18A Linhart Farms, 89.14 333⇓P **P 00 05 27.1 +0.5**
baz=89,SNR=7.1
B15A Bradely Ranch, 89.19 335⇓P **P 00 05 26.8 0.0**
baz=89,SNR=29
RSSD Black Hills 89.32 328 *e*P **P 00 05 28.4 +0.8**
RSSD pmax pmax
comp=Z,15nm,1.0s,mb5.3
RSSD Black Hills 89.32 328 *e*P **P 00 05 28.4 +0.9**
comp=Z,15nm,1.0s,mb5.3
RSSD Black Hills 89.32 328 *e*P **P 00 05 28.4 +0.8**
comp=Z,15nm,1.0s,mb5.3
C16A Fuhringer Ranc 89.34 334⇓P **P 00 05 27.0 -0.5**
baz=89,SNR=16
B14A Marquette Ranc 89.39 335⇓P **P 00 05 27.6 -0.2**
baz=89,SNR=9.0
D17A Six Diamond Ra 89.51 333⇑P **P 00 05 28.3 0.0**
baz=89,SNR=7.5
KSU1 Kansas State U 89.63 320 *e*P **P 00 05 28.1 -1.0**
comp=Z,13nm,0.6s,mb5.4
KSU1 Kansas State U 89.63 320 *e*P **P 00 05 28.1 -1.0**
comp=Z,13nm,0.6s,mb5.4
C15A Salmond Ranch, 89.67 335⇓P **P 00 05 28.5 -0.5**
baz=89,SNR=7.5
E18A Harlowton 89.71 332⇑P **P 00 05 29.9 +0.6**
baz=89,SNR=14
B13A Whitefish 89.78 336⇓P **P 00 05 29.9 +0.3**
baz=89,SNR=8.2
D16A Dana Ranch, Ca 89.92 334⇓P **P 00 05 30.5 +0.2**
baz=90,SNR=39
E17A Martinsdale 90.15 333⇓P **P 00 05 31.8 +0.4**
baz=90,SNR=13
F18A Big Timber 90.19 332⇓P **P 00 05 32.0 +0.4**
baz=90,SNR=9.7
D15A Lincoln 90.26 334⇑P **P 00 05 32.3 +0.4**
baz=90,SNR=9.1
HRY Holter Researc 90.30 334 *e*P **P 00 05 32.0 0.0**
comp=Z,9.6nm,0.8s,mb5.2
HRY Holter Researc 90.30 334 *e*P **P 00 05 32.0 -0.1**
comp=Z,9.6nm,0.8s,mb5.2
SWMT Swartz Lake 90.38 335 *e*P **P 00 05 32.6 +0.3**
comp=Z,19nm,1.1s,mb5.3
SWMT Swartz Lake 90.38 335 *e*P **P 00 05 32.7 +0.3**
comp=Z,19nm,1.1s,mb5.3
E16A East Helena 90.39 333⇓P **P 00 05 32.9 +0.4**
baz=90
SLMT Seeley Lake 90.43 335 *e*P **P 00 05 32.7 0.0**
comp=Z,6.9nm,0.7s,mb5.1
SLMT Seeley Lake 90.43 335 *e*P **P 00 05 32.7 0.0**
comp=Z,6.9nm,0.7s,mb5.1
F17A Fitzpatrick Pl 90.55 332⇑P **P 00 05 34.0 +0.8**
baz=90,SNR=16
D14A Greenough 90.58 335⇓P **P 00 05 33.0 -0.3**
baz=90,SNR=5.3
CHMT Chamberlain Mo 90.63 335 *e*P **P 00 05 33.1 -0.5**
comp=Z,9.2nm,1.1s,mb5.0
CHMT Chamberlain Mo 90.63 335 *e*P **P 00 05 33.1 -0.5**
comp=Z,9.2nm,1.1s,mb5.0
RLMT Red Lodge 90.67 331⇑P **P 00 05 34.6 +0.8**
baz=90
NEW Newport 90.73 337 *e*P **P 00 05 34.1 +0.1**

NEW pmax pmax
comp=Z,3.0nm,0.6s
NEW Newport 90.73 337 eP **P 00 05 34.1 0.0**
comp=Z,3.3nm,0.6s,mb4.8
NEW Newport 90.73 337 eP **P 00 05 34.1 +0.1**
comp=Z,3.3nm,0.6s,mb4.8
E15A Deer Lodge 90.83 334 ⇓P **P 00 05 34.5 -0.1**
baz=90,SNR=9.6
D13A Huson 90.89 335 ⇓P **P 00 05 34.6 -0.2**
baz=90,SNR=7.5
F16A Kennard Place, 91.01 333 ⇑P **P 00 05 35.9 +0.6**
baz=90,SNR=19
G17A Pierce Place, 91.07 332 ⇓P **P 00 05 36.8 +1.2**
baz=91,SNR=9.3
BOZ Bozeman (W) 91.13 333 ⇓P **P 00 05 36.9 +0.9**
baz=91,SNR=22
BOZ Bozeman (W) 91.13 333 eP **P 00 05 36.5 +0.6**
BOZ pmax pmax
comp=Z,8.0nm,0.6s,mb5.2
BOZ Bozeman (W) 91.13 333 eP **P 00 05 36.5 +0.6**
comp=Z,7.8nm,0.6s,mb5.2
BOZ Bozeman (W) 91.13 333 eP **P 00 05 36.5 +0.6**
comp=Z,7.8nm,0.6s,mb5.2
E14A Clinton 91.14 334 ⇑P **P 00 05 36.3 +0.3**
baz=91,SNR=8.1
F15A Butte 91.28 334 ⇑P **P 00 05 37.2 +0.5**
baz=91,SNR=12
LRM Limekiln Ridge 91.28 334 eP **P 00 05 36.8 +0.1**
comp=Z,43nm,0.7s,mb5.9
LRM Limekiln Ridge 91.28 334 eP **P 00 05 36.8 +0.2**
comp=Z,43nm,0.7s,mb5.9
MIAR Mount Ida 91.29 315 eP **P 00 05 37.0 +0.1**
MIAR pmax pmax
comp=Z,20nm,1.0s,mb5.4
MIAR Mount Ida 91.29 315 eP **P 00 05 37.0 +0.1**
comp=Z,20nm,1.0s,mb5.4
MIAR Mount Ida 91.29 315 eP **P 00 05 37.0 +0.1**
comp=Z,20nm,1.0s,mb5.4
B08A Colville Reser 91.32 339 ⇓P **P 00 05 36.6 -0.2**
baz=91
E13A Victor 91.36 335 ⇑P **P 00 05 37.2 +0.2**
baz=91,SNR=6.9
C09A Chrisman Ranch 91.50 338 ⇑P **P 00 05 38.0 +0.4**
baz=91
G16A Moss Hill, Enn 91.55 333 ⇓P **P 00 05 38.8 +0.9**
baz=91,SNR=19
F14A Wisdom 91.62 334 ⇓P **P 00 05 38.9 +0.7**
baz=91
DLMT Dillon 91.73 333 eP **P 00 05 38.8 +0.1**
comp=Z,14nm,1.1s,mb5.2
DLMT Dillon 91.73 333 eP **P 00 05 38.8 +0.1**
comp=Z,14nm,1.1s,mb5.2
SDV Santo Domingo 91.74 282 eP **P 00 05 39.9 +0.6**
comp=Z,14nm,0.8s,mb5.3
SDV Santo Domingo 91.74 282 eP **P 00 05 39.9 +0.6**
comp=Z,14nm,0.8s,mb5.3
H16A Russell Place, 91.79 332 ⇓P **P 00 05 40.3 +1.3**
baz=91
G15A Dillon 91.86 333 ⇓P **P 00 05 39.7 +0.4**
baz=91,SNR=10
F13A Darby 91.98 335 ⇓P **P 00 05 40.1 +0.3**
baz=92,SNR=17
PHWY Pilot Hill 92.21 327 eP **P 00 05 41.3 +0.3**
comp=Z,26nm,0.8s,mb5.6
PHWY Pilot Hill 92.21 327 eP **P 00 05 41.3 +0.3**
comp=Z,26nm,0.8s,mb5.6
MCMT McKenzie Canyo 92.28 333 eP **P 00 05 41.5 +0.2**
comp=Z,2.1nm,0.6s,mb4.6
MCMT McKenzie Canyo 92.28 333 eP **P 00 05 41.5 +0.2**
comp=Z,2.1nm,0.6s,mb4.6
F12A Elk City 92.33 335 ⇓P **P 00 05 41.2 -0.2**
baz=92,SNR=11
K20A Yellowstone Ra 92.34 329 ⇑P **P 00 05 41.6 0.0**
baz=92
IMW Indian Meadow 92.35 332 eP **P 00 05 42.0 +0.3**
comp=Z,5.5nm,0.7s,mb5.0
IMW Indian Meadow 92.35 332 eP **P 00 05 42.0 +0.4**
comp=Z,5.5nm,0.7s,mb5.0
D08A Wollman Farm, 92.36 338 ⇓P **P 00 05 41.9 +0.3**
baz=92
K19A Absolon Red Bu 92.41 330 ⇓P **P 00 05 41.5 -0.5**
baz=92,SNR=6.1
L21A Rawlins 92.50 328 ⇑P **P 00 05 42.4 0.0**
baz=92
G13A Cobalt 92.55 334 ⇓P **P 00 05 42.5 0.0**
baz=92,SNR=15
E09A Wood Farm, Sta 92.61 337 ⇓P **P 00 05 42.5 -0.2**
baz=92
H14A Leadore 92.65 333 ⇑P **P 00 05 43.7 +0.8**
baz=92,SNR=12
TPAW Teton Pass 92.70 331 eP **P 00 05 43.7 +0.5**
comp=Z,7.1nm,0.8s,mb5.2
TPAW Teton Pass 92.70 331 eP **P 00 05 43.7 +0.5**
comp=Z,7.1nm,0.8s,mb5.2
DCID1 Drake Creek 92.70 332 eP **P 00 05 41.1 -2.2**
DCID1 Drake Creek 92.70 332 eP **P 00 05 41.1 -2.1**
J17A Brown Place, J 92.71 331 ⇑P **P 00 05 43.9 +0.6**
baz=92
BW06 Boulder Array 92.75 330 ⇓P **P 00 05 43.0 -0.5**
baz=92,SNR=5.7
BW06 Boulder Array 92.75 330 eP **P 00 05 42.5 -1.0**
comp=Z,3.0nm,1.0s,mb4.7
BW06 Boulder Array 92.75 330 eP **P 00 05 42.5 -1.0**
comp=Z,3.0nm,1.0s,mb4.7
PDAR Pinedale Array 92.75 330 P **P 00 05 43.1 -0.4**
comp=Z,2.4nm,0.7s,mb4.8,baz=42,slow=4.6,SNR=18
PDAR LR LR 00 47 02.8
comp=Z,42nm,21.4s,MS3.9,baz=52,slow=35
PDAR Pinedale Array 92.75 330 P **P 00 05 43.1 -0.4**
F10A Beach Ranch, E 92.79 336 ⇑P **P 00 05 43.6 0.0**
baz=92
M21A Separation Pea 92.80 328 ⇓P **P 00 05 44.0 +0.3**
baz=92,SNR=7.7
I15A Monteview 92.85 333 ⇓P **P 00 05 45.4 +1.5**
baz=92
L20A Wamsutter 92.88 329 ⇑P **P 00 05 44.4 +0.3**
baz=92
E08A Dider Farm, El 92.91 338 ⇑P **P 00 05 44.5 +0.4**
baz=92
RRI2 Red Ridge 92.96 332 eP **P 00 05 45.3 +0.8**
comp=Z,9.1nm,0.7s,mb5.3
P25A Willow Gulch B 93.05 325 ⇑P **P 00 05 45.5 +0.5**
baz=93
N22A Wattenberg Ran 93.06 327 ⇓P **P 00 05 45.6 +0.6**
baz=93
K18A Toltan Ranch, 93.06 330 ⇑P **P 00 05 45.7 +0.7**
baz=93
HAWA Hanford 93.14 338 eP **P 00 05 44.9 -0.3**
comp=Z,11nm,0.9s,mb5.3
HAWA Hanford 93.14 338 eP **P 00 05 44.9 -0.3**
comp=Z,11nm,0.9s,mb5.3
L19A Farson 93.22 330 ⇑P **P 00 05 45.7 0.0**
baz=93
H12A Diamond D Ranc 93.24 334 ⇑P **P 00 05 46.5 +0.7**
baz=93,SNR=6.5
M20A Sweetwater, Wa 93.24 329 ⇑P **P 00 05 46.0 +0.2**
baz=93,SNR=6.5
I14A Mackay 93.27 333 ⇑P **P 00 05 47.0 +1.1**
baz=93,SNR=8.6
J15A Blackfoot 93.34 332 ⇑P **P 00 05 47.1 +0.9**
baz=93,SNR=8.4
ISCO Idaho Springs 93.49 326 eP **P 00 05 47.1 +0.1**
ISCO pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
ISCO Idaho Springs 93.49 326 eP **P 00 05 47.1 +0.1**
comp=Z,4.9nm,0.8s,mb5.0
ISCO Idaho Springs 93.49 326 eP **P 00 05 47.1 +0.1**
comp=Z,4.9nm,0.8s,mb5.0
I13A Wildhorse Cree 93.53 334 ⇑P **P 00 05 47.9 +0.9**
baz=93,SNR=13
N21A Black Mountain 93.56 328 ⇓P **P 00 05 47.4 +0.1**
baz=93
G09A Cove 93.59 337 ⇓P **P 00 05 47.3 0.0**
baz=93
O22A Kremmling 93.62 327 ⇓P **P 00 05 47.8 +0.2**
baz=93
M19A Rock Springs 93.64 329 ⇑P **P 00 05 47.7 +0.1**
baz=93
L18A Fontenelle, Gr 93.65 330 ⇑P **P 00 05 47.5 -0.1**
baz=93
BMO Blue Mountains 93.81 336 eP **P 00 05 47.7 -0.7**
comp=Z,4.8nm,0.8s,mb5.0
BMO Blue Mountains 93.81 336 eP **P 00 05 47.7 -0.6**
comp=Z,4.8nm,0.8s,mb5.0
N20A Spence Gulch, 93.82 328 ⇓P **P 00 05 48.7 +0.2**
baz=93,SNR=5.9
L17A Cokeville 93.84 331 ⇑P **P 00 05 48.4 -0.1**
baz=93

P23A Jefferson 93.93 326 ⇑P **P 00 05 49.7 +0.7**
baz=94,SNR=7.6
HLID Hailey 93.94 334 ⇑P **P 00 05 49.3 +0.3**
baz=94
HLID Hailey 93.94 334 eP **P 00 05 48.8 -0.1**
comp=Z,3.2nm,1.3s,mb4.6
HLID Hailey 93.94 334 eP **P 00 05 48.8 -0.1**
comp=Z,3.2nm,1.3s,mb4.6
Q24A Divide 93.95 325 ⇑P **P 00 05 49.6 +0.5**
baz=94
G08A Pilot Rock 93.95 337 ⇓P **P 00 05 49.1 +0.1**
baz=94
O21A Pagoda 93.98 327 ⇑P **P 00 05 49.6 +0.4**
baz=94
K15A Arbon 93.99 332 ⇓P **P 00 05 50.2 +1.0**
baz=94,SNR=12
I12A Atlanta 94.00 334 ⇓P **P 00 05 49.2 0.0**
baz=94,SNR=6.0
J13A Cove Ranch, Pi 94.00 333 ⇓P **P 00 05 49.9 +0.7**
baz=94
WMOK Wichita Mounta 94.04 319 eP **P 00 05 49.4 -0.2**
WMOK pmax pmax
comp=Z,5.0nm,0.7s,mb5.0
WMOK Wichita Mounta 94.04 319 eP **P 00 05 49.4 -0.2**
comp=Z,4.8nm,0.7s,mb5.0
WMOK Wichita Mounta 94.04 319 eP **P 00 05 49.4 -0.2**
comp=Z,4.8nm,0.7s,mb5.0
M18A Lyman 94.08 330 ⇓P **P 00 05 49.1 -0.5**
baz=94
N19A John Jarvie Ra 94.15 329 ⇓P **P 00 05 49.7 -0.3**
baz=94,SNR=5.6
M17A Scullys Gap (B 94.28 330 ⇑P **P 00 05 50.2 -0.4**
baz=94
N18A Larsen Ranch, 94.29 329 ⇓P **P 00 05 50.3 -0.3**
baz=94
I10A Payette 94.32 335 ⇑P **P 00 05 50.8 +0.1**
baz=94
K14A Jones Ranch, D 94.36 332 ⇓P **P 00 05 51.8 +1.0**
baz=94
O20A White River Ci 94.38 328 ⇑P **P 00 05 50.9 -0.2**
baz=94
J12A Stokes Ranch, 94.46 334 ⇑P **P 00 05 51.8 +0.5**
baz=94
R24A Sanders Place, 94.52 325 ⇑P **P 00 05 52.4 +0.7**
baz=94
L15A Malad City 94.52 331 ⇓P **P 00 05 52.2 +0.6**
baz=94
G06A Carlson Farm, 94.52 338 ⇓P **P 00 05 52.3 +0.7**
baz=94
HWUT Hardware Ranch 94.53 331 eP **P 00 05 51.8 +0.1**
comp=Z,11nm,0.9s,mb5.3
HWUT Hardware Ranch 94.53 331 eP **P 00 05 51.8 +0.1**
comp=Z,11nm,0.9s,mb5.3
MFID Camas Ranch 94.57 334 ⇑P **P 00 05 52.4 +0.6**
baz=94,SNR=10
K13A Stover Farm, H 94.61 333 ⇓P **P 00 05 53.0 +0.9**
baz=94,SNR=5.1
S25A Robets Cordova 94.65 324 ⇑P **P 00 05 52.3 0.0**
baz=94,SNR=6.3
L14A Malta 94.82 332 ⇓P **P 00 05 53.8 +0.8**
baz=94
Q22A Crested Butte, 94.83 326 ⇑P **P 00 05 53.6 +0.5**
baz=94
K12A Draper Farm, C 94.92 333 ⇓P **P 00 05 54.0 +0.6**
baz=94
M15A Larsen Ranch, 95.00 331 ⇓P **P 00 05 53.8 -0.1**
baz=94
S24A Houchin Ranch, 95.04 324 ⇑P **P 00 05 54.1 0.0**
baz=95
L13A Double Diamond 95.04 333 ⇑P **P 00 05 55.1 +1.1**
baz=95
T25A Trinidad 95.06 324 ⇓P **P 00 05 54.2 0.0**
baz=95,SNR=6.9
SDCO Great Sand Dun 95.09 325 eP **P 00 05 54.1 -0.3**
comp=Z,6.6nm,1.0s,mb5.0
SDCO Great Sand Dun 95.09 325 eP **P 00 05 54.1 -0.2**
comp=Z,6.6nm,1.0s,mb5.0
P19A Cripple Cowboy 95.12 328 ⇓P **P 00 05 54.5 +0.1**
baz=95
K11A Parker Ranch, 95.21 334 ⇑P **P 00 05 55.3 +0.6**
baz=95
I07A Izee 95.21 337 ⇓P **P 00 05 55.3 +0.6**
baz=95
R22A Saguache, Gunn 95.28 326 ⇑P **P 00 05 55.5 +0.3**
baz=95,SNR=5.1
M14A Sheep Mountain 95.32 332 ⇓P **P 00 05 55.6 +0.3**
baz=95,SNR=7.7
U26A Atchley Ranch, 95.32 323 ⇑P **P 00 05 55.6 +0.2**
baz=95,SNR=6.8
Q20A Ridgley Place, 95.38 327 ⇑P **P 00 05 55.6 -0.1**
baz=95
L12A House Creek Ra 95.39 333 ⇑P **P 00 05 56.4 +0.8**
baz=95
O17A Robinson Place 95.39 329 ⇓P **P 00 05 56.1 +0.4**
baz=95
H04A Detroit Lake 95.48 339 ⇓P **P 00 05 55.7 -0.3**
baz=95
N15A Stansbury Isla 95.52 331 ⇑P **P 00 05 56.5 +0.3**
baz=95
J08A Circle Bar Ran 95.53 336 ⇓P **P 00 05 56.3 0.0**
baz=95
L11A Cat Creek Ranc 95.64 334 ⇑P **P 00 05 57.7 +0.9**
baz=95
U25A Circle Dot Ran 95.64 323 ⇑P **P 00 05 57.2 +0.3**
baz=95,SNR=6.2
P18A Preston Nutter 95.66 329 ⇑P **P 00 05 56.8 -0.1**
baz=95
S22A 4UR Ranch, Cre 95.71 326 ⇓P **P 00 05 57.6 +0.4**
baz=95,SNR=8.0
M13A Montello 95.75 332 ⇑P **P 00 05 57.5 +0.2**
baz=95,SNR=7.0
M13A Montello 95.75 332 eP **P 00 05 57.0 -0.3**
comp=Z,5.5nm,1.1s,mb4.9
M13A Montello 95.75 332 eP **P 00 05 57.0 -0.3**
comp=Z,5.4nm,1.1s,mb4.9
V26A Tequesquite Ra 95.81 322 ⇓P **P 00 05 57.0 -0.7**
baz=95
N14A Grayback Hills 95.81 331 ⇑P **P 00 05 57.9 +0.3**
baz=95,SNR=6.4
M12A Wells 95.99 333 ⇑P **P 00 05 59.0 +0.7**
baz=96,SNR=7.2
W27A Bowe Ranch, En 96.03 321 ⇓P **P 00 05 58.5 -0.2**
baz=96
R20A Redvale 96.05 327 ⇑P **P 00 05 58.6 -0.1**
baz=96
Q18A Rafter H Ranch 96.05 328 ⇑P **P 00 05 58.5 -0.2**
baz=96
PV10 Paradox Valley 96.18 327 eP **P 00 05 59.9 +0.6**
comp=Z,125nm,0.7s,mb6.5
PV10 Paradox Valley 96.18 327 eP **P 00 05 59.9 +0.6**
comp=Z,125nm,0.7s,mb6.5
SRU San Rafael 96.21 329 ⇑P **P 00 05 58.8 -0.6**
baz=96,SNR=5.3
SRU San Rafael 96.21 329 eP **P 00 05 57.8 -1.6**
SRU pmax pmax
comp=Z,6.0nm,0.6s,mb5.2
SRU San Rafael 96.21 329 eP **P 00 05 57.8 -1.6**
comp=Z,6.5nm,0.6s,mb5.2
SRU San Rafael 96.21 329 eP **P 00 05 57.8 -1.6**
comp=Z,6.5nm,0.6s,mb5.2
S21A Coal Bank Pass 96.22 326 ⇑P **P 00 05 59.8 +0.3**
baz=96
DUG Dugway 96.23 331 ⇑P **P 00 05 59.6 +0.1**
baz=96,SNR=7.1
M11A Holland Ranch, 96.30 333 ⇑P **P 00 06 00.8 +1.0**
baz=96
S20A Disappointment 96.33 327 ⇓P **P 00 06 00.7 +0.7**
baz=96
T22A Edith 96.34 325 ⇓P **P 00 06 00.3 +0.3**
baz=96
W26A Owens Ranch, T 96.36 322 ⇓P **P 00 06 00.2 +0.1**
baz=96
M10A I.L. Ranch, Tu 96.48 334 ⇓P **P 00 06 01.7 +1.1**
baz=96
R18A Canyonlands Na 96.55 328 ⇑P **P 00 06 00.6 -0.4**
baz=96
U23A El Rito 96.56 324 ⇓P **P 00 06 00.8 -0.2**
baz=96
V24A Rampart Ranch, 96.60 323 ⇓P **P 00 06 01.4 +0.2**
baz=96
W25A X Bar L Ranch, 96.61 322 ⇑P **P 00 06 01.5 +0.2**
baz=96
Q16A Castle Valley 96.64 329 ⇓P **P 00 06 01.4 0.0**
baz=96
ELK Elko 96.69 333 P **P 00 06 01.3 -0.3**
comp=Z,2.5nm,0.8s,mb4.7,baz=5.0,slow=4.7,SNR=10
ELK Elko 96.69 333 P **P 00 06 01.3 -0.3**
ELK Elko 96.69 333 P **P 00 06 01.3 -0.3**

MSTX Muleshoe 96.74 321 ⇓P **P 00 06 01.5 -0.4**
baz=96
X26A CR and CF Fran 96.81 322 ⇑P **P 00 06 02.0 -0.2**
baz=96
U22A Llaves 96.83 325 ⇓P **P 00 06 03.3 +1.0**
baz=96
P14A Drum Mountains 96.85 331 ⇓P **P 00 06 02.8 +0.5**
baz=96
K05A Summer Lake 96.87 337 ⇓P **P 00 06 03.6 +1.2**
baz=96
R17A Hanksville Air 96.87 328 ⇓P **P 00 06 01.7 -0.7**
baz=96
Y27A Causey 97.01 321 ⇓P **P 00 06 02.8 -0.3**
baz=97
Q15A Fillmore 97.08 330 ⇑P **P 00 06 03.8 +0.5**
baz=97
W24A Lazy 6 Ranch, 97.08 323 ⇓P **P 00 06 04.1 +0.6**
baz=97
U21A Nageezi 97.16 325 ⇑P **P 00 06 04.0 +0.3**
baz=97
S18A Hurst Farm, Bl 97.17 328 ⇓P **P 00 06 04.0 +0.2**
baz=97
X25A Clemmons Ranch 97.26 322 ⇓P **P 00 06 04.3 0.0**
baz=97
R16A Teasdale 97.31 329 ⇑P **P 00 06 05.4 +1.0**
baz=97
Y26A Elida 97.31 321 ⇑P **P 00 06 04.9 +0.4**
baz=97
P13A Bates Ranch, G 97.34 331 ⇑P **P 00 06 05.6 +1.1**
baz=97
MOD Modoc 97.43 337 eP **P 00 06 05.6 +0.8**
comp=Z,2.0nm,0.6s,mb4.7
MOD Modoc 97.43 337 eP **P 00 06 05.6 +0.7**
comp=Z,2.0nm,0.6s,mb4.7
Q14A Sevier Lake (B 97.45 330 ⇑P **P 00 06 05.6 +0.6**
baz=97,SNR=5.6
T18A Mexican Hat 97.58 327 ⇓P **P 00 06 05.6 0.0**
baz=97,SNR=7.0
Y25A Mesa, Roswell 97.75 322 ⇓P **P 00 06 06.2 -0.2**
baz=97
ANMO Albuquerque 97.80 324 P **P 00 06 05.5 -1.2**
comp=Z,0.3nm,0.4s,mb4.2,baz=61,slow=6.5,SNR=5.3
ANMO Albuquerque 97.80 324 P **P 00 06 05.5 -1.2**
ANMO Albuquerque 97.80 324 P **P 00 06 05.5 -1.2**
S16A Weppner Ranch, 97.83 329 ⇑P **P 00 06 06.9 +0.1**
baz=97,SNR=7.6
Z26A Caprock 97.91 321 ⇑P **P 00 06 07.2 0.0**
baz=98,SNR=11
Y24A Capitan 98.12 322 ⇓P **P 00 06 07.9 -0.3**
baz=98
Z25A Roswell 98.28 321 ⇓P **P 00 06 08.7 -0.1**
baz=98
YBH Yreka Blue Hor 98.33 338 P **P 00 06 07.5 -1.4**
comp=Z,0.7nm,0.4s,mb4.5,baz=340,slow=7.4,SNR=4.6
YBH Yreka Blue Hor 98.33 338 P **P 00 06 07.5 -1.4**
126A Clayton Basin, 98.42 321 ⇓P **P 00 06 09.6 +0.1**
baz=98
Y23A Lovelace Mesa, 98.42 323 ⇑P **P 00 06 09.5 0.0**
baz=98
Q11A Duckwater 98.50 332 ⇑P **P 00 06 10.0 +0.3**
baz=98
Z24A Sheeppen Canyo 98.56 322 ⇓P **P 00 06 10.5 +0.3**
baz=98,SNR=6.1
125A Gardner Draw, 98.74 321 ⇓P **P 00 06 10.5 -0.4**
baz=98
T15A Red Dirt Ranch 98.76 329 ⇑P **P 00 06 10.4 -0.6**
baz=98
328A Wristen Ranch, 98.78 319 ⇓P **P 00 06 11.2 +0.1**
baz=98
X21A Alamocita Cree 98.84 324 ⇓P **P 00 06 11.7 +0.3**
baz=98
R11A Troy Canyon, C 98.91 332 ⇑P **P 00 06 11.9 +0.3**
baz=98
226A Malaga, Loving 98.92 320 ⇑P **P 00 06 11.7 0.0**
baz=98
U16A Tuba City 98.96 328 ⇓P **P 00 06 11.9 0.0**
baz=98
124A Stringfield Ra 99.11 322 ⇓P **P 00 06 12.8 +0.2**
baz=99
U15A North Rim 99.22 328 ⇑P **P 00 06 13.3 +0.3**
baz=99,SNR=5.3
V17A Tonalea, Kykot 99.25 327 ⇓P **P 00 06 13.6 +0.4**
baz=99
225A Deer Hill, Car 99.26 321 ⇑P **P 00 06 14.1 +0.8**
baz=99
T13A Saint George 99.39 330 ⇑P **P 00 06 14.7 +0.9**
baz=99
Z22A Elephant Butte 99.41 323 ⇓P **P 00 06 14.5 +0.6**
baz=99
326A Caldwell Ranch 99.45 320 ⇓P **P 00 06 14.6 +0.5**
baz=99
WUAZ Wupatki 99.60 327 ⇓P Pdif 00 06 15.3 +0.8
baz=99
U14A Mt Trumbull 99.61 329 ⇑P Pdif 00 06 15.2 +0.6
baz=99,SNR=5.1
224A Cornudas Mount 99.64 321 ⇑P Pdif 00 06 14.9 +0.1
baz=99
V15A Kaibab Nationa 99.69 328 ⇑P Pdif 00 06 15.9 +0.9
baz=99
528A Cox Ranch, San 99.72 318 ⇓P Pdif 00 06 15.7 +0.6
baz=99
T11A Corn Creek, Al 99.73 331 ⇑P Pdif 00 06 16.1 +1.0
baz=99
NVAR Mina Array Bea 99.85 334 P Pdif 00 06 15.8 +0.1
comp=Z,1.3nm,0.7s,baz=34,slow=5.3,SNR=9.7
NVAR Mina Array Bea 99.85 334 P Pdif 00 06 15.8 +0.1
NVAR Mina Array Bea 99.85 334 P Pdif 00 06 15.8 +0.1
MNTX Cornudas Mount 99.87 321 ePdif Pdif 00 06 15.6 -0.2
comp=Z,3.6nm,0.8s
U13A Pakoon Wash 99.93 330 ⇓P Pdif 00 06 17.1 +1.0
baz=100
426A McDonald Obser 99.98 319 ⇓P Pdif 00 06 16.7 +0.4
baz=100,SNR=9.9
324A Moseley Ranch, 100.13 321 ⇓P Pdif 00 06 16.7 -0.2
baz=100,SNR=7.1
527A Woodward Ranch 100.17 319 ⇓P Pdif 00 06 17.7 +0.6
baz=100
V14A Boquillas Ranc 100.24 329 ⇑P Pdif 00 06 18.2 +0.8
baz=100
Z20A Nine Sixteen R 100.32 324 ⇑P Pdif 00 06 18.9 +1.1
baz=100,SNR=7.8
425A Indio Mountain 100.39 320 ⇑P Pdif 00 06 17.7 -0.5
baz=100
V13A Grand Canyon W 100.42 329 ⇑P Pdif 00 06 19.0 +0.7
baz=100
526A Mary Lane Ranc 100.49 319 ⇑P Pdif 00 06 19.2 +0.7
baz=100
X16A Lo Mia Camp, P 100.55 327 ⇑P Pdif 00 06 20.2 +1.4
baz=100
627A Terlingua Ranc 100.59 318 ⇑P Pdif 00 06 19.8 +0.8
baz=100
W14A Seligman 100.59 328 ⇓P Pdif 00 06 20.0 +1.0
baz=100
TXAR Lajitas Array 100.84 318 P Pdif 00 06 20.6 +0.5
comp=Z,0.9nm,0.7s,baz=75,slow=4.5,SNR=13
TXAR pP 00 06 35.8
comp=Z,0.3nm,0.5s,baz=55,slow=6.9,SNR=3.1
TXAR PP PP 00 10 20.4 -7.5
comp=Z,0.3nm,0.7s,baz=46,slow=6.9,SNR=3.0
TXAR Lajitas Array 100.84 318 P Pdif 00 06 20.5 +0.4
V12A Nelson 100.89 330 ⇑P Pdif 00 06 21.3 +1.0
baz=100
X13A Yucca 101.44 329 ⇓P Pdif 00 06 23.4 +0.6
baz=101
MPMC Manual Prospec 101.64 332 ⇑P Pdif 00 06 24.9 +1.2
baz=101
WRA Warramunga Arr 114.42 98 PKP PKiKP 00 11 12.5 +1.3
comp=Z,0.4nm,0.8s,baz=300,slow=1.7,SNR=2.8
ASAR Alice Springs 115.94 101 PKP PKPdf 00 11 15.5 +1.4
comp=Z,0.4nm,0.7s,baz=298,slow=1.3,SNR=5.4
ASAR pPKP pPKPdf 00 11 31.8 +0.2
comp=Z,0.8nm,0.5s,baz=300,slow=1.2,SNR=3.3
ASAR PKKPab PKKPab 00 21 46.7 -2.4
comp=Z,0.5nm,0.6s,baz=132,slow=4.3,SNR=5.0
ASAR Alice Springs 115.94 101 PKIKP PKPdf 00 11 15.5 +1.4
ASAR 00 11 31.8
ASAR Alice Springs 115.94 101 PKIKP PKPdf 00 11 15.5 +1.4
QSPA South Pole Qui 125.60 180 ePKPdf PKPdf 00 11 32.5 +1.6
QSPA South Pole Qui 125.60 180 ePKIKP PKPdf 00 11 32.5 +1.5
STKA Stephens Creek 125.70 106 ePKPdf PKPdf 00 11 33.1 +0.5
STKA Stephens Creek 125.70 106 ePKIKP PKPdf 00 11 33.1 +0.5

*CRAAG **16** 00:03:21.7,36.26N×1.36E,Ml4.0*
*ISCJB **16** 00:03:21.1±0.3,36.36N±0.02×1.41E±0.03,h10km,Error ellipse: s-maj=3.1km s-min=2.6km az=40.9*
*MDD **16** 00:03:22.4±0.4,36.23N×1.46E,h0km,mb4.3/21,Error*

ellipse: s-maj=4.8km s-min=3.4km az=119.0
*CSEM **16** 00:03:22.3±0.2, 36°.26N×1°.43E, h10km, ML4.0, Error ellipse: s-maj=4.2km s-min=3.1km az=148.0*
*LDG **16** 00:03:23.6±0.2, 36°.08N×1°.57E, h20km, Ml3.1/14, Error ellipse: s-maj=3.8km s-min=1.7km az=149.0*
*INMG **16** 00:03:23.7±0.9, 36°.08N×1°.46E, h31km, ML2.6, Error ellipse: s-maj=5.6km s-min=3.0km az=126.0*
*NEIC **16** 00:03:25.2, 36°.30N×1°.40E, h30km, ML3.8(CSEM), After CSEM.*
ISC 16 00:03:22.7±0.3**, 36°.32N**±0°.02×**1°.42E**±0°.02**, h10km, n289, σ1§27**/471**, 17C-9D, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EBNR	Beni Rached	0.10	106	P	Pg	00 03 25.0	-0.2
EBNR	Beni Rached	0.10	106	P	Pg	00 03 25.0	-0.2
ECHA	Ech Chlef	0.17	193	P	Pg	00 03 24.5	-1.9
ECHA	Ech Chlef	0.17	193	P	Pg	00 03 24.5	-1.9
ECHF	Ech Chlef	0.17	200	P	Pg	00 03 24.5	-1.9
ECHF	Ech Chlef	0.17	200	P	Pg	00 03 24.5	-1.9
EANR	'Ain N'Sour	0.45	215	P	Pg	00 03 30.0	-1.4
EANR	'Ain N'Sour	0.45	215	P	Pg	00 03 30.0	-1.4
EANR	'Ain N'Sour	0.45	215	P	Pg	00 03 30.0	-1.4
EANR	'Ain N'Sour	0.45	215	P	Pg	00 03 30.0	-1.4
OKGL	Djebel Kef Gue	0.68	246	P	Pg	00 03 45.0	+9.1
OKGL	Djebel Kef Gue	0.68	246	P	Pg	00 03 45.0	+9.1
OKGL	Djebel Kef Gue	0.68	246	P	Pg	00 03 45.0	+9.1
OKGL	Djebel Kef Gue	0.68	246	P	Pg	00 03 45.0	+9.1
ETRT	Tiaret	0.93	186	P	Pg	00 03 39.5	-1.1
ETRT	Tiaret	0.93	186	P	Pg	00 03 39.5	-1.1
ETRT	Tiaret	0.93	186	P	Pg	00 03 39.5	-1.1
ETRT	Tiaret	0.93	186	P	Pg	00 03 39.5	-1.1
OJBR	Djebel Berber	1.14	230	P	Pb	00 03 43.0	-1.4
OJBR	Djebel Berber	1.14	230	P	Pb	00 03 43.0	-1.4
OJBR	Djebel Berber	1.14	230	P	Pb	00 03 43.0	-1.4
OJBR	Djebel Berber	1.14	230	P	Pb	00 03 43.0	-1.4
EMHD	Djebel Mahouad	1.25	95	P	Pn	00 03 44.0	-2.1
EMHD	Djebel Mahouad	1.25	95	P	Pn	00 03 44.0	-2.1
EMHD	Djebel Mahouad	1.25	95	P	Pn	00 03 44.0	-2.1
EMHD	Djebel Mahouad	1.25	95	P	Pn	00 03 44.0	-2.1
ABA	Alger-Bouzarea	1.39	69	P	Pn	00 03 49.6	+1.5
ABA	Alger-Bouzarea	1.39	69	P	Pn	00 03 49.6	+1.5
ABA	Alger-Bouzarea	1.39	69	P	Pn	00 03 49.6	+1.5
ABA	Alger-Bouzarea	1.39	69	P	Pn	00 03 49.6	+1.5
ADJB	Djebel Djouab	1.64	95	P	Pn	00 03 50.5	-1.1
ADJB	Djebel Djouab	1.64	95	P	Pn	00 03 50.5	-1.1
ADJB	Djebel Djouab	1.64	95	P	Pn	00 03 50.5	-1.1
ADJB	Djebel Djouab	1.64	95	P	Pn	00 03 50.5	-1.1
USTO	Oran	1.70	250	P	Sn	00 04 17.0	+2.9
USTO	Oran	1.70	250	P	Sn	00 04 17.0	+2.9
USTO	Oran	1.70	250	P	Sn	00 04 17.0	+2.9
EMUR	La Murta	2.61	306	⇑P	Pn	00 04 04.7	-0.2
EMUR				S	Sn	00 04 36.3	-0.4
EMUR	La Murta	2.61	306	P	Pn	00 04 04.7	-0.2
	6.8nm,0.1s,SNR=18						
EMUR				S	Sn	00 04 36.3	-0.4
	21nm,0.4s,SNR=7.9						
EMUR	La Murta	2.61	306	P	Pn	00 04 04.7	-0.2
	6.8nm,0.1s,SNR=18						
EMUR				S	Sn	00 04 36.3	-0.4
	21nm,0.4s,SNR=7.9						
EMUR	La Murta	2.61	306	P	Pn	00 04 04.7	-0.2
	6.8nm,0.1s,SNR=18						
EMUR				S	Sn	00 04 36.3	-0.4
	21nm,0.4s,SNR=7.9						
EIBI	Ibiza	2.71	359	⇑P	Pn	00 04 07.3	+1.1
EIBI				S	Sn	00 04 37.9	-1.1
EIBI	Ibiza	2.71	359	⇓P	Pn	00 04 07.2	+1.0
	7.1nm,0.1s,SNR=18						
EIBI				S	Sn	00 04 37.9	-1.1
	40nm,0.2s,SNR=14						
EIBI	Ibiza	2.71	359	⇓P	Pn	00 04 07.2	+1.0
	7.1nm,0.1s,SNR=18						
EIBI				S	Sn	00 04 37.9	-1.1
	40nm,0.2s,SNR=14						
EIBI	Ibiza	2.71	359	P	Pn	00 04 07.3	+1.1
	7.1nm,0.1s,SNR=18						
EIBI				S	Sn	00 04 37.9	-1.1
	40nm,0.2s,SNR=14						
EBEN	Beniarda	2.71	332	P	Pn	00 04 07.3	+1.0
EBEN				S	Sn	00 04 39.2	-0.1
EBEN	Beniarda	2.71	332	P	Pn	00 04 07.3	+1.0
	2.0nm,0.1s,SNR=20						
EBEN				S	Sn	00 04 39.2	-0.1
	8.8nm,0.2s,SNR=7.9						
EBEN	Beniarda	2.71	332	P	Pn	00 04 07.3	+1.0
	2.0nm,0.1s,SNR=20						
EBEN				S	Sn	00 04 39.2	-0.1
	8.8nm,0.2s,SNR=7.9						
EBEN	Beniarda	2.71	332	P	Pn	00 04 07.3	+1.0
	2.0nm,0.1s,SNR=20						
EBEN				S	Sn	00 04 39.2	0.0
	8.8nm,0.2s,SNR=7.9						
ENIJ	Nijar	2.98	284	P	Pn	00 04 09.9	-0.1
ENIJ				S	Sn	00 04 44.9	-1.0
ENIJ	Nijar	2.98	284	P	Pn	00 04 09.9	-0.1
	5.8nm,0.2s,SNR=13						
ENIJ				S	Sn	00 04 44.9	-1.0
	8.0nm,0.4s,SNR=7.9						
ENIJ	Nijar	2.98	284	P	Pn	00 04 09.9	-0.1
	5.8nm,0.2s,SNR=13						
ENIJ				S	Sn	00 04 44.9	-1.0
	8.0nm,0.4s,SNR=7.9						
ENIJ	Nijar	2.98	284	P	Pn	00 04 09.9	-0.1
	5.8nm,0.2s,SNR=13						
ENIJ				S	Sn	00 04 44.9	-1.0
	8.0nm,0.4s,SNR=7.9						
ETOB	Tobarra	3.31	315	⇓P	Pn	00 04 15.9	+1.4
ETOB				S	Sn	00 04 55.4	+1.5
ETOB	Tobarra	3.31	315	⇓P	Pn	00 04 15.9	+1.4
	13nm,0.1s,SNR=18						
ETOB				S	Sn	00 04 55.4	+1.5
	14nm,0.2s,SNR=7.9						
ETOB	Tobarra	3.31	315	⇓P	Pn	00 04 15.9	+1.4
	13nm,0.1s,SNR=18						
ETOB				S	Sn	00 04 55.4	+1.5
	14nm,0.2s,SNR=7.9						
ETOB	Tobarra	3.31	315	P	Pn	00 04 15.9	+1.4
	13nm,0.1s,SNR=18						
ETOB				S	Sn	00 04 55.4	+1.6
	14nm,0.2s,SNR=7.9						
EBER	Berja	3.51	281	⇑P	Pn	00 04 17.1	-0.2
EBER				S	Sn	00 04 59.9	+1.0
EBER	Berja	3.51	281	⇑P	Pn	00 04 17.1	-0.2
	20nm,0.2s,SNR=18						
EBER				S	Sn	00 04 59.9	+1.0
	24nm,0.4s,SNR=7.9						
EBER	Berja	3.51	281	⇑P	Pn	00 04 17.1	-0.2
	20nm,0.2s,SNR=18						
EBER				S	Sn	00 04 59.9	+1.0
	24nm,0.4s,SNR=7.9						
EBER	Berja	3.51	281	P	Pn	00 04 17.1	-0.2
	20nm,0.2s,SNR=18						
EBER				S	Sn	00 04 59.9	+1.1
	24nm,0.4s,SNR=7.9						
EHUE	Huescar	3.54	296	P	Pn	00 04 18.6	+1.0
EHUE				S	Sn	00 05 00.7	+1.2
EHUE	Huescar	3.54	296	P	Pn	00 04 18.6	+1.0
	2.7nm,0.2s,SNR=7.9						
EHUE				S	Sn	00 05 00.3	+0.8
	3.9nm,0.2s,SNR=7.9						
EHUE	Huescar	3.54	296	P	Pn	00 04 18.6	+1.0
	2.7nm,0.2s,SNR=7.9						
EHUE				S	Sn	00 05 00.3	+0.8
	3.9nm,0.2s,SNR=7.9						
EHUE	Huescar	3.54	296	P	Pn	00 04 18.6	+1.0
	2.7nm,0.2s,SNR=7.9						
EHUE				S	Sn	00 05 00.7	+1.2
	3.9nm,0.2s,SNR=7.9						
ETOS	Mallorca	3.62	17	P	Pn	00 04 18.9	+0.2
ETOS				S	Sn	00 04 59.9	-1.6
ETOS	Mallorca	3.62	17	P	Pn	00 04 18.9	+0.2
	1.3nm,0.1s,SNR=8.2						
ETOS				S	Sn	00 04 59.7	-1.7
	11nm,0.2s,SNR=6.4						
ETOS	Mallorca	3.62	17	P	Pn	00 04 18.9	+0.2
	1.3nm,0.1s,SNR=8.2						
ETOS				S	Sn	00 04 59.7	-1.7
	11nm,0.2s,SNR=6.4						
ETOS	Mallorca	3.62	17	P	Pn	00 04 18.9	+0.2
	1.3nm,0.1s,SNR=8.2						
ETOS				S	Sn	00 04 59.9	-1.6
	11nm,0.2s,SNR=6.4						
ECHE	Chera	3.77	331	P	Pn	00 04 21.9	+1.0
ECHE				S	Sn	00 05 06.5	+1.3
ECHE	Chera	3.77	331	P	Pn	00 04 21.9	+1.0
	1.0nm,0.1s,SNR=9.0						
ECHE				S	Sn	00 05 06.5	+1.3
	15nm,0.4s,SNR=5.9						
ECHE	Chera	3.77	331	P	Pn	00 04 21.9	+1.0
	1.0nm,0.1s,SNR=9.0						
ECHE				S	Sn	00 05 06.5	+1.3
	15nm,0.4s,SNR=5.9						
ECHE	Chera	3.77	331	P	Pn	00 04 21.9	+1.1
	1.0nm,0.1s,SNR=9.0						
ECHE				S	Sn	00 05 06.5	+1.2
	15nm,0.4s,SNR=5.9						
EQES	Quesada	3.88	294	⇓P	Pn	00 04 24.0	+1.6
EQES				S	Sn	00 05 08.9	+0.9
EQES	Quesada	3.88	294	⇑P	Pn	00 04 23.9	+1.5
	11nm,0.1s,SNR=18						
EQES				S	Sn	00 05 08.9	+0.9
	18nm,0.2s,SNR=8.9						
EQES	Quesada	3.88	294	⇑P	Pn	00 04 23.9	+1.5
	11nm,0.1s,SNR=18						
EQES				S	Sn	00 05 08.9	+0.9
	18nm,0.2s,SNR=8.9						
EQES	Quesada	3.88	294	P	Pn	00 04 24.0	+1.6
	11nm,0.1s,SNR=18						
EQES				S	Sn	00 05 08.9	+0.9
	18nm,0.2s,SNR=8.9						
EVIA	Vianos	3.88	308	⇑P	Pn	00 04 23.6	+1.2
EVIA				S	Sn	00 05 09.3	+1.3
EVIA	Vianos	3.88	308	⇑P	Pn	00 04 23.6	+1.2
	5.4nm,0.2s,SNR=18						
EVIA				S	Sn	00 05 09.3	+1.3
	20nm,0.3s						
EVIA	Vianos	3.88	308	⇑P	Pn	00 04 23.6	+1.2
	5.4nm,0.2s,SNR=18						
EVIA				S	Sn	00 05 09.3	+1.3
	20nm,0.3s						
EVIA	Vianos	3.88	308	P	Pn	00 04 23.6	+1.2
	5.4nm,0.2s,SNR=18						
EVIA				S	Sn	00 05 09.3	+1.3
	20nm,0.3s						
EQUE	Quentar	4.00	284	⇑P	Pn	00 04 24.8	+0.8
	18nm,0.2s,SNR=18						
EQUE				S	Sn	00 05 11.0	+0.2
	10nm,0.5s,SNR=7.9						
EQUE	Quentar	4.00	284	⇑P	Pn	00 04 24.8	+0.8
	18nm,0.2s,SNR=18						
EQUE				S	Sn	00 05 11.0	+0.2
	10nm,0.5s,SNR=7.9						
EQUE	Quentar	4.00	284	P	Pn	00 04 24.8	+0.9
	18nm,0.2s,SNR=18						
EQUE				S	Sn	00 05 11.0	+0.2
	10nm,0.5s,SNR=7.9						
EGUA	Guajares	4.04	279	P	Pn	00 04 24.0	-0.6
EGUA				S	Sn	00 05 10.0	-1.9
EGUA	Guajares	4.04	279	P	Pn	00 04 24.0	-0.6
	21nm,0.2s,SNR=7.9						
EGUA				S	Sn	00 05 10.0	-1.9
	87nm,0.5s,SNR=7.9						
EGUA	Guajares	4.04	279	P	Pn	00 04 24.0	-0.6
	21nm,0.2s,SNR=7.9						
EGUA				S	Sn	00 05 10.0	-1.9
	87nm,0.5s,SNR=7.9						
EGUA	Guajares	4.04	279	P	Pn	00 04 24.0	-0.6
	21nm,0.2s,SNR=7.9						
EGUA				S	Sn	00 05 10.0	-1.9
	87nm,0.5s,SNR=7.9						
ECOG	Cogollos-Vega	4.11	285	P	Pn	00 04 26.8	+1.3
ECOG	Cogollos-Vega	4.11	285	P	Pn	00 04 26.8	+1.3
	14nm,0.3s,SNR=14						
ECOG	Cogollos-Vega	4.11	285	P	Pn	00 04 26.8	+1.3
	14nm,0.3s,SNR=14						
ECOG	Cogollos-Vega	4.11	285	P	Pn	00 04 26.8	+1.3
	14nm,0.3s,SNR=14						
ERON	Agron	4.25	281	P	Pn	00 04 27.2	-0.3
	5.9nm,0.3s,SNR=7.9						
ERON	Agron	4.25	281	P	Pn	00 04 27.2	-0.3
	5.9nm,0.3s,SNR=7.9						
EMOS	Mosqueruela	4.30	340	⇑P	Pn	00 04 30.2	+2.1
EMOS				S	Sn	00 05 18.0	-0.4
EMOS	Mosqueruela	4.30	340	⇑P	Pn	00 04 30.3	+2.1
	8.9nm,0.2s,SNR=18						
EMOS				S	Sn	00 05 18.0	-0.4
	9.0nm,0.3s,SNR=7.9						
EMOS	Mosqueruela	4.30	340	⇑P	Pn	00 04 30.3	+2.1
	8.9nm,0.2s,SNR=18						
EMOS				S	Sn	00 05 18.0	-0.4
	9.0nm,0.3s,SNR=7.9						
EMOS	Mosqueruela	4.30	340	P	Pn	00 04 30.2	+2.1
	8.9nm,0.2s,SNR=18						
EMOS				S	Sn	00 05 18.0	-0.4
	9.0nm,0.3s,SNR=7.9						
EBAN	Banos Encina	4.54	296	P	Pn	00 04 32.3	+0.9
EBAN	Banos Encina	4.54	296	P	Pn	00 04 32.3	+0.9
	2.6nm,0.2s,SNR=7.9						
EBAN				S	Sn	00 05 24.1	-0.1
	4.0nm,0.3s,SNR=7.9						
EBAN	Banos Encina	4.54	296	P	Pn	00 04 32.3	+0.9
	2.6nm,0.2s,SNR=7.9						
EBAN				S	Sn	00 05 24.1	-0.1
	4.0nm,0.3s,SNR=7.9						
EBAN	Banos Encina	4.54	296	P	Pn	00 04 32.3	+0.9
	2.6nm,0.2s,SNR=7.9						
EBAN				S	Sn	00 05 24.1	-0.1
	4.0nm,0.3s,SNR=7.9						
ELOJ	Sierra Loja	4.55	282	P	Pn	00 04 33.6	+2.0
ELOJ	Sierra Loja	4.55	282	P	Pn	00 04 33.7	+2.1
	9.6nm,0.4s,SNR=13						
ELOJ				S	Sn	00 05 23.1	-1.3
	11nm,0.6s,SNR=7.9						
ELOJ	Sierra Loja	4.55	282	P	Pn	00 04 33.7	+2.1
	9.6nm,0.4s,SNR=13						
ELOJ				S	Sn	00 05 23.1	-1.3
	11nm,0.6s,SNR=7.9						
ELOJ	Sierra Loja	4.55	282	P	Pn	00 04 33.6	+2.1
	9.6nm,0.4s,SNR=13						
ERTA	Horta de San J	4.71	350	P	Pn	00 04 35.7	+2.0
ERTA				S	Sn	00 05 27.7	-0.7
ERTA	Horta de San J	4.71	350	P	Pn	00 04 35.7	+2.0
	1.4nm,0.1s,SNR=13						
ERTA				S	Sn	00 05 27.7	-0.7
	3.8nm,0.3s,SNR=7.9						
ERTA	Horta de San J	4.71	350	P	Pn	00 04 35.7	+2.0
	1.4nm,0.1s,SNR=13						
ERTA				S	Sn	00 05 27.7	-0.7
	3.8nm,0.3s,SNR=7.9						
ERTA	Horta de San J	4.71	350	P	Pn	00 04 35.7	+2.0
	1.4nm,0.1s,SNR=13						
ERTA				S	Sn	00 05 27.7	-0.7
	3.8nm,0.3s,SNR=7.9						
EMIJ	Mijas	5.00	275	P	Pn	00 04 35.9	-1.8
EMIJ				S	Sn	00 05 31.7	-3.8
EMIJ	Mijas	5.00	275	P	Pn	00 04 35.9	-1.8
	5.6nm,0.2s,SNR=28						
EMIJ				S	Sn	00 05 31.7	-3.8
	2.2nm,0.3s,SNR=7.9						
EMIJ	Mijas	5.00	275	P	Pn	00 04 35.9	-1.8
	5.6nm,0.2s,SNR=28						
EMIJ				S	Sn	00 05 31.7	-3.8
	2.2nm,0.3s,SNR=7.9						
EMIJ	Mijas	5.00	275	P	Pn	00 04 35.9	-1.8
	5.6nm,0.2s,SNR=28						
EMIJ				S	Sn	00 05 31.7	-3.7
	2.2nm,0.3s,SNR=7.9						
EPOB	Poblet	5.03	357	P	Pn	00 04 39.6	+1.4
EPOB				S	Sn	00 05 35.8	-0.5
EPOB	Poblet	5.03	357	P	Pn	00 04 39.6	+1.4
	1.4nm,0.2s,SNR=12						
EPOB				S	Sn	00 05 33.7	-2.7
	2.0nm,0.2s,SNR=7.9						
EPOB	Poblet	5.03	357	P	Pn	00 04 39.6	+1.4
	1.4nm,0.2s,SNR=12						
EPOB				S	Sn	00 05 33.7	-2.7
	2.0nm,0.2s,SNR=7.9						
EPOB	Poblet	5.03	357	P	Pn	00 04 39.6	+1.4
	1.4nm,0.2s,SNR=12						
EPOB				S	Sn	00 05 35.8	-0.6
	2.0nm,0.2s,SNR=7.9						
TZK	Tazeka	5.09	246	P	Pn	00 04 39.0	0.0
TZK	Tazeka	5.09	246	P	Pn	00 04 39.0	0.0
TZK	Tazeka	5.09	246	eP	Pn	00 04 39.0	0.0
EADA	Adamuz	5.12	293	P	Pn	00 04 39.8	+0.4
EADA				S	Sn	00 05 36.9	-1.7
EADA	Adamuz	5.12	293	P	Pn	00 04 39.8	+0.4
	1.3nm,0.2s,SNR=4.5						
EADA				S	Sn	00 05 36.9	-1.7
	5.6nm,0.3s,SNR=7.9						
EADA	Adamuz	5.12	293	P	Pn	00 04 39.8	+0.4
	1.3nm,0.2s,SNR=4.5						
EADA				S	Sn	00 05 36.9	-1.7
	5.6nm,0.3s,SNR=7.9						
EADA	Adamuz	5.12	293	P	Pn	00 04 39.8	+0.4
	1.3nm,0.2s,SNR=4.5						
EADA				S	Sn	00 05 36.9	-1.7
	5.6nm,0.3s,SNR=7.9						
ETOR	Torete	5.25	330	P	Pn	00 04 42.7	+1.5
ETOR				S	Sn	00 05 42.4	+0.6
ETOR	Torete	5.25	330	P	Pn	00 04 42.7	+1.5
	3.9nm,0.5s,SNR=4.0						
ETOR				S	Sn	00 05 42.1	+0.3
	4.2nm,0.2s,SNR=7.9						
ETOR	Torete	5.25	330	P	Pn	00 04 42.7	+1.5
	3.9nm,0.5s,SNR=4.0						
ETOR				S	Sn	00 05 42.1	+0.3
	4.2nm,0.2s,SNR=7.9						
ETOR	Torete	5.25	330	P	Pn	00 04 42.7	+1.5
	3.9nm,0.5s,SNR=4.5						
ETOR				S	Sn	00 05 42.4	+0.6
	4.2nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	5.41	310	P	Pn	00 04 44.1	+0.7
ESDC	Sonseca Array	5.41	310	P	Pn	00 04 44.1	+0.7
	3.9nm,0.2s,baz=123,slow=13,SNR=27						
ESDC	Sonseca Array	5.41	310	P	Pn	00 04 44.1	+0.7
	3.9nm,0.2s,baz=123,slow=13,SNR=27						
ESDC	Sonseca Array	5.41	310	P	Pn	00 04 44.1	+0.8
	3.9nm,0.2s,slow=13,SNR=27						
CFON	Fontmartina	5.50	8	P	Pn	00 04 45.4	+0.9
CFON				S	Sn	00 05 45.4	-2.3
CFON	Fontmartina	5.50	8	P	Pn	00 04 45.4	+0.9
	1.8nm,0.3s,SNR=6.6						
CFON				S	Sn	00 05 45.4	-2.3
	1.4nm,0.1s,SNR=7.9						
CFON	Fontmartina	5.50	8	P	Pn	00 04 45.4	+0.9
	1.8nm,0.3s,SNR=6.6						
CFON				S	Sn	00 05 45.4	-2.3
	1.4nm,0.1s,SNR=7.9						
CFON	Fontmartina	5.50	8	P	Pn	00 04 45.4	+0.9
	1.8nm,0.3s,SNR=6.6						
CFON				S	Sn	00 05 45.4	-2.3
	1.4nm,0.1s,SNR=7.9						
EMIR	Miracle	5.59	1	⇓P	Pn	00 04 48.1	+2.2
EMIR				S	Sn	00 05 50.3	+0.3
EMIR	Miracle	5.59	1	⇓P	Pn	00 04 48.1	+2.2
	2.4nm,0.1s,SNR=18						
EMIR				S	Sn	00 05 50.3	+0.3
	5.5nm,0.3s,SNR=5.0						
EMIR	Miracle	5.59	1	⇓P	Pn	00 04 48.1	+2.2
	2.4nm,0.1s,SNR=18						
EMIR				S	Sn	00 05 50.3	+0.3
	5.5nm,0.3s,SNR=5.0						
EMIR	Miracle	5.59	1	P	Pn	00 04 48.1	+2.3
	2.4nm,0.1s,SNR=18						
EMIR				S	Sn	00 05 50.3	+0.2
	5.5nm,0.3s,SNR=5.0						
ESAC	San Caprasio	5.59	345	P	Pn	00 04 47.5	+1.7
ESAC				S	Sn	00 05 50.5	+0.4
ESAC	San Caprasio	5.59	345	P	Pn	00 04 48.6	+2.8
	1.6nm,0.2s,SNR=7.9						
ESAC				S	Sn	00 05 50.5	+0.4
	5.4nm,0.3s,SNR=7.9						
ESAC	San Caprasio	5.59	345	P	Pn	00 04 48.6	+2.8
	1.6nm,0.2s,SNR=7.9						
ESAC				S	Sn	00 05 50.5	+0.4
	5.4nm,0.3s,SNR=7.9						
ESAC	San Caprasio	5.59	345	P	Pn	00 04 47.5	+1.7
	1.6nm,0.2s,SNR=7.9						
ESAC				S	Sn	00 05 50.5	+0.4
	5.4nm,0.3s,SNR=7.9						
ECAB	El Cabril	5.73	290	P	Pn	00 04 47.7	-0.1
ECAB				S	Sn	00 05 52.6	-0.9
ECAB	El Cabril	5.73	290	P	Pn	00 04 47.7	-0.1
	1.3nm,0.1s,SNR=14						
ECAB				S	Sn	00 05 52.6	-1.0
	0.9nm,0.2s,SNR=7.9						
ECAB	El Cabril	5.73	290	P	Pn	00 04 47.7	-0.1
	1.3nm,0.1s,SNR=14						
ECAB				S	Sn	00 05 52.6	-1.0
	0.9nm,0.2s,SNR=7.9						
ECAB	El Cabril	5.73	290	P	Pn	00 04 47.7	-0.1
	1.3nm,0.1s,SNR=14						
ECAB				S	Sn	00 05 52.6	-0.9
	0.9nm,0.2s,SNR=7.9						
CSOR	Sort	6.05	358	P	Pn	00 04 54.1	+1.9
CSOR				S	Sn	00 06 00.5	-1.0
CSOR	Sort	6.05	358	P	Pn	00 04 54.1	+1.9
	1.2nm,0.2s,SNR=13						
CSOR				S	Sn	00 06 00.5	-1.0
	2.3nm,0.3s,SNR=7.9						
CSOR	Sort	6.05	358	P	Pn	00 04 54.1	+1.9
	1.2nm,0.2s,SNR=13						
CSOR				S	Sn	00 06 00.5	-1.0
	2.3nm,0.3s,SNR=7.9						
CSOR	Sort	6.05	358	P	Pn	00 04 54.1	+1.9
	1.2nm,0.2s,SNR=13						
CSOR				S	Sn	00 06 00.5	-1.0
	2.3nm,0.3s,SNR=7.9						
CLLI	Llivia	6.17	4	P	Pn	00 04 55.6	+1.9
CLLI				S	Sn	00 06 03.5	-0.8
CLLI	Llivia	6.17	4	P	Pn	00 04 55.6	+1.9
	0.3nm,0.1s,SNR=7.2						
CLLI				S	Sn	00 06 03.5	-0.8
	0.9nm,0.3s,SNR=7.9						
CLLI	Llivia	6.17	4	P	Pn	00 04 55.6	+1.9
	0.3nm,0.1s,SNR=7.2						
CLLI				S	Sn	00 06 03.5	-0.8
	0.9nm,0.3s,SNR=7.9						
CLLI	Llivia	6.17	4	P	Pn	00 04 55.6	+1.8
	0.3nm,0.1s,SNR=7.2						
CLLI				S	Sn	00 06 03.5	-0.8
	0.9nm,0.3s,SNR=7.9						
MIF	Mishlifen	6.18	244	P	Pn	00 04 50.0	-4.0
MIF	Mishlifen	6.18	244	P	Pn	00 04 50.0	-4.0
CZD	Col de Zad	6.25	240	P	Pn	00 04 51.0	-3.9
CZD	Col de Zad	6.25	240	P	Pn	00 04 51.0	-3.9
EMIN	Mina Concepcio	6.63	285	P	Pn	00 04 58.8	-1.3
EMIN				S	Sn	00 06 13.2	-2.5
EMIN	Mina Concepcio	6.63	285	P	Pn	00 04 58.8	-1.3
	0.7nm,0.1s,SNR=16						
EMIN				S	Sn	00 06 13.2	-2.5
	0.1nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	6.63	285	P	Pn	00 04 58.8	-1.3
	0.7nm,0.1s,SNR=16						
EMIN				S	Sn	00 06 13.2	-2.5
	0.1nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	6.63	285	P	Pn	00 04 58.8	-1.3
	0.7nm,0.1s,SNR=16						
EMIN				S	Sn	00 06 13.2	-2.5
	0.1nm,0.2s,SNR=7.9						
ETSF	Etsaut	6.75	348	*e*Pn	Pn	00 05 02.8	+1.1
ETSF				*e*Sn	Sn	00 06 17.5	-1.1
	2.9nm,0.6s						
ETSF	Etsaut	6.75	348	P	Pn	00 05 02.8	+1.1
ETSF				S	Sn	00 06 17.5	-1.1
	1.4nm,0.6s						
ETSF	Etsaut	6.75	348	P	Pn	00 05 02.8	+1.1
ETSF				S	Sn	00 06 17.5	-1.1
	1.4nm,0.6s						
ETSF	Etsaut	6.75	348	*e*Pn	Pn	00 05 02.8	+1.1
ETSF				*e*Sn	Sn	00 06 17.5	-1.1
	1.5nm,0.6s						
EPF	Esparros	6.76	353	*e*Pn	Pn	00 05 03.1	+1.3
EPF				*e*Sn	Sn	00 06 16.8	-2.0
	1.4nm,0.3s						
EPF	Esparros	6.76	353	P	Pn	00 05 03.1	+1.3
EPF				S	Sn	00 06 16.8	-2.0
	0.7nm,0.3s						
EPF	Esparros	6.76	353	P	Pn	00 05 03.1	+1.3
EPF				S	Sn	00 06 16.8	-2.0
	0.7nm,0.3s						
EPF	Esparros	6.76	353	*e*Pn	Pn	00 05 03.1	+1.3
EPF				*e*Sn	Sn	00 06 16.8	-2.0
	0.7nm,0.3s						
EORO	Oroz-Betelu	6.89	343	P	Pn	00 05 04.6	+0.8
	0.2nm,0.1s,SNR=4.0						
EORO	Oroz-Betelu	6.89	343	P	Pn	00 05 04.6	+0.8
	0.2nm,0.1s,SNR=4.0						
EORO	Oroz-Betelu	6.89	343	P	Pn	00 05 04.6	+0.9
	0.2nm,0.1s,SNR=7.9						
EPLA	Plasencia	6.99	305	P	Pn	00 05 06.1	+1.1
EPLA				S	Sn	00 06 23.4	-1.1
EPLA	Plasencia	6.99	305	P	Pn	00 05 06.1	+1.1
	0.6nm,0.1s,SNR=5.6						
EPLA				S	Sn	00 06 23.4	-1.1
	0.2nm,0.1s,SNR=7.9						

EPLA	**Plasencia**	**6.99**	**305**	P	**Pn**	**00 05 06.1 +1.1**
	0.6nm,0.1s,SNR=5.6					
EPLA				S	**Sn**	**00 06 23.4 -1.1**
	0.2nm,0.1s,SNR=7.9					
EPLA	**Plasencia**	**6.99**	**305**	P	**Pn**	**00 05 06.1 +1.1**
	0.6nm,0.1s,SNR=5.6					
EPLA				S	**Sn**	**00 06 23.4 -1.1**
	0.2nm,0.1s,SNR=7.9					
PBAR	**Barrancos**	**6.99**	**288**	*e*Pn	**Pn**	**00 05 05.5 +0.4**
PBAR				*e*Sn	**Sn**	**00 06 22.4 -2.3**
PBAR				A		00 06 25.1
	1.3nm,0.4s					
PBAR	**Barrancos**	**6.99**	**288**	P	**Pn**	**00 05 05.5 +0.4**
PBAR				S	**Sn**	**00 06 22.4 -2.3**
	1.3nm,0.4s					
PBAR	**Barrancos**	**6.99**	**288**	P	**Pn**	**00 05 05.5 +0.4**
PBAR				S	**Sn**	**00 06 22.4 -2.3**
	1.3nm,0.4s					
PBAR	**Barrancos**	**6.99**	**288**	*e*Pn	**Pn**	**00 05 05.5 +0.4**
PBAR				*e*Sn	**Sn**	**00 06 22.4 -2.3**
	1.3nm,0.4s					
MTLF	**Montolieu**	**7.04**	**5**	*e*Pn	**Pn**	**00 05 06.5 +0.8**
MTLF				*e*Sn	**Sn**	**00 06 23.5 -2.3**
	1.1nm,0.5s					
MTLF	**Montolieu**	**7.04**	**5**	P	**Pn**	**00 05 06.5 +0.8**
MTLF				S	**Sn**	**00 06 23.5 -2.3**
	0.6nm,0.5s					
MTLF	**Montolieu**	**7.04**	**5**	P	**Pn**	**00 05 06.5 +0.8**
MTLF				S	**Sn**	**00 06 23.5 -2.3**
	0.6nm,0.5s					
MTLF	**Montolieu**	**7.04**	**5**	*e*Pn	**Pn**	**00 05 06.5 +0.8**
MTLF				*e*Sn	**Sn**	**00 06 23.5 -2.3**
	0.6nm,0.5s					
SJPF	**Ste Jean**	**7.08**	**344**	*e*Pn	**Pn**	**00 05 07.7 +1.4**
SJPF				*e*Sn	**Sn**	**00 06 25.2 -1.7**
	2.5nm,0.5s					
SJPF	**Ste Jean**	**7.08**	**344**	P	**Pn**	**00 05 07.7 +1.4**
SJPF				S	**Sn**	**00 06 25.2 -1.7**
	1.2nm,0.5s					
SJPF	**Ste Jean**	**7.08**	**344**	P	**Pn**	**00 05 07.7 +1.4**
SJPF				S	**Sn**	**00 06 25.2 -1.7**
	1.2nm,0.5s					
SJPF	**Ste Jean**	**7.08**	**344**	*e*Pn	**Pn**	**00 05 07.7 +1.4**
SJPF				*e*Sn	**Sn**	**00 06 25.2 -1.7**
	1.2nm,0.5s					
EBAD	**Badajoz**	**7.12**	**292**	P	**Pn**	**00 05 07.2 +0.3**
EBAD				S	**Sn**	**00 06 24.2 -3.7**
EBAD	**Badajoz**	**7.12**	**292**	P	**Pn**	**00 05 07.2 +0.3**
	0.7nm,0.1s,SNR=8.2					
EBAD				S	**Sn**	**00 06 24.2 -3.7**
	2.0nm,0.2s,SNR=7.9					
EBAD	**Badajoz**	**7.12**	**292**	P	**Pn**	**00 05 07.2 +0.3**
	0.7nm,0.1s,SNR=8.2					
EBAD				S	**Sn**	**00 06 24.2 -3.7**
	2.0nm,0.2s,SNR=7.9					
EBAD	**Badajoz**	**7.12**	**292**	P	**Pn**	**00 05 07.2 +0.3**
	0.7nm,0.1s,SNR=8.2					
ELIZ	**Elizondo**	**7.20**	**343**	P	**Pn**	**00 05 09.6 +1.7**
ELIZ				S	**Sn**	**00 06 27.4 -2.4**
ELIZ	**Elizondo**	**7.20**	**343**	P	**Pn**	**00 05 09.6 +1.6**
	0.5nm,0.2s,SNR=7.9					
ELIZ				S	**Sn**	**00 06 27.4 -2.4**
	7.6nm,0.5s,SNR=7.9					
EGRO	**El Granado**	**7.23**	**282**	P	**Pn**	**00 05 08.3 0.0**
EGRO	**El Granado**	**7.23**	**282**	P	**Pn**	**00 05 08.3 0.0**
	0.8nm,0.1s,SNR=6.5					
EGRO	**El Granado**	**7.23**	**282**	P	**Pn**	**00 05 08.3 0.0**
	0.8nm,0.1s,SNR=6.5					
EGRO	**El Granado**	**7.23**	**282**	P	**Pn**	**00 05 08.3 -0.1**
	0.8nm,0.1s,SNR=6.5					
EALK	**Alkurruntz**	**7.25**	**343**	P	**Pn**	**00 05 10.3 +1.7**
EALK				S	**Sn**	**00 06 30.1 -0.8**
EALK	**Alkurruntz**	**7.25**	**343**	S	**Sn**	**00 06 30.1 -0.8**
	5.5nm,0.4s,SNR=7.9					
EALK	**Alkurruntz**	**7.25**	**343**	S	**Sn**	**00 06 30.1 -0.8**
	5.5nm,0.4s,SNR=7.9					
EALK	**Alkurruntz**	**7.25**	**343**	P	**Pn**	**00 05 10.3 +1.7**
	0.5nm,0.1s,SNR=7.9					
EALK				S	**Sn**	**00 06 30.1 -0.9**
	5.5nm,0.4s,SNR=7.9					
PVAQ	**Vaqueiros**	**7.40**	**281**	*e*Pn	**Pn**	**00 05 10.2 -0.5**
PVAQ				*e*Sn	**Sn**	**00 06 30.4 -4.3**
PVAQ				A		00 06 45.0
	2.1nm,0.9s					
PVAQ	**Vaqueiros**	**7.40**	**281**	P	**Pn**	**00 05 10.2 -0.5**
PVAQ				S	**Sn**	**00 06 30.4 -4.3**
	2.1nm,0.9s					
PVAQ	**Vaqueiros**	**7.40**	**281**	P	**Pn**	**00 05 10.2 -0.5**
PVAQ				S	**Sn**	**00 06 30.4 -4.3**
	2.1nm,0.9s					
PVAQ	**Vaqueiros**	**7.40**	**281**	*e*Pn	**Pn**	**00 05 10.2 -0.5**
PBDV	**Barranco-do-Ve**	**7.56**	**280**	*e*Pn	**Pn**	**00 05 12.7 -0.1**
PBDV	**Barranco-do-Ve**	**7.56**	**280**	P	**Pn**	**00 05 12.7 -0.1**
PBDV	**Barranco-do-Ve**	**7.56**	**280**	P	**Pn**	**00 05 12.7 -0.1**
PBDV	**Barranco-do-Ve**	**7.56**	**280**	*e*Pn	**Pn**	**00 05 12.7 -0.1**
PESTR	**Estremoz**	**7.59**	**292**	*e*Pn	**Pn**	**00 05 15.0 +1.7**
PESTR	**Estremoz**	**7.59**	**292**	P	**Pn**	**00 05 15.0 +1.7**
PESTR	**Estremoz**	**7.59**	**292**	P	**Pn**	**00 05 15.0 +1.7**
PESTR	**Estremoz**	**7.59**	**292**	*e*Pn	**Pn**	**00 05 15.0 +1.7**
PBEJ	**Beja**	**7.60**	**286**	*e*Pn	**Pn**	**00 05 13.1 -0.4**
PBEJ	**Beja**	**7.60**	**286**	P	**Pn**	**00 05 13.1 -0.4**
PBEJ	**Beja**	**7.60**	**286**	P	**Pn**	**00 05 13.1 -0.4**
PBEJ	**Beja**	**7.60**	**286**	*e*Pn	**Pn**	**00 05 13.1 -0.4**
PCVE	**Castro Verde**	**7.68**	**283**	*e*Pn	**Pn**	**00 05 13.9 -0.6**
PCVE	**Castro Verde**	**7.68**	**283**	P	**Pn**	**00 05 13.9 -0.6**
PCVE	**Castro Verde**	**7.68**	**283**	P	**Pn**	**00 05 13.9 -0.6**
PCVE	**Castro Verde**	**7.68**	**283**	*e*Pn	**Pn**	**00 05 13.9 -0.6**
ELAN	**Lanestosa**	**7.85**	**333**	P	**Pn**	**00 05 20.2 +3.4**
ELAN				S	**Sn**	**00 06 45.3 -0.4**
ELAN	**Lanestosa**	**7.85**	**333**	⇑P	**Pn**	**00 05 20.2 +3.4**
	3.3nm,0.2s,SNR=18					
ELAN				S	**Sn**	**00 06 43.8 -1.9**
	0.2nm,0.2s,SNR=7.9					
ELAN	**Lanestosa**	**7.85**	**333**	⇑P	**Pn**	**00 05 20.2 +3.4**
	3.3nm,0.2s,SNR=18					
ELAN				S	**Sn**	**00 06 43.8 -1.9**
	0.2nm,0.2s,SNR=7.9					
LMR	**La Mourre**	**8.03**	**28**	*e*Pn	**Pn**	**00 05 19.1 -0.2**
LMR				*e*Sn	**Sn**	**00 06 45.6 -4.5**
	2.6nm,0.3s					
LMR	**La Mourre**	**8.03**	**28**	P	**Pn**	**00 05 19.1 -0.2**
LMR				S	**Sn**	**00 06 45.6 -4.5**
	1.3nm,0.3s					
LMR	**La Mourre**	**8.03**	**28**	P	**Pn**	**00 05 19.1 -0.2**
LMR				S	**Sn**	**00 06 45.6 -4.5**
	1.3nm,0.3s					
LMR	**La Mourre**	**8.03**	**28**	*e*Pn	**Pn**	**00 05 19.1 -0.2**
MORF	**Marmelete**	**8.13**	**280**	*e*Pn	**Pn**	**00 05 21.6 +0.8**
MORF	**Marmelete**	**8.13**	**280**	P	**Pn**	**00 05 21.6 +0.8**
MORF	**Marmelete**	**8.13**	**280**	P	**Pn**	**00 05 21.6 +0.8**
MORF	**Marmelete**	**8.13**	**280**	*e*Pn	**Pn**	**00 05 21.6 +0.8**
MVO	**Moncorvo**	**8.18**	**309**	P	**Pn**	**00 05 22.1 +0.8**
MVO				S	**Sn**	**00 06 52.0 -1.9**
MVO	**Moncorvo**	**8.18**	**309**	P	**Pn**	**00 05 22.2 +0.8**
	0.3nm,0.1s,SNR=7.9					
MVO				S	**Sn**	**00 06 52.0 -1.8**
	1.9nm,0.2s,SNR=7.9					
MVO	**Moncorvo**	**8.18**	**309**	P	**Pn**	**00 05 22.2 +0.8**
	0.3nm,0.1s,SNR=7.9					
MVO				S	**Sn**	**00 06 52.0 -1.8**
	1.9nm,0.2s,SNR=7.9					
MVO	**Moncorvo**	**8.18**	**309**	P	**Pn**	**00 05 22.0 +0.6**
	0.3nm,0.1s,SNR=7.9					
MVO				S	**Sn**	**00 06 52.0 -1.8**
	1.9nm,0.2s,SNR=7.9					
PTEO	**Sao Teotonio**	**8.21**	**282**	*e*Pn	**Pn**	**00 05 21.7 -0.1**
PTEO	**Sao Teotonio**	**8.21**	**282**	P	**Pn**	**00 05 21.7 -0.1**
PTEO	**Sao Teotonio**	**8.21**	**282**	P	**Pn**	**00 05 21.7 -0.1**
PTEO	**Sao Teotonio**	**8.21**	**282**	*e*Pn	**Pn**	**00 05 21.7 -0.1**
PFVI	**Vila Bisbo**	**8.27**	**279**	*e*Pn	**Pn**	**00 05 22.0 -0.5**
PFVI	**Vila Bisbo**	**8.27**	**279**	P	**Pn**	**00 05 22.0 -0.5**
	0.7nm,0.1s,SNR=7.9					
PFVI	**Vila Bisbo**	**8.27**	**279**	P	**Pn**	**00 05 22.0 -0.5**
	0.7nm,0.1s,SNR=7.9					
PFVI	**Vila Bisbo**	**8.27**	**279**	P	**Pn**	**00 05 22.0 -0.5**
	0.7nm,0.1s,SNR=7.9					
FRF	**La Foret Royal**	**8.27**	**27**	*e*Pn	**Pn**	**00 05 22.3 -0.3**
FRF				*e*Sn	**Sn**	**00 06 51.6 -4.5**
	4.4nm,0.4s					
FRF	**La Foret Royal**	**8.27**	**27**	P	**Pn**	**00 05 22.3 -0.3**
FRF				S	**Sn**	**00 06 51.6 -4.5**
	2.2nm,0.4s					
FRF	**La Foret Royal**	**8.27**	**27**	P	**Pn**	**00 05 22.3 -0.3**
FRF				S	**Sn**	**00 06 51.6 -4.5**
	2.2nm,0.4s					
FRF	**La Foret Royal**	**8.27**	**27**	*e*Pn	**Pn**	**00 05 22.3 -0.3**
SMRF	**Simiane la Rot**	**8.29**	**21**	*e*Pn	**Pn**	**00 05 22.8 0.0**
SMRF				*e*Sn	**Sn**	**00 06 52.3 -4.1**
	1.0nm,0.5s					
SMRF	**Simiane la Rot**	**8.29**	**21**	P	**Pn**	**00 05 22.8 0.0**
SMRF				S	**Sn**	**00 06 52.3 -4.1**
	0.0nm,0.5s					
SMRF	**Simiane la Rot**	**8.29**	**21**	P	**Pn**	**00 05 22.8 0.0**
SMRF				S	**Sn**	**00 06 52.3 -4.1**
	0.0nm,0.5s					
SMRF	**Simiane la Rot**	**8.29**	**21**	*e*Pn	**Pn**	**00 05 22.8 0.0**
ECAL	**Calabor**	**8.46**	**314**	P	**Pn**	**00 05 26.5 +1.2**
ECAL	**Calabor**	**8.46**	**314**	P	**Pn**	**00 05 26.5 +1.2**
	1.0nm,0.2s,SNR=5.0					
ECAL	**Calabor**	**8.46**	**314**	P	**Pn**	**00 05 26.5 +1.2**
	1.0nm,0.2s,SNR=5.0					
ECAL	**Calabor**	**8.46**	**314**	P	**Pn**	**00 05 26.5 +1.3**
	1.0nm,0.2s,SNR=5.0					
PGF	**Pioggiola**	**8.55**	**41**	*e*Pn	**Pn**	**00 05 25.1 -1.3**
PGF				*e*Sn	**Sn**	**00 06 56.3 -6.6**
	2.2nm,0.3s					
PGF	**Pioggiola**	**8.55**	**41**	P	**Pn**	**00 05 25.1 -1.3**
PGF				S	**Sn**	**00 06 56.3 -6.6**
	1.1nm,0.3s					
PGF	**Pioggiola**	**8.55**	**41**	P	**Pn**	**00 05 25.1 -1.3**
PGF				S	**Sn**	**00 06 56.3 -6.6**
	1.1nm,0.3s					
PGF	**Pioggiola**	**8.55**	**41**	*e*Pn	**Pn**	**00 05 25.1 -1.3**
CAF	**Calviac**	**8.61**	**3**	*e*Pn	**Pn**	**00 05 27.5 +0.2**
CAF				*e*Sn	**Sn**	**00 07 01.1 -3.4**
	0.9nm,0.4s					
CAF	**Calviac**	**8.61**	**3**	P	**Pn**	**00 05 27.5 +0.2**
CAF				S	**Sn**	**00 07 01.1 -3.4**
	0.4nm,0.4s					
CAF	**Calviac**	**8.61**	**3**	P	**Pn**	**00 05 27.5 +0.2**
CAF				S	**Sn**	**00 07 01.1 -3.4**
	0.4nm,0.4s					
CAF	**Calviac**	**8.61**	**3**	*e*Pn	**Pn**	**00 05 27.5 +0.2**
CAF				*e*Sn	**Sn**	**00 07 01.1 -3.4**
	0.4nm,0.4s					
LFF	**La Frestale**	**8.63**	**357**	*e*Pn	**Pn**	**00 05 28.1 +0.6**
LFF				*e*Sn	**Sn**	**00 07 01.6 -3.2**
	3.5nm,0.6s					
LFF	**La Frestale**	**8.63**	**357**	P	**Pn**	**00 05 28.1 +0.6**
LFF				S	**Sn**	**00 07 01.6 -3.2**
	1.8nm,0.6s					
LFF	**La Frestale**	**8.63**	**357**	P	**Pn**	**00 05 28.1 +0.6**
LFF				S	**Sn**	**00 07 01.6 -3.2**
	1.8nm,0.6s					
LFF	**La Frestale**	**8.63**	**357**	*e*Pn	**Pn**	**00 05 28.1 +0.6**
LFF				*e*Sn	**Sn**	**00 07 01.6 -3.2**
	1.8nm,0.6s					
SBF	**Sospel**	**8.83**	**30**	*e*Pn	**Pn**	**00 05 29.8 -0.5**
SBF				*e*Sn	**Sn**	**00 07 04.2 -5.7**
	1.9nm,0.3s					
SBF	**Sospel**	**8.83**	**30**	P	**Pn**	**00 05 29.8 -0.5**
SBF				S	**Sn**	**00 07 04.2 -5.7**
	0.9nm,0.3s					
SBF	**Sospel**	**8.83**	**30**	P	**Pn**	**00 05 29.8 -0.5**
SBF				S	**Sn**	**00 07 04.2 -5.7**
	0.9nm,0.3s					
SBF	**Sospel**	**8.83**	**30**	*e*Pn	**Pn**	**00 05 29.8 -0.5**
RJF	**Les Rejaudoux**	**8.98**	**0**	*e*Pn	**Pn**	**00 05 32.8 +0.5**
RJF				*e*Sn	**Sn**	**00 07 10.3 -3.1**
	0.6nm,0.2s					
RJF	**Les Rejaudoux**	**8.98**	**0**	P	**Pn**	**00 05 32.8 +0.5**
RJF				S	**Sn**	**00 07 10.3 -3.1**
	0.3nm,0.2s					
RJF	**Les Rejaudoux**	**8.98**	**0**	P	**Pn**	**00 05 32.8 +0.5**
RJF				S	**Sn**	**00 07 10.3 -3.1**
	0.3nm,0.2s					
RJF	**Les Rejaudoux**	**8.98**	**0**	*e*Pn	**Pn**	**00 05 32.8 +0.5**
RJF				*e*Sn	**Sn**	**00 07 10.3 -3.1**
	0.3nm,0.2s					
LPG	**La Plagne**	**10.02**	**22**	*e*Pn	**Pn**	**00 05 46.6 +0.1**
LPG				*e*Sn	**Sn**	**00 07 33.8 -5.1**
	0.6nm,0.3s					
LPG	**La Plagne**	**10.02**	**22**	P	**Pn**	**00 05 46.6 +0.1**
LPG				S	**Sn**	**00 07 33.8 -5.1**
	0.3nm,0.3s					
LPG	**La Plagne**	**10.02**	**22**	P	**Pn**	**00 05 46.6 +0.1**
LPG				S	**Sn**	**00 07 33.8 -5.1**
	0.3nm,0.3s					
LPG	**La Plagne**	**10.02**	**22**	*e*Pn	**Pn**	**00 05 46.6 +0.1**
LPL	**La Plagne**	**10.03**	**22**	*e*Pn	**Pn**	**00 05 46.8 +0.1**
LPL				*e*Sn	**Sn**	**00 07 33.8 -5.4**
	0.6nm,0.3s					
LPL	**La Plagne**	**10.03**	**22**	P	**Pn**	**00 05 46.8 +0.1**
LPL				S	**Sn**	**00 07 33.8 -5.4**
	0.3nm,0.3s					
LPL	**La Plagne**	**10.03**	**22**	P	**Pn**	**00 05 46.8 +0.1**
LPL				S	**Sn**	**00 07 33.8 -5.4**
	0.3nm,0.3s					
LPL	**La Plagne**	**10.03**	**22**	*e*Pn	**Pn**	**00 05 46.8 +0.1**

IDC ***16*** *00:10:14.6±1.5, 35°.91N×27°.83E, h0km, mb3.8/7, mb1 4.0/10, mb1mx3.8/25, mbtmp3.9/10, ML4.1/3, Error ellipse: s-maj=35.5km s-min=18.8km az=35.0*
DDA ***16*** *00:10:18.3, 35°.74N×27°.83E, h32km±3km, Md3.6*
ISK ***16*** *00:10:18.1, 35°.63N×27°.94E, h26km, ML3.8*
ISCJB ***16*** *00:10:19.8±0.2, 35°.73N±0°.02×27°.98E±0°.02, h72km±2km, mb3.8/23, Error ellipse: s-maj=2.6km s-min=1.9km az=24.9*
SGS ***16*** *00:10:20.4, 35°.57N×27°.92E, h32km*
NEIC ***16*** *00:10:21.0, 35°.85N×27°.91E, h59km, mb3.9/27, After ATH.*
CSEM ***16*** *00:10:21.2±0.1, 35°.75N×27°.97E, h60km, mb3.9/14, Mw3.3, Error ellipse: s-maj=2.4km s-min=1.7km az=35.0*
NIC ***16*** *00:10:21.8±0.2, 35°.60N×28°.06E, h35km, mb4.3, ML3.7, MW3.3*
ATH ***16*** *00:10:21.0, 35°.85N×27°.91E, h59km±1km, ML3.7*
HLW ***16*** *00:10:23.9, 35°.48N×28°.17E, h31km±42km, Md4.0, Ml3.8*
THE ***16*** *00:10:24.1, 35°.93N×27°.83E, h37km±4km, ML4.4/6, Error ellipse: s-maj=5.1km s-min=0.9km az=105.0*
SZGRF ***16*** *00:10:32.0, 36°.69N×27°.36E, h33km, mb3.8, Dodecanese Islands, Greece*

ISC 16 00:10:21.3±0.1, 35°.75N±0°.01×27°.96E±0°.01, h64km±3km, n442, σ1°.08/552, mb3.9/23, 6C-4D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.48**	**16**	*e*P	**Pn**	**00 10 32.7**	**-0.7**
ARG				*e*S	**Sn**	**00 10 40.9**	**-1.4**
ARG	**Arkhangelos**	**0.48**	**16**	*e*P	**Pn**	**00 10 32.7**	**-0.7**
ARG				*e*S	**Sn**	**00 10 40.9**	**-1.4**
ARG	**Arkhangelos**	**0.48**	**16**	P	**Pn**	**00 10 32.7**	**-0.7**
ARG				S	**Sn**	**00 10 39.6**	**-2.7**
ARG	**Arkhangelos**	**0.48**	**16**	P	**Pn**	**00 10 32.7**	**-0.7**
ARG				*e*S	**Sn**	**00 10 40.9**	**-1.4**
KARP	**Karpathos**	**0.68**	**253**	*e*P	**Pn**	**00 10 35.8**	**+0.2**
KARP				*e*S	**Sn**	**00 10 46.2**	**+0.2**
KARP	**Karpathos**	**0.68**	**253**	*e*P	**Pn**	**00 10 35.8**	**+0.2**
KARP				*e*S	**Sn**	**00 10 46.2**	**+0.2**
KARP	**Karpathos**	**0.68**	**253**	*e*P	**Pn**	**00 10 35.8**	**+0.2**
KARP				*e*S	**Sn**	**00 10 46.2**	**+0.2**
DAT	**Datca**	**1.02**	**343**	PN	**Pn**	**00 10 38.9**	**-0.9**
DAT	**Datca**	**1.02**	**343**	*i* Pn	**Pn**	**00 10 38.9**	**-0.9**
NIS1	**Nisyros Isl.**	**1.06**	**324**	P	**Pn**	**00 10 39.1**	**-1.1**
NIS1				S	**Sn**	**00 10 51.2**	**-3.1**
NIS1	**Nisyros Isl.**	**1.06**	**324**	P	**Pn**	**00 10 39.1**	**-1.1**
NIS1				S	**Sn**	**00 10 51.2**	**-3.1**
TURN	**Turunc**	**1.23**	**25**	*i* P	**Pn**	**00 10 40.2**	**-2.4**
TURN				*i* S	**Sn**	**00 10 53.8**	**-4.6**
TURN	**Turunc**	**1.23**	**25**	*i* P	**Pn**	**00 10 40.2**	**-2.3**
TURN				*i* S	**Sn**	**00 10 53.8**	**-4.6**
BDRM	**Kayabasi**	**1.37**	**343**	*i* P	**Pn**	**00 10 43.3**	**-1.1**
BDRM				*i* S	**Sn**	**00 11 00.6**	**-1.1**
BDRM	**Kayabasi**	**1.37**	**343**	*i* P	**Pn**	**00 10 43.3**	**-1.1**
BDRM				*i* S	**Sn**	**00 11 00.6**	**-1.1**
KSL	**Kastellorizon**	**1.38**	**73**	*e*P	**Pn**	**00 10 45.1**	**+0.7**
KSL	**Kastellorizon**	**1.38**	**73**	*e*P	**Pn**	**00 10 45.1**	**+0.7**
YER	**Yerkesik**	**1.40**	**11**	*e*PN	**Pn**	**00 10 44.9**	**+0.1**
YER				*e*SN	**Sn**	**00 11 03.3**	**+0.9**
YER	**Yerkesik**	**1.40**	**11**	Pn	**Pn**	**00 10 45.1**	**+0.4**
YER				Sg	**Sn**	**00 11 05.1**	**+2.7**
YER	**Yerkesik**	**1.40**	**11**	*e*Pn	**Pn**	**00 10 44.9**	**+0.1**
YER				*e*Sn	**Sn**	**00 11 03.3**	**+0.9**
YER				Sg	**Sn**	**00 11 05.1**	**+2.7**
BODT	**Bodrum**	**1.41**	**338**	PN	**Pn**	**00 10 43.8**	**-1.1**
BODT	**Bodrum**	**1.41**	**338**	Pn	**Pn**	**00 10 43.8**	**-1.1**
BODT	**Bodrum**	**1.41**	**338**	*i* Pn	**Pn**	**00 10 43.8**	**-1.0**
AKAS	**Kas**	**1.42**	**70**	*i* P	**Pn**	**00 10 45.8**	**+0.8**
AKAS				*i* S	**Sn**	**00 11 04.1**	**+1.3**
AKAS	**Kas**	**1.42**	**70**	*i* P	**Pn**	**00 10 45.8**	**+0.8**
AKAS				*i* S	**Sn**	**00 11 04.1**	**+1.3**
MLSB	**Milas**	**1.54**	**355**	*e*PN	**Pn**	**00 10 46.3**	**-0.4**
MLSB				*e*SN	**Sn**	**00 11 06.7**	**+0.9**
MLSB	**Milas**	**1.54**	**355**	*e*Pn	**Pn**	**00 10 46.3**	**-0.4**
MLSB				*e*Sn	**Sn**	**00 11 06.7**	**+0.9**
ZKR	**Zakros**	**1.56**	**246**	*e*P	**Pn**	**00 10 48.5**	**+1.7**
ZKR				*e*S	**Sn**	**00 11 07.0**	**+0.9**
ZKR	**Zakros**	**1.56**	**246**	*e*P	**Pn**	**00 10 48.5**	**+1.7**
ZKR				*e*S	**Sn**	**00 11 07.0**	**+0.9**
ZKR	**Zakros**	**1.56**	**246**	P	**Pn**	**00 10 48.5**	**+1.7**
ZKR				S	**Sn**	**00 11 08.0**	**+1.9**
ZKR	**Zakros**	**1.56**	**246**	P	**Pn**	**00 10 48.5**	**+1.7**
ZKR				*e*S	**Sn**	**00 11 07.0**	**+0.9**
ELL	**Elmali**	**1.86**	**57**	*e*PN	**Pn**	**00 10 50.6**	**-0.4**
ELL	**Elmali**	**1.86**	**57**	*e*Pn	**Pn**	**00 10 50.6**	**-0.3**
GLHS	**Glhisar (BURDU**	**1.87**	**41**	*e*PN	**Pn**	**00 10 50.9**	**-0.1**
GLHS	**Glhisar (BURDU**	**1.87**	**41**	*e*Pn	**Pn**	**00 10 50.9**	**-0.2**
AYDN	**Tasoluk**	**1.90**	**358**	*i* P	**Pn**	**00 10 51.3**	**-0.2**
AYDN				*i* S	**Sn**	**00 11 18.5**	**+4.0**
AYDN	**Tasoluk**	**1.90**	**358**	*i* P	**Pn**	**00 10 51.3**	**-0.2**
AYDN				*i* S	**Sn**	**00 11 18.5**	**+4.0**
NPS	**Neapolis**	**1.98**	**256**	P	**Pn**	**00 10 52.9**	**+0.4**
NPS	**Neapolis**	**1.98**	**256**	P	**Pn**	**00 10 52.9**	**+0.4**
GCAM	**G?zelcaml?**	**2.03**	**344**	*i* P	**Pn**	**00 10 52.6**	**-0.6**
GCAM				*i* S	**Sn**	**00 11 16.7**	**-0.8**
GCAM	**G?zelcaml?**	**2.03**	**344**	*i* P	**Pn**	**00 10 52.6**	**-0.6**
GCAM				*i* S	**Sn**	**00 11 16.7**	**-0.8**
LAST	**Lasithi**	**2.11**	**254**	*e*P	**Pn**	**00 10 55.3**	**+1.0**
LAST				*e*S	**Sn**	**00 11 20.3**	**+0.9**
LAST	**Lasithi**	**2.11**	**254**	*e*P	**Pn**	**00 10 55.3**	**+1.0**
LAST				*e*S	**Sn**	**00 11 20.3**	**+0.9**
LAST	**Lasithi**	**2.11**	**254**	P	**Pn**	**00 10 55.2**	**+0.9**
LAST				S	**Sn**	**00 11 19.9**	**+0.5**
LAST	**Lasithi**	**2.11**	**254**	P	**Pn**	**00 10 55.2**	**+0.9**
LAST				S	**Sn**	**00 11 19.9**	**+0.5**
THR1	**Thera Island**	**2.12**	**288**	P	**Pn**	**00 10 53.9**	**-0.5**
THR1	**Thera Island**	**2.12**	**288**	P	**Pn**	**00 10 53.9**	**-0.5**
DNZL	**Cakiroluk**	**2.12**	**24**	*i* P	**Pn**	**00 10 55.9**	**+1.5**
DNZL				*i* S	**Sn**	**00 11 24.8**	**+5.1**
DNZL	**Cakiroluk**	**2.12**	**24**	*i* P	**Pn**	**00 10 55.9**	**+1.5**
SMG	**Samos**	**2.15**	**336**	*e*P	**Pn**	**00 10 53.8**	**-1.0**
SMG				*e*S	**Sn**	**00 11 18.5**	**-1.9**
SMG	**Samos**	**2.15**	**336**	*e*P	**Pn**	**00 10 53.8**	**-1.0**
SMG				*e*S	**Sn**	**00 11 18.5**	**-1.9**
SMG	**Samos**	**2.15**	**336**	*e*P	**Pn**	**00 10 53.8**	**-1.0**
SMG				*e*S	**Sn**	**00 11 18.5**	**-1.9**
THR2	**Thira island,**	**2.16**	**289**	P	**Pn**	**00 10 54.6**	**-0.3**
THR2	**Thira island,**	**2.16**	**289**	P	**Pn**	**00 10 54.6**	**-0.3**
THR3	**Thira Island,**	**2.17**	**288**	P	**Pn**	**00 10 54.8**	**-0.3**
THR3	**Thira Island,**	**2.17**	**288**	P	**Pn**	**00 10 54.8**	**-0.3**
THR3	**Thira Island,**	**2.17**	**288**	P	**Pn**	**00 10 54.8**	**-0.3**
DENT	**Denizli**	**2.17**	**23**	*e*PN	**Pn**	**00 10 55.4**	**+0.2**
DENT	**Denizli**	**2.17**	**23**	Pn	**Pn**	**00 10 55.3**	**+0.1**
DENT	**Denizli**	**2.17**	**23**	Pn	**Pn**	**00 10 55.3**	**+0.1**
THR5	**Thira Island,**	**2.22**	**288**	P	**Pn**	**00 10 55.4**	**-0.3**
THR5	**Thira Island,**	**2.22**	**288**	P	**Pn**	**00 10 55.4**	**-0.3**
THR5	**Thira Island,**	**2.22**	**288**	P	**Pn**	**00 10 55.4**	**-0.3**
KORT	**Korkueli**	**2.30**	**56**	*i* P	**Pn**	**00 10 58.7**	**+1.8**
KORT				*i* S	**Sn**	**00 11 26.4**	**+2.4**
KORT	**Korkueli**	**2.30**	**56**	*i* P	**Pn**	**00 10 58.7**	**+1.9**
KORT				*i* S	**Sn**	**00 11 26.4**	**+2.4**
APE	**Apeiranthos**	**2.36**	**305**	*e*PN	**Pn**	**00 10 57.3**	**-0.4**
APE	**Apeiranthos**	**2.36**	**305**

HDMB Hadim 3.85 70 ePN Pn 00 11 18.3 +0.3
HDMB Hadim 3.85 70 ePn Pn 00 11 18.3 +0.3
VLY Voula,Athens 3.94 303 eP Pn 00 11 19.8 +0.5
VLY Voula,Athens 3.94 303 eP Pn 00 11 19.8 +0.5
VLY Voula,Athens 3.94 303 eP Pn 00 11 19.8 +0.5
BALY Balya 3.99 356 i P Pn 00 11 19.5 -0.4
BALY i S Sn 00 12 04.9 -0.5
BALY Balya 3.99 356 i P Pn 00 11 19.5 -0.4
BALY i S Sn 00 12 04.9 -0.5
PTL Penteli 4.00 306 eP Pn 00 11 19.8 -0.3
PTL Penteli 4.00 306 eP Pn 00 11 19.8 -0.3
PTL Penteli 4.00 306 eP Pn 00 11 19.8 -0.3
KYTH Kithira 4.02 279 eP Pn 00 11 21.0 +0.6
KYTH Kithira 4.02 279 eP Pn 00 11 21.0 +0.6
KYTH Kithira 4.02 279 eP Pn 00 11 21.0 +0.6
ATH Athens Observa 4.06 304 eP Pn 00 11 20.8 -0.1
ATH eS Sn 00 12 06.2 -0.9
ATH Athens Observa 4.06 304 eP Pn 00 11 20.8 -0.1
ATH eS Sn 00 12 06.2 -0.9
ATH Athens Observa 4.06 304 eP Pn 00 11 20.8 -0.1
ATH eS Sn 00 12 06.2 -0.9
LEF Lefka 4.08 98 ePN Pn 00 11 20.4 -0.8
LEF Lefka 4.08 98 ePn Pn 00 11 20.4 -0.7
ERMK Ermenek 4.10 76 i P Pn 00 11 24.6 +3.1
ERMK i S Sn 00 12 09.2 +0.9
ERMK Ermenek 4.10 76 i P Pn 00 11 24.6 +3.1
ERMK i S Sn 00 12 09.1 +0.9
NAIG Nisos Aigina 4.11 300 eP Pn 00 11 22.1 +0.5
NAIG Nisos Aigina 4.11 300 eP Pn 00 11 22.1 +0.5
NAIG Nisos Aigina 4.11 300 eP Pn 00 11 22.1 +0.5
KONT Konya--Tatoy 4.15 57 ePN Pn 00 11 22.6 +0.4
KONT Konya--Tatoy 4.15 57 ePn Pn 00 11 22.6 +0.4
VLI Veliai 4.17 285 eP Pn 00 11 22.8 +0.4
VLI eS Sn 00 12 08.4 -1.5
VLI Veliai 4.17 285 eP Pn 00 11 22.8 +0.4
VLI eS Sn 00 12 08.4 -1.5
VLI Veliai 4.17 285 eP Pn 00 11 22.8 +0.4
VLI eS Sn 00 12 08.4 -1.5
DID Didima 4.18 296 eP Pn 00 11 23.2 +0.7
DID eS Sn 00 12 09.1 -1.0
DID Didima 4.18 296 P Pn 00 11 23.1 +0.6
DID S Sn 00 12 09.1 -1.0
DID Didima 4.18 296 P Pn 00 11 23.1 +0.6
DID S Sn 00 12 09.1 -1.0
EZN Ezine 4.27 343 ePN Pn 00 11 25.0 +1.3
EZN Ezine 4.27 343 ePn Pn 00 11 25.0 +1.3
LADK Ladik-KONYA 4.29 54 ePN Pn 00 11 25.4 +1.4
LADK Ladik-KONYA 4.29 54 ePn Pn 00 11 25.4 +1.4
GONE Gonen-Balikesi 4.29 357 ePN Pn 00 11 25.0 +0.9
GONE Gonen-Balikesi 4.29 357 ePn Pn 00 11 25.0 +1.0
MAMC Mammari 4.33 96 P Pn 00 11 24.7 +0.1
MAMC Mammari 4.33 96 P Pn 00 11 24.7 +0.1
ESKT Eskisehir 4.41 31 ePN Pn 00 11 27.3 +1.7
ESKT Eskisehir 4.41 31 ePn Pn 00 11 27.3 +1.7
KIZT Kizilcal 4.42 44 ePN Pn 00 11 26.7 +0.9
KIZT Kizilcal 4.42 44 ePn Pn 00 11 26.7 +0.9
CSS Prodhromos 4.46 99 P Pn 00 11 26.4 0.0
2.9nm,0.3s
CSS S Sn 00 12 16.7 -0.3
CSS Prodhromos 4.46 99 P Pn 00 11 26.4 0.0
2.9nm,0.3s
CSS S Sn 00 12 16.7 -0.3
LFK Lefkose 4.57 94 ePN Pn 00 11 27.6 -0.3
LFK Lefkose 4.57 94 ePn Pn 00 11 27.6 -0.3
LTK Loutraki 4.60 301 eP Pn 00 11 29.4 +1.2
LTK eS Sn 00 12 18.2 -2.1
LTK Loutraki 4.60 301 P Pn 00 11 29.3 +1.1
LTK Loutraki 4.60 301 P Pn 00 11 29.3 +1.1
LTK eS Sn 00 12 18.2 -2.1
IKL Isikli 4.67 82 ePN Pn 00 11 29.2 0.0
IKL Isikli 4.67 82 ePn Pn 00 11 29.2 0.0
LIA Limnos Island 4.68 333 eP Pn 00 11 29.8 +0.4
LIA P 00 11 33.6
LIA Limnos Island 4.68 333 eP Pn 00 11 29.8 +0.4
LIA Limnos Island 4.68 333 eP Pn 00 11 29.8 +0.4
VLX Vlachokerasia 4.77 291 eP Pn 00 11 32.4 +1.8
VLX eS Sn 00 12 23.0 -1.6
VLX Vlachokerasia 4.77 291 P Pn 00 11 32.4 +1.8
VLX S Sn 00 12 23.2 -1.4
VLX Vlachokerasia 4.77 291 P Pn 00 11 32.4 +1.8
VLX S Sn 00 12 23.2 -1.4
SLUM 4.83 209 P Pn 00 11 31.7 +0.3
baz=213
SLUM 4.83 209 P Pn 00 11 31.7 +0.3
LKR Lokris 4.90 308 eP Pn 00 11 33.2 +0.8
LKR Lokris 4.90 308 eP Pn 00 11 33.2 +0.8
LKR Lokris 4.90 308 eP Pn 00 11 33.2 +0.8
LTBQ Tobruq 4.99 223 eP Pn 00 11 34.3 +0.7
102nm,1.7s,SNR=43
LTBQ eS Sn 00 12 26.0 -3.9
SNR=43
GUR Goura 5.00 297 eP Pn 00 11 35.3 +1.5
GUR eS Sn 00 12 29.4 -0.9
GUR Goura 5.00 297 P Pn 00 11 34.4 +0.6
GUR S Sn 00 12 28.9 -1.4
GUR Goura 5.00 297 P Pn 00 11 34.4 +0.6
GUR eS Sn 00 12 29.4 -0.9
PHNC Paralimni 5.02 97 P Pn 00 11 36.1 +2.1
3.2nm,0.5s
PHNC S Sn 00 12 31.1 +0.4
PHNC Paralimni 5.02 97 P Pn 00 11 36.1 +2.1
3.2nm,0.5s
PHNC S Sn 00 12 31.1 +0.4
EREN Erenkoy 5.06 91 ePN Pn 00 11 34.9 +0.3
EREN Erenkoy 5.06 91 ePn Pn 00 11 34.9 +0.3
ITM Ithomi 5.07 288 P Pn 00 11 38.3 +3.7
ITM Ithomi 5.07 288 P Pn 00 11 38.3 +3.7
SULT Sultanhani-AKS 5.07 60 ePN Pn 00 11 35.4 +0.6
SULT Sultanhani-AKS 5.07 60 ePn Pn 00 11 35.4 +0.6
DSF Desfina 5.09 303 P Pn 00 11 36.1 +1.2
DSF Desfina 5.09 303 P Pn 00 11 36.1 +1.2
XOR Xorichti 5.23 315 P Pn 00 11 38.6 +1.7
XOR Xorichti 5.23 315 P Pn 00 11 38.6 +1.7
ALN Alexandroupoli 5.35 344 eP Pn 00 11 39.2 +0.7
ALN eS Sn 00 12 36.8 -2.0
ALN Alexandroupoli 5.35 344 eP Pn 00 11 39.2 +0.7
ALN eS Sn 00 12 36.8 -2.0
ALN Alexandroupoli 5.35 344 eP Pn 00 11 39.2 +0.7
ALN eS Sn 00 12 36.8 -2.0
TRIZ Trizonia 5.38 301 P Pn 00 11 40.8 +1.9
TRIZ Trizonia 5.38 301 P Pn 00 11 40.8 +1.9
MERS Mersin 5.42 76 ePN Pn 00 11 39.6 +0.2
MERS Mersin 5.42 76 ePn Pn 00 11 39.7 +0.3
EFP Efpalio 5.53 301 eP Pn 00 11 42.7 +1.8
EFP eS Sn 00 12 41.9 -1.2
EFP Efpalio 5.53 301 P Pn 00 11 43.1 +2.2
EFP Efpalio 5.53 301 eP Pn 00 11 42.7 +1.8
EFP eS Sn 00 12 41.9 -1.2
AGG Agios Georgios 5.54 308 eP Pn 00 11 42.9 +1.7
AGG Agios Georgios 5.54 308 eP Pn 00 11 42.9 +1.7
AGG Agios Georgios 5.54 308 eP Pn 00 11 42.9 +1.7
EVR Evrytania 5.83 305 eP Pn 00 11 46.2 +1.1
EVR Evrytania 5.83 305 eP Pn 00 11 46.2 +1.1
EVR Evrytania 5.83 305 eP Pn 00 11 46.2 +1.1
BR131 Keskin Array S 6.00 47 ePn Pn 00 11 45.1 -2.2
2.2nm,0.3s
BR131 eSn Sn 00 12 52.1 -2.6
BR131 Keskin Array S 6.00 47 ePn Pn 00 11 45.2 -2.2
2.2nm,0.3s
BR131 eSn Sn 00 12 52.1 -2.5
BRTR Keskin Array B 6.00 47 Pn Pn 00 11 48.0 +0.6
0.2nm,0.3s,baz=218,slow=15,SNR=8.9
BRTR Sn Sn 00 12 54.5 -0.2
0.5nm,0.3s,baz=221,slow=24,SNR=4.6
BRTR Keskin Array B 6.00 47 Pn Pn 00 11 48.0 +0.6
BRTR Sn Sn 00 12 54.5 -0.1
HMYD Mayadein 6.41 157 P Pn 00 11 53.5 +0.5
baz=157
HMYD Mayadein 6.41 157 P Pn 00 11 53.5 +0.5
NVR Nevrokopi 6.44 331 eP Pn 00 11 54.5 +1.0
NVR Nevrokopi 6.44 331 eP Pn 00 11 54.5 +1.0
NVR Nevrokopi 6.44 331 eP Pn 00 11 54.5 +1.0
KOT Kottamia 6.66 150 P Pn 00 11 55.8 -0.7
baz=149
KOT Kottamia 6.66 150 P Pn 00 11 55.8 -0.7
HWQ Hawqa 6.72 100 ePn Pn 00 11 56.8 -0.4
HWQ Hawqa 6.72 100 ePn Pn 00 11 56.8 -0.5
AMAG Maghara 6.73 138 P Pn 00 11 56.3 -1.2
baz=137
AMAG Maghara 6.73 138 P Pn 00 11 56.3 -1.2
MMAI Mount Meron Ar 6.73 112 Pn Pn 00 11 56.1 -1.4
7.2nm,0.3s,baz=302,slow=13,SNR=46
MMAI Sn Sn 00 13 10.0 -2.8
15nm,0.3s,baz=294,slow=31,SNR=8.6
HHAG Hagoal 6.75 148 P Pn 00 11 57.2 -0.6
baz=147
HHAG AMP 00 13 00.0
comp=E,100µm,0.1s,logA/T=5.8,baz=147
HHAG Hagoal 6.75 148 P Pn 00 11 57.2 -0.6
HRSH Kfar Ka'horesh 6.79 115 P Pn 00 11 57.4 -0.8
baz=132
RSH 6.79 133 P Pn 00 11 57.4 -0.9
SWA2 6.83 199 P Pn 00 11 59.2 +0.5
baz=202
SWA2 6.83 199 P Pn 00 11 59.2 +0.4
RCY Rachaya 6.86 107 ePn Pn 00 11 58.9 -0.4
RCY Rachaya 6.86 107 ePn Pn 00 11 58.9 -0.4
FNA Florina 7.21 316 P Pn 00 12 08.0 +4.0
AWBH 7.45 174 P Pn 00 12 07.2 -0.2
baz=174
AWBH 7.45 174 P Pn 00 12 07.2 -0.2
HNKL Nakhl 7.71 137 P Pn 00 12 09.5 -1.3
baz=136
HNKL S Sn 00 13 30.3 -6.3
baz=136
HNKL Nakhl 7.71 137 P Pn 00 12 09.5 -1.3
VTS Vitosha 7.76 333 ||iP Pn 00 12 13.5 +2.0
VTS Vitosha 7.76 333 ||iP Pn 00 12 13.5 +2.0
LJBD Adjabya 8.09 236 eP Pn 00 12 15.6 -0.5
comp=E,180nm,2.1s,SNR=41
ASF Jabal al Asfar 8.24 113 Pn Pn 00 12 17.6 -0.5
comp=E,0.9nm,0.3s,baz=156,slow=6.6,SNR=9.3
ASF Sn Sn 00 13 47.9 -1.8
comp=E,0.7nm,0.3s,baz=248,slow=19,SNR=2.4
EIL Elat 8.45 134 Pn Pn 00 12 19.6 -1.4
comp=E,2.6nm,0.3s,baz=307,slow=5.6,SNR=42
EIL Sn Sn 00 13 49.4 -5.6
comp=E,6.6nm,0.3s,baz=312,slow=19,SNR=18
EIL Elat 8.45 134 Pn Pn 00 12 19.6 -1.4
GRB Gharib 8.51 150 P Pn 00 12 21.6 -0.2
baz=150
GRB Gharib 8.51 150 P Pn 00 12 21.6 -0.2
CVD Cernavoda 8.55 0 ||iP Px 00 13 16.2
HFRF Wahat Farafira 8.58 178 P Pn 00 12 22.5 -0.3
baz=179
HFRF Wahat Farafira 8.58 178 P Pn 00 12 22.5 -0.3
HBST Basata 8.67 137 P Pn 00 12 23.9 -0.1
baz=136
HBST Basata 8.67 137 P Pn 00 12 23.9 -0.1
TR2 8.82 145 P Pn 00 12 25.2 -0.9
baz=144
TR2 8.82 145 P Pn 00 12 25.2 -0.9
HKAT Jabal Katrina 8.84 143 P Pn 00 12 26.0 -0.3
baz=143
HKAT Jabal Katrina 8.84 143 P Pn 00 12 26.0 -0.3
HAQS Haql 8.90 137 S Sn 00 13 58.4 -7.6
HDHB Dhahab 8.99 139 P Pn 00 12 28.3 -0.1
baz=139
HDHB Dhahab 8.99 139 P Pn 00 12 28.3 -0.2
TR1 9.25 145 P Pn 00 12 31.5 -0.5
baz=145
TR1 9.25 145 P Pn 00 12 31.5 -0.4
SHRM 9.43 144 P Pn 00 12 33.9 -0.5
baz=144
SHRM 9.43 144 P Pn 00 12 33.9 -0.5
MLR Muntele Rosu 9.85 352 ||iP Pn 00 12 44.5 +4.5
HDK1 Dakhla 10.25 173 P Pn 00 12 46.5 +0.8
baz=173
HDK1 Dakhla 10.25 173 P Pn 00 12 46.4 +0.8
GZR Gura Zlata 10.40 339 ||iP Pn 00 12 48.8 +1.3
GZR Gura Zlata 10.40 339 ||iP Pn 00 12 48.8 +1.3
AKRG Al Kharijah 10.45 167 P Pn 00 12 48.3 0.0
baz=168
GTR Jabal at Tayr 10.45 167 P Pn 00 12 48.3 0.0
baz=167
GTR Jabal at Tayr 10.45 167 P Pn 00 12 48.3 -0.1
HSFG 10.48 149 P Pn 00 12 48.6 -0.3
baz=149
HSFG 10.48 149 P Pn 00 12 48.6 -0.2
STON Ston 10.66 315 ePn Pn 00 12 50.4 -0.6
STON Sn Sn 00 14 41.7 -6.9
DBAS Duba 10.92 139 S Sn 00 14 47.2 -8.0
DBAS Duba 10.92 139 P Pn 00 12 53.6 -1.1
DBAS Duba 10.92 139 P Pn 00 12 53.6 -1.1
BZS Buzias 10.96 336 ||iP Pn 00 12 54.2 -1.0
BZS Buzias 10.96 336 ||iP Pn 00 12 54.2 -1.0
VAE Valguarnera 11.02 283 Sn Sn 00 14 51.0 -6.8
comp=E,0.7nm,0.3s,baz=193,slow=19,SNR=3.0
HDK2 Wahat Dakhilah 11.43 175 P Pn 00 13 02.4 +0.7
baz=176
HDK2 Wahat Dakhilah 11.43 175 P Pn 00 13 02.4 +0.7
BIDS Bi'r al Bayda' 11.73 137 P Pn 00 13 05.2 -0.5
BIDS Bi'r al Bayda' 11.73 137 P Pn 00 13 05.2 -0.6
HADB 11.85 149 P Pn 00 13 07.5 0.0
baz=149
HADB 11.85 149 P Pn 00 13 07.4 0.0
NVLJ Novalja 13.31 315 ePn Pn 00 13 27.2 0.0
NVLJ Sn Sn 00 15 47.1 -6.3
NVLJ Novalja 13.31 315 ePn Pn 00 13 27.2 0.0
KECS Kecovo 13.87 339 eP Pn 00 13 42.8 +8.2
KECS Kecovo 13.87 339 eP Pn 00 13 42.8 +8.2
CEY Cerknica 14.29 318 i Pn Pn 00 13 42.1 +1.9
CEY Cerknica 14.29 318 i Pn Pn 00 13 42.1 +2.0
VNDS Vrh nad Dolski 14.38 320 i Pn Pn 00 13 43.0 +1.7
VNDS i P 00 13 47.5
VYHS Vyhne 14.40 335 eP Pn 00 13 47.7 +6.1
VYHS Vyhne 14.40 335 eP Pn 00 13 47.7 +6.1
VYHS Vyhne 14.40 335 eP Pn 00 13 47.7 +6.1
LJU Ljubljana 14.43 320 i Pn Pn 00 13 43.4 +1.4
LJU i P 00 13 47.6
LJU Ljubljana 14.43 320 i Pn Pn 00 13 43.4 +1.4
AKASG Malin Array Be 14.97 3 Pn Pn 00 13 52.8 +3.8
comp=E,1.5nm,0.3s,baz=188,slow=10.0,SNR=8.4
VRAC Vranov 15.90 332 Pn Pn 00 14 04.0 +3.1
comp=E,0.5nm,0.3s,baz=128,slow=11,SNR=10
MORC Moravsky Berou 15.94 335 ePn Pn 00 14 00.2 -1.1
MORC Moravsky Berou 15.94 335 ePn Pn 00 14 00.2 -1.2
MORC Moravsky Berou 15.94 335 eP Pn 00 14 05.1 +3.7
ABTA Abfaltersbach 15.96 318 ||iP Pn 00 14 04.8 +3.2
comp=E,5.3nm,0.6s
ABTA Abfaltersbach 15.96 318 P Pn 00 14 04.8 +3.2
comp=E,5.3nm,0.6s
PGF Pioggiola 16.18 301 eP Pn 00 14 01.6 -2.9
comp=E,36nm,1.3s
PGF Pioggiola 16.18 301 eP Pn 00 14 01.6 -2.9
comp=E,18nm,1.3s
TREC Trest 16.33 330 eP Pn 00 14 08.0 +1.8
TREC Trest 16.33 330 P Pn 00 14 08.0 +1.8
GEC2 GERESS Array S 16.77 326 eP Pn 00 14 13.8 +2.1
comp=Z,8.0nm,1.3s
DPC Dobruska-Polom 16.85 334 eP Pn 00 14 14.8 +2.0
DPC e 00 14 25.5
DPC Dobruska-Polom 16.85 334 eP Pn 00 14 14.8 +2.0
DPC epP pP 00 14 25.5 -1.9
DPC Dobruska-Polom 16.85 334 eP Pn 00 14 14.8 +2.0
KHC Kasperske Hory 17.03 326 eP Pn 00 14 16.3 +1.3
KHC e 00 14 31.1
KHC Kasperske Hory 17.03 326 eP Pn 00 14 16.3 +1.3
KHC epP pP 00 14 31.1 +1.8
KHC Kasperske Hory 17.03 326 eP Pn 00 14 16.3 +1.3
FETA Feichten 17.10 316 ||iP Pn 00 14 18.5 +2.6
comp=Z,14nm,1.1s
FETA Feichten 17.10 316 P Pn 00 14 18.5 +2.6
comp=Z,14nm,1.1s
PRU Pruhonice 17.25 330 eP Pn 00 14 18.5 +0.8
PRU Pruhonice 17.25 330 eP Pn 00 14 18.5 +0.8
PRU Pruhonice 17.25 330 eP Pn 00 14 18.5 +0.8
WET Wettzell 17.36 325 eP Pn 00 14 19.4 +0.4
comp=Z,6.0nm,1.1s
DAVOX Davos/Dischmat 17.45 315 P Pn 00 14 22.9 +2.7
comp=Z,0.4nm,0.3s,baz=203,slow=3.2,SNR=3.4
DAVOX Davos/Dischmat 17.45 315 P Pn 00 14 22.9 +2.7
FUR Furstenfeldbru 17.50 320 eP Pn 00 14 20.6 -0.1
comp=Z,13nm,1.2s
SBF Sospel 17.70 303 eP Pn 00 14 20.1 -3.1
comp=Z,41nm,1.4s
SBF Sospel 17.70 303 eP Pn 00 14 20.1 -3.1
comp=Z,20nm,1.4s
ROTZ Rotzenmuhle 18.11 326 eP Pn 00 14 29.4 +1.2
comp=Z,6.0nm,1.0s
FRF La Foret Royal 18.14 302 eP Pn 00 14 28.0 -0.6
comp=Z,20nm,1.4s
FRF La Foret Royal 18.14 302 eP Pn 00 14 28.0 -0.6
comp=Z,9.9nm,1.4s
FRF La Foret Royal 18.14 302 eP Pn 00 14 28.0 -0.6
comp=Z,9.9nm,1.4s
BRG Berggiesshubel 18.18 331 eP Pn 00 14 29.1 +0.1
comp=Z,2.0nm,0.8s
MBDF Montbardon 18.45 306 eP Pn 00 14 31.3 -1.1
comp=Z,5.6nm,0.7s
MBDF Montbardon 18.45 306 eP Pn 00 14 31.3 -1.1
comp=Z,2.8nm,0.7s
MBDF Montbardon 18.45 306 eP Pn 00 14 31.3 -1.1
comp=Z,2.8nm,0.7s
TANN Tannenbergstha 18.46 327 eP Pn 00 14 32.6 +0.2
comp=Z,5.0nm,1.1s
GRF Grafenberg Arr 18.52 324 eP Pn 00 14 33.4 +0.3
comp=Z,6.0nm,0.8s
GRF Grafenberg Arr 18.52 324 eP Pn 00 14 33.4 +0.3
comp=Z,6.0nm,0.8s
LPG La Plagne 18.76 308 eP Pn 00 14 35.1 -1.0
comp=Z,5.2nm,0.5s
LPG La Plagne 18.76 308 eP Pn 00 14 35.1 -1.0
comp=Z,2.6nm,0.5s
LPG La Plagne 18.76 308 eP Pn 00 14 35.1 -1.0
comp=Z,2.6nm,0.5s
LPL La Plagne 18.78 308 eP Pn 00 14 35.5 -0.8
comp=Z,11nm,0.6s
LPL La Plagne 18.78 308 eP Pn 00 14 35.5 -0.8
comp=Z,5.3nm,0.6s
LPL La Plagne 18.78 308 eP Pn 00 14 35.5 -0.8
comp=Z,5.3nm,0.6s
CLL Collm 18.90 330 eP Pn 00 14 36.3 -1.3
comp=Z,4.0nm,0.7s
CLL Collm 18.90 330 i P Pn 00 14 36.6 -1.0
comp=Z,5.0nm,0.7s
CLL Collm 18.90 330 i P Pn 00 14 36.6 -1.0
comp=Z,5.0nm,0.7s
CLL Collm 18.90 330 i P Pn 00 14 36.6 -1.0
comp=Z,5.0nm,0.7s
STU Stuttgart 18.96 319 eP Pn 00 14 38.5 +0.1
comp=Z,11nm,0.6s
MOX Moxa 19.00 327 eP Pn 00 14 39.4 +0.5
comp=Z,6.0nm,0.9s
ORIF Oris-en-Rattie 19.11 305 eP Pn 00 14 37.2 -3.1
comp=Z,4.5nm,0.7s
ORIF Oris-en-Rattie 19.11 305 eP Pn 00 14 37.2 -3.1
comp=Z,2.3nm,0.7s
ORIF Oris-en-Rattie 19.11 305 eP Pn 00 14 37.2 -3.1
comp=Z,2.2nm,0.7s
BFO Black Forest 19.18 317 eP Pn 00 14 41.6 +0.6
comp=Z,4.0nm,0.6s
BFO Black Forest 19.18 317 ePn Pn 00 14 41.9 +0.9
BFO Black Forest 19.18 317 ePn Pn 00 14 41.9 +0.9
CABF La Chapelle 19.65 310 eP Pn 00 14 43.4 -3.2
comp=Z,14nm,0.9s
CABF La Chapelle 19.65 310 eP Pn 00 14 43.4 -3.2
comp=Z,7.0nm,0.9s
CABF La Chapelle 19.65 310 eP Pn 00 14 43.4 -3.2
comp=Z,7.0nm,0.9s
CDF Champ du Feu 19.81 316 eP Pn 00 14 47.2 -1.3
comp=Z,19nm,0.8s
CDF Champ du Feu 19.81 316 eP Pn 00 14 47.2 -1.3
comp=Z,9.6nm,0.8s
CDF Champ du Feu 19.81 316 eP Pn 00 14 47.2 -1.3
comp=Z,9.6nm,0.8s
VIVF Saint-Julien-l 19.90 304 eP Pn 00 14 46.7 -2.8
comp=Z,6.4nm,0.7s
VIVF Saint-Julien-l 19.90 304 eP Pn 00 14 46.7 -2.8
comp=Z,3.2nm,0.7s
VIVF Saint-Julien-l 19.90 304 eP Pn 00 14 46.7 -2.8
comp=Z,3.2nm,0.7s
HAU Haudompre 20.14 314 eP P 00 14 50.2 +0.2
comp=Z,7.2nm,0.7s
HAU Haudompre 20.14 314 eP P 00 14 50.2 +0.2
comp=Z,3.6nm,0.7s
HAU Haudompre 20.14 314 eP P 00 14 50.2 +0.2
comp=Z,3.6nm,0.7s
LASF Ste Croix 20.22 302 eP P 00 14 50.8 -0.1
comp=Z,4.4nm,0.8s
LASF Ste Croix 20.22 302 eP P 00 14 50.8 -0.1
TNS Taunus Mts 20.23 322 eP P 00 14 51.1 +0.2
comp=Z,16nm,0.7s
SMF Signal de Mont 21.08 308 eP P 00 14 59.2 -0.9
comp=Z,7.0nm,0.6s,mb3.9
SMF Signal de Mont 21.08 308 eP P 00 14 59.2 -0.9
comp=Z,3.5nm,0.6s,mb3.9
SMF Signal de Mont 21.08 308 eP P 00 14 59.2 -0.9
comp=Z,3.5nm,0.6s,mb3.9
MTLF Montolieu 21.19 299 eP P 00 15 00.7 -0.7
comp=Z,2.6nm,0.5s,mb3.5
MTLF Montolieu 21.19 299 eP P 00 15 00.7 -0.7
comp=Z,1.3nm,0.5s,mb3.5
MTLF Montolieu 21.19 299 eP P 00 15 00.7 -0.7
comp=Z,1.3nm,0.5s,mb3.5
LOR Lormes 21.31 310 eP P 00 15 02.8 +0.2
comp=Z,5.0nm,0.7s,mb3.7
LOR Lormes 21.31 310 eP P 00 15 02.8 +0.2
comp=Z,2.5nm,0.7s,mb3.6
LOR Lormes 21.31 310 eP P 00 15 02.8 +0.2
comp=Z,2.5nm,0.7s,mb3.6
AVF Avril sur Loir 21.44 308 eP P 00 15 03.8 -0.2
comp=Z,3.3nm,0.6s,mb3.5
AVF Avril sur Loir 21.44 308 eP P 00 15 03.8 -0.2
comp=Z,1.6nm,0.6s,mb3.5
AVF Avril sur Loir 21.44 308 eP P 00 15 03.8 -0.2
comp=Z,1.6nm,0.6s,mb3.5
SSF Saint Saulge 21.45 309 eP P 00 15 03.7 -0.4
comp=Z,11nm,0.6s,mb4.0
SSF Saint Saulge 21.45 309 eP P 00 15 03.7 -0.4
comp=Z,5.3nm,0.6s,mb4.0
SSF Saint Saulge 21.45 309 eP P 00 15 03.7 -0.4
comp=Z,5.3nm,0.6s,mb4.0
BGF Bois d'Agland 21.68 308 eP P 00 15 06.8 +0.2
comp=Z,8.6nm,0.8s,mb3.9
BGF Bois d'Agland 21.68 308 eP P 00 15 06.8 +0.2
comp=Z,4.3nm,0.8s,mb3.9
BGF Bois d'Agland 21.68 308 eP P 00 15 06.8 +0.2
comp=Z,4.3nm,0.8s,mb3.9
TCF Toulx Ste Croi 22.00 306 eP P 00 15 09.5 -0.5
comp=Z,22nm,1.6s,mb4.0
TCF Toulx Ste Croi 22.00 306 eP P 00 15 09.5 -0.5
comp=Z,11nm,1.6s,mb4.0
TCF Toulx Ste Croi 22.00 306 eP P 00 15 09.5 -0.5
comp=Z,11nm,1.6s,mb4.0
RJF Les Rejaudoux 22.16 304 eP P 00 15 11.1 -0.6
comp=Z,10nm,1.1s,mb3.9
RJF Les Rejaudoux 22.16 304 eP P 00 15 11.1 -0.6
comp=Z,5.1nm,1.0s,mb3.9
RJF Les Rejaudoux 22.16 304 eP P 00 15 11.1 -0.6
comp=Z,5.1nm,1.0s,mb3.9
BAIF Baives 22.39 317 eP P 00 15 13.7 -0.3
comp=Z,3.3nm,0.5s,mb3.8
BAIF Baives 22.39 317 eP P 00 15 13.7 -0.3
comp=Z,1.6nm,0.5s,mb3.7
BAIF Baives 22.39 317 eP P 00 15 13.7 -0.3
comp=Z,1.6nm,0.5s,mb3.7
LFF La Frestale 22.60 302 eP P 00 15 14.2 -2.1
comp=Z,18nm,1.1s,mb4.1
LFF La Frestale 22.60 302 eP P 00 15 14.2 -2.1
comp=Z,9.3nm,1.1s,mb4.1
LFF La Frestale 22.60 302 eP P 00 15 14.2 -2.1
comp=Z,9.2nm,1.1s,mb4.1
MFF Saint Martin d 23.65 306 eP P 00 15 26.6 0.0
comp=Z,3.1nm,0.5s,mb3.7
MFF Saint Martin d 23.65 306 eP P 00 15 26.6 0.0
comp=Z,1.5nm,0.4s,mb3.8
MFF Saint Martin d 23.65 306 eP P 00 15 26.6 0.0
comp=Z,1.5nm,0.4s,mb3.8
LDF La Druitiere 24.29 311 eP P 00 15 32.2 -0.3
comp=Z,6.2nm,0.4s,mb4.1
FLN La Foliniere 24.58 311 eP P 00 15 34.1 -0.9
comp=Z,11nm,0.4s,mb4.5
GRR Gorron 24.68 310 eP P 00 15 35.4 -0.6
comp=Z,20nm,0.5s,mb4.6
GRR Gorron 24.68 310 eP P 00 15 35.4 -0.6
comp=Z,10nm,0.5s,mb4.6
GRR Gorron 24.68 310 eP P 00 15 35.4 -0.6
comp=Z,10nm,0.5s,mb4.6
ESDC Sonseca Array 25.48 288 P P 00 15 43.8 +0.4
comp=Z,0.9nm,0.5s,mb3.5,baz=82,slow=9.9,SNR=11
ESDC Sonseca Array 25.48 288 P P 00 15 43.8 +0.4
SGMF Saint Gilles 25.71 309 eP P 00 15 45.3 0.0
comp=Z,4.9nm,0.6s,mb4.0
SGMF Saint Gilles 25.71 309 eP P 00 15 45.3 0.0
comp=Z,2.5nm,0.6s,mb3.9
SGMF Saint Gilles 25.71 309 eP P 00 15 45.3 0.0
comp=Z,2.5nm,0.6s,mb3.9
FINES FINESS Array B 25.74 358 P P 00 15 44.6 -0.8
comp=Z,1.1nm,0.5s,mb3.6,baz=162,slow=13,SNR=8.0
FINES FINESS Array B 25.74 358 P P 00 15 44.6 -0.8
HFS Hagfors 26.08 344 P P 00 15 47.7 -0.9
comp=Z,2.5nm,0.6s,mb3.9,baz=136,slow=12,SNR=7.9

HFS	Hagfors	26.08	344	P	P	00 15 47.7	-0.9
ROSF	Rostrenen	26.19	308	eP	P	00 15 49.1	-0.6
	comp=Z,34nm,1.1s,mb4.5						
ROSF	Rostrenen	26.19	308	eP	P	00 15 49.1	-0.6
	comp=Z,17nm,1.1s,mb4.5						
ROSF	Rostrenen	26.19	308	eP	P	00 15 49.1	-0.6
	comp=Z,17nm,1.1s,mb4.5						
NOA	NORSAR Array B	27.47	342	P	P	00 16 00.1	-0.9
	comp=Z,0.6nm,0.6s,mb3.3,baz=140,slow=10,SNR=2.9						
NOA	NORSAR Array B	27.47	342	P	P	00 16 00.1	-0.9
ARCES	ARCESS Array B	33.86	358	P	P	00 16 56.4	-0.9
	comp=Z,1.5nm,0.8s,mb4.0,baz=163,slow=9.8,SNR=4.8						
ARCES	ARCESS Array B	33.86	358	P	P	00 16 56.4	-0.9
AAK	Ala-Archa	36.34	65	eP	P	00 17 19.2	+0.2
AAK	Ala-Archa	36.34	65	eP	P	00 17 19.2	+0.3
MKAR	Makanchi Array	41.54	57	P	P	00 18 04.9	+2.6
	comp=Z,1.1nm,0.9s,mb3.5,baz=280,slow=8.2,SNR=3.2						
MKAR	Makanchi Array	41.54	57	P	P	00 18 04.9	+2.6
ZALV	Zalesovo Beam	42.94	47	P	P	00 18 15.6	+2.0
	comp=Z,0.4nm,0.4s,mb3.5,baz=268,slow=7.4,SNR=2.5						
ZALV	Zalesovo Beam	42.94	47	P	P	00 18 15.6	+2.0

DJA 16 00:21:29,0°.74S×123°.53E,h33km,MLv3.8/4,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	Luwuk	0.81	248	P	Pn	00 21 44.8	+0.6
LUWI				S	Sn	00 21 55.2	+0.1
KMSI	Cibinong	1.38	19	P	Pn	00 21 56.6	+4.6
KMSI				S	Sn	00 22 07.0	-2.1
MRSI	Marisa	2.00	307	P	Pn	00 22 03.0	+2.5
MNI	Manado	2.53	31	P	Pn	00 22 09.9	+2.0
TTSI	Tana Toraja	4.36	238	P	Pn	00 22 35.9	+2.9
SPSI	Sidrap Palu	4.94	229	P	Pn	00 22 38.0	-2.9

TAP 16 00:24:11.7,21°.19N×121°.23E,h71km,MLv3.5,C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSEB	Hengchuen, Pin	0.77	337	P	Pn	00 24 28.3	+0.8
	baz=328						
TSEB				S	Sn	00 24 40.6	+1.4
	baz=328						
TWK1	Hengchun	0.85	333	i P	Pn	00 24 28.8	+0.4
	baz=328						
TWK1				S	Sn	00 24 41.4	+0.6
	baz=328						
LAY	Lan-yu	0.90	20	eP	Pn	00 24 29.4	+0.3
	baz=20						
LAY				eS	Sn	00 24 42.2	+0.3
	baz=20						
HEN	Hengchun	0.93	331	eP	Pn	00 24 30.7	+1.3
	baz=324						
HEN				eS	Sn	00 24 44.1	+1.6
	baz=324						
TAW	Tawu	1.20	345	eP	Pn	00 24 33.5	+0.7
	baz=354						
EAST	Anshuo	1.24	344	P	Pn	00 24 34.3	+1.0
	baz=354						
EAST				eS	Sn	00 24 50.9	+1.4
	baz=354						
SCZT	Fangliau	1.30	335	eP	Pn	00 24 34.7	+0.5
	baz=327						
SCZT				eS	Sn	00 24 50.7	-0.3
	baz=327						
ECL	Taimali	1.42	350	eP	Pn	00 24 36.1	+0.3
	baz=356						
TWG	Pinlang	1.63	355	eP	Pn	00 24 39.8	+1.3
	baz=355						
TWM1	Shoushan	1.79	336	eP	Pn	00 24 42.7	+2.1
	baz=336						
SGST	Jiashian	1.98	343	eP	Pn	00 24 45.9	+2.9
	baz=332						
ELDTW	Lidau	2.00	355	eP	Pn	00 24 45.0	+1.6
	baz=360						
STYT	Tauyuan	2.01	348	eP	Pn	00 24 45.2	+1.6
	baz=348						
CHN1	Nanshi	2.09	342	eP	Pn	00 24 47.5	+2.9
	baz=353						
WTP	Ta-pu	2.12	345	eP	Pn	00 24 48.0	+3.0
	baz=345						
TWF1	Yuli	2.15	2	eP	Pn	00 24 46.3	+0.8
	baz=356						
TWK	Hsinying	2.18	342	eP	Pn	00 24 47.8	+2.0
	baz=353						
YUS	Yu-Shan	2.30	354	eP	Pn	00 24 49.7	+2.2
	baz=354						
EHY	Hungye	2.31	2	eP	Pn	00 24 48.6	+1.1
	baz=357						
ALS	Alishan	2.34	351	eP	Pn	00 24 50.5	+2.5
	baz=351						
CHN5	Tsauling	2.45	348	eP	Pn	00 24 50.9	+1.5
	baz=348						
SMLT	Sun Moon Lake	2.70	354	eP	Pn	00 24 55.6	+2.8
	baz=354						
TYC	Yuchr	2.72	353	eP	Pn	00 24 55.6	+2.4
	baz=353						
WHF	Hehuan Shan	2.94	1	eP	Pn	00 24 59.5	+3.4
	baz=9.0						
NNS	Nan Shan	3.24	2	eP	Pn	00 25 03.5	+3.3
	baz=10.0						
NSK	Sanguang	3.47	2	eP	Pn	00 25 06.5	+3.1
	baz=352						

*NEIC **16** 00:50:05.7, 17°.29N×94°.57W, h154km, MD4.0(MEX), After MEX.*

MEX 16 00:50:05.7±0.6, 17°.29N×94°.57W, h154km±7km, MD4.0, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.36	236	i P	Pn	00 50 26.1	-0.9
CMIG				eS	Sn	00 50 40.8	-2.4
CMIG	Matias Romero	0.36	236	i P	Pn	00 50 26.1	-0.9
CMIG				eS	Sn	00 50 40.8	-2.4
VHO	Vista Hermosa	2.08	264	i P	Pn	00 50 40.7	-1.3
VHO				eS	Sn	00 51 08.6	-1.4
VHO	Vista Hermosa	2.08	264	i P	Pn	00 50 40.7	-1.3
VHO				eS	Sn	00 51 08.6	-1.4
HUIG	Huatulco	2.12	224	i P	Pn	00 50 40.8	-1.7
HUIG				eS	Sn	00 51 09.0	-1.7
HUIG	Huatulco	2.12	224	i P	Pn	00 50 40.8	-1.7
HUIG				eS	Sn	00 51 09.0	-1.7
PNIG	Pinotepa	3.52	256	i P	Pn	00 50 59.1	-0.8
PNIG				eS	Sn	00 51 40.5	-1.4
PNIG	Pinotepa	3.52	256	i P	Pn	00 50 59.1	-0.8
PNIG				eS	Sn	00 51 40.5	-1.4

*ISK **16** 00:55:47.4, 34°.11N×32°.14E, h22km, ML3.6*
*ISCJB **16** 00:55:48.9±1.0, 34°.33N±0°.02×32°.07E±0°.04, h8km±8km, Error ellipse: s-maj=5.1km s-min=3.8km az=15.5*
*NEIC **16** 00:55:49.7, 34°.33N×31°.90E, h25km, ML3.6(NIC), ML3.6(ISK), After NIC.*
*NIC **16** 00:55:49.7±0.2, 34°.33N×31°.90E, h25km, ML3.6, MW3.4*
*CSEM **16** 00:55:50.1±0.2, 34°.39N×32°.12E, h5km, Mw3.4, Error ellipse: s-maj=4.5km s-min=3.4km az=73.0*
*HLW **16** 00:55:52.4, 34°.44N×32°.11E, h32km±48km, Md3.2, Ml3.3*

ISC 16 00:55:50.0±0.8, 34°.36N±0°.02×32°.13E±0°.04, h5km±5km, n87,σ1°.01/103, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPCY	Paphos	0.56	19	P	Pg	00 56 01.5	+0.8
PPCY	Paphos	0.56	19	P	Pg	00 56 01.5	+0.8
SZAC	Souni-Zanaja	0.74	57	P	Pg	00 56 05.0	+0.8
SZAC	Souni-Zanaja	0.74	57	P	Pg	00 56 05.0	+0.8
ALFC	Alevga	0.89	26	P	Pg	00 56 06.6	-0.5
	54nm,0.2s						
ALFC				S	Sg	00 56 19.5	+0.9
ALFC	Alevga	0.89	26	P	Pg	00 56 06.6	-0.5
	54nm,0.2s						
ALFC				S	Sg	00 56 19.5	+0.9
CSS	Prodhromos	1.16	58	P	Pg	00 56 11.1	-1.2
	15nm,0.2s						
CSS				S	Sg	00 56 27.9	+0.6
CSS	Prodhromos	1.16	58	P	Pg	00 56 11.1	-1.2
	15nm,0.2s						
CSS				S	Sg	00 56 27.9	+0.6
MAMC	Mammari	1.21	48	P	Pg	00 56 12.0	-1.2
MAMC	Mammari	1.21	48	P	Pg	00 56 12.0	-1.2
LFK	Lefkose	1.48	51	ePN	Pn	00 56 16.1	-1.2
LFK				eSN	Sn	00 56 37.4	+0.3
LFK	Lefkose	1.48	51	Pn	Pn	00 56 16.1	-1.2
LFK	Lefkose	1.48	51	ePn	Pn	00 56 16.1	-1.2
LFK				eSn	Sn	00 56 37.4	+0.4
PHNC	Paralimni	1.70	67	P	Pn	00 56 19.6	-0.7
	6.9nm,0.4s						
PHNC				S	Sn	00 56 44.1	+1.6
PHNC	Paralimni	1.70	67	P	Pn	00 56 19.6	-0.7
	6.9nm,0.4s						
PHNC				S	Sn	00 56 44.1	+1.6
EREN	Erenkoy	2.04	55	ePN	Pn	00 56 22.9	-2.2
EREN	Erenkoy	2.04	55	Pn	Pn	00 56 22.6	-2.5
EREN	Erenkoy	2.04	55	ePn	Pn	00 56 22.9	-2.2
IKL	Isikli	2.27	34	ePN	Pn	00 56 27.7	-0.6
IKL				eSN	Sn	00 56 56.0	-0.5
IKL	Isikli	2.27	34	Pn	Pn	00 56 28.0	-0.2
IKL	Isikli	2.27	34	ePn	Pn	00 56 27.7	-0.5
IKL				eSn	Sn	00 56 56.0	-0.6
HDMB	Hadim	2.62	6	ePN	Pn	00 56 33.8	+0.8
HDMB				eSN	Sn	00 57 06.2	+1.0
HDMB	Hadim	2.62	6	Pn	Pn	00 56 34.7	+1.7
HDMB	Hadim	2.62	6	ePn	Pn	00 56 33.8	+0.8
HDMB				eSn	Sn	00 57 06.2	+1.0
BHL	Bhannes	2.96	98	ePn	Pn	00 56 37.4	-0.3
BHL	Bhannes	2.96	98	ePn	Pn	00 56 37.4	-0.3
ELL	Elmali	3.00	323	ePN	Pn	00 56 38.6	+0.4
ELL	Elmali	3.00	323	Pn	Pn	00 56 37.6	-0.6
ELL	Elmali	3.00	323	Pn	Pn	00 56 37.6	-0.6
HWQ	Hawqa	3.16	90	ePn	Pn	00 56 39.5	-1.0
HWQ	Hawqa	3.16	90	ePn	Pn	00 56 39.5	-1.0
MERS	Mersin	3.17	37	ePN	Pn	00 56 40.4	-0.3
MERS	Mersin	3.17	37	ePn	Pn	00 56 40.4	-0.3
RCY	Rachaya	3.19	105	ePn	Pn	00 56 40.0	-0.9
RCY	Rachaya	3.19	105	ePn	Pn	00 56 40.0	-0.9
GLHS	Glhisar (BURDU	3.52	323	ePN	Pn	00 56 45.3	-0.1
GLHS	Glhisar (BURDU	3.52	323	ePn	Pn	00 56 45.3	-0.1
KONT	Konya--Tatoy	3.59	3	ePN	Pn	00 56 47.3	+1.0
KONT	Konya--Tatoy	3.59	3	Pn	Pn	00 56 48.9	+2.5
KONT	Konya--Tatoy	3.59	3	ePn	Pn	00 56 47.3	+1.0
HTY	Hatay	3.72	61	ePN	Pn	00 56 46.6	-1.6
HTY	Hatay	3.72	61	Pn	Pn	00 56 43.7	-4.5
HTY	Hatay	3.72	61	ePn	Pn	00 56 46.6	-1.6
KARA	Karaisali	3.75	39	ePN	Pn	00 56 48.5	-0.1
KARA	Karaisali	3.75	39	ePn	Pn	00 56 48.5	-0.1
AMAG	Maghara	3.81	166	P	Pn	00 56 50.0	+0.6
	baz=165						
AMAG				S	Sn	00 57 34.0	-0.7
	baz=165						
AMAG	Maghara	3.81	166	P	Pn	00 56 50.1	+0.6
AMAG				S	Sn	00 57 34.0	-0.7
LADK	Ladik-KONYA	3.84	3	ePN	Pn	00 56 51.4	+1.6
LADK	Ladik-KONYA	3.84	3	ePn	Pn	00 56 51.4	+1.6
YER	Yerkesik	4.18	313	ePN	Pn	00 56 54.6	+0.1
YER	Yerkesik	4.18	313	Pn	Pn	00 56 52.6	-1.9
YER	Yerkesik	4.18	313	Pn	Pn	00 56 52.6	-1.9
KOZT	Kozan	4.33	43	ePN	Pn	00 56 56.2	-0.3
HHAG	Hagoal	4.39	180	P	Pn	00 56 59.4	+2.0
	baz=181						
HHAG	Hagoal	4.39	180	P	Pn	00 56 59.4	+2.0
DAT	Datca	4.40	304	ePN	Pn	00 56 57.4	-0.1
DAT	Datca	4.40	304	ePn	Pn	00 56 57.4	-0.1
KOT	Kottamia	4.42	183	P	Pn	00 56 58.9	+1.0
	baz=184						
KOT				AMP		00 57 00.0	
	comp=E,40μm,0.2s,logA/T=5.2,baz=184						
KOT				S	Sn	00 57 48.8	-1.0
	baz=184						
KOT	Kottamia	4.42	183	P	Pn	00 56 58.8	+0.9
KOT				S	Sn	00 57 48.8	-1.0
KHL	Karahalli	4.48	333	ePN	Pn	00 56 59.2	+0.6
KHL	Karahalli	4.48	333	ePn	Pn	00 56 59.2	+0.6
MLSB	Milas	4.59	311	ePN	Pn	00 56 59.8	-0.4
MLSB	Milas	4.59	311	Pn	Pn	00 56 58.2	-1.9
MLSB	Milas	4.59	311	Pn	Pn	00 56 58.2	-2.0
HNKL	Nakhl	4.69	160	P	Pn	00 57 02.1	+0.7
	baz=160						
BODT	Bodrum	4.76	306	ePN	Pn	00 57 01.8	-0.7
BODT	Bodrum	4.76	306	Pn	Pn	00 57 00.1	-2.3
BODT	Bodrum	4.76	306	Pn	Pn	00 57 00.1	-2.4
ALT	Altintas	4.96	342	ePN	Pn	00 57 06.0	+0.8
ALT	Altintas	4.96	342	Pn	Pn	00 57 07.2	+1.9
ALT	Altintas	4.96	342	ePn	Pn	00 57 06.0	+0.8
KULA	Kula-Manisa	5.00	327	ePN	Pn	00 57 06.7	+0.9
KULA	Kula-Manisa	5.00	327	ePn	Pn	00 57 06.7	+0.9
HMAT	Matruh	5.34	234	P	Pn	00 57 10.9	+0.4
	baz=234						
HMAT	Matruh	5.34	234	P	Pn	00 57 10.9	+0.4
HBST	Basata	5.58	156	P	Pn	00 57 15.2	+1.4
	baz=156						
HBST	Basata	5.58	156	P	Pn	00 57 15.2	+1.4
IZM	Izmir	5.63	317	ePN	Pn	00 57 15.1	+0.7
IZM	Izmir	5.63	317	Pn	Pn	00 57 13.3	-1.1
IZM	Izmir	5.63	317	Pn	Pn	00 57 13.3	-1.1
BLCB	Balcova	5.74	316	Pn	Pn	00 57 15.2	-0.8
BLCB	Balcova	5.74	316	Pn	Pn	00 57 15.2	-0.8
APE	Apeiranthos	6.01	299	Pn	Pn	00 57 15.5	-4.1
HKAT	Jabal Katrina	6.03	164	P	Pn	00 57 20.4	+0.4
	baz=164						
TR2		6.11	167	P	Pn	00 57 21.0	0.0
	baz=166						
AWBH		6.62	205	P	Pn	00 57 28.4	+0.3
	baz=206						
AWBH		6.62	205	P	Pn	00 57 28.4	+0.4

JMA 16 01:02:56.9±0.1, 43°.13N×146°.23E, h64km±1km, M3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.43	304	P	Pn	01 03 08.5	+0.1
NEM2				eS	Sn	01 03 16.8	-0.1
JAK	Akkeshi	1.13	264	P	Pn	01 03 17.0	+0.2
JAK				eS	Sn	01 03 31.7	+0.1
JRA	Rausu	1.14	315	P	Pn	01 03 17.0	+0.1
JRA				eS	Sn	01 03 32.1	+0.3
JNK	Nakash	1.19	293	P	Pn	01 03 17.5	-0.1
JNK				eS	Sn	01 03 32.5	-0.5
JOB	Onbets	1.77	263	eS	Sn	01 03 47.1	+0.3
JAR	Ashorobuto	1.81	276	P	Pn	01 03 26.5	+0.7
JAR				eS	Sn	01 03 48.0	+0.3
JTKR	Abashiri--Toko	1.89	297	P	Pn	01 03 27.8	+1.0
JTKR				eS	Sn	01 03 50.7	+1.1
JCH	Churui	2.17	257	P	Pn	01 03 31.1	+0.4
JCH				eS	Sn	01 03 56.4	-0.1

BJI 16 01:31:58.4, 31°.13N×103°.36E, h11km, ML3.7/13, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.41	123	i Pg	Pg	01 32 03.8	-2.6
CD2				Sg	Sg	01 32 09.6	-2.2
CD2				smax			
	comp=N,13μm,0.4s						
CD2				smax			
	comp=E,14μm,0.7s						
LZH	Lanzhou	4.96	5	Pg	Pg	01 33 30.8	-2.6
LZH				Sg	Sg	01 34 36.8	-0.9
LZH				smax			
	comp=N,110nm,1.3s						
LZH				smax			
	comp=E,79nm,1.1s						
GYA	Guiyang	5.48	147	Pn	Pn	01 33 23.8	+3.8
GYA				Pg	Pg	01 33 38.5	-4.9
GYA				Sn	Sn	01 34 21.5	-1.6
GYA				smax			
	comp=N,100nm,0.9s						
GYA				smax			
	comp=E,70nm,0.8s						
XAN	Xi'an	5.52	57	Pg	Pg	01 33 34.9	-9.2
XAN				Sn	Sn	01 34 24.5	+0.6
XAN				Sg	Sg	01 34 43.5	-12
XAN				smax			
	comp=N,83nm,0.9s						
XAN				smax			
	comp=E,90nm,0.8s						
GTA	Gaotai	8.75	342	P	Pn	01 34 42.8	+38
GTA				pP		01 34 50.3	
GTA				sP		01 34 53.1	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
WHN	Wuhan	9.47	91	P	Pn	01 34 10.5	-4.2

*NEIC **16** 01:42:59.7, 40°.94S×174°.65E, h66km, ML4.1(WEL), After WEL.*

WEL 16 01:42:59.6±0.1, 40°.94S×174°.65E, h68km±1km, ML4.2/20, 7C-13D, Error ellipse: s-maj=0.8km s-min=0.7km az=90.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIW	Kapiti Island	0.21	69	⇓PN	Pn	01 43 09.7	-0.3
KIW				SN	Sn	01 43 16.9	-0.6
KIW	Kapiti Island	0.21	69	P	Pn	01 43 09.7	-0.3
KIW				S	Sn	01 43 16.9	-0.6
CAW	Cannon Point	0.36	119	⇑PN	Pn	01 43 10.6	-0.3
CAW				SN	Sn	01 43 19.3	+0.1
WEL	Wellington	0.36	166	PN	Pn	01 43 10.5	-0.5
WEL				SN	Sn	01 43 18.9	-0.4
SNZO	South Karori	0.37	174	⇓PN	Pn	01 43 10.5	-0.5
SNZO				SN	Sn	01 43 18.6	-0.9
SNZO	South Karori	0.37	174	P	Pn	01 43 10.7	-0.4
SNZO				S	Sn	01 43 18.6	-0.9
TCW	Tory Channel	0.40	226	⇓PN	Pn	01 43 10.8	-0.5
TCW				SN	Sn	01 43 18.7	-1.1
TCW	Tory Channel	0.40	226	P	Pn	01 43 10.8	-0.4
TCW				S	Sn	01 43 18.7	-1.1
OGWZ	Otaki Gorge	0.41	73	⇓PN	Pn	01 43 11.2	-0.2
OGWZ				SN	Sn	01 43 19.7	-0.3
BHW	Baring Head	0.50	161	⇑PN	Pn	01 43 11.7	-0.5
DUWZ	D'Urville Isla	0.57	283	⇓PN	Pn	01 43 12.1	-0.8
HOWZ	Holdsworth Sta	0.66	87	⇓PN	Pn	01 43 13.4	-0.4
MSWZ	Moikau Station	0.66	137	⇑PN	Pn	01 43 13.5	-0.4
MSWZ	Moikau Station	0.66	137	P	Pn	01 43 13.5	-0.3
MTW	Mount Morrison	0.68	109	⇑PN	Pn	01 43 13.6	-0.4
MTW	Mount Morrison	0.68	109	P	Pn	01 43 13.6	-0.5
TUWZ	Tuamarina	0.73	227	⇓PN	Pn	01 43 14.0	-0.6
MRZ	Mangatainoka R	0.76	69	PN	Pn	01 43 14.3	-0.7
MRZ	Mangatainoka R	0.76	69	P	Pn	01 43 13.9	-1.0
PLWZ	Palliser	0.78	145	⇑PN	Pn	01 43 14.8	-0.4
CMWZ	Cape Campbell	0.88	202	PN	Pn	01 43 16.6	+0.2
CMWZ	Cape Campbell	0.88	202	P	Pn	01 43 16.6	+0.2
TRWZ	Traveller	0.91	121	⇑PN	Pn	01 43 16.3	-0.4
TIWZ	Tintock	0.95	81	⇓PN	Pn	01 43 16.6	-0.7
TMWZ	Te Maipa	0.95	101	⇑PN	Pn	01 43 16.9	-0.5
BSWZ	Blackbirch Sta	0.97	217	PN	Pn	01 43 17.1	-0.5
BSWZ	Blackbirch Sta	0.97	217	P	Pn	01 43 17.1	-0.5
NNZ	Nelson	1.00	253	⇓PN	Pn	01 43 17.3	-0.6
NNZ	Nelson	1.00	253	P	Pn	01 43 17.3	-0.7
POWZ	Post Office Ro	1.01	58	⇓PN	Pn	01 43 17.1	-0.9
WAZ	Wanganui	1.21	12	PN	Pn	01 43 20.9	+0.3
BFZ	Birch Farm	1.24	79	⇓PN	Pn	01 43 19.9	-1.1
BFZ	Birch Farm	1.24	79	P	Pn	01 43 19.6	-1.4
DVHZ	Dannevirke	1.32	62	⇓PN	Pn	01 43 20.7	-1.3
TSZ	Takapari Road	1.33	49	PN	Pn	01 43 21.1	-1.0
TSZ	Takapari Road	1.33	49	P	Pn	01 43 21.1	-1.1
THZ	Tophouse	1.55	237	PN	Pn	01 43 24.0	-1.1
THZ	Tophouse	1.55	237	P	Pn	01 43 24.0	-1.1
PNHZ	Pukenui	1.56	50	⇓PN	Pn	01 43 23.9	-1.3
QRZ	Quartz Range	1.61	273	PN	Pn	01 43 24.9	-1.0
WPHZ	Waipukurau	1.62	58	PN	Pn	01 43 24.6	-1.4
PRHZ	Porangahau	1.65	67	PN	Pn	01 43 24.9	-1.6
DFE	Dawson Falls	1.66	345	PN	Pn	01 43 27.3	+0.7
MTVZ	Mangateitei	1.67	22	PN	Pn	01 43 26.6	-0.1
NEZ	North Egmont	1.72	345	PN	Pn	01 43 27.6	+0.3
NEZ	North Egmont	1.72	345	P	Pn	01 43 27.6	+0.2
PKVZ	Pokaka	1.73	18	PN	Pn	01 43 27.6	+0.1
MOVZ	Moawhango	1.75	29	PN	Pn	01 43 26.8	-0.9
MOVZ	Moawhango	1.75	29	P	Pn	01 43 26.8	-0.9
WNVZ	Wahianoa	1.76	25	PN	Pn	01 43 28.0	0.0
WNVZ	Wahianoa	1.76	25	P	Pn	01 43 28.0	0.0
NWEZ	Newall Road	1.77	340	PN	Pn	01 43 28.1	+0.1
NWEZ	Newall Road	1.77	340	P	Pn	01 43 28.1	+0.1
DREZ	Durham Road	1.78	349	PN	Pn	01 43 28.7	+0.5
VRZ	Vera Road	1.81	3	PN	Pn	01 43 28.8	+0.2
VRZ	Vera Road	1.81	3	P	Pn	01 43 28.8	+0.2
PKE	Pukeiti	1.81	343	PN	Pn	01 43 28.8	+0.1
PKE	Pukeiti	1.81	343	P	Pn	01 43 28.8	+0.2
TUVZ	Tukino	1.83	25	PN	Pn	01 43 28.8	-0.1
WPVZ	Whakapapa	1.86	22	PN	Pn	01 43 29.1	-0.2
WPVZ	Whakapapa	1.86	22	P	Pn	01 43 29.1	-0.2
MHEZ	Mangahewa	1.88	352	PN	Pn	01 43 30.4	+0.9
NGZ	Ngauruhoe	1.90	23	PN	Pn	01 43 29.6	-0.2
NGZ	Ngauruhoe	1.90	23	P	Pn	01 43 29.6	-0.2
PXZ	Pawanui	1.91	62	PN	Pn	01 43 28.0	-1.9
OTVZ	Oturere	1.93	24	PN	Pn	01 43 30.1	-0.1
WTVZ	West Tongariro	1.96	22	PN	Pn	01 43 30.3	-0.2
WTVZ	West Tongariro	1.96	22	P	Pn	01 43 30.3	-0.3
TWVZ	Taurewa	1.96	18	PN	Pn	01 43 30.1	-0.4
TWVZ	Taurewa	1.96	18	P	Pn	01 43 30.1	-0.5
KRVZ	Karewarewa	1.99	23	PN	Pn	01 43 30.7	-0.3
KAHZ	Kahuranaki	2.05	57	PN	Pn	01 43 30.0	-1.8
KATZ	Kakaramea	2.12	23	PN	Pn	01 43 32.8	0.0
KATZ	Kakaramea	2.12	23	P	Pn	01 43 32.8	+0.1
BKZ	Black Stump Fm	2.26	39	PN	Pn	01 43 33.0	-1.7
BKZ	Black Stump Fm	2.26	39	P	Pn	01 43 33.0	-1.7
DSZ	Denniston Nort	2.29	248	PN	Pn	01 43 33.7	-1.3
DSZ	Denniston Nort	2.29	248	P	Pn	01 43 33.7	-1.4
HIZ	Hauiti	2.42	4	PN	Pn	01 43 37.0	+0.1
NMHZ	Naumai	2.47	43	PN	Pn	01 43 35.9	-1.7
LTZ	Lake Taylor	2.56	223	PN	Pn	01 43 37.1	-1.6
LTZ	Lake Taylor	2.56	223	P	Pn	01 43 37.1	-1.6
RAHZ	Arahi	2.75	44	PN	Pn	01 43 38.8	-2.5
KNZ	Kokohu	3.01	51	PN	Pn	01 43 41.7	-3.1
KNZ	Kokohu	3.01	51	P	Pn	01 43 41.7	-3.1
CRLZ	Canterbury Las	3.04	209	PN	Pn	01 43 42.7	-2.5
CRLZ	Canterbury Las	3.04	209	P	Pn	01 43 42.7	-2.5
MHGZ	Mahia Peninsul	3.07	56	PN	Pn	01 43 42.8	-2.8
MQZ	McQueen's Vall	3.14	208

ISC 16 02:04:50.4±2.9, 36°.4N±0°.2×69°.7E±0°.2, h125km±63km, n9, σ0°59/12, 3C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**6.56**	**27**	P	**Pn**	**02 06 24.3**	**-0.1**
	SNR=11						
KK31	**Karatay Array**	**6.77**	**5**	Pn	**Pn**	**02 06 27.6**	**+0.4**
	0.6nm,0.3s,baz=189,slow=16,SNR=20						
KK31				⇓Sn	**Sn**	**02 07 43.3**	**+0.5**
	1.2nm,0.3s,baz=189,slow=22,SNR=4.2						
UCH	**Uchtor**	**6.96**	**31**	P	**Pn**	**02 06 29.2**	**-0.6**
	SNR=9.7						
EKS2	**Erkin-Say**	**7.05**	**26**	P	**Pn**	**02 06 31.3**	**+0.3**
	SNR=7.9						
CHMS	**Chumysh**	**7.71**	**29**	P	**Pn**	**02 06 40.5**	**+0.7**
	SNR=5.4						
ULHL	**Ulahol**	**7.78**	**39**	P	**Pn**	**02 06 40.9**	**0.0**
	SNR=6.1						
TKM2	**Tokmak 2**	**7.99**	**33**	⇑Pn	**Pn**	**02 06 42.4**	**-1.3**
	2.8nm,0.7s						
TKM2				⇑Sn	**Sn**	**02 08 12.4**	**0.0**
	1.7nm,0.5s						
TKM2	**Tokmak 2**	**7.99**	**33**	P	**Pn**	**02 06 42.7**	**-1.0**
	SNR=5.8						
AB31	**Akbulak array**	**14.72**	**334**	⇑Pn	**Pn**	**02 08 12.8**	**+0.6**
	0.2nm,0.3s,baz=132,slow=17,SNR=8.4						
AB31				⇓Sn	**Sn**	**02 10 50.6**	**-4.2**
	0.2nm,0.5s,baz=164,slow=23,SNR=3.8						

*NEIC **16** 02:10:43.0, 31°.75S×72°.06W, h29km, ML3.0(GUC), After GUC.*

GUC 16 02:10:43.0±0.9, 31°.75S×72°.06W, h29km±5km, MD3.5, ML3.0, 2C-2D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.50**	**105**	⇑*i*P	Pb	02 10 52.7	-0.6
CHNG				*i* S	Sb	02 10 59.9	-0.4
CMCH	**Combarbala**	**1.07**	**58**	*i* P	Pn	02 11 03.4	+1.3
CMCH				*i* S	Sn	02 11 18.6	+2.5
CMCH	**Combarbala**	**1.07**	**58**	*i* P	Pn	02 11 03.4	+1.3
CMCH				*i* S	Sn	02 11 18.6	+2.5
ROCH	**El Roble**	**1.51**	**144**	*e*P	Pn	02 11 09.6	+1.6
ROCH	**El Roble**	**1.51**	**144**	*e*P	Pn	02 11 09.6	+1.6
JACH	**Jahuel**	**1.55**	**127**	*e*P	Pn	02 11 10.2	+1.5
JACH				*e*S	Sn	02 11 30.4	+2.6
JACH	**Jahuel**	**1.55**	**127**	*e*P	Pn	02 11 10.2	+1.5
JACH				*e*S	Sn	02 11 30.4	+2.6
PEL	**Peldehue**	**1.81**	**140**	⇑*i*P	Pn	02 11 14.0	+1.8
PEL				*i* S	Sn	02 11 37.4	+3.1
PEL				AML	AML	02 11 44.4	
	comp=N,346nm,0.3s						
RCDM	**Rinconada Maip**	**2.03**	**149**	*e*P	Pn	02 11 16.6	+1.3
RCDM				*e*S	Sn	02 11 42.0	+2.3
RCDM	**Rinconada Maip**	**2.03**	**149**	*e*P	Pn	02 11 16.6	+1.3
RCDM				*e*S	Sn	02 11 42.0	+2.3
RCDM				AML	AML	02 11 45.5	
	comp=E,157nm,0.2s						
CLCH	**Cerro Calan**	**2.08**	**142**	⇓*i*P	Pn	02 11 17.6	+1.6
CLCH				*i* S	Sn	02 11 43.9	+2.9
CLCH				AML	AML	02 11 50.4	
	comp=E,172nm,0.6s						
TACH	**Talagante**	**2.12**	**154**	*e*P	Pn	02 11 18.0	+1.5
TACH				*e*S	Sn	02 11 44.0	+2.2
TACH	**Talagante**	**2.12**	**154**	*e*P	Pn	02 11 18.0	+1.5
TACH				*e*S	Sn	02 11 44.0	+2.2
FCH	**Farellones**	**2.17**	**137**	⇓*i*P	Pn	02 11 18.6	+1.4
FCH				*e*S	Sn	02 11 46.0	+2.9
FCH				AML	AML	02 11 51.4	
	comp=E,110nm,0.3s						
PCH	**Pirque**	**2.27**	**145**	*e*P	Pn	02 11 20.3	+1.6
PCH	**Pirque**	**2.27**	**145**	*e*P	Pn	02 11 20.3	+1.6
LMEL	**Las Melosas**	**2.61**	**144**	*e*P	Pn	02 11 24.8	+1.6
LMEL				*e*S	Sn	02 11 56.6	+2.6
LMEL	**Las Melosas**	**2.61**	**144**	*e*P	Pn	02 11 24.8	+1.6
LMEL				*e*S	Sn	02 11 56.6	+2.6
LMEL				AML	AML	02 12 07.5	
	comp=N,89nm,0.2s						

*NIED **16** 02:12:00, 27°.40N×128°.50E, h44km, Mw4.0 Best double couple: M0 1.17000×10^15 NP1:φs42.00000°, δ67.00000°, λ90.00000°. NP2:φs223.00000°, δ23.00000°, λ91.00000°.*
*ISCJB **16** 02:12:15.6±0.3, 27°.49N±0°.05×128°.45E±0°.07, h55km±5km, mb4.0/23, MS3.6/2, Error ellipse: s-maj=12.9km s-min=3.9km az=39.9*
*NEIC **16** 02:12:15.0±6.2, 27°.51N×128°.46E, h34km±42km, mb4.2/6, Error ellipse: s-maj=19.7km s-min=9.8km az=69.0*
NEIC Recorded [2 JMA] on Tokuno-shima and [1 JMA] on Okinawa and Okino-erabu-shima.
*JMA **16** 02:12:16.5±0.1, 27°.42N×128°.53E, h43km±3km, M4.2*
JMA Felt II J1.
*IDC **16** 02:12:21.5±4.0, 27°.51N×128°.42E, h94km±36km, mb3.6/15, mb1 3.7/16, mb1mx3.6/26, mbtmp3.6/16, MS2.9/3, Ms1 2.9/3, ms1mx2.6/26, Error ellipse: s-maj=30.9km s-min=17.0km az=73.0*

ISC 16 02:12:16.5±0.3, 27°.49N±0°.05×128°.44E±0°.07, h45km±5km, n43, σ0°76/51, mb4.0/23, MS3.6/2, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**0.54**	**57**	P	**Pn**	**02 12 27.6**	**-0.4**
JTK				S	**Sn**	**02 12 35.3**	**-0.9**
JIH	**Iheya**	**0.62**	**223**	P	**Pn**	**02 12 29.0**	**+0.1**
JIH				S	**Sn**	**02 12 37.8**	**-0.1**
JOW	**Kunigami**	**0.67**	**192**	P	**Pn**	**02 12 28.8**	**-0.9**
JOW				S	**Sn**	**02 12 37.5**	**-1.6**
JAM	**Amami Oshima**	**1.38**	**48**	P	**Pn**	**02 12 39.3**	**0.0**
JAM				S	**Sn**	**02 12 56.8**	**+0.4**
JAGN	**Aguni-jima**	**1.39**	**230**	P	**Pn**	**02 12 39.6**	**+0.2**
JAGN				S	**Sn**	**02 12 56.3**	**-0.3**
NAH1	**Naha**	**1.44**	**208**	P	**Pn**	**02 12 42.4**	**+2.2**
NAH1				*e*S	**Sn**	**02 12 59.4**	**+1.5**
JJT2	**Tamagusuku 2**	**1.48**	**205**	P	**Pn**	**02 12 41.3**	**+0.7**
JZK	**Kikaishima**	**1.59**	**59**	P	**Pn**	**02 12 42.9**	**+0.8**
JKE	**Kume jima 2**	**1.88**	**232**	P	**Pn**	**02 12 46.3**	**+0.2**
JKE				*e*S	**Sn**	**02 13 08.5**	**0.0**
JNN	**Nakanoshima**	**2.66**	**28**	P	**Pn**	**02 12 57.0**	**+0.1**
JNN				*e*S	**Sn**	**02 13 27.5**	**-0.4**
JTN	**Tanegashima 3**	**3.86**	**35**	P	**Pn**	**02 13 14.3**	**+1.0**
JTN				*e*S	**Sn**	**02 13 57.9**	**+0.5**
SSLB	**Suanglung**	**7.69**	**243**	*e*Pn	**Pn**	**02 14 04.3**	**-1.6**
	11nm,0.3s						
KSRS	**Korea Array**	**9.95**	**358**	P	**Pn**	**02 14 41.0**	**+4.3**
	0.3nm,0.3s,baz=173,slow=14,SNR=7.2						
KSRS				LR	LR	02 18 44.5	
	comp=Z,50nm,18.0s,baz=165,slow=39						
CBIJ	**Chichi jima**	**12.24**	**89**	LR	LR	02 18 49.9	
	comp=Z,52nm,21.3s,baz=312,slow=32						
BJI	**Beijing**	**16.12**	**324**	P	**Pn**	**02 16 05.5**	**+5.6**
BJI				pmax	pmax		
	comp=Z,13nm,0.9s						
BJI				LR	LR		
	comp=N,440nm,15.8s						
BJI				LR	LR		
	comp=E,110nm,18.6s						
BJI				LR	LR		
	comp=Z,64nm,20.1s						
KMI	**Kunming**	**23.14**	**270**	P	**P**	**02 17 13.3**	**-5.7**
KMI				pmax	pmax		
	comp=Z,11nm,0.5s,mb4.5						
GTA	**Gaotai**	**26.56**	**304**	*e*P	**P**	**02 17 51.6**	**+1.5**
GTA				pP	pP	02 18 00.0	-2.1
GTA				sP	sP	02 18 04.4	-3.1
GTA				S	S	02 21 48.3	-33
GTA				sS	sS	02 22 04.0	-38
GTA				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.1						
GTA				LR	LR		
	comp=N,440nm,10.7s,MS4.3						
GTA				LR	LR		
	comp=E,250nm,12.5s,MS4.3						
GTA				LR	LR		
	comp=Z,280nm,9.2s						
SONM	**Songino Array**	**26.61**	**326**	P	**P**	**02 17 51.9**	**+1.5**
	comp=Z,1.0nm,0.7s,mb3.5,baz=135,slow=11,SNR=5.2						
CHTO	**Chiang Mai**	**28.40**	**259**	*e*P	**P**	**02 18 06.5**	**-0.3**
	comp=Z,2.1nm,0.6s,mb3.9						
CMAR	**Chiang Mai Arr**	**28.54**	**258**	P	**P**	**02 18 08.6**	**+0.6**
	comp=Z,0.6nm,0.3s,mb3.8,baz=69,slow=5.9,SNR=3.4						
MKAR	**Makanchi Array**	**40.84**	**311**	P	**P**	**02 19 53.5**	**-0.2**
	comp=Z,0.3nm,0.4s,mb3.2,baz=94,slow=12,SNR=4.0						
MKAR	**Makanchi Array**	**40.84**	**311**	P	**P**	**02 19 53.5**	**-0.2**
ZALV	**Zalesovo Beam**	**41.37**	**322**	P	**P**	**02 19 57.3**	**-0.5**
	comp=Z,0.7nm,0.3s,mb3.7,baz=102,slow=6.2,SNR=3.9						
ZALV				LR	LR	02 39 12.1	
	comp=Z,18nm,19.4s,MS3.0,baz=91,slow=39						
KURK	**Kurchatov**	**44.04**	**316**	*e*P	**P**	**02 20 18.8**	**-0.8**
	comp=Z,1.9nm,0.6s,mb4.0						
TKM2	**Tokmak 2**	**45.11**	**304**	*e*P	**P**	**02 20 28.9**	**+0.6**
	comp=Z,2.1nm,0.6s,mb4.1						
WRA	**Warramunga Arr**	**47.50**	**172**	P	**P**	**02 20 47.0**	**-0.1**
	comp=Z,0.6nm,0.6s,mb3.7,baz=352,slow=8.0,SNR=7.3						
BVAR	**Borovoye Array**	**49.47**	**318**	P	**P**	**02 21 01.8**	**-0.2**
	comp=Z,1.0nm,0.5s,mb4.2,baz=94,slow=8.9,SNR=5.7						
BRVK	**Borovoye**	**49.53**	**318**	*e*P	**P**	**02 21 02.4**	**-0.1**
	comp=Z,2.1nm,0.6s,mb4.3						
KBL	**Kabul**	**50.76**	**293**	*e*P	**P**	**02 21 12.8**	**+0.7**
	comp=Z,4.3nm,0.5s,mb4.6						
ASAR	**Alice Springs**	**51.13**	**174**	P	**P**	**02 21 15.1**	**+0.3**
	comp=Z,0.3nm,0.6s,mb3.4,baz=6.7,slow=14,SNR=3.4						
ABKAR	**Akbulak array**	**55.93**	**313**	*e*P	**P**	**02 21 49.4**	**-0.4**
	comp=Z,2.4nm,0.8s,mb4.3						
AKTK	**Aktyubinsk**	**57.09**	**314**	P	**P**	**02 21 57.6**	**-0.3**
AKTO	**Aktyubinsk**	**57.09**	**314**	P	**P**	**02 21 57.6**	**-0.3**
	comp=Z,0.6nm,0.5s,mb3.9,baz=82,slow=14,SNR=3.8						
ARCES	**ARCESS Array B**	**68.91**	**338**	P	**P**	**02 23 15.3**	**-0.9**
	comp=Z,1.3nm,0.8s,mb3.9,baz=76,slow=6.6,SNR=4.0						
FINES	**FINESS Array B**	**71.86**	**330**	P	**P**	**02 23 33.8**	**-0.6**
	comp=Z,1.1nm,0.5s,mb4.0,baz=53,slow=5.2,SNR=10						
AKASG	**Malin Array Be**	**74.70**	**319**	P	**P**	**02 23 50.0**	**-1.2**
	comp=Z,0.9nm,0.5s,mb4.0,baz=51,slow=7.2,SNR=4.2						
BRTR	**Keskin Array B**	**76.41**	**308**	P	**P**	**02 24 01.1**	**-0.1**
	comp=Z,1.7nm,0.7s,mb4.1,baz=103,slow=5.2,SNR=11						
ASF	**Jabal al Asfar**	**77.11**	**300**	P	**P**	**02 24 05.7**	**+0.4**
	comp=Z,0.8nm,0.5s,mb3.9,baz=138,slow=8.6,SNR=4.9						
YKA	**Yellowknife Ar**	**77.31**	**25**	P	**P**	**02 24 05.9**	**+0.1**
	comp=Z,0.4nm,0.6s,mb3.5,baz=304,slow=6.4,SNR=5.4						
NB2	**NORSAR Subarra**	**78.27**	**334**	P	**P**	**02 24 10.3**	**-0.9**
	comp=Z,1.8nm,0.6s,mb4.2,baz=50,slow=5.9						
NOA	**NORSAR Array B**	**78.27**	**334**	P	**P**	**02 24 10.6**	**-0.7**
	comp=Z,1.7nm,0.7s,mb4.1,baz=51,slow=5.5,SNR=5.4						
NOA	**NORSAR Array B**	**78.27**	**334**	P	**P**	**02 24 10.6**	**-0.7**
CLL	**Collm**	**83.23**	**325**	*i* P	**P**	**02 24 37.9**	**0.0**

*ISCJB **16** 02:20:15.8±0.6, 33°.08N±0°.04×92°.0E±0°.1, h10km, mb3.7/7, MS3.2/2, Error ellipse: s-maj=14.4km s-min=6.2km az=5.4*
*IDC **16** 02:20:15.9±1.1, 33°.09N×91°.95E, h0km, mb3.8/6, mb1 4.0/9, mb1mx3.8/23, mbtmp3.8/9, ML4.0/3, MS3.2/3, Ms1 3.2/3, ms1mx2.8/27, Error ellipse: s-maj=39.8km s-min=20.0km az=58.0*
*BJI **16** 02:20:18.8, 33°.03N×92°.47E, h8km, mB4.4/1, mb3.9/3, ML4.1/3, Ms3.7/2, Ms7 3.6/2*
*NEIC **16** 02:20:18.5±0.7, 33°.33N×92°.73E, h10km, mb3.5/3, Error ellipse: s-maj=19.3km s-min=8.7km az=64.0*

ISC 16 02:20:17.8±0.6, 33°.10N±0°.04×92°.0E±0°.1, h10km, n20, σ0°94/19, mb3.7/7, MS3.2/2, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.46**	**192**	Pg	**Pb**	**02 21 19.4**	**+0.2**
LSA				Sg	**Sg**	**02 22 09.4**	**+0.5**
LSA				smax			
	comp=E,490nm,1.4s						
LSA	**Lhasa**	**3.46**	**192**	*e*Pn	**Pb**	**02 21 18.8**	**-0.4**
LSA				*e*Sn	**Sg**	**02 22 09.3**	**+0.4**
GTA	**Gaotai**	**8.94**	**43**	*e*P	**Pn**	**02 22 28.3**	**+1.3**
GTA				pP		02 22 31.6	
GTA				sP		02 22 34.4	
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MKAR	**Makanchi Array**	**15.53**	**335**	Pn	**Pn**	**02 23 54.9**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=152,slow=13,SNR=3.0						
CMAR	**Chiang Mai Arr**	**15.88**	**155**	Pn	**Pn**	**02 24 00.5**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=339,slow=13,SNR=6.4						
TKM2	**Tokmak 2**	**16.16**	**312**	*e*P	**Pn**	**02 24 10.5**	**+5.5**
	comp=Z,4.4nm,1.0s						
UCH	**Uchtor**	**16.51**	**308**	*e*P	**Pn**	**02 24 15.3**	**+5.9**
	comp=Z,2.4nm,0.6s						
AAK	**Ala-Archa**	**16.72**	**310**	LR	LR	02 32 10.5	
	comp=Z,59nm,19.8s,baz=256,slow=43						
EKS2	**Erkin-Say**	**17.20**	**309**	*e*P	**Pn**	**02 24 24.2**	**+6.1**
	comp=Z,4.9nm,1.1s						
SONM	**Songino Array**	**18.32**	**32**	P	**Pn**	**02 24 32.2**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=212,slow=12,SNR=19						
SONM	**Songino Array**	**18.32**	**32**	P	**Pn**	**02 24 32.1**	**+0.2**
ZALV	**Zalesovo Beam**	**21.45**	**348**	P	**P**	**02 25 05.9**	**-0.1**
	comp=Z,1.5nm,0.5s,mb3.6,baz=160,slow=11,SNR=8.6						
BVAR	**Borovoye Array**	**25.21**	**329**	P	**P**	**02 25 43.2**	**-0.3**
	comp=Z,0.6nm,0.5s,mb3.4,baz=127,slow=9.2,SNR=3.4						
ABKAR	**Akbulak array**	**28.72**	**314**	*e*P	**P**	**02 26 17.3**	**+2.2**
	comp=Z,0.4nm,0.5s,mb3.4						
KSRS	**Korea Array**	**29.58**	**71**	LR	LR	02 38 54.2	
	comp=Z,33nm,20.9s,MS2.9,baz=235,slow=38						
BRTR	**Keskin Array B**	**46.68**	**296**	P	**P**	**02 28 46.8**	**+0.2**
	comp=Z,1.2nm,0.9s,mb3.8,baz=117,slow=4.4,SNR=7.2						
FINES	**FINESS Array B**	**50.09**	**325**	P	**P**	**02 29 11.7**	**-0.9**
	comp=Z,2.2nm,0.9s,mb4.2,baz=119,slow=11,SNR=3.6						
NOA	**NORSAR Array B**	**57.27**	**325**	LR	LR	02 56 40.4	
	comp=Z,29nm,19.8s,MS3.4,baz=100,slow=38						
ASAR	**Alice Springs**	**69.18**	**139**	P	**P**	**02 31 24.7**	**0.0**
	comp=Z,2.1nm,0.8s,mb4.1,baz=325,slow=6.5,SNR=14						
YKA	**Yellowknife Ar**	**82.37**	**12**	P	**P**	**02 32 38.8**	**-0.7**
	comp=Z,0.6nm,0.9s,mb3.5,baz=330,slow=5.7,SNR=3.9						

IDC 16 02:30:33.8±4.0, 56°.04S×26°.03W, h0km, mb3.7/2, mb1 3.9/2, mb1mx3.7/12, mbtmp3.7/2, MS3.6/8, Ms1 3.6/8, ms1mx3.5/15, Error ellipse: s-maj=434.0km s-min=42.5km az=28.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**32.64**	**279**	LR	LR	02 50 23.8	
	comp=Z,112nm,18.6s,baz=102,slow=36						
CPUP	**Villa Florida**	**37.30**	**310**	P	P	02 37 47.6	+0.2
	0.2nm,0.3s,baz=120,slow=11,SNR=2.6						
CPUP				LR	LR	02 52 17.7	
	comp=Z,84nm,18.8s,baz=169,slow=35						
MAW	**Mawson**	**39.77**	**143**	LR	LR	02 52 16.9	
	comp=Z,87nm,19.1s,baz=170,slow=33						
BOSA	**Boshof**	**45.34**	**75**	LR	LR	02 54 41.6	
	comp=Z,191nm,19.4s,baz=58,slow=32						
LPAZ	**La Paz**	**50.91**	**304**	P	P	02 39 36.6	+0.1
	1.6nm,0.9s,baz=146,slow=6.6,SNR=6.3						
LPAZ				LR	LR	03 01 00.9	
	comp=Z,21nm,18.1s,baz=118,slow=36						
NNA	**Nana**	**58.82**	**298**	LR	LR	03 03 06.3	
	comp=Z,42nm,21.3s,baz=129,slow=33						
ATAH	**Atahualpa**	**63.76**	**299**	LR	LR	03 07 08.8	
	comp=Z,42nm,19.6s,baz=167,slow=34						
RPN	**Rapa Nui**	**64.30**	**259**	LR	LR	03 05 20.0	
	comp=Z,1.3nm,18.5s,baz=207,slow=32						
ROSC	**El Rosal**	**72.40**	**309**	LR	LR	03 14 16.7	
	comp=Z,50nm,18.6s,baz=138,slow=36						
YKA	**Yellowknife Ar**	**136.60**	**318**	PKP	PKPdf	02 49 57.2	+1.0
	0.8nm,0.6s,baz=125,slow=2.4,SNR=8.3						
ZALV	**Zalesovo Beam**	**141.78**	**63**	PKP	PKPdf	02 50 06.6	+0.7
	0.6nm,0.4s,baz=266,slow=6.8,SNR=4.2						
SONM	**Songino Array**	**150.08**	**86**	PKPbc	PKPbc	02 50 24.5	-0.8
	0.4nm,0.4s,baz=253,slow=1.5,SNR=2.3						

*NIED **16** 02:47:00, 45°.30N×151°.40E, h41km, Mw3.9 Best double couple: M0 8.61000×10^14 NP1:φs58.00000°, δ80.00000°, λ-49.00000°. NP2:φs159.00000°, δ42.00000°, λ-165.00000°.*

JMA 16 02:47:39.7±0.5, 45°.28N×151°.44E, h30km, M4.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**4.51**	**247**	P	Pn	02 48 45.3	-0.6
NEM2				*e*S	Sn	02 49 33.4	-4.0
JRA	**Rausu**	**4.71**	**256**	P	Pn	02 48 50.6	+2.0
JNK	**Nakash**	**5.10**	**253**	P	Pn	02 48 55.0	+1.0
JAK	**Akkeshi**	**5.36**	**247**	P	Pn	02 48 57.1	-0.5
JTKR	**Abashiri--Toko**	**5.53**	**259**	P	Pn	02 49 02.2	+2.3
JAR	**Ashorobuto**	**5.85**	**253**	P	Pn	02 49 05.4	+1.1
JMP	**Maruseppu**	**5.90**	**260**	P	Pn	02 49 07.8	+2.8
JKK2	**Kamakawa 2**	**6.37**	**260**	P	Pn	02 49 14.3	+2.9
JCH	**Churui**	**6.41**	**248**	P	Pn	02 49 11.8	-0.2
JCH				*e*S	Sn	02 50 20.0	-4.1
JEM	**Erimo**	**6.84**	**244**	*e*S	Sn	02 50 32.3	-2.3
JNBK	**Urakawa-nobuka**	**6.97**	**248**	P	Pn	02 49 18.9	-0.7
JNBK				*e*S	Sn	02 50 30.1	-7.7
JBT2	**Biratori 2**	**7.00**	**252**	P	Pn	02 49 20.0	-0.1
JKB	**Kayabe**	**8.28**	**249**	P	Pn	02 49 37.4	-0.2
JKB				*e*S	Sn	02 51 03.1	-7.0
JANG	**Nango**	**8.79**	**240**	*e*S	Sn	02 51 13.4	-9.1
JTH	**Tanohata**	**8.85**	**236**	P	Pn	02 49 43.2	-2.2
JTH				*e*S	Sn	02 51 12.9	-11
OFUJ	**Ofunato**	**9.53**	**233**	P	Pn	02 49 52.3	-2.5
OFUJ				*e*S	Sn	02 51 30.6	-10

DJA 16 02:47:52, 1°.54N×125°.26E, h96km, MLv4.1/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	**Manado**	**0.43**	**257**	P	Pn	02 48 08.1	+1.2
KMSI	**Cibinong**	**1.60**	**233**	P	Pn	02 48 19.7	+0.4
TNTI	**Ternate**	**2.24**	**110**	P	Pn	02 48 27.4	-0.2
MRSI	**Marisa**	**3.48**	**252**	P	Pn	02 48 44.0	-0.2
LUWI	**Luwuk**	**3.57**	**224**	P	Pn	02 48 48.5	+3.1
NLAI	**Namlea**	**5.09**	**159**	P	Pn	02 49 06.0	0.0
	271nm,0.4s						
KDI	**Kendari**	**6.07**	**206**	P	Pn	02 49 18.2	-1.0

IDC 16 03:23:19.3±1.6, 0°.10N×125°.98E, h0km, mb3.9/6, mb1 3.9/6, mb1mx3.7/21, mbtmp3.9/6, Error ellipse: s-maj=154.7km s-min=26.3km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**24.85**	**162**	P	P	03 28 43.6	+0.1
	0.5nm,0.4s,baz=345,slow=7.9,SNR=5.6						
SONM	**Songino Array**	**50.50**	**343**	P	P	03 32 19.0	-0.1
	1.8nm,1.0s,baz=152,slow=9.6,SNR=7.1						
MKAR	**Makanchi Array**	**60.12**	**327**	P	P	03 33 29.0	+0.5
	1.2nm,0.7s,baz=130,slow=8.7,SNR=10						
AAK	**Ala-Archa**	**62.56**	**319**	P	P	03 33 44.6	-0.6
	1.3nm,0.3s,baz=172,slow=15,SNR=3.7						
BVAR	**Borovoye Array**	**69.95**	**328**	P	P	03 34 32.9	+0.5
	0.6nm,0.4s,baz=117,slow=6.4,SNR=4.9						
AKTO	**Aktyubinsk**	**76.04**	**322**	P	P	03 35 08.7	+0.2
	0.9nm,0.5s,baz=82,slow=10,SNR=3.6						

*ISCJB **16** 03:39:32.5±0.9, 37°.36N±0°.03×20°.08E±0°.03, h7km±5km, mb3.6/5, Error ellipse: s-maj=6.1km s-min=3.4km az=26.7*
*CSEM **16** 03:39:33.8±0.3, 37°.35N×20°.23E, h2km, MD3.7, Error ellipse: s-maj=7.6km s-min=4.0km az=29.0*
*THE **16** 03:39:33.9, 37°.37N×20°.22E, h0km±2km, ML4.3/8, Error ellipse: s-maj=3.4km s-min=0.9km az=244.0*
*ATH **16** 03:39:36.2, 37°.40N×20°.46E, h21km±2km, MD3.7/17*
*NEIC **16** 03:39:36.2, 37°.40N×20°.46E, h21km, MD3.7(ATH), After ATH.*
*IDC **16** 03:39:38.3±4.0, 37°.64N×20°.69E, h33km±9km, mb3.5/5, mb1 3.6/6, mb1mx3.4/25, mbtmp3.6/6, Error ellipse: s-maj=79.8km s-min=28.4km az=34.0*
*BEO **16** 03:39:39.7±1.2, 37°.80N×20°.48E, h0km, ML3.6/3*

ISC 16 03:39:33.6±0.9, 37°.35N±0°.04×20°.15E±0°.03, h6km±5km, n130, σ1°12/171, mb3.6/5, 2C-4D, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.90**	**23**	*e*Pn	**Pg**	**03 39 50.9**	**0.0**
VLS				*e*Sn	**Sg**	**03 40 02.7**	**+0.1**
VLS	**Valsamata**	**0.90**	**23**	*e*PN	**Pg**	**03 39 50.9**	**0.0**
VLS				*e*SN	**Sg**	**03 40 02.7**	**+0.1**
VLS	**Valsamata**	**0.90**	**23**	P	**Pg**	**03 39 49.5**	**-1.4**
VLS				S	**Sg**	**03 40 02.5**	**-0.1**
VLS	**Valsamata**	**0.90**	**23**	P	**Pg**	**03 39 49.5**	**-1.4**
VLS	**Valsamata**	**0.90**	**23**	*e*Pn	**Pg**	**03 39 50.9**	**0.0**
VLS				S	**Sg**	**03 40 02.5**	**-0.1**
KFL	**Anninata**	**0.92**	**33**	P	**Pg**	**03 39 49.7**	**-1.5**
KFL				S	**Sg**	**03 40 02.8**	**-0.3**
KFL	**Anninata**	**0.92**	**33**	P	**Pg**	**03 39 49.7**	**-1.5**
KFL				S	**Sg**	**03 40 02.8**	**-0.3**
RLS	**Riolos of Patr**	**1.26**	**55**	*e*Pn	**Pn**	**03 39 55.6**	**-2.3**
RLS				*e*Sn	**Sn**	**03 40 10.9**	**-4.3**
RLS	**Riolos of Patr**	**1.26**	**55**	*e*PN	**Pn**	**03 39 55.6**	**-2.3**
RLS				*e*SN	**Sn**	**03 40 10.9**	**-4.3**
RLS	**Riolos of Patr**	**1.26**	**55**	*e*Pn	**Pn**	**03 39 55.6**	**-2.3**
PYL	**PYLOS**	**1.35**	**109**	*e*PN	**Pn**	**03 39 57.8**	**-1.2**
PYL				*e*SN	**Sn**	**03 40 12.9**	**-4.4**
PYL	**PYLOS**	**1.35**	**109**	P	**Pn**	**03 39 57.9**	**-1.1**
PYL				S	**Sb**	**03 40 17.7**	**+0.8**
PYL	**PYLOS**	**1.35**	**109**	P	**Pn**	**03 39 57.9**	**-1.1**
PYL				S	**Sb**	**03 40 17.7**	**+0.8**
LKD	**Levkas**	**1.42**	**16**	*e*Pn	**P

AGG				S	Sn	03 40 44.4	+1.2
DID	**Didima**	**2.46**	**85**	*e*PB	Pb	03 40 13.1	-5.2
DID	**Didima**	**2.46**	**85**	P	Pn	03 40 13.3	-1.1
DID				S	Sn	03 40 45.3	+0.5
DID	**Didima**	**2.46**	**85**	P	Pn	03 40 13.3	-1.1
DID				S	Sn	03 40 45.3	+0.5
KYTH	**Kithira**	**2.55**	**114**	*e*Pb	Pb	03 40 17.0	-2.8
KYTH	**Kithira**	**2.55**	**114**	*e*PB	Pb	03 40 17.0	-2.8
LKR	**Lokris**	**2.60**	**59**	*e*Pn	Pn	03 40 15.4	-0.9
LKR	**Lokris**	**2.60**	**59**	*e*PN	Pn	03 40 15.4	-0.9
LKR	**Lokris**	**2.60**	**59**	P	Pn	03 40 15.4	-0.9
LKR	**Lokris**	**2.60**	**59**	P	Pn	03 40 15.4	-0.9
THL	**Klokotos Trika**	**2.66**	**33**	*e*PN	Pn	03 40 16.9	-0.1
THL	**Klokotos Trika**	**2.66**	**33**	P	Pn	03 40 16.9	-0.1
THL	**Klokotos Trika**	**2.66**	**33**	P	Pn	03 40 16.9	-0.1
KZN	**Kozani**	**3.22**	**23**	P	Pn	03 40 26.1	+1.4
KZN	**Kozani**	**3.22**	**23**	P	Pn	03 40 25.3	+0.6
KZN	**Kozani**	**3.22**	**23**	P	Pn	03 40 25.3	+0.6
FNA	**Florina**	**3.56**	**15**	P	Pn	03 40 29.5	0.0
FNA	**Florina**	**3.56**	**15**	P	Pn	03 40 29.7	+0.2
FNA	**Florina**	**3.56**	**15**	P	Pn	03 40 29.7	+0.2
BIA	**Bitola**	**3.78**	**14**	*e*Pn	Pn	03 40 32.3	-0.1
OHR	**Ohrid**	**3.79**	**7**	*i* Pn	Pn	03 40 33.0	+0.4
TAR1	**Taranto**	**3.88**	**326**	*e*Pn	Pn	03 40 34.7	+0.8
TAR1				*e*Sn	Sn	03 41 18.3	-1.5
THE	**Thessaloniki**	**3.95**	**33**	P	Pn	03 40 36.0	+1.2
THE	**Thessaloniki**	**3.95**	**33**	P	Pn	03 40 36.0	+1.2
PLG	**Polygyros**	**3.97**	**39**	*e*Pn	Pn	03 40 35.1	0.0
PLG	**Polygyros**	**3.97**	**39**	*e*PN	Pn	03 40 35.1	0.0
PLG	**Polygyros**	**3.97**	**39**	*e*Pn	Pn	03 40 35.1	0.0
PE1	**Pezze di Greco**	**4.05**	**329**	*e*Pn	Pn	03 40 37.4	+1.2
PE1				*e*Sn	Sn	03 41 22.0	-2.0
KRUS	**Krusevo**	**4.11**	**12**	*i* Pn	Pn	03 40 36.2	-0.8
SOH	**Sokhos**	**4.27**	**35**	*e*Pn	Pn	03 40 39.2	0.0
SOH	**Sokhos**	**4.27**	**35**	*e*PN	Pn	03 40 39.2	0.0
SOH	**Sokhos**	**4.27**	**35**	*e*Pn	Pn	03 40 39.2	0.0
VAY	**Valandovo**	**4.39**	**25**	*i* Pn	Pn	03 40 40.6	-0.3
SG1	**Sgolgore (BA)**	**4.41**	**323**	*e*Pn	Pn	03 40 43.2	+2.1
SG1				*e*Sn	Sn	03 41 30.6	-2.2
BAI	**Bari**	**4.53**	**327**	*e*Pn	Pn	03 40 44.2	+1.4
BAI				*e*Sn	Sn	03 41 33.4	-2.4
CHOS	**Chios island**	**4.79**	**76**	*e*PN	Pn	03 40 47.7	+1.4
CHOS	**Chios island**	**4.79**	**76**	*e*Pn	Pn	03 40 47.7	+1.4
CDT	**Castel del Mon**	**4.79**	**322**	*e*Pn	Pn	03 40 48.2	+1.8
LAST	**Lasithi**	**4.83**	**115**	P	Pn	03 40 50.2	+3.4
LAST	**Lasithi**	**4.83**	**115**	P	Pn	03 40 50.2	+3.4
TREB	**Trebinje**	**5.54**	**346**	‖ *i* Pn	Pn	03 40 58.0	+1.4
TREB	**Trebinje**	**5.54**	**346**	‖ *i* Pn	Pn	03 40 58.0	+1.4
BARS	**Barje**	**5.61**	**13**	*e*Pn	Pn	03 40 56.7	-0.9
BARS				*e*Sn	Sn	03 41 55.5	-6.9
BARS	**Barje**	**5.61**	**13**	*e*Pn	Pn	03 40 56.7	-0.9
VTS	**Vitosha**	**5.74**	**23**	‖ *i* Pn	Pn	03 40 58.8	-0.6
VTS	**Vitosha**	**5.74**	**23**	P	Pn	03 40 59.7	+0.3
VTS	**Vitosha**	**5.74**	**23**	P	Pn	03 40 59.7	+0.3
STON	**Ston**	**5.83**	**342**	*i* Pn	Pn	03 40 59.5	-1.1
STON				Sn	Sn	03 42 00.2	-7.6
STON	**Ston**	**5.83**	**342**	*i* Pn	Pn	03 40 59.4	-1.2
BBLS	**Lazići**	**6.54**	**355**	*e*Pn	Pn	03 41 11.0	+0.7
BBLS				*e*Sn	Sn	03 42 19.6	-5.6
BBLS	**Lazići**	**6.54**	**355**	*e*Pn	Pn	03 41 11.0	+0.7
DIVS	**Divibare**	**6.75**	**359**	*e*Pn	Pn	03 41 12.4	-0.8
DIVS				*e*Sn	Sn	03 42 22.6	-7.8
DIVS	**Divibare**	**6.75**	**359**	*e*Pn	Pn	03 41 12.4	-0.8
NVLJ	**Novalja**	**8.24**	**333**	*e*Pn	Pn	03 41 35.1	+1.4
NVLJ				Sn	Sn	03 43 01.0	-6.1
NVLJ	**Novalja**	**8.24**	**333**	*e*Pn	Pn	03 41 35.1	+1.4
OBKA	**Obir**	**10.06**	**337**	‖ *i* Pn	Pn	03 42 00.0	+1.4
OBKA				‖ *i* Sn	Sn	03 43 45.5	-6.3
MOA	**Molln**	**11.35**	**339**	‖ *i* Pn	Pn	03 42 17.1	+0.8
MOA	**Molln**	**11.35**	**339**	Sn	Sn	03 44 15.2	-8.3
EIL	**Elat**	**14.52**	**118**	Pn	Pn	03 42 58.4	-1.2
	baz=328,slow=15						
EKA	**Eskdalemuir Ar**	**23.95**	**326**	P	P	03 44 49.2	+0.8
	2.5nm,1.0s,mb3.6,baz=118,slow=14,SNR=3.5						
NOA	**NORSAR Array B**	**24.38**	**349**	P	P	03 44 51.1	-1.1
	0.9nm,0.9s,mb3.2,baz=172,slow=12,SNR=3.0						
FINES	**FINESS Array B**	**24.41**	**7**	P	P	03 44 50.2	-2.3
	0.9nm,0.5s,mb3.4,baz=171,slow=9.8,SNR=4.6						
FINES				pP		03 45 00.1	
	1.8nm,0.5s,baz=169,slow=9.5,SNR=2.6						
MKAR	**Makanchi Array**	**45.99**	**58**	P	P	03 47 54.2	-3.4
	0.4nm,0.4s,mb3.7,baz=266,slow=7.5,SNR=3.9						
MKAR				pP	pP	03 48 03.7	+4.4
	0.4nm,0.4s,baz=285,slow=7.1,SNR=2.2						
ZALV	**Zalesovo Beam**	**46.47**	**47**	P	P	03 47 57.5	-3.8
	1.0nm,0.5s,mb4.0,baz=286,slow=6.2,SNR=3.4						
ZALV				pP	pP	03 48 07.5	+4.6
	1.0nm,0.4s,baz=267,slow=7.4,SNR=3.3						

ISK ***16*** *03:46:38.7, 35°.18N×27°.75E, h26km, ML3.6*
IDC ***16*** *03:46:38.6±2.5, 35°.76N×27°.42E, h0km, mb3.6/6, mb1 3.6/7, mb1mx3.5/24, mbtmp3.5/7, ML2.6/1, MS2.6/1, Ms1 2.7/1, ms1mx2.1/24, Error ellipse: s-maj=56.9km s-min=23.4km az=175.0*
ISCJB ***16*** *03:46:38.8±0.7, 35°.28N±0°.03×27°.90E±0°.02, h12km±4km, mb3.5/6, Error ellipse: s-maj=4.6km s-min=3.3km az=174.0*
DDA ***16*** *03:46:40.0, 35°.54N×27°.88E, h8km±3km, Md3.7, Ml3.9*
CSEM ***16*** *03:46:40.1±0.2, 35°.34N×27°.83E, h10km, MD3.3, Error ellipse: s-maj=5.1km s-min=2.9km az=165.0*
ATH ***16*** *03:46:40.7, 35°.43N×27°.81E, h30km±2km, MD3.3/12*
NEIC ***16*** *03:46:40.7, 35°.43N×27°.81E, h30km, MD3.3(ATH), After ATH.*
THE ***16*** *03:46:41.2, 35°.37N×27°.91E, h10km±5km, Error ellipse: s-maj=7.4km s-min=1.1km az=127.0*

ISC 16 03:46:40.0±0.7, **35°.30N**±0°.03×**27°.86E**±0°.02, **h12**km±4km, **n135**, σ1§**12**/172, **mb3.5**/6, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.62**	**294**	*e*Pn	Pg	03 46 51.5	-0.5
KARP				*e*Sn	Sg	03 47 00.5	+0.4
KARP	**Karpathos**	**0.62**	**294**	*e*PN	Pg	03 46 51.5	-0.5
KARP				*e*SN	Sg	03 47 00.5	+0.4
KARP	**Karpathos**	**0.62**	**294**	*e*Pn	Pg	03 46 51.5	-0.5
ARG	**Arkhangelos**	**0.94**	**14**	*e*Pn	Pg	03 46 57.6	-0.5
ARG	**Arkhangelos**	**0.94**	**14**	*e*PN	Pg	03 46 57.6	-0.5
ARG	**Arkhangelos**	**0.94**	**14**	P	Pg	03 46 57.3	-0.8
ARG				S	Sg	03 47 09.9	-0.4
ARG	**Arkhangelos**	**0.94**	**14**	P	Pg	03 46 57.3	-0.8
ARG	**Arkhangelos**	**0.94**	**14**	*e*Pn	Pg	03 46 57.6	-0.5
ARG				S	Sg	03 47 09.9	-0.4
ZKR	**Zakros**	**1.35**	**263**	*e*Pn	Pn	03 47 04.8	+0.2
ZKR	**Zakros**	**1.35**	**263**	*e*PN	Pn	03 47 04.8	+0.2
ZKR	**Zakros**	**1.35**	**263**	P	Pn	03 47 04.6	0.0
ZKR				S	Sb	03 47 23.4	+0.9
ZKR	**Zakros**	**1.35**	**263**	*e*Pn	Pn	03 47 04.8	+0.2
ZKR				S	Sb	03 47 23.4	+0.9
NIS1	**Nisyros Isl.**	**1.41**	**337**	P	Pn	03 47 04.7	-0.7
NIS1				S	Sn	03 47 23.2	-0.7
NIS1	**Nisyros Isl.**	**1.41**	**337**	P	Pn	03 47 04.7	-0.7
NIS1				S	Sn	03 47 23.2	-0.7
DAT	**Datca**	**1.44**	**351**	PN	Pn	03 47 05.2	-0.6
DAT				*e*SN	Sn	03 47 24.7	0.0
DAT	**Datca**	**1.44**	**351**	*i* Pn	Pn	03 47 05.2	-0.7
DAT				*e*Sn	Sn	03 47 24.7	0.0
KSL	**Kastellorizon**	**1.64**	**58**	*e*Pb	Pb	03 47 08.7	-1.4
KSL	**Kastellorizon**	**1.64**	**58**	*e*PB	Pb	03 47 08.7	-1.4
TURN	**Turunc**	**1.68**	**21**	*i* P	Pn	03 47 06.1	-3.1
TURN				*i* S	Sn	03 47 27.7	-2.9
TURN	**Turunc**	**1.68**	**21**	*i* P	Pn	03 47 06.1	-3.0
TURN				*i* S	Sn	03 47 27.7	-2.9
AKAS	**Kas**	**1.70**	**56**	*i* P	Pn	03 47 09.4	0.0
AKAS				*i* S	Sn	03 47 31.2	+0.1
AKAS	**Kas**	**1.70**	**56**	*i* P	Pn	03 47 09.4	0.0
AKAS				*i* S	Sn	03 47 31.2	+0.1
BDRM	**Kayabasi**	**1.79**	**349**	*i* P	Pn	03 47 09.3	-1.4
BDRM				*i* S	Sn	03 47 30.9	-2.4
BDRM	**Kayabasi**	**1.79**	**349**	*i* P	Pn	03 47 09.3	-1.4
BDRM				*i* S	Sn	03 47 30.9	-2.4
BODT	**Bodrum**	**1.81**	**346**	*e*PN	Pn	03 47 10.1	-0.8
BODT				*e*SN	Sn	03 47 33.8	0.0
BODT	**Bodrum**	**1.81**	**346**	*e*Pn	Pn	03 47 10.1	-0.8
BODT				*e*Sn	Sn	03 47 33.8	0.0
NPS	**Neapolis**	**1.83**	**269**	*e*Pb	Pb	03 47 12.1	-1.3
NPS	**Neapolis**	**1.83**	**269**	*e*PB	Pb	03 47 12.1	-1.3
NPS	**Neapolis**	**1.83**	**269**	*e*Pb	Pb	03 47 12.1	-1.3
YER	**Yerkesik**	**1.86**	**11**	*e*PN	Pn	03 47 12.5	+0.9
YER	**Yerkesik**	**1.86**	**11**	*e*Pn	Pn	03 47 12.5	+0.9
LAST	**Lasithi**	**1.95**	**267**	*e*Pb	Pb	03 47 14.3	-1.1
LAST	**Lasithi**	**1.95**	**267**	*e*PB	Pb	03 47 14.3	-1.1
LAST	**Lasithi**	**1.95**	**267**	P	Pn	03 47 13.8	+1.0
LAST				S	Sn	03 47 38.4	+1.2
LAST	**Lasithi**	**1.95**	**267**	P	Pn	03 47 13.8	+1.0
LAST	**Lasithi**	**1.95**	**267**	*e*Pb	Pb	03 47 14.3	-1.1
LAST				S	Sn	03 47 38.4	+1.2
MLSB	**Milas**	**1.99**	**358**	*e*PN	Pn	03 47 13.3	-0.1
MLSB				*e*SN	Sn	03 47 38.7	+0.5
MLSB	**Milas**	**1.99**	**358**	*e*Pn	Pn	03 47 13.3	-0.1
MLSB				*e*Sn	Sn	03 47 38.7	+0.5
ELL	**Elmali**	**2.20**	**48**	*e*PN	Pn	03 47 17.2	+0.9
ELL	**Elmali**	**2.20**	**48**	*e*Pn	Pn	03 47 17.3	+1.0
THR2	**Thira Island,**	**2.27**	**301**	P	Pn	03 47 16.8	-0.5
THR2	**Thira Island,**	**2.27**	**301**	P	Pn	03 47 16.8	-0.5
GLHS	**Glhisar (BURDU**	**2.28**	**35**	*e*PN	Pn	03 47 17.9	+0.6
GLHS	**Glhisar (BURDU**	**2.28**	**35**	*e*Pn	Pn	03 47 17.9	+0.6
THR3	**Thira Island,**	**2.28**	**300**	P	Pn	03 47 17.0	-0.4
THR3	**Thira Island,**	**2.28**	**300**	P	Pn	03 47 17.0	-0.4
THR5	**Thira Island,**	**2.32**	**299**	P	Pn	03 47 17.8	-0.1
THR5	**Thira Island,**	**2.32**	**299**	P	Pn	03 47 17.8	-0.1
AYDN	**Tasoluk**	**2.35**	**0**	*i* P	Pn	03 47 17.5	-0.9
AYDN				*i* S	Sn	03 47 47.2	0.0
AYDN	**Tasoluk**	**2.35**	**0**	*i* P	Pn	03 47 17.5	-0.9
AYDN				*i* S	Sn	03 47 47.2	0.0
GOLH	**Golhisar**	**2.37**	**35**	*i* P	Pn	03 47 19.4	+0.7
GOLH	**Golhisar**	**2.37**	**35**	*i* P	Pn	03 47 19.4	+0.7
SIVA	**Sivas**	**2.51**	**264**	*e*Pn	Pn	03 47 22.1	+1.5
SIVA	**Sivas**	**2.51**	**264**	*e*PN	Pn	03 47 22.1	+1.5
SIVA	**Sivas**	**2.51**	**264**	P	Pn	03 47 21.6	+1.0
SIVA	**Sivas**	**2.51**	**264**	P	Pn	03 47 21.6	+1.0
SIVA	**Sivas**	**2.51**	**264**	*e*Pn	Pn	03 47 22.1	+1.5
SMG	**Samos**	**2.54**	**341**	*e*Pn	Pn	03 47 19.9	-1.0
SMG	**Samos**	**2.54**	**341**	*e*PN	Pn	03 47 19.9	-1.0
SMG	**Samos**	**2.54**	**341**	*e*Pn	Pn	03 47 19.9	-1.0
DNZL	**Cakiroluk**	**2.57**	**22**	*i* P	Pn	03 47 20.4	-0.9
DNZL				*i* S	Sn	03 47 59.0	+6.4
DNZL	**Cakiroluk**	**2.57**	**22**	*i* P	Pn	03 47 20.5	-0.9
APE	**Apeiranthos**	**2.58**	**314**	*e*PN	Pn	03 47 20.7	-0.8
APE	**Apeiranthos**	**2.58**	**314**	*e*Pn	Pn	03 47 20.6	-0.9
APE				*e*Sn	Sn	03 47 50.2	-2.5
APE	**Apeiranthos**	**2.58**	**314**	*e*PN	Pn	03 47 20.6	-0.9
APE				*e*SN	Sn	03 47 50.2	-2.5
APE	**Apeiranthos**	**2.58**	**314**	P	Pn	03 47 20.6	-0.9
APE	**Apeiranthos**	**2.58**	**314**	*e*Pn	Pn	03 47 20.7	-0.8
APE				*e*Sn	Sn	03 47 50.2	-2.5
DENT	**Denizli**	**2.62**	**21**	*e*PN	Pn	03 47 23.0	+0.9
DENT	**Denizli**	**2.62**	**21**	*e*Pn	Pn	03 47 23.0	+0.9
KORT	**Korkueli**	**2.64**	**49**	*e*P	Pn	03 47 25.1	+2.9
KORT				*i* S	Sn	03 47 56.9	+2.7
KORT	**Korkueli**	**2.64**	**49**	*e*P	Pn	03 47 25.1	+2.8
KORT				*i* S	Sn	03 47 56.8	+2.6
ANTB	**Antalya**	**2.77**	**54**	*e*PN	Pn	03 47 24.3	+0.1
ANTB	**Antalya**	**2.77**	**54**	*e*Pn	Pn	03 47 24.3	+0.2
VAM	**Vamos**	**2.99**	**273**	*e*Pn	Pn	03 47 28.1	+1.0
VAM	**Vamos**	**2.99**	**273**	*e*PN	Pn	03 47 28.1	+1.0
VAM	**Vamos**	**2.99**	**273**	*e*Pn	Pn	03 47 28.1	+1.0
BCK	**Bucak**	**3.08**	**45**	*e*PN	Pn	03 47 29.2	+0.8
BCK	**Bucak**	**3.08**	**45**	*e*Pn	Pn	03 47 29.2	+0.8
IZM	**Izmir**	**3.13**	**351**	*e*PN	Pn	03 47 29.6	+0.6
IZM	**Izmir**	**3.13**	**351**	*e*Pn	Pn	03 47 29.6	+0.6
KARN	**Karanos**	**3.22**	**273**	*e*PN	Pn	03 47 31.0	+0.7
KARN	**Karanos**	**3.22**	**273**	P	Pn	03 47 31.6	+1.3
KARN	**Karanos**	**3.22**	**273**	*e*Pn	Pn	03 47 31.0	+0.7
KARN	**Karanos**	**3.22**	**273**	P	Pn	03 47 31.6	+1.3
KULA	**Kula-Manisa**	**3.27**	**11**	*e*PN	Pn	03 47 31.7	+0.7
KULA	**Kula-Manisa**	**3.27**	**11**	*e*PN	Pn	03 47 31.7	+0.7
KHL	**Karahalli**	**3.30**	**23**	*e*PN	Pn	03 47 32.7	+1.3
KHL	**Karahalli**	**3.30**	**23**	*e*Pn	Pn	03 47 32.7	+1.3
KHAL	**Karahalli**	**3.33**	**23**	*i* P	Pn	03 47 31.3	-0.5
KHAL	**Karahalli**	**3.33**	**23**	*i* P	Pn	03 47 31.3	-0.5
SUTC	**Sutluce-Ispart**	**3.34**	**49**	*e*PN	Pn	03 47 33.1	+1.2
SUTC	**Sutluce-Ispart**	**3.34**	**49**	*e*Pn	Pn	03 47 33.1	+1.2
CHOS	**Chios island**	**3.40**	**335**	P	Pn	03 47 32.4	-0.4
CHOS	**Chios island**	**3.40**	**335**	P	Pn	03 47 32.4	-0.4
AKS	**Akhisar**	**3.57**	**359**	*e*PN	Pn	03 47 35.4	+0.3
AKS	**Akhisar**	**3.57**	**359**	*e*Pn	Pn	03 47 35.4	+0.3
GAZI	**Gazipasa**	**3.75**	**74**	*i* P	Pn	03 47 37.0	-0.5
GAZI				*i* S	Sn	03 48 17.4	-4.1
GAZI	**Gazipasa**	**3.75**	**74**	*i* P	Pn	03 47 37.0	-0.5
KYTH	**Kithira**	**4.04**	**285**	*e*Pn	Pn	03 47 41.6	+0.1
KYTH	**Kithira**	**4.04**	**285**	*e*PN	Pn	03 47 41.6	+0.1
KYTH	**Kithira**	**4.04**	**285**	*e*Pn	Pn	03 47 41.6	+0.1
HDMB	**Hadim**	**4.10**	**65**	*e*PN	Pn	03 47 43.2	+0.8
HDMB	**Hadim**	**4.10**	**65**	*e*Pn	Pn	03 47 43.2	+0.8
ALT	**Altintas**	**4.16**	**25**	*e*PN	Pn	03 47 44.6	+1.4
ALT	**Altintas**	**4.16**	**25**	*e*Pn	Pn	03 47 44.6	+1.4
VLI	**Veliai**	**4.23**	**291**	*e*Pn	Pn	03 47 44.1	-0.1
VLI	**Veliai**	**4.23**	**291**	*e*PN	Pn	03 47 44.1	-0.1
VLI	**Veliai**	**4.23**	**291**	*e*Pn	Pn	03 47 44.1	-0.1
KONT	**Konya--Tatoy**	**4.48**	**53**	*e*PN	Pn	03 47 49.1	+1.5
KONT	**Konya--Tatoy**	**4.48**	**53**	*e*Pn	Pn	03 47 49.2	+1.6
CSS	**Prodhromos**	**4.50**	**93**	*e*Pn	Pn	03 47 46.1	-1.8
CSS				*e*Sn	Sn	03 48 37.7	-2.5
CSS	**Prodhromos**	**4.50**	**93**	*e*Pn	Pn	03 47 46.1	-1.8
CSS				*e*Sn	Sn	03 48 37.7	-2.5
LADK	**Ladik-KONYA**	**4.63**	**50**	*e*PN	Pn	03 47 51.5	+1.7
LADK	**Ladik-KONYA**	**4.63**	**50**	*e*Pn	Pn	03 47 51.5	+1.8
KIZT	**Kizilcal**	**4.81**	**41**	*e*PN	Pn	03 47 53.0	+0.9
KIZT	**Kizilcal**	**4.81**	**41**	*e*Pn	Pn	03 47 53.0	+0.9
IKL	**Isikli**	**4.83**	**77**	*e*PN	Pn	03 47 53.2	+0.7
IKL	**Isikli**	**4.83**	**77**	*e*Pn	Pn	03 47 53.2	+0.7
BRTR	**Keskin Array B**	**6.37**	**44**	Pn	Pn	03 48 14.0	+0.4
	0.1nm,0.3s,baz=223,slow=15,SNR=3.8						
BRTR				Sn	Sn	03 49 27.0	+0.7
	0.3nm,0.3s,baz=216,slow=25,SNR=5.2						
BRTR	**Keskin Array B**	**6.37**	**44**	Pn	Pn	03 48 14.0	+0.4
BRTR				Sn	Sn	03 49 27.0	+0.7
MMAI	**Mount Meron Ar**	**6.66**	**108**	Pn	Pn	03 48 16.4	-1.2
	3.9nm,0.3s,baz=299,slow=18,SNR=5.1						
MMAI				Sn	Sn	03 49 30.9	-2.5
	2.2nm,0.3s,baz=285,slow=28,SNR=2.7						
ASF	**Jabal al Asfar**	**8.15**	**110**	Pn	Pn	03 48 38.0	-0.1
	0.3nm,0.3s,baz=292,slow=5.5,SNR=2.1						
ASF				Sn	Sn	03 50 08.8	-1.3
	0.2nm,0.3s,baz=336,slow=20,SNR=2.0						
EIL	**Elat**	**8.21**	**131**	Pn	Pn	03 48 38.5	-0.4
	0.9nm,0.3s,baz=288,slow=12,SNR=3.5						
EIL				Sn	Sn	03 50 05.7	-5.9
	0.7nm,0.3s,baz=135,slow=18,SNR=3.3						
EIL	**Elat**	**8.21**	**131**	Pn	Pn	03 48 38.5	-0.4
ESDC	**Sonseca Array**	**25.55**	**289**	P	P	03 52 05.0	-3.5
	0.5nm,0.5s,mb3.3,baz=83,slow=9.4,SNR=5.5						
HFS	**Hagfors**	**26.49**	**344**	P	P	03 52 12.7	-4.2
	1.4nm,0.7s,mb3.6,baz=173,slow=13,SNR=4.2						
AKTK	**Aktyubinsk**	**26.55**	**46**	P	P	03 52 19.0	+1.6
AKTK	**Aktyubinsk**	**26.55**	**46**	P	P	03 52 19.0	+1.5
AKTO	**Aktyubinsk**	**26.55**	**46**	P	P	03 52 19.0	+1.6
	0.7nm,0.4s,mb3.5,baz=252,slow=13,SNR=3.8						
NOA	**NORSAR Array B**	**27.87**	**343**	LR	LR	04 04 48.5	
	comp=Z,12nm,21.6s,baz=150,slow=40						
ARCES	**ARCESS Array B**	**34.31**	**359**	P	P	03 53 21.6	-4.2
	1.1nm,0.9s,mb3.8,baz=190,slow=9.9,SNR=3.0						
MKAR	**Makanchi Array**	**41.85**	**57**	P	P	03 54 28.7	-1.0
	0.1nm,0.3s,mb2.9,baz=267,slow=5.6,SNR=2.2						
MKAR	**Makanchi Array**	**41.85**	**57**	P	P	03 54 28.7	-1.0
SONM	**Songino Array**	**57.68**	**51**	P	P	03 56 31.7	+1.6
	0.2nm,0.3s,mb3.6,baz=312,slow=11,SNR=2.1						
SONM	**Songino Array**	**57.68**	**51**	P	P	03 56 31.7	+1.6

CRAAG ***16*** *04:25:15.5, 35°.66N×0°.60E, Ml3.1*
CSEM ***16*** *04:25:15.5, 35°.66N×0°.60E, h0km, ML3.1, After ALG*
MDD ***16*** *04:25:16.7±0.6, 35°.62N×0°.55E, h24km±6km, mb4.2/7, Error ellipse: s-maj=11.0km s-min=5.1km az=178.0*

ISC 16 04:25:16.6±0.7, **35°.72N**±0°.06×**0°.50E**±0°.04, **h24**km±9km, **n69**, σ1§**02**/99, **Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJBR	**Djebel Berber**	**0.19**	**222**	P	Pb	04 25 22.0	-0.1
OJBR	**Djebel Berber**	**0.19**	**222**	P	Pb	04 25 22.0	-0.1
OJBR	**Djebel Berber**	**0.19**	**222**	P	Pb	04 25 22.0	-0.1
OJBR	**Djebel Berber**	**0.19**	**222**	P	Pb	04 25 22.0	-0.1
EANR	**'Ain N'Sour**	**0.54**	**65**	P	Pb	04 25 27.0	-0.5
EANR	**'Ain N'Sour**	**0.54**	**65**	P	Pb	04 25 27.0	-0.5
EANR	**'Ain N'Sour**	**0.54**	**65**	P	Pb	04 25 27.0	-0.5
EANR	**'Ain N'Sour**	**0.54**	**65**	P	Pb	04 25 27.0	-0.5
ETRT	**Tiaret**	**0.73**	**117**	P	Pb	04 25 29.0	-1.8
ETRT	**Tiaret**	**0.73**	**117**	P	Pb	04 25 29.0	-1.8
ETRT	**Tiaret**	**0.73**	**117**	P	Pb	04 25 29.0	-1.8
ETRT	**Tiaret**	**0.73**	**117**	P	Pb	04 25 29.0	-1.8
ECHF	**Ech Chlef**	**0.81**	**57**	P	Pn	04 25 34.0	+1.5
ECHF	**Ech Chlef**	**0.81**	**57**	P	Pn	04 25 34.0	+1.5
ECHA	**Ech Chlef**	**0.82**	**59**	P	Pn	04 25 34.0	+1.3
ECHA	**Ech Chlef**	**0.82**	**59**	P	Pn	04 25 34.0	+1.3
USTO	**Oran**	**0.85**	**271**	P	Sn	04 25 44.0	-0.8
USTO	**Oran**	**0.85**	**271**	P	Sn	04 25 44.0	-0.8
USTO	**Oran**	**0.85**	**271**	P	Sn	04 25 44.0	-0.8
EBNR	**Beni Rached**	**1.01**	**56**	P	Pn	04 25 30.0	-5.3
EBNR	**Beni Rached**	**1.01**	**56**	P	Pn	04 25 30.0	-5.3
EMHD	**Djebel Mahouad**	**2.05**	**76**	P	Pn	04 25 50.0	+0.5
EMHD	**Djebel Mahouad**	**2.05**	**76**	P	Pn	04 25 50.0	+0.5
EMHD	**Djebel Mahouad**	**2.05**	**76**	P	Pn	04 25 50.0	+0.5
EMHD	**Djebel Mahouad**	**2.05**	**76**	P	Pn	04 25 50.0	+0.5
EMUR	**La Murta**	**2.53**	**327**	P	Pn	04 25 56.4	+0.2
	1.3nm,0.2s,SNR=5.5						
EMUR				S	Sn	04 26 26.2	-0.1
	5.1nm,0.3s,SNR=7.9						
EMUR	**La Murta**	**2.53**	**327**	P	Pn	04 25 56.4	+0.2
	1.3nm,0.2s,SNR=5.5						
EMUR				S	Sn	04 26 26.2	-0.1
	5.1nm,0.3s,SNR=7.9						
EBER	**Berja**	**2.98**	**294**	P	Pn	04 26 01.8	-0.4
	5.3nm,0.1s,SNR=21						
EBER				S	Sn	04 26 37.3	+0.1
	0.8nm,0.3s,SNR=7.9						
EBER	**Berja**	**2.98**	**294**	P	Pn	04 26 01.8	-0.4
	5.3nm,0.1s,SNR=21						
EBER				S	Sn	04 26 37.3

GUC 16 04:26:20.5±0.5, 32°.14S×72°.23W, h27km±2km, MD3.9, ML3.3, 5C-3D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.67**	**68**	⇑*iP*	Pb	04 26 33.2	-0.4
CHNG				*i* S	Sb	04 26 42.5	-0.1
CHNG				AML	AML	04 26 44.4	
	comp=N,879nm,0.5s						
IHA	**Instituto Hidr**	**1.01**	**151**	*e*P	Pn	04 26 38.5	-0.4
IHA				*e*S	Sn	04 26 52.2	-0.1
IHA	**Instituto Hidr**	**1.01**	**151**	*e*P	Pn	04 26 38.5	-0.4
IHA				*e*S	Sn	04 26 52.2	-0.1
ROCH	**El Roble**	**1.32**	**129**	*e*P	Pn	04 26 43.7	+0.5
ROCH	**El Roble**	**1.32**	**129**	*e*P	Pn	04 26 43.7	+0.5
CMCH	**Combarbala**	**1.42**	**48**	*e*P	Pn	04 26 45.5	+0.9
CMCH				*i* S	Sn	04 27 04.0	+1.7
CMCH	**Combarbala**	**1.42**	**48**	*e*P	Pn	04 26 45.5	+0.9
CMCH				*i* S	Sn	04 27 04.0	+1.7
CMCH				AML	AML	04 27 14.3	
	comp=E,1μm,0.6s						
JACH	**Jahuel**	**1.49**	**112**	⇑*iP*	Pn	04 26 46.2	+0.8
JACH				*i* S	Sn	04 27 05.4	+1.4
JACH	**Jahuel**	**1.49**	**112**	⇑*iP*	Pn	04 26 46.2	+0.8
JACH				*i* S	Sn	04 27 05.4	+1.4
PEL	**Peldehue**	**1.64**	**128**	⇓*iP*	Pn	04 26 48.5	+0.9
PEL				*i* S	Sn	04 27 10.1	+2.2
PEL				AML	AML	04 27 14.4	
	comp=E,2μm,0.5s						
TACH	**Talagante**	**1.86**	**145**	⇓*iP*	Pn	04 26 52.0	+1.4
TACH	**Talagante**	**1.86**	**145**	⇓*iP*	Pn	04 26 52.0	+1.4
CLCH	**Cerro Calan**	**1.90**	**132**	⇑*iP*	Pn	04 26 52.2	+1.1
CLCH				*i* S	Sn	04 27 16.9	+2.8
CLCH				AML	AML	04 27 27.5	
	comp=N,306nm,0.6s						
LNV	**Longovilo**	**1.94**	**159**	*e*P	Pn	04 26 52.9	+1.3
LNV	**Longovilo**	**1.94**	**159**	*e*P	Pn	04 26 52.9	+1.3
FCH	**Farellones**	**2.02**	**126**	⇑*iP*	Pn	04 26 58.8	+6.0
FCH				*i* S	Sn	04 27 21.2	+4.1
FCH				AML	AML	04 27 29.6	
	comp=E,227nm,0.4s						
PCH	**Pirque**	**2.07**	**136**	*e*P	Pn	04 26 54.9	+1.5
PCH				*e*S	Sn	04 27 21.1	+2.8
PCH	**Pirque**	**2.07**	**136**	*e*P	Pn	04 26 54.9	+1.5
PCH				*e*S	Sn	04 27 21.1	+2.8
CHCH	**Chadas Angostu**	**2.23**	**144**	*e*P	Pn	04 26 57.3	+1.7
CHCH				*i* S	Sn	04 27 25.1	+2.8
CHCH	**Chadas Angostu**	**2.23**	**144**	*e*P	Pn	04 26 57.3	+1.7
CHCH				*i* S	Sn	04 27 25.1	+2.8
CACH	**El Canelo**	**2.40**	**146**	*e*P	Pn	04 27 00.1	+2.2
CACH	**El Canelo**	**2.40**	**146**	*e*P	Pn	04 27 00.1	+2.2
LCO	**Las Campanas**	**3.38**	**23**	*e*P	Pn	04 27 13.5	+2.0
LCO				*e*S	Sn	04 27 53.5	+2.7
LCO	**Las Campanas**	**3.38**	**23**	*e*P	Pn	04 27 13.5	+2.0
LCO				*e*S	Sn	04 27 53.5	+2.7
LCO				AML	AML	04 28 20.9	
	comp=N,49nm,0.6s						

*IDC **16** 04:38:31.1±1.6, 15°.78S×173°.06W, h0km, mb4.0/6, mb1 4.3/6, mb1mx4.1/18, mbtmp4.0/6, MS3.5/8, Ms1 3.5/8, ms1mx3.3/25, Error ellipse: s-maj=131.2km s-min=19.9km az=149.0*

*NEIC **16** 04:38:32.8±0.5, 15°.75S×173°.11W, h10km, mb4.4/3, Error ellipse: s-maj=28.4km s-min=11.5km az=134.0*

*ISCJB **16** 04:38:34.7±0.7, 15°.7S±0°.2×173°.2W±0°.2, h33km, mb4.0/9, MS3.6/6, Error ellipse: s-maj=36.0km s-min=14.4km az=43.6*

ISC 16 04:38:36.5±0.7, 15°.7S±0°.2×173°.2W±0°.2, h35km, n25, σ0°38/14, mb4.0/9, MS3.6/6, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.26**	**37**		**Pn**	**04 39 04.6**	**-6.8**
	19nm,0.3s,baz=256,slow=7.7,SNR=12						
AFI				Sn	**Sn**	**04 39 27.2**	**-11**
	73nm,0.3s,baz=50,slow=24,SNR=13						
AFI				LR	LR	04 39 40.4	
	comp=Z,777nm,21.1s,baz=166,slow=31						
RAO	**Raoul Island**	**14.15**	**197**	LR	LR	04 46 41.3	
	comp=Z,98nm,18.9s,baz=39,slow=35						
DZM	**Mont Dzumac**	**20.28**	**249**	*e*LR	LR	04 48 23.1	
	212nm,23.0s						
PPT	**Papeete**	**22.67**	**98**	*e*LR	LR	04 48 41.0	
	191nm,26.8s						
TBI	**Tubuai**	**23.57**	**112**	*e*LR	LR	04 49 12.7	
	203nm,26.5s						
URZ	**Urewera**	**24.02**	**199**	*e*P	**P**	**04 43 48.2**	**+0.1**
	5.2nm,0.6s,mb4.1						
HNR	**Honiara**	**26.96**	**280**	LR	LR	04 53 21.6	
	comp=Z,129nm,19.1s,MS3.5,baz=135,slow=33						
RPZ	**Rata Peaks**	**30.96**	**203**	LR	LR	04 55 16.2	
	comp=Z,809nm,18.6s,MS4.4,baz=34,slow=32						
RKT	**Rikitea**	**36.68**	**108**	*e*LR	LR	04 55 11.0	
	152nm,30.5s						
CTA	**Charters Tower**	**38.79**	**257**	LR	LR	04 59 19.6	
	comp=Z,55nm,21.4s,MS3.4,baz=52,slow=32						
STKA	**Stephens Creek**	**44.06**	**240**	P	**P**	**04 46 41.6**	**+0.4**
	4.3nm,0.7s,mb4.3,baz=75,slow=9.1,SNR=7.6						
STKA				LR	LR	05 02 08.0	
	comp=Z,80nm,21.6s,MS3.6,baz=205,slow=32						
WRA	**Warramunga Arr**	**49.98**	**257**	P	**P**	**04 47 27.2**	**-0.5**
	1.1nm,0.4s,mb4.2,baz=92,slow=6.7,SNR=44						
WRA				PcP	PcP	04 48 49.2	+1.7
	1.2nm,0.9s,baz=88,slow=4.3,SNR=4.3						
WRA	**Warramunga Arr**	**49.98**	**257**	P	**P**	**04 47 27.2**	**-0.5**
WRA				PcP	PcP	04 48 49.2	+1.7
ASAR	**Alice Springs**	**50.22**	**252**	P	**P**	**04 47 29.2**	**-0.1**
	6.3nm,0.7s,mb4.7,baz=87,slow=8.9,SNR=34						
ASAR				PcP	PcP	04 48 49.7	+1.4
	1.0nm,0.8s,baz=104,slow=3.9,SNR=3.4						
GUMO	**Guam**	**50.70**	**303**	LR	LR	05 06 50.9	
	comp=Z,20nm,19.7s,MS3.1,baz=82,slow=33						
NVAR	**Mina Array Bea**	**74.43**	**42**	P	**P**	**04 50 10.9**	**-0.3**
	0.3nm,0.5s,mb3.5,baz=223,slow=10,SNR=2.6						
KSRS	**Korea Array**	**76.55**	**316**	LR	LR	05 19 14.9	
	comp=Z,20nm,20.0s,MS3.4,baz=151,slow=32						
TXAR	**Lajitas Array**	**80.61**	**56**	P	**P**	**04 50 45.7**	**-0.2**
	0.2nm,0.8s,mb3.1,baz=207,slow=5.3,SNR=4.7						
TXAR	**Lajitas Array**	**80.61**	**56**	P	**P**	**04 50 45.7**	**-0.2**
MCK	**McKinley**	**81.41**	**11**	*e*P	**P**	**04 50 49.2**	**-0.1**
	3.8nm,0.8s,mb4.4						
PDAR	**Pinedale Array**	**82.36**	**42**	P	**P**	**04 50 54.6**	**-0.3**
	0.6nm,0.8s,mb3.5,baz=222,slow=2.0,SNR=5.8						
COLA	**College**	**82.65**	**11**	*e*P	**P**	**04 50 55.8**	**0.0**
	2.4nm,0.8s,mb4.3						
DAWY	**Dawson**	**83.69**	**14**	*e*P	**P**	**04 51 02.1**	**+0.9**
BR131	**Keskin Array S**	**146.56**	**321**	*e*PKPbc	PKPbc	04 58 16.2	+1.7
BRTR	**Keskin Array B**	**146.56**	**321**	PKPbc	PKPbc	04 58 16.0	+1.5
	2.4nm,0.8s,baz=116,slow=2.5,SNR=10						

CASC 16 04:52:57.0±1.9, 13°.93N×91°.62W, h60km±29km, MD3.7, 4C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.38**	**358**	⇑*e*P	Pn	04 53 08.3	+0.5
FUG	**Fuego 3**	**0.91**	**56**	⇑*e*P	Pn	04 53 14.2	+0.3
FG6		**0.95**	**49**	⇑*e*P	Pn	04 53 14.9	+0.5
TP2	**Tecpan 2**	**1.03**	**34**	⇑*e*P	Pn	04 53 16.3	+0.9
PCG	**Pacaya**	**1.09**	**65**	*e*P	Pn	04 53 16.8	+0.6
NBG	**Las Nubes**	**1.40**	**62**	*e*P	Pn	04 53 22.5	+2.2
RBDL	**Robledal**	**1.89**	**84**	*e*P	Pn	04 53 27.6	+0.7
RBDL				*e*S	Sn	04 53 51.4	+1.7
RTR	**El Retiro**	**1.92**	**91**	*e*P	Pn	04 53 27.9	+0.5
SBLS	**San Blas**	**1.94**	**92**	*e*P	Pn	04 53 27.7	0.0
SBLS				*e*S	Sn	04 53 53.2	+2.2
SNJE	**San Jose**	**1.96**	**92**	*e*P	Pn	04 53 28.1	+0.2
MRL	**Marmol**	**2.18**	**59**	*e*P	Pn	04 53 32.7	+1.8
MTO2	**Montecristo 2**	**2.24**	**78**	*e*P	Pn	04 53 31.8	0.0
MTO2				*e*S	Sn	04 53 58.4	+0.1
BOQS	**Boqueron**	**2.28**	**95**	*e*P	Pn	04 53 32.5	+0.1
BOQS				*e*S	Sn	04 54 01.9	+2.5
LFRS	**El Faro**	**2.51**	**97**	*e*P	Pn	04 53 36.1	+0.7
LFRS				*e*S	Sn	04 54 07.3	+2.5
SNVI	**San Vicente**	**2.72**	**96**	*e*P	Pn	04 53 38.8	+0.4
CNCH	**Conchagua**	**3.74**	**100**	*e*P	Pn	04 53 52.9	+0.6
CNCH				*e*S	Sn	04 54 36.9	+1.8

*IDC **16** 04:57:20.3±1.8, 16°.89S×178°.34W, h450km±32km, mb4.1/3, mb1 4.2/4, mb1mx3.5/17, mbtmp4.1/4, Error ellipse: s-maj=110.1km s-min=17.2km az=150.0*

*ISCJB **16** 04:57:21.2±0.8, 17°.4S±0°.2×177°.9W±0°.1, h506km±11km, mb4.5/13, Error ellipse: s-maj=38.6km s-min=12.1km az=150.3*

*NEIC **16** 04:57:22.5±1.0, 17°.48S×177°.96W, h500km±9km, mb4.5/8, Error ellipse: s-maj=45.0km s-min=11.8km az=153.0*

ISC 16 04:57:22.1±0.8, 17°.4S±0°.2×177°.9W±0°.2, h502km±11km, n42, σ0°96/22, mb4.5/13, 1C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.91**	**264**	*e*Pn	**P**	**04 58 41.1**	**+1.2**
AFI	**Afiamalu**	**6.80**	**61**	P	**P**	**04 59 06.9**	**+0.4**
	6.3nm,0.3s,baz=256,slow=4.2,SNR=7.1						
AFI				S	**S**	**05 00 29.3**	**-2.4**
	2.2nm,0.3s,baz=45,slow=19,SNR=4.8						
ARMA	**Armidale**	**30.66**	**239**	*e*P	**P**	**05 02 55.6**	**+0.5**
CNB	**Canberra Magne**	**34.17**	**232**	*e*P	**P**	**05 03 25.6**	**+0.7**
PMG	**Port Moresby**	**34.88**	**279**	*e*P	**P**	**05 03 31.2**	**+0.1**
	15nm,0.8s,mb4.5						
COEN	**Coen**	**37.62**	**270**	*e*P	**P**	**05 03 53.2**	**-0.6**
	37nm,0.6s,mb5.0						
TOO	**Toolangi**	**37.91**	**230**	*e*P	**P**	**05 03 56.8**	**+0.9**
STKA	**Stephens Creek**	**39.34**	**241**	*e*P	**P**	**05 04 08.0**	**+0.4**
	5.4nm,0.4s,mb4.3						
STKA	**Stephens Creek**	**39.34**	**241**	P	**P**	**05 04 08.2**	**+0.6**
	8.0nm,0.4s,mb4.5,baz=88,slow=9.3,SNR=38						
WRAB	**Tennant Creek**	**45.23**	**259**	*e*P	**P**	**05 04 52.5**	**-1.7**
	4.6nm,0.6s,mb4.1						
WRA	**Warramunga Arr**	**45.24**	**259**	P	**P**	**05 04 53.2**	**-1.1**
	4.4nm,0.5s,mb4.2,baz=96,slow=7.0,SNR=114						
ASAR	**Alice Springs**	**45.43**	**254**	P	**P**	**05 04 55.3**	**-0.4**
	47nm,0.6s,mb5.1,baz=88,slow=8.2,SNR=322						
KAKA	**Kakadu**	**48.11**	**268**	*e*P	**P**	**05 05 15.6**	**-0.5**
	15nm,0.5s,mb4.6						
KAKA	**Kakadu**	**48.11**	**268**	*e*P	**P**	**05 05 15.7**	**-0.4**
	27nm,0.5s,mb4.8						
FORT	**Forrest**	**50.71**	**244**	*e*P	**P**	**05 05 34.5**	**-0.6**
	32nm,0.5s,mb4.9						
FORT	**Forrest**	**50.71**	**244**	*e*P	**P**	**05 05 34.5**	**-0.6**
	47nm,0.7s,mb4.9						
FITZ	**Fitzroy Crossi**	**53.62**	**260**	*e*P	**P**	**05 05 56.6**	**+0.3**
	5.4nm,0.4s,mb4.2						
MBWA	**Marble Bar**	**58.71**	**255**	*e*P	**P**	**05 06 30.9**	**-0.6**
	7.6nm,0.3s,mb4.5						
KLBR	**Kellerberrin**	**59.53**	**243**	*e*P	**P**	**05 06 36.2**	**-0.7**
	22nm,0.8s,mb4.6						
MCK	**McKinley**	**83.89**	**13**	*e*P	**P**	**05 08 59.7**	**+1.5**
	2.0nm,0.4s,mb4.0						
COLA	**College**	**85.12**	**12**	*e*P	**P**	**05 09 05.5**	**+1.3**
	2.3nm,0.7s,mb3.9						
ARCES	**ARCESS Array B**	**125.86**	**350**	PKP	PKPdf	05 15 27.7	+1.9
	0.9nm,0.4s,baz=48,slow=1.3,SNR=13						
BUR08	**Bucovina Ar. S**	**144.35**	**333**	*e*PKPdf	PKPdf	05 16 02.4	+1.8
BRTR	**Keskin Array B**	**144.75**	**316**	PKP	PKPdf	05 16 03.5	+1.8
	1.9nm,0.5s,baz=122,slow=4.0,SNR=11						
CLL	**Collm**	**145.03**	**348**	⇑*i*PKPbc	PKPbc	05 16 04.1	+1.7
	comp=Z,9.0nm,0.9s						
MMAI	**Mount Meron Ar**	**146.27**	**304**	PKPbc	PKPbc	05 16 08.3	+1.8
	comp=Z,1.2nm,0.3s,baz=61,slow=3.6,SNR=3.8						
GIVF	**Givet**	**147.26**	**357**	*e*PKP1	PKPbc	05 16 09.4	+0.8
FLN	**La Foliniere**	**148.60**	**3**	*e*PKP1	PKPbc	05 16 13.8	+1.7
	comp=Z,10nm,0.6s						
CDF	**Champ du Feu**	**148.74**	**353**	*e*PKP1	PKPbc	05 16 14.5	+2.1
	comp=Z,6.1nm,0.7s						
LDF	**La Druitiere**	**148.79**	**3**	*e*PKP1	PKPbc	05 16 14.1	+1.5
	comp=Z,3.5nm,0.4s						
SGMF	**Saint Gilles**	**148.94**	**6**	*e*PKP1	PKPbc	05 16 14.6	+1.6
	comp=Z,4.7nm,0.6s						
GRR	**Gorron**	**148.95**	**4**	*e*PKP1	PKPbc	05 16 14.8	+1.8
	comp=Z,8.0nm,0.5s						
HAU	**Haudompre**	**149.24**	**354**	*e*PKP1	PKPbc	05 16 15.4	+1.7
	comp=Z,4.0nm,0.5s						
HINF	**Hinteralfeld**	**149.37**	**354**	*e*PKP1	PKPbc	05 16 15.8	+1.8
LOR	**Lormes**	**150.13**	**358**	*e*PKP1	PKPbc	05 16 17.8	+2.0
	comp=Z,2.7nm,0.4s						
SSF	**Saint Saulge**	**150.35**	**358**	*e*PKP1	PKPbc	05 16 18.4	+2.1
	comp=Z,3.9nm,0.6s						
MFF	**Saint Martin d**	**150.78**	**3**	*e*PKP1	PKPbc	05 16 19.2	+1.9
	comp=Z,6.7nm,0.7s						
BGF	**Bois d'Agland**	**150.87**	**359**	*e*PKP1	PKPbc	05 16 18.6	+1.0
MBDF	**Montbardon**	**152.43**	**353**	*e*PKP1	PKPbc	05 16 23.2	+2.1
	comp=Z,2.1nm,0.5s						
VIVF	**Saint-Julien-l**	**152.50**	**356**	*e*PKP1	PKPbc	05 16 23.3	+2.0
	comp=Z,2.6nm,0.5s						
CAF	**Calviac**	**152.51**	**0**	*e*PKP1	PKPbc	05 16 23.3	+2.0
FRF	**La Foret Royal**	**153.60**	**353**	*e*PKP1	PKPbc	05 16 24.9	+1.2

*NEIC **16** 05:00:17.6, 44°.01N×7°.40E, h4km, ML2.5(LDG), ML2.5(STR), After LDG.*

*CSEM **16** 05:00:17.3±0.1, 44°.01N×7°.36E, h12km, ML2.4/14, Error ellipse: s-maj=2.1km s-min=1.9km az=66.0*

*ROM **16** 05:00:17.8±0.6, 44°.06N×7°.39E, h9km±2km, Md2.3/6, Ml1.8/5, Error ellipse: s-maj=9.8km s-min=2.1km az=48.0*

*ISCJB **16** 05:00:17.0±0.3, 44°.02N±0°.02×7°.34E±0°.03, h10km, Error ellipse: s-maj=2.9km s-min=2.3km az=155.3*

*STR **16** 05:00:17.6±0.1, 44°.01N×7°.38E, h5km, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

*LDG **16** 05:00:17.6±0.1, 44°.01N×7°.40E, h4km, Md2.4/3, Ml2.5/8, Error ellipse: s-maj=1.0km s-min=0.8km az=70.0*

ISC 16 05:00:17.3±0.4, 44°.00N±0°.02×7°.37E±0°.03, h14km±2km, n46, σ0°58/86, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUTN	**L'Aution**	**0.04**	**101**	Pg	**Pg**	**05 00 18.9**	**-0.9**
AUTN				Sg	**Sg**	**05 00 20.0**	**-1.6**
AUTN	**L'Aution**	**0.04**	**101**	Pg	**Pg**	**05 00 18.9**	**-0.9**
AUTN				Sg	**Sg**	**05 00 20.0**	**-1.6**
TOUF	**Mont Tournerai**	**0.09**	**277**	Pg	**Pg**	**05 00 19.7**	**-0.6**
TOUF				Sg	**Sg**	**05 00 22.2**	**-0.2**
TOUF	**Mont Tournerai**	**0.09**	**277**	Pg	**Pg**	**05 00 19.7**	**-0.6**
TOUF				Sg	**Sg**	**05 00 22.2**	**-0.2**
LUCF	**Luceram**	**0.11**	**189**	Pg	**Pg**	**05 00 20.5**	**0.0**
LUCF				Sg	**Sg**	**05 00 22.5**	**-0.3**
LUCF	**Luceram**	**0.11**	**189**	Pg	**Pg**	**05 00 20.5**	**0.0**
LUCF				Sg	**Sg**	**05 00 22.5**	**-0.3**
SAOF	**Saorge**	**0.13**	**97**	Pg	**Pg**	**05 00 20.6**	**-0.2**
SAOF				Sg	**Sg**	**05 00 23.5**	**+0.2**
SAOF	**Saorge**	**0.13**	**97**	Pg	**Pg**	**05 00 20.6**	**-0.2**
SAOF				Sg	**Sg**	**05 00 23.5**	**+0.2**
SBF	**Sospel**	**0.15**	**162**	*e*Pg	**Pg**	**05 00 20.8**	**-0.2**
SBF				*e*Sg	**Sg**	**05 00 23.2**	**-0.4**
	213nm,0.3s						
SBF	**Sospel**	**0.15**	**162**	*e*Pg	**Pg**	**05 00 20.8**	**-0.2**
SBF				*e*Sg	**Sg**	**05 00 23.2**	**-0.4**
	106nm,0.3s						
MVIF	**Mont Vial**	**0.19**	**236**	Pg	**Pg**	**05 00 21.8**	**+0.2**
MVIF				Sg	**Sg**	**05 00 25.4**	**+0.7**
MVIF	**Mont Vial**	**0.19**	**236**	Pg	**Pg**	**05 00 21.8**	**+0.2**
MVIF				Sg	**Sg**	**05 00 25.4**	**+0.7**
STV	**Sant Anna di V**	**0.24**	**352**	Pg	**Pg**	**05 00 22.5**	**-0.1**
STV				Sg	**Sg**	**05 00 25.7**	**-0.4**
	292nm,0.2s						
STV	**Sant Anna di V**	**0.24**	**352**	Pg	**Pg**	**05 00 22.5**	**-0.1**
STV				Sg	**Sg**	**05 00 25.7**	**-0.4**
	292nm,0.2s						
IMI	**Imperia**	**0.39**	**104**	Pg	**Pg**	**05 00 26.6**	**+1.5**
IMI				Sg	**Sg**	**05 00 31.6**	**+1.3**
	66nm,0.4s						
IMI	**Imperia**	**0.39**	**104**	Pg	**Pg**	**05 00 26.6**	**+1.5**
IMI				Sg	**Sg**	**05 00 31.6**	**+1.3**
	66nm,0.4s						
DOI	**San Damiano**	**0.51**	**350**	Pg	**Pg**	**05 00 27.5**	**+0.2**
DOI				Sg	**Sg**	**05 00 34.5**	**+0.4**
	41nm,0.2s						
DOI	**San Damiano**	**0.51**	**350**	Pg	**Pg**	**05 00 27.5**	**+0.2**
DOI				Sg	**Sg**	**05 00 34.5**	**+0.4**
	41nm,0.2s						
PZZ	**Stroppo**	**0.54**	**340**	Pg	**Pg**	**05 00 28.0**	**+0.2**
PZZ				Sg	**Sg**	**05 00 35.4**	**+0.4**
	47nm,0.3s						
PZZ	**Stroppo**	**0.54**	**340**	Pg	**Pg**	**05 00 28.0**	**+0.2**
PZZ				Sg	**Sg**	**05 00 35.4**	**+0.4**
	47nm,0.3s						
FRF	**La Foret Royal**	**0.69**	**230**	*e*Pg	**Pg**	**05 00 31.2**	**+0.6**
FRF				*e*Sg	**Sg**	**05 00 40.3**	**+0.6**
	14nm,0.2s						
FRF	**La Foret Royal**	**0.69**	**230**	*e*Pg	**Pg**	**05 00 31.2**	**+0.6**
FRF				*e*Sg	**Sg**	**05 00 40.3**	**+0.6**
	7.2nm,0.2s						
QLNO	**Quiliano**	**0.77**	**65**	Pg	**Pg**	**05 00 32.7**	**+0.4**
QLNO	**Quiliano**	**0.77**	**65**	Pg	**Pg**	**05 00 32.7**	**+0.4**
MBDF	**Montbardon**	**0.84**	**330**	*e*Pg	**Pg**	**05 00 33.5**	**-0.1**
MBDF				*e*Sg	**Sg**	**05 00 44.9**	**+0.3**
	18nm,0.4s						
MBDF	**Montbardon**	**0.84**	**330**	*e*Pg	**Pg**	**05 00 33.5**	**-0.1**
MBDF				*e*Sg	**Sg**	**05 00 44.9**	**+0.3**
	8.8nm,0.4s						
LMR	**La Mourre**	**0.92**	**223**	*e*Pg	**Pg**	**05 00 35.2**	**+0.2**
LMR				*e*Sg	**Sg**	**05 00 47.3**	**+0.4**
	40nm,0.3s						
LMR	**La Mourre**	**0.92**	**223**	*e*Pg	**Pg**	**05 00 35.2**	**+0.2**
LMR				*e*Sg	**Sg**	**05 00 47.3**	**+0.4**
	20nm,0.3s						
PCP	**Piancastagn**	**1.00**	**57**	Pg	**Pg**	**05 00 37.5**	**+0.9**
	16nm,0.5s						
PCP	**Piancastagn**	**1.00**	**57**	Pg	**Pg**	**05 00 37.5**	**+0.9**
	16nm,0.5s						
BNI	**Bardonecchia**	**1.16**	**335**	*e*Pn	**Pn**	**05 00 39.2**	**+0.2**
BNI	**Bardonecchia**	**1.16**	**335**	*e*Pn	**Pn**	**05 00 39.2**	**+0.1**
SMRF	**Simiane la Rot**	**1.30**	**269**	*e*Pg	**Pg**	**05 00 42.3**	**+0.1**
SMRF				*e*Sg	**Sg**	**05 00 59.4**	**+0.3**
	33nm,0.3s						
SMRF	**Simiane la Rot**	**1.30**	**269**	*e*Pg	**Pg**	**05 00 42.3**	**+0.1**
SMRF				*e*Sg	**Sg**	**05 00 59.4**	**+0.3**
	16nm,0.3s						
ORIF	**Oris-en-Rattie**	**1.41**	**311**	*e*Pg	**Pg**	**05 00 44.2**	**-0.1**
ORIF				*e*Sg	**Sg**	**05 01 02.4**	**-0.2**
	17nm,0.6s						
ORIF	**Oris-en-Rattie**	**1.41**	**311**	*e*Pg	**Pg**	**05 00 44.2**	**-0.1**
ORIF				*e*Sg	**Sg**	**05 01 02.4**	**-0.2**
	8.5nm,0.6s						
LPG	**La Plagne**	**1.56**	**344**	*e*Pg	**Pg**	**05 00 47.0**	**-0.2**
LPG				*e*Sg	**Sg**	**05 01 07.1**	**-0.3**
	18nm,0.8s						
LPG	**La Plagne**	**1.56**	**344**	*e*Pg	**Pg**	**05 00 47.0**	**-0.2**
LPG				*e*Sg	**Sg**	**05 01 07.1**	**-0.3**
	9.1nm,0.8s						
LPL	**La Plagne**	**1.58**	**343**	*e*Pg	**Pg**	**05 00 47.4**	**-0.2**
LPL				*e*Sg	**Sg**	**05 01 07.9**	**-0.2**
	18nm,0.7s						
LPL	**La Plagne**	**1.58**	**343**	*e*Pg	**Pg**	**05 00 47.4**	**-0.2**
LPL				*e*Sg	**Sg**	**05 01 07.9**	**-0.2**
	9.1nm,0.7s						
PGF	**Pioggiola**	**1.88**	**140**	*e*Pn	**Pn**	**05 00 48.4**	**-0.5**
PGF				*e*Sn	**Sn**	**05 01 11.0**	**-1.4**
	2.4nm,0.2s						
PGF	**Pioggiola**	**1.88**	**140**	*e*Pn	**Pn**	**05 00 48.4**	**-0.5**
PGF				*e*Sn	**Sn**	**05 01 11.0**	**-1.4**
	1.2nm,0.2s						
VIVF	**Saint-Julien-l**	**2.11**	**295**	*e*Pn	**Pn**	**05 00 52.5**	**+0.4**
VIVF				*e*Sn	**Sn**	**05 01 17.7**	**-0.5**
	2.5nm,0.3s						
VIVF	**Saint-Julien-l**	**2.11**	**295**	*e*Pn	**Pn**	**05 00 52.5**	**+0.4**
VIVF				*e*Sn	**Sn**	**05 01 17.7**	**-0.5**
	1.2nm,0.3s						
LASF	**Ste Croix**	**2.54**	**273**	*e*Pn	**Pn**	**05 00 58.2**	**+0.2**
LASF				*e*Sn	**Sn**	**05 01 27.8**	**-0.8**
	1.1nm,0.3s						
LASF	**Ste Croix**	**2.54**	**273**	*e*Pn	**Pn**	**05 00 58.2**	**+0.2**
LASF				*e*Sn	**Sn**	**05 01 27.8**	**-0.8**
	0.6nm,0.3s						

*ISCJB **16** 05:00:43.1±4.4, 13°.45N±0°.10×92°.51E±0°.10, h4km±28km, mb3.8/8, Error ellipse: s-maj=18.3km s-min=13.8km az=43.2*

*IDC **16** 05:00:44.9±1.1, 13°.47N×92°.50E, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.7/22, mbtmp3.7/7, ML3.7/1, Error ellipse: s-maj=34.5km s-min=20.1km az=62.0*

*NEIC **16** 05:00:46.2±0.7, 13°.44N×92°.47E, h10km, Error ellipse: s-maj=15.0km s-min=12.2km az=69.0*

ISC 16 05:00:44.8±5.3, 13°.42N±0°.10×92°.5E±0°.1, h1km±34km, n13, σ0°62/14, mb3.9/8, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**8.00**	**50**	Pn	**Pn**	**05 02 42.0**	**-0.3**
	0.3nm,0.3s,baz=238,slow=15,SNR=5.8						
CMAR				Sn	**Sn**	**05 04 13.6**	**+0.1**
	0.4nm,0.3s,baz=240,slow=30,SNR=5.0						

mb1mx3.0/14, mbtmp2.7/3, ML2.3/2, Error ellipse: s-maj=151.9km s-min=17.1km az=45.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**3.06**	**126**	Pn	Pn	06 16 02.7	-0.3
	0.1nm,0.3s,baz=295,slow=10,SNR=4.8						
STKA				Pg	Pg	06 16 09.7	-2.4
	0.7nm,0.3s,baz=308,slow=14,SNR=7.9						
STKA				Sn	Sn	06 16 40.5	+0.2
	0.8nm,0.3s,baz=283,slow=15,SNR=4.2						
STKA				Lg		06 16 50.8	
	2.2nm,0.3s,baz=192,slow=22,SNR=8.6						
ASAR	**Alice Springs**	**7.71**	**325**	Pn	Pn	06 17 06.9	0.0
	baz=149,slow=13,SNR=4.1						
ASAR				Lg		06 19 30.3	
	0.1nm,0.3s,baz=151,slow=24,SNR=5.0						
WRA	**Warramunga Arr**	**10.87**	**338**	Pn	Pn	06 17 50.5	+0.2
	0.1nm,0.3s,baz=158,slow=13,SNR=5.4						

MAN 16 06:35:55, 16°.88N×122°.46E, h0km, mb4.1, ML2.9, MS2.7, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.18**	**349**	*e*P	Pg	06 35 59.1	+0.6
CAUP	**Cauayan**	**0.61**	**276**	*e*P	Pg	06 36 07.7	+0.9
CAUP				*e*S	Sg	06 36 17.0	+2.3
BALP	**Baler**	**1.42**	**217**	*e*P	Pn	06 36 22.0	-0.1
APYP	**Conner**	**1.52**	**310**	*e*P	Pn	06 36 30.3	+6.9

IDC 16 06:42:58.6±1.7, 1°.18S×124°.28E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.3/20, mbtmp3.3/3, Error ellipse: s-maj=184.0km s-min=26.5km az=62.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.08**	**153**	P	P	06 47 45.6	+0.8
	0.3nm,0.5s,baz=331,slow=12,SNR=10						
ASAR	**Alice Springs**	**24.22**	**158**	P	P	06 48 16.6	-0.6
	0.2nm,0.4s,baz=344,slow=12,SNR=3.5						
MKAR	**Makanchi Array**	**60.28**	**328**	P	P	06 53 09.0	+0.1
	0.3nm,0.3s,baz=126,slow=7.2,SNR=6.3						

NNC 16 06:47:34.8±10.0, 53°.96N×86°.05E, h0km, mb3.6, mpv3.2, 5C-4D, Error ellipse: s-maj=96.9km s-min=50.4km az=61.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**5.59**	**238**	⇑Pn	Pn	06 49 02.2	+3.0
	9.5nm,2.5s						
KURK				⇓Lg		06 50 40.2	
	3.8nm,0.9s						
MK31	**Makanchi Array**	**7.56**	**200**	⇑Pn	Pn	06 49 30.2	+4.0
	0.7nm,0.5s,baz=27,slow=13,SNR=43						
MK31				⇑Sn	Sn	06 50 58.1	+5.6
	1.6nm,1.1s,baz=30,slow=26						
MK31				⇑Lg		06 51 41.0	
	2.3nm,0.9s,baz=24,slow=31						
VOSK	**Vostochnaya**	**9.11**	**268**	⇓Pn	Pn	06 49 47.5	+0.2
	1.1nm,0.9s						
VOSK				⇓Sn	Sn	06 51 24.5	-5.9
	2.2nm,1.1s						
ZRNK	**Zerenda**	**10.22**	**271**	⇑Pn	Pn	06 50 03.0	+0.4
	1.2nm,0.8s						
ZRNK				⇓Sn	Sn	06 51 52.2	-5.6
	2.6nm,1.5s						

*ISCJB **16** 06:47:40.2±0.7, 31°.75S±0°.03×72°.23W±0°.06, h10km, mb4.0/2, Error ellipse: s-maj=7.1km s-min=4.2km az=178.4*
*GUC **16** 06:47:40.0±0.8, 31°.76S×72°.15W, h2km±3km, MD4.0, ML4.0*
*IDC **16** 06:47:40.2±1.4, 31°.70S×72°.28W, h0km, mb3.7/1, mb1 3.8/4, mb1mx3.7/15, mbtmp3.5/4, ML3.6/3, MS3.3/3, Ms1 3.3/3, ms1mx3.0/21, Error ellipse: s-maj=43.0km s-min=37.1km az=98.0*
*NEIC **16** 06:47:40.0, 31°.76S×72°.15W, h2km, ML4.0(GUC), After GUC.*

ISC 16 06:47:41.6±0.7, 31°.75S±0°.03×72°.17W±0°.06, h10km, n31, σ1s07/40, mb4.0/2, 7C-3D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.58**	**103**	*e*P	Pg	06 47 51.9	-1.0
CHNG				*i*S	Sg	06 48 00.0	-0.6
CMCH	**Combarbala**	**1.15**	**60**	⇓*i*P	Pb	06 48 01.9	-1.7
CMCH				*i*S	Sb	06 48 18.0	-0.7
CMCH	**Combarbala**	**1.15**	**60**	⇓*i*P	Pb	06 48 01.9	-1.7
CMCH				*i*S	Sb	06 48 18.0	-0.7
CMCH				AML	AML	06 48 20.2	
	comp=E,34μm,0.7s						
IHA	**Instituto Hidr**	**1.35**	**161**	*e*P	Pn	06 48 04.6	-1.8
IHA	**Instituto Hidr**	**1.35**	**161**	*e*P	Pn	06 48 04.6	-1.8
ROCH	**El Roble**	**1.56**	**141**	⇑*i*P	Pn	06 48 09.2	-0.2
ROCH				*i*S	Sn	06 48 30.2	+0.5
ROCH	**El Roble**	**1.56**	**141**	⇑*i*P	Pn	06 48 09.2	-0.2
ROCH				*i*S	Sn	06 48 30.2	+0.5
JACH	**Jahuel**	**1.63**	**125**	⇑*i*P	Pn	06 48 09.8	-0.5
JACH				*i*S	Sn	06 48 31.8	+0.6
JACH	**Jahuel**	**1.63**	**125**	⇑*i*P	Pn	06 48 09.8	-0.5
JACH				*i*S	Sn	06 48 31.8	+0.6
PEL	**Peldehue**	**1.87**	**138**	⇓*i*P	Pn	06 48 12.8	-0.9
PEL				*i*S	Sn	06 48 38.0	+0.7
PEL				AML	AML	06 48 43.7	
	comp=N,2μm,0.8s						
TLL	**Tololo Astrono**	**1.97**	**37**	*e*P	Pn	06 48 14.5	-0.4
TLL				*e*S	Sn	06 48 41.5	+1.8
TLL	**Tololo Astrono**	**1.97**	**37**	*e*P	Pn	06 48 14.5	-0.4
TLL				*e*S	Sn	06 48 41.5	+1.8
TLL				AML	AML	06 48 49.8	
	comp=N,2μm,0.7s						
CLCH	**Cerro Calan**	**2.14**	**140**	⇑*i*P	Pn	06 48 16.6	-0.8
CLCH				*i*S	Sn	06 48 45.1	+1.1
CLCH				AML	AML	06 48 51.9	
	comp=E,2μm,0.6s						
TACH	**Talagante**	**2.16**	**152**	⇑*i*P	Pn	06 48 17.3	-0.3
TACH	**Talagante**	**2.16**	**152**	⇑*i*P	Pn	06 48 17.3	-0.3
FSR	**Penalolen**	**2.21**	**142**	*e*P	Pn	06 48 18.1	-0.2
FSR	**Penalolen**	**2.21**	**142**	*e*P	Pn	06 48 18.1	-0.2
FSR				AML	AML	06 48 52.5	
	comp=N,253nm,0.9s						
ANTU	**Antumapu**	**2.23**	**145**	*e*P	Pn	06 48 18.2	-0.4
ANTU	**Antumapu**	**2.23**	**145**	*e*P	Pn	06 48 18.2	-0.4
ANTU				AML	AML	06 49 04.0	
	comp=N,812nm,0.5s						
LCO	**Las Campanas**	**3.01**	**25**	*e*Pn	Pn	06 48 28.4	-1.0
LCO				*e*Sn	Sn	06 49 06.1	+0.6
PLCA	**Paso Flores**	**9.06**	**172**	Pn	Pn	06 49 53.9	+1.6
	comp=N,0.1nm,0.3s,baz=337,slow=7.7,SNR=2.3						
PLCA				LR	LR	06 53 32.9	
	comp=N,252nm,18.6s,baz=37,slow=39						
PLCA	**Paso Flores**	**9.06**	**172**	Pn	Pn	06 49 53.9	+1.6
PLCA				LR	LR	06 53 32.9	
TRQA	**Tornquist**	**10.46**	**130**	*e*Pn	Pn	06 50 14.0	+2.4
	comp=N,16nm,0.9s						
CPUP	**Villa Florida**	**14.06**	**71**	Pn	Pn	06 51 01.9	+1.1
	comp=N,0.1nm,0.3s,baz=232,slow=19,SNR=2.0						
CPUP				Sn	Sn	06 53 40.1	+3.2
	comp=N,0.2nm,0.3s,baz=141,slow=7.3,SNR=4.4						
CPUP				LR	LR	06 56 40.1	
	comp=N,105nm,21.8s,baz=230,slow=38						
LPAZ	**La Paz**	**15.83**	**14**	Pn	Pn	06 51 25.1	+0.6
	comp=N,0.1nm,0.3s,baz=198,slow=7.1,SNR=7.6						
SPB	**Sao Paulo**	**23.33**	**76**	*e*P	P	06 52 48.7	-1.4
	comp=N,12nm,0.8s,mb4.4						
ROSC	**El Rosal**	**36.46**	**356**	LR	LR	07 10 32.2	
	comp=N,34nm,19.2s,baz=208,slow=38						
NVAR	**Mina Array Bea**	**81.98**	**325**	P	P	07 00 02.0	+0.5
	comp=N,0.6nm,0.8s,mb3.6,baz=132,slow=6.1,SNR=4.3						
BVAR	**Borovoye Array**	**145.68**	**41**	PKPbc	PKPbc	07 07 20.1	0.0
	comp=N,1.0nm,0.8s,baz=289,slow=4.5,SNR=4.9						
ZALV	**Zalesovo Beam**	**152.36**	**30**	PKPbc	PKPbc	07 07 35.7	-1.6
	comp=N,0.8nm,0.5s,baz=289,slow=5.8,SNR=3.5						
ZALV				PKPab	PKPab	07 07 48.4	+1.1
	comp=N,1.4nm,0.6s,baz=325,slow=3.3,SNR=4.5						
MKAR	**Makanchi Array**	**155.32**	**45**	PKPab	PKPab	07 08 00.0	-0.1
	comp=N,0.2nm,0.2s,baz=321,slow=3.1,SNR=4.5						

*ISK **16** 07:00:36.9, 35°.23N×27°.53E, h6km, ML3.2*
*ISCJB **16** 07:00:39.2±1.0, 35°.37N±0°.05×27°.65E±0°.04, h2km±6km, Error ellipse: s-maj=9.2km s-min=4.5km az=150.7*
*ATH **16** 07:00:40.1, 35°.42N×27°.64E, h21km±1km, MD3.6/15*
*NEIC **16** 07:00:40.1, 35°.42N×27°.64E, h21km, MD3.6(ATH), After ATH.*
*CSEM **16** 07:00:42.0±0.4, 35°.43N×27°.63E, h19km, MD3.6, Error ellipse: s-maj=12.2km s-min=5.2km az=152.0*

ISC 16 07:00:39.6±1.1, 35°.36N±0°.05×27°.65E±0°.04, h1km±6km, n59, σ0s86/75, 3C, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.44**	**296**	⇑*i*Pb	Pg	07 00 48.3	+0.3
KARP				*e*Sb	Sg	07 00 54.8	+1.1
KARP	**Karpathos**	**0.44**	**296**	⇑*i*PB	Pg	07 00 48.3	+0.3
KARP				*e*SB	Sg	07 00 54.8	+1.1
KARP	**Karpathos**	**0.44**	**296**	⇑*i*Pb	Pg	07 00 48.3	+0.3
KARP				*e*Sb	Sg	07 00 54.8	+1.1
ARG	**Arkhangelos**	**0.94**	**24**	*e*Pn	Pg	07 00 57.1	-0.5
ARG				*e*Sn	Sg	07 01 10.2	+0.4
ARG	**Arkhangelos**	**0.94**	**24**	*e*PN	Pg	07 00 57.1	-0.5
ARG				*e*SN	Sg	07 01 10.2	+0.4
ARG	**Arkhangelos**	**0.94**	**24**	*e*Pn	Pg	07 00 57.1	-0.5
ARG				*e*Sn	Sg	07 01 10.2	+0.4
ZKR	**Zakros**	**1.20**	**259**	*e*Pn	Pn	07 01 02.2	-1.2
ZKR	**Zakros**	**1.20**	**259**	*e*PN	Pn	07 01 02.2	-1.2
ZKR	**Zakros**	**1.20**	**259**	*e*Pn	Pn	07 01 02.2	-1.2
DAT	**Datca**	**1.37**	**358**	*e*PN	Pn	07 01 05.0	-0.8
DAT	**Datca**	**1.37**	**358**	*e*Pn	Pn	07 01 05.0	-0.8
NPS	**Neapolis**	**1.67**	**267**	*e*Pn	Pn	07 01 10.7	+0.8
NPS				*e*Sn	Sn	07 01 32.5	+0.6
NPS	**Neapolis**	**1.67**	**267**	*e*PN	Pn	07 01 10.7	+0.8
NPS				*e*SN	Sn	07 01 32.5	+0.6
NPS	**Neapolis**	**1.67**	**267**	*e*Pn	Pn	07 01 10.7	+0.8
NPS				*e*Sn	Sn	07 01 32.5	+0.6
XRY	**Khrisi**	**1.67**	**254**	*e*Pn	Pn	07 01 11.2	+1.2
XRY	**Khrisi**	**1.67**	**254**	*e*PN	Pn	07 01 11.2	+1.2
XRY	**Khrisi**	**1.67**	**254**	*e*Pn	Pn	07 01 11.2	+1.2
BODT	**Bodrum**	**1.72**	**351**	*e*PN	Pn	07 01 10.3	-0.3
BODT				*e*SN	Sn	07 01 33.3	0.0
BODT	**Bodrum**	**1.72**	**351**	*e*Pn	Pn	07 01 10.4	-0.3
BODT				*e*Sn	Sn	07 01 33.3	0.0
KSL	**Kastellorizon**	**1.76**	**63**	*e*Pn	Pn	07 01 11.0	-0.2
KSL	**Kastellorizon**	**1.76**	**63**	*e*PN	Pn	07 01 11.0	-0.2
LAST	**Lasithi**	**1.79**	**264**	*e*Pn	Pn	07 01 12.9	+1.4
LAST	**Lasithi**	**1.79**	**264**	*e*PN	Pn	07 01 12.9	+1.4
LAST	**Lasithi**	**1.79**	**264**	*e*Pn	Pn	07 01 12.9	+1.4
YER	**Yerkesik**	**1.85**	**16**	*e*PN	Pn	07 01 12.4	0.0
YER				*e*SN	Sn	07 01 38.4	+2.0
YER	**Yerkesik**	**1.85**	**16**	*e*Pn	Pn	07 01 12.4	0.0
YER				*e*Sn	Sn	07 01 38.4	+2.1
MLSB	**Milas**	**1.94**	**3**	*e*PN	Pn	07 01 12.9	-0.7
MLSB	**Milas**	**1.94**	**3**	*e*Pn	Pn	07 01 12.9	-0.7
IDI	**Anoyia**	**2.26**	**269**	*e*Pn	Pn	07 01 18.0	0.0
IDI	**Anoyia**	**2.26**	**269**	*e*PN	Pn	07 01 18.0	0.0
IDI	**Anoyia**	**2.26**	**269**	*e*Pn	Pn	07 01 18.0	0.0
ELL	**Elmali**	**2.30**	**52**	*e*PN	Pn	07 01 18.5	-0.1
ELL	**Elmali**	**2.30**	**52**	*e*Pn	Pn	07 01 18.5	-0.1
GLHS	**Glhisar (BURDU**	**2.34**	**39**	*e*PN	Pn	07 01 18.5	-0.6
GLHS	**Glhisar (BURDU**	**2.34**	**39**	*e*Pn	Pn	07 01 18.5	-0.6
SIVA	**Sivas**	**2.35**	**263**	*e*Pb	Pb	07 01 21.0	-1.7
SIVA	**Sivas**	**2.35**	**263**	*e*PB	Pb	07 01 21.0	-1.7
APE	**Apeiranthos**	**2.42**	**316**	*e*Pn	Pn	07 01 19.3	-0.9
APE				*e*Sn	Sn	07 01 49.0	-1.4
APE	**Apeiranthos**	**2.42**	**316**	*e*PN	Pn	07 01 19.2	-1.0
APE				*e*SN	Sn	07 01 49.0	-1.4
APE	**Apeiranthos**	**2.42**	**316**	*e*Pn	Pn	07 01 19.3	-0.9
APE				*e*Sn	Sn	07 01 49.0	-1.4
SMG	**Samos**	**2.44**	**345**	*e*Pn	Pn	07 01 19.9	-0.6
SMG	**Samos**	**2.44**	**345**	*e*PN	Pn	07 01 19.9	-0.6
SMG	**Samos**	**2.44**	**345**	*e*Pn	Pn	07 01 19.9	-0.6
DENT	**Denizli**	**2.64**	**25**	*e*PN	Pn	07 01 23.5	+0.2
DENT	**Denizli**	**2.64**	**25**	*e*Pn	Pn	07 01 23.5	+0.2
VAM	**Vamos**	**2.82**	**272**	*e*Pb	Pb	07 01 27.2	-3.5
VAM	**Vamos**	**2.82**	**272**	*e*PB	Pb	07 01 27.2	-3.5
KARN	**Karanos**	**3.05**	**272**	*e*PN	Pn	07 01 29.1	+0.2
KARN	**Karanos**	**3.05**	**272**	*e*Pn	Pn	07 01 29.1	+0.2
KULA	**Kula-Manisa**	**3.25**	**14**	*e*PN	Pn	07 01 31.9	+0.2
KULA	**Kula-Manisa**	**3.25**	**14**	*e*Pn	Pn	07 01 31.9	+0.2
SUTC	**Sutluce-Ispart**	**3.43**	**51**	*e*PN	Pn	07 01 35.1	+0.9
SUTC	**Sutluce-Ispart**	**3.43**	**51**	*e*Pn	Pn	07 01 35.1	+0.9
KYTH	**Kithira**	**3.86**	**285**	*e*Pn	Pn	07 01 40.2	+0.2
KYTH	**Kithira**	**3.86**	**285**	*e*PN	Pn	07 01 40.2	+0.2
KYTH	**Kithira**	**3.86**	**285**	*e*Pn	Pn	07 01 40.2	+0.2
VLI	**Veliai**	**4.05**	**291**	*e*Pn	Pn	07 01 43.0	+0.3
VLI	**Veliai**	**4.05**	**291**	*e*PN	Pn	07 01 43.0	+0.3
VLI	**Veliai**	**4.05**	**291**	*e*Pn	Pn	07 01 43.0	+0.3

*IDC **16** 07:05:56.7±0.7, 1°.86N×128°.87E, h0km, mb4.2/11, mb1 4.3/11, mb1mx4.2/21, mbtmp4.2/11, MS3.0/4, Ms1 3.0/4, ms1mx2.6/31, Error ellipse: s-maj=28.9km s-min=14.1km az=78.0*
*ISCJB **16** 07:05:57.7±2.7, 1°.84N±0°.05×128°.82E±0°.06, h20km±20km, mb4.5/16, MS3.0/4, Error ellipse: s-maj=9.8km s-min=9.2km az=177.7*
*NEIC **16** 07:05:57.9±0.4, 1°.88N×128°.85E, h10km, mb4.7/1, Error ellipse: s-maj=16.9km s-min=6.9km az=73.0*
NEIC Felt at Ternate.
*DJA **16** 07:06:02, 1°.59N×128°.56E, h2km, MLv4.5/6*

ISC 16 07:05:57.5±3.5, 1°.86N±0°.06×128°.86E±0°.06, h5km±23km, n31, σ0s93/32, mb4.5/16, MS3.0/4, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.84**	**234**	P	Pn	07 06 28.2	-1.6
TNTI				S	Sn	07 06 48.8	-4.7
MNI	**Manado**	**4.04**	**264**	P	Pn	07 07 00.8	+0.8
KMSI	**Cibinong**	**5.04**	**255**	P	Pn	07 07 14.5	+0.7
KMSI				S	Sn	07 08 12.1	-0.4
NLAI	**Namlea**	**5.36**	**199**	P	Pn	07 07 18.4	+0.2
	0.4nm2μm71nm,0.9s						
AAI	**Ambon**	**5.55**	**187**	P	Pn	07 07 22.3	+1.5
	0.4nm6μm74nm,0.8s						
DAV	**Davao City (W)**	**6.12**	**328**	*e*Pn	Pn	07 07 26.9	-1.8
LUWI	**Luwuk**	**6.73**	**245**	P	Pn	07 07 35.5	-1.6
	0.8nm5μm125nm,0.9s						
MRSI	**Marisa**	**7.05**	**259**	P	Pn	07 07 43.0	+1.5
	670nm51nm,0.6s						
KDI	**Kendari**	**8.50**	**227**	P	Pn	07 08 01.2	-0.2
FITZ	**Fitzroy Crossi**	**20.09**	**189**	P	P	07 10 31.3	-0.8
	4.0nm,0.8s,baz=24,slow=9.9,SNR=9.1						
WRAB	**Tennant Creek**	**22.32**	**166**	*e*P	P	07 10 56.0	-0.1
	17nm,0.6s,mb4.7						
WRA	**Warramunga Arr**	**22.32**	**166**	P	P	07 10 56.5	+0.3
	22nm,0.8s,mb4.6,baz=347,slow=12,SNR=47						
ASAR	**Alice Springs**	**25.84**	**169**	P	P	07 11 29.9	-0.2
	4.4nm,0.9s,mb4.0,baz=348,slow=12,SNR=30						
ASAR				PcP	PcP	07 15 00.9	+1.3
	0.7nm,0.9s,baz=347,slow=2.8,SNR=4.3						
CTA	**Charters Tower**	**27.69**	**143**	LR	LR	07 22 57.1	
	comp=Z,52nm,18.8s,MS3.1,baz=120,slow=37						
PSI	**Prapat**	**29.92**	**272**	P	P	07 12 06.6	-0.2
	3.2nm,0.7s,mb4.2,baz=183,slow=5.1,SNR=4.6						
PSI	**Prapat**	**29.92**	**272**	P	P	07 12 06.6	-0.2
CMAR	**Chiang Mai Arr**	**33.65**	**301**	P	P	07 12 40.4	+0.9
	2.5nm,0.8s,mb4.2,baz=113,slow=6.8,SNR=15						
KSRS	**Korea Array**	**35.43**	**359**	P	P	07 12 55.0	+0.4
	0.8nm,0.5s,mb3.9,baz=176,slow=9.8,SNR=4.4						
KSRS				LR	LR	07 26 36.2	
	comp=Z,20nm,20.3s,MS2.9,baz=239,slow=35						
MJAR	**Matsushiro Arr**	**35.58**	**13**	P	P	07 12 55.6	-0.3
	4.7nm,0.7s,mb4.5,baz=183,slow=9.7,SNR=13						
MJAR				LR	LR	07 25 55.7	
	comp=Z,54nm,19.9s,MS3.3,baz=240,slow=34						
STKA	**Stephens Creek**	**35.66**	**161**	P	P	07 12 56.3	-0.4
	3.7nm,0.6s,mb4.5,baz=344,slow=7.4,SNR=8.5						
TAPN	**Taplejung**	**46.83**	**307**	*e*P	P	07 14 21.8	-6.9
RAMN	**Ramite**	**47.56**	**306**	*e*P	P	07 14 34.3	-0.1
	16nm,0.6s,mb5.3						
JIRN	**Jiri**	**48.18**	**306**	*e*P	P	07 14 39.1	-0.1
	17nm,0.6s,mb5.3						
GUN	**Gumba**	**48.54**	**306**	*e*P	P	07 14 42.4	+0.5
	25nm,0.5s,mb5.5						
PKIN	**Phulchoki**	**48.79**	**306**	*e*P	P	07 14 46.5	+2.6
	8.3nm,0.6s,mb5.0						
GKN	**Gorkha**	**49.58**	**306**	*e*P	P	07 14 53.3	+3.4
SONM	**Songino Array**	**49.75**	**340**	P	P	07 14 50.8	0.0
	1.1nm,0.8s,mb3.9,baz=158,slow=8.7,SNR=5.8						
PETK	**Petropavlovsk-**	**56.39**	**20**	P	P	07 15 39.4	-0.4
	2.5nm,0.8s,mb4.3,baz=180,slow=7.4,SNR=4.6						
PETK				LR	LR	07 38 20.0	
	comp=Z,5.3nm,20.6s,MS2.6,baz=31,slow=34						
MK31	**Makanchi Array**	**60.30**	**325**	*e*P	P	07 16 06.8	-0.4
MK31	**Makanchi Array**	**60.30**	**325**	Sn	P	07 16 06.5	-0.7
	1.4nm,0.4s,mb4.3,baz=115,slow=8.4,SNR=18						
MKAR	**Makanchi Array**	**60.30**	**325**	P	P	07 16 06.7	-0.5
	3.7nm,0.4s,mb4.7,baz=116,slow=8.2,SNR=26						

*IDC **16** 07:12:37.0±2.9, 54°.53N×86°.92E, h0km, mb1 3.5/2, mb1mx3.3/24, mbtmp3.5/2, ML3.4/2, Error ellipse: s-maj=28.0km s-min=17.8km az=38.0*
*NNC **16** 07:12:44.2±7.2, 53°.90N×86°.35E, h0km, mb4.0, mpv3.5, Error ellipse: s-maj=60.0km s-min=32.5km az=59.0*

ISC 16 07:12:49.6±2.7, 54°.0N±0°.2×85°.8E±0°.2, h13km±11km, n9, σ0s81/13, 7C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**0.60**	**264**	Pg	Pg	07 13 01.3	-0.1
	5.1nm,0.3s,baz=66,slow=17,SNR=57						
ZALV				Lg		07 13 21.6	
	6.0nm,0.3s,baz=66,slow=29,SNR=25						
KURK	**Kurchatov**	**5.52**	**236**	⇑Pn	Pn	07 14 12.5	+1.2
	5.7nm,0.7s						
KURK				⇑Sn	Sn	07 15 24.1	+9.5
	6.6nm,0.7s						
KURK				⇓Lg		07 15 54.8	
	22nm,0.8s						
MK31	**Makanchi Array**	**7.57**	**199**	⇑Pn	Pn	07 14 39.3	-0.3
	1.4nm,0.6s,baz=29,slow=13,SNR=4.8						
MK31				Lg		07 16 49.0	
	11nm,0.9s,baz=27,slow=30,SNR=5.4						
MKAR	**Makanchi Array**	**7.57**	**199**	Pn	Pn	07 14 39.2	-0.3
	0.5nm,0.3s,baz=24,slow=13,SNR=12						
MKAR				Lg		07 17 00.9	
	baz=24,slow=30,SNR=3.9						
VOSK	**Vostochnaya**	**8.98**	**268**	⇓Pn	Pn	07 14 58.9	+0.1
	3.3nm,0.6s						
VOSK				⇑Sn	Sn	07 16 39.3	-0.5
	7.1nm,0.9s						
BVAR	**Borovoye Array**	**9.26**	**270**	Pn	Pn	07 15 00.4	-2.3
	0.4nm,0.3s,baz=79,slow=14,SNR=7.5						
BVAR				Sn	Sn	07 16 46.3	-0.2
	0.2nm,0.3s,baz=70,slow=22,SNR=8.8						
BRVK	**Borovoye**	**9.31**	**270**	⇑Pn	Pn	07 15 03.7	+0.2
	3.6nm,0.9s						
BRVK				⇓Sn	Sn	07 16 47.9	0.0
	3.4nm,0.6s						
ZRNK	**Zerenda**	**10.09**	**271**	⇑Pn	Pn	07 15 15.4	+1.3
	1.5nm,0.5s						
ZRNK				⇑Sn	Sn	07 17 07.5	+0.5
	3.6nm,0.7s						
SONM	**Songino Array**	**14.34**	**107**	Lg		07 20 03.2	
	baz=308,slow=31,SNR=5.4						

*ISCJB **16** 07:24:22.3±0.7, 59°.4S±0°.1×18°.2W±0°.3, h10km, mb4.1/9, MS4.1/13, Error ellipse: s-maj=22.3km s-min=12.0km az=139.6*
*IDC **16** 07:24:22.1±0.6, 59°.37S×18°.05W, h0km, mb4.1/9, mb1 4.2/9, mb1mx4.1/17, mbtmp4.1/9, MS4.1/13, Ms1 4.1/13, ms1mx4.0/23, Error ellipse: s-maj=26.1km s-min=19.0km az=50.0*
*NEIC **16** 07:24:23.5±0.4, 59°.35S×18°.00W, h10km, Error ellipse: s-maj=14.3km s-min=11.1km az=224.0*
*GCMT **16** 07:24:25.8±0.3, 59°.51S×17°.78W, h12km, MW5.0, Moment Tensor Solution. s30,c38; s74,c102; Moment tensor: Scale 10^{16}Nm; M_{rr}-3.51±.10; $M_{\theta\theta}$0.16±.10; $M_{\phi\phi}$3.35±.09; $M_{r\theta}$0.86±.39; $M_{\theta\phi}$0.50±.10; $M_{r\phi}$0.05±.30; Best double couple: $M_0$3.60000×10^{16} NP1:ϕ_s356.00000°, δ45.00000°, λ-108.00000°. NP2:ϕ_s201.00000°, δ48.00000°, λ-73.00000°. Principal axes: T 3.4300, Plg2.0000°, Azm279.0000°; N 0.2700, Plg13.0000°, Azm9.0000°; P -3.7000, Plg77.0000°, Azm182.0000°; Data Used: II IU G IC CN.*

ISC 16 07:24:24.1±0.7, 59°.4S±0°.1×18°.1W±0°.2, h10km, n33, σ0s95/17, mb4.1/9, MS4.1/13, 2C, East of South Sandwich Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**12.01**	**164**	*e*	Pn	07 27 13.8	-1.3
VNA1				*e*		07 29 21.4	
MAIT	**Maitri**	**16.72**	**145**	*e*P	Pn	07 28 20.4	+2.3
MAIT				*e*S	Sn	07 31 09.1	-14
PMSA	**Palmer Station**	**21.75**	**236**	P	P	07 29 15.9	+0.6
	3.1nm,0.7s,mb3.9,baz=80,slow=12,SNR=2.6						
PMSA				LR	LR	07 35 47.7	
	comp=Z,346nm,20.8s,MS3.7,baz=97,slow=32						

*IDC **16** 07:26:01.8±2.0, 32°.11S×72°.22W, h0km, mb3.8/1, mb1 3.6/5, mb1mx3.5/16, mbtmp3.5/5, ML3.6/3, Error ellipse: s-maj=61.6km s-min=21.8km az=179.0*
*ISCJB **16** 07:26:03.8±1.0, 32°.14S±0°.03×72°.16W±0°.07, h23km±7km, Error ellipse: s-maj=9.8km s-min=4.9km az=174.6*
*GUC **16** 07:26:04.8±0.8, 32°.16S×72°.07W, h30km±2km, MD4.0, ML3.8*
*NEIC **16** 07:26:04.8, 32°.16S×72°.07W, h30km, ML3.8(GUC), After GUC.*

ISC 16 07:26:03.8±1.2, 32°.17S±0°.03×72°.14W±0°.07, h14km±6km, n39, σ0s93/62, 12C-5D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.61**	**63**	⇓iP	**Pg**	**07 26 15.5**	**-0.3**
CHNG				*i* S	**Sg**	**07 26 24.1**	**+0.2**
IHA	**Instituto Hidr**	**0.96**	**154**	⇑iP	**Pb**	**07 26 21.4**	**-0.7**
IHA	**Instituto Hidr**	**0.96**	**154**	⇑iP	**Pb**	**07 26 21.4**	**-0.7**
ROCH	**El Roble**	**1.25**	**130**	*e*P	**Pn**	**07 26 26.5**	**-0.3**
ROCH				*i* S	**Sb**	**07 26 42.8**	**-0.2**
ROCH	**El Roble**	**1.25**	**130**	⇑*e*P	**Pn**	**07 26 26.5**	**-0.3**
ROCH				*i* S	**Sb**	**07 26 42.8**	**-0.2**
CMCH	**Combarbala**	**1.39**	**45**	⇓iP	**Pn**	**07 26 27.7**	**-1.0**
CMCH				*i* S	**Sn**	**07 26 45.9**	**-0.9**
CMCH	**Combarbala**	**1.39**	**45**	⇓iP	**Pn**	**07 26 27.7**	**-1.0**
CMCH				*i* S	**Sn**	**07 26 45.9**	**-0.9**
CMCH				AML	AML	07 26 50.4	
	comp=E,6μm,0.7s						
JACH	**Jahuel**	**1.41**	**112**	⇑iP	**Pn**	**07 26 28.8**	**-0.2**
JACH				*i* S	**Sn**	**07 26 46.6**	**-0.7**
JACH	**Jahuel**	**1.41**	**112**	⇑iP	**Pn**	**07 26 28.8**	**-0.2**
JACH				*i* S	**Sn**	**07 26 46.6**	**-0.7**
PEL	**Peldehue**	**1.57**	**129**	⇓iP	**Pn**	**07 26 31.1**	**-0.1**
PEL				*i* S	**Sn**	**07 26 50.7**	**-0.6**
PEL				AML	AML	07 26 57.9	
	comp=E,4μm,0.5s						
SAN	**Santiago**	**1.79**	**136**	*e*P	**Pn**	**07 26 35.1**	**+0.8**
SAN				*e*S	**Sn**	**07 26 57.1**	**+0.3**
SAN	**Santiago**	**1.79**	**136**	*e*P	**Pn**	**07 26 35.1**	**+0.8**
SAN				*e*S	**Sn**	**07 26 57.1**	**+0.3**
TACH	**Talagante**	**1.79**	**146**	*e*P	**Pn**	**07 26 34.3**	**-0.1**
TACH				*i* S	**Sn**	**07 26 57.4**	**+0.4**
TACH	**Talagante**	**1.79**	**146**	*e*P	**Pn**	**07 26 34.3**	**-0.1**
TACH				*i* S	**Sn**	**07 26 57.4**	**+0.4**
CLCH	**Cerro Calan**	**1.82**	**133**	⇑iP	**Pn**	**07 26 34.8**	**0.0**
CLCH				*i* S	**Sn**	**07 26 58.4**	**+0.7**
CLCH				AML	AML	07 27 10.9	
	comp=E,1μm,0.5s						
ANTU	**Antumapu**	**1.89**	**138**	*e*P	**Pn**	**07 26 35.6**	**0.0**
ANTU				*i* S	**Sn**	**07 26 59.5**	**+0.2**
ANTU	**Antumapu**	**1.89**	**138**	*e*P	**Pn**	**07 26 35.6**	**0.0**
ANTU				*i* S	**Sn**	**07 26 59.5**	**+0.2**
ANTU				AML	AML	07 27 08.6	
	comp=N,1μm,0.6s						
FCH	**Farellones**	**1.94**	**127**	⇑iP	**Pn**	**07 26 34.3**	**-2.1**
FCH				*i* S	**Sn**	**07 26 58.6**	**-2.0**
FCH				AML	AML	07 27 06.4	
	comp=N,741nm,0.8s						
PCH	**Pirque**	**1.99**	**137**	⇑iP	**Pn**	**07 26 37.6**	**+0.5**
PCH	**Pirque**	**1.99**	**137**	⇑iP	**Pn**	**07 26 37.6**	**+0.5**
CHCH	**Chadas Angostu**	**2.16**	**145**	*e*P	**Pn**	**07 26 39.9**	**+0.5**
CHCH				*i* S	**Sn**	**07 27 06.4**	**+0.5**
CHCH	**Chadas Angostu**	**2.16**	**145**	*e*P	**Pn**	**07 26 39.9**	**+0.5**
CHCH				*i* S	**Sn**	**07 27 06.4**	**+0.5**
TLL	**Tololo Astrono**	**2.30**	**30**	*e*P	**Pn**	**07 26 42.2**	**+1.0**
TLL	**Tololo Astrono**	**2.30**	**30**	*e*P	**Pn**	**07 26 42.2**	**+1.0**
TLL				AML	AML	07 27 22.4	
	comp=E,629nm,0.7s						
CACH	**El Canelo**	**2.34**	**147**	*e*P	**Pn**	**07 26 42.9**	**+1.1**
CACH	**El Canelo**	**2.34**	**147**	*e*P	**Pn**	**07 26 42.9**	**+1.1**
LMEL	**Las Melosas**	**2.34**	**136**	⇑iP	**Pn**	**07 26 42.6**	**+0.8**
LMEL				*i* S	**Sn**	**07 27 10.8**	**+0.4**
LMEL	**Las Melosas**	**2.34**	**136**	⇑iP	**Pn**	**07 26 42.6**	**+0.8**
LMEL				*i* S	**Sn**	**07 27 10.8**	**+0.4**
LMEL				AML	AML	07 27 21.1	
	comp=N,699nm,0.3s						
CFAA	**Coronel Fontan**	**3.37**	**81**	Pn	**Pn**	**07 26 58.5**	**+2.5**
	baz=241,slow=14						
CFAA				Pg	**Pg**	**07 27 03.9**	**-4.5**
	baz=257,slow=12						
CFAA				Sn	**Sn**	**07 27 39.6**	**+3.9**
	comp=N,0.9nm,0.3s,baz=66,slow=8.5,SNR=4.6						
CFAA				Lg		07 27 50.0	
	comp=N,2.3nm,0.3s,baz=189,slow=18,SNR=7.4						
CFAA	**Coronel Fontan**	**3.37**	**81**	Pn	**Pn**	**07 26 58.5**	**+2.5**
CFAA				Pg	**Pg**	**07 27 03.9**	**-4.5**
CFAA				Sn	**Sn**	**07 27 39.6**	**+3.9**
CFAA				Lg		07 27 50.0	
LCO	**Las Campanas**	**3.38**	**22**	P	**Pn**	**07 26 55.6**	**-0.6**
LCO	**Las Campanas**	**3.38**	**22**	⇓*e*P	**Pn**	**07 26 55.6**	**-0.6**
TRQA	**Tornquist**	**10.18**	**128**	*e*Pn	**Pn**	**07 28 27.7**	**-1.9**
	comp=N,24nm,1.4s						
CPUP	**Villa Florida**	**14.17**	**70**	Pn	**Pn**	**07 29 26.1**	**+2.0**
	comp=N,0.1nm,0.3s,baz=252,slow=20,SNR=3.4						
CPUP				Sn	**Sn**	**07 32 02.1**	**+0.9**
	comp=N,0.1nm,0.3s,baz=264,slow=20,SNR=3.1						
LPAZ	**La Paz**	**16.22**	**14**	Pn	**Pn**	**07 29 51.8**	**+0.4**
	comp=N,0.1nm,0.3s,baz=204,slow=10,SNR=3.7						
SIV	**San Ignacio**	**18.99**	**35**	Pn	**Pn**	**07 30 24.6**	**-1.1**
	comp=N,0.1nm,0.3s,baz=194,slow=12,SNR=6.3						
TORD	**Torodi Ar. Bea**	**83.67**	**70**	P	**P**	**07 38 32.0**	**-0.4**
	comp=N,0.5nm,0.7s,baz=235,slow=4.3,SNR=3.4						
BVAR	**Borovoye Array**	**145.98**	**41**	PKPbc	PKPbc	07 45 42.6	+0.1
	comp=N,0.4nm,0.5s,baz=341,slow=3.1,SNR=3.4						
MKAR	**Makanchi Array**	**155.59**	**46**	PKPab	PKPab	07 46 22.9	+0.1
	comp=N,0.4nm,0.8s,baz=267,slow=2.9,SNR=3.0						

MAN 16 07:30:57, 7°.83N×123°.32E, h12km, mb4.2, ML3.1, MS2.8, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAGZ	**Pagadian**	**0.07**	**70**	*e*P	Pg	07 31 01.5	+2.0
PAGZ				*e*S	Sg	07 31 03.5	+2.3
IPIL	**Ipil**	**0.74**	**267**	*e*P	Pg	07 31 11.6	+0.2
IPIL				*e*S	Sg	07 31 21.2	+0.1
CGP	**Cagayan de Oro**	**1.50**	**65**	⇑iP	Pn	07 31 24.0	+0.3
CGP				*i* S	Sn	07 31 43.4	+0.2
SNPH	**Sibulan**	**1.51**	**357**	⇑*e*P	Pn	07 31 24.4	+0.5
SNPH				*i* S	Sn	07 31 44.5	+1.0
ZMPH	**Zamboanga City**	**1.52**	**235**	⇓iP	Pn	07 31 23.9	0.0
ZMPH				*i* S	Sn	07 31 44.9	+1.3
TBP	**Tagbilaran**	**1.93**	**16**	*e*P	Pn	07 31 31.8	+2.1
TBP				*e*S	Sn	07 31 56.3	+2.4

*NEIC **16** 07:45:37.4±0.8, 4°.69N×94°.63E, h35km, mb4.4/2, Error ellipse: s-maj=24.2km s-min=10.9km az=223.0*
*IDC **16** 07:45:42.5±3.5, 4°.98N×95°.01E, h72km±31km, mb3.9/12, mb1 4.0/13, mb1mx3.8/25, mbtmp3.9/13, MS3.3/2, Ms1 3.3/2, ms1mx2.6/36, Error ellipse: s-maj=40.7km s-min=14.5km az=52.0*
*ISCJB **16** 07:45:43.0±2.2, 5°.2N±0°.1×95°.2E±0°.1, h90km±21km, mb4.1/16, Error ellipse: s-maj=23.0km s-min=13.4km az=143.2*

ISC 16 07:45:44.6±2.1, 5°.2N±0°.1×95°.2E±0°.1, h88km±19km, n29, σ0s79/27, mb4.1/16, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**4.38**	**122**	P	**Pn**	**07 46 48.7**	**-0.2**
	4.0nm,0.3s,baz=326,slow=12,SNR=18						
PSI				S	**Sn**	**07 47 41.0**	**+2.1**
	5.4nm,0.3s,baz=45,slow=15,SNR=4.2						
PSI				LR	LR	07 48 27.9	
	comp=Z,98nm,19.5s,baz=232,slow=37						
KULM	**Kulim**	**5.42**	**88**	*e*Pn	**Pn**	**07 47 02.2**	**-0.9**
	18nm,0.6s						
KULM				*e*Sn	**Sn**	**07 48 03.0**	**-1.2**
CMAR	**Chiang Mai Arr**	**13.72**	**15**	P	**Pn**	**07 49 00.7**	**+5.3**
	0.7nm,0.3s,baz=210,slow=11,SNR=11						
XAN	**Xi'an**	**31.44**	**22**	P	**P**	**07 51 58.1**	**+0.4**
XAN				pP	pP	07 52 06.5	-11
XAN				sP	sP	07 52 12.3	-16
XAN				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
XAN				pmax	pmax		
	comp=Z,12nm,5.6s						
AAK	**Ala-Archa**	**41.60**	**337**	P	**P**	**07 53 25.0**	**+1.1**
	comp=Z,1.9nm,0.4s,mb4.2,baz=189,slow=4.0,SNR=5.3						
MK31	**Makanchi Array**	**42.96**	**347**	*e*P	**P**	**07 53 34.9**	**+0.1**
MKAR	**Makanchi Array**	**42.96**	**347**	P	**P**	**07 53 35.2**	**+0.4**
	comp=Z,2.8nm,0.5s,mb4.3,baz=160,slow=7.6,SNR=38						
MKAR				PcP	PcP	07 55 24.8	+0.9
	comp=Z,0.4nm,0.5s,baz=185,slow=4.8,SNR=2.5						
MKAR	**Makanchi Array**	**42.96**	**347**	P	**P**	**07 53 35.2**	**+0.4**
MKAR				PcP	PcP	07 55 24.8	+0.9
SONM	**Songino Array**	**43.59**	**11**	P	**P**	**07 53 40.3**	**+0.3**
	comp=Z,1.1nm,0.7s,mb3.7,baz=190,slow=9.6,SNR=6.0						
SONM				PcP	PcP	07 55 27.2	+1.1
	comp=Z,0.3nm,0.4s,baz=186,slow=1.4,SNR=2.7						
KSRS	**Korea Array**	**43.87**	**38**	P	**P**	**07 53 43.8**	**+1.4**
	comp=Z,1.0nm,0.7s,mb3.7,baz=223,slow=8.5,SNR=4.4						
WRA	**Warramunga Arr**	**45.85**	**124**	P	**P**	**07 53 58.0**	**-0.4**
	comp=Z,4.3nm,0.6s,mb4.4,baz=302,slow=9.5,SNR=60						
WRAB	**Tennant Creek**	**45.85**	**124**	*e*P	**P**	**07 53 58.0**	**-0.3**
ASAR	**Alice Springs**	**47.38**	**129**	P	**P**	**07 54 09.9**	**-0.3**
	comp=Z,0.8nm,0.4s,mb3.8,baz=300,slow=7.7,SNR=17						
ZALV	**Zalesovo Beam**	**49.38**	**352**	P	**P**	**07 54 25.4**	**+0.3**
	comp=Z,3.5nm,0.6s,mb4.5,baz=181,slow=8.6,SNR=13						
BVAR	**Borovoye Array**	**51.89**	**341**	P	**P**	**07 54 44.5**	**+0.5**
	comp=Z,5.1nm,0.6s,mb4.7,baz=142,slow=9.4,SNR=26						
ABKAR	**Akbulak array**	**53.11**	**332**	*e*P	**P**	**07 54 53.1**	**0.0**
	comp=Z,1.4nm,0.5s,mb4.2						
AKTK	**Aktyubinsk**	**54.83**	**332**	P	**P**	**07 55 05.6**	**0.0**
AKTO	**Aktyubinsk**	**54.83**	**332**	P	**P**	**07 55 05.6**	**0.0**
	comp=Z,0.7nm,0.3s,mb4.1,baz=43,slow=2.4,SNR=3.5						
ASF	**Jabal al Asfar**	**60.59**	**304**	LR	LR	08 23 03.3	
	comp=Z,7.1nm,18.3s,baz=77,slow=37						
BRTR	**Keskin Array B**	**65.00**	**312**	P	**P**	**07 56 14.8**	**-0.8**
	comp=Z,1.1nm,0.5s,mb4.0,baz=130,slow=6.5,SNR=7.4						
JOF	**Joensuu**	**73.74**	**335**	*e*P	**P**	**07 57 07.7**	**-1.2**
JOF	**Joensuu**	**73.74**	**335**	*e*p	**P**	**07 57 07.7**	**-1.2**
	comp=Z,2.6nm,0.6s,mb4.1						
FINES	**FINESS Array B**	**75.59**	**332**	P	**P**	**07 57 19.6**	**0.0**
	comp=Z,2.1nm,0.4s,mb4.2,baz=104,slow=6.1,SNR=12						
KAF	**Kangasniemi**	**75.68**	**333**	*e*P	**P**	**07 57 18.7**	**-1.4**
	comp=Z,3.1nm,0.5s,mb4.3						
KAF	**Kangasniemi**	**75.68**	**333**	*e*p	**P**	**07 57 18.7**	**-1.4**
	comp=Z,3.1nm,0.5s,mb4.3						
ARCES	**ARCESS Array B**	**78.17**	**340**	P	**P**	**07 57 34.3**	**+0.4**
	comp=Z,1.4nm,0.5s,mb4.0,baz=103,slow=6.5,SNR=18						
PDAR	**Pinedale Array**	**127.28**	**23**	PKP	PKPdf	08 04 40.0	+0.7
	comp=Z,0.2nm,0.5s,baz=79,slow=4.5,SNR=4.6						
TXAR	**Lajitas Array**	**141.21**	**27**	PKP	PKPdf	08 05 05.3	-0.4
	comp=Z,0.2nm,0.6s,baz=116,slow=0.8,SNR=5.5						
TXAR	**Lajitas Array**	**141.21**	**27**	PKP	PKPdf	08 05 05.3	-0.4

*NEIC **16** 07:51:04.5, 32°.11S×72°.09W, h41km, MD3.6(GUC), After GUC.*

GUC 16 07:51:04.5±0.6, 32°.11S×72°.09W, h41km±2km, MD3.6, ML2.7, 3C-2D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.55**	**66**	⇓iP	Pn	07 51 15.6	-0.3
CHNG				*i* S	Sn	07 51 24.7	+0.7
CHNG				AML	AML	07 51 26.7	
	comp=N,160nm,0.5s						
ROCH	**El Roble**	**1.25**	**134**	*e*P	Pn	07 51 26.8	+1.3
ROCH				*i* S	Sn	07 51 43.9	+2.7
ROCH	**El Roble**	**1.25**	**134**	*e*P	Pn	07 51 26.8	+1.3
ROCH				*i* S	Sn	07 51 43.9	+2.7
CMCH	**Combarbala**	**1.32**	**45**	*e*P	Pn	07 51 27.6	+1.2
CMCH				*i* S	Sn	07 51 44.9	+2.2
CMCH	**Combarbala**	**1.32**	**45**	*e*P	Pn	07 51 27.6	+1.2
CMCH				*i* S	Sn	07 51 44.9	+2.2
CMCH				AML	AML	07 51 50.7	
	comp=E,709nm,0.5s						
JACH	**Jahuel**	**1.39**	**115**	⇑iP	Pn	07 51 29.0	+1.6
JACH				*i* S	Sn	07 51 47.1	+2.7
JACH	**Jahuel**	**1.39**	**115**	⇑iP	Pn	07 51 29.0	+1.6
JACH				*i* S	Sn	07 51 47.1	+2.7
PEL	**Peldehue**	**1.57**	**131**	⇓iP	Pn	07 51 31.1	+1.2
PEL				*i* S	Sn	07 51 51.1	+2.2
PEL				AML	AML	07 51 58.3	
	comp=E,360nm,0.4s						
TACH	**Talagante**	**1.82**	**148**	*e*P	Pn	07 51 34.2	+1.0
TACH				*i* S	Sn	07 51 56.8	+1.7
TACH	**Talagante**	**1.82**	**148**	*e*P	Pn	07 51 34.2	+1.0
TACH				*i* S	Sn	07 51 56.8	+1.7
CLCH	**Cerro Calan**	**1.83**	**135**	*e*P	Pn	07 51 34.8	+1.3
CLCH				*i* S	Sn	07 51 57.4	+1.9
CLCH				AML	AML	07 52 05.1	
	comp=E,93nm,1.0s						
ANTU	**Antumapu**	**1.90**	**140**	*e*P	Pn	07 51 35.7	+1.3
ANTU				*e*S	Sn	07 51 58.9	+1.7
ANTU	**Antumapu**	**1.90**	**140**	*e*P	Pn	07 51 35.7	+1.3
ANTU				*e*S	Sn	07 51 58.9	+1.7
ANTU				AML	AML	07 52 08.7	
	comp=N,79nm,0.5s						
FCH	**Farellones**	**1.94**	**129**	⇑iP	Pn	07 51 35.5	+0.5
FCH				*i* S	Sn	07 52 00.4	+2.2
FCH				AML	AML	07 52 07.6	
	comp=N,70nm,0.2s						
PCH	**Pirque**	**2.01**	**139**	*e*P	Pn	07 51 37.1	+1.3
PCH	**Pirque**	**2.01**	**139**	*e*P	Pn	07 51 37.1	+1.3
LMEL	**Las Melosas**	**2.35**	**138**	*e*P	Pn	07 51 42.1	+1.5
LMEL				*e*S	Sn	07 52 10.1	+2.0
LMEL	**Las Melosas**	**2.35**	**138**	*e*P	Pn	07 51 42.1	+1.5
LMEL				*e*S	Sn	07 52 10.1	+2.0
LMEL				AML	AML	07 52 21.2	
	comp=N,58nm,0.8s						

*IDC **16** 07:59:57.6±3.0, 52°.50N×34°.85E, h0km, mb1 3.8/3, mb1mx3.4/22, mbtmp3.8/3, ML3.2/4, Error ellipse: s-maj=34.2km s-min=10.9km az=113.0*

ISC 16 07:59:56.6±2.6, 52°.76N±0°.10×34°.7E±0°.3, h10km, n6, σ0s97/9, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKASG	**Malin Array Be**	**3.97**	**241**	Pn	**Pn**	**08 00 57.4**	**-0.1**
	1.4nm,0.3s,baz=56,slow=12,SNR=3.9						
AKASG				Pg	**Pg**	**08 01 06.5**	**-6.1**
	3.6nm,0.3s,baz=63,slow=16,SNR=12						
AKASG				Sn	**Sn**	**08 01 44.5**	**+0.5**
	2.6nm,0.3s,baz=62,slow=20,SNR=5.5						
AKASG				Lg		08 02 02.1	
	3.8nm,0.3s,baz=67,slow=29,SNR=5.8						
MICGM	**Minsk**	**4.41**	**296**	*e*P	**Sg**	**08 02 24.0**	**+5.9**
NACGM	**Naroch**	**5.15**	**298**	*e*	**Sg**	**08 02 37.0**	**-4.9**
FINES	**FINESS Array B**	**9.88**	**335**	Pn	**Pn**	**08 02 19.1**	**+0.7**
	0.2nm,0.3s,baz=145,slow=15,SNR=3.2						
FINES				Sn	**Sn**	**08 04 09.7**	**+0.4**
	0.3nm,0.3s,baz=149,slow=23,SNR=4.3						
FINES				Lg		08 05 15.1	
	0.3nm,0.3s,baz=148,slow=29,SNR=2.5						
HFS	**Hagfors**	**13.71**	**311**	Pn	**Pn**	**08 03 08.3**	**-2.5**
	0.2nm,0.3s,baz=114,slow=18,SNR=3.1						
ARCES	**ARCESS Array B**	**17.37**	**349**	Pn	**Pn**	**08 03 59.0**	**+0.2**
	0.5nm,0.3s,baz=158,slow=10,SNR=11						

*IDC **16** 08:11:02.6±0.4, 16°.56S×173°.13W, h0km, mb5.1/25, mb1 5.2/25, mb1mx5.2/26, mbtmp5.1/25, MS5.2/23, Ms1 5.2/23, ms1mx5.1/28, Error ellipse: s-maj=15.5km s-min=12.4km az=146.0*
*SZGRF **16** 08:11:04.6, 17°.99S×172°.71W, h29km, mb5.4, Tonga Islands region*
*NEIC **16** 08:11:04.0±0.1, 16°.60S×172°.96W, h10km, mb5.5/133, MS5.4/196, MW5.7, MW5.6, Error ellipse: s-maj=4.8km s-min=2.9km az=136.0, Moment Tensor Solution. s103 Moment tensor: Scale 10^{17}Nm; M_{rr}2.33; $M_{\theta\theta}$-2.92; $M_{\phi\phi}$0.59; $M_{r\theta}$-0.42; $M_{\theta\phi}$1.41; $M_{\phi r}$0.51; Best double couple: $M_0$3.10000×10^{17} NP1:ϕ_s302.00000°, δ52.00000°, λ107.00000°. NP2:ϕ_s95.00000°, δ41.00000°, λ69.00000°. Principal axes: T 2.4700, Plg75.0000°, Azm268.0000°; N 1.0000, Plg13.0000°, Azm111.0000°; P -3.4700, Plg5.0000°, Azm19.0000°;*
*ISCJB **16** 08:11:05.8±0.1, 16°.62S±0°.03×172°.98W±0°.03, h33km, mb5.4/180, MS5.3/246 Error ellipse: s-maj=5.1km s-min=2.8km az=141.5*
*MOS **16** 08:11:05.6±0.9, 16°.63S×173°.04W, h33km, mb5.7/49, MS5.3/71, Error ellipse: s-maj=9.7km s-min=7.1km az=48.8*
*BJI **16** 08:11:09.2, 16°.01S×173°.17W, h33km, mB5.7/33, mb5.5/51, Ms5.3/47, Ms7 5.1/43*
*GCMT **16** 08:11:10.6±0.1, 16°.67S×172°.72W, h22km, MW5.7, Moment Tensor Solution. s102, c186; s60, c67; Moment tensor: Scale 10^{17}Nm; M_{rr}3.49±.04; $M_{\theta\theta}$-3.61±.03; $M_{\phi\phi}$0.11±.03; $M_{r\theta}$-1.18±.06; $M_{\theta\phi}$0.24±.03; $M_{\phi r}$0.97±.06; Best double couple: $M_0$3.90000×10^{17} NP1:ϕ_s81.00000°, δ37.00000°, λ69.00000°. NP2:ϕ_s287.00000°, δ56.00000°, λ105.00000°. Principal axes: T 3.9000, Plg74.0000°, Azm239.0000°; N -0.0700, Plg13.0000°, Azm98.0000°; P -3.8400, Plg10.0000°, Azm6.0000°; Data Used: II IU IC G CN. Surface waves: sta=111, comp=234, per= 50.*
*DJA **16** 08:11:40, 17°.36S×174°.75W, h232km, mb5.3/12*

ISC 16 08:11:07.7±0.1, 16°.64S±0°.03×172°.96W±0°.03, h35km, (h31km±1.4km: pP-P), n1251, σ0s68/785, mb5.4/180, MS5.3/246, 268C-230D, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.95**	**23**	Pn	**Pn**	**08 11 45.1**	**-7.0**
	344nm,0.3s,baz=170,slow=0.9,SNR=251						
AFI				Sn	**Sn**	**08 12 14.9**	**-11**
	1μm,0.3s,baz=47,slow=22,SNR=9.5						
AFI				T		08 14 57.2	
	253nm,0.3s,baz=124,slow=21,SNR=2.6						
AFI	**Afiamalu**	**2.95**	**23**	*e*Pn	**Pn**	**08 11 45.4**	**-6.7**
MSVF	**Nonsavu**	**8.66**	**262**	Pn	**Pn**	**08 13 18.0**	**+7.4**
	2μm,1.3s,SNR=32						
MSVF	**Nonsavu**	**8.66**	**262**	*e*Pn	**Pn**	**08 13 17.4**	**+6.9**
	795nm,1.3s						
MSVF	**Nonsavu**	**8.66**	**262**	Pn	**Pn**	**08 13 18.6**	**+8.0**
	2μm,1.3s,SNR=32						
RAR	**Rarotonga**	**13.28**	**112**	Pn	**Pn**	**08 14 08.3**	**-5.6**
	15nm,0.3s,baz=264,slow=7.3,SNR=26						
RAR				Sn	**Sn**	**08 16 25.6**	**-15**
	5.8nm,0.3s,baz=0.0,slow=20,SNR=3.0						
RAR				LR	LR	08 18 06.7	
	comp=Z,7μm,21.7s,baz=262,slow=32						
RAR				T		08 28 10.3	
	16nm,0.3s,baz=201,slow=8.6,SNR=3.6						
RAR	**Rarotonga**	**13.28**	**112**	Pn	**Pn**	**08 14 08.3**	**-5.6**
RAR				Sn	**Sn**	**08 16 25.6**	**-15**
RAR				LR	LR	08 18 06.7	
RAO	**Raoul Island**	**13.35**	**199**	Sn	**Sn**	**08 16 32.2**	**-10**
	43nm,0.3s,baz=300,slow=20,SNR=5.6						
RAO				T		08 27 46.2	
	66nm,0.3s,baz=288,slow=21,SNR=3.7						
DZM	**Mont Dzumac**	**20.16**	**251**	*e*P	**P**	**08 15 38.5**	**-0.7**
	196nm,1.2s						
DZM				*e*LR	LR	08 20 23.5	
	20μm,22.2s						
DZM	**Mont Dzumac**	**20.16**	**251**	*e*P	**P**	**08 15 37.5**	**-1.7**
DZM	**Mont Dzumac**	**20.16**	**251**	*e*P	**P**	**08 15 38.3**	**-0.9**
	327nm,1.4s						
NOUC	**Port Laguerre**	**20.29**	**251**	*e*P	**P**	**08 15 38.2**	**-2.4**
OUZ	**Omahuta**	**22.06**	**210**	*e*P	**P**	**08 15 59.4**	**-0.1**
	185nm,1.0s,mb5.5						
WCZ	**Waipu Caves**	**22.29**	**208**	P	**P**	**08 16 02.2**	**+0.2**
WCZ	**Waipu Caves**	**22.29**	**208**	P*	**P**	**08 16 02.2**	**+0.2**
PAE	**Paea**	**22.36**	**96**	*e*P	**P**	**08 16 01.0**	**-1.9**
	20nm,1.1s,mb4.5						
PPT	**Papeete**	**22.37**	**96**	*e*P	**P**	**08 16 01.3**	**-1.7**
	122nm,1.4s,mb5.1						
PPT				*e*LQ		08 20 10.5	
	2μm,27.8s						
PPT				*e*LR	LR	08 21 10.9	
	9μm,25.0s,baz=259						
PPT	**Papeete**	**22.37**	**96**	P	**P**	**08 16 03.8**	**+0.8**
	45nm,1.0s,mb4.9,baz=260,slow=9.6,SNR=4.6						
PPT				LR	LR	08 22 03.6	
	comp=Z,4μm,21.7s,MS4.8,baz=259,slow=29						
PPT				T		08 39 50.6	
	33nm,0.5s,baz=215,slow=21,SNR=4.1						
PPT	**Papeete**	**22.37**	**96**	P	**P**	**08 16 03.8**	**+0.8**
PPT				LR	LR	08 22 03.6	
KUZ	**Kuaotunu**	**22.40**	**204**	P	**P**	**08 16 03.2**	**+0.1**
KUZ	**Kuaotunu**	**22.40**	**204**	P*	**P**	**08 16 03.2**	**+0.1**
TIAR	**Tiarei**	**22.59**	**96**	*e*P	**P**	**08 16 03.2**	**-2.1**
	79nm,1.1s,mb5.0						
PUZ	**Puketiti**	**22.70**	**198**	P	**P**	**08 16 06.1**	**-0.2**
PUZ	**Puketiti**	**22.70**	**198**	P*	**P**	**08 16 06.1**	**-0.2**
TBI	**Tubuai**	**23.05**	**111**	*e*P	**P**	**08 16 08.1**	**-2.1**
	474nm,1.5s,mb5.7						
TBI				*e*LQ		08 20 40.4	
	10μm,28.8s						
TBI				*e*LR	LR	08 21 37.7	
	9μm,25.2s,baz=284						
TBI	**Tubuai**	**23.05**	**111**	*e*P	**P**	**08 16 08.1**	**-2.1**
	474nm,1.5s,mb5.7						
TBI				*e*LQ		08 20 40.4	
CNGZ	**Carnagh Statio**	**23.10**	**198**	P*	**P**	**08 16 12.2**	**+1.8**
MWZ	**Matawai**	**23.17**	**199**	P	**P**	**08 16 11.1**	**-0.1**
MWZ	**Matawai**	**23.17**	**199**	P*	**P**	**08 16 12.1**	**

CTA PcP PcP 08 20 41.2 +0.8
comp=Z,14nm,0.9s,baz=332,slow=2.9,SNR=3.6
CTAO Charters Tower 38.79 259 *e*P **P 08 18 27.5 -1.8**
CTAO *e* 08 20 42.1
CTAO pmax pmax
comp=Z,42nm,0.8s,mb5.2
CTAO MLR MLR
comp=Z,6µm,19.0s,MS5.4
CTAO Charters Tower 38.79 259 *e*P **P 08 18 27.5 -1.9**
comp=Z,42nm,0.8s,mb5.2
CTAO *e*PcP PcP 08 20 42.1 +1.7
CTAO LR LR
comp=Z,6µm,19.0s,MS5.4
CTAO Charters Tower 38.79 259 P **P 08 18 27.4 -1.9**
comp=Z,54nm,1.0s,mb5.2
PMG Port Moresby 39.45 275 *ce*P **P 08 18 34.6 -0.4**
PMG pmax pmax
comp=Z,196nm,1.8s
PMG Port Moresby 39.45 275 *e*P **P 08 18 35.6 +0.6**
comp=Z,82nm,0.9s,mb5.5
PMG *e*PcP PcP 08 20 45.0 +2.4
PMG LR LR
comp=Z,3µm,22.0s,MS5.1
PMG Port Moresby 39.45 275 P **P 08 18 35.4 +0.4**
comp=Z,1µmcomp=Z,99nm,1.0s,mb5.5
POHA Pohakuloa 40.02 26 PFAKE 08 18 50.0 +11
POHA LR LR
comp=Z,2µm,20.0s,MS5.0
KIP Kipapa 40.57 22 *e*P **P 08 18 44.5 +0.5**
comp=Z,92nm,0.9s,mb5.4
KIP LR LR
comp=Z,3µm,19.0s,MS5.1
WAKE Wake Island 40.94 330 *e*P **P 08 18 47.2 +0.1**
WAKE LR LR
comp=Z,2µm,20.0s,MS4.9
TOO Toolangi 42.02 232 *e*P **P 08 18 54.6 -1.2**
COEN Coen 42.33 267 *e*P **P 08 18 58.6 -0.1**
comp=Z,335nm,0.9s,mb6.0
COEN *e*PcP PcP 08 20 53.4 +1.5
COEN Coen 42.33 267 P **P 08 18 58.4 -0.2**
comp=Z,3µmcomp=Z,233nm,1.0s,mb5.8
MOO Moorlands 42.59 224 *e*P **P 08 19 01.4 +1.0**
STKA Stephens Creek 43.79 241 *e*P **P 08 19 08.8 -1.5**
comp=Z,48nm,1.0s,mb5.2
STKA Stephens Creek 43.79 241 P **P 08 19 08.5 -1.8**
comp=Z,50nm,0.8s,mb5.3,baz=90,slow=8.6,SNR=57
STKA LR LR 08 36 18.0
comp=Z,5µm,18.2s,MS5.5,baz=75,slow=35
STKA Stephens Creek 43.79 241 *e*P **P 08 19 08.8 -1.5**
comp=Z,15nm,1.0s,mb4.7
MIDW Midway 44.80 354 PFAKE 08 19 30.0 +12
MIDW LR LR
comp=Z,3µm,20.0s,MS5.2
SMPI Sarmi 49.70 282 P **P 08 19 57.5 +0.7**
comp=Z,190nm,0.8s,mb6.2
WRAB Tennant Creek 49.97 258 P **P 08 19 57.0 -1.7**
comp=Z,217nm,0.7s,mb6.3,SNR=14
WRAB Tennant Creek 49.97 258 *e*P **P 08 19 56.5 -2.2**
WRAB *e* 08 21 20.1
WRAB pmax pmax
comp=Z,27nm,0.7s,mb5.4
WRAB MLR MLR
comp=Z,6µm,19.0s,MS5.6
WRAB Tennant Creek 49.97 258 *e*P **P 08 19 56.5 -2.2**
comp=Z,27nm,0.7s,mb5.4
WRAB *e*PcP PcP 08 21 20.1 +1.5
WRAB LR LR
comp=Z,6µm,19.0s,MS5.6
WRAB Tennant Creek 49.97 258 P **P 08 19 56.9 -1.8**
comp=Z,44nm,2.4s,mb5.1
WRA Warramunga Ar 49.98 258 P **P 08 19 56.6 -2.2**
comp=Z,16nm,0.6s,mb5.2,baz=96,slow=7.5,SNR=262
WRA PcP PcP 08 21 19.9 +1.3
comp=Z,19nm,0.9s,baz=86,slow=4.1,SNR=7.1
ASAR Alice Springs 50.14 253 P **P 08 19 57.9 -2.1**
comp=Z,375nm,0.6s,mb6.6,baz=88,slow=8.4,SNR=1318
ASAR PcP PcP 08 21 20.1 +0.9
comp=Z,21nm,0.8s,baz=96,slow=4.4,SNR=5.0
ASAR S **S 08 27 04.5 -5.0**
comp=Z,1.0nm,0.6s,baz=92,slow=15,SNR=6.4
GUMO Guam 51.36 303 P **P 08 20 07.4 -1.8**
comp=Z,30nm,0.7s,mb5.3,baz=181,slow=16,SNR=5.1
GUMO Guam 51.36 303 P **P 08 20 07.4 -1.8**
GUMO LR LR
comp=Z,1µm,19.0s,MS5.0
GUMO Guam 51.36 303 P **P 08 20 14.1 +4.9**
comp=Z,120nm,1.6s,mb5.6
BAKI Biak 52.41 282 P **P 08 20 17.3 +0.1**
comp=Z,3µmcomp=Z,299nm,1.0s,mb6.2
KAKA Kakadu 52.83 266 *e*P **P 08 20 19.3 -0.9**
comp=Z,46nm,0.8s,mb5.5
KAKA Kakadu 52.83 266 *e*P **P 08 20 19.0 -1.2**
comp=Z,117nm,0.7s,mb5.9
TLE Tual 54.23 275 P **P 08 20 30.8 +0.3**
comp=Z,194nm,2.0s,mb5.7
FORT Forrest 55.24 244 *e*P **P 08 20 35.9 -1.7**
comp=Z,22nm,0.5s,mb5.4
FORT *es*P sP 08 20 49.4 -2.9
FORT Forrest 55.24 244 *e*P **P 08 20 36.3 -1.3**
comp=Z,77nm,0.7s,mb5.8
KNA Kununurra 55.79 262 P **P 08 20 40.4 -1.3**
comp=Z,2µmcomp=Z,148nm,0.7s,mb6.1
FITZ Fitzroy Crossi 58.37 259 *e*P **P 08 20 59.1 -0.9**
comp=Z,22nm,0.7s,mb5.3
FITZ Fitzroy Crossi 58.37 259 P **P 08 20 58.7 -1.3**
comp=Z,13nm,0.7s,mb5.1,baz=135,slow=3.9,SNR=46
FITZ Fitzroy Crossi 58.37 259 *e*P **P 08 20 59.0 -1.0**
comp=Z,12nm,0.7s,mb5.0
FITZ Fitzroy Crossi 58.37 259 P **P 08 20 59.6 -0.4**
comp=Z,55nm,2.4s,mb5.2
DRV Dumont d'Urvil 58.57 200 P **P 08 21 06.0 +5.4**
DRV S **S 08 29 07.0 +5.1**
AAI Ambon 59.12 276 P **P 08 21 05.8 +0.5**
SBA Scott Base 62.05 185 *e*P **P 08 21 26.6 +2.3**
SBA pmax pmax
comp=Z,54nm,0.8s,mb5.7
SBA MLR MLR
comp=Z,2µm,19.0s,MS5.2
SBA Scott Base 62.05 185 *e*P **P 08 21 26.6 +2.3**
comp=Z,54nm,0.8s,mb5.7
SBA LR LR
comp=Z,2µm,19.0s,MS5.2
MBWA Marble Bar 63.42 254 *e*P **P 08 21 32.8 -1.6**
comp=Z,41nm,0.6s,mb5.7
MBWA LR LR
comp=Z,5µm,19.0s,MS5.7
KLBR Kellerberrin 64.04 243 *e*P **P 08 21 37.3 -0.9**
comp=Z,60nm,0.7s,mb5.7
NWAO Narrogin (SRO) 64.38 241 PFAKE 08 21 50.0 +10
NWAO LR LR
comp=Z,2µm,19.0s,MS5.3
DAV Davao City (W) 65.18 286 PFAKE 08 22 00.0 +14
DAV LR LR
comp=Z,2µm,19.0s,MS5.2
DAV Davao City (W) 65.18 286⇑ *e*P **P 08 21 42.2 -3.8**
KAPI Kappang 66.83 272 P **P 08 21 55.6 -1.0**
comp=Z,23nm,0.8s,mb5.2,baz=127,slow=5.7,SNR=7.5
CASY Casey 69.46 205 *e*P **P 08 22 12.7 +0.6**
CASY Casey 69.46 205 *e*P **P 08 22 12.6 +0.5**
comp=Z,54nm,1.0s,mb5.4
CASY LR LR
comp=Z,795nm,19.0s,MS5.0
MJAR Matsushiro Arr 70.15 320 P **P 08 22 15.9 -1.0**
comp=Z,6.7nm,0.8s,mb4.6,baz=154,slow=5.5,SNR=12
MJAR LR LR 08 47 38.6
comp=Z,1µm,21.4s,MS5.1,baz=130,slow=31
MAJO Matsushiro 70.16 320 *e*P **P 08 22 16.9 +0.1**
MAJO MLR MLR
comp=Z,1µm,22.0s,MS5.2
MAT Matsushiro 70.16 320 P **P 08 22 17.0 +0.2**
MAT S S 08 31 25.0 -0.8
ERM Erimo 71.03 327 *de*P **P 08 22 22.8 +0.8**
ERM pmax pmax
comp=Z,30nm,1.7s,mb5.0
ERM Erimo 71.03 327 *e*P **P 08 22 23.0 +1.0**
comp=Z,13nm,0.8s,mb4.9
ERM LR LR
comp=Z,981nm,21.0s,MS5.0
MYLDM Lahad Datu 71.11 282 P **P 08 22 25.3 +2.1**
YUK Yuzh-Kuril'sk 71.14 330⇑ *i*P **P 08 22 23.0 +0.4**
YUK *i* 08 25 01.7
YUK *i* PPP 08 26 45.4
YUK *i* S S 08 31 40.0 +3.1
YUK pmax pmax
comp=N,50nm,3.0s
YUK pmax pmax
comp=E,40nm,3.0s
YUK pmax pmax
comp=Z,70nm,3.0s
YUK MLR MLR
comp=N,640nm,23.0s,MS4.9
YUK MLR MLR
comp=E,340nm,23.0s,MS4.9
YUK MLR MLR
comp=Z,640nm,23.0s,MS4.8
YUK MLR MLR
comp=Z,1µm,19.0s
TSM Tawau 71.41 280 P **P 08 22 26.5 +1.5**
SAC San Andreas 71.88 40 *e*P pP 08 22 40.0 +1.9
SAC San Andreas 71.88 40 *ep*P pP 08 22 40.0 +1.9
MCCM Marconi Confer 71.94 39 PFAKE 08 22 40.0 +12
MCCM LR LR
comp=Z,3µm,20.0s,MS5.6
SAO San Andreas Ge 71.97 41 *e*P **P 08 22 28.5 +0.6**
SAO MLR MLR
comp=Z,3µm,20.0s,MS5.5
CIS Catalina Islan 72.00 46⇓ P **P 08 22 28.1 0.0**
baz=72
SKR Severo-Kuril's 72.33 340 *e*P **P 08 22 32.0 +2.4**
SKR *e* 08 22 38.0
SKR *e* 08 22 50.0
SKR *e* 08 25 15.0
SKR *e*PS 08 32 42.0
SKR pmax pmax
comp=Z,1µm,4.0s
SKR MLR MLR
comp=E,900nm,18.0s
SKR MLR MLR
comp=Z,1µm,18.0s,MS5.2
HOPS Hopland 72.37 39 *e*P **P 08 22 30.3 +0.2**
comp=Z,119nm,1.5s,mb5.6
HOPS *ep*P pP 08 22 38.4 -2.6
HOPS LR LR
comp=Z,4µm,19.0s,MS5.7
OSI Osito Adit 72.48 45⇓ P **P 08 22 31.1 +0.2**
baz=73
KCPM Cahto Peak 72.51 38 *e*P **P 08 22 32.7 +1.7**
PASC Pasadena Art C 72.59 45 *e*P **P 08 22 31.0 -0.5**
109C Camp Elliot, M 72.61 47⇓ P **P 08 22 31.4 -0.3**
baz=73
ARVC Arvin 72.70 44⇑ P **P 08 22 31.9 -0.3**
baz=73
MWC Mount Wilson 72.70 45 *e*P **P 08 22 32.5 +0.2**
BAR Barrett 72.80 47 *e*P **P 08 22 33.6 +0.7**
MURC Murrieta 72.94 46⇑ P **P 08 22 33.5 -0.2**
baz=73
BFSC Mount Baldy Ra 72.98 45⇑ P **P 08 22 33.6 -0.3**
baz=73,SNR=8.3
MONP Monument Peak 73.09 47⇓ P **P 08 22 34.5 -0.1**
baz=73,SNR=8.3
RCTC Rector, Farmer 73.12 43⇓ P **P 08 22 34.3 -0.4**
baz=73
EDW2 Edwards Air Fo 73.12 45⇑ P **P 08 22 34.4 -0.3**
baz=73,SNR=16
DVTC Desert V Tower 73.19 48⇑ P **P 08 22 35.1 -0.1**
baz=73
KHMM Horse Mountain 73.19 37 *e*P **P 08 22 36.3 +1.3**
ISA Isabella 73.25 44⇑ P **P 08 22 35.0 -0.4**
baz=73,SNR=9.5
ISA Isabella 73.25 44 *e*P **P 08 22 36.0 +0.6**
QSPA South Pole Qui 73.41 180 *e*P **P 08 22 36.7 +0.9**
comp=Z,162nm,1.1s,mb5.9
QSPA LR LR
comp=Z,1µm,19.0s,MS5.2
CMB Columbia Colle 73.42 41 *e*P **P 08 22 36.4 0.0**
CMB MLR MLR
comp=Z,2µm,20.0s,MS5.5
PFO Pinyon Flat Ob 73.46 47⇓ P **P 08 22 36.6 -0.1**
baz=74
PFO Pinyon Flat Ob 73.46 47 *e*P **P 08 22 35.6 -1.2**
PFO pmax pmax
comp=Z,38nm,1.4s,mb5.1
PFO MLR MLR
comp=Z,2µm,20.0s,MS5.3
PFO Pinyon Flat Ob 73.46 47 *e*P **P 08 22 35.6 -1.2**
comp=Z,38nm,1.4s,mb5.1
PFO LR LR
comp=Z,2µm,20.0s,MS5.3
BBRC Big Bear Solar 73.50 46⇓ P **P 08 22 37.0 0.0**
baz=74
KKM Kota Kinabalu 73.54 282 *e*P **P 08 22 37.9 +0.3**
comp=Z,106nm,0.8s,mb5.8
KKM LR LR
comp=Z,646nm,22.0s,MS4.9
OHCM Honcut 73.54 39 *e*P **P 08 22 37.4 +0.3**
PET Petropavlovsk 73.58 343⇑ *i*P **P 08 22 34.8 -2.2**
PET *e*S S 08 32 01.3 -3.2
PET pmax pmax
comp=Z,343nm,13.7s
PET MLR MLR
comp=Z,496nm,17.4s,MS4.8
PET Petropavlovsk 73.58 343⇑ *e*P **P 08 22 35.6 -1.4**
PET LR LR
comp=Z,685nm,21.0s,MS4.9
LRMC Laurel Mountai 73.67 44⇓ P **P 08 22 37.7 -0.2**
baz=74,SNR=17
CHGN Chignik 73.69 8 *e*P **P 08 22 37.0 -0.5**
WDC Whiskeytown Da 73.69 38 *e*P **P 08 22 38.3 +0.3**
WDC MLR MLR
comp=Z,3µm,19.0s,MS5.6
RRX Edison Barstow 73.79 45⇓ P **P 08 22 38.5 -0.2**
baz=74
PETK Petropavlovsk- 73.94 342 P **P 08 22 39.3 +0.3**
comp=Z,35nm,0.7s,mb5.4,baz=124,slow=8.1,SNR=66
PETK LR LR 08 48 23.6
comp=Z,462nm,21.4s,MS4.7,baz=155,slow=30
CWC Cottonwood Cre 73.96 43⇓ P **P 08 22 39.6 0.0**
baz=74
BELC Belle Mtn. Jos 74.00 46⇓ P **P 08 22 39.6 -0.2**
baz=74,SNR=14
MPMC Manual Prospec 74.13 44⇑ P **P 08 22 40.6 0.0**
baz=74,SNR=31
MLAC Mammoth Lakes 74.16 42⇓ P **P 08 22 40.5 -0.2**
baz=74
GSC Goldstone 74.16 45⇓ P **P 08 22 40.4 -0.5**
baz=74,SNR=9.1
GSC Goldstone 74.16 45 *e*P **P 08 22 40.7 -0.1**
KEBM Edson Butte 74.17 35 *ep*P pP 08 22 50.5 -1.1
MTUM Tungsten Hills 74.17 42 *e*P **P 08 22 41.4 +0.5**
DAC Darwin (Calif) 74.19 44 PFAKE 08 22 50.0 +9.1
DAC LR LR
comp=Z,2µm,20.0s,MS5.5
BC3 Big Chuckawall 74.19 47⇑ P **P 08 22 40.8 -0.3**
baz=74,SNR=6.7
112A Yuma 74.21 48⇑ P **P 08 22 41.1 -0.1**
baz=74
TIN Tinemaha 74.22 43⇓ P **P 08 22 41.4 +0.3**
baz=74
HEC Hector,Ludlow 74.22 46⇓ P **P 08 22 40.5 -0.7**
baz=74,SNR=7.3
WAKR Walker 74.30 41 *e*P **P 08 22 41.9 +0.3**
GLA Glamis 74.31 48⇑ P **P 08 22 41.8 0.0**
baz=74
GLA Glamis 74.31 48 *e*P **P 08 22 42.3 +0.6**
GLA pmax pmax
comp=Z,55nm,1.1s,mb5.4
GLA Glamis 74.31 48 *e*P **P 08 22 42.3 +0.6**
comp=Z,55nm,1.1s,mb5.4
YBH Yreka Blue Hor 74.33 37 LR LR 08 47 57.5
comp=Z,3µm,20.8s,MS5.5,baz=317,slow=30
YBH Yreka Blue Hor 74.33 37 *e*P **P 08 22 42.2 +0.5**
YBH MLR MLR
comp=Z,2µm,20.0s
WCN Washoe City 74.58 40⇑ P **P 08 22 43.3 +0.1**
baz=75,SNR=18
GMRC Granite Mounta 74.66 46⇑ P **P 08 22 43.2 -0.5**
baz=75,SNR=12
IRM Iron Mountain 74.67 47⇑ P **P 08 22 43.6 -0.2**
baz=75,SNR=12
GRAC Grapevine Rang 74.75 43⇓ P **P 08 22 44.2 +0.1**
baz=75,SNR=24
HUMO Hull Mountain 74.76 36 *e*P **P 08 22 44.4 +0.2**
comp=Z,74nm,1.5s,mb5.4
HUMO LR LR
comp=Z,3µm,20.0s,MS5.5
YSS Yuzh-Sakhalins 74.77 330⇑ *e*P **P 08 22 45.0 +0.9**
YSS *e* pP 08 22 53.0 -2.0
YSS *e*S S 08 32 17.0 -1.1
YSS *e*PS 08 32 45.0
YSS *e*PPS 08 33 10.0
YSS pmax pmax
comp=Z,90nm,1.0s,mb5.7
YSS pmax pmax
comp=Z,700nm,4.0s
YSS smax
comp=E,900nm,8.0s
YSS MLR MLR
comp=N,600nm,17.0s
YSS MLR MLR
comp=Z,700nm,17.0s,MS5.0
YSS Yuzh-Sakhalins 74.77 330 *e*P **P 08 22 44.7 +0.7**
comp=Z,64nm,0.9s,mb5.5
YSS LR LR
comp=Z,336nm,20.0s,MS4.6
FURC Furnace Creek, 74.78 44⇑ P **P 08 22 44.2 -0.3**
baz=75,SNR=12
TUQ Turquoise Moun 74.83 45⇓ P **P 08 22 44.6 -0.1**
baz=75,SNR=7.9
SHOC Shoshone 74.85 45⇑ P **P 08 22 44.5 -0.3**
baz=75,SNR=10
113A Mohawk Valley, 74.91 49⇓ P **P 08 22 44.9 -0.3**
baz=75,SNR=10
NVAR Mina Array Bea 74.97 42 P **P 08 22 46.7 +1.2**
comp=Z,19nm,0.6s,mb5.2,baz=233,slow=8.9,SNR=34
NVAR PKPPKP 08 50 15.9
comp=Z,0.5nm,0.9s,baz=98,slow=3.0,SNR=3.7
PAHR Pah Rah Range 75.05 40 *e*P **P 08 22 46.5 +0.6**
U10A Ash Meadows, A 75.11 44⇑ P **P 08 22 46.3 0.0**
baz=75,SNR=11
214A Organ Pipe Nat 75.19 50⇑ P **P 08 22 47.0 +0.1**
baz=75,SNR=15
LDFC Landfair 75.20 46 *e*P **P 08 22 47.6 +0.8**
Z13A Yuma Proving G 75.22 48⇓ P **P 08 22 46.7 -0.3**
baz=75,SNR=22
NEE2 Needles Airpor 75.37 46⇑ P **P 08 22 47.6 -0.2**
baz=76
V11A Goodsprings 75.39 45⇑ P **P 08 22 48.1 +0.1**
baz=76
OHAK Old Harbor 75.39 11 *e*P **P 08 22 46.2 -1.2**
Y13A Salome 75.42 48⇓ P **P 08 22 48.2 0.0**
baz=76,SNR=14
PDMCI Parker Dam,Lak 75.45 47⇓ P **P 08 22 48.2 -0.1**
baz=76
TPH Tonopah 75.46 42 PFAKE 08 23 00.0 +12
TPH LR LR
comp=Z,2µm,19.0s,MS5.5
W12A Cal Nev Ari 75.48 46⇓ P **P 08 22 48.7 +0.2**
baz=76,SNR=9.8
114A Black Gap (USA 75.54 49⇑ P **P 08 22 48.7 -0.1**
baz=76
YULB Yu-li 75.55 300 *e*P **P 08 22 49.0 -0.1**
comp=Z,40nm,1.0s,mb5.3
NACB Ninganchiao 75.64 301 *e*P **P 08 22 49.7 +0.1**
comp=Z,113nm,1.0s,mb5.8
V12A Nelson 75.72 45⇑ P **P 08 22 49.9 0.0**
baz=76,SNR=7.3
U11A Corn Creek 75.74 45⇓ P **P 08 22 50.0 +0.1**
baz=76
S10A Tonopah Range, 75.78 43⇑ P **P 08 22 50.1 0.0**
baz=76,SNR=27
Z14A Wintersburg 75.81 48⇑ P **P 08 22 50.3 -0.1**
baz=76
X13A Yucca 75.83 47⇑ P **P 08 22 50.3 -0.1**
baz=76,SNR=11
MOD Modoc 75.84 38 *e*P **P 08 22 50.6 +0.3**
comp=Z,75nm,1.4s,mb5.4
MOD LR LR
comp=Z,3µm,20.0s,MS5.6
COR Corvallis 75.86 34 PFAKE 08 23 00.0 +10
COR LR LR
comp=Z,2µm,20.0s,MS5.5
SSLB Suanglung 76.00 300 *e*P **P 08 22 51.9 +0.2**
comp=Z,44nm,0.9s,mb5.4
K05A Summer Lake 76.01 37⇑ P **P 08 22 51.9 +0.6**
baz=76,SNR=16
HEBO Mount Hebo 76.03 33 *e*P **P 08 22 52.2 +0.8**
YHNB Yeheng 76.04 301 *e*P **P 08 22 52.9 +1.0**
comp=Z,92nm,1.1s,mb5.6
YHNB LR LR
comp=Z,1µm,19.0s,MS5.3
KDAK Kodiak Island 76.05 11 LR LR 08 49 52.2
comp=Z,3µm,20.7s,MS5.5,baz=141,slow=31
KDAK Kodiak Island 76.05 11 *i* P **P 08 22 51.7 +0.5**
KDAK Kodiak Island 76.05 11 *e*P **P 08 22 50.7 -0.4**
KDAK LR LR
comp=Z,2µm,20.0s,MS5.5
IRO Indian Ridge 76.05 35 P **P 08 22 51.9 +0.4**
W13A Hualapai Mount 76.05 46⇓ P **P 08 22 51.8 +0.1**
baz=76,SNR=11
Y14A Wickenburg 76.06 48⇓ P **P 08 22 51.7 -0.2**
baz=76,SNR=24
TPUB Ta-pu 76.07 300 *e*P **P 08 22 51.3 -0.7**
comp=Z,127nm,0.9s,mb5.8
TATO Taipei 76.08 302 PFAKE 08 23 00.0 +7.9
TATO LR LR
comp=Z,1µm,20.0s,MS5.2
S11A Rachel 76.18 43⇑ P **P 08 22 52.4 0.0**
baz=76,SNR=12
216A Three Points, 76.20 50⇓ P **P 08 22 52.6 0.0**
baz=76,SNR=11
T11A Corn Creek, Al 76.30 44⇓ P **P 08 22 53.3 +0.2**
baz=76
116A Eloy 76.30 50⇓ P **P 08 22 53.2 0.0**
baz=76
U12A Valley of Fire 76.32 45⇑ P **P 08 22 53.3 +0.1**
baz=76,SNR=20
Z15A Gila River Ind 76.34 49⇑ P **P 08 22 53.2 -0.2**
baz=76
T12A Moapa 76.36 45⇓ P **P 08 22 53.4 0.0**
baz=76
V13A Grand Canyon W 76.39 46⇓ P **P 08 22 53.5 -0.2**
baz=76,SNR=10
Q10A Clear Creek Ra 76.42 42⇓ P **P 08 22 53.8 +0.1**
baz=77,SNR=12
X14A Yava 76.42 47⇓ P **P 08 22 54.0 +0.1**
baz=77,SNR=9.5
KMOR Kings Mountain 76.45 33 P **P 08 22 54.5 +0.8**
MIR Mirnyy 76.47 204⇓ *i*P **P 08 22 55.4 +1.8**
MIR *i* pP 08 23 05.0 +0.4
MIR *e*S S 08 32 40.0 +3.5
MIR *e*S S 08 32 42.0 +5.5
MIR pmax pmax
comp=Z,108nm,1.2s,mb5.7
MIR pmax pmax
comp=Z,505nm,3.0s
MIR smax
comp=E,1µm,7.0s
MIR smax
comp=N,780nm,12.0s
MIR MLR MLR
comp=N,700nm,18.0s,MS5.2
MIR MLR MLR
comp=E,800nm,18.0s,MS5.2
MIR MLR MLR
comp=Z,1µm,18.0s,MS5.2
H04A Detroit Lake 76.53 35⇓ P **P 08 22 54.3 +0.1**
baz=77
Y15A Casa Rosa Ranc 76.55 48⇑ P **P 08 22 54.8 +0.2**
baz=77,SNR=22
217A Green Valley 76.57 51⇑ P **P 08 22 54.6 -0.1**
baz=77,SNR=17
F03A Seaside 76.61 33⇑ P **P 08 22 55.0 +0.3**
baz=77
W14A Seligman 76.67 47⇑ P **P 08 22 55.6 +0.3**
baz=77,SNR=18
R11A Troy Canyon, C 76.67 43⇓ P **P 08 22 55.0 -0.1**
baz=77,SNR=14
U13A Pakoon Wash 76.70 45⇓ P **P 08 22 55.7 +0.3**
baz=77,SNR=50
G04A Mulino 76.71 34⇓ P **P 08 22 54.9 -0.3**
baz=77
S12A Delamar Landin 76.75 44⇑ P **P 08 22 56.2 +0.6**
baz=77,SNR=46
BMN Battle Mountai 76.82 40 *e*P **P 08 22 56.5 +0.6**
BMN pmax pmax
comp=Z,112nm,1.7s,mb5.5
BMN MLR MLR
comp=Z,2µm,20.0s,MS5.5
BMN Battle Mountai 76.82 40 *e*P **P 08 22 56.5 +0.5**
comp=Z,112nm,1.7s,mb5.5
BMN LR LR
comp=Z,2µm,20.0s,MS5.5
P10A Eureka 76.83 41⇓ P **P 08 22 56.0 0.0**
baz=77
TUC Tucson 76.85 50 *e*P **P 08 22 56.4 +0.1**
TUC pmax pmax
comp=Z,125nm,1.6s,mb5.6
TUC MLR MLR
comp=Z,2µm,19.0s,MS5.4
TUC Tucson 76.85 50 *e*P **P 08 22 56.4 +0.1**
comp=Z,125nm,1.6s,mb5.6

TUC LR LR
comp=Z,2µm,19.0s,MS5.4
V14A Boquillas Ranc 76.88 46 ⇑P P 08 22 56.7 +0.3
baz=77,SNR=23
X15A Humboldt 76.89 48 ⇑P P 08 22 56.7 +0.2
baz=77,SNR=17
Z16A Peralta Trail, 76.89 49 ⇓P P 08 22 56.4 -0.1
baz=77,SNR=11
Q11A Duckwater 76.91 42 ⇑P P 08 22 56.6 +0.1
baz=77,SNR=19
117A Oracle 77.01 50 ⇓P P 08 22 57.5 +0.2
baz=77,SNR=13
318A Bisbee 77.02 51 ⇑P P 08 22 57.4 +0.1
baz=77,SNR=13
Y16A Circle Bar Ran 77.13 49 ⇓P P 08 22 58.1 +0.3
baz=77,SNR=10
WVOR Wild Horse Val 77.14 38 *eP* **P 08 22 57.7 0.0**
WVOR pmax pmax
comp=Z,48nm,1.3s,mb5.3
WVOR MLR MLR
comp=Z,4µm,19.0s,MS5.7
WVOR Wild Horse Val 77.14 38 *eP* **P 08 22 57.7 -0.1**
comp=Z,48nm,1.3s,mb5.3
WVOR LR LR
comp=Z,4µm,19.0s,MS5.7
O10A Cortez Mining, 77.19 41 ⇓P P 08 22 58.1 +0.1
baz=77
F04A Amboy 77.21 34 ⇓P P 08 22 57.9 -0.1
baz=77
W15A Williams 77.23 47 ⇓P P 08 22 58.4 0.0
baz=77
HOOD Mount Hood Mea 77.23 34 *eP* **P 08 22 59.2 +1.1**
HOOD *eP*P pP 08 23 08.9 -0.2
218A Dragoon 77.24 51 ⇑P P 08 22 58.7 +0.2
baz=77,SNR=18
U14A Mt Trumbull 77.24 46 ⇑P P 08 22 59.0 +0.6
baz=77,SNR=29
P11A Circle Ranch, 77.24 42 ⇑P P 08 22 58.2 -0.1
baz=77
R12A Pony Springs, 77.30 43 ⇓P P 08 22 59.0 +0.2
baz=78,SNR=36
VFP Flag Point 77.33 34 P **P 08 22 59.2 +0.5**
KSRS Korea Array 77.33 316 P **P 08 22 58.2 -0.7**
comp=Z,8.1nm,0.9s,mb4.6,baz=128,slow=5.5,SNR=11
KSRS LR LR 08 51 01.4
comp=Z,736nm,21.7s,MS5.0,baz=110,slow=31
S13A Holt Ranch, En 77.39 44 ⇓P P 08 22 59.5 +0.2
baz=78,SNR=18
X16A Lo Mia Camp, P 77.42 48 ⇑P P 08 23 00.0 +0.5
baz=78,SNR=19
N10A Dunphy 77.43 40 ⇓P P 08 22 59.5 +0.1
baz=78
NLWA Neilton Lookou 77.43 32 ⇑P P 08 22 59.6 +0.4
baz=78
NLWA Neilton Lookou 77.43 32 *eP* **P 08 22 59.5 +0.3**
NLWA LR LR
comp=Z,2µm,19.0s,MS5.5
Y17A Roosevelt 77.49 49 ⇓P P 08 23 00.0 +0.1
baz=78,SNR=7.5
319A Douglas 77.52 52 ⇓P P 08 23 00.2 0.0
baz=78,SNR=13
Q12A Willow Creek R 77.55 43 ⇓P P 08 23 00.1 0.0
baz=78,SNR=30
Z17A San Carlos Hig 77.57 50 ⇑P P 08 23 00.7 +0.4
baz=78
118A Homack Ranch, 77.61 50 ⇓P P 08 23 01.1 +0.5
baz=78,SNR=7.7
V15A Kaibab Nationa 77.62 47 ⇑P P 08 23 01.3 +0.7
baz=78,SNR=20
O11A Cowboy Ranch, 77.63 41 ⇑P P 08 23 00.9 +0.4
baz=78
I07A Izee 77.64 36 ⇓P P 08 23 00.8 +0.3
baz=78,SNR=13
T14A Hurricane 77.64 45 ⇓P P 08 23 00.9 +0.2
baz=78,SNR=14
R13A O'Grain Ranch, 77.65 44 ⇑P P 08 23 01.3 +0.7
baz=78
W16A Flagstaff 77.70 47 ⇑P P 08 23 01.6 +0.6
baz=78
CCUT Cedar City 77.71 45 *eP* **P 08 23 01.7 +0.7**
KSM Kuching 77.72 275 *eP* **P 08 23 02.4 +0.8**
comp=Z,208nm,1.0s,mb6.0
G06A Carlson Farm, 77.73 35 ⇓P P 08 23 01.1 +0.1
baz=78
P12A McGill 77.74 42 ⇓P P 08 23 01.1 -0.1
baz=78,SNR=18
Z18A Geronimo 77.78 50 ⇓P P 08 23 01.7 +0.2
baz=78
ARUT Antelope Range 77.79 44 *eP* **P 08 23 01.7 +0.2**
ARUT pmax pmax
comp=Z,27nm,1.1s,mb5.1
ARUT Antelope Range 77.79 44 *eP* **P 08 23 01.7 +0.3**
comp=Z,27nm,1.1s,mb5.1
J08A Circle Bar Ran 77.79 37 ⇓P P 08 23 01.3 0.0
baz=78,SNR=22
OSD Olympics--Snow 77.80 31 P **P 08 23 02.4 +1.1**
219A White Tail Can 77.83 51 ⇓P P 08 23 02.1 +0.2
baz=78,SNR=14
X17A Forest Lakes 77.84 48 ⇑P P 08 23 02.6 +0.8
baz=78,SNR=11
U15A North Rim 77.85 46 ⇓P P 08 23 02.5 +0.6
baz=78,SNR=21
M10A I.L. Ranch, Tu 77.87 40 ⇓P P 08 23 02.2 +0.4
baz=78,SNR=17
S14A Cedar City 77.95 44 ⇑P P 08 23 02.8 +0.4
baz=78,SNR=12
N11A Elko Archery C 77.97 41 ⇑P P 08 23 02.3 0.0
baz=78
WUAZ Wupatki 78.03 47 ⇓P P 08 23 03.1 +0.3
baz=78
WUAZ Wupatki 78.03 47 *eP* **P 08 23 03.7 +0.9**
comp=Z,52nm,1.4s,mb5.3
WUAZ LR LR
comp=Z,1µm,20.0s,MS5.2
Q13A Wheeler Ranch, 78.03 43 ⇑P P 08 23 02.7 0.0
baz=78,SNR=34
LON Longmire 78.06 33 *eP* **P 08 23 03.0 +0.2**
GNW Green Mountain 78.07 32 *eP* **P 08 23 03.1 +0.3**
comp=Z,34nm,1.5s,mb5.1
T15A Red Dirt Ranch 78.10 45 ⇑P P 08 23 03.5 +0.3
baz=78,SNR=22
Y18A Canyon Day Jun 78.12 49 ⇓P P 08 23 03.7 +0.3
baz=78,SNR=9.4
119A Ashpeak Ranch, 78.17 50 ⇑P P 08 23 03.9 +0.3
baz=78
WPW White Pass 78.17 33 P **P 08 23 03.8 +0.4**
INCN Inchon 78.22 315 PFAKE 08 23 20.0 +16
INCN LR LR
comp=Z,629nm,20.0s,MS4.9
L10A Juniper Basin 78.23 39 ⇑P P 08 23 03.7 -0.1
baz=78,SNR=14
ELK Elko 78.24 41 LR LR 08 51 42.4
comp=Z,3µm,19.2s,MS5.6,baz=211,slow=31
ELK Elko 78.24 41 *eP* **P 08 23 03.1 -0.8**
ELK pmax pmax
comp=Z,14nm,0.9s
ELK MLR MLR
comp=Z,3µm,20.0s
ELK Elko 78.24 41 *eP* **P 08 23 03.1 -0.7**
comp=Z,14nm,0.9s,mb4.9
ELK LR LR
comp=Z,3µm,20.0s,MS5.6
D05A Enumclaw 78.26 33 ⇓P P 08 23 04.3 +0.5
baz=78
W17A Winslow 78.27 48 ⇓P P 08 23 04.4 +0.2
baz=78
M11A Holland Ranch, 78.28 40 ⇑P P 08 23 04.3 +0.2
baz=78,SNR=10.0
O12A Currie 78.28 42 ⇓P P 08 23 04.0 -0.1
baz=78,SNR=18
P13A Bates Ranch, G 78.31 43 ⇓P P 08 23 04.5 +0.2
baz=78,SNR=11
220A Playas Peak, P 78.34 52 ⇓P P 08 23 05.1 +0.4
baz=78,SNR=18
R14A James Farms, M 78.34 44 ⇓P P 08 23 04.6 +0.1
baz=78
K10A MacKenzie Ranc 78.40 39 ⇓P P 08 23 04.7 0.0
baz=79,SNR=19
N12A Clover Valley, 78.42 41 ⇑P P 08 23 04.9 0.0
baz=79,SNR=12
N12A Clover Valley, 78.42 41 *eP* **P 08 23 04.9 0.0**
comp=Z,63nm,1.3s,mb5.4
QZH Quanzhou 78.44 300 ⇑*iP* **P 08 23 05.4 0.0**
QZH S S 08 33 00.0 +0.8
QZH pmax pmax
comp=Z,110nm,0.7s,mb5.9
QZH pmax pmax
comp=Z,1µm,3.5s
QZH LR LR
comp=N,950nm,16.0s,MS5.4
QZH LR LR
comp=E,980nm,17.0s,MS5.4
QZH LR LR
comp=Z,1µm,19.7s,MS5.2
S15A Panguitch 78.45 45 ⇓P P 08 23 06.4 +1.3
baz=79,SNR=18
PGC Sidney 78.48 31 *eP* **P 08 23 04.7 -0.4**
V17A Tonalea, Kykot 78.49 47 ⇑P P 08 23 05.6 +0.2
baz=79
U16A Tuba City 78.51 47 ⇑P P 08 23 06.1 +0.6
baz=79,SNR=15
RMW Rattlesnake Mo 78.53 33 P **P 08 23 05.7 +0.4**
F07A Phinny Hill Vi 78.53 35 ⇓P P 08 23 05.3 -0.1
baz=79
Q14A Sevier Lake (B 78.54 43 ⇑P P 08 23 05.8 +0.2
baz=79,SNR=35
X18A Snowflake 78.55 49 ⇓P P 08 23 06.0 +0.2
baz=79
RSO Redoubt South 78.55 10 *eP* **P 08 23 04.9 -0.2**
120A U Bar Ranch, L 78.56 51 ⇑P P 08 23 06.3 +0.4
baz=79
T16A Glen Canyon Da 78.68 46 ⇓P P 08 23 06.9 +0.5
baz=79,SNR=7.4
G08A Pilot Rock 78.69 36 ⇑P P 08 23 06.3 0.0
baz=79
O13A Hicks Ranch, I 78.70 42 ⇑P P 08 23 06.6 +0.2
baz=79
SVW2 Sparrevohn 78.72 9 *eP* **P 08 23 05.8 -0.2**
comp=Z,20nm,0.8s,mb5.1
L11A Cat Creek Ranc 78.72 40 ⇑P P 08 23 06.8 +0.3
baz=79,SNR=24
Y19A Nutrioso 78.77 49 ⇑P P 08 23 07.6 +0.6
baz=79,SNR=20
R15A Junction 78.79 44 ⇑P P 08 23 07.2 +0.2
baz=79,SNR=12
BBB Bella Bella 78.81 26 LR LR 08 53 58.7
comp=Z,792nm,18.1s,MS5.1,baz=215,slow=33
M12A Wells 78.81 41 ⇑P P 08 23 07.1 +0.1
baz=79,SNR=17
J10A Berg Farm, Mel 78.84 38 ⇓P P 08 23 06.8 -0.4
baz=79
Z20A Nine Sixteen R 78.86 50 ⇑P P 08 23 07.6 +0.1
baz=79,SNR=13
K11A Parker Ranch, 78.90 39 ⇑P P 08 23 07.5 0.0
baz=79,SNR=13
JCW Jim Creek 78.94 32 *eP* **P 08 23 07.7 +0.1**
221A Mesquite Ranch 78.95 52 ⇓P P 08 23 08.4 +0.4
baz=79
N13A Wendover, West 78.95 41 ⇑P P 08 23 07.9 +0.1
baz=79
N13A Wendover, West 78.95 41 *eP* **P 08 23 08.4 +0.6**
comp=Z,44nm,0.8s,mb5.4
X19A St. Johns 78.97 49 ⇓P P 08 23 08.4 +0.3
baz=79,SNR=15
E07A Sunnyside 78.98 34 ⇓P P 08 23 08.0 +0.1
baz=79
MVU Marysvale 78.99 44 PFAKE 08 23 20.0 +12
MVU LR LR
comp=Z,2µm,20.0s,MS5.5
W18A Petrified Fore 78.99 48 ⇑P P 08 23 08.3 +0.2
baz=79
P14A Drum Mountains 79.00 43 ⇓P P 08 23 08.2 +0.2
baz=79,SNR=44
S16A Weppner Ranch, 79.00 45 ⇑P P 08 23 08.3 +0.2
baz=79,SNR=34
MSU Marysvale 79.02 44 *eP* **P 08 23 09.3 +1.1**
RSW Rattlesnake Hi 79.02 34 *eP* **P 08 23 08.8 +0.8**
SSE Sheshan 79.04 307 *eP* **P 08 23 08.5 0.0**
SSE pP pP 08 23 19.1 -0.4
SSE S S 08 33 03.5 -1.9
SSE sS sS 08 33 22.1 -1.4
SSE pmax pmax
comp=Z,32nm,0.7s,mb5.4
SSE pmax pmax
comp=Z,240nm,12.0s
SSE LR LR
comp=N,170nm,23.9s,MS4.6
SSE LR LR
comp=E,330nm,24.0s,MS4.6
SSE LR LR
comp=Z,430nm,22.7s,MS4.7
HAWA Hanford 79.05 34 *eP* **P 08 23 08.4 +0.1**
comp=Z,82nm,1.4s,mb5.5
HAWA LR LR
comp=Z,2µm,20.0s,MS5.5
U17A Shonto 79.07 47 ⇑P P 08 23 09.0 +0.4
baz=79
Q15A Fillmore 79.14 44 ⇑P P 08 23 08.9 +0.1
baz=79
V18A Ganado 79.14 48 ⇑P P 08 23 09.2 +0.3
baz=79
L12A House Creek Ra 79.16 40 ⇑P P 08 23 09.2 +0.2
baz=79,SNR=9.8
T17A Navajo Res., N 79.17 46 ⇑P P 08 23 09.8 +0.6
baz=79,SNR=9.9
121A Cookes Peak, D 79.19 51 ⇓P P 08 23 09.3 0.0
baz=79
I10A Payette 79.20 38 ⇓P P 08 23 09.3 +0.2
baz=79
W19A Sanders 79.23 48 ⇑P P 08 23 09.7 +0.2
baz=79
M13A Montello 79.25 41 ⇓P P 08 23 09.4 -0.1
baz=79,SNR=14
M13A Montello 79.25 41 *eP* **P 08 23 09.4 0.0**
comp=Z,55nm,1.4s,mb5.3
G09A Cove 79.35 36 ⇓P P 08 23 09.6 -0.3
baz=80,SNR=18
BMO Blue Mountains 79.36 37 *eP* **P 08 23 09.4 -0.5**
BMO LR LR
comp=Z,2µm,20.0s,MS5.4
R16A Teasdale 79.36 45 ⇓P P 08 23 10.8 +0.7
baz=80,SNR=41
B06A Marblemount 79.38 32 ⇑P P 08 23 09.4 -0.5
baz=80
A05A Maple Falls 79.39 31 ⇓P P 08 23 09.7 -0.3
baz=80
ETW Entiat 79.39 33 *eP* **P 08 23 10.4 +0.4**
MFID Camas Ranch 79.39 39 ⇑P P 08 23 09.7 -0.4
baz=80,SNR=15
Y20A Horse Springs, 79.39 50 ⇓P P 08 23 11.1 +0.7
baz=80,SNR=14
LNOR Lincton Mounta 79.42 35 *eP* **P 08 23 10.3 +0.1**
DUG Dugway 79.48 43 ⇑P P 08 23 10.6 -0.2
baz=80,SNR=13
DUG Dugway 79.48 43 *eP* **P 08 23 10.5 -0.2**
DUG pmax pmax
comp=Z,52nm,1.4s,mb5.3
DUG MLR MLR
comp=Z,2µm,19.0s,MS5.4
DUG Dugway 79.48 43 *eP* **P 08 23 10.5 -0.2**
comp=Z,52nm,1.4s,mb5.3
DUG LR LR
comp=Z,2µm,19.0s,MS5.4
S17A Black Ridge (B 79.50 46 ⇑P P 08 23 10.6 -0.3
baz=80,SNR=14
P15A Leamington 79.50 43 ⇓P P 08 23 11.0 +0.1
baz=80
K12A Draper Farm, C 79.50 40 ⇑P P 08 23 10.7 -0.1
baz=80,SNR=8.2
U18A Rough Rock, Ch 79.53 47 ⇓P P 08 23 11.3 +0.2
baz=80,SNR=7.8
N14A Grayback Hills 79.60 42 ⇑P P 08 23 11.0 -0.3
baz=80,SNR=5.4
I11A Placerville 79.60 38 ⇓P P 08 23 10.8 -0.4
baz=80,SNR=15
X20A Quemado 79.60 49 ⇑P P 08 23 11.9 +0.4
baz=80,SNR=10
HABR Khabarovsk 79.61 328 *eP* **P 08 23 11.7 +0.5**
HABR *e* 08 23 17.3
HABR *e**PP pP 08 23 19.9 -2.3
HABR *e**SP sP 08 23 24.8 -1.4
HABR 08 26 09.3
HABR *e*S S 08 33 10.3 -0.3
HABR *e* 08 33 29.2
HABR *e*SS SS 08 38 15.5 -4.3
HABR *e*SSS 08 41 43.4
HABR pmax pmax
comp=E,46nm,1.9s
HABR pmax pmax
comp=N,47nm,2.1s
HABR pmax pmax
comp=Z,359nm,2.4s,mb5.9
HABR MLR MLR
comp=Z,335nm,17.0s,MS4.8
Z21A St. Cloud Mine 79.63 51 ⇑P P 08 23 12.3 +0.6
baz=80
RC01 Rabbit Creek A 79.67 11 *eP* **P 08 23 10.5 -0.7**
comp=Z,137nm,1.4s,mb5.7
G10A Bishop Farm, J 79.73 36 ⇑P P 08 23 11.5 -0.5
baz=80,SNR=10.0
J12A Stokes Ranch, 79.73 39 ⇑P P 08 23 12.2 +0.2
baz=80
BGU Big Grassy Mou 79.74 42 *eP* **P 08 23 11.9 -0.2**
comp=Z,30nm,1.4s,mb5.0
O15A The Old Anders 79.75 43 ⇓P P 08 23 12.4 +0.2
baz=80
V19A Window Rock 79.77 48 ⇑P P 08 23 12.6 +0.2
baz=80
L13A Double Diamond 79.79 40 ⇑P P 08 23 12.5 +0.1
baz=80
D08A Wollman Farm, 79.80 34 ⇑P P 08 23 12.1 -0.1
baz=80,SNR=9.2
NLU North Lily Min 79.84 43 *eP* **P 08 23 14.4 +1.7**
M14A Sheep Mountain 79.85 41 ⇓P P 08 23 12.5 -0.2
baz=80,SNR=25
122A Conniff Cattle 79.85 51 ⇑P P 08 23 13.4 +0.5
baz=80
T18A Mexican Hat 79.89 46 ⇓P P 08 23 13.4 +0.4
baz=80,SNR=50
E09A Wood Farm, Sta 79.89 35 ⇑P P 08 23 12.1 -0.7
baz=80,SNR=5.8
Q16A Castle Valley 79.90 44 ⇓P P 08 23 13.6 +0.6
baz=80
P16A Fountain Green 79.93 43 ⇓P P 08 23 13.6 +0.4
baz=80
U19A Dine' College, 79.94 47 ⇓P P 08 23 13.6 +0.3
baz=80
R17A Hanksville Air 79.95 45 ⇑P P 08 23 13.1 -0.3
baz=80,SNR=21
Y21A Point of Rocks 79.95 50 ⇑P P 08 23 14.2 +0.7
baz=80
223A Chaparral, Ant 79.97 52 ⇓P P 08 23 14.1 +0.5
baz=80
K13A Stover Farm, H 80.01 40 ⇓P P 08 23 13.5 0.0
baz=80,SNR=13
I12A Atlanta 80.02 38 ⇑P P 08 23 13.5 -0.1
baz=80,SNR=27
H11A Donnelly 80.02 37 ⇑P P 08 23 13.1 -0.4
baz=80,SNR=8.7
N15A Stansbury Isla 80.04 42 ⇑P P 08 23 13.4 -0.3
baz=80
TMUT Trail Mountain 80.07 44 *eP* **P 08 23 14.6 +0.7**
comp=Z,34nm,0.8s,mb5.3
F10A Beach Ranch, E 80.07 36 ⇑P P 08 23 13.2 -0.6
baz=80,SNR=18
S18A Hurst Farm, Bl 80.08 46 ⇓P P 08 23 14.1 +0.1
baz=80
X21A Alamocita Cree 80.08 50 ⇑P P 08 23 14.6 +0.5
baz=80
OD2 Odessa Site #2 80.11 34 *eP* **P 08 23 13.9 0.0**
Z22A Elephant Butte 80.13 51 ⇑P P 08 23 14.7 +0.3
baz=80,SNR=19
MPU Maple Canyon 80.16 43 *eP* **P 08 23 14.3 -0.1**
comp=Z,25nm,1.2s,mb5.0
NOQ North Oquirrh 80.17 42 *eP* **P 08 23 14.8 +0.3**
L14A Malta 80.20 41 ⇑P P 08 23 14.4 -0.2
baz=80,SNR=12
V20A Brimhall 80.22 48 ⇑P P 08 23 14.8 0.0
baz=80
PMR Palmer 80.25 11 *eP* **P 08 23 13.4 -1.0**
PMR pmax pmax
comp=Z,52nm,1.6s,mb5.2
PMR Palmer 80.25 11 *eP* **P 08 23 13.4 -1.0**
comp=Z,52nm,1.6s,mb5.2
MDJ Mudanjiang 80.26 322 P **P 08 23 16.3 +1.5**
MDJ pP pP 08 23 25.8 0.0
MDJ sP sP 08 23 29.4 -0.5
MDJ PP PP 08 26 20.6 +2.6
MDJ S S 08 33 20.5 +2.8
MDJ pmax pmax
comp=Z,30nm,1.6s,mb5.0
MDJ pmax pmax
comp=Z,260nm,4.6s
MDJ LR LR
comp=N,470nm,21.5s,MS5.0
MDJ LR LR
comp=E,670nm,20.6s,MS5.0
MDJ LR LR
comp=Z,1µm,20.6s,MS5.2
MDJ Mudanjiang 80.26 322 *eP* **P 08 23 15.1 +0.3**
comp=Z,7.5nm,0.6s,mb4.8
MDJ LR LR
comp=Z,1µm,21.0s,MS5.2
SPUT South Promonto 80.31 42 *eP* **P 08 23 14.7 -0.5**
HLID Hailey 80.32 39 ⇓P P 08 23 15.4 +0.2
baz=80,SNR=39
HLID Hailey 80.32 39 P **P 08 23 15.3 +0.2**
HLID LR LR
comp=Z,2µm,20.0s,MS5.3
T19A Beclabito 80.33 47 ⇑P P 08 23 15.6 +0.2
baz=80,SNR=11
O16A Springville 80.34 43 ⇑P P 08 23 15.4 0.0
baz=80
HVU Hansel Valley 80.36 41 *eP* **P 08 23 15.8 +0.4**
J13A Cove Ranch, Pi 80.37 39 ⇑P P 08 23 15.7 +0.2
baz=80,SNR=20
123A Bell Site, Whi 80.38 52 ⇓P P 08 23 15.5 -0.3
baz=80
B08A Colville Reser 80.38 33 ⇓P P 08 23 14.5 -0.9
baz=81,SNR=12
M15A Larsen Ranch, 80.39 42 ⇑P P 08 23 15.3 -0.3
baz=81,SNR=13
SRU San Rafael 80.43 44 ⇓P P 08 23 15.7 -0.2
baz=81,SNR=16
SRU San Rafael 80.43 44 *eP* **P 08 23 16.2 +0.4**
CTU Camp Tracy 80.44 43 *eP* **P 08 23 13.5 -2.4**
324A Moseley Ranch, 80.44 53 ⇓P P 08 23 15.9 -0.3
baz=81,SNR=15
Y22A Socorro 80.44 50 ⇑P P 08 23 16.3 +0.2
baz=81,SNR=9.6
U20A Newcomb 80.46 48 ⇑P P 08 23 16.4 +0.3
baz=81
P17A Butcher Ranch, 80.47 44 ⇑P P 08 23 16.3 +0.2
baz=81,SNR=12
W21A San Fidel 80.49 49 ⇑P P 08 23 16.8 +0.5
baz=81
R18A Canyonlands Na 80.49 45 ⇓P P 08 23 16.0 -0.2
baz=81,SNR=10
DIV Divide 80.50 13 *eP* **P 08 23 15.4 -0.4**
comp=Z,77nm,0.9s,mb5.6
K14A Jones Ranch, D 80.52 40 ⇑P P 08 23 16.2 -0.1
baz=81,SNR=18
LAZ Ladron 80.53 50 *eP* **P 08 23 17.2 +0.7**
comp=Z,18nm,1.5s,mb4.8
425A Indio Mountain 80.54 54 ⇓P P 08 23 16.8 +0.2
baz=81,SNR=42
Y22D IRIS PASSCAL I 80.54 50 ⇓P P 08 23 16.8 +0.2
baz=81
JLU Jordanelle 80.58 43 *eP* **P 08 23 17.2 +0.5**
comp=Z,22nm,1.2s,mb5.0
C09A Chrisman Ranch 80.60 34 ⇓P P 08 23 16.3 -0.2
baz=81
H12A Diamond D Ranc 80.61 38 ⇓P P 08 23 16.6 -0.1
baz=81,SNR=9.2
DAU Daniels Canyon 80.61 43 *eP* **P 08 23 17.6 +0.8**
BMRM Bremner River 80.62 14 *eP* **P 08 23 16.0 -0.3**
comp=Z,142nm,1.4s,mb5.7
MNTX Cornudas Mount 80.63 53 *eP* **P 08 23 16.9 -0.2**
comp=Z,36nm,1.4s,mb5.1
MNTX LR LR
comp=Z,1µm,19.0s,MS5.3
X22A Bernardo 80.67 50 ⇓P P 08 23 18.1 +0.8
baz=81
626A Big Bend Ranch 80.68 55 ⇓P P 08 23 17.5 +0.1
baz=81,SNR=12
Z23A Rita Site, Whi 80.68 51 ⇑P P 08 23 17.6 +0.3
baz=81
Q18A Rafter H Ranch 80.69 45 ⇓P P 08 23 17.2 -0.1
baz=81,SNR=12
224A Cornudas Mount 80.69 53 ⇑P P 08 23 17.7 +0.2
baz=81,SNR=12
I13A Wildhorse Cree 80.69 39 ⇑P P 08 23 17.4 +0.2
baz=81,SNR=12
S19A Harvey Farm, M 80.69 46 ⇑P P 08 23 17.6 +0.3
baz=81
L15A Malad City 80.72 41 ⇓P P 08 23 16.9 -0.4
baz=81,SNR=9.9
J14A Carey 80.73 40 ⇑P P 08 23 17.9 +0.5
baz=81,SNR=23
N16A Rees Ranch, Co 80.74 42 ⇓P P 08 23 17.6 +0.1
baz=81
PNL Peninsula 80.78 17 *eP* **P 08 23 16.6 -0.7**
comp=Z,57nm,1.1s,mb5.4

BNM Barren Site 80.79 50 eP P 08 23 18.0 +0.1
comp=Z,28nm,1.3s,mb5.0
325A Bean Ranch, Si 80.80 53 ⇑P P 08 23 17.7 -0.3
baz=81,SNR=27
V21A Milan 80.82 48 ⇓P P 08 23 18.5 +0.4
baz=81
PNT Penticton 80.83 32 P P 08 23 17.1 -0.7
O17A Robinson Place 80.84 43 ⇓P P 08 23 18.4 +0.4
baz=81,SNR=35
LPM Los Pinos Moun 80.86 50 eP P 08 23 19.3 +1.0
P18A Preston Nutter 80.88 44 ⇓P P 08 23 18.5 +0.2
baz=81,SNR=8.7
R19A Curley Farm, L 80.88 46 ⇑P P 08 23 18.3 0.0
baz=81,SNR=14
MVCO Mesa Verde 80.88 47 ⇓P P 08 23 18.3 0.0
baz=81
MVCO Mesa Verde 80.88 47 eP P 08 23 19.9 +1.6
comp=Z,46nm,1.6s,mb5.2
MVCO LR LR
comp=Z,1μm,19.0s,MS5.4
526A Mary Lane Ranc 80.93 55 ⇑P P 08 23 18.6 -0.1
baz=81,SNR=21
PPLA Purkeypile 80.94 9 eP P 08 23 17.8 -0.2
comp=Z,20nm,1.0s,mb5.0
TXAR Lajitas Array 80.95 56 P P 08 23 19.0 +0.1
comp=Z,3.6nm,0.8s,mb4.4,baz=218,slow=8.3,SNR=32
TXAR PKKPbc PKKPbc 08 41 58.4 +1.0
comp=Z,0.3nm,0.8s,baz=66,slow=5.2,SNR=3.8
TXAR LR LR 08 51 45.6
comp=Z,1μm,20.5s,MS5.2,baz=320,slow=30
TXAR Lajitas Array 80.95 56 P P 08 23 19.0 +0.1
TXAR 08 41 58.4
TXAR Lajitas Array 80.95 56 P P 08 23 19.0 +0.1
TXAR PKKPbc PKKPbc 08 41 58.4 +1.0
TXAR LR LR 08 51 45.5
H13A Challis 80.97 38 ⇓P P 08 23 18.6 -0.1
baz=81,SNR=19
K15A Arbon 81.00 40 ⇓P P 08 23 18.7 -0.1
baz=81,SNR=13
124A Stringfield Ra 81.02 52 ⇓P P 08 23 19.5 +0.3
baz=81,SNR=8.9
HWUT Hardware Ranch 81.03 42 eP P 08 23 18.5 -0.5
comp=Z,33nm,1.4s,mb5.1
HWUT LR LR
comp=Z,2μm,19.0s,MS5.6
W22A Albuquerque 81.04 49 ⇑P P 08 23 19.9 +0.7
baz=81
F12A Elk City 81.06 37 ⇓P P 08 23 18.7 -0.4
baz=81,SNR=32
U21A Nageezi 81.10 48 ⇑P P 08 23 20.0 +0.4
baz=81,SNR=27
I14A Mackay 81.10 39 ⇑P P 08 23 19.6 +0.2
baz=81,SNR=5.1
Y23A Lovelace Mesa, 81.11 51 ⇓P P 08 23 19.5 -0.1
baz=81,SNR=7.5
N17A Moffit Pass 81.16 43 ⇓P P 08 23 19.7 0.0
baz=81
PV04 Paradox Valley 81.17 46 eP P 08 23 20.5 +0.7
Q19A Hogan Spring (81.20 45 ⇑P P 08 23 20.1 +0.1
baz=81
627A Terlingua Ranc 81.23 56 ⇑P P 08 23 20.6 +0.3
baz=81,SNR=21
426A McDonald Obser 81.23 54 ⇓P P 08 23 20.5 +0.2
baz=81,SNR=44
225A Deer Hill, Car 81.24 53 ⇓P P 08 23 20.4 +0.1
baz=81,SNR=16
NJ2 Nanjing 81.25 307 eP P 08 23 22.1 +1.7
NJ2 pP pP 08 23 32.5 +1.1
NJ2 sP sP 08 23 36.4 +0.9
NJ2 PP PP 08 26 29.1 +2.6
NJ2 S S 08 33 27.0 -1.5
NJ2 SKS 08 33 33.0
NJ2 sS sS 08 33 42.0 -4.8
NJ2 pmax pmax
comp=Z,30nm,0.8s,mb5.3
NJ2 pmax pmax
comp=Z,370nm,11.2s
NJ2 LR LR
comp=N,1μm,17.5s,MS5.3
NJ2 LR LR
comp=E,520nm,21.0s,MS5.3
NJ2 LR LR
comp=Z,590nm,21.4s,MS4.9
E12A Beaver Dam Sad 81.26 36 ⇓P P 08 23 19.3 -0.8
baz=81
S20A Disappointment 81.27 46 ⇑P P 08 23 20.5 +0.1
baz=81,SNR=8.2
PV01 Paradox Valley 81.28 46 eP P 08 23 20.6 +0.1
comp=Z,5μm,1.5s
ANMO Albuquerque 81.28 50 eP P 08 23 20.8 +0.3
ANMO pmax pmax
comp=Z,35nm,1.4s
ANMO MLR MLR
comp=Z,1μm,20.0s
ANMO Albuquerque 81.28 50 eP P 08 23 20.8 +0.3
comp=Z,35nm,1.4s,mb5.1
ANMO LR LR
comp=Z,1μm,20.0s,MS5.3
G13A Cobalt 81.28 38 ⇓P P 08 23 20.0 -0.3
baz=81,SNR=11
X23A Hourglass Bar 81.31 50 ⇓P P 08 23 20.7 0.0
baz=82
527A Woodward Ranch 81.34 55 ⇓P P 08 23 20.6 -0.3
baz=82,SNR=13
O18A Roosevelt 81.36 44 ⇑P P 08 23 21.2 +0.4
baz=82
Z24A Sheeppen Canyo 81.36 52 ⇑P P 08 23 21.2 +0.2
baz=82
V22A San Miguel Ran 81.39 49 ⇓P P 08 23 21.5 +0.4
baz=82
R20A Redvale 81.43 46 ⇓P P 08 23 21.4 +0.1
baz=82
J15A Blackfoot 81.44 40 ⇑P P 08 23 21.5 +0.4
baz=82,SNR=14
T21A Navajo Lake 81.45 47 ⇑P P 08 23 22.0 +0.6
baz=82
NEW Newport 81.50 34 eP P 08 23 20.5 -0.8
NEW pmax pmax
comp=Z,27nm,1.4s
NEW MLR MLR
comp=Z,2μm,20.0s
NEW Newport 81.50 34 eP P 08 23 20.5 -0.8
comp=Z,27nm,1.4s,mb5.0
NEW LR LR
comp=Z,2μm,20.0s,MS5.4
H14A Leadore 81.53 39 ⇑P P 08 23 21.9 +0.3
baz=82,SNR=13
M17A Scullys Gap (B 81.54 42 ⇓P P 08 23 21.3 -0.4
baz=82
326A Caldwell Ranch 81.55 54 ⇑P P 08 23 21.8 -0.2
baz=82
Y24A Capitan 81.57 51 ⇓P P 08 23 22.3 +0.2
baz=82,SNR=19
S21A Coal Bank Pass 81.59 47 ⇓P P 08 23 22.3 +0.3
baz=82,SNR=17
W23A Werner Place, 81.60 50 ⇓P P 08 23 22.5 +0.3
baz=82,SNR=7.4
125A Gardner Draw, 81.60 52 ⇓P P 08 23 22.4 +0.1
baz=82
F13A Darby 81.62 37 ⇓P P 08 23 21.5 -0.5
baz=82,SNR=12
GDL2 Guadalupe Moun 81.63 53 eP P 08 23 22.6 +0.2
comp=Z,48nm,1.2s,mb5.3
628A Black Gap, Mar 81.64 56 ⇓P P 08 23 22.3 -0.2
baz=82
U22A Llaves 81.65 48 ⇓P P 08 23 22.8 +0.3
baz=82
K16A Soda Springs 81.66 41 ⇑P P 08 23 22.2 -0.1
baz=82
C11A Tepee Creek (N 81.71 35 ⇓P P 08 23 22.2 -0.3
baz=82
P19A Cripple Cowboy 81.73 45 ⇑P P 08 23 22.8 0.0
baz=82,SNR=16
I15A Monteview 81.73 39 ⇓P P 08 23 22.9 +0.2
baz=82
L17A Cokeville 81.73 42 ⇑P P 08 23 21.8 -0.9
baz=82
D12A Red Ives Fores 81.75 36 ⇑P P 08 23 22.0 -0.7
baz=82
TRF Thorofare Moun 81.77 10 eP P 08 23 21.5 -0.9
comp=Z,55nm,0.8s,mb5.5
226A Malaga, Loving 81.77 53 ⇓P P 08 23 23.0 -0.1
baz=82,SNR=18
SKAG Skagway 81.78 18 eP P 08 23 23.5 +0.9
comp=Z,24nm,1.1s,mb5.0
KLR Kul'dur 81.78 327 eP P 08 23 19.0 -3.8
KLR eS S 08 33 31.0 -2.3
KLR pmax pmax
comp=E,170nm,3.0s
KLR pmax pmax
comp=Z,370nm,3.0s
427A Hayter Ranch, 81.80 55 ⇑P P 08 23 23.4 +0.1
baz=82,SNR=42
Z25A Roswell 81.83 52 ⇓P P 08 23 23.7 +0.2
baz=82,SNR=5.7
V23A Ortiz Mt. (NFS 81.84 49 ⇑P P 08 23 24.3 +0.8
baz=82,SNR=9.8
X24A Lazy VL Ranch, 81.86 50 ⇑P P 08 23 23.4 -0.2
baz=82
Q20A Ridgley Place, 81.86 45 ⇓P P 08 23 23.6 +0.1
baz=82,SNR=10
J16A Bone 81.88 40 ⇓P P 08 23 23.7 +0.2
baz=82,SNR=6.4
M18A Lyman 81.90 43 ⇓P P 08 23 23.2 -0.5
baz=82
T22A Edith 81.91 48 ⇓P P 08 23 23.9 +0.1
baz=82,SNR=6.7
AHID Auburn Hatcher 81.93 41 PFAKE
AHID LR LR 08 23 40.0 +16
comp=Z,2μm,20.0s,MS5.6
N18A Larsen Ranch, 81.93 43 ⇑P P 08 23 23.4 -0.4
baz=82
MCMT McKenzie Canyo 81.96 39 P P 08 23 24.5 +0.7
O19A Miners Draw (B 81.96 44 ⇑P P 08 23 23.5 -0.5
baz=82
528A Cox Ranch, San 81.99 55 ⇑P P 08 23 24.3 -0.1
baz=82,SNR=20
CLNB Carlsbad 82.03 53 eP P 08 23 24.6 +0.1
comp=Z,8.1nm,1.0s,mb4.6
K17A Gardner Place, 82.04 41 ⇓P P 08 23 24.3 0.0
baz=82
TNA Tin City 82.04 2 eP P 08 23 23.1 -0.7
P20A De Beque 82.06 45 ⇓P P 08 23 24.6 0.0
baz=82,SNR=16
C12B Naegeli Ranch, 82.06 35 ⇓P P 08 23 23.9 -0.5
baz=82
E13A Victor 82.07 37 ⇑P P 08 23 23.5 -0.9
baz=82,SNR=14
126A Clayton Basin, 82.08 53 ⇑P P 08 23 24.5 -0.3
baz=82
R21A Cimarron 82.09 46 ⇑P P 08 23 25.0 +0.3
baz=82,SNR=11
RRI2 Red Ridge 82.10 40 eP P 08 23 25.1 +0.5
comp=Z,63nm,1.4s,mb5.3
U23A El Rito 82.10 49 ⇑P P 08 23 25.2 +0.4
baz=82,SNR=13
Y25A Mesa, Roswell 82.13 51 ⇑P P 08 23 24.9 -0.2
baz=82,SNR=14
GZH Guangzhou 82.13 297 P P 08 23 24.3 -1.0
GZH S S 08 33 40.3 +2.3
GZH pmax pmax
comp=Z,410nm,5.4s
W24A Lazy 6 Ranch, 82.17 50 ⇑P P 08 23 24.9 -0.3
baz=82,SNR=11
L18A Fontenelle, Gr 82.18 42 ⇑P P 08 23 24.7 -0.3
baz=82
F14A Wisdom 82.19 38 ⇑P P 08 23 24.2 -0.8
baz=82
N19A John Jarvie Ra 82.22 43 ⇓P P 08 23 24.9 -0.5
baz=82
BPAW Bear Paw Mtn. 82.26 10 eP P 08 23 23.5 -1.5
comp=Z,15nm,0.9s,mb4.9
MCK McKinley 82.26 11 eP P 08 23 24.3 -0.7
MCK pmax pmax
comp=Z,105nm,0.9s,mb5.8
MCK McKinley 82.26 11 eP P 08 23 24.3 -0.7
comp=Z,105nm,0.9s,mb5.8
HYT Haines Junctio 82.27 17 eP P 08 23 25.5 +0.4
I16A Newdale 82.27 40 ⇓P P 08 23 25.8 +0.2
baz=82,SNR=12
D13A Huson 82.28 36 ⇑P P 08 23 24.4 -1.1
baz=82,SNR=13
Q21A Lamborn Mesa, 82.30 46 ⇑P P 08 23 25.9 +0.1
baz=82,SNR=11
S22A 4UR Ranch, Cre 82.30 47 ⇑P P 08 23 26.3 +0.5
baz=82,SNR=42
CN2 Changchun 82.30 320 eP P 08 23 27.4 +1.7
CN2 esP sP 08 23 42.4 +1.6
CN2 eS S 08 33 39.8 +0.9
CN2 pmax pmax
comp=Z,50nm,1.0s,mb5.4
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,500nm,19.0s,MS5.1
CN2 LR LR
comp=E,600nm,19.0s,MS5.1
CN2 LR LR
comp=Z,500nm,21.0s,MS4.9
428A Kincaid Ranch, 82.31 55 ⇓P P 08 23 24.6 -1.5
baz=82,SNR=9.0
DCID1 Drake Creek 82.31 40 eP P 08 23 25.9 +0.2
comp=Z,84nm,1.3s,mb5.5
DL2 Dalian 82.34 314 ⇑rP P 08 23 27.4 +1.4
DL2 pP pP 08 23 39.3 +2.2
DL2 S S 08 33 44.3 +4.7
DL2 pmax pmax
comp=Z,30nm,0.9s,mb5.2
DL2 pmax pmax
comp=Z,180nm,4.8s
DL2 LR LR
comp=N,290nm,15.7s,MS4.8
DL2 LR LR
comp=E,220nm,17.6s,MS4.8
DL2 LR LR
comp=Z,260nm,18.0s,MS4.6
G15A Dillon 82.36 38 ⇑P P 08 23 25.7 -0.2
baz=82,SNR=22
CPRX Cap Rock 82.36 52 eP P 08 23 26.5 +0.3
comp=Z,12nm,1.0s,mb4.8
227A Bennet, Jal 82.37 53 ⇑P P 08 23 26.4 +0.1
baz=82
Z26A Caprock 82.38 52 ⇑P P 08 23 26.0 -0.3
baz=82,SNR=18
DLMT Dillon 82.40 38 eP P 08 23 26.0 -0.1
comp=Z,86nm,1.5s,mb5.5
REDW Red Top Meadow 82.40 41 eP P 08 23 26.0 -0.2
comp=Z,129nm,1.6s,mb5.6
X25A Clemmons Ranch 82.41 51 ⇓P P 08 23 26.0 -0.5
baz=83
MSO Missoula 82.42 36 eP P 08 23 25.6 -0.7
comp=Z,59nm,1.6s,mb5.3
MSO LR LR
comp=Z,2μm,21.0s,MS5.4
B12A Libby 82.44 34 ⇓P P 08 23 25.8 -0.5
baz=83
E14A Clinton 82.45 37 ⇓P P 08 23 25.8 -0.6
baz=83,SNR=24
O20A White River Ci 82.47 44 ⇑P P 08 23 26.6 -0.1
baz=83
SNY Shenyang 82.47 318 ⇓P P 08 23 25.9 -0.7
SNY S S 08 33 40.8 +0.1
SNY pmax pmax
comp=Z,54nm,1.7s,mb5.2
SNY LR LR
comp=N,340nm,18.0s,MS4.8
SNY LR LR
comp=E,270nm,20.7s,MS4.8
SNY LR LR
comp=Z,420nm,18.6s,MS4.8
328A Wristen Ranch, 82.48 54 ⇓P P 08 23 25.9 -1.0
baz=83,SNR=12
J17A Brown Place, J 82.48 41 ⇓P P 08 23 26.6 0.0
baz=83,SNR=8.3
V24A Rampart Ranch, 82.49 49 ⇓P P 08 23 26.9 0.0
baz=83,SNR=6.5
SNOW Snow King Moun 82.51 41 eP P 08 23 27.1 +0.4
comp=Z,55nm,1.2s,mb5.5
BSMT Bassoo Peak 82.53 35 eP P 08 23 26.2 -0.5
T23A Casias Ranch, 82.53 48 ⇓P P 08 23 27.2 +0.1
baz=83,SNR=8.4
K18A Toltan Ranch, 82.53 42 ⇓P P 08 23 26.9 0.0
baz=83,SNR=12
M19A Rock Springs 82.53 43 ⇓P P 08 23 26.3 -0.6
baz=83,SNR=11
C13A Hot Springs 82.55 35 ⇓P P 08 23 26.0 -0.8
baz=83
MENT Mentasta 82.56 13 eP P 08 23 26.7 +0.1
R22A Saguache, Gunn 82.58 47 ⇓P P 08 23 27.9 +0.6
baz=83,SNR=23
127A Arkansas Junct 82.60 53 ⇑P P 08 23 27.0 -0.5
baz=83
IMW Indian Meadow 82.62 40 eP P 08 23 27.6 +0.2
comp=Z,56nm,1.3s,mb5.4
A12A Yaak River Ran 82.68 34 ⇑P P 08 23 27.1 -0.4
baz=83
LOHW Long Hollow 82.68 40 eP P 08 23 27.6 0.0
comp=Z,32nm,1.1s,mb5.3
DLBC Dease Lake 82.70 21 LR LR 08 53 32.0
comp=Z,1μm,20.0s,MS5.3,baz=256,slow=31
DLBC Dease Lake 82.70 21 eP P 08 23 27.9 +0.5
L19A Farson 82.70 42 ⇑P P 08 23 27.5 -0.3
baz=83,SNR=12
F15A Butte 82.72 38 ⇓P P 08 23 27.6 -0.2
baz=83,SNR=8.4
LRM Limekiln Ridge 82.73 38 eP P 08 23 27.9 0.0
comp=Z,352nm,1.7s,mb6.1
JTMT Jette 82.75 36 eP P 08 23 27.0 -0.9
comp=Z,14nm,1.2s,mb4.9
Q22A Crested Butte, 82.77 46 ⇑P P 08 23 28.5 +0.3
baz=83,SNR=25
SWMT Swartz Lake 82.77 36 eP P 08 23 27.3 -0.7
Y26A Elida 82.78 52 ⇓P P 08 23 28.2 -0.2
baz=83
PAYG Puerto Ayora 82.79 89 PFAKE 08 23 40.0 +11
PAYG LR LR
comp=Z,820nm,19.0s,MS5.1
N20A Spence Gulch, 82.79 44 ⇓P P 08 23 28.2 -0.1
baz=83,SNR=10.0
G16A Moss Hill, Enn 82.80 39 ⇑P P 08 23 28.0 -0.3
baz=83,SNR=9.3
D14A Greenough 82.81 36 ⇓P P 08 23 27.0 -1.3
baz=83,SNR=26
J18A Kendall Valley 82.84 41 ⇑P P 08 23 28.1 -0.4
baz=83,SNR=28
H16A Russell Place, 82.86 39 ⇑P P 08 23 28.8 +0.3
baz=83,SNR=14
I17A Pilgrim Ck. 82.86 40 ⇑P P 08 23 29.0 +0.4
baz=83
CHMT Chamberlain Mo 82.86 37 eP P 08 23 27.9 -0.7
W25A X Bar L Ranch, 82.86 50 ⇑P P 08 23 28.2 -0.7
baz=83,SNR=7.5
S23A Nye Farm, Mont 82.86 47 ⇓P P 08 23 29.1 +0.3
baz=83
SMCO Snowmass 82.87 46 eP P 08 23 29.5 +0.7
comp=Z,79nm,1.5s,mb5.5
PMSA Palmer Station 82.88 156 P P 08 23 28.9 +0.5
comp=Z,24nm,1.0s,mb5.2,baz=229,slow=4.0,SNR=13
PMSA Palmer Station 82.88 156 eP P 08 23 28.7 +0.3
comp=Z,39nm,1.1s,mb5.3
PMSA LR LR
comp=Z,2μm,20.0s,MS5.4
SLMT Seeley Lake 82.91 36 eP P 08 23 28.1 -0.7
BW06 Boulder Array 82.91 42 ⇑P P 08 23 28.2 -0.7
baz=83,SNR=23
BW06 Boulder Array 82.91 42 PFAKE 08 23 40.0 +11
BW06 LR LR
comp=Z,3μm,20.0s,MS5.6
PDAR Pinedale Array 82.91 42 P P 08 23 28.1 -0.7
comp=Z,8.8nm,0.8s,mb4.9,baz=216,slow=3.2,SNR=51
PDAR PKKPbc PKKPbc 08 41 53.4 -0.2
comp=Z,0.9nm,1.0s,baz=66,slow=3.7,SNR=5.6
PDAR PKPPKP 08 49 48.9
comp=Z,0.5nm,0.9s,baz=351,slow=2.0,SNR=3.7
PDAR LR LR 08 55 20.4
comp=Z,2μm,18.6s,MS5.6,baz=245,slow=32
E15A Deer Lodge 82.95 37 ⇓P P 08 23 28.2 -0.8
baz=83,SNR=7.8
YBMT Yellow Bay 82.96 36 eP P 08 23 28.0 -1.0
YFT Old Faithful 82.97 40 eP P 08 23 29.8 +0.6
comp=Z,84nm,1.6s,mb5.5
B13A Whitefish 83.00 35 ⇑P P 08 23 28.0 -1.2
baz=83,SNR=7.1
YMR Madison River 83.01 39 eP P 08 23 30.1 +0.8
comp=Z,180nm,1.5s,mb5.9
V25A Rancho No Teng 83.02 50 ⇓P P 08 23 29.7 +0.1
baz=83
O21A Pagoda 83.02 45 ⇓P P 08 23 29.6 +0.1
baz=83
X26A CR and CF Fran 83.06 51 ⇑P P 08 23 29.2 -0.6
baz=83
C14A Swan Lake 83.06 36 ⇑P P 08 23 28.4 -1.1
baz=83
H17A Grant Village 83.10 40 ⇑P P 08 23 30.7 +0.8
baz=83
BOZ Bozeman (W) 83.12 38 ⇑P P 08 23 29.7 -0.2
baz=83,SNR=30
BOZ Bozeman (W) 83.12 38 eP P 08 23 29.7 -0.2
BOZ pmax pmax
comp=Z,85nm,1.5s,mb5.5
BOZ MLR MLR
comp=Z,2μm,20.0s,MS5.5
BOZ Bozeman (W) 83.12 38 eP P 08 23 29.7 -0.2
comp=Z,85nm,1.5s,mb5.5
BOZ LR LR
comp=Z,2μm,20.0s,MS5.5
M20A Sweetwater, Wa 83.16 43 ⇓P P 08 23 30.3 +0.1
baz=83,SNR=7.6
F16A Kennard Place, 83.20 38 ⇓P P 08 23 30.2 -0.1
baz=83,SNR=16
I18A Diamond G Ranc 83.22 41 ⇑P P 08 23 30.3 -0.1
baz=83
SDCO Great Sand Dun 83.24 48 eP P 08 23 31.0 +0.3
comp=Z,46nm,1.6s,mb5.2
N21A Black Mountain 83.25 44 ⇓P P 08 23 30.4 -0.3
baz=83,SNR=18
Y27A Causey 83.26 52 ⇓P P 08 23 30.5 -0.4
baz=83
LKWY Lake 83.30 40 eP P 08 23 32.2 +1.4
LKWY pmax pmax
comp=Z,60nm,1.1s,mb5.5
LKWY MLR MLR
comp=Z,2μm,19.0s,MS5.6
LKWY Lake 83.30 40 eP P 08 23 32.2 +1.4
comp=Z,60nm,1.1s,mb5.5
LKWY LR LR
comp=Z,2μm,19.0s,MS5.6
L20A Wamsutter 83.31 43 ⇑P P 08 23 31.1 +0.1
baz=84,SNR=22
W26A Owens Ranch, T 83.32 51 ⇑P P 08 23 30.8 -0.4
baz=84
A13A Flathead Natio 83.35 34 ⇓P P 08 23 30.7 -0.3
baz=84
D15A Lincoln 83.35 37 ⇑P P 08 23 30.5 -0.6
baz=84,SNR=27
K19A Absolon Red Bu 83.39 42 ⇓P P 08 23 30.4 -1.0
baz=84,SNR=9.1
S24A Houchin Ranch, 83.39 48 ⇑P P 08 23 31.5 0.0
baz=84,SNR=11
U25A Circle Dot Ran 83.42 49 ⇓P P 08 23 31.4 -0.3
baz=84,SNR=13
G17A Pierce Place, 83.48 39 ⇑P P 08 23 32.2 +0.4
baz=84
COLA College 83.50 11 eP P 08 23 30.8 -0.6
COLA pmax pmax
comp=Z,101nm,0.9s,mb5.8
COLA MLR MLR
comp=Z,2μm,20.0s,MS5.5
COLA College 83.50 11 eP P 08 23 30.8 -0.6
comp=Z,101nm,0.9s,mb5.8
COLA LR LR
comp=Z,2μm,20.0s,MS5.5
Q23A Hartsel 83.53 46 ⇑P P 08 23 32.1 0.0
baz=84
E16A East Helena 83.57 38 ⇑P P 08 23 31.5 -0.6
baz=84,SNR=9.2
HRY Holter Researc 83.57 37 eP P 08 23 32.4 +0.2
comp=Z,50nm,1.0s,mb5.6
MSTX Muleshoe 83.59 52 ⇓P P 08 23 32.3 -0.3
baz=84
V26A Tequesquite Ra 83.61 50 ⇑P P 08 23 32.1 -0.5
baz=84
O22A Kremmling 83.62 45 ⇑P P 08 23 32.6 -0.1
baz=84,SNR=14
X27A F and S Farms, 83.63 51 ⇑P P 08 23 32.3 -0.5
baz=84
K20A Yellowstone Ra 83.63 42 ⇑P P 08 23 31.6 -1.0
baz=84,SNR=14
B14A Marquette Ranc 83.65 35 ⇑P P 08 23 31.6 -1.0
baz=84
WALA Waterton Lakes 83.69 35 eP P 08 23 31.9 -0.8
comp=Z,2.3nm,1.5s
C15A Salmond Ranch, 83.70 36 ⇑P P 08 23 32.0 -0.9
baz=84,SNR=15
R24A Sanders Place, 83.73 47 ⇓P P 08 23 33.2 -0.1
baz=84,SNR=8.9
P23A Jefferson 83.74 46 ⇓P P 08 23 34.0 +0.7
baz=84,SNR=7.0
T25A Trinidad 83.74 48 ⇓P P 08 23 32.9 -0.4
baz=84
QIZ Qiongzhong 83.76 292 P P 08 23 32.5 -1.3
QIZ pP pP 08 23 43.6 -1.2

QIZ sP sP 08 23 47.8 -1.0
QIZ S S 08 33 55.1 +0.4
QIZ sS sS 08 34 09.3 -3.7
QIZ pmax pmax
comp=Z,25nm,1.7s,mb5.1
QIZ pmax pmax
comp=Z,430nm,3.2s
QIZ LR LR
comp=N,410nm,19.7s
QIZ LR LR
comp=E,170nm,25.7s
QIZ LR LR
comp=Z,1µm,24.2s,MS5.2
QIZ Qiongzhong 83.76 292 PFAKE 08 23 50.0 +16
QIZ LR LR
comp=Z,1µm,22.0s,MS5.2
M21A Separation Pea 83.76 43 ⇓P **P 08 23 32.7 -0.6**
baz=84,SNR=17
SEY Seymchan 83.82 345 ⇑*i*P **P 08 23 32.9 -0.2**
W27A Bowe Ranch, En 83.83 51 ⇓P **P 08 23 33.2 -0.6**
baz=84,SNR=12
F17A Fitzpatrick Pl 83.84 38 ⇑P **P 08 23 33.8 +0.2**
baz=84,SNR=19
RWWY Rawlins 83.90 43 *e*P **P 08 23 33.6 -0.4**
comp=Z,140nm,1.5s,mb5.9
U26A Atchley Ranch, 83.90 49 ⇑P **P 08 23 33.7 -0.5**
baz=84,SNR=11
D16A Dana Ranch, Ca 83.91 37 ⇓P **P 08 23 33.6 -0.3**
baz=84,SNR=31
A14A Double T Ranch 83.91 35 ⇑P **P 08 23 33.1 -0.7**
baz=84,SNR=16
L21A Rawlins 83.93 43 ⇓P **P 08 23 33.6 -0.5**
baz=84,SNR=7.9
S25A Robets Cordova 83.95 48 ⇓P **P 08 23 34.2 -0.2**
baz=84,SNR=10
N22A Wattenberg Ran 83.98 44 ⇑P **P 08 23 34.5 +0.1**
baz=84,SNR=32
E17A Martinsdale 84.01 38 ⇑P **P 08 23 34.2 -0.2**
baz=84
B15A Bradely Ranch, 84.02 36 ⇑P **P 08 23 33.2 -1.2**
baz=84,SNR=15
Q24A Divide 84.03 47 ⇓P **P 08 23 35.0 +0.3**
baz=84
ISCO Idaho Springs 84.09 46 *e*P **P 08 23 35.2 +0.2**
ISCO pmax pmax
comp=Z,40nm,1.7s,mb5.3
ISCO MLR MLR
comp=Z,1µm,19.0s,MS5.3
ISCO Idaho Springs 84.09 46 *e*P **P 08 23 35.2 +0.2**
comp=Z,40nm,1.7s,mb5.3
ISCO LR LR
comp=Z,1µm,19.0s,MS5.3
WHN Wuhan 84.13 304 P **P 08 23 37.1 +1.6**
WHN S S 08 33 59.1 +1.0
WHN pmax pmax
comp=Z,810nm,13.2s
WHN LR LR
comp=Z,1µm,21.2s,MS5.2
G18A Lazy EL Ranch, 84.19 39 ⇓P **P 08 23 35.4 -0.1**
baz=84,SNR=15
C16A Fuhringer Ranc 84.21 36 ⇓P **P 08 23 34.4 -1.0**
baz=84
RLMT Red Lodge 84.28 40 ⇓P **P 08 23 35.9 +0.1**
baz=84,SNR=12
RLMT Red Lodge 84.28 40 *e*P **P 08 23 35.6 -0.2**
comp=Z,55nm,1.3s,mb5.5
RLMT LR LR
comp=Z,1µm,20.0s,MS5.3
A15A Johnson Ranch, 84.29 35 ⇑P **P 08 23 34.9 -0.9**
baz=84,SNR=19
GCMT Greycliff 84.37 39 *e*P **P 08 23 36.8 +0.4**
comp=Z,46nm,1.4s,mb5.4
F18A Big Timber 84.40 39 ⇓P **P 08 23 36.3 -0.1**
baz=85,SNR=14
P24A Kohler Place, 84.45 46 ⇑P **P 08 23 36.8 -0.1**
baz=85
D17A Six Diamond Ra 84.47 37 ⇑P **P 08 23 36.6 -0.2**
baz=85,SNR=26
JCT Junction City 84.49 56 *e*P **P 08 23 37.5 +0.2**
JCT pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
JCT MLR MLR
comp=Z,1µm,19.0s,MS5.3
JCT Junction City 84.49 56 *e*P **P 08 23 37.5 +0.2**
comp=Z,5.2nm,0.8s,mb4.7
JCT LR LR
comp=Z,1µm,19.0s,MS5.3
DAWY Dawson 84.52 14 *e*P **P 08 23 36.4 -0.2**
B16A M & M Farms, S 84.56 36 ⇑P **P 08 23 35.7 -1.4**
baz=85,SNR=16
L22A Ellis Ranch, M 84.57 43 ⇑P **P 08 23 37.4 0.0**
baz=85
E18A Harlowton 84.62 38 ⇓P **P 08 23 37.5 0.0**
baz=85,SNR=13
Q25A Bedland, Calha 84.64 47 ⇑P **P 08 23 37.4 -0.5**
baz=85
USHA Ushuaia 84.66 146 P **P 08 23 39.6 +1.8**
comp=Z,18nm,0.7s,mb5.3,baz=216,slow=4.8,SNR=11
EGAK Eagle 84.73 13 *e*P **P 08 23 37.5 -0.2**
comp=Z,99nm,1.4s,mb5.8
EGAK LR LR
comp=Z,2µm,20.0s,MS5.4
AMTX Amarillo 84.79 51 *e*P **P 08 23 38.2 -0.5**
comp=Z,152nm,1.6s,mb5.9
AMTX LR LR
comp=Z,2µm,19.0s,MS5.6
PHWY Pilot Hill 84.88 44 *e*P **P 08 23 38.9 -0.1**
comp=Z,45nm,1.6s,mb5.3
KVTX Kingsville 84.93 59 PFAKE 08 23 50.0 +10
KVTX LR LR
comp=Z,702nm,19.0s,MS5.1
P25A Willow Gulch B 84.96 46 ⇑P **P 08 23 39.3 -0.1**
baz=85
B17A L&G Farms, Che 85.00 36 ⇑P **P 08 23 38.5 -0.9**
baz=85,SNR=5.7
D18A Linhart Farms, 85.01 38 ⇓P **P 08 23 39.4 -0.1**
baz=85,SNR=6.3
COLD Coldfoot 85.30 9 *e*P **P 08 23 41.2 +0.7**
comp=Z,121nm,1.6s,mb5.8
EGMT Eagleton 85.46 37 ⇓P **P 08 23 41.1 -0.6**
baz=86,SNR=6.4
EGMT Eagleton 85.46 37 *e*P **P 08 23 41.1 -0.6**
comp=Z,76nm,1.5s,mb5.6
EGMT LR LR
comp=Z,3µm,20.0s,MS5.7
B18A Beardsley Farm 85.64 37 ⇑P **P 08 23 42.1 -0.5**
baz=86,SNR=6.3
BILL Bilibino 85.79 352 *c i*P **P 08 23 42.6 -0.3**
BILL *e*S SKSac 08 34 02.9 -2.4
BILL *e*SS SS 08 39 48.2 -2.6
BILL pmax pmax
comp=Z,41nm,1.2s,mb5.5
BILL pmax pmax
comp=Z,3.0nm,1.3s,mb4.4
BILL Bilibino 85.79 352 *e*P **P 08 23 42.9 0.0**
comp=Z,25nm,0.8s,mb5.5
BILL LR LR
comp=Z,2µm,22.0s,MS5.5
A18A Metzger Ranch, 85.87 36 ⇑P **P 08 23 42.9 -0.8**
baz=86,SNR=7.9
EDM Edmonton 86.32 31 *e*P **P 08 23 45.1 -0.7**
BJT Baijiatuau 86.62 313 *e*P **P 08 23 48.4 +0.8**
BJT pmax pmax
comp=Z,110nm,1.4s
BJT MLR MLR
comp=Z,474nm,20.0s
BJT Baijiatuau 86.62 313 *e*P **P 08 23 48.4 +0.8**
comp=Z,110nm,1.4s,mb5.9
BJT LR LR
comp=Z,474nm,20.0s,MS4.9
BJI Beijing 86.62 313 P **P 08 23 48.5 +0.8**
BJI pP pP 08 23 58.3 -0.5
BJI sP sP 08 24 02.0 -0.8
BJI PP PP 08 27 10.8 +0.6
BJI S SKSac 08 34 11.3 -0.5
BJI sS sS 08 34 39.5 -1.1
BJI pmax pmax
comp=Z,84nm,1.1s,mb5.9
BJI pmax pmax
comp=Z,820nm,4.3s
BJI LR LR
comp=N,220nm,22.6s,MS4.8
BJI LR LR
comp=E,410nm,21.7s,MS4.8
BJI LR LR
comp=Z,430nm,23.2s,MS4.8
MAW Mawson 86.75 199 *e*P **P 08 23 48.6 +0.7**
comp=Z,14nm,0.8s,mb5.2
MAW Mawson 86.75 199 P **P 08 23 48.0 +0.1**
comp=Z,16nm,0.7s,mb5.3,baz=122,slow=6.9,SNR=41
MAW LR LR 08 59 21.5
comp=Z,2µm,20.6s,MS5.5,baz=114,slow=33
MAW Mawson 86.75 199 *e*P **P 08 23 48.6 +0.7**
comp=Z,9.8nm,1.1s,mb5.0
MAW LR LR
comp=Z,3µm,21.0s,MS5.7
COCO West Island 86.77 258 PFAKE 08 24 00.0 +11
COCO LR LR
comp=Z,2µm,20.0s,MS5.5
LAO LASA Array 86.90 39 *e*P **P 08 23 49.2 +0.4**
comp=Z,93nm,1.6s,mb5.8
LAO LR LR
comp=Z,1µm,20.0s,MS5.3
WMOK Wichita Mounta 86.92 53 *e*P **P 08 23 48.5 -0.7**
WMOK pmax pmax
comp=Z,30nm,1.5s,mb5.3
WMOK MLR MLR
comp=Z,2µm,20.0s,MS5.5
WMOK Wichita Mounta 86.92 53 *e*P **P 08 23 48.5 -0.7**
comp=Z,30nm,1.5s,mb5.3
WMOK LR LR
comp=Z,2µm,20.0s,MS5.5
OGNE Ogallala 87.05 46 PFAKE 08 24 00.0 +10
OGNE LR LR
comp=Z,2µm,19.0s,MS5.4
RSSD Black Hills 87.09 42 *e*P **P 08 23 49.2 -0.6**
RSSD pmax pmax
comp=Z,7.0nm,0.8s,mb4.9
RSSD MLR MLR
comp=Z,2µm,21.0s,MS5.4
RSSD Black Hills 87.09 42 *e*P **P 08 23 49.1 -0.7**
comp=Z,6.7nm,0.8s,mb4.9
RSSD LR LR
comp=Z,2µm,21.0s,MS5.4
HKT Hockley 87.48 58 *e*P **P 08 23 51.4 -0.7**
HKT pmax pmax
comp=Z,37nm,1.6s,mb5.4
HKT MLR MLR
comp=Z,1µm,19.0s,MS5.3
HKT Hockley 87.48 58 *e*P **P 08 23 51.4 -0.7**
comp=Z,37nm,1.6s,mb5.4
HKT LR LR
comp=Z,1µm,19.0s,MS5.3
CBKS Cedar Bluff 87.80 48 PFAKE 08 24 00.0 +6.6
CBKS LR LR
comp=Z,1µm,19.0s,MS5.3
ENH Enshi 87.94 302 *e*P **P 08 23 55.5 +1.2**
comp=Z,264nm,1.7s,mb6.2
ENH LR LR
comp=Z,605nm,19.0s,MS5.0
KULM Kulim 88.05 276 *e*P **P 08 23 54.8 -0.3**
comp=Z,63nm,1.1s,mb5.8
KULM LR LR
comp=Z,529nm,19.0s,MS5.0
TIY Taiyuan 88.37 310 P **P 08 23 57.8 +1.7**
TIY S S 08 34 43.4 +4.3
TIY pmax pmax
comp=Z,590nm,2.5s,mb6.4
TIY LR LR
comp=N,400nm,13.7s
TIY LR LR
comp=E,580nm,19.8s
TIY LR LR
comp=Z,700nm,21.1s
PLCA Paso Flores 88.37 132 P **P 08 23 57.2 +1.0**
comp=Z,4.3nm,0.7s,mb4.8,baz=214,slow=6.6,SNR=13
PLCA LR LR 08 56 13.0
comp=Z,2µm,18.9s,MS5.5,baz=269,slow=31
HIA Hailar 88.44 323 *e*P **P 08 23 56.2 +0.1**
HIA pmax pmax
comp=Z,44nm,1.3s
HIA MLR MLR
comp=Z,866nm,21.0s
HIA Hailar 88.44 323 *e*P **P 08 23 56.2 +0.1**
comp=Z,44nm,1.3s,mb5.5
HIA LR LR
comp=Z,866nm,21.0s,MS5.2
DGMT Dagmar 88.93 38 ⇑P **P 08 23 58.4 -0.2**
baz=89
DGMT Dagmar 88.93 38 *e*P **P 08 23 58.0 -0.5**
comp=Z,42nm,1.2s,mb5.6
DGMT LR LR
comp=Z,3µm,20.0s,MS5.7
GYA Guiyang 88.99 298 ⇑*i*P **P 08 24 00.6 +1.3**
GYA pmax pmax
comp=Z,80nm,1.0s,mb6.0
NATX Nacogdoches 89.06 57 PFAKE 08 24 10.0 +10
NATX LR LR
comp=Z,1µm,20.0s,MS5.3
INK Inuvik 89.37 14 P **P 08 23 59.5 -0.6**
comp=Z,4.7nm,0.7s,mb4.9,baz=217,slow=6.8,SNR=20
INK Inuvik 89.37 14 *e*P **P 08 23 59.4 -0.7**
INK pmax pmax
comp=Z,62nm,1.5s
INK Inuvik 89.37 14 *e*P **P 08 23 59.4 -0.7**
comp=Z,62nm,1.5s,mb5.7
CLNS Chul'man 89.52 331 *e*P **P 08 23 55.6 -5.4**
CLNS *e**PP pP 08 24 06.4 -5.8
CLNS *e*S SKSac 08 34 22.9 -5.5
CLNS pmax pmax
comp=Z,24nm,1.5s,mb5.3
CLNS pmax pmax
comp=N,13nm,1.4s
CLNS pmax pmax
comp=E,7.0nm,1.0s
CLNS smax
comp=E,279nm,15.6s
CLNS smax
comp=N,175nm,11.5s
CLNS MLR MLR
comp=Z,412nm,20.0s,MS4.8
CLNS MLR MLR
comp=N,269nm,17.0s,MS4.8
CLNS MLR MLR
comp=E,129nm,14.0s,MS4.8
XAN Xi'an 89.69 306 P **P 08 24 02.3 -0.1**
XAN pP pP 08 24 11.8 -1.8
XAN sP sP 08 24 17.8 +0.2
XAN pmax pmax
comp=Z,17nm,1.9s,mb5.0
XAN pmax pmax
comp=Z,90nm,11.6s
XAN LR LR
comp=N,290nm,19.9s,MS4.8
XAN LR LR
comp=E,69nm,16.9s,MS4.8
XAN LR LR
comp=E,69nm,17.0s
TGUH Tegucigalpa,Un 89.93 75 PFAKE 08 24 20.0 +16
TGUH LR LR
comp=Z,616nm,22.0s,MS5.0
KSU1 Kansas State U 90.16 49 PFAKE 08 24 20.0 +16
KSU1 LR LR
comp=Z,2µm,20.0s,MS5.5
HHC Hu-ho-hao-te 90.17 313 *e*P **P 08 24 04.9 +0.4**
HHC sP sP 08 24 20.1 +0.4
HHC PP PP 08 27 40.9 +2.2
HHC SKS 08 34 31.6
HHC S S 08 34 54.3 -1.5
HHC sS sS 08 35 11.5 -2.8
HHC pmax pmax
comp=Z,62nm,1.1s,mb5.8
HHC pmax pmax
comp=Z,500nm,7.2s
HHC LR LR
comp=N,320nm,17.6s,MS5.0
HHC LR LR
comp=E,330nm,17.6s,MS5.0
HHC LR LR
comp=Z,410nm,17.4s,MS4.9
YAK Yakutsk 90.41 337 *e*P **P 08 24 02.8 -2.3**
YAK pmax pmax
comp=Z,26nm,0.8s,mb5.6
YAK Yakutsk 90.41 337 ⇑*e*P **P 08 24 04.1 -1.0**
YAK LR LR
comp=Z,603nm,22.0s,MS5.0
TEIG Tepich 90.83 69 PFAKE 08 24 20.0 +12
TEIG LR LR
comp=Z,1µm,21.0s,MS5.3
MIAR Mount Ida 90.86 54 *e*P **P 08 24 07.3 -0.6**
MIAR pmax pmax
comp=Z,18nm,1.5s,mb5.2
MIAR MLR MLR
comp=Z,1µm,21.0s,MS5.2
MIAR Mount Ida 90.86 54 *e*P **P 08 24 07.3 -0.5**
comp=Z,18nm,1.5s,mb5.2
MIAR LR LR
comp=Z,1µm,21.0s,MS5.2
JTS JuntasAbangare 91.02 80 *e*P **P 08 24 09.3 +0.2**
JTS pmax pmax
comp=Z,189nm,1.7s
JTS MLR MLR
comp=Z,897nm,21.0s
JTS JuntasAbangare 91.02 80 *e*P **P 08 24 09.3 +0.2**
comp=Z,189nm,1.7s,mb6.2
JTS LR LR
comp=Z,897nm,21.0s,MS5.2
YKA Yellowknife Ar 91.07 23 P **P 08 24 07.3 -0.8**
comp=Z,2.3nm,0.7s,mb4.6,baz=234,slow=4.5,SNR=11
YKA Yellowknife Ar 91.07 23 P **P 08 24 07.3 -0.8**
BTO Baotou 91.18 312 *e*P **P 08 24 10.3 +1.1**
SYO Syowa Base 91.47 191 ⇑*e*P **P 08 24 09.3 -0.8**
NST Nakhon Sawan 91.52 286 P **P 08 24 13.0 +1.7**
comp=Z,38nm,0.7s,mb5.8
ECSD EROS Data Cent 91.84 45 *e*P **P 08 24 11.7 -0.5**
comp=Z,23nm,1.6s,mb5.3
ECSD LR LR
comp=Z,1µm,20.0s,MS5.4
KMI Kunming 91.94 296 ⇑P **P 08 24 15.3 +2.2**
KMI pP pP 08 24 25.9 +1.7
KMI sP sP 08 24 29.8 +1.6
KMI PP PP 08 27 58.3 +5.3
KMI SKS 08 34 44.3
KMI S S 08 35 13.0 +0.4
KMI sS sS 08 35 30.3 -0.8
KMI pmax pmax
comp=Z,69nm,1.5s,mb5.8
KMI LR LR
comp=N,340nm,20.5s,MS5.1
KMI LR LR
comp=E,670nm,19.1s,MS5.1
KMI LR LR
comp=Z,880nm,19.1s,MS5.2
VNA1 Neumayer--Stat 92.28 175 *e*P **P 08 24 15.0 +1.2**
VNA1 *e* 08 24 15.3
VNA1 *e* 08 29 03.5
LCO Las Campanas 92.35 121 *e*P **P 08 24 15.8 +0.7**
comp=Z,22nm,1.3s,mb5.3
LCO LR LR
comp=Z,952nm,19.0s,MS5.3
NNA Nana 92.37 103 PFAKE 08 24 30.0 +15
NNA LR LR
comp=Z,580nm,19.0s,MS5.0
VBMS Vicksburg 92.53 57 PFAKE 08 24 30.0 +14
VBMS LR LR
comp=Z,740nm,20.0s,MS5.1
MAIT Maitri 92.75 182 *e*P **P 08 24 16.8 +0.8**
NVL N'lazarevskaya 92.75 182 ⇓*i*P **P 08 24 15.0 -1.0**
NVL *e**PP pP 08 24 22.0 -5.2
NVL *e*S SKSac 08 34 50.9 +4.1
NVL *e*PS PS 08 36 26.1 -7.7
NVL *e*SS SS 08 41 33.6 +3.4
NVL pmax pmax
comp=Z,34nm,0.9s,mb5.8
CD2 Chengdu 92.81 301 P **P 08 24 19.3 +2.3**
CD2 pP pP 08 24 29.9 +1.8
CD2 sP sP 08 24 33.8 +1.7
CD2 PP PP 08 28 04.3 +4.5
CD2 SKS 08 34 48.9
CD2 S S 08 35 19.5 -0.7
CD2 sS sS 08 35 37.1 -1.6
CD2 pmax pmax
comp=Z,30nm,1.4s,mb5.5
CD2 pmax pmax
comp=Z,290nm,8.8s
CD2 LR LR
comp=N,410nm,16.7s
CD2 LR LR
comp=Z,570nm,19.6s,MS5.0
FFC Flin Flon 92.90 33 *i*P **P 08 24 16.7 -0.1**
FFC Flin Flon 92.90 33 *e*P **P 08 24 16.1 -0.8**
comp=Z,52nm,1.6s,mb5.7
FFC LR LR
comp=Z,1µm,19.0s,MS5.4
CHRT Chiangrai 93.03 290 P **P 08 24 20.0 +1.7**
comp=Z,237nm,1.0s,mb6.6
CIT Chita 93.18 324 *e*P **P 08 24 19.4 +1.3**
CIT *e* pP 08 24 29.0 -0.3
CIT *e* 08 24 34.0
CIT pmax pmax
comp=Z,149nm,1.9s,mb6.1
CMAR Chiang Mai Arr 93.40 288 P **P 08 24 20.6 +0.6**
comp=Z,21nm,0.9s,mb5.5,baz=98,slow=2.6,SNR=92
CMAR LR LR 09 01 37.1
comp=Z,509nm,21.1s,MS5.0,baz=280,slow=33
HBAR Harrisburg 93.45 54 *e*P **P 08 24 19.6 -0.2**
CHG Chiang Mai 93.50 288 ⇓P **P 08 24 22.9 +2.5**
comp=Z,44nm,0.9s,mb5.9
CHTO Chiang Mai 93.50 288 *e*P **P 08 24 21.3 +0.9**
CHTO pmax pmax
comp=Z,62nm,1.3s,mb5.9
CHTO MLR MLR
comp=Z,618nm,22.0s,MS5.0
CHTO Chiang Mai 93.50 288 *e*P **P 08 24 21.3 +0.9**
comp=Z,62nm,1.3s,mb5.9
CHTO LR LR
comp=Z,618nm,22.0s,MS5.0
SCIA State Center 93.56 47 *e*P **P 08 24 19.1 -1.1**
comp=Z,89nm,1.7s,mb5.9
SCIA LR LR
comp=Z,1µm,21.0s,MS5.4
AGMN Agassiz Nation 93.96 41 *e*P **P 08 24 22.2 +0.3**
comp=Z,36nm,1.6s,mb5.6
AGMN *e*pP pP 08 24 28.3 -4.7
AGMN LR LR
comp=Z,1µm,20.0s,MS5.3
OXF Oxford 94.11 55 PFAKE 08 24 30.0 +7.1
OXF LR LR
comp=Z,2µm,20.0s,MS5.5
LZH Lanzhou 94.29 306 P **P 08 24 26.3 +2.6**
LZH pP pP 08 24 36.6 +1.7
LZH sP sP 08 24 39.4 +0.5
LZH PP PP 08 28 16.0 +4.7
LZH SKS 08 34 58.3
LZH S S 08 35 33.5 +0.5
LZH sS sS 08 35 48.5 -3.1
LZH pmax pmax
comp=Z,92nm,1.4s,mb6.0
LZH pmax pmax
comp=Z,240nm,4.0s
LZH LR LR
comp=E,730nm,16.4s
LZH LR LR
comp=Z,980nm,17.6s,MS5.3
FVM French Village 94.36 52 *e*P **P 08 24 23.5 -0.5**
FVM pmax pmax
comp=Z,44nm,1.5s,mb5.7
FVM French Village 94.36 52 *e*P **P 08 24 23.5 -0.5**
comp=Z,44nm,1.5s,mb5.7
OTAV Otavalo 94.39 91 PFAKE 08 24 40.0 +15
OTAV LR LR
comp=Z,679nm,20.0s,MS5.1
ULM Lac du Bonnet 94.63 39 P **P 08 24 23.6 -1.3**
comp=Z,3.2nm,0.7s,mb4.9,baz=213,slow=7.1,SNR=2.4
ULM LR LR 09 01 36.9
comp=Z,3µm,19.6s,MS5.7,baz=249,slow=32
BRAL Brewton 95.00 59 PFAKE 08 24 40.0 +13
BRAL LR LR
comp=Z,855nm,19.0s,MS5.2
UTMT University of 95.07 54 *e*P **P 08 24 25.6 -1.6**
SIUC Southern Illin 95.20 52 *e*P **P 08 24 27.5 -0.3**
TRQA Tornquist 95.52 132 PFAKE 08 24 40.0 +11
TRQA LR LR
comp=Z,2µm,20.0s,MS5.5
BCIP Isla Barro Col 95.55 82 PFAKE 08 24 40.0 +10
BCIP LR LR
comp=Z,447nm,19.0s,MS5.0
LRAL Lakeview Retre 95.61 57 PFAKE 08 24 40.0 +10
LRAL LR LR
comp=Z,635nm,19.0s,MS5.1
ULN Ulaanbaatar 95.63 318 *e*P **P 08 24 29.9 +0.4**
ULN pmax pmax
comp=Z,20nm,1.4s,mb5.3
ULN MLR MLR
comp=Z,557nm,22.0s,MS5.0
ULN Ulaanbaatar 95.63 318 *e*P **P 08 24 29.9 +0.3**
comp=Z,20nm,1.4s,mb5.3
ULN LR LR
comp=Z,557nm,22.0s,MS5.0

WVT Waverly 95.81 54 PFAKE 08 24 40.0 +9.4
WVT LR LR
comp=Z,2µm,20.0s,MS5.5
HDIL Hopedale 95.96 50 PFAKE 08 24 40.0 +8.8
HDIL LR LR
comp=Z,2µm,20.0s,MS5.6
JFWS Jewell Farm 95.96 47 *e*P **P 08 24 30.1 -1.0**
JFWS pmax pmax
comp=Z,39nm,1.4s,mb5.6
JFWS MLR MLR
comp=Z,1µm,20.0s,MS5.5
JFWS Jewell Farm 95.96 47 *e*P **P 08 24 30.1 -1.1**
comp=Z,39nm,1.4s,mb5.6
JFWS LR LR
comp=Z,1µm,20.0s,MS5.5
SONM Songino Array 96.05 318 P **P 08 24 31.4 0.0**
comp=Z,5.0nm,0.8s,mb5.0,baz=128,slow=4.5,SNR=16
SONM LR LR 09 03 06.9
comp=Z,507nm,21.9s,MS5.0,baz=110,slow=33
TIXI Tiksi 96.31 344 *e*P **P 08 24 31.8 -0.3**
TIXI *e* 08 28 29.7
TIXI *e*S SKSac 08 35 06.4 +0.9
TIXI *e* 08 35 49.8
TIXI *e*SP SP 08 37 13.4 +5.0
TIXI pmax pmax
comp=Z,15nm,1.4s,mb5.2
TIXI MLR MLR
comp=Z,270nm,18.0s,MS4.8
TIXI Tiksi 96.31 344⇑*e*P **P 08 24 32.1 0.0**
TIXI LR LR
comp=Z,694nm,20.0s,MS5.1
EYMN Ely 96.61 42 P **P 08 24 34.6 +0.7**
comp=Z,28nm,1.6s,mb5.4
EYMN LR LR
comp=Z,1µm,20.0s,MS5.3
WCI Wyandotte Cave 97.56 52 PFAKE 08 24 50.0 +11
WCI LR LR
comp=Z,1µm,20.0s,MS5.4
GTA Gaotai 98.28 309 ⇓P **P 08 24 43.3 +1.6**
GTA PP PP 08 28 48.1 +6.1
GTA SKS 08 35 17.5
GTA S S 08 36 07.8 +0.6
GTA sS sS 08 36 26.0 +0.2
GTA pmax pmax
comp=Z,14nm,1.6s,mb5.2
GTA pmax pmax
comp=Z,150nm,7.8s
GTA LR LR
comp=N,210nm,19.9s,MS4.8
GTA LR LR
comp=E,180nm,19.3s,MS4.8
GTA LR LR
comp=Z,260nm,24.4s
GOGA Godfrey 98.57 58 PFAKE 08 24 50.0 +6.8
GOGA LR LR
comp=Z,745nm,20.0s,MS5.2
TLY Talaya 98.86 321 *e*P **P 08 24 43.6 -0.4**
TLY *e* 08 35 15.9
TLY *e*SS SS 08 43 08.5 +9.4
TLY pmax pmax
comp=Z,6.0nm,0.9s,mb5.1
TLY Talaya 98.86 321 *e*P **P 08 24 43.2 -0.8**
comp=Z,4.1nm,0.8s,mb5.0
TLY LR LR
comp=Z,678nm,20.0s,MS5.1
TKL Tuckaleechee C 98.87 56 LR LR 09 06 47.3
comp=Z,744nm,18.1s,MS5.2,baz=253,slow=34
DWPF Disney 98.98 63 PFAKE 08 25 00.0 +15
DWPF LR LR
comp=Z,375nm,19.0s,MS4.9
LPAZ La Paz 99.00 110 P **P 08 24 48.3 +2.8**
comp=Z,1.5nm,1.1s,mb4.4,baz=243,slow=4.5,SNR=3.5
PKKP PKKPbc 08 41 12.9 +1.6
LPAZ comp=Z,1.6nm,0.8s,baz=50,slow=3.7,SNR=4.8
LPAZ LR LR 08 59 27.1
comp=Z,739nm,21.2s,MS5.2,baz=255,slow=29
ROSC El Rosal 99.63 88 LR LR 09 00 24.1
comp=Z,371nm,21.3s,MS4.9,baz=200,slow=30
MTDJ Mount Denham 100.06 74 PFAKE 08 25 00.0 +11
MTDJ LR LR
comp=Z,697nm,19.0s,MS5.2
AAM Ann Arbor 100.50 49 PFAKE 08 25 00.0 +8.6
AAM LR LR
comp=Z,2µm,19.0s,MS5.6
ACSO Alum Creek Sta 100.54 51 PFAKE 08 25 00.0 +8.4
ACSO LR LR
comp=Z,2µm,19.0s,MS5.6
NHSC New Hope 101.18 59 PFAKE 08 25 10.0 +16
NHSC LR LR
comp=Z,997nm,19.0s,MS5.3
BLA Blacksburg 101.85 55 PFAKE 08 25 10.0 +13
BLA LR LR
comp=Z,1µm,20.0s,MS5.4
GTBY Guantanamo Bay 102.69 73 PFAKE 08 25 10.0 +8.9
GTBY LR LR
comp=Z,458nm,20.0s,MS5.0
MCWV Mont Chateau 102.78 52 PFAKE 08 25 10.0 +8.5
MCWV LR LR
comp=Z,2µm,20.0s,MS5.5
LSA Lhasa 103.05 297 PFAKE 08 25 20.0 +17
LSA LR LR
comp=Z,489nm,21.0s,MS5.0
ERPA Erie 103.13 50 PFAKE 08 25 10.0 +6.9
ERPA LR LR
comp=Z,2µm,20.0s,MS5.7
CNNC Cliffs of the 103.47 57 PFAKE 08 25 20.0 +15
CNNC LR LR
comp=Z,1µm,19.0s,MS5.5
SDV Santo Domingo 104.24 85 PFAKE 08 25 20.0 +12
SDV LR LR
comp=Z,175nm,20.0s,MS4.6
CBN Corbin 104.41 54 PFAKE 08 25 20.0 +11
CBN LR LR
comp=Z,1µm,21.0s,MS5.5
SSPA Standing Stone 104.43 52 PFAKE 08 25 20.0 +11
SSPA LR LR
comp=Z,1µm,19.0s,MS5.4
SDDR Presa de Saban 106.00 75 PFAKE 08 29 40.0 +11
SDDR LR LR
comp=Z,1µm,21.0s,MS5.4
BINY Binghamton 106.08 50 PFAKE 08 29 40.0 +12
BINY LR LR
comp=Z,2µm,20.0s,MS5.7
GRTK Grand Turk 106.67 72 PFAKE 08 29 40.0 +10
GRTK LR LR
comp=Z,700nm,19.0s,MS5.2
LONY Lake Ozonia 107.40 48 PFAKE 08 29 40.0 +9.3
LONY LR LR
comp=Z,1µm,22.0s,MS5.4
NCB Newcomb 107.58 48 PFAKE 08 29 40.0 +9.0
NCB LR LR
comp=Z,930nm,20.0s,MS5.3
WMQ Urumqi 108.00 311 Pdif Pdif 08 25 25.1 +0.3
WMQ PP PP 08 29 57.4 +2.8
WMQ S Sdif 08 37 24.3 -3.7
WMQ SS SS 08 45 04.8 -0.6
WMQ AMB AMB
comp=Z,230nm,4.6s
WMQ LR LR
comp=N,330nm,25.4s,MS5.1
WMQ LR LR
comp=E,540nm,26.0s,MS5.1
WMQ LR LR
comp=Z,370nm,23.0s,MS4.9
LBNH Lisbon 109.26 48 PFAKE 08 29 50.0 +16
LBNH LR LR
comp=Z,1µm,20.0s,MS5.5
ZALV Zalesovo Beam 110.46 322 PKiKP PKiKP 08 29 35.5 -0.6
comp=Z,3.6nm,1.0s,baz=151,slow=1.8,SNR=5.2
ZALV Zalesovo Beam 110.46 322 PKPdf PKiKP 08 29 35.5 -0.6
SJG San Juan 110.59 77 PFAKE 08 29 50.0 +13
SJG LR LR
comp=Z,486nm,20.0s,MS5.1
PKME Peaks-Kenny Pk 111.19 47 PFAKE 08 29 50.0 +12
PKME LR LR
comp=Z,2µm,20.0s,MS5.6
MK31 Makanchi Array 111.99 314 *e*PKIKP PKiKP 08 29 39.1 -0.1
MKAR Makanchi Array 111.99 314 Pdiff Pdif 08 25 42.2 -0.3
comp=Z,0.3nm,0.2s,baz=89,slow=5.9,SNR=6.2
MKAR PKiKP PKiKP 08 29 39.0 -0.2
comp=Z,4.4nm,0.7s,baz=64,slow=2.8,SNR=28
MKAR PKKPbc PKKPbc 08 40 31.1 -1.5
comp=Z,0.2nm,0.2s,baz=336,slow=3.2,SNR=3.2
MKAR PKKP PKKPdf 08 40 54.1 +1.9
comp=Z,0.3nm,0.3s,baz=260,slow=5.0,SNR=4.4
MKAR Makanchi Array 111.99 314*c i*PKIKP PKiKP 08 29 39.0 -0.2
MKAR pmax pmax
comp=Z,4.0nm,0.7s
MKAR Makanchi Array 111.99 314 Pdif Pdif 08 25 42.2 -0.3
MKAR PKPdf PKiKP 08 29 39.0 -0.2
MKAR PKKPbc PKKPbc 08 40 31.1 -1.5
MKAR PKKP PKKPdf 08 40 54.1 +1.9
SPB Sao Paulo 113.44 126 PFAKE 08 29 50.0 +7.2
SPB LR LR
comp=Z,890nm,20.0s,MS5.4
GRGR Grenville 113.59 84 PFAKE 08 30 00.0 +17
GRGR LR LR
comp=Z,320nm,20.0s,MS4.9
BBSR BB Station 113.95 62 PFAKE 08 30 00.0 +17
BBSR LR LR
comp=Z,673nm,20.0s,MS5.2
KURK Kurchatov 114.35 319⇓*i*PKIKP PKiKP 08 29 44.2 +0.6
KURK pmax pmax
comp=Z,14nm,1.7s
KURK Kurchatov 114.35 319 *e*PKPdf PKiKP 08 29 43.8 +0.2
KURK LR LR
comp=Z,544nm,20.0s,MS5.2
ANWB Willy Bob 114.58 78 PFAKE 08 30 00.0 +15
ANWB LR LR
comp=Z,377nm,20.0s,MS5.0
FDF Fort de France 114.62 81 PFAKE 08 30 00.0 +15
FDF LR LR
comp=Z,299nm,22.0s,MS4.8
KSH Kashi 116.55 306 PKP PKPdf 08 29 50.6 +2.4
KSH sPKP 08 30 04.9
KSH PKS 08 33 25.4
KSH SKS SKSdf 08 36 57.9 +0.1
KSH AMB AMB
comp=Z,130nm,5.1s
KSH LR LR
comp=N,1µm,16.6s,MS5.8
KSH LR LR
comp=E,810nm,15.1s,MS5.8
TKM2 Tokmak 2 116.78 310 PFAKE 08 30 00.0 +11
TKM2 LR LR
comp=Z,351nm,20.0s,MS5.0
AAK Ala-Archa 117.60 310 PKP PKPdf 08 29 51.2 +1.0
comp=Z,1.9nm,0.5s,baz=250,slow=4.6,SNR=6.6
AAK Ala-Archa 117.60 310*c i*PKIKP PKPdf 08 29 51.1 +1.0
AAK pmax pmax
comp=Z,2.0nm,0.7s
AAK Ala-Archa 117.60 310 PKP PKPdf 08 29 51.2 +1.0
AAK LR LR
comp=Z,458nm,19.0s,MS5.1
UCH Uchtor 117.60 309 *e*PKPdf PKPdf 08 29 50.7 +0.5
UCH LR LR
comp=Z,528nm,20.0s,MS5.2
KBS Kingsbay 117.64 359 *e*PKPdf PKPdf 08 29 50.5 +1.3
KBS *e* 08 30 53.5
KBS *i* 08 40 40.1
KBS *e*SS SS 08 47 14.2 +3.2
KBS Kingsbay 117.64 359⇑*i*PKIKP PKPdf 08 29 48.6 -0.7
KBS pmax pmax
comp=Z,34nm,2.5s
KBS Kingsbay 117.64 359 *e*P PKPdf 08 29 50.7 +1.4
KBS *e* 08 31 13.4
KBS *i* 08 40 40.1
KBS LR LR
comp=Z,340nm,20.0s,MS5.0
EKS2 Erkin-Say 118.13 310 *e*PKPdf PKPdf 08 29 51.5 +0.4
EKS2 LR LR
comp=Z,371nm,20.0s,MS5.0
AML Almayashu 118.22 309 PFAKE 08 30 00.0 +8.7
AML LR LR
comp=Z,516nm,20.0s,MS5.2
SPITS Spitsbergen Ar 118.27 358 PKP PKPdf 08 29 50.8 +0.3
comp=Z,9.1nm,0.7s,baz=150,slow=11,SNR=8.5
NIL Nilore 118.65 300 PFAKE 08 30 00.0 +7.5
NIL LR LR
comp=Z,119nm,21.0s,MS4.5
BVAR Borovoye Array 119.11 322 PKP PKPdf 08 29 52.6 -0.1
comp=Z,8.5nm,0.8s,baz=75,slow=1.7,SNR=37
BRVK Borovoye 119.17 322⇓*i*PKIKP PKPdf 08 29 52.0 -0.8
BRVK pmax pmax
comp=Z,19nm,1.2s
BRVK Borovoye 119.17 322 *e*PKPdf PKPdf 08 29 51.9 -0.9
BRVK LR LR
comp=Z,641nm,20.0s,MS5.2
KBL Kabul 122.15 301 *e*PKIKP PKPdf 08 29 59.7 +0.6
SVE Sverdlovsk 123.40 328⇓*i*PKIKP PKPdf 08 30 02.3 +1.5
SVE *e* 08 31 44.5
SVE pmax pmax
comp=Z,16nm,1.0s
SVE MLR MLR
comp=Z,638nm,20.0s,MS5.3
SOKR Solikamsk 124.07 332*c i*PKIKP PKPdf 08 30 02.8 +0.8
SOKR pmax pmax
comp=Z,30nm,0.9s
SOKR MLR MLR
comp=Z,660nm,21.0s,MS5.3
ARU Arti 124.61 328 *i* PKIKP PKPdf 08 30 03.4 +0.2
ARU 08 37 01.1
ARU MLR MLR
comp=Z,570nm,19.0s,MS5.3
ARU Arti 124.61 328 *e*PKPdf PKPdf 08 30 02.8 -0.4
ARU LR LR
comp=Z,608nm,20.0s,MS5.3
KEV Kevo 125.48 352 PFAKE 08 30 20.0 +16
KEV LR LR
comp=Z,734nm,19.0s,MS5.4
LVZ Lovozero 125.80 348⇑*i*PKIKP PKPdf 08 30 06.1 +1.0
LVZ MLR MLR
comp=Z,787nm,20.0s,MS5.4
ARCES ARCESS Array B 125.89 352 PKP PKPdf 08 30 05.7 +0.5
comp=Z,20nm,0.7s,baz=342,slow=2.7,SNR=36
ARCES ARCESS Array B 125.89 352 PKP PKPdf 08 30 05.7 +0.5
ARE0 ARCESS Array S 125.89 352 *e*PKPdf PKPdf 08 30 05.3 +0.1
APA Apatity 126.33 348⇑*i*PKIKP PKPdf 08 30 07.0 +0.8
APA pmax pmax
comp=Z,14nm,0.8s
ABKAR Abkulak array 126.43 319 *e*PKPdf PKPdf 08 30 07.4 +0.5
TRO Tromso 126.52 355 *e*PP PP 08 32 03.9 +1.7
ABPO Ambohimpanom 126.92 230 PFAKE 08 30 20.0 +11
ABPO LR LR
comp=Z,1µm,19.0s,MS5.7
AKTK Aktyubinsk 127.22 321 PKP PKPdf 08 30 09.2 +0.9
AKTO Aktyubinsk 127.22 321 PKP PKPdf 08 30 09.2 +0.9
comp=Z,4.4nm,0.8s,baz=69,slow=2.6,SNR=16
MSEY Mahe Island 127.65 250 PFAKE 08 30 20.0 +10
MSEY LR LR
comp=Z,1µm,20.0s,MS5.6
BORG Borgarnes 128.24 15 PFAKE 08 30 20.0 +10
BORG LR LR
comp=Z,1µm,20.0s,MS5.6
JOF Joensuu 130.77 346 *e*PKIKP PKPdf 08 30 15.0 +0.3
JOF Joensuu 130.77 346 *ep* PKPdf 08 30 15.0 +0.3
comp=Z,27nm,1.0s
BOSA Boshof 131.68 202 PKP PKPdf 08 30 19.5 +1.9
comp=Z,7.6nm,1.0s,baz=270,slow=2.0,SNR=3.5
RCBR Riachuelo 132.03 114 PFAKE 08 30 30.0 +11
RCBR LR LR
comp=Z,1µm,20.0s,MS5.5
KAF Kangasniemi 132.59 348 *e*PKIKP PKPdf 08 30 17.4 -0.8
KAF Kangasniemi 132.59 348 *ep* PKPdf 08 30 17.4 -0.8
comp=Z,13nm,0.6s
FINES FINESS Array B 133.24 348 PKhKP PKPpre 08 30 14.8
comp=Z,2.6nm,0.7s,baz=45,slow=1.3,SNR=5.0
FINES PKP PKPdf 08 30 20.4 +1.0
comp=Z,14nm,0.8s,baz=77,slow=4.1,SNR=23
MOS Moscow 134.54 336 *e*PKIKP PKPdf 08 30 21.9 -0.2
OBN Obninsk 135.41 336 *i* PKIKP PKPdf 08 30 22.8 -0.9
OBN *e* 08 32 58.7
OBN pmax pmax
comp=Z,29nm,1.2s
OBN MLR MLR
comp=Z,700nm,21.0s,MS5.4
OBN Obninsk 135.41 336⇓*e*PKP PKPdf 08 30 22.8 -0.9
OBN LR LR
comp=Z,700nm,21.0s,MS5.4
NB2 NORSAR Subarra135.56 357 PKPdf PKPpre 08 30 14.8
comp=Z,48nm,2.0s,baz=5.7,slow=1.9
NB2 NORSAR Subarra135.56 357 PKPdf PKPpre 08 30 14.8
baz=5.7,slow=1.9
NOA NORSAR Array B 135.56 357 PKhKP PKPpre 08 30 11.8
comp=Z,0.9nm,0.7s,baz=5.1,slow=3.6,SNR=3.4
NOA PKP PKPdf 08 30 24.1 +0.3
comp=Z,1.8nm,0.7s,baz=14,slow=3.7,SNR=4.0
NOA NORSAR Array B 135.56 357 PKIKP PKPdf 08 30 24.1 +0.3
VSU Vasula 135.77 345*d i*PKIKP PKPdf 08 30 26.5 +2.2
MAK Makhachkala 136.77 316 *e*PKIKP PKPdf 08 30 25.8 -0.8
MAK *e*PS PS 08 43 33.4 -2.4
MAK pmax pmax
comp=Z,23nm,0.3s
MAK MLR MLR
comp=Z,732nm,22.0s,MS5.4
VSR Storozhevoye 137.04 331 *e*PKHKP PKPpre 08 30 20.8
VSR pmax pmax
comp=N,110nm,4.0s
VSR pmax pmax
comp=E,160nm,4.0s
VSR pmax pmax
comp=Z,220nm,4.0s
VSR MLR MLR
comp=N,390nm,19.0s,MS5.3
VSR MLR MLR
comp=E,310nm,19.0s,MS5.3
VSR MLR MLR
comp=Z,590nm,19.0s,MS5.3
GOF Gofitskoye 138.63 321 *e*PKHKP PKPpre 08 30 22.1
KIV Kislovodsk 139.42 320 *e*PKHKP PKPdf 08 30 26.7 -4.8
KIV *e*SS SS 08 51 36.5 -5.4
KIV pmax pmax
comp=Z,13nm,1.2s
KIV Kislovodsk 139.42 320⇓*e*PKP PKPdf 08 30 29.2 -2.3
KIV LR LR
comp=Z,649nm,20.0s,MS5.4
GNI Garni 139.83 313⇓*e*PKIKP PKPdf 08 30 31.5 -0.8
GNI MLR MLR
comp=Z,482nm,21.0s
ESK Eskdalemuir 140.61 9 PFAKE 08 30 50.0 +17
ESK LR LR
comp=Z,1µm,21.0s,MS5.6
SUW Suwalki 140.65 345 *e*PKP PKPdf 08 30 34.8 +1.4
SUW Suwalki 140.65 345 *e*PKPdf PKPdf 08 30 34.0 +0.7
SOC Sochi 141.43 321 *e*PKHKP PKPpre 08 30 19.0
SOC MLR MLR
comp=Z,777nm,21.0s,MS5.4
AKASG Malin Array Be 141.64 337 PKhKP PKPpre 08 30 29.4
comp=Z,3.5nm,0.6s,baz=44,slow=4.2,SNR=14
AKASG PKP PKPdf 08 30 35.0 -0.3
comp=Z,5.3nm,0.7s,baz=37,slow=3.8,SNR=22
AKASG Malin Array Be 141.64 337 *i* PKHKP PKPpre 08 30 29.4
AKASG 08 30 35.0
AKASG pmax pmax
comp=Z,4.0nm,0.6s
AKASG pmax pmax
comp=Z,5.0nm,0.7s
AKASG Malin Array Be 141.64 337 PKP PKPdf 08 30 35.0 -0.3
AKBB Malin Array Si 141.64 337 *e*PKIKP PKPdf 08 30 32.1 -3.2
KIEV Kiev 141.65 337 *e*PKHKP PKPpre 08 30 31.0
KIEV MLR MLR
comp=Z,720nm,20.0s,MS5.4
LSZ Lusaka 142.03 214 PFAKE 08 30 50.0 +13
LSZ LR LR
comp=Z,1µm,19.0s,MS5.7
ANN Anapa 142.05 324 *i* PKIKP PKPdf 08 30 35.0 -1.2
ANN *e* 08 37 45.2
ANN pmax pmax
comp=Z,39nm,1.4s
BHD Baghdad 142.55 303 *ex* x 08 30 29.0
BHD *ex* x 08 34 14.0
BSEG Bad Segeberg 142.70 357 *e*PKPdf PKPdf 08 30 36.6 -0.4
TSUM Tsumeb 142.90 197 *e*P PKPdf 08 30 36.1 -2.4
TSUM LR LR
comp=Z,2µm,19.0s,MS5.9
PTK Pertek 144.09 315 *e*P PKPdf 08 30 39.6 -0.4
NRDL Niedersach Rie 144.15 357 *e*PKPbc PKPdf 08 30 38.0 -1.6
LVV L'vov 144.16 341 *e*PKHKP PKPdf 08 30 37.6 -2.1
SVRC Sivrice-ELAZID 144.40 314 *e*P PKPdf 08 30 40.8 +0.3
IBBN Ibbenburen 144.41 359 *e*PKPbc PKPdf 08 30 40.0 -0.1
ELZG Elazig 144.56 314⇑*i*P PKPdf 08 30 41.0 +0.2
KWP Kalwaria Pacla 144.73 342 *e*PKPc PKPdf 08 30 39.9 -0.8
KWP *e* 08 30 48.2
KWP Kalwaria Pacla 144.73 342 *e*PKIKP PKPdf 08 30 40.2 -0.5
KWP MLR MLR
comp=Z,1µm,20.0s,MS5.6
KWP Kalwaria Pacla 144.73 342 *e*PKPdf PKPdf 08 30 40.2 -0.6
KWP LR LR
comp=Z,1µm,20.0s,MS5.6
KWP Kalwaria Pacla 144.73 342⇑*i*P PKPdf 08 30 40.0 -0.7
WTSB Winterswijk 144.76 0 *e*PKP PKPdf 08 30 38.7 -2.0
comp=Z,39nm,1.6s
KIS Kishinev 144.77 334 *e*PKP PKPdf 08 30 38.0 -2.9
comp=Z,300nm,1.6s
KIS Kishinev 144.77 334 *e*PP PP 08 33 55.0 -2.6
KIS LRM 09 03 24.0
comp=Z,700nm,22.0s
KIS Kishinev 144.77 334 *e*PKHKP PKPdf 08 30 38.0 -2.9
KIS *e* 08 33 55.0
KIS pmax pmax
comp=Z,250nm,1.6s
KIS pmax pmax
comp=Z,600nm,13.0s
KIS pmax pmax
comp=Z,700nm,14.0s
CLZ Clausthal 144.78 356 *e*PKPbc PKPdf 08 30 39.5 -1.3
OJC Ojcow 144.96 346 *e*PKPdf PKPdf 08 30 38.2 -2.9
OJC *ep*PKPdf pPKPdf 08 30 51.7 -0.9
MYA Malataya 145.03 314 *e*P PKPbc 08 30 43.3 +2.3
KSP Ksiaz 145.08 350 *e*PKPc PKPbc 08 30 40.9 +0.1
KSP Ksiaz 145.08 350 *e*PKIKP PKPdf 08 30 41.0 -0.3
KSP *e* 08 30 48.7
KSP *e* 08 33 57.7
KSP MLR MLR
comp=Z,2µm,21.9s,MS5.8
KSP Ksiaz 145.08 350 *e*PKP PKPdf 08 30 41.0 -0.3
KSP *ep*PKP pPKPdf 08 30 48.7 -4.1
KSP *e*PP PP 08 33 57.7 -1.4
KSP LR LR
comp=Z,2µm,21.9s,MS5.8
CLL Collm 145.09 353 *e*PKPbc PKPbc 08 30 40.5 -0.3
CLL Collm 145.09 353⇓*i*PKIKP PKPdf 08 30 40.8 -0.5
CLL pmax pmax
comp=Z,40nm,0.9s
CLL MLR MLR
comp=Z,600nm,18.5s,MS5.4
CLL Collm 145.09 353⇓*i*PKP PKPdf 08 30 40.8 -0.5
CLL *i* PKP PKPdf 08 30 44.4 +3.1
CLL LR LR
comp=Z,600nm,18.5s,MS5.4
CLL Collm 145.09 353⇓*i*PKPdf PKPdf 08 30 40.8 -0.5
comp=Z,40nm,0.9s
CLL *i* PKiKP PKiKP 08 30 44.4 -0.8
comp=Z,32nm,0.7s
CLL *e* 08 30 57.0
CLL *e*PP PP 08 34 01.0 +1.9
CLL *e*PPP 08 37 18.0
CLL *e*PSKS 08 44 14.0
CLL *e*PPS 08 46 48.0
CLL *e*SS SS 08 52 54.0 +8.0
CLL *e*PSS 08 53 36.0
CLL *e* 08 54 11.0
CLL *e*(SSS) 08 58 05.0
CLL *e*(SSSS) 09 03 00.0
CLL Lm 09 40 00.0
comp=N,600nm,19.0s
CLL Lm 09 40 00.0
comp=E,200nm,20.6s
CLL Lm 09 40 00.0
comp=Z,600nm,18.5s
KVT Kavak 145.10 320 *e*P PKPbc 08 30 42.4 +1.3
SCER sogukcermik 145.10 318⇑*i*P PKPbc 08 30 42.6 +1.4
DARE Darende-Malaty 145.13 316 *e*P PKPbc 08 30 44.8 +3.5
SVSK Karacayir 145.15 318 *e*P PKPbc 08 30 43.1 +1.7
URFA Urfa 145.18 313 *e*P PKPbc 08 30 42.9 +1.3
DIKM Dikmen 145.24 322 *e*P PKPbc 08 30 42.7 +1.1
BUG Bochum--Univer 145.28 360 *e*PKPbc PKPbc 08 30 41.4 0.0
STHS Stebnicka Huta 145.33 344 *e*PKIKP PKPdf 08 30 42.6 +0.8
STHS Stebnicka Huta 145.33 344 *e*PKP PKPdf 08 30 42.6 +0.8
KMBO Kilima Mbogo 145.35 242 PKPbc PKPbc 08 30 43.7 +0.9
comp=Z,67nm,0.9s,baz=360,slow=23,SNR=83
KMBO Kilima Mbogo 145.35 242 PKIKP PKPdf 08 30 43.7 +0.7
KMBO pmax pmax
comp=Z,67nm,0.9s
KMBO Kilima Mbogo 145.35 242 *e*PKPbc PKPbc 08 30 44.8 +1.9
KMBO LR LR
comp=Z,834nm,19.0s,MS5.5
AKCD Akcadag 145.39 315⇑*i*P PKPbc 08 30 43.2 +1.0
BRG Berggiesshubel 145.41 352 *e*PKPbc PKPbc 08 30 41.7 -0.1
BRG Berggiesshubel 145.41 352 *i* PKP PKPdf 08 30 41.9 0.0
comp=Z,27nm,1.0s
BRG *e* 08 30 55.3
comp=Z,70nm,1.4s
BRG PP PP 08 34 03.0 +2.0
BRG SS SS 08 53 41.0 +51

BRG
comp=N,382nm,16.0s
BRG
comp=E,307nm,16.2s
BRG
comp=Z,564nm,14.0s
BRG Berggiesshubel 145.41 352 *i* PKP2 PKPab 08 30 41.9 -0.1
BRG 08 34 03.0
BRG SS SS 08 53 41.0 +51
BRG pmax pmax
comp=Z,16nm,1.0s
BRG MLR MLR
comp=N,229nm,16.0s,MS5.2
BRG MLR MLR
comp=E,184nm,16.2s,MS5.2
BRG MLR MLR
comp=Z,338nm,14.0s,MS5.3
LEOM Leova 145.43 334 ⇓PKIKP PKPdf 08 30 42.8 +0.8
LEOM Leova 145.43 334 ⇓*i*P PKPbc 08 30 42.8 +0.8
RAC Raciborz 145.45 347 *e*PKIKP PKPdf 08 30 42.8 +0.8
UPC Upice 145.46 350 *e*PKP PKPdf 08 30 42.6 +0.6
UPC *e* 08 30 50.7
UPC Upice 145.46 350 *e*PKP PKPdf 08 30 42.6 +0.6
UPC *ex* x 08 30 50.7
DPC Dobruska-Polom 145.55 349 *e*PKIKP PKPdf 08 30 42.9 +0.8
DPC *e* 08 30 51.3
DPC MLR MLR
comp=Z,700nm,19.6s,MS5.4
DPC Dobruska-Polom 145.55 349 *e*PKP PKPdf 08 30 42.9 +0.8
DPC *e* 08 30 51.3
DPC *e* 08 53 48.9
DPC LR LR
comp=Z,700nm,19.6s,MS5.4
DPC Dobruska-Polom 145.55 349 *e*PKP PKPdf 08 30 42.9 +0.8
DPC *ex* x 08 30 51.3
DPC *ex* x 08 53 48.9
DPC AMS AMS 09 34 10.0
comp=Z,700nm,19.6s
NIE Niedzica 145.57 345 *e*PKP PKPdf 08 30 43.2 +1.0
BOYT Boyabat 145.59 322 *e*P PKPdf 08 30 45.6 +3.1
BUR08 Bucovina Ar. S 145.65 338 *e*PKPbc PKPbc 08 30 43.8 +1.1
PVCC Panska Ves 145.66 351 *e*PKP2 PKPab 08 30 43.5 +0.6
PVCC MLR MLR
comp=Z,900nm,22.9s,MS5.5
PVCC Panska Ves 145.66 351 *e*PKP PKPdf 08 30 43.5 +1.2
PVCC *e* 08 30 50.0
PVCC LR LR
comp=Z,900nm,22.9s,MS5.5
PVCC Panska Ves 145.66 351 *e*PKP PKPdf 08 30 43.5 +1.2
PVCC *ex* x 08 30 50.0
PVCC AMS AMS 09 33 50.0
comp=Z,900nm,22.9s
BURAR Bucovina Array 145.67 338 ⇑PKIKP PKPdf 08 30 43.5 +1.1
BURAR Bucovina Array 145.67 338 ⇑*i*P PKPdf 08 30 43.5 +1.1
OKC Ostrava-Krasne 145.69 347 *e*PKP PKPdf 08 30 43.2 +0.8
OKC AMS AMS 09 30 10.0
comp=Z,600nm,24.1s
CRVS Cervenica-Dubn 145.74 343 *e*PKIKP PKPdf 08 30 43.1 +0.6
CRVS Cervenica-Dubn 145.74 343 *e*PKP PKPdf 08 30 43.1 +0.6
UZH Uzhgorod 145.75 342 *e*PKIKP PKPdf 08 30 43.1 +0.6
UZH *e* 08 30 51.7
UZH *e* 08 30 56.9
UBBA Unterbreizbach 145.82 357 *e*PKPbc PKPbc 08 30 42.6 -0.5
UBBA *ep*PKPbc pPKPbc 08 30 50.8 -3.7
MORC Moravsky Berou 145.87 348 ⇑PKP2 PKPab 08 30 43.9 +0.2
MORC Moravsky Berou 145.87 348 *e*PKPbc PKPbc 08 30 43.5 +0.1
MORC Moravsky Berou 145.87 348 ⇑*i*P PKPdf 08 30 43.9 +1.2
MOX Moxa 145.88 355 ⇓*i*PKP PKPdf 08 30 43.7 +1.0
comp=Z,257nm,1.9s
MOX *e* 08 30 51.5
MOX
comp=Z,400nm,20.0s
MOX Moxa 145.88 355 *e*PKPbc PKPbc 08 30 43.0 -0.3
MOX *ep*PKPbc pPKPbc 08 30 51.5 -3.2
BEBN Eben Emael 145.91 2 PKP PKPdf 08 30 43.5 +0.7
HGN Heimansgroeve 145.95 1 *e*PKP PKPdf 08 30 41.8 -1.0
comp=Z,104nm,2.3s
WERD Werda 146.01 354 *e*PKPbc PKPbc 08 30 42.9 -0.8
WERD *ep*PKPbc pPKPbc 08 30 52.1 -3.0
SARI SarD1z-Kayseri 146.01 316 *e*P PKPdf 08 30 46.6 +3.3
TANN Tannenbergstha 146.03 354 *e*PKPbc PKPbc 08 30 44.1 +0.3
TESR 146.05 335 ⇑P PKPdf 08 30 43.7 +0.6
TESR 146.05 335 ⇑*i*P PKPdf 08 30 43.7 +0.6
GUNZ Gunzen 146.09 354 *e*PKPbc PKPbc 08 30 44.4 +0.4
GUNZ *ep*PKPbc pPKPbc 08 30 52.7 -2.6
GZT Gaziantep 146.10 313 ⇑*i*P PKPdf 08 30 45.6 +2.2
MEM Membach 146.11 1 PKP PKPdf 08 30 44.7 +1.6
TRPA Tarpa 146.12 341 ⇓*i*P PKPdf 08 30 44.7 +1.5
PRA Prague 146.13 351 PKP PKPdf 08 30 45.0 +1.9
PRA *p*PKP pPKPdf 08 30 53.0 -1.6
CTKT Corum 146.13 320 *i* P PKPdf 08 30 45.4 +1.9
SNF Seneffe 146.15 3 PKP PKPdf 08 30 44.4 +1.3
TLCR 146.18 332 ⇑PKP2 PKPab 08 30 45.4 +0.3
TLCR 146.18 332 ⇑*i*P PKPdf 08 30 45.4 +2.0
PRU Pruhonice 146.19 351 *e*PKP2 PKPab 08 30 45.3 +0.4
PRU MLR MLR
comp=Z,1μm,22.7s,MS5.5
PRU Pruhonice 146.19 351 *e*PKP PKPdf 08 30 45.3 +2.1
PRU *e* 08 30 53.4
PRU *e* 08 54 04.2
PRU LR LR
comp=Z,1μm,22.7s,MS5.5
PRU Pruhonice 146.19 351 *e*PKP PKPdf 08 30 45.3 +2.1
PRU *ex* x 08 30 53.4
PRU *ex* x 08 54 04.2
PRU AMS AMS 09 34 30.0
comp=Z,1μm,22.7s
NKC Novy Kostel 146.21 354 *e*PKP PKPdf 08 30 45.3 +2.0
BCLA Clavier 146.28 2 PKP PKPdf 08 30 44.0 +0.6
YOZ Yozgat 146.38 319 *e*P PKPab 08 30 46.7 +0.6
KECS Kecovo 146.39 344 *e*PKP2 PKPab 08 30 45.6 -0.2
KECS Kecovo 146.39 344 *e*PKP PKPdf 08 30 45.6 +2.0
BALT Daday 146.41 323 ⇑*i*P PKPab 08 30 46.2 +0.1
KMRS Kahramanmaras 146.48 314 *e*P PKPab 08 30 46.5 0.0
TNS Taunus Mts 146.49 358 *e*PKPbc PKPbc 08 30 45.0 -0.1
CFR Carcaliu 146.49 333 ⇑PKP2 PKPab 08 30 47.0 +0.7
CFR Carcaliu 146.49 333 ⇑*i*P PKPab 08 30 47.0 +0.7
VRAC Vranov 146.50 349 PKPbc PKPbc 08 30 45.9 +0.7
comp=Z,30nm,0.8s,baz=51,slow=1.9,SNR=42
VRAC Vranov 146.50 349 PKP2 PKPab 08 30 45.9 -0.3
VRAC pmax pmax
comp=Z,31nm,0.9s
VRAC Vranov 146.50 349 ⇓P PKPab 08 30 46.4 +0.2
VRAC Vranov 146.50 349 ⇓*i*P PKPab 08 30 46.4 +0.2
ILGA Ilgaz 146.52 322 ⇑*i*P PKPab 08 30 46.8 +0.3
VRI Vrincioaia 146.54 335 ⇑PKP2 PKPab 08 30 46.4 -0.1
VRI Vrincioaia 146.54 335 ⇑*i*P PKPab 08 30 46.4 -0.1
DOU Dourbes 146.57 3 PKP PKPdf 08 30 45.6 +1.7
GIVF Givet 146.58 3 *e*PKIKP PKPdf 08 30 45.6 +1.7
PLOR Plostina 146.59 335 ⇑PKP2 PKPab 08 30 46.6 0.0
PLOR Plostina 146.59 335 ⇑*i*P PKPab 08 30 46.6 0.0
BAIF Baives 146.59 3 *e*PKIKP PKPdf 08 30 45.7 +1.8
ROTZ Rotzenmuhle 146.70 354 *e*PKPbc PKPbc 08 30 45.4 -0.3
ROTZ *ep*PKPbc pPKPbc 08 30 54.6 -2.5
TREC Trest 146.72 350 *e*PKIKP PKPdf 08 30 46.0 +1.9
TREC *e* 08 30 54.2
TREC MLR MLR
comp=Z,800nm,23.4s,MS5.4
TREC Trest 146.72 350 *e*PKP PKPdf 08 30 46.0 +1.9
TREC *ex* x 08 30 54.2
TREC AMS AMS 09 35 20.0
comp=Z,800nm,23.4s
VYHS Vyhne 146.80 346 *e*PKIKP PKPdf 08 30 45.9 +1.6
VYHS Vyhne 146.80 346 *e*PKP PKPdf 08 30 45.9 +1.6
KOLL Kolacno 146.82 346 *e*PKP2 PKPab 08 30 46.3 -1.1
KOLL Kolacno 146.82 346 *e*PKP PKPdf 08 30 46.3 +2.0
ANDN Andirin 146.82 315 *e*P PKPdf 08 30 44.8 +0.1
ABH Alteburg 146.84 359 PKP PKPdf 08 30 45.5 +1.2
GRF Grafenberg Arr 146.86 355 *e*PKPbc PKPbc 08 30 45.8 -0.4
GRF *ep*PKPbc pPKPbc 08 30 56.1 -1.5
GRF *eL* 09 40 06.4
comp=Z,616nm,20.5s
TIRR Tirgusor 146.92 331 *e*PKIKP PKPdf 08 30 46.1 +1.4
TIRR Tirgusor 146.92 331 ⇓*i*P PKPdf 08 30 46.5 +1.8
CDAG Cicekdag 146.99 319 *i* P PKPdf 08 30 44.5 -0.4
SAFT Safranbolu 147.00 323 *e*P PKPab 08 30 49.4 +1.0
RUP Ruppelstein 147.03 360 PKP PKPbc 08 30 46.9 +0.2
ELDT Eldivan 147.04 321 ⇑*i*P PKPbc 08 30 48.0 +0.9
WLF Walferdange 147.06 1 PKP PKPbc 08 30 48.1 +1.3
WLF Walferdange 147.06 1 *e*PKPbc PKPbc 08 30 47.3 +0.5
WLF Walferdange 147.06 1 *e*PKP2 PKPab 08 30 47.7 -0.6
WLF MLR MLR
comp=Z,884nm,20.0s,MS5.5
WLF Walferdange 147.06 1 *e*PKPbc PKPbc 08 30 47.7 +0.9
WLF LR LR
comp=Z,884nm,20.0s,MS5.5
PSZ Piszkesteto 147.07 344 ⇑PKIKP PKPdf 08 30 45.9 +1.1
PSZ Piszkesteto 147.07 344 *e*PKPbc PKPbc 08 30 46.4 -0.4
PSZ LR LR
comp=Z,603nm,19.0s,MS5.4
PSZ Piszkesteto 147.07 344 ⇑*i*P PKPdf 08 30 45.9 +1.1
TOD Tromm 147.09 358 PKP PKPdf 08 30 46.7 +1.9
KHC Kasperske Hory 147.16 352 *e*PKIKP PKPdf 08 30 45.7 +0.8
KHC *e* 08 53 49.9
KHC MLR MLR
comp=Z,700nm,18.2s,MS5.5
KHC Kasperske Hory 147.16 352 *e*PKP PKPdf 08 30 45.7 +0.8
KHC *e* 08 53 49.9
KHC LR LR
comp=Z,700nm,18.2s,MS5.5
KHC Kasperske Hory 147.16 352 *e*PKP PKPdf 08 30 45.7 +0.8
KHC *ex* x 08 53 49.9
KHC AMS AMS 09 36 50.0
comp=Z,700nm,18.2s
AVNT Avonos 147.17 318 *e*P PKPdf 08 30 45.6 +0.3
MLR Muntele Rosu 147.17 335 ⇑PKP2 PKPbc 08 30 47.6 +0.4
MLR Muntele Rosu 147.17 335 ⇑*i*P PKPbc 08 30 47.6 +0.4
KOZT Kozan 147.23 315 *e*P PKPbc 08 30 48.1 +0.4
WET Wettzell 147.24 353 *e*PKPbc PKPbc 08 30 47.9 +0.6
DRGR 147.25 340 ⇓PKIKP PKPdf 08 30 47.2 +2.1
DRGR 147.25 340 ⇓*i*P PKPdf 08 30 47.2 +2.1
ROSF Rostrenen 147.28 13 *e*PKIKP PKPdf 08 30 45.3 +0.2
comp=Z,30nm,0.9s
BRTR Keskin Array B 147.38 320 PKP PKPdf 08 30 45.1 -0.5
comp=Z,16nm,0.7s,baz=22,slow=1.6,SNR=13
BRTR PKPbc PKPbc 08 30 48.4 +0.4
comp=Z,50nm,0.8s,baz=123,slow=2.0,SNR=66
FLN La Foliniere 147.38 9 *e*PKIKP PKPdf 08 30 45.8 +0.5
FLN *e*MLR MLR
comp=Z,1μm,22.8s,MS5.3
FLN La Foliniere 147.38 9 *e*PKPdf PKPdf 08 30 45.8 +0.5
FLN LR LR
comp=Z,1μm,22.8s,MS5.6
KTD Kalmit 147.40 359 PKP2 PKPab 08 30 48.3 -1.4
COBT Iskenderun 147.42 313 *e*P PKPab 08 30 49.5 -0.8
GEC2 GERESS Array S 147.43 352 *e*PKPbc PKPbc 08 30 47.9 +0.1
GEC2 *ep*PKPbc pPKPbc 08 30 56.5 -2.7
ZST Bratislava 147.47 347 *e*PKP2 PKPab 08 30 50.1 +0.1
ZST Bratislava 147.47 347 *e*PKP PKPab 08 30 50.1 +0.1
SGMF Saint Gilles 147.51 12 *e*PKIKP PKPdf 08 30 46.0 +0.5
comp=Z,41nm,1.0s
VOIR 147.57 336 ⇓PKP2 PKPab 08 30 50.0 -0.5
VOIR 147.57 336 ⇓*i*P PKPab 08 30 50.0 -0.5
LDF La Druitiere 147.60 9 *e*PKIKP PKPdf 08 30 45.8 +0.2
GRR Gorron 147.69 10 *e*PKIKP PKPdf 08 30 46.2 +0.4
BUD Budapest 147.69 345 ⇑*e*PKP PKPdf 08 30 42.9 -2.9
QUIF Quistinic 147.70 13 *e*PKIKP PKPdf 08 30 46.3 +0.5
comp=Z,34nm,0.9s
LANF Langenberg 147.74 359 PKP PKPbc 08 30 48.5 -0.2
STU Stuttgart 147.91 357 *e*PKPbc PKPbc 08 30 48.3 -0.9
STU *ep*PKPbc pPKPbc 08 30 57.8 -2.8
STU Stuttgart 147.91 357 *e*PKPbc PKPbc 08 30 47.9 -1.3
CONA Conrad Observa 147.97 349 ⇑*i*PKPbc PKPbc 08 30 48.1 -1.3
comp=Z,16nm,1.4s,SNR=20
CONA Conrad Observa 147.97 349 P PKPab 08 30 51.8 -0.2
comp=Z,84nm,1.0s
GULE Gulek 148.04 315 *e*P PKPbc 08 30 50.5 +0.6
MOA Molln 148.32 351 ⇑*i*PKPbc PKPdf 08 30 48.2 +1.3
comp=Z,5.1nm,0.8s,SNR=14
MOA Molln 148.32 351 P PKPab 08 30 52.2 -1.1
comp=Z,52nm,1.1s
MDU Mudurnu 148.35 323 *e*P PKPbc 08 30 51.1 +0.5
FUR Furstenfeldbru 148.37 355 *e*PKPbc PKPbc 08 30 51.1 +0.7
FUR *ep*PKPbc pPKPbc 08 30 59.2 -2.6
BFO Black Forest 148.38 358 *e*PKPbc PKPbc 08 30 50.7 +0.3
BFO Black Forest 148.38 358 *e*PKIKP PKPbc 08 30 50.5 +0.1
BFO MLR MLR
comp=Z,531nm,21.0s,MS5.3
BFO Black Forest 148.38 358 *e*PKPbc PKPbc 08 30 50.5 0.0
BFO LR LR
comp=Z,531nm,21.0s,MS5.3
MERS Mersin 148.44 315 *e*P PKPbc 08 30 51.4 +0.4
THEF They Montfort 148.49 1 PKP PKPdf 08 30 48.2 +1.1
ECH Echery 148.51 360 PKP PKPbc 08 30 49.7 -1.1
ECH Echery 148.51 360 *e*PKIKP PKPbc 08 30 51.1 +0.3
ECH MLR MLR
comp=Z,1μm,20.0s,MS5.6
ECH Echery 148.51 360 *e*PKPbc PKPbc 08 30 51.1 +0.3
ECH LR LR
comp=Z,1μm,20.0s,MS5.6
SPAK Spaichingen-Ko 148.59 358 PKP PKPdf 08 30 47.0 -0.3
RJOB Jochberg 148.63 353 *e*PKPbc PKPbc 08 30 51.5 +0.4
BZS Buzias 148.64 340 ⇓PKIKP PKPdf 08 30 48.9 +1.4
BZS Buzias 148.64 340 ⇓*i*P PKPdf 08 30 48.9 +1.4
ARSA Arzberg 148.68 349 ⇓*i*PKPdf PKPdf 08 30 48.3 +0.8
comp=Z,7.6nm,1.2s
ARSA Arzberg 148.68 349 P PKPbc 08 30 51.4 +0.2
comp=Z,53nm,1.3s
GULT Gulveren 148.77 324 *e*P PKPbc 08 30 53.4 +1.7
FELD Feldberg im Sc 148.84 359 PKP PKPdf 08 30 48.5 +0.8
MOF Molkenrain 148.88 360 PKP PKPdf 08 30 49.0 +1.2
HINF Hinteralfeld 148.91 0 *e*PKIKP PKPdf 08 30 48.2 +0.4
PKSM Moragy 148.97 344 ⇑PKIKP PKPbc 08 30 51.9 -0.1
PKSM Moragy 148.97 344 ⇑*i*P PKPbc 08 30 51.9 -0.1
KIZT Kizilcal 148.97 320 *e*P PKPbc 08 30 53.5 +1.2
KDHN Kadinhani 149.05 320 *e*P PKPdf 08 30 43.5 -4.9
RETA Reutte 149.09 355 ⇑*i*pPKPdf PKPdf 08 30 49.6 +1.5
comp=Z,2.8nm,0.7s,SNR=14
RETA Reutte 149.09 355 P PKPbc 08 30 52.9 +0.6
comp=Z,60nm,1.1s
LADK Ladik-KONYA 149.09 319 *e*P PKPbc 08 30 53.1 +0.5
WATA Walderalm 149.16 354 ⇑*i*pPKPdf PKPdf 08 30 49.8 +1.6
comp=Z,3.6nm,0.5s
WATA Walderalm 149.16 354 P PKPbc 08 30 53.2 +0.8
comp=Z,23nm,0.6s
BORA Eskisehir 149.17 323 ⇑*i*P PKPbc 08 30 53.0 +0.2
MOTA Moosalm 149.20 355 ⇓*i*pPKPdf PKPdf 08 30 50.2 +1.9
comp=Z,6.8nm,0.8s,SNR=7.2
MOTA Moosalm 149.20 355 P PKPbc 08 30 54.6 +2.0
comp=Z,40nm,0.9s
KBA Koelnbreinsper 149.21 352 ⇓*i*PKPdf PKPdf 08 30 49.0 +0.7
comp=Z,9.0nm,1.4s,SNR=7.8
KBA Koelnbreinsper 149.21 352 P PKPbc 08 30 52.8 +0.2
comp=Z,39nm,1.1s
WTTA Wattenberg 149.23 354 ⇑*i*pPKPdf PKPdf 08 30 49.9 +1.5
comp=Z,14nm,1.3s,SNR=8.6
WTTA Wattenberg 149.23 354 P PKPbc 08 30 54.7 +2.1
comp=Z,99nm,1.1s
SOKA Soboth 149.32 349 ⇑*i*PKPdf PKPdf 08 30 49.4 +0.9
comp=Z,10nm,0.9s
SOKA Soboth 149.32 349 P PKPbc 08 30 54.3 +1.4
comp=Z,88nm,1.5s
LOR Lormes 149.35 4 *e*PKIKP PKPdf 08 30 49.2 +0.7
comp=Z,35nm,1.0s
LOR *e*MLR MLR
comp=Z,2μm,20.5s,MS5.5
LOR Lormes 149.35 4 *e*PKPdf PKPdf 08 30 49.2 +0.7
LOR LR LR
comp=Z,2μm,20.5s,MS5.8
DAVA Damuels 149.35 356 ⇑*i*pPKPdf PKPdf 08 30 50.3 +1.7
comp=Z,6.9nm,1.0s,SNR=9.7
DAVA Damuels 149.35 356 P PKPbc 08 30 54.0 +1.1
comp=Z,82nm,1.0s
LOMF Lomont 149.38 0 PKP PKPdf 08 30 49.7 +1.1
SSF Saint Saulge 149.53 5 *e*PKIKP PKPdf 08 30 49.5 +0.7
comp=Z,50nm,1.1s
MFF Saint Martin d 149.54 10 *e*PKIKP PKPdf 08 30 49.3 +0.4
FETA Feichten 149.56 355 ⇑*i*pPKPdf PKPdf 08 30 49.9 +1.1
comp=Z,11nm,1.0s,SNR=36
FETA Feichten 149.56 355 P PKPbc 08 30 54.4 +1.0
comp=Z,81nm,1.1s
OBKA Obir 149.57 350 ⇑*i*PKPbc PKPbc 08 30 52.8 -0.7
comp=Z,26nm,0.9s,SNR=10
MYKA Terra Mystica 149.60 351 ⇑*i*PKPdf PKPdf 08 30 49.6 +0.7
comp=Z,8.8nm,1.0s
MYKA Terra Mystica 149.60 351 P PKPbc 08 30 54.6 +1.1
comp=Z,51nm,1.1s
ABTA Abfaltersbach 149.64 353 ⇑*i*PKPdf PKPdf 08 30 50.0 +1.0
comp=Z,13nm,1.1s,SNR=20
ABTA Abfaltersbach 149.64 353 P PKPbc 08 30 53.7 0.0
comp=Z,94nm,1.1s
MMAI Mount Meron Ar 149.66 308 PKP PKPdf 08 30 51.0 +1.5
comp=Z,5.6nm,0.7s,baz=67,slow=4.8,SNR=3.6
MMAI PKPbc PKPbc 08 30 55.8 +1.6
comp=Z,30nm,0.8s,baz=46,slow=4.8,SNR=24
HDMB Hadim 149.74 317 *e*P PKPbc 08 30 54.8 +0.6
AVF Avril sur Loir 149.78 5 *e*PKIKP PKPdf 08 30 49.5 +0.2
LFK Lefkose 149.95 313 *e*P PKPbc 08 30 55.3 +0.5
SMF Signal de Mont 149.97 4 *e*PKIKP PKPdf 08 30 49.9 +0.4
BGF Bois d'Agland 149.97 6 *e*PKIKP PKPdf 08 30 50.2 +0.6
comp=Z,35nm,1.0s
SHUT Suhut-Afyon 149.99 321 *e*P PKPbc 08 30 55.9 +1.1
LJU Ljubljana 150.03 350 *e*PKIKP PKPdf 08 30 49.7 0.0
LJU *e* 08 30 54.9
LJU *e* 08 31 03.1
LJU Ljubljana 150.03 350 *e*PKPdf PKPdf 08 30 49.7 +0.1
LJU *e*PKPbc PKPbc 08 30 54.9 +0.3
LJU *e* 08 31 03.1
LJU *e* 08 31 08.3
CABF La Chapelle 150.11 1 *e*PKIKP PKPdf 08 30 51.0 +1.2
VOY Vojsko 150.15 350 *e*PKPdf PKPdf 08 30 50.3 +0.5
VOY *e*PKPbc PKPbc 08 30 55.0 +0.1
VOY *e* 08 31 11.7
TCF Toulx Ste Croi 150.17 7 *e*PKIKP PKPdf 08 30 50.3 +0.4
comp=Z,20nm,0.9s
CSS Prodhromos 150.26 313 *e*PKPbc PKPbc 08 30 55.1 -0.4
CSS LR LR
comp=Z,386nm,20.0s,MS5.2
GDZ Gediz 150.26 323 ⇑*i*P PKPdf 08 30 49.8 -0.5
GAZI Gazipasa 150.27 316 ⇑*i*P PKPbc 08 30 54.3 -1.2
SUTC Sutluce-Ispart 150.39 319 *e*P PKPbc 08 30 55.6 -0.2
BOJS Bojanci 150.41 348 *e*PKPdf PKPdf 08 30 50.8 +0.5
BOJS *i* PKPbc PKPbc 08 30 56.1 +0.6
SACV Santiago Islan 150.48 89 PFAKE 08 31 00.0 +8.8
SACV LR LR
comp=Z,561nm,19.0s,MS5.4
TRI Trieste 150.48 350 *e*PKIKP PKPbc 08 30 55.5 -0.2
TRI MLR MLR
comp=Z,620nm,21.0s,MS5.4
AGO Saint Agoulin 150.50 6 PKP PKPdf 08 30 51.7 +1.3
KNDS Knezji Dol 150.55 349 *e*PKPdf PKPdf 08 30 50.4 -0.1
KNDS *e*PKPbc PKPbc 08 30 55.9 0.0
VTS Vitosha 150.67 335 ⇓PKIKP PKPbc 08 30 57.5 +1.2
VTS Vitosha 150.67 335 ⇓*i*P PKPbc 08 30 57.5 +1.2
PYM Petit Puy Mans 150.78 6 PKP PKPdf 08 30 51.2 +0.3
BALY Balya 150.84 326 ⇑*i*P PKPbc 08 30 55.9 -0.8
MBAR Mbarara 151.02 236 ⇓*i*PKIKP PKPbc 08 30 58.6 +0.6
MBAR Mbarara 151.02 236 PFAKE 08 31 00.0 +7.8
MBAR LR LR
comp=Z,725nm,21.0s,MS5.5
RJF Les Rejaudoux 151.05 8 *e*PKIKP PKPdf 08 30 51.9 +0.6
comp=Z,25nm,0.9s
RJF *e*MLR MLR
comp=Z,1μm,22.2s,MS5.4
RJF Les Rejaudoux 151.05 8 *e*PKPdf PKPdf 08 30 51.9 +0.6
RJF LR LR
comp=Z,1μm,22.3s,MS5.7
KORT Korkueli 151.09 319 ⇑*i*P PKPbc 08 30 56.6 -0.8
KULA Kula-Manisa 151.12 323 *e*P PKPbc 08 30 58.3 +0.9
LPL La Plagne 151.21 0 *e*PKIKP PKPdf 08 30 52.9 +1.4
LPG La Plagne 151.23 0 *e*PKIKP PKPdf 08 30 53.0 +1.5
LFF La Frestale 151.30 9 *e*PKIKP PKPdf 08 30 52.2 +0.5
LBL Lubilhac 151.32 6 PKP PKPdf 08 30 53.5 +1.8
SSB Saint Sauveur 151.38 4 PKP PKPdf 08 30 53.2 +1.4
SSB Saint Sauveur 151.38 4 *e*PKIKP PKPdf 08 30 53.1 +1.3
SSB MLR MLR
comp=Z,1μm,20.0s,MS5.7
SSB Saint Sauveur 151.38 4 *e*PKPdf PKPdf 08 30 53.0 +1.3
SSB LR LR
comp=Z,1μm,20.0s,MS5.7
CAF Calviac 151.50 7 *e*PKIKP PKPdf 08 30 52.8 +0.8
GDM Grand'Maison 151.52 1 PKP PKPdf 08 30 53.5 +1.5
BNI Bardonecchia 151.68 1 *e*PKIKP PKPdf 08 30 53.9 +1.7
BNI MLR MLR
comp=Z,748nm,20.0s,MS5.5
ORIF Oris-en-Rattie 151.80 2 *e*PKIKP PKPdf 08 30 53.5 +1.1
comp=Z,36nm,1.1s
ORIF *e*MLR MLR
comp=Z,1μm,20.0s,MS5.4
VIVF Saint-Julien-l 151.80 4 *e*PKIKP PKPdf 08 30 53.4 +1.0
comp=Z,53nm,1.4s
PCAB Cabril 151.86 24 *e*PKPdf PKPbc 08 31 00.1 +1.0
VAY Valandovo 152.00 335 *i* PKP PKPbc 08 30 58.3 -1.1
MBDF Montbardon 152.00 0 *e*PKIKP PKPdf 08 30 53.7 +1.0
comp=Z,29nm,1.0s
AKAS Kas 152.03 319 *e*P PKPdf 08 30 47.2 -5.8
AYDN Tasoluk 152.15 323 *i* P PKPdf 08 30 52.1 -1.1
SURF Saint Ours 152.25 0 PKP PKPdf 08 30 54.0 +0.9
PBRG Braganca 152.27 22 *e*PKPab PKPbc 08 31 01.8 +1.8
VLC Villacollemand 152.43 355 PFAKE 08 31 00.0 +6.6
VLC LR LR
comp=Z,758nm,20.0s,MS5.5
LASF Ste Croix 152.52 5 *e*PKIKP PKPdf 08 30 54.6 +1.1
comp=Z,40nm,1.1s
MVO Moncorvo 152.71 24 *e*PKPdf PKPdf 08 30 56.2 +2.3
MVO Moncorvo 152.71 24 *e*PKPab PKPab 08 31 16.9 +5.2
MVO *eP* 08 59 38.0
MVO *eL*R LR 09 29 33.6
comp=Z,578nm,18.0s
TOUF Mont Tournerai 152.72 360 PKP PKPdf 08 30 54.9 +1.1
SMRF Simiane la Rot 152.73 2 *e*PKIKP PKPdf 08 30 55.2 +1.4
AUTN L'Aution 152.73 359 PKP PKPdf 08 30 54.5 +0.7
SAOF Saorge 152.74 359 PKP PKPdf 08 30 54.8 +0.9
MVIF Mont Vial 152.83 360 PKP PKPdf 08 30 55.2 +1.2
LUCF Luceram 152.84 360 PKP PKPdf 08 30 55.0 +1.0
CALN Calern 152.98 0 PKP PKPdf 08 30 55.3 +1.1
TIR Tirane 153.01 338 PFAKE 08 31 10.0 +16
TIR LR LR
comp=Z,980nm,21.0s,MS5.6
ETSF Etsaut 153.04 12 *e*PKIKP PKPdf 08 30 55.6 +1.3
MTLF Montolieu 153.07 8 *e*PKIKP PKPdf 08 30 55.1 +0.7
comp=Z,45nm,1.5s
MTE Manteigas 153.16 25 *e*PKPdf PKPdf 08 30 54.9 +0.3
MTE Manteigas 153.16 25 *e*PKPab PKPab 08 31 14.4 +0.8
MTE *eP* 09 00 25.2
MTE *eL*R LR 09 28 21.0
comp=Z,984nm,22.0s
MTE Manteigas 153.16 25 PFAKE 08 31 10.0 +15
MTE LR LR
comp=Z,1μm,20.0s,MS5.6
FRF La Foret Royal 153.17 1 *e*PKIKP PKPdf 08 30 54.9 +0.4
PMPS Porto Santo 153.32 48 *e*PKPab PKPbc 08 31 05.8 +3.2
PCBR Castelo Branco 153.66 26 *e*PKPab PKPab 08 31 20.4 +4.7
AQU L'Aquila 153.80 349 PFAKE 08 31 10.0 +15
AQU LR LR
comp=Z,628nm,19.0s,MS5.5
PMRV Marv??o 154.04 26 *e*PKPdf PKPdf 08 30 58.5 +2.6
PMRV Marv??o 154.04 26 *e*PKPab PKPab 08 31 17.8 +0.4
PMRV *eP* 09 00 35.9
PMRV *eL*R LR 09 30 16.1
comp=Z,729nm,20.0s
PGF Pioggiola 154.13 357 *e*PKIKP PKPdf 08 30 56.2 +0.3
comp=Z,44nm,1.1s
PESTR Estremoz 154.42 27 *e*PKPab PKPab 08 31 19.4 +0.4
PESTR *eP* 09 00 48.4
PESTR *eL*R LR 09 27 58.0
comp=Z,542nm,18.0s
EVOP Sao Brissos 154.46 28 *e*P PKPdf 08 30 56.9 +0.3
EVOP *e*PP PP 08 34 55.5 +1.8
EVOP AMS AMS 09 32 34.3
comp=Z,930nm,23.5s,MS5.5
EVOP Sao Brissos 154.46 28 *e*PKIKP PKPdf 08 30 56.8 +0.3
EVOP *e* 08 34 55.5
EVO Evora 154.51 28 *e*PKIKP PKPdf 08 30 56.7 +0.1
comp=Z,96nm,1.6s
EVO *e*MLR MLR
comp=Z,2μm,22.5s,MS5.5
EVO Evora 154.51 28 *e*PKPdf PKPdf 08 30 59.4 +2.8
EVO Evora 154.51 28 *e*PKPab PKPab 08 31 20.2 +0.8
MESJ Messejana 154.97 30 *e*P PKPdf 08 30 56.1 -1.1
MESJ *e*PP PP 08 34 57.2 +0.5
MESJ AMS AMS 09 34 10.2
comp=Z,652nm,17.3s,MS5.5
MESJ Messejana 154.97 30 *e*PP PP 08 34 57.2 +0.5
MESJ A 09 34 10.2
comp=Z,652nm,17.3s
MESJ Messejana 154.97 30 *e*PKIKP PKPdf 08 30 56.0 -1.2
MESJ *e* 08 34 57.1
PAB San Pablo 155.12 21 PFAKE 08 31 10.0 +13
PAB LR LR
comp=Z,754nm,19.0s,MS5.5
ESDC Sonseca Array 155.13 20 PKP PKPdf 08 30 58.8 +1.4
comp=Z,0.6nm,0.4s,baz=2.9,slow=3.0,SNR=6.4
ESLA Sonseca Array 155.13 20 PFAKE 08 31 10.0 +13
ESLA LR LR
comp=Z,3μm,19.0s,MS6.2
MORF Marmelete 155.19 31 *e*PKPdf PKPdf 08 31 00.3 +2.8
MORF *eP* 09 00 42.4
MORF *eL*R LR 09 29 19.5
comp=Z,776nm,20.0s

MORF	**Marmelete**	**155.19**	**31**	*e*PKIKP	PKPdf	08 30 56.3	-1.2
MORF				*e*		08 34 59.0	
PCVE	**Castro Verde**	**155.22**	**30**	*e*PKPdf	PKPdf	08 31 00.2	+2.6
PCVE	**Castro Verde**	**155.22**	**30**	*e*PKPab	PKPab	08 31 25.9	+3.4
PCVE				*e*P		09 01 19.3	
PCVE				*e*LR	LR	09 30 16.5	
	comp=Z,542nm,20.0s						
PFVI	**Vila Bisbo**	**155.24**	**31**	*e*PKPdf	PKPdf	08 30 59.8	+2.2
PFVI				*e*P		09 00 35.8	
PFVI				*e*LR	LR	09 29 00.1	
	comp=Z,960nm,20.0s						
PBAR	**Barrancos**	**155.24**	**27**	*e*PKPdf	PKPdf	08 31 00.2	+2.6
PBAR	**Barrancos**	**155.24**	**27**	*e*PKPab	PKPab	08 31 22.2	-0.3
PBAR				*e*P		09 00 58.3	
PBAR				*e*LR	LR	09 27 18.0	
	comp=Z,520nm,18.0s						
PVAQ	**Vaqueiros**	**155.56**	**29**	*e*PKPab	PKPab	08 31 24.3	+0.4
PVAQ				*e*P		09 00 56.9	
PVAQ				*e*LR	LR	09 30 00.9	
	comp=Z,470nm,20.0s						
SFS	**San Fernando**	**157.02**	**28**	PFAKE		08 31 10.0	+10
SFS				LR	LR		
	comp=Z,2μm,19.0s,MS5.8						
CEL	**Celeste**	**157.10**	**342**	PFAKE		08 31 10.0	+10
CEL				LR	LR		
	comp=Z,872nm,21.0s,MS5.6						
VSL	**Villasalto**	**157.14**	**355**	PFAKE		08 31 10.0	+10
VSL				LR	LR		
	comp=Z,666nm,20.0s,MS5.5						
WDD	**Wield Dalam**	**159.73**	**342**	PFAKE		08 31 10.0	+6.7
WDD				LR	LR		
	comp=Z,935nm,20.0s,MS5.6						
MDT	**Midelt**	**160.76**	**31**	PKP	PKPdf	08 31 06.1	+1.6
	comp=Z,6.2nm,0.9s,baz=357,slow=1.8,SNR=8.5						
KEST	**Kesra**	**160.88**	**354**	PKP	PKPdf	08 31 05.8	+1.3
	comp=Z,3.6nm,1.0s,baz=342,slow=3.2						
KEST				PKPab	PKPab	08 31 47.9	+1.0
	comp=Z,3.2nm,0.9s,baz=341,slow=7.0,SNR=2.8						
DBIC	**Dimbokro**	**164.72**	**129**	PFAKE		08 31 20.0	+11
DBIC				LR	LR		
	comp=Z,901nm,20.0s						
TAM	**Tamanrasset**	**173.72**	**13**	*e*PKIKP	PKPdf	08 31 15.2	+1.0
TAM				MLR	MLR		
	comp=Z,1μm,20.0s						

*ISK **16** 08:27:43.9, 38°.36N×37°.85E, h10km, MD3.1*
*CSEM **16** 08:27:43.7±0.3, 38°.30N×37°.86E, h5km, MD2.9, Error ellipse: s-maj=8.7km s-min=6.2km az=156.0*
*ISCJB **16** 08:27:44.6±0.5, 38°.37N±0°.03×37°.89E±0°.04, h7km±5km, Error ellipse: s-maj=5.5km s-min=4.6km az=143.8*
*DDA **16** 08:27:44.4, 38°.42N×37°.91E, h1km, Md2.9*

ISC 16 08:27:44.9±0.5, 38°.36N±0°.03×37°.88E±0°.04, h9km±4km, n30, σ1°.15/45, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AKCD	**Akcadag**	**0.07**	**148**	*i* P		**Pg**		**08 27 46.2**	**-0.7**
AKCD				*i* S		**Sg**		**08 27 48.0**	**-0.4**
AKCD	**Akcadag**	**0.07**	**148**	*i* P		**Pg**		**08 27 46.2**	**-0.7**
AKCD				*i* S		**Sg**		**08 27 48.0**	**-0.4**
MYA	**Malataya**	**0.43**	**94**	*e*PG		**Pg**		**08 27 53.0**	**-0.3**
MYA				*e*SG		**Sg**		**08 28 00.2**	**+1.1**
MYA	**Malataya**	**0.43**	**94**	*e*Pg		**Pg**		**08 27 53.0**	**-0.4**
MYA				*e*Sg		**Sg**		**08 28 00.2**	**+1.1**
DARE	**Darende-Malaty**	**0.60**	**355**	*e*PG		**Pg**		**08 27 51.0**	**-5.4**
DARE				*e*SG		**Sg**		**08 27 57.3**	**-7.0**
DARE	**Darende-Malaty**	**0.60**	**355**	*e*Pg		**Pg**		**08 27 51.1**	**-5.4**
DARE				*e*Sg		**Sg**		**08 27 57.3**	**-7.0**
ELZG	**Elazig**	**0.88**	**80**	*i* P		**Pg**		**08 28 00.7**	**-1.2**
ELZG				*i* S		**Sg**		**08 28 14.7**	**+1.3**
ELZG	**Elazig**	**0.88**	**80**	*i* P		**Pg**		**08 28 00.7**	**-1.2**
ELZG				*i* S		**Sg**		**08 28 14.7**	**+1.3**
SARI	**SarD1z-Kayseri**	**0.98**	**290**	*e*PN		**Pg**		**08 28 06.3**	**+2.6**
SARI	**SarD1z-Kayseri**	**0.98**	**290**	*e*Pn		**Pg**		**08 28 06.3**	**+2.6**
GZT	**Gaziantep**	**1.03**	**194**	*i* P		**Pg**		**08 28 05.7**	**+1.1**
GZT				*i* S		**Sg**		**08 28 21.4**	**+3.4**
KEMA	**Kemaliye**	**1.03**	**28**	*i* P		**Pg**		**08 28 03.0**	**-1.8**
KEMA				*i* S		**Sg**		**08 28 19.9**	**+1.7**
KEMA	**Kemaliye**	**1.03**	**28**	*i* P		**Pg**		**08 28 03.0**	**-1.8**
KEMA				*i* S		**Sg**		**08 28 19.9**	**+1.7**
SVRC	**Sivrice-ELAZID**	**1.13**	**88**	*e*PN		**Pg**		**08 28 05.3**	**-1.3**
SVRC	**Sivrice-ELAZID**	**1.13**	**88**	*e*Pn		**Pg**		**08 28 05.3**	**-1.2**
KMRS	**Kahramanmaras**	**1.15**	**223**	*e*PN		**Pg**		**08 28 06.3**	**-0.6**
KMRS	**Kahramanmaras**	**1.15**	**223**	*e*Pn		**Pg**		**08 28 06.3**	**-0.6**
URFA	**Urfa**	**1.18**	**140**	*e*PN		**Pn**		**08 28 07.7**	**+0.1**
URFA				*e*SN		**Sn**		**08 28 24.6**	**+0.8**
URFA	**Urfa**	**1.18**	**140**	*e*Pn		**Pn**		**08 28 07.7**	**+0.1**
URFA				*e*Sn		**Sn**		**08 28 24.6**	**+0.8**
PINB	**Pinarbasi**	**1.20**	**286**	*i* P		**Pb**		**08 28 06.8**	**-1.0**
PINB				*i* S		**Sb**		**08 28 24.4**	**+1.0**
PINB	**Pinarbasi**	**1.20**	**286**	*i* P		**Pb**		**08 28 06.8**	**-1.0**
PINB				*i* S		**Sb**		**08 28 24.4**	**+1.0**
GAZ	**Gaziantep**	**1.29**	**204**	*e*PN		**Pn**		**08 28 07.8**	**-1.3**
GAZ	**Gaziantep**	**1.29**	**204**	*e*Pn		**Pn**		**08 28 07.8**	**-1.4**
PTK	**Pertek**	**1.30**	**65**	*e*PN		**Pn**		**08 28 08.2**	**-1.1**
PTK	**Pertek**	**1.30**	**65**	*e*Pn		**Pn**		**08 28 08.2**	**-1.1**
SVSK	**Karacayir**	**1.70**	**337**	*e*PN		**Pn**		**08 28 15.0**	**+0.2**
SVSK	**Karacayir**	**1.70**	**337**	*e*Pn		**Pn**		**08 28 15.0**	**+0.2**
KOZT	**Kozan**	**1.84**	**242**	*e*PN		**Pn**		**08 28 15.9**	**-0.8**
GUMT	**Gumushane**	**2.44**	**30**	*e*PN		**Pn**		**08 28 25.7**	**+0.7**
GUMT	**Gumushane**	**2.44**	**30**	*e*Pn		**Pn**		**08 28 25.7**	**+0.7**

CSEM 16 08:52:10.4±0.3, 35°.19N×46°.37E, h10km, ML3.7, Error ellipse: s-maj=11.0km s-min=4.5km az=111.0, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ZNJK	**Zanjan**	**2.39**	**51**	*e*Pn		Pn		08 52 49.7	+0.1
ASAO	**Ashtian**	**3.07**	**101**	*e*Pn		Pn		08 52 59.4	+0.5
SHGR	**Shooshtar-Gavs**	**3.68**	**146**	*e*Pn		Pn		08 53 08.7	+1.4
THKV	**Tehran--Karaj**	**3.75**	**78**	*e*Pn		Pn		08 53 08.2	0.0
GRMI	**Germi**	**3.81**	**18**	*e*Pn		Pn		08 53 09.9	+0.7
CHTH	**Charan**	**3.94**	**78**	*e*Pn		Pn		08 53 11.1	+0.2
GHVR	**GHOM**	**4.11**	**98**	*e*Pn		Pn		08 53 13.0	-0.2
MIB	**Mutribah**	**5.43**	**171**	*e*P		Pn		08 53 31.5	+0.1
NASN	**Na'in**	**5.85**	**112**	*e*Pn		Pn		08 53 38.3	+1.1
NAY	**Al-Naaiem**	**5.97**	**173**	*e*P		Pn		08 53 38.5	-0.3
KBD	**Kabd**	**6.10**	**169**	*e*P		Pn		08 53 40.1	-0.5
RDF	**Al-Radifah**	**6.32**	**171**	*e*P		Pn		08 53 43.7	0.0

GUC 16 09:02:09.0±0.7, 22°.92S×69°.01W, h80km, ML4.0, 2C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**0.79**	**326**	↑*i* P		Pn		09 02 31.8	+6.2
PB04				*i* S		Sn		09 02 48.8	+11
PB04				AML		AML		09 02 52.3	
	comp=N,4μm,0.4s								
CEN1	**Los Morros**	**1.19**	**247**	*e*P		Pn		09 02 35.4	+5.1
CEN1				*i* S		Sn		09 02 53.4	+7.0
CEN1				AML		AML		09 02 58.5	
	comp=E,2μm,0.6s								
MECH	**Mejillones**	**1.34**	**262**	↑*i* P		Pn		09 02 33.4	+1.2
MECH				*i* S		Sn		09 02 51.5	+1.8
MECH				AML		AML		09 02 57.6	
	comp=E,3μm,0.4s								
ANCH	**Antofagasta**	**1.49**	**239**	↓*i* P		Pn		09 02 34.3	+0.1
ANCH				*i* S		Sn		09 02 54.2	+0.9
ANCH				AML		AML		09 02 59.4	
	comp=E,3μm,0.5s								
PB01	**Plate Boundary**	**1.92**	**347**	↓*i* P		Pn		09 02 40.8	+1.0
PB01				*i* S		Sn		09 03 04.2	+0.9
PB01				AML		AML		09 03 06.2	
	comp=E,2μm,0.2s								

MEX 16 09:12:03.2±1.3, 16°.10N×95°.58W, h81km±18km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.61**	**237**	*i* P		Pn		09 12 16.7	-1.3
HUIG				*e*S		Sn		09 12 27.5	-1.6
VHO	**Vista Hermosa**	**1.47**	**311**	*i* P		Pn		09 12 26.5	-1.6
VHO				*e*S		Sn		09 12 46.2	-0.8
PCIG		**2.30**	**100**	*i* P		Pn		09 12 38.0	-1.2
TGIG		**2.45**	**74**	*i* P		Pn		09 12 39.6	-1.5
TGIG				*i* S		Sn		09 13 07.4	-2.8
PNIG	**Pinotepa**	**2.46**	**277**	*i* P		Pn		09 12 41.3	0.0
PNIG				*e*S		Sn		09 13 07.5	-3.1

*ISCJB **16** 09:13:31.8±3.7, 6°.62S±0°.10×154°.2E±0°.1, h45km±31km, mb4.3/18, MS4.0/2, Error ellipse: s-maj=21.3km s-min=16.2km az=171.2*
*BJI **16** 09:13:31.2, 6°.66S×153°.89E, h20km, mB5.1/3, mb4.6/4*
*IDC **16** 09:13:32.4±1.0, 6°.67S×154°.19E, h35km±6km, mb4.2/13, mb1 4.3/13, mb1mx4.2/18, mbtmp4.2/13, MS3.9/3, Ms1 3.9/3, ms1mx3.1/25, Error ellipse: s-maj=26.5km s-min=16.2km az=95.0*
*NEIC **16** 09:13:32.3±0.6, 6°.53S×154°.24E, mb4.5/5, Error ellipse: s-maj=17.9km s-min=11.3km az=114.0*

ISC 16 09:13:35.2±3.1, 6°.66S±0°.10×154°.2E±0°.1, h62km±25km, h35km±4.7km; pP-P, n29, σ1°.02/29, mb4.3/18, 1C, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.50**	**248**	*e*Pn		**Pn**		**09 15 21.1**	**-0.9**
	53nm,0.8s								
PMG					Sn		**Sn**	**09 16 46.5**	**+0.9**
CTA	**Charters Tower**	**15.42**	**209**	*e*P		**Pn**		**09 17 13.0**	**+3.9**
	7.6nm,0.9s								
CTA	**Charters Tower**	**15.42**	**209**	Pn		**Pn**		**09 17 11.3**	**+2.2**
	0.2nm,0.3s,baz=28,slow=13,SNR=6.4								
CTA					LR		LR	09 21 51.0	
	comp=Z,169nm,18.5s,baz=348,slow=32								
CTAO	**Charters Tower**	**15.42**	**209**	*e*P		**Pn**		**09 17 11.2**	**+2.1**
	6.8nm,0.7s								
KAKA	**Kakadu**	**22.27**	**253**	*e*P		**P**		**09 18 27.1**	**-0.3**
	14nm,0.6s,mb4.6								
KAKA	**Kakadu**	**22.27**	**253**	*e*P		**P**		**09 18 26.6**	**-0.8**
	43nm,0.7s,mb5.0								
WRAB	**Tennant Creek**	**23.36**	**234**	*e*P		**P**		**09 18 37.8**	**-0.7**
	16nm,0.8s,mb4.5								
WRA	**Warramunga Arr**	**23.38**	**234**	P		**P**		**09 18 37.7**	**-0.9**
	20nm,1.0s,mb4.5,baz=53,slow=9.1,SNR=44								
ASAR	**Alice Springs**	**25.82**	**227**	P		**P**		**09 19 00.7**	**-0.2**
	4.5nm,0.8s,mb4.0,baz=57,slow=8.9,SNR=38								
STKA	**Stephens Creek**	**27.72**	**204**	*e*P		**P**		**09 19 16.9**	**-0.9**
	4.7nm,0.6s,mb4.3								
STKA	**Stephens Creek**	**27.72**	**204**	P		**P**		**09 19 16.6**	**-1.2**
	8.5nm,0.8s,mb4.4,baz=22,slow=13,SNR=18								
FITZ	**Fitzroy Crossi**	**30.08**	**245**	*e*P		**P**		**09 19 38.4**	**-0.6**
	8.2nm,0.6s,mb4.6								
FITZ	**Fitzroy Crossi**	**30.08**	**245**	P		**P**		**09 19 38.5**	**-0.5**
	5.7nm,0.6s,mb4.5,baz=77,slow=6.8,SNR=17								
FITZ					LR		LR	09 31 58.6	
	comp=Z,74nm,19.1s,baz=46,slow=37								
RAO	**Raoul Island**	**34.58**	**134**	LR		LR		09 31 06.1	
	comp=Z,956nm,18.6s,baz=92,slow=30								
RPZ	**Rata Peaks**	**39.76**	**161**	P		**P**		**09 21 01.9**	**-0.1**
	4.8nm,0.6s,mb4.4,baz=0.0,slow=5.1,SNR=4.6								
KSRS	**Korea Array**	**50.28**	**333**	P		**P**		**09 22 24.8**	**-0.7**
	1.4nm,0.8s,mb4.0,baz=155,slow=8.9,SNR=5.7								
CMAR	**Chiang Mai Arr**	**59.94**	**296**	P		**P**		**09 23 35.5**	**0.0**
	1.1nm,0.6s,mb4.1,baz=111,slow=5.0,SNR=7.8								
GTA	**Gaotai**	**67.96**	**317**	*e*P		**P**		**09 24 29.9**	**+2.1**
GTA				pP		pP		09 24 35.1	-9.4
GTA				sP		sP		09 24 38.3	-13
GTA				pmax		pmax			
	comp=Z,5.0nm,0.8s,mb4.6								
SONM	**Songino Array**	**68.63**	**328**	P		**P**		**09 24 33.1**	**+1.2**
	comp=Z,1.3nm,0.6s,mb4.0,baz=140,slow=6.7,SNR=8.5								
MK31	**Makanchi Array**	**82.64**	**319**	*e*P		**P**		**09 25 50.3**	**-1.6**
MKAR	**Makanchi Array**	**82.64**	**319**	P		**P**		**09 25 52.7**	**+0.8**
	comp=Z,0.5nm,0.4s,mb3.9,baz=95,slow=5.7,SNR=5.8								
MKAR					pP		pP	09 26 04.0	-5.1
	comp=Z,3.1nm,0.7s,baz=105,slow=6.3,SNR=6.6								
QSPA	**South Pole Qui**	**83.31**	**180**	*e*P		**P**		**09 25 55.9**	**+1.0**
	comp=Z,4.4nm,0.9s,mb4.5								
ZALV	**Zalesovo Beam**	**83.47**	**326**	P		**P**		**09 25 55.7**	**-0.3**
	comp=Z,2.0nm,0.5s,mb4.4,baz=110,slow=6.9,SNR=5.6								
ZALV					pP		pP	09 26 07.0	-6.2
	comp=Z,1.6nm,0.3s,baz=127,slow=3.8,SNR=4.0								
MAW	**Mawson**	**84.40**	**203**	P		**P**		**09 26 01.3**	**+0.7**
	comp=Z,2.6nm,0.6s,mb4.5,baz=102,slow=9.3,SNR=9.6								
KSH	**Kashi**	**85.20**	**311**	P		**P**		**09 26 08.4**	**+3.2**
KSH				pmax		pmax			
	comp=Z,110nm,6.4s								
EGAK	**Eagle**	**85.51**	**23**	*e*P		**P**		**09 26 05.1**	**-1.0**
	comp=Z,2.3nm,1.0s,mb4.4								
BVAR	**Borovoye Array**	**91.56**	**323**	P		**P**		**09 26 34.6**	**-0.6**
	comp=Z,0.9nm,0.5s,mb4.3,baz=48,slow=4.5,SNR=5.3								
BVAR					pP		pP	09 26 46.1	-6.5
	comp=Z,1.4nm,0.6s,baz=100,slow=6.2,SNR=4.3								
NVAR	**Mina Array Bea**	**92.13**	**52**	P		**P**		**09 26 38.7**	**+0.5**
	comp=Z,2.1nm,0.9s,mb4.4,baz=255,slow=6.6,SNR=12								
NVAR	**Mina Array Bea**	**92.13**	**52**	P		**P**		**09 26 38.7**	**+0.5**

IDC 16 09:38:34.6±2.9, 32°.12S×178°.33W, h0km, mb3.7/2, mb1 4.0/3, mb1mx3.7/16, mbtmp3.7/3, ML3.5/1, Error ellipse: s-maj=69.1km s-min=44.7km az=121.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.17**	**210**	Pn		Pn		09 40 19.3	-1.5
	0.7nm,0.3s,baz=253,slow=17,SNR=4.0								
URZ					Sn		Sn	09 41 35.8	-7.0
	0.9nm,0.3s,baz=248,slow=21,SNR=6.4								
ASAR	**Alice Springs**	**42.77**	**269**	P		P		09 46 34.2	+0.2
	0.6nm,0.6s,baz=110,slow=6.8,SNR=6.8								
WRA	**Warramunga Arr**	**43.91**	**274**	P		P		09 46 43.1	-0.1
	0.6nm,0.3s,baz=113,slow=8.1,SNR=19								
FINES	**FINESS Array B**	**146.66**	**339**	PKPbc		PKPbc		09 58 16.9	-0.6
	0.6nm,0.4s,baz=27,slow=3.4,SNR=4.9								

BJI 16 09:39:14.3, 32°.01N×104°.23E, h9km, mb3.4/1, ML3.6/12, Ms3.4/2, Ms7 3.2/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.17**	**200**	Pn		Pn		09 39 38.1	+1.3
CD2				Pg		Pg		09 39 40.3	+3.6
CD2				Sg		Sg		09 39 58.5	+6.6
CD2				smax					
	comp=N,2μm,0.6s								
CD2				smax					
	comp=E,2μm,0.5s								
LZH	**Lanzhou**	**4.08**	**356**	*e*Pn		Pn		09 40 20.0	+3.2
LZH				Pg		Pg		09 40 31.5	-0.9
LZH				Sg		Sg		09 41 22.8	-2.5
LZH				smax					
	comp=N,79nm,0.5s								
LZH				smax					
	comp=E,110nm,0.8s								
LZH				LR		LR			
	comp=E,310nm,5.8s								
LZH				LR		LR			
	comp=Z,450nm,6.3s								
XAN	**Xi'an**	**4.43**	**62**	Pn		Pn		09 40 21.3	-0.4
XAN				Sn		Sn		09 41 18.3	+4.9
XAN				Sg		Sg		09 41 34.9	-1.7
XAN				smax					
	comp=N,130nm,0.9s								
XAN				smax					
	comp=E,57nm,0.9s								
GYA	**Guiyang**	**5.93**	**158**	Pn		Pn		09 40 41.0	-1.2
GYA				Pg		Pg		09 41 04.3	-3.5
GYA				Sn		Sn		09 41 51.3	+1.0
GYA				Sg		Sg		09 42 16.3	-8.3
GYA				smax					
	comp=N,90nm,0.7s								
GYA				smax					
	comp=E,80nm,0.8s								
GTA	**Gaotai**	**8.21**	**335**	*e*P		Pn		09 41 17.4	+3.8
GTA				pP				09 41 20.6	
GTA				sP				09 41 23.3	
GTA				S		Sn		09 42 51.1	+4.7
GTA				sS				09 42 55.9	
GTA				pmax		pmax			
	comp=Z,2.0nm,1.0s								
GTA				LR		LR			
	comp=N,100nm,11.7s								
GTA				LR		LR			
	comp=E,290nm,12.6s								
GTA				LR		LR			
	comp=Z,72nm,10.2s								

*CASC **16** 09:55:33.5±2.1, 12°.82N×90°.41W, h0km±9km, MD3.7, mb3.7(NEIC)*
*IDC **16** 09:55:38.4±4.9, 13°.22N×89°.86W, h22km±26km, mb3.3/5, mb1 3.8/7, mb1mx3.6/20, mbtmp3.5/7, ML4.0/1, Error ellipse: s-maj=44.3km s-min=20.2km az=38.0*
*NEIC **16** 09:55:40.2±1.6, 12°.97N×90°.13W, h56km±15km, mb3.7/1, Error ellipse: s-maj=26.4km s-min=13.6km az=211.0*

ISC 16 09:55:37.2±4.2, 12°.99N±0°.07×90°.22W±0°.07, h9km±30km, n36, σ0°.97/42, mb3.6/5, 1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SNJE	**San Jose**	**1.06**	**34**	*e*P		**Pb**		**09 55 58.1**	**+0.4**
SNJE				*e*S		**Sg**		**09 56 18.1**	**+6.8**
BOQS	**Boqueron**	**1.18**	**51**	*e*P		**Pn**		**09 55 59.9**	**+0.1**
BOQS				*e*S		**Sg**		**09 56 22.3**	**+7.1**
SNET	**Serv Nac Est T**	**1.19**	**54**	*e*P		**Pn**		**09 55 59.4**	**-0.5**
SNET				*e*S		**Sg**		**09 56 21.0**	**+5.6**
RBDL	**Robledal**	**1.23**	**25**	*e*P		**Pn**		**09 56 00.7**	**+0.1**
LFRS	**El Faro**	**1.29**	**61**	*e*P		**Pn**		**09 56 01.0**	**-0.4**
SNVI	**San Vicente**	**1.48**	**65**	*e*P		**Pn**		**09 56 03.8**	**-0.2**
FUG	**Fuego 3**	**1.57**	**337**	*e*P		**Pn**		**09 56 03.9**	**-1.3**
NBG	**Las Nubes**	**1.59**	**356**	*e*P		**Pn**		**09 56 06.5**	**+1.0**
MTO2	**Montecristo 2**	**1.63**	**31**	*e*P		**Pn**		**09 56 06.6**	**+0.5**
MTO2				*e*S		**Sn**		**09 56 33.2**	**+6.0**
FG6		**1.69**	**338**	*e*P		**Pn**		**09 56 06.1**	**-0.8**
TP2	**Tecpan 2**	**1.94**	**337**	↓*e*P		**Pn**		**09 56 09.8**	**-0.6**
VSM	**San Miguel**	**1.94**	**77**	*e*P		**Pn**		**09 56 10.6**	**+0.1**
BLLM	**Bellamira**	**1.98**	**77**	*e*P		**Pn**		**09 56 10.7**	**-0.2**
APG	**El Apazote**	**2.02**	**353**	Pg		**Pn**		**09 56 11.4**	**0.0**
APG				Lg				09 56 39.2	
CAHU	**Cacacuatique**	**2.10**	**68**	*e*P		**Pn**		**09 56 12.4**	**-0.2**
MRL	**Marmol**	**2.12**	**14**	*e*P		**Pn**		**09 56 14.3**	**+1.4**
CNCH	**Conchagua**	**2.34**	**83**	*e*P		**Pn**		**09 56 14.9**	**-1.0**
TGUH	**Tegucigalpa,Un**	**3.06**	**69**	*e*Pn		**Pn**		**09 56 25.1**	**-0.6**
JTS	**JuntasAbangare**	**5.82**	**117**	Pn		**Pn**		**09 57 02.7**	**-1.0**
	4.6nm,0.3s,baz=308,slow=18,SNR=24								
JTS					Sn		**Sn**	**09 58 04.7**	**-5.9**
	0.7nm,0.3s,baz=299,slow=18,SNR=1.6								
JCR	**Jicaral**	**5.90**	**121**	*e*P		**Pn**		**09 57 04.0**	**-0.8**
CMIG	**Matias Romero**	**6.07**	**313**	Pn		**Pn**		**09 57 07.4**	**+0.2**
	1.0nm,0.3s,baz=120,slow=10,SNR=15								
CMIG					Sn		**Sn**	**09 58 19.8**	**+2.9**
	0.5nm,0.3s,baz=75,slow=20,SNR=2.8								
CGA2	**Cerro Gallo 2**	**6.37**	**117**	*e*P		**Pn**		**09 57 11.8**	**+0.5**
PRS1	**Puriscal**	**6.52**	**117**	*e*P		**Pn**		**09 57 13.7**	**+0.3**
LAJ	**Bijagual**	**6.74**	**117**	*e*P		**Pn**		**09 57 12.4**	**-4.0**
URSC	**Urasca**	**7.05**	**116**	*e*P		**Pn**		**09 57 22.1**	**+1.4**
URSC				*e*S		**Pb**		**09 57 46.5**	**+6.6**
BUS	**Buena Vista**	**7.20**	**118**	*e*P		**Pn**		**09 57 23.9**	**+1.2**
TEIG	**Tepich**	**7.43**	**14**	*e*Pn		**Pn**		**09 57 27.1**	**+1.3**
	12nm,0.8s								
BAR1		**7.74**	**118**	*e*P		**Pn**		**09 57 31.0**	**+0.9**
TXAR	**Lajitas Array**	**20.50**	**325**	P		**P**		**10 00 15.3**	**-0.3**
	0.4nm,0.6s,baz=149,slow=12,SNR=9.2								
TXAR	**Lajitas Array**	**20.50**	**325**	P		**P**		**10 00 15.3**	**-0.3**
MNTX	**Cornudas Mount**	**23.26**	**326**	*e*P		**P**		**10 00 42.5**	**-2.6**
	3.6nm,1.2s,mb3.7								
MNTX				*e*pP				10 00 50.1	
TKL	**Tuckaleechee C**	**23.31**	**13**	P		**P**		**10 00 43.0**	**-2.6**
	0.9nm,0.6s,mb3.4,baz=182,slow=12,SNR=2.7								
PDAR	**Pinedale Array**	**34.06**	**334**	P		**P**		**10 02 22.6**	**+0.8**
	0.2nm,0.6s,mb3.2,baz=156,slow=9.8,SNR=2.4								
NVAR	**Mina Array Bea**	**35.54**	**321**	P		**P**		**10 02 35.1**	**+0.4**
	0.5nm,0.6s,mb3.6,baz=129,slow=7.4,SNR=6.7								
SCHQ	**Schefferville**	**45.59**	**19**	P		**P**		**10 03 52.8**	**-4.6**
	1.4nm,0.4s,mb4.3,baz=212,slow=8.7,SNR=12								
CMAR	**Chiang Mai Arr**	**147.47**	**344**	PKPbc		PKPbc		10 15 19.4	-3.1
	0.5nm,0.3s,baz=338,slow=5.6,SNR=4.3								

*BJI **16** 10:11:57.4, 64°.20N×149°.25W, h30km, mB5.0/3, mb4.8/5, Ms4.7/1, Ms7 4.6/1*
*ISCJB **16** 10:11:59.4±0.6, 64°.62N±0°.03×149°.56W±0°.07, h28km±5km, mb4.2/13, Error ellipse: s-maj=5.5km s-min=4.6km az=151.1*
*NEIC **16** 10:12:00.6, 64°.59N×149°.53W, h30km, ML4.2(PMR), ML3.8(AEIC), MW3.9(SLM), After AEIC.*
*NEIC Felt [IV] at Nenana and [III] at Fairbanks. Also felt

TXAR	**Lajitas Array**	**45.42**	**118**	P	**P**	**10 20 19.9**	**+2.4**
	0.1nm,0.6s,baz=345,slow=6.5,SNR=3.4						
TXAR				pP	pP	10 20 27.8	+6.0
	0.6nm,0.7s,baz=329,slow=5.5,SNR=8.6						
MJAR	**Matsushiro Arr**	**50.14**	**273**	P	**P**	**10 20 54.7**	**+0.8**
	1.0nm,0.6s,mb4.0,baz=20,slow=7.7,SNR=5.3						
SONM	**Songino Array**	**53.41**	**305**	P	**P**	**10 21 18.6**	**+0.4**
	1.1nm,0.6s,mb4.0,baz=21,slow=6.1,SNR=5.6						
KSRS	**Korea Array**	**53.77**	**282**	P	**P**	**10 21 21.1**	**+0.1**
	2.5nm,0.8s,mb4.2,baz=30,slow=7.3,SNR=8.0						
ZALV	**Zalesovo Beam**	**54.61**	**324**	P	**P**	**10 21 26.4**	**-0.4**
	0.7nm,0.3s,mb4.1,baz=15,slow=6.0,SNR=2.0						
HHC	**Hu-ho-hao-te**	**57.50**	**297**	*eP*	**P**	**10 21 48.5**	**+0.8**
HHC				S	**S**	**10 29 42.0**	**-2.3**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.9						
HHC				pmax	pmax		
	comp=Z,79nm,6.1s						
BVAR	**Borovoye Array**	**58.72**	**333**	P	**P**	**10 21 56.1**	**+0.1**
	comp=Z,1.4nm,0.7s,mb4.1,baz=52,slow=8.0,SNR=4.9						
MKAR	**Makanchi Array**	**61.81**	**322**	P	**P**	**10 22 16.7**	**-0.5**
	comp=Z,0.5nm,0.3s,mb4.1,baz=54,slow=7.4,SNR=3.4						
WMQ	**Urumqi**	**63.02**	**317**	*eP*	**P**	**10 22 27.5**	**+2.0**
AKTK	**Aktyubinsk**	**63.32**	**341**	P	**P**	**10 22 27.1**	**-0.2**
AKTO	**Aktyubinsk**	**63.32**	**341**	P	**P**	**10 22 27.1**	**-0.2**
	comp=Z,3.6nm,1.0s,mb4.5,baz=32,slow=7.1,SNR=6.0						
LZH	**Lanzhou**	**64.58**	**301**	*eP*	**P**	**10 22 37.1**	**+1.3**
LZH				pP	pP	10 22 44.4	+4.1
LZH				sP	sP	10 22 47.5	+5.5
LZH				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
AKASG	**Malin Array Be**	**65.04**	**1**	P	**P**	**10 22 38.3**	**-0.2**
	comp=Z,1.0nm,0.5s,mb4.1,baz=355,slow=6.2,SNR=4.8						
CD2	**Chengdu**	**69.22**	**298**	P	**P**	**10 23 05.4**	**0.0**
CD2				pP	pP	10 23 13.3	+3.3
CD2				sP	sP	10 23 16.4	+4.8
CD2				PP	PP	10 25 40.3	+2.4
CD2				S	S	10 32 07.3	-3.5
CD2				SS	SS	10 36 35.6	-0.8
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
CD2				pmax	pmax		
	comp=Z,300nm,5.4s						
CD2				LR	LR		
	comp=N,130nm,8.3s						
CD2				LR	LR		
	comp=Z,140nm,7.7s						

*IDC **16** 10:13:45.2±0.6, 33.°56N×89.°38E, h0km, mb4.2/17, mb1 4.3/19, mb1mx4.3/26, mbtmp4.2/19, ML3.8/2, MS3.8/8, Ms1 3.8/8, ms1mx3.5/31, Error ellipse: s-maj=21.7km s-min=13.9km az=45.0*

*ISCJB **16** 10:13:46.2±0.3, 33.°73N±0.°03×89.°22E±0.°04, h10km, mb4.2/21, MS3.9/7, Error ellipse: s-maj=4.7km s-min=3.8km az=38.4*

*BJI **16** 10:13:47.2, 33.°77N×89.°34E, h10km, mB4.5/9, mb4.4/20, ML4.7/1, Ms4.4/14, Ms7 4.1/13*

*NEIC **16** 10:13:47.6±0.4, 33.°70N×89.°21E, h10km, mb4.2/6, Error ellipse: s-maj=12.2km s-min=6.8km az=54.0*

ISC 16 10:13:48.3±0.3, 33.°76N±0.°03×89.°23E±0.°04, h10km, n64, σ1°23/68, mb4.2/21, MS3.9/7, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**4.37**	**157**	Pn	**Pn**	**10 14 57.8**	**+3.1**
LSA				Sg	**Sg**	**10 16 04.4**	**-4.1**
LSA	**Lhasa**	**4.37**	**157**	*e*Pn	**Pn**	**10 14 57.4**	**+2.7**
LSA				*e*Sg	**Sg**	**10 16 09.0**	**+0.5**
GUN	**Gumba**	**6.50**	**207**	*eP*	**Pn**	**10 15 24.8**	**+0.8**
	97nm,0.6s						
TAPN	**Taplejung**	**6.52**	**192**	*eP*	**Pn**	**10 15 24.3**	**0.0**
	112nm,0.8s						
JIRN	**Jiri**	**6.62**	**204**	*eP*	**Pn**	**10 15 27.0**	**+1.4**
	145nm,0.7s						
KKN	**Kakani**	**6.85**	**211**	*eP*	**Pn**	**10 15 29.2**	**+0.4**
	38nm,0.5s						
GKN	**Gorkha**	**6.96**	**216**	*eP*	**Pn**	**10 15 30.5**	**+0.2**
	31nm,0.4s						
PKI	**Pulchoki**	**6.99**	**209**	*eP*	**Pn**	**10 15 31.2**	**+0.5**
PKIN	**Phulchoki**	**6.99**	**209**	*eP*	**Pn**	**10 15 31.2**	**+0.5**
	36nm,0.5s						
ODAN	**Odare**	**7.06**	**193**	*eP*	**Pn**	**10 15 31.5**	**-0.2**
	217nm,0.7s						
DMN	**Daman**	**7.08**	**211**	*eP*	**Pn**	**10 15 33.1**	**+1.1**
	87nm,0.9s						
RAMN	**Ramite**	**7.16**	**199**	*eP*	**Pn**	**10 15 32.9**	**-0.1**
SHL	**Shillong**	**8.49**	**164**	*e*PKP	**Pn**	**10 15 52.5**	**+1.3**
SHL				*e*S	Sn	10 18 07.5	+40
GTA	**Gaotai**	**10.21**	**53**	*eP*	**Pn**	**10 16 16.3**	**+1.5**
GTA				pP		10 16 19.9	
GTA				sP		10 16 22.3	
GTA				S	**Sn**	**10 18 11.3**	**+2.0**
GTA				sS		10 18 15.8	
GTA				SS		10 18 24.4	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,67nm,4.5s						
GTA				LR	LR		
	comp=N,2μm,16.5s						
GTA				LR	LR		
	comp=E,720nm,15.9s						
GTA				LR	LR		
	comp=Z,2μm,11.1s						
LZH	**Lanzhou**	**12.22**	**75**	*eP*	**Pn**	**10 16 47.0**	**+4.6**
LZH				pP		10 16 50.5	
LZH				sP		10 16 53.5	
LZH				*e*S	**Sn**	**10 19 03.0**	**+4.3**
LZH				sS		10 19 09.0	
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				pmax	pmax		
	comp=Z,90nm,4.5s						
LZH				LR	LR		
	comp=N,2μm,10.8s						
LZH				LR	LR		
	comp=Z,2μm,11.5s						
MK31	**Makanchi Array**	**14.04**	**340**	*e*Pn	**Pn**	**10 17 07.0**	**-0.2**
MKAR	**Makanchi Array**	**14.04**	**340**	Pn	**Pn**	**10 17 07.2**	**0.0**
	comp=Z,0.3nm,0.3s,baz=145,slow=15,SNR=10						
AAK	**Ala-Archa**	**14.56**	**312**	Pn	**Pn**	**10 17 17.6**	**+3.2**
	comp=Z,0.4nm,0.3s,baz=210,slow=20,SNR=2.5						
AAK				LR	LR	10 24 18.1	
	comp=Z,347nm,19.2s,baz=94,slow=43						
KMI	**Kunming**	**14.57**	**123**	P	**Pn**	**10 17 16.8**	**+2.3**
KMI				pmax	pmax		
	comp=Z,13nm,0.8s						
KMI				LR	LR		
	comp=N,1μm,12.9s						
KMI				LR	LR		
	comp=E,920nm,13.5s						
KMI				LR	LR		
	comp=Z,840nm,11.2s						
XAN	**Xi'an**	**16.36**	**84**	P	**Pn**	**10 17 35.4**	**-2.6**
XAN				pP	pP	10 17 46.0	+2.3
XAN				sP	sP	10 17 49.6	+4.6
XAN				S	**Sn**	**10 20 39.8**	**+0.2**
XAN				pmax	pmax		
	comp=Z,2.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,21nm,8.4s						
XAN				LR	LR		
	comp=N,690nm,15.0s						
XAN				LR	LR		
	comp=E,80nm,15.0s						
XAN				LR	LR		
	comp=Z,240nm,13.6s						
KBL	**Kabul**	**16.73**	**278**	*e*Pn	**Pn**	**10 17 40.9**	**-1.8**
	comp=Z,12nm,0.8s						
CHTO	**Chiang Mai**	**17.23**	**147**	*e*Pn	**Pn**	**10 17 47.8**	**-1.3**
	comp=Z,20nm,1.3s						
ENH	**Enshi**	**17.53**	**96**	*e*Pn	**Pn**	**10 17 53.8**	**+1.0**
	comp=Z,32nm,1.0s						
CMAR	**Chiang Mai Arr**	**17.54**	**148**	P	**Pn**	**10 17 51.8**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=330,slow=11,SNR=27						
CMAR				LR	LR	10 24 37.1	
	comp=Z,279nm,18.2s,baz=332,slow=38						
KURK	**Kurchatov**	**18.64**	**339**	*eP*	**Pn**	**10 18 05.8**	**-0.4**
	comp=Z,37nm,1.7s						
SONM	**Songino Array**	**19.09**	**37**	P	**Pn**	**10 18 11.5**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=224,slow=11,SNR=31						
SONM				LR	LR	10 27 07.2	
	comp=Z,85nm,19.9s,baz=232,slow=42						
HHC	**Hu-ho-hao-te**	**19.10**	**62**	*eP*	**Pn**	**10 18 11.8**	**-0.1**
HHC				S	**Sn**	**10 21 42.3**	**-3.5**
HHC				pmax	pmax		
	comp=Z,15nm,0.5s						
HHC				pmax	pmax		
	comp=Z,180nm,5.2s						
HHC				LR	LR		
	comp=N,350nm,11.7s						
HHC				LR	LR		
	comp=E,570nm,12.7s						
HHC				LR	LR		
	comp=Z,440nm,12.0s						
ULN	**Ulaanbaatar**	**19.44**	**38**	*eP*	**Pn**	**10 18 16.1**	**+0.1**
	comp=Z,33nm,1.3s						
ZALV	**Zalesovo Beam**	**20.42**	**353**	P	**P**	**10 18 26.6**	**+1.2**
	comp=Z,17nm,0.8s,baz=172,slow=12,SNR=61						
POO	**Poona**	**20.47**	**226**	*ex*	**P**	**10 18 24.0**	**-2.2**
WHN	**Wuhan**	**21.50**	**92**	P	**P**	**10 18 42.0**	**+4.8**
WHN				S	**S**	**10 22 38.0**	**+2.4**
WHN				LR	LR		
	comp=N,1μm,8.3s						
WHN				LR	LR		
	comp=E,760nm,8.5s						
WHN				LR	LR		
	comp=Z,1μm,12.0s,MS4.5						
BJI	**Beijing**	**22.40**	**66**	P	**P**	**10 18 47.5**	**+0.7**
BJI				S	**S**	**10 22 46.5**	**-6.5**
BJI				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.4						
BJI				pmax	pmax		
	comp=Z,91nm,5.6s						
BJI				LR	LR		
	comp=N,260nm,13.6s,MS4.3						
BJI				LR	LR		
	comp=E,760nm,11.9s,MS4.3						
BJI				LR	LR		
	comp=Z,230nm,15.5s,MS3.7						
BVAR	**Borovoye Array**	**23.50**	**331**	P	**P**	**10 18 59.4**	**+1.2**
	comp=Z,2.3nm,0.5s,mb3.8,baz=136,slow=10.0,SNR=12						
ABKAR	**Akbulak array**	**26.62**	**314**	*eP*	**P**	**10 19 27.7**	**+0.9**
	comp=Z,2.8nm,0.9s,mb3.8						
AKTK	**Aktyubinsk**	**28.25**	**316**	P	**P**	**10 19 42.2**	**+0.9**
AKTK				LR	LR	10 32 33.8	
AKTO	**Aktyubinsk**	**28.25**	**316**	P	**P**	**10 19 42.2**	**+0.9**
	comp=Z,0.8nm,0.6s,mb3.5,baz=143,slow=10,SNR=3.5						
AKTO				LR	LR	10 32 33.8	
	comp=Z,233nm,18.5s,MS3.8,baz=292,slow=40						
KSRS	**Korea Array**	**31.53**	**72**	P	**P**	**10 20 08.3**	**-2.2**
	comp=Z,2.1nm,0.6s,mb4.1,baz=274,slow=9.6,SNR=9.6						
KSRS				LR	LR	10 34 20.0	
	comp=Z,162nm,18.0s,MS3.7,baz=83,slow=39						
MJAR	**Matsushiro Arr**	**39.81**	**72**	P	**P**	**10 21 20.0**	**-1.6**
	comp=Z,0.7nm,0.5s,mb3.6,baz=282,slow=6.1,SNR=3.2						
BRTR	**Keskin Array B**	**44.34**	**294**	P	**P**	**10 21 59.1**	**+0.5**
	comp=Z,2.3nm,0.8s,mb4.0,baz=91,slow=8.6,SNR=11						
CBIJ	**Chichi jima**	**45.73**	**84**	LR	LR	10 42 02.0	
	comp=Z,69nm,18.6s,MS3.6,baz=328,slow=37						
JOF	**Joensuu**	**46.02**	**327**	*eP*	**P**	**10 22 11.1**	**-0.5**
JOF	**Joensuu**	**46.02**	**327**	*ep*	**P**	**10 22 11.1**	**-0.5**
	comp=Z,11nm,0.8s,mb4.8						
AKASG	**Malin Array Be**	**46.23**	**310**	P	**P**	**10 22 12.7**	**-0.7**
	comp=Z,1.8nm,0.6s,mb4.2,baz=80,slow=7.4,SNR=7.6						
KAF	**Kangasniemi**	**48.20**	**326**	*eP*	**P**	**10 22 33.3**	**+4.7**
KAF	**Kangasniemi**	**48.20**	**326**	*ep*	**P**	**10 22 33.3**	**+4.7**
FINES	**FINESS Array B**	**48.25**	**325**	P	**P**	**10 22 29.4**	**+0.5**
	comp=Z,3.9nm,0.7s,mb4.6,baz=116,slow=6.6,SNR=6.7						
FINES	**FINESS Array B**	**48.25**	**325**	P	**P**	**10 22 29.4**	**+0.5**
KEV	**Kevo**	**49.18**	**336**	*eP*	**P**	**10 22 35.1**	**-0.9**
KEV	**Kevo**	**49.18**	**336**	*ep*	**P**	**10 22 35.1**	**-0.9**
ARCES	**ARCESS Array B**	**49.65**	**336**	P	**P**	**10 22 39.9**	**+0.3**
	comp=Z,3.7nm,0.9s,mb4.4,baz=100,slow=6.3,SNR=5.5						
GUMO	**Guam**	**54.10**	**98**	LR	LR	10 46 08.5	
	comp=Z,76nm,18.7s,MS3.8,baz=290,slow=36						
NOA	**NORSAR Array B**	**55.43**	**325**	P	**P**	**10 23 22.3**	**-0.2**
	comp=Z,1.1nm,0.7s,mb4.0,baz=83,slow=7.2,SNR=3.0						
NOA				LR	LR	10 48 47.9	
	comp=Z,160nm,18.2s,MS4.1,baz=95,slow=38						
FITZ	**Fitzroy Crossi**	**62.17**	**140**	P	**P**	**10 24 08.9**	**-1.0**
	comp=Z,1.6nm,0.7s,mb4.2,baz=4.3,slow=7.8						
WRAB	**Tennant Creek**	**68.56**	**134**	*eP*	**P**	**10 24 48.8**	**-2.5**
	comp=Z,79nm,1.8s,mb5.3						
WRA	**Warramunga Arr**	**68.56**	**134**	P	**P**	**10 24 48.8**	**-2.5**
	comp=Z,7.1nm,0.8s,mb4.6,baz=327,slow=6.4,SNR=39						
ASAR	**Alice Springs**	**71.19**	**137**	P	**P**	**10 25 05.1**	**-2.3**
	comp=Z,3.8nm,0.8s,mb4.4,baz=322,slow=6.0,SNR=38						
INK	**Inuvik**	**73.38**	**15**	P	**P**	**10 25 19.1**	**-0.8**
	comp=Z,2.3nm,1.0s,mb4.1,baz=348,slow=5.4,SNR=6.2						
STKA	**Stephens Creek**	**81.83**	**137**	P	**P**	**10 26 03.7**	**-3.8**
	comp=Z,3.9nm,0.8s,mb4.4,baz=354,slow=8.5,SNR=4.6						
STKA	**Stephens Creek**	**81.83**	**137**	P	**P**	**10 26 03.7**	**-3.8**
YKA	**Yellowknife Ar**	**82.18**	**11**	P	**P**	**10 26 07.4**	**-1.7**
	comp=Z,1.0nm,0.8s,mb3.8,baz=329,slow=5.8,SNR=4.4						
DLBC	**Dease Lake**	**82.47**	**20**	P	**P**	**10 26 11.0**	**+0.4**
	comp=Z,0.7nm,0.7s,mb3.7,baz=300,slow=9.3,SNR=3.6						
BOSA	**Boshof**	**86.68**	**232**	P	**P**	**10 26 32.5**	**+0.3**
	comp=Z,3.8nm,0.8s,mb4.7,baz=58,slow=13,SNR=4.1						
TXAR	**Lajitas Array**	**116.07**	**13**	PKP	PKPdf	10 32 29.8	-2.1
	comp=Z,0.3nm,0.7s,baz=153,slow=0.8,SNR=3.9						
CPUP	**Villa Florida**	**150.21**	**275**	PKP	PKPdf	10 33 33.1	-1.5
	comp=Z,5.1nm,0.6s,baz=17,slow=4.4,SNR=4.6						
CPUP				PKPbc	PKPbc	10 33 37.9	-1.9
	comp=Z,3.3nm,0.5s,baz=47,slow=2.8,SNR=18						

IDC 16 10:17:58.0±2.0, 21.°12S×178.°19W, h538km±40km, mb3.2/5, mb1 3.4/7, mb1mx3.1/20, mbtmp3.3/7, Error ellipse: s-maj=30.0km s-min=21.6km az=97.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.42**	**42**	P	P	10 20 11.7	+1.8
	5.4nm,0.3s,baz=242,slow=22,SNR=7.9						
AFI				S	S	10 21 56.3	-1.9
	1.3nm,0.3s,baz=246,slow=20,SNR=2.7						
URZ	**Urewera**	**17.56**	**192**	P	P	10 21 30.9	-1.4
	2.5nm,0.3s,baz=352,slow=7.1,SNR=15						
RPZ	**Rata Peaks**	**24.25**	**199**	P	P	10 22 33.0	+0.5
	3.9nm,0.7s,baz=25,slow=3.2,SNR=4.0						
CTA	**Charters Tower**	**33.26**	**265**	P	P	10 23 50.8	-0.3
	2.8nm,0.4s,baz=89,slow=12,SNR=4.8						
ASAR	**Alice Springs**	**44.21**	**257**	P	P	10 25 19.6	0.0
	1.0nm,0.5s,baz=88,slow=8.0,SNR=20						
WRA	**Warramunga Arr**	**44.34**	**263**	P	P	10 25 20.4	-0.3
	0.6nm,0.3s,baz=96,slow=7.3,SNR=30						
FITZ	**Fitzroy Crossi**	**52.77**	**263**	P	P	10 26 23.9	+0.6
	1.9nm,1.0s,baz=110,slow=12,SNR=3.4						
AKASG	**Malin Array Be**	**143.46**	**331**	PKP	PKPdf	10 36 30.2	-0.9
	0.8nm,0.4s,baz=38,slow=4.5,SNR=5.8						

*IDC **16** 10:19:22.2±1.4, 32.°76N×86.°76E, h0km, mb3.7/7, mb1 3.8/9, mb1mx3.7/24, mbtmp3.7/9, ML3.9/2, Error ellipse: s-maj=36.2km s-min=21.0km az=53.0*

*ISCJB **16** 10:19:25.8±3.2, 32.°98N±0.°06×86.°83E±0.°10, h29km±28km, mb3.7/8, Error ellipse: s-maj=14.4km s-min=8.8km az=162.6*

*NEIC **16** 10:19:25.1±0.8, 32.°93N×86.°79E, h10km, mb3.9/3, Error ellipse: s-maj=17.0km s-min=10.9km az=219.0*

*DMN **16** 10:19:33.2±7.5, 32.°26N×86.°94E, h10km, Mb5.4/2, Error ellipse: s-maj=177.3km s-min=14.9km az=8.0*

ISC 16 10:19:28.7±0.8, 32.°97N±0.°05×86.°8E±0.°1, h37km±14km, n26, σ0°84/26, mb3.7/8, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**4.93**	**130**	*e*Pn	**Pn**	**10 20 41.2**	**+0.8**
GUN	**Gumba**	**5.11**	**189**	*eP*	**Pn**	**10 20 42.8**	**0.0**
	232nm,1.0s						
GKN	**Gorkha**	**5.30**	**201**	*eP*	**Pn**	**10 20 45.6**	**+0.2**
	60nm,0.7s						
JIRN	**Jiri**	**5.32**	**186**	*eP*	**Pn**	**10 20 45.6**	**-0.1**
	51nm,0.7s						
KKN	**Kakani**	**5.33**	**195**	*eP*	**Pn**	**10 20 45.9**	**+0.1**
	34nm,0.6s						
PKIN	**Phulchoki**	**5.52**	**193**	*eP*	**Pn**	**10 20 48.6**	**+0.3**
	42nm,0.6s						
PKI	**Pulchoki**	**5.52**	**193**	*eP*	**Pn**	**10 20 48.6**	**+0.2**
	76nm,0.9s						
DMN	**Daman**	**5.55**	**196**	*eP*	**Pn**	**10 20 49.6**	**+0.8**
	32nm,0.5s						
TAPN	**Taplejung**	**5.66**	**172**	*eP*	**Pn**	**10 20 50.2**	**-0.1**
RAMN	**Ramite**	**6.00**	**182**	*eP*	**Pn**	**10 20 54.3**	**-0.8**
	70nm,0.4s						
ODAN	**Odare**	**6.11**	**175**	*eP*	**Pn**	**10 20 55.7**	**-0.8**
	122nm,0.6s						
TKM2	**Tokmak 2**	**13.29**	**322**	*e*Pn	**Pn**	**10 22 36.1**	**+1.3**
EKS2	**Erkin-Say**	**14.12**	**317**	*eP*	**Pn**	**10 22 55.4**	**+9.3**
MKAR	**Makanchi Array**	**14.23**	**347**	Pn	**Pn**	**10 22 46.6**	**-1.0**
	0.2nm,0.3s,baz=161,slow=11,SNR=4.0						
KBL	**Kabul**	**14.87**	**281**	*e*Pn	**Pn**	**10 22 53.8**	**-2.5**
	6.7nm,0.7s						
CMAR	**Chiang Mai Arr**	**18.09**	**140**	P	**Pn**	**10 23 31.8**	**-5.4**
	0.4nm,0.3s,baz=319,slow=14,SNR=6.5						
KURK	**Kurchatov**	**18.73**	**344**	*eP*	**Pn**	**10 23 43.8**	**-0.9**
	3.1nm,0.7s						
SONM	**Songino Array**	**20.95**	**39**	P	**P**	**10 24 08.6**	**+0.4**
	3.1nm,0.9s,baz=233,slow=12,SNR=14						
ZALV	**Zalesovo Beam**	**21.02**	**357**	P	**P**	**10 24 08.7**	**-0.3**
	3.7nm,0.7s,mb3.8,baz=186,slow=10,SNR=9.0						
ULN	**Ulaanbaatar**	**21.32**	**40**	*eP*	**P**	**10 24 11.7**	**-0.6**
	7.0nm,0.9s,mb4.0						
BVAR	**Borovoye Array**	**23.27**	**334**	P	**P**	**10 24 33.9**	**+1.1**
	0.5nm,0.4s,mb3.3,baz=148,slow=16,SNR=3.3						
ABKAR	**Akbulak array**	**25.78**	**317**	*eP*	**P**	**10 24 57.8**	**+1.8**
	1.4nm,0.5s,mb3.8						
KSRS	**Korea Array**	**33.69**	**71**	P	**P**	**10 26 06.2**	**+0.1**
	0.6nm,0.6s,mb3.7,baz=276,slow=9.8,SNR=4.1						
AKASG	**Malin Array Be**	**45.21**	**111**	P	**P**	**10 27 41.4**	**-0.6**
	1.0nm,0.6s,mb3.9,baz=80,slow=7.6,SNR=7.3						
ASAR	**Alice Springs**	**72.02**	**135**	P	**P**	**10 30 48.0**	**-0.8**
	0.3nm,0.8s,mb3.3,baz=325,slow=7.9,SNR=4.9						
INK	**Inuvik**	**74.66**	**14**	P	**P**	**10 31 04.2**	**+0.4**
	1.0nm,0.9s,mb3.7,baz=347,slow=7.6,SNR=4.7						

*TRN **16** 10:29:15.4, 18.°22N×64.°39W, h132km*

*RSPR **16** 10:29:16.8, 18.°21N×64.°40W, h133km±1km, MD2.9/3, MD2.9/3*

*NEIC **16** 10:29:16.8, 18.°21N×64.°40W, h133km, MD2.9(RSPR), After RSPR.*

ISC 16 10:29:16.1±2.6, 18.°2N±0.°2×64.°4W±0.°2, h135km±15km, n8, σ0°18/16, 2C-6D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.30**	**312⇑**	*eP*	**Pn**	**10 29 34.6**	**-0.3**
TBVI				*e*S	Sn	10 29 49.1	0.0
TBVI	**Tortola**	**0.30**	**312⇑**	*eP*	**Pn**	**10 29 34.6**	**-0.3**
TBVI				*e*S	**Sn**	**10 29 49.1**	**0.0**
STVI	**Saint Thomas**	**0.56**	**284⇓**	*eP*	**Pn**	**10 29 36.3**	**+0.2**
STVI				*e*S	**Sn**	**10 29 51.4**	**+0.1**
STVI	**Saint Thomas**	**0.56**	**284⇓**	*eP*	**Pn**	**10 29 36.3**	**+0.2**
STVI				*e*S	**Sn**	**10 29 51.4**	**+0.1**
CDVI	**St. Croix**	**0.59**	**219⇓**	*eP*	**Pn**	**10 29 36.2**	**-0.1**
CDVI				*e*S	**Sn**	**10 29 51.7**	**+0.1**
CDVI	**St. Croix**	**0.59**	**219⇓**	*eP*	**Pn**	**10 29 36.2**	**-0.1**
CDVI				*e*S	**Sn**	**10 29 51.7**	**+0.1**
MTP	**Monte Pirata**	**1.12**	**264⇓**	*eP*	**Pn**	**10 29 40.9**	**+0.2**
MTP				*e*S	**Sn**	**10 29 59.0**	**-0.3**
MTP	**Monte Pirata**	**1.12**	**264⇓**	*eP*	**Pn**	**10 29 40.9**	**+0.2**
MTP				*e*S	**Sn**	**10 29 59.1**	**-0.2**

*IDC **16** 10:36:48.7±0.8, 8.°49N×102.°79W, h0km, mb4.4/12, mb1 4.6/14, mb1mx4.5/23, mbtmp4.4/14, ML3.7/1, MS4.7/21, Ms1 4.7/21, ms1mx4.6/27, Error ellipse: s-maj=29.7km s-min=14.4km az=62.0*

*NEIC **16** 10:36:49.8±0.4, 8.°29N×102.°87W, h10km, mb4.9/102, Error ellipse: s-maj=7.7km s-min=5.4km az=219.0*

*ISCJB **16** 10:36:51.5±0.4, 8.°34N±0.°05×102.°88W±0.°04, h33km, mb4.8/104, MS4.8/27, Error ellipse: s-maj=7.3km s-min=5.7km az=34.0*

*GCMT **16** 10:36:52.9±0.2, 8.°49N×103.°04W, h12km, MW5.4, Moment Tensor Solution. s72,c118; s25,c25; Moment tensor: Scale 1017Nm; Mrr=0.19±.02; Mθθ=0.90±.03; Mφφ=-0.71±.03; Mrθ=0.63±.06; Mrφ=-1.21±.02; Mθφ=0.20±.06; Best double couple: M0=1.60000×1017 NP1:φs=345.00000°, δ72.00000°, λ9.00000°. NP2:φb=252.00000°, δ82.00000°, λ162.00000°. Principal axes: T 1.7700, Plg19.0000°, Azm207.0000°; N -0.4000, Plg70.0000°, Azm49.0000°; P -1.3700, Plg7.0000°, Azm300.0000°; Data Used: II IU IC CN G. Surface waves: sta= 93, comp=165, per= 50.*

ISC 16 10:36:54.0±0.4, 8.°37N±0.°05×102.°86W±0.°04, h35km, n532, σ0°71/498, mb4.8/104, MS4.8/27, 165C-167D, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**11.64**	**41**	Pn	**Pn**	**10 39 32.6**	**-5.1**
	0.5nm,0.3s,baz=229,slow=7.3,SNR=6.7						
CMIG				LR	LR	10 43 03.4	
	comp=Z,14μm,20.9s,baz=212,slow=33						
CMIG				T		10 50 03.6	
	0.5nm,0.3s,baz=210,slow=13,SNR=4.3						
CMIG	**Matias Romero**	**11.64**	**41**	Pn	**Pn**	**10 39 32.6**	**-5.1**
CMIG				LR	LR	10 43 03.4	
APG	**El Apazote**	**13.80**	**60**	Pn	**Pn**	**10 40 03.4**	**-3.9**
	baz=90,slow=16						
APG				LR	LR	10 43 48.9	
	comp=Z,892nm,18.4s,baz=91,slow=31						
PAYG	**Puerto Ayora**	**15.42**	**125**	Pn	**Pn**	**10 40 27.2**	**-1.8**
	377nm,1.8s						
TGUH	**Tegucigalpa,Un**	**16.29**	**68**	*e*Pn	**Pn**	**10 40 41.2**	**+1.0**
	99nm,1.4s						
TGUH				*e*Sn	**Sn**	**10 44 00.1**	**+20**
JTS	**JuntasAbangare**	**17.77**	**82**	P	**Pn**	**10 41 02.0**	**+3.3**
	0.1nm,0.3s,baz=260,slow=13,SNR=3.8						
JTS				LR	LR	10 46 08.4	
	comp=Z,2μm,19

baz=24
GDL2 Guadalupe Moun 23.75 357 eP P 10 42 03.5 +0.3
318A Bisbee 23.89 345 ⇓P P 10 42 02.2 -2.3
baz=24,SNR=15
221A Mesquite Ranch 23.96 350 ⇑P P 10 42 03.2 -1.9
baz=24
220A Playas Peak, P 24.00 348 ⇓P P 10 42 03.1 -2.3
baz=24,SNR=27
126A Clayton Basin, 24.18 358 ⇑P P 10 42 06.0 -1.0
baz=24,SNR=6.7
127A Arkansas Junct 24.19 359 ⇓P P 10 42 05.8 -1.4
baz=24,SNR=6.5
125A Gardner Draw, 24.23 356 ⇑P P 10 42 07.8 +0.4
baz=24,SNR=12
219A White Tail Can 24.25 347 ⇑P P 10 42 07.0 -0.7
baz=24,SNR=17
124A Stringfield Ra 24.33 355 ⇓P P 10 42 07.4 -1.0
baz=24,SNR=19
123A Bell Site, Whi 24.35 353 ⇓P P 10 42 07.5 -1.1
baz=24
218A Dragoon 24.42 345 ⇓P P 10 42 08.5 -0.7
baz=24,SNR=12
217A Green Valley 24.44 343 ⇓P P 10 42 09.2 -0.2
baz=25,SNR=14
121A Cookes Peak, D 24.47 350 ⇓P P 10 42 08.5 -1.2
baz=25,SNR=14
NATX Nacogdoches 24.49 17 eP P 10 42 09.8 -0.1
43nm,0.8s,mb4.9
122A Conniff Cattle 24.51 352 ⇑P P 10 42 09.7 -0.4
baz=25
CPRX Cap Rock 24.56 358 eP P 10 42 11.0 +0.5
10nm,0.9s,mb4.4
Z26A Caprock 24.80 358 ⇑P P 10 42 12.4 -0.3
baz=25,SNR=15
Z27A Tatum 24.82 359 ⇓P P 10 42 12.6 -0.3
baz=25,SNR=18
216A Three Points, 24.84 342 ⇓P P 10 42 13.1 0.0
baz=25,SNR=15
Z25A Roswell 24.85 356 ⇑P P 10 42 13.3 +0.2
baz=25,SNR=17
TUC Tucson 24.93 344 eP P 10 42 14.2 +0.3
47nm,1.6s,mb4.8
Z24A Sheeppen Canyo 24.95 355 ⇓P P 10 42 13.9 -0.1
baz=25,SNR=5.0
Z23A Rita Site, Whi 24.96 353 ⇓P P 10 42 14.9 +0.7
baz=25,SNR=10
119A Ashpeak Ranch, 25.00 347 ⇓P P 10 42 14.2 -0.3
baz=25,SNR=8.5
118A Homack Ranch, 25.03 346 ⇓P P 10 42 14.0 -0.8
baz=25,SNR=23
Z22A Elephant Butte 25.05 352 ⇑P P 10 42 15.0 0.0
baz=25,SNR=25
117A Oracle 25.17 344 ⇑P P 10 42 16.4 +0.4
baz=25,SNR=18
Z20A Nine Sixteen R 25.19 349 ⇑P P 10 42 15.6 -0.7
baz=25,SNR=38
Z21A St. Cloud Mine 25.21 351 ⇓P P 10 42 15.8 -0.6
baz=25
214A Organ Pipe Nat 25.23 340 ⇓P P 10 42 15.8 -0.8
baz=25,SNR=10
Y27A Causey 25.39 359 ⇓P P 10 42 17.3 -0.8
baz=26,SNR=61
116A Eloy 25.43 342 ⇑P P 10 42 17.8 -0.7
baz=26,SNR=8.5
Y26A Elida 25.44 358 ⇑P P 10 42 17.6 -0.9
baz=26
Z18A Geronimo 25.47 346 ⇑P P 10 42 18.0 -0.8
baz=26
MSTX Muleshoe 25.48 0 ⇑P P 10 42 18.7 -0.1
baz=26,SNR=14
Y25A Mesa, Roswell 25.48 356 ⇑P P 10 42 19.2 +0.2
baz=26,SNR=17
Y24A Capitan 25.54 355 ⇓P P 10 42 19.9 +0.4
baz=26
Y23A Lovelace Mesa, 25.61 354 ⇑P P 10 42 20.6 +0.6
baz=26,SNR=20
OTAV Otavalo 25.62 107 eP P 10 42 23.6 +3.2
119nm,1.8s,mb5.1
Y22A Socorro 25.72 352 ⇓P P 10 42 20.8 -0.3
baz=26,SNR=15
Z17A San Carlos Hig 25.78 345 ⇓P P 10 42 20.8 -0.8
baz=26
Y22D IRIS PASSCAL I 25.85 352 ⇑P P 10 42 21.8 -0.5
baz=26
BNM Barren Site 25.89 353 eP P 10 42 23.8 +1.2
21nm,1.4s,mb4.5
Y21A Point of Rocks 25.90 351 ⇓P P 10 42 22.7 +0.1
baz=26,SNR=20
Y20A Horse Springs, 25.92 349 ⇓P P 10 42 24.0 +1.1
baz=26,SNR=22
114A Black Gap (USA 25.98 340 ⇑P P 10 42 23.0 -0.4
baz=26,SNR=13
X26A CR and CF Fran 26.07 358 ⇓P P 10 42 23.4 -0.8
baz=26
Z16A Peralta Trail, 26.08 344 ⇑P P 10 42 23.9 -0.4
baz=26
X25A Clemmons Ranch 26.08 357 ⇓P P 10 42 23.4 -0.9
baz=26
Y18A Canyon Day Jun 26.14 346 ⇑P P 10 42 24.0 -0.8
baz=26
Y19A Nutrioso 26.14 348 ⇑P P 10 42 24.0 -0.8
baz=26,SNR=27
X27A F and S Farms, 26.15 360 ⇑P P 10 42 23.8 -1.2
baz=26
X24A Lazy VL Ranch, 26.18 355 ⇓P P 10 42 24.6 -0.5
baz=26
LAZ Ladron 26.20 352 eP P 10 42 26.8 +1.3
13nm,1.3s,mb4.3
Y17A Roosevelt 26.26 345 ⇑P P 10 42 25.3 -0.6
baz=26,SNR=9.0
X23A Hourglass Bar 26.26 354 ⇓P P 10 42 25.9 -0.1
baz=26,SNR=8.2
X22A Bernardo 26.29 352 ⇓P P 10 42 26.1 -0.1
baz=26
113A Mohawk Valley, 26.30 339 ⇓P P 10 42 25.9 -0.4
baz=26,SNR=17
X21A Alamocita Cree 26.34 351 ⇓P P 10 42 27.8 +1.1
baz=26,SNR=18
VBMS Vicksburg 26.35 24 eP P 10 42 27.5 +0.7
32nm,0.8s,mb4.9
AMTX Amarillo 26.41 2 eP P 10 42 27.1 -0.1
14nm,0.9s,mb4.5
WMOK Wichita Mounta 26.51 8 eP P 10 42 26.4 -1.8
44nm,1.9s,mb4.7
X20A Quemado 26.56 350 ⇓P P 10 42 29.1 +0.5
baz=27,SNR=11
Z14A Wintersburg 26.56 341 ⇓P P 10 42 28.4 -0.3
baz=27
W27A Bowe Ranch, En 26.57 360 ⇓P P 10 42 28.5 -0.2
baz=27,SNR=9.8
Y16A Circle Bar Ran 26.60 344 ⇓P P 10 42 29.2 +0.2
baz=27
W26A Owens Ranch, T 26.60 358 ⇓P P 10 42 29.2 +0.1
baz=27
Z13A Yuma Proving G 26.65 339 ⇓P P 10 42 28.9 -0.6
baz=27,SNR=12
ANMO Albuquerque 26.66 353 P P 10 42 29.4 -0.2
3.0nm,1.0s,mb3.8,baz=166,slow=7.2,SNR=10
ANMO LR LR 10 52 36.5
comp=Z,2μm,18.8s,MS4.6,baz=32,slow=36
ANMO Albuquerque 26.66 353 eP P 10 42 30.3 +0.8
8.8nm,1.3s,mb4.1
W25A X Bar L Ranch, 26.76 357 ⇓P P 10 42 29.7 -0.8
baz=27
W24A Lazy 6 Ranch, 26.82 355 ⇑P P 10 42 31.4 +0.5
baz=27,SNR=8.0
W23A Werner Place, 26.83 354 ⇑P P 10 42 31.6 +0.5
baz=27
X18A Snowflake 26.84 347 ⇑P P 10 42 31.6 +0.5
baz=27
X17A Forest Lakes 26.86 345 ⇓P P 10 42 31.6 +0.3
baz=27,SNR=16
Y15A Casa Rosa Ranc 26.92 342 ⇓P P 10 42 31.8 -0.1
baz=27,SNR=19
GLA Glamis 26.94 337 ⇓P P 10 42 32.2 +0.1
baz=27
GLA Glamis 26.94 337 eP P 10 42 32.7 +0.6
27nm,1.0s,mb4.7
W21A San Fidel 26.98 351 ⇓P P 10 42 32.4 0.0
baz=27
X16A Lo Mia Camp, P 27.10 344 ⇓P P 10 42 33.1 -0.4
baz=27,SNR=12
DVTC Desert V Tower 27.11 335 ⇓P P 10 42 33.4 -0.2
baz=27
Y14A Wickenburg 27.11 341 ⇑P P 10 42 33.2 -0.4
baz=27,SNR=9.3
W20A Ramah 27.13 350 ⇓P P 10 42 34.1 +0.3
baz=27,SNR=8.3

Y13A Salome 27.27 340 ⇓P P 10 42 34.9 -0.1
baz=27
V26A Tequesquite Ra 27.31 358 ⇓P P 10 42 34.9 -0.5
baz=28,SNR=6.9
V24A Rampart Ranch, 27.32 356 ⇑P P 10 42 35.8 +0.3
baz=28
W18A Petrified Fore 27.36 348 ⇓P P 10 42 35.8 0.0
baz=28
BAR Barrett 27.37 334 eP P 10 42 36.0 +0.1
38nm,1.4s,mb4.7
X15A Humboldt 27.39 343 ⇓P P 10 42 35.7 -0.4
baz=28,SNR=11
V25A Rancho No Teng 27.39 357 ⇓P P 10 42 36.0 -0.1
baz=28
MIAR Mount Ida 27.41 17 eP P 10 42 35.3 -1.1
27nm,0.8s,mb4.8
V23A Ortiz Mt. (NFS 27.41 354 ⇑P P 10 42 36.3 0.0
baz=28
MONP Monument Peak 27.44 335 ⇑P P 10 42 36.7 0.0
baz=28
X14A Yava 27.56 342 ⇓P P 10 42 37.7 0.0
baz=28
V22A San Miguel Ran 27.66 353 ⇓P P 10 42 38.7 +0.1
baz=28
BC3 Big Chuckawall 27.72 337 ⇑P P 10 42 39.2 +0.2
baz=28
W16A Flagstaff 27.76 345 ⇑P P 10 42 39.4 0.0
baz=28,SNR=10
V19A Window Rock 27.80 349 ⇑P P 10 42 39.8 0.0
baz=28
PDMCI Parker Dam,Lak 27.82 340 ⇑P P 10 42 39.7 -0.2
baz=28
U26A Atchley Ranch, 27.91 358 ⇑P P 10 42 40.4 -0.3
baz=28
U25A Circle Dot Ran 27.93 357 ⇓P P 10 42 41.2 +0.2
baz=28
V18A Ganado 27.97 348 ⇓P P 10 42 40.8 -0.5
baz=28,SNR=15
X13A Yucca 27.98 340 ⇑P P 10 42 40.9 -0.5
baz=28,SNR=18
U23A El Rito 27.99 354 ⇓P P 10 42 41.2 -0.3
baz=28,SNR=8.4
W15A Williams 28.04 343 ⇓P P 10 42 42.2 +0.3
baz=28
IRM Iron Mountain 28.05 338 ⇓P P 10 42 41.5 -0.5
baz=28,SNR=19
PFO Pinyon Flat Ob 28.08 335 ⇓P P 10 42 42.5 +0.2
baz=28
PFO Pinyon Flat Ob 28.08 335 eP P 10 42 42.3 0.0
31nm,1.3s,mb4.8
V17A Tonalea, Kykot 28.08 346 ⇓P P 10 42 43.0 +0.7
baz=28,SNR=23
U22A Llaves 28.11 353 ⇓P P 10 42 42.8 +0.2
baz=28,SNR=15
WUAZ Wupatki 28.12 345 ⇓P P 10 42 42.3 -0.3
baz=28,SNR=22
WUAZ Wupatki 28.12 345 eP P 10 42 43.6 +1.0
25nm,1.1s,mb4.8
BELC Belle Mtn. Jos 28.23 336 ⇑P P 10 42 43.5 -0.1
baz=28,SNR=9.1
U21A Nageezi 28.27 352 ⇓P P 10 42 43.6 -0.3
baz=28
W14A Seligman 28.31 342 ⇓P P 10 42 44.3 -0.1
baz=28
U20A Newcomb 28.35 350 ⇓P P 10 42 44.7 +0.1
baz=28
U19A Dine' College, 28.39 349 ⇑P P 10 42 45.2 +0.2
baz=28,SNR=16
W13A Hualapai Mount 28.46 341 ⇑P P 10 42 46.0 +0.4
baz=29,SNR=6.0
ROSC El Rosal 28.55 95 LR LR 10 50 39.3
comp=Z,262nm,21.0s,MS3.8,baz=318,slow=29
LRAL Lakeview Retre 28.60 29 eP P 10 42 47.1 +0.2
5.3nm,0.9s,mb4.3
V15A Kaibab Nationa 28.62 344 ⇓P P 10 42 47.4 +0.4
baz=29,SNR=9.1
U18A Rough Rock, Ch 28.64 348 ⇓P P 10 42 47.0 -0.3
baz=29
U16A Tuba City 28.66 346 ⇓P P 10 42 47.3 -0.1
baz=29,SNR=16
T25A Trinidad 28.67 357 ⇑P P 10 42 47.4 -0.2
baz=29
V14A Boquillas Ranc 28.71 342 ⇑P P 10 42 48.3 +0.4
baz=29,SNR=7.2
T22A Edith 28.75 353 ⇓P P 10 42 49.0 +0.8
baz=29,SNR=11
GMRC Granite Mounta 28.79 338 ⇑P P 10 42 48.0 -0.6
baz=29,SNR=12
T21A Navajo Lake 28.80 352 ⇓P P 10 42 48.5 -0.2
baz=29
BBRC Big Bear Solar 28.84 335 ⇑P P 10 42 48.9 -0.2
baz=29
ATAH Atahualpa 28.84 122 P P 10 42 50.5 +1.2
10.0nm,1.0s,mb4.5,baz=321,slow=6.1,SNR=11
ATAH LR LR 10 52 05.0
comp=Z,7μm,19.9s,MS5.3,baz=302,slow=32
LDFC Landfair 28.86 339 eP P 10 42 50.6 +1.4
T19A Beclabito 28.88 350 ⇑P P 10 42 49.0 -0.4
baz=29
U17A Shonto 28.98 347 ⇑P P 10 42 49.8 -0.5
baz=29
HEC Hector,Ludlow 29.09 337 ⇓P P 10 42 51.3 0.0
baz=29
BFSC Mount Baldy Ra 29.13 334 ⇑P P 10 42 51.6 0.0
baz=29
MVCO Mesa Verde 29.16 351 ⇑P P 10 42 51.8 -0.1
baz=29,SNR=8.3
MVCO Mesa Verde 29.16 351 eP P 10 42 52.5 +0.7
26nm,1.4s,mb4.8
V13A Grand Canyon W 29.18 341 ⇑P P 10 42 51.4 -0.6
baz=29,SNR=12
S25A Robets Cordova 29.19 357 ⇑P P 10 42 51.9 -0.3
baz=29
S24A Houchin Ranch, 29.22 356 ⇓P P 10 42 53.3 +1.0
baz=29,SNR=7.6
U15A North Rim 29.22 344 ⇓P P 10 42 52.3 -0.1
baz=29,SNR=9.1
MWC Mount Wilson 29.29 334 eP P 10 42 54.5 +1.5
27nm,1.3s,mb4.8
PASC Pasadena Art C 29.30 333 eP P 10 42 54.1 +1.0
69nm,1.1s,mb5.3
T18A Mexican Hat 29.34 349 ⇓P P 10 42 53.1 -0.3
baz=30,SNR=15
SDCO Great Sand Dun 29.34 356 eP P 10 42 55.8 +2.3
12nm,1.4s,mb4.4
V12A Nelson 29.35 340 ⇓P P 10 42 54.1 +0.5
baz=30
T17A Navajo Res., N 29.40 347 ⇑P P 10 42 54.6 +0.6
baz=30
U14A Mt Trumbull 29.46 343 ⇑P P 10 42 53.9 -0.6
baz=30,SNR=10
S22A 4UR Ranch, Cre 29.46 354 ⇓P P 10 42 55.2 +0.6
baz=30,SNR=11
TUQ Turquoise Moun 29.47 338 ⇓P P 10 42 54.6 -0.1
baz=30,SNR=7.7
S21A Coal Bank Pass 29.50 352 ⇑P P 10 42 54.9 0.0
baz=30
T16A Glen Canyon Da 29.55 346 ⇓P P 10 42 55.5 +0.2
baz=30,SNR=14
V11A Goodsprings 29.66 339 ⇓P P 10 42 56.3 0.0
baz=30
GSC Goldstone 29.69 337 ⇑P P 10 42 56.7 +0.1
baz=30
GSC Goldstone 29.69 337 eP P 10 42 57.2 +0.6
15nm,1.1s,mb4.6
U13A Pakoon Wash 29.69 342 ⇓P P 10 42 56.9 +0.3
baz=30,SNR=12
S20A Disappointment 29.75 351 ⇓P P 10 42 57.3 +0.2
baz=30
S19A Harvey Farm, M 29.79 350 ⇓P P 10 42 57.0 -0.4
baz=30
R24A Sanders Place, 29.80 356 ⇑P P 10 42 58.1 +0.6
baz=30,SNR=9.1
T15A Red Dirt Ranch 29.80 345 ⇑P P 10 42 58.0 +0.5
baz=30
EDW2 Edwards Air Fo 29.82 334 ⇓P P 10 42 57.6 -0.1
baz=30
S18A Hurst Farm, Bl 29.89 349 ⇓P P 10 42 58.3 -0.1
baz=30,SNR=32
R22A Saguache, Gunn 29.93 354 ⇑P P 10 42 59.3 +0.6
baz=30,SNR=7.5
S17A Black Ridge (B 30.01 347 ⇓P P 10 42 59.6 +0.3
baz=30,SNR=6.4
SHOC Shoshone 30.02 338 ⇓P P 10 42 59.7 +0.2
baz=30
T14A Hurricane 30.03 344 ⇑P P 10 42 60.0 +0.4
baz=30
PV01 Paradox Valley 30.08 351 eP P 10 43 00.5 +0.5

578nm,1.2s
R20A Redvale 30.10 351 ⇓P P 10 43 00.3 +0.1
baz=30,SNR=12
R21A Cimarron 30.16 353 ⇓P P 10 43 01.0 +0.3
baz=30,SNR=12
LRMC Laurel Mountai 30.20 335 ⇓P P 10 43 01.4 +0.2
baz=30
S16A Weppner Ranch, 30.27 346 ⇑P P 10 43 01.8 +0.1
baz=30
R19A Curley Farm, L 30.34 350 ⇓P P 10 43 02.3 -0.1
baz=30,SNR=18
PV04 Paradox Valley 30.38 351 eP P 10 43 02.8 +0.1
S15A Panguitch 30.42 345 ⇓P P 10 43 03.5 +0.5
baz=31
Q25A Bedland, Calha 30.43 358 ⇑P P 10 43 03.3 +0.1
baz=31,SNR=7.2
R18A Canyonlands Na 30.55 349 ⇓P P 10 43 03.6 -0.6
baz=31,SNR=51
CCUT Cedar City 30.57 343 eP P 10 43 05.5 +1.2
17nm,1.7s,mb4.6
Q22A Crested Butte, 30.58 354 ⇑P P 10 43 04.3 -0.1
baz=31,SNR=20
MPMC Manual Prospec 30.62 336 ⇓P P 10 43 04.6 -0.3
baz=31,SNR=17
Q21A Lamborn Mesa, 30.63 353 ⇑P P 10 43 04.8 -0.1
baz=31,SNR=12
GOGA Godfrey 30.69 33 eP P 10 43 05.4 -0.1
21nm,1.3s,mb4.8
ISA Isabella 30.69 335 ⇑P P 10 43 05.8 +0.4
baz=31
ISA Isabella 30.69 335 eP P 10 43 05.6 +0.2
17nm,1.4s,mb4.7
S14A Cedar City 30.71 344 ⇓P P 10 43 06.0 +0.4
baz=31
S13A Holt Ranch, En 30.74 343 ⇑P P 10 43 06.5 +0.6
baz=31
FURC Furnace Creek, 30.74 338 ⇑P P 10 43 06.1 +0.2
baz=31
R17A Hanksville Air 30.74 348 ⇑P P 10 43 05.1 -0.8
baz=31,SNR=34
R16A Teasdale 30.78 347 ⇑P P 10 43 06.5 +0.3
baz=31,SNR=12
ARUT Antelope Range 30.81 343 eP P 10 43 07.5 +1.0
13nm,1.2s,mb4.6
Q20A Ridgley Place, 30.84 352 ⇑P P 10 43 07.5 +0.8
baz=31
WVT Waverly 30.84 24 eP P 10 43 05.5 -1.2
7.7nm,0.8s,mb4.6
T11A Corn Creek, Al 30.85 341 ⇑P P 10 43 06.9 +0.1
baz=31,SNR=17
SMCO Snowmass 30.89 354 eP P 10 43 07.6 +0.4
24nm,1.5s,mb4.8
R15A Junction 30.90 345 ⇓P P 10 43 07.7 +0.5
baz=31,SNR=12
P23A Jefferson 30.98 356 ⇑P P 10 43 08.8 +0.8
baz=31
Q19A Hogan Spring (30.99 350 ⇓P P 10 43 09.3 +1.3
baz=31
P25A Willow Gulch B 31.03 358 ⇓P P 10 43 09.3 +0.9
baz=31
KSU1 Kansas State U 31.11 9 eP P 10 43 10.1 +1.0
21nm,1.1s,mb4.9
MSU Marysvale 31.16 346 eP P 10 43 10.0 +0.4
CWC Cottonwood Cre 31.19 336 ⇓P P 10 43 10.0 +0.1
baz=31
Q18A Rafter H Ranch 31.29 349 ⇑P P 10 43 11.3 +0.7
baz=31
Q16A Castle Valley 31.32 347 ⇑P P 10 43 11.1 +0.1
baz=32,SNR=6.6
R13A O'Grain Ranch, 31.33 343 ⇑P P 10 43 11.0 0.0
baz=32
SRU San Rafael 31.37 348 ⇓P P 10 43 11.3 0.0
baz=32,SNR=12
SRU San Rafael 31.37 348 eP P 10 43 11.2 -0.2
16nm,1.2s,mb4.7
P20A De Beque 31.39 352 ⇑P P 10 43 12.0 +0.4
baz=32
ISCO Idaho Springs 31.39 356 eP P 10 43 14.1 +2.6
6.1nm,1.1s,mb4.3
S11A Rachel 31.39 340 ⇑P P 10 43 12.0 +0.4
baz=32
GRAC Grapevine Rang 31.40 337 ⇑P P 10 43 12.0 +0.4
baz=32
P19A Cripple Cowboy 31.61 351 ⇑P P 10 43 13.1 -0.4
baz=32,SNR=11
R12A Pony Springs, 31.65 342 ⇑P P 10 43 14.5 +0.7
baz=32,SNR=12
Q15A Fillmore 31.67 346 ⇑P P 10 43 14.5 +0.4
baz=32
TMUT Trail Mountain 31.69 348 eP P 10 43 15.6 +1.4
12nm,1.0s,mb4.7
SIUC Southern Illin 31.71 21 eP P 10 43 14.6 +0.1
14nm,0.8s,mb4.9
CPCT Cooper Cave 31.75 29 eP P 10 43 14.8 +0.1
P17A Butcher Ranch, 31.76 348 ⇓P P 10 43 14.8 -0.1
baz=32
P18A Preston Nutter 31.82 349 ⇓P P 10 43 15.5 +0.2
baz=32
O22A Kremmling 31.83 355 ⇑P P 10 43 15.8 +0.4
baz=32
Q14A Sevier Lake (B 31.89 345 ⇑P P 10 43 16.6 +0.7
baz=32,SNR=25
S10A Tonopah Range, 31.93 339 ⇑P P 10 43 16.5 +0.1
baz=32,SNR=19
O21A Pagoda 31.98 353 ⇑P P 10 43 17.2 +0.6
baz=32
R11A Troy Canyon, C 31.98 341 ⇑P P 10 43 17.2 +0.5
baz=32,SNR=7.4
O20A White River Ci 31.99 352 ⇑P P 10 43 17.3 +0.4
baz=32
Q13A Wheeler Ranch, 32.06 343 ⇑P P 10 43 17.6 +0.1
baz=32,SNR=17
MTUM Tungsten Hills 32.17 336 eP P 10 43 19.9 +1.5
TKL Tuckaleechee C 32.28 30 eP P 10 43 19.3 -0.1
O19A Miners Draw (B 32.28 351 ⇓P P 10 43 19.9 +0.6
baz=32
O18A Roosevelt 32.39 350 ⇑P P 10 43 21.0 +0.7
baz=32,SNR=10
P14A Drum Mountains 32.40 345 ⇓P P 10 43 21.0 +0.5
baz=32,SNR=17
Q11A Duckwater 32.45 341 ⇑P P 10 43 21.2 +0.3
baz=33,SNR=17
N22A Wattenberg Ran 32.45 355 ⇓P P 10 43 21.2 +0.3
baz=33
O17A Robinson Place 32.46 349 ⇓P P 10 43 21.5 +0.5
baz=33,SNR=6.9
MPU Maple Canyon 32.47 347 eP P 10 43 22.3 +1.3
32nm,1.2s,mb5.0
NLU North Lily Min 32.51 347 eP P 10 43 22.0 +0.6
7.9nm,1.0s,mb4.6
MLAC Mammoth Lakes 32.52 336 ⇑P P 10 43 22.4 +0.8
baz=33,SNR=12
O16A Springville 32.63 348 ⇑P P 10 43 22.8 +0.4
baz=33
Q10A Clear Creek Ra 32.68 340 ⇓P P 10 43 23.0 +0.1
baz=33,SNR=17
N20A Spence Gulch, 32.68 352 ⇓P P 10 43 23.2 +0.3
baz=33
DAU Daniels Canyon 32.77 348 eP P 10 43 24.2 +0.5
P12A McGill 32.80 343 ⇑P P 10 43 24.0 0.0
baz=33
NNA Nana 32.83 128 LR LR 10 52 20.2
comp=Z,278nm,20.4s,MS4.0,baz=314,slow=28
N19A John Jarvie Ra 32.87 351 ⇓P P 10 43 24.7 +0.2
baz=33
PHWY Pilot Hill 32.88 356 eP P 10 43 25.6 +1.0
11nm,1.1s,mb4.7
DUG Dugway 32.91 346 ⇑P P 10 43 25.4 +0.5
baz=33,SNR=20
DUG Dugway 32.91 346 eP P 10 43 27.0 +2.1
30nm,1.2s,mb5.1
JLU Jordanelle 33.00 348 eP P 10 43 26.3 +0.7
9.7nm,1.0s,mb4.7
NVAR Mina Array Bea 33.01 337 P P 10 43 25.9 +0.1
2.6nm,0.8s,mb4.2,baz=163,slow=8.8,SNR=22
OLIL Olney 33.02 21 eP P 10 43 25.4 -0.5
8.7nm,0.6s,mb4.9
N18A Larsen Ranch, 33.03 351 ⇑P P 10 43 25.2 -0.7
baz=33,SNR=18
P11A Circle Ranch, 33.13 342 ⇓P P 10 43 27.1 +0.3
baz=33
CTU Camp Tracy 33.15 348 eP P 10 43 27.5 +0.6
23nm,1.2s,mb5.0
O13A Hicks Ranch, I 33.15 344 ⇑P P 10 43 27.7 +0.7
baz=33
N17A Moffit Pass 33.20 349 ⇑P P 10 43 27.7 +0.3
baz=33
N16A Rees Ranch, Co 33.27 348 ⇑P P 10 43 28.4 +0.4

baz=33
WCI Wyandotte Cave 33.27 24 eP P 10 43 28.4 +0.4
16nm,0.7s,mb5.0
M19A Rock Springs 33.47 351 ⇓P P 10 43 30.4 +0.7
baz=34
O12A Currie 33.49 343 ⇑P P 10 43 30.3 +0.3
baz=34,SNR=22
N15A Stansbury Isla 33.51 347 ⇓P P 10 43 30.8 +0.7
baz=34
CMB Columbia Colle 33.51 334 eP P 10 43 29.7 -0.4
120nm,3.0s
WAKR Walker 33.52 336 eP P 10 43 30.7 +0.5
M18A Lyman 33.53 350 ⇓P P 10 43 30.5 +0.2
baz=34
N14A Grayback Hills 33.62 346 ⇑P P 10 43 31.9 +0.8
baz=34
O11A Cowboy Ranch, 33.63 342 ⇓P P 10 43 31.5 +0.3
baz=34
BGU Big Grassy Mou 33.66 346 eP P 10 43 32.0 +0.6
17nm,1.2s,mb4.9
M17A Scullys Gap (B 33.68 349 ⇑P P 10 43 31.3 -0.4
baz=34,SNR=8.6
L21A Rawlins 33.69 354 ⇑P P 10 43 31.7 0.0
baz=34
N13A Wendover, West 33.89 344 ⇓P P 10 43 33.7 +0.3
baz=34
N13A Wendover, West 33.89 344 eP P 10 43 34.3 +0.9
24nm,0.6s,mb5.3
HWUT Hardware Ranch 33.99 348 eP P 10 43 35.5 +1.2
18nm,1.0s,mb5.0
M15A Larsen Ranch, 34.03 347 ⇓P P 10 43 34.9 +0.2
baz=34
L19A Farson 34.08 351 ⇓P P 10 43 35.2 +0.2
baz=34,SNR=8.5
N12A Clover Valley, 34.11 343 ⇑P P 10 43 35.5 +0.2
baz=34,SNR=8.9
N12A Clover Valley, 34.11 343 eP P 10 43 36.9 +1.5
23nm,1.0s,mb5.1
HDIL Hopedale 34.25 19 eP P 10 43 36.5 -0.1
36nm,0.8s,mb5.3
M14A Sheep Mountain 34.28 346 ⇑P P 10 43 36.4 -0.3
baz=34,SNR=22
WCN Washoe City 34.33 336 ⇑P P 10 43 37.9 +0.7
baz=34,SNR=16
M13A Montello 34.35 345 ⇑P P 10 43 37.8 +0.4
baz=34,SNR=18
M13A Montello 34.35 345 eP P 10 43 37.0 -0.4
20nm,1.1s,mb5.0
BMN Battle Mountai 34.40 340 eP P 10 43 38.5 +0.7
30nm,1.2s,mb5.1
HVU Hansel Valley 34.41 347 eP P 10 43 38.7 +0.8
18nm,1.1s,mb4.9
K20A Yellowstone Ra 34.49 353 ⇑P P 10 43 39.1 +0.5
baz=35
PAHR Pah Rah Range 34.53 337 eP P 10 43 40.7 +1.7
26nm,1.2s,mb5.0
L15A Malad City 34.54 347 ⇓P P 10 43 38.9 -0.2
baz=35,SNR=12
M12A Wells 34.60 344 ⇑P P 10 43 40.1 +0.5
baz=35,SNR=11
K18A Toltan Ranch, 34.71 351 ⇓P P 10 43 41.0 +0.5
baz=35
K19A Absolon Red Bu 34.72 352 ⇑P P 10 43 41.0 +0.5
baz=35
L14A Malta 34.76 346 ⇑P P 10 43 40.9 0.0
baz=35,SNR=22
BW06 Boulder Array 34.76 351 ⇑P P 10 43 41.1 +0.2
baz=35,SNR=21
BW06 Boulder Array 34.76 351 eP P 10 43 40.9 0.0
18nm,1.0s,mb5.0
PDAR Pinedale Array 34.76 351 P P 10 43 40.5 -0.5
7.4nm,0.9s,mb4.6,baz=162,slow=7.0,SNR=50
M11A Holland Ranch, 34.86 343 ⇑P P 10 43 42.4 +0.6
baz=35
K17A Gardner Place, 34.97 350 ⇓P P 10 43 43.2 +0.5
baz=35
L13A Double Diamond 34.98 346 ⇓P P 10 43 43.2 +0.4
baz=35,SNR=7.9
ELN Prospectdale 35.03 32 eP P 10 43 43.9 +0.6
OHCM Honcut 35.07 334 eP P 10 43 44.6 +0.9
M10A I.L. Ranch, Tu 35.17 342 ⇑P P 10 43 44.9 +0.4
baz=35,SNR=9.9
K16A Soda Springs 35.17 349 ⇑P P 10 43 44.7 +0.2
baz=35
BLA Blacksburg 35.19 32 eP P 10 43 44.9 +0.1
11nm,0.9s,mb4.8
K15A Arbon 35.22 348 ⇑P P 10 43 44.9 0.0
baz=35,SNR=11
L12A House Creek Ra 35.31 344 ⇓P P 10 43 45.7 0.0
baz=36,SNR=10
HOPS Hopland 35.49 332 eP P 10 43 53.6 +6.3
26nm,1.2s,mb5.0
J17A Brown Place, J 35.53 350 ⇑P P 10 43 47.6 0.0
baz=36,SNR=12
L11A Cat Creek Ranc 35.53 343 ⇓P P 10 43 48.5 +0.9
baz=36,SNR=21
K13A Stover Farm, H 35.54 346 ⇓P P 10 43 48.2 +0.6
baz=36,SNR=18
REDW Red Top Meadow 35.55 350 eP P 10 43 48.4 +0.7
19nm,1.3s,mb4.9
J16A Bone 35.60 349 ⇑P P 10 43 48.3 +0.1
baz=36
RRI2 Red Ridge 35.62 349 eP P 10 43 48.6 +0.3
12nm,1.0s,mb4.8
RSSD Black Hills 35.63 359 eP P 10 43 49.4 +1.1
4.0nm,0.9s,mb4.3
SNOW Snow King Moun 35.63 350 eP P 10 43 49.5 +1.0
24nm,1.4s,mb4.9
ECSD EROS Data Cent 35.65 8 eP P 10 43 49.6 +1.1
43nm,1.9s,mb5.0
L10A Juniper Basin 35.66 343 ⇑P P 10 43 48.9 +0.2
baz=36,SNR=10.0
TPAW Teton Pass 35.69 350 eP P 10 43 49.2 +0.3
16nm,1.4s,mb4.8
I18A Diamond G Ranc 35.72 351 ⇑P P 10 43 49.1 0.0
baz=36
LOHW Long Hollow 35.75 350 eP P 10 43 49.4 -0.1
15nm,1.0s,mb4.9
DCID1 Drake Creek 35.83 350 eP P 10 43 51.6 +1.5
16nm,0.9s,mb4.9
RPN Rapa Nui 35.84 190 LR LR 10 54 11.0
comp=Z,315nm,19.9s,MS4.1,baz=9.4,slow=29
J15A Blackfoot 35.88 348 ⇓P P 10 43 50.6 0.0
baz=36
J14A Carey 36.05 347 ⇑P P 10 43 52.1 +0.1
baz=36
IMW Indian Meadow 36.09 350 eP P 10 43 51.9 -0.5
13nm,1.3s,mb4.7
JFWS Jewell Farm 36.15 16 eP P 10 43 52.9 +0.1
7.7nm,0.9s,mb4.6
I16A Newdale 36.16 349 ⇑P P 10 43 53.0 0.0
baz=36
K11A Parker Ranch, 36.17 343 ⇑P P 10 43 53.6 +0.6
baz=36,SNR=12
J13A Cove Ranch, Pi 36.27 346 ⇓P P 10 43 54.6 +0.8
baz=36,SNR=5.7
ACSO Alum Creek Sta 36.34 26 eP P 10 43 55.3 +0.7
21nm,1.0s,mb5.0
J12A Stokes Ranch, 36.36 345 ⇑P P 10 43 55.1 +0.4
baz=36,SNR=18
K10A MacKenzie Ranc 36.42 343 ⇓P P 10 43 54.7 -0.5
baz=37,SNR=21
I15A Monteview 36.47 348 ⇓P P 10 43 55.7 +0.1
baz=37
HLID Hailey 36.48 346 ⇑P P 10 43 55.2 -0.5
baz=37,SNR=20
HLID Hailey 36.48 346 eP P 10 43 55.8 +0.1
16nm,1.1s,mb4.8
WDC Whiskeytown Da 36.55 334 eP P 10 43 55.2 -1.1
I14A Mackay 36.61 347 ⇑P P 10 43 57.2 +0.4
baz=37,SNR=14
WVOR Wild Horse Val 36.66 340 eP P 10 43 57.3 +0.1
13nm,1.1s,mb4.7
WVOR ePcP PcP 10 46 29.8 +10
MFID Camas Ranch 36.71 344 ⇑P P 10 43 57.3 -0.3
baz=37,SNR=9.5
I13A Wildhorse Cree 36.74 346 ⇓P P 10 43 57.7 -0.3
baz=37,SNR=16
MOD Modoc 36.78 338 eP P 10 43 59.4 +1.1
25nm,1.1s,mb5.0
I12A Atlanta 36.88 345 ⇑P P 10 43 59.3 +0.2
baz=37,SNR=9.8
JSRW J. Sargeant Re 36.91 34 eP P 10 44 00.0 +0.6
H16A Russell Place, 36.92 350 ⇑P P 10 43 59.3 -0.1
baz=37
J10A Berg Farm, Mel 36.98 343 ⇓P P 10 43 59.6 -0.4
baz=37
RLMT Red Lodge 37.03 352 ⇓P P 10 44 00.2 -0.2
baz=37
RLMT Red Lodge 37.03 352 eP P 10 44 00.3 0.0
I11A Placerville 37.20 344 ⇑P P 10 44 01.6 -0.3
baz=37,SNR=10
H14A Leadore 37.24 348 ⇑P P 10 44 02.4 +0.3
baz=37,SNR=13
G18A Lazy EL Ranch, 37.26 352 ⇑P P 10 44 02.1 -0.2
baz=37,SNR=8.6
KHMM Horse Mountain 37.31 334 eP P 10 44 09.0 +6.2
28nm,1.2s,mb5.0
MCMT McKenzie Canyo 37.34 348 eP P 10 44 04.5 +1.5
8.6nm,1.4s,mb4.4
H13A Challis 37.39 347 ⇓P P 10 44 03.9 +0.4
baz=38,SNR=24
G17A Pierce Place, 37.44 351 ⇑P P 10 44 04.3 +0.5
baz=38,SNR=8.8
J08A Circle Bar Ran 37.44 341 ⇑P P 10 44 03.9 0.0
baz=38
H12A Diamond D Ranc 37.52 346 ⇑P P 10 44 04.4 -0.1
baz=38,SNR=20
G16A Moss Hill, Enn 37.53 350 ⇑P P 10 44 04.8 +0.3
baz=38,SNR=25
YBH Yreka Blue Hor 37.58 335 eP P 10 44 03.8 -1.3
G15A Dillon 37.59 349 ⇓P P 10 44 04.9 -0.2
baz=38,SNR=17
I10A Payette 37.60 343 ⇑P P 10 44 05.3 +0.2
baz=38
K05A Sumner Lake 37.71 338 ⇓P P 10 44 06.8 +0.6
baz=38,SNR=20
GCMT Greyclift 37.74 352 eP P 10 44 06.7 +0.4
12nm,1.2s,mb4.5
AAM Ann Arbor 37.79 23 P P 10 44 07.7 +0.8
DLMT Dillon 37.80 349 eP P 10 44 08.0 +1.1
22nm,1.1s,mb4.8
F18A Big Timber 37.86 352 ⇓P P 10 44 07.1 -0.2
baz=38,SNR=19
G13A Cobalt 37.89 347 ⇓P P 10 44 07.7 +0.1
baz=38,SNR=37
BOZ Bozeman (W) 37.90 350 ⇓P P 10 44 07.5 -0.2
baz=38
BOZ Bozeman (W) 37.90 350 eP P 10 44 08.1 +0.4
28nm,1.9s,mb4.7
H11A Donnelly 37.95 345 ⇑P P 10 44 07.4 -0.8
baz=38,SNR=13
F17A Fitzpatrick Pl 37.99 351 ⇓P P 10 44 08.4 -0.1
baz=38,SNR=12
F16A Kennard Place, 38.03 350 ⇓P P 10 44 08.8 -0.1
baz=38
LRM Limekiln Ridge 38.22 349 eP P 10 44 10.2 -0.2
F15A Butte 38.24 349 ⇑P P 10 44 10.4 -0.2
baz=38,SNR=12
HUMO Hull Mountain 38.41 336 eP P 10 44 18.3 +6.3
18nm,1.5s,mb4.6
I07A Izee 38.42 341 ⇓P P 10 44 12.7 +0.6
baz=39,SNR=8.7
BMO Blue Mountains 38.44 343 eP P 10 44 11.8 -0.5
8.0nm,1.4s,mb4.3
E18A Harlowton 38.53 352 ⇓P P 10 44 13.0 0.0
baz=39
E17A Martinsdale 38.57 351 ⇓P P 10 44 13.2 -0.2
baz=39
F13A Darby 38.57 347 ⇓P P 10 44 13.3 -0.1
baz=39,SNR=16
F12A Elk City 38.75 346 ⇓P P 10 44 14.5 -0.4
baz=39,SNR=13
G10A Bishop Farm, J 38.80 344 ⇑P P 10 44 14.6 -0.7
baz=39
E15A Deer Lodge 38.83 349 ⇑P P 10 44 15.0 -0.6
baz=39,SNR=7.8
G09A Cove 38.97 343 ⇑P P 10 44 15.8 -0.9
baz=39
HRY Holter Researc 38.97 350 eP P 10 44 16.8 +0.1
E14A Clinton 38.99 348 ⇑P P 10 44 16.6 -0.3
baz=39
SSPA Standing Stone 39.06 31 eP P 10 44 17.0 -0.5
D18A Linhart Farms, 39.14 352 ⇓P P 10 44 17.6 -0.5
baz=39
E13A Victor 39.16 348 ⇑P P 10 44 17.5 -0.8
baz=39
D17A Six Diamond Ra 39.22 352 ⇑P P 10 44 18.4 -0.4
baz=39,SNR=22
D16A Dana Ranch, Ca 39.23 351 ⇓P P 10 44 18.1 -0.7
baz=39,SNR=9.1
G08A Pilot Rock 39.33 342 ⇓P P 10 44 19.2 -0.5
baz=40
D15A Lincoln 39.41 350 ⇑P P 10 44 19.6 -0.8
baz=40
CHMT Chamberlain Mo 39.42 349 eP P 10 44 20.5 0.0
F10A Beach Ranch, E 39.45 344 ⇓P P 10 44 20.7 0.0
baz=40,SNR=5.8
MSO Missoula 39.48 348 eP P 10 44 20.5 -0.4
5.6nm,1.1s,mb4.2
D14A Greenough 39.63 349 ⇓P P 10 44 21.7 -0.5
baz=40
SLMT Seeley Lake 39.78 349 eP P 10 44 23.6 +0.2
G06A Carlson Farm, 39.81 340 ⇓P P 10 44 23.6 -0.2
baz=40
D13A Huson 39.84 348 ⇓P P 10 44 23.4 -0.5
baz=40
H04A Detroit Lake 39.88 338 ⇑P P 10 44 23.6 -0.7
baz=40,SNR=9.2
EGMT Eagleton 39.95 353 ⇓P P 10 44 24.1 -0.7
baz=40,SNR=8.5
EGMT Eagleton 39.95 353 eP P 10 44 24.1 -0.7
17nm,1.0s,mb4.7
DGMT Dagmar 39.98 359 ⇓P P 10 44 24.6 -0.5
baz=40
DGMT Dagmar 39.98 359 eP P 10 44 25.4 +0.3
28nm,1.0s,mb4.9
C16A Fuhringer Ranc 40.01 351 ⇓P P 10 44 24.5 -0.9
baz=40,SNR=10.0
C15A Salmond Ranch, 40.13 350 ⇑P P 10 44 26.0 -0.4
baz=40
SWMT Swartz Lake 40.14 348 eP P 10 44 26.6 +0.2
F07A Phinny Hill Vi 40.17 341 ⇑P P 10 44 26.1 -0.6
baz=40
AGMN Agassiz Nation 40.23 7 eP P 10 44 26.1 -1.0
HOOD Mount Hood Mea 40.24 339 eP P 10 44 28.9 +1.6
30nm,1.0s,mb5.0
B18A Beardsley Farm 40.31 353 ⇓P P 10 44 26.5 -1.4
baz=40,SNR=8.1
B17A L&G Farms, Che 40.35 352 ⇑P P 10 44 27.3 -0.8
baz=40
G04A Mulino 40.43 339 ⇓P P 10 44 28.1 -0.8
baz=41
HAWA Hanford 40.49 342 eP P 10 44 30.3 +0.9
RSW Rattlesnake Hi 40.52 342 eP P 10 44 29.0 -0.5
5.6nm,0.6s,mb4.4
EYMN Ely 40.60 12 eP P 10 44 28.8 -1.4
B15A Bradely Ranch, 40.64 350 ⇑P P 10 44 30.0 -0.6
baz=41
B14A Marquette Ranc 40.82 349 ⇑P P 10 44 31.0 -1.0
baz=41,SNR=11
A18A Metzger Ranch, 40.84 353 ⇑P P 10 44 31.5 -0.7
baz=41
D08A Wollman Farm, 40.92 343 ⇓P P 10 44 32.3 -0.5
baz=41,SNR=5.6
F04A Amboy 41.03 339 ⇑P P 10 44 33.5 -0.4
baz=41
B13A Whitefish 41.06 348 ⇓P P 10 44 33.3 -0.7
baz=41
OD2 Odessa Site #2 41.16 344 eP P 10 44 34.8 -0.1
BINY Binghamton 41.18 31 eP P 10 44 35.2 +0.1
A15A Johnson Ranch, 41.32 350 ⇓P P 10 44 35.6 -0.5
baz=42,SNR=13
B12A Libby 41.38 347 ⇓P P 10 44 36.0 -0.7
baz=42
A14A Double T Ranch 41.43 349 ⇑P P 10 44 36.7 -0.3
baz=42,SNR=13
LON Longmire 41.54 340 eP P 10 44 38.7 +0.8
NEW Newport 41.55 346 eP P 10 44 37.2 -0.8
NEW LR LR
comp=Z,1μm,19.0s,MS4.8
A13A Flathead Natio 41.58 349 ⇑P P 10 44 37.9 -0.3
baz=42
WALA Waterton Lakes 41.60 349 eP P 10 44 38.9 +0.4
ETW Entiat 41.83 342 eP P 10 44 41.0 +0.7
A12A Yaak River Ran 41.84 347 ⇑P P 10 44 40.2 -0.2
baz=42
D05A Enumclaw 41.98 340 ⇓P P 10 44 40.7 -0.8
baz=42
ULM Lac du Bonnet 42.15 7 P P 10 44 41.2 -1.6
comp=Z,4.2nm,0.8s,mb4.2,baz=200,slow=7.8,SNR=3.3
ULM LR LR 11 01 14.6
comp=Z,1μm,20.9s,MS4.8,baz=194,slow=35
ULM Lac du Bonnet 42.15 7 P P 10 44 41.2 -1.7
ULM LR LR 11 01 14.6
LPAZ La Paz 42.21 125 P P 10 44 45.3 +1.4
comp=Z,11nm,0.8s,mb4.6,baz=312,slow=6.4,SNR=52
LPAZ La Paz 42.21 125 eP P 10 44 45.0 +1.2
comp=Z,53nm,1.5s,mb5.0
LPAZ LR LR
comp=Z,1μm,20.0s,MS4.7
B08A Colville Reser 42.22 344 ⇑P P 10 44 43.6 +0.2
baz=42
NLWA Neilton Lookou 42.80 339 ⇑P P 10 44 48.6 +0.4
baz=43,SNR=8.3
NLWA Neilton Lookou 42.80 339 eP P 10 44 49.0 +0.7
JCW Jim Creek 42.84 341 eP P 10 44 48.4 -0.2
RKT Rikitea 44.35 224 eS S 10 51 30.2 -3.1
comp=Z,356nm,29.8s
RKT eLQ 10 55 18.0
comp=Z,756nm,34.5s
RKT eLR LR 10 57 11.0
comp=Z,3μm,26.5s,baz=44
EDM Edmonton 45.52 351 eP P 10 45 08.5 -1.5
FFC Flin Flon 46.23 1 eP P 10 45 13.8 -1.7
comp=Z,12nm,1.3s,mb4.7
FCC Fort Churchill 50.72 6 eP P 10 45 49.0 -1.0
PPT Papeete 52.86 241 eS S 10 53 31.2 -2.3
comp=Z,561nm,26.0s
PPT eLQ 10 58 59.8
comp=Z,2μm,25.2s
PPT eLR LR 11 01 06.6
comp=Z,2μm,24.8s,baz=57
PPT Papeete 52.86 241 LR LR 11 03 46.2
comp=Z,725nm,18.1s,MS4.8,baz=65,slow=30
DLBC Dease Lake 54.12 343 P P 10 46 15.3 +0.1
comp=Z,4.8nm,0.8s,mb4.5,baz=183,slow=4.7,SNR=14
DLBC Dease Lake 54.12 343 eP P 10 46 15.8 +0.6
SCHQ Schefferville 54.48 25 P P 10 46 15.6 -2.3
comp=Z,4.0nm,0.9s,mb4.4,baz=225,slow=5.7,SNR=6.5
YKA Yellowknife Ar 54.70 353 P P 10 46 17.4 -2.0
comp=Z,2.6nm,0.8s,mb4.3,baz=164,slow=7.4,SNR=12
TBI Tubuai 55.40 234 eS S 10 54 08.0 +0.4
comp=Z,842nm,27.2s
TBI eLR LR 11 02 15.8
comp=Z,2μm,28.8s,baz=55
CPUP Villa Florida 56.06 129 P P 10 46 29.8 0.0
comp=Z,4.5nm,0.9s,mb4.5,baz=301,slow=9.0,SNR=10
SKAG Skagway 56.59 341 eP P 10 46 32.7 -0.3
comp=Z,14nm,1.9s,mb4.7
SKAG LR LR
comp=Z,2μm,19.0s,MS5.1
PLCA Paso Flores 57.21 151 LR LR 11 06 45.8
comp=Z,696nm,18.2s,MS4.8,baz=128,slow=31
TRQA Tornquist 59.88 143 eP P 10 46 56.7 +0.4
comp=Z,6.7nm,1.0s,mb4.6
BMRM Bremner River 60.90 338 eP P 10 47 02.6 -0.3
comp=Z,23nm,1.1s,mb5.2
DAWY Dawson 61.35 343 eP P 10 47 05.5 -0.4
DIV Divide 61.44 338 eP P 10 47 06.7 +0.2
MENT Mentasta 61.91 340 eP P 10 47 09.7 0.0
EGAK Eagle 62.39 343 eP P 10 47 12.2 -0.7
comp=Z,16nm,1.1s,mb5.1
RC01 Rabbit Creek A 62.93 337 eP P 10 47 20.6 +4.1
comp=Z,34nm,1.3s,mb5.3
PMR Palmer 62.99 337 eP P 10 47 15.4 -1.5
comp=Z,33nm,1.3s,mb5.3
PMR LR LR
comp=Z,400nm,17.0s,MS4.7
INK Inuvik 63.21 348 P P 10 47 17.8 -0.5
comp=Z,6.6nm,0.9s,mb4.8,baz=156,slow=8.2,SNR=19
INK Inuvik 63.21 348 eP P 10 47 17.7 -0.7
comp=Z,33nm,1.3s,mb5.3
RSO Redoubt South 63.80 335 eP P 10 47 22.1 -0.3
MCK McKinley 64.22 339 eP P 10 47 24.2 -0.8
comp=Z,20nm,1.1s,mb5.1
TRF Thorofare Moun 64.53 338 eP P 10 47 27.9 +0.9
comp=Z,67nm,1.7s,mb5.4
PPLA Purkeypile 64.92 337 eP P 10 47 27.9 -1.7
comp=Z,95nm,1.5s,mb5.6
BPAW Bear Paw Mtn. 65.17 339 eP P 10 47 30.2 -1.0
comp=Z,7.4nm,0.9s,mb4.7
BPAW ePP PP 10 49 49.1 -5.7
COLD Coldfoot 66.78 342 eP P 10 47 41.5 -0.1
comp=Z,27nm,1.4s,mb5.1
RAO Raoul Island 81.22 239 LR LR 11 15 52.4
comp=Z,350nm,20.4s,MS4.7,baz=68,slow=29
URZ Urewera 87.39 231 LR LR 11 19 10.0
comp=Z,338nm,20.4s,MS4.7,baz=100,slow=29
PETK Petropavlovsk- 89.00 324 LR LR 11 23 14.3
comp=Z,172nm,20.8s,MS4.5,baz=265,slow=31
ESDC Sonseca Array 91.50 50 LR LR 11 28 40.4
comp=Z,353nm,18.6s,MS4.8,baz=280,slow=34
RPZ Rata Peaks 92.91 226 LR LR 11 21 27.4
comp=Z,570nm,18.2s,MS5.1,baz=75,slow=29
TIXI Tiksi 93.27 346 eP P 10 50 01.6 -3.1
comp=Z,18nm,1.4s,mb5.3
DZM Mont Dzumac 93.74 248 eLR LR 11 20 10.3
comp=Z,289nm,30.3s
NOA NORSAR Array B 94.02 26 LR LR 11 30 10.4
comp=Z,537nm,21.5s,MS5.0,baz=275,slow=34
ARCES ARCESS Array B 94.62 16 LR LR 11 32 46.1
comp=Z,886nm,21.8s,MS5.2,baz=125,slow=36
DBIC Dimbokro 96.90 82 LR LR 11 30 51.4
comp=Z,199nm,18.6s,MS4.6,baz=263,slow=34
DBIC Dimbokro 96.90 82 PFAKE 10 50 30.0 +7.6
DBIC LR LR
comp=Z,324nm,22.0s,MS4.8
CLL Collm 99.11 35 ePS PS 11 03 32.0 +1.5
CLL ePPS 11 04 18.0
CLL eSS SS 11 08 48.0 +0.1
CLL eSSSS 11 15 48.0
FINES FINESS Array B 99.90 22 LR LR 11 37 06.3
comp=Z,418nm,19.7s,MS5.0,baz=328,slow=36
PVCC Panska Ves 100.34 35 AMS AMS 11 33 00.0
comp=Z,600nm,20.5s
KHC Kasperske Hory 100.39 37 eSS SS 11 09 18.6 +13
KHC AMS AMS 11 29 10.0
comp=Z,700nm,26.0s
PRU Pruhonice 100.57 36 eSS SS 11 09 18.9 +11
PRU AMS AMS 11 30 20.0
comp=Z,400nm,26.5s
DPC Dobruska-Polom 101.42 35 AMS AMS 11 33 30.0
comp=Z,500nm,16.8s
TREC Trest 101.43 36 AMS AMS 11 30 20.0
comp=Z,600nm,22.3s
OKC Ostrava-Krasne 102.70 35 eSS SS 11 09 48.2 +10
OKC AMS AMS 11 31 50.0
comp=Z,300nm,18.7s
BJI Beijing 119.83 326 PKP PKPdf 10 55 39.0 -1.9
BJI SKS SKSdf 11 02 50.1 -0.5
BJI AMB AMB
comp=Z,53nm,5.7s
BJI LR LR
comp=N,130nm,24.6s,MS4.9
BJI LR LR
comp=E,300nm,20.2s,MS4.9
BJI LR LR
comp=Z,220nm,21.2s,MS4.8
HHC Hu-ho-hao-te 121.67 330 ePKP PKPdf 10 55 42.1 -2.4
HHC PP PP 10 57 17.8 +1.5
HHC PKS 10 59 17.8
HHC SKS SKSdf 11 02 52.5 -1.5
HHC SKKS SKKSac 11 04 10.0 -4.1
HHC SS SS 11 13 51.5 +1.9
HHC AMB AMB
comp=Z,130nm,9.2s
HHC LR LR
comp=N,210nm,20.5s,MS4.9
HHC LR LR
comp=E,190nm,19.7s,MS4.9
HHC LR LR
comp=Z,330nm,20.2s,MS5.0
NJ2 Nanjing 123.43 317 ePKP PKPdf 10 55 44.1 -4.0
NJ2 PP PP 10 57 30.3 +1.6
NJ2 SKKS SKKSac 11 04 22.0 -3.9
NJ2 AMB AMB
comp=Z,10.0nm,6.4s
NJ2 LR LR
comp=N,720nm,29.4s,MS5.3
NJ2 LR LR
comp=E,470nm,26.6s,MS5.3
NJ2 LR LR
comp=Z,460nm,25.4s,MS5.0
WRA Warramunga Arr 123.60 252 PKP PKPdf 10 55 48.0 -0.7
comp=Z,0.4nm,0.3s,baz=106,slow=5.7,SNR=20
ASAR Alice Springs 123.71 247 PKP PKPdf 10 55 48.7 -0.1
comp=Z,0.6nm,0.8s,baz=88,slow=2.3,SNR=5.5
MKAR Makanchi Array 124.89 356 PKP PKPdf 10 55 49.0 -1.5
comp=Z,0.8nm,0.8s,baz=5.7,slow=2.4,SNR=7.1
WMQ Urumqi 127.18 350 ePKP PKPdf 10 55 55.0 +0.1
WMQ PP PP 10 57 58.1 +5.4

WMQ				SKS	SKSdf	11 03 01.6	-2.6
WMQ				SKKS	SKKSac	11 04 46.1	-3.0
WMQ				SS	SS	11 15 02.1	+4.0
WMQ				AMB	AMB		
	comp=Z,200nm,4.6s						
WMQ				LR	LR		
	comp=N,500nm,20.0s						
WMQ				LR	LR		
	comp=E,490nm,26.0s						
WMQ				LR	LR		
	comp=Z,540nm,25.3s						
WHN	**Wuhan**	**127.36**	**319**	PKP	PKPdf	10 55 52.8	-2.9
LZH	**Lanzhou**	**129.14**	**332**	*e*PKP	PKPdf	10 55 58.8	-0.1
LZH				sPKP		10 56 03.3	
CD2	**Chengdu**	**133.35**	**328**	PKP	PKPdf	10 56 08.1	+1.1
CD2				PP	PP	10 58 38.4	+5.0
CD2				PKS		10 59 43.1	
CD2				SKS	SKSdf	11 03 18.0	+2.0
CD2				SS	SS	11 16 20.5	+5.5
CD2				AMB	AMB		
	comp=Z,70nm,7.2s						
CD2				LR	LR		
	comp=N,350nm,15.5s						
CD2				LR	LR		
	comp=Z,230nm,15.5s,MS5.0						
KMI	**Kunming**	**138.41**	**324**	PKP	PKPdf	10 56 14.6	-2.0
KMI				PP	PP	10 59 07.8	+2.4
KMI				PKS		10 59 49.3	
KMI				SKS	SKSdf	11 03 20.3	-4.7
KMI				SKKS	SKKSac	11 05 54.9	-3.5
KMI				SS	SS	11 17 15.4	-0.5
KMI				AMB	AMB		
	comp=Z,71nm,5.7s						
KMI				LR	LR		
	comp=N,170nm,21.0s,MS5.1						
KMI				LR	LR		
	comp=E,300nm,21.0s,MS5.1						
KMI				LR	LR		
	comp=Z,370nm,21.5s,MS5.1						
CHTO	**Chiang Mai**	**145.47**	**322**	*e*PKPbc	PKPbc	10 56 29.9	+0.6
KSM	**Kuching**	**145.52**	**285**	*e*PKPdf	PKPdf	10 56 29.1	-0.5
CMAR	**Chiang Mai Arr**	**145.75**	**321**	PKPbc	PKPbc	10 56 30.2	+0.1
	comp=Z,3.1nm,0.8s,baz=359,slow=2.7,SNR=14						

*GRAL **16** 10:44:24.2±0.3, 33°.56N×36°.93E, h68km±23km, MD3.3*
*ISCJB **16** 10:44:26.7±0.6, 33°.66N±0°.04×36°.76E±0°.04, h32km±5km, Error ellipse: s-maj=7.0km s-min=6.0km az=157.1*
*NSSC **16** 10:44:26, 33°.68N×36°.73E, h28km±6km*
*CSEM **16** 10:44:26.4±0.2, 33°.68N×36°.74E, h30km, Mc2.4, Error ellipse: s-maj=5.2km s-min=4.7km az=168.0*

ISC 16 10:44:26.7±0.6, 33°.66N±0°.04×36°.76E±0°.04, h30km±5km, n18, σ0s72/32, 8D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOTH	**TOTAL**	**0.41**	**224**	⇑P	**Pb**	**10 44 35.0**	**-0.7**
TOTH				⇑S	**Sb**	**10 44 42.0**	**+0.2**
TOTH	**TOTAL**	**0.41**	**224**	⇑*i*P	**Pb**	**10 44 35.3**	**-0.4**
TOTH				⇑*i*S	**Sb**	**10 44 42.4**	**+0.6**
QASN	**Qassioun**	**0.43**	**253**	⇑P	**Pb**	**10 44 35.0**	**-1.0**
QASN	**Qassioun**	**0.43**	**253**	⇑*i*P	**Pb**	**10 44 35.2**	**-0.8**
ROOS	**tl_alroos**	**0.67**	**40**	⇓P	**Pb**	**10 44 39.0**	**-1.0**
ROOS				⇓S	**Sb**	**10 44 50.0**	**+1.0**
ROOS	**tl_alroos**	**0.67**	**40**	⇓*i*P	**Pb**	**10 44 39.1**	**-0.9**
ROOS				⇓*i*S	**Sb**	**10 44 50.3**	**+1.3**
BRBR	**Barbar**	**0.72**	**251**	⇑P	**Pb**	**10 44 40.0**	**-0.8**
BRBR				⇑S	**Sb**	**10 44 51.0**	**+0.6**
BRBR	**Barbar**	**0.72**	**251**	⇑*i*P	**Pb**	**10 44 40.1**	**-0.7**
BRBR				⇑*i*S	**Sb**	**10 44 51.1**	**+0.7**
RCY	**Rachaya**	**0.81**	**258**	*e*P	**Pn**	**10 44 41.1**	**-0.9**
RCY				*e*S	**Sb**	**10 44 53.6**	**+0.8**
RCY	**Rachaya**	**0.81**	**258**	*e*P	**Pn**	**10 44 41.1**	**-0.9**
RCY				*e*S	**Sb**	**10 44 53.6**	**+0.8**
ZALF	**Zalf**	**0.87**	**147**	⇓P	**Pn**	**10 44 43.0**	**+0.1**
ZALF				⇓S	**Sb**	**10 44 55.0**	**+0.3**
ZALF	**Zalf**	**0.87**	**147**	⇓*i*P	**Pn**	**10 44 43.9**	**+1.0**
ZALF				⇓*i*S	**Sb**	**10 44 55.0**	**+0.3**
HWQ	**Hawqa**	**0.92**	**313**	*e*P	**Pn**	**10 44 43.2**	**-0.4**
HWQ	**Hawqa**	**0.92**	**313**	*e*P	**Pn**	**10 44 43.2**	**-0.4**
SALA	**Sala**	**0.94**	**182**	⇑P	**Pn**	**10 44 44.0**	**+0.1**
SALA				⇑S	**Sn**	**10 44 56.0**	**-0.3**
SALA	**Sala**	**0.94**	**182**	⇑*i*P	**Pn**	**10 44 44.5**	**+0.6**
SALA				⇑*i*S	**Sn**	**10 44 56.0**	**-0.3**
BHL	**Bhannes**	**0.96**	**285**	*e*P	**Pn**	**10 44 43.6**	**-0.5**
BHL				*e*S	**Sn**	**10 44 57.9**	**+1.1**
BHL	**Bhannes**	**0.96**	**285**	*e*P	**Pn**	**10 44 43.6**	**-0.5**
BHL				*e*S	**Sn**	**10 44 57.8**	**+1.1**

*ISCJB **16** 10:48:57.1±0.7, 24°.83N±0°.04×122°.00E±0°.03, h97km±5km, Error ellipse: s-maj=6.7km s-min=3.7km az=166.2*
*JMA **16** 10:48:57.2±0.4, 24°.91N×122°.00E, h93km, M2.5*
*TAP **16** 10:48:57.2, 24°.82N×121°.97E, h97km, ML3.3, C*

ISC 16 10:48:57.5±0.7, 24°.83N±0°.04×122°.00E±0°.03, h96km±5km, n36, σ0s56/64, 6D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.17**	**357**	⇓*i*P	**Pn**	**10 49 11.2**	**0.0**
TWB1	baz=7.0			*i*S	**Sn**	**10 49 20.8**	**-0.6**
ILA	**Ilan**	**0.24**	**253**	*e*P	**Pn**	**10 49 11.5**	**+0.1**
TWC	**Suao**	**0.26**	**211**	P	**Pn**	**10 49 11.2**	**-0.3**
TWC	baz=207			S	**Sn**	**10 49 21.5**	**-0.4**
NWF	**Wu-fen Shan**	**0.31**	**320**	P	**Pn**	**10 49 11.3**	**-0.4**
TWE	**Neicheng**	**0.32**	**249**	*e*P	**Pn**	**10 49 11.9**	**+0.1**
TWE	baz=249			*e*S	**Sn**	**10 49 23.0**	**+0.6**
TWA	**Mucha**	**0.40**	**291**	⇓*i*P	**Pn**	**10 49 12.0**	**-0.2**
TWA	baz=297			S	**Sn**	**10 49 22.6**	**-0.6**
ENA	**Nanau**	**0.47**	**210**	P	**Pn**	**10 49 12.9**	**+0.3**
ENA	baz=202			*e*S	**Sn**	**10 49 24.5**	**+0.6**
TAP1	**Taipei**	**0.48**	**295**	*e*P	**Pn**	**10 49 12.8**	**+0.1**
TWY	**Chenhua**	**0.57**	**321**	P	**Pn**	**10 49 13.2**	**-0.3**
TWY	baz=325			*e*S	**Sn**	**10 49 26.7**	**+1.4**
TWS1	**Kuangyinshan**	**0.59**	**297**	*e*P	**Pn**	**10 49 13.7**	**+0.1**
TWS1	baz=301			*e*S	**Sn**	**10 49 25.6**	**-0.1**
NSK	**Sanguang**	**0.60**	**255**	⇓*i*P	**Pn**	**10 49 13.7**	**-0.1**
NSK	baz=255			S	**Sn**	**10 49 25.3**	**-0.5**
NNS	**Nan Shan**	**0.69**	**235**	⇓*i*P	**Pn**	**10 49 14.8**	**+0.3**
NNS	baz=235			*e*S	**Sn**	**10 49 27.3**	**+0.1**
NCU	**National Centr**	**0.75**	**281**	⇓P	**Pn**	**10 49 15.3**	**+0.2**
NCU	baz=281			*e*S	**Sn**	**10 49 28.2**	**0.0**
TWD	**Chiawan**	**0.83**	**206**	*e*P	**Pn**	**10 49 15.2**	**-0.7**
TWD	baz=213			*e*S	**Sn**	**10 49 29.2**	**-0.5**
NSTT	**Nanjuang**	**0.93**	**258**	⇓*i*P	**Pn**	**10 49 16.8**	**-0.1**
NSTT	baz=250			*e*S	**Sn**	**10 49 30.8**	**-0.6**
HSN	**Hsinchu**	**0.93**	**268**	*e*P	**Pn**	**10 49 16.4**	**-0.5**
TWT	**Tachien**	**0.94**	**232**	P	**Pn**	**10 49 17.8**	**+0.8**
TWT	baz=227			S	**Sn**	**10 49 32.7**	**+1.0**
WHF	**Hehuan Shan**	**0.96**	**224**	P	**Pn**	**10 49 17.6**	**+0.4**
WHF	baz=218			S	**Sn**	**10 49 32.4**	**+0.5**
YOJ	**Yonaguni jima**	**0.99**	**112**	P	**Pn**	**10 49 17.4**	**-0.2**
YOJ				*e*S	**Sn**	**10 49 33.2**	**+0.5**
ESL	**Shilin**	**1.14**	**207**	*e*P	**Pn**	**10 49 17.8**	**-1.5**
NSY	**Sanyi**	**1.20**	**250**	*e*P	**Pn**	**10 49 20.0**	**+0.1**
NSY	baz=249			*e*S	**Sn**	**10 49 36.8**	**0.0**
TWQ1	**Liyutan**	**1.22**	**247**	P	**Pn**	**10 49 20.1**	**-0.1**
TWQ1	baz=246			*e*S	**Sn**	**10 49 36.2**	**-1.0**
SMLT	**Sun Moon Lake**	**1.38**	**227**	P	**Pn**	**10 49 22.6**	**+0.5**
SMLT	baz=233			*e*S	**Sn**	**10 49 41.0**	**+0.3**
TCU	**Taichung**	**1.38**	**241**	*e*P	**Pn**	**10 49 22.3**	**+0.1**
TCU	baz=240			*e*S	**Sn**	**10 49 40.8**	**0.0**
TYC	**Yuchr**	**1.39**	**229**	*e*P	**Pn**	**10 49 22.3**	**0.0**
TYC	baz=234			*e*S	**Sn**	**10 49 41.3**	**+0.3**
EHY	**Hungye**	**1.46**	**205**	*e*P	**Pn**	**10 49 21.3**	**-1.8**
TWF1	**Yuli**	**1.61**	**204**	*e*P	**Pn**	**10 49 23.8**	**-1.1**
TWF1	baz=196						
IRIF	**Iriomote-Funau**	**1.65**	**107**	P	**Pn**	**10 49 25.5**	**0.0**
IRIF				*e*S	**Sn**	**10 49 46.7**	**-0.1**
ALS	**Alishan**	**1.71**	**220**	*e*P	**Pn**	**10 49 27.2**	**+0.9**
ALS	baz=228			*e*S	**Sn**	**10 49 49.0**	**+1.0**
CHN5	**Tsauling**	**1.72**	**225**	*e*P	**Pn**	**10 49 26.6**	**+0.2**
CHN5	baz=224			*e*S	**Sn**	**10 49 48.5**	**+0.2**
HATJ	**Hateruma jima**	**1.82**	**115**	P	**Pn**	**10 49 28.2**	**+0.6**
JKRS	**Kuro-shima**	**1.93**	**108**	P	**Pn**	**10 49 29.3**	**+0.3**
JKRS				*e*S	**Sn**	**10 49 53.1**	**+0.1**
JIJ	**Ishigaki jima**	**2.01**	**103**	P	**Pn**	**10 49 29.9**	**-0.2**
JIJ				*e*S	**Sn**	**10 49 53.9**	**-1.0**
WTP	**Ta-pu**	**2.02**	**219**	*e*P	**Pn**	**10 49 30.2**	**-0.1**
WTP	baz=219			*e*S	**Sn**	**10 49 55.4**	**+0.1**
CHN1	**Nanshi**	**2.12**	**220**	*e*P	**Pn**	**10 49 32.0**	**+0.5**
CHN1	baz=220			*e*S	**Sn**	**10 49 57.0**	**-0.5**
JTJ	**Tarama**	**2.47**	**94**	P	**Pn**	**10 49 36.8**	**+0.7**
JTJ				*e*S	**Sn**	**10 50 06.1**	**+0.4**

*IDC **16** 11:18:19.7±7.1, 24°.54S×179°.94W, h531km±67km, mb3.2/4, mb1 3.3/5, mb1mx3.0/15, mbtmp3.2/5, Error ellipse: s-maj=56.8km s-min=28.7km az=48.0*

ISC 16 11:18:24.2±4.8, 24°.98S±0°.3×179°.7E±0°.4, h558km±44km, n13, σ0s86/11, mb4.0/7, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**13.55**	**189**	P	**P**	**11 21 18.8**	**+0.3**
URZ	0.8nm,0.3s,baz=293,slow=5.2,SNR=6.6			S	**S**	**11 23 41.3**	**-0.6**
CMSA	**Cobar Meteorol**	**30.64**	**250**	*e*P	**P**	**11 23 54.5**	**+0.9**
CTA	**Charters Tower**	**31.24**	**272**	*e*P	**P**	**11 23 58.8**	**-0.1**
STKA	**Stephens Creek**	**34.15**	**249**	*e*P	**P**	**11 24 24.5**	**+1.2**
STKA	**Stephens Creek**	**34.15**	**249**	P	**P**	**11 24 23.9**	**+0.6**
ASAR	**Alice Springs**	**41.64**	**262**	P	**P**	**11 25 24.6**	**+0.2**
WRA	**Warramunga Arr**	**42.10**	**267**	P	**P**	**11 25 27.4**	**-0.6**
KAKA	**Kakadu**	**46.15**	**276**	*e*P	**P**	**11 25 56.8**	**-2.6**
FITZ	**Fitzroy Crossi**	**50.51**	**266**	*e*P	**P**	**11 26 32.2**	**+0.5**
MAW	**Mawson**	**76.78**	**201**	P	**P**	**11 29 18.4**	**+0.2**
AKASG	**Malin Array Be**	**145.62**	**326**	PKPbc	PKPbc	11 36 57.3	-3.2
MMAI	**Mount Meron Ar**	**147.85**	**293**	PKPbc	PKPbc	11 37 06.7	-0.4
BRTR	**Keskin Array B**	**147.94**	**306**	PKPbc	PKPbc	11 37 04.4	-2.6

*IDC **16** 11:37:48.4±2.3, 61°.76N×152°.30W, h68km±23km, mb3.6/11, mb1 3.9/15, mb1mx3.7/28, mbtmp3.7/15, Error ellipse: s-maj=16.3km s-min=14.8km az=32.0*
*ISCJB **16** 11:37:49.9±0.3, 61°.70N±0°.03×151°.93W±0°.07, h107km±3km, mb3.8/12, Error ellipse: s-maj=5.9km s-min=4.9km az=141.6*
*NEIC **16** 11:37:52.1, 61°.70N×151°.84W, h98km, MG3.8(AEIC), After AEIC.*

ISC 16 11:37:51.0±0.3, 61°.70N±0°.03×151°.96W±0°.07, h99km±3km, n59, σ0s99/66, mb3.8/12, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKT	**Skwentna**	**0.35**	**35**	P	**Pn**	**11 38 05.8**	**+0.1**
SKT				S	**Sn**	**11 38 17.0**	**+0.3**
FIB	**Fire Island**	**1.01**	**121**	P	**Pn**	**11 38 12.7**	**+1.3**
FIB				S	**Sn**	**11 38 28.3**	**+1.6**
PPLA	**Purkeypile**	**1.21**	**355**	P	**Pn**	**11 38 14.3**	**+0.6**
PPLA				S	**Sn**	**11 38 31.2**	**+0.5**
RC01	**Rabbit Creek A**	**1.23**	**119**	P	**Pn**	**11 38 13.9**	**0.0**
RC01				S	**Sn**	**11 38 31.1**	**0.0**
RSO	**Redoubt South**	**1.30**	**198**	*e*Pn	**Pn**	**11 38 15.4**	**+0.7**
PMR	**Palmer**	**1.35**	**93**	*e*P	**Pn**	**11 38 14.7**	**-0.6**
GHO	**Glory Hole Cre**	**1.45**	**86**	P	**Pn**	**11 38 16.2**	**-0.2**
SLKM	**Skilak Lake**	**1.46**	**144**	P	**Pn**	**11 38 17.1**	**+0.4**
KNK	**Knik Glacier**	**1.70**	**98**	P	**Pn**	**11 38 19.2**	**-0.4**
SML	**Sawmill**	**1.73**	**85**	P	**Pn**	**11 38 19.3**	**-0.6**
SVW2	**Sparrevohn**	**1.84**	**253**	*e*P	**Pn**	**11 38 21.6**	**+0.1**
TRF	**Thorofare Moun**	**1.92**	**23**	P	**Pn**	**11 38 23.0**	**+0.6**
CHUM	**Lake Minchumin**	**2.20**	**356**	P	**Pn**	**11 38 26.3**	**+0.3**
RND	**Reindeer**	**2.24**	**39**	P	**Pn**	**11 38 26.5**	**0.0**
TT01	**Tatalina**	**2.25**	**304**	P	**Pn**	**11 38 26.6**	**-0.1**
TTA	**Tatalina**	**2.26**	**305**	*e*P	**Pn**	**11 38 27.1**	**+0.3**
BPAW	**Bear Paw Mtn.**	**2.45**	**10**	P	**Pn**	**11 38 29.1**	**-0.3**
MCK	**McKinley**	**2.47**	**33**	P	**Pn**	**11 38 30.0**	**+0.4**
EYAK	**Cordova Ski Ar**	**3.23**	**108**	P	**Pn**	**11 38 39.3**	**-0.3**
MID	**Middleton Isla**	**3.59**	**127**	*e*P	**Pn**	**11 38 44.6**	**+0.1**
BMRM	**Bremner River**	**3.62**	**98**	P	**Pn**	**11 38 43.5**	**-1.4**
COLA	**College**	**3.69**	**28**	P	**Pn**	**11 38 45.5**	**-0.3**
KDAK	**Kodiak Island**	**3.94**	**185**	P	**Pn**	**11 38 47.5**	**-1.8**
KDAK	5.7nm,0.3s,baz=20,slow=8.4,SNR=35			S	**Sn**	**11 39 32.3**	**-2.2**
KDAK	**Kodiak Island**	**3.94**	**185**	P	**Pn**	**11 38 48.2**	**-1.1**
MENT	**Mentasta**	**4.04**	**68**	*e*P	**Pn**	**11 38 50.3**	**-0.3**
DOT	**Dot Lake**	**4.13**	**58**	P	**Pn**	**11 38 51.6**	**-0.2**
IM3	**Indian Mountai**	**4.38**	**350**	P	**Pn**	**11 38 55.2**	**+0.1**
OHAK	**Old Harbor**	**4.54**	**189**	*e*P	**Pn**	**11 38 57.7**	**+0.3**
BCA3	**Beaver Creek A**	**4.93**	**69**	P	**Pn**	**11 39 02.1**	**-0.4**
COLD	**Coldfoot**	**5.60**	**7**	P	**Pn**	**11 39 12.4**	**+0.7**
DAWY	**Dawson**	**6.22**	**62**	P	**Pn**	**11 39 19.6**	**-0.4**
CHGN	**Chignik**	**6.36**	**214**	*e*Pn	**Pn**	**11 39 22.2**	**+0.2**
PNL	**Peninsula**	**6.50**	**103**	P	**Pn**	**11 39 23.5**	**-0.4**
BM3	**Burnt Mountain**	**6.55**	**26**	P	**Pn**	**11 39 24.4**	**-0.3**
HYT	**Haines Junctio**	**7.03**	**91**	*e*Pn	**Pn**	**11 39 30.4**	**-0.6**
WHY	**Whitehorse**	**8.31**	**90**	P	**Pn**	**11 39 47.6**	**-1.0**
SKAG	**Skagway**	**8.48**	**98**	*e*P	**Pn**	**11 39 50.7**	**-0.2**
SIT	**Sitka**	**9.66**	**111**	P	**Pn**	**11 40 04.5**	**-2.4**
INK	**Inuvik**	**10.20**	**42**	P	**Pn**	**11 40 13.8**	**-0.3**
INK	1.0nm,0.3s,baz=258,slow=18,SNR=26 **Inuvik**	**10.20**	**42**	*e*Pn	**Pn**	**11 40 14.3**	**+0.3**
INK	13nm,0.9s			*e*Sn	**Sn**	**11 42 02.3**	**-4.0**
DLBC	**Dease Lake**	**11.41**	**97**	P	**Pn**	**11 40 30.1**	**-0.5**
DLBC	0.4nm,0.3s,baz=292,slow=6.4,SNR=6.3 **Dease Lake**	**11.41**	**97**	*e*Pn	**Pn**	**11 40 29.6**	**-1.0**
YKA	**Yellowknife Ar**	**17.35**	**71**	P	**Pn**	**11 41 46.2**	**-0.2**
YBH	0.2nm,0.3s,baz=281,slow=12,SNR=8.6 **Yreka Blue Hor**	**26.59**	**125**	P	**P**	**11 43 22.3**	**+2.7**
NVAR	0.6nm,0.6s,mb3.3,baz=302,slow=3.0,SNR=4.4 **Mina Array Bea**	**31.16**	**123**	P	**P**	**11 44 02.6**	**+2.4**
PDAR	1.5nm,0.6s,mb3.9,baz=317,slow=9.3,SNR=20 **Pinedale Array**	**31.36**	**107**	P	**P**	**11 44 03.6**	**+1.8**
SRU	0.4nm,0.4s,mb3.5,baz=321,slow=6.9,SNR=5.2 **San Rafael**	**33.87**	**113**	*e*P	**P**	**11 44 26.2**	**+2.4**
PV01	1.8nm,0.8s,mb4.0 **Paradox Valley**	**35.54**	**111**	*e*P	**P**	**11 44 39.8**	**+1.7**
TXAR	283nm,0.8s **Lajitas Array**	**45.14**	**113**	P	**P**	**11 45 59.5**	**+2.1**
ARCES	0.4nm,0.6s,mb3.3,baz=330,slow=6.6,SNR=7.5 **ARCESS Array B**	**49.04**	**1**	P	**P**	**11 46 26.4**	**-0.8**
KSRS	1.3nm,0.8s,mb3.9,baz=354,slow=6.3,SNR=2.9 **Korea Array**	**53.31**	**282**	P	**P**	**11 46 59.1**	**-0.3**
SONM	0.7nm,0.5s,mb3.9,baz=29,slow=7.5,SNR=5.3 **Songino Array**	**54.21**	**306**	P	**P**	**11 47 07.1**	**+1.2**
ZALV	1.3nm,0.5s,mb4.2,baz=33,slow=7.5,SNR=10 **Zalesovo Beam**	**56.31**	**324**	P	**P**	**11 47 20.2**	**-0.6**
HHC	1.1nm,0.5s,mb4.2,baz=35,slow=5.0,SNR=2.7 **Hu-ho-hao-te**	**57.86**	**297**	*e*P	**P**	**11 47 32.1**	**+0.1**
HHC				S	**S**	**11 55 21.3**	**-2.3**
HHC				pmax	pmax		
	comp=Z,22nm,0.6s						
HHC				pmax	pmax		
	comp=Z,52nm,6.5s						
MKAR	**Makanchi Array**	**63.42**	**321**	P	**P**	**11 48 08.4**	**-1.2**
	comp=Z,0.5nm,0.4s,mb3.8,baz=40,slow=7.1,SNR=4.0						
WMQ	**Urumqi**	**64.39**	**316**	*e*P	**P**	**11 48 19.0**	**+3.0**
LZH	**Lanzhou**	**65.11**	**300**	*e*P	**P**	**11 48 19.8**	**-1.0**
LZH				pP	pP	11 48 44.6	-0.9
LZH				sP	sP	11 48 55.8	-0.5
LZH				pmax	pmax		
	comp=Z,27nm,1.2s						
LZH				pmax	pmax		
	comp=Z,160nm,5.3s						
AKASG	**Malin Array Be**	**67.95**	**359**	P	**P**	**11 48 37.4**	**-1.2**
	comp=Z,0.8nm,0.3s,mb4.0,baz=360,slow=5.9,SNR=3.2						
CMAR	**Chiang Mai Arr**	**82.61**	**295**	P	**P**	**11 50 02.5**	**-0.6**
	comp=Z,0.3nm,0.4s,mb3.5,baz=8.5,slow=7.3,SNR=3.5						

*ATH **16** 12:06:40.5, 38°.38N×21°.44E, h26km±1km, MD2.8/5*
*NEIC **16** 12:06:40.5, 38°.38N×21°.44E, h26km, MD2.8(ATH), After ATH.*
*ISCJB **16** 12:06:41.2±0.4, 38°.41N±0°.03×21°.42E±0°.03, h26km±4km, Error ellipse: s-maj=5.1km s-min=3.6km az=178.5*
*CSEM **16** 12:06:41.1±0.2, 38°.40N×21°.42E, h28km±1km, MD2.8, Error ellipse: s-maj=5.1km s-min=3.7km az=179.0*
*THE **16** 12:06:41.2, 38°.40N×21°.42E, h17km, ML2.7/5, Error ellipse: s-maj=1.1km s-min=0.3km az=173.0*

ISC 16 12:06:41.2±0.4, 38°.41N±0°.03×21°.41E±0°.03, h24km±4km, n41, σ0s78/74, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.35**	**173**	*e*Pb	**Pb**	**12 06 48.3**	**-0.6**
RLS				*e*Sb	**Sb**	**12 06 54.0**	**-0.1**
RLS	**Riolos of Patr**	**0.35**	**173**	*e*PB	**Pb**	**12 06 48.3**	**-0.6**
RLS				*e*SB	**Sb**	**12 06 54.0**	**-0.1**
RLS	**Riolos of Patr**	**0.35**	**173**	*e*Pb	**Pb**	**12 06 48.3**	**-0.6**
RLS				*e*Sb	**Sb**	**12 06 54.0**	**-0.1**
EFP	**Efpalio**	**0.39**	**87**	*e*PB	**Pb**	**12 06 48.8**	**-0.7**
EFP				*e*SB	**Sb**	**12 06 55.1**	**-0.1**
EFP	**Efpalio**	**0.39**	**87**	P	**Pb**	**12 06 48.8**	**-0.7**
EFP				S	**Sb**	**12 06 54.8**	**-0.4**
EFP	**Efpalio**	**0.39**	**87**	P	**Pb**	**12 06 48.8**	**-0.7**
EFP				S	**Sb**	**12 06 54.8**	**-0.4**
EFP				*e*Sb	**Sb**	**12 06 55.1**	**-0.1**
LAKA	**Lakka**	**0.47**	**110**	P	**Pb**	**12 06 50.4**	**-0.6**
LAKA				S	**Sb**	**12 06 57.7**	**+0.1**
LAKA	**Lakka**	**0.47**	**110**	P	**Pb**	**12 06 50.4**	**-0.6**
LAKA				S	**Sb**	**12 06 57.7**	**+0.1**
TRIZ	**Trizonia**	**0.52**	**94**	P	**Pb**	**12 06 51.3**	**-0.4**
TRIZ				S	**Sb**	**12 06 59.3**	**+0.4**
TRIZ	**Trizonia**	**0.52**	**94**	P	**Pb**	**12 06 51.3**	**-0.4**
TRIZ				S	**Sb**	**12 06 59.3**	**+0.4**
KALE	**Kalithea**	**0.57**	**91**	P	**Pb**	**12 06 52.1**	**-0.5**
KALE				S	**Sb**	**12 07 00.9**	**+0.6**
KALE	**Kalithea**	**0.57**	**91**	P	**Pb**	**12 06 52.1**	**-0.5**
KALE				S	**Sb**	**12 07 00.9**	**+0.6**
KFL	**Anninata**	**0.57**	**239**	P	**Pb**	**12 06 52.5**	**-0.1**
KFL				S	**Sb**	**12 07 01.0**	**+0.7**
KFL	**Anninata**	**0.57**	**239**	P	**Pb**	**12 06 52.5**	**-0.1**
KFL				S	**Sb**	**12 07 01.0**	**+0.7**
EVR	**Evrytania**	**0.60**	**31**	*e*Pn	**Pn**	**12 06 53.1**	**-1.1**
EVR				*e*Sn	**Sb**	**12 07 01.3**	**+0.2**
EVR	**Evrytania**	**0.60**	**31**	*e*PN	**Pn**	**12 06 53.1**	**-1.1**
EVR				*e*SN	**Sb**	**12 07 01.3**	**+0.2**
EVR	**Evrytania**	**0.60**	**31**	*e*Pn	**Pn**	**12 06 53.1**	**-1.1**
EVR				*e*Sn	**Sb**	**12 07 01.3**	**+0.2**
LKD	**Levkas**	**0.67**	**297**	*e*Pn	**Pn**	**12 06 54.6**	**-0.6**
LKD				*e*Sn	**Sn**	**12 07 05.2**	**+0.3**
LKD	**Levkas**	**0.67**	**297**	*e*PN	**Pn**	**12 06 54.6**	**-0.6**
LKD				*e*SN	**Sn**	**12 07 05.2**	**+0.3**
LKD	**Levkas**	**0.67**	**297**	*e*Pn	**Pn**	**12 06 54.6**	**-0.6**
LKD				*e*Sn	**Sn**	**12 07 05.2**	**+0.3**
VLS	**Valsamata**	**0.69**	**251**	*e*Pn	**Pn**	**12 06 54.2**	**-1.2**
VLS				*e*Sn	**Sn**	**12 07 04.9**	**-0.4**
VLS	**Valsamata**	**0.69**	**251**	*e*PN	**Pn**	**12 06 54.2**	**-1.2**
VLS				*e*SN	**Sn**	**12 07 04.9**	**-0.4**
VLS	**Valsamata**	**0.69**	**251**	P	**Pb**	**12 06 54.0**	**-0.5**
VLS				*e*Sn	**Sn**	**12 07 04.9**	**-0.4**
VLS	**Valsamata**	**0.69**	**251**	P	**Pb**	**12 06 54.0**	**-0.5**
VLS				S	**Sb**	**12 07 04.9**	**-0.4**
LKD2	**Lefkada island**	**0.70**	**303**	P	**Pb**	**12 06 54.7**	**-0.1**
LKD2				S	**Sb**	**12 07 05.2**	**+1.1**
LKD2	**Lefkada island**	**0.70**	**303**	P	**Pb**	**12 06 54.7**	**-0.1**
LKD2				S	**Sb**	**12 07 05.2**	**+1.1**
GUR	**Goura**	**0.87**	**122**	*e*PN	**Pn**	**12 06 56.8**	**-1.2**
GUR				*e*SN	**Sn**	**12 07 08.4**	**-1.5**
GUR	**Goura**	**0.87**	**122**	*e*Pn	**Pn**	**12 06 56.8**	**-1.2**
GUR				*e*Sn	**Sn**	**12 07 08.4**	**-1.5**
AGG	**Agios Georgios**	**0.95**	**49**	*e*Pn	**Pn**	**12 06 58.4**	**-0.6**
AGG				*e*Sn	**Sn**	**12 07 12.4**	**+0.6**
AGG	**Agios Georgios**	**0.95**	**49**	*e*PN	**Pn**	**12 06 58.4**	**-0.6**
AGG				*e*SN	**Sn**	**12 07 12.4**	**+0.6**
AGG	**Agios Georgios**	**0.95**	**49**	P	**Pb**	**12 07 00.1**	**+1.2**
AGG	**Agios Georgios**	**0.95**	**49**	*e*Pn	**Pn**	**12 06 58.4**	**-0.6**
AGG	**Agios Georgios**	**0.95**	**49**	P	**Pb**	**12 07 00.1**	**+1.2**
AGG				*e*Sn	**Sn**	**12 07 12.4**	**+0.6**
LTK	**Loutraki**	**1.28**	**107**	*e*PN	**Pn**	**12 07 05.0**	**+1.4**
VLX	**Vlachokerasia**	**1.29**	**143**	*e*PN	**Pn**	**12 07 04.7**	**+1.0**
VLX	**Vlachokerasia**	**1.29**	**143**	*e*Pn	**Pn**	**12

CMCH	**Combarbala**	**1.34**	**45**⇓	*i* P	Pn	12 23 13.7	+1.1
CMCH				*i* S	Sn	12 23 31.4	+2.1
CMCH				AML	AML	12 23 36.2	
	comp=E,1μm,0.5s						
JACH	**Jahuel**	**1.40**	**114**⇑	*i* P	Pn	12 23 14.7	+1.3
JACH				*i* S	Sn	12 23 33.3	+2.6
JACH	**Jahuel**	**1.40**	**114**⇑	*i* P	Pn	12 23 14.7	+1.3
JACH				*i* S	Sn	12 23 33.3	+2.6
PEL	**Peldehue**	**1.57**	**130**⇓	*i* P	Pn	12 23 17.1	+1.3
PEL				*i* S	Sn	12 23 38.1	+3.0
PEL				AML	AML	12 23 43.9	
	comp=E,840nm,0.5s						
TACH	**Talagante**	**1.81**	**147**	*e* P	Pn	12 23 20.3	+1.2
TACH				*i* S	Sn	12 23 43.6	+2.6
TACH	**Talagante**	**1.81**	**147**	*e* P	Pn	12 23 20.3	+1.2
TACH				*i* S	Sn	12 23 43.6	+2.6
CLCH	**Cerro Calan**	**1.83**	**134**	*e* P	Pn	12 23 20.9	+1.5
CLCH				*e* S	Sn	12 23 44.5	+3.1
CLCH				AML	AML	12 23 52.1	
	comp=E,308nm,0.3s						
LNV	**Longovilo**	**1.92**	**162**	*e* P	Pn	12 23 21.6	+1.2
LNV	**Longovilo**	**1.92**	**162**	*e* P	Pn	12 23 21.6	+1.2
FCH	**Farellones**	**1.95**	**128**	*e* P	Pn	12 23 20.1	-0.8
FCH				*i* S	Sn	12 23 44.6	+0.4
FCH				AML	AML	12 23 51.8	
	comp=E,168nm,0.3s						
PCH	**Pirque**	**2.01**	**138**	*e* P	Pn	12 23 23.8	+2.0
PCH	**Pirque**	**2.01**	**138**	*e* P	Pn	12 23 23.8	+2.0
CHCH	**Chadas Angostu**	**2.18**	**146**	*e* P	Pn	12 23 26.1	+2.0
CHCH	**Chadas Angostu**	**2.18**	**146**	*e* P	Pn	12 23 26.1	+2.0
TLL	**Tololo Astrono**	**2.25**	**30**	*e* P	Pn	12 23 27.3	+2.1
TLL				*e* S	Sn	12 23 55.2	+3.5
TLL	**Tololo Astrono**	**2.25**	**30**	*e* P	Pn	12 23 27.3	+2.1
TLL				*e* S	Sn	12 23 55.2	+3.5
TLL				AML	AML	12 24 08.2	
	comp=E,133nm,0.6s						

CSEM ***16*** *12:27:33.6±0.2, 45.°56N×26.°36E, h149km±2km, MD4.6/2, Error ellipse: s-maj=3.8km s-min=3.3km az=49.0*
IDC ***16*** *12:27:33.5±2.1, 45.°52N×26.°25E, h142km±21km, mb3.4/6, mb1 3.4/10, mb1mx3.2/24, mbtmp3.3/10, Error ellipse: s-maj=21.0km s-min=19.1km az=137.0*
ISCJB ***16*** *12:27:33.2±0.3, 45.°57N±0.°03×26.°37E±0.°04, h149km±3km, mb3.7/6, Error ellipse: s-maj=4.5km s-min=4.2km az=31.7*
BUC ***16*** *12:27:33.7±1.3, 45.°56N×26.°36E, h149km±12km, MD4.6/2, Error ellipse: s-maj=9.3km s-min=8.1km az=77.0*
NEIC ***16*** *12:27:34.2, 45.°45N×26.°37E, h143km, MG3.7(BUC), After BUC.*
SOF ***16*** *12:27:35.8, 45.°46N×26.°23E, h125km, MD3.2*

ISC 16 12:27:34.2±0.3, 45.°56N±0.°03×26.°37E±0.°04, h146km±2km, n124, σ0.°77/163, mb3.7/6, 47C-25D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLR	**Muntele Rosu**	**0.30**	**257**	P	**Pn**	**12 27 54.4**	**+0.1**
MLR	**Muntele Rosu**	**0.30**	**257**⇑	*i* P	**Pn**	**12 27 54.7**	**+0.5**
MLR				*i* S	**Sn**	**12 28 10.2**	**+0.8**
MLR	**Muntele Rosu**	**0.30**	**257**⇑	*i* P	**Pn**	**12 27 54.7**	**+0.5**
MLR	**Muntele Rosu**	**0.30**	**257**	P	**Pn**	**12 27 54.4**	**+0.2**
MLR	**Muntele Rosu**	**0.30**	**257**⇑	*i* Pn	**Pn**	**12 27 54.7**	**+0.5**
MLR				*e* Sn	**Sn**	**12 28 09.9**	**+0.5**
MLR				*i* S	**Sn**	**12 28 10.2**	**+0.8**
PLOR	**Plostina**	**0.35**	**34**⇑	*i* P	**Pn**	**12 27 54.3**	**-0.1**
PLOR				*i* S	**Sn**	**12 28 09.9**	**+0.1**
PLOR	**Plostina**	**0.35**	**34**⇑	*i* P	**Pn**	**12 27 54.3**	**-0.1**
PLOR	**Plostina**	**0.35**	**34**⇑	*i* P	**Pn**	**12 27 54.3**	**-0.1**
PLOR				*i* S	**Sn**	**12 28 09.9**	**+0.1**
VRI	**Vrincioaia**	**0.40**	**40**	P	**Pn**	**12 27 54.9**	**+0.3**
VRI	**Vrincioaia**	**0.40**	**40**⇑	*i* P	**Pn**	**12 27 54.7**	**+0.1**
VRI				*i* S	**Sn**	**12 28 10.3**	**+0.2**
VRI	**Vrincioaia**	**0.40**	**40**⇑	*i* P	**Pn**	**12 27 54.7**	**+0.1**
VRI	**Vrincioaia**	**0.40**	**40**⇑	*i* P	**Pn**	**12 27 54.7**	**+0.1**
VRI				*i* S	**Sn**	**12 28 10.3**	**+0.2**
ISR	**Istrita**	**0.46**	**164**⇑	P	**Pn**	**12 27 55.4**	**+0.5**
ISR	**Istrita**	**0.46**	**164**⇓	*i* P	**Pn**	**12 27 55.4**	**+0.5**
ISR	**Istrita**	**0.46**	**164**⇓	*i* P	**Pn**	**12 27 55.4**	**+0.5**
ISR	**Istrita**	**0.46**	**164**⇓	*i* P	**Pn**	**12 27 55.4**	**+0.5**
GRER		**0.47**	**113**	P	**Pn**	**12 27 56.4**	**+1.5**
GRER		**0.47**	**113**⇑	*i* P	**Pn**	**12 27 56.2**	**+1.3**
GRER				*i* S	**Sn**	**12 28 10.6**	**0.0**
GRER		**0.47**	**113**⇑	*i* P	**Pn**	**12 27 56.2**	**+1.3**
GRER		**0.47**	**113**⇑	*i* P	**Pn**	**12 27 56.2**	**+1.3**
GRER				*i* S	**Sn**	**12 28 10.6**	**0.0**
ODB	**Odobesti**	**0.53**	**66**	P	**Pn**	**12 27 56.4**	**+1.2**
ODB	**Odobesti**	**0.53**	**66**	P	**Pn**	**12 27 56.4**	**+1.2**
ODB				*i* S	**Sn**	**12 28 11.9**	**+0.7**
PETR		**0.63**	**75**⇑	P	**Pn**	**12 27 56.5**	**+0.7**
PETR		**0.63**	**75**⇑	*i* P	**Pn**	**12 27 56.5**	**+0.7**
PETR		**0.63**	**75**⇑	*i* P	**Pn**	**12 27 56.5**	**+0.7**
PETR		**0.63**	**75**⇑	*i* P	**Pn**	**12 27 56.5**	**+0.7**
DOPR	**Dopca**	**0.80**	**301**⇓	*i* P	**Pn**	**12 27 56.8**	**-0.1**
DOPR				*i* S	**Sn**	**12 28 14.5**	**+0.3**
DOPR	**Dopca**	**0.80**	**301**⇓	*i* P	**Pn**	**12 27 56.8**	**-0.1**
DOPR	**Dopca**	**0.80**	**301**⇓	*i* P	**Pn**	**12 27 56.8**	**-0.1**
DOPR				*i* S	**Sn**	**12 28 14.5**	**+0.3**
SULR		**0.89**	**185**⇓	P	**Pn**	**12 27 58.4**	**+0.7**
SULR		**0.89**	**185**⇑	*i* P	**Pn**	**12 27 58.4**	**+0.8**
SULR		**0.89**	**185**⇑	*i* P	**Pn**	**12 27 58.4**	**+0.8**
SULR		**0.89**	**185**⇑	*i* P	**Pn**	**12 27 58.4**	**+0.8**
VOIR		**0.93**	**263**	P	**Pn**	**12 27 58.0**	**0.0**
VOIR		**0.93**	**263**⇑	*i* P	**Pn**	**12 27 57.8**	**-0.2**
VOIR				*i* S	**Sn**	**12 28 15.8**	**-0.3**
VOIR		**0.93**	**263**⇑	*i* P	**Pn**	**12 27 57.8**	**-0.2**
VOIR		**0.93**	**263**	P	**Pn**	**12 27 58.0**	**0.0**
VOIR				*i* S	**Sn**	**12 28 15.8**	**-0.3**
TESR		**0.97**	**12**⇑	P	**Pn**	**12 27 58.0**	**-0.3**
TESR				S	**Sn**	**12 28 15.4**	**-1.4**
TESR		**0.97**	**12**⇑	*i* P	**Pn**	**12 27 58.0**	**-0.3**
TESR				*i* S	**Sn**	**12 28 15.4**	**-1.4**
TESR		**0.97**	**12**⇑	*i* P	**Pn**	**12 27 58.0**	**-0.3**
TESR		**0.97**	**12**⇑	*i* P	**Pn**	**12 27 58.0**	**-0.3**
TESR				*i* S	**Sn**	**12 28 15.4**	**-1.4**
AMRR	**Amara**	**1.17**	**144**⇑	P	**Pn**	**12 28 00.6**	**+0.4**
AMRR				S	**Sn**	**12 28 20.4**	**+0.5**
AMRR	**Amara**	**1.17**	**144**⇑	*i* P	**Pn**	**12 28 00.6**	**+0.5**
AMRR				*i* S	**Sn**	**12 28 20.4**	**+0.5**
AMRR	**Amara**	**1.17**	**144**⇑	*i* P	**Pn**	**12 28 00.6**	**+0.5**
AMRR	**Amara**	**1.17**	**144**⇑	*i* P	**Pn**	**12 28 00.6**	**+0.5**
AMRR				*i* S	**Sn**	**12 28 20.4**	**+0.5**
CFR	**Carcaliu**	**1.31**	**106**⇓	*i* P	**Pn**	**12 28 01.2**	**-0.2**
CFR				S	**Sn**	**12 28 21.0**	**-1.1**
CFR	**Carcaliu**	**1.31**	**106**⇑	*i* P	**Pn**	**12 28 01.2**	**-0.2**
CFR				*i* S	**Sn**	**12 28 21.0**	**-1.2**
CFR	**Carcaliu**	**1.31**	**106**⇑	*i* P	**Pn**	**12 28 01.2**	**-0.2**
CFR	**Carcaliu**	**1.31**	**106**⇑	*i* P	**Pn**	**12 28 01.2**	**-0.2**
CFR				*i* S	**Sn**	**12 28 21.0**	**-1.2**
LEOM	**Leova**	**1.60**	**54**⇑	*i* P	**Pn**	**12 28 04.5**	**+0.1**
LEOM				*i* S	**Sn**	**12 28 26.6**	**-1.0**
LEOM	**Leova**	**1.60**	**54**⇑	*i* P	**Pn**	**12 28 04.5**	**+0.1**
LEOM	**Leova**	**1.60**	**54**⇑	*i* P	**Pn**	**12 28 04.5**	**+0.1**
LEOM				*i* S	**Sn**	**12 28 26.6**	**-1.0**
TLCR		**1.77**	**101**⇓	P	**Pn**	**12 28 06.2**	**-0.1**
TLCR				S	**Sn**	**12 28 30.6**	**-0.3**
TLCR		**1.77**	**101**⇓	*i* P	**Pn**	**12 28 06.2**	**-0.1**
TLCR				*i* S	**Sn**	**12 28 30.6**	**-0.4**
TLCR		**1.77**	**101**⇓	*i* P	**Pn**	**12 28 06.2**	**-0.1**
TLCR		**1.77**	**101**⇓	*i* P	**Pn**	**12 28 06.2**	**-0.1**
TLCR				*i* S	**Sn**	**12 28 30.6**	**-0.4**
TIRR	**Tirgusor**	**1.82**	**126**⇑	P	**Pn**	**12 28 07.1**	**+0.1**
TIRR				S	**Sn**	**12 28 31.2**	**-1.0**
TIRR	**Tirgusor**	**1.82**	**126**⇑	*i* P	**Pn**	**12 28 07.1**	**+0.1**
TIRR				*i* S	**Sn**	**12 28 31.2**	**-0.9**
TIRR	**Tirgusor**	**1.82**	**126**⇑	*i* P	**Pn**	**12 28 07.1**	**+0.1**
TIRR	**Tirgusor**	**1.82**	**126**⇑	*i* P	**Pn**	**12 28 07.1**	**+0.1**
TIRR				*i* S	**Sn**	**12 28 31.2**	**-0.9**
IAS	**Iasi**	**1.83**	**26**	*i* S	**Sn**	**12 28 30.4**	**-1.9**
IAS	**Iasi**	**1.83**	**26**	S	**Sn**	**12 28 30.4**	**-1.9**
ZIMR		**2.03**	**201**⇑	P	**Pn**	**12 28 09.1**	**-0.3**
ZIMR				S	**Sn**	**12 28 35.5**	**-0.9**
ZIMR		**2.03**	**201**⇓	*i* P	**Pn**	**12 28 09.1**	**-0.3**
ZIMR				*i* S	**Sn**	**12 28 35.5**	**-1.0**
ZIMR		**2.03**	**201**⇓	*i* P	**Pn**	**12 28 09.1**	**-0.3**
BURAR	**Bucovina Array**	**2.20**	**339**⇓	P	**Pn**	**12 28 12.5**	**+1.1**
BURAR				S	**Sn**	**12 28 41.8**	**+1.7**
BURAR	**Bucovina Array**	**2.20**	**339**⇓	*i* P	**Pn**	**12 28 12.5**	**+1.1**
BURAR	**Bucovina Array**	**2.20**	**339**⇓	*i* P	**Pn**	**12 28 12.5**	**+1.1**
BURAR	**Bucovina Array**	**2.20**	**339**⇓	*i* P	**Pn**	**12 28 12.5**	**+1.1**
BURAR				S	**Sn**	**12 28 41.8**	**+1.7**
KIS	**Kishinev**	**2.23**	**49**	*i* S	**Sn**	**12 28 37.5**	**-3.1**
	2μm,0.4s						
KIS	**Kishinev**	**2.23**	**49**	*i* S	**Sn**	**12 28 39.2**	**-1.4**
KIS	**Kishinev**	**2.23**	**49**	S	**Sn**	**12 28 39.2**	**-1.4**
KIS	**Kishinev**	**2.23**	**49**	*i* S	**Sn**	**12 28 39.2**	**-1.4**
BUR08	**Bucovina Ar. S**	**2.23**	**339**	*e* Pn	**Pn**	**12 28 12.5**	**+0.7**
BUR08				*e* Sn	**Sn**	**12 28 42.3**	**+1.5**
BUR08	**Bucovina Ar. S**	**2.23**	**339**	*e* Pn	**Pn**	**12 28 12.5**	**+0.7**
BUR08				*e* Sn	**Sn**	**12 28 42.3**	**+1.5**
PSN	**Preselentsi**	**2.28**	**145**	*i* P	**Pn**	**12 28 13.3**	**+0.9**
PSN	**Preselentsi**	**2.28**	**145**	*i* P	**Pn**	**12 28 13.3**	**+0.9**
SZH	**Strazhica**	**2.31**	**188**	*i* P	**Pn**	**12 28 12.6**	**-0.2**
SZH	**Strazhica**	**2.31**	**188**	*i* P	**Pn**	**12 28 12.6**	**-0.2**
PVL	**Pavlikeni**	**2.46**	**198**	*i* P	**Pn**	**12 28 15.6**	**+1.0**
PVL	**Pavlikeni**	**2.46**	**198**	*i* P	**Pn**	**12 28 15.6**	**+1.0**
PRD	**Provadia**	**2.47**	**162**	*i* P	**Pn**	**12 28 15.3**	**+0.5**
PRD	**Provadia**	**2.47**	**162**	*i* P	**Pn**	**12 28 15.3**	**+0.5**
GZR	**Gura Zlata**	**2.53**	**267**⇑	P	**Pn**	**12 28 15.6**	**+0.2**
GZR				S	**Sn**	**12 28 47.3**	**+0.1**
GZR	**Gura Zlata**	**2.53**	**267**⇑	*i* P	**Pn**	**12 28 15.6**	**+0.2**
GZR	**Gura Zlata**	**2.53**	**267**⇑	*i* P	**Pn**	**12 28 15.6**	**+0.2**
GZR	**Gura Zlata**	**2.53**	**267**⇑	*i* P	**Pn**	**12 28 15.6**	**+0.2**
GZR				S	**Sn**	**12 28 47.3**	**+0.1**
DRGR		**2.82**	**297**⇑	P	**Pn**	**12 28 18.3**	**-0.7**
DRGR		**2.82**	**297**⇓	*i* P	**Pn**	**12 28 18.3**	**-0.7**
DRGR				*i* S	**Sn**	**12 28 52.0**	**-1.7**
DRGR		**2.82**	**297**⇓	*i* P	**Pn**	**12 28 18.3**	**-0.7**
DRGR		**2.82**	**297**⇓	*i* P	**Pn**	**12 28 18.3**	**-0.7**
BZS	**Buzias**	**3.33**	**273**⇓	P	**Pn**	**12 28 25.4**	**-0.1**
BZS	**Buzias**	**3.33**	**273**⇓	*i* P	**Pn**	**12 28 25.5**	**-0.1**
BZS	**Buzias**	**3.33**	**273**⇓	*i* P	**Pn**	**12 28 25.5**	**-0.1**
BZS	**Buzias**	**3.33**	**273**⇓	*i* P	**Pn**	**12 28 25.5**	**-0.1**
ZAPS	**Zavoj**	**3.52**	**231**⇑	*i* Pn	**Pn**	**12 28 27.8**	**-0.2**
VTS	**Vitosha**	**3.74**	**219**	P	**Pn**	**12 28 30.0**	**-0.9**
VTS	**Vitosha**	**3.74**	**219**	P	**Pn**	**12 28 30.0**	**-0.9**
BARS	**Barje**	**4.27**	**232**	*e* Pn	**Pn**	**12 28 37.8**	**0.0**
TRUS	**Trudelj**	**4.44**	**255**	*e* Pn	**Pn**	**12 28 38.7**	**-1.4**
CRVS	**Cervenica-Dubn**	**4.72**	**317**	*e* P	**Pn**	**12 28 44.0**	**+0.2**
CRVS	**Cervenica-Dubn**	**4.72**	**317**	*e* PN	**Pn**	**12 28 44.0**	**+0.2**
CRVS	**Cervenica-Dubn**	**4.72**	**317**	*e* P	**Pn**	**12 28 44.0**	**+0.2**
DIVS	**Divibare**	**4.76**	**254**	*e* Pn	**Pn**	**12 28 44.2**	**-0.1**
KECS	**Kecovo**	**4.97**	**308**	*e* P	**Pn**	**12 28 46.7**	**-0.3**
KECS	**Kecovo**	**4.97**	**308**	*e* PN	**Pn**	**12 28 46.7**	**-0.3**
STHS	**Stebnicka Huta**	**5.19**	**320**	*e* P	**Pn**	**12 28 50.0**	**+0.1**
STHS	**Stebnicka Huta**	**5.19**	**320**	*e* PN	**Pn**	**12 28 50.0**	**+0.1**
STHS	**Stebnicka Huta**	**5.19**	**320**	*e* P	**Pn**	**12 28 50.0**	**+0.1**
AKASG	**Malin Array Be**	**5.49**	**19**	P	**Pn**	**12 28 53.3**	**-0.6**
	1.3nm,0.3s,baz=203,slow=12,SNR=2.6						
AKASG	**Malin Array Be**	**5.49**	**19**	P	**Pn**	**12 28 53.3**	**-0.6**
VRAC	**Vranov**	**7.61**	**303**	P	**Pn**	**12 29 21.6**	**-0.6**
	0.4nm,0.3s,baz=109,slow=17,SNR=4.7						
VRAC	**Vranov**	**7.61**	**303**	P	**Pn**	**12 29 21.6**	**-0.6**
BRTR	**Keskin Array B**	**7.92**	**135**	P	**Pn**	**12 29 25.9**	**-0.6**
	0.2nm,0.3s,baz=322,slow=11,SNR=4.6						
BRTR	**Keskin Array B**	**7.92**	**135**	P	**Pn**	**12 29 25.9**	**-0.6**
FINES	**FINESS Array B**	**15.91**	**359**	P	**Pn**	**12 31 09.6**	**-0.1**
	0.2nm,0.3s,baz=163,slow=7.4,SNR=3.4						
HFS	**Hagfors**	**16.43**	**337**	P	**Pn**	**12 31 15.9**	**-0.2**
	0.1nm,0.3s,baz=153,slow=9.7,SNR=4.0						
ARCES	**ARCESS Array B**	**24.04**	**359**	P	**P**	**12 32 34.7**	**-0.5**
	1.8nm,0.8s,mb3.6,baz=187,slow=8.6,SNR=3.7						
ZALV	**Zalesovo Beam**	**37.70**	**55**	P	**P**	**12 34 35.6**	**+0.6**
	1.1nm,0.3s,mb4.0,baz=283,slow=7.8,SNR=4.3						
MKAR	**Makanchi Array**	**38.05**	**67**	P	**P**	**12 34 38.5**	**+0.4**
	0.3nm,0.4s,mb3.3,baz=284,slow=7.6,SNR=3.3						
DBIC	**Dimbokro**	**47.24**	**225**	P	**P**	**12 35 51.6**	**-0.9**
	3.5nm,0.9s,mb4.0,baz=8.7,slow=8.9,SNR=6.6						
SONM	**Songino Array**	**52.57**	**57**	P	**P**	**12 36 33.5**	**+1.2**
	0.3nm,0.3s,mb3.5,baz=303,slow=6.7,SNR=2.9						
CMAR	**Chiang Mai Arr**	**64.94**	**89**	P	**P**	**12 37 58.9**	**+0.7**
	0.7nm,0.4s,mb3.8,baz=300,slow=7.2,SNR=3.7						
ASAR	**Alice Springs**	**118.57**	**95**	PKP	PKPdf	12 46 03.3	-1.2
	0.6nm,1.1s,baz=333,slow=1.8,SNR=3.5						

NEIC ***16*** *12:27:50.1, 37.°26S×179.°43E, h33km, ML3.7(WEL), After WEL.*

WEL 16 12:27:48.6±0.3, 37.°32S×179.°44E, h12km, ML3.7/6, Error ellipse: s-maj=2.4km s-min=2.3km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.94**	**255**	P*	Pb	12 28 05.6	-1.1
MXZ				S*	Sb	12 28 18.5	-0.6
MXZ	**Matakaoa Point**	**0.94**	**255**	P	Pg	12 28 05.6	-1.0
MXZ				S	Sg	12 28 18.5	-0.3
PUZ	**Puketiti**	**1.20**	**231**	P*	Pb	12 28 10.3	-0.9
PUZ				S*	Sb	12 28 26.0	-0.7
PUZ	**Puketiti**	**1.20**	**231**	P	Pn	12 28 10.3	-0.9
PUZ				S	Sb	12 28 26.0	-0.7
CNGZ	**Carnagh Statio**	**1.52**	**220**	PN	Pn	12 28 15.5	0.0
MWZ	**Matawai**	**1.82**	**236**	PN	Pn	12 28 18.6	-1.0
MWZ	**Matawai**	**1.82**	**236**	P	Pn	12 28 18.6	-1.1
PRGZ	**Paritu Road**	**2.02**	**217**	PN	Pn	12 28 21.5	-0.9
PRGZ				SN	Sn	12 28 46.7	-0.8
URZ	**Urewera**	**2.07**	**242**	PN	Pn	12 28 22.8	-0.3
URZ				SN	Sn	12 28 47.4	-1.5
URZ	**Urewera**	**2.07**	**242**	P	Pn	12 28 22.8	-0.3
KNZ	**Kokohu**	**2.19**	**219**	PN	Pn	12 28 23.9	-1.0
KNZ	**Kokohu**	**2.19**	**219**	P	Pn	12 28 23.9	-0.9
TARZ	**Mount Tarawera**	**2.50**	**248**	PN	Pn	12 28 28.8	-0.2
NMHZ	**Naumai**	**2.73**	**229**	PN	Pn	12 28 31.4	-0.8
BKZ	**Black Stump Fm**	**2.96**	**231**	PN	Pn	12 28 34.1	-1.3
BKZ				SN	Sn	12 29 09.2	-1.7
BKZ	**Black Stump Fm**	**2.96**	**231**	P	Pn	12 28 34.1	-1.3
KUZ	**Kuaotunu**	**3.03**	**280**	PN	Pn	12 28 35.7	-0.7
KUZ	**Kuaotunu**	**3.03**	**280**	P	Pn	12 28 35.7	-0.6
KAHZ	**Kahuranaki**	**3.19**	**218**	PN	Pn	12 28 36.3	-2.1
WNVZ	**Wahianoa**	**3.63**	**235**	PN	Pn	12 28 44.3	-0.2
BFZ	**Birch Farm**	**4.18**	**216**	PN	Pn	12 28 48.3	-3.8
WAZ	**Wanganui**	**4.26**	**234**	PN	Pn	12 28 52.5	-0.7
TIWZ	**Tintock**	**4.42**	**218**	PN	Pn	12 28 52.0	-3.4
MRZ	**Mangatainoka R**	**4.49**	**221**	PN	Pn	12 28 53.0	-3.4
MRZ	**Mangatainoka R**	**4.49**	**221**	P	Pn	12 28 53.0	-3.4

CASC 16 12:28:57.6±2.1, 13.°98N×91.°73W, h23km±12km, MD3.6, 2C-3D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.97**	**61**⇑	*e* P	Pb	12 29 16.3	+0.4
FG6		**1.00**	**55**⇓	*e* P	Pn	12 29 16.6	+0.4
FG6				*e* S	Sb	12 29 29.3	+0.3
TP2	**Tecpan 2**	**1.05**	**40**⇓	*e* P	Pn	12 29 17.3	+0.3
PCG	**Pacaya**	**1.16**	**69**	*e* P	Pn	12 29 19.4	+0.9
PCG				*e* S	Sn	12 29 34.9	+1.3
NBG	**Las Nubes**	**1.47**	**65**⇑	*e* P	Pn	12 29 23.0	+0.4
NBG				*e* S	Sn	12 29 44.3	+3.2
RTR	**El Retiro**	**2.02**	**92**	*e* P	Pn	12 29 30.2	0.0
SBLS	**San Blas**	**2.05**	**94**	*e* P	Pn	12 29 31.0	+0.3
SNJE	**San Jose**	**2.06**	**93**	*e* P	Pn	12 29 30.7	-0.1
MRL	**Marmol**	**2.25**	**61**⇓	*e* P	Pn	12 29 32.6	-0.8
MTO2	**Montecristo 2**	**2.33**	**79**	*e* P	Pn	12 29 32.8	-1.7
LFRS	**El Faro**	**2.61**	**97**	*e* P	Pn	12 29 39.6	+1.2
LFRS				*e* S	Sn	12 30 11.3	+1.9

IDC 16 12:40:41.8±1.4, 16.°29S×173.°07W, h0km, mb4.1/5, mb1 4.2/6, mb1mx3.9/21, mbtmp4.1/6, ML2.2/1, Error ellipse: s-maj=39.4km s-min=27.1km az=122.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.67**	**28**	Pn	Pn	12 41 26.2	+0.1
	22nm,0.3s,baz=160,slow=2.5,SNR=27						
AFI				Sn	Sn	12 41 57.2	-2.0
	39nm,0.3s,baz=51,slow=16,SNR=4.5						
URZ	**Urewera**	**23.53**	**200**	P	P	12 45 53.7	-0.2
	5.5nm,0.5s,baz=3.9,slow=1.3,SNR=10						
RPZ	**Rata Peaks**	**30.49**	**203**	P	P	12 47 01.0	+4.5
	4.6nm,0.7s,baz=40,slow=10,SNR=5.8						
STKA	**Stephens Creek**	**43.88**	**241**	P	P	12 48 50.8	+0.6
	1.9nm,0.8s,baz=79,slow=10,SNR=2.8						
WRA	**Warramunga Arr**	**49.96**	**257**	P	P	12 49 37.5	-0.5
	0.3nm,0.3s,baz=95,slow=7.1,SNR=13						
ASAR	**Alice Springs**	**50.15**	**253**	P	P	12 49 39.3	-0.1
	2.6nm,0.5s,baz=88,slow=9.0,SNR=72						
QSPA	**South Pole Qui**	**73.76**	**180**	P	P	12 52 17.8	+0.4
	1.3nm,0.9s,baz=100,slow=2.8,SNR=6.6						

ISCJB ***16*** *12:48:38.3±2.2, 28.°57S±0.°04×175.°74W±0.°05, h6km±13km, mb4.9/49, MS4.5/17, Error ellipse: s-maj=9.0km s-min=4.5km az=39.3*
IDC ***16*** *12:48:39.6±0.4, 28.°19S×175.°73W, h0km, mb4.7/19, mb1 4.8/20, mb1mx4.8/22, mbtmp4.6/20, ML5.3/2, MS4.2/12, Ms1 4.2/12, ms1mx4.0/30, Error ellipse: s-maj=16.5km s-min=13.8km az=151.0*
BJI ***16*** *12:48:40.9, 27.°81S×175.°33W, h13km, mB5.5/19, mb5.1/26, Ms5.2/14, Ms7 4.9/15*
NEIC ***16*** *12:48:41.2±0.1, 28.°22S×175.°74W, h10km, mb4.9/25, Error ellipse: s-maj=7.1km s-min=4.1km az=140.0*
GCMT ***16*** *12:48:45.4±0.2, 28.°08S×175.°43W, h17km, MW5.1, Moment Tensor Solution. s39,c53; s75,c115; Moment tensor: Scale 10^16 Nm; Mrr-4.05±.24; Mθθ-1.21±.18; Mφφ5.27±.15; Mrθ0.61±.52; Mrφ1.16±.11; Mθφ-0.34±.33; Best double couple: M0 4.80000×10^16 NP1:φs203.00000°, δ45.00000°, λ-71.00000°. NP2:φs357.00000°, δ48.00000°, λ-108.00000°. Principal axes: T 5.4800, Plg1.0000°, Azm100.0000°; N -1.2600, Plg13.0000°, Azm9.0000°; P -4.2100, Plg77.0000°, Azm196.0000°; Data Used: II IU IC G CN.*

ISC 16 12:48:40.4±2.1, 28.°54S±0.°04×175.°71W±0.°05, h9km±13km, h20km±4.5km: pP-P, n484, σ0.°67/433, mb4.9/49, MS4.5/17, 147C-127D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.06**	**249**	Pn	**Pn**	**12 49 19.4**	**+4.2**
	3μm,0.3s,baz=175,slow=2.5,SNR=59						
RAO				Sn	**Sn**	**12 49 46.1**	**+5.0**
	2μm,0.3s,baz=90,slow=20,SNR=18						
MXZ	**Matakaoa Point**	**10.30**	**208**	PN	**Pn**	**12 51 08.0**	**-0.3**
MXZ				SN	**Sn**	**12 53 04.7**	**+0.7**
CNGZ	**Carnagh Statio**	**11.14**	**205**	PN	**Pn**	**12 51 18.8**	**-1.1**
CNGZ				SN	**Sn**	**12 53 24.9**	**+0.3**
MWZ	**Matawai**	**11.28**	**208**	PN	**Pn**	**12 51 22.5**	**+0.7**
MWZ				SN	**Sn**	**12 53 25.7**	**-2.3**
URZ	**Urewera**	**11.40**	**210**	Pn	**Pn**	**12 51 22.9**	**-0.5**
	1.8nm,0.3s,baz=266,slow=5.1,SNR=13						
URZ				Sn	**Sn**	**12 53 28.2**	**-2.6**
	10nm,0.3s,baz=296,slow=18,SNR=14						
URZ	**Urewera**	**11.40**	**210**	*e* Pn	**Pn**	**12 51 26.4**	**+3.1**
	19nm,0.6s						
URZ	**Urewera**	**11.40**	**210**	PN	**Pn**	**12

QSPA	**South Pole Qui**	61.57	180	P	P	12 59 01.4	+4.0
PMSA	**Palmer Station**	73.13	155	P	P	13 00 13.0	+2.1
	1.6nm,0.8s,mb4.0,baz=154,slow=5.4,SNR=3.7						
MAW	**Mawson**	74.74	200	eP	P	13 00 23.4	+3.1
	5.1nm,0.8s,mb4.5						
MAW	**Mawson**	74.74	200	P	P	13 00 23.8	+3.5
	3.9nm,0.9s,mb4.3,baz=106,slow=4.8,SNR=6.3						
MAW	**Mawson**	74.74	200	eP	P	13 00 23.6	+3.3
	1.8nm,0.9s,mb4.0						
KSM	**Kuching**	76.67	279	eP	P	13 00 32.4	+0.1
MJAR	**Matsushiro Arr**	77.89	324	P	P	13 00 36.4	-2.1
	3.5nm,0.8s,mb4.3,baz=164,slow=5.8,SNR=10						
MAJO	**Matsushiro**	77.89	324	eP	P	13 00 38.0	-0.5
MAT	**Matsushiro**	77.89	324	P	P	13 00 37.9	-0.6
SYO	**Syowa Base**	79.36	192	eP	P	13 00 47.0	+0.7
SYO	**Syowa Base**	79.36	192	epP	pP	13 00 50.8	+1.7
VNA1	**Neumayer--Stat**	80.69	176	eP	P	13 00 54.8	+1.4
ASAJ	**Asahikawa**	81.75	331	P	P	13 00 60.0	+0.7
	15nm,0.9s,mb4.9,baz=234,slow=8.2,SNR=12						
PLCA	**Paso Flores**	82.30	132	P	P	13 01 04.5	+2.0
	3.3nm,0.7s,mb4.4,baz=225,slow=6.4,SNR=3.2						
PLCA				LR	LR	13 29 32.0	
	comp=Z,234nm,21.3s,MS4.5,baz=88,slow=30						
SMMC	**Simmler**	82.42	43	⇓P	P	13 01 03.3	+0.3
	baz=82						
MURC	**Murrieta**	83.00	46	⇓P	P	13 01 06.1	0.0
	baz=83						
MONP	**Monument Peak**	83.04	47	⇓P	P	13 01 06.5	+0.3
	baz=83						
EDW2	**Edwards Air Fo**	83.35	44	⇓P	P	13 01 07.7	-0.1
	baz=83						
PFO	**Pinyon Flat Ob**	83.48	46	⇑P	P	13 01 08.6	0.0
	baz=84						
ISA	**Isabella**	83.58	44	⇓P	P	13 01 09.2	+0.2
	baz=84						
BBRC	**Big Bear Solar**	83.61	45	⇓P	P	13 01 09.2	0.0
	baz=84						
LRMC	**Laurel Mountai**	83.93	44	⇑P	P	13 01 11.1	+0.3
	baz=84						
YSS	**Yuzh-Sakhalins**	83.97	333	eP	P	13 01 10.7	0.0
BELC	**Belle Mtn. Jos**	84.02	46	⇑P	P	13 01 11.4	0.0
	baz=84						
CMB	**Columbia Colle**	84.05	41	eP	P	13 01 11.0	-0.4
BC3	**Big Chuckawall**	84.15	47	⇓P	P	13 01 12.2	+0.2
	baz=84						
GLA	**Glamis**	84.17	48	⇓P	P	13 01 12.0	-0.1
	baz=84						
GLA	**Glamis**	84.17	48	eP	P	13 01 12.3	+0.2
KSRS	**Korea Array**	84.26	318	P	P	13 01 12.8	+0.3
	2.9nm,0.9s,mb4.4,baz=127,slow=6.0,SNR=11						
KSRS				LR	LR	13 31 46.9	
	comp=Z,66nm,21.4s,MS4.0,baz=115,slow=31						
OHCM	**Honcut**	84.33	39	eP	P	13 01 12.2	-0.5
CWC	**Cottonwood Cre**	84.33	43	⇑P	P	13 01 12.9	0.0
	baz=84						
HEC	**Hector,Ludlow**	84.35	45	⇓P	P	13 01 12.9	0.0
	baz=84						
GSC	**Goldstone**	84.36	45	⇑P	P	13 01 13.0	0.0
	baz=84						
GSC	**Goldstone**	84.36	45	eP	P	13 01 12.9	-0.1
	2.9nm,0.7s,mb4.5						
MPMC	**Manual Prospec**	84.44	44	⇓P	P	13 01 13.5	+0.2
	baz=84						
PETK	**Petropavlovsk-**	84.54	344	P	P	13 01 13.0	-0.4
	16nm,0.8s,mb5.2,baz=130,slow=8.1,SNR=28						
PETK				LR	LR	13 30 32.3	
	comp=Z,97nm,20.9s,MS4.2,baz=151,slow=30						
WDC	**Whiskeytown Da**	84.62	38	eP	P	13 01 14.1	-0.1
MTUM	**Tungsten Hills**	84.65	42	eP	P	13 01 15.0	+0.6
TIN	**Tinemaha**	84.65	43	⇑P	P	13 01 14.7	+0.3
	baz=85						
IRM	**Iron Mountain**	84.67	46	⇓P	P	13 01 14.9	+0.3
	baz=85,SNR=12						
113A	**Mohawk Valley,**	84.69	48	⇑P	P	13 01 14.6	-0.1
	baz=85						
GMRC	**Granite Mounta**	84.74	46	⇓P	P	13 01 15.0	+0.1
	baz=85						
214A	**Organ Pipe Nat**	84.81	49	⇑P	P	13 01 15.4	0.0
	baz=85,SNR=5.5						
TUQ	**Turquoise Moun**	85.00	45	⇑P	P	13 01 16.2	0.0
	baz=85						
Z13A	**Yuma Proving G**	85.03	48	⇑P	P	13 01 16.4	0.0
	baz=85,SNR=7.4						
FURC	**Furnace Creek,**	85.09	44	⇑P	P	13 01 16.4	-0.3
	baz=85						
GRAC	**Grapevine Rang**	85.13	43	⇓P	P	13 01 17.0	+0.2
	baz=85						
114A	**Black Gap (USA**	85.26	49	⇑P	P	13 01 17.5	-0.1
	baz=85						
WCN	**Washoe City**	85.28	40	⇓P	P	13 01 17.6	+0.1
	baz=85						
LDFC	**Landfair**	85.28	46	eP	P	13 01 18.4	+0.8
Y13A	**Salome**	85.30	47	⇑P	P	13 01 18.0	+0.2
	baz=85						
KEBM	**Edson Butte**	85.32	35	eP	P	13 01 17.1	-0.5
YBH	**Yreka Blue Hor**	85.34	37	P	P	13 01 18.1	+0.3
	10nm,0.9s,mb5.0,baz=203,slow=1.1,SNR=29						
YBH	**Yreka Blue Hor**	85.34	37	eP	P	13 01 17.9	+0.1
U10A	**Ash Meadows, A**	85.38	44	⇑P	P	13 01 18.4	+0.3
	baz=85						
PDMCI	**Parker Dam,Lak**	85.40	47	⇓P	P	13 01 18.5	+0.2
	baz=85						
NVAR	**Mina Array Bea**	85.52	42	P	P	13 01 18.7	0.0
	11nm,0.9s,mb5.1,baz=222,slow=7.8,SNR=65						
W12A	**Cal Nev Ari**	85.57	46	⇑P	P	13 01 19.3	+0.2
	baz=86						
Z14A	**Wintersburg**	85.59	48	⇑P	P	13 01 19.5	+0.2
	baz=86,SNR=8.5						
216A	**Three Points,**	85.75	50	⇑P	P	13 01 20.4	+0.3
	baz=86						
X13A	**Yucca**	85.78	47	⇑P	P	13 01 20.3	+0.1
	baz=86,SNR=9.2						
HUMO	**Hull Mountain**	85.84	36	eP	P	13 01 20.5	+0.3
V12A	**Nelson**	85.85	45	⇑P	P	13 01 21.0	+0.5
	baz=86						
Y14A	**Wickenburg**	85.91	48	⇑P	P	13 01 20.9	+0.1
	baz=86,SNR=11						
116A	**Eloy**	85.93	50	⇓P	P	13 01 21.3	+0.4
	baz=86						
U11A	**Corn Creek**	85.97	45	⇓P	P	13 01 21.3	+0.3
	baz=86						
QIZ	**Qiongzhong**	86.03	294	P	P	13 01 23.6	+1.9
QIZ				S	S	13 11 54.9	-1.4
QIZ				pmax	pmax		
	comp=Z,16nm,1.6s,mb5.0						
QIZ				pmax	pmax		
	comp=Z,140nm,7.0s						
QIZ				LR	LR		
	comp=N,280nm,19.2s						
QIZ				LR	LR		
	comp=Z,300nm,17.2s,MS4.8						
217A	**Green Valley**	86.05	51	⇑P	P	13 01 22.0	+0.5
	baz=86,SNR=16						
W13A	**Hualapai Mount**	86.07	46	⇑P	P	13 01 21.9	+0.3
	baz=86,SNR=7.2						
S10A	**Tonopah Range,**	86.20	43	⇑P	P	13 01 22.1	0.0
	baz=86,SNR=8.5						
X14A	**Yava**	86.31	47	⇓P	P	13 01 23.1	+0.3
	baz=86						
Y15A	**Casa Rosa Ranc**	86.36	48	⇓P	P	13 01 23.3	+0.3
	baz=86,SNR=10						
TUC	**Tucson**	86.39	50	eP	P	13 01 23.4	+0.2
318A	**Bisbee**	86.41	51	⇑P	P	13 01 23.8	+0.4
	baz=86,SNR=15						
V13A	**Grand Canyon W**	86.48	46	⇓P	P	13 01 23.8	+0.2
	baz=86,SNR=8.7						
U12A	**Valley of Fire**	86.50	45	⇑P	P	13 01 24.2	+0.6
	baz=86,SNR=5.6						
S11A	**Rachel**	86.53	44	⇑P	P	13 01 23.9	+0.1
	baz=87,SNR=8.5						
T12A	**Moapa**	86.57	45	⇑P	P	13 01 24.3	+0.3
	baz=87						
117A	**Oracle**	86.58	50	⇓P	P	13 01 24.8	+0.6
	baz=87,SNR=11						
NJ2	**Nanjing**	86.58	309	eP	P	13 01 25.5	+1.3
NJ2				pP	pP	13 01 30.3	+3.3
NJ2				sP	sP	13 01 32.5	+4.4
NJ2				PP	PP	13 04 48.8	+2.4
NJ2				S	S	13 11 58.0	-3.2
NJ2				sS	sS	13 12 09.0	+3.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.2						
NJ2				pmax	pmax		
	comp=Z,190nm,8.7s						
NJ2				LR	LR		
	comp=N,540nm,21.1s						
NJ2				LR	LR		
	comp=E,570nm,15.8s						
NJ2				LR	LR		
	comp=Z,730nm,17.5s,MS5.1						
Z16A	**Peralta Trail,**	86.58	49	⇓P	P	13 01 24.1	0.0
	baz=87						
T11A	**Corn Creek, Al**	86.59	44	⇑P	P	13 01 24.5	+0.5
	baz=87,SNR=23						
W14A	**Seligman**	86.65	47	⇓P	P	13 01 25.1	+0.7
	baz=87,SNR=8.9						
218A	**Dragoon**	86.69	51	⇑P	P	13 01 25.2	+0.4
	baz=87						
X15A	**Humboldt**	86.75	48	⇑P	P	13 01 25.6	+0.6
	baz=87,SNR=8.8						
MOD	**Modoc**	86.75	38	eP	P	13 01 24.4	-0.4
U13A	**Pakoon Wash**	86.84	45	⇑P	P	13 01 25.9	+0.6
	baz=87,SNR=9.4						
319A	**Douglas**	86.86	52	⇓P	P	13 01 26.0	+0.5
	baz=87,SNR=9.3						
Y16A	**Circle Bar Ran**	86.88	49	⇑P	P	13 01 26.2	+0.6
	baz=87,SNR=17						
V14A	**Boquillas Ranc**	86.90	46	⇓P	P	13 01 26.2	+0.6
	baz=87,SNR=6.7						
Q10A	**Clear Creek Ra**	86.90	42	⇑P	P	13 01 25.6	0.0
	baz=87						
K05A	**Summer Lake**	87.00	37	⇑P	P	13 01 26.0	+0.1
	baz=87,SNR=9.9						
S12A	**Delamar Landin**	87.05	44	⇓P	P	13 01 27.1	+0.8
	baz=87,SNR=18						
R11A	**Troy Canyon, C**	87.08	43	⇑P	P	13 01 26.3	-0.1
	baz=87						
W15A	**Williams**	87.16	47	⇓P	P	13 01 27.6	+0.8
	baz=87						
Y17A	**Roosevelt**	87.19	49	⇓P	P	13 01 27.6	+0.5
	baz=87,SNR=8.9						
Z17A	**San Carlos Hig**	87.19	50	⇓P	P	13 01 27.6	+0.5
	baz=87						
X16A	**Lo Mia Camp, P**	87.23	48	⇑P	P	13 01 28.0	+0.8
	baz=87,SNR=16						
219A	**White Tail Can**	87.25	51	⇑P	P	13 01 27.9	+0.4
	baz=87,SNR=8.6						
U14A	**Mt Trumbull**	87.34	46	⇑P	P	13 01 28.4	+0.7
	baz=87,SNR=7.9						
Q11A	**Duckwater**	87.36	43	⇓P	P	13 01 27.5	-0.3
	baz=87,SNR=5.3						
Z18A	**Geronimo**	87.36	50	⇑P	P	13 01 28.5	+0.5
	baz=87						
W16A	**Flagstaff**	87.58	48	⇓P	P	13 01 29.4	+0.5
	baz=88,SNR=5.6						
X17A	**Forest Lakes**	87.60	49	⇓P	P	13 01 30.1	+1.1
	baz=88						
V15A	**Kaibab Nationa**	87.61	47	⇑P	P	13 01 29.7	+0.6
	baz=88,SNR=7.4						
S13A	**Holt Ranch, En**	87.64	45	⇑P	P	13 01 29.5	+0.4
	baz=88,SNR=9.9						
R12A	**Pony Springs,**	87.66	44	⇑P	P	13 01 29.6	+0.3
	baz=88,SNR=11						
119A	**Ashpeak Ranch,**	87.67	51	⇑P	P	13 01 29.9	+0.5
	baz=88,SNR=5.2						
220A	**Playas Peak, P**	87.69	52	⇓P	P	13 01 30.0	+0.4
	baz=88,SNR=5.7						
P11A	**Circle Ranch,**	87.76	42	⇑P	P	13 01 29.5	-0.2
	baz=88						
Y18A	**Canyon Day Jun**	87.77	49	⇑P	P	13 01 30.6	+0.7
	baz=88,SNR=11						
T14A	**Hurricane**	87.80	45	⇓P	P	13 01 30.3	+0.3
	baz=88						
U15A	**North Rim**	87.91	46	⇑P	P	13 01 31.2	+0.8
	baz=88,SNR=16						
CCUT	**Cedar City**	87.93	45	eP	P	13 01 30.3	-0.2
WUAZ	**Wupatki**	87.94	47	⇓P	P	13 01 31.4	+0.7
	baz=88						
WUAZ	**Wupatki**	87.94	47	eP	P	13 01 31.5	+0.9
R13A	**O'Grain Ranch,**	87.95	44	⇑P	P	13 01 31.2	+0.6
	baz=88						
WVOR	**Wild Horse Val**	88.02	38	eP	P	13 01 30.4	-0.4
	comp=Z,6.7nm,1.0s,mb4.8						
ARUT	**Antelope Range**	88.03	45	eP	P	13 01 31.1	+0.1
	comp=Z,6.0nm,1.0s,mb4.8						
O11A	**Cowboy Ranch,**	88.19	42	⇑P	P	13 01 31.6	-0.1
	baz=88,SNR=14						
P12A	**McGill**	88.21	43	⇑P	P	13 01 31.7	-0.2
	baz=88,SNR=9.5						
T15A	**Red Dirt Ranch**	88.21	46	⇑P	P	13 01 32.3	+0.4
	baz=88,SNR=7.6						
MDJ	**Mudanjiang**	88.25	324	P	P	13 01 32.5	+0.6
MDJ				pP	pP	13 01 35.8	+1.0
MDJ				sP	sP	13 01 37.1	+1.3
MDJ				pmax	pmax		
	comp=Z,19nm,1.2s,mb5.2						
MDJ				pmax	pmax		
	comp=Z,160nm,3.7s						
221A	**Mesquite Ranch**	88.27	52	⇓P	P	13 01 33.1	+0.7
	baz=88						
X18A	**Snowflake**	88.28	49	⇓P	P	13 01 32.8	+0.5
	baz=88						
Z20A	**Nine Sixteen R**	88.36	51	⇑P	P	13 01 33.5	+0.8
	baz=88,SNR=7.2						
V17A	**Tonalea, Kykot**	88.38	48	⇑P	P	13 01 33.2	+0.4
	baz=88,SNR=9.6						
Y19A	**Nutrioso**	88.40	50	⇓P	P	13 01 34.0	+1.1
	baz=88,SNR=10						
Q13A	**Wheeler Ranch,**	88.41	43	⇑P	P	13 01 32.5	-0.3
	baz=88,SNR=8.8						
F04A	**Amboy**	88.47	34	⇓P	P	13 01 32.7	-0.2
	baz=88						
U16A	**Tuba City**	88.47	47	⇑P	P	13 01 33.7	+0.5
	baz=88,SNR=5.3						
VFP	**Flag Point**	88.51	35	P	P	13 01 33.0	-0.1
121A	**Cookes Peak, D**	88.57	52	⇑P	P	13 01 34.1	+0.4
	baz=89						
M10A	**I.L. Ranch, Tu**	88.58	40	⇑P	P	13 01 33.4	-0.1
	baz=89,SNR=8.1						
N11A	**Elko Archery C**	88.58	41	⇑P	P	13 01 33.4	-0.2
	baz=89						
S15A	**Panguitch**	88.63	45	⇓P	P	13 01 35.1	+1.2
	baz=89						
I07A	**Izee**	88.67	37	⇑P	P	13 01 33.3	-0.6
	baz=89,SNR=9.8						
J08A	**Circle Bar Ran**	88.73	38	⇓P	P	13 01 33.7	-0.5
	baz=89,SNR=10						
T16A	**Glen Canyon Da**	88.75	46	⇓P	P	13 01 34.7	+0.3
	baz=89						
W18A	**Petrified Fore**	88.77	48	⇑P	P	13 01 35.0	+0.4
	baz=89						
O12A	**Currie**	88.81	42	⇑P	P	13 01 34.5	-0.1
	baz=89,SNR=9.7						
NLWA	**Neilton Lookou**	88.82	32	⇑P	P	13 01 34.8	+0.3
	baz=89						
NLWA	**Neilton Lookou**	88.82	32	eP	P	13 01 35.0	+0.5
	comp=Z,14nm,1.1s,mb5.2						
G06A	**Carlson Farm,**	88.88	35	⇑P	P	13 01 34.2	-0.6
	baz=89,SNR=6.8						
Q14A	**Sevier Lake (B**	88.88	44	⇑P	P	13 01 35.1	+0.1
	baz=89						
M11A	**Holland Ranch,**	88.95	41	⇑P	P	13 01 35.4	+0.1
	baz=89						
Y20A	**Horse Springs,**	88.97	50	⇓P	P	13 01 36.2	+0.6
	baz=89,SNR=8.4						
L10A	**Juniper Basin**	88.98	40	⇑P	P	13 01 34.9	-0.5
	baz=89,SNR=5.8						
V18A	**Ganado**	88.99	48	⇑P	P	13 01 36.2	+0.6
	baz=89						
N12A	**Clover Valley,**	89.01	41	⇓P	P	13 01 35.7	+0.2
	baz=89						
U17A	**Shonto**	89.05	47	⇓P	P	13 01 36.3	+0.4
	baz=89,SNR=5.6						
Z21A	**St. Cloud Mine**	89.10	51	⇓P	P	13 01 36.6	+0.4
	baz=89						
T17A	**Navajo Res., N**	89.20	46	⇑P	P	13 01 37.1	+0.5
	baz=89,SNR=5.3						
122A	**Conniff Cattle**	89.21	52	⇓P	P	13 01 37.2	+0.5
	baz=89						
K10A	**MacKenzie Ranc**	89.22	39	⇓P	P	13 01 36.1	-0.4
	baz=89,SNR=8.1						
X20A	**Quemado**	89.25	50	⇓P	P	13 01 37.8	+0.9
	baz=89,SNR=10						
MSU	**Marysvale**	89.26	45	eP	P	13 01 34.8	-2.0
TRQA	**Tornquist**	89.30	134	eP	P	13 01 38.9	+1.6
LON	**Longmire**	89.35	34	eP	P	13 01 36.6	-0.4
M12A	**Wells**	89.44	41	⇓P	P	13 01 37.2	-0.4
	baz=90						
L11A	**Cat Creek Ranc**	89.45	40	⇑P	P	13 01 37.4	-0.2
	baz=90,SNR=8.5						
U18A	**Rough Rock, Ch**	89.45	47	⇓P	P	13 01 37.8	0.0
	baz=90,SNR=5.7						
626A	**Big Bend Ranch**	89.48	56	⇓P	P	13 01 38.1	+0.1
	baz=90,SNR=14						
Y21A	**Point of Rocks**	89.50	50	⇑P	P	13 01 39.0	+0.9
	baz=90,SNR=11						
N13A	**Wendover, West**	89.50	42	⇑P	P	13 01 38.2	+0.3
	baz=90						
N13A	**Wendover, West**	89.50	42	eP	P	13 01 38.7	+0.8
425A	**Indio Mountain**	89.55	54	⇓P	P	13 01 38.4	+0.1
	baz=90,SNR=12						
Z22A	**Elephant Butte**	89.55	51	⇑P	P	13 01 38.6	+0.2
	baz=90						
324A	**Moseley Ranch,**	89.56	54	⇑P	P	13 01 37.9	-0.5
	baz=90,SNR=7.5						
D05A	**Enumclaw**	89.57	33	⇓P	P	13 01 37.9	-0.1
	baz=90,SNR=5.8						
S17A	**Black Ridge (B**	89.59	46	⇑P	P	13 01 38.6	+0.2
	baz=90						
W20A	**Ramah**	89.59	49	⇓P	P	13 01 39.3	+0.8
	baz=90,SNR=9.9						
X21A	**Alamocita Cree**	89.67	50	⇓P	P	13 01 39.4	+0.5
	baz=90,SNR=16						
K11A	**Parker Ranch,**	89.68	39	⇓P	P	13 01 38.6	-0.1
	baz=90,SNR=6.1						
TXAR	**Lajitas Array**	89.70	56	P	P	13 01 39.2	0.0
	comp=Z,5.3nm,0.9s,mb4.9,baz=209,slow=8.2,SNR=44						
MNTX	**Cornudas Mount**	89.77	53	eP	P	13 01 38.8	-0.6
	comp=Z,2.5nm,0.7s,mb4.7						
G08A	**Pilot Rock**	89.78	36	⇑P	P	13 01 38.7	-0.3
	baz=90,SNR=21						
526A	**Mary Lane Ranc**	89.79	55	⇓P	P	13 01 39.0	-0.5
	baz=90,SNR=15						
U19A	**Dine' College,**	89.81	48	⇑P	P	13 01 39.6	+0.2
	baz=90,SNR=8.1						
NAC	**Naches**	89.82	34	P	P	13 01 39.2	0.0
P15A	**Leamington**	89.85	44	⇓P	P	13 01 39.8	+0.2
	baz=90						
L12A	**House Creek Ra**	89.85	40	⇓P	P	13 01 39.6	+0.1
	baz=90						
T18A	**Mexican Hat**	89.88	47	⇓P	P	13 01 40.0	+0.3
	baz=90,SNR=12						
325A	**Bean Ranch, Si**	89.88	54	⇑P	P	13 01 39.4	-0.5
	baz=90,SNR=9.2						
224A	**Cornudas Mount**	89.89	53	⇓P	P	13 01 39.9	0.0
	baz=90						
CN2	**Changchun**	89.89	322	eP	P	13 01 39.8	+0.2
CN2				esP	sP	13 01 54.3	+11
CN2				eS	S	13 12 28.1	-4.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.2						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,18.0s,MS4.7						
CN2				LR	LR		
	comp=E,200nm,18.0s,MS4.7						
CN2				LR	LR		
	comp=Z,400nm,19.0s,MS4.9						
Y22A	**Socorro**	89.94	51	⇑P	P	13 01 40.4	+0.3
	baz=90						
627A	**Terlingua Ranc**	89.97	56	⇓P	P	13 01 40.3	0.0
	baz=90,SNR=20						
V20A	**Brimhall**	90.01	49	⇓P	P	13 01 40.3	0.0
	baz=90						
LAZ	**Ladron**	90.09	50	eP	P	13 01 41.2	+0.4
	comp=Z,3.6nm,1.1s,mb4.6						
R17A	**Hanksville Air**	90.12	45	⇑P	P	13 01 40.5	-0.3
	baz=90,SNR=5.1						
Q16A	**Castle Valley**	90.13	45	⇓P	P	13 01 41.1	+0.3
	baz=90						
W21A	**San Fidel**	90.16	50	⇑P	P	13 01 41.5	+0.4
	baz=90						
426A	**McDonald Obser**	90.17	55	⇑P	P	13 01 41.1	-0.1
	baz=90,SNR=14						
E07A	**Sunnyside**	90.18	35	⇓P	P	13 01 41.1	+0.2
	baz=90						
527A	**Woodward Ranch**	90.19	56	⇓P	P	13 01 41.0	-0.3
	baz=90,SNR=14						
RSW	**Rattlesnake Hi**	90.20	35	eP	P	13 01 41.4	+0.4
MFID	**Camas Ranch**	90.22	39	⇓P	P	13 01 40.9	-0.2
	baz=90						
HAWA	**Hanford**	90.23	35	eP	P	13 01 41.3	+0.1
X22A	**Bernardo**	90.23	50	⇑P	P	13 01 42.1	+0.6
	baz=90						
TBM	**Table Mountain**	90.23	34	P	P	13 01 41.2	+0.1
T19A	**Beclabito**	90.25	47	⇓P	P	13 01 41.5	+0.1
	baz=90						
124A	**Stringfield Ra**	90.28	53	⇓P	P	13 01 41.9	+0.1
	baz=90						
JCW	**Jim Creek**	90.31	33	P	P	13 01 41.4	-0.1
U20A	**Newcomb**	90.31	48	⇑P	P	13 01 41.9	+0.1
	baz=90,SNR=6.6						
GBB	**Gable Butte**	90.33	35	P	P	13 01 41.7	+0.1
TMUT	**Trail Mountain**	90.34	44	eP	P	13 01 43.0	+1.2
BMO	**Blue Mountains**	90.35	37	eP	P	13 01 41.4	-0.4
628A	**Black Gap, Mar**	90.36	56	⇓P	P	13 01 41.9	-0.3
	baz=90,SNR=14						
G09A	**Cove**	90.39	37	⇑P	P	13 01 41.7	-0.2
	baz=90						
225A	**Deer Hill, Car**	90.40	53	⇑P	P	13 01 42.1	-0.2
	baz=90						
M14A	**Sheep Mountain**	90.41	42	⇑P	P	13 01 41.7	-0.4
	baz=90,SNR=12						
L13A	**Double Diamond**	90.43	41	⇓P	P	13 01 42.1	-0.1
	baz=90						
I11A	**Placerville**	90.47	39	⇓P	P	13 01 41.9	-0.4
	baz=90						
J12A	**Stokes Ranch,**	90.52	40	⇓P	P	13 01 42.4	-0.2
	baz=90,SNR=6.2						
V21A	**Milan**	90.56	49	⇑P	P	13 01 43.0	0.0
	baz=91,SNR=6.6						
Y23A	**Lovelace Mesa,**	90.56	51	⇑P	P	13 01 42.5	-0.5
	baz=91						
R18A	**Canyonlands Na**	90.61	46	⇑P	P	13 01 42.9	-0.3
	baz=91,SNR=7.6						
SRU	**San Rafael**	90.65	45	⇑P	P	13 01 43.0	-0.3
	baz=91,SNR=7.1						
SRU	**San Rafael**	90.65	45	eP	P	13 01 43.7	+0.4
ETW	**Entiat**	90.67	34	P	P	13 01 43.2	+0.1
RPW	**Rockport**	90.68	33

428A	Kincaid Ranch,	91.17	55	⇓P		P	13 01 45.7	-0.2
	baz=91							
S20A	Disappointment	91.26	47	⇓P		P	13 01 45.6	-0.5
	baz=91							
L15A	Malad City	91.29	42	⇑P		P	13 01 45.4	-0.7
	baz=91,SNR=6.3							
PV01	Paradox Valley	91.30	47	eP		P	13 01 46.2	-0.2
	comp=Z,240nm,0.8s							
OD2	Odessa Site #2	91.32	35	P		P	13 01 45.8	-0.4
X24A	Lazy VL Ranch,	91.34	51	⇑P		P	13 01 46.0	-0.6
	baz=91							
J14A	Carey	91.45	40	⇑P		P	13 01 47.3	+0.4
	baz=92,SNR=10.0							
R20A	Redvale	91.46	47	⇑P		P	13 01 46.6	-0.5
	baz=92							
H12A	Diamond D Ranc	91.48	39	⇑P		P	13 01 46.5	-0.5
	baz=92,SNR=20							
I13A	Wildhorse Cree	91.49	39	⇓P		P	13 01 46.8	-0.2
	baz=92							
Y25A	Mesa, Roswell	91.49	52	⇓P		P	13 01 46.6	-0.7
	baz=92,SNR=7.8							
HWUT	Hardware Ranch	91.53	42	eP		P	13 01 47.0	-0.3
S21A	Coal Bank Pass	91.53	47	⇓P		P	13 01 47.0	-0.4
	baz=92							
K15A	Arbon	91.62	41	⇑P		P	13 01 47.4	-0.4
	baz=92							
Z26A	Caprock	91.63	53	⇑P		P	13 01 47.5	-0.5
	baz=92,SNR=6.1							
W24A	Lazy 6 Ranch,	91.72	50	⇑P		P	13 01 47.8	-0.5
	baz=92,SNR=6.2							
T22A	Edith	91.74	48	⇓P		P	13 01 48.1	-0.3
	baz=92							
127A	Arkansas Junct	91.74	54	⇓P		P	13 01 47.8	-0.8
	baz=92							
C09A	Chrisman Ranch	91.82	35	⇓P		P	13 01 48.1	-0.4
	baz=92							
H13A	Challis	91.82	39	⇑P		P	13 01 48.4	-0.2
	baz=92,SNR=8.3							
X25A	Clemmons Ranch	91.85	51	⇑P		P	13 01 48.1	-0.8
	baz=92,SNR=5.0							
I14A	Mackay	91.87	40	⇓P		P	13 01 48.6	-0.3
	baz=92,SNR=8.2							
P19A	Cripple Cowboy	91.92	45	⇑P		P	13 01 48.8	-0.4
	baz=92							
Q20A	Ridgley Place,	91.95	46	⇓P		P	13 01 48.9	-0.4
	baz=92							
M17A	Scullys Gap (B	91.98	43	⇓P		P	13 01 49.0	-0.4
	baz=92							
F12A	Elk City	92.04	38	⇓P		P	13 01 48.7	-0.8
	baz=92,SNR=26							
R21A	Cimarron	92.09	47	⇑P		P	13 01 49.8	-0.2
	baz=92							
V24A	Rampart Ranch,	92.10	50	⇑P		P	13 01 50.1	0.0
	baz=92							
J15A	Blackfoot	92.12	41	⇓P		P	13 01 50.4	+0.4
	baz=92,SNR=15							
G13A	Cobalt	92.17	39	⇓P		P	13 01 49.6	-0.6
	baz=92,SNR=11							
Z27A	Tatum	92.19	53	⇑P		P	13 01 49.7	-0.9
	baz=92							
S22A	4UR Ranch, Cre	92.20	48	⇓P		P	13 01 50.6	+0.1
	baz=92,SNR=8.2							
P20A	De Beque	92.21	46	⇓P		P	13 01 50.4	-0.1
	baz=92							
ENH	Enshi	92.22	303	eP		P	13 01 50.7	-0.1
	comp=Z,32nm,0.9s,mb5.7							
L17A	Cokeville	92.24	42	⇑P		P	13 01 50.0	-0.5
	baz=92							
K16A	Soda Springs	92.26	41	⇑P		P	13 01 50.4	-0.2
	baz=92,SNR=5.7							
H14A	Leadore	92.35	39	⇑P		P	13 01 50.8	-0.2
	baz=92,SNR=16							
W25A	X Bar L Ranch,	92.37	51	⇑P		P	13 01 50.5	-0.8
	baz=92,SNR=5.3							
X26A	CR and CF Fran	92.45	52	⇓P		P	13 01 51.0	-0.8
	baz=92							
I15A	Monteview	92.46	40	⇓P		P	13 01 51.6	0.0
	baz=92							
J16A	Bone	92.52	41	⇑P		P	13 01 51.7	-0.2
	baz=92,SNR=6.1							
R22A	Saguache, Gunn	92.52	47	⇓P		P	13 01 51.8	-0.2
	baz=92							
Y27A	Causey	92.53	53	⇑P		P	13 01 51.1	-1.0
	baz=93,SNR=5.2							
F13A	Darby	92.56	38	⇑P		P	13 01 51.0	-1.0
	baz=93,SNR=13							
K17A	Gardner Place,	92.60	42	⇑P		P	13 01 52.1	-0.2
	baz=93,SNR=6.2							
V25A	Rancho No Teng	92.60	50	⇓P		P	13 01 51.6	-0.8
	baz=93							
BMRM	Bremner River	92.72	15	eP		P	13 01 52.2	-0.1
	comp=Z,5.3nm,0.7s,mb5.1							
RRI2	Red Ridge	92.73	41	eP		P	13 01 53.1	+0.3
MCMT	McKenzie Canyo	92.77	39	eP		P	13 01 53.2	+0.2
	comp=Z,4.6nm,1.0s,mb4.9							
MSTX	Muleshoe	92.85	53	⇓P		P	13 01 53.0	-0.7
	baz=93,SNR=5.0							
SMCO	Snowmass	92.92	46	eP		P	13 01 54.2	+0.4
I16A	Newdale	92.95	41	⇓P		P	13 01 53.9	+0.1
	baz=93,SNR=7.4							
REDW	Red Top Meadow	93.01	41	eP		P	13 01 54.3	+0.2
BJI	Beijing	93.02	314	P		P	13 01 55.0	+0.8
BJI				pP		pP	13 02 05.1	+7.9
BJI				sP		sP	13 02 09.1	+11
BJI				PP		PP	13 05 38.8	+1.2
BJI				pmax		pmax		
	comp=Z,9.0nm,0.8s,mb5.2							
BJI				pmax		pmax		
	comp=Z,99nm,4.3s							
TPAW	Teton Pass	93.03	41	eP		P	13 01 54.3	+0.1
E13A	Victor	93.05	37	⇑P		P	13 01 53.3	-0.9
	baz=93							
K18A	Toltan Ranch,	93.05	42	⇓P		P	13 01 54.5	+0.2
	baz=93							
U25A	Circle Dot Ran	93.05	50	⇑P		P	13 01 54.1	-0.4
	baz=93							
N20A	Spence Gulch,	93.07	45	⇓P		P	13 01 53.8	-0.6
	baz=93							
J17A	Brown Place, J	93.09	41	⇑P		P	13 01 54.1	-0.4
	baz=93,SNR=6.9							
SNOW	Snow King Moun	93.13	41	eP		P	13 01 55.1	+0.5
JCT	Junction City	93.15	57	eP		P	13 01 54.4	-0.7
G15A	Dillon	93.18	39	⇓P		P	13 01 54.5	-0.3
	baz=93,SNR=8.0							
DLMT	Dillon	93.24	39	eP		P	13 01 55.4	+0.2
W27A	Bowe Ranch, En	93.24	52	⇓P		P	13 01 54.7	-0.7
	baz=93							
IMW	Indian Meadow	93.28	41	eP		P	13 01 55.5	+0.2
LOHW	Long Hollow	93.31	41	eP		P	13 01 55.6	+0.2
E14A	Clinton	93.41	38	⇓P		P	13 01 54.8	-1.0
	baz=93							
J18A	Kendall Valley	93.41	42	⇑P		P	13 01 55.5	-0.4
	baz=93,SNR=12							
BW06	Boulder Array	93.42	42	⇑P		P	13 01 54.9	-1.1
	baz=93,SNR=5.4							
BW06	Boulder Array	93.42	42	eP		P	13 01 55.5	-0.5
PDAR	Pinedale Array	93.42	42	P		P	13 01 55.4	-0.6
	comp=Z,1.8nm,0.9s,mb4.5,baz=228,slow=2.8,SNR=16							
PDAR				PP		PP	13 05 36.8	-3.9
	comp=Z,0.6nm,1.0s,baz=251,slow=4.5,SNR=4.1							
MSO	Missoula	93.43	37	eP		P	13 01 53.4	-2.5
	comp=Z,1.8nm,0.9s,mb4.5							
T25A	Trinidad	93.46	49	⇓P		P	13 01 56.2	-0.2
	baz=94							
N21A	Black Mountain	93.49	45	⇓P		P	13 01 56.3	-0.1
	baz=94							
M20A	Sweetwater, Wa	93.50	44	⇑P		P	13 01 56.4	0.0
	baz=94							
U26A	Atchley Ranch,	93.50	50	⇑P		P	13 01 56.2	-0.3
	baz=94							
I17A	Pilgrim Ck.	93.51	41	⇓P		P	13 01 57.2	+0.8
	baz=94							
F15A	Butte	93.59	39	⇑P		P	13 01 56.2	-0.5
	baz=94,SNR=5.9							
H16A	Russell Place,	93.59	40	⇑P		P	13 01 57.1	+0.4
	baz=94,SNR=13							
R24A	Sanders Place,	93.60	48	⇑P		P	13 01 57.2	+0.2
	baz=94							
G16A	Moss Hill, Enn	93.60	39	⇑P		P	13 01 56.6	-0.2
	baz=94,SNR=9.6							
LRM	Limekiln Ridge	93.61	39	eP		P	13 01 56.8	0.0
C13A	Hot Springs	93.63	36	⇓P		P	13 01 56.2	-0.6
	baz=94							
L20A	Wamsutter	93.70	44	⇓P		P	13 01 57.1	-0.2
	baz=94,SNR=8.0							
O22A	Kremmling	93.75	46	⇑P		P	13 01 57.0	-0.6
	baz=94							
D14A	Greenough	93.82	37	⇑P		P	13 01 56.4	-1.4
	baz=94,SNR=6.6							
CHMT	Chamberlain Mo	93.85	38	eP		P	13 01 57.4	-0.4
TRF	Thorofare Moun	93.87	11	eP		P	13 01 56.0	-1.6
	comp=Z,4.0nm,0.8s,mb4.9							
E15A	Deer Lodge	93.87	38	⇑P		P	13 01 57.5	-0.5
	baz=94							
BOZ	Bozeman (W)	93.95	39	⇑P		P	13 01 58.0	-0.4
	baz=94,SNR=26							
BOZ	Bozeman (W)	93.95	39	eP		P	13 01 58.2	-0.1
F16A	Kennard Place,	94.04	39	⇓P		P	13 01 58.4	-0.3
	baz=94,SNR=5.6							
M21A	Separation Pea	94.07	44	⇑P		P	13 01 58.3	-0.8
	baz=94							
K20A	Yellowstone Ra	94.08	43	⇓P		P	13 01 58.5	-0.5
	baz=94							
L21A	Rawlins	94.27	44	⇓P		P	13 01 58.9	-1.0
	baz=94							
D15A	Lincoln	94.32	38	⇑P		P	13 01 59.1	-1.0
	baz=94							
MCK	McKinley	94.36	12	eP		P	13 01 59.2	-0.7
HRY	Holter Researc	94.49	38	eP		P	13 02 00.8	-0.1
F17A	Fitzpatrick Pl	94.65	39	⇑P		P	13 02 01.7	+0.1
	baz=95,SNR=7.0							
CMAR	Chiang Mai Arr	94.69	288	P		P	13 02 04.4	+2.0
	comp=Z,1.4nm,0.8s,mb4.4,baz=145,slow=3.8,SNR=8.2							
C15A	Salmond Ranch,	94.73	37	⇓P		P	13 02 01.2	-0.7
	baz=95							
KMI	Kunming	94.78	296	P		P	13 02 03.9	+1.2
KMI				pP		pP	13 02 06.8	+1.2
KMI				PP		PP	13 05 56.3	+4.6
KMI				S		S	13 13 14.8	-2.0
KMI				SS		SS	13 19 44.3	+2.8
KMI				pmax		pmax		
	comp=Z,3.0nm,0.8s,mb4.8							
KMI				pmax		pmax		
	comp=Z,74nm,4.1s							
KMI				LR		LR		
	comp=N,100nm,16.6s,MS4.5							
KMI				LR		LR		
	comp=E,98nm,17.5s,MS4.5							
KMI				LR		LR		
	comp=Z,120nm,16.6s,MS4.4							
D16A	Dana Ranch, Ca	94.84	38	⇑P		P	13 02 01.9	-0.5
	baz=95,SNR=8.0							
CHTO	Chiang Mai	94.86	289	eP		P	13 02 03.0	-0.2
	comp=Z,1.9nm,0.6s,mb4.7							
G18A	Lazy EL Ranch,	94.92	40	⇑P		P	13 02 02.7	-0.2
	baz=95,SNR=5.2							
RLMT	Red Lodge	94.97	41	⇓P		P	13 02 02.8	-0.3
	baz=95							
RLMT	Red Lodge	94.97	41	eP		P	13 02 03.4	+0.3
A14A	Double T Ranch	95.04	36	⇑P		P	13 02 02.6	-0.7
	baz=95							
GCMT	Greycliff	95.14	40	eP		P	13 02 03.5	-0.3
	comp=Z,4.0nm,0.9s,mb4.8							
F18A	Big Timber	95.18	40	⇓P		P	13 02 03.8	-0.2
	baz=95,SNR=5.6							
D17A	Six Diamond Ra	95.38	38	⇓P		P	13 02 04.7	-0.2
	baz=95,SNR=10							
A15A	Johnson Ranch,	95.40	36	⇑P		P	13 02 04.2	-0.7
	baz=95							
E18A	Harlowton	95.46	39	⇓P		P	13 02 05.2	0.0
	baz=96,SNR=5.1							
HHC	Hu-ho-hao-te	96.40	313	eP		P	13 02 08.8	-0.9
HHC				sP		sP	13 02 22.8	+9.2
HHC				PP		PP	13 06 05.3	+1.4
HHC				SKS			13 12 40.9	
HHC				S		S	13 13 23.5	-6.6
HHC				sS		sS	13 13 41.1	+6.2
HHC				SS		SS	13 20 00.8	-3.0
HHC				pmax		pmax		
	comp=Z,17nm,0.7s,mb5.6							
HHC				pmax		pmax		
	comp=Z,140nm,7.3s							
HHC				LR		LR		
	comp=N,290nm,18.7s,MS5.2							
HHC				LR		LR		
	comp=E,730nm,18.5s,MS5.2							
HHC				LR		LR		
	comp=Z,1μm,18.6s,MS5.3							
CD2	Chengdu	96.80	301	P		P	13 02 12.6	+0.8
CD2				pP		pP	13 02 23.3	+8.6
CD2				sP		sP	13 02 27.1	+11
CD2				PP		PP	13 06 10.4	+3.2
CD2				SKS			13 12 45.8	
CD2				S		S	13 13 28.6	-5.5
CD2				sS		sS	13 13 46.5	+7.6
CD2				SS		SS	13 20 08.3	-1.7
CD2				pmax		pmax		
	comp=Z,10.0nm,0.5s,mb5.5							
CD2				pmax		pmax		
	comp=Z,60nm,3.7s							
CD2				LR		LR		
	comp=N,160nm,7.7s							
CD2				LR		LR		
	comp=Z,130nm,7.1s							
LPAZ	La Paz	97.05	113	P		P	13 02 15.2	+1.9
	comp=Z,0.8nm,0.7s,mb4.3,baz=189,slow=3.0,SNR=4.1							
RSSD	Black Hills	97.50	44	eP		P	13 02 13.8	-0.8
	comp=Z,8.8nm,1.0s,mb5.1							
LZH	Lanzhou	99.23	306	eP		P	13 02 25.8	+3.2
LZH				pP		pP	13 02 32.9	+7.4
LZH				sP		sP	13 02 36.0	+9.5
LZH				pmax		pmax		
	comp=Z,15nm,1.0s,mb5.5							
WMQ	Urumqi	113.64	308	ePKP		PKiKP	13 07 18.8	-0.3
WMQ				PP		PP	13 08 15.5	+3.8
WMQ				SKS		SKSdf	13 14 26.0	-5.3
WMQ				SKKS		SKKSac	13 15 04.5	-8.9
WMQ				SS		SS	13 23 54.3	-5.5
WMQ				AMB		AMB		
	comp=Z,160nm,5.8s							
WMQ				LR		LR		
	comp=N,320nm,19.2s,MS5.0							
WMQ				LR		LR		
	comp=E,210nm,18.4s,MS5.0							
WMQ				LR		LR		
	comp=Z,310nm,19.6s,MS4.9							
ZALV	Zalesovo Beam	117.96	319	PKP		PKPdf	13 07 26.1	-0.9
	comp=Z,2.2nm,0.7s,baz=156,slow=1.4,SNR=10							
MK31	Makanchi Array	118.10	310	ePKPdf		PKPdf	13 07 26.8	-0.7
MKAR	Makanchi Array	118.10	310	PKP		PKPdf	13 07 26.9	-0.7
	comp=Z,3.4nm,0.8s,baz=76,slow=2.3,SNR=26							
MKAR				PKKPbc		PKKPbc	13 17 59.9	+12
	comp=Z,0.3nm,0.5s,baz=291,slow=1.6,SNR=4.3							
AML	Almayashu	123.22	304	ePKPdf		PKPdf	13 07 38.0	+0.5
EKS2	Erkin-Say	123.25	304	ePKPdf		PKPdf	13 07 37.9	+0.4
SCHQ	Schefferville	123.53	41	PKP		PKPdf	13 07 35.7	-2.0
	comp=Z,2.7nm,0.8s,baz=296,slow=3.9,SNR=4.8							
SCHQ	Schefferville	123.53	41	PKP		PKPdf	13 07 35.7	-2.0
KBL	Kabul	125.31	294	ePKPdf		PKPdf	13 07 42.7	+0.9
BVAR	Borovoye Array	126.44	317	PKP		PKPdf	13 07 43.0	-0.4
	comp=Z,3.9nm,0.8s,baz=96,slow=3.0,SNR=20							
BRVK	Borovoye	126.51	317	ePKPdf		PKPdf	13 07 43.3	-0.2
ARU	Arti	132.89	322	ePKPdf		PKPdf	13 07 55.5	0.0
ABKAR	Akbulak array	133.18	312	ePKPdf		PKPdf	13 07 56.0	-0.2
ARCES	ARCESS Array B	137.17	349	PKKP		PKPpre	13 07 54.8	
	comp=Z,3.0nm,1.0s,baz=329,slow=1.4,SNR=4.8							
ARCES				PKP		PKPdf	13 08 02.8	-0.3
	comp=Z,3.7nm,0.8s,baz=76,slow=0.5,SNR=6.5							
JOF	Joensuu	141.38	341	eP		PKPdf	13 08 16.0	+5.0
JOF	Joensuu	141.38	341	ep		PKPdf	13 08 16.0	+5.0
	comp=Z,7.0nm,1.0s							
KAF	Kangasniemi	143.41	343	eP		PKPdf	13 08 08.7	-5.9
KAF	Kangasniemi	143.41	343	ep		PKPdf	13 08 08.7	-5.9
	comp=Z,6.7nm,0.8s							
FINES	FINESS Array B	144.03	342	PKP		PKPdf	13 08 12.9	-2.9
	comp=Z,18nm,0.9s,baz=64,slow=4.4,SNR=23							
DGRG	David-gareji	144.28	302	P		PKPdf	13 08 16.0	-0.8
MTA	Mtatsminda	144.68	303	P		PKPdf	13 08 17.2	-0.3
TBLG	Delisi	144.72	303	P		PKPdf	13 08 17.6	+0.1
OBN	Obninsk	144.72	328	ePKPdf		PKPdf	13 08 15.6	-1.5
KEH	Kehvi	145.21	304	P		PKPbc	13 08 17.6	-0.5
BHD	Baghdad	145.43	288	ex		x	13 08 15.0	
BHD				ex		x	13 15 25.0	
ONI	Oni	145.51	305	P		PKPdf	13 08 19.8	+0.9
KIV	Kislovodsk	145.76	307	ePKPbc		PKPbc	13 08 20.2	+0.5
NB2	NORSAR Subarra	147.17	354	PKP		PKPdf	13 08 22.1	+1.0
	comp=Z,1.0nm,0.7s,baz=18,slow=3.0							
NOA	NORSAR Array B	147.17	354	PKPbc		PKPbc	13 08 22.4	-0.9
	comp=Z,12nm,0.8s,baz=13,slow=4.5,SNR=23							
NACGM	Naroch	149.04	335	e		PKPdf	13 08 26.0	+1.6
AKASG	Malin Array Be	150.94	326	PKPbc		PKPbc	13 08 32.7	-0.5
	comp=Z,17nm,0.8s,baz=45,slow=2.6,SNR=40							
AKASG				PKPab		PKPab	13 08 39.9	-0.7
	comp=Z,5.2nm,0.8s,baz=42,slow=2.8,SNR=6.3							
AKASG	Malin Array Be	150.94	326	PKPbc		PKPbc	13 08 32.7	-0.5
AKASG				PKPab		PKPab	13 08 39.9	-0.7
AKBB	Malin Array Si	150.94	326	ePKPbc		PKPbc	13 08 32.5	-0.7
KIEV	Kiev	150.95	326	ePKPbc		PKPbc	13 08 32.4	-0.9
SUW	Suwalki	151.04	337	ePKP		PKPbc	13 08 33.5	+0.2
SUW				e			13 08 40.3	
SUW	Suwalki	151.04	337	ePKPdf		PKPdf	13 08 27.5	0.0
SUW				ePKPbc		PKPbc	13 08 33.4	+0.1
SUW				ePKPab		PKPab	13 08 40.2	-0.7
MMAI	Mount Meron Ar	152.95	287	PKPbc		PKPbc	13 08 39.3	+0.9
	comp=Z,8.0nm,0.8s,baz=81,slow=7.7,SNR=5.5							
MMAI				PKPab		PKPab	13 08 49.6	0.0
	comp=Z,7.7nm,0.7s,baz=25,slow=2.9,SNR=5.5							
BRTR	Keskin Array B	153.38	302	PKPbc		PKPbc	13 08 38.4	-0.7
	comp=Z,4.0nm,0.8s,baz=127,slow=1.9,SNR=12							
BRTR				PKPab		PKPab	13 08 51.8	+0.5
	comp=Z,2.8nm,0.7s,baz=88,slow=3.9,SNR=7.0							
BUR08	Bucovina Ar. S	154.94	325	ePKPbc		PKPbc	13 08 43.9	+1.7
BUR08				ePKPab		PKPab	13 08 58.1	+0.6
CRVS	Cervenica-Dubn	155.75	332	ePKP		PKPab	13 09 01.0	+0.1
UPC	Upice	156.32	341	ePKPAB		PKPab	13 09 03.5	+0.2
CLL	Collm	156.33	346	ePKP		PKPdf	13 08 35.0	-0.2
CLL	Collm	156.33	346	ePKPdf		PKPdf	13 08 35.0	-0.2
CLL				ePKPab		PKPab	13 09 02.0	-1.3
CLL				eSS		SS	13 32 48.0	+18
DPC	Dobruska-Polom	156.38	341	ePKPAB		PKPab	13 09 03.5	0.0
BRG	Berggiesshubel	156.53	345	eP		PKPab	13 09 03.5	-0.7
	comp=Z,6.3nm,1.1s							
DBIC	Dimbokro	156.59	157	PKP		PKPdf	13 08 37.1	+0.4
	comp=Z,3.7nm,0.8s,baz=198,slow=10,SNR=4.0							
DBIC				PKPab		PKPab	13 09 07.4	+2.0
	comp=Z,2.2nm,0.5s,baz=217,slow=10,SNR=2.8							
VYHS	Vyhne	157.12	335	ePKP		PKPab	13 09 07.1	+0.3
PRU	Pruhonice	157.20	343	ePKPAB		PKPab	13 09 07.1	0.0
KHC	Kasperske Hory	158.23	343	ePKPAB		PKPab	13 09 11.2	-0.4
CONA	Conrad Observa	158.66	338	⇑iPKPab		PKPab	13 09 11.5	-2.0
	comp=Z,7.0nm,0.9s							
SOKA	Soboth	160.02	338	⇑iPKPab		PKPab	13 09 19.3	-0.1
	comp=Z,6.1nm,1.1s							
TORD	Torodi Ar. Bea	164.50	171	PKP		PKPdf	13 08 45.5	+0.2
	comp=Z,3.3nm,0.8s,baz=268,slow=1.0,SNR=16							
TORD				PKPab		PKPab	13 09 41.3	+1.6
	comp=Z,8.5nm,0.8s,baz=184,slow=4.3,SNR=24							
TORD	Torodi Ar. Bea	164.50	171	PKP		PKPdf	13 08 45.5	+0.2
TORD				PKPab		PKPab	13 09 41.3	+1.6
ESDC	Sonseca Array	166.97	29	PKP		PKPdf	13 08 47.3	+0.7
	comp=Z,0.2nm,0.3s,baz=345,slow=1.2,SNR=5.0							

NIED ***16*** *13:02:00,45°.30N×151°.10E,h23km,Mw4.7 Best double couple: M0 1.32000×10^16 NP1:φ0=37.00000°,δ62.00000°, λ91.00000°. NP2:φ0=216.00000°,δ28.00000°,λ89.00000°.*

SKHL ***16*** *13:02:17.3±1.4,44°.87N×151°.33E,h39km±9km,mb5.7/3, Ms4.5/5,msh5.5/3*

ISCJB ***16*** *13:02:19.4±0.8,45°.16N±0°.03×151°.07E±0°.03,h30km±5km, mb4.9/169,MS4.3/37,Error ellipse: s-maj=6.5km s-min=3.0km az=150.4*

MOS ***16*** *13:02:20.9±0.9,45°.32N×150°.99E,h36km,mb5.1/71, MS4.2/26,Error ellipse: s-maj=7.7km s-min=4.6km az=110.1*

JMA ***16*** *13:02:20.6±0.5,45°.33N×151°.15E,h30km,M5.1*

BJI ***16*** *13:02:21.4,45°.35N×150°.85E,h37km,mB5.0/27,mb5.0/43, Ms4.5/42,Ms7 4.3/38*

NEIC ***16*** *13:02:22.5±0.6,45°.29N×151°.03E,h38km±5km,mb4.9/86, MS4.5/7,Error ellipse: s-maj=6.0km s-min=3.5km az=157.0*

IDC ***16*** *13:02:23.4±0.4,45°.40N×150°.98E,h44km±4km,mb4.3/22, mb1 4.4/25,mb1mx4.4/28,mbtmp4.3/25,MS4.2/13, Ms1 4.2/13,ms1mx4.0/32,Error ellipse: s-maj=13.9km s-min=9.6km az=137.0*

SZGRF ***16*** *13:02:30.2,47°.20N×151°.37E,h33km,mb5.2,MS4.5,Kuril Islands, Russia*

ISC 16 13:02:22.3±0.4,45°.23N±0°.03×151°.06E±0°.04,h36km±3km, h41km±2.1km:pP-P,n501,σ0:99/523,mb4.9/169,MS4.3/36, 42C-11D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.25	271	ePN	Pn	13 02 56.0	-1.0
KUR				eS	Sn	13 03 24.0	+0.5
KUR				pmax	pmax		
	comp=N,430nm,0.7s						
KUR				pmax	pmax		
	comp=E,560nm,0.7s						
KUR				pmax	pmax		
	comp=Z,1μm,0.7s						
KUR				pmax	pmax		
	comp=Z,3μm,1.0s						
KUR				smax			
	comp=N,15μm,2.0s						
KUR				smax			
	comp=E,10μm,2.0s						
KUR				smax			
	comp=N,5μm,0.8s						
KUR				smax			
	comp=E,2μm,0.8s						
KUR	Kuril'sk	2.25	271	eP	Pn	13 02 56.0	-1.0
KUR				AMB	AMB	13 03 08.6	
	comp=E,430nm,0.7s						
KUR				AMB	AMB	13 03 08.6	
	comp=E,560nm,0.7s						
KUR				AMB	AMB	13 03 08.6	
	comp=E,1μm,0.7s						
KUR				eS	Sn	13 03 24.0	+0.5
KUR				A		13 03 28.0	
	comp=E,15μm,2.0s						
KUR				A		13 03 28.0	
	comp=E,10μm,2.0s						
KUR				A		13 03 32.0	
	comp=E,35μm,2.0s

JRA			*e*S		**Sn**	**13 04 19.8 +2.6**
JNK	**Nakash**	**4.83 252**	P		**Pn**	**13 03 33.3 +0.9**
JNK			*e*S		**Sn**	**13 04 28.0 +1.0**
JAK	**Akkeshi**	**5.09 246**	P		**Pn**	**13 03 35.5 -0.5**
JAK			*e*S		**Sn**	**13 04 31.4 -2.1**
JTKR	**Abashiri--Toko**	**5.26 259**	P		**Pn**	**13 03 40.0 +1.7**
JAR	**Ashorobuto**	**5.58 252**	P		**Pn**	**13 03 43.9 +1.2**
JMP	**Maruseppu**	**5.63 260**	P		**Pn**	**13 03 45.4 +2.0**
JOB	**Onbets**	**5.70 248**	P		**Pn**	**13 03 44.4 +0.1**
YSS	**Yuzh-Sakhalins**	**6.03 290**	*e*PN		**Pn**	**13 03 50.5 +1.7**
YSS			pmax		pmax	
	comp=Z,60nm,1.0s					
YSS			MLR		MLR	
	comp=E,2μm,16.0s					
YSS			MLR		MLR	
	comp=Z,2μm,16.0s					
YSS			MLR		MLR	
	comp=N,800nm,18.0s					
YSS	**Yuzh-Sakhalins**	**6.03 290**	*e*Pn		**Pn**	**13 03 50.0 +1.2**
	comp=N,62nm,0.6s					
YSS	**Yuzh-Sakhalins**	**6.03 290**	*e*P		**Pn**	**13 03 50.5 +1.7**
YSS			AMB		AMB	13 03 52.7
	comp=N,60nm,1.0s					
YSS			A			13 04 57.3
	comp=N,90nm,1.0s					
YSS			*e*LQ			13 05 26.0
YSS			*e*LR		LR	13 05 48.0
YSS			AMS		AMS	13 06 10.0
	comp=N,2μm,16.0s					
YSS			AMS		AMS	13 06 10.0
	comp=N,800nm,18.0s					
YSS			AMS		AMS	13 06 10.0
	comp=N,2μm,16.0s					
JKK2	**Kamakawa 2**	**6.09 260**	P		**Pn**	**13 03 52.0 +2.3**
ASAJ	**Asahikawa**	**6.13 263**	P		**Pn**	**13 03 52.8 +2.5**
	comp=N,13nm,0.3s,baz=90,slow=16,SNR=91					
ASAJ			S		**Sn**	**13 05 06.8 +7.6**
	comp=N,4.1nm,0.3s,baz=114,slow=14,SNR=1.7					
ASAJ			LR		LR	13 06 18.0
	comp=N,2μm,21.1s,baz=87,slow=38					
ASAJ	**Asahikawa**	**6.13 263**	PN		**Pn**	**13 03 52.8 +2.5**
ASAJ			S		**Sn**	**13 05 06.8 +7.6**
ASAJ			pmax		pmax	
	comp=Z,13nm,0.3s					
ASAJ			smax			
	comp=N,4.0nm,0.3s					
ASAJ			MLR		MLR	
	comp=Z,2μm,21.1s					
ASAJ	**Asahikawa**	**6.13 263**	P		**Pn**	**13 03 53.0 +2.7**
JCH	**Churui**	**6.14 248**	P		**Pn**	**13 03 50.0 -0.4**
JFR	**Furan**	**6.42 254**	P		**Pn**	**13 03 56.1 +1.8**
SKR	**Severo-Kuril's**	**6.43 30**	*e*PN		**Pn**	**13 04 01.4 +7.1**
SKR			*e*S		**Sn**	**13 05 09.5 +3.1**
SKR			pmax		pmax	
	comp=Z,80nm,0.5s					
SKR			smax			
	comp=N,470nm,1.0s					
SKR			smax			
	comp=E,340nm,1.0s					
SKR			smax			
	comp=N,1μm,10.0s					
SKR			smax			
	comp=E,2μm,10.0s					
SKR			MLR		MLR	
	comp=E,3μm,16.0s					
SKR			MLR		MLR	
	comp=Z,2μm,16.0s					
SKR	**Severo-Kuril's**	**6.43 30**	*e*P		**Pn**	**13 04 01.2 +6.9**
SKR			AMB		AMB	13 04 02.0
	comp=Z,80nm,0.5s					
SKR			*e*S		**Sn**	**13 05 09.5 +3.1**
SKR			A			13 05 46.5
	comp=Z,1μm,10.0s					
SKR			A			13 05 46.5
	comp=Z,2μm,10.0s					
SKR			A			13 05 46.5
	comp=Z,1μm,10.0s					
SKR			A			13 05 46.5
	comp=Z,470nm,1.0s					
SKR			A			13 05 46.5
	comp=Z,340nm,1.0s					
SKR			AMS		AMS	13 06 46.0
	comp=Z,2μm,16.0s					
SKR			AMS		AMS	13 06 46.0
	comp=Z,1μm,16.0s					
SKR			AMS		AMS	13 06 46.0
	comp=Z,3μm,16.0s					
JWK2	**Keihoku**	**6.46 274**	P		**Pn**	**13 03 59.2 +4.4**
JAB	**Ashibetsu**	**6.56 258**	P		**Pn**	**13 03 59.0 +2.8**
ERM	**Erimo**	**6.57 244**	*c i*PN		**Pn**	**13 03 57.7 +1.4**
ERM	**Erimo**	**6.57 244**	*e*Pn		**Pn**	**13 03 57.4 +1.1**
	comp=Z,442nm,0.8s					
JEM	**Erimo**	**6.57 244**	P		**Pn**	**13 03 57.1 +0.8**
JSS	**Shosan**	**6.60 266**	P		**Pn**	**13 04 00.3 +3.6**
JNBK	**Urakawa-nobuka**	**6.70 247**	P		**Pn**	**13 03 57.4 -0.6**
JBT2	**Biratori 2**	**6.73 252**	P		**Pn**	**13 03 58.8 +0.3**
JHR	**Hokuryu**	**6.84 261**	P		**Pn**	**13 04 03.1 +3.1**
UGL	**Uglegorsk**	**7.24 305**	*e*PN		**Pn**	**13 04 08.0 +2.6**
UGL			pmax		pmax	
	comp=Z,123nm,1.0s					
UGL			MLR		MLR	
	comp=N,1μm,14.0s					
UGL			MLR		MLR	
	comp=E,3μm,14.0s					
UGL	**Uglegorsk**	**7.24 305**	*e*P		**Pn**	**13 04 08.0 +2.6**
UGL			AMB		AMB	13 04 10.0
	comp=E,123nm,1.0s					
UGL			AMS		AMS	13 07 18.0
	comp=E,1μm,14.0s					
UGL			AMS		AMS	13 07 18.0
	comp=E,3μm,14.0s					
JEW	**Eniwo**	**7.32 254**	P		**Pn**	**13 04 08.4 +1.8**
JNB	**Noboribetsu**	**7.75 253**	P		**Pn**	**13 04 13.1 +0.6**
JNB			*e*S		**Sn**	**13 05 37.2 -1.7**
JSK	**Shakotan**	**7.82 260**	P		**Pn**	**13 04 14.7 +1.3**
TYV	**Tymovskoe**	**7.96 318**	*e*P		**Pn**	**13 04 15.2 -0.2**
TYV			AMB		AMB	13 04 20.0
	comp=E,300nm,2.0s					
TYV			AMB		AMB	13 04 20.0
	comp=E,33nm,0.8s					
TYV			AMB		AMB	13 04 20.0
	comp=E,24nm,0.8s					
TYV			*e*S		**Sn**	**13 05 44.0 -0.1**
TYV			A			13 05 47.5
	comp=E,70nm,1.0s					
TYV			A			13 05 47.5
	comp=E,92nm,1.0s					
TYV			AMS		AMS	13 07 28.0
	comp=E,2μm,15.0s					
TYV			AMS		AMS	13 07 28.0
	comp=E,3μm,20.0s					
JKB	**Kayabe**	**8.01 249**	P		**Pn**	**13 04 15.6 -0.4**
JKB			*e*S		**Sn**	**13 05 40.3 -5.0**
JYM2	**Yakumo 2**	**8.35 252**	P		**Pn**	**13 04 20.8 +0.1**
JSH	**Shimam**	**8.36 256**	P		**Pn**	**13 04 23.2 +2.4**
JANG	**Nango**	**8.53 239**	P		**Pn**	**13 04 20.5 -2.6**
JANG			*e*S		**Sn**	**13 05 49.7 -8.3**
JTM	**Tenmabayashi**	**8.56 242**	P		**Pn**	**13 04 22.2 -1.4**
JTM			*e*S		**Sn**	**13 05 51.4 -7.4**
JSR	**Shiriuchi**	**8.58 248**	P		**Pn**	**13 04 23.4 -0.5**
JSR			*e*S		**Sn**	**13 05 54.1 -5.3**
JTH	**Tanohata**	**8.60 235**	P		**Pn**	**13 04 20.8 -3.3**
JTH			*e*S		**Sn**	**13 05 50.5 -9.2**
MIYJ	**Miyakonagasawa**	**8.86 234**	P		**Pn**	**13 04 25.3 -2.4**
JKZ	**Kuzumaki**	**8.88 237**	P		**Pn**	**13 04 25.5 -2.5**
JOSM	**Okushiri--Mats**	**8.96 254**	P		**Pn**	**13 04 29.2 +0.1**
PETK	**Petropavlovsk-**	**9.00 26**	P		**Pn**	**13 04 29.5 -0.1**
	comp=E,0.9nm,0.3s,baz=174,slow=12,SNR=20					
PETK			S		**Sn**	**13 06 17.9 +8.2**
	comp=E,0.2nm,0.3s,baz=253,slow=30,SNR=2.7					
PETK			LR		LR	13 08 10.4
	comp=E,626nm,18.4s,baz=215,slow=39					
PETK	**Petropavlovsk-**	**9.00 26**	PN		**Pn**	**13 04 29.5 -0.1**
PETK			S		**Sn**	**13 06 17.9 +8.3**
PETK			pmax		pmax	
	comp=Z,1.0nm,0.3s					
PETK			MLR		MLR	
	comp=Z,626nm,18.4s					
PET	**Petropavlovsk**	**9.25 30**	*e*PN		**Pn**	**13 04 37.0 +4.0**
PET			*e*S		**Sn**	**13 06 15.5 -0.2**
PET			pmax		pmax	
	comp=Z,199nm,7.0s					
PET			pmax		pmax	
	comp=Z,97nm,6.2s					
PET			pmax		pmax	
	comp=Z,21nm,1.0s					
PET			MLR		MLR	
	comp=Z,796nm,16.6s					
PET			MLR		MLR	
	comp=Z,819nm,14.3s					
PET	**Petropavlovsk**	**9.25 30**	P		**Pn**	**13 04 30.9 -2.2**
OFUJ	**Ofunato**	**9.29 232**	P		**Pn**	**13 04 31.1 -2.5**
OFUJ			*e*S		**Sn**	**13 06 08.2 -8.5**
JOG2	**Oga 2**	**9.86 241**	P		**Pn**	**13 04 40.3 -1.1**
OKH	**Okha**	**9.86 331**	*e*P		**Pn**	**13 04 44.0 +2.6**
OKH			*e*P			13 04 45.2
OKH			AMB		AMB	13 04 46.1
	comp=Z,1μm,2.0s					
OKH			AMB		AMB	13 04 47.5
	comp=Z,400nm,1.1s					
OKH			A			13 07 30.1
	comp=Z,600nm,5.0s					
OKH			*e*LQ			13 07 47.8
OKH			AMS		AMS	13 09 54.0
	comp=Z,2μm,12.0s					
OKH			AMS		AMS	13 09 54.0
	comp=Z,900nm,14.0s					
OKH			AMS		AMS	13 09 54.0
	comp=Z,2μm,14.0s					
JIO	**Ouri**	**9.91 230**	P		**Pn**	**13 04 39.6 -2.5**
JIO			*e*S		**Sn**	**13 06 23.2 -8.7**
TEY	**Ternei**	**10.22 274**	*e*P		**Pn**	**13 04 52.0 +5.7**
TEY			*e*LR		LR	13 08 04.4
TEY			AMS		AMS	13 08 12.0
	comp=Z,13μm,22.0s					
NKL	**Nikolayevsk**	**10.43 323**	*e*P		**Pn**	**13 04 47.0 -2.1**
NKL			AMB		AMB	13 04 50.0
	comp=Z,400nm,3.0s					
NKL			AMB		AMB	13 04 50.5
	comp=Z,400nm,3.0s					
NKL			*e*L			13 07 44.0
NKL			AMS		AMS	13 09 00.0
	comp=Z,1μm,19.0s					
NKL			AMS		AMS	13 09 00.0
	comp=Z,2μm,19.0s					
NKL			AMS		AMS	13 09 00.0
	comp=Z,500nm,16.0s					
JYA	**Atsumi**	**10.73 236**	P		**Pn**	**13 04 51.6 -1.8**
HABR	**Khabarovsk**	**11.43 292**	*de*PN		**Pn**	**13 05 01.7 -1.1**
HABR			pmax		pmax	
	comp=Z,15nm,1.6s					
HABR			MLR		MLR	
	comp=Z,1μm,16.0s					
JFY	**Yanaizu**	**11.56 231**	P		**Pn**	**13 05 03.1 -1.6**
MAJO	**Matsushiro**	**13.02 233**	*e*PN		**Pn**	**13 05 22.6 -2.0**
MAJO			pmax		pmax	
	comp=Z,38nm,1.0s					
MAJO	**Matsushiro**	**13.02 233**	*e*Pn		**Pn**	**13 05 22.6 -2.0**
	comp=Z,38nm,1.0s					
MAT	**Matsushiro**	**13.02 233**	P		**Pn**	**13 05 22.2 -2.4**
MAT			S		**Sn**	**13 07 48.6 +0.6**
MJAR	**Matsushiro Arr**	**13.02 233**	P		**Pn**	**13 05 22.3 -2.2**
	comp=Z,0.9nm,0.3s,baz=43,slow=9.5,SNR=20					
MJAR	**Matsushiro Arr**	**13.02 233**	PN		**Pn**	**13 05 22.3 -2.3**
MJAR			pmax		pmax	
	comp=Z,1.0nm,0.3s					
MJAR	**Matsushiro Arr**	**13.02 233**	P		**Pn**	**13 05 22.3 -2.2**
KLR	**Kul'dur**	**13.71 294**	*e*P		**Pn**	**13 05 32.2 -1.7**
KLR			MLR		MLR	
	comp=Z,3μm,12.5s					
MDJ	**Mudanjiang**	**15.21 275**	P		**Pn**	**13 05 53.5 -0.8**
MDJ			pmax		pmax	
	comp=Z,29nm,1.3s					
MDJ			pmax		pmax	
	comp=Z,56nm,3.3s					
MDJ			LR		LR	
	comp=N,490nm,15.7s					
MDJ			LR		LR	
	comp=E,690nm,16.2s					
MDJ			LR		LR	
	comp=Z,1μm,17.0s					
MDJ	**Mudanjiang**	**15.21 275**	*e*P		**Pn**	**13 05 55.4 +1.1**
	comp=Z,15nm,0.7s					
ZEA	**Zeya**	**17.59 307**	*e*P		**Pn**	**13 06 20.6 -3.7**
ZEA			AMB		AMB	13 06 25.1
	comp=Z,57nm,1.2s					
ZEA			AMB		AMB	13 06 25.1
	comp=Z,30nm,1.0s					
ZEA			AMB		AMB	13 06 25.1
	comp=Z,35nm,1.0s					
SEY	**Seymchan**	**17.76 2**	*d i*P		**Pn**	**13 06 26.2 -0.1**
CN2	**Changchun**	**18.30 275**	*e*P		**Pn**	**13 06 32.8 -0.3**
CN2			*e*pP		pP	13 06 41.0 -1.3
CN2			*e*PP			13 06 47.4
CN2			*e*S		**S**	**13 09 51.6 -8.5**
CN2			*e*SS			13 10 15.1
CN2			pmax		pmax	
	comp=Z,20nm,0.7s					
CN2			pmax		pmax	
	comp=Z,200nm,4.0s					
CN2			LR		LR	
	comp=N,700nm,15.0s					
CN2			LR		LR	
	comp=E,700nm,15.0s					
CN2			LR		LR	
	comp=Z,900nm,16.0s					
KSRS	**Korea Array**	**18.98 254**	P		**Pn**	**13 06 41.1 -0.2**
	comp=Z,0.6nm,0.3s,baz=60,slow=11,SNR=24					
KSRS			LR		LR	13 14 02.1
	comp=Z,427nm,18.6s,baz=51,slow=37					
KSRS	**Korea Array**	**18.98 254**	P		**Pn**	**13 06 41.2 -0.2**
KSRS			pmax		pmax	
	comp=Z,1.0nm,0.3s					
KSRS			MLR		MLR	
	comp=Z,427nm,18.6s					
INCN	**Inchon**	**19.85 256**	*e*P		**Pn**	**13 06 51.0 -0.7**
CLNS	**Chul'man**	**20.00 315**	*e*P		**P**	**13 06 50.8 -0.6**
CLNS			pmax		pmax	
	comp=N,8.0nm,0.8s					
CLNS			pmax		pmax	
	comp=Z,11nm,0.8s					
CLNS			MLR		MLR	
	comp=N,318nm,13.0s					
CLNS			MLR		MLR	
	comp=E,242nm,13.0s					
CLNS			MLR		MLR	
	comp=Z,399nm,13.0s					
SNY	**Shenyang**	**20.17 270**	⇑P		**P**	**13 06 53.8 +0.4**
SNY			S		**S**	**13 10 31.3 -6.4**
SNY			pmax		pmax	
	comp=Z,32nm,1.2s					
SNY			LR		LR	
	comp=N,400nm,14.4s,MS4.2					
SNY			LR		LR	
	comp=E,720nm,15.9s,MS4.2					
SNY			LR		LR	
	comp=Z,770nm,15.9s,MS4.2					
YAK	**Yakutsk**	**20.90 331**	*e*P		**P**	**13 06 59.8 -1.3**
YAK			*e*			13 07 17.9
YAK			*e*S		**S**	**13 10 49.7 -2.1**
YAK			*e*SS			13 11 06.8
YAK			*e*SSS			13 11 24.3
YAK			pmax		pmax	
	comp=E,9.0nm,0.9s					
YAK			pmax		pmax	
	comp=Z,43nm,0.9s					
YAK			pmax		pmax	
	comp=N,13nm,1.1s					
YAK			pmax		pmax	
	comp=Z,34nm,0.8s					
YAK			pmax		pmax	
	comp=N,12nm,0.8s					
YAK			pmax		pmax	
	comp=E,19nm,0.8s					
YAK			smax			
	comp=E,10.0nm,0.8s					
YAK			smax			
	comp=N,7.0nm,0.8s					
YAK			MLR		MLR	
	comp=Z,453nm,19.0s,MS3.9					
YAK			MLR		MLR	
	comp=N,368nm,20.0s,MS3.9					
YAK			MLR		MLR	
	comp=E,184nm,15.0s,MS3.9					
YAK	**Yakutsk**	**20.90 331**	*e*P		**P**	**13 06 60.0 -1.1**
	comp=E,113nm,0.9s					
DL2	**Dalian**	**22.66 264**	P		**P**	**13 07 19.9 -0.3**
DL2			pmax		pmax	
	comp=Z,20nm,1.3s,mb4.4					
DL2			LR		LR	
	comp=N,200nm,14.8s,MS3.8					
DL2			LR		LR	
	comp=E,160nm,13.4s,MS3.8					
DL2			LR		LR	
	comp=Z,280nm,15.3s,MS3.8					
BILL	**Bilibino**	**24.21 14**	*e*P		**P**	**13 07 34.9 -0.1**
BILL			pmax		pmax	
	comp=Z,7.0nm,1.1s,mb4.0					
BILL			MLR		MLR	
	comp=Z,700nm,16.0s,MS4.2					
BJI	**Beijing**	**26.05 271**	P		**P**	**13 07 51.8 -0.2**
BJI			pmax		pmax	
	comp=Z,180nm,1.1s,mb5.5					
BJI			pmax		pmax	
	comp=Z,260nm,5.1s					
BJI			LR		LR	
	comp=N,380nm,15.3s,MS4.3					
BJI			LR		LR	
	comp=E,690nm,16.4s,MS4.3					
BJI			LR		LR	
	comp=Z,380nm,22.5s					
NJ2	**Nanjing**	**28.18 253**	*e*P		**P**	**13 08 11.3 +0.1**
NJ2			pP		pP	13 08 20.6 -0.9
NJ2			sP		sP	13 08 24.6 -1.3
NJ2			PP		PP	13 09 02.9 -12
NJ2			S		**S**	**13 12 48.0 -6.2**
NJ2			sS		sS	13 13 05.0 -6.3
NJ2			pmax		pmax	
	comp=Z,10.0nm,0.6s,mb4.6					
NJ2			pmax		pmax	
	comp=Z,90nm,4.1s					
NJ2			LR		LR	
	comp=N,540nm,21.1s					
NJ2			LR		LR	
	comp=E,570nm,15.8s					
NJ2			LR		LR	
	comp=Z,730nm,17.5s,MS4.3					
TIXI	**Tiksi**	**28.55 346**	*e*P		**P**	**13 08 09.9 -4.2**
TIXI			pmax		pmax	
	comp=Z,3.0nm,0.5s,mb4.3					
TIXI	**Tiksi**	**28.55 346**	*e*P		**P**	**13 08 09.9 -4.2**
	comp=Z,3.1nm,0.5s,mb4.3					
HHC	**Hu-ho-hao-te**	**28.99 275**	*e*P		**P**	**13 08 18.4 +0.1**
HHC			sP		sP	13 08 32.6 -0.4
HHC			PP		PP	13 09 11.9 -12
HHC			PcP		PcP	13 11 27.5 +1.4
HHC			S		**S**	**13 13 05.0 -1.8**
HHC			sS		sS	13 13 22.4 -1.5
HHC			SS		SS	13 14 35.1 -35
HHC			ScP		ScP	13 15 04.9 +0.3
HHC			PcS		PcS	13 15 09.1 +0.3
HHC			ScS		ScS	13 18 57.3 -1.1
HHC			pmax		pmax	
	comp=Z,36nm,0.9s,mb5.1					
HHC			pmax		pmax	
	comp=Z,160nm,5.0s					
HHC			LR		LR	
	comp=N,420nm,12.3s,MS4.6					
HHC			LR		LR	
	comp=E,880nm,12.3s,MS4.6					
HHC			LR		LR	
	comp=Z,1μm,12.7s,MS4.6					
SONM	**Songino Array**	**30.51 291**	P		**P**	**13 08 30.7 -1.0**
	comp=Z,2.9nm,0.8s,mb4.2,baz=74,slow=7.9,SNR=10					
SONM			PcP		PcP	13 11 30.4 +0.5
	comp=Z,2.2nm,0.9s,baz=117,slow=1.7,SNR=4.1					
SONM			LR		LR	13 21 51.5
	comp=Z,625nm,18.7s,MS4.3,baz=81,slow=38					
SONM	**Songino Array**	**30.51 291**	P		**P**	**13 08 30.7 -1.0**
SONM						13 11 30.4
SONM			pmax		pmax	
	comp=Z,3.0nm,0.8s					
SONM			MLR		MLR	
	comp=Z,625nm,18.7s					
TLY	**Talaya**	**31.63 299**	*e*P		**P**	**13 08 41.0 -0.5**
TLY			pmax		pmax	
	comp=Z,1.0nm,0.5s,mb3.9					
TLY			MLR		MLR	
	comp=Z,652nm,16.0s,MS4.4					
WHN	**Wuhan**	**32.16 256**	P		**P**	**13 08 46.3 -0.1**
WHN			S		**S**	**13 13 55.8 -0.8**
WHN			LR		LR	
	comp=N,230nm,10.0s					
WHN			LR		LR	
	comp=E,2μm,23.1s					
WHN			LR		LR	
	comp=Z,1μm,18.0s					
KDAK	**Kodiak Island**	**36.18 49**	P		**P**	**13 09 20.7 -0.2**
	comp=Z,7.9nm,0.9s,mb4.7,baz=321,slow=3.5,SNR=4.4					
KDAK	**Kodiak Island**	**36.18 49**	P		**P**	**13 09 20.7 -0.2**
KDAK			pmax		pmax	
	comp=Z,8.0nm,0.9s,mb4.7					
PPLA	**Purkeypile**	**36.26 40**	*e*P		**P**	**13 09 22.7 +1.2**
	comp=Z,10nm,1.0s,mb4.7					
LZH	**Lanzhou**	**36.51 272**	⇑P		**P**	**13 09 25.1 +1.1**
LZH			pP		pP	13 09 35.0 +0.6
LZH			sP		sP	13 09 39.1 +0.3
LZH			PP		PP	13 10 49.0 +1.7
LZH			*e*S		**S**	**13 15 04.0 +0.4**
LZH			sS		sS	13 15 22.0 +1.1
LZH			SS		SS	13 17 30.0 -14
LZH			pmax		pmax	
	comp=Z,45nm,1.2s,mb5.2					
LZH			pmax		pmax	
	comp=Z,120nm,4.0s					
LZH			LR		LR	
	comp=E,1μm,10.8s					
LZH			LR		LR	
	comp=Z,1μm,12.9s,MS4.9					
BPAW	**Bear Paw Mtn.**	**36.84 38**	*e*P		**P**	**13 09 26.4 -0.1**
	comp=Z,3.1nm,0.7s,mb4.2					
TRF	**Thorofare Moun**	**37.13 39**	*e*P		**P**	**13 09 29.3 +0.3**
	comp=Z,4.3nm,0.6s,mb4.5					
COLD	**Coldfoot**	**37.40 33**	*e*P		**P**	**13 09 31.1 -0.1**
	comp=Z,3.6nm,0.8s,mb4.2					
GTA	**Gaotai**	**37.80 280**	⇑P		**P**	**13 09 35.8 +0.9**
GTA			pP		pP	13 09 45.3 -0.1
GTA			sP		sP	13 09 49.5 -0.3
GTA			PP		PP	13 11 06.5 +5.0
GTA			PcP		PcP	13 11 52.8 +1.9
GTA			S		**S**	**13 15 25.4 +2.2**
GTA			sS		sS	13 15 41.3 +0.8
GTA			pmax		pmax	
	comp=Z,27nm,1.0s,mb4.9					
GTA			pmax		pmax	
	comp=Z,92nm,6.9s					
GTA			LR		LR	
	comp=N,200nm,18.0s,MS4.2					
GTA			LR		LR	
	comp=E,290nm,15.9s,MS4.2					
GTA			LR		LR	
	comp=Z,410nm,16.2s,MS4.3					
COLA	**College**	**38.22 37**	*e*P		**P**	**13 09 38.4 +0.3**
COLA			pmax		pmax	
	comp=Z,8.0nm,0.8s,mb4.5					
COLA	**College**	**38.22 37**	*e*P		**P**	**13 09 38.4 +0.3**
	comp=Z,8.5nm,0.8s,mb4.5					
CD2	**Chengdu**	**39.32 265**	P		**P**	**13 09 48.6 +0.8**
CD2			pP		pP	13 09 58.4 +0.1
CD2			sP		sP	13 10 02.4 -0.2
CD2			PP		PP	13 11 23.5 +5.2
CD2			S		**S**	**13 15 46.4 +0.1**
CD2			sS		sS	13 16 02.6 -1.1
CD2			SS		SS	13 18 32.5 -8.1
CD2			pmax		pmax	
	comp=Z,10.0nm,0.5s,mb4.8					
CD2			pmax		pmax	
	comp=Z,80nm,8.3s					
CD2			LR		LR	
	comp=N,150nm,7.1s					
CD2			LR		LR	
	comp=Z,190nm,7.7s					
BMRM	**Bremner River**	**39.92 43**	*e*P		**P**	**13 09 53.0 +0.6**
	comp=Z,12nm,0.9s,mb4.6					
MENT	**Mentasta**	**40.12 40**	*e*P		**P**	**13 09 54.5 +0.5**
EGAK	**Eagle**	**41.08 37**	*e*P		**P**	**13 10 01.6 -0.4**
	comp=Z,17nm,1.2s,mb4.5					
DAWY	**Dawson**	**41.93 38**	*e*P		**P**	**13 10 09.0 +0.2**
ZALV	**Zalesovo Beam**	**42.35 307**	P		**P**	**13 10 10.5 -1.9**
	comp=Z,1.5nm,0.4s,mb3.9,baz=64,slow=8.1,SNR=7.6					
ZALV			PcP		PcP	13 12 05.5 +0.3
	comp=Z,5.0nm,0.6s,baz=72,slow=3.0,SNR=13					
ZALV			LR		LR	13 28 58.8
	comp=Z,343nm,18.2s,MS4.3,baz=234,slow=38					
ZALV	**Zalesovo Beam**	**42.35 307**	P		**P**	**13 10 10.5 -1.9**
ZALV						13 12 05.5

ZALV pmax pmax
comp=Z,2.0nm,0.4s,mb4.1
ZALV MLR MLR
comp=Z,343nm,18.2s,MS4.3
KMI Kunming 43.55 259 P **P** **13 10 23.1 +0.6**
KMI pP pP 13 10 33.5 +0.4
KMI sP sP 13 10 37.8 +0.4
KMI PP PP 13 12 06.3 +2.2
KMI S **S** **13 16 48.0 -1.1**
KMI sS sS 13 17 05.5 -1.1
KMI SS SS 13 19 54.8 -10
KMI pmax pmax
comp=Z,15nm,1.2s,mb4.6
KMI pmax pmax
comp=Z,110nm,4.9s
KMI LR LR
comp=N,190nm,19.5s,MS4.2
KMI LR LR
comp=E,180nm,18.5s,MS4.2
KMI LR LR
comp=Z,200nm,15.4s,MS4.1
INK Inuvik 43.70 31 P **P** **13 10 23.5 +0.3**
comp=Z,6.7nm,0.8s,mb4.4,baz=291,slow=7.2,SNR=32
INK Inuvik 43.70 31 P **P** **13 10 23.5 +0.3**
INK pmax pmax
comp=Z,7.0nm,0.8s
INK Inuvik 43.70 31 *eP* **P** **13 10 23.5 +0.4**
comp=Z,7.2nm,0.8s,mb4.5
WMQ Urumqi 44.15 292 P **P** **13 10 28.8 +1.7**
WMQ pP pP 13 10 38.8 +1.1
WMQ sP sP 13 10 42.6 +0.6
WMQ PP PP 13 12 13.3 +3.2
WMQ S **S** **13 16 58.8 +1.4**
WMQ sS sS 13 17 15.1 +0.2
WMQ SS SS 13 20 08.3 -7.1
WMQ ScS ScS 13 20 22.3 -0.1
WMQ pmax pmax
comp=Z,14nm,0.7s,mb4.8
WMQ pmax pmax
comp=Z,200nm,4.6s
WMQ LR LR
comp=N,320nm,19.4s,MS4.3
WMQ LR LR
comp=E,220nm,18.6s,MS4.3
WMQ LR LR
comp=Z,310nm,19.4s,MS4.2
SKAG Skagway 44.76 44 *eP* **P** **13 10 33.4 +1.7**
comp=Z,5.6nm,0.9s,mb4.4
MK31 Makanchi Array 46.37 298 *eP* **P** **13 10 44.0 -0.7**
MK31 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
MK31 Makanchi Array 46.37 298 *eP* **P** **13 10 43.5 -1.2**
MKAR Makanchi Array 46.37 298 P **P** **13 10 43.2 -1.4**
comp=Z,7.3nm,0.6s,mb4.8,baz=73,slow=7.3,SNR=68
MKAR PcP PcP 13 12 18.4 -0.7
comp=Z,2.7nm,0.5s,baz=62,slow=2.5,SNR=8.1
MKAR LR LR 13 31 14.9
comp=Z,565nm,19.2s,MS4.5,baz=258,slow=37
MKAR Makanchi Array 46.37 298 *i P* **P** **13 10 44.7 0.0**
MKAR pmax pmax
comp=Z,7.0nm,0.6s
MKAR Makanchi Array 46.37 298 P **P** **13 10 43.2 -1.4**
MKAR PcP PcP 13 12 18.4 -0.7
MKAR LR LR 13 31 14.9
KURK Kurchatov 47.02 304 *d iP* **P** **13 10 48.8 -0.9**
KURK pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
DLBC Dease Lake 47.69 44 *eP* **P** **13 10 55.4 +0.7**
LSA Lhasa 48.92 273 *eP* **P** **13 11 06.2 +1.5**
LSA pmax pmax
comp=Z,32nm,1.0s,mb5.3
LSA Lhasa 48.92 273 *eP* **P** **13 11 06.2 +1.5**
comp=Z,32nm,1.0s,mb5.3
CHTO Chiang Mai 50.37 256 *eP* **P** **13 11 16.4 +0.7**
CHTO pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
CHTO Chiang Mai 50.37 256 *eP* **P** **13 11 16.4 +0.6**
comp=Z,6.5nm,0.7s,mb4.8
CMAR Chiang Mai Arr 50.61 256 P **P** **13 11 18.6 +0.9**
comp=Z,2.4nm,0.8s,mb4.2,baz=38,slow=8.0,SNR=20
CMAR PcP PcP 13 12 36.3 +1.4
comp=Z,1.8nm,0.7s,baz=24,slow=2.3,SNR=6.6
CMAR LR LR 13 34 48.8
comp=Z,198nm,18.6s,MS4.2,baz=137,slow=38
CMAR Chiang Mai Arr 50.61 256 P **P** **13 11 18.6 +1.0**
CMAR 13 12 36.3
CMAR pmax pmax
comp=Z,2.0nm,0.8s
CMAR MLR MLR
comp=Z,198nm,18.6s
BVAR Borovoye Array 50.72 310 PcP PcP 13 12 34.9 +0.2
comp=Z,3.4nm,0.7s,baz=90,slow=3.0,SNR=5.9
BRVK Borovoye 50.76 310 *deP* **P** **13 11 18.4 +0.1**
BRVK pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
BRVK Borovoye 50.76 310 P **P** **13 11 17.6 -0.8**
comp=Z,7.4nm,1.0s,mb4.6
SHL Shillong 50.89 268 ⇑ *iP* **P** **13 11 21.0 +1.3**
SNR=48
ULHL Ulahol 52.31 295 P **P** **13 11 31.2 +1.2**
SNR=9.4
TKM2 Tokmak 2 52.38 296 P **P** **13 11 31.6 +1.1**
TKM2 Tokmak 2 52.38 296 *eP* **P** **13 11 31.4 +0.8**
TKM2 pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
TKM2 Tokmak 2 52.38 296 *eP* **P** **13 11 31.4 +0.9**
comp=Z,6.4nm,0.6s,mb4.7
TAPN Taplejung 52.75 273 *eP* **P** **13 11 34.4 +0.9**
USP Ospenovka 52.90 297 P **P** **13 11 34.8 +0.4**
SNR=15
YKA Yellowknife Ar 53.00 35 P **P** **13 11 35.0 +0.2**
comp=Z,1.5nm,0.7s,mb4.0,baz=300,slow=7.3,SNR=8.1
YKA pP pP 13 11 46.5 +0.8
comp=Z,2.8nm,0.8s,baz=298,slow=7.0,SNR=7.3
YKA Yellowknife Ar 53.00 35 P **P** **13 11 35.0 +0.2**
YKA *PP pP 13 11 46.5 +0.8
YKA pmax pmax
comp=Z,2.0nm,0.7s
YKA Yellowknife Ar 53.00 35 P **P** **13 11 35.0 +0.2**
YKA pP pP 13 11 46.5 +0.8
KZA Kyzart 53.03 295 P **P** **13 11 37.3 +2.0**
SNR=13
AAK Ala-Archa 53.23 296 P **P** **13 11 37.4 +0.6**
SNR=7.7
AAK Ala-Archa 53.23 296 *c iP* **P** **13 11 37.0 +0.2**
AAK pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
AAK Ala-Archa 53.23 296 *eP* **P** **13 11 36.4 -0.4**
comp=Z,12nm,0.8s,mb4.9
ODAN Odare 53.27 273 *eP* **P** **13 11 38.4 +1.0**
UCH Uchtor 53.42 296 *eP* **P** **13 11 38.7 +0.5**
comp=Z,3.8nm,0.8s,mb4.4
JIRN Jiri 53.63 274 *eP* **P** **13 11 41.3 +1.3**
comp=Z,86nm,0.8s,mb5.7
EKS2 Erkin-Say 53.66 297 P **P** **13 11 41.1 +1.1**
SNR=16
EKS2 Erkin-Say 53.66 297 *eP* **P** **13 11 40.6 +0.6**
comp=Z,16nm,0.8s,mb5.0
GUN Gumba 53.70 275 *eP* **P** **13 11 41.5 +1.0**
comp=Z,75nm,0.6s,mb5.8
RAMN Ramite 53.77 273 *eP* **P** **13 11 42.0 +1.0**
KSH Kashi 53.91 292 P **P** **13 11 46.4 +4.6**
KSH pP pP 13 11 56.8 +4.1
KSH sP sP 13 12 00.3 +3.3
KSH PcP PcP 13 12 50.8 +3.9
KSH PP PP 13 13 49.3 +6.3
KSH ScP ScP 13 16 44.3 +2.4
KSH PcS PcS 13 16 48.8 +2.6
KSH S **S** **13 19 19.3 +4.8**
KSH sS sS 13 19 36.5 +4.1
KSH ScS ScS 13 21 29.4 +1.3
KSH SS SS 13 23 00.4 +5.0
KSH pmax pmax
comp=Z,13nm,0.7s,mb5.0
KSH pmax pmax
comp=Z,130nm,5.1s
KSH LR LR
comp=N,210nm,13.7s
KSH LR LR
comp=E,170nm,6.7s
KSH LR LR
comp=Z,480nm,17.4s,MS4.6
SVE Sverdlovsk 53.97 317 *eP* **P** **13 11 40.6 -1.4**
SVE pmax pmax
comp=Z,10.0nm,0.9s,mb4.8

AML Almayashu 53.99 296 P **P** **13 11 44.1 +1.7**
SNR=5.7
AML Almayashu 53.99 296 *eP* **P** **13 11 43.5 +1.1**
comp=Z,11nm,0.8s,mb4.8
KKN Kakani 54.19 275 *eP* **P** **13 11 45.5 +1.4**
comp=Z,79nm,0.8s,mb5.7
PKI Pulchoki 54.24 275 *eP* **P** **13 11 45.1 +0.7**
comp=Z,41nm,0.8s,mb5.4
PKI Pulchoki 54.24 275 *eP* **P** **13 11 45.2 +0.8**
PKIN Phulchoki 54.24 275 *eP* **P** **13 11 45.2 +0.8**
comp=Z,27nm,0.7s,mb5.3
DMN Daman 54.43 275 *eP* **P** **13 11 47.0 +1.2**
comp=Z,76nm,0.8s,mb5.7
GKN Gorkha 54.52 276 *eP* **P** **13 11 47.3 +0.8**
comp=Z,96nm,1.0s,mb5.8
ARU Arti 55.16 317 *d iP* **P** **13 11 48.4 -2.3**
ARU S **S** **13 19 30.0 -0.9**
ARU SS SS 13 23 11.3 -3.2
ARU pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
ARU Arti 55.16 317 *eP* **P** **13 11 48.3 -2.4**
comp=Z,6.7nm,0.4s,mb5.0
KK31 Karatay Array 55.47 299 *i P* **P** **13 11 53.0 -0.1**
KK31 pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
BOK Bokaro 56.24 271 *e*PKP **P** **13 11 59.0 +0.1**
DDI Dehra Dun 57.72 282 *e*PKP **P** **13 12 08.5 -0.8**
DDI *ex* x 13 12 32.5
KEV Kevo 58.29 340 *eP* **P** **13 12 10.5 -2.2**
KEV Kevo 58.29 340 *ep* **P** **13 12 10.5 -2.2**
AB31 Akbulak array 58.30 310 *eP* **P** **13 12 12.4 -0.6**
AB31 pmax pmax
comp=Z,7.0nm,0.3s,mb5.2
ABKAR Akbulak array 58.30 310 *eP* **P** **13 12 12.0 -1.0**
comp=Z,11nm,0.4s,mb5.2
EDM Edmonton 58.41 45 *eP* **P** **13 12 13.4 -0.3**
ARCES ARCESS Array B 58.81 340 P **P** **13 12 14.8 -1.6**
comp=Z,2.4nm,0.7s,mb4.4,baz=32,slow=7.5,SNR=13
ARCES pP pP 13 12 27.4 +0.1
comp=Z,3.2nm,0.8s,baz=26,slow=6.7,SNR=2.8
ARCES LR LR 13 42 45.9
comp=Z,160nm,18.3s,MS4.2,baz=40,slow=41
ARCES ARCESS Array B 58.81 340 P **P** **13 12 14.8 -1.5**
ARCES *PP pP 13 12 27.4 +0.1
ARCES pmax pmax
comp=Z,2.0nm,0.7s
ARCES MLR MLR
comp=Z,161nm,18.3s
NDI New Delhi 59.29 281 *e*PKP **P** **13 12 19.0 -1.3**
KAKA Kakadu 60.08 201 *eP* **P** **13 12 25.7 0.0**
comp=Z,9.9nm,0.6s,mb5.0
KAKA *i* 13 12 40.0
KAKA Kakadu 60.08 201 *eP* **P** **13 12 25.9 +0.2**
comp=Z,24nm,0.6s,mb5.4
KAKA *e* 13 12 40.0
WALA Waterton Lakes 60.52 49 *eP* **P** **13 12 28.6 +0.2**
comp=Z,0.1nm,0.9s
WALA *e* 13 12 42.5
KBL Kabul 61.29 291 *eP* **P** **13 12 33.3 -0.5**
KBL pmax pmax
comp=Z,54nm,1.0s,mb5.6
KBL Kabul 61.29 291 *eP* **P** **13 12 33.3 -0.6**
comp=Z,54nm,1.0s,mb5.6
VIS Vishakhapatnam 62.01 267 *e*PKP **P** **13 12 39.3 +0.5**
JOF Joensuu 62.05 333 *eP* **P** **13 12 35.7 -2.8**
JOF Joensuu 62.05 333 *ep* **P** **13 12 35.7 -2.8**
comp=Z,5.6nm,0.4s,mb5.0
PSI Prapat 62.12 243 P **P** **13 12 40.2 +0.6**
comp=Z,5.0nm,0.7s,mb4.8,baz=14,slow=8.0
PSI Prapat 62.12 243 P **P** **13 12 40.3 +0.7**
PSI pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
SUMG Summit 62.31 3 *eP* **P** **13 12 40.2 +0.1**
comp=Z,48nm,0.9s,mb5.6
AJM Ajmer 62.45 281 *e*PKP **P** **13 12 41.1 -0.6**
AJM AMb AMB 13 12 43.8
comp=Z,29nm,1.6s,mb5.2
BHPL Bhopal 62.56 276 *e*PKP **P** **13 12 42.0 -0.6**
BHPL AMb AMB 13 12 43.0
comp=Z,30nm,1.0s,mb5.4
NGP Nagpur 62.77 273 *e*PKP **P** **13 12 42.5 -1.4**
NGP AMb AMB 13 12 45.3
comp=Z,39nm,1.8s,mb5.2
FFC Flin Flon 62.83 39 *i P* **P** **13 12 44.4 +0.6**
FFC Flin Flon 62.83 39 *eP* **P** **13 12 42.6 -1.2**
comp=Z,12nm,0.9s,mb5.0
LRM Limekiln Ridge 63.26 51 P **P** **13 12 46.8 -0.1**
comp=Z,21nm,0.9s,mb5.3
FCC Fort Churchill 63.32 32 *eP* **P** **13 12 46.5 -0.5**
comp=Z,0.2nm,0.8s
BOZ Bozeman (W) 63.82 51 *eP* **P** **13 12 51.3 +0.7**
BOZ pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
BOZ Bozeman (W) 63.82 51 *eP* **P** **13 12 51.3 +0.8**
comp=Z,1.8nm,0.8s,mb4.2
KAF Kangasniemi 64.21 335 *eP* **P** **13 12 50.8 -2.0**
KAF pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
KAF Kangasniemi 64.21 335 *eP* **P** **13 12 50.8 -2.0**
comp=Z,6.3nm,0.8s,mb4.7
KAF Kangasniemi 64.21 335 *ep* **P** **13 12 50.8 -2.0**
comp=Z,6.3nm,0.8s,mb4.7
NVAR Mina Array Bea 64.42 61 P **P** **13 12 55.0 +0.3**
comp=Z,1.2nm,0.8s,mb4.0,baz=282,slow=6.1,SNR=12
NVAR pP pP 13 13 06.7 +1.0
comp=Z,1.4nm,0.8s,baz=284,slow=6.2,SNR=5.6
SCO Scoresbysund 64.49 357 *i P* **P** **13 12 54.3 -0.3**
SCO pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
SCO Scoresbysund 64.49 357 *i P* **P** **13 12 54.3 -0.3**
comp=Z,7.7nm,0.9s,mb4.7
AKL Akola 64.50 274 *e*PKP **P** **13 12 55.6 +0.3**
AKL AMb AMB 13 13 02.1
comp=Z,33nm,0.9s,mb5.4
FINES FINESS Array B 64.80 334 P **P** **13 12 54.8 -1.8**
comp=Z,9.6nm,0.5s,mb5.1,baz=29,slow=8.0,SNR=40
FINES LR LR 13 43 29.8
comp=Z,209nm,19.9s,MS4.3,baz=16,slow=38
FINES FINESS Array B 64.80 334 P **P** **13 12 54.8 -1.9**
FINES pmax pmax
comp=Z,10.0nm,0.5s
FINES MLR MLR
comp=Z,209nm,19.9s
RRI2 Red Ridge 65.45 53 *eP* **P** **13 13 00.9 -0.3**
comp=Z,5.7nm,0.8s,mb4.7
TPAW Teton Pass 65.56 52 P **P** **13 13 02.5 +0.5**
comp=Z,5.1nm,0.9s,mb4.5
HYB Hyderabad 65.58 270 *eP* **P** **13 13 02.5 +0.1**
HYB Hyderabad 65.58 270 *i P* **P** **13 13 02.5 +0.1**
LOHW Long Hollow 65.68 52 P **P** **13 13 04.8 +2.1**
OBN Obninsk 65.74 325 *eP* **P** **13 13 02.0 -0.9**
OBN *e* 13 13 32.6
OBN pmax pmax
comp=Z,11nm,1.2s,mb4.8
OBN MLR MLR
comp=Z,100nm,15.0s,MS4.1
LAO LASA Array 66.04 47 *eP* **P** **13 13 05.6 +0.6**
comp=Z,6.8nm,0.8s,mb4.7
LATR Latur 66.33 273 *e*PKP **P** **13 13 07.2 0.0**
LATR AMb AMB 13 13 14.5
comp=Z,21nm,1.4s,mb5.0
WRAB Tennant Creek 66.61 197 *eP* **P** **13 13 08.7 -0.1**
WRAB *e* 13 13 23.4
WRAB pmax pmax
comp=Z,12nm,0.9s,mb4.9
WRAB Tennant Creek 66.61 197 *eP* **P** **13 13 08.7 -0.1**
comp=Z,12nm,0.9s,mb4.9
WRAB *e* 13 13 23.4
WRA Warramunga Arr 66.62 197 P **P** **13 13 09.2 +0.3**
comp=Z,8.2nm,0.8s,mb4.8,baz=16,slow=6.8,SNR=46
WRA pP pP 13 13 22.5 +2.5
comp=Z,14nm,0.7s,baz=15,slow=6.7,SNR=22
WRA Warramunga Arr 66.62 197 P **P** **13 13 09.2 +0.4**
WRA *PP pP 13 13 22.5 +2.6
WRA pmax pmax
comp=Z,8.0nm,0.8s
PDAR Pinedale Array 66.81 52 P **P** **13 13 09.9 -0.1**
comp=Z,1.2nm,0.7s,mb4.0,baz=318,slow=4.0,SNR=13
FITZ Fitzroy Crossi 67.13 206 *eP* **P** **13 13 12.9 +0.8**
comp=Z,5.1nm,0.9s,mb4.5
FITZ *e* 13 13 27.4
FITZ Fitzroy Crossi 67.13 206 P **P** **13 13 11.9 -0.2**
comp=Z,3.3nm,0.9s,mb4.4,baz=346,slow=8.2,SNR=5.5
FITZ pP pP 13 13 26.3 +3.1
comp=Z,4.5nm,0.8s,baz=40,slow=4.1,SNR=5.6
POO Poona 68.16 275 *ex* x 13 07 41.0

DZM Mont Dzumac 68.43 165 *e*LR LR 13 33 59.7
comp=Z,163nm,22.6s
LDFC Landfair 68.53 62 P **P** **13 13 20.9 -0.1**
comp=Z,9.4nm,1.0s,mb4.7
ULM Lac du Bonnet 68.61 39 P **P** **13 13 19.8 -1.4**
comp=Z,2.8nm,0.6s,mb4.4,baz=333,slow=3.6,SNR=3.0
ULM Lac du Bonnet 68.61 39 P **P** **13 13 19.8 -1.4**
KAD Karad 68.74 273 *e*PKP **P** **13 13 22.8 +0.3**
KAD AMb AMB 13 13 23.1
comp=Z,22nm,0.6s,mb5.3
RSSD Black Hills 68.91 48 *eP* **P** **13 13 23.3 +0.2**
RSSD pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
RSSD Black Hills 68.91 48 *eP* **P** **13 13 23.3 +0.2**
comp=Z,2.7nm,0.6s,mb4.3
NB2 NORSAR Subarra 69.19 340 P **P** **13 13 23.5 -1.1**
comp=Z,12nm,0.6s,mb5.0,baz=28,slow=6.5
NOA NORSAR Array B 69.19 340 P **P** **13 13 23.9 -0.7**
comp=Z,9.1nm,0.5s,mb5.0,baz=28,slow=6.3,SNR=49
NOA LR LR 13 48 33.7
comp=Z,128nm,18.4s,MS4.2,baz=10.0,slow=40
NOA NORSAR Array B 69.19 340 P **P** **13 13 23.9 -0.7**
NOA pmax pmax
comp=Z,9.0nm,0.5s
NOA MLR MLR
comp=Z,128nm,18.5s
GOF Gofitskoye 69.87 314 *eP* **P** **13 13 37.1 +8.0**
AGMN Agassiz Nation 70.02 41 *eP* **P** **13 13 29.3 -0.7**
comp=Z,7.7nm,0.9s,mb4.6
ASAR Alice Springs 70.32 197 P **P** **13 13 33.6 +1.7**
comp=Z,6.9nm,0.8s,mb4.6,baz=14,slow=6.2,SNR=8.0
ASAR pP pP 13 13 47.3 +4.2
comp=Z,6.6nm,0.7s,baz=12,slow=5.3,SNR=10
ASAR Alice Springs 70.32 197 P **P** **13 13 33.6 +1.7**
ASAR *PP pP 13 13 47.3 +4.2
ASAR pmax pmax
comp=Z,7.0nm,0.8s
SMCO Snowmass 70.66 54 *eP* **P** **13 13 35.4 +1.4**
comp=Z,2.7nm,0.8s,mb4.2
KIV Kislovodsk 70.82 313 *eP* **P** **13 13 35.5 +0.6**
KIV pmax pmax
comp=Z,47nm,0.9s,mb5.4
KIV MLR MLR
comp=Z,282nm,20.0s,MS4.5
KIV Kislovodsk 70.82 313 *eP* **P** **13 13 35.7 +0.8**
comp=Z,66nm,1.1s,mb5.5
ZEI Tsey 71.02 312 *eP* **P** **13 13 34.8 -1.3**
ZEI pmax pmax
comp=Z,20nm,0.6s,mb5.2
SUW Suwalki 71.63 331 *eP* **P** **13 13 38.8 -0.9**
AKASG Malin Array Be 72.00 325 P **P** **13 13 40.9 -1.0**
comp=Z,9.9nm,0.4s,mb5.1,baz=35,slow=6.0,SNR=5.2
AKASG LR LR 13 47 49.2
comp=Z,279nm,18.6s,MS4.6,baz=35,slow=38
AKASG Malin Array Be 72.00 325 P **P** **13 13 40.9 -1.0**
AKASG pmax pmax
comp=Z,10.0nm,0.4s
AKASG MLR MLR
comp=Z,279nm,18.6s
AKBB Malin Array Si 72.00 325 *eP* **P** **13 13 40.8 -1.1**
KIEV Kiev 72.01 325 *eP* **P** **13 13 40.8 -1.1**
EYMN Ely 72.26 39 *eP* **P** **13 13 42.7 -0.8**
comp=Z,7.3nm,1.0s,mb4.6
GNI Garni 72.41 309 *c iP* **P** **13 13 46.0 +1.5**
GNI pmax pmax
comp=Z,35nm,1.2s
GNI Garni 72.41 309 P **P** **13 13 44.6 +0.1**
comp=Z,21nm,0.8s,mb5.1
ANN Anapa 72.83 317 *eP* **P** **13 13 46.3 -0.6**
ANN pmax pmax
comp=Z,28nm,0.6s,mb5.4
ECSD EROS Data Cent 72.98 45 *eP* **P** **13 13 47.0 -0.8**
comp=Z,12nm,1.0s,mb4.8
GKP Gorka Klasztor 74.23 333 *eP* **P** **13 13 54.8 -0.2**
COWI Conover 74.71 39 *eP* **P** **13 13 57.3 -0.6**
comp=Z,3.4nm,0.7s,mb4.4
SCHQ Schefferville 75.26 22 P **P** **13 14 00.9 0.0**
comp=Z,4.8nm,0.5s,mb4.7,baz=9.5,slow=5.7,SNR=11
ARMA Armidale 75.29 179 *eP* **P** **13 14 04.1 +2.9**
ARMA *e* 13 14 18.7
KWP Kalwaria Pacla 75.38 328 *eP* **P** **13 14 02.0 +0.3**
KWP Kalwaria Pacla 75.38 328 *eP* **P** **13 14 01.5 -0.2**
KWP pmax pmax
comp=Z,99nm,1.1s,mb5.7
KWP Kalwaria Pacla 75.38 328 *eP* **P** **13 14 01.5 -0.2**
comp=Z,99nm,1.1s,mb5.7
KWP Kalwaria Pacla 75.38 328 ⇑ *iP* **P** **13 14 02.8 +1.1**
BSEG Bad Segeberg 75.69 337 *eP* **P** **13 14 03.2 -0.2**
comp=Z,22nm,1.1s,mb5.0
LEOM Leova 75.72 323 ⇑ **P** **13 14 03.7 0.0**
LEOM Leova 75.72 323 ⇑ *iP* **P** **13 14 03.7 0.0**
OJC Ojcow 75.94 330 *eP* **P** **13 14 02.3 -2.6**
RUE Ruedersdorf 75.98 335 *eP* **P** **13 14 05.3 +0.2**
comp=Z,28nm,0.8s,mb5.2
BUR08 Bucovina Ar. S 76.03 326 *eP* **P** **13 14 05.5 0.0**
BURAR Bucovina Array 76.05 326 ⇑ **P** **13 14 05.6 0.0**
BURAR Bucovina Array 76.05 326 ⇑ *iP* **P** **13 14 05.6 0.0**
STHS Stebnicka Huta 76.09 329 *eP* **P** **13 14 07.0 +1.2**
STHS pmax pmax
comp=Z,24nm,0.8s,mb5.2
STHS Stebnicka Huta 76.09 329 *eP* **P** **13 14 07.0 +1.2**
comp=Z,24nm,0.8s,mb5.2
STHS Stebnicka Huta 76.09 329 *eP* **P** **13 14 07.0 +1.2**
HLG Helgoland 76.12 339 *eP* **P** **13 14 04.6 -1.2**
comp=Z,259nm,0.9s
TESR 76.36 324 ⇓ **P** **13 14 07.2 -0.2**
TESR 76.36 324 ⇓ *iP* **P** **13 14 07.2 -0.1**
UZH Uzhgorod 76.36 328 *eP* **P** **13 14 05.1 -2.2**
UZH *e* pP 13 14 14.3 -4.3
UZH *e* 13 14 21.3
NIE Niedzica 76.43 329 *eP* **P** **13 14 08.1 +0.4**
CRVS Cervenica-Dubn 76.44 328 *eP* **P** **13 14 07.9 +0.1**
CRVS pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
CRVS Cervenica-Dubn 76.44 328 *eP* **P** **13 14 07.9 +0.1**
comp=Z,10nm,0.7s,mb4.9
CRVS Cervenica-Dubn 76.44 328 *eP* **P** **13 14 07.9 +0.1**
TLCR 76.49 322 ⇑ *iP* **P** **13 14 07.8 -0.3**
TLCR 76.49 322 ⇑ *iP* **P** **13 14 07.8 -0.3**
KSP Ksiaz 76.60 332 *eP* **P** **13 14 08.6 -0.1**
KSP Ksiaz 76.60 332 *eP* **P** **13 14 08.3 -0.4**
TRPA Tarpa 76.67 327 ⇑ *iP* **P** **13 14 09.4 +0.3**
VRI Vrincioaia 76.84 324 ⇑ **P** **13 14 10.7 +0.6**
VRI Vrincioaia 76.84 324 ⇑ *iP* **P** **13 14 10.7 +0.6**
OKC Ostrava-Krasne 76.84 331 *eP* **P** **13 14 09.6 -0.4**
UPC Upice 76.98 332 *eP* **P** **13 14 10.8 0.0**
DPC Dobruska-Polom 77.02 332 *eP* **P** **13 14 11.3 +0.3**
DPC MLR MLR
comp=Z,200nm,23.8s,MS4.4
DPC Dobruska-Polom 77.02 332 *eP* **P** **13 14 11.3 +0.3**
DPC LR LR
comp=Z,200nm,23.8s,MS4.4
DPC Dobruska-Polom 77.02 332 *eP* **P** **13 14 11.3 +0.3**
DPC AMS AMS 13 50 30.0
comp=Z,200nm,23.8s
NRDL Niedersach Rie 77.04 337 *eP* **P** **13 14 09.6 -1.5**
comp=Z,18nm,1.2s,mb4.9
MORC Moravsky Berou 77.10 331 *eP* **P** **13 14 11.5 0.0**
MORC pmax pmax
comp=Z,39nm,1.0s,mb5.3
MORC Moravsky Berou 77.10 331 *eP* **P** **13 14 11.5 0.0**
comp=Z,39nm,1.0s,mb5.3
KECS Kecovo 77.15 329 *eP* **P** **13 14 11.7 -0.1**
KECS pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
KECS Kecovo 77.15 329 *eP* **P** **13 14 11.7 -0.1**
comp=Z,8.2nm,1.0s,mb4.6
KECS Kecovo 77.15 329 *eP* **P** **13 14 11.7 -0.1**
CLL Collm 77.24 335 *eP* **P** **13 14 11.5 -0.7**
comp=Z,43nm,1.1s,mb5.3
CLL Collm 77.24 335 ⇑ *iP* **P** **13 14 11.5 -0.7**
CLL pmax pmax
comp=Z,43nm,1.1s,mb5.3
CLL MLR MLR
comp=Z,200nm,21.5s,MS4.4
CLL Collm 77.24 335 ⇑ *iP* **P** **13 14 11.5 -0.7**
comp=Z,43nm,1.1s,mb5.3
CLL *i* 13 14 14.6
CLL LR LR
comp=Z,200nm,21.5s,MS4.4
CLL Collm 77.24 335 ⇑ *iP* **P** **13 14 11.5 -0.7**
comp=Z,43nm,1.1s,mb5.3
CLL *i* 13 14 14.6
CLL Lm 13 50 00.0
comp=Z,200nm,21.5s

BRG Berggiesshubel 77.33 334 *eP* **P 13 14 12.3 -0.5**
comp=Z,12nm,1.0s,mb4.8
BRG Berggiesshubel 77.33 334 *eP* **P 13 14 12.2 -0.5**
comp=Z,22nm,1.3s,mb4.9
BRG Berggiesshubel 77.33 334 *eP* **P 13 14 12.2 -0.6**
BRG pmax pmax
comp=Z,13nm,1.3s,mb4.7
PVCC Panska Ves 77.43 333 *eP* **P 13 14 13.4 +0.1**
PVCC MLR MLR
comp=Z,300nm,19.1s,MS4.6
PVCC Panska Ves 77.43 333 *eP* **P 13 14 13.4 +0.1**
PVCC LR LR
comp=Z,300nm,19.1s,MS4.6
PVCC Panska Ves 77.43 333 *eP* **P 13 14 13.4 +0.1**
PVCC AMS AMS 13 51 40.0
comp=Z,300nm,19.1s
MLR Muntele Rosu 77.47 324 ⇓*P* **P 13 14 14.4 +0.8**
MLR Muntele Rosu 77.47 324 ⇓*iP* **P 13 14 14.4 +0.8**
CLZ Clausthal 77.54 336 *eP* **P 13 14 13.9 0.0**
comp=Z,48nm,1.3s,mb5.3
DRGR 77.71 327 ⇑*P* **P 13 14 13.2 -1.8**
DRGR 77.71 327 ⇑*iP* **P 13 14 13.2 -1.8**
VYHS Vyhne 77.74 330 *eP* **P 13 14 15.2 +0.1**
VYHS pmax pmax
comp=Z,11nm,1.1s,mb4.7
VYHS Vyhne 77.74 330 *eP* **P 13 14 15.2 +0.1**
comp=Z,11nm,1.1s,mb4.7
VYHS Vyhne 77.74 330 *eP* **P 13 14 15.2 +0.1**
KOLL Kolacno 77.82 330 *eP* **P 13 14 16.0 +0.5**
KOLL Kolacno 77.82 330 *eP* **P 13 14 16.0 +0.5**
PSZ Piszkesteto 77.84 329 *eP* **P 13 14 16.5 +0.9**
PSZ pmax pmax
comp=Z,21nm,1.0s,mb5.0
PSZ Piszkesteto 77.84 329 *eP* **P 13 14 16.5 +0.9**
comp=Z,21nm,1.0s,mb5.0
PSZ Piszkesteto 77.84 329 ⇑*iP* **P 13 14 16.5 +0.9**
VOIR 77.88 324 ⇑*P* **P 13 14 16.5 +0.6**
VOIR 77.88 324 ⇑*iP* **P 13 14 16.5 +0.6**
PRU Pruhonice 77.91 333 *eP* **P 13 14 16.5 +0.5**
PRU *e* 13 14 19.5
PRU MLR MLR
comp=Z,300nm,19.3s,MS4.6
PRU Pruhonice 77.91 333 *eP* **P 13 14 16.5 +0.5**
PRU *e* 13 14 19.5
PRU LR LR
comp=Z,300nm,19.3s,MS4.6
PRU Pruhonice 77.91 333 *eP* **P 13 14 16.5 +0.5**
PRU *ex* x 13 14 19.5
PRU AMS AMS 13 52 10.0
comp=Z,300nm,19.3s
TANN Tannenbergstha 78.19 334 *eP* **P 13 14 17.1 -0.4**
comp=Z,7.0nm,0.9s,mb4.6
TREC Trest 78.20 332 *eP* **P 13 14 17.7 +0.1**
TREC Trest 78.20 332 *eP* **P 13 14 17.7 +0.1**
MOX Moxa 78.24 335 *eP* **P 13 14 17.7 -0.1**
comp=Z,25nm,1.2s,mb5.0
MOX *e* 13 14 22.1
MOX Moxa 78.24 335 *eP* **P 13 14 17.5 -0.3**
comp=Z,10.0nm,0.8s,mb4.8
MOX Moxa 78.24 335 *eP* **P 13 14 17.7 -0.1**
MOX *e* 13 14 22.1
MOX pmax pmax
comp=Z,25nm,1.2s,mb5.0
GUNZ Gunzen 78.27 334 *eP* **P 13 14 17.9 -0.1**
comp=Z,13nm,0.8s,mb4.9
NKC Novy Kostel 78.35 334 *eP* **P 13 14 18.3 -0.2**
WMOK Wichita Mounta 78.42 52 *eP* **P 13 14 18.7 -0.4**
WMOK pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
WMOK Wichita Mounta 78.42 52 *eP* **P 13 14 18.7 -0.4**
comp=Z,2.8nm,0.8s,mb4.2
KBD Kabd 78.44 300 *eP* **P 13 14 19.7 +0.4**
KBD AMb AMB 13 14 20.3
comp=Z,38nm,0.6s,mb5.5
BRTR Keskin Array B 78.50 316 P **P 13 14 19.7 +0.2**
comp=Z,7.2nm,0.9s,mb4.6,baz=48,slow=3.7,SNR=20
BRTR Keskin Array B 78.50 316 P **P 13 14 19.7 +0.3**
BRTR pmax pmax
comp=Z,7.0nm,0.9s
BUD Budapest 78.52 329⇑*eP* **P 13 14 16.8 -2.6**
UBBA Unterbreizbach 78.56 336 *eP* **P 13 14 18.9 -0.7**
comp=Z,5.0nm,0.6s,mb4.6
ZST Bratislava 78.60 331 *eP* **P 13 14 20.8 +0.9**
ZST pmax pmax
comp=Z,14nm,0.6s,mb5.1
ZST Bratislava 78.60 331 *eP* **P 13 14 20.8 +0.9**
comp=Z,14nm,0.6s,mb5.1
ZST Bratislava 78.60 331 *eP* **P 13 14 20.8 +0.9**
NAY Al-Naaiem 78.67 300 *eP* **P 13 14 20.6 0.0**
NAY AMb AMB 13 14 21.3
comp=Z,28nm,0.8s,mb5.2
RDF Al-Radifah 78.71 300 *eP* **P 13 14 21.9 +1.1**
RDF AMb AMB 13 14 22.6
comp=Z,78nm,0.5s,mb5.9
BUG Bochum--Univer 78.76 338 *eP* **P 13 14 20.2 -0.5**
comp=Z,28nm,1.1s,mb5.1
ROTZ Rotzenmuhle 78.84 334 *eP* **P 13 14 21.2 +0.1**
comp=Z,17nm,1.2s,mb4.8
GZR Gura Zlata 78.84 326 ⇓*P* **P 13 14 20.4 -0.8**
GZR Gura Zlata 78.84 326 ⇓*iP* **P 13 14 20.4 -0.8**
KHC Kasperske Hory 78.97 333 *eP* **P 13 14 22.0 +0.2**
KHC *e* 13 14 25.0
KHC MLR MLR
comp=Z,300nm,20.5s,MS4.6
KHC Kasperske Hory 78.97 333 *eP* **P 13 14 22.0 +0.2**
KHC *ex* x 13 14 25.0
KHC AMS AMS 13 52 50.0
comp=Z,300nm,20.5s
BZS Buzias 79.11 326 ⇑*P* **P 13 14 22.1 -0.6**
BZS Buzias 79.11 326 ⇑*iP* **P 13 14 22.1 -0.6**
GEC2 GERESS Array S 79.18 333 *eP* **P 13 14 22.6 -0.4**
WET Wettzell 79.18 334 *eP* **P 13 14 23.3 +0.3**
comp=Z,35nm,1.3s,mb5.1
GRF Grafenberg Arr 79.20 335 *eP* **P 13 14 23.4 +0.3**
comp=Z,30nm,0.8s,mb5.3
GRF *eL* 13 52 32.4
comp=Z,246nm,19.9s
GRF Grafenberg Arr 79.20 335 *eP* **P 13 14 23.4 +0.3**
GRF pmax pmax
comp=Z,30nm,0.8s,mb5.3
GRF MLR MLR
comp=Z,200nm,19.9s,MS4.5
CONA Conrad Observa 79.26 331⇑*iP* **P 13 14 24.0 +0.6**
comp=Z,31nm,1.5s,mb5.0
TXAR Lajitas Array 79.50 59 P **P 13 14 25.5 +0.4**
comp=Z,0.9nm,0.5s,mb4.0,baz=300,slow=3.9,SNR=16
TXAR pP pP 13 14 38.4 +2.0
comp=Z,3.4nm,0.6s,baz=298,slow=4.0,SNR=15
TXAR Lajitas Array 79.50 59 P **P 13 14 25.5 +0.4**
TXAR *PP pP 13 14 38.4 +2.0
TXAR pmax pmax
comp=Z,1.0nm,0.5s
TXAR Lajitas Array 79.50 59 P **P 13 14 25.5 +0.4**
TXAR pP pP 13 14 38.4 +2.0
TNS Taunus Mts 79.54 337 *eP* **P 13 14 24.9 0.0**
comp=Z,25nm,0.8s,mb5.2
BEBN Eben Emael 79.76 339 P **P 13 14 26.1 -0.1**
MEM Membach 79.85 338 P **P 13 14 26.3 -0.3**
comp=Z,19nm,1.1s,mb4.9
ARSA Arzberg 79.96 331⇑*iP* **P 13 14 27.3 0.0**
comp=Z,12nm,1.4s,mb4.7
TOD Tromm 79.99 336 *eP* **P 13 14 27.1 -0.3**
BCLA Clavier 80.20 339 P **P 13 14 28.4 -0.2**
comp=Z,11nm,1.2s,mb4.7
RUP Ruppelstein 80.39 337 *eP* **P 13 14 29.3 -0.3**
RJOB Jochberg 80.44 333 *eP* **P 13 14 30.2 +0.3**
comp=Z,12nm,1.0s,mb4.8
FUR Furstenfeldbru 80.54 334 *eP* **P 13 14 30.9 +0.5**
comp=Z,30nm,1.0s,mb5.2
GIVF Givet 80.62 339 *eP* **P 13 14 30.4 -0.4**
SOKA Soboth 80.62 331⇑*iP* **P 13 14 30.9 +0.1**
comp=Z,18nm,1.0s,mb5.0
BAIF Baives 80.81 339 *eP* **P 13 14 31.7 -0.1**
comp=Z,9.0nm,0.7s,mb4.5
BAIF Baives 80.81 339 *eP* **P 13 14 31.7 -0.1**
BAIF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
BAIF Baives 80.81 339 *eP* **P 13 14 31.7 -0.1**
comp=Z,4.5nm,0.7s,mb4.5
ZAVS Zavodnje 80.83 331 *eP* **P 13 14 31.6 -0.5**
LANF Langenberg 80.84 336 *eP* **P 13 14 31.9 -0.1**
KBA Koelnbreinsper 80.84 332⇑*iP* **P 13 14 32.8 +0.8**
comp=Z,21nm,0.8s,mb5.1
VTS Vitosha 80.97 324 ⇑*P* **P 13 14 32.4 -0.4**
VTS Vitosha 80.97 324⇑*iP* **P 13 14 32.3 -0.5**

GOLS Golise 80.99 330 *eP* **P 13 14 32.5 -0.4**
MYKA Terra Mystica 81.13 332⇑*iP* **P 13 14 33.0 -0.6**
comp=Z,11nm,1.1s,mb4.7
PDKS Podkum 81.17 331 *eP* **P 13 14 33.2 -0.6**
WATA Walderalm 81.18 333⇑*iP* **P 13 14 34.2 +0.3**
comp=Z,9.5nm,0.5s,mb5.0
WTTA Wattenberg 81.23 333⇑*iP* **P 13 14 34.5 +0.4**
comp=Z,14nm,0.9s,mb4.9
BFO Black Forest 81.28 336 *eP* **P 13 14 34.0 -0.3**
comp=Z,16nm,1.1s,mb4.9
BFO Black Forest 81.28 336 *eP* **P 13 14 33.9 -0.4**
BFO pmax pmax
comp=Z,13nm,1.0s,mb4.8
BFO Black Forest 81.28 336 *eP* **P 13 14 33.9 -0.4**
comp=Z,13nm,1.0s,mb4.8
MOTA Moosalm 81.32 334⇑*iP* **P 13 14 35.0 +0.4**
comp=Z,19nm,1.0s,mb5.0
MIAR Mount Ida 81.41 49 *eP* **P 13 14 34.8 -0.5**
MIAR pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
MIAR Mount Ida 81.41 49 *eP* **P 13 14 34.8 -0.5**
comp=Z,6.7nm,0.8s,mb4.6
VISS Visnje 81.45 331 *eP* **P 13 14 34.5 -0.8**
CDF Champ du Feu 81.50 337 *eP* **P 13 14 35.4 -0.1**
comp=Z,7.4nm,0.5s,mb4.6
CDF Champ du Feu 81.50 337 *eP* **P 13 14 35.4 -0.1**
CDF pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
CDF Champ du Feu 81.50 337 *eP* **P 13 14 35.4 -0.1**
comp=Z,3.7nm,0.5s,mb4.6
ECH Echery 81.71 337 *eP* **P 13 14 36.2 -0.4**
ECH pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
ECH Echery 81.71 337 *eP* **P 13 14 36.2 -0.4**
comp=Z,7.7nm,0.8s,mb4.7
FETA Feichten 81.73 334⇑*iP* **P 13 14 37.0 +0.3**
comp=Z,12nm,1.2s,mb4.7
DAVA Damuels 81.75 334⇑*iP* **P 13 14 37.1 +0.2**
comp=Z,11nm,1.1s,mb4.7
FELD Feldberg im Sc 81.78 336 *eP* **P 13 14 36.6 -0.4**
MEZF Maizieres J'vi 82.03 338 *eP* **P 13 14 38.5 +0.2**
comp=Z,16nm,0.4s,mb5.0
MEZF Maizieres J'vi 82.03 338 *eP* **P 13 14 38.5 +0.2**
comp=Z,16nm,0.4s,mb5.3
THEF They Montfort 82.03 337 *eP* **P 13 14 37.9 -0.4**
MOF Molkenrain 82.05 336 *eP* **P 13 14 37.7 -0.7**
HAU Haudompre 82.13 337 *eP* **P 13 14 38.5 -0.3**
comp=Z,5.8nm,0.4s,mb4.6
HAU *e*MLR MLR
comp=Z,130nm,20.5s,MS4.0
HAU Haudompre 82.13 337 *eP* **P 13 14 38.5 -0.3**
HAU pmax pmax
comp=Z,3.0nm,0.4s,mb4.6
HAU MLR MLR
comp=Z,130nm,20.5s,MS4.3
HAU Haudompre 82.13 337 *eP* **P 13 14 38.5 -0.3**
comp=Z,2.9nm,0.4s,mb4.6
HAU LR LR
comp=Z,130nm,20.5s,MS4.3
PPT Papeete 82.46 124 *e*LR LR 13 40 33.7
comp=Z,256nm,23.0s,baz=319
LOMF Lomont 82.59 336 *eP* **P 13 14 41.4 +0.1**
MMAI Mount Meron Ar 82.72 310 P **P 13 14 43.2 +1.0**
comp=Z,11nm,0.5s,mb5.2,baz=40,slow=6.9,SNR=22
MMAI LR LR 13 56 05.5
comp=Z,192nm,19.5s,MS4.5,baz=255,slow=39
WVT Waverly 83.12 44 *eP* **P 13 14 43.7 -0.5**
WVT pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
WVT Waverly 83.12 44 *eP* **P 13 14 43.7 -0.5**
comp=Z,4.9nm,0.8s,mb4.6
FLN La Foliniere 83.14 341 *eP* **P 13 14 43.5 -0.6**
comp=Z,17nm,0.6s,mb5.0
FLN *e*MLR MLR
comp=Z,112nm,22.2s,MS3.9
FLN La Foliniere 83.14 341 *eP* **P 13 14 43.5 -0.6**
FLN pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
FLN MLR MLR
comp=Z,110nm,22.3s,MS4.2
FLN La Foliniere 83.14 341 *eP* **P 13 14 43.5 -0.6**
comp=Z,8.7nm,0.6s,mb5.0
FLN LR LR
comp=Z,110nm,22.3s,MS4.2
LDF La Druitiere 83.22 341 *eP* **P 13 14 44.2 -0.3**
comp=Z,9.1nm,0.4s,mb4.8
LDF La Druitiere 83.22 341 *eP* **P 13 14 44.2 -0.3**
LDF pmax pmax
comp=Z,5.0nm,0.4s,mb4.9
LDF La Druitiere 83.22 341 *eP* **P 13 14 44.2 -0.3**
comp=Z,4.6nm,0.4s,mb4.9
CABF La Chapelle 83.47 337 *eP* **P 13 14 46.0 +0.2**
comp=Z,7.7nm,0.5s,mb4.7
CABF La Chapelle 83.47 337 *eP* **P 13 14 46.0 +0.2**
CABF pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
CABF La Chapelle 83.47 337 *eP* **P 13 14 46.0 +0.2**
comp=Z,3.8nm,0.5s,mb4.7
LOR Lormes 83.48 338 *eP* **P 13 14 45.7 -0.1**
comp=Z,17nm,0.6s,mb5.0
LOR *e*MLR MLR
comp=Z,176nm,18.8s,MS4.2
LOR Lormes 83.48 338 *eP* **P 13 14 45.7 -0.1**
LOR pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
LOR MLR MLR
comp=Z,180nm,18.8s,MS4.5
LOR Lormes 83.48 338 *eP* **P 13 14 45.7 -0.1**
comp=Z,8.4nm,0.6s,mb5.0
LOR LR LR
comp=Z,180nm,18.8s,MS4.5
GRR Gorron 83.58 342 *eP* **P 13 14 46.4 +0.1**
comp=Z,20nm,0.6s,mb5.2
GRR Gorron 83.58 342 *eP* **P 13 14 46.4 +0.1**
GRR pmax pmax
comp=Z,10.0nm,0.6s,mb5.1
GRR Gorron 83.58 342 *eP* **P 13 14 46.4 +0.1**
comp=Z,10nm,0.6s,mb5.1
SSF Saint Saulge 83.76 338 *eP* **P 13 14 47.2 -0.1**
comp=Z,6.3nm,0.6s,mb4.6
SSF Saint Saulge 83.76 338 *eP* **P 13 14 47.2 -0.1**
SSF pmax pmax
comp=Z,3.0nm,0.6s,mb4.6
SSF Saint Saulge 83.76 338 *eP* **P 13 14 47.2 -0.1**
comp=Z,3.2nm,0.6s,mb4.6
AVF Avril sur Loir 84.05 338 *eP* **P 13 14 48.9 +0.1**
comp=Z,21nm,0.6s,mb5.1
AVF Avril sur Loir 84.05 338 *eP* **P 13 14 48.9 +0.1**
AVF pmax pmax
comp=Z,10.0nm,0.6s,mb5.1
AVF Avril sur Loir 84.05 338 *eP* **P 13 14 48.9 +0.1**
comp=Z,10nm,0.6s,mb5.1
SMF Signal de Mont 84.06 338 *eP* **P 13 14 48.9 +0.1**
comp=Z,28nm,0.7s,mb5.2
SMF Signal de Mont 84.06 338 *eP* **P 13 14 48.9 +0.1**
SMF pmax pmax
comp=Z,14nm,0.7s,mb5.2
SMF Signal de Mont 84.06 338 *eP* **P 13 14 48.9 +0.1**
comp=Z,14nm,0.7s,mb5.2
SGMF Saint Gilles 84.07 343 *eP* **P 13 14 49.2 +0.3**
comp=Z,24nm,0.6s,mb5.2
SGMF Saint Gilles 84.07 343 *eP* **P 13 14 49.2 +0.3**
SGMF pmax pmax
comp=Z,12nm,0.6s,mb5.2
SGMF Saint Gilles 84.07 343 *eP* **P 13 14 49.2 +0.3**
comp=Z,12nm,0.6s,mb5.2
ROSF Rostrenen 84.14 343 *eP* **P 13 14 49.0 -0.2**
comp=Z,15nm,0.7s,mb4.9
ROSF Rostrenen 84.14 343 *eP* **P 13 14 49.0 -0.2**
ROSF pmax pmax
comp=Z,7.0nm,0.7s,mb4.9
ROSF Rostrenen 84.14 343 *eP* **P 13 14 49.0 -0.2**
comp=Z,7.4nm,0.7s,mb4.9
LPL La Plagne 84.29 336 *eP* **P 13 14 50.7 +0.7**
comp=Z,12nm,0.6s,mb4.9
LPL La Plagne 84.29 336 *eP* **P 13 14 50.7 +0.7**
LPL pmax pmax
comp=Z,6.0nm,0.6s,mb4.9
LPL La Plagne 84.29 336 *eP* **P 13 14 50.7 +0.7**
comp=Z,6.2nm,0.6s,mb4.9
LPG La Plagne 84.30 336 *eP* **P 13 14 51.0 +0.9**
comp=Z,17nm,0.8s,mb5.0
LPG La Plagne 84.30 336 *eP* **P 13 14 51.0 +0.9**
LPG pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
LPG La Plagne 84.30 336 *eP* **P 13 14 51.0 +0.9**
comp=Z,8.4nm,0.8s,mb4.9

QUIF Quistinic 84.52 343 *eP* **P 13 14 51.0 -0.1**
PLDF La Plantade 84.74 338 *eP* **P 13 14 53.5 +1.2**
AGO Saint Agoulin 84.79 338 *eP* **P 13 14 54.2 +1.6**
TCF Toulx Ste Croi 84.81 339 *eP* **P 13 14 53.0 +0.4**
comp=Z,11nm,0.7s,mb4.8
TCF Toulx Ste Croi 84.81 339 *eP* **P 13 14 53.0 +0.4**
TCF pmax pmax
comp=Z,6.0nm,0.7s,mb4.8
TCF Toulx Ste Croi 84.81 339 *eP* **P 13 14 53.0 +0.4**
comp=Z,5.6nm,0.7s,mb4.8
ORIF Oris-en-Rattie 85.08 336 *eP* **P 13 14 54.8 +0.8**
comp=Z,12nm,0.6s,mb4.9
ORIF *e*MLR MLR
comp=Z,138nm,20.5s,MS4.0
ORIF Oris-en-Rattie 85.08 336 *eP* **P 13 14 54.8 +0.8**
ORIF pmax pmax
comp=Z,6.0nm,0.6s,mb4.9
ORIF Oris-en-Rattie 85.08 336 *eP* **P 13 14 54.8 +0.8**
comp=Z,6.2nm,0.6s,mb4.9
MFF Saint Martin d 85.10 341 *eP* **P 13 14 54.5 +0.4**
comp=Z,13nm,0.6s,mb4.9
MFF Saint Martin d 85.10 341 *eP* **P 13 14 54.5 +0.4**
MFF pmax pmax
comp=Z,6.0nm,0.6s,mb4.9
MFF Saint Martin d 85.10 341 *eP* **P 13 14 54.5 +0.4**
comp=Z,6.3nm,0.6s,mb4.9
PYM Petit Puy Mans 85.11 338 *eP* **P 13 14 55.4 +1.3**
SSB Saint Sauveur 85.13 337 *eP* **P 13 14 54.3 +0.1**
SSB pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
SSB Saint Sauveur 85.13 337 *eP* **P 13 14 54.3 0.0**
comp=Z,9.0nm,0.8s,mb5.0
CPCT Cooper Cave 85.28 43 *eP* **P 13 14 55.1 -0.1**
TKL Tuckaleechee C 85.46 42 *eP* **P 13 14 55.6 -0.5**
AUTN L'Aution 85.46 335 *eP* **P 13 14 55.6 -0.4**
VIVF Saint-Julien-I 85.48 337 *eP* **P 13 14 56.5 +0.5**
comp=Z,13nm,0.8s,mb4.8
VIVF Saint-Julien-I 85.48 337 *eP* **P 13 14 56.5 +0.5**
VIVF pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
VIVF Saint-Julien-I 85.48 337 *eP* **P 13 14 56.5 +0.5**
comp=Z,6.7nm,0.8s,mb4.8
TOUF Mont Tournerai 85.50 335 *eP* **P 13 14 55.9 -0.2**
MVIF Mont Vial 85.64 335 *eP* **P 13 14 56.4 -0.4**
CALN Calern 85.85 335 *eP* **P 13 14 57.4 -0.5**
RJF Les Rejaudoux 85.91 339 *eP* **P 13 14 58.7 +0.6**
comp=Z,12nm,0.6s,mb5.0
RJF *e*MLR MLR
comp=Z,192nm,20.8s,MS4.2
RJF Les Rejaudoux 85.91 339 *eP* **P 13 14 58.7 +0.6**
RJF pmax pmax
comp=Z,6.0nm,0.6s,mb5.0
RJF MLR MLR
comp=Z,190nm,20.8s,MS4.5
RJF Les Rejaudoux 85.91 339 *eP* **P 13 14 58.7 +0.6**
comp=Z,5.8nm,0.6s,mb5.0
RJF LR LR
comp=Z,190nm,20.8s,MS4.5
SMRF Simiane la Rot 86.03 336 *eP* **P 13 14 59.4 +0.6**
FRF La Foret Royal 86.09 335 *eP* **P 13 14 59.0 -0.1**
comp=Z,10nm,0.7s,mb4.9
FRF La Foret Royal 86.09 335 *eP* **P 13 14 59.0 -0.1**
FRF pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
FRF La Foret Royal 86.09 335 *eP* **P 13 14 59.0 -0.1**
comp=Z,5.2nm,0.7s,mb4.9
CAF Calviac 86.12 338 *eP* **P 13 15 00.2 +1.0**
comp=Z,17nm,0.7s,mb5.1
CAF Calviac 86.12 338 *eP* **P 13 15 00.2 +1.0**
CAF pmax pmax
comp=Z,8.0nm,0.7s,mb5.1
CAF Calviac 86.12 338 *eP* **P 13 15 00.2 +1.0**
comp=Z,8.4nm,0.7s,mb5.1
LMR La Mourre 86.34 335 *eP* **P 13 15 00.3 0.0**
comp=Z,33nm,0.8s,mb5.3
LMR La Mourre 86.34 335 *eP* **P 13 15 00.3 0.0**
LMR pmax pmax
comp=Z,16nm,0.8s,mb5.3
LMR La Mourre 86.34 335 *eP* **P 13 15 00.3 0.0**
comp=Z,16nm,0.8s,mb5.3
LASF Ste Croix 86.43 337 *eP* **P 13 15 01.6 +0.9**
LFF La Frestale 86.44 339 *eP* **P 13 15 00.4 -0.4**
comp=Z,11nm,0.5s,mb5.1
LFF La Frestale 86.44 339 *eP* **P 13 15 00.4 -0.4**
LFF pmax pmax
comp=Z,6.0nm,0.5s,mb5.1
LFF La Frestale 86.44 339 *eP* **P 13 15 00.4 -0.4**
comp=Z,5.7nm,0.5s,mb5.1
TBI Tubuai 87.08 128 *e*LR LR 13 42 43.7
comp=Z,221nm,27.2s
MTLF Montolieu 87.55 338 *eP* **P 13 15 06.8 +0.6**
comp=Z,3.7nm,0.6s,mb4.5
MTLF Montolieu 87.55 338 *eP* **P 13 15 06.8 +0.6**
MTLF pmax pmax
comp=Z,2.0nm,0.6s,mb4.5
MTLF Montolieu 87.55 338 *eP* **P 13 15 06.8 +0.6**
comp=Z,1.9nm,0.6s,mb4.5
ETSF Etsaut 88.68 340 *eP* **P 13 15 13.0 +1.4**
comp=Z,7.1nm,0.6s,mb4.9
ETSF Etsaut 88.68 340 *eP* **P 13 15 13.0 +1.4**
ETSF pmax pmax
comp=Z,4.0nm,0.6s,mb4.9
ETSF Etsaut 88.68 340 *eP* **P 13 15 13.0 +1.4**
comp=Z,3.5nm,0.6s,mb4.9
ESDC Sonseca Array 92.55 341 LR LR 14 02 48.1
comp=Z,68nm,18.5s,MS4.1,baz=325,slow=39
TORD Torodi Ar. Bea 115.62 327 PKP PKPdf 13 20 59.1 -1.7
comp=Z,0.5nm,0.8s,baz=11,slow=2.8,SNR=4.4
DBIC Dimbokro 124.00 331 PKP PKPdf 13 21 16.8 -0.2
comp=Z,4.7nm,0.9s,baz=271,slow=5.4,SNR=3.7
DBIC Dimbokro 124.00 331 PKIKP PKPdf 13 21 16.8 -0.2
DBIC pmax pmax
comp=Z,5.0nm,0.9s
QSPA South Pole Qui 134.96 180 PKP PKPdf 13 21 36.3 +0.6
comp=Z,3.0nm,1.0s,baz=305,slow=1.8,SNR=6.2
QSPA South Pole Qui 134.96 180 PKP PKPdf 13 21 36.3 +0.6
CFAA Coronel Fontan 146.68 80 PKPbc PKPbc 13 21 59.5 -0.4
comp=Z,0.3nm,0.5s,baz=247,slow=4.5,SNR=2.5
PLCA Paso Flores 149.48 96 PKPbc PKPbc 13 22 06.9 -0.1
comp=Z,3.3nm,0.8s,baz=234,slow=6.8,SNR=4.2
PLCA pPKPbc pPKPbc 13 22 21.1 +2.4
comp=Z,4.5nm,0.7s,baz=261,slow=3.0,SNR=6.1
CPUP Villa Florida 150.47 60 PKPbc PKPbc 13 22 09.2 -0.7
comp=Z,2.2nm,0.6s,baz=301,slow=2.7,SNR=9.4
VNA1 Neumayer--Stat 152.55 195 *e*PKPdf PKPdf 13 22 09.6 +3.3
VNA1 *e* 13 22 13.1
VNA1 *e* 13 22 28.0

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*IDC **16** 13:08:22.2±0.8, 16°.45S×173°.24W, h0km, mb4.1/10, mb1 4.3/10, mb1mx4.1/21, mbtmp4.1/10, MS4.1/11, Ms1 4.1/11, ms1mx3.7/32, Error ellipse: s-maj=33.1km s-min=19.2km az=132.0*
*NEIC **16** 13:08:24.0±0.6, 16°.18S×173°.42W, h10km, mb4.7/2, Error ellipse: s-maj=24.7km s-min=14.0km az=133.0*
ISC 16 13:08:28.0±0.5, 16°.4S±0°.1×173°.5W±0°.1, h35km, n42, σ0.89/21, mb4.2/12, MS4.1/10, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase Op	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.93**	**34**	Pn		**Pn**	**13 09 05.2**	**-7.0**
	26nm,0.3s,baz=360,slow=7.0,SNR=19							
AFI				Sn		**Sn**	**13 09 35.1**	**-11**
	146nm,0.3s,baz=40,slow=22,SNR=9.0							
AFI				T			13 12 23.5	
	14nm,0.3s,baz=66,slow=18,SNR=3.7							
AFI	**Afiamalu**	**2.93**	**34**	*e*P		**Pn**	**13 09 05.3**	**-6.8**
AFI				Sn		**Sn**	**13 09 35.1**	**-11**
RAR	**Rarotonga**	**13.85**	**113**	LR		LR	13 14 50.9	
	comp=Z,788nm,18.4s,baz=228,slow=29							
RAR				T			13 24 59.3	
	3.2nm,0.3s,baz=125,slow=22,SNR=6.5							
DZM	**Mont Dzumac**	**19.79**	**250**	*e*LR		LR	13 17 55.3	
	939nm,22.7s							
PPT	**Papeete**	**22.89**	**96**	*e*LQ			13 17 38.6	
	2μm,27.0s							
PPT				*e*LR		LR	13 18 26.7	
	631nm,25.2s,baz=253							
PPT	**Papeete**	**22.89**	**96**	LR		LR	13 19 20.2	
	comp=Z,441nm,18.8s,MS3.9,baz=265,slow=29							
URZ	**Urewera**	**23.34**	**199**	P		**P**	**13 13 31.7**	**-1.7**
	6.2nm,0.3s,mb4.5,baz=325,slow=4.1,SNR=21							
URZ	**Urewera**	**23.34**	**199**	*e*P		**P**	**13 13 31.6**	**-1.7**
TBI	**Tubuai**	**23.62**	**111**	*e*LQ			13 17 47.4	
	557nm,25.8s							
TBI				*e*LR		LR	13 18 53.3	

901nm,26.0s,baz=289
HNR Honiara 26.78 282 LR LR 13 23 24.4
comp=Z,1μm,20.6s,MS4.4,baz=116,slow=33
RPZ Rata Peaks 30.27 203 P **P 13 14 35.9 +0.2**
6.4nm,0.8s,mb4.4,baz=26,slow=14,SNR=2.8
RKT Rikitea 36.78 107 *e*LR LR 13 25 01.0
651nm,40.5s,baz=281
CTA Charters Tower 38.37 258 LR LR 13 29 21.5
comp=Z,210nm,20.4s,MS3.9,baz=89,slow=33
PTCN Pitcairn Islan 41.35 109 *e*P **P 13 16 12.1 +1.3**
STKA Stephens Creek 43.50 241 P **P 13 16 28.9 +0.7**
1.5nm,0.8s,mb3.8,baz=79,slow=11,SNR=3.7
STKA LR LR 13 33 27.3
comp=Z,176nm,19.8s,MS4.0,baz=207,slow=34
STKA Stephens Creek 43.50 241 *e*P **P 13 16 27.4 -0.8**
STKA LR LR 13 33 27.3
WRA Warramunga Arr 49.56 258 P **P 13 17 16.9 +0.9**
0.4nm,0.3s,mb3.9,baz=97,slow=7.4,SNR=6.4
ASAR Alice Springs 49.75 253 P **P 13 17 17.4 +0.1**
6.2nm,0.6s,mb4.8,baz=88,slow=8.8,SNR=41
FITZ Fitzroy Crossi 57.95 259 LR LR 13 41 07.0
comp=Z,121nm,21.5s,MS4.0,baz=94,slow=34
SBA Scott Base 62.30 185 *e*P **P 13 18 47.1 +0.9**
6.0nm,0.9s,mb4.7
QSPA South Pole Qui 73.70 180 P **P 13 19 57.0 -0.8**
6.1nm,1.0s,mb4.5,baz=48,slow=2.9,SNR=17
QSPA South Pole Qui 73.70 180 *e*P **P 13 19 57.4 -0.4**
6.6nm,1.0s,mb4.5
NVAR Mina Array Bea 75.08 42 P **P 13 20 04.4 -2.0**
0.7nm,0.8s,mb3.7,baz=222,slow=6.9,SNR=5.7
KSRS Korea Array 76.78 316 LR LR 13 47 50.9
comp=Z,59nm,20.1s,MS3.9,baz=1.2,slow=31
TXAR Lajitas Array 81.20 56 P **P 13 20 40.5 0.0**
0.5nm,1.0s,mb3.4,baz=217,slow=4.7,SNR=3.4
PDAR Pinedale Array 83.02 42 P **P 13 20 49.9 +0.1**
0.5nm,0.7s,mb3.6,baz=191,slow=3.0,SNR=4.1
DAWY Dawson 84.36 14 *e*P **P 13 20 56.6 +0.5**
MAW Mawson 86.87 199 LR LR 13 58 30.4
comp=Z,134nm,20.9s,MS4.3,baz=262,slow=35
HHC Hu-ho-hao-te 89.62 313 *e*P **P 13 21 22.1 -0.1**
HHC S S 13 32 11.1 +0.1
HHC pmax pmax
comp=Z,12nm,0.7s,mb5.3
HHC pmax pmax
comp=Z,550nm,7.5s
CMAR Chiang Mai Arr 92.84 288 P **P 13 21 37.9 +0.1**
comp=Z,0.9nm,0.9s,mb4.2,baz=105,slow=2.4,SNR=3.0
CMAR LR LR 13 58 38.2
comp=Z,47nm,21.9s,MS3.9,baz=95,slow=32
SONM Songino Array 95.50 318 LR LR 13 58 58.6
comp=Z,64nm,19.1s,MS4.1,baz=311,slow=32
ROSC El Rosal 100.11 88 LR LR 14 01 50.5
comp=Z,86nm,18.0s,MS4.3,baz=211,slow=32
STHS Stebnicka Huta 144.92 343 *e*PKP PKPdf 13 28 03.8 +2.4
STHS Stebnicka Huta 144.92 343 *e* PKPdf 13 28 03.8 +2.4
BUR08 Bucovina Ar. S 145.20 338 *e*PKP PKPdf 13 28 02.4 +0.4
CRVS Cervenica-Dubn 145.32 343 *e*PKP PKPbc 13 28 02.1 +0.2
CRVS Cervenica-Dubn 145.32 343 *e* PKPbc 13 28 02.1 +0.2
KECS Kecovo 145.97 343 *e*PKP PKPab 13 28 05.8 +1.3
KECS Kecovo 145.97 343 *e* PKPbc 13 28 05.8 +1.8
VYHS Vyhne 146.40 345 *e*PKP PKPab 13 28 08.0 +1.9
VYHS Vyhne 146.40 345 *e* PKPab 13 28 08.0 +1.9
BRTR Keskin Array B 146.84 320 PKPbc PKPbc 13 28 08.3 +1.5
comp=Z,3.6nm,0.9s,baz=108,slow=2.7,SNR=9.9

*IDC **16** 13:10:50.6±1.8, 4°.91S×152°.40E, h0km, mb3.8/7, mb1 4.0/7, mb1mx3.8/16, mbtmp3.8/7, Error ellipse: s-maj=66.8km s-min=24.8km az=121.0*
*NEIC **16** 13:10:56.6±0.8, 4°.80S×152°.28E, h35km, mb3.9/1, Error ellipse: s-maj=21.7km s-min=15.4km az=127.0*
*ISCJB **16** 13:10:59.3±4.3, 4°.9S±0°.2×152°.2E±0°.2, h72km±37km, mb3.6/8, Error ellipse: s-maj=31.5km s-min=26.1km az=7.2*
ISC 16 13:11:01.7±3.5, 5°.0S±0°.2×152°.2E±0°.1, h82km±32km, n10, σ0°54/10, mb3.6/8, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.64**	**228**	P	**Pn**	**13 12 36.7**	**0.0**
DZM	**Mont Dzumac**	**21.88**	**142**	*e*P	**P**	**13 15 48.4**	**+0.4**
WRAB	**Tennant Creek**	**22.85**	**228**	*e*P	**P**	**13 15 58.0**	**-0.3**
1.6nm,0.3s,mb3.8							
WRA	**Warramunga Arr**	**22.86**	**228**	P	**P**	**13 15 58.1**	**-0.4**
1.3nm,0.4s,mb3.6,baz=53,slow=10.0,SNR=17							
ASAR	**Alice Springs**	**25.60**	**222**	P	**P**	**13 16 24.1**	**+0.6**
1.2nm,0.4s,mb3.6,baz=54,slow=9.1,SNR=16							
FITZ	**Fitzroy Crossi**	**29.04**	**241**	P	**P**	**13 16 54.1**	**-0.3**
0.8nm,0.5s,mb3.6,baz=70,slow=9.6,SNR=7.9							
MKAR	**Makanchi Array**	**80.08**	**319**	P	**P**	**13 23 03.4**	**+0.8**
0.3nm,0.6s,mb3.3,baz=104,slow=6.0,SNR=3.5							
ZALV	**Zalesovo Beam**	**80.98**	**326**	P	**P**	**13 23 07.9**	**+0.6**
0.5nm,0.4s,mb3.7,baz=120,slow=5.7,SNR=2.8							
BVAR	**Borovoye Array**	**89.03**	**323**	P	**P**	**13 23 46.9**	**-0.6**
0.4nm,0.5s,mb3.7,baz=131,slow=6.1,SNR=3.5							
NVAR	**Mina Array Bea**	**92.68**	**52**	P	**P**	**13 24 04.0**	**-0.9**
0.3nm,0.8s,mb3.7,baz=243,slow=4.0,SNR=2.6							

*ISK **16** 13:16:45.4, 37°.15N×36°.19E, h18km, ML2.5*
*DDA **16** 13:16:46.1, 37°.32N×36°.35E, h7km±3km, MD3.0*
*CSEM **16** 13:16:46.6±0.2, 37°.33N×36°.28E, h5km, MD3.0, Error ellipse: s-maj=4.4km s-min=4.0km az=82.0*
*ISCJB **16** 13:16:47.1±0.4, 37°.33N±0°.03×36°.32E±0°.03, h10km, Error ellipse: s-maj=3.8km s-min=3.6km az=147.0*
ISC 16 13:16:47.0±0.5, 37°.32N±0°.02×36°.34E±0°.03, h5km±6km, n24, σ0°75/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANDN	**Andirin**	**0.26**	**2**	*i* P	**Pg**	**13 16 51.4**	**-0.6**
ANDN				*i* S	**Sg**	**13 16 55.7**	**+0.3**
ANDN	**Andirin**	**0.26**	**2**	*i* P	**Pg**	**13 16 51.4**	**-0.6**
ANDN				*i* S	**Sg**	**13 16 55.7**	**+0.3**
KOZT	**Kozan**	**0.43**	**291**	*e*PG	**Pg**	**13 16 54.9**	**-0.5**
KOZT				*e*SG	**Sg**	**13 17 01.5**	**+0.4**
GAZ	**Gaziantep**	**0.71**	**102**	*e*PG	**Pg**	**13 17 01.6**	**+0.9**
GAZ				*e*SG	**Sg**	**13 17 13.7**	**+3.7**
GAZ	**Gaziantep**	**0.71**	**102**	*e*Pg	**Pg**	**13 17 01.6**	**+0.8**
GAZ				*e*Sg	**Sg**	**13 17 13.7**	**+3.7**
COBT	**Iskenderun**	**0.81**	**185**	*i* P	**Pg**	**13 17 02.0**	**-0.5**
COBT				*i* S	**Sg**	**13 17 12.4**	**-0.5**
COBT	**Iskenderun**	**0.81**	**185**	*i* P	**Pg**	**13 17 02.0**	**-0.5**
COBT				*i* S	**Sg**	**13 17 12.4**	**-0.5**
KUZU	**Kuzuini**	**0.81**	**133**	*i* P	**Pg**	**13 17 01.8**	**-0.7**
KUZU				*i* S	**Sg**	**13 17 13.5**	**+0.5**
KUZU	**Kuzuini**	**0.81**	**133**	*i* P	**Pg**	**13 17 01.8**	**-0.7**
KUZU				*i* S	**Sg**	**13 17 13.5**	**+0.5**
GZT	**Gaziantep**	**0.98**	**88**	*i* P	**Pg**	**13 17 05.2**	**-0.6**
GZT				*i* S	**Sg**	**13 17 18.2**	**-0.3**
GULE	**Gulek**	**1.24**	**269**	*e*P	**Pg**	**13 17 09.4**	**-1.4**
GULE				*i* S	**Sg**	**13 17 28.6**	**+1.6**
GULE	**Gulek**	**1.24**	**269**	*e*P	**Pg**	**13 17 09.4**	**-1.5**
GULE				*i* S	**Sg**	**13 17 28.5**	**+1.5**
YAYL	**Yayladag**	**1.30**	**188**	*i* P	**Pn**	**13 17 12.1**	**+0.2**
YAYL				*i* S	**Sg**	**13 17 29.4**	**+0.6**
YAYL	**Yayladag**	**1.30**	**188**	*i* P	**Pn**	**13 17 12.1**	**+0.2**
YAYL				*i* S	**Sg**	**13 17 29.4**	**+0.6**
PINB	**Pinarbasi**	**1.35**	**2**	*i* P	**Pn**	**13 17 11.4**	**-1.2**
PINB				*i* S	**Sg**	**13 17 31.1**	**+0.6**
PINB	**Pinarbasi**	**1.35**	**2**	*i* P	**Pn**	**13 17 11.4**	**-1.2**
PINB				*i* S	**Sg**	**13 17 31.1**	**+0.6**
SARI	**SarD1z-Kayseri**	**1.38**	**12**	*e*PN	**Pn**	**13 17 08.8**	**-4.2**
SARI	**SarD1z-Kayseri**	**1.38**	**12**	*e*Pn	**Pn**	**13 17 08.8**	**-4.2**
AKCD	**Akcadag**	**1.59**	**52**	*i* P	**Pn**	**13 17 15.9**	**+0.1**
AKCD				*i* S	**Sn**	**13 17 37.0**	**+0.2**
AKCD	**Akcadag**	**1.59**	**52**	*i* P	**Pn**	**13 17 15.9**	**+0.1**
AKCD				*i* S	**Sn**	**13 17 37.0**	**+0.2**
MYA	**Malataya**	**1.93**	**58**	*e*PN	**Pn**	**13 17 20.9**	**+0.3**
MYA	**Malataya**	**1.93**	**58**	*e*Pn	**Pn**	**13 17 20.9**	**+0.3**
URFA	**Urfa**	**1.98**	**86**	*e*PN	**Pn**	**13 17 21.6**	**+0.3**
URFA	**Urfa**	**1.98**	**86**	*e*Pn	**Pn**	**13 17 21.6**	**+0.3**

*NEIC **16** 13:22:13.2, 18°.21N×94°.58W, h31km, MD3.8(MEX), After MEX.*
MEX 16 13:22:13.2±0.7, 18°.21N×94°.58W, h31km±6km, MD3.8, Bay of Campeche

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUIG	**Tuzandepetl**	**0.23**	**140**	*i* P	Pb	13 22 18.3	-1.5
TUIG				*e*S	Sb	13 22 23.4	-0.8
TUIG	**Tuzandepetl**	**0.23**	**140**	*i* P	Pb	13 22 18.3	-1.5
TUIG				*e*S	Sb	13 22 23.4	-0.8
CMIG	**Matias Romero**	**1.15**	**195**	*i* P	Pn	13 22 31.0	-2.2
CMIG				*e*S	Sn	13 22 44.9	-2.9
CMIG	**Matias Romero**	**1.15**	**195**	*i* P	Pn	13 22 31.0	-2.2
CMIG				*e*S	Sn	13 22 44.9	-2.9
TGIG		**1.99**	**135**	*i* P	Pn	13 22 43.2	-1.5
TGIG				*i* S	Sn	13 23 06.2	-2.3
VHO	**Vista Hermosa**	**2.35**	**242**	*i* P	Pn	13 22 49.0	-0.7
VHO				*e*S	Sn	13 23 16.8	-0.6
VHO	**Vista Hermosa**	**2.35**	**242**	*i* P	Pn	13 22 49.0	-0.7
VHO				*e*S	Sn	13 23 16.8	-0.6
HUIG	**Huatulco**	**2.83**	**211**	*i* P	Pn	13 22 53.7	-2.7
HUIG				*e*S	Sn	13 23 27.1	-2.4
HUIG	**Huatulco**	**2.83**	**211**	*i* P	Pn	13 22 53.7	-2.7
HUIG				*e*S	Sn	13 23 27.1	-2.4

*CSEM **16** 13:24:26.1, 44°.78N×40°.55E, h18km, mb4.4, After OBN*
MOS 16 13:24:26.6±0.6, 44°.78N×40°.55E, h18km, mb4.4/1, 2C, Error ellipse: s-maj=23.4km s-min=14.9km az=114.9, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOC	**Sochi**	**1.33**	**207**	*e*PG	Pg	13 24 50.4	-1.9
SOC				*e*		13 25 09.1	
SOC				pmax	pmax		
comp=Z,27nm,0.5s							
SOC				smax			
comp=E,43nm,0.3s							
SOC	**Sochi**	**1.33**	**207**	*e*Pg	Pg	13 24 50.4	-1.9
comp=E,27nm,0.5s							
SOC				*e*Sg	Sg	13 25 09.1	-0.7
KIV	**Kislovodsk**	**1.74**	**117**	*e*PN	Pn	13 24 57.3	+1.4
KIV				*e*S	Sn	13 25 20.2	+2.6
KIV	**Kislovodsk**	**1.74**	**117**	*e*Pn	Pn	13 24 57.3	+1.4
KIV				*e*Sg	Sg	13 25 20.2	-2.5
BEYR	**Belyy Ugol+**	**1.80**	**114**	*e*PN	Pn	13 24 58.0	+1.3
BEYR	**Belyy Ugol+**	**1.80**	**114**	*e*Pn	Pn	13 24 58.0	+1.3
SHAR	**Shatzhatmas**	**1.84**	**123**	*e*PN	Pn	13 24 57.6	+0.3
SHAR	**Shatzhatmas**	**1.84**	**123**	*e*Pn	Pn	13 24 57.6	+0.3
PYA	**Pyatigorsk**	**1.95**	**112**	*e*PN	Pn	13 24 59.4	+0.7
PYA	**Pyatigorsk**	**1.95**	**112**	*e*Pn	Pn	13 24 59.4	+0.7

*ISCJB **16** 13:26:34.9±0.8, 27°.86S±0°.06×66°.69W±0°.08, h157km±10km, mb3.6/5, Error ellipse: s-maj=12.2km s-min=9.5km az=14.4*
*IDC **16** 13:26:35.6±1.5, 27°.90S×66°.73W, h152km±14km, mb3.5/4, mb1 3.8/8, mb1mx3.7/16, mbtmp3.5/8, Error ellipse: s-maj=24.8km s-min=13.6km az=104.0*
*NEIC **16** 13:26:36.1±0.6, 27°.86S×66°.66W, h156km±5km, mb4.1/2, Error ellipse: s-maj=9.1km s-min=7.2km az=102.0*
ISC 16 13:26:36.1±0.8, 27°.90S±0°.07×66°.66W±0°.08, h154km±10km, n20, σ0°51/15, mb3.6/5, Catamarca Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**3.73**	**252**	*e*P	**Pn**	**13 27 33.4**	**+0.5**
LCO				*e*S	**Sn**	**13 28 16.8**	**-0.2**
CFAA	**Coronel Fontan**	**3.94**	**200**	P	**Pn**	**13 27 36.6**	**+1.0**
5.2nm,0.3s,baz=17,slow=13,SNR=574							
CFAA				S	**Sn**	**13 28 20.8**	**-1.1**
9.8nm,0.3s,baz=25,slow=16,SNR=19							
CPUP	**Villa Florida**	**8.46**	**82**	P	**Pn**	**13 28 35.4**	**-0.1**
1.0nm,0.3s,baz=244,slow=12,SNR=26							
CPUP	**Villa Florida**	**8.46**	**82**	*e*P	**Pn**	**13 28 35.4**	**-0.1**
TRQA	**Tornquist**	**10.86**	**160**	*e*P	**Pn**	**13 29 07.7**	**+0.4**
8.1nm,1.0s							
LPAZ	**La Paz**	**11.63**	**353**	P	**Pn**	**13 29 17.8**	**+0.3**
1.0nm,0.3s,baz=147,slow=9.3,SNR=24							
LPAZ				S	**Sn**	**13 31 20.7**	**-5.6**
0.1nm,0.3s,baz=67,slow=17,SNR=3.5							
SIV	**San Ignacio**	**12.93**	**25**	P	**Pn**	**13 29 33.6**	**-0.6**
0.4nm,0.3s,baz=211,slow=13,SNR=27							
TXAR	**Lajitas Array**	**67.03**	**325**	P	**P**	**13 37 12.4**	**-0.1**
0.5nm,0.6s,mb3.5,baz=153,slow=7.5,SNR=6.7							
MAW	**Mawson**	**77.64**	**162**	P	**P**	**13 38 15.1**	**+0.2**
3.1nm,0.7s,mb4.0,baz=219,slow=7.8,SNR=8.0							
PDAR	**Pinedale Array**	**80.64**	**329**	P	**P**	**13 38 31.5**	**0.0**
0.7nm,0.6s,mb3.5,baz=129,slow=7.4,SNR=7.5							
NVAR	**Mina Array Bea**	**81.76**	**322**	P	**P**	**13 38 37.2**	**-0.3**
0.3nm,0.5s,mb3.2,baz=149,slow=6.9,SNR=3.0							
HLID	**Hailey**	**83.52**	**327**	*e*P	**P**	**13 38 46.5**	**0.0**
1.9nm,1.0s,mb3.8							
ASAR	**Alice Springs**	**125.03**	**203**	PKP	PKPdf	13 45 17.4	-1.2
1.0nm,0.7s,baz=131,slow=1.6,SNR=19							
WRA	**Warramunga Arr**	**128.28**	**205**	PKP	PKPdf	13 45 24.1	-0.8
2.3nm,0.8s,baz=154,slow=2.0,SNR=28							
BVAR	**Borovoye Array**	**139.66**	**39**	PKP	PKPdf	13 45 45.7	+0.7
0.3nm,0.5s,baz=254,slow=5.3,SNR=3.4							
AAK	**Ala-Archa**	**145.36**	**55**	*e*PKP	PKPdf	13 45 56.7	+1.2
TKM2	**Tokmak 2**	**146.09**	**54**	*e*PKP	PKPdf	13 45 57.5	+0.8
ZALV	**Zalesovo Beam**	**146.62**	**31**	PKPbc	PKPbc	13 45 58.2	-0.8
1.9nm,0.3s,baz=316,slow=4.1,SNR=7.2							
MK31	**Makanchi Array**	**149.22**	**44**	*e*PKPbc	PKPbc	13 46 06.0	-0.2
MKAR	**Makanchi Array**	**149.22**	**44**	PKPbc	PKPbc	13 46 06.2	+0.1
2.0nm,0.6s,baz=304,slow=2.8,SNR=15							

MEX 16 13:35:29.4±0.6, 16°.75N×95°.40W, h130km±13km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.19**	**215**	*i* P	Pn	13 35 52.8	-1.5
HUIG				*e*S	Sn	13 36 12.1	-0.9
VHO	**Vista Hermosa**	**1.32**	**284**	*i* P	Pn	13 35 54.7	-0.8
VHO				*e*S	Sn	13 36 13.4	-2.0
TGIG		**2.18**	**89**	P	Pn	13 36 03.5	-2.1
TGIG				*i* S	Sn	13 36 29.1	-4.2
PCIG		**2.34**	**116**	*i* P	Pn	13 36 07.0	-0.5
PCIG				*i* S	Sn	13 36 35.1	-1.8
PNIG	**Pinotepa**	**2.64**	**263**	*i* P	Pn	13 36 10.1	-1.3
PNIG				*e*S	Sn	13 36 42.5	-1.3

*IDC **16** 13:42:14.8±0.8, 8°.46N×102°.91W, h0km, mb4.2/9, mb1 4.5/11, mb1mx4.3/22, mbtmp4.2/11, ML3.6/1, MS4.1/14, Ms1 4.1/14, ms1mx4.0/23, Error ellipse: s-maj=32.8km s-min=15.2km az=58.0*
*NEIC **16** 13:42:16.6±0.6, 8°.44N×102°.89W, h10km, mb4.6/50, Error ellipse: s-maj=14.3km s-min=8.6km az=54.0*
*ISCJB **16** 13:42:18.6±0.5, 8°.44N±0°.06×102°.89W±0°.06, h33km, mb4.5/55, MS4.2/16, Error ellipse: s-maj=9.4km s-min=6.7km az=139.9*
*GCMT **16** 13:42:20.9±0.3, 8°.53N×103°.05W, h26km±1km, MW5.1, Moment Tensor Solution. s37,c43; s79,c116; Moment tensor: Scale 10^{16}Nm; M_{rr}-0.92±.21; $M_{\theta\theta}$2.66±.19; $M_{\phi\phi}$-1.73±.23; $M_{r\theta}$-2.43±.38; $M_{\theta\phi}$-5.00±.16; $M_{r\phi}$0.11±.41; Best double couple: $M_0$6.00000×10^{16} NP1:ϕ_s349.00000°, δ66.00000°, λ-1.00000°. NP2:ϕ_s79.00000°, δ89.00000°, λ-156.00000°. Principal axes: T 6.5300, Plg16.0000°, Azm211.0000°; N -1.1500, Plg66.0000°, Azm80.0000°; P -5.3700, Plg17.0000°, Azm306.0000°; Data Used: II IU IC G CN.*
ISC 16 13:42:20.8±0.5, 8°.45N±0°.06×102°.84W±0°.06, h35km, n322, σ0°76/299, mb4.5/55, MS4.2/16, 107C-120D, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**11.57**	**41**	Pn	**Pn**	**13 45 01.8**	**-1.7**
0.4nm,0.3s,baz=216,slow=12,SNR=4.3							
APG	**El Apazote**	**13.75**	**61**	Pn	**Pn**	**13 45 31.4**	**-1.9**
baz=90,slow=17							
PAYG	**Puerto Ayora**	**15.45**	**125**	P	**Pn**	**13 45 58.1**	**+1.9**
TEIG	**Tepich**	**18.31**	**49**	*e*P	**Pn**	**13 46 30.7**	**-1.4**
154nm,1.7s							
TXAR	**Lajitas Array**	**20.79**	**358**	P	**P**	**13 46 59.1**	**+0.2**
5.3nm,0.9s,baz=180,slow=12,SNR=27							
TXAR				PcP	PcP	13 51 08.0	+0.7
0.3nm,0.6s,baz=173,slow=8.2,SNR=3.3							
TXAR				LR	LR	13 54 28.3	
comp=Z,1μm,18.4s,MS4.3,baz=300,slow=35							
TXAR	**Lajitas Array**	**20.79**	**358**	P	**P**	**13 46 59.1**	**+0.2**
TXAR				PcP	PcP	13 51 08.0	+0.7
TXAR				LR	LR	13 54 28.3	
627A	**Terlingua Ranc**	**20.90**	**359**	⇑P	**P**	**13 47 00.1**	**0.0**
baz=21							
628A	**Black Gap, Mar**	**20.92**	**360**	⇓P	**P**	**13 47 00.9**	**+0.5**
baz=21							
626A	**Big Bend Ranch**	**21.03**	**357**	⇓P	**P**	**13 47 00.9**	**-0.6**
baz=21							
526A	**Mary Lane Ranc**	**21.53**	**357**	⇓P	**P**	**13 47 06.6**	**-0.3**
baz=22							
527A	**Woodward Ranch**	**21.59**	**358**	⇓P	**P**	**13 47 07.5**	**-0.1**
baz=22							
528A	**Cox Ranch, San**	**21.60**	**0**	⇓P	**P**	**13 47 07.5**	**-0.1**
baz=22							
JCT	**Junction City**	**22.10**	**7**	*e*P	**P**	**13 47 13.2**	**+0.2**
37nm,1.1s,mb4.7							
426A	**McDonald Obser**	**22.13**	**357**	⇓P	**P**	**13 47 13.1**	**-0.3**
baz=22							
428A	**Kincaid Ranch,**	**22.16**	**0**	⇓P	**P**	**13 47 13.7**	**0.0**
baz=22							
427A	**Hayter Ranch,**	**22.29**	**359**	⇓P	**P**	**13 47 14.7**	**-0.3**
baz=22							
425A	**Indio Mountain**	**22.31**	**355**	⇓P	**P**	**13 47 14.9**	**-0.3**
baz=22							
HKT	**Hockley**	**22.37**	**16**	*e*P	**P**	**13 47 16.4**	**+0.5**
160nm,1.8s,mb5.2							
326A	**Caldwell Ranch**	**22.77**	**357**	⇓P	**P**	**13 47 19.2**	**-0.9**
baz=23							
328A	**Wristen Ranch,**	**22.81**	**0**	⇑P	**P**	**13 47 20.0**	**-0.6**
baz=23							
325A	**Bean Ranch, Si**	**22.89**	**355**	⇓P	**P**	**13 47 19.8**	**-1.6**
baz=23							
324A	**Moseley Ranch,**	**23.01**	**354**	⇑P	**P**	**13 47 21.9**	**-0.7**
baz=23							
MNTX	**Cornudas Mount**	**23.25**	**355**	*e*P	**P**	**13 47 23.4**	**-1.7**
14nm,1.4s,mb4.2							
226A	**Malaga, Loving**	**23.52**	**357**	⇑P	**P**	**13 47 26.7**	**-1.1**
baz=24							
319A	**Douglas**	**23.58**	**346**	⇓P	**P**	**13 47 26.9**	**-1.6**
baz=24							
225A	**Deer Hill, Car**	**23.61**	**356**	⇓P	**P**	**13 47 28.6**	**-0.1**
baz=24							
224A	**Cornudas Mount**	**23.64**	**354**	⇓P	**P**	**13 47 28.3**	**-0.6**
baz=24							
GDL2	**Guadalupe Moun**	**23.67**	**357**	*e*P	**P**	**13 47 28.7**	**-0.5**
9.0nm,1.2s,mb4.1							
318A	**Bisbee**	**23.82**	**345**	⇑P	**P**	**13 47 29.5**	**-1.1**
baz=24							
220A	**Playas Peak, P**	**23.93**	**348**	⇑P	**P**	**13 47 31.0**	**-0.5**
baz=24							
126A	**Clayton Basin,**	**24.10**	**358**	⇑P	**P**	**13 47 32.8**	**-0.3**
baz=24							
125A	**Gardner Draw,**	**24.14**	**356**	⇓P	**P**	**13 47 33.5**	**0.0**
baz=24							
219A	**White Tail Can**	**24.18**	**347**	⇓P	**P**	**13 47 33.4**	**-0.5**
baz=24							
124A	**Stringfield Ra**	**24.25**	**355**	⇑P	**P**	**13 47 34.5**	**0.0**
baz=24							
218A	**Dragoon**	**24.34**	**345**	⇓P	**P**	**13 47 34.8**	**-0.6**
baz=24							
217A	**Green Valley**	**24.36**	**343**	⇓P	**P**	**13 47 35.1**	**-0.4**
baz=24							
121A	**Cookes Peak, D**	**24.39**	**350**	⇑P	**P**	**13 47 35.7**	**-0.1**
baz=24							
NATX	**Nacogdoches**	**24.41**	**17**	P	**P**	**13 47 34.9**	**-1.1**
120A	**U Bar Ranch, L**	**24.57**	**348**	⇑P	**P**	**13 47 36.9**	**-0.5**
baz=25							
Z26A	**Caprock**	**24.72**	**358**	⇓P	**P**	**13 47 38.2**	**-0.5**
baz=25							
Z27A	**Tatum**	**24.74**	**359**	⇑P	**P**	**13 47 39.2**	**+0.2**
baz=25							
216A	**Three Points,**	**24.76**	**342**	⇑P	**P**	**13 47 38.2**	**-1.0**
baz=25							
Z25A	**Roswell**	**24.77**	**356**	⇓P	**P**	**13 47 38.9**	**-0.3**
baz=25							
TUC	**Tucson**	**24.86**	**344**	*e*P	**P**	**13 47 40.2**	**+0.1**
12nm,1.1s,mb4.3							
Z24A	**Sheeppen Canyo**	**24.86**	**355**	⇑P	**P**	**13 47 40.0**	**-0.1**
baz=25							
Z23A	**Rita Site, Whi**	**24.89**	**353**	⇓P	**P**	**13 47 40.2**	**-0.1**
baz=25							
119A	**Ashpeak Ranch,**	**24.92**	**347**	⇓P	**P**	**13 47 40.1**	**-0.5**
baz=25							
118A	**Homack Ranch,**	**24.96**	**346**	⇑P	**P**	**13 47 40.5**	**-0.5**
baz=25							
Z22A	**Elephant Butte**	**24.97**	**352**	⇑P	**P**	**13 47 40.3**	**-0.8**
baz=25							
117A	**Oracle**	**25.09**	**344**	⇓P	**P**	**13 47 41.1**	**-1.1**
baz=25							
Z20A	**Nine Sixteen R**	**25.11**	**349**	⇓P	**P**	**13 47 42.4**	**0.0**
baz=25							
Z21A	**St. Cloud Mine**	**25.13**	**350**	⇑P	**P**	**13 47 42.3**	**-0.3**
baz=25							
214A	**Organ Pipe Nat**	**25.16**	**340**	⇑P	**P**	**13 47 41.6**	**-1.1**
baz=25							
Y27A	**Causey**	**25.31**	**359**	⇓P	**P**	**13 47 44.1**	**0.0**
baz=25							
MSTX	**Muleshoe**	**25.39**	**0**	⇓P	**P**	**13 47 45.0**	**+0.1**
baz=26							
Y25A	**Mesa, Roswell**	**25.40**	**356**	⇓P	**P**	**13 47 44.5**	**-0.5**
baz=26							
Y23A	**Lovelace Mesa,**	**25.53**	**354**	⇑P	**P**	**13 47 45.7**	**-0.5**
baz=26							
OTAV	**Otavalo**	**25.63**	**107**	*e*P	**P**	**13 47 49.2**	**+1.9**
104nm,2.0s,mb5.0							
115A	**Sonoran Desert**	**25.65**	**341**	⇓P	**P**	**13 47 47.1**	**-0.2**
baz=26							
BNM	**Barren Site**	**25.81**	**353**	*e*P	**P**	**13 47 49.1**	**+0.5**
6.8nm,1.2s,mb4.0							
Y20A	**Horse Springs,**	**25.84**	**349**	⇓P	**P**	**13 47 49.1**	**+0.1**
baz=26							
114A	**Black Gap (USA**	**25

PDMCI	Parker Dam,Lak	27.75 340	⇓P	P	13 48 06.2 +0.1
	baz=28				
U26A	Atchley Ranch,	27.82 358	⇑P	P	13 48 07.2 +0.4
	baz=28				
U25A	Circle Dot Ran	27.86 357	⇓P	P	13 48 07.9 +0.8
	baz=28				
X13A	Yucca	27.91 340	⇑P	P	13 48 07.1 -0.5
	baz=28				
U23A	El Rito	27.91 354	⇓P	P	13 48 08.0 +0.4
	baz=28				
IRM	Iron Mountain	27.98 338	⇑P	P	13 48 07.8 -0.4
	baz=28				
V17A	Tonalea, Kykot	28.00 346	⇑P	P	13 48 09.0 +0.7
	baz=28				
PFO	Pinyon Flat Ob	28.01 335	⇑P	P	13 48 07.4 -1.1
	baz=28				
U22A	Llaves	28.04 353	⇓P	P	13 48 09.5 +0.8
	baz=28				
WUAZ	Wupatki	28.05 345	⇑P	P	13 48 09.1 +0.4
	baz=28				
WUAZ	Wupatki	28.05 345	eP	P	13 48 09.2 +0.4
	16nm,1.2s,mb4.5				
BELC	Belle Mtn. Jos	28.17 336	⇓P	P	13 48 09.3 -0.6
	baz=28				
U21A	Nageezi	28.19 352	⇑P	P	13 48 10.9 +0.8
	baz=28				
W14A	Seligman	28.24 342	⇑P	P	13 48 10.7 +0.2
	baz=28				
U20A	Newcomb	28.27 350	⇓P	P	13 48 11.0 +0.2
	baz=28				
W13A	Hualapai Mount	28.39 341	⇓P	P	13 48 12.0 +0.1
	baz=28				
V15A	Kaibab Nationa	28.54 344	⇓P	P	13 48 13.1 -0.1
	baz=29				
U18A	Rough Rock, Ch	28.57 348	⇓P	P	13 48 13.5 +0.2
	baz=29				
U16A	Tuba City	28.58 346	⇓P	P	13 48 14.0 +0.5
	baz=29				
T25A	Trinidad	28.59 357	⇑P	P	13 48 14.2 +0.6
	baz=29				
V14A	Boquillas Ranc	28.64 342	⇑P	P	13 48 14.5 +0.4
	baz=29				
T22A	Edith	28.67 353	⇓P	P	13 48 15.0 +0.7
	baz=29				
GMRC	Granite Mounta	28.72 338	⇑P	P	13 48 14.1 -0.7
	baz=29				
LDFC	Landfair	28.79 339	eP	P	13 48 16.9 +1.5
	25nm,1.3s,mb4.8				
T19A	Beclabito	28.80 350	⇑P	P	13 48 15.5 +0.1
	baz=29				
ATAH	Atahualpa	28.87 122	P	P	13 48 17.9 +1.6
	3.0nm,0.2s,mb4.6,baz=281,slow=13,SNR=9.6				
ATAH			LR	LR	13 57 30.2
	comp=Z,1μm,20.2s,MS4.4,baz=311,slow=32				
BFSC	Mount Baldy Ra	29.06 334	⇑P	P	13 48 17.7 -0.2
	baz=29				
MVCO	Mesa Verde	29.08 351	⇑P	P	13 48 18.4 +0.4
	baz=29				
V13A	Grand Canyon W	29.11 341	⇓P	P	13 48 18.1 -0.1
	baz=29				
S25A	Robets Cordova	29.11 357	⇑P	P	13 48 18.5 +0.3
	baz=29				
S24A	Houchin Ranch,	29.14 356	⇑P	P	13 48 19.1 +0.6
	baz=29				
U15A	North Rim	29.15 344	⇓P	P	13 48 19.3 +0.7
	baz=29				
T18A	Mexican Hat	29.26 348	⇓P	P	13 48 20.0 +0.4
	baz=29				
V12A	Nelson	29.28 340	⇓P	P	13 48 19.8 +0.1
	baz=29				
T17A	Navajo Res., N	29.32 347	⇓P	P	13 48 20.6 +0.5
	baz=29				
S22A	4UR Ranch, Cre	29.39 354	⇑P	P	13 48 21.8 +1.1
	baz=30				
U14A	Mt Trumbull	29.39 343	⇓P	P	13 48 21.0 +0.3
	baz=30				
TUQ	Turquoise Moun	29.41 338	⇑P	P	13 48 20.9 +0.1
	baz=30				
S21A	Coal Bank Pass	29.42 352	⇑P	P	13 48 21.5 +0.5
	baz=30				
U13A	Pakoon Wash	29.62 342	⇓P	P	13 48 22.8 0.0
	baz=30				
GSC	Goldstone	29.63 336	⇓P	P	13 48 22.4 -0.4
	baz=30				
S19A	Harvey Farm, M	29.71 350	⇓P	P	13 48 24.3 +0.8
	baz=30				
R24A	Sanders Place,	29.72 356	⇓P	P	13 48 24.3 +0.7
	baz=30				
T15A	Red Dirt Ranch	29.73 344	⇑P	P	13 48 24.2 +0.5
	baz=30				
EDW2	Edwards Air Fo	29.75 334	⇓P	P	13 48 24.2 +0.3
	baz=30				
S18A	Hurst Farm, Bl	29.82 349	⇓P	P	13 48 24.8 +0.3
	baz=30				
R22A	Saguache, Gunn	29.85 354	⇑P	P	13 48 25.6 +0.8
	baz=30				
S17A	Black Ridge (B	29.93 347	⇑P	P	13 48 25.4 -0.1
	baz=30				
SHOC	Shoshone	29.95 338	⇑P	P	13 48 25.5 -0.2
	baz=30				
T14A	Hurricane	29.96 343	⇑P	P	13 48 25.8 +0.1
	baz=30				
R20A	Redvale	30.02 351	⇓P	P	13 48 26.9 +0.6
	baz=30				
R21A	Cimarron	30.09 353	⇑P	P	13 48 27.7 +0.8
	baz=30				
LRMC	Laurel Mountai	30.14 335	⇑P	P	13 48 26.6 -0.7
	baz=30				
T13A	Saint George	30.16 342	⇓P	P	13 48 28.5 +0.9
	baz=30				
S16A	Weppner Ranch,	30.20 346	⇑P	P	13 48 28.1 +0.3
	baz=30				
R19A	Curley Farm, L	30.27 350	⇑P	P	13 48 29.1 +0.6
	baz=30				
R18A	Canyonlands Na	30.47 349	⇑P	P	13 48 30.4 +0.1
	baz=31				
Q22A	Crested Butte,	30.50 354	⇑P	P	13 48 31.7 +1.3
	baz=31				
MPMC	Manual Prospec	30.56 336	⇓P	P	13 48 30.4 -0.6
	baz=31				
ISA	Isabella	30.62 334	⇑P	P	13 48 30.5 -1.1
	baz=31				
R17A	Hanksville Air	30.67 348	⇑P	P	13 48 32.3 +0.4
	baz=31				
ARUT	Antelope Range	30.74 343	eP	P	13 48 33.9 +1.2
	1.1nm,0.3s,mb4.2				
WVT	Waverly	30.76 24	P	P	13 48 29.2 -3.7
	9.5nm,1.1s,mb4.5				
T11A	Corn Creek, Al	30.78 340	⇑P	P	13 48 33.2 +0.1
	baz=31				
Q19A	Hogan Spring (	30.91 350	⇑P	P	13 48 34.8 +0.7
	baz=31				
P19A	Cripple Cowboy	31.53 351	⇑P	P	13 48 40.0 +0.4
	baz=32				
R12A	Pony Springs,	31.58 342	⇓P	P	13 48 39.9 -0.1
	baz=32				
TMUT	Trail Mountain	31.61 348	P	P	13 48 41.6 +1.3
	6.2nm,0.4s,mb4.8				
O22A	Kremmling	31.75 355	⇑P	P	13 48 42.1 +0.6
	baz=32				
Q14A	Sevier Lake (B	31.82 344	⇑P	P	13 48 42.6 +0.5
	baz=32				
S10A	Tonopah Range,	31.86 339	⇓P	P	13 48 41.6 -0.9
	baz=32				
R11A	Troy Canyon, C	31.91 341	⇑P	P	13 48 42.9 -0.1
	baz=32				
P14A	Drum Mountains	32.33 345	⇑P	P	13 48 47.0 +0.4
	baz=32				
N22A	Wattenberg Ran	32.37 355	⇑P	P	13 48 46.7 -0.3
	baz=32				
Q11A	Duckwater	32.38 341	⇑P	P	13 48 47.4 +0.3
	baz=32				
MPU	Maple Canyon	32.40 347	eP	P	13 48 48.7 +1.5
	18nm,1.1s,mb4.8				
N20A	Spence Gulch,	32.60 352	⇑P	P	13 48 49.5 +0.5
	baz=33				
DAU	Daniels Canyon	32.70 348	eP	P	13 48 50.5 +0.7
	11nm,1.1s,mb4.7				
DUG	Dugway	32.84 346	⇓P	P	13 48 51.6 +0.5
	baz=33				
DUG	Dugway	32.84 346	eP	P	13 48 52.3 +1.3
	13nm,1.1s,mb4.8				
NVAR	Mina Array Bea	32.94 337	P	P	13 48 51.4 -0.6
	1.2nm,0.8s,mb3.9,baz=165,slow=11,SNR=8.4				
N18A	Larsen Ranch,	32.95 350	⇓P	P	13 48 52.5 +0.5
	baz=33				
P11A	Circle Ranch,	33.06 342	⇓P	P	13 48 53.3 +0.3
	baz=33				
P10A	Eureka	33.35 341	⇓P	P	13 48 56.1 +0.6
	baz=33				
O12A	Currie	33.41 343	⇓P	P	13 48 56.2 +0.1
	baz=34				
M18A	Lyman	33.46 350	⇑P	P	13 48 57.0 +0.6
	baz=34				
O11A	Cowboy Ranch,	33.56 342	⇑P	P	13 48 57.6 +0.3
	baz=34				
BGU	Big Grassy Mou	33.58 346	eP	P	13 48 57.9 +0.4
	10nm,1.3s,mb4.6				
M17A	Scullys Gap (B	33.61 349	⇓P	P	13 48 58.5 +0.8
	baz=34				
L21A	Rawlins	33.61 354	⇑P	P	13 48 57.7 -0.1
	baz=34				
HWUT	Hardware Ranch	33.91 348	eP	P	13 49 01.2 +0.8
	8.5nm,1.1s,mb4.6				
M15A	Larsen Ranch,	33.96 347	⇓P	P	13 49 01.7 +0.9
	baz=34				
L19A	Farson	34.00 351	⇓P	P	13 49 01.9 +0.7
	baz=34				
N12A	Clover Valley,	34.04 343	⇓P	P	13 49 01.8 +0.3
	baz=34				
N12A	Clover Valley,	34.04 343	P	P	13 49 01.9 +0.4
	9.8nm,1.1s,mb4.7				
HDIL	Hopedale	34.17 19	eP	P	13 49 02.1 -0.5
M14A	Sheep Mountain	34.21 346	⇑P	P	13 49 03.2 +0.2
	baz=34				
WCN	Washoe City	34.26 336	⇑P	P	13 49 03.0 -0.4
	baz=34				
M13A	Montello	34.28 345	⇓P	P	13 49 03.3 -0.2
	baz=34				
M13A	Montello	34.28 345	eP	P	13 49 02.3 -1.2
	7.0nm,1.0s,mb4.5				
BMN	Battle Mountai	34.33 340	P	P	13 49 04.4 +0.4
	15nm,1.3s,mb4.8				
K20A	Yellowstone Ra	34.41 353	⇓P	P	13 49 05.5 +0.8
	baz=34				
L15A	Malad City	34.46 347	⇑P	P	13 49 05.7 +0.6
	baz=34				
M12A	Wells	34.53 344	⇓P	P	13 49 06.1 +0.3
	baz=35				
K18A	Toltan Ranch,	34.63 351	⇑P	P	13 49 07.4 +0.8
	baz=35				
K19A	Absolon Red Bu	34.64 352	⇓P	P	13 49 07.3 +0.6
	baz=35				
BW06	Boulder Array	34.68 351	⇓P	P	13 49 08.1 +1.1
	baz=35				
L14A	Malta	34.68 346	⇑P	P	13 49 07.6 +0.5
	baz=35				
PDAR	Pinedale Array	34.68 351	P	P	13 49 07.0 -0.1
	3.1nm,0.9s,mb4.2,baz=152,slow=6.7,SNR=24				
M10A	I.L. Ranch, Tu	35.10 342	⇓P	P	13 49 10.5 -0.2
	baz=35				
K15A	Arbon	35.15 348	⇓P	P	13 49 11.6 +0.6
	baz=35				
K14A	Jones Ranch, D	35.15 347	⇓P	P	13 49 11.0 -0.1
	baz=35				
L12A	House Creek Ra	35.23 344	⇑P	P	13 49 12.4 +0.6
	baz=35				
J17A	Brown Place, J	35.45 350	⇑P	P	13 49 14.4 +0.8
	baz=36				
L11A	Cat Creek Ranc	35.46 343	⇑P	P	13 49 14.4 +0.7
	baz=36				
K13A	Stover Farm, H	35.47 346	⇓P	P	13 49 14.3 +0.5
	baz=36				
J16A	Bone	35.53 349	⇑P	P	13 49 14.9 +0.6
	baz=36				
RRI2	Red Ridge	35.54 349	eP	P	13 49 14.6 +0.1
	4.3nm,0.8s,mb4.4				
K12A	Draper Farm, C	35.66 345	⇑P	P	13 49 15.8 +0.3
	baz=36				
LOHW	Long Hollow	35.67 350	eP	P	13 49 14.9 -0.7
	9.6nm,1.2s,mb4.6				
J15A	Blackfoot	35.81 348	⇓P	P	13 49 16.6 -0.2
	baz=36				
RPN	Rapa Nui	35.92 190	LR	LR	14 00 09.3
	comp=Z,492nm,20.2s,MS4.3,baz=151,slow=30				
J14A	Carey	35.97 347	⇓P	P	13 49 18.6 +0.4
	baz=36				
IMW	Indian Meadow	36.01 350	eP	P	13 49 19.2 +0.8
	4.2nm,1.0s,mb4.3				
K11A	Parker Ranch,	36.10 343	⇓P	P	13 49 19.3 +0.1
	baz=36				
J13A	Cove Ranch, Pi	36.20 346	⇑P	P	13 49 20.4 +0.4
	baz=36				
J12A	Stokes Ranch,	36.29 345	⇓P	P	13 49 21.1 +0.2
	baz=36				
K10A	MacKenzie Ranc	36.34 342	⇓P	P	13 49 21.1 -0.2
	baz=36				
HLID	Hailey	36.41 346	⇑P	P	13 49 22.4 +0.5
	baz=36				
HLID	Hailey	36.41 346	eP	P	13 49 21.8 -0.1
	6.5nm,1.2s,mb4.4				
I14A	Mackay	36.53 347	⇓P	P	13 49 23.2 +0.3
	baz=37				
WVOR	Wild Horse Val	36.59 340	eP	P	13 49 23.7 +0.3
	11nm,1.4s,mb4.5				
MFID	Camas Ranch	36.63 344	⇓P	P	13 49 24.2 +0.4
	baz=37				
I13A	Wildhorse Cree	36.67 346	⇓P	P	13 49 24.8 +0.7
	baz=37				
MOD	Modoc	36.71 338	P	P	13 49 24.4 -0.1
	6.8nm,1.0s,mb4.4				
I12A	Atlanta	36.80 345	⇓P	P	13 49 25.2 0.0
	baz=37				
H15A	Lima	37.02 348	⇑P	P	13 49 27.9 +0.8
	baz=37				
H14A	Leadore	37.17 348	⇑P	P	13 49 29.0 +0.7
	baz=37				
G18A	Lazy EL Ranch,	37.18 352	⇑P	P	13 49 28.9 +0.5
	baz=37				
MCMT	McKenzie Canyo	37.26 348	eP	P	13 49 30.5 +1.4
	3.0nm,1.2s,mb4.0				
H13A	Challis	37.32 347	⇓P	P	13 49 30.4 +0.8
	baz=37				
G17A	Pierce Place,	37.36 351	⇑P	P	13 49 31.2 +1.2
	baz=37				
H12A	Diamond D Ranc	37.45 346	⇑P	P	13 49 31.2 +0.5
	baz=38				
G16A	Moss Hill, Enn	37.45 350	⇓P	P	13 49 31.1 +0.4
	baz=38				
YBH	Yreka Blue Hor	37.51 335	P	P	13 49 28.8 -2.5
	6.5nm,1.1s,mb4.3,baz=142,slow=4.2,SNR=8.4				
YBH	Yreka Blue Hor	37.51 335	P	P	13 49 27.5 -3.8
	8.2nm,1.1s,mb4.4				
G15A	Dillon	37.52 349	⇑P	P	13 49 32.0 +0.7
	baz=38				
K05A	Summer Lake	37.65 338	⇓P	P	13 49 32.5 +0.1
	baz=38				
GCMT	Greycliff	37.66 352	eP	P	13 49 32.9 +0.4
	3.8nm,1.0s,mb4.1				
DLMT	Dillon	37.73 349	eP	P	13 49 33.1 +0.1
	14nm,1.3s,mb4.5				
F18A	Big Timber	37.78 352	⇑P	P	13 49 33.6 +0.1
	baz=38				
G13A	Cobalt	37.81 347	⇑P	P	13 49 33.5 -0.2
	baz=38				
BOZ	Bozeman (W)	37.83 350	⇓P	P	13 49 34.4 +0.6
	baz=38				
H11A	Donnelly	37.88 345	⇓P	P	13 49 34.6 +0.2
	baz=38				
F17A	Fitzpatrick Pl	37.92 351	⇓P	P	13 49 35.8 +1.1
	baz=38				
F16A	Kennard Place,	37.96 350	⇑P	P	13 49 35.6 +0.6
	baz=38				
G12A	Big Creek, Yel	38.10 346	⇑P	P	13 49 36.5 +0.3
	baz=38				
F15A	Butte	38.17 349	⇓P	P	13 49 37.3 +0.5
	baz=38				
I07A	Izee	38.35 341	⇓P	P	13 49 38.3 0.0
	baz=38				
E18A	Harlowton	38.46 352	⇑P	P	13 49 40.0 +0.9
	baz=38				
E17A	Martinsdale	38.49 351	⇓P	P	13 49 39.5 0.0
	baz=39				
F13A	Darby	38.49 347	⇓P	P	13 49 39.6 +0.1
	baz=39				
F12A	Elk City	38.68 346	⇑P	P	13 49 40.6 -0.4
	baz=39				
E15A	Deer Lodge	38.76 349	⇑P	P	13 49 42.0 +0.3
	baz=39				
E14A	Clinton	38.91 348	⇑P	P	13 49 43.6 +0.6
	baz=39				
E13A	Victor	39.08 348	⇑P	P	13 49 44.4 -0.1
	baz=39				
D17A	Six Diamond Ra	39.14 352	⇑P	P	13 49 44.2 -0.7
	baz=39				
D16A	Dana Ranch, Ca	39.15 351	⇑P	P	13 49 44.7 -0.3
	baz=39				
G08A	Pilot Rock	39.26 342	⇓P	P	13 49 46.5 +0.6
	baz=39				
COWI	Conover	39.32 15	eP	P	13 49 44.8 -1.6
	12nm,1.2s,mb4.5				
CHMT	Chamberlain Mo	39.34 349	eP	P	13 49 46.8 +0.2
E12A	Beaver Dam Sad	39.37 346	⇑P	P	13 49 46.9 +0.1
	baz=39				
D14A	Greenough	39.55 349	⇓P	P	13 49 48.9 +0.5
	baz=40				
C17A	Wharram Farm,	39.62 352	⇓P	P	13 49 48.7 -0.2
	baz=40				
SLMT	Seeley Lake	39.71 349	P	P	13 49 49.2 -0.4
	7.6nm,1.3s,mb4.3				
D13A	Huson	39.76 348	⇓P	P	13 49 49.4 -0.7
	baz=40				
H04A	Detroit Lake	39.81 338	⇓P	P	13 49 49.6 -0.9
	baz=40				
EGMT	Eagleton	39.87 353	⇑P	P	13 49 51.3 +0.3
	baz=40				
C16A	Fuhringer Ranc	39.94 351	⇑P	P	13 49 51.7 +0.2
	baz=40				
AGMN	Agassiz Nation	40.15 7	eP	P	13 49 51.9 -1.3
	21nm,1.3s,mb4.7				
EYMN	Ely	40.52 12	eP	P	13 49 54.0 -2.3
	24nm,1.4s,mb4.6				
D08A	Wollman Farm,	40.84 343	⇑P	P	13 49 59.1 +0.1
	baz=41				
C11A	Tepee Creek (N	40.87 346	⇓P	P	13 49 59.4 +0.2
	baz=41				
B13A	Whitefish	40.98 348	⇓P	P	13 50 00.4 +0.2
	baz=41				
A16A	West Butte Ran	41.03 351	⇑P	P	13 50 00.5 0.0
	baz=41				
OD2	Odessa Site #2	41.09 344	eP	P	13 49 59.2 -1.8
	9.9nm,1.1s,mb4.3				
A14A	Double T Ranch	41.35 349	⇑P	P	13 50 02.9 -0.4
	baz=41				
LON	Longmire	41.47 340	eP	P	13 50 04.7 +0.5
	8.3nm,1.1s,mb4.3				
A13A	Flathead Natio	41.51 348	⇑P	P	13 50 04.4 0.0
	baz=42				
ETW	Entiat	41.75 342	eP	P	13 50 07.8 +1.3
	13nm,1.2s,mb4.4				
ULM	Lac du Bonnet	42.06 7	LR	LR	14 06 39.2
	comp=Z,312nm,20.3s,MS4.2,baz=38,slow=35				
LPAZ	La Paz	42.24 126	P	P	13 50 10.8 -0.1
	7.9nm,0.9s,mb4.3,baz=315,slow=8.3,SNR=23				
LPAZ	La Paz	42.24 126	eP	P	13 50 11.2 +0.3
	30nm,1.3s,mb4.8				
NLWA	Neilton Lookou	42.73 339	⇑P	P	13 50 14.6 +0.1
	baz=43				
RKT	Rikitea	44.42 224	eLR	LR	14 03 01.1
	848nm,28.2s,baz=45				
RKT			eT		14 37 24.6
	16nm,0.3s				
EDM	Edmonton	45.45 351	eP	P	13 50 33.7 -2.4
PMOR	Pomariorio Ree	50.38 243	eT		14 44 48.4
	8.3nm,0.3s				
CFAA	Coronel Fontan	51.78 142	LR	LR	14 08 50.8
	comp=Z,33nm,18.4s,MS3.4,baz=309,slow=31				
PPT	Papeete	52.92 241	eS	S	13 58 58.3 -2.7
	99nm,27.2s				
PPT			eLR	LR	14 06 32.1
	483nm,25.2s,baz=58				
PPT	Papeete	52.92 241	LR	LR	14 08 46.4
	comp=Z,200nm,21.9s,MS4.1,baz=60,slow=30				
SCHQ	Schefferville	54.40 25	LR	LR	14 16 46.7
	comp=Z,229nm,18.1s,MS4.3,baz=41,slow=38				
YKA	Yellowknife Ar	54.62 353	P	P	13 51 42.8 -2.8
	1.2nm,0.7s,mb4.1,baz=166,slow=7.6,SNR=5.6				
YKA			PcP	PcP	13 52 48.9 +0.7
	1.4nm,0.8s,baz=155,slow=3.2,SNR=4.7				
YKA	Yellowknife Ar	54.62 353	P	P	13 51 42.8 -2.8
YKA			PcP	PcP	13 52 48.9 +0.7
TBI	Tubuai	55.47 234	eS	S	13 59 34.4 -0.9
	239nm,28.2s				
TBI			eLR	LR	14 07 55.7
	393nm,26.8s,baz=55				
TBI			eT		14 51 10.6
	8.7nm,0.3s				
CPUP	Villa Florida	56.10 130	P	P	13 51 55.3 -1.5
	6.5nm,1.0s,mb4.6,baz=292,slow=8.3,SNR=7.4				
CPUP			LR	LR	14 15 10.9
	comp=Z,125nm,21.6s,MS4.0,baz=300,slow=35				
DAWY	Dawson	61.27 343	eP	P	13 52 30.8 -1.4
MENT	Mentasta	61.84 340	P	P	13 52 34.8 -1.3
EGAK	Eagle	62.32 343	eP	P	13 52 37.2 -2.1
	3.2nm,0.8s,mb4.5				
PMR	Palmer	62.92 337	eP	P	13 52 40.8 -2.6
	13nm,1.2s,mb4.9				
INK	Inuvik	63.13 348	eP	P	13 52 43.0 -1.6
	13nm,1.2s,mb4.9				
RAR	Rarotonga	63.19 241	LR	LR	14 14 30.0
	comp=Z,63nm,18.8s,MS3.8,baz=105,slow=31				
TRF	Thorofare Moun	64.46 338	eP	P	13 52 52.7 -0.7
	7.4nm,1.1s,mb4.6				
PPLA	Purkeypile	64.85 337	eP	P	13 52 54.5 -1.4
	28nm,1.2s,mb5.2				
BPAW	Bear Paw Mtn.	65.10 339	eP	P	13 52 55.1 -2.5
	4.5nm,1.2s,mb4.4				
COLD	Coldfoot	66.71 342	eP	P	13 53 06.7 -1.2
	7.5nm,1.2s,mb4.6				
USHA	Ushuaia	69.32 160	LR	LR	14 16 54.7
	comp=Z,319nm,18.4s,MS4.6,baz=55,slow=30				
PETK	Petropavlovsk-	88.94 324	LR	LR	14 28 40.3
	comp=Z,40nm,18.9s,MS3.9,baz=199,slow=31				
TIXI	Tiksi	93.19 346	eP	P	13 55 30.2 -0.9
	5.7nm,1.0s,mb5.0				
DZM	Mont Dzumac	93.79 248	eLR	LR	14 25 35.6
	63nm,23.6s				
NOA	NORSAR Array B	93.94 26	LR	LR	14 36 06.5
	comp=Z,107nm,19.1s,MS4.3,baz=290,slow=34				
ARCES	ARCESS Array B	94.54 16	LR	LR	14 38 21.5
	comp=Z,154nm,20.1s,MS4.5,baz=120,slow=36				
FINES	FINESS Array B	99.82 22	LR	LR	14 41 27.3
	comp=Z,94nm,20.4s,MS4.3,baz=338,slow=36				
HHC	Hu-ho-hao-te	121.61 330	ePKP	PKPdf	14 01 09.0 -2.1
HHC			PP	PP	14 02 43.9 +1.2
HHC			PKS		14 04 44.9
HHC			SKS	SKSdf	14 08 19.8 -0.9
HHC			SKKS	SKKSac	14 09 36.3 -4.2
HHC			SS	SS	14 19 16.8 +1.2
HHC			AMB	AMB	
	comp=Z,57nm,9.0s				
HHC			LR	LR	
	comp=N,120nm,19.6s,MS4.7				
HHC			LR	LR	
	comp=E,140nm,19.3s,MS4.7				
HHC			LR	LR	
	comp=Z,140nm,19.2s,MS4.6				
WRA	Warramunga Arr	123.64 252	PKP	PKPdf	14 01 15.1 -0.4
	comp=Z,1.1nm,0.8s,baz=93,slow=2.0,SNR=7.7				
ASAR	Alice Springs	123.76 247	PKP	PKPdf	14 01 13.8 -1.9
	comp=Z,0.8nm,0.8s,baz=99,slow=2.0,SNR=5.5				
MKAR	Makanchi Array	124.81 356	PKP	PKPdf	14 01 16.7 -0.4
	comp=Z,0.2nm,0.2s,baz=18,slow=5.0,SNR=3.0				
WMQ	Urumqi	127.10 350	ePKP	PKPdf	14 01 22.0 +0.4
WMQ			LR	LR	
	comp=N,97nm,25.0s				
WMQ			LR	LR	
	comp=Z,130nm,23.0s,MS4.5				
LZH	Lanzhou	129.08 332	ePKP	PKPdf	14 01 21.6 -4.0
LZH			sPKP		14 01 26.1
CD2	Chengdu	133.29 328	PKP	PKPdf	14 01 35.0 +1.3
CHTO	Chiang Mai	145.42 322	ePKPbc	PKPbc	14 01 57.3 +1.4
CMAR	Chiang Mai Arr	145.69 321	PKPbc	PKPbc	14 01 57.4 +0.6
	comp=Z,2.7nm,0.7s,baz=15,slow=2.3,SNR=14				

*KISR **16** 13:56:18.1±0.8,31°.65N×47°.19E,h42km±999km,ML3.0*
*TEH **16** 13:56:19.9,30°.85N×46°.85E,h35km*
*ISCJB **16** 13:56:25.4±0.6,31°.39N±0°.03×47°.25E±0°.07,h33km,Error ellipse: s-maj=9.2km s-min=4.8km az=4.6*
*CSEM **16** 13:56:25.4±0.3,31°.29N×47°.19E,h40km,ML3.0,Error ellipse: s-maj=12.1km s-min=6.6km az=90.0*

ISC 16 13:56:27.3±0.6,31°.40N±0°.03×47°.28E±0°.09,h35km,n25,
σ1§11/32,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
NAY	Al-Naaiem	2.15	181	eP	Pn	13 56 57.0	-3.6
NAY				eS	Sn	13 57 26.8	+0.8
NAY				AML	AML	13 57 36.5	
	comp=Z,52nm,0.4s						
NAY	Al-Naaiem	2.15	181	eP	Pn	13 56 57.0	-3.6

NAY				*e*S	Sn	13 57 26.8	+0.8
KBD	**Kabd**	**2.25**	**171**	*e*P	Pn	13 56 58.8	-3.2
KBD				*e*S	Sn	13 57 29.3	+0.8
KBD				AML	AML	13 57 31.6	
	comp=Z,62nm,0.5s						
KBD	**Kabd**	**2.25**	**171**	*e*P	Pn	13 56 58.8	-3.2
KBD				*e*S	Sn	13 57 29.3	+0.8
RDF	**Al-Radifah**	**2.48**	**175**	*e*P	Pn	13 57 02.5	-2.6
RDF				*e*S	Sn	13 57 35.3	+1.1
RDF				AML	AML	13 57 39.4	
	comp=Z,74nm,0.5s						
RDF	**Al-Radifah**	**2.48**	**175**	*e*P	Pn	13 57 02.5	-2.6
RDF				*e*S	Sn	13 57 35.3	+1.1
IKOM	**Komasi**	**2.77**	**4**	*e*Pn	Pn	13 57 09.5	+0.3
IKOM				*e*		13 58 18.0	
	comp=Z,2μm,0.3s						
IKOM	**Komasi**	**2.77**	**4**	*e*Pn	Pn	13 57 09.5	+0.3
IGHG	**Ghaleghazi**	**2.98**	**349**	*e*Pn	Pn	13 57 11.5	-0.5
IGHG				*e*		13 58 21.5	
	comp=Z,2μm,0.3s						
IGHG	**Ghaleghazi**	**2.98**	**349**	*e*Pn	Pn	13 57 11.5	-0.5
BHD	**Baghdad**	**3.08**	**308**	*e*x	x	13 57 15.0	
BHD				*e*x	x	13 58 03.0	
BHD	**Baghdad**	**3.08**	**308**	*e*Pn	Pn	13 57 15.0	+1.6
IVIS	**Veis**	**3.14**	**353**	*e*Pn	Pn	13 57 13.6	-0.6
IVIS	**Veis**	**3.14**	**353**	*e*Pn	Pn	13 57 13.6	-0.6
IPIR	**Pirpir**	**3.32**	**66**	*e*Pn	Pn	13 57 17.2	+0.5
IPIR				*e*		13 58 28.9	
	comp=Z,574nm,0.3s						
IPIR	**Pirpir**	**3.32**	**66**	*e*Pn	Pn	13 57 17.2	+0.5
ILIN	**Lien**	**3.52**	**356**	*e*Pn	Pn	13 57 19.2	-0.2
ILIN				*e*		13 57 23.7	
	comp=Z,849nm,0.1s						
ILIN	**Lien**	**3.52**	**356**	*e*Pn	Pn	13 57 19.2	-0.2
IKLH	**Kolahrood**	**4.11**	**61**	*e*Pn	Pn	13 57 27.9	+0.4
IKLH				*e*		13 57 29.1	
	comp=Z,374nm,0.2s						
IKLH				*e*Sn	Sn	13 58 18.5	+4.1
IKLH	**Kolahrood**	**4.11**	**61**	*e*Pn	Pn	13 57 27.9	+0.4
IKLH				*e*Sn	Sn	13 58 18.5	+4.1
IGAR	**Gharneh**	**4.17**	**75**	*e*Pn	Pn	13 57 27.4	-1.0
IGAR				*e*		13 58 53.1	
	comp=Z,248nm,0.3s						
IZEF	**Zefreh**	**4.53**	**69**	*e*Pn	Pn	13 57 33.3	-0.1
IZEF				*e*		13 57 37.7	
	comp=Z,150nm,0.1s						
IZEF	**Zefreh**	**4.53**	**69**	*e*Pn	Pn	13 57 33.3	-0.1
IRAZ	**Razeghan**	**4.56**	**28**	*e*Pn	Pn	13 57 34.4	+0.6
IRAZ				*e*		13 57 45.6	
	comp=Z,582nm,0.3s						
IRAZ	**Razeghan**	**4.56**	**28**	*e*Pn	Pn	13 57 34.4	+0.6

*CASC **16** 14:00:05.6±2.1, 10°.49N×86°.63W, h0km±12km, MD3.7, ML2.9*
*IDC **16** 14:00:08.5±1.7, 11°.79N×85°.22W, h0km, mb3.4/3, mb1 3.9/3, mb1mx3.6/17, mbtmp3.4/3, Error ellipse: s-maj=94.1km s-min=12.4km az=74.0*
ISC 16 14:00:08.8±1.9, 10°.59N±0°.07×86°.49W±0°.09, h16km±10km, n33, σ0s89/34, mb3.3/3, 1C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NY14	**Universidad de**	**0.94**	**86**	*i* P	**Pg**	**14 00 27.0**	**-0.1**
NY14				*i* S	**Sg**	**14 00 42.1**	**+2.7**
SSN	**San Juan del S**	**0.95**	**41**	⇑*i*P	**Pg**	**14 00 26.8**	**-0.3**
SSN				*e*S	**Sg**	**14 00 44.9**	**+5.3**
VCR	**Vista de Mar**	**0.96**	**118**	*e*P	**Pg**	**14 00 27.1**	**-0.2**
GBS3	**Finca Las lm¨¡**	**1.03**	**79**	*i* P	**Pn**	**14 00 27.8**	**-0.8**
LAPC	**Finca la Perla**	**1.05**	**80**	*i* P	**Pn**	**14 00 28.0**	**-0.9**
GB1A	**Borinquen Arri**	**1.10**	**78**	*i* P	**Pb**	**14 00 29.0**	**-0.4**
GPS1	**Guardaparques**	**1.14**	**80**	*i* P	**Pb**	**14 00 29.3**	**-0.7**
CONN	**Concepcion**	**1.29**	**41**	*e*P	**Pn**	**14 00 32.4**	**+0.2**
CUI	**Cuipilapa**	**1.30**	**87**	*i* P	**Pn**	**14 00 32.0**	**-0.4**
APON	**Apoyo**	**1.39**	**17**	*e*P	**Pn**	**14 00 34.5**	**+1.0**
CRUN	**El Crucero**	**1.40**	**8**	*e*P	**Pn**	**14 00 34.6**	**+0.9**
MASN	**Masaya**	**1.43**	**13**	*e*P	**Pn**	**14 00 35.2**	**+1.1**
TICN	**Ticuantepe**	**1.46**	**10**	*e*P	**Pn**	**14 00 34.5**	**0.0**
JTS	**JuntasAbangare**	**1.54**	**101**	Pg	**Pn**	**14 00 35.0**	**-0.6**
	9.8nm,0.3s,baz=305,slow=20,SNR=27						
JTS				Lg		14 00 57.2	
	30nm,0.3s,baz=48,slow=23,SNR=9.8						
JTS	**JuntasAbangare**	**1.54**	**101**	*e*P	**Pn**	**14 00 35.1**	**-0.5**
JCR	**Jicaral**	**1.54**	**118**	*e*P	**Pn**	**14 00 35.0**	**-0.6**
XAVN	**Gruta Xavier**	**1.56**	**6**	*e*P	**Pn**	**14 00 35.8**	**-0.2**
COPN	**Copaltepe**	**1.59**	**356**	*i* P	**Pn**	**14 00 36.0**	**-0.3**
CSAN		**1.59**	**2**	*e*P	**Pn**	**14 00 35.8**	**-0.6**
APYN	**Apoyeque**	**1.64**	**5**	*e*P	**Pn**	**14 00 36.9**	**-0.1**
MOMN	**Momotombo**	**1.81**	**358**	*e*P	**Pn**	**14 00 39.2**	**-0.2**
CNGN	**Cerro Negro**	**1.91**	**354**	*e*P	**Pn**	**14 00 40.2**	**-0.6**
CGA2	**Cerro Gallo 2**	**2.07**	**106**	*e*P	**Pn**	**14 00 43.3**	**+0.4**
CRIN	**San Cristobal**	**2.17**	**345**	*i* P	**Pn**	**14 00 44.1**	**-0.3**
PRS1	**Puriscal**	**2.22**	**105**	*e*P	**Pn**	**14 00 45.4**	**+0.3**
LAJ	**Bijagual**	**2.44**	**107**	*e*P	**Pn**	**14 00 44.5**	**-3.4**
URSC	**Urasca**	**2.77**	**105**	*e*P	**Pn**	**14 00 54.0**	**+1.5**
BUS	**Buena Vista**	**2.88**	**111**	*e*P	**Pn**	**14 00 55.5**	**+1.5**
BAR1		**3.40**	**113**	*e*P	**Pn**	**14 01 00.8**	**-0.5**
TXAR	**Lajitas Array**	**24.61**	**322**	P	**P**	**14 05 28.6**	**+0.1**
	0.7nm,0.6s,mb3.4,baz=136,slow=9.6,SNR=14						
PDAR	**Pinedale Array**	**37.85**	**332**	P	**P**	**14 07 23.6**	**-1.2**
	0.2nm,0.4s,mb3.2,baz=135,slow=8.3,SNR=2.9						
NVAR	**Mina Array Bea**	**39.72**	**320**	P	**P**	**14 07 43.2**	**+2.6**
	0.6nm,0.8s,mb3.4,baz=142,slow=7.9,SNR=5.4						
NVAR				PcP	PcP	14 09 50.1	+3.0
	0.8nm,0.7s,baz=126,slow=4.6,SNR=7.2						
CMAR	**Chiang Mai Arr**	**150.65**	**349**	PKPbc	PKPbc	14 20 00.4	-0.7
	0.3nm,0.5s,baz=3.3,slow=4.7,SNR=3.2						

*IDC **16** 14:16:50.6±10.0, 6°.57S×129°.90E, h52km±100km, mb3.7/4, mb1 4.0/7, mb1mx3.6/18, mbtmp3.8/7, ML4.1/3, Error ellipse: s-maj=130.2km s-min=25.8km az=54.0*
*ISCJB **16** 14:16:55.6±2.2, 6°.9S±0°.1×129°.6E±0°.1, h117km±23km, mb3.8/5, Error ellipse: s-maj=25.5km s-min=13.4km az=149.8*
*NEIC **16** 14:16:58.1±2.6, 6°.92S×129°.51E, h124km±29km, mb4.0/2, Error ellipse: s-maj=25.5km s-min=18.0km az=57.0*
ISC 16 14:17:00.6±1.5, 7°.07S±0°.09×129°.6E±0°.1, h155km±16km, n15, σ1s11/20, mb3.7/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.27**	**154**	*e*P	**Pn**	**14 18 32.1**	**+1.2**
	98nm,0.4s						
KAKA				*e*S	**Sn**	**14 19 40.8**	**-0.9**
FITZ	**Fitzroy Crossi**	**11.62**	**199**	P	**Pn**	**14 19 40.9**	**-0.9**
	0.4nm,0.3s,baz=37,slow=10.0,SNR=31						
FITZ				S	**Sn**	**14 21 41.5**	**-8.9**
	0.7nm,0.3s,baz=271,slow=23,SNR=5.1						
FITZ	**Fitzroy Crossi**	**11.62**	**199**	*e*P	**Pn**	**14 19 41.0**	**-0.8**
FITZ				S	**Sn**	**14 21 41.5**	**-8.9**
WRAB	**Tennant Creek**	**13.60**	**161**	*e*P	**Pn**	**14 20 06.6**	**-0.6**
	5.4nm,0.5s						
WRA	**Warramunga Arr**	**13.60**	**161**	P	**Pn**	**14 20 06.1**	**-1.1**
	1.2nm,0.3s,baz=219,slow=23,SNR=62						
WRA				S	**Sn**	**14 22 31.3**	**-6.8**
	1.5nm,0.3s,baz=337,slow=22,SNR=7.0						
MBWA	**Marble Bar**	**16.94**	**213**	*e*P	**Pn**	**14 20 49.8**	**+1.2**
ASAR	**Alice Springs**	**17.01**	**166**	P	**Pn**	**14 20 52.0**	**+2.6**
	1.0nm,0.3s,baz=337,slow=9.7,SNR=110						
ASAR				S	**S**	**14 23 57.4**	**-0.8**
	0.4nm,0.3s,baz=358,slow=28,SNR=6.7						
STKA	**Stephens Creek**	**27.10**	**157**	P	**P**	**14 22 31.4**	**+2.5**
	1.8nm,0.7s,mb3.8,baz=320,slow=14,SNR=3.0						
STKA	**Stephens Creek**	**27.10**	**157**	P	**P**	**14 22 31.4**	**+2.5**
COCO	**West Island**	**32.67**	**258**	P	**P**	**14 23 18.3**	**-0.1**
CMAR	**Chiang Mai Arr**	**39.46**	**310**	P	**P**	**14 24 15.4**	**-0.5**
	0.9nm,0.5s,mb3.7,baz=137,slow=6.7,SNR=6.3						
CHTO	**Chiang Mai**	**39.68**	**311**	*e*P	**P**	**14 24 17.1**	**-0.7**
	1.1nm,0.6s,mb3.7						
MK31	**Makanchi Array**	**68.06**	**327**	*e*P	**P**	**14 27 43.8**	**+0.4**
MKAR	**Makanchi Array**	**68.06**	**327**	P	**P**	**14 27 43.8**	**+0.5**
	0.7nm,0.4s,mb3.8,baz=112,slow=9.2,SNR=11						
ZALV	**Zalesovo Beam**	**71.47**	**334**	P	**P**	**14 28 02.9**	**-1.0**
	0.5nm,0.3s,mb3.7,baz=122,slow=5.4,SNR=2.6						

MEX 16 14:36:40.1±0.5, 16°.48N×99°.33W, h16km±7km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.64**	**308**	*i* P	Pg	14 36 50.8	-1.9
ACX				*i* S	Sg	14 36 59.7	-1.6
CAIG	**El Cayaco**	**1.06**	**302**	*i* P	Pb	14 36 56.9	-3.2
CAIG				*i* S	Sb	14 37 09.3	-4.5
PNIG	**Pinotepa**	**1.16**	**94**	*i* P	Pn	14 36 58.2	-3.4
PNIG				*i* S	Sb	14 37 11.5	-4.9
MEIG	**Mezcala**	**1.47**	**349**	*i* P	Pn	14 37 02.8	-3.1
MEIG				*e*S	Sn	14 37 20.1	-4.7
PLIG	**Platanillo**	**1.91**	**355**	*i* P	Pn	14 37 08.4	-3.6
PLIG				*i* S	Sn	14 37 31.4	-4.4

*ISCJB **16** 14:50:54.6±1.0, 28°.5S±0°.2×62°.6E±0°.2, h10km, mb4.1/11, MS3.9/4, Error ellipse: s-maj=32.1km s-min=20.2km az=155.5*
*IDC **16** 14:50:54.8±1.0, 28°.48S×62°.55E, h0km, mb4.1/9, mb1 4.2/9, mb1mx4.0/23, mbtmp4.1/9, MS3.4/3, Ms1 3.5/3, ms1mx3.1/24, Error ellipse: s-maj=33.2km s-min=23.3km az=57.0*
*NEIC **16** 14:50:56.1±0.6, 28°.45S×62°.43E, h10km, mb4.1/1, Error ellipse: s-maj=22.2km s-min=15.2km az=57.0*
ISC 16 14:50:56.6±1.0, 28°.4S±0°.2×62°.5E±0°.2, h10km, n17, σ0s65/13, mb4.1/11, MS3.9/4, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAW	**Mawson**	**39.19**	**180**	LR	LR	15 11 50.3	
	comp=Z,66nm,20.4s,MS3.5,baz=171,slow=32						
FITZ	**Fitzroy Crossi**	**58.31**	**95**	P	**P**	**15 00 50.7**	**-1.4**
	3.3nm,0.8s,mb4.4,baz=319,slow=1.5,SNR=4.9						
FITZ	**Fitzroy Crossi**	**58.31**	**95**	P	**P**	**15 00 52.5**	**+0.4**
CMAR	**Chiang Mai Arr**	**58.42**	**41**	P	**P**	**15 00 53.2**	**+0.5**
	2.0nm,0.8s,mb4.2,baz=232,slow=7.7,SNR=15						
CMAR				LR	LR	15 22 17.8	
	comp=Z,30nm,18.3s,MS3.4,baz=178,slow=32						
QSPA	**South Pole Qui**	**61.71**	**180**	P	**P**	**15 01 14.8**	**+0.3**
	2.5nm,0.9s,mb4.3,baz=291,slow=2.7,SNR=6.0						
QSPA	**South Pole Qui**	**61.71**	**180**	P	**P**	**15 01 14.8**	**+0.3**
ASAR	**Alice Springs**	**63.44**	**104**	P	**P**	**15 01 26.8**	**-0.2**
	2.0nm,0.8s,mb4.3,baz=248,slow=6.6,SNR=17						
WRA	**Warramunga Arr**	**65.20**	**100**	P	**P**	**15 01 38.5**	**0.0**
	2.9nm,0.8s,mb4.3,baz=248,slow=5.4,SNR=13						
BRTR	**Keskin Array B**	**72.96**	**337**	P	**P**	**15 02 26.3**	**+0.1**
	1.0nm,0.8s,mb3.8,baz=151,slow=2.8,SNR=4.8						
GTA	**Gaotai**	**75.92**	**29**	P	**P**	**15 02 44.3**	**+0.9**
GTA				pP	pP	15 02 48.8	+2.1
GTA				sP	sP	15 02 51.3	+3.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.1						
ABKAR	**Akbulak array**	**77.38**	**358**	P	**P**	**15 02 49.8**	**-1.5**
	comp=Z,1.3nm,0.8s,mb3.9						
BVAR	**Borovoye Array**	**81.41**	**5**	P	**P**	**15 03 13.7**	**+0.4**
	comp=Z,0.3nm,0.3s,mb3.6,baz=172,slow=5.5,SNR=3.1						
ZALV	**Zalesovo Beam**	**84.29**	**13**	P	**P**	**15 03 28.2**	**0.0**
	comp=Z,2.1nm,0.9s,mb4.3,baz=211,slow=4.9,SNR=5.5						
ZALV				LR	LR	15 36 52.1	
	comp=Z,20nm,19.5s,MS3.5,baz=139,slow=33						
SONM	**Songino Array**	**85.54**	**28**	P	**P**	**15 03 34.5**	**-0.2**
	comp=Z,1.2nm,0.9s,mb4.1,baz=218,slow=4.1,SNR=5.0						
RAO	**Raoul Island**	**98.58**	**130**	LR	LR	15 37 29.9	
	comp=Z,634nm,21.5s,MS5.1,baz=138,slow=28						
SADO	**Sadowa**	**145.56**	**309**	PKPbc	PKPbc	15 10 34.3	-0.9
	comp=Z,4.5nm,0.8s,baz=52,slow=2.3,SNR=4.5						
YKA	**Yellowknife Ar**	**145.89**	**358**	PKPbc	PKPbc	15 10 34.1	-1.5
	comp=Z,2.5nm,0.9s,baz=345,slow=3.3,SNR=9.5						

MAN 16 14:52:03, 6°.77N×125°.63E, h30km, mb4.6, ML3.5, MS3.5, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.64**	**74**	*e*P	Pb	14 52 16.2	+0.4
MATI				*e*S	Sb	14 52 20.7	-3.8
GSPH	**General Santos**	**0.96**	**225**	⇑*e*P	Pn	14 52 17.6	-2.9
GSPH				*i* S	Sn	14 52 36.8	+3.7
BUKP	**Musuan**	**1.24**	**333**	*e*P	Pn	14 52 24.7	+0.4
BUKP				*e*S	Sn	14 52 39.6	-0.5

*LDG **16** 15:07:09.7±0.2, 39°.28N×95°.44E, h10km, Mb4.7/28, Ms3.6/7, Error ellipse: s-maj=8.6km s-min=5.4km az=130.0*
*IDC **16** 15:07:09.9±0.5, 39°.32N×95°.53E, h0km, mb4.5/19, mb1 4.6/22, mb1mx4.4/28, mbtmp4.4/22, ML3.9/3, MS3.4/9, Ms1 3.4/9, ms1mx3.2/28, Error ellipse: s-maj=19.7km s-min=12.2km az=39.0*
*BJI **16** 15:07:10.9, 39°.47N×95°.41E, h19km, mB4.6/20, mb4.6/35, ML4.7/9, Ms4.3/41, Ms7 4.1/34*
*NEIC **16** 15:07:10.8±2.4, 39°.40N×95°.54E, h2km±15km, mb4.7/54, Error ellipse: s-maj=7.0km s-min=5.7km az=222.0*
*ISCJB **16** 15:07:13.5±0.2, 39°.35N±0°.03×95°.48E±0°.03, h33km, mb4.6/91, MS3.8/17, Error ellipse: s-maj=4.6km s-min=2.8km az=15.4*
*MOS **16** 15:07:13.4±0.8, 39°.40N×95°.56E, h33km, mb4.7/54, Error ellipse: s-maj=9.7km s-min=5.2km az=119.2*
*SZGRF **16** 15:07:15.2, 39°.41N×95°.77E, h33km, mb4.7, Gansu, China*
ISC 16 15:07:10.7±1.2, 39°.35N±0°.03×95°.49E±0°.03, h1km±7km, n282, σ0s99/286, mb4.7/91, MS3.8/17, 12C-4D, Gansu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTA	**Gaotai**	**3.35**	**88**	Pn	**Pn**	**15 08 05.9**	**+1.7**
GTA				Pg	**Pb**	**15 08 10.8**	**-0.1**
GTA				Sg	**Sb**	**15 08 50.8**	**-1.3**
GTA				smax			
	comp=N,2μm,0.8s						
GTA				smax			
	comp=E,1μm,0.9s						
GTA				LR	LR		
	comp=N,3μm,9.3s						
GTA				LR	LR		
	comp=E,3μm,6.8s						
GTA				LR	LR		
	comp=Z,3μm,9.9s						
WMQ	**Urumqi**	**7.36**	**310**	Pn	**Pn**	**15 09 00.4**	**+1.2**
WMQ				Sn	**Sn**	**15 10 17.0**	**-6.3**
WMQ				smax			
	comp=N,280nm,0.6s						
WMQ				smax			
	comp=E,320nm,0.8s						
WMQ				LR	LR		
	comp=N,2μm,10.0s						
LZH	**Lanzhou**	**7.38**	**114**	*e*Pn	**Pn**	**15 09 00.8**	**+1.3**
LZH				*e*Sn	**Sn**	**15 10 24.4**	**+0.6**
LZH				smax			
	comp=N,170nm,0.9s						
LZH				smax			
	comp=E,110nm,0.8s						
LZH				LR	LR		
	comp=E,2μm,6.0s						
LZH				LR	LR		
	comp=Z,2μm,7.1s						
LSA	**Lhasa**	**10.26**	**202**	*e*P	**Pn**	**15 09 44.2**	**+5.1**
LSA				pmax	pmax		
	comp=Z,26nm,1.1s						
LSA	**Lhasa**	**10.26**	**202**	*e*P	**Pn**	**15 09 44.2**	**+5.1**
	comp=Z,26nm,1.1s						
CD2	**Chengdu**	**10.79**	**139**	P	**Pn**	**15 09 53.6**	**+7.2**
CD2				PP		15 10 02.8	
CD2				S	**Sn**	**15 11 55.3**	**+7.5**
CD2				SS		15 12 08.6	
CD2				PcP	PcP	15 15 51.6	+3.8
CD2				pmax	pmax		
	comp=Z,30nm,0.8s						
CD2				pmax	pmax		
	comp=Z,110nm,4.9s						
CD2				LR	LR		
	comp=N,1μm,7.7s						
CD2				LR	LR		
	comp=Z,1μm,7.1s						
BTO	**Baotou**	**11.22**	**79**	*e*P	**Pn**	**15 09 51.3**	**-0.9**
BTO				S	**Sn**	**15 11 51.6**	**-6.6**
BTO				LR	LR		
	comp=N,310nm,6.1s						
BTO				LR	LR		
	comp=E,140nm,10.6s						
SONM	**Songino Array**	**11.59**	**39**	Pn	**Pn**	**15 09 56.2**	**-1.0**
	comp=E,3.3nm,0.3s,baz=221,slow=15,SNR=47						
SONM				Lg		15 13 09.8	
	comp=E,0.9nm,0.3s,baz=244,slow=33,SNR=3.7						
SONM				LR	LR	15 14 26.7	
	comp=E,370nm,19.5s,baz=235,slow=38						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**12.01**	**112**	P	**Pn**	**15 09 58.8**	**-4.1**
XAN				S	Sn	15 11 49.4	-28
XAN				LR	LR		
	comp=N,400nm,12.5s						
XAN				LR	LR		
	comp=E,330nm,11.9s						
XAN				LR	LR		
	comp=Z,330nm,12.7s						
MK31	**Makanchi Array**	**12.18**	**312**	*e*P	**Pn**	**15 10 04.4**	**-0.8**
MKAR	**Makanchi Array**	**12.18**	**312**	Pn	**Pn**	**15 10 04.5**	**-0.7**
	comp=Z,2.1nm,0.3s,baz=120,slow=14,SNR=19						
MKAR				Sn	**Sn**	**15 12 12.5**	**-9.1**
	comp=Z,1.6nm,0.3s,baz=113,slow=25,SNR=6.7						
MKAR				Lg		15 13 36.6	
	baz=105,slow=27,SNR=1.8						
MKAR				LR	LR	15 15 24.7	
	comp=Z,334nm,19.2s,baz=120,slow=40						
MKAR	**Makanchi Array**	**12.18**	**312**	P	**Pn**	**15 10 04.5**	**-0.7**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MKAR				MLR	MLR		
	comp=Z,335nm,19.2s						
HHC	**Hu-ho-hao-te**	**12.40**	**78**	*e*P	**Pn**	**15 10 10.8**	**+2.5**
HHC				PP		15 10 22.1	
HHC				S	**Sn**	**15 12 30.0**	**+2.9**
HHC				SS		15 12 45.1	
HHC				PcS	PcS	15 19 21.3	-2.2
HHC				pmax	pmax		
	comp=Z,22nm,0.5s						
HHC				pmax	pmax		
	comp=Z,100nm,5.0s						
HHC				LR	LR		
	comp=N,1μm,9.5s						
HHC				LR	LR		
	comp=E,710nm,9.4s						
HHC				LR	LR		
	comp=Z,680nm,9.0s						
SHL	**Shillong**	**14.07**	**194**	*e*PKP	**Pn**	**15 10 32.0**	**+0.8**
SHL				*e*x	x	15 13 03.5	
ENH	**Enshi**	**14.62**	**124**	*e*P	**Pn**	**15 10 36.8**	**-1.8**
	comp=Z,22nm,0.9s						
ULHL	**Ulahol**	**14.87**	**287**	P	**Pn**	**15 10 40.3**	**-1.7**
	SNR=14						
KSH	**Kashi**	**15.09**	**277**	P	**Pn**	**15 10 48.3**	**+3.3**
KSH				pP	pP	15 10 56.8	+6.1
KSH				PP		15 11 01.0	
KSH				sP	sP	15 11 03.4	+13
KSH				S	**Sn**	**15 13 33.5**	**+0.8**
KSH				sS	sS	15 13 46.9	-3.9
KSH				SS		15 13 51.1	
KSH				PcP	PcP	15 15 55.4	+2.6
KSH				ScP	ScP	15 19 24.8	-3.1
KSH				PcS	PcS	15 19 29.6	+1.6
KSH				ScS	ScS	15 23 01.3	-4.5
KSH				pmax	pmax		
	comp=Z,20nm,0.8s						
KSH				LR	LR		
	comp=N,220nm,7.2s						
KSH				LR	LR		
	comp=E,300nm,10.2s						
KSH				LR	LR		
	comp=Z,460nm,11.3s						
TKM2	**Tokmak 2**	**15.41**	**290**	P	**Pn**	**15 10 47.6**	**-1.5**
	SNR=27						
TKM2	**Tokmak 2**	**15.41**	**290**	*e*P	**Pn**	**15 10 47.4**	**-1.8**
TKM2				pmax	pmax		
	comp=Z,56nm,0.6s						
TKM2	**Tokmak 2**	**15.41**	**290**	*e*P	**Pn**	**15 10 47.4**	**-1.7**
	comp=Z,56nm,0.6s						
KMI	**Kunming**	**15.44**	**155**	P	**Pn**	**15 10 54.5**	**+4.8**
KMI				PP		15 11 07.4	
KMI				S	**Sn**	**15 13 45.3**	**+4.0**
KMI				SS		15 14 05.0	
KMI				pmax	pmax		
	comp=Z,16nm,0.9s						
KMI				pmax	pmax		
	comp=Z,100nm,6.3s						
KMI				LR	LR		
	comp=N,340nm,13.5s						
KMI				LR	LR		
	comp=E,780nm,14.3s						
KMI				LR	LR		
	comp=Z,380nm,12.1s						
KZA	**Kyzart**	**15.59**	**287**	P	**Pn**	**15 10 48.9**	**-2.7**
	SNR=6.1						
ORY	**Orie**	**15.67**	**359**	⇓*e*P	**Pn**	**15 10 52.3**	**-0.2**
ORY				*e*S	**Sn**	**15 13 50.0**	**+3.4**
KBK	**Karagaybulak**	**15.86**	**289**	P	**Pn**	**15 10 54.0**	**-1.0**
	SNR=10						
GYA	**Guiyang**	**15.89**	**141**	⇑*i*P	**Pn**	**15 10 54.1**	**-1.5**
GYA				S	**Sn**	**15 14 03.8**	**+11**
GYA				pmax	pmax		
	comp=Z,30nm,0.9s						
BJT	**Baijiatuau**	**15.94**	**81**	*e*P	**Pn**	**15 11 01.2**	**+5.1**
BJT				pmax	pmax		
	comp=Z,24nm,0.7s						
BJT	**Baijiatuau**	**15.94**	**81**	*e*P	**Pn**	**15 11 01.2**	**+5.2**
	comp=Z,24nm,0.7s						
BJI	**Beijing**	**15.94**	**81**	P	**Pn**	**15 10 57.1**	**+1.0**
BJI				pmax	pmax		
	comp=Z,11nm,1.0s						
BJI				pmax	pmax		
	comp=Z,160nm,5.0s						
BJI				LR	LR		
	comp=N,510nm,8.7s						
BJI				LR	LR		
	comp=E,210nm,12.6s						
BJI				LR	LR		
	comp=Z,190nm,19.1s						
KLP	**Kalpa**	**16.05**	**246**	*e*PKP	**Pn**	**15 10 59.1**	**+1.5**
KLP				AMb	AMB	15 11 10.5	
	comp=Z,41nm,1.1s						
FRU	**Bishkek**	**16.11**	**289**	*e*P	**Pn**	**15 10 58.0**	**-0.4**
FRU				pmax	pmax		
	comp=E,70nm,2.0s						
UCH	**Uchtor**	**16.14**	**287**	P	**Pn**	**15 10 58.3**	**-0.4**
	SNR=14						
UCH	**Uchtor**	**16.14**	**287**	*e*P	**Pn**	**15 10 57.7**	**-1.1**
	comp=E,15nm,0.9s						
AAK	**Ala-Archa**	**16.19**	**288**	Pn	**Pn**	**15 10 58.1**	**-1.2**
	comp=E,0.5nm,0.3s,baz=151,slow=2.9,SNR=11						
AAK				LR	LR	15 17 26.6	
	comp=E,218nm,20.0s,baz=234,slow=38						
AAK	**Ala-Archa**	**16.19**	**288**	⇓*i*P	**Pn**	**

comp=Z,960nm,13.1s
DL2 Dalian 20.26 83 P P 15 11 48.3 +0.8
DL2 eS S 15 15 34.0 -1.5
DL2 sS sS 15 15 43.8 +7.9
DL2 pmax pmax
comp=Z,10.0nm,0.8s
DL2 LR LR
comp=N,100nm,11.2s,MS3.6
DL2 LR LR
comp=E,100nm,11.0s,MS3.6
DL2 LR LR
comp=Z,140nm,10.2s,MS3.6
NJ2 Nanjing 20.29 104 eP P **15 11 51.3 +3.5**
NJ2 S S **15 15 27.0 -9.0**
NJ2 pmax pmax
comp=Z,20nm,0.5s
NJ2 LR LR
comp=N,420nm,21.2s
NJ2 LR LR
comp=E,380nm,12.2s
NJ2 LR LR
comp=Z,430nm,11.0s
CHTO Chiang Mai 20.68 171 eP P **15 11 52.6 +0.5**
CHTO pmax pmax
comp=Z,22nm,1.2s
CHTO Chiang Mai 20.68 171 eP P **15 11 52.6 +0.5**
comp=Z,22nm,1.2s
CMAR Chiang Mai Arr 21.03 171 P P **15 11 56.4 +0.5**
comp=Z,11nm,0.8s,mb4.2,baz=346,slow=9.4,SNR=14
CMAR Chiang Mai Arr 21.03 171 P P **15 11 56.4 +0.5**
CMAR pmax pmax
comp=Z,11nm,0.9s
AJM Ajmer 21.64 240 ePKP P **15 12 02.1 -0.4**
AJM AMb AMB 15 12 13.6
comp=Z,143nm,1.1s,mb5.3
KBL Kabul 21.64 265 eP P **15 12 03.3 +0.9**
KBL pmax pmax
comp=Z,25nm,0.9s,mb4.6
KBL Kabul 21.64 265 eP P **15 12 03.3 +0.9**
comp=Z,25nm,0.9s,mb4.7
BVAR Borovoye Array 21.97 317 P P **15 12 04.9 -0.8**
comp=Z,6.9nm,0.6s,mb4.3,baz=115,slow=10.0,SNR=48
BVAR Borovoye Array 21.97 317 P P **15 12 04.9 -0.9**
BVAR pmax pmax
comp=Z,7.0nm,0.6s
BRVK Borovoye 22.04 317 eP P **15 12 05.9 -0.6**
BRVK pmax pmax
comp=Z,11nm,0.6s,mb4.5
BRVK Borovoye 22.04 317 eP P **15 12 05.9 -0.7**
comp=Z,11nm,0.6s,mb4.5
BHPL Bhopal 22.21 229 ePKP P **15 12 08.2 -0.3**
BHPL AMb AMB 15 12 14.1
comp=Z,78nm,0.8s,mb5.2
CN2 Changchun 22.78 69 eP P **15 12 15.6 +1.1**
CN2 eS S **15 16 17.1 -7.6**
CN2 eSS 15 17 01.4
CN2 pmax pmax
comp=Z,10.0nm,1.0s,mb4.3
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,400nm,10.0s,MS4.2
CN2 LR LR
comp=E,200nm,10.0s,MS4.2
CN2 LR LR
comp=Z,1μm,10.0s,MS4.5
NGP Nagpur 22.97 223 ePKP P **15 12 16.4 -0.3**
NGP AMb AMB 15 12 20.7
comp=Z,32nm,1.8s,mb4.6
QIZ Qiongzhong 23.75 144 P P **15 12 27.8 +3.2**
QIZ S S **15 16 39.4 -1.2**
QIZ pmax pmax
comp=Z,18nm,1.6s,mb4.3
QIZ LR LR
comp=N,210nm,14.6s
QIZ LR LR
comp=Z,250nm,6.7s
VIS Vishakhapatnam 24.00 210 ePKP P **15 12 27.3 +0.3**
VIS AMb AMB 15 12 30.9
comp=Z,28nm,1.3s,mb4.6
AKL Akola 24.43 226 ePKP P **15 12 32.0 +1.1**
KSRS Korea Array 25.42 84 P P **15 12 38.6 -1.1**
comp=Z,10nm,0.8s,mb4.6,baz=278,slow=10,SNR=18
KSRS LR LR 15 23 04.9
comp=Z,57nm,18.4s,MS3.1,baz=294,slow=38
KSRS Korea Array 25.42 84 P P **15 12 38.6 -1.1**
KSRS pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
KSRS MLR MLR
comp=Z,57nm,18.4s,MS3.1
MDJ Mudanjiang 25.77 67 P P **15 12 44.5 +1.6**
MDJ pP 15 12 55.4
MDJ S S **15 17 11.1 -1.7**
MDJ ScP ScP 15 19 50.5 -2.6
MDJ pmax pmax
comp=Z,6.0nm,1.2s,mb4.1
MDJ pmax pmax
comp=Z,59nm,3.6s
MDJ LR LR
comp=N,140nm,9.9s
MDJ LR LR
comp=E,350nm,10.5s
MDJ LR LR
comp=Z,270nm,10.5s,MS4.0
CLNS Chul'man 26.00 38 eP P **15 12 49.6 +4.8**
CLNS pmax pmax
comp=Z,11nm,1.2s,mb4.4
CLNS pmax pmax
comp=N,7.0nm,1.2s
CLNS MLR MLR
comp=Z,144nm,11.0s,MS3.8
CLNS MLR MLR
comp=N,59nm,13.0s
HYB Hyderabad 26.36 219 eP P **15 12 54.0 +5.6**
HYB Hyderabad 26.36 219 i P P **15 12 54.0 +5.6**
LATR Latur 26.54 224 ex x 15 12 54.2
ABKAR Akbulak array 27.08 303 eP P **15 12 54.7 +0.1**
comp=N,2.3nm,0.7s,mb4.0
BHJ Bhuj 27.16 241 ex x 15 10 56.9
POO Poona 27.95 228 ePKP P **15 13 02.4 -0.4**
AKTK Aktyubinsk 28.48 305 P P **15 13 06.6 -0.6**
AKTK LR LR 15 26 47.8
AKTO Aktyubinsk 28.48 305 P P **15 13 06.6 -0.6**
comp=N,13nm,0.6s,mb4.0,baz=93,slow=18,SNR=6.6
AKTO LR LR 15 26 47.7
comp=N,52nm,18.3s,MS3.2,baz=256,slow=41
AKTO Aktyubinsk 28.48 305 P P **15 13 06.6 -0.6**
AKTO pmax pmax
comp=Z,1.0nm,0.6s,mb3.8
AKTO MLR MLR
comp=Z,52nm,18.3s,MS3.2
SVE Sverdlovsk 28.68 319 eP P **15 13 09.4 +0.5**
ARU Arti 29.61 318c i P P **15 13 17.2 +0.1**
ARU e 15 14 12.4
ARU S S **15 18 12.9 -0.2**
ARU SS SS 15 19 38.4 -40
ARU pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
ARU Arti 29.61 318 eP P **15 13 17.0 -0.2**
comp=Z,5.2nm,0.6s,mb4.5
MJAR Matsushiro Arr 33.58 81 LR LR 15 26 59.1
comp=Z,63nm,20.8s,MS3.3,baz=310,slow=35
ASAJ Asahikawa 35.10 67 P P **15 14 05.2 -0.2**
comp=Z,8.4nm,0.9s,mb4.7,baz=288,slow=5.6,SNR=5.2
ASAJ Asahikawa 35.10 67 P P **15 14 05.2 -0.1**
ASAJ pmax pmax
comp=Z,8.0nm,1.0s
MAK Makhachkala 35.93 292 eP P **15 14 17.3 +4.8**
TIXI Tiksi 36.48 17 P P **15 14 16.1 -0.8**
VRHR Novokhopersk 38.89 306 eP P **15 14 37.0 -0.5**
VRHR pmax pmax
comp=N,9.0nm,0.5s
VRHR pmax pmax
comp=Z,10.0nm,0.5s,mb4.7
VRHR pmax pmax
comp=E,10.0nm,1.0s
KIV Kislovodsk 39.17 294 eP P **15 14 39.1 -0.8**
KIV pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
KIV MLR MLR
comp=Z,85nm,14.0s,MS3.7
VSR Storozhevoye 40.42 306 eP P **15 14 49.1 -1.1**
VSR pmax pmax
comp=Z,9.0nm,0.5s,mb4.7
VSR pmax pmax
comp=N,1.0nm,0.3s
VSR pmax pmax
comp=E,1.0nm,0.3s
NAY Al-Naaiem 40.70 271 eP P **15 14 53.2 +0.4**
NAY AMb AMB 15 14 57.9
comp=Z,19nm,1.5s,mb4.6
SEY Seymchan 40.95 36ceP P **15 14 54.3 -0.2**
OBN Obninsk 41.69 312 eP P **15 15 00.6 0.0**
OBN e 15 16 35.7
OBN pmax pmax
comp=Z,22nm,1.6s,mb4.6
OBN MLR MLR
comp=Z,100nm,17.0s,MS3.8
ANN Anapa 42.65 297 eP P **15 15 11.1 +2.5**
ANN pmax pmax
comp=Z,31nm,1.2s,mb4.9
PETK Petropavlovsk- 43.80 50 P P **15 15 17.4 -0.4**
comp=Z,4.6nm,0.9s,mb4.2,baz=221,slow=7.7,SNR=6.8
PETK LR LR 15 36 04.7
comp=Z,25nm,21.9s,MS3.1,baz=270,slow=40
PETK Petropavlovsk- 43.80 50 P P **15 15 17.4 -0.4**
PETK pmax pmax
comp=Z,5.0nm,0.9s,mb4.2
PETK MLR MLR
comp=Z,25nm,21.9s,MS3.1
PETK Petropavlovsk- 43.80 50 P P **15 15 17.4 -0.4**
PETK LR LR 15 36 04.7
JOF Joensuu 44.27 324 eP P **15 15 20.2 -1.3**
JOF Joensuu 44.27 324 ep P **15 15 20.2 -1.3**
comp=Z,9.4nm,0.5s,mb4.8
PET Petropavlovsk 44.38 50 eP P **15 15 21.3 -1.2**
PET pmax pmax
comp=Z,28nm,1.3s,mb4.8
PET Petropavlovsk 44.38 50 eP P **15 15 21.3 -1.2**
comp=Z,28nm,1.3s,mb4.8
KEV Kevo 46.30 333 eP P **15 15 34.3 -3.1**
KEV pmax pmax
comp=Z,11nm,1.2s,mb4.8
KEV Kevo 46.30 333 eP P **15 15 34.3 -3.1**
comp=Z,11nm,1.2s,mb4.8
KEV Kevo 46.30 333 ep P **15 15 34.3 -3.1**
comp=Z,11nm,1.2s,mb4.8
KAF Kangasniemi 46.62 323 eP P **15 15 39.0 -1.1**
KAF pmax pmax
comp=Z,4.0nm,0.5s,mb4.8
KAF Kangasniemi 46.62 323 eP P **15 15 39.0 -1.1**
comp=Z,4.1nm,0.5s,mb4.8
KAF Kangasniemi 46.62 323 ep P **15 15 39.0 -1.1**
comp=Z,4.1nm,0.5s,mb4.8
AKASG Malin Array Be 46.70 307 P P **15 15 40.2 -0.7**
comp=Z,1.8nm,0.5s,mb4.5,baz=66,slow=7.7,SNR=7.5
AKASG Malin Array Be 46.70 307 P P **15 15 40.2 -0.7**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKASG Malin Array Be 46.70 307 P P **15 15 40.2 -0.7**
VSU Vasula 46.78 316⇑eP P **15 15 39.5 -1.8**
VSU pmax pmax
comp=Z,27nm,1.2s,mb5.2
FINES FINESS Array B 46.78 322 P P **15 15 41.4 0.0**
comp=Z,8.4nm,0.7s,mb5.0,baz=92,slow=9.3,SNR=19
FINES FINESS Array B 46.78 322 P P **15 15 41.4 0.0**
FINES pmax pmax
comp=Z,8.0nm,0.7s
ARCES ARCESS Array B 46.81 333 P P **15 15 41.6 +0.1**
comp=Z,2.1nm,0.5s,mb4.5,baz=87,slow=8.0,SNR=20
ARCES PcP PcP 15 17 13.7 -0.8
comp=Z,1.2nm,0.6s,baz=111,slow=5.3,SNR=5.1
ARCES LR LR 15 36 40.3
comp=Z,43nm,20.7s,MS3.4,baz=275,slow=38
ARCES ARCESS Array B 46.81 333 P P **15 15 41.6 +0.1**
ARCES 15 17 13.7
ARCES pmax pmax
comp=Z,2.0nm,0.5s
ARCES MLR MLR
comp=Z,43nm,20.7s
BR131 Keskin Array S 46.84 291 eP P **15 15 42.9 +0.7**
comp=Z,2.4nm,0.8s,mb4.4
BRTR Keskin Array B 46.84 291 P P **15 15 42.9 +0.8**
comp=Z,2.7nm,0.8s,mb4.4,baz=94,slow=7.5,SNR=13
BRTR Keskin Array B 46.84 291 P P **15 15 42.9 +0.8**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
BILL Bilibino 47.07 29⇓i P P **15 15 44.7 +1.2**
BILL pmax pmax
comp=Z,14nm,1.2s,mb5.0
BILL Bilibino 47.07 29 eP P **15 15 44.5 +0.9**
comp=Z,7.1nm,0.8s,mb4.8
STHS Stebnicka Huta 52.00 307 eP P **15 16 22.6 +1.2**
STHS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
STHS Stebnicka Huta 52.00 307 eP P **15 16 22.6 +1.2**
comp=Z,2.9nm,0.9s,mb4.2
STHS Stebnicka Huta 52.00 307 eP P **15 16 22.6 +1.2**
CRVS Cervenica-Dubn 52.03 306 eP P **15 16 24.2 +2.6**
CRVS pmax pmax
comp=Z,3.0nm,1.3s,mb4.1
CRVS Cervenica-Dubn 52.03 306 eP P **15 16 24.2 +2.6**
comp=Z,3.4nm,1.3s,mb4.1
CRVS Cervenica-Dubn 52.03 306 eP P **15 16 24.2 +2.6**
KECS Kecovo 52.78 306 eP P **15 16 30.9 +3.7**
KECS pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
KECS Kecovo 52.78 306 eP P **15 16 30.9 +3.7**
comp=Z,3.0nm,1.2s,mb4.1
KECS Kecovo 52.78 306 eP P **15 16 30.9 +3.7**
OKC Ostrava-Krasne 53.76 308 AMS AMS 15 40 30.0
comp=Z,200nm,12.0s
VYHS Vyhne 53.81 307 eP P **15 16 36.0 +1.3**
VYHS pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
VYHS Vyhne 53.81 307 eP P **15 16 36.0 +1.3**
comp=Z,5.0nm,1.2s,mb4.4
VYHS Vyhne 53.81 307 eP P **15 16 36.0 +1.3**
NB2 NORSAR Subarra 53.90 323 P P **15 16 34.6 -0.6**
comp=Z,5.4nm,0.6s,mb4.8,baz=71,slow=7.4
NOA NORSAR Array B 53.90 323 P P **15 16 34.8 -0.5**
comp=Z,4.3nm,0.6s,mb4.7,baz=72,slow=7.2,SNR=15
NOA NORSAR Array B 53.90 323 P P **15 16 34.8 -0.4**
NOA pmax pmax
comp=Z,4.0nm,0.6s
DPC Dobruska-Polom 54.68 310 eP P **15 16 42.1 +1.0**
DPC MLR MLR
comp=Z,200nm,11.6s,MS4.4
DPC Dobruska-Polom 54.68 310 eP P **15 16 42.1 +1.0**
DPC LR LR
comp=Z,200nm,11.6s,MS4.4
DPC Dobruska-Polom 54.68 310 eP P **15 16 42.1 +1.0**
DPC AMS AMS 15 41 00.0
comp=Z,200nm,11.6s
UPC Upice 54.81 310 eP P **15 16 43.1 +1.1**
TREC Trest 55.57 309 AMS AMS 15 41 20.0
comp=Z,200nm,14.4s
PVCC Panska Ves 55.66 310 eP P **15 16 49.2 +1.1**
PVCC MLR MLR
comp=Z,200nm,11.2s,MS4.5
PVCC Panska Ves 55.66 310 eP P **15 16 49.2 +1.1**
PVCC LR LR
comp=Z,200nm,11.2s,MS4.5
PVCC Panska Ves 55.66 310 eP P **15 16 49.2 +1.1**
PVCC AMS AMS 15 41 30.0
comp=Z,200nm,11.2s
CSNA Conrad Observa 55.87 307⇑i sP sP 15 16 50.9 +0.8
comp=Z,8.9nm,1.2s
PRU Pruhonice 55.88 310 AMS AMS 15 41 50.0
comp=Z,200nm,11.0s
BRG Berggiesshubel 55.89 311 eP P **15 16 50.1 +0.3**
comp=Z,7.0nm,1.0s,mb4.7
BRG Berggiesshubel 55.89 311 eP P **15 16 50.2 +0.3**
comp=Z,7.3nm,1.0s,mb4.7
BRG Berggiesshubel 55.89 311 eP P **15 16 50.2 +0.4**
BRG pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
CLL Collm 56.28 312 eP P **15 16 52.5 -0.1**
comp=Z,6.0nm,0.7s,mb4.7
CLL Collm 56.28 312⇑i P P **15 16 52.4 -0.2**
CLL pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
CLL Collm 56.28 312⇑i P P **15 16 52.4 -0.2**
comp=Z,5.0nm,0.7s,mb4.7
GROS Grobnik 56.67 305 i P P **15 16 55.7 +0.2**
GOLS Golise 56.78 305 i P P **15 16 56.8 +0.6**
KHC Kasperske Hory 56.79 309 eP P **15 16 56.5 +0.3**
KHC Kasperske Hory 56.79 309 AMS AMS 15 42 10.0
comp=Z,200nm,10.6s
SOKA Soboth 56.88 306⇑i sP sP 15 16 57.3 0.0
comp=Z,7.2nm,0.9s
TANN Tannenbergstha 56.94 311 eP P **15 16 58.0 +0.7**
comp=Z,5.0nm,1.0s,mb4.5
WET Wettzell 57.20 309 eP P **15 16 59.6 +0.4**
comp=Z,3.0nm,1.0s,mb4.3
OBKA Obir 57.25 306⇑i sP sP 15 16 60.0 0.0
comp=Z,11nm,1.1s
VNDS Vrh nad Dolski 57.33 305 i P P **15 17 00.4 +0.3**
MOX Moxa 57.34 311 eP P **15 17 00.6 +0.4**
comp=Z,4.0nm,0.9s,mb4.5
ROTZ Rotzenmuhle 57.35 310 eP P **15 17 01.2 +1.0**
comp=Z,6.0nm,0.9s,mb4.6
CLZ Clausthal 57.58 313 eP P **15 17 02.3 +0.5**
comp=Z,9.0nm,0.8s,mb4.8
RJOB Jochberg 57.83 308 eP P **15 17 04.6 +1.0**
comp=Z,4.0nm,0.8s,mb4.5
GRF Grafenberg Arr 57.97 310 eP P **15 17 05.0 +0.5**
comp=Z,21nm,0.7s,mb5.3
GRF Grafenberg Arr 57.97 310 eP P **15 17 05.0 +0.5**
GRF pmax pmax
comp=Z,21nm,0.7s,mb5.3
FUR Furstenfeldbru 58.58 309 eP P **15 17 08.4 -0.4**
comp=Z,27nm,0.5s,mb5.5
WTTA Wattenberg 58.74 308⇓i sP sP 15 17 10.6 +0.2
comp=Z,9.3nm,0.5s
FETA Feichten 59.41 308⇑i sP sP 15 17 15.0 -0.1
comp=Z,8.9nm,1.0s
BFO Black Forest 60.27 310 eP P **15 17 20.9 +0.3**
comp=Z,20nm,2.0s,mb4.8
CDF Champ du Feu 60.86 310 eP P **15 17 24.6 0.0**
comp=Z,5.2nm,0.7s,mb4.5
CDF Champ du Feu 60.86 310 eP P **15 17 24.6 0.0**
CDF pmax pmax
comp=Z,3.0nm,0.6s,mb4.6
CDF Champ du Feu 60.86 310 eP P **15 17 24.6 0.0**
comp=Z,2.6nm,0.6s,mb4.5
HINF Hinteralfeld 61.39 310 eP P **15 17 28.1 -0.1**
comp=Z,7.0nm,0.7s,mb4.6
HINF Hinteralfeld 61.39 310 eP P **15 17 28.1 -0.1**
HINF pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
HINF Hinteralfeld 61.39 310 eP P **15 17 28.1 -0.1**
comp=Z,3.5nm,0.7s,mb4.6
GIVF Givet 61.49 313 eP P **15 17 29.2 +0.4**
comp=Z,5.9nm,0.4s,mb4.8
GIVF Givet 61.49 313 eP P **15 17 29.2 +0.4**
GIVF pmax pmax
comp=Z,3.0nm,0.4s,mb4.8
GIVF Givet 61.49 313 eP P **15 17 29.2 +0.4**
comp=Z,3.0nm,0.4s,mb4.8
HAU Haudompre 61.60 310 eP P **15 17 29.6 0.0**
comp=Z,8.3nm,0.6s,mb4.9
HAU eMLR MLR
comp=Z,130nm,18.2s,MS3.8
HAU Haudompre 61.60 310 eP P **15 17 29.6 0.0**
comp=Z,4.2nm,0.6s,mb4.8
HAU LR LR
comp=Z,130nm,18.3s,MS4.1
BAIF Baives 61.86 313 eP P **15 17 31.8 +0.5**
comp=Z,8.2nm,0.6s,mb4.9
BAIF Baives 61.86 313 eP P **15 17 31.8 +0.5**
comp=Z,4.1nm,0.6s,mb4.8
MEZF Maizieres J'vi 62.12 311 eP P **15 17 33.6 +0.5**
comp=Z,4.3nm,0.4s,mb4.8
MEZF Maizieres J'vi 62.12 311 eP P **15 17 33.6 +0.5**
comp=Z,4.3nm,0.4s,mb5.0
CABF La Chapelle 62.42 309 eP P **15 17 35.5 +0.4**
comp=Z,4.0nm,0.5s,mb4.7
CABF La Chapelle 62.42 309 eP P **15 17 35.5 +0.4**
CABF pmax pmax
comp=Z,2.0nm,0.4s,mb4.7
CABF La Chapelle 62.42 309 eP P **15 17 35.5 +0.4**
comp=Z,2.0nm,0.4s,mb4.7
LPG La Plagne 62.56 308 eP P **15 17 37.1 +1.0**
comp=Z,8.4nm,0.6s,mb4.8
LPG La Plagne 62.56 308 eP P **15 17 37.1 +1.0**
LPG pmax pmax
comp=Z,4.0nm,0.6s,mb4.7
LPG La Plagne 62.56 308 eP P **15 17 37.1 +1.0**
comp=Z,4.2nm,0.6s,mb4.8
LPL La Plagne 62.56 308 eP P **15 17 37.0 +0.9**
comp=Z,6.1nm,0.5s,mb4.7
LPL La Plagne 62.56 308 eP P **15 17 37.0 +0.9**
LPL pmax pmax
comp=Z,3.0nm,0.5s,mb4.7
LPL La Plagne 62.56 308 eP P **15 17 37.0 +0.9**
comp=Z,3.0nm,0.5s,mb4.7
PGF Pioggiola 62.58 304 eP P **15 17 36.9 +0.6**
comp=Z,21nm,0.8s,mb5.0
PGF Pioggiola 62.58 304 eP P **15 17 36.9 +0.6**
PGF pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
PGF Pioggiola 62.58 304 eP P **15 17 36.9 +0.6**
comp=Z,10nm,0.8s,mb5.0
COLD Coldfoot 62.78 24 eP P **15 17 37.9 +0.7**
comp=Z,8.5nm,0.9s,mb4.9
MBDF Montbardon 62.92 307 eP P **15 17 38.6 +0.1**
comp=Z,9.4nm,0.7s,mb4.8
MBDF Montbardon 62.92 307 eP P **15 17 38.6 +0.1**
MBDF pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
MBDF Montbardon 62.92 307 eP P **15 17 38.6 +0.1**
comp=Z,4.7nm,0.7s,mb4.7
SBF Sospel 62.93 306 eP P **15 17 38.9 +0.3**
KNA Kununurra 63.00 144 eP P **15 17 38.4 -0.9**
comp=Z,13nm,0.6s,mb5.2
ORIF Oris-en-Rattie 63.38 307 eP P **15 17 41.7 +0.2**
comp=Z,9.0nm,0.6s,mb4.8
ORIF eMLR MLR
comp=Z,177nm,17.8s,MS4.0
ORIF Oris-en-Rattie 63.38 307 eP P **15 17 41.7 +0.2**
ORIF pmax pmax
comp=Z,5.0nm,0.6s,mb4.8
ORIF Oris-en-Rattie 63.38 307 eP P **15 17 41.7 +0.2**
comp=Z,4.5nm,0.6s,mb4.8
LOR Lormes 63.43 310 eP P **15 17 41.2 -0.6**
comp=Z,2.9nm,0.5s,mb4.4
LOR eMLR MLR
comp=Z,109nm,17.0s,MS3.8
LOR Lormes 63.43 310 eP P **15 17 41.2 -0.6**
LOR pmax pmax
comp=Z,1.0nm,0.5s,mb4.2
LOR MLR MLR
comp=Z,110nm,17.0s,MS4.1
LOR Lormes 63.43 310 eP P **15 17 41.2 -0.6**
comp=Z,1.5nm,0.5s,mb4.4
LOR LR LR
comp=Z,110nm,17.0s,MS4.1
FITZ Fitzroy Crossi 63.72 148 eP P **15 17 42.5 -1.5**
comp=Z,8.1nm,0.8s,mb5.0
SMF Signal de Mont 63.75 310 eP P **15 17 43.8 -0.2**
comp=Z,8.2nm,0.6s,mb4.8
SMF Signal de Mont 63.75 310 eP P **15 17 43.8 -0.2**
SMF pmax pmax
comp=Z,4.0nm,0.6s,mb4.8
SMF Signal de Mont 63.75 310 eP P **15 17 43.8 -0.2**
comp=Z,4.1nm,0.6s,mb4.8
LMR La Mourre 63.78 306 eP P **15 17 44.2 0.0**
AVF Avril sur Loir 63.97 310 eP P **15 17 45.3 -0.1**
comp=Z,2.3nm,0.3s,mb4.5
AVF Avril sur Loir 63.97 310 eP P **15 17 45.3 -0.1**
AVF pmax pmax
comp=Z,1.0nm,0.3s,mb4.5
AVF Avril sur Loir 63.97 310 eP P **15 17 45.3 -0.1**
comp=Z,1.1nm,0.3s,mb4.6
SMRF Simiane la Rot 64.04 307 eP P **15 17 45.4 -0.5**
comp=Z,0.7nm,0.3s,mb4.1
SMRF Simiane la Rot 64.04 307 eP P **15 17 45.4 -0.5**
comp=Z,0.7nm,0.3s,mb4.4
VIVF Saint-Julien-l 64.15 308 eP P **15 17 46.6 0.0**
comp=Z,4.7nm,0.6s,mb4.6
VIVF Saint-Julien-l 64.15 308 eP P **15 17 46.6 0.0**
VIVF pmax pmax
comp=Z,2.0nm,0.6s,mb4.5
VIVF Saint-Julien-l 64.15 308 eP P **15 17 46.6 0.0**
comp=Z,2.3nm,0.6s,mb4.6
TCF Toulx Ste Croi 64.90 310 eP P **15 17 51.7 +0.2**
comp=Z,5.0nm,0.5s,mb4.7
TCF Toulx Ste Croi 64.90 310 eP P **15 17 51.7 +0.2**
TCF pmax pmax
comp=Z,3.0nm,0.5s,mb4.8
TCF Toulx Ste Croi 64.90 310 eP P **15 17 51.7 +0.2**
comp=Z,2.5nm,0.5s,mb4.7
LDF La Druitiere 65.05 313 eP P **15 17 52.0 -0.4**
comp=Z,6.1nm,0.6s,mb4.7
LDF La Druitiere 65.05 313 eP P **15 17 52.0 -0.4**
LDF pmax pmax
comp=Z,3.0nm,0.6s,mb4.7
LDF La Druitiere 65.05 313 eP P **15 17 52.0 -0.4**

comp=Z,3.0nm,0.6s,mb4.7
LASF Ste Croix 65.05 307 eP P 15 17 53.0 +0.4
comp=Z,12nm,0.8s,mb4.9
GRR Gorron 65.57 313 eP P 15 17 55.6 -0.2
comp=Z,16nm,0.8s,mb5.0
GRR Gorron 65.57 313 eP P 15 17 55.6 -0.2
GRR pmax pmax
comp=Z,8.0nm,0.8s,mb5.0
GRR Gorron 65.57 313 eP P 15 17 55.6 -0.2
comp=Z,8.2nm,0.8s,mb5.0
CAF Calviac 65.70 309 eP P 15 17 57.4 +0.7
RJF Les Rejaudoux 65.83 309 eP P 15 17 58.1 +0.5
RJF eMLR MLR
comp=Z,77nm,19.0s,MS3.6
RJF Les Rejaudoux 65.83 309 eP P 15 17 58.1 +0.5
RJF LR LR
comp=Z,80nm,19.0s,MS3.9
MFF Saint Martin d 66.12 311 eP P 15 17 59.4 0.0
comp=Z,10.0nm,0.8s,mb4.8
MFF Saint Martin d 66.12 311 eP P 15 17 59.4 0.0
MFF pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
MFF Saint Martin d 66.12 311 eP P 15 17 59.4 0.0
comp=Z,5.0nm,0.8s,mb4.8
MTLF Montolieu 66.45 307 eP P 15 18 01.9 +0.3
comp=Z,2.1nm,0.5s,mb4.3
MTLF Montolieu 66.45 307 eP P 15 18 01.9 +0.3
MTLF pmax pmax
comp=Z,1.0nm,0.5s,mb4.3
MTLF Montolieu 66.45 307 eP P 15 18 01.9 +0.3
comp=Z,1.0nm,0.5s,mb4.3
LFF La Prestale 66.49 309 eP P 15 18 01.3 -0.5
comp=Z,9.7nm,0.5s,mb5.0
LFF La Prestale 66.49 309 eP P 15 18 01.3 -0.5
LFF pmax pmax
comp=Z,5.0nm,0.5s,mb5.0
LFF La Prestale 66.49 309 eP P 15 18 01.3 -0.5
comp=Z,4.8nm,0.5s,mb5.0
INK Inuvik 66.61 18 eP P 15 18 01.8 -0.3
QUIF Quistinic 67.13 314 eP P 15 18 06.0 +0.2
comp=Z,12nm,0.7s,mb5.0
QUIF Quistinic 67.13 314 eP P 15 18 06.0 +0.2
QUIF pmax pmax
comp=Z,6.0nm,0.7s,mb4.9
QUIF Quistinic 67.13 314 eP P 15 18 06.0 +0.2
comp=Z,6.2nm,0.7s,mb5.0
EGAK Eagle 67.18 23 eP P 15 18 05.6 -0.3
KDAK Kodiak Island 67.79 32 iP P 15 18 10.3 +0.5
DAWY Dawson 68.23 23 eP P 15 18 12.7 +0.2
ETSF Etsaut 68.40 308 eP P 15 18 14.7 +0.8
comp=Z,7.2nm,0.9s,mb4.6
ETSF Etsaut 68.40 308 eP P 15 18 14.7 +0.8
ETSF pmax pmax
comp=Z,4.0nm,0.9s,mb4.7
ETSF Etsaut 68.40 308 eP P 15 18 14.7 +0.8
comp=Z,3.6nm,0.9s,mb4.6
WRAB Tennant Creek 69.26 141 eP P 15 18 18.2 -1.2
WRAB pmax pmax
comp=Z,6.0nm,0.8s,mb4.9
WRAB Tennant Creek 69.26 141 eP P 15 18 18.2 -1.2
comp=Z,6.5nm,0.8s,mb4.9
WRA Warramunga Arr 69.26 141 P P 15 18 18.3 -1.1
comp=Z,4.5nm,0.8s,mb4.8,baz=331,slow=5.6,SNR=41
WRA Warramunga Arr 69.26 141 P P 15 18 18.3 -1.1
WRA pmax pmax
comp=Z,5.0nm,0.8s
WB2 Warramunga Arr 69.27 141 eP P 15 18 18.2 -1.3
ASAR Alice Springs 72.24 143 P P 15 18 36.8 -0.7
comp=Z,6.0nm,0.6s,mb4.9,baz=334,slow=6.0,SNR=163
ASAR Alice Springs 72.24 143 P P 15 18 36.8 -0.7
ASAR pmax pmax
comp=Z,6.0nm,0.6s
ESDC Sonseca Array 72.35 307 P P 15 18 38.3 +0.1
comp=Z,1.1nm,0.4s,mb4.3,baz=46,slow=6.0,SNR=8.8
SKAG Skagway 72.98 24 eP P 15 18 42.5 +1.0
comp=Z,8.7nm,1.0s,mb4.8
DLBC Dease Lake 75.45 23 eP P 15 18 56.4 +0.5
YKA Yellowknife Ar 75.66 14 P P 15 18 55.9 -1.2
comp=Z,2.1nm,0.8s,mb4.3,baz=333,slow=5.3,SNR=7.2
YKA Yellowknife Ar 75.66 14 P P 15 18 55.9 -1.2
YKA pmax pmax
comp=Z,2.0nm,0.8s
STKA Stephens Creek 82.78 142 eP P 15 19 34.7 -1.6
comp=Z,3.7nm,0.8s,mb4.7
STKA Stephens Creek 82.78 142 P P 15 19 35.1 -1.2
comp=Z,4.2nm,0.7s,mb4.8,baz=351,slow=7.1,SNR=12
STKA Stephens Creek 82.78 142 eP P 15 19 35.1 -1.2
CMSA Cobar Meteorol 84.54 139 eP P 15 19 44.5 -0.8
SCHQ Schefferville 84.98 350 P P 15 19 46.7 -0.7
comp=Z,5.5nm,0.7s,mb4.9,baz=33,slow=5.7,SNR=11
SCHQ Schefferville 84.98 350 eP P 15 19 46.1 -1.2
comp=Z,6.0nm,0.9s,mb4.8
FFC Flin Flon 85.11 10 iP P 15 19 47.6 -0.4
SWMT Swartz Lake 89.62 19 eP P 15 20 10.0 0.0
SLMT Seeley Lake 90.00 19 eP P 15 20 10.9 -0.8
comp=Z,5.1nm,1.1s,mb4.7
DBIC Dimbokro 93.76 282 P P 15 20 28.3 -1.4
comp=Z,5.7nm,0.8s,mb5.0,baz=43,slow=7.5,SNR=6.2
DBIC Dimbokro 93.76 282 P P 15 20 28.3 -1.4
DBIC pmax pmax
comp=Z,6.0nm,0.8s
IMW Indian Meadow 93.77 19 eP P 15 20 29.9 +0.7
comp=Z,3.0nm,0.9s,mb4.6
NVAR Mina Array Bea 96.62 26 P P 15 20 42.6 +0.2
comp=Z,0.3nm,0.6s,mb4.1,baz=318,slow=5.7,SNR=4.3
ATAH Atahualpa 147.46 349 PKPbc PKPbc 15 26 57.2 +0.3
comp=Z,7.4nm,0.6s,baz=18,slow=6.2,SNR=5.4
LPAZ La Paz 152.93 323 PKPbc PKPbc 15 27 09.2 -0.9
comp=Z,0.9nm,0.6s,baz=37,slow=8.5,SNR=3.7
CPUP Villa Florida 153.85 292 PKPbc PKPbc 15 27 10.1 -1.7
comp=Z,0.8nm,0.5s,baz=71,slow=5.6,SNR=4.5

IDC 16 15:18:05.3±6.0, 17°.63S×69°.76W, h138km±51km, mb3.5/2, mb1 3.8/3, mb1mx3.4/15, mbtmp3.6/3, Error ellipse: s-maj=117.2km s-min=28.0km az=101.0, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	2.06	50	P	Pn	15 18 41.4	+0.9
	55nm,0.3s,baz=242,slow=6.7,SNR=1086						
LPAZ				S	Sn	15 19 08.8	+1.4
	5.2nm,0.3s,baz=61,slow=9.3,SNR=5.4						
PLCA	Paso Flores	23.03	182	P	P	15 22 58.7	+0.5
	3.1nm,0.8s,baz=0.4,slow=12,SNR=5.4						
QSPA	South Pole Qui	72.54	180	P	P	15 29 16.9	+0.3
	0.6nm,0.5s,baz=326,slow=2.8,SNR=7.5						
ASAR	Alice Springs	132.89	210	PKP	PKPdf	15 37 04.1	-0.8
	0.4nm,0.9s,baz=128,slow=1.9,SNR=4.6						
SONM	Songino Array	149.72	5	PKPbc	PKPbc	15 37 38.9	+0.1
	0.4nm,0.4s,baz=260,slow=2.5,SNR=3.5						

*ISCJB **16** 15:18:11.3±0.9, 13°.64N±0°.08×90°.85W±0°.06, h62km±12km, Error ellipse: s-maj=15.2km s-min=5.0km az=31.3*
*CASC **16** 15:18:12.0±1.2, 13°.64N×90°.80W, h35km±13km, MD3.7*
*IDC **16** 15:18:14.3±2.0, 13°.79N×90°.83W, h75km±20km, mb3.6/1, mb1 3.7/4, mb1mx3.4/19, mbtmp3.4/4, MS2.6/1, Ms1 2.6/1, ms1mx2.1/32, Error ellipse: s-maj=25.7km s-min=12.8km az=39.0*

ISC 16 15:18:11.8±0.9, 13°.61N±0°.08×90°.85W±0°.05, h51km±16km, n20, σ0°.64/28, 2C-4D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	Ixpaco	0.68	34	eP	Pn	15 18 24.6	-0.7
PCG	Pacaya	0.82	17	eP	Pn	15 18 27.0	-0.1
PCG				eS	Sn	15 18 37.1	-1.1
FUG	Fuego 3	0.84	0	||eP	Pn	15 18 26.8	-0.5
FG6		0.95	358	||eP	Pn	15 18 28.6	-0.2
JAT	Jato	1.04	313	||eP	Pn	15 18 30.9	+0.9
NBG	Las Nubes	1.09	26	||eP	Pn	15 18 31.0	+0.3
NBG				eS	Sn	15 18 45.9	+1.1
TP2	Tecpan 2	1.18	352	||eP	Pn	15 18 32.3	+0.3
TP2				eS	Sn	15 18 47.5	+0.5
SBLS	San Blas	1.21	79	eP	Pn	15 18 31.8	-0.5
SNJE	San Jose	1.24	78	eP	Pn	15 18 32.3	-0.4
SNJE				eS	Sn	15 18 49.2	+0.9
APG	El Apazote	1.44	15	P	Pn	15 18 34.7	-0.7
	baz=90,slow=16						
APG				S	Sn	15 18 53.4	+0.2
	baz=90,slow=16						
BOQS	Boqueron	1.53	85	eP	Pn	15 18 36.3	-0.4
BOQS				eS	Sn	15 18 55.1	-0.3
MRL	Marmol	1.83	38	||eP	Pn	15 18 40.7	-0.1
SNVI	San Vicente	1.96	90	eP	Pn	15 18 42.4	-0.1
SNVI				eS	Sn	15 19 06.3	+0.4
CNCH	Conchagua	2.95	96	eP	Pn	15 18 56.2	0.0
CNCH				eS	Sn	15 19 30.9	+0.5
CMIG	Matias Romero	5.21	312	P	Pn	15 19 28.1	+0.9
	1.8nm,0.3s,baz=97,slow=9.7,SNR=23						
CMIG				S	Sn	15 20 26.1	+0.1
	2.1nm,0.3s,baz=296,slow=18,SNR=3.4						
JTS	JuntasAbangare	6.64	119	P	Pn	15 19 52.1	+5.2
	2.0nm,0.3s,baz=311,slow=20,SNR=4.6						
JTS				S	Sn	15 21 06.4	+5.1
	0.6nm,0.3s,baz=280,slow=19,SNR=1.9						
TXAR	Lajitas Array	19.65	325	P	Pn	15 22 36.6	-1.5
	0.1nm,0.3s,baz=148,slow=12,SNR=5.4						
SJG	San Juan	24.17	76	LR	LR	15 32 17.0	
	comp=Z,12nm,19.4s,baz=280,slow=35						
NVAR	Mina Array Bea	34.68	320	P	P	15 24 57.2	+0.6
	1.2nm,0.7s,baz=129,slow=8.4,SNR=13						
CMAR	Chiang Mai Arr	146.71	343	PKPbc	PKPbc	15 37 45.4	-3.5
	0.5nm,0.5s,baz=339,slow=3.2,SNR=5.5						

CASC 16 15:42:22.7±1.9, 13°.35N×89°.93W, h34km±6km, MD3.6, 1C-1D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNJE	San Jose	0.61	31	eP	Pn	15 42 35.0	+0.1
BOQS	Boqueron	0.74	58	eP	Pn	15 42 36.7	-0.1
BOQS				eS	Sn	15 42 48.0	+1.1
RBDL	Robledal	0.80	17	eP	Pn	15 42 37.9	+0.3
IXG	Ixpaco	0.97	328	||eP	Pn	15 42 39.9	0.0
IXG				eS	Sn	15 42 53.9	+1.4
MTO2	Montecristo 2	1.18	28	eP	Pn	15 42 43.0	+0.2
FUG	Fuego 3	1.41	321	eP	Pn	15 42 46.3	+0.3
FUG				eS	Sn	15 43 04.0	+0.6
FG6		1.52	323	eP	Pn	15 42 48.0	+0.5
FG6				eS	Sn	15 43 07.6	+1.4
TP2	Tecpan 2	1.78	324	eP	Pn	15 42 52.8	+1.7
TP2				eS	Sn	15 43 15.8	+3.3
JAT	Jato	1.92	300	||eP	Pn	15 42 53.9	+0.9

IDC 16 15:48:31.6±1.4, 8°.57N×103°.06W, h0km, mb4.1/6, mb1 4.4/7, mb1mx4.2/19, mbtmp4.1/7, MS3.6/1, Ms1 3.6/1, ms1mx3.1/16, Error ellipse: s-maj=55.7km s-min=18.3km az=57.0, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APG	El Apazote	13.89	61	Pn	Pn	15 51 48.2	-1.7
	baz=90,slow=16						
TXAR	Lajitas Array	20.67	359	P	P	15 53 13.7	+0.6
	2.3nm,0.9s,baz=178,slow=12,SNR=16						
ATAH	Atahualpa	29.12	122	P	P	15 54 36.0	+1.5
	5.2nm,0.7s,baz=46,slow=4.0,SNR=4.1						
NVAR	Mina Array Bea	32.75	338	P	P	15 55 07.3	+1.1
	1.0nm,0.9s,baz=160,slow=8.0,SNR=7.5						
PDAR	Pinedale Array	34.54	352	P	P	15 55 21.9	+0.2
	1.3nm,1.0s,baz=168,slow=7.6,SNR=6.1						
LPAZ	La Paz	42.49	125	P	P	15 56 29.2	+0.3
	4.8nm,0.7s,baz=327,slow=8.0,SNR=18						
PPT	Papeete	52.78	240	LR	LR	16 12 17.5	
	comp=Z,60nm,21.3s,baz=52,slow=27						
CPUP	Villa Florida	56.34	129	P	P	15 58 14.8	+0.1
	2.9nm,0.7s,baz=298,slow=6.8,SNR=9.0						
CMAR	Chiang Mai Arr	145.47	321	PKPbc	PKPbc	16 08 10.6	-2.0
	0.3nm,0.6s,baz=19,slow=5.9,SNR=3.8						

IDC 16 15:49:18.3±1.4, 8°.82N×102°.97W, h0km, mb4.1/5, mb1 4.4/6, mb1mx4.2/18, mbtmp4.2/6, MS3.9/2, Ms1 4.0/2, ms1mx3.3/16, Error ellipse: s-maj=60.3km s-min=19.9km az=53.0, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APG	El Apazote	13.69	62	Pn	Pn	15 52 33.5	-0.3
	baz=90,slow=17						
TXAR	Lajitas Array	20.42	358	P	P	15 54 00.4	+3.3
	2.4nm,1.0s,baz=182,slow=12,SNR=5.8						
ANMO	Albuquerque	26.20	354	LR	LR	16 03 53.4	
	comp=Z,289nm,19.9s,baz=210,slow=33						
ATAH	Atahualpa	29.18	122	P	P	15 55 23.6	+1.9
	3.9nm,0.6s,baz=162,slow=6.4,SNR=3.5						
NVAR	Mina Array Bea	32.55	337	P	P	15 55 52.7	+1.6
	0.4nm,0.6s,baz=154,slow=6.5,SNR=2.9						
PDAR	Pinedale Array	34.30	351	P	P	15 56 06.0	-0.4
	0.6nm,0.9s,baz=129,slow=7.1,SNR=2.8						
LPAZ	La Paz	42.56	126	P	P	15 57 16.3	+0.1
	7.9nm,1.0s,baz=325,slow=10,SNR=8.4						
RKT	Rikitea	44.59	224	eLR	LR	16 09 51.4	
	532nm,29.0s,baz=49						
PPT	Papeete	52.98	240	eS	S	16 06 01.1	-7.0
	63nm,29.5s						
PPT				eLQ		16 11 15.3	
	336nm,28.0s						
PPT				eLR	LR	16 13 23.3	
	266nm,25.0s,baz=62						
TBI	Tubuai	55.57	234	eLR	LR	16 14 45.6	
	227nm,28.0s,baz=66						
CPUP	Villa Florida	56.44	130	P	P	15 59 01.9	-0.2
	7.3nm,0.9s,baz=302,slow=7.3,SNR=8.8						
ESDC	Sonseca Array	91.29	50	LR	LR	16 37 26.0	
	comp=Z,59nm,21.6s,baz=250,slow=32						
DZM	Mont Dzumac	93.80	248	eLR	LR	16 32 45.5	
	55nm,25.8s						
CMAR	Chiang Mai Arr	145.32	321	PKPbc	PKPbc	16 08 57.2	-1.7
	0.9nm,1.0s,baz=28,slow=2.1,SNR=3.3						

JMA 16 15:51:16.8±0.1, 36°.69N×141°.01E, h47km±1km, M3.6, 7D Broadband fault plane solution: P waves. NP1: ϕ_s=204.00000°, δ15.00000°, λ97.00000°. **NP2:** ϕ_s18.00000°, δ75.00000°, λ88.00000°. **Principal axes:** T Plg60.0000°, Azm285.0000°; N Plg2.0000°, Azm18.0000°; P Plg30.0000°, Azm109.0000°; **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	Hitachi	0.36	258	||P	Pn	15 51 26.3	0.0
JHO				S	Sn	15 51 32.7	-0.3
ONAJ	Iwakimizuishiy	0.45	338	||P	Pn	15 51 26.9	-0.3
ONAJ				S	Sn	15 51 33.8	-0.8
JFK	Kawauchi	0.68	351	||P	Pn	15 51 29.8	-0.4
JFK				S	Sn	15 51 38.8	-1.1
JYT	Yasato	0.80	235	P	Pn	15 51 31.6	-0.2
JYT				S	Sn	15 51 42.1	-0.6
JFT	Otama	0.99	327	||P	Pn	15 51 35.1	+0.8
JFT				S	Sn	15 51 47.9	+0.8
JMM	Marumori	1.19	352	||P	Pn	15 51 36.8	-0.2
JMM				S	Sn	15 51 51.4	-0.6
JFY	Yanaizu	1.27	305	||P	Pn	15 51 38.5	+0.5
JAG	Ashikaga	1.28	259	||P	Pn	15 51 38.5	+0.3
JAG				S	Sn	15 51 53.9	-0.3
JKT	Katashina	1.42	274	P	Pn	15 51 40.9	+0.8
JKT				S	Sn	15 51 58.4	+0.8
MAT	Matsushiro	2.26	267	P	Pn	15 51 53.3	+1.7
MAT				S	Sn	15 52 22.0	+3.7

*ISK **16** 15:53:39.5, 41°.47N×36°.02E, h7km, MD3.0*
*ISCJB **16** 15:53:40.3±0.9, 41°.46N±0°.04×35°.95E±0°.05, h0km±7km, Error ellipse: s-maj=8.1km s-min=4.8km az=33.8*
*CSEM **16** 15:53:40.0±0.8, 41°.52N×36°.03E, h5km, MD3.0, Error ellipse: s-maj=21.2km s-min=6.4km az=38.0*
*DDA **16** 15:53:40.7, 41°.41N×35°.75E, h8km±6km, Md2.8*

ISC 16 15:53:41.3±0.8, 41°.44N±0°.04×35°.91E±0°.05, h5km±6km, n27, σ1°.16/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KVT	Kavak	0.37	164	ePG	Pg	15 53 47.0	-1.4
KVT				eSG	Sg	15 53 53.8	+0.6
KVT	Kavak	0.37	164	ePg	Pg	15 53 47.0	-1.4
DIKM	Dikmen	0.54	293	ePG	Pg	15 53 51.9	+0.3
DIKM				eSG	Sg	15 54 00.4	+1.8
DIKM	Dikmen	0.54	293	ePg	Pg	15 53 51.9	+0.3
DIKM				eSg	Sg	15 54 00.4	+1.9
BYBT	Boyabat	0.86	272	ePG	Pg	15 53 57.7	-0.1
BYBT	Boyabat	0.86	272	ePg	Pg	15 53 57.7	-0.1
ERBA	Erbaa	0.99	140	iP	Pg	15 53 59.6	-0.6
ERBA				iS	Sg	15 54 13.4	+0.4
ERBA	Erbaa	0.99	140	iP	Pg	15 53 59.6	-0.6
ERBA				iS	Sg	15 54 13.4	+0.4
CTKT	Corum	1.18	227	iP	Pg	15 54 01.3	-2.5
CTKT				iS	Sg	15 54 15.8	-3.2
CTKT	Corum	1.18	227	iP	Pg	15 54 01.3	-2.5
TOKA	Tokat	1.19	159	iP	Pg	15 54 05.0	+0.8
TOKA				iS	Sg	15 54 21.2	+1.6
TOKA	Tokat	1.19	159	iP	Pg	15 54 05.0	+0.9
TOKA				iS	Sg	15 54 21.2	+1.6
TOKT	Tokat	1.22	157	ePN	Pn	15 54 02.9	-1.9
TOKT	Tokat	1.22	157	ePn	Pn	15 54 02.9	-1.9
BZK	Bozkurt	1.52	291	ePN	Pn	15 54 09.0	-0.1
BZK	Bozkurt	1.52	291	ePn	Pn	15 54 09.0	-0.1
CORM	Corum	1.59	218	ePN	Pn	15 54 09.8	-0.2
CORM	Corum	1.59	218	ePn	Pn	15 54 09.8	-0.2
SVSK	Karacayir	1.73	151	ePN	Pn	15 54 11.2	-0.7
SVSK	Karacayir	1.73	151	ePn	Pn	15 54 11.2	-0.7
GRSN	GIRESUNGRSN	1.85	105	iP	Pn	15 54 13.2	-0.4
GRSN				iS	Sn	15 54 38.2	+0.9
YOZ	Yozgat	1.85	194	ePN	Pn	15 54 12.9	-0.7
YOZ	Yozgat	1.85	194	ePn	Pn	15 54 12.9	-0.7
CDAG	Cicekdag	2.16	213	iP	Pn	15 54 19.5	+1.7
CDAG				iS	Sb	15 54 48.3	+0.4
CDAG	Cicekdag	2.16	213	iP	Pn	15 54 19.5	+1.6
CDAG				iS	Sb	15 54 48.3	+0.4
AVNT	Avonos	2.78	197	iP	Pb	15 54 30.2	-1.1
AVNT				iS	Sb	15 55 07.0	+1.4
AVNT	Avonos	2.78	197	iP	Pb	15 54 30.2	-1.1
AVNT				iS	Sb	15 55 07.1	+1.5

*ISCJB **16** 15:56:50.9±0.2, 35°.90N±0°.02×53°.23E±0°.02, h10km, mb4.0/11, MS3.2/10, Error ellipse: s-maj=3.0km s-min=2.5km az=143.4*
*NEIC **16** 15:56:50.0, 36°.00N×53°.20E, h3km, mb4.3/5, ML4.3(THR), MN4.2(TEH), After TEH.*
*TEH **16** 15:56:50.8, 35°.94N×53°.19E, h5km*
*THR **16** 15:56:51.3±1.0, 35°.85N×53°.17E, h14km±13km, ML4.3*
*CSEM **16** 15:56:51.1±0.2, 35°.90N×53°.17E, h2km, mb4.3/5, Error ellipse: s-maj=5.2km s-min=4.3km az=155.0*
*IDC **16** 15:56:51.8±1.3, 35°.93N×53°.24E, h0km, mb3.8/8, mb1 4.0/11, mb1mx3.8/26, mbtmp3.9/11, ML3.4/2, MS3.3/14, Ms1 3.4/14, ms1mx3.2/31, Error ellipse: s-maj=24.1km s-min=20.6km az=26.0*
*MOS **16** 15:56:56.7±1.7, 36°.12N×53°.31E, h33km, mb4.4/6, Error ellipse: s-maj=10.7km s-min=7.3km az=120.4*
*NNC **16** 15:56:59.4±7.1, 36°.41N×54°.17E, h0km, mb4.0, Error ellipse: s-maj=214.7km s-min=51.9km az=119.0*

ISC 16 15:56:52.7±0.2, 35°.84N±0°.02×53°.20E±0°.02, h10km, n191, σ1°.17/213, mb4.0/14, MS3.2/10, 14C-12D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISHM	Shahmirzad	0.08	116	Pg	Pg	15 56 53.1	-1.9
ISHM				Sg	Sg	15 56 55.5	-1.2
ISHM	Shahmirzad	0.08	116	||ePg	Pg	15 56 53.2	-1.8
ISHM				eSg	Sg	15 56 55.5	-1.2
ISHM				e		15 56 58.8	
	comp=Z,7595μm,0.2s						
ISHM	Shahmirzad	0.08	116	||ePg	Pg	15 56 53.2	-1.8
ISHM				eSg	Sg	15 56 55.5	-1.2
IALA	Alasht	0.40	307	Pg	Pg	15 56 56.6	-3.9
IALA	Alasht	0.40	307	||ePg	Pg	15 56 56.6	-3.9
IALA				e		15 57 03.2	
	comp=Z,66μm,0.2s						
IALA	Alasht	0.40	307	||ePg	Pg	15 56 56.6	-3.9
IFIR	Firoozkooh	0.42	241	Pg	Pg	15 56 59.2	-1.7
IFIR	Firoozkooh	0.42	241	ePg	Pg	15 56 59.1	-1.8
IFIR				eSg	Sg	15 57 06.4	0.0
IFIR				e		15 57 09.5	
	comp=Z,37μm,0.1s						
IFIR	Firoozkooh	0.42	241	ePg	Pg	15 56 59.1	-1.8
IFIR				eSg	Sg	15 57 06.4	0.0
ILAS	Lasjerd	0.50	203	Pg	Pg	15 57 01.4	-1.0
ILAS				Sg	Sg	15 57 09.0	0.0
ILAS	Lasjerd	0.50	203	||ePg	Pg	15 57 01.4	-1.0
ILAS				eSg	Sg	15 57 09.1	+0.1
ILAS				e		15 57 15.3	
	comp=Z,45μm,0.2s						
ILAS	Lasjerd	0.50	203	||ePg	Pg	15 57 01.4	-1.0
ILAS				eSg	Sg	15 57 09.1	+0.1
IKIA	Kiasar	0.53	47	Pg	Pg	15 56 59.5	-3.6
IKIA				Sg	Sg	15 57 05.0	-5.1
IKIA	Kiasar	0.53	47	ePg	Pg	15 56 59.4	-3.7
IKIA				eSg	Sg	15 57 05.0	-5.1
IKIA				e		15 57 12.7	
	comp=Z,99μm,0.2s						
IKIA	Kiasar	0.53	47	ePg	Pg	15 56 59.4	-3.7
IKIA				eSg	Sg	15 57 05.0	-5.1
IANJ	Anjilo	0.69	123	Pg	Pg	15 57 04.0	-2.0
IANJ				Sg	Sg	15 57 14.7	-0.3
IANJ	Anjilo	0.69	123	e	Sg	15 57 26.1	+11
	comp=Z,49μm,0.2s						
IANJ				ePg	Pg	15 57 04.1	-1.9
IPRN	Peran	0.81	300	Pg	Pg	15 57 05.0	-3.2
IPRN	Peran	0.81	300	e	Sg	15 57 17.3	-1.5
	comp=Z,40μm,0.3s						
IPRN				ePg	Pg	15 57 05.3	-2.9
IGLO	Ghaloghah	0.83	37	Pg	Pg	15 57 05.0	-3.7
IGLO				Sg	Sg	15 57 14.2	-5.4
IGLO	Ghaloghah	0.83	37	eSg	Sg	15 57 14.2	-5.4
IGLO				ePg	Pg	15 57 05.0	-3.7
IGLO				e		15 57 24.7	
	comp=Z,4μm,0.3s						
IDMV	Damavand	0.99	255	Pg	Pg	15 57 09.4	-2.3
IDMV	Damavand	0.99	255	e	Sg	15 57 36.8	+12
	comp=Z,64μm,0.3s						
IDMV				||ePg	Pg	15 57 09.1	-2.6
DAMV	Damavand	1.02	258	ePg	Pg	15 57 10.0	-2.4
DAMV	Damavand	1.02	258	ePg	Pg	15 57 10.0	-2.4
DAMV				AML	AML	15 57 26.8	
	comp=E,7μm,0.3s						
DAMV	Damavand	1.02	258	ePg	Pg	15 57 10.2	-2.2
IAFJ	Afjeh	1.21	271	ePg	Pg	15 57 12.5	-3.5
IAFJ				e		15 57 18.8	
	comp=Z,182nm,0.1s						
IAFJ	Afjeh	1.21	271	ePg	Pg	15 57 12.5	-3.5
IVRN	Varamin	1.47	235	Pn	Pn	15 57 18.8	-0.5
IVRN	Varamin	1.47	235	ePn	Pn	15 57 18.8	-0.5
IVRN				ePn	Pn	15 57 18.8	-0.5
IVRN				e		15 57 20.2	
	comp=Z,70μm,0.2s						
IVRN	Varamin	1.47	235	ePn	Pn	15 57 18.8	-0.5
ISFB	Sefidab	1.68	208	Pn	Pn	15 57 22.5	+0.3
ISFB				Sg	Sg	15 57 46.2	-0.6
ISFB	Sefidab	1.68	208	ePn	Pn	15 57 22.5	+0.3
ISFB				eSg	Sg	15 57 46.2	-0.6
ISFB				e		15 57 53.4	
	comp=Z,54μm,0.1s						
ISFB	Sefidab	1.68	208	ePn	Pn	15 57 22.5	+0.3
ISFB				eSg	Sg	15 57 46.2	-0.6
CHTH	Charan	1.69	273	ePg	Pn	15 57 22.0	-0.2
CHTH	Charan	1.69	273	ePg	Pn	15 57 22.0	-0.2
CHTH	Charan	1.69	273	ePg	Pn	15 57 22.0	-0.2
THKV	Tehran--Karaj	1.89	273	ePg	Pn	15 57 25.0	0.0
THKV	Tehran--Karaj	1.89	273	ePg	Pn	15 57 25.8	+0.8
THKV				AML	AML	15 58 01.2	
	comp=E,2μm,0.2s						
THKV				AML	AML	15 58 06.2	
	comp=N,3μm,0.8s						
THKV	Tehran--

IKLH e 15 58 21.7
comp=Z,17μm,0.2s
IKLH Kolahrood 2.85 208 *e*Pn **Pn 15 57 38.6 +0.4**
ASAO Ashtian 2.91 245 *e*Pn **Pn 15 57 39.0 0.0**
ASAO *e*Sg **Sg 15 58 21.0 -5.0**
ASAO Ashtian 2.91 245 *e*Pn **Pn 15 57 39.4 +0.4**
ASAO *e*Sg **Sg 15 58 21.1 -4.9**
ASAO Ashtian 2.91 245 *e*Pn **Pn 15 57 39.0 0.0**
ASAO *e*Sg **Sg 15 58 21.0 -5.0**
MRVT Maraveh tapeh 2.94 51 *e*Pn **Pn 15 57 39.6 +0.1**
IZEF Zefreh 3.03 194 Pn **Pn 15 57 40.9 +0.3**
IZEF Zefreh 3.03 194 *e*Pn **Pn 15 57 40.8 +0.2**
IZEF *e* 15 58 43.8
comp=Z,9μm,0.2s
IZEF Zefreh 3.03 194 *e*Pn **Pn 15 57 40.8 +0.2**
NASN Na'in 3.05 186 *e*Pn **Pn 15 57 41.0 0.0**
NASN Na'in 3.05 186 *e*Pn **Pn 15 57 41.8 +0.8**
NASN AML AML 15 58 42.3
comp=N,506nm,0.5s
NASN Na'in 3.05 186 *e*Pn **Pn 15 57 41.8 +0.8**
IPIR Pirpir 3.69 212 *e*Pn **Pn 15 57 53.1 +3.4**
IPIR *e* 15 58 07.3
comp=Z,6μm,0.2s
ICHK Chekchek 3.73 164 Pn **Pn 15 57 50.9 +0.6**
ICHK Chekchek 3.73 164 *e*Pn **Pn 15 57 51.0 +0.7**
ICHK *e* 15 59 01.1
comp=Z,7μm,0.3s
ICHK Chekchek 3.73 164 *e*Pn **Pn 15 57 51.0 +0.7**
ISAD Sadrabad 3.94 174 Pn **Pn 15 57 54.1 +0.9**
ISAD Sadrabad 3.94 174 *e*Pn **Pn 15 57 54.1 +0.9**
ISAD *e* 15 59 07.1
comp=Z,14μm,0.3s
ISAD Sadrabad 3.94 174 *e*Pn **Pn 15 57 54.1 +0.9**
ISHV Shirvan 3.99 64 Pn **Pn 15 57 55.5 +1.6**
ISHV Shirvan 3.99 64 *e*Pn **Pn 15 57 55.5 +1.6**
ISHV *e* 15 59 14.1
comp=Z,16μm,0.5s
ISHV Shirvan 3.99 64 *e*Pn **Pn 15 57 55.5 +1.6**
ISFR Sfrayin 4.05 71 Pn **Pn 15 57 52.9 -1.8**
ISFR Sfrayin 4.05 71 *e*Pn **Pn 15 57 52.9 -1.8**
ISFR *e* 15 59 21.9
comp=Z,3μm,0.3s
ISFR Sfrayin 4.05 71 *e*Pn **Pn 15 57 52.9 -1.8**
IKRD Kardeh 4.39 76 *e* **Sn 15 58 43.6 -6.9**
comp=Z,970nm,0.5s
VAN Vannovskaya 4.46 60*c i*P **Pn 15 58 02.1 +1.8**
VAN Vannovskaya 4.46 60 *i* P **Pn 15 58 02.1 +1.8**
IAKL Akhelmad 4.55 79 *e*Pn **Pn 15 58 00.6 -1.0**
IAKL *e* 15 58 32.5
comp=Z,1μm,0.3s
IMEH Mehriz 4.59 165 *e*Pn **Pn 15 58 02.7 +0.5**
IMEH *e* 15 58 59.6
comp=Z,3μm,0.2s
IMEH Mehriz 4.59 165 *e*Pn **Pn 15 58 02.7 +0.5**
IBAF Bafgh 4.68 154 *e*Pn **Pn 15 58 03.3 0.0**
IBAF *e* 15 59 43.7
comp=Z,2μm,0.3s
IBAF Bafgh 4.68 154 *e*Pn **Pn 15 58 03.3 0.0**
ISRB Sarab 4.86 296 *e* **Pn 15 58 10.3 +4.5**
comp=Z,2μm,0.2s
ISRB *e*Pn **Pn 15 58 07.0 +1.1**
ISRO Mashad 5.10 83 *e*Pn **Pn 15 58 09.6 +0.5**
ITEG Tejag 5.45 121 *e*Pn **Pn 15 58 14.9 +1.0**
ITEG Tejag 5.45 121 *e*Pn **Pn 15 58 14.9 +1.0**
IMYA Miami 5.61 83 *e*Pn **Pn 15 58 17.0 +0.9**
IMYA *e* 16 00 34.1
comp=Z,3μm,0.8s
IMYA Miami 5.61 83 *e*Pn **Pn 15 58 17.0 +0.9**
IKOO Kooshah 5.90 124 *e*Pn **Pn 15 58 19.6 -0.5**
IKOO *e* 15 58 21.8
comp=Z,2μm,0.2s
IKOO Kooshah 5.90 124 *e*Pn **Pn 15 58 19.6 -0.5**
IDAH Dahanechah 6.33 117 *e*Pn **Pn 15 58 26.9 +0.9**
IDAH *e* 15 58 27.9
comp=Z,1μm,0.2s
IDAH Dahanechah 6.33 117 *e*Pn **Pn 15 58 26.9 +0.9**
ISHB Shabestar 6.54 294 *e* **Pg 15 58 59.5 +1.7**
comp=Z,379nm,0.3s
BHD Baghdad 7.72 253 *ex* x 15 58 41.0
BHD *ex* x 16 00 02.0
GNI Garni 7.94 305*c i*P **Pn 15 58 53.3 +5.1**
GNI Garni 7.94 305 *e*P **Pn 15 58 53.6 +5.5**
comp=Z,14nm,0.4s
KBD Kabd 8.11 217 *e*P **Pn 15 58 50.5 0.0**
KBD Kabd 8.11 217 *e*P **Pn 15 58 50.5 0.0**
NAY Al-Naaiem 8.28 219 *e*P **Pn 15 58 52.6 -0.2**
NAY AML AML 16 00 25.1
comp=Z,3.9nm,0.5s
NAY Al-Naaiem 8.28 219 *e*P **Pn 15 58 52.6 -0.2**
DGRG David-gareji 8.30 315 P **Pn 15 58 52.9 -0.1**
RDF Al-Radifah 8.39 216 *e*P **Pn 15 58 54.9 +0.5**
RDF Al-Radifah 8.39 216 *e*P **Pn 15 58 54.8 +0.5**
KIV Kislovodsk 11.43 318 *e*P **Pn 15 59 37.7 +1.7**
KIV pmax pmax
comp=Z,9.0nm,1.1s
KIV Kislovodsk 11.43 318 *e*P **Pn 15 59 37.7 +1.7**
comp=Z,9.0nm,1.1s
ASF Jabal al Asfar 14.01 260 LR LR 16 06 18.2
comp=Z,221nm,18.9s,baz=298,slow=40
AB31 Akbulak array 14.29 18 ⇑Pn **Pn 16 00 11.3 -3.6**
comp=Z,1.1nm,0.4s,baz=204,slow=14,SNR=10
AB31 ⇓Sn **Sn 16 02 41.5 -12**
comp=Z,6.4nm,0.8s,baz=196,slow=22,SNR=6.2
AB31 Akbulak array 14.29 18 Pn **Pn 16 00 11.3 -3.6**
comp=Z,1.1nm,0.4s,baz=204,SNR=10
ABKAR Akbulak array 14.29 18 *e*P **Pn 16 00 10.0 -4.9**
comp=Z,3.0nm,0.5s
MMAI Mount Meron Ar 14.96 264 LR LR 16 06 42.7
comp=Z,89nm,19.5s,baz=25,slow=39
AKTK Aktyubinsk 15.00 12 Pn **Pn 16 00 21.2 -3.3**
AKTK Sn **Sn 16 02 57.5 -13**
AKTK Aktyubinsk 15.00 12 Pn **Pn 16 00 21.2 -3.4**
AKTO Aktyubinsk 15.00 12 Pn **Pn 16 00 21.2 -3.3**
baz=197,slow=12
AKTO Sn **Sn 16 02 57.5 -13**
comp=Z,0.1nm,0.3s,baz=140,slow=17,SNR=3.7
KK31 Karatay Array 15.19 56 Pn **Pn 16 00 35.0 +7.8**
comp=Z,1.7nm,0.5s,baz=155,slow=12,SNR=12
KK31 Sn Sx 16 01 42.0
baz=159,slow=22
BRTR Keskin Array B 15.94 290 Pn **Pn 16 00 37.3 +0.2**
comp=Z,0.1nm,0.3s,baz=83,slow=10,SNR=20
BRTR Keskin Array B 15.94 290 P **Pn 16 00 37.3 +0.3**
EIL Elat 16.53 253 Pn **Pn 16 00 46.5 +1.8**
comp=Z,0.2nm,0.3s,baz=44,slow=6.6,SNR=8.2
EIL LR LR 16 08 23.1
comp=Z,343nm,18.6s,baz=280,slow=42
EIL Elat 16.53 253 Pn **Pn 16 00 46.5 +1.8**
VRHR Novokhopersk 17.37 335 *e*P **Pn 16 00 53.2 -1.9**
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,10.0nm,0.5s
VRHR pmax pmax
comp=Z,10.0nm,0.5s
VRHR Novokhopersk 17.37 335 *e*P **Pn 16 00 53.2 -1.9**
AAK Ala-Archa 17.81 61 LR LR 16 08 58.8
comp=Z,240nm,19.6s,baz=242,slow=41
VSR Storozhevoye 18.38 331 *e*P **Pn 16 01 03.2 -4.3**
VSR pmax pmax
comp=N,30nm,1.5s
VSR pmax pmax
comp=E,20nm,1.5s
VSR pmax pmax
comp=Z,30nm,1.5s
VSR Storozhevoye 18.38 331 *e*P **Pn 16 01 03.2 -4.3**
ZRNK Zerenda 20.42 28 Pn **P 16 01 30.6 +0.9**
comp=Z,6.0nm,0.9s
ZRNK Sn **S 16 05 12.0 -6.2**
ARU Arti 20.91 8 *e*P **P 16 01 36.0 +0.9**
ARU *e* 16 01 50.1
ARU S **S 16 05 14.2 -14**
ARU SS 16 05 28.6
ARU Arti 20.91 8 *e*P **P 16 01 35.3 +0.2**
comp=Z,5.7nm,0.5s
ARU Arti 20.91 8 *e*P **P 16 01 35.3 +0.2**
comp=Z,5.7nm,0.5s
BRVK Borovoye 21.00 30 ⇓Pn **P 16 01 36.7 +0.6**
comp=Z,18nm,1.3s,mb4.2
BRVK ⇑Sn **S 16 05 21.4 -8.4**
comp=Z,14nm,1.9s
BRVK Borovoye 21.00 30*d i*P **P 16 01 36.4 +0.3**
BRVK pmax pmax
comp=Z,9.0nm,1.2s,mb4.0
BRVK Borovoye 21.00 30 *e*P **P 16 01 35.7 -0.4**
comp=Z,12nm,1.2s,mb4.1
BRVK Borovoye 21.00 30 *e*P **P 16 01 35.7 -0.4**
comp=Z,12nm,1.2s,mb4.1
BRVK Borovoye 21.00 30 Pn **P 16 01 36.7 +0.6**
comp=Z,18nm,1.3s,mb4.2
BVAR Borovoye Array 21.02 30 P **P 16 01 36.5 +0.2**
comp=Z,5.2nm,0.9s,mb3.9,baz=218,slow=9.4,SNR=26
BVAR Borovoye Array 21.02 30 P **P 16 01 36.5 +0.2**
VOSK Vostochnaya 21.04 31 ⇓Pn **P 16 01 36.1 -0.4**
comp=Z,6.6nm,1.2s,mb3.8
VOSK Sn **S 16 05 28.6 -2.0**
VOSK Vostochnaya 21.04 31 Pn **P 16 01 36.1 -0.4**
comp=Z,6.6nm,1.2s,mb3.8
KIS Kishinev 21.33 309 ⇑*i*UNK **P 16 01 39.0 -0.6**
KIS XM 16 01 40.5
comp=Z,200nm,1.4s
KIS Kishinev 21.33 309 ⇑*i*P **P 16 01 39.0 -0.6**
KIS *e* 16 01 48.0
KIS *e* 16 02 03.0
KIS Kishinev 21.33 309 *i*P **P 16 01 39.0 -0.6**
VRI Vrincioaia 22.30 305 ⇑P **P 16 01 54.2 +4.1**
VRI Vrincioaia 22.30 305 ⇑*i*P **P 16 01 54.2 +4.1**
OBN Obninsk 22.42 334 *e*P **P 16 01 52.1 +0.8**
OBN *i* 16 02 07.7
OBN pmax pmax
comp=Z,24nm,1.3s,mb4.5
OBN Obninsk 22.42 334 *e*P **P 16 01 52.1 +0.8**
comp=Z,24nm,1.3s,mb4.5
MOS Moscow 22.57 337 *e*P **P 16 01 57.6 +4.8**
MLR Muntele Rosu 22.72 303 ⇓P **P 16 01 57.8 +3.3**
MLR Muntele Rosu 22.72 303 ⇓*i*P **P 16 01 57.8 +3.3**
AKASG Malin Array Be 22.78 318 P **P 16 01 55.5 +0.3**
comp=Z,1.7nm,0.5s,mb3.7,baz=115,slow=8.6,SNR=7.9
AKASG Malin Array Be 22.78 318 *i*P **P 16 01 56.5 +1.4**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKASG Malin Array Be 22.78 318 P **P 16 01 55.5 +0.4**
AKBB Malin Array Si 22.78 318 *e*P **P 16 01 55.3 +0.2**
AKBB Malin Array Si 22.78 318 *e*P **P 16 01 55.3 +0.2**
KIEV Kiev 22.79 318 *e*P **P 16 01 54.9 -0.3**
KIEV pmax pmax
comp=Z,10.0nm,0.8s,mb4.3
KIEV Kiev 22.79 318 *e*P **P 16 01 54.9 -0.3**
comp=Z,9.6nm,0.8s,mb4.3
KIEV Kiev 22.79 318 *e*P **P 16 01 54.9 -0.3**
comp=Z,10.0nm,0.8s,mb4.3
VOIR 23.31 303 ⇑P **P 16 02 02.0 +1.2**
VOIR 23.31 303 ⇑*i*P **P 16 02 02.0 +1.2**
VOIR 23.31 303 P **P 16 02 02.0 +1.2**
KURK Kurchatov 23.58 43 *e*P **P 16 02 04.5 +1.0**
KURK pmax pmax
comp=Z,11nm,1.1s,mb4.2
KURK Kurchatov 23.58 43 *e*P **P 16 02 04.5 +1.0**
comp=Z,11nm,1.1s,mb4.2
KURK Kurchatov 23.58 43 *e*P **P 16 02 04.5 +1.0**
comp=Z,11nm,1.1s,mb4.2
BURAR Bucovina Array 23.84 308 ⇓P **P 16 02 07.1 +1.2**
BURAR Bucovina Array 23.84 308 ⇓*i*P **P 16 02 07.1 +1.2**
BURAR Bucovina Array 23.84 308 ⇓*i*P **P 16 02 07.1 +1.2**
BUR08 Bucovina Ar. S 23.86 308 P **P 16 02 05.0 -1.1**
BUR08 Bucovina Ar. S 23.86 308 P **P 16 02 05.0 -1.1**
MK31 Makanchi Array 24.30 54 P **P 16 02 09.8 -0.3**
MK31 Makanchi Array 24.30 54 P **P 16 02 09.8 -0.3**
MKAR Makanchi Array 24.30 54 P **P 16 02 10.6 +0.5**
comp=Z,1.9nm,0.8s,mb3.6,baz=266,slow=7.3,SNR=7.5
MKAR LR LR 16 12 08.8
comp=Z,61nm,21.9s,MS3.0,baz=254,slow=38
MKAR Makanchi Array 24.30 54 P **P 16 02 10.6 +0.5**
LVV L'vov 25.36 312 *e*P **P 16 02 21.2 +1.5**
LVV L'vov 25.36 312 *e*P **P 16 02 21.2 +1.5**
ATD Arta Tunnel 25.96 204 LR LR 16 13 33.7
comp=Z,82nm,21.8s,MS3.2,baz=351,slow=38
UZH Uzhgorod 26.02 309 *e*P **P 16 02 28.5 +2.8**
UZH *e* 16 02 33.3
UZH *e* 16 02 42.9
UZH *e* 16 03 03.7
CRVS Cervenica-Dubn 26.62 309 *e*P **P 16 02 36.1 +4.9**
CRVS Cervenica-Dubn 26.62 309 *e*P **P 16 02 36.1 +4.9**
ZALV Zalesovo Beam 28.45 41 P **P 16 02 47.5 0.0**
comp=Z,0.5nm,0.4s,mb3.5,baz=262,slow=10,SNR=4.0
ZALV LR LR 16 14 54.2
comp=Z,28nm,20.6s,MS2.8,baz=275,slow=38
MORC Moravsky Berou 29.33 310 *e*P **P 16 02 55.8 +0.5**
MORC pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
MORC Moravsky Berou 29.33 310 *e*P **P 16 02 55.8 +0.4**
comp=Z,4.7nm,0.8s,mb4.3
MORC Moravsky Berou 29.33 310 *e*P **P 16 02 55.8 +0.5**
comp=Z,5.0nm,0.8s,mb4.3
VRAC Vranov 29.82 308 LR LR 16 15 10.0
comp=Z,22nm,19.2s,MS2.8,baz=318,slow=37
FINES FINESS Array B 30.83 335 LR LR 16 18 01.3
comp=Z,47nm,19.9s,MS3.1,baz=222,slow=41
HFS Hagfors 35.07 326 P **P 16 03 45.2 -0.4**
HFS LR LR 16 21 13.3
comp=Z,1.5nm,0.7s,mb4.0,baz=116,slow=17,SNR=3.3
HFS Hagfors 35.07 326 P **P 16 03 45.2 -0.3**
NOA NORSAR Array B 36.56 327 LR LR 16 22 10.0
comp=Z,60nm,18.6s,MS3.4,baz=115,slow=42
ARCES ARCESS Array B 36.99 344 LR LR 16 22 35.1
comp=Z,59nm,18.9s,MS3.4,baz=304,slow=42
SONM Songino Array 40.65 56 LR LR 16 24 15.6
comp=Z,69nm,20.9s,MS3.5,baz=255,slow=40
CMAR Chiang Mai Arr 43.80 101 P **P 16 04 59.0 +0.1**
comp=Z,0.9nm,0.7s,mb3.6,baz=300,slow=8.5,SNR=7.1
CMAR LR LR 16 27 16.4
comp=Z,28nm,18.8s,MS3.2,baz=180,slow=42
CMAR Chiang Mai Arr 43.80 101 P **P 16 04 59.0 +0.1**
KSRS Korea Array 58.44 64 P **P 16 06 49.0 +0.3**
comp=Z,0.9nm,0.7s,mb3.9,baz=286,slow=6.9,SNR=4.2
KSRS Korea Array 58.44 64 P **P 16 06 49.0 +0.3**
KSRS pmax pmax
comp=Z,1.0nm,0.7s,mb4.0
KSRS Korea Array 58.44 64 P **P 16 06 49.0 +0.3**
comp=Z,1.0nm,0.7s,mb4.0
ASAR Alice Springs 96.45 114 P **P 16 10 22.8 +0.5**
comp=Z,0.4nm,0.9s,mb3.9,baz=302,slow=5.0,SNR=4.5

*IDC **16** 15:58:29.4±1.0, 8°.55N×102°.63W, h0km, mb3.7/6, mb1 4.0/8, mb1mx3.9/21, mbtmp3.8/8, ML3.5/1, MS3.6/5, Ms1 3.5/5, ms1mx3.2/30, Error ellipse: s-maj=34.4km s-min=19.6km az=57.0*
*NEIC **16** 15:58:30.9±0.9, 8°.56N×102°.65W, h10km, mb4.3/1, Error ellipse: s-maj=24.8km s-min=16.2km az=60.0*
*ISCJB **16** 15:58:32.7±1.1, 8°.6N±0°.1×102°.6W±0°.1, h33km, mb3.9/6, MS3.4/3, Error ellipse: s-maj=22.4km s-min=13.4km az=139.8*

ISC 16 15:58:34.7±1.1, 8°.6N±0°.1×102°.7W±0°.1, h35km, n21, σ1§16/12, mb3.9/6, MS3.4/3, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**11.35**	**41**	Pn	**Pn**	**16 01 13.1**	**-1.4**
	0.3nm,0.3s,baz=247,slow=8.5,SNR=3.6						
CMIG				LR	LR	16 04 50.4	
	comp=Z,459nm,18.4s,baz=251,slow=34						
APG	**El Apazote**	**13.53**	**61**	Pn	**Pn**	**16 01 44.6**	**+0.4**
	baz=270,slow=19						
APG				LR	LR	16 05 37.0	
	comp=Z,131nm,18.2s,baz=272,slow=32						
TXAR	**Lajitas Array**	**20.67**	**357**	P	**P**	**16 03 13.2**	**+1.6**
	1.7nm,1.0s,baz=179,slow=12,SNR=5.4						
TXAR				LR	LR	16 11 38.7	
	comp=Z,111nm,19.7s,MS3.2,baz=270,slow=38						
OTAV	**Otavalo**	**25.49**	**108**	*e*P	**P**	**16 04 01.2**	**+1.2**
ANMO	**Albuquerque**	**26.48**	**353**	LR	LR	16 15 21.9	
	comp=Z,78nm,18.5s,MS3.3,baz=13,slow=38						
MIAR	**Mount Ida**	**27.16**	**17**	*e*P	**P**	**16 04 14.8**	**0.0**
	7.6nm,1.1s,mb4.1						
NVAR	**Mina Array Bea**	**32.90**	**337**	P	**P**	**16 05 05.8**	**+0.3**
	1.0nm,0.9s,mb3.8,baz=161,slow=9.1,SNR=6.3						
NVAR	**Mina Array Bea**	**32.90**	**337**	P	**P**	**16 05 05.8**	**+0.3**
PDAR	**Pinedale Array**	**34.59**	**351**	P	**P**	**16 05 20.8**	**+0.6**
	0.8nm,0.9s,mb3.6,baz=183,slow=8.9,SNR=5.4						
YBH	**Yreka Blue Hor**	**37.48**	**335**	P	**P**	**16 05 43.1**	**-1.8**
	0.8nm,0.4s,mb3.9,baz=70,slow=3.1,SNR=4.0						
LPAZ	**La Paz**	**42.16**	**126**	P	**P**	**16 06 24.9**	**+0.7**
	2.6nm,0.8s,mb3.9,baz=257,slow=4.6,SNR=6.1						
LPAZ	**La Paz**	**42.16**	**126**	*e*P	**P**	**16 06 24.9**	**+0.7**
RKT	**Rikitea**	**44.64**	**224**	*e*LR	LR	16 19 01.7	
	170nm,27.2s						
RKT				*e*T		16 53 37.8	
	7.8nm,0.2s						
SIV	**San Ignacio**	**47.86**	**121**	P	**P**	**16 07 07.6**	**-1.9**
	1.4nm,1.0s,mb4.0,baz=175,slow=19						
PMOR	**Pomariorio Ree**	**50.60**	**243**	*e*T		17 01 01.4	
	2.6nm,0.2s						
PPT	**Papeete**	**53.14**	**241**	*e*LR	LR	16 22 37.8	
	136nm,25.2s						
TBI	**Tubuai**	**55.69**	**234**	*e*LR	LR	16 23 56.6	
	116nm,28.5s						
FRB	**Frobisher Bay**	**60.20**	**17**	LR	LR	16 33 18.8	
	comp=Z,71nm,20.1s,MS3.8,baz=137,slow=35						
WRA	**Warramunga Arr**	**123.86**	**252**	PKP	PKPdf	16 17 31.7	+1.8
	0.3nm,0.8s,baz=93,slow=2.7,SNR=5.3						
ASAR	**Alice Springs**	**123.98**	**247**	PKP	PKPdf	16 17 31.8	+1.7
	0.4nm,0.9s,baz=90,slow=2.8,SNR=3.6						
CMAR	**Chiang Mai Arr**	**145.71**	**322**	PKPbc	PKPbc	16 18 08.5	-2.4
	0.8nm,0.6s,baz=0.4,slow=1.6,SNR=6.9						

IDC 16 16:00:49.3±2.3, 25°.68S×137°.53E, h0km, mb1 3.1/3, mb1mx3.0/15, mbtmp2.9/3, ML2.8/3, Error ellipse: s-maj=38.6km s-min=16.0km az=53.0, Northern Territory

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**3.86**	**301**	Pn	Pn	16 01 50.4	+0.5
	0.3nm,0.3s,baz=125,slow=14,SNR=24						
ASAR				Pg	Pg	16 02 01.5	-1.9
	0.9nm,0.3s,baz=116,slow=16,SNR=29						
ASAR				Sn	Sn	16 02 33.6	-2.4
	1.0nm,0.3s,baz=120,slow=23,SNR=6.5						
ASAR				Lg		16 02 50.1	
	1.7nm,0.3s,baz=118,slow=24,SNR=9.4						
WRA	**Warramunga Arr**	**6.43**	**332**	Pn	Pn	16 02 25.3	+0.1
	0.1nm,0.3s,baz=147,slow=12,SNR=14						
WRA				Sn	Sn	16 03 39.5	+0.1
	0.3nm,0.3s,baz=157,slow=25,SNR=5.2						
WRA				Lg		16 04 14.2	
	0.6nm,0.3s,baz=79,slow=28,SNR=4.7						
STKA	**Stephens Creek**	**7.13**	**151**	Pn	Pn	16 02 33.8	-1.0
	0.3nm,0.3s,baz=323,slow=14,SNR=5.6						
STKA				Sn	Sn	16 03 54.4	-2.1
	0.4nm,0.3s,baz=249,slow=21,SNR=2.9						
STKA				Lg		16 04 36.2	
	0.5nm,0.3s,baz=272,slow=21,SNR=2.7						

MAN 16 16:07:56, 17°.31N×120°.41E, h38km, mb4.4, ML3.3, MS3.2, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABRA	**Dolores**	**0.44**	**41**	*e*P	Pn	16 08 08.7	+2.7
ABRA				*e*S	Sn	16 08 15.7	+2.9
APYP	**Conner**	**0.97**	**55**	*e*P	Pn	16 08 13.7	+0.6
APYP				*e*S	Sn	16 08 27.5	+1.9
PIP	**Pasuquin**	**1.03**	**11**	⇓*e*P	Pn	16 08 14.7	+0.8
BOLP	**Bolinao**	**1.04**	**207**	*e*P	Pn	16 08 15.4	+1.3
CAUP	**Cauayan**	**1.40**	**105**	*e*P	Pn	16 08 20.6	+1.5
CVP	**Callao Caves**	**1.40**	**74**	*e*P	Pn	16 08 19.2	+0.1
BALP	**Baler**	**1.92**	**144**	*e*P	Pn	16 08 26.9	+0.7

*IDC **16** 16:08:29.4±1.1, 31°.91S×72°.49W, h0km, mb3.8/2, mb1 3.8/7, mb1mx3.7/18, mbtmp3.5/7, ML3.8/5, Error ellipse: s-maj=25.6km s-min=17.8km az=4.0*
*ISCJB **16** 16:08:30.3±1.1, 32°.07S±0°.02×72°.34W±0°.06, h15km±7km, mb3.8/2, Error ellipse: s-maj=9.2km s-min=4.1km az=174.5*
*GUC **16** 16:08:32.7±0.7, 32°.09S×72°.16W, h29km±2km, MD4.2, ML4.0*
*NEIC **16** 16:08:32.7, 32°.09S×72°.16W, h29km, ML4.0(GUC), After GUC.*

ISC 16 16:08:30.6±1.0, 32°.08S±0°.02×72°.26W±0°.06, h6km±5km, n44, σ1§02/74, mb3.8/2, 9C-3D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHNG	**Los Chungos**	**0.67**	**73**	⇑*i*P	**Pg**	**16 08 44.0**	**+0.4**
CHNG				*i* S	**Sg**	**16 08 53.2**	**+0.9**
IHA	**Instituto Hidr**	**1.08**	**151**	⇑*i*P	**Pg**	**16 08 51.2**	**-0.1**
IHA				*i* S	**Sg**	**16 09 05.0**	**-0.4**
IHA	**Instituto Hidr**	**1.08**	**151**	⇑*i*P	**Pg**	**16 08 51.2**	**-0.1**
IHA				*i* S	**Sg**	**16 09 05.0**	**-0.4**
ROCH	**El Roble**	**1.38**	**131**	*e*P	**Pn**	**16 08 56.0**	**-0.4**
ROCH				*i* S	**Sb**	**16 09 13.2**	**-1.5**
ROCH	**El Roble**	**1.38**	**131**	*e*P	**Pn**	**16 08 56.0**	**-0.4**
ROCH				*i* S	**Sb**	**16 09 13.2**	**-1.5**
CMCH	**Combarbala**	**1.40**	**50**	⇓*i*P	**Pn**	**16 08 56.0**	**-0.7**
CMCH				*e*S	**Sb**	**16 09 13.9**	**-1.4**
CMCH	**Combarbala**	**1.40**	**50**	⇓*i*P	**Pn**	**16 08 56.0**	**-0.7**
CMCH				*e*S	**Sb**	**16 09 13.9**	**-1.4**
CMCH				AML	AML	16 09 16.5	
	comp=E,8μm,0.6s						
LCCH	**Las Cruces**	**1.51**	**158**	⇑*i*P	**Pn**	**16 08 57.9**	**-0.3**
LCCH	**Las Cruces**	**1.51**	**158**	⇑*i*P	**Pn**	**16 08 57.9**	**-0.3**
JACH	**Jahuel**	**1.53**	**114**	*e*P	**Pn**	**16 08 57.9**	**-0.6**
JACH	**Jahuel**	**1.53**	**114**	*e*P	**Pn**	**16 08 57.9**	**-0.6**
PEL	**Peldehue**	**1.70**	**129**	⇓*i*P	**Pn**	**16 09 00.8**	**0.0**
PEL				*i* S	**Sn**	**16 09 21.8**	**-1.1**
PEL				AML	AML	16 09 29.1	
	comp=N,5μm,0.4s						
OVCH	**Ovalle**	**1.72**	**32**	*e*P	**Pn**	**16 09 01.5**	**+0.4**
OVCH				*i* S	**Sn**	**16 09 23.3**	**-0.1**
OVCH	**Ovalle**	**1.72**	**32**	*e*P	**Pn**	**16 09 01.5**	**+0.4**
OVCH				*i* S	**Sn**	**16 09 23.3**	**-0.1**
OVCH				AML	AML	16 09 38.1	
	comp=N,2μm,0.8s						
SAN	**Santiago**	**1.92**	**136**	*e*P	**Pn**	**16 09 03.8**	**-0.1**
SAN				*e*S	**Sn**	**16 09 28.1**	**-0.2**
SAN	**Santiago**	**1.92**	**136**	*e*P	**Pn**	**16 09 03.8**	**-0.1**
SAN				*e*S	**Sn**	**16 09 28.1**	**-0.2**
SAN				AML	AML	16 09 34.4	
	comp=N,2μm,0.6s						
TACH	**Talagante**	**1.93**	**145**	*e*P	**Pn**	**16 09 04.2**	**+0.3**
TACH				*i* S	**Sn**	**16 09 28.4**	**0.0**
TACH	**Talagante**	**1.93**	**145**	*e*P	**Pn**	**16 09 04.2**	**+0.3**
TACH				*i* S	**Sn**	**16 09 28.4**	**0.0**
CLCH	**Cerro Calan**	**1.96**	**133**	⇑*i*P	**Pn**	**16 09 04.5**	**+0.1**
CLCH				*i* S	**Sn**	**16 09 28.7**	**-0.5**
CLCH				AML	AML	16 09 42.1	
	comp=N,2μm,0.4s						
ANTU	**Antumapu**	**2.02**	**138**	*e*P	**Pn**	**16 09 05.0**	**-0.3**
ANTU				*i* S	**Sn**	**16 09 30.2**	**-0.6**
ANTU	**Antumapu**	**2.02**	**138**	*e*P	**Pn**	**16 09 05.0**	**-0.3**
ANTU				*i* S	**Sn**	**16 09 30.2**	**-0.6**
ANTU				AML	AML	16 09 42.6	
	comp=N,2μm,0.6s						
FCH	**Farellones**	**2.08**	**127**	⇑*i*P	**Pn**	**16 09 08.7**	**+2.8**
FCH				*i* S	**Sn**	**16 09 34.2**	**+2.1**
FCH				AML	AML	16 09 43.5	
	comp=N,1μm,0.7s						
PCH	**Pirque**	**2.13**	**137**	*e*P	**Pn**	**16 09 06.9**	**+0.2**
PCH				*e*S	**Sn**	**16 09 33.5**	**0.0**
PCH	**Pirque**	**2.13**	**137**	*e*P	**Pn**	**16 09 06.9**	**+0.2**
PCH				*e*S	**Sn**	**16 09 33.5**	**0.0**
TLL	**Tololo Astrono**	**2.28**	**34**	*e*P	**Pn**	**16 09 10.0**	**+1.3**
TLL				*i* S	**Sn**	**16 09 38.0**	**+0.9**
TLL	**Tololo Astrono**	**2.28**	**34**	*e*P	**Pn**	**16 09 10.0**	**+1.3**
TLL				*i* S	**Sn**	**16 09 38.0**	**+0.9**
TLL				AML	AML	16 09 52.0	
	comp=N,1μm,0.8s						
CHCH	**Chadas Angostu**	**2.29**	**144**	⇑*i*P	**Pn**	**16 09 09.1**	**+0.2**
CHCH				*i* S	**Sn**	**16 09 37.1**	**-0.3**
CHCH	**Chadas Angostu**	**2.29**	**144**	⇑*i*P	**Pn**	**16 09 09.1**	**+0.2**
CHCH				*i* S	**Sn**	**16 09 37.1**	**-0.3**
CACH	**El Canelo**	**2.46**	**146**	*e*P	**Pn**	**16 09 12.6**	**+1.2**
CACH				*e*S	**Sn**	**16 09 43.1**	**+1.4**
CACH	**El Canelo**	**2.46**	**146**	*e*P	**Pn**	**16 09 12.6**	**+1.2**
CACH				*e*S	**Sn**	**16 09 43.1**	**+1.4**
LMEL	**Las Melosas**	**2.47**	**136**	*e*P	**Pn**	**16 09 11.9**	**+0.5**
LMEL				*

comp=N,1.7nm,0.3s,baz=117,slow=9.3,SNR=5.1
CFAA Lg 16 10 24.1
comp=N,4.5nm,0.3s,baz=350,slow=22,SNR=6.2
CFAA Coronel Fontan 3.46 83 Pn Pn 16 09 28.0 +3.0
CFAA Pg **Pg 16 09 35.0 -1.9**
CFAA Sn **Sn 16 10 12.8 +6.6**
CFAA Lg 16 10 24.1
PLCA Paso Flores 8.75 171 Pn **Pn 16 10 38.2 +0.6**
comp=N,0.5nm,0.3s,baz=336,slow=8.3,SNR=7.0
PLCA Sn **Sn 16 12 23.4 +6.9**
comp=N,0.1nm,0.3s,baz=234,slow=7.3,SNR=3.7
PLCA Lg 16 13 00.8
comp=N,0.6nm,0.3s,baz=136,slow=18,SNR=7.6
CPUP Villa Florida 14.24 70 Pn **Pn 16 11 54.8 +2.0**
comp=N,0.3nm,0.3s,baz=90,slow=17,SNR=2.4
CPUP Sn **Sn 16 14 39.7 +8.6**
comp=N,0.2nm,0.3s,baz=269,slow=11,SNR=2.7
LPAZ La Paz 16.16 14 Pn **Pn 16 12 17.8 -0.6**
comp=N,0.1nm,0.3s,baz=169,slow=11,SNR=2.2
SIV San Ignacio 18.97 35 P **Pn 16 12 51.2 -2.2**
comp=N,0.1nm,0.3s,baz=186,slow=20,SNR=3.9
TXAR Lajitas Array 67.97 331 P **P 16 19 28.2 -2.2**
comp=N,0.8nm,0.5s,mb4.0,baz=138,slow=10,SNR=9.3
TORD Torodi Ar. Bea 83.73 70 P **P 16 21 01.0 +0.2**
comp=N,0.6nm,0.9s,mb3.7,baz=270,slow=5.0,SNR=4.9
WRA Warramunga Arr 122.34 210 PKP PKPdf 16 27 27.4 +0.2
comp=N,0.5nm,0.9s,baz=153,slow=1.5,SNR=4.9
WRA Warramunga Arr 122.34 210 PKP PKPdf 16 27 27.4 +0.2
ZALV Zalesovo Beam 152.68 30 PKPbc PKPbc 16 28 28.3 +0.6
comp=N,2.5nm,0.6s,baz=309,slow=2.9,SNR=12
ZALV PKPab PKPab 16 28 37.7 -0.6
comp=N,1.1nm,0.5s,baz=293,slow=3.8,SNR=4.8
ZALV Zalesovo Beam 152.68 30 PKPbc PKPbc 16 28 28.3 +0.6
ZALV PKPab PKPab 16 28 37.7 -0.6

*NEIC **16** 16:13:03.7±1.9, 6°.52N×83°.91W, h10km, mb4.1/2, Error ellipse: s-maj=30.9km s-min=11.3km az=176.0*
*ISCJB **16** 16:13:04.9±2.1, 6°.48N±0°.06×84°.54W±0°.08, h13km±15km, mb3.7/6, MS3.3/2, Error ellipse: s-maj=12.9km s-min=10.2km az=3.9*
*IDC **16** 16:13:04.2±2.2, 6°.57N×84°.30W, h0km, mb3.8/5, mb1 4.2/8, mb1mx4.0/20, mbtmp3.9/8, ML4.2/3, MS3.1/5, Ms1 3.2/5, ms1mx2.8/33, Error ellipse: s-maj=83.8km s-min=32.7km az=71.0*
*CASC **16** 16:13:10.3±1.8, 6°.88N×84°.69W, h0km±34km, MD4.2, ML2.9, mb4.1(NEIC)*

ISC 16 16:13:07.7±2.5, 6°.50N±0°.06×84°.55W±0°.08, h18km±18km, n36, σ1°09/38, mb3.7/6, MS3.3/2, 1C-3D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**2.54**	**33**	*e*P	**Pn**	**16 13 49.9**	**+1.9**
QCR	**Quepos**	**2.93**	**7**	↑*e*P	**Pn**	**16 13 52.9**	**-0.4**
BAR1		**2.98**	**24**	*e*P	**Pn**	**16 13 55.8**	**+1.7**
BAR1				*e*S	**Sn**	16 14 29.6	+0.1
BUS	**Buena Vista**	**3.13**	**14**	*e*P	**Pn**	**16 13 57.1**	**+0.9**
LAJ	**Bijagual**	**3.37**	**7**	↓*e*P	**Pn**	**16 13 56.0**	**-3.4**
JCR	**Jicaral**	**3.37**	**350**	*e*P	**Pn**	**16 13 58.1**	**-1.4**
URSC	**Urasca**	**3.40**	**13**	↓*e*P	**Pn**	**16 14 01.0**	**+1.2**
PRS1	**Puriscal**	**3.47**	**4**	↓*e*P	**Pn**	**16 13 59.2**	**-1.6**
CGA2	**Cerro Gallo 2**	**3.49**	**1**	*e*P	**Pn**	**16 14 01.1**	**0.0**
VCR	**Vista de Mar**	**3.76**	**343**	*e*P	**Pn**	**16 14 02.7**	**-2.1**
JTS	**JuntasAbangare**	**3.79**	**354**	**Pn**	**Pn**	**16 14 04.2**	**-1.0**
	76nm,0.3s,baz=163,slow=6.6,SNR=125						
JTS				Sn	**Sn**	**16 14 50.0**	**+0.7**
	60nm,0.3s,baz=320,slow=21,SNR=10						
JTS	**JuntasAbangare**	**3.79**	**354**	*e*Pn	**Pn**	**16 14 03.9**	**-1.3**
JTS				*e*Sn	**Sn**	**16 14 46.6**	**-2.6**
JTS				Sn	**Sn**	**16 14 50.0**	**+0.7**
JTS	**JuntasAbangare**	**3.79**	**354**	*e*P	**Pn**	**16 14 04.2**	**-1.0**
JTS				*e*S	**Sn**	**16 14 46.7**	**-2.6**
LAPC	**Finca la Perla**	**4.33**	**348**	*i*P	**Pn**	**16 14 11.4**	**-1.3**
GB1A	**Borinquen Arri**	**4.37**	**349**	*i*P	**Pn**	**16 14 12.8**	**-0.4**
SSN	**San Juan del S**	**4.94**	**345**	*e*P	**Pn**	**16 14 20.8**	**-0.2**
CONN	**Concepcion**	**5.14**	**348**	*e*P	**Pn**	**16 14 23.8**	**0.0**
BCIP	**Isla Barro Col**	**5.36**	**60**	Pg	**Pb**	**16 14 35.6**	**-5.4**
CSAN		**5.94**	**342**	*e*P	**Pn**	**16 14 34.5**	**-0.3**
APYN	**Apoyeque**	**5.97**	**343**	*e*P	**Pn**	**16 14 36.0**	**+0.8**
COPN	**Copaltepe**	**5.99**	**340**	*e*P	**Pn**	**16 14 35.6**	**0.0**
CNGN	**Cerro Negro**	**6.33**	**341**	*e*P	**Pn**	**16 14 40.4**	**+0.3**
TGUH	**Tegucigalpa,Un**	**7.97**	**341**	*e*P	**Pn**	**16 15 03.1**	**+0.4**
	72nm,0.5s						
APG	**El Apazote**	**10.25**	**326**	Pn	**Pn**	**16 15 36.6**	**+2.5**
	baz=90,slow=17						
ROSC	**El Rosal**	**10.30**	**99**	LR	LR	16 19 12.4	
	comp=Z,62nm,18.9s,baz=212,slow=36						
CMIG	**Matias Romero**	**14.59**	**317**	**Pn**	**Pn**	**16 16 35.0**	**+1.7**
	0.5nm,0.3s,baz=118,slow=14,SNR=7.1						
CMIG				LR	LR	16 20 59.0	
	comp=Z,90nm,21.3s,baz=174,slow=32						
ATAH	**Atahualpa**	**14.87**	**156**	Pn	**Pn**	**16 16 36.5**	**-0.8**
	0.4nm,0.3s,baz=92,slow=13,SNR=2.0						
ATAH				LR	LR	16 20 40.3	
	comp=Z,64nm,21.4s,baz=360,slow=31						
LPAZ	**La Paz**	**27.87**	**145**	LR	LR	16 30 52.6	
	comp=Z,82nm,21.4s,MS3.3,baz=26,slow=38						
TXAR	**Lajitas Array**	**29.00**	**324**	P	**P**	**16 19 06.1**	**-0.5**
	0.4nm,0.8s,mb3.2,baz=130,slow=12,SNR=4.7						
ANMO	**Albuquerque**	**34.77**	**327**	P	**P**	**16 19 57.0**	**-0.2**
	1.2nm,0.7s,mb4.0,baz=165,slow=6.3,SNR=4.0						
ANMO	**Albuquerque**	**34.77**	**327**	P	**P**	**16 19 57.3**	**+0.1**
	1.7nm,0.7s,mb4.1						
SDCO	**Great Sand Dun**	**36.47**	**332**	*e*P	**P**	**16 20 12.6**	**+0.8**
	4.0nm,1.1s,mb4.3						
PDAR	**Pinedale Array**	**42.34**	**332**	**P**	**P**	**16 21 00.7**	**+0.1**
	1.3nm,0.9s,mb3.5,baz=127,slow=9.5,SNR=7.8						
NVAR	**Mina Array Bea**	**44.07**	**321**	P	**P**	**16 21 15.6**	**+0.9**
	0.7nm,0.7s,mb3.5,baz=134,slow=7.8,SNR=4.4						
YBH	**Yreka Blue Hor**	**48.75**	**322**	LR	LR	16 46 03.3	
	comp=Z,29nm,20.6s,MS3.2,baz=67,slow=40						
YKA	**Yellowknife Ar**	**60.07**	**344**	P	**P**	**16 23 12.6**	**-0.8**
	0.9nm,0.8s,mb3.9,baz=122,slow=9.7,SNR=4.5						

*IDC **16** 16:21:02.5±4.4, 19°.69S×178°.42W, h452km±47km, mb3.1/6, mb1 3.4/7, mb1mx3.2/16, mbtmp3.1/7, Error ellipse: s-maj=26.1km s-min=16.0km az=117.0*
*ISCJB **16** 16:21:09.3±1.4, 20°.0S±0°.2×178°.5W±0°.2, h547km±16km, mb3.6/7, Error ellipse: s-maj=31.9km s-min=19.1km az=145.6*
*NEIC **16** 16:21:09.6±1.0, 20°.04S×178°.44W, h541km±11km, mb4.2/1, Error ellipse: s-maj=21.4km s-min=12.3km az=146.0*

ISC 16 16:21:09.8±1.5, 20°.1S±0°.2×178°.5W±0°.2, h541km±16km, n12, σ0°21/13, mb3.6/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.02**	**304**	*e*P	**P**	**16 22 31.3**	**0.0**
URZ	**Urewera**	**18.55**	**191**	P	**P**	**16 24 53.2**	**+0.3**
	0.9nm,0.3s,baz=275,slow=6.8,SNR=6.9						
URZ				S	**S**	**16 28 03.9**	**+9.4**
	0.4nm,0.3s,baz=239,slow=23,SNR=5.6						
URZ	**Urewera**	**18.55**	**191**	*e*P	**P**	**16 24 52.9**	**-0.1**
URZ				S	**S**	**16 28 03.9**	**+9.4**
CTAO	**Charters Tower**	**33.10**	**264**	*e*P	**P**	**16 27 01.7**	**+0.3**
	2.8nm,0.4s,mb4.2						
STKA	**Stephens Creek**	**37.60**	**244**	P	**P**	**16 27 38.1**	**-0.5**
	2.3nm,0.8s,mb3.8,baz=25,slow=6.3,SNR=3.7						
ASAR	**Alice Springs**	**44.20**	**256**	P	**P**	**16 28 31.4**	**+0.2**
	3.3nm,0.5s,mb4.1,baz=89,slow=8.5,SNR=143						
ASAR				PcP	PcP	16 30 03.9	-0.2
	0.4nm,0.6s,baz=106,slow=3.4,SNR=6.1						
WRAB	**Tennant Creek**	**44.22**	**262**	*e*P	**P**	**16 28 31.4**	**-0.1**
WRA	**Warramunga Arr**	**44.23**	**262**	P	**P**	**16 28 31.4**	**-0.1**
	1.1nm,0.6s,mb3.6,baz=97,slow=8.1,SNR=73						
NVAR	**Mina Array Bea**	**81.00**	**44**	P	**P**	**16 32 28.2**	**-0.1**
	0.7nm,0.8s,mb3.1,baz=221,slow=7.9,SNR=4.3						
TXAR	**Lajitas Array**	**87.18**	**58**	P	**P**	**16 32 58.9**	**0.0**
	0.3nm,0.6s,mb3.1,baz=215,slow=8.3,SNR=5.2						
PDAR	**Pinedale Array**	**88.93**	**43**	P	**P**	**16 33 06.8**	**0.0**
	0.4nm,0.6s,mb3.4,baz=219,slow=1.9,SNR=3.5						
MMAI	**Mount Meron Ar**	**147.21**	**300**	PKPbc	PKPbc	16 39 54.0	+1.2
	0.7nm,0.3s,baz=77,slow=6.4,SNR=4.5						

MEX 16 16:30:30.7±0.5, 15°.55N×93°.28W, h101km±5km, MD3.5, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.16**	**20**	*i*P	Pn	16 30 43.5	-1.4
PCIG				*e*S	Sn	16 30 53.7	-1.8
THIG		**1.17**	**123**	*i*P	Pn	16 30 51.2	-1.9
THIG				*i*S	Sn	16 31 08.3	-1.6
TGIG		**1.23**	**7**	*i*P	Pn	16 30 52.7	-1.1
TGIG				*e*S	Sn	16 31 09.2	-2.0
SCX	**San Cristobal**	**1.33**	**28**	*i*P	Pn	16 30 55.0	0.0
SCX				*i*S	Sn	16 31 12.5	-0.8

*ISCJB **16** 16:33:43.3±0.2, 35°.91N±0°.02×53°.21E±0°.02, h10km, mb3.5/4, Error ellipse: s-maj=3.0km s-min=2.1km az=159.6*
*CSEM **16** 16:33:43.4±0.1, 35°.92N×53°.19E, h2km, mb4.0/1, Error ellipse: s-maj=4.3km s-min=3.2km az=159.0*
*THR **16** 16:33:43.7±1.4, 35°.89N×53°.18E, h15km±11km, ML4.0*
*NEIC **16** 16:33:44.0, 35°.90N×53°.30E, h3km, mb4.0/1, ML4.1(THR), MN4.0(TEH), After TEH.*
*TEH **16** 16:33:44.0, 35°.91N×53°.23E, h3km*
*IDC **16** 16:33:45.5±1.6, 35°.87N×53°.47E, h0km, mb3.7/5, mb1 3.9/8, mb1mx3.6/24, mbtmp3.8/8, ML3.6/3, MS3.1/3, Ms1 3.1/3, ms1mx2.6/44, Error ellipse: s-maj=26.2km s-min=23.9km az=15.0*
*NNC **16** 16:33:52.7±3.8, 36°.56N×54°.08E, h0km, mb3.5, Error ellipse: s-maj=44.9km s-min=20.3km az=50.0*

ISC 16 16:33:44.4±0.2, 35°.91N±0°.02×53°.20E±0°.02, h10km, n137, σ1°17/177, mb3.5/4, 6C-6D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISHM	**Shahmirzad**	**0.13**	**143**	Pg	**Pg**	**16 33 45.6**	**-1.8**
ISHM				Sg	**Sg**	**16 33 48.0**	**-1.5**
ISHM	**Shahmirzad**	**0.13**	**143**	↓*e*Pg	**Pg**	**16 33 45.6**	**-1.8**
ISHM				*e*Sg	**Sg**	**16 33 48.0**	**-1.5**
ISHM				*e*		16 33 49.0	
	comp=Z,4914μm,0.2s						
ISHM	**Shahmirzad**	**0.13**	**143**	↓*e*Pg	**Pg**	**16 33 45.6**	**-1.8**
ISHM				*e*Sg	**Sg**	**16 33 48.0**	**-1.5**
IALA	**Alasht**	**0.36**	**299**	*e*Pg	**Pg**	**16 33 49.5**	**-2.0**
IALA				*e*Sg	**Sg**	**16 33 55.6**	**-0.7**
IALA				*e*		16 33 56.4	
	comp=Z,31μm,0.2s						
IALA	**Alasht**	**0.36**	**299**	*e*Pg	**Pg**	**16 33 49.5**	**-2.0**
IALA				*e*Sg	**Sg**	**16 33 55.6**	**-0.7**
IFIR	**Firoozkooh**	**0.45**	**233**	Pg	**Pg**	**16 33 52.2**	**-1.0**
IFIR	**Firoozkooh**	**0.45**	**233**	↑*e*Pg	**Pg**	**16 33 52.3**	**-0.9**
IFIR				*e*Sg	**Sg**	**16 33 59.6**	**+0.5**
IFIR				*e*		16 34 02.4	
	comp=Z,37μm,0.1s						
IFIR	**Firoozkooh**	**0.45**	**233**	↑*e*Pg	**Pg**	**16 33 52.3**	**-0.9**
IFIR				*e*Sg	**Sg**	**16 33 59.6**	**+0.5**
IKIA	**Kiasar**	**0.49**	**53**	Pg	**Pg**	**16 33 52.3**	**-1.8**
IKIA	**Kiasar**	**0.49**	**53**	↓*e*Pg	**Pg**	**16 33 52.4**	**-1.7**
IKIA				*e*Sg	**Sg**	**16 34 00.5**	**-0.1**
IKIA				*e*		16 34 06.2	
	comp=Z,71μm,0.3s						
IKIA	**Kiasar**	**0.49**	**53**	↓*e*Pg	**Pg**	**16 33 52.4**	**-1.7**
IKIA				*e*Sg	**Sg**	**16 34 00.5**	**-0.1**
ILAS	**Lasjerd**	**0.56**	**200**	Pg	**Pg**	**16 33 54.0**	**-1.3**
ILAS				Sg	**Sg**	**16 34 02.6**	**-0.1**
ILAS	**Lasjerd**	**0.56**	**200**	↑*e*Pg	**Pg**	**16 33 54.0**	**-1.3**
ILAS				*e*Sg	**Sg**	**16 34 02.6**	**-0.1**
ILAS				*e*		16 34 07.5	
	comp=Z,90μm,0.2s						
ILAS	**Lasjerd**	**0.56**	**200**	↑*e*Pg	**Pg**	**16 33 54.0**	**-1.3**
ILAS				*e*Sg	**Sg**	**16 34 02.6**	**-0.1**
IANJ	**Anjilo**	**0.73**	**127**	Pg	**Pg**	**16 33 56.6**	**-2.0**
IANJ				Sg	**Sg**	**16 34 05.9**	**-2.3**
IANJ	**Anjilo**	**0.73**	**127**	*e*Pg	**Pg**	**16 33 56.6**	**-2.0**
IANJ				*e*Sg	**Sg**	**16 34 06.0**	**-2.2**
IANJ				*e*		16 34 09.3	
	comp=Z,34μm,0.1s						
IANJ	**Anjilo**	**0.73**	**127**	*e*Pg	**Pg**	**16 33 56.6**	**-2.0**
IANJ				*e*Sg	**Sg**	**16 34 06.0**	**-2.2**
IPRN	**Peran**	**0.77**	**296**	Pg	**Pg**	**16 33 58.2**	**-1.1**
IPRN	**Peran**	**0.77**	**296**	*e*Pg	**Pg**	**16 33 58.3**	**-1.0**
IPRN				*e*Sg	**Sg**	**16 34 09.9**	**+0.6**
IPRN				*e*		16 34 10.2	
	comp=Z,66μm,0.2s						
IPRN	**Peran**	**0.77**	**296**	*e*Pg	**Pg**	**16 33 58.3**	**-1.0**
IPRN				*e*Sg	**Sg**	**16 34 09.9**	**+0.6**
IGLO	**Ghaloghah**	**0.78**	**41**	Pg	**Pg**	**16 33 58.1**	**-1.5**
IGLO				Sg	**Sg**	**16 34 08.5**	**-1.3**
IGLO	**Ghaloghah**	**0.78**	**41**	*e*Pg	**Pg**	**16 33 57.9**	**-1.7**
IGLO				*e*Sg	**Sg**	**16 34 08.6**	**-1.2**
IGLO				*e*		16 34 16.4	
	comp=Z,49μm,0.2s						
IGLO	**Ghaloghah**	**0.78**	**41**	*e*Pg	**Pg**	**16 33 57.9**	**-1.7**
IGLO				*e*Sg	**Sg**	**16 34 08.6**	**-1.2**
IDMV	**Damavand**	**1.00**	**251**	Pg	**Pg**	**16 34 02.4**	**-1.3**
IDMV				Sg	**Sg**	**16 34 17.4**	**+0.5**
IDMV	**Damavand**	**1.00**	**251**	*e*Sg	**Sg**	**16 34 16.9**	**+0.1**
IDMV				*e*Pg	**Pg**	**16 34 02.4**	**-1.3**
IDMV				*e*		16 34 21.9	
	comp=Z,49μm,0.2s						
DAMV	**Damavand**	**1.03**	**255**	*e*Pg	**Pg**	**16 34 02.0**	**-2.3**
DAMV				*e*Sg	**Sg**	**16 34 17.0**	**-0.8**
DAMV	**Damavand**	**1.03**	**255**	*e*Pg	**Pg**	**16 34 02.7**	**-1.6**
DAMV				*e*Sg	**Sg**	**16 34 17.8**	**0.0**
DAMV				AML	AML	16 34 21.0	
	comp=E,3μm,0.7s						
DAMV	**Damavand**	**1.03**	**255**	*e*Pg	**Pg**	**16 34 02.8**	**-1.5**
DAMV				*e*Sg	**Sg**	**16 34 17.8**	**0.0**
IAFJ	**Afjeh**	**1.21**	**268**	Pg	**Pg**	**16 34 06.4**	**-1.2**
IAFJ				Sg	**Sg**	**16 34 24.1**	**+0.8**
IAFJ	**Afjeh**	**1.21**	**268**	*e*Pg	**Pg**	**16 34 06.2**	**-1.4**
IAFJ	**Afjeh**	**1.21**	**268**	*e*Pg	**Pg**	**16 34 06.2**	**-1.4**
IVRN	**Varamin**	**1.51**	**233**	Pn	**Pn**	**16 34 11.9**	**+0.4**
IVRN				Sg	**Sg**	**16 34 33.4**	**+0.5**
IVRN	**Varamin**	**1.51**	**233**	*e*Pn	**Pn**	**16 34 11.7**	**+0.2**
IVRN				*e*Pn	**Pn**	**16 34 11.9**	**+0.4**
IVRN				*e*		16 34 12.9	
	comp=Z,39μm,0.2s						
IVRN				*e*Sg	**Sg**	**16 34 33.4**	**+0.5**
IVRN	**Varamin**	**1.51**	**233**	*e*Pn	**Pn**	**16 34 11.9**	**+0.4**
IVRN				*e*Sg	**Sg**	**16 34 33.4**	**+0.5**
CHTH	**Charan**	**1.68**	**271**	*e*Pg	**Pn**	**16 34 14.0**	**+0.1**
CHTH	**Charan**	**1.68**	**271**	*e*Pg	**Pn**	**16 34 14.1**	**+0.2**
CHTH	**Charan**	**1.68**	**271**	*e*Pg	**Pn**	**16 34 14.5**	**+0.6**
ISFB	**Sefidab**	**1.74**	**207**	Pn	**Pn**	**16 34 15.2**	**+0.5**
ISFB	**Sefidab**	**1.74**	**207**	*e*Pn	**Pn**	**16 34 15.3**	**+0.6**
ISFB				*e*		16 34 40.9	
	comp=Z,45μm,0.1s						
ISFB	**Sefidab**	**1.74**	**207**	*e*Pn	**Pn**	**16 34 15.3**	**+0.6**
IR3	**Iran Long-Peri**	**1.82**	**257**	*e*Pn	**Pn**	**16 34 17.1**	**+1.3**
IR3				*e*Sg	**Sg**	**16 34 42.3**	**-0.6**
IR3	**Iran Long-Peri**	**1.82**	**257**	*e*Pn	**Pn**	**16 34 17.1**	**+1.3**
IR3				*e*Sg	**Sg**	**16 34 42.3**	**-0.6**
IR3				*e*		16 34 50.5	
	comp=Z,99nm,0.3s						
THKV	**Tehran--Karaj**	**1.88**	**271**	*e*Pg	**Pb**	**16 34 18.0**	**-0.9**
THKV	**Tehran--Karaj**	**1.88**	**271**	*e*Pg	**Pb**	**16 34 18.2**	**-0.7**
THKV				AML	AML	16 34 53.4	
	comp=E,2μm,0.6s						
THKV	**Tehran--Karaj**	**1.88**	**271**	*e*Pg	**Pb**	**16 34 18.2**	**-0.7**
IMHD	**Mahdasht**	**2.07**	**265**	Pn	**Pn**	**16 34 20.8**	**+1.6**
IMHD	**Mahdasht**	**2.07**	**265**	*e*Pn	**Pn**	**16 34 20.9**	**+1.7**
IMHD				*e*		16 34 24.2	
	comp=Z,16μm,0.2s						
IMHD	**Mahdasht**	**2.07**	**265**	*e*Pn	**Pn**	**16 34 20.9**	**+1.7**
GHVR	**GHOM**	**2.11**	**228**	*e*Pg	**Pb**	**16 34 22.0**	**-0.8**
GHVR	**GHOM**	**2.11**	**228**	*e*Pg	**Pb**	**16 34 21.9**	**-0.9**
GHVR				AML	AML	16 34 59.0	
	comp=E,2μm,0.2s						
GHVR				AML	AML	16 35 00.1	
	comp=N,2μm,0.1s						
GHVR	**GHOM**	**2.11**	**228**	*e*Pg	**Pb**	**16 34 22.2**	**-0.6**
IRAZ	**Razeghan**	**2.71**	**260**	Pn	**Pn**	**16 34 29.6**	**+1.6**
IRAZ				Sg	**Sg**	**16 35 10.1**	**-1.3**
IRAZ	**Razeghan**	**2.71**	**260**	*e*Pn	**Pn**	**16 34 29.7**	**+1.7**
IRAZ				Sg	**Sg**	**16 35 10.1**	**-1.3**
IRAZ	**Razeghan**	**2.71**	**260**	*e*Pn	**Pn**	**16 34 29.7**	**+1.7**
IRAZ				*e*Sg	**Sg**	**16 35 10.2**	**-1.2**
MRVT	**Maraveh tapeh**	**2.91**	**52**	*e*Pn	**Pn**	**16 34 31.7**	**+1.0**
IKLH	**Kolahrood**	**2.91**	**208**	Pn	**Pn**	**16 34 31.2**	**+0.4**
IKLH	**Kolahrood**	**2.91**	**208**	*e*Pn	**Pn**	**16 34 31.6**	**+0.8**
IKLH				*e*		16 34 38.0	
	comp=Z,9μm,0.2s						
IKLH	**Kolahrood**	**2.91**	**208**	*e*Pn	**Pn**	**16 34 31.6**	**+0.8**
ASAO	**Ashtian**	**2.93**	**243**	*e*Pn	**Pn**	**16 34 31.0**	**0.0**
ASAO	**Ashtian**	**2.93**	**243**	*e*Pn	**Pn**	**16 34 32.0**	**+0.9**
ASAO				AML	AML	16 35 23.3	
	comp=E,420nm,0.3s						
ASAO	**Ashtian**	**2.93**	**243**	*e*Pn	**Pn**	**16 34 32.0**	**+1.0**
IZEF	**Zefreh**	**3.09**	**194**	Pn	**Pn**	**16 34 33.4**	**+0.1**
IZEF	**Zefreh**	**3.09**	**194**	*e*Pn	**Pn**	**16 34 33.8**	**+0.5**
IZEF				*e*		16 35 23.8	
	comp=Z,6μm,0.2s						
IZEF	**Zefreh**	**3.09**	**194**	*e*Pn	**Pn**	**16 34 33.8**	**+0.5**
NASN	**Na'in**	**3.12**	**186**	*e*Pn	**Pn**	**16 34 34.0**	**+0.3**
NASN	**Na'in**	**3.12**	**186**	*e*Pn	**Pn**	**16 34 34.4**	**+0.7**
NASN				AML	AML	16 35 34.8	
	comp=E,249nm,1.0s						
NASN	**Na'in**	**3.12**	**186**	*e*Pn	**Pn**	**16 34 34.0**	**+0.3**
IGAR	**Gharneh**	**3.63**	**196**	*e*Pn	**Pn**	**16 34 41.1**	**+0.5**
IGAR				*e*		16 35 03.1	
	comp=Z,2μm,0.3s						
IPIR	**Pirpir**	**3.74**	**211**	*e*Pn	**Pn**	**16 34 45.3**	**+3.1**
IPIR				*e*		16 34 58.6	
	comp=Z,3μm,0.3s						
IPIR	**Pirpir**	**3.74**	**211**	*e*Pn	**Pn**	**16 34 45.3**	**+3.1**
ICHK	**Chekchek**	**3.79**	**164**	Pn	**Pn**	**16 34 42.6**	**-0.3**
ICHK	**Chekchek**	**3.79**	**164**	*e*Pn	**Pn**	**16 34 42.6**	**-0.3**
ICHK				*e*		16 35 53.3	
	comp=Z,5μm,0.2s						
ICHK	**Chekchek**	**3.79**	**164**	*e*Pn	**Pn**	**16 34 42.6**	**-0.3**
BJRD	**Bojnurd**	**3.82**	**61**	*e*Pn	**Pn**	**16 34 45.2**	**+1.8**
ISHV	**Shirvan**	**3.97**	**65**	*e*Pn	**Pn**	**16 34 47.7**	**+2.4**
ISHV	**Shirvan**	**3.97**	**65**	*e*Pn	**Pn**	**16 34 47.7**	**+2.4**
ISAD	**Sadrabad**	**4.01**	**174**	*e*Pn	**Pn**	**16 34 46.1**	**+0.2**
ISAD				*e*		16 35 59.2	
	comp=Z,9μm,0.4s						
ISAD	**Sadrabad**	**4.01**	**174**	*e*Pn	**Pn**	**16 34 46.1**	**+0.2**
IKRD	**Kardeh**	**4.38**	**77**	Pn	**Pb**	**16 35 01.6**	**+0.1**
IKRD	**Kardeh**	**4.38**	**77**	*e*Pn	**Pb**	**16 35 01.6**	**+0.1**
IKRD				*e*		16 35 35.1	
	comp=Z,401nm,0.2s						
IAKL	**Akhelmad**	**4.55**	**80**	Pn	**Pn**	**16 34 54.0**	**+0.7**
IMEH	**Mehriz**	**4.66**	**165**	Pn	**Pn**	**16 34 55.0**	**+0.1**
IMEH	**Mehriz**	**4.66**	**165**	*e*Pn	**Pn**	**16 34 55.1**	**+0.2**
IMEH				*e*		16 36 33.3	
	comp=Z,2μm,0.4s						
IMEH	**Mehriz**	**4.66**	**165**	*e*Pn	**Pn**	**16 34 55.1**	**+0.2**
IPAY	**Payeh**	**4.72**	**82**	*e*	Px	16 35 29.0	
	comp=Z,475nm,0.3s						
IBAF	**Bafgh**	**4.74**	**155**	*e*Pn	**Pn**	**16 34 56.3**	**+0.4**
IBAF				*e*		16 36 30.9	
	comp=Z,1μm,0.3s						
IBAF	**Bafgh**	**4.74**	**155**	*e*Pn	**Pn**	**16 34 56.3**	**+0.4**
ISRB	**Sarab**	**4.83**	**295**	Pn	**Pn**	**16 34 58.1**	**+1.0**
ISRB	**Sarab**	**4.83**	**295**	*e*Pn	**Pn**	**16 34 57.6**	**+0.5**
ISRB				*e*		16 35 02.9	
	comp=Z,1μm,0.1s						
ISRB	**Sarab**	**4.83**	**295**	*e*Pn	**Pn**	**16 34 57.6**	**+0.5**
ISRO	**Mashad**	**5.10**	**84**	*e*Pn	**Pn**	**16 35 00.2**	**-0.6**
ISRO				*e*		16 36 50.1	
	comp=Z,2μm,0.7s						
ISRO	**Mashad**	**5.10**	**84**	*e*Pn	**Pn**	**16 35 00.2**	**-0.6**
GRMI	**Germi**	**5.12**	**306**	*e*Pn	**Pn**	**16 35 01.5**	**+0.3**
ITEG	**Tejag**	**5.49**	**122**	*e*	**Pn**	**16 35 08.4**	**+2.2**
	comp=Z,1μm,0.1s						
ITEG				*e*Pn	**Pn**	**16 35 07.6**	**+1.4**
IDAH	**Dahanechah**	**6.36**	**118**	*e*Pn	**Pn**	**16 35 19.5**	**+1.3**
IDAH				*e*		16 35 20.3	
	comp=Z,720nm,0.1s						
IDAH	**Dahanechah**	**6.36**	**118**	*e*Pn	**Pn**	**16 35 19.5**	**+1.3**
GNI	**Garni**	**7.90**	**305**	P	**Pn**	**16 35 43.7**	**+4.4**
	comp=Z,12nm,0.6s						
GNI	**Garni**	**7.90**	**305**	P	**Pn**	**16 35 43.7**	**+4.4**
	comp=Z,12nm,0.6s						
KBD	**Kabd**	**8.16**	**216**	*e*P	**Pn**	**16 35 43.0**	**+0.1**

WRA	**Warramunga Arr**	**26.16 160**	P		**P**	**16 41 45.4**	**+0.1**
	0.6nm,0.3s,mb3.5,baz=336,slow=10,SNR=18						
ASAR	**Alice Springs**	**29.53 164**	P		**P**	**16 42 15.8**	**+0.5**
	0.2nm,0.5s,mb3.1,baz=344,slow=7.2,SNR=16						
STKA	**Stephens Creek**	**39.66 158**	P		**P**	**16 43 42.8**	**+0.2**
	0.9nm,0.3s,mb3.9,baz=337,slow=7.7,SNR=3.8						

*NEIC **16** 16:43:52.1,32.°07S×72.°26W,h25km,ML3.5(GUC),After GUC.*

GUC 16 16:43:52.1±0.7,32.°07S×72.°26W,h25km±3km,MD3.9, ML3.5,10C-2D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.67**	**74**	⇑*iP*	Pb	16 44 04.5	-0.6
CHNG				*i* S	Sb	16 44 13.9	-0.1
ROCH	**El Roble**	**1.39**	**131**	⇑*iP*	Pn	16 44 16.4	+0.5
ROCH	**El Roble**	**1.39**	**131**	⇑*iP*	Pn	16 44 16.4	+0.5
CMCH	**Combarbala**	**1.39**	**51**	⇑*iP*	Pn	16 44 16.4	+0.4
CMCH				*e*S	Sn	16 44 34.4	+0.9
CMCH	**Combarbala**	**1.39**	**51**	⇑*iP*	Pn	16 44 16.4	+0.4
CMCH				*e*S	Sn	16 44 34.4	+0.9
CMCH				AML	AML	16 44 37.0	
	comp=E,3μm,0.5s						
JACH	**Jahuel**	**1.54**	**114**	*e*P	Pn	16 44 18.3	+0.4
JACH				*e*S	Sn	16 44 38.5	+1.5
JACH	**Jahuel**	**1.54**	**114**	*e*P	Pn	16 44 18.3	+0.4
JACH				*e*S	Sn	16 44 38.5	+1.5
PEL	**Peldehue**	**1.71**	**129**	⇑*iP*	Pn	16 44 20.7	+0.5
PEL				*i* S	Sn	16 44 43.5	+2.3
PEL				AML	AML	16 44 47.6	
	comp=N,2μm,0.6s						
TACH	**Talagante**	**1.93**	**145**	⇑*iP*	Pn	16 44 24.8	+1.4
TACH				*i* S	Sn	16 44 49.3	+2.4
TACH	**Talagante**	**1.93**	**145**	⇑*iP*	Pn	16 44 24.8	+1.4
TACH				*i* S	Sn	16 44 49.3	+2.4
CLCH	**Cerro Calan**	**1.96**	**133**	*e*P	Pn	16 44 24.7	+0.9
CLCH				*i* S	Sn	16 44 50.4	+2.8
CLCH				AML	AML	16 45 06.3	
	comp=E,502nm,0.4s						
FCH	**Farellones**	**2.08**	**128**	*e*P	Pn	16 44 28.0	+2.6
FCH				*i* S	Sn	16 44 54.2	+3.7
FCH				AML	AML	16 45 01.4	
	comp=N,258nm,0.7s						
PCH	**Pirque**	**2.13**	**137**	⇑*iP*	Pn	16 44 27.5	+1.4
PCH				*e*S	Sn	16 44 54.4	+2.6
PCH	**Pirque**	**2.13**	**137**	⇑*iP*	Pn	16 44 27.5	+1.4
PCH				*e*S	Sn	16 44 54.4	+2.6
LMEL	**Las Melosas**	**2.48**	**136**	⇓*iP*	Pn	16 44 32.6	+1.7
LMEL	**Las Melosas**	**2.48**	**136**	⇓*iP*	Pn	16 44 32.6	+1.7
LMEL				AML	AML	16 45 13.5	
	comp=N,140nm,0.3s						

MEX 16 16:49:01.7±1.4,17.°35N×94.°66W,h159km±27km,MD3.9, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**1.58**	**111**	*i* P	Pn	16 49 32.0	-0.7
TGIG				*e*S	Sn	16 49 54.2	-2.4
VHO	**Vista Hermosa**	**2.00**	**262**	*i* P	Pn	16 49 36.9	-0.5
VHO				*i* S	Sn	16 50 03.8	-1.0
HUIG	**Huatulco**	**2.10**	**222**	*e*P	Pn	16 49 36.2	-2.4
HUIG				*e*S	Sn	16 50 05.3	-1.6
TPIG	**Tehuac#an**	**2.78**	**293**	*i* P	Pn	16 49 46.8	+0.1
TPIG				*e*S	Sn	16 50 18.8	-2.7

*ISCJB **16** 17:03:24.8±1.6,32.°09S±0.°05×72.°21W±0.°09,h17km±12km, Error ellipse: s-maj=12.6km s-min=8.0km az=173.5*
*GUC **16** 17:03:25.2±0.8,32.°11S×72.°17W,h27km±3km,MD3.8, ML3.4*
*NEIC **16** 17:03:25.2,32.°11S×72.°17W,h27km,ML3.4(GUC),After GUC.*

ISC 16 17:03:25.2±1.5,32.°08S±0.°05×72.°17W±0.°09,h15km±7km, n22,σ0°83/34,10C-3D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.60**	**71**	⇓*iP*	**Pg**	**17 03 36.3**	**-0.8**
CHNG				*i* S	**Sg**	**17 03 45.9**	**+0.7**
ROCH	**El Roble**	**1.32**	**132**	⇓*iP*	**Pn**	**17 03 48.3**	**-0.8**
ROCH				*i* S	**Sn**	**17 04 05.7**	**-0.8**
ROCH	**El Roble**	**1.32**	**132**	⇓*iP*	**Pn**	**17 03 48.3**	**-0.8**
ROCH				*i* S	**Sn**	**17 04 05.7**	**-0.8**
CMCH	**Combarbala**	**1.35**	**48**	*e*P	**Pn**	**17 03 48.6**	**-0.9**
CMCH				*i* S	**Sn**	**17 04 07.2**	**+0.1**
CMCH	**Combarbala**	**1.35**	**48**	*e*P	**Pn**	**17 03 48.6**	**-0.9**
CMCH				*i* S	**Sn**	**17 04 07.2**	**+0.1**
CMCH				AML	AML	17 04 09.0	
	comp=E,2μm,0.6s						
JACH	**Jahuel**	**1.46**	**114**	⇑*iP*	**Pn**	**17 03 50.6**	**-0.4**
JACH				*i* S	**Sn**	**17 04 09.3**	**-0.6**
JACH	**Jahuel**	**1.46**	**114**	⇑*iP*	**Pn**	**17 03 50.6**	**-0.4**
JACH				*i* S	**Sn**	**17 04 09.3**	**-0.6**
PEL	**Peldehue**	**1.64**	**130**	⇑*iP*	**Pn**	**17 03 52.9**	**-0.6**
PEL				*i* S	**Sn**	**17 04 13.6**	**-0.7**
PEL				AML	AML	17 04 18.9	
	comp=N,1μm,0.4s						
TACH	**Talagante**	**1.88**	**147**	⇑*iP*	**Pn**	**17 03 56.6**	**-0.2**
TACH	**Talagante**	**1.88**	**147**	⇑*iP*	**Pn**	**17 03 56.6**	**-0.2**
CLCH	**Cerro Calan**	**1.90**	**134**	⇑*iP*	**Pn**	**17 03 56.6**	**-0.4**
CLCH				*i* S	**Sn**	**17 04 21.4**	**+0.6**
CLCH				AML	AML	17 04 30.2	
	comp=E,398nm,0.6s						
ANTU	**Antumapu**	**1.97**	**139**	*e*S	**Sn**	**17 04 22.3**	**-0.1**
ANTU				AML	AML	17 04 34.9	
	comp=N,334nm,0.4s						
LNV	**Longovilo**	**1.97**	**161**	*e*P	**Pn**	**17 03 57.7**	**-0.4**
LNV	**Longovilo**	**1.97**	**161**	*e*P	**Pn**	**17 03 57.7**	**-0.4**
FCH	**Farellones**	**2.01**	**129**	*e*P	**Pn**	**17 04 01.2**	**+2.6**
FCH				*i* S	**Sn**	**17 04 26.8**	**+3.3**
FCH				AML	AML	17 04 31.5	
	comp=N,209nm,0.2s						
PCH	**Pirque**	**2.07**	**138**	⇑*iP*	**Pn**	**17 03 59.5**	**+0.1**
PCH	**Pirque**	**2.07**	**138**	⇑*iP*	**Pn**	**17 03 59.5**	**+0.1**
TLL	**Tololo Astrono**	**2.24**	**32**	*e*P	**Pn**	**17 04 02.6**	**+0.9**
TLL	**Tololo Astrono**	**2.24**	**32**	*e*P	**Pn**	**17 04 02.6**	**+0.9**
TLL				AML	AML	17 04 40.8	
	comp=E,284nm,0.5s						
LMEL	**Las Melosas**	**2.42**	**137**	⇑*iP*	**Pn**	**17 04 04.5**	**+0.4**
LMEL				*i* S	**Sn**	**17 04 33.9**	**+0.5**
LMEL	**Las Melosas**	**2.42**	**137**	⇑*iP*	**Pn**	**17 04 04.5**	**+0.4**
LMEL				*i* S	**Sn**	**17 04 33.9**	**+0.5**
LMEL				AML	AML	17 04 45.9	
	comp=N,186nm,0.2s						
CACH	**El Canelo**	**2.42**	**147**	*e*P	**Pn**	**17 04 05.2**	**+1.0**

*SZGRF **16** 17:09:07.5,31.°83S×178.°00W,h37km,mb4.8,Kermadec Islands region*
*ISCJB **16** 17:09:15.8±0.6,31.°15S±0.°03×178.°53W±0.°04,h68km±5km, mb5.1/94,Error ellipse: s-maj=6.8km s-min=4.1km az=41.4*
*NEIC **16** 17:09:19.1±0.7,31.°13S×178.°51W,h89km±6km,mb5.3/64, MW5.5,MWS.5,Error ellipse: s-maj=8.3km s-min=5.4km az=143.0,Moment Tensor Solution. s19 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.57; $M_{\theta\theta}$1.06; $M_{\phi\phi}$-0.48; $M_{r\theta}$-0.30; $M_{\theta\phi}$1.15; $M_{\phi r}$2.11; Best double couple: M_o2.60000×10^{17} NP1:ϕ_s195.00000°,δ81.00000°,λ-127.00000°. NP2: ϕ_s93.00000°,δ38.00000°,λ-14.00000°. Principal axes: T 2.0600, Plg26.0000°, Azm313.0000°; N 0.8500, Plg36.0000°, Azm201.0000°; P -2.9100, Plg41.0000°, Azm70.0000°;*
*MOS **16** 17:09:20.2±1.1,30.°84S×178.°56W,h102km,mb5.4/26 Error ellipse: s-maj=12.1km s-min=9.8km az=135.1*
*IDC **16** 17:09:21.8±1.0,30.°77S×178.°50W,h108km±7km,mb4.6/19, mb1 4.8/20,mb1mx4.8/21,mbtmp4.7/20,MS4.4/12, Ms1 4.3/12,ms1mx4.2/18,Error ellipse: s-maj=12.5km s-min=10.5km az=157.0*
*GCMT **16** 17:09:23.1±0.1,30.°93S×178.°24W,h108km,MW5.5, Moment Tensor Solution. s101,c178; s25,c25; Moment tensor: Scale 10^{17}Nm; M_{rr}-0.25±.03; $M_{\theta\theta}$-0.91±.03; $M_{\phi\phi}$1.16±.04; $M_{r\theta}$-0.59±.02; $M_{\theta\phi}$0.65±.03; $M_{\phi r}$1.89±.02; Best double couple: M_o2.30000×10^{17} NP1:ϕ_s62.00000°, δ30.00000°,λ-8.00000°. NP2:ϕ_s159.00000°,δ86.00000°,*
λ-120.00000°. Principal axes: T 2.4800, Plg34.0000°, Azm274.0000°; N -0.3300, Plg30.0000°, Azm161.0000°; P -2.1500, Plg41.0000°, Azm41.0000°; Data Used: II IU IC G CN. Surface waves: sta=107, comp=204, per= 50.
*BJI **16** 17:09:25.3,30.°55S×178.°57W,h141km,mB5.2/24, mb4.9/29*
*DJA **16** 17:09:43,31.°03S×178.°65W,h321km,mb5.1/11*

ISC 16 17:09:17.0±0.5,31.°15S±0.°03×178.°50W±0.°04,h66km±4km, h138km±3.6km:pP-P,n714,σ0°81/541,mb5.1/94, 152C-141D,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.95**	**15**	P	**Pn**	**17 09 49.8**	**+1.9**
	4μm,0.3s,baz=197,slow=3.7,SNR=119						
RAO				S	**Sn**	**17 10 10.7**	**-0.7**
	4μm,0.3s,baz=44,slow=23,SNR=10						
RAO				LR	LR	17 10 28.1	
	comp=Z,10μm,21.1s,baz=150,slow=42						
RAO	**Raoul Island**	**1.95**	**15**	P	**Pn**	**17 09 49.9**	**+2.0**
RAO				S	**Sn**	**17 10 10.7**	**-0.7**
MXZ	**Matakaoa Point**	**6.93**	**202**	P	**Pn**	**17 10 57.6**	**+1.8**
MXZ				S	**Sn**	**17 12 18.2**	**+5.1**
MXZ	**Matakaoa Point**	**6.93**	**202**	PN	**Pn**	**17 10 57.6**	**+1.8**
MXZ				SN	**Sn**	**17 12 18.2**	**+5.0**
WIZ	**White Island**	**7.30**	**208**	PN	**Pn**	**17 11 04.5**	**+3.6**
KUZ	**Kuaotunu**	**7.37**	**219**	P	**Pn**	**17 11 08.9**	**+7.1**
KUZ	**Kuaotunu**	**7.37**	**219**	PN	**Pn**	**17 11 08.9**	**+7.0**
PUZ	**Puketiti**	**7.41**	**200**	P	**Pn**	**17 11 03.6**	**+1.2**
PUZ	**Puketiti**	**7.41**	**200**	PN	**Pn**	**17 11 03.6**	**+1.2**
WCZ	**Waipu Caves**	**7.65**	**229**	P	**Pn**	**17 11 14.4**	**+8.6**
WCZ	**Waipu Caves**	**7.65**	**229**	PN	**Pn**	**17 11 14.4**	**+8.6**
OUZ	**Omahuta**	**7.78**	**236**	P	**Pn**	**17 11 17.0**	**+10**
OUZ	**Omahuta**	**7.78**	**236**	PN	**Pn**	**17 11 17.0**	**+10**
CNGZ	**Carnagh Statio**	**7.81**	**199**	PN	**Pn**	**17 11 09.2**	**+1.3**
CNGZ				SN	**Sn**	**17 12 41.1**	**+6.4**
OPRZ	**Ohinepanea**	**7.83**	**210**	PN	**Pn**	**17 11 10.9**	**+2.7**
MWZ	**Matawai**	**7.88**	**203**	P	**Pn**	**17 11 09.7**	**+0.8**
MWZ				S	**Sn**	**17 12 40.5**	**+4.0**
MWZ	**Matawai**	**7.88**	**203**	PN	**Pn**	**17 11 09.7**	**+0.8**
MWZ				SN	**Sn**	**17 12 40.5**	**+3.9**
MARZ	**Manawahe**	**7.90**	**209**	PN	**Pn**	**17 11 11.8**	**+2.7**
URZ	**Urewera**	**7.96**	**206**	P	**Pn**	**17 11 12.1**	**+2.1**
	15nm,0.3s,baz=296,slow=0.5,SNR=120						
URZ				S	**Sn**	**17 12 43.7**	**+5.2**
	312nm,0.3s,baz=210,slow=23,SNR=30						
URZ	**Urewera**	**7.96**	**206**	P	**Pn**	**17 11 10.9**	**+0.9**
URZ	**Urewera**	**7.96**	**206**	PN	**Pn**	**17 11 10.9**	**+0.9**
URZ				SN	**Sn**	**17 12 43.6**	**+5.0**
RRRZ	**Republican Roa**	**8.27**	**208**	PN	**Pn**	**17 11 18.0**	**+3.8**
PRGZ	**Paritu Road**	**8.31**	**200**	PN	**Pn**	**17 11 14.8**	**+0.1**
PRRZ	**Plateau Road**	**8.45**	**208**	*e*PN	**Pn**	**17 11 17.6**	**+0.9**
KNZ	**Kokohu**	**8.46**	**201**	PN	**Pn**	**17 11 15.9**	**-0.8**
MHGZ	**Mahia Peninsul**	**8.52**	**199**	PN	**Pn**	**17 11 17.4**	**-0.1**
ALRZ	**Allen Road**	**8.53**	**208**	PN	**Pn**	**17 11 19.3**	**+1.6**
RAHZ	**Arahi**	**8.56**	**204**	PN	**Pn**	**17 11 18.8**	**+0.7**
NMHZ	**Naumai**	**8.82**	**205**	PN	**Pn**	**17 11 22.0**	**+0.4**
BKZ	**Black Stump Fm**	**8.99**	**206**	P	**Pn**	**17 11 23.8**	**-0.2**
BKZ	**Black Stump Fm**	**8.99**	**206**	PN	**Pn**	**17 11 23.8**	**-0.2**
RITZ	**Rihia Road**	**9.08**	**209**	*e*PN	**Pn**	**17 11 26.2**	**+1.0**
HIZ	**Hauiti**	**9.16**	**215**	P	**Pn**	**17 11 30.1**	**+3.8**
HIZ	**Hauiti**	**9.16**	**215**	PN	**Pn**	**17 11 30.1**	**+3.8**
MCHZ	**McNeill Hill**	**9.16**	**204**	PN	**Pn**	**17 11 26.2**	**-0.2**
CKHZ	**Cape Kidnapper**	**9.23**	**202**	*e*PN	**Pn**	**17 11 25.5**	**-1.8**
WPVZ	**Whakapapa**	**9.40**	**210**	*e*PN	**Pn**	**17 11 30.3**	**+0.7**
KAHZ	**Kahuranaki**	**9.42**	**202**	PN	**Pn**	**17 11 28.9**	**-0.9**
MTVZ	**Mangateitei**	**9.59**	**209**	PN	**Pn**	**17 11 32.5**	**+0.4**
PXZ	**Pawanui**	**9.64**	**202**	PN	**Pn**	**17 11 30.5**	**-2.4**
PNHZ	**Pukenui**	**9.76**	**205**	PN	**Pn**	**17 11 32.4**	**-2.0**
PNHZ				SN	**Sn**	**17 13 20.8**	**-1.6**
WPHZ	**Waipukurau**	**9.81**	**203**	PN	**Pn**	**17 11 33.5**	**-1.6**
PRHZ	**Porangahau**	**9.92**	**202**	PN	**Pn**	**17 11 34.4**	**-2.4**
DVHZ	**Dannevirke**	**10.11**	**204**	PN	**Pn**	**17 11 37.2**	**-2.1**
POWZ	**Post Office Ro**	**10.33**	**205**	PN	**Pn**	**17 11 41.3**	**-1.1**
BFZ	**Birch Farm**	**10.42**	**203**	P	**Pn**	**17 11 40.6**	**-3.0**
BFZ	**Birch Farm**	**10.42**	**203**	PN	**Pn**	**17 11 40.6**	**-2.9**
TIWZ	**Tintock**	**10.63**	**204**	PN	**Pn**	**17 11 43.9**	**-2.5**
MRZ	**Mangatainoka R**	**10.64**	**205**	P	**Pn**	**17 11 42.6**	**-3.9**
MRZ	**Mangatainoka R**	**10.64**	**205**	PN	**Pn**	**17 11 42.6**	**-3.9**
HOWZ	**Holdsworth Sta**	**10.87**	**205**	PN	**Pn**	**17 11 46.4**	**-3.3**
OGWZ	**Otaki Gorge**	**10.93**	**206**	PN	**Pn**	**17 11 47.2**	**-3.2**
KIW	**Kapiti Island**	**11.06**	**207**	P	**Pn**	**17 11 48.7**	**-3.6**
KIW	**Kapiti Island**	**11.06**	**207**	PN	**Pn**	**17 11 48.7**	**-3.6**
MTW	**Mount Morrison**	**11.10**	**204**	P	**Pn**	**17 11 48.8**	**-4.1**
MTW	**Mount Morrison**	**11.10**	**204**	PN	**Pn**	**17 11 48.8**	**-4.0**
CAW	**Cannon Point**	**11.22**	**206**	P	**Pn**	**17 11 50.2**	**-4.2**
CAW	**Cannon Point**	**11.22**	**206**	PN	**Pn**	**17 11 50.2**	**-4.2**
PAWZ	**Paruwai Farm**	**11.33**	**204**	P	**Pn**	**17 11 52.0**	**-3.9**
PAWZ	**Paruwai Farm**	**11.33**	**204**	PN	**Pn**	**17 11 52.0**	**-3.9**
SNZO	**South Karori**	**11.53**	**207**	P	**Pn**	**17 11 54.0**	**-4.6**
SNZO				P		17 12 02.8	
SNZO				*e*Sn	**Sn**	**17 13 60.0**	**-5.7**
SNZO	**South Karori**	**11.53**	**207**	PN	**Pn**	**17 11 54.0**	**-4.6**
THZ	**Tophouse**	**12.65**	**211**	P	**Pn**	**17 12 09.6**	**-4.3**
THZ	**Tophouse**	**12.65**	**211**	PN	**Pn**	**17 12 09.6**	**-4.3**
CTZ	**Chatham Island**	**12.65**	**174**	*e*PN	**Pn**	**17 12 16.8**	**+2.0**
MSVF	**Nonsavu**	**13.72**	**346**	Pn	**Pn**	**17 12 30.2**	**+1.7**
	936nm,1.0s,SNR=9.7						
MSVF	**Nonsavu**	**13.72**	**346**	*e*P	**Pn**	**17 12 30.1**	**+1.6**
	660nm,1.6s						
LTZ	**Lake Taylor**	**13.75**	**210**	P	**Pn**	**17 12 22.9**	**-5.8**
LTZ	**Lake Taylor**	**13.75**	**210**	PN	**Pn**	**17 12 22.9**	**-5.8**
RPZ	**Rata Peaks**	**15.03**	**210**	P	**Pn**	**17 12 40.5**	**-5.0**
	4.1nm,0.3s,baz=48,slow=3.1,SNR=15						
RPZ				S		17 15 21.0	-24
	19nm,0.3s,baz=18,slow=21,SNR=14						
RPZ	**Rata Peaks**	**15.03**	**210**	*e*P	**Pn**	**17 12 40.2**	**-5.2**
	222nm,0.6s						
RPZ				*e*P		17 12 49.9	
RPZ	**Rata Peaks**	**15.03**	**210**	*e*PN	**Pn**	**17 12 39.9**	**-5.5**
DZM	**Mont Dzumac**	**16.21**	**300**	*e*Pn	**Pn**	**17 13 05.3**	**+4.8**
	3.0nm,0.3s						
DZM				*e*LQ		17 16 05.7	
	3μm,24.2s						
DZM				*e*LR	LR	17 16 44.1	
	6μm,30.1s						
DZM	**Mont Dzumac**	**16.21**	**300**	*e*P	**Pn**	**17 13 04.0**	**+3.4**
ODZ	**Otahua Downs**	**16.28**	**208**	*e*P	**Pn**	**17 12 57.3**	**-4.0**
	614nm,0.7s						
ODZ				*e*P		17 13 05.8	
ODZ	**Otahua Downs**	**16.28**	**208**	*e*PN	**Pn**	**17 12 55.6**	**-5.6**
NOUC	**Port Laguerre**	**16.29**	**300**	*e*P	**Pn**	**17 13 05.6**	**+4.0**
TUZ	**Tuapeka**	**17.43**	**209**	P	**Pn**	**17 13 13.3**	**-2.2**
TUZ	**Tuapeka**	**17.43**	**209**	PN	**Pn**	**17 13 13.3**	**-2.2**
MLZ	**Mavora Lakes**	**17.59**	**213**	*e*PN	**Pn**	**17 13 16.6**	**-0.9**
SYZ	**Scrubby Hill**	**18.10**	**208**	SN	**Sn**	**17 16 34.7**	**-10**
WHZ	**Wether Hill Ro**	**18.11**	**212**	*e*PN	**Pn**	**17 13 20.0**	**-3.8**
AFI	**Afiamalu**	**18.23**	**21**	P	**Pn**	**17 13 17.2**	**-8.3**
	8.2nm,0.3s,baz=55,slow=12,SNR=14						
AFI				S	**S**	**17 16 29.7**	**-20**
	15nm,0.3s,baz=207,slow=22,SNR=6.6						
APZ	**The Paps**	**18.82**	**210**	*e*PN	**Pn**	**17 13 31.0**	**-1.4**
RAR	**Rarotonga**	**19.47**	**64**	P	**Pn**	**17 13 37.3**	**-3.0**
	2.2nm,0.3s,baz=229,slow=6.0,SNR=11						
RAR				S	**S**	**17 17 00.6**	**-14**
	9.0nm,0.3s,baz=68,slow=15,SNR=7.8						
RAR				LR	LR	17 19 10.0	
	comp=Z,2μm,20.9s,baz=248,slow=30						
RAR	**Rarotonga**	**19.47**	**64**	P	**Pn**	**17 13 37.3**	**-3.0**
RAR				S	**S**	**17 17 00.6**	**-15**
ARMA	**Armidale**	**25.64**	**264**	⇑*iP*	**P**	**17 14 45.2**	**+4.7**
ARMA				*e*S	**S**	**17 19 08.7**	**+4.6**
ARMA	**Armidale**	**25.64**	**264**	*e*P	**P**	**17 14 45.3**	**+4.8**
	359nm,1.9s,mb5.5						
RIV	**Riverview**	**25.70**	**256**	*e*P	**P**	**17 14 45.3**	**+4.4**
TBI	**Tubuai**	**26.90**	**80**	*e*LQ		17 20 36.4	
	1μm,27.5s						
TBI				*e*LR	LR	17 21 25.2	
	4μm,35.8s						
CNB	**Canberra Magne**	**27.14**	**253**	⇑*iP*	**P**	**17 14 57.9**	**+4.0**
EIDS	**Eidsvold**	**27.36**	**275**	*e*P	**P**	**17 14 58.4**	**+2.5**
	135nm,1.6s,mb5.2						
CAN	**Canberra**	**27.44**	**253**	*e*P	**P**	**17 14 59.8**	**+3.2**
CAN				pmax	pmax		
	comp=Z,31nm,0.9s,mb4.8						
CAN	**Canberra**	**27.44**	**253**	*e*P	**P**	**17 14 59.8**	**+3.2**
	comp=Z,30nm,0.9s,mb4.8						
PAE	**Paea**	**29.45**	**70**	*e*P	**P**	**17 15 14.0**	**-0.7**
	comp=Z,8.1nm,0.9s,mb4.3						
PAE	**Paea**	**29.45**	**70**	*e*P	**P**	**17 15 14.0**	**-0.7**
PAE				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.3						
HNR	**Honiara**	**29.48**	**313**	S	**S**	**17 19 54.4**	**-10**
	comp=Z,38nm,0.3s,baz=206,slow=15,SNR=4.6						
PPT	**Papeete**	**29.50**	**69**	*e*P	**P**	**17 15 14.6**	**-0.5**
	comp=Z,72nm,1.4s,mb5.1						
PPT				*e*LQ		17 21 51.0	
	comp=Z,2μm,31.2s						
PPT				*e*LR	LR	17 22 32.8	
	comp=Z,5μm,35.5s						
PPT	**Papeete**	**29.50**	**69**	LR	LR	17 24 22.7	
	comp=Z,656nm,18.3s,baz=248,slow=31						
PPT	**Papeete**	**29.50**	**69**	*e*P	**P**	**17 15 14.6**	**-0.5**
	comp=Z,72nm,1.4s,mb5.1						
PPT				*e*LQ		17 21 51.0	
MOO	**Moorlands**	**29.51**	**238**	*e*P	**P**	**17 15 17.7**	**+2.7**
TIAR	**Tiarei**	**29.70**	**70**	*e*P	**P**	**17 15 16.4**	**-0.4**
TIAR				*e*pP	pP	17 15 44.5	+12
	comp=Z,108nm,0.9s						
TOO	**Toolangi**	**30.28**	**248**	*e*P	**P**	**17 15 24.9**	**+3.1**
CTA	**Charters Tower**	**33.51**	**281**	⇑*iP*	**P**	**17 15 52.5**	**+2.2**
	comp=Z,82nm,1.4s,mb5.4						
CTA				*e*S	**S**	**17 21 01.2**	**-6.3**
CTA	**Charters Tower**	**33.51**	**281**	P	**P**	**17 15 51.4**	**+1.1**
	comp=Z,73nm,0.9s,mb5.5,baz=104,slow=10,SNR=60						
CTA				S	**S**	**17 20 55.9**	**-12**
	comp=Z,3.4nm,1.1s,baz=262,slow=21,SNR=1.8						
CTA				ScP	ScP	17 22 05.4	-3.3
	comp=Z,11nm,0.9s,baz=146,slow=2.5,SNR=4.9						
CTA				LR	LR	17 27 16.6	
	comp=Z,582nm,19.2s,baz=110,slow=32						
CTA	**Charters Tower**	**33.51**	**281**	P	**P**	**17 15 51.4**	**+1.1**
CTA				S	**S**	**17 20 55.9**	**-12**
CTA	**Charters Tower**	**33.51**	**281**	P	**P**	**17 15 51.4**	**+1.1**
CTA				S	**S**	**17 20 55.9**	**-12**
CTA				ScP	ScP	17 22 05.4	-3.3
CTA				LR	LR	17 27 16.6	
CTAO	**Charters Tower**	**33.51**	**281**	*e*P	**P**	**17 15 52.3**	**+2.0**
CTAO				pmax	pmax		
	comp=Z,194nm,1.2s,mb5.8						
CTAO	**Charters Tower**	**33.51**	**281**	*e*P	**P**	**17 15 52.3**	**+2.0**
	comp=Z,194nm,1.2s,mb5.8						
CTAO	**Charters Tower**	**33.51**	**281**	P	**P**	**17 15 53.0**	**+2.7**
	comp=Z,2μmcomp=Z,164nm,1.3s,mb5.7						
STKA	**Stephens Creek**	**33.90**	**258**	⇑*iP*	**P**	**17 15 56.5**	**+2.9**
	comp=Z,59nm,0.6s,mb5.6						
STKA	**Stephens Creek**	**33.90**	**258**	P	**P**	**17 15 56.7**	**+3.1**
	comp=Z,51nm,0.5s,mb5.6,baz=98,slow=9.2,SNR=130						
STKA				ScP	ScP	17 22 05.5	-4.4
	comp=Z,4.5nm,0.9s,baz=53,slow=5.1,SNR=2.4						
STKA				LR	LR	17 28 06.4	
	comp=Z,721nm,21.9s,baz=92,slow=33						
STKA	**Stephens Creek**	**33.90**	**258**	*e*P	**P**	**17 15 56.6**	**+3.0**
	comp=Z,24nm,0.9s,mb5.0						
PMG	**Port Moresby**	**38.55**	**297**	⇓*iP*	**P**	**17 16 32.5**	**-0.9**
PMG				pmax	pmax		
	comp=Z,19nm,1.0s						
COEN	**Coen**	**39.07**	**287**	*e*P	**P**	**17 16 39.4**	**+1.6**
	comp=Z,202nm,0.9s,mb6.0						
COEN	**Coen**	**39.07**	**287**	P	**P**	**17 16 39.2**	**+1.4**
	comp=Z,120nm,1.3s,mb5.6						
RKT	**Rikitea**	**39.35**	**89**	*e*LR	LR	17 27 13.3	
	comp=Z,3μm,34.5s						
ASAR	**Alice Springs**	**42.65**	**268**	P	**P**	**17 17 08.6**	**+1.4**
	comp=Z,23nm,0.4s,mb5.2,baz=106,slow=7.2,SNR=635						
ASAR				ScP	ScP	17 22 36.1	-7.2
	comp=Z,5.5nm,0.8s,baz=111,slow=4.2,SNR=9.1						
ASAR				S	**S**	**17 23 23.6**	**-2.0**
	comp=Z,1.8nm,0.8s,baz=114,slow=16,SNR=4.4						
ASAR				PKKP		17 40 35.4	
	comp=Z,0.3nm,0.7s,baz=31,slow=1.0,SNR=4.8						
ASAR	**Alice Springs**	**42.65**	**268**	P	**P**	**17 17 08.6**	**+1.4**
ASAR				S	**S**	**17 23 23.7**	**-1.9**
ASAR	**Alice Springs**	**42.65**	**268**	P	**P**	**17 17 08.6**	**+1.4**
ASAR				ScP	ScP	17 22 36.1	-7.2
ASAR				S	**S**	**17

comp=Z,42nm,1.2s,mb5.0
SYO Syowa Base 76.30 193⇓ *e*P P 17 20 57.4 -0.8
SYO Syowa Base 76.30 193⇑ *e*PcP PcP 17 21 07.6 -2.3
MAIT Maitri 78.11 183 *e*P P 17 21 09.9 +1.6
NVL N'lazarevskaya 78.11 183⇓ *i*P P 17 21 17.5 +9.2
NVL *e**SP sP 17 21 42.9 +9.2
NVL *e*S S 17 30 54.2 -2.7
NVL *e* 17 31 33.9
NVL pmax pmax
comp=Z,36nm,1.0s,mb5.1
VNA1 Neumayer--Stat 78.25 177 *e*P P 17 21 09.7 +0.6
VNA1 *e* 17 21 16.7
VNA1 *e* 17 21 19.7
MJAR Matsushiro Arr 78.61 326 P P 17 21 09.4 -2.0
comp=Z,1.3nm,0.7s,baz=173,slow=5.7,SNR=6.0
MJAR LR LR 17 51 14.5
comp=Z,181nm,18.4s,baz=180,slow=32
MAT Matsushiro 78.61 326 P P 17 21 10.6 -0.9
ERM Erimo 80.92 332⇓ *e*P P 17 21 20.9 -2.9
ERM pmax pmax
comp=Z,15nm,1.6s,mb4.6
YUK Yuzh-Kuril'sk 81.60 335⇑ *i*P P 17 21 33.1 +5.7
YUK *i* *PP pP 17 22 03.3 +18
YUK *i* 17 24 39.4
YUK *i*S S 17 31 33.1 -1.0
YUK *i* *SS sS 17 32 25.3 +20
YUK pmax pmax
comp=E,80nm,6.5s
YUK pmax pmax
comp=Z,40nm,6.5s
YUK pmax pmax
comp=N,20nm,3.2s
YUK smax
comp=N,150nm,6.8s
YUK smax
comp=E,120nm,6.8s
PLCA Paso Flores 82.31 133 P P 17 21 32.6 +1.2
comp=E,13nm,0.8s,mb4.8,baz=227,slow=5.4,SNR=19
PLCA LR LR 17 51 09.3
comp=E,246nm,18.8s,baz=254,slow=30
PLCA Paso Flores 82.31 133 *e*P P 17 21 32.6 +1.1
PLCA pmax pmax
comp=Z,11nm,0.9s
PLCA Paso Flores 82.31 133 *e*P P 17 21 32.6 +1.1
comp=Z,11nm,0.9s,mb4.7
ASAJ Asahikawa 82.90 333 P P 17 21 33.2 -0.9
comp=Z,9.5nm,1.0s,mb4.6,baz=230,slow=13,SNR=5.2
KSRS Korea Array 84.64 320 P P 17 21 42.6 -0.6
comp=Z,3.1nm,0.7s,mb4.3,baz=147,slow=6.1,SNR=12
QIZ Qiongzhong 84.93 296 P P 17 21 44.8 -0.3
QIZ S S 17 32 02.9 -5.9
QIZ sS sS 17 32 59.3 +19
QIZ pmax pmax
comp=Z,8.0nm,1.8s,mb4.3
QIZ LR LR
comp=N,240nm,19.4s
QIZ LR LR
comp=Z,460nm,39.2s
PSI Prapat 85.09 276 P P 17 21 44.6 -1.5
comp=Z,3.0nm,0.3s,mb4.7,baz=225,slow=5.5,SNR=5.4
YSS Yuzh-Sakhalins 85.23 335 *e*P P 17 21 45.0 -0.9
YSS *e*S S 17 31 57.0 -14
YSS *e*SS SS 17 37 42.0 -5.0
YSS Yuzh-Sakhalins 85.23 335 *e*P P 17 21 45.6 -0.3
comp=Z,28nm,1.0s,mb5.1
SCI San Clemente I 85.29 47⇓ P P 17 21 46.7 0.0
baz=86
BSC Santa Cruz Isl 85.30 46⇓ P P 17 21 46.7 0.0
baz=86
SBC Santa Barbara 85.55 45⇑ P P 17 21 48.0 +0.1
baz=86
CIS Catalina Islan 85.67 47⇓ P P 17 21 48.4 -0.1
baz=86
BLG Laguna Peak 85.73 46⇓ P P 17 21 48.6 -0.2
baz=86
FMP Fort Macarthur 85.94 46⇓ P P 17 21 49.5 -0.3
baz=86
SMMC Simmler 85.97 44⇓ P P 17 21 50.2 +0.3
baz=86
SAO San Andreas Ge 86.11 42 *e*P P 17 21 50.8 +0.2
SAO pmax pmax
comp=Z,40nm,1.3s,mb5.2
SAO San Andreas Ge 86.11 42 *e*P P 17 21 50.8 +0.2
comp=Z,40nm,1.3s,mb5.2
109C Camp Elliot, M 86.14 48⇓ P P 17 21 50.6 -0.2
baz=86
DECC Green Verdugo 86.27 46⇓ P P 17 21 51.2 -0.2
baz=86
OSI Osito Adit 86.27 46⇓ P P 17 21 51.3 -0.2
baz=86
BAR Barrett 86.28 48 *e*P P 17 21 51.5 0.0
comp=Z,6.1nm,0.9s,mb4.5
NJ2 Nanjing 86.41 311 *e*P P 17 21 47.1 -5.0
NJ2 pP pP 17 22 22.8 +12
NJ2 sP sP 17 22 37.8 +20
NJ2 PP PP 17 25 11.3 -3.3
NJ2 S S 17 32 07.0 -16
NJ2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
NJ2 pmax pmax
comp=Z,110nm,9.1s
NJ2 LR LR
comp=N,370nm,18.5s
NJ2 LR LR
comp=E,420nm,27.5s
NJ2 LR LR
comp=Z,650nm,25.3s
MWC Mount Wilson 86.42 46 *e*P P 17 21 52.3 +0.1
MWC pmax pmax
comp=Z,36nm,1.3s,mb5.1
MWC Mount Wilson 86.42 46 *e*P P 17 21 52.3 +0.2
comp=Z,36nm,1.3s,mb5.1
PETK Petropavlovsk- 86.43 346 P P 17 21 50.1 -1.6
comp=Z,9.5nm,0.9s,mb4.7,baz=107,slow=7.9,SNR=16
MURC Murrieta 86.55 47⇓ P P 17 21 52.8 0.0
baz=87,SNR=8.2
ARVC Arvin 86.55 45⇓ P P 17 21 52.6 -0.2
baz=87
MONP Monument Peak 86.58 48⇑ P P 17 21 53.4 +0.5
baz=87,SNR=15
DVTC Desert V Tower 86.63 48⇑ P P 17 21 53.6 +0.3
baz=87,SNR=7.6
BFSC Mount Baldy Ra 86.68 46⇓ P P 17 21 53.3 -0.1
baz=87,SNR=9.4
HOPS Hopland 86.75 40 *e*P P 17 21 53.6 -0.1
comp=Z,66nm,1.2s,mb5.4
EDW2 Edwards Air Fo 86.90 46⇑ P P 17 21 54.5 0.0
baz=87,SNR=18
SWSC Sam W. Stewart 87.01 48⇓ P P 17 21 55.0 0.0
baz=87
PFO Pinyon Flat Ob 87.02 48⇓ P P 17 21 55.3 +0.1
baz=87,SNR=12
PFO Pinyon Flat Ob 87.02 48 *e*P P 17 21 55.2 +0.1
PFO pmax pmax
comp=Z,67nm,1.4s,mb5.4
PFO Pinyon Flat Ob 87.02 48 *e*P P 17 21 55.2 0.0
comp=Z,67nm,1.4s,mb5.4
RCTC Rector, Farmer 87.10 44⇑ P P 17 21 54.9 -0.5
baz=87
ISA Isabella 87.12 45⇓ P P 17 21 55.7 +0.1
baz=87,SNR=33
BBRC Big Bear Solar 87.16 47⇑ P P 17 21 56.0 +0.3
baz=87
LRMC Laurel Mountai 87.48 45⇑ P P 17 21 57.4 +0.1
baz=88,SNR=31
RRX Edison Barstow 87.51 46⇑ P P 17 21 57.4 0.0
baz=88
112A Yuma 87.54 49⇑ P P 17 21 57.9 +0.3
baz=88
BELC Belle Mtn. Jos 87.57 48⇓ P P 17 21 58.2 +0.4
baz=88,SNR=22
CMB Columbia Colle 87.60 42 *e*P P 17 21 57.2 -0.6
CMB pmax pmax
comp=Z,89nm,1.5s,mb5.6
CMB Columbia Colle 87.60 42 *e*P P 17 21 57.2 -0.6
comp=Z,89nm,1.5s,mb5.6
BC3 Big Chuckawall 87.69 48⇓ P P 17 21 58.9 +0.5
baz=88,SNR=21
GLA Glamis 87.70 49⇑ P P 17 21 59.0 +0.5
baz=88,SNR=12
GLA Glamis 87.70 49 *e*P P 17 21 58.6 +0.2
GLA pmax pmax
comp=Z,60nm,1.3s,mb5.5
GLA Glamis 87.70 49 *e*P P 17 21 58.6 +0.1
comp=Z,60nm,1.3s,mb5.5
CWC Cottonwood Cre 87.88 45⇑ P P 17 21 59.1 -0.1
baz=88

HEC Hector,Ludlow 87.89 47⇑ P P 17 21 59.2 0.0
baz=88,SNR=23
GSC Goldstone 87.91 46⇓ P P 17 21 59.3 0.0
baz=88,SNR=17
GSC Goldstone 87.91 46 *e*P P 17 21 59.2 -0.1
GSC pmax pmax
comp=Z,58nm,1.3s,mb5.5
GSC Goldstone 87.91 46 *e*P P 17 21 59.2 -0.1
comp=Z,58nm,1.3s,mb5.5
MPMC Manual Prospec 87.99 45⇑ P P 17 21 59.6 -0.1
baz=88,SNR=28
WDC Whiskeytown Da 88.16 39 *e*P P 17 22 00.2 -0.2
WDC pmax pmax
comp=Z,113nm,1.7s,mb5.6
WDC Whiskeytown Da 88.16 39 *e*P P 17 22 00.1 -0.2
comp=Z,113nm,1.7s,mb5.6
TIN Tinemaha 88.20 44⇓ P P 17 22 00.6 -0.1
baz=88
IRM Iron Mountain 88.21 48⇑ P P 17 22 01.3 +0.6
baz=88,SNR=38
113A Mohawk Valley, 88.22 50⇑ P P 17 22 01.1 +0.2
baz=88,SNR=6.5
MLAC Mammoth Lakes 88.23 43⇑ P P 17 22 01.1 +0.3
baz=88
GMRC Granite Mounta 88.28 47⇑ P P 17 22 01.4 +0.3
baz=88,SNR=14
214A Organ Pipe Nat 88.34 51⇑ P P 17 22 01.8 +0.4
baz=88
WHN Wuhan 88.46 307 P P 17 22 01.8 -0.2
WHN SKS 17 32 18.3
WHN S S 17 32 35.3 -7.2
TUQ Turquoise Moun 88.54 46⇑ P P 17 22 02.6 +0.3
baz=89,SNR=12
Z13A Yuma Proving G 88.56 49⇑ P P 17 22 02.8 +0.3
baz=89,SNR=23
SHOC Shoshone 88.62 46⇑ P P 17 22 02.8 +0.1
baz=89
FURC Furnace Creek, 88.64 45⇓ P P 17 22 02.9 +0.2
baz=89
GRAC Grapevine Rang 88.68 45⇑ P P 17 22 03.1 +0.2
baz=89,SNR=36
114A Black Gap (USA 88.78 50⇓ P P 17 22 04.0 +0.5
baz=89
WCN Washoe City 88.82 42⇓ P P 17 22 03.7 +0.1
baz=89
Y13A Salome 88.83 49⇓ P P 17 22 04.3 +0.5
baz=89,SNR=16
YBH Yreka Blue Hor 88.88 38 P P 17 22 03.5 -0.2
comp=Z,10.0nm,1.0s,mb4.8,baz=348,slow=0.8,SNR=13
YBH Yreka Blue Hor 88.88 38 *e*P P 17 22 03.8 +0.1
YBH pmax pmax
comp=Z,28nm,1.3s
YBH Yreka Blue Hor 88.88 38 *e*P P 17 22 03.8 +0.1
comp=Z,28nm,1.3s,mb5.1
U10A Ash Meadows, A 88.93 46⇑ P P 17 22 04.5 +0.4
baz=89,SNR=11
NEE2 Needles Airpor 88.93 48⇓ P P 17 22 04.6 +0.5
baz=89
PDMCI Parker Dam,Lak 88.94 48⇓ P P 17 22 04.7 +0.4
baz=89,SNR=10
MDJ Mudanjiang 89.00 326 P P 17 22 03.4 -0.8
MDJ pP pP 17 22 36.0 +13
MDJ sP sP 17 22 51.0 +21
MDJ PP PP 17 25 33.0 -2.2
MDJ S S 17 32 34.9 -12
MDJ sS sS 17 33 37.0 +19
MDJ SS SS 17 38 28.9 -13
MDJ pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
MDJ pmax pmax
comp=Z,59nm,3.7s
MDJ LR LR
comp=N,230nm,25.9s
MDJ LR LR
comp=E,190nm,29.9s
MDJ LR LR
comp=Z,170nm,27.9s
NVAR Mina Array Bea 89.07 43 P P 17 22 04.8 0.0
comp=Z,16nm,0.8s,mb5.1,baz=221,slow=7.7,SNR=76
V11A Goodsprings 89.11 46⇓ P P 17 22 05.4 +0.4
baz=89
W12A Cal Nev Ari 89.11 47⇑ P P 17 22 05.5 +0.5
baz=89,SNR=5.5
Z14A Wintersburg 89.12 50⇑ P P 17 22 05.6 +0.5
baz=89,SNR=12
115A Sonoran Desert 89.18 51⇑ P P 17 22 05.8 +0.4
baz=89
DL2 Dalian 89.21 318 *e*P P 17 22 07.6 +2.2
DL2 pP pP 17 22 45.6 +22
DL2 SKS 17 32 19.4
DL2 S S 17 32 45.8 -3.4
DL2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
216A Three Points, 89.27 51⇑ P P 17 22 06.4 +0.6
baz=90
X13A Yucca 89.32 48⇑ P P 17 22 06.5 +0.5
baz=90,SNR=42
HUMO Hull Mountain 89.37 38 *e*P P 17 22 06.2 +0.2
comp=Z,79nm,1.5s,mb5.5
V12A Nelson 89.40 47⇑ P P 17 22 06.5 +0.2
baz=90,SNR=7.6
Y14A Wickenburg 89.44 49⇓ P P 17 22 06.9 +0.3
baz=90,SNR=22
116A Eloy 89.45 51⇓ P P 17 22 07.1 +0.5
baz=90
U11A Corn Creek 89.51 46⇓ P P 17 22 07.4 +0.5
baz=90
217A Green Valley 89.56 52⇑ P P 17 22 07.8 +0.6
baz=90,SNR=32
Z15A Gila River Ind 89.59 50⇓ P P 17 22 07.7 +0.4
baz=90
W13A Hualapai Mount 89.61 48⇓ P P 17 22 07.7 +0.4
baz=90,SNR=17
S10A Tonopah Range, 89.75 44⇓ P P 17 22 07.9 0.0
baz=90,SNR=37
X14A Yava 89.85 49⇑ P P 17 22 08.9 +0.4
baz=90,SNR=30
Y15A Casa Rosa Ranc 89.89 49⇓ P P 17 22 09.2 +0.5
baz=90,SNR=25
TUC Tucson 89.91 52 *e*P P 17 22 09.4 +0.6
TUC pmax pmax
comp=Z,40nm,1.0s,mb5.5
TUC Tucson 89.91 52 *e*P P 17 22 09.4 +0.6
comp=Z,40nm,1.0s,mb5.5
318A Bisbee 89.92 53⇓ P P 17 22 09.5 +0.6
baz=90,SNR=26
V13A Grand Canyon W 90.02 47⇓ P P 17 22 09.6 +0.3
baz=90,SNR=18
U12A Valley of Fire 90.04 46⇓ P P 17 22 09.9 +0.5
baz=90,SNR=5.1
S11A Rachel 90.08 45⇓ P P 17 22 09.7 +0.2
baz=90
117A Oracle 90.10 51⇓ P P 17 22 10.4 +0.7
baz=90,SNR=17
Z16A Peralta Trail, 90.11 50⇑ P P 17 22 10.4 +0.7
baz=90
T12A Moapa 90.12 46⇓ P P 17 22 10.2 +0.5
baz=90
T11A Corn Creek, Al 90.14 45⇑ P P 17 22 10.3 +0.5
baz=90,SNR=30
W14A Seligman 90.19 48⇑ P P 17 22 10.8 +0.8
baz=90,SNR=22
218A Dragoon 90.20 52⇓ P P 17 22 10.9 +0.7
baz=90,SNR=20
X15A Humboldt 90.28 49⇑ P P 17 22 11.3 +0.8
baz=90,SNR=15
MOD Modoc 90.29 39 *e*P P 17 22 09.9 -0.5
comp=Z,137nm,1.9s,mb5.8
319A Douglas 90.37 53⇓ P P 17 22 11.5 +0.5
baz=90,SNR=13
U13A Pakoon Wash 90.39 47⇑ P P 17 22 11.4 +0.5
baz=91,SNR=16
Y16A Circle Bar Ran 90.40 50⇓ P P 17 22 11.8 +0.7
baz=91,SNR=38
V14A Boquillas Ranc 90.44 48⇑ P P 17 22 11.8 +0.7
baz=91,SNR=19
Q10A Clear Creek Ra 90.45 44⇑ P P 17 22 11.2 0.0
baz=91,SNR=11
CN2 Changchun 90.48 323 *e*P P 17 22 09.1 -2.1
CN2 *e*sP sP 17 23 00.0 +23
CN2 *e*S S 17 32 49.6 -11
CN2 *e*SS SS 17 38 57.5 -6.1
CN2 pmax pmax
comp=Z,20nm,0.9s,mb5.2
CN2 pmax pmax
comp=Z,200nm,4.0s
K05A Summer Lake 90.54 38⇑ P P 17 22 11.8 +0.4
baz=91
S12A Delamar Landin 90.60 45⇓ P P 17 22 12.5 +0.6
baz=91,SNR=10
R11A Troy Canyon, C 90.63 44⇓ P P 17 22 11.8 -0.2
baz=91,SNR=8.8
W15A Williams 90.69 49⇑ P P 17 22 13.1 +0.8
baz=91
Y17A Roosevelt 90.71 50⇑ P P 17 22 13.2 +0.7
baz=91,SNR=34
Z17A San Carlos Hig 90.72 51⇓ P P 17 22 13.3 +0.7
baz=91,SNR=7.3
219A White Tail Can 90.75 53⇑ P P 17 22 13.1 +0.4
baz=91,SNR=18
X16A Lo Mia Camp, P 90.76 50⇓ P P 17 22 13.5 +0.8
baz=91,SNR=22
Z18A Geronimo 90.88 51⇓ P P 17 22 13.7 +0.3
baz=91
U14A Mt Trumbull 90.88 47⇑ P P 17 22 13.8 +0.6
baz=91,SNR=25
Q11A Duckwater 90.91 44⇑ P P 17 22 13.2 -0.1
baz=91,SNR=6.1
P10A Eureka 90.93 43⇓ P P 17 22 13.2 -0.2
baz=91,SNR=7.3
BMN Battle Mountai 91.03 42 *e*P P 17 22 13.7 -0.1
BMN pmax pmax
comp=Z,34nm,1.6s,mb5.2
BMN Battle Mountai 91.03 42 *e*P P 17 22 13.7 -0.1
comp=Z,34nm,1.6s,mb5.2
W16A Flagstaff 91.11 49⇓ P P 17 22 15.1 +0.7
baz=91,SNR=14
X17A Forest Lakes 91.12 50⇓ P P 17 22 15.2 +0.8
baz=91,SNR=14
V15A Kaibab Nationa 91.15 48⇓ P P 17 22 15.1 +0.7
baz=91,SNR=12
119A Ashpeak Ranch, 91.18 52⇑ P P 17 22 15.3 +0.6
baz=91,SNR=6.8
S13A Holt Ranch, En 91.19 46⇑ P P 17 22 15.0 +0.4
baz=91,SNR=8.1
220A Playas Peak, P 91.20 53⇑ P P 17 22 15.5 +0.7
baz=91,SNR=12
R12A Pony Springs, 91.21 45⇑ P P 17 22 15.0 +0.3
baz=91,SNR=9.2
H04A Detroit Lake 91.23 36⇑ P P 17 22 14.3 -0.3
baz=91
Y18A Canyon Day Jun 91.30 51⇑ P P 17 22 16.1 +0.9
baz=92,SNR=31
P11A Circle Ranch, 91.31 43⇓ P P 17 22 14.8 -0.3
baz=92
T14A Hurricane 91.34 47⇑ P P 17 22 15.7 +0.3
baz=92,SNR=7.4
O10A Cortez Mining, 91.35 42⇓ P P 17 22 15.1 -0.2
baz=92
G04A Mulino 91.44 36⇓ P P 17 22 15.1 -0.5
baz=92
U15A North Rim 91.45 48⇓ P P 17 22 16.5 +0.7
baz=92,SNR=27
KLR Kul'dur 91.46 330 *e*P P 17 22 10.0 -5.6
WUAZ Wupatki 91.47 49⇓ P P 17 22 16.5 +0.5
baz=92,SNR=11
WUAZ Wupatki 91.47 49 *e*P P 17 22 16.6 +0.6
comp=Z,29nm,1.1s,mb5.3
CCUT Cedar City 91.48 46 *e*P P 17 22 16.9 +0.9
comp=Z,25nm,1.4s,mb5.2
R13A O'Grain Ranch, 91.50 45⇓ P P 17 22 16.6 +0.5
baz=92,SNR=7.5
Z19A T-Link Ranch, 91.52 52⇓ P P 17 22 16.8 +0.5
baz=92
WVOR Wild Horse Val 91.56 40 *e*P P 17 22 16.2 0.0
WVOR pmax pmax
comp=Z,46nm,1.5s,mb5.5
WVOR Wild Horse Val 91.56 40 *e*P P 17 22 16.2 0.0
comp=Z,46nm,1.5s,mb5.5
N10A Dunphy 91.62 42⇑ P P 17 22 16.4 -0.2
baz=92
W17A Winslow 91.64 49⇑ P P 17 22 17.2 +0.4
baz=92
S14A Cedar City 91.73 46⇓ P P 17 22 17.5 +0.4
baz=92
O11A Cowboy Ranch, 91.74 43⇓ P P 17 22 17.1 0.0
baz=92,SNR=24
T15A Red Dirt Ranch 91.76 47⇓ P P 17 22 17.7 +0.5
baz=92
P12A McGill 91.76 44⇑ P P 17 22 17.3 0.0
baz=92,SNR=9.2
221A Mesquite Ranch 91.77 53⇓ P P 17 22 17.8 +0.3
baz=92
X18A Snowflake 91.80 50⇑ P P 17 22 18.0 +0.5
baz=92,SNR=8.1
Z20A Nine Sixteen R 91.87 52⇓ P P 17 22 18.6 +0.7
baz=92,SNR=18
V17A Tonalea, Kykot 91.91 49⇑ P P 17 22 18.3 +0.3
baz=92,SNR=17
Y19A Nutrioso 91.92 51⇑ P P 17 22 18.7 +0.6
baz=92,SNR=17
HOOD Mount Hood Mea 91.94 36 *e*P P 17 22 18.0 +0.1
comp=Z,11nm,0.9s,mb5.1
Q13A Wheeler Ranch, 91.96 45⇓ P P 17 22 18.0 -0.2
baz=92,SNR=7.7
F04A Amboy 91.98 35⇑ P P 17 22 17.2 -0.8
baz=92
U16A Tuba City 92.01 48⇑ P P 17 22 18.8 +0.3
baz=92
121A Cookes Peak, D 92.07 53⇑ P P 17 22 19.3 +0.4
baz=92
M10A I.L. Ranch, Tu 92.13 42⇓ P P 17 22 18.9 0.0
baz=92,SNR=9.3
N11A Elko Archery C 92.13 42⇑ P P 17 22 18.9 0.0
baz=92
R14A James Farms, M 92.16 46⇓ P P 17 22 19.3 +0.2
baz=92
S15A Panguitch 92.17 47⇓ P P 17 22 20.6 +1.4
baz=92
FL2 Flat Top 2 92.20 35 P P 17 22 20.6 +1.5
I07A Izee 92.20 38⇓ P P 17 22 19.0 -0.2
baz=92,SNR=28
J08A Circle Bar Ran 92.27 39⇑ P P 17 22 19.2 -0.3
baz=92,SNR=11
T16A Glen Canyon Da 92.29 48⇑ P P 17 22 19.9 +0.1
baz=92
W18A Petrified Fore 92.30 50⇓ P P 17 22 20.0 +0.2
baz=92
O12A Currie 92.36 43⇑ P P 17 22 19.8 -0.2
baz=93,SNR=8.6
G06A Carlson Farm, 92.40 37⇑ P P 17 22 19.6 -0.5
baz=93,SNR=14
Q14A Sevier Lake (B 92.43 45⇑ P P 17 22 20.6 +0.3
baz=93,SNR=19
Y20A Horse Springs, 92.48 52⇓ P P 17 22 21.6 +0.9
baz=93,SNR=13
M11A Holland Ranch, 92.50 42⇓ P P 17 22 20.5 -0.1
baz=93
W19A Sanders 92.52 50⇑ P P 17 22 21.2 +0.4
baz=93,SNR=5.4
V18A Ganado 92.53 49⇑ P P 17 22 21.2 +0.4
baz=93,SNR=6.3
L10A Juniper Basin 92.53 41⇑ P P 17 22 20.3 -0.4
baz=93,SNR=8.1
R15A Junction 92.56 46⇑ P P 17 22 21.4 +0.4
baz=93
N12A Clover Valley, 92.56 43⇓ P P 17 22 20.8 -0.1
baz=93,SNR=12
N12A Clover Valley, 92.56 43 *e*P P 17 22 20.9 0.0
comp=Z,23nm,1.0s,mb5.5
U17A Shonto 92.59 48⇓ P P 17 22 21.6 +0.4
baz=93
Z21A St. Cloud Mine 92.61 52⇓ P P 17 22 21.6 +0.3
baz=93
S16A Weppner Ranch, 92.68 47⇑ P P 17 22 21.2 -0.3
baz=93
O13A Hicks Ranch, I 92.73 44⇑ P P 17 22 21.6 -0.1
baz=93
T17A Navajo Res., N 92.74 48⇑ P P 17 22 22.3 +0.5
baz=93,SNR=5.2
K10A MacKenzie Ranc 92.77 40⇓ P P 17 22 21.7 -0.1
baz=93,SNR=17
X20A Quemado 92.77 51⇑ P P 17 22 22.6 +0.6
baz=93,SNR=22
MSU Marysvale 92.81 46 *e*P P 17 22 22.8 +0.7
MSU pmax pmax
comp=Z,10.0nm,1.1s,mb5.1
MSU Marysvale 92.81 46 *e*P P 17 22 22.8 +0.7
comp=Z,10nm,1.1s,mb5.1
LON Longmire 92.86 35 *e*P P 17 22 21.7 -0.4
LON pmax pmax
comp=Z,5.0nm,0.9s,mb4.8
LON Longmire 92.86 35 *e*P P 17 22 21.7 -0.4
comp=Z,5.1nm,0.9s,mb4.8
P14A Drum Mountains 92.93 45⇓ P P 17 22 22.7 0.0

baz=93,SNR=6.7
626A Big Bend Ranch 92.93 57 ⇓P P 17 22 22.7 -0.2
baz=93,SNR=6.8
Q15A Fillmore 92.98 46 ⇑P P 17 22 23.0 +0.1
baz=93
U18A Rough Rock, Ch 92.99 49 ⇑P P 17 22 22.9 -0.1
baz=93
M12A Wells 92.99 42 ⇑P P 17 22 22.9 0.0
baz=93,SNR=5.6
L11A Cat Creek Ranc 93.00 41 ⇓P P 17 22 22.8 -0.1
baz=93,SNR=13
Y21A Point of Rocks 93.01 52 ⇑P P 17 22 23.9 +0.8
baz=93
425A Indio Mountain 93.02 56 ⇑P P 17 22 22.6 -0.7
baz=93
324A Moseley Ranch, 93.04 55 ⇑P P 17 22 22.7 -0.7
baz=93,SNR=5.1
N13A Wendover, West 93.05 43 ⇓P P 17 22 22.9 -0.2
baz=93
N13A Wendover, West 93.05 43 *e*P **P 17 22 23.2 0.0**
comp=Z,26nm,1.1s,mb5.5
Z22A Elephant Butte 93.06 53 ⇓P P 17 22 23.5 +0.1
baz=93,SNR=18
D05A Enumclaw 93.08 35 ⇓P P 17 22 23.2 +0.1
baz=93
R16A Teasdale 93.10 47 ⇓P P 17 22 23.6 +0.2
baz=93
V19A Window Rock 93.11 50 ⇑P P 17 22 23.7 +0.2
baz=93
W20A Ramah 93.12 50 ⇑P P 17 22 24.2 +0.6
baz=93,SNR=16
S17A Black Ridge (B 93.13 47 ⇑P P 17 22 23.2 -0.4
baz=93
TXAR Lajitas Array 93.15 58 P **P 17 22 24.3 +0.4**
comp=Z,3.7nm,0.9s,mb4.7,baz=205,slow=5.5,SNR=15
TXAR LR LR 17 54 34.6
comp=Z,145nm,21.9s,baz=5.0,slow=29
TXAR Lajitas Array 93.15 58 P **P 17 22 24.3 +0.4**
TXAR LR LR 17 54 34.6
BJI Beijing 93.16 316 P **P 17 22 23.8 +0.1**
BJI sP sP 17 23 15.1 +26
BJI PP PP 17 26 09.5 +1.3
BJI SKS 17 32 43.8
BJI S S 17 33 16.9 -8.1
BJI sS sS 17 34 20.3 +24
BJI pmax pmax
comp=Z,2.0nm,0.8s,mb4.5
BJI pmax pmax
comp=Z,87nm,6.6s
123A Bell Site, Whi 93.18 54 ⇓P P 17 22 24.0 0.0
baz=93
X21A Alamocita Cree 93.19 51 ⇑P P 17 22 24.4 +0.4
baz=93,SNR=17
K11A Parker Ranch, 93.23 41 ⇑P P 17 22 23.8 -0.1
baz=93,SNR=11
CMAR Chiang Mai Arr 93.25 289 P **P 17 22 25.6 +1.0**
comp=Z,3.1nm,0.9s,mb4.6,baz=147,slow=3.6,SNR=14
CMAR PP PP 17 26 10.9 +1.6
comp=Z,0.9nm,0.8s,baz=148,slow=5.0,SNR=4.1
CMAR PKKP PKKPbc 17 39 32.8 +1.1
comp=Z,1.2nm,0.8s,baz=290,slow=4.2,SNR=8.3
J10A Berg Farm, Mel 93.25 40 ⇑P P 17 22 23.3 -0.7
baz=93
526A Mary Lane Ranc 93.25 57 ⇑P P 17 22 24.0 -0.4
baz=93,SNR=8.3
MNTX Cornudas Mount 93.26 55 *e*P **P 17 22 23.8 -0.5**
comp=Z,12nm,1.4s,mb5.0
G08A Pilot Rock 93.31 38 ⇓P P 17 22 23.9 -0.3
baz=94,SNR=19
U19A Dine' College, 93.34 49 ⇓P P 17 22 24.8 +0.2
baz=94
325A Bean Ranch, Si 93.36 55 ⇓P P 17 22 23.9 -0.9
baz=94
224A Cornudas Mount 93.37 54 ⇑P P 17 22 24.8 -0.1
baz=94,SNR=8.4
M13A Montello 93.39 43 ⇑P P 17 22 24.5 -0.2
baz=94,SNR=23
M13A Montello 93.39 43 *e*P **P 17 22 24.5 -0.2**
comp=Z,29nm,1.2s,mb5.5
P15A Leamington 93.40 45 ⇑P P 17 22 24.9 +0.1
baz=94
L12A House Creek Ra 93.40 42 ⇓P P 17 22 24.6 -0.1
baz=94,SNR=10.0
627A Terlingua Ranc 93.42 58 ⇑P P 17 22 24.7 -0.4
baz=94,SNR=15
T18A Mexican Hat 93.42 48 ⇓P P 17 22 25.1 +0.2
baz=94,SNR=7.8
CHTO Chiang Mai 93.43 290 *e*P **P 17 22 26.1 +0.7**
CHTO pmax pmax
comp=Z,6.0nm,1.1s,mb4.8
CHTO Chiang Mai 93.43 290 *e*P **P 17 22 26.1 +0.6**
comp=Z,5.7nm,1.1s,mb4.8
Y22A Socorro 93.45 52 ⇑P P 17 22 25.3 +0.1
baz=94
DUG Dugway 93.46 44 ⇑P P 17 22 24.7 -0.4
baz=94
V20A Brimhall 93.53 50 ⇑P P 17 22 25.4 -0.2
baz=94
Y22D IRIS PASSCAL I 93.56 52 ⇑P P 17 22 26.2 +0.6
baz=94
Z23A Rita Site, Whi 93.56 53 ⇑P P 17 22 25.7 0.0
baz=94
426A McDonald Obser 93.63 56 ⇓P P 17 22 25.0 -1.1
baz=94,SNR=5.4
527A Woodward Ranch 93.64 57 ⇑P P 17 22 25.3 -0.8
baz=94,SNR=5.1
N14A Grayback Hills 93.65 44 ⇓P P 17 22 25.4 -0.5
baz=94
I10A Payette 93.66 39 ⇓P P 17 22 25.5 -0.4
baz=94
R17A Hanksville Air 93.66 47 ⇑P P 17 22 25.6 -0.4
baz=94
S18A Hurst Farm, Bl 93.67 48 ⇑P P 17 22 26.0 -0.1
baz=94
W21A San Fidel 93.68 51 ⇓P P 17 22 26.5 +0.3
baz=94
Q16A Castle Valley 93.68 46 ⇓P P 17 22 26.2 +0.1
baz=94
O15A The Old Anders 93.72 44 ⇓P P 17 22 26.0 -0.3
baz=94
RSW Rattlesnake Hi 93.73 36 *e*P **P 17 22 26.7 +0.6**
comp=Z,5.9nm,0.6s,mb5.1
HAWA Hanford 93.75 36 *e*P **P 17 22 26.1 -0.2**
comp=Z,5.5nm,0.7s,mb5.0
MFID Camas Ranch 93.76 40 ⇓P P 17 22 26.0 -0.4
baz=94,SNR=7.8
124A Stringfield Ra 93.78 54 ⇓P P 17 22 26.4 -0.3
baz=94
KMI Kunming 93.78 297 P **P 17 22 28.3 +1.4**
KMI pP pP 17 23 05.8 +20
KMI sP sP 17 23 21.3 +29
KMI PP PP 17 26 16.8 +3.4
KMI SKS 17 32 47.3
KMI S S 17 33 20.6 -11
KMI sS sS 17 34 26.3 +24
KMI SS SS 17 39 44.5 -7.2
KMI pmax pmax
comp=Z,8.0nm,0.5s,mb5.3
KMI pmax pmax
comp=Z,150nm,6.5s
KMI LR LR
comp=N,200nm,17.0s
KMI LR LR
comp=E,260nm,17.9s
KMI LR LR
comp=Z,260nm,18.8s
BGU Big Grassy Mou 93.79 44 *e*P **P 17 22 26.4 -0.2**
comp=Z,15nm,1.6s,mb5.1
628A Black Gap, Mar 93.80 58 ⇑P P 17 22 26.4 -0.5
baz=94,SNR=8.7
BNM Barren Site 93.80 52 *e*P **P 17 22 27.4 +0.6**
comp=Z,5.3nm,1.2s,mb4.8
U20A Newcomb 93.84 49 ⇑P P 17 22 26.4 -0.5
baz=94
225A Deer Hill, Car 93.88 55 ⇑P P 17 22 26.9 -0.3
baz=94
G09A Cove 93.92 38 ⇑P P 17 22 26.3 -0.8
baz=94,SNR=10.0
M14A Sheep Mountain 93.96 43 ⇑P P 17 22 26.7 -0.6
baz=94,SNR=18
L13A Double Diamond 93.98 42 ⇑P P 17 22 27.0 -0.4
baz=94
I11A Placerville 94.01 40 ⇓P P 17 22 26.9 -0.6
baz=94,SNR=8.1
J12A Stokes Ranch, 94.06 41 ⇑P P 17 22 27.4 -0.4
baz=94,SNR=19
Y23A Lovelace Mesa, 94.06 53 ⇓P P 17 22 27.7 -0.3
baz=94
V21A Milan 94.08 50 ⇑P P 17 22 27.9 -0.1
baz=94
R18A Canyonlands Na 94.15 47 ⇓P P 17 22 27.9 -0.4
baz=94,SNR=7.5
ETW Entiat 94.18 35 *e*P **P 17 22 27.8 -0.4**
comp=Z,19nm,1.0s,mb5.4
427A Hayter Ranch, 94.18 56 ⇓P P 17 22 28.3 -0.3
baz=94,SNR=14
SRU San Rafael 94.19 46 ⇓P P 17 22 28.1 -0.4
baz=94,SNR=7.4
SRU San Rafael 94.19 46 *e*P **P 17 22 28.3 -0.2**
SRU pmax pmax
comp=Z,27nm,1.4s,mb5.4
SRU San Rafael 94.19 46 *e*P **P 17 22 28.3 -0.2**
comp=Z,27nm,1.4s,mb5.4
Z24A Sheeppen Canyo 94.19 53 ⇑P P 17 22 28.6 0.0
baz=94
528A Cox Ranch, San 94.24 57 ⇓P P 17 22 28.4 -0.5
baz=94
S19A Harvey Farm, M 94.25 48 ⇓P P 17 22 28.5 -0.3
baz=94
GDL2 Guadalupe Moun 94.25 55 *e*P **P 17 22 29.6 +0.7**
comp=Z,2.1nm,0.6s,mb4.6
K13A Stover Farm, H 94.25 42 ⇓P P 17 22 28.6 -0.1
baz=94,SNR=5.7
G10A Bishop Farm, J 94.28 38 ⇑P P 17 22 27.6 -1.1
baz=94
P17A Butcher Ranch, 94.28 46 ⇓P P 17 22 28.7 -0.1
baz=94
125A Gardner Draw, 94.31 54 ⇓P P 17 22 28.5 -0.7
baz=94
MVCO Mesa Verde 94.34 49 ⇑P P 17 22 28.9 -0.3
baz=94
X23A Hourglass Bar 94.34 52 ⇑P P 17 22 28.8 -0.5
baz=94
L14A Malta 94.36 43 ⇑P P 17 22 28.8 -0.3
baz=94,SNR=7.5
ANMO Albuquerque 94.37 52 P **P 17 22 28.9 -0.5**
comp=Z,3.4nm,0.8s,mb4.7,baz=209,slow=5.7,SNR=10
ANMO Albuquerque 94.37 52 P **P 17 22 28.9 -0.5**
I12A Atlanta 94.39 40 ⇑P P 17 22 29.2 -0.1
baz=95,SNR=13
U21A Nageezi 94.43 50 ⇓P P 17 22 29.6 0.0
baz=95,SNR=9.0
M15A Larsen Ranch, 94.47 44 ⇑P P 17 22 29.2 -0.5
baz=95,SNR=8.4
HVU Hansel Valley 94.47 43 *e*P **P 17 22 29.0 -0.7**
HVU pmax pmax
comp=Z,31nm,1.3s,mb5.5
HVU Hansel Valley 94.47 43 *e*P **P 17 22 29.0 -0.6**
comp=Z,31nm,1.3s,mb5.5
Y24A Capitan 94.48 53 ⇑P P 17 22 29.6 -0.4
baz=95,SNR=11
R19A Curley Farm, L 94.50 48 ⇓P P 17 22 29.4 -0.5
baz=95
D08A Wollman Farm, 94.51 36 ⇑P P 17 22 29.2 -0.5
baz=95,SNR=10.0
E09A Wood Farm, Sta 94.55 37 ⇑P P 17 22 29.0 -0.9
baz=95
Z25A Roswell 94.61 54 ⇑P P 17 22 30.4 -0.2
baz=95
428A Kincaid Ranch, 94.63 57 ⇓P P 17 22 30.4 -0.2
baz=95
V22A San Miguel Ran 94.63 51 ⇑P P 17 22 30.4 -0.1
baz=95
HLID Hailey 94.65 41 ⇑P P 17 22 30.2 -0.2
baz=95,SNR=9.8
HLID Hailey 94.65 41 *e*P **P 17 22 30.2 -0.2**
comp=Z,11nm,1.1s,mb5.2
F10A Beach Ranch, E 94.67 38 ⇑P P 17 22 29.5 -0.9
baz=95,SNR=7.9
J13A Cove Ranch, Pi 94.68 41 ⇑P P 17 22 30.4 -0.2
baz=95,SNR=11
O17A Robinson Place 94.72 45 ⇑P P 17 22 31.0 +0.1
baz=95,SNR=7.4
126A Clayton Basin, 94.74 55 ⇓P P 17 22 30.4 -0.7
baz=95
L15A Malad City 94.84 43 ⇑P P 17 22 30.8 -0.5
baz=95,SNR=7.4
OD2 Odessa Site #2 94.84 36 *e*P **P 17 22 30.6 -0.6**
comp=Z,22nm,1.0s,mb5.5
OD2 *e* 17 22 39.5
Q19A Hogan Spring (94.89 47 ⇑P P 17 22 31.1 -0.6
baz=95
Y25A Mesa, Roswell 94.99 53 ⇑P P 17 22 31.6 -0.7
baz=95,SNR=7.6
J14A Carey 95.00 42 ⇑P P 17 22 32.1 +0.1
baz=95,SNR=12
H12A Diamond D Ranc 95.03 40 ⇑P P 17 22 31.5 -0.6
baz=95,SNR=13
I13A Wildhorse Cree 95.03 41 ⇓P P 17 22 32.1 -0.1
baz=95
Z26A Caprock 95.12 54 ⇑P P 17 22 32.3 -0.6
baz=95
K15A Arbon 95.17 43 ⇓P P 17 22 32.3 -0.6
baz=95,SNR=7.9
B08A Colville Reser 95.18 35 ⇓P P 17 22 31.5 -1.3
baz=95
W24A Lazy 6 Ranch, 95.23 52 ⇑P P 17 22 32.9 -0.5
baz=95
X25A Clemmons Ranch 95.35 53 ⇑P P 17 22 33.1 -0.8
baz=96
H13A Challis 95.37 40 ⇓P P 17 22 33.5 -0.2
baz=96,SNR=10
I14A Mackay 95.42 41 ⇑P P 17 22 33.6 -0.3
baz=96,SNR=5.8
F12A Elk City 95.58 39 ⇑P P 17 22 33.8 -0.8
baz=96,SNR=11
Y26A Elida 95.59 54 ⇑P P 17 22 34.4 -0.6
baz=96
V24A Rampart Ranch, 95.61 52 ⇑P P 17 22 34.7 -0.3
baz=96
R21A Cimarron 95.63 48 ⇓P P 17 22 35.0 -0.1
baz=96
J15A Blackfoot 95.67 42 ⇑P P 17 22 35.3 +0.2
baz=96,SNR=10.0
Z27A Tatum 95.68 54 ⇓P P 17 22 34.2 -1.2
baz=96
G13A Cobalt 95.71 40 ⇓P P 17 22 34.7 -0.5
baz=96,SNR=8.1
W25A X Bar L Ranch, 95.88 52 ⇓P P 17 22 35.5 -0.8
baz=96
H14A Leadore 95.89 41 ⇑P P 17 22 36.0 -0.1
baz=96,SNR=7.7
Y27A Causey 96.03 54 ⇓P P 17 22 35.8 -1.2
baz=96
J16A Bone 96.07 42 ⇑P P 17 22 36.8 -0.2
baz=96
F13A Darby 96.10 39 ⇓P P 17 22 36.0 -1.0
baz=96
V25A Rancho No Teng 96.12 52 ⇑P P 17 22 36.8 -0.5
baz=96
CD2 Chengdu 96.12 302 P **P 17 22 38.1 +0.6**
CD2 pP pP 17 23 14.1 +18
CD2 sP sP 17 23 29.1 +26
CD2 PP PP 17 26 35.4 +3.9
CD2 SKS 17 33 00.0
CD2 S S 17 33 41.5 -10
CD2 sS sS 17 34 45.1 +22
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.5
CD2 pmax pmax
comp=Z,90nm,5.4s
CD2 LR LR
comp=N,160nm,8.9s
CD2 LR LR
comp=Z,200nm,12.5s
MCMT McKenzie Canyo 96.31 41 *e*P **P 17 22 39.1 +1.1**
comp=Z,3.7nm,1.2s,mb4.7
MSTX Muleshoe 96.34 54 ⇓P P 17 22 37.3 -1.1
baz=96
C11A Tepee Creek (N 96.39 37 ⇓P P 17 22 37.4 -0.9
baz=97,SNR=5.5
HHC Hu-ho-hao-te 96.44 314 *e*P **P 17 22 38.3 -0.4**
HHC pP pP 17 23 16.8 +20
HHC sP sP 17 23 31.3 +27
HHC PP PP 17 26 37.1 +3.3
HHC SKS 17 33 00.8
HHC S S 17 33 42.8 -11
HHC sS sS 17 34 47.0 +22
HHC SS SS 17 40 22.8 -6.3
HHC pmax pmax
comp=Z,11nm,0.7s,mb5.4
HHC pmax pmax
comp=Z,95nm,8.2s
HHC LR LR
comp=N,160nm,18.5s
HHC LR LR
comp=E,220nm,18.2s
HHC LR LR
comp=Z,250nm,18.4s
REDW Red Top Meadow 96.56 43 *e*P **P 17 22 39.2 +0.1**
comp=Z,9.3nm,1.4s,mb5.0
E13A Victor 96.59 39 ⇓P P 17 22 38.1 -1.1
baz=97
SEY Seymchan 96.60 347 ⇑*i*P **P 17 22 37.5 -1.4**
N20A Spence Gulch, 96.61 46 ⇑P P 17 22 38.7 -0.8
baz=97
L19A Farson 96.69 44 ⇓P P 17 22 39.1 -0.7
baz=97
O21A Pagoda 96.75 47 ⇓P P 17 22 38.9 -1.2
baz=97
DLMT Dillon 96.79 40 *e*P **P 17 22 41.2 +1.1**
comp=Z,2.7nm,0.6s,mb4.8
IMW Indian Meadow 96.83 42 *e*P **P 17 22 40.6 +0.2**
comp=Z,14nm,1.5s,mb5.2
LOHW Long Hollow 96.86 43 *e*P **P 17 22 40.8 +0.3**
comp=Z,11nm,1.3s,mb5.1
PDAR Pinedale Array 96.97 44 P **P 17 22 40.0 -1.0**
comp=Z,1.1nm,0.8s,mb4.3,baz=240,slow=2.9,SNR=8.9
PDAR PKKP PKKPbc 17 39 30.4 +7.7
comp=Z,1.0nm,0.6s,baz=68,slow=4.2,SNR=5.4
PDAR LR LR 17 58 25.5
comp=Z,91nm,19.2s,baz=250,slow=30
F15A Butte 97.14 40 ⇓P P 17 22 41.2 -0.5
baz=97
S25A Robets Cordova 97.25 50 ⇑P P 17 22 42.0 -0.5
baz=97
BOZ Bozeman (W) 97.50 41 *e*P **P 17 22 42.9 -0.4**
BOZ pmax pmax
comp=Z,8.0nm,1.4s,mb5.0
BOZ Bozeman (W) 97.50 41 *e*P **P 17 22 42.9 -0.4**
comp=Z,8.2nm,1.4s,mb5.0
DLBC Dease Lake 97.97 23 PP PP 17 26 41.2 -3.9
comp=Z,0.3nm,0.3s,baz=214,slow=21,SNR=4.0
LPAZ La Paz 98.23 115 P **P 17 22 49.8 +2.4**
comp=Z,1.3nm,0.7s,mb4.6,baz=206,slow=4.5,SNR=8.9
LPAZ LR LR 17 57 29.6
comp=Z,73nm,19.2s,baz=44,slow=29
LZH Lanzhou 98.82 307 *e*P **P 17 22 45.9 -3.6**
LZH pP pP 17 23 21.1 +13
LZH sP sP 17 23 36.1 +21
LZH PP PP 17 26 51.5 -0.7
LZH SKS 17 33 15.3
LZH S S 17 34 02.0 -12
LZH SS SS 17 40 54.0 -8.7
LZH pmax pmax
comp=Z,13nm,1.0s,mb5.4
LZH pmax pmax
comp=Z,80nm,4.7s
BILL Bilibino 99.54 354 ⇓*i*P Pdif 17 22 50.5 -2.2
BILL pmax pmax
comp=Z,6.0nm,1.6s,mb5.0
GTA Gaotai 103.26 308 *e*P Pdif 17 23 11.8 +2.5
GTA pP 17 23 47.8
GTA sP 17 24 03.1
GTA PP PP 17 27 31.3 +5.7
GTA SKS 17 33 36.9
GTA S Sdif 17 34 42.3 -8.9
GTA sS 17 35 46.8
GTA SS SS 17 42 00.6 -3.7
GTA pmax pmax
comp=Z,2.0nm,1.7s
GTA pmax pmax
comp=Z,83nm,6.6s
GTA LR LR
comp=N,100nm,19.8s
GTA LR LR
comp=E,110nm,21.0s
GTA LR LR
comp=Z,200nm,19.2s
SONM Songino Array 103.41 318 PP PP 17 27 19.0 -7.5
comp=Z,0.6nm,0.7s,baz=122,slow=5.4,SNR=4.1
SONM PKiKP PKiKP 17 27 29.3 +1.0
comp=Z,0.2nm,0.4s,baz=151,slow=3.4,SNR=3.5
YKA Yellowknife Ar 106.30 26 PKiKP PKiKP 17 27 31.8 -1.3
comp=Z,0.5nm,0.5s,baz=258,slow=1.5,SNR=6.2
FCC Fort Churchill 113.31 34 *e*PKiKP PKiKP 17 27 43.4 -3.0
WMQ Urumqi 113.35 308 PKP PKiKP 17 27 46.1 -0.9
WMQ PP PP 17 28 42.4 +3.3
WMQ PKS 17 31 21.6
WMQ SKS SKSdf 17 34 47.3 -5.9
WMQ AMB AMB
comp=Z,240nm,6.6s
BOSA Boshof 116.41 203 PKP PKPdf 17 27 54.1 +0.6
comp=Z,2.9nm,0.6s,baz=214,slow=4.5,SNR=7.3
MK31 Makanchi Array 117.92 310 *e*PKIKP PKPdf 17 27 53.5 -2.2
MKAR Makanchi Array 117.92 310 PKP PKPdf 17 27 53.6 -2.1
comp=Z,1.6nm,0.4s,baz=52,slow=2.0,SNR=16
ZALV Zalesovo Beam 118.30 318 PKP PKPdf 17 27 53.6 -2.5
comp=Z,0.9nm,0.5s,baz=212,slow=1.4,SNR=7.5
NVS Novosibirsk 119.42 319 *e*PKIKP PKPdf 17 27 55.4 -2.9
NVS pmax pmax
comp=E,7.0nm,1.2s
NVS pmax pmax
comp=Z,13nm,1.2s
NVS pmax pmax
comp=N,4.0nm,1.0s
KURK Kurchatov 121.25 314 ⇑*i*PKIKP PKPdf 17 27 59.7 -2.2
KURK Kurchatov 121.25 314 *e*PKPdf PKPdf 17 27 59.4 -2.5
UCH Uchtor 122.05 303 *e*PKPdf PKPdf 17 28 02.8 -1.0
UCH *e* 17 28 12.8
AAK Ala-Archa 122.17 304 PKP PKPdf 17 28 02.5 -1.4
comp=N,2.3nm,0.5s,baz=265,slow=8.6,SNR=5.9
AML Almayashu 122.62 303 *e*PKPdf PKPdf 17 28 04.2 -0.6
EKS2 Erkin-Say 122.69 303 *e*PKPdf PKPdf 17 28 03.4 -1.5
EKS2 *e* 17 28 13.9
KBL Kabul 124.12 293 *e*PKPdf PKPdf 17 28 06.2 -1.8
KBL *e* 17 28 14.5
PKME Peaks-Kenny Pk 124.30 54 *e*PKPdf PKPdf 17 28 07.7 -0.3
BVAR Borovoye Array 126.64 315 PKP PKPdf 17 28 10.5 -1.7
comp=N,4.3nm,0.4s,baz=117,slow=2.3,SNR=46
BRVK Borovoye 126.70 315 *c i*PKIKP PKPdf 17 28 09.9 -2.4
BRVK Borovoye 126.70 315 *e*PKPdf PKPdf 17 28 10.2 -2.1
SCHQ Schefferville 127.08 42 PKP PKPdf 17 28 12.2 -0.7
comp=N,17nm,1.0s,baz=328,slow=1.2,SNR=13
LSZ Lusaka 127.20 213 *e*PKIKP PKPdf 17 28 14.8 +0.3
KMBO Kilima Mbogo 133.29 233 PKP PKPdf 17 28 27.6 +1.5
comp=N,1.4nm,0.8s,baz=359,slow=24,SNR=3.4
KMBO SKPbc SKPbc 17 31 45.0 -3.7
comp=N,6.3nm,0.9s,baz=1.6,slow=24,SNR=6.2
ARU Arti 133.39 320 *i*PKIKP PKPdf 17 28 23.9 -1.0
ARU 17 30 50.8
ARU SS SS 17 48 24.1 -9.0
ARU Arti 133.39 320 *e*PKPdf PKPdf 17 28 23.3 -1.6
AKTK Aktyubinsk 134.28 312 PKP PKPdf 17 28 25.1 -1.6
AKTK SKPbc SKPbc 17 31 45.3 -5.3
AKTO Aktyubinsk 134.28 312 PKP PKPdf 17 28 25.1 -1.6
comp=N,3.2nm,0.6s,baz=87,slow=7.3,SNR=9.6
AKTO SKPbc SKPbc 17 31 45.3 -5.3
comp=N,1.6nm,0.6s,baz=102,slow=7.8,SNR=3.2
KEV Kevo 138.75 347 *e*PKIKP PKPdf 17 28 32.9 -1.6
KEV Kevo 138.75 347 *e*pkp PKPdf 17 28 32.9 -1.6
comp=N,6.9nm,0.9s
ARCES ARCESS Array B 139.22 347 PKhKP PKPpre 17 28 26.0
comp=N,4.0nm,0.8s,baz=75,slow=3.2,SNR=20
ARCES PKP PKPdf 17 28 35.0 -0.4
comp=N,3.4nm,0.5s,baz=77,slow=1.6,SNR=15
ARCES SKPbc SKPbc 17 31 59.9 -4.9
comp=N,2.9nm,0.8s,baz=64,slow=2.8,SNR=5.7
ARCES ARCESS Array B 139.22 347 PKP PKPdf 17 28 35.0 -0.4
ARCES SKPbc SKPbc 17 31 59.9 -4.9
JOF Joensuu 142.95 338 *e*PKHKP PKPpre 17 28 36.6
JOF Joensuu 142.95 338 *e*pkp PKPpre 17 28 36.6
comp=N,8.6nm,0.9s
DGRG David-gareji 143.52 299 P PKPdf 17 28 40.7 -3.2
MTA Mtatsminda 143.95 299 P PKPdf 17 28 41.9 -2.8
TBLG Delisi 143.98 299 PKIKP PKPdf 17 28 41.8 -2.9
TBLG Delisi 143.98 299 P PKPdf 17 28 41.8 -3.0
GNI Garni 144.03 297 *e*PKPdf PKPdf 17 28 42.3 -2.5
GOR Gori 144.44 300 P PKPdf 17 28 43.8 -1.7
ZEI Tsey 144.54 301 *e*PKIKP PKPdf 17 28 42.4 -3.3
ZEI pmax pmax
comp=Z,48nm,1.4s
KEH Kehvi 144.55 300 P PKPdf 17 28 42.3 -3.4
MOS Moscow 144.70 325 *e*PKHKP PKPpre 17 28 40.8
MOS pmax pmax
comp=Z,66nm,0.9s
ONI Oni 144.88 301 P PKPdf 17 28 44.9 -1.4
GOF Gofitskoye 144.88 305 *e*PKIKP PKPdf 17 28 51.7 +5.5
GOF pmax pmax
comp=Z,60nm,1.2s

KAF	Kangasniemi	145.10	340	ePKIKP	PKPdf	17 28 42.1	-3.9
KAF	Kangasniemi	145.10	340	epkp	PKPdf	17 28 42.1	-3.9
comp=Z,40nm,0.9s,baz=36,slow=3.1							
KIV	Kislovodsk	145.29	303	i PKP2	PKPab	17 28 45.1	-1.9
KIV				pmax	pmax		
comp=Z,26nm,1.1s							
KIV	Kislovodsk	145.29	303	ePKPdf	PKPdf	17 28 45.0	-1.9
OBN	Obninsk	145.53	324	⇓i PKIKP	PKPdf	17 28 45.7	-1.3
OBN				i		17 29 16.3	
OBN				i SS	SS	17 50 52.0	-3.3
OBN				pmax	pmax		
comp=Z,98nm,1.1s							
OBN	Obninsk	145.53	324	ePKPdf	PKPdf	17 28 45.5	-1.5
FINES	FINESS Array B	145.69	339	PKPbc	PKPbc	17 28 45.3	-2.2
comp=Z,42nm,0.4s,baz=48,slow=4.0,SNR=237							
VSR	Storozhevoye	145.79	317	ePKP2	PKPdf	17 28 46.4	-1.1
VSR				pmax	pmax		
comp=N,10.0nm,0.9s							
VSR				pmax	pmax		
comp=E,30nm,0.9s							
VSR				pmax	pmax		
comp=Z,80nm,0.9s							
VSU	Vasula	147.73	335d	i PKP2	PKPdf	17 28 51.8	+1.2
ANN	Anapa	148.84	306	i PKIKP	PKPdf	17 28 54.5	+1.7
ANN				pmax	pmax		
comp=Z,43nm,1.2s							
NB2	NORSAR Subarra	149.42	351	PKP	PKPbc	17 28 55.9	-1.8
comp=Z,31nm,0.8s,baz=13,slow=4.1							
NB2	NORSAR Subarra	149.42	351	PKP	PKPbc	17 28 55.9	-1.8
baz=13,slow=4.1							
NB2	NORSAR Subarra	149.42	351	PKP2	PKPbc	17 28 55.9	-1.8
NB2	NORSAR Subarra	149.42	351	PKPab	PKPbc	17 28 55.9	-1.8
NOA	NORSAR Array B	149.42	351	PKPbc	PKPbc	17 28 55.2	-2.5
comp=Z,34nm,1.0s,baz=14,slow=4.1,SNR=34							
NAO01	NORSAR Array S	149.65	351	ePKPbc	PKPbc	17 28 57.4	-0.9
IZAR	Zarasai	149.86	332	eP	PKPbc	17 28 56.9	-2.1
IZAR				AMB	AMB	17 28 59.5	
comp=Z,22nm,1.3s							
IDID	Didziasalis	149.96	331	eP	PKPbc	17 28 57.1	-2.1
IDID				AMB	AMB	17 28 59.6	
comp=Z,16nm,1.3s							
MICGM	Minsk	150.01	329⇓	eP	PKPbc	17 28 57.0	-2.4
MNK	Minsk	150.03	329⇓	ePKHKP	PKPbc	17 28 57.0	-2.4
MNK				pmax	pmax		
comp=Z,220nm,1.0s							
IIGN	Ignalina	150.15	331	eP	PKPbc	17 28 58.1	-1.6
IIGN				AMB	AMB	17 29 00.2	
comp=Z,25nm,1.5s							
NACGM	Naroch	150.22	330	e	PKPdf	17 28 56.0	+1.3
KONO	Kongsberg	150.98	352	ePKIKP	PKPbc	17 28 59.5	-2.0
MMAI	Mount Meron Ar	151.29	283	PKPbc	PKPbc	17 29 02.7	-0.4
comp=Z,16nm,0.7s,baz=91,slow=4.2,SNR=21							
AKASG	Malin Array Be	151.62	322	PKP	PKPdf	17 28 54.7	-2.3
comp=Z,0.3nm,0.4s,baz=45,slow=1.7,SNR=6.9							
AKASG				PKPbc	PKPbc	17 29 01.6	-1.7
comp=Z,12nm,0.5s,baz=50,slow=2.4,SNR=58							
AKASG	Malin Array Be	151.62	322	PKP	PKPdf	17 28 54.7	-2.3
AKASG				PKPbc	PKPbc	17 29 01.6	-1.7
AKBB	Malin Array Si	151.62	322	ePKIKP	PKPbc	17 29 01.0	-2.3
AKBB				e		17 29 11.2	
KIEV	Kiev	151.64	322	ePKPbc	PKPbc	17 29 01.2	-2.2
KIEV				e		17 29 11.8	
SUW	Suwalki	152.34	332	ePKIKP	PKPbc	17 29 03.4	-1.4
BRTR	Keskin Array B	152.57	297	PKP	PKPdf	17 28 57.6	-1.2
comp=Z,1.9nm,1.1s,baz=306,slow=2.9,SNR=5.4							
BRTR				PKPbc	PKPbc	17 29 04.4	-1.4
comp=Z,8.4nm,1.0s,baz=132,slow=1.8,SNR=22							
BRTR				PKPab	PKPab	17 29 15.2	-1.4
comp=Z,12nm,0.5s,baz=131,slow=3.6,SNR=23							
KIS	Kishinev	153.72	315	eUNK	PKPbc	17 29 06.0	-2.1
LIC	Lamto	154.46	165	ePKIKP	PKPbc	17 29 11.5	+0.8
comp=Z,64nm,1.0s							
KIC	Kosan Boka	154.66	165	ePKIKP	PKPbc	17 29 11.8	+0.7
comp=Z,22nm,0.6s							
LVV	L'vov	154.84	324	ePKIKP	PKPbc	17 29 14.2	+3.8
TIC	Toumodi	154.87	165	ePKIKP	PKPbc	17 29 12.2	+0.6
comp=Z,22nm,0.2s							
DBIC	Dimbokro	154.93	165	PKPbc	PKPbc	17 29 13.6	+1.9
comp=Z,4.0nm,0.7s,baz=1.4,slow=3.9,SNR=4.4							
DBIC				PKPab	PKPab	17 29 28.1	+1.1
comp=Z,4.4nm,0.5s,baz=122,slow=1.6,SNR=4.8							
BSEG	Bad Segeberg	156.35	347	ePKPdf	PKPdf	17 29 02.3	-1.3
BSEG				ePKPab	PKPab	17 29 30.2	-1.9
STHS	Stebnicka Huta	156.46	326	ePKP2	PKPab	17 29 32.1	-0.6
STHS	Stebnicka Huta	156.46	326	ePKP	PKPab	17 29 32.1	-0.6
UZH	Uzhgorod	156.47	324	ePKIKP	PKPdf	17 29 11.3	+7.4
UZH				e		17 29 30.3	
UZH				e		17 29 41.1	
CRVS	Cervenica-Dubn	156.71	325	ePKIKP	PKPdf	17 29 03.1	-1.1
CRVS				e		17 29 32.8	
CRVS				e		17 29 44.5	
CRVS	Cervenica-Dubn	156.71	325	ePKP	PKPdf	17 29 03.1	-1.1
CRVS				e		17 29 32.8	
CRVS				e		17 29 44.5	
NIE	Niedzica	156.90	328	ePKP	PKPab	17 29 33.2	-1.4
KECS	Kecovo	157.47	326	ePKP2	PKPab	17 29 36.8	-0.3
KECS	Kecovo	157.47	326	ePKP	PKPab	17 29 36.8	-0.3
KECS				e		17 29 46.7	
OKC	Ostrava-Krasne	157.53	331	ePKP	PKPdf	17 29 05.3	+0.1
OKC				e		17 29 35.9	
OKC				e		17 29 45.6	
OKC	Ostrava-Krasne	157.53	331	ePKPDF	PKPdf	17 29 05.3	+0.1
OKC				ePKPAB	PKPab	17 29 35.9	-1.4
OKC				ex	x	17 29 45.6	
OKC				AMS	AMS	18 38 50.0	
UPC	Upice	157.84	335	ePKPDF	PKPdf	17 29 04.5	-1.1
UPC				ePKPAB	PKPab	17 29 37.0	-1.6
UPC				ex	x	17 29 46.0	
DPC	Dobruska-Polom	157.85	334	ePKPDF	PKPdf	17 29 05.2	-0.4
DPC				ePKPAB	PKPab	17 29 36.7	-2.0
DPC				ex	x	17 29 45.8	
CLL	Collm	158.13	340	ePKPab	PKPab	17 29 37.7	-2.1
CLL				epPKPab	pPKPab	17 29 48.5	-10
CLL	Collm	158.13	340	ePKIKP	PKPdf	17 29 16.0	+10
CLL				i		17 29 37.8	
CLL				pmax	pmax		
comp=Z,6.0nm,1.1s							
CLL				pmax	pmax		
comp=Z,21nm,1.3s							
CLL	Collm	158.13	340	ePKPdiff	PKPdf	17 29 16.0	+10
comp=Z,6.0nm,1.1s							
CLL				i PKPab	PKPab	17 29 37.8	-2.0
comp=Z,21nm,1.3s							
CLL				e		17 30 16.0	
CLL				ePPS		17 46 48.0	
CLL				eSS	SS	17 53 10.0	-3.2
CLL				eSSS		17 59 16.0	
CLL				e		18 04 54.0	
CLL				LmV		18 41 00.0	
comp=Z,100nm,21.3s							
CLL	Collm	158.13	340	⇓i (P)	PKPab	17 29 48.6	+8.8
comp=Z,10.0nm,0.8s							
BRG	Berggiesshubel	158.23	338	ePKPdf	PKPdf	17 29 04.8	-1.2
BRG				ePKPab	PKPab	17 29 38.4	-1.9
BRG	Berggiesshubel	158.23	338	eP	PKPdf	17 29 05.3	-0.8
comp=Z,18nm,1.9s							
BRG				e		17 29 38.4	
comp=Z,22nm,1.2s							
BRG	Berggiesshubel	158.23	338	ePKIKP	PKPdf	17 29 05.3	-0.7
BRG				e		17 29 38.4	
BRG				pmax	pmax		
comp=Z,11nm,1.9s							
BRG				pmax	pmax		
comp=Z,13nm,1.2s							
VYHS	Vyhne	158.24	328	ePKIKP	PKPdf	17 29 04.9	-1.2
VYHS				e		17 29 39.2	
VYHS	Vyhne	158.24	328	ePKP	PKPdf	17 29 04.9	-1.2
VYHS				e		17 29 39.2	
VYHS				e		17 29 50.1	
VYHS	Vyhne	158.24	328	ePKP	PKPdf	17 29 04.9	-1.2
VYHS				e		17 29 39.2	
VYHS				e		17 29 50.1	
CLZ	Clausthal	158.31	345	ePKPdf	PKPdf	17 29 03.9	-2.2
CLZ				ePKPab	PKPab	17 29 39.2	-1.4
PVCC	Panska Ves	158.32	337	ePKP2	PKPab	17 29 39.3	-1.4
PVCC	Panska Ves	158.32	337	ePKPAB	PKPab	17 29 39.3	-1.4
PVCC				AMS	AMS	18 38 50.0	
IBBN	Ibbenburen	158.36	350	ePKPab	PKPab	17 29 39.0	-1.8
IBBN				epPKPab	pPKPab	17 29 50.1	-9.3
PRU	Pruhonice	158.79	336	ePKIKP	PKPdf	17 29 06.3	-0.4
PRU				e		17 29 42.1	
PRU	Pruhonice	158.79	336	ePKP	PKPdf	17 29 06.3	-0.4
PRU				e		17 29 42.1	
PRU				e		17 29 51.6	
PRU	Pruhonice	158.79	336	ePKPDF	PKPdf	17 29 06.3	-0.4
PRU				ePKPAB	PKPab	17 29 42.1	-0.6
PRU				ex	x	17 29 51.6	
PRU				AMS	AMS	18 38 40.0	
TREC	Trest	159.02	334	AMS	AMS	18 39 00.0	
TANN	Tannenbergstha	159.08	340	ePKPdf	PKPdf	17 29 05.3	-1.8
TANN				ePKPab	PKPab	17 29 42.3	-1.7
MOX	Moxa	159.11	342	eP	PKPab	17 29 42.0	-2.1
comp=Z,18nm,1.4s							
MOX				e		17 29 52.9	
MOX	Moxa	159.11	342	ePKPab	PKPab	17 29 41.8	-2.3
MOX				epPKPab	pPKPab	17 29 52.5	-10
ZST	Bratislava	159.23	330	ePKP2	PKPab	17 29 44.3	-0.4
ZST	Bratislava	159.23	330	ePKP	PKPab	17 29 44.3	-0.4
NKC	Novy Kostel	159.25	340	ePKP2	PKPab	17 29 43.4	-1.3
NKC	Novy Kostel	159.25	340	ePKPAB	PKPab	17 29 43.4	-1.3
NKC				ex	x	17 29 52.1	
UBBA	Unterbreizbach	159.35	345	ePKPab	PKPab	17 29 43.5	-1.6
ROTZ	Rotzenmuhle	159.73	340	ePKPab	PKPab	17 29 45.8	-1.0
KHC	Kasperske Hory	159.85	336	ePKIKP	PKPdf	17 29 07.1	-0.9
KHC				e		17 29 45.5	
KHC	Kasperske Hory	159.85	336	ePKP	PKPdf	17 29 07.1	-0.9
KHC				e		17 29 45.5	
KHC				e		17 29 56.4	
KHC	Kasperske Hory	159.85	336	ePKPDF	PKPdf	17 29 07.1	-0.9
KHC				ePKPAB	PKPab	17 29 45.5	-1.9
KHC				ex	x	17 29 56.4	
KHC				AMS	AMS	18 37 00.0	
CONA	Conrad Observa	159.97	331⇑	i PKPdf	PKPdf	17 29 05.9	-2.3
comp=Z,4.4nm,1.2s							
CONA	Conrad Observa	159.97	331	P	PKPab	17 29 46.1	-1.9
comp=Z,6.6nm,0.9s							
GEC2	GERESS Array S	160.05	336	ePKPdf	PKPdf	17 29 06.0	-2.2
GEC2				ePKPab	PKPab	17 29 46.5	-1.8
WET	Wettzell	160.07	338	ePKPab	PKPab	17 29 46.8	-1.5
WET				epPKPab	pPKPab	17 29 58.0	-8.9
GRF	Grafenberg Arr	160.08	341	ePKPdf	PKPdf	17 29 05.5	-2.7
GRF				ePKPab	PKPab	17 29 46.7	-1.7
GRF				epPKPab	pPKPab	17 29 57.3	-10
GRF				eL		18 31 29.2	
comp=Z,139nm,20.6s							
TNS	Taunus Mts	160.25	347	ePKPab	PKPab	17 29 47.5	-1.5
BCLA	Clavier	160.54	353	PKPab	PKPab	17 29 49.0	-1.3
GIVF	Givet	160.90	353	ePKP2	PKPab	17 29 49.7	-2.2
BAIF	Baives	161.00	355	ePKP2	PKPab	17 29 50.0	-2.3
WLF	Walferdange	161.17	351	PKPab	PKPab	17 29 51.7	-1.4
WLF	Walferdange	161.17	351	ePKPab	PKPab	17 29 51.7	-1.4
GROS	Grobnik	161.26	329	ePKPdf	PKPdf	17 29 07.7	-1.9
SOKA	Soboth	161.30	330	i PKPdf	PKPdf	17 29 08.0	-1.6
comp=Z,7.8nm,1.2s							
SOKA	Soboth	161.30	330	P	PKPab	17 29 51.5	-2.3
comp=Z,8.9nm,1.3s							
RJOB	Jochberg	161.31	336	ePKPab	PKPab	17 29 52.6	-1.2
FUR	Furstenfeldbru	161.44	339	ePKPab	PKPab	17 29 53.1	-1.2
STU	Stuttgart	161.45	344	ePKPab	PKPab	17 29 52.6	-1.8
KBA	Koelnbreinsper	161.66	334⇓	i PKPdf	PKPdf	17 29 07.9	-2.2
comp=Z,9.0nm,1.4s							
LJU	Ljubljana	162.01	329	ePKPdf	PKPdf	17 29 09.3	-1.1
BFO	Black Forest	162.07	345	ePKPab	PKPab	17 29 54.8	-2.2
BOJS	Bojanci	162.10	327	ePKPdf	PKPdf	17 29 09.5	-1.0
WTTA	Wattenberg	162.12	337⇑	i PKPdf	PKPdf	17 29 09.1	-1.4
comp=Z,9.4nm,1.4s							
CADS	Cadrg	162.20	331	ePKPdf	PKPdf	17 29 09.0	-1.6
CDF	Champ du Feu	162.20	347	ePKP2	PKPab	17 29 55.2	-2.4
ABTA	Abfaltersbach	162.25	334⇓	i PKPdf	PKPdf	17 29 08.7	-1.9
comp=Z,4.9nm,0.9s							
ABTA	Abfaltersbach	162.25	334	P	PKPab	17 29 56.3	-1.7
comp=Z,7.6nm,1.0s							
FLN	La Foliniere	162.34	4	ePKP2	PKPab	17 29 54.3	-3.9
ROSF	Rostrenen	162.45	11	ePKP2	PKPab	17 29 56.6	-2.1
comp=Z,49nm,1.3s							
FETA	Feichten	162.63	338⇓	i PKPdf	PKPdf	17 29 09.7	-1.3
comp=Z,7.2nm,1.3s							
FETA	Feichten	162.63	338	P	PKPab	17 29 56.0	-3.6
comp=Z,12nm,1.3s							
SGMF	Saint Gilles	162.63	9	ePKP2	PKPab	17 29 57.6	-1.9
comp=Z,76nm,1.2s							
GRR	Gorron	162.69	5	ePKP2	PKPab	17 29 57.7	-2.0
comp=Z,85nm,1.6s							
HAU	Haudompre	162.76	349	ePKP2	PKPab	17 29 57.6	-2.5
HINF	Hinteralfeld	162.85	348	ePKP2	PKPab	17 29 58.1	-2.4
QUIF	Quistinic	162.87	11	ePKP2	PKPab	17 29 58.5	-2.1
comp=Z,72nm,1.4s							
LOR	Lormes	163.80	354	ePKP2	PKPab	17 30 02.4	-2.3
SSF	Saint Saulge	164.03	355	ePKP2	PKPab	17 30 03.4	-2.3
comp=Z,32nm,1.0s							
CABF	La Chapelle	164.16	348	ePKP2	PKPab	17 30 03.9	-2.4
comp=Z,14nm,0.9s							
AVF	Avril sur Loir	164.31	355	ePKP2	PKPab	17 30 04.4	-2.5
comp=Z,29nm,1.2s							
SMF	Signal de Mont	164.42	354	ePKP2	PKPab	17 30 05.0	-2.4
comp=Z,61nm,1.2s							
MFF	Saint Martin d	164.51	4	ePKP2	PKPab	17 30 06.3	-1.5
comp=Z,24nm,1.0s							
TCF	Toulx Ste Croi	164.87	358	ePKP2	PKPab	17 30 07.0	-2.4
comp=Z,25nm,1.4s							
LPL	La Plagne	165.08	346	ePKP2	PKPab	17 30 09.0	-1.4
comp=Z,23nm,1.2s							
LPG	La Plagne	165.10	346	ePKP2	PKPab	17 30 09.2	-1.2
comp=Z,23nm,1.1s							
MBDF	Montbardon	165.82	345	ePKP2	PKPab	17 30 11.7	-2.0
ORIF	Oris-en-Rattie	165.83	347	ePKP2	PKPab	17 30 12.0	-1.7
comp=Z,10nm,0.8s							
RJF	Les Rejaudoux	165.86	360	ePKP2	PKPab	17 30 11.2	-2.6
VIVF	Saint-Julien-l	166.09	351	ePKP2	PKPab	17 30 12.9	-1.9
LFF	La Frestale	166.22	2	ePKP2	PKPab	17 30 14.1	-1.3
comp=Z,21nm,0.9s							
CAF	Calviac	166.24	358	ePKP2	PKPab	17 30 13.3	-2.1
comp=Z,19nm,1.3s							
SBF	Sospel	166.47	341	ePKP2	PKPab	17 30 13.9	-2.6
FRF	La Foret Royal	166.95	343	ePKP2	PKPab	17 30 16.3	-2.4
comp=Z,39nm,1.3s							
LASF	Ste Croix	166.96	352	ePKP2	PKPab	17 30 17.2	-1.5
comp=Z,8.2nm,1.0s							
LMR	La Mourre	167.20	343	ePKP2	PKPab	17 30 17.4	-2.4
comp=Z,45nm,1.3s							
MTLF	Montolieu	167.81	358	ePKP2	PKPab	17 30 20.5	-2.0
comp=Z,15nm,1.3s							
SJPF	Ste Jean	167.86	10	ePKP2	PKPab	17 30 20.7	-2.0
comp=Z,29nm,1.4s							
PCBR	Castelo Branco	168.66	38	ePKP	PKPdf	17 29 17.5	+1.3
MORF	Marmelete	169.59	51	ePKP	PKPdf	17 29 18.7	+1.9
PBEJ	Beja	169.67	46	ePKP	PKPdf	17 29 18.6	+1.7
PCVE	Castro Verde	169.80	48	ePKP	PKPdf	17 29 17.6	+0.6
PBAR	Barrancos	170.07	43	ePKP	PKPdf	17 29 18.4	+1.3
PBDV	Barranco-do-Ve	170.10	50	ePKP	PKPdf	17 29 18.8	+1.7
ESDC	Sonseca Array	170.39	26	PKP	PKPdf	17 29 17.7	+0.5
comp=Z,5.2nm,1.1s,baz=348,slow=3.2,SNR=15							
ESDC	Sonseca Array	170.39	26	PKP	PKPdf	17 29 17.7	+0.4
TAM	Tamanrasset	170.94	204	ePKIKP	PKPdf	17 29 18.0	0.0

IDC 16 17:22:18.5±8.1, 16°.81N×148°.16E, h33km±61km, mb3.9/14, mb1 4.1/15, mb1mx4.0/25, mbtmp3.9/15, ML3.9/1, Error ellipse: s-maj=29.1km s-min=16.2km az=82.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	4.51	225	Pn	Pn	17 23 24.4	-0.2
6.5nm,0.3s,baz=82,slow=22,SNR=9.4							
GUMO				Sn	Sn	17 24 14.3	-1.6
15nm,0.3s,baz=27,slow=21,SNR=8.9							
MJAR	Matsushiro Arr	21.54	338	P	P	17 27 05.7	+0.7
1.7nm,0.5s,baz=170,slow=8.8,SNR=6.8							
KSRS	Korea Array	27.22	323	P	P	17 27 59.1	-0.2
0.7nm,0.5s,baz=142,slow=8.6,SNR=4.8							
WRA	Warramunga Arr	38.97	201	P	P	17 29 41.5	-0.2
5.6nm,0.7s,baz=24,slow=9.1,SNR=47							
ASAR	Alice Springs	42.57	199	P	P	17 30 11.2	-0.2
1.2nm,0.6s,baz=24,slow=8.8,SNR=28							
SONM	Songino Array	46.07	321	P	P	17 30 39.9	+0.7
0.9nm,0.6s,baz=131,slow=8.1,SNR=6.6							
CMAR	Chiang Mai Arr	46.82	280	P	P	17 30 46.3	+0.8
1.9nm,0.8s,baz=73,slow=6.9,SNR=17							
ZALV	Zalesovo Beam	60.93	323	P	P	17 32 27.8	-0.2
4.1nm,0.8s,baz=100,slow=6.6,SNR=16							
MKAR	Makanchi Array	61.45	314	P	P	17 32 32.5	+0.8
1.0nm,0.4s,baz=93,slow=8.9,SNR=8.4							
BVAR	Borovoye Array	69.41	321	P	P	17 33 23.4	+0.3
7.3nm,0.8s,baz=88,slow=7.1,SNR=26							
AKTO	Aktyubinsk	77.32	319	P	P	17 34 08.6	-1.2
1.5nm,0.8s,baz=106,slow=5.5,SNR=3.3							
YKA	Yellowknife Ar	78.55	28	P	P	17 34 16.1	-0.2
0.6nm,0.7s,baz=289,slow=6.2,SNR=4.2							
NVAR	Mina Array Bea	82.44	52	P	P	17 34 37.8	0.0
0.9nm,0.9s,baz=257,slow=5.6,SNR=5.7							
ARCES	ARCESS Array B	84.99	343	P	P	17 34 49.2	-1.0
1.3nm,0.7s,baz=24,slow=6.9,SNR=3.6							
FINES	FINESS Array B	89.56	336	P	P	17 35 10.9	-1.5
1.5nm,0.6s,baz=86,slow=5.7,SNR=3.6							
DBIC	Dimbokro	144.56	309	PKP	PKPdf	17 41 51.0	-1.6
4.7nm,0.8s,baz=12,slow=0.9,SNR=3.3							
LPAZ	La Paz	145.24	94	PKPbc	PKPbc	17 41 55.2	+1.9
3.6nm,0.7s,baz=289,slow=2.1,SNR=20							

*BJI **16** 17:23:41.5, 16°.93N×148°.13E, h6km, mB4.9/26, mb4.8/45, Ms4.4/26, Ms7 4.3/27*
*ISCJB **16** 17:23:41.7±1.1, 16°.88N±0°.04×148°.01E±0°.02, h6km±6km, mb4.9/132, MS4.1/20, Error ellipse: s-maj=6.7km s-min=3.9km az=3.7*
*IDC **16** 17:23:41.8±0.4, 16°.86N×148°.12E, h0km, mb4.8/33, mb1 4.8/36, mb1mx4.8/37, mbtmp4.8/36, ML4.5/3, MS4.0/6, Ms1 4.0/6, ms1mx3.4/32, Error ellipse: s-maj=14.4km s-min=9.9km az=93.0*
*NEIC **16** 17:23:43.1±0.2, 16°.83N×148°.10E, h10km, mb4.9/57, Error ellipse: s-maj=5.4km s-min=4.4km az=134.0*
*MOS **16** 17:23:45.1±1.0, 16°.86N×148°.07E, h33km, mb5.2/35, Error ellipse: s-maj=9.4km s-min=5.8km az=110.1*
*GCMT **16** 17:23:48.2±0.3, 16°.80N×148°.28E, h17km±1km, MW5.0, Moment Tensor Solution. s21,c25; s72,c104; Moment tensor: Scale 10^{16}Nm; M_{rr}=4.33±.29; $M_{\theta\theta}$0.45±.16; $M_{\phi\phi}$3.88±.19; $M_{r\theta}$-0.43±.53; $M_{\theta\phi}$0.35±.11; $M_{\phi r}$0.48±.38; Best double couple: M_0=4.20000×10^{16} NP1:ϕ_s11.00000°, δ42.00000°, λ-82.00000°. NP2:ϕ_s180.00000°, δ48.00000°, λ-97.00000°. Principal axes: T 3.9400, Plg3.0000°, Azm275.0000°; N 0.4600, Plg6.0000°, Azm185.0000°; P -4.4000, Plg84.0000°, Azm34.0000°; Data Used: II IU IC G CN.*

ISC 16 17:23:45.4±1.2, 16°.85N±0°.04×148°.07E±0°.02, h21km±8km, h16km±2.0km: pP-P, n407, σ0.977/402, mb4.9/132, MS4.1/20, 92C-95D, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	4.48	224	Pn	Pn	17 24 52.8	+0.7
26nm,0.3s,baz=20,slow=21,SNR=4.4							
GUMO				Sn	Sn	17 25 38.5	-5.1
53nm,0.3s,baz=31,slow=22,SNR=7.9							
GUMO				LR	LR	17 26 19.5	
comp=Z,573nm,20.7s,baz=38,slow=35							
GUMO	Guam	4.48	224	P	Pn	17 24 52.9	+0.8
GUMO						17 25 38.5	
CBIJ	Chichi jima	11.57	333	Pn	Pn	17 26 28.3	-1.1
21nm,0.3s,baz=116,slow=23,SNR=11							
CBIJ				Sn	Sn	17 28 31.1	-6.9
31nm,0.3s,baz=298,slow=23,SNR=8.7							
JHJ	Hachijo jima 2	17.85	337	P	Pn	17 27 52.5	0.0
2.5nm,0.3s,baz=180,slow=15,SNR=3.0							
MJAR	Matsushiro Arr	21.48	338	P	P	17 28 31.5	-1.2
8.8nm,0.6s,mb4.2,baz=163,slow=9.2,SNR=16							
MJAR				S	S	17 32 26.0	-4.0
1.3nm,0.6s,baz=357,slow=15,SNR=3.9							
MAJO	Matsushiro	21.48	338	eP	P	17 28 32.4	-0.3
MAJO				pmax	pmax		
comp=Z,33nm,0.5s,mb4.9							
MAJO	Matsushiro	21.48	338	eP	P	17 28 32.4	-0.3
comp=Z,33nm,0.5s,mb4.9							
MAT	Matsushiro	21.48	338	P	P	17 28 32.2	-0.5
MAT				S	S	17 32 30.0	0.0
BUKP	Musuan	24.16	251	eP	P	17 29 05.2	+4.9
GQP	Guinayangan	24.88	267⇓	eP	P	17 29 14.7	+7.8
CAUP	Cauayan	25.11	274	eP	P	17 29 08.1	-1.0
ERM	Erimo	25.44	351	eP	P	17 29 11.1	-0.6
ERM				pmax	pmax		
comp=Z,19nm,0.8s,mb4.7							
ERM	Erimo	25.44	351	eP	P	17 29 11.1	-0.6
comp=Z,19nm,0.8s,mb4.7							
YULB	Yu-li	25.95	289	eP	P	17 29 16.0	-0.6
YHNB	Yeheng	26.12	292	eP	P	17 29 17.5	-0.6
comp=Z,70nm,0.8s,mb5.2							
SSLB	Suanglung	26.32	290	eP	P	17 29 20.1	+0.1
comp=Z,113nm,1.1s,mb5.3							
TPUB	Ta-pu	26.54	288	eP	P	17 29 20.1	-1.8
comp=Z,36nm,1.0s,mb4.8							
KSRS	Korea Array	27.14	323	P	P	17 29 26.7	-0.5
comp=Z,6.0nm,0.6s,mb4.3,baz=144,slow=8.3,SNR=28							
KSRS				PcP	PcP

comp=Z,930nm,15.3s,MS4.6
KLR Kul'dur 34.92 341 *e*P **P** **17 30 31.6 -4.0**
KAPI Kappang 35.43 235 LR LR 17 42 42.8
comp=Z,998nm,19.7s,MS4.6,baz=151,slow=32
BJT Baijiatuau 36.02 316 *e*P **P** **17 30 45.4 +0.2**
BJT pmax pmax
comp=Z,25nm,1.1s
BJT Baijiatuau 36.02 316 *e*P **P** **17 30 45.4 +0.2**
comp=Z,24nm,1.1s,mb5.0
BJI Beijing 36.03 316 P **P** **17 30 47.5 +2.2**
BJI S **S** **17 36 24.8 +1.7**
BJI pmax pmax
comp=Z,30nm,1.3s,mb5.1
BJI pmax pmax
comp=Z,74nm,3.5s
BJI LR LR
comp=N,240nm,19.1s,MS4.1
BJI LR LR
comp=E,260nm,21.5s,MS4.1
BJI LR LR
comp=Z,280nm,39.3s
QIZ Qiongzhong 36.39 279 P **P** **17 30 47.5 -1.1**
QIZ S **S** **17 36 28.4 -0.8**
CTA Charters Tower 36.75 183 P **P** **17 30 51.4 -0.2**
comp=Z,2.8nm,0.7s,mb4.2,baz=346,slow=12,SNR=2.6
PETK Petropavlovsk- 36.97 10 P **P** **17 30 53.5 +0.5**
comp=Z,2.5nm,0.7s,mb4.2,baz=168,slow=6.6,SNR=8.9
PETK PcP PcP 17 33 13.1 -0.9
comp=Z,3.8nm,0.7s,baz=156,slow=4.1,SNR=8.4
ENH Enshi 37.62 298 *e*P **P** **17 30 58.9 -0.1**
comp=Z,9.6nm,0.4s,mb4.9
WRAB Tennant Creek 38.96 201 *e*P **P** **17 31 09.6 -0.6**
WRAB pmax pmax
comp=Z,32nm,0.6s,mb5.2
WRAB Tennant Creek 38.96 201 *e*P **P** **17 31 09.6 -0.6**
comp=Z,32nm,0.6s,mb5.2
WRA Warramunga Arr 38.97 201 P **P** **17 31 09.7 -0.6**
comp=Z,33nm,0.6s,mb5.2,baz=24,slow=9.1,SNR=91
WRA PcP PcP 17 33 20.7 0.0
comp=Z,3.4nm,0.6s,baz=16,slow=3.4,SNR=8.8
HHC Hu-ho-hao-te 39.51 315 *e*P **P** **17 31 15.1 +0.5**
HHC sP sP 17 31 20.6 -3.1
HHC PP PP 17 32 49.6 +4.1
HHC PcP PcP 17 33 23.6 +1.5
HHC ScP ScP 17 37 10.4 +0.6
HHC PcS PcS 17 37 11.9 0.0
HHC S **S** **17 37 16.6 +0.7**
HHC sS sS 17 37 22.3 -4.2
HHC SS SS 17 40 04.1 -6.6
HHC ScS ScS 17 41 21.3 -0.6
HHC pmax pmax
comp=Z,27nm,0.7s,mb5.1
HHC pmax pmax
comp=Z,120nm,5.2s
HHC LR LR
comp=N,330nm,15.5s,MS4.4
HHC LR LR
comp=E,320nm,15.7s,MS4.4
HHC LR LR
comp=Z,310nm,15.4s,MS4.2
GYA Guiyang 39.51 291⇑ *i*P **P** **17 31 16.3 +1.4**
GYA pmax pmax
comp=Z,20nm,0.8s,mb4.9
HIA Hailar 39.66 331 *e*P **P** **17 31 15.7 -0.1**
HIA pmax pmax
comp=Z,16nm,0.7s
HIA Hailar 39.66 331 *e*P **P** **17 31 15.7 -0.1**
comp=Z,16nm,0.7s,mb4.9
KSM Kuching 40.17 252 *e*P **P** **17 31 19.6 -1.0**
comp=Z,13nm,0.5s,mb4.9
FITZ Fitzroy Crossi 41.15 213 P **P** **17 31 29.0 +0.5**
comp=Z,4.9nm,0.9s,mb4.2,baz=39,slow=9.8,SNR=10
FITZ PcP PcP 17 33 27.9 +0.2
comp=Z,6.1nm,0.7s,baz=135,slow=1.7,SNR=6.8
FITZ Fitzroy Crossi 41.15 213 *e*P **P** **17 31 28.4 -0.1**
comp=Z,7.8nm,1.0s,mb4.3
ASAR Alice Springs 42.58 199 P **P** **17 31 39.5 -0.5**
comp=Z,10.0nm,0.7s,mb4.7,baz=25,slow=8.4,SNR=76
ASAR PcP PcP 17 33 32.4 +0.1
comp=Z,3.5nm,0.7s,baz=24,slow=4.5,SNR=6.6
CD2 Chengdu 42.60 297 P **P** **17 31 40.9 +0.6**
CD2 pP pP 17 31 45.3 -1.4
CD2 sP sP 17 31 47.5 -1.8
CD2 PP PP 17 33 22.3 +3.1
CD2 S **S** **17 38 03.5 +1.4**
CD2 sS sS 17 38 10.4 -2.4
CD2 SS SS 17 41 06.9 -5.5
CD2 pmax pmax
comp=Z,20nm,0.6s,mb5.0
CD2 pmax pmax
comp=Z,110nm,6.5s
CD2 LR LR
comp=N,320nm,11.3s
CD2 LR LR
comp=Z,320nm,16.1s,MS4.3
DZM Mont Dzumac 42.66 154 *e*S **S** **17 38 01.2 -1.8**
comp=Z,109nm,28.6s
DZM *e*LR LR 17 43 31.9
comp=Z,301nm,29.9s
KMI Kunming 42.96 289 P **P** **17 31 44.8 +1.5**
KMI pP pP 17 31 47.8 -1.9
KMI sP sP 17 31 48.9 -3.4
KMI PP PP 17 33 26.6 +3.5
KMI S **S** **17 38 08.3 +0.7**
KMI SS SS 17 41 12.3 -7.4
KMI pmax pmax
comp=Z,11nm,1.7s,mb4.3
KMI pmax pmax
comp=Z,98nm,3.6s
KMI LR LR
comp=N,200nm,17.5s,MS4.3
KMI LR LR
comp=E,220nm,15.3s,MS4.3
KMI LR LR
comp=Z,260nm,17.5s,MS4.2
LZH Lanzhou 43.55 305 P **P** **17 31 48.8 +0.9**
LZH pP pP 17 31 52.5 -1.9
LZH sP sP 17 31 54.3 -2.7
LZH PP PP 17 33 32.0 +2.6
LZH *e*S **S** **17 38 17.0 +1.0**
LZH pmax pmax
comp=Z,23nm,1.0s,mb4.9
LZH pmax pmax
comp=Z,90nm,4.0s
LZH LR LR
comp=E,280nm,15.1s
LZH LR LR
comp=Z,520nm,16.4s,MS4.5
CLNS Chul'man 43.58 342 *e*P **P** **17 31 45.3 -2.5**
CLNS pmax pmax
comp=Z,13nm,0.9s,mb4.7
CLNS pmax pmax
comp=N,16nm,1.2s
CLNS pmax pmax
comp=E,6.0nm,0.8s
CLNS MLR MLR
comp=Z,140nm,16.0s,MS4.0
CLNS MLR MLR
comp=N,92nm,15.0s
CIT Chita 44.44 330 *e*P **P** **17 31 56.4 +1.6**
CIT *e* 17 32 06.9
CIT *e* 17 32 14.7
CIT pmax pmax
comp=Z,72nm,1.2s,mb5.3
ULN Ulaanbaatar 45.62 322 *e*P **P** **17 32 04.6 +0.4**
ULN pmax pmax
comp=Z,29nm,1.3s,mb5.0
ULN Ulaanbaatar 45.62 322 *e*P **P** **17 32 04.6 +0.4**
comp=Z,28nm,1.3s,mb5.0
NST Nakhon Sawan 45.95 276 P **P** **17 32 08.0 +0.7**
comp=Z,33nm,0.6s,mb5.4
SONM Songino Array 45.99 321 P **P** **17 32 07.8 +0.6**
comp=Z,12nm,0.6s,mb5.0,baz=135,slow=7.2,SNR=35
SONM PcP PcP 17 33 44.3 +0.7
comp=Z,2.1nm,0.6s,baz=149,slow=3.4,SNR=3.6
SEY Seymchan 46.13 3⇑ *i*P **P** **17 32 09.6 +1.6**
CHG Chiang Mai 46.70 280⇓P **P** **17 32 14.4 +1.3**
comp=Z,11nm,0.7s,mb4.9
CHTO Chiang Mai 46.70 280 *e*P **P** **17 32 14.0 +0.9**
CHTO pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
CHTO Chiang Mai 46.70 280 *e*P **P** **17 32 14.0 +0.9**
comp=Z,7.0nm,0.7s,mb4.7
CMAR Chiang Mai Arr 46.73 280 P **P** **17 32 14.7 +1.2**
comp=Z,15nm,0.8s,mb5.0,baz=73,slow=6.3,SNR=39
YAK Yakutsk 46.97 348 *e*P **P** **17 32 13.6 -1.0**
YAK pmax pmax
comp=Z,21nm,0.9s,mb5.1
YAK pmax pmax
comp=N,6.0nm,1.1s
YAK Yakutsk 46.97 348 *e*P **P** **17 32 14.3 -0.2**
comp=N,33nm,0.6s,mb5.4
GTA Gaotai 47.47 308⇑ *e*P **P** **17 32 20.0 +1.1**
GTA pP pP 17 32 24.5 -0.9
GTA sP sP 17 32 27.0 -0.9
GTA PcP PcP 17 33 51.4 +2.4
GTA PP PP 17 34 12.1 +1.9
GTA S **S** **17 39 16.5 +4.1**
GTA sS sS 17 39 24.0 +0.9
GTA pmax pmax
comp=Z,7.0nm,1.6s,mb4.3
GTA pmax pmax
comp=Z,85nm,7.2s
GTA LR LR
comp=N,280nm,19.2s,MS4.3
GTA LR LR
comp=E,170nm,18.6s,MS4.3
GTA LR LR
comp=Z,260nm,19.8s,MS4.2
STKA Stephens Creek 48.84 187 P **P** **17 32 28.6 -0.9**
comp=Z,3.6nm,0.7s,mb4.5,baz=18,slow=14,SNR=7.0
IRK Irkutsk 49.30 326 *e*P **P** **17 32 33.7 +0.9**
IRK *e* 17 32 43.8
IRK *e* 17 32 52.6
IRK pmax pmax
comp=Z,46nm,1.6s,mb5.3
TLY Talaya 49.37 325 *e*P **P** **17 32 35.0 +1.7**
TLY *e* 17 34 03.0
TLY *e*S **S** **17 39 28.3 -11**
TLY pmax pmax
comp=Z,12nm,0.8s,mb5.0
TLY MLR MLR
comp=Z,120nm,16.0s,MS4.0
PSI Prapat 50.24 259 P **P** **17 32 40.1 -0.4**
comp=Z,6.9nm,0.5s,mb4.9,baz=38,slow=9.3,SNR=8.0
BILL Bilibino 52.48 9*d i*P **P** **17 32 56.3 -0.2**
BILL *i* 17 33 08.9
BILL *e* 17 34 06.6
BILL *e* 17 34 58.6
BILL pmax pmax
comp=Z,19nm,1.2s,mb4.9
BILL MLR MLR
comp=Z,100nm,16.0s,MS4.0
BILL Bilibino 52.48 9 *e*P **P** **17 32 55.7 -0.7**
comp=Z,20nm,1.2s,mb4.9
SHL Shillong 52.78 290 *e*PKP **P** **17 33 00.0 +0.6**
SHL *ex* x 17 35 42.0
LSA Lhasa 53.37 295 *e*P **P** **17 33 05.7 +2.0**
LSA pmax pmax
comp=Z,39nm,0.6s,mb5.5
LSA Lhasa 53.37 295 *e*P **P** **17 33 05.7 +2.0**
comp=Z,39nm,0.6s,mb5.5
TIXI Tiksi 55.97 353 *e*P **P** **17 33 20.5 -1.3**
TIXI pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
TIXI Tiksi 55.97 353 *e*P **P** **17 33 21.1 -0.7**
comp=Z,12nm,1.0s,mb4.9
TAPN Taplejung 56.44 292 *e*P **P** **17 33 27.3 +1.3**
comp=Z,42nm,0.7s,mb5.6
ODAN Odare 56.75 291 *e*P **P** **17 33 29.0 +0.8**
comp=Z,53nm,0.6s,mb5.8
KRAR Krasnoyarsk 56.96 327⇑ *e*P **P** **17 33 28.6 -0.5**
KRAR pmax pmax
comp=Z,44nm,1.2s,mb5.4
WMQ Urumqi 57.23 312 P **P** **17 33 31.9 +0.7**
WMQ pP pP 17 33 36.5 -1.4
WMQ sP sP 17 33 38.9 -1.5
WMQ PcP PcP 17 34 26.1 +0.5
WMQ PP PP 17 35 40.5 +2.2
WMQ S **S** **17 41 25.3 -0.7**
WMQ sS sS 17 41 32.9 -4.0
WMQ ScS ScS 17 43 17.1 -2.5
WMQ SS SS 17 45 15.5 +0.4
WMQ pmax pmax
comp=Z,16nm,0.7s,mb5.2
WMQ pmax pmax
comp=Z,190nm,4.6s
WMQ LR LR
comp=N,180nm,25.0s,MS4.2
WMQ LR LR
comp=E,140nm,26.0s,MS4.2
WMQ LR LR
comp=Z,190nm,26.0s,MS4.1
RAMN Ramite 57.45 291 *e*P **P** **17 33 34.3 +1.2**
comp=Z,44nm,0.8s,mb5.6
NWAO Narrogin (SRO) 57.61 211 P **P** **17 33 34.1 +0.1**
comp=Z,5.2nm,0.6s,mb4.8,baz=11,slow=6.5,SNR=6.2
JIRN Jiri 57.77 292 *e*P **P** **17 33 37.0 +1.6**
comp=Z,105nm,0.6s,mb6.1
GUN Gumba 58.03 293 *e*P **P** **17 33 38.2 +1.0**
comp=Z,70nm,0.7s,mb5.8
BOK Bokaro 58.34 288 *e*PKP **P** **17 33 39.4 -0.1**
PKI Pulchoki 58.47 292 *e*P **P** **17 33 40.7 +0.4**
comp=Z,50nm,0.6s,mb5.7
PKI Pulchoki 58.47 292 *e*P **P** **17 33 41.2 +0.9**
PKIN Phulchoki 58.48 292 *e*P **P** **17 33 41.2 +0.9**
comp=Z,47nm,0.6s,mb5.7
KKN Kakani 58.57 293 *e*P **P** **17 33 41.9 +0.9**
comp=Z,43nm,0.7s,mb5.6
DMN Daman 58.73 292 *e*P **P** **17 33 42.8 +0.7**
comp=Z,53nm,0.6s,mb5.8
GKN Gorkha 59.12 293 *e*P **P** **17 33 45.8 +1.0**
comp=Z,165nm,1.0s,mb6.0
OHAK Old Harbor 59.15 33 *e*P **P** **17 33 42.4 -2.1**
KDAK Kodiak Island 59.68 32 P **P** **17 33 47.5 -0.6**
comp=Z,14nm,0.7s,mb5.1,baz=308,slow=7.8,SNR=9.3
KDAK Kodiak Island 59.68 32 *i* P **P** **17 33 47.7 -0.4**
KDAK Kodiak Island 59.68 32 *e*P **P** **17 33 47.9 -0.2**
comp=Z,14nm,0.8s,mb5.1
ZAA0 Zalesovo Array 60.85 323 *e*P **P** **17 33 55.7 -0.6**
ZALV Zalesovo Beam 60.85 323 P **P** **17 33 55.9 -0.3**
comp=Z,28nm,0.7s,mb5.5,baz=108,slow=7.7,SNR=60
ZALV PcP PcP 17 34 39.1 -0.7
comp=Z,12nm,0.6s,baz=115,slow=4.7,SNR=6.4
ZALV LR LR 18 00 11.7
comp=Z,83nm,20.3s,MS3.9,baz=169,slow=36
ZALV Zalesovo Beam 60.85 323 P **P** **17 33 55.9 -0.3**
ZALV 17 34 39.1
ZALV Zalesovo Beam 60.85 323 P **P** **17 33 55.9 -0.3**
ZALV PcP PcP 17 34 39.1 -0.7
ZALV LR LR 18 00 11.7
URZ Urewera 61.22 154 P **P** **17 33 57.3 -1.5**
comp=Z,4.7nm,0.8s,mb4.7,baz=337,slow=7.7,SNR=5.1
MK31 Makanchi Array 61.37 314 *e*P **P** **17 34 00.5 +0.6**
MKAR Makanchi Array 61.37 314 P **P** **17 34 00.3 +0.4**
comp=Z,13nm,0.6s,mb5.2,baz=89,slow=8.4,SNR=67
MKAR PcP PcP 17 34 41.4 -0.6
comp=Z,6.9nm,0.6s,baz=93,slow=5.4,SNR=6.4
PPLA Purkeypile 61.51 27 *e*P **P** **17 34 00.7 +0.2**
comp=Z,8.9nm,0.7s,mb5.0
VIS Vishakhapatnam 61.54 281 *e*PKP **P** **17 34 01.0 -0.5**
VIS AMb AMB 17 34 08.1
comp=Z,25nm,1.3s,mb5.2
NVS Novosibirsk 61.94 324⇓ *i*P **P** **17 34 03.0 -0.5**
NVS *e*S **S** **17 42 26.4 0.0**
NVS pmax pmax
comp=N,10.0nm,1.0s
NVS pmax pmax
comp=E,26nm,1.0s
NVS pmax pmax
comp=Z,31nm,1.0s,mb5.4
NVS smax
comp=N,18nm,2.1s
NVS smax
comp=E,4.0nm,1.6s
BPAW Bear Paw Mtn. 62.42 26 *e*P **P** **17 34 06.2 -0.4**
comp=E,13nm,0.8s,mb5.1
TRF Thorofare Moun 62.50 26 *e*P **P** **17 34 06.1 -1.1**
comp=E,12nm,0.9s,mb5.0
COLD Coldfoot 63.78 22 *e*P **P** **17 34 16.0 +0.4**
comp=E,6.1nm,0.4s,mb5.0
DIV Divide 63.91 30 *e*P **P** **17 34 16.4 -0.2**
comp=E,12nm,0.6s,mb5.1
KURK Kurchatov 64.15 319*d i*P **P** **17 34 18.0 -0.3**
KURK pmax pmax
comp=Z,60nm,1.2s,mb5.5
KURK Kurchatov 64.15 319 *e*P **P** **17 34 18.2 -0.1**
comp=Z,50nm,1.0s,mb5.5
BMRM Bremner River 64.44 30 *e*P **P** **17 34 19.1 -0.9**
comp=Z,7.5nm,0.8s,mb4.8
DDI Dehra Dun 64.68 296 *e*PKP **P** **17 34 23.0 +0.8**
NGP Nagpur 64.95 286 *e*PKP **P** **17 34 22.4 -1.8**
NGP AMb AMB 17 34 22.6
comp=Z,23nm,1.4s,mb5.0
KSH Kashi 65.78 306 P **P** **17 34 32.8 +3.6**
KSH pP pP 17 34 36.8 +0.9
KSH sP sP 17 34 39.8 +1.4
KSH PcP PcP 17 35 02.9 +2.7
KSH PP PP 17 37 00.8 +6.9
KSH ScP 17 39 03.4
KSH PcS 17 39 05.5
KSH S S 17 43 19.3 +4.6
KSH sS sS 17 43 26.3 +0.5
KSH ScS ScS 17 44 24.9 +0.8
KSH SS SS 17 47 36.5 +7.3
KSH pmax pmax
comp=Z,23nm,1.6s,mb5.0
KSH LR LR
comp=N,120nm,5.3s
KSH LR LR
comp=E,140nm,6.9s
KSH LR LR
comp=Z,150nm,5.8s
HYB Hyderabad 66.07 282 *e*P **P** **17 34 30.0 -1.4**
BHPL Bhopal 66.12 288 *e*PKP **P** **17 34 31.1 -0.5**
BHPL AMb AMB 17 34 34.6
comp=Z,9.6nm,0.9s,mb4.8
KZA Kyzart 66.24 309 P **P** **17 34 33.9 +1.8**
SNR=8.5
KBK Karagaybulak 66.45 310 P **P** **17 34 34.3 +0.9**
SNR=6.2
EGAK Eagle 66.71 26 *e*P **P** **17 34 33.3 -1.4**
comp=Z,9.1nm,0.7s,mb4.9
USP Ospenovka 66.76 310 P **P** **17 34 35.9 +0.6**
SNR=6.5
AAK Ala-Archa 66.79 310 P **P** **17 34 36.2 +0.6**
comp=Z,1.4nm,0.4s,mb4.4,baz=223,slow=0.3,SNR=3.6
AAK Ala-Archa 66.79 310⇑ *i*P **P** **17 34 36.9 +1.4**
AAK pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
UCH Uchtor 66.79 309 P **P** **17 34 37.4 +1.8**
SNR=14
UCH Uchtor 66.79 309 *e*P **P** **17 34 37.0 +1.4**
UCH pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
UCH Uchtor 66.79 309 *e*P **P** **17 34 37.0 +1.5**
comp=Z,7.5nm,0.8s,mb4.8
AKL Akola 66.91 286 *e*PKP **P** **17 34 35.0 -1.7**
DAWY Dawson 67.35 27 *e*P **P** **17 34 38.5 -0.3**
AML Almayashu 67.40 309 P **P** **17 34 41.1 +1.6**
SNR=5.5
AML Almayashu 67.40 309 *e*P **P** **17 34 40.8 +1.4**
AML pmax pmax
comp=Z,13nm,1.0s,mb4.9
AML Almayashu 67.40 309 *e*P **P** **17 34 40.8 +1.4**
comp=Z,13nm,1.0s,mb4.9
SKAG Skagway 68.84 32 *e*P **P** **17 34 48.6 +0.5**
comp=Z,6.7nm,0.6s,mb4.8
VOSK Vostochnaya 68.98 321 P **P** **17 34 48.2 -0.9**
VOSK pmax pmax
comp=Z,30nm,1.4s,mb5.0
BVAR Borovoye Array 69.33 321 P **P** **17 34 51.4 +0.1**
comp=Z,48nm,0.6s,mb5.6,baz=90,slow=7.5,SNR=112
BRVK Borovoye 69.40 321 *e*P **P** **17 34 51.5 -0.2**
BRVK pmax pmax
comp=Z,42nm,0.8s,mb5.4
BRVK Borovoye 69.40 321 *e*P **P** **17 34 51.5 -0.3**
comp=Z,42nm,0.8s,mb5.4
KK31 Karatay Array 69.69 310 P **P** **17 34 53.6 -0.1**
KK31 pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
ZRNK Zerenda 70.17 321 P **P** **17 34 55.6 -0.9**
ZRNK pmax pmax
comp=Z,33nm,0.7s,mb5.4
KAD Karad 70.18 283 *e*PKP **P** **17 34 55.0 -2.2**
KAD AMb AMB 17 35 07.4
comp=Z,26nm,1.5s,mb4.9
INK Inuvik 70.19 23 P **P** **17 34 55.9 -0.4**
comp=Z,3.9nm,0.5s,mb4.6,baz=273,slow=7.1,SNR=20
INK LR LR 18 08 10.7
comp=Z,68nm,18.9s,MS3.9,baz=240,slow=38
INK Inuvik 70.19 23 *e*P **P** **17 34 55.3 -1.0**
INK pmax pmax
comp=Z,4.0nm,0.5s
INK Inuvik 70.19 23 *e*P **P** **17 34 55.3 -1.1**
comp=Z,3.7nm,0.5s,mb4.6
PPT Papeete 70.27 116 *e*S S 17 44 04.4 -4.5
comp=Z,504nm,28.0s
PPT *e*LR LR 17 56 17.2
comp=Z,361nm,24.8s,baz=291
DLBC Dease Lake 71.58 33 *e*P **P** **17 35 05.2 +0.3**
KBL Kabul 71.76 301 *e*P **P** **17 35 06.8 +0.3**
KBL pmax pmax
comp=Z,21nm,1.0s,mb5.0
KBL Kabul 71.76 301 *e*P **P** **17 35 06.8 +0.3**
comp=Z,21nm,1.0s,mb5.0
TBI Tubuai 72.94 122 *e*S S 17 44 36.8 -2.8
comp=Z,135nm,31.8s
TBI *e*LR LR 17 57 31.6
comp=Z,116nm,26.0s
ARU Arti 75.88 325*d i*P **P** **17 35 29.9 -0.3**
ARU *e* 17 38 15.8
ARU S S 17 45 10.8 -0.6
ARU SS SS 17 50 01.1 -2.2
ARU pmax pmax
comp=Z,25nm,0.7s,mb5.2
ARU Arti 75.88 325 *e*P **P** **17 35 29.7 -0.5**
comp=Z,12nm,1.7s,mb4.5
AB31 Akbulak array 76.23 318 *i* P **P** **17 35 31.9 -0.5**
AB31 pmax pmax
comp=Z,11nm,0.6s,mb5.0
ABKAR Akbulak array 76.23 318 *e*P **P** **17 35 31.6 -0.7**
comp=Z,9.3nm,0.6s,mb4.9
AKTK Aktyubinsk 77.24 319 P **P** **17 35 37.8 -0.3**
AKTO Aktyubinsk 77.24 319 P **P** **17 35 37.8 -0.3**
comp=Z,10nm,0.6s,mb4.9,baz=88,slow=7.5,SNR=34
HUMO Hull Mountain 78.06 49 *e*P **P** **17 35 42.5 -0.2**
comp=Z,4.3nm,0.6s,mb4.6
YBH Yreka Blue Hor 78.42 50 P **P** **17 35 45.2 +0.5**
comp=Z,4.8nm,0.6s,mb4.6,baz=338,slow=2.9,SNR=16
YBH Yreka Blue Hor 78.42 50 *e*P **P** **17 35 45.5 +0.7**
YBH pmax pmax
comp=Z,5.0nm,0.6s
YBH Yreka Blue Hor 78.42 50 *e*P **P** **17 35 45.5 +0.7**
comp=Z,5.1nm,0.6s,mb4.6
YKA Yellowknife Ar 78.56 28 P **P** **17 35 44.3 -0.8**
comp=Z,6.6nm,0.6s,mb4.7,baz=284,slow=5.6,SNR=39
G06A Carlson Farm, 79.13 46⇓P **P** **17 35 48.3 -0.4**
baz=79
B08A Colville Reser 79.30 43⇑P **P** **17 35 49.3 -0.2**
baz=79
K05A Summer Lake 79.52 49⇑P **P** **17 35 51.1 +0.3**
baz=79
G08A Pilot Rock 80.27 46⇓P **P** **17 35 54.4 -0.4**
baz=80
E09A Wood Farm, Sta 80.52 44⇓P **P** **17 35 55.9 -0.2**
baz=80
NEW Newport 80.75 42 *e*P **P** **17 35 56.7 -0.7**
NEW pmax pmax
comp=Z,4.0nm,0.7s
NEW Newport 80.75 42 *e*P **P** **17 35 56.7 -0.6**
comp=Z,4.4nm,0.7s,mb4.5
WVOR Wild Horse Val 81.20 48 *e*P **P** **17 35 59.7 -0.2**
WVOR pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
WVOR Wild Horse Val 81.20 48 *e*P **P** **17 35 59.7 -0.2**
comp=Z,2.8nm,0.7s,mb4.3
C11A Tepee Creek (N 81.43 43⇓P **P** **17 36 00.3 -0.7**
baz=81
G10A Bishop Farm, J 81.53 45⇓P **P** **17 36 01.2 -0.3**
baz=81
SMMC Simmler 81.99 56⇑P **P** **17 36 04.5 +0.3**
baz=82
E12A Beaver Dam Sad 82.27 44⇓P **P** **17 36 05.2 -0.2**
baz=82
K10A MacKenzie Ranc 82.37 48⇓P **P** **17 36 05.9 -0.2**
baz=82
BSMT Bassoo Peak 82.37 42 *e*P **P** **17 36 04.7 -1.2**
comp=Z,2.9nm,0.7s,mb4.3
B13A Whitefish 82.43 42⇑P **P** **17 36 06.3 +0.1**
baz=82
NVAR Mina Array Bea 82.49 52 P **P** **17 36 07.0 +0.3**
comp=Z,2.5nm,0.7s,mb4.2,baz=267,slow=5.9,SNR=10
C13A Hot Springs 82.56 43⇓P **P** **17 36 06.6 -0.3**
baz=82
G12A Big Creek, Yel 82.79 45⇓P **P** **17 36 07.7 -0.5**
baz=83
L10A Juniper Basin 82.85 48⇑P **P** **17 36 08.6 0.0**

	baz=83							
A14A	Double T Ranch	82.92	41	⇑P		P	17 36 08.8	0.0
	baz=83							
MFID	Camas Ranch	82.93	47	⇓P		P	17 36 09.1	+0.1
	baz=83							
LVZ	Lovozero	82.96	340	⇓	eP	P	17 36 07.3	-1.3
LVZ					pmax	pmax		
	comp=Z,45nm,2.5s,mb5.1							
K11A	Parker Ranch,	82.97	48	⇑P		P	17 36 09.0	-0.1
	baz=83							
C14A	Swan Lake	83.07	42	⇓P		P	17 36 08.9	-0.7
	baz=83							
E13A	Victor	83.17	44	⇓P		P	17 36 09.8	-0.3
	baz=83							
B14A	Marquette Ranc	83.19	42	⇓P		P	17 36 10.6	+0.4
	baz=83							
F13A	Darby	83.27	44	⇓P		P	17 36 09.9	-0.7
	baz=83							
H12A	Diamond D Ranc	83.28	46	⇓P		P	17 36 10.7	0.0
	baz=83							
L11A	Cat Creek Ranc	83.33	48	⇑P		P	17 36 10.9	-0.2
	baz=83							
J12A	Stokes Ranch,	83.49	47	⇓P		P	17 36 11.7	-0.1
	baz=83,SNR=6.0							
P10A	Eureka	83.54	51	⇓P		P	17 36 12.0	-0.2
	baz=83							
G13A	Cobalt	83.54	45	⇑P		P	17 36 11.5	-0.5
	baz=83,SNR=7.8							
GRAC	Grapevine Rang	83.59	53	⇓P		P	17 36 11.9	-0.6
	baz=84							
B15A	Bradely Ranch,	83.66	42	⇑P		P	17 36 12.0	-0.6
	baz=84							
H13A	Challis	83.68	45	⇑P		P	17 36 12.8	0.0
	baz=84							
EDW2	Edwards Air Fo	83.69	56	⇓P		P	17 36 13.2	+0.2
	baz=84							
MPMC	Manual Prospec	83.76	54	⇑P		P	17 36 13.6	+0.2
	baz=84							
LRMC	Laurel Mountai	83.76	55	⇑P		P	17 36 13.3	-0.1
	baz=84							
C15A	Salmond Ranch,	83.80	42	⇑P		P	17 36 12.9	-0.4
	baz=84							
K12A	Draper Farm, C	83.80	47	⇑P		P	17 36 13.2	-0.3
	baz=84							
L12A	House Creek Ra	83.87	48	⇓P		P	17 36 13.6	-0.2
	baz=84,SNR=6.5							
HLID	Hailey	83.87	46	⇓P		P	17 36 13.8	0.0
	baz=84							
HLID	Hailey	83.87	46	eP		P	17 36 13.9	+0.2
	comp=Z,3.3nm,1.0s,mb4.4							
S10A	Tonopah Range,	83.92	52	⇓P		P	17 36 14.1	0.0
	baz=84,SNR=7.2							
I13A	Wildhorse Cree	83.97	46	⇑P		P	17 36 14.3	0.0
	baz=84							
O11A	Cowboy Ranch,	83.99	50	⇑P		P	17 36 14.3	-0.1
	baz=84							
J13A	Cove Ranch, Pi	84.09	47	⇓P		P	17 36 14.8	-0.1
	baz=84							
M12A	Wells	84.15	49	⇓P		P	17 36 15.1	-0.1
	baz=84							
B16A	M & M Farms, S	84.17	41	⇑P		P	17 36 14.9	-0.3
	baz=84							
E15A	Deer Lodge	84.20	43	⇓P		P	17 36 15.1	-0.3
	baz=84							
N12A	Clover Valley,	84.23	49	⇓P		P	17 36 15.8	+0.1
	baz=84							
N12A	Clover Valley,	84.23	49	eP		P	17 36 16.1	+0.5
	comp=Z,1.9nm,0.5s,mb4.5							
H14A	Leadore	84.27	45	⇑P		P	17 36 15.9	+0.1
	baz=84,SNR=10							
Q11A	Duckwater	84.36	51	⇓P		P	17 36 16.7	+0.3
	baz=84							
KEV	Kevo	84.38	343	eP		P	17 36 14.8	-1.0
KEV					pmax	pmax		
	comp=Z,12nm,0.6s,mb5.2							
KEV	Kevo	84.38	343	eP		P	17 36 14.8	-1.0
	comp=Z,12nm,0.6s,mb5.2							
KEV	Kevo	84.38	343	ep		P	17 36 14.8	-1.0
	comp=Z,12nm,0.6s,mb5.2							
F15A	Butte	84.48	44	⇓P		P	17 36 16.6	-0.2
	baz=84							
GSC	Goldstone	84.50	55	⇑P		P	17 36 16.8	-0.3
	baz=84							
MCMT	McKenzie Canyo	84.56	45	eP		P	17 36 17.5	+0.3
	comp=Z,1.4nm,0.9s,mb4.1							
R11A	Troy Canyon, C	84.56	52	⇑P		P	17 36 17.5	+0.1
	baz=84,SNR=7.3							
J14A	Carey	84.57	46	⇑P		P	17 36 17.6	+0.3
	baz=84,SNR=7.2							
O12A	Currie	84.62	50	⇓P		P	17 36 17.5	-0.2
	baz=84,SNR=5.4							
L13A	Double Diamond	84.64	48	⇓P		P	17 36 18.0	+0.2
	baz=84							
G15A	Dillon	84.69	44	⇑P		P	17 36 17.9	0.0
	baz=85							
M13A	Montello	84.71	49	eP		P	17 36 18.1	0.0
	comp=Z,3.9nm,0.7s,mb4.7							
P12A	McGill	84.73	50	⇑P		P	17 36 18.7	+0.4
	baz=85							
B17A	L&G Farms, Che	84.78	41	⇓P		P	17 36 18.5	+0.2
	baz=85							
E16A	East Helena	84.80	43	⇓P		P	17 36 18.5	+0.1
	baz=85							
Q12A	Willow Creek R	84.92	51	⇑P		P	17 36 19.1	-0.1
	baz=85							
ARCES	ARCESS Array B	84.93	343	P		P	17 36 18.3	-0.3
	comp=Z,13nm,0.6s,mb5.2,baz=76,slow=6.6,SNR=45							
C17A	Wharram Farm,	85.02	42	⇓P		P	17 36 18.4	-1.1
	baz=85							
RKT	Rikitea	85.03	116	eLR		LR	18 03 07.9	
	comp=Z,292nm,30.5s,baz=304							
BOZ	Bozeman (W)	85.11	44	⇓P		P	17 36 19.6	-0.4
	baz=85							
BOZ	Bozeman (W)	85.11	44	eP		P	17 36 20.0	0.0
BOZ					pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.3							
BOZ	Bozeman (W)	85.11	44	eP		P	17 36 20.0	-0.1
	comp=Z,2.2nm,0.8s,mb4.3							
G16A	Moss Hill, Enn	85.13	44	⇓P		P	17 36 20.3	+0.2
	baz=85							
TUQ	Turquoise Moun	85.16	55	⇑P		P	17 36 20.2	-0.2
	baz=85							
A18A	Metzger Ranch,	85.17	40	⇑P		P	17 36 20.2	0.0
	baz=85							
D17A	Six Diamond Ra	85.23	42	⇓P		P	17 36 20.2	-0.4
	baz=85							
M14A	Sheep Mountain	85.25	48	⇓P		P	17 36 20.4	-0.3
	baz=85							
PFO	Pinyon Flat Ob	85.27	56	⇑P		P	17 36 21.8	+0.8
	baz=85							
J15A	Blackfoot	85.29	46	⇑P		P	17 36 21.4	+0.4
	baz=85,SNR=6.1							
R12A	Pony Springs,	85.30	52	⇑P		P	17 36 21.4	+0.3
	baz=85							
E17A	Martinsdale	85.35	43	⇑P		P	17 36 20.7	-0.5
	baz=85							
B18A	Beardsley Farm	85.39	41	⇑P		P	17 36 21.4	0.0
	baz=85							
P13A	Bates Ranch, G	85.40	50	⇓P		P	17 36 21.5	0.0
	baz=85							
K15A	Arbon	85.45	47	⇓P		P	17 36 21.9	+0.1
	baz=85							
MONP	Monument Peak	85.51	57	⇑P		P	17 36 22.2	0.0
	baz=85							
BELC	Belle Mtn. Jos	85.52	56	⇑P		P	17 36 21.8	-0.5
	baz=85							
EGMT	Eagleton	85.53	41	⇓P		P	17 36 21.8	-0.2
	baz=85							
GMRC	Granite Mounta	85.56	55	⇑P		P	17 36 21.9	-0.5
	baz=85							
R13A	O'Grain Ranch,	85.83	51	⇑P		P	17 36 23.9	+0.2
	baz=86							
J16A	Bone	85.90	46	⇓P		P	17 36 24.4	+0.4
	baz=86							
V12A	Nelson	85.90	54	⇓P		P	17 36 23.9	-0.3
	baz=86							
E18A	Harlowton	85.93	43	⇓P		P	17 36 23.9	-0.2
	baz=86,SNR=8.1							
DUG	Dugway	86.05	49	⇓P		P	17 36 24.6	-0.2
	baz=86							
P14A	Drum Mountains	86.05	50	⇓P		P	17 36 24.9	+0.1
	baz=86							
BC3	Big Chuckawall	86.06	56	⇑P		P	17 36 25.2	+0.2
	baz=86							
Q14A	Sevier Lake (B	86.09	51	⇑P		P	17 36 25.3	+0.3
	baz=86							
S13A	Holt Ranch, En	86.09	52	⇓P		P	17 36 25.0	-0.1
	baz=86							
IRM	Iron Mountain	86.14	56	⇑P		P	17 36 25.8	+0.4
	baz=86							
IMW	Indian Meadow	86.16	45	eP		P	17 36 26.2	+0.9
	comp=Z,15nm,1.3s,mb5.1							
F18A	Big Timber	86.29	43	⇑P		P	17 36 25.7	-0.1
	baz=86,SNR=7.2							
ARUT	Antelope Range	86.34	52	eP		P	17 36 26.9	+0.6
ARUT					pmax	pmax		
	comp=Z,15nm,1.4s,mb5.0							
ARUT	Antelope Range	86.34	52	eP		P	17 36 26.9	+0.6
	comp=Z,15nm,1.4s,mb5.0							
GCMT	Greycliff	86.36	43	eP		P	17 36 26.1	-0.1
	comp=Z,3.2nm,0.8s,mb4.6							
U13A	Pakoon Wash	86.38	53	⇑P		P	17 36 26.8	+0.3
	baz=86							
G18A	Lazy EL Ranch,	86.59	44	⇓P		P	17 36 27.8	+0.4
	baz=86							
JOF	Joensuu	86.63	336	eP		P	17 36 25.0	-2.2
JOF	Joensuu	86.63	336	ep		P	17 36 25.0	-2.2
	comp=Z,9.1nm,0.6s,mb5.2							
P15A	Leamington	86.64	50	⇑P		P	17 36 27.4	-0.2
	baz=86							
RLMT	Red Lodge	86.86	44	⇑P		P	17 36 29.6	+0.9
	baz=87							
RLMT	Red Lodge	86.86	44	eP		P	17 36 29.5	+0.9
	comp=Z,7.4nm,0.8s,mb5.0							
PDMCI	Parker Dam,Lak	86.90	55	⇓P		P	17 36 29.5	+0.4
	baz=87							
U14A	Mt Trumbull	86.97	53	⇑P		P	17 36 30.1	+0.7
	baz=87							
J18A	Kendall Valley	87.02	46	⇓P		P	17 36 29.7	+0.2
	baz=87							
X13A	Yucca	87.05	55	⇑P		P	17 36 29.7	-0.1
	baz=87							
MSU	Marysvale	87.06	51	eP		P	17 36 30.1	+0.3
MSU					pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.6							
MSU	Marysvale	87.06	51	eP		P	17 36 30.1	+0.3
	comp=Z,4.1nm,1.1s,mb4.6							
M17A	Scullys Gap (B	87.16	48	⇑P		P	17 36 29.4	-0.8
	baz=87							
N17A	Moffit Pass	87.22	48	⇑P		P	17 36 30.2	-0.3
	baz=87							
V14A	Boquillas Ranc	87.28	54	⇓P		P	17 36 31.2	+0.3
	baz=87,SNR=8.4							
FFC	Flin Flon	87.42	33	i P		P	17 36 30.8	-0.4
FFC	Flin Flon	87.42	33	eP		P	17 36 30.3	-0.9
	comp=Z,8.9nm,1.0s,mb5.0							
W14A	Seligman	87.43	54	⇑P		P	17 36 32.0	+0.3
	baz=87							
PDAR	Pinedale Array	87.49	46	P		P	17 36 31.8	0.0
	comp=Z,1.1nm,0.5s,mb4.3,baz=276,slow=2.8,SNR=8.3							
TMUT	Trail Mountain	87.51	50	eP		P	17 36 31.8	-0.2
	comp=Z,3.2nm,0.8s,mb4.6							
O17A	Robinson Place	87.55	49	⇓P		P	17 36 32.3	+0.2
	baz=87							
Z13A	Yuma Proving G	87.62	56	⇓P		P	17 36 33.4	+0.8
	baz=88							
R16A	Teasdale	87.64	51	⇓P		P	17 36 33.2	+0.6
	baz=88							
U15A	North Rim	87.65	53	⇑P		P	17 36 32.8	+0.1
	baz=88,SNR=8.8							
Q16A	Castle Valley	87.66	50	⇑P		P	17 36 33.2	+0.5
	baz=88							
113A	Mohawk Valley,	87.67	57	⇓P		P	17 36 33.7	+0.8
	baz=88							
S16A	Weppner Ranch,	87.75	51	⇓P		P	17 36 33.6	+0.5
	baz=88							
L19A	Farson	87.86	47	⇑P		P	17 36 33.4	-0.2
	baz=88							
Y14A	Wickenburg	87.90	55	⇑P		P	17 36 34.5	+0.5
	baz=88							
V15A	Kaibab Nationa	87.94	53	⇓P		P	17 36 34.5	+0.4
	baz=88,SNR=5.7							
K19A	Absolon Red Bu	87.96	46	⇑P		P	17 36 33.2	-0.8
	baz=88							
N18A	Larsen Ranch,	88.04	48	⇑P		P	17 36 34.5	+0.1
	baz=88							
OBN	Obninsk	88.05	328	eP		P	17 36 32.9	-1.3
OBN				eS		S	17 47 06.9	-10
OBN					pmax	pmax		
	comp=Z,19nm,1.6s,mb5.1							
SRU	San Rafael	88.07	50	⇓P		P	17 36 34.1	-0.5
	baz=88							
SRU	San Rafael	88.07	50	eP		P	17 36 34.4	-0.2
SRU					pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.8							
SRU	San Rafael	88.07	50	eP		P	17 36 34.4	-0.3
	comp=Z,4.1nm,0.6s,mb4.8							
R17A	Hanksville Air	88.17	50	⇑P		P	17 36 34.6	-0.5
	baz=88							
X15A	Humboldt	88.33	55	⇓P		P	17 36 36.3	+0.4
	baz=88							
VSR	Storozhevoye	88.35	323	eP		P	17 36 33.9	-1.8
VSR					pmax	pmax		
	comp=E,6.0nm,0.7s							
VSR					pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.2							
VSR					pmax	pmax		
	comp=N,2.0nm,0.3s							
K20A	Yellowstone Ra	88.37	46	⇓P		P	17 36 36.0	+0.1
	baz=88							
Y15A	Casa Rosa Ranc	88.43	55	⇓P		P	17 36 36.8	+0.4
	baz=88							
T17A	Navajo Res., N	88.59	52	⇑P		P	17 36 37.4	+0.2
	baz=88							
WUAZ	Wupatki	88.65	53	⇑P		P	17 36 37.7	+0.3
	baz=88,SNR=5.8							
WUAZ	Wupatki	88.65	53	eP		P	17 36 38.2	+0.7
	comp=N,8.7nm,0.9s,mb5.1							
214A	Organ Pipe Nat	88.70	57	⇓P		P	17 36 38.4	+0.7
	baz=89							
ZEI	Tsey	88.73	314	eP		P	17 36 36.0	-1.7
ZEI					pmax	pmax		
	comp=Z,15nm,0.5s,mb5.6							
R18A	Canyonlands Na	88.78	50	⇓P		P	17 36 37.4	-0.7
	baz=89							
U17A	Shonto	88.83	52	⇓P		P	17 36 38.6	+0.3
	baz=89							
M20A	Sweetwater, Wa	88.90	47	⇑P		P	17 36 38.7	+0.2
	baz=89							
P19A	Cripple Cowboy	89.01	49	⇑P		P	17 36 38.9	-0.1
	baz=89,SNR=8.4							
KAF	Kangasniemi	89.02	336	eP		P	17 36 36.6	-2.0
KAF					pmax	pmax		
	comp=Z,8.0nm,1.0s,mb5.0							
KAF	Kangasniemi	89.02	336	eP		P	17 36 36.6	-2.0
	comp=Z,7.8nm,1.0s,mb5.0							
KAF	Kangasniemi	89.02	336	ep		P	17 36 36.6	-2.0
	comp=Z,7.8nm,1.0s,mb5.0,baz=66,slow=4.8							
V17A	Tonalea, Kykot	89.06	53	⇓P		P	17 36 39.7	+0.3
	baz=89,SNR=7.8							
N20A	Spence Gulch,	89.09	48	⇓P		P	17 36 39.1	-0.3
	baz=89							
GNI	Garni	89.10	312	⇑eP		P	17 36 40.3	+0.8
GNI					pmax	pmax		
	comp=Z,20nm,1.7s							
KIV	Kislovodsk	89.10	316	eP		P	17 36 36.7	-2.7
KIV					pmax	pmax		
	comp=Z,9.0nm,0.9s,mb5.1							
Y16A	Circle Bar Ran	89.12	55	⇓P		P	17 36 40.3	+0.6
	baz=89							
T18A	Mexican Hat	89.24	51	⇑P		P	17 36 40.1	-0.1
	baz=89							
FCC	Fort Churchill	89.27	27	eP		P	17 36 39.0	-0.8
	comp=Z,0.1nm,0.6s							
L21A	Rawlins	89.29	46	⇑P		P	17 36 40.6	+0.2
	baz=89							
116A	Eloy	89.38	56	⇑P		P	17 36 42.1	+1.1
	baz=89							
M21A	Separation Pea	89.43	47	⇓P		P	17 36 40.9	-0.1
	baz=89							
U18A	Rough Rock, Ch	89.49	52	⇑P		P	17 36 42.0	+0.7
	baz=89							
FINES	FINESS Array B	89.50	336	P		P	17 36 39.3	-1.6
	comp=Z,9.9nm,0.6s,mb5.4,baz=68,slow=4.5,SNR=39							
S19A	Harvey Farm, M	89.57	51	⇑P		P	17 36 41.5	-0.3
	baz=89							
N21A	Black Mountain	89.64	47	⇓P		P	17 36 42.5	+0.5
	baz=90							
Y17A	Roosevelt	89.68	55	⇓P		P	17 36 42.8	+0.4
	baz=90							
V18A	Ganado	89.69	53	⇓P		P	17 36 42.4	+0.1
	baz=90							
Q20A	Ridgley Place,	89.75	49	⇑P		P	17 36 42.5	-0.1
	baz=90,SNR=7.8							
216A	Three Points,	89.77	57	⇑P		P	17 36 43.6	+0.8
	baz=90							
L22A	Ellis Ranch, M	89.91	46	⇑P		P	17 36 43.2	0.0
	baz=90							
T19A	Beclabito	89.98	51	⇓P		P	17 36 44.3	+0.6
	baz=90							
Y18A	Canyon Day Jun	90.29	55	⇑P		P	17 36 45.6	+0.5
	baz=90							
217A	Green Valley	90.36	57	⇓P		P	17 36 46.4	+0.8
	baz=90							
R21A	Cimarron	90.51	50	⇑P		P	17 36 46.4	+0.3
	baz=90							
O22A	Kremmling	90.55	48	⇓P		P	17 36 46.5	+0.3
	baz=90							
S21A	Coal Bank Pass	90.59	50	⇓P		P	17 36 47.0	+0.5
	baz=90							
N23A	Red Feather La	90.69	47	⇑P		P	17 36 47.2	+0.3
	baz=90							
118A	Homack Ranch,	90.73	56	⇓P		P	17 36 47.4	+0.1
	baz=91							
Q22A	Crested Butte,	90.79	49	⇓P		P	17 36 48.1	+0.7
	baz=91							
Y19A	Nutrioso	90.83	54	⇓P		P	17 36 48.6	+0.9
	baz=91							
218A	Dragoon	90.90	56	⇑P		P	17 36 48.8	+0.7
	baz=91							
W20A	Ramah	90.99	53	⇑P		P	17 36 48.5	0.0
	baz=91							
318A	Bisbee	91.14	57	⇑P		P	17 36 49.9	+0.7
	baz=91							
119A	Ashpeak Ranch,	91.22	55	⇓P		P	17 36 50.4	+0.9
	baz=91							
S22A	4UR Ranch, Cre	91.27	50	⇑P		P	17 36 50.0	+0.4
	baz=91							
219A	White Tail Can	91.52	56	⇓P		P	17 36 51.6	+0.7
	baz=91							
Z20A	Nine Sixteen R	91.65	55	⇑P		P	17 36 52.2	+0.7
	baz=92							
120A	U Bar Ranch, L	91.82	55	⇑P		P	17 36 52.4	+0.1
	baz=92							
Y21A	Point of Rocks	92.03	54	⇑P		P	17 36 54.4	+1.1
	baz=92							
220A	Playas Peak, P	92.14	56	⇓P		P	17 36 54.7	+0.9
	baz=92							
O25A	Wiggins	92.28	47	⇓P		P	17 36 54.6	+0.3
	baz=92							
121A	Cookes Peak, D	92.49	55	⇑P		P	17 36 56.3	+0.8
	baz=92							
ULM	Lac du Bonnet	92.82	35	P		P	17 36 55.6	-0.9
	comp=Z,2.4nm,0.5s,mb4.9,baz=250,slow=4.9,SNR=3.5							
Z22A	Elephant Butte	92.86	54	⇑P		P	17 36 57.6	+0.4
	baz=93							
T25A	Trinidad	93.28	50	⇑P		P	17 36 58.8	-0.1
	baz=93							
W24A	Lazy 6 Ranch,	93.31	52	⇑P		P	17 36 59.8	+0.7
	baz=93							
Y23A	Lovelace Mesa,	93.31	53	⇓P		P	17 36 59.7	+0.5
	baz=93							
U25A	Circle Dot Ran	93.58	50	⇑P		P	17 37 01.0	+0.6
	baz=93							
AKASG	Malin Array Be	94.10	326	P		P	17 37 00.3	-2.1
	comp=Z,0.6nm,0.5s,mb4.3,baz=52,slow=4.6,SNR=4.7							
AKASG	Malin Array Be	94.10	326	ceP		P	17 37 01.7	-0.7
AKASG					pmax	pmax		
	comp=Z,1.0nm,0.5s							
AKASG	Malin Array Be	94.10	326	P		P	17 37 00.3	-2.1
MNTX	Cornudas Mount	94.69	55	eP		P	17 37 05.8	+0.3
	comp=Z,7.6nm,1.4s,mb4.9							
324A	Moseley Ranch,	94.72	55	⇓P		P	17 37 06.0	+0.4
	baz=95							
X26A	CR and CF Fran	94.77	52	⇓P		P	17 37 05.9	0.0
	baz=95							
NB2	NORSAR Subarra	95.08	340	P		P	17 37 04.6	-2.1
	comp=Z,1.2nm,0.6s,mb4.5,baz=48,slow=4.6							
NOA	NORSAR Array B	95.08	340	P		P	17 37 05.0	-1.7
	comp=Z,1.3nm,0.7s,mb4.5,baz=45,slow=5.6,SNR=4.4							
325A	Bean Ranch, Si	95.15	55	⇑P		P	17 37 08.2	+0.6
	baz=95							
Z26A	Caprock	95.16	53	⇓P		P	17 37 08.0	+0.3
	baz=95							
526A	Mary Lane Ranc	96.36	56	⇓P		P	17 37 13.5	+0.3
	baz=96							
527A	Woodward Ranch	96.70	56	⇓P		P	17 37 15.4	+0.6
	baz=97							
TXAR	Lajitas Array	96.99	57	P		P	17 37 14.7	-1.4
	comp=Z,0.3nm,0.7s,mb3.8,baz=263,slow=4.9,SNR=4.1							
BR131	Keskin Array S	97.02	315	eP		P	17 37 15.3	-0.7
BRTR	Keskin Array B	97.02	315	eP		P	17 37 15.3	-0.6
	comp=Z,1.6nm,0.7s,mb4.6,baz=88,slow=4.2,SNR=7.4							
BRTR	Keskin Array B	97.02	315	ceP		P	17 37 15.8	-0.2
BRTR					pmax	pmax		
	comp=Z,2.0nm,0.7s							
628A	Black Gap, Mar	97.55	56	⇑P		P	17 37 18.9	+0.3
	baz=97							
MMAI	Mount Meron Ar	98.85	308	P		P	17 37 23.6	-0.8
	comp=Z,1.5nm,0.6s,mb4.7,baz=95,slow=4.8,SNR=3.3							
STHS	Stebnicka Huta	99.02	328	eP		P	17 37 24.6	-0.1
STHS	Stebnicka Huta	99.02	328	PDIF		P	17 37 24.6	-0.1
KECS	Kecovo	100.00	328	eP		Pdif	17 37 29.0	0.0
KECS	Kecovo	100.00	328	PDIF		Pdif	17 37 29.0	0.0
VYHS	Vyhne	100.83	328	eP		Pdif	17 37 37.6	+4.9
VYHS	Vyhne	100.83	328	PDIF		Pdif	17 37 37.6	+4.9
GRF	Grafenberg Arr	103.58	333	ePP		PP	17 42 04.5	+4.1
ESDC	Sonseca Array	118.01	336	PP		PP	17 43 43.9	-0.5
	comp=Z,0.7nm,0.7s,baz=29,slow=8.2,SNR=4.4							
BOSA	Boshof	126.41	247	PKP		PKPdf	17 42 46.7	-0.6
	comp=Z,2.7nm,0.8s,baz=333,slow=16,SNR=3.4							
BOSA	Boshof	126.41	247	PKP		PKPdf	17 42 46.7	-0.6
PLCA	Paso Flores	139.09	134	PKhKP		PKPpre	17 43 07.3	
	comp=Z,1.3nm,0.7s,baz=105,slow=7.9,SNR=2.9							
DBIC	Dimbokro	144.47	309	PKP		PKPdf	17 43 19.5	-1.8
	comp=Z,21nm,0.7s,baz=30,slow=3.1,SNR=24							
DBIC	Dimbokro	144.47	309	ePKPdf		PKPdf	17 43 19.1	-2.2
KIC	Kosan Boka	144.58	308	ePKP1		PKPdf	17 43 19.6	-1.9
	comp=Z,41nm,0.8s							
TIC	Toumodi	144.61	309	ePKP1		PKPdf	17 43 19.4	-2.1
	comp=Z,11nm,0.2s							
LIC	Lamto	144.89	309	ePKP1		PKPdf	17 43 20.5	-1.5
	comp=Z,104nm,0.7s							
LPAZ	La Paz	145.32	94	PKPbc		PKPbc	17 43 23.6	+

BFZ	Birch Farm	10.85 200	*e*PN	Pn	17 48 16.2	-1.7
MRZ	Mangatainoka R	11.04 203	*e*PN	Pn	17 48 16.4	-4.0
TIWZ	Tintock	11.04 201	SN	S	17 50 17.6	-6.3
HOWZ	Holdsworth Sta	11.27 203	SN	S	17 50 22.4	-6.9
OGWZ	Otaki Gorge	11.32 204	*e*PN	Pn	17 48 19.4	-4.5
NNZ	Nelson	12.35 209	SN	S	17 50 48.9	-5.6
MQZ	McQueen's Vall	14.75 205	SN	S	17 51 38.2	-12
ASAR	Alice Springs	42.40 268	P	P	17 53 21.4	-0.1
	0.1nm,0.4s,baz=105,slow=7.5,SNR=7.8					
WRA	Warramunga Arr	43.40 273	P	P	17 53 29.6	0.0
	0.2nm,0.3s,baz=111,slow=8.1,SNR=12					
FINES	FINESS Array B	145.07 339	PKPbc	PKPbc	18 04 57.8	-0.9
	2.4nm,0.9s,baz=85,slow=3.1,SNR=3.9					

TRN **16** *18:02:11.1,* 15°.71N×61°.52W, *h23*km, *MD2.7*
NEIC **16** *18:02:11.7,* 15°.69N×61°.39W, *h32*km, *MD2.7(TRN), After TRN.*
ISCJB **16** *18:02:13.0*±*0.5,* 15°.75N±0°.05×61°.5W±0°.1, *h23*km±5km, *Error ellipse: s-maj=19.6km s-min=3.8km az=158.2*
ISC 16 18:02:13.1±0.5, **15°.74N**±0°.05×**61°.5W**±0°.1, **h21**km±5km, **n23,** σ0s**36**/39, **6C-3D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBG	Guadaloupe-3	0.17	309	⇓*i*P	Pb	18 02 17.3	-0.7
DWS	Wesley	0.26	133	*e*P	Pb	18 02 19.3	+0.2
DWS				*e*S	Sb	18 02 23.2	-0.1
DWS	Wesley	0.26	133	⇑*e*P	Pb	18 02 19.3	+0.2
DWS				*e*S	Sb	18 02 23.2	-0.1
PHG	Guadaloupe-2	0.30	334	*e*P	Pb	18 02 19.9	+0.1
SCG	Saint Claude	0.33	329	*e*P	Pb	18 02 20.4	+0.1
BCG	Bois Riant Cap	0.36	342	*e*P	Pb	18 02 20.7	-0.1
MDN	Morne-Daniel	0.44	165	⇑*i*P	Pb	18 02 22.3	+0.2
MDN				*e*S	Sb	18 02 28.6	+0.3
MDN	Morne-Daniel	0.44	165	⇑*i*P	Pb	18 02 22.3	+0.2
MDN				*e*S	Sb	18 02 28.6	+0.3
LZG	Guadaloupe-1	0.47	327	*e*P	Pb	18 02 22.6	-0.1
DLPL	La Plaine	0.48	149	*e*P	Pb	18 02 22.3	-0.6
DPMT	Pointe Michel	0.50	165	*e*P	Pb	18 02 23.5	+0.4
DPMT				*e*S	Sb	18 02 30.2	+0.2
DPMT	Pointe Michel	0.50	165	*e*P	Pb	18 02 23.5	+0.4
DPMT				*e*S	Sb	18 02 30.2	+0.2
DFBT	Forest Bistro	0.52	164	*e*P	Pb	18 02 23.6	+0.1
DFBT				*e*S	Sb	18 02 30.9	+0.2
DFBT	Forest Bistro	0.52	164	*e*P	Pb	18 02 23.6	+0.1
DFBT				*e*S	Sb	18 02 30.9	+0.2
DSTT	Stowe	0.53	158	*e*P	Pb	18 02 23.8	+0.1
DSTT				*e*S	Sb	18 02 30.9	-0.1
DSTT	Stowe	0.53	158	*e*P	Pb	18 02 23.8	+0.1
DSTT				*e*S	Sb	18 02 31.5	+0.5
DSHT	Scott's Head	0.54	166	*e*P	Pb	18 02 24.3	+0.3
DSHT				*e*S	Sb	18 02 31.5	+0.3
DSHT	Scott's Head	0.54	166	*e*P	Pb	18 02 24.3	+0.3
DSHT				*e*S	Sb	18 02 31.5	+0.3
FDF	Fort de France	1.06	161	⇓*e*P	Pn	18 02 32.0	-0.7
FDF				⇓*e*S	Sb	18 02 45.9	-0.3
BIM	Bigot	1.29	161	*e*P	Pn	18 02 35.7	-0.1
MVM	Montagne Vaucl	1.32	153	⇑*e*P	Pn	18 02 35.6	-0.6
MVM				⇑*e*S	Sn	18 02 53.1	-0.1
BPA	Boggy Peak	1.34	345	*e*P	Pn	18 02 36.5	0.0
BPA				*e*S	Sn	18 02 54.5	+0.8
BPA	Boggy Peak	1.34	345	*e*P	Pn	18 02 36.5	0.0
BPA				*e*S	Sn	18 02 54.5	+0.8

ISCJB **16** *18:09:24.5*±*0.4,* 43°.74N±0°.04×105°.22W±0°.05, *h0*km, *mb3.9/3, Error ellipse: s-maj=5.8km s-min=4.7km az=39.4*
NEIC **16** *18:09:26.3*±*0.3,* 43°.74N×105°.22W, *h0*km, *ML3.3, Error ellipse: s-maj=4.1km s-min=3.3km az=132.0, Suspected Mining explosion.*
NEIC 65 km [40 miles] SSE of Gillette.
IDC **16** *18:09:26.1*±*1.8,* 43°.72N×105°.50W, *h0*km, *mb3.8/3, mb1 3.8/8, mb1mx3.6/26, mbtmp3.6/8, ML3.5/5, Error ellipse: s-maj=54.6km s-min=7.5km az=149.0*
ISC 16 18:09:26.3±0.4, **43°.75N**±0°.04×**105°.21W**±0°.05, **h0**km, **n48,** σ0s**71**/49, **mb3.9/3, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.93	66	*e*Pn	Pn	18 09 45.7	-0.8
PHWY	Pilot Hill	2.46	184	*e*P	Pn	18 10 07.4	-0.2
RWWY	Rawlins	2.53	216	*e*P	Pn	18 10 09.0	+0.3
LAO	LASA Array	3.02	347	*e*P	Pn	18 10 15.8	+0.4
RLMT	Red Lodge	3.21	297	*e*P	Pn	18 10 18.4	+0.4
BW06	Boulder Array	3.33	254	*e*P	Pn	18 10 18.9	-0.7
PDAR	Pinedale Array	3.33	254	Pn	Pn	18 10 19.4	-0.1
	4.9nm,0.3s,baz=69,slow=15,SNR=70						
PDAR				Pg	Pg	18 10 25.6	-4.5
	13nm,0.3s,baz=72,slow=21,SNR=51						
PDAR				Lg		18 11 02.6	
	11nm,0.3s,baz=81,slow=18,SNR=7.7						
GCMT	Greycliff	3.77	304	*e*P	Pn	18 10 26.2	+0.5
LOHW	Long Hollow	3.92	270	*e*P	Pn	18 10 28.2	+0.5
ISCO	Idaho Springs	3.96	185	*e*P	Pn	18 10 28.8	+0.5
SNOW	Snow King Moun	4.04	268	P	Pn	18 10 28.9	-0.5
REDW	Red Top Meadow	4.12	267	*e*P	Pn	18 10 31.1	+0.7
IMW	Indian Meadow	4.15	274	*e*P	Pn	18 10 31.6	+0.8
TPAW	Teton Pass	4.18	268	*e*P	Pn	18 10 31.5	+0.2
YMR	Madison River	4.24	284	*e*P	Pn	18 10 32.8	+0.7
AHID	Auburn Hatcher	4.41	259	*e*P	Pn	18 10 34.3	-0.2
RRI2	Red Ridge	4.46	267	*e*P	Pn	18 10 35.5	+0.4
SMCO	Snowmass	4.76	197	*e*Pg	Pg	18 10 52.5	-5.0
DGMT	Dagmar	4.77	8	*e*P	Pn	18 10 41.1	+1.7
BOZ	Bozeman (W)	4.95	295	*e*P	Pn	18 10 40.9	-1.0
EGMT	Eagleton	5.32	325	*e*P	Pn	18 10 46.8	-0.2
	27nm,0.5s						
DLMT	Dillon	5.52	290	P	Pn	18 10 49.5	-0.2
	4.8nm,0.7s						
HRY	Holter Researc	5.53	305	*e*P	Pn	18 10 50.0	+0.1
	13nm,0.4s						
LRM	Limekiln Ridge	5.55	294	*e*P	Pn	18 10 50.1	-0.1
	19nm,0.4s						
MCMT	McKenzie Canyo	5.59	284	P	Pn	18 10 50.5	-0.2
	2.0nm,0.4s						
DAU	Daniels Canyon	5.60	235	*e*P	Pn	18 10 49.0	-1.8
	11nm,0.4s						
JLU	Jordanelle	5.60	238	*e*P	Pn	18 10 50.5	-0.3
	6.1nm,0.6s						
SPUT	South Promonto	5.88	248	*e*P	Pn	18 10 54.4	-0.2
	6.4nm,0.5s						
HVU	Hansel Valley	5.91	253	*e*P	Pn	18 10 54.1	-0.9
SDCO	Great Sand Dun	6.00	182	*e*P	Pn	18 10 57.0	+0.7
	2.0nm,0.6s						
PV04	Paradox Valley	6.04	209	*e*P	Pn	18 10 57.1	+0.3
SRU	San Rafael	6.12	223	*e*P	Pn	18 10 56.8	-1.1
	16nm,0.4s						
PV01	Paradox Valley	6.16	206	*e*P	Pn	18 10 59.3	+0.8
	525nm,0.5s						
ECSD	EROS Data Cent	6.23	87	*e*P	Pn	18 11 00.2	+0.8
	7.1nm,0.4s						
BGU	Big Grassy Mou	6.45	247	*e*P	Pn	18 11 01.6	-0.8
CHMT	Chamberlain Mo	6.49	302	*e*P	Pn	18 11 02.3	-0.7
	2.2nm,0.4s						
HLID	Hailey	6.68	272	*e*P	Pn	18 11 06.8	+1.2
	2.8nm,0.8s						
M13A	Montello	7.03	253	*e*P	Pn	18 11 10.5	0.0
	7.4nm,0.4s						
MSU	Marysvale	7.42	227	*e*P	Pn	18 11 15.1	-0.6
	5.2nm,0.5s						
AGMN	Agassiz Nation	7.94	52	*e*P	Pn	18 11 21.6	-1.2
	15nm,0.5s						
ELK	Elko	8.02	251	Pn	Pn	18 11 23.7	-0.4
	0.2nm,0.3s,baz=45,slow=16,SNR=3.9						
ELK				Lg		18 13 32.3	
	0.1nm,0.3s,baz=175,slow=15,SNR=2.5						
ULM	Lac du Bonnet	9.10	41	Pn	Pn	18 11 38.6	-0.2
	3.1nm,0.3s,baz=239,slow=11,SNR=9.5						
WUAZ	Wupatki	9.50	212	*e*P	Pn	18 11 44.8	+0.6
	6.4nm,0.5s						
NVAR	Mina Array Bea	11.22	246	Pn	Pn	18 12 09.2	+1.4
	0.2nm,0.3s,baz=95,slow=16,SNR=3.1						
YKA	Yellowknife Ar	19.56	347	P	Pn	18 13 56.1	-0.5
	0.1nm,0.3s,baz=155,slow=12,SNR=3.6						
ARCES	ARCESS Array B	61.39	18	P	P	18 19 43.4	-0.2
	0.9nm,0.5s,mb4.2,baz=329,slow=5.3,SNR=14						
ZALV	Zalesovo Beam	82.30	354	P	P	18 21 48.6	-0.8
	0.5nm,0.5s,mb3.9,baz=25,slow=7.2,SNR=2.8						
SONM	Songino Array	84.64	339	P	P	18 22 02.2	+0.7
	0.3nm,0.7s,mb3.7,baz=347,slow=5.9,SNR=2.8						

DDA **16** *18:09:39.5,* 34°.72N×26°.94E, *h21*km, *Md3.4*
ISCJB **16** *18:10:13.7*±*0.7,* 35°.85N±0°.04×27°.90E±0°.05, *h59*km±9km, *Error ellipse: s-maj=8.7km s-min=5.1km az=43.1*
ATH **16** *18:10:14.0,* 35°.79N×27°.88E, *h42*km±2km, *MD3.3/7*
CSEM **16** *18:10:14.6*±*0.4,* 35°.88N×27°.89E, *h48*km±8km, *MD3.3, Error ellipse: s-maj=8.9km s-min=5.1km az=130.0*
ISK **16** *18:10:14.0,* 35°.88N×27°.97E, *h31*km, *ML2.7*
NEIC **16** *18:10:14.0,* 35°.79N×27°.88E, *h42*km, *MD3.3(ATH), After ATH.*
ISC 16 18:10:14.4±0.7, **35°.84N**±0°.04×**27°.90E**±0°.05, **h53**km±11km, **n37,** σ0s**69**/58, **3C-3D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	Arkhangelos	0.42	26	⇑*i*P	Pn	18 10 25.1	+0.2
ARG				*e*S	Sn	18 10 33.0	+0.5
ARG	Arkhangelos	0.42	26	⇑*i*P	Pn	18 10 25.1	+0.2
ARG				*e*S	Sn	18 10 33.0	+0.5
ARG	Arkhangelos	0.42	26	⇑*i*P	Pn	18 10 25.1	+0.2
ARG				*e*S	Sn	18 10 33.0	+0.5
KARP	Karpathos	0.67	244	⇓*i*P	Pn	18 10 27.7	-0.2
KARP				*e*S	Sn	18 10 37.3	-0.4
KARP	Karpathos	0.67	244	⇓*i*P	Pn	18 10 27.7	-0.2
KARP				*e*S	Sn	18 10 37.3	-0.4
KARP	Karpathos	0.67	244	⇓*i*P	Pn	18 10 27.7	-0.2
KARP				*e*S	Sn	18 10 37.3	-0.4
DAT	Datca	0.93	344	*e*PG	Pn	18 10 31.1	-0.1
DAT				*e*SG	Sn	18 10 43.6	0.0
DAT	Datca	0.93	344	*e*Pg	Pn	18 10 31.1	-0.1
DAT				*e*Sg	Sn	18 10 43.6	0.0
BODT	Bodrum	1.31	339	*e*PN	Pn	18 10 36.4	0.0
BODT				*e*SN	Sn	18 10 52.0	-0.8
BODT	Bodrum	1.31	339	*e*Pn	Pn	18 10 36.4	0.0
BODT				*e*Sn	Sn	18 10 52.0	-0.8
YER	Yerkesik	1.33	13	*e*PN	Pn	18 10 36.5	-0.1
YER				*e*SN	Sn	18 10 52.1	-1.2
YER	Yerkesik	1.33	13	*e*Pn	Pn	18 10 36.6	0.0
YER				*e*Sn	Sn	18 10 52.1	-1.1
AKAS	Kas	1.43	74	*i* P	Pn	18 10 38.0	-0.1
AKAS				*i* S	Sn	18 10 55.8	0.0
AKAS	Kas	1.43	74	*i* P	Pn	18 10 38.0	-0.1
AKAS				*i* S	Sn	18 10 55.8	0.0
MLSB	Milas	1.46	356	*e*PN	Pn	18 10 37.8	-0.6
MLSB	Milas	1.46	356	*e*Pn	Pn	18 10 37.8	-0.6
ZKR	Zakros	1.56	243	*e*P	Pn	18 10 40.6	+0.9
ZKR	Zakros	1.56	243	*e*P	Pn	18 10 40.6	+0.9
ZKR	Zakros	1.56	243	*e*P	Pn	18 10 40.6	+0.9
AYDN	Tasoluk	1.82	359	*i* P	Pn	18 10 43.2	-0.1
AYDN				*i* S	Sn	18 11 06.7	+1.5
AYDN	Tasoluk	1.82	359	*i* P	Pn	18 10 43.2	-0.1
AYDN				*i* S	Sn	18 11 06.7	+1.5
GLHS	Glhisar (BURDU	1.84	44	*e*PN	Pn	18 10 43.0	-0.6
GLHS	Glhisar (BURDU	1.84	44	*e*Pn	Pn	18 10 43.0	-0.5
NPS	Neapolis	1.96	254	*e*P	Pn	18 10 45.1	0.0
NPS				*e*S	Sn	18 11 07.7	-0.8
NPS	Neapolis	1.96	254	*e*P	Pn	18 10 45.1	0.0
NPS				*e*S	Sn	18 11 07.7	-0.8
NPS	Neapolis	1.96	254	*e*P	Pn	18 10 45.1	0.0
NPS				*e*S	Sn	18 11 07.7	-0.8
SMG	Samos	2.05	336	*e*P	Pn	18 10 48.5	+2.0
SMG	Samos	2.05	336	*e*P	Pn	18 10 48.5	+2.0
SMG	Samos	2.05	336	*e*P	Pn	18 10 48.5	+2.0
LAST	Lasithi	2.09	252	*e*P	Pn	18 10 47.6	+0.6
LAST	Lasithi	2.09	252	*e*P	Pn	18 10 47.6	+0.6
LAST	Lasithi	2.09	252	*e*P	Pn	18 10 47.6	+0.6
IDI	Anoyia	2.52	258	*e*P	Pn	18 10 53.0	+0.2
IDI	Anoyia	2.52	258	*e*P	Pn	18 10 53.0	+0.2
IDI	Anoyia	2.52	258	*e*P	Pn	18 10 53.0	+0.2
BALY	Balya	3.90	357	*i* P	Pn	18 11 10.9	-0.9
BALY				*i* S	Sn	18 11 56.4	+0.1
BALY	Balya	3.90	357	*i* P	Pn	18 11 10.9	-0.9
BALY				*i* S	Sn	18 11 56.4	+0.1

DJA 16 18:25:28, 8°.36S×**108°.77E, h79**km, **MLv4.0/**7, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMJI	Cimerak	0.66	331	P	Pn	18 25 44.7	+1.6
CMJI				S	Sn	18 25 58.1	+3.8
UGM	Wanagama	1.79	76	P	Pn	18 25 58.3	+1.2
UGM				S	Sn	18 26 21.3	+2.1
LEM	Lembang	1.90	323	P	Pn	18 25 59.1	+0.5
PCJI	Pacitan	2.39	86	P	Pn	18 26 05.9	+0.8
PCJI				S	Sn	18 26 34.1	+0.6
SKJI	Sukabumi	2.57	301	P	Pn	18 26 08.8	+1.2
SKJI				S	Sn	18 26 40.4	+2.4
PWJI	Pagerwojo	3.02	84	P	Pn	18 26 14.2	+0.6
SJI	Sawahan	3.03	78	P	Pn	18 26 15.1	+1.3

BJI **16** *18:48:24.6,* 44°.40N×129°.30W, *h10*km, *mB4.6/2, mb4.3/2*
NEIC **16** *18:48:34.7*±*1.9,* 44°.36N×129°.26W, *h10*km, *mb3.9/10, Error ellipse: s-maj=23.0km s-min=8.1km az=82.0*
IDC **16** *18:48:35.9*±*4.6,* 44°.23N×128°.83W, *h0*km, *mb3.5/3, mb1 3.8/6, mb1mx3.6/25, mbtmp3.5/6, ML3.1/3, MS3.5/5, Ms1 3.4/5, ms1mx3.0/26, Error ellipse: s-maj=69.7km s-min=28.7km az=67.0*
ISC 16 18:48:34.3±1.6, **44°.39N**±0°.06×**129°.6W**±0°.1, **h36**km±12km, **n66,** σ1s**10**/66, **mb3.9/**5, **MS3.4/**3, **Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPOR	Mary's Peak	4.36	86	P	Pn	18 49 35.9	-2.2
KMOR	Kings Mountain	4.53	72	P	Pn	18 49 38.6	-1.8
COR	Corvallis	4.54	85	*e*Pn	Pn	18 49 37.9	-2.6
BMW	Boistfort Moun	4.97	63	P	Pn	18 49 45.3	-1.0
NLWA	Neilton Lookou	5.02	51	*e*Pn	Pn	18 49 46.8	-0.2
OOW	Octopus West	5.05	47	P	Pn	18 49 48.4	+0.8
SSOR	Sweet Springs	5.14	82	P	Pn	18 49 47.9	-0.9
HUMO	Hull Mountain	5.18	108	*e*Pn	Pn	18 49 46.0	-3.3
HUMO				*e*Sn	Sn	18 50 40.8	-6.9
LVP	Lakeview Peak	5.37	69	P	Pn	18 49 52.2	+0.3
MTMW	Mount Mitchell	5.50	70	P	Pn	18 49 53.4	-0.2
HDW	Hoodsport	5.62	52	P	Pn	18 49 55.6	+0.3
GNW	Green Mountain	5.71	54	*e*Pn	Pn	18 49 56.1	-0.4
	10nm,0.6s						
YBH	Yreka Blue Hor	5.73	115	Pn	Pn	18 49 58.6	+1.7
	0.3nm,0.3s,baz=264,slow=8.9,SNR=17						
YBH				Sn	Sn	18 50 55.4	-5.9
	0.3nm,0.3s,baz=167,slow=11,SNR=2.6						
YBH	Yreka Blue Hor	5.73	115	Pn	Pn	18 49 56.8	-0.1
	8.3nm,0.9s						
HOOD	Mount Hood Mea	5.75	78	*e*Pn	Pn	18 49 56.2	-0.9
	46nm,0.7s						
ASR	Mount Adams--S	5.94	70	P	Pn	18 49 59.8	0.0
LON	Longmire	5.98	64	*e*Pn	Pn	18 49 59.5	-0.8
	26nm,0.8s						
PGC	Sidney	6.03	43	*e*P	Pn	18 50 01.7	+0.8
	1.1nm,0.3s						
JCW	Jim Creek	6.55	52	*e*Pn	Pn	18 50 08.5	+0.4
	43nm,0.3s						
RPW	Rockport	6.92	51	P	Pn	18 50 14.3	+1.1
ETW	Entiat	7.23	60	*e*Pn	Pn	18 50 16.4	-1.1
	18nm,0.8s						
HAWA	Hanford	7.39	71	*e*Pn	Pn	18 50 19.9	+0.3
	11nm,1.0s						
WVOR	Wild Horse Val	8.24	100	*e*Pn	Pn	18 50 32.5	+1.1
	6.0nm,1.1s						
BMO	Blue Mountains	8.81	83	*e*Pn	Pn	18 50 36.9	-2.2
	2.0nm,0.8s						
NVAR	Mina Array Bea	10.39	121	Pn	Pn	18 51 00.7	0.0
	0.1nm,0.3s,baz=282,slow=14,SNR=7.6						
BSMT	Bassoo Peak	10.87	66	*e*P	Pn	18 51 06.9	-0.4
	4.8nm,0.9s						
HLID	Hailey	11.01	89	*e*P	Pn	18 51 11.0	+1.8
	12nm,1.0s						
ELK	Elko	11.23	104	Pn	Pn	18 51 12.9	+0.8
	0.0nm,0.3s,baz=274,slow=9.8,SNR=3.8						
ELK				LR	LR	18 55 21.8	
	comp=Z,128nm,18.6s,baz=281,slow=38						
SWMT	Swartz Lake	11.32	69	*e*P	Pn	18 51 13.9	+0.4
	5.3nm,1.0s						
SLMT	Seeley Lake	11.62	70	*e*P	Pn	18 51 19.4	+1.9
	18nm,1.1s						
CHMT	Chamberlain Mo	11.74	72	*e*P	Pn	18 51 18.2	-1.0
	3.7nm,1.1s						
MCMT	McKenzie Canyo	11.98	82	*e*P	Pn	18 51 24.4	+2.0
	0.6nm,0.5s						
GSC	Goldstone	13.39	128	*e*P	Pn	18 51 41.7	0.0
IMW	Indian Meadow	13.44	86	*e*P	Pn	18 51 43.2	+0.8
	9.3nm,1.2s						
TPAW	Teton Pass	13.50	87	*e*P	Pn	18 51 44.5	+1.3
	10nm,1.1s						
LOHW	Long Hollow	13.73	87	*e*P	Pn	18 51 46.1	-0.2
	7.7nm,1.2s						
ARUT	Antelope Range	13.87	113	*e*P	Pn	18 51 46.7	-1.6
	11nm,1.2s						
CCUT	Cedar City	14.06	113	*e*P	Pn	18 51 52.0	+1.1
	12nm,1.4s						
GCMT	Greycliff	14.18	77	P	Pn	18 51 55.1	+2.7
	17nm,0.9s						
MSU	Marysvale	14.34	108	P	Pn	18 51 55.8	+1.1
	23nm,1.5s						
RLMT	Red Lodge	14.49	80	*e*P	Pn	18 51 56.7	0.0
	11nm,0.9s						
PDAR	Pinedale Array	14.65	89	Pn	Pn	18 51 59.9	+1.0
	0.0nm,0.3s,baz=294,slow=11,SNR=6.7						
PDAR				LR	LR	18 57 35.3	
	comp=Z,159nm,19.2s,baz=342,slow=38						
SRU	San Rafael	15.20	104	*e*P	Pn	18 52 07.1	+0.9
	22nm,1.0s						
WUAZ	Wupatki	16.55	116	*e*P	Pn	18 52 24.6	+1.1
	11nm,1.1s						
RWWY	Rawlins	16.61	92	*e*P	Pn	18 52 22.7	-1.6
	11nm,1.0s						
PV04	Paradox Valley	16.65	104	*e*P	Pn	18 52 23.6	-1.3
PV01	Paradox Valley	17.01	104	*e*P	Pn	18 52 28.8	-0.5
	691nm,1.0s						
MVCO	Mesa Verde	17.51	107	*e*P	Pn	18 52 35.5	-0.1
	8.9nm,1.0s						
DGMT	Dagmar	17.97	68	*e*P	Pn	18 52 40.9	-0.2
RSSD	Black Hills	18.32	82	P	Pn	18 52 44.7	-0.7
	18nm,1.4s						
ISCO	Idaho Springs	18.39	96	*e*P	Pn	18 52 44.7	-1.6
	4.5nm,0.9s						
SDCO	Great Sand Dun	19.33	102	*e*P	Pn	18 52 57.5	-0.2
	9.7nm,1.4s						
ANMO	Albuquerque	20.12	110	LR	LR	19 01 11.5	
	comp=Z,168nm,18.8s,MS3.4,baz=280,slow=39						
YKA	Yellowknife Ar	20.13	20	P	P	18 53 10.5	+5.6
	1.8nm,1.0s,baz=208,slow=10,SNR=4.9						
FFC	Flin Flon	20.57	50	*e*P	P	18 53 11.4	+1.6
	5.4nm,0.8s						
ULM	Lac du Bonnet	23.49	64	P	P	18 53 43.7	+3.0
	1.6nm,0.4s,mb3.8,baz=336,slow=5.5,SNR=3.0						
ULM				LR	LR	19 02 44.1	
	comp=Z,98nm,18.9s,MS3.3,baz=274,slow=37						
AGMN	Agassiz Nation	23.53	68	P	P	18 53 40.7	-0.4
	3.9nm,0.8s,mb3.9						
ECSD	EROS Data Cent	23.66	80	*e*P	P	18 53 41.7	-0.6
	30nm,1.8s,mb4.4						
TXAR	Lajitas Array	25.50	117	P	P	18 53 59.9	+0.6
	1.1nm,1.1s,mb3.3,baz=302,slow=7.2,SNR=4.8						
WMOK	Wichita Mounta	25.54	102	*e*P	P	18 53 59.9	+0.4
	7.4nm,1.1s,mb4.1						
SCHQ	Schefferville	40.69	52	LR	LR	19 12 47.5	
	comp=Z,81nm,21.1s,MS3.6,baz=312,slow=36						
HHC	Hu-ho-hao-te	78.92	317	*e*P	P	19 00 32.4	-1.5
HHC				S	S	19 10 27.5	-2.1
HHC				pmax	pmax		
	comp=Z,84nm,7.0s						
NJ2	Nanjing	81.66	307	*e*P	P	19 00 49.3	+0.5
WMQ	Urumqi	86.08	334	*e*P	P	19 01 11.6	+0.5
LZH	Lanzhou	86.37	319	*e*P	P	19 01 12.8	+0.1
LZH				pP	pP	19 01 16.8	-7.2
LZH				sP	sP	19 01 19.3	-8.9
CD2	Chengdu	90.63	316	P	P	19 01 32.5	-0.6

NIED **16** *18:58:00,* 26°.20N×126°.60E, *h62*km, *Mw3.9 Best double couple: M0 7.22000×10^14 NP1:*ϕ*s156.00000°,* δ*67.00000°,* λ*-27.00000°. NP2:*ϕ*s258.00000°,* δ*65.00000°,* λ*-154.00000°.*
ISCJB **16** *18:58:26.8*±*0.3,* 26°.14N±0°.04×126°.62E±0°.04, *h76*km±4km, *mb3.9/15, Error ellipse: s-maj=8.7km s-min=3.8km az=141.0*
JMA **16** *18:58:27.4,* 26°.18N×126°.56E, *h64*km±1km, *M3.7*
JMA Felt I J1.
NEIC **16** *18:58:28.9*±*2.3,* 26°.12N×126°.55E, *h82*km±20km, *mb4.4/1, Error ellipse: s-maj=22.7km s-min=7.2km az=67.0*
IDC **16** *18:58:30.9*±*4.2,* 26°.12N×126°.53E, *h99*km±39km, *mb3.6/14, mb1 3.7/15, mb1mx3.6/25, mbtmp3.6/15, MS2.9/2, Ms1 2.9/2, ms1mx2.3/29, Error ellipse: s-maj=32.6km s-min=13.0km az=69.0*
ISC 16 18:58:27.7±0.3, **26°.17N**±0°.05×**126°.60E**±0°.04, **h69**km±4km, **n39,** σ0s**60**/51, **mb3.9/**15, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKE	Kume jima 2	0.23	48	P	Pn	18 58 37.6	-0.8
JKE				S	Sn	18 58 45.1	-1.1
JAGN	Aguni-jima	0.71	54	P	Pn	18 58 42.5	-0.2
JAGN

comp=Z,1.1nm,0.9s,mb3.7,baz=56,slow=5.4,SNR=2.7
YKA Yellowknife Ar 79.19 24 P **P 19 10 25.6 +0.7**
comp=Z,2.1nm,1.0s,mb3.9,baz=306,slow=5.5,SNR=5.8
YKA Yellowknife Ar 79.19 24 P **P 19 10 25.6 +0.7**

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*NEIC **16** 19:04:50.5, 32.12S×71.12W, h79km, MG3.1(GUC), After GUC.*
GUC 16 19:04:50.5±0.6, 32.12S×71.12W, h79km±3km, MD3.7, ML3.1, 15C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.40**	**306**	⇑*i*P	Pn	19 05 03.6	+0.3
CHNG				*i* S	Sn	19 05 13.3	+0.5
CHNG				AML	AML	19 05 15.4	
	comp=E,1μm,0.2s						
ROCH	**El Roble**	**0.86**	**174**	⇑*i*P	Pn	19 05 08.5	+0.6
ROCH				*i* S	Sn	19 05 21.9	+1.2
ROCH	**El Roble**	**0.86**	**174**	⇑*i*P	Pn	19 05 08.5	+0.6
ROCH				*i* S	Sn	19 05 21.9	+1.2
CMCH	**Combarbala**	**0.94**	**6**	⇑*i*P	Pn	19 05 09.1	+0.2
CMCH				*i* S	Sn	19 05 23.4	+0.9
CMCH	**Combarbala**	**0.94**	**6**	⇑*i*P	Pn	19 05 09.1	+0.2
CMCH				*i* S	Sn	19 05 23.4	+0.9
CMCH				AML	AML	19 05 24.8	
	comp=N,1μm,0.7s						
PEL	**Peldehue**	**1.09**	**160**	⇑*i*P	Pn	19 05 11.1	+0.5
PEL				*i* S	Sn	19 05 26.5	+0.9
CLCH	**Cerro Calan**	**1.37**	**159**	⇑*i*P	Pn	19 05 14.5	+0.4
CLCH				*i* S	Sn	19 05 32.8	+0.9
CLCH				AML	AML	19 05 33.9	
	comp=N,382nm,0.5s						
SAN	**Santiago**	**1.39**	**164**	⇓*i*P	Pn	19 05 14.8	+0.4
SAN				*i* S	Sn	19 05 33.0	+0.7
SAN	**Santiago**	**1.39**	**164**	⇓*i*P	Pn	19 05 14.8	+0.4
SAN				*i* S	Sn	19 05 33.0	+0.7
SAN				AML	AML	19 05 34.3	
	comp=N,272nm,0.5s						
FCH	**Farellones**	**1.40**	**150**	*e*P	Pn	19 05 16.6	+2.2
FCH				*i* S	Sn	19 05 36.1	+3.6
FCH				AML	AML	19 05 38.3	
	comp=E,524nm,0.3s						
LCCH	**Las Cruces**	**1.41**	**195**	⇑*i*P	Pn	19 05 14.8	+0.2
LCCH	**Las Cruces**	**1.41**	**195**	⇑*i*P	Pn	19 05 14.8	+0.2
OVCH	**Ovalle**	**1.50**	**357**	*e*P	Pn	19 05 16.2	+0.4
OVCH				*e*S	Sn	19 05 35.7	+0.7
OVCH	**Ovalle**	**1.50**	**357**	*e*P	Pn	19 05 16.2	+0.4
OVCH				*e*S	Sn	19 05 35.7	+0.7
OVCH				AML	AML	19 05 38.3	
	comp=N,434nm,0.2s						
ANTU	**Antumapu**	**1.51**	**164**	*e*P	Pn	19 05 16.3	+0.4
ANTU				*i* S	Sn	19 05 35.8	+0.8
ANTU	**Antumapu**	**1.51**	**164**	*e*P	Pn	19 05 16.3	+0.4
ANTU				*i* S	Sn	19 05 35.8	+0.8
ANTU				AML	AML	19 05 37.3	
	comp=E,594nm,0.3s						
TACH	**Talagante**	**1.54**	**174**	⇑*i*P	Pn	19 05 16.7	+0.3
TACH				*e*S	Sn	19 05 36.3	+0.5
TACH	**Talagante**	**1.54**	**174**	⇑*i*P	Pn	19 05 16.7	+0.3
TACH				*e*S	Sn	19 05 36.3	+0.5
PCH	**Pirque**	**1.59**	**161**	⇑*i*P	Pn	19 05 17.4	+0.5
PCH				*i* S	Sn	19 05 37.6	+0.8
PCH	**Pirque**	**1.59**	**161**	⇑*i*P	Pn	19 05 17.4	+0.5
PCH				*i* S	Sn	19 05 37.6	+0.8
SJCH	**San Jose de Ma**	**1.65**	**157**	*e*P	Pn	19 05 18.8	+1.0
SJCH				*i* S	Sn	19 05 39.8	+1.4
SJCH	**San Jose de Ma**	**1.65**	**157**	*e*P	Pn	19 05 18.8	+1.0
SJCH				*i* S	Sn	19 05 39.8	+1.4
SJCH				AML	AML	19 05 41.8	
	comp=N,231nm,0.3s						
CHCH	**Chadas Angostu**	**1.85**	**168**	*e*P	Pn	19 05 20.9	+0.4
CHCH				*i* S	Sn	19 05 44.0	+0.8
CHCH	**Chadas Angostu**	**1.85**	**168**	*e*P	Pn	19 05 20.9	+0.4
CHCH				*i* S	Sn	19 05 44.0	+0.8
LMEL	**Las Melosas**	**1.89**	**156**	⇓*i*P	Pn	19 05 22.0	+1.1
LMEL				*i* S	Sn	19 05 45.6	+1.5
LMEL	**Las Melosas**	**1.89**	**156**	⇓*i*P	Pn	19 05 22.0	+1.1
LMEL				*i* S	Sn	19 05 45.6	+1.5
LMEL				AML	AML	19 05 47.6	
	comp=N,630nm,0.1s						
CACH	**El Canelo**	**2.04**	**168**	⇑*i*P	Pn	19 05 24.0	+1.1
CACH				*i* S	Sn	19 05 49.6	+2.0
CACH	**El Canelo**	**2.04**	**168**	⇑*i*P	Pn	19 05 24.0	+1.1
CACH				*i* S	Sn	19 05 49.6	+2.0

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*ISCJB **16** 19:07:10.3±1.1, 16.53N±0.05×146.03E±0.07, h113km±10km, mb4.4/36, Error ellipse: s-maj=11.3km s-min=8.8km az=174.5*
*BJI **16** 19:07:11.6, 16.50N×146.00E, h121km, mB4.7/5, mb4.4/5*
*IDC **16** 19:07:11.8±1.6, 16.52N×145.91E, h113km±16km, mb3.9/17, mb1 4.1/20, mb1mx4.0/27, mbtmp4.0/20, MS3.3/1, Ms1 3.3/1, ms1mx2.3/25, Error ellipse: s-maj=17.7km s-min=10.4km az=86.0*
*NEIC **16** 19:07:12.7±1.6, 16.49N×146.02E, h121km±15km, mb4.5/13, Error ellipse: s-maj=10.4km s-min=9.3km az=211.0*
NEIC Felt on Saipan.
ISC 16 19:07:11.4±1.0, 16.53N±0.05×146.04E±0.07, h107km±10km, n53, σ1§02/55, mb4.4/36, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.13**	**201**	P	**Pn**	**19 08 00.2**	**+1.0**
	378nm,0.3s,baz=347,slow=1.2,SNR=424						
GUMO				S	**Sn**	**19 08 35.6**	**-0.4**
	264nm,0.3s,baz=34,slow=22,SNR=10						
GUMO	**Guam**	**3.13**	**201**	*e*P	**Pn**	**19 07 59.9**	**+0.7**
GUMO				P		19 08 00.2	
GUMO				S	**Sn**	**19 08 35.6**	**-0.4**
CBIJ	**Chichi jima**	**11.11**	**342**	P	**Pn**	**19 09 47.0**	**0.0**
	2.2nm,0.3s,baz=240,slow=18,SNR=2.7						
JHJ	**Hachijo jima 2**	**17.46**	**342**	P	**Pn**	**19 11 07.2**	**-1.0**
	6.7nm,0.3s,baz=134,slow=12,SNR=6.6						
MJAR	**Matsushiro Arr**	**21.11**	**342**	P	**P**	**19 11 44.3**	**-3.1**
	1.0nm,0.5s,mb3.4,baz=158,slow=10,SNR=5.1						
YULB	**Yu-li**	**24.21**	**290**	*e*P	**P**	**19 12 19.3**	**+1.1**
SSLB	**Suanglung**	**24.61**	**291**	*e*P	**P**	**19 12 22.6**	**+0.8**
	24nm,0.8s,mb4.7						
PMG	**Port Moresby**	**25.79**	**177**	*e*P	**P**	**19 12 31.7**	**-0.9**
	6.9nm,0.5s,mb4.3						
KSRS	**Korea Array**	**26.27**	**326**	P	**P**	**19 12 35.0**	**-1.7**
	1.7nm,0.5s,mb3.7,baz=140,slow=9.1,SNR=11						
ASAJ	**Asahikawa**	**27.65**	**355**	P	**P**	**19 12 48.8**	**-0.2**
	5.4nm,0.7s,mb4.2,baz=120,slow=26,SNR=7.9						
HNR	**Honiara**	**29.24**	**151**	P	**P**	**19 13 03.3**	**-0.1**
	38nm,0.3s,mb5.5,baz=191,slow=20,SNR=4.4						
PETK	**Petropavlovsk-**	**37.63**	**12**	P	**P**	**19 14 15.7**	**0.0**
	3.3nm,0.7s,mb4.3,baz=149,slow=3.5,SNR=4.2						
WRA	**Warramunga Arr**	**38.02**	**198**	P	**P**	**19 14 18.5**	**-0.9**
	5.5nm,0.7s,mb4.5,baz=21,slow=9.4,SNR=41						
HHC	**Hu-ho-hao-te**	**38.36**	**316**	*e*P	**P**	**19 14 22.8**	**+0.7**
HHC				S	**S**	**19 20 07.9**	**-0.9**
HHC				pmax	pmax		
	comp=Z,16nm,0.6s,mb5.0						
HHC				pmax	pmax		
	comp=Z,90nm,6.3s						
ASAR	**Alice Springs**	**41.67**	**197**	P	**P**	**19 14 48.7**	**-0.8**
	comp=Z,1.7nm,0.5s,mb4.0,baz=18,slow=12,SNR=40						
CMAR	**Chiang Mai Arr**	**44.86**	**280**	P	**P**	**19 15 15.4**	**0.0**
	comp=Z,2.8nm,0.6s,mb4.2,baz=71,slow=6.4,SNR=25						
SONM	**Songino Array**	**45.04**	**323**	P	**P**	**19 15 16.0**	**-0.3**
	comp=Z,1.5nm,0.6s,mb3.9,baz=131,slow=7.8,SNR=12						
SONM				LR	LR	19 32 45.2	
	comp=Z,36nm,22.0s,baz=322,slow=34						
STKA	**Stephens Creek**	**48.32**	**185**	P	**P**	**19 15 41.4**	**-0.6**
	comp=Z,3.3nm,0.8s,mb4.2,baz=304,slow=12,SNR=6.2						
STKA	**Stephens Creek**	**48.32**	**185**	P	**P**	**19 15 41.4**	**-0.6**
LSA	**Lhasa**	**51.73**	**295**	P	**P**	**19 16 10.2**	**+2.1**
	comp=Z,7.7nm,0.6s,mb4.9						
TAPN	**Taplejung**	**54.75**	**292**	*e*P	**P**	**19 16 31.5**	**+1.3**
ODAN	**Odare**	**55.05**	**291**	*e*P	**P**	**19 16 33.0**	**+0.6**
RAMN	**Ramite**	**55.75**	**292**	*e*P	**P**	**19 16 37.6**	**+0.2**
JIRN	**Jiri**	**56.09**	**292**	*e*P	**P**	**19 16 41.0**	**+1.2**
	comp=Z,14nm,0.5s,mb5.3						
GUN	**Gumba**	**56.35**	**293**	*e*P	**P**	**19 16 43.5**	**+1.8**
PKI	**Pulchoki**	**56.78**	**292**	*e*P	**P**	**19 16 44.8**	**+0.1**
	comp=Z,13nm,0.5s,mb5.2						
KKN	**Kakani**	**56.89**	**293**	*e*P	**P**	**19 16 45.5**	**0.0**
DMN	**Daman**	**57.05**	**292**	*e*P	**P**	**19 16 47.3**	**+0.7**
	comp=Z,8.2nm,0.4s,mb5.1						
GKN	**Gorkha**	**57.45**	**293**	*e*P	**P**	**19 16 50.1**	**+0.7**
	comp=Z,10nm,0.3s,mb5.3						
ZALV	**Zalesovo Beam**	**59.93**	**323**	P	**P**	**19 17 04.5**	**-1.6**
	comp=Z,1.5nm,0.6s,mb4.2,baz=94,slow=6.3,SNR=6.6						
ZALV				PcP	PcP	19 17 51.4	+0.1
	comp=Z,0.4nm,0.5s,baz=104,slow=3.0,SNR=4.0						
MKAR	**Makanchi Array**	**60.20**	**315**	P	**P**	**19 17 08.0**	**-0.1**
	comp=Z,0.9nm,0.4s,mb4.2,baz=91,slow=9.1,SNR=10						
MKAR	**Makanchi Array**	**60.20**	**315**	P	**P**	**19 17 08.0**	**-0.1**
KDAK	**Kodiak Island**	**60.99**	**33**	P	**P**	**19 17 14.3**	**+1.0**
	comp=Z,4.0nm,0.6s,mb4.7,baz=276,slow=9.1,SNR=5.0						
KDAK	**Kodiak Island**	**60.99**	**33**	P	**P**	**19 17 14.3**	**+1.0**
PPLA	**Purkeypile**	**62.67**	**27**	*e*P	**P**	**19 17 24.6**	**+0.2**
KURK	**Kurchatov**	**63.10**	**319**	*e*P	**P**	**19 17 25.5**	**-2.0**
	comp=Z,2.7nm,0.8s,mb4.2						
BPAW	**Bear Paw Mtn.**	**63.55**	**26**	*e*P	**P**	**19 17 30.2**	**0.0**
	comp=Z,2.6nm,0.6s,mb4.2						
COLD	**Coldfoot**	**64.81**	**23**	*e*P	**P**	**19 17 39.3**	**+0.8**
	comp=Z,2.0nm,0.4s,mb4.3						
EGAK	**Eagle**	**67.85**	**26**	*e*P	**P**	**19 17 57.7**	**-0.2**
	comp=Z,2.8nm,0.6s,mb4.3						
BVAR	**Borovoye Array**	**68.35**	**321**	P	**P**	**19 17 59.7**	**-1.4**
	comp=Z,3.9nm,0.6s,mb4.4,baz=91,slow=7.7,SNR=22						
INK	**Inuvik**	**71.23**	**23**	P	**P**	**19 18 18.8**	**+0.3**
	comp=Z,4.1nm,0.7s,mb4.4,baz=270,slow=6.8,SNR=16						
DLBC	**Dease Lake**	**72.91**	**33**	*e*P	**P**	**19 18 30.1**	**+1.4**
ABKAR	**Akbulak array**	**75.14**	**317**	*e*P	**P**	**19 18 40.3**	**-1.7**
	comp=Z,2.7nm,0.4s,mb4.3						
YKA	**Yellowknife Ar**	**79.75**	**28**	P	**P**	**19 19 07.1**	**-0.1**
	comp=Z,2.2nm,0.5s,mb4.3,baz=289,slow=4.6,SNR=16						
YKA	**Yellowknife Ar**	**79.75**	**28**	P	**P**	**19 19 07.1**	**-0.2**
BSMT	**Bassoo Peak**	**83.92**	**42**	*e*P	**P**	**19 19 30.2**	**+0.7**
	comp=Z,2.8nm,0.7s,mb4.2						
NVAR	**Mina Array Bea**	**84.22**	**52**	P	**P**	**19 19 32.5**	**+1.3**
	comp=Z,1.4nm,0.6s,mb4.0,baz=260,slow=6.2,SNR=9.2						
ARCES	**ARCESS Array B**	**84.65**	**342**	P	**P**	**19 19 31.1**	**-1.7**
	comp=Z,2.4nm,0.7s,mb4.2,baz=83,slow=8.9,SNR=11						
HLID	**Hailey**	**85.50**	**46**	*e*P	**P**	**19 19 38.1**	**+0.6**
	comp=Z,1.9nm,0.9s,mb4.0						
LRM	**Limekiln Ridge**	**86.08**	**43**	*e*P	**P**	**19 19 40.9**	**+0.6**
	comp=Z,7.0nm,0.5s,mb4.8						
FINES	**FINESS Array B**	**88.98**	**335**	P	**P**	**19 19 50.8**	**-3.1**
	comp=Z,1.1nm,0.7s,mb4.0,baz=61,slow=3.7,SNR=8.1						
PDAR	**Pinedale Array**	**89.11**	**46**	P	**P**	**19 19 54.0**	**-0.9**
	comp=Z,0.4nm,0.5s,mb3.7,baz=238,slow=1.5,SNR=5.1						
LPAZ	**La Paz**	**147.24**	**95**	PKPbc	PKPbc	19 26 44.6	+1.4
	comp=Z,0.5nm,0.3s,baz=22,slow=5.4,SNR=3.3						

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*NIED **16** 19:16:00, 33.50N×141.10E, h71km, Mw3.9 Best double couple: M0:6.77000×10^14 NP1:φ=2.00000°, δ=74.00000°, λ=150.00000°. NP2:φ=102.00000°, δ=61.00000°, λ=19.00000°.*
*ISCJB **16** 19:16:25.9±0.7, 33.43N±0.04×141.14E±0.07, h54km±7km, mb3.9/7, Error ellipse: s-maj=9.3km s-min=6.2km az=170.2*
*JMA **16** 19:16:26.7±0.2, 33.49N×141.08E, h63km±5km, M3.5*
*NEIC **16** 19:16:26.6±2.1, 33.27N×141.04E, h39km±19km, mb4.3/1, Error ellipse: s-maj=30.7km s-min=15.7km az=76.0*
*IDC **16** 19:16:27.5±2.6, 33.38N×141.07E, h48km±22km, mb3.5/5, mb1 3.8/7, mb1mx3.4/24, mbtmp3.6/7, ML3.9/2, Error ellipse: s-maj=39.2km s-min=13.6km az=74.0*
ISC 16 19:16:26.6±0.7, 33.41N±0.04×141.15E±0.06, h43km±8km, n26, σ0§99/41, mb3.9/7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**1.16**	**255**	P	**Pn**	**19 16 46.8**	**+0.5**
JHJ2				S	**Sn**	**19 17 02.3**	**+1.3**
JHJ	**Hachijo jima 2**	**1.18**	**256**	P	**Pn**	**19 16 46.9**	**+0.3**
	1μm,0.3s,baz=92,slow=3.8,SNR=1028						
JHJ				S	**Sn**	**19 16 57.6**	**-4.0**
	272nm,0.3s,baz=64,slow=23,SNR=14						
BSO1	**Boso 1**	**1.25**	**353**	P	**Pn**	**19 16 47.2**	**-0.4**
BSO1				S	**Sn**	**19 17 02.8**	**-0.3**
BSO3	**Boso 3**	**1.48**	**339**	P	**Pn**	**19 16 50.8**	**0.0**
BSO3				S	**Sn**	**19 17 09.7**	**+0.7**
JMY	**Miyakejima3**	**1.52**	**296**	P	**Pn**	**19 16 50.8**	**-0.4**
BSO4	**Boso 4**	**1.71**	**337**	P	**Pn**	**19 16 54.2**	**+0.3**
JKO	**Kozu shima**	**1.85**	**295**	P	**Pn**	**19 16 55.9**	**+0.1**
JKO				S	**Sn**	**19 17 16.7**	**-1.2**
JIM2	**Oshima 3**	**1.93**	**313**	P	**Pn**	**19 16 56.5**	**-0.5**
JIM2				S	**Sn**	**19 17 18.0**	**-2.0**
JIZS	**Izushimoda**	**2.29**	**305**	P	**Pn**	**19 17 02.1**	**+0.2**
JIZS				S	**Sn**	**19 17 27.8**	**-1.1**
JOD2	**Odawara 2**	**2.51**	**318**	P	**Pn**	**19 17 04.8**	**-0.1**
JOD2				S	**Sn**	**19 17 32.4**	**-2.0**
SHZ3	**Shizuoka 3**	**2.94**	**305**	P	**Pn**	**19 17 12.2**	**+1.4**
SHZ3				S	**Sn**	**19 17 46.5**	**+1.6**
JYN	**Shimob**	**2.99**	**315**	P	**Pn**	**19 17 12.7**	**+1.2**
JRY	**Ryogami san**	**3.19**	**325**	P	**Pn**	**19 17 14.3**	**+0.1**
JRY				S	**Sn**	**19 17 51.0**	**0.0**
JAG	**Ashikaga**	**3.31**	**336**	P	**Pn**	**19 17 15.9**	**0.0**
JAG				S	**Sn**	**19 17 54.0**	**0.0**
MJAR	**Matsushiro Arr**	**3.95**	**323**	P	**Pn**	**19 17 25.3**	**+0.7**
	3.2nm,0.3s,baz=150,slow=11,SNR=25						
MJAR				S	**Sn**	**19 18 09.2**	**-0.4**
	3.7nm,0.3s,baz=67,slow=32,SNR=8.0						
MAJO	**Matsushiro**	**3.95**	**323**	*e*P	**Pn**	**19 17 25.7**	**+1.1**
MAT	**Matsushiro**	**3.95**	**323**	P	**Pn**	**19 17 26.0**	**+1.4**
MAT				S	**Sn**	**19 18 09.7**	**0.0**
CBIJ	**Chichi jima**	**6.36**	**172**	P	**Pn**	**19 17 58.0**	**+0.2**
	10nm,0.3s,baz=298,slow=16,SNR=7.6						
CBIJ				S	**Sn**	**19 19 06.2**	**-2.9**
	4.2nm,0.3s,baz=292,slow=22,SNR=2.7						
ASAJ	**Asahikawa**	**10.75**	**6**	P	**Pn**	**19 18 55.7**	**-2.1**
	1.2nm,0.3s,baz=214,slow=17,SNR=12						
HHC	**Hu-ho-hao-te**	**24.65**	**296**	*e*P	**P**	**19 21 43.8**	**+0.7**
HHC				S	**S**	**19 25 59.3**	**-2.3**
HHC				pmax	pmax		
	comp=Z,12nm,0.5s,mb4.7						
HHC				pmax	pmax		
	comp=Z,34nm,5.2s						
SONM	**Songino Array**	**29.77**	**309**	P	**P**	**19 22 29.7**	**+0.7**
	comp=Z,0.4nm,0.7s,mb3.3,baz=104,slow=8.3,SNR=3.3						
MKAR	**Makanchi Array**	**45.94**	**305**	P	**P**	**19 24 45.7**	**+0.6**
	comp=Z,0.3nm,0.2s,mb3.8,baz=88,slow=12,SNR=3.0						
WRAB	**Tennant Creek**	**53.44**	**188**	*e*P	**P**	**19 25 41.0**	**-1.3**
	comp=Z,1.8nm,0.6s,mb4.2						
WRA	**Warramunga Arr**	**53.45**	**188**	P	**P**	**19 25 42.1**	**-0.2**
	comp=Z,1.7nm,0.4s,mb4.4,baz=5.5,slow=7.7,SNR=43						
ASAR	**Alice Springs**	**57.18**	**188**	P	**P**	**19 26 08.9**	**-0.2**
	comp=Z,0.2nm,0.4s,mb3.5,baz=3.4,slow=6.3,SNR=9.6						
TXAR	**Lajitas Array**	**92.50**	**52**	P	**P**	**19 29 34.8**	**+1.4**
	comp=Z,0.1nm,0.3s,mb3.7,baz=265,slow=5.3,SNR=2.7						

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*NEIC **16** 19:28:53.6±1.0, 13.83N×144.83E, h121km±8km, Error ellipse: s-maj=41.7km s-min=21.2km az=99.0*
IDC 16 19:28:53.1±0.8, 13.83N×144.81E, h115km±6km, mb3.4/4, mb1 3.6/4, mb1mx3.2/23, mbtmp3.4/4, Error ellipse: s-maj=43.6km s-min=22.3km az=96.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.25**	**168**	P	Pn	19 29 10.4	+1.1
	361nm,0.3s,baz=216,slow=0.3,SNR=389						
GUMO				S	Sn	19 29 22.9	+1.5
	327nm,0.3s,baz=354,slow=23,SNR=58						
GUMO	**Guam**	**0.25**	**168**	*e*P	Pn	19 29 10.5	+1.2
GUMO				S	Sn	19 29 22.9	+1.5
WRA	**Warramunga Arr**	**35.11**	**197**	P	P	19 35 35.5	0.0
	0.6nm,0.6s,baz=18,slow=8.7,SNR=9.6						
ASAR	**Alice Springs**	**38.76**	**196**	P	P	19 36 06.4	-0.1
	0.4nm,0.5s,baz=19,slow=13,SNR=9.2						
MKAR	**Makanchi Array**	**61.28**	**316**	P	P	19 38 56.3	0.0
	0.2nm,0.2s,baz=101,slow=7.5,SNR=3.4						
NVAR	**Mina Array Bea**	**86.81**	**51**	P	P	19 41 24.9	+0.1
	0.2nm,0.5s,baz=286,slow=7.4,SNR=2.6						

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*ISCJB **16** 19:35:17.5±0.7, 38.84N±0.05×110.99E±0.06, h10km, mb3.4/2, Error ellipse: s-maj=7.6km s-min=5.4km az=135.9*
*IDC **16** 19:35:21.1±5.5, 39.10N×110.79E, h0km, mb3.3/2, mb1 3.6/3, mb1mx3.2/23, mbtmp3.4/3, Error ellipse: s-maj=113.0km s-min=25.0km az=84.0*
ISC 16 19:35:18.9±0.9, 38.82N±0.06×110.99E±0.07, h10km, n8, σ1§46/14, mb3.4/2, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTO	**Baotou**	**1.94**	**338**	*e*P	**Pn**	**19 35 50.0**	**-1.9**
BTO				pmax	pmax		
	comp=Z,39nm,1.0s						
BJI	**Beijing**	**4.19**	**71**	Pg	**Pg**	**19 36 40.3**	**+1.1**
BJI				Sg	**Sg**	**19 37 39.8**	**+6.3**
BJI				smax			
	comp=N,41nm,1.0s						
BJI				smax			
	comp=E,13nm,1.1s						
XAN	**Xi'an**	**5.05**	**200**	Pn	**Pn**	**19 36 24.9**	**-10**
XAN				Pg	**Pg**	**19 36 51.1**	**-4.5**
XAN				Sn	**Sn**	**19 37 32.8**	**-0.2**
XAN				Sg	**Sg**	**19 38 07.3**	**+6.3**
XAN				smax			
	comp=N,21nm,1.7s						
XAN				smax			
	comp=E,12nm,1.3s						
LZH	**Lanzhou**	**6.31**	**247**	*e*Pg	**Pg**	**19 37 17.6**	**-2.0**
LZH				Sg	**Sb**	**19 38 24.5**	**+0.3**
LZH				smax			
	comp=N,74nm,1.0s						
LZH				smax			
	comp=E,42nm,0.9s						
LZH				LR	LR		
	comp=N,190nm,4.7s						
LZH				LR	LR		
	comp=Z,280nm,6.1s						
GTA	**Gaotai**	**8.71**	**277**	*e*P	**Pn**	**19 37 28.4**	**+3.5**
GTA				pP		19 37 33.0	
GTA				sP		19 37 35.5	
GTA				S	**Sn**	**19 39 05.5**	**+2.4**
GTA				sS		19 39 10.9	
GTA				pmax	pmax		
	comp=Z,1.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,58nm,5.7s						
GTA				LR	LR		
	comp=N,91nm,6.0s						
GTA				LR	LR		
	comp=E,71nm,6.6s						
GTA				LR	LR		
	comp=Z,85nm,6.6s						
SONM	**Songino Array**	**9.62**	**341**	Pn	**Pn**	**19 37 36.3**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=156,slow=12,SNR=8.2						
SONM				Lg		19 40 15.8	
	comp=Z,0.1nm,0.3s,baz=160,slow=32,SNR=8.1						
MKAR	**Makanchi Array**	**22.43**	**300**	P	**P**	**19 40 18.6**	**+1.1**
	comp=Z,0.3nm,0.2s,mb3.3,baz=96,slow=12,SNR=5.9						
CMAR	**Chiang Mai Arr**	**22.83**	**211**	P	**P**	**19 40 27.4**	**+5.3**
	comp=Z,1.3nm,0.8s,mb3.4,baz=13,slow=10.0,SNR=12						

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*DDA **16** 19:39:00.4, 36.98N×29.15E, h7km±4km, Md2.9*
*ISK **16** 19:39:00.9, 37.04N×29.12E, h5km, MD2.9*
*ISCJB **16** 19:39:01.2±0.5, 37.00N±0.04×29.12E±0.03, h10km, Error ellipse: s-maj=5.8km s-min=3.9km az=8.9*
*CSEM **16** 19:39:01.0±0.2, 37.00N×29.13E, h8km, MD2.9, Error ellipse: s-maj=5.6km s-min=4.0km az=9.0*
ISC 16 19:39:01.3±0.6, 36.99N±0.04×29.11E±0.03, h6km±6km, n34, σ0§94/45, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.35**	**62**	*e*Pg	**Pg**	**19 39 06.8**	**-1.3**
GLHS				*e*Sg	**Sg**	**19 39 13.2**	**+0.5**
GLHS	**Glhisar (BURDU**	**0.35**	**62**	*e*PG	**Pg**	**19 39 06.8**	**-1.3**
GLHS				*e*SG	**Sg**	**19 39 13.2**	**+0.5**
GOLH	**Golhisar**	**0.43**	**56**	*i* P	**Pg**	**19 39 08.3**	**-1.4**
GOLH				*i* S	**Sg**	**19 39 15.8**	**+0.4**
GOLH	**Golhisar**	**0.43**	**56**	*i* P	**Pg**	**19 39 08.3**	**-1.4**
GOLH				*i* S	**Sg**	**19 39 15.8**	**+0.4**
YER	**Yerkesik**	**0.68**	**282**	*e*PG	**Pg**	**19 39 15.1**	**+0.7**
YER	**Yerkesik**	**0.68**	**282**	*e*Pg	**Pg**	**19 39 15.1**	**+0.7**
ELL	**Elmali**	**0.68**	**111**	*e*PG	**Pg**	**19 39 14.6**	**+0.2**
ELL				*e*SG	**Sg**	**19 39 25.0**	**+1.7**
ELL	**Elmali**	**0.68**	**111**	*e*Pg	**Pg**	**19 39 14.6**	**+0.2**
ELL				*e*Sg	**Sg**	**19 39 25.0**	**+1.7**
DNZL	**Cakiroluk**	**0.70**	**356**	*i* P	**Pg**	**19 39 13.5**	**-1.3**
DNZL				*i* S	**Sg**	**19 39 25.5**	**+1.7**
DNZL	**Cakiroluk**	**0.70**	**356**	*i* P	**Pg**	**19 39 13.5**	**-1.3**
DNZL				*i* S	**Sg**	**19 39 25.5**	**+1.6**
DENT	**Denizli**	**0.76**	**355**	*e*PG	**Pg**	**19 39 14.9**	**-1.1**
DENT	**Denizli**	**0.76**	**355**	*e*Pg	**Pg**	**19 39 14.9**	**-1.1**
AKAS	**Kas**	**0.85**	**152**	*i* P	**Pg**	**19 39 16.9**	**-0.8**
AKAS				*i* S	**Sg**	**19 39 37.3**	**+8.5**
AKAS	**Kas**	**0.85**	**152**	*i* P	**Pg**	**19 39 16.9**	**-0.8**
MLSB	**Milas**	**1.11**	**286**	*e*PN	**Pg**	**19 39 22.2**	**-0.4**
MLSB	**Milas**	**1.11**	**286**	*e*Pn	**Pg**	**19 39 22.3**	**-0.3**
**AYDN

TEIG Tepich 6.79 37 eP Pn 20 27 29.2 -1.4
240nm,0.3s
TEIG eS Sn 20 28 40.7 -5.8
TXAR Lajitas Array 17.74 327 P Pn 20 29 56.1 +0.9
0.1nm,0.3s,baz=149,slow=9.7,SNR=6.3
NVAR Mina Array Bea 32.72 321 P P 20 32 20.2 +1.8
1.1nm,0.8s,mb3.7,baz=141,slow=7.5,SNR=5.8
YKA Yellowknife Ar 50.14 347 P P 20 34 37.9 -2.4
0.5nm,0.4s,mb3.8,baz=137,slow=8.6,SNR=5.7
YKA Yellowknife Ar 50.14 347 P P 20 34 37.9 -2.5
CMAR Chiang Mai Arr 145.07 341 PKPbc PKPbc 20 45 20.9 -1.1
0.9nm,0.7s,baz=344,slow=2.7,SNR=8.7

IDC 16 20:30:47.2±1.8, 13°.49N×92°.82E, h0km, mb3.8/4, mb1 3.8/5, mb1mx3.5/22, mbtmp3.6/5, ML2.8/1, Error ellipse: s-maj=62.2km s-min=21.4km az=64.0, Andaman Islands region

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)
CMAR Chiang Mai Arr 7.68 49 Pn Pn 20 32 40.2 -0.2
0.0nm,0.3s,baz=241,slow=14,SNR=3.3
CMAR Sn Sn 20 34 03.9 -4.3
0.1nm,0.3s,baz=237,slow=26,SNR=4.5
MKAR Makanchi Array 34.36 347 P P 20 37 35.1 -0.6
0.2nm,0.2s,baz=148,slow=6.8,SNR=2.7
ZALV Zalesovo Beam 40.85 353 P P 20 38 31.4 +0.8
0.3nm,0.3s,baz=199,slow=8.4,SNR=2.2
WRA Warramunga Arr 52.65 128 P P 20 40 03.3 -0.3
1.9nm,0.6s,baz=308,slow=7.8,SNR=39
ASAR Alice Springs 54.56 132 P P 20 40 17.6 +0.1
1.0nm,0.6s,baz=310,slow=6.5,SNR=17

ISCJB 16 20:33:29.5±0.2, 43°.27N±0°.01×0°.47W±0°.01, h1km±2km, Error ellipse: s-maj=1.9km s-min=1.7km az=33.5
CSEM 16 20:33:32.3±0.1, 43°.23N×0°.38W, h5km, ML4.3/45, Error ellipse: s-maj=1.7km s-min=1.2km az=142.0
STR 16 20:33:33.7±0.1, 43°.11N×0°.37W, h5km, Ml4.2, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0
MDD 16 20:33:33.3±0.2, 43°.18N×0°.38W, h0km, mbLg3.6/43, Error ellipse: s-maj=2.1km s-min=1.4km az=0.0
LDG 16 20:33:34.2±0.1, 43°.17N×0°.38W, h5km, Md3.8/3, Ml4.4/43, Error ellipse: s-maj=1.4km s-min=1.0km az=133.0
NEIC 16 20:33:34.2, 43°.17N×0°.38W, h5km, ML4.4(LDG), ML4.3(STR), After LDG.
NEIC Felt at Pau, France.
INMG 16 20:33:34.6±1.1, 43°.10N×0°.42W, h4km±2km, MD3.7, ML3.3, Error ellipse: s-maj=2.0km s-min=1.3km az=27.0
PRU 16 20:33:58.0, 42°.84N×1°.20E, h96km
ISC 16 20:33:31.8±0.2, 43°.219N±0°.009×0°.41W±0°.01, h4km±1km, n615, σ1§28/1083, 10C-15D, Pyrenees

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)
REYF Montagne du Re 0.15 174 Pg Pg 20 33 35.6 +0.9
REYF Montagne du Re 0.15 174 Pg Pg 20 33 35.6 +0.9
REYF Lg 20 33 36.8
REYF Montagne du Re 0.15 174 Pg Pg 20 33 35.6 +0.9
REYF Lg 20 33 36.8
REYF Montagne du Re 0.15 174 Pg Pg 20 33 35.6 +0.9
ETSF Etsaut 0.34 199 ePg Pg 20 33 37.9 -0.4
ETSF eSg Sg 20 33 41.7 -0.9
5µm,0.4s
ETSF Etsaut 0.34 199 Pg Pg 20 33 37.9 -0.4
ETSF Lg 20 33 41.7
3µm,0.4s
ETSF Etsaut 0.34 199 Pg Pg 20 33 37.9 -0.4
ETSF Lg 20 33 41.7
3µm,0.4s
ETSF Etsaut 0.34 199 ePg Pg 20 33 37.9 -0.4
ETSF eSg Sg 20 33 41.7 -0.9
3µm,0.4s
ORDF Ordiarp 0.38 269 Pg Pg 20 33 41.2 +2.1
ORDF Sg Sg 20 33 48.4 +4.3
ORDF Ordiarp 0.38 269 Pg Pg 20 33 41.6 +2.5
ORDF Lg 20 33 47.8
ORDF Ordiarp 0.38 269 Pg Pg 20 33 41.6 +2.5
ORDF Lg 20 33 47.8
ORDF Ordiarp 0.38 269 Pg Pg 20 33 41.2 +2.1
LABF Labassere 0.40 116 Pg Pg 20 33 40.2 +0.8
LABF Sg Sg 20 33 45.2 +0.7
LABF Labassere 0.40 116 Pg Pg 20 33 40.3 +0.9
LABF Lg 20 33 46.0
LABF Labassere 0.40 116 Pg Pg 20 33 40.3 +0.9
LABF Lg 20 33 46.0
LABF Labassere 0.40 116 Pg Pg 20 33 40.2 +0.8
LABF Sg Sg 20 33 45.2 +0.7
FDAF Les Forges d'A 0.42 196 Pg Pg 20 33 39.9 +0.1
FDAF Lg 20 33 44.4
FDAF Les Forges d'A 0.42 196 Pg Pg 20 33 39.9 +0.1
FDAF Lg 20 33 44.4
LARF Larrau 0.46 247 Pg Pg 20 33 41.8 +1.2
LARF Sg Sg 20 33 50.7 +4.2
LARF Larrau 0.46 247 Pg Pg 20 33 42.0 +1.5
LARF Lg 20 33 48.5
LARF Larrau 0.46 247 Pg Pg 20 33 42.0 +1.5
LARF Lg 20 33 48.5
LARF Larrau 0.46 247 Pg Pg 20 33 41.8 +1.2
LARF Sg Sg 20 33 50.7 +4.2
VIEF Viey 0.46 136 Pg Pg 20 33 41.0 +0.3
VIEF Viey 0.46 136 Pg Pg 20 33 41.0 +0.4
VIEF Lg 20 33 46.1
VIEF Viey 0.46 136 Pg Pg 20 33 41.0 +0.4
VIEF Lg 20 33 46.1
VIEF Viey 0.46 136 Pg Pg 20 33 41.0 +0.3
EPF Esparros 0.58 109 ePg Pg 20 33 43.6 +0.7
EPF eSg Sg 20 33 51.7 +1.2
3µm,0.3s
EPF Esparros 0.58 109 Pg Pg 20 33 43.6 +0.7
EPF Lg 20 33 51.7
2µm,0.3s
EPF Esparros 0.58 109 Pg Pg 20 33 43.6 +0.7
EPF Lg 20 33 51.7
2µm,0.3s
EPF Esparros 0.58 109 ePg Pg 20 33 43.6 +0.7
EPF eSg Sg 20 33 51.7 +1.2
2µm,0.3s
SJPF Ste Jean 0.60 260 ePg Pg 20 33 44.5 +1.2
SJPF eSg Sg 20 33 53.7 +2.5
2µm,0.4s
SJPF Ste Jean 0.60 260 Pg Pg 20 33 44.5 +1.2
SJPF Lg 20 33 53.7
756nm,0.4s
SJPF Ste Jean 0.60 260 Pg Pg 20 33 44.5 +1.2
SJPF Lg 20 33 53.7
756nm,0.4s
SJPF Ste Jean 0.60 260 ePg Pg 20 33 44.5 +1.2
SJPF eSg Sg 20 33 53.7 +2.5
756nm,0.4s
OSSF Osses 0.62 274 Pg Pg 20 33 45.2 +1.5
OSSF Osses 0.62 274 Pg Pg 20 33 44.9 +1.2
OSSF Lg 20 33 54.3
OSSF Osses 0.62 274 Pg Pg 20 33 44.9 +1.2
OSSF Lg 20 33 54.3
OSSF Osses 0.62 274 Pg Pg 20 33 45.2 +1.5
EBIE Bielsa 0.67 142 ⇓Pg Pg 20 33 44.7 +0.1
EBIE Lg 20 33 52.2
EBIE Bielsa 0.67 142 ⇓Pg Pg 20 33 44.7 +0.1
283nm,0.2s,SNR=18
EBIE Lg 20 33 52.2
5µm,0.3s,SNR=16
EBIE Bielsa 0.67 142 ⇓Pg Pg 20 33 44.7 +0.1
283nm,0.2s,SNR=18
EBIE Lg 20 33 52.2
5µm,0.3s,SNR=16
EBIE Bielsa 0.67 142 Pg Pg 20 33 44.7 +0.1
283nm,0.2s,SNR=18
EBIE Lg 20 33 52.2
2µm,0.1s,SNR=16
RESF Ens 0.69 126 Pg Pg 20 33 45.2 +0.3
RESF Ens 0.69 126 Pg Pg 20 33 45.4 +0.5
RESF Lg 20 33 54.4
RESF Ens 0.69 126 Pg Pg 20 33 45.4 +0.5
RESF Lg 20 33 54.4
RESF Ens 0.69 126 Pg Pg 20 33 45.2 +0.3
EORO Oroz-Betelu 0.73 244 ⇓Pg Pg 20 33 47.0 +1.2
71nm,0.3s,SNR=18
EORO Lg 20 33 56.2
443nm,0.1s,SNR=7.9
EORO Oroz-Betelu 0.73 244 ⇓Pg Pg 20 33 47.0 +1.2
71nm,0.3s,SNR=18
EORO Lg 20 33 56.2
443nm,0.1s,SNR=7.9
EORO Oroz-Betelu 0.73 244 Pg Pg 20 33 47.0 +1.2
71nm,0.3s,SNR=18
EORO Lg 20 33 56.2
443nm,0.1s,SNR=7.9
EALK Alkurruntz 0.80 270 Pg Pg 20 33 48.1 +1.1
EALK Lg 20 34 00.5
EALK Alkurruntz 0.80 270 Pg Pg 20 33 48.1 +1.1
12nm,0.2s,SNR=104
EALK Lg 20 34 00.5
399nm,0.2s,SNR=24
EALK Alkurruntz 0.80 270 Pg Pg 20 33 48.1 +1.1
12nm,0.2s,SNR=104
EALK Lg 20 34 00.5
399nm,0.2s,SNR=24
EALK Alkurruntz 0.80 270 Pg Pg 20 33 48.2 +1.1
12nm,0.2s,SNR=104
EALK Lg 20 34 00.5
399nm,0.2s,SNR=24
IPRE Itoiz 0.81 239 Pg Pg 20 33 48.4 +1.2
39nm,0.1s,SNR=12
IPRE Lg 20 33 58.4
1µm,0.4s
IPRE Itoiz 0.81 239 Pg Pg 20 33 48.4 +1.2
39nm,0.1s,SNR=12
IPRE Lg 20 33 58.4
1µm,0.4s
IPRE Itoiz 0.81 239 Pg Pg 20 33 48.4 +1.2
39nm,0.1s,SNR=12
IPRE Lg 20 33 58.4
1µm,0.4s
ELIZ Elizondo 0.82 267 Pg Pg 20 33 48.2 +0.8
ELIZ Lg 20 34 00.8
ELIZ Elizondo 0.82 267 Pg Pg 20 33 48.2 +0.8
7.8nm,0.2s,SNR=74
ELIZ Lg 20 34 00.8
238nm,0.2s,SNR=19
ELIZ Elizondo 0.82 267 Pg Pg 20 33 48.2 +0.8
7.8nm,0.2s,SNR=74
ELIZ Lg 20 34 00.8
238nm,0.2s,SNR=19
ELIZ Elizondo 0.82 267 Pg Pg 20 33 48.2 +0.8
7.8nm,0.2s,SNR=74
ELIZ Lg 20 34 00.8
238nm,0.2s,SNR=19
IUSE Utxeti 0.88 252 ⇓Pg Pg 20 33 49.7 +1.1
17nm,0.1s,SNR=18
IUSE Lg 20 34 00.8
205nm,0.2s,SNR=35
IUSE Utxeti 0.88 252 ⇓Pg Pg 20 33 49.7 +1.1
17nm,0.1s,SNR=18
IUSE Lg 20 34 00.8
205nm,0.2s,SNR=35
IUSE Utxeti 0.88 252 Pg Pg 20 33 49.7 +1.2
17nm,0.1s,SNR=18
IUSE Lg 20 34 00.8
205nm,0.2s,SNR=35
IUNC Unciti 0.92 240 ⇑Pg Pg 20 33 50.8 +1.4
24nm,0.1s,SNR=18
IUNC Lg 20 34 03.1
214nm,0.2s,SNR=32
IUNC Unciti 0.92 240 ⇑Pg Pg 20 33 50.8 +1.4
24nm,0.1s,SNR=18
IUNC Lg 20 34 03.1
214nm,0.2s,SNR=32
IUNC Unciti 0.92 240 Pg Pg 20 33 50.8 +1.4
24nm,0.1s,SNR=18
IUNC Lg 20 34 03.2
214nm,0.2s,SNR=32
MELF Melles 0.93 112 Pg Pg 20 33 49.8 +0.3
MELF Sg Sg 20 34 01.5 0.0
MELF Melles 0.93 112 Pg Pg 20 33 49.5 0.0
MELF S Sg 20 34 02.0 +0.5
MELF Melles 0.93 112 Pg Pg 20 33 49.5 0.0
MELF S Sg 20 34 02.0 +0.5
MELF Melles 0.93 112 Pg Pg 20 33 49.8 +0.3
MELF Sg Sg 20 34 01.5 0.0
EARA Aranguren 0.96 243 ⇑Pg Pg 20 33 51.6 +1.4
20nm,0.1s,SNR=18
EARA Lg 20 34 04.5
186nm,0.2s,SNR=24
EARA Aranguren 0.96 243 ⇑Pg Pg 20 33 51.6 +1.4
20nm,0.1s,SNR=18
EARA Lg 20 34 04.5
186nm,0.2s,SNR=24
EARA Aranguren 0.96 243 Pg Pg 20 33 51.6 +1.3
20nm,0.1s,SNR=26
EARA Lg 20 34 04.5
186nm,0.2s,SNR=24
SALF Salau 1.26 111 Pg Pg 20 33 56.4 +0.5
SALF Sg Sg 20 34 12.9 +0.6
SALF Salau 1.26 111 Pg Pg 20 33 56.4 +0.4
SALF S Sg 20 34 12.4 +0.1
SALF Salau 1.26 111 Pg Pg 20 33 56.4 +0.4
SALF S Sg 20 34 12.4 +0.1
SALF Salau 1.26 111 Pg Pg 20 33 56.4 +0.5
SALF Sg Sg 20 34 12.9 +0.6
CSOR Sort 1.42 126 ⇑Pg Pg 20 33 58.9 0.0
CSOR Lg 20 34 17.9
CSOR Sort 1.42 126 ⇓Pg Pg 20 33 58.4 -0.5
95nm,0.3s,SNR=18
CSOR Lg 20 34 17.9
496nm,0.2s,SNR=22
CSOR Sort 1.42 126 ⇓Pg Pg 20 33 58.4 -0.5
95nm,0.3s,SNR=18
CSOR Lg 20 34 17.9
496nm,0.2s,SNR=22
CSOR Sort 1.42 126 Pg Pg 20 33 58.9 0.0
95nm,0.3s,SNR=18
CSOR Lg 20 34 17.9
496nm,0.2s,SNR=22
GRBF Gourbit 1.48 104 Pg Pg 20 33 59.9 -0.2
GRBF Lg 20 34 20.4
GRBF Gourbit 1.48 104 Pg Pg 20 33 59.9 -0.2
GRBF Lg 20 34 20.4
ESAC San Caprasio 1.50 182 ⇑Pg Pg 20 34 00.1 -0.4
ESAC Lg 20 34 19.6
ESAC San Caprasio 1.50 182 ⇓Pg Pg 20 33 60.0 -0.5
964nm,0.3s,SNR=18
ESAC Lg 20 34 19.6
5µm,0.3s
ESAC San Caprasio 1.50 182 ⇓Pg Pg 20 33 60.0 -0.5
964nm,0.3s,SNR=18
ESAC Lg 20 34 19.6
5µm,0.3s
ESAC San Caprasio 1.50 182 Pg Pg 20 34 00.1 -0.3
964nm,0.3s,SNR=18
ESAC Lg 20 34 19.6
5µm,0.3s
PAND Andorre 1.60 115 Pg Pg 20 34 07.3 +4.9
PAND Lg 20 34 29.1
PAND Andorre 1.60 115 Pg Pg 20 34 07.3 +4.9
PAND Lg 20 34 29.1
ECRI Cripan 1.66 249 Pg Pg 20 34 04.2 +0.7
ECRI Lg 20 34 26.2
ECRI Cripan 1.66 249 Pg Pg 20 34 04.2 +0.7
51nm,0.2s,SNR=7.9
ECRI Lg 20 34 26.2
335nm,0.2s,SNR=7.9
ECRI Cripan 1.66 249 Pg Pg 20 34 04.2 +0.7
51nm,0.2s,SNR=7.9
ECRI Lg 20 34 26.2
335nm,0.2s,SNR=7.9
ECRI Cripan 1.66 249 Pg Pg 20 34 04.2 +0.7
51nm,0.2s,SNR=7.9
ECRI Lg 20 34 26.2
335nm,0.2s,SNR=7.9
LPEF Le Peyrat 1.72 98 Pg Pb 20 34 03.2 -0.7
LPEF Lg 20 34 27.7
LPEF Le Peyrat 1.72 98 Pg Pb 20 34 03.2 -0.7
LPEF Lg 20 34 27.7
CLLI Llivia 1.91 112 Pg Pg 20 34 09.1 +0.9
CLLI Lg 20 34 33.9
CLLI Llivia 1.91 112 Pg Pg 20 34 07.8 -0.4
236nm,0.3s,SNR=454
CLLI Lg 20 34 33.9
256nm,0.2s,SNR=66
CLLI Llivia 1.91 112 Pg Pg 20 34 07.8 -0.4
236nm,0.3s,SNR=454
CLLI Lg 20 34 33.9
256nm,0.2s,SNR=66
CLLI Llivia 1.91 112 Pg Pg 20 34 09.1 +0.8
236nm,0.3s,SNR=454
CLLI Lg 20 34 33.9
256nm,0.2s,SNR=66
LFF La Frestale 1.91 25 ePg Pg 20 34 11.5 +3.1
LFF eSg Sg 20 34 35.4 +2.3
1µm,0.3s
LFF La Frestale 1.91 25 ePn Pn 20 34 06.0 +1.0
LFF ePg Pg 20 34 11.5 +3.1
LFF eSg Sg 20 34 35.4 +2.3
LFF La Frestale 1.91 25 Pn Pn 20 34 06.0 +1.0
LFF Pg Pg 20 34 11.5 +3.1
LFF Lg 20 34 35.4
512nm,0.3s
LFF La Frestale 1.91 25 Pn Pn 20 34 06.0 +1.0
LFF Pg Pg 20 34 11.5 +3.1
LFF Lg 20 34 35.4
512nm,0.3s
LFF La Frestale 1.91 25 ePn Pn 20 34 06.0 +1.0
LFF La Frestale 1.91 25 ePg Pg 20 34 11.5 +3.1
LFF eSg Sg 20 34 35.4 +2.3
512nm,0.3s
CARF Carcanieres 1.92 104 Pg Pg 20 34 09.2 +0.7
CARF Sg Sg 20 34 34.5 +1.2
CARF Carcanieres 1.92 104 Pg Pg 20 34 08.6 +0.2
CARF Lg 20 34 33.4
CARF Carcanieres 1.92 104 Pg Pg 20 34 08.6 +0.2
CARF Lg 20 34 33.4
CARF Carcanieres 1.92 104 Pg Pg 20 34 09.2 +0.7
CARF Sg Sg 20 34 34.5 +1.2
MTLF Montolieu 1.93 85 ePg Pg 20 34 09.9 +1.3
MTLF eSg Sg 20 34 33.8 +0.2
1µm,0.3s
MTLF Montolieu 1.93 85 ePn Pn 20 34 05.3 +0.1
MTLF ePg Pg 20 34 09.9 +1.3
MTLF eSg Sg 20 34 33.8 +0.2
MTLF Montolieu 1.93 85 Pn Pn 20 34 05.3 +0.1
MTLF Pg Pg 20 34 09.9 +1.3
MTLF Lg 20 34 33.8
584nm,0.3s
MTLF Montolieu 1.93 85 Pn Pn 20 34 05.3 +0.1
MTLF Pg Pg 20 34 09.9 +1.3
MTLF Lg 20 34 33.8
584nm,0.3s
MTLF Montolieu 1.93 85 ePn Pn 20 34 05.3 +0.1
MTLF Montolieu 1.93 85 ePg Pg 20 34 09.9 +1.3
MTLF eSg Sg 20 34 33.8 +0.2
584nm,0.3s
EMIR Miracle 1.94 132 Pg Pg 20 34 08.5 -0.3
EMIR Lg 20 34 33.7
EMIR Miracle 1.94 132 Pn Pn 20 34 07.3 +1.9
449nm,0.3s,SNR=581
EMIR Lg 20 34 33.7
906nm,0.3s,SNR=13
EMIR Miracle 1.94 132 Pn Pn 20 34 07.3 +1.9
449nm,0.3s,SNR=581
EMIR Lg 20 34 33.7
906nm,0.3s,SNR=13
EMIR Miracle 1.94 132 Pg Pg 20 34 08.5 -0.4
449nm,0.3s,SNR=581
EMIR Lg 20 34 33.7
906nm,0.3s,SNR=13
VALF Valcebollere 1.97 114 Pg Pg 20 34 09.0 -0.4
VALF Sg Sg 20 34 35.7 +0.8
VALF Valcebollere 1.97 114 Pg Pg 20 34 09.0 -0.4
VALF Lg 20 34 35.7
VALF Valcebollere 1.97 114 Pg Pg 20 34 09.0 -0.4
VALF Lg 20 34 35.7
VALF Valcebollere 1.97 114 Pg Pg 20 34 09.0 -0.4
VALF Sg Sg 20 34 35.7 +0.8
EPOB Poblet 2.17 149 Pn Pn 20 34 09.3 +0.7
EPOB Pn Pn 20 34 11.6 +3.0
EPOB Sn Sn 20 34 36.1 +0.3
EPOB Poblet 2.17 149 Pn Pn 20 34 09.3 +0.7
0.8nm,0.2s,SNR=164
EPOB Pg Pg 20 34 11.6 -1.7
40nm,0.2s,SNR=7.9
EPOB Sn Sn 20 34 36.1 +0.3
497nm,0.3s,SNR=32
EPOB Lg 20 34 39.0
1µm,0.6s,SNR=7.9
EPOB Poblet 2.17 149 Pn Pn 20 34 09.3 +0.7
0.8nm,0.2s,SNR=164
EPOB Pg Pg 20 34 11.6 -1.7
40nm,0.2s,SNR=7.9
EPOB Sn Sn 20 34 36.1 +0.3
497nm,0.3s,SNR=32
EPOB Lg 20 34 39.0
1µm,0.6s,SNR=7.9
EPOB Poblet 2.17 149 Pn Pn 20 34 09.3 +0.7
0.8nm,0.2s,SNR=164
EPOB Sn Sn 20 34 36.2 +0.3
497nm,0.3s,SNR=32
LRDF Laroque-de-Fa 2.18 96 Pg Pg 20 34 13.5 0.0
LRDF Sg Sg 20 34 41.9 +0.1
LRDF Laroque-de-Fa 2.18 96 Pg Pn 20 34 09.5 +0.8
LRDF Lg 20 34 38.8
LRDF Laroque-de-Fa 2.18 96 Pg Pn 20 34 09.5 +0.8
LRDF Lg 20 34 38.8
LRDF Laroque-de-Fa 2.18 96 Pg Pg 20 34 13.5 0.0
LRDF Sg Sg 20 34 41.9 +0.1
ELAN Lanestosa 2.21 271 Pn Pb 20 34 12.6 +0.4
ELAN Sn Sn 20 34 40.1 +3.2
ELAN Lanestosa 2.21 271 Pn Pb 20 34 12.6 +0.4
4.8nm,0.2s,SNR=26
ELAN Sn Sn 20 34 40.1 +3.2
65nm,0.4s,SNR=7.6
ELAN Lanestosa 2.21 271 Pn Pb 20 34 12.6 +0.4
4.8nm,0.2s,SNR=26
ELAN Sn Sn 20 34 40.1 +3.2
65nm,0.4s,SNR=7.6
ELAN Lanestosa 2.21 271 Pn Pb 20 34 12.6 +0.4
4.8nm,0.2s,SNR=26
ELAN Sn Sn 20 34 40.1 +3.3
65nm,0.4s,SNR=7.6
FILF Fillols 2.28 106 Pg Pg 20 34 13.8 -1.7
FILF Sg Sg 20 34 43.6 -1.4
FILF Fillols 2.28 106 Pg Pn 20 34 10.7 +0.6
FILF Lg 20 34 40.5
FILF Fillols 2.28 106 Pg Pn 20 34 10.7 +0.6
FILF Lg 20 34 40.5
FILF Fillols 2.28 106 Pg Pg 20 34 13.8 -1.7
FILF Sg Sg 20 34 43.6 -1.4
ERTA Horta de San J 2.33 166 Pn Pn 20 34 11.0 +0.2
ERTA Pg Pg 20 34 15.1 -1.3
ERTA Sn Sn 20 34 38.1 -1.7
ERTA Horta de San J 2.33 166 Pn Pn 20 34 11.0 +0.2
0.9nm,0.1s,SNR=43
ERTA Pg Pg 20 34 15.1 -1.3
51nm,0.2s,SNR=7.9
ERTA Lg 20 34 42.8
876nm,0.6s,SNR=25
ERTA Horta de San J 2.33 166 Pn Pn 20 34 11.0 +0.2
0.9nm,0.1s,SNR=43
ERTA Pg Pg 20 34 15.1 -1.3
51nm,0.2s,SNR=7.9
ERTA Lg 20 34 42.8
876nm,0.6s,SNR=25
ERTA Horta de San J 2.33 166 Pn Pn 20 34 11.0 +0.2
0.9nm,0.1s,SNR=43
ERTA Horta de San J 2.33 166 Pg Pg 20 34 15.1 -1.3
51nm,0.2s,SNR=7.9
ERTA Sn Sn 20 34 38.1 -1.7
27nm,0.1s,SNR=25
CAF Calviac 2.47 45 ePg Pg 20 34 21.2 +2.1
CAF eSg Sg 20 34 51.1 0.0
708nm,0.2s
CAF Calviac 2.47 45 ePn Pn 20 34 12.5 -0.2
CAF ePg Pg 20 34 21.2 +2.1
CAF eSg Sg 20 34 51.1 0.0
CAF Calviac 2.47 45 Pn Pn 20 34 12.5 -0.2
CAF Pg Pg 20 34 21.2 +2.1
CAF Lg 20 34 51.1
354nm,0.2s
CAF Calviac 2.47 45 Pn Pn 20 34 12.5 -0.2
CAF Pg Pg 20 34 21.2 +2.1
CAF Lg 20 34 51.1
354nm,0.2s
CAF Calviac 2.47 45 ePn Pn 20 34 12.5 -0.2
CAF Calviac 2.47 45 ePg Pg 20 34 21.2 +2.1
CAF eSg Sg 20 34 51.1 0.0
354nm,0.2s
RJF Les Rejaudoux 2.50 33 ePg Pg 20 34 22.0 +2.3
RJF eSg Sg 20 34 53.2 +1.0
714nm,0.3s
RJF Les Rejaudoux 2.50 33 ePn Pn 20 34 13.3 +0.1
RJF ePg Pg 20 34 22.0 +2.3

RJF				*e*Sg	Sg	20 34 53.2	+1.0
RJF	**Les Rejaudoux**	**2.50**	**33**	Pn	Pn	20 34 13.3	+0.1
RJF				Pg	Pg	20 34 22.0	+2.3
RJF				Lg		20 34 53.2	
	357nm,0.3s						
RJF	**Les Rejaudoux**	**2.50**	**33**	Pn	Pn	20 34 13.3	+0.1
RJF				Pg	Pg	20 34 22.0	+2.3
RJF				Lg		20 34 53.2	
	357nm,0.3s						
RJF	**Les Rejaudoux**	**2.50**	**33**	*e*Pn	Pn	20 34 13.3	+0.1
RJF	**Les Rejaudoux**	**2.50**	**33**	*e*Pg	Pg	20 34 22.0	+2.3
RJF				*e*Sg	Sg	20 34 53.2	+1.0
	357nm,0.3s						
SJAF	**Saint Jean de**	**2.53**	**106**	Pg	Pg	20 34 18.8	-1.5
SJAF				Sg	Sg	20 34 54.2	+1.1
SJAF	**Saint Jean de**	**2.53**	**106**	Pg	Pb	20 34 16.6	-1.1
SJAF				Lg		20 34 49.1	
SJAF	**Saint Jean de**	**2.53**	**106**	Pg	Pb	20 34 16.6	-1.1
SJAF				Lg		20 34 49.1	
SJAF	**Saint Jean de**	**2.53**	**106**	Pg	Pg	20 34 18.8	-1.5
SJAF				Sg	Sg	20 34 54.2	+1.1
EJON	**La Jonquera**	**2.55**	**106**	Pn	Pn	20 34 16.3	+2.5
EJON				Pg	Pg	20 34 20.5	-0.1
EJON				Sn	Sn	20 34 46.5	+1.3
EJON				Lg		20 34 54.9	
EJON	**La Jonquera**	**2.55**	**106**	Pn	Pn	20 34 15.4	+1.6
	0.0nm,0.1s,SNR=7.9						
EJON				Pg	Pg	20 34 20.5	-0.1
	38nm,0.3s,SNR=62						
EJON				Lg		20 34 53.8	
	169nm,0.2s,SNR=30						
EJON	**La Jonquera**	**2.55**	**106**	Pn	Pn	20 34 15.4	+1.6
	0.0nm,0.1s,SNR=7.9						
EJON				Pg	Pg	20 34 20.5	-0.1
	38nm,0.3s,SNR=62						
EJON				Lg		20 34 53.8	
	169nm,0.2s,SNR=30						
EJON	**La Jonquera**	**2.55**	**106**	Pn	Pn	20 34 16.3	+2.5
	SNR=7.9						
EJON	**La Jonquera**	**2.55**	**106**	Pg	Pg	20 34 20.5	-0.1
	38nm,0.3s,SNR=62						
EJON				Sn	Sn	20 34 46.5	+1.3
	24nm,0.2s,SNR=7.9						
EJON				Lg		20 34 54.9	
	169nm,0.2s,SNR=30						
CFON	**Fontmartina**	**2.56**	**124**	⇓Pn	Pn	20 34 16.1	+2.1
CFON				Pg	Pg	20 34 20.1	-0.7
CFON				Sn	Sn	20 34 45.2	-0.3
CFON				Lg		20 34 53.6	
CFON	**Fontmartina**	**2.56**	**124**	⇓Pn	Pn	20 34 16.0	+2.1
	49nm,0.2s,SNR=18						
CFON				Pg	Pg	20 34 20.1	-0.7
	108nm,0.2s,SNR=7.9						
CFON				Sn	Sn	20 34 45.2	-0.3
	110nm,0.2s,SNR=7.9						
CFON				Lg		20 34 52.4	
	2µm,0.2s,SNR=18						
CFON	**Fontmartina**	**2.56**	**124**	⇓Pn	Pn	20 34 16.0	+2.1
	49nm,0.2s,SNR=18						
CFON				Pg	Pg	20 34 20.1	-0.7
	108nm,0.2s,SNR=7.9						
CFON				Sn	Sn	20 34 45.2	-0.3
	110nm,0.2s,SNR=7.9						
CFON				Lg		20 34 52.4	
	2µm,0.2s,SNR=18						
CFON	**Fontmartina**	**2.56**	**124**	Pn	Pn	20 34 16.0	+2.0
	49nm,0.2s,SNR=18						
CFON	**Fontmartina**	**2.56**	**124**	Pg	Pg	20 34 20.1	-0.7
	108nm,0.2s,SNR=7.9						
CFON				Sn	Sn	20 34 45.2	-0.3
	110nm,0.2s,SNR=7.9						
CFON				Lg		20 34 53.6	
	2µm,0.2s,SNR=18						
ETOR	**Torete**	**2.69**	**208**	⇑Pn	Pn	20 34 17.0	+1.2
ETOR				Pg	Pg	20 34 22.8	-0.6
ETOR				Sn	Sn	20 34 48.2	-0.6
ETOR				Lg		20 34 57.1	
ETOR	**Torete**	**2.69**	**208**	⇑Pn	Pn	20 34 17.0	+1.2
	34nm,0.3s,SNR=18						
ETOR				Pg	Pg	20 34 22.8	-0.6
	110nm,0.2s,SNR=7.9						
ETOR				Sn	Sn	20 34 48.2	-0.6
	140nm,0.2s,SNR=7.2						
ETOR				Lg		20 34 57.1	
	248nm,0.2s,SNR=7.9						
ETOR	**Torete**	**2.69**	**208**	⇑Pn	Pn	20 34 17.0	+1.2
	34nm,0.3s,SNR=18						
ETOR				Pg	Pg	20 34 22.8	-0.6
	110nm,0.2s,SNR=7.9						
ETOR				Sn	Sn	20 34 48.2	-0.6
	140nm,0.2s,SNR=7.2						
ETOR				Lg		20 34 57.1	
	248nm,0.2s,SNR=7.9						
ETOR	**Torete**	**2.69**	**208**	Pn	Pn	20 34 17.0	+1.2
	34nm,0.3s,SNR=18						
EMOS	**Mosqueruela**	**2.85**	**181**	Pn	Pn	20 34 19.0	+1.0
EMOS				Pg	Pg	20 34 24.6	-1.8
EMOS				Sn	Sn	20 34 50.8	-2.0
EMOS				Lg		20 35 02.4	
EMOS	**Mosqueruela**	**2.85**	**181**	Pn	Pn	20 34 19.0	+1.0
	1.0nm,0.1s,SNR=37						
EMOS				Pg	Pg	20 34 24.6	-1.8
	12nm,0.2s,SNR=7.9						
EMOS				Sn	Sn	20 34 50.8	-2.0
	36nm,0.3s,SNR=7.9						
EMOS				Lg		20 35 03.1	
	59nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**2.85**	**181**	Pn	Pn	20 34 19.0	+1.0
	1.0nm,0.1s,SNR=37						
EMOS				Pg	Pg	20 34 24.6	-1.8
	12nm,0.2s,SNR=7.9						
EMOS				Sn	Sn	20 34 50.8	-2.0
	36nm,0.3s,SNR=7.9						
EMOS				Lg		20 35 03.1	
	59nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**2.85**	**181**	Pn	Pn	20 34 19.0	+1.0
	1.0nm,0.1s,SNR=37						
EMOS	**Mosqueruela**	**2.85**	**181**	Pg	Pg	20 34 24.6	-1.8
	12nm,0.2s,SNR=7.9						
EMOS				Sn	Sn	20 34 50.8	-1.9
	36nm,0.3s,SNR=7.9						
EMOS				Lg		20 35 02.4	
	59nm,0.2s,SNR=7.9						
LASF	**Ste Croix**	**3.22**	**73**	*e*Pg	Pg	20 34 34.3	+0.9
LASF				*e*Sg	Sg	20 35 14.4	-0.6
	784nm,0.3s						
LASF	**Ste Croix**	**3.22**	**73**	*e*Pn	Pn	20 34 22.8	-0.2
LASF				*e*Pg	Pg	20 34 34.3	+0.9
LASF				*e*Sg	Sg	20 35 14.4	-0.6
LASF	**Ste Croix**	**3.22**	**73**	Pn	Pn	20 34 22.8	-0.2
LASF				Pg	Pg	20 34 34.3	+0.9
LASF				Lg		20 35 14.4	
	392nm,0.3s						
LASF	**Ste Croix**	**3.22**	**73**	Pn	Pn	20 34 22.8	-0.2
LASF				Pg	Pg	20 34 34.3	+0.9
LASF				Lg		20 35 14.4	
	392nm,0.3s						
LASF	**Ste Croix**	**3.22**	**73**	*e*Pn	Pn	20 34 22.8	-0.2
LASF	**Ste Croix**	**3.22**	**73**	*e*Pg	Pg	20 34 34.3	+0.9
LASF				*e*Sg	Sg	20 35 14.4	-0.6
	392nm,0.3s						
VERF	**Verneugheol**	**3.27**	**38**	Pn	Pn	20 34 24.5	+0.8
VERF	**Verneugheol**	**3.27**	**38**	Pn	Pn	20 34 24.5	+0.8
LBL	**Lubilhac**	**3.31**	**51**	Pn	Pn	20 34 25.8	+1.5
LBL	**Lubilhac**	**3.31**	**51**	Pn	Pn	20 34 25.8	+1.5
MFF	**Saint Martin d**	**3.39**	**3**	*e*Pg	Pg	20 34 38.6	+1.9
MFF				*e*Sg	Sg	20 35 21.5	+0.9
	283nm,0.3s						
MFF	**Saint Martin d**	**3.39**	**3**	*e*Pn	Pn	20 34 25.9	+0.6
MFF				*e*Pg	Pg	20 34 38.6	+1.9
MFF				*e*Sg	Sg	20 35 21.5	+0.9
MFF	**Saint Martin d**	**3.39**	**3**	Pn	Pn	20 34 25.9	+0.6
MFF				Pg	Pg	20 34 38.6	+1.9
MFF				Lg		20 35 21.5	
	142nm,0.3s						
MFF	**Saint Martin d**	**3.39**	**3**	Pn	Pn	20 34 25.9	+0.6
MFF				Pg	Pg	20 34 38.6	+1.9
MFF				Lg		20 35 21.5	
	142nm,0.3s						
MFF	**Saint Martin d**	**3.39**	**3**	*e*Pn	Pn	20 34 25.9	+0.6
MFF	**Saint Martin d**	**3.39**	**3**	*e*Pg	Pg	20 34 38.6	+1.9
MFF				*e*Sg	Sg	20 35 21.5	+0.9
	141nm,0.3s						
EARI	**Arriondas**	**3.50**	**273**	Pn	Pn	20 34 30.3	+3.3
EARI				Pg	Pg	20 34 38.8	-0.1
EARI				Sn	Sn	20 35 08.8	-0.1
EARI				Lg		20 35 26.2	
EARI	**Arriondas**	**3.50**	**273**	Pn	Pn	20 34 29.7	+2.8
	1.4nm,0.2s,SNR=9.4						
EARI				Sn	Sn	20 35 08.8	-0.1
	33nm,0.5s,SNR=4.6						
EARI	**Arriondas**	**3.50**	**273**	Pn	Pn	20 34 29.7	+2.8
	1.4nm,0.2s,SNR=9.4						
EARI				Sn	Sn	20 35 08.8	-0.1
	33nm,0.5s,SNR=4.6						
EARI	**Arriondas**	**3.50**	**273**	Pn	Pn	20 34 30.3	+3.4
	1.4nm,0.2s,SNR=9.4						
EARI	**Arriondas**	**3.50**	**273**	Pg	Pg	20 34 38.8	-0.1
	2.1nm,0.2s,SNR=7.3						
EARI				Sn	Sn	20 35 08.8	0.0
	33nm,0.5s,SNR=4.6						
EARI				Lg		20 35 26.2	
	6.7nm,0.2s						
PYM	**Petit Puy Mans**	**3.52**	**43**	Pn	Pn	20 34 29.1	+1.9
PYM	**Petit Puy Mans**	**3.52**	**43**	Pn	Pn	20 34 29.1	+1.9
TCF	**Toulx Ste Croi**	**3.59**	**30**	*e*Pg	Pg	20 34 41.9	+1.3
TCF				*e*Sn	Sn	20 35 10.0	-1.0
TCF				*e*Sg	Sg	20 35 27.2	+0.1
	352nm,0.4s						
TCF	**Toulx Ste Croi**	**3.59**	**30**	*e*Pn	Pn	20 34 27.7	-0.5
TCF				*e*Pg	Pg	20 34 41.9	+1.3
TCF				*e*Sn	Sn	20 35 10.0	-1.0
TCF				*e*Sg	Sg	20 35 27.2	+0.1
TCF	**Toulx Ste Croi**	**3.59**	**30**	Pn	Pn	20 34 27.7	-0.5
TCF				Pg	Pg	20 34 41.9	+1.3
TCF				Sn	Sn	20 35 10.0	-1.0
TCF				Lg		20 35 27.2	
	176nm,0.4s						
TCF	**Toulx Ste Croi**	**3.59**	**30**	Pn	Pn	20 34 27.7	-0.5
TCF				Pg	Pg	20 34 41.9	+1.3
TCF				Sn	Sn	20 35 10.0	-1.0
TCF				Lg		20 35 27.2	
	176nm,0.4s						
TCF	**Toulx Ste Croi**	**3.59**	**30**	*e*Pn	Pn	20 34 27.7	-0.5
TCF	**Toulx Ste Croi**	**3.59**	**30**	*e*Pg	Pg	20 34 41.9	+1.3
TCF				*e*Sn	Sn	20 35 10.0	-1.0
TCF				*e*Sg	Sg	20 35 27.2	+0.1
	176nm,0.4s						
ECHE	**Chera**	**3.65**	**187**	Pn	Pn	20 34 29.4	+0.4
ECHE				Pg	Pg	20 34 39.7	-2.0
ECHE				Sn	Sn	20 35 10.4	-2.0
ECHE				Lg		20 35 26.0	
ECHE	**Chera**	**3.65**	**187**	Pn	Pn	20 34 29.4	+0.4
	0.7nm,0.2s,SNR=11						
ECHE				Pg	Pg	20 34 39.7	-2.0
	3.5nm,0.2s,SNR=14						
ECHE				Sn	Sn	20 35 10.4	-2.0
	22nm,0.3s,SNR=5.6						
ECHE				Lg		20 35 26.0	
	69nm,0.3s,SNR=5.0						
ECHE	**Chera**	**3.65**	**187**	Pn	Pn	20 34 29.4	+0.4
	0.7nm,0.2s,SNR=11						
ECHE				Pg	Pg	20 34 39.7	-2.0
	3.5nm,0.2s,SNR=14						
ECHE				Sn	Sn	20 35 10.4	-2.0
	22nm,0.3s,SNR=5.6						
ECHE				Lg		20 35 26.0	
	69nm,0.3s,SNR=5.0						
ECHE	**Chera**	**3.65**	**187**	Pn	Pn	20 34 29.4	+0.5
	0.7nm,0.2s,SNR=11						
ECHE	**Chera**	**3.65**	**187**	Pg	Pg	20 34 39.7	-2.0
	3.5nm,0.2s,SNR=14						
ECHE				Sn	Sn	20 35 10.4	-2.0
	22nm,0.3s,SNR=5.6						
ECHE				Lg		20 35 26.0	
	69nm,0.3s,SNR=5.0						
GUD	**Guadarrama**	**3.80**	**229**	Pn	Pn	20 34 32.3	+1.4
GUD				Pg	Pg	20 34 41.9	-2.6
GUD				Sn	Sn	20 35 14.1	-2.0
GUD	**Guadarrama**	**3.80**	**229**	Pn	Pn	20 34 32.3	+1.4
	15nm,0.4s,SNR=7.9						
GUD				Pg	Pg	20 34 41.9	-2.6
	9.2nm,0.2s,SNR=7.9						
GUD				Sn	Sn	20 35 14.1	-2.0
	11nm,0.3s,SNR=7.9						
GUD				Lg		20 35 30.8	
	73nm,0.6s,SNR=7.9						
GUD	**Guadarrama**	**3.80**	**229**	Pn	Pn	20 34 32.3	+1.4
	15nm,0.4s,SNR=7.9						
GUD				Pg	Pg	20 34 41.9	-2.6
	9.2nm,0.2s,SNR=7.9						
GUD				Sn	Sn	20 35 14.1	-2.0
	11nm,0.3s,SNR=7.9						
GUD				Lg		20 35 30.8	
	73nm,0.6s,SNR=7.9						
GUD	**Guadarrama**	**3.80**	**229**	Pn	Pn	20 34 32.3	+1.3
	15nm,0.4s,SNR=7.9						
AGO	**Saint Agoulin**	**3.80**	**41**	Pn	Pn	20 34 32.1	+1.1
AGO	**Saint Agoulin**	**3.80**	**41**	Pn	Pn	20 34 32.1	+1.1
PLDF	**La Plantade**	**3.98**	**45**	Pn	Pn	20 34 33.8	+0.3
PLDF	**La Plantade**	**3.98**	**45**	Pn	Pn	20 34 33.8	+0.3
VIVF	**Saint-Julien-l**	**4.02**	**64**	*e*Pg	Pg	20 34 49.8	+1.1
VIVF				*e*Sg	Sg	20 35 39.3	-1.4
	248nm,0.2s						
VIVF	**Saint-Julien-l**	**4.02**	**64**	*e*Pn	Pn	20 34 34.5	+0.5
VIVF				*e*Pg	Pg	20 34 49.8	+1.1
VIVF				*e*Sg	Sg	20 35 39.3	-1.4
VIVF	**Saint-Julien-l**	**4.02**	**64**	Pn	Pn	20 34 34.5	+0.5
VIVF				Pg	Pg	20 34 49.8	+1.1
VIVF				Lg		20 35 39.3	
	124nm,0.2s						
VIVF	**Saint-Julien-l**	**4.02**	**64**	Pn	Pn	20 34 34.5	+0.5
VIVF				Pg	Pg	20 34 49.8	+1.1
VIVF				Lg		20 35 39.3	
	124nm,0.2s						
VIVF	**Saint-Julien-l**	**4.02**	**64**	*e*Pn	Pn	20 34 34.5	+0.5
VIVF	**Saint-Julien-l**	**4.02**	**64**	*e*Pg	Pg	20 34 49.8	+1.1
VIVF				*e*Sg	Sg	20 35 39.3	-1.4
	124nm,0.2s						
BGF	**Bois d'Agland**	**4.06**	**34**	*e*Pg	Pg	20 34 50.9	+1.3
BGF				*e*Sg	Sg	20 35 41.8	-0.4
	1µm,0.4s						
BGF	**Bois d'Agland**	**4.06**	**34**	*e*Pn	Pn	20 34 34.7	+0.1
BGF				*e*Pg	Pg	20 34 50.9	+1.3
BGF				*e*Sg	Sg	20 35 41.8	-0.4
BGF	**Bois d'Agland**	**4.06**	**34**	Pn	Pn	20 34 34.7	+0.1
BGF				Pg	Pg	20 34 50.9	+1.3
BGF				Lg		20 35 41.8	
	532nm,0.4s						
BGF	**Bois d'Agland**	**4.06**	**34**	Pn	Pn	20 34 34.7	+0.1
BGF				Pg	Pg	20 34 50.9	+1.3
BGF				Lg		20 35 41.8	
	532nm,0.4s						
BGF	**Bois d'Agland**	**4.06**	**34**	*e*Pn	Pn	20 34 34.7	+0.1
BGF	**Bois d'Agland**	**4.06**	**34**	*e*Pg	Pg	20 34 50.9	+1.3
BGF				*e*Sg	Sg	20 35 41.8	-0.4
	532nm,0.4s						
SSB	**Saint Sauveur**	**4.11**	**58**	Pn	Pn	20 34 35.9	+0.6
SSB	**Saint Sauveur**	**4.11**	**58**	*e*Pn	Pn	20 34 36.9	+1.6
SSB	**Saint Sauveur**	**4.11**	**58**	Pn	Pn	20 34 35.9	+0.6
ETOS	**Mallorca**	**4.21**	**144**	Pn	Pn	20 34 37.5	+0.8
ETOS				Pg	Pg	20 34 49.3	-3.2
ETOS				Sn	Sn	20 35 24.4	-1.9
ETOS				Lg		20 35 46.9	
ETOS	**Mallorca**	**4.21**	**144**	Pn	Pn	20 34 37.5	+0.8
	4.4nm,0.3s,SNR=26						
ETOS				Pg	Pg	20 34 49.3	-3.2
	2.6nm,0.2s,SNR=6.0						
ETOS				Sn	Sn	20 35 24.4	-1.9
	8.9nm,0.2s,SNR=7.9						
ETOS	**Mallorca**	**4.21**	**144**	Pn	Pn	20 34 37.5	+0.8
	4.4nm,0.3s,SNR=26						
ETOS				Pg	Pg	20 34 49.3	-3.2
	2.6nm,0.2s,SNR=6.0						
ETOS				Sn	Sn	20 35 24.4	-1.9
	8.9nm,0.2s,SNR=7.9						
ETOS	**Mallorca**	**4.21**	**144**	Pn	Pn	20 34 37.5	+0.8
	4.4nm,0.3s,SNR=26						
ETOS	**Mallorca**	**4.21**	**144**	Pg	Pg	20 34 49.3	-3.2
	2.6nm,0.2s,SNR=6.0						
ETOS				Sn	Sn	20 35 24.4	-1.9
	8.9nm,0.2s,SNR=7.9						
ETOS				Lg		20 35 46.9	
	8.1nm,0.3s						
OCF	**Saint Nazaire**	**4.35**	**70**	Pn	Pn	20 34 39.4	+0.9
OCF	**Saint Nazaire**	**4.35**	**70**	Pn	Pn	20 34 39.4	+0.9
OG26	**St.-Nazaire-De**	**4.35**	**70**	Pn	Pn	20 34 39.4	+0.9
OG26	**St.-Nazaire-De**	**4.35**	**70**	Pn	Pn	20 34 39.4	+0.9
EIBI	**Ibiza**	**4.39**	**162**	Pn	Pn	20 34 39.3	+0.2
EIBI				Pg	Pg	20 34 51.5	-4.4
EIBI				Sn	Sn	20 35 26.3	-4.4
EIBI				Lg		20 35 50.9	
EIBI	**Ibiza**	**4.39**	**162**	Pn	Pn	20 34 39.3	+0.2
	7.3nm,0.2s,SNR=15						
EIBI				Sn	Sn	20 35 26.3	-4.4
	11nm,0.2s,SNR=7.9						
EIBI				Lg		20 35 50.9	
	8.9nm,0.3s						
EIBI	**Ibiza**	**4.39**	**162**	Pn	Pn	20 34 39.3	+0.2
	7.3nm,0.2s,SNR=15						
EIBI				Sn	Sn	20 35 26.3	-4.4
	11nm,0.2s,SNR=7.9						
EIBI				Lg		20 35 50.9	
	8.9nm,0.3s						
EIBI	**Ibiza**	**4.39**	**162**	Pn	Pn	20 34 39.3	+0.1
	7.3nm,0.2s,SNR=15						
EIBI				Lg		20 35 50.9	
	8.9nm,0.3s						
SMRF	**Simiane la Rot**	**4.42**	**78**	*e*Pg	Pg	20 34 57.5	+1.2
SMRF				*e*Sg	Sg	20 35 52.3	-1.2
	192nm,0.5s						
SMRF	**Simiane la Rot**	**4.42**	**78**	*e*Pn	Pn	20 34 39.8	+0.4
SMRF				*e*Pg	Pg	20 34 57.5	+1.2
SMRF				*e*Sg	Sg	20 35 52.3	-1.2
SMRF	**Simiane la Rot**	**4.42**	**78**	Pn	Pn	20 34 39.8	+0.4
SMRF				Pg	Pg	20 34 57.5	+1.2
SMRF				Lg		20 35 52.3	
	329nm,0.7s						
SMRF	**Simiane la Rot**	**4.42**	**78**	Pn	Pn	20 34 39.8	+0.4
SMRF				Pg	Pg	20 34 57.5	+1.2
SMRF				Lg		20 35 52.3	
	329nm,0.7s						
SMRF	**Simiane la Rot**	**4.42**	**78**	*e*Pn	Pn	20 34 39.8	+0.4
SMRF	**Simiane la Rot**	**4.42**	**78**	*e*Pg	Pg	20 34 57.5	+1.2
SMRF				*e*Sg	Sg	20 35 52.3	-1.2
	165nm,0.7s						
ESDC	**Sonseca Array**	**4.43**	**218**	Pn	Pn	20 34 39.9	+0.2
ESDC				Pg	Pg	20 34 53.3	-3.4
ESDC				Sn	Sn	20 35 28.3	-3.4
ESDC				Lg		20 35 51.3	
ESDC	**Sonseca Array**	**4.43**	**218**	Pn	Pn	20 34 39.9	+0.2
	8.7nm,0.2s,baz=41,slow=14,SNR=53						
ESDC				Pg	Pg	20 34 53.3	-3.4
	14nm,0.3s,baz=41,slow=14,SNR=8.5						
ESDC				Sn	Sn	20 35 28.3	-3.4
	6.4nm,0.1s,baz=41,slow=25,SNR=6.4						
ESDC				Lg		20 35 49.2	
	31nm,0.4s,baz=39,slow=28,SNR=8.9						
ESDC	**Sonseca Array**	**4.43**	**218**	Pn	Pn	20 34 39.9	+0.2
	8.7nm,0.2s,baz=41,slow=14,SNR=53						
ESDC				Pg	Pg	20 34 53.3	-3.4
	14nm,0.3s,baz=41,slow=14,SNR=8.5						
ESDC				Sn	Sn	20 35 28.3	-3.4
	6.4nm,0.1s,baz=41,slow=25,SNR=6.4						
ESDC				Lg		20 35 49.2	
	31nm,0.4s,baz=39,slow=28,SNR=8.9						
ESDC	**Sonseca Array**	**4.43**	**218**	Pn	Pn	20 34 39.9	+0.2
	8.7nm,0.2s,slow=14,SNR=53						
ESDC	**Sonseca Array**	**4.43**	**218**	Pg	Pg	20 34 53.3	-3.4
	14nm,0.3s,SNR=8.5						
ESDC				Sn	Sn	20 35 28.3	-3.4
	6.4nm,0.1s,slow=25,SNR=6.4						
ESDC				Lg		20 35 51.3	
	31nm,0.4s,SNR=8.9						
ESLA	**Sonseca Array**	**4.43**	**218**	*e*Pn	Pn	20 34 39.5	-0.3
ESLA	**Sonseca Array**	**4.43**	**218**	*e*Pn	Pn	20 34 39.5	-0.2
AVF	**Avril sur Loir**	**4.46**	**35**	*e*Pg	Pg	20 34 57.7	+0.5
AVF				*e*Sg	Sg	20 35 54.2	-0.7
	232nm,0.4s						
AVF	**Avril sur Loir**	**4.46**	**35**	*e*Pn	Pn	20 34 40.4	+0.3
AVF				*e*Pg	Pg	20 34 57.7	+0.5
AVF				*e*Sg	Sg	20 35 54.2	-0.7
AVF	**Avril sur Loir**	**4.46**	**35**	Pn	Pn	20 34 40.4	+0.3
AVF				Pg	Pg	20 34 57.7	+0.5
AVF				Lg		20 35 54.2	
	116nm,0.4s						
AVF	**Avril sur Loir**	**4.46**	**35**	Pn	Pn	20 34 40.4	+0.3
AVF				Pg	Pg	20 34 57.7	+0.5
AVF				Lg		20 35 54.2	
	116nm,0.4s						
AVF	**Avril sur Loir**	**4.46**	**35**	*e*Pn	Pn	20 34 40.4	+0.3
AVF	**Avril sur Loir**	**4.46**	**35**	*e*Pg	Pg	20 34 57.7	+0.5
AVF				*e*Sg	Sg	20 35 54.2	-0.7
	116nm,0.4s						
EBEN	**Beniarda**	**4.51**	**178**	Pn	Pn	20 34 41.5	+0.7
EBEN				Pg	Pg	20 34 53.8	-4.4
EBEN				Sn	Sn	20 35 30.1	-3.6
EBEN				Lg		20 35 55.5	
EBEN	**Beniarda**	**4.51**	**178**	Pn	Pn	20 34 41.5	+0.7
	0.3nm,0.1s,SNR=7.9						
EBEN				Pg	Pg	20 34 53.8	-4.4
	0.5nm,0.1s,SNR=7.9						
EBEN				Sn	Sn	20 35 30.0	-3.6
	6.7nm,0.4s,SNR=16						
EBEN				Lg		20 35 55.5	
	5.9nm,0.2s,SNR=4.7						
EBEN	**Beniarda**	**4.51**	**178**	Pn	Pn	20 34 41.5	+0.7
	0.3nm,0.1s,SNR=7.9						
EBEN				Pg	Pg	20 34 53.8	-4.4
	0.5nm,0.1s,SNR=7.9						
EBEN				Sn	Sn	20 35 30.0	-3.6
	6.7nm,0.4s,SNR=16						
EBEN				Lg		20 35 55.5	
	5.9nm,0.2s,SNR=4.7						
EBEN	**Beniarda**	**4.51**	**178**	Pn	Pn	20 34 41.5	+0.7
	0.3nm,0.1s,SNR=7.9						
EBEN				Sn	Sn	20 35 30.0	-3.7
	6.7nm,0.4s,SNR=16						
EBEN				Lg		20 35 55.5	
	5.9nm,0.2s,SNR=4.7						
SMF	**Signal de Mont**	**4.57**	**40**	*e*Pg	Pg	20 35 00.3	+1.1
SMF				*e*Sg	Sg	20 35 57.4	-1.0
	154nm,0.4s						
SMF	**Signal de Mont**	**4.57**	**40**	*e*Pn	Pn	20 34 41.1	-

PAB San Pablo 4.71 220 ePn Pn 20 34 43.6 0.0
SSF Saint Saulge 4.74 34 ePg Pg 20 35 02.7 +0.2
SSF eSg Sg 20 36 02.8 -1.1
114nm,0.3s
SSF Saint Saulge 4.74 34 ePn Pn 20 34 43.6 -0.3
SSF ePg Pg 20 35 02.7 +0.2
SSF eSg Sg 20 36 02.8 -1.1
SSF Saint Saulge 4.74 34 Pn Pn 20 34 43.6 -0.3
SSF Pg Pg 20 35 02.7 +0.2
SSF Lg 20 36 02.8
57nm,0.3s
SSF Saint Saulge 4.74 34 Pn Pn 20 34 43.6 -0.3
SSF Pg Pg 20 35 02.7 +0.2
SSF Lg 20 36 02.8
57nm,0.3s
SSF Saint Saulge 4.74 34 ePn Pn 20 34 43.6 -0.3
SSF Saint Saulge 4.74 34 ePg Pg 20 35 02.7 +0.2
SSF eSg Sg 20 36 02.8 -1.1
57nm,0.3s
ECAL Calabor 4.84 257 Pn Pn 20 34 47.1 +1.8
ECAL Pg Pg 20 35 02.8 -1.7
ECAL Sn Sn 20 35 41.0 -0.8
ECAL Lg 20 36 09.1
ECAL Calabor 4.84 257 Pn Pn 20 34 47.1 +1.8
2.5nm,0.1s,SNR=22
ECAL Pg Pg 20 35 02.8 -1.7
9.5nm,0.2s,SNR=6.1
ECAL Sn Sn 20 35 40.9 -0.8
27nm,0.2s,SNR=9.8
ECAL Lg 20 36 06.5
85nm,0.4s
ECAL Calabor 4.84 257 Pn Pn 20 34 47.1 +1.8
2.5nm,0.1s,SNR=22
ECAL Pg Pg 20 35 02.8 -1.7
9.5nm,0.2s,SNR=6.1
ECAL Sn Sn 20 35 40.9 -0.8
27nm,0.2s,SNR=9.8
ECAL Lg 20 36 06.5
85nm,0.4s
ECAL Calabor 4.84 257 Pn Pn 20 34 47.1 +1.8
2.5nm,0.1s,SNR=22
ECAL Calabor 4.84 257 Pg Pg 20 35 02.8 -1.7
9.5nm,0.2s,SNR=6.1
ECAL Sn Sn 20 35 40.9 -0.9
27nm,0.2s,SNR=9.8
ECAL Lg 20 36 09.0
85nm,0.4s
EVIA Vianos 4.84 200 Pn Pn 20 34 46.6 +1.3
EVIA Pg Pg 20 35 01.5 -3.0
EVIA Sn Sn 20 35 38.5 -3.3
EVIA Lg 20 36 05.2
EVIA Vianos 4.84 200 Pn Pn 20 34 46.6 +1.3
4.2nm,0.2s,SNR=9.7
EVIA Pg Pg 20 35 01.5 -3.0
12nm,0.4s,SNR=6.5
EVIA Sn Sn 20 35 38.5 -3.3
10nm,0.4s,SNR=7.9
EVIA Lg 20 36 05.2
49nm,0.4s
EVIA Vianos 4.84 200 Pn Pn 20 34 46.6 +1.3
4.2nm,0.2s,SNR=9.7
EVIA Pg Pg 20 35 01.5 -3.0
12nm,0.4s,SNR=6.5
EVIA Sn Sn 20 35 38.5 -3.3
10nm,0.4s,SNR=7.9
EVIA Lg 20 36 05.2
49nm,0.4s
EVIA Vianos 4.84 200 Pn Pn 20 34 46.6 +1.3
4.2nm,0.2s,SNR=9.7
EVIA Vianos 4.84 200 Pg Pg 20 35 01.5 -3.0
12nm,0.4s,SNR=6.5
EVIA Sn Sn 20 35 38.5 -3.3
10nm,0.4s,SNR=7.9
EVIA Lg 20 36 05.2
49nm,0.4s
ORIF Oris-en-Rattie 4.84 67 ePn Pn 20 34 45.7 +0.4
ORIF eSg Sg 20 36 05.1 -2.1
53nm,0.4s
ORIF Oris-en-Rattie 4.84 67 Pn Pn 20 34 45.7 +0.4
ORIF Lg 20 36 05.1
76nm,0.8s
ORIF Oris-en-Rattie 4.84 67 Pn Pn 20 34 45.7 +0.4
ORIF Lg 20 36 05.1
76nm,0.8s
ORIF Oris-en-Rattie 4.84 67 ePn Pn 20 34 45.7 +0.4
ORIF eSg Sg 20 36 05.1 -2.1
76nm,0.8s
PBRG Braganca 4.89 255 ePn Pn 20 34 47.7 +1.8
PBRG eSn Sn 20 35 41.9 -1.0
PBRG eSg Sg 20 36 04.8 -3.9
PBRG A 20 36 08.8
33nm,0.5s
PBRG Braganca 4.89 255 Pn Pn 20 34 47.7 +1.8
PBRG Sn Sn 20 35 41.9 -1.0
PBRG Lg 20 36 04.8
17nm,0.5s
PBRG Braganca 4.89 255 Pn Pn 20 34 47.7 +1.8
PBRG Sn Sn 20 35 41.9 -1.0
PBRG Lg 20 36 04.8
17nm,0.5s
PBRG Braganca 4.89 255 ePn Pn 20 34 47.7 +1.8
PBRG eSn Sn 20 35 41.9 -1.0
EPON Pontenova 4.92 274 Pn Pn 20 34 49.7 +3.3
EPON Pg Pg 20 35 03.8 -2.2
EPON Sn Sn 20 35 44.4 +0.6
EPON Lg 20 36 13.3
EPON Pontenova 4.92 274 Pn Pn 20 34 49.7 +3.3
0.9nm,0.1s,SNR=7.9
EPON Pg Pg 20 35 03.8 -2.2
7.4nm,0.2s,SNR=7.9
EPON Sn Sn 20 35 44.3 +0.6
3.2nm,0.2s,SNR=7.9
EPON Pontenova 4.92 274 Pn Pn 20 34 49.7 +3.3
0.9nm,0.1s,SNR=7.9
EPON Pg Pg 20 35 03.8 -2.2
7.4nm,0.2s,SNR=7.9
EPON Sn Sn 20 35 44.3 +0.6
3.2nm,0.2s,SNR=7.9
EPON Pontenova 4.92 274 Pn Pn 20 34 49.7 +3.3
0.9nm,0.1s,SNR=7.9
EPON Pontenova 4.92 274 Pg Pg 20 35 03.8 -2.2
7.4nm,0.2s,SNR=7.9
EPON Sn Sn 20 35 44.3 +0.6
3.2nm,0.2s,SNR=7.9
EPON Lg 20 36 13.3
11nm,0.3s,SNR=7.9
ERUA La Rua 5.02 263 Pn Pn 20 34 49.5 +1.7
ERUA Sn Sn 20 35 45.7 -0.5
ERUA La Rua 5.02 263 Pn Pn 20 34 49.5 +1.7
3.1nm,0.1s,SNR=7.9
ERUA Sn Sn 20 35 45.7 -0.5
5.6nm,0.2s,SNR=7.9
ERUA La Rua 5.02 263 Pn Pn 20 34 49.5 +1.7
3.1nm,0.1s,SNR=7.9
ERUA Sn Sn 20 35 45.7 -0.5
5.6nm,0.2s,SNR=7.9
ERUA La Rua 5.02 263 Pn Pn 20 34 49.5 +1.7
3.1nm,0.1s,SNR=7.9
ERUA Sn Sn 20 35 45.7 -0.5
5.6nm,0.2s,SNR=7.9
LOR Lormes 5.05 35 ePn Pn 20 34 48.2 +0.1
baz=220
LOR Lormes 5.05 35 ePg Pg 20 35 08.9 +0.5
baz=217
LOR eSg Sg 20 36 12.6 -1.2
187nm,0.5s,baz=217
LOR Lormes 5.05 35 ePn Pn 20 34 48.2 +0.1
LOR ePg Pg 20 35 08.9 +0.5
LOR eSg Sg 20 36 12.6 -1.2
LOR Lormes 5.05 35 Pn Pn 20 34 48.2 +0.1
LOR Pg Pg 20 35 08.9 +0.5
LOR Lg 20 36 12.6
94nm,0.5s
LOR Lormes 5.05 35 Pn Pn 20 34 48.2 +0.1
LOR Pg Pg 20 35 08.9 +0.5
LOR Lg 20 36 12.6
94nm,0.5s
LOR Lormes 5.05 35 ePn Pn 20 34 48.2 +0.1
LOR Lormes 5.05 35 ePg Pg 20 35 08.9 +0.5
LOR eSg Sg 20 36 12.6 -1.2
94nm,0.5s
LMR La Mourre 5.06 86 ePn Pn 20 34 48.3 0.0
LMR eSg Sg 20 36 11.3 -2.8
89nm,0.5s
LMR La Mourre 5.06 86 Pn Pn 20 34 48.3 0.0
LMR Lg 20 36 11.3
45nm,0.5s
LMR La Mourre 5.06 86 Pn Pn 20 34 48.3 0.0
LMR Lg 20 36 11.3
45nm,0.5s
LMR La Mourre 5.06 86 ePn Pn 20 34 48.3 0.0
LMR eSg Sg 20 36 11.3 -2.8
45nm,0.5s
QUIF Quistinic 5.08 339 ePg Pg 20 35 08.9 -0.1
QUIF eSn Sn 20 35 46.0 -1.6
QUIF eSg Sg 20 36 14.5 -0.3
69nm,0.3s
QUIF Quistinic 5.08 339 ePn Pn 20 34 49.2 +0.6
QUIF ePg Pg 20 35 08.9 -0.1
QUIF eSn Sn 20 35 46.0 -1.6
QUIF eSg Sg 20 36 14.5 -0.3
QUIF Quistinic 5.08 339 Pn Pn 20 34 49.2 +0.6
QUIF Pg Pg 20 35 08.9 -0.1
QUIF Sn Sn 20 35 46.0 -1.6
QUIF Lg 20 36 14.5
98nm,0.6s
QUIF Quistinic 5.08 339 Pn Pn 20 34 49.2 +0.6
QUIF Pg Pg 20 35 08.9 -0.1
QUIF Sn Sn 20 35 46.0 -1.6
QUIF Lg 20 36 14.5
98nm,0.6s
QUIF Quistinic 5.08 339 ePn Pn 20 34 49.2 +0.6
QUIF Quistinic 5.08 339 ePg Pg 20 35 08.9 -0.1
QUIF eSn Sn 20 35 46.0 -1.6
QUIF eSg Sg 20 36 14.5 -0.3
98nm,0.6s
FRF La Foret Royal 5.16 84 ePn Pn 20 34 49.8 +0.2
FRF eSg Sg 20 36 14.7 -2.6
121nm,0.5s
FRF La Foret Royal 5.16 84 Pn Pn 20 34 49.8 +0.2
FRF Lg 20 36 14.7
60nm,0.5s
FRF La Foret Royal 5.16 84 Pn Pn 20 34 49.8 +0.2
FRF Lg 20 36 14.7
60nm,0.5s
FRF La Foret Royal 5.16 84 ePn Pn 20 34 49.8 +0.2
FRF eSg Sg 20 36 14.7 -2.6
60nm,0.5s
GRR Gorron 5.18 357 ePg Pg 20 35 11.0 +0.1
GRR eSn Sn 20 35 48.3 -1.8
GRR eSg Sg 20 36 17.5 -0.5
131nm,0.4s
GRR Gorron 5.18 357 ePn Pn 20 34 50.3 +0.4
GRR ePg Pg 20 35 11.0 +0.1
GRR eSn Sn 20 35 48.3 -1.8
GRR eSg Sg 20 36 17.5 -0.5
GRR Gorron 5.18 357 Pn Pn 20 34 50.3 +0.4
GRR Pg Pg 20 35 11.0 +0.1
GRR Sn Sn 20 35 48.3 -1.8
GRR Lg 20 36 17.5
66nm,0.4s
GRR Gorron 5.18 357 Pn Pn 20 34 50.3 +0.4
GRR Pg Pg 20 35 11.0 +0.1
GRR Sn Sn 20 35 48.3 -1.8
GRR Lg 20 36 17.5
66nm,0.4s
GRR Gorron 5.18 357 ePn Pn 20 34 50.3 +0.4
GRR Gorron 5.18 357 ePg Pg 20 35 11.0 +0.1
GRR eSn Sn 20 35 48.3 -1.8
GRR eSg Sg 20 36 17.5 -0.5
66nm,0.4s
SGMF Saint Gilles 5.25 344 ePg Pg 20 35 12.6 +0.2
SGMF eSn Sn 20 35 50.1 -1.8
SGMF eSg Sg 20 36 20.0 -0.4
146nm,0.4s
SGMF Saint Gilles 5.25 344 ePn Pn 20 34 51.5 +0.5
SGMF ePg Pg 20 35 12.6 +0.2
SGMF eSn Sn 20 35 50.1 -1.8
SGMF eSg Sg 20 36 20.0 -0.4
SGMF Saint Gilles 5.25 344 Pn Pn 20 34 51.5 +0.5
SGMF Pg Pg 20 35 12.6 +0.2
SGMF Sn Sn 20 35 50.1 -1.8
SGMF Lg 20 36 20.0
73nm,0.4s
SGMF Saint Gilles 5.25 344 Pn Pn 20 34 51.5 +0.5
SGMF Pg Pg 20 35 12.6 +0.2
SGMF Sn Sn 20 35 50.1 -1.8
SGMF Lg 20 36 20.0
73nm,0.4s
SGMF Saint Gilles 5.25 344 ePn Pn 20 34 51.5 +0.5
SGMF Saint Gilles 5.25 344 ePg Pg 20 35 12.6 +0.2
SGMF eSn Sn 20 35 50.1 -1.8
SGMF eSg Sg 20 36 20.0 -0.4
73nm,0.4s
EPLA Plasencia 5.29 235 Pn Pn 20 34 52.5 +1.1
EPLA Sn Sn 20 35 49.5 -3.2
EPLA Lg 20 36 20.7
EPLA Plasencia 5.29 235 Pn Pn 20 34 52.5 +1.0
1.9nm,0.1s,SNR=14
EPLA Sn Sn 20 35 49.5 -3.2
11nm,0.4s,SNR=4.7
EPLA Lg 20 36 20.7
10nm,0.3s,SNR=7.5
EPLA Plasencia 5.29 235 Pn Pn 20 34 52.5 +1.0
1.9nm,0.1s,SNR=14
EPLA Sn Sn 20 35 49.5 -3.2
11nm,0.4s,SNR=4.7
EPLA Lg 20 36 20.7
10nm,0.3s,SNR=7.5
EPLA Plasencia 5.29 235 Pn Pn 20 34 52.5 +1.1
1.9nm,0.1s,SNR=14
EPLA Sn Sn 20 35 49.5 -3.3
11nm,0.4s,SNR=4.7
EPLA Lg 20 36 20.7
10nm,0.3s,SNR=7.5
MVO Moncorvo 5.33 250 ePn Pn 20 34 53.3 +1.3
MVO eSn Sn 20 35 51.3 -2.4
MVO eSg Sg 20 36 17.1 -5.7
MVO A 20 36 21.9
54nm,0.5s
MVO Moncorvo 5.33 250 Pn Pn 20 34 53.5 +1.6
MVO Pg Pg 20 35 10.4 -3.4
MVO Sn Sn 20 35 50.3 -3.4
MVO Lg 20 36 20.9
MVO Moncorvo 5.33 250 Pn Pn 20 34 53.5 +1.6
1.8nm,0.1s,SNR=13
MVO Pg Pg 20 35 10.4 -3.4
2.9nm,0.1s,SNR=6.4
MVO Sn Sn 20 35 50.3 -3.4
11nm,0.2s,SNR=7.9
MVO Lg 20 36 17.0
57nm,0.5s
MVO Moncorvo 5.33 250 Pn Pn 20 34 53.5 +1.6
1.8nm,0.1s,SNR=13
MVO Pg Pg 20 35 10.4 -3.4
2.9nm,0.1s,SNR=6.4
MVO Sn Sn 20 35 50.3 -3.4
11nm,0.2s,SNR=7.9
MVO Lg 20 36 17.0
57nm,0.5s
MVO Moncorvo 5.33 250 Pn Pn 20 34 53.3 +1.3
MVO Moncorvo 5.33 250 Pg Pg 20 35 10.4 -3.4
2.9nm,0.1s,SNR=6.4
MVO Sn Sn 20 35 50.3 -3.4
11nm,0.2s,SNR=7.9
MVO Lg 20 36 20.9
57nm,0.5s
LDF La Druitiere 5.38 2 ePg Pg 20 35 14.3 -0.5
LDF eSn Sn 20 35 53.1 -1.9
LDF eSg Sg 20 36 23.7 -0.7
103nm,0.3s
LDF La Druitiere 5.38 2 ePn Pn 20 34 52.9 +0.2
LDF ePg Pg 20 35 14.3 -0.5
LDF eSn Sn 20 35 53.1 -1.9
LDF eSg Sg 20 36 23.7 -0.7
LDF La Druitiere 5.38 2 ePn Pn 20 34 52.9 +0.2
LDF La Druitiere 5.38 2 ePg Pg 20 35 14.3 -0.5
LDF eSn Sn 20 35 53.1 -1.9
LDF eSg Sg 20 36 23.7 -0.7
94nm,0.5s
MBDF Montbardon 5.40 71 ePn Pn 20 34 53.2 +0.2
MBDF eSg Sg 20 36 23.0 -2.1
49nm,0.5s
MBDF Montbardon 5.40 71 Pn Pn 20 34 53.2 +0.2
MBDF Lg 20 36 23.0
45nm,0.8s
MBDF Montbardon 5.40 71 Pn Pn 20 34 53.2 +0.2
MBDF Lg 20 36 23.0
45nm,0.8s
MBDF Montbardon 5.40 71 ePn Pn 20 34 53.2 +0.2
MBDF eSg Sg 20 36 23.0 -2.1
45nm,0.8s
EMUR La Murta 5.41 187 Pn Pn 20 34 54.0 +0.9
EMUR Pg Pg 20 35 12.1 -3.2
EMUR Sn Sn 20 35 50.9 -4.9
EMUR Lg 20 36 22.7
EMUR La Murta 5.41 187 Pn Pn 20 34 54.0 +0.9
7.7nm,0.4s,SNR=15
EMUR Pg Pg 20 35 12.1 -3.2
2.0nm,0.2s,SNR=7.9
EMUR Sn Sn 20 35 50.8 -4.9
11nm,0.5s,SNR=7.9
EMUR Lg 20 36 17.1
10.0nm,0.3s
EMUR La Murta 5.41 187 Pn Pn 20 34 54.0 +0.9
7.7nm,0.4s,SNR=15
EMUR Pg Pg 20 35 12.1 -3.2
2.0nm,0.2s,SNR=7.9
EMUR Sn Sn 20 35 50.8 -4.9
11nm,0.5s,SNR=7.9
EMUR Lg 20 36 17.1
10.0nm,0.3s
EMUR La Murta 5.41 187 Pn Pn 20 34 54.0 +0.9
7.7nm,0.4s,SNR=15
BNI Bardonecchia 5.42 68 ePn Pn 20 34 55.7 +2.4
7.4nm,0.6s
BNI Bardonecchia 5.42 68 ePn Pn 20 34 55.7 +2.4
7.3nm,0.6s
ROSF Rostrenen 5.50 340 ePn Pn 20 34 54.8 +0.5
ROSF eSn Sn 20 35 55.2 -2.6
ROSF eSg Sg 20 36 27.6 -0.5
100nm,0.4s
ROSF Rostrenen 5.50 340 Pn Pn 20 34 54.8 +0.5
ROSF Sn Sn 20 35 55.2 -2.6
ROSF Lg 20 36 27.6
74nm,0.5s
ROSF Rostrenen 5.50 340 Pn Pn 20 34 54.8 +0.5
ROSF Sn Sn 20 35 55.2 -2.6
ROSF Lg 20 36 27.6
74nm,0.5s
ROSF Rostrenen 5.50 340 ePn Pn 20 34 54.8 +0.5
ROSF eSg Sg 20 36 27.6 -0.5
74nm,0.5s
FLN La Foliniere 5.54 360 ePn Pn 20 34 55.1 +0.1
baz=178
FLN La Foliniere 5.54 360 ePg Pg 20 35 18.0 +0.1
baz=184
FLN eSn Sn 20 35 57.0 -2.1
FLN eSg Sg 20 36 28.6 -1.1
73nm,0.3s,baz=173
FLN La Foliniere 5.54 360 ePn Pn 20 34 55.1 +0.1
FLN ePg Pg 20 35 18.0 +0.1
FLN eSn Sn 20 35 57.0 -2.1
FLN eSg Sg 20 36 28.6 -1.1
FLN La Foliniere 5.54 360 Pn Pn 20 34 55.1 +0.1
FLN Pg Pg 20 35 18.0 +0.1
FLN Sn Sn 20 35 57.0 -2.1
FLN Lg 20 36 28.6
58nm,0.4s
FLN La Foliniere 5.54 360 Pn Pn 20 34 55.1 +0.1
FLN Pg Pg 20 35 18.0 +0.1
FLN Sn Sn 20 35 57.0 -2.1
FLN Lg 20 36 28.6
58nm,0.4s
FLN La Foliniere 5.54 360 ePn Pn 20 34 55.1 +0.1
FLN La Foliniere 5.54 360 ePg Pg 20 35 18.0 +0.1
FLN eSn Sn 20 35 57.0 -2.1
FLN eSg Sg 20 36 28.6 -1.1
58nm,0.4s
LPL La Plagne 5.61 63 ePn Pn 20 34 56.6 +0.7
LPL eSg Sg 20 36 29.9 -2.1
25nm,0.4s
LPL La Plagne 5.61 63 Pn Pn 20 34 56.6 +0.7
LPL Lg 20 36 29.9
30nm,0.6s
LPL La Plagne 5.61 63 Pn Pn 20 34 56.6 +0.7
LPL Lg 20 36 29.9
30nm,0.6s
LPL La Plagne 5.61 63 ePn Pn 20 34 56.6 +0.7
LPL eSg Sg 20 36 29.9 -2.1
30nm,0.6s
LPG La Plagne 5.62 64 ePn Pn 20 34 57.0 +1.0
LPG eSg Sg 20 36 30.1 -2.0
26nm,0.3s
LPG La Plagne 5.62 64 Pn Pn 20 34 57.0 +1.0
LPG Lg 20 36 30.1
23nm,0.4s
LPG La Plagne 5.62 64 Pn Pn 20 34 57.0 +1.0
LPG Lg 20 36 30.1
23nm,0.4s
LPG La Plagne 5.62 64 ePn Pn 20 34 57.0 +1.0
LPG eSg Sg 20 36 30.1 -2.0
23nm,0.4s
TOUF Mont Tournerai 5.62 79 Pn Pn 20 34 55.7 -0.3
TOUF Mont Tournerai 5.62 79 Pn Pn 20 34 55.7 -0.3
EHUE Huescar 5.65 198 Pn Pn 20 34 57.4 +1.0
EHUE Pg Pg 20 35 17.4 -2.6
EHUE Lg 20 36 29.6
EHUE Huescar 5.65 198 Pn Pn 20 34 57.4 +1.0
0.3nm,0.1s,SNR=7.9
EHUE Pg Pg 20 35 17.4 -2.6
0.7nm,0.2s,SNR=7.9
EHUE Lg 20 36 29.6
4.4nm,0.3s,SNR=7.9
EHUE Huescar 5.65 198 Pn Pn 20 34 57.4 +1.0
0.3nm,0.1s,SNR=7.9
EHUE Pg Pg 20 35 17.4 -2.6
0.7nm,0.2s,SNR=7.9
EHUE Lg 20 36 29.6
4.4nm,0.3s,SNR=7.9
EHUE Huescar 5.65 198 Pn Pn 20 34 57.4 +1.0
0.3nm,0.1s,SNR=7.9
EBAN Banos Encina 5.66 208 Pn Pn 20 34 57.0 +0.4
EBAN Pg Pg 20 35 17.1 -3.1
EBAN Sn Sn 20 35 56.4 -5.6
EBAN Lg 20 36 31.3
EBAN Banos Encina 5.66 208 Pn Pn 20 34 57.0 +0.4
2.5nm,0.1s,SNR=8.3
EBAN Pg Pg 20 35 17.1 -3.1
6.5nm,0.4s,SNR=7.9
EBAN Sn Sn 20 35 57.8 -4.2
7.6nm,0.4s,SNR=7.9
EBAN Lg 20 36 31.3
11nm,0.4s
EBAN Banos Encina 5.66 208 Pn Pn 20 34 57.0 +0.4
2.5nm,0.1s,SNR=8.3
EBAN Pg Pg 20 35 17.1 -3.1
6.5nm,0.4s,SNR=7.9
EBAN Sn Sn 20 35 57.8 -4.2
7.6nm,0.4s,SNR=7.9
EBAN Lg 20 36 31.3
11nm,0.4s
EBAN Banos Encina 5.66 208 Pn Pn 20 34 57.0 +0.4
2.5nm,0.1s,SNR=8.3
LUCF Luceram 5.68 81 Pn Pn 20 34 57.2 +0.4
LUCF Luceram 5.68 81 Pn Pn 20 34 57.2 +0.4
CABF La Chapelle 5.73 51 ePg Pg 20 35 22.4 +1.0
CABF eSg Sg 20 36 33.6 -2.0
343nm,0.7s
CABF La Chapelle 5.73 51 ePn Pn 20 34 57.5 0.0
CABF ePg Pg 20 35 22.4 +1.0
CABF eSg Sg 20 36 33.6 -2.0
CABF La Chapelle 5.73 51 Pn Pn 20 34 57.5 0.0
CABF Pg Pg 20 35 22.4 +1.0
CABF Lg 20 36 33.6
172nm,0.7s
CABF La Chapelle 5.73 51 Pn Pn 20 34 57.5 0.0
CABF Pg Pg 20 35 22.4 +1.0
CABF Lg 20 36 33.6
172nm,0.7s
CABF La Chapelle 5.73 51 ePn Pn 20 34 57.5 0.0
CABF La Chapelle 5.73 51 ePg Pg 20 35 22.4 +1.0
CABF eSg Sg 20 36 33.6 -2.0
172nm,0.7s
SBF Sospel 5.74 81 ePn Pn 20 34 57.7 0.0
SBF eSg Sg 20 36 33.2 -2.9
78nm,0.4s
SBF Sospel 5.74 81 Pn Pn 20 34 57.7 0.0
SBF Lg 20 36 33.2
66nm,0.6s
SBF Sospel 5.74 81 Pn Pn 20 34 57.7 0.0
SBF Lg 20 36 33.2
66nm,0.6s
SBF Sospel 5.74 81 ePn Pn 20 34 57.7 0.0
AUTN L'Aution 5.75 80 Pn Pn 20 34 56.6 -1.1

AUTN	**L'Aution**	**5.75 80**	Pn	**Pn**	**20 34 56.6**	**-1.1**
PVRL	**Vila Real**	**5.76 253**	*e*Pn	**Pn**	**20 34 59.2**	**+1.3**
PVRL			*e*Sg	**Sg**	**20 36 30.6**	**-6.0**
PVRL			A		20 36 36.9	
	34nm,0.9s					
PVRL	**Vila Real**	**5.76 253**	Pn	**Pn**	**20 34 59.2**	**+1.3**
PVRL			Lg		20 36 30.6	
	17nm,0.9s					
PVRL	**Vila Real**	**5.76 253**	Pn	**Pn**	**20 34 59.2**	**+1.3**
PVRL			Lg		20 36 30.6	
	17nm,0.9s					
PVRL	**Vila Real**	**5.76 253**	*e*Pn	**Pn**	**20 34 59.2**	**+1.3**
EQES	**Quesada**	**5.78 201**	Pn	**Pn**	**20 34 59.7**	**+1.6**
EQES			Pg	**Pg**	**20 35 18.5**	**-3.9**
EQES			Lg		20 36 34.8	
EQES	**Quesada**	**5.78 201**	Pn	**Pn**	**20 34 59.7**	**+1.6**
	0.9nm,0.2s,SNR=14					
EQES			Pg	**Pg**	**20 35 18.5**	**-3.9**
	3.6nm,0.3s,SNR=4.8					
EQES			Lg		20 36 34.8	
	14nm,0.3s					
EQES	**Quesada**	**5.78 201**	Pn	**Pn**	**20 34 59.7**	**+1.6**
	0.9nm,0.2s,SNR=14					
EQES			Pg	**Pg**	**20 35 18.5**	**-3.9**
	3.6nm,0.3s,SNR=4.8					
EQES			Lg		20 36 34.8	
	14nm,0.3s					
EQES	**Quesada**	**5.78 201**	Pn	**Pn**	**20 34 59.7**	**+1.5**
	0.9nm,0.2s,SNR=14					
ELOB	**Lobios**	**5.81 259**	Pn	**Pn**	**20 35 00.2**	**+1.6**
ELOB			Sn	**Sn**	**20 36 05.5**	**-0.1**
ELOB			Lg		20 36 38.9	
ELOB	**Lobios**	**5.81 259**	Pn	**Pn**	**20 35 00.2**	**+1.6**
	1.3nm,0.1s,SNR=8.3					
ELOB			Sn	**Sn**	**20 36 05.5**	**-0.1**
	4.8nm,0.2s,SNR=7.9					
ELOB			Lg		20 36 34.2	
	11nm,0.4s					
ELOB	**Lobios**	**5.81 259**	Pn	**Pn**	**20 35 00.2**	**+1.6**
	1.3nm,0.1s,SNR=8.3					
ELOB			Sn	**Sn**	**20 36 05.5**	**-0.1**
	4.8nm,0.2s,SNR=7.9					
ELOB			Lg		20 36 34.2	
	11nm,0.4s					
ELOB	**Lobios**	**5.81 259**	Pn	**Pn**	**20 35 00.2**	**+1.6**
	1.3nm,0.1s,SNR=8.3					
ELOB			Sn	**Sn**	**20 36 05.5**	**-0.1**
	4.8nm,0.2s,SNR=7.9					
PCAB	**Cabril**	**5.83 258**	*e*Sn	**Sn**	**20 36 06.0**	**-0.1**
PCAB			*e*Sg	**Sg**	**20 36 33.8**	**-5.1**
PCAB	**Cabril**	**5.83 258**	Sn	**Sn**	**20 36 06.0**	**-0.1**
PCAB			Lg		20 36 33.8	
PCAB	**Cabril**	**5.83 258**	Sn	**Sn**	**20 36 06.0**	**-0.1**
PCAB			Lg		20 36 33.8	
PCAB	**Cabril**	**5.83 258**	*e*Sn	**Sn**	**20 36 06.0**	**-0.1**
SAOF	**Saorge**	**5.84 80**	Pn	**Pn**	**20 34 59.4**	**+0.4**
SAOF	**Saorge**	**5.84 80**	Pn	**Pn**	**20 34 59.4**	**+0.4**
EADA	**Adamuz**	**5.96 213**	Pn	**Pn**	**20 35 02.0**	**+1.4**
EADA			Pg	**Pg**	**20 35 22.0**	**-3.8**
EADA			Sn	**Sn**	**20 36 04.5**	**-4.8**
EADA			Lg		20 36 40.1	
EADA	**Adamuz**	**5.96 213**	Pn	**Pn**	**20 35 01.2**	**+0.5**
	1.6nm,0.2s,SNR=19					
EADA			Sn	**Sn**	**20 36 04.5**	**-4.8**
	2.8nm,0.1s,SNR=4.6					
EADA			Lg		20 36 40.1	
	24nm,0.5s					
EADA	**Adamuz**	**5.96 213**	Pn	**Pn**	**20 35 01.2**	**+0.5**
	1.6nm,0.2s,SNR=19					
EADA			Sn	**Sn**	**20 36 04.5**	**-4.8**
	2.8nm,0.1s,SNR=4.6					
EADA			Lg		20 36 40.1	
	24nm,0.5s					
EADA	**Adamuz**	**5.96 213**	Pn	**Pn**	**20 35 02.0**	**+1.4**
	1.6nm,0.2s,SNR=19					
STS	**Santiago**	**5.97 270**	Pn	**Pn**	**20 35 03.1**	**+2.3**
STS			Pg	**Pg**	**20 35 23.4**	**-2.7**
STS			Sn	**Sn**	**20 36 09.0**	**-0.7**
STS	**Santiago**	**5.97 270**	Pn	**Pn**	**20 35 03.1**	**+2.3**
	1.6nm,0.2s,SNR=7.9					
STS			Sn	**Sn**	**20 36 09.0**	**-0.6**
	3.9nm,0.2s,SNR=7.9					
MTE	**Manteigas**	**6.03 245**	*e*Sn	**Sn**	**20 36 08.2**	**-2.8**
MTE			*e*Sg	**Sg**	**20 36 43.1**	**-2.1**
MTE			A		20 36 52.5	
	40nm,0.7s					
PVIS	**Viseu**	**6.11 248**	*e*Pn	**Pn**	**20 35 04.2**	**+1.4**
PVIS			*e*Sn	**Sn**	**20 36 09.9**	**-3.2**
PVIS			*e*Sg	**Sg**	**20 36 40.8**	**-7.2**
PVIS			A		20 36 56.1	
	20nm,0.5s					
PVIS	**Viseu**	**6.11 248**	Pn	**Pn**	**20 35 04.2**	**+1.4**
PVIS			Sn	**Sn**	**20 36 09.9**	**-3.2**
PVIS			Lg		20 36 40.8	
	10nm,0.5s					
PVIS	**Viseu**	**6.11 248**	Pn	**Pn**	**20 35 04.2**	**+1.4**
PVIS			Sn	**Sn**	**20 36 09.9**	**-3.2**
PVIS			Lg		20 36 40.8	
	10nm,0.5s					
PVIS	**Viseu**	**6.11 248**	*e*Pn	**Pn**	**20 35 04.2**	**+1.4**
EZAM	**Zamans**	**6.20 263**	Pn	**Pn**	**20 35 05.0**	**+1.1**
EZAM			Sn	**Sn**	**20 36 11.3**	**-3.8**
EZAM	**Zamans**	**6.20 263**	Pn	**Pn**	**20 35 05.0**	**+1.1**
	5.4nm,0.3s,SNR=7.9					
EMAZ	**Mazaricos**	**6.28 270**	Pn	**Pn**	**20 35 06.6**	**+1.6**
EMAZ			Sn	**Sn**	**20 36 13.2**	**-3.9**
EMAZ	**Mazaricos**	**6.28 270**	Pn	**Pn**	**20 35 06.6**	**+1.6**
	1.0nm,0.1s,SNR=6.7					
EMAZ			Sn	**Sn**	**20 36 13.2**	**-3.9**
	1.4nm,0.1s,SNR=7.9					
EMAZ	**Mazaricos**	**6.28 270**	Pn	**Pn**	**20 35 06.6**	**+1.6**
	1.0nm,0.1s,SNR=6.7					
EMAZ			Sn	**Sn**	**20 36 13.2**	**-3.9**
	1.4nm,0.1s,SNR=7.9					
EMAZ	**Mazaricos**	**6.28 270**	Pn	**Pn**	**20 35 06.6**	**+1.6**
	1.0nm,0.1s,SNR=6.7					
SFTF	**Sexfontaines**	**6.28 36**	*e*Pn	**Pn**	**20 35 05.2**	**+0.2**
	baz=223					
SFTF	**Sexfontaines**	**6.28 36**	*e*Pg	**Pg**	**20 35 32.8**	**+0.8**
	baz=222					
SFTF			*e*Sg	**Sg**	**20 36 51.1**	**-2.2**
	96nm,0.5s,baz=225					
SFTF	**Sexfontaines**	**6.28 36**	*e*Pn	**Pn**	**20 35 05.2**	**+0.2**
SFTF			*e*Pg	**Pg**	**20 35 32.8**	**+0.8**
SFTF			*e*Sg	**Sg**	**20 36 51.1**	**-2.2**
SFTF	**Sexfontaines**	**6.28 36**	Pn	**Pn**	**20 35 05.2**	**+0.2**
SFTF			Pg	**Pg**	**20 35 32.8**	**+0.8**
SFTF			Lg		20 36 51.1	
	96nm,0.5s					
SFTF	**Sexfontaines**	**6.28 36**	Pn	**Pn**	**20 35 05.2**	**+0.2**
SFTF			Pg	**Pg**	**20 35 32.8**	**+0.8**
SFTF			Lg		20 36 51.1	
	96nm,0.5s					
SFTF	**Sexfontaines**	**6.28 36**	*e*Pn	**Pn**	**20 35 05.2**	**+0.2**
SFTF	**Sexfontaines**	**6.28 36**	*e*Pg	**Pg**	**20 35 32.8**	**+0.8**
SFTF			*e*Sg	**Sg**	**20 36 51.1**	**-2.2**
	48nm,0.5s					
PCBR	**Castelo Branco**	**6.28 240**	*e*Pn	**Pn**	**20 35 05.5**	**+0.4**
PCBR			*e*Sn	**Sn**	**20 36 13.1**	**-4.2**
PCBR			*e*Sg	**Sg**	**20 36 52.1**	**-1.4**
PCBR			A		20 37 01.4	
	23nm,0.6s					
PCBR	**Castelo Branco**	**6.28 240**	Pn	**Pn**	**20 35 05.5**	**+0.4**
PCBR			Sn	**Sn**	**20 36 13.1**	**-4.2**
PCBR			Lg		20 36 52.1	
	11nm,0.6s					
PCBR	**Castelo Branco**	**6.28 240**	Pn	**Pn**	**20 35 05.5**	**+0.4**
PCBR			Sn	**Sn**	**20 36 13.1**	**-4.2**
PCBR			Lg		20 36 52.1	
	11nm,0.6s					
PCBR	**Castelo Branco**	**6.28 240**	*e*Pn	**Pn**	**20 35 05.5**	**+0.4**
ENIJ	**Nijar**	**6.39 193**	Pn	**Pn**	**20 35 08.5**	**+1.9**
ENIJ			Sn	**Sn**	**20 36 14.4**	**-5.5**
ENIJ	**Nijar**	**6.39 193**	Pn	**Pn**	**20 35 08.5**	**+1.9**
	1.2nm,0.1s,SNR=7.9					
ECAB	**El Cabril**	**6.39 218**	Pn	**Pn**	**20 35 07.6**	**+1.0**
ECAB			Sn	**Sn**	**20 36 14.0**	**-6.1**
ECAB			Lg		20 36 54.5	
ECAB	**El Cabril**	**6.39 218**	Pn	**Pn**	**20 35 07.6**	**+1.0**
	0.1nm,0.1s,SNR=18					
ECAB			Sn	**Sn**	**20 36 14.0**	**-6.1**
	1.5nm,0.2s,SNR=7.9					
ECAB			Lg		20 36 54.5	
	11nm,0.5s					
ECAB	**El Cabril**	**6.39 218**	Pn	**Pn**	**20 35 07.6**	**+1.0**
	0.1nm,0.1s,SNR=18					
ECOG	**Cogollos-Vega**	**6.41 203**	Pn	**Pn**	**20 35 08.1**	**+1.3**
ECOG	**Cogollos-Vega**	**6.41 203**	Pn	**Pn**	**20 35 08.1**	**+1.3**
	0.6nm,0.1s,SNR=7.9					
ECOG	**Cogollos-Vega**	**6.41 203**	Pn	**Pn**	**20 35 08.1**	**+1.3**
	0.6nm,0.1s,SNR=7.9					
ECOG	**Cogollos-Vega**	**6.41 203**	Pn	**Pn**	**20 35 08.1**	**+1.3**
	0.6nm,0.1s,SNR=7.9					
EQUE	**Quentar**	**6.44 202**	Pn	**Pn**	**20 35 09.0**	**+1.8**
	1.1nm,0.1s,SNR=26					
EQUE			Sn	**Sn**	**20 36 17.2**	**-3.9**
	0.4nm,0.1s,SNR=7.9					
EQUE			Lg		20 36 55.0	
	3.3nm,0.3s					
EQUE	**Quentar**	**6.44 202**	Pn	**Pn**	**20 35 09.0**	**+1.8**
	1.1nm,0.1s,SNR=26					
EQUE			Sn	**Sn**	**20 36 17.2**	**-3.9**
	0.4nm,0.1s,SNR=7.9					
EQUE			Lg		20 36 55.0	
	3.3nm,0.3s					
EQUE	**Quentar**	**6.44 202**	Pn	**Pn**	**20 35 09.0**	**+1.7**
	1.1nm,0.1s,SNR=26					
PMRV	**Marv??o**	**6.47 237**	*e*Pn	**Pn**	**20 35 08.4**	**+0.6**
PMRV			*e*Sn	**Sn**	**20 36 18.4**	**-3.6**
PMRV			*e*Sg	**Sg**	**20 36 59.1**	**-0.5**
PMRV			A		20 37 09.6	
	28nm,0.5s					
PMRV	**Marv??o**	**6.47 237**	Pn	**Pn**	**20 35 08.4**	**+0.6**
PMRV			Sn	**Sn**	**20 36 18.4**	**-3.6**
PMRV			Lg		20 36 59.1	
	28nm,0.5s					
PMRV	**Marv??o**	**6.47 237**	Pn	**Pn**	**20 35 08.4**	**+0.6**
PMRV			Sn	**Sn**	**20 36 18.4**	**-3.6**
PMRV			Lg		20 36 59.1	
	28nm,0.5s					
PMRV	**Marv??o**	**6.47 237**	*e*Pn	**Pn**	**20 35 08.4**	**+0.6**
PMRV			*e*Sg	**Sg**	**20 36 59.1**	**-0.5**
	28nm,0.5s					
MEZF	**Maizieres J'vi**	**6.52 34**	*e*Pg	**Pg**	**20 35 36.5**	**0.0**
	baz=219					
MEZF			*e*Sg	**Sg**	**20 36 58.7**	**-2.2**
	126nm,0.5s					
MEZF	**Maizieres J'vi**	**6.52 34**	Pg	**Pg**	**20 35 36.5**	**0.0**
MEZF			Lg		20 36 58.7	
	126nm,0.5s					
MEZF	**Maizieres J'vi**	**6.52 34**	Pg	**Pg**	**20 35 36.5**	**0.0**
MEZF			Lg		20 36 58.7	
	126nm,0.5s					
MEZF	**Maizieres J'vi**	**6.52 34**	*e*Pg	**Pg**	**20 35 36.5**	**0.0**
MEZF			*e*Sg	**Sg**	**20 36 58.7**	**-2.2**
	63nm,0.5s					
EBER	**Berja**	**6.59 198**	Pn	**Pn**	**20 35 11.8**	**+2.4**
EBER			Sn	**Sn**	**20 36 17.9**	**-7.1**
EBER			Lg		20 36 58.8	
EBER	**Berja**	**6.59 198**	Pn	**Pn**	**20 35 11.8**	**+2.4**
	0.0nm,0.1s,SNR=8.5					
EBER			Lg		20 36 58.8	
	8.4nm,0.4s,SNR=7.9					
EBER	**Berja**	**6.59 198**	Pn	**Pn**	**20 35 11.8**	**+2.4**
	0.0nm,0.1s,SNR=8.5					
EBER			Lg		20 36 58.8	
	8.4nm,0.4s,SNR=7.9					
EBER	**Berja**	**6.59 198**	Pn	**Pn**	**20 35 11.8**	**+2.4**
	SNR=8.5					
EBAD	**Badajoz**	**6.69 230**	Pn	**Pn**	**20 35 11.1**	**+0.4**
EBAD			Sn	**Sn**	**20 36 22.5**	**-4.9**
EBAD			Lg		20 37 04.1	
EBAD	**Badajoz**	**6.69 230**	Pn	**Pn**	**20 35 11.1**	**+0.4**
	0.7nm,0.1s,SNR=13					
EBAD			Sn	**Sn**	**20 36 22.5**	**-4.9**
	3.2nm,0.2s,SNR=5.4					
EBAD			Lg		20 37 04.1	
	6.6nm,0.3s					
EBAD	**Badajoz**	**6.69 230**	Pn	**Pn**	**20 35 11.1**	**+0.4**
	0.7nm,0.1s,SNR=13					
EBAD			Sn	**Sn**	**20 36 22.5**	**-4.9**
	3.2nm,0.2s,SNR=5.4					
EBAD			Lg		20 37 04.1	
	6.6nm,0.3s					
EBAD	**Badajoz**	**6.69 230**	Pn	**Pn**	**20 35 11.1**	**+0.3**
	0.7nm,0.1s,SNR=13					
ELOJ	**Sierra Loja**	**6.71 207**	Pn	**Pn**	**20 35 14.3**	**+3.4**
ELOJ	**Sierra Loja**	**6.71 207**	Pn	**Pn**	**20 35 14.3**	**+3.4**
	1.0nm,0.2s,SNR=12					
ERON	**Agron**	**6.72 204**	Pn	**Pn**	**20 35 13.2**	**+2.1**
ERON			Sn	**Sn**	**20 36 21.4**	**-6.6**
ERON	**Agron**	**6.72 204**	Pn	**Pn**	**20 35 13.2**	**+2.1**
	1.3nm,0.1s,SNR=7.9					
ERON			Sn	**Sn**	**20 36 21.4**	**-6.6**
	0.1nm,0.2s,SNR=7.9					
ERON	**Agron**	**6.72 204**	Pn	**Pn**	**20 35 13.2**	**+2.1**
	1.3nm,0.1s,SNR=7.9					
ERON			Sn	**Sn**	**20 36 21.4**	**-6.6**
	0.1nm,0.2s,SNR=7.9					
ERON	**Agron**	**6.72 204**	Pn	**Pn**	**20 35 13.2**	**+2.1**
	1.3nm,0.1s,SNR=7.9					
HAU	**Haudompre**	**6.74 42**	*e*Pg	**Pg**	**20 35 39.9**	**-0.8**
HAU			*e*Sg	**Sg**	**20 37 05.3**	**-2.6**
	51nm,0.3s					
HAU	**Haudompre**	**6.74 42**	*e*Pn	**Pn**	**20 35 11.0**	**-0.3**
HAU			*e*Pg	**Pg**	**20 35 39.9**	**-0.8**
HAU			*e*Sg	**Sg**	**20 37 05.3**	**-2.6**
HAU	**Haudompre**	**6.74 42**	Pn	**Pn**	**20 35 11.0**	**-0.3**
HAU			Pg	**Pg**	**20 35 39.9**	**-0.8**
HAU			Lg		20 37 05.3	
	26nm,0.3s					
HAU	**Haudompre**	**6.74 42**	Pn	**Pn**	**20 35 11.0**	**-0.3**
HAU			Pg	**Pg**	**20 35 39.9**	**-0.8**
HAU			Lg		20 37 05.3	
	26nm,0.3s					
HAU	**Haudompre**	**6.74 42**	*e*Pn	**Pn**	**20 35 11.0**	**-0.3**
HAU	**Haudompre**	**6.74 42**	*e*Pg	**Pg**	**20 35 39.9**	**-0.8**
HAU			*e*Sg	**Sg**	**20 37 05.3**	**-2.6**
	26nm,0.3s					
RFYF	**Reffroy**	**6.79 35**	*e*Pg	**Pg**	**20 35 41.8**	**0.0**
	baz=218					
RFYF			*e*Sn	**Sn**	**20 36 24.6**	**-5.1**
	baz=213					
RFYF			*e*Sg	**Sg**	**20 37 08.4**	**-1.3**
	95nm,0.4s					
RFYF	**Reffroy**	**6.79 35**	*e*Pn	**Pn**	**20 35 12.7**	**+0.6**
RFYF			*e*Pg	**Pg**	**20 35 41.8**	**0.0**
RFYF			*e*Sn	**Sn**	**20 36 24.6**	**-5.1**
RFYF			*e*Sg	**Sg**	**20 37 08.4**	**-1.3**
RFYF	**Reffroy**	**6.79 35**	*e*Pn	**Pn**	**20 35 12.7**	**+0.6**
EGUA	**Guajares**	**6.82 202**	Pn	**Pn**	**20 35 14.8**	**+2.3**
EGUA			Sn	**Sn**	**20 36 26.7**	**-3.9**
EGUA	**Guajares**	**6.82 202**	Pn	**Pn**	**20 35 14.8**	**+2.3**
	8.8nm,0.2s,SNR=7.9					
EGUA	**Guajares**	**6.82 202**	Pn	**Pn**	**20 35 14.8**	**+2.3**
	8.8nm,0.2s,SNR=7.9					
EGUA	**Guajares**	**6.82 202**	Pn	**Pn**	**20 35 14.8**	**+2.3**
	8.8nm,0.2s,SNR=7.9					
HINF	**Hinteralfeld**	**6.87 45**	*e*Pg	**Pg**	**20 35 42.8**	**-0.4**
HINF			*e*Sg	**Sg**	**20 37 09.0**	**-3.2**
	28nm,0.3s					
HINF	**Hinteralfeld**	**6.87 45**	*e*Pn	**Pn**	**20 35 12.9**	**-0.2**
HINF			*e*Pg	**Pg**	**20 35 42.8**	**-0.4**
HINF			*e*Sg	**Sg**	**20 37 09.0**	**-3.2**
HINF	**Hinteralfeld**	**6.87 45**	Pn	**Pn**	**20 35 12.9**	**-0.2**
HINF			Pg	**Pg**	**20 35 42.8**	**-0.4**
HINF			Lg		20 37 09.0	
	20nm,0.5s					
HINF	**Hinteralfeld**	**6.87 45**	Pn	**Pn**	**20 35 12.9**	**-0.2**
HINF			Pg	**Pg**	**20 35 42.8**	**-0.4**
HINF			Lg		20 37 09.0	
	20nm,0.5s					
HINF	**Hinteralfeld**	**6.87 45**	*e*Pn	**Pn**	**20 35 12.9**	**-0.2**
PGF	**Pioggiola**	**6.95 92**	*e*Pn	**Pn**	**20 35 13.2**	**-1.0**
PGF			*e*Sn	**Sn**	**20 36 28.2**	**-5.4**
	24nm,0.4s					
PGF	**Pioggiola**	**6.95 92**	Pn	**Pn**	**20 35 13.2**	**-1.0**
PGF			Sn	**Sn**	**20 36 28.2**	**-5.4**
	12nm,0.4s					
PGF	**Pioggiola**	**6.95 92**	Pn	**Pn**	**20 35 13.2**	**-1.0**
PGF			Sn	**Sn**	**20 36 28.2**	**-5.4**
	12nm,0.4s					
PGF	**Pioggiola**	**6.95 92**	*e*Pn	**Pn**	**20 35 13.2**	**-1.0**
PESTR	**Estremoz**	**6.95 234**	*e*Pn	**Pn**	**20 35 14.8**	**+0.5**
PESTR			*e*Sn	**Sn**	**20 36 29.2**	**-4.5**
PESTR			A		20 37 21.5	
	19nm,0.6s					
PESTR	**Estremoz**	**6.95 234**	Pn	**Pn**	**20 35 14.8**	**+0.5**
PESTR			Sn	**Sn**	**20 36 29.2**	**-4.5**
	19nm,0.6s					
PESTR	**Estremoz**	**6.95 234**	Pn	**Pn**	**20 35 14.8**	**+0.5**
PESTR			Sn	**Sn**	**20 36 29.2**	**-4.5**
	19nm,0.6s					
PESTR	**Estremoz**	**6.95 234**	*e*Pn	**Pn**	**20 35 14.8**	**+0.5**
PTOM	**Tomar**	**7.00 242**	*e*Pn	**Pn**	**20 35 16.0**	**+1.0**
PTOM			*e*Sn	**Sn**	**20 36 32.4**	**-2.7**
PTOM			*e*Sg	**Sg**	**20 37 09.2**	**-7.4**
PTOM			A		20 37 34.9	
	27nm,0.6s					
PTOM	**Tomar**	**7.00 242**	Pn	**Pn**	**20 35 16.0**	**+1.0**
PTOM			Sn	**Sn**	**20 36 32.4**	**-2.7**
PTOM			Lg		20 37 09.2	
	14nm,0.6s					
PTOM	**Tomar**	**7.00 242**	Pn	**Pn**	**20 35 16.0**	**+1.0**
PTOM			Sn	**Sn**	**20 36 32.4**	**-2.7**
PTOM			Lg		20 37 09.2	
	14nm,0.6s					
PTOM	**Tomar**	**7.00 242**	*e*Pn	**Pn**	**20 35 16.0**	**+1.0**
PBAR	**Barrancos**	**7.12 227**	*e*Pn	**Pn**	**20 35 17.3**	**+0.7**
PBAR			*e*Sn	**Sn**	**20 36 33.9**	**-4.0**
PBAR			*e*Sg	**Sg**	**20 37 18.9**	**-1.4**
PBAR			A		20 37 34.7	
	18nm,0.7s					
PBAR	**Barrancos**	**7.12 227**	Pn	**Pn**	**20 35 17.3**	**+0.7**
PBAR			Sn	**Sn**	**20 36 33.9**	**-4.0**
PBAR			Lg		20 37 18.9	
	18nm,0.7s					
PBAR	**Barrancos**	**7.12 227**	Pn	**Pn**	**20 35 17.3**	**+0.7**
PBAR			Sn	**Sn**	**20 36 33.9**	**-4.0**
PBAR			Lg		20 37 18.9	
	18nm,0.7s					
PBAR	**Barrancos**	**7.12 227**	*e*Pn	**Pn**	**20 35 17.3**	**+0.7**
EMIN	**Mina Concepcio**	**7.24 223**	Pn	**Pn**	**20 35 17.7**	**-0.5**
EMIN			Sn	**Sn**	**20 36 33.0**	**-7.8**
EMIN	**Mina Concepcio**	**7.24 223**	Pn	**Pn**	**20 35 17.7**	**-0.5**
	0.2nm,0.2s,SNR=5.7					
EMIN			Sn	**Sn**	**20 36 33.0**	**-7.8**
	0.5nm,0.2s,SNR=18					
EMIN			Lg		20 37 18.5	
	22nm,1.0s,SNR=7.9					
EMIN	**Mina Concepcio**	**7.24 223**	Pn	**Pn**	**20 35 17.7**	**-0.5**
	0.2nm,0.2s,SNR=5.7					
EMIN			Sn	**Sn**	**20 36 33.0**	**-7.8**
	0.5nm,0.2s,SNR=18					
EMIN			Lg		20 37 18.5	
	22nm,1.0s,SNR=7.9					
EMIN	**Mina Concepcio**	**7.24 223**	Pn	**Pn**	**20 35 17.7**	**-0.5**
	0.2nm,0.2s,SNR=5.7					
EVO	**Evora**	**7.42 233**	*e*Pn	**Pn**	**20 35 20.6**	**-0.1**
EVO			*e*Sn	**Sn**	**20 36 41.3**	**-4.0**
EVO			*e*Sg	**Sg**	**20 37 27.9**	**-2.0**
	32nm,0.7s					
EVO	**Evora**	**7.42 233**	*e*Pn	**Pn**	**20 35 21.7**	**+1.0**
EVO			*e*Sn	**Sn**	**20 36 41.2**	**-4.1**
EVO			A		20 37 42.6	
	12nm,0.6s					
EVO	**Evora**	**7.42 233**	Pn	**Pn**	**20 35 21.7**	**+1.0**
EVO			Sn	**Sn**	**20 36 41.2**	**-4.1**
	12nm,0.6s					
EVO	**Evora**	**7.42 233**	Pn	**Pn**	**20 35 21.7**	**+1.0**
EVO			Sn	**Sn**	**20 36 41.2**	**-4.1**
	12nm,0.6s					
EVO	**Evora**	**7.42 233**	*e*Pn	**Pn**	**20 35 21.7**	**+1.0**
EMIJ	**Mijas**	**7.44 208**	Pn	**Pn**	**20 35 22.3**	**+1.3**
EMIJ			Sn	**Sn**	**20 36 42.6**	**-3.2**
EMIJ			Lg		20 37 27.9	
EMIJ	**Mijas**	**7.44 208**	Pn	**Pn**	**20 35 22.3**	**+1.3**
	0.0nm,0.1s,SNR=7.6					
EMIJ			Sn	**Sn**	**20 36 42.6**	**-3.2**
	0.5nm,0.1s,SNR=5.0					
EMIJ			Lg		20 37 27.9	
	3.2nm,0.3s,SNR=4.0					
EMIJ	**Mijas**	**7.44 208**	Pn	**Pn**	**20 35 22.3**	**+1.3**
	0.0nm,0.1s,SNR=7.6					
EMIJ			Sn	**Sn**	**20 36 42.6**	**-3.2**
	0.5nm,0.1s,SNR=5.0					
EMIJ			Lg		20 37 27.9	
	3.2nm,0.3s,SNR=4.0					
EMIJ	**Mijas**	**7.44 208**	Pn	**Pn**	**20 35 22.3**	**+1.3**
	SNR=7.6					
CDF	**Champ du Feu**	**7.47 43**	*e*Pg	**Pg**	**20 35 53.6**	**-1.1**
CDF			*e*Sg	**Sg**	**20 37 27.9**	**-3.5**
	54nm,0.7s					
CDF	**Champ du Feu**	**7.47 43**	*e*Pn	**Pn**	**20 35 21.1**	**-0.3**
CDF			*e*Pg	**Pg**	**20 35 53.6**	**-1.1**
CDF			*e*Sg	**Sg**	**20 37 27.9**	**-3.5**
CDF	**Champ du Feu**	**7.47 43**	Pn	**Pn**	**20 35 21.1**	**-0.3**
CDF			Pg	**Pg**	**20 35 53.6**	**-1.1**
CDF			Lg		20 37 27.9	
	27nm,0.7s					
CDF	**Champ du Feu**	**7.47 43**	Pn	**Pn**	**20 35 21.1**	**-0.3**
CDF			Pg	**Pg**	**20 35 53.6**	**-1.1**
CDF			Lg		20 37 27.9	
	27nm,0.7s					
CDF	**Champ du Feu**	**7.47 43**	*e*Pn	**Pn**	**20 35 21.1**	**-0.3**
EVOP	**Sao Brissos**	**7.49 234**	*e*Pn	**Pn**	**20 35 20.6**	**-1.1**
BAIF	**Baives**	**7.54 23**	*e*Pn	**Pn**	**20 35 22.4**	**0.0**
BAIF			*e*Sg	**Sg**	**20 37 30.7**	**-3.1**
	30nm,0.5s					
BAIF	**Baives**	**7.54 23**	Pn	**Pn**	**20 35 22.4**	**0.0**
BAIF			Lg		20 37 30.7	
	28nm,0.8s					
BAIF	**Baives**	**7.54 23**	Pn	**Pn**	**20 35 22.4**	**0.0**
BAIF			Lg		20 37 30.7	
	28nm,0.8s					
BAIF	**Baives**	**7.54 23**	*e*Pn	**Pn**	**20 35 22.4**	**0.0**
BAIF			*e*Sg	**Sg**	**20 37 30.7**	**-3.1**
	28nm,0.8s					
ESPR	**Espera**	**7.59 215**	Pn	**Pn**	**20 35 25.2**	**+2.1**
ESPR			Sn	**Sn**	**20 36 42.7**	**-6.8**
ESPR			Lg		20 37 32.2	
ESPR	**Espera**	**7.59 215**	Pn	**Pn**	**20 35 24.7**	**+1.6**
	0.1nm,0.1s,SNR=13					
ESPR			Sn	**Sn**	**20

EGRO			Sn	Sn	20 36 48.6	-6.8
EGRO			Lg		20 37 40.4	
EGRO	**El Granado**	**7.83 226**	Pn	Pn	20 35 27.0	+0.6
	0.1nm,0.1s,SNR=9.6					
EGRO			Sn	Sn	20 36 48.6	-6.8
	3.2nm,0.3s,SNR=7.9					
EGRO	**El Granado**	**7.83 226**	Pn	Pn	20 35 27.0	+0.6
	0.1nm,0.1s,SNR=9.6					
EGRO			Sn	Sn	20 36 48.6	-6.8
	3.2nm,0.3s,SNR=7.9					
EGRO	**El Granado**	**7.83 226**	Pn	Pn	20 35 27.0	+0.6
	0.1nm,0.1s,SNR=9.6					
PMAFR	**Mafra**	**7.94 241**	*e*Pn	Pn	20 35 29.6	+1.8
PMAFR			A		20 38 15.3	
	22nm,0.6s					
PMAFR	**Mafra**	**7.94 241**	*e*Pn	Pn	20 35 29.6	+1.8
	22nm,0.6s					
PVAQ	**Vaqueiros**	**8.05 226**	*e*Pn	Pn	20 35 29.2	-0.2
PVAQ			*e*Sn	Sn	20 36 53.4	-7.5
PVAQ			*e*Sg	Sg	20 37 49.0	-1.2
PVAQ			A		20 38 15.1	
	10.0nm,0.7s					
PVAQ	**Vaqueiros**	**8.05 226**	Pn	Pn	20 35 29.2	-0.2
PVAQ			Sn	Sn	20 36 53.4	-7.5
PVAQ			Lg		20 37 49.0	
	10.0nm,0.7s					
PVAQ	**Vaqueiros**	**8.05 226**	Pn	Pn	20 35 29.2	-0.2
PVAQ			Sn	Sn	20 36 53.4	-7.5
PVAQ			Lg		20 37 49.0	
	10.0nm,0.7s					
PVAQ	**Vaqueiros**	**8.05 226**	*e*Pn	Pn	20 35 29.2	-0.2
PCVE	**Castro Verde**	**8.06 229**	*e*Pn	Pn	20 35 30.5	+1.0
PCVE			*e*Sn	Sn	20 36 55.3	-5.7
PCVE			A		20 37 56.0	
	11nm,0.6s					
PCVE	**Castro Verde**	**8.06 229**	Pn	Pn	20 35 30.5	+1.0
PCVE			Sn	Sn	20 36 55.3	-5.7
	11nm,0.6s					
PCVE	**Castro Verde**	**8.06 229**	Pn	Pn	20 35 30.5	+1.0
PCVE			Sn	Sn	20 36 55.3	-5.7
	11nm,0.6s					
PCVE	**Castro Verde**	**8.06 229**	*e*Pn	Pn	20 35 30.5	+1.0
PBDV	**Barranco-do-Ve**	**8.29 226**	*e*Sn	Sn	20 37 00.0	-6.6
PBDV			A		20 38 07.2	
	9.7nm,0.6s					
PBDV	**Barranco-do-Ve**	**8.29 226**	Sn	Sn	20 37 00.0	-6.6
	9.7nm,0.6s					
PBDV	**Barranco-do-Ve**	**8.29 226**	Sn	Sn	20 37 00.0	-6.6
	9.7nm,0.6s					
PTEO	**Sao Teotonio**	**8.50 231**	*e*Sn	Sn	20 37 05.3	-6.6
PTEO			A		20 38 36.1	
	15nm,0.6s					
PTEO	**Sao Teotonio**	**8.50 231**	Sn	Sn	20 37 05.3	-6.6
	7.3nm,0.6s					
PTEO	**Sao Teotonio**	**8.50 231**	Sn	Sn	20 37 05.3	-6.6
	7.3nm,0.6s					
MORF	**Marmelete**	**8.63 230**	*e*Pn	Pn	20 35 37.5	+0.2
MORF			*e*Sn	Sn	20 37 10.4	-4.7
MORF			A		20 38 26.3	
	5.9nm,0.5s					
MORF	**Marmelete**	**8.63 230**	Pn	Pn	20 35 37.5	+0.2
MORF			Sn	Sn	20 37 10.4	-4.7
	5.9nm,0.5s					
MORF	**Marmelete**	**8.63 230**	Pn	Pn	20 35 37.5	+0.2
MORF			Sn	Sn	20 37 10.4	-4.7
	5.9nm,0.5s					
MORF	**Marmelete**	**8.63 230**	*e*Pn	Pn	20 35 37.5	+0.2
FETA	**Feichten**	**8.75 60**	⇑*i*Pn	Pn	20 35 43.3	+4.4
PFVI	**Vila Bisbo**	**8.85 229**	*e*Pn	Pn	20 35 40.4	0.0
PFVI			*e*Sn	Sn	20 37 16.0	-4.5
PFVI			A		20 38 35.9	
	10nm,0.7s					
PFVI	**Vila Bisbo**	**8.85 229**	*e*Pn	Pn	20 35 40.4	0.0
MOTA	**Moosalm**	**9.11 59**	⇓*i*Pn	Pn	20 35 46.6	+2.7
DLF	**Lyons Farm**	**10.87 340**	*e*P	Pn	20 36 08.0	0.0
NKC	**Novy Kostel**	**11.27 47**	*e*S	Sx	20 39 38.4	
NKC	**Novy Kostel**	**11.27 47**	Sg	Sx	20 39 38.4	
KHC	**Kasperske Hory**	**11.35 54**	*e*P	Px	20 36 25.1	
KHC			*e*S	Sx	20 38 11.1	
KHC			*e*x	x	20 39 36.7	
KHC	**Kasperske Hory**	**11.35 54**	Pn	Px	20 36 25.1	
KHC			Sg	Sx	20 39 36.7	
	14nm,1.6s					
PRU	**Pruhonice**	**12.30 51**	*e*S	Sx	20 38 33.1	
PRU			*e*x	x	20 40 07.7	
PRU	**Pruhonice**	**12.30 51**	Sg	Sx	20 40 07.7	
	13nm,1.3s					
DPC	**Dobruska-Polom**	**13.49 52**	*e*S	Sx	20 40 45.2	
DPC	**Dobruska-Polom**	**13.49 52**	Sg	Sx	20 40 45.2	
	75nm,3.4s					

MEX 16 20:42:09.5±0.7, 16°.86N×90°.51W, h9km±39km, MD4.1, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCX	**San Cristobal**	**2.04**	**267**	*i* P	Pn	20 42 40.4	-3.6
SCX				*i* S	Sn	20 43 05.8	-3.8
SCIG	**Sabancuy**	**2.20**	**343**	*i* P	Pn	20 42 43.0	-3.2
SCIG				*e*S	Sn	20 43 09.1	-4.4
TGIG		**2.50**	**269**	*i* P	Pn	20 42 48.1	-2.3
TGIG				*e*S	Sn	20 43 16.2	-4.8
PCIG		**2.84**	**247**	*i* P	Pn	20 42 52.2	-2.9
PCIG				*e*S	Sn	20 43 25.6	-3.8

*IDC **16** 20:53:17.3±1.6, 10°.08N×126°.19E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.6/21, mbtmp3.8/5, Error ellipse: s-maj=176.0km s-min=22.4km az=69.0*
*ISCJB **16** 20:53:25.5±1.0, 9°.94N±0°.05×126°.16E±0°.09, h78km±11km, mb3.6/5, Error ellipse: s-maj=14.3km s-min=8.7km az=178.1*
*MAN **16** 20:53:25, 9°.96N×126°.16E, h54km, mb4.6, ML3.5, MS3.5*
ISC 16 20:53:26.6±1.0, 9°.94N±0°.05×126°.15E±0°.09, h71km±11km, n16, σ0°.91/21, mb3.6/5, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**1.09**	**208**	*e*P	Pn	20 53 45.1	-1.3
BUTP				*e*S	Sn	20 53 54.3	-6.8
BESP	**Borongan**	**1.79**	**337**	*e*P	Pn	20 53 55.6	+0.2
OCLP	**Ormoc**	**1.87**	**306**	*e*P	Pn	20 53 56.5	0.0
CGP	**Cagayan de Oro**	**2.06**	**224**	*e*P	Pn	20 53 58.5	-0.6
CGP				*i* S	Sn	20 54 21.7	-2.1
LLP	**Lapu-Lapu**	**2.18**	**280**	⇓*e*P	Pn	20 54 00.4	-0.2
LLP				*i* S	Sn	20 54 26.3	-0.4
TBP	**Tagbilaran**	**2.26**	**264**	*e*P	Pn	20 54 03.3	+1.5
TBP				*e*S	Sn	20 54 29.6	+0.8
BUKP	**Musuan**	**2.31**	**208**	*e*P	Pn	20 54 04.3	+1.8
BUKP				*e*S	Sn	20 54 14.3	-16
CNP	**Catarman**	**2.94**	**330**	*e*P	Pn	20 54 09.9	-1.1
PAGZ	**Pagadian**	**3.43**	**233**	*e*P	Pn	20 54 18.7	+1.0
GUIM	**Jordan**	**3.56**	**281**	*e*P	Pn	20 54 19.9	+0.4
PVCP	**Virac**	**4.12**	**332**	*e*P	Pn	20 54 27.7	+0.5
WRA	**Warramunga Arr**	**30.77**	**165**	P	**P**	20 59 36.0	+0.5
	1.3nm,1.0s,mb3.6,baz=343,slow=9.3,SNR=4.7						
ASAR	**Alice Springs**	**34.25**	**167**	P	**P**	21 00 06.1	+0.3
	0.3nm,0.7s,mb3.2,baz=345,slow=7.5,SNR=5.7						
MKAR	**Makanchi Array**	**52.21**	**323**	P	**P**	21 02 29.9	-0.3
	0.2nm,0.3s,mb3.6,baz=115,slow=8.0,SNR=6.7						
ARCES	**ARCESS Array B**	**84.46**	**340**	P	**P**	21 05 50.3	-0.9
	1.6nm,0.8s,mb3.9,baz=82,slow=6.7,SNR=2.9						
FINES	**FINESS Array B**	**86.12**	**332**	P	**P**	21 05 59.5	-0.1
	0.5nm,0.3s,mb3.9,baz=68,slow=4.0,SNR=8.4						

*ISCJB **16** 21:11:14.0±1.5, 40°.83N±0°.04×20°.7E±0°.1, h26km±12km, Error ellipse: s-maj=14.3km s-min=7.1km az=169.4*
*SKO **16** 21:11:14.0, 40°.85N×20°.75E, h27km, M1.1, ML1.6*
*CSEM **16** 21:11:15.0, 40°.83N×20°.76E, h18km, ML3.0/2, After THE THE **16** 21:11:15.0, 40°.83N×20°.76E, h18km±1km, ML3.0/2, Error ellipse: s-maj=1.2km s-min=0.5km az=327.0*
ISC 16 21:11:14.4±1.5, 40°.83N±0°.04×20°.7E±0°.1, h19km±8km, n13, σ0°.49/26, 3C, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHR	**Ohrid**	**0.29**	**16**	⇑*i*Pg	**Pg**	21 11 20.9	0.0
OHR				*i* Sg	**Sg**	21 11 26.1	+0.9
OHR				*e*Lg		21 11 26.2	
	comp=E,123nm,0.5s						
OHR				*e*Lg		21 11 28.3	
	comp=N,60nm,0.4s						
OHR	**Ohrid**	**0.29**	**16**	P	**Pg**	21 11 20.8	-0.1
OHR				S	**Sg**	21 11 26.0	+0.7
OHR	**Ohrid**	**0.29**	**16**	P	**Pg**	21 11 20.8	-0.1
OHR				S	**Sg**	21 11 26.0	+0.7
NEST	**Nestorio**	**0.50**	**147**	P	**Pg**	21 11 24.1	-0.3
NEST				S	**Sg**	21 11 31.7	+0.5
NEST	**Nestorio**	**0.50**	**147**	P	**Pg**	21 11 24.1	-0.3
NEST				S	**Sg**	21 11 31.7	+0.5
BIA	**Bitola**	**0.51**	**68**	⇑*i*Pg	**Pg**	21 11 24.1	-0.6
BIA				*i* Sg	**Sg**	21 11 31.8	+0.1
BIA				*e*Lg		21 11 32.2	
	comp=E,93nm,0.2s						
BIA				*e*Lg		21 11 32.3	
	comp=N,101nm,0.2s						
BIA	**Bitola**	**0.51**	**68**	P	**Pg**	21 11 24.0	-0.7
BIA				S	**Sg**	21 11 31.2	-0.5
BIA	**Bitola**	**0.51**	**68**	P	**Pg**	21 11 24.0	-0.7
BIA				S	**Sg**	21 11 31.2	-0.5
FNA	**Florina**	**0.52**	**95**	P	**Pg**	21 11 24.6	-0.3
FNA				S	**Sg**	21 11 31.8	-0.1
FNA	**Florina**	**0.52**	**95**	P	**Pg**	21 11 24.6	-0.3
FNA				S	**Sg**	21 11 31.8	-0.1
KRUS	**Krusevo**	**0.68**	**38**	⇑*i*Pg	**Pg**	21 11 27.2	-0.6
KRUS				*i* Sg	**Sg**	21 11 37.5	+0.5
KRUS				*e*Lg		21 11 37.8	
	comp=E,28nm,0.3s						
KRUS				*e*Lg		21 11 37.9	
	comp=N,15nm,0.2s						
KZN	**Kozani**	**0.97**	**122**	P	**Pb**	21 11 32.4	-0.2
KZN				S	**Sb**	21 11 45.7	+0.7
KZN	**Kozani**	**0.97**	**122**	P	**Pb**	21 11 32.4	-0.2
KZN				S	**Sb**	21 11 45.7	+0.7

MEX 16 21:11:22.6±0.5, 16°.98N×99°.65W, h30km±8km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.23**	**240**	*i* P	Pb	21 11 28.3	-0.8
ACX				*i* S	Sb	21 11 33.2	-0.3
CAIG	**El Cayaco**	**0.59**	**276**	*i* P	Pb	21 11 32.4	-2.1
CAIG				*i* S	Sb	21 11 40.4	-2.2
MEIG	**Mezcala**	**0.94**	**2**	*i* P	Pn	21 11 37.3	-2.4
MEIG				*e*S	Sn	21 11 49.6	-2.6
PLIG	**Platanillo**	**1.41**	**6**	*i* P	Pn	21 11 44.8	-1.5
PLIG				*e*S	Sn	21 12 01.4	-2.5
PNIG	**Pinotepa**	**1.58**	**112**	*i* P	Pn	21 11 46.8	-1.7
PNIG				*i* S	Sn	21 12 05.8	-2.1

IDC 16 21:19:05.6±2.4, 17°.17S×176°.62W, h0km, mb4.2/3, mb1 4.4/4, mb1mx3.9/17, mbtmp4.2/4, ML2.4/1, Error ellipse: s-maj=163.3km s-min=31.6km az=151.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.68**	**56**	Pn	Pn	21 20 31.4	+0.1
	5.9nm,0.3s,baz=207,slow=22,SNR=5.6						
AFI				Sn	Sn	21 21 22.7	-14
	13nm,0.3s,baz=36,slow=23,SNR=9.5						
STKA	**Stephens Creek**	**40.48**	**241**	P	P	21 26 46.8	+0.5
	1.2nm,0.5s,baz=74,slow=11,SNR=3.3						
WRA	**Warramunga Arr**	**46.45**	**259**	P	P	21 27 34.2	-0.4
	0.3nm,0.5s,baz=96,slow=7.1,SNR=13						
ASAR	**Alice Springs**	**46.64**	**253**	P	P	21 27 35.8	-0.3
	6.7nm,0.5s,baz=88,slow=8.5,SNR=154						

BUC 16 21:24:08.6±0.8, 45°.85N×26°.77E, h125km±5km, MD2.9/2, 8C, Error ellipse: s-maj=12.0km s-min=4.9km az=113.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRI	**Vrincioaia**	**0.03**	**300**	⇑*i*P	Pn	21 24 25.8	+0.3
VRI				*i* S	Sn	21 24 38.4	+0.1
VRI	**Vrincioaia**	**0.03**	**300**	⇑*i*P	Pn	21 24 25.8	+0.3
PLOR	**Plostina**	**0.08**	**271**	⇑*i*P	Pn	21 24 25.7	+0.1
PLOR				*i* S	Sn	21 24 38.8	+0.4
PLOR	**Plostina**	**0.08**	**271**	⇑*i*P	Pn	21 24 25.7	+0.1
TESR		**0.67**	**353**	⇑*i*P	Pn	21 24 28.5	+0.3
TESR				*i* S	Sn	21 24 42.8	-0.2
TESR		**0.67**	**353**	⇑*i*P	Pn	21 24 28.5	+0.3
MLR	**Muntele Rosu**	**0.68**	**238**	⇑*i*P	Pn	21 24 28.4	+0.1
MLR				*i* S	Sn	21 24 43.4	+0.3
MLR	**Muntele Rosu**	**0.68**	**238**	⇑*i*P	Pn	21 24 28.4	+0.1
MLR	**Muntele Rosu**	**0.68**	**238**	S	Sn	21 24 43.4	+0.3
VOIR		**1.27**	**252**	*i* S	Sn	21 24 53.5	+0.5
VOIR		**1.27**	**252**	S	Sn	21 24 53.5	+0.5

*BJI **16** 21:25:29.7, 5°.24N×94°.68E, h20km, mB4.6/6, mb4.8/18, Ms4.3/1, Ms7 4.1/1*
*NEIC **16** 21:25:34.8±1.1, 5°.02N×94°.66E, h53km±9km, mb4.5/32, Error ellipse: s-maj=10.1km s-min=6.1km az=48.0*
NEIC Felt [III] at Banda Aceh.
*ISCJB **16** 21:25:35.2±1.1, 5°.10N±0°.05×94°.83E±0°.07, h69km±10km, mb4.4/63, Error ellipse: s-maj=12.0km s-min=6.5km az=155.9*
*IDC **16** 21:25:36.0±0.9, 5°.23N×94°.88E, h58km±7km, mb4.1/17, mb1 4.2/18, mb1mx4.0/25, mbtmp4.1/18, MS2.9/2, Ms1 3.0/2, ms1mx2.6/24, Error ellipse: s-maj=25.8km s-min=10.7km az=46.0*
*DJA **16** 21:26:03, 4°.12N×96°.80E, h34km, MLv4.5/8*
ISC 16 21:25:36.6±0.9, 5°.10N±0°.05×94°.78E±0°.07, h67km±9km, h58km±5.1km: pP-P, n133, σ0°.93/134, mb4.4/63, 2C, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**3.01**	**127**	P	**Pn**	21 26 21.4	-0.5
TPTI				S	Px	21 26 30.7	
PSI	**Prapat**	**4.72**	**119**	P	**Pn**	21 26 46.5	+1.1
	35nm,0.3s,baz=297,slow=10,SNR=72						
PSI				S	**Sn**	21 27 41.1	+2.3
	12nm,0.3s,baz=16,slow=17,SNR=2.5						
PSI	**Prapat**	**4.72**	**119**	P	**Pn**	21 26 46.5	+1.1
PSI				S	**Sn**	21 27 41.0	+2.3
KULM	**Kulim**	**5.85**	**88**	P	**Pn**	21 27 01.1	+0.3
KULM	**Kulim**	**5.85**	**88**	*e*Pn	**Pn**	21 27 00.8	0.0
	41nm,0.6s						
KULM				*e*Sn	**Sn**	21 28 01.4	-5.0
KULM	**Kulim**	**5.85**	**88**	P	**Pn**	21 27 00.4	-0.4
IPM	**Ipoh**	**6.25**	**95**	P	**Pn**	21 27 05.9	-0.4
IPM	**Ipoh**	**6.25**	**95**	P	**Pn**	21 27 05.9	-0.4
MNSI	**Mandailing Nat**	**6.42**	**132**	P	**Pn**	21 27 08.0	-0.6
FRIM	**Kepong**	**7.07**	**105**	P	**Pn**	21 27 16.9	-0.6
SISI	**Saibi**	**7.70**	**146**	P	**Pn**	21 27 24.9	-1.2
	0.3nm62nm,0.6s						
BKNI	**Bangkinang**	**7.84**	**127**	P	**Pn**	21 27 28.4	+0.3
	0.5nm1μm130nm,0.7s						
PPI	**Padang Panjang**	**7.87**	**134**	P	**Pn**	21 27 28.6	+0.2
	0.2nm54nm,1.2s						
PDSI	**Padang**	**8.23**	**136**	P	**Pn**	21 27 32.6	-0.9
KGM	**Kluang**	**9.05**	**109**	P	**Pn**	21 27 44.5	-0.2
MYKOM	**Kota Tinggi**	**9.63**	**110**	P	**Pn**	21 27 52.2	-0.3
NST	**Nakhon Sawan**	**11.75**	**26**	P	**Pn**	21 28 23.1	+1.6
	64nm,0.5s						
CMAR	**Chiang Mai Arr**	**13.89**	**17**	P	**Pn**	21 28 52.1	+1.8
	1.8nm,0.3s,baz=209,slow=11,SNR=61						
CMAR				LR	LR	21 34 29.1	
	comp=Z,50nm,19.3s,baz=190,slow=39						
CMAR				ScP	ScP	21 37 36.7	+0.5
	0.1nm,0.3s,baz=229,slow=2.3,SNR=5.7						
PALK	**Pallekele**	**14.16**	**279**	*e*Pn	**Pn**	21 28 48.5	-5.6
PALK				*e*Sn	**Sn**	21 31 17.8	-12
CHG	**Chiang Mai**	**14.22**	**16**	⇑P	**Pn**	21 28 59.6	+4.8
	26nm,0.8s						
CHTO	**Chiang Mai**	**14.22**	**16**	*e*Pn	**Pn**	21 28 55.7	+0.9
	21nm,0.8s						
KSM	**Kuching**	**15.91**	**103**	P	**Pn**	21 29 19.7	+3.1
KSM	**Kuching**	**15.91**	**103**	*e*Pn	**Pn**	21 29 16.6	+0.1
	14nm,0.8s						
KMI	**Kunming**	**21.33**	**20**	P	**P**	21 30 19.3	+1.1
KMI				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.3						
ODAN	**Odare**	**22.76**	**343**	*e*P	**P**	21 30 32.0	-1.4
	comp=Z,12nm,0.5s,mb4.5						
RAMN	**Ramite**	**23.09**	**341**	*e*P	**P**	21 30 35.9	-1.0
	comp=Z,22nm,0.6s,mb4.7						
TAPN	**Taplejung**	**23.13**	**344**	*e*P	**P**	21 30 36.8	-0.4
	comp=Z,12nm,0.3s,mb4.7						
JIRN	**Jiri**	**23.88**	**341**	*e*P	**P**	21 30 43.2	-0.9
	comp=Z,8.6nm,0.3s,mb4.6						
PKI	**Pulchoki**	**24.07**	**339**	*e*P	**P**	21 30 45.2	-0.6
GYA	**Guiyang**	**24.09**	**27**	⇑*i*P	**P**	21 30 45.6	-0.4
GYA				pmax	pmax		
	comp=Z,40nm,0.6s,mb4.9						
DMN	**Daman**	**24.21**	**339**	*e*P	**P**	21 30 46.0	-1.1
	comp=Z,8.9nm,0.6s,mb4.3						
GUN	**Gumba**	**24.22**	**340**	*e*P	**P**	21 30 46.2	-0.9
	comp=Z,17nm,0.4s,mb4.7						
KKN	**Kakani**	**24.31**	**339**	*e*P	**P**	21 30 46.8	-1.2
	comp=Z,9.1nm,0.6s,mb4.3						
LSA	**Lhasa**	**24.71**	**352**	*e*P	**P**	21 30 51.6	0.0
	comp=Z,15nm,0.6s,mb4.6						
GKN	**Gorkha**	**24.74**	**338**	*e*P	**P**	21 30 51.4	-0.5
	comp=Z,16nm,0.3s,mb4.9						
ENH	**Enshi**	**28.62**	**27**	*e*P	**P**	21 31 24.6	-2.2
	comp=Z,6.9nm,0.8s,mb4.3						
XAN	**Xi'an**	**31.65**	**23**	P	**P**	21 31 51.6	-1.9
XAN				pP	pP	21 31 58.3	-11
XAN				sP	sP	21 32 00.3	-17
XAN				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.7						
XAN				pmax	pmax		
	comp=Z,11nm,5.9s						
GTA	**Gaotai**	**34.46**	**7**	*e*P	**P**	21 32 16.9	-1.0
GTA				pP	pP	21 32 20.5	-14
GTA				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.7						
MBWA	**Marble Bar**	**35.77**	**138**	P	**P**	21 32 29.1	-0.4
KBL	**Kabul**	**37.77**	**324**	*e*P	**P**	21 32 45.5	-0.7
FITZ	**Fitzroy Crossi**	**38.18**	**128**	*e*P	**P**	21 32 49.4	-0.6
	comp=Z,3.2nm,0.7s,mb4.3						
HHC	**Hu-ho-hao-te**	**38.65**	**21**	*e*P	**P**	21 32 55.8	+2.2
HHC				S	**S**	21 38 50.4	+5.1
HHC				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.0						
HHC				pmax	pmax		
	comp=Z,61nm,6.4s						
BJT	**Baijiatuao**	**39.75**	**26**	*e*P	**P**	21 33 03.0	+0.3
	comp=Z,15nm,0.6s,mb5.0						
BJI	**Beijing**	**39.77**	**26**	P	**P**	21 33 03.1	+0.1
BJI				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.2						
ULHL	**Ulahol**	**40.51**	**339**	P	**P**	21 33 09.7	+0.7
	SNR=8.5						
KZA	**Kyzart**	**40.73**	**338**	P	**P**	21 33 12.0	+1.1
	SNR=5.7						
UCH	**Uchtor**	**41.14**	**337**	P	**P**	21 33 15.2	+1.0
	SNR=20						
UCH	**Uchtor**	**41.14**	**337**	*e*P	**P**	21 33 15.3	+1.1
	comp=Z,9.9nm,0.7s,mb4.8						
KBK	**Karagaybulak**	**41.34**	**338**	P	**P**	21 33 17.4	+1.6
	SNR=19						
AML	**Almayashu**	**41.38**	**336**	P	**P**	21 33 17.5	+1.3
	SNR=41						
AML	**Almayashu**	**41.38**	**336**	*e*P	**P**	21 33 17.2	+1.0
	comp=Z,26nm,0.6s,mb5.2						
AAK	**Ala-Archa**	**41.49**	**337**	*e*P	**P**	21 33 18.6	+1.5
	comp=Z,8.5nm,0.8s,mb4.6						
EKS2	**Erkin-Say**	**41.80**	**337**	P	**P**	21 33 20.7	+1.2
	SNR=15						
EKS2	**Erkin-Say**	**41.80**	**337**	*e*P	**P**	21 33 20.3	+0.7
	comp=Z,6.7nm,0.6s,mb4.5						
USP	**Ospenovka**	**42.03**	**338**	P	**P**	21 33 22.4	+0.9
	SNR=5.6						
MK31	**Makanchi Array**	**42.92**	**347**	*e*P	**P**	21 33 28.0	-0.7
MK31				*e*PcP	PcP	21 35 19.0	+0.7
MKAR	**Makanchi Array**	**42.92**	**347**	P	**P**	21 33 27.9	-0.7
	comp=Z,3.1nm,0.3s,mb4.5,baz=169,slow=8.4,SNR=51						
MKAR				pP	pP	21 33 43.7	-1.8
	comp=Z,1.5nm,0.5s,baz=166,slow=8.0,SNR=3.0						
MKAR				PcP	PcP	21 35 18.9	+0.6
	comp=Z,0.5nm,0.4s,baz=161,slow=3.7,SNR=2.7						
SONM	**Songino Array**	**43.73**	**11**	P	**P**	21 33 33.9	-1.3
	comp=Z,2.4nm,0.5s,mb4.2,baz=188,slow=9.0,SNR=20						
SONM				PcP	PcP	21 35 21.0	0.0
	comp=Z,0.6nm,0.4s,baz=190,slow=3.9,SNR=4.0						
ULN	**Ulaanbaatar**	**43.89**	**12**	*e*P	**P**	21 33 35.1	-1.3
	comp=Z,3.5nm,0.9s,mb4.1						
KSRS	**Korea Array**	**44.17**	**39**	P	**P**	21 33 37.5	-1.4
	comp=Z,2.1nm,0.4s,mb4.2,baz=218,slow=9.1,SNR=14						
WRA	**Warramunga Arr**	**46.16**	**124**	P	**P**	21 33 54.8	-0.1
	comp=Z,3.3nm,0.8s,mb4.1,baz=306,slow=8.8,SNR=20						
WRA				pP	pP	21 34 09.8	-2.1
	comp=Z,4.6nm,0.6s,baz=302,slow=9.2,SNR=7.8						
WRAB	**Tennant Creek**	**46.17**	**124**	*e*P	**P**	21 33 55.3	+0.3
	comp=Z,4.6nm,0.6s,mb4.4						
TLY	**Talaya**	**47.01**	**8**	*e*P	**P**	21 34 00.4	-0.7
KURK	**Kurchatov**	**47.44**	**346**	*e*P	**P**	21 34 04.0	-0.4
	comp=Z,9.6nm,0.6s,mb4.7						
ASAR	**Alice Springs**	**47.67**	**129**	P	**P**	21 34 06.9	+0.2
	comp=Z,2.0nm,0.4s,mb4.3,baz=299,slow=7.9,SNR=32						
ASAR				pP	pP	21 34 21.6	-2.2
	comp=Z,6.1nm,0.7s,baz=298,slow=7.8,SNR=15						
HIA	**Hailar**	**48.83**	**22**	*e*P	**P**	21 34 13.9	-1.2
ZAA0	**Zalesovo Array**	**49.38**	**352**	*e*P	**P**	21 34 18.3	-0.9
ZALV	**Zalesovo Beam**	**49.38**	**352**	P	**P**	21 34 18.5	-0.7
	comp=Z,6.7nm,0.3s,mb5.0,baz=178,slow=6.9,SNR=63						
ZALV				LR	LR	21 58 05.5	
	comp=Z,14nm,20.2s,baz=126,slow=40						
MDJ	**Mudanjiang**	**49.77**	**32**	*e*P	**P**	21 34 24.7	+2.3
MJAR	**Matsushiro Arr**	**50.59**	**46**	P	**P**	21 34 28.4	-0.3
	com

comp=Z,2.9nm,0.6s,mb4.4
HAU Haudompre 85.20 318 *e*P **P 21 38 05.8 0.0**
comp=Z,7.3nm,0.8s,mb4.4
HAU Haudompre 85.20 318 *e*P **P 21 38 05.8 0.0**
comp=Z,3.7nm,0.8s,mb4.4
LMR La Mourre 85.28 313 *e*P **P 21 38 06.7 +0.4**
comp=Z,3.3nm,0.5s,mb4.2
LMR La Mourre 85.28 313 *e*P **P 21 38 06.7 +0.4**
comp=Z,1.6nm,0.5s,mb4.2
CABF La Chapelle 85.44 316 *e*P **P 21 38 07.5 +0.5**
comp=Z,4.0nm,0.6s,mb4.2
CABF La Chapelle 85.44 316 *e*P **P 21 38 07.5 +0.5**
comp=Z,2.0nm,0.6s,mb4.2
ORIF Oris-en-Rattie 85.66 315 *e*P **P 21 38 08.8 +0.6**
comp=Z,3.3nm,0.6s,mb4.1
ORIF Oris-en-Rattie 85.66 315 *e*P **P 21 38 08.8 +0.6**
comp=Z,1.6nm,0.6s,mb4.1
MEZF Maizieres J'vi 86.04 318 *e*P **P 21 38 09.9 -0.1**
VIVF Saint-Julien-I 86.52 315 *e*P **P 21 38 12.8 +0.4**
comp=Z,3.4nm,0.5s,mb4.2
VIVF Saint-Julien-I 86.52 315 *e*P **P 21 38 12.8 +0.4**
comp=Z,1.7nm,0.5s,mb4.2
LOR Lormes 86.92 317 *e*P **P 21 38 14.4 +0.1**
comp=Z,5.2nm,0.7s,mb4.2
LOR Lormes 86.92 317 *e*P **P 21 38 14.4 +0.1**
comp=Z,2.6nm,0.7s,mb4.3
SMF Signal de Mont 86.98 316 *e*P **P 21 38 14.6 0.0**
LASF Ste Croix 87.16 314 *e*P **P 21 38 16.3 +0.8**
comp=Z,3.1nm,0.7s,mb4.0
BGF Bois d'Agland 87.67 316 *e*P **P 21 38 18.6 +0.7**
comp=Z,4.5nm,0.6s,mb4.4
BGF Bois d'Agland 87.67 316 *e*P **P 21 38 18.6 +0.7**
comp=Z,2.3nm,0.6s,mb4.4
TCF Toulx Ste Croi 88.13 316 *e*P **P 21 38 20.6 +0.5**
CAF Calviac 88.36 315 *e*P **P 21 38 22.8 +1.5**
comp=Z,2.1nm,0.7s,mb4.0
CAF Calviac 88.36 315 *e*P **P 21 38 22.8 +1.5**
comp=Z,1.0nm,0.7s,mb4.0
MTLF Montolieu 88.41 313 *e*P **P 21 38 22.2 +0.7**
comp=Z,1.5nm,0.5s,mb4.0
MTLF Montolieu 88.41 313 *e*P **P 21 38 22.2 +0.7**
comp=Z,0.8nm,0.5s,mb4.0
EKA Eskdalemuir Ar 90.36 326 P **P 21 38 31.0 +0.6**
comp=Z,0.9nm,0.8s,mb4.0,baz=93,slow=5.0,SNR=4.2
ESDC Sonseca Array 93.48 310 P **P 21 38 45.8 +0.6**
comp=Z,0.3nm,0.6s,mb3.8,baz=74,slow=5.4,SNR=2.7
PMR Palmer 97.58 26 *e*P **P 21 39 04.8 +1.5**
ULM Lac du Bonnet 124.11 8 PKP PKPdf 21 44 25.6 -2.0
comp=Z,1.8nm,0.6s,baz=346,slow=4.2,SNR=3.0
NVAR Mina Array Bea 126.93 32 PKP PKPdf 21 44 35.1 +1.8
comp=Z,0.3nm,0.3s,baz=318,slow=4.0,SNR=3.7
PDAR Pinedale Array 127.49 22 PKP PKPdf 21 44 34.3 0.0
comp=Z,0.3nm,0.5s,baz=98,slow=4.1,SNR=3.7
TXAR Lajitas Array 141.45 26 PKP PKPdf 21 44 58.5 -2.3
comp=Z,0.1nm,0.4s,baz=257,slow=0.8,SNR=3.6

*ATH **16** 21:36:10.2, 38°.90N×28°.29E, h19km±13km, MD3.7/6*
*NEIC **16** 21:36:10.3, 38°.90N×28°.29E, h19km, MD3.7(ATH), After ATH.*
*ISK **16** 21:36:14.6, 38°.94N×27°.74E, h2km, ML3.5*
*DDA **16** 21:36:14.2, 38°.91N×27°.90E, h13km±1km, Md3.3*
*THE **16** 21:36:15.4, 38°.89N×27°.83E, h1km±1km, ML4.0/4, Error ellipse: s-maj=2.0km s-min=0.5km az=107.0*
*CSEM **16** 21:36:15.5±0.1, 38°.91N×27°.79E, h2km, ML3.5, Error ellipse: s-maj=3.2km s-min=2.7km az=110.0*
*ISCJB **16** 21:36:15.2±0.3, 38°.92N±0°.01×27°.80E±0°.02, h2km±3km, Error ellipse: s-maj=3.0km s-min=2.3km az=10.5*
ISC 16 21:36:15.8±0.3, 38°.92N±0°.01×27°.79E±0°.02, h4km±2km, n145, σ1°00/192, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.04**	**153**	*i* P	**Pg**	**21 36 16.6**	**-0.1**
AKHS				*i* S	**Sg**	**21 36 18.0**	**+0.6**
AKHS	**Akhisar**	**0.04**	**153**	*i* P	**Pg**	**21 36 16.6**	**-0.2**
AKHS				*i* S	**Sg**	**21 36 18.0**	**+0.6**
AKS	**Akhisar**	**0.04**	**154**	PG	**Pg**	**21 36 16.6**	**-0.2**
AKS	**Akhisar**	**0.04**	**154**	*i* Pg	**Pg**	**21 36 16.6**	**-0.2**
KDAG	**Bornova**	**0.66**	**219**	*i* P	**Pg**	**21 36 27.5**	**-0.9**
KDAG				*i* S	**Sg**	**21 36 38.1**	**+1.2**
KDAG	**Bornova**	**0.66**	**219**	*i* P	**Pg**	**21 36 27.5**	**-0.8**
KDAG				*i* S	**Sg**	**21 36 38.1**	**+1.3**
IZM	**Izmir**	**0.66**	**219**	PG	**Pg**	**21 36 28.0**	**-0.5**
IZM				*e*SG	**Sg**	**21 36 38.3**	**+1.2**
BALB	**Balikesir**	**0.73**	**5**	*e*PG	**Pg**	**21 36 29.6**	**-0.1**
BALB				*e*SG	**Sg**	**21 36 40.3**	**+1.1**
BALB	**Balikesir**	**0.73**	**5**	*e*Pg	**Pg**	**21 36 29.7**	**-0.1**
BALB				*e*Sg	**Sg**	**21 36 40.3**	**+1.1**
DEMI	**Demirci**	**0.73**	**80**	*i* P	**Pg**	**21 36 27.6**	**-2.3**
DEMI				*i* S	**Sg**	**21 36 35.5**	**-3.8**
DEMI	**Demirci**	**0.73**	**80**	*i* P	**Pg**	**21 36 27.6**	**-2.2**
DEMI				*i* S	**Sg**	**21 36 35.5**	**-3.8**
BLCB	**Balcova**	**0.79**	**228**	*e*PG	**Pg**	**21 36 30.7**	**-0.2**
BLCB				*e*SG	**Sg**	**21 36 43.0**	**+1.8**
BLCB	**Balcova**	**0.79**	**228**	P	**Pg**	**21 36 30.7**	**-0.2**
BLCB				S	**Sg**	**21 36 43.1**	**+2.0**
BLCB	**Balcova**	**0.79**	**228**	*e*Pg	**Pg**	**21 36 30.7**	**-0.2**
BLCB				*e*Sg	**Sg**	**21 36 43.0**	**+1.9**
BALY	**Balya**	**0.83**	**351**	*i* P	**Pg**	**21 36 31.1**	**-0.7**
BALY				*i* S	**Sg**	**21 36 43.3**	**+0.7**
BALY	**Balya**	**0.83**	**351**	*i* P	**Pg**	**21 36 31.1**	**-0.7**
BALY				*i* S	**Sg**	**21 36 43.3**	**+0.6**
AYVA	**Ayvalik**	**0.94**	**295**	*i* P	**Pg**	**21 36 34.2**	**+0.4**
AYVA				*i* S	**Sg**	**21 36 48.6**	**+2.5**
AYVA	**Ayvalik**	**0.94**	**295**	*i* P	**Pg**	**21 36 34.2**	**+0.4**
AYVA				*i* S	**Sg**	**21 36 48.6**	**+2.5**
URLA	**Izmir**	**1.09**	**240**	*i* P	**Pg**	**21 36 36.4**	**-0.3**
URLA				*i* S	**Sg**	**21 36 52.5**	**+1.8**
URLA	**Izmir**	**1.09**	**240**	*i* P	**Pg**	**21 36 36.3**	**-0.3**
URLA				*i* S	**Sg**	**21 36 52.5**	**+1.8**
GONE	**Gonen-Balikesi**	**1.13**	**356**	*e*PN	**Pg**	**21 36 36.8**	**-0.7**
GONE				*e*SN	**Sg**	**21 36 52.6**	**+0.4**
GONE	**Gonen-Balikesi**	**1.13**	**356**	*e*Pn	**Pg**	**21 36 36.8**	**-0.7**
GONE				*e*Sn	**Sg**	**21 36 52.6**	**+0.4**
PRK	**Paraskevi**	**1.23**	**286**	*e*Pn	**Pn**	**21 36 39.0**	**-0.8**
PRK	**Paraskevi**	**1.23**	**286**	*e*PN	**Pn**	**21 36 39.0**	**-0.8**
PRK	**Paraskevi**	**1.23**	**286**	P	**Pg**	**21 36 38.9**	**-0.4**
PRK				S	**Sg**	**21 36 57.0**	**+1.8**
PRK	**Paraskevi**	**1.23**	**286**	P	**Pg**	**21 36 38.9**	**-0.4**
PRK				S	**Sg**	**21 36 57.0**	**+1.8**
AYDN	**Tasoluk**	**1.25**	**177**	*i* P	**Pg**	**21 36 37.9**	**-2.0**
AYDN				*i* S	**Sg**	**21 36 55.0**	**-1.0**
AYDN	**Tasoluk**	**1.25**	**177**	*i* P	**Pg**	**21 36 37.8**	**-2.0**
AYDN				*i* S	**Sg**	**21 36 55.0**	**-1.1**
GCAM	**G?zelcaml?**	**1.29**	**200**	*i* P	**Pg**	**21 36 38.0**	**-2.5**
GCAM				*i* S	**Sg**	**21 36 57.9**	**+0.7**
GCAM	**G?zelcaml?**	**1.29**	**200**	*i* P	**Pg**	**21 36 38.0**	**-2.5**
GCAM				*i* S	**Sg**	**21 36 57.9**	**+0.7**
GDZ	**Gediz**	**1.33**	**82**	*i* P	**Pn**	**21 36 38.7**	**-2.4**
GDZ	**Gediz**	**1.33**	**82**	*i* P	**Pn**	**21 36 38.7**	**-2.4**
SMG	**Samos**	**1.42**	**212**	*e*Pn	**Pn**	**21 36 41.3**	**-1.1**
SMG				*e*Sn	**Sn**	**21 37 02.1**	**+0.6**
SMG	**Samos**	**1.42**	**212**	*e*PN	**Pn**	**21 36 41.3**	**-1.1**
SMG				*e*SN	**Sn**	**21 37 02.1**	**+0.6**
SMG	**Samos**	**1.42**	**212**	*e*Pn	**Pn**	**21 36 41.3**	**-1.1**
SMG				*e*Sn	**Sn**	**21 37 02.1**	**+0.6**
KHAL	**Karahalli**	**1.44**	**112**	*i* P	**Pn**	**21 36 40.3**	**-2.4**
KHAL				*i* S	**Sb**	**21 36 58.5**	**-3.3**
KHAL	**Karahalli**	**1.44**	**112**	*i* P	**Pn**	**21 36 40.3**	**-2.4**
KHAL				*i* S	**Sb**	**21 36 58.5**	**-3.3**
BNT	**Bandirma**	**1.44**	**4**	*e*PN	**Pn**	**21 36 41.7**	**-1.0**
BNT	**Bandirma**	**1.44**	**4**	*e*Pn	**Pn**	**21 36 41.7**	**-1.0**
EZN	**Ezine**	**1.46**	**309**	*e*PN	**Pn**	**21 36 41.7**	**-1.2**
EZN	**Ezine**	**1.46**	**309**	*e*Pn	**Pn**	**21 36 41.7**	**-1.2**
CHOS	**Chios island**	**1.46**	**249**	*e*PB	**Pb**	**21 36 42.0**	**-1.5**
CHOS	**Chios island**	**1.46**	**249**	P	**Pn**	**21 36 42.1**	**-0.8**
CHOS				S	**Sb**	**21 37 02.5**	**+0.1**
CHOS	**Chios island**	**1.46**	**249**	P	**Pn**	**21 36 42.1**	**-0.8**
CHOS				S	**Sb**	**21 37 02.5**	**+0.1**
DENT	**Denizli**	**1.52**	**139**	*e*PN	**Pn**	**21 36 44.1**	**+0.4**
DENT	**Denizli**	**1.52**	**139**	*e*Pn	**Pn**	**21 36 44.2**	**+0.5**
KRBG	**Karabiga-Canak**	**1.52**	**346**	*e*PN	**Pn**	**21 36 42.5**	**-1.4**
KRBG	**Karabiga-Canak**	**1.52**	**346**	*e*Pn	**Pn**	**21 36 42.5**	**-1.3**
SIGR	**SIGRI**	**1.54**	**282**	P	**Pn**	**21 36 43.1**	**-0.9**
SIGR	**SIGRI**	**1.54**	**282**	P	**Pn**	**21 36 43.1**	**-0.9**
DNZL	**Cakiroluk**	**1.57**	**141**	*i* P	**Pn**	**21 36 44.2**	**-0.3**
DNZL				*i* S	**Sn**	**21 37 00.8**	**-4.5**
DNZL	**Cakiroluk**	**1.57**	**141**	*i* P	**Pn**	**21 36 44.2**	**-0.3**
DNZL				*i* S	**Sn**	**21 37 00.8**	**-4.5**
MLSB	**Milas**	**1.62**	**180**	*e*PN	**Pn**	**21 36 45.1**	**+0.1**
MLSB	**Milas**	**1.62**	**180**	*e*Pn	**Pn**	**21 36 45.2**	**+0.1**
BOZC	**Bozcaada**	**1.63**	**305**	*i* P	**Pn**	**21 36 44.8**	**-0.5**
BOZC				*i* S	**Sn**	**21 37 07.2**	**+0.3**
LPK	**Lapseki**	**1.66**	**332**	*e*PN	**Pn**	**21 36 45.2**	**-0.5**
LPK	**Lapseki**	**1.66**	**332**	*e*Pn	**Pn**	**21 36 45.2**	**-0.5**
MDNY	**Mudanya-Bursa**	**1.68**	**30**	*e*PN	**Pn**	**21 36 46.0**	**0.0**
MDNY	**Mudanya-Bursa**	**1.68**	**30**	*e*Pn	**Pn**	**21 36 46.0**	**0.0**
GELI	**Tayfur-Gelibol**	**1.80**	**326**	*e*PN	**Pn**	**21 36 46.7**	**-0.9**
GELI	**Tayfur-Gelibol**	**1.80**	**326**	*e*Pn	**Pn**	**21 36 46.7**	**-0.9**
ALT	**Altintas**	**1.81**	**85**	*e*PN	**Pn**	**21 36 48.0**	**+0.2**
ALT	**Altintas**	**1.81**	**85**	*e*Pn	**Pn**	**21 36 48.0**	**+0.2**
YER	**Yerkesik**	**1.82**	**168**	*e*PN	**Pn**	**21 36 48.0**	**+0.2**
YER	**Yerkesik**	**1.82**	**168**	*e*Pn	**Pn**	**21 36 48.0**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.83**	**345**	*e*PN	**Pn**	**21 36 47.9**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.83**	**345**	*e*Pn	**Pn**	**21 36 47.9**	**-0.2**
SART	**Tekirdag**	**1.83**	**345**	*i* P	**Pg**	**21 36 50.5**	**-0.5**
SART				*i* S	**Sg**	**21 37 12.2**	**+0.4**
SART	**Tekirdag**	**1.83**	**345**	*i* P	**Pg**	**21 36 50.5**	**-0.4**
SART				*i* S	**Sn**	**21 37 12.2**	**+0.4**
ARMT	**Armutlu**	**1.84**	**26**	*e*PN	**Pn**	**21 36 48.4**	**+0.1**
ARMT	**Armutlu**	**1.84**	**26**	*e*Pn	**Pn**	**21 36 48.4**	**+0.2**
GEMT	**Gemlik**	**1.86**	**35**	*e*PN	**Pn**	**21 36 49.0**	**+0.5**
GEMT	**Gemlik**	**1.86**	**35**	*e*Pn	**Pn**	**21 36 49.0**	**+0.5**
BDRM	**Kayabasi**	**1.87**	**189**	*i* P	**Pn**	**21 36 49.1**	**+0.6**
BDRM				*i* S	**Sg**	**21 37 16.3**	**+0.5**
BDRM	**Kayabasi**	**1.87**	**189**	*i* P	**Pn**	**21 36 49.2**	**+0.7**
BDRM				*i* S	**Sg**	**21 37 16.3**	**+0.6**
BODT	**Bodrum**	**1.89**	**192**	*e*PN	**Pn**	**21 36 49.4**	**+0.6**
BODT	**Bodrum**	**1.89**	**192**	*e*Pn	**Pn**	**21 36 49.4**	**+0.6**
MFT	**Murefte**	**1.91**	**348**	*e*PN	**Pn**	**21 36 49.1**	**-0.1**
MFT	**Murefte**	**1.91**	**348**	*e*Pn	**Pn**	**21 36 49.1**	**0.0**
GADA	**Gvkgeada**	**1.94**	**312**	*e*PN	**Pn**	**21 36 48.8**	**-0.8**
GADA	**Gvkgeada**	**1.94**	**312**	*e*Pn	**Pn**	**21 36 48.8**	**-0.8**
ERIK	**Erikli-Kesan**	**2.01**	**331**	*e*PN	**Pn**	**21 36 49.8**	**-0.7**
ERIK	**Erikli-Kesan**	**2.01**	**331**	*e*Pn	**Pn**	**21 36 49.8**	**-0.7**
CAVI	**Cavuskoy**	**2.04**	**50**	*e*PN	**Pn**	**21 36 51.9**	**+0.9**
CAVI	**Cavuskoy**	**2.04**	**50**	*e*Pn	**Pn**	**21 36 51.9**	**+0.9**
YLV	**Yalova**	**2.05**	**36**	*e*PN	**Pn**	**21 36 51.7**	**+0.6**
YLV	**Yalova**	**2.05**	**36**	*e*Pn	**Pn**	**21 36 51.7**	**+0.6**
TKR	**Tekirdag**	**2.08**	**355**	*e*PN	**Pn**	**21 36 51.4**	**-0.1**
TKR	**Tekirdag**	**2.08**	**355**	*e*Pn	**Pn**	**21 36 51.4**	**-0.1**
ADVT	**Abdulvahap**	**2.13**	**44**	*e*PN	**Pn**	**21 36 53.6**	**+1.3**
ADVT	**Abdulvahap**	**2.13**	**44**	*e*Pn	**Pn**	**21 36 53.6**	**+1.4**
DAT	**Datca**	**2.19**	**184**	*e*PN	**Pn**	**21 36 53.8**	**+0.8**
DAT	**Datca**	**2.19**	**184**	*e*Pn	**Pn**	**21 36 53.8**	**+0.8**
SHUT	**Suhut-Afyon**	**2.19**	**99**	*e*PN	**Pn**	**21 36 53.6**	**+0.6**
SHUT	**Suhut-Afyon**	**2.19**	**99**	*e*Pn	**Pn**	**21 36 53.6**	**+0.6**
CRLT	**Corlu**	**2.21**	**359**	*e*PN	**Pn**	**21 36 53.2**	**-0.1**
CRLT	**Corlu**	**2.21**	**359**	*e*Pn	**Pn**	**21 36 53.2**	**-0.1**
ENEZ	**Enez**	**2.21**	**326**	*e*PN	**Pn**	**21 36 53.0**	**-0.4**
ENEZ	**Enez**	**2.21**	**326**	*e*Pn	**Pn**	**21 36 53.0**	**-0.3**
LIA	**Limnos Island**	**2.25**	**297**	*e*Pn	**Pn**	**21 36 53.5**	**-0.3**
LIA				*e*Sn	**Sg**	**21 37 26.0**	**-1.9**
LIA	**Limnos Island**	**2.25**	**297**	*e*PN	**Pn**	**21 36 53.5**	**-0.3**
LIA				*e*SN	**Sg**	**21 37 26.0**	**-1.9**
LIA	**Limnos Island**	**2.25**	**297**	P	**Pn**	**21 36 53.1**	**-0.7**
LIA	**Limnos Island**	**2.25**	**297**	P	**Pn**	**21 36 53.1**	**-0.7**
LIA	**Limnos Island**	**2.25**	**297**	*e*Pn	**Pn**	**21 36 53.5**	**-0.3**
LIA				*e*Sn	**Sg**	**21 37 26.0**	**-1.9**
BORA	**Eskisehir**	**2.28**	**64**	*i* P	**Pn**	**21 36 56.5**	**+2.3**
BORA				*i* S	**Sn**	**21 37 26.4**	**+3.7**
BORA	**Eskisehir**	**2.28**	**64**	*i* P	**Pn**	**21 36 56.5**	**+2.3**
BORA				*i* S	**Sn**	**21 37 26.4**	**+3.7**
SLVT	**Silivri**	**2.33**	**8**	*e*PN	**Pn**	**21 36 54.9**	**0.0**
SLVT	**Silivri**	**2.33**	**8**	*e*Pn	**Pn**	**21 36 54.9**	**-0.1**
ISK	**Istanbul-Kandi**	**2.36**	**24**	*e*PN	**Pn**	**21 36 55.9**	**+0.5**
ISK	**Istanbul-Kandi**	**2.36**	**24**	*e*Pn	**Pn**	**21 36 55.9**	**+0.6**
CTKS	**Kestanelik-??a**	**2.38**	**13**	*e*PN	**Pn**	**21 36 55.9**	**+0.2**
CTKS	**Kestanelik-??a**	**2.38**	**13**	*e*Pn	**Pn**	**21 36 55.9**	**+0.3**
BGKT	**Bogazkoy**	**2.39**	**18**	*e*PN	**Pn**	**21 36 56.8**	**+1.1**
BGKT	**Bogazkoy**	**2.39**	**18**	*e*Pn	**Pn**	**21 36 56.8**	**+1.1**
HRT	**Hereke**	**2.39**	**37**	*e*PN	**Pn**	**21 36 55.9**	**+0.1**
HRT	**Hereke**	**2.39**	**37**	*e*Pn	**Pn**	**21 36 55.9**	**+0.2**
ALN	**Alexandroupoli**	**2.39**	**326**	*e*Pb	**Pn**	**21 36 54.9**	**-0.9**
ALN	**Alexandroupoli**	**2.39**	**326**	*e*PB	**Pn**	**21 36 54.9**	**-0.9**
ALN	**Alexandroupoli**	**2.39**	**326**	P	**Pn**	**21 36 54.8**	**-1.0**
ALN				S	**Sn**	**21 37 25.7**	**+0.2**
ALN	**Alexandroupoli**	**2.39**	**326**	*e*Pb	**Pn**	**21 36 54.9**	**-0.9**
ALN				S	**Sn**	**21 37 25.7**	**+0.2**
ESKT	**Eskisehir**	**2.45**	**75**	*e*PN	**Pn**	**21 36 57.2**	**+0.6**
ESKT	**Eskisehir**	**2.45**	**75**	*e*Pn	**Pn**	**21 36 57.2**	**+0.6**
KLYT	**Kilyos**	**2.52**	**22**	*e*PN	**Pn**	**21 36 58.6**	**+1.0**
KLYT	**Kilyos**	**2.52**	**22**	*e*Pn	**Pn**	**21 36 58.6**	**+1.0**
GULT	**Gulveren**	**2.59**	**53**	*e*PN	**Pn**	**21 36 59.6**	**+1.1**
GULT	**Gulveren**	**2.59**	**53**	*e*Pn	**Pn**	**21 36 59.6**	**+1.1**
ARG	**Arkhangelos**	**2.71**	**174**	*e*PN	**Pn**	**21 36 54.6**	**-5.5**
ARG	**Arkhangelos**	**2.71**	**174**	*e*PN	**Pn**	**21 36 54.6**	**-5.5**
ARG	**Arkhangelos**	**2.71**	**174**	*e*Pn	**Pn**	**21 36 54.6**	**-5.5**
ELL	**Elmali**	**2.74**	**142**	*e*PN	**Pn**	**21 37 00.9**	**+0.4**
ELL	**Elmali**	**2.74**	**142**	*e*Pn	**Pn**	**21 37 00.9**	**+0.4**
SVRH	**Sivrihisar-ESK**	**2.95**	**78**	*e*PN	**Pn**	**21 37 05.0**	**+1.6**
SVRH	**Sivrihisar-ESK**	**2.95**	**78**	*e*Pn	**Pn**	**21 37 05.1**	**+1.7**
EDRB	**Edirne**	**3.04**	**345**	*e*PN	**Pn**	**21 37 05.0**	**+0.4**
EDRB	**Edirne**	**3.04**	**345**	*e*Pn	**Pn**	**21 37 05.1**	**+0.5**
MDU	**Mudurnu**	**3.06**	**59**	*e*PN	**Pn**	**21 37 06.4**	**+1.5**
MDU	**Mudurnu**	**3.06**	**59**	*e*Pn	**Pn**	**21 37 06.4**	**+1.4**
KAVA	**Kavala**	**3.27**	**311**	P	**Pn**	**21 37 07.2**	**-0.6**
KAVA	**Kavala**	**3.27**	**311**	P	**Pn**	**21 37 07.2**	**-0.6**
PLG	**Polygyros**	**3.66**	**295**	*e*PN	**Pn**	**21 37 12.9**	**-0.3**
PLG	**Polygyros**	**3.66**	**295**	*e*PN	**Pn**	**21 37 12.9**	**-0.3**
PLG	**Polygyros**	**3.66**	**295**	*e*Pn	**Pn**	**21 37 12.9**	**-0.3**
NVR	**Nevrokopi**	**3.87**	**310**	*e*PN	**Pn**	**21 37 15.6**	**-0.5**
NVR	**Nevrokopi**	**3.87**	**310**	*e*PN	**Pn**	**21 37 15.6**	**-0.5**
NVR	**Nevrokopi**	**3.87**	**310**	*e*Pn	**Pn**	**21 37 15.6**	**-0.5**

*ISCJB **16** 21:52:45.0±2.1, 7°.1S±0°.1×147°.48E±0°.10, h67km±20km, mb3.9/4, Error ellipse: s-maj=19.9km s-min=13.2km az=144.1*
*IDC **16** 21:52:44.8±5.2, 7°.05S×147°.44E, h45km±72km, mb3.7/2, mb1 3.9/3, mb1mx3.4/15, mbtmp3.8/3, ML3.9/1, Error ellipse: s-maj=95.2km s-min=33.5km az=144.0*
*NEIC **16** 21:52:45.7±1.3, 7°.06S×147°.45E, h57km±12km, mb3.8/4, Error ellipse: s-maj=13.3km s-min=8.1km az=142.0*
ISC 16 21:52:45.2±1.7, 7°.05S±0°.09×147°.45E±0°.10, h50km±16km, n18, σ0°63/20, mb4.0/4, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.36**	**187**	*e*Pn	**Pn**	**21 53 23.2**	**+1.7**
PMG				*e*Sn	**Sn**	**21 53 48.5**	**-0.7**
HNR	**Honiara**	**12.60**	**102**	*e*Pn	**Pn**	**21 55 41.5**	**-0.3**
CTAO	**Charters Tower**	**13.01**	**185**	*e*Pn	**Pn**	**21 55 47.0**	**-0.4**
WRAB	**Tennant Creek**	**18.04**	**223**	*e*Pn	**Pn**	**21 56 52.5**	**+0.2**
2.4nm,0.5s
WRA Warrumunga Arr 18.05 224 P **Pn 21 56 52.4 -0.1**
0.5nm,0.3s,baz=48,slow=11,SNR=34
WRA Warrumunga Arr 18.05 224 P **Pn 21 56 52.4 -0.1**
ASAR Alice Springs 21.02 217 P **P 21 57 25.3 +0.5**
3.0nm,0.3s,mb4.0,baz=53,slow=9.1,SNR=64
ASAR S **S 22 01 17.6 +1.3**
0.9nm,0.8s,baz=37,slow=21,SNR=4.7
FITZ Fitzroy Crossi 23.92 241 *e*P **P 21 57 53.9 -0.7**
2.9nm,0.4s,mb4.1
STKA Stephens Creek 25.30 192 P **P 21 58 07.0 -0.1**
1.8nm,0.5s,mb3.9,baz=356,slow=10,SNR=7.3
STKA Stephens Creek 25.30 192 *e*P **P 21 58 06.8 -0.2**
0.7nm,0.8s,mb3.2
MBWA Marble Bar 30.24 240 *e*P **P 21 58 50.1 -1.3**
1.8nm,0.3s,mb4.3
MSVF Nonsavu 31.67 112 P **P 21 59 04.1 +0.1**
MAJO Matsushiro 44.22 349 P **P 22 00 49.6 +0.2**
CASY Casey 64.37 196 *e*P **P 22 03 15.5 0.0**
YAK Yakutsk 70.24 351 *e*P **P 22 03 52.8 +0.2**
SBA Scott Base 71.48 176 *e*P **P 22 04 00.1 0.0**
EKS2 Erkin-Say 82.90 314 P **P 22 05 04.8 +0.1**
MCK McKinley 85.01 24 P **P 22 05 15.1 +0.2**

*ISCJB **16** 22:09:33.7±1.2, 27°.4S±0°.1×178°.3W±0°.2, h269km±10km, mb3.2/4, Error ellipse: s-maj=35.0km s-min=20.1km az=163.7*
*IDC **16** 22:09:35.5±4.6, 27°.52S×178°.42W, h261km±60km, mb3.1/2, mb1 3.3/2, mb1mx3.1/14, mbtmp3.1/2, Error ellipse: s-maj=138.3km s-min=30.2km az=170.0*
*NEIC **16** 22:09:35.3±1.1, 27°.39S×178°.41W, h266km±10km, mb3.5/2, Error ellipse: s-maj=18.6km s-min=13.9km az=77.0*
ISC 16 22:09:34.6±1.3, 27°.4S±0°.1×178°.4W±0°.2, h261km±10km, n20, σ0°81/17, mb3.2/4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.90**	**168**	P	**Pn**	**22 10 17.8**	**+0.8**
124nm,0.3s,baz=238,slow=19,SNR=11
RAO S **S 22 10 49.9 -0.8**
165nm,0.3s,baz=253,slow=23,SNR=6.7
URZ Urewera 11.50 198 S **S 22 14 04.8 -15**
1.5nm,0.3s,baz=109,slow=23,SNR=9.6
URZ Urewera 11.50 198 *e*P **Pn 22 12 13.5 +2.0**
SNZO South Karori 15.02 201 *e*P **Pn 22 12 53.4 -1.1**
PMG Port Moresby 37.11 292 P **P 22 16 20.2 -0.4**
ASAR Alice Springs 43.04 264 P **P 22 17 09.2 +0.2**
0.3nm,0.7s,mb2.7,baz=89,slow=6.7,SNR=5.1
WRAB Tennant Creek 43.74 269 *e*P **P 22 17 15.1 +0.4**
0.8nm,0.4s,mb3.3
WRA Warramunga Arr 43.75 269 P **P 22 17 15.1 +0.4**
0.7nm,0.4s,mb3.3,baz=110,slow=6.5,SNR=20
SBA Scott Base 51.02 184 *e*P **P 22 18 09.5 -0.1**
NWAO Narrogin (SRO) 55.22 247 *e*P **P 22 18 40.8 -0.1**
MBWA Marble Bar 56.30 262 P **P 22 18 47.1 -1.5**
QSPA South Pole Qui 62.72 180 *e*P **P 22 19 31.5 +0.1**
0.9nm,0.6s,mb3.6
KKM Kota Kinabalu 71.35 287 P **P 22 20 27.1 +0.5**
22nm,1.2s
MAJO Matsushiro 75.59 325 *e*P **P 22 20 50.2 -0.5**
NACB Ninganchiao 77.34 306 *e*P **P 22 21 01.9 +1.0**
TPUB Ta-pu 77.51 305 *e*P **P 22 21 01.3 -0.5**
ARCES ARCESS Array B 135.58 348 PKP PKPdf 22 28 24.4 +1.6
2.3nm,1.0s,baz=48,slow=1.3,SNR=4.9
NOA NORSAR Array B 145.73 352 PKPbc PKPbc 22 28 42.8 +0.6
0.6nm,0.7s,baz=28,slow=3.5,SNR=3.5
AKASG Malin Array Be 148.68 326 PKPbc PKPbc 22 28 50.3 -0.3
1.8nm,0.7s,baz=48,slow=2.9,SNR=4.4
MMAI Mount Meron Ar 150.37 289 PKPbc PKPbc 22 28 56.8 +1.6
0.8nm,0.6s,baz=90,slow=2.9,SNR=4.0

*ISCJB **16** 22:20:51.8±0.8, 32°.28N±0°.03×105°.08E±0°.03, h8km±5km, mb4.2/28, MS3.7/2, Error ellipse: s-maj=5.3km s-min=4.4km az=139.9*
*IDC **16** 22:20:52.9±1.7, 32°.31N×104°.98E, h0km, mb4.2/10, mb1 4.3/13, mb1mx4.1/25, mbtmp4.2/13, ML4.0/3, MS3.7/2, Ms1 3.8/2, ms1mx2.7/32, Error ellipse: s-maj=38.4km s-min=22.8km az=2.0*
*BJI **16** 22:20:53.7, 32°.34N×105°.16E, h9km, mB4.5/5, mb4.1/6, ML4.0/21, Ms3.8/8, Ms7 3.6/7*
*NEIC **16** 22:20:54.0±0.3, 32°.31N×105°.01E, h10km, mb4.3/12, Error ellipse: s-maj=7.5km s-min=5.5km az=65.0*
ISC 16 22:20:54.5±0.8, 32°.26N±0°.03×105°.03E±0°.03, h13km±5km, n73, σ0°95/86, mb4.2/28, MS3.7/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.73**	**219**	Pn	**Pn**	**22 21 26.4**	**+2.1**
CD2 Pg **Pg 22 21 27.5 -0.3**
CD2 Sg **Sg 22 21 50.3 0.0**
CD2 smax
comp=N,15μm,0.7s
CD2 smax
comp=E,9μm,0.7s
XAN Xi'an 3.71 60 Pn **Pn

EKS2	Erkin-Say	26.76	302	*e*P		P	22 26 33.6 -0.2
	comp=Z,1.2nm,0.5s,mb3.7						
KURK	Kurchatov	26.82	321	*e*P		P	22 26 34.3 0.0
	comp=Z,5.1nm,0.7s,mb4.2						
KBL	Kabul	30.04	284	*e*P		P	22 27 02.5 -0.8
BVAR	Borovoye Array	32.39	320	P		P	22 27 24.2 +0.4
	comp=Z,2.6nm,0.7s,mb4.2,baz=123,slow=11,SNR=11						
BRVK	Borovoye	32.46	320	*e*P		P	22 27 24.0 -0.4
	comp=Z,2.2nm,0.5s,mb4.2						
PALK	Pallekele	33.63	228	P		P	22 27 34.7 -0.2
ABKAR	Abkulak array	37.51	310	*e*P		P	22 28 08.4 +0.4
	comp=Z,1.5nm,0.3s,mb4.2						
ARU	Arti	40.01	321	*e*P		P	22 28 27.7 -1.1
	comp=Z,13nm,0.9s,mb4.7						
PETK	Petropavlovsk-	42.81	45	P		P	22 28 52.1 +0.3
	comp=Z,1.5nm,0.6s,mb3.9,baz=285,slow=5.5,SNR=2.7						
GNI	Garni	48.47	297	*e*P		P	22 29 37.1 +0.3
KIV	Kislovodsk	49.35	303	*e*P		P	22 29 43.0 -0.5
FITZ	Fitzroy Crossi	53.83	156	P		P	22 30 14.9 -2.2
JOF	Joensuu	54.48	327	*e*P		P	22 30 20.2 -1.2
JOF	Joensuu	54.48	327	*ep*		P	22 30 20.2 -1.2
	comp=Z,2.7nm,0.7s,mb4.3						
KEV	Kevo	56.00	336	*e*P		P	22 30 30.4 -1.9
	comp=Z,6.5nm,0.8s,mb4.7						
KEV	Kevo	56.00	336	*ep*		P	22 30 30.4 -1.9
	comp=Z,6.5nm,0.8s,mb4.7						
ARCES	ARCESS Array B	56.53	336	P		P	22 30 36.1 0.0
	comp=Z,3.1nm,0.6s,mb4.5,baz=89,slow=8.4,SNR=25						
ARE0	ARCESS Array S	56.53	336	*e*P		P	22 30 36.0 -0.1
KAF	Kangasniemi	56.86	327	*e*P		P	22 30 35.9 -2.6
	comp=Z,3.7nm,0.7s,mb4.5						
KAF	Kangasniemi	56.86	327	*ep*		P	22 30 35.9 -2.6
	comp=Z,3.7nm,0.7s,mb4.5,baz=84,slow=6.9						
BR131	Keskin Array S	56.86	299	*e*P		P	22 30 38.4 -0.5
	comp=Z,0.5nm,0.5s,mb3.8						
BRTR	Keskin Array B	56.86	299	P		P	22 30 38.9 0.0
	comp=Z,1.0nm,0.6s,mb4.0,baz=100,slow=6.4,SNR=5.2						
FINES	FINESS Array B	57.05	326	P		P	22 30 39.8 -0.2
	comp=Z,4.8nm,0.7s,mb4.6,baz=80,slow=8.0,SNR=22						
AKASG	Malin Array Be	57.17	313	P		P	22 30 40.3 -0.6
	comp=Z,0.6nm,0.3s,mb4.2,baz=68,slow=7.7,SNR=3.1						
IDID	Didziasalis	57.71	319	*e*P		P	22 30 45.1 +0.5
IIGN	Ignalina	58.00	319	*e*P		P	22 30 47.4 +0.7
WRAB	Tennant Creek	59.01	147	*e*P		P	22 30 54.1 0.0
	comp=Z,7.7nm,0.5s,mb5.0						
KWP	Kalwaria Pacla	61.50	313	*e*P		P	22 31 10.8 -0.1
NB2	NORSAR Subarra	64.11	327	P		P	22 31 26.9 -1.2
	comp=Z,1.8nm,0.5s,mb4.4,baz=72,slow=6.9						
NOA	NORSAR Array B	64.11	327	P		P	22 31 27.2 -0.9
	comp=Z,2.7nm,0.7s,mb4.4,baz=72,slow=6.7,SNR=7.5						
NAO01	NORSAR Array S	64.33	327	*e*P		P	22 31 29.2 -0.3
MORC	Moravsky Berou	64.63	314	*e*P		P	22 31 30.7 -0.9
NWAO	Narrogin (SRO)	65.86	169	*e*P		P	22 31 40.5 +0.8
INK	Inuvik	70.80	20	*e*P		P	22 32 09.4 -0.8
STKA	Stephens Creek	72.56	148	P		P	22 32 21.1 -0.2
CABF	La Chapelle	72.90	315	*e*P		P	22 32 23.2 -0.1
	comp=Z,3.5nm,0.7s,mb4.1						
LPG	La Plagne	73.03	313	*e*P		P	22 32 24.7 +0.6
	comp=Z,8.1nm,0.7s,mb4.5						
LPL	La Plagne	73.04	313	*e*P		P	22 32 24.5 +0.4
	comp=Z,4.1nm,0.5s,mb4.3						
MBDF	Montbardon	73.39	313	*e*P		P	22 32 27.1 +0.9
	comp=Z,3.7nm,0.8s,mb4.1						
ORIF	Oris-en-Rattie	73.85	313	*e*P		P	22 32 28.8 -0.1
SSF	Saint Saulge	74.22	316	*e*P		P	22 32 30.9 -0.1
	comp=Z,3.6nm,0.8s,mb4.0						
SMF	Signal de Mont	74.23	315	*e*P		P	22 32 31.4 +0.3
LMR	La Mourre	74.24	311	*e*P		P	22 32 31.3 +0.1
	comp=Z,1.9nm,0.5s,mb4.0						
LDF	La Druitiere	75.51	319	*e*P		P	22 32 39.2 +0.7
	comp=Z,1.8nm,0.5s,mb3.9						
YKA	Yellowknife Ar	80.35	17	P		P	22 33 04.9 -0.2
	comp=Z,1.0nm,0.5s,mb4.0,baz=328,slow=5.1,SNR=6.9						
YKA	Yellowknife Ar	80.35	17	P		P	22 33 04.9 -0.2
FFC	Flin Flon	90.30	15	*e*P		P	22 33 54.7 -0.2
PDAR	Pinedale Array	98.87	25	LR		LR	23 21 22.8
	comp=Z,145nm,19.1s,MS4.5,baz=69,slow=37						

BJI ***16*** *22:25:47.1, 7.92S×120.53E, h561km, mB4.4/21, mb4.6/34*
MOS ***16*** *22:25:51.8±1.0, 7.19S×120.31E, h559km, mb4.7/23, Error ellipse: s-maj=12.8km s-min=6.5km az=123.2*
NEIC ***16*** *22:25:52.9±0.4, 7.26S×120.30E, h561km±4km, mb4.7/33, Error ellipse: s-maj=7.1km s-min=4.0km az=57.0*
ISCJB ***16*** *22:25:52.4±0.2, 7.33S±0.03×120.28E±0.03, h573km±2km, mb4.5/75, Error ellipse: s-maj=5.5km s-min=3.9km az=144.0*
DJA ***16*** *22:25:52, 7.41S×120.26E, h568km, mb4.9/30*
IDC ***16*** *22:25:53.2±0.5, 7.29S×120.34E, h561km±5km, mb4.1/26, mb1 4.1/30, mb1mx4.1/32, mbtmp4.1/30, Error ellipse: s-maj=10.6km s-min=5.5km az=60.0*
ISC 16 22:25:52.9±0.2, 7.36S±0.03×120.28E±0.03, h564km±2km, h554km±4.0km: pP-P, n253, σ1.905/239, mb4.5/73, 8C-6D, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKSI	Bulukumba	2.03	356	P		22 27 04.5	+0.4
BKSI				S		22 28 02.0	+0.1
MMRI	Maumere	2.32	123	P		22 27 03.9	-1.5
KAPI	Kappang	2.39	347	P		22 27 05.9	+0.1
	76nm,0.3s,baz=189,slow=2.9,SNR=330						
KAPI				S		22 28 04.6	-0.3
	4.5nm,0.3s,baz=218,slow=22,SNR=18						
BNSI	Bone	2.94	357	P		22 27 10.0	+1.1
SPSI	Sidrap Palu	3.41	351	P		22 27 12.5	+0.7
SPSI				S		22 28 16.9	+1.1
KDI	Kendari	4.10	35	P		22 27 17.2	+0.6
TTSI	Tana Toraja	4.31	354	P		22 27 18.2	0.0
KHKI	Kahang-Kahang	4.74	258	P		22 27 20.9	-0.6
SRBI	Singaraja	5.07	261	P		22 27 24.1	-0.1
	0.8nm2μm68nm,1.0s						
KBKI	Kotabaru	5.75	314	P		22 27 30.5	+0.4
	0.6nm2μm182nm,0.8s						
BYJI	Banyuwangi	5.93	261	P		22 27 31.8	+0.1
	1.1nm304nm,1.0s						
PCI	Palu	6.43	356	P		22 27 36.2	0.0
	0.6nm2μm177nm,0.8s						
LUWI	Luwuk	6.75	22	P		22 27 39.1	-0.1
	6μm467nm,1.0s						
NLAI	Namlea	7.93	59	P		22 27 50.9	+0.5
	160nm,0.8s						
MRSI	Marisa	7.96	12	P		22 27 50.7	-0.1
	8μm905nm,0.9s						
PWJI	Pagerwojo	8.43	265	P		22 27 54.1	-1.2
	36nm,0.5s						
KMSI	Cibinong	8.70	25	P		22 27 58.5	+0.4
	6μm739nm,0.8s						
PCJI	Pacitan	9.06	264	P		22 28 00.6	-1.0
	61nm,0.5s						
UGM	Wanagama	9.69	266	P		22 28 07.5	-0.5
	96nm,1.8s						
MNI	Manado	9.86	28	P		22 28 08.8	-0.9
	8μm836nm,0.9s						
TNTI	Ternate	10.73	41	P		22 28 16.9	-1.7
	103nm,0.8s						
STKI	Sintang	11.47	310	P		22 28 27.3	+1.2
	8μm40nm,1.2s						
KNA	Kununurra	11.77	136	P		22 28 28.4	-0.8
	2μm180nm,0.9s						
TSM	Tawau	11.82	348	P		22 28 30.4	+0.6
FITZ	Fitzroy Crossi	11.89	154	*e*P		22 28 30.0	-0.3
	219nm,0.6s						
FITZ				*e*S		22 30 38.6	-1.2
FITZ	Fitzroy Crossi	11.89	154	P		22 28 30.4	+0.1
	9.9nm,0.3s,baz=348,slow=6.5,SNR=408						
FITZ				S		22 30 38.5	-1.3
	0.1nm,0.3s,baz=160,slow=16,SNR=9.5						
FITZ	Fitzroy Crossi	11.89	154	*e*P		22 28 30.4	0.0
	120nm,0.7s						
FITZ				*e*S		22 30 38.7	-1.1
FITZ	Fitzroy Crossi	11.89	154	P		22 28 29.9	-0.4
	4μm401nm,0.8s						
LEM	Lembang	12.58	272	P		22 28 37.3	-0.2
	64nm,0.8s						
MYLDM	Lahad Datu	12.58	352	P		22 28 38.4	+0.8
MYLDM	Lahad Datu	12.58	352	P		22 28 38.8	+1.2
	2μm174nm,1.0s						
SBUM	Sibu	12.63	320	P		22 28 39.1	+1.0
SBUM	Sibu	12.63	320	P		22 28 38.7	+0.6
	2μm144nm,0.8s						
BTM	Bintulu	12.71	325	P		22 28 39.9	+0.9
KAKA	Kakadu	13.10	115	*e*P		P	22 28 41.4 -1.4
	29nm,0.5s						
KAKA	Kakadu	13.10	115	*e*P		P	22 28 41.3 -1.6
	91nm,0.6s						
KSM	Kuching	13.27	311	P		P	22 28 45.3 +0.7
KSM	Kuching	13.27	311	*e*P		P	22 28 45.1 +0.5
	27nm,0.6s						
KSM	Kuching	13.27	311	P		P	22 28 45.3 +0.7
	47nm,0.9s						
CBJI	Citeko	13.37	273	P		P	22 28 43.3 -2.3
	374nm,0.8s						
TPI	Tanjungpandan	13.38	289	P		P	22 28 45.7 -0.1
	984nm104nm,0.9s						
SKJI	Sukabumi	13.62	271	P		P	22 28 45.6 -2.7
	3μm159nm,0.6s						
MBWA	Marble Bar	13.73	182⇑	*e*P		P	22 28 49.2 0.0
	129nm,0.5s						
MBWA				S		S	22 31 15.3 +1.0
MBWA	Marble Bar	13.73	182	P		P	22 28 49.4 +0.2
	215nm,1.2s						
KKM	Kota Kinabalu	13.92	343	*e*P		P	22 28 50.5 -0.7
	67nm,0.4s						
KKM				*e*S		S	22 31 18.8 +0.8
CGJI	Cibinong	14.50	272	P		P	22 28 54.3 -2.9
	5μm438nm,0.5s						
RBSI	Rajabasa	14.52	275	P		P	22 28 52.1 -5.4
	111nm,0.8s						
DAV	Davao City (W)	15.28	20	P		P	22 29 03.8 -1.3
	32nm,0.3s,baz=28,slow=14,SNR=4.1						
MDSI	Maura Dua	16.27	279	P		P	22 29 13.6 -0.8
	856nm22nm,0.7s						
LWLI	Liwa	16.29	277	P		P	22 29 14.9 +0.2
	3μm60nm,0.7s						
TBP	Tagbilaran	17.31	12	*e*P		P	22 29 25.6 +1.6
WRA	Warramunga Arr	18.50	134	P		P	22 29 35.0 +0.3
	15nm,0.3s,baz=314,slow=11,SNR=810						
WRA				S		S	22 32 33.7 -1.4
	0.8nm,0.3s,baz=314,slow=16,SNR=6.8						
WRA	Warramunga Arr	18.50	134	P		P	22 29 35.0 +0.3
WRA				S		S	22 32 33.7 -1.4
WRAB	Tennant Creek	18.50	134	*e*P		P	22 29 34.8 0.0
WRAB				*e*S		S	22 32 34.3 -0.8
WRAB				pmax		pmax	
	comp=Z,203nm,0.7s						
WRAB	Tennant Creek	18.50	134	*e*P		P	22 29 34.8 0.0
	comp=Z,203nm,0.7s						
WRAB				*e*S		S	22 32 34.3 -0.8
WRAB	Tennant Creek	18.50	134	P		P	22 29 35.0 +0.2
	comp=Z,3μmcomp=Z,312nm,0.7s						
MYKOM	Kota Tinggi	18.75	298	P		P	22 29 38.2 +1.1
KGM	Kluang	19.32	298	P		P	22 29 43.5 +1.2
SDSI	Sungai Dareh	19.85	288	P		P	22 29 47.0 -0.1
ASAR	Alice Springs	20.83	143	P		P	22 29 56.4 +0.5
	comp=Z,33nm,0.4s,baz=320,slow=8.8,SNR=489						
ASAR				S		S	22 33 10.5 -1.7
	comp=Z,10nm,0.7s,baz=338,slow=25,SNR=8.0						
ASAR				PcP		PcP	22 33 40.0 +0.3
	comp=Z,7.1nm,0.5s,baz=332,slow=1.3,SNR=9.2						
ASAR				ScP		ScP	22 36 23.6 +0.1
	comp=Z,6.0nm,0.6s,baz=327,slow=2.1,SNR=13						
ASAR	Alice Springs	20.83	143	P		P	22 29 56.4 +0.5
ASAR				S		S	22 33 10.5 -1.7
ASAR							22 33 40.1
FRIM	Kepong	21.39	299	P		P	22 30 01.9 +0.9
IPM	Ipoh	22.53	301	P		P	22 30 11.7 +0.5
KULM	Kulim	23.27	302	P		P	22 30 18.4 +0.5
KULM	Kulim	23.27	302	*e*P		P	22 30 17.6 -0.2
	comp=Z,9.5nm,0.6s,mb4.6						
PSI	Prapat	23.58	295	P		P	22 30 20.7 +0.1
	comp=Z,26nm,0.7s,mb5.0,baz=128,slow=8.2,SNR=30						
PSI				S		S	22 33 55.2 -0.6
	comp=Z,11nm,1.2s,baz=266,slow=19,SNR=9.7						
KLBR	Kellerberrin	24.23	185⇑	*i*P		P	22 30 26.3 +0.3
	comp=Z,36nm,0.6s,mb5.2						
FORT	Forrest	24.41	164⇑	*i*P		P	22 30 28.3 +0.6
	comp=Z,98nm,0.6s,mb5.6						
FORT	Forrest	24.41	164	*e*P		P	22 30 28.4 +0.7
	comp=Z,98nm,0.6s,mb5.6						
NWAO	Narrogin (SRO)	25.60	186	P		P	22 30 38.9 +0.8
	comp=Z,55nm,0.5s,mb5.4,baz=17,slow=8.5,SNR=96						
NWAO	Narrogin (SRO)	25.60	186	*e*P		P	22 30 38.6 +0.5
NWAO				pmax		pmax	
	comp=Z,34nm,0.5s						
NWAO	Narrogin (SRO)	25.60	186	*e*P		P	22 30 38.6 +0.4
	comp=Z,34nm,0.5s,mb5.2						
CTA	Charters Tower	28.17	119	P		P	22 31 01.9 +0.9
	comp=Z,5.8nm,0.8s,mb4.3,baz=317,slow=11,SNR=4.3						
CTA				PcP		PcP	22 33 57.1 +0.7
	comp=Z,1.8nm,0.4s,baz=330,slow=4.8,SNR=6.0						
CTAO	Charters Tower	28.17	119	*e*P		P	22 31 01.6 +0.7
NACB	Ninganchiao	31.37	2	P		P	22 31 27.8 -0.6
STKA	Stephens Creek	31.46	144⇑	*i*P		P	22 31 30.0 +0.9
	comp=Z,56nm,0.3s,mb5.6						
STKA				*e*S		S	22 35 58.3 +0.4
STKA	Stephens Creek	31.46	144	P		P	22 31 30.1 +1.0
	comp=Z,59nm,0.3s,mb5.5,baz=324,slow=8.1,SNR=370						
STKA				PcP		PcP	22 34 05.0 +0.2
	comp=Z,6.9nm,0.6s,baz=293,slow=2.3,SNR=3.0						
STKA				S		S	22 35 58.4 +0.6
	comp=Z,5.8nm,0.6s,baz=147,slow=17,SNR=5.3						
STKA				ScP		ScP	22 36 55.0 0.0
	comp=Z,10nm,0.7s,baz=308,slow=5.3,SNR=7.0						
STKA	Stephens Creek	31.46	144	*e*P		P	22 31 29.9 +0.8
STKA				*e*			22 34 04.5
STKA				*e*S		S	22 35 58.0 +0.1
STKA				pmax		pmax	
	comp=Z,13nm,0.4s						
STKA	Stephens Creek	31.46	144	*e*P		P	22 31 29.9 +0.8
	comp=Z,13nm,0.4s,mb4.8						
STKA				*e*			22 34 04.5
STKA				*e*S		S	22 35 58.0 +0.1
YHNB	Yeheng	31.85	2	*e*P		P	22 31 31.6 -0.9
GUMO	Guam	32.08	50	*e*P		P	22 31 33.6 -1.0
CMAR	Chiang Mai Arr	33.19	321	P		P	22 31 44.7 +0.8
	comp=Z,6.0nm,0.6s,mb4.3,baz=145,slow=6.7,SNR=37						
CMAR				PcP		PcP	22 34 11.3 +1.4
	comp=Z,5.8nm,0.6s,baz=175,slow=2.9,SNR=14						
CHTO	Chiang Mai	33.45	321	*e*P		P	22 31 45.6 -0.5
CHTO				pmax		pmax	
	comp=Z,10.0nm,0.6s,mb4.5						
CHTO	Chiang Mai	33.45	321	*e*P		P	22 31 45.6 -0.5
	comp=Z,10.0nm,0.6s,mb4.5						
KMI	Kunming	36.52	333	P		P	22 32 13.8 +2.2
KMI				pP			22 33 50.9
KMI				PP		PP	22 33 55.4 +1.3
KMI				sP		sP	22 34 53.1 +1.2
KMI				S		S	22 37 19.3 +4.9
KMI				sS		sS	22 40 12.1 +0.9
KMI				SS		SS	22 40 24.3 -7.7
KMI				pmax		pmax	
	comp=Z,13nm,0.9s,mb4.5						
KMI				pmax		pmax	
	comp=Z,45nm,5.4s						
ARMA	Armidale	37.27	132	*e*P		P	22 32 20.0 +2.4
ARMA	Armidale	37.27	132	*e*P		P	22 32 19.4 +1.8
	comp=Z,6.8nm,0.7s,mb4.3						
TOO	Toolangi	37.79	146	*e*P		P	22 32 23.4 +1.7
CAN	Canberra	38.32	141	*e*P		P	22 32 27.3 +1.2
CAN				pmax		pmax	
	comp=Z,10.0nm,0.7s,mb4.5						
CAN	Canberra	38.32	141	*e*P		P	22 32 27.3 +1.2
	comp=Z,9.8nm,0.7s,mb4.5						
ENH	Enshi	38.82	345	P		P	22 32 29.6 -0.6
NJ2	Nanjing	39.21	358	*e*P		P	22 32 34.8 +1.5
NJ2				pmax		pmax	
	comp=Z,10.0nm,0.7s,mb4.5						
HNR	Honiara	39.28	96	P		P	22 32 34.1 -0.1
CBIJ	Chichi jima	40.29	31	P		P	22 32 41.4 -0.6
	comp=Z,78nm,0.7s,mb5.4,baz=240,slow=9.3,SNR=4.4						
CD2	Chengdu	41.21	338	P		P	22 32 49.3 0.0
CD2				pP		pP	22 34 26.8 -1.4
CD2				PcP		PcP	22 34 35.0 +0.3
CD2				PP		PP	22 34 38.5 -1.1
CD2				sP		sP	22 35 26.3 -5.5
CD2				S		S	22 38 26.3 +3.5
CD2				SS		SS	22 41 46.6 -2.2
CD2				pmax		pmax	
	comp=Z,40nm,0.7s,mb5.1						
CD2				pmax		pmax	
	comp=Z,80nm,6.3s						
PALK	Pallekele	42.06	289	*i*P		P	22 32 57.0 +0.7
PALK	Pallekele	42.06	289	*e*P		P	22 32 56.1 -0.2
	comp=Z,18nm,0.7s,mb4.7						
XAN	Xi'an	42.56	346	P		P	22 32 59.1 -0.7
XAN				pP		pP	22 34 38.3 -1.4
XAN				sP		sP	22 35 37.5 -5.5
XAN				pmax		pmax	
	comp=Z,3.0nm,0.5s,mb4.1						
XAN				pmax		pmax	
	comp=Z,21nm,5.1s						
VIS	Vishakhapatnam	44.19	305	*e*PKP		P	22 33 11.7 -1.1
KSRS	Korea Array	45.15	9	P		P	22 33 19.9 +0.2
	comp=Z,2.8nm,0.7s,mb3.9,baz=190,slow=8.2,SNR=13						
KSRS				PcP		PcP	22 34 49.0 +1.0
	comp=Z,3.7nm,0.7s,baz=189,slow=3.8,SNR=11						
LZH	Lanzhou	45.90	341	*e*P		P	22 33 26.9 +1.4
LZH				PcP		PcP	22 34 52.5 +1.8
LZH				pP		pP	22 35 08.0 +0.4
LZH				sP		sP	22 36 05.1 -5.1
LZH				pmax		pmax	
	comp=Z,22nm,1.2s,mb4.6						
LZH				pmax		pmax	
	comp=Z,89nm,4.3s						
LSA	Lhasa	46.28	324	*e*P		P	22 33 29.1 +0.6
LSA				*e*			22 34 53.3
LSA				pmax		pmax	
	comp=Z,28nm,0.7s,mb4.9						
LSA	Lhasa	46.28	324	*e*P		P	22 33 29.1 +0.5
	comp=Z,28nm,0.7s,mb4.9						
LSA				*e*PcP		PcP	22 34 53.3 +1.0
MJAR	Matsushiro Arr	46.80	20	P		P	22 33 31.0 -1.3
	comp=Z,4.8nm,0.7s,mb4.1,baz=197,slow=8.1,SNR=20						
MJAR	Matsushiro Arr	46.80	20	P		P	22 33 31.0 -1.3
MAJO	Matsushiro	46.80	20	*e*P		P	22 33 31.1 -1.2
MAJO				pmax		pmax	
	comp=Z,7.0nm,0.8s,mb4.2						
MAJO	Matsushiro	46.80	20	*e*P		P	22 33 31.1 -1.2
	comp=Z,6.8nm,0.8s,mb4.2						
MAT	Matsushiro	46.80	20	P		P	22 33 30.7 -1.6
BJI	Beijing	47.31	356	P		P	22 33 34.4 -1.7
BJI				pP		pP	22 35 19.1 -0.1
BJI				PP		PP	22 35 36.8 +1.9
BJI				S		S	22 39 49.0 +0.4
BJI				pmax		pmax	
	comp=Z,6.0nm,0.8s,mb4.2						
HYB	Hyderabad	48.02	301	*e*P		P	22 33 41.0 -0.8
HYB	Hyderabad	48.02	301	*i*P		P	22 33 41.0 -0.8
HHC	Hu-ho-hao-te	48.63	351	*e*P		P	22 33 47.5 +1.6
HHC				PcP		PcP	22 35 01.8 +1.3
HHC				pP		pP	22 35 32.9 +3.0
HHC				PP		PP	22 35 50.0 +3.2
HHC				sP		sP	22 36 32.6 +0.7
HHC				ScP		ScP	22 38 04.8 +2.9
HHC				PcS		PcS	22 38 57.6 0.0
HHC				S		S	22 40 10.3 +3.6
HHC				ScS		ScS	22 42 39.6 +2.1
HHC				sS		sS	22 43 15.6 +1.0
HHC				SS		SS	22 43 50.3 +3.2
HHC				pmax		pmax	
	comp=Z,11nm,0.6s,mb4.6						
HHC				pmax		pmax	
	comp=Z,70nm,6.5s						
NGP	Nagpur	49.41	306	*e*PKP		P	22 33 50.1 -1.9
LATR	Latur	50.16	301	*ex*		PcP	22 35 06.6 -0.1
GTA	Gaotai	50.25	339	⇓P		P	22 33 59.0 +1.2
GTA				PcP		PcP	22 35 08.3 +1.7
GTA				pP		pP	22 35 43.6 +0.8
GTA				PP		PP	22 36 04.0 +2.7
GTA				sP		sP	22 36 45.4 +0.9
GTA				S		S	22 40 29.5 +0.8
GTA				pmax		pmax	
	comp=Z,17nm,0.8s,mb4.5						
GTA				pmax		pmax	
	comp=Z,85nm,6.0s						
AKL	Akola	50.84	304	*e*PKP		P	22 34 00.4 -2.1
CN2	Changchun	51.13	5	*e*P		P	22 34 08.1 +4.0
CN2				*e*S		S	22 40 46.5 +6.1
CN2				pmax		pmax	
	comp=Z,10.0nm,0.6s,mb4.3						
CN2				pmax		pmax	
	comp=Z,200nm,3.0s						
KAD	Karad	51.73	299	*e*PKP		P	22 34 07.9 -1.0
BHPL	Bhopal	51.77	307	*e*PKP		P	22 34 07.7 -1.4
MDJ	Mudanjiang	52.41	8	P		P	22 34 15.4 +2.1
MDJ				pmax		pmax	
	comp=Z,8.0nm,1.2s,mb3.9						
MDJ				pmax		pmax	
	comp=Z,75nm,3.4s						
POO	Poona	52.52	300	*e*PKP		P	22 34 13.7 -0.9
ASAJ	Asahikawa	55.06	19	P		P	22 34 31.9 -0.2
	comp=Z,5.0nm,0.6s,mb3.9,baz=205,slow=12,SNR=5.8						
AJM	Ajmer	55.59	309	*e*PKP		P	22 34 34.8 -1.3
AJM				AMb		AMB	22 34 35.7
	comp=Z,31nm,0.6s,mb4.7						
ULN	Ulaanbaatar	56.21	349	*e*P		P	22 34 40.5 +0.6
ULN				pmax		pmax	
	comp=Z,10.0nm,0.4s,mb4.4						
ULN	Ulaanbaatar	56.21	349	*e*P		P	22 34 40.5 +0.6
	comp=Z,10nm,0.4s,mb4.4						
SONM	Songino Array	56.31	349	P		P	22 34 41.0 +0.4
	comp=Z,10.0nm,0.5s,mb4.3,baz=166,slow=8.4,SNR=64						
SONM				PcP		PcP	22 35 30.2 +0.5
	comp=Z,2.1nm,0.6s,baz=168,slow=3.8,SNR=5.1						
RPZ	Rata Peaks	57.15	138	P		P	22 34 47.7 +1.2
	comp=Z,9.4nm,0.5s,mb4.2,baz=190,slow=1.5,SNR=12						
YSS	Yuzh-Sakhalins	57.64	18	P		P	22 34 48.0 -1.7
THN	Thein Dam	58.02	316	*ex*		P	22 34 49.5 -3.1
WMQ	Urumqi	58.86	333	P		P	22 35 00.3 +2.3
WMQ				PcP		PcP	22 35 42.8 +2.9
WMQ				pP		pP	22 36 47.6 -0.4
WMQ				sP		sP	22 37 44.3 -3.9
WMQ				pmax		pmax	
	comp=Z,28nm,0.8s,mb4.5						
WMQ

comp=Z,26nm,0.7s,mb4.8
AML Almayashu 65.04 323 *e*P **P 22 35 38.7 +0.5**
comp=Z,26nm,0.7s,mb4.8
AML *e*PcP PcP 22 36 06.8 +1.5
USP Ospenovka 65.27 325 P **P 22 35 39.8 +0.2**
SNR=12
EKS2 Erkin-Say 65.31 324 P **P 22 35 40.5 +0.7**
SNR=19
EKS2 Erkin-Say 65.31 324 *e*P **P 22 35 40.2 +0.4**
EKS2 pmax pmax
comp=Z,22nm,1.0s,mb4.5
EKS2 Erkin-Say 65.31 324 *e*P **P 22 35 40.2 +0.4**
comp=Z,22nm,1.0s,mb4.5
KRAR Krasnoyarsk 67.09 344 *de*P **P 22 35 47.7 -2.9**
KK31 Karatay Array 67.51 323 *i* P **P 22 35 52.6 -0.8**
KK31 pmax pmax
comp=Z,4.0nm,0.4s,mb4.3
ZAA0 Zalesovo Array 67.98 338 *e*P **P 22 35 55.2 -0.8**
ZALV Zalesovo Beam 67.98 338 P **P 22 35 55.2 -0.8**
comp=Z,29nm,0.4s,mb5.2,baz=137,slow=4.7,SNR=158
ZALV S S 22 44 07.3 -3.5
comp=Z,1.3nm,0.6s,baz=134,slow=11,SNR=3.8
ZALV Zalesovo Beam 67.98 338 P **P 22 35 55.2 -0.8**
ZALV S S 22 44 07.3 -3.5
PETK Petropavlovsk- 68.07 23 P **P 22 35 57.3 +0.7**
comp=Z,6.2nm,0.7s,mb4.3,baz=201,slow=4.2,SNR=12
PETK PcP PcP 22 36 17.7 -0.1
comp=Z,2.2nm,0.7s,baz=202,slow=6.1,SNR=3.8
KURK Kurchatov 68.11 333 *d i*P **P 22 35 56.7 -0.2**
KURK pmax pmax
comp=Z,55nm,1.2s,mb5.0
KURK Kurchatov 68.11 333 *e*P **P 22 35 56.9 0.0**
comp=Z,32nm,0.8s,mb4.9
NVS Novosibirsk 69.26 338 ⇓ *i*P **P 22 36 02.2 -1.5**
NVS *e*S S 22 44 20.4 -5.1
NVS pmax pmax
comp=N,9.0nm,1.1s
NVS pmax pmax
comp=E,9.0nm,1.1s
NVS pmax pmax
comp=Z,21nm,1.1s,mb4.6
NVS smax
comp=N,7.0nm,1.6s
NVS smax
comp=E,8.0nm,1.6s
MAW Mawson 71.20 200 P **P 22 36 16.7 +1.6**
comp=E,1.8nm,0.6s,mb3.8,baz=41,slow=10.0,SNR=4.8
OPO Ambohidratompo 71.71 253 P **P 22 36 20.2 +1.2**
comp=E,8.6nm,0.5s,mb4.4,baz=79,slow=4.5,SNR=37
VOSK Vostochnaya 73.00 331 P **P 22 36 24.3 -1.3**
VOSK pmax pmax
comp=Z,32nm,0.6s,mb4.9
BVAR Borovoye Array 73.47 331 P **P 22 36 28.0 -0.3**
comp=Z,8.3nm,0.6s,mb4.4,baz=120,slow=5.7,SNR=58
BRVK Borovoye 73.54 331 *d i*P **P 22 36 28.3 -0.4**
BRVK pmax pmax
comp=Z,20nm,1.2s,mb4.4
BRVK Borovoye 73.54 331 *e*P **P 22 36 27.7 -1.0**
comp=Z,53nm,1.7s,mb4.7
ZRNK Zerenda 74.09 331 P **P 22 36 30.3 -1.5**
ZRNK pmax pmax
comp=Z,21nm,0.6s,mb4.7
SEY Seymchan 74.26 15 ⇑ *i*P **P 22 36 33.6 +1.0**
SBA Scott Base 74.39 171 *e*P **P 22 36 34.1 +0.9**
AB31 Akbulak array 76.97 324 *e*P **P 22 36 47.0 -0.9**
AB31 pmax pmax
comp=Z,9.0nm,0.5s,mb4.5
ABKAR Akbulak array 76.97 324 *e*P **P 22 36 47.1 -0.8**
comp=Z,7.9nm,0.5s,mb4.4
KBD Kabd 78.59 302 *e*P **P 22 36 57.2 +0.1**
KBD AMb AMB 22 36 58.3
comp=Z,30nm,0.8s,mb4.6
RDF Al-Radifah 78.64 301 *e*P **P 22 36 58.2 +0.8**
RDF AMb AMB 22 36 59.1
comp=Z,91nm,0.5s,mb5.4
TIXI Tiksi 79.05 3 *e*P **P 22 36 57.6 -1.0**
TIXI pmax pmax
comp=Z,15nm,0.9s,mb4.3
TIXI Tiksi 79.05 3 *e*P **P 22 36 57.7 -0.9**
comp=Z,14nm,0.9s,mb4.3
SYO Syowa Base 79.83 201 ⇑ *e*P **P 22 37 02.2 -0.7**
SVE Sverdlovsk 80.25 331 ⇑ *e*P **P 22 37 04.6 -0.6**
SVE pmax pmax
comp=Z,13nm,0.6s,mb4.4
ARU Arti 81.07 330 *d i*P **P 22 37 08.2 -1.2**
ARU 22 40 19.3
ARU S S 22 46 31.6 -1.1
ARU pmax pmax
comp=Z,14nm,1.2s,mb4.3
ARU Arti 81.07 330 *e*P **P 22 37 08.4 -1.0**
QSPA South Pole Qui 82.62 180 P **P 22 37 18.1 +1.1**
comp=Z,3.4nm,0.6s,mb4.1,baz=306,slow=1.5,SNR=18
QSPA South Pole Qui 82.62 180 *e*P **P 22 37 18.3 +1.3**
comp=Z,2.4nm,0.6s,mb3.9
KMBO Kilima Mbogo 82.94 270 *e*P **P 22 37 21.0 +1.0**
KMBO pmax pmax
comp=Z,6.0nm,0.8s
KMBO Kilima Mbogo 82.94 270 *e*P **P 22 37 21.0 +1.0**
comp=Z,5.7nm,0.8s,mb4.2
DGRG David-gareji 83.67 313 P **P 22 37 24.8 +1.9**
GNI Garni 83.79 312 *e*P **P 22 37 24.3 +0.7**
GNI pmax pmax
comp=Z,8.0nm,0.8s
GNI Garni 83.79 312 *e*P **P 22 37 24.3 +0.7**
comp=Z,8.5nm,0.8s,mb4.3
MTA Mtatsminda 84.16 313 P **P 22 37 26.4 +1.1**
TBLG Delisi 84.20 313 P **P 22 37 27.6 +2.0**
TBLG Delisi 84.20 313 P **P 22 37 27.6 +2.0**
GOR Gori 84.72 313 P **P 22 37 29.4 +1.3**
KEH Kehvi 84.93 314 P **P 22 37 28.4 -0.7**
ZEI Tsey 85.07 314 *e*P **P 22 37 29.7 -0.1**
ZEI pmax pmax
comp=Z,11nm,0.5s,mb4.6
ONI Oni 85.35 314 P **P 22 37 31.6 +0.5**
KIV Kislovodsk 86.22 315 *e*P **P 22 37 35.1 -0.1**
KIV pmax pmax
comp=Z,5.0nm,1.1s,mb4.1
KIV Kislovodsk 86.22 315 *e*P **P 22 37 35.4 +0.1**
MMAI Mount Meron Ar 89.69 303 P **P 22 37 52.8 +1.1**
comp=Z,3.5nm,0.5s,mb4.5,baz=87,slow=5.9,SNR=20
LSZ Lusaka 90.09 255 *e*P **P 22 37 54.6 +0.7**
LSZ pmax pmax
comp=Z,18nm,0.8s,mb5.0
LSZ Lusaka 90.09 255 *e*P **P 22 37 54.6 +0.7**
comp=Z,18nm,0.8s,mb5.0
VSR Storozhevoye 90.15 322 *e*P **P 22 37 52.1 -1.3**
VSR pmax pmax
comp=N,2.0nm,0.6s
VSR pmax pmax
comp=E,2.0nm,0.6s
VSR pmax pmax
comp=Z,7.0nm,0.6s,mb4.7
BOSA Boshof 90.90 241 P **P 22 37 58.2 +0.8**
comp=Z,7.2nm,0.6s,mb4.8,baz=111,slow=3.7,SNR=28
BOSA Boshof 90.90 241 *e*P **P 22 37 58.1 +0.7**
BOSA pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
BOSA Boshof 90.90 241 *e*P **P 22 37 58.1 +0.7**
comp=Z,6.3nm,0.5s,mb4.8
CSS Prodhromos 91.68 305 *e*P **P 22 38 00.5 -0.4**
BR131 Keskin Array S 92.07 310 *e*P **P 22 38 01.9 -0.7**
comp=Z,3.9nm,0.9s,mb4.4
BRTR Keskin Array B 92.07 310 P **P 22 38 01.8 -0.7**
comp=Z,4.1nm,0.8s,mb4.5,baz=119,slow=5.1,SNR=20
BRTR Keskin Array B 92.07 310 *ce*P **P 22 38 01.7 -0.8**
BRTR pmax pmax
comp=Z,4.0nm,0.8s
OBN Obninsk 92.39 325 *e*P **P 22 38 02.1 -1.5**
OBN *e**PP pP 22 40 04.4 -2.7
OBN pmax pmax
comp=Z,11nm,0.8s,mb4.9
OBN Obninsk 92.39 325 *e*P **P 22 38 02.1 -1.5**
JOF Joensuu 96.02 333 *e*P **P 22 38 17.1 -2.8**
JOF Joensuu 96.02 333 *ep* **P 22 38 17.1 -2.8**
comp=Z,2.1nm,0.5s,mb4.6
AKASG Malin Array Be 96.31 320 P **P 22 38 20.0 -1.5**
comp=Z,0.6nm,0.4s,mb4.2,baz=96,slow=3.6,SNR=5.4
KAF Kangasniemi 98.31 332 *e*P Pdif 22 38 27.2 -3.3
KAF pmax pmax
comp=Z,3.0nm,0.9s,mb4.6
KAF Kangasniemi 98.31 332 *e*P Pdif 22 38 27.2 -3.3
comp=Z,3.3nm,0.9s
KAF Kangasniemi 98.31 332 *ep* Pdif 22 38 27.2 -3.3
comp=Z,3.3nm,0.9s
FINES FINESS Array B 98.42 331 P Pdif 22 38 29.7 -1.3
comp=Z,1.7nm,0.6s,baz=97,slow=4.8,SNR=8.2
FINES PKiKP PKiKP 22 42 59.3 +0.2
comp=Z,0.5nm,0.4s,baz=102,slow=1.2,SNR=9.3
ARCES ARCESS Array B 98.52 339 P Pdif 22 38 30.4 -1.0
comp=Z,1.6nm,0.8s,baz=72,slow=4.0,SNR=6.5
ARCES PKiKP PKiKP 22 42 60.0 +0.9
comp=Z,0.6nm,0.5s,baz=156,slow=1.5,SNR=7.1
YKA Yellowknife Ar 112.18 24 PKiKP PKiKP 22 43 24.2 -0.3
comp=Z,1.9nm,0.4s,baz=298,slow=1.9,SNR=14
YKA Yellowknife Ar 112.18 24 PKPdf PKiKP 22 43 24.2 -0.3
NVAR Mina Array Bea 119.00 50 PKP PKPdf 22 43 39.9 +1.5
comp=Z,2.1nm,0.6s,baz=245,slow=2.1,SNR=10
MSO Missoula 119.39 40 *e*PKPdf PKPdf 22 43 38.7 -0.1
HLID Hailey 120.27 43 *e*PKPdf PKPdf 22 43 41.4 +0.8
ESDC Sonseca Array 120.78 312 PKP PKPdf 22 43 42.2 +0.5
comp=Z,0.3nm,0.4s,baz=26,slow=3.2,SNR=5.2
MCMT McKenzie Canyo 120.86 42 *e*PKPdf PKPdf 22 43 43.2 +1.5
EGMT Eagleton 121.47 37 *e*PKPdf PKPdf 22 43 43.1 +0.3
FFC Flin Flon 121.97 27 *i* PKiKP PKPdf 22 43 43.8 +0.3
FCC Fort Churchill 122.36 20 *e*PKiKP PKPdf 22 43 43.2 -1.0
LOHW Long Hollow 122.82 42 *e*PKPdf PKPdf 22 43 46.3 +0.8
MSU Marysvale 123.58 48 *e*PKiKP PKPdf 22 43 48.9 +1.8
PDAR Pinedale Array 123.86 43 PKP PKPdf 22 43 48.2 +0.7
comp=Z,0.8nm,0.5s,baz=105,slow=1.1,SNR=10.0
PDAR PKKPbc PKKPbc 22 53 36.8 -1.0
comp=Z,0.6nm,0.6s,baz=120,slow=6.6,SNR=4.4
DBIC Dimbokro 125.57 273 PKP PKPdf 22 43 51.2 -0.5
comp=Z,3.6nm,0.6s,baz=122,slow=7.1,SNR=6.1
MVCO Mesa Verde 126.76 49 *e*PKPdf PKPdf 22 43 54.4 +1.1
RSSD Black Hills 126.83 39 *e*PKiKP PKPdf 22 43 53.5 +0.3
ANMO Albuquerque 129.12 50 *e*PKiKP PKPdf 22 43 58.9 +1.1
MNTX Cornudas Mount 131.10 54 *e*PKPdf PKPdf 22 44 02.6 +1.0
PLCA Paso Flores 131.12 169 PKP PKPdf 22 44 02.9 +1.5
comp=Z,1.4nm,0.5s,baz=322,slow=2.6,SNR=5.4
SCHQ Schefferville 132.32 6 PKP PKPdf 22 44 04.8 +1.5
comp=Z,3.1nm,0.4s,baz=342,slow=2.8,SNR=11
SCHQ SKPbc SKPbc 22 46 39.4 +1.6
comp=Z,1.2nm,0.6s,baz=37,slow=8.9,SNR=3.8
TXAR Lajitas Array 133.28 56 PKP PKPdf 22 44 07.2 +1.3
comp=Z,1.6nm,0.8s,baz=166,slow=1.4,SNR=8.2
TXAR SKPbc SKPbc 22 46 41.9 +0.1
comp=Z,0.6nm,0.7s,baz=284,slow=3.6,SNR=3.6
JCT Junction City 136.00 53 *e*PKiKP PKPdf 22 44 11.5 +0.6
CFAA Coronel Fontan 140.41 169 SKPbc SKPbc 22 47 03.0 +0.4
comp=Z,0.6nm,0.5s,baz=207,slow=4.0,SNR=9.4
MCWV Mont Chateau 143.11 26 *e*PKPdf PKPdf 22 44 21.8 -1.6
CPCT Cooper Cave 143.96 36 *e*PKPdf PKPdf 22 44 24.0 -1.1
LRAL Lakeview Retre 144.05 41 *e*PKPdf PKPdf 22 44 24.6 -0.7
TKL Tuckaleechee C 144.24 35 *e*PKiKP PKPdf 22 44 25.3 -0.3
ELN Prospectdale 144.65 30 *e*PKPdf PKPdf 22 44 26.0 -0.2
GOGA Godfrey 146.01 37 *e*PKiKP PKPdf 22 44 29.3 +0.6
CPUP Villa Florida 146.43 184 PKP PKPdf 22 44 30.6 +1.0
comp=Z,7.0nm,0.6s,baz=168,slow=2.2,SNR=26
CPUP PKPbc PKPbc 22 44 32.9 +0.9
comp=Z,7.0nm,0.6s,baz=158,slow=2.2,SNR=28
CPUP SKPbc SKPbc 22 47 17.6 +0.5
comp=Z,0.8nm,0.5s,baz=141,slow=6.5,SNR=3.1
CPUP Villa Florida 146.43 184 PKiKP PKPdf 22 44 30.6 +1.0
CPUP 22 44 32.9
JSC Jenkinsville 146.65 34 *e*PKP2 PKPbc 22 44 32.0 -0.3
TEIG Tepich 149.53 62 *e*PKPbc PKPbc 22 44 39.9 -0.1
LPAZ La Paz 155.07 161 PKP PKPdf 22 44 45.0 +2.0
comp=Z,1.8nm,0.8s,baz=334,slow=0.8,SNR=6.2
LPAZ PKPbc PKPdf 22 44 54.5 +12
comp=Z,1.1nm,0.5s,baz=96,slow=4.6,SNR=6.7
LPAZ PKPab PKPab 22 45 13.1 +2.4
comp=Z,4.1nm,0.6s,baz=176,slow=3.2,SNR=11

*ISCJB **16** 22:31:26.4±0.5, 54°.9S±0°.1×127°.5W±0°.2, h10km, mb4.3/13, MS4.4/9, Error ellipse: s-maj=18.8km s-min=11.2km az=157.9*
*IDC **16** 22:31:26.9±0.7, 54°.82S×127°.55W, h0km, mb4.3/5, mb1 4.5/5, mb1mx4.3/14, mbtmp4.3/5, MS4.4/9, Ms1 4.3/9, ms1mx4.2/16, Error ellipse: s-maj=33.0km s-min=18.6km az=161.0*
*NEIC **16** 22:31:28.4±0.3, 54°.92S×127°.51W, h10km, mb4.7/5, Error ellipse: s-maj=14.0km s-min=8.9km az=160.0*
*GCMT **16** 22:31:32.6±0.3, 55°.09S×127°.45W, h26km±1km, MW5.1, Moment Tensor Solution. s27,c36; s67,c92; Moment tensor: Scale 10^{16}Nm; M_{rr}=0.72±.24; $M_{\theta\theta}$4.52±.27; $M_{\phi\phi}$=3.80±.22; $M_{r\theta}$-1.14±.39; $M_{\theta\phi}$3.79±.14; $M_{r\phi}$1.20±.38; Best double couple: $M_0$5.90000×10^{16} NP1:ϕ_s205.00000°, δ74.00000°, λ-172.00000°. NP2:ϕ_s113.00000°, δ82.00000°, λ-16.00000°. Principal axes: T 6.0500, Plg5.0000°, Azm160.0000°; N -0.3100, Plg72.0000°, Azm267.0000°; P -5.7400, Plg17.0000°, Azm68.0000°; Data Used: IU CN II G IC.*
ISC 16 22:31:28.3±0.5, 54°.9S±0°.1×127°.5W±0°.2, h10km, n53, σ0674/23, mb4.3/13, MS4.4/9, 1C-1D, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**30.76**	**33**	P	**P**	**22 37 42.9**	**-0.7**
	26nm,0.3s,mb5.5,baz=118,slow=7.7,SNR=4.1						
RPN	**Rapa Nui**	**30.76**	**33**	*e*P	**P**	**22 37 43.6**	**0.0**
PMSA	**Palmer Station**	**32.00**	**134**	P	**P**	**22 37 59.0**	**+4.9**
	6.6nm,1.2s,mb4.3,baz=251,slow=12,SNR=4.6						
PMSA				LR	LR	22 47 00.8	
	comp=Z,486nm,20.1s,MS4.2,baz=256,slow=29						
PMSA	**Palmer Station**	**32.00**	**134**	*e*P	**P**	**22 37 54.0**	**-0.1**
PMSA				LR	LR	22 47 00.8	
SBA	**Scott Base**	**32.00**	**201**	*e*P	**P**	**22 37 52.6**	**-1.5**
	0.6nm,0.4s,mb3.8						
RKT	**Rikitea**	**32.22**	**347**	*e*LR	LR	22 46 19.9	
	2μm,27.5s,baz=172						
RKT				*e*T		23 11 31.1	
	4.5nm,0.3s						
USHA	**Ushuaia**	**33.12**	**115**	LR	LR	22 47 44.9	
	comp=Z,421nm,20.1s,MS4.2,baz=235,slow=30						
QSPA	**South Pole Qui**	**35.28**	**180**	P	**P**	**22 38 23.8**	**+1.2**
	7.1nm,0.8s,mb4.6,baz=92,slow=2.9,SNR=8.6						
QSPA	**South Pole Qui**	**35.28**	**180**	*e*P	**P**	**22 38 23.7**	**+1.2**
	28nm,1.4s,mb5.0						
TBI	**Tubuai**	**35.50**	**324**	*e*LR	LR	22 47 55.8	
	1μm,26.0s,baz=167						
TBI				*e*T		23 15 40.4	
	42nm,0.3s						
PLCA	**Paso Flores**	**39.66**	**93**	LR	LR	22 51 30.6	
	comp=Z,398nm,19.5s,MS4.3,baz=241,slow=30						
PLCA	**Paso Flores**	**39.66**	**93**	P	**P**	**22 38 58.7**	**-1.4**
PPT	**Papeete**	**40.92**	**327**	*e*S	**S**	**22 45 16.4**	**-5.8**
	93nm,25.5s						
PPT				*e*LR	LR	22 50 26.8	
	2μm,25.5s,baz=168						
PPT	**Papeete**	**40.92**	**327**	LR	LR	22 51 42.4	
	comp=Z,872nm,19.7s,MS4.6,baz=176,slow=30						
VAH	**Vaihoa**	**42.54**	**331**	*e*T		23 24 27.1	
	39nm,0.3s						
TRQA	**Tornquist**	**46.38**	**97**	*e*P	**P**	**22 39 54.7**	**+0.3**
	3.3nm,0.8s,mb4.3						
CFAA	**Coronel Fontan**	**47.36**	**86**	P	**P**	**22 40 01.3**	**-0.9**
	0.3nm,0.6s,mb3.4,baz=225,slow=9.7,SNR=3.9						
MAW	**Mawson**	**57.57**	**185**	LR	LR	23 03 47.2	
	comp=Z,148nm,18.2s,MS4.1,baz=164,slow=34						
MAW	**Mawson**	**57.57**	**185**	*e*P	**P**	**22 41 17.8**	**+0.5**
CPUP	**Villa Florida**	**57.60**	**90**	P	**P**	**22 41 19.3**	**+1.1**
	0.3nm,0.3s,mb3.7,baz=245,slow=17,SNR=3.1						
CPUP				LR	LR	23 02 35.6	
	comp=Z,824nm,18.2s,MS4.9,baz=209,slow=32						
DZM	**Mont Dzumac**	**58.49**	**276**	*e*LR	LR	22 58 48.4	
	279nm,24.2s						
LPAZ	**La Paz**	**59.34**	**74**	P	**P**	**22 41 30.9**	**+0.6**
	8.3nm,1.1s,mb4.7,baz=206,slow=2.8,SNR=12						
LPAZ				LR	LR	23 01 03.0	
	comp=Z,214nm,18.9s,MS4.3,baz=207,slow=30						
EIDS	**Eidsvold**	**64.79**	**261**	*e*P	**P**	**22 42 07.0**	**+0.1**
STKA	**Stephens Creek**	**65.08**	**250**	LR	LR	23 03 28.7	
	comp=Z,187nm,19.3s,MS4.3,baz=75,slow=30						
STKA	**Stephens Creek**	**65.08**	**250**	*e*P	**P**	**22 42 08.8**	**+0.1**
ROSC	**El Rosal**	**73.96**	**56**	LR	LR	23 09 18.4	
	comp=Z,201nm,18.9s,MS4.4,baz=208,slow=31						
ASAR	**Alice Springs**	**75.71**	**249**	P	**P**	**22 43 14.3**	**+0.5**
	1.2nm,0.9s,mb3.8,baz=140,slow=7.3,SNR=4.1						
WRA	**Warramunga Arr**	**78.47**	**252**	P	**P**	**22 43 28.7**	**-0.7**
	2.3nm,0.9s,mb4.1,baz=142,slow=5.1,SNR=6.6						
WRAB	**Tennant Creek**	**78.48**	**252**	*e*P	**P**	**22 43 29.6**	**+0.3**
	6.8nm,1.1s,mb4.5						
FITZ	**Fitzroy Crossi**	**84.67**	**246**	P	**P**	**22 44 01.5**	**-0.7**
	2.4nm,0.8s,mb4.3,baz=146,slow=7.1,SNR=3.3						
FITZ	**Fitzroy Crossi**	**84.67**	**246**	*e*P	**P**	**22 44 02.1**	**-0.1**
MBWA	**Marble Bar**	**85.16**	**240**	*e*P	**P**	**22 44 04.5**	**-0.1**
ANMO	**Albuquerque**	**91.30**	**17**	*e*P	**P**	**22 44 34.0**	**+0.6**
	6.6nm,1.0s,mb4.9						
NACB	**Ninganchiao**	**121.36**	**268**	PKPdf	PKPdf	22 50 20.8	-0.5
YHNB	**Yeheng**	**121.87**	**268**	PKPdf	PKPdf	22 50 22.8	+0.5
CMAR	**Chiang Mai Arr**	**129.39**	**243**	PKP	PKPdf	22 50 37.1	+0.2
	1.1nm,0.8s,baz=211,slow=3.0,SNR=4.0						
SJPF	**Ste Jean**	**143.73**	**86**	*e*PKP1	PKPdf	22 51 03.1	+0.5
	39nm,1.5s						
ETSF	**Etsaut**	**143.99**	**87**	*e*PKP1	PKPdf	22 51 02.4	-0.6
	16nm,1.2s						
EPF	**Esparros**	**144.59**	**87**	*e*PKP1	PKPdf	22 51 02.6	-1.5
	10nm,1.0s						
MTLF	**Montolieu**	**145.86**	**89**	*e*PKP1	PKPbc	22 51 06.5	-0.4
	13nm,1.1s						
LFF	**La Frestale**	**145.97**	**85**	*e*PKP1	PKPbc	22 51 08.0	+0.9
	40nm,1.2s						
SONM	**Songino Array**	**146.35**	**281**	PKPbc	PKPbc	22 51 08.7	+0.5
	1.6nm,0.7s,baz=165,slow=3.3,SNR=6.8						
RJF	**Les Rejaudoux**	**146.62**	**85**	*e*PKP1	PKPbc	22 51 09.6	+0.5
	21nm,1.1s						
CAF	**Calviac**	**146.72**	**86**	*e*PKP1	PKPbc	22 51 08.8	-0.6
	15nm,1.1s						
AVF	**Avril sur Loir**	**148.52**	**84**	*e*PKP1	PKPbc	22 51 14.4	+0.2
	24nm,1.3s						
SMF	**Signal de Mont**	**148.72**	**85**	*e*PKP1	PKPbc	22 51 15.2	+0.5
FETA	**Feichten**	**152.90**	**89**	⇑ *i*PKPbc	PKPbc	22 51 24.7	+0.2
	6.1nm,0.9s						
MOTA	**Moosalm**	**153.28**	**89**	⇓ *i*PKPbc	PKPbc	22 51 26.8	+1.4
	3.3nm,0.7s						
MKAR	**Makanchi Array**	**159.63**	**259**	PKPab	PKPab	22 52 05.5	+0.8
	1.3nm,0.7s,baz=120,slow=4.8,SNR=6.5						
NIE	**Niedzica**	**159.64**	**92**	*e*PX	PKPab	22 52 10.5	+5.8
BRTR	**Keskin Array B**	**160.26**	**132**	PKP	PKPdf	22 51 28.6	+1.4
	1.3nm,1.0s,baz=214,slow=43,SNR=3.7						
BRTR				PKPab	PKPab	22 52 08.8	+1.1
	1.9nm,1.0s,baz=225,slow=1.8,SNR=3.7						
ZALV	**Zalesovo Beam**	**161.24**	**280**	PKPab	PKPab	22 52 13.0	+1.3
	0.2nm,0.3s,baz=147,slow=2.9,SNR=3.1						
AKASG	**Malin Array Be**	**165.34**	**97**	PKPab	PKPab	22 52 30.4	+0.6
	0.3nm,0.3s,baz=278,slow=2.7,SNR=3.5						

*IDC **16** 22:31:37.5±0.6, 3°.09S×126°.30E, h17km±4km, mb4.3/15, mb1 4.3/16, mb1mx4.3/24, mbtmp4.3/16, ML5.0/1, Error ellipse: s-maj=22.0km s-min=9.3km az=68.0*
*ISCJB **16** 22:31:38.7±0.6, 3°.08S±0°.03×126°.31E±0°.04, h39km±5km, mb4.8/41, Error ellipse: s-maj=6.1km s-min=5.2km az=151.9*
*DJA **16** 22:31:40, 2°.86S×126°.29E, h17km, MLv4.7/11*
*BJI **16** 22:31:42.0, 2°.35S×126°.81E, h27km, mB5.0/5, mb4.6/11*
*NEIC **16** 22:31:42.2±0.9, 3°.10S×126°.30E, h56km±8km, mb4.6/13, Error ellipse: s-maj=7.5km s-min=3.8km az=55.0*
ISC 16 22:31:40.8±0.5, 3°.10S±0°.03×126°.33E±0°.03, h40km±5km, h21km±5.8km: pP-P, n100, σ1§13/108, mb4.8/41, Buru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.79**	**101**	P	**Pn**	**22 31 56.2**	**+0.8**
NLAI				S	**Sn**	**22 32 09.7**	**+3.7**
AAI	**Ambon**	**1.96**	**108**	P	**Pn**	**22 32 14.7**	**+3.2**
LBMI	**Labuha**	**2.71**	**26**	P	**Pn**	**22 32 22.0**	**+0.1**
KDI	**Kendari**	**3.80**	**257**	P	**Pn**	**22 32 36.9**	**0.0**
KDI				S	**Sn**	**22 32 16.2**	**-4.1**
TNTI	**Ternate**	**3.98**	**15**	P	**Pn**	**22 32 37.7**	**-1.7**
TNTI				S	**Sn**	**22 33 22.6**	**-2.2**
LUWI	**Luwuk**	**4.10**	**300**	P	**Pn**	**22 32 38.0**	**-3.0**
KMSI	**Cibinong**	**4.33**	**327**	P	**Pn**	**22 32 41.5**	**-2.7**
MNI	**Manado**	**4.75**	**342**	P	**Pn**	**22 32 47.8**	**-2.1**
MRSI	**Marisa**	**5.64**	**309**	P	**Pn**	**22 33 00.3**	**-1.9**
BNSI	**Bone**	**6.34**	**258**	P	**Pn**	**22 33 12.9**	**+1.1**
	0.2nm72nm,0.6s						
TTSI	**Tana Toraja**	**6.50**	**270**	P	**Pn**	**22 33 15.0**	**+1.0**
	33nm,0.8s						
TTSI				S	**Sn**	**22 34 24.7**	**-2.2**
	33nm,0.8s						
BKSI	**Bulukumba**	**6.57**	**250**	P	**Pn**	**22 33 16.3**	**+1.3**
	0.4nm1μm94nm,0.6s						
BKSI				S	**Sn**	**22 34 25.7**	**-3.0**
	0.4nm1μm94nm,0.6s						
SPSI	**Sidrap Palu**	**6.60**	**262**	P	**Pn**	**22 33 16.1**	**+0.7**
KAPI	**Kappang**	**6.83**	**254**	Pn	**Pn**	**22 33 18.5**	**-0.1**
	12nm,0.3s,baz=103,slow=6.5,SNR=50						
KAPI				Sn	**Sn**	**22 34 29.7**	**-5.4**
	baz=303,slow=19,SNR=4.2						
PCI	**Palu**	**6.84**	**288**	P	**Pn**	**22 33 18.3**	**-0.4**
	1.0nm3μm104nm,0.7s						
PCI				S	**Sn**	**22 34 30.3**	**-5.0**
	1.0nm3μm104nm,0.7s						
MMRI	**Maumere**	**6.84**	**216**	P	**Pn**	**22 33 20.7**	**+2.0**
	0.3nm93nm,1.1s						
KAKA	**Kakadu**	**11.31**	**148**	*e*P	**Pn**	**22 34 11.2**	**-8.7**
	17nm,0.2s						
MYLDM	**Lahad Datu**	**11.34**	**316**	P	**Pn**	**22 34 21.3**	**+0.9**
KNA	**Kununurra**	**12.80**	**169**	P	**Pn**	**22 34 47.0**	**+6.6**
	2μm245nm,1.0s						
KKM	**Kota Kinabalu**	**13.58**	**312**	*e*Pn	**Pn**	**22 34 51.9**	**+0.9**
FITZ	**Fitzroy Crossi**	**14.93**	**183**	*e*P	**Pn**	**22 35 15.0**	**+5.8**
	114nm,0.6s						
FITZ				*e*S	**Sn**	**22 37 36.7**	**-17**
FITZ	**Fitzroy Crossi**	**14.93**	**183**	Pn	**Pn**	**22 35 11.3**	**+2.1**
	6.8nm,0.3s,baz=17,slow=7.5,SNR=36						
FITZ	**Fitzroy Crossi**	**14.93**	**183**	*e*Pn	**Pn**	**22 35 11.4**	**+2.2**
FITZ	**Fitzroy Crossi**	**14.93**	**183**	P	**Pn**	**22 35 15.2**	**+6.0**
SBUM	**Sibu**	**15.14**	**291**	P	**Pn**	**22 35 14.1**	**+2.1**
PCJI	**Pacitan**	**15.90**	**251**	P	**Pn**	**22 35 25.6**	**+3.7**
KSM	**Kuching**	**16.64**	**286**	*e*Pn	**Pn**	**22 35 31.7**	**+0.4**
WRAB	**Tennant Creek**	**18.48**	**156**	*e*P	**Pn**	**22 35 53.8**	**-0.1**
	36nm,0.5s						
WRAB	**Tennant Creek**	**18.48**	**156**	P	**Pn**	**22 35 53.7**	**-0.2**
	74nm,0.8s						
WRA	**Warramunga Arr**	**18.48**	**156**	P	**Pn**	**22 35 53.7**	**-0.2**
	4.6nm,0.3s,baz=336,slow=12,SNR=36						
WRA				S	**S**	**22 39 21.1**	**-1.3**
	baz=341,slow=22,SNR=3.5						
WRA	**Warramunga Arr**	**18.48**	**156**	P	**Pn**	**22 35 53.7**	**-0.2**
WRA				S	**S**	**22 39 21.1**	**-1.3**
MBWA	**Marble Bar**	**19.07**	**199**	*e*P	**Pn**	**22 35 59.5**	**-1.4**
COEN	**Coen**	**19.83**	**124**	*e*P	**Pn**	**22 36 08.6**	**-1.6**
	363nm,0.5s						
COEN	**Coen**	**19.83**	**124**	P	**Pn**	**22 36 08.8**	**-1.3**
	219nm,0.5s						
KLSI		**21.60**	**265**	P	**P**	**22 36 32.6**	**+5.0**
	48nm,1.8s,mb4.6						
PMG	**Port Moresby**	**21.63**	**108**	*e*P	**P**	**22 36 29.1**	**+1.4**
ASAR	**Alice Springs**	**21.72**	**161**	P	**P**	**22 36 29.2**	**+0.5**
	90nm,0.7s

1.2nm,0.6s,mb3.7,baz=187,slow=10,SNR=5.7
LZH Lanzhou 44.28 334 P **P** **22 39 48.8 +2.2**
LZH pP pP 22 39 57.9 -0.2
LZH pP pP 22 39 58.9 +0.8
LZH sP sP 22 40 05.0 +2.1
LZH pmax pmax
comp=Z,25nm,1.0s,mb4.9
LZH pmax pmax
comp=Z,200nm,7.2s
HHC Hu-ho-hao-te 45.77 344 *e*P **P** **22 40 00.4 +2.0**
HHC S **S** **22 46 39.8 +0.6**
HHC pmax pmax
comp=Z,14nm,0.7s,mb5.0
HHC pmax pmax
comp=Z,180nm,6.8s
PALK Pallekele 46.68 283 P **P** **22 40 04.7 -1.4**
LSA Lhasa 46.87 317 *e*P **P** **22 40 07.5 +0.3**
comp=Z,6.7nm,0.7s,mb4.7
ODAN Odare 47.95 311 *e*P **P** **22 40 16.6 +0.9**
comp=Z,28nm,0.9s,mb5.3
TAPN Taplejung 47.97 312 *e*P **P** **22 40 16.8 +0.9**
RAMN Ramite 48.60 310 *e*P **P** **22 40 21.9 +1.2**
comp=Z,67nm,0.8s,mb5.7
GTA Gaotai 48.83 333 P **P** **22 40 23.3 +1.1**
GTA pP pP 22 40 32.4 -1.4
GTA sP sP 22 40 36.5 -2.1
GTA pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
JIRN Jiri 49.28 311 *e*P **P** **22 40 26.9 +1.0**
comp=Z,16nm,0.6s,mb5.2
GUN Gumba 49.64 311 *e*P **P** **22 40 29.6 +0.9**
comp=Z,56nm,0.8s,mb5.7
PKI Pulchoki 49.82 310 *e*P **P** **22 40 30.6 +0.5**
comp=Z,20nm,0.8s,mb5.2
KKN Kakani 50.03 311 *e*P **P** **22 40 32.1 +0.4**
comp=Z,27nm,0.9s,mb5.3
DMN Daman 50.07 310 *e*P **P** **22 40 32.6 +0.6**
comp=Z,46nm,1.1s,mb5.4
GKN Gorkha 50.63 310 *e*P **P** **22 40 36.6 +0.4**
comp=Z,28nm,0.8s,mb5.2
ULN Ulaanbaatar 53.48 344 *e*P **P** **22 40 57.5 +0.5**
comp=Z,6.9nm,0.8s,mb4.6
ULN Ulaanbaatar 53.48 344 P **P** **22 40 58.2 +1.2**
SONM Songino Array 53.64 343 P **P** **22 40 58.8 +0.6**
comp=Z,4.8nm,0.8s,mb4.5,baz=155,slow=8.1,SNR=20
RPZ Rata Peaks 56.54 142 P **P** **22 41 19.5 +0.2**
comp=Z,9.7nm,0.5s,mb5.0,baz=347,slow=3.2,SNR=11
PETK Petropavlovsk- 61.89 21 P **P** **22 41 56.2 +0.3**
comp=Z,2.0nm,0.7s,mb4.4,baz=200,slow=4.5,SNR=4.5
MK31 Makanchi Array 62.98 328 *e*P **P** **22 42 03.9 +0.5**
MKAR Makanchi Array 62.98 328 P **P** **22 42 03.8 +0.4**
comp=Z,2.4nm,0.6s,mb4.5,baz=126,slow=8.2,SNR=24
MKAR pP pP 22 42 09.2 -6.1
comp=Z,7.2nm,0.7s,baz=127,slow=8.3,SNR=17
UCH Uchtor 65.00 320 *e*P **P** **22 42 17.5 +0.7**
comp=Z,4.2nm,0.9s,mb4.5
AAK Ala-Archa 65.22 320 P **P** **22 42 18.0 -0.2**
KBL Kabul 65.46 310 *e*P **P** **22 42 20.8 +0.9**
comp=Z,5.7nm,0.8s,mb4.7
AML Almayashu 65.48 319 *e*P **P** **22 42 20.7 +0.8**
comp=Z,5.8nm,0.9s,mb4.6
EKS2 Erkin-Say 65.69 320 *e*P **P** **22 42 22.3 +1.0**
comp=Z,4.9nm,0.9s,mb4.5
ZAA0 Zalesovo Array 66.50 335 *e*P **P** **22 42 25.4 -0.8**
ZALV Zalesovo Beam 66.50 335 P **P** **22 42 25.5 -0.7**
comp=Z,1.3nm,0.6s,mb4.1,baz=131,slow=4.1,SNR=7.6
ZALV pP pP 22 42 31.1 -7.1
comp=Z,4.7nm,0.8s,baz=107,slow=5.0,SNR=8.6
KURK Kurchatov 67.31 329 *e*P **P** **22 42 30.9 -0.5**
comp=Z,14nm,0.8s,mb5.0
BVAR Borovoye Array 72.84 328 P **P** **22 43 04.6 -0.7**
comp=Z,3.2nm,0.8s,mb4.3,baz=141,slow=9.3,SNR=14
BVAR pP pP 22 43 10.6 -6.8
comp=Z,0.6nm,0.5s,baz=132,slow=6.4,SNR=14
BRVK Borovoye 72.91 328 *e*P **P** **22 43 04.4 -1.3**
comp=Z,5.5nm,0.9s,mb4.5
ABKAR Akbulak array 77.20 322 *e*P **P** **22 43 29.9 -0.6**
comp=Z,5.4nm,1.3s,mb4.3
MAW Mawson 77.26 201 P **P** **22 43 29.5 -1.0**
comp=Z,0.9nm,0.3s,mb4.1,baz=21,slow=3.9,SNR=3.8
MAW Mawson 77.26 201 *e*P **P** **22 43 29.2 -1.4**
ARU Arti 80.48 329 *e*P **P** **22 43 47.2 -1.2**
QSPA South Pole Qui 86.86 180 P **P** **22 44 19.4 -1.3**
comp=Z,3.2nm,0.6s,mb4.7,baz=282,slow=1.1,SNR=24
QSPA South Pole Qui 86.86 180 *e*P **P** **22 44 19.5 -1.2**
KIV Kislovodsk 87.55 314 *e*P **P** **22 44 23.7 -1.0**
CFAA Coronel Fontan 142.81 159 PKhKP PKPpre 22 51 06.3
comp=Z,0.5nm,0.5s,baz=192,slow=2.0,SNR=9.2
CPUP Villa Florida 150.53 173 PKPbc PKPbc 22 51 29.1 0.0
comp=Z,6.4nm,0.6s,baz=148,slow=1.6,SNR=24
LPAZ La Paz 156.02 144 PKPbc PKPdf 22 51 42.8 +11
comp=Z,2.1nm,0.8s,baz=25,slow=0.5,SNR=10
LPAZ PKPab PKPab 22 52 00.4 +1.4
comp=Z,12nm,0.6s,baz=212,slow=1.1,SNR=36

*NEIC **16** 22:46:10.8, 35.°86N×27.°76E, h42km, MD3.3(ATH), After ATH.*
*ATH **16** 22:46:10.8, 35.°86N×27.°76E, h42km, MD3.3/6*
*ISCJB **16** 22:46:12.0±1.9, 36.°02N±0.°05×27.°51E±0.°06, h13km±13km, Error ellipse: s-maj=11.3km s-min=4.2km az=44.6*
*CSEM **16** 22:46:12.0±0.2, 35.°99N×27.°53E, h15km, MD3.3, Error ellipse: s-maj=9.3km s-min=3.7km az=134.0*
*DDA **16** 22:46:14.9, 36.°13N×27.°29E, h40km, Md2.9*
ISC 16 22:46:12.9±0.7, 35.°96N±0.°05×27.°59E±0.°08, h24km±8km, n24, σ0.89/44, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.50**	**60**	*e*P	**Pb**	**22 46 22.0**	**-1.1**
ARG				*e*S	**Sb**	**22 46 29.9**	**-0.2**
ARG	**Arkhangelos**	**0.50**	**60**	*e*P	**Pb**	**22 46 22.0**	**-1.1**
ARG				*e*S	**Sb**	**22 46 29.9**	**-0.2**
ARG	**Arkhangelos**	**0.50**	**60**	*e*P	**Pb**	**22 46 22.0**	**-1.1**
ARG				*e*S	**Sb**	**22 46 29.9**	**-0.2**
KARP	**Karpathos**	**0.54**	**220**	*e*P	**Pb**	**22 46 23.5**	**-0.2**
KARP				*e*S	**Sb**	**22 46 32.5**	**+1.4**
KARP	**Karpathos**	**0.54**	**220**	*e*P	**Pb**	**22 46 23.5**	**-0.2**
KARP				*e*S	**Sb**	**22 46 32.5**	**+1.4**
KARP	**Karpathos**	**0.54**	**220**	*e*P	**Pb**	**22 46 23.5**	**-0.2**
BDRM	**Kayabasi**	**1.10**	**354**	*i* P	**Pn**	**22 46 32.0**	**-0.9**
BDRM				*i* S	**Sb**	**22 46 47.9**	**+0.6**
BDRM	**Kayabasi**	**1.10**	**354**	*i* P	**Pn**	**22 46 32.0**	**-0.8**
BDRM				*i* S	**Sb**	**22 46 47.9**	**+0.6**
ZKR	**Zakros**	**1.40**	**233**	*e*P	**Pn**	**22 46 36.3**	**-0.6**
ZKR				*e*S	**Sn**	**22 46 54.8**	**+0.2**
ZKR	**Zakros**	**1.40**	**233**	*e*P	**Pn**	**22 46 36.3**	**-0.6**
ZKR				*e*S	**Sn**	**22 46 54.8**	**+0.2**
ZKR	**Zakros**	**1.40**	**233**	*e*P	**Pn**	**22 46 36.3**	**-0.6**
ZKR				*e*S	**Sn**	**22 46 54.8**	**+0.2**
AYDN	**Tasoluk**	**1.71**	**8**	*i* P	**Pn**	**22 46 40.5**	**-0.6**
AYDN				*i* S	**Sn**	**22 47 01.4**	**-0.8**
AYDN	**Tasoluk**	**1.71**	**8**	*i* P	**Pn**	**22 46 40.5**	**-0.6**
AYDN				*i* S	**Sn**	**22 47 01.4**	**-0.8**
NPS	**Neapolis**	**1.75**	**247**	*e*P	**Pn**	**22 46 40.9**	**-0.8**
NPS				*e*S	**Sn**	**22 47 02.9**	**-0.4**
NPS	**Neapolis**	**1.75**	**247**	*e*P	**Pn**	**22 46 40.9**	**-0.8**
NPS				*e*S	**Sn**	**22 47 02.9**	**-0.4**
NPS	**Neapolis**	**1.75**	**247**	*e*P	**Pn**	**22 46 40.9**	**-0.8**
NPS				*e*S	**Sn**	**22 47 02.9**	**-0.4**
LAST	**Lasithi**	**1.90**	**246**	*e*P	**Pn**	**22 46 43.5**	**-0.2**
LAST	**Lasithi**	**1.90**	**246**	*e*P	**Pn**	**22 46 43.5**	**-0.2**
LAST	**Lasithi**	**1.90**	**246**	*e*P	**Pn**	**22 46 43.5**	**-0.2**
DNZL	**Cakiroluk**	**2.08**	**34**	*i* P	**Pn**	**22 46 48.1**	**+1.9**
DNZL				*i* S	**Sn**	**22 47 13.2**	**+1.8**
DNZL	**Cakiroluk**	**2.08**	**34**	*i* P	**Pn**	**22 46 48.1**	**+1.8**
DNZL				*i* S	**Sn**	**22 47 13.2**	**+1.8**
IDI	**Anoyia**	**2.30**	**254**	*e*P	**Pn**	**22 46 48.8**	**-0.4**
IDI				*e*S	**Sn**	**22 47 17.6**	**+0.9**
IDI	**Anoyia**	**2.30**	**254**	*e*P	**Pn**	**22 46 48.8**	**-0.4**
IDI				*e*S	**Sn**	**22 47 17.6**	**+0.9**
IDI	**Anoyia**	**2.30**	**254**	*e*P	**Pn**	**22 46 48.8**	**-0.4**
IDI				*e*S	**Sn**	**22 47 17.6**	**+0.9**

*LDG **16** 22:58:17.0±0.3, 33.°33N×91.°88E, h10km, Mb5.2/40, Ms4.7/9, Error ellipse: s-maj=15.2km s-min=6.6km az=139.0*
*BJI **16** 22:58:17.4, 33.°15N×92.°11E, h15km, mB5.0/42, mb4.8/52, Ms5.4/71, Ms7 5.2/58*
*IDC **16** 22:58:17.2±0.5, 33.°21N×92.°13E, h0km, mb4.8/24, mb1 4.9/26, mb1mx4.9/29, mbtmp4.8/26, ML4.7/2, MS4.7/27, Ms1 4.7/27, ms1mx4.5/37, Error ellipse: s-maj=15.9km s-min=11.2km az=35.0*
*ISCJB **16** 22:58:18.2±0.7, 33.°17N±0.°02×92.°13E±0.°02, h21km±5km, mb5.0/192, MS4.9/69, Error ellipse: s-maj=3.5km s-min=2.6km az=7.1*
*NEIC **16** 22:58:20.1±1.3, 33.°17N×92.°08E, h20km±9km, mb5.1/107, MS4.9/5, Error ellipse: s-maj=4.5km s-min=3.2km az=219.0*
*MOS **16** 22:58:20.0±0.9, 33.°19N×92.°09E, h33km, mb5.2/91, MS4.8/43, Error ellipse: s-maj=6.0km s-min=3.5km az=123.5*
*SZGRF **16** 22:58:21.4, 33.°05N×92.°41E, h18km, mb5.1, MS5.0, Qinghai, China*
*GCMT **16** 22:58:24.3±0.1, 33.°15N×92.°24E, h17km, MW5.3, Moment Tensor Solution. s60,c86; s88,c172; Moment tensor: Scale 10^{17}Nm; M_{rr}-0.39±.03; $M_{\theta\theta}$-0.70±.02; $M_{\phi\phi}$1.09±.03; $M_{r\theta}$-0.47±.06; $M_{\theta\phi}$0.76±.02; $M_{\phi r}$0.11±.06; Best double couple: $M_0$1.30000×10^{17} NP1:ϕ_s159.00000°,δ68.00000°, λ-160.00000°. NP2:ϕ_s61.00000°,δ71.00000°, λ-23.00000°. Principal axes: T 1.3700, Plg2.0000°, Azm111.0000°; N -0.1300, Plg61.0000°, Azm204.0000°; P -1.2400, Plg29.0000°, Azm19.0000°; Data Used: II IU IC G CN.*
ISC 16 22:58:20.0±0.8, 33.°17N±0.°02×92.°12E±0.°02, h18km±4km, h19km±2.2km: pP-P, n589, σ1.9±04/633, mb5.0/192, MS4.9/69, 21C-44D, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.56**	**194**	Pg	**Pb**	**22 59 20.1**	**-2.3**
LSA				Sg	**Sb**	**23 00 06.8**	**+1.6**
LSA				LR	LR		
comp=N,31μm,8.4s
LSA LR LR
comp=E,47μm,9.7s
LSA LR LR
comp=Z,64μm,7.7s
LSA Lhasa 3.56 194 ⇓*i*Pn **Pb** **22 59 19.4 -2.9**
LSA *e*Sg **Sg** **23 00 12.9 -1.4**
TAPN Taplejung 6.94 214 *e*P **Pn** **23 00 04.0 +3.2**
ODAN Odare 7.51 214 *e*P **Pn** **23 00 10.3 +1.8**
JIRN Jiri 7.51 225 *e*P **Pn** **23 00 12.0 +3.4**
comp=Z,271nm,0.8s
GUN Gumba 7.51 227 *e*P **Pn** **23 00 12.2 +3.6**
comp=Z,325nm,0.9s
SHL Shillong 7.58 182 *e*PKP **Pn** **23 00 10.0 +0.5**
comp=Z,31nm,0.9s
SHL *ex* x 23 01 36.0
RAMN Ramite 7.83 219 *e*P **Pn** **23 00 14.1 +1.1**
comp=Z,452nm,0.9s
KKN Kakani 7.98 230 *e*P **Pn** **23 00 18.2 +3.3**
comp=Z,232nm,0.7s
PKI Pulchoki 8.05 228 *e*P **Pn** **23 00 18.9 +3.0**
comp=Z,196nm,0.6s
PKIN Phulchoki 8.05 228 *e*P **Pn** **23 00 18.8 +2.8**
comp=Z,128nm,0.4s
DMN Daman 8.21 229 *e*P **Pn** **23 00 20.5 +2.3**
comp=Z,190nm,0.6s
GKN Gorkha 8.26 233 *e*P **Pn** **23 00 20.5 +1.7**
comp=Z,211nm,0.5s
IMP Imphal 8.51 169 *e*PKP **Pn** **23 00 22.0 -0.2**
IMP *i* S **Sn** **23 01 51.0 -6.8**
GTA Gaotai 8.79 43 ⇓P **Pn** **23 00 27.8 +1.7**
GTA pP 23 00 31.3
GTA sP 23 00 32.8
GTA S **Sn** **23 02 06.9 +2.3**
GTA sS 23 02 12.6
GTA pmax pmax
comp=Z,45nm,1.1s
GTA pmax pmax
comp=Z,280nm,4.8s
GTA LR LR
comp=N,18μm,11.5s
GTA LR LR
comp=E,11μm,12.0s
GTA LR LR
comp=Z,9μm,11.7s
AGT Agartala 9.29 185 *i* P **Pn** **23 00 32.0 -0.9**
AGT *i* S **Sn** **23 02 08.0 -8.9**
LZH Lanzhou 10.09 70 P **Pn** **23 00 48.3 +4.5**
LZH pP 23 00 51.3
LZH sP 23 00 54.3
LZH PP 23 00 56.8
LZH S **Sn** **23 02 45.0 +8.5**
LZH sS 23 02 50.1
LZH SS 23 02 55.1
LZH pmax pmax
comp=Z,60nm,1.0s
LZH pmax pmax
comp=Z,340nm,5.9s
LZH LR LR
comp=N,16μm,10.0s
LZH LR LR
comp=Z,22μm,11.7s
CD2 Chengdu 10.13 100 P **Pn** **23 00 47.3 +2.8**
CD2 pP 23 00 50.4
CD2 sP 23 00 52.3
CD2 PP 23 00 55.6
CD2 S **Sn** **23 02 42.9 +5.3**
CD2 sS 23 02 47.8
CD2 SS 23 02 55.8
CD2 pmax pmax
comp=Z,30nm,0.6s
CD2 pmax pmax
comp=Z,440nm,6.3s
CD2 LR LR
comp=N,23μm,7.7s
CD2 LR LR
comp=Z,30μm,9.5s
PTH Pithoragarh 10.80 254 *ex* **Pn** **23 00 56.2 +2.6**
BOK Bokaro 10.83 212 *e*PKP **Pn** **23 00 54.4 +0.3**
BOK AMb AMB 23 00 59.1
comp=Z,39nm,1.0s
WMQ Urumqi 11.18 343 P **Pn** **23 00 58.3 -0.5**
WMQ pP 23 01 01.5
WMQ sP 23 01 04.5
WMQ PP 23 01 06.8
WMQ S **Sn** **23 03 04.4 +1.1**
WMQ SS 23 03 18.1
WMQ PcP PcP 23 06 53.3 -1.0
WMQ ScS ScS 23 13 58.1 -3.1
WMQ pmax pmax
comp=Z,42nm,1.0s
WMQ pmax pmax
comp=Z,550nm,4.3s
WMQ LR LR
comp=N,14μm,11.0s
WMQ LR LR
comp=E,26μm,11.0s
WMQ LR LR
comp=Z,16μm,12.0s
KMI Kunming 12.26 128 P **Pn** **23 01 14.1 +0.5**
KMI pP 23 01 16.1
KMI PP 23 01 23.5
KMI S **Sn** **23 03 31.9 +2.1**
KMI SS 23 03 46.0
KMI pmax pmax
comp=Z,27nm,1.1s
KMI pmax pmax
comp=Z,170nm,4.1s
KMI LR LR
comp=N,11μm,8.4s
KMI LR LR
comp=E,6μm,9.7s
KMI LR LR
comp=Z,8μm,9.7s
DDI Dehra Dun 12.31 260 *e*PKP **Pn** **23 01 14.0 -0.3**
DDI *ex* x 23 03 33.5
SDNR Sundarnagar 12.92 267 *ex* x 23 01 28.5
BHK Bhakra 13.40 267 *e*PKP **Pn** **23 01 25.8 -3.5**
THN Thein Dam 13.82 271 *ex* **Pn** **23 01 31.4 -3.6**
XAN Xi'an 14.03 82 P **Pn** **23 01 37.1 -0.7**
XAN sP 23 01 44.3
XAN PP 23 01 48.5
XAN S **Sn** **23 04 11.8 -1.2**
XAN SS 23 04 32.0
XAN pmax pmax
comp=Z,6.0nm,1.2s
XAN pmax pmax
comp=Z,87nm,7.0s
XAN LR LR
comp=N,7μm,10.1s
XAN LR LR
comp=E,2μm,7.9s
XAN LR LR
comp=Z,3μm,8.3s
GYA Guiyang 14.28 114 ⇑*i*P **Pn** **23 01 39.5 -1.7**
GYA S **Sn** **23 04 17.8 -1.3**
GYA pmax pmax
comp=Z,60nm,1.0s
GYA pmax pmax
comp=Z,340nm,3.4s
GYA LR LR
comp=N,9μm,9.6s
GYA LR LR
comp=E,6μm,9.9s
GYA LR LR
comp=Z,4μm,12.7s
KSH Kashi 14.47 301 P **Pn** **23 01 45.1 +1.4**
KSH pP pP 23 01 47.5 -8.0
KSH sP sP 23 01 50.1 -7.8
KSH PP 23 01 55.6
KSH S **Sn** **23 04 24.9 +1.3**
KSH SS 23 04 41.5
KSH PcP PcP 23 07 00.3 +1.9
KSH ScP ScP 23 10 32.0 +0.8
KSH PcS PcS 23 10 33.8 +0.5
KSH pmax pmax
comp=Z,8.0nm,1.3s
KSH LR LR
comp=N,6μm,9.3s
KSH LR LR
comp=Z,4μm,9.8s
CHRT Chiangrai 14.91 151 P **Pn** **23 01 50.0 +0.2**
comp=Z,232nm,0.9s
ENH Enshi 15.06 96 *e*Pn **Pn** **23 01 50.0 -1.7**
comp=Z,102nm,0.9s
ENH *e*Sn **Sn** **23 04 42.6 +4.5**
ULHL Ulahol 15.47 310 P **Pn** **23 01 57.5 +0.3**
SNR=11
MK31 Makanchi Array 15.53 334 *e*P **Pn** **23 01 56.8 -1.1**
MKAR Makanchi Array 15.53 334 Pn **Pn** **23 01 56.8 -1.1**
comp=Z,0.4nm,0.3s,baz=145,slow=13,SNR=28
MKAR LR LR 23 07 50.5
comp=Z,2μm,20.2s,baz=149,slow=37
MKAR Makanchi Array 15.53 334 *i* P **Pn** **23 01 56.7 -1.2**
MKAR pmax pmax
comp=Z,30nm,1.0s
CHG Chiang Mai 15.55 155 P **Pn** **23 01 57.5 -0.8**
comp=Z,26nm,1.0s
CHTO Chiang Mai 15.55 155 *e*P **Pn** **23 01 57.0 -1.3**
CHTO pmax pmax
comp=Z,33nm,1.2s
CHTO Chiang Mai 15.55 155 *e*Pn **Pn** **23 01 57.0 -1.2**
comp=Z,33nm,1.2s
CHTO *e*S Sn 23 05 28.5 +38
CHTO Chiang Mai 15.55 155 Pn **Pn** **23 01 58.0 -0.3**
SNR=10.0
AAA Alma-Ata 15.60 315 *i* P **Pn** **23 02 00.6 +1.9**
AAA pmax pmax
comp=Z,1μm,2.6s
AAA MLR MLR
comp=Z,6μm,11.0s
CM31 Chiang Mai Arr 15.88 156 *e*Pn **Pn** **23 02 01.4 -1.2**
CMAR Chiang Mai Arr 15.88 156 Pn **Pn** **23 02 02.1 -0.5**
comp=Z,0.6nm,0.3s,baz=330,slow=13,SNR=54
CMAR PcP PcP 23 07 02.0 +1.3
comp=Z,0.3nm,0.3s,baz=324,slow=2.9,SNR=4.3
CMAR LR LR 23 09 18.8
comp=Z,3μm,20.5s,baz=336,slow=42
CMAR ScP ScP 23 10 37.1 +3.0
comp=Z,0.4nm,0.3s,baz=287,slow=2.2,SNR=5.2
KZA Kyzart 16.03 309 P **Pn** **23 02 10.6 +6.2**
SNR=37
BTO Baotou 16.11 57 *e*P **Pn** **23 02 02.4 -3.0**
BTO S **Sn** **23 05 10.1 +6.5**
BTO LR LR
comp=N,4μm,17.0s
BTO LR LR
comp=E,1μm,18.2s
BHPL Bhopal 16.29 236 *e*PKP **Pn** **23 02 06.8 -1.0**
BHPL AMb AMB 23 02 07.5
comp=Z,161nm,1.4s
KBK Karagaybulak 16.51 310 P **Pn** **23 02 16.4 +5.9**
SNR=35
AJM Ajmer 16.56 251 *ex* **Pn** **23 02 04.0 -7.3**
UCH Uchtor 16.59 308 P **Pn** **23 02 16.7 +5.2**
SNR=60
UCH Uchtor 16.59 308 *e*Pn **Pn** **23 02 12.5 +1.0**
comp=Z,100nm,1.0s
NGP Nagpur 16.68 227 ⇓*e*PKP **Pn** **23 02 09.4 -3.3**
NGP *ex* x 23 02 11.6
comp=Z,94nm,1.4s
NGP *e*S **Sn** **23 05 16.2 -1.3**
AAK Ala-Archa 16.79 309 P **Pn** **23 02 17.8 +3.8**
comp=Z,420nm,1.0s,SNR=14
AAK Ala-Archa 16.79 309 P **Pn** **23 02 17.7 +3.7**
SNR=12
AAK Ala-Archa 16.79 309 Pn **Pn** **23 02 17.2 +3.2**
comp=Z,0.4nm,0.3s,baz=102,slow=6.2,SNR=22
AAK Ala-Archa 16.79 309 ⇓*e*P **Pn** **23 02 14.9 +0.9**
AAK Ala-Archa 16.79 309 *e*P **Pn** **23 02 16.7 +2.6**
comp=Z,80nm,1.0s
AAK Ala-Archa 16.79 309 Pn **Pn** **23 02 17.6 +3.5**
SNR=46
CHMS Chumysh 16.80 311 P **Pn** **23 02 16.6 +2.4**
SNR=12
FRU Bishkek 16.81 310 *e*P **Pn** **23 02 19.0 +4.7**
FRU pmax pmax
comp=Z,430nm,2.8s
FRU pmax pmax
comp=E,580nm,3.8s
CEP Cherat 16.88 278 P **Pn** **23 02 12.0 -3.2**
AML Almayashu 17.09 307 P **Pn** **23 02 20.2 +2.4**
SNR=32
AML Almayashu 17.09 307 *e*Pn **Pn** **23 02 20.0 +2.2**
comp=E,50nm,0.9s
USP Ospenovka 17.10 311 P **Pn** **23 02 19.7 +1.8**
SNR=12
TIY Taiyuan 17.15 69 *e*P **Pn** **23 02 20.5 +1.9**
TIY S **Sn** **23 05 28.3 -0.6**
TIY LR LR
comp=N,7μm,7.1s
TIY LR LR
comp=E,4μm,9.0s
TIY LR LR
comp=Z,5μm,8.9s
EKS2 Erkin-Say 17.27 309 P **Pn** **23 02 22.4 +2.4**
SNR=43
EKS2 Erkin-Say 17.27 309 *e*Pn **Pn** **23 02 21.5 +1.4**
comp=Z,46nm,0.9s
HHC Hu-ho-hao-te 17.29 58 *e*P **Pn** **23 02 19.8 -0.6**
HHC sP sP 23 02 25.1 -4.2
HHC PP 23 02 34.3
HHC S **Sn** **23 05 30.3 -2.0**
HHC SS 23 05 51.8
HHC PcP PcP 23 07 02.8 +0.2
HHC ScS ScS 23 14 14.8 -1.6
HHC pmax pmax
comp=Z,18nm,0.5s
HHC pmax pmax
comp=Z,210nm,6.4s
HHC LR LR
comp=N,6μm,9.6s
HHC LR LR
comp=E,6μm,9.7s
HHC LR LR
comp=Z,7μm,10.3s
VIS Vishakhapatnam 17.30 209 *i* P **Pn** **23 02 23.6 +3.0**
VIS *ex* x 23 02 25.7
comp=Z,56nm,1.2s
VIS *i* S **Sn** **23 05 35.5 +2.8**
SONM Songino Array 18.18 32 P **Pn** **23 02 31.0 -0.3**
comp=Z,4.5nm,0.3s,baz=218,slow=11,SNR=119
SONM Songino Array 18.18 32 P **Pn** **23 02 31.0 -0.3**
SONM pmax pmax
comp=Z,5.0nm,0.3s
AKL Akola 18.29 231 *e*PKP **Pn** **23 02 31.4 -1.4**
AKL AMb AMB 23 02 35.3
comp=Z,93nm,1.1s
ULN Ulaanbaatar 18.50 33 *e*P **Pn** **23 02 34.3 -0.9**
ULN pmax pmax
comp=Z,55nm,1.0s
ULN Ulaanbaatar 18.50 33 *e*P **Pn** **23 02 34.3 -0.9**
comp=Z,55nm,1.0s
ULN Ulaanbaatar 18.50 33 P **Pn** **23 02 35.7 +0.5**
SNR=34
WHN Wuhan 19.06 92 ⇑P **Pn** **23 02 39.5 -2.6**

WHN pP pP 23 02 44.1 -2.3
WHN LR LR
comp=N,5μm,6.4s
WHN LR LR
comp=E,14μm,7.4s
WHN LR LR
comp=Z,16μm,8.0s
KBL Kabul 19.21 280 *e*P **Pn 23 02 42.0 -1.9**
KBL pmax pmax
comp=Z,190nm,1.0s
KBL Kabul 19.21 280 *e*P **Pn 23 02 42.0 -1.9**
comp=Z,190nm,1.0s
MOY Mondy 19.58 17 *e*P **Pn 23 02 48.5 +0.3**
MOY pmax pmax
comp=Z,92nm,1.4s
HYB Hyderabad 19.88 221 *e*P **Pn 23 02 50.5 -1.5**
HYB *e*S **Sn 23 06 42.0 +6.9**
HYB Hyderabad 19.88 221 *i*P **Pn 23 02 50.5 -1.5**
HYB *e*S **Sn 23 06 34.0 -1.1**
HYB LR LR 23 11 00.0
comp=Z,6.4nm,16.0s
KURK Kurchatov 20.15 334 P **P 23 02 52.8 -0.2**
comp=Z,188nm,0.9s,SNR=24
KURK Kurchatov 20.15 334 *e*P **P 23 02 52.0 -1.0**
KURK pmax pmax
comp=Z,28nm,0.9s
KURK Kurchatov 20.15 334 *e*P **P 23 02 52.0 -0.9**
comp=Z,28nm,0.9s
KURK Kurchatov 20.15 334 P **P 23 02 52.6 -0.3**
SNR=18
LATR Latur 20.27 227 *e*PKP **P 23 02 54.3 -0.2**
LATR AMb AMB 23 03 01.8
comp=Z,88nm,1.1s
TLY Talaya 20.31 21 Pn **P 23 02 56.5 +1.8**
comp=Z,106nm,1.3s,SNR=7.7
TLY Talaya 20.31 21 *e*P **P 23 02 56.5 +1.8**
TLY *e*SS 23 07 24.7
TLY pmax pmax
comp=Z,32nm,1.3s
TLY MLR MLR
comp=Z,2μm,19.0s,MS4.5
TLY Talaya 20.31 21 *e*Pn **P 23 02 55.7 +1.0**
comp=Z,30nm,1.2s
TLY Talaya 20.31 21 P **P 23 02 57.0 +2.3**
SNR=20
BJT Baijiatuau 20.45 64 *e*P **P 23 02 56.9 +0.6**
BJI Beijing 20.45 64 P **P 23 02 56.8 +0.4**
BJI S **S 23 06 49.8 +5.1**
BJI pmax pmax
comp=Z,13nm,1.3s
BJI pmax pmax
comp=Z,370nm,5.8s
BJI LR LR
comp=N,27μm,13.4s,MS5.8
BJI LR LR
comp=E,7μm,12.9s,MS5.8
TIA Tai'an 20.77 75 *e*P **P 23 03 00.3 +0.5**
TIA S **S 23 06 52.1 +1.2**
TIA LR LR
comp=N,6μm,10.2s
TIA LR LR
comp=E,5μm,9.9s
IRK Irkutsk 20.99 21 *e*P **P 23 03 04.0 +1.9**
IRK pmax pmax
comp=Z,271nm,1.6s
QIZ Qiongzhong 21.20 127 P **P 23 03 05.5 +0.8**
QIZ S **S 23 07 01.8 +2.1**
QIZ pmax pmax
comp=Z,17nm,2.1s,mb4.0
QIZ pmax pmax
comp=Z,400nm,6.1s
QIZ LR LR
comp=N,6μm,13.8s,MS5.2
QIZ LR LR
comp=E,3μm,15.0s,MS5.2
QIZ LR LR
comp=Z,5μm,9.7s
QIZ Qiongzhong 21.20 127 *e*P **P 23 03 06.4 +1.7**
comp=Z,37nm,1.1s,mb4.6
GZH Guangzhou 21.20 113 P **P 23 03 04.3 -0.3**
GZH S **S 23 06 54.0 -5.7**
GZH LR LR
comp=N,3μm,9.8s
GZH LR LR
comp=E,6μm,10.3s
GZH LR LR
comp=Z,9μm,10.0s,MS5.4
ZALV Zalesovo Beam 21.41 348 P **P 23 03 06.0 -0.6**
comp=Z,29nm,0.9s,mb4.6,baz=155,slow=11,SNR=108
ZALV LR LR 23 11 44.3
comp=Z,282nm,19.4s,MS3.7,baz=340,slow=38
ZALV Zalesovo Beam 21.41 348 P **P 23 03 06.0 -0.6**
ZALV pmax pmax
comp=Z,29nm,0.9s,mb4.6
ZALV MLR MLR
comp=Z,282nm,19.4s,MS3.7
POO Poona 21.93 233 *e*PKP **P 23 03 12.0 -0.4**
HKC Hong Kong Obse 22.27 113 S **S 23 07 26.0 +5.4**
NJ2 Nanjing 22.53 86 *e*P **P 23 03 22.6 +3.8**
NJ2 pP 23 03 26.8
NJ2 sP sP 23 03 29.6 +3.2
NJ2 PP 23 03 50.8
NJ2 S **S 23 07 24.0 -1.4**
NJ2 sS sS 23 07 28.0 -5.8
NJ2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.5
NJ2 pmax pmax
comp=Z,170nm,3.8s
NJ2 LR LR
comp=N,4μm,9.8s
NJ2 LR LR
comp=E,6μm,11.3s
NJ2 LR LR
comp=Z,6μm,10.4s,MS5.3
NVS Novosibirsk 22.55 347 ⇓*i*P **P 23 03 17.6 -1.2**
NVS *e*S **S 23 07 22.6 -2.8**
NVS pmax pmax
comp=N,119nm,1.7s
NVS pmax pmax
comp=E,42nm,1.7s
NVS pmax pmax
comp=Z,93nm,1.7s,mb4.9
NVS smax
comp=N,48nm,2.6s
NVS smax
comp=E,34nm,2.2s
KAD Karad 22.59 230 *e*PKP **P 23 03 19.0 -0.5**
MDRS Chennai 22.76 211 *e*x x 23 03 46.2
KRAR Krasnoyarsk 22.84 1 ⇓*i*P **P 23 03 21.4 -0.4**
KRAR pmax pmax
comp=Z,22nm,0.5s,mb4.8
DL2 Dalian 24.47 68 ⇑P **P 23 03 40.5 +2.7**
DL2 S **S 23 08 00.8 +3.6**
DL2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.3
DL2 pmax pmax
comp=Z,170nm,3.6s
DL2 LR LR
comp=N,4μm,15.4s,MS5.1
DL2 LR LR
comp=E,2μm,15.3s,MS5.1
DL2 LR LR
comp=Z,2μm,15.1s,MS4.8
QZH Quanzhou 24.50 103 ⇑*i*P **P 23 03 37.5 -0.7**
QZH S **S 23 07 51.3 -6.5**
QZH LR LR
comp=N,7μm,9.9s
QZH LR LR
comp=E,3μm,9.6s
QZH LR LR
comp=Z,8μm,19.6s,MS5.2
SSE Sheshan 24.67 87 *e*P **P 23 03 36.8 -2.9**
SSE pP 23 03 43.1
SSE S **S 23 07 57.0 -3.5**
SSE sS sS 23 08 07.4 -2.2
SSE pmax pmax
comp=Z,36nm,0.7s,mb5.0
SSE pmax pmax
comp=Z,40nm,3.9s
SSE LR LR
comp=N,2μm,11.4s,MS5.2
SSE LR LR
comp=E,4μm,11.4s,MS5.2
SSE LR LR
comp=Z,6μm,12.4s,MS5.3
BVAR Borovoye Array 25.23 328 P **P 23 03 45.2 +0.7**
comp=Z,17nm,0.8s,mb4.6,baz=137,slow=11,SNR=92
BVAR PcP PcP 23 07 17.5 -0.1
comp=Z,0.9nm,0.7s,baz=172,slow=2.9,SNR=3.3
BRVK Borovoye 25.30 328 P **P 23 03 45.0 -0.2**
comp=Z,240nm,1.1s,mb5.6,SNR=29
BRVK Borovoye 25.30 328 *c*e**P** **P 23 03 45.1 -0.1**
BRVK pmax pmax
comp=Z,61nm,1.2s,mb5.0
BRVK Borovoye 25.30 328 *e*P **P 23 03 44.1 -1.1**
comp=Z,56nm,1.1s,mb5.0
BRVK Borovoye 25.30 328 P **P 23 03 46.0 +0.8**
SNR=34
HIA Hailar 26.07 44 *e*P **P 23 03 52.2 0.0**
SNY Shenyang 26.29 62 ⇓P **P 23 03 54.3 0.0**
SNY S **S 23 08 29.1 +3.0**
SNY pmax pmax
comp=Z,14nm,1.0s,mb4.5
SNY LR LR
comp=N,3μm,12.6s,MS5.0
SNY LR LR
comp=E,2μm,13.8s,MS5.0
SNY LR LR
comp=Z,3μm,19.5s
PALK Pallekele 27.86 205 *e*P **P 23 04 08.2 -0.4**
PALK pmax pmax
comp=Z,37nm,1.3s,mb4.8
PALK Pallekele 27.86 205 *e*P **P 23 04 08.2 -0.4**
comp=Z,37nm,1.3s,mb4.9
ABKT Ailbek 27.98 289 P **P 23 04 11.8 +2.3**
comp=Z,242nm,1.2s,mb5.7,SNR=14
VAN Vannovskaya 27.98 290 *e*P **P 23 04 11.1 +1.5**
CN2 Changchun 27.99 58 *e*P **P 23 04 09.3 -0.2**
CN2 *e*sP sP 23 04 17.0 -0.4
CN2 *e*S **S 23 08 50.0 -2.8**
CN2 pmax pmax
comp=Z,20nm,0.9s,mb4.8
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,14μm,17.0s,MS5.6
CN2 LR LR
comp=E,2μm,17.0s,MS5.6
CN2 LR LR
comp=Z,3μm,18.0s,MS4.9
ABKAR Akbulak array 28.78 314 *e*P **P 23 04 16.6 +0.1**
comp=Z,15nm,0.9s,mb4.7
KSRS Korea Array 29.41 71 P **P 23 04 21.4 -0.8**
comp=Z,1.7nm,0.6s,mb4.0,baz=264,slow=9.9,SNR=8.6
KSRS ScP ScP 23 11 09.9 +1.1
comp=Z,0.4nm,0.3s,baz=263,slow=3.3,SNR=5.0
KSRS LR LR 23 16 53.5
comp=Z,939nm,20.6s,MS4.4,baz=273,slow=38
KSRS Korea Array 29.41 71 P **P 23 04 21.5 -0.8**
KSRS 23 11 10.0
KSRS pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
KSRS MLR MLR
comp=Z,939nm,20.6s,MS4.4
AKTK Aktyubinsk 30.37 315 P **P 23 04 31.0 +0.4**
AKTO Aktyubinsk 30.37 315 P **P 23 04 31.0 +0.4**
comp=Z,12nm,1.0s,mb4.6,baz=108,slow=8.8,SNR=38
AKTO Aktyubinsk 30.37 315 P **P 23 04 31.0 +0.4**
AKTO pmax pmax
comp=Z,12nm,1.0s,mb4.6
PSI Prapat 30.88 167 P **P 23 04 37.9 +2.5**
comp=Z,12nm,0.8s,mb4.8,baz=323,slow=4.9,SNR=8.8
PSI LR LR 23 19 04.3
comp=Z,1μm,19.2s,MS4.6,baz=340,slow=40
PSI Prapat 30.88 167 P **P 23 04 37.9 +2.5**
PSI pmax pmax
comp=Z,12nm,0.8s,mb4.8
PSI MLR MLR
comp=Z,1μm,19.2s,MS4.6
MDJ Mudanjiang 31.06 57 P **P 23 04 37.0 +0.2**
MDJ pP pP 23 04 40.1 -2.3
MDJ PcP PcP 23 07 31.8 -0.3
MDJ S **S 23 09 42.8 +1.7**
MDJ ScP ScP 23 11 15.3 +1.2
MDJ pmax pmax
comp=Z,6.0nm,0.9s,mb4.4
MDJ pmax pmax
comp=Z,85nm,4.9s
MDJ LR LR
comp=N,11μm,18.9s,MS5.6
MDJ LR LR
comp=E,2μm,15.5s,MS5.6
MDJ LR LR
comp=Z,3μm,14.6s,MS5.0
SVE Sverdlovsk 32.00 327 ⇑*e*P **P 23 04 45.7 +0.9**
SVE *e* 23 05 50.1
SVE *e*S **S 23 10 01.2 +5.9**
SVE pmax pmax
comp=Z,60nm,1.0s,mb5.4
SVE MLR MLR
comp=Z,3μm,15.0s,MS5.0
ARU Arti 32.75 325 P **P 23 04 51.5 +0.1**
comp=Z,128nm,1.0s,mb5.8,SNR=9.6
ARU Arti 32.75 325 *d*i**P** **P 23 04 51.6 +0.2**
ARU *e* 23 05 58.9
ARU *e*PPP 23 06 10.8
ARU *e* 23 07 34.7
ARU S **S 23 10 07.6 +0.5**
ARU SS SS 23 12 05.2 -23
ARU pmax pmax
comp=Z,34nm,1.2s,mb5.2
ARU Arti 32.75 325 *e*P **P 23 04 51.5 0.0**
comp=Z,20nm,0.9s,mb5.0
KLR Kul'dur 33.41 49 *e*P **P 23 04 52.5 -4.9**
KLR *e*S **S 23 10 14.0 -3.6**
KLR MLR MLR
comp=E,3μm,13.0s
KLR MLR MLR
comp=Z,11μm,13.0s,MS5.8
KKM Kota Kinabalu 35.07 135 *e*P **P 23 05 13.3 +1.3**
comp=Z,75nm,1.1s,mb5.5
SOKR Solikamsk 35.21 329 *c*i**P** **P 23 05 13.4 +0.6**
SOKR pmax pmax
comp=Z,40nm,1.1s,mb5.3
SOKR MLR MLR
comp=Z,2μm,16.0s,MS4.9
HABR Khabarovsk 35.40 51 P **P 23 05 13.1 -1.4**
HABR *e**SP sP 23 05 26.8 +4.4
HABR *e* 23 06 31.6
HABR *e* 23 07 42.5
HABR *e* 23 15 29.9
HABR MLR MLR
comp=Z,2μm,17.0s,MS4.9
KSM Kuching 35.86 148 *e*P **P 23 05 20.2 +1.4**
comp=Z,12nm,0.7s,mb4.9
MAK Makhachkala 36.09 299 *e*P **P 23 05 19.7 -0.9**
MAK *e* 23 06 39.9
MAK *e*S **S 23 11 02.0 +2.9**
MAK *e*SS SS 23 13 18.6 -18
MAK pmax pmax
comp=Z,58nm,1.1s,mb5.4
YAK Yakutsk 37.47 28 *e*P **P 23 05 33.0 +1.0**
YAK *e**PP pP 23 05 43.4 +5.7
YAK *e* 23 06 59.5
YAK *e*PPP 23 07 20.9
YAK *e*S **S 23 11 25.0 +5.5**
YAK *e*SS SS 23 13 57.7 -6.0
YAK *e* 23 15 41.3
YAK pmax pmax
comp=Z,12nm,1.2s,mb4.6
YAK pmax pmax
comp=E,12nm,1.5s
YAK pmax pmax
comp=N,5.0nm,1.0s
YAK pmax pmax
comp=Z,14nm,0.6s,mb5.0
YAK smax
comp=N,112nm,3.0s
YAK smax
comp=E,51nm,3.1s
YAK MLR MLR
comp=Z,1μm,17.0s,MS4.8
YAK MLR MLR
comp=E,1μm,16.0s,MS4.8
YAK MLR MLR
comp=N,566nm,16.0s,MS4.8
MJAR Matsushiro Arr 37.69 72 P **P 23 05 33.8 -0.5**
comp=N,0.4nm,0.3s,baz=346,slow=9.5,SNR=4.3
MJAR LR LR 23 21 42.3
comp=N,858nm,18.5s,MS4.6,baz=270,slow=37
DGRG David-gareji 37.71 296 P **P 23 05 36.5 +2.2**
KBD Kabd 38.01 276 *e*P **P 23 05 36.5 -0.5**
KBD AMb AMB 23 05 38.4
comp=Z,36nm,1.0s,mb5.1
MTA Mtatsminda 38.13 297 P **P 23 05 38.7 +0.8**
TBLG Delisi 38.17 297 P **P 23 05 38.7 +0.5**
TBLG Delisi 38.17 297 P **P 23 05 38.7 +0.5**
RDF Al-Radifah 38.21 276 *e*P **P 23 05 38.8 +0.1**
RDF AMb AMB 23 05 39.9
comp=Z,69nm,1.1s,mb5.3
GNI Garni 38.28 294 *d*i**P** **P 23 05 41.0 +1.9**
GNI pmax pmax
comp=Z,62nm,1.2s
GNI Garni 38.28 294 *e*P **P 23 05 40.3 +1.2**
comp=Z,72nm,1.1s,mb5.3
GNI Garni 38.28 294 P **P 23 05 41.4 +2.3**
SNR=16
GOR Gori 38.63 297 P **P 23 05 43.8 +1.7**
KEH Kehvi 38.74 298 P **P 23 05 42.7 -0.3**
ZEI Tsey 38.75 299 *e*P **P 23 05 42.8 -0.3**
ZEI pmax pmax
comp=Z,10.0nm,0.4s,mb4.9
ONI Oni 39.09 298 P **P 23 05 47.9 +2.0**
HAKT HAKKARI 39.38 290 ⇓*i*P **P 23 05 45.7 -2.8**
KIV Kislovodsk 39.60 301 *e*P **P 23 05 50.6 +0.4**
KIV *e* 23 07 18.7
KIV *e*S **S 23 11 51.2 -0.9**
KIV pmax pmax
comp=Z,16nm,1.1s,mb4.7
KIV MLR MLR
comp=Z,501nm,16.0s,MS4.5
KIV Kislovodsk 39.60 301 *e*P **P 23 05 48.8 -1.4**
comp=Z,13nm,0.8s,mb4.7
KIV Kislovodsk 39.60 301 P **P 23 05 50.9 +0.8**
SNR=8.0
JHJ Hachijo jima 2 39.63 77 LR LR 23 23 08.5
comp=Z,1μm,18.0s,MS4.8,baz=264,slow=38
BHD Baghdad 39.66 284 *e*x x 23 05 45.0
BHD *e*x x 23 07 18.0
BHD *e*x x 23 11 50.0
BHD *e*x x 23 12 02.0
TUTA Tutak 39.83 293 ⇓*i*P **P 23 05 54.2 +2.1**
ARTV Artvin 40.32 296 ⇓*i*P **P 23 05 58.0 +1.8**
DAGI Agillar 40.34 296 ⇓*i*P **P 23 05 58.0 +1.6**
ASAJ Asahikawa 40.34 59 P **P 23 05 56.6 +0.3**
comp=Z,10.0nm,0.9s,mb4.5,baz=290,slow=11,SNR=4.4
ASAJ Asahikawa 40.34 59 P **P 23 05 56.6 +0.3**
ASAJ pmax pmax
comp=Z,10.0nm,0.9s
YSS Yuzh-Sakhalins 40.43 55 *e*P **P 23 05 58.0 +0.9**
YSS *e*S **S 23 12 06.0 +1.4**
YSS smax
comp=N,500nm,8.0s
YSS MLR MLR
comp=E,3μm,16.0s,MS5.3
YSS MLR MLR
comp=Z,2μm,16.0s,MS5.1
YSS MLR MLR
comp=N,1μm,13.0s,MS5.3
DAV Davao City (W) 40.44 122 LR LR 23 25 16.5
comp=N,2μm,18.9s,MS4.9,baz=348,slow=40
DBOC Borcka 40.50 297 ⇓*i*P **P 23 05 59.0 +1.4**
VRHR Novokhopersk 40.62 312 *e*P **P 23 05 58.2 -0.3**
VRHR pmax pmax
comp=N,10.0nm,0.9s
VRHR pmax pmax
comp=E,60nm,0.9s
VRHR pmax pmax
comp=Z,30nm,0.9s,mb4.9
ERM Erimo 40.87 62 *c*i**P** **P 23 06 00.6 -0.1**
ERM pmax pmax
comp=Z,12nm,1.0s,mb4.5
ERZM Erzurum 40.88 294 ⇓*i*P **P 23 06 03.1 +2.2**
SOC Sochi 41.76 300 *e*P **P 23 06 07.5 -0.5**
SOC *e* 23 07 47.7
SOC *e*S **S 23 12 21.0 -3.4**
SOC *e*SS SS 23 15 26.1 -4.1
SOC *e*SSS 23 16 05.0
SOC pmax pmax
comp=Z,30nm,1.2s,mb4.8
VSR Storozhevoye 42.17 312 *e*P **P 23 06 10.4 -0.9**
VSR pmax pmax
comp=E,50nm,1.3s
VSR pmax pmax
comp=Z,40nm,1.3s,mb4.9
VSR pmax pmax
comp=N,6.0nm,0.6s
VSR MLR MLR
comp=N,90nm,13.0s,MS4.6
VSR MLR MLR
comp=E,550nm,13.0s,MS4.6
VSR MLR MLR
comp=Z,850nm,13.0s,MS4.8
YUK Yuzh-Kuril'sk 42.69 59 ⇑*i*P **P 23 06 16.9 +1.3**
YUK *i* 23 08 03.0
YUK *i*S **S 23 12 40.9 +2.8**
YUK pmax pmax
comp=N,17nm,0.3s
YUK pmax pmax
comp=E,13nm,0.3s
YUK pmax pmax
comp=Z,42nm,0.3s,mb5.7
YUK pmax pmax
comp=Z,200nm,0.3s
YUK smax
comp=N,170nm,8.5s
YUK smax
comp=E,100nm,8.5s
TIXI Tiksi 43.16 16 *d*i**P** **P 23 06 18.5 -0.6**
TIXI *e*S **S 23 12 48.9 +4.6**
TIXI pmax pmax
comp=Z,15nm,0.9s,mb4.7
TIXI MLR MLR
comp=Z,993nm,12.0s,MS4.9
TIXI Tiksi 43.16 16 *e*P **P 23 06 18.7 -0.4**
comp=Z,17nm,1.1s,mb4.7
KEMA Kemaliye 43.17 294 ⇓*i*P **P 23 06 21.0 +1.5**
ANN Anapa 43.32 302 *e*P **P 23 06 18.9 -1.8**
ANN *e* 23 08 03.7
ANN *e*S **S 23 12 44.8 -2.5**
ANN *e*SS SS 23 15 57.6 -3.2
ANN pmax pmax
comp=Z,47nm,1.2s,mb5.1
ANN MLR MLR
comp=N,642nm,15.0s,MS4.8
ANN MLR MLR
comp=E,553nm,15.0s,MS4.8
ANN MLR MLR
comp=Z,933nm,15.0s,MS4.8
CBIJ Chichi jima 43.39 84 LR LR 23 26 11.1
comp=Z,738nm,18.1s,MS4.6,baz=332,slow=39
MOS Moscow 43.57 318 *e*P **P 23 06 20.9 -1.6**
MOS pmax pmax
comp=Z,300nm,2.4s,mb5.6
MOS pmax pmax
comp=Z,116nm,1.5s,mb5.4
MOS MLR MLR
comp=Z,2μm,13.0s,MS5.1
MOS MLR MLR
comp=E,1μm,14.0s
AKCD Akcadag 43.77 293 ⇓*i*P **P 23 06 25.9 +1.5**
OBN Obninsk 44.09 317 *d*i**P** **P 23 06 26.1 -0.6**
OBN *e* 23 08 10.4
OBN *i*S **S 23 12 59.0 +0.8**
OBN *i*S SS 23 16 18.5 +3.0
OBN pmax pmax
comp=Z,42nm,1.2s,mb5.0
OBN MLR MLR
comp=Z,900nm,17.0s,MS4.8
OBN Obninsk 44.09 317 *e*P **P 23 06 26.4 -0.3**
comp=Z,69nm,1.5s,mb5.2
GZT Gaziantep 44.23 291 ⇓*i*P **P 23 06 29.4 +1.2**
ANDN Andirin 45.13 292 ⇓*i*P **P 23 06 36.4 +1.0**
ASF Jabal al Asfar 46.03 285 P **P 23 06 43.6 +1.0**
comp=Z,26nm,1.1s,mb5.1,baz=316,slow=0.9,SNR=31
ASF LR LR 23 29 24.6
comp=Z,621nm,19.6s,MS4.6,baz=314,slow=41
ASF Jabal al Asfar 46.03 285 P **P 23 06 43.6 +1.1**
ASF pmax pmax
comp=Z,26nm,1.1s
ASF MLR MLR
comp=Z,621nm,19.6s
AVNT Avonos 46.04 294 *e*P **P 23 06 42.4 -0.1**
KAPI Kappang 46.13 140 LR LR 23 29 01.7
comp=Z,815nm,20.4s,MS4.7,baz=334,slow=40
GULE Gulek 46.42 292 ⇓*i*P **P 23 06 47.2 +1.7**
BR131 Keskin Array S 46.78 296 *e*P **P 23 06 48.5 +0.1**

BRTR Keskin Array B 46.78 296 P **P** **23 06 48.4 0.0**
comp=Z,16nm,0.9s,mb4.9,baz=98,slow=7.5,SNR=65
BRTR PP PP 23 08 43.8 +5.6
comp=Z,3.1nm,0.9s,baz=88,slow=8.8,SNR=4.3
BRTR Keskin Array B 46.78 296 P **P** **23 06 48.4 +0.1**
BRTR 23 08 43.8
BRTR pmax pmax
comp=Z,16nm,0.9s
BRTR pmax pmax
comp=Z,3.0nm,0.9s
MMAI Mount Meron Ar 47.00 286 P **P** **23 06 50.0 -0.1**
comp=Z,21nm,1.0s,mb5.0,baz=85,slow=14,SNR=18
MMAI LR LR 23 31 48.9
comp=Z,511nm,18.9s,MS4.5,baz=90,slow=43
LVZ Lovozero 47.57 334 *d iP* **P** **23 06 53.8 -0.2**
LVZ pmax pmax
comp=Z,18nm,1.0s,mb5.1
SEY Seymchan 47.58 33⇑ *eP* **P** **23 06 55.1 +0.9**
SGKT Sivrigoynuk 47.81 297 *eP* **P** **23 06 56.9 +0.6**
JOF Joensuu 47.83 327 *eP* **P** **23 06 56.4 +0.3**
JOF Joensuu 47.83 327 *ep* **P** **23 06 56.4 +0.3**
comp=Z,22nm,1.1s,mb5.1
CSS Prodhromos 48.12 289 *eP* **P** **23 06 57.1 -1.7**
EIL Elat 48.40 282 P **P** **23 07 01.4 +0.4**
comp=Z,59nm,1.0s,mb5.6,baz=42,slow=4.3,SNR=49
EIL LR LR 23 31 28.9
comp=Z,1µm,18.6s,MS4.9,baz=81,slow=41
AKASG Malin Array Be 48.45 311 P **P** **23 07 00.4 -0.7**
comp=Z,6.8nm,0.7s,mb4.8,baz=83,slow=6.0,SNR=29
AKASG Malin Array Be 48.45 311 P **P** **23 07 00.4 -0.7**
AKASG pmax pmax
comp=Z,7.0nm,0.7s
AKBB Malin Array Si 48.45 311 *eP* **P** **23 07 00.0 -1.1**
KIEV Kiev 48.46 311 *eP* **P** **23 07 00.1 -1.1**
KIEV pmax pmax
comp=Z,34nm,1.3s,mb5.2
KIEV Kiev 48.46 311 *eP* **P** **23 07 00.1 -1.1**
comp=Z,34nm,1.3s,mb5.2
KIS Kishinev 49.09 306 *eP* **P** **23 07 04.0 -2.0**
KIS Kishinev 49.09 306 *e*PP PP 23 09 00.0 +0.5
KIS *eS* **S** **23 14 04.0 -6.0**
KIS *e*LQ 23 25 00.0
KIS *e*LR LR 23 29 48.0
comp=Z,1µm,14.0s
KIS Kishinev 49.09 306 *eP* **P** **23 07 04.0 -2.0**
KIS *e* 23 09 00.0
KIS *eS* **S** **23 14 04.0 -6.0**
VSU Vasula 49.69 321 *d iP* **P** **23 07 10.1 -0.4**
VSU pmax pmax
comp=Z,37nm,1.2s,mb5.3
NACGM Naroch 49.71 317 *e*LQ 23 18 16.0
IDID Didziasalis 49.72 317 *eP* **P** **23 07 10.9 +0.1**
IDID AMB AMB 23 07 12.3
comp=Z,6.3nm,1.2s,mb4.5
PETK Petropavlovsk- 49.94 46 P **P** **23 07 13.2 +0.7**
comp=Z,2.7nm,0.6s,mb4.4,baz=250,slow=8.8,SNR=4.8
PETK LR LR 23 30 16.7
comp=Z,588nm,20.1s,MS4.6,baz=91,slow=38
PETK Petropavlovsk- 49.94 46 P **P** **23 07 13.2 +0.7**
PETK pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
PETK MLR MLR
comp=Z,588nm,20.1s,MS4.6
IZAR Zarasai 49.99 318 *eP* **P** **23 07 12.8 +0.1**
IZAR AMB AMB 23 07 14.3
comp=Z,8.5nm,1.2s,mb4.7
IIGN Ignalina 50.01 317 *eP* **P** **23 07 13.1 +0.1**
IIGN AMB AMB 23 07 14.7
comp=Z,11nm,1.4s,mb4.7
KAF Kangasniemi 50.05 326 *eP* **P** **23 07 14.1 +1.0**
KAF pmax pmax
comp=Z,11nm,1.1s,mb4.8
KAF Kangasniemi 50.05 326 *eP* **P** **23 07 14.1 +1.0**
comp=Z,11nm,1.1s,mb4.8
KAF Kangasniemi 50.05 326 *ep* **P** **23 07 14.1 +1.0**
comp=Z,11nm,1.1s,mb4.8,baz=96,slow=7.6
FINES FINESS Array B 50.12 325 P **P** **23 07 13.3 -0.3**
comp=Z,2.8nm,0.5s,mb4.5,baz=90,slow=8.4,SNR=27
FINES FINESS Array B 50.12 325 P **P** **23 07 13.4 -0.3**
FINES pmax pmax
comp=Z,3.0nm,0.5s
PET Petropavlovsk 50.52 46 *eP* **P** **23 07 15.9 -1.0**
PET *e* 23 09 11.3
PET *eS* **S** **23 14 24.7 -5.2**
PET pmax pmax
comp=Z,13nm,1.4s,mb4.7
PET pmax pmax
comp=Z,100nm,5.6s
PET pmax pmax
comp=Z,100nm,9.2s
PET pmax pmax
comp=Z,100nm,8.9s
PET pmax pmax
comp=Z,100nm,12.9s
PET MLR MLR
comp=Z,1µm,14.0s,MS5.0
PET MLR MLR
comp=Z,1µm,14.0s
VRI Vrincioaia 50.69 305 ⇑P **P** **23 07 19.1 +0.9**
VRI Vrincioaia 50.69 305⇑ *iP* **P** **23 07 19.1 +0.9**
KEV Kevo 50.70 336 *eP* **P** **23 07 16.6 -1.4**
KEV pmax pmax
comp=Z,17nm,1.0s,mb4.9
KEV Kevo 50.70 336 *eP* **P** **23 07 16.6 -1.4**
comp=Z,17nm,1.0s,mb4.9
KEV Kevo 50.70 336 *ep* **P** **23 07 16.6 -1.4**
comp=Z,17nm,1.0s,mb4.9
PLOR Plostina 50.74 305 ⇑P **P** **23 07 17.4 -1.2**
PLOR Plostina 50.74 305⇑ *iP* **P** **23 07 17.4 -1.2**
ARCES ARCESS Array B 51.18 336 P **P** **23 07 21.9 +0.3**
comp=Z,9.1nm,0.8s,mb4.8,baz=92,slow=7.4,SNR=51
ARCES PcP PcP 23 08 36.5 -0.2
comp=Z,4.4nm,0.9s,baz=97,slow=6.2,SNR=4.4
ARCES ARCESS Array B 51.18 336 P **P** **23 07 21.9 +0.3**
ARCES 23 08 36.5
ARCES pmax pmax
comp=Z,9.0nm,0.8s
ARE0 ARCESS Array S 51.18 336 *eP* **P** **23 07 21.8 +0.3**
ARE0 *e*PcP PcP 23 08 36.7 -0.1
MLR Muntele Rosu 51.29 304 ⇓P **P** **23 07 23.5 +0.7**
MLR Muntele Rosu 51.29 304⇓ *iP* **P** **23 07 23.5 +0.7**
BURAR Bucovina Array 51.42 307 ⇓P **P** **23 07 23.5 -0.2**
BURAR Bucovina Array 51.42 307⇓ *iP* **P** **23 07 23.5 -0.2**
BUR08 Bucovina Ar. S 51.43 307 *eP* **P** **23 07 23.0 -0.7**
BUR08 *e*PcP PcP 23 08 38.1 0.0
LVV L'vov 51.86 310 *eP* **P** **23 07 26.8 -0.1**
LVV *e* 23 09 27.6
LVV *e*PPP 23 10 29.2
LVV *eS* **S** **23 14 43.8 -4.7**
LVV *e*PS 23 14 55.8
LVV *eSS* SS 23 18 15.8 -9.1
LVV MLR MLR
comp=E,700nm,17.0s,MS4.8
LVV MLR MLR
comp=Z,800nm,17.0s,MS4.8
LVV MLR MLR
comp=N,300nm,15.0s,MS4.8
SUW Suwalki 51.87 316 *eP* **P** **23 07 26.3 -0.6**
SUW *ep*P pP 23 07 31.5 -1.3
SUW LMZ 23 30 48.6
comp=N,1µm,19.2s
SUW Suwalki 51.87 316 *eP* **P** **23 07 26.6 -0.3**
comp=N,41nm,1.1s,mb5.3
KTK1 Kautokeino 51.91 335 *eP* **P** **23 07 27.3 +0.3**
VOIR 51.92 305 ⇓P **P** **23 07 27.7 +0.2**
VOIR 51.92 305⇓ *iP* **P** **23 07 27.7 +0.2**
KWP Kalwaria Pacla 52.74 310 *eP* **P** **23 07 33.6 +0.2**
KWP LMZ 23 33 34.5
comp=N,1µm,20.0s
KWP Kalwaria Pacla 52.74 310 *eP* **P** **23 07 33.0 -0.5**
comp=N,57nm,1.1s,mb5.4
KWP Kalwaria Pacla 52.74 310⇓ *iP* **P** **23 07 33.7 +0.2**
UZH Uzhgorod 53.18 309 *eP* **P** **23 07 36.1 -0.6**
UZH *e* 23 07 49.3
UZH *e* 23 08 38.9
UZH *eS* **S** **23 15 02.7 -3.8**
UZH MLR MLR
comp=N,600nm,19.0s,MS5.0
UZH MLR MLR
comp=E,1µm,19.0s,MS5.0
UZH MLR MLR
comp=Z,600nm,19.0s,MS4.7
DRGR 53.25 307 ⇑P **P** **23 07 37.9 +0.6**
DRGR 53.25 307⇑ *iP* **P** **23 07 37.9 +0.6**
TRO Tromso 53.49 335 *eP* **P** **23 07 38.6 -0.1**

CRVS Cervenica-Dubn 53.67 309 *eP* **P** **23 07 41.1 +0.8**
CRVS pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
CRVS Cervenica-Dubn 53.67 309 *eP* **P** **23 07 41.1 +0.8**
comp=Z,6.5nm,1.2s,mb4.4
CRVS *e*PP pP 23 07 46.1 -0.1
CRVS Cervenica-Dubn 53.67 309 *eP* **P** **23 07 41.1 +0.8**
CRVS *ep*P pP 23 07 46.0 -0.2
STHS Stebnicka Huta 53.72 310 *eP* **P** **23 07 40.7 0.0**
STHS pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
STHS Stebnicka Huta 53.72 310 *eP* **P** **23 07 40.7 0.0**
comp=Z,7.6nm,1.2s,mb4.5
STHS Stebnicka Huta 53.72 310 *eP* **P** **23 07 40.7 0.0**
BILL Bilibino 53.79 27 *d iP* **P** **23 07 41.9 +1.0**
BILL *e* 23 08 47.3
BILL *e* 23 09 39.5
BILL pmax pmax
comp=Z,14nm,1.0s,mb4.8
BILL MLR MLR
comp=Z,700nm,16.0s,MS4.8
BILL Bilibino 53.79 27 *eP* **P** **23 07 39.8 -1.1**
comp=Z,6.1nm,0.5s,mb4.8
NIE Niedzica 54.31 310 *eP* **P** **23 07 45.6 +0.6**
KECS Kecovo 54.38 309 *eP* **P** **23 07 46.0 +0.4**
KECS pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
KECS Kecovo 54.38 309 *eP* **P** **23 07 46.0 +0.4**
comp=Z,5.1nm,1.0s,mb4.4
KECS Kecovo 54.38 309 *eP* **P** **23 07 46.0 +0.4**
OJC Ojcow 54.48 311 *eP* **P** **23 07 43.1 -3.2**
OJC *e**PP pP 23 07 53.0 +0.9
OJC *eS* **S** **23 15 18.5 -5.7**
OJC *eSS* SS 23 19 01.2 -5.1
OJC MLR MLR
comp=Z,900nm,17.8s,MS4.9
SPITS Spitsbergen Ar 54.87 346 LR LR 23 34 51.6
comp=Z,903nm,20.4s,MS4.8,baz=135,slow=40
PSZ Piszkesteto 54.89 308 *eP* **P** **23 07 48.9 -0.3**
MOR8 Moi Rana 55.23 331 *eP* **P** **23 07 50.7 -0.7**
LOF Lofoten 55.45 334 *eP* PcP 23 08 49.6 -3.3
VYHS Vyhne 55.45 309 *eP* **P** **23 07 53.3 0.0**
VYHS pmax pmax
comp=Z,10.0nm,1.4s,mb4.7
VYHS Vyhne 55.45 309 *eP* **P** **23 07 53.3 0.0**
comp=Z,10nm,1.4s,mb4.7
VYHS *e*PP pP 23 08 02.8 +3.7
VYHS Vyhne 55.45 309 *eP* **P** **23 07 53.3 0.0**
VYHS *ep*P pP 23 08 02.8 +3.7
GKP Gorka Klasztor 55.48 315 *eP* **P** **23 07 53.2 -0.2**
GKP *ep*P pP 23 07 58.1 -1.1
GKP LMZ 23 33 13.7
comp=Z,2µm,20.9s
OKC Ostrava-Krasne 55.60 311 *eP* **P** **23 07 54.3 -0.1**
OKC *eS* **S** **23 15 38.2 -1.0**
OKC Ostrava-Krasne 55.60 311 *eP* **P** **23 07 54.3 -0.1**
OKC *eS* **S** **23 15 38.2 -1.0**
OKC *eSS* SS 23 19 49.4 +25
OKC Ostrava-Krasne 55.60 311 *eP* **P** **23 07 54.3 -0.1**
OKC *eS* **S** **23 15 38.2 -1.0**
OKC *ex* x 23 19 49.4
OKC AMS AMS 23 33 40.0
comp=Z,700nm,12.2s
KOLL Kolacno 55.72 310 *eP* **P** **23 07 55.5 +0.3**
KOLL Kolacno 55.72 310 *eP* **P** **23 07 55.5 +0.3**
MORC Moravsky Berou 56.00 311 ⇓P **P** **23 07 57.3 +0.1**
MORC Moravsky Berou 56.00 311 *eP* **P** **23 07 57.4 +0.2**
MORC Moravsky Berou 56.00 311 ⇓ *iP* **P** **23 07 57.3 +0.1**
HFS Hagfors 56.24 324 LR LR 23 32 31.1
comp=Z,1µm,20.1s,MS5.0,baz=77,slow=36
SMOL Smolenice 56.36 310 *eP* **P** **23 08 00.6 +0.8**
SMOL Smolenice 56.36 310 *eP* **P** **23 08 00.6 +0.8**
KSP Ksiaz 56.54 313 *eP* **P** **23 08 01.2 +0.1**
KSP *ep*P pP 23 08 06.4 -0.5
KSP LMZ 23 34 04.8
comp=Z,2µm,17.3s
KSP Ksiaz 56.54 313 *eP* **P** **23 08 01.1 0.0**
KSP *eS* **S** **23 15 52.0 +0.4**
KSP LR LR
comp=Z,2µm,17.3s,MS5.3
DPC Dobruska-Polom 56.64 312 *eP* **P** **23 08 02.0 +0.3**
DPC *e* 23 10 08.6
DPC *eS* **S** **23 15 54.6 +1.7**
DPC *eSS* SS 23 19 30.7 -9.4
DPC MLR MLR
comp=Z,700nm,11.7s,MS5.0
DPC Dobruska-Polom 56.64 312 *eP* **P** **23 08 02.0 +0.3**
DPC *e*PP PP 23 10 08.6 +1.1
DPC *eS* **S** **23 15 54.6 +1.7**
DPC *eSS* SS 23 19 30.7 -9.4
DPC LR LR
comp=Z,700nm,11.7s,MS5.0
DPC Dobruska-Polom 56.64 312 *eP* **P** **23 08 02.0 +0.3**
DPC *e*PP PP 23 10 08.6 +1.1
DPC *eS* **S** **23 15 54.6 +1.7**
DPC *ex* x 23 19 30.7
DPC AMS AMS 23 34 50.0
comp=Z,700nm,11.7s
ZST Bratislava 56.65 309 *eP* **P** **23 08 02.7 +0.8**
ZST pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
ZST Bratislava 56.65 309 *eP* **P** **23 08 02.7 +0.8**
comp=Z,5.8nm,1.1s,mb4.5
ZST Bratislava 56.65 309 *eP* **P** **23 08 02.7 +0.8**
VRAC Vranov 56.71 311 LR LR 23 36 46.4
comp=Z,1µm,18.1s,MS5.0,baz=69,slow=41
VRAC Vranov 56.71 311 ⇓P **P** **23 08 02.4 +0.1**
VRAC Vranov 56.71 311⇓ *iP* **P** **23 08 02.4 +0.1**
UPC Upice 56.79 312 *eP* **P** **23 08 03.6 +0.8**
NB2 NORSAR Subarra 57.30 325 P **P** **23 08 05.4 -0.9**
comp=Z,13nm,0.9s,mb5.0,baz=80,slow=7.4
NOA NORSAR Array B 57.30 325 P **P** **23 08 05.7 -0.6**
comp=Z,7.3nm,0.8s,mb4.7,baz=80,slow=7.0,SNR=18
NOA LR LR 23 34 41.2
comp=Z,1µm,20.7s,MS5.0,baz=85,slow=38
NOA NORSAR Array B 57.30 325 P **P** **23 08 05.7 -0.6**
NOA pmax pmax
comp=Z,7.0nm,0.8s
NOA MLR MLR
comp=Z,1µm,20.7s
TREC Trest 57.41 311 *eP* **P** **23 08 08.1 +0.8**
TREC *eS* **S** **23 16 07.8 +4.6**
TREC *eSS* SS 23 19 49.7 -2.7
TREC MLR MLR
comp=Z,1µm,15.7s,MS5.1
TREC Trest 57.41 311 *eP* **P** **23 08 08.1 +0.8**
TREC *eS* **S** **23 16 07.8 +4.6**
TREC *eSS* SS 23 19 49.7 -2.7
TREC AMS AMS 23 36 50.0
comp=Z,1µm,15.7s
NAO01 NORSAR Array S 57.49 325 *eP* **P** **23 08 06.6 -1.1**
CONA Conrad Observa 57.52 309⇓ *iP* **P** **23 08 08.3 +0.3**
comp=Z,28nm,1.1s,mb5.2,SNR=15
KOGS Kog 57.66 307 *i P* **P** **23 08 08.7 -0.3**
PVCC Panska Ves 57.68 312 *eP* **P** **23 08 10.0 +0.9**
PVCC MLR MLR
comp=Z,900nm,13.3s,MS5.0
PVCC Panska Ves 57.68 312 *eP* **P** **23 08 10.0 +0.9**
PVCC *eSS* SS 23 20 06.4 +10
PVCC LR LR
comp=Z,900nm,13.3s,MS5.0
PVCC Panska Ves 57.68 312 *eP* **P** **23 08 10.0 +0.9**
PVCC *eSS* SS 23 20 06.4 +10
PVCC AMS AMS 23 34 30.0
comp=Z,900nm,13.3s
PRU Pruhonice 57.84 312 *eP* **P** **23 08 11.1 +0.9**
PRU *eS* **S** **23 16 12.4 +3.7**
PRU MLR MLR
comp=Z,900nm,16.4s,MS5.0
PRU Pruhonice 57.84 312 *eP* **P** **23 08 11.1 +0.9**
PRU *e*PP PP 23 10 08.4 -10
PRU *eS* **S** **23 16 12.4 +3.7**
PRU *eSS* SS 23 20 06.6 +7.6
PRU LR LR
comp=Z,900nm,16.4s,MS5.0
PRU Pruhonice 57.84 312 *eP* **P** **23 08 11.1 +0.9**
PRU *e*PP PP 23 10 08.4 -10
PRU *eS* **S** **23 16 12.4 +3.7**
PRU *eSS* SS 23 20 06.6 +7.6
PRU AMS AMS 23 37 50.0
comp=Z,900nm,16.4s
ARSA Arzberg 57.92 309⇓ *iP* **P** **23 08 10.5 -0.4**
comp=Z,9.6nm,1.1s,mb4.7

BRG Berggiesshubel 57.98 313 *eP* **P** **23 08 11.1 -0.2**
comp=Z,13nm,1.0s,mb4.9
BRG *e* 23 09 00.3
comp=Z,4.3nm,1.1s
BRG S **S** **23 16 15.0 +4.4**
BRG SS SS 23 20 06.0 +4.7
BRG
comp=N,519nm,12.2s
BRG
comp=E,959nm,13.8s
BRG
comp=Z,1µm,14.4s
BRG Berggiesshubel 57.98 313 *eP* **P** **23 08 11.1 -0.1**
BRG *e* 23 09 00.3
BRG S **S** **23 16 15.0 +4.4**
BRG SS SS 23 20 06.0 +4.7
BRG pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
BRG MLR MLR
comp=N,311nm,12.2s,MS4.9
BRG MLR MLR
comp=E,574nm,13.8s,MS4.9
BRG MLR MLR
comp=Z,737nm,14.4s,MS4.9
GROS Grobnik 58.15 308 *i P* **P** **23 08 12.2 -0.3**
SOKA Soboth 58.40 308⇓ *iP* **P** **23 08 14.1 -0.2**
comp=Z,19nm,1.2s,mb5.0
CLL Collm 58.45 314 *eP* **P** **23 08 14.0 -0.5**
comp=Z,11nm,1.0s,mb4.8
CLL Collm 58.45 314⇓ *iP* **P** **23 08 14.0 -0.5**
CLL *eS* **S** **23 16 18.0 +1.4**
CLL pmax pmax
comp=Z,11nm,1.0s,mb4.8
CLL MLR MLR
comp=Z,800nm,19.8s,MS4.8
CLL Collm 58.45 314⇓ *iP* **P** **23 08 14.0 -0.5**
comp=Z,11nm,1.0s,mb4.8
CLL *eS* **S** **23 16 18.0 +1.4**
CLL LR LR
comp=Z,800nm,19.8s,MS4.8
MOA Molln 58.58 309⇑ *iP* **P** **23 08 14.9 -0.6**
comp=Z,11nm,1.2s,mb4.8
PDKS Podkum 58.60 307 *i P* **P** **23 08 15.7 0.0**
GEC2 GERESS Array S 58.67 311 *eP* **P** **23 08 16.3 +0.3**
comp=Z,18nm,1.3s,mb4.9
GEC2 *ep*P pP 23 08 21.3 -0.6
GEC2 *e*PP PP 23 10 26.9 +1.3
KHC Kasperske Hory 58.67 311 *eP* **P** **23 08 15.9 -0.1**
KHC *eS* **S** **23 16 20.9 +1.3**
KHC *eSS* SS 23 20 17.3 +5.2
KHC MLR MLR
comp=Z,1µm,14.9s,MS5.1
KHC Kasperske Hory 58.67 311 *eP* **P** **23 08 15.9 -0.1**
KHC *ex* x 23 10 11.8
KHC *eS* **S** **23 16 20.9 +1.3**
KHC *eSS* SS 23 20 17.3 +5.2
KHC AMS AMS 23 37 30.0
comp=Z,1µm,14.9s
TANN Tannenbergstha 59.01 313 *eP* **P** **23 08 18.3 -0.1**
comp=Z,14nm,1.2s,mb4.9
TANN *ep*P pP 23 08 23.5 -0.8
NKC Novy Kostel 59.07 313 *eP* **P** **23 08 19.5 +0.7**
NKC *eS* **S** **23 16 23.7 -1.1**
NKC Novy Kostel 59.07 313 *eP* **P** **23 08 19.5 +0.7**
NKC *eS* **S** **23 16 23.7 -1.1**
NKC *eSS* SS 23 20 25.4 +7.0
NKC Novy Kostel 59.07 313 *eP* **P** **23 08 19.5 +0.7**
NKC *eS* **S** **23 16 23.7 -1.1**
NKC *eSS* SS 23 20 25.4 +7.0
NKC AMS AMS 23 35 20.0
comp=Z,1µm,13.5s
WET Wettzell 59.10 311 *eP* **P** **23 08 19.1 0.0**
comp=Z,13nm,1.3s,mb4.8
WET *ep*P pP 23 08 24.4 -0.5
BSEG Bad Segeberg 59.35 317 *eP* **P** **23 08 20.8 +0.1**
comp=Z,25nm,1.0s,mb5.2
ROTZ Rotzenmuhle 59.35 312 *eP* **P** **23 08 21.2 +0.4**
comp=Z,30nm,1.3s,mb5.2
CADS Cadrg 59.39 308 *i P* **P** **23 08 20.0 -1.1**
KBA Koelnbreinsper 59.40 309⇓ *iP* **P** **23 08 20.5 -0.6**
comp=Z,10nm,1.2s,mb4.7
MOX Moxa 59.47 313 *eP* **P** **23 08 21.7 +0.1**
comp=Z,14nm,1.4s,mb4.8
MOX *e* 23 10 38.0
MOX
comp=Z,900nm,16.0s
MOX Moxa 59.47 313 *eP* **P** **23 08 21.4 -0.2**
comp=Z,12nm,1.3s,mb4.8
MOX Moxa 59.47 313 *eP* **P** **23 08 21.7 +0.1**
MOX *e* 23 10 38.0
MOX pmax pmax
comp=Z,14nm,1.4s,mb4.8
MOX MLR MLR
comp=Z,900nm,16.0s,MS5.0
RJOB Jochberg 59.56 310 *eP* **P** **23 08 22.3 0.0**
comp=Z,20nm,1.5s,mb4.9
KAKA Kakadu 59.67 133 *eP* **P** **23 08 23.0 -0.3**
comp=Z,4.9nm,0.6s,mb4.7
NRDL Niedersach Rie 59.86 316 *eP* **P** **23 08 23.4 -0.8**
comp=Z,30nm,1.2s,mb5.2
CLZ Clausthal 59.88 315 *eP* **P** **23 08 24.5 +0.1**
comp=Z,20nm,1.0s,mb5.1
GRF Grafenberg Arr 59.98 312 *eP* **P** **23 08 25.6 +0.5**
comp=Z,26nm,1.2s,mb5.1
GRF *e*PP PP 23 10 37.8 +0.6
GRF *e*L 23 36 33.0
comp=Z,1µm,18.2s
GRF Grafenberg Arr 59.98 312 *eP* **P** **23 08 25.6 +0.5**
GRF *e* 23 10 37.8
GRF pmax pmax
comp=Z,26nm,1.2s,mb5.1
GRF MLR MLR
comp=Z,1µm,18.2s,MS5.0
MBWA Marble Bar 60.11 150 *eP* **P** **23 08 26.7 +0.5**
MBWA Marble Bar 60.11 150 *eP* **P** **23 08 26.7 +0.5**
comp=Z,32nm,0.8s,mb5.4
FITZ Fitzroy Crossi 60.20 143 *eP* **P** **23 08 26.7 -0.2**
comp=Z,5.9nm,0.8s,mb4.7
FITZ Fitzroy Crossi 60.20 143 *eP* **P** **23 08 27.1 +0.2**
comp=Z,10nm,1.3s,mb4.7
FUR Furstenfeldbru 60.41 311 *eP* **P** **23 08 28.4 +0.3**
comp=Z,84nm,1.6s,mb5.5
FUR *ep*P pP 23 08 33.6 -0.3
WTTA Wattenberg 60.45 309⇑ *iP* **P** **23 08 27.8 -0.6**
comp=Z,17nm,1.3s,mb4.9
MOTA Moosalm 60.77 310⇑ *iP* **P** **23 08 29.8 -0.7**
comp=Z,14nm,1.1s,mb5.0
AQU L'Aquila 60.85 304 *eP* **P** **23 08 30.7 -0.5**
AQU pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
AQU L'Aquila 60.85 304 *eP* **P** **23 08 30.7 -0.5**
comp=Z,9.0nm,0.8s,mb5.0
RETA Reutte 60.95 310⇓ *iP* **P** **23 08 31.4 -0.4**
comp=Z,14nm,1.3s,mb4.9,SNR=5.7
FETA Feichten 61.12 309⇑ *iP* **P** **23 08 32.3 -0.6**
comp=Z,13nm,1.2s,mb4.9,SNR=5.8
TNS Taunus Mts 61.53 313 *eP* **P** **23 08 35.7 +0.1**
comp=Z,37nm,1.5s,mb5.3
STU Stuttgart 61.53 312 *eP* **P** **23 08 35.9 +0.2**
comp=Z,18nm,1.0s,mb5.2
STU *ep*P pP 23 08 40.8 -0.8
DAVA Damuels 61.58 310⇓ *iP* **P** **23 08 35.5 -0.5**
comp=Z,14nm,1.3s,mb4.9
DAVOX Davos/Dischmat 61.75 309 LR LR 23 38 25.7
comp=Z,914nm,18.5s,MS5.0,baz=61,slow=39
VAE Valguarnera 61.84 298 LR LR 23 37 42.6
comp=Z,308nm,21.5s,MS4.4,baz=342,slow=38
KMBO Kilima Mbogo 61.84 248 *eP* **P** **23 08 40.2 +1.9**
KMBO pmax pmax
comp=Z,3.0nm,0.4s
KMBO Kilima Mbogo 61.84 248 *eP* **P** **23 08 38.0 -0.3**
comp=Z,9.3nm,1.5s,mb4.7
BFO Black Forest 62.22 311 *eP* **P** **23 08 39.8 -0.5**
comp=Z,13nm,1.1s,mb5.0
BFO Black Forest 62.22 311 *eP* **P** **23 08 39.6 -0.7**
BFO pmax pmax
comp=Z,13nm,1.2s,mb4.9
BFO Black Forest 62.22 311 *eP* **P** **23 08 39.6 -0.7**
comp=Z,13nm,1.2s,mb4.9
LANF Langenberg 62.33 312 *eP* **P** **23 08 40.6 -0.5**
FELD Feldberg im Sc 62.58 311 *eP* **P** **23 08 41.9 -0.8**
CDF Champ du Feu 62.85 312 *eP* **P** **23 08 43.6 -1.0**
comp=Z,36nm,1.2s,mb5.0
CDF Champ du Feu 62.85 312 *eP* **P** **23 08 43.6 -1.0**
CDF pmax pmax
comp=Z,18nm,1.3s,mb5.0

CDF **Champ du Feu 62.85 312** eP P 23 08 43.6 -1.0
comp=Z,18nm,1.3s,mb5.0
MEM **Membach 62.88 314** P P 23 08 45.5 +0.8
ECH **Echery 62.99 312** eP P 23 08 44.9 -0.6
ECH **Echery 62.99 312** eP P 23 08 44.2 -1.3
ECH pmax pmax
comp=Z,8.0nm,1.1s,mb4.8
ECH **Echery 62.99 312** eP P 23 08 44.2 -1.3
comp=Z,8.4nm,1.1s,mb4.8
WLF **Walferdange 63.11 313** P P 23 08 47.0 +0.8
comp=Z,23nm,1.7s,mb5.0
WLF **Walferdange 63.11 313** eP P 23 08 46.8 +0.5
comp=Z,37nm,1.2s,mb5.4
WLF **Walferdange 63.11 313** eP P 23 08 47.2 +1.0
MOF **Molkenrain 63.14 311** eP P 23 08 45.6 -0.9
HINF **Hinteralfeld 63.33 311** eP P 23 08 46.7 -1.0
comp=Z,39nm,1.4s,mb5.0
HINF **Hinteralfeld 63.33 311** eP P 23 08 46.7 -1.0
HINF pmax pmax
comp=Z,20nm,1.4s,mb5.0
HINF **Hinteralfeld 63.33 311** eP P 23 08 46.7 -1.0
comp=Z,20nm,1.4s,mb5.0
BCLA **Clavier 63.36 314** P P 23 08 47.7 -0.2
comp=Z,15nm,1.6s,mb4.9
HAU **Haudompre 63.58 312** eP P 23 08 48.3 -1.1
comp=Z,31nm,1.3s,mb4.9
HAU eMLR MLR
comp=Z,880nm,20.2s,MS4.6
HAU **Haudompre 63.58 312** eP P 23 08 48.3 -1.1
HAU pmax pmax
comp=Z,15nm,1.3s,mb4.9
HAU MLR MLR
comp=Z,880nm,20.3s,MS4.9
HAU **Haudompre 63.58 312** eP P 23 08 48.3 -1.1
comp=Z,15nm,1.3s,mb4.9
HAU LR LR
comp=Z,880nm,20.3s,MS4.9
GIVF **Givet 63.76 314** eP P 23 08 49.9 -0.7
PGF **Pioggiola 63.83 305** eP P 23 08 50.0 -1.1
comp=Z,36nm,1.3s,mb5.0
PGF **Pioggiola 63.83 305** eP P 23 08 50.0 -1.1
PGF pmax pmax
comp=Z,18nm,1.3s,mb4.9
PGF **Pioggiola 63.83 305** eP P 23 08 50.0 -1.1
comp=Z,18nm,1.3s,mb4.9
DOU **Dourbes 63.90 314** P P 23 08 51.6 +0.1
comp=Z,7.7nm,1.3s,mb4.6
BAIF **Baives 64.15 314** eP P 23 08 52.4 -0.7
comp=Z,28nm,1.2s,mb4.9
BAIF **Baives 64.15 314** eP P 23 08 52.4 -0.7
BAIF pmax pmax
comp=Z,14nm,1.2s,mb4.9
BAIF **Baives 64.15 314** eP P 23 08 52.4 -0.7
comp=Z,14nm,1.2s,mb4.9
MEZF **Maizieres J'vi 64.20 312** eP P 23 08 52.9 -0.6
comp=Z,46nm,1.3s,mb5.1
MEZF **Maizieres J'vi 64.20 312** eP P 23 08 52.9 -0.6
comp=Z,46nm,1.3s,mb5.3
LPG **La Plagne 64.23 309** eP P 23 08 53.6 -0.1
comp=Z,29nm,0.8s,mb5.0
LPG **La Plagne 64.23 309** eP P 23 08 53.6 -0.1
LPG pmax pmax
comp=Z,14nm,0.8s,mb5.0
LPG **La Plagne 64.23 309** eP P 23 08 53.6 -0.1
comp=Z,14nm,0.8s,mb5.0
LPL **La Plagne 64.24 309** eP P 23 08 53.6 -0.2
comp=Z,57nm,1.0s,mb5.2
LPL **La Plagne 64.24 309** eP P 23 08 53.6 -0.2
LPL pmax pmax
comp=Z,29nm,1.0s,mb5.3
LPL **La Plagne 64.24 309** eP P 23 08 53.6 -0.2
comp=Z,28nm,1.0s,mb5.2
CABF **La Chapelle 64.25 310** eP P 23 08 51.6 -2.2
comp=Z,13nm,0.9s,mb4.6
CABF **La Chapelle 64.25 310** eP P 23 08 51.6 -2.2
CABF pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
CABF **La Chapelle 64.25 310** eP P 23 08 51.6 -2.2
comp=Z,6.5nm,0.9s,mb4.7
SAOF **Saorge 64.27 307** eP P 23 08 53.8 -0.2
AUTN **L'Aution 64.35 307** eP P 23 08 54.7 +0.2
SBF **Sospel 64.39 307** eP P 23 08 52.8 -2.0
comp=Z,39nm,0.9s,mb5.1
SBF **Sospel 64.39 307** eP P 23 08 52.8 -2.0
SBF pmax pmax
comp=Z,20nm,0.9s,mb5.2
SBF **Sospel 64.39 307** eP P 23 08 52.8 -2.0
comp=Z,20nm,0.9s,mb5.1
BNI **Bardonecchia 64.45 308** eP P 23 08 54.6 -0.5
BNI pmax pmax
comp=Z,22nm,1.4s,mb5.0
BNI **Bardonecchia 64.45 308** eP P 23 08 54.6 -0.6
comp=Z,22nm,1.4s,mb5.0
TOUF **Mont Tournerai 64.46 307** eP P 23 08 55.1 -0.1
MBDF **Montbardon 64.51 308** eP P 23 08 55.2 -0.3
comp=Z,18nm,1.1s,mb4.7
MBDF **Montbardon 64.51 308** eP P 23 08 55.2 -0.3
MBDF pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
MBDF **Montbardon 64.51 308** eP P 23 08 55.2 -0.3
comp=Z,8.8nm,1.1s,mb4.7
VSL **Villasalto 64.73 302** P P 23 08 56.6 -0.5
ORIF **Oris-en-Rattie 65.02 309** eP P 23 08 57.8 -1.1
comp=Z,15nm,0.9s,mb4.7
ORIF eMLR MLR
comp=Z,1µm,21.7s,MS4.8
ORIF **Oris-en-Rattie 65.02 309** eP P 23 08 57.8 -1.1
ORIF pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
ORIF **Oris-en-Rattie 65.02 309** eP P 23 08 57.8 -1.1
comp=Z,7.4nm,0.9s,mb4.7
FRF **La Foret Royal 65.04 307** eP P 23 08 57.8 -1.2
comp=Z,52nm,1.4s,mb5.1
FRF **La Foret Royal 65.04 307** eP P 23 08 57.8 -1.2
FRF pmax pmax
comp=Z,26nm,1.4s,mb5.1
FRF **La Foret Royal 65.04 307** eP P 23 08 57.8 -1.2
comp=Z,26nm,1.4s,mb5.1
LMR **La Mourre 65.22 307** eP P 23 08 59.0 -1.2
comp=Z,65nm,1.4s,mb5.2
LMR **La Mourre 65.22 307** eP P 23 08 59.0 -1.2
LMR pmax pmax
comp=Z,33nm,1.4s,mb5.2
LMR **La Mourre 65.22 307** eP P 23 08 59.0 -1.2
comp=Z,32nm,1.4s,mb5.2
LOR **Lormes 65.41 312** eP P 23 08 59.9 -1.5
comp=Z,16nm,1.1s,mb4.7
LOR eMLR MLR
comp=Z,688nm,22.0s,MS4.5
LOR **Lormes 65.41 312** eP P 23 08 59.9 -1.5
LOR pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
LOR MLR MLR
comp=Z,690nm,22.0s,MS4.8
LOR **Lormes 65.41 312** eP P 23 08 59.9 -1.5
comp=Z,8.3nm,1.0s,mb4.7
LOR LR LR
comp=Z,690nm,22.0s,MS4.8
SMRF **Simiane la Rot 65.59 308** eP P 23 09 01.8 -0.8
comp=Z,47nm,1.5s,mb5.0
SMRF **Simiane la Rot 65.59 308** eP P 23 09 01.8 -0.8
comp=Z,47nm,1.5s,mb5.3
SMF **Signal de Mont 65.67 311** eP P 23 09 01.8 -1.2
comp=Z,72nm,1.3s,mb5.2
SMF **Signal de Mont 65.67 311** eP P 23 09 01.8 -1.2
SMF pmax pmax
comp=Z,36nm,1.3s,mb5.2
SMF **Signal de Mont 65.67 311** eP P 23 09 01.8 -1.2
comp=Z,36nm,1.3s,mb5.2
SSF **Saint Saulge 65.72 311** eP P 23 09 02.1 -1.2
comp=Z,29nm,1.2s,mb4.9
SSF **Saint Saulge 65.72 311** eP P 23 09 02.1 -1.2
SSF pmax pmax
comp=Z,15nm,1.2s,mb4.9
SSF **Saint Saulge 65.72 311** eP P 23 09 02.1 -1.2
comp=Z,15nm,1.2s,mb4.9
VIVF **Saint-Julien-l 65.84 309** eP P 23 09 03.2 -1.0
comp=Z,84nm,1.4s,mb5.3
VIVF **Saint-Julien-l 65.84 309** eP P 23 09 03.2 -1.0
VIVF pmax pmax
comp=Z,42nm,1.4s,mb5.3
VIVF **Saint-Julien-l 65.84 309** eP P 23 09 03.2 -1.0
comp=Z,42nm,1.4s,mb5.3
AVF **Avril sur Loir 65.92 311** eP P 23 09 03.6 -1.1
comp=Z,65nm,1.4s,mb5.2
AVF **Avril sur Loir 65.92 311** eP P 23 09 03.6 -1.1
AVF pmax pmax
comp=Z,32nm,1.4s,mb5.2
AVF **Avril sur Loir 65.92 311** eP P 23 09 03.6 -1.1
comp=Z,32nm,1.4s,mb5.2
HYF **Humbligny 66.18 312** eP P 23 09 05.6 -0.7
BGF **Bois d'Agland 66.33 311** eP P 23 09 06.2 -1.1
comp=Z,30nm,1.3s,mb4.8
BGF **Bois d'Agland 66.33 311** eP P 23 09 06.2 -1.1
BGF pmax pmax
comp=Z,15nm,1.3s,mb4.9
BGF **Bois d'Agland 66.33 311** eP P 23 09 06.2 -1.1
comp=Z,15nm,1.3s,mb4.9
AGO **Saint Agoulin 66.36 311** eP P 23 09 07.2 -0.3
WRAB **Tennant Creek 66.44 136** P P 23 09 08.6 +0.4
comp=Z,188nm,0.9s,mb6.1,SNR=12
WRAB **Tennant Creek 66.44 136** eP P 23 09 08.6 +0.4
WRAB pmax pmax
comp=Z,34nm,1.0s,mb5.3
WRAB **Tennant Creek 66.44 136** eP P 23 09 08.6 +0.4
comp=Z,34nm,1.0s,mb5.3
WRA **Warramunga Arr 66.44 136** P P 23 09 08.9 +0.7
comp=Z,23nm,1.0s,mb5.2,baz=332,slow=6.8,SNR=32
WRA **Warramunga Arr 66.44 136** P P 23 09 09.0 +0.8
WRA pmax pmax
comp=Z,23nm,1.0s
PYM **Petit Puy Mans 66.56 310** eP P 23 09 08.4 -0.4
LBL **Lubilhac 66.61 310** eP P 23 09 08.9 -0.2
LASF **Ste Croix 66.69 308** eP P 23 09 09.0 -0.6
comp=Z,73nm,1.4s,mb5.2
TCF **Toulx Ste Croi 66.84 311** eP P 23 09 09.9 -0.7
comp=Z,74nm,1.3s,mb5.3
TCF **Toulx Ste Croi 66.84 311** eP P 23 09 09.9 -0.7
TCF pmax pmax
comp=Z,37nm,1.3s,mb5.2
TCF **Toulx Ste Croi 66.84 311** eP P 23 09 09.9 -0.7
comp=Z,37nm,1.3s,mb5.2
LDF **La Druitiere 67.33 314** eP P 23 09 12.1 -1.5
comp=Z,8.9nm,0.7s,mb4.6
LDF **La Druitiere 67.33 314** eP P 23 09 12.1 -1.5
LDF pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
LDF **La Druitiere 67.33 314** eP P 23 09 12.1 -1.5
comp=Z,4.4nm,0.7s,mb4.6
FLN **La Foliniere 67.48 314** eP P 23 09 13.3 -1.3
comp=Z,82nm,1.6s,mb5.2
FLN eMLR MLR
comp=Z,1µm,18.8s,MS4.8
FLN **La Foliniere 67.48 314** eP P 23 09 13.3 -1.3
FLN pmax pmax
comp=Z,41nm,1.6s,mb5.2
FLN MLR MLR
comp=Z,1µm,18.8s,MS5.1
FLN **La Foliniere 67.48 314** eP P 23 09 13.3 -1.3
comp=Z,41nm,1.6s,mb5.2
FLN LR LR
comp=Z,1µm,18.8s,MS5.1
CAF **Calviac 67.50 310** eP P 23 09 14.2 -0.6
comp=Z,46nm,1.3s,mb5.0
CAF **Calviac 67.50 310** eP P 23 09 14.2 -0.6
CAF pmax pmax
comp=Z,23nm,1.3s,mb5.0
CAF **Calviac 67.50 310** eP P 23 09 14.2 -0.6
comp=Z,23nm,1.3s,mb5.0
RJF **Les Rejaudoux 67.69 310** eP P 23 09 15.7 -0.3
comp=Z,83nm,1.4s,mb5.3
RJF eMLR MLR
comp=Z,712nm,22.8s,MS4.5
RJF **Les Rejaudoux 67.69 310** eP P 23 09 15.7 -0.3
RJF pmax pmax
comp=Z,41nm,1.4s,mb5.3
RJF MLR MLR
comp=Z,710nm,22.8s,MS4.8
RJF **Les Rejaudoux 67.69 310** eP P 23 09 15.7 -0.3
comp=Z,41nm,1.4s,mb5.3
RJF LR LR
comp=Z,710nm,22.8s,MS4.8
GRR **Gorron 67.86 314** eP P 23 09 15.7 -1.3
comp=Z,49nm,1.1s,mb5.1
GRR **Gorron 67.86 314** eP P 23 09 15.7 -1.3
GRR pmax pmax
comp=Z,25nm,1.1s,mb5.2
GRR **Gorron 67.86 314** eP P 23 09 15.7 -1.3
comp=Z,25nm,1.1s,mb5.2
EJON **La Jonquera 68.01 307** P P 23 09 16.0 -2.0
comp=Z,7.3nm,1.1s,mb4.6
MTLF **Montolieu 68.07 308** eP P 23 09 17.7 -0.7
comp=Z,50nm,1.4s,mb5.1
MTLF **Montolieu 68.07 308** eP P 23 09 17.7 -0.7
MTLF pmax pmax
comp=Z,25nm,1.4s,mb5.0
MTLF **Montolieu 68.07 308** eP P 23 09 17.7 -0.7
comp=Z,25nm,1.4s,mb5.0
MFF **Saint Martin d 68.19 312** eP P 23 09 18.0 -1.1
comp=Z,49nm,1.4s,mb5.0
MFF **Saint Martin d 68.19 312** eP P 23 09 18.0 -1.1
MFF pmax pmax
comp=Z,25nm,1.4s,mb5.0
MFF **Saint Martin d 68.19 312** eP P 23 09 18.0 -1.1
comp=Z,25nm,1.4s,mb5.0
LFF **La Frestale 68.35 310** eP P 23 09 19.7 -0.4
comp=Z,53nm,1.3s,mb5.1
LFF **La Frestale 68.35 310** eP P 23 09 19.7 -0.4
LFF pmax pmax
comp=Z,26nm,1.3s,mb5.1
LFF **La Frestale 68.35 310** eP P 23 09 19.7 -0.4
comp=Z,26nm,1.3s,mb5.1
CLLI **Llivia 68.61 307** P P 23 09 21.5 -0.3
CFON **Fontmartina 68.61 307** P P 23 09 20.7 -1.1
comp=Z,70nm,1.7s,mb5.3
VALF **Valcebollere 68.61 307** eP P 23 09 21.9 +0.1
SGMF **Saint Gilles 68.94 314** eP P 23 09 23.2 -0.5
comp=Z,69nm,1.3s,mb5.1
SGMF **Saint Gilles 68.94 314** eP P 23 09 23.2 -0.5
SGMF pmax pmax
comp=Z,34nm,1.3s,mb5.1
SGMF **Saint Gilles 68.94 314** eP P 23 09 23.2 -0.5
comp=Z,34nm,1.3s,mb5.1
ASAR **Alice Springs 69.14 139** P P 23 09 25.9 +0.7
comp=Z,27nm,0.9s,mb5.2,baz=327,slow=6.1,SNR=83
ASAR **Alice Springs 69.14 139** P P 23 09 25.9 +0.7
ASAR pmax pmax
comp=Z,27nm,0.9s
EMIR **Miracle 69.15 307** P P 23 09 25.1 -0.1
comp=Z,39nm,1.2s,mb5.2
CSOR **Sort 69.21 308** P P 23 09 25.3 -0.3
comp=Z,75nm,1.7s,mb5.3
SUMG **Summit 69.21 346** eP P 23 09 25.3 +0.2
comp=Z,12nm,0.9s,mb4.8
ROSF **Rostrenen 69.33 315** eP P 23 09 25.5 -0.7
comp=Z,74nm,1.3s,mb5.2
ROSF **Rostrenen 69.33 315** eP P 23 09 25.5 -0.7
ROSF pmax pmax
comp=Z,37nm,1.3s,mb5.2
ROSF **Rostrenen 69.33 315** eP P 23 09 25.5 -0.7
comp=Z,37nm,1.3s,mb5.2
EPF **Esparros 69.44 308** eP P 23 09 25.4 -1.6
comp=Z,8.5nm,1.0s,mb4.3
EPF **Esparros 69.44 308** eP P 23 09 25.4 -1.6
EPF pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
EPF **Esparros 69.44 308** eP P 23 09 25.4 -1.6
comp=Z,4.3nm,1.0s,mb4.3
COLD **Coldfoot 69.52 22** eP P 23 09 27.5 +0.5
comp=Z,24nm,1.1s,mb5.0
EPOB **Poblet 69.70 307** P P 23 09 28.1 -0.5
comp=Z,29nm,1.1s,mb5.1
EBIE **Bielsa 69.73 308** P P 23 09 28.9 +0.1
comp=Z,30nm,1.4s,mb5.0
ETSF **Etsaut 70.09 309** eP P 23 09 30.7 -0.3
comp=Z,18nm,1.0s,mb4.7
ETSF **Etsaut 70.09 309** eP P 23 09 30.7 -0.3
ETSF pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
ETSF **Etsaut 70.09 309** eP P 23 09 30.7 -0.3
comp=Z,9.1nm,1.0s,mb4.7
ERTA **Horta de San J 70.38 307** P P 23 09 32.5 -0.3
comp=Z,54nm,1.4s,mb5.3
SJPF **Ste Jean 70.43 309** eP P 23 09 32.2 -0.8
ESAC **San Caprasio 70.57 308** P P 23 09 33.6 -0.3
comp=Z,136nm,1.6s,mb5.6
BPAW **Bear Paw Mtn. 71.18 24** eP P 23 09 37.6 +0.4
comp=Z,16nm,1.2s,mb4.8
SVW2 **Sparrevohn 71.25 28** eP P 23 09 39.8 +2.1
comp=Z,78nm,2.0s,mb5.3
PPLA **Purkeypile 71.48 26** eP P 23 09 40.0 +1.0
comp=Z,89nm,1.4s,mb5.5
ECRI **Cripan 71.50 309** P P 23 09 40.4 +0.9
ECRI pmax pmax
comp=Z,26nm,1.1s,mb5.1
ECRI **Cripan 71.50 309** P P 23 09 40.4 +0.9
comp=Z,26nm,1.1s,mb5.1
COLA **College 71.75 23** eP P 23 09 40.8 +0.2
COLA pmax pmax
comp=Z,32nm,1.1s,mb5.2
COLA **College 71.75 23** eP P 23 09 40.8 +0.2
comp=Z,32nm,1.1s,mb5.2
ELAN **Lanestosa 71.80 310** P P 23 09 41.9 +0.5
comp=Z,18nm,0.9s,mb5.0
RSO **Redoubt South 72.75 28** eP P 23 09 48.7 +2.0
INK **Inuvik 73.29 16** eP P 23 09 50.5 +0.8
PMR **Palmer 73.42 26** eP P 23 09 51.2 +0.6
GUD **Guadarrama 73.53 308** P P 23 09 51.4 -0.3
GUD pmax pmax
comp=Z,48nm,1.2s,mb5.3
GUD **Guadarrama 73.53 308** P P 23 09 51.4 -0.3
comp=Z,48nm,1.2s,mb5.3
ESDC **Sonseca Array 73.88 307** P P 23 09 53.6 -0.1
comp=Z,8.7nm,1.1s,mb4.6,baz=50,slow=6.3,SNR=24
ESDC LR LR 23 47 42.4
comp=Z,430nm,19.0s,MS4.8,baz=0.0,slow=40
ESDC **Sonseca Array 73.88 307** P P 23 09 53.7 -0.1
comp=Z,4.2nm,0.8s,mb4.4
ESLA **Sonseca Array 73.88 307** eP P 23 09 53.4 -0.3
EGAK **Eagle 73.91 21** eP P 23 09 54.0 +0.6
KDAK **Kodiak Island 74.46 30** P P 23 09 57.1 +0.4
comp=Z,23nm,0.9s,mb5.1,baz=343,slow=3.3,SNR=7.9
EBAN **Banos Encina 74.51 306** P P 23 09 57.2 -0.3
EBAN pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
EBAN **Banos Encina 74.51 306** P P 23 09 57.2 -0.2
comp=Z,8.6nm,0.8s,mb4.7
ECAL **Calabor 74.56 310** P P 23 09 57.9 +0.2
comp=Z,37nm,1.2s,mb5.2
DAWY **Dawson 74.96 21** eP P 23 10 00.5 +0.9
ERON **Agron 75.10 305** P P 23 09 59.7 -1.2
MVO **Moncorvo 75.15 310** eP P 23 10 01.1 0.0
comp=Z,31nm,1.2s,mb5.1
MVO eLQ 23 36 07.8
MVO eLR LR 23 40 24.3
comp=Z,419nm,18.0s
MVO **Moncorvo 75.15 310** P P 23 10 01.4 +0.3
TAM **Tamanrasset 75.19 288** eP P 23 10 01.3 -0.3
TAM pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
TAM **Tamanrasset 75.19 288** eP P 23 10 01.3 -0.3
comp=Z,9.0nm,1.1s,mb4.6
BMRM **Bremner River 75.47 25** eP P 23 10 03.2 +0.7
comp=Z,41nm,1.1s,mb5.3
PCAB **Cabril 75.50 310** eP P 23 10 04.0 +0.9
comp=Z,48nm,1.6s,mb5.2
MTE **Manteigas 75.88 309** eP P 23 10 05.8 +0.5
comp=Z,39nm,1.4s,mb5.1
MTE eLQ 23 36 32.1
MTE eLR LR 23 40 59.6
comp=Z,251nm,18.0s
PVIS **Viseu 75.94 309** eP P 23 10 06.2 +0.6
comp=Z,38nm,1.2s,mb5.2
PMRV **Marv??o 76.29 308** eP P 23 10 07.1 -0.5
PMRV eLQ 23 36 12.9
PMRV eLR LR 23 39 39.5
comp=Z,326nm,18.0s
ESPR **Espera 76.59 305** P P 23 10 08.8 -0.6
comp=Z,9.2nm,0.8s,mb4.8
EMIN **Mina Concepcio 76.67 306** P P 23 10 09.9 0.0
comp=Z,40nm,1.3s,mb5.2
PBAR **Barrancos 76.71 307** eP P 23 10 10.0 0.0
comp=Z,42nm,1.2s,mb5.2
PBAR eLQ 23 36 16.3
PBAR eLR LR 23 41 08.2
comp=Z,408nm,18.0s
PESTR **Estremoz 76.71 308** eP P 23 10 10.6 +0.6
comp=Z,26nm,1.3s,mb5.0
PESTR eLQ 23 35 54.0
PESTR eLR LR 23 39 46.0
comp=Z,346nm,18.0s
PTOM **Tomar 76.86 309** eP P 23 10 11.7 +0.9
comp=Z,49nm,1.3s,mb5.3
EVO **Evora 77.17 308** eP P 23 10 13.0 +0.4
comp=Z,60nm,1.2s,mb5.1
EVO eMLR MLR
comp=Z,610nm,19.8s,MS4.6
EVO **Evora 77.17 308** eP P 23 10 13.0 +0.4
comp=Z,40nm,1.3s,mb5.2
EVOP **Sao Brissos 77.25 308** eP P 23 10 13.1 +0.1
EVOP eS S 23 20 03.4 +1.5
EVOP AMS AMS 23 43 20.3
comp=E,462nm,20.4s
EVOP **Sao Brissos 77.25 308** eP P 23 10 13.1 0.0
EVOP eS S 23 20 03.4 +1.5
PBEJ **Beja 77.34 307** eP P 23 10 13.7 +0.1
comp=E,28nm,1.4s,mb5.0
PVAQ **Vaqueiros 77.57 307** eP P 23 10 15.0 +0.1
comp=E,35nm,1.1s,mb5.2
PVAQ eLQ 23 37 02.9
PVAQ eLR LR 23 40 51.4
comp=E,241nm,20.0s
PCVE **Castro Verde 77.67 307** eLQ 23 35 59.9
PCVE eLR LR 23 40 35.2
comp=E,377nm,18.0s
MESJ **Messejana 77.68 307** eP P 23 10 15.1 -0.4
MESJ eS S 23 20 07.9 +1.2
MESJ eS S 23 20 08.1 +1.5
MESJ AMS AMS 23 43 26.6
comp=N,685nm,20.6s
MESJ **Messejana 77.68 307** eP P 23 10 15.0 -0.5
MESJ eS S 23 20 08.1 +1.5
LSZ **Lusaka 77.70 243** eP P 23 10 14.2 -1.6
LSZ pmax pmax
comp=Z,19nm,1.1s,mb4.9
LSZ **Lusaka 77.70 243** eP P 23 10 14.2 -1.6
comp=Z,19nm,1.1s,mb4.9
PMAFR **Mafra 77.78 309** eLQ 23 36 14.8
PMAFR eLR LR 23 40 23.4
comp=Z,302nm,18.0s
PBDV **Barranco-do-Ve 77.80 306** eP P 23 10 16.9 +0.7
comp=Z,59nm,1.7s,mb5.2
PBDV eLQ 23 35 26.9
PBDV eLR LR 23 40 58.2
comp=Z,292nm,22.0s
HYT **Haines Junctio 77.97 22** eP P 23 10 17.9 +1.3
PTEO **Sao Teotonio 78.17 307** eP P 23 10 18.3 +0.1
comp=Z,43nm,1.9s,mb5.0
PNL **Peninsula 78.21 24** eP P 23 10 18.8 +0.8
comp=Z,21nm,0.9s,mb5.1
MORF **Marmelete 78.25 307** eP P 23 10 19.2 +0.5
comp=Z,60nm,1.8s,mb5.2
MORF eLQ 23 37 51.0
MORF eLR LR 23 41 04.5
comp=Z,360nm,18.0s
MORF **Marmelete 78.25 307** eP P 23 10 18.3 -0.4
MORF eS S 23 20 14.2 +1.3
PFVI **Vila Bisbo 78.46 307** eP P 23 10 20.3 +0.4
comp=Z,79nm,1.5s,mb5.4
PFVI eLQ 23 36 37.2
PFVI eLR LR 23 40 24.3
comp=Z,451nm,18.0s
SKAG **Skagway 79.71 22** eP P 23 10 26.5 +0.2
comp=Z,51nm,1.1s,mb5.4
STKA **Stephens Creek 79.78 139** eP P 23 10 27.0 +0.1
comp=Z,5.6nm,0.8s,mb4.5
STKA **Stephens Creek 79.78 139** P P 23 10 26.2 -0.6
comp=Z,6.9nm,0.9s,mb4.6,baz=313,slow=4.5,SNR=5.3
STKA LR LR 23 51 27.2
comp=Z,376nm,19.9s,MS4.7,baz=146,slow=40
EIDS **Eidsvold 80.84 128** eP P 23 10 32.7 -0.1
comp=Z,23nm,1.3s,mb4.9
DLBC **Dease Lake 82.18 21** eP P 23 10 39.8 +0.4
YKA **Yellowknife Ar 82.27 12** P P 23 10 39.6 -0.2
comp=Z,8.7nm,1.0s,mb4.7,baz=337,slow=4.9,SNR=22
ARMA **Armidale 84.64 132** eP P 23 10 51.9 -0.5
LBTB **Lobatse 85.75 237** eP P 23 10 57.6 -0.5
LBTB pmax pmax
comp=Z,40nm,1.1s,mb5.6
LBTB **Lobatse 85.75 237** eP P 23 10 57.5 -0.6
comp=Z,40nm,1.1s,mb5.6
BOSA **Boshof 88.27 234** P P 23 11 10.1 -0.1
comp=Z,11nm,1.1s,mb5.0,baz=20,slow=5.4,SNR=5.6
BOSA LR LR 23 48 51.6
comp=Z,464nm,21.6s,MS4.9,baz=217,slow=34
BOSA **Boshof 88.27 234** P P 23 11 10.1 -0.1
BOSA pmax pmax
comp=Z,11nm,1.1s,mb5.0
BOSA MLR MLR
comp=Z,464nm,21.6s,MS4.9

BOSA	Boshof	88.27	234	*e*P	P	23 11 10.3	0.0
FCC	Fort Churchill	88.27	3	*e*P	P	23 11 09.3	-0.6
	comp=Z,0.7nm,1.3s,mb3.7						
DZM	Mont Dzumac	89.61	117	*e*S	S	23 22 02.6	-4.6
	comp=Z,112nm,25.1s						
DZM				*e*SS	SS	23 27 57.2	-6.8
	comp=Z,153nm,25.7s						
DZM				*e*LR	LR	23 39 46.1	
	comp=Z,347nm,33.4s						
SCHQ	Schefferville	90.50	348	P	P	23 11 20.2	-0.2
	comp=Z,7.3nm,0.9s,mb5.0,baz=25,slow=5.9,SNR=8.5						
SCHQ				LR	LR	23 55 16.7	
	comp=Z,533nm,19.3s,MS5.0,baz=19,slow=38						
EDM	Edmonton	91.16	15	*e*P	P	23 11 23.3	-0.2
FFC	Flin Flon	91.62	8	P	P	23 11 25.1	-0.5
	comp=Z,126nm,1.1s,mb6.2,SNR=12						
FFC	Flin Flon	91.62	8	*e*P	P	23 11 24.4	-1.2
FFC				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.5						
FFC	Flin Flon	91.62	8	*e*P	P	23 11 24.4	-1.2
	comp=Z,24nm,1.0s,mb5.5						
DBIC	Dimbokro	92.20	279	P	P	23 11 28.9	-0.1
	comp=Z,12nm,1.0s,mb5.1,baz=65,slow=2.8,SNR=3.6						
DBIC				LR	LR	23 53 17.5	
	comp=Z,367nm,21.4s,MS4.8,baz=40,slow=36						
DBIC	Dimbokro	92.20	279	*e*P	P	23 11 28.8	-0.2
ULM	Lac du Bonnet	96.64	5	LR	LR	00 02 23.0	
	comp=Z,308nm,18.9s,MS4.8,baz=224,slow=40						
YBH	Yreka Blue Hor	98.87	26	LR	LR	23 59 13.6	
	comp=Z,211nm,20.4s,MS4.6,baz=356,slow=37						
PPT	Papeete	122.87	90	*e*LR	LR	23 55 11.4	
	comp=Z,766nm,33.0s						
QSPA	South Pole Qui	122.95	180	*e*PKPdf	PKPdf	23 17 13.0	-0.7
TBI	Tubuai	125.55	97	*e*LR	LR	23 56 36.1	
	comp=Z,248nm,25.8s						
OTAV	Otavalo	145.60	343	*e*PKPdf	PKPdf	23 17 58.3	+0.5
CPUP	Villa Florida	152.68	276	PKP	PKPdf	23 18 09.0	+0.3
	comp=Z,0.8nm,0.4s,baz=160,slow=2.8,SNR=3.1						
CPUP				PKPbc	PKPbc	23 18 15.6	-0.2
	comp=Z,0.9nm,0.5s,baz=226,slow=0.5,SNR=6.0						
CPUP	Villa Florida	152.68	276	PKP	PKPdf	23 18 09.0	+0.3
CPUP				PKPbc	PKPbc	23 18 15.6	-0.2
LPAZ	La Paz	155.49	309	PKPbc	PKPdf	23 18 23.8	+11
	comp=Z,1.0nm,0.9s,baz=80,slow=7.6,SNR=4.1						
LPAZ				PKPab	PKPab	23 18 38.4	-0.2
	comp=Z,1.8nm,0.7s,baz=16,slow=1.1,SNR=6.2						

IDC 16 23:09:18.5±1.6, 33°.15N×92°.03E, h0km, mb3.7/4, mb1 3.8/6, mb1mx3.5/24, mbtmp3.7/6, ML3.3/2, Error ellipse: s-maj=62.1km s-min=24.7km az=62.0, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	15.52	334	Pn	Pn	23 12 57.4	-1.1
	0.1nm,0.3s,baz=143,slow=16,SNR=4.2						
SONM	Songino Array	18.24	32	P	Pn	23 13 33.4	+0.4
	0.2nm,0.3s,baz=216,slow=11,SNR=7.6						
ZALV	Zalesovo Beam	21.42	348	P	P	23 14 07.2	-0.5
	0.7nm,0.6s,baz=162,slow=11,SNR=5.1						
BVAR	Borovoye Array	25.21	328	P	P	23 14 46.3	+0.6
	0.8nm,0.6s,baz=147,slow=15,SNR=4.4						
ARCES	ARCESS Array B	51.17	336	P	P	23 18 22.1	-0.8
	3.2nm,1.1s,baz=78,slow=8.4,SNR=3.5						
ASAR	Alice Springs	69.17	139	P	P	23 20 27.1	+0.2
	0.5nm,0.6s,baz=320,slow=5.9,SNR=6.4						

ISCJB 16 23:13:45.8±0.9, 36°.43N±0°.04×21°.96E±0°.06, h10km, Error ellipse: s-maj=8.2km s-min=4.5km az=144.7
ATH 16 23:13:45.9, 36°.44N×21°.98E, h4km±3km, MD3.5/14
NEIC 16 23:13:45.9, 36°.44N×21°.98E, h4km, MD3.5(ATH), After ATH.
CSEM 16 23:13:46.2±0.6, 36°.45N×21°.99E, h2km, ML3.1/2, Error ellipse: s-maj=12.1km s-min=5.6km az=52.0
THE 16 23:13:46.3, 36°.46N×21°.93E, h2km±2km, ML3.1/2, Error ellipse: s-maj=2.5km s-min=1.0km az=301.0
ISC 16 23:13:45.0±1.2, 36°.39N±0°.05×21°.94E±0°.07, h2km±7km, n44, σ0°52/60, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.53	342	*e*PG	Pg	23 13 54.7	-0.5
PYL				*e*SG	Sg	23 14 02.5	+0.5
PYL	PYLOS	0.53	342	P	Pg	23 13 54.7	-0.5
PYL				S	Sg	23 14 01.9	-0.1
PYL	PYLOS	0.53	342	P	Pg	23 13 54.7	-0.5
PYL				S	Sg	23 14 01.9	-0.1
PYL				*e*Sg	Sg	23 14 02.5	+0.5
ITM	Ithomi	0.79	359	*e*Pg	Pg	23 13 59.9	-0.2
ITM				*e*Sg	Sg	23 14 10.6	+0.3
ITM	Ithomi	0.79	359	*e*PG	Pg	23 13 59.9	-0.2
ITM				*e*SG	Sg	23 14 10.6	+0.3
ITM	Ithomi	0.79	359	P	Pg	23 13 59.9	-0.2
ITM				S	Sg	23 14 10.7	+0.4
ITM	Ithomi	0.79	359	P	Pg	23 13 59.9	-0.2
ITM				*e*Sg	Sg	23 14 10.6	+0.3
VLI	Veliai	0.87	68	*e*Pb	Pg	23 14 02.0	+0.4
VLI				*e*Sg	Sg	23 14 12.4	-0.5
VLI	Veliai	0.87	68	*e*PB	Pg	23 14 02.0	+0.4
VLI				*e*SG	Sg	23 14 12.4	-0.5
VLI	Veliai	0.87	68	*e*Pb	Pg	23 14 02.0	+0.4
VLI				*e*Sg	Sg	23 14 12.4	-0.5
KYTH	Kithira	0.89	97	*e*Pb	Pg	23 14 02.8	+0.7
KYTH	Kithira	0.89	97	*e*PB	Pg	23 14 02.8	+0.7
KYTH	Kithira	0.89	97	*e*Pb	Pg	23 14 02.8	+0.7
VLX	Vlachokerasia	1.04	20	*e*PG	Pg	23 14 04.2	-0.7
VLX				*e*SG	Sg	23 14 18.8	+0.4
VLX	Vlachokerasia	1.04	20	P	Pg	23 14 04.4	-0.5
VLX				S	Sg	23 14 18.9	+0.5
VLX	Vlachokerasia	1.04	20	P	Pg	23 14 04.4	-0.5
VLX				*e*Sg	Sg	23 14 18.8	+0.4
DID	Didima	1.52	43	*e*PN	Pn	23 14 13.6	+0.3
DID	Didima	1.52	43	P	Pn	23 14 13.4	+0.1
DID				S	Sn	23 14 33.6	0.0
DID	Didima	1.52	43	*e*Pn	Pn	23 14 13.6	+0.3
DID				S	Sn	23 14 33.6	0.0
GUR	Goura	1.57	12	*e*PB	Pn	23 14 13.4	-0.6
GUR	Goura	1.57	12	P	Pn	23 14 13.8	-0.2
GUR	Goura	1.57	12	*e*Pb	Pn	23 14 13.4	-0.6
GUR	Goura	1.57	12	P	Pn	23 14 13.8	-0.2
RLS	Riolos of Patr	1.71	347	*e*Pn	Pn	23 14 16.3	+0.5
RLS	Riolos of Patr	1.71	347	*e*PN	Pn	23 14 16.3	+0.5
RLS	Riolos of Patr	1.71	347	*e*Pn	Pn	23 14 16.3	+0.5
LTK	Loutraki	1.82	26	*e*PB	Pb	23 14 19.3	+0.2
LTK	Loutraki	1.82	26	*e*Pb	Pb	23 14 19.3	+0.2
NAIG	Nisos Aigina	1.84	42	*e*Pb	Pb	23 14 20.0	+0.6
NAIG	Nisos Aigina	1.84	42	*e*PB	Pb	23 14 20.0	+0.6
NAIG	Nisos Aigina	1.84	42	*e*Pb	Pb	23 14 20.0	+0.6
KARN	Karanos	1.88	121	*e*PB	Pb	23 14 21.1	+1.0
KARN	Karanos	1.88	121	*e*Pb	Pb	23 14 21.1	+1.0
EFP	Efpalio	2.03	359	*e*PN	Pb	23 14 22.4	-0.3
EFP	Efpalio	2.03	359	*e*Pn	Pb	23 14 22.4	-0.3
VLY	Voula,Athens	2.08	45	*e*Pn	Pb	23 14 22.7	-0.8
VLY	Voula,Athens	2.08	45	*e*PN	Pb	23 14 22.7	-0.8
VLY	Voula,Athens	2.08	45	*e*Pn	Pb	23 14 22.7	-0.8
VAM	Vamos	2.08	118	*e*Pn	Pb	23 14 23.3	-0.2
VAM	Vamos	2.08	118	*e*PN	Pb	23 14 23.3	-0.2
VAM	Vamos	2.08	118	*e*Pn	Pb	23 14 23.3	-0.2
IDI	Anoyia	2.64	114	*e*Pb	Pb	23 14 31.9	-1.1
IDI	Anoyia	2.64	114	*e*PB	Pb	23 14 31.9	-1.1
IDI	Anoyia	2.64	114	*e*Pb	Pb	23 14 31.9	-1.1

IDC 16 23:15:46.6±4.2, 22°.72S×179°.14W, h0km, mb4.1/2, mb1 4.4/2, mb1mx3.9/15, mbtmp4.1/2, Error ellipse: s-maj=251.3km s-min=46.0km az=156.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.02	259	P	P	23 23 47.5	-0.6
	1.1nm,0.6s,baz=96,slow=7.9,SNR=9.4						
WRA	Warramunga Arr	43.29	265	P	P	23 23 51.0	+0.6
	1.3nm,0.3s,baz=101,slow=8.1,SNR=49						
ARCES	ARCESS Array B	130.90	349	PKP	PKPdf	23 34 60.0	+0.8
	1.3nm,0.8s,baz=54,slow=2.1,SNR=4.4						
BRTR	Keskin Array B	147.48	309	PKPbc	PKPbc	23 35 32.3	-0.4
	0.4nm,0.5s,baz=145,slow=6.3,SNR=3.3						
MMAI	Mount Meron Ar	147.91	296	PKPbc	PKPbc	23 35 32.6	-1.5
	1.1nm,0.4s,baz=84,slow=7.6,SNR=6.5						

IDC 16 23:19:17.9±0.9, 33°.14N×91°.97E, h0km, mb3.9/6, mb1 4.0/9, mb1mx3.8/25, mbtmp3.8/9, ML3.9/3, Error ellipse: s-maj=37.5km s-min=17.6km az=55.0
NEIC 16 23:19:19.6±0.3, 33°.21N×92°.06E, h10km, mb3.7/7, Error ellipse: s-maj=8.0km s-min=4.1km az=55.0
ISCJB 16 23:19:20.8±2.8, 33°.28N±0°.05×92°.13E±0°.09, h32km±23km, mb3.9/7, Error ellipse: s-maj=13.4km s-min=6.7km az=157.2
BJI 16 23:19:23.1, 33°.14N×92°.18E, h27km, ML3.7/1
ISC 16 23:19:20.7±4.2, 33°.21N±0°.07×92°.07E±0°.10, h17km±28km, n25, σ0°40/26, mb3.9/7, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	Shillong	7.61	181	*e*PKP	Pn	23 21 16.0	+5.1
SHL				*e*S	Sn	23 22 41.5	+4.7
MK31	Makanchi Array	15.48	334	*e*Pn	Pn	23 22 58.2	+0.1
MKAR	Makanchi Array	15.48	334	Pn	Pn	23 22 57.3	-0.8
	0.2nm,0.3s,baz=137,slow=13,SNR=9.1						
CHTO	Chiang Mai	15.60	155	*e*Pn	Pn	23 22 59.3	-0.6
	1.5nm,0.7s						
CM31	Chiang Mai Arr	15.93	156	Pn	Pn	23 23 04.5	+0.4
CMAR	Chiang Mai Arr	15.93	156	Pn	Pn	23 23 04.0	-0.1
	0.5nm,0.3s,baz=332,slow=13,SNR=9.8						
UCH	Uchtor	16.53	308	*e*Pn	Pn	23 23 11.6	0.0
	3.6nm,0.9s						
AAK	Ala-Archa	16.73	309	Pn	Pn	23 23 14.0	-0.2
AML	Almayashu	17.03	307	*e*Pn	Pn	23 23 18.4	+0.4
EKS2	Erkin-Say	17.21	309	Pn	Pn	23 23 20.1	-0.2
SONM	Songino Array	18.18	32	P	Pn	23 23 32.7	+0.5
	0.2nm,0.3s,baz=214,slow=13,SNR=11						
ULN	Ulaanbaatar	18.50	33	*e*P	Pn	23 23 36.0	-0.1
	3.3nm,1.1s						
KBL	Kabul	19.16	280	*e*P	Pn	23 23 44.6	+0.5
	11nm,0.9s						
KURK	Kurchatov	20.09	335	*e*P	P	23 23 53.5	+0.2
	2.0nm,0.6s						
ZALV	Zalesovo Beam	21.37	348	P	P	23 24 06.6	-0.4
	2.8nm,0.9s,mb3.6,baz=156,slow=11,SNR=11						
BVAR	Borovoye Array	25.18	328	P	P	23 24 45.3	+0.3
	1.3nm,0.8s,mb3.5,baz=172,slow=11,SNR=8.9						
BRVK	Borovoye	25.25	328	*e*P	P	23 24 45.5	-0.1
KIV	Kislovodsk	39.54	301	P	P	23 26 51.0	+0.4
BR131	Keskin Array S	46.73	296	*e*P	P	23 27 48.8	0.0
	1.1nm,0.7s,mb3.9						
BRTR	Keskin Array B	46.73	296	P	P	23 27 48.8	0.0
	1.2nm,0.9s,mb3.8,baz=106,slow=8.2,SNR=5.1						
KWP	Kalwaria Pacla	52.68	310	P	P	23 28 34.1	+0.1
WRAB	Tennant Creek	66.49	136	*e*P	P	23 30 09.4	-0.1
	2.6nm,0.8s,mb4.3						
WRA	Warramunga Arr	66.50	136	P	P	23 30 10.1	+0.6
	1.7nm,0.9s,mb4.1,baz=319,slow=8.0,SNR=9.8						
ASAR	Alice Springs	69.20	139	P	P	23 30 26.3	-0.2
	2.4nm,0.8s,mb4.2,baz=325,slow=6.7,SNR=16						
TORD	Torodi Ar. Bea	83.23	281	P	P	23 31 45.7	-0.9
	0.6nm,0.8s,mb3.7,baz=42,slow=6.2,SNR=3.0						

ISCJB 16 23:24:58.6±0.4, 30°.02N±0°.05×138°.8E±0°.1, h433km±7km, mb3.4/22, Error ellipse: s-maj=15.7km s-min=6.7km az=165.0
IDC 16 23:24:59.3±0.7, 29°.96N×138°.71E, h420km±8km, mb3.1/14, mb1 3.3/17, mb1mx3.2/25, mbtmp3.2/17, Error ellipse: s-maj=16.3km s-min=9.5km az=71.0
JMA 16 23:24:59.8±0.2, 30°.17N×139°.48E, h459km, M3.7
NEIC 16 23:24:59.6±1.6, 30°.17N×139°.28E, h451km±18km, mb3.6/8, Error ellipse: s-maj=29.0km s-min=8.0km az=67.0
ISC 16 23:24:59.6±0.4, 30°.04N±0°.05×138°.9E±0°.1, h428km±7km, n41, σ1°17/50, mb3.4/22, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	3.16	14	P	P	23 26 05.6	-0.4
	18nm,0.3s,baz=80,slow=21,SNR=3.7						
JHJ				S	S	23 27 01.7	+1.7
	24nm,0.3s,baz=48,slow=22,SNR=7.4						
CBIJ	Chichi jima	4.12	135	P	P	23 26 14.6	+0.1
	19nm,0.3s,baz=92,slow=24,SNR=14						
CBIJ				S	S	23 27 13.9	-1.4
	77nm,0.3s,baz=292,slow=21,SNR=22						
CBIJ	Chichi jima	4.12	135	P	P	23 26 14.3	-0.2
CBIJ				*e*S	S	23 27 14.9	-0.4
JIE	Ise	4.72	337	P	P	23 26 23.4	+3.5
BSO1	Boso 1	4.92	20	P	P	23 26 23.1	+1.2
BSO1				S	S	23 27 29.1	0.0
BSO3	Boso 3	4.94	16	*e*S	S	23 27 29.1	-0.3
BSO4	Boso 4	5.08	13	P	P	23 26 24.7	+1.2
BSO4				*e*S	S	23 27 31.6	-0.4
JOD2	Odawara 2	5.21	2	*e*S	S	23 27 31.9	-2.4
JNY	Yasuok	5.37	351	P	P	23 26 29.2	+2.8
JHU	Hanno	5.80	3	P	P	23 26 31.0	+0.1
JHU				*e*S	S	23 27 42.3	-3.1
JRY	Ryogami san	5.96	360	P	P	23 26 33.8	+1.3
JRY				*e*S	S	23 27 46.9	-1.5
JAG	Ashikaga	6.38	4	P	P	23 26 36.8	-0.2
JAG				*e*S	S	23 27 52.0	-4.6
JHO	Hitachi	6.70	12	P	P	23 26 40.9	+0.6
JHO				*e*S	S	23 28 00.1	-2.7
KSRS	Korea Array	11.75	312	P	P	23 27 37.0	+1.2
	0.7nm,0.3s,baz=128,slow=10,SNR=16						
INCN	Inchon	12.61	309	P	P	23 27 47.7	+2.4
GUMO	Guam	17.28	160	*e*P	P	23 28 34.3	-1.3
	96nm,1.1s						
ULN	Ulaanbaatar	30.20	315	*e*P	P	23 30 33.0	0.0
	1.3nm,0.3s,mb3.7						
SONM	Songino Array	30.60	315	P	P	23 30 35.7	-0.7
	0.7nm,0.4s,mb3.3,baz=130,slow=8.4,SNR=7.0						
CHTO	Chiang Mai	37.89	262	*e*P	P	23 31 37.0	-1.4
	1.9nm,0.9s,mb3.4						
CMAR	Chiang Mai Arr	38.04	262	P	P	23 31 39.1	-0.5
	0.8nm,0.6s,mb3.2,baz=66,slow=5.6,SNR=4.8						
KULM	Kulim	43.64	243	*e*P	P	23 32 26.9	+2.2
ZALV	Zalesovo Beam	45.38	318	P	P	23 32 37.4	-0.3
	0.6nm,0.4s,mb3.3,baz=87,slow=6.4,SNR=4.0						
MKAR	Makanchi Array	46.39	308	P	P	23 32 45.3	-0.2
	0.3nm,0.3s,mb3.2,baz=92,slow=9.4,SNR=5.3						
KURK	Kurchatov	48.87	313	*e*P	P	23 33 03.2	-1.1
	0.9nm,0.4s,mb3.5						
FITZ	Fitzroy Crossi	49.54	197	*e*P	P	23 33 09.6	-0.1
	0.8nm,0.6s,mb3.2						
WRAB	Tennant Creek	49.88	186	*e*P	P	23 33 11.3	-0.8
	1.5nm,0.6s,mb3.5						
WRA	Warramunga Arr	49.89	186	P	P	23 33 12.1	-0.1
	0.6nm,0.3s,mb3.4,baz=0.9,slow=7.9,SNR=22						
WRA	Warramunga Arr	49.89	186	P	P	23 33 12.1	-0.1
EKS2	Erkin-Say	52.74	303	*e*P	P	23 33 32.1	-0.7
AML	Almayashu	52.89	302	*e*P	P	23 33 34.6	+0.7
	1.2nm,0.8s,mb3.2						
ASAR	Alice Springs	53.62	186	P	P	23 33 39.1	-0.1
	0.5nm,0.5s,mb3.0,baz=6.8,slow=7.0,SNR=7.7						
BVAR	Borovoye Array	53.93	316	P	P	23 33 40.9	-0.2
	2.5nm,0.4s,mb3.8,baz=94,slow=7.5,SNR=18						
ARU	Arti	60.33	321	*e*P	P	23 34 24.0	-1.2
	2.5nm,0.4s,mb4.0						
ABKAR	Akbulak array	60.98	313	*e*P	P	23 34 28.7	-0.9
	1.3nm,0.4s,mb3.7						
ARCES	ARCESS Array B	69.81	340	P	P	23 35 25.6	+0.5
	0.6nm,0.5s,mb3.4,baz=57,slow=8.8,SNR=5.1						
YKA	Yellowknife Ar	70.92	28	P	P	23 35 32.7	+0.9
	0.3nm,0.4s,mb3.2,baz=299,slow=6.1,SNR=2.9						
FINES	FINESS Array B	74.03	333	P	P	23 35 49.7	-0.2
	0.7nm,0.3s,mb3.8,baz=57,slow=4.1,SNR=11						
NOA	NORSAR Array B	79.80	337	P	P	23 36 21.4	-0.2
	1.2nm,0.9s,mb3.5,baz=74,slow=12,SNR=2.8						
NVAR	Mina Array Bea	80.94	51	P	P	23 36 31.3	+3.2
	0.3nm,0.3s,mb3.5,baz=306,slow=6.2,SNR=3.6						
BRTR	Keskin Array B	81.89	311	P	P	23 36 33.0	0.0
	1.3nm,0.8s,mb3.7,baz=119,slow=4.4,SNR=5.9						
PDAR	Pinedale Array	84.11	44	P	P	23 36 46.5	+2.4
	0.2nm,0.4s,mb3.2,baz=292,slow=0.5,SNR=2.8						

ISCJB 16 23:25:25.0±0.4, 38°.90N±0°.02×27°.90E±0°.03, h7km±4km, Error ellipse: s-maj=4.1km s-min=3.7km az=153.7
DDA 16 23:25:24.6, 38°.91N×27°.89E, h10km±3km, Ml2.8
ISK 16 23:25:24.7, 38°.89N×27°.90E, h9km, MD2.9
CSEM 16 23:25:25.1±0.1, 38°.90N×27°.91E, h5km, MD2.9, Error ellipse: s-maj=2.3km s-min=2.1km az=112.0
ISC 16 23:25:25.3±0.4, 38°.90N±0°.02×27°.90E±0°.03, h8km±3km, n47, σ0°65/68, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	Akhisar	0.07	254	*i* P	Pg	23 25 26.8	-0.4
AKHS				*i* S	Sg	23 25 28.3	-0.3
AKHS	Akhisar	0.07	254	*i* P	Pg	23 25 26.8	-0.4
AKHS				*i* S	Sg	23 25 28.3	-0.2
AKS	Akhisar	0.07	254	PG	Pg	23 25 26.9	-0.3
AKS	Akhisar	0.07	254	*i* Pg	Pg	23 25 26.9	-0.3
DEMI	Demirci	0.65	77	*i* P	Pg	23 25 37.8	-0.1
DEMI				*i* S	Sg	23 25 46.2	-0.2
DEMI	Demirci	0.65	77	*i* P	Pg	23 25 37.8	-0.1
DEMI				*i* S	Sg	23 25 46.2	-0.2
IZM	Izmir	0.70	225	*e*PG	Pg	23 25 39.1	+0.2
IZM				*e*SG	Sg	23 25 48.3	+0.3
KULA	Kula-Manisa	0.71	122	*e*PG	Pg	23 25 39.0	+0.1
KULA				*e*SG	Sg	23 25 48.6	+0.5
KULA	Kula-Manisa	0.71	122	*e*Pg	Pg	23 25 39.0	+0.1
KULA				*e*Sg	Sg	23 25 48.6	+0.4
BALB	Balikesir	0.74	359	*e*PG	Pg	23 25 39.9	+0.3
BALB				*e*SG	Sg	23 25 51.0	+1.8
BALB	Balikesir	0.74	359	*e*Pg	Pg	23 25 39.9	+0.3
BALB				*e*Sg	Sg	23 25 51.0	+1.7
BLCB	Balcova	0.84	233	*e*PG	Pg	23 25 41.1	-0.4
BLCB				*e*SG	Sg	23 25 53.6	+1.1
BLCB	Balcova	0.84	233	*e*Pg	Pg	23 25 41.1	-0.4
BLCB				*e*Sg	Sg	23 25 53.6	+1.1
BALY	Balya	0.87	346	*i* P	Pg	23 25 41.3	-0.8
BALY				*i* S	Sg	23 25 53.6	+0.2
BALY	Balya	0.87	346	*i* P	Pg	23 25 41.3	-0.7
BALY				*i* S	Sg	23 25 53.6	+0.3
AYVA	Ayvalik	1.02	294	*i* P	Pg	23 25 42.5	-2.5
AYVA				*i* S	Sg	23 25 58.3	0.0
AYVA	Ayvalik	1.02	294	*i* P	Pg	23 25 42.5	-2.5
AYVA				*i* S	Sg	23 25 58.3	0.0
GONE	Gonen-Balikesi	1.16	352	*e*PN	Pn	23 25 47.1	-0.7
GONE	Gonen-Balikesi	1.16	352	*e*Pn	Pn	23 25 47.1	-0.7
AYDN	Tasoluk	1.23	181	*i* P	Pn	23 25 47.9	-0.9
AYDN				*i* S	Sb	23 26 04.8	-0.1
AYDN	Tasoluk	1.23	181	*i* P	Pn	23 25 47.9	-0.9
AYDN				*i* S	Sb	23 26 04.8	-0.1
GDZ	Gediz	1.25	81	*i* P	Pn	23 25 49.0	-0.1
GDZ				*i* S	Sb	23 26 05.3	0.0
GDZ	Gediz	1.25	81	*i* P	Pn	23 25 49.0	0.0
GDZ				*i* S	Sb	23 26 05.3	0.0
BNT	Bandirma	1.46	1	*e*PN	Pn	23 25 51.6	-0.3
BNT	Bandirma	1.46	1	*e*Pn	Pn	23 25 51.6	-0.3
EZN	Ezine	1.53	308	*e*PN	Pn	23 25 52.9	0.0
EZN	Ezine	1.53	308	*e*Pn	Pn	23 25 52.9	0.0
KRBG	Karabiga-Canak	1.56	343	*e*PN	Pn	23 25 53.0	-0.4
KRBG	Karabiga-Canak	1.56	343	*e*Pn	Pn	23 25 53.0	-0.4
ULDT	Uludag	1.57	37	*i* P	Pn	23 25 53.8	+0.3
ULDT				*i* S	Sn	23 26 13.0	-0.9
ULDT	Uludag	1.57	37	*i* P	Pn	23 25 53.8	+0.3
ULDT				*i* S	Sn	23 26 13.0	-1.0
MLSB	Milas	1.60	183	*e*PN	Pn	23 25 54.6	+0.7
MLSB	Milas	1.60	183	*e*Pn	Pn	23 25 54.7	+0.8
MDNY	Mudanya-Bursa	1.66	27	*e*PN	Pn	23 25 54.5	-0.2
MDNY	Mudanya-Bursa	1.66	27	*e*Pn	Pn	23 25 54.5	-0.1
ARMT	Armutlu	1.82	24	*e*PN	Pn	23 25 56.8	-0.2
ARMT	Armutlu	1.82	24	*e*Pn	Pn	23 25 56.8	-0.2
GELI	Tayfur-Gelibol	1.86	324	*e*PN	Pn	23 25 58.1	+0.7
GELI	Tayfur-Gelibol	1.86	324	*e*Pn	Pn	23 25 58.2	+0.8
RKY	Sarkoy-Tekirda	1.87	343	*e*PN	Pn	23 25 58.1	+0.5
RKY	Sarkoy-Tekirda	1.87	343	*e*Pn	Pn	23 25 58.2	+0.6
ERIK	Erikli-Kesan	2.07	329	*e*PN	Pn	23 26 00.5	+0.1
ERIK	Erikli-Kesan	2.07	329	*e*Pn	Pn	23 26 00.5	+0.2
ENEZ	Enez	2.27	324	*e*PN	Pn	23 26 03.6	+0.4
ENEZ	Enez	2.27	324	*e*Pn	Pn	23 26 03.6	+0.4
GULT	Gulveren	2.54	52	*e*PN	Pn	23 26 07.5	+0.8
GULT	Gulveren	2.54	52	*e*Pn	Pn	23 26 07.5	+0.8

JMA 16 23:33:13.6±0.1, 23°.86N×122°.49E, h40km, M2.4
TAP 16 23:33:13.2, 23°.84N×122°.48E, h36km±2km, ML3.1, 3C, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.78	38	P	Pn	23 33 28.1	+0.4
YOJ				S	Sn	23 33 38.5	+0.2
TWD	Chiawan	0.84	286	*i* P

	baz=240					
ECL	**Taimali**	**1.87 229**	*e*P	Pn	23 33 41.8	-1.0
	baz=237					
ECL			*e*S	Sn	23 34 03.0	-2.2
	baz=237					
SGST	**Jiashian**	**1.90 247**	*e*P	Pn	23 33 44.5	+1.4
	baz=237					
SGST			*e*S	Sn	23 34 08.6	+2.8
	baz=237					
CHN1	**Nanshi**	**1.91 250**	*e*P	Pn	23 33 45.0	+1.8
	baz=248					
CHN1			*e*S	Sn	23 34 09.3	+3.3
	baz=248					
TWK	**Hsinying**	**1.92 253**	*e*P	Pn	23 33 44.9	+1.6
	baz=251					
TWK			*e*S	Sn	23 34 08.7	+2.5
	baz=251					
SSD	**Sandimen**	**2.02 238**	*e*P	Pn	23 33 45.4	+0.7
	baz=229					
EAST	**Anshuo**	**2.09 226**	*e*P	Pn	23 33 44.8	-0.9
	baz=233					
SCZT	**Fangliau**	**2.25 230**	*e*P	Pn	23 33 47.8	-0.1
	baz=222					

*NEIC **16** 23:59:25.9, 32°.24S×72°.14W, h22km, ML3.3(GUC), After GUC.*

GUC 16 23:59:25.9±0.6, 32°.24S×72°.14W, h22km±4km, MD3.8, ML3.3, 8C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.65**	**57**	⇓*i*P	Pb	23 59 37.7	-0.8
CHNG				*i* S	Sb	23 59 47.1	-0.1
ROCH	**El Roble**	**1.20**	**128**	⇑*i*P	Pn	23 59 47.1	-0.3
ROCH				*i* S	Sn	00 00 03.5	+0.5
ROCH	**El Roble**	**1.20**	**128**	⇑*i*P	Pn	23 59 47.1	-0.3
ROCH				*i* S	Sn	00 00 03.5	+0.5
LCCH	**Las Cruces**	**1.32**	**159**	*e*P	Pn	23 59 48.9	-0.1
LCCH	**Las Cruces**	**1.32**	**159**	*e*P	Pn	23 59 48.9	-0.1
JACH	**Jahuel**	**1.38**	**109**	⇑*i*P	Pn	23 59 49.8	-0.1
JACH				*i* S	Sn	00 00 08.4	+0.9
JACH	**Jahuel**	**1.38**	**109**	⇑*i*P	Pn	23 59 49.8	-0.1
JACH				*i* S	Sn	00 00 08.4	+0.9
CMCH	**Combarbala**	**1.44**	**43**	⇑*i*P	Pn	23 59 50.6	0.0
CMCH				*i* S	Sn	00 00 09.9	+1.1
CMCH	**Combarbala**	**1.44**	**43**	⇑*i*P	Pn	23 59 50.6	0.0
CMCH				*i* S	Sn	00 00 09.9	+1.1
PEL	**Peldehue**	**1.52**	**127**	⇑*i*P	Pn	23 59 52.2	+0.4
PEL				*i* S	Sn	00 00 12.3	+1.3
PEL				AML	AML	00 00 15.9	
	comp=E,1μm,0.3s						
TACH	**Talagante**	**1.74**	**145**	*e*P	Pn	23 59 55.6	+0.9
TACH				*e*S	Sn	00 00 17.9	+1.7
TACH	**Talagante**	**1.74**	**145**	*e*P	Pn	23 59 55.6	+0.9
TACH				*e*S	Sn	00 00 17.9	+1.7
SAN	**Santiago**	**1.74**	**135**	*e*P	Pn	23 59 55.6	+0.9
SAN				*i* S	Sn	00 00 17.4	+1.2
SAN	**Santiago**	**1.74**	**135**	*e*P	Pn	23 59 55.6	+0.9
SAN				*i* S	Sn	00 00 17.4	+1.2
SAN				AML	AML	00 00 22.8	
	comp=N,395nm,0.4s						
CLCH	**Cerro Calan**	**1.78**	**131**	⇑*i*P	Pn	23 59 56.0	+0.7
CLCH				*i* S	Sn	00 00 19.1	+1.9
CLCH				AML	AML	00 00 30.3	
	comp=N,490nm,0.5s						
FCH	**Farellones**	**1.90**	**125**	*e*P	Pn	23 59 58.5	+1.5
FCH				*e*S	Sn	00 00 23.1	+2.8
FCH				AML	AML	00 00 25.9	
	comp=N,208nm,0.3s						
PCH	**Pirque**	**1.94**	**136**	*e*P	Pn	23 59 58.8	+1.2
PCH	**Pirque**	**1.94**	**136**	*e*P	Pn	23 59 58.8	+1.2
CHCH	**Chadas Angostu**	**2.10**	**144**	*e*P	Pn	00 00 00.7	+0.9
CHCH	**Chadas Angostu**	**2.10**	**144**	*e*P	Pn	00 00 00.7	+0.9
LMEL	**Las Melosas**	**2.29**	**135**	*e*P	Pn	00 00 03.9	+1.6
LMEL				*i* S	Sn	00 00 32.8	+3.0
LMEL	**Las Melosas**	**2.29**	**135**	*e*P	Pn	00 00 03.9	+1.6
LMEL				*i* S	Sn	00 00 32.8	+3.0
LMEL				AML	AML	00 00 40.4	
	comp=N,313nm,0.4s						

*ISCJB **16** 23:59:45.7±0.4, 10°.83N±0°.02×62°.26W±0°.02, h87km±5km, Error ellipse: s-maj=4.4km s-min=3.1km az=143.8*
*FUNV **16** 23:59:46.9, 10°.90N×62°.15W, h76km, MW3.2*
*NEIC **16** 23:59:46.9, 10°.91N×62°.20W, h21km, MD3.6(TRN), MD3.0(CAR), After CAR.*
*TRN **16** 23:59:47.6, 10°.83N×62°.21W, h72km, MD3.6*

ISC 16 23:59:46.9±0.4, 10°.83N±0°.02×62°.25W±0°.02, h79km±6km, n44, σ0°.86/83, 5C-6D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.18**	**173**	⇑*e*P	Pn	23 59 59.0	+0.4
GUIV				*e*S	Sn	00 00 07.4	+0.3
TCE	**Chacachacare**	**0.50**	**105**	⇑*e*P	Pn	00 00 01.0	+0.4
TCE				*e*S	Sn	00 00 09.5	-1.2
TCE	**Chacachacare**	**0.50**	**105**	⇑*e*P	Pn	00 00 01.0	+0.4
TCE				*e*S	Sn	00 00 09.5	-1.2
TRN	**Trinidad (W)**	**0.85**	**102**	*e*P	Pn	00 00 04.5	+0.4
TRN				*e*S	Sn	00 00 16.6	-0.4
TRN	**Trinidad (W)**	**0.85**	**102**	*e*P	Pn	00 00 04.5	+0.4
TRN				*e*S	Sn	00 00 16.6	-0.4
TPP	**Pointe-a-Pierr**	**0.94**	**123**	*e*P	Pn	00 00 07.9	+2.8
TPP				*e*S	Sn	00 00 22.2	+3.5
TPP	**Pointe-a-Pierr**	**0.94**	**123**	*e*P	Pn	00 00 04.6	-0.5
TPP				*e*S	Sn	00 00 19.1	+0.3
GUNV	**Guanoco**	**0.95**	**226**	⇑*i*P	Pn	00 00 06.6	+1.3
GUNV				*e*S	Sn	00 00 20.5	+1.4
CRUV	**Carupano**	**0.98**	**261**	⇓*i*P	Pn	00 00 06.0	+0.3
CRUV				*e*S	Sn	00 00 19.6	-0.1
ITEV	**Isla Los Testi**	**1.01**	**301**	⇓*i*P	Pn	00 00 05.8	-0.2
ITEV				*e*S	Sn	00 00 19.7	-0.7
TBH	**Brigand Hill**	**1.21**	**106**	*e*P	Pn	00 00 09.0	+0.6
TBH				*e*S	Sn	00 00 24.4	-0.3
TBH	**Brigand Hill**	**1.21**	**106**	*e*P	Pn	00 00 09.0	+0.6
TBH				*e*S	Sn	00 00 24.4	-0.3
GRW	**Mount Saint Ca**	**1.44**	**23**	*e*P	Pn	00 00 11.1	-0.3
GRW				*e*S	Sn	00 00 27.8	-2.0
GRW	**Mount Saint Ca**	**1.44**	**23**	*e*P	Pn	00 00 11.1	-0.3
GRW				*e*S	Sn	00 00 29.1	-0.8
TPR	**Prospect**	**1.49**	**76**	*e*P	Pn	00 00 12.2	+0.3
TPR				*e*S	Sn	00 00 29.5	-1.4
TPR	**Prospect**	**1.49**	**76**	*e*P	Pn	00 00 12.2	+0.3
TPR				*e*S	Sn	00 00 29.5	-1.4
GRHS	**Sauteurs**	**1.50**	**23**	*e*P	Pn	00 00 12.4	+0.2
GRHS				*e*S	Sn	00 00 30.8	-0.6
GRHS	**Sauteurs**	**1.50**	**23**	*e*P	Pn	00 00 12.4	+0.2
GRHS				*e*S	Sn	00 00 30.8	-0.6
BOT	**Bacolet**	**1.54**	**77**	⇓*i*P	Pn	00 00 12.7	+0.1
BOT				*e*S	Sn	00 00 32.3	+0.2
BOT	**Bacolet**	**1.54**	**77**	⇓*i*P	Pn	00 00 12.7	+0.1
BOT				*e*S	Sn	00 00 32.3	+0.2
GRIC	**Isle de Caille**	**1.58**	**24**	*e*P	Pn	00 00 13.8	+0.6
GRIC				*e*S	Sn	00 00 33.5	+0.3
GRSS	**Sisters**	**1.58**	**23**	*e*P	Pn	00 00 14.0	+0.7
GRSS				*e*S	Sn	00 00 33.6	+0.4
GRSS	**Sisters**	**1.58**	**23**	*e*P	Pn	00 00 14.0	+0.7
GRSS				*e*S	Sn	00 00 33.6	+0.4
TOSP	**Speyside**	**1.74**	**74**	⇓*i*P	Pn	00 00 15.5	+0.2
TOSP				*e*S	Sn	00 00 35.3	-1.7
ORIV	**Oritupano**	**2.09**	**213**	*e*P	Pn	00 00 20.8	+0.8
ORIV				*e*S	Sn	00 00 46.6	+1.3
PCRV	**Puerto La Cruz**	**2.44**	**255**	*e*P	Pn	00 00 25.6	+1.0
PCRV				*e*S	Sn	00 00 53.5	0.0
IBAV	**Isla La Blanqu**	**2.49**	**294**	⇓*e*P	Pn	00 00 25.0	-0.2
IBAV				*e*S	Sn	00 00 53.8	-0.9
SVB	**Belmont**	**2.61**	**22**	*e*P	Pn	00 00 28.0	+1.0
SVB				*e*S	Sn	00 00 58.7	+0.9
SVB	**Belmont**	**2.61**	**22**	*e*P	Pn	00 00 28.0	+1.0
SVB				*e*S	Sn	00 00 58.7	+0.9
RIOV	**Rio Grande**	**2.78**	**171**	*e*P	Pn	00 00 30.1	+0.8
RIOV				*e*S	Sn	00 01 00.7	-1.1
MCLT	**Moule a Chique**	**3.13**	**24**	*e*P	Pn	00 00 34.8	+0.8
MCLT				*e*S	Sn	00 01 10.1	-0.2
MCLT	**Moule a Chique**	**3.13**	**24**	*e*P	Pn	00 00 34.8	+0.8
MCLT				*e*S	Sn	00 01 10.1	-0.2
PRGV	**PARIAGUAN**	**3.13**	**229**	*e*P	Pn	00 00 34.7	+0.7
PRGV				*e*S	Sn	00 01 10.0	-0.4
GURV	**El Guri**	**3.16**	**195**	⇑*i*P	Pn	00 00 34.5	+0.1
GURV				*e*S	Sn	00 01 09.4	-1.7
CUPV	**Cœpira**	**3.57**	**258**	*e*P	Pn	00 00 41.0	+1.1
CUPV				*e*S	Sn	00 01 21.1	+0.1
BIRV	**Birongo**	**3.97**	**265**	*e*P	Pn	00 00 46.3	+1.0
BIRV				*e*S	Sn	00 01 28.9	-1.8
ORCV	**Isla La Orchil**	**3.99**	**285**	*e*P	Pn	00 00 45.2	-0.5
MERV	**Las Mercedes**	**4.29**	**249**	*e*P	Pn	00 00 50.1	+0.4
MERV				*e*S	Sn	00 01 37.4	-1.2
LUEV	**Luepa**	**5.02**	**171**	*e*P	Pn	00 00 58.7	-1.0
LUEV				*e*S	Sn	00 01 51.9	-4.5
CAOV	**Caicara del Or**	**5.32**	**229**	*e*P	Pn	00 01 04.0	+0.1
CAOV				*e*S	Sn	00 02 00.5	-3.3
TURV	**Turiamo**	**5.51**	**267**	*e*P	Pn	00 01 06.9	+0.5
BAUV	**El Baul**	**6.01**	**252**	*e*P	Pn	00 01 12.9	-0.3
TEPV	**Terepaima**	**6.89**	**263**	*e*P	Pn	00 01 24.9	-0.3
MONV	**Montecano**	**7.66**	**279**	*e*P	Pn	00 01 34.5	-1.2

*IDC **17** 00:03:51.4±2.5, 11°.20N×85°.96W, h0km, mb3.9/5, mb1 4.2/6, mb1mx3.8/20, mbtmp3.9/6, ML3.5/1, Error ellipse: s-maj=54.9km s-min=40.4km az=6.0*
*ISCJB **17** 00:03:53.7±0.7, 10°.61N±0°.05×86°.48W±0°.06, h55km±7km, mb3.9/9, Error ellipse: s-maj=11.8km s-min=5.1km az=142.1*
*CASC **17** 00:03:53.4±2.9, 10°.63N×86°.51W, h23km±12km, MD4.1, ML3.8, mb4.1(NEIC)*
*NEIC **17** 00:03:54.6±1.2, 10°.79N×85°.88W, h50km±14km, mb4.1/4, Error ellipse: s-maj=20.4km s-min=9.8km az=48.0*

ISC 17 00:03:54.6±0.6, 10°.61N±0°.05×86°.44W±0°.06, h47km±7km, n51, σ1s15/56, mb3.9/9, 5C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NY14	**Universidad de**	**0.89**	**88**	⇑*i*P	Pn	00 04 10.7	-0.2
SSN	**San Juan del S**	**0.90**	**40**	*e*P	Pn	00 04 10.3	-0.6
SSN				*e*S	Sn	00 04 23.9	+1.1
VCR	**Vista de Mar**	**0.93**	**121**	*e*P	Pn	00 04 10.1	-1.3
GBS3	**Finca Las Im¯¡**	**0.98**	**80**	⇑*i*P	Pn	00 04 11.4	-0.6
GBS3				*i* S	Sn	00 04 30.2	+5.3
LAPC	**Finca la Perla**	**1.00**	**81**	⇑*i*P	Pn	00 04 11.7	-0.7
GB1A	**Borinquen Arri**	**1.05**	**79**	*i* P	Pn	00 04 12.5	-0.5
GPS1	**Guardaparques**	**1.09**	**81**	*i* P	Pn	00 04 12.9	-0.6
COLC	**Colonia**	**1.22**	**87**	⇑*i*P	Pn	00 04 14.9	-0.3
MESS	**Mesas**	**1.23**	**84**	⇑*i*P	Pn	00 04 15.2	-0.2
CONN	**Concepcion**	**1.24**	**40**	*e*P	Pn	00 04 15.8	+0.3
CONN				*e*S	Sn	00 04 32.1	+0.9
APON	**Apoyo**	**1.35**	**16**	*e*P	Pn	00 04 17.2	+0.1
CRUN	**El Crucero**	**1.37**	**6**	*e*P	Pn	00 04 18.9	+1.5
MASN	**Masaya**	**1.40**	**12**	*e*P	Pn	00 04 19.2	+1.5
TICN	**Ticuantepe**	**1.43**	**8**	*e*P	Pn	00 04 18.3	+0.1
JTS	**JuntasAbangare**	**1.50**	**102**	*e*Pn	Pn	00 04 18.6	-0.5
JTS				*e*Sn	Sn	00 04 48.8	+11
JTS	**JuntasAbangare**	**1.50**	**102**	*e*P	Pn	00 04 18.7	-0.4
JCR	**Jicaral**	**1.51**	**120**	*e*P	Pn	00 04 18.7	-0.6
XAVN	**Gruta Xavier**	**1.53**	**4**	*e*P	Pn	00 04 19.4	-0.1
CSAN		**1.56**	**1**	*e*P	Pn	00 04 19.4	-0.6
APYN	**Apoyeque**	**1.61**	**3**	*e*P	Pn	00 04 20.4	-0.3
APYN				AML	AML	00 04 50.4	
	comp=Z,1μm,0.5s						
HUEN		**1.74**	**9**	*e*P	Pn	00 04 21.8	-0.6
HUEN				*e*S	Sn	00 04 43.6	+0.2
MOMN	**Momotombo**	**1.79**	**357**	*e*P	Pn	00 04 23.0	-0.1
CNGN	**Cerro Negro**	**1.89**	**352**	*e*P	Pn	00 04 23.8	-0.8
CGA2	**Cerro Gallo 2**	**2.03**	**107**	*e*P	Pn	00 04 27.0	+0.5
PRS1	**Puriscal**	**2.19**	**106**	*e*P	Pn	00 04 31.0	+2.4
LAJ	**Bijagual**	**2.40**	**108**	*e*P	Pn	00 04 28.3	-3.2
QCR	**Quepos**	**2.53**	**118**	*e*P	Pn	00 04 35.5	+2.1
URSC	**Urasca**	**2.73**	**106**	*e*P	Pn	00 04 37.7	+1.7
CNCH	**Conchagua**	**2.98**	**333**	*e*P	Pn	00 04 39.0	-0.4
CNCH				*e*S	Sn	00 05 11.8	-2.1
BLLM	**Bellamira**	**3.32**	**328**	*e*P	Pn	00 04 44.0	-0.1
BAR1		**3.37**	**114**	*e*P	Pn	00 04 46.1	+1.3
TGUH	**Tegucigalpa,Un**	**3.52**	**347**	*e*Pn	Pn	00 04 46.9	0.0
CAHU	**Cacacuatique**	**3.58**	**331**	*e*P	Pn	00 04 48.3	+0.5
CMIG	**Matias Romero**	**10.42**	**309**	Pn	Pn	00 06 22.2	+0.7
	comp=Z,0.4nm,0.3s,baz=131,slow=16,SNR=5.4						
OTAV	**Otavalo**	**13.01**	**142**	*e*Pn	Pn	00 06 54.7	-2.2
SDV	**Santo Domingo**	**15.68**	**95**	Pn	Pn	00 07 25.4	-7.0
LRAL	**Lakeview Retre**	**22.32**	**359**	*e*P	P	00 08 47.1	-1.2
	comp=Z,6.0nm,1.0s,mb4.0						
OXF	**Oxford**	**23.94**	**354**	*e*P	P	00 09 03.5	-0.9
	comp=Z,12nm,0.8s,mb4.4						
SWET	**Sewanee**	**24.50**	**1**	*e*Pn	P	00 09 08.0	-1.5
TXAR	**Lajitas Array**	**24.62**	**322**	P	P	00 09 11.5	+0.8
	comp=Z,1.8nm,0.7s,mb3.7,baz=139,slow=12,SNR=7.8						
MIAR	**Mount Ida**	**24.70**	**346**	*e*P	P	00 09 11.1	-0.2
	comp=Z,3.4nm,0.9s,mb3.9						
TKL	**Tuckaleechee C**	**25.05**	**5**	P	P	00 09 11.3	-3.1
	comp=Z,10nm,1.2s,mb4.2,baz=188,slow=14,SNR=1.9						
WVT	**Waverly**	**25.44**	**357**	*e*P	P	00 09 14.7	-3.3
WMOK	**Wichita Mounta**	**26.53**	**337**	*e*P	P	00 09 28.7	+0.8
	comp=Z,7.2nm,0.9s,mb4.2						
ANMO	**Albuquerque**	**30.33**	**326**	*e*P	P	00 10 02.9	+1.2
SDCO	**Great Sand Dun**	**31.99**	**331**	*e*P	P	00 10 16.7	+0.3
PDAR	**Pinedale Array**	**37.85**	**332**	P	P	00 11 08.4	+1.7
	comp=Z,0.4nm,0.6s,mb3.3,baz=134,slow=10,SNR=3.6						
NVAR	**Mina Array Bea**	**39.73**	**320**	P	P	00 11 25.5	+2.8
	comp=Z,1.2nm,0.8s,mb3.7,baz=138,slow=8.2,SNR=6.8						
NVAR				PcP	PcP	00 13 32.5	+4.0
	comp=Z,1.7nm,0.7s,baz=147,slow=5.2,SNR=12						
NEW	**Newport**	**45.49**	**331**	*e*P	P	00 12 12.1	+2.9
SCHQ	**Schefferville**	**46.76**	**15**	P	P	00 12 17.2	-1.9
	comp=Z,1.4nm,0.6s,mb4.0,baz=218,slow=8.1,SNR=5.5						
CMAR	**Chiang Mai Arr**	**150.63**	**350**	PKPbc	PKPbc	00 23 44.3	+2.0
	comp=Z,0.5nm,0.3s,baz=341,slow=2.1,SNR=5.7						

*ISCJB **17** 00:28:04.1±0.8, 16°.7S±0°.1×69°.61W±0°.09, h186km±8km, mb3.6/2, Error ellipse: s-maj=20.3km s-min=9.3km az=33.1*
*IDC **17** 00:28:05.1±2.1, 16°.64S×69°.61W, h175km±11km, mb3.7/1, mb1 3.6/4, mb1mx3.3/17, mbtmp3.5/4, Error ellipse: s-maj=54.8km s-min=15.6km az=17.0*
*NEIC **17** 00:28:05.2±1.3, 16°.72S×69°.56W, h180km±12km, mb3.6/1, Error ellipse: s-maj=22.7km s-min=12.0km az=68.0*

ISC 17 00:28:04.7±0.8, 16°.7S±0°.1×69°.67W±0°.08, h176km±8km, n14, σ0s82/18, mb3.6/2, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**1.54**	**74**	P	Pn	00 28 37.3	+0.6
	73nm,0.3s,baz=252,slow=6.9,SNR=2671						
LPAZ				S	Sn	00 29 01.6	+0.2
	baz=14,slow=19,SNR=2.1						
LPAZ	**La Paz**	**1.54**	**74**	*e*Pn	Pn	00 28 37.4	+0.7
LPAZ				S	Sn	00 29 01.6	+0.2
SIV	**San Ignacio**	**8.28**	**86**	P	Pn	00 30 00.9	-0.8
	0.8nm,0.3s,baz=273,slow=11,SNR=13						
SIV				S	Sn	00 31 27.3	-7.2
	0.4nm,0.3s,baz=345,slow=20,SNR=6.0						
NNA	**Nana**	**8.40**	**303**	P	Pn	00 30 04.1	+0.8
	16nm,0.3s,baz=128,slow=11,SNR=26						
NNA				S	Sn	00 31 35.8	-1.5
	4.1nm,0.3s,baz=12,slow=18,SNR=4.2						
NNA	**Nana**	**8.40**	**303**	S	Sn	00 31 35.8	-1.5
NNA				*e*Sn	Sn	00 31 36.5	-0.8
CPUP	**Villa Florida**	**14.93**	**132**	P	Pn	00 31 26.3	-0.7
	0.3nm,0.3s,baz=284,slow=12,SNR=4.1						
TRQA	**Tornquist**	**22.30**	**164**	*e*P	P	00 32 46.4	-1.2
PLCA	**Paso Flores**	**23.93**	**182**	*e*P	P	00 33 04.2	+1.7
WVT	**Waverly**	**55.31**	**342**	*e*P	P	00 37 20.1	+0.1
MIAR	**Mount Ida**	**55.83**	**336**	P	P	00 37 24.5	+0.7
ANMO	**Albuquerque**	**62.15**	**326**	*e*P	P	00 38 07.1	-0.1
	0.5nm,0.6s,mb3.5						
CMB	**Columbia Colle**	**72.33**	**320**	P	P	00 39 11.3	+0.1
TORD	**Torodi Ar. Bea**	**76.49**	**72**	P	P	00 39 35.5	-0.2
	1.0nm,0.5s,mb3.7,baz=261,slow=5.5,SNR=24						
SONM	**Songino Array**	**148.81**	**5**	PKPbc	PKPbc	00 47 32.7	+1.3
	0.5nm,0.5s,baz=329,slow=1.6,SNR=4.0						

*ISCJB **17** 00:32:51.9±0.4, 33°.23N±0°.04×91°.91E±0°.07, h10km, mb3.5/4, Error ellipse: s-maj=9.0km s-min=6.2km az=164.4*
*IDC **17** 00:32:53.4±1.5, 33°.19N×91°.92E, h0km, mb3.4/3, mb1 3.6/6, mb1mx3.4/25, mbtmp3.4/6, ML3.6/3, Error ellipse: s-maj=64.4km s-min=22.6km az=64.0*
*NEIC **17** 00:32:53.4±0.4, 33°.21N×91°.90E, h10km, mb3.5/3, Error ellipse: s-maj=8.9km s-min=6.5km az=50.0*

ISC 17 00:32:53.4±0.4, 33°.16N±0°.04×91°.87E±0°.07, h10km, n23, σ1s06/25, mb3.5/4, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.51**	**190**	Pg	Pb	00 33 54.3	-1.3
LSA				Sg	Pg	00 34 04.8	+4.2
LSA				smax			
	comp=N,30nm,0.7s						
LSA				smax			
	comp=E,60nm,0.7s						
LSA	**Lhasa**	**3.51**	**190**	*e*Pn	Pn	00 33 50.7	+2.7
LSA				*e*S	Sg	00 34 45.9	-0.2
ENH	**Enshi**	**15.27**	**96**	Pn	Pn	00 36 28.5	-0.6
MK31	**Makanchi Array**	**15.45**	**335**	Pn	Pn	00 36 31.6	+0.2
MKAR	**Makanchi Array**	**15.45**	**335**	Pn	Pn	00 36 29.4	-1.9
	comp=E,0.1nm,0.3s,baz=149,slow=14,SNR=2.7						
CHTO	**Chiang Mai**	**15.63**	**154**	Pn	Pn	00 36 34.2	+0.4
CMAR	**Chiang Mai Arr**	**15.96**	**155**	Pn	Pn	00 36 37.6	-0.5
	comp=E,0.2nm,0.3s,baz=332,slow=13,SNR=4.8						
AAK	**Ala-Archa**	**16.63**	**310**	*e*Pn	Pn	00 36 46.6	0.0
	comp=E,4.5nm,1.4s						
EKS2	**Erkin-Say**	**17.11**	**309**	Pn	Pn	00 36 53.5	+0.8
SONM	**Songino Array**	**18.30**	**33**	P	Pn	00 37 05.7	+0.2
	comp=E,0.1nm,0.3s,baz=216,slow=12,SNR=3.3						
ULN	**Ulaanbaatar**	**18.63**	**34**	P	Pn	00 37 11.1	-0.2
KBL	**Kabul**	**19.01**	**280**	*e*P	Pn	00 37 14.2	-1.8
KURK	**Kurchatov**	**20.07**	**335**	*e*P	P	00 37 27.2	+0.5
	comp=E,0.7nm,0.6s						
BJT	**Baijiatuau**	**20.64**	**64**	*e*P	P	00 37 31.9	-1.1
ZALV	**Zalesovo Beam**	**21.38**	**349**	P	P	00 37 42.7	+1.8
	comp=E,0.4nm,0.4s,mb3.1,baz=171,slow=10,SNR=1.9						
BVAR	**Borovoye Array**	**25.13**	**329**	P	P	00 38 19.6	+1.2
	comp=E,0.4nm,0.5s,mb3.2,baz=148,slow=12,SNR=2.8						
HIA	**Hailar**	**26.22**	**44**	P	P	00 38 27.9	-0.4
ARU	**Arti**	**32.63**	**326**	*e*P	P	00 39 24.9	-0.3
GNI	**Garni**	**38.09**	**294**	*e*P	P	00 40 12.6	+0.3
KIV	**Kislovodsk**	**39.42**	**301**	*e*P	P	00 40 22.6	-0.9
	comp=E,2.5nm,0.6s,mb4.1						
KWP	**Kalwaria Pacla**	**52.58**	**310**	P	P	00 42 07.2	+0.1
ASAR	**Alice Springs**	**69.27**	**139**	P	P	00 44 02.9	+2.0
	comp=E,0.9nm,0.8s,mb3.8,baz=323,slow=6.3,SNR=7.5						
ASAR	**Alice Springs**	**69.27**	**139**	P	P	00 44 02.9	+2.0

*ISCJB **17** 00:45:32.8±0.7, 37°.58N±0°.03×20°.60E±0°.04, h10km, Error ellipse: s-maj=5.5km s-min=3.2km az=147.4*
*CSEM **17** 00:45:33.6±0.3, 37°.63N×20°.67E, h1km, ML3.5/13, Error ellipse: s-maj=6.7km s-min=3.5km az=58.0*
*THE **17** 00:45:34.5, 37°.64N×20°.75E, h1km±2km, ML3.5/13, Error ellipse: s-maj=2.6km s-min=0.9km az=240.0*
*ATH **17** 00:45:34.6, 37°.66N×20°.71E, h13km±2km, MD3.7/23, ML3.0*
*NEIC **17** 00:45:34.6, 37°.66N×20°.71E, h13km, ML3.5(THE), ML3.0(ATH), After ATH.*

ISC 17 00:45:33.6±0.7, 37°.62N±0°.02×20°.67E±0°.04, h1km±3km, n98, σ1s06/152, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KFL	**Anninata**	**0.50**	**11**	P	Pg	00 45 43.2	+0.1
KFL				S	Sg	00 45 50.2	+0.6
KFL	**Anninata**	**0.50**	**11**	P	Pg	00 45 43.2	+0.1
KFL				S	Sg	00 45 50.2	+0.6
VLS	**Valsamata**	**0.56**	**354**	*e*Pg	Pg	00 45 44.8	+0.5
VLS				*e*Sb	Sg	00 45 52.7	+1.1
VLS	**Valsamata**	**0.56**	**354**	*e*PG	Pg	00 45 44.8	+0.5
VLS				*e*SB	Sg	00 45 52.7	+1.1
VLS	**Valsamata**	**0.56**	**354**	P	Pg	00 45 44.7	+0.4
VLS				S	Sg	00 45 52.7	+1.1
VLS	**Valsamata**	**0.56**	**354**	P	Pg	00 45 44.7	+0.4
VLS				S	Sg	00 45 52.7	+1.1
RLS	**Riolos of Patr**	**0.77**	**55**	*e*Pb	Pg	00 45 47.8	-0.5
RLS				*e*Sb	Sg	00 45 58.8	+0.5
RLS	**Riolos of Patr**	**0.77**	**55**	*e*PB	Pg	00 45 47.8	-0.5
RLS				*e*SB	Sg	00 45 58.8	+0.5
RLS	**Riolos of Patr**	**0.77**	**55**	*e*Pb	Pg	00 45 47.8	-0.5
RLS				*e*Sb	Sg	00 45 58.8	+0.5
LKD	**Levkas**	**1.08**	**359**	P	Pg	00 45 58.5	+4.1
LKD	**Levkas**	**1.08**	**359**	P	Pg	00 45 58.5	+4.1

JAN	**Janina**	**2.04**	**4**	*e*PG	**Pg**	**00 46 12.1**	**-0.6**
JAN	**Janina**	**2.04**	**4**	*e*Pg	**Pg**	**00 46 12.1**	**-0.6**
DID	**Didima**	**2.04**	**92**	*e*PB	**Pb**	**00 46 08.9**	**-2.6**
DID				*e*SN	**Sn**	**00 46 36.6**	**+1.3**
DID	**Didima**	**2.04**	**92**	P	**Pn**	**00 46 08.8**	**-0.4**
DID				S	**Sn**	**00 46 34.7**	**-0.6**
DID	**Didima**	**2.04**	**92**	P	**Pn**	**00 46 08.8**	**-0.4**
DID				S	**Sn**	**00 46 34.7**	**-0.6**
DID				*e*Sn	**Sn**	**00 46 36.6**	**+1.3**
LKR	**Lokris**	**2.11**	**60**	P	**Pn**	**00 46 12.0**	**+2.0**
LKR				S	**Sn**	**00 46 36.6**	**-0.3**
LKR	**Lokris**	**2.11**	**60**	P	**Pn**	**00 46 10.3**	**+0.3**
LKR				S	**Sn**	**00 46 36.6**	**-0.3**
LKR	**Lokris**	**2.11**	**60**	P	**Pn**	**00 46 10.3**	**+0.3**
LKR				S	**Sn**	**00 46 36.6**	**-0.3**
KEK	**Kerkira**	**2.20**	**342**	*e*Pg	**Pg**	**00 46 15.3**	**-0.4**
KEK	**Kerkira**	**2.20**	**342**	*e*PG	**Pg**	**00 46 15.3**	**-0.4**
KEK	**Kerkira**	**2.20**	**342**	*e*Pg	**Pg**	**00 46 15.3**	**-0.4**
THL	**Klokotos Trika**	**2.21**	**28**	*e*PN	**Pn**	**00 46 12.2**	**+0.8**
THL				*e*SN	**Sn**	**00 46 40.2**	**+0.8**
THL	**Klokotos Trika**	**2.21**	**28**	P	**Pn**	**00 46 12.3**	**+0.9**
THL				S	**Sn**	**00 46 40.0**	**+0.6**
THL	**Klokotos Trika**	**2.21**	**28**	*e*Pn	**Pn**	**00 46 12.2**	**+0.8**
THL				S	**Sn**	**00 46 40.0**	**+0.6**
NAIG	**Nisos Aigina**	**2.24**	**86**	*e*Pg	**Pg**	**00 46 14.7**	**-1.9**
NAIG	**Nisos Aigina**	**2.24**	**86**	*e*PG	**Pg**	**00 46 14.7**	**-1.9**
NAIG	**Nisos Aigina**	**2.24**	**86**	*e*Pg	**Pg**	**00 46 14.7**	**-1.9**
KYTH	**Kithira**	**2.32**	**124**	*e*Pn	**Pn**	**00 46 14.6**	**+1.6**
KYTH	**Kithira**	**2.32**	**124**	*e*PN	**Pn**	**00 46 14.6**	**+1.6**
KYTH	**Kithira**	**2.32**	**124**	*e*Pn	**Pn**	**00 46 14.6**	**+1.6**
ATH	**Athens Observa**	**2.44**	**81**	*e*Pn	**Pn**	**00 46 17.0**	**+2.4**
ATH	**Athens Observa**	**2.44**	**81**	*e*PN	**Pn**	**00 46 17.0**	**+2.4**
ATH	**Athens Observa**	**2.44**	**81**	*e*Pn	**Pn**	**00 46 17.0**	**+2.4**
VLY	**Voula,Athens**	**2.49**	**84**	*e*Pn	**Pn**	**00 46 16.3**	**+1.0**
VLY	**Voula,Athens**	**2.49**	**84**	*e*PN	**Pn**	**00 46 16.3**	**+1.0**
VLY	**Voula,Athens**	**2.49**	**84**	*e*Pn	**Pn**	**00 46 16.3**	**+1.0**
PTL	**Penteli**	**2.57**	**79**	*e*Pb	**Pb**	**00 46 16.9**	**-3.5**
PTL	**Penteli**	**2.57**	**79**	*e*PB	**Pb**	**00 46 16.9**	**-3.5**
PTL	**Penteli**	**2.57**	**79**	*e*Pb	**Pb**	**00 46 16.9**	**-3.5**
PLG	**Polygyros**	**3.50**	**37**	*e*Pn	**Pn**	**00 46 28.6**	**-0.6**
PLG	**Polygyros**	**3.50**	**37**	*e*PN	**Pn**	**00 46 28.6**	**-0.6**
PLG	**Polygyros**	**3.50**	**37**	*e*Pn	**Pn**	**00 46 28.6**	**-0.6**
HORT	**Hortiatis**	**3.52**	**32**	P	**Pn**	**00 46 31.6**	**+2.1**
HORT	**Hortiatis**	**3.52**	**32**	P	**Pn**	**00 46 31.6**	**+2.1**
SOH	**Sokhos**	**3.82**	**32**	*e*Pn	**Pn**	**00 46 34.3**	**+0.8**
SOH	**Sokhos**	**3.82**	**32**	*e*PN	**Pn**	**00 46 34.3**	**+0.8**
SOH	**Sokhos**	**3.82**	**32**	*e*Pn	**Pn**	**00 46 34.3**	**+0.8**
STON	**Ston**	**5.71**	**338**	*e*Pn	**Pn**	**00 46 57.2**	**-2.4**
STON				Sn	**Sn**	**00 47 57.5**	**-8.3**
STON	**Ston**	**5.71**	**338**	*e*Pn	**Pn**	**00 46 57.2**	**-2.4**

*MDD **17** 00:46:57.2±1.3,36°.80N×13°.69W,h0km,mb4.5/5,Error ellipse: s-maj=17.9km s-min=11.8km az=148.0*
*NEIC **17** 00:46:59.8,37°.02N×13°.57W,h0km,MG4.3(MDD),After MDD.*
*CSEM **17** 00:47:00.1±0.5,36°.80N×13°.60W,h30km,ML3.2/15,Error ellipse: s-maj=13.3km s-min=8.9km az=151.0*
*IGIL **17** 00:47:00.2,37°.02N×13°.57W,h2km,ML2.8*
*LDG **17** 00:47:01.6±0.3,36°.88N×13°.73W,h30km,Ml3.2/4,Error ellipse: s-maj=4.9km s-min=4.8km az=136.0*
INMG 17 00:47:02.0±0.9,36°.79N×13°.84W,h10km,ML2.6,4C, Error ellipse: s-maj=4.9km s-min=2.1km az=131.0, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**4.03**	**84**	*e*Pn	Pn	00 47 57.9	-5.8
PFVI				*e*Sn	Sn	00 48 39.2	-12
PFVI				A		00 48 47.4	
	5.5nm,0.6s						
PFVI	**Vila Bisbo**	**4.03**	**84**	⇑Pn	Pn	00 47 58.0	-5.8
PFVI				Sn	Sn	00 48 39.9	-11
PFVI	**Vila Bisbo**	**4.03**	**84**	⇑Pn	Pn	00 47 57.9	-5.8
	5.8nm,0.1s,SNR=18						
PFVI				Sn	Sn	00 48 39.9	-11
	7.3nm,0.1s,SNR=7.5						
PFVI	**Vila Bisbo**	**4.03**	**84**	⇑Pn	Pn	00 47 57.9	-5.8
	5.8nm,0.1s,SNR=18						
PFVI				Sn	Sn	00 48 39.9	-11
	7.3nm,0.1s,SNR=7.5						
PFVI	**Vila Bisbo**	**4.03**	**84**	⇑Pn	Pn	00 47 58.0	-5.7
PFVI				*e*Sn	Sn	00 48 39.2	-12
	5.5nm,0.6s						
PTEO	**Sao Teotonio**	**4.15**	**78**	*e*Pn	Pn	00 47 59.6	-5.8
PTEO				*e*Sn	Sn	00 48 42.0	-12
PTEO				A		00 48 48.5	
	5.7nm,0.6s						
PTEO	**Sao Teotonio**	**4.15**	**78**	Pn	Pn	00 47 59.6	-5.8
PTEO				Sn	Sn	00 48 42.0	-12
	2.8nm,0.6s						
PTEO	**Sao Teotonio**	**4.15**	**78**	Pn	Pn	00 47 59.6	-5.8
PTEO				Sn	Sn	00 48 42.0	-12
	2.8nm,0.6s						
PTEO	**Sao Teotonio**	**4.15**	**78**	*e*Pn	Pn	00 47 59.6	-5.8
PTEO				*e*Sn	Sn	00 48 42.0	-12
	5.7nm,0.6s						
MORF	**Marmelete**	**4.18**	**81**	*e*Pn	Pn	00 48 00.0	-5.8
MORF				*e*Sn	Sn	00 48 43.4	-11
MORF				A		00 48 45.5	
	7.9nm,0.1s						
MORF	**Marmelete**	**4.18**	**81**	Pn	Pn	00 48 00.0	-5.8
MORF				Sn	Sn	00 48 43.4	-11
	7.9nm,0.1s						
MORF	**Marmelete**	**4.18**	**81**	Pn	Pn	00 48 00.0	-5.8
MORF				Sn	Sn	00 48 43.4	-11
	7.9nm,0.1s						
MORF	**Marmelete**	**4.18**	**81**	*e*Pn	Pn	00 48 00.0	-5.8
MORF				*e*Sn	Sn	00 48 43.4	-11
	7.9nm,0.1s						
PMAFR	**Mafra**	**4.20**	**58**	*e*Pn	Pn	00 48 00.2	-5.9
PMAFR				*e*Sn	Sn	00 48 44.5	-11
PMAFR				A		00 49 07.7	
	15nm,0.6s						
PMAFR	**Mafra**	**4.20**	**58**	Pn	Pn	00 48 00.2	-5.8
	4.4nm,0.1s,SNR=9.0						
PMAFR				Sn	Sn	00 48 44.6	-11
	3.9nm,0.1s,SNR=7.9						
PMAFR	**Mafra**	**4.20**	**58**	Pn	Pn	00 48 00.2	-5.8
	4.4nm,0.1s,SNR=9.0						
PMAFR				Sn	Sn	00 48 44.6	-11
	3.9nm,0.1s,SNR=7.9						
PMAFR	**Mafra**	**4.20**	**58**	*e*Pn	Pn	00 48 00.2	-5.9
PMAFR				*e*Sn	Sn	00 48 44.5	-11
	15nm,0.6s						
PMPS	**Porto Santo**	**4.25**	**210**	*e*Pn	Pn	00 48 00.5	-6.3
PMPS				*e*Sn	Sn	00 48 42.8	-14
PMPS				A		00 48 49.8	
	22nm,0.7s						
PMPS	**Porto Santo**	**4.25**	**210**	Pn	Pn	00 48 00.5	-6.3
PMPS				Sn	Sn	00 48 42.8	-14
	11nm,0.7s						
PMPS	**Porto Santo**	**4.25**	**210**	Pn	Pn	00 48 00.5	-6.3
PMPS				Sn	Sn	00 48 42.8	-14
	11nm,0.7s						
PMPS	**Porto Santo**	**4.25**	**210**	*e*Pn	Pn	00 48 00.5	-6.3
PMPS				*e*Sn	Sn	00 48 42.8	-14
	22nm,0.7s						
MESJ	**Messejana**	**4.60**	**75**	*e*P	Pn	00 48 05.4	-6.2
MESJ				*e*S	Sn	00 48 52.7	-12
MESJ	**Messejana**	**4.60**	**75**	Pn	Pn	00 48 05.4	-6.2
MESJ				Sn	Sn	00 48 52.7	-12
MESJ	**Messejana**	**4.60**	**75**	Pn	Pn	00 48 05.4	-6.2
MESJ				Sn	Sn	00 48 52.7	-12
MESJ	**Messejana**	**4.60**	**75**	*e*P	Pn	00 48 05.4	-6.2
MESJ				*e*S	Sn	00 48 52.7	-12
MOE	**Montemor**	**4.68**	**67**	*e*Pn	Pn	00 48 06.7	-6.0
MOE				*e*Sn	Sn	00 48 55.0	-12
MOE	**Montemor**	**4.68**	**67**	*e*Pn	Pn	00 48 06.7	-6.0
MOE				*e*Sn	Sn	00 48 55.0	-12
PCVE	**Castro Verde**	**4.71**	**78**	*e*Pn	Pn	00 48 07.0	-6.0
PCVE				*e*Sn	Sn	00 48 55.5	-12
PCVE				A		00 49 01.4	
	2.9nm,0.3s						
PCVE	**Castro Verde**	**4.71**	**78**	Pn	Pn	00 48 07.0	-6.0
PCVE				Sn	Sn	00 48 55.5	-12
	2.9nm,0.3s						
PCVE	**Castro Verde**	**4.71**	**78**	Pn	Pn	00 48 07.0	-6.0
PCVE				Sn	Sn	00 48 55.5	-12
	2.9nm,0.3s						
PCVE	**Castro Verde**	**4.71**	**78**	*e*Pn	Pn	00 48 07.0	-6.0
PCVE				*e*Sn	Sn	00 48 55.5	-12
	2.9nm,0.3s						
PBDV	**Barranco-do-Ve**	**4.75**	**83**	*e*Pn	Pn	00 48 08.3	-5.3
PBDV				*e*Sn	Sn	00 48 57.8	-11
PBDV				A		00 49 07.5	
	5.0nm,0.3s						
PBDV	**Barranco-do-Ve**	**4.75**	**83**	Pn	Pn	00 48 08.3	-5.3
PBDV				Sn	Sn	00 48 57.8	-11
	5.0nm,0.3s						
PBDV	**Barranco-do-Ve**	**4.75**	**83**	Pn	Pn	00 48 08.3	-5.3
PBDV				Sn	Sn	00 48 57.8	-11
	5.0nm,0.3s						
PBDV	**Barranco-do-Ve**	**4.75**	**83**	*e*Pn	Pn	00 48 08.3	-5.3
PBDV				*e*Sn	Sn	00 48 57.8	-11
	5.0nm,0.3s						
PMAR	**Madeira**	**4.78**	**213**	*e*Sn	Sn	00 48 58.1	-12
PMAR	**Madeira**	**4.78**	**213**	Sn	Sn	00 48 58.1	-12
PMAR	**Madeira**	**4.78**	**213**	Sn	Sn	00 48 58.1	-12
PMAR	**Madeira**	**4.78**	**213**	*e*Sn	Sn	00 48 58.1	-12
EVOP	**Sao Brissos**	**4.85**	**67**	*e*Pn	Pn	00 48 08.7	-6.4
EVOP				*e*Sn	Sn	00 48 59.8	-11
	1.8nm,0.3s						
FUL	**Funchal**	**4.86**	**212**	*e*Sn	Sn	00 48 58.7	-13
FUL				A		00 49 01.9	
	13nm,0.2s						
FUL	**Funchal**	**4.86**	**212**	Sn	Sn	00 48 58.7	-13
	6.6nm,0.2s						
FUL	**Funchal**	**4.86**	**212**	Sn	Sn	00 48 58.7	-13
	6.6nm,0.2s						
FUL	**Funchal**	**4.86**	**212**	*e*Sn	Sn	00 48 58.7	-13
	13nm,0.2s						
PBEJ	**Beja**	**4.91**	**74**	*e*Pn	Pn	00 48 09.7	-6.1
PBEJ				*e*Sn	Sn	00 49 00.6	-12
PBEJ				A		00 49 14.3	
	1.5nm,0.5s						
PBEJ	**Beja**	**4.91**	**74**	Pn	Pn	00 48 09.7	-6.1
PBEJ				Sn	Sn	00 49 00.6	-12
	0.8nm,0.5s						
PBEJ	**Beja**	**4.91**	**74**	Pn	Pn	00 48 09.7	-6.1
PBEJ				Sn	Sn	00 49 00.6	-12
	0.8nm,0.5s						
PBEJ	**Beja**	**4.91**	**74**	*e*Pn	Pn	00 48 09.7	-6.1
PBEJ				*e*Sn	Sn	00 49 00.6	-12
	1.5nm,0.5s						
PVAQ	**Vaqueiros**	**4.93**	**81**	*e*Pn	Pn	00 48 10.6	-5.5
PVAQ				*e*Sn	Sn	00 49 01.0	-12
PVAQ				A		00 49 06.4	
	6.3nm,0.1s						
PVAQ	**Vaqueiros**	**4.93**	**81**	Pn	Pn	00 48 10.6	-5.5
PVAQ				Sn	Sn	00 49 01.0	-12
	6.3nm,0.1s						
PVAQ	**Vaqueiros**	**4.93**	**81**	Pn	Pn	00 48 10.6	-5.5
PVAQ				Sn	Sn	00 49 01.0	-12
	6.3nm,0.1s						
PVAQ	**Vaqueiros**	**4.93**	**81**	*e*Pn	Pn	00 48 10.6	-5.5
PVAQ				*e*Sn	Sn	00 49 01.0	-12
	6.3nm,0.1s						
EVO	**Evora**	**4.94**	**68**	*e*Pn	Pn	00 48 08.7	-7.5
EVO				*e*Sn	Sn	00 48 59.8	-14
	3.5nm,0.3s						
EVO	**Evora**	**4.94**	**68**	*e*Pn	Pn	00 48 10.0	-6.2
EVO				*e*Sn	Sn	00 49 00.6	-13
EVO				A		00 49 21.1	
	5.4nm,0.1s						
EVO	**Evora**	**4.94**	**68**	Pn	Pn	00 48 10.0	-6.2
EVO				Sn	Sn	00 49 00.6	-13
	5.4nm,0.1s						
EVO	**Evora**	**4.94**	**68**	Pn	Pn	00 48 10.0	-6.2
EVO				Sn	Sn	00 49 00.6	-13
	5.4nm,0.1s						
EVO	**Evora**	**4.94**	**68**	*e*Pn	Pn	00 48 10.0	-6.2
EVO				*e*Sn	Sn	00 49 00.6	-13
	5.4nm,0.1s						
PTOM	**Tomar**	**5.12**	**55**	*e*Pn	Pn	00 48 13.3	-5.4
PTOM				*e*Sn	Sn	00 49 05.8	-12
PTOM				A		00 49 15.0	
	9.2nm,0.8s						
PTOM	**Tomar**	**5.12**	**55**	Pn	Pn	00 48 13.3	-5.4
PTOM				Sn	Sn	00 49 05.8	-12
	4.6nm,0.8s						
PTOM	**Tomar**	**5.12**	**55**	Pn	Pn	00 48 13.3	-5.4
PTOM				Sn	Sn	00 49 05.8	-12
	4.6nm,0.8s						
PTOM	**Tomar**	**5.12**	**55**	*e*Pn	Pn	00 48 13.3	-5.4
PTOM				*e*Sn	Sn	00 49 05.8	-12
	9.2nm,0.8s						
EGRO	**El Granado**	**5.13**	**80**	Pn	Pn	00 48 13.1	-5.8
EGRO				Sn	Sn	00 49 06.7	-11
EGRO	**El Granado**	**5.13**	**80**	Pn	Pn	00 48 13.1	-5.8
	0.9nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	00 49 06.7	-11
	3.2nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**5.13**	**80**	Pn	Pn	00 48 13.1	-5.8
	0.9nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	00 49 06.7	-11
	3.2nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**5.13**	**80**	Pn	Pn	00 48 13.1	-5.7
	0.6nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	00 49 06.7	-11
	3.2nm,0.1s,SNR=7.9						
PESTR	**Estremoz**	**5.36**	**65**	*e*Pn	Pn	00 48 16.2	-5.8
PESTR				*e*Sn	Sn	00 49 12.4	-11
PESTR				A		00 49 23.3	
	3.2nm,0.6s						
PESTR	**Estremoz**	**5.36**	**65**	Pn	Pn	00 48 16.2	-5.8
PESTR				Sn	Sn	00 49 12.4	-11
	1.6nm,0.6s						
PESTR	**Estremoz**	**5.36**	**65**	Pn	Pn	00 48 16.2	-5.8
PESTR				Sn	Sn	00 49 12.4	-11
	1.6nm,0.6s						
PESTR	**Estremoz**	**5.36**	**65**	*e*Pn	Pn	00 48 16.2	-5.8
PESTR				*e*Sn	Sn	00 49 12.4	-11
	3.2nm,0.6s						
PBAR	**Barrancos**	**5.58**	**74**	*e*Pn	Pn	00 48 19.4	-5.6
PBAR				*e*Sn	Sn	00 49 17.0	-12
PBAR				A		00 49 21.5	
	1.4nm,0.3s						
PBAR	**Barrancos**	**5.58**	**74**	Pn	Pn	00 48 19.4	-5.6
PBAR				Sn	Sn	00 49 17.0	-12
	1.4nm,0.3s						
PBAR	**Barrancos**	**5.58**	**74**	Pn	Pn	00 48 19.4	-5.6
PBAR				Sn	Sn	00 49 17.0	-12
	1.4nm,0.3s						
PBAR	**Barrancos**	**5.58**	**74**	*e*Pn	Pn	00 48 19.4	-5.6
PBAR				*e*Sn	Sn	00 49 17.0	-12
	1.4nm,0.3s						
PMRV	**Marv??o**	**5.72**	**61**	*e*Pn	Pn	00 48 20.7	-6.3
PMRV				*e*Sn	Sn	00 49 20.3	-12
PMRV				A		00 49 33.7	
	3.0nm,0.4s						
PMRV	**Marv??o**	**5.72**	**61**	Pn	Pn	00 48 20.7	-6.3
PMRV				Sn	Sn	00 49 20.3	-12
	3.0nm,0.4s						
PMRV	**Marv??o**	**5.72**	**61**	Pn	Pn	00 48 20.7	-6.3
PMRV				Sn	Sn	00 49 20.3	-12
	3.0nm,0.4s						
PMRV	**Marv??o**	**5.72**	**61**	*e*Pn	Pn	00 48 20.7	-6.3
PMRV				*e*Sn	Sn	00 49 20.3	-12
	3.0nm,0.4s						
EBAD	**Badajoz**	**5.75**	**68**	Pn	Pn	00 48 20.8	-6.6
EBAD				Sn	Sn	00 49 22.2	-11
EBAD	**Badajoz**	**5.75**	**68**	Pn	Pn	00 48 20.8	-6.6
	0.9nm,0.1s,SNR=12						
EBAD				Sn	Sn	00 49 22.2	-11
	1.6nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**5.75**	**68**	Pn	Pn	00 48 20.8	-6.6
	0.9nm,0.1s,SNR=12						
EBAD				Sn	Sn	00 49 22.2	-11
	1.6nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**5.75**	**68**	Pn	Pn	00 48 20.8	-6.6
	0.4nm,0.1s,SNR=12						
EBAD				Sn	Sn	00 49 22.2	-11
	1.6nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.80**	**78**	Pn	Pn	00 48 22.3	-5.7
EMIN				Sn	Sn	00 49 24.8	-10
EMIN	**Mina Concepcio**	**5.80**	**78**	Pn	Pn	00 48 22.3	-5.7
	0.9nm,0.1s,SNR=12						
EMIN				Sn	Sn	00 49 21.6	-13
	1.5nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.80**	**78**	Pn	Pn	00 48 22.3	-5.7
	0.9nm,0.1s,SNR=12						
EMIN				Sn	Sn	00 49 21.6	-13
	1.5nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.80**	**78**	Pn	Pn	00 48 22.3	-5.7
	0.4nm,0.1s,SNR=12						
PVIS	**Viseu**	**6.08**	**48**	*e*Pn	Pn	00 48 25.2	-6.6
PVIS				*e*Sn	Sn	00 48 28.2	-13
PVIS				A		00 49 35.3	
	5.1nm,0.3s						
PVIS	**Viseu**	**6.08**	**48**	Pn	Pn	00 48 25.2	-6.6
PVIS				Sn	Sn	00 49 28.2	-13
	2.6nm,0.3s						
PVIS	**Viseu**	**6.08**	**48**	Pn	Pn	00 48 25.2	-6.6
PVIS				Sn	Sn	00 49 28.2	-13
	2.6nm,0.3s						
PVIS	**Viseu**	**6.08**	**48**	*e*Pn	Pn	00 48 25.2	-6.6
PVIS				*e*Sn	Sn	00 49 28.2	-13
	5.1nm,0.3s						
ESPR	**Espera**	**6.40**	**87**	Pn	Pn	00 48 31.2	-5.1
ESPR				Sn	Sn	00 49 39.1	-10
ESPR	**Espera**	**6.40**	**87**	Pn	Pn	00 48 31.3	-5.1
	1.9nm,0.2s,SNR=4.0						
ESPR				Sn	Sn	00 49 39.1	-10
	5.3nm,0.2s,SNR=7.9						
ESPR	**Espera**	**6.40**	**87**	Pn	Pn	00 48 31.3	-5.1
	1.9nm,0.2s,SNR=4.0						
ESPR				Sn	Sn	00 49 39.1	-10
	5.3nm,0.2s,SNR=7.9						
ESPR	**Espera**	**6.40**	**87**	Pn	Pn	00 48 31.2	-5.1
ESPR				Sn	Sn	00 49 39.1	-10
	5.3nm,0.2s,SNR=7.9						
PVRL	**Vila Real**	**6.54**	**45**	*e*Sn	Sn	00 49 39.6	-13
PVRL				A		00 49 42.2	
	4.1nm,0.3s						
PVRL	**Vila Real**	**6.54**	**45**	Sn	Sn	00 49 39.6	-13
	2.0nm,0.3s						
PVRL	**Vila Real**	**6.54**	**45**	Sn	Sn	00 49 39.6	-13
	2.0nm,0.3s						
PVRL	**Vila Real**	**6.54**	**45**	*e*Sn	Sn	00 49 39.6	-13
	4.1nm,0.3s						
PCAB	**Cabril**	**6.67**	**41**	*e*Pn	Pn	00 48 33.2	-6.7
PCAB				*e*Sn	Sn	00 49 42.0	-14
PCAB				A		00 49 45.3	
	4.8nm,0.1s						
PCAB	**Cabril**	**6.67**	**41**	Pn	Pn	00 48 33.2	-6.7
PCAB				Sn	Sn	00 49 42.0	-14
	2.4nm,0.1s						
PCAB	**Cabril**	**6.67**	**41**	Pn	Pn	00 48 33.2	-6.7
PCAB				Sn	Sn	00 49 42.0	-14
	2.4nm,0.1s						
PCAB	**Cabril**	**6.67**	**41**	*e*Pn	Pn	00 48 33.2	-6.7
PCAB				*e*Sn	Sn	00 49 42.0	-14
	4.8nm,0.1s						
ELOB	**Lobios**	**6.76**	**40**	Pn	Pn	00 48 35.0	-6.3
ELOB				Sn	Sn	00 49 43.4	-15
ELOB	**Lobios**	**6.76**	**40**	Pn	Pn	00 48 35.0	-6.3
	0.4nm,0.1s,SNR=7.9						
ELOB				Sn	Sn	00 49 43.4	-15
	1.8nm,0.1s,SNR=6.6						
ELOB	**Lobios**	**6.76**	**40**	Pn	Pn	00 48 35.0	-6.3
	0.4nm,0.1s,SNR=7.9						
ELOB				Sn	Sn	00 49 43.4	-15
	1.8nm,0.1s,SNR=6.6						
ELOB	**Lobios**	**6.76**	**40**	Pn	Pn	00 48 35.0	-6.2
	0.5nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**6.82**	**77**	Pn	Pn	00 48 36.7	-5.4
ECAB				Sn	Sn	00 49 46.4	-13
ECAB	**El Cabril**	**6.82**	**77**	Pn	Pn	00 48 36.7	-5.4
	0.9nm,0.2s,SNR=6.1						
ECAB				Sn	Sn	00 49 46.4	-13
	SNR=7.9						
ECAB	**El Cabril**	**6.82**	**77**	Pn	Pn	00 48 36.7	-5.4
	0.9nm,0.2s,SNR=6.1						
ECAB				Sn	Sn	00 49 46.4	-13
	SNR=7.9						
ECAB	**El Cabril**	**6.82**	**77**	Pn	Pn	00 48 36.7	-5.4
	0.7nm,0.1s,SNR=6.1						
ECAB				Sn	Sn	00 49 46.4	-13
	SNR=7.9						
MVO	**Moncorvo**	**6.87**	**48**	*e*Pn	Pn	00 48 36.7	-6.0
MVO				*e*Sn	Sn	00 49 47.5	-13
MVO				A		00 49 49.2	
	3.6nm,0.3s						
MVO	**Moncorvo**	**6.87**	**48**	Pn	Pn	00 48 36.6	-6.1
MVO				Sn	Sn	00 49 48.1	-13
MVO	**Moncorvo**	**6.87**	**48**	Pn	Pn	00 48 36.6	-6.1
	0.8nm,0.1s,SNR=4.0						
MVO				Sn	Sn	00 49 46.0	-15
	1.1nm,0.1s,SNR=6.2						
MVO	**Moncorvo**	**6.87**	**48**	Pn	Pn	00 48 36.6	-6.1
	0.8nm,0.1s,SNR=4.0						
MVO				Sn	Sn	00 49 46.0	-15
	1.1nm,0.1s,SNR=6.2						
MVO	**Moncorvo**	**6.87**	**48**	*e*Pn	Pn	00 48 36.7	-6.0
MVO				*e*Sn	Sn	00 49 47.5	-13
	3.6nm,0.3s						
EPLA	**Plasencia**	**6.91**	**59**	Pn	Pn	00 48 37.5	-5.8
EPLA				Sn	Sn	00 49 49.3	-13
EPLA	**Plasencia**	**6.91**	**59**	Pn	Pn	00 48 37.5	-5.8
	0.4nm,0.1s,SNR=7.9						
EPLA				Sn	Sn	00 49 49.3	-13
	0.6nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	**6.91**	**59**	Pn	Pn	00 48 37.5	-5.8
	0.4nm,0.1s,SNR=7.9						
EPLA				Sn	Sn	00 49 49.3	-13
	0.6nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	**6.91**	**59**	Pn	Pn	00 48 37.5	-5.8
	0

	1.6nm,0.5s						
SJPF	**Ste Jean**	**11.55**	**53**	Pn	Pn	00 49 40.5	-6.4
SJPF				Sn	Sn	00 51 39.7	-16
	0.8nm,0.5s						
SJPF	**Ste Jean**	**11.55**	**53**	Pn	Pn	00 49 40.5	-6.4
SJPF				Sn	Sn	00 51 39.7	-16
	0.8nm,0.5s						
ETSF	**Etsaut**	**11.88**	**55**	*e*Pn	Pn	00 49 45.0	-6.4
ETSF				*e*Sn	Sn	00 51 47.8	-16
	1.0nm,0.6s						
ETSF	**Etsaut**	**11.88**	**55**	Pn	Pn	00 49 45.0	-6.4
ETSF				Sn	Sn	00 51 47.8	-16
	0.5nm,0.6s						
ETSF	**Etsaut**	**11.88**	**55**	*e*Pn	Pn	00 49 45.0	-6.4
ETSF				*e*Sn	Sn	00 51 47.8	-16
	0.5nm,0.6s						
ETSF	**Etsaut**	**11.88**	**55**	*e*Pn	Pn	00 49 45.0	-6.4
ETSF				Sn	Sn	00 51 47.8	-16
	0.5nm,0.6s						
EPF	**Esparros**	**12.54**	**56**	*e*Pn	Pn	00 49 53.9	-6.4
EPF				*e*Sn	Sn	00 52 03.1	-17
	0.4nm,0.3s						
EPF	**Esparros**	**12.54**	**56**	Pn	Pn	00 49 53.9	-6.4
EPF				Sn	Sn	00 52 03.1	-17
	0.2nm,0.3s						
EPF	**Esparros**	**12.54**	**56**	Pn	Pn	00 49 53.9	-6.4
EPF				Sn	Sn	00 52 03.1	-17
	0.2nm,0.3s						
EPF	**Esparros**	**12.54**	**56**	*e*Pn	Pn	00 49 53.9	-6.4
EPF				*e*Sn	Sn	00 52 03.1	-17
	0.2nm,0.3s						

NEIC ***17*** *01:00:30.3, 39°.40N×26°.47E, h16km, MD3.4(ATH), After ATH.*
ATH ***17*** *01:00:30.5, 39°.40N×26°.44E, h16km±1km, MD3.4/4*
CSEM ***17*** *01:00:31.7±0.1, 39°.38N×26°.29E, h8km, ML3.2/5, Error ellipse: s-maj=2.9km s-min=2.1km az=92.0*
ISK ***17*** *01:00:31.0, 39°.40N×26°.31E, h5km, MD3.1*
DDA ***17*** *01:00:31.4, 39°.43N×26°.27E, h21km±3km, Md3.1*
ISCJB ***17*** *01:00:31.3±0.3, 39°.39N±0°.01×26°.29E±0°.03, h7km±3km, Error ellipse: s-maj=4.3km s-min=2.5km az=179.3*
THE ***17*** *01:00:32.5, 39°.38N×26°.26E, h10km±1km, ML3.2/5, Error ellipse: s-maj=1.4km s-min=0.5km az=238.0*

ISC 17 01:00:32.0±0.3**, 39°.39N**±0°.02**×26°.28E**±0°.04**, h10**km±3km**, n90, σ0s75**/125**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.15**	**183**	*e*Pb	**Pg**	**01 00 35.5**	**+0.2**
PRK				*e*Sb	**Sg**	**01 00 38.6**	**+1.1**
PRK	**Paraskevi**	**0.15**	**183**	*e*PB	**Pg**	**01 00 35.5**	**+0.2**
PRK				*e*SB	**Sg**	**01 00 38.6**	**+1.1**
PRK	**Paraskevi**	**0.15**	**183**	P	**Pg**	**01 00 35.4**	**+0.1**
PRK				S	**Sg**	**01 00 38.0**	**+0.5**
PRK	**Paraskevi**	**0.15**	**183**	P	**Pg**	**01 00 35.4**	**+0.1**
PRK				S	**Sg**	**01 00 38.0**	**+0.5**
PRK				*e*Sb	**Sg**	**01 00 38.6**	**+1.1**
AYVA	**Ayvalik**	**0.33**	**105**	*i* P	**Pg**	**01 00 43.0**	**+4.6**
AYVA				*i* S	**Sg**	**01 00 49.0**	**+6.1**
SIGR	**SIGRI**	**0.38**	**241**	P	**Pg**	**01 00 39.7**	**+0.3**
SIGR				S	**Sg**	**01 00 45.3**	**+0.8**
SIGR	**SIGRI**	**0.38**	**241**	P	**Pg**	**01 00 39.7**	**+0.3**
SIGR				S	**Sg**	**01 00 45.3**	**+0.8**
EZN	**Ezine**	**0.43**	**4**	PG	**Pg**	**01 00 40.3**	**-0.2**
EZN				*e*SG	**Sg**	**01 00 46.3**	**+0.1**
EZN	**Ezine**	**0.43**	**4**	*i* Pg	**Pg**	**01 00 40.3**	**-0.2**
EZN				*e*Sg	**Sg**	**01 00 46.3**	**+0.1**
BOZC	**Bozcaada**	**0.48**	**338**	*i* P	**Pg**	**01 00 41.2**	**-0.2**
BOZC				*i* S	**Sg**	**01 00 47.5**	**-0.2**
GADA	**Gvkgeada**	**0.85**	**340**	*e*PG	**Pg**	**01 00 47.8**	**-0.6**
GADA				*e*SG	**Sg**	**01 00 59.8**	**+0.3**
GADA	**Gvkgeada**	**0.85**	**340**	*e*Pg	**Pg**	**01 00 47.8**	**-0.6**
GADA				*e*Sg	**Sg**	**01 00 59.8**	**+0.3**
LIA	**Limnos Island**	**0.99**	**301**	*e*Pn	**Pg**	**01 00 51.2**	**+0.2**
LIA	**Limnos Island**	**0.99**	**301**	*e*PN	**Pg**	**01 00 51.2**	**+0.2**
LIA	**Limnos Island**	**0.99**	**301**	P	**Pg**	**01 00 51.1**	**+0.1**
LIA				S	**Sg**	**01 01 04.7**	**+0.9**
LIA	**Limnos Island**	**0.99**	**301**	P	**Pg**	**01 00 51.1**	**+0.1**
LIA				S	**Sg**	**01 01 04.7**	**+0.9**
GELI	**Tayfur-Gelibol**	**1.01**	**8**	*e*PG	**Pg**	**01 00 50.6**	**-0.9**
GELI				*e*SG	**Sg**	**01 01 05.0**	**+0.3**
GELI	**Tayfur-Gelibol**	**1.01**	**8**	*e*Pg	**Pg**	**01 00 50.6**	**-0.9**
GELI				*e*Sg	**Sg**	**01 01 05.0**	**+0.3**
CHOS	**Chios island**	**1.02**	**190**	*e*PN	**Pg**	**01 00 51.0**	**-0.6**
CHOS				*e*SN	**Sg**	**01 01 05.0**	**+0.1**
CHOS	**Chios island**	**1.02**	**190**	P	**Pg**	**01 00 51.2**	**-0.4**
CHOS				S	**Sg**	**01 01 05.2**	**+0.3**
CHOS	**Chios island**	**1.02**	**190**	P	**Pg**	**01 00 51.2**	**-0.4**
CHOS				S	**Sg**	**01 01 05.2**	**+0.3**
LPK	**Lapseki**	**1.04**	**20**	*e*PG	**Pg**	**01 00 51.1**	**-1.0**
LPK	**Lapseki**	**1.04**	**20**	*e*Pg	**Pg**	**01 00 51.1**	**-1.0**
URLA	**Izmir**	**1.06**	**167**	*i* P	**Pg**	**01 00 51.4**	**-0.9**
URLA				*i* S	**Sg**	**01 01 07.0**	**+0.9**
URLA	**Izmir**	**1.06**	**167**	*i* P	**Pg**	**01 00 51.4**	**-1.0**
URLA				*i* S	**Sg**	**01 01 07.1**	**+1.0**
BALY	**Balya**	**1.09**	**71**	*i* P	**Pg**	**01 00 52.3**	**-0.7**
BALY				*i* S	**Sg**	**01 01 07.5**	**+0.4**
BALY	**Balya**	**1.09**	**71**	*i* P	**Pg**	**01 00 52.3**	**-0.6**
BALY				*i* S	**Sg**	**01 01 07.5**	**+0.4**
BLCB	**Balcova**	**1.17**	**149**	*e*PN	**Pn**	**01 00 53.8**	**-0.6**
BLCB	**Balcova**	**1.17**	**149**	P	**Pb**	**01 00 53.6**	**-0.7**
BLCB				S	**Sb**	**01 01 10.3**	**+0.9**
BLCB	**Balcova**	**1.17**	**149**	P	**Pb**	**01 00 53.6**	**-0.7**
BLCB				S	**Sb**	**01 01 10.3**	**+0.9**
IZM	**Izmir**	**1.25**	**142**	*e*PN	**Pn**	**01 00 55.1**	**-0.5**
IZM	**Izmir**	**1.25**	**142**	*e*Pn	**Pn**	**01 00 55.1**	**-0.5**
BALB	**Balikesir**	**1.26**	**78**	*e*PN	**Pn**	**01 00 54.9**	**-0.7**
BALB	**Balikesir**	**1.26**	**78**	*e*Pn	**Pn**	**01 00 54.9**	**-0.8**
GONE	**Gonen-Balikesi**	**1.26**	**58**	*e*PN	**Pn**	**01 00 55.2**	**-0.5**
GONE	**Gonen-Balikesi**	**1.26**	**58**	*e*Pn	**Pn**	**01 00 55.2**	**-0.5**
KRBG	**Karabiga-Canak**	**1.27**	**38**	*e*PN	**Pn**	**01 00 54.9**	**-0.8**
KRBG	**Karabiga-Canak**	**1.27**	**38**	*e*Pn	**Pn**	**01 00 54.9**	**-0.9**
ERIK	**Erikli-Kesan**	**1.29**	**8**	*e*PN	**Pn**	**01 00 55.6**	**-0.4**
ERIK	**Erikli-Kesan**	**1.29**	**8**	*e*Pn	**Pn**	**01 00 55.6**	**-0.5**
AKS	**Akhisar**	**1.30**	**113**	*e*PN	**Pn**	**01 00 55.6**	**-0.5**
AKS	**Akhisar**	**1.30**	**113**	*e*Pn	**Pn**	**01 00 55.6**	**-0.6**
ENEZ	**Enez**	**1.34**	**356**	*e*PN	**Pn**	**01 00 56.9**	**0.0**
ENEZ	**Enez**	**1.34**	**356**	*e*Pn	**Pn**	**01 00 56.9**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.46**	**28**	*e*PN	**Pn**	**01 00 58.1**	**-0.4**
RKY	**Sarkoy-Tekirda**	**1.46**	**28**	*e*Pn	**Pn**	**01 00 58.1**	**-0.4**
ALN	**Alexandroupoli**	**1.51**	**353**	*e*Pn	**Pn**	**01 00 58.8**	**-0.3**
ALN				*e*Sn	**Sn**	**01 01 19.9**	**+1.0**
ALN	**Alexandroupoli**	**1.51**	**353**	*e*PN	**Pn**	**01 00 58.8**	**-0.3**
ALN				*e*SN	**Sn**	**01 01 19.9**	**+1.0**
ALN	**Alexandroupoli**	**1.51**	**353**	P	**Pn**	**01 00 58.7**	**-0.4**
ALN				S	**Sn**	**01 01 18.8**	**-0.1**
ALN	**Alexandroupoli**	**1.51**	**353**	*e*Pn	**Pn**	**01 00 58.8**	**-0.3**
ALN				S	**Sn**	**01 01 18.8**	**-0.1**
ALN				*e*Sn	**Sn**	**01 01 19.9**	**+1.0**
BNT	**Bandirma**	**1.58**	**52**	*e*PN	**Pn**	**01 00 59.7**	**-0.5**
MFT	**Murefte**	**1.59**	**29**	*e*PN	**Pn**	**01 01 00.5**	**+0.3**
MFT	**Murefte**	**1.59**	**29**	*e*Pn	**Pn**	**01 01 00.5**	**+0.3**
SMG	**Samos**	**1.74**	**165**	*e*Pb	**Pb**	**01 01 00.5**	**-3.5**
SMG				*e*Sn	**Sn**	**01 01 24.8**	**+0.4**
SMG	**Samos**	**1.74**	**165**	*e*PB	**Pb**	**01 01 00.5**	**-3.5**
SMG				*e*SN	**Sn**	**01 01 24.8**	**+0.4**
SMG	**Samos**	**1.74**	**165**	*e*Pb	**Pb**	**01 01 00.5**	**-3.5**
SMG				*e*Sn	**Sn**	**01 01 24.8**	**+0.4**
KULA	**Kula-Manisa**	**2.05**	**115**	*e*PN	**Pn**	**01 01 06.2**	**-0.3**
KULA	**Kula-Manisa**	**2.05**	**115**	*e*Pn	**Pn**	**01 01 06.2**	**-0.3**
CRLT	**Corlu**	**2.06**	**32**	*e*PN	**Pn**	**01 01 07.1**	**+0.5**
CRLT	**Corlu**	**2.06**	**32**	*e*Pn	**Pn**	**01 01 07.1**	**+0.4**
AYDN	**Tasoluk**	**2.14**	**144**	*i* P	**Pn**	**01 01 12.4**	**+4.7**
AYDN				*i* S	**Sn**	**01 01 37.9**	**+3.6**
MDNY	**Mudanya-Bursa**	**2.23**	**63**	*e*PN	**Pn**	**01 01 09.3**	**+0.3**
MDNY	**Mudanya-Bursa**	**2.23**	**63**	*e*Pn	**Pn**	**01 01 09.3**	**+0.4**
ARMT	**Armutlu**	**2.30**	**59**	*e*PN	**Pn**	**01 01 09.4**	**-0.6**
ARMT	**Armutlu**	**2.30**	**59**	*e*Pn	**Pn**	**01 01 09.4**	**-0.6**
SLVT	**Silivri**	**2.35**	**38**	*e*PN	**Pn**	**01 01 11.7**	**+1.0**
SLVT	**Silivri**	**2.35**	**38**	*e*Pn	**Pn**	**01 01 11.7**	**+1.0**
APE	**Apeiranthos**	**2.40**	**195**	*e*Pb	**Pb**	**01 01 11.6**	**-3.6**
APE	**Apeiranthos**	**2.40**	**195**	*e*PB	**Pb**	**01 01 11.6**	**-3.6**
APE	**Apeiranthos**	**2.40**	**195**	*e*Pb	**Pb**	**01 01 11.6**	**-3.6**
GEMT	**Gemlik**	**2.46**	**64**	*e*PN	**Pn**	**01 01 13.1**	**+0.9**
GEMT	**Gemlik**	**2.46**	**64**	*e*Pn	**Pn**	**01 01 13.1**	**+0.9**
EDRB	**Edirne**	**2.48**	**8**	*e*PN	**Pn**	**01 01 13.2**	**+0.8**
EDRB	**Edirne**	**2.48**	**8**	*e*Pn	**Pn**	**01 01 13.2**	**+0.8**
VLY	**Voula,Athens**	**2.48**	**232**	*e*Pb	**Pb**	**01 01 14.9**	**-1.8**
VLY	**Voula,Athens**	**2.48**	**232**	*e*PB	**Pb**	**01 01 14.9**	**-1.8**
VLY	**Voula,Athens**	**2.48**	**232**	*e*Pb	**Pb**	**01 01 14.9**	**-1.8**
CTKS	**Kestanelik-??a**	**2.50**	**42**	*e*PN	**Pn**	**01 01 13.6**	**+0.8**
CTKS	**Kestanelik-??a**	**2.50**	**42**	*e*Pn	**Pn**	**01 01 13.6**	**+0.8**
BGKT	**Bogazkoy**	**2.61**	**46**	*e*PN	**Pn**	**01 01 14.9**	**+0.7**
BGKT	**Bogazkoy**	**2.61**	**46**	*e*Pn	**Pn**	**01 01 14.9**	**+0.7**
YLV	**Yalova**	**2.65**	**63**	*e*PN	**Pn**	**01 01 15.6**	**+0.8**
YLV	**Yalova**	**2.65**	**63**	*e*Pn	**Pn**	**01 01 15.6**	**+0.9**
ISK	**Istanbul-Kandi**	**2.70**	**51**	*e*PN	**Pn**	**01 01 15.8**	**+0.4**
ISK	**Istanbul-Kandi**	**2.70**	**51**	*e*Pn	**Pn**	**01 01 15.9**	**+0.4**
HRT	**Hereke**	**2.96**	**60**	*e*PN	**Pn**	**01 01 20.0**	**+0.9**
HRT	**Hereke**	**2.96**	**60**	*e*Pn	**Pn**	**01 01 20.0**	**+0.9**
VLI	**Veliai**	**3.76**	**226**	*e*Pn	**Pn**	**01 01 28.6**	**-1.4**
VLI	**Veliai**	**3.76**	**226**	*e*PN	**Pn**	**01 01 31.6**	**+1.6**
VLI	**Veliai**	**3.76**	**226**	*e*Pn	**Pn**	**01 01 28.6**	**-1.4**

BJI ***17*** *01:11:27.6, 42°.44N×30°.84W, h13km, mB5.3/10, mb5.0/13, Ms5.0/11, Ms7 4.7/10*
ISCJB ***17*** *01:11:29.2±0.1, 42°.48N±0°.03×30°.55W±0°.02, h10km, mb4.5/159, MS3.9/41, Error ellipse: s-maj=4.6km s-min=1.7km az=5.4*
IDC ***17*** *01:11:29.3±0.7, 42°.45N×30°.47W, h0km, mb4.2/25, mb1 4.3/25, mb1mx4.2/34, mbtmp4.2/25, MS3.8/23, Ms1 3.8/23, ms1mx3.8/29, Error ellipse: s-maj=19.1km s-min=12.1km az=179.0*
CSEM ***17*** *01:11:29.4±0.1, 42°.40N×30°.53W, h2km, mb4.6/94, Ms3.5, Mw4.8, Error ellipse: s-maj=4.7km s-min=2.8km az=11.0*
NEIC ***17*** *01:11:30.8±0.2, 42°.39N×30°.52W, h10km, mb4.6/108, ML4.3(SVSA), Error ellipse: s-maj=4.8km s-min=2.6km az=186.0*
MOS ***17*** *01:11:32.7±0.8, 42°.50N×30°.48W, h33km, mb4.8/79, Error ellipse: s-maj=8.2km s-min=3.7km az=150.1*
IGIL ***17*** *01:11:32.3, 42°.23N×30°.43W, h10km, mb4.8*
GCMT ***17*** *01:11:34.0±0.4, 42°.45N×30°.56W, h23km±1km, MW4.8, Moment Tensor Solution. s17,c20; s62,c89; Moment tensor: Scale 10^{16}Nm; M_{rr}-0.56±.14; $M_{\theta\theta}$2.43±.11; $M_{\phi\phi}$-1.87±.09; $M_{r\theta}$-0.21±.14; $M_{\theta\phi}$0.35±.07; $M_{\phi r}$-0.44±.15; Best double couple: $M_0$2.30000×10^{16} NP1:ϕ_s310.00000°, δ75.00000°, λ-8.00000°. NP2:ϕ_s42.00000°, δ82.00000°, λ-165.00000°. Principal axes: T 2.4800, Plg5.0000°, Azm175.0000°; N -0.4600, Plg73.0000°, Azm70.0000°; P -2.0200, Plg16.0000°, Azm266.0000°; Data Used: II IU G CN IC.*
SZGRF ***17*** *01:11:40.1, 41°.96N×29°.08W, h33km, mb4.7, MS3.7, Azores Islands region*

ISC 17 01:11:30.0±1.5**, 42°.48N**±0°.03×**30°.51W**±0°.02**, h3**km±9km**, h16**km±1.4km**: pP-P, n790,** σ0s81/798**, mb4.5**/159**, MS3.9**/41**, 75C-111D, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCED	**Cedros**	**4.08**	**160**	*e*P	**Pn**	**01 12 30.4**	**-3.0**
PCED	**Cedros**	**4.08**	**160**	*e*P	**Pn**	**01 12 30.4**	**-3.0**
PCED				*e*S	**Sn**	**01 13 27.4**	**+5.7**
PCED	**Cedros**	**4.08**	**160**	*e*P	**Pn**	**01 12 30.4**	**-3.0**
CALA	**Caldeira**	**4.13**	**160**	*e*P	**Pn**	**01 12 31.4**	**-2.6**
CALA	**Caldeira**	**4.13**	**160**	*e*P	**Pn**	**01 12 31.4**	**-2.6**
CALA	**Caldeira**	**4.13**	**160**	*e*P	**Pn**	**01 12 31.4**	**-2.6**
ROSA	**Rosais**	**4.13**	**155**	*e*P	**Pn**	**01 12 30.6**	**-3.4**
ROSA	**Rosais**	**4.13**	**155**	*e*P	**Pn**	**01 12 31.1**	**-2.9**
ROSA	**Rosais**	**4.13**	**155**	*e*P	**Pn**	**01 12 30.6**	**-3.4**
HOR	**Horta**	**4.20**	**159**	*e*P	**Pn**	**01 12 32.2**	**-2.8**
HOR	**Horta**	**4.20**	**159**	*e*P	**Pn**	**01 12 32.2**	**-2.8**
PMAN	**Manadas**	**4.26**	**154**	*e*P	**Pb**	**01 12 46.1**	**+0.5**
PCAN	**Candelaria**	**4.30**	**158**	*e*P	**Pn**	**01 12 33.3**	**-3.0**
PCAN	**Candelaria**	**4.30**	**158**	*e*P	**Pn**	**01 12 33.2**	**-3.1**
PCAN				*e*S	**Sn**	**01 13 28.9**	**+2.0**
PCAN	**Candelaria**	**4.30**	**158**	*e*P	**Pn**	**01 12 33.3**	**-3.0**
PCAN				*e*S	**Sn**	**01 13 28.9**	**+2.0**
PID	**Ribeirinha**	**4.42**	**155**	*e*P	**Pn**	**01 12 35.2**	**-2.9**
PID	**Ribeirinha**	**4.42**	**155**	*e*P	**Pn**	**01 12 35.2**	**-2.9**
ADH	**Angra Heroismo**	**4.56**	**146**	*e*P	**Pn**	**01 12 36.4**	**-3.5**
ADH	**Angra Heroismo**	**4.56**	**146**	*e*P	**Pn**	**01 12 36.4**	**-3.5**
ADH				*e*S	**Sn**	**01 13 42.1**	**+8.7**
ADH	**Angra Heroismo**	**4.56**	**146**	*e*P	**Pn**	**01 12 36.4**	**-3.5**
BART	**Pico Bartolome**	**6.23**	**137**	*e*P	**Pn**	**01 12 59.6**	**-3.2**
PMAFR	**Mafra**	**16.46**	**95**	*e*P	**Pn**	**01 15 23.2**	**+1.2**
	150nm,1.4s						
PMAFR				*e*S	**Sn**	**01 18 32.0**	**+6.9**
PMAFR				*e*LR	LR	01 19 23.8	
	439nm,20.0s						
PMAFR	**Mafra**	**16.46**	**95**	*e*P	**Pn**	**01 15 23.2**	**+1.2**
	150nm,1.4s						
PCAB	**Cabril**	**16.70**	**85**	A		01 15 27.7	
	44nm,1.9s						
PCAB	**Cabril**	**16.70**	**85**	*e*P	**Pn**	**01 15 28.3**	**+3.4**
PCAB	**Cabril**	**16.70**	**85**	*e*P	**Pn**	**01 15 28.3**	**+3.4**
PTOM	**Tomar**	**16.90**	**92**	*e*P	**Pn**	**01 15 30.0**	**+2.5**
PTOM	**Tomar**	**16.90**	**92**	*e*P	**Pn**	**01 15 30.0**	**+2.5**
PVIS	**Viseu**	**17.00**	**88**	*e*P	**Pn**	**01 15 29.2**	**+0.5**
	54nm,1.5s						
PVIS	**Viseu**	**17.00**	**88**	*e*P	**Pn**	**01 15 29.2**	**+0.5**
	54nm,1.5s						
ERUA	**La Rua**	**17.24**	**82**	P	**Pn**	**01 15 33.2**	**+1.4**
ERUA				pmax	pmax		
	comp=Z,63nm,1.3s						
ERUA	**La Rua**	**17.24**	**82**	P	**Pn**	**01 15 33.2**	**+1.4**
	comp=Z,63nm,1.3s						
ERUA	**La Rua**	**17.24**	**82**	P	**Pn**	**01 15 33.2**	**+1.4**
	comp=Z,63nm,1.3s						
MTE	**Manteigas**	**17.33**	**89**	*e*P	**Pn**	**01 15 35.9**	**+3.0**
	comp=Z,56nm,2.0s						
MTE				*e*LR	LR	01 19 48.2	
	comp=Z,276nm,20.0s						
MTE	**Manteigas**	**17.33**	**89**	*e*Pn	**Pn**	**01 15 33.5**	**+0.5**
	comp=Z,45nm,1.4s						
MTE	**Manteigas**	**17.33**	**89**	*e*Pn	**Pn**	**01 15 33.5**	**+0.6**
	comp=Z,45nm,1.4s						
MTE	**Manteigas**	**17.33**	**89**	*e*P	**Pn**	**01 15 35.9**	**+3.0**
	comp=Z,56nm,2.0s						
PTEO	**Sao Teotonio**	**17.38**	**99**	*e*P	**Pn**	**01 15 36.2**	**+2.6**
	comp=Z,64nm,1.4s						
PTEO	**Sao Teotonio**	**17.38**	**99**	*e*P	**Pn**	**01 15 36.2**	**+2.6**
	comp=Z,64nm,1.4s						
EVOP	**Sao Brissos**	**17.46**	**96**	*e*P	**Pn**	**01 15 35.3**	**+0.8**
EVOP				AMb	AMB	01 15 37.9	
	comp=Z,50nm,0.9s						
EVOP				*e*S	**Sn**	**01 18 50.2**	**+0.9**
EVOP	**Sao Brissos**	**17.46**	**96**	*e*P	**Pn**	**01 15 35.3**	**+0.8**
EVOP				*e*S	**Sn**	**01 18 50.1**	**+0.8**
EVOP	**Sao Brissos**	**17.46**	**96**	*e*P	**Pn**	**01 15 35.3**	**+0.8**
	comp=Z,45nm,1.5s						
PFVI	**Vila Bisbo**	**17.48**	**101**	*e*P	**Pn**	**01 15 37.4**	**+2.7**
	comp=Z,83nm,1.4s						
PFVI				*e*S	**Sn**	**01 18 49.5**	**-0.2**
PFVI				*e*LR	LR	01 19 50.1	
	comp=Z,387nm,20.0s						
PFVI	**Vila Bisbo**	**17.48**	**101**	P	**Pn**	**01 15 37.6**	**+2.8**
PFVI	**Vila Bisbo**	**17.48**	**101**	*e*P	**Pn**	**01 15 37.4**	**+2.7**
	comp=Z,83nm,1.4s						
MORF	**Marmelete**	**17.53**	**100**	*e*P	**Pn**	**01 15 36.3**	**+0.9**
	comp=Z,54nm,1.3s						
MORF				*e*S	**Sn**	**01 18 33.9**	**-17**
MORF				*e*LR	LR	01 20 15.6	
	comp=Z,435nm,18.0s						
MORF	**Marmelete**	**17.53**	**100**	*e*P	**Pn**	**01 15 35.6**	**+0.2**
MORF				*e*S	**Sn**	**01 18 50.8**	**-0.3**
MORF	**Marmelete**	**17.53**	**100**	*e*P	**Pn**	**01 15 36.3**	**+0.9**
	comp=Z,54nm,1.3s						
MVO	**Moncorvo**	**17.54**	**86**	*e*P	**Pn**	**01 15 35.3**	**-0.2**
	comp=Z,44nm,1.4s						
MVO				*e*LR	LR	01 19 40.0	
	comp=Z,193nm,20.0s						
MVO	**Moncorvo**	**17.54**	**86**	P	**Pn**	**01 15 35.4**	**-0.1**
MVO	**Moncorvo**	**17.54**	**86**	P	**Pn**	**01 15 35.4**	**-0.1**
EVO	**Evora**	**17.54**	**95**	*e*P	**Pn**	**01 15 35.3**	**-0.2**
	comp=Z,91nm,1.5s						
EVO				*e*MLR	MLR		
	comp=Z,477nm,19.2s						
EVO	**Evora**	**17.54**	**95**	*e*P	**Pn**	**01 15 36.1**	**+0.6**
	comp=Z,29nm,1.4s						
EVO	**Evora**	**17.54**	**95**	*e*P	**Pn**	**01 15 36.1**	**+0.6**
	comp=Z,29nm,1.4s						
ECAL	**Calabor**	**17.61**	**84**	P	**Pn**	**01 15 38.4**	**+2.0**
	comp=Z,34nm,0.8s						
ECAL	**Calabor**	**17.61**	**84**	P	**Pn**	**01 15 38.4**	**+2.1**
	comp=Z,34nm,0.8s						
PBRG	**Braganca**	**17.63**	**84**	*e*P	**Pn**	**01 15 37.2**	**+0.6**
	comp=Z,56nm,1.4s						
PBRG	**Braganca**	**17.63**	**84**	*e*P	**Pn**	**01 15 37.2**	**+0.6**
	comp=Z,56nm,1.4s						
MESJ	**Messejana**	**17.64**	**98**	*e*P	**Pn**	**01 15 36.2**	**-0.6**
MESJ				AMb	AMB	01 15 42.3	
	comp=Z,48nm,2.0s						
MESJ				*e*S	**Sn**	**01 18 53.2**	**-0.4**
MESJ	**Messejana**	**17.64**	**98**	*e*P	**Pn**	**01 15 36.2**	**-0.6**
	comp=Z,48nm,2.0s						
MESJ				*e*S	**Sn**	**01 18 53.3**	**-0.3**
MESJ	**Messejana**	**17.64**	**98**	*e*P	**Pn**	**01 15 36.1**	**-0.7**
MESJ				*e*S	**Sn**	**01 18 53.2**	**-0.4**
MESJ	**Messejana**	**17.64**	**98**	*e*P	**Pn**	**01 15 36.2**	**-0.6**
	comp=Z,48nm,2.0s						
PMRV	**Marv??o**	**17.71**	**92**	*e*P	**Pn**	**01 15 37.2**	**-0.5**
	comp=Z,42nm,1.7s						
PMRV				*e*S	**Sn**	**01 18 54.0**	**-1.4**
PMRV				*e*LR	LR	01 19 56.5	
	comp=Z,340nm,20.0s						
PMRV	**Marv??o**	**17.71**	**92**	*e*P	**Pn**	**01 15 37.2**	**-0.5**
	comp=Z,42nm,1.7s						
PESTR	**Estremoz**	**17.74**	**94**	*e*P	**Pn**	**01 15 38.2**	**+0.2**
	comp=Z,36nm,1.3s						
PESTR				*e*S	**Sn**	**01 19 03.5**	**+7.4**
PESTR				*e*LR	LR	01 19 52.9	
	comp=Z,325nm,18.0s						
PESTR	**Estremoz**	**17.74**	**94**	*e*P	**Pn**	**01 15 38.2**	**+0.2**
	comp=Z,36nm,1.3s						
PBEJ	**Beja**	**17.83**	**97**	*e*P	**Pn**	**01 15 39.0**	**-0.1**
	comp=Z,46nm,1.7s						
PBEJ	**Beja**	**17.83**	**97**	*e*P	**Pn**	**01 15 39.0**	**-0.1**
	comp=Z,46nm,1.7s						
PCVE	**Castro Verde**	**17.85**	**98**	*e*P	**Pn**	**01 15 38.6**	**-0.8**
	comp=Z,39nm,1.4s						
PCVE				*e*S	**Sn**	**01 18 59.9**	**+1.1**
PCVE				*e*LR	LR	01 20 03.1	
	comp=Z,298nm,20.0s						
PCVE	**Castro Verde**	**17.85**	**98**	*e*P	**Pn**	**01 15 38.6**	**-0.8**
	comp=Z,39nm,1.4s						
PBDV	**Barranco-do-Ve**	**18.08**	**99**	*e*P	**Pn**	**01 15 43.3**	**+1.1**
	comp=Z,72nm,1.8s						
PBDV				*e*S	**Sn**	**01 18 58.4**	**-6.0**
PBDV				*e*LR	LR	01 20 27.4	
	comp=Z,350nm,20.0s						
PBDV	**Barranco-do-Ve**	**18.08**	**99**	*e*P	**Pn**	**01 15 43.3**	**+1.1**
	comp=Z,72nm,1.8s						
PVAQ	**Vaqueiros**	**18.18**	**99**	*e*P	**Pn**	**01 15 45.0**	**+1.6**
	comp=Z,37nm,1.7s						
PVAQ				*e*S	**Sn**	**01 18 55.5**	**-11**
PVAQ				*e*LR	LR	01 20 07.5	
	comp=Z,289nm,20.0s						
PVAQ	**Vaqueiros**	**18.18**	**99**	*e*P	**Pn**	**01 15 45.0**	**+1.6**
	comp=Z,37nm,1.7s						
EBAD	**Badajoz**	**18.20**	**94**	P	**Pn**	**01 15 43.2**	**-0.5**
	comp=Z,131nm,2.3s						
EBAD	**Badajoz**	**18.20**	**94**	P	**Pn**	**01 15 43.2**	**-0.5**
	comp=Z,131nm,2.3s						
EGRO	**El Granado**	**18.30**	**98**	P	**Pn**	**01 15 46.8**	**+1.9**
	comp=Z,109nm,1.9s						
EGRO	**El Granado**	**18.30**	**98**	P	**Pn**	**01 15 46.8**	**+1.9**
	comp=Z,109nm,1.9s				

ELOJ pmax pmax
comp=Z,255nm,2.1s
ELOJ Sierra Loja 20.89 96 P **P 01 16 14.7 +1.3**
comp=Z,255nm,2.1s
ELOJ Sierra Loja 20.89 96 P **P 01 16 14.7 +1.3**
comp=Z,255nm,2.1s
EALK Alkurruntz 21.23 78 P **P 01 16 17.2 +0.2**
comp=Z,93nm,2.3s,mb4.7
EALK Alkurruntz 21.23 78 P **P 01 16 17.2 +0.2**
comp=Z,93nm,2.3s,mb4.7
ECOG Cogollos-Vega 21.27 95 P **P 01 16 19.1 +1.6**
ECOG pmax pmax
comp=Z,14nm,1.0s,mb4.2
ECOG Cogollos-Vega 21.27 95 P **P 01 16 19.1 +1.6**
comp=Z,14nm,1.0s,mb4.3
ECOG Cogollos-Vega 21.27 95 P **P 01 16 19.1 +1.6**
comp=Z,14nm,1.0s,mb4.2
ETOR Torete 21.29 85 P **P 01 16 19.9 +2.3**
ETOR pmax pmax
comp=Z,29nm,1.6s,mb4.4
ETOR Torete 21.29 85 P **P 01 16 19.9 +2.3**
comp=Z,29nm,1.6s,mb4.4
ETOR Torete 21.29 85 P **P 01 16 19.9 +2.3**
comp=Z,29nm,1.6s,mb4.4
OSSF Osses 21.41 78 *e*P **P 01 16 19.0 +0.1**
OSSF Osses 21.41 78 *e*P **P 01 16 19.0 +0.1**
EQES Quesada 21.44 93 P **P 01 16 21.3 +1.9**
comp=Z,17nm,1.0s,mb4.3
EQES Quesada 21.44 93 P **P 01 16 21.3 +2.0**
comp=Z,17nm,1.0s,mb4.3
EGUA Guajares 21.45 96 P **P 01 16 20.1 +0.7**
EGUA Guajares 21.45 96 P **P 01 16 20.0 +0.6**
SJPF Ste Jean 21.45 78 *e*P **P 01 16 19.2 -0.2**
comp=Z,33nm,1.1s,mb4.3
SJPF Ste Jean 21.45 78 *e*P **P 01 16 19.2 -0.2**
SJPF pmax pmax
comp=Z,16nm,1.1s,mb4.3
SJPF Ste Jean 21.45 78 *e*P **P 01 16 19.2 -0.2**
comp=Z,16nm,1.1s,mb4.3
SJPF Ste Jean 21.45 78 *e*P **P 01 16 19.2 -0.2**
comp=Z,16nm,1.1s,mb4.3
GRR Gorron 21.54 64 *e*P **P 01 16 20.8 +0.5**
comp=Z,54nm,1.0s,mb4.6
GRR Gorron 21.54 64 *e*P **P 01 16 20.8 +0.5**
GRR pmax pmax
comp=Z,27nm,1.0s,mb4.6
GRR Gorron 21.54 64 *e*P **P 01 16 20.8 +0.5**
comp=Z,27nm,1.0s,mb4.6
GRR Gorron 21.54 64 *e*P **P 01 16 20.8 +0.5**
comp=Z,27nm,1.0s,mb4.6
LARF Larrau 21.64 78 *e*P **P 01 16 22.1 +0.7**
LARF Larrau 21.64 78 *e*P **P 01 16 22.1 +0.7**
TZC Tazercounte 21.64 111 *i* P **P 01 16 22.0 +0.5**
KIB El Ksiba 21.71 109 *i* P **P 01 16 23.0 +0.8**
EHUE Huescar 21.79 93 P **P 01 16 24.9 +1.8**
EHUE Huescar 21.79 93 P **P 01 16 24.9 +1.8**
FLN La Foliniere 21.83 63 *e*P **P 01 16 22.0 -1.4**
comp=Z,109nm,1.1s,mb4.9,baz=271
FLN *e*MLR MLR
comp=Z,298nm,20.2s,MS3.4
FLN La Foliniere 21.83 63 *e*P **P 01 16 22.0 -1.4**
FLN pmax pmax
comp=Z,55nm,1.1s,mb4.9
FLN MLR MLR
comp=Z,300nm,20.3s,MS3.7
FLN La Foliniere 21.83 63 *e*P **P 01 16 22.0 -1.4**
comp=Z,55nm,1.1s,mb4.9
FLN LR LR
comp=Z,300nm,20.3s,MS3.7
FLN La Foliniere 21.83 63 *e*P **P 01 16 22.0 -1.4**
comp=Z,55nm,1.1s,mb4.9,baz=271
MIF Mishlifen 21.83 106 *i* P **P 01 16 23.0 -0.5**
ESK Eskdalemuir 21.90 45 P **P 01 16 21.8 -2.2**
ESK pmax pmax
comp=Z,37nm,1.4s,mb4.6
ESK Eskdalemuir 21.90 45 P **P 01 16 21.8 -2.3**
comp=Z,37nm,1.4s,mb4.6
ESK Eskdalemuir 21.90 45 P **P 01 16 21.8 -2.2**
comp=Z,37nm,1.4s,mb4.6
EKA Eskdalemuir Ar 21.93 45 P **P 01 16 24.4 0.0**
comp=Z,5.6nm,1.0s,mb4.0,baz=237,slow=7.7,SNR=7.9
EKA Eskdalemuir Ar 21.93 45 P **P 01 16 24.4 0.0**
MFF Saint Martin d 21.96 69 *e*P **P 01 16 24.7 -0.1**
comp=Z,103nm,1.1s,mb4.9
MFF Saint Martin d 21.96 69 *e*P **P 01 16 24.7 -0.1**
MFF pmax pmax
comp=Z,52nm,1.1s,mb4.9
MFF Saint Martin d 21.96 69 *e*P **P 01 16 24.7 -0.1**
comp=Z,52nm,1.1s,mb4.9
MFF Saint Martin d 21.96 69 *e*P **P 01 16 24.7 -0.1**
comp=Z,52nm,1.1s,mb4.9
ETSF Etsaut 21.97 79 *e*P **P 01 16 26.1 +1.2**
comp=Z,55nm,1.5s,mb4.5
ETSF Etsaut 21.97 79 *e*P **P 01 16 26.1 +1.2**
ETSF pmax pmax
comp=Z,28nm,1.5s,mb4.5
ETSF Etsaut 21.97 79 *e*P **P 01 16 26.1 +1.2**
comp=Z,28nm,1.5s,mb4.5
ETSF Etsaut 21.97 79 *e*P **P 01 16 26.1 +1.2**
comp=Z,28nm,1.5s,mb4.5
LDF La Druitiere 22.05 63 *e*P **P 01 16 25.2 -0.5**
comp=Z,23nm,0.9s,mb4.3
LDF La Druitiere 22.05 63 *e*P **P 01 16 25.2 -0.5**
LDF pmax pmax
comp=Z,12nm,0.9s,mb4.3
LDF La Druitiere 22.05 63 *e*P **P 01 16 25.2 -0.5**
comp=Z,12nm,0.9s,mb4.3
LDF La Druitiere 22.05 63 *e*P **P 01 16 25.2 -0.5**
comp=Z,12nm,0.9s,mb4.3
CZD Col de Zad 22.16 107 *i* P **P 01 16 27.0 -0.1**
TZK Tazeka 22.23 103 *i* P **P 01 16 27.0 -0.8**
EBIE Bielsa 22.51 79 P **P 01 16 32.1 +1.4**
comp=Z,6.3nm,0.9s,mb4.0
EBIE Bielsa 22.51 79 P **P 01 16 32.1 +1.4**
comp=Z,6.3nm,0.9s,mb4.0
MDT Midelt 22.58 107 P **P 01 16 31.2 -0.3**
comp=Z,5.5nm,1.0s,mb3.9,baz=314,slow=13,SNR=6.2
MDT LR LR 01 23 25.7
comp=Z,154nm,18.6s,MS3.5,baz=132,slow=32
MDT Midelt 22.58 107 P **P 01 16 31.2 -0.3**
EPF Esparros 22.60 78 *e*P **P 01 16 30.8 -0.8**
comp=Z,63nm,1.3s,mb4.6
EPF Esparros 22.60 78 *e*P **P 01 16 30.8 -0.8**
EPF pmax pmax
comp=Z,32nm,1.3s,mb4.6
EPF Esparros 22.60 78 *e*P **P 01 16 30.8 -0.8**
comp=Z,32nm,1.3s,mb4.6
EPF Esparros 22.60 78 *e*P **P 01 16 30.8 -0.8**
comp=Z,32nm,1.3s,mb4.6
LFF La Frestale 22.65 73 *e*P **P 01 16 32.4 +0.2**
comp=Z,41nm,1.0s,mb4.5
LFF La Frestale 22.65 73 *e*P **P 01 16 32.4 +0.2**
LFF pmax pmax
comp=Z,20nm,1.0s,mb4.5
LFF La Frestale 22.65 73 *e*P **P 01 16 32.4 +0.2**
comp=Z,20nm,1.0s,mb4.5
LFF La Frestale 22.65 73 *e*P **P 01 16 32.4 +0.2**
comp=Z,20nm,1.0s,mb4.5
BORG Borgarnes 22.92 10 P **P 01 16 34.7 -0.1**
comp=Z,3.7nm,0.9s,mb3.8,baz=240,slow=18,SNR=2.5
BORG LR LR 01 22 53.9
comp=Z,206nm,20.9s,MS3.5,baz=104,slow=30
BORG Borgarnes 22.92 10 P **P 01 16 34.7 -0.1**
BORG LR LR 01 22 53.9
BORG Borgarnes 22.92 10 P **P 01 16 34.7 -0.1**
ERTA Horta de San J 23.01 83 P **P 01 16 36.3 +0.3**
comp=Z,13nm,0.9s,mb4.4
ERTA Horta de San J 23.01 83 P **P 01 16 36.3 +0.3**
comp=Z,13nm,0.9s,mb4.4
RJF Les Rejaudoux 23.17 72⇓*i*P **P 01 16 37.0 -0.7**
comp=Z,51nm,1.4s,mb4.5
RJF *e*MLR MLR
comp=Z,219nm,21.2s,MS3.3
RJF Les Rejaudoux 23.17 72⇓*i*P **P 01 16 37.0 -0.7**
RJF pmax pmax
comp=Z,25nm,1.4s,mb4.5
RJF MLR MLR
comp=Z,220nm,21.3s,MS3.6
RJF Les Rejaudoux 23.17 72⇓*i*P **P 01 16 37.0 -0.7**
comp=Z,25nm,1.4s,mb4.5
RJF LR LR
comp=Z,220nm,21.3s,MS3.6
RJF Les Rejaudoux 23.17 72⇓*i*P **P 01 16 37.0 -0.7**
comp=Z,25nm,1.4s,mb4.5
CSOR Sort 23.29 79 P **P 01 16 39.4 +0.5**
comp=Z,9.1nm,0.9s,mb4.2
CSOR Sort 23.29 79 P **P 01 16 39.4 +0.4**
comp=Z,9.1nm,0.9s,mb4.2
CAF Calviac 23.59 73 *e*P **P 01 16 41.1 -1.0**
comp=Z,22nm,0.9s,mb4.3
CAF Calviac 23.59 73 *e*P **P 01 16 41.1 -1.0**
CAF pmax pmax
comp=Z,11nm,0.9s,mb4.3
CAF Calviac 23.59 73 *e*P **P 01 16 41.1 -1.0**
comp=Z,11nm,0.9s,mb4.3
CAF Calviac 23.59 73 *e*P **P 01 16 41.1 -1.0**
comp=Z,11nm,0.9s,mb4.3
TCF Toulx Ste Croi 23.59 69 *e*P **P 01 16 41.7 -0.4**
comp=Z,76nm,1.1s,mb4.7
TCF Toulx Ste Croi 23.59 69 *e*P **P 01 16 41.7 -0.4**
TCF pmax pmax
comp=Z,38nm,1.1s,mb4.7
TCF Toulx Ste Croi 23.59 69 *e*P **P 01 16 41.7 -0.4**
comp=Z,38nm,1.1s,mb4.7
TCF Toulx Ste Croi 23.59 69 *e*P **P 01 16 41.7 -0.4**
comp=Z,38nm,1.1s,mb4.7
MENF Mencas 23.73 59 *e*P **P 01 16 42.9 -0.4**
MENF Mencas 23.73 59 *e*P **P 01 16 42.9 -0.4**
HYF Humbligny 23.86 67 *e*P **P 01 16 44.2 -0.3**
HYF Humbligny 23.86 67 *e*P **P 01 16 44.2 -0.3**
CLLI Llivia 23.88 79 P **P 01 16 44.8 0.0**
CLLI Llivia 23.88 79 P **P 01 16 44.8 0.0**
MTLF Montolieu 23.90 77 *e*P **P 01 16 43.8 -1.2**
comp=Z,31nm,1.2s,mb4.3
MTLF Montolieu 23.90 77 *e*P **P 01 16 43.8 -1.2**
MTLF pmax pmax
comp=Z,15nm,1.2s,mb4.3
MTLF Montolieu 23.90 77 *e*P **P 01 16 43.8 -1.2**
comp=Z,15nm,1.2s,mb4.3
MTLF Montolieu 23.90 77 *e*P **P 01 16 43.8 -1.2**
comp=Z,15nm,1.2s,mb4.3
BGF Bois d'Agland 24.02 69⇓*i*P **P 01 16 45.5 -0.5**
comp=Z,162nm,0.7s,mb5.2
BGF Bois d'Agland 24.02 69⇓*i*P **P 01 16 45.5 -0.5**
BGF pmax pmax
comp=Z,81nm,0.7s,mb5.3
BGF Bois d'Agland 24.02 69⇓*i*P **P 01 16 45.5 -0.5**
comp=Z,81nm,0.7s,mb5.3
BGF Bois d'Agland 24.02 69⇓*i*P **P 01 16 45.5 -0.5**
comp=Z,81nm,0.7s,mb5.2
PYM Petit Puy Mans 24.18 71 *e*P **P 01 16 47.1 -0.4**
PYM Petit Puy Mans 24.18 71 *e*P **P 01 16 47.1 -0.4**
AGO Saint Agoulin 24.25 70 *e*P **P 01 16 47.8 -0.3**
AGO Saint Agoulin 24.25 70 *e*P **P 01 16 47.8 -0.3**
AVF Avril sur Loir 24.36 68⇓*i*P **P 01 16 48.3 -0.8**
comp=Z,30nm,0.7s,mb4.5
AVF Avril sur Loir 24.36 68⇓*i*P **P 01 16 48.3 -0.8**
AVF pmax pmax
comp=Z,15nm,0.7s,mb4.5
AVF Avril sur Loir 24.36 68⇓*i*P **P 01 16 48.3 -0.8**
comp=Z,15nm,0.7s,mb4.5
AVF Avril sur Loir 24.36 68⇓*i*P **P 01 16 48.3 -0.8**
comp=Z,15nm,0.7s,mb4.5
CFON Fontmartina 24.36 80 P **P 01 16 48.7 -0.5**
CFON Fontmartina 24.36 80 P **P 01 16 48.7 -0.5**
LBL Lubilhac 24.39 72 *e*P **P 01 16 49.2 -0.2**
LBL Lubilhac 24.39 72 *e*P **P 01 16 49.2 -0.2**
SSF Saint Saulge 24.45 67 *e*P **P 01 16 49.4 -0.6**
comp=Z,43nm,0.9s,mb4.6
SSF Saint Saulge 24.45 67 *e*P **P 01 16 49.4 -0.6**
SSF pmax pmax
comp=Z,22nm,0.9s,mb4.6
SSF Saint Saulge 24.45 67 *e*P **P 01 16 49.4 -0.6**
comp=Z,22nm,0.9s,mb4.6
SSF Saint Saulge 24.45 67 *e*P **P 01 16 49.4 -0.6**
comp=Z,22nm,0.9s,mb4.6
EJON La Jonquera 24.55 79 P **P 01 16 50.8 -0.1**
comp=Z,7.0nm,0.8s,mb4.2
EJON La Jonquera 24.55 79 P **P 01 16 50.8 -0.1**
comp=Z,7.0nm,0.8s,mb4.2
PLDF La Plantade 24.59 70 *e*P **P 01 16 50.7 -0.5**
PLDF La Plantade 24.59 70 *e*P **P 01 16 50.7 -0.5**
LOR Lormes 24.69 67 *e*P **P 01 16 51.5 -0.6**
comp=Z,61nm,0.8s,mb4.9,baz=272
LOR *e*MLR MLR
comp=Z,280nm,19.0s,MS3.5
LOR Lormes 24.69 67 *e*P **P 01 16 51.5 -0.6**
LOR pmax pmax
comp=Z,31nm,0.8s,mb4.9
LOR MLR MLR
comp=Z,280nm,19.0s,MS3.8
LOR Lormes 24.69 67 *e*P **P 01 16 51.5 -0.6**
comp=Z,30nm,0.8s,mb4.9
LOR LR LR
comp=Z,280nm,19.0s,MS3.8
LOR Lormes 24.69 67 *e*P **P 01 16 51.5 -0.6**
comp=Z,30nm,0.8s,mb4.9,baz=272
SMF Signal de Mont 24.70 68⇓*i*P **P 01 16 51.6 -0.6**
comp=Z,55nm,0.9s,mb4.8
SMF Signal de Mont 24.70 68⇓*i*P **P 01 16 51.6 -0.6**
SMF pmax pmax
comp=Z,27nm,0.9s,mb4.8
SMF Signal de Mont 24.70 68⇓*i*P **P 01 16 51.6 -0.6**
comp=Z,27nm,0.9s,mb4.8
SMF Signal de Mont 24.70 68⇓*i*P **P 01 16 51.6 -0.6**
comp=Z,27nm,0.9s,mb4.8
LASF Ste Croix 24.96 75 *e*P **P 01 16 54.3 -0.3**
comp=Z,48nm,1.2s,mb4.6
LASF Ste Croix 24.96 75 *e*P **P 01 16 54.3 -0.3**
comp=Z,24nm,1.2s,mb4.6
BAIF Baives 24.99 60⇓*i*P **P 01 16 54.2 -0.6**
comp=Z,95nm,1.1s,mb4.9
BAIF Baives 24.99 60⇓*i*P **P 01 16 54.2 -0.6**
BAIF pmax pmax
comp=Z,48nm,1.1s,mb4.9
BAIF Baives 24.99 60⇓*i*P **P 01 16 54.2 -0.6**
comp=Z,48nm,1.1s,mb4.9
BAIF Baives 24.99 60⇓*i*P **P 01 16 54.2 -0.6**
comp=Z,48nm,1.1s,mb4.9
SNF Seneffe 25.07 59 P **P 01 16 55.3 -0.2**
comp=Z,14nm,1.2s,mb4.4
DOU Dourbes 25.24 60 P **P 01 16 56.6 -0.5**
comp=Z,17nm,1.4s,mb4.4
SSB Saint Sauveur 25.30 72 *e*P **P 01 16 57.0 -0.6**
SSB pmax pmax
comp=Z,15nm,1.3s,mb4.4
SSB Saint Sauveur 25.30 72 *e*P **P 01 16 57.0 -0.6**
comp=Z,15nm,1.3s,mb4.4
SSB Saint Sauveur 25.30 72 *e*P **P 01 16 57.0 -0.6**
comp=Z,15nm,1.3s,mb4.4
GIVF Givet 25.39 60 *e*P **P 01 16 57.8 -0.6**
comp=Z,83nm,1.1s,mb4.9
GIVF Givet 25.39 60 *e*P **P 01 16 57.8 -0.6**
GIVF pmax pmax
comp=Z,42nm,1.1s,mb4.9
GIVF Givet 25.39 60 *e*P **P 01 16 57.8 -0.6**
comp=Z,42nm,1.1s,mb4.9
GIVF Givet 25.39 60 *e*P **P 01 16 57.8 -0.6**
comp=Z,42nm,1.1s,mb4.9
VIVF Saint-Julien-l 25.44 73 *e*P **P 01 16 58.8 -0.1**
comp=Z,26nm,1.1s,mb4.4
VIVF Saint-Julien-l 25.44 73 *e*P **P 01 16 58.8 -0.1**
VIVF pmax pmax
comp=Z,13nm,1.1s,mb4.4
VIVF Saint-Julien-l 25.44 73 *e*P **P 01 16 58.8 -0.1**
comp=Z,13nm,1.1s,mb4.4
VIVF Saint-Julien-l 25.44 73 *e*P **P 01 16 58.8 -0.1**
comp=Z,13nm,1.1s,mb4.4
MEZF Maizieres J'vi 25.48 64 *e*P **P 01 16 58.8 -0.5**
comp=Z,121nm,0.9s,mb5.1,baz=278
MEZF Maizieres J'vi 25.48 64 *e*P **P 01 16 58.8 -0.5**
comp=Z,121nm,0.9s,mb5.4
MEZF Maizieres J'vi 25.48 64 *e*P **P 01 16 58.8 -0.5**
comp=Z,61nm,0.9s,mb5.1,baz=278
BCLA Clavier 25.72 60 P **P 01 17 00.7 -0.7**
THEF They Montfort 26.11 65 *e*P **P 01 17 04.2 -0.7**
THEF They Montfort 26.11 65 *e*P **P 01 17 04.2 -0.7**
MEM Membach 26.18 59 P **P 01 17 05.4 -0.2**
comp=Z,10.0nm,1.1s,mb4.3
SMRF Simiane la Rot 26.20 74 *e*P **P 01 17 06.3 +0.4**
comp=Z,26nm,1.1s,mb4.4
SMRF Simiane la Rot 26.20 74 *e*P **P 01 17 06.3 +0.4**
comp=Z,26nm,1.1s,mb4.7
SMRF Simiane la Rot 26.20 74 *e*P **P 01 17 06.3 +0.4**
comp=Z,13nm,1.1s,mb4.4
WLF Walferdange 26.23 61 P **P 01 17 05.9 -0.1**
comp=Z,18nm,1.2s,mb4.5
WLF Walferdange 26.23 61 *e*P **P 01 17 05.2 -0.8**
comp=Z,30nm,1.0s,mb4.8
WLF Walferdange 26.23 61 *e*P **P 01 17 05.9 -0.1**
WLF pmax pmax
comp=Z,28nm,1.0s,mb4.8
WLF Walferdange 26.23 61 *e*P **P 01 17 05.9 -0.1**
comp=Z,28nm,1.0s,mb4.7
WLF Walferdange 26.23 61 *e*P **P 01 17 05.9 -0.1**
comp=Z,28nm,1.0s,mb4.8
CABF La Chapelle 26.25 68 *e*P **P 01 17 06.0 -0.3**
comp=Z,77nm,1.1s,mb4.8
CABF La Chapelle 26.25 68 *e*P **P 01 17 06.0 -0.3**
CABF pmax pmax
comp=Z,39nm,1.1s,mb4.8
CABF La Chapelle 26.25 68 *e*P **P 01 17 06.0 -0.3**
comp=Z,39nm,1.1s,mb4.8
CABF La Chapelle 26.25 68 *e*P **P 01 17 06.0 -0.3**
comp=Z,39nm,1.1s,mb4.8
ORIF Oris-en-Rattie 26.28 72 *e*P **P 01 17 07.0 +0.4**
comp=Z,32nm,1.3s,mb4.4
ORIF *e*MLR MLR
comp=Z,131nm,21.5s,MS3.1
ORIF Oris-en-Rattie 26.28 72 *e*P **P 01 17 07.0 +0.4**
ORIF pmax pmax
comp=Z,16nm,1.3s,mb4.4
ORIF Oris-en-Rattie 26.28 72 *e*P **P 01 17 07.0 +0.4**
comp=Z,16nm,1.3s,mb4.4
ORIF Oris-en-Rattie 26.28 72 *e*P **P 01 17 07.0 +0.4**
comp=Z,16nm,1.3s,mb4.4
HAU Haudompre 26.35 65 *e*P **P 01 17 06.5 -0.7**
comp=Z,74nm,1.2s,mb4.8
HAU *e*MLR MLR
comp=Z,210nm,22.5s,MS3.3
HAU Haudompre 26.35 65 *e*P **P 01 17 06.5 -0.7**
HAU pmax pmax
comp=Z,37nm,1.2s,mb4.8
HAU MLR MLR
comp=Z,210nm,22.5s,MS3.6
HAU Haudompre 26.35 65 *e*P **P 01 17 06.5 -0.7**
comp=Z,37nm,1.2s,mb4.8
HAU LR LR
comp=Z,210nm,22.5s,MS3.6
HAU Haudompre 26.35 65 *e*P **P 01 17 06.5 -0.7**
comp=Z,37nm,1.2s,mb4.8
SCHQ Schefferville 26.67 310 P **P 01 17 10.1 +0.1**
comp=Z,10.0nm,1.3s,mb4.2,baz=101,slow=14,SNR=3.2
SCHQ Schefferville 26.67 310 P **P 01 17 10.1 +0.1**
HINF Hinteralfeld 26.70 66 *e*P **P 01 17 09.6 -0.7**
comp=Z,23nm,0.9s,mb4.4
HINF Hinteralfeld 26.70 66 *e*P **P 01 17 09.6 -0.7**
HINF pmax pmax
comp=Z,11nm,0.9s,mb4.4
HINF Hinteralfeld 26.70 66 *e*P **P 01 17 09.6 -0.7**
comp=Z,11nm,0.9s,mb4.4
HINF Hinteralfeld 26.70 66 *e*P **P 01 17 09.6 -0.7**
comp=Z,11nm,0.9s,mb4.4
LOMF Lomont 26.70 67 *e*P **P 01 17 10.0 -0.4**
LOMF Lomont 26.70 67 *e*P **P 01 17 10.0 -0.4**
LPL La Plagne 26.80 71 *e*P **P 01 17 11.5 +0.2**
comp=Z,18nm,1.1s,mb4.2
LPL La Plagne 26.80 71 *e*P **P 01 17 11.5 +0.2**
LPL pmax pmax
comp=Z,9.0nm,1.1s,mb4.2
LPL La Plagne 26.80 71 *e*P **P 01 17 11.5 +0.2**
comp=Z,9.2nm,1.1s,mb4.2
LPL La Plagne 26.80 71 *e*P **P 01 17 11.5 +0.2**
comp=Z,9.2nm,1.1s,mb4.2
RUP Ruppelstein 26.81 61 *e*P **P 01 17 11.5 +0.2**
RUP Ruppelstein 26.81 61 *e*P **P 01 17 11.5 +0.2**
LPG La Plagne 26.82 71 *e*P **P 01 17 11.8 +0.4**
comp=Z,19nm,1.1s,mb4.2
LPG La Plagne 26.82 71 *e*P **P 01 17 11.8 +0.4**
LPG pmax pmax
comp=Z,10.0nm,1.1s,mb4.3
LPG La Plagne 26.82 71 *e*P **P 01 17 11.8 +0.4**
comp=Z,9.7nm,1.1s,mb4.2
LPG La Plagne 26.82 71 *e*P **P 01 17 11.8 +0.4**
comp=Z,9.7nm,1.1s,mb4.2
BNI Bardonecchia 26.82 72 *e*P **P 01 17 11.6 +0.1**
BNI pmax pmax
comp=Z,26nm,1.5s,mb4.5
BNI Bardonecchia 26.82 72 *e*P **P 01 17 11.6 +0.2**
comp=Z,26nm,1.5s,mb4.5
BNI Bardonecchia 26.82 72 *e*P **P 01 17 11.6 +0.1**
comp=Z,26nm,1.5s,mb4.5
MOF Molkenrain 26.89 65 *e*P **P 01 17 13.9 +1.9**
MOF Molkenrain 26.89 65 *e*P **P 01 17 13.9 +1.9**
ECH Echery 26.89 65 *e*P **P 01 17 11.5 -0.5**
ECH pmax pmax
comp=Z,45nm,1.4s,mb4.8
ECH Echery 26.89 65 *e*P **P 01 17 11.5 -0.5**
comp=Z,45nm,1.4s,mb4.8
ECH Echery 26.89 65 *e*P **P 01 17 11.5 -0.5**
MBDF Montbardon 26.94 72 *e*P **P 01 17 12.9 +0.4**
comp=Z,12nm,0.9s,mb4.1
MBDF Montbardon 26.94 72 *e*P **P 01 17 12.9 +0.4**
MBDF pmax pmax
comp=Z,6.0nm,0.9s,mb4.1
MBDF Montbardon 26.94 72 *e*P **P 01 17 12.9 +0.4**
comp=Z,6.1nm,0.9s,mb4.1
MBDF Montbardon 26.94 72 *e*P **P 01 17 12.9 +0.4**
comp=Z,6.1nm,0.9s,mb4.1
CDF Champ du Feu 26.96 64⇓*i*P **P 01 17 12.2 -0.5**
comp=Z,57nm,0.8s,mb4.8
CDF Champ du Feu 26.96 64⇓*i*P **P 01 17 12.2 -0.5**
CDF pmax pmax
comp=Z,29nm,0.8s,mb4.9
CDF Champ du Feu 26.96 64⇓*i*P **P 01 17 12.2 -0.5**
comp=Z,28nm,0.8s,mb4.8
CDF Champ du Feu 26.96 64⇓*i*P **P 01 17 12.2 -0.5**
comp=Z,28nm,0.8s,mb4.8
LMR La Mourre 26.99 75 *e*P **P 01 17 13.1 +0.2**
comp=Z,31nm,1.3s,mb4.4
LMR La Mourre 26.99 75 *e*P **P 01 17 13.1 +0.2**
LMR pmax pmax
comp=Z,15nm,1.3s,mb4.4
LMR La Mourre 26.99 75 *e*P **P 01 17 13.1 +0.2**
comp=Z,15nm,1.3s,mb4.4
LMR La Mourre 26.99 75 *e*P **P 01 17 13.1 +0.2**
comp=Z,15nm,1.3s,mb4.4
FRF La Foret Royal 27.04 75 *e*P **P 01 17 12.9 -0.5**
comp=Z,42nm,1.3s,mb4.5
FRF La Foret Royal 27.04 75 *e*P **P 01 17 12.9 -0.5**
FRF pmax pmax
comp=Z,21nm,1.3s,mb4.5
FRF La Foret Royal 27.04 75 *e*P **P 01 17 12.9 -0.5**
comp=Z,21nm,1.3s,mb4.5
FRF La Foret Royal 27.04 75 *e*P **P 01 17 12.9 -0.5**
comp=Z,21nm,1.3s,mb4.5
ABH Alteburg 27.13 61 *e*P **P 01 17 14.6 +0.4**
ABH Alteburg 27.13 61 *e*P **P 01 17 14.6 +0.4**
BBS Basel-Blauen 27.16 66 *e*P **P 01 17 14.1 -0.4**
BBS Basel-Blauen 27.16 66 *e*P **P 01 17 14.1 -0.4**
LANF Langenberg 27.30 63 *e*P **P 01 17 15.4 -0.3**
LANF Langenberg 27.30 63 *e*P **P 01 17 15.4 -0.3**
SBF Sospel 27.55 74 *e*P **P 01 17 19.6 +1.6**
comp=Z,29nm,1.0s,mb4.6
SBF Sospel 27.55 74 *e*P **P 01 17 19.6 +1.6**
SBF pmax pmax
comp=Z,14nm,1.0s,mb4.5
SBF Sospel 27.55 74 *e*P **P 01 17 19.6 +1.6**
comp=Z,14nm,1.0s,mb4.6
SBF Sospel 27.55 74 *e*P **P 01 17 19.6 +1.6**
comp=Z,14nm,1.0s,mb4.6
BFO Black Forest 27.67 64 *e*P **P 01 17 18.2 -0.8**
comp=Z,18nm,1.3s,mb4.5
SPAK Spaichingen-Ko 27.98 65 *e*P **P 01 17 21.3 -0.5**
SPAK Spaichingen-Ko 27.98 65 *e*P **P 01 17 21.3 -0.5**
STU Stuttgart 28.22 63 *e*P **P 01 17 23.8 -0.2**
comp=Z,27nm,1.3s,mb4.7
SCO Scoresbysund 28.41 6 *e*P **P 01 17 26.4 +1.0**
SCO Scoresbysund 28.41 6 *i* P **P 01 17 26.4 +1.0**
comp=Z,3.8nm,1.0s,mb4.0
SCO
comp=Z,160nm,20.0s
SCO Scoresbysund 28.41 6 *e*P **P 01 17 26.4 +1.0**
DAVOX Davos/Dischmat 28.83 67 P **P 01 17 28.5 -0.9**
comp=Z,4.4nm,0.8s,mb4.2,baz=349,slow=13,SNR=5.5
DAVOX LR LR 01 27 31.1
comp=Z,158nm,18.2s,MS3.7,baz=273,slow=33
DAVOX Davos/Dischmat 28.83 67 P **P 01 17 28.5 -0.9**
DAVOX LR LR 01 27 31.1
DAVOX Davos/Dischmat 28.83 67 P **P 01 17 28.5 -0.9**
NRDL Niedersach Rie 28.86 56 *e*P **P 01 17 28.8 -0.8**
comp=Z,16nm,1.0s,mb4.7
PGF Pioggiola 28.94 76 *e*P **P 01 17 29.7 -0.7**
comp=Z,26nm,1.0s,mb4.6
PGF Pioggiola 28.94 76 *e*P **P 01 17 29.7 -0.7**
PGF pmax pmax
comp=Z,13nm,1.0s,mb4.6
PGF Pioggiola 28.94 76 *e*P **P 01 17 29.7 -0.7**
comp=Z,13nm,1.0s,mb4.6
PGF Pioggiola 28.94 76 *e*P **P 01 17 29.7 -0.7**

comp=Z,13nm,1.0s,mb4.6
CLZ Clausthal 28.99 57 *e*P **P 01 17 31.0 +0.3**
comp=Z,10.0nm,1.1s,mb4.5
BSEG Bad Segeberg 29.11 53 *e*P **P 01 17 32.0 +0.2**
comp=Z,34nm,1.0s,mb5.0
RETA Reutte 29.36 66⇑*i*P **P 01 17 33.9 -0.2**
comp=Z,6.3nm,0.8s,mb4.4
FETA Feichten 29.38 67⇓*i*P **P 01 17 34.6 +0.3**
comp=Z,20nm,0.9s,mb4.8,SNR=19
GRF Grafenberg Arr 29.52 61 *e*P **P 01 17 35.1 -0.3**
comp=Z,13nm,1.0s,mb4.6
GRF *e*L 01 28 06.7
comp=Z,214nm,20.8s
GRF Grafenberg Arr 29.52 61 *e*P **P 01 17 35.1 -0.3**
GRF pmax pmax
comp=Z,13nm,1.0s,mb4.6
GRF MLR MLR
comp=Z,200nm,20.8s,MS3.7
GRF Grafenberg Arr 29.52 61 *e*P **P 01 17 35.1 -0.3**
comp=Z,200nm,20.8s
MOTA Moosalm 29.60 66⇓*i*P **P 01 17 36.1 -0.2**
comp=Z,9.9nm,0.8s,mb4.6
FUR Furstenfeldbru 29.64 64 *e*P **P 01 17 36.5 -0.1**
comp=Z,30nm,1.2s,mb4.9
MOX Moxa 29.75 59 *e*(P) **P 01 17 37.6 +0.1**
MOX
comp=Z,200nm,17.0s
MOX Moxa 29.75 59 *e*P **P 01 17 37.3 -0.2**
comp=Z,17nm,1.4s,mb4.6
WATA Walderalm 29.92 66⇓*i*P **P 01 17 39.1 0.0**
comp=Z,5.3nm,0.7s,mb4.4
WTTA Wattenberg 29.97 66⇑*i*P **P 01 17 39.8 +0.2**
comp=Z,17nm,0.7s,mb4.9
ROTZ Rotzenmuhle 30.15 61 *e*P **P 01 17 40.6 -0.5**
comp=Z,9.0nm,1.5s,mb4.3
WERD Werda 30.19 60 *e*P **P 01 17 41.0 -0.4**
comp=Z,10.0nm,1.3s,mb4.4
GUNZ Gunzen 30.21 60 *e*P **P 01 17 41.8 +0.2**
comp=Z,15nm,1.4s,mb4.5
NKC Novy Kostel 30.29 60 *e*P **P 01 17 42.7 +0.4**
NKC Novy Kostel 30.29 60 *e*P **P 01 17 42.7 +0.4**
NKC Novy Kostel 30.29 60 *e*P **P 01 17 42.7 +0.4**
TANN Tannenbergstha 30.29 60 *e*P **P 01 17 42.1 -0.2**
comp=Z,13nm,1.4s,mb4.5
SUMG Summit 30.42 355 *e*P **P 01 17 43.2 0.0**
SUMG pmax pmax
comp=Z,13nm,1.0s
SUMG Summit 30.42 355 *e*P **P 01 17 43.2 -0.1**
comp=Z,13nm,1.0s,mb4.6
SUMG Summit 30.42 355 *e*P **P 01 17 43.2 0.0**
comp=Z,13nm,1.0s,mb4.6
CLL Collm 30.62 58 *e*P **P 01 17 44.5 -0.7**
comp=Z,12nm,1.3s,mb4.6
CLL Collm 30.62 58⇓*i*P **P 01 17 44.5 -0.7**
CLL *i* 01 17 58.9
CLL pmax pmax
comp=Z,12nm,1.3s,mb4.6
CLL MLR MLR
comp=Z,200nm,18.9s,MS3.8
CLL Collm 30.62 58⇓*i*P **P 01 17 44.5 -0.7**
comp=Z,12nm,1.3s,mb4.6
CLL *i* 01 17 58.9
CLL *e*S **S 01 22 54.0 +6.2**
CLL LR LR
comp=Z,200nm,18.9s,MS3.8
CLL Collm 30.62 58⇓*i*P **P 01 17 44.5 -0.7**
comp=Z,12nm,1.3s,mb4.6
CLL *i* 01 17 58.9
CLL *e*S **S 01 22 54.0 +6.2**
CLL *e* 01 24 10.0
CLL Lm 01 29 00.0
comp=Z,200nm,18.9s
CLL Collm 30.62 58 *i*P **P 01 17 44.5 -0.7**
comp=Z,12nm,1.3s,mb4.6
WET Wettzell 30.63 62 *e*P **P 01 17 44.7 -0.6**
comp=Z,15nm,1.1s,mb4.7
JMIC Jan Mayen 30.63 14 LR LR 01 26 35.9
comp=Z,158nm,21.1s,MS3.6,baz=34,slow=30
ABTA Abfaltersbach 30.63 67 *i*P **P 01 17 45.4 0.0**
comp=Z,13nm,0.8s,mb4.8,SNR=13
RJOB Jochberg 30.70 65 *e*P **P 01 17 45.4 -0.5**
comp=Z,7.0nm,0.9s,mb4.5
NOA NORSAR Array B 31.07 39 LR LR 01 28 45.3
comp=Z,127nm,18.7s,MS3.6,baz=260,slow=33
KHC Kasperske Hory 31.09 62 *e*P **P 01 17 49.3 0.0**
KHC MLR MLR
comp=Z,200nm,9.1s
KHC Kasperske Hory 31.09 62 *e*P **P 01 17 49.1 -0.2**
comp=Z,23nm,1.1s,mb4.9
KHC Kasperske Hory 31.09 62 *e*P **P 01 17 49.3 0.0**
KHC AMS AMS 01 30 00.0
comp=Z,200nm,9.1s
KHC Kasperske Hory 31.09 62 *e*P **P 01 17 49.3 0.0**
comp=Z,200nm,9.1s
RUE Ruedersdorf 31.10 56 *e*P **P 01 17 49.9 +0.5**
comp=Z,36nm,1.4s,mb5.0
KBA Koelnbreinsper 31.15 66 *i*P **P 01 17 50.1 +0.2**
comp=Z,43nm,0.9s,mb5.2,SNR=24
GEC2 GERESS Array S 31.19 63 *e*P **P 01 17 49.8 -0.4**
comp=Z,22nm,1.6s,mb4.7
BRG Berggiesshubel 31.22 59 *e*P **P 01 17 50.1 -0.4**
comp=Z,8.0nm,1.3s,mb4.4
BRG Berggiesshubel 31.22 59 *e*P **P 01 17 50.6 +0.1**
comp=Z,8.0nm,1.3s,mb4.4
BRG
comp=N,174nm,12.0s
BRG
comp=E,144nm,14.6s
BRG
comp=Z,227nm,19.9s
BRG Berggiesshubel 31.22 59 *e*P **P 01 17 50.6 +0.1**
BRG pmax pmax
comp=Z,5.0nm,1.3s,mb4.2
BRG MLR MLR
comp=N,104nm,12.0s,MS3.8
BRG MLR MLR
comp=E,86nm,14.6s,MS3.8
BRG MLR MLR
comp=Z,136nm,19.9s
BRG Berggiesshubel 31.22 59 *e*P **P 01 17 50.6 +0.1**
comp=Z,136nm,19.9s
CADS Cadrg 31.55 68 *i*P **P 01 17 52.9 -0.5**
CADS Cadrg 31.55 68 *i*P **P 01 17 52.9 -0.5**
PVCC Panska Ves 31.63 59 AMS AMS 01 29 20.0
comp=Z,300nm,9.4s
PRU Pruhonice 31.65 61 *e*P **P 01 17 54.9 +0.6**
PRU *e* 01 18 01.1
PRU MLR MLR
comp=Z,300nm,12.4s,MS4.2
PRU Pruhonice 31.65 61 *e*P **P 01 17 54.9 +0.6**
PRU *e*pP pP 01 18 01.1 +6.1
PRU AMS AMS 01 29 30.0
comp=Z,300nm,12.4s
PRU Pruhonice 31.65 61 *e*P **P 01 17 54.9 +0.6**
comp=Z,300nm,12.4s
MOA Molln 31.67 65⇓*i*P **P 01 17 54.0 -0.5**
comp=Z,10nm,0.9s,mb4.7
CRNS Crni Vrh 31.93 68 *i*P **P 01 17 56.2 -0.6**
OBKA Obir 32.05 67⇓*i*P **P 01 17 57.0 -0.9**
comp=Z,38nm,0.8s,mb5.3,SNR=16
LJU Ljubljana 32.12 68 *i*P **P 01 17 58.0 -0.5**
LJU Ljubljana 32.12 68 *i*P **P 01 17 58.0 -0.5**
AQU L'Aquila 32.14 75 *e*P **P 01 17 58.5 -0.2**
AQU pmax pmax
comp=Z,21nm,0.9s,mb5.0
AQU L'Aquila 32.14 75 *e*P **P 01 17 58.5 -0.2**
comp=Z,21nm,0.9s,mb5.0
AQU L'Aquila 32.14 75 *e*P **P 01 17 58.5 -0.2**
comp=Z,21nm,0.9s,mb5.0
TREC Trest 32.32 62 *e*P **P 01 17 59.8 -0.4**
TREC MLR MLR
comp=Z,200nm,8.4s
TREC Trest 32.32 62 *e*P **P 01 17 59.8 -0.4**
TREC AMS AMS 01 30 50.0
comp=Z,200nm,8.4s
SOKA Soboth 32.36 67⇑*i*P **P 01 17 59.0 -1.5**
comp=Z,6.7nm,0.9s,mb4.5
VISS Visnje 32.38 68 *i*P **P 01 18 00.1 -0.6**
VISS Visnje 32.38 68 *i*P **P 01 18 00.1 -0.6**
UPC Upice 32.55 59 *e*P **P 01 18 02.1 -0.1**
UPC Upice 32.55 59 *e*P **P 01 18 02.1 -0.1**
ARSA Arzberg 32.60 66⇓*i*P **P 01 18 01.6 -1.1**
comp=Z,18nm,1.2s,mb4.9
BOJS Bojanci 32.72 69 *e*P **P 01 18 03.4 -0.3**
BOJS Bojanci 32.72 69 *e*P **P 01 18 03.4 -0.3**
CONA Conrad Observa 32.73 64⇓*i*P **P 01 18 03.2 -0.5**
comp=Z,8.1nm,0.8s,mb4.7,SNR=9.5

DPC Dobruska-Polom 32.76 60 *e*P **P 01 18 03.6 -0.4**
DPC MLR MLR
comp=Z,300nm,18.1s,MS4.0
DPC Dobruska-Polom 32.76 60 *e*P **P 01 18 03.6 -0.4**
DPC AMS AMS 01 30 30.0
comp=Z,300nm,18.1s
GKP Gorka Klasztor 33.20 54 *e*P **P 01 18 08.6 +0.8**
ZST Bratislava 33.51 64 *e*P **P 01 18 10.6 0.0**
ZST pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
ZST Bratislava 33.51 64 *e*P **P 01 18 10.6 0.0**
comp=Z,5.8nm,1.0s,mb4.5
ZST Bratislava 33.51 64 *e*P **P 01 18 10.6 0.0**
ZST Bratislava 33.51 64 *e*P **P 01 18 10.6 0.0**
comp=Z,5.8nm,1.0s,mb4.5
MORC Moravsky Berou 33.60 61 *e*P **P 01 18 11.2 -0.2**
MORC pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
MORC Moravsky Berou 33.60 61 *e*P **P 01 18 11.2 -0.1**
comp=Z,10nm,1.0s,mb4.7
MORC Moravsky Berou 33.60 61 *e*P **P 01 18 11.2 -0.2**
comp=Z,10nm,1.0s,mb4.7
SMOL Smolenice 33.68 63 *e*P **P 01 18 12.1 0.0**
SMOL Smolenice 33.68 63 *e*P **P 01 18 12.1 0.0**
SMOL Smolenice 33.68 63 *e*P **P 01 18 12.1 0.0**
OKC Ostrava-Krasne 33.98 60 *e*P **P 01 18 14.8 +0.1**
OKC MLR MLR
comp=Z,300nm,11.3s,MS4.3
OKC Ostrava-Krasne 33.98 60 *e*P **P 01 18 14.8 +0.1**
OKC AMS AMS 01 31 50.0
comp=Z,300nm,11.3s
KOLL Kolacno 34.31 63 *e*P **P 01 18 17.5 -0.1**
KOLL Kolacno 34.31 63 *e*P **P 01 18 17.5 -0.1**
KOLL Kolacno 34.31 63 *e*P **P 01 18 17.5 -0.1**
VYHS Vyhne 34.61 63 *e*P **P 01 18 19.8 -0.3**
VYHS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
VYHS Vyhne 34.61 63 *e*P **P 01 18 19.8 -0.3**
comp=Z,4.0nm,1.0s,mb4.3
VYHS Vyhne 34.61 63 *e*P **P 01 18 19.8 -0.3**
VYHS Vyhne 34.61 63 *e*P **P 01 18 19.8 -0.3**
comp=Z,4.0nm,1.0s,mb4.3
SADO Sadowa 34.87 291 P **P 01 18 22.0 -0.4**
comp=Z,6.2nm,0.6s,mb4.7,baz=89,slow=8.7,SNR=9.0
SADO Sadowa 34.87 291 P **P 01 18 22.0 -0.4**
PKSM Moragy 34.90 67⇓P **P 01 18 21.6 -1.0**
PKSM Moragy 34.90 67⇓*i*P **P 01 18 21.6 -1.0**
PKSM Moragy 34.90 67⇓P **P 01 18 21.6 -1.0**
BUD Budapest 34.91 64⇓*e*P **P 01 18 29.0 +6.3**
OJC Ojcow 35.00 60 *e*P **P 01 18 20.5 -2.9**
PSZ Piszkesteto 35.41 63⇓P **P 01 18 28.9 +1.9**
PSZ Piszkesteto 35.41 63⇓*i*P **P 01 18 28.9 +1.9**
PSZ Piszkesteto 35.41 63⇓P **P 01 18 28.9 +1.9**
NIE Niedzica 35.43 61 *e*P **P 01 18 27.9 +0.7**
NIE Niedzica 35.43 61 *e*P **P 01 18 27.9 +0.7**
KECS Kecovo 35.70 62 *e*P **P 01 18 29.9 +0.4**
KECS pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
KECS Kecovo 35.70 62 *e*P **P 01 18 29.9 +0.4**
comp=Z,5.0nm,0.9s,mb4.4
KECS Kecovo 35.70 62 *e*P **P 01 18 29.9 +0.4**
TAM Tamanrasset 35.78 112 *e*P **P 01 18 30.5 0.0**
TAM pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
TAM Tamanrasset 35.78 112 *e*P **P 01 18 30.5 0.0**
comp=Z,2.1nm,0.9s,mb4.1
TAM Tamanrasset 35.78 112 *e*P **P 01 18 30.5 0.0**
comp=Z,2.1nm,0.9s,mb4.1
STHS Stebnicka Huta 36.03 61 *e*P **P 01 18 33.7 +1.3**
STHS pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
STHS Stebnicka Huta 36.03 61 *e*P **P 01 18 33.7 +1.3**
comp=Z,7.7nm,1.1s,mb4.5
STHS Stebnicka Huta 36.03 61 *e*P **P 01 18 33.7 +1.3**
STHS Stebnicka Huta 36.03 61 *e*P **P 01 18 33.7 +1.3**
comp=Z,7.7nm,1.1s,mb4.5
CRVS Cervenica-Dubn 36.26 61 *e*P **P 01 18 34.2 -0.1**
CRVS pmax pmax
comp=Z,11nm,1.3s,mb4.6
CRVS Cervenica-Dubn 36.26 61 *e*P **P 01 18 34.2 -0.1**
comp=Z,11nm,1.3s,mb4.6
CRVS Cervenica-Dubn 36.26 61 *e*P **P 01 18 34.2 -0.1**
CRVS Cervenica-Dubn 36.26 61 *e*P **P 01 18 34.2 -0.1**
comp=Z,11nm,1.3s,mb4.6
SUW Suwalki 36.70 53 *e*P **P 01 18 37.7 -0.4**
SUW Suwalki 36.70 53 *e*P **P 01 18 37.7 -0.3**
UZH Uzhgorod 36.85 62 *e*P **P 01 18 37.0 -2.4**
UZH *i* 01 18 42.0
UZH *i* 01 19 59.0
UZH *e* 01 21 01.0
UZH *e*S **S 01 24 19.0 -5.4**
UZH *e*SS SS 01 26 45.5 -19
UZH Uzhgorod 36.85 62 *e*PcP PcP 01 21 01.0 -0.1
KWP Kalwaria Pacla 36.94 60 *e*P **P 01 18 40.8 +0.7**
KWP Kalwaria Pacla 36.94 60 *e*P **P 01 18 40.7 +0.6**
KWP pmax pmax
comp=Z,27nm,1.1s,mb5.0
KWP Kalwaria Pacla 36.94 60 *e*P **P 01 18 40.6 +0.5**
comp=Z,27nm,1.1s,mb5.0
KWP Kalwaria Pacla 36.94 60⇓*i*P **P 01 18 40.7 +0.6**
KWP Kalwaria Pacla 36.94 60 *e*P **P 01 18 40.7 +0.6**
comp=Z,27nm,1.1s,mb5.0
BZS Buzias 37.05 67⇓P **P 01 18 40.8 -0.3**
BZS Buzias 37.05 67⇓*i*P **P 01 18 40.8 -0.3**
BZS Buzias 37.05 67⇓P **P 01 18 40.8 -0.3**
FINES FINESS Array B 38.20 40 P **P 01 18 50.6 0.0**
comp=Z,3.7nm,0.8s,mb4.1,baz=249,slow=5.3,SNR=7.8
FINES LR LR 01 34 01.2
comp=Z,218nm,18.6s,MS4.0,baz=5.0,slow=35
FINES FINESS Array B 38.20 40 P **P 01 18 50.6 0.0**
VSU Vasula 38.48 45⇓*i*P **P 01 18 53.3 +0.3**
VSU pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
BUR08 Bucovina Ar. S 38.96 63 *e*P **P 01 18 57.7 +0.5**
BUR08 Bucovina Ar. S 38.96 63 *e*P **P 01 18 57.7 +0.5**
BURAR Bucovina Array 38.98 63⇑P **P 01 18 57.7 +0.3**
BURAR Bucovina Array 38.98 63⇑*i*P **P 01 18 57.7 +0.3**
BURAR Bucovina Array 38.98 63⇑P **P 01 18 57.7 +0.3**
ARCES ARCESS Array B 39.17 27 P **P 01 18 58.2 -0.4**
comp=Z,4.3nm,0.9s,mb4.2,baz=248,slow=6.4,SNR=7.2
ARCES LR LR 01 32 24.7
comp=Z,127nm,20.2s,MS3.7,baz=77,slow=32
ARCES ARCESS Array B 39.17 27 P **P 01 18 58.2 -0.4**
ARCES LR LR 01 32 24.8
ARCES ARCESS Array B 39.17 27 P **P 01 18 58.2 -0.4**
VOIR 39.43 66⇑P **P 01 19 00.9 -0.2**
VOIR 39.43 66⇑*i*P **P 01 19 00.9 -0.2**
VOIR 39.43 66⇑P **P 01 19 00.9 -0.2**
VRI Vrincioaia 40.44 65⇑P **P 01 19 08.7 -0.8**
VRI Vrincioaia 40.44 65⇑*i*P **P 01 19 08.7 -0.8**
VRI Vrincioaia 40.44 65⇑P **P 01 19 08.7 -0.8**
KIEV Kiev 40.84 57 *e*P **P 01 19 11.9 -0.9**
KIEV pmax pmax
comp=Z,13nm,0.9s,mb4.6
KIEV Kiev 40.84 57 *e*P **P 01 19 11.8 -0.9**
comp=Z,14nm,0.9s,mb4.6
KIEV Kiev 40.84 57 *e*P **P 01 19 11.9 -0.9**
comp=Z,14nm,0.9s,mb4.6
AKASG Malin Array Be 40.85 57 P **P 01 19 12.0 -0.9**
comp=Z,12nm,0.8s,mb4.6,baz=277,slow=8.6,SNR=10
AKASG Malin Array Be 40.85 57 *i*P **P 01 19 10.3 -2.6**
AKASG pmax pmax
comp=Z,12nm,0.8s
AKASG Malin Array Be 40.85 57 P **P 01 19 12.0 -0.9**
AKBB Malin Array Si 40.85 57 *e*P **P 01 19 12.2 -0.7**
AKBB Malin Array Si 40.85 57 *e*P **P 01 19 12.2 -0.7**
FCC Fort Churchill 41.77 316 *e*P **P 01 19 22.8 +2.5**
comp=Z,0.1nm,0.8s
CPCT Cooper Cave 41.98 279 *e*P **P 01 19 22.2 -0.1**
CPCT Cooper Cave 41.98 279 *e*P **P 01 19 22.2 -0.1**
GOGA Godfrey 42.14 276 *e*P **P 01 19 23.4 -0.3**
GOGA pmax pmax
comp=Z,6.0nm,0.9s,mb4.2
GOGA Godfrey 42.14 276 *e*P **P 01 19 23.4 -0.2**
comp=Z,6.0nm,0.9s,mb4.2
GOGA Godfrey 42.14 276 *e*P **P 01 19 23.4 -0.3**
comp=Z,6.0nm,0.9s,mb4.2
DBIC Dimbokro 42.26 140 P **P 01 19 24.8 0.0**
comp=Z,16nm,1.2s,mb4.5,baz=293,slow=13,SNR=3.9
DBIC LR LR 01 35 35.7
comp=Z,116nm,18.7s,MS3.8,baz=313,slow=34
DBIC Dimbokro 42.26 140 P **P 01 19 24.8 0.0**
RES Resolute Bay 42.81 339 P **P 01 19 29.7 +1.1**
comp=Z,4.0nm,1.1s,mb4.1,baz=179,slow=23,SNR=8.5

RES Resolute Bay 42.81 339 *e*P **P 01 19 30.4 +1.8**
RES pmax pmax
comp=Z,11nm,1.3s,mb4.4
RES Resolute Bay 42.81 339 *e*P **P 01 19 30.4 +1.8**
comp=Z,12nm,1.3s,mb4.5
RES Resolute Bay 42.81 339 *e*P **P 01 19 30.4 +1.8**
comp=Z,12nm,1.3s,mb4.5
WVT Waverly 44.09 282 *e*P **P 01 19 38.7 -0.7**
WVT pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
WVT Waverly 44.09 282 *e*P **P 01 19 38.7 -0.6**
comp=Z,4.3nm,0.9s,mb4.2
WVT Waverly 44.09 282 *e*P **P 01 19 38.7 -0.7**
comp=Z,4.3nm,0.9s,mb4.2
OBN Obninsk 44.25 49⇑*i*P **P 01 19 40.6 +0.2**
OBN pmax pmax
comp=Z,12nm,1.0s,mb4.6
OBN MLR MLR
comp=Z,300nm,18.0s,MS4.2
ULM Lac du Bonnet 44.45 304 LR LR 01 35 58.2
comp=Z,72nm,19.0s,MS3.6,baz=222,slow=33
AGMN Agassiz Nation 45.02 301 *e*P **P 01 19 46.6 -0.1**
AGMN Agassiz Nation 45.02 301 *e*P **P 01 19 46.6 -0.1**
FVM French Village 45.14 285 *e*P **P 01 19 47.3 -0.5**
FVM pmax pmax
comp=Z,8.0nm,0.8s,mb4.6
FVM French Village 45.14 285 *e*P **P 01 19 47.3 -0.5**
comp=Z,8.1nm,0.8s,mb4.6
FVM French Village 45.14 285 *e*P **P 01 19 47.3 -0.5**
comp=Z,8.1nm,0.8s,mb4.6
OXF Oxford 45.97 280 *e*P **P 01 19 53.4 -1.0**
OXF pmax pmax
comp=Z,43nm,1.0s,mb5.3
OXF Oxford 45.97 280 *e*P **P 01 19 53.4 -1.0**
comp=Z,43nm,1.0s,mb5.3
OXF Oxford 45.97 280 *e*P **P 01 19 53.4 -1.0**
comp=Z,43nm,1.0s,mb5.3
VSR Storozhevoye 46.78 54 *e*P **P 01 19 59.8 -0.8**
VSR pmax pmax
comp=N,10.0nm,1.0s
VSR pmax pmax
comp=E,20nm,1.0s
VSR pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
FFC Flin Flon 46.81 311 *e*P **P 01 20 01.6 +0.9**
FFC pmax pmax
comp=Z,8.0nm,1.3s,mb4.5
FFC Flin Flon 46.81 311 *e*P **P 01 20 01.6 +0.9**
comp=Z,8.3nm,1.3s,mb4.5
FFC Flin Flon 46.81 311 *e*P **P 01 20 01.6 +0.9**
comp=Z,8.2nm,1.3s,mb4.5
VORD Divnogorie 46.94 54 *e*P **P 01 20 01.2 -0.6**
VORD pmax pmax
comp=E,50nm,0.8s
VORD pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
VORD pmax pmax
comp=N,8.0nm,0.4s
ECSD EROS Data Cent 47.10 295 *e*P **P 01 20 02.5 -0.6**
comp=N,5.4nm,1.0s,mb4.4
ECSD EROS Data Cent 47.10 295 *e*P **P 01 20 02.5 -0.7**
comp=N,5.4nm,1.0s,mb4.4
BR131 Keskin Array S 47.38 71 *e*P **P 01 20 05.6 +0.2**
comp=N,3.0nm,0.8s,mb4.3
BR131 Keskin Array S 47.38 71 *e*P **P 01 20 05.6 +0.2**
comp=N,3.0nm,0.8s,mb4.3
BRTR Keskin Array B 47.38 71 P **P 01 20 05.1 -0.3**
comp=N,4.3nm,0.9s,mb4.4,baz=284,slow=5.3,SNR=18
BRTR Keskin Array B 47.38 71 *e*P **P 01 20 05.5 +0.1**
BRTR pmax pmax
comp=Z,4.0nm,0.9s
BRTR Keskin Array B 47.38 71 P **P 01 20 05.1 -0.3**
VRHR Novokhopersk 48.29 54 *e*P **P 01 20 12.6 +0.3**
VRHR pmax pmax
comp=N,9.0nm,1.0s
VRHR pmax pmax
comp=E,10.0nm,1.0s
VRHR pmax pmax
comp=Z,20nm,1.0s,mb5.1
MIAR Mount Ida 48.98 283 *e*P **P 01 20 16.9 -0.9**
MIAR pmax pmax
comp=Z,14nm,0.9s,mb5.0
MIAR Mount Ida 48.98 283 *e*P **P 01 20 16.9 -0.9**
comp=Z,14nm,0.9s,mb5.0
MIAR Mount Ida 48.98 283 *e*P **P 01 20 16.9 -0.9**
comp=Z,14nm,0.9s,mb5.0
YKA Yellowknife Ar 50.86 323 P **P 01 20 31.3 -0.4**
comp=Z,1.5nm,1.1s,mb3.9,baz=67,slow=6.8,SNR=3.3
YKA Yellowknife Ar 50.86 323 P **P 01 20 31.3 -0.4**
KIV Kislovodsk 51.69 62 *e*P **P 01 20 39.1 +0.9**
KIV pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
KIV MLR MLR
comp=Z,62nm,16.0s,MS3.7
KIV Kislovodsk 51.69 62 *e*P **P 01 20 39.1 +0.9**
comp=Z,62nm,16.0s
MMAI Mount Meron Ar 51.79 77 P **P 01 20 37.9 -1.2**
comp=Z,3.3nm,0.8s,mb4.3,baz=304,slow=10,SNR=3.4
WMOK Wichita Mounta 52.62 286 *e*P **P 01 20 43.8 -1.4**
WMOK pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
WMOK Wichita Mounta 52.62 286 *e*P **P 01 20 43.8 -1.4**
comp=Z,3.0nm,0.9s,mb4.2
WMOK Wichita Mounta 52.62 286 *e*P **P 01 20 43.8 -1.4**
comp=Z,3.0nm,0.9s,mb4.2
TEIG Tepich 53.01 264 *e*P **P 01 20 48.7 +0.5**
TEIG Tepich 53.01 264 *e*P **P 01 20 48.7 +0.4**
ZEI Tsey 53.01 63 *e*P **P 01 20 48.6 +0.6**
ZEI pmax pmax
comp=Z,14nm,0.5s,mb5.2
ZEI Tsey 53.01 63 *e*P **P 01 20 48.6 +0.6**
comp=Z,14nm,0.5s,mb5.2
ASF Jabal al Asfar 53.30 78 P **P 01 20 49.0 -1.3**
comp=Z,3.2nm,0.9s,mb4.2,baz=263,slow=8.1
EGMT Eagleton 53.75 305⇑P **P 01 20 53.9 +0.5**
baz=54
ROSC El Rosal 53.96 239 LR LR 01 38 43.9
comp=Z,81nm,21.3s,MS3.8,baz=196,slow=30
PHWY Pilot Hill 54.05 296 P **P 01 20 57.1 +1.5**
PHWY Pilot Hill 54.05 296 P **P 01 20 57.1 +1.4**
AMTX Amarillo 54.60 287 *e*P **P 01 20 59.5 -0.3**
comp=Z,12nm,1.0s,mb4.9
AMTX Amarillo 54.60 287 *e*P **P 01 20 59.5 -0.3**
comp=Z,12nm,1.0s,mb4.9
F18A Big Timber 54.67 303⇓P **P 01 21 01.7 +1.6**
baz=54
D17A Six Diamond Ra 54.70 305⇓P **P 01 21 01.9 +1.6**
baz=55
GNI Garni 54.79 65⇑*e*P **P 01 21 00.6 -0.5**
GNI pmax pmax
comp=Z,13nm,1.7s
GNI Garni 54.79 65 *e*P **P 01 21 00.6 -0.5**
comp=Z,13nm,1.7s,mb4.7
Q24A Divide 54.96 293⇑P **P 01 21 02.6 +0.3**
baz=55
L21A Rawlins 55.00 298⇓P **P 01 21 02.9 +0.3**
baz=55
C16A Fuhringer Ranc 55.05 306⇑P **P 01 21 03.5 +0.7**
baz=55
A15A Johnson Ranch, 55.11 307⇑P **P 01 21 03.6 +0.3**
baz=55
E17A Martinsdale 55.12 304⇑P **P 01 21 03.6 +0.2**
baz=55
S25A Robets Cordova 55.12 292⇓P **P 01 21 03.6 +0.1**
baz=55
M21A Separation Pea 55.16 297⇑P **P 01 21 04.0 +0.2**
baz=55
P23A Jefferson 55.23 294⇑P **P 01 21 04.0 -0.3**
baz=55
U26A Atchley Ranch, 55.28 290⇓P **P 01 21 04.2 -0.5**
baz=55
D16A Dana Ranch, Ca 55.28 305⇑P **P 01 21 04.6 +0.1**
baz=55,SNR=5.2
B15A Bradely Ranch, 55.30 306⇓P **P 01 21 05.1 +0.4**
baz=55
O22A Kremmling 55.32 295⇓P **P 01 21 05.0 +0.1**
baz=55
T25A Trinidad 55.36 291⇑P **P 01 21 05.0 -0.3**
baz=55
W27A Bowe Ranch, En 55.48 288⇑P **P 01 21 05.2 -0.9**
baz=55,SNR=5.2
A14A Double T Ranch 55.51 308⇓P **P 01 21 06.5 +0.4**
baz=55
ARU Arti 55.52 42*d*i*P* **P 01 21 05.9 -0.2**
ARU *e* 01 23 08.1
ARU S **S 01 28 54.2 +2.4**
ARU pmax pmax

comp=Z,8.0nm,1.0s,mb4.7
ARU Arti 55.52 42 *e*P **P 01 21 05.7 -0.4**
comp=Z,9.0nm,1.1s,mb4.7
ARU Arti 55.52 42 *i* P **P 01 21 05.9 -0.2**
comp=Z,8.0nm,1.0s,mb4.7
K19A Absolon Red Bu 55.55 299 ⇑P **P 01 21 05.9 -0.7**
baz=55
U25A Circle Dot Ran 55.73 290 ⇓P **P 01 21 07.8 -0.1**
baz=56,SNR=6.2
INK Inuvik 55.76 334 *e*P **P 01 21 08.1 +0.5**
INK pmax pmax
comp=Z,1.0nm,0.6s
INK Inuvik 55.76 334 *e*P **P 01 21 08.1 +0.5**
comp=Z,0.6nm,0.6s,mb3.8
INK Inuvik 55.76 334 *e*P **P 01 21 08.1 +0.5**
comp=Z,1.0nm,0.6s,mb4.0
M20A Sweetwater, Wa 55.76 297 ⇑P **P 01 21 08.2 +0.1**
baz=56
WALA Waterton Lakes 55.76 308 *e*P **P 01 21 08.0 +0.1**
comp=Z,0.1nm,0.9s
WALA Waterton Lakes 55.76 308 *e*P **P 01 21 08.0 +0.1**
comp=Z,0.1nm,0.9s
SDCO Great Sand Dun 55.81 292 *e*P **P 01 21 08.5 0.0**
comp=Z,6.2nm,1.4s,mb4.5
SDCO Great Sand Dun 55.81 292 *e*P **P 01 21 08.5 0.0**
comp=Z,6.2nm,1.4s,mb4.5
MSTX Muleshoe 55.84 287 ⇓P **P 01 21 07.2 -1.6**
baz=56,SNR=5.1
BOZ Bozeman (W) 55.97 303 ⇓P **P 01 21 09.4 -0.2**
baz=56
BW06 Boulder Array 56.04 299 ⇓P **P 01 21 09.6 -0.4**
baz=56
PDAR Pinedale Array 56.04 299 P **P 01 21 09.4 -0.7**
comp=Z,1.9nm,1.0s,mb4.1,baz=59,slow=8.8,SNR=7.5
PDAR LR LR 01 43 20.8
comp=Z,89nm,19.4s,MS3.9,baz=70,slow=34
PDAR Pinedale Array 56.04 299 P **P 01 21 09.4 -0.6**
SMCO Snowmass 56.09 294 *e*P **P 01 21 11.0 +0.5**
SMCO Snowmass 56.09 294 *e*P **P 01 21 11.0 +0.5**
Y27A Causey 56.16 287 ⇓P **P 01 21 10.6 -0.5**
baz=56
V25A Rancho No Teng 56.17 290 ⇓P **P 01 21 10.5 -0.5**
baz=56
Q22A Crested Butte, 56.21 294 ⇑P **P 01 21 10.8 -0.5**
baz=56
E15A Deer Lodge 56.23 304 ⇓P **P 01 21 11.4 +0.1**
baz=56
R22A Saguache, Gunn 56.42 293 ⇓P **P 01 21 12.8 0.0**
baz=56
D14A Greenough 56.44 306 ⇑P **P 01 21 13.1 +0.3**
baz=56
REDW Red Top Meadow 56.58 301 *e*P **P 01 21 14.1 +0.2**
comp=Z,7.7nm,1.3s,mb4.6
REDW Red Top Meadow 56.58 301 *e*P **P 01 21 14.1 +0.2**
comp=Z,7.7nm,1.3s,mb4.6
Q21A Lamborn Mesa, 56.67 294 ⇑P **P 01 21 14.1 -0.5**
baz=56
S22A 4UR Ranch, Cre 56.72 293 ⇓P **P 01 21 14.5 -0.4**
baz=57
G15A Dillon 56.73 303 ⇓P **P 01 21 15.0 0.0**
baz=57
P20A De Beque 56.88 295 ⇑P **P 01 21 16.1 0.0**
baz=57
U23A El Rito 57.01 291 ⇑P **P 01 21 17.5 +0.4**
baz=57
D13A Huson 57.01 306 ⇑P **P 01 21 17.3 +0.4**
baz=57
W24A Lazy 6 Ranch, 57.05 290 ⇑P **P 01 21 17.1 -0.2**
baz=57
Z26A Caprock 57.07 287 ⇓P **P 01 21 17.2 -0.3**
baz=57
Q20A Ridgley Place, 57.09 295 ⇓P **P 01 21 17.7 +0.1**
baz=57
T22A Edith 57.14 292 ⇓P **P 01 21 17.6 -0.4**
baz=57
P19A Cripple Cowboy 57.21 296 ⇓P **P 01 21 18.3 -0.1**
baz=57
Y25A Mesa, Roswell 57.22 288 ⇑P **P 01 21 17.9 -0.7**
baz=57
V23A Ortiz Mt. (NFS 57.30 291 ⇓P **P 01 21 19.1 -0.1**
baz=57
M17A Scullys Gap (B 57.39 298 ⇑P **P 01 21 19.6 -0.1**
baz=57
J15A Blackfoot 57.56 301 ⇓P **P 01 21 21.3 +0.4**
baz=57
T21A Navajo Lake 57.59 292 ⇑P **P 01 21 21.2 +0.1**
baz=58
125A Gardner Draw, 57.88 287 ⇑P **P 01 21 22.5 -0.8**
baz=58
528A Cox Ranch, San 57.90 283 ⇑P **P 01 21 22.0 -1.5**
baz=58,SNR=6.4
HWUT Hardware Ranch 57.91 299 *e*P **P 01 21 23.4 +0.1**
comp=Z,8.8nm,1.0s,mb4.7
HWUT Hardware Ranch 57.91 299 *e*P **P 01 21 23.4 +0.1**
comp=Z,8.8nm,1.0s,mb4.7
GDL2 Guadalupe Moun 57.91 286 *e*P **P 01 21 23.4 -0.1**
GDL2 Guadalupe Moun 57.91 286 *e*P **P 01 21 23.4 -0.1**
U21A Nageezi 57.96 292 ⇑P **P 01 21 22.7 -1.1**
baz=58
427A Hayter Ranch, 57.97 284 ⇓P **P 01 21 22.5 -1.4**
baz=58
AKTK Aktyubinsk 58.03 49 P **P 01 21 24.3 +0.3**
AKTK LR LR 01 45 05.9
AKTK Aktyubinsk 58.03 49 P **P 01 21 24.3 +0.3**
AKTO Aktyubinsk 58.03 49 P **P 01 21 24.3 +0.3**
comp=Z,3.0nm,0.6s,mb4.5,baz=294,slow=6.8,SNR=14
AKTO LR LR 01 45 05.9
comp=Z,144nm,20.4s,MS4.1,baz=304,slow=35
326A Caldwell Ranch 58.12 285 ⇓P **P 01 21 24.4 -0.5**
baz=58
F12A Elk City 58.14 305 ⇓P **P 01 21 24.4 -0.4**
baz=58,SNR=5.2
Y23A Lovelace Mesa, 58.17 289 ⇓P **P 01 21 24.9 -0.4**
baz=58
S19A Harvey Farm, M 58.28 294 ⇑P **P 01 21 25.7 -0.3**
baz=58
225A Deer Hill, Car 58.29 286 ⇓P **P 01 21 25.5 -0.6**
baz=58,SNR=6.4
DAU Daniels Canyon 58.31 298 *e*P **P 01 21 26.6 +0.4**
DAU Daniels Canyon 58.31 298 *e*P **P 01 21 26.6 +0.4**
I13A Wildhorse Cree 58.36 302 ⇑P **P 01 21 26.8 +0.3**
baz=58
124A Stringfield Ra 58.42 287 ⇓P **P 01 21 26.7 -0.3**
baz=58,SNR=11
R18A Canyonlands Na 58.46 295 ⇑P **P 01 21 27.1 -0.1**
baz=58
BNM Barren Site 58.46 289 *e*P **P 01 21 27.5 +0.2**
comp=Z,4.0nm,0.9s,mb4.5
BNM Barren Site 58.46 289 *e*P **P 01 21 27.5 +0.2**
comp=Z,4.0nm,0.9s,mb4.5
H12A Diamond D Ranc 58.50 303 ⇓P **P 01 21 27.5 +0.1**
baz=58
527A Woodward Ranch 58.51 284 ⇑P **P 01 21 26.9 -0.8**
baz=58
U20A Newcomb 58.58 292 ⇑P **P 01 21 28.1 -0.1**
baz=58
LAZ Ladron 58.68 290 *e*P **P 01 21 29.4 +0.6**
comp=Z,2.3nm,1.1s,mb4.1
LAZ Ladron 58.68 290 *e*P **P 01 21 29.4 +0.6**
comp=Z,2.3nm,1.1s,mb4.1
T19A Beclabito 58.69 293 ⇓P **P 01 21 28.6 -0.3**
baz=59
HLID Hailey 58.73 302 ⇑P **P 01 21 29.3 +0.3**
baz=59
627A Terlingua Ranc 58.73 283 ⇓P **P 01 21 28.6 -0.6**
baz=59,SNR=6.7
325A Bean Ranch, Si 58.80 286 ⇓P **P 01 21 28.9 -0.8**
baz=59
224A Cornudas Mount 58.81 287 ⇓P **P 01 21 28.4 -1.3**
baz=59
Y22A Socorro 58.81 289 ⇓P **P 01 21 29.3 -0.4**
baz=59
S18A Hurst Farm, Bl 58.89 294 ⇑P **P 01 21 29.9 -0.3**
baz=59
R17A Hanksville Air 58.99 295 ⇓P **P 01 21 30.4 -0.5**
baz=59
TXAR Lajitas Array 59.00 283 P **P 01 21 30.4 -0.7**
comp=Z,1.7nm,0.6s,mb4.2,baz=68,slow=7.0,SNR=16
TXAR LR LR 01 44 27.9
comp=Z,74nm,20.2s,MS3.8,baz=90,slow=34
TXAR Lajitas Array 59.00 283 P **P 01 21 30.4 -0.7**
I12A Atlanta 59.06 303 ⇑P **P 01 21 31.8 +0.5**
baz=59
U19A Dine' College, 59.10 293 ⇓P **P 01 21 31.5 -0.1**
baz=59
X21A Alamocita Cree 59.11 290 ⇓P **P 01 21 31.7 -0.1**
baz=59
324A Moseley Ranch, 59.13 286 ⇑P **P 01 21 31.0 -0.9**
baz=59
W20A Ramah 59.23 291 ⇑P **P 01 21 32.4 -0.3**
baz=59
Y21A Point of Rocks 59.27 290 ⇑P **P 01 21 32.7 -0.2**
baz=59
J12A Stokes Ranch, 59.32 302 ⇑P **P 01 21 33.3 +0.2**
baz=59
DUG Dugway 59.44 298 ⇑P **P 01 21 34.2 +0.1**
baz=59
DUG Dugway 59.44 298 *e*P **P 01 21 34.0 0.0**
DUG pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
DUG Dugway 59.44 298 *e*P **P 01 21 34.0 0.0**
comp=Z,7.1nm,1.1s,mb4.6
DUG Dugway 59.44 298 *e*P **P 01 21 34.0 0.0**
comp=Z,7.0nm,1.1s,mb4.6
U18A Rough Rock, Ch 59.48 293 ⇓P **P 01 21 35.0 +0.7**
baz=59
X20A Quemado 59.55 291 ⇓P **P 01 21 35.7 +0.8**
baz=59
Z21A St. Cloud Mine 59.65 289 ⇑P **P 01 21 36.3 +0.8**
baz=60
MFID Camas Ranch 59.69 303 ⇑P **P 01 21 36.6 +1.0**
baz=60
ABKAR Akbulak array 59.70 49 *e*P **P 01 21 36.1 +0.4**
comp=Z,1.8nm,0.8s,mb4.2
ABKAR Akbulak array 59.70 49 *e*P **P 01 21 36.1 +0.5**
comp=Z,1.8nm,0.8s,mb4.2
Q15A Fillmore 59.79 297 ⇓P **P 01 21 37.0 +0.6**
baz=60
T17A Navajo Res., N 59.80 294 ⇑P **P 01 21 36.7 +0.1**
baz=60
Y20A Horse Springs, 59.81 290 ⇑P **P 01 21 37.2 +0.6**
baz=60
V18A Ganado 59.90 292 ⇑P **P 01 21 37.7 +0.4**
baz=60
G09A Cove 59.91 305 ⇑P **P 01 21 38.2 +1.1**
baz=60
P14A Drum Mountains 59.93 298 ⇓P **P 01 21 37.3 -0.1**
baz=60
DAWY Dawson 60.07 331 *e*P **P 01 21 40.0 +2.1**
DAWY Dawson 60.07 331 *e*P **P 01 21 40.0 +2.1**
K11A Parker Ranch, 60.15 302 ⇓P **P 01 21 39.3 +0.5**
baz=60
121A Cookes Peak, D 60.15 288 ⇑P **P 01 21 39.0 -0.1**
baz=60
X19A St. Johns 60.16 291 ⇓P **P 01 21 39.4 +0.4**
baz=60
Y19A Nutrioso 60.39 290 ⇓P **P 01 21 41.1 +0.4**
baz=60,SNR=6.6
Z20A Nine Sixteen R 60.40 289 ⇑P **P 01 21 40.9 +0.2**
baz=60
V17A Tonalea, Kykot 60.54 293 ⇑P **P 01 21 42.0 +0.3**
baz=60
S14A Cedar City 60.98 296 ⇓P **P 01 21 45.1 +0.5**
baz=61
220A Playas Peak, P 61.02 288 ⇑P **P 01 21 44.7 -0.3**
baz=61
Y18A Canyon Day Jun 61.03 291 ⇑P **P 01 21 45.3 +0.3**
baz=61
U15A North Rim 61.12 294 ⇓P **P 01 21 45.5 -0.1**
baz=61
CCUT Cedar City 61.22 296 *e*P **P 01 21 46.8 +0.6**
comp=Z,3.0nm,0.9s,mb4.4
CCUT Cedar City 61.22 296 *e*P **P 01 21 46.8 +0.6**
comp=Z,3.0nm,0.9s,mb4.4
X17A Forest Lakes 61.26 292 ⇓P **P 01 21 47.2 +0.7**
baz=61
W16A Flagstaff 61.33 293 ⇓P **P 01 21 47.8 +0.8**
baz=61
J08A Circle Bar Ran 61.35 304 ⇑P **P 01 21 48.1 +1.0**
baz=61
V15A Kaibab Nationa 61.37 294 ⇓P **P 01 21 47.8 +0.5**
baz=61
219A White Tail Can 61.48 288 ⇓P **P 01 21 48.3 +0.2**
baz=61
COLD Coldfoot 61.51 337 *e*P **P 01 21 48.3 +0.6**
comp=Z,10nm,1.2s,mb4.8
COLD Coldfoot 61.51 337 *e*P **P 01 21 48.3 +0.6**
comp=Z,10nm,1.2s,mb4.8
S13A Holt Ranch, En 61.53 296 ⇓P **P 01 21 48.6 +0.3**
baz=61
118A Homack Ranch, 61.62 289 ⇑P **P 01 21 49.5 +0.4**
baz=62
Y17A Roosevelt 61.64 291 ⇑P **P 01 21 49.5 +0.4**
baz=62
X16A Lo Mia Camp, P 61.65 292 ⇑P **P 01 21 49.9 +0.8**
baz=62
T13A Saint George 61.88 296 ⇓P **P 01 21 51.1 +0.4**
baz=62
WVOR Wild Horse Val 61.95 303 *e*P **P 01 21 53.3 +2.2**
WVOR pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
WVOR Wild Horse Val 61.95 303 *e*P **P 01 21 53.3 +2.2**
comp=Z,4.8nm,0.9s,mb4.6
WVOR Wild Horse Val 61.95 303 *e*P **P 01 21 53.3 +2.2**
comp=Z,5.0nm,0.9s,mb4.6
X15A Humboldt 62.15 292 ⇑P **P 01 21 53.0 +0.4**
baz=62
117A Oracle 62.20 290 ⇑P **P 01 21 53.4 +0.5**
baz=62
U13A Pakoon Wash 62.25 295 ⇓P **P 01 21 53.6 +0.4**
baz=62
R11A Troy Canyon, C 62.25 298 ⇓P **P 01 21 53.8 +0.6**
baz=62
W14A Seligman 62.32 294 ⇓P **P 01 21 54.3 +0.6**
baz=62
V13A Grand Canyon W 62.58 295 ⇑P **P 01 21 55.7 +0.3**
baz=62
X14A Yava 62.61 293 ⇑P **P 01 21 55.9 +0.2**
baz=62
216A Three Points, 63.02 290 ⇓P **P 01 21 58.6 +0.2**
baz=63
BRVK Borovoye 63.07 42 ⇑*i*P **P 01 21 58.6 +0.2**
BRVK pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
BRVK Borovoye 63.07 42 *i* P **P 01 21 58.6 +0.2**
comp=Z,3.0nm,0.8s,mb4.5
BVAR Borovoye Array 63.14 42 P **P 01 21 59.3 +0.4**
comp=Z,1.7nm,0.8s,mb4.2,baz=307,slow=5.4,SNR=7.9
BVAR LR LR 01 47 40.4
comp=Z,66nm,20.9s,MS3.8,baz=92,slow=34
BVAR Borovoye Array 63.14 42 P **P 01 21 59.3 +0.4**
S10A Tonopah Range, 63.15 298 ⇓P **P 01 21 59.5 +0.3**
baz=63
X13A Yucca 63.18 293 ⇓P **P 01 21 59.8 +0.4**
baz=63
Z13A Yuma Proving G 63.85 292 ⇓P **P 01 22 03.8 -0.1**
baz=64
NVAR Mina Array Bea 63.97 299 P **P 01 22 03.7 -0.9**
comp=Z,0.2nm,0.3s,mb3.6,baz=43,slow=5.7,SNR=2.6
NVAR Mina Array Bea 63.97 299 P **P 01 22 03.7 -0.9**
214A Organ Pipe Nat 63.99 290 ⇓P **P 01 22 05.1 +0.3**
baz=64
GLA Glamis 64.74 292 ⇑P **P 01 22 10.1 +0.4**
baz=65
MPMC Manual Prospec 64.80 297 ⇑P **P 01 22 10.4 +0.4**
baz=65
TIXI Tiksi 65.23 7 *e*P **P 01 22 11.6 -0.7**
TIXI pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
TIXI Tiksi 65.23 7 *e*P **P 01 22 12.5 +0.2**
comp=Z,4.5nm,1.0s,mb4.5
TIXI Tiksi 65.23 7 *e*P **P 01 22 12.5 +0.2**
comp=Z,4.5nm,1.0s,mb4.5
NVS Novosibirsk 67.88 35 *e*P **P 01 22 29.2 -0.3**
NVS pmax pmax
comp=Z,7.0nm,1.2s,mb4.6
NVS pmax pmax
comp=E,42nm,1.7s
NVS Novosibirsk 67.88 35 *e*P **P 01 22 29.2 -0.3**
comp=E,7.0nm,1.2s,mb4.6
LPAZ La Paz 67.97 219 P **P 01 22 31.9 +1.5**
comp=E,2.8nm,0.9s,mb4.3,baz=10.0,slow=8.5,SNR=7.9
LPAZ LR LR 01 48 49.3
comp=E,58nm,19.3s,MS3.8,baz=215,slow=33
LPAZ La Paz 67.97 219 P **P 01 22 31.9 +1.5**
KURK Kurchatov 68.57 40 *e*P **P 01 22 33.8 -0.1**
KURK pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
KURK Kurchatov 68.57 40 *e*P **P 01 22 33.8 -0.1**
comp=Z,3.1nm,0.9s,mb4.2
KURK Kurchatov 68.57 40 *e*P **P 01 22 33.8 -0.1**
comp=Z,3.0nm,0.9s,mb4.2
ZALV Zalesovo Beam 69.17 35 P **P 01 22 37.5 -0.1**
comp=Z,1.2nm,0.6s,mb4.0,baz=306,slow=10,SNR=5.6
ZALV LR LR 01 52 44.8
comp=Z,76nm,19.2s,MS4.0,baz=68,slow=36
AAK Ala-Archa 71.77 49⇓*e*P **P 01 22 54.2 +0.5**
AAK pmax pmax
comp=Z,2.0nm,1.2s,mb3.9
AAK Ala-Archa 71.77 49 *e*P **P 01 22 54.2 +0.5**
comp=Z,2.0nm,1.2s,mb3.9
MK31 Makanchi Array 73.03 41 *e*P **P 01 23 01.0 -0.1**
MK31 Makanchi Array 73.03 41 *e*P **P 01 23 01.0 -0.1**
MKAR Makanchi Array 73.03 41 P **P 01 23 01.1 0.0**
comp=Z,1.5nm,0.5s,mb4.2,baz=322,slow=5.5,SNR=13
MKAR LR LR 01 53 55.0
comp=Z,76nm,19.7s,MS4.0,baz=172,slow=35
KSH Kashi 74.69 50 P **P 01 23 12.5 +1.6**
KSH pP pP 01 23 16.8 +5.0
KSH sP sP 01 23 19.0 +6.9
KSH PP PP 01 26 01.6 +4.3
KSH S S 01 32 47.8 +0.1
KSH sS sS 01 32 54.9 +5.8
KSH SKS 01 33 15.8
KSH ScS ScS 01 33 19.4 -4.0
KSH SS SS 01 37 36.4 +2.4
KSH pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
KSH pmax pmax
comp=Z,180nm,5.1s
KSH LR LR
comp=N,87nm,4.8s
KSH LR LR
comp=E,110nm,5.2s
KSH LR LR
comp=Z,160nm,7.9s
SEY Seymchan 74.91 359⇓*i*P **P 01 23 12.8 +1.0**
SEY Seymchan 74.91 359 *i* P **P 01 23 12.8 +1.0**
WMQ Urumqi 77.81 41 *e*P **P 01 23 29.5 +0.9**
WMQ pP pP 01 23 34.3 +4.9
WMQ sP sP 01 23 36.5 +6.8
WMQ PcP PcP 01 23 39.6 +1.0
WMQ PP PP 01 26 27.8 +4.4
WMQ pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
WMQ pmax pmax
comp=Z,210nm,5.2s
WMQ LR LR
comp=N,110nm,18.4s,MS4.3
WMQ LR LR
comp=E,76nm,20.4s,MS4.3
WMQ LR LR
comp=Z,99nm,21.2s,MS4.1
SONM Songino Array 82.34 28 P **P 01 23 53.2 +0.2**
comp=Z,0.5nm,0.7s,mb3.6,baz=316,slow=4.0,SNR=3.3
SONM LR LR 01 59 59.1
comp=Z,63nm,18.4s,MS4.0,baz=47,slow=35
SONM Songino Array 82.34 28 P **P 01 23 53.2 +0.2**
PETK Petropavlovsk- 84.53 355 LR LR 02 02 12.1
comp=Z,44nm,19.1s,MS3.9,baz=251,slow=36
GTA Gaotai 86.87 36 *e*P **P 01 24 15.8 -0.3**
GTA pP pP 01 24 20.3 +3.4
GTA sP sP 01 24 22.8 +5.6
GTA pmax pmax
comp=Z,3.0nm,1.3s,mb4.4
BOSA Boshof 87.40 133 LR LR 02 00 16.5
comp=Z,160nm,20.4s,MS4.4,baz=128,slow=34
HHC Hu-ho-hao-te 90.24 28 *e*P **P 01 24 29.4 -2.6**
HHC PP PP 01 28 05.3 +0.5
HHC SKS 01 34 58.4
HHC S S 01 35 20.9 -5.9
HHC SS SS 01 41 22.9 -1.4
HHC pmax pmax
comp=Z,11nm,0.7s,mb5.3
HHC pmax pmax
comp=Z,65nm,6.8s
HHC LR LR
comp=N,140nm,18.2s,MS4.5
HHC LR LR
comp=E,110nm,18.6s,MS4.5
HHC LR LR
comp=Z,140nm,18.2s,MS4.4
PLCA Paso Flores 90.40 209 LR LR 02 04 18.0
comp=Z,75nm,20.8s,MS4.1,baz=93,slow=35
LZH Lanzhou 91.39 35 *e*P **P 01 24 35.8 -1.7**
LZH pP pP 01 24 39.0 +0.7
LZH pmax pmax
comp=Z,13nm,1.0s,mb5.2
CN2 Changchun 91.44 17 *e*P **P 01 24 36.1 -1.4**
CN2 *es*P sP 01 24 42.5 +3.8
CN2 *e*S S 01 35 31.3 -6.3
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.3
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,600nm,24.0s,MS5.0
CN2 LR LR
comp=E,400nm,24.0s,MS5.0
CN2 LR LR
comp=Z,200nm,15.0s
CD2 Chengdu 95.73 38 P **P 01 24 56.8 -0.7**
CD2 pP pP 01 25 01.6 +3.2
CD2 sP sP 01 25 03.8 +5.1
CD2 PP PP 01 28 50.3 +2.1
CD2 S S 01 36 10.5 -5.5
CD2 sS sS 01 36 18.1 +0.7
CD2 SS SS 01 42 42.5 -1.0
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.5
CD2 pmax pmax
comp=Z,60nm,3.9s
CD2 LR LR
comp=N,150nm,6.5s
CD2 LR LR
comp=Z,210nm,7.7s
KSRS Korea Array 98.05 17 LR LR 02 09 12.5
comp=Z,30nm,21.1s,MS3.8,baz=352,slow=35
KMI Kunming 100.10 42 P Pdif 01 25 17.1 0.0
KMI pP 01 25 20.9
KMI sP 01 25 22.4
KMI PP PP 01 29 25.3 +3.5
KMI S Sdif 01 36 48.4 -4.6
KMI SS SS 01 43 45.3 +0.1
KMI pmax pmax
comp=Z,8.0nm,0.7s
KMI pmax pmax
comp=Z,68nm,5.0s
KMI LR LR
comp=N,88nm,17.3s,MS4.5
KMI LR LR
comp=E,97nm,16.8s,MS4.5
GYA Guiyang 100.85 38 *e*P Pdif 01 25 22.1 +1.7
GYA PP PP 01 29 32.8 +5.4
GYA SKS 01 35 58.0
GYA S Sdif 01 36 55.3 -3.9
GYA SS SS 01 43 55.9 +0.5
GYA pmax pmax
comp=Z,10.0nm,0.9s
GYA pmax pmax
comp=Z,80nm,5.9s
GYA LR LR
comp=N,530nm,25.3s,MS5.1
GYA LR LR
comp=E,420nm,23.6s,MS5.1
GYA LR LR
comp=Z,410nm,25.0s,MS4.8
ASAR Alice Springs 157.21 40 PKPab PKPab 01 31 57.4 -0.8
comp=Z,0.4nm,0.6s,baz=323,slow=3.6,SNR=3.9
ASAR Alice Springs 157.21 40 PKPab PKPab 01 31 57.4 -0.8

IGIL ***17*** *01:39:15.8, 37°.47N×13°.58W, h2km, ML2.6*
NEIC ***17*** *01:39:15.2, 37°.47N×13°.58W, h0km, MG4.3(MDD), After MDD.*
MDD ***17*** *01:39:16.4±1.7, 37°.49N×13°.48W, h0km, mb4.1/3, Error ellipse: s-maj=14.6km s-min=12.7km az=66.0*
INMG ***17*** *01:39:16.8±2.0, 37°.34N×13°.97W, h10km, ML2.7, Error ellipse: s-maj=8.0km s-min=3.9km az=125.0*
LDG ***17*** *01:39:17.5±0.3, 37°.42N×13°.72W, h30km, Ml3.2/4, Error ellipse: s-maj=4.8km s-min=4.5km az=85.0*
ISCJB ***17*** *01:39:19.6±0.7, 37°.77N±0°.03×13°.09W±0°.05, h10km, Error ellipse: s-maj=5.2km s-min=4.7km az=3.1*
CSEM ***17*** *01:39:20.1±0.3, 37°.65N×13°.16W, h10km, ML3.4/30, Error ellipse: s-maj=5.9km s-min=5.1km az=68.0*
ISC 17 01:39:20.1±0.8,**37°.68N**±0°.04×**13°.17W**±0°.05,**h10**km,**n159,**
σ0°**94**/283,**Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMAFR	Mafra	3.31	66	ePn	Pn	01 40 12.9	+0.9
PMAFR				eSn	Sn	01 40 54.7	+3.3
PMAFR				A		01 40 57.7	
	22nm,0.2s						
PMAFR	Mafra	3.31	66	Pn	Pn	01 40 12.9	+0.9
	4.1nm,0.1s,SNR=6.6						
PMAFR				Sn	Sn	01 40 55.1	+3.7
	15nm,0.2s,SNR=7.3						
PMAFR	Mafra	3.31	66	Pn	Pn	01 40 12.9	+0.9
	4.1nm,0.1s,SNR=6.6						
PMAFR				Sn	Sn	01 40 55.1	+3.7
	15nm,0.2s,SNR=7.3						
PMAFR	Mafra	3.31	66	Pn	Pn	01 40 12.9	+0.9
	4.1nm,0.1s,SNR=6.6						
PMAFR				eSn	Sn	01 40 54.7	+3.3
	22nm,0.2s						
PFVI	Vila Bisbo	3.50	98	ePn	Pn	01 40 13.8	-0.8
PFVI				eSn	Sn	01 40 55.0	-1.1
PFVI				A		01 40 57.1	
	6.2nm,0.5s						
PFVI	Vila Bisbo	3.50	98	Pn	Pn	01 40 13.7	-0.9
PFVI				Sn	Sn	01 40 55.0	-1.1
PFVI	Vila Bisbo	3.50	98	Pn	Pn	01 40 13.7	-0.9
	2.6nm,0.1s,SNR=7.9						
PFVI				Sn	Sn	01 40 55.0	-1.1
	16nm,0.2s,SNR=7.9						
PFVI	Vila Bisbo	3.50	98	Pn	Pn	01 40 13.7	-0.9
	2.6nm,0.1s,SNR=7.9						
PFVI				Sn	Sn	01 40 55.0	-1.1
	16nm,0.2s,SNR=7.9						
PFVI	Vila Bisbo	3.50	98	ePn	Pn	01 40 13.8	-0.8
PFVI				eSn	Sn	01 40 55.0	-1.1
	6.2nm,0.5s						
PTEO	Sao Teotonio	3.53	91	ePn	Pn	01 40 14.6	-0.5
PTEO				eSn	Sn	01 40 56.6	-0.3
PTEO				A		01 40 58.5	
	8.3nm,0.4s						
PTEO	Sao Teotonio	3.53	91	Pn	Pn	01 40 14.6	-0.5
PTEO				Sn	Sn	01 40 56.6	-0.3
	4.2nm,0.4s						
PTEO	Sao Teotonio	3.53	91	Pn	Pn	01 40 14.6	-0.5
PTEO				Sn	Sn	01 40 56.6	-0.3
	4.2nm,0.4s						
PTEO	Sao Teotonio	3.53	91	ePn	Pn	01 40 14.6	-0.5
PTEO				eSn	Sn	01 40 56.6	-0.3
	8.3nm,0.4s						
MORF	Marmelete	3.62	95	ePn	Pn	01 40 15.5	-0.7
MORF				eSn	Sn	01 40 59.0	+0.1
MORF				A		01 41 01.5	
	9.6nm,0.2s						
MORF	Marmelete	3.62	95	Pn	Pn	01 40 15.5	-0.7
MORF				Sn	Sn	01 40 59.0	+0.1
	9.6nm,0.2s						
MORF	Marmelete	3.62	95	Pn	Pn	01 40 15.5	-0.7
MORF				Sn	Sn	01 40 59.0	+0.1
	9.6nm,0.2s						
MORF	Marmelete	3.62	95	ePn	Pn	01 40 15.5	-0.7
MORF				eSn	Sn	01 40 59.0	+0.1
	9.6nm,0.2s						
MOE	Montemor	3.90	76	eSn	Sn	01 41 06.6	+0.8
MOE	Montemor	3.90	76	eSn	Sn	01 41 06.6	+0.8
ALMR	Almeirim	3.90	66	eP	Pn	01 40 20.4	+0.4
ALMR				eS	Sn	01 41 07.6	+1.7
ALMR				eS	Sn	01 41 07.7	+1.8
ALMR				AML	AML	01 41 09.7	
	comp=N,11nm,0.1s						
ALMR	Almeirim	3.90	66	eP	Pn	01 40 20.4	+0.4
ALMR				eS	Sn	01 41 07.7	+1.8
ALMR	Almeirim	3.90	66	Pn	Pn	01 40 20.4	+0.4
ALMR				Sn	Sn	01 41 07.6	+1.7
ALMR	Almeirim	3.90	66	Pn	Pn	01 40 20.4	+0.4
ALMR				Sn	Sn	01 41 07.6	+1.7
ALMR	Almeirim	3.90	66	eP	Pn	01 40 20.4	+0.4
ALMR				eS	Sn	01 41 07.7	+1.8
MESJ	Messejana	3.93	86	eP	Pn	01 40 20.0	-0.5
MESJ				eS	Sn	01 41 06.6	0.0
MESJ				eS	Sn	01 41 06.7	+0.1
MESJ	Messejana	3.93	86	eP	Pn	01 40 20.0	-0.5
MESJ				eS	Sn	01 41 06.6	0.0
MESJ	Messejana	3.93	86	Pn	Pn	01 40 20.0	-0.5
MESJ				Sn	Sn	01 41 06.6	0.0
MESJ	Messejana	3.93	86	Pn	Pn	01 40 20.0	-0.5
MESJ				Sn	Sn	01 41 06.6	0.0
MESJ	Messejana	3.93	86	eP	Pn	01 40 20.0	-0.5
MESJ				eS	Sn	01 41 06.6	0.0
EVOP	Sao Brissos	4.07	76	ePn	Pn	01 40 22.4	0.0
EVOP				eSn	Sn	01 41 10.8	+0.7
	comp=N,6.2nm,0.4s						
PCVE	Castro Verde	4.07	89	ePn	Pn	01 40 21.7	-0.8
PCVE				eSn	Sn	01 41 09.7	-0.5
PCVE				A		01 41 15.1	
	comp=N,3.8nm,0.2s						
PCVE	Castro Verde	4.07	89	Pn	Pn	01 40 21.7	-0.8
PCVE				Sn	Sn	01 41 09.7	-0.5
	comp=N,3.8nm,0.2s						
PCVE	Castro Verde	4.07	89	Pn	Pn	01 40 21.7	-0.8
PCVE				Sn	Sn	01 41 09.7	-0.5
	comp=N,3.8nm,0.2s						
PCVE	Castro Verde	4.07	89	ePn	Pn	01 40 21.7	-0.8
PCVE				eSn	Sn	01 41 09.7	-0.5
	comp=N,3.8nm,0.2s						
EVO	Evora	4.16	77	ePn	Pn	01 40 22.4	-1.2
EVO				eSn	Sn	01 41 10.8	-1.4
	comp=N,12nm,0.4s						
EVO	Evora	4.16	77	ePn	Pn	01 40 23.8	+0.2
EVO				eSn	Sn	01 41 13.0	+0.8
EVO				A		01 41 19.1	
	comp=N,14nm,0.1s						
EVO	Evora	4.16	77	Pn	Pn	01 40 23.8	+0.2
EVO				Sn	Sn	01 41 13.0	+0.8
	comp=N,14nm,0.1s						
EVO	Evora	4.16	77	Pn	Pn	01 40 23.8	+0.2
EVO				Sn	Sn	01 41 13.0	+0.8
	comp=N,14nm,0.1s						
EVO	Evora	4.16	77	ePn	Pn	01 40 23.8	+0.2
EVO				eSn	Sn	01 41 13.0	+0.8
	comp=N,14nm,0.1s						
PBDV	Barranco-do-Ve	4.19	94	ePn	Pn	01 40 24.0	-0.1
PBDV				eSn	Sn	01 41 13.4	+0.3
PBDV				A		01 41 20.7	
	comp=N,5.0nm,0.5s						
PBDV	Barranco-do-Ve	4.19	94	Pn	Pn	01 40 24.0	-0.1
PBDV				Sn	Sn	01 41 13.4	+0.3
	comp=N,5.0nm,0.5s						
PBDV	Barranco-do-Ve	4.19	94	Pn	Pn	01 40 24.0	-0.1
PBDV				Sn	Sn	01 41 13.4	+0.3
	comp=N,5.0nm,0.5s						
PBDV	Barranco-do-Ve	4.19	94	ePn	Pn	01 40 24.0	-0.1
PBDV				eSn	Sn	01 41 13.4	+0.3
	comp=N,5.0nm,0.5s						
PTOM	Tomar	4.20	61	eSn	Sn	01 41 15.7	+2.4
PTOM				A		01 41 21.5	
	comp=N,11nm,0.6s						
PTOM	Tomar	4.20	61	Sn	Sn	01 41 15.7	+2.4
	comp=N,5.5nm,0.6s						
PTOM	Tomar	4.20	61	Sn	Sn	01 41 15.7	+2.4
	comp=N,5.5nm,0.6s						
PTOM	Tomar	4.20	61	eSn	Sn	01 41 15.7	+2.4
	comp=N,11nm,0.6s						
PBEJ	Beja	4.21	84	ePn	Pn	01 40 25.2	+0.8
PBEJ				eSn	Sn	01 41 14.6	+1.0
PBEJ				A		01 41 19.3	
	comp=N,5.5nm,0.3s						
PBEJ	Beja	4.21	84	Pn	Pn	01 40 25.2	+0.8
PBEJ				Sn	Sn	01 41 14.6	+1.0
	comp=N,2.8nm,0.3s						
PBEJ	Beja	4.21	84	Pn	Pn	01 40 25.2	+0.8
PBEJ				Sn	Sn	01 41 14.6	+1.0
	comp=N,2.8nm,0.3s						
PBEJ	Beja	4.21	84	ePn	Pn	01 40 25.2	+0.8
PBEJ				eSn	Sn	01 41 14.6	+1.0
	comp=N,5.5nm,0.3s						
PVAQ	Vaqueiros	4.34	92	ePn	Pn	01 40 25.3	-0.9
PVAQ				eSn	Sn	01 41 17.3	+0.4
PVAQ				A		01 41 21.7	
	comp=N,5.8nm,0.1s						
PVAQ	Vaqueiros	4.34	92	Pn	Pn	01 40 25.3	-0.9
PVAQ				Sn	Sn	01 41 17.3	+0.4
	comp=N,5.8nm,0.1s						
PVAQ	Vaqueiros	4.34	92	Pn	Pn	01 40 25.3	-0.9
PVAQ				Sn	Sn	01 41 17.3	+0.4
	comp=N,5.8nm,0.1s						
PVAQ	Vaqueiros	4.34	92	ePn	Pn	01 40 25.3	-0.9
PVAQ				eSn	Sn	01 41 17.3	+0.4
	comp=N,5.8nm,0.1s						
EGRO	El Granado	4.52	90	Pn	Pn	01 40 27.6	-1.0
EGRO				Sn	Sn	01 41 21.9	+0.8
EGRO	El Granado	4.52	90	Pn	Pn	01 40 28.4	-0.2
	comp=N,1.0nm,0.2s,SNR=7.9						
EGRO				Sn	Sn	01 41 21.9	+0.8
	comp=N,1.9nm,0.1s,SNR=7.8						
EGRO	El Granado	4.52	90	Pn	Pn	01 40 28.4	-0.2
	comp=N,1.0nm,0.2s,SNR=7.9						
EGRO				Sn	Sn	01 41 21.9	+0.8
	comp=N,1.9nm,0.1s,SNR=7.8						
EGRO	El Granado	4.52	90	Pn	Pn	01 40 28.4	-0.2
	comp=N,1.0nm,0.2s,SNR=7.9						
EGRO				Sn	Sn	01 41 21.9	+0.7
	comp=N,1.9nm,0.1s,SNR=7.8						
PESTR	Estremoz	4.55	73	ePn	Pn	01 40 28.4	-0.6
PESTR				eSn	Sn	01 41 22.3	+0.4
PESTR				A		01 41 30.5	
	comp=N,3.9nm,0.4s						
PESTR	Estremoz	4.55	73	Pn	Pn	01 40 28.4	-0.6
PESTR				Sn	Sn	01 41 22.3	+0.4
	comp=N,1.9nm,0.4s						
PESTR	Estremoz	4.55	73	Pn	Pn	01 40 28.4	-0.6
PESTR				Sn	Sn	01 41 22.3	+0.4
	comp=N,1.9nm,0.4s						
PESTR	Estremoz	4.55	73	ePn	Pn	01 40 28.4	-0.6
PESTR				eSn	Sn	01 41 22.3	+0.4
	comp=N,3.9nm,0.4s						
PMRV	Marv??o	4.86	67	ePn	Pn	01 40 33.8	+0.6
PMRV				eSn	Sn	01 41 31.0	+1.5
PMRV				A		01 41 34.5	
	comp=N,6.1nm,0.3s						
PMRV	Marv??o	4.86	67	Pn	Pn	01 40 33.8	+0.6
PMRV				Sn	Sn	01 41 31.0	+1.5
	comp=N,6.1nm,0.3s						
PMRV	Marv??o	4.86	67	Pn	Pn	01 40 33.8	+0.6
PMRV				Sn	Sn	01 41 31.0	+1.5
	comp=N,6.1nm,0.3s						
PMRV	Marv??o	4.86	67	ePn	Pn	01 40 33.8	+0.6
PMRV				eSn	Sn	01 41 31.0	+1.5
	comp=N,6.1nm,0.3s						
PBAR	Barrancos	4.87	82	ePn	Pn	01 40 34.1	+0.6
PBAR				eSn	Sn	01 41 30.3	+0.4
PBAR				A		01 41 38.7	
	comp=N,2.7nm,0.5s						
PBAR	Barrancos	4.87	82	Pn	Pn	01 40 34.1	+0.6
PBAR				Sn	Sn	01 41 30.3	+0.4
	comp=N,2.7nm,0.5s						
PBAR	Barrancos	4.87	82	Pn	Pn	01 40 34.1	+0.6
PBAR				Sn	Sn	01 41 30.3	+0.4
	comp=N,2.7nm,0.5s						
PBAR	Barrancos	4.87	82	ePn	Pn	01 40 34.1	+0.6
PBAR				eSn	Sn	01 41 30.3	+0.4
	comp=N,2.7nm,0.5s						
PTO	Porto	4.95	44	eSn	Sn	01 41 32.0	+0.4
PTO				A		01 41 36.8	
	comp=N,15nm,0.1s						
PTO	Porto	4.95	44	Sn	Sn	01 41 32.0	+0.4
	comp=N,7.6nm,0.1s						
PTO	Porto	4.95	44	Sn	Sn	01 41 32.0	+0.4
	comp=N,7.6nm,0.1s						
PTO	Porto	4.95	44	eSn	Sn	01 41 32.0	+0.4
	comp=N,15nm,0.1s						
EBAD	Badajoz	4.97	76	Pn	Pn	01 40 34.9	+0.1
EBAD				Sn	Sn	01 41 32.0	-0.2
EBAD	Badajoz	4.97	76	Pn	Pn	01 40 34.9	+0.1
	comp=N,0.7nm,0.1s,SNR=4.0						
EBAD				Sn	Sn	01 41 32.0	-0.2
	comp=N,5.9nm,0.2s,SNR=8.8						
EBAD	Badajoz	4.97	76	Pn	Pn	01 40 34.9	+0.1
	comp=N,0.7nm,0.1s,SNR=4.0						
EBAD				Sn	Sn	01 41 32.0	-0.2
	comp=N,5.9nm,0.2s,SNR=8.8						
EBAD	Badajoz	4.97	76	Pn	Pn	01 40 34.9	+0.2
	comp=N,0.7nm,0.1s,SNR=4.0						
EBAD				Sn	Sn	01 41 32.0	-0.2
	comp=N,5.9nm,0.2s,SNR=8.8						
PVIS	Viseu	5.10	52	ePn	Pn	01 40 38.0	+1.5
PVIS				eSn	Sn	01 41 36.8	+1.4
PVIS				A		01 41 40.6	
	comp=N,6.8nm,0.2s						
PVIS	Viseu	5.10	52	Pn	Pn	01 40 38.0	+1.5
PVIS				Sn	Sn	01 41 36.8	+1.4
	comp=N,3.4nm,0.2s						
PVIS	Viseu	5.10	52	Pn	Pn	01 40 38.0	+1.5
PVIS				Sn	Sn	01 41 36.8	+1.4
	comp=N,3.4nm,0.2s						
PVIS	Viseu	5.10	52	ePn	Pn	01 40 38.0	+1.5
PVIS				eSn	Sn	01 41 36.8	+1.4
	comp=N,6.8nm,0.2s						
EMIN	Mina Concepcio	5.15	87	Pn	Pn	01 40 36.6	-0.7
EMIN				Sn	Sn	01 41 37.2	+0.4
EMIN	Mina Concepcio	5.15	87	Pn	Pn	01 40 36.6	-0.7
	comp=N,0.3nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	01 41 36.3	-0.5
	comp=N,0.7nm,0.1s,SNR=6.6						
EMIN	Mina Concepcio	5.15	87	Pn	Pn	01 40 36.6	-0.7
	comp=N,0.3nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	01 41 36.3	-0.5
	comp=N,0.7nm,0.1s,SNR=6.6						
EMIN	Mina Concepcio	5.15	87	Pn	Pn	01 40 36.6	-0.7
	comp=N,0.3nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	01 41 36.3	-0.5
	comp=N,0.7nm,0.1s,SNR=6.6						
MTE	Manteigas	5.15	56	eSn	Sn	01 41 38.0	+1.2
MTE				A		01 41 41.6	
	comp=N,6.2nm,0.3s						
PMPS	Porto Santo	5.29	210	eSn	Pg	01 41 09.4	+8.0
PMPS				A		01 41 12.0	
	comp=N,11nm,0.4s						
PMPS	Porto Santo	5.29	210	Sn	Pg	01 41 09.4	+8.0
	comp=N,5.3nm,0.4s						
PMPS	Porto Santo	5.29	210	Sn	Pg	01 41 09.4	+8.0
	comp=N,5.3nm,0.4s						
PVRL	Vila Real	5.54	48	ePn	Pn	01 40 42.9	+0.3
PVRL				eSn	Sn	01 41 46.1	-0.2
PVRL				A		01 41 49.5	
	comp=N,9.0nm,0.1s						
PVRL	Vila Real	5.54	48	Pn	Pn	01 40 42.9	+0.3
PVRL				Sn	Sn	01 41 46.1	-0.2
	comp=N,4.5nm,0.1s						
PVRL	Vila Real	5.54	48	Pn	Pn	01 40 42.9	+0.3
PVRL				Sn	Sn	01 41 46.1	-0.2
	comp=N,4.5nm,0.1s						
PVRL	Vila Real	5.54	48	ePn	Pn	01 40 42.9	+0.3
PVRL				eSn	Sn	01 41 46.1	-0.2
	comp=N,9.0nm,0.1s						
PCAB	Cabril	5.65	43	ePn	Pn	01 40 44.3	+0.2
PCAB				eSn	Sn	01 41 48.5	-0.6
PCAB				A		01 41 53.1	
	comp=N,7.0nm,0.3s						
PCAB	Cabril	5.65	43	Pn	Pn	01 40 44.3	+0.2
PCAB				Sn	Sn	01 41 48.5	-0.6
	comp=N,3.5nm,0.3s						
PCAB	Cabril	5.65	43	Pn	Pn	01 40 44.3	+0.2
PCAB				Sn	Sn	01 41 48.5	-0.6
	comp=N,3.5nm,0.3s						
PCAB	Cabril	5.65	43	ePn	Pn	01 40 44.3	+0.2
PCAB				eSn	Sn	01 41 48.5	-0.6
	comp=N,7.0nm,0.3s						
ELOB	Lobios	5.74	42	Pn	Pn	01 40 45.6	+0.2
ELOB				Sn	Sn	01 41 51.1	-0.2
ELOB	Lobios	5.74	42	Pn	Pn	01 40 45.6	+0.2
	comp=N,0.8nm,0.2s,SNR=7.9						
ELOB				Sn	Sn	01 41 50.4	-0.9
	comp=N,2.8nm,0.1s,SNR=6.1						
ELOB	Lobios	5.74	42	Pn	Pn	01 40 45.6	+0.2
	comp=N,0.8nm,0.2s,SNR=7.9						
ELOB				Sn	Sn	01 41 50.4	-0.9
	comp=N,2.8nm,0.1s,SNR=6.1						
ELOB	Lobios	5.74	42	Pn	Pn	01 40 45.6	+0.2
	comp=N,0.8nm,0.2s,SNR=7.9						
ELOB				Sn	Sn	01 41 51.1	-0.2
PMAR	Madeira	5.82	213	eSn	Pg	01 41 22.4	+11
PMAR				A		01 41 25.8	
	comp=N,18nm,0.5s						
ESPR	Espera	5.89	96	Sn	Sn	01 41 54.7	-0.2
	comp=N,3.9nm,0.2s,SNR=7.9						
ESPR	Espera	5.89	96	Sn	Sn	01 41 54.7	-0.2
	comp=N,3.9nm,0.2s,SNR=7.9						
ESPR	Espera	5.89	96	Sn	Sn	01 41 54.7	-0.3
	comp=N,3.9nm,0.2s,SNR=7.9						
MVO	Moncorvo	5.89	52	ePn	Pn	01 40 48.0	+0.6
MVO				eSn	Sn	01 41 54.6	-0.4
MVO				A		01 41 56.1	
	comp=N,3.9nm,0.5s						
MVO	Moncorvo	5.89	52	Pn	Pn	01 40 47.8	+0.3
MVO				Sn	Sn	01 41 55.6	+0.6
MVO	Moncorvo	5.89	52	Pn	Pn	01 40 47.8	+0.3
	comp=N,0.4nm,0.1s,SNR=7.9						
MVO				Sn	Sn	01 41 54.5	-0.5
	comp=N,1.7nm,0.1s,SNR=10						
MVO	Moncorvo	5.89	52	Pn	Pn	01 40 47.8	+0.3
	comp=N,0.4nm,0.1s,SNR=7.9						
MVO				Sn	Sn	01 41 54.5	-0.5
	comp=N,1.7nm,0.1s,SNR=10						
MVO	Moncorvo	5.89	52	Pn	Pn	01 40 47.8	+0.4
	comp=N,0.4nm,0.1s,SNR=7.9						
MVO				Sn	Sn	01 41 55.6	+0.6
EPLA	Plasencia	6.02	65	Pn	Pn	01 40 49.8	+0.6
EPLA				Sn	Sn	01 42 00.1	+1.8
EPLA	Plasencia	6.02	65	Pn	Pn	01 40 49.8	+0.6
	comp=N,0.2nm,0.1s,SNR=7.9						
EPLA				Sn	Sn	01 41 59.3	+1.1
	comp=N,1.5nm,0.1s,SNR=6.5						
EPLA	Plasencia	6.02	65	Pn	Pn	01 40 49.8	+0.6
	comp=N,0.2nm,0.1s,SNR=7.9						
EPLA				Sn	Sn	01 41 59.3	+1.1
	comp=N,1.5nm,0.1s,SNR=6.5						
EPLA	Plasencia	6.02	65	Pn	Pn	01 40 49.8	+0.6
	comp=N,0.2nm,0.1s,SNR=7.9						
EPLA				Sn	Sn	01 41 59.3	+1.1
	comp=N,1.5nm,0.1s,SNR=6.5						
ECAB	El Cabril	6.15	84	Pn	Pn	01 40 51.3	+0.4
ECAB				Sn	Sn	01 42 03.0	+1.7
ECAB	El Cabril	6.15	84	Pn	Pn	01 40 51.3	+0.4
	comp=N,0.3nm,0.1s,SNR=7.9						
ECAB				Sn	Sn	01 41 59.8	-1.5
	SNR=7.9						
ECAB	El Cabril	6.15	84	Pn	Pn	01 40 51.3	+0.4
	comp=N,0.3nm,0.1s,SNR=7.9						
ECAB				Sn	Sn	01 41 59.8	-1.5
	SNR=7.9						
ECAB	El Cabril	6.15	84	Pn	Pn	01 40 51.3	+0.4
	comp=N,0.3nm,0.1s,SNR=7.9						
ECAB				Sn	Sn	01 41 59.8	-1.5
	SNR=7.9						
EMAZ	Mazaricos	6.16	30	Sn	Sn	01 41 59.8	-1.8
	comp=N,2.3nm,0.1s,SNR=7.9						
EMAZ	Mazaricos	6.16	30	Sn	Sn	01 41 59.8	-1.8
	comp=N,2.3nm,0.1s,SNR=7.9						
EMAZ	Mazaricos	6.16	30	Sn	Sn	01 41 59.8	-1.8
	comp=N,2.3nm,0.1s,SNR=7.9						
PBRG	Braganca	6.44	48	ePn	Pn	01 40 56.8	+1.8
PBRG				eSn	Sn	01 42 07.3	-1.3
PBRG	Braganca	6.44	48	Pn	Pn	01 40 56.8	+1.8
PBRG				Sn	Sn	01 42 07.3	-1.3
PBRG	Braganca	6.44	48	Pn	Pn	01 40 56.8	+1.8
PBRG				Sn	Sn	01 42 07.3	-1.3
PBRG	Braganca	6.44	48	ePn	Pn	01 40 56.8	+1.8
PBRG				eSn	Sn	01 42 07.3	-1.3
ECAL	Calabor	6.53	47	Pn	Pn	01 40 57.4	+1.2
ECAL				Sn	Sn	01 42 10.7	0.0
ECAL	Calabor	6.53	47	Pn	Pn	01 40 57.3	+1.2
	comp=N,0.6nm,0.2s,SNR=7.9						
ECAL				Sn	Sn	01 42 10.7	0.0
	comp=N,1.6nm,0.1s,SNR=7.9						
ECAL	Calabor	6.53	47	Pn	Pn	01 40 57.3	+1.2
	comp=N,0.6nm,0.2s,SNR=7.9						
ECAL				Sn	Sn	01 42 10.7	0.0
	comp=N,1.6nm,0.1s,SNR=7.9						
ECAL	Calabor	6.53	47	Pn	Pn	01 40 57.3	+1.1
	comp=N,0.6nm,0.2s,SNR=7.9						
ECAL				Sn	Sn	01 42 10.7	0.0
	comp=N,1.6nm,0.1s,SNR=7.9						
EADA	Adamuz	6.81	83	Pn	Pn	01 41 00.3	+0.2
EADA				Sn	Sn	01 42 18.6	+0.9
EADA	Adamuz	6.81	83	Pn	Pn	01 41 00.3	+0.2
	comp=N,0.9nm,0.2s,SNR=7.9						
EADA				Sn	Sn	01 42 17.6	0.0
	comp=N,0.9nm,0.1s,SNR=7.9						
EADA	Adamuz	6.81	83	Pn	Pn	01 41 00.3	+0.2
	comp=N,0.9nm,0.2s,SNR=7.9						
EADA				Sn	Sn	01 42 17.6	0.0
	comp=N,0.9nm,0.1s,SNR=7.9						
EADA	Adamuz	6.81	83	Pn	Pn	01 41 00.3	+0.2
	comp=N,0.9nm,0.2s,SNR=7.9						
EADA				Sn	Sn	01 42 17.6	-0.1
	comp=N,0.9nm,0.1s,SNR=7.9						
PAB	San Pablo	7.16	72	ePn	Pn	01 41 03.9	-0.9
PAB				eS	Sn	01 42 24.7	-1.4
PAB	San Pablo	7.16	72	ePn	Pn	01 41 03.9	-0.9
PAB				eS	Sn	01 42 24.7	-1.4
EPON	Pontenova	7.27	37	Sn	Sn	01 42 27.9	-1.0
	comp=N,0.6nm,0.1s,SNR=7.9						
EPON	Pontenova	7.27	37	Sn	Sn	01 42 27.9	-1.0
	comp=N,0.6nm,0.1s,SNR=7.9						
EPON	Pontenova	7.27	37	Sn	Sn	01 42 27.9	-1.0
	comp=N,0.6nm,0.1s,SNR=7.9						
EBAN	Banos Encina	7.44	83	Sn	Sn	01 42 31.3	-1.7
	comp=N,1.0nm,0.2s,SNR=7.9						
EBAN	Banos Encina	7.44	83	Sn	Sn	01 42 31.3	-1.7
	comp=N,1.0nm,0.2s,SNR=7.9						
EBAN	Banos Encina	7.44	83	Sn	Sn	01 42 31.3	-1.7
	comp=N,1.0nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	7.47	72	Pn	Pn	01 41 09.3	+0.2
ESDC	Sonseca Array	7.47	72	Pn	Pn	01 41 09.3	+0.2
	comp=N,0.9nm,0.2s,baz=257,slow=14,SNR=4.3						
ESDC	Sonseca Array	7.47	72	Pn	Pn	01 41 09.3	+0.2
	comp=N,0.9nm,0.2s,baz=257,slow=14,SNR=4.3						
ESDC	Sonseca Array	7.47	72	Pn	Pn	01 41 09.3	+0.1
	comp=N,0.9nm,0.2s,baz=257,slow=14,SNR=4.3						
GUD	Guadarrama	7.61	64	Sn	Sn	01 42 37.2	+0.1
	comp=N,0.5nm,0.1s,SNR=7.9						
GUD	Guadarrama	7.61	64	Sn	Sn	01 42 37.2	+0.1
	comp=N,0.5nm,0.1s,SNR=7.9						
GUD	Guadarrama	7.61	64	Sn	Sn	01 42 37.2	0.0
	comp=N,0.5nm,0.1s,SNR=7.9						
ETOR	Torete	9.18	67	Sn	Sn	01 43 14.7	-1.1
	SNR=7.9						
ETOR	Torete	9.18	67	Sn	Sn	01 43 14.7	-1.1
	SNR=7.9						
ETOR	Torete	9.18	67	Sn	Sn	01 43 14.7	-1.1
	SNR=7.9						
SJPF	Ste Jean	10.60	55	ePn	Pn	01 41 51.3	-0.7
SJPF				eSn	Sn	01 43 48.1	-2.6
	comp=N,1.0nm,0.5s						
SJPF	Ste Jean	10.60	55	ePn	Pn	01 41 51.3	-0.7
SJPF				eSn	Sn	01 43 48.1	-2.6
	comp=N,0.5nm,0.5s						
ETSF	Etsaut	10.95	58	ePn	Pn	01 41 56.6	-0.2
ETSF				eSn	Sn	01 43 56.3	-3.0
	comp=N,1.0nm,0.6s						
ETSF	Etsaut	10.95	58	ePn	Pn	01 41 56.6	-0.2
ETSF				eSn	Sn	01 43 56.3	-3.0
	comp=N,0.5nm,0.6s						
EPF	Esparros	11.61	58	ePn	Pn	01 42 05.6	-0.2
EPF				eSn	Sn	01 44 12.3	-3.1
	comp=N,0.4nm,0.3s						
EPF	Esparros	11.61	58	ePn	Pn	01 42 05.6	-0.2
EPF				eSn	Sn	01 44 12.3	-3.1
	comp=N,0.2nm,0.3s						

*ISCJB **17** 01:43:01.8±0.3, 40°.26N±0°.02×28°.03E±0°.02, h4km±3km, Error ellipse: s-maj=2.9km s-min=2.5km az=150.8*
*ISK **17** 01:43:01.7, 40°.25N×28°.02E, h7km, ML3.3*
*DDA **17** 01:43:01.6, 40°.24N×28°.01E, h7km±3km, Md3.1, Ml3.3*
*NEIC **17** 01:43:01.0, 40°.25N×28°.03E, h6km, ML3.3(ISK), After ISK.*
*CSEM **17** 01:43:02.3±0.1, 40°.27N×28°.02E, h8km, ML3.3, Error ellipse: s-maj=1.5km s-min=1.3km az=160.0*
*ATH **17** 01:43:02.5, 40°.33N×28°.17E, h83km±8km*
*THE **17** 01:43:03.8, 40°.22N×27°.99E, h6km±2km, ML3.9/5, Error ellipse: s-maj=3.4km s-min=0.9km az=90.0*
ISC 17 01:43:02.3±0.3, 40°.26N±0°.02×28°.02E±0°.02, h5km±3km, n121, σ0ˢ57/161, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNT	Bandirma	0.13	321	PG	Pg	01 43 05.4	+0.4
BNT				eSG	Sg	01 43 07.4	+0.7
GONE	Gonen-Balikesi	0.33	231	PG	Pg	01 43 08.8	0.0
GONE				eSG	Sg	01 43 13.7	+0.6
GONE	Gonen-Balikesi	0.33	231	iPg	Pg	01 43 08.8	0.0
GONE				eSg	Sg	01 43 13.7	+0.6
KRBG	Karabiga-Canak	0.57	284	PG	Pg	01 43 13.0	-0.3
KRBG				eSG	Sg	01 43 20.6	-0.1

KRBG	**Karabiga-Canak**	**0.57 284**	*i* Pg	**Pg**	**01 43 13.0**	**-0.3**
KRBG			*e*Sg	**Sg**	**01 43 20.6**	**-0.1**
BALY	**Balya**	**0.60 211**	*i* P	**Pg**	**01 43 13.7**	**-0.2**
BALY			*i* S	**Sg**	**01 43 22.2**	**+0.5**
BALY	**Balya**	**0.60 211**	*i* P	**Pg**	**01 43 13.7**	**-0.2**
BALY			*i* S	**Sg**	**01 43 22.2**	**+0.5**
BALB	**Balikesir**	**0.63 190**	PG	**Pg**	**01 43 14.4**	**+0.1**
BALB			*e*SG	**Sg**	**01 43 23.0**	**+0.5**
BALB	**Balikesir**	**0.63 190**	*i* Pg	**Pg**	**01 43 14.4**	**0.0**
BALB			*e*Sg	**Sg**	**01 43 23.0**	**+0.5**
MDNY	**Mudanya-Bursa**	**0.67 80**	PG	**Pg**	**01 43 15.4**	**+0.3**
MDNY			*e*SG	**Sg**	**01 43 25.0**	**+1.2**
MDNY	**Mudanya-Bursa**	**0.67 80**	*i* Pg	**Pg**	**01 43 15.4**	**+0.2**
MDNY			*e*Sg	**Sg**	**01 43 25.0**	**+1.2**
ARMT	**Armutlu**	**0.71 64**	PG	**Pg**	**01 43 16.1**	**+0.1**
ARMT	**Armutlu**	**0.71 64**	*i* Pg	**Pg**	**01 43 16.1**	**+0.1**
MFT	**Murefte**	**0.77 313**	*e*PG	**Pg**	**01 43 17.4**	**+0.2**
MFT	**Murefte**	**0.77 313**	*e*Pg	**Pg**	**01 43 17.4**	**+0.2**
RKY	**Sarkoy-Tekirda**	**0.78 304**	*e*PG	**Pg**	**01 43 16.9**	**-0.3**
RKY	**Sarkoy-Tekirda**	**0.78 304**	*e*Pg	**Pg**	**01 43 16.9**	**-0.3**
TKR	**Tekirdag**	**0.82 333**	*e*PG	**Pg**	**01 43 18.2**	**+0.1**
TKR	**Tekirdag**	**0.82 333**	*e*Pg	**Pg**	**01 43 18.2**	**+0.1**
CRLT	**Corlu**	**0.90 346**	*e*PG	**Pg**	**01 43 19.8**	**+0.3**
CRLT	**Corlu**	**0.90 346**	*e*Pg	**Pg**	**01 43 19.8**	**+0.2**
GEMT	**Gemlik**	**0.91 78**	*e*PG	**Pg**	**01 43 19.6**	**-0.2**
GEMT	**Gemlik**	**0.91 78**	*e*Pg	**Pg**	**01 43 19.6**	**-0.2**
ELBA	**Catalca**	**0.94 19**	*i* P	**Pg**	**01 43 20.3**	**-0.1**
ELBA			*i* S	**Sg**	**01 43 33.0**	**+0.3**
ELBA	**Catalca**	**0.94 19**	*i* P	**Pg**	**01 43 20.3**	**-0.1**
ELBA			*i* S	**Sg**	**01 43 33.0**	**+0.4**
LPK	**Lapseki**	**0.97 277**	*e*PG	**Pg**	**01 43 20.9**	**-0.1**
LPK	**Lapseki**	**0.97 277**	*e*Pg	**Pg**	**01 43 20.9**	**-0.1**
SLVT	**Silivri**	**0.98 8**	*e*PG	**Pg**	**01 43 21.0**	**-0.2**
SLVT	**Silivri**	**0.98 8**	*e*Pg	**Pg**	**01 43 21.0**	**-0.2**
CTKS	**Kestanelik-??a**	**1.04 20**	*e*PG	**Pg**	**01 43 22.0**	**-0.4**
CTKS	**Kestanelik-??a**	**1.04 20**	*e*Pg	**Pg**	**01 43 22.0**	**-0.4**
YLV	**Yalova**	**1.08 73**	*e*PG	**Pg**	**01 43 22.3**	**-0.7**
YLV	**Yalova**	**1.08 73**	*e*Pg	**Pg**	**01 43 22.3**	**-0.7**
BGKT	**Bogazkoy**	**1.08 31**	*e*PN	**Pg**	**01 43 22.7**	**-0.5**
BGKT	**Bogazkoy**	**1.08 31**	*e*Pn	**Pg**	**01 43 22.7**	**-0.4**
ISK	**Istanbul-Kandi**	**1.13 44**	*e*PN	**Pg**	**01 43 23.4**	**-0.6**
ISK	**Istanbul-Kandi**	**1.13 44**	*e*Pn	**Pg**	**01 43 23.4**	**-0.6**
GELI	**Tayfur-Gelibol**	**1.19 277**	*e*PN	**Pn**	**01 43 24.9**	**-0.7**
GELI	**Tayfur-Gelibol**	**1.19 277**	*e*Pn	**Pn**	**01 43 24.9**	**-0.7**
ERIK	**Erikli-Kesan**	**1.22 290**	*e*PN	**Pn**	**01 43 25.2**	**-0.9**
ERIK	**Erikli-Kesan**	**1.22 290**	*e*Pn	**Pn**	**01 43 25.2**	**-0.9**
CTYL	**Yal??k??y-??at**	**1.23 9**	*e*PN	**Pn**	**01 43 25.6**	**-0.5**
CTYL	**Yal??k??y-??at**	**1.23 9**	*e*Pn	**Pn**	**01 43 25.6**	**-0.6**
KLYT	**Kilyos**	**1.26 38**	*e*PN	**Pn**	**01 43 25.8**	**-0.8**
KLYT	**Kilyos**	**1.26 38**	*e*Pn	**Pn**	**01 43 25.8**	**-0.8**
ADVT	**Abdulvahap**	**1.32 82**	*e*PN	**Pn**	**01 43 26.5**	**-0.9**
ADVT	**Abdulvahap**	**1.32 82**	*e*Pn	**Pn**	**01 43 26.5**	**-0.9**
DEMI	**Demirci**	**1.33 156**	*i* P	**Pn**	**01 43 27.3**	**-0.1**
DEMI			*i* S	**Sb**	**01 43 44.9**	**0.0**
DEMI	**Demirci**	**1.33 156**	*i* P	**Pn**	**01 43 27.3**	**-0.2**
DEMI			*i* S	**Sb**	**01 43 44.9**	**0.0**
EZN	**Ezine**	**1.37 252**	*e*PN	**Pn**	**01 43 27.9**	**-0.2**
EZN	**Ezine**	**1.37 252**	*e*Pn	**Pn**	**01 43 27.9**	**-0.2**
HRT	**Hereke**	**1.37 65**	*e*PN	**Pn**	**01 43 27.7**	**-0.4**
HRT	**Hereke**	**1.37 65**	*e*Pn	**Pn**	**01 43 27.7**	**-0.4**
AKHS	**Akhisar**	**1.39 187**	*i* P	**Sg**	**01 43 46.4**	**-0.5**
AKHS			*i* P	**Pn**	**01 43 27.6**	**-0.7**
AKHS	**Akhisar**	**1.39 187**	*i* P	**Pn**	**01 43 27.6**	**-0.7**
AKS	**Akhisar**	**1.39 187**	*e*PN	**Pn**	**01 43 27.6**	**-0.7**
AKS	**Akhisar**	**1.39 187**	*e*Pn	**Pn**	**01 43 27.6**	**-0.7**
CAVI	**Cavuskoy**	**1.39 92**	*e*PN	**Pn**	**01 43 28.2**	**-0.2**
CAVI	**Cavuskoy**	**1.39 92**	*e*Pn	**Pn**	**01 43 28.2**	**-0.2**
AYVA	**Ayvalik**	**1.40 228**	*i* P	**Pn**	**01 43 27.8**	**-0.6**
AYVA			*i* S	**Sb**	**01 43 46.9**	**-0.1**
AYVA	**Ayvalik**	**1.40 228**	*i* P	**Pn**	**01 43 27.8**	**-0.6**
AYVA			*i* S	**Sb**	**01 43 46.9**	**-0.1**
ENEZ	**Enez**	**1.50 289**	*e*PN	**Pn**	**01 43 29.3**	**-0.6**
ENEZ	**Enez**	**1.50 289**	*e*Pn	**Pn**	**01 43 29.3**	**-0.6**
SILT	**Sile**	**1.52 53**	*e*PN	**Pn**	**01 43 30.1**	**-0.1**
SILT	**Sile**	**1.52 53**	*e*Pn	**Pn**	**01 43 30.1**	**-0.1**
BOZC	**Bozcaada**	**1.57 255**	*i* P	Px	01 43 43.7	
BOZC			*i* S	**Sn**	**01 43 52.5**	**+1.1**
GDZ	**Gediz**	**1.62 136**	*i* P	**Pn**	**01 43 31.7**	**+0.2**
GDZ			*i* S	**Sn**	**01 43 54.9**	**+2.2**
GDZ	**Gediz**	**1.62 136**	*i* P	**Pn**	**01 43 31.7**	**+0.2**
GDZ			*i* S	**Sn**	**01 43 54.9**	**+2.2**
GADA	**Gvkgeada**	**1.63 268**	*e*PN	**Pn**	**01 43 31.6**	**0.0**
GADA	**Gvkgeada**	**1.63 268**	*e*Pn	**Pn**	**01 43 31.6**	**0.0**
ALN	**Alexandroupoli**	**1.64 294**	*e*P	**Pn**	**01 43 31.3**	**-0.4**
ALN			*e*S	**Sn**	**01 43 53.6**	**+0.5**
ALN	**Alexandroupoli**	**1.64 294**	*e*P	**Pn**	**01 43 31.3**	**-0.4**
ALN			*e*S	**Sn**	**01 43 53.6**	**+0.5**
ALN	**Alexandroupoli**	**1.64 294**	P	**Pn**	**01 43 31.3**	**-0.4**
ALN			S	**Sn**	**01 43 53.9**	**+0.8**
ALN	**Alexandroupoli**	**1.64 294**	*e*P	**Pn**	**01 43 31.3**	**-0.4**
ALN			*e*S	**Sn**	**01 43 53.6**	**+0.5**
PRK	**Paraskevi**	**1.69 234**	*e*P	**Pn**	**01 43 33.0**	**+0.6**
PRK			*e*S	**Sn**	**01 43 55.4**	**+1.0**
PRK	**Paraskevi**	**1.69 234**	*e*P	**Pn**	**01 43 33.0**	**+0.6**
PRK			*e*S	**Sn**	**01 43 55.4**	**+1.0**
PRK	**Paraskevi**	**1.69 234**	P	**Pn**	**01 43 32.4**	**0.0**
PRK			S	**Sn**	**01 43 54.5**	**+0.1**
PRK	**Paraskevi**	**1.69 234**	P	**Pn**	**01 43 32.4**	**0.0**
PRK			S	**Sn**	**01 43 54.5**	**+0.1**
GPA	**Golpazari**	**1.75 88**	*e*PN	**Pn**	**01 43 33.5**	**+0.2**
GPA	**Golpazari**	**1.75 88**	*e*Pn	**Pn**	**01 43 33.5**	**+0.2**
SPNC	**Sapanca-Adapaz**	**1.79 75**	*e*PN	**Pn**	**01 43 33.9**	**0.0**
SPNC	**Sapanca-Adapaz**	**1.79 75**	*e*Pn	**Pn**	**01 43 33.9**	**0.0**
KULA	**Kula-Manisa**	**1.81 164**	*e*PN	**Pn**	**01 43 34.0**	**-0.1**
KULA	**Kula-Manisa**	**1.81 164**	*e*Pn	**Pn**	**01 43 34.0**	**-0.1**
EDRB	**Edirne**	**1.86 329**	*e*PN	**Pn**	**01 43 34.9**	**+0.1**
EDRB	**Edirne**	**1.86 329**	*e*Pn	**Pn**	**01 43 34.9**	**+0.1**
GULT	**Gulveren**	**1.91 84**	*e*PN	**Pn**	**01 43 35.4**	**-0.1**
GULT	**Gulveren**	**1.91 84**	*e*Pn	**Pn**	**01 43 35.4**	**-0.1**
SIGR	**SIGRI**	**1.97 239**	P	**Pn**	**01 43 35.4**	**-0.9**
SIGR			S	**Sn**	**01 44 00.9**	**-0.5**
SIGR	**SIGRI**	**1.97 239**	P	**Pn**	**01 43 35.4**	**-0.9**
SIGR			S	**Sn**	**01 44 00.9**	**-0.5**
ALT	**Altintas**	**2.01 126**	*e*PN	**Pn**	**01 43 36.8**	**-0.1**
ALT	**Altintas**	**2.01 126**	*e*Pn	**Pn**	**01 43 36.8**	**-0.1**
BLCB	**Balcova**	**2.02 202**	P	**Pn**	**01 43 36.9**	**-0.1**
BLCB			S	**Sn**	**01 44 02.1**	**-0.5**
BLCB	**Balcova**	**2.02 202**	P	**Pn**	**01 43 36.9**	**-0.1**
BLCB			S	**Sn**	**01 44 02.1**	**-0.5**
LIA	**Limnos Island**	**2.21 262**	*e*P	**Pn**	**01 43 40.4**	**+0.8**
LIA			*e*S	**Sn**	**01 44 08.2**	**+1.0**
LIA	**Limnos Island**	**2.21 262**	*e*P	**Pn**	**01 43 40.4**	**+0.8**
LIA			*e*S	**Sn**	**01 44 08.2**	**+1.0**
LIA	**Limnos Island**	**2.21 262**	P	**Pn**	**01 43 39.5**	**-0.1**
LIA			S	**Sn**	**01 44 07.1**	**-0.1**
LIA	**Limnos Island**	**2.21 262**	P	**Pn**	**01 43 39.5**	**-0.1**
LIA			S	**Sn**	**01 44 07.1**	**-0.1**
ESKT	**Eskisehir**	**2.30 108**	*e*PN	**Pn**	**01 43 40.9**	**+0.1**
ESKT	**Eskisehir**	**2.30 108**	*e*Pn	**Pn**	**01 43 40.9**	**+0.1**
CHOS	**Chios island**	**2.41 220**	*e*P	**Pn**	**01 43 43.6**	**+1.2**
CHOS	**Chios island**	**2.41 220**	P	**Pn**	**01 43 42.0**	**-0.4**
CHOS			S	**Sn**	**01 44 11.7**	**-0.6**
CHOS	**Chios island**	**2.41 220**	P	**Pn**	**01 43 42.0**	**-0.4**
CHOS			S	**Sn**	**01 44 11.7**	**-0.6**
MDU	**Mudurnu**	**2.45 84**	*e*PN	**Pn**	**01 43 43.3**	**+0.4**
MDU	**Mudurnu**	**2.45 84**	*e*Pn	**Pn**	**01 43 43.3**	**+0.4**
JMB	**Yambol**	**2.46 334**	P	**Pn**	**01 43 44.1**	**+1.1**
JMB			S	**Sn**	**01 44 14.7**	**+1.3**
JMB	**Yambol**	**2.46 334**	P	**Pn**	**01 43 44.1**	**+1.1**
JMB			S	**Sn**	**01 44 14.7**	**+1.3**
SHUT	**Suhut-Afyon**	**2.59 130**	*e*PN	**Pn**	**01 43 45.2**	**+0.3**
SHUT	**Suhut-Afyon**	**2.59 130**	*e*Pn	**Pn**	**01 43 45.2**	**+0.3**
SMG	**Samos**	**2.71 200**	*e*P	**Pn**	**01 43 47.5**	**+1.0**
SMG	**Samos**	**2.71 200**	*e*P	**Pn**	**01 43 47.5**	**+1.0**
SMG	**Samos**	**2.71 200**	*e*P	**Pn**	**01 43 47.5**	**+1.0**
SVRH	**Sivrihisar-ESK**	**2.81 106**	*e*PN	**Pn**	**01 43 48.5**	**+0.6**
SVRH	**Sivrihisar-ESK**	**2.81 106**	*e*Pn	**Pn**	**01 43 48.5**	**+0.6**
KIZT	**Kizilcal**	**3.28 114**	*e*PN	**Pn**	**01 43 54.6**	**+0.2**
KIZT	**Kizilcal**	**3.28 114**	*e*Pn	**Pn**	**01 43 54.6**	**+0.2**
PLG	**Polygyros**	**3.50 273**	*e*P	**Pn**	**01 43 57.1**	**-0.3**
PLG	**Polygyros**	**3.50 273**	*e*P	**Pn**	**01 43 57.1**	**-0.3**
PLG	**Polygyros**	**3.50 273**	*e*P	**Pn**	**01 43 57.1**	**-0.3**
BR131	**Keskin Array S**	**4.35 95**	*e*PN	**Pn**	**01 44 08.5**	**-0.5**
BR131	**Keskin Array S**	**4.35 95**	*e*Pn	**Pn**	**01 44 08.5**	**-0.5**

WEL 17 02:24:01.8±0.4, 36°.30S×177°.40E, h171km±5km, ML3.5/6, Error ellipse: s-maj=5.5km s-min=4.9km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.45 150**		PN	Pn	02 24 32.7	+0.1
MXZ				SN	Sn	02 24 57.0	+0.8
PUZ	**Puketiti**	**1.90 159**		PN	Pn	02 24 36.9	-0.2
PUZ				SN	Sn	02 25 03.0	-1.3
URZ	**Urewera**	**1.97 187**		PN	Pn	02 24 38.1	+0.3
URZ				SN	Sn	02 25 06.0	+0.2
MWZ	**Matawai**	**2.03 177**		PN	Pn	02 24 38.7	+0.1
CNGZ	**Carnagh Statio**	**2.27 164**		PN	Pn	02 24 41.6	+0.3
NMHZ	**Naumai**	**2.83 189**		PN	Pn	02 24 48.0	0.0
KAHZ	**Kahuranaki**	**3.51 187**		PN	Pn	02 24 54.6	-1.8
PNHZ	**Pukenui**	**3.73 194**		PN	Pn	02 24 57.0	-2.1
PRHZ	**Porangahau**	**4.01 188**		PN	Pn	02 24 59.9	-2.8
BFZ	**Birch Farm**	**4.47 191**		PN	Pn	02 25 04.9	-3.7
TIWZ	**Tintock**	**4.62 194**		PN	Pn	02 25 07.0	-3.6

*ISCJB **17** 02:30:31.3±0.3, 35°.72N±0°.03×27°.85E±0°.03, h70km±7km, Error ellipse: s-maj=4.7km s-min=3.6km az=167.5*
*CSEM **17** 02:30:32.9±0.1, 35°.73N×27°.85E, h60km, MD3.6, Error ellipse: s-maj=4.2km s-min=3.9km az=178.0*
*DDA **17** 02:30:33.2, 36°.02N×27°.90E, h26km±2km, Md3.0*
*ATH **17** 02:30:33.2, 35°.89N×27°.70E, h49km±3km, MD3.6/12*
*ISK **17** 02:30:33.6, 35°.93N×27°.68E, h26km, MD3.3*
*NEIC **17** 02:30:33.2, 35°.90N×27°.70E, h49km, MD3.6(ATH), After ATH.*
*HLW **17** 02:30:40.7, 35°.13N×28°.34E, h36km±51km, Md3.5, Ml3.1*
ISC 17 02:30:33.0±0.3, 35°.75N±0°.03×27°.83E±0°.03, h53km±10km, n111, σ1$24/151, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.52 27**		*e*P	**Pn**	**02 30 45.0**	**+0.3**
ARG				*e*S	**Sn**	**02 30 53.0**	**-0.1**
ARG	**Arkhangelos**	**0.52 27**		*e*P	**Pn**	**02 30 45.0**	**+0.3**
ARG				*e*S	**Sn**	**02 30 53.0**	**-0.1**
ARG	**Arkhangelos**	**0.52 27**		*e*P	**Pn**	**02 30 45.0**	**+0.3**
ARG				*e*S	**Sn**	**02 30 53.0**	**-0.1**
KARP	**Karpathos**	**0.58 250**		*e*P	**Pn**	**02 30 45.8**	**+0.4**
KARP				*e*S	**Sn**	**02 30 54.7**	**+0.3**
KARP	**Karpathos**	**0.58 250**		*e*P	**Pn**	**02 30 45.8**	**+0.4**
KARP				*e*S	**Sn**	**02 30 54.7**	**+0.3**
KARP	**Karpathos**	**0.58 250**		*e*P	**Pn**	**02 30 45.8**	**+0.4**
KARP				*e*S	**Sn**	**02 30 54.7**	**+0.3**
DAT	**Datca**	**1.00 348**		PG	**Pn**	**02 30 50.0**	**-0.7**
DAT				*e*SG	**Sn**	**02 31 01.2**	**-2.6**
DAT	**Datca**	**1.00 348**		*i* Pg	**Pn**	**02 30 50.0**	**-0.7**
TURN	**Turunc**	**1.28 29**		*i* P	**Pn**	**02 30 51.8**	**-2.7**
TURN				*i* S	**Sn**	**02 31 07.7**	**-3.0**
TURN	**Turunc**	**1.28 29**		*i* P	**Pn**	**02 30 51.8**	**-2.7**
TURN				*i* S	**Sn**	**02 31 07.7**	**-2.9**
BDRM	**Kayabasi**	**1.35 347**		*i* P	**Pn**	**02 30 54.5**	**-0.9**
BDRM				*i* S	**Sn**	**02 31 07.2**	**-5.1**
BDRM	**Kayabasi**	**1.35 347**		*i* P	**Pn**	**02 30 54.5**	**-0.9**
BODT	**Bodrum**	**1.37 342**		*e*PN	**Pn**	**02 30 54.7**	**-1.1**
BODT				*e*SN	**Sn**	**02 31 10.1**	**-2.8**
BODT	**Bodrum**	**1.37 342**		*e*Pn	**Pn**	**02 30 54.7**	**-1.1**
BODT				*e*Sn	**Sn**	**02 31 10.1**	**-2.8**
YER	**Yerkesik**	**1.43 15**		*e*PN	**Pn**	**02 30 56.7**	**+0.2**
YER	**Yerkesik**	**1.43 15**		*e*Pn	**Pn**	**02 30 56.7**	**+0.2**
ZKR	**Zakros**	**1.46 245**		*e*P	**Pn**	**02 30 59.0**	**+2.0**
ZKR	**Zakros**	**1.46 245**		*e*P	**Pn**	**02 30 58.6**	**+1.6**
ZKR	**Zakros**	**1.46 245**		*e*P	**Pn**	**02 30 59.0**	**+2.0**
AKAS	**Kas**	**1.52 71**		*i* P	**Pn**	**02 30 58.6**	**+0.9**
AKAS				*i* S	**Sn**	**02 31 17.9**	**+1.5**
AKAS	**Kas**	**1.52 71**		*i* P	**Pn**	**02 30 58.6**	**+0.9**
AKAS				*i* S	**Sn**	**02 31 17.9**	**+1.5**
MLSB	**Milas**	**1.54 358**		*e*PN	**Pn**	**02 30 57.6**	**-0.4**
MLSB	**Milas**	**1.54 358**		*e*Pn	**Pn**	**02 30 57.6**	**-0.5**
NPS	**Neapolis**	**1.88 256**		*e*P	**Pn**	**02 31 03.4**	**+0.8**
NPS				*e*S	**Sn**	**02 31 24.9**	**-0.2**
NPS	**Neapolis**	**1.88 256**		*e*P	**Pn**	**02 31 03.4**	**+0.8**
NPS				*e*S	**Sn**	**02 31 24.9**	**-0.2**
NPS	**Neapolis**	**1.88 256**		*e*P	**Pn**	**02 31 03.4**	**+0.8**
NPS				*e*S	**Sn**	**02 31 24.9**	**-0.2**
AYDN	**Tasoluk**	**1.91 1**		*i* P	**Pn**	**02 31 03.1**	**+0.1**
AYDN				*i* S	**Sn**	**02 31 24.9**	**-0.9**
AYDN	**Tasoluk**	**1.91 1**		*i* P	**Pn**	**02 31 03.1**	**+0.1**
AYDN				*i* S	**Sn**	**02 31 25.0**	**-0.8**
GLHS	**Glhisar (BURDU**	**1.94 43**		*e*PN	**Pn**	**02 31 04.6**	**+1.1**
GLHS	**Glhisar (BURDU**	**1.94 43**		*e*Pn	**Pn**	**02 31 04.6**	**+1.1**
ELL	**Elmali**	**1.95 59**		*e*PN	**Pn**	**02 31 06.1**	**+2.5**
ELL	**Elmali**	**1.95 59**		*e*Pn	**Pn**	**02 31 06.1**	**+2.5**
LAST	**Lasithi**	**2.01 254**		*e*P	**Pn**	**02 31 05.0**	**+0.6**
LAST	**Lasithi**	**2.01 254**		*e*P	**Pn**	**02 31 05.0**	**+0.6**
LAST	**Lasithi**	**2.01 254**		*e*P	**Pn**	**02 31 05.0**	**+0.6**
GOLH	**Golhisar**	**2.03 43**		*i* P	**Pn**	**02 31 06.2**	**+1.4**
GOLH				*i* S	**Sn**	**02 31 31.8**	**+2.8**
GOLH	**Golhisar**	**2.03 43**		*i* P	**Pn**	**02 31 06.2**	**+1.4**
GOLH				*i* S	**Sn**	**02 31 31.8**	**+2.8**
SMG	**Samos**	**2.11 338**		*e*P	**Pn**	**02 31 04.8**	**-1.0**
SMG				*e*S	**Sn**	**02 31 28.6**	**-2.2**
SMG	**Samos**	**2.11 338**		*e*P	**Pn**	**02 31 04.8**	**-1.0**
SMG				*e*S	**Sn**	**02 31 28.6**	**-2.2**
SMG	**Samos**	**2.11 338**		*e*P	**Pn**	**02 31 04.8**	**-1.0**
DNZL	**Cakiroluk**	**2.17 26**		*i* P	**Pn**	**02 31 06.8**	**+0.2**
DNZL				*i* S	**Sn**	**02 31 38.6**	**+6.4**
DNZL	**Cakiroluk**	**2.17 26**		*i* P	**Pn**	**02 31 06.8**	**+0.2**
DENT	**Denizli**	**2.22 25**		*e*PN	**Pn**	**02 31 08.7**	**+1.4**
DENT	**Denizli**	**2.22 25**		*e*Pn	**Pn**	**02 31 08.7**	**+1.4**
APE	**Apeiranthos**	**2.27 306**		*e*PN	**Pn**	**02 31 07.5**	**-0.6**
APE	**Apeiranthos**	**2.27 306**		*e*P	**Pn**	**02 31 07.5**	**-0.5**
APE				*e*S	**Sn**	**02 31 32.4**	**-2.5**
APE	**Apeiranthos**	**2.27 306**		*e*P	**Pn**	**02 31 07.5**	**-0.5**
APE				*e*S	**Sn**	**02 31 32.4**	**-2.5**
APE	**Apeiranthos**	**2.27 306**		*e*P	**Pn**	**02 31 07.5**	**-0.5**
KORT	**Korkueli**	**2.38 58**		*i* P	**Pn**	**02 31 11.8**	**+2.3**
KORT				*i* S	**Sn**	**02 31 41.4**	**+3.8**
KORT	**Korkueli**	**2.38 58**		*i* P	**Pn**	**02 31 11.8**	**+2.2**
KORT				*i* S	**Sn**	**02 31 41.4**	**+3.8**
IDI	**Anoyia**	**2.44 260**		*e*P	**Pn**	**02 31 10.4**	**0.0**
IDI				*e*S	**Sn**	**02 31 39.8**	**+0.8**
IDI	**Anoyia**	**2.44 260**		*e*P	**Pn**	**02 31 10.9**	**+0.5**
IDI				*e*S	**Sn**	**02 31 39.1**	**+0.1**
IDI	**Anoyia**	**2.44 260**		*e*P	**Pn**	**02 31 10.4**	**0.0**
IDI				*e*S	**Sn**	**02 31 39.8**	**+0.8**
SIVA	**Sivas**	**2.58 254**		*e*P	**Pn**	**02 31 14.0**	**+1.8**
SIVA	**Sivas**	**2.58 254**		*e*P	**Pn**	**02 31 14.0**	**+1.8**
SIVA	**Sivas**	**2.58 254**		*e*P	**Pn**	**02 31 14.0**	**+1.8**
BCK	**Bucak**	**2.80 52**		*e*PN	**Pn**	**02 31 18.4**	**+3.2**
BCK	**Bucak**	**2.80 52**		*e*Pn	**Pn**	**02 31 18.4**	**+3.2**
KULA	**Kula-Manisa**	**2.83 13**		*e*PN	**Pn**	**02 31 16.2**	**+0.5**
KULA	**Kula-Manisa**	**2.83 13**		*e*Pn	**Pn**	**02 31 16.2**	**+0.5**
KHL	**Karahalli**	**2.90 27**		*e*PN	**Pn**	**02 31 18.1**	**+1.5**
KHL	**Karahalli**	**2.90 27**		*e*Pn	**Pn**	**02 31 18.1**	**+1.5**
VAM	**Vamos**	**2.98 264**		*e*P	**Pn**	**02 31 18.2**	**+0.5**
VAM	**Vamos**	**2.98 264**		*e*P	**Pn**	**02 31 18.2**	**+0.5**
VAM	**Vamos**	**2.98 264**		*e*P	**Pn**	**02 31 18.2**	**+0.5**
KARN	**Karanos**	**3.21 265**		*e*P	**Pn**	**02 31 21.1**	**+0.2**
KARN				*e*S	**Sn**	**02 31 57.0**	**-0.9**
KARN	**Karanos**	**3.21 265**		*e*P	**Pn**	**02 31 21.1**	**+0.2**
KARN				*e*S	**Sn**	**02 31 56.4**	**-1.5**
GAZI	**Gazipasa**	**3.67 81**		*i* P	**Pn**	**02 31 27.0**	**-0.1**
GAZI				*i* S	**Sn**	**02 32 07.0**	**-2.1**
GAZI	**Gazipasa**	**3.67 81**		*i* P	**Pn**	**02 31 27.0**	**-0.1**
GAZI				*i* S	**Sn**	**02 32 07.0**	**-2.1**
ALT	**Altintas**	**3.76 28**		*e*PN	**Pn**	**02 31 29.4**	**+1.0**
ALT	**Altintas**	**3.76 28**		*e*Pn	**Pn**	**02 31 29.4**	**+1.0**
VLY	**Voula,Athens**	**3.86 304**		*e*P	**Pn**	**02 31 29.8**	**+0.1**
VLY	**Voula,Athens**	**3.86 304**		*e*P	**Pn**	**02 31 29.8**	**+0.1**
VLY	**Voula,Athens**	**3.86 304**		*e*P	**Pn**	**02 31 29.8**	**+0.1**
VLI	**Veliai**	**4.07 285**		*e*P	**Pn**	**02 31 33.2**	**+0.5**
VLI	**Veliai**	**4.07 285**		*e*P	**Pn**	**02 31 33.2**	**+0.5**
VLI	**Veliai**	**4.07 285**		*e*P	**Pn**	**02 31 33.2**	**+0.5**
DID	**Didima**	**4.09 297**		*e*P	**Pn**	**02 31 32.5**	**-0.4**
DID	**Didima**	**4.09 297**		*e*P	**Pn**	**02 31 32.5**	**-0.4**
CSS	**Prodhromos**	**4.56 98**		*e*Pn	**Pn**	**02 31 38.4**	**-1.0**
CSS				*e*S	**Sn**	**02 32 31.0**	**-0.2**
CSS	**Prodhromos**	**4.56 98**		*e*Pn	**Pn**	**02 31 38.4**	**-1.0**
CSS				*e*S	**Sn**	**02 32 31.0**	**-0.1**
HMAT	**Matruh**	**4.69 188**		P	**Pn**	**02 31 41.8**	**+0.7**
HMAT	baz=195			S	**Sn**	**02 32 28.8**	**-5.4**
HMAT	**Matruh**	**4.69 188**		P	**Pn**	**02 31 41.8**	**+0.7**
HMAT	baz=195			S	**Sn**	**02 32 28.8**	**-5.4**
GUR	**Goura**	**4.91 298**		*e*P	**Pn**	**02 31 45.4**	**+1.2**
GUR	**Goura**	**4.91 298**		*e*P	**Pn**	**02 31 45.4**	**+1.2**
ITM	**Ithomi**	**4.97 288**		*e*P	**Pn**	**02 31 46.8**	**+1.8**
ITM	**Ithomi**	**4.97 288**		*e*P	**Pn**	**02 31 45.8**	**+0.8**
ITM	**Ithomi**	**4.97 288**		*e*P	**Pn**	**02 31 46.8**	**+1.8**
ALN	**Alexandroupoli**	**5.33 345**		*e*P	**Pn**	**02 31 49.9**	**+0.1**
ALN	**Alexandroupoli**	**5.33 345**		*e*P	**Pn**	**02 31 49.9**	**+0.1**
ALN	**Alexandroupoli**	**5.33 345**		*e*P	**Pn**	**02 31 49.9**	**+0.1**
EFP	**Efpalio**	**5.44 301**		*e*P	**Pn**	**02 31 52.2**	**+0.8**
EFP	**Efpalio**	**5.44 301**		*e*P	**Pn**	**02 31 52.2**	**+0.8**
AMAG	**Maghara**	**6.80 137**		P	**Pn**	**02 32 08.0**	**-2.1**
AMAG	**Maghara**	**6.80 137**		P	**Pn**	**02 32 08.0**	**-2.1**
HHAG	**Hagoal**	**6.81 147**		P	**Pn**	**02 32 09.9**	**-0.3**
HHAG	baz=147			AMP		02 33 00.0	
	comp=N,20μm,0.1s,logA/T=5.2,baz=147						
HHAG	**Hagoal**	**6.81 147**		P	**Pn**	**02 32 09.9**	**-0.3**
GLL	**Jalalah**	**6.97 151**		P	**Pn**	**02 32 11.7**	**-0.8**
GLL	**Jalalah**	**6.97 151**		P	**Pn**	**02 32 11.7**	**-0.8**
AWBH	**Nakhl**	**7.46 173**		P	**Pn**	**02 32 18.9**	**-0.4**
AWBH	**Nakhl**	**7.46 173**		P	**Pn**	**02 32 18.9**	**-0.3**
HNKL	**Nakhl**	**7.78 137**		P	**Pn**	**02 32 21.8**	**-1.7**
HNKL	baz=135	

*CSEM **17** 02:53:58.9, 35°.81N×27°.81E, h43km, MD3.5, After ATH*
*NEIC **17** 02:53:58.9, 35°.81N×27°.81E, h43km, MD3.5(ATH), After ATH.*

ATH 17 02:53:59.2, 35°.84N×27°.78E, h42km±1km, MD3.5/5, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.47**	**37**	*eP*	Pn	02 54 10.6	+1.0
ARG				*eS*	Sn	02 54 18.1	+1.1
ARG	**Arkhangelos**	**0.47**	**37**	*eP*	Pn	02 54 10.6	+1.0
ARG				*eS*	Sn	02 54 18.1	+1.1
ARG	**Arkhangelos**	**0.47**	**37**	*eP*	Pn	02 54 10.6	+1.0
ARG				*eS*	Sn	02 54 18.1	+1.1
KARP	**Karpathos**	**0.58**	**240**	*eP*	Pn	02 54 11.9	+0.8
KARP				*eS*	Sn	02 54 20.8	+1.3
KARP	**Karpathos**	**0.58**	**240**	*eP*	Pn	02 54 11.9	+0.8
KARP				*eS*	Sn	02 54 20.8	+1.3
KARP	**Karpathos**	**0.58**	**240**	*eP*	Pn	02 54 11.9	+0.8
KARP				*eS*	Sn	02 54 20.8	+1.3
ZKR	**Zakros**	**1.47**	**241**	*eP*	Pn	02 54 24.7	+1.6
ZKR	**Zakros**	**1.47**	**241**	*eP*	Pn	02 54 24.7	+1.6
ZKR	**Zakros**	**1.47**	**241**	*eP*	Pn	02 54 24.7	+1.6
NPS	**Neapolis**	**1.86**	**253**	*eP*	Pn	02 54 30.2	+1.7
NPS				*eS*	Sn	02 54 51.3	+0.5
NPS	**Neapolis**	**1.86**	**253**	*eP*	Pn	02 54 30.2	+1.7
NPS				*eS*	Sn	02 54 51.7	+0.9
NPS	**Neapolis**	**1.86**	**253**	*eP*	Pn	02 54 30.2	+1.7
NPS				*eS*	Sn	02 54 51.3	+0.5
LAST	**Lasithi**	**2.00**	**251**	*eP*	Pn	02 54 31.5	+1.1
LAST	**Lasithi**	**2.00**	**251**	*eP*	Pn	02 54 31.5	+1.1
LAST	**Lasithi**	**2.00**	**251**	*eP*	Pn	02 54 31.5	+1.1
IDI	**Anoyia**	**2.42**	**258**	*ePn*	Pn	02 54 35.7	-0.6
IDI				*eS*	Sn	02 55 06.2	+1.6
IDI	**Anoyia**	**2.42**	**258**	*eP*	Pn	02 54 37.5	+1.3
IDI	**Anoyia**	**2.42**	**258**	*eP*	Pn	02 54 37.5	+1.3

IDC 17 03:08:19.3±2.7, 16°.80N×147°.88E, h0km, mb3.7/8, mb1 3.9/8, mb1mx3.7/23, mbtmp3.7/8, Error ellipse: s-maj=89.5km s-min=19.7km az=84.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**21.45**	**338**	P	P	03 13 09.3	+0.1
	2.3nm,0.8s,baz=170,slow=9.7,SNR=8.0						
WRA	**Warramunga Arr**	**38.86**	**201**	P	P	03 15 47.6	+1.1
	0.4nm,0.6s,baz=29,slow=9.1,SNR=12						
ASAR	**Alice Springs**	**42.48**	**199**	P	P	03 16 15.1	-1.2
	0.3nm,0.9s,baz=25,slow=14,SNR=3.2						
SONM	**Songino Array**	**45.91**	**322**	P	P	03 16 44.3	+0.6
	0.3nm,0.6s,baz=123,slow=7.1,SNR=2.7						
CMAR	**Chiang Mai Arr**	**46.56**	**280**	P	P	03 16 49.1	-0.1
	1.0nm,0.3s,baz=73,slow=6.5,SNR=7.4						
ZALV	**Zalesovo Beam**	**60.78**	**323**	P	P	03 18 32.7	-0.2
	0.7nm,0.6s,baz=76,slow=6.1,SNR=3.5						
MKAR	**Makanchi Array**	**61.27**	**314**	P	P	03 18 35.9	-0.5
	0.3nm,0.2s,baz=88,slow=8.8,SNR=2.3						
BVAR	**Borovoye Array**	**69.25**	**321**	P	P	03 19 28.3	+0.2
	0.7nm,0.5s,baz=93,slow=10,SNR=3.4						

DJA 17 03:42:38, 6°.00S×130°.39E, h121km, mb4.1/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**2.36**	**81**	P	Pn	03 43 17.3	+1.2
SWI	**Sorong**	**5.18**	**10**	P	Pn	03 43 53.5	+0.1
	0.3nm1μm19nm,0.6s						
KAKA	**Kakadu**	**6.97**	**163**	P	Pn	03 44 16.4	-1.2
	0.2nm939nm14nm,0.7s						
KNA	**Kununurra**	**9.82**	**189**	P	Pn	03 44 56.8	+0.7
	670nm32nm,1.0s						
FITZ	**Fitzroy Crossi**	**12.89**	**201**	P	Pn	03 45 35.9	-0.9
	12nm,4.2s						
WRAB	**Tennant Creek**	**14.38**	**165**	P	Pn	03 45 54.7	-1.2
	9.1nm,2.3s						
COEN	**Coen**	**14.86**	**123**	P	Pn	03 46 01.7	-0.4

*BGS **17** 03:56:52.0±2.4, 38°.42N×54°.57E, h33km, mb4.6*
*BJI **17** 03:57:32.1, 40°.60N×51°.70E, h28km, mB5.0/11, mb4.8/14, Ms4.4/10, Ms7 4.2/7*
*ISCJB **17** 03:57:33.2±0.8, 40°.48N±0°.03×52°.04E±0°.02, h24km±6km, mb4.5/100, MS3.4/23, Error ellipse: s-maj=4.4km s-min=2.6km az=1.7*
*CSEM **17** 03:57:33.1±0.1, 40°.50N×52°.10E, h12km, mb4.7/42, Ms2.9, Error ellipse: s-maj=5.5km s-min=3.4km az=178.0*
*THR **17** 03:57:33.0±0.9, 40°.33N×52°.04E, h15km, ML4.9*
*MOS **17** 03:57:34.6±1.2, 40°.51N×52°.04E, h33km, mb4.7/57, Error ellipse: s-maj=5.9km s-min=3.6km az=131.9*
*NEIC **17** 03:57:36.0±1.3, 40°.40N×52°.05E, h34km±10km, mb4.5/66, Error ellipse: s-maj=6.9km s-min=3.3km az=174.0*
*IDC **17** 03:57:36.6±1.0, 40°.36N×52°.00E, h47km±9km, mb4.2/20, mb1 4.3/26, mb1mx4.2/30, mbtmp4.2/26, ML3.8/5, MS3.5/17, Ms1 3.5/17, ms1mx3.3/32, Error ellipse: s-maj=17.4km s-min=10.3km az=174.0*
*NNC **17** 03:57:41.8±3.2, 41°.13N×52°.82E, h0km, mb5.0, Error ellipse: s-maj=32.3km s-min=28.8km az=115.0*

ISC 17 03:57:36.2±0.8, 40°.48N±0°.02×52°.04E±0°.02, h32km±6km, h38km±3.6km; pP-P, n534, σ1§11/590, mb4.5/100, MS3.4/23, 37C-17D, Turkmenistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GALA	**Gala**	**1.44**	**268**	P	**Pn**	**03 58 04.1**	**+4.1**
	SNR=35						
NDR	**Nardaran**	**1.57**	**274**	P	**Pn**	**03 58 05.8**	**+4.1**
	SNR=8.7						
GOBA	**Gobu**	**1.76**	**268**	P	**Pn**	**03 58 08.4**	**+4.0**
	SNR=13						
ALIB	**Äli-Bayra**	**2.38**	**258**	P	**Pn**	**03 58 15.9**	**+3.0**
	SNR=20						
SIZA	**Siyzn**	**2.46**	**285**	P	**Pn**	**03 58 17.9**	**+3.9**
	SNR=82						
IML	**Ismayilli**	**2.95**	**277**	P	**Pn**	**03 58 22.8**	**+2.0**
	SNR=61						
GLBA	**Clilabad**	**3.07**	**247**	P	**Pn**	**03 58 22.5**	**+0.1**
	SNR=35						
GLBA				S	**Sn**	**03 58 56.4**	**-1.5**
GRMI	**Germi**	**3.61**	**244**	*ePn*	**Pn**	**03 58 29.1**	**-0.8**
GRMI				AML	AML	03 59 09.6	
	comp=N,2μm,0.4s						
GRMI				AML	AML	03 59 09.8	
	comp=E,656nm,0.2s						
BRDA	**Brd**	**3.72**	**268**	P	**Pn**	**03 58 33.3**	**+2.0**
	SNR=20						
BRDA				S	**Sn**	**03 59 17.7**	**+3.7**
SEKA	**Sheki**	**3.74**	**283**	P	**Pn**	**03 58 33.5**	**+1.9**
	SNR=181						
MAK	**Makhachkala**	**4.20**	**308**	*eP*	**Pn**	**03 58 36.8**	**-1.1**
MAK				*eS*	**Sn**	**03 59 24.5**	**-1.3**
MAK				pmax	pmax		
	comp=Z,24nm,0.4s						
MAK	**Makhachkala**	**4.20**	**308**	*eP*	**Pn**	**03 58 36.8**	**-1.1**
	comp=Z,24nm,0.4s						
MAK				*eS*	**Sn**	**03 59 24.5**	**-1.3**
MRVT	**Maraveh tapeh**	**4.23**	**131**	*ePn*	**Pn**	**03 58 37.7**	**-0.7**
MRVT	**Maraveh tapeh**	**4.23**	**131**	*ePn*	**Pn**	**03 58 37.7**	**-0.7**
GANJ	**Ganja**	**4.36**	**274**	P	**Pn**	**03 58 40.1**	**0.0**
	SNR=17						
GANJ				S	**Sn**	**03 59 29.4**	**-0.3**
CHTH	**Charan**	**4.62**	**189**	*ePn*	**Pn**	**03 58 42.4**	**-1.5**
CHTH	**Charan**	**4.62**	**189**	*ePn*	**Pn**	**03 58 42.3**	**-1.5**
THKV	**Tehran--Karaj**	**4.65**	**192**	*ePn*	**Pn**	**03 58 42.6**	**-1.5**
THKV				AML	AML	03 59 34.7	
	comp=N,2μm,0.5s						
THKV				AML	AML	03 59 35.5	
	comp=E,2μm,0.6s						
THKV	**Tehran--Karaj**	**4.65**	**192**	*ePn*	**Pn**	**03 58 42.6**	**-1.6**
DAMV	**Damavand**	**4.85**	**181**	*ePn*	**Pn**	**03 58 45.8**	**-1.0**
DAMV				AML	AML	03 59 40.7	
	comp=N,1μm,0.5s						
DAMV				AML	AML	03 59 41.7	
	comp=E,977nm,0.7s						
DAMV	**Damavand**	**4.85**	**181**	*ePn*	**Pn**	**03 58 45.8**	**-1.1**
BJRD	**Bojnurd**	**5.02**	**122**	*ePn*	**Pn**	**03 58 48.7**	**-0.5**
BJRD				AML	AML	03 59 59.9	
	comp=N,497nm,0.6s						
BJRD	**Bojnurd**	**5.02**	**122**	*ePn*	**Pn**	**03 58 48.7**	**-0.5**
NAX	**Nakhchivan**	**5.20**	**258**	P	**Pn**	**03 58 53.0**	**+1.2**
	SNR=35						
GNI	**Garni**	**5.59**	**269**	*d iP*	**Pn**	**03 58 58.6**	**+1.6**
GNI				pmax	pmax		
	comp=Z,92nm,0.7s						
GNI	**Garni**	**5.59**	**269**	*ePn*	**Pn**	**03 58 58.8**	**+1.8**
	comp=Z,183nm,0.9s						
GNI	**Garni**	**5.59**	**269**	*i P*	**Pn**	**03 58 58.6**	**+1.6**
	comp=Z,92nm,0.7s						
MAKU	**Maku**	**5.77**	**261**	*ePn*	**Pn**	**03 59 00.8**	**+1.3**
MAKU	**Maku**	**5.77**	**261**	*ePn*	**Pn**	**03 59 00.8**	**+1.3**
GHVR	**GHOM**	**6.02**	**186**	*ePn*	**Pn**	**03 59 02.5**	**-0.6**
ASAO	**Ashtian**	**6.14**	**196**	*ePn*	**Pn**	**03 59 03.5**	**-1.1**
ZEI	**Tsey**	**6.51**	**293**	*eP*	**Pn**	**03 59 10.0**	**+0.3**
ZEI				*eS*	**Sn**	**04 00 32.7**	**+10**
ZEI				pmax	pmax		
	comp=Z,31nm,0.6s						
ZEI	**Tsey**	**6.51**	**293**	*eP*	**Pn**	**03 59 10.0**	**+0.3**
	comp=Z,31nm,0.6s						
SNGE	**Sanandaj**	**6.54**	**216**	*ePn*	**Pn**	**03 59 09.1**	**-1.0**
NASN	**Na`in**	**7.70**	**175**	*ePn*	**Pn**	**03 59 24.9**	**-1.1**
KIV	**Kislovodsk**	**7.76**	**300**	*eP*	**Pn**	**03 59 28.1**	**+1.3**
KIV				*eS*	**Sn**	**04 00 55.5**	**+2.0**
KIV				pmax	pmax		
	comp=Z,32nm,0.6s						
KIV	**Kislovodsk**	**7.76**	**300**	*ePn*	**Pn**	**03 59 28.0**	**+1.2**
KIV				*eSn*	**Sn**	**04 00 54.8**	**+1.3**
KIV	**Kislovodsk**	**7.76**	**300**	*ePn*	**Pn**	**03 59 28.0**	**+1.2**
KIV				*eSn*	**Sn**	**04 00 54.8**	**+1.3**
SOC	**Sochi**	**9.68**	**293**	*eP*	**Pn**	**03 59 57.1**	**+4.0**
SOC				pmax	pmax		
	comp=Z,22nm,1.1s						
AB31	**Akbulak array**	**10.40**	**30**	⇑P	**Pn**	**04 00 02.3**	**-0.7**
	comp=Z,8.7nm,0.3s,baz=207,slow=13,SNR=540						
AB31				⇓S	**Sn**	**04 01 49.8**	**-8.5**
	comp=Z,67nm,0.5s,baz=218,slow=28,SNR=10						
AB31	**Akbulak array**	**10.40**	**30**	P	**Pn**	**04 00 02.3**	**-0.7**
	comp=Z,8.7nm,0.3s,baz=207,SNR=540						
ABKAR	**Akbulak array**	**10.40**	**30**	*ePn*	**Pn**	**04 00 02.6**	**-0.4**
	comp=Z,5.1nm,0.8s						
ABKAR				*eSn*	**Sn**	**04 01 56.2**	**-2.1**
ABKAR	**Akbulak array**	**10.40**	**30**	*ePn*	**Pn**	**04 00 02.6**	**-0.4**
	comp=Z,5.1nm,0.8s						
ABKAR				*eSn*	**Sn**	**04 01 56.2**	**-2.2**
AKTK	**Aktyubinsk**	**10.80**	**21**	P	**Pn**	**04 00 08.6**	**+0.2**
AKTK				S	**Sn**	**04 02 01.9**	**-6.1**
AKTK				LR	LR	04 05 41.0	
AKTK	**Aktyubinsk**	**10.80**	**21**	P	**Pn**	**04 00 08.6**	**+0.2**
	comp=Z,18nm,0.3s						
AKTO	**Aktyubinsk**	**10.80**	**21**	P	**Pn**	**04 00 08.6**	**+0.2**
	comp=Z,18nm,0.3s,baz=207,slow=12,SNR=101						
AKTO				S	**Sn**	**04 02 01.9**	**-6.1**
	comp=Z,17nm,0.3s,baz=212,slow=23,SNR=5.5						
AKTO				LR	LR	04 05 41.0	
	comp=Z,333nm,19.3s,baz=202,slow=44						
AKTO	**Aktyubinsk**	**10.80**	**21**	P	**Pn**	**04 00 08.6**	**+0.2**
AKTO				S	**Sn**	**04 02 01.9**	**-6.0**
AKTO				pmax	pmax		
	comp=Z,18nm,0.3s						
AKTO				smax			
	comp=N,17nm,0.3s						
AKTO				MLR	MLR		
	comp=Z,333nm,19.3s						
VRHR	**Novokhopersk**	**12.85**	**329**	*eP*	**Pn**	**04 00 37.7**	**+1.3**
VRHR				*eS*	**Sn**	**04 02 54.9**	**-3.2**
VRHR				pmax	pmax		
	comp=E,20nm,0.6s						
VRHR				pmax	pmax		
	comp=Z,100nm,0.6s						
VRHR				pmax	pmax		
	comp=N,3.0nm,0.3s						
VRHR				smax			
	comp=E,650nm,0.9s						
VRHR				smax			
	comp=Z,130nm,0.9s						
VRHR				smax			
	comp=N,140nm,0.4s						
VRHR	**Novokhopersk**	**12.85**	**329**	*eP*	**Pn**	**04 00 37.7**	**+1.3**
	comp=N,3.0nm,0.3s						
VORD	**Divnogorie**	**13.73**	**324**	*eP*	**Pn**	**04 00 47.9**	**-0.5**
VORD				*eS*	**Sn**	**04 03 16.5**	**-3.2**
VORD				pmax	pmax		
	comp=Z,30nm,0.8s						
VORD				pmax	pmax		
	comp=N,60nm,0.9s						
VORD				pmax	pmax		
	comp=E,60nm,0.9s						
VORD				smax			
	comp=N,190nm,1.0s						
VORD				smax			
	comp=E,560nm,1.0s						
VORD				smax			
	comp=Z,120nm,1.0s						
VORD	**Divnogorie**	**13.73**	**324**	*eP*	**Pn**	**04 00 47.9**	**-0.5**
	comp=Z,30nm,0.8s						
SIM	**Simferopol'**	**13.91**	**295**	*cePn*	**Pn**	**04 00 58.9**	**+8.0**
SIM				pmax	pmax		
	comp=Z,35nm,0.5s						
VSR	**Storozhevoye**	**13.96**	**325**	*eP*	**Pn**	**04 00 50.8**	**-0.8**
VSR				*eS*	**Sn**	**04 03 24.6**	**-0.7**
VSR				pmax	pmax		
	comp=N,40nm,0.6s						
VSR				pmax	pmax		
	comp=E,30nm,0.6s						
VSR				pmax	pmax		
	comp=Z,30nm,0.6s						
VSR				smax			
	comp=N,740nm,1.0s						
VSR				smax			
	comp=E,410nm,1.0s						
VSR				smax			
	comp=Z,50nm,0.5s						
VSR	**Storozhevoye**	**13.96**	**325**	*eP*	**Pn**	**04 00 50.8**	**-0.8**
KK31	**Karatay Array**	**14.03**	**73**	P	**Pn**	**04 00 51.5**	**-1.1**
	comp=Z,26nm,0.8s,baz=259,slow=16,SNR=152						
KK31				⇑S	**Sn**	**04 03 18.8**	**-8.3**
	comp=Z,42nm,0.7s,baz=264,slow=25,SNR=6.6						
KK31	**Karatay Array**	**14.03**	**73**	P	**Pn**	**04 00 51.5**	**-1.1**
	comp=Z,26nm,0.8s,baz=259,SNR=152						
BR131	**Keskin Array S**	**14.11**	**273**	*ePn*	**Pn**	**04 00 54.9**	**+1.3**
BR131	**Keskin Array S**	**14.11**	**273**	*ePn*	**Pn**	**04 00 54.9**	**+1.2**
BRTR	**Keskin Array B**	**14.11**	**273**	P	**Pn**	**04 00 52.5**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=93,slow=11,SNR=24						
BRTR	**Keskin Array B**	**14.11**	**273**	*cePn*	**Pn**	**04 00 55.2**	**+1.5**
BRTR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BRTR	**Keskin Array B**	**14.11**	**273**	*eP*	**Pn**	**04 00 55.2**	**+1.5**
	comp=Z,7.0nm,0.9s						
KBL	**Kabul**	**14.73**	**108**	*eP*	**Pn**	**04 01 02.4**	**+0.2**
KBL				pmax	pmax		
	comp=Z,29nm,1.3s						
KBL	**Kabul**	**14.73**	**108**	*ePn*	**Pn**	**04 01 02.4**	**+0.1**
	comp=Z,29nm,1.3s						
KBL	**Kabul**	**14.73**	**108**	*ePn*	**Pn**	**04 01 02.4**	**+0.2**
	comp=Z,29nm,1.3s						
ASF	**Jabal al Asfar**	**14.74**	**241**	P	**Pn**	**04 01 01.3**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=90,slow=5.1,SNR=8.6						
MMAI	**Mount Meron Ar**	**15.26**	**246**	P	**Pn**	**04 01 09.8**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=66,slow=17,SNR=8.6						
MMAI				LR	LR	04 08 02.7	
	comp=Z,166nm,21.1s,baz=60,slow=41						
AML	**Almayashu**	**16.35**	**77**	*ePn*	**Pn**	**04 01 23.4**	**+0.2**
AML	**Almayashu**	**16.35**	**77**	*ePn*	**Pn**	**04 01 23.4**	**+0.2**
EKS2	**Erkin-Say**	**16.41**	**75**	P	**Pn**	**04 01 26.5**	**+2.5**
	SNR=8.1						
EKS2	**Erkin-Say**	**16.41**	**75**	*ePn*	**Pn**	**04 01 23.7**	**-0.3**
	comp=Z,23nm,0.8s						
EKS2	**Erkin-Say**	**16.41**	**75**	*ePn*	**Pn**	**04 01 23.7**	**-0.2**
	comp=Z,23nm,0.8s						
ARU	**Arti**	**16.52**	**13**	*d iP*	**Pn**	**04 01 22.5**	**-2.7**
ARU				S	**Sn**	**04 04 22.2**	**-5.2**
ARU				pmax	pmax		
	comp=Z,90nm,0.8s						
ARU	**Arti**	**16.52**	**13**	Pn	**Pn**	**04 01 22.9**	**-2.3**
	comp=Z,206nm,1.2s						
ARU	**Arti**	**16.52**	**13**	Pn	**Pn**	**04 01 23.0**	**-2.2**
	comp=Z,206nm,1.2s						
AAK	**Ala-Archa**	**16.94**	**75**	P	**Pn**	**04 01 31.4**	**+0.8**
	SNR=7.9						
AAK	**Ala-Archa**	**16.94**	**75**	P	**Pn**	**04 01 30.4**	**-0.2**
	comp=Z,1.3nm,0.3s,baz=221,slow=8.9,SNR=16						
AAK				S	**Sn**	**04 04 28.9**	**-8.9**
	comp=Z,0.5nm,0.3s,baz=228,slow=15,SNR=2.5						
AAK				LR	LR	04 08 50.6	
	comp=Z,247nm,21.5s,baz=271,slow=40						
AAK	**Ala-Archa**	**16.94**	**75**	*d iP*	**Pn**	**04 01 30.9**	**+0.3**
AAK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
AAK	**Ala-Archa**	**16.94**	**75**	*ePn*	**Pn**	**04 01 31.2**	**+0.6**
	comp=Z,31nm,1.0s						
AAK				*eSn*	**Sn**	**04 04 36.0**	**-1.8**
AAK	**Ala-Archa**	**16.94**	**75**	*i P*	**Pn**	**04 01 30.9**	**+0.3**
	comp=Z,10.0nm,1.0s						
AAK	**Ala-Archa**	**16.94**	**75**	*ePn*	**Pn**	**04 01 31.2**	**+0.6**
	comp=Z,31nm,1.0s						
USP	**Ospenovka**	**16.95**	**73**	P	**Pn**	**04 01 30.6**	**-0.2**
	SNR=8.2						
UCH	**Uchtor**	**16.96**	**77**	P	**Pn**	**04 01 31.5**	**+0.6**
	SNR=18						
UCH	**Uchtor**	**16.96**	**77**	*ePn*	**Pn**	**04 01 31.3**	**+0.4**
	comp=Z,14nm,0.6s						
UCH				*eSn*	**Sn**	**04 04 33.0**	**-5.3**
UCH	**Uchtor**	**16.96**	**77**	*ePn*	**Pn**	**04 01 31.3**	**+0.4**
	comp=Z,14nm,0.6s						
ZRNK	**Zerenda**	**17.00**	**37**	⇑P	**Pn**	**04 01 29.5**	**-1.8**
	comp=Z,49nm,0.8s						
ZRNK				⇑S	**Sn**	**04 04 27.6**	**-11**
	comp=Z,106nm,1.0s						
FRU	**Bishkek**	**17.03**	**75**	*eP*	**Pn**	**04 01 32.0**	**+0.3**
FRU				*eS*	**Sn**	**04 04 42.0**	**+2.0**
FRU				pmax	pmax		
	comp=Z,90nm,2.0s						
FRU				pmax	pmax		
	comp=E,200nm,1.8s						
FRU	**Bishkek**	**17.03**	**75**	*eP*	**Pn**	**04 01 32.0**	**+0.3**
	comp=E,90nm,2.0s						
CHMS	**Chumysh**	**17.13**	**74**	P	**Pn**	**04 01 34.0**	**+1.1**
	SNR=6.6						
KBK	**Karagaybulak**	**17.27**	**75**	P	**Pn**	**04 01 36.3**	**+1.5**
	SNR=13						
SVE	**Sverdlovsk**	**17.29**	**16**	*i eP*	**Pn**	**04 01 34.1**	**-0.8**
SVE				*eS*	**Sn**	**04 04 38.4**	**-7.6**
SVE				pmax	pmax		
	comp=Z,134nm,1.2s						
SVE	**Sverdlovsk**	**17.29**	**16**	*eP*	**Pn**	**04 01 34.1**	**-0.8**
	comp=Z,134nm,1.2s						
KZA	**Kyzart**	**17.51**	**77**	P	**Pn**	**04 01 39.0**	**+1.2**
	SNR=27						
EIL	**Elat**	**17.63**	**238**	P	**Pn**	**04 01 37.6**	**-1.7**
	comp=Z,0.6nm,0.3s,baz=49,slow=5.7,SNR=8.1						
TLCR		**17.65**	**293**	⇑P	**Pn**	**04 01 38.1**	**-1.3**
TLCR		**17.65**	**293**	*i P*	**Pn**	**04 01 38.1**	**-1.3**
TLCR		**17.65**	**293**	P	**Pn**	**04 01 38.1**	**-1.3**
BRVK	**Borovoye**	**17.66**	**39**	⇑P	**Pn**	**04 01 37.7**	**-1.8**
	comp=Z,116nm,0.9s						
BRVK	**Borovoye**	**17.66**	**39**	*c iP*	**Pn**	**04 01 38.0**	**-1.5**
BRVK				pmax	pmax		
	comp=Z,46nm,0.7s						
BRVK	**Borovoye**	**17.66**	**39**	*ePn*	**Pn**	**04 01 38.1**	**-1.4**
	comp=Z,61nm,0.8s						
BRVK				*eSn*	**Sn**	**04 04 46.4**	**-8.8**
BRVK	**Borovoye**	**17.66**	**39**	*ePn*	**Pn**	**04 01 38.1**	**-1.4**
	comp=Z,61nm,0.8s						
BVAR	**Borovoye Array**	**17.69**	**39**	P	**Pn**	**04 01 39.0**	**-0.9**
	comp=Z,4.8nm,0.3s,baz=221,slow=15,SNR=44						
BVAR				S	**Sn**	**04 04 45.2**	**-11**
	comp=Z,4.0nm,0.3s,baz=226,slow=26,SNR=8.0						
BVAR	**Borovoye Array**	**17.69**	**39**	P	**Pn**	**04 01 39.0**	**-0.9**
BVAR				S	**Sn**	**04 04 45.2**	**-11**
BVAR				pmax	pmax		
	comp=Z,5.0nm,0.3s						
BVAR				smax			
	comp=N,4.0nm,0.3s						
BVAR	**Borovoye Array**	**17.69**	**39**	P	**Pn**	**04 01 39.0**	**-0.9**
	comp=N,5.0nm,0.3s						
TKM2	**Tokmak 2**	**17.75**	**74**	P	**Pn**	**04 01 41.1**	**+0.4**
	SNR=24						
TKM2	**Tokmak 2**	**17.75**	**74**	*eP*	**Pn**	**04 01 41.3**	**+0.6**
TKM2				S	**Sn**	**04 04 59.6**	**+2.2**
TKM2				pmax	pmax		
	comp=Z,32nm,0.8s						
TKM2	**Tokmak 2**	**17.75**	**74**	*ePn*	**Pn**	**04 01 41.3**	**+0.6**
	comp=Z,32nm,0.8s						
TKM2				S	**Sn**	**04 04 59.6**	**+2.2**
TKM2	**Tokmak 2**	**17.75**	**74**	*eP*	**Pn**	**04 01 41.3**	**+0.6**
	comp=Z,32nm,0.8s						
VOSK	**Vostochnaya**	**17.80**	**40**	⇑P	**Pn**	**04 01 39.5**	**-1.7**
	comp=Z,70nm,1.2s						
VOSK				⇓S	**Sn**	**04 04 48.6**	**-10**
	comp=Z,45nm,1.1s						
VOSK	**Vostochnaya**	**17.80**	**40**	P	**Pn**	**04 01 39.5**	**-1.7**
	comp=Z,70nm,1.2s						
OBN	**Obninsk**	**17.89**	**330**	*i eP*	**Pn**	**04 01 40.9**	**-1.4**
OBN				*i S*	**Sn**	**04 04 52.2**	**-8.3**
OBN				pmax	pmax		
	comp=Z,82nm,1.6s						
OBN				MLR	MLR		
	comp=Z,100nm,21.0s						
OBN	**Obninsk**	**17.89**	**330**	*ePn*	**Pn**	**04 01 41.6**	**-0.6**
	comp=Z,252nm,1.6s						
OBN				*eSn*	**Sn**	**04 04 59.4**	**-1.2**
OBN	**Obninsk**	**17.89**	**330**	*eP*	**Pn**	**04 01 40.9**	**-1.4**
	comp=Z,82nm,1.6s						
OBN	**Obninsk**	**17.89**	**330**	*ePn*	**Pn**	**04 01 41.7**	**-0.6**
	comp=Z,252nm,1.6s						
KIS	**Kishinev**	**17.96**	**299**	*eP*	**Pn**	**04 01 42.0**	**-1.3**
KIS				*eS*	**Sn**	**04 05 02.0**	**-0.5**
KIS	**Kishinev**	**17.96**	**299**	*eP*	**Pn**	**04 01 42.0**	**-1.3**
PSN	**Preselentsi**	**17.98**	**288**	*eP*	**Pn**	**04 01 44.6**	**+1.1**
MOS	**Moscow**	**17.98**	**333**	*eP*	**Pn**	**04 01 41.3**	**-2.1**
MOS				*eS*	**Sn**	**04 04 52.2**	**-11**
MOS				pmax	pmax		
	comp=Z,143nm,1.1s						
MOS				pmax	pmax		
	comp=Z,222nm,1.2s						
MOS	**Moscow**	**17.98**	**333**	*eP*	**Pn**	**04 01 41.3**	**-2.1**
	comp=Z,222nm,1.2s						
ULHL	**Ulahol**	**18.24**	**77**	P	**Pn**	**04 01 49.8**	**+3.1**
	SNR=15						
AKASG	**Malin Array Be**	**18.88**	**310**	P	**Pn**	**04 01 52

BURAR Bucovina Array 20.49 299 P **P 04 02 12.1 +0.9**
BUR08 Bucovina Ar. S 20.50 299 *e*P **P 04 02 11.5 +0.1**
BUR08 *e*S **S 04 06 01.2 +2.3**
BUR08 Bucovina Ar. S 20.50 299 *e*P **P 04 02 11.5 +0.1**
BUR08 *e*S **S 04 06 01.2 +2.3**
RZN Rozhen 20.60 282 *e*P **P 04 02 12.5 0.0**
PGB Panagyurishte 20.94 285 *e*P **P 04 02 16.0 -0.1**
KURK Kurchatov 21.12 52 ⇑P **P 04 02 19.1 +1.2**
comp=Z,86nm,1.4s,mb4.9
KURK ⇓S **S 04 06 08.0 -3.0**
comp=Z,39nm,1.0s
KURK Kurchatov 21.12 52*c i*P **P 04 02 18.9 +0.9**
KURK pmax pmax
comp=Z,77nm,1.2s,mb4.9
KURK Kurchatov 21.12 52 *e*P **P 04 02 19.3 +1.3**
comp=Z,49nm,1.0s,mb4.8
KURK *e*S **S 04 06 07.5 -3.5**
KURK Kurchatov 21.12 52 *i* P **P 04 02 18.9 +0.9**
comp=Z,77nm,1.2s,mb4.9
MICGM Minsk 21.37 319 *e* **P 04 02 18.0 -2.7**
MNK Minsk 21.40 319 *e*P **P 04 02 18.0 -2.9**
VTS Vitosha 21.64 285 *e*P **P 04 02 23.0 -0.7**
BMR Baia Mare 21.64 299 P **P 04 02 24.4 +0.8**
BMR Baia Mare 21.64 299 P **P 04 02 24.4 +0.8**
LVV L'vov 21.74 305 *e*P **P 04 02 24.2 -0.4**
LVV L'vov 21.74 305 *e*P **P 04 02 24.2 -0.4**
GZR Gura Zlata 21.91 293 ⇑P **P 04 02 25.9 -0.6**
GZR Gura Zlata 21.91 293 ⇑*i*P **P 04 02 25.9 -0.6**
GZR Gura Zlata 21.91 293 ⇑P **P 04 02 25.9 -0.6**
DRGR 22.06 296 P **P 04 02 28.8 +0.7**
DRGR 22.06 296 ⇑*i*P **P 04 02 28.2 +0.1**
DRGR 22.06 296 P **P 04 02 28.8 +0.7**
NACGM Naroch 22.13 319 *e*P **P 04 02 26.0 -2.7**
TRPA Tarpa 22.35 300 ⇓*i*P **P 04 02 31.0 -0.2**
TRPA Tarpa 22.35 300 ⇓*e*P **P 04 02 30.7 -0.5**
BOLS Boljevac 22.49 288 *i* P **P 04 02 32.0 -0.7**
KWP Kalwaria Pacla 22.53 304 *e*P **P 04 02 33.6 +0.6**
KWP *e*pP 04 02 38.7
KWP *e*S **S 04 06 36.8 -1.7**
KWP *e*sS sS 04 06 45.0 -7.4
KWP Kalwaria Pacla 22.53 304 *e*P **P 04 02 33.4 +0.4**
KWP pmax pmax
comp=Z,44nm,0.9s,mb4.9
KWP Kalwaria Pacla 22.53 304 *e*P **P 04 02 33.4 +0.3**
comp=Z,44nm,0.9s,mb4.9
KWP Kalwaria Pacla 22.53 304 *e*P **P 04 02 33.4 +0.4**
comp=Z,44nm,0.9s,mb4.9
BARS Barje 22.65 286 *i* P **P 04 02 34.7 +0.3**
MK31 Makanchi Array 22.69 64 ⇑P **P 04 02 35.3 +0.5**
comp=Z,21nm,0.8s,mb4.6,baz=259,slow=8.8,SNR=151
MK31 ⇑S **S 04 06 41.2 -0.1**
comp=Z,16nm,1.1s,baz=252,slow=29,SNR=5.8
MK31 Makanchi Array 22.69 64 *e*P **P 04 02 35.7 +0.9**
MK31 *e*S **S 04 06 44.2 +3.0**
MK31 Makanchi Array 22.69 64 *e*P **P 04 02 35.7 +0.9**
MK31 S **S 04 06 41.2 -0.1**
comp=Z,16nm,1.1s,SNR=5.8
MKAR Makanchi Array 22.69 64 P **P 04 02 35.3 +0.4**
comp=Z,16nm,0.8s,mb4.5,baz=265,slow=8.0,SNR=65
MKAR pP 04 02 46.4
comp=Z,20nm,0.8s,baz=256,slow=10,SNR=13
MKAR S **S 04 06 41.0 -0.2**
comp=Z,2.7nm,0.7s,baz=256,slow=15,SNR=3.9
MKAR LR LR 04 12 40.1
comp=Z,52nm,21.4s,MS2.9,baz=253,slow=40
MKAR Makanchi Array 22.69 64*ce*P **P 04 02 35.2 +0.4**
MKAR pmax pmax
comp=Z,16nm,0.8s
MKAR Makanchi Array 22.69 64 P **P 04 02 35.3 +0.5**
BZS Buzias 22.74 293 ⇑P **P 04 02 34.5 -0.8**
BZS Buzias 22.74 293 ⇑*i*P **P 04 02 34.5 -0.8**
BZS Buzias 22.74 293 P **P 04 02 34.5 -0.8**
SVIS Svilajnac 23.01 290 *i* P **P 04 02 38.1 -0.1**
CRVS Cervenica-Dubn 23.18 302 *e*P **P 04 02 40.0 0.0**
CRVS pmax pmax
comp=Z,22nm,1.6s,mb4.3
CRVS Cervenica-Dubn 23.18 302 *e*P **P 04 02 40.0 0.0**
comp=Z,22nm,1.6s,mb4.3
CRVS Cervenica-Dubn 23.18 302 *e*P **P 04 02 40.0 0.0**
CRVS Cervenica-Dubn 23.18 302 *e*P **P 04 02 40.0 0.0**
comp=Z,22nm,1.6s,mb4.3
GRUS Gruza 23.39 289 *i* P **P 04 02 41.4 -0.7**
DDI Dehra Dun 23.43 107 *ex* x 04 02 33.0
TRUS Trudelj 23.59 290 *i* P **P 04 02 44.1 0.0**
SUW Suwalki 23.61 315 *e*P **P 04 02 43.8 -0.2**
SUW *e*pP 04 02 46.4
SUW *e*S **S 04 06 57.3 +1.3**
SUW Suwalki 23.61 315 P **P 04 02 44.0 -0.1**
SUW pmax pmax
comp=Z,55nm,0.8s,mb5.0
SUW Suwalki 23.61 315 P **P 04 02 44.0 -0.1**
comp=Z,55nm,0.8s,mb5.0
SUW Suwalki 23.61 315 P **P 04 02 44.0 -0.1**
comp=Z,55nm,0.8s,mb5.0
SUW *e*S **S 04 06 57.3 +1.4**
KECS Kecovo 23.76 300 *e*P **P 04 02 45.7 +0.2**
KECS pmax pmax
comp=Z,5.0nm,0.6s,mb4.1
KECS Kecovo 23.76 300 *e*P **P 04 02 45.7 +0.2**
comp=Z,4.7nm,0.6s,mb4.1
KECS *e*PP 04 02 53.9
KECS Kecovo 23.76 300 *e*P **P 04 02 45.7 +0.2**
KECS *e*pP 04 02 53.9
DIVS Divibare 23.90 289 *i* P **P 04 02 47.6 +0.8**
NIE Niedzica 24.02 302 *e*P **P 04 02 49.4 +1.5**
NIE Niedzica 24.02 302 *e*P **P 04 02 49.4 +1.5**
PSZ Piszkesteto 24.08 299 *e*P **P 04 02 52.5 +4.0**
PSZ pmax pmax
comp=Z,25nm,1.2s,mb4.5
PSZ Piszkesteto 24.08 299 *e*P **P 04 02 52.5 +4.0**
comp=Z,25nm,1.2s,mb4.5
VSU Vasula 24.13 327*c i*P **P 04 02 49.1 +0.3**
VSU pmax pmax
comp=Z,82nm,1.7s,mb4.9
VSU Vasula 24.13 327 *i* P **P 04 02 49.1 +0.3**
comp=Z,82nm,1.7s,mb4.9
BBLS Lazići 24.33 289 *i* P **P 04 02 50.5 -0.3**
OJC Ojcow 24.49 304 *e*P **P 04 02 50.1 -2.1**
OJC *e**SP sP 04 02 58.1 -7.3
OJC *e*S **S 04 07 10.9 +0.6**
OJC Ojcow 24.49 304 *e*P **P 04 02 50.1 -2.1**
OJC *e*S **S 04 07 10.9 +0.6**
BUD Budapest 24.63 298 ⇓*e*P **P 04 02 53.3 -0.2**
VYHS Vyhne 24.85 300 *e*P **P 04 02 56.6 +1.1**
comp=Z,2.4nm,0.9s,mb3.7
VYHS *e*PP 04 03 04.6
VYHS Vyhne 24.85 300 *e*P **P 04 02 56.6 +1.1**
VYHS *e*pP 04 03 04.6
VYHS Vyhne 24.85 300 *e*P **P 04 02 56.6 +1.1**
comp=Z,2.4nm,0.9s,mb3.7
KOLL Kolacno 25.14 300 *e*P **P 04 02 59.6 +1.4**
KOLL Kolacno 25.14 300 *e*P **P 04 02 59.6 +1.4**
OKC Ostrava-Krasne 25.47 303 *e*P **P 04 03 02.2 +1.1**
OKC Ostrava-Krasne 25.47 303 *e*P **P 04 03 02.2 +1.1**
OKC AMS AMS 04 12 00.0
JOF Joensuu 25.64 338 *e*P **P 04 03 02.4 -0.1**
JOF Joensuu 25.64 338 *e*p **P 04 03 02.4 -0.1**
comp=Z,29nm,0.4s,mb5.2
STON Ston 25.66 287 P **P 04 03 03.2 +0.3**
ZALV Zalesovo Beam 25.75 47 P **P 04 03 03.9 +0.3**
comp=Z,14nm,0.6s,mb4.7,baz=263,slow=11,SNR=48
ZALV pP pP 04 03 15.8 +3.0
comp=Z,6.1nm,0.5s,baz=240,slow=12,SNR=7.5
ZALV S S 04 07 50.4 +20
comp=Z,7.3nm,1.0s,baz=251,slow=16,SNR=6.1
ZALV LR LR 04 14 39.6
comp=Z,147nm,19.6s,MS3.5,baz=268,slow=40
ZALV Zalesovo Beam 25.75 47 P **P 04 03 03.9 +0.3**
ZALV pP pP 04 03 15.8 +3.0
ZALV S S 04 07 50.4 +20
ZALV LR LR 04 14 39.6
MORC Moravsky Berou 25.85 303 P **P 04 03 06.1 +1.5**
MORC Moravsky Berou 25.85 303 *e*P **P 04 03 04.4 -0.1**
comp=Z,18nm,1.3s,mb4.4
MORC Moravsky Berou 25.85 303 ⇓*i*P **P 04 03 05.6 +1.0**
MORC Moravsky Berou 25.85 303 P **P 04 03 06.1 +1.5**
ZST Bratislava 25.97 299 *e*P **P 04 03 08.0 +2.3**
ZST pmax pmax
comp=Z,9.0nm,0.9s,mb4.3
ZST Bratislava 25.97 299 *e*P **P 04 03 08.0 +2.3**
comp=Z,9.1nm,0.9s,mb4.3
ZST Bratislava 25.97 299 *e*P **P 04 03 08.0 +2.3**
ZST Bratislava 25.97 299 *e*P **P 04 03 08.0 +2.3**
comp=Z,9.1nm,0.9s,mb4.3
FINES FINESS Array B 26.28 332 P **P 04 03 08.0 -0.2**
comp=Z,21nm,0.5s,mb4.9,baz=135,slow=13,SNR=45
FINES LR LR 04 15 00.2
comp=Z,96nm,20.9s,MS3.3,baz=156,slow=40
FINES FINESS Array B 26.28 332 P **P 04 03 08.1 -0.2**
VRAC Vranov 26.41 301 P **P 04 03 07.1 -2.5**
comp=Z,1.9nm,0.5s,mb3.9,baz=90,slow=10,SNR=2.2
VRAC LR LR 04 15 23.3
comp=Z,68nm,18.8s,MS3.2,baz=90,slow=40
VRAC Vranov 26.41 301 P **P 04 03 07.1 -2.5**
VRAC pmax pmax
comp=Z,2.0nm,0.5s
VRAC MLR MLR
comp=Z,68nm,18.8s
KOGS Kog 26.49 295 *e*P **P 04 03 11.4 +1.1**
KOGS Kog 26.49 295 *e*P **P 04 03 11.4 +1.0**
WMQ Urumqi 26.52 71 P **P 04 03 10.5 -0.1**
WMQ pP pP 04 03 19.8 -0.1
WMQ sP sP 04 03 23.9 0.0
WMQ PP 04 03 54.3
WMQ PcP PcP 04 06 35.5 +0.8
WMQ *e*S **S 04 07 40.3 -2.3**
WMQ sS sS 04 07 56.3 -1.7
WMQ SS 04 08 51.3
WMQ ScS ScS 04 14 00.3 -2.0
WMQ pmax pmax
comp=Z,32nm,1.0s,mb4.8
WMQ pmax pmax
comp=Z,160nm,5.1s
WMQ LR LR
comp=N,160nm,28.0s,MS3.6
WMQ LR LR
comp=E,190nm,26.8s,MS3.6
WMQ LR LR
comp=Z,130nm,25.4s,MS3.4
KAF Kangasniemi 26.64 333 *e*P **P 04 03 11.7 +0.1**
KAF pmax pmax
comp=Z,5.0nm,0.3s,mb4.5
KAF Kangasniemi 26.64 333 *e*P **P 04 03 11.7 +0.1**
comp=Z,5.1nm,0.3s,mb4.5
KAF Kangasniemi 26.64 333 *ep* **P 04 03 11.7 +0.1**
comp=Z,5.1nm,0.3s,mb4.5,baz=131,slow=9.4
KAF Kangasniemi 26.64 333 *e*P **P 04 03 11.7 +0.1**
comp=Z,5.1nm,0.3s,mb4.5
DPC Dobruska-Polom 26.71 304 *e*P **P 04 03 13.9 +1.6**
DPC Dobruska-Polom 26.71 304 *e*P **P 04 03 13.9 +1.6**
DPC AMS AMS 04 12 50.0
DPC Dobruska-Polom 26.71 304 *e*P **P 04 03 13.9 +1.6**
GKP Gorka Klasztor 26.72 310 *e*P **P 04 03 11.7 -0.6**
GKP Gorka Klasztor 26.72 310 *e*P **P 04 03 11.7 -0.6**
CONA Conrad Observa 26.79 298 ⇓*i*P **P 04 03 13.9 +0.9**
comp=Z,5.4nm,0.9s,mb4.1
CONA Conrad Observa 26.79 298 P **P 04 03 13.9 +0.9**
comp=Z,5.4nm,0.9s,mb4.1
UPC Upice 26.93 304 *e*P **P 04 03 15.6 +1.3**
UPC Upice 26.93 304 *e*P **P 04 03 15.6 +1.3**
UPC Upice 26.93 304 *e*P **P 04 03 15.6 +1.3**
ARSA Arzberg 27.00 297 ⇓*i*P **P 04 03 15.3 +0.4**
comp=Z,14nm,1.3s,mb4.3
ARSA Arzberg 27.00 297 P **P 04 03 15.3 +0.4**
comp=Z,14nm,1.3s,mb4.3
SOKA Soboth 27.33 295 ⇑*i*P **P 04 03 18.8 +0.9**
comp=Z,9.9nm,0.9s,mb4.3
SOKA Soboth 27.33 295 P **P 04 03 18.8 +0.9**
comp=Z,9.9nm,0.9s,mb4.3
VISS Visnje 27.48 294 *e*P **P 04 03 20.2 +0.9**
VISS Visnje 27.48 294 *e*P **P 04 03 20.2 +0.9**
VNDS Vrh nad Dolski 27.57 294 *e*P **P 04 03 21.3 +1.2**
PRU Pruhonice 27.80 303 *e*P **P 04 03 27.3 +5.2**
PRU Pruhonice 27.80 303 *e*P **P 04 03 27.3 +5.2**
PRU AMS AMS 04 13 30.0
PVCC Panska Ves 27.84 304 *e*P **P 04 03 24.2 +1.7**
PVCC Panska Ves 27.84 304 *e*P **P 04 03 24.2 +1.7**
PVCC Panska Ves 27.84 304 P **P 04 03 24.2 +1.7**
BRG Berggiesshubel 28.28 304 *e*P **P 04 03 28.2 +1.9**
comp=Z,6.5nm,0.9s,mb4.2
BRG Berggiesshubel 28.28 304 *e*P **P 04 03 28.2 +1.9**
BRG pmax pmax
comp=Z,4.0nm,1.0s,mb4.0
KHC Kasperske Hory 28.36 301 *e*P **P 04 03 27.6 +0.5**
KHC Kasperske Hory 28.36 301 *e*P **P 04 03 27.6 +0.5**
KHC AMS AMS 04 14 00.0
KHC Kasperske Hory 28.36 301 P **P 04 03 27.6 +0.5**
KBA Koelnbreinsper 28.48 296 ⇑*i*P **P 04 03 29.6 +1.4**
comp=Z,14nm,1.1s,mb4.5
KBA Koelnbreinsper 28.48 296 P **P 04 03 29.6 +1.4**
comp=Z,14nm,1.1s,mb4.5
BSD Bornholm Skovb 28.51 313 *i* P **P 04 03 31.4 +3.0**
BSD Bornholm Skovb 28.51 313 *i* P **P 04 03 31.4 +3.0**
CLL Collm 28.92 305 *e*P **P 04 03 34.0 +2.0**
CLL pmax pmax
comp=Z,8.0nm,1.2s,mb4.3
CLL Collm 28.92 305 *e*P **P 04 03 34.0 +2.0**
comp=Z,8.0nm,1.2s,mb4.3
CLL Collm 28.92 305 *e*P **P 04 03 34.0 +2.0**
comp=Z,8.0nm,1.2s,mb4.3
CLL *e*PPP 04 04 31.0
CLL *i* 04 04 53.3
APA Apatity 29.01 345 ⇑*e*P **P 04 03 35.0 +2.4**
APA pmax pmax
comp=Z,46nm,1.6s,mb5.0
LVZ Lovozero 29.07 347 ⇑*e*P **P 04 03 33.5 +0.4**
LVZ pmax pmax
comp=Z,21nm,1.2s,mb4.7
NKC Novy Kostel 29.17 303 *e*P **P 04 03 39.0 +4.8**
ATD Arta Tunnel 29.96 198 LR LR 04 16 32.6
comp=Z,78nm,20.4s,MS3.3,baz=9,7,slow=38
FETA Feichten 30.27 296 ⇑*i*P **P 04 03 44.8 +0.7**
comp=Z,7.2nm,1.0s,mb4.4
FETA Feichten 30.27 296 P **P 04 03 44.8 +0.7**
comp=Z,7.2nm,1.0s,mb4.4
HFS Hagfors 30.76 323 P **P 04 03 48.5 +0.3**
comp=Z,12nm,0.5s,mb5.0,baz=109,slow=8.6,SNR=80
HFS LR LR 04 17 01.7
comp=Z,67nm,18.1s,MS3.3,baz=109,slow=38
HFS Hagfors 30.76 323 P **P 04 03 48.5 +0.3**
HFS pmax pmax
comp=Z,12nm,0.5s
HFS MLR MLR
comp=Z,67nm,18.1s
DAVOX Davos/Dischmat 30.87 296 P **P 04 03 49.4 +0.1**
comp=Z,1.8nm,0.5s,mb4.2,baz=104,slow=8.3,SNR=4.3
DAVOX LR LR 04 19 16.4
comp=Z,27nm,19.4s,MS2.9,baz=86,slow=42
KEV Kevo 32.13 344 *e*P **P 04 03 59.7 -0.5**
KEV pmax pmax
comp=Z,8.0nm,0.6s,mb4.7
KEV Kevo 32.13 344 *e*P **P 04 03 59.7 -0.5**
comp=Z,8.1nm,0.6s,mb4.7
KEV Kevo 32.13 344 *ep* **P 04 03 59.7 -0.5**
comp=Z,8.1nm,0.6s,mb4.7
KEV Kevo 32.13 344 *e*P **P 04 03 59.7 -0.5**
comp=Z,8.1nm,0.6s,mb4.7
NB2 NORSAR Subarra 32.24 323 P **P 04 04 00.9 -0.3**
comp=Z,9.1nm,0.6s,mb4.8,baz=115,slow=8.6
NB2 NORSAR Subarra 32.24 323 P **P 04 04 00.9 -0.3**
SNR=31
NOA NORSAR Array B 32.24 323 P **P 04 04 00.3 -0.9**
comp=Z,7.1nm,0.6s,mb4.7,baz=113,slow=8.3,SNR=31
NOA LR LR 04 19 11.5
comp=Z,45nm,21.6s,MS3.1,baz=105,slow=40
NOA NORSAR Array B 32.24 323 P **P 04 04 00.3 -0.9**
NOA pmax pmax
comp=Z,7.0nm,0.6s
NOA MLR MLR
comp=Z,45nm,21.6s
ARCES ARCESS Array B 32.29 343 P **P 04 04 01.6 +0.1**
comp=Z,1.4nm,0.5s,mb4.1,baz=147,slow=10,SNR=21
ARCES LR LR 04 21 04.8
comp=Z,70nm,18.6s,MS3.4,baz=330,slow=44
ARCES ARCESS Array B 32.29 343 P **P 04 04 01.6 +0.1**
ARCES pmax pmax
comp=Z,1.0nm,0.5s
ARCES MLR MLR
comp=Z,70nm,18.6s
ARE0 ARCESS Array S 32.29 343 *e*P **P 04 04 02.6 +1.1**
NAO01 NORSAR Array S 32.32 323 *e*P **P 04 04 01.5 -0.4**
comp=Z,4.7nm,0.6s,mb4.5
CDF Champ du Feu 32.53 299 *e*P **P 04 04 02.5 -1.4**
comp=Z,1.3nm,0.3s,mb4.0
CDF Champ du Feu 32.53 299 *e*P **P 04 04 02.5 -1.4**
CDF pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
CDF Champ du Feu 32.53 299 *e*P **P 04 04 02.5 -1.4**
comp=Z,0.6nm,0.3s,mb4.0
HINF Hinteralfeld 32.85 298 *e*P **P 04 04 06.8 +0.1**
comp=Z,1.8nm,0.5s,mb4.0
HINF Hinteralfeld 32.85 298 *e*P **P 04 04 06.8 +0.1**
HINF pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
HINF Hinteralfeld 32.85 298 *e*P **P 04 04 06.8 +0.1**
comp=Z,0.9nm,0.5s,mb4.0
LPG La Plagne 33.16 294 *e*P **P 04 04 09.1 -0.4**
comp=Z,4.4nm,0.5s,mb4.3
LPG La Plagne 33.16 294 *e*P **P 04 04 09.1 -0.4**
LPG pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
LPG La Plagne 33.16 294 *e*P **P 04 04 09.1 -0.4**
comp=Z,2.2nm,0.5s,mb4.3
LPL La Plagne 33.17 294 *e*P **P 04 04 10.1 +0.5**
comp=Z,11nm,0.8s,mb4.5
LPL La Plagne 33.17 294 *e*P **P 04 04 10.1 +0.5**
LPL pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
LPL La Plagne 33.17 294 *e*P **P 04 04 10.1 +0.5**
comp=Z,5.4nm,0.8s,mb4.5
HAU Haudompre 33.18 299 *e*P **P 04 04 09.2 -0.4**
comp=Z,9.7nm,0.6s,mb4.6
HAU *e*MLR MLR
comp=Z,43nm,20.0s,MS2.9
HAU Haudompre 33.18 299 *e*P **P 04 04 09.2 -0.4**
HAU pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
HAU MLR MLR
comp=Z,40nm,20.0s,MS3.1
HAU Haudompre 33.18 299 *e*P **P 04 04 09.2 -0.4**
comp=Z,4.8nm,0.6s,mb4.6
HAU LR LR
comp=Z,40nm,20.0s,MS3.1
MOR8 Moi Rana 33.23 333 *e*P **P 04 04 10.0 +0.1**
MOR8 AMb AMB 04 04 23.9
comp=Z,25nm,4.6s
MOR8 Moi Rana 33.23 333 *e*P **P 04 04 10.0 +0.1**
comp=Z,25nm,4.6s
MOR8 Moi Rana 33.23 333 *e*P **P 04 04 10.0 +0.2**
comp=Z,25nm,4.6s,SNR=31
MBDF Montbardon 33.26 293 *e*P **P 04 04 10.1 -0.2**
comp=Z,17nm,0.6s,mb4.8
MBDF Montbardon 33.26 293 *e*P **P 04 04 10.1 -0.2**
MBDF pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
MBDF Montbardon 33.26 293 *e*P **P 04 04 10.1 -0.2**
comp=Z,8.4nm,0.6s,mb4.8
BNI Bardonecchia 33.27 293 *e*P **P 04 04 11.5 +1.0**
BNI pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
BNI Bardonecchia 33.27 293 *e*P **P 04 04 11.4 +1.0**
comp=Z,2.2nm,0.5s,mb4.3
CABF La Chapelle 33.48 296 *e*P **P 04 04 11.2 -1.1**
comp=Z,8.4nm,0.6s,mb4.5
CABF La Chapelle 33.48 296 *e*P **P 04 04 11.2 -1.1**
CABF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
CABF La Chapelle 33.48 296 *e*P **P 04 04 11.2 -1.1**
comp=Z,4.2nm,0.6s,mb4.5
FRF La Foret Royal 33.54 291 *e*P **P 04 04 12.4 -0.4**
FLOS Flostrand 33.69 333 *e*P **P 04 04 15.0 +1.2**
STOK Stokkvaagen 33.81 333 *e*P **P 04 04 16.1 +1.2**
ORIF Oris-en-Rattie 33.85 293 *e*P **P 04 04 16.2 +0.7**
comp=Z,14nm,1.1s,mb4.5
ORIF *e*MLR MLR
comp=Z,28nm,21.5s,MS2.7
ORIF Oris-en-Rattie 33.85 293 *e*P **P 04 04 16.2 +0.7**
ORIF pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
ORIF Oris-en-Rattie 33.85 293 *e*P **P 04 04 16.2 +0.7**
comp=Z,7.2nm,1.1s,mb4.5
STEI Steigen 33.95 336 *e*P **P 04 04 16.6 +0.5**
TRO Tromso 33.96 340 *e*P **P 04 04 16.8 +0.6**
TRO Tromso 33.96 340 *e*P **P 04 04 16.8 +0.7**
SNR=31
MEZF Maizieres J'vi 34.00 300 *e*P **P 04 04 15.9 -0.9**
BLS5 Blasjo 34.03 319 *e*P **P 04 04 18.1 +1.2**
BLS5 Blasjo 34.03 319 *e*P **P 04 04 18.1 +1.2**
SNR=31
MOL Molde 34.40 325 *e*P **P 04 04 20.2 +0.2**
MOL AMb AMB 04 04 38.1
comp=Z,40nm,2.1s,mb5.0
MOL Molde 34.40 325 *e*P **P 04 04 20.2 +0.2**
comp=Z,40nm,2.1s,mb5.0
MOL Molde 34.40 325 *e*P **P 04 04 20.2 +0.2**
comp=Z,40nm,2.1s,mb5.0,SNR=30
HYA Hoyanger 34.60 322 *e*P **P 04 04 24.2 +2.4**
HYA Hoyanger 34.60 322 *e*P **P 04 04 24.2 +2.5**
SNR=30
VIVF Saint-Julien-I 34.71 293 *e*P **P 04 04 23.1 +0.2**
comp=Z,7.1nm,0.8s,mb4.3
VIVF Saint-Julien-I 34.71 293 *e*P **P 04 04 23.1 +0.2**
VIVF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
VIVF Saint-Julien-I 34.71 293 *e*P **P 04 04 23.1 +0.2**
comp=Z,3.5nm,0.8s,mb4.3
SSB Saint Sauveur 34.73 294 *e*P **P 04 04 23.5 +0.4**
SSB pmax pmax
comp=Z,4.0nm,0.4s,mb4.7
SSB Saint Sauveur 34.73 294 *e*P **P 04 04 23.5 +0.4**
comp=Z,4.3nm,0.4s,mb4.7
LOR Lormes 34.92 298 *e*P **P 04 04 24.3 -0.4**
comp=Z,4.7nm,0.6s,mb4.3
LOR *e*MLR MLR
comp=Z,40nm,19.5s,MS2.9
LOR Lormes 34.92 298 *e*P **P 04 04 24.3 -0.4**
LOR pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
LOR MLR MLR
comp=Z,40nm,19.5s,MS3.2
LOR Lormes 34.92 298 *e*P **P 04 04 24.3 -0.4**
comp=Z,2.3nm,0.6s,mb4.3
LOR LR LR
comp=Z,40nm,19.5s,MS3.2
SMF Signal de Mont 35.01 296 *e*P **P 04 04 24.3 -1.2**
comp=Z,10nm,0.8s,mb4.5
SMF Signal de Mont 35.01 296 *e*P **P 04 04 24.3 -1.2**
SMF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
SMF Signal de Mont 35.01 296 *e*P **P 04 04 24.3 -1.2**
comp=Z,5.1nm,0.8s,mb4.5
MOY Mondy 35.12 55 *e*P **P 04 04 28.1 +1.7**
SSF Saint Saulge 35.19 297 *e*P **P 04 04 26.1 -0.9**
comp=Z,2.3nm,0.5s,mb4.1
SSF Saint Saulge 35.19 297 *e*P **P 04 04 26.1 -0.9**
SSF pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
SSF Saint Saulge 35.19 297 *e*P **P 04 04 26.1 -0.9**
comp=Z,1.1nm,0.5s,mb4.0
AVF Avril sur Loir 35.33 297 *e*P **P 04 04 26.8 -1.4**
comp=Z,7.0nm,0.5s,mb4.5
AVF Avril sur Loir 35.33 297 *e*P **P 04 04 26.8 -1.4**
AVF pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
AVF Avril sur Loir 35.33 297 *e*P **P 04 04 26.8 -1.4**
comp=Z,3.5nm,0.5s,mb4.5
TCF Toulx Ste Croi 36.18 296 *e*P **P 04 04 35.0 -0.5**
comp=Z,6.0nm,0.5s,mb4.5
TCF Toulx Ste Croi 36.18 296 *e*P **P 04 04 35.0 -0.5**
TCF pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
TCF Toulx Ste Croi 36.18 296 *e*P **P 04 04 35.0 -0.5**
comp=Z,3.0nm,0.5s,mb4.5
GTA Gaotai 36.29 76 P **P 04 04 39.3 +2.7**
GTA pP pP 04 04 50.8 +4.8
GTA sP sP 04 04 54.8 +4.9
GTA pmax pmax
comp=Z,12nm,0.6s,mb5.0
CAF Calviac 36.52 294 *e*P **P 04 04 39.0 +0.5**
MTLF Montolieu 36.74 291 *e*P **P 04 04 40.2 -0.2**
comp=Z,14nm,1.3s,mb4.3
MTLF Montolieu 36.74 291 *e*P **P 04 04 40.2 -0.2**
MTLF pmax pmax
comp=Z,7.0nm,1.3s,mb4.3
MTLF Montolieu 36.74 291 *e*P **P 04 04 40.2 -0.2**
comp=Z,7.1nm,1.3s,mb4.3
RJF Les Rejaudoux 36.83 295 *e*P **P 04 04 41.0 -0.1**
RJF *e*MLR MLR
comp=Z,48nm,21.2s,MS3.0
RJF Les Rejaudoux 36.83 295 *e*P **P 04 04 41.0 -0.1**
RJF LR LR
comp=Z,50nm,21.3s,MS3.3
LDF La Druitiere 37.41 300 *e*P **P 04 04 45.1 -0.9**
comp=Z,6.5nm,0.5s,mb4.5
LDF La Druitiere 37.41 300 *e*P **P 04 04 45.1 -0.9**

LDF pmax pmax
comp=Z,3.0nm,0.5s,mb4.4
LDF La Druitiere 37.41 300 *e*P **P 04 04 45.1 -0.9**
comp=Z,3.3nm,0.5s,mb4.4
LFF La Frestale 37.44 294 *e*P **P 04 04 45.4 -0.9**
comp=Z,12nm,0.7s,mb4.5
LFF La Frestale 37.44 294 *e*P **P 04 04 45.4 -0.9**
LFF pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
LFF La Frestale 37.44 294 *e*P **P 04 04 45.4 -0.9**
comp=Z,6.1nm,0.7s,mb4.5
FLN La Foliniere 37.63 301 *e*P **P 04 04 46.7 -1.1**
comp=Z,11nm,0.7s,mb4.4
FLN *e*MLR MLR
comp=Z,61nm,23.0s,MS3.0
FLN La Foliniere 37.63 301 *e*P **P 04 04 46.7 -1.1**
FLN pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
FLN MLR MLR
comp=Z,60nm,23.0s,MS3.3
FLN La Foliniere 37.63 301 *e*P **P 04 04 46.7 -1.1**
comp=Z,5.6nm,0.7s,mb4.4
FLN LR LR
comp=Z,60nm,23.0s,MS3.3
MFF Saint Martin d 37.73 297 *e*P **P 04 04 48.9 +0.2**
comp=Z,16nm,1.0s,mb4.4
MFF Saint Martin d 37.73 297 *e*P **P 04 04 48.9 +0.2**
MFF pmax pmax
comp=Z,8.0nm,1.0s,mb4.4
MFF Saint Martin d 37.73 297 *e*P **P 04 04 48.9 +0.2**
comp=Z,8.3nm,1.0s,mb4.4
GRR Gorron 37.93 300 *e*P **P 04 04 49.9 -0.4**
comp=Z,8.8nm,0.7s,mb4.3
GRR Gorron 37.93 300 *e*P **P 04 04 49.9 -0.4**
GRR pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
GRR Gorron 37.93 300 *e*P **P 04 04 49.9 -0.4**
comp=Z,4.4nm,0.7s,mb4.3
EPF Esparros 38.15 291 *e*P **P 04 04 53.4 +1.1**
comp=Z,4.2nm,0.6s,mb4.0
EPF Esparros 38.15 291 *e*P **P 04 04 53.4 +1.1**
EPF pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
EPF Esparros 38.15 291 *e*P **P 04 04 53.4 +1.1**
comp=Z,2.1nm,0.6s,mb4.0
XAL Allendale 38.25 311 P **P 04 04 53.4 +0.4**
XAL Allendale 38.25 311 *e*P **P 04 04 53.4 +0.4**
XAL Allendale 38.25 311 *e*P **P 04 04 53.4 +0.4**
ESY Stoneypath 38.47 312 P **P 04 04 53.9 -0.9**
ESY Stoneypath 38.47 312 *e*P **P 04 04 53.9 -0.9**
ESY Stoneypath 38.47 312 *e*P **P 04 04 53.9 -0.9**
EBL Broad Law 38.72 312 P **P 04 04 56.5 -0.4**
EBL Broad Law 38.72 312 *e*P **P 04 04 56.5 -0.4**
EBL Broad Law 38.72 312 *e*P **P 04 04 56.5 -0.4**
ECK Cauldkaine Hil 38.77 311 P **P 04 04 57.2 -0.1**
ECK Cauldkaine Hil 38.77 311 *e*P **P 04 04 57.2 -0.1**
ECK Cauldkaine Hil 38.77 311 *e*P **P 04 04 57.2 -0.1**
ESK Eskdalemuir 38.81 311 P **P 04 04 57.2 -0.5**
ESK AMb AMB 04 05 07.4
comp=Z,30nm,3.1s
ESK Eskdalemuir 38.81 311 *e*P **P 04 04 57.2 -0.5**
ESK AMb AMB 04 05 07.4
comp=Z,30nm,3.1s
ESK Eskdalemuir 38.81 311 *e*P **P 04 04 57.2 -0.5**
ETSF Etsaut 38.82 291 *e*P **P 04 04 58.9 +0.9**
comp=Z,4.3nm,0.7s,mb4.0
ETSF Etsaut 38.82 291 *e*P **P 04 04 58.9 +0.9**
ETSF pmax pmax
comp=Z,2.0nm,0.7s,mb4.0
ETSF Etsaut 38.82 291 *e*P **P 04 04 58.9 +0.9**
comp=Z,2.2nm,0.7s,mb4.0
MCH1 Michaelchurch 38.87 306 P **P 04 04 57.2 -1.1**
MCH1 AMb AMB 04 05 10.7
comp=Z,29nm,2.2s,mb4.6
MCH1 Michaelchurch 38.87 306 *e*P **P 04 04 57.2 -1.1**
MCH1 AMb AMB 04 05 10.7
comp=Z,29nm,2.2s,mb4.6
MCH1 Michaelchurch 38.87 306 *e*P **P 04 04 57.2 -1.1**
SONM Songino Array 38.98 61 P **P 04 04 59.2 0.0**
comp=Z,1.1nm,0.7s,mb3.7,baz=274,slow=9.8,SNR=5.5
SONM pP pP 04 05 12.2 +3.5
comp=Z,0.6nm,0.5s,baz=276,slow=8.2,SNR=3.3
SONM LR LR 04 22 17.5
comp=Z,101nm,20.5s,MS3.6,baz=100,slow=38
SONM Songino Array 38.98 61 P **P 04 04 59.2 0.0**
SONM *PP pP 04 05 12.2 +3.5
SONM pmax pmax
comp=Z,1.0nm,0.7s
SONM MLR MLR
comp=Z,101nm,20.5s
SONM Songino Array 38.98 61 P **P 04 04 59.2 0.0**
SONM pP pP 04 05 12.2 +3.5
SONM LR LR 04 22 17.5
SGMF Saint Gilles 39.07 300 *e*P **P 04 04 59.1 -0.8**
comp=Z,14nm,0.6s,mb4.6
SGMF Saint Gilles 39.07 300 *e*P **P 04 04 59.1 -0.8**
SGMF pmax pmax
comp=Z,7.0nm,0.6s,mb4.6
SGMF Saint Gilles 39.07 300 *e*P **P 04 04 59.1 -0.8**
comp=Z,6.9nm,0.6s,mb4.6
SJPF Ste Jean 39.24 292 *e*P **P 04 05 02.1 +0.7**
comp=Z,15nm,1.1s,mb4.3
SJPF Ste Jean 39.24 292 *e*P **P 04 05 02.1 +0.7**
SJPF pmax pmax
comp=Z,8.0nm,1.1s,mb4.4
SJPF Ste Jean 39.24 292 *e*P **P 04 05 02.1 +0.7**
comp=Z,7.7nm,1.1s,mb4.3
ULN Ulaanbaatar 39.41 60 *e*P **P 04 05 03.3 +0.5**
ULN pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
ULN Ulaanbaatar 39.41 60 *e*P **P 04 05 03.3 +0.5**
comp=Z,8.6nm,1.0s,mb4.4
EAB Aberfoyle 39.44 313 P **P 04 05 03.0 +0.1**
EAB Aberfoyle 39.44 313 *e*P **P 04 05 03.0 +0.1**
EAB Aberfoyle 39.44 313 *e*P **P 04 05 03.0 +0.1**
PGBU Glenifferbraes 39.53 312 P **P 04 05 02.7 -1.0**
PGBU AMb AMB 04 05 16.0
comp=Z,74nm,3.3s
PGBU Glenifferbraes 39.53 312 *e*P **P 04 05 02.7 -1.0**
PGBU AMb AMB 04 05 16.0
comp=Z,74nm,3.3s
QUIF Quistinic 39.53 300 *e*P **P 04 05 02.8 -1.0**
comp=Z,10nm,0.6s,mb4.5
QUIF Quistinic 39.53 300 *e*P **P 04 05 02.8 -1.0**
QUIF pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
QUIF Quistinic 39.53 300 *e*P **P 04 05 02.8 -1.0**
comp=Z,5.2nm,0.6s,mb4.4
LZH Lanzhou 40.42 79 *e*P **P 04 05 11.5 +0.1**
LZH pP pP 04 05 20.1 -0.8
LZH sP sP 04 05 25.3 +0.5
LZH pmax pmax
comp=Z,27nm,1.1s,mb4.9
LZH pmax pmax
comp=Z,95nm,4.0s
SPITS Spitsbergen Ar 40.48 349 P **P 04 05 12.6 +1.2**
comp=Z,16nm,0.7s,mb4.8,baz=139,slow=10,SNR=10
SPITS Spitsbergen Ar 40.48 349 P **P 04 05 12.6 +1.2**
SPITS pmax pmax
comp=Z,16nm,0.7s
SPITS Spitsbergen Ar 40.48 349 P **P 04 05 12.6 +1.2**
KBS Kingsbay 41.64 349 *e*P **P 04 05 21.6 +0.8**
KBS Kingsbay 41.64 349 *d i*P **P 04 05 22.6 +1.7**
KBS Kingsbay 41.64 349 *e*P **P 04 05 21.6 +0.7**
SNR=29
ESDC Sonseca Array 42.23 288 P **P 04 05 25.0 -1.2**
comp=Z,2.7nm,0.8s,mb4.0,baz=65,slow=8.3,SNR=15
ESDC Sonseca Array 42.23 288 P **P 04 05 25.0 -1.2**
CD2 Chengdu 42.55 86 P **P 04 05 29.0 +0.1**
CD2 pP pP 04 05 38.8 +0.4
CD2 sP sP 04 05 42.8 +0.5
CD2 PP PP 04 07 10.5 +2.8
CD2 S **S 04 11 48.0 -1.2**
CD2 sS sS 04 12 04.3 -0.7
CD2 SS SS 04 14 52.0 -7.4
CD2 pmax pmax
comp=Z,20nm,0.4s,mb5.2
CD2 pmax pmax
comp=Z,110nm,4.9s
CD2 LR LR
comp=N,200nm,6.5s
CD2 LR LR
comp=Z,160nm,8.3s
TAM Tamanrasset 42.82 260 *e*P **P 04 05 31.7 +0.6**
TAM pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
TAM Tamanrasset 42.82 260 *e*P **P 04 05 31.7 +0.6**
comp=Z,6.4nm,0.8s,mb4.4
TAM Tamanrasset 42.82 260 *e*P **P 04 05 31.7 +0.6**
comp=Z,6.4nm,0.8s,mb4.4
MVO Moncorvo 43.94 291 *e*P **P 04 05 39.7 -0.2**
MVO Moncorvo 43.94 291 *e*P **P 04 05 39.7 -0.2**
HHC Hu-ho-hao-te 44.37 69 *e*P **P 04 05 43.4 0.0**
HHC sP sP 04 05 56.9 0.0
HHC PP PP 04 07 28.3 +1.2
HHC ScP ScP 04 11 16.3 -0.2
HHC PcS PcS 04 11 19.8 -0.3
HHC S **S 04 12 13.8 -1.8**
HHC sS sS 04 12 29.8 -1.6
HHC SS SS 04 15 24.0 -11
HHC ScS ScS 04 15 37.0 -2.0
HHC pmax pmax
comp=Z,12nm,0.6s,mb4.8
HHC pmax pmax
comp=Z,81nm,6.3s
HHC LR LR
comp=N,230nm,15.5s,MS4.3
HHC LR LR
comp=E,220nm,15.3s,MS4.3
HHC LR LR
comp=Z,210nm,15.3s,MS4.2
KMI Kunming 44.69 94 P **P 04 05 47.3 +1.2**
KMI pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
PBAR Barrancos 45.01 287 *e*P **P 04 05 48.0 -0.5**
comp=Z,20nm,1.9s,mb4.6
PBAR Barrancos 45.01 287 *e*P **P 04 05 48.0 -0.5**
comp=Z,20nm,1.9s,mb4.6
XAN Xi'an 45.06 79 P **P 04 05 51.4 +2.4**
PESTR Estremoz 45.15 288 *e*P **P 04 05 49.3 -0.4**
comp=Z,24nm,1.6s,mb4.8
PESTR Estremoz 45.15 288 *e*P **P 04 05 49.3 -0.4**
comp=Z,24nm,1.6s,mb4.8
CMAR Chiang Mai Arr 45.72 105 P **P 04 05 52.9 -1.5**
comp=Z,0.7nm,0.3s,mb4.0,baz=311,slow=8.2,SNR=6.1
CMAR Chiang Mai Arr 45.72 105 P **P 04 05 52.9 -1.5**
CMAR pmax pmax
comp=Z,1.0nm,0.4s
CMAR Chiang Mai Arr 45.72 105 P **P 04 05 52.9 -1.5**
comp=Z,1.0nm,0.4s,mb4.1
TIXI Tiksi 48.05 24 *e*P **P 04 06 11.9 0.0**
TIXI pmax pmax
comp=Z,18nm,1.2s,mb5.0
TIXI Tiksi 48.05 24 *e*P **P 04 06 13.3 +1.4**
comp=Z,14nm,1.1s,mb4.9
TIXI Tiksi 48.05 24 *e*P **P 04 06 11.9 0.0**
comp=Z,18nm,1.2s,mb5.0
YAK Yakutsk 49.66 37 *e*P sP 04 06 41.7 +3.8
YAK pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
YAK pmax pmax
comp=N,2.0nm,0.9s
YAK pmax pmax
comp=E,3.0nm,0.8s
YAK MLR MLR
comp=Z,231nm,23.0s,MS4.1
YAK MLR MLR
comp=E,142nm,20.0s
TORD Torodi Ar. Bea 51.66 253 P **P 04 06 38.1 -2.0**
baz=57,slow=6.1
SUMG Summit 52.07 338 *e*P **P 04 06 43.7 +1.3**
comp=E,13nm,0.8s,mb4.9
SUMG Summit 52.07 338 *e*P **P 04 06 43.7 +1.3**
comp=E,13nm,0.8s,mb4.9
KSRS Korea Array 57.34 66 P **P 04 07 20.3 -0.8**
comp=E,4.7nm,0.7s,mb4.6,baz=292,slow=7.0,SNR=19
KSRS LR LR 04 34 52.5
comp=E,33nm,18.4s,MS3.5,baz=254,slow=39
KSRS Korea Array 57.34 66 P **P 04 07 20.3 -0.8**
KSRS pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
KSRS MLR MLR
comp=Z,33nm,18.4s,MS3.5
KSRS Korea Array 57.34 66 P **P 04 07 20.3 -0.8**
comp=Z,33nm,18.4s
SEY Seymchan 59.18 32⇑ *i*P **P 04 07 34.5 +1.0**
SEY Seymchan 59.18 32 *i*P **P 04 07 34.5 +1.0**
DBIC Dimbokro 60.76 252 P **P 04 07 43.6 -1.5**
comp=Z,3.4nm,0.4s,mb4.9,baz=22,slow=6.2,SNR=20
DBIC Dimbokro 60.76 252 P **P 04 07 43.6 -1.5**
DBIC pmax pmax
comp=Z,3.0nm,0.4s
DBIC Dimbokro 60.76 252 P **P 04 07 43.6 -1.5**
comp=Z,3.0nm,0.4s,mb4.8
KIC Kosan Boka 60.89 252 *e*P **P 04 07 44.5 -1.4**
comp=Z,21nm,0.6s,mb5.4
KIC Kosan Boka 60.89 252 *e*P **P 04 07 44.5 -1.4**
comp=Z,21nm,0.6s,mb5.5
TIC Toumodi 60.90 253 *e*P **P 04 07 44.3 -1.7**
comp=Z,366nm,2.1s
TIC Toumodi 60.90 253 *e*P **P 04 07 44.3 -1.7**
TIC pmax pmax
comp=Z,366nm,2.1s
TIC Toumodi 60.90 253 *e*P **P 04 07 44.3 -1.7**
comp=Z,366nm,2.1s
LIC Lamto 61.19 252 *e*P **P 04 07 46.5 -1.4**
comp=Z,152nm,1.7s
LIC Lamto 61.19 252 *e*P **P 04 07 46.2 -1.8**
comp=Z,22nm,0.5s,mb5.2
LIC Lamto 61.19 252 *e*P **P 04 07 46.2 -1.8**
comp=Z,11nm,0.5s,mb5.2
LIC Lamto 61.19 252 *e*P **P 04 07 46.2 -1.8**
comp=Z,11nm,0.5s,mb5.2
BILL Bilibino 61.22 23*c i*P **P 04 07 47.7 +0.3**
BILL *e*S **S 04 16 09.4 +4.8**
BILL *e*SS SS 04 20 05.1 +1.0
BILL pmax pmax
comp=Z,18nm,1.2s,mb5.1
BILL MLR MLR
comp=Z,100nm,22.0s,MS3.9
BILL Bilibino 61.22 23 *i* P **P 04 07 47.7 +0.3**
comp=Z,18nm,1.2s,mb5.1
MJAR Matsushiro Arr 64.89 63 P **P 04 08 11.2 -1.0**
comp=Z,1.8nm,1.0s,mb4.1,baz=298,slow=2.6,SNR=4.0
MJAR Matsushiro Arr 64.89 63 P **P 04 08 11.2 -1.1**
MJAR pmax pmax
comp=Z,2.0nm,1.0s
MJAR Matsushiro Arr 64.89 63 P **P 04 08 11.2 -1.1**
comp=Z,2.0nm,1.0s,mb4.1
PETK Petropavlovsk- 66.93 39 P **P 04 08 24.0 -1.1**
comp=Z,1.1nm,0.5s,mb4.1,baz=336,slow=3.2,SNR=3.9
PETK LR LR 04 39 36.4
comp=Z,50nm,19.8s,MS3.7,baz=293,slow=38
PETK Petropavlovsk- 66.93 39 P **P 04 08 24.0 -1.1**
PETK pmax pmax
comp=Z,1.0nm,0.5s,mb4.1
PETK MLR MLR
comp=Z,50nm,19.8s,MS3.7
PETK Petropavlovsk- 66.93 39 P **P 04 08 24.0 -1.1**
PETK LR LR 04 39 36.4
PETK Petropavlovsk- 66.93 39 P **P 04 08 24.0 -1.1**
comp=Z,50nm,19.8s
COLD Coldfoot 71.29 9 *e*P **P 04 08 52.6 +0.8**
comp=Z,10.0nm,1.1s,mb4.7
COLD Coldfoot 71.29 9 *e*P **P 04 08 52.6 +0.7**
comp=Z,10.0nm,1.1s,mb4.7
INK Inuvik 71.45 2 *e*P **P 04 08 52.2 -0.7**
INK pmax pmax
comp=Z,2.0nm,0.7s
INK Inuvik 71.45 2 *e*P **P 04 08 52.2 -0.6**
comp=Z,2.3nm,0.7s,mb4.2
INK Inuvik 71.45 2 *e*P **P 04 08 52.2 -0.7**
comp=Z,2.3nm,0.7s,mb4.2
SCHQ Schefferville 71.68 328 P **P 04 08 54.8 +0.3**
comp=Z,2.6nm,0.8s,mb4.2,baz=104,slow=2.0,SNR=4.0
SCHQ Schefferville 71.68 328 P **P 04 08 54.8 +0.4**
BOSA Boshof 73.11 204 LR LR 04 45 42.7
comp=Z,70nm,18.9s,MS4.0,baz=48,slow=40
COLA College 73.83 9 *e*P **P 04 09 07.5 +0.5**
COLA pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
COLA College 73.83 9 *e*P **P 04 09 07.5 +0.4**
comp=Z,9.3nm,0.9s,mb4.7
COLA College 73.83 9 *e*P **P 04 09 07.4 +0.4**
comp=Z,9.3nm,0.9s,mb4.7
BPAW Bear Paw Mtn. 74.18 10 *e*P **P 04 09 09.4 +0.3**
comp=Z,11nm,1.1s,mb4.7
BPAW Bear Paw Mtn. 74.18 10 *e*P **P 04 09 09.4 +0.3**
comp=Z,11nm,1.1s,mb4.7
EGAK Eagle 74.57 6 *e*P **P 04 09 11.5 +0.2**
comp=Z,8.7nm,0.9s,mb4.7
EGAK Eagle 74.57 6 *e*P **P 04 09 11.5 +0.2**
comp=Z,8.7nm,0.9s,mb4.7
MCK McKinley 74.80 10 *e*P **P 04 09 12.9 +0.2**
MCK pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
MCK McKinley 74.80 10 *e*P **P 04 09 12.9 +0.3**
comp=Z,4.6nm,0.9s,mb4.4
MCK McKinley 74.80 10 *e*P **P 04 09 12.9 +0.2**
comp=Z,4.6nm,0.9s,mb4.4
DAWY Dawson 75.40 5 *e*P **P 04 09 16.2 +0.1**
DAWY Dawson 75.40 5 *e*P **P 04 09 16.2 +0.1**
YKA Yellowknife Ar 76.81 354 P **P 04 09 23.5 -0.7**
comp=Z,1.6nm,0.6s,mb4.1,baz=7.8,slow=5.8,SNR=13
YKA Yellowknife Ar 76.81 354 P **P 04 09 23.5 -0.7**
YKA pmax pmax
comp=Z,2.0nm,0.6s
YKA Yellowknife Ar 76.81 354 P **P 04 09 23.5 -0.7**
comp=Z,2.0nm,0.6s,mb4.2
PMR Palmer 76.83 10 *e*P **P 04 09 24.6 +0.3**
PMR pmax pmax
comp=Z,16nm,1.2s,mb4.8
PMR Palmer 76.83 10 *e*P **P 04 09 24.6 +0.3**
comp=Z,16nm,1.2s,mb4.8
PMR Palmer 76.83 10 *e*P **P 04 09 24.6 +0.3**
comp=Z,16nm,1.2s,mb4.8
FCC Fort Churchill 77.18 343 *e*P **P 04 09 26.7 +0.4**
comp=Z,0.2nm,0.8s
FCC Fort Churchill 77.18 343 *e*P **P 04 09 26.7 +0.4**
comp=Z,0.2nm,0.8s
DLBC Dease Lake 81.43 1 *e*P **P 04 09 50.4 +0.9**
DLBC Dease Lake 81.43 1 *e*P **P 04 09 50.4 +0.9**
FFC Flin Flon 82.59 345 *i*P **P 04 09 55.2 -0.5**
FFC Flin Flon 82.59 345 *e*P **P 04 09 54.9 -0.8**
comp=Z,3.5nm,1.0s,mb4.3
FFC Flin Flon 82.59 345 *i*P **P 04 09 55.2 -0.5**
EDM Edmonton 85.82 351 *e*P **P 04 10 12.2 +0.1**
EDM Edmonton 85.82 351 *e*P **P 04 10 12.2 +0.1**
NEW Newport 91.11 353 *e*P **P 04 10 38.0 +0.6**
NEW pmax pmax
comp=Z,4.0nm,0.9s
NEW Newport 91.11 353 *e*P **P 04 10 38.0 +0.6**
comp=Z,4.0nm,0.9s,mb4.8
NEW Newport 91.11 353 *e*P **P 04 10 38.0 +0.6**
comp=Z,4.0nm,0.9s,mb4.8
ECSD EROS Data Cent 91.53 338 *e*P **P 04 10 39.3 -0.1**
comp=Z,4.8nm,1.0s,mb4.8
ECSD EROS Data Cent 91.53 338 *e*P **P 04 10 39.3 -0.1**
comp=Z,4.8nm,1.0s,mb4.8
SLMT Seeley Lake 91.71 350 *e*P **P 04 10 40.5 +0.3**
comp=Z,3.5nm,0.8s,mb4.7
SLMT Seeley Lake 91.71 350 *e*P **P 04 10 40.5 +0.3**
comp=Z,3.5nm,0.8s,mb4.7
PDAR Pinedale Array 95.48 346 P **P 04 10 58.6 +1.1**
comp=Z,0.2nm,0.5s,mb3.8,baz=79,slow=3.2,SNR=3.4
PDAR LR LR 04 54 45.1
comp=Z,36nm,19.4s,MS3.9,baz=263,slow=36
PDAR Pinedale Array 95.48 346 P **P 04 10 58.7 +1.1**
WRA Warramunga Arr 97.07 110 P **P 04 11 02.6 -2.4**
comp=Z,0.6nm,0.8s,mb4.1,baz=316,slow=4.7,SNR=5.1
WRA Warramunga Arr 97.07 110 P **P 04 11 02.6 -2.5**
WRA pmax pmax
comp=Z,1.0nm,0.8s
WRA Warramunga Arr 97.07 110 P **P 04 11 02.6 -2.5**
comp=Z,1.0nm,0.8s,mb4.3

IDC 17 04:10:56.8±8.8, 10.°86N×92.°17E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/21, mbtmp3.5/3, Error ellipse: s-maj=459.9km s-min=30.2km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.78**	**349**	P	P	04 18 06.0	-0.1
	0.3nm,0.3s,baz=165,slow=7.9,SNR=5.0						
WRA	**Warramunga Arr**	**51.58**	**126**	P	P	04 20 05.2	+0.1
	0.2nm,0.4s,baz=305,slow=9.8,SNR=3.4						
ASAR	**Alice Springs**	**53.31**	**130**	P	P	04 20 17.9	0.0
	0.3nm,0.5s,baz=309,slow=7.0,SNR=3.9						

*NEIC **17** 04:23:45.0, 31.°23S×68.°63W, h150km, MG4.0(GUC), After GUC.*

GUC 17 04:23:45.0±0.5, 31.°23S×68.°63W, h150km, ML4.0, 6C-4D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**2.03**	**271**	⇑ *i*P	Pn	04 24 21.2	+0.7
CMCH				*i* S	Sn	04 24 48.5	+0.8
CMCH	**Combarbala**	**2.03**	**271**	⇑ *i*P	Pn	04 24 21.2	+0.7
CMCH				*i* S	Sn	04 24 48.5	+0.8
CMCH				AML	AML	04 24 51.1	
	comp=N,874nm,0.6s						
JACH	**Jahuel**	**2.21**	**228**	⇓ *i*P	Pn	04 24 23.5	+0.9
JACH				*i* S	Sn	04 24 52.5	+1.0
JACH	**Jahuel**	**2.21**	**228**	⇓ *i*P	Pn	04 24 23.5	+0.9
JACH				*i* S	Sn	04 24 52.5	+1.0
FCH	**Farellones**	**2.52**	**213**	*e*P	Pn	04 24 27.6	+1.2
FCH				*i* S	Sn	04 25 00.3	+1.9
FCH	**Farellones**	**2.52**	**213**	*e*P	Pn	04 24 27.6	+1.2
FCH				*i* S	Sn	04 25 00.3	+1.9
PEL	**Peldehue**	**2.59**	**222**	⇑ *i*P	Pn	04 24 27.9	+0.8
PEL				*i* S	Sn	04 25 00.5	+0.7
PEL				AML	AML	04 25 05.8	
	comp=E,413nm,0.3s						
ROCH	**El Roble**	**2.67**	**229**	⇑ *i*P	Pn	04 24 28.6	+0.4
ROCH				*i* S	Sn	04 25 01.9	+0.5
ROCH	**El Roble**	**2.67**	**229**	⇑ *i*P	Pn	04 24 28.6	+0.4
ROCH				*i* S	Sn	04 25 01.9	+0.5
CLCH	**Cerro Calan**	**2.70**	**216**	⇑ *i*P	Pn	04 24 29.4	+0.8
CLCH				*i* S	Sn	04 25 02.9	+0.7
CLCH				AML	AML	04 25 10.6	
	comp=E,422nm,0.4s						
PCH	**Pirque**	**2.87**	**213**	*e*P	Pn	04 24 31.4	+0.8
PCH				*i* S	Sn	04 25 06.9	+0.8
PCH	**Pirque**	**2.87**	**213**	*e*P	Pn	04 24 31.4	+0.8
PCH				*i* S	Sn	04 25 06.9	+0.8
ANTU	**Antumapu**	**2.89**	**215**	*e*P	Pn	04 24 31.7	+0.8
ANTU				*i* S	Sn	04 25 07.1	+0.7
ANTU	**Antumapu**	**2.89**	**215**	*e*P	Pn	04 24 31.7	+0.8
ANTU				*i* S	Sn	04 25 07.1	+0.7
ANTU				AML	AML	04 25 10.0	
	comp=E,257nm,0.3s						
TACH	**Talagante**	**3.11**	**218**	⇓ *i*P	Pn	04 24 34.0	+0.3
TACH				*i* S	Sn	04 25 11.5	0.0
TACH	**Talagante**	**3.11**	**218**	⇓ *i*P	Pn	04 24 34.0	+0.3
TACH				*i* S	Sn	04 25 11.5	0.0
CHCH	**Chadas Angostu**	**3.19**	**212**	*e*P	Pn	04 24 35.6	+0.8
CHCH				*e*S	Sn	04 25 14.4	+1.0
CHCH	**Chadas Angostu**	**3.19**	**212**	*e*P	Pn	04 24 35.6	+0.8
CHCH				*e*S	Sn	04 25 14.4	+1.0
CACH	**El Canelo**	**3.33**	**209**	*e*P	Pn	04 24 37.9	+1.4
CACH				*e*S	Sn	04 25 18.0	+1.5
CACH	**El Canelo**	**3.33**	**209**	*e*P	Pn	04 24 37.9	+1.4
CACH				*e*S	Sn	04 25 18.0	+1.5
TRQA	**Tornquist**	**8.74**	**143**	*e*Pn	Pn	04 25 46.4	-1.8
TRQA				*e*Sn	Sn	04 27 18.5	-6.7

*NEIC **17** 05:03:51.9, 32.°05S×72.°16W, h20km, ML3.1(GUC), After GUC.*

GUC 17 05:03:51.9±0.4, 32.°05S×72.°16W, h20km±1km, MD3.5, ML3.1, 4C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.58**	**74**	⇓ *i*P	Pb	05 04 02.9	-0.6
CHNG				*i* S	Sb	05 04 11.3	+0.1
CMCH	**Combarbala**	**1.32**	**49**	⇑ *i*P	Pn	05 04 14.9	-0.2
CMCH				*i* S	Sn	05 04 32.1	0.0
CMCH	**Combarbala**	**1.32**	**49**	⇑ *i*P	Pn	05 04 14.9	-0.2
CMCH				*i* S	Sn	05 04 32.1	0.0
CMCH				AML	AML	05 04 39.6	
	comp=E,1μm,0.8s						
ROCH	**El Roble**	**1.34**	**134**	*i* P	Pn	05 04 15.5	+0.1
ROCH				*i* S	Sn	05 04 33.3	+0.7
ROCH	**El Roble**	**1.34**	**134**	*i* P	Pn	05 04 15.5	+0.1
ROCH				*i* S	Sn	05 04 33.3	+0.7
JACH	**Jahuel**	**1.47**	**116**	*e*P	Pn	05 04 17.4	+0.2
JACH				*i* S	Sn	05 04 36.6	+0.8
JACH	**Jahuel**	**1.47**	**116**	*e*P	Pn	05 04 17.4	+0.2
JACH				*i* S	Sn	05 04 36.6	+0.8
TACH	**Talagante**	**1.90**	**148**	*i* P	Pn	05 04 23.8	+0.7
TACH				*i* S	Sn	05 04 48.2	+1.7

TACH	**Talagante**	**1.90**	**148**	*i* P	Pn	05 04 23.8	+0.7
TACH				*i* S	Sn	05 04 48.2	+1.7
CLCH	**Cerro Calan**	**1.92**	**135**	*e*P	Pn	05 04 24.2	+0.9
CLCH				*i* S	Sn	05 04 48.8	+1.9
CLCH				AML	AML	05 04 54.4	
	comp=E,216nm,0.5s						
FCH	**Farellones**	**2.03**	**129**⇑	*i*P	Pn	05 04 26.4	+1.5
FCH				*i* S	Sn	05 04 53.1	+3.5
FCH	**Farellones**	**2.03**	**129**⇑	*i*P	Pn	05 04 26.4	+1.5
FCH				*i* S	Sn	05 04 53.1	+3.5
PCH	**Pirque**	**2.09**	**139**	*i* P	Pn	05 04 27.1	+1.4
PCH				*i* S	Sn	05 04 54.0	+2.8
PCH	**Pirque**	**2.09**	**139**	*i* P	Pn	05 04 27.1	+1.4
PCH				*i* S	Sn	05 04 54.0	+2.8
TLL	**Tololo Astrono**	**2.21**	**32**	*e*P	Pn	05 04 29.1	+1.8
TLL				*i* S	Sn	05 04 57.3	+3.3
TLL	**Tololo Astrono**	**2.21**	**32**	*e*P	Pn	05 04 29.1	+1.8
TLL				*i* S	Sn	05 04 57.3	+3.3
TLL				AML	AML	05 05 09.3	
	comp=E,146nm,0.5s						
CHCH	**Chadas Angostu**	**2.27**	**146**	*i* P	Pn	05 04 29.5	+1.3
CHCH				*i* S	Sn	05 04 58.0	+2.5
CHCH	**Chadas Angostu**	**2.27**	**146**	*i* P	Pn	05 04 29.5	+1.3
CHCH				*i* S	Sn	05 04 58.0	+2.5
LMEL	**Las Melosas**	**2.43**	**138**	*i* P	Pn	05 04 32.1	+1.7
LMEL				*i* S	Sn	05 05 02.3	+2.7
LMEL	**Las Melosas**	**2.43**	**138**	*i* P	Pn	05 04 32.1	+1.7
LMEL				*i* S	Sn	05 05 02.3	+2.7
LMEL				AML	AML	05 05 11.4	
	comp=N,89nm,0.1s						

NEIC ***17*** *05:19:48.9±3.5, 23°.38N×67°.49W, h10km, MD4.2(RSPR), Error ellipse: s-maj=46.0km s-min=8.6km az=200.0*

RSPR 17 05:20:00.6, 22°.71N×67°.40W, h25km±51km, MD4.2/6, 9C, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRTK	**Grand Turk**	**3.66**	**252**	*e*Pn	Pn	05 20 47.6	-8.0
GRTK				*e*Sn	Sn	05 21 28.0	-10
AGPR	**Aguadilla, PR**	**4.23**	**176**⇑	*e*P	Pn	05 21 02.7	-0.8
AGPR				*e*S	Sn	05 21 50.5	-1.6
PCDR	**Punta Cana, DR**	**4.27**	**193**⇑	*e*P	Pn	05 21 02.8	-1.3
PCDR	**Punta Cana, DR**	**4.27**	**193**	*e*S	Sn	05 21 51.8	-1.4
AOPR	**Arecibo Observ**	**4.38**	**172**	*e*S	Sn	05 21 55.5	-0.4
LRS	**Lares**	**4.43**	**173**	*e*S	Sn	05 21 54.6	-2.3
LSP	**Las Mesas**	**4.52**	**176**⇑	*e*P	Pn	05 21 07.3	-0.2
LSP				*e*S	Sn	05 21 56.7	-2.6
CBYP	**Canovanas**	**4.65**	**162**⇑	*e*P	Pn	05 21 08.0	-1.2
CBYP				*e*S	Sn	05 22 00.1	-2.3
CELP	**Cerrillos**	**4.67**	**170**⇑	*e*P	Pn	05 21 09.4	-0.3
CELP				*e*S	Sn	05 22 01.6	-1.5
CRPR	**Cabo Rojo, PR**	**4.69**	**177**⇑	*e*P	Pn	05 21 09.5	-0.3
CRPR				*e*S	Sn	05 22 02.4	-1.0
OBIP	**Obispado Ponce**	**4.70**	**171**	*e*S	Sn	05 22 02.5	-1.2
SJG	**San Juan**	**4.72**	**165**	*e*Pn	Pn	05 21 09.5	-0.8
SJG				*e*Sn	Sn	05 22 04.2	0.0
STVI	**Saint Thomas**	**4.90**	**152**⇑	*e*P	Pn	05 21 11.5	-1.3
STVI				*e*S	Sn	05 22 07.2	-1.6
MTP	**Monte Pirata**	**4.91**	**159**	Pn	Pn	05 21 11.2	-1.6
TBVI	**Tortola**	**5.00**	**148**⇑	*e*P	Pn	05 21 12.5	-1.7
TBVI				*e*S	Sn	05 22 09.8	-1.4
SDDR	**Presa de Saban**	**5.19**	**225**	Pn	Pn	05 21 11.8	-4.9
SDDR				*e*Sn	Sn	05 22 11.2	-4.7
GTBY	**Guantanamo Bay**	**7.70**	**250**⇑	*e*P	Pn	05 21 45.0	-6.2
GTBY	**Guantanamo Bay**	**7.70**	**250**	*e*Pn	Pn	05 21 44.4	-6.8

ISCJB ***17*** *05:34:54.1±0.4, 32°.68N±0°.04×105°.58E±0°.04, h10km, mb4.0/11, Error ellipse: s-maj=6.0km s-min=4.8km az=160.3*

IDC ***17*** *05:34:54.2±0.8, 32°.58N×105°.49E, h0km, mb3.9/10, mb1 4.0/12, mb1mx3.9/25, mbtmp3.9/12, ML3.4/2, Error ellipse: s-maj=38.0km s-min=15.9km az=51.0*

BJI ***17*** *05:34:56.3, 32°.63N×105°.65E, h10km, mB4.2/1, mb4.1/4, ML3.8/15, Ms3.7/2*

NEIC ***17*** *05:34:59.9±0.8, 32°.98N×105°.12E, h10km, mb4.4/1, Error ellipse: s-maj=25.7km s-min=12.2km az=223.0*

ISC 17 05:34:55.8±0.4, 32°.65N±0°.03×105°.52E±0°.03, h10km, n23, σ1§04/34, mb4.0/11, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.29**	**221**	Pn	**Pn**	**05 35 34.5**	**+0.8**
CD2				Pg	**Pb**	**05 35 36.8**	**-0.5**
CD2				Sn	**Sn**	**05 36 02.9**	**+0.9**
CD2				Sg	**Sg**	**05 36 07.3**	**-2.2**
CD2				smax			
	comp=N,1μm,1.0s						
CD2				smax			
	comp=E,1μm,0.6s						
XAN	**Xi'an**	**3.17**	**63**	Pn	**Pn**	**05 35 46.5**	**+0.8**
XAN				Pg	**Pg**	**05 35 54.5**	**-2.0**
XAN				Sn	**Sb**	**05 36 30.8**	**0.0**
XAN				Sg	**Sg**	**05 36 38.3**	**+0.7**
XAN				smax			
	comp=N,170nm,0.5s						
XAN				smax			
	comp=E,87nm,0.8s						
LZH	**Lanzhou**	**3.70**	**338**	Pn	**Pn**	**05 35 55.8**	**+2.8**
LZH				Pg	**Pg**	**05 36 05.0**	**-1.7**
LZH				Sn	**Sn**	**05 36 34.4**	**-2.3**
LZH				Sg	**Sg**	**05 36 51.3**	**-3.4**
LZH				smax			
	comp=N,330nm,0.8s						
LZH				smax			
	comp=E,400nm,0.6s						
ENH	**Enshi**	**4.13**	**124**	Pn	**Pb**	**05 36 10.1**	**+1.4**
ENH				*e*Sn	**Sg**	**05 37 06.9**	**-1.7**
WHN	**Wuhan**	**7.82**	**103**	S	**Sn**	**05 38 18.3**	**+0.1**
WHN				LR	LR		
	comp=N,590nm,4.4s						
WHN				LR	LR		
	comp=E,450nm,6.8s						
GTA	**Gaotai**	**8.18**	**327**	*e*P	**Pn**	**05 36 55.1**	**+0.6**
GTA				pP		05 36 59.4	
GTA				S	**Sn**	**05 38 32.8**	**+5.8**
GTA				sS		05 38 37.3	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,79nm,6.0s						
GTA				LR	LR		
	comp=N,210nm,9.0s						
GTA				LR	LR		
	comp=E,150nm,7.2s						
LSA	**Lhasa**	**12.65**	**260**	P	**Pn**	**05 38 06.3**	**+10**
SONM	**Songino Array**	**15.18**	**2**	Pn	**Pn**	**05 38 30.4**	**+0.2**
	comp=E,0.2nm,0.3s,baz=184,slow=13,SNR=3.7						
KSRS	**Korea Array**	**18.95**	**69**	P	**Pn**	**05 39 17.7**	**+0.1**
	comp=E,0.1nm,0.3s,baz=259,slow=11,SNR=4.6						
MK31	**Makanchi Array**	**22.67**	**315**	*e*P	**P**	**05 39 57.7**	**+0.5**
MKAR	**Makanchi Array**	**22.67**	**315**	P	**P**	**05 39 57.3**	**+0.1**
	comp=E,0.7nm,0.4s,mb3.4,baz=119,slow=13,SNR=9.1						
ZALV	**Zalesovo Beam**	**25.90**	**331**	P	**P**	**05 40 28.1**	**+0.4**
	comp=E,1.3nm,0.6s,mb3.7,baz=129,slow=11,SNR=4.8						
AKTK	**Aktyubinsk**	**38.99**	**311**	P	**P**	**05 42 23.0**	**+0.8**
AKTO	**Aktyubinsk**	**38.99**	**311**	P	**P**	**05 42 23.0**	**+0.8**
	comp=E,0.9nm,0.5s,mb3.7,baz=114,slow=12,SNR=3.6						
ARCES	**ARCESS Array B**	**56.35**	**335**	P	**P**	**05 44 36.4**	**-0.2**
	comp=E,3.3nm,1.1s,mb4.3,baz=82,slow=8.7,SNR=5.1						
FINES	**FINESS Array B**	**56.97**	**326**	P	**P**	**05 44 41.3**	**+0.2**
	comp=E,1.0nm,0.4s,mb4.2,baz=74,slow=11,SNR=5.4						
BRTR	**Keskin Array B**	**57.04**	**299**	P	**P**	**05 44 42.4**	**+0.5**
	comp=E,0.4nm,0.5s,mb3.7,baz=48,slow=7.6,SNR=2.3						
BRTR	**Keskin Array B**	**57.04**	**299**	P	**P**	**05 44 42.4**	**+0.5**
AKASG	**Malin Array Be**	**57.22**	**313**	P	**P**	**05 44 43.1**	**0.0**
	comp=E,1.5nm,0.5s,mb4.3,baz=67,slow=7.1,SNR=4.0						
WRAB	**Tennant Creek**	**59.11**	**148**	*e*P	**P**	**05 44 56.7**	**+0.2**
	comp=E,2.0nm,0.6s,mb4.3						
WRA	**Warramunga Arr**	**59.11**	**148**	P	**P**	**05 44 56.3**	**-0.3**
	comp=E,1.4nm,0.5s,mb4.2,baz=342,slow=7.6,SNR=19						
ASAR	**Alice Springs**	**62.21**	**150**	P	**P**	**05 45 17.2**	**-0.4**
	comp=E,0.8nm,0.4s,mb4.2,baz=333,slow=6.9,SNR=8.2						
NOA	**NORSAR Array B**	**64.01**	**327**	P	**P**	**05 45 29.1**	**-0.1**
	comp=E,0.7nm,0.6s,mb3.8,baz=70,slow=6.6,SNR=2.8						

IDC 17 05:37:03.7±1.4, 33°.33N×92°.04E, h0km, mb3.6/4, mb1 3.9/7, mb1mx3.6/25, mbtmp3.7/7, ML3.7/2, MS2.8/1, Ms1 2.8/1, ms1mx2.2/28, Error ellipse: s-maj=65.1km s-min=21.1km az=65.0, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**15.36**	**334**	Pn	Pn	05 40 39.8	-1.8
	baz=151,slow=13,SNR=2.1						
CMAR	**Chiang Mai Arr**	**16.05**	**156**	Pn	Pn	05 40 49.0	-1.9
	0.2nm,0.3s,baz=343,slow=12,SNR=4.7						
AAK	**Ala-Archa**	**16.64**	**309**	LR	LR	05 48 08.2	
	comp=Z,35nm,20.9s,baz=197,slow=40						
SONM	**Songino Array**	**18.08**	**33**	P	Pn	05 41 16.4	+0.2
	0.1nm,0.3s,baz=210,slow=12,SNR=5.1						
ZALV	**Zalesovo Beam**	**21.24**	**348**	P	P	05 41 50.3	-0.8
	0.5nm,0.4s,baz=169,slow=10.0,SNR=2.9						
BVAR	**Borovoye Array**	**25.06**	**328**	P	P	05 42 29.6	+0.1
	0.3nm,0.4s,baz=120,slow=11,SNR=2.8						
WRA	**Warramunga Arr**	**66.60**	**136**	P	P	05 47 55.8	-0.1
	1.6nm,1.0s,baz=333,slow=6.9,SNR=4.8						
ASAR	**Alice Springs**	**69.31**	**139**	P	P	05 48 13.6	+0.7
	1.1nm,0.7s,baz=324,slow=6.2,SNR=7.2						

ISCJB ***17*** *05:41:21.6±0.5, 8°.80N±0°.05×77°.11W±0°.04, h10km, mb3.5/9, Error ellipse: s-maj=7.9km s-min=6.0km az=9.4*

IDC ***17*** *05:41:21.5±0.7, 8°.60N×77°.30W, h0km, mb3.5/9, mb1 3.8/13, mb1mx3.7/22, mbtmp3.6/13, ML3.3/2, MS3.1/1, Ms1 3.1/1, ms1mx2.6/17, Error ellipse: s-maj=25.4km s-min=14.2km az=46.0*

NEIC ***17*** *05:41:25.9±1.9, 8°.59N×77°.32W, h30km±15km, Error ellipse: s-maj=10.3km s-min=6.2km az=202.0*

ISC 17 05:41:23.6±0.5, 8°.67N±0°.08×77°.18W±0°.04, h10km, n24, σ1§17/28, mb3.5/9, Panama-Colombia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCIP	**Isla Barro Col**	**2.67**	**281**	*e*Pn	**Pn**	**05 42 06.1**	**-0.6**
BCIP				*e*Pn	**Pn**	**05 42 07.5**	**+0.9**
BCIP				*e*Sn	**Sn**	**05 42 41.1**	**+2.0**
ROSC	**El Rosal**	**4.73**	**143**	Pn	**Pn**	**05 42 34.9**	**0.0**
	0.5nm,0.3s,baz=270,slow=20,SNR=3.0						
ROSC				Pg	**Pg**	**05 42 48.1**	**-6.1**
	1.5nm,0.3s,baz=270,slow=20,SNR=4.3						
ROSC				Lg		05 43 57.3	
	3.4nm,0.3s,baz=221,slow=20,SNR=2.8						
SDV	**Santo Domingo**	**6.48**	**88**	*e*Pn	**Pn**	**05 43 02.1**	**+3.1**
	25nm,0.6s						
JTS	**JuntasAbangare**	**7.83**	**283**	Pn	**Pn**	**05 43 16.8**	**-0.9**
	0.8nm,0.3s,baz=126,slow=17,SNR=4.9						
OTAV	**Otavalo**	**8.47**	**189**	*e*Pn	**Pn**	**05 43 33.5**	**+7.1**
	10nm,0.6s						
OTAV				*e*Sn	**Sn**	**05 45 08.9**	**+6.8**
TGUH	**Tegucigalpa,Un**	**11.25**	**299**	Pn	**Pn**	**05 44 03.5**	**-1.1**
SDDR	**Presa de Saban**	**11.74**	**29**	*e*Pn	**Pn**	**05 44 12.2**	**+0.9**
SDDR				*e*Pn	**Pn**	**05 44 12.4**	**+1.2**
PCRV	**Puerto La Cruz**	**12.47**	**82**	Pn	**Pn**	**05 44 23.9**	**+2.7**
	0.9nm,0.3s,baz=281,slow=5.2,SNR=4.5						
PCRV				Sn	**Sn**	**05 46 39.1**	**-1.2**
	1.1nm,0.3s,baz=300,slow=20,SNR=7.3						
SJG	**San Juan**	**14.25**	**48**	Pn	**Pn**	**05 44 41.8**	**-3.7**
	1.7nm,0.3s,baz=226,slow=16,SNR=3.6						
SJG	**San Juan**	**14.25**	**48**	Pn	**Pn**	**05 44 41.8**	**-3.7**
CMIG	**Matias Romero**	**19.17**	**298**	P	**Pn**	**05 45 44.4**	**-3.9**
	0.1nm,0.3s,baz=117,slow=9.0,SNR=3.5						
CMIG				LR	LR	05 53 38.6	
	comp=Z,49nm,18.5s,baz=115,slow=39						
LPAZ	**La Paz**	**26.36**	**160**	P	**P**	**05 47 00.1**	**0.0**
	0.4nm,0.8s,mb3.0,baz=0.0,slow=4.0,SNR=1.4						
SIV	**San Ignacio**	**29.23**	**147**	P	**P**	**05 47 25.6**	**-0.3**
	0.9nm,0.7s,mb3.6,baz=335,slow=14,SNR=4.0						
TXAR	**Lajitas Array**	**32.25**	**313**	P	**P**	**05 47 51.9**	**-0.6**
	0.1nm,0.6s,mb2.8,baz=119,slow=7.3,SNR=2.3						
PDAR	**Pinedale Array**	**44.26**	**326**	P	**P**	**05 49 33.2**	**-0.1**
	0.3nm,0.7s,mb3.2,baz=131,slow=8.1,SNR=4.5						
SCHQ	**Schefferville**	**46.78**	**8**	P	**P**	**05 49 53.1**	**+0.1**
	3.2nm,0.9s,mb4.3,baz=205,slow=7.7,SNR=4.9						
NVAR	**Mina Array Bea**	**47.34**	**315**	P	**P**	**05 49 57.1**	**-0.6**
	0.2nm,0.4s,mb3.4,baz=125,slow=4.6,SNR=2.5						
YKA	**Yellowknife Ar**	**60.19**	**341**	P	**P**	**05 51 30.7**	**-0.7**
	0.8nm,0.7s,mb3.9,baz=128,slow=7.1,SNR=7.3						
YKA	**Yellowknife Ar**	**60.19**	**341**	P	**P**	**05 51 30.7**	**-0.7**
ESDC	**Sonseca Array**	**71.61**	**51**	P	**P**	**05 52 47.1**	**+1.7**
	0.3nm,0.4s,mb3.6,baz=264,slow=5.9,SNR=4.2						
TORD	**Torodi Ar. Bea**	**77.31**	**78**	P	**P**	**05 53 18.3**	**-0.8**
	0.4nm,0.7s,mb3.5,baz=234,slow=4.8,SNR=3.4						
TORD	**Torodi Ar. Bea**	**77.31**	**78**	P	**P**	**05 53 18.2**	**-0.8**
ASAR	**Alice Springs**	**146.73**	**240**	PKPbc	PKPbc	06 01 06.0	-0.7
	1.6nm,0.9s,baz=118,slow=3.6,SNR=9.3						
WRA	**Warramunga Arr**	**147.53**	**246**	PKPbc	PKPbc	06 01 07.1	-1.9
	1.5nm,0.8s,baz=102,slow=3.1,SNR=8.8						

ISCJB ***17*** *06:04:35.4±0.4, 67°.69N±0°.02×15°.53E±0°.06, h0km, Error ellipse: s-maj=4.2km s-min=2.6km az=44.3*

CSEM ***17*** *06:04:36.1±0.4, 67°.76N×15°.28E, h1km, ML2.3, Error ellipse: s-maj=8.5km s-min=5.5km az=124.0, Mining explosion.*

HEL ***17*** *06:04:36.9±0.2, 67°.83N×15°.03E, h7km±1km, ML2.3, ML2.3(UPP), ML2.2(BER)*

BER ***17*** *06:04:37.5±4.4, 67°.93N×14°.89E, h4km±13km, MD2.5, ML2.2, ML2.2(NAO)*

IDC ***17*** *06:04:37.6±1.5, 67°.86N×15°.11E, h0km, mb1 3.0/4, mb1mx2.9/26, mbtmp2.9/4, ML2.6/4, Error ellipse: s-maj=18.9km s-min=7.3km az=124.0*

UPP ***17*** *06:04:37.9, 67°.77N×15°.19E, h0km, ML2.3, Mining explosion.*

NAO ***17*** *06:04:39.1±2.2, 67°.84N×15°.25E, h12km±12km, ML2.2*

ISC 17 06:04:36.2±0.4, 67°.73N±0°.02×15°.30E±0°.06, h0km, n71, σ1§25/133, 2C, Northern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STEI	**Steigen**	**0.20**	**353**⇑	*i*P	**Pg**	**06 04 39.4**	**-0.7**
STEI				*e*S	**Sg**	**06 04 41.2**	**-1.4**
STEI				AML	AML	06 04 42.8	
	comp=Z,301nm,0.3s						
STEI	**Steigen**	**0.20**	**353**⇑	*i*P	**Pg**	**06 04 39.4**	**-0.7**
STEI				*i* S	**Sg**	**06 04 41.2**	**-1.4**
STEI				AML	AML	06 04 42.8	
	comp=Z,301nm,0.3s						
STEI	**Steigen**	**0.20**	**353**	P	**Pg**	**06 04 39.3**	**-0.7**
STEI				S	**Sg**	**06 04 41.2**	**-1.4**
	comp=Z,124nm,0.2s						
SALU	**Saltoluokta**	**1.28**	**105**	*e*P	**Pg**	**06 05 02.6**	**+1.8**
SALU	**Saltoluokta**	**1.28**	**105**	P	**Pg**	**06 05 02.5**	**+1.8**
KONS	**Konsvik**	**1.51**	**216**	*e*P	**Pn**	**06 05 03.2**	**-1.2**
KONS				*e*S	**Sg**	**06 05 24.8**	**+0.3**
KONS				AML	AML	06 05 28.3	
	comp=Z,60nm,0.4s						
KONS	**Konsvik**	**1.51**	**216**	*e*P	**Pn**	**06 05 03.2**	**-1.2**
KONS				*e*S	**Sg**	**06 05 24.8**	**+0.3**
KONS				AML	AML	06 05 28.3	
	comp=Z,60nm,0.4s						
FLOS	**Flostrand**	**1.60**	**209**	*e*P	**Pn**	**06 05 05.2**	**-0.5**
FLOS				*e*S	**Sn**	**06 05 28.0**	**+1.0**
FLOS				AML	AML	06 05 34.3	
	comp=Z,63nm,0.5s						
FLOS	**Flostrand**	**1.60**	**209**	*e*P	**Pn**	**06 05 05.2**	**-0.5**
FLOS				*e*S	**Sn**	**06 05 28.0**	**+1.0**
FLOS				AML	AML	06 05 34.3	
	comp=Z,63nm,0.5s						
MOR8	**Moi Rana**	**1.61**	**193**	*e*P	**Pn**	**06 05 04.1**	**-1.7**
MOR8				*e*S	**Sn**	**06 05 25.8**	**-1.4**
MOR8				AML	AML	06 05 29.9	
	comp=Z,34nm,0.4s						
MOR8	**Moi Rana**	**1.61**	**193**	*e*P	**Pn**	**06 05 04.1**	**-1.7**
MOR8				*e*S	**Sn**	**06 05 25.8**	**-1.4**
MOR8				AML	AML	06 05 29.9	
	comp=Z,34nm,0.4s						
MOR8	**Moi Rana**	**1.61**	**193**	P	**Pn**	**06 05 04.0**	**-1.8**
MOR8				*e*S	**Sn**	**06 05 25.8**	**-1.4**
	comp=Z,45nm,0.6s,SNR=50						
STOK	**Stokkvaagen**	**1.67**	**214**	*e*P	**Pn**	**06 05 06.0**	**-0.7**
STOK				*e*S	**Sn**	**06 05 30.0**	**+1.3**
STOK				AML	AML	06 05 32.4	
	comp=N,45nm,0.6s						
STOK	**Stokkvaagen**	**1.67**	**214**	*e*P	**Pn**	**06 05 06.0**	**-0.7**
STOK				*e*S	**Sn**	**06 05 30.0**	**+1.3**
STOK				AML	AML	06 05 32.4	
	comp=N,45nm,0.6s						
STOK	**Stokkvaagen**	**1.67**	**214**	P	**Pn**	**06 05 06.0**	**-0.7**
STOK				S	**Sn**	**06 05 30.0**	**+1.3**
	comp=N,45nm,0.6s						
KUA	**Kurravaara**	**1.92**	**81**	*e*P	**Pn**	**06 05 12.8**	**+2.7**
KIF	**Kilpisjarvi**	**2.40**	**55**	*e*P	**Pn**	**06 05 17.5**	**+0.8**
KIF				*e*S	**Sn**	**06 05 47.5**	**+0.6**
KIF				*e*SG	**Sg**	**06 05 53.6**	**+0.3**
KIF				MSG		06 05 56.0	
	comp=Z,15nm,0.3s						
KIF	**Kilpisjarvi**	**2.40**	**55**	P	**Pn**	**06 05 17.5**	**+0.8**
KIF				S	**Sn**	**06 05 47.4**	**+0.6**
KIF				Sg	**Sg**	**06 05 53.6**	**+0.2**
	comp=Z,15nm,0.3s						
LANU	**Lannavaara**	**2.55**	**80**	*e*P	**Pn**	**06 05 20.2**	**+1.5**
LANU				*e*S	**Sn**	**06 05 52.0**	**+1.6**
LANU	**Lannavaara**	**2.55**	**80**	P	**Pn**	**06 05 20.2**	**+1.5**
LANU				S	**Sn**	**06 05 51.9**	**+1.5**
PAJU	**Pajala**	**3.10**	**100**	*e*P	**Pn**	**06 05 27.9**	**+1.6**
PAJU	**Pajala**	**3.10**	**100**	P	**Pn**	**06 05 27.9**	**+1.6**
KTK1	**Kautokeino**	**3.21**	**63**	*e*P	**Pn**	**06 05 29.1**	**+1.4**
KTK1				*e*S	**Sn**	**06 06 07.4**	**+0.8**
KTK1	**Kautokeino**	**3.21**	**63**	*e*P	**Pn**	**06 05 29.1**	**+1.4**
KTK1				*e*S	**Sn**	**06 06 07.4**	**+0.8**
KTK1	**Kautokeino**	**3.21**	**63**	P	**Pn**	**06 05 29.1**	**+1.3**
KTK1				S	**Sn**	**06 06 07.4**	**+0.8**
HEF	**Hetta**	**3.21**	**74**	*e*P	**Pn**	**06 05 28.7**	**+0.9**
HEF				*e*S	**Sn**	**06 06 07.5**	**+0.9**
HEF				*e*		06 06 24.2	
HEF	**Hetta**	**3.21**	**74**	P	**Pn**	**06 05 28.7**	**+0.9**
HEF				S	**Sn**	**06 06 07.5**	**+0.9**
SVAU	**Svanoeiden**	**3.69**	**150**	*e*P	**Pn**	**06 05 36.4**	**+2.0**
SVAU	**Svanoeiden**	**3.69**	**150**	P	**Pn**	**06 05 36.3**	**+1.9**
BURU	**Burvik**	**4.01**	**139**	*e*P	**Pn**	**06 05 41.2**	**+2.4**
BURU	**Burvik**	**4.01**	**139**	P	**Pn**	**06 05 41.2**	**+2.4**
ARA0	**ARCESS Array S**	**4.15**	**59**	Pn	**Pn**	**06 05 40.0**	**-0.6**
	baz=247,slow=14						
ARA0				Pg	**Pg**	**06 05 51.4**	**-4.2**
	baz=239,slow=16						
ARA0				Sn	**Sn**	**06 06 27.5**	**-2.3**
	baz=247,slow=22						
ARA0				Lg		06 06 46.5	
	baz=242,slow=28						
ARA0	**ARCESS Array S**	**4.15**	**59**	*e*P	**Pn**	**06 05 40.0**	**-0.6**
ARA0				*e*PG	**Pg**	**06 05 51.4**	**-4.2**
ARA0				*e*S	**Sn**	**06 06 27.5**	**-2.3**
ARA0				*e*SG	**Sg**	**06 06 46.5**	**-2.7**
ARA0	**ARCESS Array S**	**4.15**	**59**	P	**Pn**	**06 05 40.0**	**-0.7**
ARCES	**ARCESS Array B**	**4.15**	**59**	Pn	**Pn**	**06 05 40.4**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=247,slow=13,SNR=19						
ARCES				Pg	**Pg**	**06 05 51.0**	**-4.6**
	comp=Z,1.1nm,0.3s,baz=252,slow=17,SNR=32						
ARCES				Sn	**Sn**	**06 06 28.1**	**-1.7**
	comp=Z,0.7nm,0.3s,baz=248,slow=19,SNR=6.1						
ARCES				Lg		06 06 46.5	
	comp=Z,2.2nm,0.3s,baz=255,slow=30,SNR=16						
SGF	**Sodankyl**	**4.31**	**89**	*e*P	**Pn**	**06 05 43.8**	**+0.9**
SGF				*e*S	**Sn**	**06 06 34.7**	**+1.0**
SGF	**Sodankyl**	**4.31**	**89**	P	**Pn**	**06 05 43.7**	**+0.8**
SGF				S	**Sn**	**06 06 34.6**	**+0.9**
RNF	**Rovaniemi**	**4.32**	**100**	*e*P	**Pn**	**06 05 44.3**	**+1.2**
RNF				*e*S	**Sn**	**06 06 35.0**	**+0.9**
RNF	**Rovaniemi**	**4.32**	**100**	P	**Pn**	**06 05 44.3**	**+1.2**
RNF				S	**Sn**	**06 06 35.0**	**+0.9**
KEV	**Kevo**	**4.72**	**59**	*e*P	**Pn**	**06 05 48.1**	**-0.4**
KEV				*e*S	**Sn**	**06 06 42.6**	**-1.1**
KEV				*e*SG	**Sg**	**06 07 03.0**	**-4.5**
KEV				MSG		06 07 04.0	
	comp=Z,3.1nm,0.4s						
KEV	**Kevo**	**4.72**	**59**	P	**Pn**	**06 05 48.1**	**-0.4**
KEV				S	**Sn**	**06 06 42.6**	**-1.2**
OUL	**Oulu**	**5.02**	**117**	*e*S	**Sn**	**06 06 51.2**	**+0.1**
OUL				*e*		06 07 20.4	
OUL	**Oulu**	**5.02**	**117**	S	**Sn**	**06 06 51.2**	**0.0**
VRF	**Varrio**	**5.44**	**83**	*e*S	**Sn**	**06 07 00.8**	**-0.7**
VRF				*e*SG	**Sg**	**06 07 27.8**	**-2.9**
VRF	**Varrio**	**5.44**	**83**	S	**Sn**	**06 07 00.8**	**-0.7**
VRF				Sg	**Sg**	**06 07 27.7**	**-3.0**
VAF	**Ylistaro**	**5.62**	**143**	*e*P	**Pn**	**06 06 00.8**	**-0.2**
VAF				*e*S	**Sn**	**06 07 06.0**	**-0.2**
VAF				*e*SB	**Sb**	**06 07 25.2**	**+2.2**
VAF				*e*SG	**Sg**	**06 07 33.1**	**-3.6**
VAF				MSG		06 07 38.7	
	comp=Z,3.8nm,0.3s						
VAF	**Ylistaro**	**5.62**	**143**	P	**Pn**	**06 06 00.7**	**-0.3**
VAF				S	**Sn**	**06 07 05.9**	**-0.3**
VAF				Sb	**Sb**	**06 07 25.1**	**+2.1**
MSF	**Maaselka**	**5.72**	**102**	*e*P	**Pn**	**06 06 02.3**	**0.0**
MSF	

MLNI			*i* Sg		**Sg**	06 09 42.9	+0.5
MLNI	**Malnisio**	**0.13 243**	*i* Pg		**Pg**	06 09 40.4	-0.2
MLNI			*i* Sg		**Sg**	06 09 42.9	+0.5
MPRI	**Monte Prat**	**0.15 78**	⇓*i*Pg		**Pg**	06 09 41.0	0.0
MPRI			*i* Sg		**Sg**	06 09 44.1	+1.1
MPRI	**Monte Prat**	**0.15 78**	*i* Pg		**Pg**	06 09 41.0	0.0
MPRI			*i* Sg		**Sg**	06 09 44.1	+1.1
BUA	**Buia**	**0.24 88**	⇑*e*Pg		**Pg**	06 09 42.6	-0.1
BUA			*e*Sg		**Sg**	06 09 47.0	+1.2
BUA	**Buia**	**0.24 88**	*e*Pg		**Pg**	06 09 42.6	0.0
BUA			*e*Sg		**Sg**	06 09 47.0	+1.2
BOO	**Bordano**	**0.25 64**	⇑*i*Pg		**Pg**	06 09 42.4	-0.5
BOO	**Bordano**	**0.25 64**	*i* Pg		**Pg**	06 09 42.4	-0.4
CAE	**Caneva**	**0.31 229**	⇓*i*Pg		**Pg**	06 09 43.2	-0.7
CAE			*i* Sg		**Sg**	06 09 48.6	+0.5
CAE	**Caneva**	**0.31 229**	*i* Pg		**Pg**	06 09 43.2	-0.8
CAE			*i* Sg		**Sg**	06 09 48.6	+0.5
CSMI	**Casera Mimoias**	**0.31 344**	⇑*e*Pg		**Pg**	06 09 43.6	-0.4
CSMI			*e*Sg		**Sg**	06 09 49.0	+0.9
CSMI	**Casera Mimoias**	**0.31 344**	*e*Pg		**Pg**	06 09 43.6	-0.4
CSMI			*e*Sg		**Sg**	06 09 49.0	+0.8
CSO	**Casso**	**0.32 281**	⇑*i*Pg		**Pg**	06 09 43.2	-1.0
CSO			*i* Sg		**Sg**	06 09 48.2	-0.1
CSO	**Casso**	**0.32 281**	*i* Pg		**Pg**	06 09 43.2	-1.0
CSO			*i* Sg		**Sg**	06 09 48.2	-0.2
BAD	**Bernadia**	**0.33 85**	⇓*e*Pg		**Pg**	06 09 43.6	-0.6
BAD			*e*Sg		**Sg**	06 09 48.8	+0.3
BAD	**Bernadia**	**0.33 85**	*e*Pg		**Pg**	06 09 43.6	-0.6
BAD			*e*Sg		**Sg**	06 09 48.8	+0.3
GMNA	**Gemona**	**0.33 78**	Pg		**Pg**	06 09 42.9	-1.3
GMNA			Sg		**Sg**	06 09 47.5	-1.0
	372nm,0.4s						
GMNA	**Gemona**	**0.33 78**	Pg		**Pg**	06 09 42.9	-1.3
GMNA			Sg		**Sg**	06 09 47.5	-1.0
	372nm,0.4s						
TLI	**Talmassons**	**0.37 142**	⇑*i*Pg		**Pg**	06 09 44.4	-0.7
TLI	**Talmassons**	**0.37 142**	*i* Pg		**Pg**	06 09 44.3	-0.7
ZOU	**Zoufplan**	**0.37 21**	⇑*e*Pg		**Pg**	06 09 44.7	-0.4
ZOU			*e*Sg		**Sg**	06 09 51.0	+1.0
ZOU	**Zoufplan**	**0.37 21**	*e*Pg		**Pg**	06 09 44.7	-0.4
ZOU			*e*Sg		**Sg**	06 09 51.0	+1.0
FVI	**Forni Avoltri**	**0.39 0**	Pg		**Pg**	06 09 45.0	-0.4
FVI			Sg		**Sg**	06 09 51.4	+0.9
	167nm,0.2s						
FVI	**Forni Avoltri**	**0.39 0**	Pg		**Pg**	06 09 45.0	-0.4
FVI			Sg		**Sg**	06 09 51.4	+0.9
	167nm,0.2s						
COLI	**Coloredo**	**0.42 100**	⇓*i*Pg		**Pg**	06 09 45.4	-0.7
COLI			*i* Sg		**Sg**	06 09 52.8	+1.1
COLI	**Coloredo**	**0.42 100**	*i* Pg		**Pg**	06 09 45.4	-0.7
COLI			*i* Sg		**Sg**	06 09 52.8	+1.1
PLRO	**Paularo**	**0.43 37**	⇓*i*Pg		**Pg**	06 09 45.7	-0.4
PLRO			*i* Sg		**Sg**	06 09 52.7	+1.0
PLRO	**Paularo**	**0.43 37**	*i* Pg		**Pg**	06 09 45.7	-0.5
PLRO			*i* Sg		**Sg**	06 09 52.7	+1.0
PTCC	**Patocco-Chiusa**	**0.44 64**	Pg		**Pg**	06 09 45.6	-0.9
PTCC			Sg		**Sg**	06 09 52.7	+0.4
	63nm,0.4s						
PTCC	**Patocco-Chiusa**	**0.44 64**	Pg		**Pg**	06 09 45.6	-0.9
PTCC			Sg		**Sg**	06 09 52.7	+0.4
	63nm,0.4s						
VARN	**Col Varnada, M**	**0.52 245**	⇓*i*Pg		**Pg**	06 09 46.5	-1.3
VARN			*i* Sg		**Sg**	06 09 54.7	+0.1
VARN	**Col Varnada, M**	**0.52 245**	*i* Pg		**Pg**	06 09 46.5	-1.3
VARN			*i* Sg		**Sg**	06 09 54.7	+0.1
ABTA	**Abfaltersbach**	**0.57 341**	⇑*i*Pg		**Pg**	06 09 48.8	0.0
ABTA			⇑*i*Sg		**Sg**	06 09 56.3	0.0
	20nm,0.1s						
ABTA	**Abfaltersbach**	**0.57 341**	Pg		**Pg**	06 09 48.8	-0.1
ABTA			Sg		**Sg**	06 09 56.3	+0.1
	20nm,0.1s						
DRE	**Drenchia**	**0.60 93**	*e*Pg		**Pg**	06 09 48.5	-1.0
DRE			*e*Sg		**Sg**	06 09 58.5	+1.1
DRE	**Drenchia**	**0.60 93**	*e*Pg		**Pg**	06 09 48.5	-1.0
DRE			*e*Sg		**Sg**	06 09 58.5	+1.2
MYKA	**Terra Mystica**	**0.73 55**	⇑*i*Pg		**Pg**	06 09 51.2	-0.8
MYKA			⇑*i*Sg		**Sg**	06 10 01.1	-0.4
	5.4nm,0.1s						
MYKA	**Terra Mystica**	**0.73 55**	Pg		**Pg**	06 09 51.2	-0.8
MYKA			Sg		**Sg**	06 10 01.1	-0.3
	5.4nm,0.1s						
VOY	**Vojsko**	**0.80 103**	*e*Pg		**Pg**	06 09 52.8	-0.4
VOY			*e*Sg		**Sg**	06 10 04.9	+1.4
VOY			*e*			06 10 08.7	
VOY	**Vojsko**	**0.80 103**	Pg		**Pg**	06 09 52.8	-0.4
VOY			*e*Sg		**Sg**	06 10 04.9	+1.4
CTI	**Castel Tesino**	**0.80 259**	Pg		**Pg**	06 09 54.4	+1.1
	116nm,3.2s						
CTI	**Castel Tesino**	**0.80 259**	Pg		**Pg**	06 09 54.4	+1.1
	116nm,3.2s						
TRI	**Trieste**	**0.85 126**	Pg		**Pg**	06 09 54.7	+0.4
TRI			Sg		**Sg**	06 10 07.4	+2.1
	48nm,0.2s						
TRI	**Trieste**	**0.85 126**	Pg		**Pg**	06 09 54.7	+0.4
TRI			Sg		**Sg**	06 10 07.4	+2.1
	48nm,0.2s						
KBA	**Koelnbreinsper**	**0.95 24**	⇑*i*Pg		**Pg**	06 09 55.9	-0.3
KBA			⇓*i*Sg		**Sg**	06 10 09.3	+0.8
	16nm,0.2s						
KBA	**Koelnbreinsper**	**0.95 24**	Pg		**Pg**	06 09 55.9	-0.3
KBA			Sg		**Sg**	06 10 09.3	+0.7
	16nm,0.2s						
APPI	**Appiano**	**1.11 285**	Pg		**Pg**	06 09 59.2	+0.1
	58nm,0.3s						
APPI	**Appiano**	**1.11 285**	Pg		**Pg**	06 09 59.2	+0.1
	58nm,0.3s						
TEOL	**Teolo**	**1.15 223**	⇑*e*Pg		**Pg**	06 09 58.4	-1.6
TEOL			*e*Sg		**Sg**	06 10 15.3	+0.4
TEOL	**Teolo**	**1.15 223**	*e*Pg		**Pg**	06 09 58.4	-1.6
TEOL			*e*Sg		**Sg**	06 10 15.3	+0.4
OBKA	**Obir**	**1.26 76**	⇓*i*Pg		**Pg**	06 10 01.6	-0.6
OBKA			⇓*i*Sg		**Sg**	06 10 18.1	-0.4
	14nm,0.3s						
OBKA	**Obir**	**1.26 76**	Pg		**Pg**	06 10 01.6	-0.5
OBKA			Sg		**Sg**	06 10 18.1	-0.4
	14nm,0.3s						
WTTA	**Wattenberg**	**1.31 324**	⇓*i*Pg		**Pg**	06 10 02.8	-0.3
WTTA			⇓*i*Sg		**Sg**	06 10 21.4	+1.2
	14nm,0.4s						
WTTA	**Wattenberg**	**1.31 324**	Pg		**Pg**	06 10 02.8	-0.3
WTTA			Sg		**Sg**	06 10 21.4	+1.3
	14nm,0.4s						
WATA	**Walderalm**	**1.40 324**	⇑*i*Pn		**Pn**	06 10 02.9	-1.0
WATA			⇓*i*Pg		**Pg**	06 10 04.1	-0.5
WATA			⇑*i*Sg		**Sg**	06 10 23.9	+1.1
	8.3nm,0.3s						
WATA	**Walderalm**	**1.40 324**	Pn		**Pn**	06 10 02.9	-1.0
MABI	**Malga Bissina**	**1.58 265**	Pg		**Pn**	06 10 07.2	+0.7
MABI			Sg		**Sg**	06 10 29.0	+0.3
	16nm,0.5s						
MABI	**Malga Bissina**	**1.58 265**	Pg		**Pn**	06 10 07.2	+0.7
MABI			Sg		**Sg**	06 10 29.0	+0.3
	16nm,0.5s						
MOTA	**Moosalm**	**1.62 315**	⇑*i*Pg		**Pg**	06 10 08.3	-0.6
MOTA			⇑*i*Sg		**Sg**	06 10 30.9	+1.0
	5.1nm,0.3s						
MOTA	**Moosalm**	**1.62 315**	Pg		**Pg**	06 10 08.3	-0.6
MOTA			Sg		**Sg**	06 10 30.9	+1.1
	5.1nm,0.3s						
FETA	**Feichten**	**1.63 301**	⇑*i*Pg		**Pn**	06 10 08.2	+1.1
FETA			⇑*i*Sg		**Sg**	06 10 30.8	+0.6
	2.8nm,0.3s						
FETA	**Feichten**	**1.63 301**	Pg		**Pn**	06 10 08.2	+1.1
FETA			Sg		**Sg**	06 10 30.8	+0.6
	2.8nm,0.3s						
MOA	**Molln**	**1.93 31**	⇑*i*Pn		**Pn**	06 10 10.0	-1.3
MOA			⇓*i*Sn		**Sn**	06 10 35.4	-0.5
MOA			⇑*i*Sg		**Sg**	06 10 39.9	0.0
	5.1nm,0.3s						
MOA	**Molln**	**1.93 31**	Pn		**Pn**	06 10 10.0	-1.3
MOA			Sn		**Sn**	06 10 35.4	-0.4
MOA			Sg		**Sg**	06 10 39.9	0.0
	5.1nm,0.3s						
NVLJ	**Novalja**	**2.21 137**	*e*Pn		**Pn**	06 10 15.0	-0.1
NVLJ			Sn		**Sn**	06 10 43.3	+0.6
NVLJ	**Novalja**	**2.21 137**	*e*Pn		**Pn**	06 10 15.0	-0.1
NVLJ			Sn		**Sn**	06 10 43.3	+0.6
KHC	**Kasperske Hory**	**2.97 10**	*e*PN		**Pn**	06 10 26.2	+0.6
KHC			*e*PG		**Pg**	06 10 32.9	-1.9
KHC			*e*SN		**Sn**	06 11 02.8	+1.3
KHC			*e*SG		**Sg**	06 11 12.5	-0.8
KHC	**Kasperske Hory**	**2.97 10**	Pn		**Pn**	06 10 26.2	+0.6
KHC	**Kasperske Hory**	**2.97 10**	Pg		**Pg**	06 10 32.9	-1.9
KHC			Sn		**Sn**	06 11 02.8	+1.3
KHC			Sg		**Sg**	06 11 12.5	-0.8
PRU	**Pruhonice**	**3.96 17**	*e*SG		**Sg**	06 11 43.5	-1.6
PRU	**Pruhonice**	**3.96 17**	Sg		**Sg**	06 11 43.5	-1.6

MAN 17 06:34:35,13°.57N×120°.76E,h27km,mb4.2,ML3.0,MS2.8, 1C,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.20**	**109**	⇑*i*P	Pb	06 34 42.8	+1.9
LUBP	**Lubang**	**0.53**	**288**	*e*P	Pb	06 34 47.1	+1.4
LUBP				*e*S	Sb	06 34 51.6	-1.4
SJMP	**San Jose**	**1.15**	**162**	*e*P	Pn	06 34 57.4	+2.0
SJMP				*e*S	Sn	06 35 11.0	+0.7

IDC 17 06:40:42.1±1.9,15°.46S×178°.02W,h0km,mb3.8/4, mb1 4.1/4,mb1mx3.8/16,mbtmp3.8/4,MS3.3/4,Ms1 3.3/4, ms1mx3.0/17,Error ellipse: s-maj=210.2km s-min=27.1km az=150.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**22.33**	**283**	LR	LR	06 53 06.5	
	comp=Z,259nm,20.7s,baz=121,slow=33						
PPT	**Papeete**	**27.34**	**98**	LR	LR	06 53 27.8	
	comp=Z,32nm,21.1s,baz=330,slow=28						
STKA	**Stephens Creek**	**40.17**	**239**	P	P	06 48 20.4	+0.1
	3.5nm,0.9s,baz=74,slow=15,SNR=2.9						
ASAR	**Alice Springs**	**45.86**	**252**	P	P	06 49 06.3	-0.1
	2.4nm,0.9s,baz=84,slow=8.4,SNR=16						
PETK	**Petropavlovsk-**	**71.43**	**345**	LR	LR	07 21 15.3	
	comp=Z,15nm,20.3s,baz=356,slow=34						
KSRS	**Korea Array**	**73.15**	**318**	LR	LR	07 18 21.1	
	comp=Z,23nm,20.3s,baz=145,slow=31						
NVAR	**Mina Array Bea**	**77.41**	**44**	P	P	06 52 39.9	+0.6
	0.6nm,0.8s,baz=227,slow=7.3,SNR=3.2						
TXAR	**Lajitas Array**	**84.38**	**58**	P	P	06 53 16.7	0.0
	0.3nm,0.9s,baz=234,slow=4.0,SNR=3.6						
BRTR	**Keskin Array B**	**143.29**	**317**	PKP	PKPdf	07 00 18.2	-0.5
	1.3nm,0.9s,baz=45,slow=2.7,SNR=5.1						

*ISCJB **17** 06:55:44.8±0.9, 10°.25N±0°.05×60°.81W±0°.06, h64km±9km, Error ellipse: s-maj=9.9km s-min=8.3km az=9.3*
*FUNV **17** 06:55:45.2, 10°.27N×60°.62W, h36km, MW3.0*
*TRN **17** 06:55:51.6, 10°.74N×60°.91W, h15km, MD3.2*
*NEIC **17** 06:55:51.6, 10°.73N×60°.91W, h17km, MD3.2(TRN), After TRN.*

ISC 17 06:55:45.6±0.9,10°.29N±0°.05×60°.77W±0°.06,h56km±10km, n20,σ1°.25/33,2C,Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBH	**Brigand Hill**	**0.35**	**304**	⇑*e*P	**Pn**	06 55 57.9	+2.2
TBH				*e*S	**Sn**	06 56 02.7	-0.2
TBH	**Brigand Hill**	**0.35**	**304**	⇑*e*P	**Pn**	06 55 57.9	+2.2
TBH				*e*S	**Sn**	06 56 02.7	-0.2
TRN	**Trinidad (W)**	**0.72**	**300**	*e*P	**Pn**	06 56 02.1	+2.3
TRN				*e*S	**Sn**	06 56 08.0	-2.1
TRN	**Trinidad (W)**	**0.72**	**300**	*e*P	**Pn**	06 56 02.1	+2.3
TRN				*e*S	**Sn**	06 56 08.0	-2.1
TPR	**Prospect**	**0.89**	**360**	*e*P	**Pn**	06 56 02.5	+0.5
TPR	**Prospect**	**0.89**	**360**	*e*P	**Pn**	06 56 01.5	-0.5
TOSP	**Speyside**	**1.03**	**13**	*e*P	**Pn**	06 56 04.3	+0.5
TOSP				*e*S	**Sn**	06 56 14.2	-3.1
GUIV	**Guiria**	**1.47**	**284**	*e*P	**Pn**	06 56 11.2	+1.4
GUIV				*e*S	**Sn**	06 56 29.1	+1.2
GRW	**Mount Saint Ca**	**2.05**	**335**	*e*P	**Pn**	06 56 19.6	+1.9
GRW				*e*S	**Sn**	06 56 39.9	-2.3
GRW	**Mount Saint Ca**	**2.05**	**335**	*e*P	**Pn**	06 56 19.6	+1.9
GRW				*e*S	**Sn**	06 56 39.9	-2.3
GUNV	**Guanoco**	**2.14**	**267**	*e*P	**Pn**	06 56 20.3	+1.4
GUNV				*e*S	**Sn**	06 56 45.5	+1.2
RIOV	**Rio Grande**	**2.44**	**205**	*e*P	**Pn**	06 56 22.1	-0.8
RIOV				*e*S	**Sn**	06 56 49.7	-1.8
CRUV	**Carupano**	**2.45**	**279**	*e*P	**Pn**	06 56 23.2	+0.1
CRUV				*e*S	**Sn**	06 56 51.4	-0.6
ITEV	**Isla Los Testi**	**2.55**	**295**	*e*P	**Pn**	06 56 24.6	+0.1
ITEV				*e*S	**Sn**	06 56 54.1	-0.2
PCRV	**Puerto La Cruz**	**3.81**	**269**	*e*P	**Pn**	06 56 41.1	-0.6
IBAV	**Isla La Blanqu**	**4.03**	**293**	*e*P	**Pn**	06 56 45.5	+0.7
CUPV	**Cœpira**	**4.94**	**268**	*e*P	**Pn**	06 56 57.3	0.0
CUPV				*e*S	**Sn**	06 57 51.3	-1.9
BIRV	**Birongo**	**5.41**	**272**	*e*P	**Pn**	06 57 04.0	+0.2
CAOV	**Caicara del Or**	**6.23**	**242**	*e*P	**Pn**	06 57 14.6	-0.3
BAUV	**El Baul**	**7.29**	**260**	*e*P	**Pn**	06 57 29.2	-0.3

*IDC **17** 07:01:45.2±2.3, 53°.56N×87°.84E, h0km, mb1 3.3/2, mb1mx3.1/26, mbtmp3.3/2, ML3.4/2, Error ellipse: s-maj=20.7km s-min=11.7km az=77.0*

ISC 17 07:01:48.6±2.2,53°.52N±0°.08×87°.5E±0°.2,h10km,n5, σ0°.68/9,2C-4D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.67**	**286**	**Pn**	**Pn**	07 02 17.2	-0.6
	5.1nm,0.3s,baz=102,slow=15,SNR=58						
ZALV				Lg		07 02 41.3	
	7.9nm,0.3s,baz=103,slow=25,SNR=15						
KURK	**Kurchatov**	**6.17**	**246**	⇑Pn	**Pn**	07 03 19.4	-0.2
	1.2nm,0.5s						
KURK				⇓Sn	**Sn**	07 04 31.0	+0.9
	1.3nm,0.6s						
KURK				⇓Lg		07 05 03.7	
	3.1nm,0.6s						
MK31	**Makanchi Array**	**7.53**	**209**	⇓Pn	**Pn**	07 03 38.6	+0.3
	0.3nm,0.3s,baz=30,slow=13,SNR=21						
MK31				⇓Sn	**Sn**	07 05 02.2	-1.5
	0.4nm,0.5s						
MK31				⇑Lg		07 05 41.4	
	2.2nm,0.8s,baz=38,slow=30,SNR=5.1						
MKAR	**Makanchi Array**	**7.53**	**209**	Pn	**Pn**	07 03 39.0	+0.7
	0.6nm,0.3s,baz=31,slow=14,SNR=31						
MKAR				Sn	**Sn**	07 05 04.0	+0.4
	0.1nm,0.3s,baz=30,slow=24,SNR=7.9						
MKAR				Lg		07 05 44.2	
	0.2nm,0.3s,baz=25,slow=31,SNR=7.5						
BVAR	**Borovoye Array**	**10.29**	**274**	Pn	**Pn**	07 04 16.3	+0.3
	0.2nm,0.3s,baz=75,slow=16,SNR=3.2						
BVAR				Sn	**Sn**	07 06 11.1	-0.3
	0.3nm,0.3s,baz=62,slow=19,SNR=3.2						

MAN 17 07:19:08,14°.99N×121°.65E,h10km,mb4.6,ML3.5,MS3.5, 2D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**0.38**	**134**	*e*P	Pg	07 19 16.8	+1.2
POLP				*e*S	Sg	07 19 22.5	+1.9
BALP	**Baler**	**0.75**	**354**	*e*P	Pg	07 19 23.0	+0.5
BALP				*e*S	Sg	07 19 31.3	-0.9
PCPH	**Palayan**	**0.78**	**316**	⇓*e*P	Pg	07 19 23.6	+0.5
GQP	**Guinayangan**	**1.33**	**145**	⇓*e*P	Pn	07 19 32.0	-0.6
BOAC	**Boac**	**1.54**	**173**	*e*P	Pn	07 19 36.0	+0.5
BOAC				*e*S	Sn	07 19 56.6	+1.1
LUBP	**Lubang**	**1.85**	**228**	*e*P	Pn	07 19 40.3	+0.5
CAUP	**Cauayan**	**1.95**	**5**	*e*P	Pn	07 19 41.3	+0.2
PVCP	**Virac**	**2.79**	**120**	*e*P	Pn	07 19 54.1	+1.3
APYP	**Conner**	**2.88**	**352**	*e*P	Pn	07 19 55.1	+1.1

*ISK **17** 07:22:40.7, 35°.69N×27°.74E, h32km, ML2.9*
*DDA **17** 07:22:42.2, 35°.97N×27°.94E, h15km±1km, Md2.9*
*ISCJB **17** 07:22:43.4±0.6, 35°.85N±0°.04×27°.78E±0°.04, h64km±8km, Error ellipse: s-maj=7.1km s-min=3.6km az=144.4*
*NEIC **17** 07:22:44.3, 35°.93N×27°.67E, h47km, MD3.5(ATH), After ATH.*
*CSEM **17** 07:22:44.1±0.2, 35°.88N×27°.81E, h60km, MD3.5, Error ellipse: s-maj=7.2km s-min=3.5km az=147.0*
*ATH **17** 07:22:44.3, 35°.93N×27°.67E, h47km±3km, MD3.5/11*

ISC 17 07:22:44.3±0.6,35°.85N±0°.04×27°.79E±0°.04,h58km±10km, n58,σ0°.94/93,26D,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.46**	**37**	*e*P	**Pn**	07 22 55.6	0.0
ARG				*e*S	**Sn**	07 23 04.1	+0.3
ARG	**Arkhangelos**	**0.46**	**37**	*e*P	**Pn**	07 22 55.6	0.0
ARG				*e*S	**Sn**	07 23 04.1	+0.3
ARG	**Arkhangelos**	**0.46**	**37**	*e*P	**Pn**	07 22 55.6	0.0
ARG				*e*S	**Sn**	07 23 04.1	+0.3
KARP	**Karpathos**	**0.59**	**239**	*e*P	**Pn**	07 22 56.8	-0.3
KARP				*e*S	**Sn**	07 23 05.8	-0.7
KARP	**Karpathos**	**0.59**	**239**	*e*P	**Pn**	07 22 56.8	-0.3
KARP				*e*S	**Sn**	07 23 05.8	-0.7
KARP	**Karpathos**	**0.59**	**239**	*e*P	**Pn**	07 22 56.8	-0.3
KARP				*e*S	**Sn**	07 23 05.8	-0.7
BDRM	**Kayabasi**	**1.24**	**347**	*i* P	**Pn**	07 23 04.7	-0.8
BDRM				*i* S	**Sn**	07 23 21.3	+0.1
BDRM	**Kayabasi**	**1.24**	**347**	*i* P	**Pn**	07 23 04.7	-0.7
BDRM				*i* S	**Sn**	07 23 21.3	+0.1
BODT	**Bodrum**	**1.27**	**342**	*e*PN	**Pn**	07 23 05.0	-0.8
BODT				*e*SN	**Sn**	07 23 21.8	0.0
BODT	**Bodrum**	**1.27**	**342**	*e*Pn	**Pn**	07 23 05.0	-0.8
YER	**Yerkesik**	**1.34**	**17**	*e*PN	**Pn**	07 23 06.5	-0.3
YER				*e*SN	**Sn**	07 23 24.9	+1.3
YER	**Yerkesik**	**1.34**	**17**	*e*Pn	**Pn**	07 23 06.5	-0.3
YER				*e*Sn	**Sn**	07 23 24.9	+1.3
MLSB	**Milas**	**1.44**	**360**	*e*PN	**Pn**	07 23 07.8	-0.3
MLSB				*e*SN	**Sn**	07 23 27.0	+1.0
MLSB	**Milas**	**1.44**	**360**	*e*Pn	**Pn**	07 23 07.8	-0.3
ZKR	**Zakros**	**1.48**	**241**	⇓*i*P	**Pn**	07 23 09.8	+1.2
ZKR	**Zakros**	**1.48**	**241**	⇓*i*P	**Pn**	07 23 09.8	+1.2
ZKR	**Zakros**	**1.48**	**241**	⇓*i*P	**Pn**	07 23 09.8	+1.2
AKAS	**Kas**	**1.52**	**75**	*i* P	**Pn**	07 23 07.9	-1.3
AKAS				*i* S	**Sn**	07 23 27.6	-0.4
AKAS	**Kas**	**1.52**	**75**	*i* P	**Pn**	07 23 07.9	-1.3
AKAS				*i* S	**Sn**	07 23 27.6	-0.4
AYDN	**Tasoluk**	**1.81**	**2**	*i* P	**Pn**	07 23 13.6	+0.5
AYDN				*i* S	**Sn**	07 23 34.7	-0.2
AYDN	**Tasoluk**	**1.81**	**2**	*i* P	**Pn**	07 23 13.6	+0.5
AYDN				*i* S	**Sn**	07 23 34.7	-0.2
NPS	**Neapolis**	**1.87**	**252**	⇓*i*P	**Pn**	07 23 14.4	+0.5
NPS				*e*S	**Sn**	07 23 36.2	-0.2
NPS	**Neapolis**	**1.87**	**252**	⇓*i*P	**Pn**	07 23 14.4	+0.5
NPS				*e*S	**Sn**	07 23 36.2	-0.2
NPS	**Neapolis**	**1.87**	**252**	⇓*i*P	**Pn**	07 23 14.4	+0.5
NPS				*e*S	**Sn**	07 23 36.2	-0.2
ELL	**Elmali**	**1.93**	**62**	*e*PN	**Pn**	07 23 13.4	-1.4
ELL	**Elmali**	**1.93**	**62**	*e*Pn	**Pn**	07 23 13.4	-1.4
GOLH	**Golhisar**	**1.99**	**45**	*i* P	**Pn**	07 23 16.9	+1.4
GOLH				*i* S	**Sn**	07 23 41.3	+2.0
GOLH	**Golhisar**	**1.99**	**45**	*i* P	**Pn**	07 23 16.9	+1.4
GOLH				*i* S	**Sn**	07 23 41.3	+2.0
SMG	**Samos**	**2.00**	**338**	⇓*i*P	**Pn**	07 23 15.5	-0.2
SMG	**Samos**	**2.00**	**338**	⇓*i*P	**Pn**	07 23 15.5	-0.2
SMG	**Samos**	**2.00**	**338**	⇓*i*P	**Pn**	07 23 15.5	-0.2
LAST	**Lasithi**	**2.01**	**251**	⇓*i*P	**Pn**	07 23 16.6	+0.8
LAST				*e*S	**Sn**	07 23 39.7	-0.1
LAST	**Lasithi**	**2.01**	**251**	⇓*i*P	**Pn**	07 23 16.6	+0.8
LAST				*e*S	**Sn**	07 23 39.7	-0.1
LAST	**Lasithi**	**2.01**	**251**	⇓*i*P	**Pn**	07 23 16.6	+0.8
LAST				*e*S	**Sn**	07 23 39.7	-0.1
DNZL	**Cakiroluk**	**2.09**	**29**	*i* P	**Pn**	07 23 16.3	-0.7
DNZL				*i* S	**Sn**	07 23 43.7	+1.8
DNZL	**Cakiroluk**	**2.09**	**29**	*i* P	**Pn**	07 23 16.3	-0.7
APE	**Apeiranthos**	**2.19**	**304**	*e*PN	**Pn**	07 23 17.1	-1.1
APE	**Apeiranthos**	**2.19**	**304**	⇓*i*P	**Pn**	07 23 18.2	0.0
APE				*e*S	**Sn**	07 23 42.7	-1.5
APE	**Apeiranthos**	**2.19**	**304**	⇓*i*P	**Pn**	07 23 18.2	0.0
APE				*e*S	**Sn**	07 23 42.7	-1.5
APE	**Apeiranthos**	**2.19**	**304**	*e*Pn	**Pn**	07 23 17.1	-1.1
APE	**Apeiranthos**	**2.19**	**304**	⇓*i*P	**Pn**	07 23 18.2	0.0
APE				*e*S	**Sn**	07 23 42.7	-1.5
IDI	**Anoyia**	**2.43**	**257**	⇓*i*P	**Pn**	07 23

SOC	**Sochi**	**0.69**	**221**⇑	*e*PG	Pg	07 29 06.0	+0.7
SOC				*e*S	Sg	07 29 18.0	+3.8
KIV	**Kislovodsk**	**1.69**	**94**	*e*PN	Pn	07 29 22.9	+0.8
KIV				*e*S	Sn	07 29 45.6	+1.6
SHAR	**Shatzhatmas**	**1.72**	**101**⇓	*e*PN	Pn	07 29 23.3	+0.9
SHAR				*e*S	Sn	07 29 45.8	+1.2
BEYR	**Belyy Ugol+**	**1.78**	**92**	*e*PN	Pn	07 29 24.1	+0.8
BEYR				*e*S	Sn	07 29 47.5	+1.2
PYA	**Pyatigorsk**	**1.96**	**91**	*e*PN	Pn	07 29 26.8	+1.1
PYA				*e*S	Sn	07 29 53.0	+2.5

NIED ***17*** *07:49:00,28°.20N×129°.90E,h11km,Mw3.8 Best double couple: M₀4.84000×10¹⁴ NP1:φs283.00000°,δ49.00000°, λ-117.00000°. NP2:φs140.00000°,δ48.00000°, λ-63.00000°.*

JMA 17 07:49:48.5±0.2,28°.20N×129°.93E,h24km±2km,M3.7, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JZK	**Kikaishima**	**0.12**	**18**	P	Pb	07 49 53.1	-0.1
JZK				*e*S	Sb	07 49 57.0	+0.6
JAM	**Amami Oshima**	**0.35**	**306**	P	Pb	07 49 56.3	0.0
JAM				*e*S	Sb	07 50 01.5	-0.1
JTK	**Tokunoshima**	**0.96**	**245**	P	Pb	07 50 06.6	+0.2
JTK				*e*S	Sb	07 50 18.6	-0.1
JNN	**Nakanoshima**	**1.64**	**358**	P	Pn	07 50 17.1	+1.3
JOW	**Kunigami**	**2.00**	**228**	P	Pn	07 50 22.0	+1.2
JIH	**Iheya**	**2.09**	**237**	P	Pn	07 50 23.3	+1.2
JTN	**Tanegashima 3**	**2.61**	**20**	P	Pn	07 50 31.4	+2.2
JTN				*e*S	Sn	07 51 04.4	+4.3

JMA 17 07:49:53.6±0.4,32°.41N×142°.56E,h0km,M3.8, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.42**	**288**	P	Pn	07 50 35.4	+1.1
BSO1	**Boso 1**	**2.60**	**330**	P	Pn	07 50 37.8	+0.9
BSO1				*e*S	Sn	07 51 11.6	+2.5
BSO2	**Boso 2**	**2.78**	**328**	*e*S	Sn	07 51 17.1	+3.5
BSO3	**Boso 3**	**2.94**	**325**	P	Pn	07 50 42.7	+1.2
BSO3				*e*S	Sn	07 51 19.9	+2.5
BSO4	**Boso 4**	**3.17**	**325**	P	Pn	07 50 47.1	+2.4
BSO4				*e*S	Sn	07 51 26.1	+2.8
JOD2	**Odawara 2**	**4.05**	**316**	P	Pn	07 50 58.4	+1.5
JOD2				*e*S	Sn	07 51 45.7	+0.6
JYN	**Shimob**	**4.54**	**314**	P	Pn	07 51 06.1	+2.5
JYN				*e*S	Sn	07 52 01.2	+4.1
JRY	**Ryogami san**	**4.70**	**321**	P	Pn	07 51 07.8	+2.0
JRY				*e*S	Sn	07 52 02.8	+1.7
JAG	**Ashikaga**	**4.76**	**328**	P	Pn	07 51 08.1	+1.6
JAG				*e*S	Sn	07 52 02.9	+0.5
JIE	**Ise**	**5.28**	**294**	P	Pn	07 51 17.3	+3.6
MAT	**Matsushiro**	**5.47**	**320**	P	Pn	07 51 19.1	+2.8
MAT				S	Sn	07 52 21.8	+1.9
MAT	**Matsushiro**	**5.47**	**320**	P	Pn	07 51 19.0	+2.7
JMM	**Marumori**	**5.63**	**346**	P	Pn	07 51 18.2	-0.4
JMM				*e*S	Sn	07 52 20.3	-3.7
JMK	**Ichinoseki**	**6.62**	**351**	P	Pn	07 51 30.8	-1.3
JMK				*e*S	Sn	07 52 44.4	-3.8

IDC 17 07:50:24.7±2.0,7°.88S×127°.97E,h0km,mb3.6/1, mb1 3.7/4,mb1mx3.5/17,mbtmp3.5/4,ML3.5/3,Error ellipse: s-maj=96.2km s-min=27.4km az=73.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.41**	**192**	Pn	Pn	07 52 55.9	+0.5
	0.4nm,0.3s,baz=17,slow=12,SNR=11						
FITZ				Sn	Sn	07 54 46.8	-6.0
	0.1nm,0.3s,baz=107,slow=19,SNR=2.5						
WRA	**Warramunga Arr**	**13.49**	**153**	Pn	Pn	07 53 37.5	+0.1
	0.2nm,0.3s,baz=325,slow=13,SNR=9.8						
WRA				Sn	Sn	07 56 01.2	-7.1
	0.6nm,0.3s,baz=331,slow=23,SNR=9.8						
ASAR	**Alice Springs**	**16.70**	**161**	Pn	Pn	07 54 19.7	-0.5
	0.2nm,0.3s,baz=342,slow=12,SNR=14						
ASAR				Sn	Sn	07 57 20.6	-5.8
	0.1nm,0.3s,baz=337,slow=22,SNR=4.0						
MKAR	**Makanchi Array**	**67.87**	**328**	P	P	08 01 25.0	+0.1
	0.2nm,0.3s,baz=131,slow=6.5,SNR=2.6						

IDC ***17*** *07:55:16.6±1.7,8°.31S×124°.75E,h0km,mb3.4/1, mb1 4.1/4,mb1mx3.7/18,mbtmp3.8/4,ML4.1/3,Error ellipse: s-maj=108.5km s-min=26.2km az=66.0*
NEIC ***17*** *07:55:26.8±3.4,8°.92S×124°.26E,h93km±37km,Error ellipse: s-maj=30.0km s-min=25.7km az=175.0*

ISC 17 07:55:30.7±2.4,8°.8S±0°.2×124°.8E±0°.1,h135km±22km,n8, σ1§16/10,Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**8.45**	**118**	*e*Pn	**Pn**	**07 57 31.7**	**+1.4**
KAKA				*e*Sn	**Sn**	**07 59 02.9**	**-1.1**
FITZ	**Fitzroy Crossi**	**9.24**	**175**	Pn	**Pn**	**07 57 37.5**	**-3.4**
	0.8nm,0.3s,baz=354,slow=10,SNR=14						
FITZ				Sn	Sx	07 59 13.9	
	2.5nm,0.3s,baz=148,slow=18,SNR=11						
WRA	**Warramunga Arr**	**14.40**	**141**	Pn	**Pn**	**07 58 48.5**	**+0.2**
	0.9nm,0.3s,baz=318,slow=14,SNR=19						
WRA				Sn	Sx	08 01 20.9	
	1.5nm,0.3s,baz=313,slow=23,SNR=10						
WRA	**Warramunga Arr**	**14.40**	**141**	Pn	**Pn**	**07 58 48.5**	**+0.2**
WRA				Sn	Sx	08 01 20.9	
WRAB	**Tennant Creek**	**14.40**	**141**	*e*Pn	**Pn**	**07 58 48.5**	**+0.2**
WRAB				*e*Sn	Sx	08 01 18.1	
ASAR	**Alice Springs**	**17.13**	**150**	P	**Pn**	**07 59 24.1**	**+2.0**
	0.7nm,0.3s,baz=328,slow=12,SNR=14						
ASAR				S	Sx	08 02 26.9	
	0.5nm,0.3s,baz=327,slow=23,SNR=8.1						
COEN	**Coen**	**18.73**	**107**	*e*Pn	**Pn**	**07 59 46.3**	**+5.2**
COEN				*e*S	**S**	**08 03 05.1**	**-0.3**
MKAR	**Makanchi Array**	**67.06**	**330**	P	**P**	**08 06 08.7**	**-0.6**
	0.1nm,0.3s,baz=131,slow=6.3,SNR=2.5						

ISCJB ***17*** *08:11:25.4±0.9,39°.49N±0°.03×16°.31E±0°.09,h101km±7km, Error ellipse: s-maj=11.6km s-min=5.3km az=6.2*
CSEM ***17*** *08:11:25.0±0.3,39°.43N×16°.10E,h100km,ML3.7/4,Error ellipse: s-maj=10.8km s-min=5.3km az=86.0*
ROM ***17*** *08:11:26.4±0.3,39°.47N×16°.22E,h93km±5km,Md2.6/19, Ml2.6/17,Error ellipse: s-maj=4.3km s-min=2.5km az=105.0*

ISC 17 08:11:25.7±0.9,39°.49N±0°.03×16°.31E±0°.09,h101km±8km, n42,σ0§76/57,Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CARO	**Carolei**	**0.25**	**197**	Pg	**Pn**	**08 11 40.0**	**-0.2**
CARO				Sg	**Sn**	**08 11 49.7**	**-1.3**
	264nm,0.3s						
CARO	**Carolei**	**0.25**	**197**	Pg	**Pn**	**08 11 40.0**	**-0.2**
CARO				Sg	**Sn**	**08 11 49.7**	**-1.3**
	264nm,0.3s						
SERS	**Sersale**	**0.54**	**147**	Pg	**Pn**	**08 11 42.4**	**+0.5**
SERS				Sg	**Sn**	**08 11 54.2**	**+0.2**
	141nm,0.3s						
SERS	**Sersale**	**0.54**	**147**	Pg	**Pn**	**08 11 42.4**	**+0.5**
SERS				Sg	**Sn**	**08 11 54.2**	**+0.2**
	141nm,0.3s						
LADO	**San Nicola del**	**0.56**	**111**	Pg	**Pn**	**08 11 42.3**	**+0.3**
LADO				Sg	**Sn**	**08 11 54.3**	**+0.1**
LADO	**San Nicola del**	**0.56**	**111**	Pg	**Pn**	**08 11 42.3**	**+0.3**
LADO				Sg	**Sn**	**08 11 54.3**	**+0.1**
ORI	**Oriolo Calabro**	**0.58**	**10**	Pg	**Pn**	**08 11 42.5**	**+0.3**
ORI				Sg	**Sn**	**08 11 54.5**	**-0.1**
	213nm,0.4s						
ORI	**Oriolo Calabro**	**0.58**	**10**	Pg	**Pn**	**08 11 42.5**	**+0.3**
ORI				Sg	**Sn**	**08 11 54.5**	**-0.1**
	213nm,0.4s						
GRI	**Girifalco**	**0.67**	**173**	Pg	**Pn**	**08 11 43.8**	**+0.8**
GRI				Sg	**Sn**	**08 11 56.7**	**+0.8**
	158nm,0.7s						
GRI	**Girifalco**	**0.67**	**173**	Pg	**Pn**	**08 11 43.8**	**+0.8**
SIRI	**Monte Sirino -**	**0.77**	**334**	Pg	**Pn**	**08 11 44.3**	**+0.4**
	65nm,0.3s						
CRAC	**Craco**	**0.88**	**6**	Pg	**Pn**	**08 11 45.5**	**+0.5**
CRAC				Sg	**Sn**	**08 12 00.3**	**+0.9**
	219nm,0.2s						
CRAC	**Craco**	**0.88**	**6**	Pg	**Pn**	**08 11 45.5**	**+0.5**
CRAC				Sg	**Sn**	**08 12 00.3**	**+0.9**
	219nm,0.2s						
MTSN	**Montesano sull**	**0.89**	**331**	Pg	**Pn**	**08 11 46.5**	**+1.5**
	46nm,0.4s						
MTSN	**Montesano sull**	**0.89**	**331**	Pg	**Pn**	**08 11 46.5**	**+1.5**
	46nm,0.4s						
MCEL	**Monticello**	**0.92**	**335**	Pg	**Pn**	**08 11 46.3**	**+0.9**
MCEL	**Monticello**	**0.92**	**335**	Pg	**Pn**	**08 11 46.3**	**+0.9**
BULG	**Bulgheria - Ca**	**0.93**	**310**	Pg	**Pn**	**08 11 45.5**	**0.0**
	153nm,0.4s						
BULG	**Bulgheria - Ca**	**0.93**	**310**	Pg	**Pn**	**08 11 45.5**	**0.0**
	153nm,0.4s						
JOPP	**Joppolo**	**0.94**	**201**	Pg	**Pn**	**08 11 45.5**	**-0.1**
JOPP				Sg	**Sn**	**08 11 59.4**	**-1.1**
	152nm,0.3s						
JOPP	**Joppolo**	**0.94**	**201**	Pg	**Pn**	**08 11 45.5**	**-0.1**
JOPP				Sg	**Sn**	**08 11 59.4**	**-1.1**
	152nm,0.3s						
PLAC	**Placanica**	**1.04**	**175**	Pg	**Pn**	**08 11 47.4**	**+0.7**
	68nm,0.4s						
PLAC	**Placanica**	**1.04**	**175**	Pg	**Pn**	**08 11 47.4**	**+0.7**
	68nm,0.4s						
MIGL	**Miglionico**	**1.12**	**5**	Pg	**Pn**	**08 11 47.4**	**-0.1**
CMPR	**Campora**	**1.14**	**317**	Pg	**Pn**	**08 11 47.8**	**+0.1**
	26nm,0.3s						
CMPR	**Campora**	**1.14**	**317**	Pg	**Pn**	**08 11 47.8**	**+0.1**
	26nm,0.3s						
MATE	**Matera**	**1.20**	**14**	Pg	**Pn**	**08 11 47.4**	**-1.0**
	114nm,0.2s						
CDRU	**Civita di Ruta**	**1.26**	**323**	Pg	**Pn**	**08 11 49.5**	**+0.3**
	20nm,0.2s						
CDRU	**Civita di Ruta**	**1.26**	**323**	Pg	**Pn**	**08 11 49.5**	**+0.3**
	20nm,0.2s						
CEL	**Celeste**	**1.27**	**195**	Pg	**Pn**	**08 11 49.4**	**+0.1**
	67nm,0.7s						
CEL	**Celeste**	**1.27**	**195**	Pg	**Pn**	**08 11 49.4**	**+0.1**
	67nm,0.7s						
TAR1	**Taranto**	**1.28**	**35**	*e*P	**Pn**	**08 11 48.3**	**-1.0**
MSRU	**Castanea**	**1.38**	**207**	Pg	**Pn**	**08 11 50.4**	**-0.1**
MSRU				Sg	**Sn**	**08 12 07.7**	**-1.6**
	159nm,0.4s						
MSRU	**Castanea**	**1.38**	**207**	Pg	**Pn**	**08 11 50.4**	**-0.1**
MSRU				Sg	**Sn**	**08 12 07.7**	**-1.6**
	159nm,0.4s						
SG1	**Sgolgore (BA)**	**1.38**	**12**	*e*P	**Pn**	**08 11 49.6**	**-0.9**
SOI	**Samo**	**1.43**	**188**	Pg	**Pn**	**08 11 51.8**	**+0.6**
	29nm,0.7s						
SOI	**Samo**	**1.43**	**188**	Pg	**Pn**	**08 11 51.8**	**+0.6**
	29nm,0.7s						
MPAZ	**Palizzi**	**1.55**	**189**	Pg	**Pn**	**08 11 53.3**	**+0.6**
	67nm,0.6s						
MPAZ	**Palizzi**	**1.55**	**189**	Pg	**Pn**	**08 11 53.3**	**+0.6**
	67nm,0.6s						
PE1	**Pezze di Greco**	**1.57**	**33**	*e*P	**Pn**	**08 11 51.7**	**-1.1**
CDT	**Castel del Mon**	**1.59**	**359**	*e*P	**Pn**	**08 11 51.9**	**-1.2**

ISCJB ***17*** *08:34:59.8±0.4,20°.58S±0°.04×68°.78W±0°.05,h112km, mb3.9/14,Error ellipse: s-maj=7.0km s-min=5.3km az=172.8*
GUC ***17*** *08:35:01.3±0.4,20°.53S×69°.03W,h117km±8km,ML4.9*
IDC ***17*** *08:35:01.7±0.6,20°.58S×68°.63W,h112km±4km,mb3.8/8, mb1 4.1/11,mb1mx4.0/17,mbtmp3.9/11,MS3.3/1, Ms1 3.2/1,ms1mx2.4/17,Error ellipse: s-maj=17.9km s-min=13.4km az=81.0*
NEIC ***17*** *08:35:01.4±0.4,20°.65S×68°.67W,mb4.3/10,Error ellipse: s-maj=12.8km s-min=8.4km az=76.0*

ISC 17 08:35:01.6±0.4,20°.56S±0°.04×68°.77W±0°.06,h114km, h114km±1.4km:pP-P,n41,σ1§40/44,mb3.9/14,1C-3D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMBC	**Humberston**	**1.09**	**285**	⇑*i*P	**Pn**	**08 35 22.1**	**-1.9**
HMBC				*i* S	**Sn**	**08 35 38.0**	**-3.0**
HMBC				AML	AML	08 35 39.3	
	comp=E,34μm,0.5s						
PSGC	**Pisagua**	**1.59**	**307**	⇓*i*P	**Pn**	**08 35 27.8**	**-1.9**
PSGC				*i* S	**Sn**	**08 35 47.6**	**-3.6**
PSGC				AML	AML	08 35 54.3	
	comp=N,8μm,0.5s						
MNMC	**Miæe Miæ**	**1.62**	**331**	⇓*i*P	**Pn**	**08 35 29.4**	**-0.7**
MNMC				*i* S	**Sn**	**08 35 50.7**	**-1.1**
MNMC				AML	AML	08 35 51.9	
	comp=E,22μm,0.5s						
PB04	**Plate Boundary**	**1.83**	**201**	*e*P	**Pn**	**08 35 35.9**	**+3.2**
PB04				*e*S	**Sn**	**08 36 02.0**	**+5.7**
PB04				AML	AML	08 36 12.4	
	comp=E,10μm,0.3s						
MECH	**Mejillones**	**2.98**	**211**	⇓*e*P	**Pn**	**08 35 46.8**	**-0.6**
MECH				*i* S	**Sn**	**08 36 21.6**	**-1.1**
MECH				AML	AML	08 36 34.7	
	comp=N,8μm,0.3s						
CEN1	**Los Morros**	**3.12**	**205**	*e*P	**Pn**	**08 35 49.7**	**+0.5**
CEN1				*i* S	**Sn**	**08 36 28.4**	**+2.4**
CEN1				AML	AML	08 36 41.6	
	comp=E,2μm,0.6s						
LPAZ	**La Paz**	**4.29**	**8**	P	**Pn**	**08 36 07.1**	**+2.2**
	comp=E,15nm,0.3s,baz=188,slow=6.6,SNR=241						
LPAZ				S	**Sn**	**08 36 56.9**	**+2.8**
	comp=E,5.1nm,0.3s,baz=198,slow=9.6,SNR=2.3						
LPAZ	**La Paz**	**4.29**	**8**	P	**Pn**	**08 36 07.1**	**+2.2**
LPAZ				S	**Sn**	**08 36 56.9**	**+2.8**
LCO	**Las Campanas**	**8.60**	**191**	*e*Pn	**Pn**	**08 36 59.9**	**-3.3**
	comp=E,23nm,0.6s						
LCO				*e*Sn	**Sn**	**08 38 33.5**	**-4.9**
SIV	**San Ignacio**	**8.61**	**59**	P	**Pn**	**08 37 00.9**	**-2.4**
	comp=E,33nm,0.3s,baz=252,slow=11,SNR=677						
CFAA	**Coronel Fontan**	**11.01**	**178**	P	**Pn**	**08 37 31.6**	**-4.2**
	comp=E,0.2nm,0.3s,baz=353,slow=15,SNR=25						
CFAA				S	**Sn**	**08 39 28.2**	**-8.7**
	comp=E,0.1nm,0.3s,baz=266,slow=16,SNR=3.6						
CPUP	**Vila Florida**	**11.97**	**121**	P	**Pn**	**08 37 47.4**	**-1.0**
	comp=E,1.5nm,0.3s,baz=288,slow=12,SNR=41						
TRQA	**Tornquist**	**18.40**	**163**	*e*P	**P**	**08 39 08.3**	**+0.5**
	comp=E,30nm,0.7s						
SPB	**Sao Paulo**	**20.00**	**103**	*e*Pn	**Pn**	**08 39 26.7**	**-1.4**
	comp=E,8.9nm,0.3s						
PLCA	**Paso Flores**	**20.17**	**184**	P	**P**	**08 39 28.0**	**+1.1**
	comp=E,20nm,0.9s,baz=9.0,slow=12,SNR=27						
PLCA				LR	LR	08 47 51.5	
	comp=E,73nm,18.8s,baz=53,slow=38						
WVT	**Waverly**	**59.19**	**342**	*e*P	**P**	**08 44 49.4**	**-1.2**
	comp=E,2.8nm,0.7s,mb4.4						
WVT				*e*pP	pP	08 45 18.3	0.0
TXAR	**Lajitas Array**	**59.94**	**325**	P	**P**	**08 44 55.9**	**0.0**
	comp=E,0.1nm,0.5s,mb3.1,baz=146,slow=6.6,SNR=3.8						
TXAR				pP	pP	08 45 23.6	0.0
	comp=E,0.2nm,0.7s,baz=161,slow=7.8,SNR=2.6						
FVM	**French Village**	**61.69**	**341**	*e*P	**P**	**08 45 07.0**	**-0.5**
	comp=E,2.5nm,0.5s,mb4.5						
FVM				*e*pP	pP	08 45 32.8	-2.6
FVM				*e*sP	sP	08 45 47.2	-0.7
SDCO	**Great Sand Dun**	**67.51**	**329**	*e*P	**P**	**08 45 46.4**	**+1.1**
	comp=E,2.6nm,1.1s,mb4.0						
DBIC	**Dimbokro**	**68.34**	**74**	P	**P**	**08 45 50.5**	**-0.6**
	comp=E,10.0nm,0.7s,mb4.8,baz=234,slow=7.2,SNR=9.7						
MSU	**Marysvale**	**71.48**	**325**	*e*P	**P**	**08 46 11.6**	**+1.8**
	comp=E,1.5nm,0.8s,mb3.9						
MSU				*e*pP	pP	08 46 40.7	+2.3
MSU				*e*sP	sP	08 46 52.0	+1.2
PDAR	**Pinedale Array**	**73.36**	**330**	P	**P**	**08 46 22.9**	**+2.1**
	comp=E,0.3nm,0.7s,mb3.2,baz=191,slow=4.1,SNR=2.9						
PDAR				pP	pP	08 46 48.7	-0.9
	comp=E,1.0nm,1.1s,baz=121,slow=8.7,SNR=3.5						
NVAR	**Mina Array Bea**	**74.84**	**322**	P	**P**	**08 46 31.1**	**+1.5**
	comp=E,0.4nm,0.7s,mb3.3,baz=152,slow=5.8,SNR=5.0						
NVAR				pP	pP	08 47 00.2	+1.9
	comp=E,0.4nm,0.7s,baz=156,slow=7.5,SNR=3.0						
NVAR				sP	sP	08 47 12.3	+1.7
	comp=E,0.8nm,0.7s,baz=159,slow=6.0,SNR=4.2						
NVAR	**Mina Array Bea**	**74.84**	**322**	P	**P**	**08 46 31.1**	**+1.5**
NVAR				pP	pP	08 47 00.2	+1.9
NVAR				sP	sP	08 47 12.3	+1.7
SCHQ	**Schefferville**	**75.10**	**1**	P	**P**	**08 46 30.1**	**-0.6**
	comp=E,1.3nm,0.8s,mb3.7,baz=214,slow=10,SNR=2.7						
SCHQ				pP	pP	08 46 58.9	-0.5
	comp=E,3.5nm,1.0s,baz=122,slow=8.3,SNR=4.1						
SCHQ	**Schefferville**	**75.10**	**1**	P	**P**	**08 46 30.1**	**-0.6**
SCHQ				pP	pP	08 46 58.9	-0.6
MCMT	**McKenzie Canyo**	**76.48**	**329**	*e*P	**P**	**08 46 40.2**	**+1.5**
	comp=E,0.4nm,0.8s,mb3.2						
TORD	**Torodi Ar. Bea**	**76.92**	**70**	P	**P**	**08 46 41.2**	**-0.6**
	comp=E,4.1nm,0.7s,mb4.3,baz=252,slow=5.5,SNR=33						
TORD				pP	pP	08 47 10.6	-0.2
	comp=E,4.8nm,0.7s,baz=258,slow=5.2,SNR=7.2						
EGMT	**Eagleton**	**77.52**	**333**	*e*P	**P**	**08 46 44.6**	**+0.2**
	comp=E,2.5nm,0.8s,mb4.0						
EGMT				*e*pP	pP	08 47 14.2	+0.7
BMO	**Blue Mountains**	**78.70**	**327**	*e*P	**P**	**08 46 52.3**	**+1.2**
	comp=E,0.6nm,0.7s,mb3.5						
BMO				*e*pP	pP	08 47 21.3	+1.1
FCC	**Fort Churchill**	**81.75**	**347**	*e*P	**P**	**08 47 07.2**	**+0.1**
FCC				*e*pP	pP	08 47 36.8	+0.4
EDM	**Edmonton**	**82.97**	**335**	*e*P	**P**	**08 47 13.3**	**-0.2**
EDM				*e*pP	pP	08 47 42.2	-0.7
YKA	**Yellowknife Ar**	**90.35**	**341**	P	**P**	**08 47 49.6**	**+0.4**
	comp=E,2.8nm,0.8s,mb4.5,baz=131,slow=4.8,SNR=12						
YKA				pP	pP	08 48 18.7	-0.2
	comp=E,2.5nm,0.9s,baz=134,slow=4.9,SNR=6.0						
YKA				sP	sP	08 48 30.7	-0.4
	comp=E,1.0nm,0.6s,baz=132,slow=4.6,SNR=3.4						
YKA	**Yellowknife Ar**	**90.35**	**341**	P	**P**	**08 47 49.6**	**+0.4**
YKA				pP	pP	08 48 18.8	-0.2
YKA				sP	sP	08 48 30.7	-0.4
ASAR	**Alice Springs**	**130.81**	**208**	PKP	PKPdf	08 54 00.4	+0.3
	comp=E,0.6nm,0.4s,baz=117,slow=1.7,SNR=14						
WRA	**Warramunga Arr**	**133.83**	**211**	PKP	PKPdf	08 54 06.4	+0.5
	comp=E,0.7nm,0.4s,baz=149,slow=1.7,SNR=17						
BVAR	**Borovoye Array**	**134.94**	**34**	PKP	PKPdf	08 54 08.4	+1.5
	comp=E,0.3nm,0.4s,baz=255,slow=5.7,SNR=3.1						
ZALV	**Zalesovo Beam**	**141.05**	**25**	PKP	PKPdf	08 54 19.4	+1.3
	comp=E,0.7nm,0.4s,baz=300,slow=2.9,SNR=3.9						
MK31	**Makanchi Array**	**144.79**	**35**	*e*PKPdf	PKPdf	08 54 24.4	-0.5
MKAR	**Makanchi Array**	**144.79**	**35**	PKP	PKPdf	08 54 25.1	+0.1
	comp=E,0.6nm,0.4s,baz=343,slow=3.8,SNR=10						
SONM	**Songino Array**	**152.51**	**7**	PKP	PKPdf	08 54 38.9	+1.6
	comp=E,0.3nm,0.4s,baz=243,slow=1.3,SNR=3.2						
SONM				PKPbc	PKPbc	08 54 45.3	+0.9
	comp=E,1.1nm,0.4s,baz=197,slow=0.4,SNR=6.1						

CSEM ***17*** *08:51:21.1,39°.43N×29°.71W,h0km,ML3.6,After PDA*

PDA 17 08:51:21.1±1.0,39°.43N×29°.71W,h0km,MD3.5,ML3.6, Error ellipse: s-maj=18.8km s-min=7.2km az=56.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCED	**Cedros**	**1.13**	**135**	*e*P	Pg	08 51 38.8	-3.9
PCED				*e*S	Sg	08 51 52.3	-5.0
PCED				A		08 51 55.0	
	376nm,0.4s						
PCED	**Cedros**	**1.13**	**135**	*e*P	Pg	08 51 38.8	-3.9
PCED				*e*S	Sg	08 51 52.3	-5.0
CALA	**Caldeira**	**1.16**	**137**	*e*P	Pg	08 51 39.7	-3.6
CALA	**Caldeira**	**1.16**	**137**	*e*P	Pg	08 51 39.7	-3.6
HOR	**Horta**	**1.24**	**137**	*e*P	Pg	08 51 40.8	-4.0
HOR				*e*S	Sg	08 51 55.8	-5.1
HOR	**Horta**	**1.24**	**137**	*e*P	Pg	08 51 40.8	-4.0
HOR				*e*S	Sg	08 51 55.8	-5.1
ROSA	**Rosais**	**1.35**	**121**	*e*P	Pg	08 51 42.2	-4.8
ROSA	**Rosais**	**1.35**	**121**	*e*P	Pg	08 51 42.2	-4.8
PCAN	**Candelaria**	**1.36**	**135**	*i* P	Pg	08 51 42.3	-4.9
PCAN				*i* S	Sg	08 51 58.8	-6.0
PCAN				A		08 52 06.1	
	407nm,0.3s						
PMAN	**Manadas**	**1.50**	**122**	*e*S	Sg	08 52 01.6	-7.6
PMAN				A		08 52 03.7	
	108nm,0.1s						
PMAN	**Manadas**	**1.50**	**122**	*e*S	Sg	08 52 01.6	-7.6
PDA	**Ponta Delgada**	**3.59**	**117**	*e*P	Pn	08 52 25.7	+7.7
PSMA	**Santa Maria**	**4.35**	**123**	*e*P	Pn	08 52 23.9	-4.6
PSMN	**Pico do Norte,**	**4.39**	**122**	*e*P	Pn	08 52 25.0	-4.0
PSMN	**Pico do Norte,**	**4.39**	**122**	*e*P	Pn	08 52 25.0	-4.0

GUC 17 08:56:02.8±0.6,23°.89S×67°.20W,h208km±52km,ML4.4, 2C,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**2.66**	**307**	*e*P	Pn	08 56 56.9	+8.0
PB04				*i* S	Sn	08 57 37.6	+13
PB04				AML	AML	08 57 43.2	
	comp=N,450nm,0.4s						
CEN1	**Los Morros**	**2.79**	**280**	*e*P	Pn	08 56 53.2	+2.7
CEN1				*i* S	Sn	08 57 31.4	+3.7
CEN1				AML	AML	08 57 33.7	
	comp=N,289nm,0.7s						
ANCH	**Antofagasta**	**2.94**	**273**	⇑*i*P	Pn	08 56 52.8	+0.6
ANCH				*i* S	Sn	08 57 31.9	+1.0
MECH	**Mejillones**	**3.08**	**284**	*i* P	Pn	08 56 55.6	+1.8
MECH				*e*S	Sn	08 57 35.8	+2.1
MECH				AML	AML	08 57 43.7	
	comp=E,810nm,0.3s						
PB01	**Plate Boundary**	**3.54**	**323**	⇑*i*P	Pn	08 57 01.4	+2.1
PB01				*i* S	Sn	08 57 45.9	+2.4
**HMB

0.1nm,0.3s,baz=272,slow=8.9,SNR=3.2
SRU San Rafael 15.33 103 *e*Pn Pn 09 06 09.2 +0.6
8.2nm,1.0s
PV01 Paradox Valley 17.14 104 *e*Pn Pn 09 06 32.5 +0.8
492nm,1.2s
ISCO Idaho Springs 18.52 96 *e*P Pn 09 06 49.0 +0.2
2.5nm,1.1s
YKA Yellowknife Ar 20.21 21 P P 09 07 08.0 +1.1
0.5nm,0.8s,baz=209,slow=11,SNR=2.7
FFC Flin Flon 20.71 50 *e*P P 09 07 11.7 -0.7
3.4nm,1.1s
TXAR Lajitas Array 25.61 117 P P 09 08 00.9 -0.8
0.4nm,0.9s,mb3.0,baz=297,slow=5.5,SNR=3.6
SCHQ Schefferville 40.83 52 LR LR 09 27 51.4
comp=Z,40nm,18.8s,baz=258,slow=37
TEIG Tepich 41.97 111 *e*P P 09 10 23.7 +0.2
2.0nm,0.4s,mb4.1

NNC 17 09:07:46.2±3.2, 54°.10N×86°.57E, h0km, mb3.6, mpv3.2, 5C-4D, Error ellipse: s-maj=25.5km s-min=15.8km az=53.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**5.93**	**238**	⇑Pn	Pn	09 09 16.0	+0.9
KURK	2.7nm,0.8s			⇑Sn	Sn	09 10 24.2	+0.6
KURK	2.8nm,0.8s			⇑Lg		09 10 55.9	
MK31	**Makanchi Array**	**7.80**	**202**	⇑Pn	Pn	09 09 41.5	+0.6
MK31	0.7nm,0.7s,baz=0.0,slow=0.1,SNR=5.5			⇓Sn	Sn	09 11 10.4	+0.6
MK31	1.0nm,0.7s,baz=26,slow=27,SNR=7.3			⇑Lg		09 11 55.7	
VOSK	**Vostochnaya**	**9.41**	**268**	⇓Pn	Pn	09 10 01.7	-1.3
VOSK	0.8nm,0.4s			⇓Sn	Sn	09 11 52.3	+2.9
ZRNK	**Zerenda**	**10.52**	**271**	⇓Sn	Sn	09 12 17.0	+0.4
	3.4nm,1.2s						

IDC **17** *09:12:46.8±0.8, 33°.10N×92°.00E, h0km, mb3.9/8, mb1 4.0/11, mb1mx3.9/26, mbtmp3.9/11, ML3.9/3, MS3.0/4, Ms1 3.0/4, ms1mx2.7/26, Error ellipse: s-maj=36.8km s-min=16.4km az=55.0*
ISCJB **17** *09:12:47.5±0.5, 33°.28N±0°.04×92°.28E±0°.08, h10km, mb3.8/9, MS2.8/2, Error ellipse: s-maj=9.6km s-min=5.9km az=11.5*
NEIC **17** *09:12:48.0±0.5, 33°.03N×92°.02E, h10km, mb3.8/4, Error ellipse: s-maj=13.1km s-min=7.3km az=76.0*
BJI **17** *09:12:48.2, 33°.23N×91°.95E, h16km, mB4.2/1, mb4.0/4, ML3.5/2*
DMN **17** *09:14:30.3±0.4, 27°.86N×86°.54E, h60km, Error ellipse: s-maj=19.4km s-min=4.8km az=15.0*
ISC 17 09:12:49.0±0.5, 33°.18N±0°.04×92°.15E±0°.08, h10km, n32, σ1§21/32, mb3.8/9, MS2.8/2, 1C, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.57**	**194**	Pg	**Pb**	**09 13 51.4**	**-0.9**
LSA				Sg	**Sg**	**09 14 42.5**	**-1.2**
LSA	comp=N,100nm,0.8s			smax			
LSA	comp=E,20nm,0.7s			smax			
LSA	**Lhasa**	**3.57**	**194**	*e*Pg	**Pb**	**09 13 51.8**	**-0.4**
LSA				*e*Sg	**Sg**	**09 14 43.9**	**+0.2**
TAPN	**Taplejung**	**6.96**	**215**	*e*P	**Pb**	**09 14 52.1**	**+2.1**
	comp=E,29nm,0.9s						
ODAN	**Odare**	**7.53**	**214**	*e*P	**Pb**	**09 14 52.5**	**-7.2**
JIRN	**Jiri**	**7.53**	**225**	*e*P	**Pn**	**09 14 43.8**	**+5.0**
GUN	**Gumba**	**7.53**	**227**	*e*P	**Pn**	**09 14 45.4**	**+6.5**
SHL	**Shillong**	**7.59**	**182**	*e*PKP	**Pn**	**09 14 42.5**	**+2.8**
SHL				*ex*	x	09 16 09.5	
KKN	**Kakani**	**8.00**	**230**	*e*P	**Pn**	**09 14 50.6**	**+5.4**
PKI	**Pulchoki**	**8.07**	**228**	*e*P	**Pn**	**09 14 50.2**	**+4.0**
DMN	**Daman**	**8.23**	**229**	*e*P	**Pn**	**09 14 53.6**	**+5.1**
GTA	**Gaotai**	**8.77**	**43**	⇑P	**Pn**	**09 14 57.4**	**+1.5**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MK31	**Makanchi Array**	**15.54**	**334**	*e*P	**Pn**	**09 16 30.1**	**+2.1**
MKAR	**Makanchi Array**	**15.54**	**334**	Pn	**Pn**	**09 16 26.3**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=143,slow=14,SNR=7.0						
MKAR	**Makanchi Array**	**15.54**	**334**	Pn	**Pn**	**09 16 26.3**	**-1.8**
CMAR	**Chiang Mai Arr**	**15.88**	**156**	Pn	**Pn**	**09 16 31.1**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=335,slow=14,SNR=9.8						
UCH	**Uchtor**	**16.60**	**308**	*e*Pn	**Pn**	**09 16 42.4**	**+0.7**
	comp=Z,7.3nm,0.9s						
AAK	**Ala-Archa**	**16.80**	**309**	LR	LR	09 24 15.9	
	comp=Z,70nm,21.6s,baz=62,slow=41						
SONM	**Songino Array**	**18.17**	**32**	P	**Pn**	**09 17 02.2**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=213,slow=12,SNR=17						
SONM				LR	LR	09 24 11.7	
	comp=Z,40nm,19.4s,baz=281,slow=37						
ULN	**Ulaanbaatar**	**18.49**	**33**	*e*P	**Pn**	**09 17 05.6**	**+0.5**
	comp=Z,4.0nm,1.0s						
KBL	**Kabul**	**19.23**	**280**	*e*P	**Pn**	**09 17 16.2**	**+1.9**
	comp=Z,8.1nm,0.8s						
KURK	**Kurchatov**	**20.15**	**334**	*e*P	**P**	**09 17 23.4**	**+0.2**
	comp=Z,4.0nm,0.8s						
ZALV	**Zalesovo Beam**	**21.41**	**348**	P	**P**	**09 17 35.8**	**-1.0**
	comp=Z,3.1nm,0.7s,mb3.7,baz=155,slow=11,SNR=6.0						
ZALV				LR	LR	09 25 31.5	
	comp=Z,19nm,20.2s,MS2.5,baz=282,slow=36						
BVAR	**Borovoye Array**	**25.23**	**328**	P	**P**	**09 18 14.3**	**-0.6**
	comp=Z,1.2nm,0.6s,mb3.6,baz=148,slow=8.7,SNR=5.9						
ABKAR	**Akbulak array**	**28.79**	**314**	P	**P**	**09 18 46.1**	**-0.8**
	comp=Z,0.3nm,0.4s,mb3.4						
AKTK	**Aktyubinsk**	**30.38**	**315**	P	**P**	**09 19 00.5**	**-0.5**
AKTO	**Aktyubinsk**	**30.38**	**315**	P	**P**	**09 19 00.5**	**-0.5**
	comp=Z,1.0nm,0.7s,mb3.6,baz=127,slow=10,SNR=4.5						
BRTR	**Keskin Array B**	**46.80**	**296**	P	**P**	**09 21 17.6**	**-1.2**
	comp=Z,1.4nm,0.8s,mb3.9,baz=100,slow=6.8,SNR=4.7						
ARCES	**ARCESS Array B**	**51.19**	**336**	P	**P**	**09 21 51.4**	**-0.6**
	comp=Z,0.8nm,0.6s,mb3.9,baz=81,slow=7.5,SNR=5.7						
NOA	**NORSAR Array B**	**57.31**	**325**	LR	LR	09 49 10.3	
	comp=Z,18nm,19.7s,MS3.2,baz=270,slow=38						
WRA	**Warramunga Arr**	**66.43**	**136**	P	**P**	**09 23 38.0**	**-0.6**
	comp=Z,1.7nm,0.8s,mb4.1,baz=330,slow=7.3,SNR=8.1						
ASAR	**Alice Springs**	**69.13**	**139**	P	**P**	**09 23 55.6**	**+0.1**
	comp=Z,1.8nm,0.7s,mb4.1,baz=328,slow=6.4,SNR=22						
TORD	**Torodi Ar. Bea**	**83.30**	**281**	P	**P**	**09 25 15.1**	**-1.4**
	comp=Z,1.1nm,1.0s,mb3.8,baz=54,slow=6.0,SNR=4.0						

KRSC 17 09:24:24.8±0.3, 56°.12N×163°.33E, h11km±10km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.30**	**287**	*i* P	Pg	09 24 31.0	+0.2
KBTR				*i* S	Sg	09 24 35.0	+0.1
SRKR	**Sorokina**	**1.32**	**295**	*e*P	Pn	09 24 48.8	-0.3
SRKR				*i* S	Sb	09 25 06.4	+0.1
ZLN	**Zelenaya**	**1.42**	**267**	*e*P	Pn	09 24 51.1	+0.6
ZLN				*i* S	Sn	09 25 10.0	+0.9
BZGR	**Bezymyannyi-Gr**	**1.49**	**264**	P	Pn	09 24 53.2	+1.8
BZGR				*i* S	Sn	09 25 13.4	+2.6
KLY	**Klyuchi**	**1.51**	**278**	*e*P	Pn	09 24 49.9	-1.8
KLY				*i* S	Sn	09 25 08.1	-3.2
KRSR	**Krestovskiy**	**1.55**	**275**	P	Pn	09 24 52.8	+0.5
KRSR				*i* S	Sn	09 25 13.3	+1.0
KPT	**Kopyto**	**1.75**	**266**	P	Pn	09 24 56.4	+1.4
KPT				*i* S	Sn	09 25 19.8	+2.5
BKI	**Bering**	**1.76**	**120**	*e*P	Pn	09 24 53.8	-1.3
BKI				*i* S	Sn	09 25 14.4	-3.0
KMNR	**Kamenistaya**	**1.78**	**259**	*e*P	Pn	09 24 57.4	+2.0
KMNR				*i* S	Sn	09 25 20.6	+2.6
MKZ	**Mys Kozlova**	**1.81**	**211**	*e*P	Pn	09 24 55.3	-0.6
MKZ				*i* S	Sn	09 25 17.0	-1.9
KOZ	**Kozyrevsk**	**1.94**	**270**	P	Pn	09 24 59.9	+2.3
KOZ				*i* S	Sn	09 25 25.9	+4.0
SRDR	**Sredinnyy**	**2.03**	**277**	P	Pn	09 25 00.0	+1.2
SRDR				*i* S	Sn	09 25 26.5	+2.4
NLC	**Nalytchevo**	**3.75**	**220**	P	Pn	09 25 23.1	+0.6
NLC				*i* S	Sn	09 26 06.5	-0.2
AVH	**Avacha**	**3.91**	**225**	P	Pn	09 25 27.5	+2.8
GNL	**Ganaly**	**3.95**	**234**	P	Pn	09 25 27.6	+2.4

ISCJB **17** *09:47:34.1±0.5, 47°.58N±0°.03×13°.15E±0°.04, h0km, Error ellipse: s-maj=4.3km s-min=3.1km az=141.2*
CSEM **17** *09:47:34.8±0.2, 47°.56N×13°.17E, h1km, ML2.5/5, Error ellipse: s-maj=4.1km s-min=2.9km az=136.0, Suspected Mining induced.*
VIE **17** *09:47:34.7±0.2, 47°.57N×13°.15E, h1km, mb1.5/7, ML2.0/7, Error ellipse: s-maj=1.7km s-min=1.2km az=131.0 4 km SSW of Golling Suspected Mining induced.*
BGR **17** *09:47:36.9±0.4, 47°.55N×13°.34E, h10km, ML1.7, Error ellipse: s-maj=8.9km s-min=5.6km az=106.0*
ISC 17 09:47:35.3±0.5, 47°.56N±0°.03×13°.17E±0°.04, h0km, n20, σ0§77/39, 6C-8D, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBA	**Koelnbreinsper**	**0.50**	**166**	*e*Pg	**Pg**	**09 47 44.7**	**-0.1**
KBA				*e*Sg	**Sg**	**09 47 52.5**	**+1.3**
KBA	**Koelnbreinsper**	**0.50**	**166**	⇓*i*Pg	**Pg**	**09 47 44.4**	**-0.4**
KBA	3.1nm,0.1s			⇓*i*Sg	**Sg**	**09 47 51.9**	**+0.6**
KBA	**Koelnbreinsper**	**0.50**	**166**	Pg	**Pg**	**09 47 44.7**	**-0.1**
KBA	15nm,0.3s			Sg	**Sg**	**09 47 51.9**	**+0.7**
MOA	**Molln**	**0.79**	**68**	⇓*i*Pg	**Pg**	**09 47 50.4**	**-0.1**
MOA	1.7nm,0.3s			⇑*i*Sg	**Sg**	**09 48 01.7**	**+0.9**
MOA	**Molln**	**0.79**	**68**	Pg	**Pg**	**09 47 50.4**	**-0.1**
MOA	1.7nm,0.3s			Sg	**Sg**	**09 48 01.6**	**+0.8**
ABTA	**Abfaltersbach**	**0.93**	**209**	⇓*i*Pg	**Pg**	**09 47 52.7**	**-0.4**
ABTA	2.2nm,0.3s			⇑*i*Sg	**Sg**	**09 48 05.4**	**+0.2**
ABTA	**Abfaltersbach**	**0.93**	**209**	Pg	**Pg**	**09 47 52.7**	**-0.4**
ABTA	2.2nm,0.3s			Sg	**Sg**	**09 48 05.4**	**+0.2**
WTTA	**Wattenberg**	**1.09**	**255**	*e*Sg	**Sg**	**09 48 16.7**	**+6.5**
WTTA	**Wattenberg**	**1.09**	**255**	⇑*i*Pg	**Pg**	**09 47 55.9**	**-0.2**
WTTA	1.3nm,0.1s			⇓*i*Sg	**Sg**	**09 48 09.6**	**-0.6**
WTTA	**Wattenberg**	**1.09**	**255**	Pg	**Pg**	**09 47 55.9**	**-0.2**
WTTA	1.3nm,0.1s			Sg	**Sg**	**09 48 09.6**	**-0.6**
GEC2	**GERESS Array S**	**1.33**	**15**	*e*Pg	**Pg**	**09 48 00.1**	**-0.7**
GEC2				*e*Sg	**Sg**	**09 48 19.5**	**+1.3**
GEC2	**GERESS Array S**	**1.33**	**15**	Pg	**Pg**	**09 48 00.1**	**-0.8**
GEC2				Sg	**Sg**	**09 48 19.5**	**+1.3**
WET	**Wettzell**	**1.60**	**353**	*e*Pg	**Pg**	**09 48 06.1**	**+0.1**
WET				*e*Sg	**Sg**	**09 48 26.4**	**-0.2**
WET	**Wettzell**	**1.60**	**353**	Pg	**Pg**	**09 48 06.1**	**+0.2**
WET				Sg	**Sg**	**09 48 26.4**	**-0.2**
FETA	**Feichten**	**1.75**	**253**	⇑*i*Pg	**Pg**	**09 48 08.3**	**-0.5**
FETA	0.4nm,0.2s			⇓*i*Sg	**Sg**	**09 48 33.0**	**+1.5**
FETA	**Feichten**	**1.75**	**253**	Pg	**Pg**	**09 48 08.3**	**-0.5**
FETA	0.4nm,0.2s			Sg	**Sg**	**09 48 33.0**	**+1.5**
CONA	**Conrad Observa**	**1.85**	**78**	⇓*i*Pn	**Pn**	**09 48 07.2**	**-1.1**
CONA	5.0nm,0.4s			⇑*i*Sg	**Sg**	**09 48 34.5**	**-0.3**
CONA	**Conrad Observa**	**1.85**	**78**	Pn	**Pn**	**09 48 07.2**	**-1.1**
CONA	5.0nm,0.4s			Sg	**Sg**	**09 48 34.5**	**-0.3**
DAVA	**Damuels**	**2.25**	**264**	⇑*i*Pg	**Pg**	**09 48 17.2**	**-1.3**
DAVA	1.6nm,0.2s			⇓*i*Sg	**Sg**	**09 48 48.4**	**+0.7**
DAVA	**Damuels**	**2.25**	**264**	Pg	**Pg**	**09 48 17.2**	**-1.3**
DAVA	1.6nm,0.2s			Sg	**Sg**	**09 48 48.4**	**+0.7**

ISCJB **17** *09:48:42.9±0.2, 18°.56S±0°.06×173°.17W±0°.04, h13km, mb4.9/58, MS4.5/28, Error ellipse: s-maj=9.0km s-min=4.6km az=148.9*
BJI **17** *09:48:43.9, 18°.40S×173°.30W, h16km, mB5.4/19, mb5.3/26, Ms5.1/19, Ms7 4.7/19*
NEIC **17** *09:48:46.0±3.1, 18°.41S×173°.28W, h22km±21km, mb4.9/33, Error ellipse: s-maj=10.6km s-min=5.3km az=137.0*
IDC **17** *09:48:47.0±3.1, 18°.66S×173°.26W, h32km±22km, mb4.5/15, mb1 4.7/15, mb1mx4.6/20, mbtmp4.5/15, MS4.3/14, Ms1 4.3/14, ms1mx4.0/34, Error ellipse: s-maj=21.7km s-min=13.7km az=150.0*
GCMT **17** *09:48:47.2±0.2, 18°.59S×172°.54W, h14km, MW4.9, Moment Tensor Solution. s34,c46; s78,c108; Moment tensor: Scale 10^16Nm; Mrr3.56±.16; Mθθ-1.04±.11; Mφφ-2.52±.11; Mrθ0.45±.25; Mrφ-0.89±.08; Mθφ0.59±.21; Best double couple: M0:3.30000×10^16 NP1:φs203.00000°, δ39.00000°, λ87.00000°. NP2:φs27.00000°, δ51.00000°, λ93.00000°. Principal axes: T 3.6500, Plg83.0000°, Azm314.0000°; N -0.6300, Plg2.0000°, Azm206.0000°; P -3.0200, Plg6.0000°, Azm116.0000°; Data Used: II IU IC CN G.*
SZGRF **17** *09:48:48.6, 18°.21S×172°.36W, h33km, Tonga Islands region*
MOS **17** *09:48:48.9±1.1, 18°.29S×173°.42W, h33km, mb5.2/16, MS4.6/9, Error ellipse: s-maj=13.1km s-min=8.4km az=57.1*
ISC 17 09:48:44.2±3.7, 18°.60S±0°.06×173°.15W±0°.05, h12km±22km, h14km±1.3km: pP-P, n516, σ0§60/403, mb4.9/58, MS4.5/28, 147C-142D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.84**	**16**	Pn	**Pn**	**09 49 51.9**	**-5.0**
AFI	3.5nm,0.3s,baz=342,slow=16,SNR=6.8			Sn	**Sn**	**09 50 40.3**	**-13**
AFI	12nm,0.3s,baz=292,slow=17,SNR=6.9			T		09 54 58.9	
AFI	16nm,0.3s,baz=296,slow=20,SNR=5.9						
AFI	**Afiamalu**	**4.84**	**16**	*e*Pn	**Pn**	**09 49 55.4**	**-1.5**
AFI				*e*Sn	**Sn**	**09 50 54.5**	**+1.6**
RAR	**Rarotonga**	**12.85**	**104**	Pn	**Pn**	**09 51 36.8**	**-10**
RAR	1.3nm,0.3s,baz=231,slow=6.9,SNR=6.2			LR	LR	09 55 05.1	
	comp=Z,2μm,21.2s,baz=284,slow=29						
DZM	**Mont Dzumac**	**19.44**	**256**	*e*P	**Pn**	**09 53 11.7**	**-0.1**
DZM	141nm,1.2s			*e*LR	LR	09 57 48.5	
	1μm,27.6s						
DZM	**Mont Dzumac**	**19.44**	**256**	*e*P	**Pn**	**09 53 12.0**	**+0.2**
DZM	**Mont Dzumac**	**19.44**	**256**	*e*P	**Pn**	**09 53 12.3**	**+0.5**
	46nm,0.6s						
URZ	**Urewera**	**21.35**	**201**	P	**P**	**09 53 30.4**	**-0.8**
	42nm,1.1s,mb4.7,baz=0.0,slow=9.1,SNR=5.5						
URZ	**Urewera**	**21.35**	**201**	*e*P	**P**	**09 53 32.8**	**+1.5**
	64nm,1.0s,mb4.9						
PPT	**Papeete**	**22.43**	**91**	*e*LR	LR	09 58 46.3	
	2μm,26.5s,baz=264						
PPT	**Papeete**	**22.43**	**91**	LR	LR	10 01 14.0	
	comp=Z,763nm,18.6s,MS4.2,baz=249,slow=33						
TBI	**Tubuai**	**22.61**	**106**	*e*LR	LR	09 58 42.8	
	2μm,29.8s,baz=280						
QRZ	**Quartz Range**	**25.34**	**206**	P	**P**	**09 54 15.0**	**+4.2**
QRZ	**Quartz Range**	**25.34**	**206**	PN	**P**	**09 54 15.0**	**+4.1**
THZ	**Tophouse**	**25.98**	**204**	P	**P**	**09 54 11.8**	**-4.8**
THZ	**Tophouse**	**25.98**	**204**	PN	**P**	**09 54 23.0**	**+6.4**
DSZ	**Denniston Nort**	**26.41**	**206**	P	**P**	**09 54 14.9**	**-5.6**
DSZ	**Denniston Nort**	**26.41**	**206**	PN	**P**	**09 54 25.7**	**+5.2**
LTZ	**Lake Taylor**	**27.09**	**204**	PN	**P**	**09 54 31.5**	**+4.8**
HNR	**Honiara**	**27.61**	**286**	LR	LR	10 04 00.2	
	comp=Z,282nm,18.3s,MS3.9,baz=302,slow=33						
RPZ	**Rata Peaks**	**28.35**	**205**	P	**P**	**09 54 44.0**	**+6.1**
	20nm,0.6s,mb4.9,baz=302,slow=3.4,SNR=18						
RPZ	**Rata Peaks**	**28.35**	**205**	*e*P	**P**	**09 54 44.7**	**+6.7**
	29nm,0.7s,mb5.0						
RPZ	**Rata Peaks**	**28.35**	**205**	PN	**P**	**09 54 44.5**	**+6.6**
FOZ	**Fox Glacier**	**28.79**	**206**	P	**P**	**09 54 45.9**	**+4.1**
FOZ	**Fox Glacier**	**28.79**	**206**	PN	**P**	**09 54 45.9**	**+4.1**
EIDS	**Eidsvold**	**33.77**	**252**	*e*P	**P**	**09 55 25.2**	**-0.7**
	26nm,1.2s,mb5.0						
ARMA	**Armidale**	**34.00**	**243**	*e*P	**P**	**09 55 27.3**	**-0.6**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKT	**Rikitea**	**35.89**	**104**	*e*LR	LR	10 04 49.6	
	1μm,28.2s,baz=276						
CNB	**Canberra Magne**	**37.07**	**236**	⇓*i*P	**P**	**09 55 53.8**	**-0.4**
CAN	**Canberra**	**37.36**	**236**	*e*P	**P**	**09 55 56.1**	**-0.6**
CAN				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.8						
CAN	**Canberra**	**37.36**	**236**	*e*P	**P**	**09 55 56.1**	**-0.5**
	comp=Z,17nm,1.1s,mb4.8						
CTA	**Charters Tower**	**38.27**	**261**	*e*P	**P**	**09 56 02.7**	**-1.9**
	comp=Z,12nm,0.8s,mb4.7						
CTA	**Charters Tower**	**38.27**	**261**	P	**P**	**09 56 02.8**	**-1.7**
	comp=Z,17nm,1.0s,mb4.8,baz=96,slow=11,SNR=13						
CTA				LR	LR	10 09 32.0	
	comp=Z,249nm,20.4s,MS4.0,baz=90,slow=33						
CTAO	**Charters Tower**	**38.27**	**261**	*e*P	**P**	**09 56 03.7**	**-0.9**
CTAO				pmax	pmax		
	comp=Z,35nm,1.2s,mb5.0						
CTAO	**Charters Tower**	**38.27**	**261**	*e*P	**P**	**09 56 03.7**	**-0.9**
	comp=Z,35nm,1.2s,mb5.0						
CTAO	**Charters Tower**	**38.27**	**261**	P	**P**	**09 56 03.2**	**-1.4**
	comp=Z,28nm,1.2s,mb4.9						
STKA	**Stephens Creek**	**42.73**	**243**	*e*P	**P**	**09 56 40.2**	**-1.1**
	comp=Z,8.1nm,1.4s,mb4.3						
STKA	**Stephens Creek**	**42.73**	**243**	P	**P**	**09 56 39.5**	**-1.8**
	comp=Z,10nm,1.1s,mb4.5,baz=58,slow=4.4,SNR=6.8						
STKA				LR	LR	10 11 40.0	
	comp=Z,466nm,19.2s,MS4.4,baz=33,slow=32						
STKA	**Stephens Creek**	**42.73**	**243**	P	**P**	**09 56 39.5**	**-1.8**
STKA				LR	LR	10 11 40.0	
WRAB	**Tennant Creek**	**49.41**	**259**	*e*P	**P**	**09 57 32.6**	**-1.6**
WRAB				pmax	pmax		
	comp=Z,49nm,1.6s,mb5.3						
WRAB	**Tennant Creek**	**49.41**	**259**	*e*P	**P**	**09 57 32.6**	**-1.6**
	comp=Z,49nm,1.6s,mb5.3						
WRAB	**Tennant Creek**	**49.41**	**259**	P	**P**	**09 57 32.6**	**-1.6**
	comp=Z,19nm,1.5s,mb4.9						
ASAR	**Alice Springs**	**49.42**	**254**	P	**P**	**09 57 32.9**	**-1.3**
	comp=Z,26nm,0.9s,mb5.3,baz=88,slow=8.1,SNR=150						
ASAR				PcP	PcP	09 58 56.2	-0.3
	comp=Z,2.0nm,0.7s,baz=95,slow=5.7,SNR=3.6						
ASAR				S	**S**	**10 04 37.6**	**-3.7**
	comp=Z,0.6nm,0.8s,baz=86,slow=15,SNR=4.5						
WRA	**Warramunga Arr**	**49.42**	**259**	P	**P**	**09 57 32.2**	**-2.0**
	comp=Z,6.3nm,0.6s,mb4.8,baz=97,slow=8.5,SNR=59						
WRA				S	**S**	**10 04 38.0**	**-3.4**
	comp=Z,1.4nm,1.0s,baz=94,slow=14,SNR=6.0						
KAKA	**Kakadu**	**52.56**	**268**	*e*P	**P**	**09 57 54.5**	**-3.4**
	comp=Z,7.5nm,0.6s,mb4.8						
KAKA	**Kakadu**	**52.56**	**268**	*e*P	**P**	**09 57 57.2**	**-0.8**
	comp=Z,23nm,0.6s,mb5.3						
KAKA	**Kakadu**	**52.56**	**268**	P	**P**	**09 57 56.4**	**-1.5**
	comp=Z,223nmcomp=Z,20nm,1.0s,mb5.0						
KNA	**Kununurra**	**55.36**	**263**	P	**P**	**09 58 17.6**	**-0.8**
FITZ	**Fitzroy Crossi**	**57.84**	**260**	LR	LR	10 21 53.1	
	comp=Z,161nm,18.4s,MS4.2,baz=99,slow=34						
SBA	**Scott Base**	**60.10**	**185**	*e*P	**P**	**09 58 53.8**	**+3.0**
SBA				pmax	pmax		
	comp=Z,151nm,3.0s						
SBA	**Scott Base**	**60.10**	**185**	*e*P	**P**	**09 58 53.8**	**+3.0**
	comp=Z,151nm,3.0s						
QSPA	**South Pole Qui**	**71.47**	**180**	*e*P	**P**	**10 00 05.7**	**+1.7**
	comp=Z,15nm,1.3s,mb4.8						
MJAR	**Matsushiro Arr**	**71.53**	**320**	P	**P**	**10 00 04.3**	**-0.7**
	comp=Z,6.4nm,1.0s,mb4.5,baz=161,slow=5.6,SNR=14						
MJAR				LR	LR	10 28 33.6	
	comp=Z,167nm,19.6s,MS4.3,baz=105,slow=33						
MAJO	**Matsushiro**	**71.53**	**320**	*e*P	**P**	**10 00 05.7**	**+0.7**
MAJO				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.9						
MAJO	**Matsushiro**	**71.53**	**320**	*e*P	**P**	**10 00 05.7**	**+0.6**
	comp=Z,20nm,1.2s,mb4.9						
MAT	**Matsushiro**	**71.53**	**320**	P	**P**	**10 00 05.1**	**+0.1**
MAT				S	S	10 09 22.0	-1.8
CIS	**Catalina Islan**	**73.49**	**45**	⇑P	**P**	**10 00 16.2**	**-0.6**
	baz=74						
MURC	**Murrieta**	**74.42**	**46**	⇓P	**P**	**10 00 22.8**	**+0.6**
	baz=75						
MONP	**Monument Peak**	**74.55**	**47**	⇑P	**P**	**10 00 23.4**	**+0.4**
	baz=75						
MIR	**Mirnyy**	**74.62**	**204**	*e*P	**P**	**10 00 24.0**	**+1.1**
MIR				pmax	pmax		
	comp=Z,34nm,1.2s,mb5.2						
EDW2	**Edwards Air Fo**	**74.63**	**44**	⇑P	**P**	**10 00 23.3**	**-0.1**
	baz=75						
ISA	**Isabella**	**74.78**	**44**	⇓P	**P**	**10 00 24.4**	**+0.1**
	baz=75						
ISA	**Isabella**	**74.78**	**44**	*e*P	**P**	**10 00 23.9**	**-0.3**
PFO	**Pinyon Flat Ob**	**74.93**	**46**	⇑P	**P**	**10 00 25.4**	**+0.2**
	baz=75						
PFO	**Pinyon Flat Ob**	**74.93**	**46**	*e*P	**P**	**10 00 25.2**	**+0.1**
CMB	**Columbia Colle**	**75.01**	**41**	*e*P	**P**	**10 00 25.7**	**+0.2**
CMB				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
CMB	**Columbia Colle**	**75.01**	**41**	*e*P	**P**	**10 00 25.7**	**+0.2**
	comp=Z,4.6nm,1.0s,mb4.4						
WDC	**Whiskeytown Da**	**75.34**	**37**	*e*P	**P**	**10 00 32.2**	**+4.8**
PET	**Petropavlovsk**	**75.39**	**343**	*e*P	**P**	**10 00 29.1**	**+1.8**
PET				*e*S	S	10 10 05.7	-1.0
PET				pmax	pmax		
	comp=Z,100nm,15.3s						
PET				MLR	MLR		
	comp=Z,300nm,16.0s,MS4.7						
PET				MLR	MLR		
	comp=Z,400nm,21.0s						
BELC	**Belle Mtn. Jos**	**75.47**	**46**	⇑P	**P**	**10 00 28.0**	**-0.3**
	baz=76						
BC3	**Big Chuckawall**	**75.65**	**47**	⇑P	**P**	**10 00 29.5**	**+0.2**
	baz=76						
MPMC	**Manual Prospec**	**75.66**	**44**	⇑P	**P**	**10 00 28.8**	**-0.5**
	baz=76,SNR=9.5						
GSC	**Goldstone**	**75.67**	**45**	⇑P	**P**	**10 00 29.5**	**+0.1**
	baz=76						
GSC	**Goldstone**	**75.67**	**45**	*e*P	**P**	**

KSM Kuching 77.73 276 eP P 10 00 43.2 +1.7
comp=Z,130nm,1.4s,mb5.7
R10A Warm Springs 77.73 42 ⇑P P 10 00 40.4 -0.6
baz=78
U12A Valley of Fire 77.82 45 ⇑P P 10 00 41.6 +0.1
baz=78
T11A Corn Creek, Al 77.83 44 ⇑P P 10 00 40.8 -0.8
baz=78,SNR=9.0
X14A Yava 77.87 47 ⇑P P 10 00 42.1 +0.3
baz=78
V13A Grand Canyon W 77.87 46 ⇑P P 10 00 41.8 0.0
baz=78
217A Green Valley 77.94 50 ⇓P P 10 00 42.2 -0.1
baz=78
Y15A Casa Rosa Ranc 77.98 48 ⇓P P 10 00 41.9 -0.6
baz=78,SNR=15
W14A Seligman 78.14 46 ⇑P P 10 00 43.0 -0.3
baz=78,SNR=6.6
U13A Pakoon Wash 78.20 45 ⇓P P 10 00 43.2 -0.4
baz=78,SNR=15
R11A Troy Canyon, C 78.22 43 ⇑P P 10 00 43.3 -0.4
baz=78
TUC Tucson 78.24 50 eP P 10 00 44.1 +0.2
TUC pmax pmax
comp=Z,12nm,1.4s,mb4.6
TUC Tucson 78.24 50 eP P 10 00 44.1 +0.1
comp=Z,12nm,1.4s,mb4.6
S12A Delamar Landin 78.28 44 ⇑P P 10 00 43.9 -0.1
baz=78
Z16A Peralta Trail, 78.31 49 ⇑P P 10 00 44.3 0.0
baz=78
X15A Humboldt 78.34 47 ⇑P P 10 00 43.7 -0.7
baz=78,SNR=11
V14A Boquillas Ranc 78.35 46 ⇓P P 10 00 44.1 -0.4
baz=78,SNR=8.8
318A Bisbee 78.38 51 ⇑P P 10 00 44.5 -0.3
baz=78
117A Oracle 78.40 50 ⇑P P 10 00 44.1 -0.7
baz=79,SNR=6.1
P10A Eureka 78.41 41 ⇓P P 10 00 44.2 -0.5
baz=78
Q11A Duckwater 78.47 42 ⇑P P 10 00 44.2 -0.9
baz=79,SNR=11
Y16A Circle Bar Ran 78.55 48 ⇓P P 10 00 44.8 -0.8
baz=79,SNR=9.0
T13A Saint George 78.57 45 ⇓P P 10 00 45.0 -0.7
baz=79,SNR=12
KSRS Korea Array 78.60 316 P P 10 00 46.5 +0.7
comp=Z,18nm,1.1s,mb4.9,baz=133,slow=6.2,SNR=48
U14A Mt Trumbull 78.73 45 ⇑P P 10 00 46.2 -0.3
baz=79,SNR=14
WVOR Wild Horse Val 78.78 38 eP P 10 00 46.4 -0.3
WVOR pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
WVOR Wild Horse Val 78.78 38 eP P 10 00 46.4 -0.3
comp=Z,4.6nm,0.9s,mb4.4
R12A Pony Springs, 78.84 43 ⇓P P 10 00 46.6 -0.5
baz=79,SNR=12
X16A Lo Mia Camp, P 78.86 48 ⇓P P 10 00 47.1 -0.2
baz=79,SNR=13
319A Douglas 78.87 52 ⇓P P 10 00 47.3 -0.2
baz=79
Y17A Roosevelt 78.91 49 ⇓P P 10 00 47.7 +0.1
baz=79
S13A Holt Ranch, En 78.91 44 ⇓P P 10 00 47.0 -0.5
baz=79,SNR=9.8
118A Homack Ranch, 79.00 50 ⇓P P 10 00 48.2 +0.1
baz=79
V15A Kaibab Nationa 79.09 46 ⇓P P 10 00 49.0 +0.4
baz=79
T14A Hurricane 79.14 45 ⇓P P 10 00 48.3 -0.5
baz=79,SNR=6.9
W16A Flagstaff 79.15 47 ⇓P P 10 00 49.1 +0.2
baz=79
R13A O'Grain Ranch, 79.18 44 ⇑P P 10 00 48.4 -0.5
baz=79
219A White Tail Can 79.20 51 ⇑P P 10 00 49.1 -0.2
baz=79
O11A Cowboy Ranch, 79.21 41 ⇓P P 10 00 48.6 -0.5
baz=79
CCUT Cedar City 79.23 44 eP P 10 00 49.8 +0.5
X17A Forest Lakes 79.26 48 ⇑P P 10 00 49.1 -0.5
baz=79,SNR=9.3
P12A McGill 79.30 42 ⇑P P 10 00 49.7 +0.1
baz=79
ARUT Antelope Range 79.31 44 eP P 10 00 50.4 +0.7
ARUT pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
ARUT Antelope Range 79.31 44 eP P 10 00 50.4 +0.7
comp=Z,6.0nm,1.1s,mb4.4
I07A Izee 79.31 36 ⇑P P 10 00 49.4 -0.1
baz=80
U15A North Rim 79.33 46 ⇑P P 10 00 49.3 -0.6
baz=80,SNR=10
J08A Circle Bar Ran 79.45 37 ⇑P P 10 00 50.7 +0.3
baz=80
S14A Cedar City 79.47 44 ⇓P P 10 00 50.5 0.0
baz=80
M10A I.L. Ranch, Tu 79.48 40 ⇑P P 10 00 50.8 +0.3
baz=80
WUAZ Wupatki 79.48 47 ⇑P P 10 00 50.7 0.0
baz=80
WUAZ Wupatki 79.48 47 eP P 10 00 51.0 +0.3
Y18A Canyon Day Jun 79.53 49 ⇑P P 10 00 51.0 0.0
baz=80,SNR=8.1
119A Ashpeak Ranch, 79.55 50 ⇓P P 10 00 51.3 +0.2
baz=80
Q13A Wheeler Ranch, 79.58 43 ⇓P P 10 00 51.1 0.0
baz=80
T15A Red Dirt Ranch 79.59 45 ⇑P P 10 00 51.1 -0.2
baz=80,SNR=14
220A Playas Peak, P 79.69 51 ⇑P P 10 00 51.9 0.0
baz=80,SNR=7.3
L10A Juniper Basin 79.85 39 ⇓P P 10 00 52.5 -0.1
baz=80
O12A Currie 79.86 41 ⇑P P 10 00 52.9 +0.3
baz=80
P13A Bates Ranch, G 79.86 42 ⇓P P 10 00 52.9 +0.2
baz=80
R14A James Farms, M 79.86 44 ⇑P P 10 00 52.9 +0.2
baz=80
M11A Holland Ranch, 79.88 40 ⇑P P 10 00 53.4 +0.7
baz=80
120A U Bar Ranch, L 79.93 51 ⇑P P 10 00 53.8 +0.6
baz=80
V17A Tonalea, Kykot 79.94 47 ⇓P P 10 00 53.0 -0.2
baz=80,SNR=10
S15A Panguitch 79.96 45 ⇑P P 10 00 53.9 +0.7
baz=80
U16A Tuba City 79.98 47 ⇑P P 10 00 53.8 +0.4
baz=80
D05A Enumclaw 79.99 33 ⇑P P 10 00 53.7 +0.5
baz=80
N12A Clover Valley, 80.01 41 ⇓P P 10 00 53.4 0.0
baz=80
N12A Clover Valley, 80.01 41 eP P 10 00 53.3 -0.1
comp=Z,5.0nm,1.3s,mb4.3
K10A MacKenzie Ranc 80.03 38 ⇓P P 10 00 53.2 -0.3
baz=80
Q14A Sevier Lake (B 80.08 43 ⇓P P 10 00 53.7 -0.1
baz=80,SNR=15
T16A Glen Canyon Da 80.17 46 ⇓P P 10 00 54.7 +0.3
baz=80
Y19A Nutrioso 80.18 49 ⇑P P 10 00 54.5 0.0
baz=80,SNR=8.6
Z20A Nine Sixteen R 80.24 50 ⇑P P 10 00 54.8 0.0
baz=80
R15A Junction 80.31 44 ⇓P P 10 00 55.4 +0.3
baz=80
L11A Cat Creek Ranc 80.33 39 ⇓P P 10 00 55.2 0.0
baz=80
G08A Pilot Rock 80.38 35 ⇑P P 10 00 54.8 -0.5
baz=80,SNR=8.0
X19A St. Johns 80.39 49 ⇓P P 10 00 55.7 +0.1
baz=80
M12A Wells 80.41 40 ⇑P P 10 00 55.3 -0.2
baz=80
S16A Weppner Ranch, 80.50 45 ⇑P P 10 00 55.7 -0.4
baz=81
K11A Parker Ranch, 80.52 39 ⇓P P 10 00 55.9 -0.2
baz=81
N13A Wendover, West 80.53 41 ⇓P P 10 00 56.2 0.0
baz=81
N13A Wendover, West 80.53 41 eP P 10 00 56.1 -0.1
comp=Z,14nm,1.1s,mb4.8
MSU Marysvale 80.53 44 eP P 10 00 57.0 +0.7
U17A Shonto 80.54 46 ⇑P P 10 00 56.7 +0.3
baz=81
P14A Drum Mountains 80.54 43 ⇑P P 10 00 56.3 0.0
baz=81,SNR=7.6
121A Cookes Peak, D 80.54 51 ⇑P P 10 00 56.6 +0.1
baz=81
V18A Ganado 80.58 47 ⇑P P 10 00 56.9 +0.3
baz=81,SNR=7.3
T17A Navajo Res., N 80.65 46 ⇓P P 10 00 57.1 +0.2
baz=81
Q15A Fillmore 80.67 44 ⇓P P 10 00 57.1 +0.1
baz=81
HAWA Hanford 80.76 34 eP P 10 00 57.1 -0.3
Y20A Horse Springs, 80.78 50 ⇓P P 10 00 57.6 -0.2
baz=81,SNR=13
M13A Montello 80.84 41 ⇑P P 10 00 57.9 0.0
baz=81
S17A Black Ridge (B 80.99 45 ⇓P P 10 00 58.7 -0.1
baz=81
U18A Rough Rock, Ch 80.99 47 ⇑P P 10 00 58.7 -0.1
baz=81,SNR=6.4
X20A Quemado 81.01 49 ⇓P P 10 00 58.8 -0.1
baz=81
G09A Cove 81.02 36 ⇓P P 10 00 58.0 -0.8
baz=81,SNR=9.4
BMO Blue Mountains 81.03 37 eP P 10 00 58.1 -0.7
DUG Dugway 81.04 42 eP P 10 01 01.0 +2.0
ETW Entiat 81.11 33 eP P 10 00 59.5 +0.3
HABR Khabarovsk 81.16 328 eP P 10 00 59.1 -0.3
HABR e pP 10 01 04.2 +0.7
HABR e*SP sP 10 01 13.0 +8.1
HABR 10 04 04.1
HABR ePPP 10 05 53.6
HABR eS S 10 11 07.4 -1.6
HABR SS SS 10 16 22.9 -1.8
HABR pmax pmax
comp=N,14nm,1.3s
HABR pmax pmax
comp=E,46nm,1.8s
HABR pmax pmax
comp=Z,50nm,1.5s,mb5.2
HABR MLR MLR
comp=Z,155nm,20.0s,MS4.4
W20A Ramah, 81.30 49 ⇓P P 10 01 00.2 -0.3
baz=81,SNR=14
Y21A Point of Rocks 81.34 50 ⇓P P 10 01 00.8 +0.1
baz=82
J12A Stokes Ranch, 81.36 39 ⇑P P 10 01 00.5 -0.1
baz=82
U19A Dine' College, 81.39 47 ⇓P P 10 01 00.7 -0.2
baz=82,SNR=6.4
G10A Bishop Farm, J 81.40 36 ⇑P P 10 01 00.6 -0.2
baz=82
Q16A Castle Valley 81.42 44 ⇑P P 10 01 01.0 -0.1
baz=82
M14A Sheep Mountain 81.43 41 ⇓P P 10 01 00.9 -0.1
baz=82
R17A Hanksville Air 81.46 45 ⇓P P 10 01 01.3 0.0
baz=82
Z22A Elephant Butte 81.50 51 ⇓P P 10 01 01.0 -0.6
baz=82
D08A Wollman Farm, 81.50 34 ⇑P P 10 01 01.4 +0.1
baz=82
I12A Atlanta 81.65 38 ⇑P P 10 01 01.6 -0.6
baz=82,SNR=8.6
324A Moseley Ranch, 81.75 53 ⇓P P 10 01 02.2 -0.7
baz=82,SNR=9.4
F10A Beach Ranch, E 81.75 36 ⇑P P 10 01 01.9 -0.7
baz=82
T19A Beclabito 81.78 47 ⇓P P 10 01 02.3 -0.7
baz=82,SNR=7.2
Y22A Socorro 81.82 50 ⇓P P 10 01 03.4 +0.1
baz=82
OD2 Odessa Site #2 81.83 34 eP P 10 01 03.2 +0.3
425A Indio Mountain 81.83 54 ⇓P P 10 01 03.0 -0.4
baz=82,SNR=10
LAZ Ladron 81.92 50 eP P 10 01 04.5 +0.7
comp=Z,4.9nm,1.5s,mb4.2
626A Big Bend Ranch 81.93 55 ⇑P P 10 01 03.2 -0.8
baz=82
HLID Hailey 81.94 39 ⇓P P 10 01 03.8 +0.1
baz=82
HLID Hailey 81.94 39 eP P 10 01 03.8 +0.1
MNTX Cornudas Mount 81.95 53 eP P 10 01 03.8 -0.2
comp=Z,11nm,1.3s,mb4.6
SRU San Rafael 81.95 44 ⇓P P 10 01 04.0 +0.2
baz=82
SRU San Rafael 81.95 44 eP P 10 01 04.7 +0.9
R18A Canyonlands Na 81.99 45 ⇓P P 10 01 03.7 -0.3
baz=82,SNR=12
J13A Cove Ranch, Pi 81.99 39 ⇑P P 10 01 03.7 -0.2
baz=82,SNR=7.5
P17A Butcher Ranch, 81.99 44 ⇑P P 10 01 04.4 +0.3
baz=82
224A Cornudas Mount 82.01 52 ⇑P P 10 01 03.9 -0.5
baz=82,SNR=8.8
325A Bean Ranch, Si 82.11 53 ⇓P P 10 01 04.4 -0.5
baz=82,SNR=14
B08A Colville Reser 82.11 33 ⇑P P 10 01 04.3 -0.1
baz=82,SNR=5.6
JLU Jordanelle 82.13 43 eP P 10 01 05.2 +0.4
BNM Barren Site 82.17 50 eP P 10 01 09.8 +4.7
comp=Z,4.0nm,1.0s,mb4.3
S19A Harvey Farm, M 82.17 46 ⇑P P 10 01 05.2 +0.1
baz=82
PMR Palmer 82.19 11 eP P 10 01 05.0 +0.5
TXAR Lajitas Array 82.20 56 P P 10 01 05.5 +0.1
comp=Z,9.3nm,1.2s,mb4.6,baz=222,slow=5.0,SNR=26
TXAR LR LR 10 33 19.3
comp=Z,148nm,18.4s,MS4.4,baz=0.0,slow=32
Q18A Rafter H Ranch 82.20 44 ⇑P P 10 01 05.2 0.0
baz=82
H12A Diamond D Ranc 82.25 38 ⇓P P 10 01 05.8 +0.5
baz=82
NJ2 Nanjing 82.28 307 eP P 10 01 05.3 -0.4
NJ2 pmax pmax
comp=Z,30nm,1.0s,mb5.2
I13A Wildhorse Cree 82.32 39 ⇓P P 10 01 06.1 +0.4
baz=82
124A Stringfield Ra 82.35 52 ⇓P P 10 01 06.5 +0.4
baz=82
R19A Curley Farm, L 82.37 45 ⇑P P 10 01 05.8 -0.2
baz=82,SNR=9.8
O17A Robinson Place 82.38 43 ⇓P P 10 01 05.9 -0.2
baz=82,SNR=9.2
P18A Preston Nutter 82.40 44 ⇓P P 10 01 06.9 +0.7
baz=82
627A Terlingua Ranc 82.47 56 ⇑P P 10 01 06.4 -0.4
baz=83,SNR=18
Y23A Lovelace Mesa, 82.49 51 ⇓P P 10 01 06.7 -0.1
baz=83
U21A Nageezi 82.54 48 ⇑P P 10 01 06.8 -0.1
baz=83,SNR=8.2
BMRM Bremner River 82.55 14 eP P 10 01 07.8 +1.4
comp=Z,21nm,1.2s,mb5.0
225A Deer Hill, Car 82.56 53 ⇓P P 10 01 06.9 -0.2
baz=83,SNR=8.7
527A Woodward Ranch 82.60 55 ⇑P P 10 01 07.1 -0.4
baz=83,SNR=7.7
H13A Challis 82.61 38 ⇑P P 10 01 06.9 -0.2
baz=83
PV04 Paradox Valley 82.66 46 eP P 10 01 08.4 +0.8
ANMO Albuquerque 82.67 50 eP P 10 01 08.5 +0.8
X23A Hourglass Bar 82.70 50 ⇓P P 10 01 07.9 +0.1
baz=83
Q19A Hogan Spring (82.70 45 ⇑P P 10 01 07.8 0.0
baz=83
F12A Elk City 82.73 37 ⇑P P 10 01 06.7 -1.1
baz=83,SNR=11
S20A Disappointment 82.75 46 ⇓P P 10 01 08.0 0.0
baz=83,SNR=5.1
PV01 Paradox Valley 82.76 46 eP P 10 01 08.0 0.0
comp=Z,824nm,1.0s
628A Black Gap, Mar 82.88 56 ⇓P P 10 01 08.6 -0.3
baz=83
T21A Navajo Lake 82.90 47 ⇓P P 10 01 09.2 +0.4
baz=83
L16A Fish Haven 82.91 41 ⇓P P 10 01 09.1 +0.3
baz=83
R20A Redvale 82.91 46 ⇑P P 10 01 09.3 +0.4
baz=83
G13A Cobalt 82.93 38 ⇓P P 10 01 09.1 +0.3
baz=83
125A Gardner Draw, 82.93 52 ⇓P P 10 01 09.3 +0.1
baz=83
Y24A Capitan 82.94 51 ⇑P P 10 01 09.5 +0.4
baz=83
GDL2 Guadalupe Moun 82.94 53 eP P 10 01 09.7 +0.5
W23A Werner Place, 83.00 49 ⇓P P 10 01 09.7 +0.3
baz=83
427A Hayter Ranch, 83.07 54 ⇑P P 10 01 10.0 +0.1
baz=83,SNR=10.0
226A Malaga, Loving 83.08 53 ⇓P P 10 01 09.8 -0.1
baz=83
H14A Leadore 83.17 38 ⇓P P 10 01 10.4 +0.4
baz=83,SNR=5.3
Z25A Roswell 83.17 52 ⇓P P 10 01 10.9 +0.5
baz=83
NEW Newport 83.21 34 eP P 10 01 11.6 +1.4
P19A Cripple Cowboy 83.24 44 ⇑P P 10 01 10.8 +0.3
baz=83,SNR=7.8
528A Cox Ranch, San 83.25 55 ⇓P P 10 01 11.1 +0.3
baz=83,SNR=10
K16A Soda Springs 83.25 41 ⇓P P 10 01 10.9 +0.3
baz=83
V23A Ortiz Mt. (NFS 83.25 49 ⇑P P 10 01 11.6 +0.9
baz=83,SNR=6.5
F13A Darby 83.27 37 ⇓P P 10 01 10.6 0.0
baz=83
T22A Edith 83.35 48 ⇑P P 10 01 11.5 +0.3
baz=84
Q20A Ridgley Place, 83.35 45 ⇓P P 10 01 11.3 +0.1
baz=84,SNR=9.4
126A Clayton Basin, 83.41 53 ⇓P P 10 01 11.6 0.0
baz=84
D12A Red Ives Fores 83.44 36 ⇓P P 10 01 11.5 +0.2
baz=84
M18A Lyman 83.46 42 ⇑P P 10 01 11.7 +0.1
baz=84
J16A Bone 83.48 40 ⇓P P 10 01 11.9 +0.2
baz=84
N18A Larsen Ranch, 83.48 43 ⇑P P 10 01 11.9 +0.2
baz=84
Y25A Mesa, Roswell 83.48 51 ⇓P P 10 01 12.2 +0.3
baz=84
O19A Miners Draw (B 83.48 44 ⇑P P 10 01 11.7 -0.1
baz=84
U23A El Rito 83.52 48 ⇑P P 10 01 12.7 +0.6
baz=84,SNR=9.2
W24A Lazy 6 Ranch, 83.56 50 ⇑P P 10 01 12.5 +0.2
baz=84
P20A De Beque 83.56 45 ⇓P P 10 01 12.5 +0.3
baz=84,SNR=6.9
R21A Cimarron 83.57 46 ⇑P P 10 01 12.9 +0.6
baz=84,SNR=13
428A Kincaid Ranch, 83.57 55 ⇑P P 10 01 12.3 -0.2
baz=84
MCMT McKenzie Canyo 83.59 38 eP P 10 01 12.7 +0.5
comp=Z,4.8nm,1.2s,mb4.5
H15A Lima 83.59 39 ⇓P P 10 01 12.7 +0.5
baz=84,SNR=6.3
K17A Gardner Place, 83.62 41 ⇑P P 10 01 12.6 +0.2
baz=84
CN2 Changchun 83.68 320 eP P 10 01 14.6 +1.9
CN2 esP sP 10 01 21.0 +2.7
CN2 eS S 10 11 27.4 -7.7
CN2 pmax pmax
comp=Z,20nm,0.5s,mb5.5
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,10.0s,MS4.9
CN2 LR LR
comp=E,200nm,10.0s,MS4.9
CN2 LR LR
comp=Z,200nm,12.0s,MS4.7
CPRX Cap Rock 83.69 52 eP P 10 01 13.8 +0.7
comp=Z,7.5nm,1.2s,mb4.7
TRF Thorofare Moun 83.71 10 eP P 10 01 12.7 +0.3
comp=Z,14nm,1.0s,mb5.0
Z26A Caprock 83.72 52 ⇓P P 10 01 13.2 0.0
baz=84
E13A Victor 83.73 37 ⇑P P 10 01 12.8 -0.1
baz=84
N19A John Jarvie Ra 83.76 43 ⇓P P 10 01 13.3 +0.2
baz=84
C12B Naegeli Ranch, 83.76 35 ⇑P P 10 01 13.0 0.0
baz=84
S22A 4UR Ranch, Cre 83.76 47 ⇓P P 10 01 14.0 +0.7
baz=84,SNR=17
328A Wristen Ranch, 83.76 54 ⇑P P 10 01 13.3 -0.2
baz=84
Q21A Lamborn Mesa, 83.78 46 ⇑P P 10 01 13.2 -0.1
baz=84,SNR=7.6
I16A Newdale 83.88 40 ⇓P P 10 01 13.8 +0.1
baz=84
V24A Rampart Ranch, 83.90 49 ⇓P P 10 01 13.9 -0.1
baz=84
D13A Huson 83.96 36 ⇓P P 10 01 13.4 -0.6
baz=84
T23A Casias Ranch, 83.97 48 ⇓P P 10 01 14.2 -0.2
baz=84
O20A White River Ci 83.98 44 ⇓P P 10 01 14.2 -0.1
baz=84
G15A Dillon 83.99 38 ⇑P P 10 01 13.7 -0.5
baz=84,SNR=8.3
REDW Red Top Meadow 83.99 40 eP P 10 01 13.6 -0.7
TPAW Teton Pass 84.00 40 eP P 10 01 14.2 -0.1
DLMT Dillon 84.04 38 eP P 10 01 15.0 +0.5
R22A Saguache, Gunn 84.04 47 ⇓P P 10 01 15.1 +0.3
baz=84,SNR=6.1
J17A Brown Place, J 84.08 41 ⇓P P 10 01 15.3 +0.6
baz=84
SNOW Snow King Moun 84.11 40 eP P 10 01 14.9 0.0
K18A Toltan Ranch, 84.11 41 ⇑P P 10 01 14.6 -0.3
baz=84,SNR=8.3
MCK McKinley 84.20 11 eP P 10 01 14.4 -0.5
BSMT Bassoo Peak 84.22 35 eP P 10 01 14.8 -0.5
Q22A Crested Butte, 84.25 46 ⇑P P 10 01 15.8 +0.1
baz=84,SNR=7.3
W25A X Bar L Ranch, 84.25 50 ⇓P P 10 01 15.8 0.0
baz=84
L19A Farson 84.26 42 ⇑P P 10 01 15.6 -0.1
baz=84,SNR=5.6
LOHW Long Hollow 84.28 40 eP P 10 01 16.1 +0.3
Z27A Tatum 84.31 52 ⇓P P 10 01 15.9 -0.3
baz=84
N20A Spence Gulch, 84.32 44 ⇑P P 10 01 16.1 0.0
baz=84
SMCO Snowmass 84.36 46 eP P 10 01 17.0 +0.7
F15A Butte 84.36 38 ⇑P P 10 01 16.0 -0.1
baz=84
LRM Limekiln Ridge 84.38 38 eP P 10 01 15.7 -0.5
comp=Z,14nm,1.0s,mb5.1
X26A CR and CF Fran 84.42 51 ⇓P P 10 01 16.6 -0.1
baz=85
V25A Rancho No Teng 84.42 49 ⇑P P 10 01 17.0 +0.3
baz=85,SNR=8.9
J18A Kendall Valley 84.43 41 ⇓P P 10 01 16.0 -0.6
baz=85
G16A Moss Hill, Enn 84.43 39 ⇑P P 10 01 16.3 -0.1
baz=85
H16A Russell Place, 84.47 39 ⇓P P 10 01 16.6 -0.2
baz=85,SNR=7.6
BW06 Boulder Array 84.48 42 ⇑P P 10 01 16.1 -0.7
baz=85,SNR=5.4
BW06 Boulder Array 84.48 42 eP P 10 01 16.0 -0.8
PDAR Pinedale Array 84.48 42 P P 10 01 15.9 -0.9
comp=Z,2.0nm,0.9s,mb4.3,baz=204,slow=3.3,SNR=12
PDAR LR LR 10 34 23.3
comp=Z,217nm,18.6s,MS4.6,baz=249,slow=32
PDAR Pinedale Array 84.48 42 P P 10 01 15.9 -0.9
PDAR LR LR 10 34 23.3
D14A Greenough 84.48 36 ⇑P P 10 01 16.5 -0.2
baz=85
CHMT Chamberlain Mo 84.53 37 eP P 10 01 16.2 -0.7
Y27A Causey 84.60 52 ⇓P P 10 01 17.0 -0.6
baz=85,SNR=8.8
E15A Deer Lodge 84.60 37 ⇓P P 10 01 17.0 -0.4
baz=85
SDCO Great Sand Dun 84.68 47 eP P 10 01 17.9 0.0
B13A Whitefish 84.70 35 ⇓P P 10 01 17.4 -0.3
baz=85
BOZ Bozeman (W) 84.76 38 ⇓P P 10 01 17.5 -0.6
baz=85,SNR=7.8
BOZ Bozeman (W) 84.76 38 eP P 10 01 17.4 -0.8
BOZ pmax pmax
comp=Z,9.0nm,1.2s,mb4.8
BOZ Bozeman (W) 84.76 38 eP P 10 01 17.4 -0.8
comp=Z,8.6nm,1.2s,mb4.8
N21A Black Mountain 84.77 44 ⇑P P 10 01 18.6 +0.2
baz=85
U25A Circle Dot Ran 84.83 49 ⇑P P 10 01 18.9 +0.2
baz=85
S24A Houchin Ranch, 84.83 48 ⇑P P 10 01 18.7 -0.1
baz=85

F16A	Kennard Place,	84.84	38	⇓P	P	10 01 18.9	+0.3
	baz=85						
MAW	Mawson	84.86	199	P	P	10 01 17.9	-0.4
	comp=Z,2.6nm,0.4s,mb4.7,baz=130,slow=6.8,SNR=5.0						
L20A	Wamsutter	84.87	43	⇓P	P	10 01 19.0	+0.3
	baz=85						
MSTX	Muleshoe	84.93	52	⇓P	P	10 01 18.9	-0.4
	baz=85,SNR=6.5						
K19A	Absolon Red Bu	84.96	42	⇓P	P	10 01 19.0	-0.2
	baz=85						
X27A	F and S Farms,	84.99	51	⇓P	P	10 01 19.6	0.0
	baz=85						
D15A	Lincoln	85.02	37	⇓P	P	10 01 19.5	+0.1
	baz=85						
WHN	Wuhan	85.08	304	eP	P	10 01 22.9	+2.8
O22A	Kremmling	85.12	45	⇓P	P	10 01 20.4	+0.2
	baz=85						
T25A	Trinidad	85.17	48	⇑P	P	10 01 20.9	+0.5
	baz=85						
R24A	Sanders Place,	85.19	47	⇓P	P	10 01 20.9	+0.4
	baz=85						
K20A	Yellowstone Ra	85.19	42	⇓P	P	10 01 20.2	-0.2
	baz=85						
W27A	Bowe Ranch, En	85.20	51	⇓P	P	10 01 20.0	-0.6
	baz=85,SNR=5.8						
HRY	Holter Researc	85.23	37	eP	P	10 01 20.0	-0.4
U26A	Atchley Ranch,	85.30	49	⇓P	P	10 01 20.6	-0.5
	baz=85,SNR=7.0						
B14A	Marquette Ranc	85.34	35	⇑P	P	10 01 20.7	-0.2
	baz=86						
S25A	Robets Cordova	85.39	48	⇓P	P	10 01 21.3	-0.2
	baz=86						
COLA	College	85.44	11	eP	P	10 01 19.9	-1.2
COLA				pmax	pmax		
	comp=Z,18nm,1.1s,mb5.1						
COLA	College	85.44	11	eP	P	10 01 19.9	-1.2
	comp=Z,18nm,1.1s,mb5.1						
L21A	Rawlins	85.47	43	⇓P	P	10 01 21.8	0.0
	baz=86						
Q24A	Divide	85.50	46	⇓P	P	10 01 22.0	-0.1
	baz=86						
D16A	Dana Ranch, Ca	85.56	37	⇓P	P	10 01 21.2	-0.9
	baz=86						
A14A	Double T Ranch	85.61	35	⇓P	P	10 01 21.7	-0.6
	baz=86,SNR=6.1						
SEY	Seymchan	85.65	345	⇓iP	P	10 01 22.6	+0.4
B15A	Bradely Ranch,	85.70	36	⇓P	P	10 01 21.7	-1.1
	baz=86						
C16A	Fuhringer Ranc	85.88	36	⇑P	P	10 01 22.5	-1.1
	baz=86						
A15A	Johnson Ranch,	85.98	35	⇓P	P	10 01 23.6	-0.6
	baz=86,SNR=6.8						
F18A	Big Timber	86.03	39	⇑P	P	10 01 24.0	-0.4
	baz=86						
D17A	Six Diamond Ra	86.12	37	⇓P	P	10 01 24.0	-0.9
	baz=86						
AMTX	Amarillo	86.14	51	eP	P	10 01 24.7	-0.6
	comp=Z,15nm,1.0s,mb5.2						
B16A	M & M Farms, S	86.23	36	⇑P	P	10 01 24.4	-1.0
	baz=86						
E18A	Harlowton	86.26	38	⇑P	P	10 01 25.7	+0.1
	baz=86						
C17A	Wharram Farm,	86.34	37	⇓P	P	10 01 25.8	-0.2
	baz=86						
DAWY	Dawson	86.44	14	eP	P	10 01 25.8	-0.2
A16A	West Butte Ran	86.59	35	⇑P	P	10 01 27.1	0.0
	baz=87						
EGAK	Eagle	86.66	13	eP	P	10 01 27.0	-0.1
PLCA	Paso Flores	87.20	132	P	P	10 01 31.4	+0.8
	comp=Z,10nm,1.1s,mb5.0,baz=238,slow=5.8,SNR=5.2						
PLCA				LR	LR	10 35 56.8	
	comp=Z,173nm,18.1s,MS4.5,baz=261,slow=32						
PLCA	Paso Flores	87.20	132	P	P	10 01 31.4	+0.8
PLCA				LR	LR	10 35 56.8	
COLD	Coldfoot	87.25	9	eP	P	10 01 31.0	+1.0
	comp=Z,2.1nm,1.0s,mb4.3						
A18A	Metzger Ranch,	87.55	36	⇓P	P	10 01 31.1	-0.7
	baz=88						
BILL	Bilibino	87.69	352	⇑iP	P	10 01 32.3	+0.2
BILL				pmax	pmax		
	comp=Z,22nm,1.6s,mb5.1						
BJI	Beijing	87.83	314	P	P	10 01 34.9	+1.5
BJI				S	S	10 12 05.6	-10
BJI				sS	sS	10 12 23.1	+0.3
BJI				SS	SS	10 18 03.3	-0.3
BJI				pmax	pmax		
	comp=Z,20nm,1.4s,mb5.2						
BJI				pmax	pmax		
	comp=Z,270nm,4.0s						
BJI				LR	LR		
	comp=N,150nm,14.2s,MS4.7						
BJI				LR	LR		
	comp=E,160nm,15.0s,MS4.7						
BJI				LR	LR		
	comp=Z,64nm,24.8s						
GYA	Guiyang	89.74	298	P	P	10 01 44.5	+1.7
GYA				PP	PP	10 05 18.8	+3.5
GYA				SKS		10 12 13.6	
GYA				S	S	10 12 35.4	+0.7
GYA				SS	SS	10 18 32.0	0.0
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.4						
GYA				pmax	pmax		
	comp=Z,90nm,5.9s						
GYA				LR	LR		
	comp=N,430nm,23.3s,MS4.9						
GYA				LR	LR		
	comp=E,410nm,24.6s,MS4.9						
GYA				LR	LR		
	comp=Z,470nm,25.0s,MS4.8						
VNA1	Neumayer--Stat	90.36	175	eP	P	10 01 46.4	+1.5
CLNS	Chul'man	91.13	331	eP	P	10 01 49.4	+0.9
CLNS				pmax	pmax		
	comp=Z,20nm,1.2s,mb5.3						
CLNS				pmax	pmax		
	comp=E,9.0nm,1.2s						
CLNS				pmax	pmax		
	comp=N,9.0nm,1.2s						
INK	Inuvik	91.30	14	eP	P	10 01 48.7	-0.3
HHC	Hu-ho-hao-te	91.36	313	eP	P	10 01 51.4	+1.5
HHC				sP	sP	10 01 56.4	+0.9
HHC				PP	PP	10 05 31.3	+3.5
HHC				SKS		10 12 21.1	
HHC				S	S	10 12 47.3	-1.6
HHC				sS	sS	10 12 53.3	-2.4
HHC				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.6						
HHC				pmax	pmax		
	comp=Z,150nm,7.2s						
HHC				LR	LR		
	comp=N,190nm,18.2s,MS4.7						
HHC				LR	LR		
	comp=E,130nm,18.2s,MS4.7						
HHC				LR	LR		
	comp=Z,170nm,18.0s,MS4.5						
LCO	Las Campanas	91.50	121	eP	P	10 01 53.0	+1.9
	comp=Z,33nm,1.0s,mb5.6						
JTS	JuntasAbangare	91.54	80	eP	P	10 01 51.2	-0.2
KMI	Kunming	92.61	295	P	P	10 01 57.8	+1.7
KMI				pP	pP	10 02 00.5	+0.3
KMI				PP	PP	10 05 38.3	+0.3
KMI				S	S	10 12 57.9	-3.0
KMI				SS	SS	10 19 10.8	-2.7
KMI				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb5.1						
KMI				pmax	pmax		
	comp=Z,93nm,3.4s						
KMI				LR	LR		
	comp=N,100nm,18.2s,MS4.6						
KMI				LR	LR		
	comp=E,170nm,15.7s,MS4.6						
KMI				LR	LR		
	comp=Z,130nm,18.2s,MS4.4						
YKA	Yellowknife Ar	92.92	23	P	P	10 01 55.6	-1.0
	comp=Z,1.1nm,1.0s,mb4.3,baz=242,slow=3.8,SNR=4.0						
ECSD	EROS Data Cent	93.34	45	eP	P	10 01 58.7	-0.3
	comp=Z,12nm,1.3s,mb5.2						
CD2	Chengdu	93.67	301	P	P	10 02 01.8	+0.9
CD2				pP	pP	10 02 06.3	+1.3
CD2				sP	sP	10 02 07.8	+1.4
CD2				PP	PP	10 05 49.4	+3.2
CD2				S	S	10 13 07.5	-2.4
CD2				sS	sS	10 13 15.3	-1.5
CD2				SS	SS	10 19 28.6	+0.2
CD2				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.5						
CD2				pmax	pmax		
	comp=Z,130nm,5.5s						
CD2				LR	LR		
	comp=N,340nm,8.9s						
CD2				LR	LR		
	comp=Z,390nm,8.0s						
CMAR	Chiang Mai Arr	93.83	288	P	P	10 02 02.6	+0.7
	comp=Z,5.9nm,1.2s,mb4.9,baz=108,slow=2.7,SNR=13						
LZH	Lanzhou	95.30	306	eP	P	10 02 09.3	+1.1
LZH				pP	pP	10 02 13.6	+1.3
LZH				sP	sP	10 02 15.5	+1.7
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb5.3						
ULM	Lac du Bonnet	96.25	39	LR	LR	10 42 38.0	
	comp=Z,398nm,18.2s,MS4.9,baz=236,slow=34						
SONM	Songino Array	97.37	318	LR	LR	10 46 29.1	
	comp=Z,88nm,18.7s,MS4.3,baz=276,slow=36						
LPAZ	La Paz	98.49	110	LR	LR	10 36 29.9	
	comp=Z,231nm,21.8s,MS4.6,baz=308,slow=29						
GTA	Gaotai	99.35	308	eP	P	10 02 27.3	+0.9
GTA				pP	pP	10 02 32.1	+1.6
GTA				sP	sP	10 02 34.3	+2.3
GTA				PP	PP	10 06 32.4	+2.5
GTA				SKS		10 13 03.8	
GTA				S	S	10 13 54.6	-3.8
GTA				sS	sS	10 14 03.0	-2.3
GTA				SS	SS	10 20 47.3	-1.1
GTA				pmax	pmax		
	comp=Z,2.0nm,1.8s,mb4.3						
GTA				pmax	pmax		
	comp=Z,92nm,5.4s						
GTA				LR	LR		
	comp=N,130nm,17.4s,MS4.6						
GTA				LR	LR		
	comp=E,130nm,18.3s,MS4.6						
GTA				LR	LR		
	comp=Z,170nm,18.6s,MS4.6						
ROSC	El Rosal	99.88	88	LR	LR	10 42 31.7	
	comp=Z,67nm,18.3s,MS4.2,baz=195,slow=32						
MKAR	Makanchi Array	113.21	314	PKiKP	PKiKP	10 07 20.7	-0.9
	comp=Z,0.3nm,0.2s,baz=121,slow=1.3,SNR=3.7						
MKAR	Makanchi Array	113.21	314	PKPdf	PKiKP	10 07 20.7	-0.9
BVAR	Borovoye Array	120.52	321	PKP	PKPdf	10 07 35.6	+0.2
	comp=Z,0.7nm,0.5s,baz=108,slow=0.5,SNR=4.7						
BRVK	Borovoye	120.58	321	iPKIKP	PKPdf	10 07 34.3	-1.2
ARU	Arti	126.16	327	iPKIKP	PKPdf	10 07 46.0	-0.1
ARU						10 09 41.6	
ARU						10 14 47.7	
ARU				SS	SS	10 26 35.5	-7.1
KMBO	Kilima Mbogo	144.26	240	PKP	PKPdf	10 08 20.9	-0.2
	comp=Z,15nm,1.1s,baz=182,slow=6.0,SNR=15						
SIM	Simferopol'	145.27	325	iPKIKP	PKPdf	10 08 23.2	+1.4
SIM				pmax	pmax		
	comp=Z,25nm,1.2s						
LVV	L'vov	145.94	340	⇓iPKIKP	PKPdf	10 08 23.6	+0.8
NRDL	Niedersach Rie	146.08	356	ePKPbc	PKPbc	10 08 22.9	-0.9
IBBN	Ibbenburen	146.35	359	ePKPbc	PKPbc	10 08 25.0	+0.4
KIS	Kishinev	146.42	332	e	PKPdf	10 08 25.0	+1.3
CLZ	Clausthal	146.71	356	ePKPbc	PKPbc	10 08 26.2	+0.5
OJC	Ojcow	146.79	345	ePKHKP	PKPdf	10 08 23.5	-0.8
KSP	Ksiaz	146.96	349	ePKP	PKPbc	10 08 27.0	+0.6
KSP	Ksiaz	146.96	349	ePKPdf	PKPdf	10 08 25.3	+0.8
KSP				ePKPab	PKPab	10 08 27.0	-0.8
CLL	Collm	147.00	353	ePKPbc	PKPbc	10 08 26.7	+0.1
CLL	Collm	147.00	353	⇑iPKP	PKPbc	10 08 26.6	0.0
CLL				i		10 08 32.3	
CLL				i		10 08 37.4	
CLL	Collm	147.00	353	⇑iPKPbc	PKPbc	10 08 26.6	0.0
	comp=Z,33nm,1.2s						
CLL				i pPKPbc	pPKPbc	10 08 32.3	+1.5
CLL				i pPKiKP		10 08 37.4	
CLL				LV		11 17 00.0	
	comp=Z,100nm,21.2s						
STHS	Stebnicka Huta	147.14	343	ePKP2	PKPab	10 08 28.1	-0.5
STHS	Stebnicka Huta	147.14	343	ePKP	PKPab	10 08 28.1	-0.5
BUG	Bochum--Univer	147.23	360	ePKPbc	PKPbc	10 08 27.2	0.0
BRG	Berggiesshubel	147.31	352	ePKPbc	PKPbc	10 08 28.0	+0.6
BRG	Berggiesshubel	147.31	352	ePKP	PKPbc	10 08 27.9	+0.5
	comp=Z,21nm,1.3s						
BRG				pmax	pmax		
	comp=N,75nm,17.5s						
BRG				MLR	MLR		
	comp=E,114nm,22.5s						
BRG				MLR	MLR		
	comp=Z,135nm,13.6s						
BRG	Berggiesshubel	147.31	352	ePKP2	PKPab	10 08 27.9	-1.3
BRG				pmax	pmax		
	comp=Z,13nm,1.3s						
BRG				MLR	MLR		
	comp=N,45nm,17.5s,MS4.5						
BRG				MLR	MLR		
	comp=E,68nm,22.5s,MS4.5						
BRG				MLR	MLR		
	comp=Z,81nm,13.6s						
UPC	Upice	147.33	349	ePKP2	PKPab	10 08 28.7	-0.6
UPC	Upice	147.33	349	ePKP	PKPab	10 08 28.7	-0.6
BURAR	Bucovina Array	147.40	337	⇑PKP2	PKPab	10 08 28.9	-0.8
BURAR	Bucovina Array	147.40	337	⇑iP	PKPab	10 08 28.9	-0.8
DPC	Dobruska-Polom	147.43	349	ePKP2	PKPab	10 08 28.6	-1.1
DPC				MLR	MLR		
	comp=Z,100nm,15.1s,MS4.7						
DPC	Dobruska-Polom	147.43	349	ePKP	PKPab	10 08 28.6	-1.1
DPC				AMS	AMS	11 20 20.0	
	comp=Z,100nm,15.1s						
UZH	Uzhgorod	147.53	341	⇓iPKIKP	PKPbc	10 08 28.0	-0.1
UZH				i		10 08 38.0	
CRVS	Cervenica-Dubn	147.54	342	ePKP2	PKPbc	10 08 29.2	+1.1
CRVS	Cervenica-Dubn	147.54	342	ePKP	PKPbc	10 08 29.2	+1.1
OKC	Ostrava-Krasne	147.54	346	ePKP2	PKPab	10 08 29.4	-0.8
OKC				MLR	MLR		
	comp=Z,200nm,16.7s,MS5.0						
OKC	Ostrava-Krasne	147.54	346	ePKP	PKPab	10 08 29.4	-0.8
OKC				AMS	AMS	11 20 40.0	
	comp=Z,200nm,16.7s						
PVCC	Panska Ves	147.55	351	ePKP2	PKPab	10 08 29.4	-0.8
PVCC	Panska Ves	147.55	351	ePKP	PKPab	10 08 29.4	-0.8
PVCC				AMS	AMS	11 15 30.0	
MORC	Moravsky Berou	147.73	347	⇑PKP2	PKPab	10 08 29.1	-1.8
MORC	Moravsky Berou	147.73	347	⇑iP	PKPab	10 08 29.1	-1.8
MOX	Moxa	147.80	354	ePKP	PKPab	10 08 29.5	-1.7
	comp=Z,26nm,1.4s						
MOX							
	comp=Z,100nm,18.0s						
MOX	Moxa	147.80	354	ePKPbc	PKPbc	10 08 28.8	0.0
TANN	Tannenbergstha	147.94	353	ePKPbc	PKPbc	10 08 29.6	+0.4
PRU	Pruhonice	148.08	351	ePKP2	PKPbc	10 08 31.1	+1.5
PRU				MLR	MLR		
	comp=Z,200nm,22.9s,MS4.8						
PRU	Pruhonice	148.08	351	ePKP	PKPbc	10 08 31.1	+1.5
PRU				AMS	AMS	11 20 00.0	
	comp=Z,200nm,22.9s						
NKC	Novy Kostel	148.12	353	ePKP2	PKPbc	10 08 30.8	+1.1
NKC				MLR	MLR		
	comp=Z,100nm,18.0s,MS4.7						
NKC	Novy Kostel	148.12	353	ePKP	PKPbc	10 08 30.8	+1.1
NKC				AMS	AMS	11 18 20.0	
	comp=Z,100nm,18.0s						
KECS	Kecovo	148.20	343	ePKP2	PKPbc	10 08 30.1	+0.2
KECS	Kecovo	148.20	343	ePKP	PKPbc	10 08 30.1	+0.2
VRI	Vrincioaia	148.21	333	⇓PKP2	PKPab	10 08 32.8	-0.2
VRI	Vrincioaia	148.21	333	⇓iP	PKPab	10 08 32.8	-0.2
TNS	Taunus Mts	148.42	358	ePKPbc	PKPbc	10 08 30.7	+0.2
DOU	Dourbes	148.52	3	PKP	PKPbc	10 08 31.4	+0.7
GIVF	Givet	148.53	2	ePKP1	PKPbc	10 08 30.8	+0.1
	comp=Z,76nm,1.3s						
TREC	Trest	148.59	349	ePKP2	PKPbc	10 08 31.2	+0.3
TREC				MLR	MLR		
	comp=Z,200nm,18.1s,MS5.0						
TREC	Trest	148.59	349	ePKP	PKPbc	10 08 31.2	+0.3
TREC				AMS	AMS	11 20 00.0	
	comp=Z,200nm,18.1s						
ROTZ	Rotzenmuhle	148.61	353	ePKPbc	PKPbc	10 08 31.5	+0.6
BRTR	Keskin Array B	148.73	318	PKPbc	PKPbc	10 08 32.8	+1.1
	comp=Z,14nm,1.1s,baz=139,slow=2.5,SNR=14						
GRF	Grafenberg Arr	148.78	355	ePKPbc	PKPbc	10 08 31.9	+0.5
MLR	Muntele Rosu	148.84	334	⇑PKP2	PKPbc	10 08 32.1	+0.4
MLR	Muntele Rosu	148.84	334	⇑iP	PKPbc	10 08 32.1	+0.4
PSZ	Piszkesteto	148.88	343	⇑PKP2	PKPab	10 08 40.1	+4.5
PSZ	Piszkesteto	148.88	343	⇑iP	PKPab	10 08 40.1	+4.5
DRGR		149.00	339	⇑PKP2	PKPbc	10 08 32.8	+0.8
DRGR		149.00	339	⇑iP	PKPbc	10 08 32.8	+0.8
WLF	Walferdange	149.00	1	PKP	PKPbc	10 08 32.1	+0.1
WLF	Walferdange	149.00	1	ePKPbc	PKPbc	10 08 32.7	+0.7
KHC	Kasperske Hory	149.06	351	ePKP2	PKPbc	10 08 33.2	+1.1
KHC				MLR	MLR		
	comp=Z,100nm,14.5s,MS4.8						
KHC	Kasperske Hory	149.06	351	ePKP	PKPbc	10 08 33.2	+1.1
KHC				AMS	AMS	11 20 30.0	
	comp=Z,100nm,14.5s						
WET	Wettzell	149.14	352	ePKPbc	PKPbc	10 08 32.9	+0.6
VOIR		149.26	335	⇑PKP2	PKPbc	10 08 34.5	+1.8
VOIR		149.26	335	⇑iP	PKPbc	10 08 34.5	+1.8
FLN	La Foliniere	149.33	10	ePKP1	PKPbc	10 08 32.3	-0.5
	comp=Z,62nm,1.2s						
BUD	Budapest	149.51	344	ePKP	PKPbc	10 08 33.2	-0.1
LDF	La Druitiere	149.55	9	ePKP1	PKPbc	10 08 32.8	-0.6
GRR	Gorron	149.63	10	ePKP1	PKPbc	10 08 33.4	-0.2
CONA	Conrad Observa	149.83	348	⇓iPKiKP	PKiKP	10 08 35.1	0.0
	comp=Z,27nm,1.4s						
STU	Stuttgart	149.84	357	ePKPbc	PKPbc	10 08 34.4	+0.3
MOA	Molln	150.20	350	⇑iPKiKP	PKiKP	10 08 35.4	-0.5
	comp=Z,20nm,1.6s						
CDF	Champ du Feu	150.26	359	ePKP1	PKPbc	10 08 35.2	+0.1
	comp=Z,38nm,1.2s						
BFO	Black Forest	150.32	358	ePKPbc	PKPbc	10 08 35.5	+0.3
BZS	Buzias	150.40	339	⇑PKIKP	PKPbc	10 08 36.5	+1.0
BZS	Buzias	150.40	339	⇑iP	PKPbc	10 08 36.5	+1.0
RJOB	Jochberg	150.53	352	ePKPbc	PKPbc	10 08 35.6	-0.2
MMAI	Mount Meron Ar	150.67	305	PKPbc	PKPbc	10 08 36.1	-0.5
	comp=Z,5.1nm,0.8s,baz=174,slow=8.4,SNR=4.3						
MMAI				PKPab	PKPab	10 08 44.5	+1.0
	comp=Z,15nm,0.9s,baz=44,slow=4.4,SNR=9.8						
PKSM	Moragy	150.79	343	⇑PKIKP	PKPbc	10 08 36.0	-0.4
PKSM	Moragy	150.79	343	⇑iP	PKPbc	10 08 36.0	-0.4
RETA	Reutte	151.01	355	⇓iPKPdf	PKPbc	10 08 37.6	+0.7
	comp=Z,15nm,1.3s						
KBA	Koelnbreinsper	151.10	351	⇑iPKPbc	PKPbc	10 08 35.4	-1.7
	comp=Z,5.7nm,0.4s						
MOTA	Moosalm	151.12	354	⇑iPKiKP	PKiKP	10 08 37.3	-0.4
	comp=Z,19nm,1.2s						
WTTA	Wattenberg	151.14	353	⇑iPKiKP	PKiKP	10 08 37.5	-0.3
	comp=Z,14nm,1.0s						
SOKA	Soboth	151.19	348	⇑iPKiKP	PKiKP	10 08 37.2	-0.7
	comp=Z,13nm,1.1s						
DAVA	Damuels	151.28	356	⇓iPKPdf	PKPbc	10 08 38.7	+1.1
	comp=Z,18nm,1.1s						
LOR	Lormes	151.30	4	ePKP1	PKPbc	10 08 37.6	0.0
GROS	Grobnik	151.31	347	ePKPbc	PKPbc	10 08 37.3	-0.3
FETA	Feichten	151.47	354	⇓iPKPdf	PKPbc	10 08 38.9	+0.9
	comp=Z,18nm,1.5s						
SSF	Saint Saulge	151.48	5	ePKP1	PKPbc	10 08 38.1	+0.1
	comp=Z,49nm,1.1s						
MYKA	Terra Mystica	151.49	350	⇓iPKPbc	PKPbc	10 08 37.6	-0.5
	comp=Z,9.3nm,1.1s						
ABTA	Abfaltersbach	151.54	352	⇓iPKPdf	PKPbc	10 08 38.3	+0.2
	comp=Z,15nm,1.0s						
AVF	Avril sur Loir	151.74	5	ePKP1	PKPbc	10 08 38.2	-0.4
	comp=Z,18nm,1.1s						
LJU	Ljubljana	151.90	349	iPKPbc	PKPbc	10 08 39.3	+0.2
SMF	Signal de Mont	151.92	4	ePKP1	PKPbc	10 08 38.6	-0.4
BGF	Bois d'Agland	151.92	6	ePKP1	PKPbc	10 08 38.8	-0.2
CABF	La Chapelle	152.06	1	ePKP1	PKPbc	10 08 39.9	+0.6
	comp=Z,41nm,1.1s						
TCF	Toulx Ste Croi	152.12	7	ePKP1	PKPbc	10 08 38.9	-0.6
	comp=Z,12nm,0.9s						
BOJS	Bojanci	152.28	347	iPKPbc	PKPbc	10 08 40.1	+0.3
RJF	Les Rejaudoux	153.00	8	ePKP1	PKPbc	10 08 41.1	-0.4
TORD	Torodi Ar. Bea	172.66	137	PKP	PKPdf	10 08 53.5	-0.5
	comp=Z,1.7nm,1.1s,baz=204,slow=1.2,SNR=3.8						
TORD				PKPab	PKPab	10 10 19.1	-0.2
	comp=Z,9.2nm,1.1s,baz=266,slow=1.3,SNR=15						

MAN ***17*** *10:11:59, 11°.38N×126°.73E, h43km, mb5.3, ML4.3, MS4.5*
MAN INTENSITY II - TACLOBAN CITY.
MOS ***17*** *10:12:01.6±1.2, 11°.00N×126°.22E, h33km, mb5.0/22, Error ellipse: s-maj=14.4km s-min=6.6km az=123.6*
ISCJB ***17*** *10:12:03.8±0.2, 11°.16N±0°.02×126°.38E±0°.03, h50km, mb4.8/74, MS4.0/12, Error ellipse: s-maj=4.7km s-min=3.4km az=1.4*
BJI ***17*** *10:12:04.3, 11°.00N×126°.22E, h55km, mB4.9/23, mb4.8/37, Ms4.3/24, Ms7 4.0/24*
IDC ***17*** *10:12:05.3±0.6, 11°.05N×126°.20E, h50km±5km, mb4.3/20, mb1 4.4/21, mb1mx4.3/25, mbtmp4.3/21, MS4.0/5, Ms1 4.0/5, ms1mx3.4/33, Error ellipse: s-maj=20.6km s-min=10.1km az=69.0*
NEIC ***17*** *10:12:05.5±0.3, 11°.08N×126°.31E, mb4.7/30, Error ellipse: s-maj=10.0km s-min=6.3km az=65.0*
NEIC Felt [II PIVS] at Tacloban, Leyte.
DJA ***17*** *10:12:19, 10°.98N×126°.38E, h204km, mb4.6/16*
ISC 17 10:12:05.9±0.2, 11°.14N±0°.02×126°.33E±0°.04, h52km, h52km±1.2km:pP-P, n169, σ1§30/173, mb4.8/74, MS4.0/12, 8C-3D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	Ormoc	1.69	267	eP	Pn	10 12 33.2	+0.2
CNP	Cataman	2.12	310	eP	Pn	10 12 36.3	-2.7
BUTP	Butuan	2.27	198	eP	Pn	10 12 41.0	+0.1
LLP	Lapu-Lapu	2.46	251	eP	Pn	10 12 42.7	-0.9
LLP				eS	Sn	10 13 09.8	-2.7
TBP	Tagbilaran	2.82	239	eP	Pn	10 12 51.1	+2.6
TBP				eS	Sn	10 13 23.3	+2.0
CGP	Cagayan de Oro	3.12	211	⇑eP	Pn	10 12 52.2	-0.4
CGP				i S	Sn	10 13 28.9	+0.3
PVCP	Virac	3.23	319	eP	Pn	10 12 49.6	-4.6
BUKP	Musuan	3.47	201	eP	Pn	10 12 57.8	+0.3
SNPH	Sibulan	3.53	240	eP	Pn	10 12 59.0	+0.8
GUIM	Jordan	3.71	262	eP	Pn	10 13 01.8	+1.2
DAV	Davao City (W)	4.11	190	S	Sn	10 13 54.5	+1.4
	63nm,0.3s,baz=98,slow=22,SNR=5.0						
DAV				LR	LR	10 15 14.4	
	comp=Z,2μm,18.1s,baz=356,slow=47						
DAV	Davao City (W)	4.11	190	P	Sn	10 13 56.5	+3.4
DMPH	Davao City--Mi	4.11	191	eP	Pn	10 13 12.1	+5.8
DMPH				i S	Px	10 13 32.6	
AUQP	San Andres

GYA sP sP 10 17 35.8 +0.6
GYA PP 10 17 51.0
GYA PcP PcP 10 20 57.8 +0.8
GYA S **S** **10 21 25.5 -3.9**
GYA sS sS 10 21 48.8 -2.7
GYA SS 10 22 20.0
GYA ScP ScP 10 24 30.0 -1.3
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.3
GYA pmax pmax
comp=Z,120nm,4.7s
GYA LR LR
comp=N,530nm,15.3s,MS4.2
GYA LR LR
comp=E,490nm,17.6s,MS4.2
GYA LR LR
comp=Z,510nm,16.0s,MS4.1
PPBI Pangkal Pinang 24.04 238 P **P** **10 17 15.9 -0.5**
KAKA Kakadu 24.46 165 *e*P **P** **10 17 18.5 -1.7**
comp=Z,41nm,0.6s,mb5.0
KAKA Kakadu 24.46 165 *e*P **P** **10 17 18.9 -1.3**
comp=Z,116nm,0.6s,mb5.5
KAKA Kakadu 24.46 165 P **P** **10 17 17.6 -2.6**
comp=Z,871nmcomp=Z,109nm,0.8s,mb5.3
ENH Enshi 24.64 323 *e*P **P** **10 17 24.4 +2.7**
IPM Ipoh 25.91 257 P **P** **10 17 32.4 -1.0**
comp=Z,28nm,1.2s,mb4.7
KULM Kulim 26.06 259 *e*P **P** **10 17 36.1 +1.4**
KS15 Wonju Array Si 26.22 3 *e*P **P** **10 17 38.1 +2.1**
KSRS Korea Array 26.24 3 P **P** **10 17 36.8 +0.7**
comp=Z,5.1nm,1.0s,mb4.0,baz=180,slow=11,SNR=16
KSRS pP pP 10 17 49.0 -0.2
comp=Z,9.8nm,1.0s,baz=181,slow=11,SNR=12
KMI Kunming 26.31 305 P **P** **10 17 39.0 +2.0**
KMI pP pP 10 17 51.0 +0.9
KMI sP sP 10 17 57.8 +1.5
KMI PP 10 18 23.3
KMI S **S** **10 22 06.1 -0.2**
KMI sS sS 10 22 29.3 +0.6
KMI SS 10 23 17.5
KMI pmax pmax
comp=Z,11nm,0.8s,mb4.4
KMI pmax pmax
comp=Z,110nm,5.0s
KMI LR LR
comp=N,230nm,20.6s,MS3.8
KMI LR LR
comp=E,170nm,23.9s,MS3.8
KMI LR LR
comp=Z,320nm,25.2s,MS3.8
KLSI 26.63 235 P **P** **10 17 39.4 -0.5**
comp=Z,53nm,1.1s,mb5.0
KNA Kununurra 26.83 175 P **P** **10 17 41.6 0.0**
comp=Z,776nmcomp=Z,76nm,0.9s,mb5.2
MDSI Maura Dua 26.96 236 P **P** **10 17 40.9 -2.0**
comp=Z,1µmcomp=Z,33nm,1.1s,mb4.8
CM31 Chiang Mai Arr 27.43 289 *e*P **P** **10 17 45.7 -1.4**
comp=Z,3.9nm,0.6s,mb4.1
CMAR Chiang Mai Arr 27.43 289 P **P** **10 17 45.6 -1.4**
comp=Z,8.0nm,1.0s,mb4.2,baz=101,slow=7.3,SNR=32
CMAR pP pP 10 17 58.4 -1.9
comp=Z,9.2nm,0.8s,baz=99,slow=7.4,SNR=16
CMAR PcP PcP 10 21 05.3 +0.4
comp=Z,1.3nm,0.6s,baz=35,slow=0.8,SNR=6.7
MAJO Matsushiro 27.47 21 *e*P **P** **10 17 46.8 -0.4**
MAJO pmax pmax
comp=Z,3.0nm,0.6s,mb4.0
MAJO Matsushiro 27.47 21 *e*P **P** **10 17 46.8 -0.4**
comp=Z,2.5nm,0.6s,mb3.9
MJAR Matsushiro Arr 27.47 21 P **P** **10 17 46.8 -0.4**
comp=Z,1.5nm,0.7s,mb3.6,baz=197,slow=10.0,SNR=6.2
CHTO Chiang Mai 27.50 289 *e*P **P** **10 17 45.6 -2.1**
CHTO pmax pmax
comp=Z,7.0nm,0.7s,mb4.4
CHTO Chiang Mai 27.50 289 *e*P **P** **10 17 45.6 -2.0**
comp=Z,6.6nm,0.7s,mb4.4
CHTO Chiang Mai 27.50 289 P **P** **10 17 45.4 -2.3**
comp=Z,10nm,0.8s,mb4.5
CD2 Chengdu 28.71 317 P **P** **10 17 57.6 -0.7**
CD2 pP pP 10 18 10.8 -0.8
CD2 sP sP 10 18 17.3 -0.4
CD2 PP PP 10 18 52.0 -12
CD2 S **S** **10 22 42.1 -1.9**
CD2 sS sS 10 23 04.8 -1.6
CD2 SS SS 10 24 12.6 -35
CD2 pmax pmax
comp=Z,30nm,0.6s,mb5.2
CD2 pmax pmax
comp=Z,110nm,5.5s
CD2 LR LR
comp=N,260nm,10.2s
CD2 LR LR
comp=Z,380nm,16.1s
FITZ Fitzroy Crossi 29.07 181 *e*P **P** **10 18 01.6 +0.1**
comp=Z,16nm,0.7s,mb4.9
FITZ Fitzroy Crossi 29.07 181 P **P** **10 17 59.9 -1.6**
comp=Z,7.3nm,0.8s,mb4.5,baz=18,slow=8.4,SNR=14
FITZ Fitzroy Crossi 29.07 181 *e*P **P** **10 18 02.2 +0.7**
comp=Z,9.9nm,0.8s,mb4.6
FITZ Fitzroy Crossi 29.07 181 P **P** **10 17 59.4 -2.1**
comp=Z,27nm,1.4s,mb4.8
COEN Coen 30.02 146 *e*P **P** **10 18 08.3 -1.8**
comp=Z,87nm,0.8s,mb5.5
SNY Shenyang 30.66 356 ⇓P **P** **10 18 17.5 +2.0**
SNY S **S** **10 23 19.3 +5.0**
SNY pmax pmax
comp=Z,15nm,0.9s,mb4.8
SNY pmax pmax
comp=Z,69nm,3.5s
SNY LR LR
comp=E,120nm,12.9s
SNY LR LR
comp=Z,160nm,16.9s,MS3.7
WRAB Tennant Creek 31.87 166 *e*P **P** **10 18 24.7 -1.6**
WRAB pmax pmax
comp=Z,6.0nm,0.6s,mb4.6
WRAB Tennant Creek 31.87 166 *e*P **P** **10 18 24.7 -1.6**
comp=Z,6.3nm,0.6s,mb4.6
WRA Warramunga Arr 31.88 166 P **P** **10 18 24.4 -2.0**
comp=Z,6.6nm,0.6s,mb4.6,baz=345,slow=9.5,SNR=66
WRA Warramunga Arr 31.88 166 P **P** **10 18 24.4 -2.0**
LZH Lanzhou 32.10 324 *e*P **P** **10 18 30.0 +1.8**
LZH pP pP 10 18 43.3 +1.8
LZH sP sP 10 18 48.0 +0.3
LZH pmax pmax
comp=Z,18nm,1.4s,mb4.7
HHC Hu-ho-hao-te 32.33 339 *e*P **P** **10 18 31.9 +1.8**
HHC sP sP 10 18 50.8 +1.2
HHC PP PP 10 19 40.5 -3.4
HHC PcP PcP 10 21 18.6 +1.5
HHC S **S** **10 23 41.3 +0.9**
HHC sS sS 10 24 03.8 +1.0
HHC ScP ScP 10 24 56.6 -0.1
HHC PcS PcS 10 25 02.1 +0.1
HHC SS SS 10 25 39.5 -21
HHC ScS ScS 10 28 54.9 -0.8
HHC pmax pmax
comp=Z,16nm,0.6s,mb5.0
HHC pmax pmax
comp=Z,120nm,5.7s
HHC LR LR
comp=N,800nm,12.3s,MS4.8
HHC LR LR
comp=E,810nm,12.5s,MS4.8
HHC LR LR
comp=Z,820nm,12.4s,MS4.6
CN2 Changchun 32.55 359 *e*P **P** **10 18 35.8 +3.8**
CN2 *e*sP sP 10 18 55.0 +3.5
CN2 *e*S **S** **10 23 47.6 +3.9**
CN2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,400nm,21.0s,MS4.1
CN2 LR LR
comp=E,200nm,21.0s,MS4.1
CN2 LR LR
comp=Z,200nm,24.0s,MS3.7
MBWA Marble Bar 32.75 191 *e*P **P** **10 18 32.7 -1.2**
comp=Z,4.4nm,0.7s,mb4.5
ASAR Alice Springs 35.38 168 P **P** **10 18 55.6 -1.1**
comp=Z,3.7nm,0.4s,mb4.7,baz=351,slow=7.4,SNR=75
GTA Gaotai 36.70 325 *e*P **P** **10 19 07.9 -0.1**
GTA pP pP 10 19 20.0 -1.4
GTA sP sP 10 19 25.5 -2.0
GTA PP PP 10 20 33.8 +1.5
GTA PcP PcP 10 21 30.8 +1.0
GTA S **S** **10 24 47.8 -0.1**
GTA sS sS 10 25 07.4 -3.2
GTA SS SS 10 27 15.4 -15
GTA pmax pmax
comp=Z,19nm,1.1s,mb4.8
GTA pmax pmax
comp=Z,100nm,5.1s
GTA LR LR
comp=N,120nm,16.2s,MS4.0
GTA LR LR
comp=E,170nm,16.8s,MS4.0
GTA LR LR
comp=Z,180nm,16.8s,MS3.9
CTA Charters Tower 36.71 148 *e*P **P** **10 19 07.3 -0.9**
comp=Z,5.7nm,0.6s,mb4.6
CTA Charters Tower 36.71 148 P **P** **10 19 07.5 -0.7**
comp=Z,3.8nm,0.8s,mb4.3,baz=340,slow=8.1,SNR=5.8
CTAO Charters Tower 36.71 148 *e*P **P** **10 19 07.5 -0.7**
CTAO pmax pmax
comp=Z,12nm,1.0s,mb4.7
CTAO Charters Tower 36.71 148 *e*P **P** **10 19 07.5 -0.7**
comp=Z,12nm,1.0s,mb4.7
YUK Yuzh-Kuril'sk 36.86 24 *e*P **P** **10 19 00.1 -9.2**
YUK *e* 10 20 40.7
YUK MLR MLR
comp=E,270nm,23.0s
YUK MLR MLR
comp=Z,320nm,23.0s,MS4.0
LSA Lhasa 37.57 305 *e*P **P** **10 19 16.2 +0.7**
LSA pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
LSA Lhasa 37.57 305 *e*P **P** **10 19 16.2 +0.7**
comp=Z,9.8nm,0.6s,mb4.7
HABR Khabarovsk 37.92 9 P **P** **10 19 27.4 +9.2**
HABR *e*S **S** **10 25 09.1 +3.0**
HABR *e**SS sS 10 25 25.8 -3.1
HABR MLR MLR
comp=Z,157nm,19.0s,MS3.8
TAPN Taplejung 39.66 300 *e*P **P** **10 19 32.2 -0.9**
comp=Z,32nm,0.7s,mb5.2
ODAN Odare 39.80 299 *e*P **P** **10 19 33.2 -1.1**
comp=Z,88nm,0.7s,mb5.6
ULN Ulaanbaatar 40.03 340 *e*P **P** **10 19 36.2 +0.4**
ULN *e**PP pP 10 19 49.6 +0.2
ULN pmax pmax
comp=Z,9.0nm,0.9s,mb4.5
ULN Ulaanbaatar 40.03 340 *e*P **P** **10 19 36.2 +0.4**
comp=Z,8.6nm,0.9s,mb4.5
ULN *e*pP pP 10 19 49.6 +0.2
ULN Ulaanbaatar 40.03 340 P **P** **10 19 37.1 +1.3**
SONM Songino Array 40.23 339 P **P** **10 19 37.3 -0.1**
comp=Z,8.8nm,0.9s,mb4.5,baz=154,slow=9.2,SNR=27
SONM pP pP 10 19 50.5 -0.5
comp=Z,5.2nm,0.8s,baz=157,slow=9.8,SNR=8.3
RAMN Ramite 40.51 299 *e*P **P** **10 19 39.2 -0.9**
comp=Z,52nm,0.8s,mb5.2
JIRN Jiri 41.05 299 *e*P **P** **10 19 43.7 -0.8**
comp=Z,40nm,0.5s,mb5.3
GUN Gumba 41.38 300 *e*P **P** **10 19 46.2 -1.1**
comp=Z,88nm,0.9s,mb5.4
PKI Pulchoki 41.69 299 *e*P **P** **10 19 48.3 -1.5**
FORT Forrest 41.71 178 *e*P **P** **10 19 49.6 -0.2**
comp=Z,18nm,0.6s,mb4.9
KKN Kakani 41.86 299 *e*P **P** **10 19 49.5 -1.7**
comp=Z,31nm,0.8s,mb5.0
DMN Daman 41.96 299 *e*P **P** **10 19 50.6 -1.4**
GKN Gorkha 42.46 299 *e*P **P** **10 19 54.3 -1.8**
KLBR Kellerberrin 43.28 191 *e*P **P** **10 20 02.2 -0.3**
comp=Z,21nm,0.7s,mb5.0
TLY Talaya 44.44 340 *e*P **P** **10 20 14.5 +2.9**
TLY *e* 10 26 42.7
TLY pmax pmax
comp=Z,16nm,0.9s,mb4.8
STKA Stephens Creek 45.20 162 *e*P **P** **10 20 17.0 -0.9**
comp=Z,4.7nm,0.6s,mb4.5
STKA *e* 10 20 23.2
STKA Stephens Creek 45.20 162 P **P** **10 20 17.3 -0.6**
comp=Z,8.5nm,0.8s,mb4.6,baz=348,slow=6.1,SNR=13
STKA Stephens Creek 45.20 162 *e*P **P** **10 20 17.3 -0.6**
STKA pmax pmax
comp=Z,6.0nm,0.8s
STKA Stephens Creek 45.20 162 *e*P **P** **10 20 17.3 -0.6**
comp=Z,6.1nm,0.8s,mb4.5
WMQ Urumqi 46.58 322 P **P** **10 20 29.6 +0.9**
WMQ pP pP 10 20 42.0 -0.5
WMQ sP sP 10 20 47.3 -1.2
WMQ PP PP 10 22 19.3 +0.5
WMQ pmax pmax
comp=Z,22nm,1.0s,mb5.0
WMQ pmax pmax
comp=Z,170nm,4.9s
WMQ LR LR
comp=N,72nm,18.3s
WMQ LR LR
comp=Z,76nm,21.0s,MS3.6
ARMA Armidale 47.95 150 *e*P **P** **10 20 36.4 -3.1**
PETK Petropavlovsk- 48.83 25 P **P** **10 20 46.5 +0.6**
comp=Z,2.2nm,0.6s,mb4.4,baz=186,slow=4.3,SNR=4.8
YAK Yakutsk 50.86 2 *e*P pP 10 21 11.9 -3.3
YAK pmax pmax
comp=N,12nm,1.0s
YAK pmax pmax
comp=E,5.0nm,1.1s
CNB Canberra Magne 51.09 156 *e*P **P** **10 21 03.7 +0.4**
MK31 Makanchi Array 51.37 322 *e*P **P** **10 21 05.5 +0.2**
MK31 *e**PP pP 10 21 19.9 +0.6
MKAR Makanchi Array 51.37 322 P **P** **10 21 05.4 +0.1**
comp=E,19nm,0.8s,mb5.1,baz=115,slow=8.3,SNR=53
MKAR pP pP 10 21 19.5 +0.2
comp=E,9.3nm,0.8s,baz=114,slow=7.9,SNR=7.2
MKAR Makanchi Array 51.37 322 P **P** **10 21 05.4 +0.1**
MKAR pP pP 10 21 19.5 +0.2
TOO Toolangi 51.68 161 *e*P **P** **10 21 13.9 +6.2**
KSH Kashi 52.70 312 P **P** **10 21 16.8 +1.5**
KSH pP pP 10 21 29.4 0.0
KSH sP sP 10 21 34.9 -0.4
KSH PcP PcP 10 22 27.0 +2.4
KSH PP PP 10 23 17.8 +2.9
KSH ScP ScP 10 26 18.9 +1.1
KSH PcS PcS 10 26 23.8 +0.7
KSH S **S** **10 28 39.4 -0.1**
KSH sS sS 10 29 01.4 -1.7
KSH ScS ScS 10 30 59.5 -1.2
KSH SS SS 10 32 16.6 -1.9
KSH pmax pmax
comp=Z,14nm,1.2s,mb4.8
KSH pmax pmax
comp=Z,54nm,3.5s
KSH LR LR
comp=N,120nm,6.7s
KSH LR LR
comp=E,140nm,7.4s
KSH LR LR
comp=Z,200nm,6.7s
ZALV Zalesovo Beam 53.89 331 P **P** **10 21 22.6 -1.3**
comp=Z,4.6nm,0.5s,mb4.6,baz=111,slow=8.1,SNR=8.3
ZALV pP pP 10 21 37.2 -0.7
comp=Z,4.0nm,0.3s,baz=114,slow=7.2,SNR=3.4
TKM2 Tokmak 2 54.08 315 *e*P **P** **10 21 25.6 +0.2**
TKM2 *e**PP pP 10 21 40.4 +0.9
TKM2 pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
TKM2 Tokmak 2 54.08 315 *e*P **P** **10 21 25.6 +0.2**
comp=Z,5.8nm,0.6s,mb4.7
TKM2 *e*pP pP 10 21 40.4 +0.9
UCH Uchtor 54.61 314 *e*P **P** **10 21 30.0 +0.7**
UCH *e**PP pP 10 21 45.1 +1.7
UCH pmax pmax
comp=Z,18nm,0.7s,mb5.2
UCH Uchtor 54.61 314 *e*P **P** **10 21 30.0 +0.8**
comp=Z,18nm,0.7s,mb5.2
UCH *e*pP pP 10 21 45.1 +1.8
AAK Ala-Archa 54.75 315*ce*P **P** **10 21 30.6 +0.3**
AAK pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
AAK Ala-Archa 54.75 315 *e*P **P** **10 21 30.4 +0.1**
comp=Z,7.6nm,1.2s,mb4.6
AML Almayashu 55.15 314 *e*P **P** **10 21 34.2 +1.0**
AML pmax pmax
comp=Z,12nm,0.8s,mb5.0
AML Almayashu 55.15 314 *e*P **P** **10 21 34.1 +0.9**
comp=Z,12nm,0.8s,mb5.0
EKS2 Erkin-Say 55.26 315 *e*P **P** **10 21 34.4 +0.4**
EKS2 *e**PP pP 10 21 47.3 -0.8
EKS2 pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
EKS2 Erkin-Say 55.26 315 *e*P **P** **10 21 34.4 +0.4**
comp=Z,8.8nm,0.7s,mb4.9
EKS2 *e*pP pP 10 21 47.3 -0.9
KURK Kurchatov 55.39 325*ce*P **P** **10 21 34.4 -0.3**
KURK pmax pmax
comp=Z,67nm,1.0s,mb5.6
KURK Kurchatov 55.39 325 *e*P **P** **10 21 34.1 -0.6**
comp=Z,56nm,0.9s,mb5.6
KURK *e*pP pP 10 21 48.9 +0.1
KBL Kabul 56.89 304 *e*P **P** **10 21 45.1 -0.7**
KBL *e**PP pP 10 21 59.5 -0.5
KBL pmax pmax
comp=Z,12nm,0.7s,mb5.0
KBL Kabul 56.89 304 *e*P **P** **10 21 45.1 -0.7**
comp=Z,12nm,0.7s,mb5.0
KBL *e*pP pP 10 21 59.5 -0.5
BVAR Borovoye Array 60.98 325 P **P** **10 22 13.6 -0.2**
comp=Z,16nm,0.8s,mb5.2,baz=120,slow=8.8,SNR=36
BVAR pP pP 10 22 27.6 -0.5
comp=Z,9.0nm,0.7s,baz=123,slow=10,SNR=10
BRVK Borovoye 61.06 325*ce*P **P** **10 22 13.8 -0.5**
BRVK pmax pmax
comp=Z,43nm,1.0s,mb5.5
BRVK Borovoye 61.06 325 *e*P **P** **10 22 13.6 -0.6**
comp=Z,36nm,0.9s,mb5.5
BRVK *e*pP pP 10 22 28.1 -0.5
BILL Bilibino 62.55 16⇑*e*P **P** **10 22 27.2 +3.1**
BILL pmax pmax
comp=Z,15nm,2.5s,mb4.7
ABKAR Akbulak array 66.26 319 *e*P **P** **10 22 47.8 -0.8**
comp=Z,4.9nm,0.6s,mb4.7
ABKAR *e*pP pP 10 23 02.4 -0.7
SVE Sverdlovsk 67.51 327⇑*e*P **P** **10 22 58.9 +2.4**
SVE pmax pmax
comp=Z,25nm,0.9s,mb5.2
RPZ Rata Peaks 68.08 147 P **P** **10 23 00.2 0.0**
comp=Z,14nm,0.9s,mb5.0,baz=278,slow=3.5,SNR=6.1
RPZ LR LR 10 50 57.9
comp=Z,199nm,20.6s,MS4.3,baz=63,slow=34
ARU Arti 68.53 326*d i*P **P** **10 23 01.9 -1.0**
ARU *e* 10 25 32.6
ARU S S 10 32 03.0 +1.9
ARU SS SS 10 36 27.2 +1.5
ARU pmax pmax
comp=Z,20nm,1.0s,mb5.0
ARU Arti 68.53 326 *e*P **P** **10 23 04.9 +2.0**
comp=Z,14nm,0.7s,mb5.0
ARU *e*pP pP 10 23 19.8 +2.3
RSO Redoubt South 75.91 30 *e*P **P** **10 23 45.2 -1.7**
GNI Garni 76.50 309*ce*P **P** **10 23 51.4 +0.7**
GNI pmax pmax
comp=Z,19nm,1.7s
BPAW Bear Paw Mtn. 76.86 27 *e*P **P** **10 23 52.1 -0.1**
comp=Z,13nm,1.2s,mb4.8
BPAW *e*pP pP 10 24 08.4 +1.5
MCK McKinley 77.76 27 *e*P **P** **10 23 59.2 +2.0**
MCK *e**PP pP 10 24 10.2 -1.8
MCK pmax pmax
comp=Z,17nm,1.2s,mb4.8
MCK McKinley 77.76 27 *e*P **P** **10 23 59.2 +2.0**
comp=Z,17nm,1.2s,mb4.9
MCK *e*pP pP 10 24 10.2 -1.8
KIV Kislovodsk 77.80 313 *e*P **P** **10 23 56.9 -0.9**
KIV pmax pmax
comp=Z,13nm,1.0s,mb4.8
COLA College 78.22 26 *e*P **P** **10 24 01.8 +2.1**
COLA *e**PP pP 10 24 14.5 -0.1
COLA pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
COLA College 78.22 26 *e*P **P** **10 24 01.8 +2.0**
comp=Z,2.6nm,0.8s,mb4.2
COLA *e*pP pP 10 24 14.5 0.0
OBN Obninsk 80.82 324⇓*e*P **P** **10 24 15.6 +1.5**
OBN pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
EGAK Eagle 81.08 26 *e*P **P** **10 24 10.5 -4.8**
comp=Z,10.0nm,0.6s,mb4.9
DAWY Dawson 81.94 26 *e*P **P** **10 24 20.1 +0.3**
DAWY *e*pP pP 10 24 34.1 -0.6
JOF Joensuu 82.45 333 *e*P PcP 10 24 33.9 +6.4
JOF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
JOF Joensuu 82.45 333 *e*p PcP 10 24 33.9 +6.4
comp=Z,4.2nm,0.7s
ARCES ARCESS Array B 83.40 340 P **P** **10 24 28.2 +0.9**
comp=Z,5.1nm,0.8s,mb4.6,baz=64,slow=5.5,SNR=8.1
ARCES ARCESS Array B 83.40 340 P **P** **10 24 28.2 +0.9**
INK Inuvik 83.46 22 *e*P **P** **10 24 28.2 +0.6**
INK *e**PP pP 10 24 41.4 -1.2
INK pmax pmax
comp=Z,2.0nm,1.1s
INK Inuvik 83.46 22 *e*P **P** **10 24 28.2 +0.6**
comp=Z,2.4nm,1.1s,mb4.1
INK *e*pP pP 10 24 41.4 -1.2
MMAI Mount Meron Ar 84.79 302 P **P** **10 24 35.4 +0.2**
comp=Z,3.1nm,0.8s,mb4.5,baz=74,slow=7.0,SNR=3.6
KAF Kangasniemi 84.89 332 *e*P **P** **10 24 32.6 -2.4**
KAF pmax pmax
comp=Z,12nm,1.2s,mb4.9
KAF Kangasniemi 84.89 332 *e*P **P** **10 24 32.6 -2.4**
comp=Z,12nm,1.2s,mb4.9
KAF Kangasniemi 84.89 332 *e*p **P** **10 24 32.6 -2.4**
comp=Z,12nm,1.2s,mb4.9
BR131 Keskin Array S 85.02 309 *e*P **P** **10 24 34.9 -1.3**
comp=Z,1.1nm,0.6s,mb4.2
BRTR Keskin Array B 85.02 309 P **P** **10 24 35.2 -1.0**
comp=Z,4.0nm,0.8s,mb4.6,baz=100,slow=5.3,SNR=12
BRTR pP pP 10 24 49.7 -1.5
comp=Z,1.4nm,0.6s,baz=135,slow=5.1,SNR=3.4
BRTR Keskin Array B 85.02 309*ce*P **P** **10 24 38.0 +1.8**
BRTR pmax pmax
comp=Z,4.0nm,0.8s
FINES FINESS Array B 85.15 332 P **P** **10 24 35.4 -1.0**
comp=Z,3.2nm,0.8s,mb4.5,baz=72,slow=4.5,SNR=5.0
FINES LR LR 11 05 45.8
comp=Z,121nm,20.4s,MS4.3,baz=4.8,slow=38
AKASG Malin Array Be 85.93 321 P **P** **10 24 38.1 -2.3**
comp=Z,0.4nm,0.3s,mb4.1,baz=73,slow=3.1,SNR=4.3
NOA NORSAR Array B 92.00 334 P **P** **10 25 09.8 +0.8**
comp=Z,1.1nm,0.8s,mb4.2,baz=64,slow=4.7,SNR=3.2
NOA LR LR 11 12 29.6
comp=Z,49nm,19.7s,MS4.0,baz=355,slow=39
TORD Torodi Ar. Bea 119.99 292 PKP PKPdf 10 30 51.0 -0.8
comp=Z,1.7nm,0.9s,baz=49,slow=1.8,SNR=5.8
PLCA Paso Flores 146.98 156 PKPbc PKPbc 10 31 43.9 +0.8
comp=Z,2.1nm,0.8s,baz=241,slow=5.0,SNR=4.3
LPAZ La Paz 165.06 112 PKPab PKPab 10 33 03.5 +1.3
comp=Z,1.0nm,0.8s,baz=239,slow=3.0,SNR=4.4

GUC 17 10:24:00.6±0.8**, 22°.12S×67°.87W, h204**km±26km**, ML3.6, 5C, Chile-Bolivia border region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PB04 Plate Boundary 1.50 264⇑*i*P Pn 10 24 41.9 +7.2
PB04 *i* S Sn 10 25 13.3 +12
PB04 AML AML 10 25 14.5
comp=N,220nm,0.3s
PB01 Plate Boundary 1.85 305⇑*i*P Pn 10 24 39.1 +1.2
PB01 *e*S Sn 10 25 08.0 +1.1
PB01 AML AML 10 25 10.6
comp=E,120nm,0.4s
CEN1 Los Morros 2.49 239⇑*i*P Pn 10 24 48.8 +4.2
CEN1 *i* S Sn 10 25 22.0 +3.0
CEN1 AML AML 10 25 23.8
comp=N,90nm,0.6s
PSGC Pisagua 3.28 320⇑*i*P Pn 10 24 54.6 +0.9
PSGC *i* S Sn 10 25 36.4 +1.1
PSGC AML AML 10 25 40.2
comp=N,43nm,0.2s
MNMC Miæe Miæ 3.38 331⇑*i*P Pn 10 24 57.0 +2.0
MNMC *i* S Sn 10 25 40.8 +3.1
MNMC AML AML 10 25 42.4
comp=E,285nm,0.5s

IDC 17 10:42:29.2±38.0**, 3°.20N×95°.16W, h0**km**, mb3.3**/3**, mb1 3.8**/3**, mb1mx3.6**/17**, mbtmp3.3**/3**, Error ellipse: s-maj=670.3km s-min=255.4km az=147.0, Eastcentral Pacific Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**27.22**	**344**	P	P	10 48 15.1	+0.2
	0.1nm,0.6s,baz=159,slow=12,SNR=4.3						
NVAR	**Mina Array Bea**	**40.94**	**332**	P	P	10 50 13.7	+0.1
	0.4nm,0.8s,baz=163,slow=9.4,SNR=3.7						
PDAR	**Pinedale Array**	**41.44**	**344**	P	P	10 50 17.9	+0.3
	0.5nm,0.9s,baz=156,slow=9.7,SNR=3.8						

ISC 17 11:00:39.4±0.7, 48°.86N±0°.04×20°.90E±0°.05, h0km, n5, σ0:80/10, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRVS	**Cervenica-Dubn**	**0.38**	**83**	*e*PG	**Pg**	**11 00 45.9**	**-0.7**
CRVS				*e*SG	**Sg**	**11 00 51.0**	**-0.5**
KECS	**Kecovo**	**0.47**	**216**	*e*PG	**Pg**	**11 00 49.1**	**+0.8**
KECS				*e*SG	**Sg**	**11 00 55.3**	**+1.0**
STHS	**Stebnicka Huta**	**0.60**	**22**	*e*PG	**Pg**	**11 00 50.7**	**-0.3**
STHS				*e*SG	**Sg**	**11 01 00.0**	**+1.2**
NIE	**Niedzica**	**0.68**	**326**	*e*Pg	**Pg**	**11 00 53.2**	**+0.8**
NIE				*e*Sg	**Sg**	**11 01 00.7**	**-0.5**
VYHS	**Vyhne**	**1.41**	**256**	*e*PG	**Pg**	**11 01 05.7**	**-0.8**
VYHS				*e*SG	**Sg**	**11 01 23.8**	**-1.0**

*IDC **17** 11:18:51.1±1.2, 20°.88N×121°.19E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.5/22, mbtmp3.7/5, ML3.7/1, Error ellipse: s-maj=68.1km s-min=20.4km az=70.0*
*NEIC **17** 11:18:52.2±0.7, 20°.92N×121°.32E, h10km, Error ellipse: s-maj=43.3km s-min=9.0km az=79.0*
*ISCJB **17** 11:18:53.6±0.7, 20°.90N±0°.06×121°.3E±0°.2, h33km, mb3.5/4, Error ellipse: s-maj=30.5km s-min=7.0km az=171.3*
ISC 17 11:18:55.7±0.7, 20°.96N±0°.07×121°.4E±0°.2, h35km, n13, σ0:94/17, mb3.5/4, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**1.87**	**351**	*e*Pn	**Pn**	**11 19 22.8**	**-2.5**
YULB	**Yu-li**	**2.42**	**358**	*e*Pn	**Pn**	**11 19 31.8**	**-1.0**
YULB				*e*Sn	**Sn**	**11 20 07.8**	**+6.5**
TPUB	**Ta-pu**	**2.43**	**343**	*e*Pn	**Pn**	**11 19 32.6**	**-0.4**
TPUB				*e*Sn	**Sn**	**11 20 02.5**	**+1.1**
SSLB	**Suanglung**	**2.84**	**352**	*e*Pn	**Pn**	**11 19 38.9**	**+0.3**
SSLB				*e*Sn	**Sn**	**11 20 11.0**	**-0.6**
YHNB	**Yeheng**	**3.69**	**360**	*e*Pn	**Pn**	**11 19 50.9**	**+0.6**
YHNB				*e*Sn	**Sn**	**11 20 37.2**	**+4.6**
KSRS	**Korea Array**	**17.39**	**18**	P	**Pn**	**11 22 56.4**	**+0.8**
	0.2nm,0.3s,baz=193,slow=11,SNR=9.7						
SONM	**Songino Array**	**29.42**	**339**	P	**P**	**11 24 57.0**	**+1.2**
	0.4nm,0.5s,mb3.4,baz=157,slow=7.8,SNR=4.0						
MKAR	**Makanchi Array**	**40.82**	**318**	P	**P**	**11 26 33.5**	**-0.3**
	0.9nm,0.5s,mb3.6,baz=112,slow=9.3,SNR=7.6						
MKAR	**Makanchi Array**	**40.82**	**318**	P	**P**	**11 26 33.5**	**-0.3**
WRAB	**Tennant Creek**	**42.58**	**162**	P	**P**	**11 26 47.6**	**-0.8**
WRA	**Warramunga Arr**	**42.58**	**162**	P	**P**	**11 26 48.2**	**-0.2**
	0.6nm,0.5s,mb3.5,baz=344,slow=9.0,SNR=4.4						
WRA	**Warramunga Arr**	**42.58**	**162**	P	**P**	**11 26 48.2**	**-0.2**
ASAR	**Alice Springs**	**46.00**	**164**	P	**P**	**11 27 16.7**	**+0.9**
	0.5nm,0.8s,mb3.5,baz=343,slow=7.5,SNR=10						

IDC 17 12:18:24.8±2.1, 2°.03S×128°.37E, h0km, mb3.8/2, mb1 4.1/4, mb1mx3.7/20, mbtmp3.9/4, ML3.7/1, Error ellipse: s-maj=106.7km s-min=26.3km az=71.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**16.20**	**189**	Pn	Pn	12 22 15.0	+1.1
	0.2nm,0.3s,baz=27,slow=10,SNR=7.7						
WRA	**Warramunga Arr**	**18.74**	**162**	P	Pn	12 22 44.8	-0.8
	0.4nm,0.3s,baz=340,slow=11,SNR=43						
ASAR	**Alice Springs**	**22.17**	**166**	P	P	12 23 22.3	-0.2
	6.3nm,0.5s,baz=344,slow=10,SNR=127						
MKAR	**Makanchi Array**	**63.21**	**326**	P	P	12 28 55.1	+0.3
	0.3nm,0.6s,baz=114,slow=6.5,SNR=3.6						

*CSEM **17** 12:33:44.5±1.4, 50°.57N×14°.06E, h2km, ML2.5/2, Error ellipse: s-maj=24.1km s-min=15.4km az=165.0, Suspected Mining explosion.*
*VIE **17** 12:33:45.1±0.6, 50°.50N×14°.03E, h0km, ML2.5/2, Error ellipse: s-maj=4.2km s-min=1.9km az=42.0 57 km NNW of Praha Suspected Mining explosion.*
ISC 17 12:33:46.5±1.7, 50°.50N±0°.05×14°.1E±0°.1, h0km, n8, σ0:96/14, 2C-2D, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**1.46**	**75**	*e*Pn	**Pn**	**12 34 14.4**	**+0.3**
KSP				*e*Sn	**Sn**	**12 34 34.7**	**+0.7**
KSP	**Ksiaz**	**1.46**	**75**	*e*Pg	**Pg**	**12 34 14.1**	**-0.4**
KSP				*e*Sg	**Sg**	**12 34 34.4**	**+0.9**
VRAC	**Vranov**	**2.02**	**125**	*e*Sg	**Sg**	**12 34 51.3**	**-0.1**
MORC	**Moravsky Berou**	**2.35**	**106**	*e*Sg	**Sg**	**12 34 59.8**	**-2.2**
MOA	**Molln**	**2.65**	**177**	⇑*i*Pg	**Pg**	**12 34 36.1**	**-1.2**
MOA				⇓*i*Sg	**Sg**	**12 35 12.3**	**+0.7**
	8.9nm,0.6s						
MOA	**Molln**	**2.65**	**177**	Pg	**Pg**	**12 34 36.1**	**-1.2**
MOA				Sg	**Sg**	**12 35 12.3**	**+0.7**
	8.9nm,0.6s						
CONA	**Conrad Observa**	**2.83**	**155**	⇓*i*Pn	**Pn**	**12 34 32.5**	**-0.3**
CONA				⇑*i*Sg	**Sg**	**12 35 18.5**	**+1.2**
	5.9nm,0.3s						
CONA	**Conrad Observa**	**2.83**	**155**	Pn	**Pn**	**12 34 32.5**	**-0.4**
CONA				Sg	**Sg**	**12 35 18.5**	**+1.2**
	5.9nm,0.3s						

*NEIC **17** 12:56:53.0, 31°.83S×72°.02W, h53km, MD3.6(GUC), After GUC.*
GUC 17 12:56:53.0±0.5, 31°.83S×72°.02W, h53km±7km, MD3.6, ML3.5, 6C-3D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.45**	**97**	⇓*i*P	Pn	12 57 04.0	+0.2
CHNG				*i*S	Sn	12 57 12.2	+0.7
JACH	**Jahuel**	**1.48**	**125**	⇑*i*P	Pn	12 57 17.8	+0.6
JACH				*i*S	Sn	12 57 36.9	+1.6
JACH	**Jahuel**	**1.48**	**125**	⇑*i*P	Pn	12 57 17.8	+0.6
JACH				*i*S	Sn	12 57 36.9	+1.6
CLCH	**Cerro Calan**	**2.00**	**142**	AML	AML	12 58 07.0	
	comp=E,424nm,0.7s						
CLCH				AML	AML	12 58 07.6	
	comp=E,469nm,0.5s						
TACH	**Talagante**	**2.03**	**154**	*e*P	Pn	12 57 25.1	+0.4
TACH				*i*S	Sn	12 57 49.8	+0.9
TACH	**Talagante**	**2.03**	**154**	*e*P	Pn	12 57 25.1	+0.4
TACH				*i*S	Sn	12 57 49.8	+0.9
FCH	**Farellones**	**2.09**	**136**	⇑*i*P	Pn	12 57 27.2	+1.7
FCH				*i*S	Sn	12 57 52.3	+2.0
FCH	**Farellones**	**2.09**	**136**	⇑*i*P	Pn	12 57 27.2	+1.7
FCH				*i*S	Sn	12 57 52.3	+2.0
ANTU	**Antumapu**	**2.09**	**146**	*e*P	Pn	12 57 26.3	+0.8
ANTU				*i*S	Sn	12 57 51.5	+1.2
ANTU	**Antumapu**	**2.09**	**146**	*e*P	Pn	12 57 26.3	+0.8
ANTU				*i*S	Sn	12 57 51.5	+1.2
ANTU				AML	AML	12 58 11.1	
	comp=E,260nm,0.3s						
PCH	**Pirque**	**2.19**	**145**	⇓*i*P	Pn	12 57 29.0	+2.1
PCH				*i*S	Sn	12 57 55.3	+2.5
PCH	**Pirque**	**2.19**	**145**	⇓*i*P	Pn	12 57 29.0	+2.1
PCH				*i*S	Sn	12 57 55.3	+2.5
CHCH	**Chadas Angostu**	**2.39**	**152**	*i*P	Pn	12 57 32.7	+3.0
CHCH				*i*S	Sn	12 58 01.2	+3.5
CHCH	**Chadas Angostu**	**2.39**	**152**	*i*P	Pn	12 57 32.7	+3.0
CHCH				*i*S	Sn	12 58 01.2	+3.5
LMEL	**Las Melosas**	**2.52**	**143**	⇑*i*P	Pn	12 57 34.1	+2.6
LMEL				*i*S	Sn	12 58 04.2	+3.1
LMEL	**Las Melosas**	**2.52**	**143**	⇑*i*P	Pn	12 57 34.1	+2.6
LMEL				*i*S	Sn	12 58 04.2	+3.1
LMEL				AML	AML	12 58 07.9	
	comp=N,394nm,0.1s						
CACH	**El Canelo**	**2.57**	**153**	*i*P	Pn	12 57 33.8	+1.7
CACH				*i*S	Sn	12 58 04.6	+2.4
CACH	**El Canelo**	**2.57**	**153**	*i*P	Pn	12 57 33.8	+1.7
CACH				*i*S	Sn	12 58 04.6	+2.4

*ISK **17** 13:11:20.8, 36°.98N×29°.24E, h5km, MD2.9*
*ISCJB **17** 13:11:21.2±0.7, 36°.97N±0°.03×29°.16E±0°.04, h1km±8km, Error ellipse: s-maj=6.3km s-min=4.5km az=138.8*
*DDA **17** 13:11:21.6, 37°.01N×29°.17E, h7km±5km, Md3.0*
*CSEM **17** 13:11:21.6±0.2, 36°.95N×29°.16E, h2km, MD2.9, Error ellipse: s-maj=3.7km s-min=2.3km az=61.0*
ISC 17 13:11:21.8±0.6, 36°.97N±0°.03×29°.16E±0°.04, h4km±8km, n24, σ0:94/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.33**	**55**	*e*PG	**Pg**	**13 11 26.7**	**-1.5**
GLHS				*e*SG	**Sg**	**13 11 32.4**	**0.0**
GLHS	**Glhisar (BURDU**	**0.33**	**55**	*e*Pg	**Pg**	**13 11 26.7**	**-1.4**
GLHS				*e*Sg	**Sg**	**13 11 32.4**	**0.0**
GOLH	**Golhisar**	**0.41**	**50**	*i*P	**Pg**	**13 11 28.6**	**-1.2**
GOLH				*i*S	**Sg**	**13 11 35.9**	**+0.6**
GOLH	**Golhisar**	**0.41**	**50**	*i*P	**Pg**	**13 11 28.6**	**-1.2**
GOLH				*i*S	**Sg**	**13 11 35.8**	**+0.6**
ELL	**Elmali**	**0.64**	**110**	*e*PG	**Pg**	**13 11 33.0**	**-1.0**
ELL				*e*SG	**Sg**	**13 11 42.8**	**+0.5**
ELL	**Elmali**	**0.64**	**110**	*e*Pg	**Pg**	**13 11 33.1**	**-1.0**
ELL				*e*Sg	**Sg**	**13 11 42.8**	**+0.5**
DNZL	**Cakiroluk**	**0.72**	**353**	*i*P	**Pg**	**13 11 34.1**	**-1.6**
DNZL				*i*S	**Sg**	**13 11 45.3**	**+0.1**
DNZL	**Cakiroluk**	**0.72**	**353**	*i*P	**Pg**	**13 11 34.1**	**-1.6**
DNZL				*i*S	**Sg**	**13 11 45.3**	**+0.2**
YER	**Yerkesik**	**0.72**	**283**	*e*PG	**Pg**	**13 11 36.2**	**+0.5**
YER	**Yerkesik**	**0.72**	**283**	*e*Pg	**Pg**	**13 11 36.2**	**+0.5**
DENT	**Denizli**	**0.79**	**352**	*e*PG	**Pg**	**13 11 37.6**	**+0.6**
DENT				*e*SG	**Sg**	**13 11 49.2**	**+1.9**
DENT	**Denizli**	**0.79**	**352**	*e*Pg	**Pg**	**13 11 37.6**	**+0.6**
DENT				*e*Sg	**Sg**	**13 11 49.2**	**+2.0**
AKAS	**Kas**	**0.82**	**154**	*i*P	**Pg**	**13 11 37.1**	**-0.3**
AKAS				*i*S	**Sg**	**13 11 51.2**	**+3.1**
AKAS	**Kas**	**0.82**	**154**	*i*P	**Pg**	**13 11 37.2**	**-0.3**
AKAS				*i*S	**Sg**	**13 11 51.2**	**+3.1**
AYDN	**Tasoluk**	**1.23**	**304**	*i*P	**Pg**	**13 11 44.9**	**-0.6**
AYDN				*i*S	**Sg**	**13 12 01.2**	**-0.3**
AYDN	**Tasoluk**	**1.23**	**304**	*i*P	**Pg**	**13 11 44.9**	**-0.6**
AYDN				*i*S	**Sg**	**13 12 01.2**	**-0.3**
KHAL	**Karahalli**	**1.42**	**10**	*i*P	**Pg**	**13 11 50.3**	**+1.2**
KHAL				*i*S	**Sb**	**13 12 07.1**	**-0.2**
KHAL	**Karahalli**	**1.42**	**10**	*i*P	**Pg**	**13 11 50.3**	**+1.2**
KHAL				*i*S	**Sb**	**13 12 07.1**	**-0.2**
SUTC	**Sutluce-Ispart**	**1.55**	**70**	*e*PN	**Pn**	**13 11 50.1**	**0.0**
SUTC	**Sutluce-Ispart**	**1.55**	**70**	*e*Pn	**Pn**	**13 11 50.1**	**-0.1**
KULA	**Kula-Manisa**	**1.59**	**346**	*e*PN	**Pg**	**13 11 52.1**	**-0.2**
KULA	**Kula-Manisa**	**1.59**	**346**	*e*Pn	**Pg**	**13 11 52.1**	**-0.3**
HDMB	**Hadim**	**2.66**	**89**	*e*PN	**Pn**	**13 12 05.7**	**+0.3**
HDMB	**Hadim**	**2.66**	**89**	*e*Pn	**Pn**	**13 12 05.7**	**+0.3**

*ISCJB **17** 13:17:56.4±0.6, 50°.03N±0°.05×78°.51E±0°.09, h10km, Error ellipse: s-maj=9.5km s-min=4.8km az=142.0*
*NNC **17** 13:17:58.5±2.0, 50°.14N×78°.37E, h0km, mb2.9, mpv2.6, Error ellipse: s-maj=20.6km s-min=12.6km az=90.0*
*IDC **17** 13:17:59.0±1.0, 49°.93N×78°.80E, h0km, mb1 2.9/3, mb1mx2.9/26, mbtmp2.9/3, ML3.0/3, Error ellipse: s-maj=22.4km s-min=8.3km az=44.0*
ISC 17 13:17:58.0±0.6, 50°.05N±0°.05×78°.63E±0°.09, h10km, n8, σ1:07/14, 8C-3D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**0.67**	**360**	⇓P	**Pg**	**13 18 09.6**	**-1.2**
	10nm,0.3s						
KURK				⇑S	**Sg**	**13 18 19.3**	**-0.3**
	23nm,0.5s						
MK31	**Makanchi Array**	**4.07**	**142**	⇑Pn	**Pn**	**13 19 01.0**	**+0.8**
	0.1nm,0.2s,baz=276,slow=7.3,SNR=41						
MK31				⇑Sn	**Sb**	**13 19 59.0**	**+0.2**
	8.2nm,0.6s,baz=328,slow=27,SNR=18						
MKAR	**Makanchi Array**	**4.07**	**142**	Pn	**Pn**	**13 19 00.2**	**0.0**
	0.5nm,0.3s,baz=322,slow=10,SNR=70						
MKAR				Pg	**Pb**	**13 19 07.8**	**-1.9**
	1.3nm,0.3s,baz=324,slow=14,SNR=18						
MKAR				Lg		13 20 02.8	
	2.8nm,0.3s,baz=329,slow=28,SNR=16						
ZALV	**Zalesovo Beam**	**5.46**	**42**	Pn	**Pn**	**13 19 21.3**	**+2.0**
	1.2nm,0.3s,baz=229,slow=14,SNR=10.0						
ZALV				Lg		13 20 55.0	
	0.3nm,0.3s,baz=223,slow=24,SNR=4.5						
VOSK	**Vostochnaya**	**5.49**	**302**	⇓Pn	**Pn**	**13 19 19.5**	**-0.1**
	0.5nm,0.4s						
VOSK				⇑Sn	**Sn**	**13 20 22.2**	**-0.5**
	1.0nm,0.5s						
VOSK				⇑Lg		13 20 49.5	
	1.9nm,0.8s						
BVAR	**Borovoye Array**	**5.94**	**303**	Pn	**Pn**	**13 19 29.8**	**+3.9**
	0.3nm,0.3s,baz=113,slow=14,SNR=4.2						
BVAR				Pg	**Pg**	**13 19 44.6**	**-7.0**
	0.5nm,0.3s,baz=143,slow=12,SNR=5.0						
BVAR				Sn	**Sn**	**13 20 37.7**	**+3.8**
	0.6nm,0.3s,baz=113,slow=23,SNR=5.9						
BVAR				Lg		13 21 11.0	
	0.4nm,0.3s,baz=112,slow=24,SNR=3.6						
ZRNK	**Zerenda**	**6.67**	**299**	⇓Sn	**Sn**	**13 20 52.5**	**+0.6**
	2.0nm,0.9s						
ZRNK				⇑Lg		13 21 26.0	
	3.1nm,1.2s						
KK31	**Karatay Array**	**8.91**	**222**	⇑Pn	**Sn**	**13 21 37.4**	**-10**
	1.9nm,0.7s,baz=138,slow=15,SNR=4.1						
KK31				⇑Lg		13 22 40.4	
	3.4nm,0.5s,baz=137,slow=30,SNR=4.4						

*BJI **17** 13:24:40.1, 44°.40N×129°.50W, h10km, mB4.9/5, mb4.5/6, Ms4.6/3, Ms7 4.6/3*
*IDC **17** 13:24:46.8±1.3, 44°.07N×129°.74W, h0km, mb3.9/10, mb1 4.0/14, mb1mx3.8/28, mbtmp3.8/14, ML3.4/4, MS3.7/3, Ms1 3.8/3, ms1mx3.1/32, Error ellipse: s-maj=38.3km s-min=13.8km az=41.0*
*ISCJB **17** 13:24:48.1±0.6, 44°.43N±0°.04×129°.57W±0°.07, h10km, mb3.9/12, MS3.7/3, Error ellipse: s-maj=7.3km s-min=5.5km az=162.0*
*NEIC **17** 13:24:50.2±0.7, 44°.39N×129°.55W, h10km, mb4.1/12, Error ellipse: s-maj=9.9km s-min=6.6km az=65.0*
ISC 17 13:24:49.6±0.6, 44°.42N±0°.04×129°.69W±0°.07, h10km, n96, σ1:37/92, mb3.9/12, MS3.7/3, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPOR	**Mary's Peak**	**4.40**	**87**	P	**Pn**	**13 25 53.0**	**-3.3**
KMOR	**Kings Mountain**	**4.56**	**72**	P	**Pn**	**13 25 56.3**	**-2.2**
COR	**Corvallis**	**4.57**	**86**	*e*Pn	**Pn**	**13 25 55.4**	**-3.3**
NLWA	**Neilton Lookou**	**5.03**	**52**	*e*Pn	**Pn**	**13 26 03.9**	**-1.1**
HUMO	**Hull Mountain**	**5.22**	**108**	*e*Pn	**Pn**	**13 26 03.0**	**-4.6**
OBC	**Olympics--Boni**	**5.31**	**45**	P	**Pn**	**13 26 09.8**	**+1.0**
IRO	**Indian Ridge**	**5.36**	**92**	P	**Pn**	**13 26 07.3**	**-2.2**
OSD	**Olympics--Snow**	**5.37**	**49**	P	**Pn**	**13 26 09.6**	**-0.1**
HDW	**Hoodsport**	**5.64**	**53**	P	**Pn**	**13 26 13.5**	**+0.2**
GNW	**Green Mountain**	**5.72**	**54**	*e*P	**Pn**	**13 26 13.2**	**-1.3**
	7.2nm,0.4s						
YBH	**Yreka Blue Hor**	**5.77**	**115**	Pn	**Pn**	**13 26 15.0**	**-0.3**
	0.2nm,0.3s,baz=246,slow=6.2,SNR=9.6						
YBH				Sn	**Sn**	**13 27 16.3**	**-5.1**
	0.3nm,0.3s,baz=25,slow=18,SNR=2.5						
YBH	**Yreka Blue Hor**	**5.77**	**115**	*e*Pn	**Pn**	**13 26 14.7**	**-0.5**
HOOD	**Mount Hood Mea**	**5.78**	**78**	*e*Pn	**Pn**	**13 26 13.3**	**-2.0**
LON	**Longmire**	**6.00**	**64**	*e*Pn	**Pn**	**13 26 18.8**	**+0.4**
PGC	**Sidney**	**6.03**	**43**	*e*Pn	**Pn**	**13 26 18.1**	**-0.6**
PGC				*e*Sn	**Sn**	**13 27 26.3**	**-1.6**
JCW	**Jim Creek**	**6.57**	**52**	P	**Pn**	**13 26 27.4**	**+1.3**
TBM	**Table Mountain**	**6.92**	**63**	P	**Pn**	**13 26 31.5**	**+0.5**
RPW	**Rockport**	**6.94**	**52**	*e*Pn	**Pn**	**13 26 30.9**	**-0.3**
VDB	**Vedder Mountai**	**6.96**	**46**	P	**Pn**	**13 26 32.4**	**+1.0**
ETW	**Entiat**	**7.25**	**61**	*e*Pn	**Pn**	**13 26 36.0**	**+0.6**
MOD	**Modoc**	**7.31**	**107**	*e*Pn	**Pn**	**13 26 37.0**	**+0.7**
HAWA	**Hanford**	**7.42**	**71**	P	**Pn**	**13 26 36.4**	**-1.4**
	7.3nm,0.9s						
BBB	**Bella Bella**	**7.84**	**7**	Pn	**Pn**	**13 26 50.6**	**+7.1**
	0.3nm,0.3s,baz=226,slow=12,SNR=5.7						
OD2	**Odessa Site #2**	**8.21**	**65**	*e*Pn	**Pn**	**13 26 47.9**	**-0.8**
WVOR	**Wild Horse Val**	**8.29**	**100**	*e*P	**Pn**	**13 26 47.3**	**-2.4**
	2.6nm,0.7s						
BMO	**Blue Mountains**	**8.84**	**83**	*e*Pn	**Pn**	**13 26 54.2**	**-3.1**
CMB	**Columbia Colle**	**9.47**	**129**	*e*Pn	**Pn**	**13 27 06.0**	**0.0**
WAKR	**Walker**	**9.70**	**124**	*e*Pn	**Pn**	**13 27 10.3**	**+1.2**
NVAR	**Mina Array Bea**	**10.43**	**121**	Pn	**Pn**	**13 27 17.7**	**-1.4**
	0.1nm,0.3s,baz=297,slow=13,SNR=12						
NVAR	**Mina Array Bea**	**10.43**	**121**	Pn	**Pn**	**13 27 17.7**	**-1.4**
BSMT	**Bassoo Peak**	**10.90**	**66**	*e*Pn	**Pn**	**13 27 26.9**	**+1.5**
HLID	**Hailey**	**11.04**	**89**	*e*Pn	**Pn**	**13 27 29.0**	**+1.6**
ELK	**Elko**	**11.27**	**104**	Pn	**Pn**	**13 27 31.6**	**+1.1**
	0.2nm,0.3s,baz=294,slow=12,SNR=3.2						
MSO	**Missoula**	**11.29**	**72**	P	**Pn**	**13 27 26.2**	**-4.6**
SLMT	**Seeley Lake**	**11.65**	**70**	*e*P	**Pn**	**13 27 35.9**	**+0.2**
CHMT	**Chamberlain Mo**	**11.77**	**72**	*e*Pn	**Pn**	**13 27 38.6**	**+1.3**
M13A	**Montello**	**11.79**	**100**	*e*Pn	**Pn**	**13 27 39.5**	**+1.8**
MCMT	**McKenzie Canyo**	**12.01**	**82**	*e*P	**Pn**	**13 27 41.2**	**+0.5**
	1.1nm,0.8s						
DLMT	**Dillon**	**12.16**	**80**	*e*Pn	**Pn**	**13 27 43.2**	**+0.4**
ISA	**Isabella**	**12.25**	**132**	*e*Pn	**Pn**	**13 27 46.4**	**+2.3**
LRM	**Limekiln Ridge**	**12.26**	**77**	*e*Pn	**Pn**	**13 27 45.3**	**+1.2**
BOZ	**Bozeman (W)**	**12.84**	**78**	*e*Pn	**Pn**	**13 27 50.1**	**-1.9**
GSC	**Goldstone**	**13.43**	**128**	*e*Pn	**Pn**	**13 28 00.0**	**-0.2**
IMW	**Indian Meadow**	**13.48**	**86**	*e*Pn	**Pn**	**13 28 02.2**	**+1.5**
TPAW	**Teton Pass**	**13.54**	**87**	*e*Pn	**Pn**	**13 28 02.2**	**+0.7**
HWUT	**Hardware Ranch**	**13.56**	**96**	*e*Pn	**Pn**	**13 28 02.2**	**+0.4**
REDW	**Red Top Meadow**	**13.63**	**88**	*e*Pn	**Pn**	**13 28 06.0**	**+3.2**
LOHW	**Long Hollow**	**13.76**	**87**	*e*Pn	**Pn**	**13 28 05.8**	**+1.2**
CCUT	**Cedar City**	**14.10**	**113**	*e*Pn	**Pn**	**13 28 10.2**	**+0.9**
GCMT	**Greycliff**	**14.21**	**77**	*e*P	**Pn**	**13 28 18.4**	**+7.8**
	6.8nm,0.8s						
EGMT	**Eagleton**	**14.26**	**68**	*e*Pn	**Pn**	**13 28 11.2**	**-0.2**
MSU	**Marysvale**	**14.39**	**108**	*e*Pn	**Pn**	**13 28 17.3**	**+4.1**
RLMT	**Red Lodge**	**14.53**	**80**	*e*Pn	**Pn**	**13 28 18.4**	**+3.5**
LDFC	**Landfair**	**14.57**	**125**	*e*Pn	**Pn**	**13 28 15.5**	**-0.1**
PDAR	**Pinedale Array**	**14.68**	**89**	Pn	**Pn**	**13 28 20.2**	**+3.1**
	0.0nm,0.3s,baz=291,slow=9.4,SNR=4.0						
SRU	**San Rafael**	**15.24**	**104**	*e*Pn	**Pn**	**13 28 27.8**	**+3.1**
	76nm,2.0s						
WUAZ	**Wupatki**	**16.59**	**116**	*e*Pn	**Pn**	**13 28 43.2**	**+1.1**
	12nm,1.1s						
PV04	**Paradox Valley**	**16.70**	**104**	*e*P	**Pn**	**13 28 41.9**	**-1.6**
PV01	**Paradox Valley**	**17.05**	**104**	*e*P	**Pn**	**13 28 48.2**	**+0.3**
	3μm,1.6s						
MVCO	**Mesa Verde**	**17.56**	**107**	*e*Pn	**Pn**	**13 28 53.5**	**-0.7**
	171nm,2.3s						
ISCO	**Idaho Springs**	**18.43**	**96**	*e*P	**Pn**	**13 29 04.1**	**-0.8**
	45nm,2.3s						
TUC	**Tucson**	**19.08**	**123**	*e*P	**Pn**	**13 29 11.5**	**-1.4**
	5.5nm,1.1s						
SDCO	**Great Sand Dun**	**19.38**	**102**	*e*P	**Pn**	**13 29 15.5**	**-0.9**
	7.4nm,1.3s						
LAZ	**Ladron**	**20.03**	**112**	*e*P	**P**	**13 29 23.3**	**+0.7**
	3.8nm,1.5s						
YKA	**Yellowknife Ar**	**20.11**	**21**	P	**P**	**13 29 25.3**	**+2.1**
	3.1nm,1.0s,baz=210,slow=11,SNR=7.2						
ANMO	**Albuquerque**	**20.17**	**110**	P	**P**	**13 29 27.1**	**+3.2**
	2.3nm,0.9s,baz=307,slow=11,SNR=4.5						
ANMO				LR	LR	13 37 22.3	
	comp=Z,219nm,19.8s,MS3.5,baz=168,slow=38						
BNM	**Barren Site**	**20.52**	**112**	*e*P	**P**	**13 29 28.0**	**+0.1**
	18nm,1.6s						
FFC	**Flin Flon**	**20.58**	**50**	*e*P	**P**	**13 29 27.0**	**-1.3**
	8.8nm,0.9s						
AGMN	**Agassiz Nation**	**23.55**	**68**	*e*P	**P**	**13 29 59.0**	**-1.1**
	5.0nm,1.0s,mb3.9						
ECSD	**EROS Data Cent**	**23.69**	**80**	*e*P	**P**	**13 29 59.3**	**-2.1**
	14nm,1.5s,mb4.2						
INK	**Inuvik**	**24.03**	**357**	P	**P**	**13 30 07.1**	**+2.9**
	1.5nm,1.0s,mb3.4,baz=232,slow=4.2,SNR=3.0						
TXAR	**Lajitas Array**	**25.55**	**117**	P	**P**	**13 30 15.6**	**-2.8**
	0.4nm,0.7s,mb3.1,baz=301,slow=8.1,SNR=5.8						
TXAR	**Lajitas Array**	**25.55**	**117**	P	**P**	**13 30 15.6**	**-2.8**
WMOK	**Wichita Mounta**	**25.58**	**102**	*e*P	**P**	**13 30 18.6**	**-0.1**
	14nm,1.4s,mb4.3						
FCC	**Fort Churchill**	**25.98**	**44**	*e*P	**P**	**13 30 22.0**	**-0.1**
	0.3nm,1.1s						
RES	**Resolute Bay**	**34.02**	**16**	P

BBB	Bella Bella	7.79	6	Pn		Pn	13 34 16.2 +4.6
	0.5nm,0.3s,baz=5.7,slow=13,SNR=5.9						
BBB				LR		LR	13 36 49.1
	comp=Z,517nm,18.7s,baz=161,slow=35						
OD2	Odessa Site #2	8.04	65	*e*Pn		Pn	13 34 14.4 -0.7
WVOR	Wild Horse Val	8.11	101	*e*P		Pn	13 34 16.2 +0.1
	5.6nm,1.0s						
BMO	Blue Mountains	8.66	83	*e*Pn		Pn	13 34 21.7 -1.9
PAHR	Pah Rah Range	8.85	119	*e*Pn		Pn	13 34 28.8 +2.5
NEW	Newport	9.33	62	*e*Pn		Pn	13 34 34.1 +1.3
CMB	Columbia Colle	9.35	130	*e*Pn		Pn	13 34 33.1 0.0
WAKR	Walker	9.57	125	*e*Pn		Pn	13 34 36.3 +0.3
NVAR	Mina Array Bea	10.29	122	Pn		Pn	13 34 45.1 -0.9
	0.1nm,0.3s,baz=291,slow=12,SNR=8.7						
BSMT	Bassoo Peak	10.72	66	*e*Pn		Pn	13 34 52.1 +0.3
HLID	Hailey	10.86	89	*e*Pn		Pn	13 34 55.8 +2.0
JTMT	Jette	11.03	67	*e*Pn		Pn	13 34 56.5 +0.5
ELK	Elko	11.10	105	Pn		Pn	13 34 57.8 +0.7
	0.1nm,0.3s,baz=286,slow=10,SNR=6.4						
MSO	Missoula	11.11	72	*e*Pn		Pn	13 34 56.4 -0.7
N12A	Clover Valley,	11.20	104	*e*Pn		Pn	13 34 58.8 +0.4
SLMT	Seeley Lake	11.47	70	*e*Pn		Pn	13 35 01.7 -0.3
CHMT	Chamberlain Mo	11.59	72	*e*Pn		Pn	13 35 04.7 +1.0
WALA	Waterton Lakes	11.60	61	*e*Pn		Pn	13 35 05.3 +1.4
M13A	Montello	11.62	100	*e*Pn		Pn	13 35 05.0 +0.9
MCMT	McKenzie Canyo	11.83	82	*e*P		Pn	13 35 07.4 +0.4
	7.9nm,1.4s						
DLMT	Dillon	11.98	80	*e*Pn		Pn	13 35 10.1 +1.0
LRM	Limekiln Ridge	12.08	78	*e*Pn		Pn	13 35 11.2 +0.8
ISA	Isabella	12.14	133	*e*Pn		Pn	13 35 10.8 -0.4
HVU	Hansel Valley	12.47	97	*e*Pn		Pn	13 35 19.5 +3.8
BOZ	Bozeman (W)	12.65	78	*e*Pn		Pn	13 35 18.8 +0.6
DUG	Dugway	13.01	103	*e*Pn		Pn	13 35 23.6 +0.4
IMW	Indian Meadow	13.29	86	*e*Pn		Pn	13 35 27.9 +0.9
GSC	Goldstone	13.31	129	*e*Pn		Pn	13 35 27.3 0.0
TPAW	Teton Pass	13.35	88	*e*Pn		Pn	13 35 28.9 +1.1
REDW	Red Top Meadow	13.45	88	*e*Pn		Pn	13 35 30.5 +1.4
LOHW	Long Hollow	13.58	87	*e*Pn		Pn	13 35 31.1 +0.2
CCUT	Cedar City	13.95	114	*e*Pn		Pn	13 35 36.8 +0.8
DLBC	Dease Lake	14.01	359	Pn		Pn	13 35 36.3 -0.4
	0.2nm,0.3s,baz=126,slow=24,SNR=3.2						
DAU	Daniels Canyon	14.02	100	*e*Pn		Pn	13 35 39.1 +2.2
EGMT	Eagleton	14.08	68	*e*Pn		Pn	13 35 37.6 -0.1
MSU	Marysvale	14.22	109	*e*Pn		Pn	13 35 41.8 +2.1
RLMT	Red Lodge	14.34	80	*e*Pn		Pn	13 35 44.8 +3.5
LDFC	Landfair	14.44	126	*e*Pn		Pn	13 35 42.8 +0.1
BW06	Boulder Array	14.50	90	*e*Pn		Pn	13 35 42.2 -1.3
PDAR	Pinedale Array	14.50	90	Pn		Pn	13 35 44.0 +0.5
	0.0nm,0.3s,baz=294,slow=11,SNR=5.3						
TMUT	Trail Mountain	14.52	104	*e*Pn		Pn	13 35 43.5 -0.2
SRU	San Rafael	15.07	104	*e*Pn		Pn	13 35 52.9 +1.6
	79nm,1.4s						
BAR	Barrett	15.40	135	*e*Pn		Pn	13 35 53.9 -1.7
	25nm,1.3s						
GLA	Glamis	16.08	130	*e*Pn		Pn	13 36 02.6 -1.8
	20nm,1.3s						
WUAZ	Wupatki	16.44	117	*e*Pn		Pn	13 36 10.1 +1.0
	19nm,1.1s						
RWWY	Rawlins	16.47	92	*e*Pn		Pn	13 36 09.7 +0.4
	52nm,1.6s						
PV04	Paradox Valley	16.53	104	*e*Pn		Pn	13 36 08.6 -1.5
PV01	Paradox Valley	16.88	105	*e*P		Pn	13 36 13.7 -0.9
	3μm,1.5s						
MVCO	Mesa Verde	17.39	107	*e*Pn		Pn	13 36 23.1 +2.1
	148nm,1.8s						
SMCO	Snowmass	17.53	100	*e*Pn		Pn	13 36 23.6 +0.8
	40nm,1.7s						
DGMT	Dagmar	17.82	68	*e*Pn		Pn	13 36 26.3 +0.1
	408nm,2.7s						
PHWY	Pilot Hill	17.84	92	*e*Pn		Pn	13 36 27.9 +1.4
	12nm,1.1s						
RSSD	Black Hills	18.17	82	*e*Pn		Pn	13 36 29.5 -1.1
	11nm,1.1s						
ISCO	Idaho Springs	18.25	96	*e*P		Pn	13 36 32.2 +0.7
	132nm,2.6s						
TUC	Tucson	18.94	123	*e*Pn		Pn	13 36 39.0 -1.1
	13nm,1.3s						
SDCO	Great Sand Dun	19.20	102	*e*Pn		Pn	13 36 42.5 -0.7
	25nm,1.5s						
LAZ	Ladron	19.88	113	*e*P		Pn	13 36 50.2 -1.1
	6.1nm,1.4s						
ANMO	Albuquerque	20.01	110	P		P	13 36 50.5 -0.5
	0.1nm,0.3s,baz=308,slow=11,SNR=5.9						
ANMO	Albuquerque	20.01	110	*e*Pn		P	13 36 51.2 +0.2
	9.5nm,1.2s						
YKA	Yellowknife Ar	20.02	20	P		P	13 36 50.5 -0.5
	6.3nm,1.1s,baz=211,slow=10,SNR=11						
BNM	Barren Site	20.37	113	*e*P		P	13 36 55.6 +0.7
	52nm,1.9s						
OGNE	Ogallala	20.41	90	*e*Pn		P	13 36 57.4 +2.0
	60nm,1.5s						
FFC	Flin Flon	20.43	50	*e*Pn		P	13 36 56.3 +0.8
	20nm,1.2s						
DAWY	Dawson	20.45	347	*e*P		P	13 36 53.2 -2.4
EGAK	Eagle	21.40	346	*e*P		P	13 37 08.6 +2.7
	7.7nm,1.4s,mb3.8						
PPLA	Purkeypile	22.65	333	*e*P		P	13 37 20.6 +1.4
	43nm,1.4s,mb4.7						
MNTX	Cornudas Mount	22.72	116	*e*P		P	13 37 20.3 0.0
	13nm,1.6s,mb4.1						
AMTX	Amarillo	23.31	105	*e*P		P	13 37 25.1 -1.4
	19nm,1.0s,mb4.5						
ULM	Lac du Bonnet	23.33	64	P		P	13 37 25.8 -0.8
	9.4nm,1.0s,mb4.2,baz=316,slow=8.0,SNR=3.1						
ULM				LR		LR	13 46 37.3
	comp=Z,333nm,18.6s,MS3.8,baz=232,slow=37						
ULM	Lac du Bonnet	23.33	64	*e*P		P	13 37 26.2 -0.4
	16nm,1.2s,mb4.3						
AGMN	Agassiz Nation	23.37	69	*e*P		P	13 37 26.5 -0.5
	13nm,1.1s,mb4.3						
ECSD	EROS Data Cent	23.50	80	*e*P		P	13 37 27.1 -1.4
	45nm,1.6s,mb4.7						
INK	Inuvik	24.01	356	P		P	13 37 32.1 -0.7
	1.0nm,0.8s,mb3.3,baz=194,slow=13,SNR=6.2						
INK				LR		LR	13 46 36.6
	comp=Z,134nm,18.9s,MS3.4,baz=231,slow=36						
COLD	Coldfoot	25.37	341	*e*P		P	13 37 47.4 +2.1
	2.7nm,1.2s,mb3.6						
TXAR	Lajitas Array	25.40	118	P		P	13 37 43.8 -2.1
	4.5nm,1.1s,mb3.9,baz=318,slow=5.4,SNR=13						
TXAR				LR		LR	13 48 19.0
	comp=Z,122nm,18.8s,MS3.5,baz=250,slow=38						
FCC	Fort Churchill	25.84	44	*e*P		P	13 37 49.8 +0.3
	0.7nm,1.4s						
EYMN	Ely	26.32	69	*e*P		P	13 37 55.0 +1.0
	15nm,1.4s,mb4.3						
HDIL	Hopedale	29.64	83	*e*P		P	13 38 28.9 +5.1
HKT	Hockley	30.19	107	*e*P		P	13 38 32.8 +4.0
	16nm,1.4s,mb4.5						
RES	Resolute Bay	33.95	16	P		P	13 39 01.5 +0.2
	4.0nm,0.9s,mb4.4,baz=227,slow=4.6,SNR=4.5						
SCHQ	Schefferville	40.55	52	LR		LR	13 56 42.9
	comp=Z,264nm,20.1s,MS4.1,baz=315,slow=36						
PMOR	Pomariorio Ree	61.51	200	*e*T			14 48 53.7
	14nm,0.3s						
TIAR	Tiarei	64.33	201	*e*T			14 52 24.6
	16nm,0.2s						
PPT	Papeete	64.40	201	*e*LR		LR	14 02 02.5
	126nm,26.2s						
PPT	Papeete	64.40	201	LR		LR	14 03 27.6
	comp=Z,106nm,20.3s,MS4.0,baz=1.5,slow=29						
ARCES	ARCESS Array B	64.84	9	LR		LR	14 09 41.0
	comp=Z,39nm,19.4s,MS3.6,baz=280,slow=35						
RKT	Rikitea	67.43	186	*e*T			14 56 19.0
	2.8nm,0.2s						
TBI	Tubuai	69.91	200	*e*T			14 59 23.4
	7.7nm,0.3s						
NOA	NORSAR Array B	70.12	19	P		P	13 43 30.1 -0.3
	1.6nm,0.9s,mb4.0,baz=332,slow=6.4,SNR=3.4						
NOA				LR		LR	14 11 38.2
	comp=Z,41nm,18.3s,MS3.7,baz=195,slow=34						
FINES	FINESS Array B	72.61	12	P		P	13 43 42.9 -2.6
	4.4nm,1.0s,mb4.3,baz=15,slow=7.9,SNR=6.7						
KSRS	Korea Array	72.67	306	LR		LR	14 16 39.7
	comp=Z,26nm,18.3s,MS3.5,baz=252,slow=37						
SONM	Songino Array	75.84	325	P		P	13 44 03.5 -1.0
	2.6nm,0.9s,mb4.2,baz=51,slow=4.7,SNR=12						
GUMO	Guam	77.57	277	LR		LR	14 13 22.8
	comp=Z,27nm,19.9s,MS3.6,baz=86,slow=32						
ZALV	Zalesovo Beam	77.70	340	P		P	13 44 14.7 -0.2
	0.7nm,0.4s,mb4.0,baz=28,slow=6.7,SNR=6.7						
HHC	Hu-ho-hao-te	78.97	317	*e*P		P	13 44 22.1 0.0
HHC				S		S	13 54 17.8 -2.9
HHC				pmax		pmax	
	comp=Z,10.0nm,0.7s,mb4.8						
HHC				pmax		pmax	
	comp=Z,130nm,6.6s						
CLL	Collm	79.23	23	*e*P		P	13 44 23.0 -0.3
BRVK	Borovoye	81.41	348	*e*P		P	13 44 35.1 +0.1
	comp=Z,5.1nm,0.9s,mb4.5						
BVAR	Borovoye Array	81.42	348	P		P	13 44 35.0 -0.1
	comp=Z,3.0nm,0.9s,mb4.2,baz=35,slow=3.6,SNR=13						
NJ2	Nanjing	81.75	307	*e*P		P	13 44 38.3 +1.1
NJ2				pmax		pmax	
	comp=Z,10.0nm,0.5s,mb5.0						
KURK	Kurchatov	82.13	342	*e*P		P	13 44 38.4 -0.6
	comp=Z,11nm,1.3s,mb4.6						
LPAZ	La Paz	82.20	122	P		P	13 44 37.1 -2.5
	comp=Z,3.0nm,1.0s,mb4.2,baz=354,slow=7.7,SNR=8.1						
AKASG	Malin Array Be	83.43	13	P		P	13 44 44.4 -1.3
	comp=Z,0.4nm,0.4s,mb3.8,baz=350,slow=4.9,SNR=9.8						
MKAR	Makanchi Array	84.92	339	P		P	13 44 52.3 -1.0
	comp=Z,1.3nm,1.0s,mb4.0,baz=44,slow=3.7,SNR=7.4						
RAO	Raoul Island	85.66	221	LR		LR	14 18 48.6
	comp=Z,106nm,18.7s,MS4.3,baz=310,slow=33						
WMQ	Urumqi	86.09	334	*e*P		P	13 45 00.6 +1.4
ABKAR	Akbulak array	86.32	354	*e*P		P	13 44 59.8 -0.4
	comp=Z,2.6nm,0.9s,mb4.5						
LZH	Lanzhou	86.42	319	*e*P		P	13 45 01.8 +0.8
LZH				pP		pP	13 45 04.5 +0.2
LZH				sP		sP	13 45 06.8 +1.3
LZH				pmax		pmax	
	comp=Z,13nm,1.0s,mb5.1						
TKM2	Tokmak 2	90.18	342	*e*P		P	13 45 18.6 -0.2
	comp=Z,6.5nm,1.1s,mb4.9						
CD2	Chengdu	90.69	317	P		P	13 45 22.4 +1.0
CD2				pP		pP	13 45 27.0 +2.3
CD2				sP		sP	13 45 28.3 +2.4
CD2				PP		PP	13 48 59.4 +3.6
CD2				SKS			13 55 51.4
CD2				S		S	13 56 15.3 -2.2
CD2				sS		sS	13 56 22.4 -0.6
CD2				pmax		pmax	
	comp=Z,120nm,5.3s						
CD2				LR		LR	
	comp=N,270nm,6.5s						
CD2				LR		LR	
	comp=Z,290nm,8.3s						
GYA	Guiyang	92.80	312	*e*P		P	13 45 32.0 +0.8
GYA				pmax		pmax	
	comp=Z,10.0nm,1.0s						
KMI	Kunming	95.94	314	P		P	13 45 46.4 +0.8
KMI				pP		pP	13 45 49.6 +0.7
KMI				sP		sP	13 45 50.8 +0.7
KMI				pmax		pmax	
	comp=Z,2.0nm,0.6s						
CPUP	Villa Florida	96.34	121	LR		LR	14 31 21.0
	comp=Z,24nm,18.3s,MS3.7,baz=178,slow=37						
CTA	Charters Tower	99.88	252	LR		LR	14 24 26.4
	comp=Z,107nm,20.0s,MS4.3,baz=230,slow=31						

*NEIC **17** 13:42:44.1, 32°.15S×72°.10W, h9km, ML4.0(GUC), After GUC.*

GUC 17 13:42:44.1±0.4, 32°.15S×72°.10W, h9km±3km, MD3.9, ML4.0, 8C-4D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	Los Chungos	0.57	63	⇓*i*P	Pg	13 42 55.3	+0.1
CHNG				*i* S	Sg	13 43 04.4	+1.6
PACH	Papudo	0.68	125	*i* P	Pg	13 42 57.7	+0.4
PACH				*i* S	Sg	13 43 07.6	+1.4
PACH	Papudo	0.68	125	*i* P	Pg	13 42 57.7	+0.4
PACH				*i* S	Sg	13 43 07.6	+1.4
ROCH	El Roble	1.23	132	⇓*i*P	Pn	13 43 06.7	-0.8
ROCH				*i* S	Sb	13 43 23.6	0.0
ROCH	El Roble	1.23	132	⇓*i*P	Pn	13 43 06.7	-0.8
ROCH				*i* S	Sb	13 43 23.6	0.0
JACH	Jahuel	1.38	113	*i* P	Pn	13 43 08.7	-0.8
JACH				*i* S	Sb	13 43 27.3	-0.5
JACH	Jahuel	1.38	113	*i* P	Pn	13 43 08.7	-0.8
JACH				*i* S	Sb	13 43 27.3	-0.5
LCCH	Las Cruces	1.40	161	⇑*i*P	Pn	13 43 08.6	-1.2
LCCH				*i* S	Sb	13 43 27.4	-0.9
LCCH	Las Cruces	1.40	161	⇑*i*P	Pn	13 43 08.6	-1.2
LCCH				*i* S	Sb	13 43 27.4	-0.9
PEL	Peldehue	1.55	130	⇓*i*P	Pn	13 43 11.3	-0.6
PEL				*i* S	Sn	13 43 32.0	-0.1
PEL				AML	AML	13 43 36.0	
	comp=E,4μm,0.3s						
SAN	Santiago	1.78	137	⇑*i*P	Pn	13 43 14.7	-0.3
SAN				*i* S	Sn	13 43 38.2	+0.5
SAN	Santiago	1.78	137	⇑*i*P	Pn	13 43 14.7	-0.3
SAN				*i* S	Sn	13 43 38.2	+0.5
SAN				AML	AML	13 43 44.1	
	comp=N,2μm,0.6s						
TACH	Talagante	1.79	147	*e*P	Pn	13 43 15.0	-0.1
TACH				*i* S	Sn	13 43 38.5	+0.5
TACH	Talagante	1.79	147	*e*P	Pn	13 43 15.0	-0.1
TACH				*i* S	Sn	13 43 38.5	+0.5
CLCH	Cerro Calan	1.81	134	⇑*i*P	Pn	13 43 15.6	+0.2
CLCH				*i* S	Sn	13 43 39.3	+0.8
CLCH	Cerro Calan	1.81	134	*e*P	Pn	13 43 15.5	0.0
CLCH				⇑*i*P		13 43 15.6	
CLCH				*i* S	Sn	13 43 39.2	+0.7
CLCH				*i* S	Sn	13 43 39.3	+0.8
CLCH				AML	AML	13 43 50.7	
	comp=N,2μm,0.2s						
CLCH				AML	AML	13 43 51.3	
	comp=N,2μm,0.5s						
LNV	Longovilo	1.89	162	*e*P	Pn	13 43 16.4	-0.1
LNV				*i* S	Sn	13 43 41.2	+0.7
LNV	Longovilo	1.89	162	*e*P	Pn	13 43 16.4	-0.1
LNV				*i* S	Sn	13 43 41.2	+0.7
PCH	Pirque	1.98	138	⇑*i*P	Pn	13 43 18.0	+0.2
PCH				*i* S	Sn	13 43 44.0	+1.2
PCH	Pirque	1.98	138	⇑*i*P	Pn	13 43 18.0	+0.2
PCH				*i* S	Sn	13 43 44.0	+1.2
CHCH	Chadas Angostu	2.16	146	*i* P	Pn	13 43 20.9	+0.8
CHCH				*e*S	Sn	13 43 48.7	+1.7
CHCH	Chadas Angostu	2.16	146	*i* P	Pn	13 43 20.9	+0.8
CHCH				*e*S	Sn	13 43 48.7	+1.7

IDC 17 14:10:46.4±3.3, 4°.78S×152°.08E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.6/17, mbtmp3.9/3, MS3.5/1, Ms1 3.4/1, ms1mx2.2/22, Error ellipse: s-maj=124.0km s-min=45.3km az=122.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.92	227	P	P	14 15 52.5	+0.2
	0.9nm,0.3s,baz=54,slow=9.7,SNR=35						
ASAR	Alice Springs	25.68	221	P	P	14 16 18.8	+0.4
	0.8nm,0.3s,baz=53,slow=9.1,SNR=54						
STKA	Stephens Creek	28.69	199	LR	LR	14 26 34.4	
	comp=Z,102nm,21.4s,baz=24,slow=33						
FITZ	Fitzroy Crossi	29.04	241	P	P	14 16 47.5	-1.0
	1.0nm,0.7s,baz=66,slow=6.5,SNR=7.3						
TORD	Torodi Ar. Bea	149.62	288	PKPbc	PKPbc	14 30 39.1	0.0
	0.4nm,0.7s,baz=64,slow=3.5,SNR=3.8						

DJA 17 14:14:12, 2°.17S×128°.20E, h131km, MLv3.6/6, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	Ambon	1.51	180	P	Pn	14 14 40.5	+0.2
NLAI	Namlea	1.53	226	P	Pn	14 14 41.5	+1.0
NLAI				S	Sn	14 15 04.7	+2.5
LBMI	Labuha	1.68	335	P	Pn	14 14 42.2	0.0
TNTI	Ternate	3.04	344	P	Pn	14 15 00.2	+1.0
LUWI	Luwuk	5.54	282	P	Pn	14 15 33.7	+1.3
LUWI				S	Sn	14 16 36.0	+0.9

*ISCJB **17** 14:47:41.6±1.2, 32°.4N±0°.1×131°.2E±0°.2, h158km±6km, mb3.4/4, Error ellipse: s-maj=29.1km s-min=16.2km az=135.3*

*JMA **17** 14:47:44.9±0.1, 32°.50N×131°.06E, h142km±1km, M2.9*

*IDC **17** 14:47:51.0±10.0, 32°.95N×131°.02E, h201km±46km, mb3.2/4, mb1 3.1/6, mb1mx2.9/26, mbtmp3.0/6, Error ellipse: s-maj=158.8km s-min=30.6km az=7.0*

ISC 17 14:47:43.0±1.2, 32°.4N±0°.1×131°.2E±0°.2, h155km±6km, n11, σ0.071/13, mb3.4/4, 1D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKIT	Kitakata	0.33	44	P	Pn	14 48 04.9	+0.8
JKIT				S	Sn	14 48 19.8	-0.5
JIU2	Izumi 2	0.34	297	*e*S	Sn	14 48 19.3	-1.1
JTZ	Takazaki	0.49	189	S	Sn	14 48 21.9	+0.5
JSJ	Shimokoshiki	1.43	241	P	Pn	14 48 12.9	+0.7
JSJ				S	Sn	14 48 34.1	-0.4
KSRS	Korea Array	5.72	333	P	Pn	14 49 07.2	+1.4
	0.3nm,0.3s,baz=155,slow=14,SNR=8.5						
MJAR	Matsushiro Arr	7.13	53	P	Pn	14 49 30.5	+5.8
	0.3nm,0.3s,baz=243,slow=14,SNR=3.4						
PIP	Pasuquin	16.93	217	⇓*e*P	Pn	14 51 36.0	+5.2
SONM	Songino Array	24.29	317	P	P	14 52 45.6	-0.2
	0.5nm,0.5s,mb3.3,baz=128,slow=9.6,SNR=3.9						
MKAR	Makanchi Array	39.69	306	P	P	14 54 59.9	+0.1
	0.2nm,0.3s,mb3.2,baz=92,slow=11,SNR=4.2						
ARCES	ARCESS Array B	65.25	338	P	P	14 58 07.1	-0.3
	1.0nm,0.9s,mb3.6,baz=66,slow=11,SNR=2.0						
FINES	FINESS Array B	68.80	330	P	P	14 58 29.2	-0.8
	0.6nm,0.6s,mb3.5,baz=55,slow=5.6,SNR=8.2						

*ISK **17** 14:52:00.2, 35°.29N×27°.79E, h30km, ML3.5*

*ISCJB **17** 14:52:02.9±0.3, 35°.44N±0°.02×27°.94E±0°.03, h33km, Error ellipse: s-maj=4.0km s-min=3.4km az=33.8*

*NEIC **17** 14:52:03.0, 35°.59N×27°.91E, h32km, MD3.4(ATH), After ATH.*

*CSEM **17** 14:52:03.2±0.2, 35°.52N×27°.95E, h19km, MD3.4, Error ellipse: s-maj=4.6km s-min=4.3km az=129.0*

*ATH **17** 14:52:03.0, 35°.58N×27°.91E, h32km, MD3.4/6*

*DDA **17** 14:52:05.6, 35°.83N×28°.01E, h20km, Md3.3*

*HLW **17** 14:52:08.4, 35°.22N×28°.23E, h31km±28km, Md3.3, Ml3.6*

ISC 17 14:52:04.7±0.3, 35°.50N±0°.03×27°.94E±0°.03, h35km, n89, σ1.08/111, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.64	275	*e*Pn	Pn	14 52 15.7	-1.5
KARP				*e*Sn	Sn	14 52 24.9	-1.2
KARP	Karpathos	0.64	275	*e*PN	Pn	14 52 15.7	-1.5
KARP				*e*SN	Sn	14 52 24.9	-1.2
KARP	Karpathos	0.64	275	*e*Pn	Pn	14 52 15.7	-1.5
ARG	Arkhangelos	0.73	12	*e*Pn	Pn	14 52 16.5	-2.0
ARG				*e*Sn	Sn	14 52 26.5	-1.9
ARG	Arkhangelos	0.73	12	*e*PN	Pn	14 52 16.5	-2.0
ARG				*e*SN	Sn	14 52 26.5	-1.9
ARG	Arkhangelos	0.73	12	*e*Pn	Pn	14 52 16.5	-2.0
ARG				*e*Sn	Sn	14 52 26.5	-1.9
DAT	Datca	1.26	347	*e*PN	Pn	14 52 24.7	-1.0
DAT				*e*SN	Sn	14 52 42.0	+0.5
DAT	Datca	1.26	347	*e*Pn	Pn	14 52 24.7	-1.1
DAT				*e*Sn	Sn	14 52 42.0	+0.5
KSL	Kastellorizon	1.48	64	*e*Pn	Pn	14 52 29.1	+0.3
KSL	Kastellorizon	1.48	64	*e*PN	Pn	14 52 29.1	+0.3
AKAS	Kas	1.54	61	*i* P	Pn	14 52 30.0	+0.4
AKAS				*i* S	Sn	14 52 49.4	+1.0
AKAS	Kas	1.54	61	*i* P	Pn	14 52 30.0	+0.4
AKAS				*i* S	Sn	14 52 49.4	+1.1
BDRM	Kayabasi	1.61	346	*i* P	Pn	14 52 29.3	-1.3
BDRM				*i* S	Sn	14 52 43.5	-6.7
BDRM	Kayabasi	1.61	346	*i* P	Pn	14 52 29.3	-1.3
BODT	Bodrum	1.64	342	*e*PN	Pn	14 52 30.0	-1.0
BODT	Bodrum	1.64	342	*e*Pn	Pn	14 52 30.0	-1.0
YER	Yerkesik	1.66	10	*e*PN	Pn	14 52 31.8	+0.7
YER				*e*SN	Sn	14 52 54.1	+2.9
YER	Yerkesik	1.66	10	*e*Pn	Pn	14 52 31.8	+0.6
YER				*e*Sn	Sn	14 52 54.1	+2.9
MLSB	Milas	1.80	356	*e*PN	Pn	14 52 32.4	-0.8
MLSB	Milas	1.80	356	*e*Pn	Pn	14 52 32.4	-0.7
NPS	Neapolis	1.92	264	*e*Pb	Pn	14 52 36.0	+1.2
NPS				*e*Sn	Sn	14 52 58.6	+1.0
NPS	Neapolis	1.92	264	*e*PN	Pn	14 52 35.0	+0.2
NPS				*e*SN	Sn	14 52 58.6	+1.0
ELL	Elmali	2.02	51	*e*PN	Pn	14 52 36.2	-0.1
ELL	Elmali	2.02	51	*e*Pn	Pn	14 52 36.2	0.0
GLHS	Gihisar (BURDU	2.08	37	*e*PN	Pn	14 52 36.9	-0.1
GLHS	Gihisar (BURDU	2.08	37	*e*Pn	Pn	14 52 36.9	-0.1
AYDN	Tasoluk	2.16	359	*i* P	Pn	14 52 37.5	-0.6
AYDN				*i* S	Sn	14 52 56.2	-7.4
AYDN	Tasoluk	2.16	359	*i* P	Pn	14 52 37.5	-0.6
DNZL	Cakiroluk	2.36	22	*i* P	Pn	14 52 40.5	-0.4
DNZL				*i* S	Sn	14 53 04.9	-3.7
DNZL	Cakiroluk	2.36	22	*i* P	Pn	14 52 40.5	-0.4
SMG	Samos	2.38	338	*e*Pn	Pn	14 52 39.9	-1.2
SMG	Samos	2.38	338	*e*PN	Pn	14 52 39.9	-1.2
SMG	Samos	2.38	338	*e*Pn	Pn	14 52 39.9	-1.2
DENT	Denizli	2.42	21	*e*PN	Pn	14 52 42.1	+0.5
DENT	Denizli	2.42	21	*e*Pn	Pn	14 52 42.1	+0.5
APE	Apeiranthos	2.50	310	*e*PN	Pn	14 52 41.

NIED ***17*** *14:53:00, 35.°40N×141.°30E, h53km, Mw3.8 Best double couple: M0:6.64000×1014 NP1:φs 134.00000°, δ51.00000°, λ-77.00000°. NP2:φs 295.00000°, δ41.00000°, λ-105.00000°.*
IDC ***17*** *14:53:34.7±1.2, 35.°51N×141.°28E, h0km, mb3.8/3, mb1 3.9/7, mb1mx3.6/27, mbtmp3.7/7, ML3.7/4, MS2.4/1, Ms1 2.4/1, ms1mx1.8/37, Error ellipse: s-maj=26.3km s-min=21.6km az=80.0*
ISCJB ***17*** *14:53:37.8±0.7, 35.°42N±0.°03×141.°34E±0.°05, h33km, mb4.1/5, Error ellipse: s-maj=6.3km s-min=4.9km az=175.9*
JMA ***17*** *14:53:37.8±0.1, 35.°44N×141.°33E, h56km±2km, M3.5*
NEIC ***17*** *14:53:41.0±2.0, 35.°66N×141.°22E, h50km±21km, mb4.2/2, Error ellipse: s-maj=23.8km s-min=13.9km az=125.0*

ISC 17 14:53:38.6±0.6, 35.°41N±0.°03×141.°33E±0.°05, h35km, n26, σ1§23/40, mb4.1/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.48**	**307**	P	**Pn**	**14 53 49.1**	**+0.2**
CHOJ				S	**Sn**	**14 53 57.7**	**+1.5**
BSO1	**Boso 1**	**0.81**	**201**	P	**Pn**	**14 53 53.7**	**+0.2**
BSO1				*e*S	**Sn**	**14 54 06.2**	**+1.9**
KTR	**Katsuura**	**0.87**	**253**	P	**Pn**	**14 53 54.3**	**0.0**
KTR				*e*S	**Sn**	**14 54 06.2**	**+0.4**
BSO3	**Boso 3**	**0.91**	**228**	P	**Pn**	**14 53 54.8**	**0.0**
BSO3				*e*S	**Sn**	**14 54 07.8**	**+1.1**
BSO4	**Boso 4**	**0.92**	**243**	P	**Pn**	**14 53 55.1**	**+0.2**
BSO4				*e*S	**Sn**	**14 54 07.9**	**+1.0**
JCN	**Nagara**	**0.92**	**271**	P	**Pn**	**14 53 55.9**	**+0.9**
JIM2	**Oshima 3**	**1.71**	**247**	P	**Pn**	**14 54 04.7**	**-1.1**
JIM2				*e*S	**Sn**	**14 54 24.3**	**-2.1**
JAG	**Ashikaga**	**1.83**	**304**	P	**Pn**	**14 54 07.5**	**0.0**
JOD2	**Odawara 2**	**1.84**	**266**	P	**Pn**	**14 54 07.0**	**-0.6**
JOD2				S	**Sn**	**14 54 27.9**	**-1.8**
JFK	**Kawauchi**	**1.98**	**349**	P	**Pn**	**14 54 08.9**	**-0.7**
JRY	**Ryogami san**	**2.07**	**288**	P	**Pn**	**14 54 11.1**	**+0.4**
JIZS	**Izushimoda**	**2.13**	**252**	P	**Pn**	**14 54 10.6**	**-1.0**
JIZS				*e*S	**Sn**	**14 54 35.9**	**-0.9**
JKT	**Katashina**	**2.16**	**309**	P	**Pn**	**14 54 13.0**	**+1.0**
JKT				*e*S	**Sn**	**14 54 38.9**	**+1.3**
JHJ	**Hachijo jima 2**	**2.62**	**210**	Pn	**Pn**	**14 54 17.7**	**-0.7**
	64nm,0.3s,baz=296,slow=4.2,SNR=50						
JHJ				Sn	**Sn**	**14 54 47.4**	**-1.6**
	89nm,0.3s,baz=233,slow=23,SNR=9.2						
MJAR	**Matsushiro Arr**	**2.77**	**295**	Pn	**Pn**	**14 54 20.6**	**+0.2**
	5.3nm,0.3s,baz=105,slow=7.9,SNR=44						
MJAR				Sn	**Sn**	**14 54 51.6**	**-1.1**
	5.0nm,0.3s,baz=144,slow=16,SNR=8.3						
MAJO	**Matsushiro**	**2.77**	**295**	*e*P	**Pn**	**14 54 20.8**	**+0.4**
MAT	**Matsushiro**	**2.77**	**295**	P	**Pn**	**14 54 21.3**	**+0.8**
MAT				*e*S	**Sn**	**14 54 54.1**	**+1.4**
CBIJ	**Chichi jima**	**8.32**	**175**	Pn	**Pn**	**14 55 34.9**	**-1.9**
	11nm,0.3s,baz=278,slow=21,SNR=7.5						
CBIJ				Sn	**Sn**	**14 57 02.8**	**-6.8**
	7.3nm,0.3s,baz=74,slow=22,SNR=3.4						
ASAJ	**Asahikawa**	**8.75**	**6**	Pn	**Pn**	**14 55 40.6**	**-1.8**
	2.4nm,0.3s,baz=212,slow=7.7,SNR=20						
ASAJ				Sn	**Sn**	**14 57 14.2**	**-5.6**
	0.5nm,0.3s,baz=321,slow=19,SNR=2.5						
KSRS	**Korea Array**	**10.99**	**285**	Pn	**Pn**	**14 56 11.8**	**-1.4**
	0.2nm,0.3s,baz=252,slow=38,SNR=3.3						
KSRS				LR	LR	15 00 32.1	
	comp=Z,20nm,18.4s,baz=230,slow=38						
YSS	**Yuzh-Sakhalins**	**11.58**	**5**	P	**Pn**	**14 56 19.7**	**-1.5**
KURK	**Kurchatov**	**46.89**	**309**	*e*P	**P**	**15 02 03.9**	**-1.3**
	1.6nm,0.9s,mb4.0						
WRAB	**Tennant Creek**	**55.44**	**188**	*e*P	**P**	**15 03 11.9**	**+2.3**
	2.3nm,0.5s,mb4.5						
WRA	**Warramunga Arr**	**55.45**	**188**	P	**P**	**15 03 11.8**	**+2.1**
	2.0nm,0.4s,mb4.5,baz=1.8,slow=7.5,SNR=89						
ASAR	**Alice Springs**	**59.18**	**188**	P	**P**	**15 03 38.5**	**+2.7**
	0.6nm,0.5s,mb3.9,baz=20,slow=11,SNR=14						
NVAR	**Mina Array Bea**	**76.02**	**53**	P	**P**	**15 05 23.6**	**+1.4**
	0.4nm,0.6s,mb3.5,baz=304,slow=3.9,SNR=4.1						

IDC ***17*** *15:03:26.5±1.8, 44.°32N×129.°58W, h0km, mb3.3/3, mb1 3.6/7, mb1mx3.4/26, mbtmp3.3/7, ML3.2/4, MS2.8/2, Ms1 2.8/2, ms1mx2.4/14, Error ellipse: s-maj=51.4km s-min=19.2km az=37.0*
ISCJB ***17*** *15:03:27.8±1.3, 44.°49N±0.°07×129.°2W±0.°1, h10km, mb3.1/2, Error ellipse: s-maj=15.5km s-min=9.0km az=163.3*
NEIC ***17*** *15:03:29.7±1.4, 44.°52N×129.°25W, h10km, mb3.7/1, Error ellipse: s-maj=17.4km s-min=9.9km az=73.0*

ISC 17 15:03:29.4±1.3, 44.°54N±0.°07×129.°3W±0.°2, h10km, n33, σ1§11/32, mb3.1/2, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEBO	**Mount Hebo**	**4.02**	**78**	*e*Pn	**Pn**	**15 04 28.4**	**-2.6**
COR	**Corvallis**	**4.31**	**87**	*e*Pn	**Pn**	**15 04 33.3**	**-1.7**
NLWA	**Neilton Lookou**	**4.76**	**51**	*e*Pn	**Pn**	**15 04 41.5**	**+0.4**
HUMO	**Hull Mountain**	**5.02**	**110**	*e*Pn	**Pn**	**15 04 41.2**	**-3.5**
HUMO				*e*Sg	**Sn**	**15 05 37.8**	**-4.9**
OSD	**Olympics--Snow**	**5.11**	**48**	P	**Pn**	**15 04 47.0**	**+1.1**
HDW	**Hoodsport**	**5.36**	**52**	P	**Pn**	**15 04 50.6**	**+1.2**
GNW	**Green Mountain**	**5.45**	**54**	*e*Pn	**Pn**	**15 04 50.5**	**-0.1**
	3.4nm,0.6s						
HOOD	**Mount Hood Mea**	**5.51**	**79**	*e*Pn	**Pn**	**15 04 51.7**	**+0.2**
	18nm,0.8s						
YBH	**Yreka Blue Hor**	**5.60**	**118**	Pn	**Pn**	**15 04 53.6**	**+0.9**
	0.1nm,0.3s,baz=168,slow=11,SNR=3.7						
LON	**Longmire**	**5.72**	**65**	*e*Pn	**Pn**	**15 04 52.7**	**-1.6**
	7.7nm,0.8s						
VIPM	**Ingram Point**	**6.23**	**87**	P	**Pn**	**15 05 00.3**	**-1.0**
RPW	**Rockport**	**6.66**	**51**	*e*Pn	**Pn**	**15 05 07.3**	**0.0**
	5.3nm,0.3s						
ETW	**Entiat**	**6.97**	**61**	*e*Pn	**Pn**	**15 05 14.9**	**+3.4**
BBB	**Bella Bella**	**7.69**	**6**	LR	LR	15 07 52.9	
	comp=Z,51nm,21.9s,baz=296,slow=34						
WVOR	**Wild Horse Val**	**8.06**	**101**	Pn	**Pn**	**15 05 27.2**	**+0.7**
BMO	**Blue Mountains**	**8.58**	**84**	*e*Pn	**Pn**	**15 05 32.1**	**-1.4**
CMB	**Columbia Colle**	**9.36**	**131**	Pn	**Pn**	**15 05 43.8**	**-0.4**
NVAR	**Mina Array Bea**	**10.28**	**123**	Pn	**Pn**	**15 05 57.2**	**+0.3**
	0.0nm,0.3s,baz=297,slow=12,SNR=8.6						
NVAR	**Mina Array Bea**	**10.28**	**123**	Pn	**Pn**	**15 05 57.2**	**+0.3**
ELK	**Elko**	**11.05**	**105**	Pn	**Pn**	**15 06 08.2**	**+0.8**
	0.1nm,0.3s,baz=320,slow=16,SNR=2.6						
N12A	**Clover Valley,**	**11.15**	**104**	*e*Pn	**Pn**	**15 06 09.8**	**+1.0**
SLMT	**Seeley Lake**	**11.37**	**71**	*e*Pn	**Pn**	**15 06 13.6**	**+1.9**
	9.8nm,1.0s						
CHMT	**Chamberlain Mo**	**11.49**	**72**	*e*Pn	**Pn**	**15 06 08.2**	**-5.3**
MCMT	**McKenzie Canyo**	**11.74**	**83**	*e*Pn	**Pn**	**15 06 15.3**	**-1.6**
BOZ	**Bozeman (W)**	**12.56**	**79**	*e*Pn	**Pn**	**15 06 28.3**	**+0.2**
	2.0nm,1.3s						
CCUT	**Cedar City**	**13.92**	**115**	*e*Pn	**Pn**	**15 06 47.5**	**+0.9**
	11nm,1.6s						
DLBC	**Dease Lake**	**13.93**	**358**	LR	LR	15 11 46.8	
	comp=Z,48nm,20.1s,baz=358,slow=35						
PDAR	**Pinedale Array**	**14.43**	**90**	Pn	**Pn**	**15 07 00.7**	**+7.1**
	0.1nm,0.3s,baz=244,slow=44,SNR=2.9						
YKA	**Yellowknife Ar**	**19.91**	**20**	P	**Pn**	**15 08 02.1**	**-0.4**
	0.9nm,0.9s,baz=205,slow=11,SNR=3.7						
FFC	**Flin Flon**	**20.31**	**50**	*e*P	**P**	**15 08 06.0**	**+0.7**
	3.5nm,0.8s						
TXAR	**Lajitas Array**	**25.38**	**118**	P	**P**	**15 08 56.7**	**0.0**
	0.2nm,0.6s,mb2.9,baz=293,slow=6.7,SNR=5.4						
TXAR	**Lajitas Array**	**25.38**	**118**	P	**P**	**15 08 56.7**	**0.0**
SONM	**Songino Array**	**75.81**	**325**	P	**P**	**15 15 14.7**	**-0.6**
	0.4nm,0.8s,mb3.4,baz=31,slow=3.4,SNR=2.9						

ISCJB ***17*** *15:11:36.4±0.4, 38.°02N±0.°02×21.°52E±0.°03, h5km±4km, Error ellipse: s-maj=3.8km s-min=3.6km az=6.0*
CSEM ***17*** *15:11:36.6±0.2, 38.°02N×21.°55E, h10km, MD2.8, Error ellipse: s-maj=3.8km s-min=3.6km az=2.0*
THE ***17*** *15:11:36.7, 38.°01N×21.°55E, h0km±2km, ML3.6/7, Error ellipse: s-maj=2.5km s-min=0.8km az=233.0*
ATH ***17*** *15:11:37.0, 38.°03N×21.°53E, h16km±1km, MD2.9/7*
NEIC ***17*** *15:11:37.0, 38.°03N×21.°53E, h16km, MD2.8(ATH), After ATH.*

ISC 17 15:11:37.3±0.4, 38.°02N±0.°02×21.°55E±0.°03, h4km±5km, n66, σ0§99/103, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.07**	**301**	*e*Pb	**Pg**	**15 11 40.0**	**+1.2**
RLS				*e*Sb	**Sg**	**15 11 42.6**	**+2.8**
RLS	**Riolos of Patr**	**0.07**	**301**	*e*PB	**Pg**	**15 11 40.0**	**+1.2**
RLS				*e*SB	**Sg**	**15 11 42.6**	**+2.8**
RLS	**Riolos of Patr**	**0.07**	**301**	*e*Pb	**Pg**	**15 11 40.0**	**+1.2**
RLS				*e*Sb	**Sg**	**15 11 42.6**	**+2.8**
UPR	**University Cam**	**0.32**	**36**	*e*PB	**Pg**	**15 11 44.0**	**+0.5**
UPR				*e*SB	**Sg**	**15 11 48.8**	**+1.0**
UPR	**University Cam**	**0.32**	**36**	P	**Pg**	**15 11 42.6**	**-0.9**
UPR	**University Cam**	**0.32**	**36**	P	**Pg**	**15 11 42.6**	**-0.9**
UPR	**University Cam**	**0.32**	**36**	*e*Pb	**Pg**	**15 11 44.0**	**+0.5**
UPR				*e*Sb	**Sg**	**15 11 48.8**	**+1.0**
LAKA	**Lakka**	**0.41**	**57**	P	**Pg**	**15 11 44.5**	**-0.6**
LAKA				S	**Sg**	**15 11 51.0**	**+0.6**
LAKA	**Lakka**	**0.41**	**57**	P	**Pg**	**15 11 44.5**	**-0.6**
LAKA				S	**Sg**	**15 11 51.0**	**+0.6**
EFP	**Efpalio**	**0.49**	**35**	*e*PB	**Pg**	**15 11 46.7**	**-0.1**
EFP				*e*SB	**Sg**	**15 11 54.3**	**+1.1**
EFP	**Efpalio**	**0.49**	**35**	P	**Pg**	**15 11 46.1**	**-0.7**
EFP				S	**Sg**	**15 11 54.1**	**+0.9**
EFP	**Efpalio**	**0.49**	**35**	P	**Pg**	**15 11 46.1**	**-0.7**
EFP	**Efpalio**	**0.49**	**35**	*e*Pb	**Pg**	**15 11 46.7**	**-0.1**
EFP				S	**Sg**	**15 11 54.1**	**+0.9**
TRIZ	**Trizonia**	**0.54**	**50**	P	**Pg**	**15 11 46.9**	**-0.7**
TRIZ				S	**Sg**	**15 11 55.4**	**+0.8**
TRIZ	**Trizonia**	**0.54**	**50**	P	**Pg**	**15 11 46.9**	**-0.7**
TRIZ				S	**Sg**	**15 11 55.4**	**+0.8**
KALE	**Kalithea**	**0.60**	**52**	P	**Pg**	**15 11 47.9**	**-0.8**
KALE				S	**Sg**	**15 11 57.4**	**+0.9**
KALE	**Kalithea**	**0.60**	**52**	P	**Pg**	**15 11 47.9**	**-0.8**
KALE				S	**Sg**	**15 11 57.4**	**+0.9**
KFL	**Anninata**	**0.60**	**279**	P	**Pg**	**15 11 48.7**	**-0.2**
KFL	**Anninata**	**0.60**	**279**	P	**Pg**	**15 11 48.7**	**-0.2**
GUR	**Goura**	**0.64**	**97**	*e*PB	**Pg**	**15 11 48.7**	**-0.8**
GUR				*e*SN	**Sg**	**15 11 58.3**	**+0.6**
GUR	**Goura**	**0.64**	**97**	P	**Pg**	**15 11 48.4**	**-1.1**
GUR				S	**Sg**	**15 11 58.3**	**+0.6**
GUR	**Goura**	**0.64**	**97**	P	**Pg**	**15 11 48.4**	**-1.1**
GUR	**Goura**	**0.64**	**97**	*e*Pb	**Pg**	**15 11 48.7**	**-0.8**
GUR				S	**Sg**	**15 11 58.3**	**+0.6**
VLS	**Valsamata**	**0.77**	**282**	*e*Pb	**Pg**	**15 11 51.0**	**-1.0**
VLS				*e*Sn	**Sg**	**15 12 03.5**	**+1.5**
VLS	**Valsamata**	**0.77**	**282**	*e*PB	**Pg**	**15 11 51.0**	**-1.0**
VLS				*e*SN	**Sg**	**15 12 03.5**	**+1.5**
VLS	**Valsamata**	**0.77**	**282**	P	**Pg**	**15 11 51.0**	**-1.0**
VLS				S	**Sg**	**15 12 03.2**	**+1.2**
VLS	**Valsamata**	**0.77**	**282**	P	**Pg**	**15 11 51.0**	**-1.0**
VLS				S	**Sg**	**15 12 03.2**	**+1.2**
VLS				*e*Sn	**Sg**	**15 12 03.5**	**+1.5**
DSF	**Desfina**	**0.87**	**63**	P	**Pg**	**15 11 52.5**	**-1.4**
DSF	**Desfina**	**0.87**	**63**	P	**Pg**	**15 11 52.5**	**-1.4**
ITM	**Ithomi**	**0.89**	**160**	*e*Pb	**Pg**	**15 11 53.7**	**-0.7**
ITM				*e*Sn	**Sg**	**15 12 07.5**	**+1.6**
ITM	**Ithomi**	**0.89**	**160**	*e*PB	**Pg**	**15 11 53.7**	**-0.7**
ITM				*e*SN	**Sg**	**15 12 07.5**	**+1.6**
ITM	**Ithomi**	**0.89**	**160**	P	**Pg**	**15 11 53.7**	**-0.7**
ITM	**Ithomi**	**0.89**	**160**	P	**Pg**	**15 11 53.7**	**-0.7**
ITM				*e*Sn	**Sg**	**15 12 07.5**	**+1.6**
EVR	**Evrytania**	**0.92**	**13**	*e*Pn	**Pg**	**15 11 54.6**	**-0.3**
EVR				*e*Sn	**Sg**	**15 12 06.9**	**+0.1**
EVR	**Evrytania**	**0.92**	**13**	*e*PN	**Pg**	**15 11 54.6**	**-0.3**
EVR				*e*SN	**Sg**	**15 12 06.9**	**+0.1**
EVR	**Evrytania**	**0.92**	**13**	*e*Pn	**Pg**	**15 11 54.6**	**-0.3**
EVR				*e*Sn	**Sg**	**15 12 06.9**	**+0.1**
VLX	**Vlachokerasia**	**0.93**	**134**	*e*PN	**Pg**	**15 11 55.8**	**+0.8**
VLX				*e*SN	**Sg**	**15 12 07.9**	**+0.9**
VLX	**Vlachokerasia**	**0.93**	**134**	P	**Pg**	**15 11 53.8**	**-1.2**
VLX	**Vlachokerasia**	**0.93**	**134**	P	**Pg**	**15 11 53.8**	**-1.2**
VLX	**Vlachokerasia**	**0.93**	**134**	*e*Pn	**Pg**	**15 11 55.8**	**+0.8**
VLX				*e*Sn	**Sg**	**15 12 07.9**	**+0.9**
LKD2	**Lefkada island**	**1.04**	**318**	P	**Pg**	**15 11 55.4**	**-1.8**
LKD2	**Lefkada island**	**1.04**	**318**	P	**Pg**	**15 11 55.4**	**-1.8**
LTK	**Loutraki**	**1.12**	**89**	*e*PN	**Pg**	**15 11 58.8**	**0.0**
LTK	**Loutraki**	**1.12**	**89**	P	**Pg**	**15 11 57.3**	**-1.5**
LTK	**Loutraki**	**1.12**	**89**	P	**Pg**	**15 11 57.3**	**-1.5**
LTK	**Loutraki**	**1.12**	**89**	*e*Pn	**Pg**	**15 11 58.8**	**0.0**
PYL	**PYLOS**	**1.13**	**172**	*e*PN	**Pg**	**15 11 58.1**	**-0.9**
PYL	**PYLOS**	**1.13**	**172**	P	**Pg**	**15 11 58.1**	**-0.9**
PYL	**PYLOS**	**1.13**	**172**	P	**Pg**	**15 11 58.1**	**-0.9**
AGG	**Agios Georgios**	**1.17**	**31**	P	**Pg**	**15 11 58.7**	**-1.1**
AGG				S	**Sg**	**15 12 15.5**	**+0.5**
AGG	**Agios Georgios**	**1.17**	**31**	P	**Pg**	**15 11 58.7**	**-1.1**
AGG				S	**Sg**	**15 12 15.5**	**+0.5**
LKR	**Lokris**	**1.30**	**61**	*e*Pn	**Pn**	**15 12 01.3**	**-1.0**
LKR				*e*Sn	**Sn**	**15 12 19.9**	**-0.3**
LKR	**Lokris**	**1.30**	**61**	*e*PN	**Pn**	**15 12 01.2**	**-1.1**
LKR				*e*SN	**Sn**	**15 12 19.9**	**-0.3**
LKR	**Lokris**	**1.30**	**61**	P	**Pg**	**15 12 00.5**	**-1.8**
LKR	**Lokris**	**1.30**	**61**	P	**Pg**	**15 12 00.5**	**-1.8**
LKR	**Lokris**	**1.30**	**61**	*e*Pn	**Pn**	**15 12 01.3**	**-1.0**
DID	**Didima**	**1.44**	**110**	*e*PN	**Pn**	**15 12 04.4**	**+0.3**
DID				*e*SN	**Sn**	**15 12 24.5**	**+1.1**
DID	**Didima**	**1.44**	**110**	P	**Pn**	**15 12 03.4**	**-0.7**
DID				S	**Sb**	**15 12 23.8**	**+0.6**
DID	**Didima**	**1.44**	**110**	P	**Pn**	**15 12 03.4**	**-0.7**
DID	**Didima**	**1.44**	**110**	*e*Pn	**Pn**	**15 12 04.4**	**+0.3**
DID				S	**Sb**	**15 12 23.8**	**+0.6**
NAIG	**Nisos Aigina**	**1.56**	**99**	*e*Pn	**Pn**	**15 12 06.1**	**+0.3**
NAIG	**Nisos Aigina**	**1.56**	**99**	*e*PN	**Pn**	**15 12 06.1**	**+0.3**
NAIG	**Nisos Aigina**	**1.56**	**99**	*e*Pn	**Pn**	**15 12 06.1**	**+0.3**
THL	**Klokotos Trika**	**1.58**	**13**	*e*PN	**Pn**	**15 12 07.2**	**+1.1**
THL	**Klokotos Trika**	**1.58**	**13**	P	**Pn**	**15 12 07.1**	**+1.0**
THL	**Klokotos Trika**	**1.58**	**13**	P	**Pn**	**15 12 07.1**	**+1.0**

ISCJB ***17*** *15:40:33.7±0.6, 33.°05N±0.°06×91.°9E±0.°1, h10km, mb3.6/6, MS2.7/2, Error ellipse: s-maj=15.2km s-min=7.3km az=163.7*
IDC ***17*** *15:40:34.4±0.9, 33.°08N×91.°91E, h0km, mb3.7/6, mb1 3.7/9, mb1mx3.6/25, mbtmp3.6/9, ML3.5/3, MS2.8/3, Ms1 2.8/3, ms1mx2.6/27, Error ellipse: s-maj=38.6km s-min=18.5km az=55.0*
NEIC ***17*** *15:40:34.7±6.7, 33.°17N×91.°99E, h5km±47km, mb3.4/4, Error ellipse: s-maj=20.5km s-min=10.9km az=73.0*
BJI ***17*** *15:40:38.5, 33.°02N×92.°44E, h12km, ML3.6/2*

ISC 17 15:40:35.6±0.6, 33.°09N±0.°05×91.°9E±0.°1, h10km, n20, σ1§24/19, mb3.6/6, MS2.7/2, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.44**	**191**	*e*Pn	**Pn**	**15 41 33.3**	**+4.0**
LSA				*e*Sn	**Sg**	**15 42 22.6**	**-3.6**
SHL	**Shillong**	**7.50**	**180**	*e*PKP	**Pn**	**15 42 29.2**	**+4.2**
SHL				*e*S	**Sn**	**15 43 50.2**	**+0.1**
MKAR	**Makanchi Array**	**15.54**	**335**	Pn	**Pn**	**15 44 12.5**	**-2.1**
	0.1nm,0.3s,baz=142,slow=14,SNR=3.0						
CHTO	**Chiang Mai**	**15.54**	**154**	P	**Pn**	**15 44 14.8**	**0.0**
	3.2nm,1.1s						
CMAR	**Chiang Mai Arr**	**15.87**	**155**	Pn	**Pn**	**15 44 17.4**	**-1.8**
	0.1nm,0.3s,baz=329,slow=13,SNR=6.8						
TKM2	**Tokmak 2**	**16.16**	**312**	P	**Pn**	**15 44 26.1**	**+3.3**
	2.6nm,1.0s						
UCH	**Uchtor**	**16.51**	**309**	*e*Pn	**Pn**	**15 44 31.8**	**+4.6**
	1.9nm,0.8s						
AAK	**Ala-Archa**	**16.72**	**310**	LR	LR	15 50 58.7	
	comp=Z,36nm,20.1s,baz=292,slow=37						
EKS2	**Erkin-Say**	**17.20**	**309**	*e*P	**Pn**	**15 44 42.3**	**+6.5**
	2.5nm,0.8s						
SONM	**Songino Array**	**18.34**	**32**	P	**Pn**	**15 44 50.0**	**+0.1**
	0.2nm,0.3s,baz=217,slow=11,SNR=5.5						
KBL	**Kabul**	**19.07**	**281**	P	**Pn**	**15 44 57.6**	**-1.2**
KURK	**Kurchatov**	**20.15**	**335**	P	**P**	**15 45 08.1**	**-1.7**
ZALV	**Zalesovo Beam**	**21.46**	**348**	P	**P**	**15 45 24.1**	**+0.3**
	0.5nm,0.4s,mb3.2,baz=163,slow=10,SNR=3.9						
BVAR	**Borovoye Array**	**25.21**	**329**	P	**P**	**15 46 01.2**	**-0.1**
	0.2nm,0.4s,mb3.0,baz=126,slow=7.3,SNR=2.7						
KSRS	**Korea Array**	**29.59**	**71**	LR	LR	15 58 44.2	
	comp=Z,17nm,19.4s,MS2.7,baz=295,slow=37						
AKTO	**Aktyubinsk**	**30.32**	**315**	LR	LR	16 00 13.3	
	comp=Z,19nm,19.8s,MS2.7,baz=105,slow=39						
BRTR	**Keskin Array B**	**46.67**	**296**	P	**P**	**15 49 05.5**	**+1.2**
	0.8nm,0.5s,mb3.9,baz=93,slow=10,SNR=4.2						
WRA	**Warramunga Arr**	**66.49**	**136**	P	**P**	**15 51 27.0**	**+1.5**
	0.7nm,0.8s,mb3.7,baz=328,slow=7.3,SNR=4.6						
ASAR	**Alice Springs**	**69.18**	**139**	P	**P**	**15 51 42.7**	**+0.3**
	1.1nm,0.6s,mb4.0,baz=326,slow=6.7,SNR=16						
TORD	**Torodi Ar. Bea**	**83.14**	**281**	P	**P**	**15 53 02.1**	**-0.1**
	0.5nm,0.7s,mb3.6,baz=49,slow=4.0,SNR=2.5						

BJI ***17*** *16:12:13.7, 35.°16N×81.°76E, h18km, ML4.1/6*
IDC ***17*** *16:12:19.1±1.0, 35.°56N×81.°51E, h0km, mb3.7/7, mb1 3.9/10, mb1mx3.7/25, mbtmp3.7/10, ML3.6/3, Error ellipse: s-maj=30.0km s-min=15.9km az=56.0*
NEIC ***17*** *16:12:21.1±5.3, 35.°67N×81.°58E, h14km±35km, mb3.6/5, Error ellipse: s-maj=12.2km s-min=10.7km az=204.0*
ISCJB ***17*** *16:12:22.4±0.6, 35.°74N±0.°06×81.°60E±0.°08, h33km, mb3.6/9, Error ellipse: s-maj=10.5km s-min=7.6km az=139.5*

ISC 17 16:12:21.3±2.8, 35.°67N±0.°06×81.°64E±0.°08, h14km±19km, n25, σ1§02/27, mb3.6/9, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**5.92**	**312**	Pn	**Pn**	**16 13 48.8**	**+0.4**
KSH				*e*Sn	**Sn**	**16 14 56.4**	**+0.4**
KSH				smax			
	comp=N,93nm,0.6s						
KSH				smax			
	comp=E,140nm,0.9s						
UCH	**Uchtor**	**8.58**	**322**	*e*Pn	**Pn**	**16 14 25.1**	**+0.1**
UCH				*e*Sg	Sn	16 16 46.2	+45
AAK	**Ala-Archa**	**8.89**	**324**	Pg	Px	16 15 01.4	
	comp=E,1.0nm,0.3s,baz=130,slow=12,SNR=6.5						
AAK				Lg		16 16 53.5	
	comp=E,0.7nm,0.3s,baz=342,slow=16,SNR=3.6						
AML	**Almayashu**	**8.94**	**319**	*e*Pn	**Pn**	**16 14 31.5**	**+1.6**
	comp=E,11nm,0.7s						
EKS2	**Erkin-Say**	**9.27**	**321**	*e*Pn	**Pn**	**16 14 37.8**	**+3.4**
	comp=E,6.0nm,0.8s						
LSA	**Lhasa**	**9.98**	**124**	Pn	**Pn**	**16 14 41.3**	**-2.9**
KBL	**Kabul**	**10.38**	**267**	*e*Pn	**Pn**	**16 14 49.0**	**-0.8**
	comp=E,10nm,0.8s						
MK31	**Makanchi Array**	**11.12**	**2**	*e*Pn	**Pn**	**16 14 59.2**	**-0.6**
MKAR	**Makanchi Array**	**11.12**	**2**	Pn	**Pn**	**16 15 00.0**	**+0.2**
	comp=E,0.8nm,0.3s,baz=177,slow=12,SNR=11						
MKAR				Sn	**Sn**	**16 17 04.4**	**+0.5**
	comp=E,0.5nm,0.3s,baz=186,slow=25,SNR=5.2						
KURK	**Kurchatov**	**15.20**	**353**	*e*Pn	**Pn**	**16 15 53.9**	**-1.4**
	comp=E,2.6nm,1.0s						
ZALV	**Zalesovo Beam**	**18.41**	**6**	P	**Pn**	**16 16 36.0**	**+0.1**
	comp=E,0.1nm,0.3s,baz=194,slow=12,SNR=5.9						
BVAR	**Borovoye Array**	**19.08**	**339**	P	**Pn**	**16 16 43.1**	**-0.9**
	comp=E,0.2nm,0.3s,baz=139,slow=9.9,SNR=7.1						
BVAR				S	**Sn**	**16 20 15.4**	**-2.1**
	comp=E,0.1nm,0.3s,baz=169,slow=23,SNR=3.1						
BRVK	**Borovoye**	**19.14**	**339**	*e*P	**Pn**	**16 16 43.8**	**-1.0**
	comp=E,2.4nm,0.8s						
ABKAR	**Akbulak array**	**20.89**	**317**	*e*Pn	**P**	**16 17 02.4**	**-0.5**
	comp=E,0.7nm,0.5s						
SONM	**Songino Array**	**22.00**	**49**	P	**P**	**16 17 18.0**	**+3.2**
	comp=E,1.6nm,0.8s,mb3.5,baz=238,slow=11,SNR=10.0						
SONM	**Songino Array**	**22.00**	**49**	P	**P**	**16 17 18.0**	**+3.2**
ULN	**Ulaanbaatar**	**22.42**	**49**	*e*P	**P**	**16 17 20.6**	**+1.3**
	comp=E,4.1nm,1.1s,mb3.8						
AKTK	**Aktyubinsk**	**22.58**	**318**	P	**P**	**16 17 21.8**	**+0.8**
AKTO	**Aktyubinsk**	**22.58**	**318**	P	**P**	**16 17 21.8**	**+0.8**
	comp=E,1.5nm,0.6s,mb3.6,baz=100,slow=12,SNR=8.6						
CMAR	**

baz=323
SCZT eS Sn 16 22 10.7 -1.5
baz=323
TWG Pinlang 1.55 348 ePn Pn 16 21 58.6 -0.6
TWG Pinlang 1.55 348 eP Pn 16 21 58.1 -1.1
baz=351
SSD Sandimen 1.61 333 eP Pn 16 21 59.0 -1.1
baz=344
TWM1 Shoushan 1.77 329 eP Pn 16 22 02.4 0.0
baz=333
ELDTW Lidau 1.92 349 eP Pn 16 22 02.7 -1.5
baz=355
TWF1 Yuli 2.04 357 eP Pn 16 22 05.0 -1.0
baz=350
TWF1 eS Sn 16 22 30.6 +0.1
baz=350
YULB Yu-li 2.08 357 ePn Pn 16 22 05.9 -0.7
EHY Hungye 2.20 358 eP Pn 16 22 07.4 -0.7
baz=352
ESL Shilin 2.50 0 eP Pn 16 22 12.6 +0.3
baz=354
SSLB Suanglung 2.51 350 ePn Pn 16 22 13.8 +1.3
SMLT Sun Moon Lake 2.61 349 eP Pn 16 22 15.5 +1.7
baz=341
TYC Yuchr 2.64 349 eP Pn 16 22 15.4 +1.2
baz=350
NACB Ninganchiao 2.86 3 ePn Pn 16 22 20.6 +3.3
TWQ1 Liyutan 3.09 349 eP Pn 16 22 20.5 +0.1
baz=350
TWQ1 eS Sn 16 22 56.4 +0.1
baz=350
NNS Nan Shan 3.12 359 eP Pn 16 22 20.4 -0.5
baz=7.0
NSTT Nanjuang 3.34 353 eP Pn 16 22 23.7 -0.1
baz=354
NSTT eS Sn 16 23 01.9 -0.5
baz=354
YHNB Yeheng 3.35 359 ePn Pn 16 22 26.0 +2.0
NSK Sanguang 3.36 359 eP Pn 16 22 25.0 +0.9
baz=349
TATO Taipei 3.66 1 ePn Pn 16 22 29.7 +1.5
KSRS Korea Array 17.05 18 Pn Pn 16 25 27.4 -2.4
baz=199,slow=11,SNR=3.7
MJAR Matsushiro Arr 21.08 40 P P 16 26 14.5 -1.0
0.2nm,0.4s,mb2.8,baz=224,slow=15,SNR=2.9
MJAR Matsushiro Arr 21.08 40 P P 16 26 14.5 -1.0
SONM Songino Array 29.11 339 P P 16 27 31.9 +0.3
0.5nm,0.7s,mb3.3,baz=152,slow=11,SNR=3.4
MKAR Makanchi Array 40.59 318 P P 16 29 11.6 +1.1
0.2nm,0.4s,mb3.1,baz=110,slow=10,SNR=4.0
ZALV Zalesovo Beam 42.79 329 P P 16 29 29.1 +0.6
0.9nm,0.6s,mb3.7,baz=117,slow=7.8,SNR=5.6
WRA Warramunga Arr 42.89 162 P P 16 29 29.8 +0.2
1.0nm,0.8s,mb3.6,baz=346,slow=8.9,SNR=8.2
WRA Warramunga Arr 42.89 162 P P 16 29 29.8 +0.2
ASAR Alice Springs 46.32 164 P P 16 29 58.7 +1.8
0.2nm,0.3s,mb3.6,baz=340,slow=7.1,SNR=7.4

*BJI **17** 16:24:28.9,2.″04N×96.″03E, h13km, mB4.9/8, mb4.7/18*
*DJA **17** 16:24:29,2.″70N×95.″14E, h30km, mb4.8/7*
*IDC **17** 16:24:32.8±0.9,2.″50N×95.″79E, h0km, mb4.3/15, mb1 4.3/17, mb1mx4.2/26, mbtmp4.3/17, ML4.1/2, MS3.8/5, Ms1 3.9/5, ms1mx3.3/37, Error ellipse: s-maj=34.5km s-min=13.2km az=47.0*
*NEIC **17** 16:24:36.0±7.7,2.″53N×95.″82E, h19km±46km, mb4.6/14, Error ellipse: s-maj=25.1km s-min=6.4km az=52.0*
*ISCJB **17** 16:24:38.6±1.4,2.″55N±0.″06×95.″97E±0.″10, h54km±12km, mb4.5/38, MS4.1/3, Error ellipse: s-maj=17.7km s-min=7.1km az=153.3*

ISC 17 16:24:40.4±1.2,2.″59N±0.″06×95.″99E±0.″09, h50km±11km, h26km±6.0km: pP-P, n69, σ0°97/68, mb4.5/38, MS4.1/3, 1C, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		1.37	61	P	Pn	16 25 02.0	-1.1
TSI	Tuntungan	2.73	71	P	Pn	16 25 23.6	+1.9
PSI	Prapat	2.94	86	Pn	Pn	16 25 25.1	+0.5
10nm,0.3s,baz=280,slow=5.9,SNR=32							
PSI				LR	LR	16 26 17.7	
comp=Z,574nm,22.0s,baz=264,slow=33							
MNSI	Mandailing Nat	4.01	116	P	Pn	16 25 39.7	+0.4
PPI	Padang Panjang	5.35	124	P	Pn	16 25 59.4	+1.7
0.4nm9μm76nm,2.2s							
IPM	Ipoh	5.37	69	P	Pn	16 25 58.5	+0.5
0.4nm94nm,1.0s							
KULM	Kulim	5.37	60	ePn	Pn	16 25 58.0	+0.1
83nm,0.8s							
KULM	Kulim	5.37	60	P	Pn	16 25 57.9	-0.1
0.4nm1μm113nm,0.9s							
KSI	Kapahiang	9.05	133	P	Pn	16 26 49.1	+0.6
60nm,0.8s							
MDSI	Maura Dua	10.79	131	P	Pn	16 27 11.5	-0.8
27nm,0.6s							
KLSI		11.34	130	P	Pn	16 27 19.1	-0.7
38nm,1.6s							
KASI	Kota Agung	11.71	133	P	Pn	16 27 22.5	-2.4
KSM	Kuching	14.36	94	ePn	Pn	16 28 09.1	+8.2
CM31	Chiang Mai Arr	16.04	10	ePn	Pn	16 28 21.5	-1.2
18nm,1.0s							
CMAR	Chiang Mai Arr	16.04	10	Pn	Pn	16 28 21.5	-1.2
0.4nm,0.3s,baz=197,slow=11,SNR=24							
CMAR				LR	LR	16 34 22.0	
comp=Z,309nm,19.9s,baz=203,slow=36							
CHTO	Chiang Mai	16.38	10	ePn	Pn	16 28 24.8	-2.2
9.9nm,1.0s							
KMI	Kunming	23.33	16	P	P	16 29 45.4	+1.0
KMI				pmax	pmax		
comp=Z,12nm,1.1s,mb4.2							
KAPI	Kappang	24.91	108	P	P	16 29 58.1	-0.9
comp=Z,7.7nm,0.4s,mb4.6,baz=270,slow=17,SNR=3.0							
ODAN	Odare	25.50	342	eP	P	16 30 05.3	+1.1
RAMN	Ramite	25.84	340	eP	P	16 30 08.3	+1.0
TAPN	Taplejung	25.87	343	eP	P	16 30 09.4	+1.9
JIRN	Jiri	26.63	340	eP	P	16 30 15.7	+1.3
comp=Z,117nm,0.9s,mb5.4							
PKI	Pulchoki	26.82	339	eP	P	16 30 16.7	+0.6
comp=Z,83nm,1.1s,mb5.2							
DMN	Daman	26.97	338	eP	P	16 30 17.9	+0.5
comp=Z,54nm,1.0s,mb5.0							
GUN	Gumba	26.97	340	eP	P	16 30 18.5	+1.1
KKN	Kakani	27.07	339	eP	P	16 30 18.7	+0.4
comp=Z,96nm,1.0s,mb5.3							
LSA	Lhasa	27.35	351	P	P	16 30 20.3	-0.5
LSA	Lhasa	27.35	351	eP	P	16 30 21.0	+0.2
comp=Z,10nm,0.8s,mb4.4							
GKN	Gorkha	27.50	338	eP	P	16 30 22.5	+0.3
comp=Z,102nm,1.0s,mb5.4							
ENH	Enshi	30.36	24	eP	P	16 30 47.0	-0.6
comp=Z,7.9nm,0.9s,mb4.4							
MBWA	Marble Bar	33.13	137	P	P	16 31 17.2	+5.2
XAN	Xi'an	33.54	20	P	P	16 31 14.3	-1.1
XAN				pP	pP	16 31 24.8	-3.6
XAN				pmax	pmax		
comp=Z,4.0nm,1.3s,mb4.2							
XAN				pmax	pmax		
comp=Z,49nm,4.5s							
LZH	Lanzhou	34.12	11	P	P	16 31 20.1	-0.3
LZH				pP	pP	16 31 27.3	-6.1
LZH				sP	sP	16 31 30.6	-8.7
LZH				pmax	pmax		
comp=Z,34nm,1.2s,mb5.2							
LZH				pmax	pmax		
comp=Z,140nm,4.5s							
FITZ	Fitzroy Crossi	35.72	126	LR	LR	16 47 10.4	
comp=Z,132nm,18.1s,MS3.7,baz=198,slow=38							
NJ2	Nanjing	36.36	34	eP	P	16 31 39.0	-0.8
NJ2				pmax	pmax		
comp=Z,10.0nm,0.8s,mb4.8							
GTA	Gaotai	36.82	5	⇑P	P	16 31 43.3	-0.3
GTA				pP	pP	16 31 49.4	-7.2
GTA				sP	sP	16 31 52.4	-10
GTA				pmax	pmax		
comp=Z,17nm,1.2s,mb4.8							
HHC	Hu-ho-hao-te	40.60	18	eP	P	16 32 16.4	+1.1
HHC				S	S	16 38 27.0	+5.6
HHC				pmax	pmax		
comp=Z,16nm,0.7s,mb4.8							
HHC				pmax	pmax		
comp=Z,110nm,6.4s							
BJT	Baijiatuau	41.51	24	eP	P	16 32 23.3	+0.5
comp=Z,45nm,1.1s,mb5.0							
WRA	Warramunga Arr	43.80	122	P	P	16 32 42.1	+0.5
comp=Z,1.0nm,0.5s,mb3.9,baz=300,slow=9.3,SNR=18							
WRAB	Tennant Creek	43.80	122	eP	P	16 32 42.2	+0.5
comp=Z,26nm,1.6s,mb4.7							
UCH	Uchtor	43.90	337	eP	P	16 32 42.9	+0.8
comp=Z,482nm,0.6s							
AML	Almayashu	44.15	336	eP	P	16 32 45.0	+0.9
comp=Z,6.9nm,0.9s,mb4.4							
AAK	Ala-Archa	44.26	337	P	P	16 32 46.8	+1.8
comp=Z,1.1nm,0.3s,mb4.1,baz=290,slow=1.4,SNR=4.1							
AAK	Ala-Archa	44.26	337	eP	P	16 32 45.9	+0.9
comp=Z,3.7nm,0.7s,mb4.2							
EKS2	Erkin-Say	44.56	337	eP	P	16 32 46.9	-0.4
comp=Z,2.0nm,0.6s,mb4.1							
ASAR	Alice Springs	45.19	127	P	P	16 32 53.4	+0.7
comp=Z,0.7nm,0.5s,mb3.8,baz=300,slow=8.0,SNR=22							
KSRS	Korea Array	45.42	36	P	P	16 32 53.6	-0.7
comp=Z,1.4nm,0.7s,mb3.9,baz=234,slow=8.4,SNR=7.6							
MK31	Makanchi Array	45.62	347	eP	P	16 32 55.6	-0.1
MKAR	Makanchi Array	45.62	347	P	P	16 32 55.3	-0.4
comp=Z,3.2nm,0.4s,mb4.6,baz=153,slow=8.1,SNR=33							
SONM	Songino Array	45.96	10	P	P	16 32 58.6	+0.2
comp=Z,4.8nm,0.7s,mb4.5,baz=190,slow=8.7,SNR=26							
ULN	Ulaanbaatar	46.11	10	eP	P	16 32 59.9	+0.4
comp=Z,6.0nm,1.0s,mb4.5							
KURK	Kurchatov	50.15	346	eP	P	16 33 30.5	-0.2
comp=Z,6.8nm,0.9s,mb4.7							
HIA	Hailar	50.74	20	P	P	16 33 36.6	+1.4
ZALV	Zalesovo Beam	52.01	352	P	P	16 33 44.3	-0.3
comp=Z,5.3nm,0.5s,mb4.7,baz=169,slow=6.7,SNR=33							
CTA	Charters Tower	54.20	117	P	P	16 34 01.8	+0.4
comp=Z,6.3nm,1.1s,mb4.5,baz=301,slow=12,SNR=2.6							
CTA	Charters Tower	54.20	117	P	P	16 34 01.8	+0.4
BVAR	Borovoye Array	54.55	341	P	P	16 34 02.8	-0.5
comp=Z,2.0nm,0.6s,mb4.3,baz=141,slow=7.6,SNR=21							
BRVK	Borovoye	54.62	341	eP	P	16 34 01.1	-2.7
comp=Z,5.5nm,0.9s,mb4.6							
STKA	Stephens Creek	55.18	132	P	P	16 34 07.2	-1.1
comp=Z,5.1nm,1.1s,mb4.5,baz=315,slow=11,SNR=3.3							
ABKAR	Akbulak array	55.73	332	eP	P	16 34 11.5	-0.4
comp=Z,10nm,1.0s,mb4.8							
AKTK	Aktyubinsk	57.45	332	P	P	16 34 23.4	-0.6
AKTO	Aktyubinsk	57.45	332	P	P	16 34 23.4	-0.6
comp=Z,1.4nm,0.4s,mb4.3,baz=122,slow=5.3,SNR=9.4							
ARU	Arti	61.44	337	eP	P	16 34 49.6	-1.8
comp=Z,12nm,1.1s,mb4.9							
AKASG	Malin Array Be	73.43	322	P	P	16 36 05.6	-1.7
comp=Z,1.0nm,0.5s,mb4.0,baz=84,slow=5.3,SNR=7.1							
FINES	FINESS Array B	78.22	333	P	P	16 36 34.1	-0.3
comp=Z,2.9nm,0.9s,mb4.2,baz=108,slow=12,SNR=5.8							
ARCES	ARCESS Array B	80.83	340	P	P	16 36 49.0	+0.5
comp=Z,1.3nm,0.5s,mb4.2,baz=99,slow=6.3,SNR=18							
URZ	Urewera	84.62	129	LR	LR	17 15 57.3	
comp=Z,123nm,18.2s,MS4.3,baz=268,slow=36							
NOA	NORSAR Array B	85.21	331	P	P	16 37 11.0	-0.3
comp=Z,2.1nm,1.0s,mb4.2,baz=90,slow=5.6,SNR=2.9							
NOA				LR	LR	17 21 01.0	
comp=Z,79nm,18.6s,MS4.1,baz=100,slow=40							
NOA	NORSAR Array B	85.21	331	P	P	16 37 11.0	-0.3
NOA				LR	LR	17 21 01.0	

*SZGRF **17** 16:24:23.7,21.″40S×179.″14W, h33km, Fiji Islands region*
*ISCJB **17** 16:25:13.3±1.5,21.″3S±0.″2×178.″7W±0.″2, h456km±20km, mb3.6/8, Error ellipse: s-maj=30.0km s-min=12.9km az=137.4*
*IDC **17** 16:25:15.5±2.1,21.″41S×178.″67W, h480km±25km, mb3.2/8, mb1 3.6/10, mb1mx3.4/18, mbtmp3.4/10, Error ellipse: s-maj=30.3km s-min=14.5km az=152.0*
*NEIC **17** 16:25:15.8±1.6,21.″43S×178.″63W, h489km±19km, Error ellipse: s-maj=32.4km s-min=16.7km az=138.0*

ISC 17 16:25:15.0±1.5,21.″4S±0.″2×178.″7W±0.″2, h468km±20km, n30, σ0°49/12, mb3.6/8, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	9.95	43	P	P	16 27 31.9	+0.1
20nm,0.3s,baz=235,slow=12,SNR=20							
AFI				S	S	16 29 18.7	-5.6
2.4nm,0.3s,baz=41,slow=19,SNR=3.8							
URZ	Urewera	17.19	191	P	P	16 28 48.6	-0.1
0.8nm,0.3s,baz=14,slow=4.2,SNR=6.9							
URZ				S	S	16 31 36.5	-8.4
0.1nm,0.3s,baz=338,slow=19,SNR=2.6							
CTA	Charters Tower	32.76	266	P	P	16 31 08.4	+0.2
3.2nm,0.7s,mb3.9,baz=59,slow=5.9,SNR=4.2							
ASAR	Alice Springs	43.68	258	P	P	16 32 37.8	+0.3
0.6nm,0.5s,mb3.3,baz=86,slow=8.5,SNR=15							
ASAR				PcP	PcP	16 34 13.6	-1.0
0.7nm,0.7s,baz=100,slow=4.0,SNR=6.5							
WRA	Warramunga Arr	43.83	263	P	P	16 32 37.8	-0.9
1.4nm,0.8s,mb3.4,baz=94,slow=7.7,SNR=14							
PETK	Petropavlovsk-	76.97	346	P	P	16 36 17.7	-0.5
1.9nm,0.9s,mb3.6,baz=130,slow=6.6,SNR=3.3							
NVAR	Mina Array Bea	82.12	44	P	P	16 36 45.8	-0.1
0.6nm,0.5s,mb3.4,baz=225,slow=8.9,SNR=6.2							
TXAR	Lajitas Array	88.09	58	P	P	16 37 15.3	+0.3
0.9nm,0.9s,mb3.5,baz=207,slow=5.6,SNR=7.3							
CMAR	Chiang Mai Arr	89.80	290	P	P	16 37 24.2	+1.0
1.3nm,0.9s,mb3.7,baz=125,slow=2.7,SNR=6.8							
PDAR	Pinedale Array	90.06	43	P	P	16 37 23.6	-0.4
0.9nm,0.7s,mb3.7,baz=177,slow=1.8,SNR=8.4							
BVAR	Borovoye Array	119.34	320	PKP	PKPdf	16 43 07.6	-2.4
0.7nm,0.4s,baz=113,slow=2.7,SNR=3.8							
ARCES	ARCESS Array B	129.68	349	PKP	PKPdf	16 43 27.7	-1.7
1.2nm,0.5s,baz=31,slow=2.1,SNR=9.8							
FINES	FINESS Array B	136.44	343	PKP	PKPdf	16 43 42.0	-0.3
1.6nm,0.8s,baz=292,slow=0.7,SNR=4.0							
AKASG	Malin Array Be	143.47	330	PKhKP	PKPpre	16 43 51.4	
4.4nm,0.6s,baz=43,slow=4.2,SNR=17							
BSEG	Bad Segeberg	146.80	350	ePKPbc	PKPbc	16 44 02.3	-1.2
BRTR	Keskin Array B	146.94	311	PKPbc	PKPbc	16 44 02.1	-2.3
1.2nm,0.7s,baz=132,slow=6.1,SNR=4.1							
MMAI	Mount Meron Ar	147.67	298	PKPbc	PKPbc	16 44 06.0	-0.5
1.3nm,0.4s,baz=72,slow=6.2,SNR=4.6							
CLL	Collm	148.78	346	ePKPbc	PKPbc	16 44 07.5	-1.2
CLL	Collm	148.78	346	⇓PKPbc	PKPbc	16 44 07.4	-1.3
comp=Z,9.0nm,1.3s							
BRG	Berggiesshubel	148.95	344	ePKPbc	PKPbc	16 44 07.7	-1.4
BRG	Berggiesshubel	148.95	344	e	PKPdf	16 44 08.0	+3.5
comp=Z,3.8nm,0.7s							
MOX	Moxa	149.70	347	ePKPbc	PKPbc	16 44 09.8	-1.1
TANN	Tannenbergstha	149.73	346	ePKPbc	PKPbc	16 44 09.9	-1.1
PLN	Plauen	149.74	346	ePKPbc	PKPbc	16 44 09.6	-1.4
WERD	Werda	149.74	346	ePKPbc	PKPbc	16 44 09.0	-2.0
GUNZ	Gunzen	149.81	346	ePKPbc	PKPbc	16 44 10.1	-1.1
TNS	Taunus Mts	150.69	351	ePKPbc	PKPbc	16 44 12.1	-1.2
GRF	Grafenberg Arr	150.69	347	ePKPbc	PKPbc	16 44 12.0	-1.3
GEC2	GERESS Array S	150.87	343	ePKPbc	PKPbc	16 44 12.3	-1.4
WLF	Walferdange	151.53	353	ePKPbc	PKPbc	16 44 14.8	-0.4

*IDC **17** 16:34:34.6±0.7, 35.″59N×81.″62E, h0km, mb4.0/12, mb1 4.2/16, mb1mx4.0/26, mbtmp4.0/16, ML3.5/4, Error ellipse: s-maj=26.1km s-min=13.0km az=51.0*
*LDG **17** 16:34:34.7±0.1, 35.″64N×81.″60E, h10km, Mb4.6/15, Error ellipse: s-maj=6.4km s-min=4.7km az=72.0*
*ISCJB **17** 16:34:34.6±0.2, 35.″73N±0.″03×81.″67E±0.″05, h10km, mb4.3/28, Error ellipse: s-maj=6.4km s-min=3.6km az=149.0*
*BJI **17** 16:34:37.0, 35.″80N×81.″74E, h14km, mB4.6/4, mb4.5/9, ML4.2/6*
*NEIC **17** 16:34:40.2±0.4, 35.″72N×81.″82E, h40km, mb4.5/14, Error ellipse: s-maj=11.3km s-min=6.0km az=222.0*
*NNC **17** 16:34:43.0±9.6, 36.″36N×81.″22E, h0km, mb4.0, Error ellipse: s-maj=125.0km s-min=42.7km az=135.0*

ISC 17 16:34:36.9±0.2, 35.″73N±0.″03×81.″67E±0.″05, h10km, n85, σ1°97/90, mb4.3/28, 1C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDNR	Sundarnagar	5.76	224	ePKP	Pn	16 36 01.5	-1.0
KSH	Kashi	5.89	312	Pn	Pn	16 36 05.8	+1.5
KSH				Sn	Sn	16 37 11.8	0.0
KSH				smax			
comp=N,270nm,1.0s							
KSH				smax			
comp=E,350nm,1.1s							
DDI	Dehra Dun	6.19	210	ex	Pn	16 36 08.0	-0.4
GKN	Gorkha	8.11	161	eP	Pn	16 36 35.0	+0.3
comp=E,18nm,0.7s							
KKN	Kakani	8.49	158	eP	Pn	16 36 40.7	+0.7
comp=E,22nm,0.6s							
UCH	Uchtor	8.55	321	ePn	Pn	16 36 41.6	+0.9
GUN	Gumba	8.58	154	eP	Pn	16 36 42.3	+1.1
DMN	Daman	8.61	159	eP	Pn	16 36 42.6	+1.0
comp=E,19nm,0.6s							
PKI	Pulchoki	8.74	158	eP	Pn	16 36 44.0	+0.7
comp=E,27nm,0.6s							
AAK	Ala-Archa	8.86	323	Pn	Pn	16 36 49.2	+4.3
comp=E,0.3nm,0.3s,baz=153,slow=11,SNR=3.6							
AAK				Pg	Pn	16 37 15.2	+30
comp=E,1.1nm,0.3s,baz=132,slow=13,SNR=5.5							
AAK				Lg		16 39 09.0	
comp=E,1.3nm,0.3s,baz=330,slow=20,SNR=3.8							
AAK	Ala-Archa	8.86	323	Pn	Pn	16 36 48.8	+3.9
comp=E,3.3nm,0.5s							
AAK				Pn	Pn	16 36 49.2	+4.3
AAK				ePg	Pn	16 37 14.1	+29
AAK				Pg	Pn	16 37 15.2	+30
AAK				eSn	Sn	16 38 32.9	+8.1
AAK				Lg		16 39 09.0	
AML	Almayashu	8.91	318	ePn	Pn	16 36 46.8	+1.1
comp=E,14nm,0.7s							
JIRN	Jiri	8.92	153	eP	Pn	16 36 47.2	+1.4
comp=E,59nm,0.7s							
EKS2	Erkin-Say	9.24	321	ePn	Pn	16 36 52.1	+1.9
comp=E,11nm,0.8s							
RAMN	Ramite	9.71	153	eP	Pn	16 36 56.6	-0.1
comp=E,31nm,0.7s							
TAPN	Taplejung	9.81	147	eP	Pn	16 36 58.4	+0.3
LSA	Lhasa	9.99	124	Pn	Pn	16 36 57.2	-3.3
ODAN	Odare	10.10	150	eP	Pn	16 37 02.6	+0.5
comp=E,25nm,0.6s							
KBL	Kabul	10.41	267	ePn	Pn	16 37 04.9	-1.4
comp=E,19nm,0.7s							
MK31	Makanchi Array	11.06	2	⇓P	Pn	16 37 15.4	+0.3
comp=E,2.8nm,0.5s,baz=0.0,slow=0.1,SNR=34							
MK31				S	Sn	16 39 12.1	-6.7
comp=E,3.7nm,0.6s,baz=6.1,slow=16,SNR=2.8							
MK31	Makanchi Array	11.06	2	ePn	Pn	16 37 15.4	+0.3
MKAR	Makanchi Array	11.06	2	Pn	Pn	16 37 15.3	+0.2
comp=E,0.7nm,0.3s,baz=193,slow=15,SNR=15							
MKAR				Sn	Sn	16 39 20.0	+1.2
comp=E,1.2nm,0.3s,baz=175,slow=19,SNR=3.9							
KK31	Karatay Array	11.34	314	P	Pn	16 37 18.1	-0.8
comp=E,1.5nm,0.7s,baz=132,slow=12,SNR=5.2							
GTA	Gaotai	14.85	70	eP	Pn	16 38 15.6	+8.8
GTA				pP	pP	16 38 19.3	+3.8
GTA				sP	sP	16 38 20.6	+3.8
GTA				pmax	pmax		
comp=Z,4.0nm,1.5s							
KURK	Kurchatov	15.14	353	ePn	Pn	16 38 07.9	-2.8
comp=Z,13nm,1.1s							
LZH	Lanzhou	17.96	82	eP	Pn	16 38 47.8	+1.1
LZH				pP	pP	16 38 51.0	+0.9
LZH				sP	sP	16 38 53.3	+1.9
LZH				pmax	pmax		
comp=Z,21nm,1.3s							
LZH				pmax	pmax		
comp=Z,110nm,5.0s							
ZALV	Zalesovo Beam	18.35	6	P	Pn	16 38 50.8	-0.5
comp=Z,0.4nm,0.3s,baz=192,slow=11,SNR=16							
VOSK	Vostochnaya	18.60	339	⇑P	Pn	16 38 53.4	-1.0
comp=Z,5.6nm,1.1s							
BVAR	Borovoye Array	19.04	339	P	Pn	16 38 59.2	-0.4
comp=Z,0.2nm,0.3s,baz=137,slow=11,SNR=14							
BRVK	Borovoye	19.10	339	eP	Pn	16 38 58.5	-1.9
comp=Z,8.5nm,1.0s							
ZRNK	Zerenda	19.40	336	⇓P	Pn	16 39 01.1	-2.9
comp=Z,6.1nm,1.3s							
AB31	Akbulak array	20.86	317	P	P	16 39 18.4	-0.5
comp=Z,6.1nm,1.1s,baz=96,slow=13,SNR=18							
ABKAR	Akbulak array	20.86	317	eP	P	16 39 18.3	-0.5
comp=Z,4.9nm,0.9s							
SONM	Songino Array	21.94	49	P	P	16 39 32.7	+2.2
comp=Z,4.9nm,1.1s,mb3.9,baz=240,slow=7.4,SNR=14							
SONM	Songino Array	21.94	49	P	P	16 39 32.7	+2.2
ULN	Ulaanbaatar	22.36	49	eP	P	16 39 36.4	+1.5
AKTK	Aktyubinsk	22.55	318	P	P	16 39 37.6	+0.7
AKTO	Aktyubinsk	22.55	318	P	P	16 39 37.6	+0.7
comp=Z,2.1nm,0.6s,mb3.7,baz=101,slow=11,SNR=12							
CMAR	Chiang Mai Arr	23.01	134	P	P	16 39 39.2	-2.9
comp=Z,0.8nm,0.8s,mb3.2,baz=317,slow=10,SNR=6.5							
ENH	Enshi	23.91	95	eP	P	16 39 49.1	-1.9
comp=Z,21nm,1.3s,mb4.4							
HHC	Hu-ho-hao-te	23.95	69	eP	P	16 39 48.5	-2.7
HHC				S	S	16 44 02.5	-5.2
HHC				pmax	pmax		
comp=Z,15nm,0.5s,mb4.7							
HHC				pmax	pmax		
comp=Z,120nm,5.5s							
ARU	Arti	25.95	330	eP	P	16 40 08.5	-0.8
BRTR	Keskin Array B	37.84	291	P	P	16 41 53.1	-0.6
comp=Z,1.9nm,0.9s,mb3.8,baz=54,slow=6.4,SNR=7.0							
AKASG	Malin Array Be	40.18	309	P	P	16 42 12.2	-0.9
comp=Z,2.4nm,0.7s,mb4.0,baz=85,slow=7.3,SNR=8.3							
FINES	FINESS Array B	43.05	324	P	P	16 42 36.5	0.0
comp=Z,2.2nm,0.9s,mb3.9,baz=94,slow=8.8,SNR=5.4							
ARCES	ARCESS Array B	45.28	336	P	P	16 42 54.8	+0.5
comp=Z,2.2nm,0.7s,mb4.1,baz=109,slow=8.1,SNR=9.4							
BRG	Berggiesshubel	49.82	310	e(P)	P	16 43 33.5	+3.7
comp=Z,4.0nm,0.9s,mb4.5							
NOA	NORSAR Array B	50.18	323	P	P	16 43 32.1	-0.3
comp=Z,1.4nm,0.9s,mb4.0,baz=87,slow=7.4,SNR=3.6							
CDF	Champ du Feu	54.59	308	eP	P	16 44 05.5	+0.2
HINF	Hinteralfeld	55.03	307	eP	P	16 44 09.3	+0.8
HAU	Haudompre	55.30	308	eP	P	16 44 11.3	+0.8
GIVF	Givet	55.67	311	eP	P	16 44 11.9	-1.1
comp=Z,17nm,0.8s,mb4.8							
GIVF	Givet	55.67	311	eP	P	16 44 11.9	-1.1
comp=Z,8.6nm,0.8s,mb4.8							
LPG	La Plagne	55.80	305	eP	P	16 44 15.4	+1.4
comp=Z,11nm,0.8s,mb4.7							
LPG	La Plagne	55.80	305	eP	P	16 44 15.4	+1.4
comp=Z,5.7nm,0.8s,mb4.7							
LPL	La Plagne	55.80	305	eP	P	16 44 15.4	+

mb1 4.7/31,mb1mx4.7/36,mbtmp4.6/31,ML3.9/2,MS4.0/12, Ms1 3.9/12,ms1mx3.6/35,Error ellipse: s-maj=14.2km s-min=10.0km az=53.0

ISCJB **17** *16:40:40.7±0.1,31.°63N±0.°02×104.°23E±0.°02,h16km, mb4.9/170,MS4.2/34,Error ellipse: s-maj=2.8km s-min=2.7km az=12.9*

NEIC **17** *16:40:42.6±0.1,31.°64N×104.°20E,mb5.1/100,MS4.4/5, Error ellipse: s-maj=3.4km s-min=3.0km az=204.0*

NEIC *Felt at Chengdu.*

BJI **17** *16:40:42.2,31.°60N×104.°32E,h17km,mB4.8/22,mb4.7/34, ML4.7/25,Ms4.7/48,Ms7 4.4/44*

MOS **17** *16:40:43.0±0.8,31.°64N×104.°30E,h33km,mb5.1/88, MS4.3/20,Error ellipse: s-maj=6.8km s-min=3.9km az=117.9*

SZGRF **17** *16:40:45.3,31.°54N×104.°33E,h16km,mb5.4,MS4.5, Sichuan, China*

ISC 17 16:40:42.9±0.1,31.°64N±0.°02×104.°21E±0.°02,h17km, h17km±.3km:pP-P,n490,σ0.98/514,mb4.9/170,MS4.2/34, 30C-19D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.82**	**208**	Pg	**Pg**	**16 40 58.8**	**-0.2**
CD2				Sg	**Sg**	**16 41 10.6**	**+0.7**
CD2				smax			
	comp=N,28μm,1.2s						
CD2				smax			
	comp=E,20μm,0.6s						
LZH	**Lanzhou**	**4.44**	**356**	Pn	**Pn**	**16 41 52.1**	**+2.6**
LZH				Sn	**Sn**	**16 42 45.3**	**+4.5**
LZH				Sg	**Sg**	**16 43 02.0**	**-3.5**
LZH				smax			
	comp=N,880nm,0.8s						
LZH				smax			
	comp=E,2μm,0.8s						
LZH				LR	LR		
	comp=E,4μm,6.3s						
LZH				LR	LR		
	comp=Z,5μm,7.4s						
XAN	**Xi'an**	**4.63**	**58**	Pn	**Pn**	**16 41 52.0**	**-0.1**
XAN				Sn	**Sn**	**16 42 41.4**	**-4.1**
XAN				Sg	**Sg**	**16 43 03.0**	**-8.6**
XAN				smax			
	comp=N,2μm,1.1s						
XAN				smax			
	comp=E,1μm,0.9s						
XAN				LR	LR		
	comp=N,4μm,11.0s						
XAN				LR	LR		
	comp=E,1μm,9.9s						
XAN				LR	LR		
	comp=Z,1μm,10.6s						
ENH	**Enshi**	**4.74**	**105**	*e*Pn	**Pn**	**16 41 54.8**	**+1.2**
ENH				*e*Sn	**Sn**	**16 42 49.7**	**+1.6**
ENH				*e*Sg	**Sg**	**16 43 13.2**	**-1.8**
GYA	**Guiyang**	**5.60**	**157**	Pn	**Pn**	**16 42 06.0**	**+0.6**
GYA				Sn	**Sn**	**16 43 10.1**	**+0.8**
GYA				Sg	**Sg**	**16 43 43.9**	**+1.4**
GYA				smax			
	comp=N,2μm,0.9s						
GYA				smax			
	comp=E,2μm,0.9s						
GYA				LR	LR		
	comp=N,5μm,4.3s						
GYA				LR	LR		
	comp=E,3μm,5.0s						
GYA				LR	LR		
	comp=Z,4μm,4.8s						
KMI	**Kunming**	**6.62**	**192**	Pn	**Pn**	**16 42 21.0**	**+1.5**
KMI				Sn	**Sn**	**16 43 36.0**	**+1.4**
KMI				smax			
	comp=N,320nm,0.9s						
KMI				smax			
	comp=E,320nm,0.7s						
KMI				LR	LR		
	comp=N,2μm,7.1s						
KMI				LR	LR		
	comp=E,2μm,6.1s						
KMI				LR	LR		
	comp=Z,3μm,10.8s						
GTA	**Gaotai**	**8.54**	**336**	⇑P	**Pn**	**16 42 49.8**	**+4.1**
GTA				pP		16 42 53.3	
GTA				sP		16 42 55.8	
GTA				S	**Sn**	**16 44 29.1**	**+7.5**
GTA				sS		16 44 34.3	
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,95nm,4.5s						
GTA				LR	LR		
	comp=N,3μm,13.8s						
GTA				LR	LR		
	comp=E,3μm,13.2s						
GTA				LR	LR		
	comp=Z,3μm,14.4s						
WHN	**Wuhan**	**8.77**	**95**	P	**Pn**	**16 42 49.9**	**+1.0**
WHN				sP		16 42 56.3	
WHN				S	**Sn**	**16 44 24.8**	**-2.6**
WHN				LR	LR		
	comp=N,10μm,6.5s						
WHN				LR	LR		
	comp=E,6μm,3.2s						
WHN				LR	LR		
	comp=Z,6μm,6.5s						
BTO	**Baotou**	**10.10**	**26**	*e*P	**Pn**	**16 43 07.4**	**+0.3**
BTO				pP		16 43 11.0	
BTO				sP		16 43 14.1	
BTO				PP		16 43 17.0	
BTO				pmax	pmax		
	comp=Z,15nm,1.0s						
HHC	**Hu-ho-hao-te**	**10.94**	**31**	*e*P	**Pn**	**16 43 19.1**	**+0.5**
HHC				PP		16 43 27.6	
HHC				S	**Sn**	**16 45 22.1**	**+1.6**
HHC				SS		16 45 35.4	
HHC				PcS	PcS	16 52 50.6	-0.4
HHC				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,110nm,4.8s						
HHC				LR	LR		
	comp=N,2μm,8.1s						
HHC				LR	LR		
	comp=E,1μm,8.0s						
HHC				LR	LR		
	comp=Z,2μm,8.6s						
LSA	**Lhasa**	**11.41**	**264**	P	**Pn**	**16 43 25.0**	**-0.1**
LSA	**Lhasa**	**11.41**	**264**	*e*P	**Pn**	**16 43 28.0**	**+2.9**
LSA				pmax	pmax		
	comp=Z,22nm,0.9s						
LSA	**Lhasa**	**11.41**	**264**	*e*Pn	**Pn**	**16 43 28.0**	**+2.9**
	comp=Z,22nm,0.9s						
TIA	**Tai'an**	**11.65**	**64**	*e*P	**Pn**	**16 43 28.9**	**+0.5**
TIA				LR	LR		
	comp=N,470nm,9.0s						
TIA				LR	LR		
	comp=E,610nm,9.0s						
GZH	**Guangzhou**	**11.77**	**134**	P	**Pn**	**16 43 26.9**	**-3.1**
GZH				S	**Sn**	**16 45 32.1**	**-8.9**
GZH				LR	LR		
	comp=N,2μm,9.4s						
GZH				LR	LR		
	comp=E,2μm,9.0s						
GZH				LR	LR		
	comp=Z,4μm,12.2s						
CHRT	**Chiangrai**	**12.38**	**200**	P	**Pn**	**16 43 41.0**	**+2.6**
	comp=Z,105nm,0.8s						
SHL	**Shillong**	**12.40**	**244**	*e*PKP	**Pn**	**16 43 38.0**	**-0.7**
NJ2	**Nanjing**	**12.46**	**84**	*e*P	**Pn**	**16 43 40.1**	**+0.6**
NJ2				pP		16 43 47.4	
NJ2				PP		16 43 50.3	
NJ2				sP		16 43 52.3	
NJ2				S	**Sn**	**16 46 04.1**	**+6.1**
NJ2				pmax	pmax		
	comp=Z,40nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,70nm,3.5s						
NJ2				LR	LR		
	comp=N,990nm,9.3s						
NJ2				LR	LR		
	comp=E,3μm,12.2s						
NJ2				LR	LR		
	comp=Z,5μm,11.9s						
BJT	**Baijiatuau**	**12.80**	**46**	*e*P	**Pn**	**16 43 43.1**	**-0.9**
BJI	**Beijing**	**12.81**	**46**	P	**Pn**	**16 43 44.6**	**+0.3**
BJI				pmax	pmax		
	comp=Z,6.0nm,0.4s						
BJI				LR	LR		
	comp=N,2μm,4.9s						
BJI				LR	LR		
	comp=E,2μm,6.2s						
BJI				LR	LR		
	comp=Z,260nm,19.0s						
QIZ	**Qiongzhong**	**13.55**	**157**	P	**Pn**	**16 43 55.8**	**+1.4**
QIZ				S	**Sn**	**16 46 27.8**	**+3.2**
QIZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
QIZ				pmax	pmax		
	comp=Z,97nm,3.1s						
QIZ				LR	LR		
	comp=N,1μm,13.7s						
QIZ				LR	LR		
	comp=E,450nm,8.2s						
QIZ				LR	LR		
	comp=Z,2μm,12.8s						
QIZ	**Qiongzhong**	**13.55**	**157**	*e*Pn	**Pn**	**16 43 52.4**	**-2.0**
QIZ				*e*Sn	**Sn**	**16 46 19.3**	**-5.3**
CHG	**Chiang Mai**	**13.63**	**202**	⇓P	**Pn**	**16 43 56.4**	**+0.9**
	comp=Z,42nm,0.8s						
CHTO	**Chiang Mai**	**13.63**	**202**	*e*P	**Pn**	**16 43 56.3**	**+0.8**
CM31	**Chiang Mai Arr**	**13.96**	**201**	*e*Pn	**Pn**	**16 44 01.2**	**+1.1**
	comp=Z,27nm,0.5s						
CMAR	**Chiang Mai Arr**	**13.96**	**201**	Pn	**Pn**	**16 44 01.3**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=8,9,slow=11,SNR=34						
QZH	**Quanzhou**	**14.32**	**114**	P	**Pn**	**16 44 01.9**	**-3.0**
QZH				S	**Sn**	**16 46 39.1**	**-4.2**
QZH				LR	LR		
	comp=N,3μm,11.0s						
QZH				LR	LR		
	comp=E,6μm,8.3s						
QZH				LR	LR		
	comp=Z,8μm,9.2s						
TAPN	**Taplejung**	**14.99**	**258**	*e*P	**Pn**	**16 44 15.7**	**+1.7**
	comp=Z,66nm,0.8s						
BDT	**Bhumibol Dam**	**15.09**	**199**	P	**Pn**	**16 44 21.0**	**+5.6**
	comp=Z,33nm,0.8s						
ODAN	**Odare**	**15.43**	**256**	*e*P	**Pn**	**16 44 18.3**	**-1.5**
	comp=Z,101nm,0.9s						
DL2	**Dalian**	**15.95**	**58**	P	**Pn**	**16 44 27.9**	**+1.4**
DL2				S	**Sn**	**16 47 25.3**	**+2.3**
DL2				pmax	pmax		
	comp=Z,20nm,1.2s						
DL2				pmax	pmax		
	comp=Z,80nm,6.3s						
DL2				LR	LR		
	comp=E,440nm,14.5s						
DL2				LR	LR		
	comp=Z,600nm,12.9s						
RAMN	**Ramite**	**16.05**	**258**	*e*P	**Pn**	**16 44 26.2**	**-1.7**
JIRN	**Jiri**	**16.16**	**260**	*e*P	**Pn**	**16 44 28.7**	**-0.5**
SONM	**Songino Array**	**16.26**	**5**	Pn	**Pn**	**16 44 29.9**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=187,slow=14,SNR=42						
SONM				Lg		16 49 25.7	
	comp=Z,0.3nm,0.3s,baz=182,slow=22,SNR=4.2						
NST	**Nakhon Sawan**	**16.33**	**194**	P	**Pn**	**16 44 31.0**	**-0.4**
GUN	**Gumba**	**16.34**	**262**	*e*P	**Pn**	**16 44 31.1**	**-0.5**
	comp=Z,239nm,1.0s						
ULN	**Ulaanbaatar**	**16.35**	**7**	*e*Pn	**Pn**	**16 44 30.9**	**-0.6**
YHNB	**Yeheng**	**16.65**	**110**	*e*Pn	**Pn**	**16 44 36.2**	**+0.7**
	comp=Z,97nm,1.2s						
PKI	**Pulchoki**	**16.84**	**261**	*e*P	**Pn**	**16 44 36.3**	**-1.6**
	comp=Z,137nm,0.9s						
PKI	**Pulchoki**	**16.84**	**261**	*e*P	**Pn**	**16 44 36.3**	**-1.6**
PKI				pmax	pmax		
	comp=Z,137nm,0.9s						
PKIN	**Phulchoki**	**16.85**	**261**	*e*P	**Pn**	**16 44 35.9**	**-2.1**
	comp=Z,177nm,0.8s						
KKN	**Kakani**	**16.88**	**262**	*e*P	**Pn**	**16 44 36.2**	**-2.2**
	comp=Z,110nm,0.8s						
KKN	**Kakani**	**16.88**	**262**	*e*P	**Pn**	**16 44 36.2**	**-2.2**
KKN				pmax	pmax		
	comp=Z,110nm,0.8s						
NACB	**Ninganchiao**	**17.06**	**112**	Pn	**Pn**	**16 44 41.8**	**+1.0**
	comp=Z,50nm,1.0s						
DMN	**Daman**	**17.09**	**261**	*e*P	**Pn**	**16 44 38.0**	**-3.0**
	comp=Z,136nm,0.9s						
GKN	**Gorkha**	**17.36**	**263**	*e*P	**Pn**	**16 44 42.4**	**-2.1**
	comp=Z,167nm,1.0s						
WMQ	**Urumqi**	**17.80**	**318**	P	**Pn**	**16 44 51.9**	**+2.1**
WMQ				pP	pP	16 44 55.5	+0.3
WMQ				sP	sP	16 44 58.9	+1.5
WMQ				PP		16 45 06.8	
WMQ				S	**Sn**	**16 48 07.9**	**+0.1**
WMQ				sS	sS	16 48 13.6	-8.4
WMQ				SS		16 48 30.4	
WMQ				PcP	PcP	16 49 29.8	+3.3
WMQ				pmax	pmax		
	comp=Z,24nm,1.2s						
WMQ				pmax	pmax		
	comp=Z,260nm,7.4s						
WMQ				LR	LR		
	comp=N,1μm,9.0s						
WMQ				LR	LR		
	comp=E,1μm,8.0s						
WMQ				LR	LR		
	comp=Z,2μm,9.0s						
BOK	**Bokaro**	**17.99**	**249**	*e*PKP	**Pn**	**16 44 52.3**	**0.0**
BOK				*e*PKP		16 44 53.8	
BOK				AMb	AMB	16 44 54.7	
	comp=Z,17nm,0.8s						
SNY	**Shenyang**	**18.52**	**51**	⇑P	**Pn**	**16 45 00.0**	**+1.4**
SNY				S	**Sn**	**16 48 25.4**	**+0.2**
SNY				pmax	pmax		
	comp=Z,7.0nm,0.6s						
SNY				pmax	pmax		
	comp=Z,190nm,6.9s						
SNY				LR	LR		
	comp=E,720nm,12.9s						
SNY				LR	LR		
	comp=Z,530nm,15.3s						
INCN	**Inchon**	**19.35**	**66**	*e*P	**Pn**	**16 45 07.4**	**-1.3**
	comp=Z,18nm,0.8s						
TLY	**Talaya**	**20.03**	**359**	*e*P	**P**	**16 45 16.4**	**+1.6**
TLY				*e*S	**S**	**16 48 53.6**	**-5.6**
TLY				pmax	pmax		
	comp=Z,16nm,1.2s						
TLY				MLR	MLR		
	comp=Z,720nm,15.0s,MS4.1						
TLY	**Talaya**	**20.03**	**359**	*e*P	**P**	**16 45 16.2**	**+1.4**
	comp=Z,6.6nm,0.8s						
TLY				*e*Pn	**P**	**16 45 16.7**	**+1.9**
MOY	**Mondy**	**20.15**	**354**	*e*P	**P**	**16 45 17.4**	**+1.3**
MOY				pmax	pmax		
	comp=Z,64nm,1.9s						
KSRS	**Korea Array**	**20.35**	**67**	P	**P**	**16 45 18.7**	**+0.2**
	comp=Z,28nm,0.8s,baz=256,slow=10,SNR=116						
KSRS				LR	LR	16 54 25.8	
	comp=Z,344nm,18.8s,MS3.7,baz=74,slow=41						
KSRS	**Korea Array**	**20.35**	**67**	P	**P**	**16 45 18.7**	**+0.2**
KSRS				pmax	pmax		
	comp=Z,28nm,0.8s						
KSRS				MLR	MLR		
	comp=Z,344nm,18.8s,MS3.7						
IRK	**Irkutsk**	**20.59**	**0**	*e*P	**P**	**16 45 22.4**	**+1.6**
IRK				pmax	pmax		
	comp=Z,108nm,0.8s						
CN2	**Changchun**	**20.66**	**48**	*e*P	**P**	**16 45 21.8**	**0.0**
CN2	**Changchun**	**20.66**	**48**	*e*P	**P**	**16 45 22.8**	**+1.0**
CN2				*e*pP		16 45 26.8	
CN2				*e*sP	sP	16 45 29.8	+1.1
CN2				*e*S	**S**	**16 49 14.8**	**+2.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,300nm,10.0s,MS4.2						
CN2				LR	LR		
	comp=E,500nm,10.0s,MS4.2						
CN2				LR	LR		
	comp=Z,200nm,17.0s						
HIA	**Hailar**	**21.13**	**29**	*e*P	**P**	**16 45 28.2**	**+1.4**
HIA				pmax	pmax		
	comp=Z,14nm,0.6s						
HIA	**Hailar**	**21.13**	**29**	*e*P	**P**	**16 45 28.2**	**+1.4**
	comp=Z,14nm,0.6s,mb4.5						
CIT	**Chita**	**21.48**	**16**	*e*P	**P**	**16 45 32.0**	**+1.4**
CIT				*e*		16 46 09.3	
CIT				pmax	pmax		
	comp=Z,87nm,1.3s,mb4.9						
DDI	**Dehra Dun**	**22.45**	**273**	*ex*	**P**	**16 45 45.0**	**+4.0**
MK31	**Makanchi Array**	**22.63**	**318**	*e*P	**P**	**16 45 43.8**	**+0.9**
MKAR	**Makanchi Array**	**22.63**	**318**	P	**P**	**16 45 43.0**	**+0.1**
	comp=Z,12nm,0.8s,mb4.4,baz=123,slow=11,SNR=35						
MKAR				LR	LR	16 55 26.9	
	comp=Z,632nm,18.2s,MS4.1,baz=33,slow=39						
MKAR	**Makanchi Array**	**22.63**	**318**	P	**P**	**16 45 43.0**	**+0.1**
MKAR				pmax	pmax		
	comp=Z,12nm,0.8s						
MKAR				MLR	MLR		
	comp=Z,632nm,18.3s						
BISR	**Bishrakh**	**23.34**	**269**	*e*PKP	**P**	**16 45 51.2**	**+0.7**
BISR				AMb	AMB	16 46 04.6	
	comp=Z,239nm,0.6s,mb5.8						
VIS	**Vishakhapatnam**	**23.44**	**239**	*e*PKP	**P**	**16 45 50.2**	**-1.3**
VIS				AMb	AMB	16 45 51.5	
	comp=Z,24nm,1.1s,mb4.5						
NDI	**New Delhi**	**23.50**	**270**	*e*PKP	**P**	**16 45 50.0**	**-2.2**
KKR	**Kurukshetra**	**23.56**	**273**	*e*PKP	**P**	**16 45 52.8**	**0.0**
BHK	**Bhakra**	**23.67**	**277**	*ex*	sP	16 46 02.5	+1.6
MDJ	**Mudanjiang**	**23.69**	**50**	P	**P**	**16 45 52.4**	**-1.4**
MDJ				pP		16 45 55.5	
MDJ				PcP	PcP	16 49 36.8	-0.8
MDJ				S	**S**	**16 50 07.1**	**-0.6**
MDJ				sS	sS	16 50 11.9	-4.2
MDJ				ScP	ScP	16 53 14.9	-0.3
MDJ				PcS	PcS	16 53 16.8	-0.1
MDJ				ScS	ScS	16 57 02.8	+1.1
MDJ				pmax	pmax		
	comp=Z,37nm,1.4s,mb4.6						
MDJ				pmax	pmax		
	comp=Z,150nm,3.9s						
MDJ				LR	LR		
	comp=N,100nm,7.1s						
MDJ				LR	LR		
	comp=E,280nm,9.5s						
MDJ				LR	LR		
	comp=Z,370nm,10.7s,MS4.1						
MDJ	**Mudanjiang**	**23.69**	**50**	*e*P	**P**	**16 45 54.3**	**+0.5**
	comp=Z,159nm,1.8s,mb5.2						
KSH	**Kashi**	**24.20**	**297**	P	**P**	**16 46 02.3**	**+3.8**
KSH				pP		16 46 06.8	
KSH				sP	sP	16 46 09.8	+4.1
KSH				PcP	PcP	16 49 42.8	+4.0
KSH				S	**S**	**16 50 18.3**	**+2.2**
KSH				SS		16 51 13.0	
KSH				ScP	ScP	16 53 19.4	+2.7
KSH				PcS	PcS	16 53 21.1	+2.6
KSH				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.4						
KSH				LR	LR		
	comp=N,400nm,10.4s,MS4.3						
KSH				LR	LR		
	comp=E,370nm,11.4s,MS4.3						
KSH				LR	LR		
	comp=Z,490nm,12.0s,MS4.2						
ORY	**Orie**	**24.23**	**347**	⇓*e*P	**P**	**16 45 59.9**	**+1.3**
ORY				*e*		16 46 28.0	
ORY				S	**S**	**16 50 14.8**	**-1.4**
ULHL	**Ulahol**	**24.63**	**303**	P	**P**	**16 46 04.4**	**+2.1**
	SNR=5.6						
NGP	**Nagpur**	**24.78**	**251**	*e*PKP	**P**	**16 46 01.7**	**-2.3**
NGP				AMb	AMB	16 46 13.2	
	comp=Z,57nm,1.3s,mb4.9						
BHPL	**Bhopal**	**25.15**	**257**	*e*PKP	**P**	**16 46 07.2**	**-0.1**
BHPL				AMb	AMB	16 46 15.9	
	comp=Z,25nm,0.8s,mb4.8						
KZA	**Kyzart**	**25.29**	**302**	P	**P**	**16 46 11.3**	**+2.9**
	SNR=14						
KRAR	**Krasnoyarsk**	**25.63**	**345**	*e*P	**P**	**16 46 09.9**	**-1.4**
KRAR				pmax	pmax		
	comp=Z,13nm,1.6s,mb4.2						
KBK	**Karagaybulak**	**25.66**	**304**	P	**P**	**16 46 13.9**	**+2.2**
	SNR=11						
UCH	**Uchtor**	**25.86**	**302**	P	**P**	**16 46 16.1**	**+2.5**
	SNR=27						
UCH	**Uchtor**	**25.86**	**302**	*e*P	**P**	**16 46 15.3**	**+1.8**
	comp=Z,481nm,0.6s,mb6.2						
FRU	**Bishkek**	**25.94**	**304**	⇑*i*P	**P**	**16 46 22.0**	**+7.7**
FRU				pmax	pmax		
	comp=Z,60nm,2.0s,mb4.8						
AAK	**Ala-Archa**	**25.98**	**303**	P	**P**	**16 46 15.9**	**+1.3**
	comp=Z,3.0nm,0.5s,mb4.1,baz=114,slow=8.7,SNR=6.2						
AAK				LR	LR	16 58 12.1	
	comp=Z,582nm,19.5s,MS4.1,baz=102,slow=40						
AAK	**Ala-Archa**	**25.98**	**303**	*e*P	**P**	**16 46 15.7**	**+1.1**
AAK				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.3						
AAK	**Ala-Archa**	**25.98**	**303**	*e*P	**P**	**16 46 15.7**	**+1.1**
	comp=Z,10nm,0.9s,mb4.4						
USP	**Ospenovka**	**26.14**	**305**	P	**P**	**16 46 20.3**	**+4.2**
	SNR=5.8						
ZALV	**Zalesovo Beam**	**26.28**	**334**	P	**P**	**16 46 17.3**	**+0.1**
	comp=Z,19nm,0.8s,mb4.7,baz=132,slow=8.7,SNR=58						
ZALV	**Zalesovo Beam**	**26.28**	**334**	P	**P**	**16 46 17.3**	**+0.1**
ZALV				pmax	pmax		
	comp=Z,19nm,0.9s,mb4.6						
AJM	**Ajmer**	**26.30**	**266**	*e*PKP	**P**	**16 46 17.0**	**-0.7**
AJM				AMb	AMB	16 46 27.5	
	comp=Z,35nm,0.6s,mb5.1						
AML	**Almayashu**	**26.43**	**302**	P	**P**	**16 46 20.6**	**+1.9**
	SNR=19						
AML	**Almayashu**	**26.43**	**302**	*e*P	**P**	**16 46 20.2**	**+1.5**
	comp=Z,13nm,0.8s,mb4.5						
KULM	**Kulim**	**26.43**	**188**	*e*P	**P**	**16 46 18.0**	**-0.9**
	comp=Z,46nm,1.3s,mb4.8						
EKS2	**Erkin-Say**	**26.50**	**303**	*e*P	**P**	**16 46 19.7**	**+0.4**
	comp=Z,7.9nm,0.9s,mb4.2						
AKL	**Akola**	**26.65**	**252**	*ex*	**P**	**16 46 17.4**	**-3.5**
AKL				AMb	AMB	16 46 45.7	
	comp=Z,26nm,0.8s,mb4.8						
KURK	**Kurchatov**	**26.87**	**323**	P	**P**	**16 46 22.2**	**-0.4**
	comp=Z,68nm,1.3s,mb5.0,SNR=8.6						
KURK	**Kurchatov**	**26.87**	**323**	*c i*P	**P**	**16 46 22.6**	**0.0**
KURK				pmax	pmax		
	comp=Z,21nm,1.2s,mb4.5						
KURK	**Kurchatov**	**26.87**	**323**	*e*P	**P**	**16 46 22.9**	**+0.3**
	comp=Z,16nm,1.1s,mb4.5						
KLR	**Kul'dur**	**27.13**	**42**	*e*P	**P**	**16 46 21.7**	**-3.2**
KLR				MLR	MLR		
	comp=N,900nm,12.0s						
KLR				MLR	MLR		
	comp=Z,3μm,12.0s,MS5.1						
HYB	**Hyderabad**	**27.21**	**245**	*i* P	**P**	**16 46 34.0**	**+8.0**
NVS	**Novosibirsk**	**27.56**	**333**	*e*P	**P**	**16 46 26.1**	**-2.6**
NVS				*e*S	**S**	**16 51 01.9**	**-7.2**
NVS				pmax	pmax		
	comp=Z,22nm,1.8s,mb4.5						
NVS				pmax	pmax		
	comp=N,14nm,1.7s						
NVS				smax			
	comp=E,17nm,1.9s						
MAJO	**Matsushiro**	**28.49**	**71**	*e*P	**P**	**16 46 36.1**	**-1.1**
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.4						
MAJO	**Matsushiro**	**28.49**	**71**	*e*P	**P**	**16 46 36.1**	**-1.1**
	comp=Z,6.0nm,0.6s,mb4.4						
MAT	**Matsushiro**	**28.49**	**71**	P	**P**	**16 46 36.1**	**-1.1**
MAT				*e*S	**S**	**16 51 21.0**	**-3.1**
MJAR	**Matsushiro Arr**	**28.49**	**71**	P	**P**	**16 46 36.1**	**-1.2**
	comp=Z,2.6nm,0.6s,mb4.0,baz=270,slow=11,SNR=11						
MJAR				LR	LR	16 58 17.9	
	comp=Z,124nm,18.3s,MS3.5,baz=240,slow=37						
MJAR	**Matsushiro Arr**	**28.49**	**71**	P	**P**	**16 46 36.1**	**-1.1**
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MJAR				MLR	MLR		
	comp=Z,124nm,18.3s						
HABR	**Khabarovsk**	**28.72**	**45**	*e*P	**P**	**16 46 37.0**	**-2.2**
HABR				*PP	pP	16 46 46.0	+1.7
HABR				PPP		16 47 36.3	
HABR				*e*		16 57 18.4	
HABR				pmax	pmax		
	comp=Z,57nm,2.0s,mb5.0						
HABR				pmax	pmax		
	comp=E,60nm,2.5s						
HABR				pmax	pmax		
	comp=N,31nm,1.8s						
HABR				MLR	MLR		
	comp=Z,330nm,16.0s,MS4.0						
PSI	**Prapat**	**29.12**	**191**	P	**P**	**16 46 43.4**	**+0.4**
	comp=Z,5.4nm,0.4s,mb4.6,baz=353,slow=8.1,SNR=6.7						
PSI	**Prapat**	**29.12**	**191**	P	**P**	**16 46 43.4**	**+0.4**
PSI				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.6						
JASL	**Jaisalmer**	**29.36**	**269**	*e*PKP	**P**	**16 46 45.7**	**+0.6**

JASL AMb AMB 16 46 47.5
comp=Z,13nm,0.2s,mb5.3
KBL Kabul 29.51 285 *e*P **P** **16 46 48.0 +1.6**
KBL pmax pmax
comp=Z,36nm,1.6s,mb4.8
KBL Kabul 29.51 285 *e*P **P** **16 46 48.0 +1.6**
comp=Z,36nm,1.6s,mb4.9
KSM Kuching 30.56 168 *e*P **P** **16 46 55.5 -0.2**
comp=Z,5.7nm,0.6s,mb4.6
BVAR Borovoye Array 32.42 321 P **P** **16 47 12.0 +0.1**
comp=Z,2.1nm,0.5s,mb4.2,baz=120,slow=9.6,SNR=14
BVAR PcP PcP 16 49 58.2 -0.6
comp=Z,3.2nm,0.8s,baz=131,slow=4.3,SNR=6.4
BVAR Borovoye Array 32.42 321 P **P** **16 47 12.0 +0.2**
BVAR 16 49 58.2
BVAR pmax pmax
comp=Z,2.0nm,0.5s
ASAJ Asahikawa 32.47 56 P **P** **16 47 11.6 -0.8**
comp=Z,6.1nm,0.7s,mb4.5,baz=259,slow=10,SNR=5.1
ASAJ Asahikawa 32.47 56 P **P** **16 47 11.6 -0.8**
ASAJ pmax pmax
comp=Z,6.0nm,0.7s
BRVK Borovoye 32.50 321 *c i*P **P** **16 47 13.0 +0.5**
BRVK pmax pmax
comp=Z,9.0nm,1.2s,mb4.5
BRVK Borovoye 32.50 321 *e*P **P** **16 47 12.1 -0.4**
comp=Z,5.0nm,0.8s,mb4.4
YSS Yuzh-Sakhalins 33.15 51⇓*e*P **P** **16 47 18.5 +0.3**
YSS Yuzh-Sakhalins 33.15 51 *e*P **P** **16 47 18.2 0.0**
comp=Z,19nm,0.7s,mb5.1
YAK Yakutsk 34.57 21 *c i*P **P** **16 47 29.5 -0.9**
YAK *e**PP pP 16 47 38.4 +2.8
YAK *e* 16 50 08.4
YAK *e*S **S** **16 52 56.6 -1.9**
YAK *e*SS SS 16 55 15.3 -13
YAK *e*SSS 16 55 30.8
YAK *e* 16 57 44.5
YAK pmax pmax
comp=Z,16nm,1.0s,mb4.9
YAK pmax pmax
comp=N,7.0nm,1.3s
YAK pmax pmax
comp=E,6.0nm,1.1s
YAK smax
comp=N,26nm,2.0s
YAK smax
comp=E,16nm,1.6s
YAK MLR MLR
comp=Z,223nm,14.0s,MS4.1
YAK MLR MLR
comp=N,67nm,14.0s,MS4.0
YAK MLR MLR
comp=E,157nm,12.0s,MS4.0
YAK Yakutsk 34.57 21 *e*P **P** **16 47 30.1 -0.3**
ABKAR Akbulak array 37.38 311 *e*P **P** **16 47 55.3 +0.7**
comp=E,9.7nm,0.8s,mb4.7
ABKAR *e*PcP PcP 16 50 17.7 +4.4
AKTK Aktyubinsk 38.84 313 P **P** **16 48 07.5 +0.7**
AKTK PcP PcP 16 50 17.7 -0.1
AKTO Aktyubinsk 38.84 313 P **P** **16 48 07.5 +0.7**
comp=E,4.0nm,0.9s,mb4.2,baz=110,slow=15,SNR=12
AKTO PcP PcP 16 50 17.7 -0.1
comp=E,2.7nm,0.8s,baz=114,slow=12,SNR=2.3
AKTO Aktyubinsk 38.84 313 P **P** **16 48 07.6 +0.7**
AKTO 16 50 17.7
AKTO pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
SVE Sverdlovsk 39.12 323⇓*e*P **P** **16 48 10.0 +0.8**
SVE *e*S **S** **16 54 14.1 +6.1**
SVE *e*SS SS 16 57 21.2 +21
SVE pmax pmax
comp=Z,26nm,1.1s,mb4.9
KAPI Kappang 39.35 155 P **P** **16 48 10.7 -0.8**
comp=Z,11nm,0.8s,mb4.6,baz=343,slow=13,SNR=3.7
ARU Arti 40.06 322 P **P** **16 48 17.8 +0.8**
comp=Z,158nm,0.7s,mb5.8,SNR=6.3
ARU Arti 40.06 322 *c i*P **P** **16 48 17.2 +0.2**
ARU *e* 16 49 48.5
ARU S **S** **16 54 23.0 +0.9**
ARU pmax pmax
comp=Z,29nm,1.0s,mb5.0
ARU Arti 40.06 322 *e*P **P** **16 48 17.0 0.0**
comp=Z,38nm,1.1s,mb5.0
GUMO Guam 41.32 106 LR LR 17 04 12.4
comp=Z,138nm,18.9s,MS3.9,baz=276,slow=34
SEY Seymchan 43.58 30 *e*P **P** **16 48 45.6 -0.1**
PETK Petropavlovsk- 43.74 44 P **P** **16 48 47.1 -0.1**
comp=Z,5.6nm,0.8s,mb4.3,baz=215,slow=5.6,SNR=8.8
PETK Petropavlovsk- 43.74 44 P **P** **16 48 47.1 -0.1**
PETK pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
GNI Garni 48.13 298 *e*P **P** **16 49 23.2 +1.2**
GNI pmax pmax
comp=Z,35nm,1.7s
GNI Garni 48.13 298 *e*P **P** **16 49 23.4 +1.5**
comp=Z,29nm,1.2s,mb5.2
ZEI Tsey 48.37 301 *e*P **P** **16 49 24.0 +0.2**
ZEI pmax pmax
comp=Z,13nm,0.5s,mb5.2
RDF Al-Radifah 48.53 282 *e*P **P** **16 49 24.3 -1.0**
RDF AMb AMB 16 49 31.0
comp=Z,30nm,1.1s,mb5.2
NAY Al-Naaiem 48.69 283 *e*P **P** **16 49 25.4 -1.0**
NAY AMb AMB 16 49 31.5
comp=Z,19nm,0.7s,mb5.2
KIV Kislovodsk 49.09 303 *e*P **P** **16 49 30.0 +0.7**
KIV *e* 16 50 52.2
KIV *e* 16 51 21.0
KIV *e*S **S** **16 56 33.7 +0.2**
KIV pmax pmax
comp=Z,29nm,1.1s,mb5.2
KIV MLR MLR
comp=Z,148nm,16.0s,MS4.1
KIV Kislovodsk 49.09 303 *e*P **P** **16 49 30.2 +0.9**
comp=Z,34nm,1.1s,mb5.3
VRHR Novokhopersk 49.24 312 *e*P **P** **16 49 29.5 -0.8**
VRHR *e* pP 16 49 34.9 -0.7
VRHR pmax pmax
comp=E,40nm,1.1s
VRHR pmax pmax
comp=Z,40nm,1.1s,mb5.4
VRHR pmax pmax
comp=N,10.0nm,0.5s
BILL Bilibino 50.65 25⇓*i*P **P** **16 49 40.0 -0.8**
BILL pmax pmax
comp=Z,12nm,1.2s,mb4.7
BILL MLR MLR
comp=Z,100nm,12.0s,MS4.0
BILL Bilibino 50.65 25 P **P** **16 49 38.9 -1.9**
comp=Z,7.7nm,0.8s,mb4.7
VORD Divnogorie 50.72 312 *e*P **P** **16 49 41.4 -0.2**
VORD pmax pmax
comp=N,10.0nm,1.5s
VORD pmax pmax
comp=Z,10.0nm,1.5s,mb4.5
VORD pmax pmax
comp=E,10.0nm,0.7s
VSR Storozhevoye 50.78 313 *e*P **P** **16 49 41.4 -0.6**
VSR *e* pP 16 49 46.5 -0.8
VSR pmax pmax
comp=N,4.0nm,0.9s
VSR pmax pmax
comp=E,10.0nm,0.9s
VSR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
MOS Moscow 51.52 318 *e*P **P** **16 49 51.2 +3.7**
MOS *e* 16 51 44.3
MOS pmax pmax
comp=Z,64nm,0.8s,mb5.6
KAKA Kakadu 51.75 144 *e*P **P** **16 49 49.1 -0.5**
comp=Z,5.7nm,0.6s,mb4.7
OBN Obninsk 52.14 318⇑*i*P **P** **16 49 51.9 -0.2**
OBN *i* pP 16 49 57.5 +0.1
OBN pmax pmax
comp=Z,30nm,1.0s,mb5.2
OBN Obninsk 52.14 318 *e*P **P** **16 49 50.9 -1.2**
comp=Z,32nm,1.0s,mb5.2
ANN Anapa 52.69 305 *e*P **P** **16 49 53.9 -2.5**
ANN *e*S **S** **16 57 20.7 -2.7**
ANN pmax pmax
comp=Z,69nm,0.9s,mb5.6
LVZ Lovozero 53.42 334 *e*P **P** **16 49 59.5 -1.9**
LVZ pmax pmax
comp=Z,13nm,1.3s,mb4.7
FITZ Fitzroy Crossi 53.57 154 *e*P **P** **16 50 02.7 -0.3**
comp=Z,14nm,1.1s,mb4.8
FITZ Fitzroy Crossi 53.57 154 P **P** **16 50 02.5 -0.5**
comp=Z,7.7nm,0.9s,mb4.6,baz=7.1,slow=8.1,SNR=8.3
FITZ LR LR 17 16 09.9
comp=Z,53nm,19.4s,MS3.6,baz=26,slow=40
FITZ Fitzroy Crossi 53.57 154 *e*P **P** **16 50 01.9 -1.1**
comp=Z,11nm,1.0s,mb4.7
MBWA Marble Bar 54.57 162 *e*P **P** **16 50 09.7 -0.6**
comp=Z,12nm,0.9s,mb4.9
JOF Joensuu 54.62 328 *e*P **P** **16 50 02.3 -7.9**
JOF pmax pmax
comp=Z,5.0nm,0.5s,mb4.8
JOF Joensuu 54.62 328 *ep* **P** **16 50 02.3 -7.9**
comp=Z,4.9nm,0.5s,mb4.8
ASF Jabal al Asfar 56.24 290 P **P** **16 50 22.6 +0.1**
comp=Z,7.0nm,0.8s,mb4.7,baz=48,slow=0.3,SNR=6.8
ASF Jabal al Asfar 56.24 290 P **P** **16 50 22.6 +0.2**
ASF pmax pmax
comp=Z,7.0nm,0.8s
KEV Kevo 56.28 336 *e*P **P** **16 50 20.3 -1.7**
KEV pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
KEV Kevo 56.28 336 *e*P **P** **16 50 20.3 -1.7**
comp=Z,6.9nm,0.6s,mb4.9
KEV Kevo 56.28 336 *ep* **P** **16 50 20.3 -1.7**
comp=Z,6.9nm,0.6s,mb4.9
BR131 Keskin Array S 56.55 299 *e*P **P** **16 50 24.6 +0.1**
comp=Z,6.5nm,0.9s,mb4.7
BRTR Keskin Array B 56.55 299 P **P** **16 50 24.3 -0.2**
comp=Z,3.1nm,0.8s,mb4.4,baz=101,slow=6.7,SNR=13
BRTR Keskin Array B 56.55 299 *ce*P **P** **16 50 24.6 +0.1**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
ARCES ARCESS Array B 56.81 336 P **P** **16 50 25.6 -0.2**
comp=Z,7.1nm,0.8s,mb4.7,baz=89,slow=8.5,SNR=26
ARCES PcP PcP 16 51 23.3 +1.9
comp=Z,6.8nm,1.0s,baz=83,slow=4.0,SNR=4.8
ARCES LR LR 17 16 17.6
comp=Z,70nm,21.8s,MS3.7,baz=284,slow=38
ARCES ARCESS Array B 56.81 336 P **P** **16 50 25.6 -0.2**
ARCES 16 51 23.3
ARCES pmax pmax
comp=Z,7.0nm,0.8s
ARCES MLR MLR
comp=Z,70nm,21.8s
ARCES ARCESS Array B 56.81 336 P **P** **16 50 25.6 -0.2**
ARCES PcP PcP 16 51 23.3 +1.9
ARCES LR LR 17 16 17.6
ARE0 ARCESS Array S 56.81 336 *e*P **P** **16 50 25.0 -0.8**
KAF Kangasniemi 56.99 327 *e*P **P** **16 50 30.0 +2.8**
KAF pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
KAF Kangasniemi 56.99 327 *e*P **P** **16 50 30.0 +2.8**
comp=Z,6.7nm,0.8s,mb4.7
KAF Kangasniemi 56.99 327 *ep* **P** **16 50 30.0 +2.8**
comp=Z,6.7nm,0.8s,mb4.7
AKASG Malin Array Be 57.08 313 P **P** **16 50 27.6 -0.5**
comp=Z,5.2nm,0.5s,mb4.8,baz=71,slow=6.3,SNR=21
AKASG PcP PcP 16 51 22.6 -0.2
comp=Z,4.3nm,0.9s,baz=66,slow=3.6,SNR=4.2
AKASG Malin Array Be 57.08 313 P **P** **16 50 27.6 -0.5**
AKASG 16 51 22.7
AKASG pmax pmax
comp=Z,5.0nm,0.5s
AKBB Malin Array Si 57.08 313 *e*P **P** **16 50 26.9 -1.1**
AKBB *ep*P pP 16 50 32.0 -1.4
KIEV Kiev 57.09 313 *e*P **P** **16 50 26.9 -1.2**
KIEV *e**PP pP 16 50 32.1 -1.4
KIEV pmax pmax
comp=Z,11nm,0.7s,mb5.0
KIEV Kiev 57.09 313 *e*P **P** **16 50 26.9 -1.3**
comp=Z,11nm,0.7s,mb5.0
KIEV *ep*P pP 16 50 32.0 -1.5
FINES FINESS Array B 57.17 326 P **P** **16 50 28.1 -0.4**
comp=Z,7.4nm,0.7s,mb4.8,baz=97,slow=7.7,SNR=18
FINES PcP PcP 16 51 25.1 +2.1
comp=Z,3.7nm,0.8s,baz=98,slow=7.9,SNR=4.4
VSU Vasula 57.22 322 *e*P **P** **16 50 28.9 0.0**
VSU pmax pmax
comp=Z,43nm,1.0s,mb5.4
PMG Port Moresby 57.91 127 *e*P **P** **16 50 33.9 -0.5**
PMG Port Moresby 57.91 127 *e*P **P** **16 50 34.9 +0.5**
comp=Z,30nm,0.9s,mb5.3
EIL Elat 58.66 288 P **P** **16 50 39.7 +0.2**
comp=Z,12nm,0.8s,mb5.0,baz=86,slow=9.2,SNR=8.3
COEN Coen 58.76 134 *e*P **P** **16 50 40.4 +0.2**
comp=Z,137nm,1.0s,mb5.9
COEN *ep*P pP 16 50 45.2 -0.4
WRAB Tennant Creek 58.87 146 P **P** **16 50 41.0 +0.1**
comp=Z,211nm,0.6s,SNR=17
WRAB Tennant Creek 58.87 146 *e*P **P** **16 50 41.2 +0.3**
WRAB pmax pmax
comp=Z,35nm,1.0s,mb5.3
WRAB Tennant Creek 58.87 146 *e*P **P** **16 50 41.2 +0.3**
comp=Z,35nm,1.0s,mb5.3
WRAB *ep*P pP 16 50 45.8 -0.5
WRA Warramunga Arr 58.87 147 P **P** **16 50 40.9 0.0**
comp=Z,12nm,0.6s,mb5.1,baz=337,slow=7.5,SNR=226
WRA Warramunga Arr 58.87 147 P **P** **16 50 40.9 0.0**
WRA pmax pmax
comp=Z,12nm,0.6s
TIRR Tirgusor 59.05 306⇓*i*P **P** **16 50 42.3 +0.3**
TIRR Tirgusor 59.05 306⇓*i*P **P** **16 50 42.3 +0.3**
VRI Vrincioaia 59.82 308⇓P **P** **16 50 48.2 +0.9**
VRI Vrincioaia 59.82 308⇓*i*P **P** **16 50 48.2 +0.9**
PLOR Plostina 59.88 308⇓P **P** **16 50 48.5 +0.8**
PLOR Plostina 59.88 308⇓*i*P **P** **16 50 48.5 +0.8**
SUW Suwalki 60.00 318 *e*P **P** **16 50 48.0 -0.3**
SUW *e* pP 16 50 52.5 -1.3
SUW Suwalki 60.00 318 *e*P **P** **16 50 47.8 -0.6**
SUW pmax pmax
comp=Z,79nm,1.0s,mb5.7
SUW Suwalki 60.00 318 *e*P **P** **16 50 48.1 -0.3**
SUW Suwalki 60.00 318 *e*P **P** **16 50 47.8 -0.6**
comp=Z,79nm,1.0s,mb5.7
SUW *ep*P pP 16 50 52.6 -1.2
BURAR Bucovina Array 60.35 310⇓P **P** **16 50 50.8 -0.1**
BURAR Bucovina Array 60.35 310⇓*i*P **P** **16 50 50.8 -0.1**
BUR08 Bucovina Ar. S 60.36 310 *e*P **P** **16 50 50.3 -0.7**
BUR08 *ep*P pP 16 50 55.7 -0.6
MLR Muntele Rosu 60.45 308⇓P **P** **16 50 52.2 +0.6**
MLR Muntele Rosu 60.45 308⇓*i*P **P** **16 50 52.2 +0.6**
LVV L'vov 60.53 313 *e*P **P** **16 50 56.0 +4.0**
VOIR 61.07 308⇑P **P** **16 50 56.1 +0.3**
VOIR 61.07 308⇑*i*P **P** **16 50 56.1 +0.3**
KWP Kalwaria Pacla 61.41 313 *e*P **P** **16 50 59.0 +1.0**
KWP *e* pP 16 51 03.5 +0.1
KWP Kalwaria Pacla 61.41 313 *e*P **P** **16 50 58.4 +0.4**
comp=Z,87nm,1.0s,mb5.8
KWP *ep*P pP 16 51 03.3 -0.1
KWP Kalwaria Pacla 61.41 313⇓*i*P **P** **16 50 58.9 +0.9**
ASAR Alice Springs 61.91 149 P **P** **16 51 01.9 +0.3**
comp=Z,3.6nm,0.5s,mb4.8,baz=338,slow=6.7,SNR=78
ASAR Alice Springs 61.91 149 P **P** **16 51 01.9 +0.3**
ASAR pmax pmax
comp=Z,4.0nm,0.5s
UZH Uzhgorod 61.95 312 *e*P **P** **16 51 01.4 -0.3**
UZH *i* 16 51 13.8
DRGR 62.23 310⇑P **P** **16 51 04.6 +1.0**
DRGR 62.23 310⇑*i*P **P** **16 51 04.6 +1.0**
CRVS Cervenica-Dubn 62.40 312 *e*P **P** **16 51 05.0 +0.3**
CRVS pmax pmax
comp=Z,13nm,1.8s,mb4.8
CRVS Cervenica-Dubn 62.40 312 *e*P **P** **16 51 05.0 +0.3**
comp=Z,13nm,1.8s,mb4.8
CRVS Cervenica-Dubn 62.40 312 *e*P **P** **16 51 05.0 +0.3**
NIE Niedzica 62.96 313 *e*P **P** **16 51 09.5 +1.1**
OJC Ojcow 63.03 314 *e*P **P** **16 51 06.6 -2.3**
KECS Kecovo 63.14 312 *e*P **P** **16 51 09.9 +0.2**
KECS pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
KECS Kecovo 63.14 312 *e*P **P** **16 51 09.9 +0.2**
comp=Z,3.2nm,0.8s,mb4.5
KECS Kecovo 63.14 312 *e*P **P** **16 51 09.9 +0.2**
VTS Vitosha 63.22 305⇑P **P** **16 51 11.3 +1.0**
VTS Vitosha 63.22 305⇑*i*P **P** **16 51 11.3 +1.0**
BZS Buzias 63.31 309⇑P **P** **16 51 10.4 -0.5**
BZS Buzias 63.31 309⇑*i*P **P** **16 51 10.4 -0.5**
PSZ Piszkesteto 63.70 312 *e*P **P** **16 51 15.8 +2.5**
PSZ pmax pmax
comp=Z,18nm,1.3s,mb4.9
PSZ Piszkesteto 63.70 312 *e*P **P** **16 51 15.8 +2.5**
comp=Z,18nm,1.3s,mb4.9
OKC Ostrava-Krasne 64.16 314 *e*P **P** **16 51 17.0 +0.6**
OKC MLR MLR
comp=Z,300nm,23.1s,MS4.4
OKC Ostrava-Krasne 64.16 314 *e*P **P** **16 51 17.0 +0.6**
OKC *ep*P pP 16 51 21.4 -0.4
OKC AMS AMS 17 20 20.0
comp=Z,300nm,23.1s
NB2 NORSAR Subarra 64.25 327 P **P** **16 51 15.7 -1.1**
comp=Z,3.0nm,0.7s,mb4.4,baz=72,slow=6.5
NOA NORSAR Array B 64.25 327 P **P** **16 51 15.8 -1.0**
comp=Z,7.3nm,0.9s,mb4.7,baz=72,slow=6.6,SNR=12
NOA NORSAR Array B 64.25 327 P **P** **16 51 15.8 -1.0**
NOA pmax pmax
comp=Z,7.0nm,0.9s
BUD Budapest 64.39 311⇓*e*P **P** **16 51 16.7 -1.2**
MORC Moravsky Berou 64.55 314⇑P **P** **16 51 19.1 +0.2**
MORC Moravsky Berou 64.55 314 *e*P **P** **16 51 18.5 -0.4**
comp=Z,21nm,0.9s,mb5.2
MORC *e* pP 16 51 23.8 -0.6
MORC Moravsky Berou 64.55 314⇑*i*P **P** **16 51 19.1 +0.2**
PKSM Moragy 65.07 310⇑P **P** **16 51 22.1 -0.3**
PKSM Moragy 65.07 310⇑*i*P **P** **16 51 22.1 -0.3**
DPC Dobruska-Polom 65.10 315 *e*P **P** **16 51 23.4 +0.9**
DPC MLR MLR
comp=Z,300nm,16.4s,MS4.6
DPC Dobruska-Polom 65.10 315 *e*P **P** **16 51 23.4 +0.9**
DPC *ep*P pP 16 51 28.1 +0.2
DPC AMS AMS 17 20 50.0
comp=Z,300nm,16.4s
UPC Upice 65.23 315 *e*P **P** **16 51 24.4 +1.1**
UPC Upice 65.23 315 *e*P **P** **16 51 24.4 +1.1**
UPC *ep*P pP 16 51 28.6 -0.2
VRAC Vranov 65.29 314 LR LR 17 21 28.5
comp=Z,242nm,20.3s,MS4.4,baz=62,slow=38
VRAC Vranov 65.29 314⇑P **P** **16 51 24.1 +0.3**
VRAC Vranov 65.29 314⇑*i*P **P** **16 51 24.1 +0.3**
CTA Charters Tower 65.35 136 *e*P **P** **16 51 24.8 +0.4**
comp=Z,3.6nm,0.3s,mb4.9
CTA Charters Tower 65.35 136 LR LR 17 21 46.9
comp=Z,64nm,19.8s,MS3.8,baz=122,slow=38
CTAO Charters Tower 65.35 136 *e*P **P** **16 51 24.5 +0.1**
CTAO pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
CTAO Charters Tower 65.35 136 *e*P **P** **16 51 24.4 0.0**
comp=Z,6.1nm,0.5s,mb4.9
ZST Bratislava 65.37 313 *e*P **P** **16 51 29.9 +5.7**
ZST pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
ZST Bratislava 65.37 313 *e*P **P** **16 51 29.9 +5.7**
NWAO Narrogin (SRO) 65.39 168 P **P** **16 51 23.8 -0.7**
comp=Z,7.7nm,0.7s,mb4.8,baz=23,slow=7.7,SNR=5.0
NWAO Narrogin (SRO) 65.39 168 P **P** **16 51 23.8 -0.6**
NWAO pmax pmax
comp=Z,8.0nm,0.7s
NWAO Narrogin (SRO) 65.39 168 *e*P **P** **16 51 24.8 +0.4**
NWAO pmax pmax
comp=Z,68nm,1.4s
NWAO Narrogin (SRO) 65.39 168 *e*P **P** **16 51 24.8 +0.4**
comp=Z,68nm,1.4s,mb5.5
TREC Trest 65.98 314 *e*P **P** **16 51 28.7 +0.5**
TREC MLR MLR
comp=Z,300nm,20.5s,MS4.5
TREC Trest 65.98 314 *e*P **P** **16 51 28.7 +0.5**
TREC *ep*P pP 16 51 33.6 0.0
TREC AMS AMS 17 21 20.0
comp=Z,300nm,20.5s
PVCC Panska Ves 66.09 316 *e*P **P** **16 51 29.6 +0.7**
PVCC MLR MLR
comp=Z,200nm,12.6s,MS4.5
PVCC Panska Ves 66.09 316 *e*P **P** **16 51 29.6 +0.7**
PVCC *ep*P pP 16 51 34.3 0.0
PVCC AMS AMS 17 21 30.0
comp=Z,200nm,12.6s
CONA Conrad Observa 66.24 313⇑*i*P **P** **16 51 30.1 +0.2**
comp=Z,17nm,0.9s,mb5.1,SNR=10
PRU Pruhonice 66.30 315 *e*P **P** **16 51 31.4 +1.2**
PRU MLR MLR
comp=Z,300nm,15.5s,MS4.6
PRU Pruhonice 66.30 315 *e*P **P** **16 51 31.4 +1.2**
PRU *ep*P pP 16 51 36.0 +0.3
PRU *ex* x 17 02 59.3
PRU AMS AMS 17 21 40.0
comp=Z,300nm,15.5s
BRG Berggiesshubel 66.33 316 *e*P **P** **16 51 30.3 -0.1**
comp=Z,23nm,0.9s,mb5.2
BRG *ep*P pP 16 51 34.9 -1.0
comp=Z,23nm,0.9s
BRG Berggiesshubel 66.33 316 *i* P **P** **16 51 30.8 +0.4**
comp=Z,14nm,1.0s,mb4.9
BRG *i* pP 16 51 35.2 -0.6
comp=Z,23nm,0.9s
BRG *e*SCS ScS 17 01 19.0 -7.3
comp=Z,2.7nm,0.7s
BRG SS 17 02 56.0
BRG Berggiesshubel 66.33 316 *i* P **P** **16 51 30.8 +0.4**
BRG *e* 17 01 18.9
BRG pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
CLL Collm 66.72 317 *e*P **P** **16 51 32.4 -0.5**
comp=Z,19nm,0.9s,mb5.1
CLL *ep*P pP 16 51 37.0 -1.4
comp=Z,19nm,0.9s
CLL Collm 66.72 317 *i* P **P** **16 51 32.5 -0.4**
CLL *i* pP 16 51 37.5 -0.9
CLL *e*S S 17 00 41.0 +17
CLL pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
CLL MLR MLR
comp=Z,200nm,20.3s,MS4.3
CLL Collm 66.72 317 *i* P **P** **16 51 32.5 -0.4**
comp=Z,10.0nm,1.0s,mb4.8
CLL *i* pP 16 51 37.5 -0.9
CLL *e*S S 17 00 41.0 +17
CLL LR LR
comp=Z,200nm,20.3s,MS4.3
CLL Collm 66.72 317 *i* P **P** **16 51 32.5 -0.4**
comp=Z,10.0nm,1.0s,mb4.8
CLL *i* pP pP 16 51 37.5 -0.9
comp=Z,19nm,1.0s
CLL *e*S S 17 00 42.0 +18
CLL *e*SSS 17 07 53.0
CLL LmV 17 21 00.0
comp=Z,200nm,20.3s
GROS Grobnik 67.01 311 *i* P **P** **16 51 34.9 +0.1**
GROS *i* pP pP 16 51 39.1 -1.2
KHC Kasperske Hory 67.20 315 *e*P **P** **16 51 36.1 +0.1**
KHC MLR MLR
comp=Z,300nm,11.2s,MS4.8
KHC Kasperske Hory 67.20 315 *e*P **P** **16 51 35.4 -0.6**
comp=Z,5.2nm,0.8s,mb4.6
KHC *e* pP 16 51 40.8 -0.6
KHC Kasperske Hory 67.20 315 *e*P **P** **16 51 36.1 +0.1**
KHC *ep*P pP 16 51 41.0 -0.4
KHC *ex* x 17 02 22.4
KHC AMS AMS 17 22 10.0
comp=Z,300nm,11.2s
SOKA Soboth 67.23 312⇑*i*P **P** **16 51 35.9 -0.3**
comp=Z,19nm,0.9s,mb5.2
GEC2 GERESS Array S 67.23 314 *e*P **P** **16 51 36.3 +0.1**
comp=Z,21nm,1.0s,mb5.1
GEC2 *ep*P pP 16 51 40.9 -0.8
comp=Z,21nm,1.0s
BSEG Bad Segeberg 67.24 320 *e*P **P** **16 51 36.6 +0.4**
comp=Z,38nm,1.0s,mb5.4
BSEG *ep*P pP 16 51 41.2 -0.4
comp=Z,38nm,1.0s
MOA Molln 67.27 313⇑*i*P **P** **16 51 36.5 +0.1**
comp=Z,24nm,1.1s,mb5.2
TANN Tannenbergstha 67.38 316 *e*P **P** **16 51 37.0 -0.1**
comp=Z,16nm,1.0s,mb5.0
TANN *ep*P pP 16 51 41.6 -1.0
comp=Z,16nm,1.0s
NKC Novy Kostel 67.46 316 *e*P **P** **16 51 38.2 +0.6**
NKC MLR MLR
comp=Z,300nm,23.0s,MS4.5
NKC Novy Kostel 67.46 316 *e*P **P** **16 51 38.2 +0.6**
NKC *ep*P pP 16 51 42.3 -0.8
NKC AMS AMS 17 22 30.0
comp=Z,300nm,23.0s
BOJS Bojanci 67.54 310 *i* P **P** **16 51 38.7 +0.5**
BOJS *i* pP pP 16 51 43.3 -0.4
WET Wettzell 67.62 315 *e*P **P** **16 51 38.8 +0.1**
comp=Z,14nm,1.1s,mb4.9
WET *ep*P pP 16 51 43.4 -0.7
comp=Z,14nm,1.1s
ROTZ Rotzenmuhle 67.78 316 *e*P **P** **16 51 40.1 +0.4**
comp=Z,34nm,1.0s,mb5.3
ROTZ *ep*P pP 16 51 44.7 -0.4

comp=Z,34nm,1.0s
MOX Moxa 67.79 317 *e*(P) **P 16 51 44.6 +4.9**
comp=Z,27nm,1.4s,mb5.1
MOX Moxa 67.79 317 *e*P **P 16 51 39.5 -0.2**
comp=Z,16nm,1.1s,mb5.0
MOX *e*pP pP 16 51 44.1 -1.0
comp=Z,16nm,1.1s
NRDL Niedersach Rie 67.92 319 *e*P **P 16 51 39.9 -0.6**
comp=Z,27nm,1.0s,mb5.2
NRDL *e*pP pP 16 51 44.5 -1.5
comp=Z,27nm,1.0s
CLZ Clausthal 68.03 318 *e*P **P 16 51 41.5 +0.3**
comp=Z,37nm,0.9s,mb5.4
CLZ *e*pP pP 16 51 46.1 -0.6
comp=Z,37nm,0.9s
VOY Vojsko 68.21 311 *e*P **P 16 51 40.5 -1.9**
VOY *e* pP 16 51 46.1 -1.8
RJOB Jochberg 68.22 313 *e*P **P 16 51 42.8 +0.3**
comp=Z,26nm,1.4s,mb5.1
RJOB *e*pP pP 16 51 47.3 -0.6
comp=Z,26nm,1.4s
CADS Cadrg 68.23 312 *i* P **P 16 51 41.8 -0.7**
CADS *e*pP pP 16 51 46.7 -1.3
GRF Grafenberg Arr 68.40 316 *e*P **P 16 51 43.9 +0.4**
comp=Z,46nm,1.0s,mb5.5
GRF *e*pP pP 16 51 48.5 -0.5
comp=Z,46nm,1.0s
GRF *e*L 17 23 11.6
comp=Z,313nm,19.7s
UBBA Unterbreizbach 68.66 317 *e*P **P 16 51 44.8 -0.3**
comp=Z,5.0nm,1.2s,mb4.3
UBBA *e*pP pP 16 51 49.4 -1.2
ABTA Abfaltersbach 68.80 312 ⇓*i*P pP 16 51 50.2 -1.3
comp=Z,9.2nm,0.9s
COLA College 68.91 26 *e*P **P 16 51 45.9 -0.5**
COLA *e**PP pP 16 51 50.9 -1.0
COLA pmax pmax
comp=Z,31nm,1.1s,mb5.2
COLA College 68.91 26 *e*P **P 16 51 45.9 -0.5**
comp=Z,31nm,1.1s,mb5.2
COLA *e*pP pP 16 51 50.9 -1.0
FUR Furstenfeldbru 68.98 314 *e*P **P 16 51 47.6 +0.4**
comp=Z,85nm,1.0s,mb5.6
FUR *e*pP pP 16 51 52.3 -0.4
comp=Z,85nm,1.0s
RSO Redoubt South 69.02 31 *e*P **P 16 51 47.8 +0.6**
RSO *e* pP 16 51 53.8 +1.1
WTTA Wattenberg 69.13 313 ⇑*i*P **P 16 51 48.1 -0.1**
comp=Z,28nm,0.9s,mb5.2
IBBN Ibbenburen 69.31 319 *e*P **P 16 51 49.2 0.0**
comp=Z,23nm,1.2s,mb5.0
IBBN *e*pP pP 16 51 53.8 -0.9
comp=Z,23nm,1.2s
ILAR Eielson Array 69.31 26 P **P 16 51 47.2 -1.8**
comp=Z,1.2nm,0.5s,mb4.1,baz=295,slow=5.2,SNR=24
ILAR LR LR 17 24 38.2
comp=Z,132nm,18.6s,MS4.2,baz=0.7,slow=38
ILAR Eielson Array 69.31 26 P **P 16 51 47.2 -1.8**
ILAR pmax pmax
comp=Z,1.0nm,0.5s
ILAR MLR MLR
comp=Z,132nm,18.6s
MOTA Moosalm 69.43 314 ⇑*i*P **P 16 51 49.1 -0.9**
comp=Z,19nm,0.9s,mb5.0
FETA Feichten 69.80 313 ⇓*i*P **P 16 51 51.8 -0.5**
comp=Z,31nm,1.0s,mb5.2,SNR=18
TNS Taunus Mts 69.81 317 *e*P **P 16 51 52.2 -0.1**
comp=Z,32nm,1.2s,mb5.1
TNS *e*pP pP 16 51 56.8 -1.0
comp=Z,32nm,1.2s
TOD Tromm 69.86 316 *e*P **P 16 51 52.9 +0.3**
BUG Bochum--Univer 69.96 319 *e*P **P 16 51 53.2 0.0**
comp=Z,28nm,1.2s,mb5.1
BUG *e*pP pP 16 51 57.9 -0.8
comp=Z,28nm,1.2s
STU Stuttgart 69.99 315 *e*P **P 16 51 53.2 -0.2**
comp=Z,28nm,0.7s,mb5.3
STU *e*pP pP 16 51 57.8 -1.1
comp=Z,33nm,0.9s
CEL Celeste 70.02 303 *e*P **P 16 51 52.4 -1.4**
comp=Z,40nm,1.0s,mb5.3
CEL *e* pP 16 51 58.0 -1.3
AQU L'Aquila 70.03 308 *e*P **P 16 51 53.5 -0.3**
AQU pmax pmax
comp=Z,39nm,1.1s,mb5.2
AQU L'Aquila 70.03 308 *e*P **P 16 51 53.5 -0.3**
comp=Z,39nm,1.1s,mb5.2
PMR Palmer 70.03 29 P **P 16 51 52.4 -1.0**
PMR pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
PMR Palmer 70.03 29 P **P 16 51 52.4 -1.1**
comp=Z,8.2nm,0.8s,mb4.7
DAVA Damuels 70.21 314 ⇑*i*P **P 16 51 54.7 -0.1**
comp=Z,15nm,1.1s,mb4.8
KDAK Kodiak Island 70.34 34 P **P 16 51 54.5 -0.9**
comp=Z,8.3nm,0.8s,mb4.7,baz=276,slow=6.0,SNR=4.3
KDAK Kodiak Island 70.34 34 *ce*P **P 16 51 55.0 -0.4**
SPAK Spaichingen-Ko 70.52 315 *e*P **P 16 51 57.3 +0.6**
BFO Black Forest 70.70 315 P **P 16 51 57.2 -0.6**
comp=Z,117nm,1.0s,mb5.8,SNR=5.5
BFO Black Forest 70.70 315 *e*P **P 16 51 57.3 -0.5**
comp=Z,22nm,1.0s,mb5.0
BFO *e*pP pP 16 52 02.0 -1.2
comp=Z,22nm,1.0s
BFO Black Forest 70.70 315 *e*P **P 16 51 57.4 -0.4**
BFO pmax pmax
comp=Z,21nm,1.0s,mb5.0
BFO Black Forest 70.70 315 *e*P **P 16 51 57.4 -0.4**
comp=Z,21nm,1.0s,mb5.0
BFO *e*pP pP 16 52 02.1 -1.2
RUP Ruppelstein 70.84 317 *e*P **P 16 51 57.9 -0.7**
MEM Membach 71.04 318 P **P 16 52 00.6 +0.8**
comp=Z,7.2nm,1.2s,mb4.5
MEM AP pP 16 52 05.2 -0.1
FELD Feldberg im Sc 71.09 315 *e*P **P 16 52 00.1 -0.1**
KMBO Kilima Mbogo 71.12 256 P **P 16 52 01.5 +0.7**
comp=Z,8.2nm,1.0s,mb4.6,baz=0.1,slow=24,SNR=8.4
KMBO Kilima Mbogo 71.12 256 P **P 16 52 01.5 +0.7**
KMBO pmax pmax
comp=Z,8.0nm,1.0s
KMBO Kilima Mbogo 71.12 256 *e*P **P 16 52 01.3 +0.5**
comp=Z,55nm,1.8s,mb5.2
KMBO *e*pP pP 16 52 06.1 -0.3
CDF Champ du Feu 71.29 316 *e*P **P 16 52 01.1 -0.3**
comp=Z,50nm,1.0s,mb5.1
CDF Champ du Feu 71.29 316 *e*P **P 16 52 01.1 -0.3**
CDF pmax pmax
comp=Z,25nm,1.0s,mb5.1
CDF Champ du Feu 71.29 316 *e*P **P 16 52 01.1 -0.3**
comp=Z,25nm,1.0s,mb5.1
WLF Walferdange 71.39 317 P **P 16 52 02.8 +0.9**
comp=Z,34nm,1.2s,mb5.2
WLF AP pP 16 52 07.7 +0.3
WLF Walferdange 71.39 317 *e*P **P 16 52 02.5 +0.6**
comp=Z,54nm,1.0s,mb5.4
WLF *e*pP pP 16 52 07.1 -0.3
comp=Z,54nm,1.0s
WLF Walferdange 71.39 317 *e*P **P 16 52 02.6 +0.7**
WLF *e**PP pP 16 52 07.7 +0.3
WLF pmax pmax
comp=Z,52nm,1.0s,mb5.4
WLF Walferdange 71.39 317 *e*P **P 16 52 02.6 +0.7**
comp=Z,52nm,1.0s,mb5.4
WLF *e*pP pP 16 52 07.7 +0.3
ECH Echery 71.45 316 *e*P **P 16 52 02.2 -0.1**
ECH Echery 71.45 316 *e*P **P 16 52 01.3 -1.0**
ECH *e**PP pP 16 52 06.7 -1.1
ECH pmax pmax
comp=Z,14nm,1.0s,mb4.8
ECH Echery 71.45 316 *e*P **P 16 52 01.3 -1.0**
comp=Z,14nm,1.0s,mb4.8
ECH *e*pP pP 16 52 06.7 -1.1
BCLA Clavier 71.53 318 P **P 16 52 03.3 +0.5**
BCLA AP pP 16 52 08.2 -0.1
INK Inuvik 71.62 19 *e*P **P 16 52 02.6 -0.4**
INK pmax pmax
comp=Z,17nm,0.9s
INK Inuvik 71.62 19 *e*P **P 16 52 02.6 -0.4**
comp=Z,17nm,0.9s,mb5.0
INK *e*pP pP 16 52 07.2 -1.2
MOF Molkenrain 71.63 315 *e*P **P 16 52 03.7 +0.3**
HINF Hinterlafeld 71.81 315 *e*P **P 16 52 04.0 -0.5**
comp=Z,39nm,1.0s,mb5.0
HINF Hinterlafeld 71.81 315 *e*P **P 16 52 04.0 -0.5**
HINF pmax pmax
comp=Z,20nm,1.0s,mb5.0
HINF Hinterlafeld 71.81 315 *e*P **P 16 52 04.0 -0.5**
comp=Z,20nm,1.0s,mb5.0
GIVF Givet 71.95 318 *e*P **P 16 52 05.2 -0.1**
comp=Z,45nm,1.0s,mb5.1
GIVF Givet 71.95 318 *e*P **P 16 52 05.2 -0.1**
GIVF pmax pmax
comp=Z,23nm,1.0s,mb5.1
GIVF Givet 71.95 318 *e*P **P 16 52 05.2 -0.1**
comp=Z,23nm,1.0s,mb5.0
HAU Haudompre 72.03 316 *e*P **P 16 52 05.3 -0.5**
comp=Z,33nm,1.1s,mb4.9
HAU *e*MLR MLR
comp=Z,248nm,22.2s,MS4.1
HAU Haudompre 72.03 316 *e*P **P 16 52 05.3 -0.5**
HAU pmax pmax
comp=Z,16nm,1.1s,mb4.9
HAU MLR MLR
comp=Z,250nm,22.3s,MS4.4
HAU Haudompre 72.03 316 *e*P **P 16 52 05.3 -0.5**
comp=Z,16nm,1.1s,mb4.9
HAU LR LR
comp=Z,250nm,22.3s,MS4.4
LOMF Lomont 72.04 315 *e*P **P 16 52 05.9 0.0**
SNF Seneffe 72.06 319 P **P 16 52 06.4 +0.4**
comp=Z,10.0nm,1.9s,mb4.4
SNF AP pP 16 52 11.3 -0.2
DOU Dourbes 72.08 318 P **P 16 52 06.7 +0.6**
comp=Z,7.2nm,1.8s,mb4.3
DOU AP pP 16 52 11.0 -0.6
THEF They Montfort 72.14 316 *e*P **P 16 52 06.6 +0.1**
BMRM Bremner River 72.22 29 *e*P **P 16 52 05.6 -1.1**
comp=Z,48nm,1.2s,mb5.3
BMRM *e*pP pP 16 52 11.4 -0.8
EIDS Eidsvold 72.24 136 *e*P **P 16 52 07.2 -0.1**
comp=Z,35nm,1.5s,mb5.1
EIDS *e*pP pP 16 52 12.4 -0.4
BAIF Baives 72.32 318 *e*P **P 16 52 07.5 0.0**
comp=Z,28nm,1.0s,mb4.8
BAIF Baives 72.32 318 *e*P **P 16 52 07.5 0.0**
BAIF pmax pmax
comp=Z,14nm,1.0s,mb4.8
BAIF Baives 72.32 318 *e*P **P 16 52 07.5 0.0**
comp=Z,14nm,1.0s,mb4.8
STKA Stephens Creek 72.41 147 *e*P **P 16 52 08.1 0.0**
comp=Z,7.2nm,0.9s,mb4.6
STKA Stephens Creek 72.41 147 P **P 16 52 07.7 -0.4**
comp=Z,8.0nm,0.7s,mb4.8,baz=330,slow=6.3,SNR=16
STKA Stephens Creek 72.41 147 *e*P **P 16 52 07.8 -0.4**
comp=Z,3.0nm,1.2s,mb4.1
DAWY Dawson 72.42 24 *e*P **P 16 52 06.9 -0.9**
DAWY *e*pP pP 16 52 12.2 -1.1
MEZF Maizieres J'vi 72.57 317 *e*P **P 16 52 08.9 -0.1**
comp=Z,36nm,1.1s,mb4.9
MEZF Maizieres J'vi 72.57 317 *e*P **P 16 52 08.9 -0.1**
comp=Z,36nm,1.1s,mb5.2
CABF La Chapelle 72.83 314 *e*P **P 16 52 10.3 -0.3**
comp=Z,32nm,1.2s,mb4.8
CABF La Chapelle 72.83 314 *e*P **P 16 52 10.3 -0.3**
CABF pmax pmax
comp=Z,16nm,1.2s,mb4.8
CABF La Chapelle 72.83 314 *e*P **P 16 52 10.3 -0.3**
comp=Z,16nm,1.2s,mb4.8
PGF Pioggiola 72.87 310 *e*P **P 16 52 11.1 +0.2**
comp=Z,73nm,0.8s,mb5.3
PGF Pioggiola 72.87 310 *e*P **P 16 52 11.1 +0.2**
PGF pmax pmax
comp=Z,36nm,0.8s,mb5.3
PGF Pioggiola 72.87 310 *e*P **P 16 52 11.1 +0.2**
comp=Z,36nm,0.8s,mb5.4
LPG La Plagne 72.95 313 *e*P **P 16 52 11.8 +0.5**
comp=Z,70nm,0.8s,mb5.3
LPG La Plagne 72.95 313 *e*P **P 16 52 11.8 +0.5**
LPG pmax pmax
comp=Z,35nm,0.8s,mb5.3
LPG La Plagne 72.95 313 *e*P **P 16 52 11.8 +0.5**
comp=Z,35nm,0.8s,mb5.3
LPL La Plagne 72.95 313 *e*P **P 16 52 11.8 +0.5**
comp=Z,95nm,0.9s,mb5.4
LPL La Plagne 72.95 313 *e*P **P 16 52 11.8 +0.5**
LPL pmax pmax
comp=Z,47nm,0.9s,mb5.4
LPL La Plagne 72.95 313 *e*P **P 16 52 11.8 +0.5**
comp=Z,47nm,0.9s,mb5.4
SAOF Saorge 73.14 311 *e*P **P 16 52 12.6 +0.1**
BNI Bardonecchia 73.20 313 *e*P **P 16 52 12.5 -0.3**
BNI *e**PP pP 16 52 17.6 -0.7
BNI pmax pmax
comp=Z,24nm,1.0s,mb5.1
BNI Bardonecchia 73.20 313 *e*P **P 16 52 12.5 -0.3**
comp=Z,24nm,1.0s,mb5.1
BNI *e*pP pP 16 52 17.6 -0.7
AUTN L'Aution 73.22 312 *e*P **P 16 52 13.6 +0.6**
SBF Sospel 73.28 311 *e*P **P 16 52 13.0 -0.3**
comp=Z,81nm,0.9s,mb5.3
SBF Sospel 73.28 311 *e*P **P 16 52 13.0 -0.3**
SBF pmax pmax
comp=Z,40nm,0.9s,mb5.3
SBF Sospel 73.28 311 *e*P **P 16 52 13.0 -0.3**
comp=Z,40nm,0.9s,mb5.3
LUCF Luceram 73.32 311 *e*P **P 16 52 13.7 +0.1**
TOUF Mont Tournerai 73.33 312 *e*P **P 16 52 13.9 +0.3**
MVIF Mont Vial 73.44 312 *e*P **P 16 52 14.4 +0.1**
ORIF Oris-en-Rattie 73.76 313 *e*P **P 16 52 16.1 0.0**
comp=Z,37nm,1.0s,mb5.0
ORIF *e*MLR MLR
comp=Z,363nm,18.8s,MS4.4
ORIF Oris-en-Rattie 73.76 313 *e*P **P 16 52 16.1 0.0**
ORIF pmax pmax
comp=Z,19nm,1.0s,mb5.0
ORIF Oris-en-Rattie 73.76 313 *e*P **P 16 52 16.1 0.0**
comp=Z,19nm,1.0s,mb5.0
LOR Lormes 73.86 316 *e*P **P 16 52 15.9 -0.8**
comp=Z,16nm,0.9s,mb4.6
LOR *e*MLR MLR
comp=Z,208nm,21.8s,MS4.1
LOR Lormes 73.86 316 *e*P **P 16 52 15.9 -0.8**
LOR pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
LOR MLR MLR
comp=Z,210nm,21.8s,MS4.4
LOR Lormes 73.86 316 *e*P **P 16 52 15.9 -0.8**
comp=Z,8.1nm,0.9s,mb4.7
LOR LR LR
comp=Z,210nm,21.8s,MS4.4
FRF La Foret Royal 73.92 311 *e*P **P 16 52 16.8 -0.3**
comp=Z,70nm,1.5s,mb5.1
FRF La Foret Royal 73.92 311 *e*P **P 16 52 16.8 -0.3**
FRF pmax pmax
comp=Z,35nm,1.5s,mb5.1
FRF La Foret Royal 73.92 311 *e*P **P 16 52 16.8 -0.3**
comp=Z,35nm,1.5s,mb5.1
LMR La Mourre 74.12 311 *e*P **P 16 52 17.9 -0.4**
comp=Z,80nm,1.1s,mb5.2
LMR La Mourre 74.12 311 *e*P **P 16 52 17.9 -0.4**
LMR pmax pmax
comp=Z,40nm,1.1s,mb5.3
LMR La Mourre 74.12 311 *e*P **P 16 52 17.9 -0.4**
comp=Z,40nm,1.1s,mb5.3
SSF Saint Saulge 74.17 316 *e*P **P 16 52 17.9 -0.6**
comp=Z,23nm,0.9s,mb4.8
SSF Saint Saulge 74.17 316 *e*P **P 16 52 17.9 -0.6**
SSF pmax pmax
comp=Z,12nm,0.9s,mb4.8
SSF Saint Saulge 74.17 316 *e*P **P 16 52 17.9 -0.6**
comp=Z,12nm,0.9s,mb4.8
SMF Signal de Mont 74.18 315 *e*P **P 16 52 18.1 -0.4**
comp=Z,81nm,1.0s,mb5.3
SMF Signal de Mont 74.18 315 *e*P **P 16 52 18.1 -0.4**
SMF pmax pmax
comp=Z,41nm,1.0s,mb5.3
SMF Signal de Mont 74.18 315 *e*P **P 16 52 18.1 -0.4**
comp=Z,41nm,1.0s,mb5.3
AVF Avril sur Loir 74.40 316 *e*P **P 16 52 19.3 -0.5**
comp=Z,65nm,1.0s,mb5.2
AVF Avril sur Loir 74.40 316 *e*P **P 16 52 19.3 -0.5**
AVF pmax pmax
comp=Z,33nm,1.0s,mb5.2
AVF Avril sur Loir 74.40 316 *e*P **P 16 52 19.3 -0.5**
comp=Z,33nm,1.0s,mb5.2
SMRF Simiane la Rot 74.41 312 *e*P **P 16 52 20.0 +0.1**
comp=Z,35nm,1.3s,mb4.8
SMRF Simiane la Rot 74.41 312 *e*P **P 16 52 20.0 +0.1**
comp=Z,35nm,1.3s,mb5.1
SSB Saint Sauveur 74.42 314 *e*P **P 16 52 18.8 -1.2**
SSB *e**PP pP 16 52 24.3 -1.2
SSB pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
SSB Saint Sauveur 74.42 314 *e*P **P 16 52 18.8 -1.2**
comp=Z,5.4nm,1.0s,mb4.4
SSB *e*pP pP 16 52 24.3 -1.2
VIVF Saint-Julien-l 74.54 313 *e*P **P 16 52 20.4 -0.3**
comp=Z,38nm,1.0s,mb5.0
VIVF Saint-Julien-l 74.54 313 *e*P **P 16 52 20.4 -0.3**
VIVF pmax pmax
comp=Z,19nm,1.0s,mb5.0
VIVF Saint-Julien-l 74.54 313 *e*P **P 16 52 20.4 -0.3**
comp=Z,19nm,1.0s,mb5.0
HYF Humbligny 74.58 316 *e*P **P 16 52 20.9 0.0**
BGF Bois d'Agland 74.82 315 *e*P **P 16 52 21.8 -0.5**
comp=Z,16nm,0.9s,mb4.7
BGF Bois d'Agland 74.82 315 *e*P **P 16 52 21.8 -0.5**
BGF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
BGF Bois d'Agland 74.82 315 *e*P **P 16 52 21.8 -0.5**
comp=Z,7.9nm,0.9s,mb4.6
AGO Saint Agoulin 74.90 315 *e*P **P 16 52 22.9 +0.2**
PYM Petit Puy Mans 75.12 315 *e*P **P 16 52 24.5 +0.5**
LBL Lubilhac 75.24 314 *e*P **P 16 52 25.0 +0.3**
TCF Toulx Ste Croi 75.33 315 *e*P **P 16 52 25.1 -0.1**
comp=Z,43nm,1.0s,mb5.0
TCF Toulx Ste Croi 75.33 315 *e*P **P 16 52 25.1 -0.1**
TCF pmax pmax
comp=Z,22nm,1.0s,mb5.0
TCF Toulx Ste Croi 75.33 315 *e*P **P 16 52 25.1 -0.1**
comp=Z,22nm,1.0s,mb5.0
LASF Ste Croix 75.44 313 *e*P **P 16 52 25.9 0.0**
comp=Z,58nm,1.1s,mb5.1
LDF La Druitiere 75.51 318 *e*P **P 16 52 25.7 -0.5**
comp=Z,23nm,1.1s,mb4.7
LDF La Druitiere 75.51 318 *e*P **P 16 52 25.7 -0.5**
LDF pmax pmax
comp=Z,12nm,1.1s,mb4.7
LDF La Druitiere 75.51 318 *e*P **P 16 52 25.7 -0.5**
comp=Z,12nm,1.1s,mb4.7
FLN La Foliniere 75.62 319 *e*P **P 16 52 26.5 -0.3**
comp=Z,48nm,1.2s,mb5.0
FLN *e*MLR MLR
comp=Z,169nm,19.8s,MS4.0
FLN La Foliniere 75.62 319 *e*P **P 16 52 26.5 -0.3**
FLN pmax pmax
comp=Z,24nm,1.2s,mb5.0
FLN MLR MLR
comp=Z,170nm,19.8s,MS4.3
FLN La Foliniere 75.62 319 *e*P **P 16 52 26.5 -0.3**
comp=Z,24nm,1.2s,mb5.0
FLN LR LR
comp=Z,170nm,19.8s,MS4.3
GRR Gorron 76.03 318 *e*P **P 16 52 28.9 -0.3**
comp=Z,38nm,1.0s,mb5.0
GRR Gorron 76.03 318 *e*P **P 16 52 28.9 -0.3**
GRR pmax pmax
comp=Z,19nm,1.0s,mb5.0
GRR Gorron 76.03 318 *e*P **P 16 52 28.9 -0.3**
comp=Z,19nm,1.0s,mb5.0
CAF Calviac 76.11 314 *e*P **P 16 52 29.9 +0.2**
comp=Z,37nm,1.0s,mb5.0
CAF Calviac 76.11 314 *e*P **P 16 52 29.9 +0.2**
CAF pmax pmax
comp=Z,18nm,1.0s,mb5.0
CAF Calviac 76.11 314 *e*P **P 16 52 29.9 +0.2**
comp=Z,18nm,1.0s,mb5.0
RJF Les Rejaudoux 76.25 315 *e*P **P 16 52 30.8 +0.3**
comp=Z,44nm,1.1s,mb5.0
RJF *e*MLR MLR
comp=Z,175nm,20.5s,MS4.1
RJF Les Rejaudoux 76.25 315 *e*P **P 16 52 30.8 +0.3**
RJF pmax pmax
comp=Z,22nm,1.1s,mb5.0
RJF MLR MLR
comp=Z,180nm,20.5s,MS4.4
RJF Les Rejaudoux 76.25 315 *e*P **P 16 52 30.8 +0.3**
comp=Z,22nm,1.1s,mb5.0
RJF LR LR
comp=Z,180nm,20.5s,MS4.4
MBAR Mbarara 76.28 261 *e*P **P 16 52 29.0 -2.2**
ARMA Armidale 76.38 139 *e*P **P 16 52 29.9 -1.4**
MFF Saint Martin d 76.56 317 *e*P **P 16 52 32.2 -0.1**
comp=Z,58nm,1.3s,mb5.0
MFF Saint Martin d 76.56 317 *e*P **P 16 52 32.2 -0.1**
MFF pmax pmax
comp=Z,29nm,1.3s,mb5.0
MFF Saint Martin d 76.56 317 *e*P **P 16 52 32.2 -0.1**
comp=Z,29nm,1.3s,mb5.0
SKAG Skagway 76.82 27 *e*P **P 16 52 33.7 +0.2**
comp=Z,27nm,0.9s,mb5.2
SKAG *e*pP pP 16 52 39.0 0.0
MTLF Montolieu 76.83 313 *e*P **P 16 52 33.9 0.0**
comp=Z,23nm,1.3s,mb4.7
MTLF Montolieu 76.83 313 *e*P **P 16 52 33.9 0.0**
MTLF pmax pmax
comp=Z,12nm,1.3s,mb4.7
MTLF Montolieu 76.83 313 *e*P **P 16 52 33.9 0.0**
comp=Z,12nm,1.3s,mb4.7
LFF La Frestale 76.91 315 *e*P **P 16 52 34.5 +0.2**
comp=Z,26nm,0.9s,mb4.9
LFF La Frestale 76.91 315 *e*P **P 16 52 34.5 +0.2**
LFF pmax pmax
comp=Z,13nm,0.9s,mb4.9
LFF La Frestale 76.91 315 *e*P **P 16 52 34.5 +0.2**
comp=Z,13nm,0.9s,mb4.9
SGMF Saint Gilles 77.06 319 *e*P **P 16 52 35.1 +0.1**
comp=Z,53nm,1.1s,mb5.1
SGMF Saint Gilles 77.06 319 *e*P **P 16 52 35.1 +0.1**
SGMF pmax pmax
comp=Z,26nm,1.1s,mb5.1
SGMF Saint Gilles 77.06 319 *e*P **P 16 52 35.1 +0.1**
comp=Z,26nm,1.1s,mb5.1
ROSF Rostrenen 77.41 319 *e*P **P 16 52 37.2 +0.2**
comp=Z,39nm,1.1s,mb4.9
ROSF Rostrenen 77.41 319 *e*P **P 16 52 37.2 +0.2**
ROSF pmax pmax
comp=Z,19nm,1.1s,mb4.9
ROSF Rostrenen 77.41 319 *e*P **P 16 52 37.2 +0.2**
comp=Z,19nm,1.1s,mb5.0
VALF Valcebollere 77.45 312 *e*P **P 16 52 38.0 +0.7**
QUIF Quistinic 77.59 319 *e*P **P 16 52 37.9 -0.1**
comp=Z,45nm,1.2s,mb5.0
QUIF Quistinic 77.59 319 *e*P **P 16 52 37.9 -0.1**
QUIF pmax pmax
comp=Z,23nm,1.2s,mb5.0
QUIF Quistinic 77.59 319 *e*P **P 16 52 37.9 -0.1**
comp=Z,23nm,1.2s,mb5.0
EPF Esparros 78.17 313 *e*P **P 16 52 40.7 -0.6**
RESF Ens 78.29 313 *e*P **P 16 52 42.9 +0.9**
ETSF Etsaut 78.79 314 *e*P **P 16 52 45.3 +0.5**
comp=Z,10nm,0.8s,mb4.5
ETSF Etsaut 78.79 314 *e*P **P 16 52 45.3 +0.5**
ETSF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
ETSF Etsaut 78.79 314 *e*P **P 16 52 45.3 +0.5**
comp=Z,5.3nm,0.8s,mb4.5
YKA Yellowknife Ar 81.15 17 P **P 16 52 56.8 -0.4**
comp=Z,6.5nm,0.8s,mb4.6,baz=326,slow=4.9,SNR=16
YKA Yellowknife Ar 81.15 17 P **P 16 52 56.8 -0.3**
YKA pmax pmax
comp=Z,7.0nm,0.8s
YKA Yellowknife Ar 81.15 17 P **P 16 52 56.8 -0.4**
ESDC Sonseca Array 82.72 312 P **P 16 53 06.1 +0.3**
comp=Z,2.2nm,0.7s,mb4.3,baz=38,slow=5.0,SNR=4.1
TAM Tamanrasset 85.28 294 *e*P **P 16 53 19.5 +0.3**
LSZ Lusaka 86.43 250 *e*P **P 16 53 24.4 -0.5**
LSZ *e**PP pP 16 53 29.8 -0.7
LSZ pmax pmax
comp=Z,5.0nm,1.1s,mb4.7
LSZ Lusaka 86.43 250 *e*P **P 16 53 24.4 -0.5**
comp=Z,5.3nm,1.1s,mb4.7
LSZ *e*pP pP 16 53 29.8 -0.7
FCC Fort Churchill 88.65 9 *e*P **P 16 53 34.5 -0.4**
comp=Z,0.7nm,1.2s,mb3.9
FCC *e*pP pP 16 53 39.3 -1.2
EDM Edmonton 89.39 22 *e*P **P 16 53 39.0 +0.5**
EDM *e*pP pP 16 53 43.8 -0.3
FFC Flin Flon 91.08 15 *e*P **P 16 53 45.6 -0.7**
FFC pmax pmax
comp=Z,12nm,1.3s,mb5.1
FFC Flin Flon 91.08 15 *e*P **P 16 53 45.6 -0.7**
comp=Z,12nm,1.3s,mb5.1
FFC *e*pP pP 16 53 50.8 -1.1
BSMT Bassoo Peak 93.47 25 *e*P **P 16 53 59.1 +1.5**
comp=Z,4.2nm,0.9s,mb4.9
BSMT *e*pP pP 16 54 03.4 +0.2
SCHQ Schefferville 93.53 355 P **P 16 53 57.5 -0.2**
comp=Z,8.6nm,1.0s,mb5.1,baz=45,slow=13,SNR=3.5

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCHQ				LR	LR	17 41 00.2	
	comp=Z,74nm,20.3s,MS4.1,baz=14,slow=39						
SLMT	Seeley Lake	94.46	25	eP	P	16 54 02.2	+0.1
	comp=Z,8.5nm,1.2s,mb5.0						
SLMT				epP	pP	16 54 07.9	+0.2
ULM	Lac du Bonnet	96.55	13	LR	LR	17 43 15.5	
	comp=Z,58nm,18.6s,MS4.1,baz=18,slow=39						
OTAV	Otavalo	148.19	5	ePKPdf	PKPdf	17 00 26.8	+1.4
OTAV				ePKPbc	PKPbc	17 00 29.9	+1.3
SIV	San Ignacio	159.44	316	PKP	PKPdf	17 00 40.3	-0.8
	comp=Z,1.1nm,0.9s,baz=194,slow=3.7						
SIV				PKPab	PKPab	17 01 18.2	-0.6
	comp=Z,1.5nm,1.0s,baz=180,slow=3.0,SNR=2.0						
LPAZ	La Paz	163.20	334	PKP	PKPdf	17 00 45.6	+0.5
	comp=Z,1.0nm,0.8s,baz=90,slow=1.0,SNR=4.0						
LPAZ				PKPab	PKPab	17 01 34.1	-1.0
	comp=Z,1.3nm,0.9s,baz=356,slow=3.7,SNR=2.5						
LPAZ	La Paz	163.20	334	PKIKP	PKPdf	17 00 45.6	+0.5
LPAZ						17 01 34.1	
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						

CASC 17 17:12:20.9±2.3, 12°.34N×87°.35W, h69km±22km, MD3.8, ML4.2, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	San Cristobal	0.46	39	eP	Pn	17 12 34.2	+1.0
CRIN				eS	Sn	17 12 44.6	+2.3
CRIN				AML	AML	17 12 45.7	
	comp=N,14μm,0.4s						
CNGN	Cerro Negro	0.65	76	eP	Pn	17 12 35.4	+0.2
CNGN				eS	Sn	17 12 46.7	+0.9
MOMN	Momotombo	0.79	85	eP	Pn	17 12 37.4	+0.6
MOMN				eS	Sn	17 12 49.4	+0.8
CSAN		0.92	100	eP	Pn	17 12 38.8	+0.5
APYN	Apoyeque	0.98	96	eP	Pn	17 12 39.4	+0.4
XAVN	Gruta Xavier	1.01	101	eP	Pn	17 12 39.9	+0.4
CNCH	Conchagua	1.04	333	eP	Pn	17 12 40.5	+0.5
CNCH				eS	Sn	17 12 53.8	-0.2
CRUN	El Crucero	1.08	109	eP	Pn	17 12 41.0	+0.6
MGAN	Managua	1.09	100	eP	Pn	17 12 40.7	+0.2
MGAN				eS	Sn	17 12 55.8	+0.7
TICN	Ticuantepe	1.13	106	eP	Pn	17 12 41.5	+0.5
HUEN		1.15	90	eP	Pn	17 12 41.0	-0.2
HUEN				eS	Sn	17 12 55.0	-1.4
APON	Apoyo	1.32	109	eP	Pn	17 12 44.1	+0.6
BLLM	Bellamira	1.40	322	eP	Pn	17 12 45.2	+0.7
BLLM				eS	Sn	17 13 02.1	-0.2
VSM	San Miguel	1.41	320	eP	Pn	17 12 45.5	+0.9
VSM				eS	Sn	17 13 03.2	+0.7
CAHU	Cacacuatique	1.65	329	eP	Pn	17 12 48.8	+1.0
CAHU				eS	Sn	17 13 09.8	+1.5
TGUH	Tegucigalpa,Un	1.71	2	AML	AML	17 13 13.2	
	comp=N,2μm,0.5s						
SSN	San Juan del S	1.79	125	eP	Pn	17 12 49.4	-0.3
SSN				eS	Sn	17 13 10.8	-0.8
CONN	Concepcion	1.85	114	eP	Pn	17 12 50.9	+0.3
SNVI	San Vicente	1.93	311	eP	Pn	17 12 52.3	+0.7
LFRS	El Faro	2.10	307	eP	Pn	17 12 54.6	+0.7
LFRS				eS	Sn	17 13 20.2	+1.0
LAPC	Finca la Perla	2.44	130	iP	Pn	17 12 57.4	-1.1
LAPC				iS	Sn	17 13 26.8	-0.6
NY14	Universidad de	2.45	133	iP	Pn	17 12 59.7	+1.1
MESS	Mesas	2.64	127	iP	Pn	17 13 00.1	-1.1
SBLS	San Blas	2.67	304	eP	Pn	17 13 03.0	+1.4
CUI	Cuipilapa	2.71	128	iP	Pn	17 13 02.1	-0.1
MTO2	Montecristo 2	2.83	316	eP	Pn	17 13 05.0	+1.2
RBDL	Robledal	2.88	308	eP	Pn	17 13 05.4	+0.9
JTS	JuntasAbangare	3.11	131	eP	Pn	17 13 07.4	-0.2
JCR	Jicaral	3.31	138	eP	Pn	17 13 11.0	+0.7
CGA2	Cerro Gallo 2	3.65	129	eP	Pn	17 13 17.7	+2.7
PRS1	Puriscal	3.79	128	eP	Pn	17 13 18.9	+2.0
LAJ	Bijagual	4.01	128	eP	Pn	17 13 17.9	-2.0
URSC	Urasca	4.30	125	eP	Pn	17 13 25.4	+1.5
BUS	Buena Vista	4.48	128	eP	Pn	17 13 28.9	+2.5
BAR1		5.02	127	eP	Pn	17 13 36.6	+2.9

ISCJB 17 17:15:38.0±0.9, 60°.24N±0°.07×59°.9E±0°.2, h10km, Error ellipse: s-maj=13.1km s-min=8.6km az=152.2
CSEM 17 17:15:39.6, 60°.44N×60°.03E, h10km, After NEIC
NEIC 17 17:15:39.6±0.9, 60°.44N×60°.03E, h10km, Error ellipse: s-maj=20.2km s-min=9.6km az=221.0
IDC 17 17:15:42.5±1.6, 60°.06N×59°.91E, h0km, mb1 3.8/4, mb1mx3.3/26, mbtmp3.8/4, ML3.0/4, Error ellipse: s-maj=88.8km s-min=12.9km az=40.0
ISC 17 17:15:40.0±0.9, 60°.32N±0°.06×59°.9E±0°.2, h10km, n17, σ1§13/23, Ural Mountains region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARU	Arti	3.96	191	eP	Pn	17 16 42.1	+1.4
ARU				eS	Sn	17 17 32.2	+5.0
ARU	Arti	3.96	191	eP	Pn	17 16 42.1	+1.4
ARU				eS	Sn	17 17 32.2	+5.0
BRVK	Borovoye	9.26	137	eP	Pn	17 17 53.7	+0.4
BRVK	Borovoye	9.26	137	eP	Pn	17 17 53.7	+0.4
BVAR	Borovoye Array	9.32	137	Pn	Pn	17 17 55.1	+0.9
	0.8nm,0.3s,baz=328,slow=15,SNR=20						
BVAR				Sn	Sn	17 19 32.7	-6.2
	1.4nm,0.3s,baz=334,slow=26,SNR=7.4						
BVAR	Borovoye Array	9.32	137	Pn	Pn	17 17 55.1	+0.9
BVAR				Sn	Sn	17 19 32.7	-6.2
AKTO	Aktyubinsk	9.96	187	Sn	Sn	17 19 54.6	-0.2
	0.1nm,0.3s,baz=178,slow=18,SNR=3.1						
ABKAR	Akbulak array	11.09	180	eP	Pn	17 18 19.9	+1.5
ABKAR				eSn	Sn	17 20 20.7	-1.7
ABKAR	Akbulak array	11.09	180	eP	Pn	17 18 19.9	+1.4
ABKAR				eSn	Sn	17 20 20.7	-1.7
KURK	Kurchatov	14.28	124	eP	Pn	17 18 59.5	-2.4
	1.1nm,0.6s						
KURK	Kurchatov	14.28	124	eP	Pn	17 18 59.5	-2.4
	1.1nm,0.6s						
FINES	FINESS Array B	16.38	289	Pn	Pn	17 19 29.0	-0.6
	0.1nm,0.3s,baz=79,slow=14,SNR=1.9						
FINES	FINESS Array B	16.38	289	Pn	Pn	17 19 29.0	-0.6
ARCES	ARCESS Array B	16.97	317	Pn	Pn	17 19 37.0	-0.1
	0.1nm,0.3s,baz=100,slow=14,SNR=3.7						
ARCES	ARCESS Array B	16.97	317	Pn	Pn	17 19 37.0	-0.1
MKAR	Makanchi Array	18.86	126	P	Pn	17 20 00.8	+0.3
	0.1nm,0.3s,baz=312,slow=9.5,SNR=3.8						
MKAR	Makanchi Array	18.86	126	P	Pn	17 20 00.8	+0.3

MAN 17 17:29:45, 13°.12N×120°.24E, h22km, mb4.9, ML3.8, MS3.8, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	Lubang	0.61	1	eP	Pb	17 29 57.5	+0.5
LUBP				eS	Sb	17 30 04.5	-0.8
BUSP	Coron	1.11	182	eP	Pn	17 30 05.2	0.0
BUSP				eS	Sb	17 30 21.0	+1.5
BOAC	Boac	1.60	78	eP	Pn	17 30 12.1	+0.1
ENPP	El Nido	2.06	203	eP	Pn	17 30 18.4	+0.1
CUYO	Cuyo Island	2.38	161	eP	Pn	17 30 21.6	-1.1
AUQP	San Andres	2.38	85	eP	Pn	17 30 27.1	+4.4
BALP	Baler	2.91	26	eP	Pn	17 30 31.3	+1.3

IDC 17 17:31:35.9±1.8, 14°.99N×147°.07E, h0km, mb3.7/6, mb1 3.8/7, mb1mx3.6/25, mbtmp3.7/7, ML3.7/1, Error ellipse: s-maj=44.0km s-min=21.1km az=93.0
NEIC 17 17:31:37.0±1.1, 14°.99N×147°.17E, h10km, mb4.1/1, Error ellipse: s-maj=28.8km s-min=12.8km az=91.0
ISCJB 17 17:31:39.0±4.4, 15°.0N±0°.1×147°.1E±0°.2, h36km±34km, mb3.7/7, Error ellipse: s-maj=36.3km s-min=20.1km az=177.2
ISC 17 17:31:39.8±7.2, 15°.0N±0°.1×147°.1E±0°.1, h26km±51km, n11, σ0§64/13, mb3.7/7, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	2.54	238	Pn	Pn	17 32 18.9	-0.5
	14nm,0.3s,baz=14,slow=4.2,SNR=18						
GUMO				Sn	Sn	17 32 49.5	0.0
	20nm,0.3s,baz=319,slow=19,SNR=9.9						
GUMO	Guam	2.54	238	eP	Pn	17 32 19.4	0.0
GUMO				Sn	Sn	17 32 49.5	0.0
WRAB	Tennant Creek	36.87	200	eP	P	17 38 46.1	-0.1
WRA	Warramunga Arr	36.88	200	P	P	17 38 46.6	+0.2
	1.5nm,0.8s,mb3.9,baz=20,slow=9.8,SNR=11						
ASAR	Alice Springs	40.50	199	P	P	17 39 16.9	+0.2
	0.2nm,0.5s,mb3.1,baz=18,slow=8.5,SNR=8.0						
CMAR	Chiang Mai Arr	46.13	281	P	P	17 40 02.6	+0.3
	0.4nm,0.7s,mb3.5,baz=68,slow=5.9,SNR=4.8						
SONM	Songino Array	46.88	323	P	P	17 40 09.3	+1.5
	0.4nm,0.6s,mb3.5,baz=126,slow=7.3,SNR=4.0						
MKAR	Makanchi Array	62.01	315	P	P	17 41 57.9	+0.1
	0.4nm,0.3s,mb4.0,baz=91,slow=8.4,SNR=6.2						
MKAR	Makanchi Array	62.01	315	P	P	17 41 57.9	0.0
KURK	Kurchatov	64.93	319	eP	P	17 42 16.2	-0.9
	0.9nm,0.6s,mb4.0						
BVAR	Borovoye Array	70.19	321	P	P	17 42 49.3	-0.9
	0.5nm,0.4s,mb3.8,baz=96,slow=6.1,SNR=5.9						

ISCJB 17 17:31:58.5±0.6, 36°.62N±0°.03×1°.37E±0°.05, h10km, Error ellipse: s-maj=6.1km s-min=4.4km az=160.6
CSEM 17 17:31:59.6±0.3, 36°.55N×1°.45E, h15km, mb3.7/5, Error ellipse: s-maj=9.1km s-min=5.9km az=81.0
CRAAG 17 17:31:59.9, 36°.44N×1°.39E, Ml3.1
NEIC 17 17:32:00.5, 36°.65N×1°.41E, h0km, MG3.7(MDD), After MDD.
MDD 17 17:32:00.1±0.9, 36°.42N×1°.60E, h35km, mb3.8/5, Error ellipse: s-maj=11.9km s-min=6.4km az=95.0
ISC 17 17:31:59.2±0.6, 36°.60N±0°.03×1°.42E±0°.05, h10km, n60, σ1§17/97, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EBNR	Beni Rached	0.33	164	P	Pg	17 32 05.2	-0.4
EBNR	Beni Rached	0.33	164	P	Pg	17 32 05.2	-0.4
ECHF	Ech Chlef	0.45	188	P	Pg	17 32 07.1	-0.9
ECHF	Ech Chlef	0.45	188	P	Pg	17 32 07.1	-0.9
ECHA	Ech Chlef	0.45	185	P	Pg	17 32 07.1	-0.9
ECHA	Ech Chlef	0.45	185	P	Pg	17 32 07.1	-0.9
EANR	'Ain N'Sour	0.70	202	P	Pg	17 32 13.0	+0.3
EANR	'Ain N'Sour	0.70	202	P	Pg	17 32 13.0	+0.3
EANR	'Ain N'Sour	0.70	202	P	Pg	17 32 13.0	+0.3
EANR	'Ain N'Sour	0.70	202	P	Pg	17 32 13.0	+0.3
ETRT	Tiaret	1.21	185	P	Pn	17 32 27.1	+4.9
ETRT	Tiaret	1.21	185	P	Pn	17 32 27.1	+4.9
ETRT	Tiaret	1.21	185	P	Pn	17 32 27.1	+4.9
ETRT	Tiaret	1.21	185	P	Pn	17 32 27.1	+4.9
EMHD	Djebel Mahoudad	1.30	107	P	Pn	17 32 29.0	+5.6
EMHD	Djebel Mahoudad	1.30	107	P	Pn	17 32 29.0	+5.6
EMHD	Djebel Mahoudad	1.30	107	P	Pn	17 32 29.0	+5.6
EIBI	Ibiza	2.42	359	P	Pn	17 32 40.0	+1.2
EIBI				S	Sn	17 33 07.1	-1.4
EIBI	Ibiza	2.42	359	P	Pn	17 32 40.0	+1.2
	3.1nm,0.1s,SNR=11						
EIBI				S	Sn	17 33 07.1	-1.4
	20nm,0.2s,SNR=10						
EIBI	Ibiza	2.42	359	P	Pn	17 32 40.0	+1.2
	3.1nm,0.1s,SNR=11						
EIBI				S	Sn	17 33 07.1	-1.4
	20nm,0.2s,SNR=10						
EIBI	Ibiza	2.42	359	P	Pn	17 32 40.0	+1.2
	3.1nm,0.1s,SNR=11						
EIBI				S	Sn	17 33 07.1	-1.4
	20nm,0.2s,SNR=10						
EMUR	La Murta	2.46	301	P	Pn	17 32 41.0	+1.7
EMUR				S	Sn	17 33 09.2	-0.1
EMUR	La Murta	2.46	301	S	Sn	17 33 09.2	-0.1
	2.1nm,0.2s,SNR=7.9						
EMUR	La Murta	2.46	301	S	Sn	17 33 09.2	-0.1
	2.1nm,0.2s,SNR=7.9						
EMUR	La Murta	2.46	301	P	Pn	17 32 41.0	+1.7
	3.4nm,0.3s,SNR=7.9						
EMUR				S	Sn	17 33 09.2	-0.1
	2.1nm,0.2s,SNR=7.9						
EBEN	Beniarda	2.47	329	P	Pn	17 32 40.3	+0.9
EBEN				S	Sn	17 33 09.8	+0.2
EBEN	Beniarda	2.47	329	P	Pn	17 32 40.3	+0.9
	1.1nm,0.2s,SNR=7.9						
EBEN				S	Sn	17 33 09.8	+0.2
	0.4nm,0.2s,SNR=7.9						
EBEN	Beniarda	2.47	329	P	Pn	17 32 40.3	+0.9
	1.1nm,0.2s,SNR=7.9						
EBEN				S	Sn	17 33 09.8	+0.2
	0.4nm,0.2s,SNR=7.9						
EBEN	Beniarda	2.47	329	P	Pn	17 32 40.3	+0.9
	0.4nm,0.2s,SNR=7.9						
EBEN				S	Sn	17 33 09.9	+0.3
ETOB	Tobarra	3.11	312	P	Pn	17 32 49.0	+0.7
ETOB				S	Sn	17 33 25.6	0.0
ETOB	Tobarra	3.11	312	P	Pn	17 32 49.0	+0.7
	1.2nm,0.2s,SNR=7.9						
ETOB				S	Sn	17 33 25.6	0.0
	1.0nm,0.2s,SNR=7.9						
ETOB	Tobarra	3.11	312	P	Pn	17 32 49.0	+0.7
	1.2nm,0.2s,SNR=7.9						
ETOB				S	Sn	17 33 25.6	0.0
	1.0nm,0.2s,SNR=7.9						
ETOB	Tobarra	3.11	312	P	Pn	17 32 49.0	+0.7
	0.8nm,0.2s,SNR=7.9						
ETOB				S	Sn	17 33 25.6	+0.1
	1.0nm,0.2s,SNR=7.9						
ETOS	Mallorca	3.35	19	P	Pn	17 32 51.4	-0.1
ETOS				S	Sn	17 33 29.2	-2.0
ETOS	Mallorca	3.35	19	P	Pn	17 32 51.4	-0.1
	0.9nm,0.3s,SNR=7.9						
ETOS				S	Sn	17 33 29.2	-2.0
	1.0nm,0.2s,SNR=6.7						
ETOS	Mallorca	3.35	19	P	Pn	17 32 51.4	-0.1
	0.9nm,0.3s,SNR=7.9						
ETOS				S	Sn	17 33 29.2	-2.0
	1.0nm,0.2s,SNR=6.7						
ETOS	Mallorca	3.35	19	P	Pn	17 32 51.4	-0.1
	1.8nm,0.2s,SNR=7.9						
ETOS				S	Sn	17 33 29.2	-2.1
	1.0nm,0.2s,SNR=6.7						
EHUE	Huescar	3.42	292	P	Pn	17 32 53.5	+1.0
EHUE				S	Sn	17 33 34.1	+1.0
EHUE	Huescar	3.42	292	P	Pn	17 32 53.5	+1.0
	0.2nm,0.1s,SNR=7.9						
EHUE				S	Sn	17 33 34.1	+1.0
	0.2nm,0.1s,SNR=7.9						
EHUE	Huescar	3.42	292	P	Pn	17 32 53.5	+1.0
	0.2nm,0.1s,SNR=7.9						
EHUE				S	Sn	17 33 34.1	+1.0
	0.2nm,0.1s,SNR=7.9						
EHUE	Huescar	3.42	292	P	Pn	17 32 53.5	+1.0
	0.2nm,0.1s,SNR=7.9						
EHUE				S	Sn	17 33 34.1	+1.0
	0.2nm,0.1s,SNR=7.9						
EBER	Berja	3.47	276	P	Pn	17 32 52.9	-0.3
EBER				S	Sn	17 33 33.0	-1.4
EBER	Berja	3.47	276	P	Pn	17 32 52.9	-0.3
	2.4nm,0.3s,SNR=5.8						
EBER				S	Sn	17 33 32.9	-1.4
	2.5nm,0.3s,SNR=4.0						
EBER	Berja	3.47	276	P	Pn	17 32 52.9	-0.3
	2.4nm,0.3s,SNR=5.8						
EBER				S	Sn	17 33 32.9	-1.4
	2.5nm,0.3s,SNR=4.0						
EBER	Berja	3.47	276	P	Pn	17 32 52.9	-0.3
	1.3nm,0.2s,SNR=5.8						
EBER				S	Sn	17 33 33.0	-1.4
ECHE	Chera	3.53	328	P	Pn	17 32 54.9	+0.9
	0.6nm,0.1s,SNR=7.9						
ECHE	Chera	3.53	328	P	Pn	17 32 54.9	+0.9
	0.6nm,0.1s,SNR=7.9						
EVIA	Vianos	3.72	304	S	Sn	17 33 38.1	-2.3
	0.3nm,0.2s,SNR=7.9						
EVIA	Vianos	3.72	304	S	Sn	17 33 38.1	-2.3
	0.3nm,0.2s,SNR=7.9						
EVIA	Vianos	3.72	304	S	Sn	17 33 38.1	-2.3
	0.3nm,0.2s,SNR=7.9						
EQES	Quesada	3.78	290	P	Pn	17 32 59.9	+2.4
EQES				S	Sn	17 33 41.7	-0.2
EQES	Quesada	3.78	290	P	Pn	17 32 59.9	+2.4
	0.3nm,0.1s,SNR=7.9						
EQES				S	Sn	17 33 41.7	-0.2
	0.4nm,0.1s,SNR=7.9						
EQES	Quesada	3.78	290	P	Pn	17 32 59.9	+2.4
	0.3nm,0.1s,SNR=7.9						
EQES				S	Sn	17 33 41.7	-0.2
	0.4nm,0.1s,SNR=7.9						
EQES	Quesada	3.78	290	P	Pn	17 32 59.9	+2.5
	0.3nm,0.1s,SNR=7.9						
EQES				S	Sn	17 33 41.7	-0.2
	0.4nm,0.1s,SNR=7.9						
EQUE	Quentar	3.94	280	P	Pn	17 33 00.2	+0.6
	0.6nm,0.2s,SNR=7.9						
EQUE				S	Sn	17 33 44.2	-1.7
	1.2nm,0.3s,SNR=7.9						
EQUE	Quentar	3.94	280	P	Pn	17 33 00.2	+0.6
	0.6nm,0.2s,SNR=7.9						
EQUE				S	Sn	17 33 44.2	-1.7
	1.2nm,0.3s,SNR=7.9						
EQUE	Quentar	3.94	280	P	Pn	17 33 00.2	+0.6
	0.1nm,0.1s,SNR=7.9						
EQUE				S	Sn	17 33 44.2	-1.7
	1.2nm,0.3s,SNR=7.9						
EMOS	Mosqueruela	4.04	339	P	Pn	17 33 03.1	+2.1
EMOS				S	Sn	17 33 47.0	-1.3
EMOS	Mosqueruela	4.04	339	P	Pn	17 33 03.0	+2.0
	1.7nm,0.1s,SNR=14						
EMOS				S	Sn	17 33 47.0	-1.3
	0.5nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	4.04	339	P	Pn	17 33 03.0	+2.0
	1.7nm,0.1s,SNR=14						
EMOS				S	Sn	17 33 47.0	-1.3
	0.5nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	4.04	339	P	Pn	17 33 03.1	+2.1
	1.3nm,0.1s,SNR=14						
EMOS				S	Sn	17 33 47.0	-1.3
	0.5nm,0.2s,SNR=7.9						

IDC 17 18:18:57.3±1.4, 44°.21N×129°.55W, h0km, mb3.7/8, mb1 3.8/12, mb1mx3.7/27, mbtmp3.6/12, ML3.3/4, MS3.7/2, Ms1 3.7/2, ms1mx3.0/30, Error ellipse: s-maj=42.7km s-min=14.0km az=40.0
ISCJB 17 18:18:58.9±0.8, 44°.48N±0°.07×129°.4W±0°.1, h10km, mb3.7/7, MS3.8/2, Error ellipse: s-maj=12.8km s-min=8.3km az=137.1
NEIC 17 18:19:00.5±0.8, 44°.46N×129°.41W, h10km, mb4.1/2, Error ellipse: s-maj=12.4km s-min=7.8km az=46.0
ISC 17 18:19:00.4±0.8, 44°.45N±0°.08×129°.5W±0°.1, h10km, n27, σ0§96/26, mb3.7/7, MS3.8/2, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COR	Corvallis	4.41	86	eP	Pn	18 20 04.1	-3.2
NLWA	Neilton Lookou	4.89	51	eP	Pn	18 20 13.5	-0.4
GNW	Green Mountain	5.57	54	eP	Pn	18 20 22.4	-0.9
	6.0nm,0.5s						
YBH	Yreka Blue Hor	5.64	116	Pn	Pn	18 20 24.3	0.0
	0.2nm,0.3s,baz=272,slow=7.9,SNR=4.1						
LON	Longmire	5.84	64	eP	Pn	18 20 26.6	-0.4
	5.7nm,0.6s						
WDC	Whiskeytown Da	6.41	125	eP	Pn	18 20 36.4	+1.5
	11nm,0.4s						
JCW	Jim Creek	6.42	52	eP	Pn	18 20 35.2	+0.3
	17nm,0.3s						
RPW	Rockport	6.79	51	eP	Pn	18 20 39.8	-0.2
	12nm,0.3s						
NVAR	Mina Array Bea	10.31	122	Pn	Pn	18 21 27.6	-0.7
	0.1nm,0.3s,baz=284,slow=14,SNR=9.3						
HLID	Hailey	10.88	89	eP	Pn	18 21 37.5	+1.4
	2.5nm,1.0s						
ELK	Elko	11.12	105	Pn	Pn	18 21 40.0	+0.6
	0.0nm,0.3s,baz=281,slow=12,SNR=3.0						
SLMT	Seeley Lake	11.48	70	eP	Pn	18 21 44.5	+0.2
	3.1nm,0.6s						
PDAR	Pinedale Array	14.52	90	Pn	Pn	18 22 29.4	+3.6
	0.0nm,0.3s,baz=280,slow=8.7,SNR=3.7						
PV04	Paradox Valley	16.55	104	P	Pn	18 22 51.6	-0.9
PV01	Paradox Valley	16.90	105	P	Pn	18 22 58.0	+1.1
	7μm,2.3s						
MVCO	Mesa Verde	17.41	107	eP	Pn	18 23 03.6	+0.3
	11nm,1.1s						
YKA	Yellowknife Ar	20.03	20	P	P	18 23 34.0	+0.9
	1.2nm,0.8s,baz=208,slow=10,SNR=3.9						
FFC	Flin Flon	20.44	50	eP	P	18 23 37.4	-0.3
	18nm,1.4s						
ILAR	Eielson Array	22.57	340	P	P	18 24 01.4	+1.0
	1.3nm,0.8s,mb3.4,baz=157,slow=8.4,SNR=12						
TXAR	Lajitas Array	25.42	118	P	P	18 24 27.0	-1.1
	0.4nm,0.9s,mb3.0,baz=284,slow=7.3,SNR=2.6						
TXAR	Lajitas Array	25.42	118	P	P	18 24 27.0	-1.1
ARCES	ARCESS Array B	64.84	9	LR	LR	19 01 53.9	
	comp=Z,46nm,18.1s,MS3.7,baz=41,slow=40						
FINES	FINESS Array B	72.61	12	P	P	18 30 27.2	-0.3
	1.6nm,0.7s,mb4.0,baz=359,slow=7.2,SNR=3.5						
FINES				LR	LR	19 04 38.7	
	comp=Z,54nm,20.7s,MS3.8,baz=7.0,slow=38						
SONM	Songino Array	75.83	325	P	P	18 30 46.8	+0.4
	0.8nm,0.7s,mb3.8,baz=56,slow=3.7,SNR=6.4						
ZALV	Zalesovo Beam	77.69	340	P	P	18 30 56.1	-0.8
	0.6nm,0.5s,mb3.8,baz=31,slow=5.7,SNR=4.1						
BVAR	Borovoye Array	81.42	348	P	P	18 31 17.4	+0.3
	1.0nm,0.6s,mb3.9,baz=25,slow=4.7,SNR=7.6						
LPAZ	La Paz	82.22	122	P	P	18 31 18.8	-2.9
	0.9nm,0.6s,mb3.9,baz=328,slow=5.1,SNR=4.0						

IDC 17 18:20:24.1±1.7, 44°.13N×129°.71W, h0km, mb3.4/5, mb1 3.7/7, mb1mx3.5/25, mbtmp3.4/7, ML3.2/2, Error ellipse: s-maj=49.8km s-min=18.2km az=39.0
ISCJB 17 18:20:26.2±1.2, 44°.4N±0°.1×129°.4W±0°.2, h10km, mb3.3/6, Error ellipse: s-maj=21.5km s-min=11.1km az=38.3
NEIC 17 18:20:27.3±1.3, 44°.36N×129°.53W, h10km, mb4.1/3, Error ellipse: s-maj=23.1km s-min=12.0km az=221.0
ISC 17 18:20:27.2±1.1, 44°.3N±0°.1×129°.6W±0°.2, h10km, n18, σ1§29/18, mb3.3/6, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPW	Rockport	6.93	51	eP	Pn	18 22 06.1	-2.6
	4.4nm,0.4s						
NVAR	Mina Array Bea	10.30	121	Pn	Pn	18 22 53.8	-1.2
	0.1nm,0.3s,baz=286,slow=14,SNR=5.2						
HLID	Hailey	10.96	89	eP	Pn	18 23 03.6	-0.3
	4.9nm,1.0s						
SLMT	Seeley Lake	11.60	70	P	Pn	18 23 11.2	-1.5
	12nm,1.4s						
GCMT	Greycliff	14.14	77	eP	Pn	18 23 52.3	+4.9
	7.5nm,1.0s						
MSU	Marysvale	14.27	108	P	Pn	18 23 50.9	+1.8
	3.2nm,1.2s						
RLMT	Red Lodge	14.46	80	eP	Pn	18 23 51.8	+0.1
	3.9nm,1.0s						
PDAR	Pinedale Array	14.60	89	Pn	Pn	18 23 57.6	+4.0
	0.0nm,0.3s,baz=280,slow=10.0,SNR=3.3						
SRU	San Rafael	15.13	104	eP	Pn	18 24 03.3	+2.4
	22nm,1.5s						
SDCO	Great Sand Dun	19.27	102	eP	Pn	18 24 51.7	-1.1
	7.0nm,1.5s						
YKA	Yellowknife Ar	20.18	20	P	P	18 25 02.0	+0.5
	0.7nm,0.8s,baz=208,slow=11,SNR=3.8						
ILAR	Eielson Array	22.67	341	P	P	18 25 29.8	+1.5
	0.9nm,1.0s,mb3.1,baz=154,slow=9.5,SNR=5.2						
TXAR	Lajitas Array	25.42	117	P	P	18 25 55.1	+0.2
	0.2nm,0.6s,mb2.8,baz=309,slow=10,SNR=2.5						
WMOK	Wichita Mounta	25.47	101	eP	P	18 25 55.2	-0.1
	5.7nm,1.1s,mb4.0						
FCC	Fort Churchill	25.99	44	P	P	18 26 01.2	+1.4
	0.4nm,1.4s,mb2.8						
SONM	Songino Array	75.89	325	P	P	18 32 12.5	-1.1
	0.8nm,1.0s,mb3.6,baz=29,slow=3.3,SNR=3.4						
SONM	Songino Array	75.89	325	P	P	18 32 12.5	-1.1
BVAR	Borovoye Array	81.53	348	P	P	18 32 43.4	-1.1
	0.5nm,0.7s,mb3.5,baz=32,slow=5.8,SNR=3.4						

IDC 17 18:21:36.1±0.8, 44°.20N×129°.44W, h0km, mb4.3/20, mb1 4.4/25, mb1mx4.3/31, mbtmp4.2/25, ML3.5/5, MS3.9/9, Ms1 3.8/9, ms1mx3.6/25, Error ellipse: s-maj=25.0km s-min=10.5km az=36.0
ISCJB 17 18:21:37.6±0.4, 44°.37N±0°.04×129°.37W±0°.05, h10km, mb4.4/35, MS3.7/6, Error ellipse: s-maj=6.5km s-min=4.1km az=35.0
NEIC 17 18:21:38.7±0.5, 44°.33N×129°.48W, h10km, mb4.4/28, Error ellipse: s-maj=7.7km s-min=4.8km az=38.0
GCMT 17 18:21:42.4±0.4, 44°.09N×129°.43W, h17km±1km, MW5.0, Moment Tensor Solution. s20,c21; s69,c94; Moment tensor: Scale 10^{16}Nm; Mrr-2.74±.28; Mθθ0.22±.18; Mφφ2.52±.17; Mrθ-1.64±.62; Mrφ-1.60±.12; Mθφ1.52±.38; Best double couple: Mo3.80000×10^{16} NP1:φs349.00000°, δ29.00000°, λ-64.00000°. NP2:φs140.00000°, δ64.00000°, λ-104.00000°. Principal axes: T 4.0100, Plg18.0000°, Azm240.0000°; N -0.4300, Plg12.0000°, Azm146.0000°;

P -3.5800, Plg68.0000°, Azm23.0000°; Data Used: II G IU IC CN.

ISC 17 18:21:38.9±0.4, 44°.34N±0°.04×129°.49W±0°.05, h10km, n140, σ1°18/138, mb4.4/35, MS3.7/7, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPOR	Mary's Peak	4.26	86	P	Pn	18 22 40.9	-2.8
COR	Corvallis	4.44	85	eP	Pn	18 22 42.0	-4.1
KMOR	Kings Mountain	4.45	71	P	Pn	18 22 44.5	-1.8
NLO	Nicolai Mounta	4.61	66	P	Pn	18 22 48.1	-0.5
WISH	Wishkah	4.87	53	P	Pn	18 22 52.2	+0.1
SSOR	Sweet Springs	5.05	82	P	Pn	18 22 53.6	-0.9
HUMO	Hull Mountain	5.06	108	eP	Pn	18 22 52.6	-2.1
	11nm,0.6s						
RVW	Rose Valley	5.09	67	P	Pn	18 22 54.0	-1.2
BBOR	Butler Butte	5.15	104	P	Pn	18 22 54.0	-2.0
FL2	Flat Top 2	5.37	67	P	Pn	18 22 58.7	-0.3
TDL	Tradedollar La	5.51	66	P	Pn	18 23 00.4	-0.4
YBH	Yreka Blue Hor	5.61	115	Pn	Pn	18 23 00.9	-1.4
	0.7nm,0.3s,baz=290,slow=9.6,SNR=8.0						
YBH				Sn	Sn	18 24 01.9	-4.9
	0.3nm,0.3s,baz=318,slow=14,SNR=2.2						
YBH				LR	LR	18 24 58.4	
	comp=Z,2μm,18.1s,baz=305,slow=37						
YBH	Yreka Blue Hor	5.61	115	eP	Pn	18 22 59.6	-2.7
	9.9nm,0.8s						
GNW	Green Mountain	5.65	53	P	Pn	18 23 02.2	-0.6
	0.6nm,0.5s						
HOOD	Mount Hood Mea	5.66	77	eP	Pn	18 23 02.2	-0.7
	111nm,0.8s						
LON	Longmire	5.91	63	eP	Pn	18 23 06.5	+0.2
	51nm,0.9s						
PGC	Sidney	5.99	42	eP	Pn	18 23 07.1	-0.5
	1.8nm,0.7s						
VIPM	Ingram Point	6.36	85	P	Pn	18 23 10.9	-1.6
WDC	Whiskeytown Da	6.37	124	eP	Pn	18 23 05.9	-6.8
	14nm,0.9s						
JCW	Jim Creek	6.50	51	eP	Pn	18 23 14.1	-0.4
RPW	Rockport	6.88	51	eP	Pn	18 23 19.0	-0.7
MOD	Modoc	7.15	107	eP	Pn	18 23 25.9	+2.5
	10nm,0.8s						
ETW	Entiat	7.17	60	eP	Pn	18 23 23.8	+0.2
	28nm,0.6s						
RSW	Rattlesnake Hi	7.27	70	eP	Pn	18 23 25.3	+0.3
	16nm,0.6s						
HAWA	Hanford	7.31	70	eP	Pn	18 23 25.8	+0.2
	42nm,1.1s						
BBB	Bella Bella	7.90	6	Pn	Pn	18 23 36.3	+2.6
	0.6nm,0.3s,baz=92,slow=15,SNR=8.2						
LNOR	Lincton Mounta	8.07	75	eP	Pn	18 23 37.8	+1.7
	5.7nm,0.6s						
OD2	Odessa Site #2	8.12	64	eP	Pn	18 23 35.2	-1.4
	12nm,0.6s						
BMO	Blue Mountains	8.71	82	eP	Pn	18 23 42.7	-2.1
	6.2nm,0.9s						
CMB	Columbia Colle	9.31	129	eP	Pn	18 23 53.3	+0.2
	19nm,1.1s						
NEW	Newport	9.41	61	eP	Pn	18 23 52.4	-2.0
	14nm,1.1s						
NVAR	Mina Array Bea	10.27	121	Pn	Pn	18 24 06.2	0.0
	0.2nm,0.3s,baz=285,slow=13,SNR=16						
BSMT	Bassoo Peak	10.80	66	eP	Pn	18 24 13.2	-0.2
	23nm,1.1s						
HLID	Hailey	10.90	89	eP	Pn	18 24 16.9	+2.1
	20nm,1.0s						
JTMT	Jette	11.11	67	eP	Pn	18 24 17.9	+0.3
	23nm,1.4s						
ELK	Elko	11.11	104	Pn	Pn	18 24 18.6	+0.8
	0.1nm,0.3s,baz=294,slow=10,SNR=8.9						
ELK				LR	LR	18 28 39.1	
	comp=Z,714nm,18.8s,baz=284,slow=38						
MSO	Missoula	11.18	72	eP	Pn	18 24 18.7	+0.1
	11nm,0.9s						
SWMT	Swartz Lake	11.24	68	eP	Pn	18 24 19.9	+0.4
	30nm,1.2s						
YBMT	Yellow Bay	11.31	66	eP	Pn	18 24 20.9	+0.6
	3.0nm,0.2s						
SLMT	Seeley Lake	11.54	70	eP	Pn	18 24 22.9	-0.6
	78nm,1.2s						
CHMT	Chamberlain Mo	11.66	72	eP	Pn	18 24 21.8	-3.4
	15nm,1.3s						
WALA	Waterton Lakes	11.69	61	eP	Pn	18 24 23.9	-1.7
	0.6nm,1.2s						
MCMT	McKenzie Canyo	11.88	82	eP	Pn	18 24 28.6	+0.4
	5.1nm,0.9s						
DLMT	Dillon	12.04	79	eP	Pn	18 24 32.1	+1.8
	24nm,1.3s						
LRM	Limekiln Ridge	12.14	77	eP	Pn	18 24 32.2	+0.5
	58nm,1.0s						
HVU	Hansel Valley	12.49	96	eP	Pn	18 24 35.8	-0.8
	19nm,1.5s						
BGU	Big Grassy Mou	12.59	100	eP	Pn	18 24 38.5	+0.5
	20nm,1.4s						
HRY	Holter Researc	12.61	73	eP	Pn	18 24 40.6	+2.5
	10nm,0.8s						
BOZ	Bozeman (W)	12.71	78	eP	Pn	18 24 40.5	+0.9
	24nm,1.3s						
RRI2	Red Ridge	13.16	88	eP	Pn	18 24 47.7	+2.0
	12nm,1.1s						
DCID1	Drake Creek	13.21	87	eP	Pn	18 24 47.8	+1.4
YMR	Madison River	13.23	82	eP	Pn	18 24 49.2	+2.5
	14nm,0.9s						
GSC	Goldstone	13.27	129	eP	Pn	18 24 48.6	+1.4
	28nm,1.3s						
IMW	Indian Meadow	13.34	85	eP	Pn	18 24 50.1	+1.9
	41nm,1.4s						
TPAW	Teton Pass	13.40	87	eP	Pn	18 24 50.4	+1.5
	40nm,1.3s						
REDW	Red Top Meadow	13.49	88	eP	Pn	18 24 53.3	+3.1
	71nm,1.5s						
LOHW	Long Hollow	13.62	86	eP	Pn	18 24 54.2	+2.2
	44nm,1.5s						
JLU	Jordanelle	13.83	99	eP	Pn	18 24 56.4	+1.6
	24nm,1.7s						
EDM	Edmonton	13.84	44	eP	Pn	18 24 55.9	+1.1
CCUT	Cedar City	13.94	114	eP	Pn	18 24 57.5	+1.1
	54nm,1.7s						
DAU	Daniels Canyon	14.04	100	P	Pn	18 24 59.8	+2.2
	9.5nm,1.1s						
GCMT	Greycliff	14.09	77	eP	Pn	18 25 07.7	+9.4
	32nm,0.9s						
DLBC	Dease Lake	14.12	359	Pn	Pn	18 25 03.6	+4.9
	0.1nm,0.3s,baz=348,slow=26,SNR=3.4						
DLBC	Dease Lake	14.12	359	eP	Pn	18 25 03.1	+4.5
EGMT	Eagleton	14.15	68	eP	Pn	18 24 58.7	-0.5
	40nm,1.1s						
MSU	Marysvale	14.23	108	eP	Pn	18 25 09.1	+8.9
	50nm,1.6s						
RLMT	Red Lodge	14.40	80	eP	Pn	18 25 11.5	+8.9
	19nm,0.9s						
LDFC	Landfair	14.41	125	P	Pn	18 25 04.4	+1.7
TMUT	Trail Mountain	14.53	104	eP	Pn	18 25 12.5	+8.1
	12nm,0.9s						
PDAR	Pinedale Array	14.54	89	Pn	Pn	18 25 05.7	+1.2
	0.0nm,0.3s,baz=278,slow=10,SNR=7.9						
PDAR				LR	LR	18 30 42.2	
	comp=Z,802nm,19.9s,baz=303,slow=38						
SRU	San Rafael	15.09	104	eP	Pn	18 25 18.7	+6.8
WUAZ	Wupatki	16.43	116	eP	Pn	18 25 30.9	+1.5
	22nm,1.0s						
RWWY	Rawlins	16.50	91	eP	Pn	18 25 29.4	-1.0
	25nm,1.1s						
PV04	Paradox Valley	16.54	104	eP	Pn	18 25 31.6	+0.8
PV01	Paradox Valley	16.89	104	eP	Pn	18 25 34.8	-0.5
	4μm,1.3s						
MVCO	Mesa Verde	17.40	107	eP	Pn	18 25 41.2	-0.3
SMCO	Snowmass	17.55	99	eP	Pn	18 25 43.8	+0.2
	17nm,1.3s						
PHWY	Pilot Hill	17.88	91	eP	Pn	18 25 45.4	-2.0
	25nm,1.4s						
DGMT	Dagmar	17.89	68	eP	Pn	18 25 48.3	+0.6
	68nm,1.3s						
RSSD	Black Hills	18.23	82	eP	Pn	18 25 52.0	+0.3
	12nm,1.1s						
ISCO	Idaho Springs	18.28	96	eP	Pn	18 25 52.7	+0.3
	18nm,1.3s						
TUC	Tucson	18.91	123	eP	Pn	18 26 01.2	+1.0
	5.7nm,0.9s						
SDCO	Great Sand Dun	19.22	102	eP	Pn	18 26 03.0	-0.8
	7.0nm,1.0s						
LAZ	Ladron	19.87	112	eP	Pn	18 26 11.0	-0.7
	7.1nm,1.1s						
ANMO	Albuquerque	20.01	110	P	P	18 26 10.2	-1.4
	0.1nm,0.3s,baz=326,slow=3.6,SNR=4.2						
ANMO				LR	LR	18 34 10.9	
	comp=Z,374nm,19.4s,MS3.8,baz=202,slow=38						
ANMO	Albuquerque	20.01	110	eP	P	18 26 10.0	-1.6
LENM	Lemitar	20.12	113	eP	P	18 26 13.0	+0.1
	13nm,1.1s						
YKA	Yellowknife Ar	20.14	20	P	P	18 26 12.5	-0.2
	14nm,1.0s,baz=208,slow=11,SNR=14						
BNM	Barren Site	20.36	112	eP	P	18 26 16.3	+0.8
	13nm,1.2s						
FFC	Flin Flon	20.52	50	eP	P	18 26 16.8	-0.2
	33nm,1.1s						
DAWY	Dawson	20.55	348	eP	P	18 26 19.6	+2.4
EGAK	Eagle	21.50	346	eP	P	18 26 28.4	+0.9
	7.4nm,1.1s,mb3.9						
ILAR	Eielson Array	22.67	341	P	P	18 26 41.2	+1.4
	8.1nm,0.9s,mb4.2,baz=156,slow=7.3,SNR=40						
ILAR				PcP	PcP	18 30 31.0	-1.0
	0.7nm,0.9s,baz=160,slow=2.9,SNR=4.4						
ILAR				LR	LR	18 33 54.6	
	comp=Z,195nm,19.3s,MS3.5,baz=136,slow=32						
MNTX	Cornudas Mount	22.71	116	eP	P	18 26 40.1	-0.5
	4.8nm,1.2s,mb3.8						
ULM	Lac du Bonnet	23.41	63	P	P	18 26 46.8	-1.1
	11nm,0.6s,mb4.5,baz=283,slow=9.0,SNR=9.1						
ULM				LR	LR	18 37 09.2	
	comp=Z,29nm,18.1s,MS2.8,baz=197,slow=40						
ULM	Lac du Bonnet	23.41	63	eP	P	18 26 46.3	-1.6
ULM				LR	LR	18 37 09.2	
AGMN	Agassiz Nation	23.45	68	eP	P	18 26 46.6	-1.7
	41nm,1.4s,mb4.7						
ECSD	EROS Data Cent	23.56	80	eP	P	18 26 48.3	-1.2
	34nm,1.3s,mb4.6						
INK	Inuvik	24.12	356	P	P	18 26 54.0	-0.4
	3.3nm,1.0s,mb3.7,baz=170,slow=10,SNR=3.8						
INK				LR	LR	18 36 04.7	
	comp=Z,290nm,18.3s,MS3.8,baz=231,slow=36						
INK	Inuvik	24.12	356	P	P	18 26 54.0	-0.4
INK				LR	LR	18 36 04.7	
KSU1	Kansas State U	24.99	91	eP	P	18 27 06.2	+3.6
TXAR	Lajitas Array	25.38	117	P	P	18 27 04.8	-1.5
	4.3nm,1.0s,mb3.9,baz=305,slow=4.4,SNR=14						
WMOK	Wichita Mounta	25.42	102	eP	P	18 27 05.4	-1.2
	36nm,1.3s,mb4.7						
FCC	Fort Churchill	25.94	44	eP	P	18 27 11.0	0.0
	1.1nm,1.1s,mb3.3						
EYMN	Ely	26.39	69	eP	P	18 27 14.4	-0.8
	19nm,1.0s,mb4.6						
JCT	Junction City	27.17	111	eP	P	18 27 20.1	-2.3
	12nm,1.0s,mb4.4						
COWI	Conover	28.27	72	eP	P	18 27 31.0	-1.0
	4.0nm,0.7s,mb4.2						
CCM	Cathedral Cave	29.26	89	eP	P	18 27 39.4	-1.5
OLIL	Olney	31.23	86	eP	P	18 27 56.9	-1.5
	19nm,0.2s						
RES	Resolute Bay	34.06	16	P	P	18 28 23.1	+0.3
	10nm,0.8s,mb4.8,baz=230,slow=10,SNR=8.0						
SCHQ	Schefferville	40.64	52	P	P	18 29 17.4	-1.3
	4.5nm,0.9s,mb4.1,baz=246,slow=5.8,SNR=4.9						
PETK	Petropavlovsk-	46.88	308	P	P	18 30 07.3	-1.6
	2.0nm,0.8s,mb4.1,baz=80,slow=11,SNR=3.1						
SUMG	Summit	48.68	24	eP	P	18 30 23.4	+0.8
	23nm,1.2s,mb5.1						
ARCES	ARCESS Array B	64.96	9	P	P	18 32 17.8	-0.4
	2.8nm,0.8s,mb4.3,baz=350,slow=3.0,SNR=6.5						
NB2	NORSAR Subarra	70.23	19	P	P	18 32 51.3	-0.2
	comp=Z,6.2nm,1.0s,mb4.5,baz=334,slow=6.2						
NOA	NORSAR Array B	70.23	19	P	P	18 32 51.8	+0.3
	comp=Z,2.7nm,0.8s,mb4.2,baz=334,slow=5.8,SNR=7.0						
CBIJ	Chichi jima	70.47	289	LR	LR	18 56 47.6	
	comp=Z,117nm,21.1s,MS4.1,baz=253,slow=30						
KSRS	Korea Array	72.70	306	P	P	18 33 06.7	-0.2
	comp=Z,0.3nm,0.4s,mb3.5,baz=52,slow=8.1,SNR=4.5						
FINES	FINESS Array B	72.73	12	P	P	18 33 06.4	-0.2
	comp=Z,10.0nm,0.9s,mb4.8,baz=19,slow=6.5,SNR=18						
SONM	Songino Array	75.90	325	P	P	18 33 25.7	+0.4
	comp=Z,2.6nm,0.8s,mb4.2,baz=49,slow=2.9,SNR=15						
ZALV	Zalesovo Beam	77.79	340	P	P	18 33 35.9	0.0
	comp=Z,2.7nm,0.8s,mb4.2,baz=21,slow=6.3,SNR=14						
ARU	Arti	79.37	355	eP	P	18 33 44.3	-0.2
	comp=Z,23nm,1.4s,mb4.9						
BRG	Berggiesshubel	80.00	23	eP	P	18 33 48.5	+0.4
	comp=Z,16nm,1.7s,mb4.7						
GRF	Grafenberg Arr	80.27	25	eP	P	18 33 50.0	+0.5
	comp=Z,16nm,1.6s,mb4.7						
GRF				eL		19 10 59.0	
	comp=Z,116nm,20.3s						
GRF	Grafenberg Arr	80.27	25	eP	P	18 33 50.0	+0.5
	comp=Z,16nm,1.6s,mb4.7						
GRF				LR	LR		
	comp=Z,100nm,20.3s,MS4.2						
BRVK	Borovoye	81.50	348	eP	P	18 33 56.0	-0.1
	comp=Z,7.0nm,0.8s,mb4.6						
BVAR	Borovoye Array	81.52	348	P	P	18 33 56.1	0.0
	comp=Z,4.0nm,0.7s,mb4.5,baz=27,slow=4.0,SNR=26						
LPAZ	La Paz	82.17	122	P	P	18 33 58.2	-1.8
	comp=Z,4.6nm,0.8s,mb4.4,baz=334,slow=4.6,SNR=14						
KURK	Kurchatov	82.22	342	eP	P	18 33 59.3	-0.6
	comp=Z,14nm,1.4s,mb4.7						
NIE	Niedzica	82.96	19	eP	P	18 34 04.5	+0.7
ESDC	Sonseca Array	83.04	39	P	P	18 34 03.9	-0.5
	comp=Z,0.3nm,0.4s,mb3.7,baz=328,slow=2.9,SNR=4.3						
VYHS	Vyhne	83.46	21	eP	P	18 34 06.8	+0.4
AKASG	Malin Array Be	83.55	13	P	P	18 34 06.2	-0.6
	comp=Z,3.2nm,0.7s,mb4.5,baz=340,slow=4.5,SNR=15						
CRVS	Cervenica-Dubn	83.72	19	epP	pP	18 34 13.5	+2.5
KECS	Kecovo	83.88	20	eP	P	18 34 10.0	+1.5
PSZ	Piszkesteto	84.26	20	eP	P	18 34 12.7	+2.2
	comp=Z,22nm,1.5s,mb5.1						
MKAR	Makanchi Array	85.01	339	P	P	18 34 13.9	-0.3
	comp=Z,1.6nm,1.0s,mb4.1,baz=35,slow=4.4,SNR=8.9						
MKAR				LR	LR	19 11 25.7	
	comp=Z,59nm,20.1s,MS4.0,baz=23,slow=35						
AKTK	Aktyubinsk	85.38	355	P	P	18 34 16.1	0.0
AKTO	Aktyubinsk	85.38	355	P	P	18 34 16.1	0.0
	comp=Z,2.2nm,0.5s,mb4.5,baz=353,slow=5.3,SNR=7.2						
LSZ	Lusaka	145.38	40	ePKPdf	PKPdf	18 41 16.8	-0.4

IDC 17 18:22:11.9±1.9, 2°.16N×125°.22E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/23, mbtmp3.4/4, Error ellipse: s-maj=124.8km s-min=25.0km az=67.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.14	179	P	P	18 26 48.3	+0.6
	0.7nm,0.6s,baz=12,slow=9.4,SNR=4.9						
WRA	Warramunga Arr	23.72	158	P	P	18 27 25.8	-0.1
	1.0nm,0.5s,baz=336,slow=10,SNR=29						
ASAR	Alice Springs	27.03	162	P	P	18 27 55.6	-0.3
	0.2nm,0.5s,baz=342,slow=7.7,SNR=8.3						
MKAR	Makanchi Array	57.99	327	P	P	18 32 06.5	+0.1
	0.2nm,0.3s,baz=122,slow=8.1,SNR=4.4						

IDC 17 18:24:11.7±1.8, 36°.67N×141°.64E, h0km, mb3.5/4, mb1 3.6/8, mb1mx3.4/27, mbtmp3.5/8, ML3.2/3, Error ellipse: s-maj=32.7km s-min=22.1km az=85.0
ISCJB 17 18:24:14.2±1.1, 36°.66N±0°.04×141°.59E±0°.06, h26km±6km, mb3.3/4, Error ellipse: s-maj=8.5km s-min=5.9km az=6.9
NEIC 17 18:24:16.4, 36°.68N×141°.42E, h49km, MG3.3(JMA), After JMA.
JMA 17 18:24:16.3±0.1, 36°.68N×141°.42E, h49km±2km, M3.3

ISC 17 18:24:14.9±1.1, 36°.69N±0°.03×141°.53E±0°.06, h16km±5km, n21, σ0°.75/33, mb3.3/4, 1C-3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.71	305	⇓P	Pg	18 24 29.2	+0.3
ONAJ				S	Sg	18 24 38.4	+0.1
JHO	Hitachi	0.78	264	⇓P	Pg	18 24 29.7	-0.3
JHO				S	Sg	18 24 39.8	-0.5
JFK	Kawauchi	0.85	322	P	Pb	18 24 31.4	0.0
JFK				S	Sb	18 24 42.8	+0.2
JFT	Otama	1.26	311	⇓P	Pn	18 24 38.1	+0.2
JFT				S	Sb	18 24 53.9	-0.4
JMM	Marumori	1.31	334	P	Pn	18 24 38.0	-0.6
JMM				S	Sb	18 24 54.4	-1.4
JFY	Yanaizu	1.62	297	P	Pn	18 24 43.5	+0.6
JFY				S	Sn	18 25 04.2	+0.7
JAG	Ashikaga	1.69	262	⇑P	Pn	18 24 43.2	-0.6
JIO	Ouri	1.77	355	P	Pn	18 24 44.3	-0.5
JOU	Okura	1.81	338	P	Pn	18 24 46.4	+1.0
JOU				S	Sn	18 25 08.7	+0.7
JKT	Katashina	1.83	273	P	Pn	18 24 46.2	+0.4
JKT				S	Sn	18 25 08.5	-0.1
MJAR	Matsushiro Arr	2.67	268	Pn	Pn	18 24 57.2	-0.2
	7.0nm,0.3s,baz=90,slow=15,SNR=50						
MJAR				Sn	Sn	18 25 30.2	+0.8
	5.4nm,0.3s,baz=83,slow=14,SNR=9.1						
MJAR	Matsushiro Arr	2.67	268	Pn	Pn	18 24 57.1	-0.2
MJAR				Sn	Sn	18 25 30.2	+0.7
MAJO	Matsushiro	2.68	268	eP	Pn	18 24 58.1	+0.7
MAT	Matsushiro	2.68	268	P	Pn	18 24 58.1	+0.7
MAT				S	Sn	18 25 27.2	-2.3
JHJ	Hachijo jima 2	3.84	202	Pn	Pn	18 25 13.6	+0.2
	6.0nm,0.3s,baz=319,slow=18,SNR=16						
JHJ				Sn	Sn	18 25 58.3	+0.1
	24nm,0.3s,baz=108,slow=23,SNR=7.8						
ASAJ	Asahikawa	7.46	6	Pn	Pn	18 26 03.0	0.0
	0.4nm,0.3s,baz=218,slow=12,SNR=4.1						
KSRS	Korea Array	10.90	278	Pn	Pn	18 26 52.1	+1.9
	0.1nm,0.3s,baz=86,slow=16,SNR=3.7						
SONM	Songino Array	28.05	304	P	P	18 30 05.7	+0.3
	0.2nm,0.4s,mb3.1,baz=113,slow=11,SNR=3.0						
ZALV	Zalesovo Beam	42.21	313	P	P	18 32 06.3	-0.6
	0.3nm,0.4s,mb3.3,baz=107,slow=8.0,SNR=2.3						
MKAR	Makanchi Array	44.38	302	P	P	18 32 23.8	-0.7
	0.2nm,0.6s,mb3.0,baz=72,slow=9.3,SNR=2.4						
WRA	Warramunga Arr	56.73	188	P	P	18 33 56.8	-1.1
	0.7nm,1.0s,mb3.6,baz=5.7,slow=7.9,SNR=5.1						

NEIC 17 18:26:06.6, 31°.89S×72°.15W, h34km, ML3.6(GUC), After GUC.

GUC 17 18:26:06.6±0.7, 31°.89S×72°.15W, h34km±3km, MD3.9, ML3.6, 6C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	Los Chungos	0.55	89	⇓iP	Pb	18 26 17.5	-0.5
CHNG				iS	Sb	18 26 26.3	+0.4
CMCH	Combarbala	1.21	54	eP	Pn	18 26 27.9	+0.7
CMCH				eS	Sn	18 26 44.2	+1.8
CMCH	Combarbala	1.21	54	eP	Pn	18 26 27.9	+0.7
CMCH				eS	Sn	18 26 44.2	+1.8
CMCH				AML	AML	18 26 52.0	
	comp=N,5μm,0.7s						
ROCH	El Roble	1.44	139	⇑iP	Pn	18 26 31.7	+1.4
ROCH				eS	Sn	18 26 50.8	+2.7
ROCH	El Roble	1.44	139	⇑iP	Pn	18 26 31.7	+1.4
ROCH				eS	Sn	18 26 50.8	+2.7
JACH	Jahuel	1.53	121	eP	Pn	18 26 33.3	+1.7
JACH				eS	Sn	18 26 53.0	+2.7
JACH	Jahuel	1.53	121	eP	Pn	18 26 33.3	+1.7
JACH				eS	Sn	18 26 53.0	+2.7
PEL	Peldehue	1.76	136	⇑iP	Pn	18 26 36.2	+1.5
PEL				iS	Sn	18 26 58.5	+2.7
PEL				AML	AML	18 27 15.7	
	comp=N,1μm,0.7s						
RCDM	Rinconada Maip	1.95	145	eP	Pn	18 26 39.0	+1.6
RCDM				iS	Sn	18 27 03.0	+2.3
RCDM	Rinconada Maip	1.95	145	eP	Pn	18 26 39.0	+1.6
RCDM				iS	Sn	18 27 03.0	+2.3
RCDM				AML	AML	18 27 15.3	
	comp=N,333nm,0.4s						
CLCH	Cerro Calan	2.02	138	⇑iP	Pn	18 26 40.0	+1.7
CLCH				iS	Sn	18 27 05.1	+2.6
CLCH				AML	AML	18 27 21.1	
	comp=E,794nm,0.6s						
TACH	Talagante	2.03	150	eP	Pn	18 26 40.1	+1.6
TACH				iS	Sn	18 27 05.4	+2.8
TACH	Talagante	2.03	150	eP	Pn	18 26 40.1	+1.6
TACH				iS	Sn	18 27 05.4	+2.8
TLL	Tololo Astrono	2.07	34	eP	Pn	18 26 40.5	+1.6
TLL	Tololo Astrono	2.07	34	eP	Pn	18 26 40.5	+1.6
TLL				AML	AML	18 27 23.8	
	comp=N,663nm,0.7s						
FCH	Farellones	2.12	133	eP	Pn	18 26 32.7	-7.0
FCH				eS	Sn	18 27 00.1	-4.7
FCH				AML	AML	18 27 10.3	
	comp=E,275nm,0.6s						
LNV	Longovilo	2.15	163	eP	Pn	18 26 41.4	+1.3
LNV	Longovilo	2.15	163	eP	Pn	18 26 41.4	+1.3
PCH	Pirque	2.21	142	⇑iP	Pn	18 26 42.9	+2.0
PCH	Pirque	2.21	142	⇑iP	Pn	18 26 42.9	+2.0
CHCH	Chadas Angostu	2.39	149	eP	Pn	18 26 44.9	+1.5
CHCH	Chadas Angostu	2.39	149	eP	Pn	18 26 44.9	+1.5
LMEL	Las Melosas	2.55	141	eP	Pn	18 26 47.5	+2.0
LMEL				iS	Sn	18 27 18.0	+2.7
LMEL	Las Melosas	2.55	141	eP	Pn	18 26 47.5	+2.0
LMEL				iS	Sn	18 27 18.0	+2.7
LMEL				AML	AML	18 27 20.9	
	comp=E,194nm,0.4s						
CACH	El Canelo	2.57	150	eP	Pn	18 26 47.9	+2.0
CACH	El Canelo	2.57	150	eP	Pn	18 26 47.9	+2.0

IDC 17 18:28:58.3±2.0, 1°.19N×125°.40E, h0km, mb3.2/3, mb1 3.5/3, mb1mx3.2/21, mbtmp3.3/3, Error ellipse: s-maj=191.9km s-min=26.3km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.75	158	P	P	18 34 02.0	-0.2
	0.4nm,0.4s,baz=336,slow=11,SNR=18						
ASAR	Alice Springs	26.05	162	P	P	18 34 33.8	+0.3
	0.3nm,0.6s,baz=341,slow=8.5,SNR=9.8						
MKAR	Makanchi Array	58.91	327	P	P	18 38 59.3	+0.1
	0.1nm,0.4s,baz=126,slow=7.3,SNR=4.2						

*ISK 17

mb3.8/14, MS3.3/6, Error ellipse: s-maj=4.0km s-min=3.5km az=154.6
*NEIC **17** 18:57:09.2±4.2, 22°.13N×121°.81E, h20km±26km, mb4.1/1, Error ellipse: s-maj=13.8km s-min=11.0km az=70.0*
*TAP **17** 18:57:11.1, 22°.19N×121°.48E, h20km, ML4.2, B*
*JMA **17** 18:57:11.9±0.4, 22°.24N×121°.71E, h25km, M3.9*
ISC 17 18:57:10.1±0.4, 22°.10N±0°.02×121°.57E±0°.02, h21km±3km, n90, σ1°23/138, mb3.8/14, MS3.3/6, 4C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.06**	**193**	⇑*i*P	**Pb**	**18 57 15.6**	**+1.6**
	baz=147						
LAY				*e*S	**Sb**	**18 57 18.7**	**+2.1**
	baz=147						
TSEB	**Hengchuen, Pin**	**0.65**	**252**	P	**Pb**	**18 57 23.4**	**+0.7**
	baz=257						
TSEB				S	**Sb**	**18 57 32.3**	**+0.9**
	baz=257						
TAW	**Tawu**	**0.67**	**293**	⇑*i*P	**Pb**	**18 57 21.8**	**-1.4**
	baz=287						
TAW				*i*S	**Sb**	**18 57 29.5**	**-2.6**
	baz=287						
EAST	**Anshuo**	**0.72**	**293**	⇑*i*P	**Pb**	**18 57 22.6**	**-1.4**
	baz=289						
EAST				*e*S	**Sb**	**18 57 30.1**	**-3.4**
	baz=289						
TWK1	**Hengchun**	**0.72**	**258**	P	**Pb**	**18 57 23.5**	**-0.5**
	baz=259						
TWK1				S	**Sb**	**18 57 32.7**	**-0.8**
	baz=259						
ECL	**Taimali**	**0.75**	**311**	P	**Pb**	**18 57 22.7**	**-1.9**
	baz=296						
ECL				*e*S	**Sb**	**18 57 30.8**	**-3.5**
	baz=296						
TTN	**Taitung**	**0.76**	**329**	*e*P	**Pb**	**18 57 23.8**	**-0.8**
	baz=341						
TTN				*e*S	**Sb**	**18 57 32.8**	**-1.8**
	baz=341						
HEN	**Hengchun**	**0.77**	**263**	*i*P	**Pb**	**18 57 25.4**	**+0.5**
	baz=255						
HEN				S	**Sb**	**18 57 33.8**	**-1.2**
	baz=255						
TWG	**Pinlang**	**0.85**	**328**	*e*P	**Pb**	**18 57 23.8**	**-2.4**
TWG	**Pinlang**	**0.85**	**328**	*e*P	**Pb**	**18 57 24.8**	**-1.4**
	baz=315						
TWG				*e*S	**Sb**	**18 57 34.6**	**-2.6**
	baz=315						
SCZT	**Fangliau**	**0.92**	**287**	⇑*i*P	**Pb**	**18 57 25.9**	**-1.4**
	baz=283						
SSD	**Sandimen**	**1.08**	**307**	*i*P	**Pn**	**18 57 27.9**	**-2.0**
	baz=306						
TWP	**Hsiaoliuchiu**	**1.14**	**283**	*e*P	**Pn**	**18 57 31.2**	**+0.4**
	baz=279						
ELDTW	**Lidau**	**1.20**	**335**	*e*P	**Pn**	**18 57 29.4**	**-2.2**
	baz=337						
KAU	**Kaohsiung**	**1.25**	**292**	*e*P	**Pn**	**18 57 33.5**	**+1.1**
	baz=289						
TWF1	**Yuli**	**1.27**	**349**	*e*P	**Pn**	**18 57 31.3**	**-1.3**
	baz=338						
TWF1				*e*S	**Sn**	**18 57 46.3**	**-2.7**
	baz=338						
TWM1	**Houshan**	**1.28**	**304**	*e*P	**Pn**	**18 57 33.0**	**+0.2**
	baz=303						
YULB	**Yu-li**	**1.31**	**349**	*e*P	**Pn**	**18 57 31.4**	**-1.8**
EHY	**Hungye**	**1.42**	**351**	*e*P	**Pn**	**18 57 33.1**	**-1.6**
	baz=340						
EHY				*e*S	**Sn**	**18 57 51.5**	**-1.1**
	baz=340						
CHN3	**Shinhua**	**1.48**	**311**	*e*P	**Pn**	**18 57 36.6**	**+1.2**
	baz=310						
CHN3				*e*S	**Sn**	**18 57 56.1**	**+2.0**
	baz=310						
TPUB	**Ta-pu**	**1.48**	**324**	*e*P	**Pn**	**18 57 35.3**	**-0.1**
TWK	**Hsinying**	**1.53**	**320**	*e*P	**Pn**	**18 57 36.6**	**+0.4**
	baz=320						
TAI1	**Yung-k'ang**	**1.55**	**307**	*e*P	**Pn**	**18 57 37.0**	**+0.5**
	baz=306						
SCLT	**Jiali**	**1.66**	**310**	*e*P	**Pn**	**18 57 38.0**	**0.0**
	baz=309						
SCLT				*e*S	**Sn**	**18 57 58.9**	**+0.3**
	baz=309						
CHN5	**Tsauling**	**1.70**	**331**	*e*P	**Pn**	**18 57 39.6**	**+1.1**
	baz=331						
CHN5				*e*S	**Sn**	**18 58 01.1**	**+1.4**
	baz=331						
ESL	**Shilin**	**1.71**	**356**	*e*P	**Pn**	**18 57 37.5**	**-1.2**
	baz=6.0						
ESL				*e*S	**Sn**	**18 57 59.2**	**-0.7**
	baz=6.0						
CHY	**Chiayi**	**1.75**	**323**	*e*P	**Pn**	**18 57 39.6**	**+0.5**
	baz=323						
CHY				*e*S	**Sn**	**18 57 59.6**	**-1.1**
	baz=323						
SSLB	**Suanglung**	**1.77**	**342**	*e*P	**Pn**	**18 57 40.0**	**+0.5**
WGK	**Gukeng**	**1.83**	**330**	*e*P	**Pn**	**18 57 40.5**	**+0.2**
	baz=330						
WGK				*e*S	**Sn**	**18 58 03.4**	**+0.6**
	baz=330						
HWA	**Hwalien**	**1.87**	**1**	*e*P	**Pn**	**18 57 43.0**	**+2.1**
	baz=14						
SMLT	**Sun Moon Lake**	**1.88**	**341**	*e*P	**Pn**	**18 57 41.4**	**+0.5**
	baz=351						
SMLT				*e*S	**Sn**	**18 58 05.2**	**+1.2**
	baz=351						
TYC	**Yuchr**	**1.91**	**340**	*e*P	**Pn**	**18 57 42.2**	**+0.8**
	baz=341						
TYC				*e*S	**Sn**	**18 58 05.3**	**+0.5**
	baz=341						
WNT	**Mingjian**	**1.95**	**336**	*e*P	**Pn**	**18 57 43.2**	**+1.3**
	baz=318						
WNT				*e*S	**Sn**	**18 58 07.0**	**+1.3**
	baz=318						
WSF	**Szhu**	**1.97**	**321**	*e*P	**Pn**	**18 57 42.8**	**+0.6**
	baz=321						
WSF				*e*S	**Sn**	**18 58 05.9**	**-0.4**
	baz=321						
TWD	**Chiawan**	**1.97**	**1**	*e*P	**Pn**	**18 57 41.6**	**-0.6**
	baz=10.0						
TWD				*e*S	**Sn**	**18 58 06.0**	**-0.3**
	baz=10.0						
WHF	**Hehuan Shan**	**2.05**	**352**	*e*P	**Pn**	**18 57 44.0**	**+0.6**
	baz=353						
WHF				*e*S	**Sn**	**18 58 07.9**	**-0.5**
	baz=353						
NACB	**Ninganchiao**	**2.06**	**1**	*e*P	**Pn**	**18 57 42.4**	**-1.2**
WDGT	**Dungji**	**2.10**	**304**	*e*P	**Pn**	**18 57 42.7**	**-1.4**
	baz=302						
WDGT				*e*S	**Sn**	**18 58 07.3**	**-2.4**
	baz=302						
WTCT	**Ta-ch'eng**	**2.12**	**326**	*e*P	**Pn**	**18 57 43.6**	**-0.7**
	baz=311						
TWT	**Tachien**	**2.17**	**351**	*e*P	**Pn**	**18 57 45.4**	**+0.4**
	baz=1.0						
TWT				S	**Sn**	**18 58 11.2**	**-0.1**
	baz=1.0						
TCU	**Taichung**	**2.20**	**338**	*e*P	**Pn**	**18 57 46.4**	**+1.0**
	baz=323						
TCU				*e*S	**Sn**	**18 58 11.6**	**-0.3**
	baz=323						
ENA	**Nanau**	**2.32**	**4**	*e*P	**Pn**	**18 57 46.9**	**-0.2**
	baz=14						
ENA				*e*S	**Sn**	**18 58 14.8**	**-0.2**
	baz=14						
NNS	**Nan Shan**	**2.34**	**356**	*e*P	**Pn**	**18 57 48.1**	**+0.8**
	baz=356						
NNS				*e*S	**Sn**	**18 58 18.0**	**+2.7**
	baz=356						
TWQ1	**Liyutan**	**2.35**	**342**	*e*P	**Pn**	**18 57 48.5**	**+0.9**
	baz=325						
TWQ1				*e*S	**Sn**	**18 58 18.0**	**+2.2**
	baz=325						
PNG	**Penghu**	**2.36**	**309**	*e*P	**Pn**	**18 57 46.9**	**-0.7**
	baz=307						
PNG				*e*S	**Sn**	**18 58 13.4**	**-2.6**
	baz=307						
NSY	**Sanyi**	**2.42**	**342**	*e*P	**Pn**	**18 57 50.2**	**+1.7**
	baz=327						
NSY				*e*S	**Sn**	**18 58 19.5**	**+2.0**
	baz=327						
TWC	**Suao**	**2.51**	**6**	*e*P	**Pn**	**18 57 50.9**	**+1.2**
	baz=16						
TWC				*e*S	**Sn**	**18 58 20.1**	**+0.4**
	baz=16						
YHNB	**Yeheng**	**2.56**	**356**	*e*P	**Pn**	**18 57 50.8**	**+0.4**
NSK	**Sanguang**	**2.57**	**356**	*e*P	**Pn**	**18 57 51.4**	**+0.9**
	baz=6.0						
NSK				*e*S	**Sn**	**18 58 21.8**	**+0.6**
	baz=6.0						
NSTT	**Nanjuang**	**2.57**	**348**	*e*P	**Pn**	**18 57 51.7**	**+1.2**
	baz=333						
NSTT				*e*S	**Sn**	**18 58 21.8**	**+0.6**
	baz=333						
TWE	**Neicheng**	**2.61**	**2**	*e*P	**Pn**	**18 57 52.2**	**+1.1**
	baz=352						
TWE				*e*S	**Sn**	**18 58 22.2**	**+0.1**
	baz=352						
ILA	**Ilan**	**2.66**	**4**	*e*P	**Pn**	**18 57 53.6**	**+1.9**
	baz=353						
ILA				*e*S	**Sn**	**18 58 23.9**	**+0.6**
	baz=353						
YOJ	**Yonaguni jima**	**2.70**	**29**	P	**Pn**	**18 57 52.4**	**+0.1**
YOJ				*e*S	**Sn**	**18 58 23.2**	**-1.1**
HATJ	**Hateruma jima**	**2.84**	**46**	P	**Pn**	**18 57 54.4**	**+0.2**
HATJ				S	**Sn**	**18 58 25.8**	**-1.9**
TATO	**Taipei**	**2.86**	**359**	*e*P	**Pn**	**18 57 54.7**	**+0.2**
TWA	**Mucha**	**2.87**	**0**	*e*P	**Pn**	**18 57 56.1**	**+1.5**
TWA				*e*S	**Sn**	**18 58 29.2**	**+0.7**
NCU	**National Centr**	**2.88**	**353**	*e*P	**Pn**	**18 57 56.9**	**+2.1**
	baz=336						
NCU				*e*S	**Sn**	**18 58 29.0**	**+0.3**
	baz=336						
TAP1	**Taipei**	**2.93**	**359**	*e*P	**Pn**	**18 57 56.9**	**+1.5**
	baz=359						
TAP1				*e*S	**Sn**	**18 58 29.9**	**0.0**
	baz=359						
NWF	**Wu-fen Shan**	**2.96**	**4**	*e*P	**Pn**	**18 57 57.5**	**+1.6**
	baz=354						
NWF				*e*S	**Sn**	**18 58 31.6**	**+0.8**
	baz=354						
IRIF	**Iriomote-Funau**	**2.98**	**41**	P	**Pn**	**18 57 56.6**	**+0.4**
IRIF				S	**Sn**	**18 58 29.8**	**-1.6**
TWS1	**Kuangyinshan**	**2.99**	**357**	*e*P	**Pn**	**18 57 58.0**	**+1.7**
	baz=10.0						
TWS1				*e*S	**Sn**	**18 58 32.4**	**+0.9**
	baz=10.0						
JKRS	**Kuro-shima**	**3.10**	**46**	P	**Pn**	**18 57 58.4**	**+0.7**
JKRS				S	**Sn**	**18 58 31.8**	**-2.3**
TWY	**Chenhua**	**3.16**	**1**	*e*P	**Pn**	**18 57 59.2**	**+0.5**
TWY				*e*S	**Sn**	**18 58 35.5**	**-0.2**
JIJ	**Ishigaki jima**	**3.27**	**46**	P	**Pn**	**18 58 00.1**	**0.0**
JIJ				S	**Sn**	**18 58 35.2**	**-3.2**
KNM	**Kinmen**	**3.69**	**309**	*e*P	**Pn**	**18 58 06.5**	**+0.6**
	baz=306						
KNM				*e*S	**Sn**	**18 58 48.1**	**-0.7**
	baz=306						
JTJ	**Tarama**	**3.83**	**48**	P	**Pn**	**18 58 08.7**	**+0.8**
JTJ				S	**Sn**	**18 58 50.3**	**-2.0**
QZH	**Quanzhou**	**3.93**	**317**	Pn	**Pn**	**18 58 07.8**	**-1.4**
QZH				Sn	**Sn**	**18 58 50.8**	**-3.9**
QZH				smax			
	comp=N,160nm,0.3s						
QZH				smax			
	comp=E,130nm,0.8s						
JMJ	**Miyako jima 2**	**4.36**	**51**	S	**Sn**	**18 59 03.9**	**-1.4**
DAV	**Davao City (W)**	**15.44**	**165**	LR	LR	19 06 38.3	
	comp=E,140nm,18.5s,baz=213,slow=37						
KSRS	**Korea Array**	**16.26**	**18**	Pn	**Pn**	**19 00 55.3**	**-1.8**
	comp=E,0.1nm,0.3s,baz=196,slow=12,SNR=2.5						
MJAR	**Matsushiro Arr**	**20.39**	**41**	P	**P**	**19 01 42.6**	**-3.0**
	comp=E,0.2nm,0.3s,baz=221,slow=9.0,SNR=2.6						
HHC	**Hu-ho-hao-te**	**20.52**	**338**	*e*P	**P**	**19 01 47.8**	**+0.9**
HHC				S	**S**	**19 05 32.1**	**-3.4**
HHC				pmax	pmax		
	comp=Z,15nm,0.5s						
HHC				pmax	pmax		
	comp=Z,79nm,5.4s						
CMAR	**Chiang Mai Arr**	**21.52**	**264**	P	**P**	**19 02 00.0**	**+2.1**
	comp=Z,0.9nm,0.8s,mb3.3,baz=65,slow=10,SNR=5.3						
CMAR				LR	LR	19 11 15.3	
	comp=Z,65nm,19.6s,MS3.0,baz=165,slow=39						
GUMO	**Guam**	**23.72**	**107**	LR	LR	19 10 19.0	
	comp=Z,25nm,19.7s,MS2.7,baz=227,slow=34						
SONM	**Songino Array**	**28.42**	**338**	P	**P**	**19 03 02.3**	**-0.8**
	comp=Z,1.2nm,0.9s,mb3.5,baz=151,slow=8.7,SNR=8.4						
SONM				LR	LR	19 15 46.9	
	comp=Z,150nm,18.7s,MS3.6,baz=167,slow=39						
MKAR	**Makanchi Array**	**40.09**	**318**	P	**P**	**19 04 45.5**	**+1.5**
	comp=Z,1.4nm,0.5s,mb3.9,baz=109,slow=11,SNR=13						
MKAR				PcP	PcP	19 06 48.2	-0.2
	comp=Z,0.3nm,0.2s,baz=90,slow=4.3,SNR=3.0						
ZALV	**Zalesovo Beam**	**42.19**	**328**	P	**P**	**19 05 00.2**	**-1.0**
	comp=Z,1.5nm,0.6s,mb3.8,baz=117,slow=8.8,SNR=8.9						
ZALV				LR	LR	19 22 46.9	
	comp=Z,18nm,19.9s,MS3.0,baz=95,slow=36						
ZALV	**Zalesovo Beam**	**42.19**	**328**	P	**P**	**19 05 00.2**	**-1.0**
ZALV				LR	LR	19 22 46.9	
WRA	**Warramunga Arr**	**43.61**	**162**	P	**P**	**19 05 12.1**	**-0.9**
	comp=Z,0.8nm,0.6s,mb3.6,baz=345,slow=9.0,SNR=15						
KURK	**Kurchatov**	**43.92**	**321**	*e*P	**P**	**19 05 16.0**	**+0.8**
	comp=Z,1.7nm,0.6s,mb4.0						
ASAR	**Alice Springs**	**47.05**	**164**	P	**P**	**19 05 39.4**	**-0.8**
	comp=Z,0.4nm,0.4s,mb3.7,baz=340,slow=6.8,SNR=24						
BVAR	**Borovoye Array**	**49.51**	**322**	P	**P**	**19 05 59.9**	**+1.0**
	comp=Z,0.9nm,0.5s,mb4.1,baz=101,slow=7.5,SNR=4.4						
JOF	**Joensuu**	**70.69**	**331**	*e*p	**P**	**19 08 22.7**	**-1.3**
	comp=Z,1.2nm,0.5s,mb4.1						
KEV	**Kevo**	**71.03**	**338**	*e*p	**P**	**19 08 23.7**	**-2.3**
	comp=Z,4.6nm,0.9s,mb4.4						
ARCES	**ARCESS Array B**	**71.60**	**338**	P	**P**	**19 08 29.4**	**0.0**
	comp=Z,1.3nm,0.8s,mb3.9,baz=74,slow=6.7,SNR=4.2						
FINES	**FINESS Array B**	**73.42**	**330**	P	**P**	**19 08 40.4**	**0.0**
	comp=Z,0.9nm,0.5s,mb3.9,baz=60,slow=7.7,SNR=6.9						
BRTR	**Keskin Array B**	**74.69**	**307**	P	**P**	**19 08 48.8**	**+0.5**
	comp=Z,1.0nm,0.7s,mb3.9,baz=94,slow=4.5,SNR=5.3						
HFS	**Hagfors**	**79.55**	**331**	LR	LR	19 48 04.4	
	comp=Z,37nm,20.6s,MS3.7,baz=344,slow=38						
NOA	**NORSAR Array B**	**80.22**	**332**	P	**P**	**19 09 18.0**	**-0.9**
	comp=Z,0.9nm,0.9s,mb3.7,baz=58,slow=5.8,SNR=2.6						
NOA				LR	LR	19 48 24.9	
	comp=Z,59nm,18.7s,MS4.0,baz=85,slow=38						
CLL	**Collm**	**83.92**	**323**	*i*P	**P**	**19 09 38.6**	**+0.2**

*ISCJB **17** 19:04:59.6±0.5, 35°.74N±0°.05×139°.25E±0°.07, h154km±3km, mb3.5/6, Error ellipse: s-maj=10.2km s-min=6.5km az=143.8*
*NIED **17** 19:05:00, 35°.70N×139°.30E, h200km, Mw3.6 Best double couple: M0 3.04000×10^14 NP1:φs=30.00000°, δ86.00000°, λ96.00000°. NP2:φs=153.00000°, δ7.00000°, λ33.00000°.*
*IDC **17** 19:05:00.0±1.2, 35°.75N×139°.36E, h146km±6km, mb3.1/5, mb1 3.3/8, mb1mx3.1/27, mbtmp3.2/8, Error ellipse: s-maj=33.7km s-min=7.3km az=67.0*
*JMA **17** 19:05:01.7±0.1, 35°.72N×139°.25E, h144km±1km, M3.5*
JMA Felt I J1.
*NEIC **17** 19:05:01.6±1.9, 35°.51N×138°.73E, h143km±30km, mb3.9/1, Error ellipse: s-maj=193.4km s-min=14.4km az=63.0*
ISC 17 19:05:00.8±0.5, 35°.75N±0°.05×139°.26E±0°.07, h150km±3km, n22, σ0°61/33, mb3.5/6, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHU	**Hanno**	**0.11**	**11**	P	**Pn**	**19 05 21.4**	**+0.5**
JHU				S	**Sn**	**19 05 36.5**	**+0.2**
JRY	**Ryogami san**	**0.39**	**313**	P	**Pn**	**19 05 22.3**	**+0.7**
JRY				S	**Sn**	**19 05 37.7**	**+0.2**
JOD2	**Odawara 2**	**0.50**	**196**	P	**Pn**	**19 05 22.0**	**-0.1**
JOD2				S	**Sn**	**19 05 37.8**	**-0.5**
JYN	**Shimob**	**0.63**	**247**	P	**Pn**	**19 05 23.1**	**+0.3**
JYN				S	**Sn**	**19 05 40.1**	**+0.6**
JAG	**Ashikaga**	**0.69**	**13**	P	**Pn**	**19 05 24.0**	**+0.8**
JAG				S	**Sn**	**19 05 40.3**	**-0.1**
MJAR	**Matsushiro Arr**	**1.16**	**313**	P	**Pn**	**19 05 26.7**	**-0.2**
	8.1nm,0.3s,baz=153,slow=8.8,SNR=88						
MJAR				S	**Sn**	**19 05 46.1**	**-0.8**
	7.4nm,0.3s,baz=123,slow=13,SNR=11						
MAJO	**Matsushiro**	**1.16**	**313**	*e*P	**Pn**	**19 05 26.8**	**-0.1**
MAT	**Matsushiro**	**1.16**	**313**	P	**Pn**	**19 05 27.1**	**+0.2**
MAT				S	**Sn**	**19 05 45.6**	**-1.4**
MAT	**Matsushiro**	**1.16**	**313**	P	**Pn**	**19 05 27.1**	**+0.2**
MAT				S	**Sn**	**19 05 46.0**	**-1.0**
BSO1	**Boso 1**	**1.78**	**127**	P	**Pn**	**19 05 33.8**	**+0.4**
BSO1				S	**Sn**	**19 05 58.1**	**-0.3**
JGM	**Miyama**	**2.07**	**269**	P	**Pn**	**19 05 37.0**	**+0.4**
JGM				S	**Sn**	**19 06 03.8**	**-0.4**
JNS	**Sasagawa**	**2.07**	**1**	P	**Pn**	**19 05 37.5**	**+0.9**
JHJ	**Hachijo jima 2**	**2.66**	**170**	P	**Pn**	**19 05 44.4**	**+0.5**
	69nm,0.3s,baz=345,slow=16,SNR=40						
JHJ				S	**Sn**	**19 06 16.0**	**-1.0**
	44nm,0.3s,baz=0.0,slow=20,SNR=14						
ASAJ	**Asahikawa**	**8.74**	**16**	P	**Pn**	**19 07 02.0**	**-1.9**
	4.1nm,0.3s,baz=224,slow=8.3,SNR=49						
KSRS	**Korea Array**	**9.27**	**284**	P	**Pn**	**19 07 11.7**	**+0.6**
	0.2nm,0.3s,baz=104,slow=14,SNR=4.7						
SONM	**Songino Array**	**27.11**	**307**	P	**P**	**19 10 29.3**	**-0.1**
	0.2nm,0.4s,mb3.1,baz=103,slow=9.3,SNR=2.3						
ZALV	**Zalesovo Beam**	**41.52**	**313**	P	**P**	**19 12 33.2**	**+0.3**
	0.2nm,0.3s,mb3.2,baz=104,slow=6.1,SNR=2.3						
MKAR	**Makanchi Array**	**43.34**	**303**	P	**P**	**19 12 47.6**	**-0.2**
	0.3nm,0.2s,mb3.5,baz=88,slow=8.9,SNR=4.7						
KURK	**Kurchatov**	**45.37**	**309**	*e*P	**P**	**19 13 04.3**	**+0.5**
	2.0nm,0.7s,mb3.9						
WRA	**Warramunga Arr**	**55.58**	**186**	P	**P**	**19 14 20.6**	**-0.1**
	0.7nm,0.5s,mb3.8,baz=1.0,slow=7.7,SNR=27						
ASAR	**Alice Springs**	**59.30**	**186**	P	**P**	**19 14 46.3**	**-0.4**
	0.2nm,0.5s,mb3.2,baz=21,slow=11,SNR=5.8						
ASAR	**Alice Springs**	**59.30**	**186**	P	**P**	**19 14 46.3**	**-0.4**

*ISCJB **17** 19:19:43.5±0.3, 10°.60S±0°.04×161°.52E±0°.06, h90km, mb4.5/38, Error ellipse: s-maj=7.8km s-min=6.2km az=168.8*
*IDC **17** 19:19:44.3±0.7, 10°.58S×161°.61E, h90km±5km, mb4.2/18, mb1 4.4/19, mb1mx4.3/21, mbtmp4.2/19, MS3.5/7, Ms1 3.5/7, ms1mx3.4/18, Error ellipse: s-maj=13.3km s-min=9.1km az=40.0*
*NEIC **17** 19:19:44.6±0.3, 10°.55S×161°.54E, mb4.9/20, Error ellipse: s-maj=9.3km s-min=6.6km az=137.0*
ISC 17 19:19:45.3±0.3, 10°.58S±0°.04×161°.54E±0°.05, h92km, h92km±2.0km: pP-P, n61, σ0°89/60, mb4.5/38, 1C, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.94**	**306**	P	**Pn**	**19 20 17.9**	**+1.1**
	660nm,0.3s,baz=156,slow=5.9,SNR=193						
HNR				S	**Sn**	**19 20 41.7**	**+0.8**
	1μm,0.3s,baz=184,slow=22,SNR=21						
HNR				LR	LR	19 20 59.9	
	comp=Z,2μm,19.8s,baz=222,slow=38						
NOUC	**Port Laguerre**	**12.33**	**159**	*e*P	**Pn**	**19 22 38.4**	**+0.9**
NOUC				*e*S	**Sn**	**19 24 50.6**	**-2.6**
DZM	**Mont Dzumac**	**12.36**	**158**	*e*Pn	**Pn**	**19 22 39.3**	**+1.4**
	15nm,0.4s						
DZM				*e*Sn	**Sn**	**19 24 43.7**	**-10**
	9.3nm,0.3s						
DZM				*e*LR	LR	19 25 33.6	
	725nm,30.7s						
DZM	**Mont Dzumac**	**12.36**	**158**	*e*P	**Pn**	**19 22 38.5**	**+0.6**
DZM				*e*S	**Sn**	**19 24 48.3**	**-5.4**
CTA	**Charters Tower**	**17.50**	**235**	⇑*i*P	**Pn**	**19 23 46.5**	**+3.0**
	18nm,1.1s						
CTA	**Charters Tower**	**17.50**	**235**	P	**Pn**	**19 23 43.6**	**+0.1**
	1.1nm,0.3s,baz=58,slow=13,SNR=21						
CTA				LR	LR	19 29 20.9	
	comp=Z,86nm,19.7s,baz=60,slow=33						
CTAO	**Charters Tower**	**17.50**	**235**	*e*P	**Pn**	**19 23 43.9**	**+0.4**
	31nm,1.0s						
COEN	**Coen**	**18.26**	**258**	*e*P	**Pn**	**19 23 53.6**	**+0.9**
	461nm,1.0s						
ARMA	**Armidale**	**21.79**	**204**	*e*P	**P**	**19 24 30.7**	**+1.0**
ARMA	**Armidale**	**21.79**	**204**	*e*P	**P**	**19 24 30.4**	**+0.7**
	17nm,0.7s,mb4.5						
CNB	**Canberra Magne**	**27.00**	**202**	*e*P	**P**	**19 25 19.6**	**+1.0**
WRAB	**Tennant Creek**	**27.80**	**247**	*e*P	**P**	**19 25 25.4**	**-0.4**
	7.4nm,0.8s,mb4.3						
WRA	**Warramunga Arr**	**27.81**	**247**	P	**P**	**19 25 25.8**	**-0.1**
	9.1nm,0.6s,mb4.5,baz=77,slow=9.1,SNR=94						
WRA				ScP	ScP	19 32 11.3	-1.5
	0.7nm,0.6s,baz=74,slow=3.5,SNR=8.7						
STKA	**Stephens Creek**	**28.09**	**218**	*e*P	**P**	**19 25 28.2**	**-0.1**
	3.4nm,0.8s,mb3.9						
STKA	**Stephens Creek**	**28.09**	**218**	P	**P**	**19 25 29.0**	**+0.7**
	4.0nm,0.7s,mb4.0,baz=50,slow=13,SNR=8.3						
STKA				LR	LR	19 35 26.5	
	comp=Z,150nm,19.1s,baz=24,slow=34						
STKA	**Stephens Creek**	**28.09**	**218**	P	**P**	**19 25 29.0**	**+0.7**
STKA				LR	LR	19 35 26.5	
KAKA	**Kakadu**	**28.57**	**263**	*e*P	**P**	**19 25 32.0**	**-0.8**
	21nm,0.7s,mb4.9						
ASAR	**Alice Springs**	**29.37**	**240**	P	**P**	**19 25 39.0**	**-0.8**
	1.7nm,0.8s,mb3.7,baz=72,slow=9.6,SNR=16						
TOO	**Toolangi**	**30.51**	**206**	*e*P	**P**	**19 25 50.8**	**+1.1**
URZ	**Urewera**	**30.90**	**156**	P	**P**	**19 25 53.2**	**+0.1**
	13nm,0.6s,mb4.8,baz=294,slow=16,SNR=8.7						
RPZ	**Rata Peaks**	**34.03**	**168**	P	**P**	**19 26 19.3**	**-1.0**
	15nm,0.8s,mb4.9,baz=69,slow=3.9,SNR=9.4						
FITZ	**Fitzroy Crossi**	**35.53**	**254**	*e*P	**P**	**19 26 32.9**	**-0.7**
	23nm,0.6s,mb5.3						
FITZ	**Fitzroy Crossi**	**35.53**	**254**	*e*P	**P**	**19 26 33.0**	**-0.7**
	11nm,0.6s,mb5.0						
MBWA	**Marble Bar**	**41.45**	**250**	*e*P	**P**	**19 27 22.7**	**-0.6**
	13nm,0.5s,mb5.0						
PPT	**Papeete**	**47.82**	**104**	*e*LR	LR	19 42 14.7	
	327nm,33.0s						
MJAR	**Matsushiro Arr**	**51.76**	**336**	P	**P**	**19 28 42.4**	**-1.1**
	1.4nm,0.5s,mb4.3,baz=170,slow=8.8,SNR=8.5						
KSRS	**Korea Array**	**57.24**	**328**	P	**P**	**19 29 22.9**	**-0.1**
	2.3nm,0.7s,mb4.3,baz=143,slow=7.5,SNR=14						
KSRS				pP	pP	19 29 44.9	-1.1
	4.4nm,1.0s,baz=146,slow=7.3,SNR=7.5						
KSRS				LR	LR	19 51 44.2	
	comp=Z,26nm,19.5s,baz=135,slow=34						
PETK	**Petropavlovsk-**	**63.52**	**357**	P	**P**	**19 30 05.9**	**+0.4**
	2.0nm,0.7s,mb4.1,baz=140,slow=7.7,SNR=3.8						
PETK				LR	LR	19 54 25.4	
	comp=Z,30nm,19.0s,baz=315,slow=33						

N12A	Clover Valley,	91.91	49	eP	P	19 32 44.5	+1.0
	comp=Z,12nm,1.0s,mb5.1						
M13A	Montello	92.66	49	eP	P	19 32 47.6	+0.6
	comp=Z,8.6nm,1.3s,mb4.9						
HLID	Hailey	92.93	46	eP	P	19 32 48.9	+0.8
	comp=Z,10nm,1.3s,mb5.0						
PDAR	Pinedale Array	96.29	48	P	P	19 33 03.1	-0.4
	comp=Z,0.9nm,0.9s,mb4.2,baz=243,slow=2.7,SNR=6.5						
YKA	Yellowknife Array	96.47	28	P	P	19 33 02.6	-1.2
	comp=Z,1.1nm,0.6s,mb4.5,baz=257,slow=4.6,SNR=5.1						
YKA	Yellowknife Ar	96.47	28	P	P	19 33 02.6	-1.2
BVAR	Borovoye Array	99.05	322	P	P	19 33 15.0	-0.7
	comp=Z,0.3nm,0.7s,mb4.0,baz=86,slow=7.4,SNR=2.3						
TXAR	Lajitas Array	99.24	62	P	P	19 33 18.5	+1.3
	comp=Z,0.2nm,0.5s,mb3.9,baz=236,slow=6.4,SNR=2.2						
ARCES	ARCESS Array B	114.81	344	PKP	PKiKP	19 38 12.1	-2.4
	comp=Z,1.1nm,0.9s,baz=38,slow=1.6,SNR=4.2						
LPAZ	La Paz	124.07	118	PKP	PKPdf	19 38 33.6	-0.3
	comp=Z,2.0nm,0.7s,baz=265,slow=1.1,SNR=9.8						
ESDC	Sonseca Array	148.28	338	PKPbc	PKPbc	19 39 19.3	-1.8
	comp=Z,0.5nm,0.6s,baz=33,slow=2.8,SNR=3.2						

*IDC **17** 19:22:00.3±2.5, 36.20N×10.23W, h0km, mb3.7/1, mb1 4.4/3, mb1mx3.6/30, mbtmp4.4/3, ML5.0/2, MS3.2/2, Ms1 3.2/2, ms1mx2.5/30, Error ellipse: s-maj=62.7km s-min=39.3km az=72.0*

*ISCJB **17** 19:22:05.0±0.3, 36.33N±0.02×9.56W±0.03, h10km, Error ellipse: s-maj=3.2km s-min=2.5km az=170.3*

*INMG **17** 19:22:06.1±2.0, 36.30N×9.81W, h6km±7km, MD3.4, ML3.7, Error ellipse: s-maj=4.2km s-min=3.6km az=59.0*

*NEIC **17** 19:22:07.7, 36.33N×9.75W, h10km, MN3.6(MDD), After MDD.*

*SFS **17** 19:22:07.0, 36.30N×9.70W, h10km, ML3.6*

*MDD **17** 19:22:08.3±0.7, 36.25N×9.87W, h43km±42km, mb4.8/31, Error ellipse: s-maj=5.8km s-min=4.0km az=97.0*

*LDG **17** 19:22:09.4±0.2, 36.28N×9.82W, h30km, Ml4.2/13, Error ellipse: s-maj=3.1km s-min=2.2km az=47.0*

*IGIL **17** 19:22:10.2, 36.30N×9.77W, h29km, ML3.8*

*CSEM **17** 19:22:12.2±0.3, 36.51N×9.52W, h40km, ML4.5/16, Error ellipse: s-maj=5.6km s-min=3.0km az=52.0*

*CNRM **17** 19:22:14.0, 35.92N×9.43W, h30km, MD4.1*

ISC 17 19:22:07.8±0.3, 36.37N±0.02×9.53W±0.03, h10km, n444, σ1.36/826, 31C-14D, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	0.95	36	iP	Pg	19 22 28.7	+2.6
PFVI				eS	Sg	19 22 42.3	+3.9
PFVI				A		19 22 44.1	
	741nm,0.5s						
PFVI	Vila Bisbo	0.95	36	⇑P	Pg	19 22 28.8	+2.7
PFVI				S	Sg	19 22 42.3	+3.9
PFVI	Vila Bisbo	0.95	36	⇑P	Pg	19 22 28.7	+2.7
	790nm,0.1s,SNR=18						
PFVI				S	Sg	19 22 42.3	+3.9
	2µm,0.2s,SNR=7.9						
PFVI	Vila Bisbo	0.95	36	⇑P	Pg	19 22 28.7	+2.7
	790nm,0.1s,SNR=18						
PFVI				S	Sg	19 22 42.3	+3.9
	2µm,0.2s,SNR=7.9						
PFVI	Vila Bisbo	0.95	36	P	Pg	19 22 28.7	+2.6
	790nm,0.1s,SNR=18						
PFVI				eS	Sg	19 22 42.3	+3.9
	741nm,0.5s						
MORF	Marmelete	1.17	37	iP	Pb	19 22 31.8	+1.7
MORF				eS	Sb	19 22 47.7	+2.3
MORF				A		19 22 48.8	
	1µm,0.3s						
MORF	Marmelete	1.17	37	⇑P	Pb	19 22 31.8	+1.7
MORF				S	Sb	19 22 47.7	+2.3
	1µm,0.3s						
MORF	Marmelete	1.17	37	⇑P	Pb	19 22 31.8	+1.7
MORF				S	Sb	19 22 47.7	+2.3
	1µm,0.3s						
PTEO	Sao Teotonio	1.34	29	iP	Pn	19 22 33.7	+1.2
PTEO				eS	Sb	19 22 51.5	+1.3
PTEO				A		19 22 52.6	
	831nm,0.8s						
PTEO	Sao Teotonio	1.34	29	⇑P	Pn	19 22 33.7	+1.2
PTEO				S	Sb	19 22 51.5	+1.3
	416nm,0.8s						
PTEO	Sao Teotonio	1.34	29	⇑P	Pn	19 22 33.7	+1.2
PTEO				S	Sb	19 22 51.5	+1.3
	416nm,0.8s						
PBDV	Barranco-do-Ve	1.55	55	iP	Pn	19 22 37.4	+1.9
PBDV				eS	Sn	19 22 57.3	+1.7
PBDV				A		19 22 59.2	
	420nm,0.6s						
PBDV	Barranco-do-Ve	1.55	55	⇑P	Pn	19 22 37.4	+1.9
PBDV				S	Sn	19 22 57.3	+1.7
	420nm,0.6s						
PBDV	Barranco-do-Ve	1.55	55	⇑P	Pn	19 22 37.4	+1.9
PBDV				S	Sn	19 22 57.3	+1.7
	420nm,0.6s						
PCVE	Castro Verde	1.74	43	iPn	Pn	19 22 39.8	+1.8
PCVE				eSn	Sn	19 23 02.1	+1.9
PCVE				A		19 23 03.4	
	302nm,0.5s						
PCVE	Castro Verde	1.74	43	⇑P	Pn	19 22 39.8	+1.8
PCVE				S	Sn	19 23 02.1	+1.9
	302nm,0.5s						
PCVE	Castro Verde	1.74	43	⇑P	Pn	19 22 39.8	+1.8
PCVE				S	Sn	19 23 02.1	+1.9
	302nm,0.5s						
PVAQ	Vaqueiros	1.78	54	iPn	Pn	19 22 40.5	+1.9
PVAQ				eSn	Sn	19 23 02.9	+1.6
PVAQ				A		19 23 04.2	
	818nm,0.2s						
PVAQ	Vaqueiros	1.78	54	⇑P	Pn	19 22 40.5	+1.9
PVAQ				S	Sn	19 23 02.9	+1.6
	818nm,0.2s						
PVAQ	Vaqueiros	1.78	54	⇑P	Pn	19 22 40.5	+1.9
PVAQ				S	Sn	19 23 02.9	+1.6
	818nm,0.2s						
MESJ	Messejana	1.80	35	eP	Pn	19 22 40.3	+1.4
MESJ				eS	Sn	19 23 02.6	+0.8
MESJ				eS	Sn	19 23 02.7	+0.8
MESJ	Messejana	1.80	35	P	Pn	19 22 40.3	+1.4
MESJ				S	Sn	19 23 02.6	+0.8
MESJ	Messejana	1.80	35	P	Pn	19 22 40.3	+1.4
MESJ				S	Sn	19 23 02.6	+0.8
MESJ	Messejana	1.80	35	eP	Pn	19 22 40.3	+1.4
MESJ				eS	Sn	19 23 02.6	+0.8
EGRO	El Granado	2.01	54	⇑P	Pn	19 22 43.4	+1.7
EGRO				S	Sn	19 23 08.1	+1.1
EGRO	El Granado	2.01	54	⇑P	Pn	19 22 43.4	+1.7
	11nm,0.1s,SNR=18						
EGRO				S	Sn	19 23 08.1	+1.1
	1µm,0.2s,SNR=6.3						
EGRO	El Granado	2.01	54	⇑P	Pn	19 22 43.4	+1.7
	11nm,0.1s,SNR=18						
EGRO				S	Sn	19 23 08.1	+1.1
	1µm,0.2s,SNR=6.3						
EGRO	El Granado	2.01	54	P	Pn	19 22 43.4	+1.6
	11nm,0.1s,SNR=18						
EGRO				S	Sn	19 23 08.1	+1.1
	1µm,0.2s,SNR=6.3						
PBEJ	Beja	2.12	38	ePn	Pn	19 22 44.5	+1.2
PBEJ				eSn	Sn	19 23 10.4	+0.7
PBEJ				A		19 23 13.6	
	194nm,0.7s						
PBEJ	Beja	2.12	38	P	Pn	19 22 44.5	+1.2
PBEJ				S	Sn	19 23 10.4	+0.7
	97nm,0.7s						
PBEJ	Beja	2.12	38	P	Pn	19 22 44.5	+1.2
PBEJ				S	Sn	19 23 10.4	+0.7
	97nm,0.7s						
PBEJ	Beja	2.12	38	ePn	Pn	19 22 44.5	+1.2
PBEJ				eSn	Sn	19 23 10.4	+0.7
	194nm,0.7s						
PLML	Palmela	2.24	13	ePn	Pn	19 22 45.4	+0.5
PLML				eSn	Sn	19 23 11.4	-1.2
PLML	Palmela	2.24	13	P	Pn	19 22 45.4	+0.5
PLML				S	Sn	19 23 11.4	-1.2
PLML	Palmela	2.24	13	P	Pn	19 22 45.4	+0.5
PLML				S	Sn	19 23 11.4	-1.2
PLML	Palmela	2.24	13	ePn	Pn	19 22 45.4	+0.5
PLML				eSn	Sn	19 23 11.4	-1.2
MOE	Montemor	2.35	23	ePn	Pn	19 22 47.4	+1.0
MOE				eSn	Sn	19 23 15.2	0.0
MOE	Montemor	2.35	23	ePn	Pn	19 22 47.4	+1.0
MOE				eSn	Sn	19 23 15.2	0.0
LIS	Lisbon	2.36	7	eS	Sn	19 23 14.1	-1.5
LIS				eS	Sn	19 23 14.1	-1.5
LIS				AML	AML	19 23 14.7	
	comp=N,464nm,0.2s						
LIS	Lisbon	2.36	7	S	Sn	19 23 14.1	-1.5
LIS	Lisbon	2.36	7	S	Sn	19 23 14.1	-1.5
LIS	Lisbon	2.36	7	eS	Sn	19 23 14.1	-1.5
EVOP	Sao Brissos	2.43	27	ePn	Pn	19 22 48.1	+0.6
EVOP				eSn	Sn	19 23 17.2	-0.1
	comp=N,372nm,0.3s						
EVO	Evora	2.47	29	ePn	Pn	19 22 48.1	0.0
EVO				eSn	Sn	19 23 17.2	-1.2
	comp=N,743nm,0.3s						
EVO	Evora	2.47	29	ePn	Pn	19 22 48.8	+0.7
EVO				eSn	Sn	19 23 17.9	-0.5
EVO				A		19 23 19.5	
	comp=N,461nm,0.2s						
EVO	Evora	2.47	29	P	Pn	19 22 48.8	+0.7
EVO				S	Sn	19 23 17.9	-0.5
	comp=N,461nm,0.2s						
EVO	Evora	2.47	29	P	Pn	19 22 48.8	+0.7
EVO				S	Sn	19 23 17.9	-0.5
	comp=N,461nm,0.2s						
EVO	Evora	2.47	29	ePn	Pn	19 22 48.8	+0.7
EVO				eSn	Sn	19 23 17.9	-0.5
	comp=N,461nm,0.2s						
PMAFR	Mafra	2.59	4	ePn	Pn	19 22 49.4	-0.3
PMAFR				eSn	Sn	19 23 19.6	-1.6
PMAFR				A		19 23 21.5	
	comp=N,1µm,0.2s						
PMAFR	Mafra	2.59	4	⇓P	Pn	19 22 49.3	-0.4
	comp=N,47nm,0.1s,SNR=18						
PMAFR				S	Sn	19 23 19.6	-1.6
	comp=N,1µm,0.2s						
PMAFR	Mafra	2.59	4	⇓P	Pn	19 22 49.3	-0.4
	comp=N,47nm,0.1s,SNR=18						
PMAFR				S	Sn	19 23 19.6	-1.6
	comp=N,1µm,0.2s						
PMAFR	Mafra	2.59	4	ePn	Pn	19 22 49.4	-0.3
PMAFR				eSn	Sn	19 23 19.6	-1.6
	comp=N,1µm,0.2s						
EMIN	Mina Concepcio	2.68	58	⇑P	Pn	19 22 52.3	+1.4
EMIN				S	Sn	19 23 24.1	+0.7
EMIN	Mina Concepcio	2.68	58	⇑P	Pn	19 22 52.3	+1.4
	comp=N,10nm,0.1s,SNR=18						
EMIN				S	Sn	19 23 24.1	+0.7
	comp=N,116nm,0.2s						
EMIN	Mina Concepcio	2.68	58	⇑P	Pn	19 22 52.3	+1.4
	comp=N,10nm,0.1s,SNR=18						
EMIN				S	Sn	19 23 24.1	+0.7
	comp=N,116nm,0.2s						
EMIN	Mina Concepcio	2.68	58	P	Pn	19 22 52.3	+1.4
	comp=N,10nm,0.1s,SNR=18						
EMIN				S	Sn	19 23 24.1	+0.7
	comp=N,116nm,0.2s						
PBAR	Barrancos	2.68	47	iPn	Pn	19 22 52.2	+1.2
PBAR				eSn	Sn	19 23 24.3	+0.8
PBAR				A		19 23 25.9	
	comp=N,131nm,0.2s						
PBAR	Barrancos	2.68	47	⇑P	Pn	19 22 52.2	+1.2
PBAR				S	Sn	19 23 24.3	+0.8
	comp=N,131nm,0.2s						
PBAR	Barrancos	2.68	47	⇑P	Pn	19 22 52.2	+1.2
PBAR				S	Sn	19 23 24.3	+0.8
	comp=N,131nm,0.2s						
SFS	San Fernando	2.69	87	S	Sn	19 23 23.1	-0.5
SFS	San Fernando	2.69	87	S	Sn	19 23 23.1	-0.5
SFS	San Fernando	2.69	87	eS	Sn	19 23 23.1	-0.5
CNIL	Conil	2.81	89	P	Pn	19 22 55.7	+3.0
CNIL				S	Sn	19 23 23.6	-3.0
CNIL	Conil	2.81	89	P	Pn	19 22 55.7	+3.0
CNIL				S	Sn	19 23 23.6	-3.0
CNIL	Conil	2.81	89	eP	Pn	19 22 55.7	+3.0
CNIL				eS	Sn	19 23 23.6	-3.0
ALMR	Almeirim	2.88	15	eP	Pn	19 22 54.3	+0.6
ALMR				eS	Sn	19 23 27.1	-1.3
ALMR				eS	Sn	19 23 27.2	-1.3
ALMR				AML	AML	19 23 28.4	
	comp=N,190nm,0.3s						
ALMR	Almeirim	2.88	15	eP	Pn	19 22 54.3	+0.6
ALMR				eS	Sn	19 23 27.1	-1.3
ALMR	Almeirim	2.88	15	P	Pn	19 22 54.3	+0.6
ALMR				S	Sn	19 23 27.1	-1.3
ALMR	Almeirim	2.88	15	P	Pn	19 22 54.3	+0.6
ALMR				S	Sn	19 23 27.1	-1.3
ALMR	Almeirim	2.88	15	eP	Pn	19 22 54.3	+0.6
ALMR				eS	Sn	19 23 27.1	-1.3
GIBL	Gibalbin	2.91	80	P	Pn	19 22 57.1	+3.0
GIBL				S	Sn	19 23 28.7	-0.3
GIBL	Gibalbin	2.91	80	P	Pn	19 22 57.1	+3.0
GIBL				S	Sn	19 23 28.7	-0.3
GIBL	Gibalbin	2.91	80	eP	Pn	19 22 57.1	+3.1
GIBL				eS	Sn	19 23 28.7	-0.3
PESTR	Estremoz	2.93	31	iPn	Pn	19 22 54.9	+0.5
PESTR				eSn	Sn	19 23 29.2	-0.5
PESTR				A		19 23 31.8	
	comp=N,82nm,0.2s						
PESTR	Estremoz	2.93	31	⇑P	Pn	19 22 54.9	+0.5
PESTR				S	Sn	19 23 29.2	-0.5
	comp=N,41nm,0.2s						
PESTR	Estremoz	2.93	31	⇑P	Pn	19 22 54.9	+0.5
PESTR				S	Sn	19 23 29.2	-0.5
	comp=N,41nm,0.2s						
ESPR	Espera	3.00	79	P	Pn	19 22 57.1	+1.8
ESPR				S	Sn	19 23 32.4	+1.1
ESPR	Espera	3.00	79	⇓P	Pn	19 22 56.9	+1.5
	comp=N,221nm,0.2s,SNR=18						
ESPR				S	Sn	19 23 31.9	+0.6
	comp=N,1µm,0.3s						
ESPR	Espera	3.00	79	⇓P	Pn	19 22 56.9	+1.5
	comp=N,221nm,0.2s,SNR=18						
ESPR				S	Sn	19 23 31.9	+0.6
	comp=N,1µm,0.3s						
ESPR	Espera	3.00	79	P	Pn	19 22 56.9	+1.6
	comp=N,221nm,0.2s,SNR=18						
ESPR				S	Sn	19 23 31.9	+0.6
	comp=N,1µm,0.3s						
EBAD	Badajoz	3.11	39	P	Pn	19 22 57.8	+0.9
EBAD				S	Sn	19 23 34.2	+0.1
EBAD	Badajoz	3.11	39	⇑P	Pn	19 22 57.7	+0.8
	comp=N,9.1nm,0.1s,SNR=18						
EBAD				S	Sn	19 23 34.2	+0.1
	comp=N,156nm,0.2s,SNR=4.5						
EBAD	Badajoz	3.11	39	⇑P	Pn	19 22 57.7	+0.8
	comp=N,9.1nm,0.1s,SNR=18						
EBAD				S	Sn	19 23 34.2	+0.1
	comp=N,156nm,0.2s,SNR=4.5						
EBAD	Badajoz	3.11	39	P	Pn	19 22 57.7	+0.8
	comp=N,9.1nm,0.1s,SNR=18						
EBAD				S	Sn	19 23 34.2	+0.1
	comp=N,156nm,0.2s,SNR=4.5						
RTC	Rabat Centre	3.23	137	P	Pn	19 22 57.0	-1.5
RTC				S	Sn	19 23 28.0	-9.1
RTC	Rabat Centre	3.23	137	P	Pn	19 22 57.0	-1.5
RTC				S	Sn	19 23 28.0	-9.1
RTC	Rabat Centre	3.23	137	iP	Pn	19 22 57.0	-1.5
EJIF	Jimena Fronter	3.28	87	P	Pn	19 23 01.0	+1.8
EJIF				S	Sn	19 23 39.9	+1.7
EJIF	Jimena Fronter	3.28	87	P	Pn	19 23 01.0	+1.8
	comp=N,17nm,0.2s,SNR=7.9						
EJIF				S	Sn	19 23 38.7	+0.4
	comp=N,134nm,0.5s,SNR=7.9						
EJIF	Jimena Fronter	3.28	87	P	Pn	19 23 01.0	+1.8
	comp=N,17nm,0.2s,SNR=7.9						
EJIF				S	Sn	19 23 38.7	+0.4
	comp=N,134nm,0.5s,SNR=7.9						
EJIF	Jimena Fronter	3.28	87	P	Pn	19 23 01.0	+1.8
	comp=N,17nm,0.2s,SNR=7.9						
EJIF				S	Sn	19 23 38.7	+0.5
	comp=N,134nm,0.5s,SNR=7.9						
PTOM	Tomar	3.36	15	ePn	Pn	19 23 00.9	+0.6
PTOM				eSn	Sn	19 23 38.5	-1.8
PTOM				A		19 23 44.9	
	comp=N,224nm,0.5s						
PTOM	Tomar	3.36	15	P	Pn	19 23 00.9	+0.6
PTOM				S	Sn	19 23 38.5	-1.8
	comp=N,112nm,0.5s						
PTOM	Tomar	3.36	15	P	Pn	19 23 00.9	+0.6
PTOM				S	Sn	19 23 38.5	-1.8
	comp=N,112nm,0.5s						
PTOM	Tomar	3.36	15	ePn	Pn	19 23 00.9	+0.6
PTOM				eSn	Sn	19 23 38.5	-1.8
	comp=N,224nm,0.5s						
LIJA	Lijar	3.36	80	⇑P	Pn	19 23 03.1	+2.7
LIJA				S	Sn	19 23 38.9	-1.4
LIJA	Lijar	3.36	80	⇑P	Pn	19 23 03.1	+2.7
LIJA				S	Sn	19 23 38.9	-1.4
LIJA	Lijar	3.36	80	iP	Pn	19 23 03.1	+2.8
LIJA				iS	Sn	19 23 38.9	-1.4
RSA	Sarsar	3.37	115	P	Pn	19 23 01.5	+1.1
RSA				S	Sn	19 23 34.0	-6.4
RSA	Sarsar	3.37	115	P	Pn	19 23 01.5	+1.1
RSA				S	Sn	19 23 34.0	-6.4
RSA	Sarsar	3.37	115	iP	Pn	19 23 01.5	+1.1
PMRV	Marv??o	3.49	28	ePn	Pn	19 23 02.8	+0.7
PMRV				eSn	Sn	19 23 42.5	-1.0
PMRV				A		19 23 44.7	
	comp=N,181nm,0.3s						
PMRV	Marv??o	3.49	28	P	Pn	19 23 02.8	+0.7
PMRV				S	Sn	19 23 42.5	-1.0
	comp=N,181nm,0.3s						
PMRV	Marv??o	3.49	28	P	Pn	19 23 02.8	+0.7
PMRV				S	Sn	19 23 42.5	-1.0
	comp=N,181nm,0.3s						
PMRV	Marv??o	3.49	28	ePn	Pn	19 23 02.8	+0.7
PMRV				eSn	Sn	19 23 42.5	-1.0
	comp=N,181nm,0.3s						
DKH	Dar Kharkhour	3.50	103	P	Pn	19 23 04.0	+1.8
DKH				S	Sn	19 23 38.0	-5.6
DKH	Dar Kharkhour	3.50	103	P	Pn	19 23 04.0	+1.8
DKH				S	Sn	19 23 38.0	-5.6
DKH	Dar Kharkhour	3.50	103	iP	Pn	19 23 04.0	+1.8
ECAB	El Cabril	3.70	61	P	Pn	19 23 06.2	+1.3
ECAB				S	Sn	19 23 47.6	-1.0
ECAB	El Cabril	3.70	61	⇓P	Pn	19 23 06.2	+1.3
	comp=N,5.9nm,0.1s,SNR=18						
ECAB				S	Sn	19 23 47.6	-1.0
	comp=N,112nm,0.2s						
ECAB	El Cabril	3.70	61	⇓P	Pn	19 23 06.2	+1.3
	comp=N,5.9nm,0.1s,SNR=18						
ECAB				S	Sn	19 23 47.6	-1.0
	comp=N,112nm,0.2s						
ECAB	El Cabril	3.70	61	P	Pn	19 23 06.2	+1.2
	comp=N,5.9nm,0.1s,SNR=18						
ECAB				S	Sn	19 23 47.6	-1.0
	comp=N,112nm,0.2s						
PCBR	Castelo Branco	3.83	24	eSn	Sn	19 23 50.1	-1.6
PCBR				A		19 23 53.9	
	comp=N,113nm,0.5s						
PCBR	Castelo Branco	3.83	24	S	Sn	19 23 50.1	-1.6
	comp=N,57nm,0.5s						
PCBR	Castelo Branco	3.83	24	S	Sn	19 23 50.1	-1.6
	comp=N,57nm,0.5s						
PCBR	Castelo Branco	3.83	24	eSn	Sn	19 23 50.1	-1.6
	comp=N,113nm,0.5s						
EMIJ	Mijas	3.84	86	P	Pn	19 23 07.6	+0.7
EMIJ				S	Sn	19 23 52.9	+0.8
EMIJ	Mijas	3.84	86	P	Pn	19 23 07.6	+0.7
	comp=N,10nm,0.2s,SNR=46						
EMIJ				S	Sn	19 23 52.2	+0.1
	comp=N,119nm,0.5s						
EMIJ	Mijas	3.84	86	P	Pn	19 23 07.6	+0.7
	comp=N,10nm,0.2s,SNR=46						
EMIJ				S	Sn	19 23 52.2	+0.1
	comp=N,119nm,0.5s						
EMIJ	Mijas	3.84	86	P	Pn	19 23 07.6	+0.7
	comp=N,10nm,0.2s,SNR=46						
EMIJ				S	Sn	19 23 52.2	+0.1
	comp=N,119nm,0.5s						
EMAL	Malaga-Limoner	4.13	83	iP	Pn	19 23 12.2	+1.4
EMAL				eS	Sn	19 23 58.2	-0.9
MTE	Manteigas	4.32	21	ePn	Pn	19 23 14.0	+0.6
MTE				eSn	Sn	19 24 02.0	-1.8
MTE				A		19 24 06.3	
	comp=N,164nm,0.5s						
MTE	Manteigas	4.32	21	ePn	Pn	19 23 12.8	-0.6
MTE				eSn	Sn	19 24 02.9	-0.9
MTE	Manteigas	4.32	21	ePn	Pn	19 23 14.0	+0.6
MTE				eSn	Sn	19 24 02.0	-1.8
	comp=N,164nm,0.5s						
EADA	Adamuz	4.34	64	P	Pn	19 23 15.0	+1.2
EADA				S	Sn	19 24 03.1	-1.3
EADA	Adamuz	4.34	64	⇑P	Pn	19 23 15.0	+1.2
	comp=N,14nm,0.1s,SNR=18						
EADA				S	Sn	19 24 03.1	-1.3
	comp=N,167nm,0.2s						
EADA	Adamuz	4.34	64	⇑P	Pn	19 23 15.0	+1.2
	comp=N,14nm,0.1s,SNR=18						
EADA				S	Sn	19 24 03.1	-1.3
	comp=N,167nm,0.2s						
EADA	Adamuz	4.34	64	P	Pn	19 23 15.0	+1.2
	comp=N,14nm,0.1s,SNR=18						
EADA				S	Sn	19 24 03.1	-1.3
	comp=N,167nm,0.2s						
ELOJ	Sierra Loja	4.39	78	P	Pn	19 23 16.4	+2.0
ELOJ				S	Sn	19 24 05.6	0.0
ELOJ	Sierra Loja	4.39	78	⇓P	Pn	19 23 16.4	+1.9
	comp=N,6.1nm,0.2s,SNR=18						
ELOJ				S	Sn	19 24 05.6	0.0
	comp=N,37nm,0.2s						
ELOJ	Sierra Loja	4.39	78	⇓P	Pn	19 23 16.4	+1.9
	comp=N,6.1nm,0.2s,SNR=18						
ELOJ				S	Sn	19 24 05.6	0.0
	comp=N,37nm,0.2s						
ELOJ	Sierra Loja	4.39	78	P	Pn	19 23 16.4	+2.0
	comp=N,6.1nm,0.2s,SNR=18						
ELOJ				S	Sn	19 24 05.6	0.0
	comp=N,37nm,0.2s						
PVIS	Viseu	4.53	16	ePn	Pn	19 23 16.4	+0.1
PVIS				eSn	Sn	19 24 06.8	-2.2
PVIS				A		19 24 11.0	
	comp=N,74nm,0.3s						
PVIS	Viseu	4.53	16	P	Pn	19 23 16.4	+0.1
PVIS				S	Sn	19 24 06.8	-2.2
	comp=N,37nm,0.3s						
PVIS	Viseu	4.53	16	P	Pn	19 23 16.4	+0.1
PVIS				S	Sn	19 24 06.8	-2.2
	comp=N,37nm,0.3s						
PVIS	Viseu	4.53	16	ePn	Pn	19 23 16.4	+0.1
PVIS				eSn	Sn	19 24 06.8	-2.2
	comp=N,74nm,0.3s						
EPLA	Plasencia	4.58	35	P	Pn	19 23 17.8	+0.7
EPLA				S	Sn	19 24 08.7	-1.6
EPLA	Plasencia	4.58	35	⇓P	Pn	19 23 17.8	+0.7
	comp=N,4.0nm,0.1s,SNR=18						
EPLA				S	Sn	19 24 08.7	-1.6
	comp=N,88nm,0.2s,SNR=4.1						
EPLA	Plasencia	4.58	35	⇓P	Pn	19 23 17.8	+0.7
	comp=N,4.0nm,0.1s,SNR=18						
EPLA				S	Sn	19 24 08.7	-1.6
	comp=N,88nm,0.2s,SNR=4.1						
EPLA	Plasencia	4.58	35	P	Pn	19 23 17.8	+0.7
	comp=N,4.0nm,0.1s,SNR=18						
EPLA				S	Sn	19 24 08.7	-1.6
	comp=N,88nm,0.2s,SNR=4.1						
MIF	Mishlifen	4.61	129	P	Pn	19 23 17.0	-0.5
MIF				S	Sn	19 24 04.0	-7.0
MIF	Mishlifen	4.61	129	P	Pn	19 23 17.0	-0.5
MIF				S	Sn	19 24 04.0	-7.0
MIF	Mishlifen	4.61	129	iP	Pn	19 23 17.0	-0.5
JHA	Jbel Lahdid	4.62	179	P	Pn	19 23 15.0	-2.7
JHA				S	Sn	19 24 00.0	-11
JHA	Jbel Lahdid	4.62	179	P	Pn	19 23 15.0	-2.7
JHA				S	Sn	19 24 00.0	-11
ERON	Agron	4.65	80	P	Pn	19 23 19.6	+1.6
ERON				S	Sn	19 24 11.3	-0.7
ERON	Agron	4.65	80	⇑P	Pn	19 23 20.1	+2.1
	comp=N,24nm,0.2s,SNR=18						
ERON				S	Sn	19 24 11.3	-0.7
	comp=N,16nm,0.2s,SNR=7.9						
ERON	Agron	4.65	80	⇑P	Pn	19 23 20.1	+2.1
	comp=N,24nm,0.2s,SNR=18						
ERON				S	Sn	19 24 11.3	-0.7
	comp=N,16nm,0.2s,SNR=7.9						
ERON	Agron	4.65	80	P	Pn	19 23 19.6	+1.6
ERON				S	Sn	19 24 11.3	-0.7
	comp=N,16nm,0.2s,SNR=7.9						
KIB	El Ksiba	4.76	142	P	Pn	19 23 17.0	-2.5
KIB				S	Sn	19 24 05.0	-10
KIB	El Ksiba	4.76	142	P	Pn	19 23 17.0	-2.5
KIB				S	Sn	19 24 05.0	-10
PTO	Porto	4.82	8	ePn	Pn	19 23 19.9	-0.4
PTO				eSn	Sn	19 24 11.4	-4.7
PTO	Porto	4.82	8	P	Pn	19 23 19.9	-0.4
PTO				S	Sn	19 24 11.4	-4.7
PTO	Porto	4.82	8	P	Pn	19 23 19.9	-0.4
PTO				S	Sn	19 24 11.4	-4.7
PTO	Porto	4.82	8	ePn	Pn	19 23 19.9	-0.4

PTO eSn Sn 19 24 11.4 -4.7
EGUA Guajares 4.82 83 P Pn 19 23 21.3 +0.8
EGUA S Sn 19 24 16.4 0.0
EGUA Guajares 4.82 83 P Pn 19 23 21.3 +0.8
comp=N,5.4nm,0.2s,SNR=7.9
EGUA S Sn 19 24 16.4 0.0
comp=N,135nm,0.2s,SNR=7.9
EGUA Guajares 4.82 83 P Pn 19 23 21.3 +0.8
comp=N,5.4nm,0.2s,SNR=7.9
EGUA S Sn 19 24 16.4 0.0
comp=N,135nm,0.2s,SNR=7.9
EGUA Guajares 4.82 83 P Pn 19 23 21.3 +0.9
comp=N,5.4nm,0.2s,SNR=7.9
EGUA S Sn 19 24 16.4 +0.1
comp=N,135nm,0.2s,SNR=7.9
CIA Chichaoua 4.83 172 P Pn 19 23 17.0 -3.6
CIA S Sn 19 24 05.0 -12
CIA Chichaoua 4.83 172 P Pn 19 23 17.0 -3.6
CIA S Sn 19 24 05.0 -12
ECOG Cogollos-Vega 4.87 78 P Pn 19 23 22.9 +1.9
ECOG S Sn 19 24 17.6 +0.1
ECOG Cogollos-Vega 4.87 78 P Pn 19 23 22.9 +1.9
comp=N,35nm,0.3s,SNR=17
ECOG S Sn 19 24 17.6 +0.1
comp=N,134nm,0.5s
ECOG Cogollos-Vega 4.87 78 P Pn 19 23 22.9 +1.9
comp=N,35nm,0.3s,SNR=17
ECOG S Sn 19 24 17.6 +0.1
comp=N,134nm,0.5s
ECOG Cogollos-Vega 4.87 78 P Pn 19 23 22.9 +1.8
comp=N,35nm,0.3s,SNR=17
ECOG S Sn 19 24 17.6 +0.1
comp=N,134nm,0.5s
TZC Tazercounte 4.91 148 P Pn 19 23 19.0 -2.6
TZC S Sn 19 24 07.0 -11
TZC Tazercounte 4.91 148 P Pn 19 23 19.0 -2.6
TZC S Sn 19 24 07.0 -11
EBAN Banos Encina 4.92 67 P Pn 19 23 22.6 +0.8
EBAN S Sn 19 24 18.0 -0.7
EBAN Banos Encina 4.92 67 P Pn 19 23 22.6 +0.8
comp=N,4.6nm,0.1s,SNR=18
EBAN S Sn 19 24 18.0 -0.7
comp=N,69nm,0.2s
EBAN Banos Encina 4.92 67 P Pn 19 23 22.6 +0.8
comp=N,4.6nm,0.1s,SNR=18
EBAN S Sn 19 24 18.0 -0.7
comp=N,69nm,0.2s
EBAN Banos Encina 4.92 67 P Pn 19 23 22.6 +0.8
comp=N,4.6nm,0.1s,SNR=18
EBAN S Sn 19 24 18.0 -0.7
comp=N,69nm,0.2s
TZK Tazeka 4.93 116 P Pn 19 23 21.0 -0.9
TZK S Sn 19 24 12.0 -7.1
TZK Tazeka 4.93 116 P Pn 19 23 21.0 -0.9
TZK S Sn 19 24 12.0 -7.1
TZK Tazeka 4.93 116 iP Pn 19 23 21.0 -0.9
EQUE Quentar 4.96 79 ⇓P Pn 19 23 24.1 +1.8
comp=N,20nm,0.3s,SNR=18
EQUE S Sn 19 24 19.4 -0.3
comp=N,26nm,0.2s
EQUE Quentar 4.96 79 ⇓P Pn 19 23 24.1 +1.8
comp=N,20nm,0.3s,SNR=18
EQUE S Sn 19 24 19.4 -0.3
comp=N,26nm,0.2s
EQUE Quentar 4.96 79 P Pn 19 23 24.1 +1.8
comp=N,20nm,0.3s,SNR=18
EQUE S Sn 19 24 19.4 -0.3
comp=N,26nm,0.2s
PVRL Vila Real 5.10 16 ePn Pn 19 23 24.6 +0.4
PVRL eSn Sn 19 24 19.0 -4.1
PVRL A 19 24 23.3
comp=N,98nm,0.4s
PVRL Vila Real 5.10 16 P Pn 19 23 24.6 +0.4
PVRL S Sn 19 24 19.0 -4.1
comp=N,49nm,0.4s
PVRL Vila Real 5.10 16 P Pn 19 23 24.6 +0.4
PVRL S Sn 19 24 19.0 -4.1
comp=N,49nm,0.4s
PVRL Vila Real 5.10 16 ePn Pn 19 23 24.6 +0.4
PVRL eSn Sn 19 24 19.0 -4.1
comp=N,98nm,0.4s
MVO Moncorvo 5.17 21 ePn Pn 19 23 25.3 +0.1
MVO eSn Sn 19 24 22.2 -2.7
MVO A 19 24 25.5
comp=N,120nm,0.5s
MVO Moncorvo 5.17 21 P Pn 19 23 25.3 +0.1
MVO S Sn 19 24 22.7 -2.2
MVO Moncorvo 5.17 21 P Pn 19 23 25.3 +0.1
comp=N,9.4nm,0.1s,SNR=36
MVO S Sn 19 24 22.7 -2.2
comp=N,67nm,0.2s
MVO Moncorvo 5.17 21 P Pn 19 23 25.3 +0.1
comp=N,9.4nm,0.1s,SNR=36
MVO S Sn 19 24 22.7 -2.2
comp=N,67nm,0.2s
MVO Moncorvo 5.17 21 ePn Pn 19 23 25.3 +0.1
MVO eSn Sn 19 24 22.2 -2.7
comp=N,120nm,0.5s
MVO S Sn 19 24 22.7 -2.2
comp=N,67nm,0.2s
PAB San Pablo 5.18 51 ePn Pn 19 23 25.3 0.0
comp=N,78nm,0.8s
PAB San Pablo 5.18 51 ePn Pn 19 23 25.3 0.0
comp=N,78nm,0.8s
EALB Alboran 5.28 93 P Pn 19 23 26.8 +0.2
EALB S Sn 19 24 25.4 -2.1
EALB Alboran 5.28 93 P Pn 19 23 26.8 +0.2
comp=N,4.2nm,0.1s,SNR=7.9
EALB S Sn 19 24 25.4 -2.1
comp=N,90nm,0.3s,SNR=9.7
EALB Alboran 5.28 93 P Pn 19 23 26.8 +0.2
comp=N,4.2nm,0.1s,SNR=7.9
EALB S Sn 19 24 25.4 -2.1
comp=N,90nm,0.3s,SNR=9.7
EALB Alboran 5.28 93 P Pn 19 23 26.8 +0.2
comp=N,4.2nm,0.1s,SNR=7.9
EALB S Sn 19 24 25.4 -2.1
comp=N,90nm,0.3s,SNR=9.7
OUK Oukaimeden 5.33 164 P Pn 19 23 24.0 -3.4
OUK S Sn 19 24 18.0 -11
OUK Oukaimeden 5.33 164 P Pn 19 23 24.0 -3.4
OUK S Sn 19 24 18.0 -11
EQES Quesada 5.36 73 P Pn 19 23 28.8 +1.0
EQES S Sn 19 24 29.0 -0.6
EQES Quesada 5.36 73 P Pn 19 23 28.8 +1.0
comp=N,6.2nm,0.2s,SNR=11
EQES S Sn 19 24 29.0 -0.6
comp=N,82nm,0.3s
EQES Quesada 5.36 73 P Pn 19 23 28.8 +1.0
comp=N,6.2nm,0.2s,SNR=11
EQES S Sn 19 24 29.0 -0.6
comp=N,82nm,0.3s
EQES Quesada 5.36 73 P Pn 19 23 28.8 +1.0
comp=N,6.2nm,0.2s,SNR=11
EQES S Sn 19 24 29.0 -0.6
comp=N,82nm,0.3s
EBER Berja 5.37 82 P Pn 19 23 29.3 +1.4
EBER S Sn 19 24 29.1 -0.6
EBER Berja 5.37 82 P Pn 19 23 29.3 +1.4
comp=N,3.2nm,0.3s,SNR=19
EBER S Sn 19 24 29.1 -0.7
comp=N,9.5nm,0.3s
EBER Berja 5.37 82 P Pn 19 23 29.3 +1.4
comp=N,3.2nm,0.3s,SNR=19
EBER S Sn 19 24 29.1 -0.7
comp=N,9.5nm,0.3s
EBER Berja 5.37 82 P Pn 19 23 29.3 +1.4
comp=N,3.2nm,0.3s,SNR=19
EBER S Sn 19 24 29.1 -0.7
comp=N,9.5nm,0.3s
MDT Midelt 5.39 130 Pn Pn 19 23 26.9 -1.2
comp=N,36nm,0.3s,baz=315,slow=12,SNR=1607
MDT Sn Sn 19 24 24.1 -6.1
comp=N,29nm,0.3s,baz=20,slow=24,SNR=11
PCAB Cabril 5.46 12 ePn Pn 19 23 28.7 -0.4
PCAB eSn Sn 19 24 27.8 -4.2
PCAB A 19 24 32.2
comp=N,64nm,0.8s
PCAB Cabril 5.46 12 P Pn 19 23 28.7 -0.4
PCAB S Sn 19 24 27.8 -4.2
comp=N,32nm,0.8s
PCAB Cabril 5.46 12 P Pn 19 23 28.7 -0.4
PCAB S Sn 19 24 27.8 -4.2
comp=N,32nm,0.8s
PCAB Cabril 5.46 12 ePn Pn 19 23 28.7 -0.4
PCAB eSn Sn 19 24 27.8 -4.2
comp=N,64nm,0.8s
ESDC Sonseca Array 5.50 51 Pn Pn 19 23 30.9 +1.3
comp=N,18nm,0.3s,baz=239,slow=13,SNR=192
ESDC Sn Sn 19 24 32.1 -0.8
comp=N,43nm,0.3s,baz=237,slow=23,SNR=50
ESDC Sonseca Array 5.50 51 P Pn 19 23 30.7 +1.1
ESDC S Sn 19 24 32.2 -0.7
ESDC Sonseca Array 5.50 51 P Pn 19 23 30.4 +0.7
comp=N,21nm,0.3s,baz=239,slow=13,SNR=212
ESDC S Sn 19 24 32.2 -0.7
comp=N,39nm,0.5s,baz=239,slow=24,SNR=47
ESDC Sonseca Array 5.50 51 P Pn 19 23 30.4 +0.7
comp=N,21nm,0.3s,baz=239,slow=13,SNR=212
ESDC S Sn 19 24 32.2 -0.7
comp=N,39nm,0.5s,baz=239,slow=24,SNR=47
ESDC Sonseca Array 5.50 51 P Pn 19 23 30.4 +0.7
comp=N,21nm,0.3s,slow=13,SNR=212
ESDC S Sn 19 24 32.2 -0.7
comp=N,39nm,0.5s,slow=24,SNR=47
ELOB Lobios 5.61 11 P Pn 19 23 30.8 -0.4
ELOB S Sn 19 24 30.1 -5.6
ELOB Lobios 5.61 11 P Pn 19 23 30.7 -0.4
comp=N,9.2nm,0.1s,SNR=65
ELOB S Sn 19 24 30.1 -5.6
comp=N,82nm,0.2s
ELOB Lobios 5.61 11 P Pn 19 23 30.7 -0.4
comp=N,9.2nm,0.1s,SNR=65
ELOB S Sn 19 24 30.1 -5.6
comp=N,82nm,0.2s
ELOB Lobios 5.61 11 P Pn 19 23 30.8 -0.4
ELOB S Sn 19 24 30.1 -5.5
comp=N,82nm,0.2s
EHUE Huescar 5.73 73 P Pn 19 23 33.7 +0.8
EHUE S Sn 19 24 37.5 -1.3
EHUE Huescar 5.73 73 P Pn 19 23 33.7 +0.8
comp=N,4.0nm,0.2s,SNR=7.9
EHUE S Sn 19 24 37.5 -1.3
comp=N,36nm,0.2s,SNR=7.9
EHUE Huescar 5.73 73 P Pn 19 23 33.7 +0.8
comp=N,4.0nm,0.2s,SNR=7.9
EHUE S Sn 19 24 37.5 -1.3
comp=N,36nm,0.2s,SNR=7.9
EHUE Huescar 5.73 73 P Pn 19 23 33.7 +0.8
comp=N,4.0nm,0.2s,SNR=7.9
EHUE S Sn 19 24 37.5 -1.2
comp=N,36nm,0.2s,SNR=7.9
EZAM Zamans 5.81 6 P Pn 19 23 32.7 -1.3
EZAM S Sn 19 24 35.2 -5.4
EZAM Zamans 5.81 6 P Pn 19 23 32.7 -1.3
comp=N,19nm,0.4s,SNR=7.9
EZAM S Sn 19 24 35.2 -5.4
comp=N,17nm,0.2s,SNR=7.9
EZAM Zamans 5.81 6 P Pn 19 23 32.7 -1.3
comp=N,19nm,0.4s,SNR=7.9
EZAM S Sn 19 24 35.2 -5.4
comp=N,17nm,0.2s,SNR=7.9
EZAM Zamans 5.81 6 P Pn 19 23 32.7 -1.2
comp=N,19nm,0.4s,SNR=7.9
EZAM S Sn 19 24 35.2 -5.4
comp=N,17nm,0.2s,SNR=7.9
PBRG Braganca 5.84 21 ePn Pn 19 23 33.6 -0.8
PBRG eSn Sn 19 24 38.4 -3.1
PBRG A 19 24 41.8
comp=N,51nm,0.2s
PBRG Braganca 5.84 21 P Pn 19 23 33.6 -0.8
PBRG S Sn 19 24 38.4 -3.1
comp=N,26nm,0.2s
PBRG Braganca 5.84 21 P Pn 19 23 33.6 -0.8
PBRG S Sn 19 24 38.4 -3.1
comp=N,26nm,0.2s
PBRG Braganca 5.84 21 ePn Pn 19 23 33.6 -0.8
PBRG eSn Sn 19 24 38.4 -3.1
comp=N,51nm,0.2s
ENIJ Nijar 5.92 82 P Pn 19 23 36.3 +0.9
ENIJ S Sn 19 24 42.8 -0.5
ENIJ Nijar 5.92 82 P Pn 19 23 36.3 +0.9
comp=N,2.9nm,0.2s,SNR=7.2
ENIJ S Sn 19 24 42.8 -0.5
comp=N,20nm,0.5s
ENIJ Nijar 5.92 82 P Pn 19 23 36.3 +0.9
comp=N,2.9nm,0.2s,SNR=7.2
ENIJ S Sn 19 24 42.8 -0.5
comp=N,20nm,0.5s
ENIJ Nijar 5.92 82 P Pn 19 23 36.3 +0.8
comp=N,2.9nm,0.2s,SNR=7.2
ENIJ S Sn 19 24 42.8 -0.5
comp=N,20nm,0.5s
AFS Agadir Fac de 5.93 180 P Pn 19 23 34.0 -1.7
AFS S Sn 19 24 31.0 -13
AFS Agadir Fac de 5.93 180 P Pn 19 23 34.0 -1.7
AFS S Sn 19 24 31.0 -13
ECAL Calabor 5.97 20 P Pn 19 23 36.8 +0.6
ECAL S Sn 19 24 41.7 -2.9
ECAL Calabor 5.97 20 P Pn 19 23 36.8 +0.6
comp=N,15nm,0.2s,SNR=43
ECAL S Sn 19 24 41.7 -2.9
comp=N,101nm,0.3s
ECAL Calabor 5.97 20 P Pn 19 23 36.8 +0.6
comp=N,15nm,0.2s,SNR=43
ECAL S Sn 19 24 41.7 -2.9
comp=N,101nm,0.3s
ECAL Calabor 5.97 20 P Pn 19 23 36.8 +0.6
comp=N,15nm,0.2s,SNR=43
ECAL S Sn 19 24 41.7 -2.9
comp=N,101nm,0.3s
GUD Guadarrama 6.00 43 P Pn 19 23 36.8 +0.3
GUD S Sn 19 24 43.1 -2.1
GUD Guadarrama 6.00 43 P Pn 19 23 36.8 +0.3
comp=N,0.8nm,0.2s,SNR=7.9
GUD S Sn 19 24 43.1 -2.1
comp=N,85nm,0.6s,SNR=7.9
GUD Guadarrama 6.00 43 P Pn 19 23 36.8 +0.3
comp=N,0.8nm,0.2s,SNR=7.9
GUD S Sn 19 24 43.1 -2.1
comp=N,85nm,0.6s,SNR=7.9
GUD Guadarrama 6.00 43 P Pn 19 23 36.8 +0.3
comp=N,0.8nm,0.2s,SNR=7.9
GUD S Sn 19 24 43.1 -2.2
comp=N,85nm,0.6s,SNR=7.9
EVIA Vianos 6.03 66 P Pn 19 23 37.5 +0.6
EVIA S Sn 19 24 44.0 -2.0
EVIA Vianos 6.03 66 P Pn 19 23 37.5 +0.6
comp=N,3.0nm,0.1s,SNR=18
EVIA S Sn 19 24 44.0 -2.0
comp=N,19nm,0.2s
EVIA Vianos 6.03 66 P Pn 19 23 37.5 +0.6
comp=N,3.0nm,0.1s,SNR=18
EVIA S Sn 19 24 44.0 -2.0
comp=N,19nm,0.2s
EVIA Vianos 6.03 66 P Pn 19 23 37.5 +0.5
comp=N,3.0nm,0.1s,SNR=18
EVIA S Sn 19 24 44.0 -2.1
comp=N,19nm,0.2s
ZFT Errachidia 6.09 134 P Pn 19 23 37.0 -0.9
ZFT S Sn 19 24 38.0 -10
ZFT Errachidia 6.09 134 P Pn 19 23 37.0 -0.9
ZFT S Sn 19 24 38.0 -10
ERUA La Rua 6.29 16 P Pn 19 23 40.3 -0.3
ERUA S Sn 19 24 48.1 -4.4
ERUA La Rua 6.29 16 P Pn 19 23 40.3 -0.3
comp=N,1.7nm,0.1s,SNR=7.9
ERUA S Sn 19 24 48.1 -4.4
comp=N,29nm,0.3s,SNR=7.9
ERUA La Rua 6.29 16 P Pn 19 23 40.3 -0.3
comp=N,1.7nm,0.1s,SNR=7.9
ERUA S Sn 19 24 48.1 -4.4
comp=N,29nm,0.3s,SNR=7.9
ERUA La Rua 6.29 16 P Pn 19 23 40.3 -0.3
comp=N,1.7nm,0.1s,SNR=7.9
ERUA S Sn 19 24 48.1 -4.4
comp=N,29nm,0.3s,SNR=7.9
PMPS Porto Santo 6.50 241 ePn Pn 19 23 37.3 -6.2
PMPS eSn Sn 19 24 37.3 -20
PMPS A 19 24 44.6
comp=N,65nm,0.3s
PMPS Porto Santo 6.50 241 P Pn 19 23 37.3 -6.2
PMPS S Sn 19 24 37.3 -20
comp=N,33nm,0.3s
PMPS Porto Santo 6.50 241 P Pn 19 23 37.3 -6.2
PMPS S Sn 19 24 37.3 -20
comp=N,33nm,0.3s
YBT Youssef Ben Ta 6.51 180 P Pn 19 23 41.0 -2.6
YBT S Sn 19 24 45.0 -13
YBT Youssef Ben Ta 6.51 180 P Pn 19 23 41.0 -2.6
YBT S Sn 19 24 45.0 -13
STS Santiago 6.55 6 P Pn 19 23 42.6 -1.6
STS S Sn 19 24 53.4 -5.5
STS Santiago 6.55 6 S Sn 19 24 53.4 -5.5
comp=N,21nm,0.2s,SNR=6.7
STS Santiago 6.55 6 S Sn 19 24 53.4 -5.5
comp=N,21nm,0.2s,SNR=6.7
STS Santiago 6.55 6 P Pn 19 23 42.6 -1.5
STS S Sn 19 24 53.4 -5.5
comp=N,21nm,0.2s,SNR=6.7
EMAZ Mazaricos 6.58 4 P Pn 19 23 43.2 -1.4
EMAZ S Sn 19 24 52.0 -7.7
EMAZ Mazaricos 6.58 4 P Pn 19 23 43.2 -1.4
comp=N,12nm,0.1s,SNR=16
EMAZ S Sn 19 24 52.0 -7.7
comp=N,96nm,0.2s
EMAZ Mazaricos 6.58 4 P Pn 19 23 43.2 -1.4
comp=N,12nm,0.1s,SNR=16
EMAZ S Sn 19 24 52.0 -7.7
comp=N,96nm,0.2s
EMAZ Mazaricos 6.58 4 P Pn 19 23 43.2 -1.4
comp=N,12nm,0.1s,SNR=16
EMAZ S Sn 19 24 52.0 -7.7
comp=N,96nm,0.2s
ETOB Tobarra 6.74 68 P Pn 19 23 47.3 +0.5
ETOB S Sn 19 25 00.8 -2.7
ETOB Tobarra 6.74 68 P Pn 19 23 47.3 +0.5
comp=N,2.2nm,0.1s,SNR=27
ETOB S Sn 19 25 00.8 -2.7
comp=N,33nm,0.1s
ETOB Tobarra 6.74 68 P Pn 19 23 47.3 +0.5
comp=N,2.2nm,0.1s,SNR=27
ETOB S Sn 19 25 00.8 -2.7
comp=N,33nm,0.1s
ETOB Tobarra 6.74 68 P Pn 19 23 47.3 +0.6
comp=N,2.2nm,0.1s,SNR=27
ETOB S Sn 19 25 00.8 -2.8
comp=N,33nm,0.1s
EMUR La Murta 6.79 75 P Pn 19 23 48.4 +1.0
EMUR S Sn 19 25 01.1 -3.6
EMUR La Murta 6.79 75 P Pn 19 23 48.4 +1.0
comp=N,2.9nm,0.2s,SNR=6.4
EMUR S Sn 19 25 01.9 -2.9
comp=N,60nm,0.6s
EMUR La Murta 6.79 75 P Pn 19 23 48.4 +1.0
comp=N,2.9nm,0.2s,SNR=6.4
EMUR S Sn 19 25 01.9 -2.9
comp=N,60nm,0.6s
EMUR La Murta 6.79 75 P Pn 19 23 48.4 +1.0
comp=N,2.9nm,0.2s,SNR=6.4
EMUR S Sn 19 25 01.9 -2.8
comp=N,60nm,0.6s
PMAR Madeira 7.09 241 ePn Pn 19 23 44.6 -7.0
PMAR eSn Sn 19 24 52.9 -19
PMAR A 19 24 59.7
comp=N,104nm,0.5s
PMAR Madeira 7.09 241 P Pn 19 23 44.6 -7.0
PMAR S Sn 19 24 52.9 -19
comp=N,52nm,0.5s
PMAR Madeira 7.09 241 P Pn 19 23 44.6 -7.0
PMAR S Sn 19 24 52.9 -19
comp=N,52nm,0.5s
FUL Funchal 7.13 241 eSn Sn 19 24 53.1 -20
FUL Funchal 7.13 241 S Sn 19 24 53.1 -20
FUL Funchal 7.13 241 S Sn 19 24 53.1 -20
EPON Pontenova 7.19 14 P Pn 19 23 52.1 -0.7
EPON S Sn 19 25 09.3 -5.2
EPON Pontenova 7.19 14 P Pn 19 23 52.1 -0.7
comp=N,1.2nm,0.1s,SNR=7.9
EPON S Sn 19 25 09.3 -5.2
comp=N,24nm,0.5s,SNR=7.9
EPON Pontenova 7.19 14 P Pn 19 23 52.1 -0.7
comp=N,1.2nm,0.1s,SNR=7.9
EPON S Sn 19 25 09.3 -5.2
comp=N,24nm,0.5s,SNR=7.9
EPON Pontenova 7.19 14 P Pn 19 23 52.1 -0.7
comp=N,1.2nm,0.1s,SNR=7.9
EPON S Sn 19 25 09.3 -5.2
comp=N,24nm,0.5s,SNR=7.9
ETOR Torete 7.35 51 P Pn 19 23 56.5 +1.4
ETOR S Sn 19 25 16.3 -2.2
ETOR Torete 7.35 51 ⇓P Pn 19 23 56.5 +1.4
comp=N,15nm,0.4s,SNR=18
ETOR S Sn 19 25 16.3 -2.2
comp=N,119nm,0.4s,SNR=5.4
ETOR Torete 7.35 51 ⇓P Pn 19 23 56.5 +1.4
comp=N,15nm,0.4s,SNR=18
ETOR S Sn 19 25 16.3 -2.2
comp=N,119nm,0.4s,SNR=5.4
ETOR Torete 7.35 51 P Pn 19 23 56.5 +1.4
comp=N,15nm,0.4s,SNR=18
ETOR S Sn 19 25 16.3 -2.2
comp=N,119nm,0.4s,SNR=5.4
ECHE Chera 7.49 62 P Pn 19 23 59.2 +2.2
ECHE S Sn 19 25 20.1 -1.9
ECHE Chera 7.49 62 P Pn 19 23 58.8 +1.8
comp=N,1.5nm,0.2s,SNR=7.0
ECHE S Sn 19 25 20.1 -1.9
comp=N,15nm,0.5s
ECHE Chera 7.49 62 P Pn 19 23 58.8 +1.8
comp=N,1.5nm,0.2s,SNR=7.0
ECHE S Sn 19 25 20.1 -1.9
comp=N,15nm,0.5s
ECHE Chera 7.49 62 P Pn 19 23 58.8 +1.8
comp=N,1.5nm,0.2s,SNR=7.0
ECHE S Sn 19 25 20.1 -1.9
comp=N,15nm,0.5s
EARI Arriondas 7.68 24 P Pn 19 24 00.5 +0.9
EARI S Sn 19 25 23.0 -3.6
EARI Arriondas 7.68 24 P Pn 19 24 00.5 +0.9
comp=N,0.7nm,0.2s,SNR=10
EARI S Sn 19 25 23.0 -3.6
comp=N,5.2nm,0.2s
EARI Arriondas 7.68 24 P Pn 19 24 00.5 +0.9
comp=N,0.7nm,0.2s,SNR=10
EARI S Sn 19 25 23.0 -3.6
comp=N,5.2nm,0.2s
EARI Arriondas 7.68 24 P Pn 19 24 00.5 +0.9
comp=N,0.7nm,0.2s,SNR=10
EARI S Sn 19 25 23.0 -3.6
comp=N,5.2nm,0.2s
EBEN Beniarda 7.75 70 P Pn 19 24 01.3 +0.6
EBEN S Sn 19 25 25.4 -3.1
EBEN Beniarda 7.75 70 P Pn 19 24 01.3 +0.6
comp=N,0.3nm,0.1s,SNR=7.5
EBEN S Sn 19 25 25.4 -3.1
comp=N,30nm,0.7s
EBEN Beniarda 7.75 70 P Pn 19 24 01.3 +0.6
comp=N,0.3nm,0.1s,SNR=7.5
EBEN S Sn 19 25 25.4 -3.1
comp=N,30nm,0.7s
EBEN Beniarda 7.75 70 P Pn 19 24 01.3 +0.7
comp=N,0.3nm,0.1s,SNR=7.5
EBEN S Sn 19 25 25.4 -3.1
comp=N,30nm,0.7s
EFAM Famara 7.97 206 S Sn 19 25 17.0 -17
EFAM Famara 7.97 206 S Sn 19 25 17.0 -17
comp=N,14nm,0.2s,SNR=7.9
EFAM Famara 7.97 206 S Sn 19 25 17.0 -17
comp=N,14nm,0.2s,SNR=7.9
EMOS Mosqueruela 8.16 58 P Pn 19 24 09.0 +2.9
EMOS S Sn 19 25 36.8 -1.6
EMOS Mosqueruela 8.16 58 P Pn 19 24 08.6 +2.4
comp=N,1.6nm,0.2s,SNR=14
EMOS S Sn 19 25 36.8 -1.6
comp=N,51nm,0.7s,SNR=10
EMOS Mosqueruela 8.16 58 P Pn 19 24 08.6 +2.4
comp=N,1.6nm,0.2s,SNR=14
EMOS S Sn 19 25 36.8 -1.6
comp=N,51nm,0.7s,SNR=10
EMOS Mosqueruela 8.16 58 P Pn 19 24 08.6 +2.4
comp=N,1.6nm,0.2s,SNR=14
EMOS S Sn 19 25 36.8 -1.6
comp=N,51nm,0.7s,SNR=10
ECRI Cripan 8.26 39 P Pn 19 24 09.1 +1.5
ECRI S Sn 19 25 37.2 -3.7
ECRI Cripan 8.26 39 P Pn 19 24 09.1 +1.5
comp=N,2.1nm,0.1s,SNR=7.9
ECRI S Sn 19 25 37.2 -3.7
comp=N,7.2nm,0.2s,SNR=7.9
ECRI Cripan 8.26 39 P Pn 19 24 09.1 +1.5
comp=N,2.1nm,0.1s,SNR=7.9
ECRI S Sn 19 25 37.2 -3.7
comp=N,7.2nm,0.2s,SNR=7.9
ECRI Cripan 8.26 39 P Pn 19 24 09.1 +1.5
comp=N,2.1nm,0.1s,SNR=7.9
ECRI S Sn 19 25 37.2 -3.7
comp=N,7.2nm,0.2s,SNR=7.9

ELAN Lanestosa 8.30 33 P Pn 19 24 10.8 +2.6
ELAN S Sn 19 25 36.8 -5.2
ELAN Lanestosa 8.30 33 P Pn 19 24 09.6 +1.4
comp=N,0.3nm,0.1s,SNR=16
ELAN S Sn 19 25 36.8 -5.2
comp=N,10nm,0.5s,SNR=7.9
ELAN Lanestosa 8.30 33 P Pn 19 24 09.6 +1.4
comp=N,0.3nm,0.1s,SNR=16
ELAN S Sn 19 25 36.8 -5.2
comp=N,10nm,0.5s,SNR=7.9
ELAN Lanestosa 8.30 33 P Pn 19 24 09.6 +1.4
comp=N,0.3nm,0.1s,SNR=16
ELAN S Sn 19 25 36.8 -5.2
comp=N,10nm,0.5s,SNR=7.9
CFUE Fuerteventura 8.55 207 P Pn 19 24 09.6 -2.0
comp=N,2.1nm,0.1s,SNR=7.9
CFUE S Sn 19 25 31.4 -17
comp=N,17nm,0.2s,SNR=7.9
CFUE Fuerteventura 8.55 207 P Pn 19 24 09.6 -2.0
comp=N,2.1nm,0.1s,SNR=7.9
CFUE S Sn 19 25 31.4 -17
comp=N,17nm,0.2s,SNR=7.9
CFUE Fuerteventura 8.55 207 P Pn 19 24 09.6 -2.0
comp=N,2.1nm,0.1s,SNR=7.9
CFUE S Sn 19 25 31.4 -17
comp=N,17nm,0.2s,SNR=7.9
CFTV Fuerteventura 8.81 207 S Sn 19 25 37.4 -17
comp=N,4.5nm,0.2s,SNR=6.2
CFTV Fuerteventura 8.81 207 S Sn 19 25 37.4 -17
comp=N,4.5nm,0.2s,SNR=6.2
CFTV Fuerteventura 8.81 207 S Sn 19 25 37.4 -17
comp=N,4.5nm,0.2s,SNR=6.2
ESAC San Caprasio 8.85 50 P Pn 19 24 18.1 +2.5
ESAC S Sn 19 25 53.2 -2.1
ESAC San Caprasio 8.85 50 P Pn 19 24 18.1 +2.5
comp=N,2.6nm,0.2s,SNR=7.9
ESAC S Sn 19 25 53.2 -2.1
comp=N,40nm,0.5s,SNR=7.9
ESAC San Caprasio 8.85 50 P Pn 19 24 18.1 +2.5
comp=N,2.6nm,0.2s,SNR=7.9
ESAC S Sn 19 25 53.2 -2.1
comp=N,40nm,0.5s,SNR=7.9
ESAC San Caprasio 8.85 50 P Pn 19 24 18.1 +2.5
comp=N,2.6nm,0.2s,SNR=7.9
ESAC S Sn 19 25 53.2 -2.1
comp=N,40nm,0.5s,SNR=7.9
EARA Aranguren 8.86 41 S Sn 19 25 53.5 -2.2
comp=N,17nm,0.4s,SNR=7.9
EARA Aranguren 8.86 41 S Sn 19 25 53.5 -2.2
comp=N,17nm,0.4s,SNR=7.9
EARA Aranguren 8.86 41 S Sn 19 25 53.5 -2.2
comp=N,17nm,0.4s,SNR=7.9
IUNC Unciti 8.89 42 P Pn 19 24 17.3 +1.1
comp=N,2.2nm,0.2s,SNR=7.9
IUNC S Sn 19 25 55.1 -1.4
comp=N,10nm,0.4s,SNR=7.9
IUNC Unciti 8.89 42 P Pn 19 24 17.3 +1.1
comp=N,2.2nm,0.2s,SNR=7.9
IUNC S Sn 19 25 55.1 -1.4
comp=N,10nm,0.4s,SNR=7.9
IUNC Unciti 8.89 42 P Pn 19 24 17.3 +1.0
comp=N,2.2nm,0.2s,SNR=7.9
IUNC S Sn 19 25 55.1 -1.4
comp=N,10nm,0.4s,SNR=7.9
ERTA Horta de San J 8.97 56 P Pn 19 24 18.5 +1.2
ERTA S Sn 19 25 56.7 -1.7
ERTA Horta de San J 8.97 56 P Pn 19 24 18.5 +1.2
comp=N,0.5nm,0.1s,SNR=7.9
ERTA S Sn 19 25 56.7 -1.7
comp=N,10nm,0.5s,SNR=7.9
ERTA Horta de San J 8.97 56 P Pn 19 24 18.5 +1.2
comp=N,0.5nm,0.1s,SNR=7.9
ERTA S Sn 19 25 56.7 -1.7
comp=N,10nm,0.5s,SNR=7.9
ERTA Horta de San J 8.97 56 P Pn 19 24 18.5 +1.2
comp=N,0.5nm,0.1s,SNR=7.9
ERTA S Sn 19 25 56.7 -1.7
comp=N,10nm,0.5s,SNR=7.9
IZUN Zunzarren 8.99 41 P Pn 19 24 18.6 +1.0
comp=N,1.0nm,0.1s,SNR=7.9
IZUN S Sn 19 25 55.5 -3.3
comp=N,13nm,0.8s,SNR=7.9
IZUN Zunzarren 8.99 41 P Pn 19 24 18.6 +1.0
comp=N,1.0nm,0.1s,SNR=7.9
IZUN S Sn 19 25 55.5 -3.3
comp=N,13nm,0.8s,SNR=7.9
IZUN Zunzarren 8.99 41 P Pn 19 24 18.5 +0.9
comp=N,1.0nm,0.1s,SNR=7.9
IZUN S Sn 19 25 55.5 -3.3
comp=N,13nm,0.8s,SNR=7.9
IUSE Utxeti 9.00 41 P Pn 19 24 19.7 +2.0
comp=N,2.0nm,0.2s,SNR=5.2
IUSE S Sn 19 25 56.5 -2.6
comp=N,7.2nm,0.6s,SNR=7.9
IUSE Utxeti 9.00 41 P Pn 19 24 19.7 +2.0
comp=N,2.0nm,0.2s,SNR=5.2
IUSE S Sn 19 25 56.5 -2.6
comp=N,7.2nm,0.6s,SNR=7.9
IUSE Utxeti 9.00 41 P Pn 19 24 19.7 +2.0
comp=N,2.0nm,0.2s,SNR=5.2
IUSE S Sn 19 25 56.5 -2.6
comp=N,7.2nm,0.6s,SNR=7.9
EIBI Ibiza 9.02 70 P Pn 19 24 20.8 +2.8
EIBI S Sn 19 25 52.5 -7.1
EIBI Ibiza 9.02 70 P Pn 19 24 19.5 +1.5
comp=N,2.2nm,0.2s,SNR=7.9
EIBI S Sn 19 25 52.4 -7.1
comp=N,31nm,0.6s,SNR=7.9
EIBI Ibiza 9.02 70 P Pn 19 24 19.5 +1.5
comp=N,2.2nm,0.2s,SNR=7.9
EIBI S Sn 19 25 52.4 -7.1
comp=N,31nm,0.6s,SNR=7.9
EIBI Ibiza 9.02 70 P Pn 19 24 19.5 +1.5
comp=N,2.2nm,0.2s,SNR=7.9
EIBI S Sn 19 25 52.4 -7.2
comp=N,31nm,0.6s,SNR=7.9
ELIZ Elizondo 9.16 40 P Pn 19 24 22.5 +2.5
ELIZ S Sn 19 25 59.2 -3.8
ELIZ Elizondo 9.16 40 P Pn 19 24 20.9 +1.0
comp=N,4.9nm,0.3s,SNR=14
ELIZ S Sn 19 25 59.2 -3.8
comp=N,8.2nm,0.3s,SNR=7.9
ELIZ Elizondo 9.16 40 P Pn 19 24 20.9 +1.0
comp=N,4.9nm,0.3s,SNR=14
ELIZ S Sn 19 25 59.2 -3.8
comp=N,8.2nm,0.3s,SNR=7.9
ELIZ Elizondo 9.16 40 P Pn 19 24 20.9 +1.0
comp=N,4.9nm,0.3s,SNR=14
ELIZ S Sn 19 25 59.2 -3.9
comp=N,8.2nm,0.3s,SNR=7.9
EALK Alkurruntz 9.21 40 P Pn 19 24 21.3 +0.7
EALK S Sn 19 25 59.7 -4.6
EALK Alkurruntz 9.21 40 P Pn 19 24 21.7 +1.1
comp=N,5.8nm,0.3s,SNR=14
EALK S Sn 19 25 59.7 -4.6
comp=N,38nm,0.6s,SNR=6.1
EALK Alkurruntz 9.21 40 P Pn 19 24 21.7 +1.1
comp=N,5.8nm,0.3s,SNR=14
EALK S Sn 19 25 59.7 -4.6
comp=N,38nm,0.6s,SNR=6.1
EALK Alkurruntz 9.21 40 P Pn 19 24 21.3 +0.7
EALK S Sn 19 25 59.7 -4.6
comp=N,38nm,0.6s,SNR=6.1
SJPF Ste Jean 9.29 41 ePn Pn 19 24 22.6 +1.0
SJPF eSn Sn 19 26 01.7 -4.4
comp=N,25nm,0.5s
SJPF Ste Jean 9.29 41 P Pn 19 24 22.6 +1.0
SJPF S Sn 19 26 01.7 -4.4
comp=N,12nm,0.5s
SJPF Ste Jean 9.29 41 P Pn 19 24 22.6 +1.0
SJPF S Sn 19 26 01.7 -4.4
comp=N,12nm,0.5s
SJPF Ste Jean 9.29 41 ePn Pn 19 24 22.6 +1.0
SJPF eSn Sn 19 26 01.7 -4.4
comp=N,12nm,0.5s
OSSF Osses 9.37 40 P Pn 19 24 24.0 +1.3
OSSF Osses 9.37 40 P Pn 19 24 24.0 +1.3
ETSF Etsaut 9.51 44 ePn Pn 19 24 25.8 +1.2
ETSF eSn Sn 19 26 07.4 -4.1
comp=N,9.2nm,0.4s
ETSF Etsaut 9.51 44 P Pn 19 24 25.8 +1.2
ETSF S Sn 19 26 07.4 -4.1
comp=N,4.6nm,0.4s
ETSF Etsaut 9.51 44 P Pn 19 24 25.8 +1.2
ETSF S Sn 19 26 07.4 -4.1
comp=N,4.6nm,0.4s
ETSF Etsaut 9.51 44 ePn Pn 19 24 25.8 +1.2
ETSF eSn Sn 19 26 07.4 -4.1
comp=N,4.6nm,0.4s
EPOB Poblet 9.65 56 P Pn 19 24 27.7 +1.0
EPOB S Sn 19 26 10.4 -4.8
EPOB Poblet 9.65 56 P Pn 19 24 27.7 +1.0
comp=N,0.4nm,0.1s,SNR=7.9
EPOB S Sn 19 26 10.4 -4.8
comp=N,2.8nm,0.4s,SNR=7.9
EPOB Poblet 9.65 56 P Pn 19 24 27.7 +1.0
comp=N,0.4nm,0.1s,SNR=7.9
EPOB S Sn 19 26 10.4 -4.8
comp=N,2.8nm,0.4s,SNR=7.9
EPOB Poblet 9.65 56 P Pn 19 24 27.7 +1.0
comp=N,0.4nm,0.1s,SNR=7.9
EPOB S Sn 19 26 10.4 -4.7
comp=N,2.8nm,0.4s,SNR=7.9
EBAJ Bajamar 9.70 218 S Sn 19 25 56.0 -20
comp=N,4.7nm,0.3s,SNR=7.9
EBAJ Bajamar 9.70 218 S Sn 19 25 56.0 -20
comp=N,4.7nm,0.3s,SNR=7.9
EBAJ Bajamar 9.70 218 S Sn 19 25 56.0 -20
comp=N,4.7nm,0.3s,SNR=7.9
EOSO Osorio 9.71 213 S Sn 19 25 58.9 -18
comp=N,5.7nm,0.2s,SNR=7.9
EOSO Osorio 9.71 213 S Sn 19 25 58.9 -18
comp=N,5.7nm,0.2s,SNR=7.9
EOSO Osorio 9.71 213 S Sn 19 25 58.9 -18
comp=N,5.7nm,0.2s,SNR=7.9
EBIE Bielsa 9.78 47 P Pn 19 24 29.5 +1.1
EBIE S Sn 19 26 13.2 -5.0
EBIE Bielsa 9.78 47 P Pn 19 24 29.5 +1.1
comp=N,0.7nm,0.1s,SNR=16
EBIE S Sn 19 26 13.2 -5.0
comp=N,13nm,0.5s,SNR=7.9
EBIE Bielsa 9.78 47 P Pn 19 24 29.5 +1.1
comp=N,0.7nm,0.1s,SNR=16
EBIE S Sn 19 26 13.2 -5.0
comp=N,13nm,0.5s,SNR=7.9
EBIE Bielsa 9.78 47 P Pn 19 24 29.5 +1.1
comp=N,0.7nm,0.1s,SNR=16
EBIE S Sn 19 26 13.2 -4.9
comp=N,13nm,0.5s,SNR=7.9
LABF Labassere 9.96 45 P Pn 19 24 32.0 +1.2
LABF Labassere 9.96 45 P Pn 19 24 32.0 +1.2
EPF Esparros 10.10 46 ePn Pn 19 24 34.0 +1.2
EPF eSn Sn 19 26 21.1 -5.0
comp=N,22nm,0.5s
EPF Esparros 10.10 46 P Pn 19 24 34.0 +1.2
EPF S Sn 19 26 21.1 -5.0
comp=N,11nm,0.5s
EPF Esparros 10.10 46 P Pn 19 24 34.0 +1.2
EPF S Sn 19 26 21.1 -5.0
comp=N,11nm,0.5s
EPF Esparros 10.10 46 ePn Pn 19 24 34.0 +1.2
EPF eSn Sn 19 26 21.1 -5.0
comp=N,11nm,0.5s
CHIO Chio 10.18 219 S Sn 19 26 08.2 -20
comp=N,11nm,0.2s,SNR=7.9
CHIO Chio 10.18 219 S Sn 19 26 08.2 -20
comp=N,11nm,0.2s,SNR=7.9
CHIO Chio 10.18 219 S Sn 19 26 08.2 -20
comp=N,11nm,0.2s,SNR=7.9
CSOR Sort 10.20 51 P Pn 19 24 34.8 +0.7
comp=N,1.6nm,0.3s
CSOR S Sn 19 26 23.0 -5.6
CSOR Sort 10.20 51 P Pn 19 24 34.8 +0.7
comp=N,1.6nm,0.3s,SNR=7.9
CSOR S Sn 19 26 23.0 -5.6
comp=N,3.6nm,0.3s,SNR=7.9
CSOR Sort 10.20 51 P Pn 19 24 34.8 +0.7
comp=N,1.6nm,0.3s,SNR=7.9
CSOR S Sn 19 26 23.0 -5.6
comp=N,3.6nm,0.3s,SNR=7.9
CSOR Sort 10.20 51 P Pn 19 24 34.8 +0.6
comp=N,1.6nm,0.3s,SNR=7.9
CSOR S Sn 19 26 23.0 -5.6
comp=N,3.6nm,0.3s,SNR=7.9
EMIR Miracle 10.21 54 P Pn 19 24 37.7 +3.4
EMIR S Sn 19 26 22.9 -6.1
EMIR Miracle 10.21 54 P Pn 19 24 37.7 +3.4
comp=N,0.3nm,0.1s,SNR=7.9
EMIR S Sn 19 26 22.9 -6.1
comp=N,14nm,0.6s,SNR=7.9
EMIR Miracle 10.21 54 P Pn 19 24 37.7 +3.4
comp=N,0.3nm,0.1s,SNR=7.9
EMIR S Sn 19 26 22.9 -6.1
comp=N,14nm,0.6s,SNR=7.9
EMIR Miracle 10.21 54 P Pn 19 24 37.7 +3.3
comp=N,0.3nm,0.1s,SNR=7.9
EMIR S Sn 19 26 22.9 -6.0
comp=N,14nm,0.6s,SNR=7.9
ETOS Mallorca 10.31 67 P Pn 19 24 36.3 +0.6
comp=N,0.1nm,0.3s
ETOS S Sn 19 26 25.9 -5.3
ETOS Mallorca 10.31 67 P Pn 19 24 36.3 +0.6
comp=N,0.1nm,0.3s,SNR=7.9
ETOS S Sn 19 26 25.9 -5.3
comp=N,2.9nm,0.3s,SNR=7.9
ETOS Mallorca 10.31 67 P Pn 19 24 36.3 +0.6
comp=N,0.1nm,0.3s,SNR=7.9
ETOS S Sn 19 26 25.9 -5.3
comp=N,2.9nm,0.3s,SNR=7.9
ETOS Mallorca 10.31 67 P Pn 19 24 36.3 +0.6
comp=N,0.1nm,0.3s,SNR=7.9
ETOS S Sn 19 26 25.9 -5.3
comp=N,2.9nm,0.3s,SNR=7.9
EGOM La Gomera 10.45 221 S Sn 19 26 12.5 -22
comp=N,12nm,0.3s,SNR=7.9
EGOM La Gomera 10.45 221 S Sn 19 26 12.5 -22
comp=N,12nm,0.3s,SNR=7.9
EGOM La Gomera 10.45 221 S Sn 19 26 12.5 -22
comp=N,12nm,0.3s,SNR=7.9
CFON Fontmartina 10.75 56 P Pn 19 24 42.0 +0.3
comp=N,0.3nm,0.1s
CFON S Sn 19 26 37.3 -4.6
CFON Fontmartina 10.75 56 P Pn 19 24 41.9 +0.3
comp=N,0.3nm,0.1s,SNR=7.9
CFON Fontmartina 10.75 56 P Pn 19 24 41.9 +0.3
comp=N,0.3nm,0.1s,SNR=7.9
CFON Fontmartina 10.75 56 P Pn 19 24 41.9 +0.2
comp=N,0.3nm,0.1s,SNR=7.9
CFON S Sn 19 26 37.3 -4.7
CLLI Llivia 10.79 52 P Pn 19 24 43.0 +0.8
CLLI S Sn 19 26 37.1 -5.8
CLLI Llivia 10.79 52 P Pn 19 24 43.0 +0.8
comp=N,0.2nm,0.1s,SNR=7.9
CLLI S Sn 19 26 38.2 -4.7
comp=N,15nm,1.0s,SNR=5.8
CLLI Llivia 10.79 52 P Pn 19 24 43.0 +0.8
comp=N,0.2nm,0.1s,SNR=7.9
CLLI S Sn 19 26 38.2 -4.7
comp=N,15nm,1.0s,SNR=5.8
CLLI Llivia 10.79 52 P Pn 19 24 43.0 +0.8
comp=N,0.2nm,0.1s,SNR=7.9
CLLI S Sn 19 26 38.2 -4.7
comp=N,15nm,1.0s,SNR=5.8
MTLF Montolieu 11.40 49 ePn Pn 19 24 50.7 +0.2
MTLF eSn Sn 19 26 52.7 -5.2
comp=N,4.3nm,0.6s
MTLF Montolieu 11.40 49 P Pn 19 24 50.7 +0.2
MTLF S Sn 19 26 52.7 -5.2
comp=N,2.2nm,0.6s
MTLF Montolieu 11.40 49 P Pn 19 24 50.7 +0.2
MTLF S Sn 19 26 52.7 -5.2
comp=N,2.2nm,0.6s
MTLF Montolieu 11.40 49 ePn Pn 19 24 50.7 +0.2
MTLF eSn Sn 19 26 52.7 -5.2
comp=N,2.2nm,0.6s
LFF La Frestale 11.57 39 ePn Pn 19 24 53.1 +0.2
LFF eSn Sn 19 26 56.2 -6.0
comp=N,4.7nm,0.3s
LFF La Frestale 11.57 39 P Pn 19 24 53.1 +0.2
LFF S Sn 19 26 56.2 -6.0
comp=N,2.3nm,0.3s
LFF La Frestale 11.57 39 P Pn 19 24 53.1 +0.2
LFF S Sn 19 26 56.2 -6.0
comp=N,2.3nm,0.3s
LFF La Frestale 11.57 39 ePn Pn 19 24 53.1 +0.2
LFF eSn Sn 19 26 56.2 -6.0
comp=N,2.3nm,0.3s
RJF Les Rejaudoux 12.22 40 ePn Pn 19 25 01.5 -0.3
RJF eSn Sn 19 27 12.0 -6.1
comp=N,2.3nm,0.3s
RJF Les Rejaudoux 12.22 40 P Pn 19 25 01.5 -0.3
RJF S Sn 19 27 12.0 -6.1
comp=N,1.2nm,0.3s
RJF Les Rejaudoux 12.22 40 P Pn 19 25 01.5 -0.3
RJF S Sn 19 27 12.0 -6.1
comp=N,1.2nm,0.3s
RJF Les Rejaudoux 12.22 40 ePn Pn 19 25 01.5 -0.3
RJF eSn Sn 19 27 12.0 -6.1
comp=N,1.1nm,0.3s
CAF Calviac 12.26 42 ePn Pn 19 25 01.5 -0.9
CAF eSn Sn 19 27 12.3 -6.7
comp=N,15nm,0.8s
CAF Calviac 12.26 42 P Pn 19 25 01.5 -0.9
CAF S Sn 19 27 12.3 -6.7
comp=N,7.3nm,0.8s
CAF Calviac 12.26 42 P Pn 19 25 01.5 -0.9
CAF S Sn 19 27 12.3 -6.7
comp=N,7.3nm,0.8s
CAF Calviac 12.26 42 ePn Pn 19 25 01.5 -0.9
MFF Saint Martin d 12.40 32 ePn Pn 19 25 04.2 0.0
MFF eSn Sn 19 27 15.5 -6.9
comp=N,0.8nm,0.2s
MFF Saint Martin d 12.40 32 P Pn 19 25 04.2 0.0
MFF S Sn 19 27 15.5 -6.9
comp=N,0.4nm,0.2s
MFF Saint Martin d 12.40 32 P Pn 19 25 04.2 0.0
MFF S Sn 19 27 15.5 -6.9
comp=N,0.4nm,0.2s
MFF Saint Martin d 12.40 32 ePn Pn 19 25 04.2 0.0
QUIF Quistinic 12.46 20 ePn Pn 19 25 04.7 -0.4
QUIF eSn Sn 19 27 16.6 -7.3
comp=N,1.5nm,0.2s
QUIF Quistinic 12.46 20 P Pn 19 25 04.7 -0.4
QUIF S Sn 19 27 16.6 -7.3
comp=N,0.8nm,0.2s
QUIF Quistinic 12.46 20 P Pn 19 25 04.7 -0.4
QUIF S Sn 19 27 16.6 -7.3
comp=N,0.8nm,0.2s
QUIF Quistinic 12.46 20 ePn Pn 19 25 04.7 -0.4
ROSF Rostrenen 12.82 19 eSn Sn 19 27 24.6 -8.0
comp=N,33nm,1.0s
ROSF Rostrenen 12.82 19 S Sn 19 27 24.6 -8.0
comp=N,17nm,1.0s
ROSF Rostrenen 12.82 19 S Sn 19 27 24.6 -8.0
comp=N,17nm,1.0s
SGMF Saint Gilles 12.94 21 ePn Pn 19 25 10.4 -1.2
SGMF eSn Sn 19 27 28.1 -7.5
comp=N,19nm,0.9s
SGMF Saint Gilles 12.94 21 P Pn 19 25 10.4 -1.2
SGMF S Sn 19 27 28.1 -7.5
comp=N,9.6nm,0.9s
SGMF Saint Gilles 12.94 21 P Pn 19 25 10.4 -1.2
SGMF S Sn 19 27 28.1 -7.5
comp=N,9.6nm,0.9s
SGMF Saint Gilles 12.94 21 ePn Pn 19 25 10.4 -1.2
DAVOX Davos/Dischmat 17.82 48 LR LR 19 33 04.4
comp=N,32nm,21.6s,baz=247,slow=36
ARCES ARCESS Array B 38.27 19 P P 19 29 25.0 -2.8
comp=N,0.6nm,0.8s,baz=221,slow=8.1,SNR=3.6
ILAR Eielson Array 73.80 342 LR LR 20 04 08.9
comp=N,31nm,20.3s,baz=96,slow=34
WRA Warramunga Arr 144.44 72 PKPbc PKPdf 19 41 37.8 -6.9
comp=N,0.3nm,0.6s,baz=320,slow=2.0,SNR=5.6
ASAR Alice Springs 146.10 78 PKPbc PKPbc 19 41 43.9 -4.5
comp=N,0.5nm,0.6s,baz=290,slow=2.9,SNR=8.5

MEX 17 20:20:51.1±0.4, 16.74N×100.20W, h4km±2km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.32	348	iP	Pg	20 20 57.2	0.0
CAIG				eS	Sg	20 21 01.5	+0.1
ACX	Acapulco	0.35	68	iP	Pg	20 20 56.8	-1.1
ACX				iS	Sg	20 21 00.8	-1.6
MEIG	Mezcala	1.30	25	iP	Pn	20 21 12.3	-3.8
MEIG				eS	Sg	20 21 29.1	-4.0
PLIG	Platanillo	1.77	22	iP	Pn	20 21 18.9	-3.6
PLIG				eS	Sn	20 21 41.4	-4.2
PNIG	Pinotepa	2.01	100	eP	Pn	20 21 22.4	-3.4
PNIG				iS	Sn	20 21 46.5	-5.0

MEX 17 20:29:28.2±1.2, 14.81N×94.45W, h16km±22km, MD4.0, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		1.49	53	iP	Pn	20 29 49.9	-4.4
PCIG				iS	Sn	20 30 08.4	-5.0
HUIG	Huatulco	1.86	301	iP	Pn	20 29 56.6	-2.8
HUIG				eS	Sn	20 30 17.2	-5.4
THIG		2.12	87	iP	Pn	20 30 00.0	-2.9
THIG				eS	Sn	20 30 24.9	-4.0
TGIG		2.34	33	iP	Pn	20 30 03.7	-2.3
TGIG				iS	Sn	20 30 30.9	-3.6
SCX	San Cristobal	2.60	42	iP	Pn	20 30 06.1	-3.4

IDC 17 20:31:48.2±2.2, 5.96S×154.58E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/17, mbtmp3.5/3, MS3.2/1, Ms1 3.2/1, ms1mx2.4/14, Error ellipse: s-maj=78.7km s-min=34.0km az=112.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.08	233	P	P	20 37 05.6	+0.1
	0.8nm,0.7s,baz=54,slow=9.4,SNR=11						
WRA				PcP	PcP	20 40 46.2	-1.1
	0.6nm,1.0s,baz=60,slow=2.8,SNR=4.2						
ASAR	Alice Springs	26.56	226	P	P	20 37 28.3	+0.3
	0.4nm,0.5s,baz=59,slow=9.0,SNR=6.0						
ASAR				PcP	PcP	20 40 52.5	-0.4
	0.6nm,0.5s,baz=65,slow=2.6,SNR=6.7						
AFI	Afiamalu	34.03	106	LR	LR	20 50 55.2	
	comp=Z,40nm,19.2s,baz=68,slow=34						
SONM	Songino Array	68.25	327	P	P	20 42 51.6	+0.9
	0.3nm,0.5s,baz=140,slow=6.8,SNR=5.2						

MEX 17 20:40:42.4±1.2, 14.61N×94.42W, h16km±45km, MD4.0
IDC 17 20:40:43.0±2.6, 15.11N×94.29W, h0km, mb3.7/5, mb1 4.0/8, mb1mx3.9/22, mbtmp3.7/8, ML3.6/1, MS3.0/1, Ms1 3.0/1, ms1mx2.2/29, Error ellipse: s-maj=59.2km s-min=23.8km az=31.0
NEIC 17 20:40:42.0, 14.59N×94.42W, h16km, mb4.2/2, MD3.9(MEX), After MEX.
ISCJB 17 20:40:43.9±0.9, 14.87N±0.08×94.43W±0.04, h33km, mb3.8/5, Error ellipse: s-maj=11.0km s-min=5.1km az=10.0
ISC 17 20:40:46.6±1.0, 14.97N±0.09×94.37W±0.05, h35km, n18, σ1.35/27, mb3.8/5, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		1.33	56	iP	Pn	20 41 05.9	-2.8
PCIG				eS	Sn	20 41 24.4	-0.8
HUIG	Huatulco	1.86	296	iP	Pn	20 41 12.9	-3.0
HUIG				eS	Sn	20 41 33.6	-4.5
HUIG	Huatulco	1.86	296	iP	Pn	20 41 12.9	-3.0
HUIG				iS	Sn	20 41 34.8	-3.4
THIG		2.04	91	iP	Pn	20 41 13.6	-4.7
THIG				eS	Sn	20 41 38.4	-4.2
TGIG		2.17	34	iP	Pn	20 41 20.1	-0.1
TGIG				eS	Sn	20 41 49.0	+3.2
CMIG	Matias Romero	2.17	347	Pn	Pn	20 41 19.1	-1.2
	28nm,0.3s,baz=162,slow=11,SNR=302						
CMIG				Sn	Sn	20 41 46.4	+0.5
	71nm,0.3s,baz=126,slow=8.7,SNR=17						
SCX	San Cristobal	2.43	43	iP	Pn	20 41 23.8	0.0
VHO	Vista Hermosa	3.09	313	iP	Pn	20 41 33.6	+0.7
VHO				eS	Sn	20 42 07.9	-0.7
VHO	Vista Hermosa	3.09	313	iP	Pn	20 41 31.7	-1.2
VHO				iS	Sn	20 42 08.8	+0.2
APG	El Apazote	3.77	89	Pn	Pn	20 41 42.1	-0.2
	baz=180,slow=20						
APG				LR	LR	20 42 22.2	
	comp=Z,174nm,18.6s,baz=270,slow=27						
APG				Sn	Sn	20 42 27.6	+2.0
	baz=180,slow=20						
TEIG	Tepich	7.82	47	eP	Pn	20 42 35.1	-2.8
	22nm,0.4s						
TXAR	Lajitas Array	16.68	331	Pn	Pn	20 44 38.7	+1.1
	0.1nm,0.3s,baz=148,slow=12,SNR=8.9						
AMTX	Amarillo	20.90	343	eP	P	20 45 26.5	+0.6
	14nm,0.7s						

PDAR Pinedale Array 30.63 338 P P 20 46 58.3 +0.9
0.4nm,0.6s,mb3.4,baz=165,slow=12,SNR=3.6
NVAR Mina Array Bea 31.50 322 P P 20 47 07.5 +2.4
0.7nm,0.7s,mb3.6,baz=134,slow=8.8,SNR=5.4
YKA Yellowknife Ar 49.58 348 P P 20 49 34.0 +0.1
0.8nm,0.6s,mb3.9,baz=131,slow=8.8,SNR=3.8
ILAR Eielson Array 61.06 337 P P 20 50 57.0 +0.4
0.8nm,0.9s,mb3.9,baz=130,slow=4.9,SNR=6.1
ARCES ARCESS Array B 85.93 18 P P 20 53 23.9 +1.3
1.3nm,1.0s,mb4.1,baz=297,slow=5.0,SNR=4.8

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*IDC **17** 20:46:20.3±1.3, 32°.03S×72°.28W, h0km, mb3.3/1, mb1 3.6/6, mb1mx3.6/17, mbtmp3.4/6, ML3.6/3, MS3.3/1, Ms1 3.3/1, ms1mx2.7/10, Error ellipse: s-maj=32.1km s-min=19.0km az=3.0*
*ISCJB **17** 20:46:21.2±1.1, 32°.11S±0°.03×72°.31W±0°.07, h25km±8km, Error ellipse: s-maj=9.6km s-min=5.2km az=171.4*
*GUC **17** 20:46:22.6±0.8, 32°.13S×72°.17W, h36km±3km, MD4.0, ML4.1*
*NEIC **17** 20:46:22.6, 32°.13S×72°.17W, h36km, ML4.1(GUC), After GUC.*
ISC 17 20:46:22.1±1.6, 32°.12S±0°.03×72°.24W±0°.07, h18km±12km, n38, σ0°79/52, 7C-3D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.67**	**69**	⇑*iP*		**Pb**	**20 46 34.6**	**-0.6**
CHNG				*i S*		**Sb**	**20 46 44.6**	**+0.5**
IHA	**Instituto Hidr**	**1.03**	**151**	*eP*		**Pb**	**20 46 40.4**	**-1.0**
IHA				*i S*		**Sb**	**20 46 53.9**	**-0.6**
IHA	**Instituto Hidr**	**1.03**	**151**	*eP*		**Pb**	**20 46 40.4**	**-1.0**
IHA				*i S*		**Sb**	**20 46 53.9**	**-0.6**
ROCH	**El Roble**	**1.34**	**130**	⇑*iP*		**Pn**	**20 46 45.5**	**-0.3**
ROCH				*i S*		**Sn**	**20 47 03.0**	**-0.1**
ROCH	**El Roble**	**1.34**	**130**	⇑*iP*		**Pn**	**20 46 45.5**	**-0.3**
ROCH				*i S*		**Sn**	**20 47 03.0**	**-0.1**
CMCH	**Combarbala**	**1.42**	**48**	⇓*iP*		**Pn**	**20 46 46.1**	**-0.8**
CMCH				*i S*		**Sn**	**20 47 04.9**	**-0.1**
CMCH	**Combarbala**	**1.42**	**48**	⇓*iP*		**Pn**	**20 46 46.1**	**-0.8**
CMCH				*i S*		**Sn**	**20 47 04.9**	**-0.1**
JACH	**Jahuel**	**1.50**	**112**	⇑*iP*		**Pn**	**20 46 47.7**	**-0.3**
JACH				*i S*		**Sn**	**20 47 06.6**	**-0.4**
JACH	**Jahuel**	**1.50**	**112**	⇑*iP*		**Pn**	**20 46 47.7**	**-0.3**
JACH				*i S*		**Sn**	**20 47 06.6**	**-0.4**
PEL	**Peldehue**	**1.66**	**128**	⇓*iP*		**Pn**	**20 46 49.8**	**-0.4**
PEL				*i S*		**Sn**	**20 47 10.8**	**-0.3**
PEL					AML	AML	20 47 17.4	
	comp=N,8μm,0.7s							
SAN	**Santiago**	**1.88**	**135**	*eP*		**Pn**	**20 46 53.7**	**+0.5**
SAN				*i S*		**Sn**	**20 47 16.9**	**+0.5**
SAN	**Santiago**	**1.88**	**135**	*eP*		**Pn**	**20 46 53.7**	**+0.5**
SAN				*i S*		**Sn**	**20 47 16.9**	**+0.5**
SAN					AML	AML	20 47 23.1	
	comp=N,3μm,0.3s							
TACH	**Talagante**	**1.88**	**145**	*eP*		**Pn**	**20 46 53.3**	**+0.1**
TACH				*i S*		**Sn**	**20 47 16.1**	**-0.3**
TACH	**Talagante**	**1.88**	**145**	*eP*		**Pn**	**20 46 53.3**	**+0.1**
TACH				*i S*		**Sn**	**20 47 16.1**	**-0.3**
CLCH	**Cerro Calan**	**1.91**	**132**	*eP*		**Pn**	**20 46 53.6**	**-0.2**
CLCH				*eS*		**Sn**	**20 47 17.2**	**-0.2**
CLCH					AML	AML	20 47 26.6	
	comp=E,3μm,0.6s							
LNV	**Longovilo**	**1.96**	**159**	*eP*		**Pn**	**20 46 54.6**	**+0.3**
LNV	**Longovilo**	**1.96**	**159**	*eP*		**Pn**	**20 46 54.6**	**+0.3**
PCH	**Pirque**	**2.08**	**136**	*eP*		**Pn**	**20 46 56.2**	**+0.1**
PCH	**Pirque**	**2.08**	**136**	*eP*		**Pn**	**20 46 56.2**	**+0.1**
TLL	**Tololo Astrono**	**2.30**	**33**	⇑*iP*		**Pn**	**20 46 59.5**	**+0.4**
TLL	**Tololo Astrono**	**2.30**	**33**	⇑*iP*		**Pn**	**20 46 59.5**	**+0.4**
TLL					AML	AML	20 47 42.2	
	comp=N,1μm,0.6s							
CACH	**El Canelo**	**2.42**	**146**	*eP*		**Pn**	**20 47 01.6**	**+0.9**
CACH	**El Canelo**	**2.42**	**146**	*eP*		**Pn**	**20 47 01.6**	**+0.9**
LMEL	**Las Melosas**	**2.42**	**136**	*eP*		**Pn**	**20 47 01.1**	**+0.3**
LMEL	**Las Melosas**	**2.42**	**136**	*eP*		**Pn**	**20 47 01.1**	**+0.3**
LMEL					AML	AML	20 47 47.0	
	comp=N,754nm,0.7s							
LCO	**Las Campanas**	**3.37**	**24**	*eP*		**Pn**	**20 47 13.5**	**-0.3**
CFAA	**Coronel Fontan**	**3.44**	**82**	Pn		**Pn**	**20 47 17.4**	**+2.6**
	comp=N,0.6nm,0.3s,baz=249,slow=14,SNR=23							
CFAA				Pg		**Pg**	**20 47 23.0**	**-5.0**
	comp=N,1.9nm,0.3s,baz=255,slow=15,SNR=50							
CFAA				Lg			20 48 08.9	
	comp=N,3.0nm,0.3s,baz=68,slow=8.8,SNR=7.8							
CFAA	**Coronel Fontan**	**3.44**	**82**	Pn		**Pn**	**20 47 17.4**	**+2.6**
CFAA				Pg		**Pg**	**20 47 23.0**	**-5.0**
CFAA				Lg			20 48 08.9	
PLCA	**Paso Flores**	**8.70**	**172**	Pn		**Pn**	**20 48 27.4**	**+0.5**
	comp=N,0.2nm,0.3s,baz=336,slow=14,SNR=3.7							
TRQA	**Tornquist**	**10.28**	**128**	*eP*		**Pn**	**20 48 52.4**	**+3.9**
	comp=N,24nm,1.3s							
CPUP	**Villa Florida**	**14.23**	**70**	Pn		**Pn**	**20 49 44.7**	**+2.0**
	comp=N,0.2nm,0.3s,baz=229,slow=16,SNR=2.5							
CPUP				LR		LR	20 55 35.7	
	comp=N,122nm,19.3s,baz=3.1,slow=39							
CPUP	**Villa Florida**	**14.23**	**70**	Pn		**Pn**	**20 49 44.7**	**+2.0**
CPUP				LR		LR	20 55 35.7	
LPAZ	**La Paz**	**16.20**	**14**	Pn		**Pn**	**20 50 08.2**	**-0.6**
	comp=N,0.1nm,0.3s,baz=184,slow=10,SNR=3.8							
SIV	**San Ignacio**	**19.00**	**35**	P		**P**	**20 50 41.4**	**-2.1**
	comp=N,0.2nm,0.3s,baz=222,slow=6.9,SNR=4.5							
TXAR	**Lajitas Array**	**68.02**	**331**	P		**P**	**20 57 20.7**	**+0.5**
	comp=N,0.2nm,0.6s,baz=149,slow=9.5,SNR=2.7							
BVAR	**Borovoye Array**	**146.00**	**41**	PKPbc		PKPbc	21 06 01.7	+1.6
	comp=N,0.4nm,0.4s,baz=291,slow=1.2,SNR=6.2							
ZALV	**Zalesovo Beam**	**152.71**	**30**	PKPbc		PKPbc	21 06 17.8	+0.7
	comp=N,1.5nm,0.5s,baz=302,slow=2.7,SNR=9.7							
MKAR	**Makanchi Array**	**155.62**	**46**	PKPab		PKPab	21 06 41.6	+1.1
	comp=N,0.7nm,0.8s,baz=316,slow=3.3,SNR=5.4							

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*ISCJB **17** 20:58:55.4±1.0, 44°.37N±0°.08×129°.1W±0°.1, h10km, mb3.2/4, MS3.1/4, Error ellipse: s-maj=13.3km s-min=9.5km az=42.9*
*IDC **17** 20:58:55.4±1.8, 44°.38N×129°.10W, h0km, mb3.4/5, mb1 3.7/7, mb1mx3.5/25, mbtmp3.4/7, ML3.3/2, MS3.2/4, Ms1 3.2/4, ms1mx2.9/16, Error ellipse: s-maj=63.2km s-min=17.2km az=46.0*
*NEIC **17** 20:59:00.4±3.1, 44°.41N×128°.81W, h10km, ML3.3, Error ellipse: s-maj=36.4km s-min=8.2km az=79.0*
ISC 17 20:58:57.2±1.0, 44°.38N±0°.08×129°.2W±0°.1, h10km, n28, σ0°84/25, mb3.2/4, MS3.1/4, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
RNO	**Roman Nose**	**3.94**	**95**	P		**Pn**	**20 59 56.6**	**-1.1**
MPOR	**Mary's Peak**	**4.03**	**86**	P		**Pn**	**20 59 57.9**	**-1.1**
COR	**Corvallis**	**4.21**	**85**	*eP*		**Pn**	**21 00 01.0**	**-0.3**
KMOR	**Kings Mountain**	**4.23**	**71**	P		**Pn**	**21 00 01.1**	**-0.5**
NLWA	**Neilton Lookou**	**4.78**	**49**	P		**Pn**	**21 00 09.4**	**+0.3**
OOW	**Octopus West**	**4.83**	**44**	P		**Pn**	**21 00 10.2**	**+0.3**
IRO	**Indian Ridge**	**4.99**	**92**	P		**Pn**	**21 00 12.3**	**+0.2**
TDL	**Tradedollar La**	**5.29**	**66**	P		**Pn**	**21 00 16.9**	**+0.8**
HDW	**Hoodsport**	**5.38**	**50**	P		**Pn**	**21 00 17.7**	**+0.4**
YBH	**Yreka Blue Hor**	**5.43**	**117**	Pn		**Pn**	**21 00 18.7**	**+0.6**
	0.2nm,0.3s,baz=282,slow=9.3,SNR=2.6							
YBH	**Yreka Blue Hor**	**5.43**	**117**	*eP*		**Pn**	**21 00 18.3**	**+0.3**
	5.4nm,0.9s							
HOOD	**Mount Hood Mea**	**5.43**	**77**	*eP*		**Pn**	**21 00 17.8**	**-0.3**
	32nm,0.8s							
GNW	**Green Mountain**	**5.46**	**52**	*eP*		**Pn**	**21 00 18.3**	**-0.2**
	8.5nm,0.4s							
VFP	**Flag Point**	**5.57**	**78**	P		**Pn**	**21 00 20.5**	**+0.6**
LON	**Longmire**	**5.69**	**63**	*eP*		**Pn**	**21 00 21.5**	**-0.2**
	8.2nm,0.5s							
VIPM	**Ingram Point**	**6.13**	**86**	P		**Pn**	**21 00 27.8**	**+0.1**
JCW	**Jim Creek**	**6.31**	**50**	*eP*		**Pn**	**21 00 29.5**	**-0.7**
	33nm,0.4s							
MBW	**Mount Baker**	**6.68**	**46**	P		**Pn**	**21 00 36.5**	**+1.3**
NVAR	**Mina Array Bea**	**10.10**	**122**	Pn		**Pn**	**21 01 23.1**	**+1.0**
	0.2nm,0.3s,baz=284,slow=12,SNR=4.9							
ANMO	**Albuquerque**	**19.81**	**111**	P		**Pn**	**21 03 32.6**	**+3.4**
	0.1nm,0.3s,baz=282,slow=5.9,SNR=3.3							
YKA	**Yellowknife Ar**	**20.03**	**20**	P		**P**	**21 03 29.5**	**-0.4**
	0.1nm,0.3s,baz=214,slow=11,SNR=2.6							
ILAR	**Eielson Array**	**22.71**	**340**	P		**P**	**21 03 57.6**	**-1.0**
	0.7nm,0.8s,mb3.1,baz=146,slow=6.5,SNR=6.4							
ILAR				LR		LR	21 11 08.4	
	comp=Z,36nm,20.4s,MS2.8,baz=56,slow=32							
ULM	**Lac du Bonnet**	**23.20**	**63**	LR		LR	21 13 08.1	
	comp=Z,91nm,19.8s,MS3.2,baz=250,slow=37							
INK	**Inuvik**	**24.10**	**356**	LR		LR	21 13 01.0	
	comp=Z,36nm,21.5s,MS2.8,baz=258,slow=35							
TXAR	**Lajitas Array**	**25.20**	**118**	P		**P**	**21 04 21.0**	**-1.9**
	0.2nm,0.8s,mb2.7,baz=321,slow=5.3,SNR=2.8							
SCHQ	**Schefferville**	**40.45**	**52**	LR		LR	21 22 59.1	
	comp=Z,49nm,18.6s,MS3.4,baz=80,slow=36							
SONM	**Songino Array**	**76.00**	**325**	P		**P**	**21 10 44.1**	**-0.1**
	0.4nm,0.6s,mb3.5,baz=80,slow=3.3,SNR=3.7							
MKAR	**Makanchi Array**	**85.06**	**339**	P		**P**	**21 11 34.3**	**+1.5**
	0.3nm,0.8s,mb3.5,baz=24,slow=5.4,SNR=2.9							

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*ISCJB **17** 21:17:51.3±0.3, 0°.25N±0°.04×96°.67E±0°.04, h29km, mb4.1/20, Error ellipse: s-maj=6.1km s-min=4.8km az=23.2*
*NEIC **17** 21:17:52.1±2.3, 0°.21N×96°.60E, h22km±16km, mb4.3/8, Error ellipse: s-maj=8.3km s-min=4.5km az=51.0*
*IDC **17** 21:17:53.4±0.8, 0°.20N×96°.57E, h29km±4km, mb3.8/13, mb1 3.8/15, mb1mx3.7/24, mbtmp3.7/15, ML3.7/2, MS3.3/1, Ms1 3.3/1, ms1mx2.2/31, Error ellipse: s-maj=25.5km s-min=13.6km az=53.0*
*DJA **17** 21:17:57, 0°.11N×96°.91E, h40km, MLv4.6/3*
ISC 17 21:17:53.5±0.3, 0°.24N±0°.04×96°.68E±0°.04, h31km, h31km±.4km: pP-P, n58, σ0°73/60, mb4.1/20, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**2.87**	**123**	P		**Pn**	**21 18 36.1**	**-1.0**
MNSI	**Mandailing Nat**	**2.95**	**79**	P		**Pn**	**21 18 38.4**	**+0.1**
MNSI				S		**Sn**	**21 19 12.5**	**-0.2**
TPTI		**3.04**	**9**	P		**Pn**	**21 18 44.3**	**+4.7**
PSI	**Prapat**	**3.40**	**41**	Pn		**Pn**	**21 18 43.7**	**-0.7**
	2.3nm,0.3s,baz=195,slow=7.6,SNR=10.0							
PSI				Sn		**Sn**	**21 19 23.2**	**-0.4**
	3.7nm,0.3s,baz=112,slow=22,SNR=6.8							
PSI				LR		LR	21 19 40.1	
	comp=Z,423nm,18.9s,baz=222,slow=31							
PSI	**Prapat**	**3.40**	**41**	Pn		**Pn**	**21 18 43.7**	**-0.7**
PSI				Sn		**Sn**	**21 19 23.2**	**-0.4**
PSI				LR		LR	21 19 40.1	
PDSI	**Padang**	**3.95**	**107**	P		**Pn**	**21 18 51.8**	**-0.2**
PDSI				S		**Sn**	**21 19 36.4**	**-0.9**
SDSI	**Sungai Dareh**	**4.89**	**104**	P		**Pn**	**21 19 05.4**	**+0.5**
KULM	**Kulim**	**6.40**	**38**	*ePn*		**Pn**	**21 19 24.3**	**-1.4**
	24nm,0.9s							
KULM				Sn		**Sn**	**21 20 37.5**	**-0.2**
KSM	**Kuching**	**13.68**	**85**	*ePn*		**Pn**	**21 21 07.0**	**+1.4**
PALK	**Pallekele**	**17.40**	**294**	Pn		**Pn**	**21 21 53.4**	**-0.7**
CMAR	**Chiang Mai Arr**	**18.24**	**7**	P		**Pn**	**21 22 05.2**	**+0.7**
	0.2nm,0.3s,baz=195,slow=11,SNR=9.9							
CHTO	**Chiang Mai**	**18.59**	**7**	*eP*		**Pn**	**21 22 07.2**	**-1.5**
QIZ	**Qiongzhong**	**22.71**	**34**	P		**P**	**21 22 52.4**	**-0.4**
SHL	**Shillong**	**25.61**	**350**	*ePKP*		**P**	**21 23 22.0**	**+1.8**
LSA	**Lhasa**	**29.77**	**350**	*eP*		**P**	**21 23 58.5**	**+1.1**
	3.1nm,0.3s,mb4.5							
MBWA	**Marble Bar**	**30.98**	**135**	P		**P**	**21 24 08.7**	**+0.5**
ENH	**Enshi**	**32.26**	**21**	*eP*		**P**	**21 24 19.0**	**-0.4**
	15nm,1.5s,mb4.6							
FITZ	**Fitzroy Crossi**	**33.81**	**124**	P		**P**	**21 24 33.5**	**+0.4**
	2.5nm,0.6s,mb4.3,baz=336,slow=4.2,SNR=9.2							
FITZ	**Fitzroy Crossi**	**33.81**	**124**	*eP*		**P**	**21 24 32.9**	**-0.2**
	2.1nm,0.5s,mb4.3							
NACB	**Ninganchiao**	**33.90**	**44**	P		**P**	**21 24 34.6**	**+0.8**
WRA	**Warramunga Arr**	**41.98**	**121**	P		**P**	**21 25 42.5**	**+0.4**
	1.7nm,0.7s,mb3.8,baz=302,slow=9.1,SNR=19							
WRA	**Warramunga Arr**	**41.98**	**121**	P		**P**	**21 25 42.5**	**+0.4**
WRAB	**Tennant Creek**	**41.99**	**121**	*eP*		**P**	**21 25 42.9**	**+0.7**
	2.3nm,0.6s,mb4.0							
ASAR	**Alice Springs**	**43.24**	**126**	P		**P**	**21 25 53.3**	**+1.0**
	1.4nm,0.7s,mb3.8,baz=299,slow=8.0,SNR=20							
BJT	**Baijiatuau**	**43.40**	**22**	*eP*		**P**	**21 25 53.5**	**+0.2**
UCH	**Uchtor**	**46.33**	**337**	*eP*		**P**	**21 26 17.5**	**+1.0**
	2.6nm,0.8s,mb4.2							
KSRS	**Korea Array**	**46.93**	**34**	P		**P**	**21 26 21.3**	**-0.1**
	0.7nm,0.5s,mb3.8,baz=225,slow=7.9,SNR=5.2							
EKS2	**Erkin-Say**	**46.98**	**337**	*eP*		**P**	**21 26 21.0**	**-0.7**
	2.2nm,0.6s,mb4.3							
MK31	**Makanchi Array**	**48.05**	**347**	*eP*		**P**	**21 26 30.6**	**+0.7**
MK31				*e*		pP	21 26 40.1	+0.8
MKAR	**Makanchi Array**	**48.05**	**347**	P		**P**	**21 26 30.8**	**+0.9**
	1.2nm,0.6s,mb4.1,baz=156,slow=7.3,SNR=13							
MKAR				pP		pP	21 26 40.0	+0.7
	3.9nm,0.6s,baz=160,slow=8.4,SNR=24							
MKAR	**Makanchi Array**	**48.05**	**347**	P		**P**	**21 26 30.8**	**+0.9**
MKAR				pP		pP	21 26 40.0	+0.7
SONM	**Songino Array**	**48.16**	**9**	P		**P**	**21 26 31.3**	**+0.6**
	0.5nm,0.6s,mb3.7,baz=194,slow=8.0,SNR=4.3							
SONM				pP		pP	21 26 39.9	-0.1
	0.6nm,0.5s,baz=191,slow=8.6,SNR=4.8							
SONM				PcP		PcP	21 27 58.3	+0.5
	0.6nm,0.6s,baz=205,slow=3.0,SNR=2.8							
CTAO	**Charters Tower**	**52.55**	**116**	*eP*		**P**	**21 27 04.9**	**+0.5**
KURK	**Kurchatov**	**52.59**	**346**	*eP*		**P**	**21 27 03.3**	**-0.9**
	3.1nm,0.9s,mb4.2							
STKA	**Stephens Creek**	**53.11**	**131**	P		**P**	**21 27 09.4**	**+1.0**
	4.0nm,1.1s,mb4.3,baz=317,slow=18,SNR=3.6							
STKA	**Stephens Creek**	**53.11**	**131**	*eP*		**P**	**21 27 08.5**	**+0.1**
ZAA0	**Zalesovo Array**	**54.42**	**351**	*eP*		**P**	**21 27 18.1**	**+0.5**
ZAA0				*e*		pP	21 27 27.2	+0.1
ZALV	**Zalesovo Beam**	**54.42**	**351**	P		**P**	**21 27 18.2**	**+0.6**
	2.5nm,0.5s,mb4.4,baz=173,slow=6.7,SNR=15							
ZALV				pP		pP	21 27 27.1	+0.1
	5.0nm,0.4s,baz=172,slow=7.1,SNR=14							
BVAR	**Borovoye Array**	**56.99**	**341**	P		**P**	**21 27 36.4**	**+0.4**
	0.7nm,0.6s,mb3.9,baz=165,slow=6.0,SNR=4.2							
ABKAR	**Akbulak array**	**58.12**	**333**	*eP*		**P**	**21 27 43.9**	**-0.2**
	1.8nm,0.8s,mb4.2							
ABKAR				*e*		pP	21 27 52.3	-1.3
GNI	**Garni**	**61.63**	**317**	P		**P**	**21 28 07.6**	**-0.8**
HNR	**Honiara**	**63.70**	**101**	P		**P**	**21 28 23.0**	**+0.3**
KIV	**Kislovodsk**	**64.70**	**320**	P		**P**	**21 28 28.6**	**-0.1**
CASY	**Casey**	**67.11**	**174**	*eP*		**P**	**21 28 42.6**	**-1.1**
CSS	**Prodhromos**	**68.24**	**308**	P		**P**	**21 28 50.8**	**-0.7**
BRTR	**Keskin Array B**	**69.38**	**313**	P		**P**	**21 28 57.8**	**-0.7**
	1.8nm,1.1s,mb3.9,baz=130,slow=7.3,SNR=3.4							
MAW	**Mawson**	**71.66**	**193**	*eP*		**P**	**21 29 10.8**	**-1.1**
AKASG	**Malin Array Be**	**75.70**	**323**	P		**P**	**21 29 35.2**	**-0.7**
	0.9nm,0.5s,mb4.0,baz=93,slow=5.2,SNR=4.1							
AKASG				pP		pP	21 29 44.5	-1.2
	1.0nm,0.6s,baz=100,slow=4.6,SNR=3.6							
AKASG	**Malin Array Be**	**75.70**	**323**	P		**P**	**21 29 35.2**	**-0.7**
AKASG				pP		pP	21 29 44.5	-1.2
SUW	**Suwalki**	**80.16**	**325**	*eP*		**P**	**21 30 00.3**	**-0.3**
FINES	**FINESS Array B**	**80.61**	**333**	P		**P**	**21 30 02.8**	**0.0**
	1.0nm,0.9s,mb3.8,baz=143,slow=33,SNR=4.7							
FINES				pP		pP	21 30 12.3	-0.5
	1.7nm,0.8s,baz=96,slow=5.7,SNR=2.8							
ARCES	**ARCESS Array B**	**83.26**	**340**	P		**P**	**21 30 17.1**	**+0.4**
	0.7nm,0.7s,mb3.8,baz=109,slow=5.5,SNR=4.8							
ARCES				pP		pP	21 30 26.4	-0.3
	0.8nm,0.6s,baz=103,slow=5.4,SNR=2.1							
SBA	**Scott Base**	**86.09**	**168**	*eP*		**P**	**21 30 30.3**	**-0.5**
STU	**Stuttgart**	**88.16**	**319**	P		**P**	**21 30 41.3**	**-0.1**
ESLA	**Sonseca Array**	**98.04**	**310**	*eP*		**P**	**21 31 27.4**	**+0.2**
ISCO	**Idaho Springs**	**135.25**	**25**	*ePKPdf*		PKPdf	21 37 11.1	+0.6
CPUP	**Villa Florida**	**143.95**	**222**	PKP		PKPdf	21 37 25.9	-0.8
	0.9nm,0.6s,baz=69,slow=2.9,SNR=3.9							
TXAR	**Lajitas Array**	**144.76**	**32**	PKP		PKPdf	21 37 27.5	-0.5
	0.6nm,0.8s,baz=318,slow=2.2,SNR=7.0							
TXAR				pPKP		pPKPdf	21 37 37.0	-1.3
	0.4nm,0.5s,baz=181,slow=1.7,SNR=4.5							

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*ISCJB **17** 21:40:36.6±0.7, 36°.97N±0°.04×29°.11E±0°.04, h10km, Error ellipse: s-maj=6.0km s-min=4.6km az=6.5*
*ISK **17** 21:40:36.0, 37°.01N×29°.11E, h8km, MD2.8*
*CSEM **17** 21:40:36.3±0.1, 36°.96N×29°.10E, h5km, MD2.8, Error ellipse: s-maj=4.1km s-min=2.2km az=171.0*
*DDA **17** 21:40:37.9, 37°.01N×29°.18E, h7km±3km, Md2.8*
ISC 17 21:40:37.2±0.6, 36°.97N±0°.04×29°.12E±0°.04, h10km, n18, σ1°06/29, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.36**	**58**	*ePG*		**Pg**	**21 40 43.2**	**-1.1**
GLHS				*eSG*		**Sg**	**21 40 48.7**	**-0.4**
GLHS	**Glhisar (BURDU**	**0.36**	**58**	*ePg*		**Pg**	**21 40 43.2**	**-1.1**
GLHS				*eSg*		**Sg**	**21 40 48.7**	**-0.4**
GOLH	**Golhisar**	**0.45**	**53**	*i P*		**Pg**	**21 40 45.2**	**-0.7**
GOLH				*i S*		**Sg**	**21 40 52.0**	**+0.2**
GOLH	**Golhisar**	**0.45**	**53**	*i P*		**Pg**	**21 40 45.2**	**-0.7**
GOLH				*i S*		**Sg**	**21 40 52.0**	**+0.2**
ELL	**Elmali**	**0.67**	**109**	*ePG*		**Pg**	**21 40 49.7**	**-0.5**
ELL				*eSG*		**Sg**	**21 41 00.1**	**+1.1**
ELL	**Elmali**	**0.67**	**109**	*ePg*		**Pg**	**21 40 49.7**	**-0.5**
ELL				*eSg*		**Sg**	**21 41 00.1**	**+1.1**
YER	**Yerkesik**	**0.69**	**284**	*ePG*		**Pg**	**21 40 49.2**	**-1.4**
YER	**Yerkesik**	**0.69**	**284**	*ePg*		**Pg**	**21 40 49.2**	**-1.3**
DNZL	**Cakiroluk**	**0.72**	**356**	*i P*		**Pg**	**21 40 50.7**	**-0.5**
DNZL				*i S*		**Sg**	**21 41 01.8**	**+1.2**
DNZL	**Cakiroluk**	**0.72**	**356**	*i P*		**Pg**	**21 40 50.7**	**-0.5**
DNZL				*i S*		**Sg**	**21 41 01.8**	**+1.1**
AKAS	**Kas**	**0.83**	**152**	*i P*		**Pg**	**21 40 54.1**	**+0.9**
AKAS				*i S*		**Sg**	**21 41 11.6**	**+7.5**
AKAS	**Kas**	**0.83**	**152**	*i P*		**Pg**	**21 40 54.1**	**+0.9**
MLSB	**Milas**	**1.12**	**287**	*ePN*		**Pg**	**21 40 57.6**	**-1.1**
MLSB	**Milas**	**1.12**	**287**	*ePn*		**Pg**	**21 40 57.6**	**-1.1**
AYDN	**Tasoluk**	**1.21**	**305**	*i P*		**Pn**	**21 41 01.7**	**+1.6**
AYDN				*i S*		**Sb**	**21 41 18.8**	**+3.1**
AYDN	**Tasoluk**	**1.21**	**305**	*i P*		**Pn**	**21 41 01.7**	**+1.6**
AYDN				*i S*		**Sb**	**21 41 18.8**	**+3.1**
DAT	**Datca**	**1.26**	**260**	*ePN*		**Pn**	**21 41 00.6**	**-0.2**
DAT	**Datca**	**1.26**	**260**	*ePn*		**Pn**	**21 41 00.6**	**-0.2**

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*ISCJB **17** 21:56:02.3±1.4, 18°.81N±0°.07×145°.4E±0°.1, h226km±14km, mb3.8/12, Error ellipse: s-maj=17.7km s-min=11.3km az=177.9*
*IDC **17** 21:56:04.9±3.2, 18°.76N×145°.41E, h236km±31km, mb3.4/10, mb1 3.7/11, mb1mx3.4/24, mbtmp3.5/11, Error ellipse: s-maj=28.6km s-min=15.4km az=99.0*
*NEIC **17** 21:56:04.6±1.1, 18°.81N×145°.38E, h234km±10km, mb4.0/2, Error ellipse: s-maj=10.3km s-min=6.7km az=88.0*
ISC 17 21:56:03.6±1.4, 18°.80N±0°.07×145°.4E±0°.1, h224km±14km, n29, σ0°82/29, mb3.8/12, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.20**	**186**	P		**Pn**	**21 57 22.8**	**+1.5**
	5.2nm,0.3s,baz=342,slow=19,SNR=3.1							
GUMO				S		**S**	**21 58 20.3**	**-2.6**
	21nm,0.3s,baz=332,slow=18,SNR=4.8							
MAJO	**Matsushiro**	**18.78**	**342**	P		**P**	**22 00 06.0**	**-0.2**
TWG	**Pinlang**	**23.08**	**284**	*eP*		**P**	**22 00 50.0**	**+0.3**
YSS	**Yuzh-Sakhalins**	**28.17**	**356**	*eP*		**P**	**22 01 34.6**	**-0.5**
ENH	**Enshi**	**34.47**	**296**	P		**P**	**22 02 29.2**	**-1.2**
KSM	**Kuching**	**38.45**	**248**	*eP*		**P**	**22 03 04.9**	**+0.6**
CTAO	**Charters Tower**	**38.65**	**179**	P		**P**	**22 03 05.8**	**+0.1**
WRAB	**Tennant Creek**	**39.98**	**196**	*eP*		**P**	**22 03 17.4**	**+0.6**
	4.3nm,0.3s,mb4.4							
WRA	**Warramunga Arr**	**40.00**	**196**	P		**P**	**22 03 16.2**	**-0.7**
	5.2nm,0.4s,mb4.3,baz=256,slow=6.4,SNR=149							
WRA	**Warramunga Arr**	**40.00**	**196**	P		**P**	**22 03 16.2**	**-0.7**
FITZ	**Fitzroy

ARCES	**ARCESS Array B**	**127.68**	**350**	PKP	PKPdf	22 27	25.8	+0.6
	0.7nm,0.4s,baz=83,slow=1.0,SNR=20							
FINES	**FINESS Array B**	**134.61**	**344**	PKP	PKPdf	22 27	39.5	+1.0
	1.1nm,0.7s,baz=153,slow=29,SNR=3.5							
BRTR	**Keskin Array B**	**146.29**	**314**	PKPbc	PKPbc	22 28	03.1	+0.7
	0.9nm,0.5s,baz=126,slow=4.8,SNR=6.1							
CLL	**Collm**	**146.85**	**348**	ǁ *i* PKPbc	PKPbc	22 28	04.8	+1.3
	comp=Z,4.0nm,1.0s							
MMAI	**Mount Meron Ar**	**147.57**	**302**	PKPbc	PKPbc	22 28	07.4	+1.4
	comp=Z,2.5nm,0.5s,baz=69,slow=7.5,SNR=6.8							
CSS	**Prodhromos**	**148.54**	**306**	*e*PKPdf	PKPdf	22 28	03.4	-0.6
GIVF	**Givet**	**149.05**	**357**	*e*PKP1	PKPbc	22 28	10.7	+1.6
BAIF	**Baives**	**149.12**	**358**	*e*PKP1	PKPbc	22 28	11.0	+1.7
CSNA	**Conrad Observa**	**149.31**	**342**	⇑ *i* PKiKP	PKPbc	22 28	11.9	+2.0
	comp=Z,2.5nm,0.6s							
FLN	**La Foliniere**	**150.34**	**4**	*e*PKP1	PKPbc	22 28	13.5	+1.3
	comp=Z,8.8nm,0.6s							
LDF	**La Druitiere**	**150.53**	**4**	*e*PKP1	PKPbc	22 28	13.7	+1.0
	comp=Z,3.9nm,0.5s							
CDF	**Champ du Feu**	**150.55**	**354**	*e*PKP1	PKPbc	22 28	14.3	+1.6
	comp=Z,3.5nm,0.6s							
MEZF	**Maizieres J'vi**	**150.64**	**357**	*e*PKP1	PKPbc	22 28	14.8	+1.9
SGMF	**Saint Gilles**	**150.66**	**7**	*e*PKP1	PKPbc	22 28	14.1	+1.1
	comp=Z,10nm,0.6s							
SOKA	**Soboth**	**150.68**	**342**	⇑ *i* PKiKP	PKPbc	22 28	14.2	+1.1
	comp=Z,4.0nm,0.9s							
GRR	**Gorron**	**150.69**	**5**	*e*PKP1	PKPbc	22 28	14.4	+1.4
RETA	**Reutte**	**150.94**	**349**	⇑ *i* PKiKP	PKPbc	22 28	15.2	+1.5
	comp=Z,2.0nm,0.6s							
HAU	**Haudompre**	**151.04**	**355**	*e*PKP1	PKPbc	22 28	15.2	+1.4
	comp=Z,8.5nm,0.7s							
ABTA	**Abfaltersbach**	**151.27**	**346**	⇑ *i* PKiKP	PKPbc	22 28	15.5	+1.1
	comp=Z,3.4nm,0.6s							
FETA	**Feichten**	**151.39**	**348**	⇑ *i* PKiKP	PKPbc	22 28	16.1	+1.5
	comp=Z,3.1nm,0.8s							
DAVOX	**Davos/Dischmat**	**151.78**	**349**	PKPbc	PKPbc	22 28	17.1	+1.5
	comp=Z,3.4nm,0.5s,baz=233,slow=4.9,SNR=5.8							
LOR	**Lormes**	**151.92**	**358**	*e*PKP1	PKPbc	22 28	17.3	+1.5
	comp=Z,7.6nm,0.8s							
BGF	**Bois d'Agland**	**152.65**	**360**	*e*PKP1	PKPbc	22 28	19.0	+1.5
TCF	**Toulx Ste Croi**	**152.92**	**1**	*e*PKP1	PKPbc	22 28	19.3	+1.2

*ISCJB **17** 22:26:05.8±0.4, 12°.49N±0°.03×120°.88E±0°.04, h46km±4km, mb4.0/17, MS3.5/2, Error ellipse: s-maj=6.0km s-min=4.6km az=179.3*
*MAN **17** 22:26:06, 12°.42N×120°.94E, h32km, mb4.7, ML3.6, MS3.5*
*NEIC **17** 22:26:07.1±0.6, 12°.53N×120°.92E, h40km±6km, mb4.3/6, Error ellipse: s-maj=10.9km s-min=4.0km az=68.0*
*IDC **17** 22:26:08.5±2.7, 12°.55N×120°.88E, h51km±27km, mb3.5/10, mb1 3.7/10, mb1mx3.5/23, mbtmp3.5/10, MS3.5/3, Ms1 3.5/3, ms1mx3.0/26, Error ellipse: s-maj=37.0km s-min=12.7km az=69.0*

ISC 17 22:26:06.9±0.4, 12°.49N±0°.03×120°.87E±0°.04, h37km±5km, n52, σ0°91/54, mb4.0/17, MS3.5/2, 1C-3D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUSP	**Coron**	**0.82**	**234**	*e*P	**Pn**	**22 26 21.4**	**-0.5**
BUSP				*e*S	**Sn**	**22 26 32.7**	**-0.1**
OTRP	**Odiongan**	**1.13**	**96**	*e*P	**Pn**	**22 26 24.8**	**-1.5**
OTRP				*e*S	**Sn**	**22 26 38.0**	**-2.6**
BOAC	**Boac**	**1.35**	**44**	*e*P	**Pn**	**22 26 27.7**	**-1.6**
LUBP	**Lubang**	**1.38**	**334**	*e*P	**Pn**	**22 26 28.0**	**-1.7**
TGY	**Tagaytay City**	**1.60**	**2**	P	**Pn**	**22 26 32.7**	**-0.1**
	899nm,0.3s,baz=186,slow=3.4,SNR=139						
TGY				S	**Sn**	**22 26 53.0**	**+0.7**
	782nm,0.3s,baz=188,slow=21,SNR=9.2						
TGY	**Tagaytay City**	**1.60**	**2**	ǁ *i* P	**Pn**	**22 26 32.8**	**0.0**
CUYO	**Cuyo Island**	**1.64**	**175**	*e*P	**Pn**	**22 26 32.4**	**-0.8**
ENPP	**El Nido**	**1.91**	**228**	*e*P	**Pn**	**22 26 37.3**	**+0.3**
ENPP				*e*S	**Sn**	**22 26 56.9**	**-2.8**
AUQP	**San Andres**	**1.94**	**65**	*e*P	**Pn**	**22 26 38.0**	**+0.5**
GQP	**Guinayangan**	**2.08**	**47**	ǁ *e*P	**Pn**	**22 26 39.1**	**-0.3**
POLP	**Polilio Island**	**2.46**	**25**	*e*P	**Pn**	**22 26 45.5**	**+1.0**
GUIM	**Jordan**	**2.50**	**138**	*e*P	**Pn**	**22 26 46.4**	**+1.2**
PCPH	**Palayan**	**3.06**	**4**	ǁ *e*P	**Pn**	**22 26 52.7**	**-0.2**
BALP	**Baler**	**3.30**	**12**	*e*P	**Pn**	**22 26 56.9**	**+0.8**
SCZP	**Santa Cruz**	**3.40**	**344**	*e*P	**Pn**	**22 26 59.4**	**+1.9**
PPR	**Puerto Princes**	**3.42**	**218**	⇑ *i* P	**Pn**	**22 26 58.8**	**+1.0**
SNPH	**Sibulan**	**3.90**	**143**	*e*P	**Pn**	**22 27 06.3**	**+1.9**
SNPH				*i* S	**Sn**	**22 27 50.2**	**+1.4**
CAUP	**Cauayan**	**4.52**	**12**	*e*P	**Pn**	**22 27 14.8**	**+1.9**
PAGZ	**Pagadian**	**5.23**	**152**	*e*P	**Pn**	**22 27 21.8**	**-0.9**
DAV	**Davao City (W)**	**7.11**	**139**	LR	LR	22 31 41.3	
	comp=Z,186nm,19.0s,baz=65,slow=47						
DAV	**Davao City (W)**	**7.11**	**139**	Pn	**Pn**	**22 27 48.0**	**-0.5**
TWG	**Pinlang**	**10.28**	**1**	*e*Pn	**Pn**	**22 28 31.6**	**-0.3**
TPUB	**Ta-pu**	**10.75**	**359**	*e*Pn	**Pn**	**22 28 38.3**	**-0.2**
YULB	**Yu-li**	**10.85**	**2**	Pn	**Pn**	**22 28 39.5**	**-0.3**
CMAR	**Chiang Mai Arr**	**21.94**	**288**	P	**P**	**22 30 57.9**	**+0.4**
	0.3nm,0.4s,mb3.1,baz=109,slow=14,SNR=2.2						
CMAR	**Chiang Mai Arr**	**21.94**	**288**	P	**P**	**22 30 57.9**	**+0.4**
PSI	**Prapat**	**23.76**	**248**	LR	LR	22 39 13.4	
	comp=Z,421nm,19.0s,MS3.9,baz=220,slow=33						
KSRS	**Korea Array**	**25.65**	**13**	LR	LR	22 41 17.7	
	comp=Z,50nm,19.0s,MS3.1,baz=215,slow=36						
FITZ	**Fitzroy Crossi**	**30.76**	**171**	P	**P**	**22 32 19.2**	**+0.3**
LSA	**Lhasa**	**32.45**	**306**	*e*P	**P**	**22 32 34.4**	**+0.6**
	2.3nm,0.6s,mb4.2						
GTA	**Gaotai**	**32.65**	**329**	*e*P	**P**	**22 32 36.3**	**+0.8**
GTA				pP	pP	22 32 40.3	-5.6
GTA				sP	sP	22 32 41.4	-9.0
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
MDJ	**Mudanjiang**	**32.88**	**12**	P	**P**	**22 32 37.0**	**-0.3**
WRAB	**Tennant Creek**	**34.84**	**157**	*e*P	**P**	**22 32 55.1**	**+0.4**
	comp=Z,8.7nm,1.1s,mb4.6						
WRA	**Warramunga Arr**	**34.85**	**157**	P	**P**	**22 32 54.9**	**+0.2**
	comp=Z,2.7nm,0.7s,mb4.3,baz=342,slow=9.3,SNR=38						
WRA				pP	pP	22 33 04.7	-0.6
	comp=Z,2.0nm,0.6s,baz=335,slow=9.7,SNR=11						
ULN	**Ulaanbaatar**	**37.11**	**345**	*e*P	**P**	**22 33 13.0**	**-0.8**
SONM	**Songino Array**	**37.26**	**344**	P	**P**	**22 33 14.9**	**-0.2**
	comp=Z,0.5nm,0.7s,mb3.5,baz=152,slow=6.5,SNR=3.3						
ASAR	**Alice Springs**	**38.13**	**160**	P	**P**	**22 33 23.6**	**+0.9**
	comp=Z,2.0nm,0.4s,mb4.2,baz=340,slow=7.0,SNR=45						
MKAR	**Makanchi Array**	**47.10**	**324**	P	**P**	**22 34 35.1**	**-0.2**
	comp=Z,0.9nm,0.7s,mb3.8,baz=119,slow=9.9,SNR=8.7						
STKA	**Stephens Creek**	**48.38**	**156**	P	**P**	**22 34 46.2**	**+0.9**
	comp=Z,1.3nm,0.8s,mb4.0,baz=324,slow=6.3,SNR=2.2						
STKA	**Stephens Creek**	**48.38**	**156**	P	**P**	**22 34 45.1**	**-0.2**
ZALV	**Zalesovo Beam**	**50.20**	**333**	P	**P**	**22 34 58.8**	**-0.2**
	comp=Z,0.4nm,0.4s,mb3.8,baz=111,slow=7.9,SNR=2.9						
EKS2	**Erkin-Say**	**50.54**	**316**	P	**P**	**22 35 01.3**	**-0.4**
KURK	**Kurchatov**	**51.28**	**327**	*e*P	**P**	**22 35 06.7**	**-0.5**
	comp=Z,2.7nm,0.7s,mb4.3						
KBL	**Kabul**	**51.72**	**304**	*e*P	**P**	**22 35 11.2**	**+0.5**
	comp=Z,1.0nm,0.4s,mb4.1						
BVAR	**Borovoye Array**	**56.86**	**326**	P	**P**	**22 35 48.2**	**+0.3**
	comp=Z,0.4nm,0.6s,mb3.6,baz=139,slow=9.0,SNR=2.7						
BRVK	**Borovoye**	**56.94**	**326**	P	**P**	**22 35 49.0**	**+0.6**
ABKAR	**Akbulak array**	**61.75**	**319**	*e*P	**P**	**22 36 21.2**	**-0.5**
	comp=Z,0.7nm,0.7s,mb3.9						
ARU	**Arti**	**64.48**	**327**	P	**P**	**22 36 39.6**	**-0.1**
ARCES	**ARCESS Array B**	**80.27**	**339**	P	**P**	**22 38 12.6**	**-0.9**
	comp=Z,0.8nm,0.7s,mb3.8,baz=81,slow=7.5,SNR=8.0						
FINES	**FINESS Array B**	**81.42**	**331**	P	**P**	**22 38 19.4**	**-0.5**
	comp=Z,1.0nm,0.8s,mb3.8,baz=74,slow=14,SNR=4.5						
INK	**Inuvik**	**84.16**	**21**	*e*P	**P**	**22 38 33.8**	**-0.1**
	comp=Z,1.6nm,0.4s,mb4.5						
RES	**Resolute Bay**	**90.20**	**9**	P	**P**	**22 39 02.5**	**-0.7**

NEIC 17 22:35:02.3±1.1, 44°.56N×128°.80W, h10km, mb4.0/5, Error ellipse: s-maj=15.2km s-min=7.9km az=51.0, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEBO	**Mount Hebo**	**3.65**	**78**	*e*Pn	Pn	22 35 57.5	-1.2
NLWA	**Neilton Lookou**	**4.46**	**49**	*e*Pn	Pn	22 36 09.3	-0.5
HUMO	**Hull Mountain**	**4.67**	**113**	P	Pn	22 36 10.9	-1.9
GNW	**Green Mountain**	**5.13**	**52**	*e*Pn	Pn	22 36 18.7	-0.5
	4.1nm,0.6s						
YBH	**Yreka Blue Hor**	**5.27**	**120**	*e*Pn	Pn	22 36 22.4	+1.3
LON	**Longmire**	**5.37**	**63**	*e*Pn	Pn	22 36 17.3	-5.1
	6.2nm,0.7s						
JCW	**Jim Creek**	**5.99**	**50**	*e*Pn	Pn	22 36 31.6	+0.8
	17nm,0.1s						
WVOR	**Wild Horse Val**	**7.69**	**102**	*e*Pn	Pn	22 36 54.4	+0.2
HLID	**Hailey**	**10.41**	**90**	*e*Pn	Pn	22 37 32.8	+1.3
SLMT	**Seeley Lake**	**11.00**	**70**	*e*Pn	Pn	22 37 41.0	+1.4
	7.2nm,0.9s						
CHMT	**Chamberlain Mo**	**11.12**	**72**	*e*Pn	Pn	22 37 44.4	+3.1
MCMT	**McKenzie Canyo**	**11.36**	**83**	*e*Pn	Pn	22 37 45.2	+0.6
	0.8nm,0.3s						
HRY	**Holter Researc**	**12.07**	**74**	*e*Pn	Pn	22 37 55.2	+0.8
	1.8nm,0.5s						
BOZ	**Bozeman (W)**	**12.19**	**79**	*e*Pn	Pn	22 37 55.7	-0.1
	6.6nm,1.7s						
SIT	**Sitka**	**13.17**	**344**	Pn	Pn	22 38 09.6	+0.4
MSU	**Marysvale**	**13.83**	**110**	Pn	Pn	22 38 21.3	+3.0
	9.6nm,1.6s						
RLMT	**Red Lodge**	**13.88**	**81**	*e*Pn	Pn	22 38 18.6	-0.3
	4.3nm,0.9s						
SRU	**San Rafael**	**14.66**	**105**	*e*Pn	Pn	22 38 30.5	+0.8
	4.4nm,0.7s						
MVCO	**Mesa Verde**	**16.99**	**109**	*e*Pn	Pn	22 39 00.9	+0.9
	28nm,1.7s						
FFC	**Flin Flon**	**20.01**	**50**	*e*P	P	22 39 34.1	-0.7
	3.4nm,0.9s						
MCK	**McKinley**	**22.36**	**336**	P	P	22 40 00.3	+0.2
MNTX	**Cornudas Mount**	**22.36**	**117**	*e*P	P	22 40 00.7	+0.3
	13nm,1.6s						
CLNB	**Carlsbad**	**22.96**	**114**	P	P	22 40 02.0	-4.8
	1.2nm,0.2s						
WMOK	**Wichita Mounta**	**24.99**	**103**	*e*P	P	22 40 24.6	-1.4
	3.6nm,1.1s						

*BJI **17** 22:36:15.7, 44°.40N×129°.40W, h10km, mB5.2/22, mb5.0/30, Ms5.4/25, Ms7 5.0/23*
*MOS **17** 22:36:16.9±0.9, 44°.35N×129°.32W, h10km, mb5.3/66, MS5.0/27, Error ellipse: s-maj=5.4km s-min=4.7km az=117.3*
*IDC **17** 22:36:16.1±0.7, 44°.29N×129°.41W, h0km, mb4.4/22, mb1 4.5/27, mb1mx4.5/31, mbtmp4.4/27, ML3.9/5, MS4.9/4, Ms1 4.9/4, ms1mx4.3/32, Error ellipse: s-maj=22.4km s-min=9.7km az=34.0*
*ISCJB **17** 22:36:17.5±0.2, 44°.40N±0°.03×129°.25W±0°.03, h10km, mb4.9/156, MS5.0/82, Error ellipse: s-maj=4.2km s-min=2.1km az=28.9*
*NEIC **17** 22:36:18.8±0.2, 44°.37N×129°.36W, h10km, mb5.1/111, MS5.0/52, MW5.5, MW5.5, Error ellipse: s-maj=4.6km s-min=2.3km az=35.0, Moment Tensor Solution. s28 Moment tensor: Scale 10^{17}Nm; M_{rr}0.67; $M_{\theta\theta}$-1.83; $M_{\phi\phi}$1.16; $M_{r\theta}$0.16; $M_{\theta\phi}$-1.24; $M_{\phi r}$-0.03; Best double couple: $M_0$2.00000×10^{17} NP1:ϕ_s115.00000°, δ88.00000°, λ174.00000°. NP2:ϕ_s205.00000°, δ84.00000°, λ2.00000°. Principal axes: T 1.6200, Plg5.0000°, Azm69.0000°; N 0.6700, Plg84.0000°, Azm277.0000°; P -2.2800, Plg2.0000°, Azm160.0000°;*
*GCMT **17** 22:36:18.3±0.1, 44°.12N×129°.47W, h12km, MW5.4, Moment Tensor Solution. s86,c151; s31,c32; Moment tensor: Scale 10^{17}Nm; M_{rr}-1.01±.03; $M_{\theta\theta}$0.59±.03; $M_{\phi\phi}$1.60±.03; $M_{r\theta}$0.18±.06; $M_{\theta\phi}$-1.16±.02; $M_{\phi r}$0.41±.06; Best double couple: $M_0$1.80000×10^{17} NP1:ϕ_s299.00000°, δ57.00000°, λ-151.00000°. NP2:ϕ_s192.00000°, δ66.00000°, λ-37.00000°. Principal axes: T 2.1300, Plg6.0000°, Azm247.0000°; N -0.7400, Plg47.0000°, Azm343.0000°; P -1.3900, Plg43.0000°, Azm152.0000°; Data Used: II IU IC G CN. Surface waves: sta=102, comp=187, per= 50.*
*SZGRF **17** 22:36:22.2, 44°.94N×130°.19W, h33km, mb5.0, Off coast of Oregon, United States*

ISC 17 22:36:18.8±0.2, 44°.38N±0°.03×129°.37W±0°.03, h10km, (h14km±1.0km:pP-P), n495, σ1°03/461, mb4.9/156, MS5.0/82, 13C-4D, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**3.95**	**111**	*e*Pn	**Pn**	**22 37 15.3**	**-4.2**
RNO	**Roman Nose**	**4.08**	**95**	P	**Pn**	**22 37 18.2**	**-2.9**
HEBO	**Mount Hebo**	**4.08**	**76**	⇑ *e*Pn	**Pn**	**22 37 18.2**	**-3.0**
HEBO				*e*Sn	**Sn**	**22 38 07.9**	**-1.1**
MPOR	**Mary's Peak**	**4.17**	**86**	P	**Pn**	**22 37 20.4**	**-2.0**
COR	**Corvallis**	**4.34**	**85**	⇑ *e*Pn	**Pn**	**22 37 23.4**	**-1.5**
COR				*e*Sn	**Sn**	**22 38 12.0**	**-3.5**
WISH	**Wishkah**	**4.78**	**53**	P	**Pn**	**22 37 30.5**	**-0.3**
NLWA	**Neilton Lookou**	**4.88**	**50**	*e*Pn	**Pn**	**22 37 30.9**	**-1.3**
HUMO	**Hull Mountain**	**4.99**	**109**	*e*Pn	**Pn**	**22 37 31.6**	**-2.0**
OTR	**Olympics--Tyee**	**5.08**	**41**	P	**Pn**	**22 37 34.6**	**-0.4**
KHMM	**Horse Mountain**	**5.43**	**128**	*e*Pn	**Pn**	**22 37 40.0**	**+0.1**
YBH	**Yreka Blue Hor**	**5.55**	**116**	Pn	**Pn**	**22 37 39.7**	**-1.7**
	1.5nm,0.3s,baz=304,slow=9.6,SNR=15						
YBH				Sn	**Sn**	**22 38 38.6**	**-6.6**
	1.0nm,0.3s,baz=241,slow=12,SNR=3.3						
YBH	**Yreka Blue Hor**	**5.55**	**116**	*e*Pn	**Pn**	**22 37 40.5**	**-0.9**
YBH				*e*Sn	**Sn**	**22 38 37.6**	**-7.6**
GNW	**Green Mountain**	**5.56**	**53**	*e*Pn	**Pn**	**22 37 40.2**	**-1.4**
	116nm,0.6s						
GNW				*e*S	**Sb**	**22 39 04.5**	**+1.9**
HOOD	**Mount Hood Mea**	**5.57**	**78**	*e*Pn	**Pn**	**22 37 41.2**	**-0.4**
HOOD				Sn	**Sn**	**22 38 35.4**	**-10**
ASR	**Mount Adams--S**	**5.77**	**69**	P	**Pn**	**22 37 44.3**	**-0.1**
LON	**Longmire**	**5.81**	**63**	*e*Pn	**Pn**	**22 37 44.0**	**-1.0**
LON				*e*Sn	**Sn**	**22 38 37.8**	**-14**
PGC	**Sidney**	**5.91**	**42**	*e*Pn	**Pn**	**22 37 45.7**	**-0.6**
PGC				Sn	**Sn**	**22 38 51.7**	**-2.2**
PGC				*e*Sn	**Sn**	**22 38 53.1**	**-0.9**
GSM	**Grass Mountain**	**6.00**	**59**	P	**Pn**	**22 37 47.9**	**+0.3**
WDC	**Whiskeytown Da**	**6.31**	**125**	*e*P	**Pn**	**22 37 53.4**	**+1.5**
KCPM	**Cahto Peak**	**6.37**	**135**	*e*Pn	**Pn**	**22 37 51.2**	**-1.4**
JCW	**Jim Creek**	**6.41**	**51**	*e*Pn	**Pn**	**22 37 52.8**	**-0.3**
JCW				*e*Sn	Sn	22 38 42.9	-23
ETW	**Entiat**	**7.07**	**60**	*e*Pn	**Pn**	**22 38 02.5**	**+0.2**
MOD	**Modoc**	**7.08**	**107**	*e*Pn	**Pn**	**22 38 00.9**	**-1.5**
MOD				Sn	**Sn**	**22 39 21.8**	**-1.0**
HOPS	**Hopland**	**7.15**	**137**	*e*Pn	**Pn**	**22 38 00.7**	**-2.7**
RSW	**Rattlesnake Hi**	**7.17**	**70**	*e*Pn	**Pn**	**22 38 02.9**	**-0.7**
HAWA	**Hanford**	**7.21**	**70**	*e*Pn	**Pn**	**22 38 03.2**	**-1.0**
OHCM	**Honcut**	**7.74**	**128**	*e*Pn	**Pn**	**22 38 11.5**	**0.0**
BBB	**Bella Bella**	**7.86**	**6**	Pn	**Pn**	**22 38 15.3**	**+2.3**
	2.0nm,0.3s,baz=19,slow=13,SNR=25						
BBB	**Bella Bella**	**7.86**	**6**	Pn	**Pn**	**22 38 15.3**	**+2.3**
MCCM	**Marconi Confer**	**7.91**	**140**	*e*Pn	**Pn**	**22 38 13.4**	**-0.4**
LNOR	**Lincton Mounta**	**7.98**	**75**	*e*P	**Pn**	**22 38 13.9**	**-0.8**
OD2	**Odessa Site #2**	**8.02**	**64**	*e*Pn	**Pn**	**22 38 14.3**	**-1.0**
WVOR	**Wild Horse Val**	**8.05**	**100**	*e*P	**Pn**	**22 38 15.1**	**-0.6**
WVOR				pmax	pmax		
	comp=Z,24nm,0.8s						
WVOR	**Wild Horse Val**	**8.05**	**100**	*e*Pn	**Pn**	**22 38 15.1**	**-0.7**
	comp=Z,24nm,0.8s						
SAC	**San Andreas**	**8.58**	**140**	*e*P	**Pn**	**22 38 22.7**	**-0.3**
BMO	**Blue Mountains**	**8.62**	**83**	*e*Pn	**Pn**	**22 38 23.1**	**-0.4**
PAHR	**Pah Rah Range**	**8.77**	**119**	*e*Pn	**Pn**	**22 38 28.0**	**+2.4**
CMB	**Columbia Colle**	**9.27**	**130**	*e*P	**Pn**	**22 38 32.7**	**+0.3**
NEW	**Newport**	**9.32**	**61**	*e*P	**Pn**	**22 38 31.9**	**-1.2**
WAKR	**Walker**	**9.48**	**125**	*e*Pn	**Pn**	**22 38 37.3**	**+1.9**
SAO	**San Andreas Ge**	**9.70**	**139**	*e*P	**Pn**	**22 38 38.1**	**-0.2**
BMN	**Battle Mountai**	**9.81**	**110**	*e*P	**Pn**	**22 38 40.6**	**+0.8**
NVAR	**Mina Array Bea**	**10.21**	**122**	Pn	**Pn**	**22 38 46.2**	**+0.8**
	comp=Z,1.0nm,0.3s,baz=297,slow=13,SNR=30						
NVAR	**Mina Array Bea**	**10.21**	**122**	Pn	**Pn**	**22 38 46.2**	**+0.8**
BSMT	**Bassoo Peak**	**10.70**	**66**	*e*Pn	**Pn**	**22 38 51.7**	**-0.3**
MTUM	**Tungsten Hills**	**10.77**	**127**	*e*Pn	**Pn**	**22 38 57.2**	**+4.2**
HLID	**Hailey**	**10.81**	**89**	*e*Pn	**Pn**	**22 38 54.8**	**+1.2**
JTMT	**Jette**	**11.01**	**67**	*e*Pn	**Pn**	**22 38 56.3**	**+0.1**
ELK	**Elko**	**11.04**	**104**	Pn	**Pn**	**22 38 58.4**	**+1.8**
	comp=Z,0.3nm,0.3s,baz=287,slow=12,SNR=26						
ELK	**Elko**	**11.04**	**104**	*e*Pn	**Pn**	**22 38 57.8**	**+1.2**
MSO	**Missoula**	**11.08**	**72**	*e*Pn	**Pn**	**22 38 57.2**	**0.0**
N12A	**Clover Valley,**	**11.13**	**103**	*e*Pn	**Pn**	**22 38 58.4**	**+0.5**
SWMT	**Swartz Lake**	**11.15**	**68**	*e*Pn	**Pn**	**22 38 58.7**	**+0.6**
YBMT	**Yellow Bay**	**11.21**	**66**	*e*Pn	**Pn**	**22 38 59.2**	**+0.2**
CRAG	**Craig**	**11.36**	**349**	*e*Pn	**Pn**	**22 39 01.8**	**+0.8**
SLMT	**Seeley Lake**	**11.44**	**70**	*e*Pn	**Pn**	**22 39 02.0**	**-0.1**
M13A	**Montello**	**11.56**	**100**	*e*Pn	**Pn**	**22 39 05.6**	**+1.8**
CHMT	**Chamberlain Mo**	**11.56**	**72**	*e*Pn	**Pn**	**22 39 03.8**	**0.0**
WALA	**Waterton Lakes**	**11.59**	**61**	*e*Pn	**Pn**	**22 39 04.1**	**-0.1**
N13A	**Wendover, West**	**11.71**	**102**	*e*Pn	**Pn**	**22 39 07.4**	**+1.6**
MCMT	**McKenzie Canyo**	**11.79**	**82**	*e*Pn	**Pn**	**22 39 08.9**	**+2.1**
	comp=Z,53nm,1.3s						
DLMT	**Dillon**	**11.94**	**79**	*e*Pn	**Pn**	**22 39 10.1**	**+1.1**
LRM	**Limekiln Ridge**	**12.04**	**77**	*e*Pn	**Pn**	**22 39 11.9**	**+1.5**
HVU	**Hansel Valley**	**12.41**	**96**	*e*P	**Pn**	**22 39 16.2**	**+0.8**
BGU	**Big Grassy Mou**	**12.51**	**100**	*e*Pn	**Pn**	**22 39 17.4**	**+0.6**
	comp=Z,73nm,1.3s						
HRY	**Holter Researc**	**12.52**	**73**	*e*Pn	**Pn**	**22 39 16.8**	**0.0**
BOZ	**Bozeman (W)**	**12.62**	**78**	*e*P	**Pn**	**22 39 19.3**	**+1.1**
SPUT	**South Promonto**	**12.79**	**98**	*e*Pn	**Pn**	**22 39 22.8**	**+2.2**
DUG	**Dugway**	**12.95**	**103**	*e*P	**Pn**	**22 39 23.5**	**+0.7**
RRI2	**Red Ridge**	**13.07**	**88**	*e*Pn	**Pn**	**22 39 25.5**	**+1.1**
	comp=Z,482nm,1.9s						
DCID1	**Drake Creek**	**13.12**	**87**	*e*Pn	**Pn**	**22 39 25.1**	**0.0**
	comp=Z,52nm,0.4s						
YMR	**Madison River**	**13.14**	**82**	*e*Pn	**Pn**	**22 39 25.3**	**-0.1**
	comp=Z,326nm,1.6s						
SIT	**Sitka**	**13.23**	**346**	P	**Pn**	**22 39 27.9**	**+1.3**
SIT				pmax	pmax		
	comp=Z,34nm,1.3s						
SIT	**Sitka**	**13.23**	**346**	Pn	**Pn**	**22 39 27.9**	**+1.3**
	comp=Z,34nm,1.3s						
IMW	**Indian Meadow**	**13.25**	**86**	*e*Pn	**Pn**	**22 39 28.1**	**+1.3**
	comp=Z,274nm,1.5s						
YFT	**Old Faithful**	**13.25**	**83**	*e*Pn	**Pn**	**22 39 27.7**	**+0.8**
NOQ	**North Oquirrh**	**13.26**	**100**	*e*Pn	**Pn**	**22 39 27.6**	**+0.6**
TPAW	**Teton Pass**	**13.31**	**87**	*e*Pn	**Pn**	**22 39 28.5**	**+0.9**
HWUT	**Hardware Ranch**	**13.32**	**96**	*e*Pn	**Pn**	**22 39 29.5**	**+1.7**
AHID	**Auburn Hatcher**	**13.35**	**91**	*e*Pn	**Pn**	**22 39 28.6**	**+0.5**
REDW	**Red Top Meadow**	**13.40**	**88**	*e*Pn	**Pn**	**22 39 30.2**	**+1.3**
	comp=Z,292nm,1.6s						
SNOW	**Snow King Moun**	**13.45**	**87**	*e*Pn	**Pn**	**22 39 32.1**	**+2.5**
CTU	**Camp Tracy**	**13.50**	**100**	*e*Pn	**Pn**	**22 39 30.7**	**+0.4**
LOHW	**Long Hollow**	**13.53**	**87**	*e*Pn	**Pn**	**22 39 32.5**	**+1.8**
NLU	**North Lily Min**	**13.56**	**103**	*e*Pn	**Pn**	**22 39 30.1**	**-1.0**
ARUT	**Antelope Range**	**13.69**	**113**	*e*P	**Pn**	**22 39 34.2**	**+1.3**
ARUT				pmax	pmax		
	comp=Z,270nm,1.7s						
ARUT	**Antelope Range**	**13.69**	**113**	*e*Pn	**Pn**	**22 39 34.1**	**+1.3**
	comp=Z,270nm,1.7s						
EDM	**Edmonton**	**13.75**	**44**	*e*P	**Pn**	**22 39 33.9**	**+0.3**
JLU	**Jordanelle**	**13.75**	**100**	*e*Pn	**Pn**	**22 39 34.0**	**+0.3**
MPU	**Maple Canyon**	**13.85**	**102**	*e*Pn	**Pn**	**22 39 35.0**	**0.0**
CCUT	**Cedar City**	**13.87**	**114**	*e*Pn	**Pn**	**22 39 37.3**	**+1.9**
DAU	**Daniels Canyon**	**13.96**	**100**	*e*P	**Pn**	**22 39 37.8**	**+1.3**
GCMT	**Greycliff**	**13.99**	**77**	*e*Pn	**Pn**	**22 39 39.9**	**+2.9**
	comp=Z,132nm,1.0s						
EGMT	**Eagleton**	**14.06**	**68**	*e*Pn	**Pn**	**22 39 37.7**	**-0.1**
DLBC	**Dease Lake**	**14.08**	**359**	Pn	**Pn**	**22 39 44.5**	**+6.4**
	comp=Z,0.1nm,0.3s,baz=167,slow=13,SNR=6.8						
DLBC				LR	LR	22 44 28.1	
	comp=Z,3μm,21.5s,baz=180,slow=35						
DLBC	**Dease Lake**	**14.08**	**359**	*e*

ULM Lac du Bonnet 23.32 64 P **P 22 41 25.7 -1.2**
comp=Z,34nm,0.9s,mb4.8,baz=274,slow=9.0,SNR=22
ULM LR LR 22 50 40.6
comp=Z,7μm,19.0s,MS5.2,baz=272,slow=37
ULM Lac du Bonnet 23.32 64 *e*P **P 22 41 25.9 -1.0**
ULM pmax pmax
comp=Z,308nm,2.1s
ULM Lac du Bonnet 23.32 64 *e*P **P 22 41 25.9 -1.0**
comp=Z,308nm,2.1s,mb5.4
AGMN Agassiz Nation 23.35 68 *e*P **P 22 41 26.2 -1.0**
comp=Z,686nm,2.3s,mb5.7
ECSD EROS Data Cent 23.47 80 *e*P **P 22 41 26.7 -1.8**
comp=Z,135nm,1.3s,mb5.2
INK Inuvik 24.09 356 P **P 22 41 35.4 +1.4**
comp=Z,6.6nm,1.0s,mb4.0,baz=182,slow=11,SNR=8.4
INK Inuvik 24.09 356 *e*P **P 22 41 38.8 +4.8**
INK pmax pmax
comp=Z,33nm,1.3s
INK Inuvik 24.09 356 *e*P **P 22 41 38.8 +4.7**
comp=Z,33nm,1.3s,mb4.6
KSU1 Kansas State U 24.90 91 *e*P **P 22 41 41.6 -0.1**
comp=Z,65nm,1.0s,mb5.1
KSU1 LR LR
comp=Z,3μm,35.6s,MS4.6
TXAR Lajitas Array 25.32 118 P **P 22 41 44.9 -0.8**
comp=Z,4.4nm,1.0s,mb4.0,baz=309,slow=8.1,SNR=17
WMOK Wichita Mounta 25.34 102 *e*P **P 22 41 45.2 -0.6**
WMOK pmax pmax
comp=Z,110nm,1.1s,mb5.3
WMOK MLR MLR
comp=Z,4μm,19.0s,MS5.0
WMOK Wichita Mounta 25.34 102 *e*P **P 22 41 45.2 -0.6**
comp=Z,110nm,1.1s,mb5.3
WMOK LR LR
comp=Z,4μm,19.0s,MS5.0
COLD Coldfoot 25.46 341 *e*P **P 22 41 48.2 +1.7**
comp=Z,51nm,1.6s,mb4.8
UNV Unalaska Valle 25.82 305 *e*P **P 22 41 50.3 +0.4**
comp=Z,98nm,1.2s,mb5.2
FCC Fort Churchill 25.85 44 *e*P **P 22 41 50.8 +0.7**
comp=Z,10nm,2.1s,mb4.0
EYMN Ely 26.30 69 *e*P **P 22 41 54.0 -0.3**
comp=Z,95nm,1.5s,mb5.1
JCT Junction City 27.10 111 *e*P **P 22 42 00.2 -1.5**
JCT pmax pmax
comp=Z,66nm,1.4s,mb5.0
JCT Junction City 27.10 111 *e*P **P 22 42 00.2 -1.5**
comp=Z,66nm,1.4s,mb5.0
JFWS Jewell Farm 28.17 79 *e*P **P 22 42 11.0 -0.1**
JFWS pmax pmax
comp=Z,27nm,0.8s,mb4.9
JFWS Jewell Farm 28.17 79 *e*P **P 22 42 11.0 -0.1**
comp=Z,27nm,0.8s,mb4.9
COWI Conover 28.17 72 *e*P **P 22 42 10.0 -1.2**
comp=Z,14nm,0.8s,mb4.6
MIAR Mount Ida 29.13 97 *e*P **P 22 42 19.8 +0.1**
MIAR pmax pmax
comp=Z,57nm,1.3s,mb5.1
MIAR MLR MLR
comp=Z,8μm,19.0s,MS5.3
MIAR Mount Ida 29.13 97 *e*P **P 22 42 19.8 0.0**
comp=Z,57nm,1.3s,mb5.1
MIAR LR LR
comp=Z,8μm,19.0s,MS5.3
HDIL Hopedale 29.60 83 *e*P **P 22 42 24.0 +0.1**
comp=Z,254nm,1.8s,mb5.7
FVM French Village 29.79 89 *e*P **P 22 42 24.3 -1.3**
FVM pmax pmax
comp=Z,32nm,1.3s,mb4.9
FVM French Village 29.79 89 *e*P **P 22 42 24.2 -1.3**
comp=Z,32nm,1.3s,mb4.9
NATX Nacogdoches 29.86 103 P **P 22 42 26.5 +0.3**
HKT Hockley 30.12 107 *e*P **P 22 42 29.0 +0.4**
HKT pmax pmax
comp=Z,98nm,1.5s,mb5.3
HKT Hockley 30.12 107 *e*P **P 22 42 28.9 +0.4**
comp=Z,98nm,1.5s,mb5.3
ATKA Atka Island 30.42 301 *e*P **P 22 42 31.0 0.0**
comp=Z,53nm,1.0s,mb5.2
OLIL Olney 31.14 86 *e*P **P 22 42 37.0 -0.5**
comp=Z,86nm,1.1s,mb5.5
BLO Bloomington 32.10 84 *e*P **P 22 42 45.8 -0.1**
BLO pmax pmax
comp=Z,41nm,1.0s,mb5.2
BLO Bloomington 32.10 84 *e*P **P 22 42 45.8 -0.1**
comp=Z,40nm,1.0s,mb5.2
OXF Oxford 32.11 94 *e*P **P 22 42 45.4 -0.7**
OXF pmax pmax
comp=Z,267nm,1.2s,mb6.0
OXF MLR MLR
comp=Z,3μm,19.0s,MS5.0
OXF Oxford 32.11 94 *e*P **P 22 42 45.4 -0.8**
comp=Z,267nm,1.2s,mb6.0
OXF LR LR
comp=Z,3μm,19.0s,MS5.0
WVT Waverly 32.47 90 *e*P **P 22 42 48.5 -0.7**
WVT pmax pmax
comp=Z,163nm,2.4s,mb5.4
WVT MLR MLR
comp=Z,6μm,22.0s,MS5.2
WVT Waverly 32.47 90 *e*P **P 22 42 48.5 -0.7**
comp=Z,163nm,2.4s,mb5.4
WVT LR LR
comp=Z,6μm,22.0s,MS5.2
VBMS Vicksburg 32.52 99 *e*P **P 22 42 49.5 -0.2**
comp=Z,71nm,1.1s,mb5.5
VBMS LR LR
comp=Z,4μm,21.0s,MS5.1
AAM Ann Arbor 32.98 77 *e*P **P 22 42 53.8 +0.1**
ACSO Alum Creek Sta 34.20 80 *e*P **P 22 43 04.1 -0.2**
comp=Z,65nm,1.3s,mb5.4
ACSO LR LR
comp=Z,1μm,21.0s,MS4.7
SWET Sewanee 34.26 90 *e*P **P 22 43 04.4 -0.5**
LRAL Lakeview Retre 34.59 94 *e*P **P 22 43 07.0 -0.8**
comp=Z,41nm,1.4s,mb5.2
CPCT Cooper Cave 35.16 89 *e*P **P 22 43 12.3 -0.3**
ERPA Erie 35.60 76 *e*P **P 22 43 16.5 +0.1**
comp=Z,39nm,1.1s,mb5.2
ALLY Alegheny Colle 35.66 77 *e*P **P 22 43 17.1 +0.3**
comp=Z,149nm,1.5s,mb5.7
MCWV Mont Chateau 36.64 80 *e*P **P 22 43 25.4 +0.1**
comp=Z,94nm,1.5s,mb5.4
GOGA Godfrey 36.93 91 *e*P **P 22 43 27.3 -0.5**
GOGA pmax pmax
comp=Z,138nm,1.9s,mb5.5
GOGA Godfrey 36.93 91 *e*P **P 22 43 27.3 -0.5**
comp=Z,138nm,1.9s,mb5.5
ELN Prospectdale 37.03 84 *e*P **P 22 43 27.9 -0.8**
BLA Blacksburg 37.28 84 *e*P **P 22 43 29.5 -1.2**
BLA pmax pmax
comp=Z,39nm,1.0s,mb5.2
BLA Blacksburg 37.28 84 *e*P **P 22 43 29.4 -1.3**
comp=Z,39nm,1.0s,mb5.2
VWCC Virginia Weste 37.58 83 *e*P **P 22 43 33.4 +0.1**
JSC Jenkinsville 38.07 88 *e*P **P 22 43 36.8 -0.7**
BINY Binghamton 38.35 74 *e*P **P 22 43 41.2 +1.5**
comp=Z,319nm,2.9s,mb5.5
LONY Lake Ozonia 38.45 70 *e*P **P 22 43 40.0 -0.5**
comp=Z,40nm,1.5s,mb4.9
JSRW J. Sargeant Re 38.87 82 *e*P **P 22 43 44.2 +0.1**
NCB Newcomb 38.91 71 *e*P **P 22 43 41.5 -2.9**
comp=Z,38nm,1.6s,mb4.9
MVL Millersville 38.96 77 *e*P **P 22 43 44.7 -0.2**
comp=Z,35nm,1.3s,mb4.9
CBN Corbin 39.00 81 *e*P **P 22 43 45.0 -0.2**
comp=Z,54nm,1.0s,mb5.2
FRNY Flat Rock 39.04 69 *e*P **P 22 43 45.1 -0.4**
comp=Z,70nm,1.5s,mb5.2
ACCN Adirondack Com 39.50 71 *e*P **P 22 43 50.1 +0.8**
comp=Z,19nm,1.1s,mb4.7
MDV Middlebury 39.60 70 *e*P **P 22 43 48.5 -1.7**
TRY Troy 39.74 72 *e*P **P 22 43 52.6 +1.2**
CMIG Matias Romero 39.75 122 P **P 22 43 50.9 -0.7**
comp=Z,9.7nm,0.9s,mb4.5,baz=317,slow=8.1,SNR=11
BILL Bilibino 40.31 328 ‖ *i*P **P 22 43 56.2 +0.4**
BILL pmax pmax
comp=Z,22nm,1.2s,mb4.8
HNH Hanover 40.31 70 *e*P **P 22 43 56.6 +0.5**
LBNH Lisbon 40.36 69 *e*P **P 22 43 56.3 -0.2**
LBNH pmax pmax
comp=Z,22nm,0.9s,mb4.9
LBNH Lisbon 40.36 69 *e*P **P 22 43 56.3 -0.2**
comp=Z,22nm,0.9s,mb4.9
SCHQ Schefferville 40.55 52 P **P 22 43 57.2 -0.7**
comp=Z,10nm,1.1s,mb4.3,baz=297,slow=6.3,SNR=5.7
SCHQ Schefferville 40.55 52 *e*P **P 22 43 57.1 -0.8**
SCHQ LR LR
comp=Z,6μm,21.0s,MS5.5
MIDW Midway 41.30 264 PFAKE 22 44 20.0 +16
MIDW LR LR
comp=Z,3μm,20.0s,MS5.1
DWPF Disney 41.32 97 PFAKE 22 44 20.0 +15
DWPF LR LR
comp=Z,3μm,14.3s,MS5.2
TEIG Tepich 41.66 112 *e*P **P 22 44 09.1 +1.6**
comp=Z,39nm,1.3s,mb4.9
TEIG LR LR
comp=Z,775nm,20.0s,MS4.6
SFJD Kangerlussuaq 45.90 32 LR LR 23 01 59.4
comp=Z,939nm,21.5s,MS4.7,slow=34
PET Petropavlovsk 46.41 308 *e*P **P 22 44 44.5 -0.7**
PET *e* 22 51 37.6
PET Petropavlovsk 46.41 308 PFAKE 22 45 00.0 +15
PET LR LR
comp=Z,845nm,22.0s,MS4.7
SEY Seymchan 46.64 322 ‖ *i*P **P 22 44 47.1 +0.3**
TGUH Tegucigalpa,Un 46.80 117 PFAKE 22 45 00.0 +11
TGUH LR LR
comp=Z,889nm,20.0s,MS4.7
PETK Petropavlovsk- 46.93 308 P **P 22 44 48.8 -0.4**
comp=Z,6.3nm,0.8s,mb4.6,baz=72,slow=14,SNR=6.8
SUMG Summit 48.61 24 *e*P **P 22 45 03.2 +1.2**
BBSR BB Station 50.88 80 PFAKE 22 45 30.0 +10
BBSR LR LR
comp=Z,2μm,22.0s,MS5.0
JTS JuntasAbangare 51.11 118 *e*P **P 22 45 21.9 +0.1**
JTS pmax pmax
comp=Z,20nm,0.7s
JTS MLR MLR
comp=Z,783nm,19.0s
JTS JuntasAbangare 51.11 118 *e*P **P 22 45 21.9 +0.1**
comp=Z,20nm,0.7s,mb5.2
JTS LR LR
comp=Z,783nm,19.0s,MS4.8
TIXI Tiksi 52.06 337 *e*P **P 22 45 29.0 +0.8**
TIXI pmax pmax
comp=Z,32nm,2.3s,mb4.8
TIXI Tiksi 52.06 337 *e*P **P 22 45 28.4 +0.3**
comp=Z,14nm,1.1s,mb4.8
TIXI LR LR
comp=Z,848nm,20.0s,MS4.8
SDDR Presa de Saban 54.26 98 PFAKE 22 46 00.0 +15
SDDR LR LR
comp=Z,1μm,20.0s,MS5.0
YAK Yakutsk 56.60 326 *e*P **P 22 46 00.8 -0.5**
YAK *e* 22 46 58.4
YAK pmax pmax
comp=Z,22nm,1.0s,mb5.1
YAK pmax pmax
comp=E,9.0nm,1.3s
YAK pmax pmax
comp=N,3.0nm,1.1s
YAK Yakutsk 56.60 326 PFAKE 22 46 10.0 +8.7
YAK LR LR
comp=Z,794nm,22.0s,MS4.8
BORG Borgarnes 57.70 29 PFAKE 22 46 20.0 +11
BORG LR LR
comp=Z,1μm,20.0s,MS5.1
YSS Yuzh-Sakhalins 58.27 306 P **P 22 46 13.7 +0.4**
YSS MLR MLR
comp=Z,208nm,20.0s,MS4.2
SJG San Juan 58.49 95 PFAKE 22 46 30.0 +15
SJG LR LR
comp=Z,873nm,21.0s,MS4.8
ASAJ Asahikawa 59.92 304 P **P 22 46 23.1 -1.7**
comp=Z,13nm,0.9s,mb4.9,baz=169,slow=5.2,SNR=3.9
ERM Erimo 60.77 301 P **P 22 46 30.6 0.0**
ERM MLR MLR
comp=Z,865nm,19.0s,MS4.9
SDV Santo Domingo 61.66 106 P **P 22 46 37.3 +0.3**
comp=Z,9.5nm,0.8s,mb5.0
SDV LR LR
comp=Z,339nm,21.0s,MS4.5
HABR Khabarovsk 61.72 311 *e*P **P 22 46 36.0 -0.9**
HABR *e**PP pP 22 46 39.0 -1.2
HABR *e* 22 47 16.5
HABR *e* 22 56 27.7
HABR pmax pmax
comp=N,16nm,0.9s
HABR pmax pmax
comp=Z,19nm,0.8s,mb5.3
HABR pmax pmax
comp=E,19nm,0.6s
HABR MLR MLR
comp=Z,228nm,17.0s,MS4.4
ROSC El Rosal 62.09 112 P **P 22 46 40.0 +0.1**
comp=Z,6.0nm,0.4s,mb5.0,baz=100,slow=17,SNR=7.2
ROSC El Rosal 62.09 112 *e*P **P 22 46 40.7 +0.8**
OTAV Otavalo 62.94 119 *e*P **P 22 46 45.9 +0.3**
comp=Z,27nm,1.3s,mb5.2
OTAV LR LR
comp=Z,509nm,20.0s,MS4.7
KLR Kul'dur 63.02 313 *e*P **P 22 46 42.2 -3.4**
KLR *e*S **S 22 55 16.0 +0.2**
PPT Papeete 64.35 201 *e*S **S 22 55 40.1 +7.3**
comp=Z,1μm,26.8s
PPT *e*LQ 23 02 58.6
comp=Z,5μm,28.2s
PPT *e*LR LR 23 05 47.3
comp=Z,2μm,29.0s,baz=24
KEV Kevo 64.87 9 P **P 22 46 57.5 0.0**
KEV MLR MLR
comp=Z,591nm,22.0s,MS4.7
ARCES ARCESS Array B 64.91 9 P **P 22 46 56.1 -1.6**
comp=Z,2.0nm,0.8s,mb4.2,baz=352,slow=7.4,SNR=5.0
ARE0 ARCESS Array S 64.91 9 *e*P **P 22 46 57.3 -0.4**
BBGH Gun Hill 66.51 95 PFAKE 22 47 20.0 +11
BBGH LR LR
comp=Z,2μm,22.0s,MS5.4
MDJ Mudanjiang 67.06 310 P **P 22 47 12.0 0.0**
MDJ pP pP 22 47 15.3 +0.1
MDJ sP sP 22 47 16.5 +0.1
MDJ PP PP 22 49 38.3 -0.9
MDJ S S 22 56 05.5 -0.1
MDJ sS sS 22 56 10.8 -0.2
MDJ ScS ScS 22 57 08.9 -0.6
MDJ pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
MDJ pmax pmax
comp=Z,82nm,4.3s
MDJ LR LR
comp=N,250nm,17.9s,MS4.7
MDJ LR LR
comp=E,350nm,15.9s,MS4.7
MDJ LR LR
comp=Z,610nm,22.4s
MDJ Mudanjiang 67.06 310 PFAKE 22 47 20.0 +8.0
MDJ LR LR
comp=Z,491nm,20.0s,MS4.7
MAJO Matsushiro 67.12 299 *e*P **P 22 47 10.6 -1.9**
MAJO pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
MAJO MLR MLR
comp=Z,1μm,20.0s,MS5.0
MAJO Matsushiro 67.12 299 *e*P **P 22 47 10.6 -2.0**
comp=Z,7.4nm,0.8s,mb4.8
MAJO LR LR
comp=Z,1μm,20.0s,MS5.0
MAT Matsushiro 67.12 299 P **P 22 47 11.1 -1.4**
MAT S S 22 56 10.0 +3.4
MJAR Matsushiro Arr 67.12 299 P **P 22 47 11.1 -1.5**
comp=Z,2.9nm,1.0s,mb4.3,baz=36,slow=4.5,SNR=7.6
RKT Rikitea 67.36 186 *e*LQ 23 04 24.1
comp=Z,2μm,28.0s
RKT *e*LR LR 23 07 09.2
comp=Z,695nm,23.8s
LVZ Lovozero 67.40 6 *e*P **P 22 47 12.8 -1.0**
LVZ pmax pmax
comp=Z,60nm,2.5s,mb5.2
APA Apatity 67.62 7 ‖ *e*P **P 22 47 22.5 +7.4**
APA *e*S S 22 56 16.0 +4.4
APA *e* 22 57 06.0
APA pmax pmax
comp=Z,13nm,1.0s,mb4.9
APA MLR MLR
comp=Z,900nm,16.0s,MS5.1
HIA Hailar 68.95 319 PFAKE 22 47 40.0 +16
HIA LR LR
comp=Z,673nm,21.0s,MS4.9
CN2 Changchun 69.83 312 *e*P **P 22 47 31.9 +2.5**
CN2 *e*sP sP 22 47 38.0 +4.2
CN2 *e*S S 22 56 36.5 -2.2
CN2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,17.0s,MS4.7
CN2 LR LR
comp=E,300nm,17.0s,MS4.7
CN2 LR LR
comp=Z,200nm,10.0s
TBI Tubuai 69.86 200 *e*S S 22 56 44.2 +5.1
comp=Z,660nm,27.2s
TBI *e*LQ 23 04 56.3
comp=Z,1μm,30.0s
TBI *e*LR LR 23 08 28.2
comp=Z,888nm,29.8s
NB2 NORSAR Subarra 70.17 19 P **P 22 47 29.9 -1.2**
comp=Z,17nm,1.1s,mb4.9,baz=334,slow=5.9
NOA NORSAR Array B 70.17 19 P **P 22 47 30.0 -1.1**
comp=Z,2.6nm,0.8s,mb4.2,baz=334,slow=5.9,SNR=7.1
NAO01 NORSAR Array S 70.26 19 *e*P **P 22 47 31.4 -0.2**
comp=Z,15nm,1.0s,mb4.9
ESK Eskdalemuir 70.73 29 PFAKE 22 47 50.0 +15
ESK LR LR
comp=Z,1μm,19.0s,MS5.2
JOF Joensuu 71.94 9 *e*P **P 22 47 39.9 -1.9**
JOF Joensuu 71.94 9 *e*p **P 22 47 39.9 -1.9**
comp=Z,7.7nm,0.8s,mb4.7
KAF Kangasniemi 72.07 12 *e*P **P 22 47 39.9 -2.7**
KAF pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
KAF Kangasniemi 72.07 12 *e*P **P 22 47 39.9 -2.7**
comp=Z,9.2nm,1.0s,mb4.7
KAF Kangasniemi 72.07 12 *e*p **P 22 47 39.9 -2.7**
comp=Z,9.2nm,1.0s,mb4.7
FINES FINESS Array B 72.67 12 P **P 22 47 45.9 -0.3**
comp=Z,4.6nm,0.8s,mb4.5,baz=354,slow=4.4,SNR=18
FINES FINESS Array B 72.67 12 P **P 22 47 45.9 -0.3**
KSRS Korea Array 72.75 306 P **P 22 47 46.8 -0.3**
comp=Z,1.7nm,0.8s,mb4.0,baz=51,slow=5.8,SNR=7.3
INCN Inchon 73.48 306 PFAKE 22 48 00.0 +8.6
INCN LR LR
comp=Z,539nm,21.0s,MS4.8
KRAR Krasnoyarsk 73.83 337 *e*P **P 22 47 54.0 +0.9**
KRAR pmax pmax
comp=Z,17nm,1.3s,mb4.8
TLY Talaya 73.93 329 *e*P **P 22 47 54.0 +0.2**
TLY pmax pmax
comp=Z,17nm,1.1s,mb4.9
TLY MLR MLR
comp=Z,588nm,18.9s,MS4.9
TLY Talaya 73.93 329 *e*P **P 22 47 53.0 -0.8**
comp=Z,19nm,1.2s,mb4.9
TLY LR LR
comp=Z,1μm,19.0s,MS5.3
MOY Mondy 74.91 330 *e*P **P 22 48 00.9 +1.4**
ULN Ulaanbaatar 75.63 325 *e*P **P 22 48 03.9 +0.2**
ULN pmax pmax
comp=Z,41nm,1.9s,mb5.0
ULN MLR MLR
comp=Z,1μm,22.0s,MS5.2
ULN Ulaanbaatar 75.63 325 *e*P **P 22 48 03.9 +0.2**
comp=Z,41nm,1.9s,mb5.0
ULN LR LR
comp=Z,1μm,22.0s,MS5.2
SONM Songino Array 75.92 325 P **P 22 48 05.9 +0.5**
comp=Z,5.8nm,0.9s,mb4.5,baz=43,slow=4.0,SNR=30
BSEG Bad Segeberg 76.18 23 *e*P **P 22 48 06.3 -0.5**
comp=Z,58nm,1.8s,mb5.2
IBBN Ibbenburen 76.85 25 *e*P **P 22 48 10.1 -0.5**
comp=Z,63nm,1.6s,mb5.3
GRR Gorron 77.18 32 *e*P **P 22 48 12.5 0.0**
comp=Z,118nm,1.6s,mb5.3
GRR Gorron 77.18 32 *e*P **P 22 48 12.5 0.0**
GRR pmax pmax
comp=Z,59nm,1.6s,mb5.3
GRR Gorron 77.18 32 *e*P **P 22 48 12.5 0.0**
comp=Z,59nm,1.6s,mb5.3
LDF La Druitiere 77.29 32 *e*P **P 22 48 12.7 -0.4**
comp=Z,10.0nm,1.1s,mb4.4
LDF La Druitiere 77.29 32 *e*P **P 22 48 12.7 -0.4**
LDF pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
LDF La Druitiere 77.29 32 *e*P **P 22 48 12.7 -0.4**
comp=Z,5.0nm,1.1s,mb4.4
NVS Novosibirsk 77.34 341 *e*P **P 22 48 11.8 -1.5**
NVS *e* 22 51 11.8
NVS pmax pmax
comp=Z,65nm,1.3s,mb5.4
NVS pmax pmax
comp=N,30nm,1.5s
NVS pmax pmax
comp=E,29nm,1.4s
BJI Beijing 77.37 314 P **P 22 48 11.8 -1.9**
BJI S S 22 58 03.0 -0.9
BJI pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
BJI LR LR
comp=N,1μm,13.6s,MS5.4
BJI LR LR
comp=E,670nm,12.3s,MS5.4
BJI LR LR
comp=Z,330nm,26.7s
BJT Baijiatuau 77.39 314 PFAKE 22 48 30.0 +16
BJT LR LR
comp=Z,624nm,20.0s,MS4.9
NRDL Niedersach Rie 77.39 24 *e*P **P 22 48 12.0 -1.6**
comp=Z,28nm,1.6s,mb4.9
BUG Bochum-Univer 77.45 26 *e*P **P 22 48 13.0 -0.9**
comp=Z,23nm,1.4s,mb4.9
ZAA0 Zalesovo Array 77.79 340 *e*P **P 22 48 14.8 -1.0**
ZALV Zalesovo Beam 77.79 340 P **P 22 48 14.7 -1.1**
comp=Z,4.6nm,0.8s,mb4.4,baz=28,slow=6.7,SNR=18
GIVF Givet 77.80 28 *e*P **P 22 48 15.7 -0.2**
CLZ Clausthal 78.05 24 *e*P **P 22 48 17.2 -0.1**
comp=Z,77nm,2.0s,mb5.3
GKP Gorka Klasztor 78.60 20 *e*P **P 22 48 20.1 -0.1**
GKP Gorka Klasztor 78.60 20 *e*P **P 22 48 20.1 -0.2**
WLF Walferdange 78.62 28 *e*P **P 22 48 20.2 -0.3**
comp=Z,22nm,1.4s,mb4.9
SVE Sverdlovsk 78.81 354 *e*P **P 22 48 21.1 -0.3**
SVE pmax pmax
comp=Z,30nm,1.5s,mb5.0
UBBA Unterbreizbach 78.84 25 *e*P **P 22 48 20.4 -1.2**
comp=Z,38nm,1.9s,mb5.0
TNS Taunus Mts 78.88 26 *e*P **P 22 48 21.2 -0.7**
comp=Z,44nm,1.6s,mb5.1
MFF Saint Martin d 78.92 33 *e*P **P 22 48 22.1 -0.1**
comp=Z,77nm,1.7s,mb5.1
MFF Saint Martin d 78.92 33 *e*P **P 22 48 22.1 -0.1**
MFF pmax pmax
comp=Z,39nm,1.7s,mb5.1
MFF Saint Martin d 78.92 33 *e*P **P 22 48 22.1 -0.1**
comp=Z,38nm,1.7s,mb5.1
NACGM Naroch 79.04 14 *e* **P 22 48 24.0 +1.3**
HHC Hu-ho-hao-te 79.06 318 *e*P **P 22 48 23.0 -0.1**
HHC sP sP 22 48 28.5 +0.9
HHC PcP PcP 22 48 32.0 +0.5
HHC PP PP 22 51 23.3 +1.8
HHC S S 22 58 19.3 -2.8
HHC SKS 22 58 32.5
HHC ScS ScS 22 58 40.3 -5.0
HHC SS SS 23 03 26.3 -0.3
HHC pmax pmax
comp=Z,15nm,0.7s,mb5.0
HHC pmax pmax
comp=Z,250nm,6.7s
HHC LR LR
comp=N,340nm,17.5s,MS5.1
HHC LR LR
comp=E,680nm,17.2s,MS5.1
HHC LR LR
comp=Z,460nm,17.3s,MS4.9
MEZF Maizieres J'vi 79.24 29 *e*P **P 22 48 24.0 +0.1**
CLL Collm 79.28 23 *e*P **P 22 48 23.1 -0.9**
comp=Z,34nm,1.7s,mb5.0
CLL Collm 79.28 23 *e*P **P 22 48 22.0 -2.0**
CLL *i**PP pP 22 48 27.7 +0.4
CLL *e*S S 22 58 29.0 +5.0
CLL pmax pmax
comp=Z,43nm,2.1s,mb5.0
CLL MLR MLR
comp=Z,900nm,18.6s,MS5.1
CLL Collm 79.28 23 *e*P **P 22 48 22.0 -2.0**
comp=Z,43nm,2.1s,mb5.0
CLL *i* pP pP 22 48 27.7 +0.4

CLL eS S 22 58 29.0 +5.0
CLL LR LR
comp=Z,900nm,18.6s,MS5.1
CLL Collm 79.28 23 eP **P 22 48 24.2 +0.2**
comp=Z,43nm,2.1s,mb5.0
CLL i pP pP 22 48 27.7 +0.4
comp=Z,33nm,1.7s
CLL eS S 22 58 29.0 +5.0
CLL ePS 22 59 14.0
CLL eSS SS 23 03 42.0 +13
CLL eSSS 23 06 54.0
CLL eSSSS 23 09 18.0
CLL LmV 23 28 00.0
comp=Z,900nm,18.6s
ARU Arti 79.34 356c iP **P 22 48 23.4 -0.9**
ARU 22 51 22.9
ARU PPP 22 53 11.5
ARU S S 22 58 25.1 +0.6
ARU SS SS 23 03 30.4 +0.5
ARU pmax pmax
comp=Z,15nm,1.2s,mb4.8
ARU Arti 79.34 356 eP **P 22 48 23.6 -0.7**
comp=Z,30nm,1.4s,mb5.0
MOX Moxa 79.47 24 e(P) **P 22 48 30.9 +5.8**
comp=Z,37nm,1.8s,mb5.0
MOX Moxa 79.47 24 eP **P 22 48 24.3 -0.8**
comp=Z,20nm,1.5s,mb4.8
MNK Minsk 79.60 13 eP **P 22 48 22.0 -3.7**
MICGM Minsk 79.61 13 e **P 22 48 22.0 -3.8**
MOS Moscow 79.65 7 eP **P 22 48 27.4 +1.4**
MOS pmax pmax
comp=Z,32nm,0.8s,mb5.3
LOR Lormes 79.87 30 eP **P 22 48 27.3 0.0**
comp=Z,54nm,1.5s,mb5.0
LOR eMLR MLR
comp=Z,2μm,19.8s,MS5.0
LOR Lormes 79.87 30 eP **P 22 48 27.3 0.0**
LOR pmax pmax
comp=Z,27nm,1.5s,mb5.0
LOR MLR MLR
comp=Z,2μm,19.8s,MS5.3
LOR Lormes 79.87 30 eP **P 22 48 27.3 0.0**
comp=Z,27nm,1.5s,mb5.0
LOR LR LR
comp=Z,2μm,19.8s,MS5.3
SSF Saint Saulge 79.92 31 eP **P 22 48 27.4 -0.2**
comp=Z,46nm,1.4s,mb4.9
SSF Saint Saulge 79.92 31 eP **P 22 48 27.4 -0.2**
SSF pmax pmax
comp=Z,23nm,1.4s,mb4.9
SSF Saint Saulge 79.92 31 eP **P 22 48 27.4 -0.2**
comp=Z,23nm,1.4s,mb4.9
TANN Tannenbergstha 79.92 24 eP **P 22 48 26.8 -0.8**
comp=Z,12nm,1.5s,mb4.6
BRG Berggiesshubel 79.93 23 eP **P 22 48 26.9 -0.7**
comp=Z,24nm,1.4s,mb4.9
BRG Berggiesshubel 79.93 23 eP **P 22 48 27.3 -0.3**
comp=Z,13nm,1.4s,mb4.7
BRG i 22 48 34.2
comp=Z,23nm,1.4s
BRG e 22 49 15.3
comp=Z,26nm,1.8s
BRG ePP PP 22 51 47.6 +19
comp=Z,12nm,1.5s
BRG S S 22 58 39.0 +8.1
BRG Berggiesshubel 79.93 23 eP **P 22 48 27.3 -0.3**
BRG i 22 48 34.2
BRG S S 22 58 39.0 +8.1
BRG pmax pmax
comp=Z,8.0nm,1.4s,mb4.5
CDF Champ du Feu 80.07 28 eP **P 22 48 28.4 0.0**
comp=Z,49nm,1.4s,mb4.9
CDF Champ du Feu 80.07 28 eP **P 22 48 28.4 0.0**
CDF pmax pmax
comp=Z,25nm,1.4s,mb5.0
CDF Champ du Feu 80.07 28 eP **P 22 48 28.4 0.0**
comp=Z,25nm,1.4s,mb4.9
NKC Novy Kostel 80.08 24 eP **P 22 48 29.4 +1.0**
NKC eS S 22 58 38.8 +6.3
NKC MLR MLR
comp=Z,1μm,15.7s,MS5.3
NKC Novy Kostel 80.08 24 eP **P 22 48 29.4 +1.0**
NKC ex x 22 51 49.8
NKC eS S 22 58 38.8 +6.3
NKC AMS AMS 23 26 00.0
comp=Z,1μm,15.7s
TCF Toulx Ste Croi 80.09 32 eP **P 22 48 28.2 -0.3**
comp=Z,36nm,1.4s,mb4.8
TCF Toulx Ste Croi 80.09 32 eP **P 22 48 28.2 -0.3**
TCF pmax pmax
comp=Z,18nm,1.4s,mb4.8
TCF Toulx Ste Croi 80.09 32 eP **P 22 48 28.2 -0.3**
comp=Z,18nm,1.4s,mb4.8
AVF Avril sur Loir 80.09 31 eP **P 22 48 28.0 -0.5**
comp=Z,43nm,1.4s,mb4.9
AVF Avril sur Loir 80.09 31 eP **P 22 48 28.0 -0.5**
AVF pmax pmax
comp=Z,21nm,1.4s,mb4.9
AVF Avril sur Loir 80.09 31 eP **P 22 48 28.0 -0.5**
comp=Z,21nm,1.4s,mb4.9
BGF Bois d'Agland 80.10 31 eP **P 22 48 28.1 -0.5**
comp=Z,59nm,1.6s,mb5.0
BGF Bois d'Agland 80.10 31 eP **P 22 48 28.1 -0.5**
BGF pmax pmax
comp=Z,30nm,1.6s,mb5.0
BGF Bois d'Agland 80.10 31 eP **P 22 48 28.1 -0.5**
comp=Z,30nm,1.6s,mb5.0
HAU Haudompre 80.11 28 eP **P 22 48 28.3 -0.4**
comp=Z,54nm,1.6s,mb4.9
HAU eMLR MLR
comp=Z,1μm,21.2s,MS4.9
HAU Haudompre 80.11 28 eP **P 22 48 28.3 -0.4**
HAU pmax pmax
comp=Z,27nm,1.6s,mb4.9
HAU MLR MLR
comp=Z,1μm,21.3s,MS5.2
HAU Haudompre 80.11 28 eP **P 22 48 28.3 -0.4**
comp=Z,27nm,1.6s,mb4.9
HAU LR LR
comp=Z,1μm,21.3s,MS5.2
OBN Obninsk 80.16 8⇓ iP **P 22 48 28.2 -0.6**
OBN eS S 22 58 36.3 +3.0
OBN eSS SS 23 03 52.7 +10
OBN pmax pmax
comp=Z,28nm,1.2s,mb5.1
OBN MLR MLR
comp=Z,600nm,18.0s,MS5.0
OBN Obninsk 80.16 8 eP **P 22 48 27.1 -1.7**
comp=Z,36nm,1.1s,mb5.2
OBN LR LR
comp=Z,683nm,20.0s,MS5.0
GRF Grafenberg Arr 80.20 25 eP **P 22 48 28.7 -0.4**
comp=Z,31nm,1.4s,mb5.0
GRF eS S 22 58 40.1 +6.3
GRF Grafenberg Arr 80.20 25 eP **P 22 48 28.7 -0.4**
GRF eS S 22 58 40.1 +6.3
GRF pmax pmax
comp=Z,31nm,1.4s,mb5.0
ECH Echery 80.20 28 eP **P 22 48 29.6 +0.5**
ECH pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
ECH Echery 80.20 28 eP **P 22 48 29.6 +0.4**
comp=Z,7.7nm,1.2s,mb4.5
STU Stuttgart 80.39 26 eP **P 22 48 29.5 -0.6**
SMF Signal de Mont 80.39 31 eP **P 22 48 29.6 -0.6**
comp=Z,28nm,1.3s,mb4.7
SMF Signal de Mont 80.39 31 eP **P 22 48 29.6 -0.6**
SMF pmax pmax
comp=Z,14nm,1.3s,mb4.7
SMF Signal de Mont 80.39 31 eP **P 22 48 29.6 -0.6**
comp=Z,14nm,1.3s,mb4.7
PVCC Panska Ves 80.41 22 eP **P 22 48 30.6 +0.4**
PVCC eS S 22 58 41.4 +5.4
PVCC MLR MLR
comp=Z,900nm,15.6s,MS5.2
PVCC Panska Ves 80.41 22 eP **P 22 48 30.6 +0.4**
PVCC ex x 22 51 50.1
PVCC eS S 22 58 41.4 +5.4
PVCC AMS AMS 23 27 30.0
comp=Z,900nm,15.6s
ROTZ Rotzenmuhle 80.43 24 eP **P 22 48 29.7 -0.6**
comp=Z,13nm,1.4s,mb4.7
HINF Hinteralfeld 80.45 28 eP **P 22 48 30.2 -0.3**
comp=Z,64nm,1.7s,mb5.0
HINF Hinteralfeld 80.45 28 eP **P 22 48 30.2 -0.3**
HINF pmax pmax
comp=Z,32nm,1.7s,mb5.0
HINF Hinteralfeld 80.45 28 eP **P 22 48 30.2 -0.3**
comp=Z,32nm,1.7s,mb5.0
BFO Black Forest 80.49 27 eP **P 22 48 30.0 -0.7**
comp=Z,16nm,1.3s,mb4.8
BFO Black Forest 80.49 27 eP **P 22 48 31.0 +0.3**
BFO pmax pmax
comp=Z,14nm,1.3s,mb4.7
BFO Black Forest 80.49 27 eP **P 22 48 31.0 +0.3**
comp=Z,14nm,1.3s,mb4.7
KSP Ksiaz 80.58 21 eP **P 22 48 30.6 -0.5**
KSP eS S 22 58 40.0 +2.2
LFF La Frestale 80.64 33 eP **P 22 48 31.3 -0.3**
comp=Z,28nm,1.2s,mb4.8
LFF La Frestale 80.64 33 eP **P 22 48 31.3 -0.3**
LFF pmax pmax
comp=Z,14nm,1.2s,mb4.8
LFF La Frestale 80.64 33 eP **P 22 48 31.3 -0.3**
comp=Z,14nm,1.2s,mb4.8
RJF Les Rejaudoux 80.64 33 eP **P 22 48 30.9 -0.7**
comp=Z,29nm,1.2s,mb4.8
RJF eMLR MLR
comp=Z,931nm,17.0s,MS4.9
RJF Les Rejaudoux 80.64 33 eP **P 22 48 30.9 -0.7**
RJF pmax pmax
comp=Z,15nm,1.2s,mb4.8
RJF MLR MLR
comp=Z,930nm,17.0s,MS5.2
RJF Les Rejaudoux 80.64 33 eP **P 22 48 30.9 -0.7**
comp=Z,15nm,1.2s,mb4.8
RJF LR LR
comp=Z,930nm,17.0s,MS5.2
PRA Prague 80.79 23 P **P 22 48 32.0 -0.2**
PRA pP pP 22 48 38.0 +2.5
UPC Upice 80.82 22 eP **P 22 48 34.2 +1.8**
UPC Upice 80.82 22 eP **P 22 48 34.2 +1.8**
UPC ex x 22 51 51.7
PRU Pruhonice 80.89 23 eP **P 22 48 33.7 +0.9**
PRU eS S 22 58 47.2 +6.1
PRU MLR MLR
comp=Z,1μm,17.6s,MS5.2
PRU Pruhonice 80.89 23 eP **P 22 48 33.7 +0.9**
PRU ex x 22 51 52.4
PRU eS S 22 58 47.2 +6.1
PRU AMS AMS 23 27 50.0
comp=Z,1μm,17.6s
DPC Dobruska-Polom 81.04 21 eP **P 22 48 33.9 +0.3**
DPC eS S 22 58 48.4 +5.8
DPC MLR MLR
comp=Z,1μm,19.6s,MS5.2
DPC Dobruska-Polom 81.04 21 eP **P 22 48 33.9 +0.3**
DPC ex x 22 51 55.0
DPC eS S 22 58 48.4 +5.8
DPC AMS AMS 23 26 50.0
comp=Z,1μm,19.6s
WET Wettzell 81.18 24 eP **P 22 48 33.6 -0.7**
comp=Z,12nm,1.4s,mb4.6
KHC Kasperske Hory 81.39 24 eP **P 22 48 35.7 +0.2**
KHC pmax pmax
comp=Z,14nm,1.4s,mb4.7
KHC Kasperske Hory 81.39 24 eP **P 22 48 35.7 +0.2**
comp=Z,14nm,1.4s,mb4.7
KHC Kasperske Hory 81.39 24 eP **P 22 48 35.7 +0.2**
KHC ex x 22 51 55.5
KHC eS S 22 58 52.7 +6.4
KHC AMS AMS 23 27 00.0
comp=Z,800nm,17.5s
BRVK Borovoye 81.48 348 P **P 22 48 36.1 +0.2**
comp=Z,90nm,1.1s,mb5.6,SNR=5.2
BRVK Borovoye 81.48 348c iP **P 22 48 35.7 -0.2**
BRVK pmax pmax
comp=Z,16nm,1.2s,mb4.8
BRVK Borovoye 81.48 348 eP **P 22 48 35.4 -0.4**
comp=Z,33nm,1.4s,mb5.1
BRVK LR LR
comp=Z,966nm,21.0s,MS5.1
BVAR Borovoye Array 81.50 348 P **P 22 48 36.0 0.0**
comp=Z,2.8nm,0.7s,mb4.3,baz=20,slow=4.7,SNR=15
FUR Furstenfeldbru 81.57 25 eP **P 22 48 36.0 -0.5**
comp=Z,29nm,1.4s,mb5.0
GEC2 GERESS Array S 81.69 24 eP **P 22 48 36.3 -0.7**
comp=Z,14nm,1.5s,mb4.7
TREC Trest 81.78 22 AMS AMS 23 27 00.0
comp=Z,900nm,17.3s
NJ2 Nanjing 81.83 307 eP **P 22 48 40.3 +2.2**
NJ2 pP pP 22 48 44.5 +3.1
NJ2 sP sP 22 48 47.6 +5.0
NJ2 pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
MORC Moravsky Berou 81.88 21 eP **P 22 48 36.8 -1.3**
MORC pmax pmax
comp=Z,28nm,1.8s,mb4.9
MORC Moravsky Berou 81.88 21 eP **P 22 48 36.8 -1.3**
comp=Z,28nm,1.8s,mb4.9
EVO Evora 81.97 43 eP **P 22 48 36.7 -2.0**
comp=Z,39nm,1.2s,mb4.9
EVO eMLR MLR
comp=Z,1μm,23.0s,MS4.9
OKC Ostrava-Krasne 81.98 21 eP **P 22 48 38.3 -0.3**
OKC MLR MLR
comp=Z,700nm,16.2s,MS5.1
OKC Ostrava-Krasne 81.98 21 eP **P 22 48 38.3 -0.3**
OKC ex x 22 51 59.6
OKC eS S 22 59 03.7 +11
OKC AMS AMS 23 29 00.0
comp=Z,700nm,16.2s
OJC Ojcow 82.03 19 eP **P 22 48 40.0 +1.2**
LPAZ La Paz 82.12 122 P **P 22 48 38.5 -1.1**
comp=Z,12nm,0.7s,mb4.9,baz=327,slow=3.7,SNR=29
LPAZ La Paz 82.12 122 eP **P 22 48 38.9 -0.8**
LPAZ pmax pmax
comp=Z,13nm,0.8s
LPAZ MLR MLR
comp=Z,626nm,19.0s
LPAZ La Paz 82.12 122 eP **P 22 48 38.9 -0.8**
comp=Z,13nm,0.8s,mb4.9
LPAZ LR LR
comp=Z,626nm,19.0s,MS5.0
KURK Kurchatov 82.22 342 P **P 22 48 39.0 -0.8**
comp=Z,75nm,1.3s,mb5.5,SNR=6.7
KURK Kurchatov 82.22 342d iP **P 22 48 40.0 +0.2**
KURK pmax pmax
comp=Z,15nm,1.2s,mb4.8
KURK Kurchatov 82.22 342 eP **P 22 48 39.4 -0.4**
comp=Z,37nm,1.4s,mb5.1
RJOB Jochberg 82.42 25 eP **P 22 48 40.1 -0.8**
comp=Z,7.0nm,0.9s,mb4.6
FETA Feichten 82.42 26⇑ iPP pP 22 48 41.5 -2.8
comp=Z,8.6nm,1.1s
MOA Molln 82.75 24⇑ iP **P 22 48 39.7 -2.9**
comp=Z,10.0nm,1.3s,mb4.7
NIE Niedzica 82.90 19 eP **P 22 48 43.3 -0.1**
ESDC Sonseca Array 82.96 39 P **P 22 48 44.3 +0.4**
comp=Z,0.6nm,0.6s,mb3.8,baz=317,slow=2.8,SNR=4.8
ESLA Sonseca Array 82.96 39 PFAKE 22 49 00.0 +16
ESLA LR LR
comp=Z,8μm,19.0s,MS6.1
SMOL Smolenice 83.02 22 eP **P 22 48 48.8 +4.8**
SMOL Smolenice 83.02 22 epP pP 22 48 48.8 +1.5
STHS Stebnicka Huta 83.12 19 eP **P 22 48 52.1 +7.6**
STHS Stebnicka Huta 83.12 19 epP pP 22 48 52.1 +4.3
CONA Conrad Observa 83.13 23⇑ iP **P 22 48 44.6 0.0**
comp=Z,19nm,1.3s,mb4.9
KBA Koelnbreinsper 83.17 25⇓ iPP pP 22 48 45.2 -3.0
comp=Z,18nm,1.3s
KOLL Kolacno 83.21 21 eP **P 22 48 45.2 +0.2**
KOLL Kolacno 83.21 21 eP **P 22 48 45.2 +0.2**
ABTA Abfaltersbach 83.22 25⇑ iPP pP 22 48 46.1 -2.3
comp=Z,12nm,1.2s
ZST Bratislava 83.22 22 eP **P 22 48 44.0 -1.1**
ZST Bratislava 83.22 22 eP **P 22 48 44.0 -1.1**
KWP Kalwaria Pacla 83.25 18 eP **P 22 48 45.5 +0.3**
KWP pmax pmax
comp=Z,65nm,1.8s,mb5.4
KWP Kalwaria Pacla 83.25 18 eP **P 22 48 45.5 +0.3**
comp=Z,65nm,1.8s,mb5.4
LVV L'vov 83.36 17 eP **P 22 48 44.9 -0.8**
LVV eS S 22 59 04.1 -2.3
LVV MLR MLR
comp=Z,500nm,19.0s,MS4.9
VYHS Vyhne 83.40 21 eP **P 22 48 45.9 -0.1**
VYHS pmax pmax
comp=Z,17nm,2.4s,mb4.7
VYHS Vyhne 83.40 21 eP **P 22 48 45.9 -0.1**
comp=Z,17nm,2.4s,mb4.6
VYHS Vyhne 83.40 21 eP **P 22 48 45.9 -0.1**
AKASG Malin Array Be 83.49 14 P **P 22 48 44.6 -1.8**
comp=Z,1.7nm,0.6s,mb4.3,baz=342,slow=4.6,SNR=14
AKBB Malin Array Si 83.49 14 eP **P 22 48 46.1 -0.3**
KIEV Kiev 83.50 14 eP **P 22 48 44.9 -1.5**
KIEV pmax pmax
comp=Z,24nm,1.4s,mb5.0
KIEV Kiev 83.50 14 eP **P 22 48 44.9 -1.5**
comp=Z,24nm,1.4s,mb5.0
ARSA Arzberg 83.65 23⇑ iP **P 22 48 47.4 +0.1**
comp=Z,23nm,1.5s,mb5.1
CRVS Cervenica-Dubn 83.65 19 eP **P 22 48 48.0 +0.7**
CRVS pmax pmax
comp=Z,12nm,1.7s,mb4.8
CRVS Cervenica-Dubn 83.65 19 eP **P 22 48 48.0 +0.7**
comp=Z,12nm,1.7s,mb4.8
CRVS Cervenica-Dubn 83.65 19 eP **P 22 48 48.0 +0.7**
KECS Kecovo 83.81 20 eP **P 22 48 52.6 +4.5**
KECS Kecovo 83.81 20 epP pP 22 48 52.6 +1.2
SOKA Soboth 84.03 24⇑ iP **P 22 48 47.3 -1.9**
comp=Z,26nm,1.4s,mb5.2
UZH Uzhgorod 84.10 18 eP **P 22 48 50.0 +0.4**
UZH i pP 22 48 54.8 +1.9
PSZ Piszkesteto 84.19 20 eP **P 22 48 50.7 +0.6**
PSZ pmax pmax
comp=Z,76nm,1.8s,mb5.5
PSZ Piszkesteto 84.19 20 eP **P 22 48 50.7 +0.6**
comp=Z,76nm,1.8s,mb5.5
VSR Storozhevoye 84.27 7 eP **P 22 48 50.0 -0.4**
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,9.0nm,0.9s
VSR pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
VSR MLR MLR
comp=N,210nm,16.0s,MS4.8
VSR MLR MLR
comp=E,280nm,16.0s,MS4.8
VSR MLR MLR
comp=Z,460nm,16.0s,MS5.0
BUD Budapest 84.38 21 epP pP 22 48 56.0 +1.7
VRHR Novokhopersk 84.59 6 eP **P 22 48 50.2 -1.8**
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,20nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb5.1
MK31 Makanchi Array 85.01 339 eP **P 22 48 54.6 +0.4**
MK31 e 22 52 12.1
MKAR Makanchi Array 85.01 339 P **P 22 48 53.2 -1.0**
comp=Z,0.3nm,0.3s,mb3.9,baz=38,slow=4.6,SNR=10
MKAR Makanchi Array 85.01 339 P **P 22 48 53.2 -1.0**
WHN Wuhan 85.50 309 P **P 22 49 02.3 +5.3**
WHN S S 22 59 25.3 -3.2
WHN LR LR
comp=Z,1μm,18.3s,MS5.3
GTA Gaotai 85.55 324 eP **P 22 48 57.5 +0.4**
GTA pP pP 22 49 01.3 +0.9
GTA sP sP 22 49 02.6 +1.0
GTA PP PP 22 52 17.1 +2.3
GTA SKS 22 59 19.3
GTA S S 22 59 28.3 -0.4
GTA sS sS 22 59 36.1 +1.9
GTA SS SS 23 05 06.9 +4.0
GTA pmax pmax
comp=Z,3.0nm,1.5s,mb4.3
GTA pmax pmax
comp=Z,110nm,6.3s
GTA LR LR
comp=N,410nm,21.6s,MS4.9
GTA LR LR
comp=E,390nm,21.0s,MS4.9
GTA LR LR
comp=Z,520nm,19.2s,MS4.9
BUR08 Bucovina Ar. S 85.67 17 eP **P 22 48 57.7 +0.2**
WMQ Urumqi 86.17 334 P **P 22 49 01.1 +1.0**
WMQ pP pP 22 49 05.9 +2.5
WMQ sP sP 22 49 08.1 +3.5
WMQ PP PP 22 52 23.6 +3.9
WMQ SKS 22 59 23.8
WMQ S S 22 59 33.9 -0.8
WMQ SS SS 23 05 16.3 +4.6
WMQ pmax pmax
comp=Z,12nm,1.0s,mb5.1
WMQ pmax pmax
comp=Z,140nm,6.2s
WMQ LR LR
comp=N,380nm,21.0s,MS5.0
WMQ LR LR
comp=E,610nm,21.6s,MS5.0
WMQ LR LR
comp=Z,490nm,18.6s,MS4.9
ABKAR Akbulak array 86.39 354 eP **P 22 49 00.7 -0.3**
comp=Z,13nm,1.1s,mb5.1
ABKAR ePP PP 22 52 20.9 -0.3
LZH Lanzhou 86.51 319 P **P 22 49 02.9 +1.0**
LZH pP pP 22 49 06.8 +1.6
LZH sP sP 22 49 10.3 +3.9
LZH PP PP 22 52 25.0 +2.3
LZH S S 22 59 42.3 +4.1
LZH sS sS 22 59 50.0 +6.3
LZH pmax pmax
comp=Z,16nm,1.0s,mb5.2
LZH pmax pmax
comp=Z,94nm,4.0s
LZH LR LR
comp=E,1μm,17.1s
LZH LR LR
comp=Z,1μm,18.0s,MS5.4
DZM Mont Dzumac 88.33 237 eS S 23 00 01.9 +6.2
comp=Z,307nm,28.6s
DZM eLR LR 23 16 53.2
comp=Z,2μm,22.8s,baz=47
CD2 Chengdu 90.78 317 P **P 22 49 22.4 +0.2**
CD2 pP pP 22 49 27.1 +1.6
CD2 sP sP 22 49 28.6 +1.9
CD2 PP PP 22 52 59.4 +2.4
CD2 SKS 22 59 51.4
CD2 S S 23 00 15.3 -3.4
CD2 sS sS 23 00 22.4 -1.8
CD2 SS SS 23 06 18.4 -1.1
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.4
CD2 pmax pmax
comp=Z,80nm,3.7s
CD2 LR LR
comp=N,750nm,11.3s
CD2 LR LR
comp=Z,540nm,11.9s,MS5.2
AAK Ala-Archa 90.78 343c iP **P 22 49 23.1 +1.1**
AAK pmax pmax
comp=Z,7.0nm,1.6s,mb4.7
AAK Ala-Archa 90.78 343 P **P 22 49 23.0 +1.0**
AAK LR LR
comp=Z,834nm,20.0s,MS5.2
EKS2 Erkin-Say 90.90 343 eP **P 22 49 23.4 +0.8**
EKS2 pmax pmax
comp=Z,28nm,1.8s,mb5.3
EKS2 Erkin-Say 90.90 343 eP **P 22 49 23.4 +0.8**
comp=Z,28nm,1.8s,mb5.3
AML Almayashu 91.43 343 eP **P 22 49 26.0 +1.0**
AML pmax pmax
comp=Z,16nm,1.4s,mb5.2
AML Almayashu 91.43 343 eP **P 22 49 26.0 +1.0**
comp=Z,16nm,1.4s,mb5.2
KIV Kislovodsk 91.77 6 PFAKE 22 49 40.0 +13
KIV LR LR
comp=Z,750nm,20.0s,MS5.1
GYA Guiyang 92.88 312 P **P 22 49 32.8 +0.8**
GYA PP PP 22 53 18.3 +4.6
GYA SKS 23 00 06.1
GYA S S 23 00 36.9 -0.9
GYA SS SS 23 06 53.3 +3.3
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.5
GYA pmax pmax
comp=Z,160nm,5.9s
GYA LR LR
comp=N,730nm,23.0s,MS5.2
GYA LR LR
comp=E,530nm,24.1s,MS5.2
GYA LR LR
comp=Z,830nm,25.8s,MS5.1
KSH Kashi 93.42 341 eP **P 22 49 37.8 +3.6**

KSH pP pP 22 49 42.8 +5.2
KSH sP sP 22 49 44.4 +5.6
KSH PP PP 22 53 26.3 +9.0
KSH S S 23 00 43.3 +1.2
KSH sS sS 23 00 52.4 +4.8
KSH SS SS 23 07 06.4 +10
KSH pmax pmax
comp=Z,5.0nm,1.1s,mb4.9
KSH pmax pmax
comp=Z,140nm,7.3s
KSH LR LR
comp=N,1μm,15.3s,MS5.7
KSH LR LR
comp=E,2μm,18.7s,MS5.7
KSH LR LR
comp=Z,1μm,22.6s,MS5.2
BR131 Keskin Array S 94.89 13 PFAKE 22 49 50.0 +9.0
BR131 LR LR
comp=Z,477nm,20.0s,MS5.0
KMI Kunming 96.03 314 P **P** **22 49 47.8 +1.4**
KMI pP pP 22 49 51.1 +1.3
KMI sP sP 22 49 52.3 +1.3
KMI PP PP 22 53 43.3 +5.1
KMI SKS 23 00 23.1
KMI S S 23 01 03.8 -1.5
KMI sS sS 23 01 09.0 -1.9
KMI pmax pmax
comp=Z,4.0nm,1.5s,mb4.6
KMI pmax pmax
comp=Z,160nm,5.2s
KMI LR LR
comp=N,610nm,15.0s,MS5.3
KMI LR LR
comp=E,430nm,16.1s,MS5.3
KMI LR LR
comp=Z,690nm,22.1s
CPUP Villa Florida 96.26 121 PFAKE 22 50 00.0 +13
CPUP LR LR
comp=Z,101nm,19.0s,MS4.3
RCBR Riachuelo 96.51 92 PFAKE 22 50 00.0 +11
RCBR LR LR
comp=Z,2μm,20.0s,MS5.5
PLCA Paso Flores 99.84 139 PFAKE 22 50 10.0 +6.5
PLCA LR LR
comp=Z,574nm,19.0s,MS5.1
CTAO Charters Tower 99.90 252 PFAKE 22 50 20.0 +16
CTAO LR LR
comp=Z,1μm,20.4s,MS5.4
TRQA Tornquist 102.13 132 PFAKE 22 50 20.0 +6.3
TRQA LR LR
comp=Z,685nm,21.0s,MS5.2
WRAB Tennant Creek 108.06 260 PFAKE 22 55 00.0 +13
WRAB LR LR
comp=Z,2μm,21.0s,MS5.6
DBIC Dimbokro 108.85 60 PFAKE 22 55 00.0 +11
DBIC LR LR
comp=Z,1μm,19.7s,MS5.4
TSUM Tsumeb 142.74 58 PFAKE 22 56 00.0 +7.5
TSUM LR LR
comp=Z,1μm,20.6s,MS5.6
LSZ Lusaka 145.30 40 *e*PKIKP PKPdf 22 55 56.2 -0.8
LSZ *e* 22 59 16.2
LSZ MLR MLR
comp=Z,884nm,21.3s,MS5.5
MAIT Maitri 147.41 157 *e*PKPdif PKPdf 22 55 58.7 -0.2
MIR Mirnyy 148.29 211 *e*PKP2 PKPdf 22 56 02.0 +1.5
MIR pmax pmax
comp=Z,56nm,1.8s
LBTB Lobatse 151.95 55 PFAKE 22 56 20.0 +12
LBTB LR LR
comp=Z,932nm,24.9s,MS5.5
SUR Sutherland 153.88 73 PFAKE 22 56 20.0 +10
SUR LR LR
comp=Z,750nm,19.0s,MS5.5

*ISCJB **17** 22:37:02.7±0.5, 43.°97N±0.°07×129.°35W±0.°07, h10km, mb4.6/22, Error ellipse: s-maj=10.6km s-min=6.1km az=27.7*
*IDC **17** 22:37:03.0±1.1, 43.°95N×129.°47W, h0km, mb4.5/18, mb1 4.6/21, mb1mx4.5/28, mbtmp4.5/21, ML4.1/2, Error ellipse: s-maj=28.3km s-min=17.6km az=10.0*
*NEIC **17** 22:37:04.2±0.3, 43.°94N×129.°42W, h10km, mb5.1/6, Error ellipse: s-maj=6.9km s-min=3.9km az=31.0*
ISC 17 22:37:02.9±3.1, 43.°95N±0.°07×129.°47W±0.°09, h1km±19km, n56, σ0°75/55, mb4.8/22, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGC	**Sidney**	**6.28**	**39**	*e*Pn	**Pn**	**22 38 35.4**	**-1.3**
MCCM	**Marconi Confer**	**7.64**	**137**	*e*Pn	**Pn**	**22 38 54.5**	**-0.8**
BBB	**Bella Bella**	**8.29**	**6**	Pn	**Pn**	**22 39 05.5**	**+1.3**
	1.8nm,0.3s,baz=351,slow=16,SNR=3.7						
NEW	**Newport**	**9.60**	**59**	*e*Pn	**Pn**	**22 39 22.8**	**+0.7**
BMN	**Battle Mountai**	**9.74**	**107**	Pn	**Pn**	**22 39 24.4**	**+0.3**
MSO	**Missoula**	**11.29**	**70**	*e*Pn	**Pn**	**22 39 44.5**	**-0.8**
DUG	**Dugway**	**12.93**	**101**	Pn	**Pn**	**22 40 07.8**	**+0.1**
SIT	**Sitka**	**13.64**	**346**	*e*Pn	**Pn**	**22 40 18.0**	**+0.8**
CCUT	**Cedar City**	**13.77**	**112**	*e*Pn	**Pn**	**22 40 19.2**	**+0.1**
MSU	**Marysvale**	**14.09**	**107**	*e*Pn	**Pn**	**22 40 23.9**	**+0.4**
EDM	**Edmonton**	**14.11**	**43**	*e*Pn	**Pn**	**22 40 23.3**	**-0.4**
PDAR	**Pinedale Array**	**14.53**	**88**	Pn	**Pn**	**22 40 34.8**	**+5.2**
	baz=280,slow=10.0,SNR=1.7						
PDAR	**Pinedale Array**	**14.53**	**88**	Pn	**Pn**	**22 40 34.8**	**+5.2**
DIV	**Divide**	**19.76**	**336**	P	**Pn**	**22 41 33.5**	**-1.9**
KDAK	**Kodiak Island**	**19.98**	**322**	P	**Pn**	**22 41 37.1**	**-0.9**
	0.4nm,0.3s,baz=117,slow=8.8,SNR=4.3						
YKA	**Yellowknife Ar**	**20.50**	**20**	P	**P**	**22 41 43.1**	**+1.0**
	16nm,0.9s,baz=202,slow=12,SNR=3.2						
FFC	**Flin Flon**	**20.77**	**49**	*e*P	**P**	**22 41 44.8**	**-0.2**
	60nm,1.0s						
DAWY	**Dawson**	**20.94**	**348**	*e*P	**P**	**22 41 47.0**	**+0.3**
PMR	**Palmer**	**21.15**	**334**	*e*P	**P**	**22 41 49.0**	**0.0**
SDPT	**Sand Point**	**22.89**	**311**	*e*P	**P**	**22 42 07.7**	**0.0**
	124nm,1.0s,mb5.4						
ILAR	**Eielson Array**	**23.05**	**341**	P	**P**	**22 42 09.9**	**+0.7**
	12nm,1.0s,mb4.4,baz=156,slow=8.1,SNR=6.2						
INK	**Inuvik**	**24.51**	**356**	P	**P**	**22 42 24.2**	**+0.8**
	5.0nm,0.8s,mb4.3,baz=152,slow=5.7,SNR=2.5						
INK	**Inuvik**	**24.51**	**356**	P	**P**	**22 42 23.3**	**0.0**
UNV	**Unalaska Valle**	**26.01**	**306**	*e*P	**P**	**22 42 37.5**	**+0.4**
	142nm,1.0s,mb5.5						
SCHQ	**Schefferville**	**40.87**	**52**	P	**P**	**22 44 47.3**	**+1.2**
	14nm,1.1s,mb4.6,baz=259,slow=13,SNR=2.2						
SCHQ	**Schefferville**	**40.87**	**52**	P	**P**	**22 44 47.3**	**+1.2**
PETK	**Petropavlovsk-**	**47.14**	**308**	P	**P**	**22 45 36.9**	**+0.5**
	12nm,0.7s,mb5.1,baz=77,slow=14,SNR=7.8						
ASAJ	**Asahikawa**	**60.10**	**304**	P	**P**	**22 47 12.3**	**+0.7**
	27nm,1.0s,mb5.2,baz=126,slow=6.8,SNR=5.2						
ARCES	**ARCESS Array B**	**65.34**	**9**	P	**P**	**22 47 45.6**	**-0.5**
	3.0nm,0.9s,mb4.5,baz=354,slow=6.7,SNR=3.9						
MJAR	**Matsushiro Arr**	**67.27**	**299**	P	**P**	**22 47 59.7**	**+0.7**
	3.9nm,0.8s,mb4.7,baz=45,slow=5.2,SNR=9.4						
MAJO	**Matsushiro**	**67.27**	**299**	*e*P	**P**	**22 47 58.1**	**-0.9**
	14nm,0.8s,mb5.2						
NB2	**NORSAR Subarra**	**70.60**	**19**	P	**P**	**22 48 19.2**	**-0.1**
	comp=Z,20nm,1.2s,mb5.1,baz=334,slow=5.9						
NOA	**NORSAR Array B**	**70.60**	**19**	P	**P**	**22 48 19.9**	**+0.5**
	comp=Z,4.5nm,0.8s,mb4.6,baz=334,slow=5.9,SNR=4.5						
KSRS	**Korea Array**	**72.95**	**306**	P	**P**	**22 48 34.1**	**+0.2**
	comp=Z,2.8nm,0.8s,mb4.4,baz=54,slow=7.2,SNR=5.8						
FINES	**FINESS Array B**	**73.11**	**12**	P	**P**	**22 48 33.5**	**-0.9**
	comp=Z,8.2nm,0.9s,mb4.9,baz=354,slow=3.0,SNR=7.0						
TLY	**Talaya**	**74.27**	**329**	*e*P	**P**	**22 48 41.2**	**-0.2**
	comp=Z,15nm,0.9s,mb5.0						
SONM	**Songino Array**	**76.24**	**325**	P	**P**	**22 48 53.7**	**+1.0**
	comp=Z,7.9nm,0.9s,mb4.9,baz=54,slow=3.5,SNR=8.8						
ZAA0	**Zalesovo Array**	**78.17**	**340**	*e*P	**P**	**22 49 03.9**	**+0.4**
ZALV	**Zalesovo Beam**	**78.17**	**340**	P	**P**	**22 49 03.6**	**+0.1**
	comp=Z,5.1nm,0.7s,mb4.8,baz=22,slow=5.7,SNR=7.2						
HHC	**Hu-ho-hao-te**	**79.33**	**318**	*e*P	**P**	**22 49 09.0**	**-1.1**
HHC				S	S	22 59 06.6	-4.9
HHC				pmax	pmax		
	comp=Z,12nm,0.7s						
HHC				pmax	pmax		
	comp=Z,99nm,6.8s						
HHC				LR	LR		
	comp=N,340nm,17.2s						
HHC				LR	LR		
	comp=E,680nm,17.3s						
HHC				LR	LR		
	comp=Z,420nm,17.3s						
CLL	**Collm**	**79.70**	**23**	*e*P	**P**	**22 49 11.0**	**-1.0**
	comp=Z,20nm,1.8s,mb4.8						
CLL				*i* sP	sP	22 49 17.2	+4.7
CLL				*i* pPcP		22 49 22.2	
CLL	**Collm**	**79.70**	**23**	*i*	sP	22 49 17.1	+4.6
NKC	**Novy Kostel**	**80.50**	**24**	*e*P	**P**	**22 49 16.3**	**0.0**
PVCC	**Panska Ves**	**80.84**	**22**	*e*P	**P**	**22 49 18.8**	**+0.7**
UPC	**Upice**	**81.25**	**21**	*e*P	**P**	**22 49 20.0**	**-0.3**
PRU	**Pruhonice**	**81.32**	**23**	*e*P	**P**	**22 49 21.0**	**+0.3**
DPC	**Dobruska-Polom**	**81.47**	**21**	*e*P	**P**	**22 49 21.3**	**-0.2**
KHC	**Kasperske Hory**	**81.82**	**24**	*e*P	**P**	**22 49 23.4**	**+0.1**
BVAR	**Borovoye Array**	**81.91**	**348**	P	**P**	**22 49 22.8**	**-0.9**
	comp=Z,4.6nm,0.7s,mb4.7,baz=19,slow=3.9,SNR=6.6						
LPAZ	**La Paz**	**81.95**	**122**	P	**P**	**22 49 26.5**	**+2.1**
	comp=Z,6.7nm,0.8s,mb4.8,baz=358,slow=8.0,SNR=3.6						
LPAZ	**La Paz**	**81.95**	**122**	*e*P	**P**	**22 49 25.5**	**+1.1**
	comp=Z,6.8nm,0.8s,mb4.8						
OKC	**Ostrava-Krasne**	**82.41**	**20**	*e*P	**P**	**22 49 25.0**	**-1.4**
ESDC	**Sonseca Array**	**83.34**	**39**	P	**P**	**22 49 31.8**	**+0.4**
	comp=Z,1.0nm,0.7s,mb4.1,baz=312,slow=5.9,SNR=2.7						
AKASG	**Malin Array Be**	**83.93**	**13**	P	**P**	**22 49 33.8**	**-0.5**
	comp=Z,4.4nm,0.8s,mb4.8,baz=349,slow=4.5,SNR=3.4						
MKAR	**Makanchi Array**	**85.38**	**339**	P	**P**	**22 49 41.5**	**-0.2**
	comp=Z,1.9nm,0.7s,mb4.4,baz=23,slow=4.4,SNR=3.5						
MKAR	**Makanchi Array**	**85.38**	**339**	P	**P**	**22 49 41.5**	**-0.2**

*IDC **17** 22:39:35.6±0.9, 44.°28N×129.°56W, h0km, mb4.1/19, mb1 4.3/23, mb1mx4.2/29, mbtmp4.1/23, ML3.4/4, Error ellipse: s-maj=27.4km s-min=12.1km az=34.0*
*ISCJB **17** 22:39:37.4±0.4, 44.°39N±0.°05×129.°40W±0.°06, h10km, mb4.4/24, Error ellipse: s-maj=8.1km s-min=4.2km az=33.7*
*NEIC **17** 22:39:39.3±0.5, 44.°41N×129.°46W, h10km, mb4.8/13, Error ellipse: s-maj=9.5km s-min=4.9km az=35.0*
ISC 17 22:39:38.6±0.4, 44.°37N±0.°05×129.°55W±0.°06, h10km, n98, σ1°27/99, mb4.4/24, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COR	**Corvallis**	**4.48**	**85**	Pn	**Pn**	**22 40 43.6**	**-2.9**
NLWA	**Neilton Lookou**	**4.98**	**51**	*e*Pn	**Pn**	**22 40 52.0**	**-1.4**
HUMO	**Hull Mountain**	**5.11**	**108**	*e*Pn	**Pn**	**22 40 55.1**	**0.0**
HUMO				*e*Sn	**Sn**	**22 41 50.5**	**-3.7**
YBH	**Yreka Blue Hor**	**5.66**	**115**	Pn	**Pn**	**22 41 01.9**	**-0.8**
	0.4nm,0.3s,baz=310,slow=7.9,SNR=1.9						
YBH	**Yreka Blue Hor**	**5.66**	**115**	*e*Pn	**Pn**	**22 41 02.9**	**+0.1**
GNW	**Green Mountain**	**5.67**	**53**	*e*Pn	**Pn**	**22 41 01.1**	**-1.8**
HOOD	**Mount Hood Mea**	**5.70**	**78**	*e*Pn	**Pn**	**22 41 03.2**	**0.0**
PGC	**Sidney**	**6.00**	**42**	*e*Pn	**Pn**	**22 41 06.9**	**-0.5**
WDC	**Whiskeytown Da**	**6.42**	**124**	*e*Pn	**Pn**	**22 41 14.7**	**+1.5**
JCW	**Jim Creek**	**6.52**	**51**	*e*Pn	**Pn**	**22 41 14.6**	**+0.2**
MOD	**Modoc**	**7.20**	**107**	*e*Pn	**Pn**	**22 41 23.8**	**0.0**
HOPS	**Hopland**	**7.24**	**136**	*e*Pn	**Pn**	**22 41 22.0**	**-2.4**
WVOR	**Wild Horse Val**	**8.18**	**100**	*e*Pn	**Pn**	**22 41 37.9**	**+0.6**
BMO	**Blue Mountains**	**8.75**	**83**	*e*Pn	**Pn**	**22 41 43.9**	**-1.2**
CMB	**Columbia Colle**	**9.37**	**129**	*e*Pn	**Pn**	**22 41 53.5**	**0.0**
NEW	**Newport**	**9.44**	**61**	*e*Pn	**Pn**	**22 41 53.0**	**-1.5**
NVAR	**Mina Array Bea**	**10.32**	**121**	Pn	**Pn**	**22 42 06.7**	**0.0**
	0.1nm,0.3s,baz=281,slow=13,SNR=5.1						
BSMT	**Bassoo Peak**	**10.82**	**66**	*e*Pn	**Pn**	**22 42 11.8**	**-1.7**
HLID	**Hailey**	**10.94**	**89**	*e*Pn	**Pn**	**22 42 16.5**	**+1.3**
JTMT	**Jette**	**11.13**	**67**	*e*Pn	**Pn**	**22 42 19.1**	**+1.4**
ELK	**Elko**	**11.16**	**104**	Pn	**Pn**	**22 42 19.5**	**+1.4**
	0.1nm,0.3s,baz=256,slow=4.2,SNR=2.5						
MSO	**Missoula**	**11.21**	**72**	*e*Pn	**Pn**	**22 42 18.2**	**-0.6**
N12A	**Clover Valley,**	**11.26**	**103**	*e*Pn	**Pn**	**22 42 20.4**	**+0.9**
CRAG	**Craig**	**11.34**	**350**	*e*Pn	**Pn**	**22 42 25.9**	**+5.4**
	92nm,1.3s						
CHMT	**Chamberlain Mo**	**11.69**	**72**	*e*Pn	**Pn**	**22 42 25.2**	**-0.1**
WALA	**Waterton Lakes**	**11.71**	**61**	*e*Pn	**Pn**	**22 42 25.6**	**0.0**
MCMT	**McKenzie Canyo**	**11.92**	**82**	*e*Pn	**Pn**	**22 42 30.2**	**+1.7**
HVU	**Hansel Valley**	**12.54**	**96**	*e*Pn	**Pn**	**22 42 36.2**	**-0.7**
BGU	**Big Grassy Mou**	**12.64**	**100**	*e*Pn	**Pn**	**22 42 38.6**	**+0.2**
BOZ	**Bozeman (W)**	**12.75**	**78**	*e*Pn	**Pn**	**22 42 39.8**	**0.0**
IMW	**Indian Meadow**	**13.38**	**86**	*e*Pn	**Pn**	**22 42 50.8**	**+2.4**
TPAW	**Teton Pass**	**13.44**	**87**	*e*Pn	**Pn**	**22 42 51.5**	**+2.3**
HWUT	**Hardware Ranch**	**13.45**	**96**	*e*Pn	**Pn**	**22 42 49.4**	**0.0**
	29nm,1.2s						
REDW	**Red Top Meadow**	**13.53**	**88**	*e*Pn	**Pn**	**22 42 53.0**	**+2.5**
LOHW	**Long Hollow**	**13.67**	**87**	*e*Pn	**Pn**	**22 42 54.0**	**+1.6**
ARUT	**Antelope Range**	**13.81**	**113**	*e*Pn	**Pn**	**22 42 52.8**	**-1.5**
	52nm,1.6s						
EDM	**Edmonton**	**13.84**	**45**	Pn	**Pn**	**22 42 54.6**	**0.0**
CCUT	**Cedar City**	**13.99**	**114**	*e*Pn	**Pn**	**22 42 57.9**	**+1.1**
GCMT	**Greycliff**	**14.12**	**77**	*e*Pn	**Pn**	**22 42 59.7**	**+1.2**
EGMT	**Eagleton**	**14.18**	**68**	*e*Pn	**Pn**	**22 43 00.1**	**+0.8**
RLMT	**Red Lodge**	**14.44**	**80**	*e*Pn	**Pn**	**22 43 11.4**	**+8.6**
PDAR	**Pinedale Array**	**14.58**	**89**	Pn	**Pn**	**22 43 07.7**	**+2.9**
	0.0nm,0.3s,baz=300,slow=9.9,SNR=4.8						
SRU	**San Rafael**	**15.14**	**104**	*e*P	**Pn**	**22 43 19.6**	**+7.2**
	40nm,1.0s						
WUAZ	**Wupatki**	**16.48**	**116**	*e*Pn	**Pn**	**22 43 30.6**	**+0.8**
PV04	**Paradox Valley**	**16.59**	**104**	*e*Pn	**Pn**	**22 43 32.3**	**+1.2**
PV01	**Paradox Valley**	**16.94**	**104**	*e*Pn	**Pn**	**22 43 36.0**	**+0.3**
MVCO	**Mesa Verde**	**17.45**	**107**	*e*P	**Pn**	**22 43 45.2**	**+3.3**
	201nm,1.8s						
DGMT	**Dagmar**	**17.92**	**68**	*e*Pn	**Pn**	**22 43 47.5**	**-0.3**
RSSD	**Black Hills**	**18.27**	**82**	*e*Pn	**Pn**	**22 43 54.5**	**+2.5**
	19nm,1.1s						
ISCO	**Idaho Springs**	**18.32**	**96**	*e*Pn	**Pn**	**22 43 53.1**	**+0.4**
SDCO	**Great Sand Dun**	**19.27**	**102**	*e*P	**Pn**	**22 44 03.0**	**-1.2**
LAZ	**Ladron**	**19.92**	**112**	*e*P	**Pn**	**22 44 11.3**	**-0.7**
ANMO	**Albuquerque**	**20.06**	**110**	P	**P**	**22 44 10.9**	**-0.9**
	2.6nm,0.9s,baz=336,slow=13,SNR=2.6						
ANMO	**Albuquerque**	**20.06**	**110**	P	**P**	**22 44 13.1**	**+1.2**
YKA	**Yellowknife Ar**	**20.12**	**20**	P	**P**	**22 44 11.1**	**-1.2**
	11nm,1.1s,baz=208,slow=11,SNR=3.3						
DAWY	**Dawson**	**20.51**	**348**	*e*P	**P**	**22 44 21.0**	**+4.6**
FFC	**Flin Flon**	**20.54**	**50**	*e*P	**P**	**22 44 16.7**	**-0.2**
RC01	**Rabbit Creek A**	**20.58**	**332**	*e*P	**P**	**22 44 20.7**	**+3.4**
	45nm,1.4s						
PMR	**Palmer**	**20.74**	**333**	*e*P	**P**	**22 44 22.6**	**+3.5**
	34nm,1.2s						
MCK	**McKinley**	**22.31**	**337**	*e*P	**P**	**22 44 39.4**	**+3.5**
	27nm,1.4s,mb4.5						
TRF	**Thorofare Moun**	**22.48**	**335**	*e*P	**P**	**22 44 42.5**	**+4.8**
ILAR	**Eielson Array**	**22.62**	**341**	P	**P**	**22 44 39.1**	**-0.1**
	6.0nm,1.0s,mb4.0,baz=152,slow=7.3,SNR=7.0						
PPLA	**Purkeypile**	**22.68**	**333**	*e*P	**P**	**22 44 42.5**	**+2.8**
ULM	**Lac du Bonnet**	**23.44**	**63**	P	**P**	**22 44 46.4**	**-1.5**
	16nm,1.1s,mb4.4,baz=275,slow=6.5,SNR=3.3						
ECSD	**ERDC Data Cent**	**23.60**	**80**	*e*P	**P**	**22 44 50.4**	**+0.9**
	33nm,1.4s,mb4.6						
TXAR	**Lajitas Array**	**25.44**	**117**	P	**P**	**22 45 05.2**	**-1.2**
	0.5nm,0.7s,baz=315,slow=8.1,SNR=2.9						
TXAR	**Lajitas Array**	**25.44**	**117**	P	**P**	**22 45 05.2**	**-1.2**
WMOK	**Wichita Mounta**	**25.47**	**102**	*e*P	**P**	**22 45 06.5**	**-0.3**
	92nm,1.8s,mb5.0						
UNV	**Unalaska Valle**	**25.71**	**305**	*e*P	**P**	**22 45 10.9**	**+2.2**
	63nm,1.3s,mb5.0						
UNV				*e*PcP	PcP	22 48 36.3	-2.3
FCC	**Fort Churchill**	**25.95**	**44**	*e*P	**P**	**22 45 09.9**	**-0.9**
EYMN	**Ely**	**26.42**	**69**	*e*P	**P**	**22 45 14.4**	**-0.8**
EYMN				*e*PcP	PcP	22 48 36.9	-3.4
OXF	**Oxford**	**32.24**	**94**	*e*P	**P**	**22 46 06.4**	**-0.6**
	28nm,0.8s,mb5.1						
WVT	**Waverly**	**32.60**	**90**	*e*P	**P**	**22 46 07.0**	**-3.2**
	17nm,0.7s,mb5.1						
RES	**Resolute Bay**	**34.04**	**16**	P	**P**	**22 46 22.0**	**-0.3**
	8.8nm,0.9s,mb4.7,baz=234,slow=11,SNR=3.9						
RES	**Resolute Bay**	**34.04**	**16**	P	**P**	**22 46 23.5**	**+1.2**
ELN	**Prospectdale**	**37.17**	**84**	*e*P	**P**	**22 46 47.8**	**-1.8**
SCHQ	**Schefferville**	**40.66**	**52**	P	**P**	**22 47 16.1**	**-2.5**
	9.3nm,1.1s,mb4.3,baz=258,slow=9.3,SNR=3.2						
PETK	**Petropavlovsk-**	**46.83**	**308**	P	**P**	**22 48 06.8**	**-1.4**
	1.8nm,0.6s,mb4.2,baz=83,slow=12,SNR=2.8						
SUMG	**Summit**	**48.67**	**24**	*e*P	**P**	**22 48 22.6**	**+0.4**
	8.5nm,1.0s,mb4.7						
ARCES	**ARCESS Array B**	**64.93**	**9**	P	**P**	**22 50 18.2**	**+0.5**
	1.4nm,0.7s,mb4.1,baz=19,slow=14,SNR=4.0						
MJAR	**Matsushiro Arr**	**67.01**	**299**	P	**P**	**22 50 29.4**	**-2.2**
	1.6nm,0.7s,mb4.2,baz=50,slow=5.7,SNR=4.3						
NB2	**NORSAR Subarra**	**70.22**	**19**	P	**P**	**22 50 50.6**	**-0.6**
	comp=Z,8.5nm,1.1s,mb4.6,baz=333,slow=5.9						
NOA	**NORSAR Array B**	**70.22**	**19**	P	**P**	**22 50 50.7**	**-0.5**
	comp=Z,4.0nm,0.9s,mb4.3,baz=333,slow=5.9,SNR=6.0						
FINES	**FINESS Array B**	**72.70**	**12**	P	**P**	**22 51 05.5**	**-0.6**
	comp=Z,5.5nm,1.0s,mb4.5,baz=29,slow=4.4,SNR=5.2						
ULN	**Ulaanbaatar**	**75.56**	**325**	P	**P**	**22 51 28.2**	**+5.1**
SONM	**Songino Array**	**75.85**	**325**	P	**P**	**22 51 24.9**	**+0.2**
	comp=Z,3.3nm,0.9s,mb4.2,baz=50,slow=2.9,SNR=5.2						
ZALV	**Zalesovo Beam**	**77.75**	**340**	P	**P**	**22 51 35.6**	**+0.3**
	comp=Z,1.5nm,0.6s,mb4.1,baz=24,slow=6.1,SNR=3.7						
HHC	**Hu-ho-hao-te**	**78.97**	**317**	*e*P	**P**	**22 51 41.8**	**-0.6**
HHC				S	S	23 01 37.3	-3.7
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
HHC				pmax	pmax		
	comp=Z,98nm,7.1s						
CLL	**Collm**	**79.33**	**23**	*i* P	**P**	**22 51 44.0**	**-0.1**
	comp=Z,11nm,1.5s						
CLL				*e*(sP)	sP	22 51 51.0	+2.4
CLL				*e*PcP	PcP	22 51 53.0	+0.7
BRVK	**Borovoye**	**81.46**	**348**	*e*P	**P**	**22 51 55.4**	**-0.2**
BVAR	**Borovoye Array**	**81.48**	**348**	P	**P**	**22 51 55.7**	**+0.1**
	comp=Z,1.5nm,0.6s,mb4.1,baz=23,slow=4.8,SNR=4.1						
KURK	**Kurchatov**	**82.18**	**342**	*e*P	**P**	**22 52 00.3**	**+0.9**
LPAZ	**La Paz**	**82.23**	**122**	P	**P**	**22 51 58.5**	**-1.5**
	comp=Z,1.9nm,0.7s,mb4.1,baz=354,slow=2.5,SNR=6.6						
LPAZ	**La Paz**	**82.23**	**122**	*e*P	**P**	**22 51 58.7**	**-1.3**
	comp=Z,7.1nm,1.2s,mb4.5						
ESDC	**Sonseca Array**	**83.05**	**39**	P	**P**	**22 52 02.9**	**-1.2**
	comp=Z,0.2nm,0.4s,mb3.5,baz=328,slow=4.6,SNR=3.5						
AKASG	**Malin Array Be**	**83.53**	**13**	P	**P**	**22 52 04.8**	**-1.6**
	comp=Z,2.3nm,0.7s,mb4.4,baz=342,slow=4.9,SNR=6.0						
PSZ	**Piszkesteto**	**84.25**	**20**	*e*P	**P**	**22 52 12.5**	**+2.4**
MKAR	**Makanchi Array**	**84.96**	**339**	P	**P**	**22 52 12.2**	**-1.5**
	comp=Z,0.3nm,0.3s,mb3.9,baz=52,slow=4.8,SNR=4.8						

OTT 17 22:39:53.8±1.0, 78.°78N×103.°14W, h18km, ML3.7/3, 45km northeast from Isachsen, Nu Sverdrup Seismic Zone., Queen Elizabeth Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RES	**Resolute Bay**	**4.53**	**151**	PN	Pn	22 41 01.6	+0.4
RES				SN	Sn	22 41 50.2	-3.1
RES				Trac		22 41 57.6	
	comp=Z,4.9nm,0.2s						
CB31	**Cambridge Bay**	**9.72**	**184**	SN	Sn	22 43 54.2	-6.7
CB31				Trac		22 44 02.9	
	comp=Z,10nm,0.2s						
GIFN	**Gifford Fjord,**	**10.44**	**136**	PN	Pn	22 42 20.6	-1.6
GIFN				SN	Sn	22 44 10.0	-8.5
GIFN				Trac		22 44 16.7	
	comp=Z,16nm,1.3s						
ILON	**Igloolik, Nuna**	**10.99**	**138**	PN	Pn	22 42 27.6	-2.2
ILON				SN	Sn	22 44 26.0	-6.1
LAIN	**Lailor River,**	**11.02**	**141**	PN	Pn	22 42 29.5	-0.7
LAIN				SN	Sn	22 44 25.7	-7.1
KUGN	**Kugaaruk Camp,**	**11.32**	**154**	PN	Pn	22 42 34.5	+0.2
KUGN				SN	Sn	22 44 34.4	-5.7
SRLN	**Sarcpa Lake, N**	**11.58**	**142**	PN	Pn	22 42 36.1	-1.7
SRLN				SN	Sn	22 44 35.2	-11

*BJI **17** 22:42:57.3, 44.°40N×129.°80W, h10km, mB4.9/2, mb4.5/3*
*IDC **17** 22:42:58.2±0.8, 44.°28N×129.°43W, h0km, mb4.2/18, mb1 4.3/24, mb1mx4.3/30, mbtmp4.1/24, ML3.5/5, MS4.4/2, Ms1 4.4/2, ms1mx3.9/36, Error ellipse: s-maj=24.2km s-min=10.6km az=36.0*
*NEIC **17** 22:42:59.4±0.3, 44.°37N×129.°75W, h10km, mb4.8/31, Error ellipse: s-maj=6.0km s-min=3.4km az=213.0*
*GCMT **17** 22:43:02.3±0.4, 44.°11N×129.°55W, h19km±1km, MW5.2, Moment Tensor Solution. s19,c21; s74,c106; Moment tensor: Scale 10^16^Nm; M_{rr}-7.64±.73; $M_{\theta\theta}$1.09±.41; $M_{\phi\phi}$6.55±.47; $M_{r\theta}$-3.33±1.18; $M_{\theta\phi}$-3.74±.31; $M_{r\phi}$2.64±.83; Best double couple: $M_0$9.10000×10^16^ NP1:ϕ_s346.00000°, δ33.00000°, λ-69.00000°. NP2:ϕ_s141.00000°, δ59.00000°, λ-103.00000°. Principal axes: T 9.3400, Plg13.0000°, Azm241.0000°; N -0.4600, Plg11.0000°, Azm148.0000°; P -8.8900, Plg73.0000°, Azm18.0000°; Data Used: II G IU IC CN.*
ISC 17 22:43:02.2±1.9, 44.°39N±0.°04×129.°66W±0.°07, h27km±13km, n154, σ1°19/146, mb4.5/36, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COR	**Corvallis**	**4.55**	**85**	*e*Pn	**Pn**	**22 44 04.9**	**-4.3**
NLWA	**Neilton Lookou**	**5.03**	**51**	*e*Pn	**Pn**	**22 44 15.0**	**-0.8**
HUMO	**Hull Mountain**	**5.19**	**108**	*e*Pn	**Pn**	**22 44 14.7**	**-3.3**
OTR	**Olympics--Tyee**	**5.22**	**43**	P	**Pn**	**22 44 17.5**	**-0.8**
**

CCUT	Cedar City	14.07	113	ePn		Pn	22 46 19.7 +0.2
DAU	Daniels Canyon	14.16	100	ePn		Pn	22 46 19.9 -1.0
GCMT	Greycliff	14.19	77	ePn		Pn	22 46 23.4 +2.2
EGMT	Eagleton	14.25	68	ePn		Pn	22 46 21.8 -0.1
	41nm,1.2s						
MSU	Marysvale	14.36	108	ePn		Pn	22 46 27.2 +3.7
RLMT	Red Lodge	14.51	80	eP		Pn	22 46 33.5 +8.0
TMUT	Trail Mountain	14.66	104	ePn		Pn	22 46 27.6 0.0
	124nm,1.8s						
PDAR	Pinedale Array	14.66	89	Pn		Pn	22 46 27.4 -0.1
	baz=297,slow=14,SNR=2.2						
PFO	Pinyon Flat Ob	14.85	132	ePn		Pn	22 46 33.6 +3.4
	74nm,2.0s						
SRU	San Rafael	15.21	104	ePn		Pn	22 46 33.1 -1.9
	54nm,0.9s						
WUAZ	Wupatki	16.56	116	ePn		Pn	22 46 54.6 +2.3
	407nm,2.6s						
LAO	LASA Array	16.57	74	ePn		Pn	22 46 53.0 +0.7
	44nm,1.1s						
PV04	Paradox Valley	16.67	104	ePn		Pn	22 46 56.2 +2.5
PV01	Paradox Valley	17.02	104	ePn		Pn	22 46 57.5 -0.7
	12μm,1.7s						
MVCO	Mesa Verde	17.53	107	eP		Pn	22 47 08.1 +3.7
	513nm,2.1s						
SMCO	Snowmass	17.68	99	eP		Pn	22 47 06.9 +0.5
	73nm,1.7s						
DGMT	Dagmar	17.99	68	ePn		Pn	22 47 10.6 +0.6
	98nm,1.4s						
PHWY	Pilot Hill	18.00	91	ePn		Pn	22 47 10.8 +0.6
MID	Middleton Isla	18.15	332	eP		Pn	22 47 17.1 +5.1
	1μm,2.4s						
ISCO	Idaho Springs	18.40	96	ePn		Pn	22 47 15.5 +0.3
	24nm,1.0s						
TUC	Tucson	19.04	123	ePn		Pn	22 47 22.3 -0.7
	292nm,2.8s						
SDCO	Great Sand Dun	19.35	102	ePn		Pn	22 47 26.0 -0.6
	23nm,1.2s						
LAZ	Ladron	20.00	112	eP		Pn	22 47 32.8 -1.6
	12nm,1.1s						
YKA	Yellowknife Ar	20.13	21	P		P	22 47 34.8 +1.1
	5.6nm,1.0s,baz=208,slow=11,SNR=5.6						
ANMO	Albuquerque	20.14	110	P		P	22 47 33.8 -0.2
	0.1nm,0.3s,baz=309,slow=12,SNR=5.1						
ANMO	Albuquerque	20.14	110	ePn		P	22 47 36.7 +2.7
	14nm,1.0s						
LENM	Lemitar	20.25	113	ePn		P	22 47 38.2 +2.9
LPM	Los Pinos Moun	20.39	112	eP		P	22 47 36.5 -0.2
DAWY	Dawson	20.47	348	eP		P	22 47 36.3 -1.1
BNM	Barren Site	20.49	112	eP		P	22 47 38.0 +0.2
	106nm,1.9s						
RC01	Rabbit Creek A	20.53	332	eP		P	22 47 36.1 -1.9
FFC	Flin Flon	20.59	50	eP		P	22 47 38.9 +0.2
	26nm,1.0s						
PMR	Palmer	20.69	333	P		P	22 47 38.3 -1.5
MCK	McKinley	22.26	337	eP		P	22 47 55.4 -1.3
	11nm,1.0s,mb4.2						
TRF	Thorofare Moun	22.44	335	eP		P	22 48 01.3 +2.9
ILAR	Eielson Array	22.58	341	P		P	22 48 02.1 +2.1
	6.5nm,1.1s,mb4.0,baz=156,slow=7.6,SNR=12						
MNTX	Cornudas Mount	22.84	115	eP		P	22 48 03.0 0.0
COLA	College	22.90	340	eP		P	22 48 01.5 -1.8
AMTX	Amarillo	23.45	104	eP		P	22 48 09.8 +0.4
	190nm,2.1s,mb5.2						
ULM	Lac du Bonnet	23.50	64	P		P	22 48 07.5 -2.2
	10nm,0.8s,mb4.3,baz=280,slow=8.1,SNR=5.3						
ULM	Lac du Bonnet	23.50	64	eP		P	22 48 09.2 -0.5
	225nm,3.0s						
AGMN	Agassiz Nation	23.54	68	eP		P	22 48 10.0 -0.2
	147nm,2.3s,mb5.0						
ECSD	EROS Data Cent	23.67	80	eP		P	22 48 10.4 -0.9
	117nm,2.0s,mb5.0						
INK	Inuvik	24.06	356	eP		P	22 48 13.8 -0.8
AKUT	Akutan	25.25	306	eP		P	22 48 32.4 +6.8
	199nm,1.8s,mb5.3						
TXAR	Lajitas Array	25.51	117	P		P	22 48 27.4 -0.8
	2.9nm,0.8s,mb3.9,baz=298,slow=7.3,SNR=8.7						
WMOK	Wichita Mounta	25.55	102	eP		P	22 48 28.0 -0.6
	38nm,1.2s,mb4.8						
UNV	Unalaska Valle	25.64	305	eP		P	22 48 28.3 -0.9
	54nm,1.1s,mb5.0						
FCC	Fort Churchill	25.99	44	eP		P	22 48 32.6 +0.4
	0.2nm,0.8s						
JCT	Junction City	27.30	110	eP		P	22 48 43.5 -0.9
	45nm,1.6s,mb4.8						
RES	Resolute Bay	34.04	16	eP		P	22 49 42.1 -1.3
FRNY	Flat Rock	39.23	69	eP		P	22 50 34.7 +6.7
	10.0nm,1.1s,mb4.5						
CMIG	Matias Romero	39.93	122	P		P	22 50 32.8 -1.2
	3.5nm,0.7s,mb4.2,baz=329,slow=9.4,SNR=8.6						
PETK	Petropavlovsk-	46.75	308	P		P	22 51 30.8 +2.1
	3.1nm,0.9s,mb4.2,baz=74,slow=12,SNR=4.0						
PMOR	Pomariorio Ree	61.40	200	eT			23 59 30.1
	33nm,0.3s						
VAH	Vaihoa	61.56	200	eT			23 59 42.9
	17nm,0.4s						
MEH	Mehetia	64.21	200	eT			00 03 00.1
	38nm,0.2s						
TIAR	Tiarei	64.22	201	eT			00 03 01.4
	35nm,0.2s						
PPT	Papeete	64.29	201	eLR		LR	23 12 31.1
	665nm,26.5s						
ARCES	ARCESS Array B	64.93	9	P		P	22 53 39.7 +1.1
	3.0nm,1.1s,mb4.2,baz=342,slow=8.5,SNR=3.0						
ARCES	ARCESS Array B	64.93	9	P		P	22 53 39.7 +1.1
MJAR	Matsushiro Arr	66.94	299	P		P	22 53 52.9 +0.9
	0.3nm,0.3s,mb3.8,baz=103,slow=7.2,SNR=3.8						
MJAR	Matsushiro Arr	66.94	299	P		P	22 53 52.9 +0.9
RKT	Rikitea	67.36	185	eT			00 06 55.3
	10nm,0.3s						
TBI	Tubuai	69.81	199	eLQ			23 12 04.6
	868nm,28.0s						
TBI				eT			00 09 59.5
	18nm,0.2s						
NB2	NORSAR Subarra	70.23	19	P		P	22 54 13.2 +1.1
	comp=Z,5.8nm,1.2s,mb4.4,baz=330,slow=6.2						
NOA	NORSAR Array B	70.23	19	P		P	22 54 13.4 +1.3
	comp=Z,2.9nm,1.0s,mb4.2,baz=332,slow=6.1,SNR=4.5						
KSRS	Korea Array	72.58	305	P		P	22 54 28.7 +1.9
	comp=Z,0.3nm,0.3s,mb3.8,baz=60,slow=7.4,SNR=4.3						
FINES	FINESS Array B	72.70	12	P		P	22 54 27.5 +0.4
	comp=Z,7.7nm,0.9s,mb4.6,baz=7.4,slow=4.4,SNR=10						
TLY	Talaya	73.81	329	P		P	22 54 33.1 -0.7
	comp=Z,10nm,1.1s,mb4.7						
SONM	Songino Array	75.79	325	P		P	22 54 47.2 +1.9
	comp=Z,2.9nm,0.9s,mb4.2,baz=46,slow=4.1,SNR=9.9						
ZALV	Zalesovo Beam	77.70	340	P		P	22 54 57.4 +1.4
	comp=Z,2.3nm,0.8s,mb4.1,baz=15,slow=6.2,SNR=8.2						
HHC	Hu-ho-hao-te	78.91	317	eP		P	22 55 02.1 -0.8
HHC				S		S	23 04 57.5 -1.9
HHC				pmax		pmax	
	comp=Z,11nm,0.7s,mb4.9						
HHC				pmax		pmax	
	comp=Z,70nm,7.3s						
ARU	Arti	79.31	355	eP		P	22 55 03.6 -1.2
	comp=Z,6.9nm,0.9s,mb4.6						
CLL	Collm	79.34	23	P		P	22 55 06.0 +0.9
CLL	Collm	79.34	23	eP		P	22 55 06.0 +0.9
	comp=Z,6.0nm,1.3s,mb4.4						
BRG	Bergqiesshubel	80.00	22	eP		P	22 55 10.0 +1.4
	comp=Z,5.3nm,1.2s,mb4.3						
BRVK	Borovoye	81.43	348	eP		P	22 55 14.9 -1.3
	comp=Z,11nm,1.0s,mb4.7						
BVAR	Borovoye Array	81.44	348	P		P	22 55 17.5 +1.2
	comp=Z,3.1nm,0.8s,mb4.3,baz=45,slow=2.3,SNR=13						
KURK	Kurchatov	82.14	342	eP		P	22 55 18.5 -1.5
	comp=Z,9.9nm,1.1s,mb4.7						
LPAZ	La Paz	82.30	122	P		P	22 55 20.6 -0.7
	comp=Z,7.2nm,0.8s,mb4.7,baz=346,slow=4.9,SNR=24						
ESDC	Sonseca Array	83.08	39	P		P	22 55 26.5 +1.3
	comp=Z,0.6nm,0.7s,mb3.8,baz=309,slow=4.9,SNR=3.4						
AKASG	Malin Array Be	83.53	13	P		P	22 55 26.6 -0.6
	comp=Z,4.4nm,0.9s,mb4.6,baz=350,slow=4.6,SNR=12						
PSZ	Piszkesteto	84.26	20	eP		P	22 55 30.5 -0.5
	comp=Z,5.3nm,1.0s,mb4.6						
MK31	Makanchi Array	84.92	339	eP		P	22 55 33.9 -0.5
MKAR	Makanchi Array	84.92	339	P		P	22 55 35.5 +1.2
	comp=Z,0.3nm,0.2s,mb4.0,baz=31,slow=7.2,SNR=4.7						
ABKAR	Akbulak array	86.36	354	eP		P	22 55 41.5 +0.1
	comp=Z,7.0nm,1.1s,mb4.8						
DZM	Mont Dzumac	88.16	236	eLR		LR	23 23 36.8
	comp=Z,1μm,23.6s						
EKS2	Erkin-Say	90.83	343	eP		P	22 56 01.8 -1.0
	comp=Z,5.7nm,1.2s,mb4.8						
LSZ	Lusaka	145.42	40	ePKPdf		PKPdf	23 02 38.4 +0.6

*ISK **17** 22:46:38.8, 39.°28N×41.°38E, h6km, MD3.1*

*DDA **17** 22:46:39.6, 39.°33N×41.°34E, h13km±2km, Md3.1*
*CSEM **17** 22:46:39.4±0.2, 39.°28N×41.°38E, h2km, MD3.1, Error ellipse: s-maj=4.7km s-min=4.3km az=5.0*
*ISCJB **17** 22:46:40.3±0.3, 39.°30N±0.°02×41.°35E±0.°03, h10km, Error ellipse: s-maj=4.0km s-min=2.8km az=20.7*
ISC 17 22:46:40.3±0.5,**39.°30N**±0.°02×**41.°38E**±0.°03,**h3**km±4km,
n39,σ1§**04**/61,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNGL	BINGOL	0.39	208	*i* P	Pg	22 46 47.7	0.0
BNGL				*i* S	Sg	22 46 54.4	+1.6
ERZM	Erzurum	0.61	359	*i* P	Pg	22 46 51.1	-0.8
ERZM				*i* S	Sg	22 46 60.0	+0.2
ERZM	Erzurum	0.61	359	*i* P	Pg	22 46 51.2	-0.7
ERZM				*i* S	Sg	22 47 00.0	+0.2
EZM	Erzurum	0.61	359	PG	Pg	22 46 51.3	-0.6
EZM				*e*SG	Sg	22 47 00.6	+0.9
EZM	Erzurum	0.61	359	*i* Pg	Pg	22 46 51.3	-0.6
EZM				*e*Sg	Sg	22 47 00.6	+0.8
BINT	Bingol	0.81	239	PG	Pg	22 46 54.3	-1.6
BINT				*e*SG	Sg	22 47 06.6	+0.2
BINT	Bingol	0.81	239	*i* Pg	Pg	22 46 54.3	-1.5
BINT				*e*Sg	Sg	22 47 06.6	+0.2
HOMI	Horasan	0.85	28	*i* P	Pg	22 46 55.6	-0.9
HOMI				*i* S	Sg	22 47 08.2	+0.7
TATV	Tatvan	1.05	139	*i* P	Pg	22 47 00.1	-0.3
TATV				*i* S	Sg	22 47 14.4	+0.5
TATV	Tatvan	1.05	139	*i* P	Pg	22 47 00.1	-0.3
TATV				*i* S	Sg	22 47 14.4	+0.4
TUTA	Tutak	1.12	84	*i* P	Pg	22 47 00.6	-1.1
TUTA				*i* S	Sg	22 47 18.1	+2.0
TUTA	Tutak	1.12	84	*i* P	Pg	22 47 00.6	-1.0
TUTA				*i* S	Sg	22 47 18.1	+2.0
AGRB	Hanur-Agry	1.28	77	*e*PN	Pn	22 47 03.7	-1.2
AGRB				*e*SN	Sn	22 47 22.4	-0.2
AGRB	Hanur-Agry	1.28	77	*e*Pn	Pn	22 47 03.7	-1.3
AGRB				*e*Sn	Sn	22 47 22.4	-0.2
BEST	Besiri	1.41	184	*i* P	Pn	22 47 06.1	-0.7
BEST				*i* S	Sb	22 47 27.1	+1.6
PTK	Pertek	1.60	256	*e*PN	Pn	22 47 07.8	-1.6
PTK	Pertek	1.60	256	*e*Pn	Pn	22 47 07.8	-1.6
DDEM	Demirkent	1.62	10	*i* P	Pn	22 47 09.9	+0.2
DDEM				*i* S	Sn	22 47 30.9	-0.1
DDEM	Demirkent	1.62	10	*i* P	Pn	22 47 09.9	+0.3
DDEM				*i* S	Sn	22 47 30.9	-0.1
EZC	Erzincan	1.63	287	*e*PN	Pn	22 47 08.9	-0.9
VANB	Van	1.72	114	*e*PN	Pn	22 47 09.8	-1.2
VANB	Van	1.72	114	*e*Pn	Pn	22 47 09.8	-1.2
DBAD	Bademkaya	1.73	8	*i* P	Pn	22 47 11.9	+0.7
DBAD				*i* S	Sn	22 47 33.1	-0.8
DBAD	Bademkaya	1.73	8	*i* P	Pn	22 47 11.9	+0.6
DBAD				*i* S	Sn	22 47 33.1	-0.8
DAGI	Agillar	1.82	13	*i* P	Pn	22 47 13.2	+0.8
DAGI				*i* S	Sn	22 47 37.9	+1.8
KARS	Kars	1.86	44	*e*PN	Pn	22 47 12.3	-0.7
KARS	Kars	1.86	44	*e*Pn	Pn	22 47 12.3	-0.7
SVRC	Sivrice-ELAZID	1.86	241	*e*PN	Pn	22 47 12.5	-0.5
SVRC	Sivrice-ELAZID	1.86	241	*e*Pn	Pn	22 47 12.5	-0.5
GUMT	Gumushane	1.87	309	*e*PN	Pn	22 47 12.7	-0.4
GUMT	Gumushane	1.87	309	*e*Pn	Pn	22 47 12.7	-0.4
DIGO	Kars	1.90	53	*i* P	Pn	22 47 14.7	+1.2
DIGO				*i* S	Sn	22 47 41.8	+3.9
DIGO	Kars	1.90	53	*i* P	Pn	22 47 14.7	+1.2
CLDR	Caldiran	1.98	94	*e*PN	Pn	22 47 13.9	-0.7
CLDR	Caldiran	1.98	94	*e*Pn	Pn	22 47 13.9	-0.7
KEMA	Kemaliye	2.24	270	*i* P	Pn	22 47 20.0	+1.8
KEMA				*i* S	Sn	22 47 49.4	+3.0
KEMA	Kemaliye	2.24	270	*i* P	Pn	22 47 20.0	+1.8
HKR	Hakkari	2.53	132	*e*PN	Pn	22 47 21.5	-0.6
HKR	Hakkari	2.53	132	*e*Pn	Pn	22 47 21.5	-0.6

*MOS **17** 22:51:53.8±0.9, 44.°35N×129.°34W, h10km, mb5.8/109, MS5.2/65, Error ellipse: s-maj=4.8km s-min=3.7km az=88.2*
*IDC **17** 22:51:53.1±0.6, 44.°31N×129.°41W, h0km, mb5.2/24, mb1 5.2/30, mb1mx5.2/33, mbtmp5.1/30, ML4.0/6, MS5.1/31, Ms1 5.1/31, ms1mx5.0/36, Error ellipse: s-maj=18.3km s-min=9.0km az=30.0*
*ISCJB **17** 22:51:54.0±0.1, 44.°38N±0.°02×129.°33W±0.°02, h10km, mb5.5/305, MS5.3/233, Error ellipse: s-maj=3.7km s-min=1.8km az=26.3*
*NEIC **17** 22:51:55.3±0.2, 44.°37N×129.°42W, h10km, mb5.6/205, MS5.3/167, MW5.6, Error ellipse: s-maj=3.8km s-min=1.8km az=31.0*
*GCMT **17** 22:51:57.0±0.1, 44.°09N×129.°56W, h14km, MW5.7, Moment Tensor Solution. s80,c120; s50,c60; Moment tensor: Scale 10^{17}Nm; M_{rr}-1.29±.06; $M_{\theta\theta}$-2.36±.05; $M_{\phi\phi}$3.66±.06; $M_{r\theta}$-0.46±.12; $M_{\theta\phi}$-2.85±.05; $M_{r\phi}$0.89±.12; Best double couple: $M_0$4.20000×10^{17} NP1:ϕ_s24.00000°, δ82.00000°, λ5.00000°. NP2:ϕ_s293.00000°, δ85.00000°, λ172.00000°. Principal axes: T 4.9500, Plg9.0000°, Azm248.0000°; N -1.4400, Plg81.0000°, Azm84.0000°; P -3.5000, Plg3.0000°, Azm339.0000°; Data Used: II IC G IU CN. Surface waves: sta=111, comp=232, per= 50.*
*BGS **17** 22:51:58.4±1.6, 44.°10N×126.°90W, h10km, mb5.3, MS5.5*
*BJI **17** 22:51:58.0, 45.°23N×130.°18W, h10km, mB5.6/39, mb5.4/49, Ms5.5/43, Ms7 5.2/42*
*SZGRF **17** 22:52:04.7, 45.°22N×129.°20W, h38km, mb5.5, MS5.4, Off coast of Oregon, United States*
ISC 17 22:51:55.4±0.1,**44.°38N**±0.°02×**129.°42W**±0.°02,**h10**km,
(h13km±1.1km:**pP-P)**,**n983**,σ0§94/872,**mb5.5**/305,
MS5.3/233,**108C-24D**,**Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	Edson Butte	3.99	110	*e*Pn	Pn	22 52 53.5	-3.0
HEBO	Mount Hebo	4.12	76	*e*Pn	Pn	22 52 57.2	-1.2
HEBO				*e*Sn	Sn	22 53 45.9	-0.6
COR	Corvallis	4.38	85	*e*P	Pn	22 53 01.1	-0.9
KMOR	Kings Mountain	4.39	71	P	Pn	22 53 00.8	-1.3
NLWA	Neilton Lookou	4.91	50	*e*Pn	Pn	22 53 09.4	+0.3
OOW	Octopus West	4.95	46	P	Pn	22 53 09.5	-0.3
HUMO	Hull Mountain	5.03	108	*e*Pn	Pn	22 53 10.5	-0.3
RVW	Rose Valley	5.04	67	P	Pn	22 53 09.8	-1.1
MTMW	Mount Mitchell	5.36	70	P	Pn	22 53 14.3	-1.0
TDL	Tradedollar La	5.45	66	P	Pn	22 53 16.4	-0.1
KHMM	Horse Mountain	5.47	128	*e*Pn	Pn	22 53 17.0	+0.1
YBH	Yreka Blue Hor	5.59	116	Pn	Pn	22 53 17.0	-1.5
	1.6nm,0.3s,baz=303,slow=12,SNR=22						
YBH				Sn	Sn	22 54 21.6	-1.0
	baz=55,slow=16,SNR=1.8						
YBH	Yreka Blue Hor	5.59	116	*e*Pn	Pn	22 53 17.4	-1.0
GNW	Green Mountain	5.59	53	P	Pn	22 53 17.6	-1.0
HOOD	Mount Hood Mea	5.61	78	*e*Pn	Pn	22 53 17.9	-0.8
SQM	Sequim	5.76	48	P	Pn	22 53 21.2	+0.4
LON	Longmire	5.85	63	*e*P	Pn	22 53 21.2	-0.8
PGC	Sidney	5.93	42	*e*Pn	Pn	22 53 23.4	+0.1
PGC				*e*Sn	Sn	22 54 30.9	-0.2
WPW	White Pass	6.00	65	P	Pn	22 53 23.6	-0.6
WDC	Whiskeytown Da	6.35	124	*e*Pn	Pn	22 53 29.1	+0.1
WDC				*e*Sn	Sn	22 54 41.8	+0.3
KCPM	Cahto Peak	6.40	135	*e*Pn	Pn	22 53 29.6	0.0
JCW	Jim Creek	6.44	51	P	Pn	22 53 30.2	0.0
RPW	Rockport	6.81	51	*e*Pn	Pn	22 53 37.2	+1.9
VDB	Vedder Mountai	6.85	45	P	Pn	22 53 36.2	+0.5
ETW	Entiat	7.11	60	*e*Pn	Pn	22 53 39.2	-0.1
ETW				Sn	Sn	22 55 01.9	+1.9
MOD	Modoc	7.12	107	*e*Pn	Pn	22 53 41.4	+1.9
MOD				*e*S	Sn	22 55 11.0	+0.6
HOPS	Hopland	7.18	136	*e*Pn	Pn	22 53 38.9	-1.5
RSW	Rattlesnake Hi	7.21	70	*e*Pn	Pn	22 53 41.1	+0.3
RSW				S	Sn	22 55 25.9	+23
HAWA	Hanford	7.25	70	*e*Pn	Pn	22 53 40.8	-0.5
OHCM	Honcut	7.78	128	*e*Pn	Pn	22 53 48.2	-0.4
BBB	Bella Bella	7.86	6	Pn	Pn	22 53 53.0	+3.4
	3.7nm,0.3s,baz=17,slow=14,SNR=33						
BBB				LR	LR	22 56 38.1	
	comp=Z,7μm,18.2s,baz=8.3,slow=36						
MCCM	Marconi Confer	7.94	139	*e*Pn	Pn	22 53 50.5	-0.4
	354nm,1.4s						
LNOR	Lincton Mounta	8.02	75	*e*Pn	Pn	22 53 51.3	-0.5
LNOR				*e*Sn	Sn	22 55 24.1	+1.5
OD2	Odessa Site #2	8.06	64	*e*Pn	Pn	22 53 51.4	-1.0
WVOR	Wild Horse Val	8.09	100	*e*P	Pn	22 53 51.7	-1.2
WVOR				pmax	pmax		
	comp=Z,527nm,1.5s						
WVOR	Wild Horse Val	8.09	100	*e*Pn	Pn	22 53 51.7	-1.1
	comp=Z,527nm,1.5s						
BMO	Blue Mountains	8.66	83	*e*Pn	Pn	22 54 00.1	-0.6
PAHR	Pah Rah Range	8.81	119	*e*Pn	Pn	22 54 06.0	+3.3
CMB	Columbia Colle	9.30	130	*e*P	Pn	22 54 09.9	+0.4
NEW	Newport	9.35	61	*e*P	Pn	22 54 09.1	-1.0
WAKR	Walker	9.52	125	*e*Pn	Pn	22 54 13.5	+1.1
SAO	San Andreas Ge	9.73	139	*e*P	Pn	22 54 15.3	0.0
BMN	Battle Mountai	9.85	109	*e*P	Pn	22 54 18.8	+1.8
NVAR	Mina Array Bea	10.25	122	Pn	Pn	22 54 23.1	+0.6
	comp=Z,0.7nm,0.3s,baz=293,slow=14,SNR=35						
BSMT	Bassoo Peak	10.74	66	*e*Pn	Pn	22 54 28.2	-0.8
MTUM	Tungsten Hills	10.81	127	*e*Pn	Pn	22 54 32.1	+2.0
HLID	Hailey	10.85	89	*e*Pn	Pn	22 54 30.0	-0.7
	comp=Z,210nm,1.0s						
JTMT	Jette	11.05	67	*e*Pn	Pn	22 54 33.5	+0.2
ELK	Elko	11.07	104	Pn	Pn	22 54 35.8	+2.1
	comp=Z,0.2nm,0.3s,baz=291,slow=11,SNR=42						
ELK				LR	LR	22 58 49.1	
	comp=Z,11μm,21.2s,baz=286,slow=38						
ELK	Elko	11.07	104	*e*Pn	Pn	22 54 36.6	+2.9
MSO	Missoula	11.12	72	*e*Pn	Pn	22 54 33.8	-0.6
N12A	Clover Valley,	11.17	103	*e*Pn	Pn	22 54 38.0	+2.9
SWMT	Swartz Lake	11.19	68	*e*Pn	Pn	22 54 35.2	-0.1
YBMT	Yellow Bay	11.25	67	*e*Pn	Pn	22 54 35.7	-0.4
CRAG	Craig	11.35	349	*e*Pn	Pn	22 54 40.2	+2.8
SLMT	Seeley Lake	11.48	70	*e*Pn	Pn	22 54 38.7	-0.5
M13A	Montello	11.60	100	*e*Pn	Pn	22 54 43.3	+2.5
CHMT	Chamberlain Mo	11.60	72	*e*Pn	Pn	22 54 40.6	-0.3
WALA	Waterton Lakes	11.62	61	*e*Pn	Pn	22 54 41.0	-0.2
N13A	Wendover, West	11.75	102	*e*Pn	Pn	22 54 45.5	+2.5
MCMT	McKenzie Canyo	11.83	82	*e*Pn	Pn	22 54 44.3	+0.3
	comp=Z,86nm,1.1s						
MCMT				S	Sn	22 56 55.6	-0.3
DLMT	Dillon	11.98	79	*e*Pn	Pn	22 54 47.2	+1.1
LRM	Limekiln Ridge	12.08	77	*e*Pn	Pn	22 54 47.9	+0.4
HVU	Hansel Valley	12.45	96	*e*P	Pn	22 54 54.8	+2.3
HRY	Holter Researc	12.55	73	*e*Pn	Pn	22 54 53.9	0.0
BGU	Big Grassy Mou	12.55	100	*e*Pn	Pn	22 54 54.3	+0.4
	comp=Z,275nm,1.6s						
BOZ	Bozeman (W)	12.66	78	*e*P	Pn	22 54 56.0	+0.6
SPUT	South Promonto	12.83	98	*e*Pn	Pn	22 54 59.5	+1.8
DUG	Dugway	12.99	103	*e*P	Pn	22 55 01.1	+1.2
RRI2	Red Ridge	13.11	88	*e*Pn	Pn	22 55 04.1	+2.6
DCID1	Drake Creek	13.16	87	*e*Pn	Pn	22 55 05.4	+3.1
YMR	Madison River	13.18	82	*e*Pn	Pn	22 55 02.7	+0.2
	comp=Z,340nm,1.3s						
SIT	Sitka	13.22	346	eP	Pn	22 55 04.5	+1.5
SIT				pmax	pmax		
	comp=Z,292nm,1.2s						
SIT	Sitka	13.22	346	*e*Pn	Pn	22 55 04.5	+1.5
	comp=Z,292nm,1.2s						
IMW	Indian Meadow	13.29	86	*e*Pn	Pn	22 55 06.7	+2.7
YFT	Old Faithful	13.29	83	*e*Pn	Pn	22 55 07.8	+3.8
NOQ	North Oquirrh	13.30	100	*e*Pn	Pn	22 55 05.6	+1.5
TPAW	Teton Pass	13.35	87	*e*Pn	Pn	22 55 07.2	+2.4
HWUT	Hardware Ranch	13.37	96	*e*Pn	Pn	22 55 06.7	+1.7
YNR	Norris Junctio	13.38	82	*e*Pn	Pn	22 55 08.6	+3.4
AHID	Auburn Hatcher	13.39	91	*e*Pn	Pn	22 55 09.4	+4.1
REDW	Red Top Meadow	13.44	88	*e*Pn	Pn	22 55 08.6	+2.5
SNOW	Snow King Moun	13.49	87	*e*Pn	Pn	22 55 10.1	+3.4
CTU	Camp Tracy	13.54	100	*e*Pn	Pn	22 55 09.2	+1.7
LOHW	Long Hollow	13.57	87	*e*Pn	Pn	22 55 10.3	+2.5
LKWY	Lake	13.59	83	*e*P	Pn	22 55 08.8	+0.7
NLU	North Lily Min	13.60	103	*e*Pn	Pn	22 55 09.8	+1.2
ARUT	Antelope Range	13.73	113	eP	Pn	22 55 10.3	+0.3
ARUT				pmax	pmax		
	comp=Z,637nm,1.7s						
ARUT	Antelope Range	13.73	113	*e*Pn	Pn	22 55 10.3	+0.3
	comp=Z,637nm,1.7s						
EDM	Edmonton	13.77	44	eP	Pn	22 55 11.4	+0.9

YKA Yellowknife Ar 20.08 20 P **P 22 56 29.4 +0.8**
comp=Z,204nm,1.2s,baz=212,slow=11,SNR=39
YKA Yellowknife Ar 20.08 20 P **P 22 56 29.4 +0.8**
LENM Lemitar 20.09 113 *e*Pn **P 22 56 30.7 +1.6**
LPM Los Pinos Moun 20.23 112 *e*Pn **P 22 56 32.0 +1.4**
BNM Barren Site 20.33 112 *e*P **P 22 56 32.8 +1.2**
comp=Z,259nm,1.5s
MENT Mentasta 20.34 341 *e*P **P 22 56 34.9 +3.5**
OGNE Ogallala 20.40 90 *e*Pn **P 22 56 33.8 +1.5**
comp=Z,917nm,1.9s
OGNE LR LR
comp=Z,11μm,19.0s,MS5.2
FFC Flin Flon 20.46 50 Pn **P 22 56 33.6 +0.7**
comp=Z,1μm,1.2s
FFC Flin Flon 20.46 50 *i* P **P 22 56 33.3 +0.4**
FFC Flin Flon 20.46 50 *e*P **P 22 56 33.2 +0.3**
comp=Z,429nm,1.2s
FFC LR LR
comp=Z,24μm,20.0s,MS5.5
DAWY Dawson 20.52 347 *e*Pn **P 22 56 36.0 +2.7**
RC01 Rabbit Creek A 20.61 331 *e*P **P 22 56 35.4 +0.9**
comp=Z,506nm,1.5s
PMR Palmer 20.77 333 *e*P **P 22 56 39.1 +2.9**
PMR pmax pmax
comp=Z,454nm,1.4s
PMR Palmer 20.77 333 *e*Pn **P 22 56 39.1 +2.9**
comp=Z,454nm,1.4s
RSO Redoubt South 21.30 327 *e*Pn **P 22 56 44.9 +3.1**
EGAK Eagle 21.47 346 *e*P **P 22 56 46.0 +2.3**
comp=Z,217nm,1.4s,mb5.3
EGAK LR LR
comp=Z,9μm,20.0s,MS5.2
CHGN Chignik 21.83 313 *e*P **P 22 56 48.6 +1.0**
MCK McKinley 22.34 337 *e*P **P 22 56 55.7 +2.8**
MCK pmax pmax
comp=Z,307nm,1.3s,mb5.6
MCK McKinley 22.34 337 *e*P **P 22 56 55.7 +2.8**
comp=Z,307nm,1.3s,mb5.6
TRF Thorofare Moun 22.52 335 *e*P **P 22 56 56.5 +1.6**
comp=Z,779nm,1.5s,mb5.9
SDPT Sand Point 22.63 310 *e*P **P 22 56 57.1 +1.0**
comp=Z,760nm,1.2s,mb6.0
ILAR Eielson Array 22.64 340 P **P 22 56 57.2 +1.1**
comp=Z,129nm,1.1s,mb5.3,baz=152,slow=7.9,SNR=179
ILAR PcP PcP 23 00 48.5 0.0
comp=Z,13nm,1.0s,baz=185,slow=1.3,SNR=8.6
ILAR LR LR 23 04 18.1
comp=Z,9μm,20.8s,MS5.2,baz=158,slow=33
ILAR Eielson Array 22.64 340 P **P 22 56 57.3 +1.1**
ILAR 23 00 48.5
MNTX Cornudas Mount 22.68 116 *e*P **P 22 56 56.9 0.0**
comp=Z,516nm,2.2s,mb5.6
MNTX LR LR
comp=Z,3μm,20.0s,MS4.8
PPLA Purkeypile 22.71 333 *e*P **P 22 56 59.3 +2.3**
comp=Z,1μm,1.4s,mb6.1
CBKS Cedar Bluff 22.82 94 *e*P **P 22 56 58.9 +0.7**
CBKS pmax pmax
comp=Z,496nm,1.5s,mb5.7
CBKS MLR MLR
comp=Z,13μm,21.0s,MS5.3
CBKS Cedar Bluff 22.82 94 *e*P **P 22 56 58.9 +0.7**
comp=Z,496nm,1.5s,mb5.7
CBKS LR LR
comp=Z,13μm,21.0s,MS5.3
CPRX Cap Rock 22.84 111 *e*P **P 22 56 59.0 +0.4**
comp=Z,178nm,1.6s,mb5.2
COLA College 22.96 340 *e*P **P 22 57 00.6 +1.0**
COLA *e* 23 00 49.5
COLA pmax pmax
comp=Z,198nm,1.5s,mb5.3
COLA MLR MLR
comp=Z,7μm,22.0s,MS5.1
COLA College 22.96 340 *e*P **P 22 57 00.6 +1.0**
comp=Z,198nm,1.5s,mb5.3
COLA *e*PcP PcP 23 00 49.5 +0.3
COLA LR LR
comp=Z,7μm,22.0s,MS5.1
GDL2 Guadalupe Moun 23.03 113 *e*P **P 22 57 01.1 +0.6**
BPAW Bear Paw Mtn. 23.21 336 *e*P **P 22 57 03.6 +1.4**
comp=Z,467nm,1.7s,mb5.6
BPAW *e*PcP PcP 23 00 50.2 +0.6
AMTX Amarillo 23.28 104 *e*P **P 22 57 03.2 0.0**
comp=Z,2μm,2.3s,mb6.1
AMTX LR LR
comp=Z,5μm,19.0s,MS5.0
CLNB Carlsbad 23.31 113 *e*P **P 22 57 03.4 -0.1**
comp=Z,164nm,2.0s,mb5.1
ULM Lac du Bonnet 23.36 64 P **P 22 57 02.7 -1.1**
comp=Z,73nm,0.8s,mb5.2,baz=274,slow=10.0,SNR=53
ULM LR LR 23 05 57.4
comp=Z,11μm,20.9s,MS5.3,baz=268,slow=36
ULM Lac du Bonnet 23.36 64 *e*P **P 22 57 02.8 -1.0**
ULM pmax pmax
comp=Z,189nm,1.1s
ULM MLR MLR
comp=Z,15μm,21.0s
ULM Lac du Bonnet 23.36 64 *e*P **P 22 57 02.8 -1.0**
comp=Z,189nm,1.1s,mb5.4
ULM LR LR
comp=Z,15μm,21.0s,MS5.4
AGMN Agassiz Nation 23.39 68 *e*P **P 22 57 03.0 -1.2**
comp=Z,505nm,1.5s,mb5.7
AGMN LR LR
comp=Z,11μm,19.0s,MS5.3
ECSD EROS Data Cent 23.51 80 *e*P **P 22 57 04.2 -1.3**
comp=Z,3μm,2.8s,mb6.2
ECSD LR LR
comp=Z,5μm,22.0s,MS5.0
TTA Tatalina 24.05 330 *e*P **P 22 57 12.0 +1.7**
INK Inuvik 24.08 356 P **P 22 57 11.2 +0.6**
comp=Z,45nm,1.1s,mb4.8,baz=170,slow=10,SNR=22
INK LR LR 23 06 03.9
comp=Z,6μm,21.1s,MS5.0,baz=175,slow=35
INK Inuvik 24.08 356 *e*P **P 22 57 11.6 +1.1**
INK pmax pmax
comp=Z,180nm,1.4s
INK Inuvik 24.08 356 *e*P **P 22 57 11.6 +1.0**
comp=Z,180nm,1.4s,mb5.3
KSU1 Kansas State U 24.94 91 *e*P **P 22 57 18.8 +0.1**
comp=Z,200nm,1.1s,mb5.6
TXAR Lajitas Array 25.36 118 P **P 22 57 22.1 -0.5**
comp=Z,5.6nm,0.9s,mb4.1,baz=296,slow=6.8,SNR=29
WMOK Wichita Mounta 25.39 102 *e*P **P 22 57 22.3 -0.4**
WMOK pmax pmax
comp=Z,1μm,2.0s,mb6.0
WMOK MLR MLR
comp=Z,5μm,22.0s,MS5.0
WMOK Wichita Mounta 25.39 102 *e*P **P 22 57 22.3 -0.5**
comp=Z,1μm,2.0s,mb6.0
WMOK LR LR
comp=Z,5μm,22.0s,MS5.0
AKUT Akutan 25.39 306 *e*P **P 22 57 23.6 +1.0**
comp=Z,211nm,0.9s,mb5.7
COLD Coldfoot 25.44 341 *e*P **P 22 57 24.2 +1.3**
comp=Z,214nm,1.5s,mb5.5
UNV Unalaska Valle 25.78 305 *e*P **P 22 57 27.5 +1.3**
comp=Z,829nm,1.1s,mb6.2
FCC Fort Churchill 25.88 44 *e*P **P 22 57 27.3 +0.3**
comp=Z,15nm,1.5s,mb4.3
EYMN Ely 26.33 69 *e*P **P 22 57 30.9 -0.3**
comp=Z,159nm,1.1s,mb5.5
EYMN LR LR
comp=Z,14μm,19.0s,MS5.5
SCIA State Center 26.40 83 *e*P **P 22 57 31.0 -0.8**
comp=Z,190nm,1.4s,mb5.4
SCIA LR LR
comp=Z,6μm,21.0s,MS5.2
JCT Junction City 27.14 111 *e*P **P 22 57 38.1 -0.5**
JCT pmax pmax
comp=Z,189nm,1.4s,mb5.4
JCT MLR MLR
comp=Z,7μm,22.0s,MS5.2
JCT Junction City 27.14 111 *e*P **P 22 57 38.1 -0.5**
comp=Z,189nm,1.4s,mb5.4
JCT LR LR
comp=Z,7μm,22.0s,MS5.2
JFWS Jewell Farm 28.21 79 *e*P **P 22 57 48.2 +0.1**
JFWS pmax pmax
comp=Z,105nm,1.0s,mb5.4
JFWS MLR MLR
comp=Z,2μm,22.0s,MS4.7
JFWS Jewell Farm 28.21 79 *e*P **P 22 57 48.2 +0.2**
comp=Z,105nm,1.0s,mb5.4
JFWS LR LR
comp=Z,2μm,22.0s,MS4.7
COWI Conover 28.21 72 *e*P **P 22 57 47.9 -0.2**
comp=Z,130nm,1.5s,mb5.3
COWI LR LR
comp=Z,17μm,22.0s,MS5.6
MIAR Mount Ida 29.17 97 *e*P **P 22 57 56.3 -0.4**
MIAR pmax pmax
comp=Z,724nm,2.5s,mb6.0
MIAR MLR MLR
comp=Z,13μm,19.0s,MS5.6
MIAR Mount Ida 29.17 97 *e*P **P 22 57 56.2 -0.4**
comp=Z,724nm,2.5s,mb6.0
MIAR LR LR
comp=Z,13μm,19.0s,MS5.6
CCM Cathedral Cave 29.21 89 *e*P **P 22 57 55.6 -1.4**
CCM *e* 23 01 04.6
CCM pmax pmax
comp=Z,96nm,1.2s,mb5.4
CCM MLR MLR
comp=Z,15μm,19.0s,MS5.6
CCM Cathedral Cave 29.21 89 *e*P **P 22 57 55.6 -1.4**
comp=Z,96nm,1.2s,mb5.4
CCM *e*PcP PcP 23 01 04.6 +0.5
CCM LR LR
comp=Z,15μm,19.0s,MS5.6
HDIL Hopedale 29.64 83 *e*P **P 22 58 00.7 -0.2**
comp=Z,413nm,1.4s,mb6.0
HDIL LR LR
comp=Z,9μm,19.0s,MS5.4
SLM Saint Louis 29.70 87 *e*P **P 22 58 00.7 -0.6**
SLM pmax pmax
comp=Z,42nm,0.7s,mb5.3
SLM Saint Louis 29.70 87 *e*P **P 22 58 00.7 -0.6**
comp=Z,42nm,0.7s,mb5.3
FVM French Village 29.83 89 *e*P **P 22 58 01.0 -1.5**
FVM pmax pmax
comp=Z,567nm,2.5s,mb5.9
FVM French Village 29.83 89 *e*P **P 22 58 01.0 -1.5**
comp=Z,566nm,2.5s,mb5.9
TNA Tin City 29.85 329 P **P 22 58 03.6 +1.1**
NATX Nacogdoches 29.90 103 *e*pP pP 22 58 09.3 +3.0
NATX LR LR
comp=Z,6μm,20.0s,MS5.2
UALR University of 29.93 96 *e*P **P 22 58 03.4 -0.1**
comp=Z,165nm,1.8s,mb5.5
UALR *e*pP pP 22 58 09.8 +3.3
HKT Hockley 30.16 107 *e*P **P 22 58 05.4 -0.1**
HKT pmax pmax
comp=Z,303nm,1.6s,mb5.8
HKT MLR MLR
comp=Z,6μm,19.0s,MS5.2
HKT Hockley 30.16 107 *e*P **P 22 58 05.4 -0.1**
comp=Z,304nm,1.6s,mb5.8
HKT LR LR
comp=Z,6μm,19.0s,MS5.2
KVTX Kingsville 30.31 113 PFAKE 22 58 20.0 +13
KVTX LR LR
comp=Z,3μm,19.0s,MS5.0
ATKA Atka Island 30.38 301 *e*P **P 22 58 06.8 -0.5**
comp=Z,211nm,1.0s,mb5.8
GAMB Gambell 30.66 324 *e*P **P 22 58 13.1 +3.5**
SIUC Southern Illin 30.81 88 *e*P **P 22 58 10.3 -0.9**
comp=Z,48nm,0.9s,mb5.3
GNAR Gosnell 31.02 92 *e*P **P 22 58 12.4 -0.6**
OLIL Olney 31.18 86 *e*P **P 22 58 14.0 -0.5**
comp=Z,268nm,1.2s,mb6.0
BLO Bloomington 32.14 84 *e*P **P 22 58 22.4 -0.5**
BLO pmax pmax
comp=Z,124nm,1.0s,mb5.7
BLO Bloomington 32.14 84 *e*P **P 22 58 22.4 -0.4**
comp=Z,124nm,1.0s,mb5.7
OXF Oxford 32.16 94 *e*P **P 22 58 22.7 -0.4**
OXF pmax pmax
comp=Z,455nm,1.0s,mb6.3
OXF MLR MLR
comp=Z,1μm,22.0s,MS4.5
OXF Oxford 32.16 94 *e*P **P 22 58 22.7 -0.4**
comp=Z,455nm,1.0s,mb6.3
OXF LR LR
comp=Z,1μm,22.0s,MS4.5
WVT Waverly 32.51 90 *e*P **P 22 58 25.3 -0.9**
WVT pmax pmax
comp=Z,94nm,1.4s,mb5.5
WVT MLR MLR
comp=Z,10μm,20.0s,MS5.5
WVT Waverly 32.51 90 *e*P **P 22 58 25.2 -0.9**
comp=Z,94nm,1.4s,mb5.5
WVT LR LR
comp=Z,10μm,20.0s,MS5.5
VBMS Vicksburg 32.56 98 *e*P **P 22 58 27.3 +0.6**
comp=Z,101nm,0.9s,mb5.8
VBMS LR LR
comp=Z,7μm,21.0s,MS5.3
WCI Wyandotte Cave 32.68 86 *e*P **P 22 58 25.8 -1.9**
WCI pmax pmax
comp=Z,102nm,1.5s,mb5.5
WCI MLR MLR
comp=Z,13μm,19.0s,MS5.7
WCI Wyandotte Cave 32.68 86 *e*P **P 22 58 25.8 -1.9**
comp=Z,102nm,1.5s,mb5.5
WCI LR LR
comp=Z,13μm,19.0s,MS5.7
POHA Pohakuloa 32.79 230 PFAKE 22 58 40.0 +11
POHA LR LR
comp=Z,5μm,22.0s,MS5.2
KIP Kipapa 32.89 235 PFAKE 22 58 40.0 +10
KIP LR LR
comp=Z,10μm,20.0s,MS5.5
AAM Ann Arbor 33.02 77 *e*P **P 22 58 31.0 +0.4**
AAM pmax pmax
comp=Z,320nm,1.9s,mb5.9
AAM MLR MLR
comp=Z,12μm,19.0s,MS5.6
AAM Ann Arbor 33.02 77 *e*P **P 22 58 31.0 +0.4**
comp=Z,320nm,1.9s,mb5.9
AAM LR LR
comp=Z,12μm,19.0s,MS5.6
RES Resolute Bay 34.01 16 P **P 22 58 39.5 +0.7**
comp=Z,43nm,0.8s,mb5.4,baz=226,slow=11,SNR=19
RES Resolute Bay 34.01 16 *e*P **P 22 58 39.5 +0.7**
RES pmax pmax
comp=Z,59nm,0.9s,mb5.5
RES Resolute Bay 34.01 16 *e*P **P 22 58 39.5 +0.7**
comp=Z,59nm,0.9s,mb5.5
ACSO Alum Creek Sta 34.24 80 *e*P **P 22 58 40.8 -0.4**
comp=Z,150nm,1.1s,mb5.8
ACSO LR LR
comp=Z,928nm,19.0s,MS4.5
SWET Sewanee 34.30 90 *e*P **P 22 58 40.9 -0.9**
LRAL Lakeview Retre 34.63 94 *e*P **P 22 58 43.3 -1.4**
comp=Z,108nm,1.5s,mb5.6
LRAL LR LR
comp=Z,6μm,21.0s,MS5.3
CPCT Cooper Cave 35.20 89 *e*P **P 22 58 49.3 -0.3**
ERPA Erie 35.64 76 *e*P **P 22 58 53.5 +0.2**
comp=Z,73nm,1.0s,mb5.6
ERPA LR LR
comp=Z,12μm,19.0s,MS5.7
BRAL Brewton 35.69 97 PFAKE 22 59 10.0 +16
BRAL LR LR
comp=Z,5μm,22.0s,MS5.2
ALLY Alegheny Colle 35.70 77 *e*P **P 22 58 53.8 0.0**
comp=Z,517nm,1.6s,mb6.2
MCWV Mont Chateau 36.68 80 *e*P **P 22 59 01.8 -0.4**
comp=Z,114nm,1.3s,mb5.5
MCWV LR LR
comp=Z,5μm,22.0s,MS5.2
GOGA Godfrey 36.97 91 *e*P **P 22 59 03.7 -1.0**
GOGA pmax pmax
comp=Z,153nm,1.5s,mb5.6
GOGA MLR MLR
comp=Z,9μm,22.0s,MS5.5
GOGA Godfrey 36.97 91 *e*P **P 22 59 03.7 -1.0**
comp=Z,153nm,1.5s,mb5.6
GOGA LR LR
comp=Z,9μm,22.0s,MS5.5
BLA Blacksburg 37.32 84 *e*P **P 22 59 07.6 -0.1**
BLA pmax pmax
comp=Z,72nm,0.9s,mb5.5
BLA MLR MLR
comp=Z,6μm,19.0s,MS5.4
BLA Blacksburg 37.32 84 *e*P **P 22 59 07.6 -0.1**
comp=Z,72nm,0.9s,mb5.5
BLA LR LR
comp=Z,6μm,19.0s,MS5.4
VWCC Virginia Weste 37.62 83 *e*P **P 22 59 09.9 -0.3**
JSC Jenkinsville 38.11 88 *e*P **P 22 59 12.5 -1.9**
JSC MLR MLR
comp=Z,4μm,19.0s,MS5.3
JSC Jenkinsville 38.11 88 *e*P **P 22 59 12.5 -1.9**
BINY Binghamton 38.38 74 *e*P **P 22 59 15.8 -0.8**
comp=Z,57nm,1.3s,mb5.1
BINY LR LR
comp=Z,12μm,20.0s,MS5.7
LONY Lake Ozonia 38.48 70 *e*P **P 22 59 16.4 -1.0**
comp=Z,55nm,1.2s,mb5.2
LONY LR LR
comp=Z,11μm,20.0s,MS5.7
SDMD Soldier's Deli 38.90 78 *e*P **P 22 59 20.7 -0.3**
comp=Z,68nm,1.2s,mb5.2
JSRW J. Sargeant Re 38.91 82 *e*P **P 22 59 20.7 -0.4**
NCB Newcomb 38.95 71 *e*P **P 22 59 20.4 -0.9**
comp=Z,103nm,1.8s,mb5.3
NCB LR LR
comp=Z,18μm,19.0s,MS5.9
MVL Millersville 39.00 77 *e*P **P 22 59 21.2 -0.5**
comp=Z,336nm,2.0s,mb5.7
CBN Corbin 39.04 81 *e*P **P 22 59 22.5 +0.3**
comp=Z,60nm,0.9s,mb5.3
CBN LR LR
comp=Z,4μm,19.0s,MS5.3
FRNY Flat Rock 39.08 69 *e*P **P 22 59 21.5 -0.8**
comp=Z,180nm,1.4s,mb5.6
NHSC New Hope 39.48 89 *e*P **P 22 59 24.8 -1.1**
comp=Z,158nm,1.2s,mb5.6
NHSC LR LR
comp=Z,12μm,21.0s,MS5.7
ACCN Adirondack Com 39.53 71 *e*P **P 22 59 24.0 -2.2**
comp=Z,534nm,2.9s,mb5.8
MDV Middlebury 39.64 70 *e*P **P 22 59 26.5 -0.6**
TRY Troy 39.78 72 *e*P **P 22 59 28.2 0.0**
CNNC Cliffs of the 40.05 85 *e*P **P 22 59 30.2 -0.4**
comp=Z,89nm,1.0s,mb5.5
CNNC LR LR
comp=Z,1μm,20.0s,MS4.8
PAL Palisades 40.28 75 *e*P **P 22 59 31.9 -0.6**
PAL pmax pmax
comp=Z,44nm,0.9s,mb5.2
PAL Palisades 40.28 75 *e*P **P 22 59 31.9 -0.6**
comp=Z,44nm,0.9s,mb5.2
BILL Bilibino 40.29 328 *d* iP **P 22 59 33.0 +0.8**
BILL *i* S **S 23 05 37.4 -1.8**
BILL pmax pmax
comp=Z,205nm,1.2s,mb5.7
BILL MLR MLR
comp=Z,4μm,16.0s,MS5.4
BILL Bilibino 40.29 328 *e*P **P 22 59 32.0 -0.2**
comp=Z,281nm,1.4s,mb5.8
BILL LR LR
comp=Z,5μm,19.0s,MS5.4
HNH Hanover 40.35 70 *e*P **P 22 59 33.4 +0.4**
LBNH Lisbon 40.40 69 *e*P **P 22 59 33.1 -0.3**
LBNH *e* 23 01 08.0
LBNH pmax pmax
comp=Z,36nm,0.9s,mb5.1
LBNH MLR MLR
comp=Z,11μm,20.0s,MS5.7
LBNH Lisbon 40.40 69 *e*P **P 22 59 33.1 -0.3**
comp=Z,36nm,0.9s,mb5.1
LBNH *e*PP PP 23 01 08.0 +1.8
LBNH LR LR
comp=Z,11μm,20.0s,MS5.7
SCHQ Schefferville 40.58 52 P **P 22 59 34.2 -0.6**
comp=Z,44nm,1.2s,mb5.0,baz=280,slow=7.4,SNR=25
SCHQ LR LR 23 17 52.0
comp=Z,2μm,20.7s,MS5.0,baz=285,slow=38
SCHQ Schefferville 40.58 52 *e*P **P 22 59 34.3 -0.5**
SCHQ LR LR
comp=Z,12μm,20.0s,MS5.7
YLE Yale 40.83 74 *e*P **P 22 59 36.9 -0.1**
MIDW Midway 41.26 263 PFAKE 22 59 50.0 +9.3
MIDW LR LR
comp=Z,6μm,19.0s,MS5.5
DWPF Disney 41.36 97 PFAKE 22 59 50.0 +8.5
DWPF LR LR
comp=Z,5μm,21.0s,MS5.3
TEIG Tepich 41.70 112 *e*P **P 22 59 43.2 -1.2**
comp=Z,83nm,1.1s,mb5.3
TEIG LR LR
comp=Z,1μm,19.0s,MS4.8
PKME Peaks-Kenny Pk 41.78 67 *e*P **P 22 59 44.4 -0.3**
comp=Z,96nm,1.4s,mb5.2
PKME LR LR
comp=Z,2μm,21.0s,MS5.0
ALE Alert 43.31 10 P **P 22 59 57.9 +1.1**
comp=Z,242nm,1.3s,mb5.8,SNR=16
JOHN Johnston Islan 43.53 244 PFAKE 23 00 10.0 +11
JOHN LR LR
comp=Z,5μm,20.0s,MS5.4
PET Petropavlovsk 46.38 308 ‖ *i* iP **P 23 00 22.6 +1.1**
PET *e*S **S 23 07 07.2 -1.5**
PET *e*SS SS 23 10 21.3 -13
PET pmax pmax
comp=Z,105nm,1.0s,mb5.7
PET pmax pmax
comp=Z,500nm,2.8s,mb6.0
PET Petropavlovsk 46.38 308 *e*P **P 23 00 22.7 +1.2**
PET LR LR
comp=Z,1μm,21.0s,MS4.8
SEY Seymchan 46.61 322 *i* P **P 23 00 23.2 0.0**
SEY Seymchan 46.61 322 *i* P **P 23 00 23.2 0.0**
TGUH Tegucigalpa,Un 46.83 117 *e*pP pP 23 00 33.0 +4.4
TGUH LR LR
comp=Z,2μm,22.0s,MS4.9
PETK Petropavlovsk- 46.89 308 P **P 23 00 24.9 -0.6**
comp=Z,53nm,0.8s,mb5.5,baz=77,slow=11,SNR=54
PETK PcP PcP 23 01 59.2 +1.1
comp=Z,23nm,1.0s,baz=101,slow=6.9,SNR=3.9
PETK LR LR 23 17 19.0
comp=Z,695nm,19.6s,MS4.6,baz=266,slow=32
PETK Petropavlovsk- 46.89 308 P **P 23 00 24.9 -0.6**
PETK 23 01 59.3
PETK Petropavlovsk- 46.89 308 P **P 23 00 24.9 -0.6**
PETK PcP PcP 23 01 59.2 +1.1
PETK LR LR 23 17 19.0
SUMG Summit 48.63 24 *e*P **P 23 00 40.0 +1.3**
SKR Severo-Kuril's 48.70 305 *e*P **P 23 00 43.1 +3.5**
SKR *e* 23 07 34.0
SKR pmax pmax
comp=Z,1μm,4.0s
SKR pmax pmax
comp=E,290nm,1.4s
SKR pmax pmax
comp=Z,320nm,1.4s,mb6.2
SKR MLR MLR
comp=E,1μm,14.0s,MS5.2
SKR MLR MLR
comp=Z,1μm,14.0s,MS5.0
SKR MLR MLR
comp=N,1μm,16.0s,MS5.2
XMAS Kiritimati 48.91 219 PFAKE 23 00 50.0 +8.5
XMAS LR LR
comp=Z,5μm,21.0s,MS5.5
MTDJ Mount Denham 50.41 104 PFAKE 23 01 00.0 +7.0
MTDJ LR LR
comp=Z,2μm,19.0s,MS5.1
BBSR BB Station 50.92 80 PFAKE 23 01 10.0 +13
BBSR LR LR
comp=Z,3μm,22.0s,MS5.2
GTBY Guantanamo Bay 50.97 100 PFAKE 23 01 10.0 +13
GTBY LR LR
comp=Z,2μm,19.0s,MS5.0
JTS JuntasÁbangare 51.15 118 *e*P **P 23 00 58.5 -0.1**
JTS MLR MLR
comp=Z,1μm,19.0s
DAG Danmarks Havn 51.70 16 ‖ *i* iP **P 23 01 02.2 +0.2**
DAG Danmarks Havn 51.70 16 ‖ *i* iP **P 23 01 02.2 +0.2**
comp=Z,92nm,1.5s,mb5.5
TIXI Tiksi 52.05 337 *e*P **P 23 01 04.6 0.0**
TIXI pmax pmax
comp=Z,192nm,2.2s,mb5.6
TIXI pmax pmax
comp=E,80nm,1.6s
TIXI pmax pmax
comp=N,27nm,1.4s
TIXI pmax pmax
comp=Z,101nm,3.6s
TIXI MLR MLR
comp=Z,2μm,18.0s,MS5.3
TIXI Tiksi 52.05 337 *e*P **P 23 01 04.8 +0.2**
TIXI LR LR
comp=Z,2μm,21.0s,MS5.1
GRTK Grand Turk 52.77 96 PFAKE 23 01 20.0 +9.4
GRTK LR LR
comp=Z,2μm,21.0s,MS5.0

SCO Scoresbysund 54.26 23 *i* P **P 23 01 21.9 +1.0**
SCO Scoresbysund 54.26 23 *i* P **P 23 01 21.9 +1.0**
comp=Z,18nm,1.1s,mb4.9
SCO
comp=Z,1µm,17.0s
SDDR Presa de Saban 54.30 98 *e*P **P 23 01 21.3 -0.6**
comp=Z,57nm,1.3s,mb5.3
SDDR LR LR
comp=Z,2µm,19.0s,MS5.3
KBS Kingsbay 54.86 8 *e*P **P 23 01 26.3 +1.1**
KBS MLR MLR
comp=Z,2µm,21.0s,MS5.1
BCIP Isla Barro Col 55.30 114 *e*P **P 23 01 33.8 +4.6**
BCIP LR LR
comp=Z,847nm,21.0s,MS4.8
YAK Yakutsk 56.58 326 *e*P **P 23 01 37.7 0.0**
YAK *e**PP pP 23 01 42.5 +1.6
YAK *e* 23 03 44.1
YAK *e*PPP 23 05 02.4
YAK *e*S **S 23 09 29.8 +0.7**
YAK *e* 23 11 26.3
YAK pmax pmax
comp=N,18nm,1.1s
YAK pmax pmax
comp=Z,144nm,1.1s,mb5.9
YAK pmax pmax
comp=E,46nm,1.1s
YAK pmax pmax
comp=Z,18nm,0.5s,mb5.4
YAK pmax pmax
comp=N,39nm,1.2s
YAK pmax pmax
comp=E,56nm,1.5s
YAK smax
comp=E,113nm,3.6s
YAK smax
comp=N,454nm,6.2s
YAK MLR MLR
comp=Z,2µm,19.0s,MS5.2
YAK MLR MLR
comp=E,1µm,15.0s,MS5.2
YAK MLR MLR
comp=N,723nm,17.0s,MS5.2
YAK Yakutsk 56.58 326 *e*P **P 23 01 39.1 +1.4**
YAK LR LR
comp=Z,2µm,22.0s,MS5.1
BORG Borgarnes 57.72 29 PFAKE 23 02 00.0 +14
BORG LR LR
comp=Z,3µm,21.0s,MS5.3
LRS Lares 57.92 96 *e*P **P 23 01 47.4 -0.4**
WAKE Wake Island 58.23 266 PFAKE 23 02 00.0 +10
WAKE LR LR
comp=Z,3µm,20.0s,MS5.3
YSS Yuzh-Sakhalins 58.23 306 *e*P **P 23 01 49.0 -0.6**
YSS *e**SP sP 23 01 54.5 +0.5
YSS *e*S **S 23 09 54.0 +2.7**
YSS *e*SS SS 23 13 44.0 +1.6
YSS pmax pmax
comp=Z,80nm,1.0s,mb5.7
YSS smax
comp=N,1µm,6.0s
YSS MLR MLR
comp=Z,700nm,14.0s,MS4.9
YSS MLR MLR
comp=E,700nm,12.0s
YSS Yuzh-Sakhalins 58.23 306 *e*P **P 23 01 49.3 -0.3**
comp=E,108nm,1.1s,mb5.8
YSS LR LR
comp=Z,214nm,20.0s,MS4.3
SJG San Juan 58.53 95 *e*P **P 23 01 51.7 -0.4**
SJG MLR MLR
comp=Z,1µm,22.0s
HUMP Col San Antoni 58.72 95 *e*P **P 23 01 52.8 -0.6**
MTP Monte Pirata 58.97 95 *e*P **P 23 01 54.2 -0.9**
comp=Z,77nm,1.1s,mb5.6
ASAJ Asahikawa 59.88 304 P **P 23 02 01.4 +0.3**
comp=Z,122nm,1.0s,mb5.9,baz=33,slow=1.5,SNR=31
ERM Erimo 60.73 301 P **P 23 02 08.6 +1.6**
comp=Z,715nm,1.1s,mb6.7,SNR=5.8
ERM Erimo 60.73 301 *e*P **P 23 02 07.9 +0.9**
ERM pmax pmax
comp=Z,156nm,1.1s,mb6.0
ERM MLR MLR
comp=Z,1µm,20.0s,MS5.0
ERM Erimo 60.73 301 *e*P **P 23 02 07.9 +1.0**
comp=Z,156nm,1.1s,mb6.0
ERM LR LR
comp=Z,1µm,20.0s,MS5.0
PMOR Pomariorio Ree 61.45 200 *e*T 00 08 22.4
comp=Z,87nm,0.3s
CLNS Chul'man 61.59 323 *e*P **P 23 02 12.3 -0.2**
CLNS *e**PP pP 23 02 17.7 +2.0
CLNS *e* 23 02 51.9
CLNS *e* 23 04 28.8
CLNS *e*PPP 23 05 53.7
CLNS *e*S **S 23 10 32.5 -1.7**
CLNS pmax pmax
comp=Z,45nm,1.2s,mb5.5
CLNS pmax pmax
comp=E,25nm,1.2s
CLNS pmax pmax
comp=N,10.0nm,1.1s
CLNS pmax pmax
comp=E,9.0nm,1.0s
CLNS pmax pmax
comp=N,7.0nm,1.0s
CLNS pmax pmax
comp=Z,10.0nm,1.3s,mb4.8
CLNS smax
comp=N,259nm,11.0s
CLNS smax
comp=E,334nm,12.7s
CLNS MLR MLR
comp=Z,2µm,20.0s,MS5.2
CLNS MLR MLR
comp=N,683nm,15.0s,MS5.2
CLNS MLR MLR
comp=E,956nm,15.0s,MS5.2
VAH Vaihoa 61.61 200 *e*T 00 08 35.5
comp=E,47nm,0.4s
HABR Khabarovsk 61.68 311 *e*P **P 23 02 12.8 -0.5**
HABR *e**PP pP 23 02 15.2 -1.3
HABR *e**SP sP 23 02 16.7 -1.0
HABR *e* 23 02 52.7
HABR *e*S **S 23 10 36.5 +0.9**
HABR *e* 23 12 03.3
HABR *e*SS SS 23 14 38.4 +2.0
HABR pmax pmax
comp=N,87nm,2.0s
HABR pmax pmax
comp=Z,198nm,1.5s,mb6.0
HABR pmax pmax
comp=E,95nm,1.4s
HABR MLR MLR
comp=Z,801nm,19.0s,MS4.9
SDV Santo Domingo 61.70 106 *e*P **P 23 02 13.3 -0.5**
comp=Z,43nm,1.1s,mb5.5
SDV LR LR
comp=Z,353nm,20.0s,MS4.5
ANWB Willy Bob 61.94 92 PFAKE 23 02 30.0 +15
ANWB LR LR
comp=Z,3µm,22.0s,MS5.4
ROSC El Rosal 62.13 112 P **P 23 02 17.8 +1.1**
comp=Z,6.8nm,0.6s,mb5.0,baz=75,slow=20,SNR=14
ROSC LR LR 23 31 15.6
comp=Z,763nm,20.3s,MS4.8,baz=352,slow=38
ROSC El Rosal 62.13 112 *e*P **P 23 02 18.3 +1.6**
OTAV Otavalo 62.98 119 *e*P **P 23 02 22.7 +0.3**
comp=Z,65nm,1.2s,mb5.6
OTAV LR LR
comp=Z,822nm,19.0s,MS4.9
KLR Kul'dur 62.98 313 *e*P **P 23 02 17.7 -4.3**
KLR *e* 23 04 42.0
KLR *e*S **S 23 10 56.0 +4.0**
KLR pmax pmax
comp=E,70nm,1.8s
KLR pmax pmax
comp=Z,120nm,1.8s,mb5.7
KLR smax
comp=N,1µm,10.5s
KLR smax
comp=E,900nm,10.5s
KLR MLR MLR
comp=E,600nm,13.0s
KLR MLR MLR
comp=Z,2µm,13.0s,MS5.5

TRO Tromso 63.95 12 *e*P **P 23 02 28.3 +0.3**
TRO AMb AMB 23 02 31.2
comp=Z,88nm,1.4s,mb5.6
TRO Tromso 63.95 12 *e*P **P 23 02 28.3 +0.3**
comp=Z,88nm,1.4s,mb5.6
MEH Mehetia 64.25 200 *e*T 00 11 52.5
comp=Z,69nm,0.2s
TIAR Tiarei 64.27 201 *e*T 00 11 53.5
comp=Z,162nm,0.2s
PPT Papeete 64.34 201 *e*LQ 23 18 35.8
comp=Z,10µm,28.8s
PPT *e*LR LR 23 21 36.2
comp=Z,1µm,24.0s,baz=19
PPT Papeete 64.34 201 LR LR 23 24 02.7
comp=Z,562nm,20.6s,MS4.7,baz=13,slow=30
FDF Fort de France 64.34 94 PFAKE 23 02 40.0 +8.6
FDF LR LR
comp=Z,1µm,19.0s,MS5.1
KEV Kevo 64.87 9 *e*P **P 23 02 33.1 -1.0**
KEV pmax pmax
comp=Z,51nm,1.1s,mb5.5
KEV MLR MLR
comp=Z,1µm,20.0s,MS5.1
KEV Kevo 64.87 9 *e*P **P 23 02 33.1 -1.0**
comp=Z,51nm,1.1s,mb5.5
KEV LR LR
comp=Z,1µm,20.0s,MS5.1
KEV Kevo 64.87 9 *e*p **P 23 02 33.1 -1.0**
comp=Z,51nm,1.1s,mb5.5
ARCES ARCESS Array B 64.91 9 P **P 23 02 33.7 -0.6**
comp=Z,23nm,1.1s,mb5.1,baz=359,slow=9.0,SNR=21
ARCES LR LR 23 30 14.8
comp=Z,1µm,21.7s,MS5.1,baz=163,slow=35
ARCES ARCESS Array B 64.91 9 P **P 23 02 33.7 -0.6**
ARCES LR LR 23 30 14.8
ARE0 ARCESS Array S 64.91 9 *e*P **P 23 02 34.0 -0.3**
KTK1 Kautokeino 65.12 11 *e*P **P 23 02 35.6 -0.1**
KTK1 AMb AMB 23 02 38.2
comp=Z,150nm,1.4s,mb5.8
KTK1 *e*pP pP 23 02 38.2 -0.7
KTK1 Kautokeino 65.12 11 *e*P **P 23 02 35.6 -0.1**
comp=Z,150nm,1.4s,mb5.8
GRGR Grenville 65.74 97 PFAKE 23 02 50.0 +9.5
GRGR LR LR
comp=Z,2µm,20.0s,MS5.3
BBGH Gun Hill 66.55 94 PFAKE 23 03 00.0 +14
BBGH LR LR
comp=Z,3µm,20.0s,MS5.5
MDJ Mudanjiang 67.03 310 P **P 23 02 47.8 -0.6**
MDJ pP pP 23 02 51.5 -0.1
MDJ sP sP 23 02 52.9 +0.1
MDJ PcP PcP 23 03 16.3 -0.4
MDJ PP PP 23 05 15.3 -0.2
MDJ S S 23 11 41.0 -0.8
MDJ sS sS 23 11 46.5 -0.6
MDJ pmax pmax
comp=Z,18nm,1.1s,mb5.0
MDJ pmax pmax
comp=Z,200nm,5.9s
MDJ LR LR
comp=N,400nm,16.9s,MS5.1
MDJ LR LR
comp=E,1µm,19.0s,MS5.1
MDJ LR LR
comp=Z,960nm,19.0s,MS5.0
MDJ Mudanjiang 67.03 310 PFAKE 23 03 00.0 +12
MDJ LR LR
comp=Z,1µm,21.0s,MS5.0
MAJO Matsushiro 67.09 299 *e*P **P 23 02 48.3 -0.6**
MAJO pmax pmax
comp=Z,100nm,1.0s,mb5.8
MAJO MLR MLR
comp=Z,1µm,20.0s,MS5.0
MAJO Matsushiro 67.09 299 *e*P **P 23 02 48.3 -0.6**
comp=Z,100nm,1.0s,mb5.8
MAJO LR LR
comp=Z,1µm,20.0s,MS5.0
MAT Matsushiro 67.09 299 P **P 23 02 48.2 -0.7**
MAT S S 23 11 41.0 -1.8
MJAR Matsushiro Arr 67.09 299 P **P 23 02 48.6 -0.3**
comp=Z,18nm,0.8s,mb5.2,baz=44,slow=5.5,SNR=56
MJAR LR LR 23 26 33.1
comp=Z,664nm,19.5s,MS4.9,baz=80,slow=31
NSS Namsos 67.28 17 *e*P **P 23 02 48.7 -0.9**
NSS AMB AMB 23 02 51.3
comp=Z,66nm,1.2s,mb5.6
RKT Rikitea 67.36 186 *e*S S 23 11 46.0 0.0
comp=Z,2µm,27.5s
RKT *e*LQ 23 20 00.5
comp=Z,4µm,28.5s
RKT *e*LR LR 23 22 57.0
comp=Z,3µm,25.8s,baz=5.4
RKT *e*T 00 15 47.6
comp=Z,13nm,0.3s
LVZ Lovozero 67.40 6 P **P 23 02 50.8 +0.4**
comp=Z,797nm,1.2s,mb6.6,SNR=22
LVZ Lovozero 67.40 6 ⇑*i*P **P 23 02 50.2 -0.2**
LVZ MLR MLR
comp=Z,1µm,21.0s,MS5.1
RRH Rhenigidale 67.51 29 P **P 23 02 49.2 -1.9**
RRH Rhenigidale 67.51 29 *e*P **P 23 02 49.2 -1.9**
LRW Lerwick 67.59 25 AMS AMS 23 32 00.3
comp=Z,1µm,21.5s,MS5.1
APA Apatity 67.62 7 ⇑*i*P **P 23 02 52.0 +0.3**
APA *i* S S 23 11 46.0 -2.2
APA pmax pmax
comp=Z,500nm,3.2s
APA pmax pmax
comp=Z,72nm,1.2s,mb5.6
RSC Scourie 67.70 28 P **P 23 02 51.8 -0.6**
RSC Scourie 67.70 28 *e*P **P 23 02 51.8 -0.6**
RRR Rubha Reidh 67.86 29 P **P 23 02 52.7 -0.7**
RRR Rubha Reidh 67.86 29 *e*P **P 23 02 52.7 -0.7**
KAC Achnashellach 68.31 29 P **P 23 02 54.7 -1.5**
KAC Achnashellach 68.31 29 *e*P **P 23 02 54.7 -1.5**
KPL Plockton 68.31 29 P **P 23 02 55.1 -1.2**
KPL AMb AMB 23 03 06.2
comp=Z,61nm,2.5s,mb5.2
KPL AMS AMS 23 32 26.8
comp=Z,2µm,14.4s
KPL Plockton 68.31 29 *e*P **P 23 02 55.1 -1.2**
KPL AMb AMB 23 03 06.2
comp=Z,61nm,2.5s,mb5.2
KPL AMS AMS 23 32 26.8
comp=Z,2µm,14.4s,MS5.4
KSB Sheil Bridge 68.49 29 P **P 23 02 56.2 -1.2**
KSB Sheil Bridge 68.49 29 *e*P **P 23 02 56.2 -1.2**
KAR1 Arisaig 68.58 29 P **P 23 02 56.9 -1.0**
KAR1 Arisaig 68.58 29 *e*P **P 23 02 56.9 -1.0**
HIA Hailar 68.92 319 *i* P **P 23 03 00.8 +0.6**
HIA Hailar 68.92 319 *e*P **P 23 03 00.4 +0.2**
comp=Z,104nm,1.4s,mb5.6
HIA LR LR
comp=Z,1µm,19.0s,MS5.1
AFI Afiamalu 69.63 224 LR LR 23 27 55.8
comp=Z,887nm,18.8s,MS5.0,baz=47,slow=31
AFI Afiamalu 69.63 224 PFAKE 23 03 20.0 +15
AFI LR LR
comp=Z,2µm,22.0s,MS5.2
EAB Aberfoyle 69.67 29 P **P 23 03 03.7 -0.9**
EAB Aberfoyle 69.67 29 *e*P **P 23 03 03.7 -0.9**
CN2 Changchun 69.80 312 *e*P **P 23 03 06.4 +0.7**
CN2 *es*P sP 23 03 13.0 +2.8
CN2 *e*S S 23 12 14.0 -0.9
CN2 pmax pmax
comp=Z,20nm,1.1s,mb5.0
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,700nm,19.0s,MS5.1
CN2 LR LR
comp=E,800nm,19.0s,MS5.1
CN2 LR LR
comp=Z,200nm,14.0s,MS4.5
TBI Tubuai 69.85 200 *e*LQ 23 20 32.4
comp=Z,3µm,30.2s
TBI *e*LR LR 23 24 00.3
comp=Z,928nm,29.8s,baz=14
TBI *e*T 00 18 52.0
comp=Z,35nm,0.2s
EBH Black Hill 69.91 29 P **P 23 03 05.8 -0.4**
EBH Black Hill 69.91 29 *e*P **P 23 03 05.8 -0.4**
PGBU Glenifferbraes 69.91 30 P **P 23 03 04.6 -1.6**
PGBU AMb AMB 23 03 18.0
comp=Z,121nm,1.8s,mb5.5
PGBU AMS AMS 23 32 57.8
comp=Z,2µm,15.9s

PGBU Glenifferbraes 69.91 30 *e*P **P 23 03 04.6 -1.6**
PGBU AMb AMB 23 03 18.0
comp=Z,121nm,1.8s,mb5.5
PGBU AMS AMS 23 32 57.8
comp=Z,2µm,15.9s,MS5.4
FUNA Funafuti 70.12 235 PFAKE 23 03 20.0 +12
FUNA LR LR
comp=Z,10µm,19.0s,MS6.1
NB2 NORSAR Subarra 70.18 19 P **P 23 03 07.7 0.0**
comp=Z,2.1nm,0.7s,mb4.2,baz=337,slow=6.2
NOA NORSAR Array B 70.18 19 P **P 23 03 07.7 -0.1**
comp=Z,32nm,1.0s,mb5.2,baz=333,slow=6.0,SNR=28
NOA LR LR 23 31 20.7
comp=Z,703nm,21.4s,MS4.9,baz=320,slow=34
EAU Auchinoon 70.25 29 P **P 23 03 07.2 -1.1**
EAU Auchinoon 70.25 29 *e*P **P 23 03 07.2 -1.1**
NAO01 NORSAR Array S 70.27 19 *e*P **P 23 03 08.2 -0.1**
comp=Z,37nm,0.8s,mb5.4
NAO01 LR LR
comp=Z,1µm,19.0s,MS5.1
EDI Edinburgh 70.28 29 AMS AMS 23 33 03.2
comp=Z,1µm,20.7s,MS5.2
EBL Broad Law 70.44 29 P **P 23 03 08.7 -0.8**
EBL Broad Law 70.44 29 *e*P **P 23 03 08.7 -0.8**
ESY Stoneypath 70.48 29 P **P 23 03 08.8 -0.9**
ESY Stoneypath 70.48 29 *e*P **P 23 03 08.8 -0.9**
CBIJ Chichi jima 70.50 289 P **P 23 03 09.6 -0.7**
comp=Z,99nm,0.9s,mb5.7,baz=327,slow=18,SNR=3.6
GAL1 Galloway 70.57 30 AMS AMS 23 34 51.7
comp=Z,1µm,14.5s,MS5.3
GMM Mts of Mourne 70.60 31 P **P 23 03 09.4 -1.0**
GMM Mts of Mourne 70.60 31 *e*P **P 23 03 09.4 -1.0**
ESK Eskdalemuir 70.75 29 AMS AMS 23 36 08.2
comp=Z,2µm,17.3s,MS5.4
ESK Eskdalemuir 70.75 29 PFAKE 23 03 20.0 +8.7
ESK LR LR
comp=Z,1µm,20.0s,MS5.2
GCD Castle Douglas 70.85 30 P **P 23 03 11.1 -0.8**
GCD Castle Douglas 70.85 30 *e*P **P 23 03 11.1 -0.8**
ECK Cauldkaine Hil 70.88 29 P **P 23 03 10.8 -1.4**
ECK Cauldkaine Hil 70.88 29 *e*P **P 23 03 10.8 -1.4**
KONO Kongsberg 71.00 21 *e*P **P 23 03 12.6 -0.2**
KONO pmax pmax
comp=Z,59nm,1.3s,mb5.4
KONO MLR MLR
comp=Z,1µm,20.0s,MS5.1
KONO Kongsberg 71.00 21 *e*P **P 23 03 12.6 -0.2**
comp=Z,59nm,1.3s,mb5.4
KONO LR LR
comp=Z,1µm,20.0s,MS5.1
DSB Dublin 71.21 32 *e*P **P 23 03 14.4 +0.3**
XDE Dent Fell 71.29 30 P **P 23 03 13.8 -0.8**
XDE Dent Fell 71.29 30 *e*P **P 23 03 13.8 -0.8**
XAL Allendale 71.46 29 P **P 23 03 15.0 -0.6**
XAL Allendale 71.46 29 *e*P **P 23 03 15.0 -0.6**
WLF1 Llynfaes 71.92 31 AMS AMS 23 34 52.2
comp=Z,8µm,14.9s,MS6.1
JOF Joensuu 71.95 9 *e*P **P 23 03 17.2 -1.2**
JOF Joensuu 71.95 9 *e*p **P 23 03 17.2 -1.2**
comp=Z,72nm,1.2s,mb5.5
KAF Kangasniemi 72.07 12 *e*P **P 23 03 18.5 -0.7**
KAF pmax pmax
comp=Z,60nm,1.1s,mb5.4
KAF Kangasniemi 72.07 12 *e*P **P 23 03 18.5 -0.7**
comp=Z,60nm,1.1s,mb5.4
KAF Kangasniemi 72.07 12 *e*p **P 23 03 18.5 -0.7**
comp=Z,60nm,1.1s,mb5.4,baz=338,slow=6.4
SNY Shenyang 72.16 311 ⇑P **P 23 03 20.3 +0.2**
SNY S S 23 12 42.8 +0.5
SNY pmax pmax
comp=Z,40nm,1.6s,mb5.1
SNY pmax pmax
comp=Z,290nm,3.9s
SNY LR LR
comp=N,750nm,16.7s,MS5.1
SNY LR LR
comp=E,610nm,20.1s,MS5.1
SNY LR LR
comp=Z,790nm,26.5s
FINES FINESS Array B 72.68 12 P **P 23 03 22.5 -0.3**
comp=Z,57nm,0.9s,mb5.5,baz=354,slow=5.7,SNR=44
FINES LR LR 23 35 43.9
comp=Z,832nm,18.6s,MS5.0,baz=346,slow=36
FINES FINESS Array B 72.68 12 P **P 23 03 22.5 -0.3**
FINES LR LR 23 35 43.9
KSRS Korea Array 72.72 306 P **P 23 03 22.7 -0.8**
comp=Z,13nm,0.9s,mb4.8,baz=54,slow=5.9,SNR=46
KSRS LR LR 23 34 43.7
comp=Z,486nm,19.6s,MS4.8,baz=30,slow=35
KBI1 Birley Grange 72.99 30 P **P 23 03 23.0 -1.8**
KBI1 Birley Grange 72.99 30 *e*P **P 23 03 23.0 -1.8**
HLM1 Long Mynd 73.09 31 P **P 23 03 23.6 -1.8**
HLM1 Long Mynd 73.09 31 *e*P **P 23 03 23.6 -1.8**
IRK Irkutsk 73.22 329 *e*P **P 23 03 25.8 -0.4**
IRK pmax pmax
comp=Z,234nm,1.5s,mb5.9
HTR Trewern Hill 73.30 31 P **P 23 03 25.3 -1.4**
HTR Trewern Hill 73.30 31 *e*P **P 23 03 25.3 -1.4**
INCN Inchon 73.45 306 PFAKE 23 03 40.0 +12
INCN LR LR
comp=Z,574nm,19.0s,MS4.9
INCN Inchon 73.45 306 P **P 23 03 28.3 +0.5**
SNR=6.8
MCH1 Michaelchurch 73.47 31 P **P 23 03 26.5 -1.1**
MCH1 AMb AMB 23 03 39.5
comp=Z,54nm,1.9s,mb5.2
MCH1 AMS AMS 23 33 31.6
comp=Z,2µm,16.7s
MCH1 Michaelchurch 73.47 31 *e*P **P 23 03 26.5 -1.1**
MCH1 AMb AMB 23 03 39.5
comp=Z,54nm,1.9s,mb5.2
MCH1 AMS AMS 23 33 31.6
comp=Z,2µm,16.7s,MS5.4
CWF Charnwood Fore 73.49 30 P **P 23 03 26.9 -0.8**
CWF AMb AMB 23 03 39.2
comp=Z,60nm,1.4s,mb5.3
CWF AMS AMS 23 35 12.9
comp=Z,2µm,18.6s
CWF Charnwood Fore 73.49 30 *e*P **P 23 03 26.9 -0.8**
CWF AMb AMB 23 03 39.2
comp=Z,60nm,1.4s,mb5.3
CWF AMS AMS 23 35 12.9
comp=Z,2µm,18.6s,MS5.3
RPN Rapa Nui 73.50 161 LR LR 23 28 05.1
comp=Z,776nm,18.7s,MS5.0,baz=27,slow=30
NNA Nana 73.59 126 PFAKE 23 03 40.0 +11
NNA LR LR
comp=Z,410nm,19.0s,MS4.7
MUD Monsted U'grnd 73.67 22 *i* P **P 23 03 29.5 +0.7**
MUD Monsted U'grnd 73.67 22 *i* P **P 23 03 29.5 +0.7**
comp=Z,18nm,1.1s,mb4.9
MUD
comp=Z,990nm,21.0s
HTL Hartland 73.70 33 AMS AMS 23 35 39.2
comp=Z,2µm,15.4s,MS5.5
KRAR Krasnoyarsk 73.81 337 ⇓*i*P **P 23 03 30.5 +0.9**
KRAR pmax pmax
comp=Z,99nm,1.2s,mb5.6
HGH Gray Hill 73.83 31 P **P 23 03 29.0 -0.8**
HGH Gray Hill 73.83 31 *e*P **P 23 03 29.0 -0.8**
TLY Talaya 73.91 329 P **P 23 03 31.0 +0.7**
comp=Z,529nm,1.2s,mb6.3,SNR=28
TLY Talaya 73.91 329 *e*P **P 23 03 30.1 -0.2**
TLY *e*S S 23 13 10.3 +8.5
TLY *e*PS 23 13 40.0
TLY pmax pmax
comp=Z,141nm,1.2s,mb5.8
TLY MLR MLR
comp=Z,1µm,16.0s,MS5.3
TLY Talaya 73.91 329 *e*P **P 23 03 30.6 +0.3**
comp=Z,151nm,1.3s,mb5.8
TLY LR LR
comp=Z,1µm,19.0s,MS5.3
TLY Talaya 73.91 329 P **P 23 03 31.2 +0.9**
SNR=86
CCA1 Carnmenellis 74.05 34 AMS AMS 23 35 53.9
comp=Z,3µm,15.8s,MS5.6
DYA Yadsworthy 74.36 33 AMS AMS 23 35 58.7
comp=Z,2µm,17.7s,MS5.5
MOY Mondy 74.88 330 *e*P **P 23 03 37.4 +1.5**
MOY *e* 23 06 21.7
MOY pmax pmax
comp=Z,152nm,1.9s,mb5.6
PUL Pulkovo 74.89 10 *e*P **P 23 03 36.4 +0.6**
DL2 Dalian 75.27 310 P **P 23 03 37.1 -1.3**

DL2					pmax	pmax		
	comp=Z,30nm,1.3s,mb5.1							
DL2					pmax	pmax		
	comp=Z,210nm,7.3s							
DL2					LR	LR		
	comp=N,380nm,16.1s							
DL2					LR	LR		
	comp=E,440nm,23.0s							
DL2					LR	LR		
	comp=Z,440nm,25.1s							
ULN	**Ulaanbaatar**	**75.60**	**325**	⇑*iP*		**P**	**23 03 40.8**	**+0.7**
ULN	**Ulaanbaatar**	**75.60**	**325**	*eP*		**P**	**23 03 40.6**	**+0.5**
	comp=Z,78nm,1.4s,mb5.4							
ULN					LR	LR		
	comp=Z,2μm,22.0s,MS5.3							
ULN	**Ulaanbaatar**	**75.60**	**325**	P		**P**	**23 03 41.2**	**+1.1**
	SNR=32							
VSU	**Vasula**	**75.63**	**13***c*	*iP*		**P**	**23 03 39.3**	**-0.8**
VSU					pmax	pmax		
	comp=Z,122nm,1.3s,mb5.7							
VSU	**Vasula**	**75.63**	**13**	⇑*iP*		**P**	**23 03 39.4**	**-0.7**
SONM	**Songino Array**	**75.90**	**325**	P		**P**	**23 03 42.3**	**+0.4**
	comp=Z,44nm,0.9s,mb5.4,baz=20,slow=2.8,SNR=148							
SONM					LR	LR	23 37 42.2	
	comp=Z,1μm,18.9s,MS5.3,baz=41,slow=36							
SONM	**Songino Array**	**75.90**	**325**	P		**P**	**23 03 42.3**	**+0.4**
SONM					LR	LR	23 37 42.2	
JSA	**Saint Aubin**	**76.04**	**33**	AMS		AMS	23 37 08.9	
	comp=Z,2μm,16.0s,MS5.6							
BSEG	**Bad Segeberg**	**76.20**	**23**	*eP*		**P**	**23 03 43.6**	**+0.2**
	comp=Z,75nm,1.3s,mb5.5							
ROSF	**Rostrenen**	**76.30**	**34**	*eP*		**P**	**23 03 43.7**	**-0.4**
	comp=Z,196nm,1.5s,mb5.5							
ROSF	**Rostrenen**	**76.30**	**34**	*eP*		**P**	**23 03 43.7**	**-0.4**
ROSF					pmax	pmax		
	comp=Z,98nm,1.5s,mb5.5							
ROSF	**Rostrenen**	**76.30**	**34**	*eP*		**P**	**23 03 43.7**	**-0.4**
	comp=Z,98nm,1.5s,mb5.5							
BSD	**Bornholm Skovb**	**76.36**	**20**	*i P*		**P**	**23 03 42.1**	**-2.2**
BSD	**Bornholm Skovb**	**76.36**	**20**	*i P*		**P**	**23 03 42.1**	**-2.2**
	comp=Z,30nm,1.0s,mb5.2							
BSD								
	comp=Z,900nm,18.0s							
RGN	**Rugen**	**76.47**	**21**	*eP*		**P**	**23 03 45.3**	**+0.4**
	comp=Z,203nm,1.5s,mb5.8							
SGMF	**Saint Gilles**	**76.64**	**33**	*eP*		**P**	**23 03 45.8**	**-0.3**
	comp=Z,174nm,1.4s,mb5.5							
SGMF	**Saint Gilles**	**76.64**	**33**	*eP*		**P**	**23 03 45.8**	**-0.3**
SGMF					pmax	pmax		
	comp=Z,87nm,1.4s,mb5.5							
SGMF	**Saint Gilles**	**76.64**	**33**	*eP*		**P**	**23 03 45.8**	**-0.3**
	comp=Z,87nm,1.4s,mb5.5							
QUIF	**Quistinic**	**76.68**	**34**	*eP*		**P**	**23 03 45.9**	**-0.3**
	comp=Z,188nm,1.6s,mb5.5							
QUIF	**Quistinic**	**76.68**	**34**	*eP*		**P**	**23 03 45.9**	**-0.3**
QUIF					pmax	pmax		
	comp=Z,94nm,1.6s,mb5.5							
QUIF	**Quistinic**	**76.68**	**34**	*eP*		**P**	**23 03 45.9**	**-0.3**
	comp=Z,94nm,1.6s,mb5.5							
IBBN	**Ibbenburen**	**76.87**	**25**	*eP*		**P**	**23 03 47.4**	**+0.2**
	comp=Z,191nm,1.6s,mb5.8							
FLN	**La Foliniere**	**77.03**	**32**	⇑*iP*		**P**	**23 03 48.0**	**-0.2**
	comp=Z,128nm,1.5s,mb5.3							
FLN					*e*MLR	MLR		
	comp=Z,3μm,18.2s,MS5.3							
FLN	**La Foliniere**	**77.03**	**32**	⇑*iP*		**P**	**23 03 48.0**	**-0.2**
FLN					pmax	pmax		
	comp=Z,64nm,1.5s,mb5.3							
FLN					MLR	MLR		
	comp=Z,3μm,18.3s,MS5.6							
FLN	**La Foliniere**	**77.03**	**32**	⇑*iP*		**P**	**23 03 48.0**	**-0.2**
	comp=Z,64nm,1.5s,mb5.3							
FLN					LR	LR		
	comp=Z,3μm,18.3s,MS5.6							
GRR	**Gorron**	**77.20**	**32**	⇑*iP*		**P**	**23 03 49.2**	**0.0**
	comp=Z,367nm,1.6s,mb5.8							
GRR	**Gorron**	**77.20**	**32**	⇑*iP*		**P**	**23 03 49.2**	**0.0**
GRR					pmax	pmax		
	comp=Z,184nm,1.6s,mb5.8							
GRR	**Gorron**	**77.20**	**32**	⇑*iP*		**P**	**23 03 49.2**	**0.0**
	comp=Z,184nm,1.6s,mb5.8							
SNF	**Seneffe**	**77.29**	**28**	P		**P**	**23 03 50.0**	**+0.3**
	comp=Z,36nm,2.0s,mb5.0							
LDF	**La Druitiere**	**77.31**	**32**	⇑*iP*		**P**	**23 03 49.3**	**-0.5**
	comp=Z,46nm,1.2s,mb5.0							
LDF	**La Druitiere**	**77.31**	**32**	⇑*iP*		**P**	**23 03 49.3**	**-0.5**
LDF					pmax	pmax		
	comp=Z,23nm,1.2s,mb5.0							
LDF	**La Druitiere**	**77.31**	**32**	⇑*iP*		**P**	**23 03 49.3**	**-0.5**
	comp=Z,23nm,1.2s,mb5.0							
NVS	**Novosibirsk**	**77.33**	**341**	*eP*		**P**	**23 03 49.3**	**-0.5**
NVS				*e*			23 06 45.8	
NVS				*e*S		S	23 13 29.7	-10
NVS					pmax	pmax		
	comp=Z,447nm,1.4s,mb6.2							
NVS					pmax	pmax		
	comp=N,236nm,1.7s							
NVS					pmax	pmax		
	comp=E,214nm,1.3s							
NVS					pmax	pmax		
	comp=N,24nm,1.5s							
NVS					pmax	pmax		
	comp=Z,34nm,1.5s,mb5.1							
NVS					pmax	pmax		
	comp=E,15nm,1.3s							
NVS					smax			
	comp=E,75nm,3.3s							
BJI	**Beijing**	**77.34**	**314**	P		**P**	**23 03 49.5**	**-0.6**
BJI				PP		PP	23 06 39.8	-3.9
BJI				S		S	23 13 38.8	-1.4
BJI					pmax	pmax		
	comp=Z,12nm,1.6s,mb4.6							
BJI					pmax	pmax		
	comp=Z,250nm,6.1s							
BJI					LR	LR		
	comp=N,740nm,19.0s,MS5.2							
BJI					LR	LR		
	comp=E,690nm,19.0s,MS5.2							
BJI					LR	LR		
	comp=Z,710nm,25.1s							
BJT	**Baijiatuau**	**77.36**	**314**	PFAKE			23 04 00.0	+10
BJT					LR	LR		
	comp=Z,624nm,20.0s,MS4.9							
NRDL	**Niedersach Rie**	**77.41**	**24**	*eP*		**P**	**23 03 49.3**	**-1.0**
	comp=Z,72nm,1.4s,mb5.4							
BUG	**Bochum--Univer**	**77.47**	**26**	*eP*		**P**	**23 03 50.2**	**-0.4**
	comp=Z,56nm,1.5s,mb5.3							
GUMO	**Guam**	**77.59**	**277**	PFAKE			23 04 00.0	+8.1
GUMO					LR	LR		
	comp=Z,2μm,22.0s,MS5.5							
BAIF	**Baives**	**77.64**	**29**	⇑*iP*		**P**	**23 03 51.6**	**0.0**
	comp=Z,319nm,1.7s,mb5.7							
BAIF	**Baives**	**77.64**	**29**	⇑*iP*		**P**	**23 03 51.6**	**0.0**
BAIF					pmax	pmax		
	comp=Z,159nm,1.7s,mb5.7							
BAIF	**Baives**	**77.64**	**29**	⇑*iP*		**P**	**23 03 51.6**	**0.0**
	comp=Z,159nm,1.7s,mb5.7							
BCLA	**Clavier**	**77.71**	**28**	P		**P**	**23 03 52.3**	**+0.3**
	comp=Z,49nm,1.9s,mb5.1							
DOU	**Dourbes**	**77.74**	**28**	P		**P**	**23 03 52.6**	**+0.4**
	comp=Z,28nm,1.8s,mb4.9							
ZALV	**Zalesovo Beam**	**77.77**	**340**	P		**P**	**23 03 51.9**	**-0.4**
	comp=Z,33nm,0.9s,mb5.3,baz=17,slow=3.6,SNR=92							
ZALV					LR	LR	23 39 25.5	
	comp=Z,844nm,18.9s,MS5.1,baz=32,slow=37							
MEM	**Membach**	**77.78**	**27**	P		**P**	**23 03 53.2**	**+0.8**
	comp=Z,32nm,1.9s,mb4.9							
GIVF	**Givet**	**77.81**	**28**	⇑*iP*		**P**	**23 03 52.5**	**-0.1**
	comp=Z,306nm,1.7s,mb5.6							
GIVF	**Givet**	**77.81**	**28**	⇑*iP*		**P**	**23 03 52.5**	**-0.1**
GIVF					pmax	pmax		
	comp=Z,153nm,1.7s,mb5.7							
GIVF	**Givet**	**77.81**	**28**	⇑*iP*		**P**	**23 03 52.5**	**-0.1**
	comp=Z,153nm,1.7s,mb5.7							
CLZ	**Clausthal**	**78.06**	**24**	*eP*		**P**	**23 03 54.4**	**+0.5**
	comp=Z,105nm,1.4s,mb5.6							
MSVF	**Nonsavu**	**78.18**	**231**	PFAKE			23 04 10.0	+15
MSVF					LR	LR		
	comp=Z,2μm,20.0s,MS5.5							
RUE	**Ruedersdorf**	**78.45**	**22**	*eP*		**P**	**23 03 55.8**	**-0.3**
	comp=Z,80nm,1.4s,mb5.5							
RUE	**Ruedersdorf**	**78.45**	**22**	*eP*		**P**	**23 03 55.8**	**-0.3**
	comp=Z,47nm,1.1s,mb5.3							
GKP	**Gorka Klasztor**	**78.61**	**20**	*eP*		**P**	**23 03 56.9**	**0.0**
	comp=Z,100nm,1.1s,mb5.7							
GKP				*e*pP		pP	23 03 59.4	-0.9
GKP				*e*PcP		PcP	23 04 04.6	-1.4
GKP				*e*SKS			23 13 60.0	
GKP				LMZ			23 39 16.0	
	comp=Z,800nm,22.4s							
GKP	**Gorka Klasztor**	**78.61**	**20**	⇑*eP*		**P**	**23 03 56.9**	**0.0**
GKP				*e**PP		pP	23 03 59.4	-0.8
GKP				*e*			23 04 04.6	
GKP				*e*			23 14 00.0	
GKP					pmax	pmax		
	comp=Z,100nm,1.1s,mb5.7							
GKP					MLR	MLR		
	comp=Z,800nm,22.4s,MS5.0							
WLF	**Walferdange**	**78.64**	**28**	P		**P**	**23 03 57.5**	**+0.4**
	comp=Z,40nm,1.8s,mb5.0							
WLF	**Walferdange**	**78.64**	**28**	*eP*		**P**	**23 03 57.5**	**+0.3**
	comp=Z,92nm,1.7s,mb5.4							
WLF	**Walferdange**	**78.64**	**28**	*eP*		**P**	**23 03 57.3**	**+0.1**
WLF					pmax	pmax		
	comp=Z,90nm,1.6s,mb5.5							
WLF					MLR	MLR		
	comp=Z,993nm,19.0s,MS5.2							
WLF	**Walferdange**	**78.64**	**28**	*eP*		**P**	**23 03 57.3**	**+0.2**
	comp=Z,90nm,1.6s,mb5.5							
WLF					LR	LR		
	comp=Z,993nm,19.0s,MS5.2							
SVE	**Sverdlovsk**	**78.81**	**354**	⇑*eP*		**P**	**23 03 58.1**	**+0.1**
SVE				*e*S		S	23 13 59.2	+3.8
SVE				*e*SSS			23 22 23.8	
SVE					pmax	pmax		
	comp=Z,155nm,1.4s,mb5.7							
SVE					MLR	MLR		
	comp=Z,1μm,22.0s,MS5.1							
UBBA	**Unterbreizbach**	**78.85**	**25**	*eP*		**P**	**23 03 58.4**	**+0.1**
	comp=Z,68nm,1.6s,mb5.3							
TNS	**Taunus Mts**	**78.89**	**26**	*eP*		**P**	**23 03 58.5**	**-0.1**
	comp=Z,92nm,1.5s,mb5.5							
RUP	**Ruppelstein**	**78.90**	**27**	*eP*		**P**	**23 03 58.8**	**+0.2**
ABH	**Alteburg**	**78.91**	**27**	*eP*		**P**	**23 03 58.6**	**0.0**
MFF	**Saint Martin d**	**78.94**	**33**	⇑*iP*		**P**	**23 03 58.8**	**-0.1**
	comp=Z,200nm,1.7s,mb5.5							
MFF	**Saint Martin d**	**78.94**	**33**	⇑*iP*		**P**	**23 03 58.8**	**-0.1**
MFF					pmax	pmax		
	comp=Z,100nm,1.7s,mb5.5							
MFF	**Saint Martin d**	**78.94**	**33**	⇑*iP*		**P**	**23 03 58.8**	**-0.1**
	comp=Z,100nm,1.7s,mb5.5							
HHC	**Hu-ho-hao-te**	**79.03**	**317**	*eP*		**P**	**23 03 59.4**	**-0.1**
HHC				sP		sP	23 04 04.6	+0.6
HHC				PcP		PcP	23 04 08.8	+0.8
HHC				PP		PP	23 06 59.9	+2.1
HHC				S		S	23 13 55.9	-2.4
HHC				sS		sS	23 14 02.3	-1.5
HHC				SKS			23 14 08.3	
HHC				ScS		ScS	23 14 17.0	-4.7
HHC					pmax	pmax		
	comp=Z,30nm,0.8s,mb5.3							
HHC					pmax	pmax		
	comp=Z,270nm,6.0s							
HHC					LR	LR		
	comp=N,770nm,18.2s,MS5.3							
HHC					LR	LR		
	comp=E,1μm,18.4s,MS5.3							
HHC					LR	LR		
	comp=Z,890nm,18.0s,MS5.1							
NACGM	**Naroch**	**79.05**	**14**	*e*		**P**	**23 03 56.0**	**-3.3**
SUW	**Suwalki**	**79.23**	**16**	*eP*		**P**	**23 03 59.4**	**-0.9**
	comp=Z,100nm,1.4s,mb5.5							
SUW				*e*pP		pP	23 04 01.5	-2.1
SUW				*e*PcP		PcP	23 04 05.9	-2.7
SUW				*e*S		S	23 14 00.2	+0.2
SUW				*e*SKSac		SKSac	23 14 08.7	-7.5
SUW				*e*ScS		ScS	23 14 19.1	-3.7
SUW				LMZ			23 34 51.1	
	comp=Z,800nm,26.5s							
SUW	**Suwalki**	**79.23**	**16**	⇑*eP*		**P**	**23 03 59.4**	**-0.9**
SUW				*e**PP		pP	23 04 01.5	-2.1
SUW				*e*			23 04 05.9	
SUW				*e*S		S	23 14 00.2	+0.2
SUW				*e*			23 14 08.7	
SUW				*e*			23 14 19.1	
SUW					pmax	pmax		
	comp=Z,100nm,1.4s,mb5.5							
SUW					MLR	MLR		
	comp=Z,800nm,26.5s,MS4.9							
SUW	**Suwalki**	**79.23**	**16**	*eP*		**P**	**23 03 59.8**	**-0.5**
	comp=Z,134nm,1.1s,mb5.8							
MEZF	**Maizieres J'vi**	**79.26**	**29**	⇑*iP*		**P**	**23 04 00.5**	**-0.1**
	comp=Z,290nm,1.9s,mb5.6							
MEZF	**Maizieres J'vi**	**79.26**	**29**	⇑*iP*		**P**	**23 04 00.5**	**-0.1**
	comp=Z,290nm,1.9s,mb5.9							
CLL	**Collm**	**79.29**	**23**	*eP*		**P**	**23 04 00.3**	**-0.4**
	comp=Z,84nm,1.3s,mb5.5							
CLL	**Collm**	**79.29**	**23**	⇑*iP*		**P**	**23 04 00.4**	**-0.3**
CLL				*i*			23 04 05.9	
CLL				*i*			23 04 11.7	
CLL					pmax	pmax		
	comp=Z,84nm,1.3s,mb5.5							
CLL					MLR	MLR		
	comp=Z,2μm,20.4s,MS5.4							
CLL	**Collm**	**79.29**	**23**	⇑*iP*		**P**	**23 04 00.4**	**-0.3**
	comp=Z,84nm,1.3s,mb5.5							
CLL				*i*			23 04 05.9	
CLL				*i*			23 04 11.7	
CLL					LR	LR		
	comp=Z,2μm,20.4s,MS5.4							
CLL	**Collm**	**79.29**	**23**	⇑*iP*		**P**	**23 04 00.4**	**-0.3**
	comp=Z,84nm,1.3s,mb5.5							
CLL				*i* sP		sP	23 04 05.9	+0.7
CLL				*i* pPcP			23 04 11.7	
CLL				Lm			23 40 00.0	
	comp=N,900nm,20.8s							
CLL				Lm			23 40 00.0	
	comp=E,700nm,21.5s							
CLL				Lm			23 40 00.0	
	comp=Z,2μm,20.4s							
ARU	**Arti**	**79.33**	**355**	P		**P**	**23 04 00.1**	**-0.8**
	comp=Z,454nm,1.1s,mb6.3,SNR=42							
ARU	**Arti**	**79.33**	**355***c*	*iP*		**P**	**23 04 00.0**	**-0.8**
ARU							23 06 59.3	
ARU				S		S	23 14 03.2	+2.2
ARU				SS		SS	23 19 05.5	-0.9
ARU					pmax	pmax		
	comp=Z,125nm,1.2s,mb5.7							
ARU	**Arti**	**79.33**	**355**	*eP*		**P**	**23 04 00.2**	**-0.6**
	comp=Z,133nm,1.3s,mb5.7							
ARU					LR	LR		
	comp=Z,824nm,20.0s,MS5.1							
HYF	**Humbligny**	**79.44**	**31**	⇑*iP*		**P**	**23 04 01.6**	**0.0**
MOX	**Moxa**	**79.48**	**24**	*eP*		**P**	**23 04 01.9**	**+0.1**
	comp=Z,80nm,1.6s,mb5.4							
MOX				*e*			23 04 13.0	
MOX								
	comp=Z,1μm,19.0s							
MOX	**Moxa**	**79.48**	**24**	*eP*		**P**	**23 04 01.5**	**-0.3**
	comp=Z,65nm,1.3s,mb5.4							
TOD	**Tromm**	**79.55**	**26**	*eP*		**P**	**23 04 01.8**	**-0.3**
KTD	**Kalmit**	**79.57**	**27**	*eP*		**P**	**23 04 02.5**	**+0.2**
MNK	**Minsk**	**79.61**	**13**	*eP*		**P**	**23 04 01.0**	**-1.4**
MNK					pmax	pmax		
	comp=Z,330nm,1.0s,mb6.2							
MICGM	**Minsk**	**79.61**	**13**	*eP*		**P**	**23 04 01.0**	**-1.4**
MOS	**Moscow**	**79.65**	**7**	*eP*		**P**	**23 04 01.4**	**-1.2**
MOS				*e*			23 04 08.2	
MOS				*e*S		S	23 14 07.1	+2.7
MOS					pmax	pmax		
	comp=Z,146nm,1.4s,mb5.7							
MOS					pmax	pmax		
	comp=Z,400nm,2.3s,mb5.9							
MOS					MLR	MLR		
	comp=Z,1μm,18.0s,MS5.3							
LANF	**Langenberg**	**79.77**	**27**	*eP*		**P**	**23 04 03.5**	**+0.1**
THEF	**They Montfort**	**79.82**	**28**	*eP*		**P**	**23 04 03.7**	**+0.1**
WERD	**Werda**	**79.86**	**24**	*eP*		**P**	**23 04 03.5**	**-0.3**
	comp=Z,25nm,1.4s,mb5.0							
LOR	**Lormes**	**79.89**	**30**	⇑*iP*		**P**	**23 04 03.9**	**-0.1**
	comp=Z,274nm,1.7s,mb5.6							
LOR				*e*MLR		MLR		
	comp=Z,3μm,22.5s,MS5.3							
LOR	**Lormes**	**79.89**	**30**	⇑*iP*		**P**	**23 04 03.9**	**-0.1**
LOR					pmax	pmax		
	comp=Z,137nm,1.7s,mb5.6							
LOR					MLR	MLR		
	comp=Z,3μm,22.5s,MS5.6							
LOR	**Lormes**	**79.89**	**30**	⇑*iP*		**P**	**23 04 03.9**	**-0.1**
	comp=Z,137nm,1.7s,mb5.6							
LOR					LR	LR		
	comp=Z,3μm,22.5s,MS5.6							
ECAL	**Calabor**	**79.91**	**40**	P		**P**	**23 04 02.9**	**-1.4**
	comp=Z,287nm,3.9s							
SSF	**Saint Saulge**	**79.93**	**31**	⇑*iP*		**P**	**23 04 04.1**	**-0.2**
	comp=Z,258nm,1.7s,mb5.6							
SSF	**Saint Saulge**	**79.93**	**31**	⇑*iP*		**P**	**23 04 04.1**	**-0.2**
SSF					pmax	pmax		
	comp=Z,129nm,1.7s,mb5.6							
SSF	**Saint Saulge**	**79.93**	**31**	⇑*iP*		**P**	**23 04 04.1**	**-0.2**
	comp=Z,129nm,1.7s,mb5.6							
TANN	**Tannenbergstha**	**79.94**	**24**	*eP*		**P**	**23 04 04.1**	**-0.1**
	comp=Z,42nm,1.5s,mb5.2							
BRG	**Berggiesshubel**	**79.94**	**23**	*eP*		**P**	**23 04 04.1**	**-0.1**
	comp=Z,119nm,1.4s,mb5.6							
BRG	**Berggiesshubel**	**79.94**	**23**	⇑*iP*		**P**	**23 04 04.4**	**+0.2**
	comp=Z,118nm,1.4s,mb5.6							
BRG				*i*			23 04 15.0	
	comp=Z,149nm,1.6s							
BRG								
	comp=N,985nm,17.8s							
BRG								
	comp=E,556nm,16.1s							
BRG								
	comp=Z,2μm,19.9s							
BRG	**Berggiesshubel**	**79.94**	**23**	⇑*iP*		**P**	**23 04 04.4**	**+0.2**
BRG				*i*			23 04 15.0	
BRG					pmax	pmax		
	comp=Z,71nm,1.4s,mb5.4							
BRG					MLR	MLR		
	comp=N,590nm,17.8s,MS5.1							
BRG					MLR	MLR		
	comp=E,333nm,16.1s,MS5.1							
BRG					MLR	MLR		
	comp=Z,976nm,19.9s,MS5.2							
GUNZ	**Gunzen**	**79.94**	**24**	*eP*		**P**	**23 04 04.1**	**-0.2**
	comp=Z,33nm,1.3s,mb5.1							
BTO	**Baotou**	**79.96**	**318**	*eP*		**P**	**23 04 03.8**	**-0.8**
PBRG	**Braganca**	**80.02**	**40**	*eP*		**P**	**23 04 04.7**	**-0.1**
	comp=Z,44nm,1.7s,mb5.1							
CDF	**Champ du Feu**	**80.09**	**28**	⇑*iP*		**P**	**23 04 05.0**	**-0.1**
	comp=Z,243nm,1.6s,mb5.6							
CDF	**Champ du Feu**	**80.09**	**28**	⇑*iP*		**P**	**23 04 05.0**	**-0.1**
CDF					pmax	pmax		
	comp=Z,122nm,1.6s,mb5.6							
CDF	**Champ du Feu**	**80.09**	**28**	⇑*iP*		**P**	**23 04 05.0**	**-0.1**
	comp=Z,122nm,1.6s,mb5.6							
NKC	**Novy Kostel**	**80.09**	**24**	*eP*		**P**	**23 04 05.3**	**+0.2**
NKC				*e*S		S	23 14 57.3	+48
NKC					MLR	MLR		
	comp=Z,2μm,17.1s,MS5.5							
NKC	**Novy Kostel**	**80.09**	**24**	*eP*		**P**	**23 04 05.3**	**+0.2**
NKC				*e*x		x	23 14 57.3	
NKC					AMS	AMS	23 41 30.0	
	comp=Z,2μm,17.1s							
TCF	**Toulx Ste Croi**	**80.11**	**32**	⇑*iP*		**P**	**23 04 04.8**	**-0.4**
	comp=Z,194nm,1.6s,mb5.5							
TCF	**Toulx Ste Croi**	**80.11**	**32**	⇑*iP*		**P**	**23 04 04.8**	**-0.4**
TCF					pmax	pmax		
	comp=Z,97nm,1.6s,mb5.5							
TCF	**Toulx Ste Croi**	**80.11**	**32**	⇑*iP*		**P**	**23 04 04.8**	**-0.4**
	comp=Z,97nm,1.6s,mb5.5							
AVF	**Avril sur Loir**	**80.11**	**31**	⇑*iP*		**P**	**23 04 04.7**	**-0.5**
	comp=Z,96nm,1.3s,mb5.3							
AVF	**Avril sur Loir**	**80.11**	**31**	⇑*iP*		**P**	**23 04 04.7**	**-0.5**
AVF					pmax	pmax		
	comp=Z,48nm,1.3s,mb5.3							
AVF	**Avril sur Loir**	**80.11**	**31**	⇑*iP*		**P**	**23 04 04.7**	**-0.5**
	comp=Z,48nm,1.3s,mb5.3							
BGF	**Bois d'Agland**	**80.12**	**31**	⇑*iP*		**P**	**23 04 04.9**	**-0.4**
	comp=Z,166nm,1.5s,mb5.4							
BGF	**Bois d'Agland**	**80.12**	**31**	⇑*iP*		**P**	**23 04 04.9**	**-0.4**
BGF					pmax	pmax		
	comp=Z,83nm,1.5s,mb5.4							
BGF	**Bois d'Agland**	**80.12**	**31**	⇑*iP*		**P**	**23 04 04.9**	**-0.4**
	comp=Z,83nm,1.5s,mb5.4							
HAU	**Haudompre**	**80.13**	**28**	⇑*iP*		**P**	**23 04 05.1**	**-0.2**
	comp=Z,166nm,1.5s,mb5.4							
HAU				*e*MLR		MLR		
	comp=Z,2μm,19.8s,MS5.2							
HAU	**Haudompre**	**80.13**	**28**	⇑*iP*		**P**	**23 04 05.1**	**-0.2**
HAU					pmax	pmax		
	comp=Z,83nm,1.5s,mb5.4							
HAU					MLR	MLR		
	comp=Z,2μm,19.8s,MS5.5							
HAU	**Haudompre**	**80.13**	**28**	⇑*iP*		**P**	**23 04 05.1**	**-0.2**
	comp=Z,83nm,1.5s,mb5.4							
HAU					LR	LR		
	comp=Z,2μm,19.8s,MS5.5							
OBN	**Obninsk**	**80.17**	**8**	P		**P**	**23 04 04.6**	**-0.8**
	comp=Z,909nm,1.2s,mb6.6,SNR=19							
OBN	**Obninsk**	**80.17**	**8***c*	*iP*		**P**	**23 04 04.5**	**-0.9**
OBN				*e*S		S	23 14 13.7	+3.8
OBN				*e*SS		SS	23 19 30.2	+11
OBN					pmax	pmax		
	comp=Z,248nm,1.2s,mb6.0							
OBN					MLR	MLR		
	comp=Z,1μm,18.0s,MS5.2							
OBN	**Obninsk**	**80.17**	**8**	*eP*		**P**	**23 04 04.8**	**-0.6**
	comp=Z,244nm,1.2s,mb6.0							
OBN					LR	LR		
	comp=Z,1μm,20.0s,MS5.2							
GRF	**Grafenberg Arr**	**80.22**	**25**	*eP*		**P**	**23 04 06.0**	**+0.2**
	comp=Z,137nm,1.5s,mb5.7							
GRF				*e*pP		pP	23 04 17.0	+7.9
GRF				*e*L			23 41 01.4	
	comp=Z,2μm,18.0s							
GRF	**Grafenberg Arr**	**80.22**	**25**	*eP*		**P**	**23 04 06.0**	**+0.2**
GRF					pmax	pmax		
	comp=Z,137nm,1.5s,mb5.7							
GRF					MLR	MLR		
	comp=Z,2μm,18.0s,MS5.4							
ECH	**Echery**	**80.22**	**28**	*eP*		**P**	**23 04 05.7**	**-0.1**
ECH	**Echery**	**80.22**	**28**	*eP*		**P**	**23 04 05.9**	**+0.1**
ECH					pmax	pmax		
	comp=Z,54nm,1.4s,mb5.3					

BFO Black Forest 80.51 27 *e*P **P 23 04 07.3 -0.1**
BFO pmax pmax
comp=Z,73nm,1.4s,mb5.4
BFO MLR MLR
comp=Z,1μm,19.0s,MS5.3
BFO Black Forest 80.51 27 *e*P **P 23 04 07.3 0.0**
comp=Z,73nm,1.4s,mb5.4
BFO LR LR
comp=Z,1μm,19.0s,MS5.3
MOF Molkenrain 80.53 28 *e*P **P 23 04 07.4 -0.1**
KSP Ksiaz 80.60 21 *e*P **P 23 04 07.8 0.0**
comp=Z,200nm,1.4s,mb5.8
KSP *e*pP pP 23 04 10.4 -0.7
KSP *e*S S 23 14 10.1 -4.5
KSP *e*SKS 23 14 22.0
KSP LMZ 23 41 26.2
comp=Z,2μm,19.5s
KSP Ksiaz 80.60 21⇑ *e*P **P 23 04 07.7 -0.1**
KSP *e*S S 23 14 19.5 +5.0
KSP LR LR
comp=Z,3μm,19.5s,MS5.6
AGO Saint Agoulin 80.65 31 *e*P **P 23 04 05.7 -2.5**
RJF Les Rejaudoux 80.66 33⇑ *i*P **P 23 04 07.6 -0.7**
comp=Z,127nm,1.4s,mb5.4
RJF *e*MLR MLR
comp=Z,721nm,19.0s,MS4.7
RJF Les Rejaudoux 80.66 33⇑ *i*P **P 23 04 07.6 -0.7**
RJF pmax pmax
comp=Z,64nm,1.4s,mb5.4
RJF MLR MLR
comp=Z,720nm,19.0s,MS5.0
RJF Les Rejaudoux 80.66 33⇑ *i*P **P 23 04 07.6 -0.7**
comp=Z,64nm,1.4s,mb5.4
RJF LR LR
comp=Z,720nm,19.0s,MS5.0
LFF La Frestale 80.67 33 *e*P **P 23 04 07.9 -0.4**
comp=Z,210nm,1.7s,mb5.5
LFF La Frestale 80.67 33 *e*P **P 23 04 07.9 -0.4**
LFF pmax pmax
comp=Z,105nm,1.7s,mb5.5
LFF La Frestale 80.67 33 *e*P **P 23 04 07.9 -0.4**
comp=Z,105nm,1.7s,mb5.5
MTE Manteigas 80.75 41 *e*S S 23 14 26.8 +10
MTE *e*LR LR 23 30 23.8
comp=Z,1μm,18.0s
MTE Manteigas 80.75 41 PFAKE 23 04 20.0 +11
MTE LR LR
comp=Z,2μm,19.0s,MS5.4
FELD Feldberg im Sc 80.80 27 *e*P **P 23 04 08.5 -0.4**
PRA Prague 80.80 23 P **P 23 04 09.0 +0.1**
PRA pP pP 23 04 10.0 -2.2
PRA AMS AMS 23 28 00.0
UPC Upice 80.83 22 *e*P **P 23 04 09.5 +0.5**
UPC Upice 80.83 22 *e*P **P 23 04 09.5 +0.5**
SPAK Spaichingen-Ko 80.86 27 *e*P **P 23 04 09.4 +0.2**
LOMF Lomont 80.86 28 *e*P **P 23 04 09.2 -0.1**
PLDF La Plantade 80.90 31 *e*P **P 23 04 09.4 -0.1**
PRU Pruhonice 80.91 23 *e*P **P 23 04 10.1 +0.6**
PRU *e*S S 23 14 26.5 +8.7
PRU MLR MLR
comp=Z,2μm,15.7s,MS5.5
PRU Pruhonice 80.91 23 *e*P **P 23 04 10.1 +0.6**
PRU *e*S S 23 14 26.5 +8.7
PRU AMS AMS 23 44 20.0
comp=Z,2μm,15.7s
BBS Basel-Blauen 80.99 28 *e*P **P 23 04 10.1 +0.1**
PMAFR Mafra 81.04 43 *e*S S 23 14 32.4 +13
PMAFR *e*LR LR 23 30 28.1
comp=Z,896nm,16.0s
DPC Dobruska-Polom 81.05 21 *e*P **P 23 04 10.8 +0.6**
DPC *e*S S 23 14 28.6 +9.3
DPC MLR MLR
comp=Z,1μm,17.2s,MS5.3
DPC Dobruska-Polom 81.05 21 *e*P **P 23 04 10.8 +0.6**
DPC *e*S S 23 14 28.6 +9.3
DPC AMS AMS 23 42 10.0
comp=Z,1μm,17.2s
SSE Sheshan 81.14 305 *e*P **P 23 04 11.9 +0.8**
SSE sP sP 23 04 25.3 +10
SSE S S 23 14 19.5 -1.4
SSE ScS ScS 23 14 37.3 -1.9
SSE pmax pmax
comp=Z,38nm,0.8s,mb5.4
SSE pmax pmax
comp=Z,250nm,4.4s
SSE LR LR
comp=N,640nm,19.2s,MS5.0
SSE LR LR
comp=E,270nm,19.1s,MS5.0
SSE LR LR
comp=Z,690nm,19.3s,MS5.0
EALK Alkurruntz 81.17 36 P **P 23 04 09.5 -1.5**
comp=Z,94nm,1.7s,mb5.4
CAF Calviac 81.19 33⇑ *i*P **P 23 04 10.5 -0.6**
comp=Z,32nm,1.1s,mb4.9
CAF Calviac 81.19 33⇑ *i*P **P 23 04 10.5 -0.6**
CAF pmax pmax
comp=Z,16nm,1.1s,mb4.9
CAF Calviac 81.19 33⇑ *i*P **P 23 04 10.5 -0.6**
comp=Z,16nm,1.1s,mb4.9
WET Wettzell 81.19 24 *e*P **P 23 04 10.8 -0.2**
comp=Z,51nm,1.4s,mb5.3
PCBR Castelo Branco 81.22 41 *e*P **P 23 04 11.0 -0.3**
comp=Z,22nm,1.2s,mb5.0
CABF La Chapelle 81.24 29⇑ *i*P **P 23 04 11.5 +0.2**
comp=Z,245nm,1.7s,mb5.6
CABF La Chapelle 81.24 29⇑ *i*P **P 23 04 11.5 +0.2**
CABF pmax pmax
comp=Z,122nm,1.7s,mb5.6
CABF La Chapelle 81.24 29⇑ *i*P **P 23 04 11.5 +0.2**
comp=Z,122nm,1.7s,mb5.6
SJPF Ste Jean 81.38 36 *e*P **P 23 04 11.5 -0.6**
comp=Z,35nm,1.2s,mb4.9
SJPF Ste Jean 81.38 36 *e*P **P 23 04 11.5 -0.6**
SJPF pmax pmax
comp=Z,18nm,1.2s,mb4.9
SJPF Ste Jean 81.38 36 *e*P **P 23 04 11.5 -0.6**
comp=Z,18nm,1.2s,mb4.9
LBL Lubilhac 81.39 32 *e*P **P 23 04 12.6 +0.5**
KHC Kasperske Hory 81.41 24 *e*P **P 23 04 12.2 +0.1**
KHC *e*S S 23 14 30.8 +7.7
KHC MLR MLR
comp=Z,2μm,16.6s,MS5.4
KHC Kasperske Hory 81.41 24 *e*P **P 23 04 12.6 +0.4**
comp=Z,56nm,1.4s,mb5.3
KHC Kasperske Hory 81.41 24 *e*P **P 23 04 12.2 +0.1**
KHC *e*S S 23 14 30.8 +7.7
KHC AMS AMS 23 42 40.0
comp=Z,2μm,16.6s
BRVK Borovoye 81.47 348 P **P 23 04 12.3 -0.1**
comp=Z,515nm,0.9s,mb6.5,SNR=34
BRVK Borovoye 81.47 348 P **P 23 04 12.6 +0.2**
BRVK pmax pmax
comp=Z,167nm,1.0s,mb5.9
BRVK Borovoye 81.47 348 *e*P **P 23 04 12.2 -0.2**
BRVK LR LR
comp=Z,1μm,20.0s,MS5.3
BRVK Borovoye 81.47 348 P **P 23 04 12.7 +0.3**
SNR=66
BVAR Borovoye Array 81.49 348 P **P 23 04 12.5 0.0**
comp=Z,41nm,0.9s,mb5.3,baz=20,slow=4.7,SNR=77
PMRV Marv??o 81.58 42 *e*P **P 23 04 12.8 -0.5**
comp=Z,60nm,1.6s,mb5.3
PMRV *e*S S 23 14 28.1 +2.9
PMRV *e*LR LR 23 30 52.9
comp=Z,1μm,18.0s
FUR Furstenfeldbru 81.59 25 *e*P **P 23 04 13.3 +0.2**
comp=Z,105nm,1.5s,mb5.5
VOSK Vostochnaya 81.69 348 P **P 23 04 13.1 -0.5**
VOSK pmax pmax
comp=Z,94nm,1.2s,mb5.6
EPLA Plasencia 81.70 40 P **P 23 04 14.5 +0.6**
EPLA pmax pmax
comp=Z,133nm,1.6s,mb5.6
EPLA Plasencia 81.70 40 P **P 23 04 14.5 +0.6**
comp=Z,133nm,1.6s,mb5.6
GEC2 GERESS Array S 81.70 24 *e*P **P 23 04 13.5 -0.2**
comp=Z,48nm,1.3s,mb5.3
ZRNK Zerenda 81.76 349 P **P 23 04 13.9 0.0**
ZRNK pmax pmax
comp=Z,127nm,1.1s,mb5.8
RAC Raciborz 81.78 20 *e*P **P 23 04 14.1 0.0**
NJ2 Nanjing 81.79 307 *e*P **P 23 04 15.3 +0.8**
NJ2 pP pP 23 04 19.3 +1.5
NJ2 sP sP 23 04 23.6 +4.6
NJ2 PP PP 23 07 24.8 +3.8
NJ2 S S 23 14 28.0 +0.4
NJ2 sS sS 23 14 35.0 +1.9
NJ2 pmax pmax
comp=Z,170nm,1.0s,mb5.9
NJ2 pmax pmax
comp=Z,490nm,4.3s
NJ2 LR LR
comp=N,950nm,19.0s,MS5.4
NJ2 LR LR
comp=E,1μm,18.4s,MS5.4
NJ2 LR LR
comp=Z,2μm,17.1s,MS5.6
TREC Trest 81.79 22 *e*P **P 23 04 14.5 +0.3**
TREC *e*S S 23 14 35.7 +8.7
TREC MLR MLR
comp=N,800nm,20.1s
TREC Trest 81.79 22 *e*P **P 23 04 14.5 +0.3**
TREC *e*S S 23 14 35.7 +8.7
TREC AMS AMS 23 41 50.0
SSB Saint Sauveur 81.83 31 PFAKE 23 04 30.0 +16
SSB LR LR
comp=Z,2μm,19.0s,MS5.4
ETSF Etsaut 81.83 35 *e*P **P 23 04 14.3 -0.2**
comp=Z,52nm,1.2s,mb5.0
ETSF Etsaut 81.83 35 *e*P **P 23 04 14.3 -0.2**
ETSF pmax pmax
comp=Z,26nm,1.2s,mb5.0
ETSF Etsaut 81.83 35 *e*P **P 23 04 14.3 -0.2**
comp=Z,26nm,1.2s,mb5.0
MORC Moravsky Berou 81.90 21 ⇓P **P 23 04 15.0 +0.3**
MORC Moravsky Berou 81.90 21 *e*P **P 23 04 14.2 -0.5**
comp=Z,52nm,1.4s,mb5.3
MORC Moravsky Berou 81.90 21 ⇓ *i*P **P 23 04 15.0 +0.3**
DAVA Damuels 81.93 27⇑ *i*pP **P 23 04 15.2 +0.3**
comp=Z,34nm,1.3s,mb5.1
PESTR Estremoz 81.93 42 *e*P **P 23 04 14.1 -1.0**
comp=Z,34nm,1.5s,mb5.1
PESTR *e*S S 23 14 40.1 +11
PESTR *e*LR LR 23 30 58.5
comp=Z,2μm,20.0s
EVOP Sao Brissos 81.94 43 *e*P **P 23 04 16.6 +1.4**
EVOP *e*S S 23 14 29.5 +0.5
EVOP *e*S S 23 14 30.3 +1.3
EVOP AMS AMS 23 39 03.1
comp=Z,979nm,19.9s,MS5.2
EVOP Sao Brissos 81.94 43 *e*P **P 23 04 16.5 +1.3**
EVOP *e*S S 23 14 30.2 +1.2
EVO Evora 81.99 43 *e*P **P 23 04 12.5 -2.9**
comp=Z,200nm,1.8s,mb5.4
EVO *e*MLR MLR
comp=Z,2μm,23.0s,MS5.0
OKC Ostrava-Krasne 81.99 21 *e*P **P 23 04 15.5 +0.3**
OKC *e*S S 23 14 34.0 +4.9
OKC MLR MLR
comp=Z,900nm,15.0s,MS5.3
OKC Ostrava-Krasne 81.99 21 *e*P **P 23 04 15.5 +0.3**
OKC *e*S S 23 14 34.0 +4.9
OKC AMS AMS 23 45 00.0
comp=Z,900nm,15.0s
OJC Ojcow 82.04 19⇑ *i*P **P 23 04 12.2 -3.3**
OJC *e*S S 23 14 27.1 -2.5
OJC MLR MLR
comp=Z,800nm,19.7s,MS5.1
VRAC Vranov 82.08 22 ⇑P **P 23 04 16.1 +0.4**
VRAC Vranov 82.08 22⇑ *i*P **P 23 04 16.1 +0.4**
VIEF Viey 82.08 35 *e*P **P 23 04 15.6 -0.2**
EPF Esparros 82.09 35 *e*P **P 23 04 15.2 -0.7**
comp=Z,107nm,1.8s,mb5.2
EPF Esparros 82.09 35 *e*P **P 23 04 15.2 -0.7**
EPF pmax pmax
comp=Z,54nm,1.8s,mb5.2
EPF Esparros 82.09 35 *e*P **P 23 04 15.2 -0.7**
comp=Z,54nm,1.8s,mb5.2
GUD Guadarrama 82.12 39 P **P 23 04 16.3 +0.3**
GUD pmax pmax
comp=Z,25nm,1.2s,mb5.0
GUD Guadarrama 82.12 39 P **P 23 04 16.3 +0.3**
comp=Z,25nm,1.2s,mb5.0
LPAZ La Paz 82.16 122 P **P 23 04 15.4 -1.0**
comp=Z,23nm,0.9s,mb5.1,baz=335,slow=6.0,SNR=42
LPAZ La Paz 82.16 122 P **P 23 04 15.4 -1.0**
LPAZ LR LR
comp=Z,276nm,19.0s,MS4.6
KURK Kurchatov 82.20 342 P **P 23 04 16.1 -0.2**
comp=Z,450nm,1.2s,mb6.3,SNR=14
KURK Kurchatov 82.20 342 *c i*P **P 23 04 15.9 -0.4**
KURK pmax pmax
comp=Z,121nm,1.2s,mb5.7
KURK Kurchatov 82.20 342 *e*P **P 23 04 16.1 -0.2**
comp=Z,121nm,1.2s,mb5.7
KURK LR LR
comp=Z,1μm,21.0s,MS5.3
KURK Kurchatov 82.20 342 P **P 23 04 16.1 -0.2**
SNR=56
VIVF Saint-Julien-l 82.24 31 *e*P **P 23 04 16.5 -0.1**
comp=Z,112nm,1.7s,mb5.2
VIVF Saint-Julien-l 82.24 31 *e*P **P 23 04 16.5 -0.1**
VIVF pmax pmax
comp=Z,56nm,1.7s,mb5.2
VIVF Saint-Julien-l 82.24 31 *e*P **P 23 04 16.5 -0.1**
comp=Z,56nm,1.7s,mb5.2
MOTA Moosalm 82.26 26⇑ *i*P **P 23 04 16.7 0.0**
comp=Z,34nm,1.2s,mb5.2,SNR=14
RESF Ens 82.28 35 *e*P **P 23 04 17.2 +0.4**
EBIE Bielsa 82.30 35 P **P 23 04 17.1 +0.1**
comp=Z,168nm,2.7s,mb5.5
EBAD Badajoz 82.30 42 P **P 23 04 14.6 -2.4**
comp=Z,173nm,2.6s,mb5.5
LPL La Plagne 82.41 29 *e*P **P 23 04 18.3 +0.8**
comp=Z,93nm,1.7s,mb5.2
LPL La Plagne 82.41 29 *e*P **P 23 04 18.3 +0.8**
LPL pmax pmax
comp=Z,47nm,1.7s,mb5.1
LPL La Plagne 82.41 29 *e*P **P 23 04 18.3 +0.8**
comp=Z,46nm,1.7s,mb5.1
WATA Walderaim 82.42 26⇑ *i*pP **P 23 04 18.0 +0.5**
comp=Z,61nm,1.3s,mb5.4,SNR=14
RJOB Jochberg 82.43 25 *e*P **P 23 04 17.4 -0.2**
comp=Z,32nm,1.2s,mb5.1
FETA Feichten 82.43 26 *i* pP **P 23 04 18.3 +0.8**
comp=Z,37nm,1.5s,mb5.1,SNR=14
MESJ Messejana 82.43 43 *e*P **P 23 04 18.4 +0.6**
MESJ *e*S S 23 14 34.8 +0.7
MESJ *e*S S 23 14 35.2 +1.2
MESJ AMS AMS 23 43 12.8
comp=Z,1μm,18.2s,MS5.3
MESJ Messejana 82.43 43 *e*P **P 23 04 18.4 +0.6**
MESJ *e*S S 23 14 34.8 +0.8
MESJ A 23 43 12.8
comp=Z,1μm,18.2s
MESJ Messejana 82.43 43 *e*P **P 23 04 18.4 +0.6**
MESJ *e*S S 23 14 35.2 +1.2
LPG La Plagne 82.44 29 *e*P **P 23 04 18.4 +0.8**
comp=Z,105nm,1.6s,mb5.2
LPG La Plagne 82.44 29 *e*P **P 23 04 18.4 +0.8**
LPG pmax pmax
comp=Z,53nm,1.6s,mb5.2
LPG La Plagne 82.44 29 *e*P **P 23 04 18.4 +0.8**
comp=Z,52nm,1.6s,mb5.2
WTTA Wattenberg 82.50 26 ⇓ *i*pP **P 23 04 18.4 +0.4**
comp=Z,71nm,1.3s,mb5.5,SNR=21
MTLF Montolieu 82.58 33 *e*P **P 23 04 18.0 -0.4**
comp=Z,110nm,1.8s,mb5.3
MTLF Montolieu 82.58 33 *e*P **P 23 04 18.0 -0.4**
MTLF pmax pmax
comp=Z,55nm,1.8s,mb5.3
MTLF Montolieu 82.58 33 *e*P **P 23 04 18.0 -0.4**
comp=Z,55nm,1.8s,mb5.3
LASF Ste Croix 82.60 32 *e*P **P 23 04 18.5 0.0**
comp=Z,149nm,1.7s,mb5.4
ORIF Oris-en-Rattie 82.63 30 *e*P **P 23 04 18.5 -0.1**
comp=Z,151nm,1.9s,mb5.4
ORIF *e*MLR MLR
comp=Z,3μm,22.0s,MS5.3
ORIF Oris-en-Rattie 82.63 30 *e*P **P 23 04 18.5 -0.1**
ORIF pmax pmax
comp=Z,75nm,1.9s,mb5.4
ORIF Oris-en-Rattie 82.63 30 *e*P **P 23 04 18.5 -0.1**
comp=Z,75nm,1.9s,mb5.4
MORF Marmelete 82.64 44 *e*S S 23 14 42.3 +6.1
MORF *e*LR LR 23 35 59.1
comp=Z,928nm,20.0s
MORF Marmelete 82.64 44 *e*P **P 23 04 18.7 -0.1**
MORF *e*S S 23 14 36.8 +0.6
PCVE Castro Verde 82.69 43 *e*S S 23 14 46.4 +10
PCVE *e*LR LR 23 31 12.2
comp=Z,1μm,18.0s
PFVI Vila Bisbo 82.69 44 *e*S S 23 14 52.3 +16
PFVI *e*LR LR 23 31 57.4
comp=Z,1μm,18.0s
PBAR Barrancos 82.74 42 *e*S S 23 14 48.1 +11
PBAR *e*LR LR 23 31 14.8
comp=Z,1μm,18.0s
MOA Molln 82.76 24⇑ *i*P **P 23 04 19.0 -0.2**
comp=Z,50nm,1.4s,mb5.3,SNR=21
BNI Bardonecchia 82.80 30 *e*P **P 23 04 19.9 +0.4**
BNI pmax pmax
comp=Z,86nm,1.8s,mb5.5
BNI MLR MLR
comp=Z,2μm,19.0s,MS5.6
BNI Bardonecchia 82.80 30 *e*P **P 23 04 19.9 +0.4**
comp=Z,86nm,1.8s,mb5.5
BNI LR LR
comp=Z,2μm,19.0s,MS5.6
ESAC San Caprasio 82.84 36 P **P 23 04 19.7 -0.1**
comp=Z,41nm,0.9s,mb5.5
ETOR Torete 82.90 37 P **P 23 04 20.0 -0.1**
ETOR pmax pmax
comp=Z,15nm,1.6s,mb4.8
ETOR Torete 82.90 37 P **P 23 04 20.0 -0.1**
comp=Z,15nm,1.6s,mb4.8
NIE Niedzica 82.91 19 *e*P **P 23 04 20.3 +0.3**
PAB San Pablo 82.91 40 *e*P **P 23 04 19.9 -0.3**
PAB pmax pmax
comp=Z,40nm,1.6s,mb5.2
PAB MLR MLR
comp=Z,2μm,19.0s,MS5.5
PAB San Pablo 82.91 40 *e*P **P 23 04 19.9 -0.4**
comp=Z,40nm,1.6s,mb5.2
PAB LR LR
comp=Z,2μm,19.0s,MS5.5
CSOR Sort 82.96 35 P **P 23 04 20.6 +0.2**
comp=Z,148nm,2.0s,mb5.7
ESDC Sonseca Array 82.98 39 P **P 23 04 20.1 -0.5**
comp=Z,3.3nm,0.9s,mb4.3,baz=323,slow=4.2,SNR=14
ESDC LR LR 23 39 38.9
comp=Z,1μm,18.0s,MS5.4,baz=335,slow=34
ESDC Sonseca Array 82.98 39 P **P 23 04 20.1 -0.5**
comp=Z,2.2nm,0.8s,mb4.2
ESLA Sonseca Array 82.98 39 *e*P **P 23 04 19.1 -1.5**
comp=Z,31nm,1.8s,mb5.0
ESLA LR LR
comp=Z,8μm,19.0s,MS6.1
PVAQ Vaqueiros 83.02 43 *e*S S 23 14 47.2 +7.1
PVAQ *e*LR LR 23 31 55.8
comp=Z,1μm,18.0s
EGRO El Granado 83.03 43 P **P 23 04 21.1 +0.3**
comp=Z,166nm,2.1s,mb5.7
HNR Honiara 83.04 250 LR LR 23 33 24.0
comp=Z,4μm,21.3s,MS5.7,baz=224,slow=30
HNR Honiara 83.04 250 PFAKE 23 04 30.0 +8.9
HNR LR LR
comp=Z,4μm,21.0s,MS5.7
PBDV Barranco-do-Ve 83.04 43 *e*P **P 23 04 20.8 -0.2**
comp=Z,85nm,1.6s,mb5.5
PBDV *e*S S 23 14 42.5 +2.2
PBDV *e*LR LR 23 32 02.6
comp=Z,1μm,18.0s
MBDF Montbardon 83.11 30 *e*P **P 23 04 21.7 +0.5**
comp=Z,86nm,1.4s,mb5.3
MBDF Montbardon 83.11 30 *e*P **P 23 04 21.7 +0.5**
MBDF pmax pmax
comp=Z,43nm,1.4s,mb5.3
MBDF Montbardon 83.11 30 *e*P **P 23 04 21.7 +0.5**
comp=Z,43nm,1.4s,mb5.3
STHS Stebnicka Huta 83.13 19 *e*P **P 23 04 22.1 +0.9**
STHS pmax pmax
comp=Z,32nm,1.2s,mb5.2
STHS Stebnicka Huta 83.13 19 *e*P **P 23 04 22.1 +0.9**
comp=Z,32nm,1.2s,mb5.2
STHS Stebnicka Huta 83.13 19 *e*P **P 23 04 22.1 +0.9**
CONA Conrad Observa 83.14 23⇑ *i*pP **P 23 04 21.5 +0.2**
comp=Z,79nm,1.3s,mb5.6,SNR=27
KBA Koelnbreinsper 83.19 25⇑ *i*pP **P 23 04 21.8 +0.3**
comp=Z,61nm,1.1s,mb5.5,SNR=14
CLLI Llivia 83.21 34 P **P 23 04 22.0 +0.3**
ABTA Abfaltersbach 83.23 25⇑ *i*P **P 23 04 21.4 -0.3**
comp=Z,56nm,1.3s,mb5.4,SNR=19
ZST Bratislava 83.23 22 *e*P **P 23 04 22.6 +0.9**
ZST Bratislava 83.23 22 *e*P **P 23 04 22.6 +0.9**
EMIN Mina Concepcio 83.24 42 P **P 23 04 21.6 -0.4**
comp=Z,203nm,2.9s,mb5.6
KWP Kalwaria Pacla 83.26 18 *e*P **P 23 04 22.1 +0.2**
KWP *e*SKS 23 14 47.0
KWP LMZ 23 37 31.0
comp=Z,1μm,25.5s
KWP Kalwaria Pacla 83.26 18 *e*P **P 23 04 22.1 +0.3**
KWP *e* 23 14 47.0
KWP Kalwaria Pacla 83.26 18 *e*P **P 23 04 21.7 -0.2**
comp=Z,142nm,1.6s,mb5.8
KWP LR LR
comp=Z,1μm,19.0s,MS5.2
KWP Kalwaria Pacla 83.26 18⇑ *i*P **P 23 04 21.9 +0.1**
SMRF Simiane la Rot 83.33 31 *e*P **P 23 04 22.7 +0.4**
comp=Z,140nm,1.5s,mb5.5
SMRF Simiane la Rot 83.33 31 *e*P **P 23 04 22.7 +0.4**
comp=Z,140nm,1.5s,mb5.8
LVV L'vov 83.37 17 *e*P **P 23 04 21.7 -0.7**
LVV *e*S S 23 14 41.9 -1.2
LVV *e*PS 23 15 50.0
VYHS Vyhne 83.41 21 *e*P **P 23 04 22.8 +0.2**
VYHS pmax pmax
comp=Z,32nm,1.3s,mb5.2
VYHS Vyhne 83.41 21 *e*P **P 23 04 22.8 +0.2**
comp=Z,32nm,1.3s,mb5.2
VYHS Vyhne 83.41 21 *e*P **P 23 04 22.8 +0.2**
AKASG Malin Array Be 83.50 13 P **P 23 04 21.9 -1.1**
comp=Z,52nm,1.0s,mb5.5,baz=343,slow=4.7,SNR=59
AKASG LR LR 23 45 09.4
comp=Z,748nm,18.3s,MS5.1,baz=310,slow=38
AKBB Malin Array Si 83.50 13 *e*P **P 23 04 22.1 -0.9**
KIEV Kiev 83.50 13 *e*P **P 23 04 22.0 -1.0**
KIEV pmax pmax
comp=Z,116nm,1.3s,mb5.8
KIEV MLR MLR
comp=Z,769nm,20.0s,MS5.1
KIEV Kiev 83.50 13 *e*P **P 23 04 22.0 -1.0**
comp=Z,116nm,1.3s,mb5.8
KIEV LR LR
comp=Z,769nm,20.0s,MS5.1
EMIR Miracle 83.50 35 P **P 23 04 23.4 +0.1**
comp=Z,96nm,1.4s,mb5.7
ECAB El Cabril 83.59 41 P **P 23 04 24.6 +0.8**
comp=Z,124nm,1.8s,mb5.7
ARSA Arzberg 83.66 23 *i* pP **P 23 04 24.2 +0.2**
comp=Z,83nm,1.2s,mb5.7,SNR=26
CRVS Cervenica-Dubn 83.66 19 *e*P **P 23 04 23.5 -0.4**
CRVS Cervenica-Dubn 83.66 19 *e*P **P 23 04 23.5 -0.4**
MYKA Terra Mystica 83.68 25⇑ *i*P **P 23 04 23.1 -1.0**
comp=Z,45nm,1.3s,mb5.4
EPOB Poblet 83.79 35 P **P 23 04 23.5 -1.2**
comp=Z,84nm,1.7s,mb5.6
ERTA Horta de San J 83.81 36 P **P 23 04 23.7 -1.2**
comp=Z,158nm,1.7s,mb5.9
KECS Kecovo 83.83 20 *e*P **P 23 04 25.1 +0.3**
KECS pmax pmax
comp=Z,34nm,1.2s,mb5.3
KECS Kecovo 83.83 20 *e*P **P 23 04 25.1 +0.3**
comp=Z,34nm,1.2s,mb5.3
KECS Kecovo 83.83 20 *e*P **P 23 04 25.1 +0.3**
EADA Adamuz 83.92 41 P **P 23 04 25.8 +0.4**
comp=Z,226nm,1.9s,mb6.0
EMOS Mosqueruela 83.96 37 P **P 23 04 26.2 +0.6**
comp=Z,91nm,1.6s,mb5.7
CFON Fontmartina 84.00 34 P **P 23 04 25.3 -0.5**
comp=Z,252nm,1.9s,mb6.0
SOKA Soboth 84.05 24⇑ *i*P **P 23 04 25.6 -0.4**
comp=Z,120nm,1.3s,mb5.9
OBKA Obir 84.06 24⇑ *i*P **P 23 04 25.5 -0.5**
comp=Z,78nm,1.1s,mb5.8,SNR=24
CADS Cadrg 84.07 25 *i* P **P 23 04 25.2 -0.8**
CADS *e*S S 23 14 53.5 +3.2
FRF La Foret Royal 84.08 30 *e*P **P 23 04 25.8 -0.3**
comp=Z,270nm,1.7s,mb5.8
FRF La Foret Royal 84.08 30 *e*P **P 23 04 25.8 -0.3**
FRF pmax pmax
comp=Z,135nm,1.7s,mb5.8
FRF La Foret Royal 84.08 30 *e*P **P 23 04 25.8 -0.3**
comp=Z,135nm,1.7s,mb5.8
SBF Sospel 84.10 30 *e*P **P 23 04 25.9 -0.3**
comp=Z,167nm,1.6s,mb5.6

SBF Sospel 84.10 30 *e*P **P 23 04 25.9 -0.3**
SBF pmax pmax
comp=Z,84nm,1.6s,mb5.6
SBF Sospel 84.10 30 *e*P **P 23 04 25.9 -0.3**
comp=Z,84nm,1.6s,mb5.6
PERS Pernice 84.11 24 *e*P **P 23 04 25.7 -0.5**
UZH Uzhgorod 84.11 18⇑*i*P **P 23 04 26.2 0.0**
UZH *i* pP 23 04 30.6 +1.1
UZH *e* 23 07 36.6
UZH *e*S S 23 14 48.0 -2.6
PSZ Piszkesteto 84.21 20⇑P **P 23 04 32.1 +5.4**
PSZ Piszkesteto 84.21 20 P **P 23 04 27.4 +0.7**
comp=Z,182nm,1.4s,mb6.0
PSZ LR LR
comp=Z,1μm,19.0s,MS5.3
PSZ Piszkesteto 84.21 20⇑*i*P **P 23 04 32.1 +5.4**
LMR La Mourre 84.22 31 *e*P **P 23 04 26.5 -0.4**
comp=Z,185nm,1.6s,mb5.7
LMR La Mourre 84.22 31 *e*P **P 23 04 26.5 -0.4**
LMR pmax pmax
comp=Z,92nm,1.6s,mb5.7
LMR La Mourre 84.22 31 *e*P **P 23 04 26.5 -0.4**
comp=Z,92nm,1.6s,mb5.7
VSR Storozhevoye 84.27 7 *e*P **P 23 04 26.0 -1.0**
VSR *e* 23 07 40.5
VSR *e*S S 23 14 49.4 -2.7
VSR *e*SS SS 23 20 28.8 +8.9
VSR pmax pmax
comp=N,80nm,1.3s
VSR pmax pmax
comp=E,10.0nm,1.3s
VSR pmax pmax
comp=Z,120nm,1.3s,mb5.9
VSR pmax pmax
comp=N,110nm,4.0s
VSR pmax pmax
comp=E,120nm,4.0s
VSR pmax pmax
comp=Z,190nm,4.0s
VSR smax
comp=N,320nm,5.6s
VSR smax
comp=E,300nm,5.6s
VSR smax
comp=Z,250nm,5.6s
VSR MLR MLR
comp=N,510nm,19.0s,MS5.0
VSR MLR MLR
comp=E,260nm,19.0s,MS5.0
VSR MLR MLR
comp=Z,920nm,19.0s,MS5.2
EBAN Banos Encina 84.29 40 P **P 23 04 27.7 +0.4**
EBAN pmax pmax
comp=Z,3.0nm,0.5s,mb4.7
EBAN Banos Encina 84.29 40 P **P 23 04 27.7 +0.4**
comp=Z,2.8nm,0.5s,mb4.7
VOY Vojsko 84.30 25 *e*P **P 23 04 26.3 -0.9**
VOY *e* 23 04 34.7
VOY *e* 23 04 51.8
ESPR Espera 84.35 42 P **P 23 04 28.1 +0.4**
comp=Z,203nm,2.0s,mb5.9
ECHE Chera 84.39 37 P **P 23 04 23.3 -4.5**
ECHE pmax pmax
comp=Z,62nm,1.4s,mb5.5
ECHE Chera 84.39 37 P **P 23 04 23.3 -4.5**
comp=Z,62nm,1.4s,mb5.5
BUD Budapest 84.39 21⇑*e*pP PcP 23 04 32.1 +0.8
LJU Ljubljana 84.47 24 *e*P **P 23 04 27.4 -0.7**
EVIA Vianos 84.49 39 P **P 23 04 28.8 +0.5**
EVIA pmax pmax
comp=Z,120nm,1.9s,mb5.7
EVIA Vianos 84.49 39 P **P 23 04 28.8 +0.5**
comp=Z,120nm,1.9s,mb5.7
SFS San Fernando 84.50 43 PFAKE 23 04 40.0 +12
SFS LR LR
comp=Z,2μm,20.0s,MS5.6
TRI Trieste 84.55 25 PFAKE 23 04 40.0 +12
TRI LR LR
comp=Z,2μm,20.0s,MS5.4
VRHR Novokhopersk 84.59 6 *e*P **P 23 04 27.5 -1.1**
VRHR *e*S S 23 14 53.7 -1.6
VRHR pmax pmax
comp=N,80nm,1.2s
VRHR pmax pmax
comp=E,30nm,1.2s
VRHR pmax pmax
comp=Z,90nm,1.2s,mb5.8
VRHR smax
comp=N,30nm,4.8s
VRHR smax
comp=E,40nm,4.8s
VRHR smax
comp=Z,10.0nm,4.8s
PDKS Podkum 84.59 24 *e*P **P 23 04 27.9 -0.8**
KOGS Kog 84.60 23 *e*P **P 23 04 27.9 -0.9**
TRPA Tarpa 84.64 18⇓*i*P **P 23 04 30.6 +1.7**
VLC Villacollemand 84.86 28 *e*P **P 23 04 29.4 -0.7**
comp=Z,53nm,1.1s,mb5.6
VLC LR LR
comp=Z,2μm,19.0s,MS5.5
KNDS Knezji Dol 84.90 25 *e*P **P 23 04 29.8 -0.4**
KNDS *e*S S 23 14 59.9 +1.3
EQES Quesada 84.91 40 P **P 23 04 30.4 -0.1**
comp=Z,102nm,2.1s,mb5.6
ETOB Tobarra 84.91 38 P **P 23 04 30.9 +0.5**
comp=Z,93nm,1.7s,mb5.6
ELOJ Sierra Loja 84.94 41 P **P 23 04 30.9 +0.3**
ELOJ pmax pmax
comp=Z,52nm,1.3s,mb5.5
ELOJ Sierra Loja 84.94 41 P **P 23 04 30.9 +0.2**
comp=Z,52nm,1.3s,mb5.5
MK31 Makanchi Array 84.99 339 *i*P **P 23 04 30.6 -0.1**
MK31 pmax pmax
comp=Z,145nm,1.7s,mb5.8
MK31 Makanchi Array 84.99 339 *e*P **P 23 04 30.3 -0.4**
MKAR Makanchi Array 84.99 339 P **P 23 04 30.0 -0.7**
comp=Z,13nm,0.9s,mb5.0,baz=31,slow=5.0,SNR=63
MKAR LR LR 23 44 51.0
comp=Z,960nm,19.0s,MS5.2,baz=25,slow=37
ECOG Cogollos-Vega 85.11 40 P **P 23 04 32.1 +0.6**
ECOG pmax pmax
comp=Z,29nm,0.9s,mb5.4
ECOG Cogollos-Vega 85.11 40 P **P 23 04 32.1 +0.7**
comp=Z,29nm,0.9s,mb5.4
EMIJ Mijas 85.11 42 P **P 23 04 31.0 -0.5**
comp=Z,91nm,2.0s,mb5.6
EHUE Huescar 85.12 40 P **P 23 04 30.3 -1.2**
EHUE pmax pmax
comp=Z,34nm,1.5s,mb5.3
EHUE Huescar 85.12 40 P **P 23 04 30.3 -1.2**
comp=Z,34nm,1.5s,mb5.3
BOJS Bojanci 85.18 24 *e*P **P 23 04 31.2 -0.5**
BOJS *e*S S 23 15 00.6 -0.8
ERON Agron 85.20 41 P **P 23 04 31.9 -0.1**
BMR Baia Mare 85.28 18 P **P 23 04 32.5 +0.4**
WHN Wuhan 85.47 309 P **P 23 04 32.9 -0.5**
WHN pP pP 23 04 38.3 +1.6
WHN S S 23 15 02.4 -2.3
WHN pmax pmax
comp=Z,70nm,0.9s,mb5.8
WHN LR LR
comp=Z,1μm,16.1s,MS5.4
EGUA Guajares 85.47 41 P **P 23 04 31.6 -1.6**
comp=Z,276nm,1.2s,mb6.3
PKSM Moragy 85.47 22 P **P 23 04 32.7 -0.4**
PKSM Moragy 85.47 22⇓P **P 23 04 32.6 -0.5**
PKSM Moragy 85.47 22⇓*i*P **P 23 04 32.6 -0.5**
GTA Gaotai 85.52 324⇑P **P 23 04 33.5 0.0**
GTA pP pP 23 04 37.3 +0.5
GTA sP sP 23 04 38.6 +0.6
GTA PP PP 23 07 52.9 +1.7
GTA SKS 23 14 54.4
GTA S S 23 15 02.3 -2.7
GTA sS sS 23 15 09.4 -1.1
GTA pmax pmax
comp=Z,17nm,1.7s,mb5.0
GTA pmax pmax
comp=Z,270nm,5.1s
GTA LR LR
comp=N,1μm,19.8s,MS5.5
GTA LR LR
comp=E,1μm,19.2s,MS5.5
GTA LR LR
comp=Z,2μm,19.8s,MS5.4
RAO Raoul Island 85.62 221 LR LR 23 34 33.2
comp=Z,2μm,20.8s,MS5.4,baz=167,slow=30
RAO Raoul Island 85.62 221 PFAKE 23 04 40.0 +6.2
RAO LR LR
comp=Z,675nm,21.0s,MS5.0
XAN Xi'an 85.65 315 P **P 23 04 33.8 -0.4**
XAN pP pP 23 04 38.4 +0.8
XAN PP PP 23 07 46.0 -6.4
XAN SKS 23 14 56.3
XAN S S 23 15 04.3 -2.1
XAN pmax pmax
comp=Z,6.0nm,1.5s,mb4.6
XAN pmax pmax
comp=Z,57nm,6.6s
XAN LR LR
comp=N,530nm,33.5s
XAN LR LR
comp=E,190nm,38.9s
XAN LR LR
comp=Z,180nm,21.7s
BUR08 Bucovina Ar. S 85.68 17 *e*P **P 23 04 34.2 +0.1**
EMUR La Murta 85.71 39 P **P 23 04 32.6 -1.8**
comp=Z,148nm,2.4s,mb5.8
BURAR Bucovina Array 85.71 17⇑P **P 23 04 34.6 +0.3**
BURAR Bucovina Array 85.71 17⇑*i*P **P 23 04 34.6 +0.3**
EBER Berja 85.73 40 P **P 23 04 36.7 +2.1**
comp=Z,117nm,1.8s,mb5.8
PGF Pioggiola 85.80 29 *e*P **P 23 04 34.5 -0.3**
comp=Z,155nm,1.5s,mb5.7
PGF Pioggiola 85.80 29 *e*P **P 23 04 34.5 -0.3**
PGF pmax pmax
comp=Z,77nm,1.5s,mb5.7
PGF Pioggiola 85.80 29 *e*P **P 23 04 34.5 -0.3**
comp=Z,77nm,1.5s,mb5.7
ETOS Mallorca 85.84 35 P **P 23 04 36.5 +1.4**
comp=Z,209nm,1.9s,mb6.0
DRGR 85.94 19⇓P **P 23 04 35.0 -0.4**
DRGR 85.94 19 P **P 23 04 35.5 +0.1**
DRGR 85.94 19⇓*i*P **P 23 04 35.0 -0.4**
WMQ Urumqi 86.16 334 P **P 23 04 38.1 +1.6**
WMQ pP pP 23 04 42.9 +3.0
WMQ sP sP 23 04 45.1 +4.0
WMQ SKS 23 15 00.8
WMQ S S 23 15 10.9 -0.1
WMQ sS sS 23 15 18.9 +2.4
WMQ pmax pmax
comp=Z,48nm,1.0s,mb5.7
WMQ pmax pmax
comp=Z,390nm,5.2s
WMQ LR LR
comp=N,1μm,21.2s,MS5.3
WMQ LR LR
comp=E,1μm,21.3s,MS5.3
WMQ LR LR
comp=Z,1μm,19.2s,MS5.3
AB31 Akbulak array 86.39 354 *i*P **P 23 04 37.4 -0.2**
AB31 pmax pmax
comp=Z,161nm,1.4s,mb6.1
ABKAR Akbulak array 86.39 354 *e*P **P 23 04 37.5 0.0**
comp=Z,89nm,1.2s,mb5.9
LZH Lanzhou 86.48 319⇑P **P 23 04 38.9 +0.6**
LZH pP pP 23 04 42.3 +0.7
LZH sP sP 23 04 43.6 +0.8
LZH PP PP 23 08 01.5 +2.5
LZH S S 23 15 09.3 -5.2
LZH sS sS 23 15 15.0 -5.0
LZH pmax pmax
comp=Z,47nm,1.0s,mb5.7
LZH pmax pmax
comp=Z,280nm,4.4s
LZH LR LR
comp=E,2μm,18.2s
LZH LR LR
comp=Z,3μm,19.3s,MS5.7
IAS Iasi 86.58 15 P **P 23 04 38.2 -0.4**
BZS Buzias 86.78 20 P **P 23 04 39.5 -0.1**
BZS Buzias 86.78 20⇑P **P 23 04 38.5 -1.1**
BZS Buzias 86.78 20⇑*i*P **P 23 04 38.5 -1.1**
KIS Kishinev 87.00 15 *e*P **P 23 04 35.0 -5.6**
KIS *e*SKS 23 15 06.0
KIS *e*S S 23 15 22.0 +2.8
KIS LRM 23 41 28.0
comp=Z,600nm,20.0s
KIS Kishinev 87.00 15 *e*P **P 23 04 35.0 -5.6**
KIS *e* 23 08 04.0
KIS *e* 23 15 06.0
KIS *e*S S 23 15 22.0 +2.8
TESR 87.05 16⇑P **P 23 04 40.3 -0.6**
TESR 87.05 16⇑*i*P **P 23 04 40.3 -0.6**
GZR Gura Zlata 87.27 19⇑P **P 23 04 42.7 +0.7**
GZR Gura Zlata 87.27 19⇑*i*P **P 23 04 42.7 +0.7**
LEOM Leova 87.40 15 P **P 23 04 42.9 +0.3**
AQU L'Aquila 87.46 27⇓P **P 23 04 44.4 +1.5**
AQU L'Aquila 87.46 27 *e*P **P 23 04 45.9 +2.9**
comp=Z,48nm,1.4s,mb5.5
AQU LR LR
comp=Z,2μm,21.0s,MS5.4
AQU L'Aquila 87.46 27⇓*i*P **P 23 04 44.4 +1.5**
PLOR Plostina 87.69 16 P **P 23 04 44.5 +0.5**
PLOR Plostina 87.69 16⇓*i*P **P 23 04 44.3 +0.3**
VRI Vrincioaia 87.69 16 P **P 23 04 44.6 +0.6**
VRI Vrincioaia 87.69 16⇓P **P 23 04 43.6 -0.4**
VRI Vrincioaia 87.69 16⇓*i*P **P 23 04 43.6 -0.4**
VOIR 87.74 18 P **P 23 04 44.2 -0.1**
VOIR 87.74 18⇓P **P 23 04 43.8 -0.4**
VOIR 87.74 18⇓*i*P **P 23 04 43.8 -0.5**
MLR Muntele Rosu 87.88 17⇓P **P 23 04 45.6 +0.7**
MLR Muntele Rosu 87.88 17⇓*i*P **P 23 04 45.6 +0.7**
DZM Mont Dzumac 88.29 237 *e*LR LR 23 32 42.4
comp=Z,3μm,22.9s
ENH Enshi 88.32 312 *e*P **P 23 04 48.1 +0.8**
comp=Z,60nm,1.2s,mb5.7
ENH LR LR
comp=Z,749nm,20.0s,MS5.1
VSL Villasalto 88.62 31 PFAKE 23 05 00.0 +11
VSL LR LR
comp=Z,992nm,20.0s,MS5.2
CFR Carcaliu 88.63 16⇑P **P 23 04 50.0 +1.6**
CFR Carcaliu 88.63 16⇑*i*P **P 23 04 50.0 +1.6**
SIM Simferopol' 89.86 12 *e*P **P 23 04 55.4 +1.2**
SIM *e* 23 08 26.0
SIM *e*PPP 23 10 26.0
SIM *e* 23 15 20.0
SIM *e*S S 23 15 51.0 +4.7
SIM *e*PS PS 23 16 58.0 +5.7
SIM pmax pmax
comp=Z,23nm,1.3s,mb5.3
SIM MLR MLR
comp=Z,950nm,17.5s,MS5.3
VTS Vitosha 90.02 20⇓P **P 23 04 55.1 +0.1**
VTS Vitosha 90.02 20⇓*i*P **P 23 04 55.1 +0.1**
USP Osenovka 90.16 343 P **P 23 04 55.8 +0.1**
SNR=28
TIR Tirane 90.31 23 PFAKE 23 05 10.0 +14
TIR LR LR
comp=Z,2μm,19.0s,MS5.5
CHMS Chumysh 90.36 343 P **P 23 04 58.8 +2.2**
SNR=27
ANN Anapa 90.44 9 *e*P **P 23 04 55.5 -1.4**
ANN *e*S SKSac 23 15 26.5 -1.7
ANN pmax pmax
comp=Z,64nm,1.0s,mb5.9
FRU Bishkek 90.55 343 *i*P **P 23 04 57.0 -0.5**
FRU *e* 23 15 33.0
FRU pmax pmax
comp=Z,160nm,1.7s,mb6.1
SACV Santiago Islan 90.57 68 PFAKE 23 05 10.0 +12
SACV LR LR
comp=Z,2μm,20.0s,MS5.5
KBK Karagaybulak 90.64 342 P **P 23 04 58.4 +0.4**
SNR=19
KRUS Krusevo 90.67 22 *e*P **P 23 04 53.8 -4.3**
ULHL Ulahol 90.75 341 P **P 23 04 58.8 +0.3**
SNR=10
CD2 Chengdu 90.75 317 P **P 23 04 58.3 -0.3**
CD2 pP pP 23 05 03.1 +1.1
CD2 sP sP 23 05 05.3 +2.1
CD2 PP PP 23 08 35.3 +2.0
CD2 SKS 23 15 27.4
CD2 S S 23 15 51.3 -3.7
CD2 sS sS 23 15 58.3 -2.2
CD2 pmax pmax
comp=Z,30nm,0.5s,mb5.9
CD2 pmax pmax
comp=Z,310nm,6.4s
CD2 LR LR
comp=N,1μm,15.5s
CD2 LR LR
comp=Z,910nm,14.3s,MS5.3
AAK Ala-Archa 90.77 343 P **P 23 04 58.9 +0.4**
comp=Z,184nm,1.1s,mb6.3,SNR=6.5
AAK Ala-Archa 90.77 343 P **P 23 05 00.8 +2.3**
SNR=11
AAK Ala-Archa 90.77 343 LR LR 23 48 51.7
comp=Z,2μm,18.6s,MS5.5,baz=21,slow=38
AAK Ala-Archa 90.77 343*c i*P **P 23 04 58.3 -0.2**
AAK pmax pmax
comp=Z,15nm,1.1s,mb5.2
AAK Ala-Archa 90.77 343 *e*P **P 23 04 58.8 +0.3**
comp=Z,52nm,1.2s,mb5.7
AAK LR LR
comp=Z,1μm,20.0s,MS5.4
AAK Ala-Archa 90.77 343 P **P 23 04 58.9 +0.4**
SNR=21
OHR Ohrid 90.79 22 *e*P **P 23 04 56.8 -1.9**
EKS2 Erkin-Say 90.89 343 P **P 23 04 59.7 +0.6**
SNR=19
EKS2 Erkin-Say 90.89 343 PFAKE 23 05 10.0 +11
EKS2 LR LR
comp=Z,1μm,19.0s,MS5.4
VAY Valandovo 91.05 21 *i*P **P 23 04 57.7 -2.2**
KK31 Karatay Array 91.10 346 *i*P **P 23 04 59.7 -0.3**
KK31 pmax pmax
comp=Z,30nm,1.0s,mb5.6
KZA Kyzart 91.13 342 P **P 23 05 03.0 +2.8**
SNR=7.4
UCH Uchtor 91.15 342 P **P 23 05 01.7 +1.4**
SNR=10
UCH Uchtor 91.15 342 PFAKE 23 05 10.0 +10
UCH LR LR
comp=Z,391nm,19.0s,MS4.9
AML Almayashu 91.42 343 P **P 23 05 02.6 +1.1**
SNR=28
AML Almayashu 91.42 343 *e*P **P 23 05 02.3 +0.8**
AML MLR MLR
comp=Z,305nm,21.0s,MS4.7
AML Almayashu 91.42 343 *e*P **P 23 05 02.3 +0.8**
comp=Z,299nm,1.1s,mb6.5
AML LR LR
comp=Z,305nm,21.0s,MS4.7
KIV Kislovodsk 91.77 6 *e*P **P 23 05 03.0 -0.1**
KIV *e* 23 15 35.1
KIV *e*SS SS 23 22 20.7 +11
KIV pmax pmax
comp=Z,35nm,4.3s
KIV pmax pmax
comp=Z,17nm,1.2s,mb5.2
KIV MLR MLR
comp=Z,657nm,18.0s,MS5.1
KIV Kislovodsk 91.77 6 *e*P **P 23 05 03.3 +0.2**
comp=Z,23nm,1.3s,mb5.3
KIV LR LR
comp=Z,750nm,20.0s,MS5.1
PMG Port Moresby 91.84 259 PFAKE 23 05 10.0 +6.2
PMG LR LR
comp=Z,2μm,20.0s,MS5.5
CEL Celeste 91.97 27 PFAKE 23 05 20.0 +16
CEL LR LR
comp=Z,2μm,19.0s,MS5.5
GYA Guiyang 92.85 312 P **P 23 05 08.9 +0.5**
GYA PP PP 23 08 53.6 +3.5
GYA SKS 23 15 42.1
GYA S S 23 16 13.9 -0.2
GYA pmax pmax
comp=Z,40nm,1.0s,mb5.8
GYA pmax pmax
comp=Z,230nm,6.9s
GYA LR LR
comp=N,5μm,23.2s,MS6.0
GYA LR LR
comp=E,4μm,24.6s,MS6.0
GYA LR LR
comp=Z,6μm,25.0s,MS5.9
MAK Makhachkala 93.00 2 *e*P **P 23 05 08.0 -0.8**
MAK *e* 23 08 53.5
MAK *e*S SKSac 23 15 42.0 -0.8
MAK *i* 23 16 17.6
MAK *e*SS SS 23 22 32.4 +5.5
MAK *e*SSS 23 26 13.8
MAK pmax pmax
comp=Z,157nm,1.4s,mb6.2
ZEI Tsey 93.03 5 *e*P **P 23 05 14.1 +5.1**
ZEI pmax pmax
comp=Z,12nm,0.4s,mb5.7
ONI Oni 93.18 5 P **P 23 05 11.2 +1.5**
KSH Kashi 93.40 341 P **P 23 05 14.8 +4.1**
KSH pP pP 23 05 19.3 +5.2
KSH sP sP 23 05 21.6 +6.3
KSH PP PP 23 09 01.4 +7.6
KSH SKS 23 15 48.3
KSH S S 23 16 21.3 +2.8
KSH sS sS 23 16 29.9 +5.8
KSH pmax pmax
comp=Z,25nm,1.3s,mb5.5
KSH pmax pmax
comp=Z,160nm,4.9s
KSH LR LR
comp=N,480nm,14.1s,MS5.7
KSH LR LR
comp=E,2μm,18.7s,MS5.7
KSH LR LR
comp=Z,1μm,16.8s,MS5.5
WDD Wield Dalam 93.69 29 PFAKE 23 05 20.0 +7.9
WDD LR LR
comp=Z,927nm,19.0s,MS5.3
GOR Gori 93.82 5 P **P 23 05 11.3 -1.3**
TBLG Delisi 94.11 4 P **P 23 05 14.1 +0.1**
TBLG Delisi 94.11 4 P **P 23 05 14.1 +0.2**
MTA Mtatsminda 94.15 4 P **P 23 05 13.6 -0.6**
DGRG David-gareji 94.42 4 P **P 23 05 15.8 +0.4**
BR131 Keskin Array S 94.89 13 P **P 23 05 18.1 +0.5**
comp=Z,0.5nm,0.5s,mb4.2
BR131 LR LR
comp=Z,477nm,20.0s,MS5.0
BRTR Keskin Array B 94.89 13 P **P 23 05 15.7 -1.9**
comp=Z,2.5nm,0.8s,mb4.7,baz=259,slow=0.6,SNR=11
BRTR PP PP 23 09 06.9 +1.5
comp=Z,3.1nm,1.1s,baz=355,slow=5.5,SNR=4.1
BRTR LR LR 23 55 01.4
comp=Z,409nm,18.2s,MS4.9,baz=154,slow=40
BRTR Keskin Array B 94.89 13 P **P 23 05 15.7 -1.9**
BRTR 23 09 06.9
DAV Davao City (W) 95.68 286 LR LR 23 42 31.8
comp=Z,1μm,19.8s,MS5.4,baz=247,slow=32
GNI Garni 95.69 4 *e*P **P 23 05 21.2 0.0**
GNI pmax pmax
comp=Z,29nm,1.2s
GNI MLR MLR
comp=Z,507nm,20.0s
GNI Garni 95.69 4 *e*P **P 23 05 21.2 0.0**
comp=Z,29nm,1.2s,mb5.6
GNI LR LR
comp=Z,507nm,20.0s,MS5.0
KMI Kunming 95.99 314 P **P 23 05 23.3 +0.4**
KMI pP pP 23 05 26.9 +0.7
KMI SKS 23 15 57.3
KMI S S 23 16 38.3 -3.3
KMI pmax pmax
comp=Z,9.0nm,1.5s,mb5.0
KMI LR LR
comp=N,470nm,16.7s,MS5.2
KMI LR LR
comp=E,560nm,18.6s,MS5.2
KMI LR LR
comp=Z,680nm,21.8s,MS5.1
ISP Isparta 96.19 16 PFAKE 23 05 30.0 +6.5
ISP LR LR
comp=Z,814nm,21.0s,MS5.2
CPUP Villa Florida 96.30 121 PFAKE 23 05 40.0 +16
CPUP LR LR
comp=Z,101nm,19.0s,MS4.3
RCBR Riachuelo 96.55 92 PFAKE 23 05 40.0 +14
RCBR LR LR
comp=Z,2μm,20.0s,MS5.5
QIZ Qiongzhong 96.94 305 P **P 23 05 26.6 -0.6**
QIZ pP pP 23 05 30.3 -0.3
QIZ sP sP 23 05 32.1 +0.3
QIZ S S 23 16 47.0 -2.9
QIZ pmax pmax
comp=Z,11nm,2.2s,mb4.9

QIZ				pmax	pmax		
	comp=Z,230nm,9.9s						
QIZ				LR	LR		
	comp=N,410nm,31.4s						
QIZ				LR	LR		
	comp=E,130nm,36.6s						
QIZ				LR	LR		
	comp=Z,440nm,13.7s						
QIZ	**Qiongzhong**	**96.94**	**305**	PFAKE		23 05 40.0	+13
QIZ				LR	LR		
	comp=Z,712nm,19.0s,MS5.2						
LSA	**Lhasa**	**97.49**	**325**	PFAKE		23 05 40.0	+10
LSA				LR	LR		
	comp=Z,2μm,20.0s,MS5.5						
SNZO	**South Karori**	**98.93**	**219**	PFAKE		23 05 50.0	+15
SNZO				LR	LR		
	comp=Z,1μm,20.0s,MS5.5						
CSS	**Prodhromos**	**99.49**	**14**	PFAKE		23 05 50.0	+12
CSS				LR	LR		
	comp=Z,529nm,20.0s,MS5.0						
NIL	**Nilore**	**99.64**	**341**	PFAKE		23 05 50.0	+11
NIL				LR	LR		
	comp=Z,73nm,21.0s,MS4.2						
CTAO	**Charters Tower**	**99.86**	**252**	PFAKE		23 05 50.0	+10
CTAO				LR	LR		
	comp=Z,3μm,19.0s,MS5.8						
PLCA	**Paso Flores**	**99.87**	**139**	LR	LR	23 40 35.5	
	comp=Z,381nm,18.9s,MS4.9,baz=173,slow=29						
PLCA	**Paso Flores**	**99.87**	**139**	PFAKE		23 05 50.0	+10
PLCA				LR	LR		
	comp=Z,574nm,19.0s,MS5.1						
SPB	**Sao Paulo**	**100.70**	**112**	PFAKE		23 06 00.0	+16
SPB				LR	LR		
	comp=Z,524nm,19.0s,MS5.1						
TAM	**Tamanrasset**	**101.48**	**42**	PFAKE		23 06 00.0	+13
TAM				LR	LR		
	comp=Z,829nm,20.0s,MS5.2						
TRQA	**Tornquist**	**102.17**	**132**	PFAKE		23 06 00.0	+10
TRQA				LR	LR		
	comp=Z,685nm,21.0s,MS5.2						
BHD	**Baghdad**	**102.51**	**5**	*ex*	x	23 05 51.0	
BHD				*ex*	x	23 16 29.0	
KKM	**Kota Kinabalu**	**102.78**	**292**	PFAKE		23 06 00.0	+6.9
KKM				LR	LR		
	comp=Z,1μm,20.0s,MS5.4						
CHTO	**Chiang Mai**	**103.17**	**313**	PFAKE		23 06 10.0	+15
CHTO				LR	LR		
	comp=Z,590nm,20.0s,MS5.1						
CM31	**Chiang Mai Arr**	**103.46**	**313**	PFAKE		23 06 10.0	+14
CM31				LR	LR		
	comp=Z,564nm,20.0s,MS5.1						
CMAR	**Chiang Mai Arr**	**103.46**	**313**	Pdiff	Pdif	23 05 57.0	+0.9
	comp=Z,0.5nm,0.5s,baz=20,slow=5.1,SNR=5.2						
CMAR				PKiKP	PKiKP	23 10 13.2	-1.9
	comp=Z,0.3nm,0.3s,baz=349,slow=1.8,SNR=3.1						
WRAB	**Tennant Creek**	**108.02**	**260**	*e*PKiKP	PKiKP	23 10 24.1	+0.7
WRAB				LR	LR		
	comp=Z,3μm,20.0s,MS5.8						
WRA	**Warramunga Arr**	**108.04**	**260**	PKiKP	PKiKP	23 10 21.5	-2.0
	comp=Z,1.7nm,1.1s,baz=30,slow=1.9,SNR=4.7						
CAN	**Canberra**	**108.38**	**238**	PFAKE		23 10 40.0	+16
CAN				LR	LR		
	comp=Z,871nm,20.0s,MS5.3						
DBIC	**Dimbokro**	**108.89**	**60**	PFAKE		23 10 40.0	+15
DBIC				LR	LR		
	comp=Z,2μm,21.0s,MS5.7						
KSM	**Kuching**	**110.09**	**293**	PFAKE		23 10 40.0	+12
KSM				LR	LR		
	comp=Z,740nm,22.0s,MS5.2						
ASAR	**Alice Springs**	**110.77**	**257**	PKiKP	PKiKP	23 10 27.5	-1.0
	comp=Z,3.5nm,1.2s,baz=54,slow=3.9,SNR=6.4						
ASAR				PKKPbc	PKKPbc	23 21 25.1	-0.3
	comp=Z,0.8nm,0.9s,baz=225,slow=2.4,SNR=6.8						
KULM	**Kulim**	**113.23**	**304**	PFAKE		23 10 50.0	+16
KULM				LR	LR		
	comp=Z,675nm,21.0s,MS5.2						
MBWA	**Marble Bar**	**119.23**	**268**	*e*PKPdf	PKPdf	23 10 45.3	+0.5
MBWA				LR	LR		
	comp=Z,1μm,20.0s,MS5.5						
PMSA	**Palmer Station**	**120.11**	**153**	PFAKE		23 11 00.0	+15
PMSA				LR	LR		
	comp=Z,1μm,19.0s,MS5.5						
SHEL	**Horse Pasture**	**124.96**	**78**	PFAKE		23 11 10.0	+14
SHEL				LR	LR		
	comp=Z,1μm,20.0s,MS5.5						
SBA	**Scott Base**	**127.89**	**194**	*e*PKIKP	PKPdf	23 10 57.6	-2.1
NWAO	**Narrogin (SRO)**	**128.03**	**259**	PFAKE		23 11 10.0	+8.7
NWAO				LR	LR		
	comp=Z,2μm,22.0s,MS5.8						
MBAR	**Mbarara**	**132.98**	**28**	PFAKE		23 11 20.0	+8.6
MBAR				LR	LR		
	comp=Z,776nm,21.0s,MS5.4						
KMBO	**Kilima Mbogo**	**135.34**	**19**	PFAKE		23 11 30.0	+14
KMBO				LR	LR		
	comp=Z,753nm,19.0s,MS5.4						
MSEY	**Mahe Island**	**140.22**	**352**	PFAKE		23 11 40.0	+15
MSEY				LR	LR		
	comp=Z,910nm,19.0s,MS5.5						
CASY	**Casey**	**141.50**	**214**	PFAKE		23 11 40.0	+15
CASY				LR	LR		
	comp=Z,1μm,22.0s,MS5.6						
TSUM	**Tsumeb**	**142.77**	**58**	*e*PKPpre	PKPpre	23 11 25.6	
TSUM				*e*PKPdf	PKPdf	23 11 30.6	+1.4
TSUM				LR	LR		
	comp=Z,2μm,22.0s,MS5.8						
LSZ	**Lusaka**	**145.32**	**40**	PKPbc	PKPbc	23 11 33.1	-0.3
	baz=355,slow=3.1						
LSZ	**Lusaka**	**145.32**	**40**	*e*PKIKP	PKPdf	23 11 33.1	-0.5
LSZ				MLR	MLR		
	comp=Z,2μm,19.0s,MS5.9						
LSZ	**Lusaka**	**145.32**	**40**	*e*PKP	PKPdf	23 11 33.1	-0.6
LSZ				LR	LR		
	comp=Z,2μm,19.0s,MS5.9						
LSZ	**Lusaka**	**145.32**	**40**	PKPbc	PKPbc	23 11 33.5	+0.1
	SNR=19						
MAIT	**Maitri**	**147.42**	**157**	*e*PKPdif	PKPdif	23 11 35.8	+0.3
NVL	**N'lazarevskaya**	**147.46**	**157**	*e*PKHKP	PKPpre	23 11 32.0	
NVL				*i*		23 11 34.9	
MIR	**Mirnyy**	**148.27**	**211**	*e*PKIKP	PKPdf	23 11 38.0	+1.0
MIR				pmax	pmax		
	comp=Z,56nm,1.8s						
LBTB	**Lobatse**	**151.99**	**55**	*e*PKIKP	PKPdf	23 11 44.5	+0.3
LBTB				*e*		23 11 50.1	
LBTB				MLR	MLR		
	comp=Z,2μm,20.0s,MS5.9						
LBTB	**Lobatse**	**151.99**	**55**	*e*PKPdf	PKPdf	23 11 44.5	+0.3
LBTB				*e*PKPbc	PKPbc	23 11 50.1	-0.6
LBTB				*e*PKPab	PKPab	23 12 00.4	+0.4
LBTB				LR	LR		
	comp=Z,2μm,20.0s,MS5.9						
SUR	**Sutherland**	**153.92**	**73**	*e*PKPbc	PKPbc	23 11 55.6	+0.8
SUR				LR	LR		
	comp=Z,750nm,19.0s,MS5.5						
BOSA	**Boshof**	**154.42**	**61**	PKP	PKPdf	23 11 48.4	+0.7
	comp=Z,9.6nm,1.1s,baz=266,slow=5.6,SNR=6.0						
BOSA				PKPab	PKPab	23 12 08.8	-1.4
	comp=Z,18nm,1.1s,baz=337,slow=4.1,SNR=6.0						
BOSA	**Boshof**	**154.42**	**61**	*e*PKPdf	PKPdf	23 11 47.2	-0.4
BOSA				*e*PKPab	PKPab	23 12 10.1	-0.1
BOSA				LR	LR		
	comp=Z,1μm,19.0s,MS5.7						
ABPO	**Ambohimpanom**	**154.56**	**7**	PFAKE		23 12 00.0	+12
ABPO				LR	LR		
	comp=Z,1μm,19.0s,MS5.7						
SYO	**Syowa Base**	**154.67**	**171⇑**	*e*P	PKPdf	23 11 44.0	-2.7
SYO	**Syowa Base**	**154.67**	**171⇑**	*e*P	PKPbc	23 11 57.2	+2.0

BJI 17 23:10:02.4, 23°.25N×117°.16E, h15km, ML4.3/5, Near coast of southeastern China

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QZH	**Quanzhou**	**2.13**	**38**	Pn	Pn	23 10 38.3	+0.8
QZH				Sn	Sn	23 11 02.3	-1.4
QZH				smax			
	comp=N,3μm,0.8s						
QZH				smax			
	comp=E,4μm,0.9s						
GZH	**Guangzhou**	**3.52**	**268**	Pn	Pn	23 10 56.6	+0.1
GZH				Sg	Sg	23 11 50.0	-5.4
GZH				smax			
	comp=N,400nm,0.7s						
GZH				smax			
	comp=E,380nm,0.6s						

ISCJB 17 23:18:18.5±3.0, 27°.2S±0°.2×177°.4W±0°.3, h116km±18km, mb4.1/9, Error ellipse: s-maj=42.2km s-min=19.9km az=148.5
NEIC 17 23:18:18.9±2.3, 27°.12S×177°.45W, h102km±15km, mb4.2/7, Error ellipse: s-maj=29.8km s-min=13.5km az=58.0
IDC 17 23:18:19.2±5.5, 27°.14S×177°.37W, h105km±37km, mb3.8/4, mb1 3.9/4, mb1mx3.6/16, mbtmp3.8/4, Error ellipse: s-maj=54.2km s-min=26.5km az=41.0
ISC 17 23:18:18.9±3.0, 27°.1S±0°.2×177°.4W±0°.3, h103km±19km, n21, σ0s71/22, mb4.1/9, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.19**	**192**	P	**Pn**	**23 18 53.1**	**-0.9**
	508nm,0.3s,baz=79,slow=4.0,SNR=54						
RAO				S	**Sn**	**23 19 21.4**	**+0.5**
	972nm,0.3s,baz=75,slow=24,SNR=36						
URZ	**Urewera**	**12.05**	**201**	*e*Pn	**Pn**	**23 21 07.5**	**+0.5**
URZ				Sn	**Sn**	**23 23 04.0**	**-15**
MCQ	**Macquarie Isla**	**32.39**	**206**	P	**P**	**23 24 38.1**	**-0.4**
CTAO	**Charters Tower**	**33.94**	**274**	*e*Pn	**P**	**23 24 52.4**	**0.0**
STKA	**Stephens Creek**	**35.85**	**252**	P	**P**	**23 25 08.9**	**+0.2**
	4.2nm,1.1s,mb4.3,baz=78,slow=9.3,SNR=3.0						
STKA	**Stephens Creek**	**35.85**	**252**	*e*P	**P**	**23 25 08.3**	**-0.4**
	1.5nm,1.1s,mb3.8						
ASAR	**Alice Springs**	**43.91**	**263**	P	**P**	**23 26 15.4**	**0.0**
	0.9nm,0.6s,mb3.7,baz=92,slow=7.2,SNR=13						
ASAR				PcP	PcP	23 27 59.4	-0.5
	0.4nm,0.5s,baz=123,slow=3.4,SNR=3.1						
WRAB	**Tennant Creek**	**44.59**	**269**	*e*P	**P**	**23 26 21.4**	**+0.4**
	1.4nm,0.5s,mb4.0						
WRA	**Warramunga Arr**	**44.60**	**268**	P	**P**	**23 26 21.5**	**+0.5**
	1.1nm,0.4s,mb3.9,baz=107,slow=8.6,SNR=35						
WRA				PcP	PcP	23 28 02.3	0.0
	1.1nm,0.9s,baz=105,slow=3.2,SNR=5.2						
SBA	**Scott Base**	**51.36**	**184**	*e*P	**P**	**23 27 14.2**	**+1.9**
	4.3nm,0.7s,mb4.6						
FITZ	**Fitzroy Crossi**	**52.96**	**267**	*e*P	**P**	**23 27 25.1**	**+0.1**
	4.1nm,1.0s,mb4.4						
MBWA	**Marble Bar**	**57.17**	**261**	*e*P	**P**	**23 27 54.6**	**-0.7**
CASY	**Casey**	**58.30**	**207**	*e*P	**P**	**23 28 00.8**	**-1.6**
	2.6nm,0.5s,mb4.5						
QSPA	**South Pole Qui**	**63.00**	**180**	P	**P**	**23 28 34.0**	**-0.2**
	2.9nm,0.8s,mb4.3,baz=14,slow=2.1,SNR=13						
QSPA	**South Pole Qui**	**63.00**	**180**	*e*P	**P**	**23 28 34.4**	**+0.2**
	3.0nm,0.8s,mb4.3						
KSM	**Kuching**	**74.95**	**280**	P	**P**	**23 29 48.9**	**-0.3**
MAW	**Mawson**	**75.57**	**200**	*e*P	**P**	**23 29 51.4**	**-0.5**
	2.7nm,1.1s,mb3.9						
TWG	**Pinlang**	**77.44**	**304**	P	**P**	**23 30 04.1**	**+1.1**
YULB	**Yu-li**	**77.61**	**304**	*e*P	**P**	**23 30 03.7**	**-0.3**
TPUB	**Ta-pu**	**78.05**	**304**	P	**P**	**23 30 06.4**	**-0.1**
MMAI	**Mount Meron Ar**	**151.07**	**290**	PKPbc	PKPbc	23 38 01.3	+1.2
	0.7nm,0.4s,baz=76,slow=6.1,SNR=2.9						

DDA 17 23:21:30.9, 40°.32N×42°.79E, h7km±2km, Md3.2
ISK 17 23:21:30.8, 40°.32N×42°.77E, h7km, ML2.3
ISCJB 17 23:21:31.1±0.5, 40°.31N±0°.02×42°.73E±0°.03, h0km±5km, Error ellipse: s-maj=3.9km s-min=3.2km az=31.5
CSEM 17 23:21:31.0±0.1, 40°.31N×42°.77E, h5km, ML2.3, Error ellipse: s-maj=1.7km s-min=1.3km az=38.0
ISC 17 23:21:31.6±0.4, 40°.30N±0°.02×42°.74E±0°.03, h1km±5km, n36, σ1s01/59, 1C-2D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARS	**Kars**	**0.42**	**39**	PG	**Pg**	**23 21 38.9**	**-0.7**
KARS				*e*SG	**Sg**	**23 21 44.4**	**-0.6**
KARS	**Kars**	**0.42**	**39**	*i* Pg	**Pg**	**23 21 38.9**	**-0.7**
KARS				*e*Sg	**Sg**	**23 21 44.4**	**-0.7**
DIGO	**Kars**	**0.50**	**77**	*i* P	**Pg**	**23 21 40.1**	**-1.1**
DIGO				*i* S	**Sg**	**23 21 46.8**	**-0.9**
DIGO	**Kars**	**0.50**	**77**	*i* P	**Pg**	**23 21 40.1**	**-1.1**
DIGO				*i* S	**Sg**	**23 21 46.8**	**-0.9**
HOMI	**Horasan**	**0.69**	**248⇑**	*i* P	**Pg**	**23 21 44.8**	**0.0**
HOMI				*i* S	**Sg**	**23 21 55.2**	**+1.6**
AGRB	**Hanur-Agry**	**0.75**	**165**	*e*PG	**Pg**	**23 21 45.8**	**-0.2**
AGRB	**Hanur-Agry**	**0.75**	**165**	*e*Pg	**Pg**	**23 21 45.8**	**-0.2**
TUTA	**Tutak**	**0.90**	**176⇓**	*i* P	**Pg**	**23 21 48.7**	**-0.2**
TUTA				*i* S	**Sg**	**23 22 03.6**	**+3.1**
TUTA	**Tutak**	**0.90**	**176**	*i* P	**Pg**	**23 21 48.7**	**-0.2**
TUTA				*i* S	**Sg**	**23 22 03.6**	**+3.1**
DDEM	**Demirkent**	**0.95**	**308**	*i* P	**Pg**	**23 21 49.8**	**-0.1**
DDEM				*i* S	**Sg**	**23 22 03.5**	**+1.2**
DDEM	**Demirkent**	**0.95**	**308**	*i* P	**Pg**	**23 21 49.8**	**-0.1**
DDEM				*i* S	**Sg**	**23 22 03.5**	**+1.2**
DAGI	**Agillar**	**1.00**	**321**	*i* P	**Pg**	**23 21 50.2**	**-0.5**
DAGI				*i* S	**Sg**	**23 22 04.7**	**+1.0**
DYDN	**Diyadin**	**1.05**	**136**	*i* S	**Pg**	**23 21 52.0**	**+0.1**
DYDN				*i* S	**Sg**	**23 22 07.2**	**+1.8**
DYDN	**Diyadin**	**1.05**	**136**	*i* S	**Sg**	**23 22 07.2**	**+1.7**
DBAD	**Bademkaya**	**1.07**	**312**	*i* P	**Pg**	**23 21 51.6**	**-0.5**
DBAD				*i* S	**Sg**	**23 22 06.5**	**+0.5**
DBAD	**Bademkaya**	**1.07**	**312**	*i* P	**Pg**	**23 21 51.7**	**-0.4**
DBAD				*i* S	**Sg**	**23 22 06.5**	**+0.5**
ARTV	**Artvin**	**1.07**	**325**	*i* P	**Pg**	**23 21 52.0**	**-0.3**
ARTV				*i* S	**Sg**	**23 22 07.6**	**+1.4**
ARTV	**Artvin**	**1.07**	**325**	*i* P	**Pg**	**23 21 52.0**	**-0.2**
ARTV				*i* S	**Sg**	**23 22 07.6**	**+1.4**
ERZM	**Erzurum**	**1.12**	**250**	*i* P	**Pg**	**23 21 53.4**	**+0.2**
ERZM				*i* S	**Sg**	**23 22 06.0**	**-1.7**
ERZM	**Erzurum**	**1.12**	**250**	*i* P	**Pg**	**23 21 53.4**	**+0.2**
ERZM				*i* S	**Sg**	**23 22 06.0**	**-1.7**
EZM	**Erzurum**	**1.13**	**250**	*e*PN	**Pn**	**23 21 53.4**	**-1.1**
EZM				*e*SN	**Sn**	**23 22 09.6**	**-0.9**
DBOC	**Borcka**	**1.32**	**322⇓**	*i* P	**Pg**	**23 21 55.9**	**-1.1**
DBOC				*i* S	**Sg**	**23 22 13.5**	**-0.6**
DBOC	**Borcka**	**1.32**	**322**	*i* P	**Pg**	**23 21 55.9**	**-1.1**
DBOC				*i* S	**Sg**	**23 22 13.5**	**-0.6**
BCA	**Borcka**	**1.42**	**324**	*e*PN	**Pn**	**23 21 57.6**	**-0.9**
BCA	**Borcka**	**1.42**	**324**	*e*Pn	**Pn**	**23 21 57.6**	**-0.9**
CLDR	**Caldiran**	**1.47**	**141**	*e*PN	**Pn**	**23 21 58.2**	**-1.0**
CLDR	**Caldiran**	**1.47**	**141**	*e*Pn	**Pn**	**23 21 58.2**	**-1.0**
GNI	**Garni**	**1.54**	**95**	*e*PN	**Pn**	**23 21 59.5**	**-0.7**
GNI	**Garni**	**1.54**	**95**	*e*Pn	**Pn**	**23 21 59.5**	**-0.7**
VANB	**Van**	**1.78**	**163**	*e*PN	**Pn**	**23 22 03.2**	**-0.2**
VANB	**Van**	**1.78**	**163**	*e*Pn	**Pn**	**23 22 03.2**	**-0.2**
TBLG	**Delisi**	**2.08**	**46**	P	**Pn**	**23 22 08.1**	**+0.5**
TBLG				S	**Sn**	**23 22 25.6**	**-8.5**
MTA	**Mtatsminda**	**2.09**	**48**	P	**Pn**	**23 22 08.7**	**+1.1**
MTA				S	**Sn**	**23 22 35.8**	**+1.6**
DGRG	**David-gareji**	**2.31**	**59**	P	**Pn**	**23 22 13.7**	**+3.0**
DGRG				S	**Sn**	**23 22 44.7**	**+5.1**
GUMT	**Gumushane**	**2.49**	**275**	*e*PN	**Pn**	**23 22 13.3**	**+0.1**
GUMT	**Gumushane**	**2.49**	**275**	*e*Pn	**Pn**	**23 22 13.3**	**+0.1**

CSEM 17 23:51:07.8±0.2, 37°.85N×23°.73E, h14km, ML1.9, Error ellipse: s-maj=5.8km s-min=4.6km az=117.0
THE 17 23:51:09.2, 37°.85N×23°.67E, h6km±1km, Error ellipse: s-maj=1.9km s-min=0.8km az=149.0
ATH 17 23:51:07.9, 37°.83N×23°.72E, h14km±1km, ML1.9, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLY	**Voula,Athens**	**0.06**	**69**	*e*PG	Pg	23 51 10.8	+0.2
VLY				*e*SG	Sg	23 51 12.3	-0.3
VLY	**Voula,Athens**	**0.06**	**69**	*e*Pg	Pg	23 51 10.8	+0.2
VLY				*e*Sg	Sg	23 51 12.3	-0.3
ATH	**Athens Observa**	**0.14**	**359**	*e*PG	Pg	23 51 11.9	+0.3
ATH				*e*SG	Sg	23 51 13.5	-0.7
ATH	**Athens Observa**	**0.14**	**359**	*e*Pg	Pg	23 51 11.9	+0.3
ATH				*e*Sg	Sg	23 51 13.5	-0.7
ATHU	**Athens Univers**	**0.15**	**21**	P	Pg	23 51 12.4	+0.8
ATHU	**Athens Univers**	**0.15**	**21**	P	Pg	23 51 12.4	+0.8
NAIG	**Nisos Aigina**	**0.20**	**249**	*e*PG	Pg	23 51 12.3	-0.1
NAIG	**Nisos Aigina**	**0.20**	**249**	*e*Pg	Pg	23 51 12.3	-0.1
PTL	**Penteli**	**0.25**	**28**	*e*PG	Pg	23 51 13.8	+0.6
PTL				*e*SG	Sg	23 51 17.0	+0.2
PTL	**Penteli**	**0.25**	**28**	*e*Pg	Pg	23 51 13.8	+0.6
PTL				*e*Sg	Sg	23 51 17.0	+0.2
DID	**Didima**	**0.50**	**230**	*e*PB	Pb	23 51 18.3	-0.2
DID				*e*SB	Sb	23 51 24.3	-1.3
DID	**Didima**	**0.50**	**230**	P	Pg	23 51 18.3	+0.5
DID	**Didima**	**0.50**	**230**	P	Pg	23 51 18.3	+0.5
DID				*e*Sb	Sb	23 51 24.3	-1.3
LTK	**Loutraki**	**0.63**	**288**	*e*PB	Pb	23 51 20.4	-0.2
LTK	**Loutraki**	**0.63**	**288**	P	Pg	23 51 20.5	+0.4
LTK	**Loutraki**	**0.63**	**288**	*e*Pb	Pb	23 51 20.4	-0.2
LKR	**Lokris**	**1.00**	**326**	*e*PB	Pb	23 51 27.0	+0.1
LKR				*e*SB	Sb	23 51 40.2	+0.3
LKR	**Lokris**	**1.00**	**326**	P	Pb	23 51 27.0	+0.1
LKR	**Lokris**	**1.00**	**326**	P	Pb	23 51 27.0	+0.1
LKR				*e*Sb	Sb	23 51 40.2	+0.3
GUR	**Goura**	**1.09**	**276**	*e*PN	Pn	23 51 29.3	+0.5
GUR				*e*SB	Sb	23 51 43.5	+0.8
GUR	**Goura**	**1.09**	**276**	*e*Pn	Pn	23 51 29.3	+0.5
GUR				*e*Sb	Sb	23 51 43.5	+0.8
VLX	**Vlachokerasia**	**1.16**	**247**	*e*PG	Pg	23 51 29.2	-1.0
VLX				*e*SB	Sb	23 51 46.1	+1.5
VLX	**Vlachokerasia**	**1.16**	**247**	*e*Pg	Pg	23 51 29.2	-1.0
VLX				*e*Sb	Sb	23 51 46.1	+1.5
VLI	**Veliai**	**1.27**	**210**	*e*PB	Pb	23 51 32.6	+1.0
VLI				*e*SB	Sb	23 51 49.4	+1.5
VLI	**Veliai**	**1.27**	**210**	*e*Pb	Pb	23 51 32.6	+1.0
VLI				*e*Sb	Sb	23 51 49.4	+1.5
AOS	**Alonnisos**	**1.34**	**5**	P	Pn	23 51 33.4	+1.2
AOS	**Alonnisos**	**1.34**	**5**	P	Pn	23 51 33.4	+1.2
NEO	**Neokhori**	**1.52**	**345**	*e*PG	Pg	23 51 36.1	-1.1
NEO	**Neokhori**	**1.52**	**345**	*e*Pg	Pg	23 51 36.1	-1.1
EFP	**Efpalio**	**1.55**	**293**	*e*PG	Pg	23 51 36.3	-1.4
EFP	**Efpalio**	**1.55**	**293**	*e*Pg	Pg	23 51 36.3	-1.4
AGG	**Agios Georgios**	**1.61**	**318**	*e*PG	Pg	23 51 37.7	-1.2
AGG	**Agios Georgios**	**1.61**	**318**	*e*Pg	Pg	23 51 37.7	-1.2
APE	**Apeiranthos**	**1.63**	**117**	*e*PG	Pg	23 51 38.2	-1.0
APE	**Apeiranthos**	**1.63**	**117**	*e*Pg	Pg	23 51 38.2	-1.0
KYTH	**Kithira**	**1.64**	**200**	*e*PG	Pg	23 51 38.2	-1.2
KYTH	**Kithira**	**1.64**	**200**	*e*Pg	Pg	23 51 38.2	-1.2
PYL	**PYLOS**	**1.83**	**240**	*e*PN	Pn	23 51 41.0	+2.1
PYL	**PYLOS**	**1.83**	**240**	*e*Pn	Pn	23 51 41.0	+2.1

IDC 17 23:55:00.4±6.2, 36°.35N×81°.63E, h0km, mb3.0/2, mb1 3.3/5, mb1mx3. 1/26, mbtmp3.3/5, ML3.2/3, Error ellipse: s-maj=91.2km s-min=35.7km az=9.0
ISCJB 17 23:55:01.1±2.9, 36°.48N±0°.08×81°.59E±0°.09, h12km±19km, mb3.3/3, Error ellipse: s-maj=16.7km s-min=8.3km az=36.9
NEIC 17 23:55:02.0±0.5, 36°.39N×81°.58E, h10km, mb3.9/1, Error ellipse: s-maj=10.0km s-min=6.6km az=220.0
BJI 17 23:55:05.3, 36°.79N×81°.36E, h20km, ML3.5/4
ISC 17 23:55:01.8±3.4, 36°.39N±0°.09×81°.62E±0°.09, h8km±22km, n20, σ0s62/24, mb3.3/3, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**5.45**	**307**	Pn	**Pn**	**23 56 24.8**	**+1.5**
KSH				Sn	**Sn**	**23 57 31.5**	**+5.3**
KSH				smax			
	comp=N,180nm,1.3s						
KSH				smax			
	comp=E,69nm,0.7s						
UCH	**Uchtor**	**8.02**	**319**	*e*Pn	**Pn**	**23 56 57.0**	**-1.7**
	comp=E,2.7nm,0.7s						
UCH				Sn	**Sn**	**23 58 29.9**	**+0.3**
AAK	**Ala-Archa**	**8.32**	**321**	Pg	**Pb**	**23 57 32.2**	**+6.1**
	comp=E,0.3nm,0.3s,baz=252,slow=6.4,SNR=1.6						
AAK				Lg		23 59 31.6	
	comp=E,0.3nm,0.3s,baz=218,slow=23,SNR=4.8						
AAK	**Ala-Archa**	**8.32**	**321**	*e*Pn	**Pn**	**23 57 02.2**	**-0.5**
AAK				Pg	**Pb**	**23 57 32.2**	**+6.1**
AAK				Lg		23 59 31.6	
AML	**Almayashu**	**8.41**	**315**	*e*Pn	**Pn**	**23 57 04.9**	**+1.0**
	comp=E,5.0nm,0.8s						
AML				Sn	**Sn**	**23 58 39.0**	**-0.1**
MK31	**Makanchi Array**	**10.41**	**3**	Pn	**Pn**	**23 57 31.6**	**+0.2**
MKAR	**Makanchi Array**	**10.41**	**3**	Pn	**Pn**	**23 57 31.6**	**+0.2**
	comp=E,0.2nm,0.3s,baz=182,slow=25,SNR=7.2						
KURK	**Kurchatov**	**14.48**	**352**	*e*Pn	**Pn**	**23 58 26.4**	**-0.6**
	comp=E,1.8nm,1.0s						
ZALV	**Zalesovo Beam**	**17.70**	**6**	P	**Pn**	**23 59 08.2**	**-0.4**
	comp=E,0.1nm,0.3s,baz=193,slow=12,SNR=2.5						
BVAR	**Borovoye Array**	**18.41**	**338**	P	**Pn**	**23 59 17.7**	**+0.4**
	comp=E,0.1nm,0.3s,baz=146,slow=11,SNR=5.2						
SONM	**Songino Array**	**21.55**	**50**	P	**P**	**23 59 51.9**	**+0.4**
	comp=E,0.3nm,0.6s,mb2.9,baz=232,slow=9.0,SNR=3.1						
AKTK	**Aktyubinsk**	**22.04**	**317**	P	**P**	**23 59 56.3**	**-0.4**
AKTO	**Aktyubinsk**	**22.04**	**317**	P	**P**	**23 59 56.3**	**-0.4**
	comp=E,0.5nm,0.5s,mb3.2,baz=132,slow=16,SNR=4.0						
CHTO	**Chiang Mai**	**23.22**	**134**	P	**P**	**00 00 09.7**	**+0.2**
ENH	**Enshi**	**24.02**	**97**	*e*P	**P**	**00 00 16.7**	**-0.5**
	comp=E,4.0nm,1.0s,mb3.8						
BJT	**Baijiatuau**	**27.28**	**72**	P	**P**	**00 00 47.0**

*SZGRF **18** 00:34:47.9, 20°.53S×177°.11W, h33km, Fiji Islands region*
*ISCJB **18** 00:35:50.2±0.8, 19°.77S±0°.09×178°.10W±0°.09, h573km±12km, mb4.0/20, Error ellipse: s-maj=15.6km s-min=10.3km az=43.4*
*IDC **18** 00:35:51.0±1.4, 19.80S×177°.96W, h575km±17km, mb3.4/13, mb1 3.7/15, mb1mx3.6/21, mbtmp3.5/15, Error ellipse: s-maj=20.7km s-min=11.0km az=141.0*
*NEIC **18** 00:35:51.0±0.8, 19°.74S×178°.03W, h575km±9km, mb4.4/8, Error ellipse: s-maj=11.7km s-min=8.4km az=130.0*

ISC 18 00:35:50.8±0.8, 19°.72S±0°.09×178°.06W±0°.09, h565km±12km, n78, σ0s78/39, mb4.0/20, 11C-2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.19	298	eP	P	00 37 21.3	+6.1
AFI	Afiamalu	8.34	47	P	P	00 37 53.9	+1.5
	3.7nm,0.3s,baz=190,slow=6.1,SNR=3.9						
AFI				S	S	00 39 31.4	-0.7
	3.8nm,0.3s,baz=18,slow=19,SNR=4.8						
AFI	Afiamalu	8.34	47	eP	P	00 37 52.9	+0.5
AFI				S	S	00 39 31.4	-0.7
FUNA	Funafuti	11.45	346	eP	P	00 38 23.9	+0.1
URZ	Urewera	18.94	192	P	P	00 39 34.2	-2.2
	2.7nm,0.3s,baz=353,slow=4.5,SNR=12						
URZ	Urewera	18.94	192	eP	P	00 39 34.2	-2.2
	12nm,0.5s						
HNR	Honiara	23.59	293	P	P	00 40 19.2	+0.8
RPZ	Rata Peaks	25.60	198	P	P	00 40 35.2	-0.6
	6.9nm,0.7s,mb4.4,baz=13,slow=2.6,SNR=4.0						
CNB	Canberra Magne	32.62	235	eP	P	00 41 37.7	+1.0
CTA	Charters Tower	33.52	263	eP	P	00 41 45.2	+0.7
	7.1nm,0.3s,mb4.7						
CTA	Charters Tower	33.52	263	P	P	00 41 45.3	+0.8
	11nm,0.4s,mb4.7,baz=92,slow=10,SNR=19						
CTAO	Charters Tower	33.52	263	eP	P	00 41 44.5	+0.1
	11nm,0.5s,mb4.6						
STKA	Stephens Creek	38.08	243	eP	P	00 42 22.6	+0.6
	4.8nm,1.6s,mb3.8						
STKA	Stephens Creek	38.08	243	P	P	00 42 22.6	+0.7
	1.9nm,0.5s,mb3.9,baz=96,slow=12,SNR=7.2						
STKA	Stephens Creek	38.08	243	eP	P	00 42 22.3	+0.3
	0.4nm,0.6s,mb3.1						
ASAR	Alice Springs	44.65	256	P	P	00 43 14.1	+0.1
	11nm,0.7s,mb4.5,baz=89,slow=8.1,SNR=114						
ASAR				PcP	PcP	00 44 43.2	-1.1
	1.2nm,0.7s,baz=101,slow=4.1,SNR=5.0						
WRA	Warramunga Arr	44.66	261	P	P	00 43 13.5	-0.6
	3.3nm,0.3s,mb4.3,baz=98,slow=7.6,SNR=200						
KAKA	Kakadu	47.91	271	eP	P	00 43 38.6	-0.1
	6.2nm,0.5s,mb4.4						
FITZ	Fitzroy Crossi	53.08	262	eP	P	00 44 16.2	-0.1
	7.6nm,0.5s,mb4.3						
FITZ	Fitzroy Crossi	53.08	262	P	P	00 44 16.2	-0.1
	3.9nm,0.5s,mb4.0,baz=141,slow=4.0,SNR=26						
FITZ	Fitzroy Crossi	53.08	262	eP	P	00 44 16.5	+0.1
MBWA	Marble Bar	57.97	257	eP	P	00 44 49.5	-0.7
	7.2nm,0.6s,mb4.1						
SBA	Scott Base	58.64	184	eP	P	00 44 55.5	+1.7
	1.5nm,0.5s,mb3.5						
NWAO	Narrogin (SRO)	58.67	243	P	P	00 44 54.4	-0.3
MJAR	Matsushiro Arr	69.55	324	P	P	00 46 03.1	-0.4
	2.4nm,0.5s,mb4.0,baz=161,slow=6.5,SNR=6.5						
QSPA	South Pole Qui	70.34	180	eP	P	00 46 07.7	+0.2
	4.2nm,0.9s,mb4.0						
NACB	Ninganchiao	73.20	304	eP	P	00 46 24.7	-0.4
	92nm,1.3s,mb5.0						
KSM	Kuching	73.25	278	eP	P	00 46 24.7	-0.9
PETK	Petropavlovsk-	75.51	345	P	P	00 46 37.1	-0.2
	3.2nm,0.7s,mb3.9,baz=125,slow=7.8,SNR=10						
NVAR	Mina Array Bea	80.50	43	P	P	00 47 05.0	+0.4
	0.3nm,0.3s,mb3.1,baz=224,slow=9.9,SNR=3.8						
KULM	Kulim	83.61	278	eP	P	00 47 20.5	-0.4
	2.8nm,0.6s,mb4.0						
BJT	Baijiatuau	85.30	315	eP	P	00 47 28.6	+0.1
	6.6nm,0.3s,mb4.6						
TXAR	Lajitas Array	86.69	57	P	P	00 47 36.4	+1.1
	0.3nm,0.6s,mb3.1,baz=210,slow=8.2,SNR=5.7						
TXAR	Lajitas Array	86.69	57	P	P	00 47 36.4	+1.1
ILAR	Eielson Array	87.57	13	P	P	00 47 37.4	-1.2
	1.8nm,0.8s,mb3.9,baz=213,slow=5.2,SNR=12						
PDAR	Pinedale Array	88.44	43	P	P	00 47 43.1	-0.1
	0.6nm,0.6s,mb3.5,baz=214,slow=2.3,SNR=6.9						
CMAR	Chiang Mai Arr	89.80	290	P	P	00 47 51.1	+1.0
	0.8nm,0.5s,mb3.9,baz=124,slow=2.3,SNR=9.9						
MKAR	Makanchi Array	110.63	314	PKiKP	PKiKP	00 53 17.5	-2.0
	0.3nm,0.6s,baz=195,slow=0.7,SNR=4.2						
BVAR	Borovoye Array	118.45	320	PKP	PKPdf	00 53 32.7	-1.6
	1.1nm,0.5s,baz=222,slow=1.9,SNR=6.7						
ARCES	ARCESS Array B	128.15	350	PKP	PKPdf	00 53 51.0	-1.4
	0.6nm,0.5s,baz=52,slow=1.2,SNR=20						
FINES	FINESS Array B	135.02	344	PKP	PKPdf	00 54 05.5	-0.1
	0.6nm,0.4s,baz=108,slow=4.2,SNR=6.6						
FINES	FINESS Array B	135.02	344	PKP	PKPdf	00 54 05.5	-0.1
HFS	Hagfors	138.77	351	PKhKP	PKPpre	00 54 02.7	
	0.8nm,0.3s,baz=64,slow=3.4,SNR=12						
AKASG	Malin Array Be	142.31	332	PKhKP	PKPpre	00 54 14.3	
	1.6nm,0.3s,baz=44,slow=4.6,SNR=11						
EKA	Eskdalemuir Ar	144.24	5	PKP	PKPdf	00 54 20.9	-1.5
	1.0nm,0.5s,baz=334,slow=3.1,SNR=12						
BSEG	Bad Segeberg	145.25	351	ePKPbc	PKPbc	00 54 24.8	-0.5
KWP	Kalwaria Pacla	145.86	336	↑iP	PKPdf	00 54 26.8	+1.4
BRTR	Keskin Array B	146.28	313	PKPbc	PKPbc	00 54 27.8	-1.0
	1.7nm,0.5s,baz=137,slow=3.7,SNR=9.7						
BURAR	Bucovina Array	146.36	331	↑iP	PKPbc	00 54 28.6	-0.1
ASF	Jabal al Asfar	146.36	299	PKPbc	PKPbc	00 54 28.6	-0.6
	1.4nm,0.6s,baz=354,slow=3.0,SNR=4.6						
NRDL	Niedersach Rie	146.68	351	ePKPbc	PKPbc	00 54 27.6	-1.8
NIE	Niedzica	146.92	338	ePX	PKPbc	00 54 30.3	+0.2
CRVS	Cervenica-Dubn	146.93	336	ePKP	PKPbc	00 54 29.8	-0.3
CLL	Collm	147.30	347	ePKPbc	PKPbc	00 54 30.1	-0.9
CLL	Collm	147.30	347	↓↓iPKPbc	PKPbc	00 54 30.3	-0.7
	comp=Z,8.0nm,1.0s						
CLL				ePKPab	PKPab	00 54 35.0	+0.2
UPC	Upice	147.32	343	↑ePKP	PKPbc	00 54 30.7	-0.4
DPC	Dobruska-Polom	147.37	343	↑ePKP	PKPbc	00 54 31.0	-0.3
DPC				ePKPAB	PKPab	00 54 35.4	+0.3
MMAI	Mount Meron Ar	147.38	301	PKPbc	PKPbc	00 54 31.7	-0.2
	comp=Z,2.8nm,0.4s,baz=74,slow=7.1,SNR=12						
BRG	Berggiesshubel	147.50	346	ePKPbc	PKPbc	00 54 31.2	-0.4
BRG	Berggiesshubel	147.50	346	eP	PKPbc	00 54 30.8	-0.8
	comp=Z,4.0nm,1.1s						
BRG				e		00 54 35.3	
	comp=Z,2.7nm,0.7s						
MLR	Muntele Rosu	147.54	328	↓↓iP	PKPbc	00 54 30.9	-1.0
KECS	Kecovo	147.64	337	ePKP	PKPbc	00 54 31.6	-0.4
PVCC	Panska Ves	147.67	345	↑ePKP	PKPbc	00 54 31.9	-0.1
PRU	Pruhonice	148.18	345	↑ePKP	PKPbc	00 54 33.4	+0.1
VYHS	Vyhne	148.22	338	ePKP	PKPbc	00 54 33.2	-0.3
TANN	Tannenbergstha	148.26	347	ePKPbc	PKPbc	00 54 32.9	-0.6
TREC	Trest	148.56	343	↑ePKP	PKPbc	00 54 33.8	-0.5
ROTZ	Rotzenmuhle	148.92	347	ePKPbc	PKPbc	00 54 34.8	-0.4
GRF	Grafenberg Arr	149.19	348	ePKPbc	PKPbc	00 54 35.8	0.0
GRF	Grafenberg Arr	149.19	348	ePKP	PKPbc	00 54 35.8	0.0
KHC	Kasperske Hory	149.21	345	↑ePKP	PKPbc	00 54 35.4	-0.5
KHC				ePKPAB	PKPab	00 54 42.7	0.0
GEC2	GERESS Array S	149.44	345	ePKPbc	PKPbc	00 54 35.7	-0.7
BZS	Buzias	149.49	332	↑iP	PKPbc	00 54 35.8	-0.9
CSNA	Conrad Observa	149.68	341	↑iPKiKP	PKPbc	00 54 37.0	0.0
	comp=Z,2.1nm,0.6s						
WLF	Walferdange	149.94	355	ePKPbc	PKPbc	00 54 37.0	-0.6
ABTA	Abfaltersbach	151.69	345	↑iPKPbc	PKPbc	00 54 40.4	-1.2
	comp=Z,2.5nm,0.5s						
DAVOX	Davos/Dischmat	152.24	348	PKPbc	PKPbc	00 54 42.2	-0.7
	comp=Z,2.1nm,0.5s,baz=54,slow=17,SNR=4.8						
DAVOX	Davos/Dischmat	152.24	348	PKPbc	PKPbc	00 54 42.2	-0.7

IDC 18 00:35:50.2±3.2, 11°.26S×163°.24E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.7/19, mbtmp3.9/5, ML4.2/1, MS2.8/1, Ms1 2.8/1, ms1mx2.7/22, Error ellipse: s-maj=56.6km s-min=43.0km az=75.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	3.71	299	Pn	Pn	00 36 50.3	+1.5
	20nm,0.3s,baz=48,slow=16,SNR=3.6						
HNR				Sn	Sn	00 37 33.5	+0.2
	28nm,0.3s,baz=210,slow=20,SNR=4.3						
HNR				LR	LR	00 37 39.3	
	comp=Z,108nm,18.2s,baz=87,slow=29						
WRA	Warramunga Arr	29.11	249	P	P	00 41 52.9	+0.1
	0.1nm,0.3s,baz=78,slow=8.9,SNR=5.3						
ASAR	Alice Springs	30.51	242	P	P	00 42 05.6	+0.3
	0.4nm,0.7s,baz=81,slow=11,SNR=4.2						
FITZ	Fitzroy Crossi	36.95	255	P	P	00 43 00.7	-0.7
	1.0nm,0.6s,baz=90,slow=9.1,SNR=4.8						
MKAR	Makanchi Array	92.00	317	P	P	00 49 01.0	+0.1
	0.3nm,0.2s,baz=86,slow=7.7,SNR=4.4						

*DDA **18** 00:40:57.1, 36°.96N×29°.14E, h7km±5km, Md2.6*
*CSEM **18** 00:40:57.8±0.3, 37°.11N×29°.21E, h30km, MD2.8, Error ellipse: s-maj=10.5km s-min=7.4km az=13.0*
*ISK **18** 00:40:57.4, 37°.09N×29°.12E, h16km, MD2.8*
*ISCJB **18** 00:40:58.1±0.7, 37°.14N±0°.07×29°.21E±0°.07, h33km±10km, Error ellipse: s-maj=12.9km s-min=7.7km az=32.6*

ISC 18 00:40:58.3±0.6, 37°.13N±0°.07×29°.20E±0°.07, h33km±11km, n20, σ0s98/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.24	85	ePG	Pb	00 41 04.0	-1.3
GLHS				eSG	Sb	00 41 09.4	-0.8
GLHS	Glhisar (BURDU	0.24	85	ePg	Pb	00 41 04.1	-1.3
GLHS				eSg	Sb	00 41 09.4	-0.8
GOLH	Golhisar	0.31	70	iP	Pb	00 41 05.6	-0.6
GOLH				iS	Sb	00 41 12.2	+0.6
GOLH	Golhisar	0.31	70	iP	Pb	00 41 05.6	-0.6
GOLH				iS	Sb	00 41 12.2	+0.7
TURN	Turunc	0.54	242	iP	Pb	00 41 10.8	+1.3
TURN				iS	Sb	00 41 22.7	+5.4
TURN	Turunc	0.54	242	iP	Pb	00 41 10.9	+1.3
DNZL	Cakiroluk	0.57	348	iP	Pb	00 41 10.7	+0.7
DNZL				iS	Sb	00 41 23.0	+5.0
DNZL	Cakiroluk	0.57	348	iP	Pb	00 41 10.7	+0.7
DENT	Denizli	0.63	348	ePG	Pb	00 41 11.0	0.0
DENT	Denizli	0.63	348	ePg	Pb	00 41 11.0	-0.1
ELL	Elmali	0.69	124	ePG	Pb	00 41 11.7	-0.3
ELL				eSG	Sb	00 41 22.7	+1.5
ELL	Elmali	0.69	124	ePg	Pb	00 41 11.7	-0.3
ELL				eSg	Sb	00 41 22.7	+1.5
YER	Yerkesik	0.73	270	ePG	Pb	00 41 11.3	-1.4
YER	Yerkesik	0.73	270	ePg	Pb	00 41 11.3	-1.4
AKAS	Kas	0.96	160	iP	Pn	00 41 13.7	-1.7
AKAS	Kas	0.96	160	iP	Pn	00 41 13.7	-1.7
MLSB	Milas	1.15	279	ePN	Pn	00 41 18.5	+0.6
MLSB	Milas	1.15	279	ePn	Pn	00 41 18.5	+0.5
DAT	Datca	1.36	253	ePN	Pn	00 41 21.2	+0.3
DAT	Datca	1.36	253	ePn	Pn	00 41 21.2	+0.3

*NEIC **18** 00:42:59.2, 31°.86S×71°.31W, h37km, MD3.5(GUC), After GUC.*

GUC 18 00:42:59.2±0.7, 31°.86S×71°.31W, h37km±2km, MD3.5, ML2.7, 3C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	Los Chungos	0.16	260	↑iP	Pn	00 43 05.8	-0.1
CHNG				iS	Sn	00 43 10.9	+0.4
CHNG				AML	AML	00 43 11.5	
	comp=N,1μm,0.2s						
CMCH	Combarbala	0.73	21	↓↓iP	Pn	00 43 13.3	+0.3
CMCH				iS	Sn	00 43 24.1	+1.1
CMCH	Combarbala	0.73	21	↓↓iP	Pn	00 43 13.3	+0.3
CMCH				iS	Sn	00 43 24.1	+1.1
CMCH				AML	AML	00 43 24.4	
	comp=N,3μm,0.3s						
JACH	Jahuel	1.03	144	↑iP	Pn	00 43 17.9	+0.9
JACH				iS	Sn	00 43 32.2	+1.9
JACH	Jahuel	1.03	144	↑iP	Pn	00 43 17.9	+0.9
JACH				iS	Sn	00 43 32.2	+1.9
ROCH	El Roble	1.14	167	eP	Pn	00 43 19.3	+0.7
ROCH				iS	Sn	00 43 35.7	+2.6
ROCH	El Roble	1.14	167	eP	Pn	00 43 19.3	+0.7
ROCH				iS	Sn	00 43 35.7	+2.6
PEL	Peldehue	1.39	158	↓↓iP	Pn	00 43 23.4	+1.3
PEL				iS	Sn	00 43 41.6	+2.4
PEL				AML	AML	00 43 44.7	
	comp=E,192nm,0.4s						
CLCH	Cerro Calan	1.67	157	eP	Pn	00 43 27.5	+1.6
CLCH				iS	Sn	00 43 48.7	+2.5
CLCH				AML	AML	00 43 56.0	
	comp=E,80nm,0.8s						
FCH	Farellones	1.70	150	eP	Pn	00 43 29.7	+3.3
FCH				iS	Sn	00 43 52.6	+5.7
FCH				AML	AML	00 43 54.3	
	comp=E,100nm,0.3s						
TLL	Tololo Astrono	1.74	15	eP	Pn	00 43 28.8	+2.0
TLL				eS	Sn	00 43 51.0	+3.2
TLL	Tololo Astrono	1.74	15	eP	Pn	00 43 28.8	+2.0
TLL				eS	Sn	00 43 51.0	+3.2
TLL				AML	AML	00 43 54.4	
	comp=N,83nm,0.7s						
TACH	Talagante	1.82	170	eP	Pn	00 43 29.3	+1.3
TACH				iS	Sn	00 43 52.5	+2.7
TACH	Talagante	1.82	170	eP	Pn	00 43 29.3	+1.3
TACH				iS	Sn	00 43 52.5	+2.7
PCH	Pirque	1.89	159	eP	Pn	00 43 30.2	+1.3
PCH				iS	Sn	00 43 54.1	+2.6
PCH	Pirque	1.89	159	eP	Pn	00 43 30.2	+1.3
PCH				iS	Sn	00 43 54.1	+2.6
LNV	Longovilo	2.10	182	P	Pn	00 43 32.1	+0.3
LNV	Longovilo	2.10	182	eP	Pn	00 43 32.1	+0.3
LMEL	Las Melosas	2.20	155	eP	Pn	00 43 34.7	+1.5
LMEL				iS	Sn	00 44 02.0	+2.9
LMEL	Las Melosas	2.20	155	eP	Pn	00 43 34.7	+1.5
LMEL				iS	Sn	00 44 02.0	+2.9
LMEL				AML	AML	00 44 09.0	
	comp=N,97nm,0.3s						

JMA 18 00:57:25.9±0.5, 32°.14N×141°.85E, h0km, M3.7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	Boso 1	2.61	344	P	Pn	00 58 10.5	+1.2
BSO1				eS	Sn	00 58 44.1	+2.4
BSO3	Boso 3	2.88	337	eS	Sn	00 58 50.7	+2.3
BSO4	Boso 4	3.11	336	P	Pn	00 58 17.5	+1.3
BSO4				eS	Sn	00 58 55.6	+1.5
JHO	Hitachi	4.58	347	P	Pn	00 58 37.5	+1.0
JHO				eS	Sn	00 59 29.6	-0.8
JAG	Ashikaga	4.71	336	eS	Sn	00 59 35.0	+1.4

IDC 18 00:57:51.0±2.0, 3°.67N×127°.50E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/22, mbtmp3.6/4, Error ellipse: s-maj=159.0km s-min=26.0km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.41	164	P	P	01 03 11.1	-0.3
	1.6nm,0.6s,baz=345,slow=10,SNR=10						
ASAR	Alice Springs	27.88	167	P	P	01 03 42.5	-0.2
	0.4nm,0.7s,baz=344,slow=6.7,SNR=4.9						
STKA	Stephens Creek	37.81	160	P	P	01 05 09.9	+0.7
	1.2nm,0.4s,baz=338,slow=10.0,SNR=5.8						
MKAR	Makanchi Array	58.04	325	P	P	01 07 45.8	-0.1
	0.4nm,0.5s,baz=122,slow=8.8,SNR=4.4						

WEL 18 01:21:29.7±0.9, 35°.22S×178°.82E, h214km±12km, ML4.2/14, Error ellipse: s-maj=20.7km s-min=12.6km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.38	190	PN	Pn	01 22 13.1	0.0
PUZ	Puketiti	2.89	189	PN	Pn	01 22 18.6	-0.2
PUZ				SN	S	01 22 56.3	-1.1
MWZ	Matawai	3.28	198	PN	Pn	01 22 24.2	+0.9
MWZ				SN	S	01 23 05.2	-0.4
CNGZ	Carnagh Statio	3.30	188	PN	Pn	01 22 24.3	+0.8
URZ	Urewera	3.33	204	PN	Pn	01 22 24.3	+0.4
PRRZ	Plateau Road	3.81	210	PN	Pn	01 22 31.0	+1.4
KNZ	Kokohu	3.91	193	PN	Pn	01 22 30.6	-0.2
RAHZ	Arahi	3.94	200	PN	Pn	01 22 31.8	+0.6
MHGZ	Mahia Peninsul	4.00	190	PN	Pn	01 22 32.0	+0.1
NMHZ	Naumai	4.19	202	PN	Pn	01 22 35.0	+0.7
BKZ	Black Stump Fm	4.36	205	PN	Pn	01 22 36.7	+0.3
FWVZ	Far West T-bar	4.80	212	PN	Pn	01 22 42.8	+1.0
KAHZ	Kahuranaki	4.82	198	PN	Pn	01 22 41.8	-0.3
WNVZ	Wahianoa	4.84	211	PN	Pn	01 22 43.1	+0.7
PXZ	Pawanui	5.05	197	PN	Pn	01 22 43.8	-1.2
PNHZ	Pukenui	5.13	203	PN	Pn	01 22 44.9	-1.1
WPHZ	Waipukurau	5.20	201	PN	Pn	01 22 46.0	-0.8
PRHZ	Porangahau	5.33	198	PN	Pn	01 22 47.5	-1.1
POWZ	Post Office Ro	5.70	204	PN	Pn	01 22 52.4	-0.8
BFZ	Birch Farm	5.82	200	PN	Pn	01 22 53.6	-1.2
MRZ	Mangatainoka R	6.01	204	PN	Pn	01 22 55.4	-1.8
TIWZ	Tintock	6.01	202	PN	Pn	01 22 56.4	-0.9
HOWZ	Holdsworth Sta	6.24	204	PN	Pn	01 22 58.3	-1.9
OGWZ	Otaki Gorge	6.29	206	PN	Pn	01 22 58.9	-1.9
TMWZ	Te Maipa	6.32	201	PN	Pn	01 22 59.3	-1.8
KIW	Kapiti Island	6.42	208	PN	Pn	01 23 00.4	-2.1
CAW	Cannon Point	6.58	206	PN	Pn	01 23 02.5	-2.0
TRWZ	Traveller	6.64	201	PN	Pn	01 23 03.6	-1.8
PAWZ	Paruwai Farm	6.71	202	PN	Pn	01 23 03.9	-2.3
MSWZ	Moikau Station	6.79	203	PN	Pn	01 23 05.2	-2.1
SNZO	South Karori	6.89	207	PN	Pn	01 23 06.1	-2.5
PLWZ	Palliser	6.93	203	PN	Pn	01 23 06.4	-2.6
TUWZ	Tuamarina	7.29	210	PN	Pn	01 23 11.2	-2.4
NNZ	Nelson	7.36	214	PN	Pn	01 23 12.8	-1.8
QRZ	Quartz Range	7.48	220	PN	Pn	01 23 14.4	-1.8
BSWZ	Blackbirch Sta	7.56	209	PN	Pn	01 23 15.6	-1.5
KHZ	Kahutara	8.28	208	PN	Pn	01 23 24.0	-2.5
CTZ	Chatham Island	9.21	159	PN	Pn	01 23 42.2	+3.7
MQZ	McQueen's Vall	9.72	207	PN	Pn	01 23 41.6	-3.5
ODZ	Otahua Downs	11.63	210	PN	Pn	01 24 07.9	-1.5

RSPR 18 01:23:13.9, 17°.92N×68°.53W, h80km±6km, MD3.5/6, 6C, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	0.61	13	↑eP	Pn	01 23 28.8	0.0
PCDR	Punta Cana, DR	0.61	13	eS	Sn	01 23 39.6	-0.2
CRPR	Cabo Rojo, PR	1.36	86	↑eP	Pn	01 23 36.9	-0.5
CRPR	Cabo Rojo, PR	1.36	86	eS	Sn	01 23 53.8	-1.3
AGPR	Aguadilla, PR	1.46	68	↑eP	Pn	01 23 38.8	+0.1
AGPR	Aguadilla, PR	1.46	68	eS	Sn	01 23 56.1	-1.3
AOPR	Arecibo Observ	1.74	75	↑eP	Pn	01 23 41.7	-0.7
AOPR	Arecibo Observ	1.74	75	eS	Sn	01 24 04.6	+0.5
HUMP	Col San Antoni	2.56	85	↑eP	Pn	01 23 52.9	-0.5
HUMP	Col San Antoni	2.56	85	eS	Sn	01 24 24.4	+0.8
MTP	Monte Pirata	2.84	86	↑eP	Pn	01 23 56.1	-1.0
MTP	Monte Pirata	2.84	86	eS	Sn	01 24 29.8	-0.5

*ISCJB **18** 01:23:35.1±1.1, 24°.29N±0°.10×108°.57W±0°.09, h10km, mb3.9/16, Error ellipse: s-maj=14.5km s-min=11.3km az=173.3*
*IDC **18** 01:23:35.2±1.1, 24°.44N×108°.76W, h0km, mb3.9/2, mb1 4.1/6, mb1mx3.9/21, mbtmp3.8/6, ML3.7/4, MS3.3/2, Ms1 3.3/2, ms1mx2.6/29, Error ellipse: s-maj=32.3km s-min=23.2km az=80.0*
*NEIC **18** 01:23:37.1±0.9, 24°.30N×108°.61W, h10km, mb3.9/25, Error ellipse: s-maj=16.0km s-min=12.7km az=65.0*

ISC 18 01:23:36.8±1.1, 24°.29N±0°.10×108°.69W±0°.08, h10km, n46, σ1s27/43, mb3.9/16, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	Lajitas Array	6.74	41	Pn	Pn	01 25 14.8	-1.0
	0.2nm,0.3s,baz=212,slow=14,SNR=12						
TXAR				Sn	Sn	01 26 33.0	+0.4
	0.2nm,0.3s,baz=228,slow=22,SNR=3.5						
TXAR				Lg		01 27 12.7	
	0.3nm,0.3s,baz=220,slow=28,SNR=3.7						
TXAR	Lajitas Array	6.74	41	Pn	Pn	01 25 14.8	-1.0
TXAR				Sn	Sn	01 26 33.0	+0.4
TXAR				Lg		01 27 12.7	
MNTX	Cornudas Mount	7.94	21	ePn	Pn	01 25 31.5	-0.8
	2.3nm,0.7s						
BNM	Barren Site	9.99	10	ePn	Pn	01 25 59.0	-1.4
	7.8nm,0.9s						
MVCO	Mesa Verde	12.88	1	ePn	Pn	01 26 44.7	+4.7
	9.0nm,1.1s						
SDCO	Great Sand Dun	13.69	11	eP	Px	01 27 01.9	
CCUT	Cedar City	13.81	344	eP	Pn	01 26 57.2	+4.5
	25nm,1.4s						
ARUT	Antelope Range	14.06	344	ePn	Pn	01 27 02.4	+6.4
	4.9nm,0.9s						
SMCO	Snowmass	14.92	5	ePn	Pn	01 27 13.5	+5.7
	12nm,1.4s						
ISCO	Idaho Springs	15.69	9	ePn	Pn	01 27 20.6	+2.8
	6.1nm,1.1s						
DAU	Daniels Canyon	16.23	353	eP	Pn	01 27 27.1	+2.3
	19nm,1.4s						
DUG	Dugway	16.24	349	eP	Pn	01 27 27.4	+2.4
	16nm,1.5s						
NVAR	Mina Array Bea	16.30	332	Pn	Pn	01 27 26.9	+1.2
	0.1nm,0.3s,baz=161,slow=12,SNR=16						
ELK	El

*BJI **18** 01:26:03.8, 32°.38N×105°.42E, h18km, mB4.6/4, mb4.6/5, ML4.0/23, Ms4.0/10, Ms7 3.8/7*
*NEIC **18** 01:26:03.9±0.4, 32°.39N×105°.34E, h10km, mb4.2/9, Error ellipse: s-maj=12.9km s-min=6.7km az=58.0*
ISC 18 01:26:04.4±0.9, **32°.29N**±0°.02×**105°.26E**±0°.03, **h13**km±6km, **n40**, σ1§**17**/56, **mb4.1**/20, **1C, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.88**	**223**	Pn	**Pn**	**01 26 37.5**	**+1.3**
CD2				Pg	**Pg**	**01 26 39.3**	**-1.1**
CD2				Sg	**Sg**	**01 27 05.8**	**+1.1**
CD2	comp=N,8μm,0.6s			smax			
CD2	comp=E,9μm,0.7s			smax			
XAN	**Xi'an**	**3.54**	**59**	Pn	**Pn**	**01 26 58.8**	**-0.2**
XAN				Pg	**Pb**	**01 27 07.8**	**+1.0**
XAN				Sn	**Sn**	**01 27 40.8**	**+0.1**
XAN				Sg	**Sb**	**01 27 52.3**	**+2.6**
XAN	comp=N,680nm,0.7s			smax			
XAN	comp=E,420nm,0.7s			smax			
XAN	comp=N,660nm,6.4s			LR	LR		
XAN	comp=E,580nm,4.9s			LR	LR		
XAN	comp=Z,490nm,5.4s			LR	LR		
LZH	**Lanzhou**	**3.97**	**343**	Pn	**Pn**	**01 27 05.6**	**+0.7**
LZH				Pg	**Pb**	**01 27 14.3**	**+0.1**
LZH				Sn	**Sn**	**01 27 50.3**	**-1.0**
LZH				Sg	**Sb**	**01 28 02.9**	**+0.8**
LZH	comp=N,830nm,0.6s			smax			
LZH	comp=E,2μm,0.7s			smax			
LZH	comp=N,2μm,6.1s			LR	LR		
LZH	comp=Z,2μm,7.1s			LR	LR		
ENH	**Enshi**	**4.14**	**118**	*e*Pn	**Pn**	**01 27 08.8**	**+1.4**
ENH				*e*Pg	**Pg**	**01 27 20.9**	**-2.8**
ENH				*e*Sg	**Sg**	**01 28 17.2**	**-0.2**
GYA	**Guiyang**	**5.94**	**168**	Pn	**Pn**	**01 27 33.9**	**+1.9**
GYA				Sn	**Sn**	**01 28 40.8**	**+0.9**
GYA				Sg	**Sg**	**01 29 09.8**	**-5.2**
GYA	comp=N,120nm,0.8s			smax			
GYA	comp=E,260nm,0.8s			smax			
KMI	**Kunming**	**7.47**	**198**	Pg	Px	01 28 39.3	
KMI				Sg	**Sn**	**01 29 15.9**	**-1.9**
KMI	comp=N,41nm,1.1s			smax			
KMI	comp=E,46nm,0.9s			smax			
WHN	**Wuhan**	**7.96**	**100**	⇑Pn	**Pn**	**01 28 00.8**	**+0.9**
WHN				Sn	**Sn**	**01 29 28.1**	**-1.7**
GTA	**Gaotai**	**8.37**	**330**	*e*P	**Pn**	**01 28 05.5**	**+0.1**
GTA				pP		01 28 09.4	
GTA				sP		01 28 11.5	
GTA				S	**Sn**	**01 29 42.3**	**+2.6**
GTA				sS		01 29 46.6	
GTA	comp=Z,4.0nm,1.4s			pmax	pmax		
GTA	comp=Z,120nm,5.1s			pmax	pmax		
GTA	comp=N,460nm,8.4s			LR	LR		
GTA	comp=E,250nm,8.7s			LR	LR		
GTA	comp=Z,390nm,9.9s			LR	LR		
HHC	**Hu-ho-hao-te**	**9.93**	**29**	*e*P	**Pn**	**01 28 25.8**	**-1.0**
HHC				S	**Sn**	**01 30 18.1**	**-0.1**
HHC				PcS	PcS	01 38 09.1	-2.8
HHC				ScS	ScS	01 41 41.0	-4.1
HHC	comp=Z,15nm,0.5s			pmax	pmax		
HHC	comp=Z,67nm,4.8s			pmax	pmax		
HHC	comp=N,300nm,8.2s			LR	LR		
HHC	comp=E,640nm,8.2s			LR	LR		
HHC	comp=Z,310nm,8.4s			LR	LR		
CMAR	**Chiang Mai Arr**	**14.90**	**204**	Pn	**Pn**	**01 29 35.6**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=17,slow=12,SNR=6.2						
SONM	**Songino Array**	**15.55**	**3**	Pn	**Pn**	**01 29 41.5**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=182,slow=13,SNR=8.4						
SONM				Lg		01 34 16.5	
	comp=Z,0.0nm,0.3s,baz=182,slow=28,SNR=3.9						
SONM				LR	LR	01 36 14.3	
	comp=Z,89nm,19.1s,baz=77,slow=40						
ULN	**Ulaanbaatar**	**15.62**	**4**	*e*Pn	**Pn**	**01 29 42.8**	**-1.3**
	comp=Z,2.3nm,0.6s						
KSRS	**Korea Array**	**19.28**	**68**	P	**Pn**	**01 30 29.1**	**-0.8**
	comp=Z,0.7nm,0.3s,baz=254,slow=10.0,SNR=30						
KSRS				LR	LR	01 37 35.7	
	comp=Z,32nm,18.4s,baz=230,slow=36						
CN2	**Changchun**	**19.57**	**48**	*e*P	**Pn**	**01 30 40.4**	**+7.2**
CN2				*es*P	sP	01 30 47.4	+10
CN2				*e*S	**Sn**	**01 34 15.3**	**+2.6**
CN2	comp=Z,10.0nm,0.6s			pmax	pmax		
CN2	comp=Z,200nm,3.0s			pmax	pmax		
CN2	comp=N,200nm,12.0s			LR	LR		
CN2	comp=E,200nm,12.0s			LR	LR		
CN2	comp=Z,200nm,14.0s			LR	LR		
MK31	**Makanchi Array**	**22.77**	**316**	*e*P	**P**	**01 31 05.7**	**-0.7**
MKAR	**Makanchi Array**	**22.77**	**316**	P	**P**	**01 31 05.8**	**-0.6**
	comp=Z,6.2nm,0.8s,mb4.1,baz=108,slow=11,SNR=22						
MKAR	**Makanchi Array**	**22.77**	**316**	P	**P**	**01 31 05.8**	**-0.6**
TKM2	**Tokmak 2**	**25.66**	**303**	*e*P	**P**	**01 31 34.3**	**+0.4**
	comp=Z,3.9nm,0.8s,mb4.0						
ZALV	**Zalesovo Beam**	**26.11**	**332**	P	**P**	**01 31 36.1**	**-1.7**
	comp=Z,1.4nm,0.5s,mb3.8,baz=134,slow=11,SNR=6.6						
UCH	**Uchtor**	**26.28**	**301**	*e*P	**P**	**01 31 42.4**	**+2.9**
	comp=Z,10nm,1.1s,mb4.3						
AML	**Almayashu**	**26.86**	**300**	*e*P	**P**	**01 31 46.8**	**+2.1**
	comp=Z,4.1nm,0.7s,mb4.1						
KURK	**Kurchatov**	**26.92**	**321**	*e*P	**P**	**01 31 44.8**	**-0.3**
	comp=Z,2.5nm,0.8s,mb3.8						
BVAR	**Borovoye Array**	**32.50**	**320**	P	**P**	**01 32 34.1**	**-0.5**
	comp=Z,0.5nm,0.5s,mb3.6,baz=120,slow=9.5,SNR=4.2						
ABKAR	**Akbulak array**	**37.64**	**310**	*e*P	**P**	**01 33 20.4**	**+1.4**
	comp=Z,1.1nm,0.7s,mb3.7						
AKTK	**Aktyubinsk**	**39.06**	**312**	P	**P**	**01 33 31.5**	**+0.6**
AKTO	**Aktyubinsk**	**39.06**	**312**	P	**P**	**01 33 31.5**	**+0.6**
	comp=Z,0.7nm,0.6s,mb3.6,baz=97,slow=6.3,SNR=5.3						
ARU	**Arti**	**40.12**	**321**	*e*P	**P**	**01 33 39.6**	**0.0**
	comp=Z,4.3nm,0.9s,mb4.2						
FITZ	**Fitzroy Crossi**	**53.77**	**156**	P	**P**	**01 35 26.5**	**-0.2**
	comp=Z,2.1nm,0.7s,mb4.2,baz=4.4,slow=13,SNR=4.4						
BRTR	**Keskin Array B**	**57.02**	**299**	P	**P**	**01 35 50.2**	**+0.2**
	comp=Z,0.8nm,0.8s,mb3.8,baz=54,slow=7.5,SNR=3.6						
AKASG	**Malin Array Be**	**57.30**	**313**	P	**P**	**01 35 50.5**	**-1.2**
	comp=Z,0.2nm,0.3s,mb3.6,baz=71,slow=6.4,SNR=3.7						
AKBB	**Malin Array Si**	**57.30**	**313**	*e*P	**P**	**01 35 51.0**	**-0.7**
WRAB	**Tennant Creek**	**58.92**	**148**	*e*P	**P**	**01 36 03.6**	**+0.2**
	comp=Z,4.6nm,0.6s,mb4.7						
WRA	**Warramunga Arr**	**58.93**	**148**	P	**P**	**01 36 03.2**	**-0.2**
	comp=Z,4.2nm,0.5s,mb4.8,baz=342,slow=7.5,SNR=18						
KWP	**Kalwaria Pacla**	**61.62**	**313**	*e*P	**P**	**01 36 20.9**	**-0.7**
	comp=Z,4.0nm,0.8s,mb4.6						
ASAR	**Alice Springs**	**62.01**	**150**	P	**P**	**01 36 25.0**	**+0.6**
	comp=Z,2.0nm,0.6s,mb4.4,baz=335,slow=6.7,SNR=24						
NOA	**NORSAR Array B**	**64.19**	**327**	P	**P**	**01 36 36.7**	**-1.8**
	comp=Z,0.4nm,0.6s,mb3.6,baz=71,slow=6.6,SNR=2.9						
NOA	**NORSAR Array B**	**64.19**	**327**	P	**P**	**01 36 36.7**	**-1.8**
STKA	**Stephens Creek**	**72.48**	**148**	P	**P**	**01 37 30.4**	**-0.3**
	comp=Z,1.3nm,0.4s,mb4.2,baz=296,slow=13,SNR=5.5						
LPG	**La Plagne**	**73.16**	**313**	*e*P	**P**	**01 37 33.9**	**-0.8**
	comp=Z,6.1nm,0.7s,mb4.3						
LPL	**La Plagne**	**73.16**	**313**	*e*P	**P**	**01 37 33.1**	**-1.6**

*DDA **18** 01:35:00.4, 36°.97N×29°.19E, h27km±2km, Md3.1*

*ISCJB **18** 01:35:01.3±0.5, 36°.99N±0°.03×29°.17E±0°.03, h8km±5km, Error ellipse: s-maj=4.7km s-min=3.5km az=0.8*
*ISK **18** 01:35:01.1, 37°.01N×29°.18E, h8km, MD3.1*
*CSEM **18** 01:35:01.3±0.1, 36°.98N×29°.18E, h8km, MD3.1, Error ellipse: s-maj=3.6km s-min=2.4km az=6.0*
ISC 18 01:35:01.9±0.4, **36°.99N**±0°.03×**29°.17E**±0°.03, **h10**km±4km, **n60**, σ0§**85**/78, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.31**	**58**	PG	**Pg**	**01 35 07.3**	**-0.8**
GLHS				*e*SG	**Sg**	**01 35 11.9**	**-0.3**
GLHS	**Glhisar (BURDU**	**0.31**	**58**	*i* Pg	**Pg**	**01 35 07.3**	**-0.8**
GLHS				*e*Sg	**Sg**	**01 35 11.9**	**-0.3**
GOLH	**Golhisar**	**0.40**	**52**	*i* P	**Pg**	**01 35 08.9**	**-0.8**
GOLH				*i* S	**Sg**	**01 35 15.8**	**+0.8**
GOLH	**Golhisar**	**0.40**	**52**	*i* P	**Pg**	**01 35 08.9**	**-0.8**
GOLH				*i* S	**Sg**	**01 35 15.8**	**+0.8**
ELL	**Elmali**	**0.64**	**112**	*e*PG	**Pg**	**01 35 13.7**	**-0.5**
ELL				*e*SG	**Sg**	**01 35 23.6**	**+0.9**
ELL	**Elmali**	**0.64**	**112**	*e*Pg	**Pg**	**01 35 13.7**	**-0.6**
ELL				*e*Sg	**Sg**	**01 35 23.6**	**+0.9**
DNZL	**Cakiroluk**	**0.70**	**352**	*i* P	**Pg**	**01 35 13.8**	**-1.7**
DNZL				*i* S	**Sg**	**01 35 26.5**	**+1.8**
DNZL	**Cakiroluk**	**0.70**	**352**	*i* P	**Pg**	**01 35 13.8**	**-1.7**
DNZL				*i* S	**Sg**	**01 35 26.5**	**+1.8**
YER	**Yerkesik**	**0.72**	**282**	*e*PG	**Pg**	**01 35 15.6**	**-0.3**
YER				*e*SG	**Sg**	**01 35 26.3**	**+1.0**
YER	**Yerkesik**	**0.72**	**282**	*e*Pg	**Pg**	**01 35 15.6**	**-0.3**
YER				*e*Sg	**Sg**	**01 35 26.3**	**+1.0**
DENT	**Denizli**	**0.77**	**352**	*e*PG	**Pg**	**01 35 16.1**	**-0.7**
DENT	**Denizli**	**0.77**	**352**	*e*Pg	**Pg**	**01 35 16.1**	**-0.6**
AKAS	**Kas**	**0.83**	**155**	*i* P	**Pg**	**01 35 16.4**	**-1.5**
AKAS	**Kas**	**0.83**	**155**	*i* P	**Pg**	**01 35 16.4**	**-1.5**
KSL	**Kastellorizon**	**0.90**	**158**	*e*P	**Pg**	**01 35 20.0**	**+0.7**
KORT	**Korkueli**	**0.94**	**89**	*i* P	**Pg**	**01 35 19.8**	**-0.3**
KORT				*i* S	**Sg**	**01 35 34.7**	**+2.4**
KORT	**Korkueli**	**0.94**	**89**	*i* P	**Pg**	**01 35 19.8**	**-0.3**
KORT				*i* S	**Sg**	**01 35 34.7**	**+2.3**
ARG	**Arkhangelos**	**1.14**	**228**	*e*P	**Pb**	**01 35 22.0**	**-1.7**
MLSB	**Milas**	**1.15**	**286**	*e*PN	**Pn**	**01 35 23.3**	**-0.7**
MLSB	**Milas**	**1.15**	**286**	*e*Pn	**Pn**	**01 35 23.3**	**-0.8**
ANTB	**Antalya**	**1.19**	**94**	*e*PN	**Pn**	**01 35 24.1**	**-0.5**
ANTB	**Antalya**	**1.19**	**94**	*e*Pn	**Pn**	**01 35 24.1**	**-0.5**
AYDN	**Tasoluk**	**1.23**	**303**	*i* P	**Pn**	**01 35 24.8**	**-0.3**
AYDN				*i* S	**Sb**	**01 35 42.4**	**+1.4**
AYDN	**Tasoluk**	**1.23**	**303**	*i* P	**Pn**	**01 35 24.8**	**-0.3**
AYDN				*i* S	**Sb**	**01 35 42.4**	**+1.4**
BCK	**Bucak**	**1.23**	**67**	*e*PN	**Pn**	**01 35 24.5**	**-0.6**
BCK	**Bucak**	**1.23**	**67**	*e*Pn	**Pn**	**01 35 24.5**	**-0.6**
DAT	**Datca**	**1.30**	**259**	*e*PN	**Pn**	**01 35 26.2**	**+0.1**
DAT	**Datca**	**1.30**	**259**	*e*Pn	**Pn**	**01 35 26.2**	**+0.1**
KHL	**Karahalli**	**1.36**	**12**	*e*PN	**Pn**	**01 35 26.7**	**-0.2**
KHL	**Karahalli**	**1.36**	**12**	*e*Pn	**Pn**	**01 35 26.7**	**-0.2**
ISP	**Isparta**	**1.36**	**52**	*e*PN	**Pn**	**01 35 27.4**	**+0.5**
ISP	**Isparta**	**1.36**	**52**	*e*Pn	**Pn**	**01 35 27.4**	**+0.5**
BDRM	**Kayabasi**	**1.38**	**274**	*i* P	**Pn**	**01 35 27.4**	**+0.2**
BDRM				*i* S	**Sb**	**01 35 44.7**	**-0.8**
BDRM	**Kayabasi**	**1.38**	**274**	*i* P	**Pn**	**01 35 27.4**	**+0.2**
BDRM				*i* S	**Sb**	**01 35 44.7**	**-0.8**
KHAL	**Karahalli**	**1.40**	**10**	*i* P	**Pn**	**01 35 26.3**	**-1.2**
KHAL				*i* S	**Sn**	**01 35 46.1**	**+0.1**
KHAL	**Karahalli**	**1.40**	**10**	*i* P	**Pn**	**01 35 26.3**	**-1.2**
KHAL				*i* S	**Sn**	**01 35 46.1**	**+0.1**
BODT	**Bodrum**	**1.49**	**273**	*e*PN	**Pn**	**01 35 28.9**	**+0.2**
BODT	**Bodrum**	**1.49**	**273**	*e*Pn	**Pn**	**01 35 28.9**	**+0.2**
KULA	**Kula-Manisa**	**1.57**	**345**	*e*PN	**Pn**	**01 35 29.7**	**-0.1**
KULA	**Kula-Manisa**	**1.57**	**345**	*e*Pn	**Pn**	**01 35 29.7**	**-0.1**
SHUT	**Suhut-Afyon**	**1.91**	**35**	*e*PN	**Pn**	**01 35 34.4**	**0.0**
SHUT	**Suhut-Afyon**	**1.91**	**35**	*e*Pn	**Pn**	**01 35 34.4**	**0.0**
SMG	**Samos**	**1.99**	**292**	*e*P	**Pn**	**01 35 35.0**	**-0.6**
IZM	**Izmir**	**2.06**	**313**	*e*PN	**Pn**	**01 35 36.6**	**0.0**
IZM	**Izmir**	**2.06**	**313**	*e*Pn	**Pn**	**01 35 36.6**	**0.0**
KDAG	**Bornova**	**2.06**	**314**	*i* P	**Pn**	**01 35 36.0**	**-0.6**
KDAG	**Bornova**	**2.06**	**314**	*i* P	**Pn**	**01 35 36.0**	**-0.6**
AKS	**Akhisar**	**2.17**	**331**	*e*PN	**Pn**	**01 35 37.6**	**-0.4**
AKS	**Akhisar**	**2.17**	**331**	*e*Pn	**Pn**	**01 35 37.6**	**-0.4**
KARP	**Karpathos**	**2.17**	**229**	*e*P	**Pn**	**01 35 38.5**	**+0.5**
BLCB	**Balcova**	**2.19**	**310**	*e*PN	**Pn**	**01 35 38.5**	**+0.3**
BLCB	**Balcova**	**2.19**	**310**	*e*Pn	**Pn**	**01 35 38.6**	**+0.3**
ALT	**Altintas**	**2.19**	**20**	*e*PN	**Pn**	**01 35 38.5**	**+0.2**
ALT	**Altintas**	**2.19**	**20**	*e*Pn	**Pn**	**01 35 38.6**	**+0.3**
LADK	**Ladik-KONYA**	**2.81**	**64**	*e*PN	**Pn**	**01 35 47.1**	**+0.3**
LADK	**Ladik-KONYA**	**2.81**	**64**	*e*Pn	**Pn**	**01 35 47.2**	**+0.4**
PRK	**Paraskevi**	**3.21**	**315**	*e*P	**Pn**	**01 35 52.5**	**+0.2**
NPS	**Neapolis**	**3.36**	**240**	*e*P	**Pn**	**01 35 55.5**	**+1.1**
LAST	**Lasithi**	**3.50**	**240**	*e*P	**Pn**	**01 35 57.5**	**+1.1**
IDI	**Anoyia**	**3.86**	**245**	*e*P	**Pn**	**01 36 02.5**	**+1.2**

*ISK **18** 02:08:09.9, 35°.76N×27°.80E, h25km, ML3.8*
*ISCJB **18** 02:08:11.9±0.2, 35°.84N±0°.02×27°.84E±0°.02, h75km±3km, mb3.5/10, Error ellipse: s-maj=3.5km s-min=2.1km az=165.9*
*CSEM **18** 02:08:12.4±0.1, 35°.75N×27°.89E, h74km±2km, mb3.8/5, Error ellipse: s-maj=3.4km s-min=2.3km az=5.0*
*NEIC **18** 02:08:12.4, 35°.84N×27°.81E, h51km, mb3.7/10, After ATH.*
*ATH **18** 02:08:12.4, 35°.84N×27°.81E, h51km±1km, ML3.5*
*DDA **18** 02:08:12.9, 36°.04N×28°.02E, h22km±2km, Md3.9*
*IDC **18** 02:08:13.2±1.9, 35°.63N×28°.07E, h93km±24km, mb3.3/5, mb1 3.4/10, mb1mx3.2/28, mbtmp3.3/10, Error ellipse: s-maj=18.5km s-min=15.4km az=28.0*
*THE **18** 02:08:15.1, 35°.92N×27°.44E, h0km±1km, ML4.0/6, Error ellipse: s-maj=6.4km s-min=0.7km az=102.0*
ISC 18 02:08:13.0±0.2, **35°.82N**±0°.02×**27°.85E**±0°.02, **h67**km±3km, **n336**, σ1§**12**/426, **mb3.5**/10, **1C, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.46**	**30**	*e*P	**Pn**	**02 08 24.2**	**-0.9**
ARG				*e*S	**Sn**	**02 08 32.3**	**-1.7**
ARG	**Arkhangelos**	**0.46**	**30**	*e*P	**Pn**	**02 08 24.2**	**-0.9**
ARG				*e*S	**Sn**	**02 08 32.3**	**-1.7**
ARG	**Arkhangelos**	**0.46**	**30**	*e*P	**Pn**	**02 08 24.2**	**-0.9**
KARP	**Karpathos**	**0.62**	**244**	*e*P	**Pn**	**02 08 25.6**	**-1.1**
KARP				*e*S	**Sn**	**02 08 34.6**	**-2.3**
KARP	**Karpathos**	**0.62**	**244**	*e*P	**Pn**	**02 08 25.6**	**-1.1**
KARP				*e*S	**Sn**	**02 08 34.6**	**-2.3**
KARP	**Karpathos**	**0.62**	**244**	*e*P	**Pn**	**02 08 25.6**	**-1.1**
DAT	**Datca**	**0.93**	**347**	PG	**Pn**	**02 08 28.8**	**-1.7**
DAT				*e*SG	**Sn**	**02 08 42.5**	**-0.9**
DAT	**Datca**	**0.93**	**347**	*i* Pg	**Pn**	**02 08 28.8**	**-1.7**
DAT				*e*Sg	**Sn**	**02 08 42.5**	**-1.0**
NIS1	**Nisyros Isl.**	**0.95**	**326**	P	**Pn**	**02 08 29.4**	**-1.3**
NIS1				S	**Sn**	**02 08 40.5**	**-3.3**
NIS1	**Nisyros Isl.**	**0.95**	**326**	P	**Pn**	**02 08 29.4**	**-1.3**
BDRM	**Kayabasi**	**1.29**	**346**	*i* P	**Pn**	**02 08 34.1**	**-0.9**
BDRM				*i* S	**Sn**	**02 08 50.6**	**-0.8**
BDRM	**Kayabasi**	**1.29**	**346**	*i* P	**Pn**	**02 08 34.1**	**-0.9**
BDRM				*i* S	**Sn**	**02 08 50.7**	**-0.8**
BODT	**Bodrum**	**1.31**	**341**	PN	**Pn**	**02 08 34.5**	**-0.9**
BODT				*e*SN	**Sn**	**02 08 51.2**	**-1.0**
BODT	**Bodrum**	**1.31**	**341**	*i* Pn	**Pn**	**02 08 34.5**	**-0.9**
BODT				*e*Sn	**Sn**	**02 08 51.2**	**-1.0**
YER	**Yerkesik**	**1.36**	**15**	PN	**Pn**	**02 08 35.4**	**-0.5**
YER	**Yerkesik**	**1.36**	**15**	*i* Pn	**Pn**	**02 08 35.4**	**-0.6**
KSL	**Kastellorizon**	**1.45**	**76**	*e*P	**Pn**	**02 08 37.5**	**+0.4**
KSL	**Kastellorizon**	**1.45**	**76**	*e*P	**Pn**	**02 08 37.5**	**+0.4**
KSL	**Kastellorizon**	**1.45**	**76**	*e*P	**Pn**	**02 08 37.5**	**+0.4**
MLSB	**Milas**	**1.48**	**358**	*e*PN	**Pn**	**02 08 36.6**	**-0.9**
MLSB	**Milas**	**1.48**	**358**	*e*Pn	**Pn**	**02 08 36.6**	**-0.9**
AKAS	**Kas**	**1.49**	**73**	*i* P	**Pn**	**02 08 38.0**	**+0.3**
AKAS				*i* S	**Sn**	**02 08 55.1**	**-1.1**
AKAS	**Kas**	**1.49**	**73**	*i* P	**Pn**	**02 08 38.0**	**+0.4**
AKAS				*i* S	**Sn**	**02 08 55.1**	**-1.1**
ZKR	**Zakros**	**1.50**	**243**	*e*P	**Pn**	**02 08 38.5**	**+0.6**
ZKR				*e*S	**Sn**	**02 08 57.0**	**+0.4**
ZKR	**Zakros**	**1.50**	**243**	*e*P	**Pn**	**02 08 38.5**	**+0.6**
ZKR				*e*S	**Sn**	**02 08 57.0**	**+0.4**
ZKR	**Zakros**	**1.50**	**243**	P	**Pn**	**02 08 38.6**	**+0.7**
ZKR				S	**Sn**	**02 08 57.0**	**+0.4**
ZKR	**Zakros**	**1.50**	**243**	*e*P	**Pn**	**02 08 38.5**	**+0.6**
ZKR				*e*S	**Sn**	**02 08 57.0**	**+0.4**
AYDN	**Tasoluk**	**1.84**	**1**	*i* P	**Pn**	**02 08 42.7**	**+0.4**
AYDN				*i* S	**Sn**	**02 09 04.0**	**-0.6**
AYDN	**Tasoluk**	**1.84**	**1**	*i* P	**Pn**	**02 08 42.7**	**+0.3**
AYDN				*i* S	**Sn**	**02 09 04.0**	**-0.7**
GLHS	**Glhisar (BURDU**	**1.89**	**44**	*e*PN	**Pn**	**02 08 42.8**	**-0.2**
GLHS	**Glhisar (BURDU**	**1.89**	**44**	*e*Pn	**Pn**	**02 08 42.8**	**-0.2**
NPS	**Neapolis**	**1.90**	**254**	*e*P	**Pn**	**02 08 42.8**	**-0.4**
NPS				*e*S	**Sn**	**02 09 05.1**	**-1.1**
NPS	**Neapolis**	**1.90**	**254**	*e*P	**Pn**	**02 08 42.8**	**-0.4**
NPS				*e*S	**Sn**	**02 09 05.1**	**-1.1**
NPS	**Neapolis**	**1.90**	**254**	*e*P	**Pn**	**02 08 42.8**	**-0.4**
NPS				*e*S	**Sn**	**02 09 05.1**	**-1.1**
ELL	**Elmali**	**1.91**	**60**	*e*PN	**Pn**	**02 08 42.8**	**-0.5**
ELL	**Elmali**	**1.91**	**60**	*e*Pn	**Pn**	**02 08 42.8**	**-0.5**
GCAM	**G?zelcaml?**	**1.94**	**346**	*i* P	**Pn**	**02 08 43.8**	**0.0**
GCAM				*i* S	**Sn**	**02 09 06.1**	**-1.0**
GCAM	**G?zelcaml?**	**1.94**	**346**	*i* P	**Pn**	**02 08 43.8**	**+0.1**
GCAM				*i* S	**Sn**	**02 09 06.1**	**-1.0**
GOLH	**Golhisar**	**1.98**	**44**	*i* P	**Pn**	**02 08 45.6**	**+1.4**
GOLH				*i* S	**Sn**	**02 09 10.5**	**+2.4**
GOLH	**Golhisar**	**1.98**	**44**	*i* P	**Pn**	**02 08 45.6**	**+1.4**
GOLH				*i* S	**Sn**	**02 09 10.5**	**+2.5**
THR1	**Thera Island**	**2.01**	**287**	P	**Pn**	**02 08 43.8**	**-0.8**
LAST	**Lasithi**	**2.04**	**252**	*e*P	**Pn**	**02 08 45.0**	**-0.1**
LAST				*e*S	**Sn**	**02 09 10.1**	**+0.6**
LAST	**Lasithi**	**2.04**	**252**	*e*P	**Pn**	**02 08 45.0**	**-0.1**
LAST				*e*S	**Sn**	**02 09 10.1**	**+0.6**
LAST	**Lasithi**	**2.04**	**252**	P	**Pn**	**02 08 45.3**	**+0.2**
LAST				S	**Sn**	**02 09 09.2**	**-0.3**
LAST	**Lasithi**	**2.04**	**252**	*e*P	**Pn**	**02 08 45.0**	**-0.1**
LAST				*e*S	**Sn**	**02 09 10.1**	**+0.6**
THR2	**Thira island,**	**2.05**	**289**	P	**Pn**	**02 08 44.4**	**-0.8**
SMG	**Samos**	**2.05**	**337**	*e*P	**Pn**	**02 08 44.6**	**-0.6**
SMG				*e*S	**Sn**	**02 09 08.9**	**-0.9**
SMG	**Samos**	**2.05**	**337**	*e*P	**Pn**	**02 08 44.6**	**-0.6**
SMG				*e*S	**Sn**	**02 09 08.9**	**-0.9**
SMG	**Samos**	**2.05**	**337**	*e*P	**Pn**	**02 08 44.6**	**-0.6**
THR3	**Thira Island,**	**2.06**	**287**	P	**Pn**	**02 08 44.6**	**-0.8**
DNZL	**Cakiroluk**	**2.10**	**27**	*i* P	**Pn**	**02 08 46.4**	**+0.5**
DNZL				*i* S	**Sn**	**02 09 18.0**	**+7.0**
DNZL	**Cakiroluk**	**2.10**	**27**	*i* P	**Pn**	**02 08 46.4**	**+0.5**
THR5	**Thira Island,**	**2.11**	**287**	P	**Pn**	**02 08 45.6**	**-0.4**
THR5	**Thira Island,**	**2.11**	**287**	P	**Pn**	**02 08 45.6**	**-0.4**
DENT	**Denizli**	**2.15**	**26**	*e*PN	**Pn**	**02 08 47.2**	**+0.6**
DENT	**Denizli**	**2.15**	**26**	*e*Pn	**Pn**	**02 08 47.2**	**+0.6**
APE	**Apeiranthos**	**2.25**	**304**	*e*PN	**Pn**	**02 08 47.3**	**-0.5**
APE	**Apeiranthos**	**2.25**	**304**	*e*P	**Pn**	**02 08 47.4**	**-0.4**
APE	**Apeiranthos**	**2.25**	**304**	*e*P	**Pn**	**02 08 47.4**	**-0.4**
APE	**Apeiranthos**	**2.25**	**304**	*e*Pn	**Pn**	**02 08 47.3**	**-0.5**
KORT	**Korkueli**	**2.34**	**59**	*i* P	**Pn**	**02 08 50.8**	**+1.7**
KORT				*i* S	**Sn**	**02 09 18.4**	**+1.6**
KORT	**Korkueli**	**2.34**	**59**	*i* P	**Pn**	**02 08 50.8**	**+1.7**
KORT				*i* S	**Sn**	**02 09 18.4**	**+1.6**
IDI	**Anoyia**	**2.47**	**258**	*e*P	**Pn**	**02 08 50.8**	**0.0**
IDI				*e*S	**Sn**	**02 09 20.2**	**+0.3**
IDI	**Anoyia**	**2.47**	**258**	*e*P	**Pn**	**02 08 50.8**	**0.0**
IDI				*e*S	**Sn**	**02 09 20.2**	**+0.3**
IDI	**Anoyia**	**2.47**	**258**	*e*P	**Pn**	**02 08 50.8**	**0.0**
IDI				*e*S	**Sn**	**02 09 20.2**	**+0.3**
ANTB	**Antalya**	**2.51**	**64**	*e*PN	**Pn**	**02 08 51.4**	**-0.1**
ANTB	**Antalya**	**2.51**	**64**	*e*Pn	**Pn**	**02 08 51.4**	**-0.1**
SIVA	**Sivas**	**2.60**	**253**	*e*P	**Pn**	**02 08 53.9**	**+1.2**
SIVA				*e*S	**Sn**	**02 09 23.6**	**+0.4**
SIVA	**Sivas**	**2.60**	**253**	*e*P	**Pn**	**02 08 53.9**	**+1.2**
SIVA				*e*S	**Sn**	**02 09 23.6**	**+0.4**
SIVA	**Sivas**	**2.60**	**253**	P	**Pn**	**02 08 53.5**	**+0.8**
SIVA	**Sivas**	**2.60**	**253**	P	**Pn**	**02 08 53.5**	**+0.8**
SIVA				*e*S	**Sn**	**02 09 23.6**	**+0.4**
IZM	**Izmir**	**2.62**	**350**	*e*PN	**Pn**	**02 08 52.2**	**-0.6**
IZM	**Izmir**	**2.62**	**350**	*e*Pn	**Pn**	**02 08 52.2**	**-0.7**
**KDAG

LEF	Lefka	4.18	98	*e*Pn	Pn	02 09 13.5	-0.7
KONT	Konya--Tatoy	4.20	58	*e*PN	Pn	02 09 16.0	+1.6
KONT	Konya--Tatoy	4.20	58	*e*PN	Pn	02 09 16.0	+1.6
GONE	Gonen-Balikesi	4.22	358	*e*PN	Pn	02 09 14.9	+0.1
GONE	Gonen-Balikesi	4.22	358	*e*PN	Pn	02 09 14.9	+0.1
LADK	Ladik-KONYA	4.33	55	*e*PN	Pn	02 09 17.1	+0.9
LADK	Ladik-KONYA	4.33	55	*e*PN	Pn	02 09 17.1	+0.9
ESKT	Eskisehir	4.40	32	*e*PN	Pn	02 09 17.9	+0.7
ESKT	Eskisehir	4.40	32	*e*PN	Pn	02 09 17.9	+0.7
KIZT	Kizilcal	4.44	45	*e*PN	Pn	02 09 18.4	+0.7
KIZT	Kizilcal	4.44	45	*e*PN	Pn	02 09 18.4	+0.7
KCTX	Karacabey (Bur	4.46	5	*e*PN	Pn	02 09 18.0	0.0
KCTX	Karacabey (Bur	4.46	5	*e*PN	Pn	02 09 18.0	0.0
LTK	Loutraki	4.49	301	*e*P	Pn	02 09 19.4	+1.0
LTK				*e*S	Sn	02 10 08.1	-1.1
LTK	Loutraki	4.49	301	P	Pn	02 09 19.5	+1.1
LTK	Loutraki	4.49	301	*e*P	Pn	02 09 19.4	+1.0
EDC	Edincik	4.52	0	*e*PN	Pn	02 09 19.1	+0.2
EDC	Edincik	4.52	0	*e*PN	Pn	02 09 19.1	+0.2
BNT	Bandirma	4.53	1	*e*PN	Pn	02 09 19.6	+0.6
BNT	Bandirma	4.53	1	*e*PN	Pn	02 09 19.6	+0.6
BORA	Eskisehir	4.55	26	*i* P	Pn	02 09 18.8	-0.4
BORA				*e*S	Sn	02 10 09.2	-1.6
CSS	Prodhromos	4.56	99	*e*PN	Pn	02 09 17.2	-2.3
CSS				*e*Sn	Sn	02 10 02.6	-8.5
CSS	Prodhromos	4.56	99	*e*PN	Pn	02 09 17.2	-2.3
LIA	Limnos Island	4.58	333	*e*P	Pn	02 09 20.4	+0.7
LIA				*e*S	Sn	02 10 11.0	-0.7
LIA	Limnos Island	4.58	333	*e*P	Pn	02 09 20.4	+0.7
LIA				*e*S	Sn	02 10 11.0	-0.7
LIA	Limnos Island	4.58	333	*e*P	Pn	02 09 20.4	+0.7
KRBG	Karabiga-Canak	4.59	355	*e*PN	Pn	02 09 20.0	+0.2
KRBG	Karabiga-Canak	4.59	355	*e*PN	Pn	02 09 20.0	+0.2
AOS	Alonnisos	4.60	318	P	Pn	02 09 20.5	+0.6
AOS	Alonnisos	4.60	318	P	Pn	02 09 20.8	+0.9
AOS	Alonnisos	4.60	318	P	Pn	02 09 20.8	+0.9
MDNY	Mudanya-Bursa	4.62	10	*e*PN	Pn	02 09 20.9	+0.8
MDNY	Mudanya-Bursa	4.62	10	*e*PN	Pn	02 09 20.9	+0.7
LPK	Lapseki	4.63	350	*e*PN	Pn	02 09 20.7	+0.4
LPK	Lapseki	4.63	350	*e*PN	Pn	02 09 20.7	+0.4
GADA	Gvkgeada	4.63	341	*e*PN	Pn	02 09 20.5	+0.2
GADA	Gvkgeada	4.63	341	*e*PN	Pn	02 09 20.5	+0.2
VLX	Vlachokerasia	4.66	291	*e*P	Pn	02 09 22.4	+1.6
VLX				*e*S	Sn	02 10 13.6	0.0
VLX	Vlachokerasia	4.66	291	P	Pn	02 09 22.0	+1.2
VLX	Vlachokerasia	4.66	291	P	Pn	02 09 22.0	+1.2
VLX				*e*S	Sn	02 10 13.6	0.0
LFK	Lefkose	4.67	95	*e*PN	Pn	02 09 20.9	0.0
LFK	Lefkose	4.67	95	*e*PN	Pn	02 09 20.9	0.0
GELI	Tayfur-Gelibol	4.70	347	*e*PN	Pn	02 09 22.0	+0.7
GELI	Tayfur-Gelibol	4.70	347	*e*PN	Pn	02 09 22.0	+0.7
IKL	Isikli	4.75	83	*e*PN	Pn	02 09 22.7	+0.7
IKL	Isikli	4.75	83	*e*PN	Pn	02 09 22.7	+0.7
LKR	Lokris	4.79	308	*e*P	Pn	02 09 23.4	+0.9
LKR	Lokris	4.79	308	*e*P	Pn	02 09 23.4	+0.9
LKR	Lokris	4.79	308	P	Pn	02 09 23.3	+0.8
LKR	Lokris	4.79	308	*e*P	Pn	02 09 23.4	+0.9
ARMT	Armutlu	4.81	9	*e*PN	Pn	02 09 23.5	+0.7
ARMT	Armutlu	4.81	9	*e*PN	Pn	02 09 23.5	+0.7
GUR	Goura	4.89	297	*e*P	Pn	02 09 25.3	+1.4
GUR				*e*S	Sn	02 10 18.0	-1.2
GUR	Goura	4.89	297	P	Pn	02 09 25.4	+1.5
GUR	Goura	4.89	297	*e*P	Pn	02 09 25.3	+1.4
YLV	Yalova	4.89	14	*e*PN	Pn	02 09 24.8	+0.9
YLV	Yalova	4.89	14	*e*PN	Pn	02 09 24.8	+0.9
ITM	Ithomi	4.96	288	*e*P	Pn	02 09 26.9	+2.1
ITM				*e*S	Sn	02 10 20.3	-0.5
ITM	Ithomi	4.96	288	*e*P	Pn	02 09 26.9	+2.1
ITM				*e*S	Sn	02 10 20.3	-0.5
ITM	Ithomi	4.96	288	P	Pn	02 09 27.4	+2.6
ITM	Ithomi	4.96	288	*e*P	Pn	02 09 26.9	+2.1
ITM				*e*S	Sn	02 10 20.3	-0.5
LTBQ	Tobruq	4.97	222	*i* P	Pn	02 09 24.5	-0.6
	SNR=92						
DSF	Desfina	4.97	303	P	Pn	02 09 26.1	+1.0
DSF	Desfina	4.97	303	P	Pn	02 09 26.1	+1.0
PYL	PYLOS	5.04	284	*e*P	Pn	02 09 27.9	+1.9
PYL				*e*S	Sn	02 10 22.8	-0.1
PYL	PYLOS	5.04	284	*e*P	Pn	02 09 27.9	+1.9
PYL				*e*S	Sn	02 10 22.8	-0.1
NEO	Neokhori	5.06	315	*e*P	Pn	02 09 27.2	+1.0
NEO				*e*S	Sn	02 10 22.1	-1.2
NEO	Neokhori	5.06	315	*e*P	Pn	02 09 27.2	+1.0
NEO				*e*S	Sn	02 10 22.1	-1.2
NEO	Neokhori	5.06	315	*e*P	Pn	02 09 27.2	+1.0
GULT	Gulveren	5.06	24	*e*PN	Pn	02 09 27.9	+1.6
GULT	Gulveren	5.06	24	*e*PN	Pn	02 09 27.9	+1.6
XOR	Xorichti	5.12	315	P	Pn	02 09 27.9	+0.9
XOR	Xorichti	5.12	315	P	Pn	02 09 27.9	+0.9
XOR	Xorichti	5.12	315	P	Pn	02 09 27.9	+0.9
SULT	Sultanhani-AKS	5.12	61	*e*PN	Pn	02 09 28.1	+1.0
SULT	Sultanhani-AKS	5.12	61	*e*PN	Pn	02 09 28.1	+1.0
EREN	Erenkoy	5.16	91	*e*PN	Pn	02 09 28.4	+0.9
EREN	Erenkoy	5.16	91	*e*PN	Pn	02 09 28.4	+0.8
KALE	Kalithea	5.23	301	P	Pn	02 09 30.3	+1.7
KALE	Kalithea	5.23	301	P	Pn	02 09 30.3	+1.7
PAIG	Paliouri	5.26	322	P	Pn	02 09 30.2	+1.2
PAIG	Paliouri	5.26	322	P	Pn	02 09 30.2	+1.2
ALN	Alexandroupoli	5.26	345	P	Pn	02 09 29.7	+0.7
ALN	Alexandroupoli	5.26	345	P	Pn	02 09 29.7	+0.7
TRIZ	Trizonia	5.27	301	P	Pn	02 09 30.8	+1.7
TRIZ	Trizonia	5.27	301	P	Pn	02 09 30.8	+1.7
LAKA	Lakka	5.28	299	P	Pn	02 09 30.9	+1.7
LAKA	Lakka	5.28	299	P	Pn	02 09 30.9	+1.7
EFP	Efpalio	5.41	301	*e*P	Pn	02 09 33.2	+2.1
EFP	Efpalio	5.41	301	*e*P	Pn	02 09 33.2	+2.1
AGG	Agios Georgios	5.43	308	P	Pn	02 09 33.3	+2.0
AGG	Agios Georgios	5.43	308	P	Pn	02 09 33.2	+1.9
AGG	Agios Georgios	5.43	308	P	Pn	02 09 33.2	+1.9
MERS	Mersin	5.49	77	*e*PN	Pn	02 09 32.9	+0.8
MERS	Mersin	5.49	77	*e*PN	Pn	02 09 32.9	+0.8
RLS	Riolos of Patr	5.58	296	*e*P	Pn	02 09 35.8	+2.5
RLS				*e*S	Sn	02 10 34.8	-1.2
RLS	Riolos of Patr	5.58	296	*e*P	Pn	02 09 35.8	+2.5
RLS				*e*S	Sn	02 10 34.8	-1.2
RLS	Riolos of Patr	5.58	296	*e*P	Pn	02 09 35.8	+2.5
RLS				*e*S	Sn	02 10 34.8	-1.2
EVR	Evrytania	5.72	305	*e*P	Pn	02 09 37.7	+2.5
EVR	Evrytania	5.72	305	*e*P	Pn	02 09 37.7	+2.5
EVR	Evrytania	5.72	305	*e*P	Pn	02 09 37.7	+2.5
THL	Klokotos Trika	5.95	311	*e*P	Pn	02 09 40.0	+1.7
THL	Klokotos Trika	5.95	311	*e*P	Pn	02 09 40.0	+1.7
KARA	Karaisali	5.98	74	*e*PN	Pn	02 09 39.9	+1.0
KARA	Karaisali	5.98	74	*e*PN	Pn	02 09 39.9	+1.1
BR131	Keskin Array S	6.02	48	*e*Pn	Pn	02 09 40.1	+0.7
	2.0nm,0.4s						
BR131				*e*Sn	Sn	02 10 46.0	-0.9
BRTR	Keskin Array B	6.02	48	P	Pn	02 09 40.0	+0.6
	0.4nm,0.3s,baz=211,slow=12,SNR=12						
BRTR				S	Sn	02 10 47.2	+0.3
	0.5nm,0.3s,baz=216,slow=27,SNR=6.4						
BRTR	Keskin Array B	6.02	48	S	Sn	02 10 47.2	+0.3
VLS	Valsamata	6.26	294	*e*P	Pn	02 09 44.5	+1.8
VLS	Valsamata	6.26	294	*e*P	Pn	02 09 44.5	+1.8
VLS	Valsamata	6.26	294	*e*P	Pn	02 09 44.5	+1.8
LKD	Levkas	6.42	299	P	Pn	02 09 47.9	+3.1
LKD	Levkas	6.42	299	P	Pn	02 09 47.9	+3.1
LKD2	Lefkada island	6.45	299	P	Pn	02 09 46.7	+1.5
LKD2	Lefkada island	6.45	299	P	Pn	02 09 46.7	+1.5
HWQ	Hawqa	6.82	101	*e*Pn	Pn	02 09 49.0	-1.4
HWQ	Hawqa	6.82	101	*e*Pn	Pn	02 09 49.0	-1.3
MMAI	Mount Meron Ar	6.84	112	P	Pn	02 09 48.1	-2.5
	5.2nm,0.3s,baz=297,slow=13,SNR=28						
MMAI				S	Sn	02 11 01.4	-5.7
	8.4nm,0.3s,baz=307,slow=29,SNR=5.2						
RCY	Rachaya	6.97	107	*e*Pn	Pn	02 09 50.9	-1.6
RCY	Rachaya	6.97	107	*e*Pn	Pn	02 09 50.8	-1.6
IGT	Igoumenitsa	7.02	304	P	Pn	02 09 56.3	+3.3
FNA	Florina	7.10	316	P	Pn	02 09 57.3	+3.2
FNA	Florina	7.10	316	P	Pn	02 09 57.3	+3.2
KEK	Kerkira	7.46	304	P	Pn	02 10 02.3	+3.2
KEK	Kerkira	7.46	304	P	Pn	02 10 00.7	+1.6
KEK	Kerkira	7.46	304	P	Pn	02 10 00.7	+1.6
LJBD	Adjabya	8.05	235	*i* P	Pn	02 10 05.2	-2.0
	SNR=91						
ASF	Jabal al Asfar	8.35	113	P	Pn	02 10 09.4	-1.8
	0.6nm,0.3s,baz=229,slow=5.9,SNR=5.9						
ASF				S	Sn	02 11 39.8	-4.2
	0.3nm,0.3s,baz=37,slow=20,SNR=2.5						
EIL	Elat	8.57	134	P	Pn	02 10 12.0	-2.3
	1.2nm,0.3s,baz=48,slow=16,SNR=16						
EIL				S	Sn	02 11 41.4	-7.9
	3.9nm,0.3s,baz=338,slow=8.4,SNR=9.8						
EIL	Elat	8.57	134	P	Pn	02 10 12.0	-2.2
LUJL	Ujela	8.67	221	*i* P	Pn	02 10 12.5	-3.1
	SNR=91						
CEL	Celeste	9.86	288	P	Pn	02 10 31.5	-0.4
CEL	Celeste	9.86	288	P	Pn	02 10 31.5	-0.4
STON	Ston	10.54	315	*e*Pn	Pn	02 10 41.7	+0.5
STON				Sn	Sn	02 12 35.3	-2.3
WDD	Wield Dalam	10.82	274	P	Pn	02 10 46.1	+1.2
WDD	Wield Dalam	10.82	274	P	Pn	02 10 46.1	+1.2
VAE	Valguarnera	10.92	283	P	Pn	02 10 49.7	+3.4
	0.1nm,0.3s,baz=97,slow=17,SNR=2.2						
VAE				S	Sn	02 12 42.5	-4.2
	0.9nm,0.3s,baz=284,slow=18,SNR=3.4						
VAE	Valguarnera	10.92	283	P	Pn	02 10 49.7	+3.4
VAE				S	Sn	02 12 42.5	-4.2
MORC	Moravsky Berou	15.84	335	*e*P	Pn	02 11 54.3	+2.6
	2.7nm,0.9s						
MORC	Moravsky Berou	15.84	335	*e*P	Pn	02 11 54.3	+2.6
	2.7nm,0.9s						
FETA	Feichten	16.99	316	⇑*i* P	Pn	02 12 08.7	+2.7
	3.2nm,0.7s						
FETA	Feichten	16.99	316	Pn	Pn	02 12 08.7	+2.7
	3.2nm,0.7s						
SBF	Sospel	17.58	303	*e*P	Pn	02 12 11.0	-2.3
SBF	Sospel	17.58	303	*e*P	Pn	02 12 11.0	-2.3
MBDF	Montbardon	18.34	305	*e*P	Pn	02 12 21.0	-1.5
MBDF	Montbardon	18.34	305	*e*P	Pn	02 12 21.0	-1.5
LPG	La Plagne	18.65	308	*e*P	Pn	02 12 25.0	-1.2
	5.2nm,0.6s						
LPG	La Plagne	18.65	308	*e*P	Pn	02 12 25.0	-1.2
	2.6nm,0.6s						
LPG	La Plagne	18.65	308	*e*P	Pn	02 12 25.0	-1.2
	2.6nm,0.6s						
LPL	La Plagne	18.67	308	*e*P	Pn	02 12 25.2	-1.3
	3.6nm,0.4s						
LPL	La Plagne	18.67	308	*e*P	Pn	02 12 25.2	-1.3
	1.8nm,0.4s						
LPL	La Plagne	18.67	308	*e*P	Pn	02 12 25.2	-1.3
	1.8nm,0.4s						
ORIF	Oris-en-Rattie	19.00	305	*e*P	Pn	02 12 29.2	-1.2
ORIF	Oris-en-Rattie	19.00	305	*e*P	Pn	02 12 29.2	-1.2
CABF	La Chapelle	19.54	310	*e*P	Pn	02 12 34.3	-2.5
	4.7nm,0.5s						
CABF	La Chapelle	19.54	310	*e*P	Pn	02 12 34.3	-2.5
	2.3nm,0.5s						
CABF	La Chapelle	19.54	310	*e*P	Pn	02 12 34.3	-2.5
	2.3nm,0.5s						
HAU	Haudompre	20.03	314	*e*P	P	02 12 40.1	-0.1
	5.7nm,0.7s						
HAU	Haudompre	20.03	314	*e*P	P	02 12 40.1	-0.1
	2.8nm,0.7s						
HAU	Haudompre	20.03	314	*e*P	P	02 12 40.1	-0.1
	2.8nm,0.7s						
SMF	Signal de Mont	20.96	308	*e*P	P	02 12 49.4	-0.9
SMF	Signal de Mont	20.96	308	*e*P	P	02 12 49.4	-0.9
LOR	Lormes	21.20	310	*e*P	P	02 12 52.3	-0.5
	3.1nm,0.6s,mb3.5						
LOR	Lormes	21.20	310	*e*P	P	02 12 52.3	-0.5
	1.5nm,0.6s,mb3.5						
LOR	Lormes	21.20	310	*e*P	P	02 12 52.3	-0.5
	1.5nm,0.6s,mb3.5						
AVF	Avril sur Loir	21.33	308	*e*P	P	02 12 54.3	0.0
AVF	Avril sur Loir	21.33	308	*e*P	P	02 12 54.3	0.0
SSF	Saint Saulge	21.34	309	*e*P	P	02 12 54.0	-0.3
	7.7nm,0.6s,mb3.9						
SSF	Saint Saulge	21.34	309	*e*P	P	02 12 54.0	-0.3
	3.8nm,0.6s,mb3.9						
SSF	Saint Saulge	21.34	309	*e*P	P	02 12 54.0	-0.3
	3.8nm,0.6s,mb3.9						
BGF	Bois d'Agland	21.57	308	*e*P	P	02 12 56.2	-0.6
	5.3nm,0.6s,mb3.8						
BGF	Bois d'Agland	21.57	308	*e*P	P	02 12 56.2	-0.6
	2.7nm,0.6s,mb3.8						
BGF	Bois d'Agland	21.57	308	*e*P	P	02 12 56.2	-0.6
	2.7nm,0.6s,mb3.8						
LDF	La Druitiere	24.18	311	*e*P	P	02 13 23.2	+0.4
	2.8nm,0.4s,mb3.6						
LDF	La Druitiere	24.18	311	*e*P	P	02 13 23.2	+0.4
	1.4nm,0.4s,mb3.6						
LDF	La Druitiere	24.18	311	*e*P	P	02 13 23.2	+0.4
	1.4nm,0.4s,mb3.6						
FLN	La Foliniere	24.46	311	*e*P	P	02 13 24.9	-0.5
FLN	La Foliniere	24.46	311	*e*P	P	02 13 24.9	-0.5
GRR	Gorron	24.56	310	*e*P	P	02 13 25.7	-0.6
	4.4nm,0.4s,mb4.0						
GRR	Gorron	24.56	310	*e*P	P	02 13 25.7	-0.6
	2.2nm,0.4s,mb3.9						
GRR	Gorron	24.56	310	*e*P	P	02 13 25.7	-0.6
	2.2nm,0.4s,mb3.9						
ESDC	Sonseca Array	25.37	288	P	P	02 13 34.0	+0.2
	1.1nm,0.6s,mb3.5,baz=84,slow=9.4,SNR=10						
ESDC	Sonseca Array	25.37	288	P	P	02 13 34.0	+0.2
ESDC	Sonseca Array	25.37	288	P	P	02 13 34.0	+0.2
HFS	Hagfors	25.99	344	P	P	02 13 38.6	-0.5
	1.2nm,0.7s,mb3.5,baz=159,slow=11,SNR=8.4						
HFS	Hagfors	25.99	344	P	P	02 13 38.6	-0.6
AKTK	Aktyubinsk	26.20	47	P	P	02 13 40.0	-1.2
AKTK	Aktyubinsk	26.20	47	P	P	02 13 40.0	-1.2
AKTO	Aktyubinsk	26.20	47	P	P	02 13 40.0	-1.2
	0.5nm,0.4s,mb3.3,baz=246,slow=12,SNR=3.1						
ARCES	ARCESS Array B	33.80	359	P	P	02 14 47.1	-1.0
	0.7nm,0.9s,mb3.5,baz=167,slow=8.3,SNR=2.8						
ARCES	ARCESS Array B	33.80	359	P	P	02 14 47.1	-1.0
MKAR	Makanchi Array	41.58	57	P	P	02 15 51.4	-2.6
	0.1nm,0.4s,mb2.9,baz=269,slow=5.8,SNR=2.9						
MKAR	Makanchi Array	41.58	57	P	P	02 15 51.4	-2.6

NNC ***18*** *02:18:10.7±1.0, 47°.85N×81°.27E, h0km, mb3.9, mpv3.8, Error ellipse: s-maj=11.1km s-min=5.8km az=46.0*
IDC ***18*** *02:18:11.9±0.9, 47°.84N×81°.31E, h0km, mb1 3.8/4, mb1mx3.4/28, mbtmp3.8/4, ML3.4/4, Error ellipse: s-maj=14.2km s-min=7.6km az=50.0*
ISCJB ***18*** *02:18:12.9±0.4, 47°.89N±0°.03×81°.11E±0°.06, h33km, Error ellipse: s-maj=6.3km s-min=3.8km az=141.3*
BJI ***18*** *02:18:13.3, 47°.70N×81°.26E, h12km, ML3.5/6*
NEIC ***18*** *02:18:15.4±0.8, 47°.82N×81°.32E, h35km, Error ellipse: s-maj=12.7km s-min=9.0km az=84.0*
ISC 18 02:18:15.0±0.5,**47°.80N**±0°.04×**81°.13E**±0°.06,**h35**km,**n22,**
σ1♀**35**/33,**9C-6D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**1.28**	**141**	P	**Pn**	**02 18 35.5**	**-0.8**
	51nm,0.3s,baz=324,slow=16,SNR=4711						
MK31				⇑S	**Sn**	**02 18 51.3**	**-0.9**
	81nm,0.2s,baz=330,slow=26,SNR=4.1						
MK31	**Makanchi Array**	**1.28**	**141**	*e*Pn	**Pn**	**02 18 35.3**	**-1.0**
MK31				*e*Sn	**Sn**	**02 18 51.2**	**-0.9**
MKAR	**Makanchi Array**	**1.28**	**141**	Pg	**Pn**	**02 18 35.1**	**-1.2**
	66nm,0.3s,baz=329,slow=18,SNR=2072						
MKAR				Lg		02 18 51.3	
	279nm,0.3s,baz=324,slow=27,SNR=48						
KURK	**Kurchatov**	**3.35**	**332**	⇓Pn	**Pn**	**02 19 05.5**	**+0.7**
	24nm,0.4s						
KURK				⇑Lg		02 19 59.8	
	89nm,0.5s						
KURK	**Kurchatov**	**3.35**	**332**	*e*Pn	**Pn**	**02 19 04.9**	**+0.1**
WMQ	**Urumqi**	**6.07**	**128**	Pn	**Pn**	**02 19 43.5**	**+1.3**
WMQ				Sn	**Sn**	**02 20 48.0**	**-2.4**
WMQ				smax			
	comp=N,28nm,0.7s						
WMQ				smax			
	comp=E,30nm,0.6s						
TKM2	**Tokmak 2**	**6.24**	**221**	⇑Pn	**Pn**	**02 19 45.7**	**+1.2**
	comp=E,2.7nm,0.4s						
TKM2				⇓Lg		02 21 32.3	
	comp=E,24nm,0.6s						
TKM2	**Tokmak 2**	**6.24**	**221**	*e*Pn	**Pn**	**02 19 46.0**	**+1.5**
	comp=E,5.2nm,0.4s						
TKM2				*e*Lg		02 21 23.1	
ZALV	**Zalesovo Beam**	**6.59**	**19**	Pn	**Pn**	**02 19 50.8**	**+1.6**
	comp=E,1.7nm,0.3s,baz=203,slow=12,SNR=12						
ZALV				Sn	**Sn**	**02 21 04.1**	**+1.2**
	comp=E,7.1nm,0.3s,baz=206,slow=27,SNR=14						
ZALV				Lg		02 21 38.7	
	comp=E,3.3nm,0.3s,baz=201,slow=30,SNR=14						
AAK	**Ala-Archa**	**6.97**	**225**	Pn	**Pn**	**02 19 59.1**	**+4.6**
	comp=E,0.5nm,0.3s,baz=89,slow=9.1,SNR=3.5						
AAK				Lg		02 21 49.6	
	comp=E,1.5nm,0.3s,baz=215,slow=23,SNR=8.5						
AAK	**Ala-Archa**	**6.97**	**225**	*e*Pn	**Pn**	**02 19 56.5**	**+1.9**
AAK				Lg		02 21 49.6	
UCH	**Uchtor**	**7.28**	**222**	*e*Pn	**Pn**	**02 20 02.5**	**+3.8**
	comp=E,2.7nm,0.6s						
UCH				*e*Lg		02 21 56.3	
EKS2	**Erkin-Say**	**7.30**	**228**	*e*Pn	**Pn**	**02 20 00.2**	**+1.1**
	comp=E,3.9nm,0.4s						
AML	**Almayashu**	**7.74**	**226**	*e*Pn	**Pn**	**02 20 09.2**	**+4.2**
	comp=E,3.0nm,0.4s						
VOSK	**Vostochnaya**	**8.16**	**311**	⇓Pn	**Pn**	**02 20 11.5**	**+0.8**
	comp=E,0.9nm,0.3s						
VOSK				⇓Sn	**Sn**	**02 21 41.2**	**-0.4**
	comp=E,3.2nm,0.3s						
VOSK				⇑Lg		02 22 27.8	
	comp=E,9.0nm,0.6s						
BVAR	**Borovoye Array**	**8.62**	**311**	Pn	**Pn**	**02 20 18.1**	**+1.0**
	comp=E,2.1nm,0.3s,baz=118,slow=14,SNR=28						
BVAR				Sn	**Sn**	**02 21 51.1**	**-1.9**
	comp=E,2.0nm,0.3s,baz=118,slow=18,SNR=8.7						
BVAR				Lg		02 22 45.4	
	comp=E,1.2nm,0.3s,baz=122,slow=30,SNR=3.4						
BRVK	**Borovoye**	**8.70**	**311**	*e*Pn	**Pn**	**02 20 18.9**	**+0.8**
	comp=E,2.4nm,0.4s						
BRVK				*e*Sn	**Sn**	**02 21 54.1**	**-0.7**
KK31	**Karatay Array**	**8.81**	**242**	⇑Pn	**Pn**	**02 20 22.6**	**+2.8**
	comp=E,0.6nm,0.3s,baz=57,slow=12						
KK31				⇑Sn	**Sn**	**02 22 03.2**	**+5.5**
	comp=E,4.1nm,0.6s,baz=54,slow=21						
KK31				⇓Lg		02 22 48.8	
	comp=E,5.8nm,0.5s,baz=48,slow=30						
ZRNK	**Zerenda**	**9.30**	**308**	⇓Pn	**Pn**	**02 20 26.7**	**+0.2**
	comp=E,2.0nm,0.5s						
ZRNK				⇑Sn	**Sn**	**02 22 08.6**	**-1.2**
	comp=E,1.8nm,0.4s						
ZRNK				⇑Lg		02 23 04.3	
	comp=E,23nm,0.9s						
AB31	**Akbulak array**	**14.11**	**284**	⇑P	**Pn**	**02 21 29.8**	**-2.4**
	comp=E,0.2nm,0.3s						
AKTK	**Aktyubinsk**	**15.35**	**288**	Pn	**Pn**	**02 21 47.4**	**-1.4**
AKTK				Sn	**Sn**	**02 24 30.4**	**-7.0**
AKTK				Lg		02 26 19.1	
AKTO	**Aktyubinsk**	**15.35**	**288**	Pn	**Pn**	**02 21 47.4**	**-1.4**
	comp=E,0.1nm,0.3s,baz=105,slow=12,SNR=4.2						
AKTO				Sn	**Sn**	**02 24 30.4**	**-7.0**
	comp=E,0.1nm,0.3s,baz=306,slow=19,SNR=2.2						
AKTO				Lg		02 26 19.1	
	comp=E,0.1nm,0.3s,baz=25,slow=19,SNR=2.9						

NIED ***18*** *02:24:00, 43°.30N×147°.90E, h23km, Mw4.7 Best double couple: M0 1.2000×10¹⁶ NP1:φ♀37.00000°, δ60.00000°, λ90.00000°. NP2:φ♂218.00000°, δ30.00000°, λ91.00000°.*
JMA ***18*** *02:24:54.5±0.4, 43°.32N×147°.91E, h0km, M4.7*
SKHL ***18*** *02:24:58.5±0.6, 43°.21N×147°.97E, h59km±25km, mb5.3/2, Ms4.7/4, msh5.2/2*
ISCJB ***18*** *02:24:59.5±0.2, 43°.38N±0°.04×147°.72E±0°.03, h37km, mb4.7/131, MS4.4/40, Error ellipse: s-maj=5.4km s-min=2.8km az=158.1*
BJI ***18*** *02:24:59.9, 43°.45N×147°.78E, h42km, mB4.9/29, mb4.7/42, Ms4.5/34, Ms7 4.4/31*
MOS ***18*** *02:24:59.6±0.9, 43°.35N×147°.70E, h39km, mb5.0/53, MS4.3/24, Error ellipse: s-maj=7.8km s-min=4.7km az=115.4*
IDC ***18*** *02:25:00.5±0.6, 43°.41N×147°.76E, h32km±3km, mb4.3/27, mb1 4.4/30, mb1mx4.3/33, mbtmp4.2/30, ML3.8/2, MS4.1/15, Ms1 4.1/15, ms1mx3.8/34, Error ellipse: s-maj=15.0km s-min=11.6km az=144.0*
NEIC ***18*** *02:25:01.2±0.7,

KUR A 02 26 28.6
comp=E,12μm,2.5s
KUR A 02 26 28.6
comp=E,22μm,2.5s
JRA Rausu 1.96 287 P **Pn 02 25 31.9 -0.3**
JNK Nakash 2.19 276 P **Pn 02 25 34.6 -0.8**
JNK *e*S **Sn 02 26 03.9 +2.6**
JAK Akkeshi 2.25 261 P **Pn 02 25 35.8 -0.4**
JTKR Abashiri--Toko 2.83 283 P **Pn 02 25 44.7 +0.6**
JAR Ashorobuto 2.89 269 P **Pn 02 25 44.6 -0.3**
JOB Onbets 2.89 262 P **Pn 02 25 44.6 -0.3**
JMP Maruseppu 3.22 282 P **Pn 02 25 50.4 +0.9**
JCH Churui 3.29 258 P **Pn 02 25 50.2 -0.3**
JCH *e*S **Sn 02 26 27.7 -0.7**
ERM Erimo 3.64 249 *d i*PN **Pn 02 25 56.3 +1.1**
ERM Erimo 3.64 249 *e*Pn **Pn 02 25 56.5 +1.3**
ERM *e*Sn **Sn 02 26 35.7 -1.1**
JKK2 Kamakawa 2 3.64 279 P **Pn 02 25 56.4 +1.1**
JFR Furan 3.75 268 P **Pn 02 25 57.5 +0.7**
ASAJ Asahikawa 3.78 283 Pn **Pn 02 25 59.5 +2.3**
comp=E,3.6nm,0.3s,baz=99,slow=6.2,SNR=11
ASAJ Sn **Sn 02 26 52.4 +12**
comp=E,18nm,0.3s,baz=6.5,slow=32,SNR=3.5
ASAJ LR LR 02 27 37.1
comp=E,3μm,20.5s,baz=302,slow=41
JNBK Urakawa-nobuka 3.82 255 P **Pn 02 25 57.3 -0.5**
JSE Soyaes 4.01 295 P **Pn 02 26 01.1 +0.7**
JHR Hokuryu 4.37 277 P **Pn 02 26 07.5 +2.2**
JWK2 Keihoku 4.60 297 P **Pn 02 26 10.9 +2.5**
JEW Eniwo 4.63 265 P **Pn 02 26 09.6 +0.8**
YSS Yuzh-Sakhalins 5.00 317⇑ *i*PN **Pn 02 26 15.0 +1.1**
YSS pmax pmax
comp=Z,50nm,0.5s
YSS MLR MLR
comp=Z,3μm,18.0s
YSS MLR MLR
comp=N,2μm,16.0s
YSS MLR MLR
comp=E,2μm,16.0s
YSS Yuzh-Sakhalins 5.00 317 *e*Pn **Pn 02 26 14.7 +0.8**
YSS Yuzh-Sakhalins 5.00 317⇑ *i*P **Pn 02 26 15.0 +1.1**
YSS AMB AMB 02 26 15.5
comp=E,50nm,0.5s
YSS *e*S **Sn 02 27 10.0 -0.4**
YSS A 02 27 13.0
comp=E,90nm,1.0s
YSS *e*LQ 02 27 30.0
YSS AMS AMS 02 28 20.0
comp=E,3μm,18.0s
YSS AMS AMS 02 28 20.0
comp=E,2μm,16.0s
YSS AMS AMS 02 28 20.0
comp=E,2μm,16.0s
JKB Kayabe 5.16 255 P **Pn 02 26 16.2 0.0**
JKB *e*S **Sn 02 27 13.5 -0.9**
TYV Tymovskoe 8.23 337 *e*P **Pn 02 27 03.0 +4.8**
TYV AMB AMB 02 27 06.0
comp=E,6.0nm,0.5s
TYV AMS AMS 02 30 16.0
comp=E,2μm,15.0s
TYV AMS AMS 02 30 16.0
comp=E,6μm,16.0s
TYV AMS AMS 02 30 16.0
comp=E,3μm,16.0s
MAJO Matsushiro 10.01 230 *e*Pn **Pn 02 27 21.3 -1.3**
MAT Matsushiro 10.01 230 P **Pn 02 27 21.3 -1.3**
MAT S **Sn 02 29 19.0 +5.5**
MJAR Matsushiro Arr 10.01 230 Pn **Pn 02 27 21.2 -1.4**
comp=E,0.9nm,0.3s,baz=28,slow=14,SNR=9.1
MJAR Sn **Sn 02 29 20.2 +6.7**
comp=E,0.7nm,0.3s,baz=40,slow=35,SNR=3.0
MJAR Matsushiro Arr 10.01 230 PN **Pn 02 27 21.2 -1.4**
MJAR 02 29 20.2
MJAR pmax pmax
comp=Z,1.0nm,0.3s
MJAR smax
comp=N,1.0nm,0.3s
HABR Khabarovsk 10.18 304 *e*PN **Pn 02 27 25.4 +0.5**
HABR pmax pmax
comp=N,62nm,2.4s
HABR pmax pmax
comp=E,115nm,2.1s
HABR pmax pmax
comp=Z,44nm,1.6s
HABR MLR MLR
comp=Z,1μm,15.0s
OKH Okha 10.64 344 *e*P **Pn 02 27 28.4 -2.8**
OKH AMB AMB 02 27 41.0
comp=Z,300nm,4.0s
OKH A 02 29 39.6
comp=Z,500nm,8.0s
OKH *e*LQ 02 31 32.1
OKH AMS AMS 02 32 34.4
comp=Z,2μm,12.0s
OKH AMS AMS 02 32 34.4
comp=Z,2μm,12.0s
OKH AMS AMS 02 32 34.4
comp=Z,3μm,15.0s
NKL Nikolayevsk 10.82 337 *e*P **Pn 02 27 30.0 -3.7**
NKL AMB AMB 02 27 33.5
comp=Z,400nm,4.0s
NKL AMB AMB 02 27 34.5
comp=Z,17nm,1.0s
NKL AMB AMB 02 27 34.5
comp=Z,26nm,1.0s
NKL *e*L 02 30 47.0
NKL AMS AMS 02 32 00.0
comp=Z,1μm,15.0s
NKL AMS AMS 02 32 00.0
comp=Z,900nm,15.0s
NKL AMS AMS 02 32 00.0
comp=Z,2μm,15.0s
PETK Petropavlovsk- 11.76 31 Pn **Pn 02 27 44.2 -2.3**
comp=Z,0.6nm,0.3s,baz=191,slow=12,SNR=8.8
PETK LR LR 02 33 02.6
comp=Z,550nm,18.4s,baz=224,slow=41
PETK Petropavlovsk- 11.76 31 PN **Pn 02 27 44.2 -2.3**
PETK pmax pmax
comp=Z,1.0nm,0.3s
PETK MLR MLR
comp=Z,550nm,18.4s
PETK Petropavlovsk- 11.76 31 Pn **Pn 02 27 44.2 -2.3**
PETK LR LR 02 33 02.6
PET Petropavlovsk 12.07 33 *e*PN **Pn 02 27 58.3 +7.6**
PET *e* 02 30 14.0
PET MLR MLR
comp=Z,800nm,13.0s
KLR Kul'dur 12.48 303 *e*PN **Pn 02 27 57.7 +1.3**
KLR pmax pmax
comp=E,110nm,1.8s
KLR pmax pmax
comp=Z,74nm,1.8s
KLR MLR MLR
comp=N,1μm,12.0s
KLR MLR MLR
comp=Z,6μm,12.0s
MDJ Mudanjiang 13.11 282 P **Pn 02 28 05.0 0.0**
MDJ S **Sn 02 30 28.3 -1.1**
MDJ PcP PcP 02 33 38.3 +3.6
MDJ ScP ScP 02 37 08.0 +3.3
MDJ PcS PcS 02 37 13.9 +4.9
MDJ ScS ScS 02 40 44.4 +3.3
MDJ pmax pmax
comp=Z,6.0nm,0.6s
MDJ pmax pmax
comp=Z,110nm,4.9s
MDJ LR LR
comp=N,530nm,14.7s
MDJ LR LR
comp=E,850nm,16.5s
MDJ LR LR
comp=Z,1μm,16.5s
CN2 Changchun 16.14 279 *e*P **Pn 02 28 45.0 -0.3**
CN2 *es*P sP 02 29 00.4 -2.5
CN2 *e*S **S 02 31 40.8 -14**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,700nm,15.0s
CN2 LR LR
comp=E,700nm,15.0s
CN2 LR LR
comp=Z,200nm,15.0s

KSRS Korea Array 16.19 255 Pn **Pn 02 28 44.6 -1.3**
baz=61,slow=12,SNR=9.9
KSRS LR LR 02 35 37.7
comp=Z,735nm,18.8s,baz=165,slow=39
ZEA Zeya 16.99 315 *e*P **Pn 02 28 57.6 +1.7**
ZEA AMB AMB 02 28 58.9
comp=Z,67nm,1.6s
SNY Shenyang 17.83 273⇓ P **Pn 02 29 11.6 +5.2**
SNY S **S 02 32 15.8 -14**
SNY pmax pmax
comp=Z,10.0nm,0.7s
SNY pmax pmax
comp=Z,250nm,9.0s
SNY LR LR
comp=N,360nm,17.3s
SNY LR LR
comp=E,540nm,17.5s
SNY LR LR
comp=Z,500nm,16.3s
SEY Seymchan 19.76 6 *e*P **Pn 02 29 25.9 -3.6**
DL2 Dalian 20.12 266 P **P 02 29 32.0 +0.1**
DL2 pmax pmax
comp=Z,20nm,1.1s
YAK Yakutsk 21.49 337 *e*P **P 02 29 41.4 -5.0**
YAK *e* 02 29 59.0
YAK *e*S **S 02 33 33.1 -9.1**
YAK *e*SS 02 33 53.0
YAK pmax pmax
comp=Z,21nm,1.0s,mb4.4
YAK pmax pmax
comp=E,6.0nm,1.1s
YAK pmax pmax
comp=N,9.0nm,1.4s
YAK smax
comp=N,6.0nm,0.4s
YAK smax
comp=E,4.0nm,0.4s
YAK MLR MLR
comp=E,540nm,15.0s,MS4.1
YAK MLR MLR
comp=Z,503nm,16.0s,MS4.0
YAK MLR MLR
comp=N,198nm,16.0s,MS4.1
BJI Beijing 23.71 273 P **P 02 30 08.3 -1.4**
BJI pP 02 30 19.8
BJI sP sP 02 30 24.8 -0.4
BJI S **S 02 34 21.1 -0.8**
BJI sS sS 02 34 39.8 0.0
BJI pmax pmax
comp=Z,34nm,1.0s,mb4.7
BJI pmax pmax
comp=Z,130nm,3.5s
BJI LR LR
comp=N,340nm,14.0s,MS4.1
BJI LR LR
comp=E,430nm,16.3s,MS4.1
BJI LR LR
comp=Z,280nm,16.7s,MS3.8
BJT Baijiatuau 23.73 273 *e*P **P 02 30 08.5 -1.3**
BJT pmax pmax
comp=Z,22nm,0.8s
BJT Baijiatuau 23.73 273 *e*P **P 02 30 08.5 -1.3**
comp=Z,22nm,0.8s,mb4.6
NJ2 Nanjing 25.36 253 *e*P **P 02 30 28.3 +3.5**
NJ2 PP 02 31 08.5
NJ2 S **S 02 34 46.5 -2.0**
NJ2 sS sS 02 35 06.5 0.0
NJ2 pmax pmax
comp=Z,30nm,1.0s,mb4.8
NJ2 pmax pmax
comp=Z,320nm,4.3s
NJ2 LR LR
comp=N,830nm,19.0s,MS4.4
NJ2 LR LR
comp=E,880nm,22.9s,MS4.4
NJ2 LR LR
comp=Z,4μm,17.8s
BILL Biiibino 26.59 16⇑ *e*P **P 02 30 33.2 -2.3**
BILL pmax pmax
comp=Z,2.0nm,0.4s,mb4.0
BILL MLR MLR
comp=Z,800nm,17.0s,MS4.3
HHC Hu-ho-hao-te 26.81 277 *e*P **P 02 30 37.8 0.0**
HHC pP pP 02 30 48.8 +0.2
HHC sP sP 02 30 54.1 +0.7
HHC PP 02 31 23.6
HHC PcP PcP 02 34 00.4 +0.7
HHC S **S 02 35 08.0 -3.2**
HHC sS sS 02 35 26.3 -3.0
HHC SS 02 36 20.8
HHC ScP ScP 02 37 35.8 -0.7
HHC PcS PcS 02 37 41.1 +0.1
HHC pmax pmax
comp=Z,32nm,0.9s,mb4.8
HHC pmax pmax
comp=Z,120nm,4.8s
HHC LR LR
comp=N,1μm,11.2s,MS4.8
HHC LR LR
comp=E,1μm,11.0s,MS4.8
HHC LR LR
comp=Z,1μm,11.2s,MS4.7
ULN Ulaanbaatar 28.55 293 *e*P **P 02 30 54.2 +0.9**
ULN pmax pmax
comp=Z,37nm,1.2s,mb5.0
ULN Ulaanbaatar 28.55 293 *e*P **P 02 30 54.2 +0.9**
comp=Z,36nm,1.2s,mb5.0
SONM Songino Array 28.99 293 P **P 02 30 58.0 +0.8**
comp=Z,7.2nm,0.6s,mb4.6,baz=86,slow=8.7,SNR=59
SONM LR LR 02 43 46.9
comp=Z,1μm,18.9s,MS4.5,baz=82,slow=39
SONM Songino Array 28.99 293 P **P 02 30 58.0 +0.8**
SONM pmax pmax
comp=Z,7.0nm,0.6s
SONM MLR MLR
comp=Z,1μm,18.9s
WHN Wuhan 29.39 255 *e*P pP 02 31 14.0 +2.2
WHN *es*S **S 02 35 58.9 +7.0**
WHN LR LR
comp=N,2μm,17.1s,MS4.8
WHN LR LR
comp=E,520nm,13.0s,MS4.8
WHN LR LR
comp=Z,1μm,14.5s,MS4.7
TLY Talaya 30.49 301 *e*P **P 02 31 10.8 +0.4**
TLY pmax pmax
comp=Z,6.0nm,1.6s,mb4.1
TLY MLR MLR
comp=Z,501nm,14.0s,MS4.3
XAN Xi'an 31.44 266 P **P 02 31 19.0 0.0**
XAN pmax pmax
comp=Z,2.0nm,0.8s,mb4.0
XAN pmax pmax
comp=Z,32nm,5.7s
MOY Mondy 32.14 302 *e*P **P 02 31 25.7 +0.8**
MOY pmax pmax
comp=Z,12nm,1.6s,mb4.5
ENH Enshi 33.00 259 *e*P **P 02 31 32.6 -0.1**
LZH Lanzhou 34.20 273 *e*P **P 02 31 44.0 +0.9**
LZH pP pP 02 31 52.0 -2.1
LZH sP sP 02 32 02.5 +3.7
LZH PP PP 02 32 57.5 -3.4
LZH *e*S **S 02 37 06.3 -0.7**
LZH sS sS 02 37 25.0 -0.2
LZH SS SS 02 39 13.3 -22
LZH pmax pmax
comp=Z,42nm,1.4s,mb5.2
LZH pmax pmax
comp=Z,120nm,5.6s
LZH LR LR
comp=E,640nm,15.3s
LZH LR LR
comp=Z,880nm,16.3s,MS4.6
GTA Gaotai 35.77 280⇑ P **P 02 31 57.6 +1.1**
GTA pP pP 02 32 10.3 +2.7
GTA sP sP 02 32 15.3 +3.0
GTA PP PP 02 33 19.9 +1.8
GTA PcP PcP 02 34 25.9 +2.2
GTA S **S 02 37 32.3 +1.4**
GTA sS sS 02 37 53.5 +4.3
GTA SS SS 02 39 56.9 -11
GTA pmax pmax
comp=Z,14nm,1.2s,mb4.8
GTA pmax pmax
comp=Z,120nm,6.3s

GTA LR LR
comp=N,250nm,13.5s,MS4.3
GTA LR LR
comp=E,330nm,14.7s,MS4.3
GTA LR LR
comp=Z,470nm,13.2s,MS4.4
CD2 Chengdu 36.79 265 P **P 02 32 06.4 +1.0**
CD2 pP pP 02 32 18.6 +2.2
CD2 sP sP 02 32 23.9 +2.8
CD2 PP PP 02 33 32.8 +3.3
CD2 S **S 02 37 46.8 +0.1**
CD2 sS sS 02 38 07.3 +2.3
CD2 SS SS 02 40 16.3 -12
CD2 pmax pmax
comp=Z,30nm,0.9s,mb5.1
CD2 pmax pmax
comp=Z,170nm,6.5s
CD2 LR LR
comp=N,480nm,10.7s
CD2 LR LR
comp=Z,230nm,9.5s
GYA Guiyang 37.24 257 P **P 02 32 09.8 +0.6**
GYA pP pP 02 32 21.3 +1.0
GYA sP sP 02 32 29.0 +4.0
GYA PP PP 02 33 36.3 +1.7
GYA PcP PcP 02 34 30.0 +1.7
GYA S **S 02 37 51.8 -1.9**
GYA ScP ScP 02 38 11.0 -1.1
GYA sS sS 02 38 13.6 +1.6
GYA SS SS 02 40 23.4 -14
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
GYA pmax pmax
comp=Z,90nm,4.8s
GYA LR LR
comp=N,480nm,15.2s,MS4.5
GYA LR LR
comp=E,430nm,16.6s,MS4.5
GYA LR LR
comp=Z,460nm,17.0s,MS4.3
KDAK Kodiak Island 39.18 47 P **P 02 32 24.1 -1.1**
comp=Z,5.2nm,0.6s,mb4.5,baz=278,slow=9.8,SNR=4.3
KDAK Kodiak Island 39.18 47 *i* P **P 02 32 25.8 +0.6**
QIZ Qiongzhong 39.99 245 P **P 02 32 31.6 -0.8**
QIZ pP pP 02 32 43.6 +0.1
QIZ S **S 02 38 34.0 -1.2**
QIZ pmax pmax
comp=Z,12nm,1.5s,mb4.4
QIZ pmax pmax
comp=Z,140nm,4.2s
QIZ LR LR
comp=N,260nm,16.1s
QIZ LR LR
comp=E,140nm,23.3s
QIZ LR LR
comp=Z,340nm,21.1s,MS4.2
KMI Kunming 40.85 258 P **P 02 32 40.3 +0.9**
KMI pP pP 02 32 52.3 +1.7
KMI sP sP 02 32 57.4 +2.2
KMI PP PP 02 34 17.9 +3.9
KMI S **S 02 38 46.8 -1.2**
KMI sS sS 02 39 08.6 +2.2
KMI SS SS 02 41 40.5 -10
KMI pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
KMI pmax pmax
comp=Z,69nm,5.2s
KMI LR LR
comp=N,340nm,17.8s,MS4.3
KMI LR LR
comp=E,180nm,21.5s,MS4.3
KMI LR LR
comp=Z,290nm,20.0s,MS4.1
COLA College 41.11 36 *e*P **P 02 32 41.9 +0.8**
COLA pmax pmax
comp=Z,4.0nm,0.5s,mb4.3
COLA College 41.11 36 *e*P **P 02 32 41.9 +0.8**
comp=Z,4.3nm,0.5s,mb4.3
ILAR Eielson Array 41.53 36 P **P 02 32 44.2 -0.3**
comp=Z,1.7nm,0.7s,mb3.8,baz=269,slow=9.0,SNR=29
ILAR Eielson Array 41.53 36 P **P 02 32 44.3 -0.2**
ILAR pmax pmax
comp=Z,2.0nm,0.7s
ZALV Zalesovo Beam 41.55 307 P **P 02 32 44.1 -0.7**
comp=Z,2.8nm,0.4s,mb4.2,baz=79,slow=7.1,SNR=17
ZALV PcP PcP 02 34 41.8 +0.3
comp=Z,1.4nm,0.5s,baz=82,slow=3.1,SNR=5.5
ZALV pPcP 02 34 53.5
comp=Z,1.9nm,0.5s,baz=78,slow=3.4,SNR=4.7
ZALV LR LR 02 51 15.8
comp=Z,122nm,18.3s,MS3.8,baz=237,slow=38
ZALV Zalesovo Beam 41.55 307 P **P 02 32 44.1 -0.7**
ZALV 02 34 41.8
ZALV 02 34 53.6
ZALV pmax pmax
comp=Z,3.0nm,0.4s,mb4.3
ZALV MLR MLR
comp=Z,122nm,18.3s,MS3.8
WMQ Urumqi 42.61 292 P **P 02 32 55.4 +1.8**
WMQ pP pP 02 33 07.8 +3.0
WMQ sP sP 02 33 13.1 +3.6
WMQ PP PP 02 34 37.5 +4.8
WMQ PcP PcP 02 34 47.6 +2.4
WMQ *es*S **S 02 39 14.8 +1.1**
WMQ SS SS 02 42 19.5 -4.9
WMQ ScS ScS 02 42 50.4 -1.0
WMQ pmax pmax
comp=Z,32nm,1.0s,mb5.0
WMQ pmax pmax
comp=Z,200nm,6.0s
WMQ LR LR
comp=N,290nm,19.2s,MS4.6
WMQ LR LR
comp=E,600nm,17.0s,MS4.6
WMQ LR LR
comp=Z,720nm,16.0s,MS4.7
EGAK Eagle 43.98 36 *e*P **P 02 33 05.0 +0.7**
comp=Z,30nm,1.6s,mb4.8
MK31 Makanchi Array 45.12 298 *ce*P **P 02 33 14.1 +0.4**
MK31 pmax pmax
comp=Z,10.0nm,0.4s,mb5.0
MK31 Makanchi Array 45.12 298 *e*P **P 02 33 14.2 +0.5**
MKAR Makanchi Array 45.12 298 P **P 02 33 14.1 +0.4**
comp=Z,6.5nm,0.4s,mb4.8,baz=77,slow=8.7,SNR=116
MKAR LR LR 02 52 54.8
comp=Z,163nm,19.1s,MS4.0,baz=266,slow=37
MKAR Makanchi Array 45.12 298 P **P 02 33 14.1 +0.4**
MKAR pmax pmax
comp=Z,7.0nm,0.4s
MKAR MLR MLR
comp=Z,163nm,19.1s
KURK Kurchatov 46.07 304 *c i*P **P 02 33 20.9 -0.3**
KURK pmax pmax
comp=Z,48nm,1.7s,mb5.2
KURK Kurchatov 46.07 304 *e*P **P 02 33 20.4 -0.8**
comp=Z,48nm,1.3s,mb5.3
HYT Haines Junctio 46.32 41 *e*P **P 02 33 24.8 +1.8**
INK Inuvik 46.50 30 P **P 02 33 25.0 +0.7**
comp=Z,9.7nm,0.5s,mb5.0,baz=317,slow=6.4,SNR=33
INK Inuvik 46.50 30 P **P 02 33 25.0 +0.7**
INK pmax pmax
comp=Z,10.0nm,0.5s
INK Inuvik 46.50 30 *e*P **P 02 33 25.0 +0.7**
comp=Z,9.9nm,0.6s,mb4.9
LSA Lhasa 46.62 272 *e*P **P 02 33 27.6 +1.8**
LSA pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
LSA Lhasa 46.62 272 *e*P **P 02 33 27.6 +1.9**
comp=Z,5.4nm,0.6s,mb4.7
CHTO Chiang Mai 47.59 255 *e*P **P 02 33 34.6 +1.2**
CHTO pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
CHTO Chiang Mai 47.59 255 *e*P **P 02 33 34.6 +1.2**
comp=Z,6.4nm,1.1s,mb4.6
CMAR Chiang Mai Arr 47.83 254 P **P 02 33 36.3 +1.0**
comp=Z,0.8nm,0.3s,mb4.2,baz=29,slow=8.3,SNR=8.6
CMAR LR LR 02 56 33.0
comp=Z,350nm,18.2s,MS4.4,baz=41,slow=40
CMAR Chiang Mai Arr 47.83 254 P **P 02 33 36.3 +1.0**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR MLR MLR
comp=Z,350nm,18.2s
VOSK Vostochnaya 49.83 309 P **P 02 33 49.5 -0.7**
VOSK pmax pmax
comp=Z,14nm,1.2s,mb4.9

BVAR Borovoye Array 50.05 310 P **P** **02 33 51.6 -0.2**
comp=Z,3.7nm,0.5s,mb4.7,baz=81,slow=9.2,SNR=28
BVAR pPcP 02 35 25.7
comp=Z,0.7nm,0.4s,baz=84,slow=3.5,SNR=4.3
BRVK Borovoye 50.10 310*c i*P **P** **02 33 52.1 -0.1**
BRVK pmax pmax
comp=Z,19nm,1.2s,mb5.0
BRVK Borovoye 50.10 310 *e*P **P** **02 33 52.0 -0.2**
comp=Z,17nm,1.1s,mb5.0
TAPN Taplejung 50.44 272 *e*P **P** **02 33 55.0 -0.2**
comp=Z,35nm,1.0s,mb5.3
DLBC Dease Lake 50.66 42 P **P** **02 33 57.1 +0.7**
comp=Z,1.5nm,0.5s,mb4.2,baz=286,slow=7.4,SNR=4.6
ZRNK Zerenda 50.85 310 *i* P **P** **02 33 57.9 0.0**
ODAN Odare 50.95 272 *e*P **P** **02 33 57.7 -1.4**
comp=Z,7.0nm,0.5s,mb4.8
TKM2 Tokmak 2 51.03 296 P **P** **02 34 00.4 +0.9**
SNR=15
TKM2 Tokmak 2 51.03 296 *e*P **P** **02 34 00.4 +0.9**
TKM2 pmax pmax
comp=Z,54nm,1.5s,mb5.3
TKM2 Tokmak 2 51.03 296 *e*P **P** **02 34 00.3 +0.9**
comp=Z,54nm,1.5s,mb5.3
JIRN Jiri 51.37 273 *e*P **P** **02 34 02.1 -0.1**
comp=Z,11nm,0.4s,mb5.1
GUN Gumba 51.45 274 *e*P **P** **02 34 02.8 0.0**
comp=Z,43nm,0.8s,mb5.5
RAMN Ramite 51.48 272 *e*P **P** **02 34 01.3 -1.7**
comp=Z,72nm,1.0s,mb5.6
KBK Karagaybulak 51.58 296 P **P** **02 34 04.7 +1.2**
SNR=5.4
USP Ospenovka 51.59 297 P **P** **02 34 04.6 +1.0**
SNR=14
AAK Ala-Archa 51.89 296*c i*P **P** **02 34 06.6 +0.8**
AAK pmax pmax
comp=Z,14nm,1.7s,mb4.6
AAK Ala-Archa 51.89 296 *e*P **P** **02 34 06.0 +0.1**
comp=Z,23nm,1.3s,mb5.0
KKN Kakani 51.96 274 *e*P **P** **02 34 06.1 -0.5**
comp=Z,49nm,1.1s,mb5.3
PKI Pulchoki 51.99 274 *e*P **P** **02 34 05.9 -0.9**
comp=Z,6.2nm,0.4s,mb4.8
PKI Pulchoki 51.99 274 *e*P **P** **02 34 06.0 -0.8**
PKIN Phulchoki 51.99 274 *e*P **P** **02 34 06.0 -0.8**
comp=Z,41nm,1.2s,mb5.2
DMN Daman 52.19 274 *e*P **P** **02 34 07.3 -1.0**
comp=Z,84nm,1.4s,mb5.5
GKN Gorkha 52.30 275 *e*P **P** **02 34 08.8 -0.3**
comp=Z,96nm,1.4s,mb5.5
EKS2 Erkin-Say 52.34 296 P **P** **02 34 10.2 +1.0**
SNR=8.0
EKS2 Erkin-Say 52.34 296 *e*P **P** **02 34 09.8 +0.6**
comp=Z,5.0nm,0.5s,mb4.7
KSH Kashi 52.38 292 P **P** **02 34 14.1 +4.6**
KSH pP pP 02 34 27.0 +6.0
KSH sP sP 02 34 32.3 +6.7
KSH PcP PcP 02 35 23.8 +3.7
KSH PP PP 02 36 14.9 +6.7
KSH ScP ScP 02 39 16.0 +2.1
KSH PcS PcS 02 39 20.3 +1.9
KSH S **S** **02 41 36.6 +4.1**
KSH sS sS 02 41 59.0 +7.6
KSH ScS ScS 02 43 56.5 +0.5
KSH SS SS 02 45 14.6 +4.4
KSH pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
KSH pmax pmax
comp=Z,98nm,4.2s
KSH LR LR
comp=N,350nm,13.2s,MS4.7
KSH LR LR
comp=E,280nm,12.5s,MS4.7
KSH LR LR
comp=Z,570nm,15.2s,MS4.7
AML Almayashu 52.65 296 P **P** **02 34 13.2 +1.7**
SNR=5.8
AML Almayashu 52.65 296 *e*P **P** **02 34 12.2 +0.7**
comp=Z,31nm,1.5s,mb5.0
SVE Sverdlovsk 53.69 317⇑*e*P **P** **02 34 18.4 -0.5**
SVE pmax pmax
comp=Z,20nm,1.2s,mb4.9
SVE MLR MLR
comp=Z,413nm,16.0s,MS4.6
KK31 Karatay Array 54.25 298*ce*P **P** **02 34 23.1 -0.1**
KK31 pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
ARU Arti 54.89 317*c i*P **P** **02 34 26.3 -1.3**
ARU 02 36 27.7
ARU S **S** **02 42 07.6 +1.6**
ARU SS SS 02 45 45.4 -3.6
ARU pmax pmax
comp=Z,33nm,1.7s,mb5.1
ARU Arti 54.89 317 *e*P **P** **02 34 26.8 -0.9**
comp=Z,44nm,1.5s,mb5.3
RES Resolute Bay 55.19 17 P **P** **02 34 29.3 -0.2**
comp=Z,11nm,0.5s,mb5.2,baz=337,slow=8.4,SNR=20
RES Resolute Bay 55.19 17 *e*P **P** **02 34 29.7 +0.1**
RES pmax pmax
comp=Z,15nm,0.5s,mb5.3
RES Resolute Bay 55.19 17 *e*P **P** **02 34 29.7 +0.2**
comp=Z,15nm,0.5s,mb5.3
YKA Yellowknife Ar 55.87 34 P **P** **02 34 34.4 -0.1**
comp=Z,1.9nm,0.6s,mb4.3,baz=299,slow=7.1,SNR=4.5
YKA Yellowknife Ar 55.87 34 P **P** **02 34 34.4 -0.2**
YKA pmax pmax
comp=Z,2.0nm,0.6s
YKA Yellowknife Ar 55.87 34 P **P** **02 34 34.4 -0.1**
AB31 Akbulak array 57.61 309*ce*P **P** **02 34 47.5 +0.3**
AB31 pmax pmax
comp=Z,13nm,0.3s,mb5.4
AKTK Aktyubinsk 58.08 311 P **P** **02 34 50.4 -0.1**
AKTO Aktyubinsk 58.08 311 P **P** **02 34 50.4 -0.1**
comp=Z,2.0nm,0.3s,mb4.6,baz=66,slow=8.0,SNR=20
AKTO Aktyubinsk 58.08 311 P **P** **02 34 50.4 -0.1**
AKTO pmax pmax
comp=Z,2.0nm,0.3s,mb4.6
KEV Kevo 59.19 340 *e*P **P** **02 34 55.4 -2.5**
KEV pmax pmax
comp=Z,4.0nm,0.3s,mb4.9
KEV Kevo 59.19 340 *ep* **P** **02 34 55.4 -2.5**
comp=Z,3.5nm,0.3s,mb4.9
KBL Kabul 59.70 290 *e*P **P** **02 35 02.0 0.0**
KBL pmax pmax
comp=Z,21nm,1.0s,mb5.1
KBL Kabul 59.70 290 *e*P **P** **02 35 02.0 0.0**
comp=Z,21nm,1.0s,mb5.1
ARCES ARCESS Array B 59.72 340 P **P** **02 35 00.2 -1.3**
comp=Z,1.8nm,0.4s,mb4.5,baz=46,slow=7.7,SNR=77
ARCES LR LR 03 04 38.4
comp=Z,141nm,19.9s,MS4.1,baz=219,slow=40
ARCES ARCESS Array B 59.72 340 P **P** **02 35 00.3 -1.2**
ARCES pmax pmax
comp=Z,2.0nm,0.4s
ARCES MLR MLR
comp=Z,141nm,19.9s
KTK1 Kautokeino 60.66 340 *e*P **P** **02 35 07.2 -0.8**
TRO Tromso 61.23 342 *e*P **P** **02 35 10.7 -1.1**
TRO *ep*P pP 02 35 23.1 -0.3
NEW Newport 62.25 49 *e*P **P** **02 35 20.0 +1.0**
NEW pmax pmax
comp=Z,2.0nm,0.6s
NEW Newport 62.25 49 *e*P **P** **02 35 20.0 +1.0**
comp=Z,1.6nm,0.6s,mb4.3
JOF Joensuu 62.60 332 *e*P **P** **02 35 20.0 -1.1**
JOF pmax pmax
comp=Z,6.0nm,0.4s,mb5.1
JOF Joensuu 62.60 332 *ep* **P** **02 35 20.0 -1.1**
comp=Z,5.9nm,0.4s,mb5.1
HYB Hyderabad 63.19 269 *e*P **P** **02 35 26.0 +0.3**
HYB Hyderabad 63.19 269 *i* P **P** **02 35 26.0 +0.3**
WRAB Tennant Creek 64.20 194 *e*P **P** **02 35 31.1 -1.0**
WRAB pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
WRAB Tennant Creek 64.20 194 *e*P **P** **02 35 31.1 -1.0**
comp=Z,5.4nm,1.0s,mb4.5
WRA Warramunga Arr 64.21 194 P **P** **02 35 31.1 -1.0**
comp=Z,1.0nm,0.7s,mb4.0,baz=8.3,slow=6.6,SNR=9.6
WRA Warramunga Arr 64.21 194 P **P** **02 35 31.2 -1.0**
WRA pmax pmax
comp=Z,1.0nm,0.7s
SUMG Summit 64.25 2 *e*P **P** **02 35 32.1 +0.2**
comp=Z,44nm,1.4s,mb5.3
SWMT Swartz Lake 64.40 48 *e*P **P** **02 35 34.7 +1.5**
KAF Kangasniemi 64.82 334 *e*P **P** **02 35 34.5 -1.2**
KAF pmax pmax
comp=Z,3.0nm,0.5s,mb4.6

KAF Kangasniemi 64.82 334 *ep* **P** **02 35 34.5 -1.2**
comp=Z,3.1nm,0.5s,mb4.6,baz=42,slow=6.2
SLMT Seeley Lake 64.83 48 *e*P **P** **02 35 36.8 +0.7**
MSO Missoula 64.84 49 *e*P **P** **02 35 37.2 +1.1**
comp=Z,4.9nm,1.3s,mb4.4
MOS Moscow 64.98 324 *e*P **P** **02 35 33.2 -3.7**
MOS pmax pmax
comp=Z,70nm,1.2s,mb5.6
MOR8 Moi Rana 65.01 341 *e*P **P** **02 35 34.7 -2.2**
MOR8 AMb AMB 02 35 35.9
comp=Z,18nm,0.5s,mb5.4
MOR8 Moi Rana 65.01 341 *e*P **P** **02 35 34.7 -2.2**
comp=Z,18nm,0.5s,mb5.4
FLOS Flostrand 65.13 341 *e*P **P** **02 35 37.5 -0.2**
FINES FINESS Array B 65.38 333 P **P** **02 35 38.6 -0.7**
comp=Z,11nm,0.7s,mb5.0,baz=45,slow=7.4,SNR=51
FINES pP pP 02 35 49.8 -1.3
comp=Z,6.5nm,0.5s,baz=42,slow=7.2,SNR=10
FINES FINESS Array B 65.38 333 P **P** **02 35 38.7 -0.7**
FINES *PP pP 02 35 49.8 -1.3
FINES pmax pmax
comp=Z,11nm,0.7s
FFC Flin Flon 65.74 37 *i* P **P** **02 35 42.7 +0.9**
FFC Flin Flon 65.74 37 *e*P **P** **02 35 41.9 +0.1**
comp=Z,6.6nm,1.0s,mb4.6
FFC *ep*P pP 02 35 54.7 +1.2
OBN Obninsk 65.85 324*c i*P **P** **02 35 42.2 -0.3**
OBN *e* 02 38 04.3
OBN *e*S S 02 44 23.8 -2.4
OBN pmax pmax
comp=Z,55nm,1.2s,mb5.5
OBN MLR MLR
comp=Z,200nm,13.0s,MS4.5
OBN Obninsk 65.85 324 *e*P **P** **02 35 41.8 -0.7**
comp=Z,14nm,0.6s,mb5.2
FCC Fort Churchill 66.12 30 *e*P **P** **02 35 43.4 -0.8**
comp=Z,0.1nm,0.5s
VRHR Novokhopersk 66.18 319 *e*P **P** **02 35 43.1 -1.6**
VRHR pmax pmax
comp=N,30nm,1.0s
VRHR pmax pmax
comp=E,20nm,1.0s
VRHR pmax pmax
comp=Z,40nm,1.0s,mb5.4
LRM Limekiln Ridge 66.27 49 *e*P **P** **02 35 46.9 +1.5**
EGMT Eagleton 66.34 46 *e*P **P** **02 35 46.0 +0.2**
comp=Z,9.6nm,1.4s,mb4.6
BOZ Bozeman (W) 66.83 49 *e*P **P** **02 35 49.6 +0.6**
BOZ pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
BOZ Bozeman (W) 66.83 49 *e*P **P** **02 35 49.6 +0.7**
comp=Z,2.2nm,0.6s,mb4.4
NSS Namsos 66.95 341 *e*P **P** **02 35 48.3 -1.2**
VSR Storozhevoye 67.27 320 *e*P **P** **02 35 50.6 -1.1**
VSR pmax pmax
comp=N,4.0nm,0.5s
VSR pmax pmax
comp=E,7.0nm,0.5s
VSR pmax pmax
comp=Z,20nm,0.5s,mb5.4
VSU Vasula 67.35 331 *e*P **P** **02 35 52.2 +0.2**
VSU pmax pmax
comp=Z,19nm,1.0s,mb5.1
NVAR Mina Array Bea 67.41 58 P **P** **02 35 52.5 -0.3**
comp=Z,0.6nm,0.5s,mb3.9,baz=287,slow=5.2,SNR=4.4
ASAR Alice Springs 67.93 194 P **P** **02 35 56.9 +0.9**
comp=Z,0.6nm,0.5s,mb3.9,baz=12,slow=6.9,SNR=13
ASAR sP sP 02 36 09.4 -2.8
comp=Z,0.7nm,0.8s,baz=11,slow=6.9,SNR=4.8
MAK Makhachkala 68.29 309 *e*P **P** **02 35 56.5 -1.7**
MAK *e*S S 02 44 56.3 +0.3
MAK pmax pmax
comp=Z,7.0nm,0.2s,mb5.3
IMW Indian Meadow 68.32 50 *e*P **P** **02 35 59.5 +1.2**
TPAW Teton Pass 68.57 50 *e*P **P** **02 36 00.7 +0.8**
comp=Z,4.4nm,1.0s,mb4.3
GOF Gofitskoye 69.39 313 *e*P **P** **02 35 56.5 -8.6**
HWUT Hardware Ranch 69.44 52 *e*P **P** **02 36 05.5 +0.1**
comp=Z,1.7nm,0.8s,mb4.0
DUG Dugway 69.62 54 *e*P **P** **02 36 06.7 +0.2**
DUG pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
DUG Dugway 69.62 54 *e*P **P** **02 36 06.7 +0.2**
comp=Z,3.5nm,1.0s,mb4.2
IDID Didziasalis 69.69 328 *e*P **P** **02 36 06.9 +0.2**
IDID AMB AMB 02 36 07.3
comp=Z,8.0nm,1.1s,mb4.6
BW06 Boulder Array 69.82 50 *e*P **P** **02 36 07.9 +0.2**
comp=Z,1.3nm,0.6s,mb4.0
PDAR Pinedale Array 69.82 50 P **P** **02 36 07.8 0.0**
comp=Z,0.7nm,0.4s,mb3.9,baz=292,slow=0.3,SNR=9.9
IIGN Ignalina 69.86 329 *e*P **P** **02 36 07.9 +0.2**
IIGN AMB AMB 02 36 08.5
comp=Z,9.4nm,0.8s,mb4.8
NACGM Naroch 69.98 328 *e* **P** **02 36 06.0 -2.5**
NB2 NORSAR Subarra 70.08 339 P **P** **02 36 08.4 -0.6**
comp=Z,7.9nm,0.6s,mb4.8,baz=30,slow=6.5
NB2 NORSAR Subarra 70.08 339 P **P** **02 36 08.4 -0.6**
baz=30,slow=6.5
NB2 NORSAR Subarra 70.08 339 P **P** **02 36 08.4 -0.6**
NB2 NORSAR Subarra 70.08 339 P **P** **02 36 08.4 -0.6**
NOA NORSAR Array B 70.08 339 P **P** **02 36 08.8 -0.2**
comp=Z,8.2nm,0.5s,mb5.0,baz=31,slow=6.3,SNR=60
NOA pP pP 02 36 19.9 -0.9
comp=Z,2.8nm,0.4s,baz=31,slow=6.5,SNR=4.6
NOA LR LR 03 11 03.4
comp=Z,80nm,18.4s,MS4.0,baz=45,slow=39
NOA NORSAR Array B 70.08 339 P **P** **02 36 08.8 -0.2**
NOA *PP pP 02 36 20.0 -0.8
NOA pmax pmax
comp=Z,8.0nm,0.5s
NOA MLR MLR
comp=Z,80nm,18.4s
NOA NORSAR Array B 70.08 339 P **P** **02 36 08.8 -0.2**
NOA pP pP 02 36 19.9 -0.9
NOA LR LR 03 11 03.4
HFS Hagfors 70.18 338 P **P** **02 36 09.1 -0.5**
comp=Z,11nm,0.4s,mb5.1,baz=53,slow=5.7,SNR=138
HFS pP pP 02 36 18.7 -2.7
comp=Z,4.5nm,0.5s,baz=57,slow=5.5,SNR=4.4
HFS Hagfors 70.18 338 P **P** **02 36 09.1 -0.5**
HFS *PP pP 02 36 18.7 -2.7
HFS pmax pmax
comp=Z,11nm,0.4s
KIV Kislovodsk 70.31 312*c i*P **P** **02 36 10.7 0.0**
KIV *e* 02 38 43.1
KIV *e*SS SS 02 49 50.4 +0.5
KIV pmax pmax
comp=Z,29nm,1.0s,mb5.2
KIV MLR MLR
comp=Z,300nm,17.0s,MS4.6
KIV Kislovodsk 70.31 312 *e*P **P** **02 36 11.6 +0.9**
comp=Z,37nm,1.0s,mb5.3
NAO01 NORSAR Array S 70.33 339 *e*P **P** **02 36 09.6 -1.0**
comp=Z,7.1nm,0.7s,mb4.7
ZEI Tsey 70.43 311 *e*P **P** **02 36 10.8 -0.7**
ZEI pmax pmax
comp=Z,6.0nm,0.4s,mb4.9
ULM Lac du Bonnet 71.53 37 LR LR 03 06 24.8
comp=Z,53nm,20.6s,MS3.8,baz=351,slow=35
GNI Garni 71.69 308*c i*P **P** **02 36 18.7 -0.4**
GNI pmax pmax
comp=Z,13nm,1.2s
GNI Garni 71.69 308 *e*P **P** **02 36 19.8 +0.7**
comp=Z,22nm,1.2s,mb5.0
RSSD Black Hills 71.90 46 *e*P **P** **02 36 21.0 +0.7**
AKASG Malin Array Be 72.11 324 P **P** **02 36 21.2 -0.2**
comp=Z,6.0nm,0.5s,mb4.8,baz=40,slow=6.4,SNR=26
AKASG Malin Array Be 72.11 324 P **P** **02 36 21.3 -0.2**
AKASG pmax pmax
comp=Z,6.0nm,0.5s
AKBB Malin Array Si 72.11 324 *e*P **P** **02 36 20.8 -0.7**
KIEV Kiev 72.12 324 *e*P **P** **02 36 20.9 -0.6**
KIEV pmax pmax
comp=Z,26nm,1.2s,mb5.0
KIEV Kiev 72.12 324 *e*P **P** **02 36 20.9 -0.6**
comp=Z,26nm,1.2s,mb5.0
ANN Anapa 72.50 316 *e*P **P** **02 36 24.2 +0.3**
ANN *e**PP pP 02 36 33.0 -2.7
ANN *e* 02 39 08.2
ANN *e*PPP 02 40 50.8
ANN *e*S S 02 45 50.2 +5.2
ANN *e*SS SS 02 50 29.3 +6.0
ANN pmax pmax
comp=Z,56nm,1.0s,mb5.5
LVV L'vov 74.95 326 *e*P **P** **02 36 38.3 +0.1**

KWP Kalwaria Pacla 75.63 327 *e*P **P** **02 36 43.1 +1.0**
KWP Kalwaria Pacla 75.63 327 *e*P **P** **02 36 42.4 +0.3**
comp=Z,47nm,1.1s,mb5.3
KWP Kalwaria Pacla 75.63 327⇑*i*P **P** **02 36 42.8 +0.7**
ECSD EROS Data Cent 75.95 42 *e*P **P** **02 36 43.8 -0.2**
comp=Z,3.9nm,1.0s,mb4.3
BUR08 Bucovina Ar. S 76.15 324 *e*P **P** **02 36 45.4 +0.3**
BURAR Bucovina Array 76.17 324 ⇓P **P** **02 36 45.5 +0.3**
BURAR Bucovina Array 76.17 324 ⇓*i*P **P** **02 36 45.5 +0.3**
OJC Ojcow 76.30 329 *e*P **P** **02 36 43.2 -2.7**
STHS Stebnicka Huta 76.39 327 *e*P **P** **02 36 47.5 +1.1**
STHS pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
STHS Stebnicka Huta 76.39 327 *e*P **P** **02 36 47.5 +1.1**
comp=Z,8.3nm,1.0s,mb4.6
STHS Stebnicka Huta 76.39 327 *e*P **P** **02 36 47.5 +1.1**
TESR 76.39 323 ⇑P **P** **02 36 46.8 +0.3**
TLCR 76.42 320 ⇓P **P** **02 36 46.8 +0.2**
TLCR 76.42 320 ⇓*i*P **P** **02 36 46.8 +0.2**
UZH Uzhgorod 76.59 326 *e*P **P** **02 36 48.6 +1.0**
UZH *e* pP 02 36 59.8 +0.3
UZH *e* 02 37 06.8
CRVS Cervenica-Dubn 76.71 327 *e*P **P** **02 36 46.6 -1.6**
CRVS Cervenica-Dubn 76.71 327 *e*P **P** **02 36 46.6 -1.6**
NIE Niedzica 76.75 328 *e*P **P** **02 36 49.1 +0.7**
VRI Vrincioaia 76.85 322 ⇓P **P** **02 36 50.9 +1.8**
VRI Vrincioaia 76.85 322 ⇓*i*P **P** **02 36 50.9 +1.8**
ANMO Albuquerque 76.87 54 *e*P **P** **02 36 50.7 +1.3**
ANMO pmax pmax
comp=Z,1.0nm,0.8s
ANMO Albuquerque 76.87 54 *e*P **P** **02 36 50.7 +1.4**
comp=Z,1.2nm,0.8s,mb3.9
TRPA Tarpa 76.89 326 ⇓*i*P **P** **02 36 50.3 +1.1**
OKC Ostrava-Krasne 77.23 329 *e*P **P** **02 36 51.8 +0.7**
OKC MLR MLR
comp=Z,200nm,11.3s,MS4.7
OKC Ostrava-Krasne 77.23 329 *e*P **P** **02 36 51.8 +0.7**
OKC AMS AMS 03 15 30.0
comp=Z,200nm,11.3s
KECS Kecovo 77.43 327 *e*P **P** **02 36 53.4 +1.1**
KECS pmax pmax
comp=Z,34nm,3.2s
KECS Kecovo 77.43 327 *e*P **P** **02 36 53.4 +1.1**
comp=Z,34nm,3.2s
KECS Kecovo 77.43 327 *e*P **P** **02 36 53.4 +1.1**
UPC Upice 77.46 331 *e*P **P** **02 36 53.0 +0.6**
UPC Upice 77.46 331 *e*P **P** **02 36 53.0 +0.6**
DPC Dobruska-Polom 77.48 331 *e*P **P** **02 36 53.2 +0.7**
DPC *e* 02 37 00.0
DPC MLR MLR
comp=Z,300nm,12.9s,MS4.8
DPC Dobruska-Polom 77.48 331 *e*P **P** **02 36 53.2 +0.7**
DPC *ep*P pP 02 37 00.0 -4.5
DPC AMS AMS 03 15 30.0
comp=Z,300nm,12.9s
MLR Muntele Rosu 77.49 322 ⇑P **P** **02 36 54.0 +1.3**
MLR Muntele Rosu 77.49 322 ⇑*i*P **P** **02 36 54.0 +1.3**
MORC Moravsky Berou 77.51 330 ⇓P **P** **02 36 53.7 +1.0**
MORC Moravsky Berou 77.51 330 *e*P **P** **02 36 53.3 +0.6**
comp=Z,10nm,1.0s,mb4.7
MORC Moravsky Berou 77.51 330 ⇓*i*P **P** **02 36 53.7 +1.0**
SCHQ Schefferville 77.82 20 P **P** **02 36 54.0 -0.3**
comp=Z,2.3nm,0.4s,mb4.4,baz=308,slow=9.0,SNR=4.1
SCHQ LR LR 03 13 46.0
comp=Z,27nm,19.3s,MS3.6,baz=310,slow=38
SCHQ Schefferville 77.82 20 P **P** **02 36 54.0 -0.3**
SCHQ LR LR 03 13 46.0
CLL Collm 77.82 333 *e*P **P** **02 36 53.8 -0.6**
comp=Z,11nm,0.7s,mb4.9
CLL Collm 77.82 333⇑*i*P **P** **02 36 54.1 -0.3**
CLL *e* pP 02 37 08.0 +1.6
CLL pmax pmax
comp=Z,11nm,0.7s,mb4.9
CLL MLR MLR
comp=Z,200nm,18.8s,MS4.5
CLL Collm 77.82 333⇑*i*P **P** **02 36 54.1 -0.3**
comp=Z,11nm,0.7s,mb4.9
CLL *ep*P pP 02 37 06.0 -0.4
CLL LmV 03 15 00.0
comp=Z,200nm,18.8s
BRG Berggiesshubel 77.87 332 *e*P **P** **02 36 54.5 -0.2**
comp=Z,4.7nm,1.1s,mb4.3
BRG Berggiesshubel 77.87 332 *e*P **P** **02 36 54.5 -0.2**
BRG pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
VOIR 77.93 323 ⇓P **P** **02 36 56.4 +1.3**
VOIR 77.93 323 ⇓*i*P **P** **02 36 56.4 +1.3**
PVCC Panska Ves 77.95 332 *e*P **P** **02 36 56.2 +1.1**
PVCC MLR MLR
comp=Z,300nm,16.6s,MS4.7
PVCC Panska Ves 77.95 332 *e*P **P** **02 36 56.2 +1.1**
PVCC AMS AMS 03 14 40.0
comp=Z,300nm,16.6s
VYHS Vyhne 78.07 328 *e*P **P** **02 36 55.2 -0.6**
VYHS Vyhne 78.07 328 *e*P **P** **02 36 55.2 -0.6**
BR131 Keskin Array S 78.09 314 *e*P **P** **02 36 56.8 +0.7**
comp=Z,1.3nm,0.6s,mb4.0
BRTR Keskin Array B 78.09 314 P **P** **02 36 56.5 +0.4**
comp=Z,1.9nm,0.7s,mb4.1,baz=98,slow=3.7,SNR=9.6
BRTR LR LR 03 17 21.5
comp=Z,100nm,18.7s,MS4.2,baz=229,slow=40
PSZ Piszkesteto 78.12 327 ⇑P **P** **02 36 56.6 +0.5**
PSZ Piszkesteto 78.12 327 *e*P **P** **02 36 55.9 -0.2**
comp=Z,6.0nm,0.9s,mb4.5
PSZ Piszkesteto 78.12 327⇑*i*P **P** **02 36 56.6 +0.5**
CLZ Clausthal 78.21 335 *e*P **P** **02 36 57.1 +0.5**
comp=Z,13nm,0.9s,mb4.9
VRAC Vranov 78.24 330 ⇑P **P** **02 36 58.1 +1.3**
VRAC Vranov 78.24 330⇑*i*P **P** **02 36 58.1 +1.3**
PRU Pruhonice 78.41 331 *e*P **P** **02 36 58.8 +1.1**
PRU *e* 02 37 06.5
PRU MLR MLR
comp=Z,300nm,13.8s,MS4.8
PRU Pruhonice 78.41 331 *e*P **P** **02 36 58.8 +1.1**
PRU *ep*P pP 02 37 06.5 -3.2
PRU AMS AMS 03 14 50.0
comp=Z,300nm,13.8s
EKA Eskdalemuir Ar 78.58 344 P **P** **02 36 58.6 +0.1**
comp=Z,2.0nm,0.6s,mb4.2,baz=24,slow=5.3,SNR=18
EKA Eskdalemuir Ar 78.58 344 P **P** **02 36 58.6 +0.1**
EKA pmax pmax
comp=Z,2.0nm,0.6s
IBBN Ibbenburen 78.60 336 *e*P **P** **02 36 58.6 -0.1**
comp=Z,25nm,1.2s,mb5.0
ESK Eskdalemuir 78.61 344 *e*P **P** **02 36 59.0 +0.3**
TREC Trest 78.66 330 *e*P **P** **02 36 59.7 +0.6**
TREC MLR MLR
comp=Z,300nm,11.8s,MS4.8
TREC Trest 78.66 330 *e*P **P** **02 36 59.7 +0.6**
TREC AMS AMS 03 16 20.0
comp=Z,300nm,11.8s
MOX Moxa 78.85 333 *e*P **P** **02 36 59.9 -0.2**
comp=Z,7.0nm,1.2s,mb4.5
NKC Novy Kostel 78.92 333 *e*P **P** **02 37 00.4 -0.1**
NKC Novy Kostel 78.92 333 *e*P **P** **02 37 00.4 -0.1**
UBBA Unterbreizbach 79.22 334 *e*P **P** **02 37 02.8 +0.7**
comp=Z,11nm,1.4s,mb4.6
BZS Buzias 79.27 325 ⇑P **P** **02 37 03.1 +0.6**
BZS Buzias 79.27 325⇑*i*P **P** **02 37 03.1 +0.6**
ROTZ Rotzenmuhle 79.40 332 *e*P **P** **02 37 03.1 0.0**
comp=Z,7.0nm,1.2s,mb4.5
KHC Kasperske Hory 79.47 331 *e*P **P** **02 37 03.7 +0.2**
KHC pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
KHC Kasperske Hory 79.47 331 *e*P **P** **02 37 03.7 +0.2**
comp=Z,4.9nm,0.6s,mb4.6
KHC Kasperske Hory 79.47 331 *e*P **P** **02 37 03.8 +0.3**
KHC *ep*P pP 02 37 11.3 -4.2
KHC AMS AMS 03 15 20.0
comp=Z,300nm,16.6s
CONA Conrad Observa 79.66 329⇑*i*P **P** **02 37 05.5 +0.9**
comp=Z,7.5nm,1.2s,mb4.5
GEC2 GERESS Array S 79.67 331 *e*P **P** **02 37 04.8 +0.2**
comp=Z,3.0nm,0.9s,mb4.2
WET Wettzell 79.70 332 *e*P **P** **02 37 04.8 0.0**
comp=Z,10.0nm,1.2s,mb4.6
GRF Grafenberg Arr 79.80 333 *e*P **P** **02 37 05.5 +0.2**
comp=Z,13nm,1.1s,mb4.8
GRF *e*L 03 16 52.6
comp=Z,166nm,19.5s
GRF Grafenberg Arr 79.80 333 *e*P **P** **02 37 05.5 +0.2**
GRF pmax pmax
comp=Z,13nm,1.1s,mb4.8
GRF MLR MLR
comp=Z,200nm,19.5s,MS4.5

PKSM	**Moragy**	**80.01 327**	⇑P	**P**	**02 37 06.2**	**-0.3**
PKSM	**Moragy**	**80.01 327**	*i*P	**P**	**02 37 06.2**	**-0.3**
MEM	**Membach**	**80.62 336**	P	**P**	**02 37 09.1**	**-0.6**
	comp=Z,6.9nm,1.5s,mb4.4					
BCLA	**Clavier**	**80.99 337**	P	**P**	**02 37 12.3**	**+0.7**
VTS	**Vitosha**	**80.99 322**	⇓P	**P**	**02 37 12.9**	**+1.1**
VTS	**Vitosha**	**80.99 322**	⇓*i*P	**P**	**02 37 12.9**	**+1.1**
SOKA	**Soboth**	**81.02 329**	⇑*i*P	**P**	**02 37 12.0**	**+0.1**
	comp=Z,15nm,1.4s,mb4.7					
WMOK	**Wichita Mounta**	**81.43 50**	*e*P	**P**	**02 37 15.0**	**+0.7**
BAIF	**Baives**	**81.62 337**	*e*P	**P**	**02 37 14.2**	**-0.8**
MOTA	**Moosalm**	**81.86 332**	⇓*i*P	**P**	**02 37 16.7**	**+0.4**
	comp=Z,11nm,1.1s,mb4.7					
MMAI	**Mount Meron Ar**	**82.03 308**	P	**P**	**02 37 19.2**	**+1.7**
	comp=Z,5.1nm,0.5s,mb4.7,baz=49,slow=5.6,SNR=12					
MMAI			LR	LR	03 18 21.3	
	comp=Z,108nm,19.2s,MS4.2,baz=125,slow=39					
CDF	**Champ du Feu**	**82.18 335**	*e*P	**P**	**02 37 17.4**	**-0.6**
	comp=Z,17nm,1.1s,mb4.6					
CDF	**Champ du Feu**	**82.18 335**	*e*P	**P**	**02 37 17.4**	**-0.6**
CDF			pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6					
CDF	**Champ du Feu**	**82.18 335**	*e*P	**P**	**02 37 17.4**	**-0.6**
	comp=Z,8.4nm,1.1s,mb4.6					
FETA	**Feichten**	**82.27 332**	⇑*i*PcP	PcP	02 37 19.6	-4.1
	comp=Z,5.4nm,1.2s					
TXAR	**Lajitas Array**	**82.50 57**	P	**P**	**02 37 20.5**	**+0.5**
	comp=Z,0.7nm,0.6s,mb3.8,baz=318,slow=1.7,SNR=3.4					
TXAR			sP	sP	02 37 34.3	-2.2
	comp=Z,1.0nm,0.6s,baz=295,slow=4.0,SNR=7.3					
PMOR	**Pomariorio Ree**	**82.62 119**	*e*T		04 08 38.7	
	comp=Z,12nm,0.3s					
MEZF	**Maizieres J'vi**	**82.78 336**	*e*P	**P**	**02 37 20.0**	**-1.1**
HAU	**Haudompre**	**82.83 335**	*e*P	**P**	**02 37 20.5**	**-0.9**
HAU			*e*MLR	MLR		
	comp=Z,196nm,18.0s,MS4.2					
HAU	**Haudompre**	**82.83 335**	*e*P	**P**	**02 37 20.5**	**-0.9**
HAU			LR	LR		
	comp=Z,200nm,18.0s,MS4.5					
PPT	**Papeete**	**83.48 121**	*e*LR	LR	03 03 31.8	
	comp=Z,124nm,23.8s					
PPT	**Papeete**	**83.48 121**	LR	LR	03 13 44.0	
	comp=Z,129nm,18.6s,MS4.3,baz=313,slow=35					
FLN	**La Foliniere**	**84.07 339**	*e*P	**P**	**02 37 26.9**	**-0.8**
	comp=Z,9.4nm,0.6s,mb4.8					
FLN			*e*MLR	MLR		
	comp=Z,132nm,21.2s,MS4.0					
FLN	**La Foliniere**	**84.07 339**	*e*P	**P**	**02 37 26.9**	**-0.8**
FLN			pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.8					
FLN			MLR	MLR		
	comp=Z,130nm,21.3s,MS4.3					
FLN	**La Foliniere**	**84.07 339**	*e*P	**P**	**02 37 26.9**	**-0.8**
	comp=Z,4.7nm,0.6s,mb4.8					
FLN			LR	LR		
	comp=Z,130nm,21.3s,MS4.3					
LDF	**La Druitiere**	**84.13 339**	*e*P	**P**	**02 37 27.6**	**-0.5**
	comp=Z,5.6nm,0.6s,mb4.6					
LDF	**La Druitiere**	**84.13 339**	*e*P	**P**	**02 37 27.6**	**-0.5**
LDF			pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.6					
LDF	**La Druitiere**	**84.13 339**	*e*P	**P**	**02 37 27.6**	**-0.5**
	comp=Z,2.8nm,0.6s,mb4.6					
CABF	**La Chapelle**	**84.15 335**	*e*P	**P**	**02 37 27.8**	**-0.4**
LOR	**Lormes**	**84.24 336**	*e*P	**P**	**02 37 27.8**	**-0.8**
LOR			*e*MLR	MLR		
	comp=Z,193nm,18.0s,MS4.2					
LOR	**Lormes**	**84.24 336**	*e*P	**P**	**02 37 27.8**	**-0.8**
LOR			LR	LR		
	comp=Z,190nm,18.0s,MS4.5					
GRR	**Gorron**	**84.51 340**	*e*P	**P**	**02 37 29.4**	**-0.6**
	comp=Z,14nm,0.6s,mb5.0					
GRR	**Gorron**	**84.51 340**	*e*P	**P**	**02 37 29.4**	**-0.6**
GRR			pmax	pmax		
	comp=Z,7.0nm,0.6s,mb5.0					
GRR	**Gorron**	**84.51 340**	*e*P	**P**	**02 37 29.4**	**-0.6**
	comp=Z,7.0nm,0.6s,mb5.0					
SSF	**Saint Saulge**	**84.53 336**	*e*P	**P**	**02 37 29.8**	**-0.3**
SMF	**Signal de Mont**	**84.81 336**	*e*P	**P**	**02 37 30.9**	**-0.6**
	comp=Z,20nm,1.0s,mb4.9					
SMF	**Signal de Mont**	**84.81 336**	*e*P	**P**	**02 37 30.9**	**-0.6**
SMF			pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9					
SMF	**Signal de Mont**	**84.81 336**	*e*P	**P**	**02 37 30.9**	**-0.6**
	comp=Z,9.9nm,1.0s,mb4.9					
AVF	**Avril sur Loir**	**84.82 336**	*e*P	**P**	**02 37 31.1**	**-0.5**
LPL	**La Plagne**	**84.92 334**	*e*P	**P**	**02 37 32.2**	**+0.1**
LPG	**La Plagne**	**84.93 334**	*e*P	**P**	**02 37 32.3**	**+0.1**
ROSF	**Rostrenen**	**85.15 341**	*e*P	**P**	**02 37 32.2**	**-1.0**
	comp=Z,112nm,1.6s,mb5.4					
ROSF	**Rostrenen**	**85.15 341**	*e*P	**P**	**02 37 32.2**	**-1.0**
ROSF			pmax	pmax		
	comp=Z,56nm,1.6s,mb5.4					
ROSF	**Rostrenen**	**85.15 341**	*e*P	**P**	**02 37 32.2**	**-1.0**
	comp=Z,56nm,1.6s,mb5.4					
BGF	**Bois d'Agland**	**85.18 337**	*e*P	**P**	**02 37 32.3**	**-1.1**
AQU	**L'Aquila**	**85.30 328**	*e*P	**P**	**02 37 34.0**	**-0.1**
AQU			pmax	pmax		
	comp=Z,17nm,1.3s,mb5.0					
AQU	**L'Aquila**	**85.30 328**	*e*P	**P**	**02 37 34.0**	**-0.1**
	comp=Z,17nm,1.3s,mb5.0					
BNI	**Bardonecchia**	**85.35 333**	*e*P	**P**	**02 37 35.4**	**+1.1**
BNI			pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.8					
BNI	**Bardonecchia**	**85.35 333**	*e*P	**P**	**02 37 35.4**	**+1.1**
	comp=Z,8.5nm,1.2s,mb4.8					
QUIF	**Quistinic**	**85.52 341**	*e*P	**P**	**02 37 34.0**	**-1.1**
TCF	**Toulx Ste Croi**	**85.61 337**	*e*P	**P**	**02 37 35.3**	**-0.2**
MFF	**Saint Martin d**	**85.97 338**	*e*P	**P**	**02 37 37.2**	**-0.1**
	comp=Z,8.0nm,0.6s,mb4.8					
MFF	**Saint Martin d**	**85.97 338**	*e*P	**P**	**02 37 37.2**	**-0.1**
MFF			pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.8					
MFF	**Saint Martin d**	**85.97 338**	*e*P	**P**	**02 37 37.2**	**-0.1**
	comp=Z,4.0nm,0.6s,mb4.8					
SBF	**Sospel**	**86.15 332**	*e*P	**P**	**02 37 37.0**	**-1.3**
RJF	**Les Rejaudoux**	**86.70 337**	*e*P	**P**	**02 37 40.8**	**-0.2**
RJF			*e*MLR	MLR		
	comp=Z,132nm,22.0s,MS4.0					
RJF	**Les Rejaudoux**	**86.70 337**	*e*P	**P**	**02 37 40.8**	**-0.2**
RJF			LR	LR		
	comp=Z,130nm,22.0s,MS4.3					
CAF	**Calviac**	**86.89 336**	*e*P	**P**	**02 37 40.6**	**-1.3**
LMR	**La Mourre**	**86.93 333**	*e*P	**P**	**02 37 41.3**	**-0.8**
ESDC	**Sonseca Array**	**93.44 338**	P	**P**	**02 38 12.2**	**-0.4**
	comp=Z,0.4nm,0.6s,mb4.0,baz=23,slow=2.7,SNR=3.8					
ESDC			LR	LR	03 26 20.7	
	comp=Z,89nm,18.3s,MS4.3,baz=25,slow=39					

ISCJB ***18*** *02:47:59.1±0.7, 1°.29S±0°.06×100°.52E±0°.09, h108km±5km, mb4.3/21, Error ellipse: s-maj=16.8km s-min=7.2km az=152.4*

IDC ***18*** *02:48:00.5±2.6, 1°.16S×100°.77E, h105km±22km, mb3.7/11, mb1 3.7/13, mb1mx3.6/21, mbtmp3.7/13, Error ellipse: s-maj=29.0km s-min=13.8km az=56.0*

NEIC ***18*** *02:48:01.1±1.2, 1°.21S×100°.73E, h112km±10km, mb4.5/9, Error ellipse: s-maj=17.7km s-min=8.2km az=57.0*

NEIC Felt [III] at Painan.

DJA ***18*** *02:48:01, 1°.29S×100°.54E, h77km, MLv4.3/4*

ISC 18 02:48:00.3±0.7, 1°.29S±0°.06×100°.53E±0°.09, h102km±5km, n44, σ0°99/44, mb4.3/21, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**0.84**	**351**	P	**Pn**	**02 48 19.1**	**-0.1**
PPI				S	**Sn**	**02 48 33.1**	**-0.3**
BKNI	**Bangkinang**	**1.69**	**17**	P	**Pn**	**02 48 29.1**	**+0.1**
BKNI				S	**Sn**	**02 48 50.4**	**+1.5**
KSI	**Kapahiang**	**3.12**	**139**	P	**Pn**	**02 48 48.6**	**+0.9**
MNAI	**Manna**	**3.89**	**142**	P	**Pn**	**02 48 58.4**	**+0.3**
PSI	**Prapat**	**4.37**	**338**	P	**Pn**	**02 49 03.3**	**-1.3**
	4.5nm,0.3s,baz=162,slow=11,SNR=9.0						
MYKOM	**Kota Tinggi**	**4.51**	**47**	P	**Pn**	**02 49 06.6**	**+0.1**
KLSI		**5.38**	**129**	P	**Pn**	**02 49 18.4**	**+0.2**
	50nm,0.6s						
TPTI		**5.63**	**323**	P	**Pn**	**02 49 20.9**	**-0.7**
	30nm,1.1s						
IPM	**Ipoh**	**5.75**	**5**	P	**Pn**	**02 49 25.4**	**+2.1**
	66nm,1.1s						
KULM	**Kulim**	**6.54**	**1**	*e*Pn	**Pn**	**02 49 34.8**	**+0.7**
KULM	**Kulim**	**6.54**	**1**	P	**Pn**	**02 49 34.5**	**+0.5**
CMAR	**Chiang Mai Arr**	**19.69**	**356**	P	**P**	**02 52 21.6**	**+0.1**
	0.4nm,0.3s,baz=192,slow=11,SNR=6.6						

WRA	**Warramunga Arr**	**37.90**	**122**	P	**P**	**02 55 05.8**	**-2.1**
	0.3nm,0.4s,mb3.5,baz=304,slow=8.9,SNR=9.7					
ASAR	**Alice Springs**	**39.24**	**127**	P	**P**	**02 55 18.1**	**-1.0**
	0.5nm,0.7s,mb3.5,baz=306,slow=7.9,SNR=5.4					
ASAR				ScP	ScP	03 01 04.5	-1.3
	0.4nm,0.7s,baz=300,slow=4.5,SNR=4.8					
HHC	**Hu-ho-hao-te**	**43.13**	**12**	*e*P	**P**	**02 55 52.8**	**+2.2**
HHC				S	**S**	**03 02 10.5**	**+1.1**
HHC				pmax	pmax		
	comp=Z,14nm,0.6s,mb4.9						
HHC				pmax	pmax		
	comp=Z,110nm,6.5s						
KSH	**Kashi**	**46.44**	**334**	*e*P	**P**	**02 56 16.1**	**-0.8**
KSH				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.5						
KSH				pmax	pmax		
	comp=Z,180nm,6.9s						
SONM	**Songino Array**	**49.19**	**5**	P	**P**	**02 56 37.9**	**-0.2**
	comp=Z,2.0nm,1.0s,mb4.0,baz=183,slow=9.4,SNR=4.9						
STKA	**Stephens Creek**	**49.22**	**132**	P	**P**	**02 56 38.2**	**-0.3**
	comp=Z,1.9nm,0.7s,mb4.1,baz=326,slow=11,SNR=3.2						
UCH	**Uchtor**	**49.29**	**335**	P	**P**	**02 56 40.4**	**+1.6**
	SNR=7.0						
UCH	**Uchtor**	**49.29**	**335**	*e*P	**P**	**02 56 40.0**	**+1.2**
	comp=Z,3.7nm,0.7s,mb4.4						
ULN	**Ulaanbaatar**	**49.29**	**6**	*e*P	**P**	**02 56 37.9**	**-0.9**
	comp=Z,0.9nm,0.6s,mb3.9						
TKM2	**Tokmak 2**	**49.40**	**336**	P	**P**	**02 56 41.1**	**+1.4**
	SNR=5.5						
TKM2	**Tokmak 2**	**49.40**	**336**	*e*P	**P**	**02 56 40.0**	**+0.3**
	comp=Z,6.4nm,0.8s,mb4.6						
AML	**Almayashu**	**49.57**	**334**	P	**P**	**02 56 42.5**	**+1.5**
	SNR=10						
AML	**Almayashu**	**49.57**	**334**	*e*P	**P**	**02 56 42.1**	**+1.2**
	comp=Z,8.8nm,0.6s,mb4.9						
EKS2	**Erkin-Say**	**49.96**	**334**	P	**P**	**02 56 45.4**	**+1.4**
	SNR=13						
EKS2	**Erkin-Say**	**49.96**	**334**	*e*P	**P**	**02 56 44.8**	**+0.9**
	comp=Z,14nm,0.7s,mb5.0						
USP	**Ospenovka**	**50.14**	**335**	P	**P**	**02 56 46.2**	**+0.8**
	SNR=6.2						
MK31	**Makanchi Array**	**50.50**	**344**	*e*P	**P**	**02 56 46.9**	**-1.0**
MKAR	**Makanchi Array**	**50.50**	**344**	P	**P**	**02 56 47.5**	**-0.5**
	comp=Z,1.8nm,0.5s,mb4.2,baz=152,slow=8.1,SNR=15						
KURK	**Kurchatov**	**55.09**	**343**	*e*P	**P**	**02 57 21.0**	**-0.7**
	comp=Z,2.6nm,0.8s,mb4.3						
ZALV	**Zalesovo Beam**	**56.58**	**349**	P	**P**	**02 57 31.2**	**-1.0**
	comp=Z,2.0nm,0.5s,mb4.4,baz=178,slow=6.6,SNR=7.7						
BVAR	**Borovoye Array**	**59.71**	**339**	P	**P**	**02 57 52.9**	**-1.2**
	comp=Z,2.8nm,0.6s,mb4.5,baz=144,slow=9.2,SNR=13						
BRVK	**Borovoye**	**59.77**	**339**	*e*P	**P**	**02 57 54.5**	**0.0**
	comp=Z,2.1nm,0.4s,mb4.5						
ABKAR	**Akbulak array**	**61.28**	**331**	*e*P	**P**	**02 58 04.2**	**-0.7**
	comp=Z,4.2nm,0.6s,mb4.7						
BRTR	**Keskin Array B**	**73.24**	**312**	P	**P**	**02 59 20.4**	**-0.2**
	comp=Z,1.8nm,0.7s,mb4.0,baz=132,slow=6.2,SNR=8.6						
BR131	**Keskin Array S**	**73.24**	**312**	*e*P	**P**	**02 59 20.2**	**-0.4**
	comp=Z,0.8nm,0.5s,mb3.8						
BOSA	**Boshof**	**76.46**	**241**	P	**P**	**02 59 41.3**	**+1.9**
	comp=Z,3.4nm,1.0s,mb4.0,baz=144,slow=6.4,SNR=7.0						
FINES	**FINESS Array B**	**83.74**	**332**	P	**P**	**03 00 17.5**	**-0.3**
	comp=Z,0.6nm,0.4s,mb3.8,baz=126,slow=3.3,SNR=5.5						
FINES	**FINESS Array B**	**83.74**	**332**	P	**P**	**03 00 17.5**	**-0.3**
ARCES	**ARCESS Array B**	**85.99**	**340**	P	**P**	**03 00 28.9**	**-0.1**
	comp=Z,1.1nm,0.4s,mb4.2,baz=102,slow=4.7,SNR=25						
TXAR	**Lajitas Array**	**143.82**	**37**	PKP	PKPdf	03 07 22.7	-1.7
	comp=Z,0.2nm,0.5s,baz=35,slow=0.6,SNR=4.8						
TXAR	**Lajitas Array**	**143.82**	**37**	PKP	PKPdf	03 07 22.7	-1.7
CPUP	**Villa Florida**	**145.20**	**216**	PKPbc	PKPbc	03 07 27.6	+1.0
	comp=Z,0.7nm,0.5s,baz=144,slow=3.5,SNR=4.2						

TAP 18 02:53:37.9, 22°.32N×122°.40E, h59km±1km, ML3.7, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTN	**Taitung**	**1.23**	**291**	*e*P	Pn	02 54 00.1	+1.3
	baz=295						
TWG	**Pinlang**	**1.32**	**292**	P	Pn	02 54 00.2	+0.1
	baz=293						
TWG				S	Sn	02 54 16.2	-0.6
	baz=293						
ECL	**Taimali**	**1.36**	**282**	P	Pn	02 54 00.9	+0.3
	baz=283						
ECL				*e*S	Sn	02 54 17.4	-0.3
	baz=283						
TAW	**Tawu**	**1.39**	**272**	*e*P	Pn	02 54 01.1	+0.1
	baz=273						
EAST	**Anshuo**	**1.43**	**273**	*i* P	Pn	02 54 01.8	+0.1
	baz=282						
TWF1	**Yuli**	**1.44**	**315**	*i* P	Pn	02 54 01.3	-0.5
	baz=310						
TWF1				S	Sn	02 54 18.7	-0.9
	baz=310						
TWK1	**Hengchun**	**1.52**	**256**	*e*P	Pn	02 54 03.4	+0.5
	baz=265						
ELDTW	**Lidau**	**1.54**	**304**	P	Pn	02 54 02.8	-0.2
	baz=309						
ELDTW				*e*S	Sn	02 54 21.4	-0.6
	baz=309						
EHY	**Hungye**	**1.54**	**320**	*e*P	Pn	02 54 03.1	+0.1
	baz=329						
EHY				*e*S	Sn	02 54 20.7	-1.3
	baz=329						
SCZT	**Fangliau**	**1.65**	**272**	P	Pn	02 54 05.2	+0.7
	baz=273						
SSD	**Sandimen**	**1.68**	**285**	P	Pn	02 54 05.6	+0.6
	baz=286						
ESL	**Shilin**	**1.73**	**329**	*e*P	Pn	02 54 05.4	-0.2
	baz=337						
ESL				*e*S	Sn	02 54 25.4	-1.2
	baz=337						
TWM1	**Shoushan**	**1.89**	**286**	*e*P	Pn	02 54 12.3	+4.5
	baz=287						
TWD	**Chiawan**	**1.90**	**337**	*e*P	Pn	02 54 08.2	+0.3
	baz=344						
TWD				*e*S	Sn	02 54 30.3	-0.4
	baz=344						
TWK	**Hsinying**	**2.00**	**298**	*e*P	Pn	02 54 11.9	+2.7
	baz=305						
TWK				*e*S	Sn	02 54 36.9	+3.7
	baz=305						
CHN3	**Shinhua**	**2.02**	**292**	*e*P	Pn	02 54 13.6	+4.1
	baz=294						
SMLT	**Sun Moon Lake**	**2.08**	**319**	*e*P	Pn	02 54 12.9	+2.6
	baz=323						
WHF	**Hehuan Shan**	**2.09**	**330**	*e*P	Pn	02 54 11.6	+1.1
	baz=330						
WHF				*e*S	Sn	02 54 35.3	-0.1
	baz=330						
TYC	**Yuchr**	**2.12**	**318**	*e*P	Pn	02 54 13.5	+2.7
	baz=322						
ENA	**Nanau**	**2.18**	**344**	*e*P	Pn	02 54 12.5	+0.8
	baz=344						
TWC	**Suao**	**2.33**	**348**	*e*P	Pn	02 54 14.5	+0.7
	baz=356						
TWC				*e*S	Sn	02 54 41.0	-0.3
	baz=356						
TWE	**Neicheng**	**2.48**	**344**	*e*P	Pn	02 54 18.0	+2.2
	baz=344						
TWE				*e*S	Sn	02 54 46.5	+1.6
	baz=344						
NSK	**Sanguang**	**2.53**	**338**	*e*P	Pn	02 54 17.4	+0.9
	baz=337						
NSK				*e*S	Sn	02 54 46.7	+0.6
	baz=337						
NWF	**Wu-fen Shan**	**2.79**	**348**	*e*P	Pn	02 54 21.0	+0.9
	baz=347						
NWF				*e*S	Sn	02 54 52.4	-0.2
	baz=347						

IDC ***18*** *02:59:03.5±1.6, 7°.68S×147°.17E, h0km, mb3.9/7, mb1 4.1/9, mb1mx4.0/17, mbtmp4.0/9, ML3.7/2, Error ellipse: s-maj=51.8km s-min=20.7km az=110.0*

NEIC ***18*** *02:59:10.2±3.0, 7°.80S×147°.11E, h47km±33km, mb4.1/2, Error ellipse: s-maj=30.6km s-min=19.8km az=167.0*

ISC 18 02:59:08.5±5.2, 7°.71S±0°.08×147°.1E±0°.2, h30km±36km, n15, σ0°98/16, mb3.9/8, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**1.68**	**179**	*e*Pn	**Pn**	**02 59 36.4**	**+0.5**
PMG				*e*Sn	**Sn**	**02 59 56.7**	**+0.2**
COEN	**Coen**	**7.33**	**212**	*e*Pn	**Pn**	**03 00 51.9**	**-1.6**
CTA	**Charters Tower**	**12.33**	**184**	Pn	**Pn**	**03 02 02.5**	**+0.4**
	0.3nm,0.3s,baz=345,slow=14,SNR=3.1						
KAKA	**Kakadu**	**15.29**	**250**	*e*Pn	**Pn**	**03 02 43.8**	**+1.5**
WRA	**Warramunga Arr**	**17.37**	**224**	P	**Pn**	**03 03 08.1**	**-0.6**
	0.3nm,0.3s,baz=55,slow=13,SNR=19						
ASAR	**Alice Springs**	**20.32**	**217**	P	**P**	**03 03 43.1**	**+0.9**
	7.5nm,0.9s,baz=46,slow=9.9,SNR=39						
FITZ	**Fitzroy Crossi**	**23.33**	**242**	P	**P**	**03 04 12.1**	**-2.4**
	3.7nm,1.0s,mb3.8,baz=63,slow=14,SNR=4.9						
KSRS	**Korea Array**	**48.39**	**339**	P	**P**	**03 07 47.3**	**-0.4**
	0.9nm,0.7s,mb3.9,baz=161,slow=9.2,SNR=4.8						
SONM	**Songino Array**	**65.96**	**331**	P	**P**	**03 09 52.9**	**+1.2**
	0.3nm,0.5s,mb3.5,baz=186,slow=5.5,SNR=3.6						
MK31	**Makanchi Array**	**78.90**	**321**	*e*P	**P**	**03 11 09.2**	**+0.3**
MKAR	**Makanchi Array**	**78.90**	**321**	P	**P**	**03 11 09.3**	**+0.4**
	1.2nm,0.7s,mb3.9,baz=104,slow=7.3,SNR=7.4						
ZALV	**Zalesovo Beam**	**80.52**	**328**	P	**P**	**03 11 17.1**	**-0.5**
	0.5nm,0.3s,mb3.9,baz=134,slow=4.2,SNR=2.2						
KURK	**Kurchatov**	**82.65**	**323**	*e*P	**P**	**03 11 28.7**	**-0.3**
	0.9nm,0.6s,mb4.0						
EKS2	**Erkin-Say**	**83.14**	**315**	*e*P	**P**	**03 11 32.6**	**+0.9**
	1.3nm,0.6s,mb4.1						
ILAR	**Eielson Array**	**86.99**	**23**	P	**P**	**03 11 49.2**	**-1.3**
	0.7nm,0.8s,mb4.0,baz=252,slow=4.8,SNR=12						

CSEM ***18*** *03:04:29.6, 36°.72N×24°.17W, h5km, ML2.9, After PDA*

PDA 18 03:04:29.6±0.8, 36°.72N×24°.17W, h5km, MD4.1, ML2.9, Error ellipse: s-maj=6.9km s-min=4.2km az=49.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSMN	**Pico do Norte,**	**0.77**	**292**	*e*P	Pg	03 04 42.7	-1.8
PSMN				*e*S	Sg	03 04 51.6	-2.9
PSMN	**Pico do Norte,**	**0.77**	**292**	*e*P	Pg	03 04 42.7	-1.8
PSMN				*e*S	Sg	03 04 51.6	-2.9
BART	**Pico Bartolome**	**1.32**	**323**	*e*P	Pn	03 04 49.8	-4.9
BART				*e*S	Sg	03 05 05.2	-7.0
BART				A		03 05 05.8	
	38nm,0.2s						
BART	**Pico Bartolome**	**1.32**	**323**	*e*P	Pn	03 04 49.8	-4.9
BART				*e*S	Sg	03 05 05.2	-7.0
GRON	**Grota Negra**	**1.51**	**314**	*e*P	Pn	03 04 51.6	-5.7
GRON				*e*S	Sn	03 05 07.8	-10
GRON				A		03 05 09.6	
	22nm,0.1s						
PDA	**Ponta Delgada**	**1.57**	**311**	*e*P	Pn	03 04 52.8	-5.4
PDA				*e*S	Sn	03 05 11.2	-7.7
PDA	**Ponta Delgada**	**1.57**	**311**	*e*P	Pn	03 04 52.8	-5.4
PDA				*e*S	Sn	03 05 11.2	-7.7
PSET	**Sete Cidades**	**1.66**	**312**	*e*P	Pn	03 04 54.6	-4.7
PSET				*e*S	Sn	03 05 13.4	-7.6
PSET				A		03 05 17.4	
	12nm,0.2s						
PSET	**Sete Cidades**	**1.66**	**312**	*e*P	Pn	03 04 54.6	-4.7
PSET				*e*S	Sn	03 05 13.4	-7.6
ADH	**Angra Heroismo**	**3.11**	**309**	*e*P	Pn	03 05 14.7	-4.6
ADH				*e*S	Sn	03 05 48.6	-8.2
ADH				A		03 05 50.4	
	9.7nm,0.3s						
ADH	**Angra Heroismo**	**3.11**	**309**	*e*P	Pn	03 05 14.7	-4.6
ADH				*e*S	Sn	03 05 48.6	-8.2
PID	**Ribeirinha**	**3.58**	**300**	*e*P	Pn	03 05 21.2	-4.5
PID	**Ribeirinha**	**3.58**	**300**	*e*P	Pn	03 05 21.2	-4.5
PMAN	**Manadas**	**3.65**	**303**	*e*P	Pn	03 05 22.1	-4.6
PMAN				*e*S	Sn	03 06 01.6	-8.6
PMAN				A		03 06 04.7	
	8.4nm,0.1s						
PMAN	**Manadas**	**3.65**	**303**	*e*P	Pn	03 05 22.1	-4.6
PMAN				*e*S	Sn	03 06 01.6	-8.6
ROSA	**Rosais**	**3.80**	**303**	*e*P	Pn	03 05 23.9	-4.8
ROSA				*e*S	Sn	03 06 05.2	-8.6
ROSA	**Rosais**	**3.80**	**303**	*e*P	Pn	03 05 23.9	-4.8
ROSA				*e*S	Sn	03 06 05.2	-8.6
PCAN	**Candelaria**	**3.85**	**298**	*e*P	Pn	03 05 25.1	-4.3
PCAN				*e*S	Sn	03 06 06.4	-8.6
PCAN				A		03 06 06.8	
	25nm,0.4s						
PCAN	**Candelaria**	**3.85**	**298**	*e*P	Pn	03 05 25.1	-4.3
PCAN				*e*S	Sn	03 06 06.4	-8.6
CALA	**Caldeira**	**4.05**	**299**	*e*P	Pn	03 05 28.1	-4.1
CALA				*e*S	Sn	03 06 11.6	-8.4
CALA	**Caldeira**	**4.05**	**299**	*e*P	Pn	03 05 28.1	-4.1
CALA				*e*S	Sn	03 06 11.6	-8.4
PCED	**Cedros**	**4.07**	**299**	*e*P	Pn	03 05 28.0	-4.5
PCED				*e*S	Sn	03 06 11.8	-8.7
PCED				A		03 06 13.0	
	11nm,0.3s						
PCED	**Cedros**	**4.07**	**299**	*e*P	Pn	03 05 28.0	-4.5
PCED				*e*S	Sn	03 06 11.8	-8.7

IDC 18 03:14:11.1±7.6, 16°.88S×174°.40W, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.6/17, mbtmp3.5/3, Error ellipse: s-maj=330.4km s-min=38.6km az=140.0, Tonga Islands

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

MKAR	**Makanchi Array**	**30.07**	**44**	P	**P**		**03 32 12.9**	**-1.8**
	comp=Z,0.3nm,0.2s,mb3.6,baz=232,slow=7.1,SNR=3.0							
MKAR	**Makanchi Array**	**30.07**	**44**	P	**P**		**03 32 12.9**	**-1.8**
FINES	**FINESS Array B**	**37.19**	**340**	P	**P**		**03 33 14.5**	**-1.8**
	comp=Z,1.0nm,0.5s,mb3.9,baz=141,slow=9.0,SNR=4.2							
FINES	**FINESS Array B**	**37.19**	**340**	P	**P**		**03 33 14.5**	**-1.8**
NOA	**NORSAR Array B**	**42.32**	**332**	P	**P**		**03 33 56.7**	**-2.3**
	comp=Z,0.7nm,0.8s,mb3.3,baz=122,slow=7.8,SNR=3.7							
NOA	**NORSAR Array B**	**42.32**	**332**	P	**P**		**03 33 56.8**	**-2.3**
ARCES	**ARCESS Array B**	**43.85**	**347**	P	**P**		**03 34 10.5**	**-0.8**
	comp=Z,0.9nm,0.8s,mb3.5,baz=146,slow=8.6,SNR=3.8							
ARCES	**ARCESS Array B**	**43.85**	**347**	P	**P**		**03 34 10.5**	**-0.8**
ARCES	**ARCESS Array B**	**43.85**	**347**	P	**P**		**03 34 10.5**	**-0.9**
SONM	**Songino Array**	**46.09**	**50**	LR	LR		03 56 28.2	
	comp=Z,38nm,18.4s,baz=134,slow=39							

DJA 18 03:26:13.0±34N×124°96E, h10km, MLv3.8/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNI	**Manado**	**1.10**	**354**	P	Pb	03 26 30.2	-4.0
MNI				S	Sg	03 26 49.0	+0.4
TNTI	**Ternate**	**2.44**	**80**	P	Pn	03 26 52.3	-0.7
TNTI				S	Sn	03 27 26.8	+3.8
LUWI	**Luwuk**	**2.58**	**238**	P	Pn	03 26 54.2	-0.7
LUWI				S	Sn	03 27 30.0	+3.6
KDI	**Kendari**	**4.87**	**209**	P	Pn	03 27 25.9	-0.4
KDI				S	Sn	03 28 23.0	+0.2

IDC 18 03:28:45.2±2.2, 17°79S×72°89W, h0km, mb1 4.0/1, mb1mx3.4/15, mbtmp3.8/1, ML3.4/1, Error ellipse: s-maj=284.2km s-min=50.0km az=161.0, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**4.79**	**73**	Pn	Pn	03 29 59.2	+0.6
	1.1nm,0.3s,baz=202,slow=6.2,SNR=44						
WRA	**Warramunga Arr**	**133.96**	**217**	PKP	PKPdf	03 48 05.0	-0.3
	0.5nm,0.9s,baz=151,slow=1.8,SNR=3.6						
ZALV	**Zalesovo Beam**	**140.00**	**20**	PKP	PKPdf	03 48 17.1	+1.8
	0.3nm,0.4s,baz=318,slow=1.9,SNR=2.8						
MKAR	**Makanchi Array**	**144.57**	**30**	PKP	PKPdf	03 48 22.1	-1.6
	0.2nm,0.3s,baz=320,slow=3.1,SNR=3.6						

*ISK **18** 03:32:56.5, 39°51N×26°48E, h5km, MD3.0*
*DDA **18** 03:32:56.5, 39°50N×26°43E, h8km±5km, Md3.0*
*ISCJB **18** 03:32:57.0±0.7, 39°50N±0°03×26°48E±0°05, h3km±5km, Error ellipse: s-maj=7.2km s-min=4.2km az=140.9*
*CSEM **18** 03:32:57.0±0.4, 39°48N×26°44E, h5km, MD3.0, Error ellipse: s-maj=8.5km s-min=4.8km az=64.0*

ISC 18 03:32:57.4±0.7, 39°49N±0°04×26°45E±0°05, h8km±5km, n37, σ0°78/51, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AYVA	**Ayvalik**	**0.26**	**133**	*i* P	**Pg**	**03 33 01.9**	**-0.6**
AYVA				*i* S	**Sg**	**03 33 06.5**	**+0.6**
AYVA	**Ayvalik**	**0.26**	**133**	*i* P	**Pg**	**03 33 01.9**	**-0.6**
AYVA				*i* S	**Sg**	**03 33 06.5**	**+0.6**
EZN	**Ezine**	**0.35**	**345**	*e*PG	**Pg**	**03 33 04.0**	**-0.2**
EZN				*e*SG	**Sg**	**03 33 09.6**	**+0.6**
EZN	**Ezine**	**0.35**	**345**	*e*Pg	**Pg**	**03 33 04.0**	**-0.3**
EZN				*e*Sg	**Sg**	**03 33 09.6**	**+0.6**
BOZC	**Bozcaada**	**0.47**	**320**	*i* P	**Pg**	**03 33 05.9**	**-0.5**
BOZC				*i* S	**Sg**	**03 33 12.7**	**+0.1**
GELI	**Tayfur-Gelibol**	**0.91**	**1**	*e*PG	**Pg**	**03 33 15.1**	**+0.2**
GELI				*e*SG	**Sg**	**03 33 27.6**	**+0.9**
GELI	**Tayfur-Gelibol**	**0.91**	**1**	*e*Pg	**Pg**	**03 33 15.1**	**+0.2**
GELI				*e*Sg	**Sg**	**03 33 27.6**	**+0.8**
LPK	**Lapseki**	**0.92**	**15**	*e*PG	**Pg**	**03 33 14.6**	**-0.4**
LPK				*e*SG	**Sg**	**03 33 27.6**	**+0.6**
LPK	**Lapseki**	**0.92**	**15**	*e*Pg	**Pg**	**03 33 14.6**	**-0.4**
LPK				*e*Sg	**Sg**	**03 33 27.6**	**+0.6**
BALY	**Balya**	**0.94**	**74**	*i* P	**Pg**	**03 33 16.0**	**+0.6**
BALY				*i* S	**Sg**	**03 33 29.5**	**+1.8**
BALY	**Balya**	**0.94**	**74**	*i* P	**Pg**	**03 33 16.0**	**+0.6**
BALY				*i* S	**Sg**	**03 33 29.5**	**+1.8**
GONE	**Gonen-Balikesi**	**1.11**	**59**	*e*PG	**Pg**	**03 33 17.8**	**-0.8**
GONE	**Gonen-Balikesi**	**1.11**	**59**	*e*Pg	**Pg**	**03 33 17.8**	**-0.8**
BALB	**Balikesir**	**1.12**	**82**	*e*PN	**Pg**	**03 33 18.4**	**-0.5**
BALB	**Balikesir**	**1.12**	**82**	*e*Pn	**Pg**	**03 33 18.4**	**-0.4**
KRBG	**Karabiga-Canak**	**1.12**	**36**	*e*PG	**Pg**	**03 33 17.6**	**-1.2**
KRBG	**Karabiga-Canak**	**1.12**	**36**	*e*Pg	**Pg**	**03 33 17.6**	**-1.2**
ERIK	**Erikli-Kesan**	**1.19**	**2**	*e*PN	**Pn**	**03 33 19.2**	**-1.0**
ERIK	**Erikli-Kesan**	**1.19**	**2**	*e*Pn	**Pn**	**03 33 19.2**	**-1.0**
IZM	**Izmir**	**1.26**	**149**	*e*PN	**Pn**	**03 33 21.7**	**+0.5**
IZM	**Izmir**	**1.26**	**149**	*e*Pn	**Pn**	**03 33 21.7**	**+0.5**
ENEZ	**Enez**	**1.27**	**350**	*e*PN	**Pn**	**03 33 21.4**	**0.0**
ENEZ	**Enez**	**1.27**	**350**	*e*Pn	**Pn**	**03 33 21.4**	**0.0**
RKY	**Sarkoy-Tekirda**	**1.33**	**25**	*e*PN	**Pn**	**03 33 21.7**	**-0.4**
RKY	**Sarkoy-Tekirda**	**1.33**	**25**	*e*Pn	**Pn**	**03 33 21.7**	**-0.4**
SART	**Tekirdag**	**1.33**	**25**	*i* P	**Pn**	**03 33 21.4**	**-0.7**
SART				*i* S	**Sb**	**03 33 38.9**	**-0.8**
SART	**Tekirdag**	**1.33**	**25**	*i* P	**Pn**	**03 33 21.4**	**-0.8**
SART				*i* S	**Sb**	**03 33 38.9**	**-0.8**
EDC	**Edincik**	**1.39**	**51**	*e*PN	**Pn**	**03 33 22.5**	**-0.5**
EDC	**Edincik**	**1.39**	**51**	*e*Pn	**Pn**	**03 33 22.5**	**-0.5**
BNT	**Bandirma**	**1.43**	**52**	*e*PN	**Pn**	**03 33 23.9**	**+0.3**
ARMT	**Armutlu**	**2.15**	**59**	*e*PN	**Pn**	**03 33 34.5**	**+1.1**
ARMT	**Armutlu**	**2.15**	**59**	*e*Pn	**Pn**	**03 33 34.5**	**+1.1**
ULDT	**Uludag**	**2.17**	**72**	*i* P	**Pg**	**03 33 38.8**	**-0.2**
ULDT				*i* S	**Sg**	**03 34 05.9**	**-1.3**
CTKS	**Kestanelik-??a**	**2.35**	**41**	*e*PN	**Pn**	**03 33 36.9**	**+0.7**
CTKS	**Kestanelik-??a**	**2.35**	**41**	*e*Pn	**Pn**	**03 33 36.9**	**+0.6**
EDRB	**Edirne**	**2.37**	**5**	*e*PN	**Pn**	**03 33 38.1**	**+1.6**
EDRB	**Edirne**	**2.37**	**5**	*e*Pn	**Pn**	**03 33 38.2**	**+1.7**

*ISCJB **18** 03:37:19.9±1.2, 30°7N±0°2×102°08E±0°08, h10km, mb3.5/3, Error ellipse: s-maj=25.7km s-min=10.2km az=174.2*
*IDC **18** 03:37:20.2±2.0, 31°36N×103°03E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/22, mbtmp3.4/3, Error ellipse: s-maj=419.1km s-min=27.5km az=52.0*
*BJI **18** 03:37:22.6, 30°72N×102°10E, h9km, ML3.0/8*

ISC 18 03:37:22.0±1.2, 30°8N±0°2×102°10E±0°08, h10km, n4, σ0°88/5, mb3.5/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**1.44**	**84**	Pg	**Pg**	**03 37 48.5**	**-1.1**
CD2				Sg	**Sg**	**03 38 08.9**	**+0.6**
CD2				smax			
	comp=N,820nm,0.7s						
MKAR	**Makanchi Array**	**22.14**	**322**	P	**P**	**03 42 17.9**	**+0.2**
	comp=N,0.2nm,0.2s,mb3.1,baz=129,slow=8.9,SNR=3.4						
WRA	**Warramunga Arr**	**59.18**	**144**	P	**P**	**03 47 23.0**	**-0.3**
	comp=N,0.9nm,0.8s,mb3.9,baz=336,slow=7.5,SNR=8.9						
ASAR	**Alice Springs**	**62.12**	**147**	P	**P**	**03 47 43.8**	**+0.5**
	comp=N,0.2nm,0.5s,mb3.5,baz=333,slow=7.2,SNR=3.2						

IDC 18 03:53:05.0±3.7, 39°54N×15°14E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.3/26, mbtmp3.4/4, ML4.2/1, Error ellipse: s-maj=65.1km s-min=41.2km az=14.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ESDC	**Sonseca Array**	**14.73**	**277**	Pn	Pn	03 56 35.1	+0.6
	0.2nm,0.3s,baz=75,slow=11,SNR=6.0						
HFS	**Hagfors**	**20.64**	**358**	P	P	03 57 46.5	+0.7
	1.6nm,0.8s,baz=180,slow=10,SNR=7.3						
NOA	**NORSAR Array B**	**21.66**	**355**	P	P	03 57 56.4	-0.5
	0.3nm,0.4s,baz=175,slow=10,SNR=2.2						
MKAR	**Makanchi Array**	**48.16**	**58**	P	P	04 01 46.6	-0.1
	0.4nm,0.4s,baz=291,slow=6.6,SNR=5.8						

*IDC **18** 04:09:02.5±8.3, 23°08S×179°80W, h433km±88km, mb3.5/4, mb1 3.7/5, mb1mx3.3/18, mbtmp3.5/5, Error ellipse: s-maj=59.4km s-min=26.2km az=13.0*
*NEIC **18** 04:09:05.3±5.5, 23°26S×179°79W, h471km±61km, mb3.9/2, Error ellipse: s-maj=51.0km s-min=23.3km az=194.0*

ISC 18 04:09:12.6±4.4, 23°9S±0°2×179°9W±0°2, h561km±57km, n12, σ0°44/8, mb4.0/6, 1C, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**14.54**	**190**	P	**P**	**04 12 16.8**	**-0.1**
	1.1nm,0.3s,baz=348,slow=17,SNR=2.7						
URZ				S	**S**	**04 14 48.8**	**+0.1**
	0.6nm,0.3s,baz=135,slow=22,SNR=2.3						
RPZ	**Rata Peaks**	**21.12**	**199**	P	**P**	**04 13 22.5**	**+4.6**
	7.8nm,0.6s,mb4.5,baz=142,slow=5.1,SNR=3.9						
CTAO	**Charters Tower**	**31.60**	**270**	*e*P	**P**	**04 14 50.5**	**+0.2**
	3.3nm,0.4s,mb4.2						
ASAR	**Alice Springs**	**42.16**	**261**	P	**P**	**04 16 17.1**	**+0.4**
	3.4nm,0.6s,mb4.0,baz=97,slow=7.8,SNR=34						
WRA	**Warramunga Arr**	**42.53**	**266**	P	**P**	**04 16 19.3**	**-0.4**
	4.8nm,0.6s,mb4.2,baz=102,slow=8.1,SNR=212						
MBWA	**Marble Bar**	**55.50**	**260**	*e*P	**P**	**04 17 55.0**	**-0.3**
	3.0nm,0.6s,mb3.7						
TXAR	**Lajitas Array**	**90.33**	**58**	P	**P**	**04 21 14.5**	**+0.1**
	0.2nm,0.7s,mb3.0,baz=201,slow=7.3,SNR=3.3						
ARCES	**ARCESS Array B**	**131.92**	**348**	PKP	PKPdf	04 27 21.8	0.0
	1.0nm,0.9s,baz=85,slow=1.3,SNR=3.5						
AKASG	**Malin Array Be**	**145.05**	**327**	PKP	PKPdf	04 27 46.4	+0.2
	1.2nm,0.5s,baz=43,slow=4.2,SNR=6.9						
BRTR	**Keskin Array B**	**147.69**	**307**	PKP	PKPdf	04 27 53.1	+2.2
	0.3nm,0.4s,baz=46,slow=4.2,SNR=2.8						
BRTR				PKPab	PKPab	04 27 59.3	+0.3
	1.2nm,0.8s,baz=107,slow=4.3,SNR=4.7						
MMAI	**Mount Meron Ar**	**147.82**	**294**	PKPbc	PKPbc	04 27 56.8	+1.6
	2.4nm,0.5s,baz=72,slow=4.7,SNR=4.3						
CLL	**Collm**	**150.90**	**343**	↑*i* PKPbc	PKPbc	04 28 02.6	+0.7
	comp=Z,6.0nm,1.1s						

*NEIC **18** 04:14:22.3, 31°81S×72°04W, h7km, ML3.2(GUC), After GUC.*

GUC 18 04:14:22.3±0.6, 31°81S×72°04W, h7km±2km, MD3.7, ML3.2, 4C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHNG	**Los Chungos**	**0.46**	**99**	↓↓*i* P	Pg	04 14 31.8	+0.5
CHNG				*i* S	Sg	04 14 39.0	+1.6
CMCH	**Combarbala**	**1.09**	**55**	↑↑*i* P	Pg	04 14 42.7	-0.5
CMCH				*i* S	Sg	04 14 57.7	+0.3
CMCH	**Combarbala**	**1.09**	**55**	↑↑*i* P	Pg	04 14 42.7	-0.5
CMCH				*i* S	Sg	04 14 57.7	+0.3
CMCH				AML	AML	04 15 00.1	
	comp=N,3μm,0.6s						
JACH	**Jahuel**	**1.50**	**126**	*e*P	Pn	04 14 49.3	-0.3
JACH				*i* S	Sn	04 15 09.1	-0.3
JACH	**Jahuel**	**1.50**	**126**	*e*P	Pn	04 14 49.3	-0.3
JACH				*i* S	Sn	04 15 09.1	-0.3
PEL	**Peldehue**	**1.75**	**140**	*e*P	Pn	04 14 52.8	-0.3
PEL				*e*S	Sn	04 15 16.4	+0.8
PEL				AML	AML	04 15 23.8	
	comp=E,434nm,0.8s						
TLL	**Tololo Astrono**	**1.95**	**33**	*e*P	Pn	04 14 57.5	+1.7
TLL				*i* S	Sn	04 15 23.2	+2.7
TLL	**Tololo Astrono**	**1.95**	**33**	*e*P	Pn	04 14 57.5	+1.7
TLL				*i* S	Sn	04 15 23.2	+2.7
TLL				AML	AML	04 15 34.4	
	comp=N,159nm,0.6s						
CLCH	**Cerro Calan**	**2.03**	**142**	*e*P	Pn	04 14 57.1	+0.3
CLCH				*i* S	Sn	04 15 23.8	+1.4
CLCH				AML	AML	04 15 31.2	
	comp=E,213nm,0.4s						
PCH	**Pirque**	**2.22**	**145**	*e*P	Pn	04 15 00.6	+1.1
PCH	**Pirque**	**2.22**	**145**	*e*P	Pn	04 15 00.6	+1.1
LMEL	**Las Melosas**	**2.55**	**143**	↑↑*i* P	Pn	04 15 04.8	+0.7
LMEL				*i* S	Sn	04 15 37.9	+2.6
LMEL	**Las Melosas**	**2.55**	**143**	↑↑*i* P	Pn	04 15 04.8	+0.7
LMEL				*i* S	Sn	04 15 37.9	+2.6
LMEL				AML	AML	04 15 47.8	
	comp=N,64nm,1.1s						

MEX 18 04:22:27.7±1.9, 14°24N×93°19W, h16km±379km, MD4.1, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**1.11**	**53**	*i* P	Pb	04 22 45.2	-3.4
THIG				*i* S	Sb	04 22 57.8	-5.1
PCIG		**1.45**	**359**	*i* P	Pn	04 22 48.6	-4.8
PCIG				*i* S	Sn	04 23 06.8	-5.3
TGIG		**2.52**	**1**	*i* P	Pn	04 23 05.7	-2.3
TGIG				*e*S	Sn	04 23 35.3	-3.1
SCX	**San Cristobal**	**2.54**	**12**	*i* P	Pn	04 23 07.5	-0.7
HUIG	**Huatulco**	**3.20**	**299**	*i* P	Pn	04 23 14.2	-3.1
HUIG				*i* S	Sn	04 23 50.0	-5.2

*NEIC **18** 04:59:48.6±0.7, 31°75S×179°86W, h347km±7km, mb4.3/6, Error ellipse: s-maj=12.0km s-min=10.4km az=134.0*
*IDC **18** 04:59:50.3±1.5, 31°42S×179°98W, h353km±14km, mb3.6/10, mb1 3.9/11, mb1mx3.8/17, mbtmp3.7/11, Error ellipse: s-maj=16.8km s-min=16.2km az=143.0*

ISC 18 04:59:52.6±0.6, 32°06S±0°05×179°8E±0°1, h380km±7km, n85, σ1°08/84, mb4.0/13, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**3.41**	**35**	P	**Pn**	**05 00 47.5**	**-10**
	56nm,0.3s,baz=54,slow=21,SNR=5.1						
RAO				S	S	05 01 26.2	-24
	112nm,0.3s,baz=95,slow=17,SNR=4.1						
MXZ	**Matakaoa Point**	**5.63**	**192**	PN	**Pn**	**05 01 20.0**	**-0.2**
MXZ				SN	**S**	**05 02 31.0**	**-0.5**
PUZ	**Puketiti**	**6.13**	**192**	PN	**Pn**	**05 01 23.7**	**-2.0**
PUZ				SN	**S**	**05 02 42.2**	**+0.6**
MWZ	**Matawai**	**6.54**	**196**	PN	**Pn**	**05 01 29.6**	**-0.6**
MWZ				SN	**S**	**05 02 52.4**	**+2.5**
CNGZ	**Carnagh Statio**	**6.55**	**191**	*e*PN	**Pn**	**05 01 30.3**	**-0.1**
URZ	**Urewera**	**6.57**	**199**	P	**Pn**	**05 01 30.0**	**-0.7**
	5.3nm,0.3s,baz=300,slow=1.6,SNR=34						
URZ				S	**S**	**05 02 52.6**	**+1.9**
	23nm,0.3s,baz=256,slow=23,SNR=13						
URZ	**Urewera**	**6.57**	**199**	*e*Pn	**Pn**	**05 01 29.9**	**-0.8**
URZ				*e*S	**S**	**05 02 53.5**	**+2.9**
URZ	**Urewera**	**6.57**	**199**	PN	**Pn**	**05 01 29.7**	**-1.0**
URZ				SN	**S**	**05 02 50.5**	**-0.1**
PRGZ	**Paritu Road**	**7.03**	**192**	PN	**Pn**	**05 01 36.8**	**+1.0**
KNZ	**Kokohu**	**7.16**	**194**	PN	**Pn**	**05 01 38.9**	**+1.6**
KNZ				SN	**S**	**05 03 03.6**	**+0.7**
RAHZ	**Arahi**	**7.20**	**197**	PN	**Pn**	**05 01 38.6**	**+0.9**
MHGZ	**Mahia Peninsul**	**7.25**	**192**	*e*PN	**Pn**	**05 01 39.9**	**+1.6**
NMHZ	**Naumai**	**7.44**	**198**	*e*PN	**Pn**	**05 01 39.9**	**-0.6**
BKZ	**Black Stump Fm**	**7.59**	**200**	PN	**Pn**	**05 01 41.9**	**-0.4**
BKZ				SN	**S**	**05 03 12.9**	**+0.9**
FWVZ	**Far West T-bar**	**7.97**	**205**	PN	**Pn**	**05 01 46.5**	**-0.2**
FWVZ				SN	**S**	**05 03 23.3**	**+3.2**
WNVZ	**Wahianoa**	**8.02**	**204**	*e*PN	**Pn**	**05 01 47.3**	**0.0**
KAHZ	**Kahuranaki**	**8.08**	**196**	PN	**Pn**	**05 01 49.3**	**+1.4**
KAHZ				SN	**S**	**05 03 21.8**	**-0.6**
PNHZ	**Pukenui**	**8.37**	**199**	*e*PN	**Pn**	**05 01 49.4**	**-1.9**
TSZ	**Takapari Road**	**8.57**	**200**	PN	**Pn**	**05 01 54.3**	**+0.7**
TSZ				SN	**S**	**05 03 32.9**	**+0.1**
PRHZ	**Porangahau**	**8.59**	**197**	*e*PN	**Pn**	**05 01 52.5**	**-1.3**
BFZ	**Birch Farm**	**9.07**	**197**	PN	**Pn**	**05 01 58.9**	**-0.6**
MRZ	**Mangatainoka R**	**9.24**	**200**	PN	**Pn**	**05 01 59.6**	**-1.8**
TIWZ	**Tintock**	**9.26**	**199**	PN	**Pn**	**05 02 02.4**	**+0.8**
HOWZ	**Holdsworth Sta**	**9.48**	**200**	*e*PN	**Pn**	**05 02 03.6**	**-0.6**
HOWZ				SN	**S**	**05 03 52.4**	**+0.1**
OGWZ	**Otaki Gorge**	**9.51**	**202**	*e*PN	**Pn**	**05 02 02.6**	**-1.9**
KIW	**Kapiti Island**	**9.63**	**203**	PN	**Pn**	**05 02 06.3**	**+0.3**
KIW				SN	**S**	**05 03 54.7**	**-1.0**
MTW	**Mount Morrison**	**9.72**	**200**	*e*PN	**Pn**	**05 02 07.3**	**+0.2**
CAW	**Cannon Point**	**9.80**	**202**	PN	**Pn**	**05 02 07.6**	**-0.4**
CAW				SN	**S**	**05 03 58.8**	**-0.6**
TRWZ	**Traveller**	**9.89**	**198**	*e*PN	**Pn**	**05 02 11.3**	**+2.3**
PAWZ	**Paruwai Farm**	**9.95**	**199**	*e*PN	**Pn**	**05 02 10.2**	**+0.5**
MSWZ	**Moikau Station**	**10.03**	**200**	*e*PN	**Pn**	**05 02 10.8**	**+0.1**
SNZO	**South Karori**	**10.10**	**203**	PN	**Pn**	**05 02 10.9**	**-0.6**
SNZO				SN	**S**	**05 04 04.8**	**-1.0**
PLWZ	**Palliser**	**10.17**	**200**	PN	**Pn**	**05 02 13.1**	**+0.8**
PLWZ				SN	**S**	**05 04 05.6**	**-1.7**
TUWZ	**Tuamarina**	**10.47**	**205**	*e*PN	**Pn**	**05 02 16.2**	**+0.3**
TUWZ				SN	**S**	**05 04 13.6**	**-0.2**
NNZ	**Nelson**	**10.50**	**208**	PN	**Pn**	**05 02 15.3**	**-0.8**
NNZ				SN	**S**	**05 04 13.6**	**-0.8**
QRZ	**Quartz Range**	**10.53**	**212**	PN	**Pn**	**05 02 19.4**	**+2.8**
BSWZ	**Blackbirch Sta**	**10.74**	**205**	PN	**Pn**	**05 02 19.3**	**+0.3**
BSWZ				SN	**S**	**05 04 18.6**	**-1.1**
THZ	**Tophouse**	**11.15**	**208**	PN	**Pn**	**05 02 23.5**	**-0.3**
THZ				SN	**S**	**05 04 27.0**	**-0.9**
KHZ	**Kahutara**	**11.48**	**204**	*e*P	**Pn**	**05 02 27.7**	**0.0**
	22nm,0.3s						
KHZ	**Kahutara**	**11.48**	**204**	PN	**Pn**	**05 02 27.7**	**0.0**
DSZ	**Denniston Nort**	**11.60**	**211**	SN	**S**	**05 04 36.9**	**-0.2**
CTZ	**Chatham Island**	**11.99**	**167**	PN	Px	05 02 48.6	
CTZ				SN	**S**	**05 05 01.0**	**+16**
LTZ	**Lake Taylor**	**12.26**	**207**	SN	**S**	**05 04 50.3**	**-0.3**
RPZ	**Rata Peaks**	**13.53**	**208**	S	**S**	**05 05 18.3**	**+2.1**
	2.2nm,0.3s,baz=342,slow=20,SNR=3.3						
DZM	**Mont Dzumac**	**15.51**	**307**	*e*P	**P**	**05 03 10.6**	**-0.8**
	17nm,0.8s						
ARMA	**Armidale**	**24.13**	**266**	*e*P	**P**	**05 04 40.6**	**+4.7**
CTA	**Charters Tower**	**32.29**	**283**	*e*P	**P**	**05 05 49.3**	**+1.6**
	4.1nm,0.3s,mb4.1						
CTAO	**Charters Tower**	**32.29**	**283**	*e*P	**P**	**05 05 48.9**	**+1.2**
	6.8nm,0.6s,mb4.0						
STKA	**Stephens Creek**	**32.31**	**260**	*e*P	**P**	**05 05 51.6**	**+3.8**
	2.1nm,0.3s,mb3.9						
STKA	**Stephens Creek**	**32.31**	**260**	P	**P**	**05 05 51.6**	**+3.8**
	4.4nm,0.4s,mb4.0,baz=102,slow=9.6,SNR=14						
ASAR	**Alice Springs**	**41.19**	**270**	P	**P**	**05 07 02.3**	**+0.4**
	1.5nm,0.4s,mb3.5,baz=105,slow=7.5,SNR=24						
ASAR				ScP	ScP	05 12 09.1	+3.5
	2.3nm,0.7s,baz=118,slow=3.9,SNR=15						
WRAB	**Tennant Creek**	**42.33**	**275**	*e*P	**P**	**05 07 11.2**	**+0.2**
	3.9nm,0.4s,mb3.9						
WRA	**Warramunga Arr**	**42.34**	**275**	P	**P**	**05 07 11.5**	**+0.5**
	3.6nm,0.3s,mb3.9,baz=111,slow=7.8,SNR=171						
WRA	**Warramunga Arr**	**42.34**	**275**	P	**P**	**05 07 11.5**	**+0.5**
FORT	**Forrest**	**43.84**	**257**	*e*P	**P**	**05 07 24.8**	**+2.0**
	20nm,0.8s,mb4.3						
FORT	**Forrest**	**43.84**	**257**	*e*P	**P**	**05 07 25.1**	**+2.2**
	29nm,0.9s,mb4.4						
QSPA	**South Pole Qui**	**58.05**	**180**	P	**P**	**05 09 12.1**	**+5.5**
	7.1nm,0.7s,mb4.1,baz=62,slow=5.4,SNR=18						
MJAR	**Matsushiro Arr**	**78.57**	**327**	P	**P**	**05 11 11.2**	**-1.7**
	0.4nm,0.3s,mb3.6,baz=68,slow=23,SNR=8.3						
PLCA	**Paso Flores**	**82.73**	**134**	P	**P**	**05 11 37.4**	**+2.5**
	2.1nm,0.7s,mb4.1,baz=261,slow=7.0,SNR=2.6						
PLCA	**Paso Flores**	**82.73**	**134**	*e*P	**P**	**05 11 36.6**	**+1.7**
	2.2nm,0.7s,mb4.1						
KSRS	**Korea Array**	**84.42**	**321**	P	**P**	**05 11 42.9**	**-0.3**
	1.7nm,0.8s,mb4.0,baz=149,slow=7.7,SNR=7.4						
PETK	**Petropavlovsk-**	**86.97**	**347**	P	**P**	**05 11 54.2**	**-0.9**
	1.1nm,0.4s,mb4.0,baz=128,slow=9.3,SNR=4.3						
TRQA	**Tornquist**	**89.57**	**136**	*e*P	**P**	**05 12 08.1**	**+0.1**
	7.3nm,1.1s,mb4.5						
NVAR	**Mina Array Bea**	**90.72**	**44**	P	**P**	**05 12 11.9**	**-1.2**
	0.6nm,0.7s,mb3.6,baz=220,slow=6.8,SNR=3.8						
PDAR	**Pinedale Array**	**98.62**	**45**	P	Pdif	05 12 47.5	-1.6
	0.3nm,0.7s,baz=185,slow=7.7,SNR=2.7						
MKAR	**Makanchi Array**	**117.40**	**310**	PKP	PKPdf	05 17 52.3	-0.9
	0.3nm,0.2s,baz=153,slow=1.2,SNR=4.8						
ZALV	**Zalesovo Beam**	**118.02**	**318**	PKP	PKPdf	05 17 52.5	-1.5
	0.4nm,0.3s,baz=68,slow=8.0,SNR=2.5						
ZALV	**Zalesovo Beam**	**118.02**	**318**	PKP	PKPdf	05 17 52.5	-1.5
TKM2	**Tokmak 2**	**120.77**	**304**	*e*PKPdf	PKPdf	05 17 59.4	-0.3
KURK	**Kurchatov**	**120.83**	**313**	*e*PKPdf	PKPdf	05 17 58.7	-0.9
EKS2	**Erkin-Say**	**121.99**	**303**	*e*PKPdf	PKPdf	05 18 01.7	-0.4
BVAR	**Borovoye Array**	**126.27**	**315**	PKP	PKPdf	05 18 08.8	-1.2
	1.5nm,0.4s,baz=105,slow=3.4,SNR=8.2						
ARCES	**ARCESS Array B**	**139.78**	**346**	PKhKP	PK

ACX *i* S Sn 05 01 36.5 -4.4
CAIG El Cayaco 2.95 253 *i* P Pn 05 01 11.2 -2.7
CAIG *e*S Sn 05 01 44.4 -3.8
CAIG El Cayaco 2.95 253 *i* P Pn 05 01 11.2 -2.7
CAIG *i* S Sn 05 01 45.2 -3.0
TEIG Tepich 8.84 74 *e*Pn Pn 05 02 32.9 -1.5
TEIG *e*Sn Sn 05 04 05.6 -6.9
628A Black Gap, Mar 12.55 337 ⇓P Pn 05 03 26.2 +1.3
baz=12,SNR=5.5
JCT Junction City 12.67 350 *e*Pn Pn 05 03 28.6 +2.0
627A Terlingua Ranc 12.72 335 ⇑P Pn 05 03 28.7 +1.5
baz=13,SNR=5.4
TXAR Lajitas Array 12.72 334 P Pn 05 03 28.3 +1.0
0.0nm,0.3s,baz=148,slow=14,SNR=12
626A Big Bend Ranch 13.12 333 ⇓P Pn 05 03 34.5 +1.9
baz=13,SNR=11
527A Woodward Ranch 13.42 336 ⇓P Pn 05 03 37.7 +1.0
baz=13,SNR=5.3
526A Mary Lane Ranc 13.54 334 ⇓P Pn 05 03 39.8 +1.5
baz=14,SNR=8.8
428A Kincaid Ranch, 13.62 340 ⇓P Pn 05 03 40.5 +1.3
baz=14,SNR=25
427A Hayter Ranch, 13.97 338 ⇓P Pn 05 03 45.0 +1.0
baz=14,SNR=8.2
JTS JuntasAbangare 14.21 121 P Pn 05 03 47.5 +0.4
1.2nm,0.3s,baz=332,slow=17,SNR=9.1
328A Wristen Ranch, 14.26 341 ⇓P Pn 05 03 48.4 +0.6
baz=14
425A Indio Mountain 14.55 333 ⇓P Pn 05 03 53.3 +1.8
baz=15,SNR=14
326A Caldwell Ranch 14.61 337 ⇓P Pn 05 03 53.6 +1.4
baz=15,SNR=10
325A Bean Ranch, Si 15.05 334 ⇓P Pn 05 03 59.2 +1.3
baz=15,SNR=10.0
226A Malaga, Loving 15.32 338 ⇑P Pn 05 04 02.2 +0.7
baz=15
324A Moseley Ranch, 15.33 333 ⇓P Pn 05 04 03.4 +1.8
baz=15,SNR=26
MNTX Cornudas Mount 15.50 333 *e*P Pn 05 04 03.3 -0.5
4.5nm,1.0s
GDL2 Guadalupe Moun 15.54 337 *e*P Pn 05 04 04.7 +0.4
127A Arkansas Junct 15.63 341 ⇓P Pn 05 04 05.3 -0.1
baz=16
225A Deer Hill, Car 15.64 336 ⇓P Pn 05 04 06.0 +0.6
baz=16,SNR=18
126A Clayton Basin, 15.82 339 ⇓P Pn 05 04 07.7 -0.1
baz=16
224A Cornudas Mount 15.89 334 ⇓P Pn 05 04 09.3 +0.6
baz=16,SNR=7.2
125A Gardner Draw, 16.06 337 ⇑P Pn 05 04 10.4 -0.4
baz=16,SNR=9.0
CPRX Cap Rock 16.12 340 *e*P Pn 05 04 11.0 -0.6
4.6nm,0.9s
Z27A Tatum 16.18 342 ⇓P Pn 05 04 11.3 -1.1
baz=16,SNR=18
Z26A Caprock 16.38 340 ⇑P Pn 05 04 13.9 -0.9
baz=16,SNR=8.1
124A Stringfield Ra 16.41 335 ⇑P Pn 05 04 14.7 -0.5
baz=16
222A Williams Famil 16.63 330 ⇓P Pn 05 04 18.1 +0.2
baz=17,SNR=16
Z25A Roswell 16.64 338 ⇓P Pn 05 04 17.3 -0.7
baz=17,SNR=13
MSTX Muleshoe 16.68 344 ⇑P Pn 05 04 17.5 -1.0
baz=17,SNR=9.0
Y27A Causey 16.70 343 ⇑P Pn 05 04 18.3 -0.5
baz=17,SNR=7.8
WMOK Wichita Mounta 16.76 356 *e*P Pn 05 04 20.3 +0.7
4.8nm,0.9s
MIAR Mount Ida 16.86 11 *e*P Pn 05 04 18.9 -1.9
17nm,1.1s
Z24A Sheeppen Canyo 16.93 336 ⇓P Pn 05 04 22.3 +0.7
baz=17,SNR=8.1
Y26A Elida 16.93 341 ⇑P Pn 05 04 21.9 +0.2
baz=17
122A Conniff Cattle 17.07 331 ⇑P Pn 05 04 24.4 +1.0
baz=17,SNR=6.3
220A Playas Peak, P 17.19 326 ⇑P Pn 05 04 26.0 +1.1
baz=17
319A Douglas 17.20 323 ⇓P Pn 05 04 26.3 +1.3
baz=17
Z23A Rita Site, Whi 17.21 334 ⇑P Pn 05 04 25.9 +0.7
baz=17
Y25A Mesa, Roswell 17.21 339 ⇓P Pn 05 04 25.7 +0.5
baz=17,SNR=11
AMTX Amarillo 17.30 348 *e*P Pn 05 04 25.5 -0.7
6.6nm,0.5s
121A Cookes Peak, D 17.31 329 ⇓P Pn 05 04 27.2 +0.8
baz=17,SNR=12
X27A F and S Farms, 17.40 344 ⇓P Pn 05 04 27.2 -0.3
baz=17,SNR=5.7
Y24A Capitan 17.48 337 ⇑P Pn 05 04 28.4 -0.1
baz=18,SNR=15
X26A CR and CF Fran 17.51 342 ⇑P Pn 05 04 28.6 -0.2
baz=18,SNR=5.9
Z22A Elephant Butte 17.52 332 ⇑P Pn 05 04 29.4 +0.4
baz=18,SNR=8.0
219A White Tail Can 17.66 325 ⇑P Pn 05 04 31.3 +0.7
baz=18,SNR=8.8
318A Bisbee 17.66 322 ⇓P Pn 05 04 31.6 +0.9
baz=18,SNR=6.1
Y23A Lovelace Mesa, 17.73 336 ⇑P Pn 05 04 31.5 0.0
baz=18,SNR=7.9
120A U Bar Ranch, L 17.75 327 ⇑P Pn 05 04 32.6 +0.9
baz=18,SNR=8.6
W27A Bowe Ranch, En 17.79 344 ⇓P Pn 05 04 31.6 -0.6
baz=18,SNR=11
Z21A St. Cloud Mine 17.89 331 ⇓P Pn 05 04 33.8 +0.4
baz=18,SNR=10
OXF Oxford 17.93 22 *e*P Pn 05 04 31.2 -2.7
19nm,1.0s
W26A Owens Ranch, T 18.00 343 ⇑P Pn 05 04 33.9 -0.9
baz=18,SNR=5.5
X24A Lazy VL Ranch, 18.05 338 ⇓P Pn 05 04 35.2 -0.2
baz=18,SNR=12
218A Dragoon 18.08 323 ⇑P Pn 05 04 36.2 +0.4
baz=18
Y22A Socorro 18.10 333 ⇑P Pn 05 04 36.2 +0.1
baz=18,SNR=8.9
BNM Barren Site 18.15 334 *e*P Pn 05 04 36.8 +0.3
8.2nm,1.0s
Z20A Nine Sixteen R 18.18 328 ⇑P Pn 05 04 37.4 +0.5
baz=18,SNR=7.1
119A Ashpeak Ranch, 18.27 326 ⇓P Pn 05 04 37.8 -0.3
baz=18
W25A X Bar L Ranch, 18.33 341 ⇑P Pn 05 04 37.6 -1.1
baz=18,SNR=14
X23A Hourglass Bar 18.35 336 ⇑P Pn 05 04 39.0 0.0
baz=18,SNR=12
217A Green Valley 18.39 321 ⇓P Pn 05 04 39.5 0.0
baz=18,SNR=7.2
Y21A Point of Rocks 18.48 332 ⇓P Pn 05 04 40.3 -0.2
baz=18
118A Homack Ranch, 18.54 324 ⇓P Pn 05 04 41.6 +0.4
baz=19
LAZ Ladron 18.58 334 *e*P Pn 05 04 41.8 0.0
3.2nm,0.9s
X22A Bernardo 18.61 334 ⇓P Pn 05 04 41.8 -0.3
baz=19
W24A Lazy 6 Ranch, 18.63 339 ⇓P Pn 05 04 41.7 -0.6
baz=19,SNR=23
Y20A Horse Springs, 18.72 330 ⇓P Pn 05 04 43.0 -0.4
baz=19
TUC Tucson 18.75 322 *e*P Pn 05 04 43.3 -0.5
6.5nm,0.9s
ANMO Albuquerque 18.78 336 P Pn 05 04 43.5 -0.6
0.3nm,0.3s,baz=144,slow=12,SNR=9.2
ANMO Albuquerque 18.78 336 *e*P Pn 05 04 43.4 -0.8
2.9nm,0.7s
W23A Werner Place, 18.85 337 ⇑P Pn 05 04 44.2 -0.7
baz=19,SNR=14
X21A Alamocita Cree 18.89 332 ⇓P Pn 05 04 45.5 -0.1
baz=19,SNR=12
117A Oracle 18.92 323 ⇑P Pn 05 04 45.5 -0.3
baz=19,SNR=6.4
216A Three Points, 18.94 320 ⇑P Pn 05 04 46.0 -0.1
baz=19
V25A Rancho No Teng 18.95 341 ⇑P Pn 05 04 45.0 -1.2
baz=19,SNR=9.5
V24A Rampart Ranch, 19.05 340 ⇓P Pn 05 04 46.5 -0.9
baz=19,SNR=24
Y19A Nutrioso 19.18 328 ⇓P Pn 05 04 48.6 -0.4
baz=19,SNR=12
U26A Atchley Ranch, 19.22 344 ⇓P Pn 05 04 48.2 -1.2
baz=19,SNR=19
X20A Quemado 19.30 331 ⇓P Pn 05 04 49.7 -0.6
baz=19,SNR=8.8
V23A Ortiz Mt. (NFS 19.38 338 ⇑P Pn 05 04 50.3 -1.0
baz=19,SNR=7.5
U25A Circle Dot Ran 19.41 343 ⇓P Pn 05 04 50.2 -1.4
baz=19,SNR=26
Y18A Canyon Day Jun 19.44 327 ⇓P Pn 05 04 50.9 -1.1
baz=20,SNR=5.6
116A Eloy 19.48 321 ⇑P Pn 05 04 51.3 -1.2
baz=20,SNR=7.7
X19A St. Johns 19.58 329 ⇓P Pn 05 04 52.6 -1.1
baz=20
U24A Moreno Valley 19.68 341 ⇑P Pn 05 04 53.2 -1.6
baz=20
214A Organ Pipe Nat 19.75 318 ⇓P Pn 05 04 54.6 -1.2
baz=20,SNR=5.5
W20A Ramah 19.78 332 ⇓P Pn 05 04 54.7 -1.3
baz=20
V22A San Miguel Ran 19.80 336 ⇓P Pn 05 04 54.5 -1.7
baz=20,SNR=12
Y17A Roosevelt 19.81 325 ⇑P Pn 05 04 54.9 -1.5
baz=20,SNR=5.2
Z16A Peralta Trail, 19.87 323 ⇑P Pn 05 04 55.6 -1.5
baz=20
115A Sonoran Desert 19.89 320 ⇑P Pn 05 04 55.9 -1.4
baz=20,SNR=16
U23A El Rito 19.91 339 ⇓P Pn 05 04 56.1 -1.5
baz=20,SNR=60
WVT Waverly 19.95 23 *e*P Pn 05 04 53.9 -4.2
68nm,2.5s
X18A Snowflake 19.98 328 ⇓P Pn 05 04 57.0 -1.4
baz=20,SNR=7.6
T25A Trinidad 20.10 343 ⇑P P 05 04 58.3 +0.9
baz=20,SNR=29
U22A Llaves 20.19 337 ⇓P P 05 04 58.7 +0.4
baz=20,SNR=11
X17A Forest Lakes 20.28 326 ⇓P P 05 05 00.3 +1.1
baz=20
Y16A Circle Bar Ran 20.30 324 ⇑P P 05 05 00.1 +0.6
baz=20,SNR=9.1
114A Black Gap (USA 20.33 319 ⇓P P 05 05 00.8 +1.0
baz=20,SNR=7.3
V20A Brimhall 20.33 333 ⇑P P 05 05 00.8 +0.9
baz=20,SNR=7.7
W18A Petrified Fore 20.35 330 ⇑P P 05 05 00.8 +0.7
baz=20
T23A Casias Ranch, 20.50 340 ⇓P P 05 05 02.3 +0.6
baz=20,SNR=6.4
V19A Window Rock 20.52 332 ⇑P P 05 05 02.6 +0.7
baz=20
U21A Nageezi 20.54 336 ⇑P P 05 05 02.8 +0.7
baz=20,SNR=18
S25A Robets Cordova 20.60 344 ⇓P P 05 05 03.1 +0.4
baz=21
X16A Lo Mia Camp, P 20.68 325 ⇓P P 05 05 04.7 +1.1
baz=21,SNR=14
CCM Cathedral Cave 20.72 14 *e*P P 05 05 03.8 -0.3
12nm,0.8s
CCM *e* 05 05 29.3
T22A Edith 20.77 338 ⇑P P 05 05 05.1 +0.5
baz=21
Z14A Wintersburg 20.78 321 ⇓P P 05 05 05.8 +1.0
baz=21
S24A Houchin Ranch, 20.80 342 ⇑P P 05 05 05.4 +0.5
baz=21,SNR=5.4
Y15A Casa Rosa Ranc 20.84 323 ⇑P P 05 05 05.9 +0.6
baz=21
U20A Newcomb 20.85 334 ⇑P P 05 05 05.6 +0.2
baz=21,SNR=13
V18A Ganado 20.92 330 ⇑P P 05 05 07.1 +0.8
baz=21,SNR=7.7
SDCO Great Sand Dun 20.98 342 *e*P P 05 05 07.3 +0.5
6.5nm,0.9s
T21A Navajo Lake 20.99 337 ⇑P P 05 05 07.5 +0.6
baz=21
U19A Dine' College, 21.07 332 ⇑P P 05 05 07.8 0.0
baz=21,SNR=26
S23A Nye Farm, Mont 21.10 341 ⇓P P 05 05 07.8 -0.3
baz=21
Z13A Yuma Proving G 21.11 319 ⇑P P 05 05 08.6 +0.4
baz=21,SNR=12
X15A Humboldt 21.17 324 ⇑P P 05 05 09.4 +0.5
baz=21,SNR=7.0
Y14A Wickenburg 21.22 322 ⇑P P 05 05 09.7 +0.3
baz=21,SNR=8.2
W16A Flagstaff 21.24 326 ⇑P P 05 05 10.3 +0.6
baz=21
V17A Tonalea, Kykot 21.27 328 ⇑P P 05 05 10.6 +0.7
baz=21,SNR=12
R24A Sanders Place, 21.32 343 ⇑P P 05 05 10.4 -0.1
baz=21
TKL Tuckaleechee C 21.34 32 LR LR 05 16 34.2
comp=Z,30nm,18.3s,baz=200,slow=46
S22A 4UR Ranch, Cre 21.41 339 ⇓P P 05 05 11.7 +0.3
baz=21,SNR=9.3
T19A Beclabito 21.45 334 ⇓P P 05 05 12.4 +0.5
baz=22,SNR=7.4
U18A Rough Rock, Ch 21.47 331 ⇓P P 05 05 12.5 +0.4
baz=22,SNR=7.5
WUAZ Wupatki 21.48 327 ⇑P P 05 05 13.2 +0.9
baz=22,SNR=10
WUAZ Wupatki 21.48 327 *e*P P 05 05 13.1 +0.8
17nm,0.9s,mb4.4
X14A Yava 21.53 323 ⇑P P 05 05 13.4 +0.6
baz=22
MVCO Mesa Verde 21.55 335 ⇑P P 05 05 12.8 -0.2
baz=22,SNR=8.1
MVCO Mesa Verde 21.55 335 *e*P P 05 05 12.9 -0.1
16nm,1.3s,mb4.2
Y13A Salome 21.63 320 ⇑P P 05 05 14.9 +1.1
baz=22,SNR=8.4
W15A Williams 21.70 325 ⇑P P 05 05 15.4 +0.8
baz=22
Q25A Bedland, Calha 21.73 345 ⇓P P 05 05 15.2 +0.3
baz=22
GLA Glamis 21.76 317 ⇑P P 05 05 16.1 +0.9
baz=22
R22A Saguache, Gunn 21.82 340 ⇓P P 05 05 16.1 +0.3
baz=22
U16A Tuba City 21.85 329 ⇓P P 05 05 16.4 +0.3
baz=22,SNR=9.7
U17A Shonto 21.99 330 ⇑P P 05 05 18.0 +0.4
baz=22
T18A Mexican Hat 22.07 332 ⇓P P 05 05 18.8 +0.3
baz=22,SNR=5.9
V15A Kaibab Nationa 22.13 326 ⇑P P 05 05 19.6 +0.5
baz=22
X13A Yucca 22.16 322 ⇓P P 05 05 20.1 +0.5
baz=22
W14A Seligman 22.17 324 ⇑P P 05 05 20.1 +0.5
baz=22
R21A Cimarron 22.21 338 ⇑P P 05 05 20.1 +0.1
baz=22,SNR=10
S19A Harvey Farm, M 22.27 335 ⇑P P 05 05 20.3 -0.3
baz=22,SNR=6.1
P25A Willow Gulch B 22.29 346 ⇑P P 05 05 20.2 -0.6
baz=22,SNR=7.5
R20A Redvale 22.36 337 ⇓P P 05 05 21.6 +0.1
baz=22,SNR=8.4
T17A Navajo Res., N 22.38 331 ⇑P P 05 05 22.0 +0.3
baz=22
PV01 Paradox Valley 22.38 336 *e*P P 05 05 21.6 -0.2
402nm,0.7s
Q22A Crested Butte, 22.44 340 ⇑P P 05 05 22.2 -0.3
baz=22
V14A Boquillas Ranc 22.49 325 ⇑P P 05 05 23.7 +0.7
baz=22,SNR=10
BC3 Big Chuckawall 22.54 317 ⇑P P 05 05 23.9 +0.4
baz=23
W13A Hualapai Mount 22.55 322 ⇑P P 05 05 24.0 +0.4
baz=23
S18A Hurst Farm, Bl 22.58 333 ⇓P P 05 05 24.0 +0.1
baz=23,SNR=9.7
P23A Jefferson 22.59 343 ⇓P P 05 05 24.3 +0.4
baz=23
Q21A Lamborn Mesa, 22.64 339 ⇓P P 05 05 24.4 -0.1
baz=23,SNR=7.3
U15A North Rim 22.66 327 ⇓P P 05 05 25.3 +0.6
baz=23,SNR=12
IRM Iron Mountain 22.68 319 ⇓P P 05 05 25.3 +0.3
baz=23
T16A Glen Canyon Da 22.70 329 ⇑P P 05 05 25.4 +0.3
baz=23
MONP Monument Peak 22.72 315 ⇓P P 05 05 25.9 +0.5
baz=23
PV04 Paradox Valley 22.74 336 *e*P P 05 05 25.7 +0.2
SMCO Snowmass 22.75 340 *e*P P 05 05 25.4 -0.3
8.7nm,1.1s,mb4.0
SMCO *e* 05 05 44.9
PV10 Paradox Valley 22.77 336 *e*P P 05 05 25.0 -0.9
162nm,0.9s
R19A Curley Farm, L 22.79 335 ⇑P P 05 05 25.6 -0.5
baz=23
O25A Wiggins 22.85 346 ⇑P P 05 05 26.2 -0.4
baz=23
S17A Black Ridge (B 22.90 332 ⇓P P 05 05 27.0 -0.2
baz=23,SNR=8.9
ISCO Idaho Springs 22.92 343 *e*P P 05 05 27.4 -0.1
7.2nm,0.8s,mb4.0
Q20A Ridgley Place, 23.00 338 ⇑P P 05 05 27.9 -0.4
baz=23,SNR=5.7
O24A Longmont 23.08 345 ⇑P P 05 05 28.4 -0.7
baz=23
BELC Belle Mtn. Jos 23.11 317 ⇑P P 05 05 29.3 -0.2
baz=23
U14A Mt Trumbull 23.12 326 ⇓P P 05 05 29.1 -0.3
baz=23,SNR=11
R18A Canyonlands Na 23.13 334 ⇑P P 05 05 28.9 -0.7
baz=23
V13A Grand Canyon W 23.14 324 ⇑P P 05 05 29.6 -0.1
baz=23
T15A Red Dirt Ranch 23.16 328 ⇑P P 05 05 30.0 +0.1
baz=23,SNR=16
LDFC Landfair 23.26 321 *e*P P 05 05 32.4 +1.5
7.6nm,0.6s,mb4.2
S16A Weppner Ranch, 23.33 330 ⇓P P 05 05 31.4 -0.1
baz=23,SNR=12
Q19A Hogan Spring (23.36 336 ⇑P P 05 05 31.3 -0.5
baz=23
O23A Lake Granby, G 23.39 343 ⇓P P 05 05 31.3 -0.6
baz=23
GMRC Granite Mounta 23.40 319 ⇓P P 05 05 32.2 +0.1
baz=24
R17A Hanksville Air 23.50 333 ⇑P P 05 05 32.6 -0.4
baz=24,SNR=6.7
P20A De Beque 23.52 338 ⇑P P 05 05 32.3 -0.8
baz=24,SNR=17
O22A Kremmling 23.52 342 ⇓P P 05 05 32.4 -0.7
baz=24
U13A Pakoon Wash 23.54 325 ⇑P P 05 05 33.6 +0.2
baz=24
T14A Hurricane 23.55 327 ⇑P P 05 05 33.7 +0.3
baz=24,SNR=6.9
V12A Nelson 23.55 322 ⇑P P 05 05 33.5 0.0
baz=24
S15A Panguitch 23.66 329 ⇓P P 05 05 35.0 +0.6
baz=24
R16A Teasdale 23.73 331 ⇑P P 05 05 35.4 +0.3
baz=24,SNR=9.9
Q18A Rafter H Ranch 23.84 335 ⇑P P 05 05 36.0 0.0
baz=24
P19A Cripple Cowboy 23.85 337 ⇓P P 05 05 36.0 -0.1
baz=24,SNR=9.4
HEC Hector,Ludlow 23.85 318 ⇑P P 05 05 36.7 +0.5
baz=24
U12A Valley of Fire 23.87 324 ⇑P P 05 05 36.8 +0.4
baz=24
T13A Saint George 23.95 326 ⇓P P 05 05 37.5 +0.4
baz=24,SNR=6.6
V11A Goodsprings 23.97 322 ⇑P P 05 05 37.8 +0.5
baz=24
TUQ Turquoise Moun 24.00 320 ⇓P P 05 05 38.6 +1.1
baz=24,SNR=6.5
SRU San Rafael 24.00 334 ⇑P P 05 05 37.8 +0.2
baz=24,SNR=13
SRU San Rafael 24.00 334 *e*P P 05 05 38.3 +0.7
8.7nm,0.7s,mb4.2
SRU *e* 05 06 11.2
O20A White River Ci 24.03 339 ⇓P P 05 05 38.1 +0.3
baz=24,SNR=8.8
N23A Red Feather La 24.03 344 ⇓P P 05 05 37.9 +0.1
baz=24,SNR=5.2
R15A Junction 24.05 330 ⇑P P 05 05 38.3 +0.3
baz=24
CCUT Cedar City 24.07 327 *e*P P 05 05 38.8 +0.6
3.8nm,1.1s,mb3.6
N22A Wattenberg Ran 24.09 343 ⇓P P 05 05 38.4 +0.1
baz=24
Q16A Castle Valley 24.12 333 ⇓P P 05 05 39.2 +0.6
baz=24,SNR=7.0
S14A Cedar City 24.13 328 ⇑P P 05 05 39.5 +0.8
baz=24,SNR=5.6
T12A Moapa 24.18 324 ⇓P P 05 05 39.8 +0.6
baz=24
MSU Marysvale 24.24 331 *e*P P 05 05 40.0 +0.3
MSU *e* 05 06 02.8
ARUT Antelope Range 24.29 328 *e*P P 05 05 40.9 +0.7
7.4nm,0.8s,mb4.1
PHWY Pilot Hill 24.29 345 *e*P P 05 05 40.4 +0.2
4.1nm,0.6s,mb3.9
P18A Preston Nutter 24.33 335 ⇑P P 05 05 41.3 +0.8
baz=24,SNR=21
BFSC Mount Baldy Ra 24.35 316 ⇓P P 05 05 41.6 +0.9
baz=24
S13A Holt Ranch, En 24.35 327 ⇑P P 05 05 41.5 +0.8
baz=24,SNR=8.8
N21A Black Mountain 24.36 341 ⇑P P 05 05 41.3 +0.5
baz=24,SNR=11
P17A Butcher Ranch, 24.40 334 ⇑P P 05 05 41.6 +0.5
baz=24
TMUT Trail Mountain 24.45 333 *e*P P 05 05 43.0 +1.4
4.8nm,0.6s,mb4.0
O19A Miners Draw (B 24.49 338 ⇑P P 05 05 41.9 -0.1
baz=24,SNR=10.0
N20A Spence Gulch, 24.67 340 ⇓P P 05 05 43.7 +0.1
baz=25,SNR=8.2
Q15A Fillmore 24.73 331 ⇑P P 05 05 44.4 +0.3
baz=25
O18A Roosevelt 24.79 336 ⇓P P 05 05 45.3 +0.6
baz=25,SNR=7.9
T11A Corn Creek, Al 24.83 324 ⇑P P 05 05 45.7 +0.5
baz=25
R13A O'Grain Ranch, 24.86 328 ⇑P P 05 05 45.8 +0.5
baz=25
S12A Delamar Landin 24.89 325 ⇑P P 05 05 46.2 +0.6
baz=25
U10A Ash Meadows, A 24.90 321 ⇑P P 05 05 46.5 +0.7
baz=25
O17A Robinson Place 25.01 335 ⇓P P 05 05 47.0 +0.3
baz=25,SNR=14
N19A John Jarvie Ra 25.03 338 ⇑P P 05 05 46.9 0.0
baz=25
M21A Separation Pea 25.09 342 ⇓P P 05 05 47.5 +0.1
baz=25
L22A Ellis Ranch, M 25.23 344 ⇓P P 05 05 49.3 +0.7
baz=25
N18A Larsen Ranch, 25.28 338 ⇑P P 05 05 49.4 +0.2
baz=25
R12A Pony Springs, 25.30 327 ⇑P P 05 05 49.6 +0.2
baz=25
O16A Springville 25.33 334 ⇑P P 05 05 49.6 0.0
baz=25
MPMC Manual Prospec 25.37 319 ⇓P P 05 05 50.8 +0.8
baz=25
NLU North Lily Min 25.37 333 *e*P P 05 05 51.4 +1.5
2.4nm,0.7s,mb3.7
DAU Daniels Canyon 25.40 335 *e*P P 05 05 50.8 +0.5
Q13A Wheeler Ranch, 25.48 329 ⇓P P 05 05 51.4 +0.4
baz=26,SNR=6.2
JFWS Jewell Farm 25.59 12 *e*P P 05 05 50.4 -1.6
8.7nm,0.8s,mb4.2
ECSD EROS Data Cent 25.70 1 *e*P P 05 05 51.0 -1.9
21nm,1.8s,mb4.3
R11A Troy Canyon, C 25.83 326 ⇑P P 05 05 54.9 +0.7
baz=26
P13A Bates Ranch, G 25.86 329 ⇑P P 05 05 55.1 +0.6
baz=26
DUG Dugway 25.89 332 ⇓P P 05 05 54.9 +0.3
baz=26
DUG Dugway 25.89 332 *e*P P 05 05 55.6 +0.9
2.6nm,0.9s,mb3.7
M17A Scullys Gap (B 26.08 337 ⇓P P 05 05 57.7 +1.3
baz=26
S10A Tonopah Range, 26.08 324 ⇓P P 05 05 57.0 +0.5
baz=26
R10A Warm Springs 26.18 325 ⇑P P 05 05 57.2 -0.2
baz=26
Q11A Duckwater 26.23 326 ⇓P P 05 05 57.8 0.0
baz=26
L18A Fontenelle, Gr 26.24 338 ⇓P P 05 05 57.6 -0.2
baz=26
P12A McGill 26.32 328 ⇓P P 05 05 58.8 +0.3
baz=26
K20A Yellowstone Ra 26.34 341 ⇓P P 05 05 58.0 -0.8
baz=26
HWUT Hardware Ranch 26.54 336 *e*P P 05 06 00.5 -0.1
3.1nm,0.7s,mb4.0
N14A Grayback Hills 26.59 332 ⇓P P 05 06 01.0 +0.1
baz=27

RSSD	**Black Hills**	26.69	349	*e*P		P	05 06 03.5	+1.6
	2.4nm,0.9s,mb3.7							
BW06	**Boulder Array**	26.83	340	⇑P		P	05 06 02.5	-0.6
	baz=27							
PDAR	**Pinedale Array**	26.83	340	P		P	05 06 02.1	-1.0
	0.9nm,0.6s,mb3.5,baz=143,slow=10,SNR=12							
O12A	**Currie**	26.84	330	⇓P		P	05 06 03.4	+0.1
	baz=27							
K18A	**Toltan Ranch,**	26.88	339	⇓P		P	05 06 03.4	-0.1
	baz=27,SNR=5.2							
M14A	**Sheep Mountain**	27.19	333	⇑P		P	05 06 06.3	0.0
	baz=27							
L15A	**Malad City**	27.20	335	⇓P		P	05 06 06.6	+0.1
	baz=27							
K17A	**Gardner Place,**	27.28	338	⇓P		P	05 06 07.2	0.0
	baz=27							
NVAR	**Mina Array Bea**	27.41	322	P		P	05 06 09.0	+0.6
	2.1nm,0.8s,mb3.8,baz=138,slow=10,SNR=13							
M13A	**Montello**	27.43	332	⇓P		P	05 06 08.7	+0.1
	baz=28,SNR=5.0							
N12A	**Clover Valley,**	27.44	330	⇑P		P	05 06 08.8	+0.2
	baz=28							
ELK	**Elko**	27.45	330	P		P	05 06 08.3	-0.4
	2.6nm,0.7s,mb3.9,baz=128,slow=6.6,SNR=10							
L14A	**Malta**	27.58	334	⇓P		P	05 06 09.8	-0.1
	baz=28,SNR=6.4							
REDW	**Red Top Meadow**	27.79	339	*e*P		P	05 06 11.2	-0.5
	3.6nm,0.8s,mb4.0							
REDW				*e*			05 06 35.6	
M12A	**Wells**	27.82	331	⇑P		P	05 06 12.5	+0.4
	baz=28							
K15A	**Arbon**	27.83	336	⇓P		P	05 06 12.4	+0.3
	baz=28							
SNOW	**Snow King Moun**	27.85	339	*e*P		P	05 06 12.6	+0.3
	10.0nm,0.9s,mb4.3							
SNOW				*e*			05 06 36.4	
LOHW	**Long Hollow**	27.93	339	*e*P		P	05 06 13.0	0.0
	3.2nm,0.9s,mb3.9							
TPAW	**Teton Pass**	27.94	339	*e*P		P	05 06 12.9	-0.1
	3.3nm,0.8s,mb3.9							
M11A	**Holland Ranch,**	28.25	330	⇑P		P	05 06 15.8	0.0
	baz=28							
J15A	**Blackfoot**	28.40	336	⇑P		P	05 06 16.9	-0.3
	baz=28							
M10A	**I.L. Ranch, Tu**	28.68	329	⇑P		P	05 06 19.7	+0.1
	baz=29							
K12A	**Draper Farm, C**	28.79	332	⇑P		P	05 06 20.6	+0.1
	baz=29							
L11A	**Cat Creek Ranc**	28.80	331	⇑P		P	05 06 20.9	+0.2
	baz=29,SNR=5.9							
RLMT	**Red Lodge**	28.87	342	⇓P		P	05 06 20.9	-0.4
	baz=29							
RLMT	**Red Lodge**	28.87	342	*e*P		P	05 06 21.1	-0.2
	3.6nm,0.8s,mb4.0							
L10A	**Juniper Basin**	29.07	330	⇑P		P	05 06 23.3	+0.2
	baz=29							
G18A	**Lazy EL Ranch,**	29.13	342	⇑P		P	05 06 23.0	-0.6
	baz=29							
I14A	**Mackay**	29.24	336	⇓P		P	05 06 24.5	-0.1
	baz=29							
HLID	**Hailey**	29.33	334	⇓P		P	05 06 25.3	-0.1
	baz=29							
HLID	**Hailey**	29.33	334	*e*P		P	05 06 24.9	-0.5
	1.3nm,0.6s,mb3.7							
J12A	**Stokes Ranch,**	29.36	333	⇑P		P	05 06 25.7	0.0
	baz=29							
K11A	**Parker Ranch,**	29.40	331	⇓P		P	05 06 26.0	-0.1
	baz=29							
H15A	**Lima**	29.52	337	⇑P		P	05 06 27.1	0.0
	baz=30							
F18A	**Big Timber**	29.71	342	⇑P		P	05 06 28.0	-0.8
	baz=30							
MCMT	**McKenzie Canyo**	29.78	337	*e*P		P	05 06 29.5	+0.1
	0.9nm,0.7s,mb3.5							
MCMT				*e*			05 06 54.5	
K10A	**MacKenzie Ranc**	29.80	330	⇑P		P	05 06 29.5	0.0
	baz=30							
I12A	**Atlanta**	29.82	334	⇑P		P	05 06 29.7	0.0
	baz=30							
G15A	**Dillon**	29.94	338	⇑P		P	05 06 30.8	0.0
	baz=30							
F17A	**Fitzpatrick Pl**	29.99	341	⇑P		P	05 06 31.3	+0.1
	baz=30							
H13A	**Challis**	30.09	335	⇓P		P	05 06 32.0	-0.1
	baz=30							
DLMT	**Dillon**	30.15	338	*e*P		P	05 06 33.0	+0.3
	5.2nm,0.7s,mb4.3							
DLMT				*e*		pP	05 06 50.6	+1.4
I11A	**Placerville**	30.27	333	⇓P		P	05 06 33.9	+0.2
	baz=30							
AGMN	**Agassiz Nation**	30.28	2	*e*P		P	05 06 31.7	-2.1
	12nm,0.7s,mb4.6							
H12A	**Diamond D Ranc**	30.32	335	⇑P		P	05 06 34.1	0.0
	baz=30,SNR=8.9							
E18A	**Harlowton**	30.37	343	⇑P		P	05 06 33.9	-0.7
	baz=30							
LRM	**Limekiln Ridge**	30.50	339	*e*P		P	05 06 35.7	0.0
G13A	**Cobalt**	30.52	336	⇑P		P	05 06 36.0	0.0
	baz=30							
F15A	**Butte**	30.53	339	⇑P		P	05 06 35.8	-0.2
	baz=30							
E16A	**East Helena**	30.87	341	⇑P		P	05 06 38.5	-0.5
	baz=31							
D18A	**Linhart Farms,**	30.91	343	⇑P		P	05 06 39.2	-0.2
	baz=31							
DGMT	**Dagmar**	30.95	351	⇓P		P	05 06 38.8	-0.8
	baz=31							
J08A	**Circle Bar Ran**	31.00	329	⇑P		P	05 06 40.0	-0.2
	baz=31,SNR=6.1							
HRY	**Holter Researc**	31.08	340	*e*P		P	05 06 40.2	-0.6
E15A	**Deer Lodge**	31.09	339	⇑P		P	05 06 40.2	-0.7
	baz=31							
D17A	**Six Diamond Ra**	31.12	342	⇓P		P	05 06 40.9	-0.3
	baz=31							
F13A	**Darby**	31.15	337	⇑P		P	05 06 41.6	+0.1
	baz=31							
F12A	**Elk City**	31.48	336	⇑P		P	05 06 44.0	-0.4
	baz=32,SNR=6.8							
C17A	**Wharram Farm,**	31.58	343	⇑P		P	05 06 44.9	-0.3
	baz=32							
E13A	**Victor**	31.65	338	⇑P		P	05 06 45.5	-0.3
	baz=32							
CHMT	**Chamberlain Mo**	31.72	339	*e*P		P	05 06 45.5	-0.9
	1.1nm,0.7s,mb3.7							
G10A	**Bishop Farm, J**	31.87	333	⇑P		P	05 06 47.0	-0.8
	baz=32,SNR=5.9							
D14A	**Greenough**	31.95	339	⇑P		P	05 06 47.9	-0.6
	baz=32							
C16A	**Fuhringer Ranc**	32.02	342	⇓P		P	05 06 48.4	-0.7
	baz=32							
E12A	**Beaver Dam Sad**	32.14	336	⇑P		P	05 06 49.3	-0.8
	baz=32							
B17A	**L&G Farms, Che**	32.19	343	⇓P		P	05 06 50.0	-0.6
	baz=32							
ULM	**Lac du Bonnet**	32.23	2	P		P	05 06 47.5	-3.4
	3.7nm,0.6s,mb4.3,baz=174,slow=5.3,SNR=4.2							
D13A	**Huson**	32.30	338	⇓P		P	05 06 50.8	-0.7
	baz=32							
F10A	**Beach Ranch, E**	32.45	334	⇓P		P	05 06 52.4	-0.5
	baz=32,SNR=12							
B16A	**M & M Farms, S**	32.56	342	⇑P		P	05 06 53.1	-0.7
	baz=32							
D12A	**Red Ives Fores**	32.59	337	⇓P		P	05 06 53.2	-0.9
	baz=33							
C14A	**Swan Lake**	32.63	339	⇑P		P	05 06 53.2	-1.2
	baz=33							
B13A	**Whitefish**	33.40	339	⇓P		P	05 07 00.3	-0.8
	baz=33							
A14A	**Double T Ranch**	33.58	341	⇑P		P	05 07 01.9	-0.7
	baz=34							
EDM	**Edmonton**	37.35	344	*e*P		P	05 07 33.6	-1.3
FCC	**Fort Churchill**	40.81	3	*e*P		P	05 08 01.9	-1.8
	0.1nm,0.6s							
SCHQ	**Schefferville**	43.57	25	P		P	05 08 24.9	-1.4
	12nm,0.5s,mb4.9,baz=230,slow=7.7,SNR=42							
SCHQ	**Schefferville**	43.57	25	*e*P		P	05 08 24.9	-1.4
	16nm,0.6s,mb4.9							
YKA	**Yellowknife Ar**	46.10	349	P		P	05 08 44.1	-2.1
	2.8nm,0.6s,mb4.2,baz=154,slow=7.3,SNR=7.1							
YKA				pP		pP	05 09 08.6	+5.1
	1.2nm,0.6s,baz=155,slow=7.5,SNR=3.9							
INK	**Inuvik**	55.24	344	*e*P		P	05 09 53.6	-1.3
	5.4nm,1.1s,mb4.5							
ILAR	**Eielson Array**	57.22	337	P		P	05 10 08.3	-0.7
	0.5nm,0.6s,mb3.7,baz=140,slow=5.7,SNR=10.0							
NOA	**NORSAR Array B**	83.08	28	P		P	05 12 46.9	-0.3
	0.5nm,0.8s,mb3.4,baz=293,slow=5.1,SNR=3.5							
NOA				pP		pP	05 13 14.0	+7.9
	1.3nm,0.9s,baz=299,slow=5.4,SNR=3.3							
ARCES	**ARCESS Array B**	83.95	17	P		P	05 12 50.7	-0.8
	1.5nm,0.7s,mb3.9,baz=291,slow=3.4,SNR=5.3							
HHC	**Hu-ho-hao-te**	115.63	336	*e*PKP	PKPdf		05 18 57.3	-6.6
HHC				PP	PP		05 20 04.0	-2.0
HHC				SS	SS		05 35 50.3	-10
HHC				AMB	AMB			
	comp=Z,100nm,9.0s							
WMQ	**Urumqi**	118.36	356	*e*PKP	PKPdf		05 19 06.8	-2.3
WMQ				LR	LR			
	comp=N,87nm,19.6s							
WMQ				LR	LR			
	comp=Z,100nm,23.8s							
LZH	**Lanzhou**	122.64	340	*e*PKP	PKPdf		05 19 15.0	-2.5
CD2	**Chengdu**	127.36	337	PKP	PKPdf		05 19 23.8	-2.9
WRA	**Warramunga Arr**	131.25	259	PKP	PKPdf		05 19 35.1	+0.8
	comp=Z,0.1nm,0.5s,baz=79,slow=3.0,SNR=4.7							

NIED ***18*** *05:09:00,26°.60N×130°.20E,h5km,Mw3.9 Best double couple: M₀6.74000×10¹⁴ NP1:φ=21.00000°,δ73.00000°, λ-133.00000°. NP2:φ=273.00000°,δ45.00000°, λ-24.00000°.*

JMA 18 05:09:05.3,26°.62N×130°.20E,h44km,M3.6,Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMZ	**Minamidaito 2**	**1.22**	**131**	P	Pn	05 09 26.3	+0.5
JMZ				S	Sn	05 09 41.4	+0.3
JTK	**Tokunoshima**	**1.61**	**316**	P	Pn	05 09 32.2	+1.0
JTK				S	Sn	05 09 50.6	-0.2
JZK	**Kikaishima**	**1.70**	**353**	P	Pn	05 09 33.5	+1.0
JZK				*e*S	Sn	05 09 53.9	+0.9
JOW	**Kunigami**	**1.73**	**277**	P	Pn	05 09 34.0	+1.0
JOW				S	Sn	05 09 53.7	-0.2
JAM	**Amami Oshima**	**1.86**	**344**	P	Pn	05 09 35.5	+0.8
JAM				S	Sn	05 09 56.7	-0.3
JIH	**Iheya**	**2.04**	**282**	P	Pn	05 09 38.3	+1.2
JIH				S	Sn	05 10 02.3	+1.0
JJT2	**Tamagusuku 2**	**2.25**	**258**	P	Pn	05 09 41.4	+1.4
NAH1	**Naha**	**2.29**	**260**	P	Pn	05 09 40.7	+0.1
JAGN	**Aguni-jima**	**2.65**	**270**	P	Pn	05 09 47.4	+1.9
JAGN				*e*S	Sn	05 10 16.0	-0.4
JNN	**Nakanoshima**	**3.22**	**355**	*e*S	Sn	05 10 30.9	+0.4

ISCJB ***18*** *05:21:05.1±0.6,43°.38N±0°.04×45°.69E±0°.03,h5km±4km, Error ellipse: s-maj=7.4km s-min=3.3km az=19.4*
CSEM ***18*** *05:21:07.1,43°.32N×45°.64E,h31km,mb4.0,After OBN*
MOS ***18*** *05:21:07.1±1.2,43°.32N×45°.64E,h31km,mb4.0/1,Error ellipse: s-maj=14.0km s-min=9.9km az=5.2*

ISC 18 05:21:05.9±0.6,43°.39N±0°.04×45°.69E±0°.03,h5km±4km, n35,σ1ᵒ17/65,2C,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNJR	**Sundja**	**0.71**	**244**	*e*PG	**Pg**	**05 21 19.0**	**-0.5**
SNJR				*i* S	**Sg**	**05 21 29.0**	**+0.2**
SNJR	**Sundja**	**0.71**	**244**	*e*Pg	**Pg**	**05 21 19.0**	**-0.5**
SNJR				*i* Sg	**Sg**	**05 21 29.0**	**+0.2**
TRKR	**Terskaya**	**0.77**	**296**	*e*PG	**Pg**	**05 21 22.8**	**+2.1**
TRKR				*e*S	**Sg**	**05 21 36.0**	**+5.3**
TRKR	**Terskaya**	**0.77**	**296**	*e*Pg	**Pg**	**05 21 22.8**	**+2.1**
TRKR				*e*Sg	**Sg**	**05 21 36.0**	**+5.3**
VLKR	**Vladikavkaz**	**0.81**	**246**	*e*PG	**Pg**	**05 21 20.6**	**-0.8**
VLKR				*e*S	**Sg**	**05 21 32.0**	**+0.1**
VLKR	**Vladikavkaz**	**0.81**	**246**	*e*Pg	**Pg**	**05 21 20.6**	**-0.8**
VLKR				*e*Sg	**Sg**	**05 21 32.0**	**+0.1**
BTKR	**Batakoyurt**	**0.83**	**269**	*e*PG	**Pg**	**05 21 22.4**	**+0.5**
BTKR				*e*S	**Sg**	**05 21 35.0**	**+2.3**
BTKR	**Batakoyurt**	**0.83**	**269**	*e*Pg	**Pg**	**05 21 22.4**	**+0.5**
BTKR				*e*Sg	**Sg**	**05 21 35.0**	**+2.3**
DBC	**Dubki**	**0.91**	**113**	*e*PG	**Pg**	**05 21 22.0**	**-1.4**
DBC				*e*S	**Sg**	**05 21 35.0**	**-0.2**
DBC	**Dubki**	**0.91**	**113**	*e*Pg	**Pg**	**05 21 22.0**	**-1.4**
DBC				*e*Sg	**Sg**	**05 21 35.0**	**-0.2**
KMSR	**Komsomolskaya**	**1.01**	**270**	*e*PG	**Pg**	**05 21 25.3**	**0.0**
KMSR				*e*S	**Sg**	**05 21 39.8**	**+1.3**
KMSR	**Komsomolskaya**	**1.01**	**270**	*e*Pg	**Pg**	**05 21 25.3**	**0.0**
KMSR				*e*Sg	**Sg**	**05 21 39.8**	**+1.3**
ARNR	**Ardon**	**1.04**	**260**	*e*PG	**Pg**	**05 21 25.0**	**-0.9**
ARNR				*e*S	**Sg**	**05 21 39.4**	**-0.1**
ARNR	**Ardon**	**1.04**	**260**	*e*Pg	**Pg**	**05 21 25.0**	**-0.9**
ARNR				*e*Sg	**Sg**	**05 21 39.4**	**-0.1**
UNCR	**Uncukul**	**1.05**	**129**	*e*PG	**Pg**	**05 21 25.5**	**-0.6**
UNCR				*i* S	**Sg**	**05 21 41.0**	**+1.2**
UNCR				pmax	pmax		
	comp=Z,27nm,0.2s						
UNCR	**Uncukul**	**1.05**	**129**	*e*Pg	**Pg**	**05 21 25.5**	**-0.6**
	comp=Z,27nm,0.2s						
UNCR				*i* Sg	**Sg**	**05 21 41.0**	**+1.2**
PRTR	**Priterechnaya**	**1.08**	**290**	⇑*i*PG	**Pg**	**05 21 27.1**	**+0.5**
PRTR				*e*S	**Sg**	**05 21 43.3**	**+2.6**
PRTR	**Priterechnaya**	**1.08**	**290**	*i* Pg	**Pg**	**05 21 27.1**	**+0.5**
PRTR				*e*Sg	**Sg**	**05 21 43.3**	**+2.6**
LACR	**Lac**	**1.16**	**242**	⇑*i*PG	**Pg**	**05 21 25.5**	**-2.6**
LACR				*e*S	**Sg**	**05 21 40.7**	**-2.5**
LACR	**Lac**	**1.16**	**242**	*i* Pg	**Pg**	**05 21 25.5**	**-2.6**
LACR				*e*Sg	**Sg**	**05 21 40.7**	**-2.5**
KORR	**Kora**	**1.22**	**256**	*e*PG	**Pg**	**05 21 27.2**	**-2.0**
KORR				*e*S	**Sg**	**05 21 43.8**	**-1.2**
KORR	**Kora**	**1.22**	**256**	*e*Pg	**Pg**	**05 21 27.2**	**-2.0**
KORR				*e*Sg	**Sg**	**05 21 43.8**	**-1.2**
ZEI	**Tsey**	**1.45**	**245**	*e*PG	**Pn**	**05 21 29.7**	**-2.9**
ZEI	**Tsey**	**1.45**	**245**	*e*Pg	**Pn**	**05 21 29.7**	**-2.9**
KMKR	**Kumukh**	**1.63**	**140**	*e*PG	**Pn**	**05 21 35.0**	**-0.1**
KMKR				*e*S	**Sg**	**05 21 59.0**	**+0.8**
KMKR				pmax	pmax		
	comp=Z,28nm,0.2s						
KMKR	**Kumukh**	**1.63**	**140**	*e*Pg	**Pn**	**05 21 35.0**	**-0.1**
	comp=Z,28nm,0.2s						
KMKR				*e*Sg	**Sg**	**05 21 59.0**	**+0.8**
TBLG	**Delisi**	**1.79**	**203**	PN	**Pn**	**05 21 37.3**	**-0.1**
TBLG				S	**Sn**	**05 22 01.4**	**+0.9**
TBLG	**Delisi**	**1.79**	**203**	P	**Pn**	**05 21 37.3**	**-0.1**
TBLG				S	**Sn**	**05 22 01.4**	**+0.9**
TBLG	**Delisi**	**1.79**	**203**	Pn	**Pn**	**05 21 37.3**	**-0.1**
TBLG				Sg	**Sn**	**05 22 01.4**	**+0.9**
MTA	**Mtatsminda**	**1.81**	**202**	P	**Pn**	**05 21 37.7**	**0.0**
MTA				S	**Sn**	**05 22 01.6**	**+0.6**
GOR	**Gori**	**1.82**	**220**	P	**Sn**	**05 22 01.0**	**-0.1**
ONI	**Oni**	**1.82**	**245**	P	**Pn**	**05 21 37.3**	**-0.5**
ONI				S	**Sn**	**05 22 01.2**	**+0.1**
DGRG	**David-gareji**	**1.95**	**187**	P	**Pn**	**05 21 40.2**	**+0.7**
DGRG				S	**Sg**	**05 22 10.2**	**+1.8**
KIV	**Kislovodsk**	**2.25**	**286**	*e*PN	**Pn**	**05 21 42.9**	**-0.8**
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KIV	**Kislovodsk**	**2.25**	**286**	*e*Pn	**Pn**	**05 21 42.9**	**-0.8**
	comp=Z,4.0nm,1.1s						

ISCJB ***18*** *05:35:56.8±0.5,38°.33N±0°.06×22°.45E±0°.06,h24km±10km, Error ellipse: s-maj=11.5km s-min=6.5km az=158.2*
ATH ***18*** *05:35:56.7,38°.32N×22°.45E,h24km±2km,MD2.9/6*
CSEM ***18*** *05:35:56.6±0.3,38°.38N×22°.41E,h26km±2km,ML2.5/3, Error ellipse: s-maj=8.9km s-min=6.6km az=7.0*
THE ***18*** *05:35:57.1,38°.29N×22°.47E,h6km±13km,ML2.5/3,Error ellipse: s-maj=13.2km s-min=0.3km az=334.0*

ISC 18 05:35:56.9±0.5,38°.34N±0°.05×22°.45E±0°.03,h18km±4km, n23,σ0ᵒ42/35,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KALE	**Kalithea**	**0.25**	**282**	P	**Pg**	**05 36 02.4**	**-0.2**
KALE				S	**Sg**	**05 36 06.8**	**+0.3**
KALE	**Kalithea**	**0.25**	**282**	P	**Pg**	**05 36 02.4**	**-0.2**
KALE				S	**Sg**	**05 36 06.8**	**+0.3**
TRIZ	**Trizonia**	**0.30**	**275**	P	**Pg**	**05 36 03.5**	**+0.1**
TRIZ				S	**Sg**	**05 36 08.1**	**+0.2**
TRIZ	**Trizonia**	**0.30**	**275**	P	**Pg**	**05 36 03.5**	**+0.1**
TRIZ				S	**Sg**	**05 36 08.1**	**+0.2**
LAKA	**Lakka**	**0.39**	**256**	P	**Pg**	**05 36 04.5**	**-0.4**
LAKA	**Lakka**	**0.39**	**256**	P	**Pg**	**05 36 04.5**	**-0.4**
EFP	**Efpalio**	**0.44**	**282**	*e*PB	**Pb**	**05 36 06.1**	**-0.1**
EFP				*e*SB	**Sb**	**05 36 12.8**	**+0.4**
EFP	**Efpalio**	**0.44**	**282**	*e*Pb	**Pb**	**05 36 06.1**	**-0.1**
EFP				*e*Sb	**Sb**	**05 36 12.8**	**+0.4**
LTK	**Loutraki**	**0.51**	**128**	*e*PN	**Pg**	**05 36 06.7**	**-0.5**
LTK				*e*SN	**Sg**	**05 36 13.9**	**-0.2**
LTK	**Loutraki**	**0.51**	**128**	*e*Pn	**Pg**	**05 36 06.7**	**-0.5**
LTK				*e*Sn	**Sg**	**05 36 13.9**	**-0.2**
LKR	**Lokris**	**0.53**	**54**	*e*PN	**Pg**	**05 36 07.4**	**-0.1**
LKR	**Lokris**	**0.53**	**54**	P	**Pg**	**05 36 07.4**	**-0.1**
LKR				S	**Sg**	**05 36 15.5**	**+0.8**
LKR	**Lokris**	**0.53**	**54**	P	**Pg**	**05 36 07.4**	**-0.1**
LKR				S	**Sg**	**05 36 15.5**	**+0.8**
ATAL	**Atalanti**	**0.57**	**51**	P	**Pg**	**05 36 08.2**	**0.0**
ATAL	**Atalanti**	**0.57**	**51**	P	**Pg**	**05 36 08.2**	**0.0**
AGG	**Agios Georgios**	**0.69**	**352**	*e*PN	**Pn**	**05 36 10.8**	**-1.0**
AGG	**Agios Georgios**	**0.69**	**352**	*e*Pn	**Pn**	**05 36 10.8**	**-1.0**
NAIG	**Nisos Aigina**	**1.00**	**125**	*e*PN	**Pn**	**05 36 15.9**	**-0.2**
NAIG	**Nisos Aigina**	**1.00**	**125**	*e*Pn	**Pn**	**05 36 15.9**	**-0.2**
DID	**Didima**	**1.04**	**143**	*e*PN	**Pn**	**05 36 16.6**	**0.0**
DID				*e*SN	**Sn**	**05 36 30.9**	**+0.3**
DID	**Didima**	**1.04**	**143**	*e*Pn	**Pn**	**05 36 16.6**	**0.0**
DID				*e*Sn	**Sn**	**05 36 30.9**	**+0.3**
VLI	**Veliai**	**1.66**	**166**	*e*PN	**Pn**	**05 36 25.8**	**+0.6**
VLI	**Veliai**	**1.66**	**166**	*e*Pn	**Pn**	**05 36 25.8**	**+0.6**

SZGRF ***18*** *05:41:50.8,2°.63S×79°.69W,h42km,mb4.9,MS4.4,Near coast of Ecuador*
IGQ ***18*** *05:41:50.1,2°.05S×80°.59W,h74km±15km,Mb5.1,Ms5.0, Error ellipse: s-maj=5.0km s-min=2.5km az=126.0*
GCMT ***18*** *05:41:53.7±0.3,1°.98S×80°.36W,h48km±1km,MW5.0, Moment Tensor Solution. s51,c61; s61,c97; Moment tensor: Scale 10¹⁶Nm; Mrr4.27±.15; Mθθ-1.56±.11; Mφφ-2.71±.13; Mrθ-1.47±.08; Mθφ2.04±.08; Mφr1.38±.10; Best double couple: M₀4.70000×10¹⁶ NP1:φ=147.00000°, δ33.00000°,λ97.00000°. NP2:φ=319.00000°,δ58.00000°, λ86.00000°. Principal axes: T 4.7300, Plg77.0000°, Azm215.0000°; N -0.0400, Plg4.0000°, Azm321.0000°; P -4.7000, Plg13.0000°, Azm52.0000°; Data Used: II IU CN G IC.*
ISCJB ***18*** *05:41:54.5±0.5,1°.96S±0°.03×80°.32W±0°.03,h79km±4km, mb4.8/119 Error ellipse: s-maj=5.7km s-min=4.2km az=135.6*
IDC ***18*** *05:41:55.3±1.7,1°.89S×80°.28W,h74km±16km,mb4.3/16, mb1 4.5/23,mb1mx4.4/27,mbtmp4.4/23,MS4.1/17, Ms1 4.1/17,ms1mx4.0/23,Error ellipse: s-maj=18.1km s-min=9.4km az=64.0*
NEIC ***18*** *05:41:55.5±0.6,1°.98S×80°.28W,h76km±5km,mb4.9/104, MD5.1(IGQ),Error ellipse: s-maj=5.7km s-min=3.8km az=51.0*
NEIC Felt at Ambato, Bahia de Caraquez and Guayaquil.

ISC 18 05:41:55.9±0.4,1°.97S±0°.03×80°.27W±0°.03,h74km±4km, h51km±2.3km:pP-P,n636,σ0ᵒ67/583,mb4.8/119, 181C-227D,Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIS	**Cerro-Chispas-**	**1.02**	**334**	P	**Pn**	**05 42 09.4**	**-5.4**
PECV	**Mancha de Ca P**	**1.20**	**11**	⇑P	**Pn**	**05 42 13.0**	**-4.1**
RIOE	**Riobamba**	**1.66**	**83**	⇓P	**Pn**	**05 42 21.4**	**-1.6**
JAMA	**Jama**	**1.69**	**2**	P	**Pn**	**05 42 19.6**	**-4.0**
IGUA	**Igualata**	**1.70**	**74**	⇓P	**Pn**	**05 42 22.9**	**-0.7**
BIL2	**Estacion Bilba**	**1.84**	**74**	⇓P	**Pn**	**05 42 25.3**	**-0.2**
BMAS	**Trigal station**	**1.85**	**76**	⇓S	**Sn**	**05 42 49.3**	**+1.1**
BMAS	**Trigal station**	**1.85**	**76**	⇓P	**Pn**	**05 42 25.1**	**-0.5**
ARRY	**Arrayan**	**1.87**	**76**	⇓P	**Pn**	**05 42 25.1**	**-0.8**
JUI6	**Juive**	**1.88**	**73**	⇓P	**Pn**	**05 42 25.7**	**-0.4**
RETU	**Refugio**	**1.90**	**74**	⇓P	**Pn**	**05 42 26.2**	**0.0**
ULBA	**Ulba**	**1.94**	**75**	⇓P	**Pn**	**05 42 26.6**	**-0.1**
BRUN	**Tungurahua Vol**	**1.94**	**74**	⇓S	**Sn**	**05 42 51.8**	**+1.5**
BRUN	**Tungurahua Vol**	**1.94**	**74**	⇓P	**Pn**	**05 42 26.6**	**-0.2**
MAG1	**Magdalena**	**1.95**	**15**	P	**Pn**	**05 42 24.2**	**-2.7**
PISA	**Pisayambo**	**2.09**	**65**	⇓P	**Pn**	**05 42 29.2**	**+0.4**
MACE	**Macas**	**2.09**	**98**	⇓S	**Sn**	**05 42 54.3**	**+0.2**
MACE	**Macas**	**2.09**	**98**	⇓P	**Pn**	**05 42 28.5**	**-0.3**
CAMI	**Rancho Maria**	**2.18**	**54**	⇓P	**Pn**	**05 42 30.4**	**+0.3**
BMOR	**Cotopaxi Volca**	**2.19**	**56**	⇓S	**Sn**	**05 42 58.4**	**+2.0**
BMOR	**Cotopaxi Volca**	**2.19**	**56**	⇓P	**Pn**	**05 42 30.2**	**0.0**
MOV1	**Cotopaxi Vol s**	**2.21**	**56**	⇓P	**Pn**	**05 42 30.7**	**+0.2**
BREF	**Cotopaxi Volca**	**2.24**	**55**	⇓S	**Sn**	**05 43 01.4**	**+3.8**
BREF	**Cotopaxi Volca**	**2.24**	**55**	⇓P	**Pn**	**05 42 31.8**	**+0.9**
BVC2	**Cotopaxi Volca**	**2.27**	**55**	⇓S	**Sn**	**05 43 01.8**	**+3.5**
BVC2	**Cotopaxi Volca**	**2.27**	**55**	⇓P	**Pn**	**

100nm,1.2s,mb5.1
CDVI St. Croix 24.85 37 *e*P P 05 47 11.1 -0.4
138nm,0.8s,mb5.4
ANWB Willy Bob 26.70 42 *e*P P 05 47 29.3 +1.1
159nm,0.9s,mb5.5
CPUP Villa Florida 32.76 140 P P 05 48 21.4 -0.5
4.3nm,0.8s,mb4.3,baz=300,slow=9.0,SNR=15
CPUP Villa Florida 32.76 140 *e*P P 05 48 20.9 -1.0
20nm,0.9s,mb5.0
HKT Hockley 35.05 336 *e*P P 05 48 41.4 -0.2
19nm,1.7s,mb4.7
HKT *e* pP 05 48 54.6 -4.8
GOGA Godfrey 35.31 355 *e*P P 05 48 42.8 -1.1
9.6nm,1.0s,mb4.6
GOGA *e* 05 48 54.1
LRAL Lakeview Retre 35.39 350 *e*P P 05 48 43.6 -1.0
16nm,1.0s,mb4.8
LRAL *e* 05 48 55.7
JSC Jenkinsville 36.07 359 *e*P P 05 48 49.2 -1.2
JSC *e* 05 49 01.7
JCT Junction City 37.25 332 *e*P P 05 49 00.7 +0.2
46nm,1.4s,mb5.2
JCT *e* pP 05 49 13.8 -4.5
CPCT Cooper Cave 37.43 354 *e*P P 05 49 01.5 -0.4
CPCT *e* 05 49 13.5
RPN Rapa Nui 37.44 225 LR LR 06 00 38.9
comp=Z,145nm,20.6s,baz=191,slow=30
628A Black Gap, Mar 38.03 327 ⇑P P 05 49 07.5 +0.5
baz=38,SNR=9.5
UALR University of 38.26 344 *e*P P 05 49 08.2 -0.7
12nm,0.8s,mb4.8
UALR *e* 05 49 20.1
627A Terlingua Ranc 38.28 326 ⇑P P 05 49 09.4 +0.2
baz=38,SNR=5.7
TXAR Lajitas Array 38.34 326 P P 05 49 09.2 -0.5
2.0nm,1.0s,mb3.9,baz=148,slow=8.2,SNR=13
TXAR PcP PcP 05 51 22.4 +0.1
4.8nm,0.8s,baz=154,slow=6.5,SNR=15
TXAR LR LR 06 04 33.8
comp=Z,68nm,19.1s,baz=355,slow=36
SPB Sao Paulo 38.38 127 *e*P P 05 49 08.0 -2.1
20nm,0.8s,mb5.0
MIAR Mount Ida 38.41 342 *e*P P 05 49 09.4 -0.7
14nm,1.0s,mb4.7
MIAR *e* 05 49 21.7
528A Cox Ranch, San 38.50 328 ⇓P P 05 49 10.9 -0.2
baz=39,SNR=6.5
WVT Waverly 38.55 350 *e*P P 05 49 09.5 -1.9
4.9nm,0.8s,mb4.4
WVT *e* 05 49 21.0
WVT *e*PcP PcP 05 51 21.3 -1.4
626A Big Bend Ranch 38.77 326 ⇑P P 05 49 13.2 -0.1
baz=39,SNR=12
428A Kincaid Ranch, 38.89 328 ⇓P P 05 49 14.2 -0.1
baz=39,SNR=7.7
527A Woodward Ranch 38.94 327 ⇑P P 05 49 14.4 -0.3
baz=39,SNR=15
526A Mary Lane Ranc 39.13 326 ⇑P P 05 49 16.2 -0.1
baz=39,SNR=14
427A Hayter Ranch, 39.37 328 ⇓P P 05 49 18.0 -0.3
baz=40
328A Wristen Ranch, 39.48 329 ⇓P P 05 49 18.9 -0.3
baz=40,SNR=12
PLCA Paso Flores 39.58 168 P P 05 49 20.3 +0.5
28nm,1.0s,mb5.1,baz=341,slow=9.3,SNR=27
PLCA PcP PcP 05 51 25.0 -0.9
8.8nm,1.0s,baz=347,slow=4.7,SNR=4.5
PLCA LR LR 06 03 27.2
comp=Z,225nm,18.2s,baz=282,slow=33
PLCA Paso Flores 39.58 168 *e*P P 05 49 19.9 +0.1
68nm,1.4s,mb5.3
TRQA Tornquist 39.65 157 *e*P P 05 49 20.1 -0.4
21nm,1.1s,mb4.9
327A Balmorhea Ranc 39.83 328 ⇑P P 05 49 21.8 -0.2
baz=40
326A Caldwell Ranch 40.04 328 ⇓P P 05 49 23.5 -0.4
baz=40
425A Indio Mountain 40.18 326 ⇑P P 05 49 24.9 -0.1
baz=40,SNR=15
227A Bennet, Jal 40.23 329 ⇑P P 05 49 24.8 -0.6
baz=40
WMOK Wichita Mounta 40.43 336 *e*P P 05 49 26.4 -0.6
12nm,1.0s,mb4.7
WMOK *e* pP 05 49 39.5 -5.6
WMOK *e*PcP PcP 05 51 28.9 +0.2
325A Bean Ranch, Si 40.62 327 ⇓P P 05 49 28.4 -0.3
baz=41,SNR=11
226A Malaga, Loving 40.69 328 ⇑P P 05 49 29.2 0.0
baz=41,SNR=11
127A Arkansas Junct 40.79 330 ⇑P P 05 49 29.5 -0.6
baz=41
FVM French Village 40.84 348 *e*P P 05 49 29.2 -1.1
16nm,1.0s,mb4.8
FVM *e* 05 49 41.9
GDL2 Guadalupe Moun 40.94 328 *e*P P 05 49 32.1 +0.9
324A Moseley Ranch, 40.96 326 ⇑P P 05 49 30.8 -0.6
baz=41,SNR=8.3
CCM Cathedral Cave 41.09 347 *e*P P 05 49 30.4 -2.0
9.3nm,1.0s,mb4.6
CCM *e* 05 49 42.7
CCM *e*PcP PcP 05 51 30.4 -0.4
MNTX Cornudas Mount 41.10 327 *e*P P 05 49 31.6 -1.0
13nm,1.1s,mb4.7
MNTX *e* pP 05 49 44.7 -5.9
126A Clayton Basin, 41.11 329 ⇓P P 05 49 32.2 -0.4
baz=41,SNR=6.4
225A Deer Hill, Car 41.11 328 ⇑P P 05 49 32.6 0.0
baz=41,SNR=6.4
OLIL Olney 41.14 351 *e*P P 05 49 30.9 -1.9
12nm,0.9s,mb4.7
OLIL *e* 05 49 43.0
Z27A Tatum 41.23 330 ⇑P P 05 49 33.0 -0.6
baz=41,SNR=8.8
CPRX Cap Rock 41.33 329 *e*P P 05 49 35.7 +1.2
11nm,1.1s,mb4.6
CPRX *e* 05 49 47.8
125A Gardner Draw, 41.45 328 ⇑P P 05 49 35.2 -0.2
baz=42,SNR=12
224A Cornudas Mount 41.46 327 ⇑P P 05 49 34.9 -0.6
baz=42,SNR=6.7
MSTX Muleshoe 41.55 331 ⇓P P 05 49 35.9 -0.3
baz=42,SNR=12
Z26A Caprock 41.58 330 ⇓P P 05 49 36.7 +0.3
baz=42,SNR=17
Y27A Causey 41.66 331 ⇓P P 05 49 36.6 -0.5
baz=42,SNR=7.9
AMTX Amarillo 41.79 333 *e*P P 05 49 36.1 -2.1
29nm,1.4s,mb4.8
124A Stringfield Ra 41.90 328 ⇑P P 05 49 39.4 +0.3
baz=42
223A Chaparral, Ant 41.91 326 ⇑P P 05 49 38.9 -0.3
baz=42
Z25A Roswell 41.96 329 ⇑P P 05 49 39.9 +0.3
baz=42,SNR=5.5
Y26A Elida 42.02 330 ⇑P P 05 49 40.0 0.0
baz=42
ACSO Alum Creek Sta 42.07 357 *e*P P 05 49 38.6 -1.8
29nm,1.0s,mb5.0
ACSO *e* 05 49 50.9
X27A F and S Farms, 42.25 332 ⇑P P 05 49 41.8 -0.1
baz=42
123A Bell Site, Whi 42.29 327 ⇑P P 05 49 42.8 +0.5
baz=42
Z24A Sheeppen Canyo 42.34 328 ⇑P P 05 49 43.1 +0.5
baz=42,SNR=14
222A Williams Famil 42.36 325 ⇓P P 05 49 43.4 +0.6
baz=42,SNR=15
Y25A Mesa, Roswell 42.46 329 ⇑P P 05 49 43.6 0.0
baz=43
X26A CR and CF Fran 42.52 331 ⇓P P 05 49 44.0 -0.1
baz=43
W27A Bowe Ranch, En 42.58 332 ⇓P P 05 49 44.5 -0.1
baz=43,SNR=12
221A Mesquite Ranch 42.68 325 ⇓P P 05 49 45.9 +0.4
baz=43
122A Conniff Cattle 42.75 326 ⇑P P 05 49 46.1 +0.1
baz=43
Z23A Rita Site, Whi 42.75 327 ⇓P P 05 49 47.0 +1.0
baz=43
Y24A Capitan 42.84 329 ⇑P P 05 49 47.0 +0.3
baz=43,SNR=8.2
X25A Clemmons Ranch 42.92 330 ⇓P P 05 49 47.5 +0.1
baz=43
W26A Owens Ranch, T 42.93 331 ⇑P P 05 49 47.6 +0.2
baz=43
220A Playas Peak, P 43.04 324 ⇑P P 05 49 48.7 +0.3
baz=43,SNR=8.0

121A Cookes Peak, D 43.07 325 ⇓P P 05 49 49.6 +1.0
baz=43,SNR=9.6
319A Douglas 43.12 323 ⇓P P 05 49 49.4 +0.4
baz=43,SNR=6.7
Z22A Elephant Butte 43.15 327 ⇑P P 05 49 49.6 +0.4
baz=43,SNR=17
Y23A Lovelace Mesa, 43.17 328 ⇓P P 05 49 50.0 +0.6
baz=43,SNR=12
W25A X Bar L Ranch, 43.37 331 ⇑P P 05 49 51.0 0.0
baz=44,SNR=8.9
KSU1 Kansas State U 43.54 341 *e*P P 05 49 51.9 -0.4
64nm,0.8s,mb5.4
KSU1 *e* 05 50 04.2
219A White Tail Can 43.55 323 ⇓P P 05 49 52.7 +0.2
baz=44
120A U Bar Ranch, L 43.57 324 ⇑P P 05 49 53.5 +0.9
baz=44
Z21A St. Cloud Mine 43.58 326 ⇑P P 05 49 53.4 +0.7
baz=44,SNR=6.1
318A Bisbee 43.59 322 ⇓P P 05 49 53.2 +0.3
baz=44,SNR=11
BNM Barren Site 43.64 328 *e*P P 05 49 53.8 +0.6
8.0nm,1.2s,mb4.3
BNM *e* pP 05 50 07.1 -4.3
Y22A Socorro 43.66 327 ⇓P P 05 49 53.9 +0.6
baz=44,SNR=7.0
X23A Hourglass Bar 43.74 329 ⇓P P 05 49 54.0 +0.1
baz=44
W24A Lazy 6 Ranch, 43.83 330 ⇓P P 05 49 54.9 +0.2
baz=44,SNR=5.5
V25A Rancho No Teng 43.94 331 ⇓P P 05 49 55.7 +0.2
baz=44,SNR=21
Z20A Nine Sixteen R 43.95 325 ⇓P P 05 49 56.4 +0.7
baz=44,SNR=9.8
U26A Atchley Ranch, 43.98 332 ⇓P P 05 49 55.8 0.0
baz=44,SNR=12
218A Dragoon 44.00 323 ⇓P P 05 49 56.3 +0.2
baz=44
Y21A Point of Rocks 44.10 327 ⇑P P 05 49 57.6 +0.8
baz=44,SNR=8.7
LAZ Ladron 44.11 328 *e*P P 05 49 57.5 +0.6
3.0nm,1.1s,mb3.9
LAZ *e* 05 50 10.0
119A Ashpeak Ranch, 44.12 324 ⇓P P 05 49 57.3 +0.3
baz=44
X22A Bernardo 44.12 328 ⇑P P 05 49 57.6 +0.7
baz=44
BINY Binghamton 44.13 5 *e*P P 05 49 56.3 -0.6
22nm,1.0s,mb4.8
BINY *e* 05 50 08.0
ANMO Albuquerque 44.17 329 *e*P P 05 49 57.9 +0.6
18nm,1.0s,mb4.8
ANMO *e* 05 50 10.2
W23A Werner Place, 44.17 329 ⇑P P 05 49 57.8 +0.4
baz=44,SNR=9.3
V24A Rampart Ranch, 44.17 330 ⇑P P 05 49 57.3 -0.1
baz=44,SNR=11
U25A Circle Dot Ran 44.30 332 ⇑P P 05 49 58.6 +0.2
baz=44,SNR=7.4
217A Green Valley 44.34 322 ⇑P P 05 49 58.8 0.0
baz=44,SNR=8.6
Y20A Horse Springs, 44.42 326 ⇓P P 05 49 60.0 +0.6
baz=45,SNR=14
Z19A T-Link Ranch, 44.47 325 ⇓P P 05 50 00.3 +0.4
baz=45
W22A Albuquerque 44.48 328 ⇓P P 05 50 00.4 +0.6
baz=45
X21A Alamocita Cree 44.49 327 ⇑P P 05 50 00.8 +0.9
baz=45,SNR=13
V23A Ortiz Mt. (NFS 44.65 330 ⇓P P 05 50 01.7 +0.5
baz=45,SNR=5.0
TUC Tucson 44.68 322 *e*P P 05 50 01.1 -0.4
5.0nm,0.9s,mb4.2
U24A Moreno Valley 44.72 331 ⇑P P 05 50 02.6 +0.8
baz=45
Z18A Geronimo 44.78 324 ⇑P P 05 50 02.8 +0.5
baz=45
117A Oracle 44.84 323 ⇑P P 05 50 03.0 +0.3
baz=45,SNR=14
216A Three Points, 44.89 321 ⇑P P 05 50 03.2 +0.1
baz=45
T25A Trinidad 44.90 332 ⇑P P 05 50 03.7 +0.5
baz=45,SNR=13
W21A San Fidel 44.92 328 ⇑P P 05 50 04.3 +0.9
baz=45
Y19A Nutrioso 44.95 325 ⇓P P 05 50 04.6 +1.0
baz=45,SNR=9.2
X20A Quemado 44.95 326 ⇓P P 05 50 04.5 +0.9
baz=45,SNR=5.8
U23A El Rito 45.11 330 ⇑P P 05 50 05.3 +0.5
baz=45,SNR=20
V22A San Miguel Ran 45.15 329 ⇓P P 05 50 05.9 +0.7
baz=45
Z17A San Carlos Hig 45.18 324 ⇓P P 05 50 05.8 +0.3
baz=45
Y18A Canyon Day Jun 45.27 324 ⇑P P 05 50 06.6 +0.5
baz=45,SNR=8.4
X19A St. Johns 45.31 326 ⇓P P 05 50 07.0 +0.5
baz=46
S25A Robets Cordova 45.34 333 ⇑P P 05 50 07.1 +0.5
baz=46
W20A Ramah 45.39 327 ⇓P P 05 50 07.7 +0.7
baz=46,SNR=6.1
116A Eloy 45.42 322 ⇑P P 05 50 07.5 +0.1
baz=46,SNR=7.6
V21A Milan 45.44 328 ⇓P P 05 50 08.2 +0.7
baz=46
U22A Llaves 45.48 330 ⇑P P 05 50 08.5 +0.8
baz=46,SNR=8.5
JFWS Jewell Farm 45.57 350 *e*P P 05 50 06.2 -2.2
9.7nm,0.7s,mb4.6
JFWS *e* 05 50 18.6
T23A Casias Ranch, 45.59 331 ⇓P P 05 50 09.2 +0.6
baz=46,SNR=5.4
S24A Houchin Ranch, 45.68 332 ⇓P P 05 50 10.0 +0.7
baz=46
Y17A Roosevelt 45.69 324 ⇑P P 05 50 09.6 +0.2
baz=46
214A Organ Pipe Nat 45.71 320 ⇑P P 05 50 10.0 +0.3
baz=46,SNR=8.2
X18A Snowflake 45.76 325 ⇑P P 05 50 10.5 +0.5
baz=46,SNR=5.8
Z16A Peralta Trail, 45.79 323 ⇑P P 05 50 10.0 -0.2
baz=46
115A Sonoran Desert 45.84 322 ⇑P P 05 50 10.8 +0.1
baz=46
W19A Sanders 45.87 326 ⇑P P 05 50 11.2 +0.4
baz=46
V20A Brimhall 45.87 328 ⇓P P 05 50 11.5 +0.6
baz=46
SDCO Great Sand Dun 45.90 332 *e*P P 05 50 11.7 +0.7
12nm,1.2s,mb4.5
U21A Nageezi 45.93 329 ⇓P P 05 50 11.8 +0.5
baz=46
T22A Edith 46.00 330 ⇑P P 05 50 12.4 +0.5
baz=46
W18A Petrified Fore 46.06 326 ⇓P P 05 50 12.9 +0.5
baz=46,SNR=5.7
S23A Nye Farm, Mont 46.10 331 ⇓P P 05 50 12.9 +0.2
baz=46
R24A Sanders Place, 46.11 333 ⇑P P 05 50 13.3 +0.6
baz=46
X17A Forest Lakes 46.11 324 ⇑P P 05 50 13.4 +0.6
baz=46,SNR=9.6
V19A Window Rock 46.12 327 ⇓P P 05 50 13.2 +0.3
baz=46
Y16A Circle Bar Ran 46.19 323 ⇓P P 05 50 13.7 +0.3
baz=46,SNR=14
Z15A Gila River Ind 46.20 322 ⇓P P 05 50 13.2 -0.3
baz=46
Q25A Bedland, Calha 46.28 334 ⇑P P 05 50 14.0 0.0
baz=46,SNR=6.0
114A Black Gap (USA 46.28 321 ⇑P P 05 50 14.5 +0.3
baz=46,SNR=8.4
T21A Navajo Lake 46.30 330 ⇑P P 05 50 14.6 +0.4
baz=46
U20A Newcomb 46.34 328 ⇓P P 05 50 15.0 +0.5
baz=46
S22A 4UR Ranch, Cre 46.53 331 ⇑P P 05 50 16.3 +0.3
baz=47,SNR=8.6
X16A Lo Mia Camp, P 46.54 324 ⇑P P 05 50 16.5 +0.3
baz=47,SNR=12
W17A Winslow 46.59 325 ⇑P P 05 50 16.7 +0.2
baz=47
V18A Ganado 46.61 326 ⇑P P 05 50 16.7 0.0
baz=47
U19A Dine' College, 46.64 327 ⇑P P 05 50 16.6 -0.3
baz=47

Q24A Divide 46.72 333 ⇑P P 05 50 17.6 +0.2
baz=47
Z14A Wintersburg 46.73 322 ⇓P P 05 50 17.9 +0.2
baz=47
P25A Willow Gulch B 46.74 335 ⇑P P 05 50 17.5 -0.1
baz=47,SNR=6.9
Y15A Casa Rosa Ranc 46.76 323 ⇑P P 05 50 17.5 -0.3
baz=47,SNR=7.2
113A Mohawk Valley, 46.85 320 ⇓P P 05 50 18.5 -0.1
baz=47
R22A Saguache, Gunn 46.88 331 ⇓P P 05 50 19.2 +0.4
baz=47,SNR=6.7
T19A Beclabito 46.95 328 ⇑P P 05 50 18.6 -0.6
baz=47
FRNY Flat Rock 46.98 7 *e*P P 05 50 18.6 -0.7
77nm,2.4s,mb5.0
V17A Tonalea, Kykot 47.02 326 ⇑P P 05 50 20.0 +0.1
baz=47,SNR=23
X15A Humboldt 47.06 323 ⇑P P 05 50 20.5 +0.2
baz=47,SNR=9.0
P24A Kohler Place, 47.07 334 ⇓P P 05 50 20.3 +0.2
baz=47
Z13A Yuma Proving G 47.07 321 ⇑P P 05 50 20.5 +0.2
baz=47
W16A Flagstaff 47.07 324 ⇑P P 05 50 20.8 +0.5
baz=47,SNR=6.4
OGNE Ogallala 47.09 337 *e*P P 05 50 20.0 -0.3
12nm,1.1s,mb4.5
U18A Rough Rock, Ch 47.09 327 ⇓P P 05 50 20.5 +0.1
baz=47
Y14A Wickenburg 47.15 322 ⇑P P 05 50 21.0 +0.1
baz=47,SNR=5.4
O25A Wiggins 47.22 335 ⇓P P 05 50 21.8 +0.5
baz=47
112A Yuma 47.23 320 ⇓P P 05 50 21.5 0.0
baz=47
WUAZ Wupatki 47.28 325 ⇑P P 05 50 22.3 +0.4
baz=47,SNR=16
WUAZ Wupatki 47.28 325 *e*P P 05 50 22.7 +0.8
26nm,1.1s,mb4.9
WUAZ *e* 05 50 35.2
P23A Jefferson 47.37 333 ⇑P P 05 50 23.3 +0.8
baz=48,SNR=12
R21A Cimarron 47.38 331 ⇑P P 05 50 23.0 +0.4
baz=48
X14A Yava 47.44 323 ⇓P P 05 50 23.7 +0.5
baz=48,SNR=9.4
Q22A Crested Butte, 47.45 332 ⇓P P 05 50 23.6 +0.4
baz=48,SNR=11
W15A Williams 47.56 324 ⇓P P 05 50 24.8 +0.7
baz=48
Y13A Salome 47.58 321 ⇑P P 05 50 24.5 +0.2
baz=48
U16A Tuba City 47.59 326 ⇑P P 05 50 24.6 +0.3
baz=48,SNR=5.7
ISCO Idaho Springs 47.61 333 *e*P P 05 50 25.1 +0.7
8.7nm,1.1s,mb4.5
ISCO *e* 05 50 37.3
ISCO *e*PcP PcP 05 51 53.7 +0.7
T18A Mexican Hat 47.62 328 ⇓P P 05 50 24.2 -0.4
baz=48,SNR=8.6
R20A Redvale 47.65 330 ⇑P P 05 50 25.4 +0.7
baz=48
U17A Shonto 47.66 327 ⇓P P 05 50 25.0 +0.2
baz=48
S19A Harvey Farm, M 47.70 329 ⇓P P 05 50 25.0 -0.1
baz=48,SNR=7.2
PV01 Paradox Valley 47.70 330 *e*P P 05 50 25.4 +0.3
885nm,1.3s
PV01 *e* pP 05 50 38.7 -5.0
GLA Glamis 47.72 320 ⇓P P 05 50 25.5 +0.1
baz=48
SMCO Snowmass 47.74 332 *e*P P 05 50 26.4 +1.1
7.9nm,1.1s,mb4.5
ECSD EROS Data Cent 47.80 344 *e*P P 05 50 24.1 -1.7
14nm,1.0s,mb4.7
ECSD *e* 05 50 36.9
V15A Kaibab Nationa 47.95 325 ⇓P P 05 50 27.8 +0.7
baz=48,SNR=9.9
T17A Navajo Res., N 48.02 327 ⇑P P 05 50 27.9 +0.3
baz=48,SNR=10
W14A Seligman 48.07 323 ⇓P P 05 50 28.7 +0.7
baz=48
PV04 Paradox Valley 48.07 330 *e*P P 05 50 27.6 -0.4
O23A Lake Granby, G 48.08 334 ⇓P P 05 50 28.1 +0.1
baz=48,SNR=5.1
X13A Yucca 48.10 322 ⇓P P 05 50 28.6 +0.4
baz=48
S18A Hurst Farm, Bl 48.10 328 ⇓P P 05 50 28.0 -0.2
baz=48,SNR=8.0
PV10 Paradox Valley 48.12 329 *e*P P 05 50 27.7 -0.7
129nm,1.0s,mb5.7
N24A Carr 48.14 335 ⇓P P 05 50 28.9 +0.5
baz=48
R19A Curley Farm, L 48.17 329 ⇓P P 05 50 28.0 -0.7
baz=48,SNR=5.8
SWSC Sam W. Stewart 48.27 319 ⇓P P 05 50 29.5 -0.1
baz=48
O22A Kremmling 48.33 333 ⇑P P 05 50 29.6 -0.3
baz=48,SNR=5.6
V14A Boquillas Ranc 48.37 324 ⇑P P 05 50 31.0 +0.7
baz=48,SNR=12
T16A Glen Canyon Da 48.40 326 ⇓P P 05 50 31.0 +0.4
baz=49
U15A North Rim 48.45 325 ⇑P P 05 50 31.9 +1.0
baz=49,SNR=6.5
W13A Hualapai Mount 48.47 323 ⇓P P 05 50 31.4 +0.3
baz=49
S17A Black Ridge (B 48.49 327 ⇑P P 05 50 31.8 +0.6
baz=49
BC3 Big Chuckawall 48.50 320 ⇓P P 05 50 31.5 +0.1
baz=49,SNR=6.1
R18A Canyonlands Na 48.57 329 ⇓P P 05 50 31.2 -0.6
baz=49,SNR=5.4
IRM Iron Mountain 48.63 321 ⇓P P 05 50 32.2 -0.2
baz=49,SNR=5.4
N23A Red Feather La 48.65 334 ⇓P P 05 50 32.5 +0.1
baz=49
Q19A Hogan Spring (48.68 330 ⇓P P 05 50 32.4 -0.2
baz=49
O21A Pagoda 48.79 332 ⇓P P 05 50 34.1 +0.6
baz=49
N22A Wattenberg Ran 48.80 334 ⇑P P 05 50 33.5 -0.1
baz=49
T15A Red Dirt Ranch 48.92 326 ⇓P P 05 50 35.2 +0.6
baz=49
U14A Mt Trumbull 48.95 324 ⇓P P 05 50 35.6 +0.8
baz=49
S16A Weppner Ranch, 48.98 327 ⇑P P 05 50 35.0 -0.1
baz=49,SNR=8.3
R17A Hanksville Air 49.02 328 ⇑P P 05 50 35.1 -0.1
baz=49
BELC Belle Mtn. Jos 49.07 320 ⇑P P 05 50 36.1 +0.3
baz=49
O20A White River Ci 49.09 332 ⇓P P 05 50 36.1 +0.4
baz=49
PFO Pinyon Flat Ob 49.12 319 ⇑P P 05 50 36.3 +0.2
baz=49
PFO Pinyon Flat Ob 49.12 319 *e*P P 05 50 36.0 -0.1
8.0nm,1.3s,mb4.5
Q18A Rafter H Ranch 49.23 329 ⇑P P 05 50 37.0 +0.2
baz=49,SNR=9.1
N21A Black Mountain 49.25 333 ⇑P P 05 50 37.3 +0.4
baz=49,SNR=5.6
R16A Teasdale 49.33 327 ⇓P P 05 50 37.7 +0.1
baz=50,SNR=5.5
T14A Hurricane 49.35 325 ⇓P P 05 50 38.3 +0.5
baz=50
GMRC Granite Mounta 49.36 321 ⇓P P 05 50 38.0 +0.1
baz=50
S15A Panguitch 49.37 326 ⇓P P 05 50 38.3 +0.3
baz=50
U13A Pakoon Wash 49.41 324 ⇑P P 05 50 38.6 +0.3
baz=50,SNR=5.2
SRU San Rafael 49.44 329 ⇓P P 05 50 38.1 -0.3
baz=50,SNR=8.2
SRU San Rafael 49.44 329 *e*P P 05 50 38.8 +0.3
16nm,1.3s,mb4.8
V12A Nelson 49.48 323 ⇓P P 05 50 38.6 -0.2
baz=50,SNR=6.4
MURC Murrieta 49.60 319 ⇑P P 05 50 39.9 +0.1
baz=50
Q16A Castle Valley 49.63 328 ⇑P P 05 50 40.4 +0.5
baz=50
O19A Miners Draw (B 49.64 331 ⇓P P 05 50 40.1 +0.1
baz=50
N20A Spence Gulch, 49.65 332 ⇓P P 05 50 40.1 0.0
baz=50,SNR=8.0

P18A	Preston Nutter	49.68	330	⇓P	P	05 50 40.6 +0.3
	baz=50					
R15A	Junction	49.71	327	⇑P	P	05 50 40.7 +0.2
	baz=50					
U12A	Valley of Fire	49.76	324	⇑P	P	05 50 41.3 +0.3
	baz=50					
L22A	Ellis Ranch, M	49.79	335	⇓P	P	05 50 41.5 +0.5
	baz=50					
T13A	Saint George	49.79	325	⇓P	P	05 50 42.0 +0.9
	baz=50					
HEC	Hector,Ludlow	49.81	321	⇑P	P	05 50 42.0 +0.6
	baz=50					
P17A	Butcher Ranch,	49.82	329	⇓P	P	05 50 41.1 -0.2
	baz=50					
CCUT	Cedar City	49.85	325	eP	P	05 50 43.0 +1.4
	6.7nm,1.0s,mb4.5					
RWWY	Rawlins	49.85	334	eP	P	05 50 41.6 +0.1
	17nm,1.3s,mb4.8					
M21A	Separation Pea	49.85	333	⇓P	P	05 50 41.7 +0.2
	baz=50					
MSU	Marysvale	49.87	327	eP	P	05 50 42.6 +0.9
MSU				ePcP	PcP	05 52 02.0 +0.7
S14A	Cedar City	49.88	326	⇓P	P	05 50 42.4 +0.5
	baz=50					
V11A	Goodsprings	49.90	322	⇓P	P	05 50 42.2 +0.1
	baz=50					
TUQ	Turquoise Moun	49.95	322	⇓P	P	05 50 42.7 +0.4
	baz=50					
O18A	Roosevelt	50.05	330	⇑P	P	05 50 43.1 +0.1
	baz=50,SNR=5.2					
N19A	John Jarvie Ra	50.13	331	⇑P	P	05 50 43.3 -0.3
	baz=50,SNR=6.1					
M20A	Sweetwater, Wa	50.13	333	⇑P	P	05 50 43.4 -0.3
	baz=50					
S13A	Holt Ranch, En	50.15	325	⇑P	P	05 50 44.4 +0.5
	baz=50,SNR=16					
BFSC	Mount Baldy Ra	50.30	319	⇑P	P	05 50 45.1 0.0
	baz=50					
O17A	Robinson Place	50.36	330	⇓P	P	05 50 45.7 +0.3
	baz=50,SNR=5.8					
P16A	Fountain Green	50.40	329	⇓P	P	05 50 46.2 +0.5
	baz=51					
GSC	Goldstone	50.41	321	⇓P	P	05 50 45.9 0.0
	baz=50,SNR=6.8					
GSC	Goldstone	50.41	321	eP	P	05 50 46.8 +0.9
	14nm,1.2s,mb4.8					
N18A	Larsen Ranch,	50.43	331	⇓P	P	05 50 45.6 -0.3
	baz=51,SNR=5.2					
SHOC	Shoshone	50.47	322	⇓P	P	05 50 46.5 +0.2
	baz=51					
RSSD	Black Hills	50.57	338	eP	P	05 50 47.3 +0.4
	7.9nm,0.8s,mb4.8					
RSSD				e		05 50 60.0
M19A	Rock Springs	50.59	332	⇑P	P	05 50 46.8 -0.4
	baz=51,SNR=5.9					
R13A	O'Grain Ranch,	50.63	326	⇓P	P	05 50 47.9 +0.5
	baz=51,SNR=6.4					
EYMN	Ely	50.66	350	eP	P	05 50 45.2 -2.3
	14nm,1.3s,mb4.8					
P15A	Leamington	50.69	328	⇑P	P	05 50 48.3 +0.3
	baz=51,SNR=14					
T11A	Corn Creek, Al	50.71	324	⇑P	P	05 50 48.3 +0.2
	baz=51,SNR=5.4					
DAU	Daniels Canyon	50.78	330	eP	P	05 50 49.6 +1.0
Q14A	Sevier Lake (B	50.81	327	⇓P	P	05 50 49.2 +0.4
	baz=51,SNR=6.4					
EDW2	Edwards Air Fo	50.91	320	⇓P	P	05 50 49.5 -0.1
	baz=51,SNR=7.3					
M18A	Lyman	50.97	331	⇑P	P	05 50 49.7 -0.2
	baz=51					
N17A	Moffit Pass	50.97	330	⇓P	P	05 50 50.6 +0.6
	baz=51					
JLU	Jordanelle	51.02	330	eP	P	05 50 51.1 +0.7
	26nm,1.7s,mb5.0					
JLU				e		05 51 03.3
LRMC	Laurel Mountai	51.08	320	⇓P	P	05 50 51.1 +0.1
	baz=51,SNR=6.3					
R12A	Pony Springs,	51.09	325	⇑P	P	05 50 51.4 +0.4
	baz=51					
P14A	Drum Mountains	51.13	327	⇑P	P	05 50 51.6 +0.4
	baz=51,SNR=7.0					
K20A	Yellowstone Ra	51.13	334	⇓P	P	05 50 51.0 -0.2
	baz=51					
L19A	Farson	51.15	332	⇑P	P	05 50 51.5 +0.2
	baz=51					
FURC	Furnace Creek,	51.19	322	⇓P	P	05 50 52.3 +0.5
	baz=51					
Q13A	Wheeler Ranch,	51.20	326	⇓P	P	05 50 51.7 -0.1
	baz=51,SNR=7.4					
N16A	Rees Ranch, Co	51.23	330	⇑P	P	05 50 52.5 +0.6
	baz=51					
S11A	Rachel	51.29	324	⇑P	P	05 50 53.1 +0.6
	baz=51					
M17A	Scullys Gap (B	51.29	331	⇓P	P	05 50 52.1 -0.3
	baz=52,SNR=5.0					
MPMC	Manual Prospec	51.32	321	⇓P	P	05 50 52.3 -0.4
	baz=52					
DUG	Dugway	51.43	328	⇓P	P	05 50 53.5 0.0
	baz=52,SNR=6.1					
DUG	Dugway	51.43	328	eP	P	05 50 53.6 +0.2
	17nm,1.5s,mb4.9					
K19A	Absolon Red Bu	51.49	333	⇓P	P	05 50 53.0 -0.9
	baz=52,SNR=5.6					
P13A	Bates Ranch, G	51.55	327	⇓P	P	05 50 54.5 +0.2
	baz=52,SNR=6.0					
R11A	Troy Canyon, C	51.67	325	⇑P	P	05 50 55.8 +0.5
	baz=52,SNR=8.1					
ISA	Isabella	51.70	320	⇓P	P	05 50 55.9 +0.3
	baz=52					
ISA	Isabella	51.70	320	eP	P	05 50 56.5 +1.0
	35nm,1.8s,mb5.1					
Q12A	Willow Creek R	51.71	326	⇑P	P	05 50 56.0 +0.4
	baz=52					
BW06	Boulder Array	51.77	333	⇓P	P	05 50 56.5 +0.6
	baz=52,SNR=6.6					
BW06	Boulder Array	51.77	333	eP	P	05 50 55.0 -0.9
	8.4nm,1.3s,mb4.6					
PDAR	Pinedale Array	51.77	333	P	P	05 50 55.1 -0.8
	2.7nm,0.9s,mb4.3,baz=134,slow=8.5,SNR=21					
PDAR				PcP	PcP	05 52 07.0 -1.2
	3.7nm,1.0s,baz=149,slow=3.5,SNR=5.8					
PDAR				LR	LR	06 13 42.8
	comp=Z,97nm,19.8s,baz=257,slow=37					
N15A	Stansbury Isla	51.78	329	⇑P	P	05 50 55.9 -0.2
	baz=52					
HWUT	Hardware Ranch	51.83	330	eP	P	05 50 56.2 -0.2
	17nm,1.1s,mb5.0					
AGMN	Agassiz Nation	51.87	347	eP	P	05 50 55.3 -1.2
	14nm,1.2s,mb4.9					
L17A	Cokeville	51.87	331	⇓P	P	05 50 56.2 -0.5
	baz=52					
K18A	Toltan Ranch,	51.89	332	⇓P	P	05 50 56.9 +0.1
	baz=52,SNR=17					
S10A	Tonopah Range,	51.98	324	⇓P	P	05 50 58.1 +0.5
	baz=52,SNR=10					
O13A	Hicks Ranch, I	52.01	327	⇓P	P	05 50 58.0 +0.2
	baz=52					
Q11A	Duckwater	52.05	325	⇑P	P	05 50 58.6 +0.6
	baz=52,SNR=13					
R10A	Warm Springs	52.05	324	⇑P	P	05 50 58.9 +0.9
	baz=52					
P12A	McGill	52.05	326	⇑P	P	05 50 58.6 +0.5
	baz=52,SNR=6.6					
SPUT	South Promonto	52.06	329	eP	P	05 50 58.7 +0.6
	22nm,1.2s,mb5.0					
BGU	Big Grassy Mou	52.07	329	eP	P	05 50 58.2 0.0
	18nm,1.7s,mb4.8					
L16A	Fish Haven	52.08	331	⇓P	P	05 50 57.3 -1.0
	baz=52,SNR=8.9					
N14A	Grayback Hills	52.10	329	⇑P	P	05 50 58.5 0.0
	baz=52					
M15A	Larsen Ranch,	52.17	330	⇓P	P	05 50 58.8 -0.2
	baz=52					
VES	Vestal, Richgr	52.20	320	⇑P	P	05 50 59.7 +0.4
	baz=52					
J18A	Kendall Valley	52.33	333	⇓P	P	05 50 59.4 -0.7
	baz=52,SNR=14					
K17A	Gardner Place,	52.39	332	⇓P	P	05 51 00.2 -0.3
	baz=53					
Q10A	Clear Creek Ra	52.46	324	⇑P	P	05 51 01.5 +0.3
	baz=53,SNR=9.0					
O12A	Currie	52.52	327	⇑P	P	05 51 02.0 +0.4
	baz=53,SNR=12					
L15A	Malad City	52.54	330	⇓P	P	05 51 00.8 -0.9
	baz=53,SNR=11					
I18A	Diamond G Ranc	52.62	333	⇓P	P	05 51 01.9 -0.3
	baz=53,SNR=5.6					
N13A	Wendover, West	52.64	328	⇓P	P	05 51 02.6 +0.1
	baz=53					
N13A	Wendover, West	52.64	328	eP	P	05 51 03.7 +1.3
	12nm,1.1s,mb4.9					
M14A	Sheep Mountain	52.66	329	⇓P	P	05 51 02.3 -0.3
	baz=53,SNR=10					
J17A	Brown Place, J	52.76	332	⇓P	P	05 51 03.0 -0.2
	baz=53,SNR=9.3					
K16A	Soda Springs	52.77	331	⇑P	P	05 51 03.4 0.0
	baz=53,SNR=7.2					
MTUM	Tungsten Hills	52.81	322	eP	P	05 51 04.8 +1.1
REDW	Red Top Meadow	52.83	332	eP	P	05 51 04.0 +0.2
	24nm,1.4s,mb5.0					
SNOW	Snow King Moun	52.86	332	eP	P	05 51 04.3 +0.3
	6.9nm,1.0s,mb4.6					
LOHW	Long Hollow	52.91	333	eP	P	05 51 04.0 -0.3
	8.8nm,1.2s,mb4.7					
O11A	Cowboy Ranch,	52.92	326	⇑P	P	05 51 05.1 +0.6
	baz=53					
TPAW	Teton Pass	52.97	332	eP	P	05 51 04.8 -0.1
	11nm,1.1s,mb4.8					
M13A	Montello	52.98	328	⇓P	P	05 51 05.0 0.0
	baz=53					
M13A	Montello	52.98	328	eP	P	05 51 04.9 0.0
	9.1nm,1.2s,mb4.7					
L14A	Malta	52.99	329	⇓P	P	05 51 04.3 -0.7
	baz=53,SNR=6.3					
P10A	Eureka	53.03	325	⇑P	P	05 51 06.0 +0.7
	baz=53					
RRI2	Red Ridge	53.03	332	eP	P	05 51 05.4 +0.1
	16nm,0.9s,mb5.1					
N12A	Clover Valley,	53.09	327	eP	P	05 51 06.1 +0.4
	2.6nm,0.8s,mb4.3					
J16A	Bone	53.12	332	⇑P	P	05 51 05.7 -0.2
	baz=53,SNR=9.3					
I17A	Pilgrim Ck.	53.13	333	⇓P	P	05 51 06.3 +0.3
	baz=53					
MLAC	Mammoth Lakes	53.15	322	⇑P	P	05 51 06.4 +0.2
	baz=53					
IMW	Indian Meadow	53.28	333	eP	P	05 51 07.2 +0.2
	10nm,1.1s,mb4.8					
IMW				ePcP	PcP	05 52 14.1 +0.2
NVAR	Mina Array Bea	53.33	323	P	P	05 51 08.1 +0.5
	4.0nm,0.8s,mb4.5,baz=136,slow=7.2,SNR=20					
NVAR				PcP	PcP	05 52 13.8 -0.4
	2.9nm,0.7s,baz=135,slow=5.2,SNR=5.0					
NVAR	Mina Array Bea	53.33	323	P	P	05 51 08.1 +0.5
NVAR				PcP	PcP	05 52 13.8 -0.4
K14A	Jones Ranch, D	53.33	330	⇓P	P	05 51 06.8 -0.7
	baz=54,SNR=10					
L13A	Double Diamond	53.39	329	⇑P	P	05 51 07.7 -0.2
	baz=54					
M12A	Wells	53.42	328	⇑P	P	05 51 07.8 -0.3
	baz=54					
N11A	Elko Archery C	53.44	327	⇓P	P	05 51 08.3 0.0
	baz=54					
RLMT	Red Lodge	53.50	335	⇑P	P	05 51 08.3 -0.3
	baz=54					
RLMT	Red Lodge	53.50	335	eP	P	05 51 08.6 0.0
	9.3nm,1.3s,mb4.7					
O10A	Cortez Mining,	53.51	326	⇑P	P	05 51 09.0 +0.2
	baz=54					
I16A	Newdale	53.52	332	⇑P	P	05 51 09.0 +0.2
	baz=54					
J15A	Blackfoot	53.60	331	⇓P	P	05 51 09.7 +0.3
	baz=54,SNR=13					
ULM	Lac du Bonnet	53.71	348	P	P	05 51 08.4 -1.6
	14nm,0.7s,mb5.1,baz=155,slow=7.1,SNR=10					
G18A	Lazy EL Ranch,	53.78	335	⇓P	P	05 51 10.6 -0.1
	baz=54					
K13A	Stover Farm, H	53.87	329	⇓P	P	05 51 10.9 -0.5
	baz=54					
M11A	Holland Ranch,	53.90	327	⇓P	P	05 51 11.3 -0.4
	baz=54					
L12A	House Creek Ra	53.99	328	⇓P	P	05 51 11.9 -0.4
	baz=54,SNR=5.6					
BMN	Battle Mountai	54.01	325	eP	P	05 51 13.2 +0.7
	28nm,1.4s,mb5.1					
H16A	Russell Place,	54.04	333	⇓P	P	05 51 13.1 +0.4
	baz=54,SNR=8.0					
WAKR	Walker	54.06	322	eP	P	05 51 14.1 +1.2
J14A	Carey	54.08	330	⇑P	P	05 51 13.1 +0.2
	baz=54,SNR=7.8					
I15A	Monteview	54.08	332	⇓P	P	05 51 13.1 +0.2
	baz=54					
GCMT	Greycliff	54.20	335	eP	P	05 51 13.3 -0.5
	18nm,1.3s,mb5.0					
GCMT				e	pP	05 51 27.0 -5.6
K12A	Draper Farm, C	54.28	329	⇓P	P	05 51 14.3 0.0
	baz=54,SNR=7.4					
G17A	Pierce Place,	54.30	334	⇓P	P	05 51 15.2 +0.8
	baz=54,SNR=11					
F18A	Big Timber	54.31	335	⇓P	P	05 51 14.1 -0.5
	baz=54,SNR=35					
M10A	I.L. Ranch, Tu	54.37	327	⇑P	P	05 51 15.0 0.0
	baz=54					
DGMT	Dagmar	54.37	341	⇑P	P	05 51 14.9 0.0
	baz=55					
L11A	Cat Creek Ranc	54.39	328	⇑P	P	05 51 15.4 +0.2
	baz=54					
J13A	Cove Ranch, Pi	54.46	330	⇑P	P	05 51 15.6 -0.1
	baz=55,SNR=7.0					
I14A	Mackay	54.49	331	⇑P	P	05 51 16.4 +0.5
	baz=55,SNR=6.7					
H15A	Lima	54.62	332	⇑P	P	05 51 17.6 +0.8
	baz=55					
HLID	Hailey	54.70	330	⇓P	P	05 51 17.4 0.0
	baz=55,SNR=14					
HLID	Hailey	54.70	330	eP	P	05 51 17.2 -0.2
	6.3nm,1.0s,mb4.6					
G16A	Moss Hill, Enn	54.70	333	⇓P	P	05 51 17.4 0.0
	baz=55,SNR=9.2					
L10A	Juniper Basin	54.71	327	⇓P	P	05 51 17.3 -0.2
	baz=55					
F17A	Fitzpatrick Pl	54.72	334	⇓P	P	05 51 17.7 +0.2
	baz=55,SNR=8.5					
WCN	Washoe City	54.76	323	⇑P	P	05 51 18.2 +0.2
	baz=55					
I13A	Wildhorse Cree	54.80	330	⇓P	P	05 51 18.6 +0.5
	baz=55,SNR=14					
J12A	Stokes Ranch,	54.82	329	⇑P	P	05 51 18.4 +0.1
	baz=55,SNR=8.4					
MCMT	McKenzie Canyo	54.87	332	eP	P	05 51 18.9 +0.3
	2.4nm,1.1s,mb4.1					
E18A	Harlowton	54.92	335	⇑P	P	05 51 18.6 -0.4
	baz=55,SNR=9.0					
BOZ	Bozeman (W)	54.94	334	⇓P	P	05 51 18.9 -0.2
	baz=55,SNR=13					
BOZ	Bozeman (W)	54.94	334	eP	P	05 51 18.9 -0.2
	8.5nm,0.9s,mb4.8					
BOZ				e		05 51 31.8
H14A	Leadore	54.96	332	⇓P	P	05 51 19.5 +0.2
	baz=55,SNR=10					
K11A	Parker Ranch,	54.96	328	⇑P	P	05 51 19.2 -0.2
	baz=55,SNR=9.1					
G15A	Dillon	54.96	333	⇑P	P	05 51 19.5 +0.2
	baz=55					
F16A	Kennard Place,	55.05	334	⇓P	P	05 51 19.6 -0.3
	baz=55,SNR=7.9					
DLMT	Dillon	55.16	333	eP	P	05 51 21.1 +0.3
	10.0nm,1.2s,mb4.7					
I12A	Atlanta	55.22	330	⇓P	P	05 51 21.4 +0.2
	baz=55,SNR=10					
E17A	Martinsdale	55.24	335	⇑P	P	05 51 20.9 -0.4
	baz=55,SNR=8.8					
MFID	Camas Ranch	55.31	329	⇑P	P	05 51 21.8 0.0
	baz=56,SNR=19					
H13A	Challis	55.35	331	⇓P	P	05 51 21.9 -0.2
	baz=56,SNR=8.1					
D18A	Linhart Farms,	55.38	336	⇓P	P	05 51 21.9 -0.3
	baz=56,SNR=9.0					
K10A	MacKenzie Ranc	55.41	328	⇑P	P	05 51 22.5 -0.1
	baz=56,SNR=13					
LRM	Limekiln Ridge	55.45	333	eP	P	05 51 22.9 +0.2
F15A	Butte	55.48	333	⇑P	P	05 51 22.5 -0.5
	baz=56					
H12A	Diamond D Ranc	55.63	331	⇓P	P	05 51 23.6 -0.5
	baz=56,SNR=8.5					
E16A	East Helena	55.65	334	⇓P	P	05 51 23.7 -0.5
	baz=56,SNR=6.9					
D17A	Six Diamond Ra	55.71	335	⇑P	P	05 51 24.2 -0.5
	baz=56,SNR=10					
I11A	Placerville	55.73	329	⇑P	P	05 51 24.6 -0.2
	baz=56,SNR=13					
G13A	Cobalt	55.73	331	⇑P	P	05 51 24.3 -0.5
	baz=56,SNR=6.2					
J10A	Berg Farm, Mel	55.80	328	⇓P	P	05 51 24.8 -0.6
	baz=56					
HRY	Holter Researc	55.85	334	eP	P	05 51 25.5 -0.2
F14A	Wisdom	55.86	333	⇑P	P	05 51 25.4 -0.3
	baz=56					
D16A	Dana Ranch, Ca	55.98	335	⇓P	P	05 51 26.3 -0.3
	baz=56,SNR=9.8					
E15A	Deer Lodge	55.99	333	⇓P	P	05 51 26.4 -0.3
	baz=56					
EGMT	Eagleton	56.03	337	⇓P	P	05 51 26.5 -0.4
	baz=56					
EGMT	Eagleton	56.03	337	eP	P	05 51 26.3 -0.6
	11nm,1.0s,mb4.9					
C17A	Wharram Farm,	56.12	336	⇑P	P	05 51 27.2 -0.3
	baz=56,SNR=11					
I10A	Payette	56.28	329	⇓P	P	05 51 28.4 -0.4
	baz=56					
F13A	Darby	56.29	332	⇑P	P	05 51 28.1 -0.7
	baz=56,SNR=6.0					
B18A	Beardsley Farm	56.34	337	⇓P	P	05 51 28.6 -0.4
	baz=56,SNR=9.0					
E14A	Clinton	56.37	333	⇓P	P	05 51 28.8 -0.5
	baz=56,SNR=6.5					
D15A	Lincoln	56.41	334	⇓P	P	05 51 29.1 -0.5
	baz=57					
CHMT	Chamberlain Mo	56.64	333	eP	P	05 51 30.8 -0.4
	0.4nm,0.6s,mb3.6					
CHMT				e		05 51 43.9
B17A	L&G Farms, Che	56.66	336	⇓P	P	05 51 30.7 -0.7
	baz=57					
J08A	Circle Bar Ran	56.66	327	⇑P	P	05 51 30.9 -0.6
	baz=57,SNR=10					
C16A	Fuhringer Ranc	56.67	335	⇓P	P	05 51 31.1 -0.3
	baz=57,SNR=6.9					
F12A	Elk City	56.70	331	⇑P	P	05 51 31.2 -0.5
	baz=57,SNR=13					
E13A	Victor	56.71	333	⇑P	P	05 51 31.3 -0.4
	baz=57					
MOD	Modoc	56.73	325	eP	P	05 51 31.4 -0.6
	4.8nm,0.9s,mb4.5					
A18A	Metzger Ranch,	56.79	337	⇑P	P	05 51 31.9 -0.4
	baz=57					
D14A	Greenough	56.88	333	⇑P	P	05 51 32.4 -0.5
	baz=57					
MSO	Missoula	56.88	333	eP	P	05 51 32.4 -0.5
	12nm,1.3s,mb4.8					
MSO				e		05 51 45.1
RKT	Rikitea	56.98	244	eLR	LR	06 08 21.9
	416nm,27.1s					
C15A	Salmond Ranch,	57.01	335	⇓P	P	05 51 33.9 0.0
	baz=57					
BMO	Blue Mountains	57.07	329	eP	P	05 51 33.7 -0.7
	4.7nm,1.1s,mb4.4					
B16A	M & M Farms, S	57.13	336	⇑P	P	05 51 34.1 -0.6
	baz=57					
G10A	Bishop Farm, J	57.29	330	⇓P	P	05 51 35.2 -0.6
	baz=57,SNR=6.4					
D13A	Huson	57.32	333	⇓P	P	05 51 35.8 -0.3
	baz=58					
E12A	Beaver Dam Sad	57.33	332	⇓P	P	05 51 35.9 -0.3
	baz=58					
B15A	Bradely Ranch,	57.41	335	⇓P	P	05 51 36.3 -0.3
	baz=58,SNR=7.0					
SWMT	Swartz Lake	57.42	333	eP	P	05 51 35.8 -1.0
SWMT				ePcP	PcP	05 52 29.9 +0.1
C14A	Swan Lake	57.50	334	⇓P	P	05 51 37.4 0.0
	baz=58					
A16A	West Butte Ran	57.51	336	⇑P	P	05 51 37.0 -0.3
	baz=58					
K05A	Summer Lake	57.59	325	⇓P	P	05 51 38.1 +0.1
	baz=58,SNR=10					
SCHQ	Schefferville	57.68	9	P	P	05 51 36.0 -2.4
	3.3nm,0.8s,mb4.4,baz=198,slow=13,SNR=3.5					
SCHQ				PcP	PcP	05 52 30.5 -0.2
	3.7nm,0.7s,baz=325,slow=1.1,SNR=4.1					
SCHQ				LR	LR	06 14 03.7
	comp=Z,228nm,20.0s,baz=173,slow=34					
SCHQ	Schefferville	57.68	9	P	P	05 51 36.0 -2.4
SCHQ				PcP	PcP	05 52 30.5 -0.2
SCHQ				LR	LR	06 14 03.7
YBMT	Yellow Bay	57.69	334	eP	P	05 51 39.2 +0.6
YBMT				e		05 51 52.8
D12A	Red Ives Fores	57.70	332	⇓P	P	05 51 38.1 -0.7
	baz=58					
I07A	Izee	57.70	327	⇑P	P	05 51 38.6 -0.2
	baz=58,SNR=13					
JTMT	Jette	57.73	333	eP	P	05 51 39.4 +0.5
JTMT				ePcP	PcP	05 52 31.4 +0.4
B14A	Marquette Ranc	57.75	335	⇑P	P	05 51 39.1 +0.1
	baz=58,SNR=17					
F10A	Beach Ranch, E	57.82	330	⇑P	P	05 51 39.3 -0.3
	baz=58,SNR=12					
A15A	Johnson Ranch,	57.99	335	⇑P	P	05 51 40.1 -0.7
	baz=58,SNR=6.8					
BSMT	Bassoo Peak	58.03	333	eP	P	05 51 41.4 +0.3
YBH	Yreka Blue Hor	58.03	323	P	P	05 51 39.1 -2.0
	9.0nm,1.1s,mb4.7,baz=114,slow=4.7,SNR=8.2					
G08A	Pilot Rock	58.23	329	⇓P	P	05 51 42.5 +0.1
	baz=58,SNR=29					
C12B	Naegeli Ranch,	58.24	333	⇓P	P	05 51 42.4 -0.1
	baz=58,SNR=11					
B13A	Whitefish	58.28	334	⇑P	P	05 51 42.8 0.0
	baz=58					
LNOR	Lincton Mounta	58.28	330	eP	P	05 51 42.8 0.0
A14A	Double T Ranch	58.28	335	⇑P	P	05 51 42.3 -0.5
	baz=58,SNR=5.3					
WALA	Waterton Lakes	58.55	335	eP	P	05 51 44.6 -0.1
	0.3nm,0.8s					
E09A	Wood Farm, Sta	58.65	330	⇓P	P	05 51 44.7 -0.7
	baz=59,SNR=5.1					
A13A	Flathead Natio	58.67	334	⇑P	P	05 51 45.5 0.0
	baz=59					
C11A	Tepee Creek (N	58.69	332	⇑P	P	05 51 45.1 -0.5
	baz=59					
B12A	Libby	58.85	333	⇓P	P	05 51 46.8 +0.1
	baz=59					
G06A	Carlson Farm,	59.07	328	⇑P	P	05 51 48.7 +0.4
	baz=59,SNR=12					
A12A	Yaak River Ran	59.22	334	⇓P	P	05 51 49.7 +0.4
	baz=59					
FFC	Flin Flon	59.28	346	eP	P	05 51 48.7 -0.8
	12nm,1.2s,mb4.8					
NEW	Newport	59.40	332	eP	P	05 51 50.0 -0.5
	14nm,1.3s,mb4.8					
NEW				e		05 52 03.4
D08A	Wollman Farm,	59.41	330	⇑P	P	05 51 50.8 +0.1
	baz=60					
OD2	Odessa Site #2	59.54	331	eP	P	05 51 51.9 +0.4
E07A	Sunnyside	59.54	329	⇑P	P	05 51 51.9 +0.4
	baz=60					
H04A	Detroit Lake	59.56	326	⇑P	P	05 51 51.3 -0.4
	baz=60					
G04A	Mulino	60.05	327	⇑P	P	05 51 54.7 -0.3
	baz=60					
F04A	Amboy	60.48	327	⇓P	P	05 51 58.0 +0.1
	baz=61					
B08A	Colville Reser	60.51	331	⇑P	P	05 51 57.7 -0.4
	baz=61					
LON	Longmire	60.68	328	eP	P	05 51 59.4 +0.1
	9.6nm,0.9s,mb4.8					
D05A	Enumclaw	61.06	329	⇑P	P	05 52 01.9 0.0
	baz=61,SNR=7.8					
E03A	Lebam	61.48	327	⇓P	P	05 52 04.8 +0.1
	baz=62,SNR=6.1					
FCC	Fort Churchill	61.53	352	eP	P	05 52 03.0 -1.9
	0.3nm,1.0s					
EDM	Edmonton	61.55	338	eP	P	05 52 04.1 -1.0
B06A	Marblemount	61.68	330

TIC	**Toumodi**	**75.59**	**83**	*e*P	**P**	**05 53 32.9**	**-0.5**
	59nm,1.1s,mb5.2						
DBIC	**Dimbokro**	**75.76**	**83**	P	**P**	**05 53 34.0**	**-0.3**
	12nm,0.8s,mb4.7,baz=235,slow=4.6,SNR=11						
DBIC				LR	LR	06 25 48.6	
	comp=Z,105nm,18.3s,baz=230,slow=35						
DBIC	**Dimbokro**	**75.76**	**83**	*e*P	**P**	**05 53 34.4**	**+0.1**
	24nm,1.0s,mb4.9						
KIC	**Kosan Boka**	**75.85**	**83**	*e*P	**P**	**05 53 34.6**	**-0.3**
	40nm,0.7s,mb5.2						
DAWY	**Dawson**	**78.76**	**337**	*e*P	**P**	**05 53 49.4**	**-0.6**
SUMG	**Summit**	**78.94**	**12**	*e*P	**P**	**05 53 50.5**	**-0.4**
	12nm,1.0s,mb4.7						
SUMG				*e*		05 54 03.2	
INK	**Inuvik**	**79.01**	**342**	*e*P	**P**	**05 53 51.0**	**-0.3**
	34nm,1.1s,mb5.1						
RAR	**Rarotonga**	**79.50**	**249**	P	**P**	**05 53 57.5**	**+2.5**
	57nm,1.1s,mb5.3,baz=120,slow=20,SNR=3.1						
BMRM	**Bremner River**	**79.55**	**333**	*e*P	**P**	**05 53 53.6**	**-0.8**
	21nm,1.0s,mb4.9						
EGAK	**Eagle**	**79.77**	**338**	*e*P	**P**	**05 53 55.3**	**-0.2**
	26nm,1.1s,mb5.0						
ESDC	**Sonseca Array**	**80.74**	**49**	P	**P**	**05 54 02.8**	**+1.4**
	0.2nm,0.3s,baz=277,slow=4.6,SNR=7.1						
ILAR	**Eielson Array**	**82.00**	**337**	P	**P**	**05 54 05.8**	**-1.6**
	7.5nm,1.1s,mb4.5,baz=132,slow=3.4,SNR=46						
ILAR				PP	PP	05 57 17.1	+1.2
	0.6nm,0.9s,baz=114,slow=8.1,SNR=5.1						
ILAR				LR	LR	06 32 56.9	
	comp=Z,90nm,19.6s,baz=114,slow=37						
ILAR	**Eielson Array**	**82.00**	**337**	P	**P**	**05 54 05.8**	**-1.6**
ILAR				PP	PP	05 57 17.1	+1.2
ILAR				LR	LR	06 32 56.9	
VNA1	**Neumayer--Stat**	**82.24**	**161**	*e*P	**P**	**05 54 08.4**	**-0.2**
VNA1				*e*		05 54 16.2	
VNA1				*e*	pP	05 54 28.7	0.0
VNA1				*e*		06 02 58.3	
KDAK	**Kodiak Island**	**82.30**	**329**	LR	LR	06 30 27.6	
	comp=Z,84nm,18.6s,baz=0.5,slow=35						
COLA	**College**	**82.42**	**337**	*e*P	**P**	**05 54 09.0**	**-0.6**
	6.8nm,0.9s,mb4.5						
MCK	**McKinley**	**82.45**	**335**	*e*P	**P**	**05 54 08.2**	**-1.6**
	13nm,1.0s,mb4.7						
TORD	**Torodi Ar. Bea**	**82.63**	**77**	P	**P**	**05 54 10.9**	**-0.8**
	5.8nm,1.0s,mb4.4,baz=306,slow=8.7,SNR=16						
TRF	**Thorofare Moun**	**82.93**	**335**	*e*P	**P**	**05 54 10.8**	**-1.5**
	6.9nm,0.8s,mb4.5						
RSO	**Redoubt South**	**83.14**	**332**	*e*P	**P**	**05 54 12.3**	**-1.1**
BPAW	**Bear Paw Mtn.**	**83.43**	**335**	*e*P	**P**	**05 54 13.4**	**-1.4**
	36nm,1.1s,mb5.1						
PPLA	**Purkeypile**	**83.58**	**334**	*e*P	**P**	**05 54 14.5**	**-1.2**
	45nm,1.3s,mb5.1						
COLD	**Coldfoot**	**84.14**	**338**	*e*P	**P**	**05 54 18.1**	**-0.3**
	16nm,1.2s,mb4.7						
DAG	**Danmarks Havn**	**85.63**	**12**	⇑*i*P	**P**	**05 54 25.1**	**-0.6**
DAG	**Danmarks Havn**	**85.63**	**12**	⇑*i*P	**P**	**05 54 25.1**	**-0.6**
	2.0nm,0.6s,mb4.2						
TAM	**Tamanrasset**	**86.88**	**67**	*e*P	**P**	**05 54 33.5**	**+0.5**
	3.0nm,0.8s,mb4.3						
DOU	**Dourbes**	**88.19**	**40**	P	**P**	**05 54 38.7**	**0.0**
	comp=Z,11nm,1.5s,mb4.7						
NOA	**NORSAR Array B**	**92.43**	**29**	LR	LR	06 34 32.0	
	comp=Z,54nm,20.2s,baz=270,slow=34						
GRF	**Grafenberg Arr**	**92.46**	**41**	*e*P	**P**	**05 54 59.3**	**+0.7**
	comp=Z,7.0nm,1.2s,mb4.8						
GRF				*e*pP	pP	05 55 11.6	-7.4
GRF				*e*L		06 30 32.3	
	comp=Z,116nm,18.6s						
SBA	**Scott Base**	**92.83**	**191**	*e*P	**P**	**05 55 00.6**	**+0.8**
	comp=Z,9.4nm,0.9s,mb5.1						
CLL	**Collm**	**93.58**	**39**	⇓*i*P	**P**	**05 55 04.4**	**+0.7**
CLL				*e*		05 55 17.0	
CLL				*e*PS	PS	06 07 26.0	-3.4
CLL				*e*SSS		06 16 24.0	
CLL				*e*SSSS		06 19 24.0	
KBA	**Koelnbreinsper**	**93.90**	**43**	⇑*i*P	**P**	**05 55 03.5**	**-1.8**
	comp=Z,8.4nm,1.1s,mb5.0						
BRG	**Berggiesshubel**	**94.18**	**39**	*e*P	**P**	**05 55 07.1**	**+0.6**
	comp=Z,7.7nm,1.0s,mb5.0						
BRG				*e*		05 55 11.7	
	comp=Z,3.8nm,0.8s						
BRG				*e*		05 55 20.4	
	comp=Z,5.0nm,0.9s						
BRG							
	comp=N,72nm,14.6s						
BRG							
	comp=E,85nm,21.6s						
BRG							
	comp=Z,135nm,18.5s						
CONA	**Conrad Observa**	**95.57**	**42**	⇓*i*PcP	PcP	05 55 13.3	+0.1
	comp=Z,6.2nm,1.3s						
TSUM	**Tsumeb**	**96.78**	**109**	*e*P	**P**	**05 55 19.7**	**+0.7**
	comp=Z,13nm,1.0s,mb5.3						
ARCES	**ARCESS Array B**	**97.32**	**20**	LR	LR	06 33 02.7	
	comp=Z,70nm,20.1s,baz=310,slow=32						
DZM	**Mont Dzumac**	**110.71**	**246**	*e*LR	LR	06 33 16.1	
	comp=Z,118nm,25.7s						
ABKAR	**Akbulak array**	**121.94**	**30**	*e*PKPdf	PKPdf	06 00 41.4	-0.4
ZALV	**Zalesovo Beam**	**126.75**	**11**	PKP	PKPdf	06 00 49.7	-1.2
	comp=Z,7.4nm,0.9s,baz=294,slow=1.5,SNR=22						
ZALV	**Zalesovo Beam**	**126.75**	**11**	PKP	PKPdf	06 00 49.7	-1.2
STKA	**Stephens Creek**	**127.97**	**226**	PKP	PKPdf	06 00 53.0	-0.9
	comp=Z,6.0nm,0.8s,baz=83,slow=2.1,SNR=8.1						
STKA	**Stephens Creek**	**127.97**	**226**	PKP	PKPdf	06 00 53.0	-0.9
KURK	**Kurchatov**	**128.25**	**17**	*e*PKPdf	PKPdf	06 00 53.6	-0.1
MJAR	**Matsushiro Arr**	**130.56**	**319**	PKP	PKPdf	06 00 57.4	-1.3
	comp=Z,0.9nm,0.4s,baz=70,slow=1.6,SNR=5.9						
CN2	**Changchun**	**132.49**	**335**	*e*PKP	PKPdf	06 01 03.3	+1.2
MK31	**Makanchi Array**	**132.84**	**16**	*e*PKPdf	PKPdf	06 01 01.8	-0.8
MKAR	**Makanchi Array**	**132.84**	**16**	PKP	PKPdf	06 01 01.8	-0.8
	comp=Z,0.5nm,0.3s,baz=348,slow=3.0,SNR=12						
MKAR	**Makanchi Array**	**132.84**	**16**	PKP	PKPdf	06 01 01.8	-0.9
SONM	**Songino Array**	**133.95**	**354**	PKP	PKPdf	06 01 04.2	-0.5
	comp=Z,1.3nm,0.7s,baz=310,slow=0.9,SNR=10						
KSRS	**Korea Array**	**136.19**	**327**	PKP	PKPdf	06 01 08.9	-0.3
	comp=Z,6.6nm,0.9s,baz=17,slow=1.1,SNR=24						
WMQ	**Urumqi**	**136.97**	**13**	PKP	PKPdf	06 01 06.6	-3.9
WMQ				LR	LR		
	comp=N,87nm,20.1s						
WMQ				LR	LR		
	comp=Z,110nm,22.0s						
ASAR	**Alice Springs**	**138.12**	**230**	PKhKP	PKPpre	06 01 02.0	
	comp=Z,1.0nm,0.8s,baz=127,slow=3.2,SNR=7.8						
ASAR				PKP	PKPdf	06 01 12.3	-0.8
	comp=Z,6.2nm,1.0s,baz=128,slow=2.4,SNR=18						
WRAB	**Tennant Creek**	**139.66**	**236**	*e*PKPdf	PKPdf	06 01 15.0	-1.1
WRA	**Warramunga Arr**	**139.66**	**236**	PKhKP	PKPpre	06 01 06.4	
	comp=Z,1.8nm,0.9s,baz=123,slow=2.7,SNR=13						
WRA				PKP	PKPdf	06 01 14.9	-1.1
	comp=Z,5.0nm,0.9s,baz=110,slow=2.5,SNR=7.3						
HHC	**Hu-ho-hao-te**	**139.84**	**346**	*e*PKP	PKPdf	06 01 12.0	-3.8
HHC				sPKP		06 01 42.0	
HHC				PP	PP	06 04 12.4	+1.3
HHC				PKS		06 04 46.3	
HHC				SKS	SKSdf	06 08 11.8	-8.0
HHC				SKKS	SKKSac	06 10 53.4	-6.1
HHC				SS	SS	06 22 23.6	-2.1
HHC				AMB	AMB		
	comp=Z,88nm,9.0s						
HHC				LR	LR		
	comp=N,180nm,20.4s						
HHC				LR	LR		
	comp=E,250nm,20.1s						
HHC				LR	LR		
	comp=Z,140nm,20.7s						
GTA	**Gaotai**	**142.73**	**360**	*e*PKP	PKPdf	06 01 16.0	-5.1
GTA				PP	PP	06 04 28.3	-0.3
GTA				SKS	SKSdf	06 08 20.8	-3.7
GTA				SKKS	SKKSac	06 11 14.1	-2.2
GTA				SS	SS	06 22 59.3	+0.2
GTA				AMB	AMB		
	comp=Z,110nm,5.4s						
GTA				LR	LR		
	comp=N,130nm,15.9s						
GTA				LR	LR		
	comp=E,78nm,16.8s						
GTA				LR	LR		
	comp=Z,130nm,16.2s						
KAKA	**Kakadu**	**144.40**	**245**	*e*P	PKPdf	06 01 22.3	-2.3
	comp=Z,41nm,0.9s						
KAKA	**Kakadu**	**144.40**	**245**	*e*PKPdf	PKPdf	06 01 22.4	-2.2
NJ2	**Nanjing**	**145.07**	**331**	*e*PKPbc	PKPbc	06 01 24.5	-0.4
DDI	**Dehra Dun**	**145.11**	**34**	*ex*	PKPbc	06 01 24.0	-1.0
LZH	**Lanzhou**	**145.84**	**354**	⇓PKPbc	PKPbc	06 01 26.3	-0.9
LZH				PKPbc	PKPbc	06 01 27.4	+0.2
LZH				sPKP		06 01 52.1	
LZH				PP	PP	06 04 55.1	+7.9
LZH				AMB	AMB		
	comp=Z,220nm,4.9s						
LZH				LR	LR		
	comp=N,230nm,18.4s						
LZH				LR	LR		
	comp=Z,370nm,19.9s						
XAN	**Xi'an**	**146.95**	**346**	PKPbc	PKPbc	06 01 28.8	-1.7
XAN				AMB	AMB		
	comp=Z,30nm,5.9s						
FITZ	**Fitzroy Crossi**	**147.62**	**231**	*e*P	PKPdf	06 01 32.3	+2.3
	comp=Z,57nm,1.0s						
FITZ	**Fitzroy Crossi**	**147.62**	**231**	*e*PKPdf	PKPdf	06 01 29.6	-0.5
FITZ				*e*PKPbc	PKPbc	06 01 32.1	-0.6
WHN	**Wuhan**	**148.38**	**335**	*e*PKPbc	PKPbc	06 01 30.3	-4.2
GKN	**Gorkha**	**150.36**	**28**	*e*P	PKPdf	06 01 34.2	0.0
	comp=Z,137nm,1.2s						
ENH	**Enshi**	**150.37**	**343**	*e*PKPdf	PKPdf	06 01 33.8	-0.4
ENH				*e*PKPbc	PKPbc	06 01 38.3	-1.1
KKN	**Kakani**	**150.84**	**27**	*e*P	PKPdf	06 01 34.9	-0.1
	comp=Z,36nm,0.9s						
DMN	**Daman**	**150.91**	**27**	*e*P	PKPdf	06 01 35.1	0.0
	comp=Z,49nm,1.1s						
CD2	**Chengdu**	**150.96**	**353**	PKPbc	PKPdf	06 01 30.1	-5.0
CD2				PKPab	PKPab	06 01 45.6	-2.6
CD2				pPKP	pPKPdf	06 01 57.0	+0.7
CD2				sPKP		06 02 07.6	
CD2				PKS		06 05 03.5	
CD2				PP	PP	06 05 16.8	-0.2
CD2				LR	LR		
	comp=N,350nm,6.5s						
CD2				LR	LR		
	comp=Z,220nm,7.4s						
GUN	**Gumba**	**151.00**	**26**	*e*P	PKPdf	06 01 34.9	-0.3
	comp=Z,59nm,1.0s						
PKIN	**Phulchoki**	**151.07**	**27**	*e*P	PKPdf	06 01 35.5	+0.2
	comp=Z,21nm,0.7s						
PKI	**Pulchoki**	**151.08**	**27**	*e*P	PKPdf	06 01 35.3	0.0
	comp=Z,50nm,1.0s						
PKI	**Pulchoki**	**151.08**	**27**	*e*P	PKPdf	06 01 35.5	+0.2
LSA	**Lhasa**	**151.24**	**16**	PKPbc	PKPdf	06 01 36.3	+0.8
LSA	**Lhasa**	**151.24**	**16**	*e*PKPdf	PKPdf	06 01 36.6	+1.1
LSA				*e*PKPbc	PKPbc	06 01 42.1	+0.6
JIRN	**Jiri**	**151.35**	**26**	*e*P	PKPdf	06 01 35.9	+0.2
	comp=Z,22nm,0.9s						
RAMN	**Ramite**	**152.15**	**26**	*e*P	PKPdf	06 01 36.8	-0.2
	comp=Z,58nm,1.0s						
TAPN	**Taplejung**	**152.26**	**23**	*e*P	PKPdf	06 01 37.1	0.0
	comp=Z,13nm,0.6s						
ODAN	**Odare**	**152.56**	**24**	*e*P	PKPdf	06 01 37.5	-0.1
	comp=Z,38nm,1.2s						
GYA	**Guiyang**	**154.75**	**345**	PKPbc	PKPdf	06 01 38.8	-1.9
GYA				pPKP	pPKPdf	06 02 01.3	-0.7
GYA				sPKP		06 02 10.4	
GYA				PKS		06 05 13.8	
GYA				PP	PP	06 05 42.0	+3.4
GYA				SKKS	SKKSac	06 12 21.0	-2.5
GYA				SS	SS	06 25 15.8	+1.8
GYA				AMB	AMB		
	comp=Z,120nm,7.9s						
GYA				LR	LR		
	comp=N,120nm,24.2s						
GYA				LR	LR		
	comp=E,110nm,25.6s						
GYA				LR	LR		
	comp=Z,140nm,24.0s						
KMI	**Kunming**	**156.79**	**353**	PKP	PKPdf	06 01 41.9	-1.6
KMI				sPKP		06 02 11.8	
KMI				PP	PP	06 05 53.1	+3.2
KMI				SS	SS	06 25 36.1	+0.3
KMI				AMB	AMB		
	comp=Z,110nm,4.6s						
KMI				LR	LR		
	comp=Z,110nm,22.8s						
CMAR	**Chiang Mai Arr**	**163.59**	**3**	PKP	PKPdf	06 01 51.0	-0.2
	comp=Z,1.2nm,0.4s,baz=321,slow=0.7,SNR=9.2						
CMAR				PKPab	PKPab	06 02 41.3	-1.4
	comp=Z,3.3nm,0.8s,baz=338,slow=5.1,SNR=12						

IDC 18 05:59:52.4±1.7, 6°36N×94°51E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.6/22, mbtmp3.7/7, Error ellipse: s-maj=55.4km s-min=28.0km az=55.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**41.64**	**347**	P	P	06 07 43.4	+1.0
	0.4nm,0.7s,baz=168,slow=7.6,SNR=4.0						
SONM	**Songino Array**	**42.56**	**12**	P	P	06 07 49.3	-0.6
	0.9nm,0.7s,baz=193,slow=8.6,SNR=5.6						
KSRS	**Korea Array**	**43.38**	**40**	P	P	06 07 56.4	-0.3
	0.7nm,0.5s,baz=210,slow=9.6,SNR=4.6						
ZALV	**Zalesovo Beam**	**48.10**	**352**	P	P	06 08 34.1	+0.4
	0.5nm,0.4s,baz=141,slow=4.8,SNR=3.0						
ASAR	**Alice Springs**	**48.67**	**129**	P	P	06 08 38.8	+0.1
	0.4nm,0.7s,baz=300,slow=7.0,SNR=5.8						
FINES	**FINESS Array B**	**74.22**	**332**	P	P	06 11 30.6	-0.3
	1.2nm,0.6s,baz=101,slow=5.8,SNR=6.3						
ARCES	**ARCESS Array B**	**76.81**	**340**	P	P	06 11 45.5	-0.1
	1.0nm,0.8s,baz=92,slow=7.3,SNR=10						

*ISCJB **18** 06:00:16.5±0.4, 38°92N±0°02×27°90E±0°03, h4km±4km, Error ellipse: s-maj=3.8km s-min=3.3km az=158.0*
*CSEM **18** 06:00:16.7±0.1, 38°91N×27°91E, h8km, MD3.0, Error ellipse: s-maj=2.6km s-min=2.2km az=81.0*
*DDA **18** 06:00:16.5, 38°91N×27°89E, h14km±3km, Md2.9*
*ISK **18** 06:00:16.0, 38°90N×27°91E, h10km, MD3.0*
ISC 18 06:00:17.0±0.4, 38°91N±0°02×27°90E±0°03, h7km±3km, n52, σ0°90/73, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKS	**Akhisar**	**0.07**	**245**	PG	**Pg**	**06 00 18.5**	**-0.3**
AKS				*e*SG	**Sg**	**06 00 20.0**	**-0.1**
AKS	**Akhisar**	**0.07**	**245**	*i* Pg	**Pg**	**06 00 18.5**	**-0.3**
AKS				*e*Sg	**Sg**	**06 00 20.0**	**-0.1**
DEMI	**Demirci**	**0.65**	**78**	*i* P	**Pg**	**06 00 29.4**	**-0.1**
DEMI				*i* S	**Sg**	**06 00 37.9**	**-0.1**
DEMI	**Demirci**	**0.65**	**78**	*i* P	**Pg**	**06 00 29.4**	**-0.1**
DEMI				*i* S	**Sg**	**06 00 37.8**	**-0.2**
IZM	**Izmir**	**0.71**	**224**	*e*PG	**Pg**	**06 00 29.9**	**-0.8**
IZM				*e*SG	**Sg**	**06 00 41.1**	**+1.1**
IZM	**Izmir**	**0.71**	**224**	*e*Pg	**Pg**	**06 00 30.0**	**-0.7**
IZM				*e*Sg	**Sg**	**06 00 41.1**	**+1.1**
KULA	**Kula-Manisa**	**0.71**	**123**	*e*PG	**Pg**	**06 00 30.6**	**-0.2**
KULA				*e*SG	**Sg**	**06 00 39.5**	**-0.5**
KULA	**Kula-Manisa**	**0.71**	**123**	*e*Pg	**Pg**	**06 00 30.6**	**-0.1**
KULA				*e*Sg	**Sg**	**06 00 39.5**	**-0.5**
BALB	**Balikesir**	**0.73**	**359**	*e*PG	**Pg**	**06 00 31.7**	**+0.7**
BALB				*e*SG	**Sg**	**06 00 41.9**	**+1.4**
BALB	**Balikesir**	**0.73**	**359**	*e*Pg	**Pg**	**06 00 31.7**	**+0.7**
BALB				*e*Sg	**Sg**	**06 00 41.9**	**+1.4**
BLCB	**Balcova**	**0.85**	**232**	*e*PG	**Pg**	**06 00 32.9**	**-0.4**
BLCB	**Balcova**	**0.85**	**232**	*e*Pg	**Pg**	**06 00 32.9**	**-0.4**
BALY	**Balya**	**0.86**	**345**	*i* P	**Pg**	**06 00 32.6**	**-0.9**
BALY				*i* S	**Sg**	**06 00 45.2**	**+0.6**
BALY	**Balya**	**0.86**	**345**	*i* P	**Pg**	**06 00 32.6**	**-0.9**
BALY				*i* S	**Sg**	**06 00 45.2**	**+0.6**
AYVA	**Ayvalik**	**1.02**	**293**	*i* P	**Pg**	**06 00 36.9**	**+0.3**
AYVA				*i* S	**Sg**	**06 00 51.0**	**+1.2**
AYVA	**Ayvalik**	**1.02**	**293**	*i* P	**Pg**	**06 00 36.9**	**+0.3**
AYVA				*i* S	**Sg**	**06 00 51.0**	**+1.2**
GONE	**Gonen-Balikesi**	**1.15**	**352**	*e*PN	**Pg**	**06 00 39.0**	**0.0**
GONE	**Gonen-Balikesi**	**1.15**	**352**	*e*Pn	**Pg**	**06 00 39.0**	**0.0**
GDZ	**Gediz**	**1.25**	**81**	*i* P	**Pn**	**06 00 40.5**	**-0.4**
GDZ				*i* S	**Sg**	**06 00 57.1**	**+0.1**
AYDN	**Tasoluk**	**1.25**	**181**	*i* P	**Pn**	**06 00 39.8**	**-1.0**
AYDN				*i* S	**Sg**	**06 00 56.6**	**-0.5**
KHAL	**Karahalli**	**1.36**	**113**	*i* P	**Pn**	**06 00 42.5**	**+0.1**
KHAL				*i* S	**Sb**	**06 01 02.8**	**+2.4**
KHAL	**Karahalli**	**1.36**	**113**	*i* P	**Pn**	**06 00 42.5**	**+0.1**
KHAL				*i* S	**Sb**	**06 01 02.8**	**+2.4**
KCTX	**Karacabey (Bur**	**1.40**	**15**	*e*PN	**Pn**	**06 00 42.6**	**-0.3**
KCTX	**Karacabey (Bur**	**1.40**	**15**	*e*Pn	**Pn**	**06 00 42.6**	**-0.4**
EDC	**Edincik**	**1.44**	**359**	*e*PN	**Pn**	**06 00 42.3**	**-1.2**
EDC	**Edincik**	**1.44**	**359**	*e*Pn	**Pn**	**06 00 42.3**	**-1.2**
BNT	**Bandirma**	**1.44**	**1**	*e*PN	**Pn**	**06 00 42.3**	**-1.3**
BNT	**Bandirma**	**1.44**	**1**	*e*Pn	**Pn**	**06 00 42.3**	**-1.3**
DNZL	**Cakiroluk**	**1.52**	**143**	*i* P	**Pn**	**06 00 46.3**	**+1.7**
DNZL				*i* S	**Sn**	**06 01 07.0**	**+2.4**
DNZL	**Cakiroluk**	**1.52**	**143**	*i* S	**Sn**	**06 01 07.0**	**+2.4**
KRBG	**Karabiga-Canak**	**1.55**	**343**	*e*PN	**Pn**	**06 00 44.6**	**-0.5**
KRBG	**Karabiga-Canak**	**1.55**	**343**	*e*Pn	**Pn**	**06 00 44.6**	**-0.5**
MLSB	**Milas**	**1.62**	**183**	*e*PN	**Pn**	**06 00 45.5**	**-0.4**
MLSB	**Milas**	**1.62**	**183**	*e*Pn	**Pn**	**06 00 45.5**	**-0.4**
LPK	**Lapseki**	**1.70**	**329**	*e*PN	**Pn**	**06 00 46.1**	**-1.1**
LPK	**Lapseki**	**1.70**	**329**	*e*Pn	**Pn**	**06 00 46.1**	**-1.1**
ALT	**Altintas**	**1.73**	**85**	*e*PN	**Pn**	**06 00 46.5**	**-1.0**
ALT	**Altintas**	**1.73**	**85**	*e*Pn	**Pn**	**06 00 46.5**	**-1.0**
YER	**Yerkesik**	**1.80**	**170**	*e*PN	**Pn**	**06 00 48.5**	**+0.1**
YER	**Yerkesik**	**1.80**	**170**	*e*Pn	**Pn**	**06 00 48.5**	**+0.1**
GELI	**Tayfur-Gelibol**	**1.85**	**324**	*e*PN	**Pn**	**06 00 48.3**	**-0.8**
GELI	**Tayfur-Gelibol**	**1.85**	**324**	*e*Pn	**Pn**	**06 00 48.3**	**-0.8**
RKY	**Sarkoy-Tekirda**	**1.86**	**343**	*e*PN	**Pn**	**06 00 48.5**	**-0.8**
RKY	**Sarkoy-Tekirda**	**1.86**	**343**	*e*Pn	**Pn**	**06 00 48.5**	**-0.8**
SART	**Tekirdag**	**1.86**	**343**	*i* P	**Pn**	**06 00 51.3**	**+2.0**
SART				*i* S	**Sn**	**06 01 13.8**	**+0.7**
SART	**Tekirdag**	**1.86**	**343**	*i* P	**Pn**	**06 00 51.3**	**+2.0**
SART				*i* S	**Sn**	**06 01 13.8**	**+0.7**
BODT	**Bodrum**	**1.90**	**194**	*e*PN	**Pn**	**06 00 50.0**	**+0.1**
BODT	**Bodrum**	**1.90**	**194**	*e*Pn	**Pn**	**06 00 50.0**	**+0.1**
MFT	**Murefte**	**1.93**	**346**	*e*PN	**Pn**	**06 00 50.5**	**+0.2**
MFT	**Murefte**	**1.93**	**346**	*e*Pn	**Pn**	**06 00 50.5**	**+0.2**
YLV	**Yalova**	**2.01**	**34**	*e*PN	**Pn**	**06 00 50.8**	**-0.5**
YLV	**Yalova**	**2.01**	**34**	*e*Pn	**Pn**	**06 00 50.8**	**-0.5**

*ISK **18** 06:08:30.9, 38°93N×27°88E, h11km, MD3.0*
*ISCJB **18** 06:08:31.6±0.5, 38°94N±0°03×27°87E±0°03, h6km±5km, Error ellipse: s-maj=5.0km s-min=4.0km az=30.1*
*CSEM **18** 06:08:31.7±0.1, 38°92N×27°84E, h10km, MD3.0, Error ellipse: s-maj=3.4km s-min=2.9km az=44.0*
*DDA **18** 06:08:32.0, 38°92N×27°89E, h5km±3km, Md2.8*
ISC 18 06:08:32.0±0.4, 38°92N±0°03×27°86E±0°04, h11km±3km, n40, σ0°80/58, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKS	**Akhisar**	**0.05**	**223**	PG	**Pg**	**06 08 33.6**	**-0.4**
AKS				*e*SG	**Sg**	**06 08 35.6**	**+0.1**
AKS	**Akhisar**	**0.05**	**223**	*i* Pg	**Pg**	**06 08 33.6**	**-0.4**
AKS				*e*Sg	**Sg**	**06 08 35.6**	**+0.1**
DEMI	**Demirci**	**0.68**	**79**	*i* P	**Pg**	**06 08 45.4**	**+0.2**
DEMI				*i* S	**Sg**	**06 08 53.5**	**-0.6**
DEMI	**Demirci**	**0.68**	**79**	*i* P	**Pg**	**06 08 45.4**	**+0.2**
DEMI				*i* S	**Sg**	**06 08 53.5**	**-0.6**
IZM	**Izmir**	**0.69**	**222**	*e*PG	**Pg**	**06 08 45.1**	**-0.3**
KULA	**Kula-Manisa**	**0.75**	**122**	*e*PG	**Pg**	**06 08 45.8**	**-0.6**
KULA				*e*SG	**Sg**	**06 08 56.5**	**+0.3**
KULA	**Kula-Manisa**	**0.75**	**122**	*e*Pg	**Pg**	**06 08 45.8**	**-0.6**
KULA				*e*Sg	**Sg**	**06 08 56.5**	**+0.4**
BLCB	**Balcova**	**0.83**	**231**	*e*PG	**Pg**	**06 08 47.8**	**-0.2**
BLCB	**Balcova**	**0.83**	**231**	*e*Pg	**Pg**	**06 08 47.8**	**-0.1**
BALY	**Balya**	**0.84**	**348**	*i* P	**Pg**	**06 08 48.4**	**+0.2**
BALY				*i* S	**Sg**	**06 09 01.4**	**+2.2**
BALY	**Balya**	**0.84**	**348**	*i* P	**Pg**	**06 08 48.4**	**+0.1**
BALY				*i* S	**Sg**	**06 09 01.5**	**+2.2**
AYVA	**Ayvalik**	**0.99**	**294**	*i* P	**Pg**	**06 08 50.5**	**-0.5**
AYVA				*i* S	**Sg**	**06 09 06.1**	**+2.3**
AYVA	**Ayvalik**	**0.99**	**294**	*i* P	**Pg**	**06 08 50.5**	**-0.5**
AYVA				*i* S	**Sg**	**06 09 06.1**	**+2.2**
GONE	**Gonen-Balikesi**	**1.14**	**353**	*e*PN	**Pg**	**06 08 52.8**	**-1.0**
GONE	**Gonen-Balikesi**	**1.14**	**353**	*e*Pn	**Pg**	**06 08 52.8**	**-1.1**
AYDN	**Tasoluk**	**1.25**	**179**	*i* P	**Pn**	**06 08 55.2**	**-0.2**
AYDN				*i* S	**Sb**	**06 09 12.1**	**+0.3**
AYDN	**Tasoluk**	**1.25**	**179**	*i* P	**Pn**	**06 08 55.2**	**-0.2**
AYDN				*i* S	**Sb**	**06 09 12.1**	**+0.3**
GDZ	**Gediz**	**1.28**	**82**	*i* P	**Pn**	**06 08 56.3**	**+0.5**
GDZ				*i* S	**Sb**	**06 09 13.2**	**+0.7**
GDZ	**Gediz**	**1.28**	**82**	*i* P	**Pn**	**06 08 56.3**	**+0.5**
GDZ				*i* S	**Sb**	**06 09 13.2**	**+0.7**
KHAL	**Karahalli**	**1.39**	**112**	*i

ASAJ	**Asahikawa**	**4.43**	**267**	PN	**Pn**	**06 17 50.4**	**+4.9**
ASAJ				pmax	pmax		
comp=Z,2.0nm,0.3s							
JNBK	**Urakawa-nobuka**	**4.89**	**245**	P	**Pn**	**06 17 52.1**	**+0.2**
JNBK				*e*S	**Sn**	**06 18 45.8**	**-1.3**
JNB	**Noboribetsu**	**5.96**	**253**	P	**Pn**	**06 18 07.8**	**+1.3**
JNB				*e*S	**Sn**	**06 19 14.1**	**+0.8**
JKB	**Kayabe**	**6.21**	**248**	P	**Pn**	**06 18 10.3**	**+0.4**
JKB				*e*S	**Sn**	**06 19 17.0**	**-2.4**
JANG	**Nango**	**6.74**	**235**	*e*S	**Sn**	**06 19 26.3**	**-6.3**
JTH	**Tanohata**	**6.83**	**231**	P	**Pn**	**06 18 16.8**	**-1.7**
JTH				*e*S	**Sn**	**06 19 27.1**	**-7.8**
PETK	**Petropavlovsk-**	**10.45**	**31**	P	**Pn**	**06 19 07.8**	**0.0**
comp=Z,0.5nm,0.3s,baz=214,slow=12,SNR=6.1							
PETK	**Petropavlovsk-**	**10.45**	**31**	PN	**Pn**	**06 19 07.9**	**0.0**
PETK				pmax	pmax		
comp=Z,1.0nm,0.3s							
SONM	**Songino Array**	**29.25**	**292**	P	**P**	**06 22 38.1**	**+0.7**
comp=Z,0.2nm,0.4s,mb3.2,baz=38,slow=7.3,SNR=2.6							
ILAR	**Eielson Array**	**40.21**	**37**	P	**P**	**06 24 10.6**	**-1.0**
comp=Z,0.3nm,0.4s,mb3.3,baz=263,slow=4.1,SNR=7.9							
MKAR	**Makanchi Array**	**45.26**	**298**	P	**P**	**06 24 53.1**	**+0.5**
comp=Z,0.5nm,0.5s,mb3.6,baz=77,slow=6.9,SNR=5.3							
MKAR	**Makanchi Array**	**45.26**	**298**	P	**P**	**06 24 53.1**	**+0.5**
MKAR				pmax	pmax		
comp=Z,1.0nm,0.5s							
NVAR	**Mina Array Bea**	**66.22**	**59**	P	**P**	**06 27 23.7**	**+0.9**
comp=Z,0.5nm,0.4s,mb3.9,baz=291,slow=7.6,SNR=5.5							
PDAR	**Pinedale Array**	**68.56**	**51**	P	**P**	**06 27 37.5**	**-0.1**
comp=Z,0.4nm,0.5s,mb3.6,baz=256,slow=0.7,SNR=4.2							
NB2	**NORSAR Subarra**	**69.32**	**339**	P	**P**	**06 27 40.7**	**-1.3**
comp=Z,1.1nm,0.8s,mb3.8,baz=31,slow=6.5							
NOA	**NORSAR Array B**	**69.32**	**339**	P	**P**	**06 27 41.1**	**-0.9**
comp=Z,0.6nm,0.6s,mb3.7,baz=29,slow=6.5,SNR=4.0							
NOA	**NORSAR Array B**	**69.32**	**339**	P	**P**	**06 27 41.1**	**-0.9**
NOA				pmax	pmax		
comp=Z,1.0nm,0.6s							
AKASG	**Malin Array Be**	**71.66**	**324**	P	**P**	**06 27 55.5**	**-0.9**
comp=Z,0.3nm,0.4s,mb3.6,baz=39,slow=7.5,SNR=3.2							
TXAR	**Lajitas Array**	**81.29**	**57**	P	**P**	**06 28 51.5**	**+0.3**
comp=Z,0.5nm,0.4s,mb3.8,baz=302,slow=4.3,SNR=18							
TXAR	**Lajitas Array**	**81.29**	**57**	P	**P**	**06 28 51.5**	**+0.3**
TXAR				pmax	pmax		
comp=Z,1.0nm,0.4s							

IDC 18 06:24:14.7±2.1, 4°.84S×151°.86E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/18, mbtmp3.4/4, Error ellipse: s-maj=125.2km s-min=28.4km az=129.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.72**	**227**	P	P	06 29 17.2	-1.2
0.3nm,0.5s,baz=54,slow=10,SNR=6.3							
ASAR	**Alice Springs**	**25.50**	**221**	P	P	06 29 45.5	+0.6
0.2nm,0.4s,baz=51,slow=8.8,SNR=3.1							
FITZ	**Fitzroy Crossi**	**28.82**	**241**	P	P	06 30 15.3	+0.4
2.4nm,1.0s,baz=59,slow=5.9,SNR=2.4							
ILAR	**Eielson Array**	**82.55**	**22**	P	P	06 36 39.2	+0.1
0.2nm,0.6s,baz=253,slow=5.6,SNR=4.6							

DJA 18 06:29:00, 0°.06S×122°.99E, h82km, MLv4.3/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**1.00**	**193**	P	Pn	06 29 19.0	-0.2
LUWI				S	Sn	06 29 33.4	-0.1
KMSI	**Cibinong**	**1.17**	**58**	P	Pn	06 29 22.0	+0.7
MRSI	**Marisa**	**1.18**	**297**	P	Pn	06 29 22.2	+0.9
MRSI				S	Sn	06 29 38.9	+1.6
APSI	**Ampana**	**1.58**	**238**	P	Pn	06 29 27.1	+0.6
APSI				S	Sn	06 29 48.4	+1.8
MNI	**Manado**	**2.38**	**51**	P	Pn	06 29 37.6	+0.6

*NEIC **18** 06:35:04.2±3.3, 23°.48N×122°.36E, h10km, MG3.5(JMA), Error ellipse: s-maj=35.2km s-min=13.7km az=102.0*
*TAP **18** 06:35:12.3, 23°.67N×121°.71E, h52km, ML3.8, C*
*JMA **18** 06:35:12.9±0.2, 23°.73N×121°.79E, h96km, M3.5*
*ISCJB **18** 06:35:13.0±0.3, 23°.65N±0°.02×121°.76E±0°.02, h43km±7km, Error ellipse: s-maj=3.8km s-min=2.5km az=140.2*

ISC 18 06:35:13.6±0.3, 23°.66N±0°.02×121°.74E±0°.02, h39km±7km, n48, σ0s84/89, 1C-3D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	**0.19**	**285**	*e*P	**Pn**	**06 35 21.0**	**+0.3**
baz=285							
ESL	**Shilin**	**0.32**	**299**	⇓*i*P	**Pn**	**06 35 21.7**	**-0.4**
baz=290							
ESL				*e*S	**Sn**	**06 35 28.1**	**+0.1**
baz=290							
HWA	**Hwalien**	**0.34**	**338**	*e*P	**Pn**	**06 35 22.1**	**-0.2**
baz=346							
HWA				*e*S	**Sn**	**06 35 29.6**	**+1.3**
baz=346							
EHY	**Hungye**	**0.41**	**249**	P	**Pn**	**06 35 22.6**	**-0.6**
baz=254							
EHY				*e*S	**Sn**	**06 35 29.6**	**-0.3**
baz=254							
TWD	**Chiawan**	**0.44**	**342**	*i* P	**Pn**	**06 35 22.8**	**-0.7**
baz=349							
TWD				S	**Sn**	**06 35 30.6**	**+0.1**
baz=349							
YULB	**Yu-li**	**0.49**	**237**	*e*Pg	**Pn**	**06 35 23.1**	**-1.1**
YULB				*e*Sg	**Sn**	**06 35 31.1**	**-0.5**
TWF1	**Yuli**	**0.51**	**234**	*i* P	**Pn**	**06 35 23.8**	**-0.7**
baz=242							
TWF1				*e*S	**Sn**	**06 35 32.1**	**0.0**
baz=242							
NACB	**Ninganchiao**	**0.53**	**345**	*e*Pg	**Pn**	**06 35 23.5**	**-1.3**
NACB				*e*Sg	**Sn**	**06 35 33.1**	**+0.6**
WHF	**Hehuan Shan**	**0.65**	**318**	⇓*i*P	**Pn**	**06 35 25.7**	**-0.7**
baz=313							
WHF				*e*S	**Sn**	**06 35 35.6**	**+0.1**
baz=313							
ENA	**Nanau**	**0.77**	**360**	P	**Pn**	**06 35 26.9**	**-1.1**
baz=1.0							
ENA				*e*S	**Sn**	**06 35 38.0**	**-0.3**
baz=1.0							
TWT	**Tachien**	**0.79**	**319**	*i* P	**Pn**	**06 35 28.0**	**-0.3**
baz=319							
TWT				S	**Sn**	**06 35 38.2**	**-0.6**
baz=319							
SMLT	**Sun Moon Lake**	**0.81**	**286**	⇑*i*P	**Pn**	**06 35 28.0**	**-0.5**
baz=287							
SMLT				S	**Sn**	**06 35 38.9**	**-0.3**
baz=287							
ELDTW	**Lidau**	**0.81**	**235**	P	**Pn**	**06 35 27.4**	**-1.2**
baz=230							
ELDTW				*e*S	**Sn**	**06 35 38.2**	**-1.2**
baz=230							
TYC	**Yuchr**	**0.85**	**287**	P	**Pn**	**06 35 28.5**	**-0.6**
baz=288							
TYC				*e*S	**Sn**	**06 35 39.5**	**-0.7**
baz=288							
NNS	**Nan Shan**	**0.85**	**337**	P	**Pn**	**06 35 28.4**	**-0.7**
baz=338							
NNS				*e*S	**Sn**	**06 35 39.9**	**-0.4**
baz=338							
TWC	**Suao**	**0.95**	**6**	P	**Pn**	**06 35 30.0**	**-0.5**
baz=6.0							
TWC				S	**Sn**	**06 35 42.8**	**-0.1**
baz=6.0							
CHN5	**Tsauling**	**0.98**	**267**	*e*P	**Pn**	**06 35 30.7**	**-0.2**
baz=267							
CHN5				S	**Sn**	**06 35 44.5**	**+1.0**
baz=267							
WNT	**Mingjian**	**0.99**	**283**	P	**Pn**	**06 35 31.1**	**+0.1**
baz=284							
WNT				*e*S	**Sn**	**06 35 44.7**	**+0.8**
baz=284							
TWG	**Pinlang**	**1.04**	**217**	*e*Pn	**Pn**	**06 35 29.4**	**-2.2**
TWG				*e*Sn	**Sn**	**06 35 42.9**	**-2.1**
TWG	**Pinlang**	**1.04**	**217**	*e*P	**Pn**	**06 35 30.3**	**-1.3**
baz=215							
TWG				*e*S	**Sn**	**06 35 43.9**	**-1.0**
baz=215							
TWE	**Neicheng**	**1.06**	**356**	P	**Pn**	**06 35 31.1**	**-0.8**
baz=348							
YHNB	**Yeheng**	**1.06**	**342**	*e*Pn	**Pn**	**06 35 31.0**	**-1.0**
NSK	**Sanguang**	**1.07**	**341**	⇓*i*P	**Pn**	**06 35 31.6**	**-0.6**
baz=341							
NSK				S	**Sn**	**06 35 44.6**	**-1.2**
baz=341							
TPUB	**Ta-pu**	**1.08**	**251**	*e*Pn	**Pn**	**06 35 32.2**	**-0.1**
TPUB				*e*Sn	**Sn**	**06 35 47.5**	**+1.4**
WGK	**Gukeng**	**1.08**	**272**	P	**Pn**	**06 35 32.3**	**0.0**
baz=272							
WGK				*e*S	**Sn**	**06 35 47.4**	**+1.3**
baz=272							
TCU	**Taichung**	**1.09**	**297**	P	**Pn**	**06 35 32.5**	**+0.1**
baz=298							
TCU				*e*S	**Sn**	**06 35 47.3**	**+1.0**
baz=298							
TWQ1	**Liyutan**	**1.12**	**308**	*e*P	**Pn**	**06 35 32.6**	**-0.2**
baz=309							
TWQ1				*e*S	**Sn**	**06 35 47.3**	**+0.3**
baz=309							
NSY	**Sanyi**	**1.17**	**310**	*e*P	**Pn**	**06 35 33.4**	**-0.1**
baz=311							
NSY				*e*S	**Sn**	**06 35 49.3**	**+1.0**
baz=311							
NSTT	**Nanjuang**	**1.18**	**325**	*e*P	**Pn**	**06 35 34.2**	**+0.6**
baz=326							
NSTT				*e*S	**Sn**	**06 35 48.6**	**+0.1**
baz=326							
SGST	**Jiashian**	**1.21**	**242**	*e*P	**Pn**	**06 35 34.1**	**+0.1**
baz=254							
SGST				*e*S	**Sn**	**06 35 51.2**	**+2.0**
baz=254							
TWK	**Hsinying**	**1.22**	**252**	*e*P	**Pn**	**06 35 33.7**	**-0.4**
baz=251							
TWK				*e*S	**Sn**	**06 35 50.7**	**+1.3**
baz=251							
CHY	**Chiayi**	**1.22**	**263**	P	**Pn**	**06 35 34.4**	**+0.2**
baz=263							
CHY				*e*S	**Sn**	**06 35 51.0**	**+1.5**
baz=263							
TWA	**Mucha**	**1.32**	**354**	*e*P	**Pn**	**06 35 36.3**	**+0.7**
baz=344							
TWA				*e*S	**Sn**	**06 35 52.4**	**+0.4**
baz=344							
WTCT	**Ta-ch'eng**	**1.36**	**279**	P	**Pn**	**06 35 35.7**	**-0.3**
baz=280							
WTCT				*e*S	**Sn**	**06 35 53.3**	**+0.5**
baz=280							
SSD	**Sandimen**	**1.37**	**229**	P	**Pn**	**06 35 36.9**	**+0.7**
baz=228							
SSD				*e*S	**Sn**	**06 35 54.6**	**+1.6**
baz=228							
NWF	**Wu-fen Shan**	**1.41**	**1**	P	**Pn**	**06 35 36.8**	**0.0**
baz=347							
NWF				*e*S	**Sn**	**06 35 54.4**	**+0.3**
baz=347							
YOJ	**Yonaguni jima**	**1.41**	**55**	P	**Pn**	**06 35 37.2**	**+0.5**
YOJ				*e*S	**Sn**	**06 35 55.2**	**+1.1**
TWS1	**Kuangyinshan**	**1.47**	**348**	P	**Pn**	**06 35 38.0**	**+0.5**
baz=347							
TWM1	**Shoushan**	**1.47**	**236**	*e*P	**Pn**	**06 35 39.2**	**+1.6**
baz=235							
TAW	**Tawu**	**1.51**	**211**	*e*S	**Sn**	**06 35 54.7**	**-1.9**
baz=204							
EAST	**Anshuo**	**1.51**	**213**	*e*P	**Pn**	**06 35 37.3**	**-0.9**
baz=206							
SCZT	**Fangliau**	**1.65**	**219**	*e*P	**Pn**	**06 35 40.9**	**+0.9**
baz=208							
SCZT				*e*S	**Sn**	**06 36 02.1**	**+2.1**
baz=208							
HATJ	**Hateruma jima**	**1.93**	**78**	P	**Pn**	**06 35 44.1**	**+0.2**
HATJ				*e*S	**Sn**	**06 36 07.4**	**+0.5**
IRIF	**Iriomote-Funau**	**1.94**	**69**	P	**Pn**	**06 35 44.3**	**+0.3**
IRIF				*e*S	**Sn**	**06 36 08.5**	**+1.3**
PNG	**Penghu**	**2.01**	**268**	P	**Pn**	**06 35 43.7**	**-1.3**
baz=259							
PNG				*e*S	**Sn**	**06 36 07.7**	**-1.2**
baz=259							
JKRS	**Kuro-shima**	**2.15**	**74**	P	**Pn**	**06 35 47.1**	**+0.1**
JKRS				*e*S	**Sn**	**06 36 13.3**	**+0.9**
JIJ	**Ishigaki jima**	**2.30**	**72**	P	**Pn**	**06 35 48.6**	**-0.5**
JIJ				*e*S	**Sn**	**06 36 15.8**	**-0.4**
JTJ	**Tarama**	**2.87**	**69**	P	**Pn**	**06 35 56.8**	**-0.1**
JTJ				*e*S	**Sn**	**06 36 30.7**	**+0.4**

*NEIC **18** 06:44:27.7, 32°.04S×72°.05W, h29km, ML3.5(GUC), After GUC.*

GUC 18 06:44:27.7±0.6, 32°.04S×72°.05W, h29km±2km, MD3.8, ML3.5, 7C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.49**	**71**	⇑*i*P	Pb	06 44 37.1	-0.9
CHNG				*i* S	Sb	06 44 45.4	+0.4
CMCH	**Combarbala**	**1.25**	**46**	⇑*i*P	Pn	06 44 49.5	+0.3
CMCH				*i* S	Sn	06 45 06.6	+1.6
CMCH	**Combarbala**	**1.25**	**46**	⇑*i*P	Pn	06 44 49.5	+0.3
CMCH				*i* S	Sn	06 45 06.6	+1.6
CMCH				AML	AML	06 45 12.4	
comp=E,3μm,0.6s							
ROCH	**El Roble**	**1.28**	**137**	*e*P	Pn	06 44 50.2	+0.7
ROCH				*e*S	Sn	06 45 07.4	+1.7
ROCH	**El Roble**	**1.28**	**137**	*e*P	Pn	06 44 50.2	+0.7
ROCH				*e*S	Sn	06 45 07.4	+1.7
JACH	**Jahuel**	**1.39**	**118**	*e*P	Pn	06 44 52.0	+0.9
JACH	**Jahuel**	**1.39**	**118**	*e*P	Pn	06 44 52.0	+0.9
PEL	**Peldehue**	**1.59**	**134**	⇓*i*P	Pn	06 44 55.1	+1.2
PEL				*i* S	Sn	06 45 15.5	+2.1
PEL				AML	AML	06 45 22.0	
comp=E,2μm,0.5s							
SAN	**Santiago**	**1.83**	**141**	*e*P	Pn	06 44 58.6	+1.4
SAN				*i* S	Sn	06 45 21.9	+2.6
SAN	**Santiago**	**1.83**	**141**	*e*P	Pn	06 44 58.6	+1.4
SAN				*i* S	Sn	06 45 21.9	+2.6
SAN				AML	AML	06 45 33.1	
comp=N,484nm,0.4s							
CLCH	**Cerro Calan**	**1.86**	**137**	*e*P	Pn	06 44 59.0	+1.5
CLCH				*i* S	Sn	06 45 23.1	+3.0
CLCH				AML	AML	06 45 37.8	
comp=E,1μm,0.8s							
TACH	**Talagante**	**1.86**	**150**	⇑*i*P	Pn	06 44 59.3	+1.7
TACH				*i* S	Sn	06 45 22.8	+2.7
TACH	**Talagante**	**1.86**	**150**	⇑*i*P	Pn	06 44 59.3	+1.7
TACH				*i* S	Sn	06 45 22.8	+2.7
ANTU	**Antumapu**	**1.93**	**142**	*e*P	Pn	06 45 00.1	+1.5
ANTU				*i* S	Sn	06 45 24.7	+2.8
ANTU	**Antumapu**	**1.93**	**142**	*e*P	Pn	06 45 00.1	+1.5
ANTU				*i* S	Sn	06 45 24.7	+2.8
ANTU				AML	AML	06 45 31.2	
comp=E,510nm,0.4s							
FCH	**Farellones**	**1.96**	**131**	*i* S	Sn	06 45 26.3	+3.7
FCH				AML	AML	06 45 31.9	
comp=E,357nm,0.2s							
LNV	**Longovilo**	**1.98**	**164**	*e*P	Pn	06 45 00.4	+1.1
LNV				*i* S	Sn	06 45 25.5	+2.4
LNV	**Longovilo**	**1.98**	**164**	*e*P	Pn	06 45 00.4	+1.1
LNV				*i* S	Sn	06 45 25.5	+2.4
PCH	**Pirque**	**2.04**	**141**	*e*P	Pn	06 45 01.5	+1.5
PCH	**Pirque**	**2.04**	**141**	*e*P	Pn	06 45 01.5	+1.5
TLL	**Tololo Astrono**	**2.15**	**30**	*e*P	Pn	06 45 03.5	+1.8
TLL				*i* S	Sn	06 45 30.6	+3.2
TLL	**Tololo Astrono**	**2.15**	**30**	*e*P	Pn	06 45 03.5	+1.8
TLL				*i* S	Sn	06 45 30.6	+3.2
TLL				AML	AML	06 45 43.4	
comp=N,452nm,0.6s							
CHCH	**Chadas Angostu**	**2.22**	**148**	*e*P	Pn	06 45 04.1	+1.6
CHCH				*i* S	Sn	06 45 31.7	+2.7
CHCH	**Chadas Angostu**	**2.22**	**148**	*e*P	Pn	06 45 04.1	+1.6
CHCH				*i* S	Sn	06 45 31.7	+2.7
LMEL	**Las Melosas**	**2.38**	**140**	⇑*i*P	Pn	06 45 06.7	+2.0
LMEL				*i* S	Sn	06 45 35.9	+3.0
LMEL	**Las Melosas**	**2.38**	**140**	⇑*i*P	Pn	06 45 06.7	+2.0
LMEL				*i* S	Sn	06 45 35.9	+3.0
LMEL				AML	AML	06 45 46.7	
comp=N,250nm,0.3s							
CACH	**El Canelo**	**2.40**	**150**	*e*P	Pn	06 45 07.4	+2.4
CACH				*e*S	Sn	06 45 37.2	+3.7
CACH	**El Canelo**	**2.40**	**150**	*e*P	Pn	06 45 07.4	+2.4
CACH				*e*S	Sn	06 45 37.2	+3.7
LCO	**Las Campanas**	**3.24**	**21**	*e*Pn	Pn	06 45 17.6	+1.0

IDC 18 06:56:49.9±4.0, 18°.92S×175°.84W, h0km, mb4.1/6, mb1 4.3/6, mb1mx3.9/19, mbtmp4.1/6, Error ellipse: s-maj=162.4km s-min=34.2km az=142.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**35.70**	**262**	P	P	07 03 52.0	+1.6
3.9nm,0.6s,baz=75,slow=10,SNR=5.5							
STKA	**Stephens Creek**	**40.32**	**243**	P	P	07 04 29.2	0.0
1.5nm,0.7s,baz=98,slow=15,SNR=1.8							
WRA	**Warramunga Arr**	**46.86**	**260**	P	P	07 05 21.2	-0.9
1.6nm,0.3s,baz=96,slow=7.6,SNR=82							
ASAR	**Alice Springs**	**46.88**	**255**	P	P	07 05 21.6	-0.6
3.6nm,0.6s,baz=89,slow=8.2,SNR=37							
FITZ	**Fitzroy Crossi**	**55.27**	**261**	P	P	07 06 25.5	0.0
0.7nm,0.3s,baz=109,slow=5.1,SNR=6.4							
ILAR	**Eielson Array**	**86.34**	**12**	P	P	07 09 33.5	+0.1
0.1nm,0.4s,baz=217,slow=6.3,SNR=5.5							

IDC 18 06:59:06.8±31.0, 16°.03S×175°.72W, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.8/18, mbtmp4.0/4, Error ellipse: s-maj=618.5km s-min=161.6km az=85.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.79**	**240**	P	P	07 06 58.5	+0.3
0.6nm,0.4s,baz=102,slow=8.3,SNR=4.5							
WRA	**Warramunga Arr**	**47.53**	**257**	P	P	07 07 43.6	-0.6
0.8nm,0.7s,baz=84,slow=7.6,SNR=10							
ASAR	**Alice Springs**	**47.79**	**252**	P	P	07 07 45.9	-0.4
4.7nm,0.5s,baz=88,slow=8.1,SNR=58							
FITZ	**Fitzroy Crossi**	**55.90**	**259**	P	P	07 08 47.4	+0.5
1.9nm,1.0s,baz=100,slow=4.4,SNR=4.3							

*IDC **18** 07:06:17.4±3.5, 53°.77N×88°.48E, h0km, mb1 3.4/3, mb1mx3.2/27, mbtmp3.4/3, ML3.3/2, Error ellipse: s-maj=34.9km s-min=16.8km az=69.0*

ISC 18 07:06:21.6±2.3, 53°.76N±0°.09×88°.0E±0°.2, h10km, n5, σ0s62/10, 5C-1D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.90**	**277**	Pn	**Pn**	**07 06 53.7**	**-0.2**
7.5nm,0.3s,baz=90,slow=15,SNR=132							
ZALV				Sn	**Sn**	**07 07 22.8**	**+5.0**
13nm,0.3s,baz=97,slow=22,SNR=24							
KURK	**Kurchatov**	**6.52**	**246**	⇑Pn	**Pn**	**07 07 57.1**	**-0.3**
1.5nm,0.5s							
KURK				⇑Sn	**Sn**	**07 09 11.7**	**0.0**
2.8nm,0.6s							
KURK				⇓Lg		07 09 45.9	
12nm,0.9s							
MK31	**Makanchi Array**	**7.87**	**210**	⇑Pn	**Pn**	**07 08 16.7**	**+0.7**
0.9nm,0.6s,baz=31,slow=13,SNR=16							
MK31				⇑Sn	**Sn**	**07 09 44.1**	**-0.9**
0.6nm,0.5s,baz=226,slow=26,SNR=3.2							
MK31				⇑Lg		07 10 29.5	
4.6nm,0.8s,baz=24,slow=33,SNR=4.3							
MKAR	**Makanchi Array**	**7.87**	**210**	Pn	**Pn**	**07 08 16.6**	**+0.7**
0.4nm,0.3s,baz=31,slow=14,SNR=20							
MKAR				Sn	**Sn**	**07 09 45.2**	**+0.2**
0.3nm,0.3s,baz=32,slow=22,SNR=6.0							
MKAR				Lg		07 10 32.9	
0.3nm,0.3s,baz=24,slow=30,SNR=7.9							
BVAR	**Borovoye Array**	**10.55**	**273**	Pn	**Pn**	**07 08 51.6**	**-0.9**
0.2nm,0.3s,baz=84,slow=15,SNR=3.2							
BVAR				Sn	**Sn**	**07 10 51.4**	**+0.8**
0.3nm,0.3s,baz=70,slow=25,SNR=3.3							

*ISCJB **18** 07:12:36.9±0.6, 36°.86N±0°.03×10°.56W±0°.05, h10km, Error ellipse: s-maj=5.5km s-min=3.9km az=21.8*
*CSEM **18** 07:12:40.9±0.3, 36°.87N×10°.59W, h30km, ML3.7/10, Error ellipse: s-maj=6.3km s-min=4.0km az=91.0*
*MDD **18** 07:12:40.4±0.9, 36°.83N×10°.76W, h40km, mbLg3.0/31, Error ellipse: s-maj=8.6km s-min=5.4km az=90.0*
*IGIL **18** 07:12:41.6, 36°.85N×10°.71W, h30km, ML2.7*
*NEIC **18** 07:12:41.3, 36°.89N×10°.72W, h40km, MG4.2(MDD), After MDD.*
*CNRM **18** 07:12:42.1, 36°.69N×10°.60W, h30km, MD3.5*
*INMG **18** 07:12:42.4±0.7, 36°.86N×10°.67W, h31km, MD2.8, ML2.7, Error ellipse: s-maj=3.3km s-min=2.8km az=51.0*
*LDG **18** 07:12:42.2±0.2, 36°.92N×10°.69W, h30km, Ml3.3/3, Error ellipse: s-maj=3.2km s-min=2.3km az=34.0*

ISC 18 07:12:40.0±0.6, 36°.89N±0°.03×10°.43W±0°.04, h10km, n178, σ1s20/326, 2C-2D, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.31**	**79**	*i* P	**Pn**	**07 13 05.5**	**+1.2**
PFVI				*e*S	**Sb**	**07 13 22.7**	**+1.2**
PFVI				A		07 13 23.8	
139nm,0.1s							
PFVI	**Vila Bisbo**	**1.31**	**79**	P	**Pn**	**07 13 05.4**	**+1.2**
PFVI				S	**Sb**	**07 13 22.7**	**+1.2**
PFVI	**Vila Bisbo**	**1.31**	**79**	⇑P	**Pn**	**07 13 05.4**	**+1.2**
30nm,0.1s,SNR=18							
PFVI				S	**Sb**	**07 13 22.7**	**+1.2**
180nm,0.1s,SNR=7.9							
PFVI	**Vila Bisbo**	**1.31**	**79**	⇑P	**Pn**	**07 13 05.4**	**+1.2**
30nm,0.1s,SNR=18							
PFVI				S	**Sb**	**07 13 22.7**	**+1.2**
180nm,0.1s,SNR=7.9							
PFVI	**Vila Bisbo**	**1.31**	**79**	P	**Pn**	**07 13 05.4**	**+1.1**
30nm,0.1s,SNR=7.9							
PFVI				S	**Sb**	**07 13 22.7**	**+1.2**
180nm,0.1s,SNR=7.9							
MORF	**Marmelete**	**1.48**	**73**	*e*P	**Pn**	**07 13 08.0**	**+1.3**
MORF				*e*S	**Sn**	**07 13 27.0**	**+0.8**
MORF				A		07 13 28.6	
81nm,0.1s							
MORF	**Marmelete**	**1.48**	**73**	P	**Pn**	**07 13 08.0**	**+1.3**
MORF				S	**Sn**	**07 13 27.0**	**+0.8**
81nm,0.1s							
MORF	**Marmelete**	**1.48**	**73**	P	**Pn**	**07 13 08.0**	**+1.3**
MORF				S	**Sn**	**07 13 27.0**	**+0.8**
81nm,0.1s							
MORF	**Marmelete**	**1.48**	**73**	*e*P	**Pn**	**07 13 08.0**	**+1.3**
MORF				*e*S	**Sn**	**07 13 27.0**	**+0.8**
81nm,0.1s							
PTEO	**Sao Teotonio**	**1.51**	**64**	*e*P	**Pn**	**07 13 08.4**	**+1.3**
PTEO				*e*S	**Sn**	**07 13 28.1**	**+1.2**
PTEO				A		07 13 29.9	
34nm,0.2s							
PTEO	**Sao Teotonio**	**1.51**	**64**	P	**Pn**	**07 13 08.4**	**+1.3**
PTEO				S	**Sn**	**07 13 28.1**	**+1.2**
17nm,0.2s							

23nm,0.4s
PVAQ Vaqueiros 2.23 76 *e*Pn **Pn 07 13 18.5 +1.5**
PVAQ *e*Sn **Sn 07 13 45.0 +0.5**
PVAQ A 07 13 50.5
27nm,0.1s
PVAQ Vaqueiros 2.23 76 P **Pn 07 13 18.5 +1.5**
PVAQ S **Sn 07 13 45.0 +0.5**
27nm,0.1s
PVAQ Vaqueiros 2.23 76 P **Pn 07 13 18.5 +1.5**
PVAQ S **Sn 07 13 45.0 +0.5**
27nm,0.1s
PVAQ Vaqueiros 2.23 76 *e*Pn **Pn 07 13 18.5 +1.5**
PVAQ *e*Sn **Sn 07 13 45.0 +0.5**
27nm,0.1s
PMAFR Mafra 2.26 23 *e*Pn **Pn 07 13 17.1 -0.2**
PMAFR *e*Sn **Sn 07 13 43.6 -1.6**
PMAFR A 07 13 45.5
93nm,0.2s
PMAFR Mafra 2.26 23 ⇓P **Pn 07 13 17.1 -0.2**
9.9nm,0.1s,SNR=18
PMAFR S **Sn 07 13 43.2 -2.0**
51nm,0.3s,SNR=12
PMAFR Mafra 2.26 23 ⇓P **Pn 07 13 17.1 -0.2**
9.9nm,0.1s,SNR=18
PMAFR S **Sn 07 13 43.2 -2.0**
51nm,0.3s,SNR=12
PMAFR Mafra 2.26 23 P **Pn 07 13 17.1 -0.2**
9.9nm,0.1s,SNR=11
PMAFR S **Sn 07 13 43.2 -2.0**
51nm,0.3s,SNR=12
PMAFR *e*Sn **Sn 07 13 43.6 -1.6**
93nm,0.2s
MOE Montemor 2.32 45 *e*Pn **Pn 07 13 19.2 +1.0**
MOE *e*Sn **Sn 07 13 46.6 -0.2**
MOE Montemor 2.32 45 *e*Pn **Pn 07 13 19.2 +1.0**
MOE *e*Sn **Sn 07 13 46.6 -0.2**
PBEJ Beja 2.34 60 *e*Sn **Sn 07 13 47.5 +0.3**
PBEJ A 07 13 48.7
12nm,0.1s
PBEJ Beja 2.34 60 S **Sn 07 13 47.5 +0.3**
5.8nm,0.1s
PBEJ Beja 2.34 60 S **Sn 07 13 47.5 +0.3**
5.8nm,0.1s
PBEJ Beja 2.34 60 *e*Sn **Sn 07 13 47.5 +0.3**
12nm,0.1s
EGRO El Granado 2.44 74 P **Pn 07 13 21.6 +1.7**
EGRO S **Sn 07 13 50.0 +0.3**
EGRO El Granado 2.44 74 P **Pn 07 13 21.6 +1.7**
1.5nm,0.1s,SNR=5.9
EGRO S **Sn 07 13 50.0 +0.3**
14nm,0.3s,SNR=10
EGRO El Granado 2.44 74 P **Pn 07 13 21.6 +1.7**
1.5nm,0.1s,SNR=5.9
EGRO S **Sn 07 13 50.0 +0.3**
14nm,0.3s,SNR=10
EGRO El Granado 2.44 74 P **Pn 07 13 21.6 +1.7**
1.5nm,0.1s,SNR=5.9
EGRO S **Sn 07 13 50.0 +0.2**
14nm,0.3s,SNR=10
EVOP Sao Brissos 2.46 48 *e*Pn **Pn 07 13 20.7 +0.6**
EVOP *e*Sn **Sn 07 13 49.6 -0.5**
14nm,0.2s
EVO Evora 2.53 49 *e*Pn **Pn 07 13 20.7 -0.3**
EVO *e*Sn **Sn 07 13 49.6 -2.2**
28nm,0.2s
EVO Evora 2.53 49 *e*Pn **Pn 07 13 22.0 +1.0**
EVO *e*Sn **Sn 07 13 51.9 +0.1**
EVO A 07 13 54.1
48nm,0.1s
EVO Evora 2.53 49 P **Pn 07 13 22.0 +1.0**
EVO S **Sn 07 13 51.9 +0.1**
48nm,0.1s
EVO Evora 2.53 49 P **Pn 07 13 22.0 +1.0**
EVO S **Sn 07 13 51.9 +0.1**
48nm,0.1s
EVO Evora 2.53 49 *e*Pn **Pn 07 13 22.0 +1.0**
EVO *e*Sn **Sn 07 13 51.9 +0.1**
48nm,0.1s
ALMR Almeirim 2.70 32 *e*P **Pn 07 13 23.6 +0.2**
ALMR *e*S **Sn 07 13 55.1 -0.9**
ALMR *e*S **Sn 07 13 55.1 -0.9**
ALMR AML AML 07 13 55.9
comp=E,22nm,0.2s
ALMR Almeirim 2.70 32 *e*P **Pn 07 13 23.6 +0.2**
ALMR *e*S **Sn 07 13 55.1 -1.0**
ALMR Almeirim 2.70 32 P **Pn 07 13 23.6 +0.2**
ALMR S **Sn 07 13 55.1 -1.0**
ALMR Almeirim 2.70 32 P **Pn 07 13 23.6 +0.2**
ALMR S **Sn 07 13 55.1 -1.0**
ALMR Almeirim 2.70 32 *e*P **Pn 07 13 23.6 +0.2**
ALMR *e*S **Sn 07 13 55.1 -1.0**
PBAR Barrancos 2.99 64 *e*Pn **Pn 07 13 28.7 +1.3**
PBAR *e*Sn **Sn 07 14 03.3 0.0**
PBAR A 07 14 10.7
comp=E,8.0nm,0.1s
PBAR Barrancos 2.99 64 P **Pn 07 13 28.7 +1.3**
PBAR S **Sn 07 14 03.3 0.0**
comp=E,8.0nm,0.1s
PBAR Barrancos 2.99 64 P **Pn 07 13 28.7 +1.3**
PBAR S **Sn 07 14 03.3 0.0**
comp=E,8.0nm,0.1s
PBAR Barrancos 2.99 64 *e*Pn **Pn 07 13 28.7 +1.3**
PBAR *e*Sn **Sn 07 14 03.3 0.0**
comp=E,8.0nm,0.1s
PESTR Estremoz 2.99 48 *e*Pn **Pn 07 13 28.8 +1.3**
PESTR *e*Sn **Sn 07 14 03.0 -0.4**
PESTR A 07 14 07.7
comp=E,9.4nm,0.4s
PESTR Estremoz 2.99 48 P **Pn 07 13 28.8 +1.3**
PESTR S **Sn 07 14 03.0 -0.4**
comp=E,4.7nm,0.4s
PESTR Estremoz 2.99 48 P **Pn 07 13 28.8 +1.3**
PESTR S **Sn 07 14 03.0 -0.4**
comp=E,4.7nm,0.4s
PESTR Estremoz 2.99 48 *e*Pn **Pn 07 13 28.8 +1.3**
PESTR *e*Sn **Sn 07 14 03.0 -0.4**
comp=E,9.4nm,0.4s
EMIN Mina Concepcio 3.12 73 P **Pn 07 13 30.5 +1.2**
EMIN S **Sn 07 14 06.3 -0.2**
EMIN Mina Concepcio 3.12 73 P **Pn 07 13 30.5 +1.2**
comp=E,0.9nm,0.3s,SNR=29
EMIN S **Sn 07 14 06.3 -0.2**
comp=E,13nm,0.3s,SNR=20
EMIN Mina Concepcio 3.12 73 P **Pn 07 13 30.5 +1.2**
comp=E,0.9nm,0.3s,SNR=29
EMIN S **Sn 07 14 06.3 -0.2**
comp=E,13nm,0.3s,SNR=20
EMIN Mina Concepcio 3.12 73 P **Pn 07 13 30.5 +1.3**
comp=E,0.9nm,0.3s,SNR=29
EMIN S **Sn 07 14 06.3 -0.3**
comp=E,13nm,0.3s,SNR=20
EBAD Badajoz 3.29 54 P **Pn 07 13 32.8 +1.3**
EBAD S **Sn 07 14 09.6 -1.0**
EBAD Badajoz 3.29 54 P **Pn 07 13 32.8 +1.3**
comp=E,1.3nm,0.4s,SNR=12
EBAD S **Sn 07 14 09.6 -1.0**
comp=E,7.6nm,0.3s,SNR=8.1
EBAD Badajoz 3.29 54 P **Pn 07 13 32.8 +1.3**
comp=E,1.3nm,0.4s,SNR=12
EBAD S **Sn 07 14 09.6 -1.0**
comp=E,7.6nm,0.3s,SNR=8.1
EBAD Badajoz 3.29 54 P **Pn 07 13 32.8 +1.3**
comp=E,1.3nm,0.4s,SNR=12
EBAD S **Sn 07 14 09.6 -1.0**
comp=E,7.6nm,0.3s,SNR=8.1
PMRV Marv??o 3.49 42 *e*Pn **Pn 07 13 34.5 +0.2**
PMRV *e*Sn **Sn 07 14 14.1 -1.5**
PMRV A 07 14 16.6
comp=E,11nm,0.2s
PMRV Marv??o 3.49 42 P **Pn 07 13 34.5 +0.2**
PMRV S **Sn 07 14 14.1 -1.5**
comp=E,11nm,0.2s
PMRV Marv??o 3.49 42 P **Pn 07 13 34.5 +0.2**
PMRV S **Sn 07 14 14.1 -1.5**
comp=E,11nm,0.2s
PMRV Marv??o 3.49 42 *e*Pn **Pn 07 13 34.5 +0.2**
PMRV *e*Sn **Sn 07 14 14.1 -1.5**
comp=E,11nm,0.2s
ESPR Espera 3.67 89 S **Sn 07 14 20.4 +0.4**
comp=E,12nm,0.3s,SNR=4.9
ESPR Espera 3.67 89 S **Sn 07 14 20.4 +0.4**
comp=E,12nm,0.3s,SNR=4.9
ESPR Espera 3.67 89 S **Sn 07 14 20.4 +0.3**
comp=E,12nm,0.3s,SNR=4.9
ECAB El Cabril 4.16 72 P **Pn 07 13 45.0 +1.5**
ECAB S **Sn 07 14 31.1 -1.1**
ECAB El Cabril 4.16 72 P **Pn 07 13 45.0 +1.5**
comp=E,1.3nm,0.3s,SNR=14
ECAB S **Sn 07 14 31.1 -1.1**
comp=E,5.8nm,0.3s
ECAB El Cabril 4.16 72 P **Pn 07 13 45.0 +1.5**
comp=E,1.3nm,0.3s,SNR=14
ECAB S **Sn 07 14 31.1 -1.1**
comp=E,5.8nm,0.3s
ECAB El Cabril 4.16 72 P **Pn 07 13 45.0 +1.5**
comp=E,1.3nm,0.3s,SNR=14
ECAB S **Sn 07 14 31.0 -1.2**
comp=E,5.8nm,0.3s
EPLA Plasencia 4.66 46 P **Pn 07 13 50.7 +0.4**
EPLA S **Sn 07 14 42.5 -2.0**
EPLA Plasencia 4.66 46 P **Pn 07 13 50.7 +0.4**
comp=E,2.6nm,0.4s,SNR=5.6
EPLA S **Sn 07 14 42.5 -2.0**
comp=E,4.6nm,0.3s,SNR=6.9
EPLA Plasencia 4.66 46 P **Pn 07 13 50.7 +0.4**
comp=E,2.6nm,0.4s,SNR=5.6
EPLA S **Sn 07 14 42.5 -2.0**
comp=E,4.6nm,0.3s,SNR=6.9
EPLA Plasencia 4.66 46 P **Pn 07 13 50.7 +0.3**
comp=E,2.6nm,0.4s,SNR=5.6
EPLA S **Sn 07 14 42.5 -2.0**
comp=E,4.6nm,0.3s,SNR=6.9
EADA Adamuz 4.83 73 P **Pn 07 13 53.9 +1.2**
EADA S **Sn 07 14 46.8 -1.8**
EADA Adamuz 4.83 73 P **Pn 07 13 53.9 +1.2**
comp=E,5.8nm,0.3s,SNR=6.6
EADA S **Sn 07 14 46.8 -1.8**
comp=E,2.0nm,0.5s
EADA Adamuz 4.83 73 P **Pn 07 13 53.9 +1.2**
comp=E,5.8nm,0.3s,SNR=6.6
EADA S **Sn 07 14 46.8 -1.8**
comp=E,2.0nm,0.5s
EADA Adamuz 4.83 73 P **Pn 07 13 53.9 +1.3**
comp=E,5.8nm,0.3s,SNR=6.6
EADA S **Sn 07 14 46.8 -1.8**
comp=E,2.0nm,0.5s
MVO Moncorvo 5.03 31 P **Pn 07 13 54.8 -0.6**
MVO S **Sn 07 14 49.4 -4.1**
MVO Moncorvo 5.03 31 P **Pn 07 13 54.8 -0.6**
comp=E,1.3nm,0.1s,SNR=6.4
MVO S **Sn 07 14 49.4 -4.1**
comp=E,5.6nm,0.3s,SNR=7.2
MVO Moncorvo 5.03 31 P **Pn 07 13 54.8 -0.6**
comp=E,1.3nm,0.1s,SNR=6.4
MVO S **Sn 07 14 49.4 -4.1**
comp=E,5.6nm,0.3s,SNR=7.2
MVO Moncorvo 5.03 31 P **Pn 07 13 54.8 -0.6**
comp=E,1.3nm,0.1s,SNR=6.4
MVO S **Sn 07 14 49.4 -4.1**
comp=E,5.6nm,0.3s,SNR=7.2
ELOB Lobios 5.30 20 P **Pn 07 13 58.4 -0.7**
ELOB S **Sn 07 14 54.8 -5.4**
ELOB Lobios 5.30 20 P **Pn 07 13 58.4 -0.7**
comp=E,9.5nm,1.1s,SNR=7.7
ELOB S **Sn 07 14 54.8 -5.4**
comp=E,5.5nm,0.3s,SNR=7.8
ELOB Lobios 5.30 20 P **Pn 07 13 58.4 -0.7**
comp=E,9.5nm,1.1s,SNR=7.7
ELOB S **Sn 07 14 54.8 -5.4**
comp=E,5.5nm,0.3s,SNR=7.8
ELOB Lobios 5.30 20 P **Pn 07 13 58.4 -0.7**
comp=E,9.5nm,1.1s,SNR=7.7
ELOB S **Sn 07 14 54.8 -5.5**
comp=E,5.5nm,0.3s,SNR=7.8
EZAM Zamans 5.42 14 P **Pn 07 13 59.8 -1.0**
EZAM S **Sn 07 14 57.3 -6.0**
EZAM Zamans 5.42 14 P **Pn 07 13 59.8 -1.0**
comp=E,14nm,0.2s,SNR=7.9
EZAM S **Sn 07 14 57.3 -6.0**
comp=E,10nm,0.1s,SNR=7.9
EZAM Zamans 5.42 14 P **Pn 07 13 59.8 -1.0**
comp=E,14nm,0.2s,SNR=7.9
EZAM S **Sn 07 14 57.3 -6.0**
comp=E,10nm,0.1s,SNR=7.9
EZAM Zamans 5.42 14 P **Pn 07 13 59.8 -1.0**
comp=E,14nm,0.2s,SNR=7.9
EZAM S **Sn 07 14 57.3 -6.0**
comp=E,10nm,0.1s,SNR=7.9
EBAN Banos Encina 5.44 74 P **Pn 07 14 02.0 +1.0**
EBAN S **Sn 07 15 01.0 -2.6**
EBAN Banos Encina 5.44 74 P **Pn 07 14 02.0 +1.0**
comp=E,1.5nm,0.1s,SNR=7.9
EBAN S **Sn 07 15 01.0 -2.6**
comp=E,2.1nm,0.1s,SNR=7.9
EBAN Banos Encina 5.44 74 P **Pn 07 14 02.0 +1.0**
comp=E,1.5nm,0.1s,SNR=7.9
EBAN S **Sn 07 15 01.0 -2.6**
comp=E,2.1nm,0.1s,SNR=7.9
EBAN Banos Encina 5.44 74 P **Pn 07 14 02.0 +1.0**
comp=E,1.5nm,0.1s,SNR=7.9
EBAN S **Sn 07 15 01.0 -2.6**
comp=E,2.1nm,0.1s,SNR=7.9
CIA Chichaoua 5.49 165 P **Pn 07 14 00.0 -1.7**
CIA S **Sn 07 14 56.0 -8.9**
CIA Chichaoua 5.49 165 P **Pn 07 14 00.0 -1.7**
CIA S **Sn 07 14 56.0 -8.9**
CIA Chichaoua 5.49 165 *i* P **Pn 07 14 00.0 -1.7**
MIF Mishlifen 5.50 128 P **Pn 07 14 02.0 +0.1**
MIF S **Sn 07 15 01.0 -4.1**
MIF Mishlifen 5.50 128 P **Pn 07 14 02.0 +0.1**
MIF S **Sn 07 15 01.0 -4.1**
MIF Mishlifen 5.50 128 *i* P **Pn 07 14 02.0 +0.1**
KIB El Ksiba 5.62 139 P **Pn 07 14 03.0 -0.6**
KIB S **Sn 07 15 02.0 -6.2**
KIB El Ksiba 5.62 139 P **Pn 07 14 03.0 -0.6**
KIB S **Sn 07 15 02.0 -6.2**
KIB El Ksiba 5.62 139 *i* P **Pn 07 14 03.0 -0.6**
TZC Tazercounte 5.74 144 P **Pn 07 14 04.0 -1.2**
TZC S **Sn 07 15 04.0 -7.1**
TZC Tazercounte 5.74 144 P **Pn 07 14 04.0 -1.2**
TZC S **Sn 07 15 04.0 -7.1**
TZC Tazercounte 5.74 144 *eP* **Pn 07 14 04.0 -1.2**
ECAL Calabor 5.80 28 P **Pn 07 14 05.8 -0.2**
ECAL S **Sn 07 15 07.6 -5.0**
ECAL Calabor 5.80 28 P **Pn 07 14 05.8 -0.2**
comp=E,3.3nm,0.5s,SNR=4.9
ECAL S **Sn 07 15 07.6 -5.0**
comp=E,6.5nm,0.3s,SNR=6.6
ECAL Calabor 5.80 28 P **Pn 07 14 05.8 -0.2**
comp=E,3.3nm,0.5s,SNR=4.9
ECAL S **Sn 07 15 07.6 -5.0**
comp=E,6.5nm,0.3s,SNR=6.6
ECAL Calabor 5.80 28 P **Pn 07 14 05.8 -0.2**
comp=E,3.3nm,0.5s,SNR=4.9
ESDC Sonseca Array 5.80 59 P **Pn 07 14 06.9 +0.8**
ESDC S **Sn 07 15 09.3 -3.3**
ESDC Sonseca Array 5.80 59 P **Pn 07 14 06.9 +0.8**
comp=E,0.6nm,0.3s,baz=243,slow=13,SNR=5.8
ESDC S **Sn 07 15 09.3 -3.3**
comp=E,2.1nm,0.2s,baz=245,slow=23,SNR=38
ESDC Sonseca Array 5.80 59 P **Pn 07 14 06.9 +0.8**
comp=E,0.6nm,0.3s,baz=243,slow=13,SNR=5.8
ESDC S **Sn 07 15 09.3 -3.3**
comp=E,2.1nm,0.2s,baz=245,slow=23,SNR=38
ESDC Sonseca Array 5.80 59 P **Pn 07 14 06.9 +0.9**
comp=E,0.6nm,0.3s,SNR=5.8
ESDC S **Sn 07 15 09.3 -3.3**
comp=E,2.1nm,0.2s,SNR=38
TZK Tazeka 5.81 117 P **Pn 07 14 05.0 -1.2**
TZK S **Sn 07 15 08.0 -4.9**
TZK Tazeka 5.81 117 P **Pn 07 14 05.0 -1.2**
TZK S **Sn 07 15 08.0 -4.9**
TZK Tazeka 5.81 117 *i* P **Pn 07 14 05.0 -1.2**
CZD Col de Zad 5.86 129 P **Pn 07 14 07.0 +0.1**
CZD S **Sn 07 15 08.0 -6.2**
CZD Col de Zad 5.86 129 P **Pn 07 14 07.0 +0.1**
CZD S **Sn 07 15 08.0 -6.2**
CZD Col de Zad 5.86 129 *i* P **Pn 07 14 07.0 +0.1**
EQES Quesada 5.94 79 S **Sn 07 15 14.1 -1.8**
comp=E,1.5nm,0.1s,SNR=7.9
EQES Quesada 5.94 79 S **Sn 07 15 14.1 -1.8**
comp=E,1.5nm,0.1s,SNR=7.9
EQES Quesada 5.94 79 S **Sn 07 15 14.1 -1.8**
comp=E,1.5nm,0.1s,SNR=7.9
OUK Oukaimeden 6.05 159 P **Pn 07 14 07.0 -2.5**
OUK S **Sn 07 15 10.0 -8.8**
OUK Oukaimeden 6.05 159 P **Pn 07 14 07.0 -2.5**
OUK S **Sn 07 15 10.0 -8.8**
EMAZ Mazaricos 6.16 10 P **Pn 07 14 09.2 -1.7**
EMAZ S **Sn 07 15 13.2 -8.2**
EMAZ Mazaricos 6.16 10 P **Pn 07 14 09.2 -1.7**
comp=E,3.6nm,0.2s,SNR=4.7
EMAZ S **Sn 07 15 13.2 -8.2**
comp=E,11nm,0.2s
EMAZ Mazaricos 6.16 10 P **Pn 07 14 09.2 -1.7**
comp=E,3.6nm,0.2s,SNR=4.7
EMAZ S **Sn 07 15 13.2 -8.2**
comp=E,11nm,0.2s
EMAZ Mazaricos 6.16 10 P **Pn 07 14 09.2 -1.7**
comp=E,3.6nm,0.2s,SNR=4.7
GUD Guadarrama 6.17 51 P **Pn 07 14 13.1 +1.9**
GUD S **Sn 07 15 18.1 -3.6**
GUD Guadarrama 6.17 51 P **Pn 07 14 13.1 +1.9**
comp=E,0.3nm,0.1s,SNR=7.9
GUD S **Sn 07 15 18.1 -3.6**
comp=E,0.9nm,0.2s,SNR=7.9
GUD Guadarrama 6.17 51 P **Pn 07 14 13.1 +1.9**
comp=E,0.3nm,0.1s,SNR=7.9
GUD S **Sn 07 15 18.1 -3.6**
comp=E,0.9nm,0.2s,SNR=7.9
GUD Guadarrama 6.17 51 P **Pn 07 14 13.1 +2.0**
comp=E,0.3nm,0.1s,SNR=7.9
GUD S **Sn 07 15 18.1 -3.7**
comp=E,0.9nm,0.2s,SNR=7.9
EHUE Huescar 6.32 79 S **Sn 07 15 24.2 -1.1**
comp=E,2.3nm,0.1s,SNR=7.9
EHUE Huescar 6.32 79 S **Sn 07 15 24.2 -1.1**
comp=E,2.3nm,0.1s,SNR=7.9
EVIA Vianos 6.52 72 S **Sn 07 15 27.7 -2.6**
comp=E,3.5nm,0.3s,SNR=7.9
EVIA Vianos 6.52 72 S **Sn 07 15 27.7 -2.6**
comp=E,3.5nm,0.3s,SNR=7.9
EVIA Vianos 6.52 72 S **Sn 07 15 27.7 -2.6**
comp=E,3.5nm,0.3s,SNR=7.9
EPON Pontenova 6.91 20 P **Pn 07 14 20.2 -0.9**
EPON S **Sn 07 15 33.5 -6.2**
EPON Pontenova 6.91 20 P **Pn 07 14 20.2 -0.9**
comp=E,2.7nm,0.3s,SNR=7.9
EPON S **Sn 07 15 33.5 -6.2**
comp=E,2.2nm,0.2s,SNR=7.9
EPON Pontenova 6.91 20 P **Pn 07 14 20.2 -0.9**
comp=E,2.7nm,0.3s,SNR=7.9
EPON S **Sn 07 15 33.5 -6.2**
comp=E,2.2nm,0.2s,SNR=7.9
EPON Pontenova 6.91 20 P **Pn 07 14 20.2 -1.0**
comp=E,2.7nm,0.3s,SNR=7.9
ZFT Errachidia 6.97 132 P **Pn 07 14 22.0 -0.2**
ZFT S **Sn 07 15 35.0 -6.6**
ZFT Errachidia 6.97 132 P **Pn 07 14 22.0 -0.2**
ZFT S **Sn 07 15 35.0 -6.6**
ZFT Errachidia 6.97 132 *i* P **Pn 07 14 22.0 -0.2**
YBT Youssef Ben Ta 7.07 173 P **Pn 07 14 20.0 -3.4**
YBT S **Sn 07 15 34.0 -10**
YBT Youssef Ben Ta 7.07 173 P **Pn 07 14 20.0 -3.4**
YBT S **Sn 07 15 34.0 -10**
ETOB Tobarra 7.25 73 P **Pn 07 14 26.9 +1.0**
ETOB S **Sn 07 15 45.8 -2.6**
ETOB Tobarra 7.25 73 P **Pn 07 14 26.9 +1.0**
comp=E,0.6nm,0.2s,SNR=7.9
ETOB S **Sn 07 15 45.8 -2.6**
comp=E,0.1nm,0.3s,SNR=7.9
ETOB Tobarra 7.25 73 P **Pn 07 14 26.9 +1.0**
comp=E,0.6nm,0.2s,SNR=7.9
ETOB S **Sn 07 15 45.8 -2.6**
comp=E,0.1nm,0.3s,SNR=7.9
ETOB Tobarra 7.25 73 P **Pn 07 14 26.9 +0.9**
comp=E,0.6nm,0.2s,SNR=7.9
ETOB S **Sn 07 15 45.8 -2.6**
comp=E,0.1nm,0.3s,SNR=7.9
ETOR Torete 7.62 56 P **Pn 07 14 31.4 +0.3**
ETOR S **Sn 07 15 52.6 -4.9**
ETOR Torete 7.62 56 S **Sn 07 15 52.6 -4.9**
comp=E,4.8nm,0.2s,SNR=7.9
ETOR Torete 7.62 56 S **Sn 07 15 52.6 -4.9**
comp=E,4.8nm,0.2s,SNR=7.9
ETOR Torete 7.62 56 P **Pn 07 14 31.4 +0.4**
comp=E,4.2nm,0.2s,SNR=7.9
ETOR S **Sn 07 15 52.6 -4.9**
comp=E,4.8nm,0.2s,SNR=7.9
EMOS Mosqueruela 8.53 63 P **Pn 07 14 45.1 +1.6**
EMOS S **Sn 07 16 16.1 -3.8**
EMOS Mosqueruela 8.53 63 S **Sn 07 16 16.1 -3.8**
comp=E,0.6nm,0.2s,SNR=7.9
EMOS Mosqueruela 8.53 63 S **Sn 07 16 16.1 -3.8**
comp=E,0.6nm,0.2s,SNR=7.9
EMOS Mosqueruela 8.53 63 P **Pn 07 14 45.1 +1.6**
comp=E,0.1nm,0.1s,SNR=7.9
EMOS S **Sn 07 16 16.1 -3.7**
comp=E,0.6nm,0.2s,SNR=7.9
SJPF Ste Jean 9.41 46 *e*Pn **Pn 07 14 55.2 -0.3**
SJPF *e*Sn **Sn 07 16 34.9 -6.4**
comp=E,2.1nm,0.4s
SJPF Ste Jean 9.41 46 P **Pn 07 14 55.2 -0.3**
SJPF S **Sn 07 16 34.9 -6.4**
comp=E,1.1nm,0.4s
SJPF Ste Jean 9.41 46 P **Pn 07 14 55.2 -0.3**
SJPF S **Sn 07 16 34.9 -6.4**
comp=E,1.1nm,0.4s
SJPF Ste Jean 9.41 46 *e*Pn **Pn 07 14 55.2 -0.3**
ETSF Etsaut 9.67 49 *e*Pn **Pn 07 14 59.3 +0.2**
ETSF *e*Sn **Sn 07 16 42.0 -5.8**
comp=E,1.2nm,0.5s
ETSF Etsaut 9.67 49 P **Pn 07 14 59.3 +0.2**
ETSF S **Sn 07 16 42.0 -5.8**
comp=E,0.6nm,0.5s
ETSF Etsaut 9.67 49 P **Pn 07 14 59.3 +0.2**
ETSF S **Sn 07 16 42.0 -5.8**
comp=E,0.6nm,0.5s
ETSF Etsaut 9.67 49 *e*Pn **Pn 07 14 59.3 +0.2**

IDC 18 07:59:15.2±3.5, 53°.60N×87°.86E, h0km, mb1 3.2/2, mb1mx3.1/26, mbtmp3.2/2, ML3.3/2, Error ellipse: s-maj=32.0km s-min=14.1km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.84**	**282**	Pg	Pg	07 59 47.7	-2.7
	4.6nm,0.3s,baz=100,slow=15,SNR=23						
ZALV				Lg		08 00 12.8	
	11nm,0.3s,baz=114,slow=28,SNR=17						
MKAR	**Makanchi Array**	**7.69**	**210**	Pn	Pn	08 01 09.4	+1.1
	0.4nm,0.3s,baz=28,slow=14,SNR=8.1						
MKAR				Sn	Sn	08 02 36.3	+0.3
	0.2nm,0.3s,baz=34,slow=25,SNR=6.3						
MKAR				Lg		08 03 17.8	
	0.2nm,0.3s,baz=21,slow=30,SNR=6.7						
BVAR	**Borovoye Array**	**10.47**	**274**	Pn	Pn	08 01 45.5	-0.9
	0.3nm,0.3s,baz=45,slow=25,SNR=3.1						
BVAR				Sn	Sn	08 03 40.5	-3.7
	0.6nm,0.3s,baz=68,slow=28,SNR=7.4						

NIED ***18*** *08:02:00, 44°.10N×148°.20E, h47km, Mw4.0 Best double couple: M0 1.02000×10^15 NP1:φs 241.00000°, δ66.00000°, λ-143.00000°. NP2:φs 134.00000°, δ56.00000°, λ-29.00000°.*

JMA ***18*** *08:02:40.9±0.4, 44°.11N×148°.22E, h0km, M4.7*

ISCJB ***18*** *08:02:40.7±0.7, 44°.55N±0°.05×148°.39E±0°.08, h67km±7km, mb3.7/9, Error ellipse: s-maj=11.0km s-min=5.7km az=41.9*

IDC ***18*** *08:02:41.6±0.8, 44°.65N×148°.43E, h59km±6km, mb3.6/9, mb1 3.8/13, mb1mx3.6/27, mbtmp3.6/13, MS3.0/4, Ms1 3.0/4, ms1mx2.8/28, Error ellipse: s-maj=23.8km s-min=11.3km az=160.0*

MOS ***18*** *08:02:41.5±1.3, 44°.62N×148°.27E, h77km, mb4.3/4, Error ellipse: s-maj=14.6km s-min=9.7km az=55.2*

SKHL ***18*** *08:02:43.4±1.2, 44°.66N×148°.31E, h39km±9km, mb5.5/2*

ISC 18 08:02:42.1±0.7, 44°.55N±0°.05×148°.40E±0°.08, h62km±8km, h58km±1.3km: pP-P, n52, σ1°.26/63, mb3.8/9, 3D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.79**	**331**	*e*PN	**Pn**	**08 02 55.8**	**-1.6**
KUR				*eS*	**Sn**	**08 03 06.0**	**-2.7**
KUR				pmax	pmax		
	comp=N,800nm,0.5s						
KUR				pmax	pmax		
	comp=E,550nm,0.5s						
KUR				pmax	pmax		
	comp=Z,3μm,0.5s						
KUR				pmax	pmax		
	comp=Z,5μm,1.0s						
KUR	**Kuril'sk**	**0.79**	**331**	*eP*	**Pn**	**08 02 55.8**	**-1.6**

KUR				AMB	AMB	08 02 56.0	
	comp=Z,920nm,0.3s						
KUR				AMB	AMB	08 02 56.0	
	comp=Z,720nm,0.3s						
KUR				AMB	AMB	08 02 56.0	
	comp=Z,3μm,0.3s						
KUR				AMB	AMB	08 02 56.0	
	comp=Z,5μm,1.0s						
KUR				*e*S	**Sn**	**08 03 06.0**	**-2.7**
KUR				A		08 03 10.0	
	comp=Z,22μm,1.0s						
KUR				A		08 03 10.0	
	comp=Z,12μm,1.0s						
KUR				A		08 03 10.0	
	comp=Z,50μm,1.2s						
KUR				A		08 03 10.0	
	comp=Z,20μm,1.2s						
YUK	**Yuzh-Kuril'sk**	**1.90 255**	*i* PN		**Pn**	**08 03 12.6**	**+0.5**
YUK			*i* S		**Sn**	**08 03 36.8**	**+1.9**
YUK			pmax	pmax			
	comp=N,270nm,0.1s						
YUK			pmax	pmax			
	comp=E,210nm,0.1s						
YUK			pmax	pmax			
	comp=Z,930nm,0.1s						
YUK			pmax	pmax			
	comp=Z,120nm,0.4s						
YUK			smax				
	comp=E,3μm,0.4s						
YUK			smax				
	comp=N,2μm,0.2s						
YUK			smax				
	comp=N,2μm,0.9s						
YUK			smax				
	comp=E,1μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.90 255** ⇓	*i* P		**Pn**	**08 03 12.5**	**+0.4**
YUK			AMB		AMB	08 03 13.0	
	comp=E,1μm,0.2s						
YUK			*i* S		**Sn**	**08 03 33.4**	**-1.5**
YUK			A			08 03 38.5	
	comp=E,2μm,0.5s						
YUK			A			08 03 38.5	
	comp=E,3μm,0.5s						
YUK			A			08 03 39.0	
	comp=E,5μm,1.0s						
NEM2	**Nemuro 2**	**2.25 239**	P		**Pn**	**08 03 15.7**	**-1.3**
NEM2			*e*S		**Sn**	**08 03 41.1**	**-2.6**
JRA	**Rausu**	**2.44 257**	P		**Pn**	**08 03 19.8**	**+0.4**
JNK	**Nakash**	**2.82 251**	P		**Pn**	**08 03 24.9**	**+0.2**
JNK			*e*S		**Sn**	**08 03 57.3**	**-0.3**
JAK	**Akkeshi**	**3.10 241**	P		**Pn**	**08 03 27.6**	**-0.9**
JAK			*e*S		**Sn**	**08 04 02.2**	**-2.1**
JTKR	**Abashiri--Toko**	**3.28 261**	P		**Pn**	**08 03 31.9**	**+0.9**
JAR	**Ashorobuto**	**3.57 251**	P		**Pn**	**08 03 36.0**	**+1.0**
JKK2	**Kamakawa 2**	**4.12 263**	P		**Pn**	**08 03 44.1**	**+1.6**
JCH	**Churui**	**4.14 244**	P		**Pn**	**08 03 42.6**	**-0.1**
ASAJ	**Asahikawa**	**4.19 266**	P		**Pn**	**08 03 44.2**	**+0.9**
	comp=E,6.4nm,0.3s,baz=54,slow=19,SNR=30						
ASAJ			S		**Sn**	**08 04 33.1**	**+2.1**
	comp=E,4.3nm,0.3s,baz=130,slow=8.7,SNR=2.6						
ASAJ			LR		LR	08 05 25.8	
	comp=E,157nm,21.3s,baz=172,slow=39						
ASAJ	**Asahikawa**	**4.19 266**	PN		**Pn**	**08 03 44.3**	**+0.9**
ASAJ			S		**Sn**	**08 04 33.1**	**+2.1**
ASAJ			pmax	pmax			
	comp=Z,6.0nm,0.3s						
ASAJ			smax				
	comp=N,4.0nm,0.3s						
ASAJ			MLR	MLR			
	comp=Z,157nm,21.3s						
JFR	**Furan**	**4.42 254**	P		**Pn**	**08 03 48.9**	**+2.3**
ERM	**Erimo**	**4.59 238**	*i* PN		**Pn**	**08 03 50.2**	**+1.3**
YSS	**Yuzh-Sakhalins**	**4.63 303** ⇓	*e*PN		**Pn**	**08 03 50.0**	**+0.6**
YSS			*e*S		**Sn**	**08 04 41.8**	**0.0**
YSS	**Yuzh-Sakhalins**	**4.63 303** ⇓	*e*P		**Pn**	**08 03 50.0**	**+0.6**
YSS			*e*S		**Sn**	**08 04 41.8**	**0.0**
JWK2	**Keihoku**	**4.68 282**	P		**Pn**	**08 03 53.7**	**+3.6**
JNBK	**Urakawa-nobuka**	**4.70 243**	P		**Pn**	**08 03 50.3**	**-0.1**
JHR	**Hokuryu**	**4.87 263**	P		**Pn**	**08 03 56.1**	**+3.4**
JSK	**Shakotan**	**5.85 261**	P		**Pn**	**08 04 08.6**	**+2.5**
JKB	**Kayabe**	**6.00 246**	P		**Pn**	**08 04 08.5**	**+0.2**
JKB			*e*S		**Sn**	**08 05 12.9**	**-2.7**
JOT	**Ohata**	**6.25 242**	P		**Pn**	**08 04 11.1**	**-0.6**
JOT			*e*S		**Sn**	**08 05 18.3**	**-3.4**
JANG	**Nango**	**6.58 233**	P		**Pn**	**08 04 14.2**	**-2.0**
JOSM	**Okushiri--Mats**	**6.96 252**	P		**Pn**	**08 04 22.3**	**+1.0**
JOSM			*e*S		**Sn**	**08 05 39.3**	**+0.3**
PETK	**Petropavlovsk-**	**10.53 32**	P		**Pn**	**08 05 09.9**	**0.0**
	comp=Z,0.2nm,0.3s,baz=189,slow=8.8,SNR=4.8						
PETK	**Petropavlovsk-**	**10.53 32**	*e*PN		**Pn**	**08 05 13.4**	**+3.4**
PET	**Petropavlovsk**	**10.84 35**	*i* PN		**Pn**	**08 05 15.4**	**+1.2**
MAJO	**Matsushiro**	**11.13 228**	*e*PN		**Pn**	**08 05 18.5**	**+0.1**
MJAR	**Matsushiro Arr**	**11.13 228**	P		**Pn**	**08 05 18.0**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=25,slow=13,SNR=6.1						
KLR	**Kul'dur**	**12.31 298**	*e*PN		**Pn**	**08 05 34.5**	**+0.1**
KSRS	**Korea Array**	**16.98 252**	P		**Pn**	**08 06 35.1**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=58,slow=12,SNR=5.7						
KSRS			LR		LR	08 12 24.4	
	comp=Z,26nm,20.3s,baz=210,slow=34						
KSRS	**Korea Array**	**16.98 252**	*e*P		**Pn**	**08 06 35.0**	**-0.3**
SONM	**Songino Array**	**29.01 292**	LR		LR	08 22 30.5	
	comp=Z,46nm,18.3s,baz=355,slow=41						
ILAR	**Eielson Array**	**40.31 37**	P		**P**	**08 10 12.4**	**-0.4**
	comp=Z,0.3nm,0.5s,mb3.3,baz=266,slow=8.0,SNR=8.1						
MKAR	**Makanchi Array**	**45.02 297**	P		**P**	**08 10 50.8**	**-0.4**
	comp=Z,0.3nm,0.2s,mb3.7,baz=75,slow=8.8,SNR=3.4						
INK	**Inuvik**	**45.26 31**	P		**P**	**08 10 51.5**	**-1.4**
	comp=Z,0.6nm,0.5s,mb3.7,baz=182,slow=9.2,SNR=14						
INK	**Inuvik**	**45.26 31**	P		**P**	**08 10 51.5**	**-1.3**
INK			pmax	pmax			
	comp=Z,1.0nm,0.5s						
ARCES	**ARCESS Array B**	**58.81 340**	LR		LR	08 39 48.8	
	comp=Z,17nm,19.7s,baz=99,slow=38						
FFC	**Flin Flon**	**64.52 37**	*i* P		**P**	**08 13 13.0**	**+1.0**
FINES	**FINESS Array B**	**64.57 333**	P		**P**	**08 13 10.0**	**-2.2**
	comp=Z,1.7nm,0.6s,mb4.3,baz=40,slow=7.4,SNR=4.6						
FINES	**FINESS Array B**	**64.57 333**	P		**P**	**08 13 10.0**	**-2.3**
FINES			pmax	pmax			
	comp=Z,2.0nm,0.6s						
NVAR	**Mina Array Bea**	**66.39 59**	P		**P**	**08 13 24.0**	**-0.4**
	comp=Z,1.1nm,0.9s,mb3.9,baz=283,slow=6.3,SNR=6.2						
NVAR			pP		pP	08 13 40.1	-0.9
	comp=Z,0.6nm,0.7s,baz=302,slow=6.3,SNR=4.3						
PDAR	**Pinedale Array**	**68.71 51**	P		**P**	**08 13 39.5**	**+0.5**
	comp=Z,0.8nm,1.0s,mb3.6,baz=336,slow=3.3,SNR=5.1						
PDAR			pP		pP	08 13 55.1	-0.5
	comp=Z,0.7nm,0.7s,baz=297,slow=1.0,SNR=4.6						
ASAR	**Alice Springs**	**69.16 194**	P		**P**	**08 13 42.5**	**+0.7**
	comp=Z,0.4nm,0.5s,mb3.6,baz=9.7,slow=6.2,SNR=7.6						
ASAR	**Alice Springs**	**69.16 194**	*e*P		**P**	**08 13 43.0**	**+1.2**
NB2	**NORSAR Subarra**	**69.18 339**	P		**P**	**08 13 40.6**	**-0.9**
	comp=Z,0.9nm,0.4s,mb4.0,baz=29,slow=6.2						
NOA	**NORSAR Array B**	**69.18 339**	P		**P**	**08 13 40.7**	**-0.8**
	comp=Z,1.9nm,0.4s,mb4.4,baz=30,slow=6.3,SNR=11						
NOA	**NORSAR Array B**	**69.18 339**	P		**P**	**08 13 40.7**	**-0.8**
NOA			pmax	pmax			
	comp=Z,2.0nm,0.4s						
TXAR	**Lajitas Array**	**81.46 57**	P		**P**	**08 14 52.6**	**0.0**
	comp=Z,0.7nm,0.5s,mb3.9,baz=297,slow=4.2,SNR=22						
TXAR			pP		pP	08 15 07.9	-1.8
	comp=Z,1.0nm,0.6s,baz=299,slow=3.8,SNR=11						
TORD	**Torodi Ar. Bea**	**115.10 324**	PKP		PKiKP	08 21 15.1	-1.4
	comp=Z,0.2nm,0.7s,baz=36,slow=0.2,SNR=4.1						

ISCJB ***18*** *08:18:25.6±0.6, 43°.35N×0°.04×45°.67E±0°.03, h5km±4km, Error ellipse: s-maj=7.0km s-min=3.4km az=17.3*
CSEM ***18*** *08:18:26.1, 43°.31N×45°.65E, h24km, mb4.0, After OBN*
MOS ***18*** *08:18:26.7±0.7, 43°.31N×45°.65E, h24km, mb4.0/1, Error ellipse: s-maj=15.4km s-min=9.5km az=176.3*
ISC 18 08:18:26.6±0.6, **43°.30N**±0°.04×**45°.65E**±0°.03, **h1**km±5km, **n33**, σ1s**12**/65, **1C, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNJR	**Sundja**	**0.65 250**		*e*PG	**Pg**	**08 18 39.0**	**-0.1**
SNJR				*e*S	**Sg**	**08 18 48.7**	**+1.1**
SNJR	**Sundja**	**0.65 250**		*e*Pg	**Pg**	**08 18 39.0**	**-0.1**
SNJR				*e*Sg	**Sg**	**08 18 48.7**	**+1.1**
VLKR	**Vladikavkaz**	**0.75 251**		*e*PG	**Pg**	**08 18 40.9**	**-0.1**
VLKR				*e*S	**Sg**	**08 18 52.0**	**+1.2**
VLKR	**Vladikavkaz**	**0.75 251**		*e*Pg	**Pg**	**08 18 40.9**	**-0.1**
VLKR				*e*Sg	**Sg**	**08 18 52.0**	**+1.2**
TRKR	**Terskaya**	**0.79 303**		*e*PG	**Pg**	**08 18 42.2**	**+0.4**
TRKR				*e*S	**Sg**	**08 18 54.2**	**+2.2**
TRKR	**Terskaya**	**0.79 303**		*e*Pg	**Pg**	**08 18 42.2**	**+0.4**
TRKR				*e*Sg	**Sg**	**08 18 54.2**	**+2.2**
BTKR	**Batakoyurt**	**0.81 276**		*e*PG	**Pg**	**08 18 42.0**	**-0.2**
BTKR				*e*S	**Sg**	**08 18 54.1**	**+1.4**
BTKR	**Batakoyurt**	**0.81 276**		*e*Pg	**Pg**	**08 18 42.0**	**-0.2**
BTKR				*e*Sg	**Sg**	**08 18 54.1**	**+1.4**
DBC	**Dubki**	**0.91 107**		*e*PG	**Pg**	**08 18 43.0**	**-1.0**
DBC				*e*S	**Sg**	**08 18 56.0**	**+0.2**
DBC	**Dubki**	**0.91 107**		*e*Pg	**Pg**	**08 18 43.0**	**-1.0**
DBC				*e*Sg	**Sg**	**08 18 56.0**	**+0.2**
KMSR	**Komsomolskaya**	**0.99 275**		*e*PG	**Pg**	**08 18 45.4**	**-0.2**
KMSR				*e*S	**Sg**	**08 18 59.5**	**+1.0**
KMSR	**Komsomolskaya**	**0.99 275**		*e*Pg	**Pg**	**08 18 45.4**	**-0.2**
KMSR				*e*Sg	**Sg**	**08 18 59.5**	**+1.0**
ARNR	**Ardon**	**1.01 264**		*e*PG	**Pg**	**08 18 45.3**	**-0.6**
ARNR				*e*S	**Sg**	**08 18 59.5**	**+0.6**
ARNR	**Ardon**	**1.01 264**		*e*Pg	**Pg**	**08 18 45.3**	**-0.6**
ARNR				*e*Sg	**Sg**	**08 18 59.5**	**+0.6**
UNCR	**Uncukul**	**1.02 124**		*e*PG	**Pg**	**08 18 46.0**	**-0.2**
UNCR				*e*S	**Sg**	**08 19 01.5**	**+2.0**
UNCR				pmax	pmax		
	comp=Z,32nm,0.3s						
UNCR	**Uncukul**	**1.02 124**		*e*Pg	**Pg**	**08 18 46.0**	**-0.2**
	comp=Z,32nm,0.3s						
UNCR				*e*Sg	**Sg**	**08 19 01.5**	**+2.0**
PRTR	**Priterechnaya**	**1.09 295**		*e*PG	**Pg**	**08 18 47.1**	**-0.5**
PRTR				*e*S	**Sg**	**08 19 03.0**	**+1.3**
PRTR	**Priterechnaya**	**1.09 295**		*e*Pg	**Pg**	**08 18 47.1**	**-0.5**
PRTR				*e*Sg	**Sg**	**08 19 03.0**	**+1.3**
LACR	**Lac**	**1.10 245** ⇑		*i*PG	**Pg**	**08 18 46.2**	**-1.4**
LACR				*e*S	**Sg**	**08 19 01.5**	**-0.4**
LACR	**Lac**	**1.10 245**		*i* Pg	**Pg**	**08 18 46.2**	**-1.4**
LACR				*e*Sg	**Sg**	**08 19 01.5**	**-0.4**
KORR	**Kora**	**1.18 260**		*e*PG	**Pg**	**08 18 47.8**	**-1.3**
KORR				*e*S	**Sg**	**08 19 04.0**	**-0.4**
KORR	**Kora**	**1.18 260**		*e*Pg	**Pg**	**08 18 47.8**	**-1.3**
KORR				*e*Sg	**Sg**	**08 19 04.0**	**-0.4**
LSNR	**Lesken**	**1.34 270**		*e*PG	**Pn**	**08 18 50.3**	**-2.2**
LSNR				*e*S	**Sg**	**08 19 08.6**	**-1.0**
LSNR	**Lesken**	**1.34 270**		*e*Pg	**Pn**	**08 18 50.3**	**-2.2**
LSNR				*e*Sg	**Sg**	**08 19 08.6**	**-1.0**
ZEI	**Tsey**	**1.39 248**		*e*PG	**Pn**	**08 18 50.4**	**-2.7**
ZEI				*e*S	**Sg**	**08 19 08.8**	**-2.4**
ZEI	**Tsey**	**1.39 248**		*e*Pg	**Pn**	**08 18 50.4**	**-2.7**
ZEI				*e*Sg	**Sg**	**08 19 08.8**	**-2.4**
TBLG	**Delisi**	**1.70 204**		*e*PN	**Pn**	**08 18 56.9**	**-0.6**
TBLG				*e*S	**Sg**	**08 19 20.9**	**-0.4**
TBLG	**Delisi**	**1.70 204**		P	**Pn**	**08 18 56.9**	**-0.5**
TBLG				S	**Sn**	**08 19 20.9**	**+1.0**
TBLG	**Delisi**	**1.70 204**		*e*Pn	**Pn**	**08 18 56.9**	**-0.6**
TBLG				*e*Sg	**Sg**	**08 19 20.9**	**-0.4**
MTA	**Mtatsminda**	**1.72 202**		P	**Pn**	**08 18 57.2**	**-0.5**
MTA				S	**Sn**	**08 19 21.2**	**+0.8**
GOR	**Gori**	**1.73 221**		P	**Sn**	**08 19 21.9**	**+1.2**
ONI	**Oni**	**1.76 247**		P	**Pn**	**08 18 57.1**	**-1.2**
ONI				S	**Sn**	**08 19 21.3**	**0.0**
DGRG	**David-gareji**	**1.86 186**		P	**Pn**	**08 19 01.1**	**+1.5**
DGRG				S	**Sg**	**08 19 30.3**	**+4.1**

RSPR ***18*** *08:53:31.4, 17°.79N×61°.19W, h76km±19km*
TRN 18 08:53:29.0, 17°.52N×61°.24W, h19km, **MD3.5, 7C-5D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BPA	**Boggy Peak**	**0.76 231** ⇓		*e*P	Pb	08 53 46.3	+2.8
BPA				*e*S	Sb	08 53 58.1	+4.6
SEG	**Port Louis**	**1.14 193** ⇑		*i*P	Pn	08 53 50.8	+0.9
SKI	**Saint Kitts**	**1.45 263**		*e*P	Pn	08 53 57.0	+2.8
SKI				*e*S	Sn	08 54 16.9	+4.4
LZG	**Guadaloupe-1**	**1.47 201**		*e*P	Pn	08 53 56.1	+1.7
BCG	**Bois Riant Cap**	**1.48 195**		*e*P	Pn	08 53 55.9	+1.4
SCG	**Saint Claude**	**1.55 196**		*e*P	Pn	08 53 57.3	+1.9
PHG	**Guadaloupe-2**	**1.55 195**		*e*P	Pn	08 53 57.2	+1.7
HMG	**Houelmont**	**1.59 196**		*e*P	Pn	08 53 58.9	+2.8
MGG	**Marie-Galante**	**1.60 183**		*e*P	Pn	08 53 57.9	+1.7
SEUS	**St. Eustatius**	**1.67 269** ⇓		*e*P	Pn	08 53 59.5	+2.4
SEUS	**St. Eustatius**	**1.67 269**		*e*S	Sn	08 54 20.3	+2.3
SEUS	**St. Eustatius**	**1.67 269** ⇓		*e*P	Pn	08 53 59.5	+2.4
SEUS				*e*S	Sn	08 54 20.3	+2.3
SABA	**Saba**	**1.92 273** ⇑		*e*P	Pn	08 54 02.6	+2.0
SABA	**Saba**	**1.92 273** ⇑		*e*P	Pn	08 54 02.6	+2.0
STVI	**Saint Thomas**	**3.63 284** ⇑		*e*P	Pn	08 54 24.5	+0.3
STVI	**Saint Thomas**	**3.63 284**		*e*S	Sn	08 55 07.1	+0.6
STVI	**Saint Thomas**	**3.63 284** ⇑		*e*P	Pn	08 54 24.5	+0.3
STVI				*e*S	Sn	08 55 07.1	+0.6
MTP	**Monte Pirata**	**4.15 279** ⇓		*e*P	Pn	08 54 32.6	+1.2
MTP	**Monte Pirata**	**4.15 279**		*e*S	Sn	08 55 20.5	+1.1
MTP	**Monte Pirata**	**4.15 279** ⇓		*e*P	Pn	08 54 32.6	+1.2
MTP				*e*S	Sn	08 55 20.5	+1.1
HUMP	**Col San Antoni**	**4.44 279** ⇑		*e*P	Pn	08 54 37.3	+2.1
HUMP	**Col San Antoni**	**4.44 279**		*e*S	Sn	08 55 27.8	+1.4
HUMP	**Col San Antoni**	**4.44 279** ⇑		*e*P	Pn	08 54 37.3	+2.1
HUMP				*e*S	Sn	08 55 27.8	+1.4

TRN ***18*** *08:58:04.5, 10°.09N×61°.87W, h21km, MD3.0*
ISCJB ***18*** *08:58:06.4±0.4, 10°.08N±0°.03×61°.75W±0°.04, h23km±4km, Error ellipse: s-maj=5.8km s-min=5.4km az=11.9*
FUNV ***18*** *08:58:06.6, 10°.14N×61°.66W, h23km, MW3.4*
ISC 18 08:58:06.7±0.4, **10°.10N**±0°.03×**61°.75W**±0°.03, **h21**km±4km, **n14**, σ0s**96**/27, **2C-2D, Trinidad**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUAY	**Buenos Aires**	**0.07 80** ⇑		*i*P	**Pb**	**08 58 09.2**	**-1.3**
BUAY				*e*S	**Sb**	**08 58 13.3**	**+0.3**
ALNG	**Atlantic LNG**	**0.11 36** ⇑		*i*P	**Pb**	**08 58 09.6**	**-1.2**
ALNG				*e*S	**Sb**	**08 58 13.7**	**+0.1**
TPP	**Pointe-a-Pierr**	**0.37 53** ⇓		*i*P	**Pb**	**08 58 14.0**	**-0.6**
TPP				*e*S	**Sb**	**08 58 21.7**	**+1.8**
TCE	**Chacachacare**	**0.60 360** ⇓		*e*P	**Pb**	**08 58 17.7**	**-0.8**
TCE				*e*S	**Sb**	**08 58 24.9**	**-1.6**
TRN	**Trinidad (W)**	**0.65 32**		*e*P	**Pb**	**08 58 18.4**	**-0.9**
TRN				*e*S	**Sb**	**08 58 29.2**	**+1.3**
GUIV	**Guiria**	**0.72 320**		*e*P	**Pb**	**08 58 21.1**	**+0.5**
GUIV				*e*S	**Sb**	**08 58 30.7**	**+0.8**
TBH	**Brigand Hill**	**0.78 60**		*e*P	**Pb**	**08 58 21.3**	**-0.3**
TBH				*e*S	**Sb**	**08 58 33.8**	**+2.2**
GUNV	**Guanoco**	**1.17 273**		*e*P	**Pn**	**08 58 29.0**	**+1.1**
GUNV				*e*S	**Sb**	**08 58 45.1**	**+2.0**
TPR	**Prospect**	**1.45 41**		*e*P	**Pn**	**08 58 31.2**	**-0.5**
CRUV	**Carupano**	**1.57 292**		*e*P	**Pn**	**08 58 33.3**	**-0.1**
CRUV				*e*S	**Sn**	**08 58 52.2**	**-0.9**
ITEV	**Isla Los Testi**	**1.84 313**		*e*P	**Pn**	**08 58 36.3**	**-0.7**
ITEV				*e*S	**Sn**	**08 58 59.6**	**-0.3**
ORIV	**Oritupano**	**1.93 238**		*e*P	**Pn**	**08 58 38.5**	**+0.2**
ORIV				*e*S	**Sn**	**08 59 02.8**	**+0.9**
RIOV	**Rio Grande**	**2.02 182**		*e*P	**Pn**	**08 58 39.7**	**+0.2**
RIOV				*e*S	**Sn**	**08 59 04.0**	**-0.1**
GURV	**El Guri**	**2.67 210**		*e*P	**Pn**	**08 58 47.6**	**-0.9**
GURV				*e*S	**Sn**	**08 59 20.0**	**-0.3**

TRN ***18*** *09:22:27.8, 10°.04N×61°.96W, h23km, MD3.0*
NEIC ***18*** *09:22:30.0, 10°.12N×61°.84W, h26km, MD3.0(TRN), After TRN.*
ISCJB ***18*** *09:22:31.5±0.8, 10°.11N±0°.06×61°.70W±0°.04, h27km±5km, Error ellipse: s-maj=9.8km s-min=5.9km az=179.2*
FUNV ***18*** *09:22:32.1, 10°.22N×61°.60W, h28km, MW2.9*
ISC 18 09:22:31.9±0.8, **10°.14N**±0°.05×**61°.68W**±0°.05, **h24**km±4km, **n17**, σ0s**73**/32, **4C, Trinidad**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUAY	**Buenos Aires**	**0.03 190** ⇑		*i*P	**Pb**	**09 22 35.2**	**-0.8**
BUAY				*e*S	**Sb**	**09 22 38.7**	**-0.1**
BUAY	**Buenos Aires**	**0.03 190** ⇑		*i*P	**Pb**	**09 22 35.2**	**-0.8**
BUAY				*e*S	**Sb**	**09 22 38.7**	**-0.1**
ALNG	**Atlantic LNG**	**0.05 351**		*e*P	**Pb**	**09 22 35.6**	**-0.5**
ALNG				*e*S	**Sb**	**09 22 39.6**	**+0.7**
ALNG	**Atlantic LNG**	**0.05 351**		*e*P	**Pb**	**09 22 35.6**	**-0.5**
ALNG				*e*S	**Sb**	**09 22 39.6**	**+0.7**
TPP	**Pointe-a-Pierr**	**0.29 51**		*e*P	**Pb**	**09 22 38.7**	**0.0**
TPP				*e*S	**Sb**	**09 22 48.9**	**+5.6**
TPP	**Pointe-a-Pierr**	**0.29 51**		*e*P	**Pb**	**09 22 38.7**	**0.0**
TPP				*e*S	**Sb**	**09 22 48.9**	**+5.6**
TCE	**Chacachacare**	**0.56 353**		*e*P	**Pb**	**09 22 41.6**	**-1.5**
TCE				*e*S	**Sb**	**09 22 51.3**	**+0.5**
TCE	**Chacachacare**	**0.56 353**		*e*P	**Pb**	**09 22 41.6**	**-1.5**
TCE				*e*S	**Sb**	**09 22 51.3**	**+0.5**
TRN	**Trinidad (W)**	**0.58 28**		*e*P	**Pb**	**09 22 43.5**	**+0.1**
TRN				*e*S	**Sb**	**09 22 50.4**	**-0.8**
TRN	**Trinidad (W)**	**0.58 28**		*e*P	**Pb**	**09 22 43.5**	**+0.1**
TRN				*e*S	**Sb**	**09 22 52.5**	**+1.2**
TBH	**Brigand Hill**	**0.70 60** ⇑		*e*P	**Pb**	**09 22 46.6**	**+1.2**
TBH				*e*S	**Sb**	**09 23 02.1**	**+7.5**
TBH	**Brigand Hill**	**0.70 60** ⇑		*e*P	**Pb**	**09 22 46.0**	**+0.6**
TBH				*e*S	**Sb**	**09 23 00.2**	**+5.6**
GUIV	**Guiria**	**0.74 314**		*e*P	**Pb**	**09 22 45.6**	**-0.4**
GUIV				*e*S	**Sb**	**09 22 56.7**	**+0.9**
GUNV	**Guanoco**	**1.24 271**		*e*P	**Pn**	**09 22 54.3**	**+0.6**
GUNV				*e*S	**Sn**	**09 23 10.5**	**+0.8**
ITEV	**Isla Los Testi**	**1.87 311**		*e*P	**Pn**	**09 23 01.6**	**-0.8**
ITEV				*e*S	**Sn**	**09 23 24.4**	**-0.8**
CUPV	**Cœpira**	**4.04 269**		*e*P	**Pn**	**09 23 31.9**	**-0.4**
CAOV	**Caicara del Or**	**5.37 239**		*e*P	**Pn**	**09 23 51.0**	**+0.5**

NIED ***18*** *09:27:00, 43°.30N×147°.90E, h17km, Mw3.9 Best double couple: M0=8.86000×10^14 NP1:φ=42.00000°, δ=61.00000°, λ=90.00000°. NP2:φ=223.00000°, δ=29.00000°, λ=91.00000°.*
JMA ***18*** *09:27:51.0±0.5, 43°.26N×147°.88E, h0km, M4.0*
ISCJB ***18*** *09:27:54.8±1.1, 43°.29N±0°.06×147°.89E±0°.09, h40km±8km, mb4.0/18, Error ellipse: s-maj=12.9km s-min=7.7km az=40.0*
MOS ***18*** *09:27:56.0±0.8, 43°.47N×147°.80E, h44km, mb4.4/11, Error ellipse: s-maj=12.7km s-min=10.5km az=99.4*
NEIC ***18*** *09:27:58.2±0.9, 43°.51N×147°.74E, h42km±8km, mb4.4/5, Error ellipse: s-maj=12.2km s-min=6.6km az=147.0*
IDC ***18*** *09:27:59.0±2.8, 43°.48N×147°.70E, h52km±25km, mb3.6/13, mb1 3.8/16, mb1mx3.6/27, mbtmp3.6/16, ML3.4/3, MS3.5/2, Ms1 3.5/2, ms1mx2.9/29, Error ellipse: s-maj=24.1km s-min=16.9km az=154.0*
ISC 18 09:27:56.7±1.0, **43°.32N**±0°.06×**147°.81E**±0°.08, **h37**km±7km, **n58**, σ0s**98**/64, **mb4.0**/18, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.51 273**		P	**Pn**	**09 28 20.2**	**-1.0**
NEM2				*e*S	**Sn**	**09 28 41.1**	**+1.5**
YUK	**Yuzh-Kuril'sk**	**1.58 298**		*i* PN	**Pn**	**09 28 21.6**	**-0.7**
YUK				*i* S	**Sn**	**09 28 43.3**	**+1.8**
YUK				pmax	pmax		
	comp=Z,200nm,0.5s						
YUK				pmax	pmax		
	comp=N,290nm,0.5s						
YUK				pmax	pmax		
	comp=E,420nm,0.5s						
YUK				pmax	pmax		
	comp=Z,480nm,0.5s						
YUK				smax			
	comp=N,1μm,0.6s						
YUK				smax			
	comp=E,1μm,0.6s						
YUK				smax			
	comp=N,1μm,0.6s						
YUK				smax			
	comp=E,2μm,0.6s						
KUR	**Kuril'sk**	**1.92 1**		*e*PN	**Pn**	**09 28 24.6**	**-2.2**
KUR				S	**Sn**	**09 28 51.0**	**+1.3**
KUR				pmax	pmax		
	comp=Z,210nm,0.5s						
KUR				smax			
	comp=N,460nm,0.5s						
KUR				smax			
	comp=E,150nm,0.5s						
JRA	**Rausu**	**2.05 289**		P	**Pn**	**09 28 28.0**	**-0.6**
JNK	**Nakash**	**2.27 278**		P	**Pn**	**09 28 30.8**	**-0.8**
JAK	**Akkeshi**	**2.30 263**		P	**Pn**	**09 28 31.6**	**-0.5**
JTKR	**Abashiri--Toko**	**2.91 284**		P	**Pn**	**09 28 40.6**	**+0.2**
JOB	**Onbets**	**2.94 263**		P	**Pn**	**09 28 40.9**	**0.0**
JAR	**Ashorobuto**	**2.95 271**		P	**Pn**	**09 28 40.8**	**-0.2**
JCH	**Churui**	**3.34 259**		P	**Pn**	**09 28 46.3**	**-0.1**
ERM	**Erimo**	**3.67 251**		*e*PN	**Pn**	**09 28 52.5**	**+1.6

ARCES pmax pmax
comp=Z,1.0nm,0.5s
WRA Warramunga Arr 64.15 194 P P 09 38 28.6 +1.3
comp=Z,0.3nm,0.8s,mb3.4,baz=12,slow=6.7,SNR=5.0
FINES FINESS Array B 65.48 333 P P 09 38 34.9 -0.6
comp=Z,2.9nm,0.6s,mb4.5,baz=46,slow=8.2,SNR=9.8
FINES FINESS Array B 65.48 333 P **P 09 38 34.9 -0.7**
FINES pmax pmax
comp=Z,3.0nm,0.6s
FINES FINESS Array B 65.48 333 P P 09 38 34.9 -0.6
NB2 NORSAR Subarra 70.18 339 P P 09 39 04.5 -0.6
comp=Z,2.2nm,0.6s,mb4.3,baz=31,slow=6.5
NOA NORSAR Array B 70.18 339 P P 09 39 04.3 -0.8
comp=Z,1.6nm,0.5s,mb4.2,baz=31,slow=6.2,SNR=11
NOA NORSAR Array B 70.18 339 P **P 09 39 04.4 -0.7**
NOA pmax pmax
comp=Z,2.0nm,0.5s
AKASG Malin Array Be 72.21 324 P P 09 39 16.6 -1.1
comp=Z,0.7nm,0.3s,mb4.0,baz=39,slow=6.4,SNR=7.9
AKASG Malin Array Be 72.21 324 P **P 09 39 16.6 -1.0**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AGMN Agassiz Nation 72.98 39 *eP* **P 09 39 23.1 +0.9**
comp=Z,7.2nm,1.0s,mb4.6
TXAR Lajitas Array 82.49 57 P P 09 40 16.3 +0.8
comp=Z,0.2nm,0.6s,mb3.2,baz=302,slow=2.8,SNR=3.7
TXAR LR LR 10 11 09.1
comp=Z,67nm,21.7s,baz=180,slow=31

IDC 18 09:34:44.5±1.1, 13°98N×144°97E, h159km±3km, mb3.3/4, mb1 3.5/4, mb1mx3.1/24, mbtmp3.3/4, MS3.2/1, Ms1 3.2/1, ms1mx2.4/8, Error ellipse: s-maj=143.3km s-min=19.5km az=108.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.40**	**194**	P	Pn	09 35 07.9	+1.4
GUMO	112nm,0.3s,baz=331,slow=1.1,SNR=18			S	Sn	09 35 24.6	+1.2
	203nm,0.3s,baz=69,slow=23,SNR=50						
JHJ	**Hachijo jima 2**	**19.63**	**347**	LR	LR	09 46 15.0	
	comp=Z,69nm,18.8s,baz=95,slow=35						
WRA	**Warramunga Arr**	**35.29**	**197**	P	P	09 41 24.5	+0.2
	1.7nm,0.5s,baz=21,slow=9.7,SNR=38						
ASAR	**Alice Springs**	**38.95**	**196**	P	P	09 41 55.1	+0.1
	0.6nm,0.5s,baz=17,slow=12,SNR=11						
STKA	**Stephens Creek**	**45.71**	**184**	P	P	09 42 49.9	+0.2
	1.1nm,0.4s,baz=11,slow=9.8,SNR=5.9						
ILAR	**Eielson Array**	**68.18**	**25**	P	P	09 45 26.9	-0.3
	0.2nm,0.4s,baz=253,slow=5.7,SNR=6.9						

IDC 18 09:35:18.9±3.0, 32°29S×178°90W, h0km, mb3.5/2, mb1 3.8/3, mb1mx3.6/17, mbtmp3.6/3, ML3.6/1, Error ellipse: s-maj=68.6km s-min=45.3km az=113.0
ISC 18 09:35:24.3±2.4, 32°68S±0°09×178°9W±0°4, h35km, n9, σ0°99/10, mb3.3/2, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**5.37**	**204**	PN	**Pn**	**09 36 43.2**	**+1.2**
PUZ	**Puketiti**	**5.85**	**202**	PN	**Pn**	**09 36 47.1**	**-1.5**
PUZ				SN	**Sn**	**09 37 53.4**	**-1.0**
CNGZ	**Carnagh Statio**	**6.25**	**201**	PN	**Pn**	**09 36 53.2**	**-0.7**
MWZ	**Matawai**	**6.34**	**206**	PN	**Pn**	**09 36 56.5**	**+1.3**
URZ	**Urewera**	**6.44**	**209**	Pn	**Pn**	**09 36 58.7**	**+2.1**
	1.2nm,0.3s,baz=336,slow=19,SNR=18						
URZ				Sn	**Sn**	**09 38 09.2**	**+0.4**
	1.6nm,0.3s,baz=244,slow=18,SNR=6.7						
URZ	**Urewera**	**6.44**	**209**	PN	**Pn**	**09 36 56.8**	**+0.1**
ASAR	**Alice Springs**	**42.26**	**270**	P	**P**	**09 43 14.2**	**-0.3**
	0.2nm,0.5s,mb3.0,baz=107,slow=7.6,SNR=4.2						
WRA	**Warramunga Arr**	**43.46**	**275**	P	**P**	**09 43 23.9**	**-0.3**
	0.4nm,0.4s,mb3.5,baz=113,slow=8.0,SNR=13						
FINES	**FINESS Array B**	**146.99**	**338**	PKPbc	PKPbc	09 55 01.1	-1.3
	1.7nm,0.6s,baz=59,slow=5.4,SNR=5.5						

IDC 18 10:05:07.8±5.4, 24°16N×112°72W, h0km, mb3.5/1, mb1 3.7/6, mb1mx3.6/22, mbtmp3.4/6, ML3.5/5, MS3.2/5, Ms1 3.3/5, ms1mx3.0/22, Error ellipse: s-maj=75.1km s-min=29.8km az=172.0
NEIC 18 10:05:08.2±2.6, 24°05N×112°73W, h10km, mb3.7/7, Error ellipse: s-maj=31.8km s-min=13.3km az=189.0
ISC 18 10:05:08.6±3.2, 24°1N±0°3×112°7W±0°1, h10km, n25, σ0°98/22, mb3.6/3, MS3.4/2, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUC	**Tucson**	**8.38**	**11**	*eP*n	**Pn**	**10 07 08.5**	**-1.7**
	4.0nm,0.8s						
BAR	**Barrett**	**9.25**	**339**	*eP*n	**Pn**	**10 07 21.1**	**-1.0**
TXAR	**Lajitas Array**	**9.64**	**55**	Pn	**Pn**	**10 07 28.1**	**+0.5**
	0.1nm,0.3s,baz=232,slow=13,SNR=6.8						
TXAR				Lg		10 10 10.8	
	0.0nm,0.3s,baz=226,slow=21,SNR=3.4						
TXAR	**Lajitas Array**	**9.64**	**55**	Pn	**Pn**	**10 07 28.1**	**+0.5**
TXAR				Lg		10 10 10.8	
MWC	**Mount Wilson**	**11.13**	**337**	Pn	**Pn**	**10 07 48.2**	**+0.3**
WUAZ	**Wupatki**	**11.47**	**6**	*eP*n	**Pn**	**10 07 52.2**	**-0.3**
	5.7nm,0.9s						
GSC	**Goldstone**	**11.74**	**343**	*eP*n	**Pn**	**10 07 56.0**	**-0.1**
ANMO	**Albuquerque**	**12.13**	**25**	Pn	**Pn**	**10 08 02.8**	**+1.2**
	0.1nm,0.3s,baz=205,slow=16,SNR=2.6						
CCUT	**Cedar City**	**13.45**	**358**	*eP*n	**Pn**	**10 08 20.6**	**+1.1**
	9.1nm,1.1s						
MVCO	**Mesa Verde**	**13.59**	**15**	*eP*n	**Pn**	**10 08 21.6**	**+0.2**
	6.6nm,1.1s						
ARUT	**Antelope Range**	**13.69**	**358**	*eP*n	**Pn**	**10 08 24.0**	**+1.3**
	4.7nm,0.9s						
NVAR	**Mina Array Bea**	**15.08**	**343**	Pn	**Pn**	**10 08 43.5**	**+1.8**
	0.1nm,0.3s,baz=168,slow=14,SNR=12						
SRU	**San Rafael**	**15.11**	**7**	*eP*n	**Pn**	**10 08 41.8**	**-0.3**
	3.6nm,0.9s						
CMB	**Columbia Colle**	**15.38**	**337**	*eP*n	**Pn**	**10 08 45.6**	**-0.1**
	5.2nm,1.2s						
DAU	**Daniels Canyon**	**16.34**	**4**	Pn	**Pn**	**10 08 59.0**	**+0.8**
	5.9nm,1.0s						
ELK	**Elko**	**16.76**	**353**	Pn	**Pn**	**10 09 04.2**	**+0.8**
	0.1nm,0.3s,baz=181,slow=15,SNR=3.7						
ELK				LR	LR	10 14 23.4	
	comp=Z,95nm,21.0s,baz=13,slow=33						
HWUT	**Hardware Ranch**	**17.51**	**3**	*eP*n	**Pn**	**10 09 12.1**	**-0.7**
	2.8nm,0.3s						
CMIG	**Matias Romero**	**18.08**	**109**	LR	LR	10 16 56.5	
	comp=Z,78nm,19.2s,baz=276,slow=39						
PDAR	**Pinedale Array**	**18.83**	**7**	P	**Pn**	**10 09 27.4**	**-1.6**
	0.1nm,0.3s,baz=184,slow=6.8,SNR=7.3						
YBH	**Yreka Blue Hor**	**19.48**	**337**	LR	LR	10 16 48.0	
	comp=Z,60nm,20.6s,baz=159,slow=36						
IMW	**Indian Meadow**	**19.83**	**4**	*eP*	**Pn**	**10 09 38.9**	**-2.2**
	2.2nm,0.6s						
BOZ	**Bozeman (W)**	**21.54**	**2**	*eP*	**P**	**10 09 57.6**	**-0.4**
	3.1nm,1.1s,mb3.6						
CHMT	**Chamberlain Mo**	**22.80**	**359**	*eP*	**P**	**10 10 11.1**	**-0.3**
	2.6nm,1.1s,mb3.6						
ILAR	**Eielson Array**	**46.32**	**341**	P	**P**	**10 13 34.6**	**+0.3**
	0.5nm,0.8s,mb3.5,baz=151,slow=7.4,SNR=6.9						
ILAR				LR	LR	10 32 25.5	
	comp=Z,39nm,19.9s,MS3.4,baz=51,slow=35						
NOA	**NORSAR Array B**	**83.92**	**24**	LR	LR	10 55 44.2	
	comp=Z,14nm,20.0s,MS3.4,baz=210,slow=36						

IDC 18 10:55:09.4±3.0, 34°06S×106°42W, h0km, mb3.8/3, mb1 4.3/3, mb1mx3.9/14, mbtmp3.8/3, Error ellipse: s-maj=175.0km s-min=37.9km az=109.0, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**63.11**	**3**	P	P	11 05 39.9	+1.3
	0.6nm,1.0s,baz=174,slow=9.7,SNR=4.0						
NVAR	**Mina Array Bea**	**72.97**	**350**	P	P	11 06 40.5	0.0
	1.2nm,0.9s,baz=171,slow=6.4,SNR=7.0						
PDAR	**Pinedale Array**	**76.51**	**358**	P	P	11 07 00.1	-0.7
	1.0nm,0.9s,baz=151,slow=3.4,SNR=8.2						
SONM	**Songino Array**	**151.89**	**309**	PKP	PKPdf	11 14 59.0	-0.3
	0.3nm,0.5s,baz=204,slow=2.5,SNR=2.4						
SONM				PKPbc	PKPbc	11 15 07.2	+1.4
	0.5nm,0.6s,baz=79,slow=3.1,SNR=3.2						
SONM				PKPab	PKPab	11 15 15.4	+0.4
	0.5nm,0.5s,baz=110,slow=2.1,SNR=3.9						
CMAR	**Chiang Mai Arr**	**152.56**	**242**	PKPbc	PKPbc	11 15 08.2	0.0
	0.3nm,0.3s,baz=185,slow=2.6,SNR=4.8						
CMAR				PKPab	PKPab	11 15 17.3	-1.3
	0.4nm,0.3s,baz=154,slow=2.5,SNR=5.0						
CMAR	**Chiang Mai Arr**	**152.56**	**242**	PKPab	PKPab	11 15 17.3	-1.3

BJI 18 10:55:56.4, 18°20N×68°20W, h78km, Ms4.5/1, Ms7 4.5/1
ISCJB 18 10:55:57.8±0.4, 18°06N±0°06×68°21W±0°03, h91km±4km, mb3.6/7, Error ellipse: s-maj=10.5km s-min=4.4km az=12.3
IDC 18 10:55:58.6±2.4, 18°02N×68°18W, h84km±33km, mb3.4/7, mb1 3.7/9, mb1mx3.5/22, mbtmp3.5/9, Error ellipse: s-maj=29.7km s-min=18.2km az=132.0
NEIC 18 10:55:59.4, 18°22N×68°23W, h78km, MD4.1(RSPR), After RSPR.
NEIC Felt [III] at Mayaguez, Puerto Rico.
RSPR 18 10:55:59.4, 18°22N×68°23W, h78km±1km, MD4.1/19
ISC 18 10:55:58.9±0.4, 18°11N±0°06×68°22W±0°03, h81km±4km, n65, σ0°85/76, mb3.6/7, 18C, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMO	**Isla Mona**	**0.29**	**89**	↑*i*P	**Pn**	**10 56 11.0**	**-0.3**
IMO				*e*S	**Sn**	**10 56 21.3**	**+0.8**
PCDR	**Punta Cana, DR**	**0.44**	**339**	↑*i*P	**Pn**	**10 56 11.0**	**-1.3**
PCDR	**Punta Cana, DR**	**0.44**	**339**	*e*S	**Sn**	**10 56 20.6**	**-1.6**
MPR	**Mayaguez**	**1.03**	**84**	↑*e*P	**Pn**	**10 56 18.4**	**0.0**
MPR	**Mayaguez**	**1.03**	**84**	*e*S	**Sn**	**10 56 32.8**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.06**	**95**	↑*i*P	**Pn**	**10 56 19.1**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.06**	**95**	*e*S	**Sn**	**10 56 33.4**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.06**	**95**	*e*Pn	**Pn**	**10 56 19.1**	**+0.4**
CRPR				*e*Sn	**Sn**	**10 56 34.1**	**+0.5**
LSP	**Las Mesas**	**1.08**	**86**	↑*e*P	**Pn**	**10 56 19.0**	**0.0**
AGPR	**Aguadilla, PR**	**1.11**	**71**	↑*e*P	**Pn**	**10 56 20.2**	**+0.9**
AGPR	**Aguadilla, PR**	**1.11**	**71**	*e*S	**Sn**	**10 56 35.7**	**+1.0**
AGPR	**Aguadilla, PR**	**1.11**	**71**	*e*Pn	**Pn**	**10 56 20.1**	**+0.8**
AGPR				*e*Sn	**Sn**	**10 56 35.9**	**+1.2**
GBPR	**Guanica, Bosqu**	**1.28**	**96**	↑*e*P	**Pn**	**10 56 21.8**	**+0.4**
GBPR				*e*S	**Sn**	**10 56 39.3**	**+0.9**
LRS	**Lares**	**1.32**	**82**	↑*e*P	**Pn**	**10 56 22.0**	**+0.1**
AOPR	**Arecibo Observ**	**1.41**	**80**	↑*e*P	**Pn**	**10 56 23.2**	**+0.1**
AOPR	**Arecibo Observ**	**1.41**	**80**	*e*S	**Sn**	**10 56 41.0**	**-0.4**
OBIP	**Obispado Ponce**	**1.53**	**92**	↑*e*P	**Pn**	**10 56 24.8**	**+0.1**
OBIP	**Obispado Ponce**	**1.53**	**92**	*e*S	**Sn**	**10 56 44.0**	**-0.2**
CELP	**Cerrillos**	**1.56**	**91**	↑*e*P	**Pn**	**10 56 25.1**	**+0.1**
CELP				*e*S	**Sn**	**10 56 44.8**	**0.0**
ICM	**Isla Caja Muer**	**1.63**	**97**	↑*e*P	**Pn**	**10 56 25.8**	**-0.1**
ICM	**Isla Caja Muer**	**1.63**	**97**	*e*S	**Sn**	**10 56 46.5**	**+0.2**
ICM	**Isla Caja Muer**	**1.63**	**97**	*e*Pn	**Pn**	**10 56 26.0**	**0.0**
ICM				*e*Sn	**Sn**	**10 56 47.9**	**+1.5**
SJG	**San Juan**	**1.96**	**89**	*e*S	**Sn**	**10 56 54.5**	**+0.1**
SJG	**San Juan**	**1.96**	**89**	↑*e*P	**Pn**	**10 56 30.3**	**-0.1**
SJG	**San Juan**	**1.96**	**89**	*e*S	**Sn**	**10 56 54.0**	**-0.4**
SJG	**San Juan**	**1.96**	**89**	P	**Pn**	**10 56 30.3**	**0.0**
	40nm,0.3s,baz=308,slow=13,SNR=21						
SJG				S	**Sn**	**10 56 53.9**	**-0.4**
	169nm,0.3s,baz=12,slow=21,SNR=27						
SJG	**San Juan**	**1.96**	**89**	P	**Pn**	**10 56 30.3**	**0.0**
SJG				S	**Sn**	**10 56 53.9**	**-0.4**
CPD	**Cerro la Pandu**	**2.19**	**91**	↑*e*P	**Pn**	**10 56 33.0**	**-0.4**
CPD	**Cerro la Pandu**	**2.19**	**91**	*e*S	**Sn**	**10 56 58.0**	**-1.8**
CBYP	**Canovanas**	**2.25**	**85**	↑*e*P	**Pn**	**10 56 34.7**	**+0.5**
CBYP	**Canovanas**	**2.25**	**85**	*e*S	**Sn**	**10 57 02.2**	**+1.1**
CBYP	**Canovanas**	**2.25**	**85**	*e*Pn	**Pn**	**10 56 34.8**	**+0.7**
CBYP				*e*Sn	**Sn**	**10 57 02.2**	**+1.1**
HUMP	**Col San Antoni**	**2.25**	**89**	↑*e*P	**Pn**	**10 56 34.1**	**0.0**
HUMP	**Col San Antoni**	**2.25**	**89**	*e*S	**Sn**	**10 57 01.5**	**+0.3**
MTP	**Monte Pirata**	**2.53**	**90**	↑*e*P	**Pn**	**10 56 38.6**	**+0.7**
MTP	**Monte Pirata**	**2.53**	**90**	*e*S	**Sn**	**10 57 08.9**	**+1.0**
MTP	**Monte Pirata**	**2.53**	**90**	*e*Pn	**Pn**	**10 56 38.3**	**+0.3**
MTP				*e*Sn	**Sn**	**10 57 09.8**	**+1.8**
SDDR	**Presa de Saban**	**3.04**	**287**	↑*e*P	**Pn**	**10 56 45.4**	**+0.5**
SDDR	**Presa de Saban**	**3.04**	**287**	*e*S	**Sn**	**10 57 21.1**	**+0.9**
SDDR	**Presa de Saban**	**3.04**	**287**	*e*Pn	**Pn**	**10 56 46.5**	**+1.6**
SDDR				*e*Sn	**Sn**	**10 57 23.0**	**+2.7**
STVI	**Saint Thomas**	**3.11**	**85**	↑*e*P	**Pn**	**10 56 45.9**	**+0.2**
STVI	**Saint Thomas**	**3.11**	**85**	*e*S	**Sn**	**10 57 21.2**	**-0.7**
CDVI	**St. Croix**	**3.30**	**96**	↑*e*P	**Pn**	**10 56 47.1**	**-1.2**
CDVI	**St. Croix**	**3.30**	**96**	*e*S	**Sn**	**10 57 25.2**	**-1.4**
TBVI	**Tortola**	**3.43**	**84**	↑*e*P	**Pn**	**10 56 49.7**	**-0.4**
TBVI				*e*S	**Sn**	**10 57 29.1**	**-0.7**
GRTK	**Grand Turk**	**4.36**	**321**	*e*Pn	**Pn**	**10 57 00.8**	**-2.0**
LZG	**Guadaloupe-1**	**6.46**	**107**	*e*P	**Pn**	**10 57 31.5**	**+0.1**
SCG	**Saint Claude**	**6.58**	**107**	*e*P	**Pn**	**10 57 33.4**	**+0.3**
BCG	**Bois Riant Cap**	**6.62**	**107**	*e*P	**Pn**	**10 57 34.1**	**+0.5**
MGG	**Marie-Galante**	**6.95**	**107**	*e*P	**Pn**	**10 57 39.4**	**+1.3**
FDF	**Fort de France**	**7.56**	**115**	*e*P	**Pn**	**10 57 45.7**	**-0.8**
BIM	**Bigot**	**7.73**	**116**	*e*P	**Pn**	**10 57 49.0**	**+0.2**
BIM				*e*S	Px	10 58 07.2	
MVM	**Montagne Vaucl**	**7.86**	**116**	*e*P	**Pn**	**10 57 49.8**	**-0.8**
MVM				*e*S	Px	10 58 21.9	
PCRV	**Puerto La Cruz**	**8.61**	**156**	P	**Pn**	**10 58 01.2**	**+0.4**
	0.8nm,0.3s,baz=77,slow=5.3,SNR=3.8						
PCRV				S	**Sn**	**10 59 33.4**	**-2.9**
	2.3nm,0.3s,baz=286,slow=23,SNR=6.2						
JTS	**JuntasAbangare**	**17.98**	**247**	P	**Pn**	**11 00 04.3**	**+0.8**
	0.2nm,0.3s,baz=344,slow=20,SNR=4.5						
TXAR	**Lajitas Array**	**34.20**	**296**	P	**P**	**11 02 35.6**	**-1.2**
	0.1nm,0.3s,mb3.1,baz=124,slow=9.8,SNR=5.6						
SCHQ	**Schefferville**	**36.67**	**1**	P	**P**	**11 02 58.3**	**+0.7**
	2.0nm,0.5s,mb4.3,baz=177,slow=5.2,SNR=7.7						
PDAR	**Pinedale Array**	**42.71**	**314**	P	**P**	**11 03 47.6**	**-0.2**
	0.2nm,0.4s,mb3.2,baz=116,slow=11,SNR=4.3						
NVAR	**Mina Array Bea**	**47.90**	**306**	P	**P**	**11 04 30.1**	**+1.1**
	0.3nm,0.6s,mb3.3,baz=80,slow=6.6,SNR=5.0						
YKA	**Yellowknife Ar**	**54.68**	**336**	P	**P**	**11 05 18.6**	**-0.7**
	1.4nm,0.7s,mb4.1,baz=109,slow=6.4,SNR=3.5						
ILAR	**Eielson Array**	**68.95**	**333**	P	**P**	**11 06 54.3**	**-0.7**
	0.6nm,0.5s,mb3.7,baz=102,slow=4.3,SNR=15						
ARCES	**ARCESS Array B**	**74.49**	**21**	P	**P**	**11 07 28.9**	**+0.8**
	1.3nm,0.8s,mb3.7,baz=331,slow=4.7,SNR=5.1						
ARCES	**ARCESS Array B**	**74.49**	**21**	P	**P**	**11 07 28.9**	**+0.8**
CN2	**Changchun**	**117.14**	**349**	*e*PKP	PKPdf	11 14 32.1	-2.7
LZH	**Lanzhou**	**125.58**	**8**	*e*PKP	PKPdf	11 14 48.5	-2.8
LZH				sPKP		11 15 16.8	

NEIC 18 10:57:19.7±1.0, 35°05S×107°53W, h10km, mb4.4/3, Error ellipse: s-maj=32.6km s-min=21.8km az=192.0
IDC 18 10:57:18.2±1.1, 34°98S×107°61W, h0km, mb4.0/5, mb1 4.4/5, mb1mx4.2/16, mbtmp4.0/5, MS3.9/8, Ms1 3.9/8, ms1mx3.7/15, Error ellipse: s-maj=38.9km s-min=30.1km az=166.0, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**7.97**	**349**	LR	LR	11 01 26.2	
	comp=Z,472nm,21.2s,baz=244,slow=31						
PLCA	**Paso Flores**	**29.66**	**112**	LR	LR	11 12 52.3	
	comp=Z,81nm,18.6s,baz=267,slow=32						
USHA	**Ushuaia**	**33.51**	**139**	LR	LR	11 13 51.9	
	comp=Z,468nm,21.3s,baz=124,slow=30						
ATAH	**Atahualpa**	**38.59**	**51**	LR	LR	11 16 41.0	
	comp=Z,224nm,20.8s,baz=209,slow=30						
LPAZ	**La Paz**	**39.84**	**72**	P	P	11 04 55.0	+1.5
	2.6nm,0.9s,baz=234,slow=5.4,SNR=5.1						
LPAZ				LR	LR	11 17 29.6	
	comp=Z,94nm,18.1s,baz=210,slow=30						
LPAZ	**La Paz**	**39.84**	**72**	*e*P	P	11 04 54.5	+1.0
	5.0nm,1.1s						
LPAZ				LR	LR	11 17 29.6	
CPUP	**Villa Florida**	**43.72**	**93**	LR	LR	11 19 04.1	
	comp=Z,73nm,22.0s,baz=312,slow=30						
SIV	**San Ignacio**	**45.61**	**78**	P	P	11 05 39.6	-0.7
	1.3nm,0.8s,baz=241,slow=10,SNR=4.9						
ROSC	**El Rosal**	**50.50**	**45**	LR	LR	11 23 47.5	
	comp=Z,106nm,19.2s,baz=18,slow=32						
TXAR	**Lajitas Array**	**64.08**	**4**	P	P	11 07 53.1	-0.7
	0.9nm,0.9s,baz=181,slow=10.0,SNR=5.7						
NVAR	**Mina Array Bea**	**73.71**	**351**	P	P	11 08 55.1	+1.5
	3.5nm,1.1s,baz=190,slow=6.1,SNR=10						
DAU	**Daniels Canyon**	**75.10**	**357**	*e*P	P	11 09 02.8	+1.2
	7.4nm,1.1s						
DAU				*e*PcP	PcP	11 09 16.2	+1.0
PDAR	**Pinedale Array**	**77.40**	**359**	P	P	11 09 14.4	-0.2
	2.1nm,0.9s,baz=164,slow=4.8,SNR=13						
HLID	**Hailey**	**78.42**	**355**	*e*P	P	11 09 21.5	+1.2
	4.2nm,0.9s						
STKA	**Stephens Creek**	**87.03**	**233**	LR	LR	11 41 31.2	
	comp=Z,201nm,18.2s,baz=24,slow=30						
CMAR	**Chiang Mai Arr**	**151.26**	**242**	PKPbc	PKPbc	11 17 13.7	-0.3
	1.3nm,0.8s,baz=203,slow=2.4,SNR=7.0						
CMAR				PKPab	PKPab	11 17 21.3	-0.6
	1.2nm,0.3s,baz=30,slow=18,SNR=5.5						
SONM	**Songino Array**	**151.69**	**307**	PKPbc	PKPbc	11 17 14.6	+0.4
	1.0nm,0.7s,baz=78,slow=2.1,SNR=4.7						

ATH 18 11:17:38.1, 38°02N×20°13E, h13km±1km, MD3.8/20, ML3.4
ISCJB 18 11:17:38.8±0.7, 38°15N±0°02×20°16E±0°03, h7km±3km, Error ellipse: s-maj=4.8km s-min=2.6km az=136.5
NEIC 18 11:17:38.2, 38°02N×20°13E, h12km, ML3.6(PDG), ML3.4(ATH), After ATH.
CSEM 18 11:17:39.0±0.2, 38°10N×20°18E, h2km, ML3.9/2, Error ellipse: s-maj=6.4km s-min=3.1km az=40.0
PDG 18 11:17:40.2±0.1, 38°11N×19°42E, h21km±11km, ML3.6/8, Error ellipse: s-maj=64.0km s-min=4.1km az=90.0
THE 18 11:17:41.3, 38°21N×20°34E, h9km, ML3.9/2, Error ellipse: s-maj=1.6km s-min=0.5km az=70.0
ISC 18 11:17:39.3±0.7, 38°12N±0°02×20°18E±0°03, h4km±4km, n126, σ1°21/191, 8C-13D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.33**	**80**	↑*i*Pg	**Pg**	**11 17 45.1**	**-0.5**
VLS	**Valsamata**	**0.33**	**80**	↑*i*PG	**Pg**	**11 17 45.5**	**-0.1**
VLS	**Valsamata**	**0.33**	**80**	P	**Pg**	**11 17 45.2**	**-0.4**
VLS				S	**Sg**	**11 17 48.7**	**-1.2**
VLS	**Valsamata**	**0.33**	**80**	P	**Pg**	**11 17 45.2**	**-0.4**
VLS				S	**Sg**	**11 17 48.7**	**-1.2**
LKD2	**Lefkada island**	**0.77**	**29**	P	**Pg**	**11 17 53.5**	**-0.5**
LKD2				S	**Sg**	**11 18 02.6**	**-1.4**
LKD2	**Lefkada island**	**0.77**	**29**	P	**Pg**	**11 17 53.5**	**-0.5**
LKD2				S	**Sg**	**11 18 02.6**	**-1.4**
RLS	**Riolos of Patr**	**1.02**	**93**	*e*Pb	**Pg**	**11 17 57.2**	**-1.6**
RLS				*e*Sb	**Sg**	**11 18 13.7**	**+1.8**
RLS	**Riolos of Patr**	**1.02**	**93**	*e*PG	**Pg**	**11 17 57.5**	**-1.3**
RLS				*e*SB	**Sg**	**11 18 12.7**	**+0.8**
RLS	**Riolos of Patr**	**1.02**	**93**	*e*Pb	**Pg**	**11 17 57.2**	**-1.6**
RLS				*e*Sb	**Sg**	**11 18 13.7**	**+1.8**
UPR	**University Cam**	**1.27**	**82**	*e*PB	**Pb**	**11 18 03.2**	**-0.7**
UPR	**University Cam**	**1.27**	**82**	*e*Pb	**Pb**	**11 18 04.2**	**+0.3**
EFP	**Efpalio**	**1.39**	**77**	*e*PG	**Pg**	**11 18 05.4**	**-0.6**
EFP				*e*SB	**Sb**	**11 18 25.4**	**+1.4**
EFP	**Efpalio**	**1.39**	**77**	*e*Pn	**Pn**	**11 18 04.4**	**-1.1**
EFP				*e*Sb	**Sb**	**11 18 25.4**	**+1.4**
IGT	**Igoumenitsa**	**1.42**	**5**	P	**Pn**	**11 18 06.0**	**+0.1**
IGT	**Igoumenitsa**	**1.42**	**5**	P	**Pn**	**11 18 06.0**	**+0.1**
LAKA	**Lakka**	**1.42**	**85**	P	**Pn**	**11 18 04.3**	**-1.6**
LAKA				S	**Sb**	**11 18 22.8**	**-2.1**
LAKA	**Lakka**	**1.42**	**85**	P	**Pn**	**11 18 04.3**	**-1.6**
LAKA				S	**Sb**	**11 18 22.8**	**-2.1**
EVR	**Evrytania**	**1.50**	**58**	*e*Pb	**Pb**	**11 18 08.5**	**+0.7**
EVR				*e*Sb	**Sg**	**11 18 30.2**	**+2.5**
EVR	**Evrytania**	**1.50**	**58**	*e*PB	**Pb**	**11 18 08.5**	**+0.7**
EVR				*e*SB	**Sg**	**11 18 30.2**	**+2.5**
EVR	**Evrytania**	**1.50**	**58**	*e*Pb	**Pb**	**11 18 08.5**	**+0.7**
EVR				*e*Sb	**Sg**	**11 18 30.2**	**+2.5**
TRIZ	**Trizonia**	**1.51**	**80**	P	**Pn**	**11 18 05.6**	**-1.5**
TRIZ	**Trizonia**	**1.51**	**80**	P	**Pn**	**11 18 05.6**	**-1.5**
KALE	**Kalithea**	**1.57**	**79**	P	**Pn**	**11 18 06.4**	**-1.5**
KALE	**Kalithea**	**1.57**	**79**	P	**Pn**	**11 18 06.4**	**-1.5**
KEK	**Kerkira**	**1.62**	**350**	*e*Pn	**Pn**	**11 18 09.4**	**+0.7**
KEK				*e*Sn	**Sg**	**11 18 33.2**	**+1.8**
KEK	**Kerkira**	**1.62**	**350**	*e*PN	**Pn**	**11 18 09.4**	**+0.7**
KEK				*e*SN	**Sg**	**11 18 33.2**	**+1.8**
KEK	**Kerkira**	**1.62**	**350**	*e*Pn	**Pn**	**11 18 09.4**	**+0.7**
KEK				*e*Sn	**

VAY	**Valandovo**	**3.69**	**29**	*e*Pn	**Pn**	**11 18 44.2**	**+7.1**
VAY				*e*Sn	**Sn**	**11 19 19.4**	**-1.7**
SG1	**Sgolgore (BA)**	**3.84**	**316**	*e*Pn	**Pn**	**11 18 40.3**	**+1.2**
SG1				*e*Sn	**Sn**	**11 19 24.2**	**-0.5**
ULC	**Ulcinj**	**3.91**	**350**	⇓*i*Pn	**Pn**	**11 18 39.6**	**-0.5**
ULC				*e*Sn	**Sn**	**11 19 24.7**	**-1.7**
ULC	**Ulcinj**	**3.91**	**350**	⇓*i*Pn	**Pn**	**11 18 39.6**	**-0.5**
ULC				*e*Sn	**Sn**	**11 19 24.7**	**-1.7**
PUK	**Puka**	**3.93**	**357**	*i* PN	**Pn**	**11 18 40.8**	**+0.4**
PUK	**Puka**	**3.93**	**357**	*i* Pn	**Pn**	**11 18 40.8**	**+0.4**
KARN	**Karanos**	**4.04**	**131**	*e*PN	**Pn**	**11 18 42.9**	**+0.9**
KARN	**Karanos**	**4.04**	**131**	*e*Pn	**Pn**	**11 18 42.9**	**+0.9**
BCI	**Bajram Curri**	**4.24**	**359**	*i* PN	**Pn**	**11 18 45.5**	**+0.8**
BCI				*i* SN	**Sn**	**11 19 34.6**	**-0.1**
BCI	**Bajram Curri**	**4.24**	**359**	*i* Pn	**Pn**	**11 18 45.5**	**+0.8**
BCI				*i* Sn	**Sn**	**11 19 34.6**	**-0.1**
BUM	**Brajici-Budva**	**4.29**	**347**	⇓*i*Pn	**Pn**	**11 18 44.7**	**-0.7**
BUM				*e*Sn	**Sn**	**11 19 33.3**	**-2.6**
BUM	**Brajici-Budva**	**4.29**	**347**	⇓*i*Pn	**Pn**	**11 18 44.7**	**-0.7**
BUM				*e*Sn	**Sn**	**11 19 33.3**	**-2.6**
PDG	**Podgorica**	**4.36**	**351**	⇑*i*Pn	**Pn**	**11 18 45.9**	**-0.5**
PDG				*e*Sn	**Sn**	**11 19 35.7**	**-2.0**
TTG	**Podgorica**	**4.36**	**351**	⇑*i*Pn	**Pn**	**11 18 45.9**	**-0.5**
TTG				*e*Sn	**Sn**	**11 19 35.7**	**-2.0**
PVY	**Plav**	**4.47**	**358**	⇑*i*Pn	**Pn**	**11 18 48.7**	**+0.8**
PVY				*e*Sn	**Sn**	**11 19 40.3**	**-0.1**
PVY	**Plav**	**4.47**	**358**	⇑*i*Pn	**Pn**	**11 18 48.7**	**+0.8**
PVY				*e*Sn	**Sn**	**11 19 40.3**	**-0.1**
HCY	**Herceg Novi**	**4.51**	**344**	⇓*i*Pn	**Pn**	**11 18 47.2**	**-1.2**
HCY				*e*Sn	**Sn**	**11 19 38.0**	**-3.3**
HCY	**Herceg Novi**	**4.51**	**344**	⇓*i*Pn	**Pn**	**11 18 47.2**	**-1.2**
HCY				*e*Sn	**Sn**	**11 19 38.0**	**-3.3**
BEY	**Berane**	**4.75**	**357**	⇓*i*Pn	**Pn**	**11 18 52.5**	**+0.8**
BEY				*e*Sn	**Sn**	**11 19 47.1**	**-0.2**
IVA	**Berane**	**4.75**	**357**	⇓*i*Pn	**Pn**	**11 18 52.5**	**+0.8**
IVA				*e*Sn	**Sn**	**11 19 47.1**	**-0.2**
IVA	**Berane**	**4.75**	**357**	⇓*i*Pn	**Pn**	**11 18 52.5**	**+0.8**
IVA				*e*Sn	**Sn**	**11 19 47.1**	**-0.2**
BRY	**Bratogost**	**4.94**	**346**	⇓*i*Pn	**Pn**	**11 18 53.1**	**-1.1**
BRY				*e*Sn	**Sn**	**11 19 48.3**	**-3.5**
BRY	**Bratogost**	**4.94**	**346**	⇓*i*Pn	**Pn**	**11 18 53.1**	**-1.1**
BRY				*e*Sn	**Sn**	**11 19 48.3**	**-3.5**
STON	**Ston**	**5.11**	**339**	*e*Pn	**Pn**	**11 18 55.1**	**-1.6**
STON				Sn	**Sn**	**11 19 51.6**	**-4.5**
STON	**Ston**	**5.11**	**339**	*e*Pn	**Pn**	**11 18 55.0**	**-1.6**
STON				Sn	**Sn**	**11 19 51.6**	**-4.5**
UPM	**Unac-Piva**	**5.17**	**350**	⇓*i*Pn	**Pn**	**11 18 57.5**	**+0.1**
UPM				*e*Sn	**Sn**	**11 19 55.1**	**-2.4**
UPM	**Unac-Piva**	**5.17**	**350**	⇓*i*Pn	**Pn**	**11 18 57.5**	**+0.1**
UPM				*e*Sn	**Sn**	**11 19 55.1**	**-2.4**
PLE	**Pljevlja**	**5.24**	**354**	⇑*i*Pn	**Pn**	**11 18 58.6**	**+0.2**
PLE				*e*Sn	**Sn**	**11 19 58.2**	**-1.1**
PLE	**Pljevlja**	**5.24**	**354**	⇑*i*Pn	**Pn**	**11 18 58.6**	**+0.2**
PLE				*e*Sn	**Sn**	**11 19 58.2**	**-1.1**

*DDA **18** 11:31:02.6, 40°.43N×29°.20E, h7km±4km, Md2.7*
*ISK **18** 11:31:03.4, 40°.29N×29°.12E, h6km, MD2.9*
*ISCJB **18** 11:31:04.2±0.5, 40°.37N±0°.04×29°.16E±0°.04, h12km±5km, Error ellipse: s-maj=6.9km s-min=5.5km az=179.7*
*CSEM **18** 11:31:04.1±0.2, 40°.36N×29°.14E, h12km, MD2.9, Error ellipse: s-maj=5.5km s-min=4.4km az=161.0*

ISC 18 11:31:04.5±0.5, 40°.38N±0°.04×29°.16E±0°.04, h14km±5km, n27, σ1s08/41, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEMT	**Gemlik**	**0.06**	**25**	*e*PG	**Pg**	**11 31 07.2**	**0.0**
GEMT				*e*SG	**Sg**	**11 31 09.7**	**+0.5**
GEMT	**Gemlik**	**0.06**	**25**	*e*Pg	**Pg**	**11 31 07.2**	**0.0**
GEMT				*e*Sg	**Sg**	**11 31 09.7**	**+0.5**
MDNY	**Mudanya-Bursa**	**0.21**	**267**	*e*PG	**Pg**	**11 31 07.8**	**-1.3**
MDNY	**Mudanya-Bursa**	**0.21**	**267**	*e*Pg	**Pg**	**11 31 07.8**	**-1.4**
YLV	**Yalova**	**0.25**	**42**	*e*PG	**Pg**	**11 31 10.5**	**+0.7**
YLV				*e*SG	**Sg**	**11 31 16.0**	**+2.5**
YLV	**Yalova**	**0.25**	**42**	*e*Pg	**Pg**	**11 31 10.5**	**+0.7**
YLV				*e*Sg	**Sg**	**11 31 16.0**	**+2.5**
KCTX	**Karacabey (Bur**	**0.62**	**260**	*e*PG	**Pg**	**11 31 15.7**	**-1.0**
KCTX	**Karacabey (Bur**	**0.62**	**260**	*e*Pg	**Pg**	**11 31 15.7**	**-0.9**
DURS	**Dursunbey**	**0.94**	**214**	*i* P	**Pg**	**11 31 22.9**	**+0.3**
DURS				*i* S	**Sg**	**11 31 36.7**	**+1.8**
DURS	**Dursunbey**	**0.94**	**214**	*i* P	**Pg**	**11 31 22.9**	**+0.3**
DURS				*i* S	**Sg**	**11 31 36.7**	**+1.8**
BNT	**Bandirma**	**0.94**	**269**	*e*PG	**Pg**	**11 31 21.4**	**-1.4**
CTKS	**Kestanelik-??a**	**0.99**	**330**	*e*PG	**Pg**	**11 31 23.5**	**-0.1**
CTKS	**Kestanelik-??a**	**0.99**	**330**	*e*Pg	**Pg**	**11 31 23.5**	**-0.1**
GULT	**Gulveren**	**1.04**	**87**	*e*PG	**Pg**	**11 31 24.0**	**-0.6**
GULT	**Gulveren**	**1.04**	**87**	*e*Pg	**Pg**	**11 31 24.0**	**-0.5**
BORA	**Eskisehir**	**1.11**	**116**	*i* P	**Pg**	**11 31 23.8**	**-2.2**
BORA				*i* S	**Sg**	**11 31 39.9**	**-0.5**
BORA	**Eskisehir**	**1.11**	**116**	*i* P	**Pg**	**11 31 23.8**	**-2.1**
BORA				*i* S	**Sg**	**11 31 39.9**	**-0.6**
GONE	**Gonen-Balikesi**	**1.17**	**254**	*e*PN	**Pn**	**11 31 25.9**	**-0.6**
GONE	**Gonen-Balikesi**	**1.17**	**254**	*e*Pn	**Pn**	**11 31 25.9**	**-0.5**
GDZ	**Gediz**	**1.31**	**169**	*i* P	**Pn**	**11 31 28.3**	**-0.1**
GDZ				*i* S	**Sb**	**11 31 47.1**	**+1.5**
GDZ	**Gediz**	**1.31**	**169**	*i* P	**Pn**	**11 31 28.3**	**-0.1**
GDZ				*i* S	**Sb**	**11 31 47.1**	**+1.5**
BALY	**Balya**	**1.34**	**242**	*i* P	**Pn**	**11 31 28.9**	**+0.2**
BALY				*i* S	**Sn**	**11 31 48.3**	**+2.0**
BALY	**Balya**	**1.34**	**242**	*i* P	**Pn**	**11 31 28.9**	**+0.1**
BALY				*i* S	**Sn**	**11 31 48.3**	**+1.9**
DEMI	**Demirci**	**1.38**	**194**	*i* P	**Pn**	**11 31 28.9**	**-0.4**
DEMI				*i* S	**Sn**	**11 31 46.4**	**-0.9**
DEMI	**Demirci**	**1.38**	**194**	*i* P	**Pn**	**11 31 28.9**	**-0.4**
DEMI				*i* S	**Sn**	**11 31 46.4**	**-0.9**
KRBG	**Karabiga-Canak**	**1.42**	**271**	*e*PN	**Pn**	**11 31 30.1**	**+0.3**
KRBG	**Karabiga-Canak**	**1.42**	**271**	*e*Pn	**Pn**	**11 31 30.1**	**+0.3**

MAN 18 11:55:39, 9°.34N×122°.51E, h40km, mb4.4, ML3.3, MS3.1, 1C, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**0.72**	**89**	⇑*i*P	Pn	11 55 52.4	-0.3
SNPH				*i* S	Sn	11 56 02.3	-0.3
GUIM	**Jordan**	**1.28**	**4**	*e*P	Pn	11 56 01.1	+0.6
GUIM				*e*S	Sn	11 56 17.3	+0.8
IPIL	**Ipil**	**1.54**	**178**	*e*P	Pn	11 56 04.1	+0.1
IPIL				*e*S	Sn	11 56 20.9	-1.9
PAGZ	**Pagadian**	**1.71**	**150**	*e*P	Pn	11 56 07.5	+1.2
CUYO	**Cuyo Island**	**2.10**	**316**	*e*P	Pn	11 56 13.1	+1.5
BUSP	**Coron**	**3.49**	**320**	*e*P	Pn	11 56 31.8	+1.0

DJA 18 12:02:50, 2°.05S×100°.65E, h30km, MLv3.9/7, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**0.81**	**93**	P	Pn	12 03 03.3	-2.1
KRJI				S	Sb	12 03 16.5	+0.2
PDSI	**Padang**	**1.15**	**351**	P	Pn	12 03 08.3	-1.7
PDSI				S	Sn	12 03 24.8	+0.1
SDSI	**Sungai Dareh**	**1.36**	**35**	P	Pn	12 03 13.1	+0.2
SDSI				S	Sn	12 03 31.8	+1.9
PPI	**Padang Panjang**	**1.60**	**351**	P	Pn	12 03 16.0	-0.3
PPI				S	Sn	12 03 38.2	+2.2
SISI	**Saibi**	**1.72**	**295**	P	Pn	12 03 18.3	+0.4
BKNI	**Bangkinang**	**2.39**	**9**	P	Pn	12 03 32.3	+5.1
MNSI	**Mandailing Nat**	**3.02**	**339**	P	Pn	12 03 42.7	+6.9
MNAI	**Manna**	**3.25**	**135**	P	Pn	12 03 42.7	+3.7

GUC 18 12:12:44.7±0.8, 32°.21S×71°.87W, h28km±5km, MD3.6, ML2.9, 2C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.45**	**44**	⇓*i*P	Pb	12 12 53.8	-0.5
CHNG				*i* S	Sb	12 13 00.8	0.0
CMCH	**Combarbala**	**1.27**	**36**	⇑*i*P	Pn	12 13 06.9	+0.4
CMCH				*i* S	Sn	12 13 24.0	+1.3
CMCH				AML	AML	12 13 31.4	
	comp=E,629nm,0.7s						
PEL	**Peldehue**	**1.37**	**133**	⇑*i*P	Pn	12 13 08.5	+0.5
PEL				*i* S	Sn	12 13 26.8	+1.6
PEL				AML	AML	12 13 27.9	
	comp=N,661nm,0.5s						
CLCH	**Cerro Calan**	**1.63**	**137**	*e*P	Pn	12 13 12.9	+1.3
CLCH				*i* S	Sn	12 13 34.0	+2.3
CLCH				AML	AML	12 13 44.0	
	comp=E,209nm,0.4s						
FCH	**Farellones**	**1.74**	**130**	⇓*i*P	Pn	12 13 14.3	+1.3
FCH				*i* S	Sn	12 13 37.6	+3.3
LMEL	**Las Melosas**	**2.15**	**140**	*e*P	Pn	12 13 20.6	+1.9
LMEL				*i* S	Sn	12 13 47.3	+2.8
LMEL				AML	AML	12 13 55.8	
	comp=N,72nm,0.2s						

*ISK **18** 12:15:17.3, 37°.48N×34°.88E, h19km, ML2.2*
*DDA **18** 12:15:18.5, 37°.45N×34°.89E, h7km±3km, Md3.0*
*CSEM **18** 12:15:18.2±0.3, 37°.44N×34°.85E, h15km, ML2.2, Error ellipse: s-maj=6.8km s-min=5.6km az=160.0*
*ISCJB **18** 12:15:19.1±0.6, 37°.39N±0°.05×34°.89E±0°.06, h23km±7km, Error ellipse: s-maj=8.9km s-min=6.3km az=136.3*

ISC 18 12:15:19.1±0.6, 37°.39N±0°.06×34°.91E±0°.06, h20km±6km, n17, σ0s85/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GULE	**Gulek**	**0.15**	**226**	*i* P	**Pg**	**12 15 22.6**	**-1.0**
GULE				*i* S	**Sg**	**12 15 26.5**	**0.0**
GULE	**Gulek**	**0.15**	**226**	*i* P	**Pg**	**12 15 22.6**	**-1.0**
GULE				*i* S	**Sg**	**12 15 26.5**	**-0.1**
KARA	**Karaisali**	**0.17**	**138**	*e*PG	**Pg**	**12 15 23.6**	**-0.3**
KARA				*e*SG	**Sg**	**12 15 28.2**	**+1.1**
KARA	**Karaisali**	**0.17**	**138**	*e*Pg	**Pg**	**12 15 23.6**	**-0.3**
KARA				*e*Sg	**Sg**	**12 15 28.2**	**+1.2**
MERS	**Mersin**	**0.60**	**211**	*e*PG	**Pg**	**12 15 30.8**	**-0.4**
MERS				*e*SG	**Sg**	**12 15 40.9**	**+1.5**
MERS	**Mersin**	**0.60**	**211**	*e*Pg	**Pg**	**12 15 30.8**	**-0.4**
MERS				*e*Sg	**Sg**	**12 15 40.9**	**+1.6**
KOZT	**Kozan**	**0.73**	**83**	*e*PG	**Pg**	**12 15 32.7**	**-0.9**
KOZT				*e*SG	**Sg**	**12 15 43.2**	**-0.3**
KOZT	**Kozan**	**0.73**	**83**	*e*Pg	**Pg**	**12 15 32.7**	**-0.9**
KOZT				*e*Sg	**Sg**	**12 15 43.2**	**-0.2**
KRTS	**Karatas**	**0.90**	**155**	*e*PG	**Pg**	**12 15 36.9**	**+0.3**
KRTS	**Karatas**	**0.90**	**155**	*e*Pg	**Pg**	**12 15 36.9**	**+0.3**
AVNT	**Avonos**	**1.39**	**358**	*i* P	**Pn**	**12 15 43.7**	**+0.3**
AVNT				*i* S	**Sn**	**12 16 02.7**	**+1.5**
AVNT	**Avonos**	**1.39**	**358**	*i* P	**Pn**	**12 15 43.7**	**+0.3**
IKL	**Isikli**	**1.51**	**221**	*e*PN	**Pn**	**12 15 44.4**	**-0.6**
IKL	**Isikli**	**1.51**	**221**	*e*Pn	**Pn**	**12 15 44.4**	**-0.7**
SARI	**SarD1z-Kayseri**	**1.91**	**47**	*e*PN	**Pn**	**12 15 44.8**	**-5.8**
HDMB	**Hadim**	**1.98**	**258**	*e*PN	**Pn**	**12 15 50.5**	**-1.0**
HDMB	**Hadim**	**1.98**	**258**	*e*Pn	**Pn**	**12 15 50.5**	**-1.1**

CASC 18 12:16:59.1±1.3, 12°.28N×87°.62W, h54km±21km, MD3.7, ML3.6, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.70**	**53**	*e*P	Pn	12 17 13.2	+0.2
CRIN				*e*S	Sn	12 17 23.6	+0.5
CRIN				AML	AML	12 17 24.4	
	comp=E,2μm,0.2s						
CNGN	**Cerro Negro**	**0.93**	**76**	*e*P	Pn	12 17 15.4	-0.5
COPN	**Copaltepe**	**1.01**	**95**	*e*P	Pn	12 17 16.8	-0.3
CSAN		**1.17**	**94**	*e*P	Pn	12 17 19.2	-0.1
APYN	**Apoyeque**	**1.24**	**92**	*e*P	Pn	12 17 19.8	-0.3
XAVN	**Gruta Xavier**	**1.27**	**96**	*e*P	Pn	12 17 21.0	+0.5
BLLM	**Bellamira**	**1.31**	**333**	*e*P	Pn	12 17 21.6	+0.5
BLLM				*e*S	Sn	12 17 38.2	+0.7
TICN	**Ticuantepe**	**1.38**	**100**	*e*P	Pn	12 17 22.0	+0.1
TGUH	**Tegucigalpa,Un**	**1.80**	**11**	*e*P	Pn	12 17 28.4	+0.5
TGUH				*e*S	Sn	12 17 50.2	+0.6
LFRS	**El Faro**	**1.94**	**314**	*e*P	Pn	12 17 30.3	+0.6
LFRS				*e*S	Sn	12 17 53.4	+0.3
SSN	**San Juan del S**	**1.98**	**119**	*e*P	Pn	12 17 30.1	-0.2

SKHL 18 12:22:17.1±0.2, 52°.49N×142°.41E, h10km, mb4.1/4, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKH	**Okha**	**1.11**	**16**	*e*Pg	Pg	12 22 40.5	+2.1
OKH				AMB	AMB	12 22 41.5	
	400nm,0.6s						
OKH				*e*Sg	Sg	12 22 57.0	+4.2
OKH				A		12 23 02.5	
	1μm,0.6s						
NKL	**Nikolayevsk**	**1.24**	**303**	*i* Pg	Pg	12 22 43.3	+2.4
NKL				AMB	AMB	12 22 47.1	
	110nm,0.3s						
NKL				AMB	AMB	12 22 47.1	
	180nm,0.3s						
NKL				*e*Sg	Sg	12 23 01.5	+4.5
NKL				A		12 23 11.5	
	380nm,0.4s						
TYV	**Tymovskoe**	**1.64**	**175**	*e*Pg	Pg	12 22 50.0	+1.5
TYV				AMB	AMB	12 22 52.0	
	18nm,0.3s						
TYV				*e*Sg	Sg	12 23 14.0	+4.3
TYV				A		12 23 23.0	
	66nm,0.8s						
GRNR	**Gornyy**	**4.11**	**248**	*e*Pg	Pg	12 23 35.0	-0.8
GRNR				AMB	AMB	12 23 36.2	
	6.0nm,0.5s						
EKMR	**Ekimchan**	**5.77**	**280**	*e*Pg	Pg	12 24 09.5	+2.0
EKMR				*e*Sg	Sg	12 25 30.8	+8.6
EKMR				A		12 25 39.4	
	20nm,0.5s						
EKMR				A		12 25 39.4	
	8.0nm,0.5s						
EKMR				A		12 25 39.4	
	7.0nm,0.5s						
KLR	**Kul'dur**	**7.49**	**248**	*e*rx	rx	12 26 23.7	
BMKR	**Bomnak**	**8.37**	**291**	*e*Sg	Sn	12 26 58.5	+66
BMKR				A		12 26 59.5	
	16nm,0.8s						

*NEIC **18** 12:32:39.5, 32°.21S×71°.84W, h26km, ML3.4(GUC), After GUC.*

GUC 18 12:32:39.5±0.6, 32°.21S×71°.84W, h26km±3km, MD3.7, ML3.4, 8C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.44**	**42**	⇓*i*P	Pb	12 32 48.2	-0.5
CHNG				*i* S	Sb	12 32 55.1	+0.1
JACH	**Jahuel**	**1.16**	**114**	*e*P	Pn	12 33 00.0	0.0
JACH				*i* S	Sn	12 33 15.2	+0.3
JACH	**Jahuel**	**1.16**	**114**	*e*P	Pn	12 33 00.0	0.0
JACH				*i* S	Sn	12 33 15.2	+0.3
CMCH	**Combarbala**	**1.26**	**35**	*e*P	Pn	12 33 01.7	+0.3
CMCH				*i* S	Sn	12 33 18.6	+1.2
CMCH	**Combarbala**	**1.26**	**35**	*e*P	Pn	12 33 01.7	+0.3
CMCH				*i* S	Sn	12 33 18.6	+1.2
CMCH				AML	AML	12 33 26.4	
	comp=E,2μm,0.6s						
PEL	**Peldehue**	**1.35**	**134**	⇑*i*P	Pn	12 33 03.0	+0.3
PEL				*i* S	Sn	12 33 20.8	+1.1
PEL				AML	AML	12 33 23.6	
	comp=N,2μm,0.5s						
CLCH	**Cerro Calan**	**1.61**	**137**	*e*P	Pn	12 33 07.0	+0.7
CLCH				*i* S	Sn	12 33 28.0	+1.7
CLCH				AML	AML	12 33 38.7	
	comp=E,656nm,0.6s						
TACH	**Talagante**	**1.63**	**152**	⇑*i*P	Pn	12 33 07.4	+1.0
TACH				*i* S	Sn	12 33 28.6	+2.0
TACH	**Talagante**	**1.63**	**152**	⇑*i*P	Pn	12 33 07.4	+1.0
TACH				*i* S	Sn	12 33 28.6	+2.0
ANTU	**Antumapu**	**1.69**	**143**	*i* S	Sn	12 33 30.4	+2.2
ANTU				AML	AML	12 33 38.0	
	comp=N,673nm,0.6s						
FCH	**Farellones**	**1.72**	**131**	⇑*i*P	Pn	12 33 06.0	-1.7
FCH				*e*S	Sn	12 33 28.9	+0.1
PCH	**Pirque**	**1.80**	**142**	⇑*i*P	Pn	12 33 10.3	+1.5
PCH				*e*S	Sn	12 33 33.7	+2.9
PCH	**Pirque**	**1.80**	**142**	⇑*i*P	Pn	12 33 10.3	+1.5
PCH				*e*S	Sn	12 33 33.7	+2.9
CHCH	**Chadas Angostu**	**1.99**	**150**	*e*P	Pn	12 33 13.0	+1.6
CHCH	**Chadas Angostu**	**1.99**	**150**	*e*P	Pn	12 33 13.0	+1.6
LMEL	**Las Melosas**	**2.14**	**140**	⇑*i*P	Pn	12 33 15.0	+1.6
LMEL				*i* S	Sn	12 33 42.3	+3.1
LMEL	**Las Melosas**	**2.14**	**140**	⇑*i*P	Pn	12 33 15.0	+1.6
LMEL				*i* S	Sn	12 33 42.3	+3.1
LMEL				AML	AML	12 33 50.3	
	comp=N,260nm,0.5s						
CACH	**El Canelo**	**2.17**	**152**	*e*P	Pn	12 33 15.8	+1.9
CACH	**El Canelo**	**2.17**	**152**	*e*P	Pn	12 33 15.8	+1.9

*LDG **18** 12:47:02.3±0.2, 37°.73N×87°.16E, h10km, Mb5.0/30, Error ellipse: s-maj=8.4km s-min=3.7km az=101.0*
*NNC **18** 12:47:02.3±2.9, 37°.95N×87°.54E, h0km, mb4.9, Error ellipse: s-maj=35.5km s-min=27.1km az=61.0*
*ISCJB **18** 12:47:03.6±0.1, 37°.76N±0°.02×87°.08E±0°.02, h10km, mb4.8/116, MS4.4/54, Error ellipse: s-maj=3.3km s-min=2.4km az=30.1*
*BJI **18** 12:47:03.2, 37°.86N×87°.12E, h10km, mB4.8/30, mb4.7/40, ML5.2/9, Ms4.9/47, Ms7 4.5/40*
*IDC **18** 12:47:03.1±0.6, 37°.74N×87°.24E, h0km, mb4.5/18, mb1 4.7/22, mb1mx4.6/28, mbtmp4.5/22, ML4.1/4, MS4.2/33, Ms1 4.3/33, ms1mx4.1/45, Error ellipse: s-maj=19.0km s-min=11.8km az=27.0*
*NEIC **18** 12:47:05.3±0.2, 37°.74N×87°.09E, h10km, mb5.0/62, MS4.6/1, Error ellipse: s-maj=5.3km s-min=3.5km az=18.0*
*GCMT **18** 12:47:06.3±0.3, 37°.85N×87°.26E, h20km±1km, MW4.9, Moment Tensor Solution. s18,c21; s81,c113; Moment tensor: Scale 10^{16}Nm; M_{rr}0.64±.16; $M_{\theta\theta}$-3.53±.12; $M_{\phi\phi}$2.88±.12; $M_{r\theta}$0.23±.20; $M_{\theta\phi}$0.38±.09; $M_{\phi r}$-0.73±.25; Best double couple: $M_0$3.30000×10^{16} NP1:ϕ_s229.00000°, δ76.00000°, λ9.00000°. NP2:ϕ_s137.00000°, δ81.00000°, λ166.00000°. Principal axes: T 3.1100, Plg16.0000°, Azm93.0000°; N 0.4500, Plg73.0000°, Azm287.0000°; P -3.5700, Plg4.0000°, Azm184.0000°; Data Used: IU IC II CN G.*
*MOS **18** 12:47:06.6±1.1, 37°.76N×87°.12E, h33km, mb5.1/67, MS4.3/27 Error ellipse: s-maj=7.1km s-min=4.2km az=119.3*
*SZGRF **18** 12:47:13.4, 38°.23N×86°.63E, h33km, mb4.8, MS4.6, Southern Xinjiang, China*

ISC 18 12:47:05.5±0.1, 37°.79N±0°.02×87°.15E±0°.02, h10km, (h23km±6.9km: pP-P), n387, σ1s04/395, mb4.8/116, MS4.4/53, 29C-18D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**6.04**	**4**	Pn	**Pn**	**12 48 34.5**	**-0.4**
WMQ				Sn	**Sn**	**12 49 47.5**	**+3.4**
WMQ				LR	LR		
	comp=E,4μm,6.0s						
LSA	**Lhasa**	**8.72**	**156**	P	**Pn**	**12 49 11.0**	**-0.7**
KSH	**Kashi**	**8.92**	**285**	⇑*i*P	**Pn**	**12 49 16.8**	**+2.5**
KSH				pP		12 49 20.0	
KSH				sP		12 49 22.4	
KSH				S	**Sn**	**12 50 58.3**	**+3.5**
KSH				smax			
	comp=N,2μm,1.5s						
KSH				smax			
	comp=E,1μm,1.3s						
KNDC	**Almaty**	**9.46**	**308**	⇓Pn	**Pn**	**12 49 25.3**	**+3.5**
	comp=E,112nm,0.6s						
KNDC				⇓Sn	**Sn**	**12 51 08.9**	**+0.7**
	comp=E,342nm,1.1s						
KNDC				⇓Lg		12 52 11.8	
	comp=E,1μm,1.3s						
ULHL	**Ulahol**	**9.48**	**301**	P	**Pn**	**12 49 22.5**	**+0.5**
	SNR=8.1						
AAA	**Alma-Ata**	**9.51**	**308**	*e*P	**Pn**	**12 49 19.8**	**-2.5**
AAA				*e*S	**Sn**	**12 51 08.1**	**-1.1**
AAA				pmax	pmax		
	comp=Z,200nm,2.7s						
AAA				smax			
	comp=E,1μm,1.7s						
AAA				MLR	MLR		
	comp=Z,3μm,3.0s						
MK31	**Makanchi Array**	**9.69**	**340**	⇓Pn	**Pn**	**12 49 23.2**	**-1.7**
	comp=Z,5.5nm,0.3s,baz=150,slow=14,SNR=97						
MK31				Sn	**Sn**	**12 51 12.8**	**-0.9**
	comp=Z,39nm,0.6s,baz=151,slow=22,SNR=5.3						
MK31				⇓Lg		12 52 12.7	
	comp=Z,236nm,1.1s						
MK31	**Makanchi Array**	**9.69**	**340**	*i* P	**Pn**	**12 49 22.8**	**-2.1**
MK31				pmax	pmax		
	comp=Z,13nm,0.2s						
MK31	**Makanchi Array**	**9.69**	**340**	*e*Pn	**Pn**	**12 49 23.1**	**-1.8**
MK31				*e*Sn	**Sn**	**12 51 14.0**	**+0.2**
MKAR	**Makanchi Array**	**9.69**	**340**	Pn	**Pn**	**12 49 22.8**	**-2.2**
	comp=Z,6.6nm,0.3s,baz=152,slow=14,SNR=52						
MKAR				Sn	**Sn**	**12 51 13.4**	**-0.3**
	comp=Z,9.2nm,0.3s,baz=157,slow=23,SNR=47						
MKAR				LR	LR	12 53 56.8	
	comp=Z,3μm,18.5s,baz=156,slow=42						
MKAR	**Makanchi Array**	**9.69**	**340**	P	**Pn**	**12 49 22.8**	**-2.1**
MKAR						12 51 13.5	
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.3s						
MKAR				smax			
	comp=N,9.0nm,0.3s						
MKAR				MLR	MLR		
	comp=Z,3μm,18.5s						
GUN	**Gumba**	**9.90**	**187**	*e*P	**Pn**	**12 49 29.6**	**+1.7**
	comp=Z,123nm,1.1s						
GKN	**Gorkha**	**9.98**	**193**	*e*P	**Pn**	**12

comp=Z,59nm,0.9s
EKS2 Erkin-Say 11.32 300 P Pn 12 49 48.2 +1.0
SNR=15
EKS2 Erkin-Say 11.32 300 *e*Pn Pn 12 49 48.0 +0.8
comp=Z,59nm,0.9s
CHCP Chirah Chowk 12.01 254 P Pn 12 49 54.9 -1.8
NDI New Delhi 12.30 225 *ex* Pn 12 50 02.5 +1.8
SHL Shillong 12.83 160 *e*PKP Pn 12 50 06.0 -1.9
CEP Cherat 12.99 257 P Pn 12 50 08.0 -2.0
LZH Lanzhou 13.46 92 *e*P Pn 12 50 17.1 +0.6
LZH pP 12 50 19.0
LZH PP 12 50 27.0
LZH S **Sn 12 52 49.0 +2.8**
LZH sS 12 52 54.0
LZH SS 12 53 03.8
LZH pmax pmax
comp=Z,24nm,1.0s
LZH pmax pmax
comp=Z,120nm,6.4s
LZH LR LR
comp=E,3μm,13.8s
LZH LR LR
comp=Z,3μm,14.4s
THW Thamme Wali 13.53 253 P Pn 12 50 15.3 -2.2
KK31 Karatay Array 13.74 298 ⇓Pn **Pn 12 50 20.7 +0.5**
comp=Z,21nm,1.1s,baz=108,slow=11,SNR=40
KK31 ⇓Lg 12 54 27.0
comp=Z,118nm,1.2s,baz=100,slow=26,SNR=4.8
KK31 Karatay Array 13.74 298 *i* P **Pn 12 50 19.2 -1.0**
KK31 pmax pmax
comp=Z,12nm,0.7s
KURK Kurchatov 14.29 338 Pn **Pn 12 50 23.6 -4.0**
comp=Z,84nm,0.7s,SNR=12
KURK Kurchatov 14.29 338 ⇑Pn **Pn 12 50 22.9 -4.7**
comp=Z,22nm,1.2s
KURK ⇓Sn **Sn 12 53 05.8 -0.3**
comp=Z,89nm,1.5s
KURK ⇑Lg 12 54 40.5
comp=Z,178nm,1.5s
KURK Kurchatov 14.29 338 ⇓*i*P **Pn 12 50 24.4 -3.2**
KURK pmax pmax
comp=Z,31nm,1.8s
KURK Kurchatov 14.29 338 *e*Pn **Pn 12 50 23.1 -4.5**
KURK *e*Sn **Sn 12 53 05.3 -0.7**
KBL Kabul 14.98 263 *e*P **Pn 12 50 33.2 -4.0**
CD2 Chengdu 15.32 112 P **Pn 12 50 44.1 +2.3**
CD2 pP pP 12 50 47.5 -1.9
CD2 sP sP 12 50 51.0 +0.3
CD2 PP 12 50 56.6
CD2 S **Sn 12 53 35.5 +3.9**
CD2 sS sS 12 53 40.6 -12
CD2 SS 12 53 53.1
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,170nm,4.3s
CD2 LR LR
comp=N,3μm,9.5s
CD2 LR LR
comp=Z,3μm,8.9s
ZAA0 Zalesovo Array 16.25 355 *e*P **Pn 12 50 49.1 -4.5**
ZALV Zalesovo Beam 16.25 355 Pn **Pn 12 50 49.2 -4.4**
comp=Z,1.8nm,0.3s,baz=176,slow=12,SNR=23
ZALV Sn **Sn 12 53 46.3 -7.4**
comp=Z,1.7nm,0.3s,baz=168,slow=23,SNR=6.5
ZALV LR LR 12 57 53.0
comp=Z,887nm,19.0s,baz=183,slow=40
ZALV Zalesovo Beam 16.25 355 P **Pn 12 50 49.2 -4.4**
ZALV 12 53 46.3
ZALV pmax pmax
comp=Z,2.0nm,0.3s
ZALV smax
comp=N,2.0nm,0.3s
ZALV MLR MLR
comp=Z,887nm,19.0s
ZALV Zalesovo Beam 16.25 355 Pn **Pn 12 50 49.2 -4.4**
ZALV Sn **Sn 12 53 46.3 -7.4**
ZALV LR LR 12 57 53.0
MOY Mondy 16.97 31 *e*P **Pn 12 51 01.7 -1.1**
MOY pmax pmax
comp=Z,56nm,1.8s
NVS Novosibirsk 17.27 352 *e*P **Pn 12 51 01.4 -5.1**
NVS *i* 12 54 09.4
SONM Songino Array 17.28 48 P **Pn 12 51 04.9 -1.8**
comp=Z,0.4nm,0.3s,baz=235,slow=12,SNR=47
SONM LR LR 12 57 56.2
comp=Z,1μm,21.8s,baz=240,slow=38
ULN Ulaanbaatar 17.69 49 *e*P **Pn 12 51 14.5 +2.7**
ULN pmax pmax
comp=Z,99nm,1.4s
ULN Ulaanbaatar 17.69 49 *e*P **Pn 12 51 14.5 +2.7**
comp=Z,99nm,1.4s
BTO Baotou 17.94 74 *e*P **Pn 12 51 12.8 -2.2**
XAN Xi'an 18.02 95 P **Pn 12 51 15.3 -0.7**
XAN pP pP 12 51 23.8 +4.5
ORY Orie 18.05 15 ⇓*i*P **Pn 12 51 14.1 -2.1**
TLY Talaya 18.11 35 *e*P **Pn 12 51 23.2 +6.2**
TLY pmax pmax
comp=Z,9.0nm,1.3s
TLY MLR MLR
comp=Z,786nm,16.0s
TLY Talaya 18.11 35 *e*P **Pn 12 51 18.8 +1.8**
comp=Z,30nm,1.4s
KMI Kunming 18.30 129 P **Pn 12 51 21.5 +2.0**
KMI pP pP 12 51 24.5 +2.1
KMI sP sP 12 51 25.8 +2.1
KMI PP 12 51 36.9
KMI S **Sn 12 54 43.3 -0.6**
KMI sS sS 12 54 48.4 -5.0
KMI SS 12 55 08.3
KMI pmax pmax
comp=Z,10.0nm,0.7s
KMI pmax pmax
comp=Z,120nm,4.2s
KMI LR LR
comp=N,2μm,9.7s
KMI LR LR
comp=E,2μm,11.7s
KMI LR LR
comp=Z,1μm,10.9s
VOSK Vostochnaya 18.71 328 ⇑P **Pn 12 51 21.7 -2.7**
comp=Z,37nm,1.0s
VOSK Vostochnaya 18.71 328 P **Pn 12 51 21.6 -2.7**
VOSK pmax pmax
comp=Z,37nm,1.0s
IRK Irkutsk 18.78 34 *e*P **Pn 12 51 25.2 +0.1**
IRK pmax pmax
comp=Z,46nm,1.3s
HHC Hu-ho-hao-te 19.12 73 *e*P **Pn 12 51 27.8 -1.5**
HHC pP pP 12 51 33.0 +1.7
HHC PP 12 51 44.8
HHC S **Sn 12 54 59.8 -3.7**
HHC sS sS 12 55 02.4 -7.3
HHC SS 12 55 24.3
HHC PcP PcP 12 55 51.1 -1.4
HHC ScS ScS 13 03 05.5 -4.3
HHC pmax pmax
comp=Z,42nm,1.0s
HHC pmax pmax
comp=Z,110nm,5.1s
HHC LR LR
comp=N,2μm,10.6s
HHC LR LR
comp=E,780nm,11.2s
HHC LR LR
comp=Z,770nm,10.4s
BVAR Borovoye Array 19.18 328 P **Pn 12 51 28.0 -2.0**
comp=Z,1.1nm,0.3s,baz=129,slow=12,SNR=52
BVAR Borovoye Array 19.18 328 P **Pn 12 51 28.0 -1.9**
BVAR pmax pmax
comp=Z,1.0nm,0.3s
BRVK Borovoye 19.25 328 P **Pn 12 51 29.6 -1.2**
comp=Z,250nm,1.0s,SNR=16
BRVK Borovoye 19.25 328 ⇑P **Pn 12 51 28.6 -2.2**
comp=Z,80nm,1.1s
BRVK Borovoye 19.25 328 *d*P **Pn 12 51 28.7 -2.1**
BRVK pmax pmax
comp=Z,63nm,1.2s
BRVK Borovoye 19.25 328 *e*P **Pn 12 51 28.8 -2.0**
comp=Z,35nm,0.8s
ZRNK Zerenda 19.73 326 ⇑P **Pn 12 51 33.9 -2.6**
comp=Z,60nm,1.4s
ZRNK Zerenda 19.73 326 *i* P **Pn 12 51 33.8 -2.7**
ZRNK pmax pmax
comp=Z,60nm,1.3s

ENH Enshi 19.94 105 *e*P **Pn 12 51 37.8 -1.4**
comp=Z,81nm,1.4s
GYA Guiyang 19.97 119 ⇑*i*P **Pn 12 51 37.8 -1.8**
GYA PP 12 52 01.0
GYA S **Sn 12 55 20.4 -3.8**
GYA SS 12 55 48.8
GYA ScP ScP 12 59 31.8 +1.3
GYA pmax pmax
comp=Z,30nm,0.8s
GYA pmax pmax
comp=Z,150nm,4.7s
GYA LR LR
comp=N,820nm,12.2s
GYA LR LR
comp=E,610nm,11.6s
GYA LR LR
comp=Z,740nm,14.0s
CHTO Chiang Mai 21.53 148 *e*P **P 12 51 53.7 -1.1**
CHTO pmax pmax
comp=Z,10.0nm,1.1s,mb4.2
CHTO Chiang Mai 21.53 148 *e*P **P 12 51 53.7 -1.1**
comp=Z,9.8nm,1.1s,mb4.2
HYB Hyderabad 21.65 203 *e*P **P 12 51 56.0 -0.1**
HYB Hyderabad 21.65 203 *i* P **P 12 51 56.0 -0.1**
CM31 Chiang Mai Arr 21.85 149 *e*P **P 12 51 57.1 -1.1**
comp=Z,27nm,1.2s,mb4.6
CMAR Chiang Mai Arr 21.85 149 P **P 12 51 56.8 -1.4**
comp=Z,7.7nm,1.0s,mb4.1,baz=328,slow=9.7,SNR=23
CMAR LR LR 13 01 10.9
comp=Z,424nm,18.4s,MS3.9,baz=333,slow=39
CMAR Chiang Mai Arr 21.85 149 P **P 12 51 56.8 -1.4**
CMAR pmax pmax
comp=Z,8.0nm,1.0s
CMAR MLR MLR
comp=Z,425nm,18.4s
POO Poona 22.44 215 ⇑*i x* **P 12 52 05.0 +0.5**
comp=Z,143nm,1.5s,mb5.2
BJI Beijing 22.65 75 P **P 12 52 07.9 +1.2**
BJI S **S 12 56 16.8 +1.7**
BJI sS sS 12 56 22.4 +2.7
BJI pmax pmax
comp=Z,20nm,1.4s,mb4.3
BJI pmax pmax
comp=Z,120nm,4.9s
BJI LR LR
comp=N,2μm,18.1s,MS4.7
BJI LR LR
comp=E,520nm,15.4s,MS4.7
BJI LR LR
comp=Z,230nm,15.0s,MS3.7
AB31 Akbulak array 22.69 309 ⇓P **P 12 52 06.0 -1.0**
comp=Z,16nm,0.6s,mb4.6,baz=90,slow=11,SNR=174
AB31 Akbulak array 22.69 309 *i* P **P 12 52 05.9 -1.1**
AB31 pmax pmax
comp=Z,25nm,0.7s,mb4.8
ABKAR Akbulak array 22.69 309 *e*P **P 12 52 06.0 -1.0**
comp=Z,29nm,0.8s,mb4.8
ABKT Ailbek 22.89 279 P **P 12 52 09.9 +0.7**
comp=Z,405nm,1.0s,mb5.8,SNR=15
WHN Wuhan 23.58 100 P **P 12 52 15.3 -1.2**
WHN LR LR
comp=N,2μm,11.1s,MS5.0
WHN LR LR
comp=E,2μm,10.0s,MS5.0
WHN LR LR
comp=Z,3μm,15.0s,MS4.9
AKTK Aktyubinsk 24.27 311 P **P 12 52 22.0 -0.6**
AKTK LR LR 13 02 38.3
AKTO Aktyubinsk 24.27 311 P **P 12 52 22.0 -0.6**
comp=Z,23nm,0.8s,mb4.7,baz=106,slow=9.8,SNR=69
AKTO LR LR 13 02 38.3
comp=Z,213nm,18.4s,MS3.7,baz=289,slow=38
AKTO Aktyubinsk 24.27 311 P **P 12 52 22.0 -0.6**
AKTO pmax pmax
comp=Z,23nm,0.8s,mb4.7
AKTO MLR MLR
comp=Z,213nm,18.4s,MS3.7
SVE Sverdlovsk 25.92 326 ⇓*e*P **P 12 52 37.9 +0.4**
SVE *e*S **S 12 57 07.8 +0.4**
SVE pmax pmax
comp=Z,82nm,1.4s,mb5.1
SVE MLR MLR
comp=Z,957nm,14.0s,MS4.5
HIA Hailar 26.07 53 *e*P **P 12 52 40.5 +1.6**
HIA pmax pmax
comp=Z,13nm,0.9s
HIA Hailar 26.07 53 *e*P **P 12 52 40.5 +1.5**
comp=Z,14nm,0.9s,mb4.5
NJ2 Nanjing 26.54 93 *e*P **P 12 52 42.1 -1.3**
NJ2 pP pP 12 52 51.4 +5.0
NJ2 sP sP 12 52 56.1 +8.4
NJ2 S **S 12 57 14.5 -3.2**
NJ2 pmax pmax
comp=Z,410nm,5.6s
NJ2 LR LR
comp=N,690nm,14.8s,MS4.4
NJ2 LR LR
comp=E,380nm,16.0s,MS4.4
NJ2 LR LR
comp=Z,480nm,16.4s,MS4.1
ARU Arti 26.65 324 P **P 12 52 43.1 -1.0**
comp=Z,98nm,1.0s,mb5.3,SNR=6.3
ARU Arti 26.65 324 *c i*P **P 12 52 44.0 -0.1**
ARU PPP 12 53 29.7
ARU S **S 12 57 19.1 +0.2**
ARU pmax pmax
comp=Z,21nm,1.0s,mb4.6
ARU Arti 26.65 324 *e*P **P 12 52 44.0 -0.1**
comp=Z,17nm,0.9s,mb4.6
QIZ Qiongzhong 27.22 127 P **P 12 52 50.5 +0.9**
QIZ S **S 12 57 29.6 +1.1**
QIZ pmax pmax
comp=Z,17nm,1.4s,mb4.4
QIZ LR LR
comp=N,850nm,19.7s,MS4.4
QIZ LR LR
comp=E,510nm,19.6s,MS4.4
QIZ LR LR
comp=Z,690nm,16.0s,MS4.3
SSE Sheshan 28.74 93 P **P 12 53 04.0 +0.9**
SSE pP pP 12 53 06.9 +0.7
SSE S **S 12 57 54.8 +2.4**
SSE sS sS 12 57 59.6 +2.2
SSE pmax pmax
comp=Z,36nm,0.8s,mb5.2
SSE pmax pmax
comp=Z,260nm,3.8s
SSE LR LR
comp=N,1μm,20.3s,MS4.5
SSE LR LR
comp=E,710nm,20.3s,MS4.5
SSE LR LR
comp=Z,780nm,11.4s
SOKR Solikamsk 29.17 328 *c i*P **P 12 53 06.9 +0.3**
SOKR pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
SOKR MLR MLR
comp=Z,740nm,17.0s,MS4.4
CN2 Changchun 29.42 66 *e*P **P 12 53 10.9 +1.9**
CN2 *es*P sP 12 53 17.9 +4.6
CN2 *e*S **S 12 58 03.0 +0.2**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,900nm,14.0s,MS4.7
CN2 LR LR
comp=E,800nm,14.0s,MS4.7
CN2 LR LR
comp=Z,200nm,19.0s,MS3.8
MAK Makhachkala 30.44 292 *e*P **P 12 53 14.0 -4.1**
MAK *e*S **S 12 58 11.9 -7.0**
MAK pmax pmax
comp=Z,67nm,0.8s,mb5.4
CLNS Chul'man 31.34 40 *e*P **P 12 53 26.2 +0.4**
CLNS *e**PP pP 12 53 35.8 +6.9
CLNS *e* 12 56 17.0
CLNS *e*S **S 12 58 25.5 -7.2**
CLNS pmax pmax
comp=Z,26nm,1.2s,mb4.9
CLNS pmax pmax
comp=N,8.0nm,1.2s
CLNS pmax pmax
comp=E,20nm,1.0s
CLNS smax
comp=N,48nm,14.1s
CLNS smax
comp=E,96nm,14.1s
CLNS MLR MLR
comp=N,302nm,10.0s,MS4.3
CLNS MLR MLR
comp=E,242nm,12.0s,MS4.3
CLNS MLR MLR
comp=Z,255nm,12.0s,MS4.1
KSRS Korea Array 32.12 78 P **P 12 53 31.5 -1.4**
comp=Z,8.4nm,1.0s,mb4.5,baz=275,slow=8.2,SNR=33
KSRS LR LR 13 07 19.7
comp=Z,443nm,19.4s,MS4.2,baz=288,slow=38
KSRS Korea Array 32.12 78 P **P 12 53 31.5 -1.4**
KSRS pmax pmax
comp=Z,8.0nm,1.0s,mb4.5
KSRS MLR MLR
comp=Z,443nm,19.5s,MS4.2
MDJ Mudanjiang 32.37 64 P **P 12 53 36.3 +1.3**
MDJ pP pP 12 53 39.4 +1.4
MDJ sP sP 12 53 40.5 +1.2
MDJ PcP PcP 12 56 23.5 +1.0
MDJ S **S 12 58 52.3 +3.4**
MDJ ScP ScP 13 00 06.8 +0.6
MDJ PcS PcS 13 00 08.8 +1.5
MDJ ScS ScS 13 04 06.8 +1.6
MDJ pmax pmax
comp=Z,23nm,1.4s,mb4.8
MDJ pmax pmax
comp=Z,79nm,3.8s
MDJ LR LR
comp=N,1μm,9.4s
MDJ LR LR
comp=E,210nm,11.3s
MDJ LR LR
comp=Z,690nm,14.0s,MS4.5
GNI Garni 32.84 288 *c i*P **P 12 53 40.9 +1.8**
GNI pmax pmax
comp=Z,28nm,1.8s
KLR Kul'dur 33.84 56 *e*P **P 12 53 44.7 -3.1**
KLR pmax pmax
comp=E,52nm,1.4s
KLR pmax pmax
comp=Z,48nm,1.4s,mb5.2
KLR MLR MLR
comp=Z,3μm,11.0s,MS5.2
RDF Al-Radifah 34.03 267 *e*P **P 12 53 50.9 +1.2**
RDF AMb AMB 12 53 52.7
comp=Z,24nm,1.0s,mb5.1
NAY Al-Naaiem 34.14 268 *e*P **P 12 53 50.8 +0.2**
NAY AMb AMB 12 53 53.1
comp=Z,20nm,1.1s,mb5.0
VRHR Novokhopersk 34.56 308 *e*P **P 12 53 52.9 -1.1**
VRHR pmax pmax
comp=Z,10.0nm,0.4s,mb5.1
VRHR pmax pmax
comp=N,30nm,0.8s
VRHR pmax pmax
comp=E,9.0nm,0.8s
YAK Yakutsk 35.58 33 *e*P **P 12 54 01.9 -0.7**
YAK *e* 12 54 15.1
YAK pmax pmax
comp=Z,52nm,1.1s,mb5.4
YAK pmax pmax
comp=E,33nm,1.4s
YAK pmax pmax
comp=N,16nm,1.5s
YAK Yakutsk 35.58 33 *e*P **P 12 54 02.6 0.0**
comp=N,83nm,1.2s,mb5.5
HABR Khabarovsk 36.01 57 *e*P **P 12 54 06.5 0.0**
HABR 12 55 27.1
HABR 12 56 33.0
HABR S **S 12 59 44.5 -0.7**
HABR *e*SS SS 13 02 08.5 -13
HABR 13 04 24.2
HABR pmax pmax
comp=Z,24nm,1.0s,mb5.1
HABR pmax pmax
comp=E,13nm,0.8s
HABR pmax pmax
comp=N,58nm,2.5s
HABR MLR MLR
comp=Z,822nm,19.0s,MS4.5
VSR Storozhevoye 36.11 308 *e*P **P 12 54 06.6 -0.8**
VSR pmax pmax
comp=N,2.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VSR MLR MLR
comp=N,480nm,20.0s,MS4.4
VSR MLR MLR
comp=E,410nm,20.0s,MS4.4
VSR MLR MLR
comp=Z,940nm,20.0s,MS4.6
PSI Prapat 36.45 160 LR LR 13 10 43.5
comp=Z,330nm,20.6s,MS4.1,baz=67,slow=39
MOS Moscow 37.44 315 *e*P **P 12 54 14.5 -4.1**
MOS pmax pmax
comp=Z,50nm,0.9s,mb5.3
MOS MLR MLR
comp=Z,1μm,15.0s,MS4.8
OBN Obninsk 37.96 314 *e*P **P 12 54 23.0 0.0**
OBN pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
OBN MLR MLR
comp=Z,800nm,15.0s,MS4.7
TIXI Tiksi 40.00 19 *e*P **P 12 54 38.9 -1.0**
TIXI pmax pmax
comp=Z,27nm,1.1s,mb4.9
TIXI MLR MLR
comp=Z,438nm,16.0s,MS4.4
TIXI Tiksi 40.00 19 *e*P **P 12 54 39.3 -0.6**
comp=Z,28nm,1.0s,mb5.0
MAT Matsushiro 40.29 76 P **P 12 54 42.3 -0.5**
MAT *e*S **S 13 01 01.0 +11**
MJAR Matsushiro Arr 40.29 76 P **P 12 54 42.3 -0.4**
comp=Z,5.1nm,1.1s,mb4.2,baz=289,slow=12,SNR=14
MJAR LR LR 13 11 27.6
comp=Z,233nm,19.7s,MS4.0,baz=240,slow=36
MJAR Matsushiro Arr 40.29 76 P **P 12 54 42.3 -0.5**
MJAR pmax pmax
comp=Z,5.0nm,1.1s
MJAR MLR MLR
comp=Z,233nm,19.7s
ASF Jabal al Asfar 41.16 278 LR LR 13 14 26.7
comp=Z,218nm,18.7s,MS4.0,baz=293,slow=40
KKM Kota Kinabalu 41.19 133 *e*P **P 12 54 50.5 +0.2**
comp=Z,31nm,1.5s,mb4.7
BR131 Keskin Array S 41.26 290 *e*P **P 12 54 51.2 +0.4**
BRTR Keskin Array B 41.26 290 P **P 12 54 51.0 +0.3**
comp=Z,9.1nm,0.8s,mb4.5,baz=95,slow=7.5,SNR=29
BRTR PP PP 12 56 30.8 +5.0
comp=Z,1.8nm,0.8s,baz=93,slow=8.7,SNR=4.3
BRTR LR LR 13 16 30.3
comp=Z,105nm,19.5s,MS3.7,baz=243,slow=43
BRTR Keskin Array B 41.26 290 P **P 12 54 51.0 +0.3**
BRTR 12 56 30.8
BRTR pmax pmax
comp=Z,9.0nm,0.8s
BRTR pmax pmax
comp=Z,2.0nm,0.8s
BRTR MLR MLR
comp=Z,105nm,19.5s
LVZ Lovozero 41.65 333 *c i*P **P 12 54 53.0 -0.5**
LVZ pmax pmax
comp=Z,45nm,1.2s,mb5.0
APA Apatity 41.99 332 ⇑*e*P **P 12 54 58.4 +2.0**
APA *e* 12 56 36.0
APA *e*S **S 13 01 20.0 +5.2**
APA pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
APA MLR MLR
comp=Z,500nm,11.0s,MS4.7
MMAI Mount Meron Ar 42.01 280 P **P 12 54 58.2 +1.2**
comp=Z,2.6nm,0.4s,mb4.2,baz=75,slow=11,SNR=5.2
MMAI LR LR 13 15 06.2
comp=Z,139nm,20.1s,MS3.8,baz=355,slow=40
AKASG Malin Array Be 42.41 307 P **P 12 54 59.1 -0.8**
comp=Z,0.3nm,0.3s,baz=68,slow=8.2,SNR=4.6
AKASG PP PP 12 56 37.6 -0.4
comp=Z,3.3nm,0.8s,baz=73,slow=9.5,SNR=4.7
AKASG LR LR 13 16 26.2
comp=Z,474nm,18.4s,MS4.4,baz=80,slow=42
AKASG Malin Array Be 42.41 307 P **P 12 54 59.2 -0.7**

AKASG 12 56 37.6
AKASG pmax pmax
comp=Z,3.0nm,0.8s
AKASG MLR MLR
comp=Z,474nm,18.4s
EIL Elat 43.69 275 LR LR 13 16 50.7
comp=Z,331nm,20.1s,MS4.2,baz=283,slow=41
FINES FINESS Array B 44.01 323 P P **12 55 12.4 -0.4**
comp=Z,5.5nm,0.7s,mb4.4,baz=94,slow=8.6,SNR=13
FINES PP PP 12 56 54.9 -0.2
comp=Z,1.5nm,0.7s,baz=96,slow=11,SNR=2.8
FINES FINESS Array B 44.01 323 P P **12 55 12.4 -0.4**
FINES 12 56 54.9
FINES pmax pmax
comp=Z,6.0nm,0.7s
FINES pmax pmax
comp=Z,2.0nm,0.7s
FINES FINESS Array B 44.01 323 P P **12 55 12.4 -0.4**
FINES PP PP 12 56 54.9 -0.2
TESR 44.71 301 ⇑P P **12 55 18.2 -0.4**
TESR 44.71 301 ⇑*i*P P **12 55 18.2 -0.4**
VRI Vrincioaia 44.79 300 ⇑P P **12 55 20.4 +1.2**
VRI Vrincioaia 44.79 300 ⇑*i*P P **12 55 20.4 +1.2**
KEV Kevo 44.83 335 *e*P P **12 55 19.3 +0.1**
KEV pmax pmax
comp=Z,32nm,1.1s,mb5.1
KEV Kevo 44.83 335 *e*P P **12 55 19.3 +0.1**
comp=Z,32nm,1.1s,mb5.1
PLOR Plostina 44.84 300 ⇑P P **12 55 20.4 +0.7**
PLOR Plostina 44.84 300 ⇑*i*P P **12 55 20.4 +0.7**
ARCES ARCESS Array B 45.29 334 P P **12 55 22.9 0.0**
comp=Z,8.7nm,0.7s,mb4.7,baz=97,slow=8.5,SNR=27
ARCES LR LR 13 15 59.7
comp=Z,396nm,19.8s,MS4.3,baz=282,slow=38
ARCES ARCESS Array B 45.29 334 P P **12 55 22.9 0.0**
ARCES pmax pmax
comp=Z,9.0nm,0.7s
ARCES MLR MLR
comp=Z,396nm,19.8s
ARE0 ARCESS Array S 45.29 334 *e*P P **12 55 23.0 +0.1**
MLR Muntele Rosu 45.41 300 ⇑P P **12 55 26.0 +1.9**
MLR Muntele Rosu 45.41 300 ⇑*i*P P **12 55 26.0 +1.9**
BURAR Bucovina Array 45.45 303 ⇑P P **12 55 25.1 +0.6**
BURAR Bucovina Array 45.45 303 ⇑*i*P P **12 55 25.1 +0.6**
BUR08 Bucovina Ar. S 45.46 303 *e*P P **12 55 25.0 +0.4**
LVV L'vov 45.83 306 *e*P P **12 55 26.9 -0.5**
SEY Seymchan 46.02 35*d*/*i*P P **12 55 28.4 -0.3**
VOIR 46.03 300 ⇓P P **12 55 30.0 +0.9**
VOIR 46.03 300 ⇓*i*P P **12 55 30.0 +0.9**
KECS Kecovo 48.37 305 *e*P P **12 55 47.9 +0.6**
KECS Kecovo 48.37 305 *e*P P **12 55 47.9 +0.6**
VYHS Vyhne 49.44 306 *e*P P **12 55 55.8 +0.4**
VYHS Vyhne 49.44 306 *e*P P **12 55 55.8 +0.4**
OKC Ostrava-Krasne 49.55 307 AMS AMS 13 20 30.0
comp=Z,400nm,14.9s
PETK Petropavlovsk- 49.77 48 P P **12 55 57.9 0.0**
comp=Z,13nm,1.0s,mb4.9,baz=221,slow=3.4,SNR=9.2
PETK LR LR 13 18 24.2
comp=Z,315nm,18.5s,MS4.3,baz=280,slow=38
PETK Petropavlovsk- 49.77 48 P P **12 55 57.9 0.0**
PETK pmax pmax
comp=Z,13nm,1.0s,mb4.9
PETK MLR MLR
comp=Z,315nm,18.5s,MS4.3
MORC Moravsky Berou 49.95 307 ⇑P P **12 55 59.6 +0.3**
MORC Moravsky Berou 49.95 307 ⇑*i*P P **12 55 59.6 +0.3**
HFS Hagfors 50.13 321 LR LR 13 16 47.0
comp=Z,226nm,19.4s,MS4.2,baz=78,slow=36
PET Petropavlovsk 50.35 48 *e*P P **12 56 01.6 -0.7**
PET *e*S S **13 03 10.7 -4.4**
PET pmax pmax
comp=Z,31nm,1.1s,mb5.2
PET MLR MLR
comp=Z,600nm,17.0s,MS4.7
PET MLR MLR
comp=Z,600nm,15.0s
PET Petropavlovsk 50.35 48 *e*P P **12 56 02.0 -0.3**
comp=Z,33nm,1.1s,mb5.3
DPC Dobruska-Polom 50.57 308 *e*P P **12 56 04.6 +0.6**
DPC *e* 12 56 14.8
DPC MLR MLR
comp=Z,300nm,14.0s,MS4.5
DPC Dobruska-Polom 50.57 308 *e*P P **12 56 04.6 +0.6**
DPC *ex* x 12 56 14.8
DPC AMS AMS 13 19 00.0
comp=Z,300nm,14.0s
VRAC Vranov 50.66 307 LR LR 13 22 08.8
comp=Z,486nm,18.3s,MS4.6,baz=86,slow=42
UPC Upice 50.72 309 *e*P P **12 56 05.6 +0.4**
UPC Upice 50.72 309 *e*P P **12 56 05.6 +0.4**
NB2 NORSAR Subarra 51.20 323 P P **12 56 07.7 -0.9**
comp=Z,27nm,1.1s,mb5.1,baz=80,slow=7.4
NOA NORSAR Array B 51.20 323 P P **12 56 07.7 -0.9**
comp=Z,12nm,0.9s,mb4.8,baz=81,slow=7.5,SNR=27
NOA LR LR 13 17 30.4
comp=Z,307nm,20.4s,MS4.3,baz=90,slow=36
NOA NORSAR Array B 51.20 323 P P **12 56 07.7 -0.9**
NOA pmax pmax
comp=Z,12nm,0.9s
NOA MLR MLR
comp=Z,307nm,20.4s
TREC Trest 51.37 307 AMS AMS 13 21 50.0
comp=Z,600nm,16.8s
NAO01 NORSAR Array S 51.39 322 *e*P P **12 56 10.0 +0.1**
BILL Bilibino 51.57 28*d*/*i*P P **12 56 12.4 +1.1**
BILL *e* 12 57 21.9
BILL *e* 12 58 09.4
BILL pmax pmax
comp=Z,43nm,1.6s,mb5.1
BILL MLR MLR
comp=Z,600nm,17.0s,MS4.7
BILL Bilibino 51.57 28 *e*P P **12 56 12.2 +1.0**
comp=Z,25nm,1.1s,mb5.0
PVCC Panska Ves 51.61 309 *e*P P **12 56 12.5 +0.7**
PVCC MLR MLR
comp=Z,300nm,12.2s,MS4.5
PVCC Panska Ves 51.61 309 *e*P P **12 56 12.5 +0.7**
PVCC AMS AMS 13 22 00.0
comp=Z,300nm,12.2s
PRU Pruhonice 51.77 308 *e*P P **12 56 14.1 +1.1**
PRU MLR MLR
comp=Z,300nm,16.8s,MS4.4
PRU Pruhonice 51.77 308 *e*P P **12 56 14.1 +1.1**
PRU AMS AMS 13 21 30.0
comp=Z,300nm,16.8s
BRG Berggiesshubel 51.90 310 *e*P P **12 56 14.3 +0.3**
comp=Z,12nm,1.0s,mb4.8
BRG Berggiesshubel 51.90 310 *e*P P **12 56 14.5 +0.6**
comp=Z,12nm,1.0s,mb4.8
BRG
comp=N,262nm,12.1s
BRG
comp=E,356nm,17.5s
BRG
comp=Z,463nm,14.6s
BRG Berggiesshubel 51.90 310 *e*P P **12 56 14.5 +0.5**
BRG pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
BRG MLR MLR
comp=N,157nm,12.1s
BRG MLR MLR
comp=E,213nm,17.5s
BRG MLR MLR
comp=Z,277nm,14.6s,MS4.4
CLL Collm 52.35 310 *e*P P **12 56 17.2 -0.2**
comp=Z,17nm,1.1s,mb4.9
CLL Collm 52.35 310 ⇑*i*P P **12 56 17.3 -0.1**
CLL *e* 12 56 28.0
CLL *e*S S **13 03 43.0 +0.2**
CLL pmax pmax
comp=Z,13nm,0.8s,mb4.9
CLL Collm 52.35 310 ⇑*i*P P **12 56 17.3 -0.1**
comp=Z,13nm,0.8s,mb4.9
CLL *e* 12 56 28.0
CLL *e*S S **13 03 43.0 +0.2**
CLL *e*SS SS 13 07 48.0 +28
CLL LmV 13 22 00.0
comp=N,200nm,19.4s
CLL LmV 13 22 00.0
comp=E,300nm,20.8s
KHC Kasperske Hory 52.61 308 *e*P P **12 56 18.9 -0.4**
KHC pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
KHC Kasperske Hory 52.61 308 *e*P P **12 56 18.9 -0.4**
comp=Z,2.6nm,0.6s,mb4.3
KHC Kasperske Hory 52.61 308 *e*P P **12 56 19.4 +0.1**
KHC *ex* x 12 56 30.6
KHC AMS AMS 13 22 30.0
comp=Z,500nm,16.6s
GEC2 GERESS Array S 52.62 307 *e*P P **12 56 19.4 0.0**
comp=Z,10.0nm,1.1s,mb4.7
TANN Tannenbergstha 52.93 309 *e*P P **12 56 21.8 +0.1**
comp=Z,6.0nm,0.9s,mb4.5
NKC Novy Kostel 52.99 309 AMS AMS 13 20 50.0
comp=Z,500nm,19.9s
WERD Werda 53.02 309 *e*P P **12 56 22.4 +0.1**
comp=Z,7.0nm,1.0s,mb4.5
WET Wettzell 53.05 308 *e*P P **12 56 22.6 +0.1**
comp=Z,7.0nm,1.0s,mb4.5
BSEG Bad Segeberg 53.22 314 *e*P P **12 56 24.2 +0.5**
comp=Z,9.0nm,0.8s,mb4.8
ROTZ Rotzenmuhle 53.28 309 *e*P P **12 56 25.0 +0.8**
comp=Z,8.0nm,1.0s,mb4.6
MOX Moxa 53.38 310 *e*P P **12 56 25.2 +0.2**
MOX *e* 12 56 49.5
MOX
comp=Z,400nm,18.0s
MOX Moxa 53.38 310 *e*P P **12 56 25.0 0.0**
comp=Z,6.0nm,1.0s,mb4.5
RJOB Jochberg 53.53 306 *e*P P **12 56 26.2 +0.1**
comp=Z,23nm,2.1s,mb4.7
NRDL Niedersach Rie 53.74 312 *e*P P **12 56 26.9 -0.7**
comp=Z,14nm,1.0s,mb4.8
CLZ Clausthal 53.78 312 *e*P P **12 56 28.0 +0.2**
comp=Z,12nm,0.9s,mb4.8
GRF Grafenberg Arr 53.91 309 *e*P P **12 56 29.6 +0.7**
comp=Z,20nm,0.9s,mb5.0
GRF *e*L 13 23 46.8
comp=Z,528nm,18.4s
GRF Grafenberg Arr 53.91 309 *e*P P **12 56 29.6 +0.7**
GRF pmax pmax
comp=Z,20nm,0.9s,mb5.0
GRF MLR MLR
comp=Z,500nm,18.4s,MS4.6
UBBA Unterbreizbach 54.31 310 *e*P P **12 56 31.6 -0.1**
comp=Z,10.0nm,1.4s,mb4.5
FUR Furstenfeldbru 54.36 307 *e*P P **12 56 32.7 +0.5**
comp=Z,325nm,3.0s
TNS Taunus Mts 55.44 310 *e*P P **12 56 40.0 +0.1**
comp=Z,14nm,1.1s,mb4.9
DAVOX Davos/Dischmat 55.73 306 LR LR 13 22 20.4
comp=Z,373nm,19.1s,MS4.5,baz=75,slow=38
BUG Bochum-Univer 55.74 312 *e*P P **12 56 43.1 +1.0**
comp=Z,23nm,1.2s,mb5.1
BFO Black Forest 56.16 308 *e*P P **12 56 45.6 +0.5**
comp=Z,7.0nm,1.0s,mb4.7
VAE Valguarnera 56.17 294 LR LR 13 24 46.6
comp=Z,164nm,20.6s,MS4.1,baz=117,slow=40
CDF Champ du Feu 56.79 308 *e*P P **12 56 49.3 -0.3**
comp=Z,20nm,0.9s,mb4.9
CDF Champ du Feu 56.79 308 *e*P P **12 56 49.3 -0.3**
CDF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
CDF Champ du Feu 56.79 308 *e*P P **12 56 49.3 -0.3**
comp=Z,10nm,0.9s,mb4.8
DAG Danmarks Havn 57.04 345⇑*e*P P **12 56 50.7 -0.3**
DAG pmax pmax
comp=Z,13nm,0.9s,mb5.0
DAG Danmarks Havn 57.04 345⇑*i*P P **12 56 50.7 -0.3**
comp=Z,13nm,0.9s,mb5.0
BCLA Clavier 57.26 311 P P **12 56 53.2 +0.3**
HINF Hinteralfeld 57.27 308 *e*P P **12 56 52.7 -0.3**
comp=Z,14nm,0.8s,mb4.8
HINF Hinteralfeld 57.27 308 *e*P P **12 56 52.7 -0.3**
HINF pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
HINF Hinteralfeld 57.27 308 *e*P P **12 56 52.7 -0.3**
comp=Z,7.1nm,0.8s,mb4.8
HAU Haudompre 57.51 308 *e*P P **12 56 54.4 -0.3**
GIVF Givet 57.66 311 *e*P P **12 56 55.8 0.0**
comp=Z,35nm,0.9s,mb5.1
GIVF Givet 57.66 311 *e*P P **12 56 55.8 0.0**
GIVF pmax pmax
comp=Z,18nm,0.9s,mb5.1
GIVF Givet 57.66 311 *e*P P **12 56 55.8 0.0**
comp=Z,18nm,0.9s,mb5.1
DOU Dourbes 57.80 311 P P **12 56 56.6 -0.1**
PGF Pioggiola 57.91 301 *e*P P **12 56 57.3 -0.3**
comp=Z,55nm,1.2s,mb5.2
PGF Pioggiola 57.91 301 *e*P P **12 56 57.3 -0.3**
PGF pmax pmax
comp=Z,28nm,1.2s,mb5.2
PGF Pioggiola 57.91 301 *e*P P **12 56 57.3 -0.3**
comp=Z,28nm,1.2s,mb5.2
BAIF Baives 58.05 311 *e*P P **12 56 58.4 -0.1**
MEZF Maizieres J'vi 58.13 309 *e*P P **12 56 59.4 +0.3**
CABF La Chapelle 58.21 307 *e*P P **12 56 59.4 -0.3**
LPG La Plagne 58.22 305 *e*P P **12 57 00.3 +0.5**
comp=Z,38nm,0.8s,mb5.2
LPG La Plagne 58.22 305 *e*P P **12 57 00.3 +0.5**
LPG pmax pmax
comp=Z,19nm,0.8s,mb5.2
LPG La Plagne 58.22 305 *e*P P **12 57 00.3 +0.5**
comp=Z,19nm,0.8s,mb5.2
LPL La Plagne 58.23 305 *e*P P **12 57 00.3 +0.5**
comp=Z,45nm,0.8s,mb5.2
LPL La Plagne 58.23 305 *e*P P **12 57 00.3 +0.5**
LPL pmax pmax
comp=Z,23nm,0.8s,mb5.3
LPL La Plagne 58.23 305 *e*P P **12 57 00.3 +0.5**
comp=Z,22nm,0.8s,mb5.2
SBF Sospel 58.43 303 *e*P P **12 57 01.1 -0.1**
comp=Z,54nm,0.8s,mb5.3
SBF Sospel 58.43 303 *e*P P **12 57 01.1 -0.1**
SBF pmax pmax
comp=Z,27nm,0.8s,mb5.3
SBF Sospel 58.43 303 *e*P P **12 57 01.1 -0.1**
comp=Z,27nm,0.8s,mb5.3
MBDF Montbardon 58.52 304 *e*P P **12 57 02.0 +0.2**
comp=Z,24nm,0.9s,mb4.9
MBDF Montbardon 58.52 304 *e*P P **12 57 02.0 +0.2**
MBDF pmax pmax
comp=Z,12nm,0.9s,mb4.9
MBDF Montbardon 58.52 304 *e*P P **12 57 02.0 +0.2**
comp=Z,12nm,0.9s,mb4.9
ORIF Oris-en-Rattie 59.02 305 *e*P P **12 57 04.8 -0.5**
comp=Z,13nm,0.7s,mb4.8
ORIF Oris-en-Rattie 59.02 305 *e*P P **12 57 04.8 -0.5**
ORIF pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
ORIF Oris-en-Rattie 59.02 305 *e*P P **12 57 04.8 -0.5**
comp=Z,6.7nm,0.7s,mb4.8
FRF La Foret Royal 59.07 303 *e*P P **12 57 05.4 -0.3**
LMR La Mourre 59.26 303 *e*P P **12 57 06.4 -0.6**
comp=Z,54nm,1.2s,mb5.2
LMR La Mourre 59.26 303 *e*P P **12 57 06.4 -0.6**
LMR pmax pmax
comp=Z,27nm,1.2s,mb5.2
LMR La Mourre 59.26 303 *e*P P **12 57 06.4 -0.6**
comp=Z,27nm,1.2s,mb5.2
LOR Lormes 59.35 308 *e*P P **12 57 06.7 -0.9**
comp=Z,8.8nm,0.7s,mb4.6
LOR Lormes 59.35 308 *e*P P **12 57 06.7 -0.9**
LOR pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
LOR Lormes 59.35 308 *e*P P **12 57 06.7 -0.9**
comp=Z,4.4nm,0.7s,mb4.6
SMF Signal de Mont 59.62 308 *e*P P **12 57 08.9 -0.5**
comp=Z,19nm,0.7s,mb4.9
SMF Signal de Mont 59.62 308 *e*P P **12 57 08.9 -0.5**
SMF pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
SMF Signal de Mont 59.62 308 *e*P P **12 57 08.9 -0.5**
comp=Z,9.4nm,0.7s,mb4.9
SSF Saint Saulge 59.66 308 *e*P P **12 57 09.0 -0.7**
comp=Z,15nm,1.0s,mb4.7
SSF Saint Saulge 59.66 308 *e*P P **12 57 09.0 -0.7**
SSF pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
SSF Saint Saulge 59.66 308 *e*P P **12 57 09.0 -0.7**
comp=Z,7.5nm,1.0s,mb4.7
VIVF Saint-Julien-l 59.83 305 *e*P P **12 57 10.4 -0.5**
comp=Z,26nm,1.2s,mb4.8
VIVF Saint-Julien-l 59.83 305 *e*P P **12 57 10.4 -0.5**
VIVF pmax pmax
comp=Z,13nm,1.2s,mb4.8
VIVF Saint-Julien-l 59.83 305 *e*P P **12 57 10.4 -0.5**
comp=Z,13nm,1.2s,mb4.8
AVF Avril sur Loir 59.86 308 *e*P P **12 57 10.6 -0.5**
comp=Z,34nm,1.0s,mb5.0
AVF Avril sur Loir 59.86 308 *e*P P **12 57 10.6 -0.5**
AVF pmax pmax
comp=Z,17nm,1.0s,mb5.0
AVF Avril sur Loir 59.86 308 *e*P P **12 57 10.6 -0.5**
comp=Z,17nm,1.0s,mb5.0
KMBO Kilima Mbogo 60.11 242 LR LR 13 21 29.1
comp=Z,226nm,19.5s,MS4.3,baz=89,slow=34
LASF Ste Croix 60.69 305 *e*P P **12 57 16.7 -0.1**
comp=Z,30nm,1.1s,mb5.0
TCF Toulx Ste Croi 60.79 308 *e*P P **12 57 17.3 -0.2**
comp=Z,34nm,1.0s,mb5.1
TCF Toulx Ste Croi 60.79 308 *e*P P **12 57 17.3 -0.2**
TCF pmax pmax
comp=Z,17nm,1.0s,mb5.1
TCF Toulx Ste Croi 60.79 308 *e*P P **12 57 17.3 -0.2**
comp=Z,17nm,1.0s,mb5.1
LDF La Druitiere 61.23 311 *e*P P **12 57 19.6 -0.8**
comp=Z,14nm,0.5s,mb5.0
LDF La Druitiere 61.23 311 *e*P P **12 57 19.6 -0.8**
LDF pmax pmax
comp=Z,7.0nm,0.5s,mb5.0
LDF La Druitiere 61.23 311 *e*P P **12 57 19.6 -0.8**
comp=Z,7.2nm,0.5s,mb5.1
FLN La Foliniere 61.37 311 *e*P P **12 57 21.1 -0.3**
comp=Z,23nm,0.9s,mb5.0
FLN La Foliniere 61.37 311 *e*P P **12 57 21.1 -0.3**
FLN pmax pmax
comp=Z,11nm,0.9s,mb5.0
FLN La Foliniere 61.37 311 *e*P P **12 57 21.1 -0.3**
comp=Z,11nm,0.9s,mb5.0
CAF Calviac 61.47 306 *e*P P **12 57 22.1 0.0**
comp=Z,8.0nm,0.7s,mb4.6
CAF Calviac 61.47 306 *e*P P **12 57 22.1 0.0**
CAF pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
CAF Calviac 61.47 306 *e*P P **12 57 22.1 0.0**
comp=Z,4.0nm,0.7s,mb4.7
RJF Les Rejaudoux 61.65 307 *e*P P **12 57 23.4 +0.1**
GRR Gorron 61.76 311 *e*P P **12 57 23.3 -0.7**
comp=Z,27nm,0.7s,mb5.2
GRR Gorron 61.76 311 *e*P P **12 57 23.3 -0.7**
GRR pmax pmax
comp=Z,14nm,0.7s,mb5.2
GRR Gorron 61.76 311 *e*P P **12 57 23.3 -0.7**
comp=Z,14nm,0.7s,mb5.2
MTLF Montolieu 62.08 305 *e*P P **12 57 25.8 -0.4**
comp=Z,12nm,0.8s,mb4.8
MTLF Montolieu 62.08 305 *e*P P **12 57 25.8 -0.4**
MTLF pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
MTLF Montolieu 62.08 305 *e*P P **12 57 25.8 -0.4**
comp=Z,6.2nm,0.8s,mb4.8
MFF Saint Martin d 62.12 309 *e*P P **12 57 25.8 -0.6**
comp=Z,9.8nm,0.6s,mb4.8
MFF Saint Martin d 62.12 309 *e*P P **12 57 25.8 -0.6**
MFF pmax pmax
comp=Z,5.0nm,0.6s,mb4.8
MFF Saint Martin d 62.12 309 *e*P P **12 57 25.8 -0.6**
comp=Z,4.9nm,0.6s,mb4.8
LFF La Frestale 62.31 307 *e*P P **12 57 27.7 -0.1**
SGMF Saint Gilles 62.84 311 *e*P P **12 57 30.9 -0.3**
comp=Z,26nm,0.8s,mb5.1
SGMF Saint Gilles 62.84 311 *e*P P **12 57 30.9 -0.3**
SGMF pmax pmax
comp=Z,13nm,0.8s,mb5.1
SGMF Saint Gilles 62.84 311 *e*P P **12 57 30.9 -0.3**
comp=Z,13nm,0.8s,mb5.1
ROSF Rostrenen 63.22 312 *e*P P **12 57 33.4 -0.4**
comp=Z,22nm,0.9s,mb5.0
ROSF Rostrenen 63.22 312 *e*P P **12 57 33.4 -0.4**
ROSF pmax pmax
comp=Z,11nm,0.9s,mb5.0
ROSF Rostrenen 63.22 312 *e*P P **12 57 33.4 -0.4**
comp=Z,11nm,0.9s,mb5.0
QUIF Quistinic 63.35 311 *e*P P **12 57 34.2 -0.5**
comp=Z,14nm,0.7s,mb4.9
QUIF Quistinic 63.35 311 *e*P P **12 57 34.2 -0.5**
QUIF pmax pmax
comp=Z,7.0nm,0.7s,mb4.9
QUIF Quistinic 63.35 311 *e*P P **12 57 34.2 -0.5**
comp=Z,7.2nm,0.7s,mb4.9
SUMG Summit 63.72 344 *e*P P **12 57 38.7 +2.1**
comp=Z,58nm,1.1s,mb5.5
ETSF Etsaut 64.08 305 *e*P P **12 57 39.5 -0.1**
comp=Z,25nm,0.7s,mb5.0
ETSF Etsaut 64.08 305 *e*P P **12 57 39.5 -0.1**
ETSF pmax pmax
comp=Z,12nm,0.7s,mb5.0
ETSF Etsaut 64.08 305 *e*P P **12 57 39.5 -0.1**
comp=Z,12nm,0.7s,mb5.0
SJPF Ste Jean 64.41 306 *e*P P **12 57 42.8 +1.1**
comp=Z,32nm,1.2s,mb4.9
SJPF Ste Jean 64.41 306 *e*P P **12 57 42.8 +1.1**
SJPF pmax pmax
comp=Z,16nm,1.2s,mb4.9
SJPF Ste Jean 64.41 306 *e*P P **12 57 42.8 +1.1**
comp=Z,16nm,1.2s,mb4.9
COLD Coldfoot 66.70 21 *e*P P **12 57 55.8 -0.3**
comp=Z,33nm,1.0s,mb5.3
TTA Tatalina 67.74 26 *e*P P **12 58 03.9 +1.2**
ESDC Sonseca Array 67.91 304 P P **12 58 04.3 0.0**
comp=Z,4.0nm,0.6s,mb4.7,baz=52,slow=6.4,SNR=12
ESDC LR LR 13 32 34.7
comp=Z,118nm,19.8s,MS4.1,baz=0.0,slow=40
BPAW Bear Paw Mtn. 68.63 24 *e*P P **12 58 08.7 +0.4**
comp=Z,32nm,1.2s,mb5.1
PPLA Purkeypile 69.07 25 *e*P P **12 58 11.3 +0.3**
comp=Z,56nm,1.4s,mb5.3
ILAR Eielson Array 69.40 22 P P **12 58 12.0 -1.1**
comp=Z,13nm,1.0s,mb4.8,baz=309,slow=4.4,SNR=89
ILAR PP PP 13 00 44.4 -1.5
comp=Z,4.0nm,1.0s,baz=306,slow=8.1,SNR=10
ILAR LR LR 13 30 41.6
comp=Z,289nm,20.9s,MS4.5,baz=200,slow=38
ILAR Eielson Array 69.40 22 P P **12 58 12.0 -1.1**
ILAR 13 00 44.4
ILAR pmax pmax
comp=Z,13nm,1.0s
ILAR pmax pmax
comp=Z,4.0nm,1.0s
ILAR MLR MLR
comp=Z,289nm,20.9s
INK Inuvik 69.94 15 *e*P P **12 58 16.6 +0.2**
INK pmax pmax
comp=Z,30nm,1.0s
INK Inuvik 69.94 15 *e*P P **12 58 16.6 +0.2**
comp=Z,30nm,1.0s,mb5.2
RSO Redoubt South 70.54 27 *e*P P **12 58 24.1 +4.0**
PMR Palmer 71.00 25 *e*P P **12 58 23.1 +0.1**
PMR pmax pmax
comp=Z,20nm,1.2s,mb4.9
PMR Palmer 71.00 25 *e*P P **12 58 23.1 +0.2**
comp=Z,20nm,1.2s,mb4.9
EGAK Eagle 71.01 20 *e*P P **12 58 23.3 +0.4**
comp=Z,24nm,1.1s,mb5.0
DAWY Dawson 72.04 20 *e*P P **12 58 29.4 +0.2**
KDAK Kodiak Island 72.47 29 LR LR 13 32 54.4
comp=Z,325nm,18.9s,MS4.6,baz=314,slow=38
KDAK Kodiak Island 72.47 29 *i*P P **12 58 31.5 -0.3**
WRAB Tennant Creek 72.56 134 *e*P P **12 58 33.6 +0.8**
WRAB pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
WRAB Tennant Creek 72.56 134 *e*P P **12 58 33.6 +0.7**
comp=Z,4.6nm,1.0s,mb4.4
WRA Warramunga Arr 72.56 134 P P **12 58 30.8 -2.0**
comp=Z,1.4nm,0.7s,mb4.0,baz=330,slow=6.1,SNR=20
HYT Haines Junctio 75.19 21 *e*P P **12 58 48.7 +1.0**
ASAR Alice Springs 75.27 136 P P **12 58 46.9 -1.8**
comp=Z,2.6nm,1.1s,mb4.1,baz=326,slow=6.0,SNR=9.8
ASAR Alice Springs 75.27 136 P P **12 58 46.9 -1.7**
ASAR pmax pmax
comp=Z,3.0nm,1.1s
SKAG Skagway 76.93 21 *e*P P **12 58 59.5 +1.8**
comp=Z,39nm,1.0s,mb5.3
TOA0 Torodi Ar. Sit 78.52 278 *e*P P **12 59 06.7 -0.6**
TORD Torodi Ar. Bea 78.52 278 P P **12 59 06.3 -1.0**
comp=Z,4.6nm,0.8s,mb4.4,baz=43,slow=5.1,SNR=16
TORD LR LR 13 39 26.0
comp=Z,106nm,19.4s,MS4.2,baz=155,slow=40
YKA Yellowknife Ar 78.54 10 P P **12 59 06.3 -0.3**
comp=Z,12nm,1.0s,mb4.8,baz=343,slow=5.1,SNR=24
YKA Yellowknife Ar 78.54 10 P P **12 59 06.3 -0.3**
YKA pmax pmax
comp=Z,12nm,1.0s
DLBC Dease Lake 79.23 19 LR LR 13 37 02.0
comp=Z,218nm,20.4s,MS4.5,baz=199,slow=38
DLBC Dease Lake 79.23 19 *e*P P **12 59 11.9 +1.5**
FCC Fort Churchill 83.81 1 *e*P P **12 59 34.6 0.0**
comp=Z,0.7nm,1.3s,mb3.6

SCHQ	Schefferville	85.09	345	LR	LR	13 44 18.1	
	comp=Z,131nm,18.0s,MS4.4,baz=283,slow=40						
BBB	Bella Bella	85.27	21	LR	LR	13 39 42.0	
	comp=Z,134nm,21.0s,MS4.3,baz=270,slow=37						
FFC	Flin Flon	87.53	5	P	P	12 59 52.7	-0.5
	comp=Z,90nm,0.9s,mb6.0,SNR=8.1						
FFC	Flin Flon	87.53	5	eP	P	12 59 53.2	0.0
FFC				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.3						
FFC	Flin Flon	87.53	5	eP	P	12 59 53.1	-0.1
	comp=Z,21nm,1.1s,mb5.3						
DBIC	Dimbokro	87.55	276	P	P	12 59 55.2	+1.1
	comp=Z,9.9nm,1.2s,mb4.9,baz=47,slow=5.2,SNR=3.5						
DBIC	Dimbokro	87.55	276	P	P	12 59 55.2	+1.2
DBIC				pmax	pmax		
	comp=Z,10.0nm,1.2s						
EDM	Edmonton	87.64	12	eP	P	12 59 54.0	+0.2
BOSA	Boshof	87.85	231	LR	LR	13 35 15.6	
	comp=Z,174nm,19.6s,MS4.5,baz=93,slow=33						
JCW	Jim Creek	90.57	19	eP	P	13 00 08.9	+1.2
GNW	Green Mountain	90.91	20	eP	P	13 00 08.8	-0.5
	comp=Z,5.9nm,1.0s,mb4.9						
ETW	Entiat	91.52	18	eP	P	13 00 13.5	+1.4
WALA	Waterton Lakes	91.54	14	eP	P	13 00 12.9	+0.7
	comp=Z,0.2nm,1.3s						
NEW	Newport	91.64	16	eP	P	13 00 13.9	+1.2
NEW				pmax	pmax		
	comp=Z,7.0nm,1.1s						
NEW	Newport	91.64	16	eP	P	13 00 13.9	+1.3
	comp=Z,7.2nm,1.1s,mb4.9						
LON	Longmire	91.93	19	eP	P	13 00 15.1	+1.1
LON				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.8						
LON	Longmire	91.93	19	eP	P	13 00 15.1	+1.0
	comp=Z,4.6nm,1.1s,mb4.7						
ULM	Lac du Bonnet	92.30	2	LR	LR	13 45 06.8	
	comp=Z,205nm,19.0s,MS4.6,baz=4.7,slow=38						
BSMT	Bassoo Peak	92.52	15	eP	P	13 00 18.1	+1.3
YBMT	Yellow Bay	92.67	14	eP	P	13 00 18.6	+1.2
JTMT	Jette	92.72	14	eP	P	13 00 18.1	+0.4
SWMT	Swartz Lake	93.01	14	eP	P	13 00 19.0	0.0
EGMT	Eagleton	93.25	11	eP	P	13 00 20.2	+0.1
SLMT	Seeley Lake	93.36	14	eP	P	13 00 21.0	+0.3
DGMT	Dagmar	93.53	8	eP	P	13 00 22.2	+0.9
	comp=Z,20nm,1.0s,mb5.5						
CHMT	Chamberlain Mo	93.72	14	eP	P	13 00 23.2	+0.9
BOZ	Bozeman (W)	95.24	13	eP	P	13 00 30.4	+1.1
DLMT	Dillon	95.34	14	eP	P	13 00 30.9	+1.2
	comp=Z,6.2nm,1.3s,mb4.9						
MCMT	McKenzie Canyo	95.81	14	eP	P	13 00 32.8	+0.9
	comp=Z,124nm,21.1s,MS4.4,baz=348,slow=36						
YBH	Yreka Blue Hor	96.30	22	LR	LR	13 44 11.7	
IMW	Indian Meadow	97.06	13	eP	P	13 00 39.6	+2.0
	comp=Z,8.0nm,1.4s,mb5.0						
PDAR	Pinedale Array	98.40	12	LR	LR	13 48 52.1	
	comp=Z,151nm,20.0s,MS4.5,baz=347,slow=38						
N13A	Wendover, West	99.33	16	eP	P	13 00 48.7	+0.9
	comp=Z,5.7nm,0.7s,mb5.2						
NVAR	Mina Array Bea	100.62	20	PP	PP	13 05 02.5	+3.0
	comp=Z,0.5nm,0.9s,baz=311,slow=4.7,SNR=4.2						
TXAR	Lajitas Array	112.47	10	PKiKP	PKiKP	13 05 42.3	+0.2
	comp=Z,0.4nm,0.9s,baz=16,slow=1.4,SNR=3.8						
TXAR				PP	PP	13 06 31.1	+4.4
	comp=Z,1.0nm,1.0s,baz=352,slow=6.3,SNR=4.8						
TXAR	Lajitas Array	112.47	10	i PKIKP	PKiKP	13 05 42.3	+0.2
TXAR						13 06 31.1	
TXAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
CPUP	Villa Florida	147.98	280	PKPbc	PKPbc	13 06 49.9	-1.3
	comp=Z,3.1nm,0.8s,baz=356,slow=2.2,SNR=6.8						
LPAZ	La Paz	149.46	308	PKPbc	PKPbc	13 06 57.2	+1.9
	comp=Z,1.6nm,1.0s,baz=360,slow=6.5,SNR=5.0						
LPAZ	La Paz	149.46	308	PKPbc	PKPbc	13 06 57.2	+1.9

*NEIC **18** 12:57:11.5, 32°.21S×71°.86W, h23km, ML3.3(GUC), After GUC.*

GUC 18 12:57:11.5±0.7, 32°.21S×71°.86W, h23km±4km, MD3.8, ML3.3, 6C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACH	Jahuel	1.17	114	eP	Pn	12 57 32.0	-0.3
JACH				eS	Sn	12 57 47.8	+0.2
JACH	Jahuel	1.17	114	eP	Pn	12 57 32.0	-0.3
JACH				eS	Sn	12 57 47.8	+0.2
CMCH	Combarbala	1.26	35	⇓iP	Pn	12 57 33.7	0.0
CMCH				i S	Sn	12 57 50.5	+0.6
CMCH	Combarbala	1.26	35	⇓iP	Pn	12 57 33.7	0.0
CMCH				i S	Sn	12 57 50.5	+0.6
CMCH				AML	AML	12 57 56.0	
	comp=E,1μm,0.7s						
PEL	Peldehue	1.36	134	⇑iP	Pn	12 57 35.0	-0.1
PEL				i S	Sn	12 57 52.8	+0.5
PEL				AML	AML	12 57 55.1	
	comp=N,1μm,0.6s						
CLCH	Cerro Calan	1.62	137	⇑iP	Pn	12 57 39.6	+0.9
CLCH				eS	Sn	12 58 00.4	+1.6
CLCH				AML	AML	12 58 10.8	
	comp=E,561nm,0.6s						
TACH	Talagante	1.64	152	⇑iP	Pn	12 57 39.5	+0.7
TACH				i S	Sn	12 58 00.8	+1.7
TACH	Talagante	1.64	152	⇑iP	Pn	12 57 39.5	+0.7
TACH				i S	Sn	12 58 00.8	+1.7
FCH	Farellones	1.73	131	⇓iP	Pn	12 57 41.0	+0.9
FCH				i S	Sn	12 58 03.9	+2.5
FCH	Farellones	1.73	131	⇓iP	Pn	12 57 41.0	+0.9
FCH				i S	Sn	12 58 03.9	+2.5
PCH	Pirque	1.81	142	eP	Pn	12 57 42.2	+1.1
PCH				eS	Sn	12 58 05.8	+2.4
PCH	Pirque	1.81	142	eP	Pn	12 57 42.2	+1.1
PCH				eS	Sn	12 58 05.8	+2.4
CHCH	Chadas Angostu	2.00	150	eP	Pn	12 57 45.2	+1.5
CHCH				eS	Sn	12 58 10.8	+2.8
CHCH	Chadas Angostu	2.00	150	eP	Pn	12 57 45.2	+1.5
CHCH				eS	Sn	12 58 10.8	+2.8
LMEL	Las Melosas	2.15	140	⇑iP	Pn	12 57 47.0	+1.2
LMEL				i S	Sn	12 58 14.8	+3.1
LMEL	Las Melosas	2.15	140	⇑iP	Pn	12 57 47.0	+1.2
LMEL				i S	Sn	12 58 14.8	+3.1
LMEL				AML	AML	12 58 22.5	
	comp=N,193nm,0.4s						
CACH	El Canelo	2.17	151	eP	Pn	12 57 48.0	+1.8
CACH				i S	Sn	12 58 16.8	+4.4
CACH	El Canelo	2.17	151	eP	Pn	12 57 48.0	+1.8
CACH				i S	Sn	12 58 16.8	+4.4
TLL	Tololo Astrono	2.23	24	P	Pn	12 57 49.8	+2.9
TLL	Tololo Astrono	2.23	24	eP	Pn	12 57 49.8	+2.9

*ISK **18** 13:08:28.6, 37°.03N×29°.22E, h5km, MD2.7*
*CSEM **18** 13:08:29.9±0.2, 37°.04N×29.21E, h2km, MD2.9, Error ellipse: s-maj=5.4km s-min=3.7km az=25.0*
*DDA **18** 13:08:29.9, 37°.04N×29°.21E, h7km±3km, Md2.9*
*ISCJB **18** 13:08:30.0±0.7, 37°.04N±0°.04×29°.21E±0°.04, h10km, Error ellipse: s-maj=6.2km s-min=4.3km az=25.2*

ISC 18 13:08:30.2±0.7, 37°.02N±0°.05×29°.19E±0°.07, h9km±13km, n14, σ0°.67/25, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.28	62	ePG	Pg	13 08 34.2	-1.5
GLHS				eSG	Sg	13 08 40.2	+0.7
GLHS	Glhisar (BURDU	0.28	62	ePg	Pg	13 08 34.2	-1.5
GLHS				eSg	Sg	13 08 40.2	+0.7
GOLH	Golhisar	0.36	54	i P	Pg	13 08 36.2	-1.1
GOLH				i S	Sg	13 08 42.8	+0.6
GOLH	Golhisar	0.36	54	i P	Pg	13 08 36.2	-1.1
GOLH				i S	Sg	13 08 42.8	+0.6
ELL	Elmali	0.64	115	ePG	Pg	13 08 42.1	-0.4
ELL				eSG	Sg	13 08 51.4	+0.6
ELL	Elmali	0.64	115	ePg	Pg	13 08 42.1	-0.4
ELL				eSg	Sg	13 08 51.4	+0.6
DNZL	Cakiroluk	0.68	350	i P	Pg	13 08 42.8	-0.4
DNZL				i S	Sg	13 08 52.1	+0.1
DNZL	Cakiroluk	0.68	350	i P	Pg	13 08 42.8	-0.4
DNZL				i S	Sg	13 08 52.1	+0.1
YER	Yerkesik	0.73	279	ePG	Pg	13 08 44.5	+0.2
YER	Yerkesik	0.73	279	ePg	Pg	13 08 44.5	+0.2
AKAS	Kas	0.85	157	i P	Pg	13 08 46.7	+0.1
AKAS				i S	Sg	13 09 02.7	+5.0
AKAS	Kas	0.85	157	i P	Pg	13 08 46.7	+0.1
AYDN	Tasoluk	1.22	302	i P	Pn	13 08 53.3	-0.2
AYDN				i S	Sb	13 09 10.0	+0.7
AYDN	Tasoluk	1.22	302	i P	Pn	13 08 53.3	-0.2
AYDN				i S	Sb	13 09 10.0	+0.6

*BJI **18** 13:09:56.1, 25°.00N×95°.12E, h8km, ML3.7/4*
*ISCJB **18** 13:10:01.0±0.6, 24°.90N±0°.07×94°.81E±0°.08, h120km±8km, mb3.7/10, Error ellipse: s-maj=14.8km s-min=7.2km az=135.6*
*NEIC **18** 13:10:02.1±1.0, 25°.05N×95°.07E, h104km±13km, mb4.4/7, Error ellipse: s-maj=20.1km s-min=9.8km az=59.0*
*IDC **18** 13:10:03.8±3.6, 25°.01N×95°.18E, h121km±36km, mb3.5/7, mb1 3.5/8, mb1mx3.3/26, mbtmp3.5/8, MS4.1/1, Ms1 4.1/1, ms1mx2.7/28, Error ellipse: s-maj=49.7km s-min=17.0km az=63.0*

ISC 18 13:10:02.1±0.6, 24°.96N±0°.07×94°.91E±0°.08, h105km±8km, n32, σ1°.01/36, mb3.7/10, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	Imphal	0.90	259	ePKP	Pn	13 10 21.0	-0.9
IMP				eS	Sn	13 10 38.0	+1.2
SHL	Shillong	2.81	283	ePKP	Pn	13 10 47.0	+1.6
SHL				eS	Sn	13 11 19.0	+0.3
LSA	Lhasa	5.79	326	Pn	Pn	13 11 25.9	+0.4
LSA				Sn	Sn	13 12 30.5	-0.1
LSA				smax			
	comp=N,20nm,0.8s						
LSA				smax			
	comp=E,30nm,0.7s						
LSA	Lhasa	5.79	326	ePn	Pn	13 11 25.2	-0.3
	comp=E,12nm,0.4s						
LSA				eSn	Sn	13 12 29.3	-1.3
TAPN	Taplejung	6.89	292	eP	Pn	13 11 40.9	+0.3
	comp=E,19nm,0.4s						
ODAN	Odare	7.03	287	eP	Pn	13 11 40.8	-1.6
	comp=E,18nm,0.3s						
CHTO	Chiang Mai	7.17	148	ePn	Pn	13 11 44.3	0.0
	comp=E,17nm,1.0s						
CM31	Chiang Mai Arr	7.47	149	ePn	Pn	13 11 48.4	0.0
	comp=E,15nm,0.9s						
CMAR	Chiang Mai Arr	7.47	149	P	Pn	13 11 49.0	+0.6
	comp=E,0.9nm,0.3s,baz=326,slow=13,SNR=64						
CMAR				S	Sn	13 13 21.4	+10
	comp=E,0.0nm,0.3s,baz=334,slow=16,SNR=2.2						
RAMN	Ramite	7.74	287	eP	Pn	13 11 48.7	-3.3
	comp=E,13nm,0.4s						
JIRN	Jiri	8.28	291	eP	Pn	13 11 55.8	-3.5
	comp=E,14nm,0.4s						
GUN	Gumba	8.61	292	eP	Pn	13 11 59.8	-4.1
	comp=E,20nm,0.4s						
PKI	Pulchoki	8.92	289	eP	Pn	13 12 02.0	-6.0
	comp=E,6.7nm,0.3s						
PKI	Pulchoki	8.92	289	eP	Pn	13 12 02.1	-5.9
PKIN	Phulchoki	8.93	289	eP	Pn	13 12 02.1	-6.1
	comp=E,8.8nm,0.4s						
KKN	Kakani	9.09	290	eP	Pn	13 12 03.9	-6.4
	comp=E,12nm,0.4s						
DMN	Daman	9.19	289	eP	Pn	13 12 04.6	-7.1
	comp=E,7.3nm,0.3s						
GKN	Gorkha	9.69	290	eP	Pn	13 12 10.0	-8.6
	comp=E,14nm,0.4s						
ENH	Enshi	13.96	64	eP	Pn	13 13 14.4	-1.0
	comp=E,7.5nm,0.5s						
GTA	Gaotai	14.99	15	eP	Pn	13 13 30.1	+1.7
GTA				pP		13 13 34.8	
GTA				sP	sP	13 13 37.3	-27
MK31	Makanchi Array	24.01	338	eP	P	13 15 07.8	+0.8
MKAR	Makanchi Array	24.01	338	P	P	13 15 08.1	+1.1
	comp=E,0.8nm,0.4s,mb3.4,baz=149,slow=8.9,SNR=8.2						
SONM	Songino Array	24.58	19	P	P	13 15 11.2	-0.9
	comp=E,1.6nm,0.7s,mb3.6,baz=200,slow=11,SNR=7.4						
TLY	Talaya	27.51	12	eP	P	13 15 34.6	-3.9
	comp=E,1.3nm,0.5s,mb3.7						
KURK	Kurchatov	28.62	338	eP	P	13 15 48.0	-0.5
	comp=E,2.0nm,0.6s,mb3.9						
ZALV	Zalesovo Beam	29.92	348	P	P	13 15 59.8	0.0
	comp=E,1.0nm,0.4s,mb3.8,baz=164,slow=7.4,SNR=5.5						
BVAR	Borovoye Array	33.57	333	P	P	13 16 32.6	+0.8
	comp=E,0.6nm,0.5s,mb3.7,baz=144,slow=13,SNR=5.0						
FITZ	Fitzroy Crossi	52.23	142	LR	LR	13 44 12.2	
	comp=E,169nm,18.7s,baz=240,slow=39						
WRAB	Tennant Creek	58.85	136	eP	P	13 19 43.5	-6.4
	comp=E,3.6nm,0.9s,mb4.4						
ASAR	Alice Springs	61.35	139	P	P	13 20 06.3	-0.7
	comp=E,0.2nm,0.3s,mb3.6,baz=316,slow=7.0,SNR=10						
HFS	Hagfors	64.37	327	P	P	13 20 27.1	+0.6
	comp=E,1.0nm,0.6s,mb3.9,baz=139,slow=11,SNR=5.1						
NOA	NORSAR Array B	65.48	328	P	P	13 20 33.8	+0.1
	comp=E,0.3nm,0.6s,mb3.3,baz=99,slow=5.5,SNR=2.4						

*LDG **18** 13:18:58.6±0.3, 14°.15S×167°.33E, h10km, Mb4.7/2, Error ellipse: s-maj=47.3km s-min=8.2km az=89.0*
*NOU **18** 13:19:04.0±1.4, 14°.37S×166°.26E, h30km, MD3.7, ML4.2*
*ISCJB **18** 13:19:09.8±1.4, 14°.97S±0°.05×167°.31E±0°.10, h124km±12km, mb4.2/18, Error ellipse: s-maj=16.2km s-min=7.1km az=157.1*
*IDC **18** 13:19:09.9±0.7, 14°.91S×167°.36E, h111km±4km, mb4.0/16, mb1 4.2/17, mb1mx4.2/20, mbtmp4.1/17, MS3.7/2, Ms1 3.7/2, ms1mx3.2/23, Error ellipse: s-maj=15.6km s-min=12.6km az=99.0*
*NEIC **18** 13:19:10.1±0.3, 14°.94S×167°.38E, mb4.4/8, Error ellipse: s-maj=10.2km s-min=7.9km az=96.0*

ISC 18 13:19:10.9±1.2, 14°.95S±0°.05×167°.34E±0°.09, h119km±9km, h115km±2.0km: pP-P, n82, σ0°.91/41, mb4.2/18, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.13	187	eP	Pn	13 20 52.1	-0.5
DZM				eS	Sn	13 22 11.7	-0.5
DZM				AMP		13 22 19.9	
	comp=Z,1μm,3.5s						
DZM	Mont Dzumac	7.13	187	ePn	Pn	13 20 52.2	-0.4
DZM				eSn	Sn	13 22 10.0	-2.2
BAYA	Yate Dam	7.18	183	eS	Sn	13 22 15.6	+2.3
NOUC	Port Laguerre	7.18	188	eP	Pn	13 20 52.9	-0.3
NOUC				eS	Sn	13 22 12.6	-0.7
NOUC				AMP		13 22 25.9	
	comp=Z,56nm,3.7s						
PLUM	Mont Dore	7.31	185	eP	Pn	13 20 54.7	-0.4
HNR	Honiara	9.07	306	P	Pn	13 21 19.7	+0.7
	comp=Z,19nm,0.3s,baz=222,slow=5.6,SNR=9.3						
HNR				S	Sn	13 22 59.4	+0.1
	comp=Z,11nm,0.3s,baz=158,slow=20,SNR=3.0						
AFI	Afiamalu	20.25	90	LR	LR	13 29 30.5	
	comp=Z,111nm,19.1s,baz=72,slow=31						
CTA	Charters Tower	20.74	253	P	P	13 23 44.1	+1.9
	comp=Z,1.9nm,0.5s,baz=130,slow=13,SNR=3.4						
CTA				pP		13 24 02.6	
	comp=Z,6.0nm,0.8s,baz=74,slow=14,SNR=4.6						
CTA				sP	sP	13 24 17.4	-1.8
	comp=Z,7.0nm,0.9s,baz=40,slow=7.8,SNR=3.7						
CTAO	Charters Tower	20.74	253	P	P	13 23 43.0	+0.9
	comp=Z,3.6nm,0.7s						
ARMA	Armidale	21.11	221	eP	P	13 23 48.0	+2.1
QLP	Quilpie	24.46	238	eP	P	13 24 19.0	+0.2
URZ	Urewera	24.77	161	P	P	13 24 21.6	+0.1
	comp=Z,6.4nm,0.5s,mb4.3,baz=302,slow=5.2,SNR=9.1						
URZ	Urewera	24.77	161	eP	P	13 24 21.0	-0.4
	comp=Z,9.4nm,0.6s,mb4.4						
CNB	Canberra Magne	25.92	215	eP	P	13 24 32.2	+0.3
RPZ	Rata Peaks	28.84	174	P	P	13 24 58.6	+0.7
	comp=Z,5.0nm,0.7s,mb4.3,baz=78,slow=2.7,SNR=3.5						
RPZ				LR	LR	13 35 08.3	
	comp=Z,241nm,18.5s,baz=46,slow=33						
STKA	Stephens Creek	28.90	230	eP	P	13 24 59.4	+0.8
	comp=Z,11nm,0.4s,mb4.8						
STKA	Stephens Creek	28.90	230	P	P	13 24 59.6	+1.1
	comp=Z,13nm,0.4s,mb4.9,baz=42,slow=7.7,SNR=28						
STKA				PcP	PcP	13 28 06.1	+1.1
	comp=Z,4.0nm,1.1s,baz=19,slow=9.0,SNR=3.1						
STKA	Stephens Creek	28.90	230	eP	P	13 24 59.2	+0.6
	comp=Z,2.7nm,0.4s,mb4.2						
STKA				PcP	PcP	13 28 06.1	+1.1
WRAB	Tennant Creek	31.83	256	eP	P	13 25 23.9	-0.6
	comp=Z,4.4nm,0.9s,mb4.2						
WRA	Warramunga Arr	31.84	256	P	P	13 25 23.1	-1.5
	comp=Z,1.5nm,0.7s,mb3.8,baz=84,slow=9.0,SNR=28						
WRA				pP	pP	13 25 48.9	-1.9
	comp=Z,0.8nm,0.6s,baz=85,slow=8.8,SNR=3.2						
WRA				PcP	PcP	13 28 11.9	-1.0
	comp=Z,2.2nm,1.0s,baz=87,slow=3.1,SNR=9.0						
WRA	Warramunga Arr	31.84	256	P	P	13 25 23.1	-1.5
WRA				pP	pP	13 25 48.9	-1.9
WRA				PcP	PcP	13 28 11.9	-1.0
ASAR	Alice Springs	32.66	249	P	P	13 25 30.4	-1.4
	comp=Z,5.2nm,0.6s,mb4.5,baz=81,slow=9.0,SNR=118						
ASAR				pP	pP	13 25 56.7	-1.2
	comp=Z,2.4nm,0.7s,baz=77,slow=9.2,SNR=4.1						
ASAR				PcP	PcP	13 28 14.7	-0.4
	comp=Z,1.0nm,0.7s,baz=91,slow=1.8,SNR=6.9						
ASAR				ScP	ScP	13 31 49.0	+0.8
	comp=Z,2.9nm,1.3s,baz=80,slow=3.1,SNR=4.9						
MBWA	Marble Bar	45.55	255	eP	P	13 27 18.8	-0.2
MEEK	Meekatharra	46.77	247	eP	P	13 27 27.4	-1.1
MJAR	Matsushiro Arr	58.13	333	P	P	13 28 51.0	-1.0
	comp=Z,0.6nm,0.4s,mb4.0,baz=232,slow=14,SNR=4.9						
SBA	Scott Base	62.92	180	eP	P	13 29 24.6	+0.6
	comp=Z,9.9nm,0.9s,mb4.7						
KSRS	Korea Array	63.96	326	P	P	13 29 31.7	+0.3
	comp=Z,0.3nm,0.3s,mb3.6,baz=146,slow=34,SNR=4.0						
KSRS				pP	pP	13 29 58.2	-2.4
	comp=Z,1.0nm,0.8s,baz=128,slow=8.1,SNR=3.4						
PETK	Petropavlovsk-	68.29	354	P	P	13 29 59.2	+0.5
	comp=Z,3.8nm,0.8s,mb4.3,baz=139,slow=7.9,SNR=4.3						
QSPA	South Pole Qui	75.08	180	eP	P	13 30 38.7	-0.3
	comp=Z,14nm,0.7s,mb4.8						
QSPA				ePcP	PcP	13 30 51.7	-0.4
QSPA				epP	pP	13 31 10.2	+1.2
CMAR	Chiang Mai Arr	75.10	294	P	P	13 30 41.3	+1.0
	comp=Z,2.4nm,0.9s,mb3.9,baz=126,slow=4.4,SNR=14						
CMAR				pP	pP	13 31 08.6	-1.6
	comp=Z,1.1nm,0.7s,baz=131,slow=4.3,SNR=3.8						
MAW	Mawson	81.71	202	P	P	13 31 16.3	+0.6
	comp=Z,2.7nm,0.8s,mb4.1,baz=100,slow=11,SNR=3.4						
MAW	Mawson	81.71	202	eP	P	13 31 14.9	-0.8
	comp=Z,0.5nm,0.7s,mb3.5						
SONM	Songino Array	82.72	324	P	P	13 31 21.5	+0.3
	comp=Z,1.2nm,0.4s,mb4.1,baz=144,slow=5.9,SNR=11						
SONM				pP	pP	13 31 50.2	-1.5
	comp=Z,2.4nm,1.2s,baz=134,slow=4.3,SNR=2.2						
ILAR	Eielson Array	86.71	18	P	P	13 31 39.5	-1.4
	comp=Z,2.1nm,0.9s,mb4.1,baz=236,slow=5.4,SNR=20						
ILAR				pP	pP	13 32 09.1	-2.5
	comp=Z,0.7nm,0.7s,baz=237,slow=4.8,SNR=3.1						
ILAR				PKKP	PKKPbc	13 49 34.2	-4.3
	comp=Z,0.2nm,0.5s,baz=341,slow=2.1,SNR=6.3						
NVAR	Mina Array Bea	87.36	49	pP	pP	13 32 14.2	-1.2
	comp=Z,0.4nm,0.6s,baz=238,slow=7.3,SNR=3.1						
PDAR	Pinedale Array	95.04	47	P	P	13 32 21.3	+1.1
	comp=Z,0.3nm,0.3s,mb4.2,baz=212,slow=3.2,SNR=3.5						
MK31	Makanchi Array	97.41	316	eP	P	13 32 30.6	-0.3
MK31				epP	pP	13 32 59.8	-2.1
MKAR	Makanchi Array	97.41	316	P	P	13 32 30.9	0.0
	comp=Z,0.8nm,0.4s,mb4.5,baz=101,slow=6.3,SNR=10						
MKAR				pP	pP	13 33 00.1	-1.7
	comp=Z,1.3nm,0.9s,baz=101,slow=6.3,SNR=4.0						
ZALV	Zalesovo Beam	97.61	324	P	P	13 32 31.0	-0.6
	comp=Z,1.8nm,0.6s,mb4.8,baz=115,slow=3.8,SNR=8.7						
KURK	Kurchatov	100.61	320	P	Pdif	13 32 45.7	+0.6
	comp=Z,1.6nm,0.6s						
ARCES	ARCESS Array B	120.48	345	PKP	PKPdf	13 37 46.9	-0.7
	comp=Z,1.0nm,0.3s,baz=86,slow=2.0,SNR=26						
ARCES				pPKP	pPKPdf	13 38 18.4	-1.5
	comp=Z,2.5nm,0.9s,baz=52,slow=6.7,SNR=2.9						
ARCES	ARCESS Array B	120.48	345	PKP	PKPdf	13 37 46.9	-0.7
ARCES				pPKP	pPKPdf	13 38 18.4	-1.5
FINES	FINESS Array B	125.95	338	PKP	PKPdf	13 37 57.9	-0.4
	comp=Z,3.7nm,1.0s,baz=56,slow=3.4,SNR=5.1						
KMBO	Kilima Mbogo	128.12	256	PKP	PKPdf	13 38 04.7	+0.7
	comp=Z,1.5nm,0.7s,baz=360,slow=24,SNR=3.5						
KMBO	Kilima Mbogo	128.12	256	PKP	PKPdf	13 38 04.7	+0.7
NOA	NORSAR Array B	130.85	345	PKP	PKPdf	13 38 07.6	-0.1
	comp=Z,0.3nm,0.6s,baz=31,slow=1.6,SNR=2.3						
BUR08	Bucovina Ar. S	134.82	324	ePKPdf	PKPdf	13 38 12.4	-3.2
KHC	Kasperske Hory	139.71	333	ePKPdf	PKPdf	13 38 23.5	-1.1
CDF	Champ du Feu	142.81	338	ePKP1	PKPdf	13 38 25.9	-4.3
	comp=Z,6.4nm,0.7s						
CABF	La Chapelle	144.76	337	ePKP1	PKPdf	13 38 33.0	-0.6
	comp=Z,46nm,0.9s						
FLN	La Foliniere	144.83	346	ePKP1	PKPdf	13 38 32.1	-1.6
	comp=Z,24nm,0.7s						
LDF	La Druitiere	144.90	345	ePKP1	PKPdf	13 38 32.3	-1.5
	comp=Z,8.9nm,0.5s						
LOR	Lormes	144.97	340	ePKP1	PKPdf	13 38 33.3	-0.7
	comp=Z,38nm,1.0s						
GRR	Gorron	145.26	346	ePKP1	PKPbc	13 38 34.0	-0.4
SSF	Saint Saulge	145.26	340	ePKP1	PKPbc	13 38 34.4	0.0
	comp=Z,58nm,0.8s						
LPL	La Plagne	145.42	336	ePKP1	PKPbc	13 38 35.3	+0.3
	comp=Z,24nm,0.7s						
LPG	La Plagne	145.43	336

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.17**	**273**	*e*PN	**Pn**	**13 27 03.5**	**0.0**
KUR				S	**Sn**	**13 27 20.0**	**-9.2**
KUR				pmax	pmax		
	comp=Z,110nm,0.3s						
NEM2	**Nemuro 2**	**4.14**	**246**	P	**Pn**	**13 27 29.5**	**-0.9**
NEM2				*e*S	**Sn**	**13 28 16.4**	**-1.1**
JRA	**Rausu**	**4.33**	**256**	P	**Pn**	**13 27 34.4**	**+1.3**
JRA				*e*S	**Sn**	**13 28 26.1**	**+3.8**
JNK	**Nakash**	**4.73**	**253**	P	**Pn**	**13 27 39.0**	**+0.5**
JNK				*e*S	**Sn**	**13 28 32.4**	**+0.4**
JAK	**Akkeshi**	**4.99**	**247**	P	**Pn**	**13 27 40.9**	**-1.2**
JTKR	**Abashiri--Toko**	**5.16**	**259**	P	**Pn**	**13 27 46.0**	**+1.6**
JAR	**Ashorobuto**	**5.48**	**253**	P	**Pn**	**13 27 49.4**	**+0.6**
JAR				*e*S	**Sn**	**13 28 53.1**	**+2.7**
JMP	**Maruseppu**	**5.54**	**261**	P	**Pn**	**13 27 51.5**	**+1.9**
JOB	**Onbets**	**5.59**	**249**	P	**Pn**	**13 27 50.0**	**-0.4**
JOB				*e*S	**Sn**	**13 28 53.2**	**-0.1**
JKK2	**Kamakawa 2**	**6.00**	**261**	P	**Pn**	**13 27 57.9**	**+2.0**
JCH	**Churui**	**6.04**	**248**	P	**Pn**	**13 27 56.3**	**-0.1**
JCH				*e*S	**Sn**	**13 29 03.6**	**-0.5**
ASAJ	**Asahikawa**	**6.04**	**263**	P	**Pn**	**13 27 58.8**	**+2.3**
	comp=Z,1.3nm,0.3s,baz=166,slow=5.1,SNR=9.9						
ASAJ				S	**Sn**	**13 29 23.3**	**+19**
	comp=Z,0.5nm,0.3s,baz=106,slow=32,SNR=1.6						
ASAJ				LR	LR	13 30 20.7	
	comp=Z,65nm,18.4s,baz=7.8,slow=39						
ERM	**Erimo**	**6.46**	**244**	*e*PN	**Pn**	**13 28 02.9**	**+0.6**
ERM	**Erimo**	**6.46**	**244**	*e*Pn	**Pn**	**13 28 03.3**	**+1.0**
ERM				*e*Sn	**Sn**	**13 29 20.2**	**+5.5**
JEM	**Erimo**	**6.46**	**244**	P	**Pn**	**13 28 03.2**	**+0.9**
JEM				*e*S	**Sn**	**13 29 16.2**	**+1.6**
JNBK	**Urakawa-nobuka**	**6.59**	**247**	P	**Pn**	**13 28 03.0**	**-1.0**
JNBK				*e*S	**Sn**	**13 29 16.0**	**-1.8**
JBT2	**Biratori 2**	**6.63**	**252**	P	**Pn**	**13 28 04.5**	**0.0**
JNB	**Noboribetsu**	**7.65**	**253**	P	**Pn**	**13 28 18.6**	**+0.1**
JNB				*e*S	**Sn**	**13 29 42.8**	**-0.9**
JKB	**Kayabe**	**7.91**	**249**	P	**Pn**	**13 28 21.1**	**-0.9**
JKB				*e*S	**Sn**	**13 29 46.1**	**-4.0**
JYM2	**Yakumo 2**	**8.24**	**252**	P	**Pn**	**13 28 26.8**	**+0.1**
JANG	**Nango**	**8.42**	**239**	*e*S	**Sn**	**13 29 54.5**	**-8.1**
JTM	**Tenmabayashi**	**8.45**	**242**	P	**Pn**	**13 28 28.3**	**-1.2**
JTM				*e*S	**Sn**	**13 29 57.6**	**-5.8**
JOSM	**Okushiri--Mats**	**8.87**	**254**	P	**Pn**	**13 28 35.5**	**+0.3**
PEA0B	**Petropavlovsk-**	**9.11**	**27**	*e*Pn	**Pn**	**13 28 37.0**	**-1.5**
PETK	**Petropavlovsk-**	**9.11**	**27**	P	**Pn**	**13 28 37.6**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=201,slow=12,SNR=7.3						
PETK	**Petropavlovsk-**	**9.11**	**27**	*e*PN	**Pn**	**13 28 39.7**	**+1.3**
OFUJ	**Ofunato**	**9.18**	**232**	P	**Pn**	**13 28 37.0**	**-2.5**
JRG	**Rokugo**	**9.56**	**237**	P	**Pn**	**13 28 43.2**	**-1.5**
JRG				*e*S	**Sn**	**13 30 25.0**	**-5.6**
JFY	**Yanaizu**	**11.45**	**231**	P	**Pn**	**13 29 09.2**	**-1.4**
KSRS	**Korea Array**	**18.89**	**254**	P	**Pn**	**13 30 47.7**	**+0.7**
	baz=65,slow=8.6,SNR=3.0						
BILL	**Bilibino**	**24.30**	**14**	*e*P	**P**	**13 31 48.3**	**+6.1**
BILL				*e*S	**S**	**13 35 55.8**	**-1.7**
BILL				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.8						
BILL				MLR	MLR		
	comp=Z,200nm,16.0s,MS3.7						
ULN	**Ulaanbaatar**	**30.03**	**291**	*e*P	**P**	**13 32 31.4**	**-2.3**
ILAR	**Eielson Array**	**38.74**	**37**	P	**P**	**13 33 48.5**	**-0.3**
	comp=Z,0.8nm,1.1s,mb3.3,baz=273,slow=7.1,SNR=3.5						
ILAR	**Eielson Array**	**38.74**	**37**	P	**P**	**13 33 48.5**	**-0.3**
ILAR				pmax	pmax		
	comp=Z,1.0nm,1.2s						
MK31	**Makanchi Array**	**46.34**	**298**	*e*P	**P**	**13 34 51.0**	**+0.4**
MKAR	**Makanchi Array**	**46.34**	**298**	P	**P**	**13 34 49.1**	**-1.5**
	comp=Z,0.9nm,0.8s,mb3.8,baz=65,slow=7.7,SNR=5.4						
MKAR				LR	LR	13 56 02.8	
	comp=Z,49nm,18.7s,MS3.5,baz=286,slow=38						
MKAR	**Makanchi Array**	**46.34**	**298**	*e*P	**P**	**13 34 52.5**	**+1.9**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ABKAR	**Akbulak array**	**58.28**	**310**	*e*P	**P**	**13 36 17.7**	**-1.4**
	comp=Z,0.4nm,0.4s,mb3.8						
FINES	**FINESS Array B**	**64.83**	**334**	P	**P**	**13 37 02.2**	**-0.8**
	comp=Z,1.1nm,0.7s,mb4.0,baz=19,slow=8.1,SNR=4.9						
FINES	**FINESS Array B**	**64.83**	**334**	P	**P**	**13 37 02.2**	**-0.8**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
PDAR	**Pinedale Array**	**66.92**	**52**	P	**P**	**13 37 19.1**	**+2.3**
	comp=Z,0.2nm,0.3s,mb3.6,baz=0.0,slow=4.5,SNR=2.5						
NB2	**NORSAR Subarra**	**69.24**	**340**	P	**P**	**13 37 30.8**	**-0.2**
	comp=Z,0.6nm,0.5s,mb3.8,baz=27,slow=6.5						
NOA	**NORSAR Array B**	**69.24**	**340**	P	**P**	**13 37 30.9**	**-0.1**
	comp=Z,0.7nm,0.5s,mb3.9,baz=28,slow=6.5,SNR=5.6						
NOA	**NORSAR Array B**	**69.24**	**340**	P	**P**	**13 37 30.9**	**-0.1**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ASAR	**Alice Springs**	**70.23**	**197**	P	**P**	**13 37 39.0**	**+1.6**
	comp=Z,0.9nm,0.9s,mb3.7,baz=14,slow=6.8,SNR=6.8						
ASAR				pP	pP	13 37 53.2	+1.9
	comp=Z,1.4nm,0.9s,baz=14,slow=5.3,SNR=7.9						
ASAR	**Alice Springs**	**70.23**	**197**	*e*P	**P**	**13 37 39.0**	**+1.6**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AKASG	**Malin Array Be**	**72.02**	**325**	P	**P**	**13 37 47.9**	**-0.2**
	comp=Z,0.5nm,0.3s,mb3.9,baz=37,slow=6.1,SNR=2.9						
AKASG	**Malin Array Be**	**72.02**	**325**	P	**P**	**13 37 47.9**	**-0.2**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CLL	**Collm**	**77.28**	**334**	*i* P	**P**	**13 38 19.7**	**+1.2**
	comp=Z,4.0nm,0.6s,mb4.5						
TXAR	**Lajitas Array**	**79.61**	**59**	P	**P**	**13 38 35.5**	**+3.7**
	comp=Z,0.2nm,0.7s,mb3.2,baz=274,slow=4.4,SNR=3.3						
TXAR				pP	pP	13 38 46.6	+0.6
	comp=Z,0.2nm,0.5s,baz=296,slow=4.1,SNR=3.9						

IDC ***18*** *13:29:51.6±2.1, 6°.36S×147°.14E, h0km, mb3.5/3, mb1 3.8/4, mb1mx3.5/17, mbtmp3.6/4, ML3.4/1, Error ellipse: s-maj=122.1km s-min=27.6km az=126.0*

ISCJB ***18*** *13:29:55.4±1.4, 6°.2S±0°.1×146°.8E±0°.2, h33km, mb3.5/3, Error ellipse: s-maj=23.9km s-min=18.4km az=23.9*

NEIC ***18*** *13:29:57.3±0.9, 6°.23S×146°.82E, h35km, mb3.9/2, Error ellipse: s-maj=19.6km s-min=13.5km az=109.0*

ISC 18 13:29:57.4±1.3, 6°.3S±0°.1×146°.8E±0°.2, h35km, n9, σ0s88/10, mb3.5/3, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.13**	**174**	*e*Pn	**Pn**	**13 30 45.0**	**+0.8**
PMG				*e*Sg	**Sn**	**13 31 32.1**	**+12**
COEN	**Coen**	**8.43**	**205**	*e*Pn	**Pn**	**13 31 57.3**	**+0.2**
COEN				*e*Sn	**Sn**	**13 33 28.8**	**-2.3**
KAKA	**Kakadu**	**15.55**	**245**	*e*Pn	**Pn**	**13 33 34.7**	**+0.5**
	19nm,0.6s						
WRAB	**Tennant Creek**	**18.20**	**221**	*e*P	**Pn**	**13 34 07.4**	**0.0**
	3.1nm,1.0s						
WRA	**Warramunga Arr**	**18.21**	**221**	P	**Pn**	**13 34 07.5**	**0.0**
	0.1nm,0.3s,baz=51,slow=11,SNR=13						
ASAR	**Alice Springs**	**21.29**	**214**	P	**P**	**13 34 41.9**	**+0.8**
	0.6nm,0.6s,mb3.1,baz=50,slow=9.3,SNR=14						
FITZ	**Fitzroy Crossi**	**23.77**	**238**	P	**P**	**13 35 06.9**	**0.0**
	1.3nm,0.6s,mb3.5,baz=81,slow=12,SNR=6.7						
ILAR	**Eielson Array**	**85.80**	**23**	P	**P**	**13 42 31.8**	**-1.1**
	0.3nm,0.5s,mb3.8,baz=248,slow=5.3,SNR=6.4						
TORD	**Torodi Ar. Bea**	**144.99**	**284**	PKPbc	PKPdf	13 49 33.0	+0.9
	1.3nm,0.8s,baz=78,slow=3.1,SNR=7.2						

ISCJB ***18*** *13:35:03.8±0.5, 59°.11N±0°.04×153°.98W±0°.08, h118km±6km, mb3.8/3, Error ellipse: s-maj=7.2km s-min=6.3km az=25.7*

IDC ***18*** *13:35:03.9±1.5, 59°.20N×154°.10W, h93km±18km, mb3.4/3, mb1 3.6/7, mb1mx3.3/27, mbtmp3.4/7, Error ellipse: s-maj=22.1km s-min=13.2km az=97.0*

NEIC ***18*** *13:35:06.2, 59°.05N×153°.87W, h118km, MG3.5(AEIC), After AEIC.*

ISC 18 13:35:05.2±0.5, 59°.10N±0°.04×153°.96W±0°.08, h109km±7km, n45, σ0s88/51, mb3.8/3, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSO	**Redoubt South**	**1.49**	**24**	*e*Pn	**Pn**	**13 35 33.1**	**+1.3**
KDAK	**Kodiak Island**	**1.51**	**151**	P	**Pn**	**13 35 32.6**	**+0.6**
	149nm,0.3s,baz=353,slow=10,SNR=358						
KDAK				S	**Sn**	**13 35 52.1**	**-0.2**
	217nm,0.3s,baz=196,slow=23,SNR=30						
KDAK	**Kodiak Island**	**1.51**	**151**	P	**Pn**	**13 35 31.8**	**-0.2**
KDAK				S	**Sn**	**13 35 51.4**	**-1.0**
BRLK	**Bradley Lake**	**1.71**	**66**	P	**Pn**	**13 35 34.8**	**+0.4**
BRLK				S	**Sn**	**13 35 56.9**	**+0.3**
OHAK	**Old Harbor**	**1.92**	**169**	P	**Pn**	**13 35 36.6**	**-0.5**
SVW2	**Sparrevohn**	**2.16**	**339**	*e*P	**Pn**	**13 35 41.0**	**+1.0**
SLKM	**Skilak Lake**	**2.36**	**52**	P	**Pn**	**13 35 43.0**	**+0.4**
FIB	**Fire Island**	**2.81**	**41**	P	**Pn**	**13 35 49.6**	**+1.2**
RC01	**Rabbit Creek A**	**2.91**	**45**	P	**Pn**	**13 35 50.2**	**+0.4**
SKT	**Skwentna**	**3.13**	**22**	P	**Pn**	**13 35 53.3**	**+0.7**
PMR	**Palmer**	**3.46**	**42**	P	**Pn**	**13 35 56.5**	**-0.6**
KNK	**Knik Glacier**	**3.59**	**47**	P	**Pn**	**13 35 58.7**	**-0.1**
CHGN	**Chignik**	**3.69**	**222**	*e*P	**Pn**	**13 36 00.3**	**+0.1**
SML	**Sawmill**	**3.89**	**43**	P	**Pn**	**13 36 02.4**	**-0.4**
PPLA	**Purkeypile**	**3.90**	**12**	P	**Pn**	**13 36 04.5**	**+1.5**
TT01	**Tatalina**	**3.95**	**346**	P	**Pn**	**13 36 03.9**	**+0.3**
TTA	**Tatalina**	**3.97**	**346**	*e*P	**Pn**	**13 36 04.6**	**+0.7**
EYAK	**Cordova Ski Ar**	**4.39**	**67**	P	**Pn**	**13 36 09.2**	**-0.4**
DIV	**Divide**	**4.57**	**60**	P	**Pn**	**13 36 12.3**	**+0.2**
TRF	**Thorofare Moun**	**4.71**	**21**	P	**Pn**	**13 36 13.4**	**-0.4**
CHUM	**Lake Minchumin**	**4.86**	**9**	P	**Pn**	**13 36 16.1**	**+0.2**
RND	**Reindeer**	**4.97**	**28**	P	**Pn**	**13 36 16.8**	**-0.6**
BMRM	**Bremner River**	**5.05**	**64**	*e*Pn	**Pn**	**13 36 17.5**	**-1.0**
BMRM				*e*Sn	**Sn**	**13 37 13.5**	**-2.1**
DHY	**Denali Highway**	**5.11**	**36**	P	**Pn**	**13 36 18.6**	**-0.7**
SDPT	**Sand Point**	**5.17**	**226**	P	**Pn**	**13 36 19.3**	**-0.8**
BPAW	**Bear Paw Mtn.**	**5.21**	**15**	P	**Pn**	**13 36 20.2**	**-0.5**
MCK	**McKinley**	**5.23**	**25**	*e*Pn	**Pn**	**13 36 20.8**	**-0.1**
MENT	**Mentasta**	**6.29**	**48**	*e*P	**Pn**	**13 36 35.9**	**+0.7**
COLA	**College**	**6.46**	**24**	*e*Pn	**Pn**	**13 36 34.6**	**-3.0**
ILAR	**Eielson Array**	**6.59**	**27**	P	**Pn**	**13 36 38.2**	**-1.1**
	1.0nm,0.3s,baz=218,slow=13,SNR=76						
ILAR				S	**Sn**	**13 37 49.0**	**-3.9**
	3.0nm,0.3s,baz=94,slow=33,SNR=10.0						
IM3	**Indian Mountai**	**6.91**	**1**	P	**Pn**	**13 36 43.3**	**-0.3**
BCA3	**Beaver Creek A**	**7.11**	**51**	P	**Pn**	**13 36 46.1**	**-0.2**
PNL	**Peninsula**	**7.46**	**79**	P	**Pn**	**13 36 50.7**	**-0.4**
EGAK	**Eagle**	**8.29**	**41**	*e*Pn	**Pn**	**13 37 01.7**	**-0.5**
COLD	**Coldfoot**	**8.33**	**10**	*e*Pn	**Pn**	**13 37 01.3**	**-1.6**
HYT	**Haines Junctio**	**8.43**	**71**	*e*Pn	**Pn**	**13 37 06.1**	**+1.8**
DAWY	**Dawson**	**8.54**	**48**	*e*Pn	**Pn**	**13 37 05.8**	**+0.1**
DLBC	**Dease Lake**	**12.42**	**83**	P	**Pn**	**13 37 59.5**	**+1.7**
	2.1nm,0.3s,baz=280,slow=11,SNR=28						
DLBC				S	**Sn**	**13 40 14.3**	**0.0**
	0.5nm,0.3s,baz=171,slow=22,SNR=4.1						
DLBC	**Dease Lake**	**12.42**	**83**	*e*Pn	**Pn**	**13 37 59.5**	**+1.7**
INK	**Inuvik**	**12.86**	**36**	P	**Pn**	**13 38 04.2**	**+0.8**
	0.1nm,0.3s,baz=252,slow=14,SNR=4.3						
YKA	**Yellowknife Ar**	**19.28**	**63**	P	**P**	**13 39 21.4**	**+0.6**
	0.1nm,0.3s,baz=276,slow=9.9,SNR=2.8						
YKA	**Yellowknife Ar**	**19.28**	**63**	P	**P**	**13 39 21.4**	**+0.6**
TXAR	**Lajitas Array**	**45.14**	**109**	P	**P**	**13 43 11.7**	**+1.2**
	0.2nm,0.5s,mb3.1,baz=316,slow=7.0,SNR=5.0						
SONM	**Songino Array**	**54.92**	**306**	P	**P**	**13 44 24.1**	**+0.1**
	1.3nm,0.5s,mb4.2,baz=44,slow=4.9,SNR=9.8						
ZALV	**Zalesovo Beam**	**57.81**	**323**	P	**P**	**13 44 43.0**	**-1.5**
	0.4nm,0.3s,mb3.9,baz=25,slow=8.0,SNR=4.0						

WEL 18 13:37:38.1±0.5, 35°.58S×178°.58E, h235km±19km, ML3.5/3, Error ellipse: s-maj=27.1km s-min=25.3km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.00**	**186**	PN	Pn	13 38 19.4	+0.2
MXZ				SN	S	13 38 51.6	-0.1
MXZ				SN	S	13 38 51.7	+0.1
MWZ	**Matawai**	**2.88**	**197**	PN	Pn	13 38 28.8	+0.6
MWZ				SN	S	13 39 07.1	-0.8
URZ	**Urewera**	**2.93**	**203**	PN	Pn	13 38 29.0	+0.3
URZ				*e*SN	S	13 39 08.6	-0.3

CASC 18 13:39:07.6±1.2, 12°.30N×87°.60W, h60km±43km, MD3.5, ML3.3, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.66**	**53**	*e*P	Pn	13 39 21.9	+0.4
CRIN				*e*S	Sn	13 39 33.1	+1.5
CRIN				AML	AML	13 39 34.2	
	comp=N,932nm,0.3s						
LEON	**Leon**	**0.70**	**80**	*e*P	Pn	13 39 21.2	-0.6
TELN	**Telica**	**0.80**	**68**	*e*P	Pn	13 39 23.5	+0.4
CNGN	**Cerro Negro**	**0.90**	**77**	*e*P	Pn	13 39 23.9	-0.4
CNGN				*e*S	Sn	13 39 36.9	+0.2
COPN	**Copaltepe**	**0.99**	**97**	*e*P	Pn	13 39 25.1	-0.3
CNCH	**Conchagua**	**1.00**	**347**	*e*P	Pn	13 39 25.9	+0.3
CNCH				*e*S	Sn	13 39 40.1	+1.2
MOMN	**Momotombo**	**1.04**	**84**	*e*P	Pn	13 39 26.6	+0.4
CSAN		**1.15**	**96**	*e*P	Pn	13 39 28.0	+0.4
APYN	**Apoyeque**	**1.22**	**93**	*e*P	Pn	13 39 28.2	-0.3
TICN	**Ticuantepe**	**1.36**	**101**	*e*P	Pn	13 39 30.7	+0.3
LFRS	**El Faro**	**1.94**	**313**	*e*P	Pn	13 39 39.5	+1.2
LFRS				*e*S	Sn	13 40 02.3	+0.7

NIED ***18*** *13:56:00, 43°.30N×148°.00E, h26km, Mw4.6 Best double couple: M0:8.45000×10^15 NP1:φs49.00000°, δ62.00000°, λ111.00000°. NP2:φs189.00000°, δ35.00000°, λ56.00000°.*

JMA ***18*** *13:56:12.4±0.5, 43°.32N×148°.04E, h0km, M5.3*

BJI ***18*** *13:56:13.8, 43°.50N×148°.11E, h18km, mB5.0/30, mb4.8/51, Ms4.4/40, Ms7 4.5/39*

IDC ***18*** *13:56:15.0±0.6, 43°.44N×147°.79E, h0km, mb4.7/21, mb1 4.8/24, mb1mx4.7/28, mbtmp4.6/24, ML4.0/3, MS4.0/12, Ms1 4.0/12, ms1mx3.5/41, Error ellipse: s-maj=16.8km s-min=13.1km az=151.0*

NEIC ***18*** *13:56:15.1±2.1, 43°.46N×147°.79E, h1km±13km, mb4.9/60, Error ellipse: s-maj=7.6km s-min=3.9km az=160.0*

ISCJB ***18*** *13:56:17.5±0.8, 43°.35N±0°.03×147°.81E±0°.02, h29km±5km, mb4.8/142, MS4.2/42, Error ellipse: s-maj=5.3km s-min=2.7km az=163.7*

SKHL ***18*** *13:56:17.6±0.7, 43°.31N×148°.08E, h48km±15km, mb5.1/8, Ms4.5/6*

MOS ***18*** *13:56:19.0±1.0, 43°.45N×147°.81E, h39km, mb5.1/58, MS4.1/30, Error ellipse: s-maj=8.0km s-min=4.7km az=112.8*

SZGRF ***18*** *13:56:23.9, 44°.33N×147°.57E, h34km, mb4.8, Kuril Islands, Russia*

ISC 18 13:56:19.4±0.8, 43°.45N±0°.03×147°.77E±0°.02, h27km±5km, h32km±1.4km: pP-P, n475, σ0s87/506, mb4.8/142, MS4.2/42, 96C-56D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.48**	**267**	⇑P	**Pn**	**13 56 43.3**	**-0.9**
NEM2				*e*S	**Sn**	**13 57 06.3**	**+3.7**
YUK	**Yuzh-Kuril'sk**	**1.50**	**294**	⇓*i*PN	**Pn**	**13 56 44.6**	**+0.1**
YUK				*i* S	**Sn**	**13 57 06.0**	**+2.8**
YUK				pmax	pmax		
	comp=N,1μm,0.5s						
YUK				pmax	pmax		
	comp=Z,4μm,0.5s						
YUK				pmax	pmax		
	comp=E,13μm,0.2s						
YUK				pmax	pmax		
	comp=Z,2μm,0.6s						
YUK				smax			
	comp=E,23μm,0.6s						
YUK				smax			
	comp=N,12μm,0.3s						
YUK				smax			
	comp=N,16μm,0.7s						
YUK				smax			
	comp=E,17μm,0.7s						
YUK	**Yuzh-Kuril'sk**	**1.50**	**294**	⇑*i*P	**Pn**	**13 56 44.4**	**-0.1**
YUK				AMB	AMB	13 56 44.8	
	comp=E,12μm,1.0s						
YUK				AMB	AMB	13 56 45.0	
	comp=E,2μm,0.5s						
YUK				AMB	AMB	13 56 45.0	
	comp=E,3μm,0.5s						
YUK				AMB	AMB	13 56 45.0	
	comp=E,6μm,0.5s						
YUK				*i* S	**Sn**	**13 57 04.0**	**+0.8**
YUK				A		13 57 07.3	
	comp=E,20μm,0.5s						
YUK				A		13 57 07.3	
	comp=E,21μm,0.5s						
YUK				A		13 57 17.5	
	comp=E,33μm,1.0s						
YUK				A		13 57 17.5	
	comp=E,52μm,1.0s						
YUK				AMS	AMS	13 57 30.1	
	comp=E,8μm,13.0s						
YUK				AMS	AMS	13 57 30.1	
	comp=E,6μm,13.0s						
KUR	**Kuril'sk**	**1.78**	**2**	⇑*i*PN	**Pn**	**13 56 47.8**	**-0.6**
KUR				*e*S	**Sn**	**13 57 09.0**	**-1.2**
KUR				pmax	pmax		
	comp=N,1μm,0.5s						
KUR				pmax	pmax		
	comp=E,610nm,0.5s						
KUR				pmax	pmax		
	comp=Z,2μm,0.5s						
KUR				pmax	pmax		
	comp=Z,6μm,2.0s						
KUR				pmax	pmax		
	comp=N,16μm,2.0s						
KUR				pmax	pmax		
	comp=E,4μm,2.0s						
KUR				smax			
	comp=N,6μm,0.8s						
KUR				smax			
	comp=E,4μm,0.8s						
KUR	**Kuril'sk**	**1.78**	**2**	⇑*i*P	**Pn**	**13 56 47.8**	**-0.6**
KUR				AMB	AMB	13 56 50.0	
	comp=E,1μm,0.5s						
KUR				AMB	AMB	13 56 50.0	
	comp=E,610nm,0.5s						
KUR				AMB	AMB	13 56 50.0	
	comp=E,2μm,0.5s						
KUR				AMB	AMB	13 56 52.0	
	comp=E,6μm,2.0s						
KUR				*e*S	**Sn**	**13 57 11.0**	**+0.8**
KUR				A		13 57 19.0	
	comp=E,15μm,1.5s						
KUR				A		13 57 19.0	
	comp=E,5μm,1.5s						
KUR				A		13 57 19.0	
	comp=E,38μm,1.6s						
KUR				A		13 57 19.0	
	comp=E,8μm,1.6s						
KUR				A		13 57 21.0	
	comp=E,4μm,0.4s						
KUR				A		13 57 21.0	
	comp=E,3μm,0.4s						
JRA	**Rausu**	**1.98**	**285**	⇑P	**Pn**	**13 56 51.3**	**+0.2**
JRA				*e*S	**Sn**	**13 57 19.9**	**+4.9**
JNK	**Nakash**	**2.22**	**275**	⇑P	**Pn**	**13 56 54.0**	**-0.4**
JAK	**Akkeshi**	**2.29**	**260**	P	**Pn**	**13 56 54.3**	**-1.1**
JTKR	**Abashiri--Toko**	**2.85**	**282**	⇑P	**Pn**	**13 57 04.0**	**+1.0**
JAR	**Ashorobuto**	**2.92**	**268**	⇑P	**Pn**	**13 57 04.0**	**0.0**
JCH	**Churui**	**3.34**	**257**	P	**Pn**	**13 57 09.0**	**-0.7**
JCH				*e*S	**Sn**	**13 57 48.7**	**+0.2**
JKK2	**Kamakawa 2**	**3.67**	**278**	⇑P	**Pn**	**13 57 15.8**	**+1.5**
ERM	**Erimo**	**3.69**	**249**	*i* PN	**Pn**	**13 57 15.7**	**+1.1**
ERM	**Erimo**	**3.69**	**249**	*e*Pn	**Pn**	**13 57 15.6**	**+1.0**
JFR	**Furan**	**3.79**	**267**	P	**Pn**	**13 57 16.5**	**+0.6**
ASAJ	**Asahikawa**	**3.81**	**282**	P	**Pn**	**13 57 18.0**	**+1.9**
	comp=E,6.6nm,0.3s,baz=116,slow=9.1,SNR=38						
ASAJ				Sn	**Sn**	**13 58 14.0**	**+14**
	comp=E,13nm,0.3s,baz=13,slow=30,SNR=2.2						
ASAJ				LR	LR	13 58 57.0	
	comp=E,2μm,20.5s,baz=145,slow=42						
JNBK	**Urakawa-nobuka**	**3.87**	**254**	⇓P	**Pn**	**13 57 16.7**	**-0.3**
JSE	**Soyaes**	**4.02**	**294**	P	**Pn**	**13 57 20.5**	**+1.4**
JHR	**Hokuryu**	**4.40**	**276**	P	**Pn**	**13 57 26.7**	**+2.4**
JWK2	**Keihoku**	**4.60**	**296**	P	**Pn**	**13 57 30.3**	**+3.2**
JEW	**Eniwo**	**4.67**	**265**	P	**Pn**	**13 57 29.2**	**+1.2**
YSS	**Yuzh-Sakhalins**	**4.98**	**316**	⇑*i*PN	**Pn**	**13 57 34.0**	**+1.7**
YSS				pmax	pmax		
	comp=Z,90nm,0.4s						
YSS				MLR	MLR		
	comp=N,2μm,18.0s						
YSS				MLR	MLR		
	comp=E,2μm,18.0s						
YSS				MLR	MLR		
	comp=Z,2μm,18.0s						
YSS	**Yuzh-Sakhalins**	**4.98**	**316**	*e*Pn	**Pn**	**13 57 33.9**	**+1.6**
YSS	**Yuzh-Sakhalins**	**4.98**	**316**	⇑*i*P	**Pn**	**13 57 34.0**	**+1.7**
YSS				AMB	AMB	13 57 34.4	
	comp=Z,90nm,0.4s						
YSS				*e*S	**Sn**	**13 58 30.0**	**+1.0**
YSS				AMS	AMS	13 59 30.0	
	comp=Z,2μm,18.0s						
YSS				AMS	AMS	13 59 30.0	
	comp=Z,2μm,18.0s						
JKB	**Kayabe**	**5.21**	**255**	⇑P	**Pn**	**13 57 35.5**	**+0.1**
JKB				*e*S	**Sn**	**13 58 31.6**	**-3.0**
JSK	**Shakotan**	**5.32**	**271**	P	**Pn**	**13 57 37.8**	**+0.9**
JOT	**Ohata**	**5.39**	**250**	⇑P	**Pn**	**13 57 37.0**	**-0.9**
JANG	**Nango**	**5.59**	**239**	P	**Pn**	**13 57 38.3**	**-2.4**
JANG				*e*S	**Sn**	**13 58 37.9**	**-6.0**
JTH	**Tanohata**	**5.64**	**234**	⇑P	**Pn**	**13 57 38.7**	**-2.7**
MIYJ	**Miyakonagasawa**	**5.91**	**231**	S	**Sn**	**13 58 44.7**	**-7.2**
JSI2	**Shiura 2**	**5.96**	**249**	P	**Pn**	**13 57 45.0**	**-0.8**

HABR			pmax	pmax		
	comp=N,28nm,2.0s					
HABR			pmax	pmax		
	comp=E,49nm,1.5s					
HABR			MLR	MLR		
	comp=Z,888nm,16.0s					
JNG	**Nsakai**	**10.22 230**	P	**Pn**	**13 58 43.4**	**-0.8**
NKL	**Nikolayevsk**	**10.79 337**	*e*P	**Pn**	**13 58 50.0**	**-1.9**
NKL			AMB	AMB	13 58 52.5	
	comp=Z,20nm,1.2s					
NKL			AMB	AMB	13 58 52.5	
	comp=Z,41nm,1.2s					
NKL			*e*L		14 01 28.0	
NKL			AMS	AMS	14 03 13.0	
	comp=Z,500nm,16.0s					
NKL			AMS	AMS	14 03 13.0	
	comp=Z,1μm,16.0s					
PETK	**Petropavlovsk-**	**11.70 31**	Pn	**Pn**	**13 59 03.5**	**-0.8**
	comp=Z,1.8nm,0.3s,baz=211,slow=12,SNR=24					
PETK	**Petropavlovsk-**	**11.70 31**	PN	**Pn**	**13 59 03.6**	**-0.7**
PETK			pmax	pmax		
	comp=Z,2.0nm,0.3s					
PET	**Petropavlovsk**	**12.00 33**	*e*PN	**Pn**	**13 59 03.4**	**-5.1**
PET			MLR	MLR		
	comp=Z,700nm,15.0s					
PET	**Petropavlovsk**	**12.00 33**	*e*Pn	**Pn**	**13 59 06.2**	**-2.3**
JHJ	**Hachijo jima 2**	**12.06 214**	Pn	**Pn**	**13 59 10.9**	**+1.4**
	comp=Z,5.0nm,0.3s,baz=242,slow=22,SNR=3.1					
JHJ			Sn	**Sn**	**14 01 12.1**	**-11**
	comp=Z,13nm,0.3s,baz=65,slow=23,SNR=5.0					
KLR	**Kul'dur**	**12.48 303**	*e*PN	**Pn**	**13 59 18.8**	**+3.8**
KLR			pmax	pmax		
	comp=E,100nm,1.8s					
KLR			pmax	pmax		
	comp=Z,50nm,1.8s					
MDJ	**Mudanjiang**	**13.14 281**	P	**Pn**	**13 59 24.3**	**+0.3**
MDJ			S	**Sn**	**14 01 48.3**	**-0.8**
MDJ			PcP	PcP	14 04 54.0	-0.4
MDJ			ScP	ScP	14 08 26.5	+0.8
MDJ			PcS	PcS	14 08 29.9	+1.2
MDJ			ScS	ScS	14 12 03.4	+1.3
MDJ			pmax	pmax		
	comp=Z,6.0nm,1.1s					
MDJ			pmax	pmax		
	comp=Z,61nm,3.3s					
MDJ			LR	LR		
	comp=N,380nm,18.1s					
MDJ			LR	LR		
	comp=E,590nm,18.1s					
MDJ			LR	LR		
	comp=Z,730nm,18.1s					
MDJ	**Mudanjiang**	**13.14 281**	P	**Pn**	**13 59 20.8**	**-3.3**
	comp=Z,8.8nm,0.8s					
CN2	**Changchun**	**16.16 279**	*e*P	**Pn**	**14 00 05.1**	**+0.6**
CN2			*e*sP	sP	14 00 17.4	-0.7
CN2			*e*S	**Sn**	**14 03 01.3**	**-1.6**
CN2			pmax	pmax		
	comp=Z,10.0nm,0.6s					
CN2			pmax	pmax		
	comp=Z,200nm,3.0s					
CN2			LR	LR		
	comp=N,500nm,14.0s					
CN2			LR	LR		
	comp=E,500nm,14.0s					
CN2			LR	LR		
	comp=Z,400nm,15.0s					
KSRS	**Korea Array**	**16.24 255**	Pn	**Pn**	**14 00 04.2**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=58,slow=12,SNR=14					
KSRS			LR	LR	14 06 57.0	
	comp=Z,404nm,18.5s,baz=55,slow=39					
ZEA	**Zeya**	**16.97 314**	*e*P	**Pn**	**14 00 11.8**	**-2.8**
ZEA			AMB	AMB	14 00 19.3	
	comp=Z,21nm,0.8s					
ZEA			AMB	AMB	14 00 19.3	
	comp=Z,29nm,1.0s					
SNY	**Shenyang**	**17.86 273**	⇓P	**Pn**	**14 00 27.6**	**+1.8**
SNY			S	**Sn**	**14 03 52.6**	**+8.6**
SNY			pmax	pmax		
	comp=Z,10.0nm,0.5s					
SNY			pmax	pmax		
	comp=Z,130nm,4.3s					
SNY			LR	LR		
	comp=N,400nm,15.5s					
SNY			LR	LR		
	comp=E,340nm,15.9s					
SNY			LR	LR		
	comp=Z,370nm,16.1s					
SEY	**Seymchan**	**19.70 6***c*	*i*P	**Pn**	**14 00 44.7**	**-3.1**
CLNS	**Chul'man**	**19.73 321**	*e*P	**Pn**	**14 00 44.9**	**-3.3**
CLNS			*e*S	**Sn**	**14 04 28.4**	**-0.5**
CLNS			pmax	pmax		
	comp=Z,11nm,1.0s					
CLNS			pmax	pmax		
	comp=N,6.0nm,0.8s					
CLNS			pmax	pmax		
	comp=E,3.0nm,0.8s					
CLNS			smax			
	comp=N,11nm,1.2s					
CLNS			smax			
	comp=E,6.0nm,0.8s					
CLNS			MLR	MLR		
	comp=N,195nm,16.0s					
CLNS			MLR	MLR		
	comp=Z,319nm,15.0s					
CLNS			MLR	MLR		
	comp=E,242nm,14.0s					
HIA	**Hailar**	**20.13 297**	*e*P	**P**	**14 00 48.5**	**-2.6**
HIA			pmax	pmax		
	comp=Z,14nm,0.6s					
HIA	**Hailar**	**20.13 297**	*e*P	**P**	**14 00 48.5**	**-2.6**
	comp=Z,14nm,0.6s					
DL2	**Dalian**	**20.16 266**	P	**P**	**14 00 51.6**	**+0.1**
DL2			pP		14 01 00.6	
DL2			S	**S**	**14 04 35.9**	**-0.5**
DL2			pmax	pmax		
	comp=Z,30nm,1.2s					
DL2			pmax	pmax		
	comp=Z,130nm,4.1s					
DL2			LR	LR		
	comp=N,150nm,16.0s,MS3.6					
DL2			LR	LR		
	comp=E,120nm,13.5s,MS3.6					
DL2			LR	LR		
	comp=Z,250nm,14.3s,MS3.7					
YAK	**Yakutsk**	**21.45 336**	*e*P	**P**	**14 01 02.0**	**-3.2**
YAK			*e*		14 01 18.5	
YAK			*e*S	**S**	**14 04 54.6**	**-6.9**
YAK			*e*SS		14 05 14.0	
YAK			pmax	pmax		
	comp=Z,43nm,0.9s,mb4.8					
YAK			pmax	pmax		
	comp=E,10.0nm,1.1s					
YAK			pmax	pmax		
	comp=N,6.0nm,0.9s					
YAK			smax			
	comp=N,17nm,1.4s					
YAK			smax			
	comp=E,19nm,1.2s					
YAK			MLR	MLR		
	comp=Z,375nm,17.0s,MS3.9					
YAK			MLR	MLR		
	comp=E,249nm,15.0s,MS3.8					
YAK			MLR	MLR		
	comp=N,178nm,16.0s,MS3.8					
YAK	**Yakutsk**	**21.45 336**	*e*P	**P**	**14 01 01.0**	**-4.2**
	comp=N,69nm,0.7s,mb5.1					
BJI	**Beijing**	**23.74 273**	P	**P**	**14 01 27.9**	**-1.4**
BJI			sP	sP	14 01 41.3	+0.9
BJI			S	**S**	**14 05 43.1**	**+0.4**
BJI			sS	sS	14 05 57.4	+1.8
BJI			pmax	pmax		
	comp=Z,33nm,1.1s,mb4.7					
BJI			LR	LR		
	comp=N,260nm,18.4s,MS3.9					
BJI			LR	LR		
	comp=E,270nm,18.9s,MS3.9					
BJI			LR	LR		
	comp=Z,180nm,16.9s,MS3.6					
BJT	**Baijiatuau**	**23.76 273**	*e*P	**P**	**14 01 27.5**	**-1.9**
BJT			pmax	pmax		
	comp=Z,27nm,0.8s					
BJT	**Baijiatuau**	**23.76 273**	*e*P	**P**	**14 01 27.5**	**-1.9**
	comp=Z,27nm,0.8s,mb4.7					
NJ2	**Nanjing**	**25.41 253**	*e*P	**P**	**14 01 46.3**	**+1.7**
NJ2			pP	pP	14 01 56.1	+3.7
NJ2			sP	sP	14 01 59.3	+3.6
NJ2			PP		14 02 24.5	
NJ2			S	**S**	**14 06 06.5**	**-3.1**
NJ2			sS	sS	14 06 18.5	-4.1
NJ2			pmax	pmax		
	comp=Z,130nm,1.0s,mb5.4					
NJ2			pmax	pmax		
	comp=Z,340nm,4.6s					
NJ2			LR	LR		
	comp=N,830nm,16.8s,MS4.5					
NJ2			LR	LR		
	comp=E,880nm,20.4s,MS4.5					
NJ2			LR	LR		
	comp=Z,2μm,17.8s,MS4.8					
BILL	**Bilibino**	**26.53 16**⇓	*i*P	**P**	**14 01 53.7**	**-0.6**
BILL			*e*		14 02 37.5	
BILL			pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.4					
BILL			MLR	MLR		
	comp=Z,500nm,16.0s,MS4.2					
BILL	**Bilibino**	**26.53 16**	*e*P	**P**	**14 01 52.3**	**-2.0**
	comp=Z,8.1nm,0.6s,mb4.4					
HHC	**Hu-ho-hao-te**	**26.84 277**	*e*P	**P**	**14 01 57.4**	**0.0**
HHC			sP	sP	14 02 11.3	+2.8
HHC			PP		14 02 41.3	
HHC			PcP	PcP	14 05 20.3	+0.9
HHC			S	**S**	**14 06 28.5**	**-3.5**
HHC			sS	sS	14 06 44.3	-0.7
HHC			ScP	ScP	14 08 56.9	-0.7
HHC			PcS	PcS	14 09 00.8	+0.1
HHC			pmax	pmax		
	comp=Z,38nm,1.0s,mb4.9					
HHC			pmax	pmax		
	comp=Z,190nm,5.0s					
HHC			LR	LR		
	comp=N,800nm,12.2s,MS4.6					
HHC			LR	LR		
	comp=E,810nm,12.5s,MS4.6					
HHC			LR	LR		
	comp=Z,820nm,12.4s,MS4.5					
BTO	**Baotou**	**28.03 277**	*e*P	**P**	**14 02 06.8**	**-1.3**
ULN	**Ulaanbaatar**	**28.56 293**⇑	*i*P	**P**	**14 02 13.3**	**+0.6**
ULN			pmax	pmax		
	comp=Z,23nm,0.8s,mb5.0					
ULN	**Ulaanbaatar**	**28.56 293**⇑	*i*P	**P**	**14 02 13.3**	**+0.6**
	comp=Z,23nm,0.8s,mb5.0					
SONM	**Songino Array**	**29.00 293**	P	**P**	**14 02 17.3**	**+0.7**
	comp=Z,19nm,0.7s,mb4.9,baz=82,slow=8.4,SNR=112					
SONM			LR	LR	14 15 06.7	
	comp=Z,664nm,18.7s,MS4.3,baz=102,slow=39					
SONM	**Songino Array**	**29.00 293**	P	**P**	**14 02 17.3**	**+0.6**
SONM			pmax	pmax		
	comp=Z,19nm,0.7s					
SONM			MLR	MLR		
	comp=Z,664nm,18.7s					
WHN	**Wuhan**	**29.43 255**	P	**P**	**14 02 21.9**	**+1.3**
WHN			S	**S**	**14 07 22.8**	**+10**
WHN			LR	LR		
	comp=Z,1μm,15.9s,MS4.5					
TIXI	**Tiksi**	**29.75 348**	*e*P	**P**	**14 02 16.6**	**-6.4**
TIXI			pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4					
TIXI	**Tiksi**	**29.75 348**	*e*P	**P**	**14 02 16.6**	**-6.4**
	comp=Z,5.2nm,0.6s,mb4.4					
TLY	**Talaya**	**30.49 301**	*e*P	**P**	**14 02 29.9**	**+0.1**
TLY			*e*		14 09 30.8	
TLY			pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.2					
TLY			MLR	MLR		
	comp=Z,303nm,14.0s,MS4.1					
TLY	**Talaya**	**30.49 301**	*e*P	**P**	**14 02 30.2**	**+0.4**
	comp=Z,4.0nm,0.8s,mb4.2					
XAN	**Xi'an**	**31.48 266**	P	**P**	**14 02 38.4**	**-0.3**
XAN			pP	pP	14 02 45.1	-1.5
XAN			pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.2					
MOY	**Mondy**	**32.14 301**	*e*P	**P**	**14 02 44.8**	**+0.5**
LZH	**Lanzhou**	**34.23 273**	P	**P**	**14 03 03.8**	**+1.0**
LZH			pP	pP	14 03 12.3	+1.6
LZH			sP	sP	14 03 17.3	+3.3
LZH			PP	PP	14 04 17.8	-2.6
LZH			S	**S**	**14 08 26.8**	**-1.1**
LZH			sS	sS	14 08 42.5	+1.5
LZH			SS	SS	14 10 36.3	-20
LZH			pmax	pmax		
	comp=Z,59nm,1.0s,mb5.5					
LZH			pmax	pmax		
	comp=Z,220nm,4.8s					
LZH			LR	LR		
	comp=E,1μm,13.8s					
LZH			LR	LR		
	comp=Z,2μm,15.4s,MS4.9					
GTA	**Gaotai**	**35.79 280**	⇓P	**P**	**14 03 16.5**	**+0.4**
GTA			pP	pP	14 03 26.4	+2.3
GTA			sP	sP	14 03 30.1	+2.7
GTA			PP	PP	14 04 38.0	+0.5
GTA			PcP	PcP	14 05 45.3	+1.9
GTA			S	**S**	**14 08 50.8**	**-0.9**
GTA			sS	sS	14 09 06.8	+2.0
GTA			SS	SS	14 11 12.6	-15
GTA			pmax	pmax		
	comp=Z,16nm,1.2s,mb4.8					
GTA			pmax	pmax		
	comp=Z,220nm,6.6s					
GTA			LR	LR		
	comp=N,160nm,14.4s,MS4.1					
GTA			LR	LR		
	comp=E,220nm,15.3s,MS4.1					
GTA			LR	LR		
	comp=Z,310nm,15.3s,MS4.2					
CD2	**Chengdu**	**36.83 265**	P	**P**	**14 03 24.9**	**-0.2**
CD2			pP	pP	14 03 35.3	+2.3
CD2			sP	sP	14 03 39.3	+3.0
CD2			PP	PP	14 04 51.5	+2.4
CD2			S	**S**	**14 09 06.3**	**-1.4**
CD2			sS	sS	14 09 22.4	+1.5
CD2			SS	SS	14 11 35.8	-13
CD2			pmax	pmax		
	comp=Z,40nm,0.8s,mb5.3					
CD2			pmax	pmax		
	comp=Z,270nm,4.7s					
CD2			LR	LR		
	comp=N,200nm,9.5s					
CD2			LR	LR		
	comp=Z,230nm,7.7s					
GYA	**Guiyang**	**37.29 257**	P	**P**	**14 03 30.0**	**+1.0**
GYA			pP	pP	14 03 40.3	+3.3
GYA			sP	sP	14 03 43.8	+3.5
GYA			PP	PP	14 04 56.9	+2.7
GYA			PcP	PcP	14 05 51.4	+3.3
GYA			S	**S**	**14 09 12.8**	**-2.0**
GYA			ScP	ScP	14 09 31.5	-1.7
GYA			pmax	pmax		
	comp=Z,20nm,0.8s,mb5.0					
GYA			pmax	pmax		
	comp=Z,120nm,4.8s					
GYA			LR	LR		
	comp=N,620nm,16.2s,MS4.6					
GYA			LR	LR		
	comp=E,510nm,17.6s,MS4.6					
GYA			LR	LR		
	comp=Z,740nm,15.0s,MS4.6					
TTA	**Tatalina**	**37.38 39**	*e*P	**P**	**14 03 30.6**	**+1.2**
BPAW	**Bear Paw Mtn.**	**39.69 37**	*e*P	**P**	**14 03 48.7**	**0.0**
	comp=Z,6.1nm,0.7s,mb4.4					
TRF	**Thorofare Moun**	**39.99 38**	*e*P	**P**	**14 03 51.8**	**+0.5**
	comp=Z,6.2nm,0.7s,mb4.5					
QIZ	**Qiongzhong**	**40.04 245**	P	**P**	**14 03 53.0**	**+0.8**
QIZ			pP	pP	14 04 01.8	+1.6
QIZ			sP	sP	14 04 05.5	+2.0
QIZ			S	**S**	**14 09 56.8**	**+0.3**
QIZ			pmax	pmax		
	comp=Z,11nm,1.1s,mb4.5					
QIZ			LR	LR		
	comp=N,310nm,18.4s					
QIZ			LR	LR		
	comp=Z,250nm,17.9s,MS4.1					
COLD	**Coldfoot**	**40.16 32**	*e*P	**P**	**14 03 53.1**	**+0.4**
	comp=Z,6.4nm,0.6s,mb4.5					
RC01	**Rabbit Creek A**	**40.33 42**	*e*P	**P**	**14 03 52.4**	**-1.7**
	comp=Z,12nm,0.8s,mb4.7					
MCK	**McKinley**	**40.59 38**	*e*P	**P**	**14 03 55.9**	**-0.4**
MCK			pmax	pmax		
	comp=Z,14nm,0.8s,mb4.6					
MCK	**McKinley**	**40.59 38**	*e*P	**P**	**14 03 55.9**	**-0.4**
	comp=Z,14nm,0.8s,mb4.7					
KMI	**Kunming**	**40.90 258**	P	**P**	**14 04 00.3**	**+1.1**
KMI			pP	pP	14 04 10.1	+2.9
KMI			sP	sP	14 04 14.5	+4.0
KMI			PP	PP	14 05 37.3	+3.6
KMI			S	**S**	**14 10 07.5**	**-1.6**
KMI			sS	sS	14 10 25.8	+3.5
KMI			SS	SS	14 13 04.1	-6.9
KMI			pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.3					
KMI			pmax	pmax		
	comp=Z,120nm,4.8s					
KMI			LR	LR		
	comp=N,270nm,19.3s,MS4.2					
KMI			LR	LR		
	comp=E,220nm,17.4s,MS4.2					
KMI			LR	LR		
	comp=Z,200nm,14.5s,MS4.1					
COLA	**College**	**41.05 36**	*e*P	**P**	**14 03 59.4**	**-0.6**
COLA			pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.5					
COLA	**College**	**41.05 36**	*e*P	**P**	**14 03 59.4**	**-0.6**
	comp=Z,10nm,0.8s,mb4.5					
ILAR	**Eielson Array**	**41.47 36**	P	**P**	**14 04 03.3**	**-0.1**
	comp=Z,2.1nm,0.6s,mb4.0,baz=268,slow=8.6,SNR=41					
ILAR	**Eielson Array**	**41.47 36**	P	**P**	**14 04 03.3**	**-0.1**
ILAR			pmax	pmax		
	comp=Z,2.0nm,0.6s					
ZAA0	**Zalesovo Array**	**41.54 307**	*e*P	**P**	**14 04 03.2**	**-0.9**
ZAA0			*e*PcP	PcP	14 06 01.3	+0.3
ZALV	**Zalesovo Beam**	**41.54 307**	P	**P**	**14 04 03.5**	**-0.6**
	comp=Z,6.1nm,0.5s,mb4.5,baz=82,slow=7.2,SNR=27					
ZALV			PcP	PcP	14 06 00.7	-0.4
	comp=Z,2.7nm,0.7s,baz=90,slow=3.0,SNR=5.1					
ZALV			LR	LR	14 22 35.1	
	comp=Z,85nm,18.2s,MS3.7,baz=248,slow=38					
ZALV	**Zalesovo Beam**	**41.54 307**	P	**P**	**14 04 03.5**	**-0.6**
ZALV					14 06 00.7	
ZALV			pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.5					
ZALV			MLR	MLR		
	comp=Z,85nm,18.2s,MS3.7					
NVS	**Novosibirsk**	**42.26 309**	*i*P	**P**	**14 04 09.2**	**-0.8**
NVS			pmax	pmax		
	comp=N,6.0nm,1.4s					
NVS			pmax	pmax		
	comp=E,16nm,1.4s					
NVS			pmax	pmax		
	comp=Z,13nm,1.4s,mb4.4					
WMQ	**Urumqi**	**42.62 292**	P	**P**	**14 04 14.6**	**+1.5**
WMQ			pP	pP	14 04 24.5	+3.3
WMQ			sP	sP	14 04 28.4	+3.9
WMQ			PP	PP	14 05 56.5	+4.5
WMQ			PcP	PcP	14 06 07.1	+2.2
WMQ			*e*S	**S**	**14 10 34.8**	**+0.5**
WMQ			SS	SS	14 13 39.3	-5.3
WMQ			ScS	ScS	14 14 11.0	-1.4
WMQ			pmax	pmax		
	comp=Z,48nm,1.0s,mb5.2					
WMQ			pmax	pmax		
	comp=Z,210nm,5.0s					
WMQ			LR	LR		
	comp=N,260nm,19.8s,MS4.5					
WMQ			LR	LR		
	comp=E,460nm,17.0s,MS4.5					
WMQ			LR	LR		
	comp=Z,470nm,17.0s,MS4.5					
BMRM	**Bremner River**	**42.83 42**	*e*P	**P**	**14 04 13.8**	**-0.7**
	comp=Z,20nm,1.0s,mb4.8					
MENT	**Mentasta**	**42.99 39**	*e*P	**P**	**14 04 16.2**	**+0.3**
EGAK	**Eagle**	**43.91 36**	*e*P	**P**	**14 04 22.5**	**-0.7**
	comp=Z,30nm,1.4s,mb4.8					
DAWY	**Dawson**	**44.77 37**	*e*P	**P**	**14 04 30.0**	**-0.1**
MK31	**Makanchi Array**	**45.12 298**	*i*P	**P**	**14 04 33.2**	**0.0**
MK31			pmax	pmax		
	comp=Z,23nm,0.4s,mb5.4					
MK31	**Makanchi Array**	**45.12 298**	*e*P	**P**	**14 04 33.5**	**+0.4**
MKAR	**Makanchi Array**	**45.12 298**	P	**P**	**14 04 33.5**	**+0.3**
	comp=Z,23nm,0.6s,mb5.2,baz=80,slow=8.7,SNR=256					
MKAR			LR	LR	14 25 27.7	
	comp=Z,104nm,21.0s,MS3.7,baz=38,slow=39					
MKAR	**Makanchi Array**	**45.12 298**	P	**P**	**14 04 33.5**	**+0.3**
MKAR			pmax	pmax		
	comp=Z,23nm,0.6s					
MKAR			MLR	MLR		
	comp=Z,104nm,21.0s					
MKAR	**Makanchi Array**	**45.12 298**	P	**P**	**14 04 33.5**	**+0.3**
MKAR			LR	LR	14 25 27.7	
KURK	**Kurchatov**	**46.07 304***d*	*i*P	**P**	**14 04 39.6**	**-1.0**
KURK			pmax	pmax		
	comp=Z,43nm,1.0s,mb5.3					
KURK	**Kurchatov**	**46.07 304**	*e*P	**P**	**14 04 39.8**	**-0.8**
	comp=Z,34nm,0.6s,mb5.5					
HYT	**Haines Junctio**	**46.26 41**	*e*P	**P**	**14 04 43.6**	**+1.7**
INK	**Inuvik**	**46.44 30**	*e*P	**P**	**14 04 43.8**	**+0.6**
INK			*e*		14 04 55.9	
INK			pmax	pmax		
	comp=Z,15nm,0.4s					
INK	**Inuvik**	**46.44 30**	*e*P	**P**	**14 04 43.8**	**+0.6**
	comp=Z,15nm,0.4s,mb5.3					
INK			*e*		14 04 55.9	
LSA	**Lhasa**	**46.65 272**	*e*P	**P**	**14 04 46.8**	**+1.4**
LSA			pmax	pmax		
	comp=Z,21nm,1.0s,mb5.0					
LSA	**Lhasa**	**46.65 272**	*e*P	**P**	**14 04 46.8**	**+1.4**
	comp=Z,21nm,1.0s,mb5.0					
CHTO	**Chiang Mai**	**47.64 255**	*e*P	**P**	**14 04 54.1**	**+0.9**
CMAR	**Chiang Mai Arr**	**47.88 254**	P	**P**	**14 04 56.0**	**+0.9**
	comp=Z,1.6nm,0.8s,mb4.1,baz=33,slow=8.5,SNR=11					
CMAR			LR	LR	14 25 18.2	
	comp=Z,152nm,19.1s,MS4.0,baz=328,slow=36					
CMAR	**Chiang Mai Arr**	**47.88 254**	P	**P**	**14 04 56.0**	**+0.9**
CMAR			pmax	pmax		
	comp=Z,2.0nm,0.8s					
CMAR			MLR	MLR		
	comp=Z,152nm,19.1s					
VOSK	**Vostochnaya**	**49.82 309**	P	**P**	**14 05 08.9**	**-0.7**
VOSK			pmax	pmax		
	comp=Z,9.0nm,0.5s,mb5.1					
BVAR	**Borovoye Array**	**50.04 310**	P	**P**	**14 05 11.0**	**-0.3**
	comp=Z,7.3nm,0.5s,mb5.0,baz=78,slow=9.4,SNR=40					
BVAR	**Borovoye Array**	**50.04 310**	P	**P**	**14 05 11.0**	**-0.3**
BVAR			pmax	pmax		
	comp=Z,7.0nm,0.5s					
BRVK	**Borovoye**	**50.09 310***c*	*i*P	**P**	**14 05 11.5**	**-0.1**
BRVK			pmax	pmax		
	comp=Z,21nm,1.0s,mb5.1					
BRVK	**Borovoye**	**50.09 310**	*e*P	**P**	**14 05 11.6**	**0.0**
TAPN	**Taplejung**	**50.47 272**	*e*P	**P**	**14 05 16.1**	**+1.2**
	comp=Z,32nm,0.8s,mb5.4					
ZRNK	**Zerenda**	**50.84 310**	*i*P	**P**	**14 05 16.9**	**-0.4**
ZRNK			pmax	pmax		
	comp=Z,31nm,1.3s,mb5.1					
ULHL	**Ulahol**	**50.92 295**	P	**P**	**14 05 19.1**	**+1.0**
	SNR=5.7					
ODAN	**Odare**	**50.99 272**	*e*P	**P**	**14 05 19.1**	**+0.3**
	comp=Z,13nm,0.6s,mb5.0					
TKM2	**Tokmak 2**	**51.04 296**	P	**P**	**14 05 20.1**	**+1.2**
	SNR=18					
JIRN	**Jiri**	**51.40 273**	*e*P	**P**	**14 05 22.5**	**+0.7**
	comp=Z,16nm,0.4s,mb5.3					
GUN	**Gumba**	**51.48 274**	*e*P	**P**	**14 05 23.3**	**+0.8**
	comp=Z,78nm,0.8s,mb5.7					
RAMN	**Ramite**	**51.51 272**	*e*P	**P**	**14 05 22.9**	**+0.2**
	comp=Z,42nm,0.6s,mb5.5					
KBK	**Karagaybulak**	**51.59 296**	P	**P**	**14 05 24.1**	**+1.0**
	SNR=9.6					
USP	**Ospenovka**	**51.60 297**	P	**P**	**14 05 23.9**	**+0.7**
	SNR=18					
KZA	**Kyzart**	**51.66 295**	P	**P**	**14 05 25.6**	**+2.0**
	SNR=9.9					
AAK	**Ala-Archa**	**51.90 296**	P	**P**	**14 05 26.1**	**+0.8**
	SNR=6.6					
AAK	**Ala-Archa**	**51.90 296**	P	**P**	**14 05 26.0**	**+0.7**
	comp=Z,7.5nm,0.4s,mb5.0,baz=109,slow=4.1,SNR=10					
AAK	**Ala-Archa**	**51.90 296***c*	*i*P	**P**	**14 05 25.9**	**+0.6**
AAK			pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.6					
AAK	**Ala-Archa**	**51.90 296**	*e*P	**P**	**14 05 25.8**	**+0.5**
KKN	**Kakani**	**51.99 274**	*e*P	**P**	**14 05 26.6**	**+0.4**
	comp=Z,39nm,1.0s,mb5.3					
PKI	**Pulchoki**	**52.02 274**	*e*P	**P**	**14 05 26.7**	**+0.2**
	comp=Z,11nm,0.4s,mb5.1					
PKIN	**Phulchoki**	**52.02 274**	*e*P	**P**	**14 05 26.6**	**+0.1**
	comp=Z,40nm,1.2s,mb5.2					
UCH	**Uchtor**	**52.07 296**	*e*P	**P**	**14 05 27.4**	**+0.8**
	comp=Z,4.0nm,0.7s,mb4.5					

DMN Daman 52.22 274 *eP* **P 14 05 28.1 +0.2**
comp=Z,11nm,0.5s,mb5.0
GKN Gorkha 52.33 275 *eP* **P 14 05 28.8 0.0**
comp=Z,18nm,0.5s,mb5.2
EKS2 Erkin-Say 52.35 296 P **P 14 05 29.4 +0.7**
SNR=9.6
EKS2 Erkin-Say 52.35 296 *eP* **P 14 05 28.9 +0.2**
comp=Z,9.5nm,0.6s,mb4.9
EKS2 *e* 14 05 40.3
KSH Kashi 52.39 292 P **P 14 05 33.1 +4.0**
KSH pP pP 14 05 42.9 +5.6
KSH sP sP 14 05 46.9 +6.4
KSH PcP PcP 14 06 43.8 +4.1
KSH PP PP 14 07 33.6 +5.9
KSH ScP ScP 14 10 36.6 +1.7
KSH PcS PcS 14 10 40.1 +2.0
KSH S **S 14 12 52.8 -0.4**
KSH sS sS 14 13 12.3 +5.6
KSH SKS 14 15 17.4
KSH pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
KSH pmax pmax
comp=Z,110nm,4.5s
KSH LR LR
comp=N,490nm,12.9s,MS4.8
KSH LR LR
comp=E,290nm,10.1s,MS4.8
KSH LR LR
comp=Z,430nm,13.0s,MS4.7
AML Almayashu 52.65 296 P **P 14 05 32.4 +1.4**
SNR=11
AML Almayashu 52.65 296 *eP* **P 14 05 32.0 +1.0**
comp=Z,13nm,0.9s,mb4.9
SVE Sverdlovsk 53.67 317⇓*eP* **P 14 05 36.8 -1.4**
SVE pmax pmax
comp=Z,28nm,1.1s,mb5.1
SVE MLR MLR
comp=Z,414nm,19.0s,MS4.5
KK31 Karatay Array 54.25 298 *i* P **P 14 05 42.5 -0.2**
KK31 pmax pmax
comp=Z,6.0nm,0.4s,mb4.9
ARU Arti 54.87 317 *d iP* **P 14 05 45.9 -1.1**
ARU *e* 14 07 46.3
ARU S **S 14 13 26.9 +0.6**
ARU SS SS 14 17 07.0 -2.2
ARU pmax pmax
comp=Z,33nm,1.2s,mb5.2
ARU MLR MLR
comp=Z,238nm,17.0s,MS4.3
ARU Arti 54.87 317 *eP* **P 14 05 45.8 -1.2**
RES Resolute Bay 55.13 17 *eP* **P 14 05 48.7 +0.1**
RES pmax pmax
comp=Z,29nm,0.6s,mb5.5
RES Resolute Bay 55.13 17 *eP* **P 14 05 48.7 +0.1**
comp=Z,30nm,0.6s,mb5.5
DDI Dehra Dun 55.77 281 *ex* **P 14 05 52.5 -1.3**
YKA Yellowknife Ar 55.80 34 P **P 14 05 53.6 +0.1**
comp=Z,3.9nm,0.6s,mb4.6,baz=299,slow=6.7,SNR=12
AB31 Akbulak array 57.60 309 P **P 14 06 06.6 0.0**
AB31 pmax pmax
comp=Z,19nm,0.3s,mb5.6
ABKAR Akbulak array 57.60 309 *eP* **P 14 06 06.5 0.0**
comp=Z,31nm,0.4s,mb5.7
AKTK Aktyubinsk 58.07 311 P **P 14 06 09.7 -0.1**
AKTO Aktyubinsk 58.07 311 P **P 14 06 09.7 -0.1**
comp=Z,3.5nm,0.3s,mb4.8,baz=65,slow=7.5,SNR=22
AKTO Aktyubinsk 58.07 311 P **P 14 06 09.7 -0.2**
AKTO pmax pmax
comp=Z,4.0nm,0.3s,mb4.9
APA Apatity 58.84 336⇑*eP* **P 14 06 20.8 +5.9**
APA *e* 14 08 34.0
APA *eS* **S 14 14 22.0 +3.7**
APA pmax pmax
comp=Z,16nm,0.8s,mb5.1
APA MLR MLR
comp=Z,200nm,17.0s,MS4.3
KEV Kevo 59.15 340 *eP* **P 14 06 15.6 -1.5**
KEV pmax pmax
comp=Z,7.0nm,0.4s,mb5.0
KEV Kevo 59.15 340 *eP* **P 14 06 15.6 -1.5**
comp=Z,7.1nm,0.4s,mb5.0
KEV Kevo 59.15 340 *ep* **P 14 06 15.2 -1.9**
comp=Z,10nm,0.4s,mb5.2
ARCES ARCESS Array B 59.69 340 P **P 14 06 19.4 -1.3**
comp=Z,4.1nm,0.3s,mb4.9,baz=43,slow=7.5,SNR=106
ARCES LR LR 14 35 37.5
comp=Z,110nm,19.2s,MS4.0,baz=282,slow=40
ARCES ARCESS Array B 59.69 340 P **P 14 06 19.5 -1.3**
ARCES pmax pmax
comp=Z,4.0nm,0.4s
ARCES MLR MLR
comp=Z,110nm,19.2s
ARE0 ARCESS Array S 59.69 340 *eP* **P 14 06 19.2 -1.5**
KBL Kabul 59.72 290 *eP* **P 14 06 20.9 -0.6**
DAG Danmarks Havn 59.75 356⇑*eP* **P 14 06 19.4 -1.7**
DAG pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
DAG Danmarks Havn 59.75 356⇑*iP* **P 14 06 19.4 -1.7**
comp=Z,4.5nm,0.8s,mb4.5
F03A Seaside 59.83 54 ⇓P **P 14 06 22.1 0.0**
baz=60
EDM Edmonton 61.32 43 *eP* **P 14 06 32.1 -0.1**
D08A Wollman Farm, 61.88 51 ⇑P **P 14 06 35.6 -0.4**
baz=62
JOF Joensuu 62.56 333 *eP* **P 14 06 38.5 -1.9**
JOF pmax pmax
comp=Z,12nm,0.4s,mb5.4
JOF Joensuu 62.56 333 *ep* **P 14 06 38.5 -1.9**
comp=Z,12nm,0.4s,mb5.4
C11A Tepee Creek (N 62.91 49 ⇑P **P 14 06 43.0 0.0**
baz=63
HYB Hyderabad 63.22 269 *eP* **P 14 06 45.0 -0.4**
HYB Hyderabad 63.22 269 *i* P **P 14 06 45.0 -0.4**
WALA Waterton Lakes 63.46 47 *eP* **P 14 06 46.1 -0.4**
B13A Whitefish 63.57 48 ⇑P **P 14 06 47.8 +0.5**
baz=63,SNR=6.2
A14A Double T Ranch 63.77 47 ⇑P **P 14 06 48.8 +0.2**
baz=64
JTMT Jette 64.04 48 *eP* **P 14 06 50.4 0.0**
E12A Beaver Dam Sad 64.13 50 ⇑P **P 14 06 51.4 +0.4**
baz=64,SNR=10
A15A Johnson Ranch, 64.13 46 ⇓P **P 14 06 50.5 -0.5**
baz=64
SUMG Summit 64.19 2 *eP* **P 14 06 50.8 -0.3**
comp=Z,19nm,0.7s,mb5.2
B14A Marquette Ranc 64.22 47 ⇓P **P 14 06 52.1 +0.5**
baz=64
WRA Warramunga Arr 64.27 194 P **P 14 06 50.8 -1.3**
comp=Z,4.3nm,0.8s,mb4.5,baz=14,slow=6.9,SNR=21
WRA Warramunga Arr 64.27 194 P **P 14 06 50.8 -1.3**
WRA pmax pmax
comp=Z,4.0nm,0.8s
C14A Swan Lake 64.32 48 ⇓P **P 14 06 52.0 -0.2**
baz=64
D13A Huson 64.34 49 ⇓P **P 14 06 52.2 -0.2**
baz=64,SNR=5.6
SWMT Swartz Lake 64.34 48 *eP* **P 14 06 52.6 +0.3**
comp=Z,5.6nm,0.9s,mb4.6
B15A Bradely Ranch, 64.62 47 ⇓P **P 14 06 53.8 -0.3**
baz=64
SLMT Seeley Lake 64.77 48 *eP* **P 14 06 54.7 -0.5**
MSO Missoula 64.78 49 *eP* **P 14 06 55.5 +0.3**
comp=Z,2.3nm,0.8s,mb4.3
KAF Kangasniemi 64.78 334 *eP* **P 14 06 53.2 -1.8**
KAF pmax pmax
comp=Z,13nm,0.7s,mb5.1
KAF Kangasniemi 64.78 334 *ep* **P 14 06 53.2 -1.8**
comp=Z,13nm,0.7s,mb5.1,baz=43,slow=6.3
D14A Greenough 64.86 48 ⇑P **P 14 06 55.8 0.0**
baz=65,SNR=5.0
C15A Salmond Ranch, 64.93 47 ⇑P **P 14 06 56.7 +0.5**
baz=65,SNR=7.8
B16A M & M Farms, S 65.01 46 ⇓P **P 14 06 56.6 -0.1**
baz=65
F13A Darby 65.19 50 ⇑P **P 14 06 57.9 -0.1**
baz=65
E14A Clinton 65.28 49 ⇑P **P 14 06 58.4 -0.1**
baz=65
FINES FINESS Array B 65.35 333 P **P 14 06 57.6 -1.1**
comp=Z,25nm,0.6s,mb5.4,baz=43,slow=6.8,SNR=110
FINES LR LR 14 39 27.6
comp=Z,88nm,18.5s,MS4.0,baz=203,slow=40
FINES FINESS Array B 65.35 333 P **P 14 06 57.6 -1.1**
FINES pmax pmax
comp=Z,25nm,0.6s
FINES MLR MLR
comp=Z,88nm,18.5s
C16A Fuhringer Ranc 65.37 47 ⇑P **P 14 06 59.4 +0.4**
baz=65,SNR=12
B17A L&G Farms, Che 65.56 46 ⇓P **P 14 07 00.4 +0.1**
baz=65
A18A Metzger Ranch, 65.67 45 ⇓P **P 14 07 00.9 -0.1**
baz=66
FFC Flin Flon 65.67 37 *i P* **P 14 07 01.2 +0.3**
FFC Flin Flon 65.67 37 *eP* **P 14 07 00.2 -0.7**
comp=Z,6.6nm,0.7s,mb4.8
G13A Cobalt 65.67 50 ⇑P **P 14 07 00.6 -0.5**
baz=66
E15A Deer Lodge 65.74 48 ⇑P **P 14 07 01.6 +0.2**
baz=66
OBN Obninsk 65.82 324 *eP* **P 14 07 01.7 -0.2**
OBN *e* 14 07 31.2
OBN *e* 14 09 25.3
OBN pmax pmax
comp=Z,34nm,1.0s,mb5.3
OBN MLR MLR
comp=Z,100nm,16.0s,MS4.1
OBN Obninsk 65.82 324 *eP* **P 14 07 01.5 -0.3**
comp=Z,20nm,0.8s,mb5.2
WCN Washoe City 65.93 58 ⇑P **P 14 07 03.0 +0.2**
baz=66
D16A Dana Ranch, Ca 65.95 47 ⇑P **P 14 07 03.1 +0.3**
baz=66
H13A Challis 65.98 51 ⇑P **P 14 07 03.3 +0.2**
baz=66
C17A Wharram Farm, 66.00 47 ⇑P **P 14 07 03.0 -0.1**
baz=66
HRY Holter Researc 66.00 48 *eP* **P 14 07 03.6 +0.4**
FCC Fort Churchill 66.06 30 *eP* **P 14 07 02.6 -0.7**
VRHR Novokhopersk 66.16 319 *eP* **P 14 07 02.7 -1.4**
VRHR *e* 14 07 14.2
VRHR pmax pmax
comp=Z,50nm,0.7s,mb5.7
VRHR pmax pmax
comp=N,5.0nm,0.3s
VRHR pmax pmax
comp=E,5.0nm,0.3s
F15A Butte 66.18 49 ⇓P **P 14 07 04.5 +0.2**
baz=66,SNR=5.3
E16A East Helena 66.19 48 ⇓P **P 14 07 04.5 +0.1**
baz=66
LRM Limekiln Ridge 66.21 49 *eP* **P 14 07 04.6 0.0**
EGMT Eagleton 66.28 46 *eP* **P 14 07 04.5 -0.4**
D17A Six Diamond Ra 66.33 47 ⇑P **P 14 07 05.4 +0.1**
baz=66
HLID Hailey 66.51 52 *eP* **P 14 07 06.6 +0.1**
comp=E,1.1nm,0.6s,mb4.1
L11A Cat Creek Ranc 66.59 54 ⇑P **P 14 07 07.2 +0.2**
baz=66
G15A Dillon 66.60 49 ⇑P **P 14 07 07.0 0.0**
baz=66,SNR=5.7
E17A Martinsdale 66.68 48 ⇑P **P 14 07 07.5 0.0**
baz=66
F16A Kennard Place, 66.69 49 ⇑P **P 14 07 08.0 +0.4**
baz=66
J13A Cove Ranch, Pi 66.75 52 ⇑P **P 14 07 08.4 +0.4**
baz=67
BOZ Bozeman (W) 66.77 49 ⇑P **P 14 07 08.6 +0.5**
baz=67,SNR=8.6
BOZ Bozeman (W) 66.77 49 *eP* **P 14 07 08.4 +0.3**
BOZ pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
BOZ Bozeman (W) 66.77 49 *eP* **P 14 07 08.4 +0.3**
comp=Z,4.2nm,0.8s,mb4.5
D18A Linhart Farms, 66.78 46 ⇓P **P 14 07 08.6 +0.5**
baz=67
I14A Mackay 66.83 51 ⇓P **P 14 07 09.3 +0.8**
baz=67
G16A Moss Hill, Enn 66.94 49 ⇓P **P 14 07 09.2 0.0**
baz=67
N10A Dunphy 67.04 55 ⇓P **P 14 07 10.7 +0.8**
baz=67
E18A Harlowton 67.12 47 ⇑P **P 14 07 10.9 +0.6**
baz=67
F17A Fitzpatrick Pl 67.14 48 ⇓P **P 14 07 10.8 +0.4**
baz=67
J14A Carey 67.17 52 ⇓P **P 14 07 11.2 +0.5**
baz=67
VSR Storozhevoye 67.25 320*c iP* **P 14 07 10.9 -0.2**
VSR *e* 14 07 22.1
VSR pmax pmax
comp=N,10.0nm,0.6s
VSR pmax pmax
comp=E,7.0nm,0.6s
VSR pmax pmax
comp=Z,50nm,0.6s,mb5.7
NVAR Mina Array Bea 67.36 58 P **P 14 07 13.0 +1.1**
comp=Z,1.2nm,0.8s,mb4.0,baz=294,slow=7.0,SNR=8.5
VORD Divnogorie 67.36 319 *eP* **P 14 07 10.8 -1.0**
VORD pmax pmax
comp=E,40nm,0.9s
VORD pmax pmax
comp=Z,50nm,0.9s,mb5.5
VORD pmax pmax
comp=N,40nm,0.5s
H16A Russell Place, 67.58 49 ⇓P **P 14 07 13.0 -0.2**
baz=67
J15A Blackfoot 67.74 51 ⇓P **P 14 07 14.8 +0.5**
baz=68
ASAR Alice Springs 67.99 194 P **P 14 07 16.1 +0.2**
comp=N,1.8nm,0.8s,mb4.2,baz=10,slow=6.4,SNR=31
L14A Malta 68.14 52 ⇑P **P 14 07 17.2 +0.4**
baz=68
IMW Indian Meadow 68.26 50 *eP* **P 14 07 19.2 +1.6**
RLMT Red Lodge 68.39 48 ⇑P **P 14 07 17.8 -0.5**
baz=68
R11A Troy Canyon, C 69.08 57 ⇓P **P 14 07 22.8 +0.1**
baz=69
HWUT Hardware Ranch 69.38 52 P **P 14 07 25.0 +0.4**
comp=N,3.4nm,0.9s,mb4.3
GOF Gofitskoye 69.38 313 *eP* **P 14 07 18.8 -5.7**
GOF pmax pmax
comp=Z,61nm,1.0s,mb5.5
L17A Cokeville 69.45 51 ⇑P **P 14 07 25.0 0.0**
baz=69
IZAR Zarasai 69.52 329 *eP* **P 14 07 25.3 +0.2**
IZAR AMB AMB 14 07 25.5
comp=Z,8.5nm,0.9s,mb4.7
DUG Dugway 69.56 54 ⇓P **P 14 07 26.0 +0.3**
baz=69
IDID Didziasalis 69.66 329 *eP* **P 14 07 26.3 +0.3**
IDID AMB AMB 14 07 26.6
comp=Z,11nm,0.9s,mb4.8
BW06 Boulder Array 69.76 50 ⇑P **P 14 07 26.6 -0.2**
baz=70
PDAR Pinedale Array 69.76 50 P **P 14 07 27.1 +0.3**
comp=Z,1.3nm,0.6s,mb4.0,baz=291,slow=1.6,SNR=9.0
IIGN Ignalina 69.83 329 *eP* **P 14 07 27.3 +0.2**
IIGN AMB AMB 14 07 27.8
comp=Z,18nm,0.6s,mb5.1
NACGM Naroch 69.95 328 *e* **P 14 07 25.0 -2.8**
T11A Corn Creek, Al 70.00 57 ⇑P **P 14 07 28.2 -0.3**
baz=70
NB2 NORSAR Subarra 70.05 339 P **P 14 07 27.9 -0.4**
comp=Z,20nm,0.6s,mb5.2,baz=31,slow=6.5
NOA NORSAR Array B 70.05 339 P **P 14 07 28.2 -0.1**
comp=Z,15nm,0.5s,mb5.2,baz=31,slow=6.3,SNR=98
NOA LR LR 14 42 13.9
comp=Z,51nm,18.8s,MS3.8,baz=40,slow=39
NOA NORSAR Array B 70.05 339 P **P 14 07 28.2 -0.1**
NOA pmax pmax
comp=Z,15nm,0.5s
NOA MLR MLR
comp=Z,51nm,18.8s
NOA NORSAR Array B 70.05 339 P **P 14 07 28.2 -0.1**
NOA LR LR 14 42 13.8
Q14A Sevier Lake (B 70.06 55 ⇓P **P 14 07 28.7 -0.1**
baz=70
NAO01 NORSAR Array S 70.30 339 *eP* **P 14 07 29.0 -0.8**
comp=Z,12nm,0.8s,mb4.9
ZEI Tsey 70.42 311 *eP* **P 14 07 30.5 -0.4**
ZEI pmax pmax
comp=Z,32nm,0.9s,mb5.2
TUQ Turquoise Moun 70.72 59 ⇑P **P 14 07 33.0 +0.1**
baz=70
U13A Pakoon Wash 71.30 57 ⇑P **P 14 07 36.9 +0.5**
baz=71
P18A Preston Nutter 71.43 53 ⇓P **P 14 07 37.1 0.0**
baz=71
LDFC Landfair 71.46 59 *eP* **P 14 07 35.9 -1.5**
ULM Lac du Bonnet 71.47 37 LR LR 14 39 44.3
comp=Z,65nm,18.4s,MS3.9,baz=20,slow=36
N20A Spence Gulch, 71.76 51 ⇑P **P 14 07 39.2 +0.1**
baz=72
U14A Mt Trumbull 71.78 57 ⇑P **P 14 07 39.5 +0.2**
baz=72
RSSD Black Hills 71.84 46 *eP* **P 14 07 39.2 -0.3**
RSSD pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
RSSD Black Hills 71.84 46 *eP* **P 14 07 39.2 -0.3**
comp=Z,3.5nm,0.7s,mb4.4
R17A Hanksville Air 71.95 54 ⇓P **P 14 07 40.6 +0.3**
baz=72
AKASG Malin Array Be 72.09 324 P **P 14 07 40.5 -0.3**
comp=Z,17nm,0.5s,mb5.2,baz=38,slow=6.0,SNR=84
AKASG Malin Array Be 72.09 324 P **P 14 07 40.5 -0.4**
AKASG pmax pmax
comp=Z,17nm,0.5s
AKBB Malin Array Si 72.09 324 *eP* **P 14 07 40.1 -0.8**
KIEV Kiev 72.10 324 *eP* **P 14 07 40.4 -0.5**
KIEV pmax pmax
comp=Z,22nm,0.8s,mb5.1
KIEV Kiev 72.10 324 *eP* **P 14 07 40.4 -0.5**
comp=Z,22nm,0.8s,mb5.1
U15A North Rim 72.32 56 ⇓P **P 14 07 42.7 +0.2**
baz=72
V14A Boquillas Ranc 72.34 58 ⇓P **P 14 07 43.4 +0.7**
baz=72,SNR=5.3
Q19A Hogan Spring (72.44 53 ⇓P **P 14 07 43.1 -0.1**
baz=72
S18A Hurst Farm, Bl 72.86 54 ⇑P **P 14 07 45.6 -0.1**
baz=73
AGMN Agassiz Nation 72.90 39 P **P 14 07 44.8 -0.9**
comp=Z,24nm,1.2s,mb5.0
U16A Tuba City 73.21 56 ⇓P **P 14 07 48.2 +0.5**
baz=73
X14A Yava 73.24 58 ⇓P **P 14 07 48.6 +0.6**
baz=73
S19A Harvey Farm, M 73.33 54 ⇓P **P 14 07 48.6 +0.2**
baz=73
V17A Tonalea, Kykot 73.76 56 ⇑P **P 14 07 51.7 +0.7**
baz=74
Y15A Casa Rosa Ranc 73.92 58 ⇑P **P 14 07 51.9 -0.1**
baz=74
X16A Lo Mia Camp, P 74.17 58 ⇓P **P 14 07 53.8 +0.4**
baz=74
U19A Dine' College, 74.26 55 ⇓P **P 14 07 54.3 +0.3**
baz=74
EYMN Ely 75.11 37 *eP* **P 14 07 56.4 -2.3**
comp=Z,3.9nm,0.6s,mb4.5
EYMN *e* 14 08 06.8
ECSD EROS Data Cent 75.89 42 *eP* **P 14 08 00.6 -2.6**
comp=Z,5.8nm,0.9s,mb4.5
BUR08 Bucovina Ar. S 76.13 324 *eP* **P 14 08 04.6 +0.1**
BUR08 *e* 14 08 16.3
BURAR Bucovina Array 76.14 324 ⇑P **P 14 08 04.9 +0.3**
BURAR Bucovina Array 76.14 324 ⇑*iP* **P 14 08 04.9 +0.3**
OJC Ojcow 76.27 329 *eP* **P 14 08 02.9 -2.4**
STHS Stebnicka Huta 76.36 327 *eP* **P 14 08 06.9 +1.1**
STHS pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
STHS Stebnicka Huta 76.36 327 *eP* **P 14 08 06.9 +1.1**
comp=Z,8.9nm,0.8s,mb4.8
STHS Stebnicka Huta 76.36 327 *eP* **P 14 08 06.9 +1.1**
X21A Alamocita Cree 76.37 55 ⇑P **P 14 08 06.3 +0.2**
baz=76
TESR 76.37 323 ⇑P **P 14 08 06.2 +0.3**
TESR 76.37 323 ⇑*iP* **P 14 08 06.2 +0.3**
Y20A Horse Springs, 76.38 56 ⇑P **P 14 08 06.8 +0.6**
baz=76
TLCR 76.40 320 ⇓P **P 14 08 06.7 +0.6**
TLCR 76.40 320 ⇓*iP* **P 14 08 06.7 +0.6**
UZH Uzhgorod 76.56 326 *eP* **P 14 08 08.6 +1.6**
UZH *e* pP 14 08 17.0 +1.5
CRVS Cervenica-Dubn 76.68 327 *eP* **P 14 08 08.1 +0.5**
CRVS Cervenica-Dubn 76.68 327 *eP* **P 14 08 08.1 +0.5**
CFR Carcaliu 76.72 321 ⇓P **P 14 08 07.9 0.0**
CFR Carcaliu 76.72 321 ⇓*iP* **P 14 08 07.9 0.0**
NIE Niedzica 76.72 328 *eP* **P 14 08 08.6 +0.8**
NIE e pP 14 08 15.7 -0.7
NIE Niedzica 76.72 328 P **P 14 08 08.6 +0.8**
NIE *e* pP 14 08 15.7 -0.7
VRI Vrincioaia 76.83 322 ⇑P **P 14 08 09.3 +0.8**
VRI Vrincioaia 76.83 322 ⇑*iP* **P 14 08 09.3 +0.8**
TRPA Tarpa 76.86 326 ⇑*iP* **P 14 08 09.3 +0.7**
PLOR Plostina 76.88 322 ⇑*iP* **P 14 08 10.8 +2.0**
KSP Ksiaz 77.05 331 *eP* **P 14 08 09.7 0.0**
OKC Ostrava-Krasne 77.20 329 *eP* **P 14 08 10.0 -0.5**
OKC MLR MLR
comp=Z,300nm,22.0s,MS4.6
OKC Ostrava-Krasne 77.20 329 *eP* **P 14 08 10.0 -0.5**
OKC AMS AMS 14 46 30.0
comp=Z,300nm,22.0s
W24A Lazy 6 Ranch, 77.25 53 ⇑P **P 14 08 12.0 +0.9**
baz=77
KECS Kecovo 77.41 327 *eP* **P 14 08 11.9 +0.2**
KECS pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
KECS Kecovo 77.41 327 *eP* **P 14 08 11.9 +0.2**
comp=Z,2.8nm,0.8s,mb4.2
KECS Kecovo 77.41 327 *eP* **P 14 08 11.9 +0.2**
UPC Upice 77.43 331 *eP* **P 14 08 12.1 +0.3**
UPC Upice 77.43 331 *eP* **P 14 08 12.1 +0.3**
DPC Dobruska-Polom 77.45 331 *eP* **P 14 08 12.5 +0.6**
DPC MLR MLR
comp=Z,200nm,15.4s,MS4.5
DPC Dobruska-Polom 77.45 331 *eP* **P 14 08 12.5 +0.6**
DPC AMS AMS 14 46 50.0
comp=Z,200nm,15.4s
MLR Muntele Rosu 77.47 322 ⇑P **P 14 08 13.8 +1.7**
MLR Muntele Rosu 77.47 322 ⇑*iP* **P 14 08 13.8 +1.7**
MORC Moravsky Berou 77.48 330 ⇑P **P 14 08 12.3 +0.2**
MORC Moravsky Berou 77.48 330 *eP* **P 14 08 12.1 0.0**
comp=Z,15nm,1.0s,mb4.9
MORC Moravsky Berou 77.48 330 ⇑*iP* **P 14 08 12.3 +0.2**
NAY Al-Naaiem 77.48 298 *eP* **P 14 08 11.9 -0.5**
NAY AMb AMB 14 08 14.0
comp=Z,15nm,1.0s,mb4.9
RDF Al-Radifah 77.50 298 *eP* **P 14 08 12.7 +0.1**
RDF AMb AMB 14 08 14.3
comp=Z,49nm,1.1s,mb5.3
COWI Conover 77.56 37 P **P 14 08 11.0 -1.6**
comp=Z,3.6nm,0.8s,mb4.3
COWI *e* 14 08 25.5
Z22A Elephant Butte 77.68 56 ⇑P **P 14 08 13.7 +0.2**
baz=78
NRDL Niedersach Rie 77.70 335 *eP* **P 14 08 12.2 -1.0**
comp=Z,4.0nm,0.7s,mb4.5
SCHQ Schefferville 77.75 20 P **P 14 08 13.5 -0.1**
comp=Z,3.3nm,0.6s,mb4.5,baz=16,slow=9.6,SNR=5.6
Y23A Lovelace Mesa, 77.76 55 ⇓P **P 14 08 14.7 +0.8**
baz=78
CLL Collm 77.79 333 *eP* **P 14 08 13.4 -0.4**
comp=Z,15nm,0.6s,mb5.1
CLL Collm 77.79 333⇑*iP* **P 14 08 13.6 -0.2**
CLL pmax pmax
comp=Z,21nm,1.0s,mb5.0
CLL MLR MLR
comp=Z,100nm,19.6s,MS4.2
CLL Collm 77.79 333⇑*iP* **P 14 08 13.6 -0.2**
comp=Z,21nm,1.0s,mb5.0
CLL LmV 14 46 00.0
comp=Z,100nm,19.6s
W25A X Bar L Ranch, 77.79 53 ⇓P **P 14 08 14.3 +0.2**
baz=78
BRG Berggiesshubel 77.84 332 *eP* **P 14 08 13.7 -0.4**
comp=Z,7.0nm,0.9s,mb4.6
BRG Berggiesshubel 77.84 332 *eP* **P 14 08 13.8 -0.3**
comp=Z,7.2nm,0.8s,mb4.6
BRG
comp=N,72nm,12.4s
BRG
comp=E,68nm,14.1s
BRG
comp=Z,144nm,12.7s
BRG Berggiesshubel 77.84 332 *eP* **P 14 08 13.8 -0.3**
BRG pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
BRG MLR MLR
comp=N,43nm,12.4s,MS4.1
BRG MLR MLR
comp=E,41nm,14.1s,MS4.1
BRG MLR MLR
comp=Z,86nm,12.7s,MS4.3
VOIR 77.91 323 ⇑P **P 14 08 15.9 +1.3**
VOIR 77.91 323 ⇑*iP* **P 14 08 15.9 +1.3**
PVCC Panska Ves 77.92 332 *eP* **P 14 08 14.5 0.0**
PVCC MLR MLR
comp=Z,200nm,15.1s,MS4.6

PVCC	**Panska Ves**	**77.92**	**332**	*e*P	**P**	**14 08 14.5 0.0**
PVCC				AMS	AMS	14 45 50.0
	comp=Z,200nm,15.1s					
VYHS	**Vyhne**	**78.04**	**328**	*e*P	**P**	**14 08 15.2 0.0**
VYHS				pmax	pmax	
	comp=Z,3.0nm,0.9s,mb4.2					
VYHS	**Vyhne**	**78.04**	**328**	*e*P	**P**	**14 08 15.2 0.0**
	comp=Z,3.1nm,0.9s,mb4.2					
VYHS	**Vyhne**	**78.04**	**328**	*e*P	**P**	**14 08 15.2 0.0**
BR131	**Keskin Array S**	**78.08**	**314**	*e*P	**P**	**14 08 16.0 +0.4**
	comp=Z,4.4nm,0.6s,mb4.6					
BR131				*e*		14 08 27.9
BRTR	**Keskin Array B**	**78.08**	**314**	P	**P**	**14 08 16.1 +0.5**
	comp=Z,4.9nm,0.7s,mb4.5,baz=88,slow=3.4,SNR=18					
BRTR				LR	LR	14 48 59.8
	comp=Z,91nm,18.9s,MS4.1,baz=223,slow=40					
Y24A	**Capitan**	**78.13**	**54**	⇓P	**P**	**14 08 16.6 +0.6**
	baz=78					
CLZ	**Clausthal**	**78.18**	**335**	*e*P	**P**	**14 08 15.4 -0.5**
	comp=Z,13nm,0.8s,mb4.9					
VRAC	**Vranov**	**78.21**	**330**	⇑P	**P**	**14 08 17.4 +1.2**
VRAC	**Vranov**	**78.21**	**330**	⇑*i*P	**P**	**14 08 17.4 +1.2**
PRU	**Pruhonice**	**78.38**	**331**	*e*P	**P**	**14 08 17.9 +0.8**
PRU				*e*		14 08 30.7
PRU				MLR	MLR	
	comp=Z,200nm,21.2s,MS4.4					
PRU	**Pruhonice**	**78.38**	**331**	*e*P	**P**	**14 08 17.9 +0.8**
PRU				*e*PCP	PcP	14 08 30.7 +4.4
PRU				AMS	AMS	14 46 00.0
	comp=Z,200nm,21.2s					
IBBN	**Ibbenburen**	**78.56**	**336**	*e*P	**P**	**14 08 18.1 +0.1**
	comp=Z,18nm,0.8s,mb5.0					
TREC	**Trest**	**78.63**	**330**	*e*P	**P**	**14 08 19.1 +0.7**
TREC				MLR	MLR	
	comp=Z,200nm,12.7s,MS4.6					
TREC	**Trest**	**78.63**	**330**	*e*P	**P**	**14 08 19.1 +0.7**
TREC				AMS	AMS	14 47 30.0
	comp=Z,200nm,12.7s					
TANN	**Tannenbergstha**	**78.73**	**333**	*e*P	**P**	**14 08 18.7 -0.3**
	comp=Z,2.0nm,0.9s,mb4.0					
MOX	**Moxa**	**78.81**	**333**	*e*P	**P**	**14 08 18.8 -0.6**
	comp=Z,6.0nm,0.8s,mb4.6					
UBBA	**Unterbreizbach**	**79.18**	**334**	*e*P	**P**	**14 08 21.2 -0.3**
	comp=Z,5.0nm,0.9s,mb4.4					
BZS	**Buzias**	**79.25**	**325**	⇓P	**P**	**14 08 22.2 +0.3**
BZS	**Buzias**	**79.25**	**325**	⇓*i*P	**P**	**14 08 22.2 +0.3**
ROTZ	**Rotzenmuhle**	**79.37**	**332**	*e*P	**P**	**14 08 21.5 -1.0**
	comp=Z,8.0nm,1.2s,mb4.5					
224A	**Cornudas Mount**	**79.37**	**56**	⇓P	**P**	**14 08 23.0 +0.1**
	baz=79					
KHC	**Kasperske Hory**	**79.44**	**331**	*e*P	**P**	**14 08 23.2 +0.3**
KHC				*e*		14 08 34.6
KHC				MLR	MLR	
	comp=Z,200nm,15.3s,MS4.6					
KHC	**Kasperske Hory**	**79.44**	**331**	*e*P	**P**	**14 08 22.8 -0.1**
	comp=Z,13nm,1.0s,mb4.8					
KHC	**Kasperske Hory**	**79.44**	**331**	*e*P	**P**	**14 08 23.2 +0.3**
KHC				*e*PCP	PcP	14 08 34.6 +3.7
KHC				AMS	AMS	14 46 40.0
	comp=Z,200nm,15.3s					
Z26A	**Caprock**	**79.45**	**54**	⇓P	**P**	**14 08 23.3 +0.1**
	baz=79					
125A	**Gardner Draw,**	**79.48**	**55**	⇑P	**P**	**14 08 23.9 +0.4**
	baz=79					
CONA	**Conrad Observa**	**79.63**	**329**	⇑*i*sP	**P**	**14 08 24.9 +0.9**
	comp=Z,9.1nm,1.1s,mb4.6					
GEC2	**GERESS Array S**	**79.64**	**331**	*e*P	**P**	**14 08 23.6 -0.4**
	comp=Z,4.0nm,0.9s,mb4.3					
WET	**Wettzell**	**79.67**	**332**	*e*P	**P**	**14 08 24.3 +0.1**
	comp=Z,9.0nm,1.0s,mb4.7					
GRF	**Grafenberg Arr**	**79.76**	**333**	*e*P	**P**	**14 08 24.8 +0.2**
	comp=Z,20nm,1.0s,mb5.0					
GRF				*e*pP	pP	14 08 34.0 +0.8
GRF	**Grafenberg Arr**	**79.76**	**333**	*e*P	**P**	**14 08 24.8 +0.2**
GRF				*e**PP	pP	14 08 34.0 +0.8
GRF				pmax	pmax	
	comp=Z,20nm,1.0s,mb5.0					
Z27A	**Tatum**	**79.87**	**54**	⇑P	**P**	**14 08 25.7 +0.2**
	baz=80					
226A	**Malaga, Loving**	**80.24**	**55**	⇓P	**P**	**14 08 27.4 -0.2**
	baz=80					
MEM	**Membach**	**80.58**	**336**	P	**P**	**14 08 28.1 -0.9**
	comp=Z,7.5nm,1.3s,mb4.5					
425A	**Indio Mountain**	**80.61**	**56**	⇑P	**P**	**14 08 29.3 -0.3**
	baz=80					
326A	**Caldwell Ranch**	**80.84**	**55**	⇑P	**P**	**14 08 30.5 -0.3**
	baz=81					
BCLA	**Clavier**	**80.95**	**337**	P	**P**	**14 08 31.0 -0.1**
VTS	**Vitosha**	**80.97**	**322**	⇑P	**P**	**14 08 31.4 +0.1**
VTS	**Vitosha**	**80.97**	**322**	⇑*i*P	**P**	**14 08 31.4 +0.1**
SOKA	**Soboth**	**80.99**	**329**	⇑*i*sP	**P**	**14 08 31.5 +0.3**
	comp=Z,8.9nm,0.8s,mb4.8					
KBA	**Koelnbreinsper**	**81.27**	**330**	⇑*i*sP	**P**	**14 08 33.5 +0.7**
	comp=Z,5.3nm,0.4s,mb4.8					
328A	**Wristen Ranch,**	**81.49**	**55**	⇑P	**P**	**14 08 34.1 -0.2**
	baz=81					
526A	**Mary Lane Ranc**	**81.67**	**56**	⇓P	**P**	**14 08 35.2 0.0**
	baz=82					
MOTA	**Moosalm**	**81.83**	**332**	⇓*i*sP	**P**	**14 08 36.2 +0.5**
	comp=Z,8.1nm,0.7s,mb4.8					
BFO	**Black Forest**	**81.89**	**334**	*e*P	**P**	**14 08 35.5 -0.5**
	comp=Z,7.0nm,0.9s,mb4.6					
527A	**Woodward Ranch**	**81.89**	**56**	⇓P	**P**	**14 08 36.5 +0.1**
	baz=82					
626A	**Big Bend Ranch**	**82.00**	**57**	⇓P	**P**	**14 08 37.1 +0.1**
	baz=82					
MMAI	**Mount Meron Ar**	**82.02**	**308**	P	**P**	**14 08 38.2 +1.2**
	comp=Z,24nm,0.7s,mb5.3,baz=42,slow=6.7,SNR=25					
428A	**Kincaid Ranch,**	**82.03**	**55**	⇑P	**P**	**14 08 36.9 -0.2**
	baz=82					
CDF	**Champ du Feu**	**82.15**	**335**	*e*P	**P**	**14 08 37.4 0.0**
	comp=Z,16nm,1.0s,mb4.6					
CDF	**Champ du Feu**	**82.15**	**335**	*e*P	**P**	**14 08 37.4 0.0**
CDF				pmax	pmax	
	comp=Z,8.0nm,1.0s,mb4.6					
CDF	**Champ du Feu**	**82.15**	**335**	*e*P	**P**	**14 08 37.4 0.0**
	comp=Z,8.2nm,1.0s,mb4.6					
ECH	**Echery**	**82.36**	**335**	*e*P	**P**	**14 08 36.9 -1.6**
ECH				pmax	pmax	
	comp=Z,6.0nm,0.8s,mb4.6					
ECH	**Echery**	**82.36**	**335**	*e*P	**P**	**14 08 36.9 -1.6**
	comp=Z,5.9nm,0.8s,mb4.6					
528A	**Cox Ranch, San**	**82.38**	**55**	⇑P	**P**	**14 08 38.6 -0.3**
	baz=82					
TXAR	**Lajitas Array**	**82.44**	**57**	P	**P**	**14 08 39.7 +0.4**
	comp=Z,2.3nm,0.9s,mb4.1,baz=299,slow=3.8,SNR=21					
TXAR	**Lajitas Array**	**82.44**	**57**	P	**P**	**14 08 39.7 +0.4**
TXAR				pmax	pmax	
	comp=Z,2.0nm,0.9s					
627A	**Terlingua Ranc**	**82.53**	**56**	⇑P	**P**	**14 08 39.2 -0.5**
	baz=82					
HAU	**Haudompre**	**82.80**	**335**	*e*P	**P**	**14 08 40.4 -0.4**
HAU				*e*MLR	MLR	
	comp=Z,143nm,19.0s,MS4.1					
HAU	**Haudompre**	**82.80**	**335**	*e*P	**P**	**14 08 40.4 -0.4**
HAU				LR	LR	
	comp=Z,140nm,19.0s,MS4.3					
628A	**Black Gap, Mar**	**82.80**	**56**	⇑P	**P**	**14 08 41.1 0.0**
	baz=83					
PPT	**Papeete**	**83.48**	**121**	LR	LR	14 40 59.1
	comp=Z,144nm,19.6s,MS4.4,baz=278,slow=32					
FLN	**La Foliniere**	**84.03**	**340**	*e*P	**P**	**14 08 46.9 -0.2**
	comp=Z,16nm,0.4s,mb5.2					
FLN				*e*MLR	MLR	
	comp=Z,109nm,22.2s,MS3.9					
FLN	**La Foliniere**	**84.03**	**340**	*e*P	**P**	**14 08 46.9 -0.2**
FLN				pmax	pmax	
	comp=Z,8.0nm,0.4s,mb5.2					
FLN				MLR	MLR	
	comp=Z,110nm,22.3s,MS4.2					
FLN	**La Foliniere**	**84.03**	**340**	*e*P	**P**	**14 08 46.9 -0.2**
	comp=Z,7.8nm,0.4s,mb5.2					
FLN				LR	LR	
	comp=Z,110nm,22.3s,MS4.2					
CABF	**La Chapelle**	**84.12**	**335**	*e*P	**P**	**14 08 47.7 +0.1**
LOR	**Lormes**	**84.20**	**336**	*e*P	**P**	**14 08 47.9 -0.1**
	comp=Z,20nm,1.0s,mb4.9					
LOR				*e*MLR	MLR	
	comp=Z,166nm,18.5s,MS4.2					
LOR	**Lormes**	**84.20**	**336**	*e*P	**P**	**14 08 47.9 -0.1**
LOR				pmax	pmax	
	comp=Z,10.0nm,1.0s,mb4.9					
LOR				MLR	MLR	
	comp=Z,170nm,18.5s,MS4.5					
LOR	**Lormes**	**84.20**	**336**	*e*P	**P**	**14 08 47.9 -0.1**
	comp=Z,10nm,1.0s,mb4.9					
LOR				LR	LR	
	comp=Z,170nm,18.5s,MS4.5					
GRR	**Gorron**	**84.47**	**340**	*e*P	**P**	**14 08 49.5 +0.1**
	comp=Z,28nm,0.6s,mb5.3					
GRR	**Gorron**	**84.47**	**340**	*e*P	**P**	**14 08 49.5 +0.1**
GRR				pmax	pmax	
	comp=Z,14nm,0.6s,mb5.3					
GRR	**Gorron**	**84.47**	**340**	*e*P	**P**	**14 08 49.5 +0.1**
	comp=Z,14nm,0.6s,mb5.3					
SSF	**Saint Saulge**	**84.49**	**336**	*e*P	**P**	**14 08 49.5 0.0**
	comp=Z,8.1nm,0.6s,mb4.7					
SSF	**Saint Saulge**	**84.49**	**336**	*e*P	**P**	**14 08 49.5 0.0**
SSF				pmax	pmax	
	comp=Z,4.0nm,0.6s,mb4.7					
SSF	**Saint Saulge**	**84.49**	**336**	*e*P	**P**	**14 08 49.5 0.0**
	comp=Z,4.1nm,0.6s,mb4.7					
SMF	**Signal de Mont**	**84.77**	**336**	*e*P	**P**	**14 08 51.0 +0.1**
	comp=Z,27nm,0.9s,mb5.1					
SMF	**Signal de Mont**	**84.77**	**336**	*e*P	**P**	**14 08 51.0 +0.1**
SMF				pmax	pmax	
	comp=Z,13nm,0.9s,mb5.1					
SMF	**Signal de Mont**	**84.77**	**336**	*e*P	**P**	**14 08 51.0 +0.1**
	comp=Z,13nm,0.9s,mb5.1					
AVF	**Avril sur Loir**	**84.78**	**336**	*e*P	**P**	**14 08 51.0 0.0**
	comp=Z,22nm,1.0s,mb5.0					
AVF	**Avril sur Loir**	**84.78**	**336**	*e*P	**P**	**14 08 51.0 0.0**
AVF				pmax	pmax	
	comp=Z,11nm,1.0s,mb4.9					
AVF	**Avril sur Loir**	**84.78**	**336**	*e*P	**P**	**14 08 51.0 0.0**
	comp=Z,11nm,1.0s,mb4.9					
LPL	**La Plagne**	**84.89**	**334**	*e*P	**P**	**14 08 52.1 +0.6**
	comp=Z,11nm,0.7s,mb4.8					
LPL	**La Plagne**	**84.89**	**334**	*e*P	**P**	**14 08 52.1 +0.6**
LPL				pmax	pmax	
	comp=Z,5.0nm,0.7s,mb4.8					
LPL	**La Plagne**	**84.89**	**334**	*e*P	**P**	**14 08 52.1 +0.6**
	comp=Z,5.4nm,0.7s,mb4.8					
LPG	**La Plagne**	**84.90**	**334**	*e*P	**P**	**14 08 52.3 +0.7**
	comp=Z,19nm,0.9s,mb5.0					
LPG	**La Plagne**	**84.90**	**334**	*e*P	**P**	**14 08 52.3 +0.7**
LPG				pmax	pmax	
	comp=Z,10.0nm,0.9s,mb5.0					
LPG	**La Plagne**	**84.90**	**334**	*e*P	**P**	**14 08 52.3 +0.7**
	comp=Z,9.6nm,0.9s,mb4.9					
SGMF	**Saint Gilles**	**85.02**	**341**	*e*P	**P**	**14 08 51.9 -0.2**
	comp=Z,23nm,0.8s,mb5.1					
SGMF	**Saint Gilles**	**85.02**	**341**	*e*P	**P**	**14 08 51.9 -0.2**
SGMF				pmax	pmax	
	comp=Z,12nm,0.8s,mb5.1					
SGMF	**Saint Gilles**	**85.02**	**341**	*e*P	**P**	**14 08 51.9 -0.2**
	comp=Z,12nm,0.8s,mb5.1					
ROSF	**Rostrenen**	**85.11**	**341**	*e*P	**P**	**14 08 53.0 +0.4**
QUIF	**Quistinic**	**85.48**	**341**	*e*P	**P**	**14 08 54.1 -0.3**
TCF	**Toulx Ste Croi**	**85.57**	**337**	*e*P	**P**	**14 08 55.3 +0.4**
MBDF	**Montbardon**	**85.58**	**333**	*e*P	**P**	**14 08 54.8 -0.2**
ORIF	**Oris-en-Rattie**	**85.69**	**334**	*e*P	**P**	**14 08 55.3 -0.3**
	comp=Z,14nm,0.8s,mb5.0					
ORIF				*e*MLR	MLR	
	comp=Z,118nm,19.2s,MS4.0					
ORIF	**Oris-en-Rattie**	**85.69**	**334**	*e*P	**P**	**14 08 55.3 -0.3**
ORIF				pmax	pmax	
	comp=Z,7.0nm,0.8s,mb4.9					
ORIF	**Oris-en-Rattie**	**85.69**	**334**	*e*P	**P**	**14 08 55.3 -0.3**
	comp=Z,7.1nm,0.8s,mb5.0					
MFF	**Saint Martin d**	**85.94**	**338**	*e*P	**P**	**14 08 57.3 +0.6**
	comp=Z,15nm,0.6s,mb5.1					
MFF	**Saint Martin d**	**85.94**	**338**	*e*P	**P**	**14 08 57.3 +0.6**
MFF				pmax	pmax	
	comp=Z,7.0nm,0.6s,mb5.1					
MFF	**Saint Martin d**	**85.94**	**338**	*e*P	**P**	**14 08 57.3 +0.6**
	comp=Z,7.3nm,0.6s,mb5.1					
VIVF	**Saint-Julien-l**	**86.13**	**335**	*e*P	**P**	**14 08 58.3 +0.6**
RJF	**Les Rejaudoux**	**86.67**	**337**	*e*P	**P**	**14 09 00.8 +0.4**
RJF				*e*MLR	MLR	
	comp=Z,98nm,19.2s,MS3.9					
RJF	**Les Rejaudoux**	**86.67**	**337**	*e*P	**P**	**14 09 00.8 +0.4**
RJF				LR	LR	
	comp=Z,100nm,19.3s,MS4.2					
CAF	**Calviac**	**86.86**	**336**	*e*P	**P**	**14 09 01.6 +0.3**
LMR	**La Mourre**	**86.90**	**333**	*e*P	**P**	**14 09 01.3 -0.2**
LASF	**Ste Croix**	**87.09**	**335**	*e*P	**P**	**14 09 02.5 +0.1**
	comp=Z,37nm,1.2s,mb5.2					
SWET	**Sewanee**	**87.69**	**41**	*e*P	**P**	**14 09 04.0 -1.5**
SWET				*e*		14 09 16.5
ETSF	**Etsaut**	**89.47**	**337**	*e*P	**P**	**14 09 14.1 +0.4**
	comp=Z,9.3nm,0.8s,mb4.9					
ETSF	**Etsaut**	**89.47**	**337**	*e*P	**P**	**14 09 14.1 +0.4**
ETSF				pmax	pmax	
	comp=Z,5.0nm,0.8s,mb4.9					
ETSF	**Etsaut**	**89.47**	**337**	*e*P	**P**	**14 09 14.1 +0.4**
	comp=Z,4.7nm,0.8s,mb4.9					
TORD	**Torodi Ar. Bea**	**115.71**	**323**	PKP	PKPdf	14 14 58.9 -0.7
	comp=Z,0.5nm,0.4s,baz=48,slow=1.6,SNR=4.8					
TORD				PP	PP	14 15 55.0 -6.5
	comp=Z,0.8nm,0.6s,baz=34,slow=7.5,SNR=3.7					
CPUP	**Villa Florida**	**153.40**	**58**	PKPbc	PKPbc	14 16 14.2 -0.9
	comp=Z,0.4nm,0.4s,baz=301,slow=5.9,SNR=3.3					

WEL 18 13:58:09.2±0.4, 37°.45S×176°.60E, h201km±3km, ML4.2/20, Error ellipse: s-maj=3.2km s-min=2.7km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPRZ	**Ohinepanea**	**0.40**	**185**	PN	Pn	13 58 36.3	+0.3
OPRZ				SN	Sn	13 58 57.5	+0.5
URZ	**Urewera**	**0.91**	**154**	PN	Pn	13 58 38.1	-0.3
URZ				SN	Sn	13 59 00.1	-1.2
KUZ	**Kuaotunu**	**0.99**	**314**	PN	Pn	13 58 38.4	-0.5
PRRZ	**Plateau Road**	**1.06**	**189**	PN	Pn	13 58 39.7	+0.3
ALRZ	**Allen Road**	**1.14**	**190**	PN	Pn	13 58 40.2	+0.3
MWZ	**Matawai**	**1.15**	**141**	PN	Pn	13 58 39.8	-0.3
MWZ				SN	Sn	13 59 03.8	-0.4
MXZ	**Matakaoa Point**	**1.36**	**96**	PN	Pn	13 58 41.8	+0.1
PUZ	**Puketiti**	**1.46**	**116**	PN	Pn	13 58 42.5	0.0
RAHZ	**Arahi**	**1.52**	**166**	PN	Pn	13 58 43.4	+0.4
RATZ	**Rangitukua**	**1.56**	**204**	PN	Pn	13 58 43.7	+0.3
CNGZ	**Carnagh Statio**	**1.64**	**130**	PN	Pn	13 58 45.1	+1.0
NMHZ	**Naumai**	**1.66**	**174**	PN	Pn	13 58 44.9	+0.6
BKZ	**Black Stump Fm**	**1.72**	**183**	PN	Pn	13 58 44.5	-0.4
HIZ	**Hauiti**	**1.75**	**232**	PN	Pn	13 58 45.1	-0.1
KNZ	**Kokohu**	**1.79**	**152**	PN	Pn	13 58 45.7	+0.2
PRGZ	**Paritu Road**	**1.79**	**146**	PN	Pn	13 58 45.7	+0.2
KRVZ	**Karewarewa**	**1.81**	**204**	PN	Pn	13 58 45.7	-0.1
OTVZ	**Oturere**	**1.87**	**203**	PN	Pn	13 58 46.7	+0.3
WPVZ	**Whakapapa**	**1.94**	**205**	PN	Pn	13 58 47.2	+0.1
TUVZ	**Tukino**	**1.97**	**202**	PN	Pn	13 58 47.3	0.0
FWVZ	**Far West T-bar**	**1.99**	**204**	PN	Pn	13 58 47.6	0.0
MHGZ	**Mahia Peninsul**	**1.99**	**149**	PN	Pn	13 58 47.8	+0.3
WNVZ	**Wahianoa**	**2.04**	**202**	PN	Pn	13 58 47.8	-0.2
MOVZ	**Moawhango**	**2.07**	**199**	PN	Pn	13 58 47.6	-0.8
MTVZ	**Mangateitei**	**2.13**	**204**	PN	Pn	13 58 48.8	-0.3
VRZ	**Vera Road**	**2.22**	**220**	PN	Pn	13 58 50.3	+0.3
CKHZ	**Cape Kidnapper**	**2.24**	**171**	PN	Pn	13 58 50.2	0.0
KAHZ	**Kahuranaki**	**2.36**	**175**	PN	Pn	13 58 51.3	-0.1
PNHZ	**Pukenui**	**2.49**	**187**	PN	Pn	13 58 51.9	-0.9
PXZ	**Pawanui**	**2.59**	**176**	PN	Pn	13 58 53.2	-0.8
WPHZ	**Waipukurau**	**2.62**	**183**	PN	Pn	13 58 53.3	-1.0
WAZ	**Wanganui**	**2.63**	**208**	PN	Pn	13 58 54.0	-0.6
TSZ	**Takapari Road**	**2.66**	**191**	PN	Pn	13 58 53.5	-1.3
PRHZ	**Porangahau**	**2.82**	**179**	PN	Pn	13 58 55.4	-1.2
DVHZ	**Dannevirke**	**2.87**	**187**	PN	Pn	13 58 55.6	-1.6
POWZ	**Post Office Ro**	**3.02**	**192**	PN	Pn	13 58 57.2	-1.7
BFZ	**Birch Farm**	**3.24**	**185**	PN	Pn	13 58 59.7	-2.0
MRZ	**Mangatainoka R**	**3.31**	**194**	PN	Pn	13 59 00.1	-2.3
TIWZ	**Tintock**	**3.38**	**189**	PN	Pn	13 59 01.2	-2.0
OGWZ	**Otaki Gorge**	**3.55**	**198**	PN	Pn	13 59 02.9	-2.4
HOWZ	**Holdsworth Sta**	**3.55**	**193**	PN	Pn	13 59 02.5	-2.8
KIW	**Kapiti Island**	**3.66**	**201**	PN	Pn	13 59 04.0	-2.6
TMWZ	**Te Maipa**	**3.70**	**188**	PN	Pn	13 59 04.7	-2.5
MTW	**Mount Morrison**	**3.81**	**193**	PN	Pn	13 59 05.3	-3.2
CAW	**Cannon Point**	**3.85**	**198**	PN	Pn	13 59 06.0	-3.0
TRWZ	**Traveller**	**4.01**	**190**	PN	Pn	13 59 08.3	-2.7
PAWZ	**Paruwai Farm**	**4.04**	**193**	PN	Pn	13 59 08.0	-3.3
WEL	**Wellington**	**4.09**	**200**	PN	Pn	13 59 09.0	-3.0
MSWZ	**Moikau Station**	**4.10**	**194**	PN	Pn	13 59 08.8	-3.3
SNZO	**South Karori**	**4.13**	**200**	PN	Pn	13 59 09.3	-3.2
BHW	**Baring Head**	**4.18**	**198**	PN	Pn	13 59 09.8	-3.3
PLWZ	**Palliser**	**4.25**	**194**	PN	Pn	13 59 10.6	-3.4
TUWZ	**Tuamarina**	**4.48**	**207**	PN	Pn	13 59 13.3	-3.5
NNZ	**Nelson**	**4.52**	**213**	PN	Pn	13 59 13.5	-3.9
QRZ	**Quartz Range**	**4.63**	**222**	PN	Pn	13 59 15.3	-3.5
BSWZ	**Blackbirch Sta**	**4.76**	**205**	PN	Pn	13 59 17.3	-3.0
THZ	**Tophouse**	**5.17**	**212**	PN	Pn	13 59 21.9	-3.7
KHZ	**Kahutara**	**5.50**	**204**	PN	Pn	13 59 26.1	-3.7
DSZ	**Denniston Nort**	**5.67**	**219**	PN	Pn	13 59 27.6	-4.5
LTZ	**Lake Taylor**	**6.28**	**211**	PN	Pn	13 59 35.3	-4.6
CRLZ	**Canterbury Las**	**6.83**	**205**	PN	Pn	13 59 42.6	-4.5
MQZ	**McQueen's Vall**	**6.94**	**204**	PN	Pn	13 59 43.1	-5.3
WVZ	**Waitaha Valley**	**7.19**	**217**	PN	Pn	13 59 47.4	-4.3
FOZ	**Fox Glacier**	**8.07**	**219**	PN	Pn	13 59 57.1	-6.0
ODZ	**Otahua Downs**	**8.82**	**209**	PN	Pn	14 00 08.4	-4.4
EAZ	**Earnscleugh**	**9.52**	**213**	PN	Pn	14 00 16.7	-5.2

*NEIC **18** 13:59:04.1, 32°.22S×71°.89W, h28km, ML3.2(GUC), After GUC.*

GUC 18 13:59:04.1±0.5, 32°.22S×71°.89W, h28km±2km, MD3.6, ML3.2, 4C-5D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACH	**Jahuel**	**1.20**	**113**	⇑*i*P	Pn	13 59 25.2	+0.2
JACH				*i* S	Sn	13 59 41.3	+1.1
JACH	**Jahuel**	**1.20**	**113**	⇑*i*P	Pn	13 59 25.2	+0.2
JACH				*i* S	Sn	13 59 41.3	+1.1
CMCH	**Combarbala**	**1.29**	**36**	⇓*i*P	Pn	13 59 26.8	+0.6
CMCH				*i* S	Sn	13 59 43.5	+1.0
CMCH	**Combarbala**	**1.29**	**36**	⇓*i*P	Pn	13 59 26.8	+0.6
CMCH				*i* S	Sn	13 59 43.5	+1.0
CMCH				AML	AML	13 59 50.9	
	comp=E,576nm,0.5s						
PEL	**Peldehue**	**1.38**	**133**	⇓*i*P	Pn	13 59 28.3	+0.8
PEL				*i* S	Sn	13 59 46.0	+1.3
PEL				AML	AML	13 59 50.0	
	comp=E,1μm,0.3s						
CLCH	**Cerro Calan**	**1.64**	**136**	*e*P	Pn	13 59 32.1	+1.1
CLCH				*i* S	Sn	13 59 53.6	+2.4
TACH	**Talagante**	**1.64**	**151**	*e*P	Pn	13 59 32.0	+0.9
TACH				*i* S	Sn	13 59 53.4	+2.0
TACH	**Talagante**	**1.64**	**151**	*e*P	Pn	13 59 32.0	+0.9
TACH				*i* S	Sn	13 59 53.4	+2.0
FCH	**Farellones**	**1.75**	**130**	*e*P	Pn	13 59 35.9	+3.3
FCH				*e*S	Sn	13 59 58.9	+5.0
FCH				AML	AML	14 00 02.0	
	comp=E,324nm,0.3s						
PCH	**Pirque**	**1.82**	**141**	*e*P	Pn	13 59 34.9	+1.4
PCH	**Pirque**	**1.82**	**141**	*e*P	Pn	13 59 34.9	+1.4
CHCH	**Chadas Angostu**	**2.01**	**149**	*e*P	Pn	13 59 37.2	+1.2
CHCH	**Chadas Angostu**	**2.01**	**149**	*e*P	Pn	13 59 37.2	+1.2
LMEL	**Las Melosas**	**2.16**	**139**	⇑*i*P	Pn	13 59 40.1	+1.9
LMEL				*i* S	Sn	14 00 07.2	+3.1
LMEL	**Las Melosas**	**2.16**	**139**	⇑*i*P	Pn	13 59 40.1	+1.9
LMEL				*i* S	Sn	14 00 07.2	+3.1
LMEL				AML	AML	14 00 15.4	
	comp=N,186nm,0.2s						
CACH	**El Canelo**	**2.19**	**151**	⇓*i*P	Pn	13 59 40.8	+2.2
CACH				*e*S	Sn	14 00 08.7	+4.1
CACH	**El Canelo**	**2.19**	**151**	⇓*i*P	Pn	13 59 40.8	+2.2
CACH				*e*S	Sn	14 00 08.7	+4.1

*ISK **18** 14:19:17.4, 37°.87N×30°.42E, h13km, MD2.9*
*ISCJB **18** 14:19:18.4±0.5, 37°.87N±0°.02×30°.50E±0°.05, h14km±4km, Error ellipse: s-maj=6.2km s-min=4.0km az=178.9*
*CSEM **18** 14:19:18.0±0.2, 37°.88N×30°.46E, h12km, MD2.9, Error ellipse: s-maj=5.7km s-min=3.9km az=84.0*
*DDA **18** 14:19:18.2, 37°.90N×30°.48E, h7km±1km, Ml3.2*

ISC 18 14:19:18.8±0.5, 37°.87N±0°.03×30°.52E±0°.05, h14km±4km, n27, σ1°.28/41, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISP	**Isparta**	**0.04**	**176**	PG	**Pg**	**14 19 20.1**	**-1.3**
ISP				*e*SG	**Sg**	**14 19 22.9**	**-0.2**
BCK	**Bucak**	**0.41**	**172**	*e*PG	**Pg**	**14 19 26.3**	**-0.7**
BCK				*e*SG	**Sg**	**14 19 33.7**	**+1.2**
BCK	**Bucak**	**0.41**	**172**	*e*Pg	**Pg**	**14 19 26.3**	**-0.7**
BCK				*e*Sg	**Sg**	**14 19 33.7**	**+1.2**
SHUT	**Suhut-Afyon**	**0.69**	**2

comp=E,900nm,0.6s
KUR eS Sn 14 26 13.2 +1.4
KUR A 14 26 24.5
comp=E,650nm,0.7s
KUR A 14 26 24.5
comp=E,200nm,0.7s
SKR Severo-Kuril's 4.63 23 ePN **Pn 14 25 34.2 -0.9**
SKR pmax pmax
comp=N,80nm,0.5s
SKR pmax pmax
comp=Z,90nm,0.5s
SKR Severo-Kuril's 4.63 23 eP **Pn 14 25 34.2 -0.9**
SKR AMB AMB 14 25 37.4
comp=Z,80nm,0.5s
SKR AMB AMB 14 25 37.4
comp=Z,90nm,0.5s
SKR eS **Sn 14 26 25.0 -2.8**
SKR A 14 26 47.1
comp=Z,190nm,0.7s
SKR A 14 26 47.1
comp=Z,80nm,0.7s
YUK Yuzh-Kuril'sk 5.77 248⇑ iPN **Pn 14 25 52.0 +1.2**
YUK i S **Sn 14 26 59.7 +3.7**
YUK pmax pmax
comp=E,60nm,0.3s
YUK pmax pmax
comp=Z,150nm,0.3s
YUK pmax pmax
comp=N,40nm,0.2s
YUK pmax pmax
comp=Z,630nm,1.6s
YUK smax
comp=N,180nm,0.6s
YUK smax
comp=E,340nm,0.6s
YUK smax
comp=N,800nm,1.2s
YUK smax
comp=E,1µm,1.2s
YUK Yuzh-Kuril'sk 5.77 248⇑ iP **Pn 14 25 52.0 +1.2**
YUK AMB AMB 14 25 55.9
comp=E,56nm,0.2s
YUK AMB AMB 14 25 55.9
comp=E,71nm,0.2s
YUK AMB AMB 14 25 55.9
comp=E,186nm,0.5s
YUK i S **Sn 14 26 56.1 +0.1**
YUK A 14 27 04.0
comp=E,391nm,0.4s
YUK A 14 27 04.0
comp=E,34nm,0.4s
YUK A 14 27 25.5
comp=E,1µm,1.5s
YUK A 14 27 25.5
comp=E,970nm,1.5s
YUK AMS AMS 14 28 16.6
comp=E,613nm,17.0s
YUK AMS AMS 14 28 16.6
comp=E,289nm,17.0s
NEM2 Nemuro 2 6.18 243 P **Pn 14 25 55.0 -1.4**
NEM2 eS **Sn 14 27 01.1 -5.0**
JRA Rausu 6.29 249 P **Pn 14 25 59.2 +1.2**
JRA eS **Sn 14 27 10.5 +1.7**
JNK Nakash 6.71 248 P **Pn 14 26 03.8 +0.1**
JNK eS **Sn 14 27 18.4 -0.8**
JAK Akkeshi 7.02 244 P **Pn 14 26 06.5 -1.5**
JAK eS **Sn 14 27 21.1 -5.8**
JTKR Abashiri--Toko 7.07 253 P **Pn 14 26 10.1 +1.4**
PETK Petropavlovsk- 7.24 22 Pn **Pn 14 26 10.8 -0.2**
comp=E,1.4nm,0.3s,baz=166,slow=11,SNR=72
PETK Sn **Sn 14 27 41.3 +9.2**
baz=195,slow=15,SNR=1.9
PETK Petropavlovsk- 7.24 22 PN **Pn 14 26 10.8 -0.2**
PETK 14 27 41.3
PETK pmax pmax
comp=Z,1.0nm,0.3s
YSS Yuzh-Sakhalins 7.25 278 ePN **Pn 14 26 16.0 +4.8**
YSS MLR MLR
comp=E,600nm,16.0s
YSS MLR MLR
comp=Z,600nm,16.0s
YSS Yuzh-Sakhalins 7.25 278 ePn **Pn 14 26 13.6 +2.4**
YSS Yuzh-Sakhalins 7.25 278 eP **Pn 14 26 16.0 +4.8**
YSS erx rx 14 26 34.5
YSS eS **Sn 14 27 34.0 +1.5**
YSS AMS AMS 14 28 44.0
comp=Z,600nm,16.0s
YSS AMS AMS 14 28 44.0
comp=Z,500nm,16.0s
JMP Maruseppu 7.42 254 P **Pn 14 26 15.0 +1.6**
PET Petropavlovsk 7.43 26 ePN **Pn 14 26 12.2 -1.4**
PET pmax pmax
comp=Z,5.0nm,0.5s
PET MLR MLR
comp=Z,100nm,12.0s
PET Petropavlovsk 7.43 26 ePn **Pn 14 26 11.2 -2.4**
JAR Ashorobuto 7.46 248 P **Pn 14 26 14.6 +0.6**
JAR eS **Sn 14 27 35.9 -1.6**
JOB Onbets 7.61 246 P **Pn 14 26 15.5 -0.6**
JOB eS **Sn 14 27 37.9 -3.4**
JKK2 Kamakawa 2 7.88 255 P **Pn 14 26 21.7 +2.0**
ASAJ Asahikawa 7.89 257 Pn **Pn 14 26 22.5 +2.6**
comp=Z,4.5nm,0.3s,baz=179,slow=30,SNR=24
ASAJ Sn **Sn 14 27 47.1 -1.0**
comp=Z,0.9nm,0.3s,baz=324,slow=25,SNR=2.1
ASAJ LR LR 14 29 04.2
comp=Z,147nm,21.4s,baz=185,slow=35
ASAJ Asahikawa 7.89 257 P **Pn 14 26 22.3 +2.4**
UGL Uglegorsk 8.00 293 eP **Pn 14 26 26.0 +4.7**
UGL AMB AMB 14 26 27.5
comp=Z,60nm,0.8s
UGL eL 14 28 50.0
UGL AMS AMS 14 29 20.0
comp=Z,500nm,15.0s
JCH Churui 8.06 245 P **Pn 14 26 21.0 -1.2**
JCH eS **Sn 14 27 47.1 -5.2**
JFR Furan 8.28 250 P **Pn 14 26 26.1 +0.8**
TYV Tymovskoe 8.30 306 eP **Pn 14 26 28.0 +2.6**
TYV AMB AMB 14 26 39.0
comp=Z,48nm,1.0s
TYV AMB AMB 14 26 39.0
comp=Z,35nm,1.0s
TYV AMB AMB 14 26 39.0
comp=Z,66nm,1.0s
ERM Erimo 8.52 242 ePN **Pn 14 26 29.3 +0.8**
ERM Erimo 8.52 242 ePn **Pn 14 26 28.4 0.0**
JEM Erimo 8.52 242 P **Pn 14 26 28.4 -0.1**
JBT2 Biratori 2 8.61 249 P **Pn 14 26 29.9 +0.1**
JBT2 eS **Sn 14 28 04.5 -1.3**
JNBK Urakawa-nobuka 8.62 245 P **Pn 14 26 28.2 -1.7**
JNBK eS **Sn 14 28 01.1 -4.9**
JEW Eniwo 9.17 251 P **Pn 14 26 39.4 +1.9**
JNB Noboribetsu 9.62 250 P **Pn 14 26 43.2 -0.4**
JNB eS **Sn 14 28 27.7 -2.8**
JKB Kayabe 9.91 247 P **Pn 14 26 45.9 -1.7**
JKB eS **Sn 14 28 30.6 -7.2**
JSH Shimam 10.19 253 P **Pn 14 26 52.5 +1.1**
JYM2 Yakumo 2 10.22 250 P **Pn 14 26 51.0 -0.8**
JANG Nango 10.49 239 eS **Sn 14 28 41.4 -11**
JTM Tenmabayashi 10.51 242 P **Pn 14 26 53.1 -2.7**
JTH Tanohata 10.57 236 eS **Sn 14 28 42.0 -12**
JOSM Okushiri--Mats 10.82 251 P **Pn 14 26 59.4 -0.6**
JRG Rokugo 11.64 237 P **Pn 14 27 08.5 -2.8**
JIO Ouri 11.89 232 P **Pn 14 27 10.9 -3.8**
JIO eS **Sn 14 29 13.5 -13**
MJAR Matsushiro Arr 15.00 234 Pn **Pn 14 27 56.5 -0.6**
comp=Z,0.2nm,0.3s,baz=32,slow=12,SNR=5.9
MAJO Matsushiro 15.00 234 eP **Pn 14 27 53.4 -3.6**
MAT Matsushiro 15.00 234 P **Pn 14 27 56.1 -0.9**
MDJ Mudanjiang 16.69 272 P **Pn 14 28 18.6 -0.1**
MDJ pP pP 14 28 36.3 +7.7
MDJ sP sP 14 28 45.5 +13
MDJ S **Sn 14 31 19.9 -3.1**
MDJ PcP PcP 14 33 05.3 -1.5
MDJ ScP ScP 14 36 32.8 -6.4
MDJ PcS PcS 14 36 40.9 -1.7
MDJ ScS ScS 14 40 12.6 -5.8
MDJ pmax pmax
comp=Z,12nm,1.8s
MDJ pmax pmax
comp=Z,84nm,3.8s
MDJ Mudanjiang 16.69 272 ePn **Pn 14 28 17.4 -1.4**
comp=Z,12nm,0.9s
ZEA Zeya 18.14 303 eP **Pn 14 28 40.0 +3.2**
ZEA AMB AMB 14 28 43.0
comp=Z,12nm,1.0s
CN2 Changchun 19.77 272 eP **Pn 14 28 55.9 -0.6**
CN2 epP pP 14 29 13.9 +11
CN2 eS **Sn 14 32 26.6 -11**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,14.0s
CN2 LR LR
comp=E,200nm,14.0s
CN2 LR LR
comp=Z,200nm,15.0s
YAK Yakutsk 20.63 328 eP **P 14 29 01.9 -2.0**
YAK pmax pmax
comp=Z,4.0nm,0.9s
YAK pmax pmax
comp=N,2.0nm,1.3s
YAK pmax pmax
comp=E,3.0nm,1.5s
KSRS Korea Array 20.82 253 P **P 14 29 07.4 +1.2**
comp=E,5.0nm,0.7s,baz=56,slow=10,SNR=31
KSRS sP sP 14 29 17.4 -0.4
comp=E,5.0nm,0.7s,baz=52,slow=11,SNR=9.5
BILL Bilibino 22.65 13⇓ iP **P 14 29 26.9 +1.4**
BILL eS **S 14 33 31.3 -0.5**
BILL SS 14 34 11.2
BILL pmax pmax
comp=Z,3.0nm,0.5s,mb4.0
BILL MLR MLR
comp=Z,100nm,17.0s,MS3.3
HHC Hu-ho-hao-te 30.43 275 eP **P 14 30 34.9 -2.0**
HHC S **S 14 35 25.1 -11**
HHC pmax pmax
comp=Z,18nm,0.6s,mb5.0
HHC pmax pmax
comp=Z,160nm,6.1s
SONM Songino Array 31.54 290 P **P 14 30 46.5 -0.1**
comp=Z,0.6nm,0.6s,mb3.6,baz=44,slow=8.7,SNR=3.3
SONM LR LR 14 44 39.6
comp=Z,95nm,18.2s,MS3.5,baz=57,slow=38
SONM Songino Array 31.54 290 P **P 14 30 46.5 -0.1**
SONM pmax pmax
comp=Z,1.0nm,0.6s
SONM MLR MLR
comp=Z,95nm,18.2s
TLY Talaya 32.41 298 eP **P 14 30 53.4 -0.8**
TLY pmax pmax
comp=Z,2.0nm,0.8s,mb4.0
TLY MLR MLR
comp=Z,114nm,15.0s,MS3.7
COLA College 36.29 38 eP **P 14 31 27.5 -0.2**
COLA pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
COLA College 36.29 38 eP **P 14 31 27.5 -0.1**
comp=Z,4.2nm,1.0s,mb4.3
ILAR Eielson Array 36.70 38 P **P 14 31 30.4 -0.7**
comp=Z,0.4nm,0.6s,mb3.4,baz=255,slow=6.0,SNR=6.8
ILAR pP pP 14 31 38.6 -1.1
comp=Z,0.4nm,0.5s,baz=260,slow=7.9,SNR=4.4
LZH Lanzhou 38.01 272 eP **P 14 31 44.3 +1.7**
LZH pP pP 14 32 05.0 +14
LZH sP sP 14 32 16.0 +21
LZH pmax pmax
comp=Z,14nm,1.0s,mb4.7
LZH pmax pmax
comp=Z,67nm,5.1s
LZH LR LR
comp=N,180nm,8.6s
LZH LR LR
comp=Z,360nm,9.6s
GTA Gaotai 39.13 279⇓ eP **P 14 31 53.8 +1.9**
GTA pP pP 14 32 14.3 +14
GTA sP sP 14 32 24.4 +20
GTA PP PP 14 33 29.8 +8.0
GTA S **S 14 37 47.9 -1.8**
GTA sS sS 14 38 23.9 +20
GTA pmax pmax
comp=Z,5.0nm,1.5s,mb4.0
GTA pmax pmax
comp=Z,69nm,5.7s
GTA LR LR
comp=N,83nm,15.3s,MS3.9
GTA LR LR
comp=E,120nm,16.2s,MS3.9
GTA LR LR
comp=Z,81nm,15.3s,MS3.7
CD2 Chengdu 40.97 266 P **P 14 32 05.1 -2.2**
CD2 pP pP 14 32 25.8 +10
CD2 sP sP 14 32 36.3 +17
CD2 PP PP 14 33 43.6 +1.7
CD2 S **S 14 38 08.4 -9.0**
CD2 sS sS 14 38 44.3 +13
CD2 SS SS 14 41 10.0 -10
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.7
CD2 pmax pmax
comp=Z,170nm,5.7s
CD2 LR LR
comp=N,420nm,5.2s
CD2 LR LR
comp=Z,240nm,7.7s
GYA Guiyang 41.77 258 P **P 14 32 12.0 -1.9**
GYA pP pP 14 32 33.6 +11
GYA sP sP 14 32 44.3 +18
GYA PP PP 14 33 52.8 +2.2
GYA PcP PcP 14 34 09.8 0.0
GYA ScP ScP 14 37 50.9 -6.9
GYA PcS PcS 14 37 59.5 -1.9
GYA S **S 14 38 20.0 -9.3**
GYA sS sS 14 38 55.4 +12
GYA SS SS 14 41 21.3 -14
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
GYA pmax pmax
comp=Z,80nm,4.7s
GYA LR LR
comp=N,420nm,17.2s,MS4.5
GYA LR LR
comp=E,310nm,18.6s,MS4.5
GYA LR LR
comp=Z,440nm,17.0s,MS4.4
ZALV Zalesovo Beam 42.87 306 P **P 14 32 21.0 -1.5**
comp=Z,1.3nm,0.6s,mb3.8,baz=56,slow=9.1,SNR=5.8
ZALV PcP PcP 14 34 12.8 -0.2
comp=Z,1.0nm,0.6s,baz=83,slow=3.6,SNR=4.2
ZALV LR LR 14 51 31.8
comp=Z,102nm,18.7s,MS3.8,baz=67,slow=38
ZALV Zalesovo Beam 42.87 306 P **P 14 32 21.0 -1.6**
ZALV 14 34 12.8
ZALV pmax pmax
comp=Z,1.0nm,0.6s,mb3.7
ZALV MLR MLR
comp=Z,102nm,18.7s,MS3.8
ZALV Zalesovo Beam 42.87 306 P **P 14 32 21.0 -1.5**
ZALV PcP PcP 14 34 12.8 -0.2
ZALV LR LR 14 51 31.8
WMQ Urumqi 45.14 292 P **P 14 32 40.6 -0.2**
WMQ pP pP 14 33 01.1 +12
WMQ sP sP 14 33 11.6 +18
WMQ PP PP 14 34 27.6 +1.2
WMQ pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
WMQ pmax pmax
comp=Z,130nm,5.0s
WMQ LR LR
comp=N,47nm,20.4s
WMQ LR LR
comp=Z,51nm,19.2s,MS3.5
KMI Kunming 45.30 260 P **P 14 32 42.8 +0.4**
KMI pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
DLBC Dease Lake 45.72 46 P **P 14 32 46.5 +1.3**
comp=Z,2.2nm,0.6s,mb4.3,baz=340,slow=14,SNR=3.7
MK31 Makanchi Array 47.18 298 eP **P 14 32 55.7 -1.1**
MKAR Makanchi Array 47.18 298 P **P 14 32 56.3 -0.5**
comp=Z,3.6nm,0.8s,mb4.4,baz=64,slow=8.2,SNR=24
MKAR PcP PcP 14 34 28.7 +0.7
comp=Z,0.7nm,0.6s,baz=27,slow=1.6,SNR=3.1
MKAR LR LR 14 54 05.0
comp=Z,85nm,18.6s,MS3.7,baz=213,slow=38
MKAR Makanchi Array 47.18 298 P **P 14 32 56.3 -0.5**
MKAR 14 34 28.7
MKAR pmax pmax
comp=Z,4.0nm,0.8s
MKAR MLR MLR
comp=Z,85nm,18.6s
KURK Kurchatov 47.62 304c iP **P 14 32 58.9 -1.3**
KURK pmax pmax
comp=Z,9.0nm,1.2s,mb4.7
KURK Kurchatov 47.62 304 eP **P 14 32 58.7 -1.5**
comp=Z,5.6nm,0.7s,mb4.7
LSA Lhasa 50.40 273 P **P 14 33 22.7 +0.9**
LSA pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
LSA Lhasa 50.40 273 P **P 14 33 22.7 +0.9**
comp=Z,6.0nm,0.6s,mb4.8
YKA Yellowknife Ar 51.09 37 P **P 14 33 26.9 +0.3**
comp=Z,1.7nm,0.6s,mb4.2,baz=299,slow=8.0,SNR=4.8
YKA Yellowknife Ar 51.09 37 P **P 14 33 26.9 +0.4**
YKA pmax pmax
comp=Z,2.0nm,0.6s
BVAR Borovoye Array 51.13 310 P **P 14 33 26.3 -0.7**
comp=Z,2.0nm,0.4s,mb4.4,baz=52,slow=9.7,SNR=13
BVAR Borovoye Array 51.13 310 P **P 14 33 26.3 -0.7**
BVAR pmax pmax
comp=Z,2.0nm,0.4s
BRVK Borovoye 51.17 310 eP **P 14 33 26.4 -0.9**
BRVK pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
BRVK Borovoye 51.17 310 eP **P 14 33 26.4 -0.9**
comp=Z,3.4nm,0.6s,mb4.5
CHTO Chiang Mai 52.16 257 eP **P 14 33 35.4 +0.3**
CHTO pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
CHTO Chiang Mai 52.16 257 eP **P 14 33 35.4 +0.3**
comp=Z,6.2nm,0.8s,mb4.6
CMAR Chiang Mai Arr 52.41 257 P **P 14 33 38.8 +1.8**
comp=Z,2.6nm,0.7s,mb4.3,baz=36,slow=7.4,SNR=18
CMAR sP sP 14 33 49.3 -0.1
comp=Z,1.2nm,0.5s,baz=38,slow=7.6,SNR=2.6
CMAR Chiang Mai Arr 52.41 257 P **P 14 33 38.8 +1.8**
CMAR *SP sP 14 33 49.3 0.0
CMAR pmax pmax
comp=Z,3.0nm,0.7s
AAK Ala-Archa 54.07 297 P **P 14 33 49.5 +0.6**
comp=Z,2.3nm,0.4s,mb4.5,baz=112,slow=15,SNR=6.2
AAK Ala-Archa 54.07 297ceP **P 14 33 49.1 +0.2**
AAK pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
TAPN Taplejung 54.23 274 eP **P 14 33 52.5 +2.2**
comp=Z,14nm,0.6s,mb5.1
ODAN Odare 54.76 273 eP **P 14 33 54.9 +0.8**
comp=Z,6.7nm,0.4s,mb5.0
KSH Kashi 54.87 293 P **P 14 33 59.8 +5.0**
KSH pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
KSH pmax pmax
comp=Z,75nm,5.7s
KSH Kashi 54.87 293 P **P 14 33 59.3 +4.5**
KSH pP pP 14 34 23.8 +20
KSH sP sP 14 34 34.8 +28
KSH PcP PcP 14 34 58.8 +2.2
KSH PP PP 14 36 06.3 +8.8
KSH ScP ScP 14 38 47.3 -5.6
KSH PcS PcS 14 38 57.9 +1.5
KSH S **S 14 41 34.6 +0.6**
KSH ScS ScS 14 43 36.8 -4.9
KSH SS SS 14 45 20.8 +3.7
KSH pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
KSH pmax pmax
comp=Z,75nm,5.7s
KSH LR LR
comp=N,320nm,10.0s
KSH LR LR
comp=Z,160nm,5.5s
JIRN Jiri 55.08 275 eP **P 14 33 58.3 +1.8**
comp=Z,34nm,0.7s,mb5.5
RAMN Ramite 55.25 274 eP **P 14 33 57.9 +0.2**
comp=Z,63nm,0.8s
ARU Arti 55.30 318c iP **P 14 33 56.3 -1.3**
ARU e 14 35 59.1
ARU S **S 14 41 37.9 -1.4**
ARU SS SS 14 45 15.9 -7.3
ARU pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
ARU Arti 55.30 318 eP **P 14 33 55.9 -1.7**
comp=Z,4.0nm,0.5s,mb4.7
KKN Kakani 55.63 276 eP **P 14 34 01.6 +1.2**
comp=Z,31nm,0.6s,mb5.5
PKI Pulchoki 55.68 275 eP **P 14 34 02.0 +1.3**
comp=Z,14nm,0.5s,mb5.2
PKIN Phulchoki 55.68 275 eP **P 14 34 01.9 +1.1**
comp=Z,20nm,0.5s,mb5.4
DMN Daman 55.86 276 eP **P 14 34 03.0 +0.9**
comp=Z,26nm,0.7s,mb5.4
GKN Gorkha 55.94 276 eP **P 14 34 04.0 +1.4**
comp=Z,25nm,0.5s,mb5.5
KEV Kevo 57.66 341 eP **P 14 34 13.0 -1.2**
KEV Kevo 57.66 341 ep **P 14 34 13.0 -1.2**
ARCES ARCESS Array B 58.16 341 P **P 14 34 17.4 -0.3**
comp=Z,2.1nm,0.9s,mb4.2,baz=25,slow=6.7,SNR=7.2
ARCES ARCESS Array B 58.16 341 P **P 14 34 17.4 -0.3**
ARCES pmax pmax
comp=Z,2.0nm,0.9s
ABKAR Akbulak array 58.70 310 eP **P 14 34 20.8 -1.0**
comp=Z,2.5nm,0.4s,mb4.6
SLMT Seeley Lake 59.84 52 P **P 14 34 28.2 -1.6**
SUMG Summit 60.98 4 eP **P 14 34 37.0 -0.1**
comp=Z,9.2nm,0.8s,mb5.0
JOF Joensuu 61.65 334 eP **P 14 34 40.9 -0.8**
JOF pmax pmax
comp=Z,1.0nm,0.3s,mb4.4
JOF Joensuu 61.65 334 ep **P 14 34 40.9 -0.8**
comp=Z,1.3nm,0.3s,mb4.5
KBL Kabul 62.28 292 eP **P 14 34 45.4 -1.0**
KBL pmax pmax
comp=Z,7.0nm,0.7s,mb4.9
KBL Kabul 62.28 292 eP **P 14 34 45.4 -1.0**
comp=Z,6.8nm,0.7s,mb4.9
NVAR Mina Array Bea 62.47 62 P **P 14 34 48.2 +0.6**
comp=Z,0.5nm,0.6s,mb3.8,baz=291,slow=8.4,SNR=4.1
KAF Kangasniemi 63.76 335 eP **P 14 34 54.2 -1.6**
KAF pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
KAF Kangasniemi 63.76 335 ep **P 14 34 54.2 -1.6**
comp=Z,2.7nm,0.5s,mb4.5
FINES FINESS Array B 64.35 335 P **P 14 34 59.2 -0.5**
comp=Z,4.7nm,0.5s,mb4.8,baz=34,slow=7.4,SNR=40
FINES FINESS Array B 64.35 335 P **P 14 34 59.2 -0.5**
FINES pmax pmax
comp=Z,5.0nm,0.5s
FINES FINESS Array B 64.35 335 P **P 14 34 59.2 -0.5**
PDAR Pinedale Array 64.83 54 P **P 14 35 03.0 -0.2**
comp=Z,0.7nm,0.7s,mb3.8,baz=345,slow=1.7,SNR=6.4
PDAR sP sP 14 35 16.1 +0.5
comp=Z,1.4nm,0.8s,baz=338,slow=3.2,SNR=6.4
WRA Warramunga Arr 68.28 199 P **P 14 35 25.1 -0.1**
comp=Z,1.3nm,0.9s,mb4.0,baz=23,slow=6.6,SNR=5.8
WRA Warramunga Arr 68.28 199 P **P 14 35 25.1 -0.1**
WRA pmax pmax
comp=Z,1.0nm,0.9s
NB2 NORSAR Subarra 68.54 341 P **P 14 35 26.1 -0.4**
comp=Z,4.7nm,0.7s,mb4.5,baz=28,slow=6.5
NOA NORSAR Array B 68.54 341 P **P 14 35 26.4 -0.1**
comp=Z,3.1nm,0.5s,mb4.5,baz=28,slow=6.3,SNR=26
NOA NORSAR Array B 68.54 341 P **P 14 35 26.4 -0.1**
NOA pmax pmax
comp=Z,3.0nm,0.5s
AKASG Malin Array Be 71.85 326 P **P 14 35 46.4 -0.6**
comp=Z,6.3nm,0.5s,mb4.8,baz=33,slow=6.1,SNR=29
AKASG Malin Array Be 71.85 326 P **P 14 35 46.4 -0.5**
AKASG pmax pmax
comp=Z,6.0nm,0.5s
AKBB Malin Array Si 71.85 326 eP **P 14 35 45.9 -1.0**
KIEV Kiev 71.86 326 eP **P 14 35 46.1 -0.9**
KIEV pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
KIEV Kiev 71.86 326 eP **P 14 35 46.1 -0.9**
comp=Z,8.9nm,0.7s,mb4.8
ASAR Alice Springs 71.97 199 P **P 14 35 48.1 +0.3**
comp=Z,0.8nm,0.8s,mb3.7,baz=12,slow=5.3,SNR=15
ASAR pP pP 14 35 58.0 +1.0
comp=Z,0.6nm,0.6s,baz=11,slow=5.0,SNR=4.1
ASAR Alice Springs 71.97 199 P **P 14 35 48.2 +0.4**
ASAR *PP pP 14 35 58.0 +1.0
ASAR pmax pmax
comp=Z,1.0nm,0.8s

BUR08	Bucovina Ar. S	75.88 327	eP	P	14 36 10.5	-0.1
BURAR	Bucovina Array	75.89 327	⇓P	P	14 36 10.9	+0.2
BURAR	Bucovina Array	75.89 327	⇓iP	P	14 36 10.9	+0.2
TESR		76.25 325	⇑P	P	14 36 12.7	0.0
TESR		76.25 325	⇑iP	P	14 36 12.7	0.0
TRPA	Tarpa	76.45 329	⇑iP	P	14 36 14.3	+0.5
NRDL	Niedersach Rie	76.50 338	eP	P	14 36 13.9	-0.1
	comp=Z,7.0nm,0.9s,mb4.6					
DPC	Dobruska-Polom	76.64 333	eP	P	14 36 16.2	+1.4
DPC	Dobruska-Polom	76.64 333	eP	P	14 36 16.2	+1.4
VRI	Vrincioaia	76.75 325	⇑iP	pP	14 36 26.9	+2.1
MORC	Moravsky Berou	76.75 332	⇓P	P	14 36 16.2	+0.7
MORC	Moravsky Berou	76.75 332	⇓iP	P	14 36 16.2	+0.7
CLL	Collm	76.78 336	eP	P	14 36 15.3	-0.3
	comp=Z,7.0nm,0.6s,mb4.8					
CLL	Collm	76.78 336	i P	P	14 36 15.6	0.0
CLL			pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8					
CLL	Collm	76.78 336	i P	P	14 36 15.6	0.0
	comp=Z,7.0nm,0.6s,mb4.8					
BRG	Berggiesshubel	76.89 335	eP	P	14 36 22.2	+6.0
	comp=Z,1.8nm,0.6s,mb4.2					
BRG	Berggiesshubel	76.89 335	eP	P	14 36 22.2	+6.0
BRG			pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9					
CLZ	Clausthal	77.02 337	eP	P	14 36 16.6	-0.4
	comp=Z,6.0nm,0.8s,mb4.6					
MLR	Muntele Rosu	77.37 325	⇓P	P	14 36 20.6	+1.6
MLR	Muntele Rosu	77.37 325	⇓iP	P	14 36 20.6	+1.6
TXAR	Lajitas Array	77.54 61	P	P	14 36 20.2	-0.1
	comp=Z,1.5nm,0.7s,mb4.0,baz=295,slow=4.9,SNR=15					
TXAR			sP	sP	14 36 32.6	-0.3
	comp=Z,1.5nm,0.6s,baz=303,slow=3.8,SNR=7.0					
TXAR	Lajitas Array	77.54 61	P	P	14 36 20.2	0.0
TXAR			*SP	sP	14 36 32.6	-0.3
TXAR			pmax	pmax		
	comp=Z,2.0nm,0.7s					
VOIR		77.77 326	⇑P	P	14 36 22.3	+1.1
VOIR		77.77 326	⇑iP	P	14 36 22.3	+1.1
KHC	Kasperske Hory	78.55 334	eP	P	14 36 25.4	-0.1
	comp=Z,4.1nm,0.9s,mb4.4					
KHC	Kasperske Hory	78.55 334	eP	P	14 36 26.0	+0.5
BRTR	Keskin Array B	78.68 317	P	P	14 36 27.2	+0.8
	comp=Z,1.1nm,0.9s,mb3.8,baz=35,slow=4.5,SNR=4.0					
BRTR	Keskin Array B	78.68 317	P	P	14 36 27.3	+0.9
BRTR			pmax	pmax		
	comp=Z,1.0nm,0.9s					
GRF	Grafenberg Arr	78.73 336	eP	P	14 36 26.2	-0.3
	comp=Z,12nm,0.6s,mb5.0					
WET	Wettzell	78.75 335	eP	P	14 36 27.6	+1.0
	comp=Z,4.0nm,0.9s,mb4.3					
KBD	Kabd	79.16 301	eP	P	14 36 30.3	+1.1
KBD			AMb	AMB	14 36 31.2	
	comp=Z,18nm,0.8s,mb5.0					
NAY	Al-Naaiem	79.38 301	eP	P	14 36 31.4	+1.0
NAY			AMb	AMB	14 36 32.9	
	comp=Z,8.7nm,0.9s,mb4.7					
RDF	Al-Radifah	79.43 301	eP	P	14 36 32.4	+1.7
RDF			AMb	AMB	14 36 34.1	
	comp=Z,18nm,0.9s,mb5.0					
VTS	Vitosha	80.87 325	⇓P	P	14 36 39.1	+0.8
VTS	Vitosha	80.87 325	⇓iP	P	14 36 39.1	+0.8
MMAI	Mount Meron Ar	83.09 312	P	P	14 36 51.8	+1.7
	comp=Z,1.7nm,0.4s,mb4.4,baz=38,slow=4.2,SNR=4.7					
MMAI			sP	sP	14 37 02.0	-0.7
	comp=Z,1.0nm,0.4s,baz=52,slow=5.6,SNR=2.6					
CPUP	Villa Florida	148.51 61	PKPbc	PKPbc	14 44 10.6	-0.4
	comp=Z,1.0nm,0.5s,baz=236,slow=2.9,SNR=5.9					

*DJA **18** 14:24:51, 1.°81N×121.°32E, h57km, MLv4.5/5*
*ISCJB **18** 14:25:02.8±0.4, 0.°30N±0.°05×122.°08E±0.°05, h197km±4km, mb3.9/12, Error ellipse: s-maj=8.6km s-min=7.7km az=152.4*
*NEIC **18** 14:25:03.9±1.7, 0.°21N×122.°01E, h192km±18km, mb4.2/7, Error ellipse: s-maj=29.8km s-min=8.0km az=62.0*
*IDC **18** 14:25:05.0±5.2, 0.°35N×122.°19E, h200km±51km, mb3.7/7, mb1 3.8/7, mb1mx3.4/22, mbtmp3.7/7, Error ellipse: s-maj=66.0km s-min=11.7km az=61.0*
ISC 18 14:25:04.0±0.4, 0.°28N±0.°05×122.°08E±0.°05, h191km±4km, n30, σ1°06/30, mb4.0/12, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	Marisa	0.24	324	P	Pn	14 25 28.4	-0.9
APSI	Ampana	1.26	200	S	Sn	14 25 54.2	-4.5
LUWI	Luwuk	1.48	152	P	Pn	14 25 38.1	+1.4
LUWI				S	Sn	14 26 02.4	+0.2
KMSI	Cibinong	1.92	81	S	Sn	14 26 11.1	+1.5
PCI	Palu	2.54	242	P	Pn	14 25 47.6	-0.1
PCI				S	Sn	14 26 20.5	-1.3
MNI	Manado	2.99	67	S	Sn	14 26 30.2	-1.0
TTSI	Tana Toraja	4.00	214	P	Pn	14 26 06.1	+0.6
	976nm33nm,1.0s						
KDI	Kendari	4.24	173	P	Pn	14 26 09.7	+1.1
	0.1nm23nm,1.3s						
BNSI	Bone	5.05	203	P	Pn	14 26 19.5	+0.6
	0.1nm32nm,0.8s						
TNTI	Ternate	5.30	85	P	Pn	14 26 20.8	-1.3
	0.4nm2μm105nm,0.9s						
KAPI	Kappang	5.75	204	ePn	Pn	14 26 26.0	-1.9
BKSI	Bulukumba	5.90	199	P	Pn	14 26 33.0	+3.1
MYLDM	Lahad Datu	6.04	324	P	Pn	14 26 36.6	+4.9
KKM	Kota Kinabalu	8.19	314	ePn	Pn	14 26 59.8	0.0
	29nm,0.8s						
KKM	Kota Kinabalu	8.19	314	P	Pn	14 27 00.2	+0.4
KAKA	Kakadu	16.50	142	eP	Pn	14 28 43.8	-1.0
	15nm,0.6s						
MBWA	Marble Bar	21.43	186	eP	P	14 29 35.7	-1.5
	2.9nm,0.5s,mb3.9						
WRAB	Tennant Creek	23.41	150	eP	P	14 29 56.1	+0.1
	6.1nm,0.6s,mb4.2						
WRA	Warramunga Arr	23.41	150	P	P	14 29 55.7	-0.3
	7.8nm,0.7s,mb4.3,baz=326,slow=11,SNR=70						
ASAR	Alice Springs	26.43	155	P	P	14 30 23.4	+0.2
	2.3nm,0.6s,mb4.0,baz=344,slow=13,SNR=68						
ASAR				pP	pP	14 31 02.6	+0.8
	0.8nm,0.8s,baz=332,slow=7.5,SNR=4.5						
ASAR				PcP	PcP	14 33 42.8	-0.8
	0.7nm,0.3s,baz=348,slow=2.1,SNR=23						
CMAR	Chiang Mai Arr	29.03	310	P	P	14 30 48.0	+1.6
	0.4nm,0.3s,mb3.6,baz=132,slow=6.8,SNR=5.3						
CHTO	Chiang Mai	29.24	310	P	P	14 30 50.0	+1.7
	1.4nm,0.6s,mb3.9						
STKA	Stephens Creek	36.93	152	P	P	14 31 55.4	+0.7
	8.8nm,0.8s,mb4.5,baz=321,slow=7.2,SNR=12						
ULN	Ulaanbaatar	49.16	347	eP	P	14 33 32.3	-0.1
	3.1nm,0.8s,mb4.0						
SONM	Songino Array	49.29	346	P	P	14 33 33.6	+0.2
	2.7nm,0.8s,mb3.9,baz=165,slow=9.3,SNR=11						
MKAR	Makanchi Array	57.90	329	P	P	14 34 36.1	+0.1
	2.0nm,0.5s,mb4.2,baz=128,slow=9.5,SNR=9.5						
ZALV	Zalesovo Beam	61.68	336	P	P	14 35 00.8	-0.8
	0.5nm,0.4s,mb3.7,baz=123,slow=7.3,SNR=3.7						
KURK	Kurchatov	62.28	330	eP	P	14 35 04.5	-1.1
	3.2nm,0.9s,mb4.2						
TORD	Torodi Ar. Bea	119.45	285	PKP	PKPdf	14 43 30.5	-1.3
	0.6nm,0.7s,baz=95,slow=1.7,SNR=3.2						
LPAZ	La Paz	161.17	148	PKPab	PKPab	14 45 29.3	+2.5
	0.7nm,0.4s,baz=225,slow=1.0,SNR=3.4						

*ISCJB **18** 14:28:21.8±1.9, 46.°6N±0.°1×153.°2E±0.°2, h43km±16km, mb3.7/9, Error ellipse: s-maj=27.1km s-min=12.9km az=138.2*
*MOS **18** 14:28:22.4±1.1, 46.°61N×153.°15E, h50km, mb4.1/6, Error ellipse: s-maj=25.0km s-min=13.9km az=71.5*
*NEIC **18** 14:28:22.6±0.7, 46.°55N×153.°13E, h35km, mb4.0/2, Error ellipse: s-maj=20.1km s-min=13.5km az=119.0*
*IDC **18** 14:28:23.5±3.3, 46.°52N×153.°32E, h43km±30km, mb3.4/8, mb1 3.6/10, mb1mx3.4/26, mbtmp3.4/10, ML3.2/2, Error ellipse: s-maj=27.6km s-min=19.2km az=114.0*
ISC 18 14:28:24.4±1.6, 46.°6N±0.°1×153.°3E±0.°2, h49km±14km, n20, σ0°89/20, mb3.7/9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	4.53	24	ePN	Pn	14 29 31.0	+0.7
SKR				e		14 30 20.5	
PETK	Petropavlovsk-	7.14	22	P	Pn	14 30 04.7	-1.4
	0.2nm,0.3s,baz=167,slow=9.3,SNR=5.8						
ASAJ	Asahikawa	7.90	256	P	Pn	14 30 16.8	+0.3
	0.6nm,0.3s,baz=353,slow=33,SNR=4.1						

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ASAJ	Asahikawa	7.90	256	PN	Pn	14 30 16.8	+0.3
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS	Korea Array	20.83	253	P	P	14 33 02.6	+0.9
	comp=Z,0.8nm,0.8s,baz=251,slow=39,SNR=4.6						
COLA	College	36.21	38	eP	P	14 35 22.5	+0.5
COLA				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
COLA	College	36.21	38	eP	P	14 35 22.5	+0.5
	comp=Z,1.3nm,0.6s,mb4.0						
MKAR	Makanchi Array	47.10	298	P	P	14 36 51.3	+0.2
	comp=Z,0.6nm,0.7s,mb3.6,baz=69,slow=7.9,SNR=3.5						
MKAR	Makanchi Array	47.10	298	P	P	14 36 51.3	+0.2
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURK	Kurchatov	47.53	304	eP	P	14 36 52.3	-2.2
KURK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9						
KURK	Kurchatov	47.53	304	eP	P	14 36 52.3	-2.2
	comp=Z,1.3nm,0.8s,mb4.0						
FINES	FINESS Array B	64.23	335	P	P	14 38 53.4	-0.3
	comp=Z,1.3nm,0.6s,mb4.1,baz=32,slow=7.6,SNR=7.0						
FINES	FINESS Array B	64.23	335	P	P	14 38 53.4	-0.3
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	Warramunga Arr	68.38	199	P	P	14 39 19.5	-1.1
	comp=Z,0.3nm,0.8s,mb3.4,baz=16,slow=6.6,SNR=2.7						
NOA	NORSAR Array B	68.42	341	P	P	14 39 21.5	+1.0
	comp=Z,0.7nm,0.5s,mb3.9,baz=28,slow=6.2,SNR=3.8						
NOA	NORSAR Array B	68.42	341	P	P	14 39 21.5	+1.0
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	Malin Array Be	71.74	326	P	P	14 39 41.3	+0.3
	comp=Z,0.8nm,0.4s,mb4.0,baz=34,slow=5.8,SNR=3.6						
AKASG	Malin Array Be	71.74	326	P	P	14 39 41.3	+0.3
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ASAR	Alice Springs	72.08	199	P	P	14 39 43.0	-0.2
	comp=Z,0.3nm,0.8s,mb3.3,baz=9.8,slow=6.2,SNR=3.3						
TXAR	Lajitas Array	77.50	61	P	P	14 40 15.3	+0.6
	comp=Z,0.1nm,0.5s,mb3.0,baz=277,slow=7.2,SNR=2.7						

*IDC **18** 14:46:38.6±2.4, 51.°23N×178.°62E, h0km, mb3.4/4, mb1 3.9/6, mb1mx3.5/28, mbtmp3.6/6, ML3.5/2, Error ellipse: s-maj=61.9km s-min=37.0km az=2.0*
*NEIC **18** 14:46:40.9, 51.°14N×178.°39E, h3km, ML3.0(AEIC), After AEIC.*
*ISCJB **18** 14:46:42.5±2.0, 51.°2N±0.°3×178.°49E±0.°10, h50km±10km, mb3.5/4, Error ellipse: s-maj=54.3km s-min=9.8km az=3.1*
ISC 18 14:46:44.4±1.6, 51.°3N±0.°3×178.°54E±0.°10, h43km±10km, n11, σ0°70/12, mb3.5/4, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	Amchitka	0.48	80	P	Pn	14 46 53.4	-1.5
AMKA				S	Sn	14 47 03.2	+0.7
SMY	Shemya	3.10	299	ePn	Pn	14 47 31.4	+0.8
FX1	Attu Island--F	3.67	298	P	Pn	14 47 38.8	+0.2
ATKA	Atka Island	4.60	76	P	Pn	14 47 51.7	+0.4
PETK	Petropavlovsk-	12.91	286	Pn	Pn	14 49 44.3	-0.6
	0.1nm,0.3s,baz=107,slow=18,SNR=4.4						
PETK	Petropavlovsk-	12.91	286	Pn	Pn	14 49 44.3	-0.6
KDAK	Kodiak Island	17.87	57	P	Pn	14 50 49.2	-0.2
	0.6nm,0.3s,baz=268,slow=6.1,SNR=3.6						
ILAR	Eielson Array	22.36	40	P	P	14 51 37.6	-0.7
	0.5nm,0.5s,mb3.2,baz=234,slow=8.5,SNR=17						
NVAR	Mina Array Bea	45.22	81	P	P	14 54 57.9	+0.9
	0.5nm,0.6s,mb3.5,baz=294,slow=7.6,SNR=2.9						
PDAR	Pinedale Array	47.92	71	P	P	14 55 18.4	+0.3
	1.6nm,0.7s,mb4.1,baz=318,slow=4.0,SNR=10.0						
TXAR	Lajitas Array	60.31	79	P	P	14 56 48.2	-0.4
	0.1nm,0.5s,mb3.1,baz=297,slow=6.0,SNR=3.1						

*BJI **18** 15:24:40.2, 23.°70N×143.°60E, h29km, mB4.9/24, mb4.5/34, Ms4.4/27, Ms7 4.2/28*
*JMA **18** 15:24:45.5±0.2, 24.°86N×144.°25E, h0km, M4.6*
*ISCJB **18** 15:24:46.5±1.2, 24.°37N±0.°04×142.°91E±0.°04, h21km±8km, mb4.6/68, MS4.1/29, Error ellipse: s-maj=7.4km s-min=5.7km az=143.1*
*MOS **18** 15:24:47.3±1.2, 24.°17N×142.°87E, h33km, mb5.0/26, MS4.2/6, Error ellipse: s-maj=12.5km s-min=6.4km az=103.3*
*IDC **18** 15:24:48.6±5.8, 24.°08N×142.°97E, h33km±42km, mb4.2/18, mb1 4.3/21, mb1mx4.3/25, mbtmp4.2/21, ML3.8/3, MS3.9/13, Ms1 4.0/13, ms1mx3.7/32, Error ellipse: s-maj=18.5km s-min=15.8km az=91.0*
*NEIC **18** 15:24:49.6±1.1, 24.°20N×142.°91E, h40km±10km, mb4.6/25, Error ellipse: s-maj=8.1km s-min=7.1km az=77.0*
ISC 18 15:24:48.8±1.1, 24.°20N±0.°03×142.°93E±0.°04, h32km±7km, h34km±1.3km; pP-P, n139, σ1°09/159, mb4.6/68, MS4.1/29, 6C-2D, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	Haha-jima-NKT	2.51	344	P	Pn	15 25 29.7	+2.3
JHHJ				S	Sn	15 26 01.3	+4.4
CBIJ	Chichi jima	2.96	347	Pn	Pn	15 25 36.0	+2.4
	17nm,0.3s,baz=265,slow=23,SNR=3.0						
CBIJ				Sn	Sn	15 26 10.4	+2.4
	61nm,0.3s,baz=280,slow=24,SNR=5.4						
CBIJ	Chichi jima	2.96	347	P	Pn	15 25 34.1	+0.5
CBIJ				S	Sn	15 26 11.0	+3.0
GUMO	Guam	10.72	170	eP	Pn	15 27 23.5	+3.3
BSO3	Boso 3	10.77	349	P	Pn	15 27 16.7	-4.1
BSO4	Boso 4	10.98	349	P	Pn	15 27 22.2	-1.5
BSO4				S	Sn	15 29 24.6	-0.8
JOD2	Odawara 2	11.51	344	P	Pn	15 27 31.2	+0.2
JOD2				S	Sn	15 29 39.3	+0.8
JNY	Yasuok	11.95	340	P	Pn	15 27 35.6	-1.4
JHU	Hanno	12.03	346	P	Pn	15 27 37.9	-0.1
JHU				S	Sn	15 29 47.9	-3.2
JAO	Obara	12.07	337	P	Pn	15 27 39.4	+0.8
JYT	Yasato	12.21	349	P	Pn	15 27 39.6	-1.0
JYT				S	Sn	15 29 50.9	-4.7
JRY	Ryogami san	12.28	344	P	Pn	15 27 38.7	-2.7
JRY				S	Sn	15 29 54.1	-3.0
JHO	Hitachi	12.53	351	P	Pn	15 27 43.2	-1.7
JHO				S	Sn	15 29 55.8	-7.6
JAG	Ashikaga	12.54	347	P	Pn	15 27 43.2	-1.9
JAG				S	Sn	15 29 56.6	-7.1
MJAR	Matsushiro Arr	12.95	343	Pn	Pn	15 27 49.3	-1.3
	1.5nm,0.3s,baz=160,slow=11,SNR=14						
MJAR				LR	LR	15 33 14.5	
	comp=Z,442nm,18.0s,baz=170,slow=39						
MAJO	Matsushiro	12.95	343	ePn	Pn	15 27 49.2	-1.4
MAT	Matsushiro	12.95	343	P	Pn	15 27 49.5	-1.2
MAT				S	Sn	15 30 11.4	-2.3
ERM	Erimo	17.76	1	eP	Pn	15 28 55.6	+2.0
KSRS	Korea Array	18.42	319	P	Pn	15 29 03.8	+2.1
	0.5nm,0.3s,baz=129,slow=12,SNR=33						
KSRS				LR	LR	15 35 23.6	
	comp=Z,195nm,20.6s,baz=135,slow=34						
ASAJ	Asahikawa	19.86	359	P	Pn	15 29 20.0	+1.0
	0.5nm,0.3s,baz=238,slow=28,SNR=4.5						
ASAJ				LR	LR	15 37 25.4	
	comp=Z,333nm,18.4s,baz=179,slow=38						
NJ2	Nanjing	22.59	296	eP	P	15 29 47.0	+0.3
NJ2				pP		15 29 55.5	
NJ2				sP	sP	15 29 59.5	+0.2
NJ2				PP		15 30 18.8	
NJ2				S	S	15 33 48.0	-4.8
NJ2				sS	sS	15 34 05.0	-1.8
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.3						
NJ2				LR	LR		
	comp=N,320nm,16.4s,MS4.1						
NJ2				LR	LR		
	comp=E,520nm,17.2s,MS4.1						
NJ2				LR	LR		
	comp=Z,640nm,15.1s,MS4.2						
MDJ	Mudanjiang	23.09	335	P	P	15 29 52.1	+0.3
MDJ				pP		15 30 00.3	
MDJ				sP	sP	15 30 04.5	+0.1
MDJ				PcP	PcP	15 33 40.4	+0.4
MDJ				S	S	15 34 00.9	+0.3
MDJ				ScP	ScP	15 37 16.1	+0.4
MDJ				PcS	PcS	15 37 19.3	+0.3
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.0						
MDJ				pmax	pmax		
	comp=Z,100nm,4.9s						
MDJ				LR	LR		
	comp=N,120nm,22.6s,MS3.5						
MDJ				LR	LR		
	comp=E,150nm,24.5s,MS3.5						
MDJ				LR	LR		
	comp=Z,410nm,16.9s						
DAV	Davao City (W)	23.81	227	LR	LR	15 37 46.6	
	comp=Z,451nm,18.4s,MS4.0,baz=150,slow=33						
CN2	Changchun	24.24	328	eP	P	15 30 03.4	+0.6
CN2				eSP	sP	15 30 16.8	+1.0
CN2				eS	S	15 34 16.8	-2.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.4						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,500nm,17.0s,MS4.2						
CN2				LR	LR		
	comp=E,500nm,17.0s,MS4.2						
CN2				LR	LR		
	comp=Z,300nm,16.0s,MS3.9						
HABR	Khabarovsk	25.01	348	eP	P	15 30 09.5	-0.2
HABR				e*PP	pP	15 30 18.5	-0.4
HABR				e*SP	sP	15 30 22.8	+0.1
HABR				e		15 30 43.5	
HABR				ePPP		15 30 51.9	
HABR				eS	S	15 34 33.6	+2.0
HABR				e*SS	sS	15 34 49.2	+2.5
HABR				eSS		15 35 25.7	
HABR				eSSS		15 35 40.2	
HABR						15 41 07.2	
HABR				pmax	pmax		
	comp=E,57nm,2.7s						
HABR				pmax	pmax		
	comp=N,52nm,2.3s						
HABR				pmax	pmax		
	comp=Z,55nm,2.3s,mb4.7						
HABR				MLR	MLR		
	comp=Z,212nm,15.0s,MS3.8						
WHN	Wuhan	26.11	290	P	P	15 30 22.3	+2.4
WHN				S	S	15 35 00.5	+11
WHN				LR	LR		
	comp=Z,720nm,13.2s,MS4.4						
KLR	Kul'dur	26.48	343	eP	P	15 30 19.3	-3.7
KLR				MLR	MLR		
	comp=N,900nm,14.0s						
KLR				MLR	MLR		
	comp=Z,1μm,14.0s,MS4.6						
BJI	Beijing	27.48	311	P	P	15 30 33.4	+1.3
BJI				sP	sP	15 30 44.5	-0.6
BJI				S	S	15 35 12.0	+1.2
BJI				sS	sS	15 35 27.1	+1.2
BJI				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.5						
BJI				pmax	pmax		
	comp=Z,64nm,6.0s						
BJI				LR	LR		
	comp=N,230nm,16.6s,MS3.9						
BJI				LR	LR		
	comp=E,150nm,16.2s,MS3.9						
BJI				LR	LR		
	comp=Z,97nm,18.9s,MS3.4						
PETK	Petropavlovsk-	30.95	17	P	P	15 31 05.9	+3.1
	comp=Z,3.2nm,1.0s,mb4.1,baz=182,slow=12,SNR=4.0						
PETK				LR	LR	15 40 38.2	
	comp=Z,127nm,20.6s,MS3.6,baz=107,slow=31						
HHC	Hu-ho-hao-te	31.01	310	eP	P	15 31 02.5	-1.0
HHC				sP	sP	15 31 15.5	-1.0
HHC				PP	PP	15 32 05.3	-8.4
HHC				PcP	PcP	15 33 57.6	-1.3
HHC				S	S	15 36 04.1	-2.2
HHC				ScP	ScP	15 37 37.1	-2.4
HHC				PcS	PcS	15 37 41.3	-1.6
HHC				ScS	ScS	15 41 32.5	-3.9
HHC				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.0						
HHC				pmax	pmax		
	comp=Z,82nm,5.6s						
HHC				LR	LR		
	comp=N,810nm,11.8s,MS4.8						
HHC				LR	LR		
	comp=E,810nm,11.8s,MS4.8						
HHC				LR	LR		
	comp=Z,820nm,12.0s,MS4.6						
QIZ	Qiongzhong	31.14	267	P	P	15 31 04.6	-0.3
QIZ				sP	sP	15 31 18.3	+0.4
QIZ				S	S	15 36 08.9	+0.1
QIZ				pmax	pmax		
	comp=Z,12nm,1.6s,mb4.5						
QIZ				pmax	pmax		
	comp=Z,97nm,3.1s						
QIZ				LR	LR		
	comp=N,180nm,4.4s						
QIZ				LR	LR		
	comp=E,51nm,4.3s						
QIZ				LR	LR		
	comp=Z,290nm,16.5s,MS4.0						
GYA	Guiyang	32.79	282	P	P	15 31 20.0	+0.7
GYA				pP	pP	15 31 30.6	+2.1
GYA				sP	sP	15 31 35.8	+3.4
GYA				PP	PP	15 32 29.9	-3.8
GYA				PcP	PcP	15 34 05.3	+1.2
GYA				S	S	15 36 33.1	-1.3
GYA				sS	sS	15 36 50.0	+0.3
GYA				ScP	ScP	15 37 44.6	-1.3
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
GYA				pmax	pmax		
	comp=Z,120nm,4.6s						
GYA				LR	LR		
	comp=N,590nm,17.2s,MS4.4						
GYA				LR	LR		
	comp=E,480nm,18.6s,MS4.4						
GYA				LR	LR		
	comp=Z,640nm,17.0s,MS4.4						
CD2	Chengdu	35.23	290	P	P	15 31 41.0	+0.5
CD2				pP	pP	15 31 50.8	+1.1
CD2				sP	sP	15 31 54.6	+1.0
CD2				PP	PP	15 33 00.4	-0.3
CD2				S	S	15 37 11.3	-0.8
CD2				sS	sS	15 37 27.3	-0.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
CD2				pmax	pmax		
	comp=Z,260nm,5.5s						
CD2				LR	LR		
	comp=N,440nm,11.3s						
CD2				LR	LR		
	comp=Z,370nm,15.5s,MS4.2						
LZH	Lanzhou	35.59	299	eP	P	15 31 44.5	+1.0
LZH				pP	pP	15 31 52.3	-0.5
LZH				sP	sP	15 31 55.8	-0.8
LZH				PP	PP	15 33 02.0	-2.6
LZH				S	S	15 37 16.5	-1.0
LZH				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.0						
LZH				pmax	pmax		
	comp=Z,90nm,4.4s						
LZH				LR	LR		
	comp=N,440nm,14.9s						
LZH				LR	LR		
	comp=Z,690nm,16.9s,MS4.5						
KMI	Kunming	36.44	280	P	P

comp=Z,9.0nm,1.0s,mb4.5
YAK pmax pmax
comp=N,3.0nm,1.0s
SEY Seymchan 39.23 7⇑ i P P 15 32 15.1 +1.2
GTA Gaotai 39.27 303 eP P 15 32 14.8 +0.2
GTA pP pP 15 32 25.6 +1.7
GTA sP sP 15 32 29.1 +1.3
GTA PP PP 15 33 49.4 +4.5
GTA S **S 15 38 12.4 -0.9**
GTA pmax pmax
comp=Z,4.0nm,1.8s,mb3.9
GTA pmax pmax
comp=Z,130nm,6.0s
GTA LR LR
comp=N,140nm,15.6s,MS4.1
GTA LR LR
comp=E,160nm,16.5s,MS4.1
GTA LR LR
comp=Z,200nm,15.0s,MS4.1
TLY Talaya 40.62 323 eP P 15 32 26.8 +1.2
TLY pmax pmax
comp=Z,3.0nm,0.7s,mb4.0
TLY MLR MLR
comp=Z,213nm,19.0s,MS4.0
CHTO Chiang Mai 41.15 271 eP P 15 32 31.0 +0.6
CHTO pmax pmax
comp=Z,6.0nm,1.0s,mb4.2
CHTO Chiang Mai 41.15 271 eP P 15 32 31.0 +0.6
comp=Z,6.1nm,1.0s,mb4.2
CM31 Chiang Mai Arr 41.24 271 eP P 15 32 31.6 +0.4
CMAR Chiang Mai Arr 41.24 271 P P 15 32 32.8 +1.5
comp=Z,3.2nm,0.6s,mb4.1,baz=58,slow=7.7,SNR=17
CMAR LR LR 15 49 50.0
comp=Z,198nm,19.3s,MS4.0,baz=114,slow=36
CTA Charters Tower 44.14 176 eP P 15 32 52.5 -2.0
comp=Z,7.0nm,0.6s,mb4.6
CTAO Charters Tower 44.14 176 eP P 15 32 52.9 -1.6
CTAO pmax pmax
comp=Z,8.0nm,0.6s,mb4.6
CTAO Charters Tower 44.14 176 eP P 15 32 52.9 -1.6
comp=Z,7.9nm,0.6s,mb4.6
WRAB Tennant Creek 44.66 192 eP P 15 32 57.4 -1.3
WRAB pmax pmax
comp=Z,15nm,0.5s,mb5.1
WRAB Tennant Creek 44.66 192 eP P 15 32 57.4 -1.3
comp=Z,15nm,0.5s,mb5.1
FITZ Fitzroy Crossi 45.30 203 eP P 15 33 01.9 -2.0
comp=Z,14nm,0.9s,mb4.8
BILL Bilibino 46.12 12⇑ i P P 15 33 11.3 +1.5
BILL e 15 33 28.4
BILL pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
BILL MLR MLR
comp=Z,100nm,16.0s,MS3.9
BILL Bilibino 46.12 12 eP P 15 33 10.4 +0.7
comp=Z,12nm,1.3s,mb4.7
TIXI Tiksi 48.14 354 eP P 15 33 29.5 +4.0
TIXI pmax pmax
comp=Z,10.0nm,1.5s,mb4.6
TIXI Tiksi 48.14 354 eP P 15 33 25.1 -0.3
comp=Z,4.4nm,0.8s,mb4.5
ASAR Alice Springs 48.38 191 P P 15 33 25.4 -2.5
comp=Z,1.0nm,0.4s,mb4.2,baz=11,slow=6.8,SNR=56
WMQ Urumqi 48.84 308 P P 15 33 31.9 +0.6
WMQ pP pP 15 33 41.9 +1.1
WMQ sP sP 15 33 45.9 +1.3
WMQ PP PP 15 35 25.0 +0.4
WMQ pmax pmax
comp=Z,16nm,1.0s,mb5.0
WMQ pmax pmax
comp=Z,170nm,4.8s
WMQ LR LR
comp=N,120nm,21.5s
WMQ LR LR
comp=Z,130nm,17.0s,MS4.0
ZAA0 Zalesovo Array 52.12 321 eP P 15 33 55.0 -0.9
ZAA0 e 15 34 06.2
ZALV Zalesovo Beam 52.12 321 P P 15 33 55.6 -0.3
comp=Z,1.7nm,0.3s,mb4.4,baz=99,slow=7.0,SNR=12
ZALV PcP PcP 15 35 07.2 -0.3
comp=Z,2.4nm,0.6s,baz=100,slow=3.2,SNR=5.4
ZALV LR LR 15 58 21.3
comp=Z,88nm,19.2s,MS3.8,baz=249,slow=38
ZALV Zalesovo Beam 52.12 321 P P 15 33 55.6 -0.3
ZALV 15 35 07.2
MK31 Makanchi Array 52.86 311 eP P 15 34 01.1 -0.3
MKAR Makanchi Array 52.86 311 P P 15 34 01.4 0.0
comp=Z,3.3nm,0.5s,mb4.5,baz=88,slow=8.7,SNR=26
MKAR LR LR 15 58 48.4
comp=Z,115nm,18.3s,MS4.0,baz=133,slow=38
MKAR Makanchi Array 52.86 311 P P 15 34 01.4 0.0
MKAR LR LR 15 58 48.4
KURK Kurchatov 55.50 316 ⇓ i P P 15 34 20.5 -0.2
KURK pmax pmax
comp=Z,9.0nm,1.2s,mb4.7
KURK Kurchatov 55.50 316 eP P 15 34 19.9 -0.8
comp=Z,5.9nm,0.6s,mb4.8
STKA Stephens Creek 55.78 181 eP P 15 34 20.6 -2.1
comp=Z,5.1nm,0.9s,mb4.5
STKA Stephens Creek 55.78 181 P P 15 34 21.1 -1.6
comp=Z,5.2nm,0.8s,mb4.6,baz=326,slow=5.9,SNR=6.9
KDAK Kodiak Island 56.29 36 P P 15 34 27.0 +0.9
comp=Z,4.4nm,0.8s,mb4.6,baz=218,slow=24,SNR=4.1
AAK Ala-Archa 58.48 306⇑ eP P 15 34 42.2 +0.3
AAK pmax pmax
comp=Z,3.0nm,1.7s,mb4.0
UCH Uchtor 58.50 306 eP P 15 34 43.9 +1.8
UCH pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
UCH Uchtor 58.50 306 eP P 15 34 43.9 +1.8
comp=Z,6.2nm,1.1s,mb4.5
AML Almayashu 59.12 306 eP P 15 34 47.3 +1.0
AML pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
AML Almayashu 59.12 306 eP P 15 34 47.3 +1.0
comp=Z,3.4nm,0.9s,mb4.4
ILAR Eielson Array 59.93 28 P P 15 34 50.4 -1.2
comp=Z,2.3nm,0.7s,mb4.3,baz=259,slow=5.6,SNR=21
ILAR LR LR 16 03 53.8
comp=Z,98nm,18.1s,MS4.0,baz=301,slow=39
BVAR Borovoye Array 60.63 319 P P 15 34 56.4 -0.1
comp=Z,5.4nm,0.5s,mb5.0,baz=86,slow=7.0,SNR=43
BVAR PcP PcP 15 35 39.8 -0.8
comp=Z,3.8nm,0.8s,baz=90,slow=4.3,SNR=4.5
BRVK Borovoye 60.70 319⇑ i P P 15 34 57.0 0.0
BRVK pmax pmax
comp=Z,14nm,1.2s,mb5.0
BRVK Borovoye 60.70 319 eP P 15 34 56.4 -0.5
comp=Z,12nm,1.1s,mb4.9
DAWY Dawson 63.14 29 eP P 15 35 12.3 -0.9
ARU Arti 67.12 323 c i P P 15 35 39.1 -0.1
ARU 15 38 04.2
ARU S S 15 44 33.6 +2.5
ARU 15 48 44.4
ARU pmax pmax
comp=Z,20nm,1.2s,mb5.0
ARU Arti 67.12 323 eP P 15 35 38.7 -0.5
comp=Z,11nm,0.6s,mb5.1
ARU e 15 35 51.2
ABKAR Akbulak array 67.60 315 eP P 15 35 41.6 -0.8
comp=Z,1.5nm,0.6s,mb4.2
YKA Yellowknife Ar 74.36 28 P P 15 36 23.2 +0.1
comp=Z,2.8nm,0.8s,mb4.2,baz=291,slow=5.8,SNR=4.7
YKA Yellowknife Ar 74.36 28 P P 15 36 23.2 +0.1
APA Apatity 74.97 338⇑ i P P 15 36 28.4 +1.9
APA pmax pmax
comp=Z,18nm,1.0s,mb5.0
APA MLR MLR
comp=Z,200nm,15.0s,MS4.5
JCW Jim Creek 75.63 43 eP P 15 36 31.4 +0.8
comp=Z,17nm,1.0s,mb4.9
KEV Kevo 75.92 341 eP P 15 36 32.3 +0.3
KEV pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
KEV Kevo 75.92 341 ep P 15 36 32.3 +0.3
comp=Z,8.9nm,1.0s,mb4.7
ARCES ARCESS Array B 76.48 341 P P 15 36 36.0 +0.8
comp=Z,2.3nm,0.5s,mb4.3,baz=75,slow=8.4,SNR=29
ARCES LR LR 16 15 04.4
comp=Z,157nm,18.2s,MS4.4,baz=97,slow=39
ARE0 ARCESS Array S 76.48 341 eP P 15 36 35.3 +0.1
VRHR Novokhopersk 78.26 321 eP P 15 36 44.1 -1.3
VRHR pmax pmax
comp=Z,5.0nm,0.3s,mb4.9
VRHR pmax pmax
comp=N,6.0nm,0.5s
VRHR pmax pmax
comp=E,10.0nm,0.9s
NEW Newport 78.58 42 eP P 15 36 47.4 +0.1
NEW pmax pmax
comp=Z,11nm,1.0s
NEW Newport 78.58 42 eP P 15 36 47.4 +0.1
comp=Z,11nm,1.0s,mb4.7
EDM Edmonton 78.72 37 eP P 15 36 48.0 0.0
OBN Obninsk 79.29 326⇓ eP P 15 36 51.1 +0.1
OBN e pP 15 37 00.0 -1.0
OBN e 15 39 52.6
OBN pmax pmax
comp=Z,28nm,1.9s,mb4.9
OBN MLR MLR
comp=Z,200nm,17.0s,MS4.5
VSR Storozhevoye 79.61 322 eP P 15 36 53.0 +0.1
VSR pmax pmax
comp=Z,6.0nm,0.3s,mb5.0
VSR pmax pmax
comp=N,7.0nm,1.0s
VSR pmax pmax
comp=E,10.0nm,1.0s
VORD Divnogorie 79.65 321 eP P 15 36 52.2 -0.9
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,50nm,0.6s
VORD pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
BMO Blue Mountains 79.84 45 eP P 15 36 55.1 +0.9
BMO pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
BMO Blue Mountains 79.84 45 eP P 15 36 55.1 +0.9
comp=Z,3.9nm,0.9s,mb4.3
WVOR Wild Horse Val 79.92 48 eP P 15 36 54.8 0.0
WVOR pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
WVOR Wild Horse Val 79.92 48 eP P 15 36 54.8 0.0
comp=Z,8.0nm,1.0s,mb4.6
BSMT Bassoo Peak 80.18 42 eP P 15 36 56.6 +0.6
WALA Waterton Lakes 80.19 41 eP P 15 36 56.5 +0.4
KAF Kangasniemi 80.36 335 eP P 15 36 56.5 -0.2
KAF pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
KAF Kangasniemi 80.36 335 ep P 15 36 56.5 -0.2
comp=Z,5.7nm,0.5s,mb4.8,baz=56,slow=4.9
CMB Columbia Colle 80.43 53 eP P 15 36 56.7 -0.9
CMB pmax pmax
comp=Z,14nm,1.2s,mb4.8
CMB Columbia Colle 80.43 53 eP P 15 36 56.7 -0.9
comp=Z,14nm,1.2s,mb4.8
JTMT Jette 80.53 42 eP P 15 36 57.9 0.0
FINES FINESS Array B 80.83 334 P P 15 36 59.2 0.0
comp=Z,7.3nm,0.5s,mb4.9,baz=67,slow=4.9,SNR=113
SLMT Seeley Lake 81.24 42 eP P 15 37 01.6 -0.1
NVAR Mina Array Bea 81.78 52 P P 15 37 05.1 +0.4
comp=Z,2.6nm,0.8s,mb4.2,baz=269,slow=4.2,SNR=11
LRM Limekiln Ridge 82.52 43 eP P 15 37 07.6 -0.8
BOZ Bozeman (W) 83.11 43 eP P 15 37 11.0 -0.5
BOZ pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
BOZ Bozeman (W) 83.11 43 eP P 15 37 11.0 -0.5
comp=Z,1.6nm,0.8s,mb4.1
EGMT Eagleton 83.12 40 eP P 15 37 12.2 +0.6
M13A Montello 83.40 48 eP P 15 37 13.3 +0.1
comp=Z,3.8nm,0.9s,mb4.4
FFC Flin Flon 83.83 32 i P P 15 37 15.9 +0.9
IMW Indian Meadow 84.36 44 eP P 15 37 19.2 +1.2
comp=Z,4.6nm,0.9s,mb4.6
RLMT Red Lodge 84.82 43 eP P 15 37 20.3 0.0
comp=Z,6.8nm,0.9s,mb4.8
HWUT Hardware Ranch 85.03 46 eP P 15 37 20.3 -1.1
comp=Z,6.5nm,1.2s,mb4.6
AKASG Malin Array Be 85.34 324 P P 15 37 22.4 -0.3
comp=Z,1.8nm,0.6s,mb4.4,baz=45,slow=5.9,SNR=15
ARUT Antelope Range 85.51 51 eP P 15 37 23.1 -0.8
ARUT pmax pmax
comp=Z,3.0nm,0.8s,mb4.6
ARUT Antelope Range 85.51 51 eP P 15 37 23.1 -0.8
comp=Z,3.0nm,0.8s,mb4.6
CCUT Cedar City 85.67 51 eP P 15 37 25.2 +0.5
comp=Z,2.5nm,0.9s,mb4.4
PDAR Pinedale Array 85.79 45 P P 15 37 24.9 -0.3
comp=Z,1.3nm,0.9s,mb4.2,baz=238,slow=3.0,SNR=5.8
PDAR LR LR 16 11 54.0
comp=Z,97nm,20.2s,MS4.2,baz=252,slow=33
MSU Marysvale 86.06 49 eP P 15 37 26.5 -0.1
NB2 NORSAR Subarra 86.54 339 P P 15 37 28.0 -0.5
comp=Z,8.2nm,0.8s,mb5.0,baz=42,slow=5.1
NOA NORSAR Array B 86.54 339 P P 15 37 28.3 -0.1
comp=Z,7.5nm,0.8s,mb5.0,baz=48,slow=4.6,SNR=23
NOA LR LR 16 20 16.8
comp=Z,56nm,20.4s,MS4.0,baz=55,slow=38
SRU San Rafael 86.91 48 eP P 15 37 30.4 -0.4
SRU pmax pmax
comp=Z,5.0nm,0.9s,mb4.7
SRU San Rafael 86.91 48 eP P 15 37 30.4 -0.3
comp=Z,5.3nm,0.9s,mb4.8
BR131 Keskin Array S 88.46 313 eP P 15 37 37.7 -0.4
comp=Z,1.5nm,0.7s,mb4.3
BRTR Keskin Array B 88.46 313 P P 15 37 38.4 +0.2
comp=Z,2.4nm,0.8s,mb4.5,baz=116,slow=3.8,SNR=11
KWP Kalwaria Pacla 89.38 326 eP P 15 37 42.7 +0.5
DPC Dobruska-Polom 92.05 329 eP P 15 37 55.3 +0.6
DPC Dobruska-Polom 92.05 329 eP P 15 37 55.3 +0.6
CLL Collm 92.89 331 eP P 15 37 58.0 -0.6
CLL pmax pmax
comp=Z,12nm,1.6s,mb5.1
CLL Collm 92.89 331 eP P 15 37 58.0 -0.6
comp=Z,12nm,1.6s,mb5.1
CLL LmV 16 27 00.0
comp=Z,100nm,18.4s
TXAR Lajitas Array 96.78 54 P P 15 38 17.7 +1.0
comp=Z,0.3nm,0.6s,mb3.9,baz=305,slow=4.4,SNR=3.4
TORD Torodi Ar. Bea 126.97 310 PKP PKPdf 15 43 49.9 -0.5
comp=Z,0.7nm,0.5s,baz=56,slow=2.8,SNR=4.1
PLCA Paso Flores 147.54 129 PKPbc PKPbc 15 44 29.3 -0.6
comp=Z,5.9nm,0.6s,baz=223,slow=2.9,SNR=14
LPAZ La Paz 149.86 81 PKP PKPdf 15 44 32.7 +1.0
comp=Z,3.7nm,0.6s,baz=355,slow=3.2,SNR=3.6
LPAZ PKPbc PKPbc 15 44 37.5 +1.0
comp=Z,4.3nm,0.7s,baz=358,slow=3.3,SNR=15

MEX 18 15:28:39.9±1.2, 14°.28N×93°.11W, h13km±34km, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**1.03**	**53**	*i P*	Pb	15 28 56.6	-3.0
THIG				*i* S	Sb	15 29 08.6	-4.5
PCIG		**1.42**	**356**	*eP*	Pn	15 29 01.0	-4.5
PCIG				*i* S	Sn	15 29 19.0	-5.0
TGIG		**2.49**	**360**	*i P*	Pn	15 29 17.9	-2.2
TGIG				*i* S	Sn	15 29 46.7	-3.6
SCX	**San Cristobal**	**2.49**	**11**	*i P*	Pn	15 29 20.3	+0.2
HUIG	**Huatulco**	**3.25**	**297**	*i P*	Pn	15 29 28.3	-2.3
HUIG				*i* S	Sn	15 30 05.8	-3.4
VHO	**Vista Hermosa**	**4.46**	**309**	*i P*	Pn	15 29 49.5	+2.3

IGQ 18 15:37:35.6, 1°.40N×78°.93W, h12km±2km, Mb4.4, Ms4.2, 6C-7D, Error ellipse: s-maj=3.7km s-min=2.9km az=142.7, Colombia-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
COTA	**Cotacachi**	**1.21**	**151**	P	Pn	15 37 59.1	+0.7
OTAV	**Otavalo**	**1.25**	**157**	⇑S	Sb	15 38 18.1	+2.9
OTAV	**Otavalo**	**1.25**	**157**	⇑P	Pn	15 37 59.1	+0.2
YANA	**Yana**	**1.55**	**167**	P	Pn	15 38 04.9	+1.9
PINO	**Pino**	**1.58**	**168**	⇓P	Pn	15 38 05.5	+2.0
TERV	**Terraza Guagua**	**1.59**	**168**	P	Pn	15 38 05.7	+2.1
GGP	**Refugio Guagua**	**1.60**	**168**	⇓P	Pn	15 38 05.7	+2.0
CAYA	**Cayambe**	**1.62**	**144**	⇓P	Pn	15 38 05.9	+1.9
JUA2	**San Juan 2**	**1.63**	**168**	⇓P	Pn	15 38 06.2	+2.0
CAYR	**Refugio Cayamb**	**1.65**	**146**	P	Pn	15 38 07.2	+2.7
MAG1	**Magdalena**	**1.68**	**210**	S	Sn	15 38 34.9	+8.4
MAG1	**Magdalena**	**1.68**	**210**	P	Pn	15 38 06.7	+1.8
CHAR	**Charly**	**1.94**	**139**	⇓P	Pn	15 38 12.2	+3.8
LAV3	**Lava3-Reventad**	**1.97**	**139**	P	Pn	15 38 12.4	+3.5
ANTI	**Antisana**	**1.99**	**157**	⇑P	Pn	15 38 12.8	+3.7
PITA	**Cotopaxi Volc**	**2.00**	**166**	P	Pn	15 38 12.7	+3.4
JAMA	**Jama**	**2.08**	**218**	P	Pn	15 38 10.9	+0.5
VC1	**Cotopaxi 1**	**2.09**	**165**	P	Pn	15 38 14.0	+3.5
BVC2	**Cotopaxi Volca**	**2.10**	**166**	⇑P	Pn	15 38 14.4	+3.7
BREF	**Cotopaxi Volca**	**2.11**	**167**	⇑P	Pn	15 38 14.4	+3.7
BTAM	**Cotopaxi Volca**	**2.12**	**165**	⇑P	Pn	15 38 14.5	+3.5
COV1	**Cotopaxi Volc**	**2.13**	**164**	P	Pn	15 38 14.5	+3.5
TAMB	**Tambo**	**2.15**	**165**	P	Pn	15 38 15.2	+3.9
TAMB	**Tambo**	**2.15**	**165**	S	Sn	15 38 45.0	+7.0
BMOR	**Cotopaxi Volca**	**2.17**	**167**	S	Sn	15 38 45.5	+7.2
BMOR	**Cotopaxi Volca**	**2.17**	**167**	P	Pn	15 38 15.5	+4.0
PISA	**Pisayambo**	**2.50**	**167**	P	Pn	15 38 21.1	+5.0
BULB	**Ulba Tungurahu**	**2.86**	**169**	⇓P	Pn	15 38 26.7	+5.6
ULBA	**Ulba**	**2.87**	**169**	P	Pn	15 38 26.9	+5.6
IGUA	**Igualata**	**2.88**	**174**	P	Pn	15 38 26.6	+5.2
BMAS	**Trigal station**	**2.92**	**171**	P	Pn	15 38 25.8	+4.0
ARRY	**Arrayan**	**2.92**	**171**	⇓P	Pn	15 38 27.2	+5.3

*NEIC **18** 15:40:00.4±0.6, 24°.03N×143°.07E, h35km, mb4.1/2, Error ellipse: s-maj=32.8km s-min=10.6km az=84.0*
IDC 18 15:39:55.1±1.0, 24°.04N×143°.09E, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.7/24, mbtmp3.8/8, ML3.5/1, MS3.7/1, Ms1 3.7/1, ms1mx2.3/45, Error ellipse: s-maj=49.0km s-min=17.5km az=83.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**18.64**	**319**	P	Pn	15 44 15.4	+0.8
	0.2nm,0.3s,baz=118,slow=13,SNR=4.7						
KAPI	**Kappang**	**36.76**	**221**	LR	LR	15 59 35.0	
	comp=Z,129nm,21.9s,slow=32						
CTA	**Charters Tower**	**43.97**	**176**	P	P	15 48 04.7	+0.5
	baz=342,slow=13						
CTAO	**Charters Tower**	**43.97**	**176**	P	P	15 48 04.1	-0.1
	2.0nm,0.7s						
WRAB	**Tennant Creek**	**44.53**	**192**	*eP*	P	15 48 09.2	+0.6
	1.5nm,0.4s						
WRA	**Warramunga Arr**	**44.54**	**192**	P	P	15 48 08.7	-0.1
	1.0nm,0.3s,baz=16,slow=9.2,SNR=44						
ASAR	**Alice Springs**	**48.25**	**191**	P	P	15 48 37.5	-0.4
	0.2nm,0.4s,baz=9.9,slow=6.8,SNR=14						
ZALV	**Zalesovo Beam**	**52.34**	**321**	P	P	15 49 08.4	-0.2
	0.3nm,0.3s,baz=82,slow=10,SNR=2.9						
ILAR	**Eielson Array**	**60.01**	**28**	P	P	15 50 02.9	-0.3
	0.5nm,0.8s,baz=243,slow=4.0,SNR=3.8						
BVAR	**Borovoye Array**	**60.85**	**319**	P	P	15 50 08.7	-0.5
	0.8nm,0.5s,baz=79,slow=7.9,SNR=4.1						
ARCES	**ARCESS Array B**	**76.69**	**341**	P	P	15 51 48.9	+1.3
	0.6nm,0.7s,baz=54,slow=6.2,SNR=3.6						
FINES	**FINESS Array B**	**81.04**	**334**	P	P	15 52 11.2	-0.4
	1.0nm,0.4s,baz=73,slow=4.3,SNR=12						

*BJI **18** 15:43:06.2, 37°.81N×87°.19E, h13km, mb3.7/1, ML3.7/9*
ISC 18 15:43:04.7±3.3, 37°.8N±0°.1×87°.8E±0°.2, h13km±21km, n4, σ0°85/7, 2C-1D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMQ	**Urumqi**	**5.99**	**359**	*eP*g	**Pb**	**15 44 49.8**	**+1.0**
WMQ				Sg	**Sg**	**15 46 16.3**	**-0.4**
WMQ				smax			
	comp=N,32nm,0.5s						
WMQ				smax			
	comp=E,40nm,0.5s						
KSH	**Kashi**	**9.41**	**284**	P	**Pn**	**15 45 20.3**	**+0.3**
KSH				S	**Sn**	**15 47 05.8**	**+0.2**
KSH				smax			
	comp=N,28nm,1.1s						
KSH				smax			
	comp=E,19nm,0.8s						
MK31	**Makanchi Array**	**9.84**	**337**	⇑Pn	**Pn**	**15 45 25.7**	**-0.2**
	comp=E,0.7nm,0.3s,baz=157,slow=14,SNR=8.6						
MK31				⇓Sn	**Sn**	**15 47 16.3**	**+0.2**
	comp=E,1.3nm,0.4s,baz=156,slow=24,SNR=4.5						
AB31	**Akbulak array**	**23.07**	**309**	⇑P	**P**	**15 48 08.7**	**-1.1**
	comp=E,0.7nm,0.7s,baz=95,slow=13,SNR=3.5						

*ISCJB **18** 16:06:25.7±4.1, 24°.1N±0°.1×143°.2E±0°.2, h44km±38km, mb3.9/1, Error ellipse: s-maj=37.1km s-min=16.1km az=172.2*
*IDC **18** 16:06:28.1±5.1, 24°.04N×143°.18E, h45km±50km, mb3.6/9, mb1 3.8/10, mb1mx3.6/24, mbtmp3.6/10, ML3.7/1, MS3.3/3, Ms1 3.3/3, ms1mx2.8/35, Error ellipse: s-maj=33.6km s-min=17.2km az=86.0*
*NEIC **18** 16:06:28.4±2.2, 24°.08N×143°.15E, h49km±20km, mb4.1/2, Error ellipse: s-maj=25.6km s-min=11.3km az=82.0*
ISC 18 16:06:28.4±2.7, 24°.1N±0°.1×143°.1E±0°.2, h49km±25km, n14, σ0°68/12, mb3.9/11, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**13.13**	**342**	P	**Pn**	**16 09 32.1**	**0.0**
	0.4nm,0.3s,baz=205,slow=10.0,SNR=4.3						
MJAR				LR	LR	16 14 00.4	
	comp=Z,76nm,19.4s,baz=150,slow=34						
KSRS	**Korea Array**	**18.64**	**319**	LR	LR	16 17 08.2	
	comp=Z,41nm,18.4s,baz=220,slow=34						
CMAR	**Chiang Mai Arr**	**41.44**	**271**	P	**P**	**16 14 11.8**	**+1.2**
	0.7nm,0.7s,mb3.4,baz=57,slow=7.2,SNR=6.8						
CTA	**Charters Tower**	**44.01**	**176**	LR	LR	16 32 10.5	
	comp=Z,111nm,18.5s,baz=206,slow=35						
WRAB	**Tennant Creek**	**44.58**	**192**	*eP*	**P**	**16 14 36.5**	**+0.7**
	4.1nm,0.8s,mb4.3						
WRA	**Warramunga Arr**	**44.59**	**192**	P	**P**	**16 14 35.5**	**-0.3**
	2.0nm,0.7s,mb4.0,baz=12,slow=8.6,SNR=36						
ASAR	**Alice Springs**	**48.30**	**191**	P	**P**	**16 15 04.5**	**-0.5**
	0.5nm,0.7s,mb3.6,baz=12,slow=10.0,SNR=9.2						
ZALV	**Zalesovo Beam**	**52.34**	**321**	P	**P**	**16 15 34.7**	**-0.4**
	0.4nm,0.4s,mb3.8,baz=132,slow=8.0,SNR=3.0						
MKAR	**Makanchi Array**	**53.08**	**311**	P	**P**	**16 15 40.5**	**-0.2**
	0.3nm,0.2s,mb3.8,baz=95,slow=7.6,SNR=4.1						
STKA	**Stephens Creek**	**55.66**	**182**	P	**P**	**16 15 59.1**	**-0.4**
	6.2nm,1.2s,mb4.5,baz=354,slow=9.2,SNR=3.1						
KURK	**Kurchatov**	**55.73**	**316**	*eP*	**P**	**16 15 58.4**	**-1.5**
	0.9nm,0.6s,mb4.0						
ILAR	**Eielson Array**	**59.95**	**28**	P	**P**	**16 16 29.8**	**+0.5**
	0.6nm,0.8s,mb3.7,baz=262,slow=5.5,SNR=8.2						
BVAR	**Borovoye Array**	**60.85**	**319**	P	**P**	**16 16 35.8**	**+0.1**
	0.8nm,0.3s,mb4.3,baz=116,slow=8.8,SNR=5.3						
FINES	**FINESS Array B**	**81.03**	**334**	P	**P**	**16 18 38.5**	**+0.7**
	0.7nm,0.4s,mb3.9,baz=85,slow=6.5,SNR=7.0						

*IDC **18** 16:10:25.7±1.1, 24°.07N×143°.17E, h0km, mb3.9/9, mb1 4.1/9, mb1mx3.8/23, mbtmp3.9/9, Error ellipse: s-maj=41.1km s-min=20.4km az=90.0*
*ISCJB **18** 16:10:28.9±0.9, 24°.1N±0°.1×143°.1E±0°.2, h33km, mb3.9/11, Error ellipse: s-maj=31.4km s-min=15.6km az=177.2*
*NEIC **18** 16:10:31.1±0.7, 24°.08N×143°.13E, h35km, mb4.0/2, Error ellipse: s-maj=24.7km s-min=12.2km az=87.0*
ISC 18 16:10:31.2±0.9, 24°.1N±0°.1×143°.1E±0°.2, h35km, n11, σ0°65/11, mb3.9/11, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**41.42**	**271**	P	**P**	**16 18 15.5**	**+0.9**
	0.3nm,0.3s,mb3.4,baz=58,slow=8.6,SNR=3.0						
WRAB	**Tennant Creek**	**44.58**	**192**	*eP*	**P**	**16 18 40.5**	**+0.5**
	1.8nm,0.4s,mb4.2						
WRA	**Warramunga Arr**	**44.59**	**192**	P	**P**	**16 18 40.0**	**-0.1**
	1.1nm,0.4s,mb4.0,baz=14,slow=8.5,SNR=44						
ASAR	**Alice Springs**	**48.30**	**191**	P	**P**	**16 19 08.2**	**-0.8**
	0.4nm,0.7s,mb3.6,baz=8.0,slow=7.6,SNR=10.0						
MKAR	**Makanchi Array**	**53.07**	**311**	P	**P**	**16 19 44.7**	**-0.2**
	0.5nm,0.3s,mb4.0,baz=86,slow=10,SNR=3.6						
KURK	**Kurchatov**	**55.71**	**316**	*eP*	**P**	**16 20 03.0**	**-1.0**
	0.5nm,0.7s,mb3.6						
ILAR	**Eielson Array**	**59.96**	**28**	P	**P**	**16 20 33.6**	**0.0**
	0.4nm,0.6s,mb3.6,baz=235,slow=6.3,SNR=4.1						
BVAR	**Borovoye Array**	**60.84**	**319**	P	**P**	**16 20 39.0**	**-0.8**
	0.8nm,0.5s,mb4.1,baz=106,slow=3.6,SNR=5.4						
ARCES	**ARCESS Array B**	**76.65**	**341**	P	**P**	**16 22 19.0**	**+1.0**
	1.2nm,0.8s,mb3.9,baz=55,slow=7.8,SNR=5.3						
FINES	**FINESS Array B**	**81.02**	**334**	P	**P**	**16 22 42.4**	**+0.3**
	1.1nm,0.4s,mb4.1,baz=71,slow=3.9,SNR=14						
NOA	**NORSAR Array B**	**86.71**	**339**	P	**P**	**16 23 11.3**	**+0.1**
	0.5nm,0.7s,mb3.9,baz=52,slow=5.1,SNR=3.4						

*IDC **18** 16:25:31.8±4.1, 36°.81N×26°.86E, h100km±45km, mb3.5/6, mb1 3.5/9, mb1mx3.3/27, mbtmp3.5/9, Error ellipse: s-maj=33.0km s-min=21.3km az=144.0*
*ISCJB **18** 16:25:34.2±0.3, 36°.60N±0°.03×26°.95E±0°.03, h146km±3km,*

mb3.7/7, Error ellipse: s-maj=6.1km s-min=3.5km az=153.6
ATH ***18*** *16:25:35.3, 36.′81N×26.′70E, h20km±1km, MD3.3/9*
NEIC ***18*** *16:25:35.5±0.4, 36.′61N×26.′94E, h147km±7km, mb3.8/1, Error ellipse: s-maj=12.6km s-min=7.2km az=157.0*
CSEM ***18*** *16:25:35.2±0.1, 36.′61N×26.′91E, h142km±2km, MD3.1, Error ellipse: s-maj=6.7km s-min=3.7km az=144.0*
ISK ***18*** *16:25:36.4, 36.′76N×26.′92E, h128km, MD3.1*
DDA ***18*** *16:25:36.7, 36.′52N×27.′29E, h4km±6km*
THE ***18*** *16:25:39.3, 36.′75N×26.′79E, h31km±38km, Error ellipse: s-maj=38.1km s-min=1.2km az=138.0*
HLW ***18*** *16:25:42.7, 35.′96N×27.′41E, h36km±12km, Md3.7, Ml3.3*

ISC 18 16:25:35.2±0.3, 36.′60N±0.′03×26.′95E±0.′03, h141km±3km, n111, σ1.9s08/162, mb3.7/7, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.52**	**76**	*e*PG	**Pn**	**16 25 55.4**	**-0.1**
DAT				*e*SG	**Sn**	**16 26 10.3**	**-0.7**
DAT	**Datca**	**0.52**	**76**	*e*Pg	**Pn**	**16 25 55.4**	**-0.1**
DAT				*e*Sg	**Sn**	**16 26 10.3**	**-0.6**
BODT	**Bodrum**	**0.54**	**32**	*e*PG	**Pn**	**16 25 55.2**	**-0.4**
BODT				*e*SG	**Sn**	**16 26 09.1**	**-2.2**
BODT	**Bodrum**	**0.54**	**32**	*e*Pg	**Pn**	**16 25 55.2**	**-0.4**
BODT				*e*Sg	**Sn**	**16 26 09.1**	**-2.1**
BDRM	**Kayabasi**	**0.61**	**41**	*i* P	**Pn**	**16 25 55.8**	**-0.2**
BDRM				*i* S	**Sn**	**16 26 10.8**	**-1.1**
BDRM	**Kayabasi**	**0.61**	**41**	*i* P	**Pn**	**16 25 55.8**	**-0.2**
BDRM				*i* S	**Sn**	**16 26 10.8**	**-1.1**
MLSB	**Milas**	**0.96**	**44**	*e*PG	**Pn**	**16 25 57.7**	**-0.9**
MLSB	**Milas**	**0.96**	**44**	*e*Pg	**Pn**	**16 25 57.7**	**-0.9**
ARG	**Arkhangelos**	**1.02**	**112**	*e*Pn	**Pn**	**16 26 00.1**	**+0.9**
ARG				*e*Sn	**Sn**	**16 26 17.7**	**+0.2**
ARG	**Arkhangelos**	**1.02**	**112**	*e*PN	**Pn**	**16 26 00.1**	**+0.9**
ARG				*e*SN	**Sn**	**16 26 17.7**	**+0.2**
ARG	**Arkhangelos**	**1.02**	**112**	P	**Pn**	**16 26 00.0**	**+0.8**
ARG				S	**Sn**	**16 26 14.0**	**-3.5**
ARG	**Arkhangelos**	**1.02**	**112**	P	**Pn**	**16 26 00.0**	**+0.8**
ARG				S	**Sn**	**16 26 14.0**	**-3.5**
ARG				*e*Sn	**Sn**	**16 26 17.7**	**+0.2**
KARP	**Karpathos**	**1.07**	**171**	*e*Pn	**Pn**	**16 26 00.0**	**+0.3**
KARP				*e*Sn	**Sn**	**16 26 18.4**	**+0.1**
KARP	**Karpathos**	**1.07**	**171**	*e*PN	**Pn**	**16 26 00.0**	**+0.3**
KARP				*e*SN	**Sn**	**16 26 18.4**	**+0.1**
KARP	**Karpathos**	**1.07**	**171**	*e*Pn	**Pn**	**16 26 00.0**	**+0.3**
KARP				*e*Sn	**Sn**	**16 26 18.4**	**+0.1**
YER	**Yerkesik**	**1.19**	**63**	*e*PN	**Pn**	**16 26 01.2**	**+0.4**
YER	**Yerkesik**	**1.19**	**63**	*e*Pn	**Pn**	**16 26 01.2**	**+0.4**
APE	**Apeiranthos**	**1.23**	**293**	*e*PN	**Pn**	**16 26 01.5**	**+0.3**
APE	**Apeiranthos**	**1.23**	**293**	*e*Pn	**Pn**	**16 26 01.5**	**+0.3**
AYDN	**Tasoluk**	**1.29**	**35**	*i* P	**Pn**	**16 26 02.0**	**+0.2**
AYDN	**Tasoluk**	**1.29**	**35**	*i* P	**Pn**	**16 26 02.0**	**+0.2**
TURN	**Turunc**	**1.35**	**78**	*i* P	**Pn**	**16 25 59.7**	**-2.8**
TURN	**Turunc**	**1.35**	**78**	*i* P	**Pn**	**16 25 59.7**	**-2.7**
ZKR	**Zakros**	**1.60**	**202**	*e*Pn	**Pn**	**16 26 06.2**	**+1.1**
ZKR				*e*Sn	**Sn**	**16 26 29.7**	**+1.7**
ZKR	**Zakros**	**1.60**	**202**	*e*PN	**Pn**	**16 26 06.2**	**+1.1**
ZKR				*e*SN	**Sn**	**16 26 29.7**	**+1.7**
ZKR	**Zakros**	**1.60**	**202**	P	**Pn**	**16 26 06.1**	**+1.0**
ZKR				S	**Sn**	**16 26 26.7**	**-1.3**
ZKR	**Zakros**	**1.60**	**202**	P	**Pn**	**16 26 06.1**	**+1.0**
ZKR				S	**Sn**	**16 26 26.7**	**-1.3**
ZKR				*e*Sn	**Sn**	**16 26 29.7**	**+1.7**
NPS	**Neapolis**	**1.72**	**219**	*e*Pn	**Pn**	**16 26 06.8**	**+0.3**
NPS				*e*Sn	**Sn**	**16 26 29.4**	**-1.0**
NPS	**Neapolis**	**1.72**	**219**	*e*PN	**Pn**	**16 26 06.8**	**+0.3**
NPS				*e*SN	**Sn**	**16 26 29.4**	**-1.0**
NPS	**Neapolis**	**1.72**	**219**	*e*Pn	**Pn**	**16 26 06.8**	**+0.3**
NPS				*e*Sn	**Sn**	**16 26 29.4**	**-1.0**
LAST	**Lasithi**	**1.87**	**220**	*e*Pb	**Pn**	**16 26 08.4**	**+0.2**
LAST				*e*Sn	**Sn**	**16 26 33.7**	**+0.2**
LAST	**Lasithi**	**1.87**	**220**	*e*PB	**Pn**	**16 26 08.4**	**+0.2**
LAST				*e*SN	**Sn**	**16 26 33.7**	**+0.2**
LAST	**Lasithi**	**1.87**	**220**	P	**Pn**	**16 26 08.3**	**+0.1**
LAST				S	**Sn**	**16 26 32.6**	**-0.9**
LAST	**Lasithi**	**1.87**	**220**	P	**Pn**	**16 26 08.3**	**+0.1**
LAST				S	**Sn**	**16 26 32.6**	**-0.9**
LAST				*e*Sn	**Sn**	**16 26 33.7**	**+0.2**
DNZL	**Cakiroluk**	**2.00**	**56**	*i* P	**Pn**	**16 26 10.6**	**+1.0**
DNZL	**Cakiroluk**	**2.00**	**56**	*i* P	**Pn**	**16 26 10.6**	**+1.0**
DENT	**Denizli**	**2.02**	**55**	*e*PN	**Pn**	**16 26 10.7**	**+0.7**
DENT	**Denizli**	**2.02**	**55**	*e*Pn	**Pn**	**16 26 10.7**	**+0.8**
GLHS	**Glhisar (BURDU**	**2.12**	**74**	*e*PN	**Pn**	**16 26 12.2**	**+1.1**
GLHS	**Glhisar (BURDU**	**2.12**	**74**	*e*Pn	**Pn**	**16 26 12.2**	**+1.1**
AKAS	**Kas**	**2.17**	**99**	*i* P	**Pn**	**16 26 12.9**	**+1.1**
AKAS				*i* S	**Sn**	**16 26 38.9**	**-1.0**
AKAS	**Kas**	**2.17**	**99**	*i* P	**Pn**	**16 26 12.9**	**+1.1**
AKAS				*i* S	**Sn**	**16 26 38.9**	**-1.0**
GOLH	**Golhisar**	**2.19**	**72**	*i* P	**Pn**	**16 26 13.3**	**+1.3**
GOLH				*i* S	**Sn**	**16 26 41.5**	**+1.3**
GOLH	**Golhisar**	**2.19**	**72**	*i* P	**Pn**	**16 26 13.3**	**+1.4**
GOLH				*i* S	**Sn**	**16 26 41.5**	**+1.3**
KULA	**Kula-Manisa**	**2.34**	**35**	*e*PN	**Pn**	**16 26 13.7**	**-0.1**
KULA	**Kula-Manisa**	**2.34**	**35**	*e*Pn	**Pn**	**16 26 13.7**	**-0.1**
SIVA	**Sivas**	**2.35**	**228**	*e*Pn	**Pn**	**16 26 15.1**	**+1.1**
SIVA				*e*Sn	**Sn**	**16 26 45.0**	**+1.2**
SIVA	**Sivas**	**2.35**	**228**	*e*PN	**Pn**	**16 26 15.1**	**+1.1**
SIVA				*e*SN	**Sn**	**16 26 45.0**	**+1.2**
SIVA	**Sivas**	**2.35**	**228**	P	**Pn**	**16 26 14.8**	**+0.8**
SIVA				S	**Sn**	**16 26 43.9**	**+0.1**
SIVA	**Sivas**	**2.35**	**228**	P	**Pn**	**16 26 14.8**	**+0.8**
SIVA	**Sivas**	**2.35**	**228**	*e*Pn	**Pn**	**16 26 15.1**	**+1.1**
SIVA				S	**Sn**	**16 26 43.9**	**+0.1**
SIVA				*e*Sn	**Sn**	**16 26 45.0**	**+1.2**
ELL	**Elmali**	**2.38**	**86**	*e*PN	**Pn**	**16 26 16.2**	**+1.8**
ELL	**Elmali**	**2.38**	**86**	*e*Pn	**Pn**	**16 26 16.2**	**+1.9**
VAM	**Vamos**	**2.53**	**243**	*e*Pb	**Pn**	**16 26 17.1**	**+0.9**
VAM				*e*Sn	**Sn**	**16 26 46.9**	**-0.8**
VAM	**Vamos**	**2.53**	**243**	*e*PB	**Pn**	**16 26 17.1**	**+0.9**
VAM				*e*SN	**Sn**	**16 26 46.9**	**-0.8**
VAM	**Vamos**	**2.53**	**243**	*e*Pb	**Pn**	**16 26 17.1**	**+0.9**
VAM				*e*Sn	**Sn**	**16 26 46.9**	**-0.8**
KHL	**Karahalli**	**2.67**	**49**	*e*PN	**Pn**	**16 26 18.7**	**+0.8**
KHL	**Karahalli**	**2.67**	**49**	*e*Pn	**Pn**	**16 26 18.7**	**+0.8**
KARN	**Karanos**	**2.74**	**245**	*e*PB	**Pn**	**16 26 20.0**	**+1.2**
KARN				*e*SN	**Sn**	**16 26 52.2**	**-0.2**
KARN	**Karanos**	**2.74**	**245**	P	**Pn**	**16 26 19.6**	**+0.8**
KARN				S	**Sn**	**16 26 50.9**	**-1.5**
KARN	**Karanos**	**2.74**	**245**	P	**Pn**	**16 26 19.6**	**+0.8**
KARN	**Karanos**	**2.74**	**245**	*e*Pb	**Pn**	**16 26 20.0**	**+1.2**
KARN				S	**Sn**	**16 26 50.9**	**-1.5**
KARN				*e*Sn	**Sn**	**16 26 52.2**	**-0.2**
KORT	**Korkueli**	**2.76**	**81**	*i* P	**Pn**	**16 26 20.6**	**+1.5**
KORT	**Korkueli**	**2.76**	**81**	*i* P	**Pn**	**16 26 20.6**	**+1.6**
GVD	**Gavdhos**	**2.92**	**234**	*e*Pn	**Pn**	**16 26 22.4**	**+1.3**
GVD	**Gavdhos**	**2.92**	**234**	*e*PN	**Pn**	**16 26 22.4**	**+1.3**
GVD	**Gavdhos**	**2.92**	**234**	P	**Pn**	**16 26 22.4**	**+1.3**
GVD				S	**Sn**	**16 26 56.6**	**0.0**
GVD	**Gavdhos**	**2.92**	**234**	P	**Pn**	**16 26 22.4**	**+1.3**
GVD				S	**Sn**	**16 26 56.6**	**0.0**
ISP	**Isparta**	**3.10**	**66**	*e*Pn	**Pn**	**16 26 24.0**	**+0.6**
ISP	**Isparta**	**3.10**	**66**	*e*Pn	**Pn**	**16 26 24.0**	**+0.6**
ITM	**Ithomi**	**4.07**	**280**	P	**Pn**	**16 26 36.7**	**+0.7**
ITM				S	**Sn**	**16 27 22.4**	**-0.8**
ITM	**Ithomi**	**4.07**	**280**	P	**Pn**	**16 26 36.7**	**+0.7**
ITM				S	**Sn**	**16 27 22.4**	**-0.8**
GAZI	**Gazipasa**	**4.34**	**93**	*i* P	**Pn**	**16 26 39.0**	**-0.6**
GAZI	**Gazipasa**	**4.34**	**93**	*i* P	**Pn**	**16 26 39.0**	**-0.7**
SLUM		**5.30**	**196**	P	**Pn**	**16 26 52.5**	**0.0**
	baz=203						
SLUM				S	**Sn**	**16 27 45.5**	**-7.1**
	baz=203						
SLUM		**5.30**	**196**	P	**Pn**	**16 26 52.5**	**+0.1**
CSS	**Prodhromos**	**5.44**	**106**	*e*Pn	**Pn**	**16 26 52.0**	**-2.3**
CSS				*e*Sn	**Sn**	**16 27 51.1**	**-4.8**
HMAT	**Matruh**	**5.50**	**179**	AMP		16 27 00.0	
	comp=N,30μm,0.3s,logA/T=5.0,baz=184						
BR131	**Keskin Array S**	**6.12**	**57**	*e*Pn	**Pn**	**16 27 06.2**	**+2.8**
BR131	**Keskin Array S**	**6.12**	**57**	*e*Pn	**Pn**	**16 27 06.2**	**+2.9**
BRTR	**Keskin Array B**	**6.12**	**57**	P	**Pn**	**16 27 05.3**	**+2.0**
	comp=N,0.2nm,0.3s,baz=228,slow=15,SNR=7.1						
BRTR	**Keskin Array B**	**6.12**	**57**	P	**Pn**	**16 27 05.3**	**+2.0**
MMAI	**Mount Meron Ar**	**7.82**	**115**	P	**Pn**	**16 27 25.6**	**-0.6**
	comp=N,7.2nm,0.3s,baz=305,slow=12,SNR=34						
MMAI				S	**Sn**	**16 28 50.8**	**-2.5**
	comp=N,3.8nm,0.3s,baz=298,slow=21,SNR=5.9						
AMAG	**Maghara**	**7.91**	**137**	P	**Pn**	**16 27 25.5**	**-1.9**
	baz=135						
AWBH		**8.42**	**168**	P	**Pn**	**16 27 32.9**	**-1.4**
	baz=170						
AWBH		**8.42**	**168**	P	**Pn**	**16 27 32.9**	**-1.4**
ASF	**Jabal al Asfar**	**9.33**	**115**	P	**Pn**	**16 27 47.1**	**+0.6**
	comp=N,0.5nm,0.3s,baz=205,slow=10,SNR=4.0						
HFRF	**Wahat Farafira**	**9.50**	**173**	P	**Pn**	**16 27 48.2**	**-0.5**
	baz=174						
HFRF	**Wahat Farafira**	**9.50**	**173**	P	**Pn**	**16 27 48.2**	**-0.5**
EIL	**Elat**	**9.63**	**134**	P	**Pn**	**16 27 50.7**	**+0.3**
	comp=N,0.4nm,0.3s,baz=45,slow=1.4,SNR=8.2						
EIL				S	**Sn**	**16 29 32.5**	**-4.5**
	comp=N,1.0nm,0.3s,baz=354,slow=5.6,SNR=8.9						
EIL	**Elat**	**9.63**	**134**	P	**Pn**	**16 27 50.7**	**+0.3**
EIL				S	**Sn**	**16 29 32.5**	**-4.5**
EIL	**Elat**	**9.63**	**134**	P	**Pn**	**16 27 50.7**	**+0.3**
SUW	**Suwalki**	**17.61**	**353**	*e*P	**Pn**	**16 29 29.6**	**-1.9**
SUW	**Suwalki**	**17.61**	**353**	*e*P	**Pn**	**16 29 29.6**	**-1.9**
FINES	**FINESS Array B**	**24.87**	**359**	P	**P**	**16 30 42.7**	**-1.6**
	comp=N,2.5nm,1.1s,mb3.7,baz=141,slow=12,SNR=3.6						
FINES	**FINESS Array B**	**24.87**	**359**	P	**P**	**16 30 42.7**	**-1.6**
FINES	**FINESS Array B**	**24.87**	**359**	P	**P**	**16 30 42.7**	**-1.6**
TORD	**Torodi Ar. Bea**	**32.53**	**231**	P	**P**	**16 31 53.7**	**+0.9**
	comp=N,0.9nm,0.4s,mb3.8,baz=28,slow=8.8,SNR=6.9						
ARCES	**ARCESS Array B**	**33.00**	**359**	P	**P**	**16 31 54.0**	**-2.3**
	comp=N,0.8nm,0.9s,mb3.4,baz=159,slow=7.7,SNR=2.8						
KURK	**Kurchatov**	**39.15**	**52**	*e*P	**P**	**16 32 48.7**	**-0.1**
	comp=N,0.7nm,0.4s,mb3.6						
KURK	**Kurchatov**	**39.15**	**52**	*e*P	**P**	**16 32 48.7**	**-0.1**
	comp=N,0.7nm,0.4s,mb3.6						
MK31	**Makanchi Array**	**41.77**	**58**	*e*P	**P**	**16 33 10.8**	**+0.4**
MK31	**Makanchi Array**	**41.77**	**58**	*e*P	**P**	**16 33 10.8**	**+0.3**
MKAR	**Makanchi Array**	**41.77**	**58**	P	**P**	**16 33 11.2**	**+0.8**
	comp=N,1.0nm,0.3s,mb3.9,baz=268,slow=8.8,SNR=7.1						
MKAR	**Makanchi Array**	**41.77**	**58**	P	**P**	**16 33 11.2**	**+0.7**
ZAA0	**Zalesovo Array**	**42.96**	**47**	*e*P	**P**	**16 33 19.1**	**-0.8**
ZAA0	**Zalesovo Array**	**42.96**	**47**	*e*P	**P**	**16 33 19.1**	**-0.8**
ZALV	**Zalesovo Beam**	**42.96**	**47**	P	**P**	**16 33 19.8**	**-0.2**
	comp=N,1.2nm,0.3s,mb4.0,baz=279,slow=9.3,SNR=7.0						
ZALV	**Zalesovo Beam**	**42.96**	**47**	P	**P**	**16 33 19.8**	**-0.2**
SONM	**Songino Array**	**57.45**	**52**	P	**P**	**16 35 09.8**	**+0.7**
	comp=N,0.2nm,0.5s,mb3.2,baz=284,slow=5.8,SNR=2.0						
SONM	**Songino Array**	**57.45**	**52**	P	**P**	**16 35 09.8**	**+0.7**

IDC 18 16:50:00.7±2.0, 8.′46S×126.′16E, h0km, mb3.6/1, mb1 3.4/3, mb1mx3.2/18, mbtmp3.3/3, ML3.1/2, Error ellipse: s-maj=221.0km s-min=33.3km az=60.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.89**	**146**	Pn	Pn	16 53 17.2	-1.7
	0.1nm,0.3s,baz=327,slow=14,SNR=7.6						
WRA				Sn	Sn	16 55 38.0	-16
	0.1nm,0.3s,baz=322,slow=25,SNR=7.1						
ASAR	**Alice Springs**	**16.84**	**155**	Pn	Pn	16 53 59.5	+1.6
	0.1nm,0.3s,baz=323,slow=11,SNR=6.5						
MKAR	**Makanchi Array**	**67.43**	**329**	P	P	17 00 58.2	+0.1
	0.1nm,0.2s,baz=121,slow=7.2,SNR=3.9						

ISCJB ***18*** *17:05:25.1±0.4, 67.′03N±0.′02×21.′03E±0.′08, h0km, Error ellipse: s-maj=4.9km s-min=2.9km az=24.4*
NAO ***18*** *17:05:26.0±1.0, 67.′05N×21.′21E, ML2.0*
UPP ***18*** *17:05:26.7, 66.′99N×21.′07E, h0km, ML2.0, Mining explosion.*
IDC ***18*** *17:05:26.7±1.0, 67.′12N×21.′10E, h0km, mb1 2.9/3, mb1mx2.8/26, mbtmp2.8/3, ML2.2/3, Error ellipse: s-maj=18.1km s-min=8.5km az=114.0*
HEL ***18*** *17:05:26.2±0.1, 67.′06N×20.′88E, h0km, ML2.3, ML2.0(UPP), ML2.0(BER), Explosion*
CSEM ***18*** *17:05:26.0±0.1, 67.′04N×20.′99E, h2km, ML2.0, Error ellipse: s-maj=5.0km s-min=2.6km az=113.0, Mining explosion.*
BER ***18*** *17:05:27.4±4.2, 67.′08N×20.′91E, h0km, ML2.0, ML2.0(NAO), Suspected explosion*

ISC 18 17:05:26.2±0.4, 67.′05N±0.′02×21.′02E±0.′07, h0km, n59, σ0.9s98/81, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HARU	**Harads**	**0.89**	**181**	*i* P	**Pg**	**17 05 42.2**	**-0.9**
HARU	**Harads**	**0.89**	**181**	P	**Pg**	**17 05 42.2**	**-0.9**
LANU	**Lannavaara**	**1.07**	**20**	*e*P	**Pg**	**17 05 45.3**	**-1.4**
LANU				*e*S	**Sg**	**17 06 01.0**	**+0.3**
LANU	**Lannavaara**	**1.07**	**20**	P	**Pg**	**17 05 45.3**	**-1.4**
LANU				S	**Sg**	**17 06 00.9**	**+0.2**
KALU	**Kalix**	**1.52**	**141**	*e*P	**Pn**	**17 05 53.6**	**-0.9**
KALU	**Kalix**	**1.52**	**141**	P	**Pn**	**17 05 53.6**	**-0.9**
SJUU	**Sjulsmark**	**1.56**	**171**	*e*P	**Pn**	**17 05 54.3**	**-0.9**
SJUU	**Sjulsmark**	**1.56**	**171**	P	**Pn**	**17 05 54.3**	**-0.8**
HEF	**Hetta**	**1.70**	**35**	*e*P	**Pn**	**17 05 56.2**	**-0.8**
HEF				*e*S	**Sn**	**17 06 18.7**	**-0.7**
HEF				*e*SN	**Sn**	**17 06 20.1**	**+0.7**
HEF	**Hetta**	**1.70**	**35**	P	**Pn**	**17 05 56.2**	**-0.8**
HEF				S	**Sn**	**17 06 18.6**	**-0.8**
HEF				Sn	**Sn**	**17 06 20.1**	**+0.7**
LILU	**Lilltraesk**	**1.83**	**196**	*e*P	**Pn**	**17 05 58.4**	**-0.4**
LILU	**Lilltraesk**	**1.83**	**196**	P	**Pn**	**17 05 58.3**	**-0.5**
KIF	**Kilpisjarvi**	**1.97**	**358**	*e*P	**Pn**	**17 06 01.1**	**+0.4**
KIF				*e*S	**Sn**	**17 06 26.9**	**+0.8**
KIF	**Kilpisjarvi**	**1.97**	**358**	P	**Pn**	**17 06 01.1**	**+0.4**
KIF				S	**Sn**	**17 06 26.9**	**+0.8**
RNF	**Rovaniemi**	**2.02**	**100**	*e*P	**Pn**	**17 06 01.9**	**+0.4**
RNF				*e*S	**Sn**	**17 06 28.3**	**+0.8**
RNF				*e*SG	**Sg**	**17 06 30.4**	**-0.7**
RNF	**Rovaniemi**	**2.02**	**100**	P	**Pn**	**17 06 01.9**	**+0.4**
RNF				S	**Sn**	**17 06 28.2**	**+0.8**
RNF				Sg	**Sg**	**17 06 30.4**	**-0.7**
KTK1	**Kautokeino**	**2.14**	**22**	*e*P	**Pn**	**17 06 03.9**	**+0.8**
KTK1				*e*Sg	**Sn**	**17 06 32.0**	**+1.6**
KTK1				AML	AML	17 06 38.6	
	comp=Z,20nm,0.2s						
KTK1	**Kautokeino**	**2.14**	**22**	*e*P	**Pn**	**17 06 03.9**	**+0.8**
KTK1				*e*SG	**Sn**	**17 06 32.0**	**+1.6**
KTK1				AML	AML	17 06 38.6	
	comp=Z,20nm,0.2s						
KTK1	**Kautokeino**	**2.14**	**22**	*e*P	**Pn**	**17 06 03.9**	**+0.8**
	SNR=50						
KTK1				Sg	**Sn**	**17 06 31.9**	**+1.5**
	comp=Z,20nm,0.2s						
SGF	**Sodankyl**	**2.18**	**77**	*e*P	**Pn**	**17 06 04.5**	**+0.9**
SGF				*e*S	**Sn**	**17 06 32.8**	**+1.6**
SGF				*e*SG	**Sg**	**17 06 35.2**	**-0.9**
SGF	**Sodankyl**	**2.18**	**77**	P	**Pn**	**17 06 04.4**	**+0.8**
SGF				S	**Sn**	**17 06 32.8**	**+1.6**
SGF				Sg	**Sg**	**17 06 35.1**	**-1.0**
STEI	**Steigen**	**2.39**	**294**	*e*Sg	**Sg**	**17 06 39.4**	**-3.5**
STEI	**Steigen**	**2.39**	**294**	*e*SG	**Sg**	**17 06 39.4**	**-3.5**
STEI	**Steigen**	**2.39**	**294**	Sg	**Sg**	**17 06 39.4**	**-3.6**
BURU	**Burvik**	**2.48**	**176**	*e*P	**Pn**	**17 06 08.3**	**+0.6**
BURU	**Burvik**	**2.48**	**176**	P	**Pn**	**17 06 08.2**	**+0.5**
SVAU	**Svanoeiden**	**2.63**	**194**	*e*P	**Pn**	**17 06 10.0**	**+0.2**
SVAU	**Svanoeiden**	**2.63**	**194**	P	**Pn**	**17 06 09.9**	**+0.1**
MOR8	**Moi Rana**	**2.77**	**255**	*e*Sg	**Sn**	**17 06 48.0**	**+2.3**
MOR8				AML	AML	17 06 54.0	
	comp=Z,15nm,0.2s						
MOR8	**Moi Rana**	**2.77**	**255**	*e*SG	**Sn**	**17 06 48.0**	**+2.3**
MOR8				AML	AML	17 06 54.0	
	comp=Z,15nm,0.2s						
ARA0	**ARCESS Array S**	**3.01**	**32**	Pn	**Pn**	**17 06 14.4**	**-0.5**
	baz=216,slow=16						
ARA0				Sn	**Sn**	**17 06 50.8**	**-0.8**
	baz=203,slow=22						
ARA0	**ARCESS Array S**	**3.01**	**32**	*e*P	**Pn**	**17 06 14.8**	**-0.1**
ARA0	**ARCESS Array S**	**3.01**	**32**	Pn	**Pn**	**17 06 14.4**	**-0.6**
	baz=216,slow=14,SNR=50						
ARA0	**ARCESS Array S**	**3.01**	**32**	P	**Pn**	**17 06 14.8**	**-0.2**
ARA0				Sn	**Sn**	**17 06 50.8**	**-0.8**
	baz=203,slow=21,SNR=50						
ARCES	**ARCESS Array B**	**3.01**	**32**	Pn	**Pn**	**17 06 14.6**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=214,slow=14,SNR=66						
ARCES				Sn	**Sn**	**17 06 51.9**	**+0.3**
	comp=Z,1.0nm,0.3s,baz=209,slow=23,SNR=15						
BREU	**Bredtraesk**	**3.33**	**199**	*e*P	**Pn**	**17 06 19.0**	**-0.4**
BREU	**Bredtraesk**	**3.33**	**199**	P	**Pn**	**17 06 19.0**	**-0.4**
VRF	**Varrio**	**3.39**	**74**	*e*P	**Pn**	**17 06 20.1**	**-0.2**
VRF				MSG		17 07 20.8	
	comp=Z,6.1nm,0.2s						
VRF	**Varrio**	**3.39**	**74**	P	**Pn**	**17 06 20.0**	**-0.3**
KEV	**Kevo**	**3.51**	**36**	MSG		17 07 15.5	
	comp=Z,5.0nm,0.2s						
KU6	**Riekki**	**3.69**	**102**	MSG		17 07 28.8	
	comp=Z,4.5nm,0.2s						
HUSU	**Husum**	**3.80**	**192**	*e*P	**Pn**	**17 06 26.3**	**+0.5**
HUSU	**Husum**	**3.80**	**192**	P	**Pn**	**17 06 26.2**	**+0.4**
APA0	**Apatity Array**	**4.67**	**78**	Pn	**Pn**	**17 06 37.0**	**-0.8**
APA0	**Apatity Array**	**4.67**	**78**	*e*P	**Pn**	**17 06 37.0**	**-0.8**
APA0	**Apatity Array**	**4.67**	**78**	P	**Pn**	**17 06 37.0**	**-0.8**
SUF	**Sumiainen**	**4.86**	**151**	MSG		17 07 44.3	
	comp=Z,3.1nm,0.2s						
KEF	**Keuruu**	**5.17**	**160**	MSG		17 07 49.5	
	comp=Z,5.5nm,0.2s						
FIA0	**FINESS Array S**	**6.04**	**156**	Pn	**Pn**	**17 06 56.5**	**-0.1**
	baz=347,slow=16						
FIA0	**FINESS Array S**	**6.04**	**156**	*e*P	**Pn**	**17 06 56.5**	**-0.1**
FIA0	**FINESS Array S**	**6.04**	**156**	Pn	**Pn**	**17 06 56.5**	**-0.1**
	baz=347,slow=15,SNR=7.3						
FINES	**FINESS Array B**	**6.04**	**156**	Pn	**Pn**	**17 06 57.4**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=353,slow=9.9,SNR=4.0						
FINES				Sn	**Sn**	**17 08 09.1**	**+2.7**
	comp=Z,0.3nm,0.3s,baz=335,slow=24,SNR=12						
NB2	**NORSAR Subarra**	**7.40**	**220**	Pn	**Pn**	**17 07 14.5**	**-0.7**
NB2	**NORSAR Subarra**	**7.40**	**220**	*e*P	**Pn**	**17 07 14.5**	**-0.7**
NB2	**NORSAR Subarra**	**7.40**	**220**	Pn	**Pn**	**17 07 14.5**	**-0.7**
	SNR=50						
NOA	**NORSAR Array B**	**7.40**	**220**	Pn	**Pn**	**17 07 14.3**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=72,slow=20,SNR=2.8						
NOA				Sn	**Sn**	**17 08 41.1**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=72,slow=17,SNR=2.9						
HFS	**Hagfors**	**7.66**	**209**	Pn	**Pn**	**17 07 17.6**	**-1.3**
	baz=28,slow=14						
HFS				Sn	**Sn**	**17 08 42.1**	**-4.1**
	baz=45,slow=22						
HFS	**Hagfors**	**7.66**	**209**	*e*P	**Pn**	**17 07 17.6**	**-1.3**
HFS				*e*S	**Sn**	**17 08 42.1**	**-4.1**
HFS	**Hagfors**	**7.66**	**209**	Pn	**Pn**	**17 07 17.6**	**-1.2**
	baz=28,slow=14,SNR=50						

ISCJB ***18*** *17:42:32.4±0.4, 24.′05N±0.′02×122.′23E±0.′02, h17km±4km, Error ellipse: s-maj=3.6km s-min=2.5km az=153.3*
JMA ***18*** *17:42:32.4±0.3, 24.′24N×122.′13E, h57km, M3.5*
TAP ***18*** *17:42:33.1, 24.′10N×122.′18E, h27km, ML3.8, C*

ISC 18 17:42:32.7±0.5, 24.′08N±0.′02×122.′22E±0.′02, h17km±3km, n59, σ0.8s83/108, 8C-2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.50**	**298**	*e*P	**Pg**	**17 42 43.6**	**+0.9**
	baz=298						
ENA	**Nanau**	**0.56**	**308**	⇓*i*P	**Pg**	**17 42 43.8**	**-0.1**
	baz=315						
ENA				*i* S	**Sg**	**17 42 51.6**	**+0.3**
	baz=315						
TWD

	baz=260						
HATJ	**Hateruma jima**	**1.45 91**	P		**Pn**	**17 42 58.1**	**0.0**
CHN5	**Tsauling**	**1.49 252**	*e*P		**Pn**	**17 42 58.7**	**0.0**
	baz=239						
CHN5			*e*S		**Sn**	**17 43 18.1**	**+0.3**
	baz=239						
WGK	**Gukeng**	**1.57 256**	*e*P		**Pn**	**17 43 00.1**	**+0.4**
	baz=253						
WGK			*e*S		**Sn**	**17 43 20.6**	**+0.9**
	baz=253						
JKRS	**Kuro-shima**	**1.64 84**	P		**Pn**	**17 43 00.8**	**+0.1**
TWG	**Pinlang**	**1.64 220**	*e*P		**Pn**	**17 42 59.2**	**-1.5**
	baz=217						
TWG			*e*S		**Sn**	**17 43 18.5**	**-2.9**
	baz=217						
CHY	**Chiayi**	**1.75 251**	*e*P		**Pn**	**17 43 02.8**	**+0.6**
	baz=248						
CHY			*e*S		**Sn**	**17 43 25.0**	**+0.9**
	baz=248						
JIJ	**Ishigaki jima**	**1.77 80**	P		**Pn**	**17 43 01.6**	**-1.0**
JIJ			*e*S		**Sn**	**17 43 25.0**	**+0.2**
TWK	**Hsinying**	**1.79 243**	P		**Pn**	**17 43 03.2**	**+0.4**
	baz=240						
TWK			*e*S		**Sn**	**17 43 25.7**	**+0.7**
	baz=240						
WTCT	**Ta-ch'eng**	**1.79 263**	P		**Pn**	**17 43 03.2**	**+0.4**
	baz=261						
WTCT			*e*S		**Sn**	**17 43 25.9**	**+0.8**
	baz=261						
SGST	**Jiashian**	**1.80 237**	*e*P		**Pn**	**17 43 03.6**	**+0.6**
	baz=234						
SGST			*e*S		**Sn**	**17 43 25.8**	**+0.4**
	baz=234						
ECL	**Taimali**	**1.88 219**	*e*P		**Pn**	**17 43 02.4**	**-1.7**
	baz=216						
WSF	**Szhu**	**1.88 257**	*e*P		**Pn**	**17 43 05.3**	**+1.2**
	baz=254						
WSF			*e*S		**Sn**	**17 43 28.0**	**+0.6**
	baz=254						
SSD	**Sandimen**	**1.98 228**	*e*P		**Pn**	**17 43 06.4**	**+1.0**
	baz=218						
SSD			*e*S		**Sn**	**17 43 30.1**	**+0.5**
	baz=218						
CHN3	**Shinhua**	**1.98 240**	*e*P		**Pn**	**17 43 06.6**	**+1.2**
	baz=237						
CHN3			*e*S		**Sn**	**17 43 31.3**	**+1.6**
	baz=237						
CHN8	**Yiju**	**1.98 249**	*e*P		**Pn**	**17 43 05.6**	**+0.1**
	baz=246						
CHN8			*e*S		**Sn**	**17 43 30.3**	**+0.4**
	baz=246						
SCLT	**Jiali**	**2.07 245**	*e*P		**Pn**	**17 43 07.3**	**+0.7**
	baz=241						
SCLT			*e*S		**Sn**	**17 43 32.1**	**+0.1**
	baz=241						
TWM1	**Shoushan**	**2.07 233**	*e*P		**Pn**	**17 43 08.2**	**+1.5**
	baz=231						
TWM1			*e*S		**Sn**	**17 43 33.2**	**+1.1**
	baz=231						
TAI1	**Yung-k'ang**	**2.10 241**	*e*P		**Pn**	**17 43 08.2**	**+1.0**
	baz=237						
TAI1			*e*S		**Sn**	**17 43 33.7**	**+0.9**
	baz=237						
EAST	**Anshuo**	**2.11 217**	*e*P		**Pn**	**17 43 07.7**	**+0.4**
	baz=215						
LAY	**Lan-yu**	**2.12 197**	*e*P		**Pn**	**17 43 06.3**	**-1.1**
	baz=195						
SCZT	**Fangliau**	**2.25 221**	*e*P		**Pn**	**17 43 10.5**	**+1.4**
	baz=212						
SCZT			*e*S		**Sn**	**17 43 37.0**	**+0.5**
	baz=212						
JTJ	**Tarama**	**2.33 76**	P		**Pn**	**17 43 10.3**	**+0.1**
HEN	**Hengchun**	**2.48 214**	*e*P		**Pn**	**17 43 14.0**	**+1.7**
	baz=204						
PNG	**Penghu**	**2.50 259**	*e*P		**Pn**	**17 43 11.8**	**-0.7**
	baz=256						
PNG			*e*S		**Sn**	**17 43 41.0**	**-1.6**
	baz=256						
TWK1	**Hengchun**	**2.50 212**	*e*P		**Pn**	**17 43 13.4**	**+0.9**
	baz=209						
TWK1			*e*S		**Sn**	**17 43 40.4**	**-2.1**
	baz=209						
KNM	**Kinmen**	**3.48 276**	*e*P		**Pn**	**17 43 26.3**	**+0.3**
	baz=273						
KNM			*e*S		**Sn**	**17 44 05.8**	**-0.9**
	baz=273						

*ISCJB **18** 17:52:16.5±0.6, 50.°12N±0.°03×18.°41E±0.°03, h0km, Error ellipse: s-maj=4.7km s-min=2.8km az=4.8*
*IPEC **18** 17:52:17.2±0.2, 50.°07N×18.°53E, h1km±2km, ML1.7/4, Error ellipse: s-maj=2.1km s-min=1.1km az=161.0*
*PRU **18** 17:52:18.7, 50.°07N×18.°42E, h0km*
*CSEM **18** 17:52:18.1±0.3, 50.°07N×18.°42E, h1km, ML2.5/7, Error ellipse: s-maj=5.5km s-min=3.0km az=15.0*
*WAR **18** 17:52:18.6, 50.°06N×18.°43E*

ISC 18 17:52:17.7±0.6, 50.°10N±0.°03×18.°43E±0.°03, h0km, n26, σ1§09/45, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.15**	**262**	*e*Pg	**Pg**	**17 52 22.3**	**+1.7**
RAC				*e*Sg	**Sg**	**17 52 25.4**	**+2.9**
OKC	**Ostrava-Krasne**	**0.32**	**214**	*e*PG	**Pg**	**17 52 24.7**	**+0.9**
OKC				*e*SG	**Sg**	**17 52 28.6**	**+0.6**
	comp=Z,49nm,0.5s						
OKC	**Ostrava-Krasne**	**0.32**	**214**	*e*Pg	**Pg**	**17 52 24.1**	**+0.3**
	baz=46						
OKC				Sg	**Sg**	**17 52 28.6**	**+0.6**
	comp=Z,49nm,0.5s						
MORC	**Moravsky Berou**	**0.66**	**240**	*e*Pg	**Pg**	**17 52 30.7**	**+0.4**
	baz=65						
MORC				*e*Sg	**Sg**	**17 52 39.2**	**+0.4**
	comp=Z,15nm,0.2s,baz=65						
OJC	**Ojcow**	**0.89**	**82**	*e*Pg	**Pg**	**17 52 32.7**	**-2.0**
	baz=260						
OJC				*e*Sg	**Sg**	**17 52 45.6**	**-0.7**
JAVC	**Velka Javorina**	**1.34**	**202**	*e*Pg	**Pg**	**17 52 43.8**	**+0.4**
JAVC				*e*Sg	**Sg**	**17 53 00.7**	**0.0**
	comp=Z,7.7nm,0.3s						
DPC	**Dobruska-Polom**	**1.37**	**281**	*e*PG	**Pg**	**17 52 44.3**	**+0.3**
DPC				*e*SG	**Sg**	**17 53 01.9**	**+0.1**
	comp=Z,17nm,0.5s						
DPC	**Dobruska-Polom**	**1.37**	**281**	Pg	**Pg**	**17 52 44.3**	**+0.3**
DPC				*e*Sg	**Sg**	**17 53 02.3**	**+0.5**
	baz=100						
NIE	**Niedzica**	**1.40**	**119**	*e*Pg	**Pg**	**17 52 45.5**	**+0.9**
NIE				*e*Sg	**Sg**	**17 53 04.1**	**+1.4**
NIE	**Niedzica**	**1.40**	**119**	*e*Pg	**Pg**	**17 52 45.5**	**+0.9**
NIE				*e*Sg	**Sg**	**17 53 04.1**	**+1.4**
VRAC	**Vranov**	**1.43**	**237**	*e*Pg	**Pg**	**17 52 44.1**	**-1.0**
	baz=58						
VRAC				*e*Sg	**Sg**	**17 53 03.2**	**-0.5**
	comp=Z,7.6nm,0.1s,baz=58						
KOLL	**Kolacno**	**1.53**	**181**	*e*PG	**Pg**	**17 52 47.5**	**+0.6**
KOLL				*e*SG	**Sg**	**17 53 06.2**	**-0.5**
KOLL	**Kolacno**	**1.53**	**181**	*e*Pg	**Pg**	**17 52 47.6**	**+0.7**
KOLL				*e*Sg	**Sg**	**17 53 06.2**	**-0.5**
UPC	**Upice**	**1.60**	**286**	*e*SG	**Sg**	**17 53 07.8**	**-1.3**
UPC	**Upice**	**1.60**	**286**	Sg	**Sg**	**17 53 07.8**	**-1.3**
VYHS	**Vyhne**	**1.63**	**170**	*e*PN	**Pn**	**17 52 47.7**	**0.0**
VYHS				*e*SN	**Sn**	**17 53 08.5**	**-0.8**
VYHS	**Vyhne**	**1.63**	**170**	*e*Pg	**Pn**	**17 52 47.7**	**0.0**
VYHS				*e*Sg	**Sn**	**17 53 08.5**	**-0.8**
KRUC	**Moravsky**	**1.68**	**232**	*e*Pn	**Pn**	**17 52 48.3**	**0.0**
	baz=53						
KRUC				*e*Sg	**Sg**	**17 53 11.0**	**-0.7**
	comp=Z,5.0nm,0.2s,baz=53						
STHS	**Stebnicka Huta**	**1.95**	**110**	*e*PN	**Pn**	**17 52 56.1**	**+4.1**
STHS				*e*SN	**Sn**	**17 53 17.5**	**+0.3**
STHS	**Stebnicka Huta**	**1.95**	**110**	*e*Pn	**Pn**	**17 52 56.1**	**+4.1**
STHS				*e*Sn	**Sn**	**17 53 17.5**	**+0.3**
KECS	**Kecovo**	**2.11**	**139**	*e*PN	**Pn**	**17 52 53.5**	**-0.7**
KECS				*e*SN	**Sn**	**17 53 16.8**	**-4.3**
PRU	**Pruhonice**	**2.51**	**269**	*e*SG	**Sg**	**17 53 36.4**	**-1.8**
	comp=Z,3.0nm,0.4s						
PRU	**Pruhonice**	**2.51**	**269**	Sg	**Sg**	**17 53 36.4**	**-1.8**
	comp=Z,3.0nm,0.4s						
BRG	**Berggiesshubel**	**2.96**	**287**	SG	**Sg**	**17 53 55.2**	**+2.3**
	comp=Z,2.0nm,0.5s						
KHC	**Kasperske Hory**	**3.30**	**255**	*e*SG	**Sg**	**17 54 01.6**	**-2.0**
	comp=Z,3.4nm,0.4s						
KHC	**Kasperske Hory**	**3.30**	**255**	Sg	**Sg**	**17 54 01.6**	**-2.0**
	comp=Z,3.4nm,0.4s						

IDC 18 18:01:29.2±57.0, 15.°42S×171.°97W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/19, mbtmp3.9/3, Error ellipse: s-maj=1118.0km s-min=208.0km az=79.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**45.22**	**240**	P	P	18 09 48.3	-0.1
	2.0nm,0.8s,baz=80,slow=12,SNR=3.6						
WRA	**Warramunga Arr**	**51.18**	**257**	P	P	18 10 34.2	-0.4
	0.2nm,0.3s,baz=88,slow=7.6,SNR=9.2						
ASAR	**Alice Springs**	**51.41**	**252**	P	P	18 10 36.6	+0.3
	2.5nm,0.6s,baz=88,slow=8.1,SNR=64						

*ISCJB **18** 18:11:04.4±0.4, 43.°74N±0.°03×105.°15W±0.°05, h0km, mb4.0/3, Error ellipse: s-maj=5.7km s-min=4.4km az=33.0*
*NEIC **18** 18:11:06.6±0.3, 43.°72N×105.°21W, h0km, ML3.2, Error ellipse: s-maj=4.8km s-min=3.9km az=125.0, Suspected Mining explosion.*
NEIC 65 km [40 miles] SSE of Gillette.
*IDC **18** 18:11:08.1±2.2, 44.°07N×105.°85W, h0km, mb3.9/3, mb1 3.9/7, mb1mx3.6/26, mbtmp3.7/7, ML3.5/4, Error ellipse: s-maj=86.7km s-min=7.0km az=145.0*

ISC 18 18:11:06.7±0.3, 43.°74N±0.°03×105.°19W±0.°05, h0km, n46, σ0§92/48, mb4.0/3, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.92**	**65**	*e*Pn	**Pg**	**18 11 26.0**	**+1.7**
PHWY	**Pilot Hill**	**2.44**	**185**	*e*Pn	**Pn**	**18 11 47.8**	**+0.1**
RWWY	**Rawlins**	**2.53**	**217**	*e*Pn	**Pn**	**18 11 49.3**	**+0.4**
LAO	**LASA Array**	**3.04**	**346**	*e*Pn	**Pn**	**18 11 56.7**	**+0.7**
RLMT	**Red Lodge**	**3.23**	**297**	*e*Pn	**Pn**	**18 11 58.5**	**-0.1**
PDAR	**Pinedale Array**	**3.33**	**255**	Pn	**Pn**	**18 11 59.6**	**-0.4**
	4.7nm,0.3s,baz=69,slow=15,SNR=71						
PDAR				Lg		18 12 40.9	
	6.3nm,0.3s,baz=90,slow=22,SNR=4.3						
OGNE	**Ogallala**	**3.64**	**139**	*e*Pn	**Pn**	**18 12 05.9**	**+1.7**
GCMT	**Greycliff**	**3.79**	**304**	*e*Pn	**Pn**	**18 12 06.7**	**+0.4**
LOHW	**Long Hollow**	**3.93**	**270**	*e*Pn	**Pn**	**18 12 08.0**	**-0.2**
ISCO	**Idaho Springs**	**3.95**	**185**	*e*Pn	**Pn**	**18 12 09.0**	**+0.6**
YNR	**Norris Junctio**	**4.07**	**286**	*e*Pn	**Pn**	**18 12 12.2**	**+2.1**
AHID	**Auburn Hatcher**	**4.43**	**259**	*e*Pn	**Pn**	**18 12 10.6**	**-4.4**
RRI2	**Red Ridge**	**4.47**	**267**	*e*Pn	**Pn**	**18 12 15.9**	**+0.2**
SMCO	**Snowmass**	**4.75**	**197**	*e*Pn	**Pn**	**18 12 18.7**	**-0.8**
DGMT	**Dagmar**	**4.79**	**8**	*e*Pn	**Pn**	**18 12 21.1**	**+1.1**
HWUT	**Hardware Ranch**	**5.16**	**248**	*e*Pn	**Pn**	**18 12 25.4**	**+0.3**
	13nm,0.5s						
EGMT	**Eagleton**	**5.34**	**325**	*e*Pn	**Pn**	**18 12 26.9**	**-0.7**
	24nm,0.5s						
HRY	**Holter Researc**	**5.55**	**305**	*e*Pn	**Pn**	**18 12 30.6**	**+0.1**
	14nm,0.7s						
DAU	**Daniels Canyon**	**5.60**	**236**	*e*Pn	**Pn**	**18 12 31.9**	**+0.7**
	11nm,0.5s						
SPUT	**South Promonto**	**5.89**	**248**	*e*Pn	**Pn**	**18 12 35.5**	**+0.4**
	6.7nm,0.6s						
HVU	**Hansel Valley**	**5.92**	**253**	*e*Pn	**Pn**	**18 12 35.1**	**-0.4**
	7.0nm,0.5s						
SDCO	**Great Sand Dun**	**5.99**	**182**	*e*Pn	**Pn**	**18 12 36.4**	**-0.1**
	2.7nm,0.7s						
PV04	**Paradox Valley**	**6.03**	**209**	*e*Pn	**Pn**	**18 12 36.4**	**-0.6**
SRU	**San Rafael**	**6.12**	**223**	*e*Pn	**Pn**	**18 12 36.0**	**-2.2**
	14nm,0.4s						
PV01	**Paradox Valley**	**6.15**	**206**	*e*Pn	**Pn**	**18 12 39.8**	**+1.0**
	357nm,0.5s						
ECSD	**EROS Data Cent**	**6.21**	**87**	*e*Pn	**Pn**	**18 12 41.0**	**+1.4**
	6.5nm,0.5s						
TMUT	**Trail Mountain**	**6.33**	**228**	*e*Pn	**Pn**	**18 12 41.6**	**+0.4**
	10nm,0.6s						
CBKS	**Cedar Bluff**	**6.41**	**138**	*e*Pn	**Pn**	**18 12 40.9**	**-1.3**
	20nm,0.7s						
BGU	**Big Grassy Mou**	**6.45**	**247**	*e*Pn	**Pn**	**18 12 42.7**	**-0.2**
	1.6nm,0.3s						
MSO	**Missoula**	**6.91**	**300**	*e*Pn	**Pn**	**18 12 47.9**	**-1.1**
MSU	**Marysvale**	**7.42**	**228**	*e*Pn	**Pn**	**18 12 55.7**	**-0.4**
	6.5nm,0.7s						
BSMT	**Bassoo Peak**	**7.87**	**305**	Pn	**Pn**	**18 13 02.6**	**+0.3**
AGMN	**Agassiz Nation**	**7.93**	**52**	*e*Pn	**Pn**	**18 13 02.1**	**-1.0**
	9.2nm,0.4s						
ELK	**Elko**	**8.03**	**252**	Pn	**Pn**	**18 13 04.8**	**+0.3**
ELK	**Elko**	**8.03**	**252**	Pn	**Pn**	**18 13 04.8**	**+0.3**
	0.3nm,0.3s,baz=58,slow=18,SNR=5.6						
CCUT	**Cedar City**	**8.76**	**228**	*e*Pn	**Pn**	**18 13 14.4**	**-0.1**
ULM	**Lac du Bonnet**	**9.10**	**41**	Pn	**Pn**	**18 13 18.8**	**-0.4**
ULM				Sn	**Sn**	**18 15 01.6**	**-0.7**
ULM				Lg		18 15 53.9	
ULM	**Lac du Bonnet**	**9.10**	**41**	Pn	**Pn**	**18 13 18.8**	**-0.4**
	3.8nm,0.3s,baz=239,slow=11,SNR=12						
ULM				Sn	**Sn**	**18 15 01.6**	**-0.7**
	0.9nm,0.3s,baz=149,slow=6.7,SNR=2.9						
ULM				Lg		18 15 53.9	
	0.8nm,0.3s,baz=307,slow=20,SNR=2.6						
LAZ	**Ladron**	**9.44**	**190**	*e*Pn	**Pn**	**18 13 20.9**	**-3.0**
	4.0nm,0.6s						
WUAZ	**Wupatki**	**9.49**	**212**	Pn	**Pn**	**18 13 24.1**	**-0.5**
	4.2nm,0.6s						
LENM	**Lemitar**	**9.66**	**189**	Pn	**Pn**	**18 13 18.4**	**-8.4**
	4.0nm,0.4s						
FFC	**Flin Flon**	**11.20**	**10**	*e*Pn	**Pn**	**18 13 46.3**	**-1.5**
	3.0nm,0.6s						
NVAR	**Mina Array Bea**	**11.22**	**246**	Pn	**Pn**	**18 13 49.8**	**+1.5**
	0.1nm,0.3s,baz=56,slow=13,SNR=3.7						
ARCES	**ARCESS Array B**	**61.40**	**18**	P	**P**	**18 21 23.4**	**-0.5**
	0.9nm,0.6s,mb4.1,baz=340,slow=6.3,SNR=9.8						
ZALV	**Zalesovo Beam**	**82.32**	**354**	P	**P**	**18 23 29.2**	**-0.6**
	0.6nm,0.5s,mb4.0,baz=328,slow=5.2,SNR=3.5						
MKAR	**Makanchi Array**	**89.61**	**355**	P	**P**	**18 24 05.9**	**-0.1**
	0.4nm,0.8s,mb3.7,baz=23,slow=6.6,SNR=3.8						

*ISCJB **18** 18:12:38.9±0.4, 52.°15N±0.°03×7.°69E±0.°03, h0km, Error ellipse: s-maj=4.0km s-min=2.0km az=150.5*
*CSEM **18** 18:12:39.4±0.2, 52.°25N×7.°63E, h2km, ML3.6/19, Error ellipse: s-maj=5.0km s-min=2.3km az=152.0*
*LDG **18** 18:12:39.4±0.1, 52.°33N×7.°81E, h1km, Ml3.4/21, Error ellipse: s-maj=3.2km s-min=1.8km az=143.0, Suspected Mining induced.*
*STR **18** 18:12:39.8±0.4, 52.°35N×7.°66E, h10km, Ml3.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*NEIC **18** 18:12:39.6, 52.°33N×7.°66E, h5km, ML3.4(STR), ML3.4(LDG), After STR.*
*BUG **18** 18:12:40.1, 52.°33N×7.°70E, h1km, ML3.3*
*BNS **18** 18:12:40.9±0.4, 52.°32N×7.°71E, h1km, ML3.2, Felt in Ibbenbueren-Bockraden*
*BGR **18** 18:12:40.4±0.7, 52.°30N×7.°70E, h1km, ML3.2/17, Error ellipse: s-maj=14.5km s-min=4.4km az=133.0*
*PRU **18** 18:12:41.7, 52.°34N×7.°80E, h13km*

ISC 18 18:12:39.6±0.4, 52.°23N±0.°02×7.°65E±0.°03, h0km, n139, σ1§12/230, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBBN	**Ibbenburen**	**0.10**	**42**	*e*Pg	**Pg**	**18 12 39.9**	**-1.6**
	SNR=46						
IBBN	**Ibbenburen**	**0.10**	**42**	Pg	**Pg**	**18 12 39.9**	**-1.6**
	SNR=46						
WTSB	**Winterswijk**	**0.59**	**243**	*e*Pg	**Pg**	**18 12 53.6**	**+2.8**
	baz=60						
WTSB				*e*Sg	**Sg**	**18 13 04.6**	**+6.2**
BUG	**Bochum--Univer**	**0.83**	**197**	*e*Pg	**Pg**	**18 12 58.2**	**+2.8**
	SNR=52						
BUG				*e*Sg	**Sg**	**18 13 11.5**	**+5.3**
	SNR=6.6						
HOBG	**Hohbusch**	**1.27**	**189**	*e*Pg	**Pg**	**18 13 05.4**	**+1.6**
HOBG				*e*Sg	**Sg**	**18 13 23.4**	**+3.1**
	416nm,0.4s						
HOBG	**Hohbusch**	**1.27**	**189**	Pg	**Pg**	**18 13 05.4**	**+1.5**
BNS	**Bensberg**	**1.31**	**193**	*e*Pg	**Pg**	**18 13 05.6**	**+1.1**
BNS				*e*Sg	**Sg**	**18 13 24.0**	**+2.5**
	479nm,0.6s						
BNS	**Bensberg**	**1.31**	**193**	Pg	**Pg**	**18 13 05.6**	**+1.0**
RODG	**Roetgen-Dahlhe**	**1.42**	**221**	*e*Sg	**Sg**	**18 13 27.9**	**+2.6**
	615nm,0.8s						
NRDL	**Niedersach Rie**	**1.53**	**79**	*e*Pn	**Pn**	**18 13 05.7**	**-2.4**
	SNR=5.7						
NRDL	**Niedersach Rie**	**1.53**	**79**	Pn	**Pn**	**18 13 05.7**	**-2.4**
	SNR=5.7						
GTTG	**Gvttingen**	**1.59**	**115**	*e*Pn	**Pn**	**18 13 08.4**	**-0.6**
	SNR=2.4						
GTTG	**Gvttingen**	**1.59**	**115**	Pn	**Pn**	**18 13 08.4**	**-0.6**
	SNR=2.4						
STB	**Steinbach**	**1.72**	**197**	*e*Pg	**Pg**	**18 13 11.5**	**-1.0**
STB				*e*Sg	**Sg**	**18 13 34.8**	**+0.1**
	148nm,0.3s						
STB	**Steinbach**	**1.72**	**197**	Pg	**Pg**	**18 13 11.5**	**-1.0**
STB				Sg	**Sg**	**18 13 34.8**	**0.0**
	148nm,0.3s						
CLZ	**Clausthal**	**1.73**	**102**	*e*Pn	**Pn**	**18 13 09.9**	**-0.9**
	SNR=21						
CLZ				*e*Sg	**Sg**	**18 13 36.0**	**+0.9**
CLZ	**Clausthal**	**1.73**	**102**	Pn	**Pn**	**18 13 09.9**	**-0.9**
	SNR=21						
CLZ				Sg	**Sg**	**18 13 36.0**	**+0.9**
KLL	**Kalltalsperre**	**1.80**	**208**	*e*Pg	**Pg**	**18 13 13.7**	**-0.3**
KLL				*e*Sg	**Sg**	**18 13 36.3**	**-1.0**
	286nm,0.6s						
KLL	**Kalltalsperre**	**1.80**	**208**	Pg	**Pg**	**18 13 13.7**	**-0.3**
KLL				Sg	**Sg**	**18 13 36.3**	**-1.0**
	286nm,0.6s						
KOE	**Koeppel**	**1.81**	**178**	*e*Pg	**Pg**	**18 13 12.8**	**-1.5**
KOE				*e*Sg	**Sg**	**18 13 36.6**	**-1.2**
	255nm,0.5s						
KOE	**Koeppel**	**1.81**	**178**	Pg	**Pg**	**18 13 12.8**	**-1.5**
KOE				Sg	**Sg**	**18 13 36.6**	**-1.2**
	255nm,0.5s						
HGN	**Heimansgroeve**	**1.82**	**217**	*e*Pn	**Pn**	**18 13 14.3**	**+2.2**
	6.5nm,0.3s,baz=20						
HGN	**Heimansgroeve**	**1.82**	**217**	*e*Pg	**Pg**	**18 13 16.8**	**+2.3**
HGN				*e*Sg	**Sg**	**18 13 40.5**	**+2.4**
HGN	**Heimansgroeve**	**1.82**	**217**	*e*Pn	**Pn**	**18 13 14.3**	**+2.2**
	6.5nm,0.3s						
HGN	**Heimansgroeve**	**1.82**	**217**	*e*Pg	**Pg**	**18 13 16.8**	**+2.3**
HGN				*e*Sg	**Sg**	**18 13 40.5**	**+2.4**
ASSE	**Asse, Remlinge**	**1.86**	**92**	*e*Pn	**Pn**	**18 13 11.2**	**-1.5**
	SNR=2.2						
ASSE				*e*Pg	**Pg**	**18 13 14.9**	**-0.4**
	SNR=5.8						
ASSE				*e*Sg	**Sg**	**18 13 38.7**	**-0.7**
	SNR=2.4						
ASSE	**Asse, Remlinge**	**1.86**	**92**	Pn	**Pn**	**18 13 11.2**	**-1.5**
	SNR=2.2						
MEM	**Membach**	**1.93**	**213**	P	**Pn**	**18 13 16.9**	**+3.4**
BGG	**Burgeitz**	**2.04**	**186**	*e*Pg	**Pn**	**18 13 14.9**	**-0.2**
BGG				*e*Sg	**Sn**	**18 13 41.7**	**+0.4**
	99nm,0.2s						
UBBA	**Unterbreizbach**	**2.04**	**133**	*e*Pn	**Pn**	**18 13 14.7**	**-0.5**
	SNR=2.6						
UBBA				*e*Pg	**Pg**	**18 13 18.7**	**0.0**
	SNR=3.3						
UBBA	**Unterbreizbach**	**2.04**	**133**	Pn	**Pn**	**18 13 14.7**	**-0.4**
	SNR=2.6						
TNS	**Taunus Mts**	**2.08**	**166**	*e*Pn	**Pn**	**18 13 16.4**	**+0.8**
TNS				*e*Pg	**Pg**	**18 13 19.9**	**+0.5**
	SNR=23						
TNS				*e*Sg	**Sg**	**18 13 46.8**	**+0.5**
	SNR=3.6						
TNS	**Taunus Mts**	**2.08**	**166**	Pn	**Pn**	**18 13 16.4**	**+0.8**
BCLA	**Clavier**	**2.34**	**220**	P	**Pn**	**18 13 21.2**	**+2.0**
BCLA	**Clavier**	**2.34**	**220**	P	**Pn**	**18 13 21.2**	**+2.0**
ABH	**Alteburg**	**2.36**	**182**	P	**Pn**	**18 13 19.9**	**+0.4**
ABH				S	**Sn**	**18 13 53.2**	**+4.1**
ABH	**Alteburg**	**2.36**	**182**	P	**Pn**	**18 13 19.9**	**+0.4**
ABH				S	**Sn**	**18 13 53.2**	**+4.1**
RUP	**Ruppelstein**	**2.56**	**189**	P	**Pn**	**18 13 22.8**	**+0.5**
RUP	**Ruppelstein**	**2.56**	**189**	P	**Pn**	**18 13 22.8**	**+0.5**
SNF	**Seneffe**	**2.73**	**232**	P	**Pn**	**18 13 25.8**	**+1.3**
SNF	**Seneffe**	**2.73**	**232**	P	**Pn**	**18 13 25.8**	**+1.2**
TOD	**Tromm**	**2.73**	**164**	P	**Pn**	**18 13 25.2**	**+0.6**
TOD	**Tromm**	**2.73**	**164**	P	**Pn**	**18 13 25.2**	**+0.6**
WLF	**Walferdange**	**2.74**	**201**	P	**Pn**	**18 13 26.6**	**+1.8**
WLF	**Walferdange**	**2.74**	**201**	*e*Pn	**Pn**	**18 13 26.4**	**+1.6**
WLF				*e*Sg	**Sg**	**18 14 07.1**	**-0.5**
	SNR=4.0						
WLF	**Walferdange**	**2.74**	**201**	*e*Pn	**Pn**	**18 13 25.7**	**+0.9**
WLF				*e*Sg	**Sg**	**18 14 07.3**	**-0.3**
WLF	**Walferdange**	**2.74**	**201**	*e*Pn	**Pn**	**18 13 25.7**	**+0.9**
WLF	**Walferdange**	**2.74**	**201**	P	**Pn**	**18 13 26.5**	**+1.7**
WLF				*e*Sg	**Sg**	**18 14 07.3**	**-0.3**
GIVF	**Givet**	**2.78**	**221**	*e*Pg	**Pg**	**18 13 32.9**	**+0.1**
GIVF				*e*Sn	**Sn**	**18 13 57.6**	**-1.9**
GIVF				*e*Sg	**Sg**	**18 14 09.7**	**+0.9**
	69nm,0.4s						
GIVF	**Givet**	**2.78**	**221**	*e*Pn	**Pn**	**18 13 24.8**	**-0.5**
GIVF				*e*Pg	**Pg**	**18 13 32.9**	**+0.1**
GIVF				*e*Sn	**Sn**	**18 13 57.6**	**-1.9**
GIVF				*e*Sg	**Sg**	**18 14 09.7**	**+0.9**
GIVF	**Givet**	**2.78**	**221**	*e*Pn	**Pn**	**18 13 24.8**	**-0.5**
GIVF	**Givet**	**2.78**	**221**	*e*Pg	**Pg**	**18 13 32.9**	**+0.1**
GIVF				*e*Sn	**Sn**	**18 13 57.3**	**-2.2**
GIVF				*e*Sg	**Sg**	**18 14 08.4**	**-0.4**
	34nm,0.4s						
DOU	**Dourbes**	**2.88**	**223**	P	**Pn**	**18 13 27.1**	**+0.5**
DOU	**Dourbes**	**2.88**	**223**	P	**Pn**	**18 13 27.1**	**+0.5**
MOX	**Moxa**	**2.95**	**121**	*e*PN	**Pn**	**18 13 27.7**	**+0.1**
MOX				*i* PG	**Pg**	**18 13 38.4**	**+2.3**
MOX				*i* SG	**Sg**	**18 14

RFYF				*e*Sg	**Sg**	**18 14 43.7**	**-0.1**
	comp=Z,6.6nm,0.3s						
BFO	**Black Forest**	**3.93 173**	*e*Pn		**Pn**	**18 13 41.3**	**+0.1**
	SNR=4.4						
BFO				*e*Sn	**Sn**	**18 14 27.2**	**-0.7**
BFO	**Black Forest**	**3.93 173**	*e*Pn		**Pn**	**18 13 39.9**	**-1.3**
BFO	**Black Forest**	**3.93 173**	Pn		**Pn**	**18 13 41.3**	**+0.2**
	SNR=4.4						
BFO				Sn	**Sn**	**18 14 27.2**	**-0.7**
ECH	**Echery**	**4.04 185**	*e*Pn		**Pn**	**18 13 41.5**	**-1.0**
ECH				*e*Sg	**Sg**	**18 14 50.2**	**+1.0**
ECH	**Echery**	**4.04 185**	*e*Pn		**Pn**	**18 13 41.5**	**-1.0**
ECH				*e*Sg	**Sg**	**18 14 50.2**	**+1.0**
MEZF	**Maizieres J'vi**	**4.09 205**	*e*Pn		**Pn**	**18 13 42.9**	**-0.4**
	baz=1.1						
MEZF				*e*Sg	**Sg**	**18 14 50.9**	**0.0**
	comp=Z,47nm,0.9s						
MEZF	**Maizieres J'vi**	**4.09 205**	*e*Pn		**Pn**	**18 13 42.9**	**-0.4**
MEZF				*e*Sg	**Sg**	**18 14 50.9**	**0.0**
	comp=Z,24nm,0.9s						
THEF	**They Montfort**	**4.15 196**	P		**Pn**	**18 13 44.6**	**+0.5**
THEF	**They Montfort**	**4.15 196**	P		**Pn**	**18 13 44.6**	**+0.5**
BRG	**Berggiesshubel**	**4.16 107**	*e*Pn		**Pn**	**18 13 44.3**	**+0.1**
	SNR=8.1						
BRG	**Berggiesshubel**	**4.16 107**	PN		**Pn**	**18 13 44.3**	**+0.1**
BRG			PG		**Pg**	**18 14 00.3**	**+1.1**
BRG			*e*			18 14 47.2	
BRG	**Berggiesshubel**	**4.16 107**	SG		**Sg**	**18 15 01.4**	**+8.3**
	comp=Z,14nm,1.0s						
BRG	**Berggiesshubel**	**4.16 107**	Pn		**Pn**	**18 13 44.3**	**+0.1**
	SNR=8.1						
HAU	**Haudompre**	**4.32 192**	*e*Pn		**Pn**	**18 13 45.9**	**-0.5**
HAU			*e*Sn		**Sn**	**18 14 34.7**	**-2.7**
HAU			*e*Sg		**Sg**	**18 14 57.8**	**-0.3**
	comp=Z,62nm,0.8s						
HAU	**Haudompre**	**4.32 192**	*e*Pn		**Pn**	**18 13 45.9**	**-0.5**
HAU			*e*Sn		**Sn**	**18 14 34.7**	**-2.7**
HAU			*e*Sg		**Sg**	**18 14 57.8**	**-0.3**
	comp=Z,31nm,0.8s						
SFTF	**Sexfontaines**	**4.37 204**	*e*Pn		**Pn**	**18 13 46.6**	**-0.5**
SFTF			*e*Sg		**Sg**	**18 14 59.6**	**-0.2**
	comp=Z,12nm,0.3s						
SFTF	**Sexfontaines**	**4.37 204**	*e*Pn		**Pn**	**18 13 46.6**	**-0.5**
SFTF			*e*Sg		**Sg**	**18 14 59.6**	**-0.2**
	comp=Z,5.8nm,0.3s						
FELD	**Feldberg im Sc**	**4.37 177**	P		**Pn**	**18 13 48.1**	**+1.0**
FELD	**Feldberg im Sc**	**4.37 177**	P		**Pn**	**18 13 48.1**	**+1.0**
MOF	**Molkenrain**	**4.40 185**	P		**Pn**	**18 13 48.6**	**+1.0**
MOF	**Molkenrain**	**4.40 185**	P		**Pn**	**18 13 48.6**	**+1.0**
HINF	**Hinteralfeld**	**4.45 187**	*e*Pn		**Pn**	**18 13 48.0**	**-0.3**
HINF			*e*Sg		**Sg**	**18 15 02.3**	**-0.2**
	comp=Z,46nm,0.8s						
HINF	**Hinteralfeld**	**4.45 187**	*e*Pn		**Pn**	**18 13 48.0**	**-0.3**
HINF			*e*Sg		**Sg**	**18 15 02.3**	**-0.2**
	comp=Z,23nm,0.8s						
WET	**Wettzell**	**4.54 131**	Pn		**Pn**	**18 13 49.7**	**+0.2**
KHC	**Kasperske Hory**	**4.88 127**	*e*P		**Pn**	**18 13 54.4**	**+0.1**
KHC	**Kasperske Hory**	**4.88 127**	*e*PN		**Pn**	**18 13 55.1**	**+0.9**
KHC			*e*PG		**Pg**	**18 14 08.2**	**-4.9**
KHC			*e*SG		**Sg**	**18 15 17.1**	**+0.7**
	comp=Z,11nm,0.8s						
KHC	**Kasperske Hory**	**4.88 127**	*e*P		**Pn**	**18 13 54.3**	**+0.1**
KHC	**Kasperske Hory**	**4.88 127**	Pn		**Pn**	**18 13 55.1**	**+0.9**
KHC			Sg		**Sg**	**18 15 17.1**	**+0.7**
	comp=Z,11nm,0.8s						
PRU	**Pruhonice**	**4.89 115**	*e*PN		**Pn**	**18 13 54.8**	**+0.5**
PRU			*e*SG		**Sg**	**18 15 15.0**	**-1.6**
	comp=Z,26nm,1.2s						
PRU	**Pruhonice**	**4.89 115**	Pn		**Pn**	**18 13 54.8**	**+0.5**
PRU			Sg		**Sg**	**18 15 15.0**	**-1.6**
	comp=Z,26nm,1.2s						
GEC2	**GERESS Array S**	**5.14 129**	*e*Pn		**Pn**	**18 13 59.0**	**+1.3**
	SNR=5.7						
GEC2	**GERESS Array S**	**5.14 129**	Pn		**Pn**	**18 13 59.0**	**+1.3**
	SNR=5.7						
LOR	**Lormes**	**5.54 208**	*e*Pn		**Pn**	**18 14 03.0**	**-0.3**
	baz=34						
LOR			*e*Sn		**Sn**	**18 15 03.6**	**-4.0**
LOR			*e*Sg		**Sg**	**18 15 35.9**	**-1.7**
	comp=Z,21nm,0.6s						
LOR	**Lormes**	**5.54 208**	*e*Pn		**Pn**	**18 14 03.0**	**-0.3**
LOR			*e*Sg		**Sg**	**18 15 35.9**	**-1.7**
	comp=Z,10nm,0.6s						
RJOB	**Jochberg**	**5.59 142**	*e*Pn		**Pn**	**18 14 05.6**	**+1.7**
RJOB	**Jochberg**	**5.59 142**	Pn		**Pn**	**18 14 05.6**	**+1.7**
CABF	**La Chapelle**	**5.72 191**	*e*Pn		**Pn**	**18 14 05.4**	**-0.3**
CABF			*e*Sg		**Sg**	**18 15 41.9**	**-1.3**
	comp=Z,37nm,1.0s						
CABF	**La Chapelle**	**5.72 191**	*e*Pn		**Pn**	**18 14 05.4**	**-0.3**
CABF			*e*Sg		**Sg**	**18 15 41.9**	**-1.3**
	comp=Z,19nm,1.0s						
DPC	**Dobruska-Polom**	**5.76 106**	*e*SG		**Sg**	**18 15 42.8**	**-1.7**
	comp=Z,6.1nm,0.7s						
SSF	**Saint Saulge**	**5.83 209**	*e*Pn		**Pn**	**18 14 06.9**	**-0.4**
SSF			*e*Sn		**Sn**	**18 15 11.3**	**-3.5**
SSF			*e*Sg		**Sg**	**18 15 45.4**	**-1.5**
	comp=Z,17nm,0.7s						
SSF	**Saint Saulge**	**5.83 209**	*e*Pn		**Pn**	**18 14 06.9**	**-0.4**
SSF			*e*Sg		**Sg**	**18 15 45.4**	**-1.5**
	comp=Z,8.4nm,0.7s						
SMF	**Signal de Mont**	**6.12 205**	*e*Pn		**Pn**	**18 14 10.7**	**-0.5**
SMF			*e*Sn		**Sn**	**18 15 17.9**	**-3.9**
SMF			*e*Sg		**Sg**	**18 15 54.3**	**-1.7**
	comp=Z,12nm,0.6s						
SMF	**Signal de Mont**	**6.12 205**	*e*Pn		**Pn**	**18 14 10.7**	**-0.5**
SMF			*e*Sg		**Sg**	**18 15 54.3**	**-1.7**
	comp=Z,6.1nm,0.6s						
AVF	**Avril sur Loir**	**6.12 209**	*e*Pn		**Pn**	**18 14 10.6**	**-0.6**
AVF			*e*Sg		**Sg**	**18 15 54.4**	**-1.8**
	comp=Z,34nm,1.2s						
AVF	**Avril sur Loir**	**6.12 209**	*e*Pn		**Pn**	**18 14 10.6**	**-0.6**
AVF			*e*Sg		**Sg**	**18 15 54.4**	**-1.8**
	comp=Z,17nm,1.2s						
LDF	**La Druitiere**	**6.16 237**	*e*Pn		**Pn**	**18 14 10.7**	**-1.0**
LDF			*e*Sn		**Sn**	**18 15 18.7**	**-4.1**
	comp=Z,6.6nm,0.5s						
LDF	**La Druitiere**	**6.16 237**	*e*Pn		**Pn**	**18 14 10.7**	**-1.0**
FLN	**La Foliniere**	**6.24 239**	*e*Pn		**Pn**	**18 14 12.3**	**-0.6**
FLN			*e*Sn		**Sn**	**18 15 20.6**	**-4.2**
	comp=Z,7.2nm,0.4s						
FLN	**La Foliniere**	**6.24 239**	*e*Pn		**Pn**	**18 14 12.3**	**-0.6**
LPL	**La Plagne**	**6.75 185**	*e*Pn		**Pn**	**18 14 19.6**	**-0.2**
LPL			*e*Sn		**Sn**	**18 15 33.1**	**-4.3**
	comp=Z,1.7nm,0.5s						
LPL	**La Plagne**	**6.75 185**	*e*Pn		**Pn**	**18 14 19.6**	**-0.2**
LPG	**La Plagne**	**6.77 185**	*e*Pn		**Pn**	**18 14 19.7**	**-0.4**
LPG			*e*Sn		**Sn**	**18 15 33.4**	**-4.4**
	comp=Z,0.9nm,0.2s						
LPG	**La Plagne**	**6.77 185**	*e*Pn		**Pn**	**18 14 19.7**	**-0.4**
KECS	**Kecovo**	**9.02 110**	*e*		**Pn**	**18 14 51.9**	**+0.9**
STHS	**Stebnicka Huta**	**9.06 103**	*e*		**Pn**	**18 14 45.3**	**-6.1**

*ISCJB **18** 18:15:49.2±2.8, 6°.2N±0°.2×127°.0E±0°.3, h165km±23km, mb3.7/9, Error ellipse: s-maj=49.2km s-min=18.3km az=156.0*
*NEIC **18** 18:15:49.3±0.7, 6°.22N×127°.10E, h150km, mb4.4/1, Error ellipse: s-maj=30.9km s-min=12.5km az=72.0*
*IDC **18** 18:15:50.4±11.0, 6°.20N×127°.08E, h160km±112km, mb3.3/8, mb1 3.5/8, mb1mx3.2/22, mbtmp3.3/8, Error ellipse: s-maj=60.1km s-min=16.5km az=63.0*
ISC 18 18:15:49.2±3.0, 6°.2N±0°.2×127°.1E±0°.3, h148km±26km, n10, σ0°51/11, mb3.7/9, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**2.12**	**267**	⇑*i*P	**Pn**	**18 16 25.7**	**0.0**
GSPH				*i* S	**Sn**	**18 16 53.5**	**-0.1**
FITZ	**Fitzroy Crossi**	**24.20**	**183**	P	**P**	**18 20 52.6**	**+0.4**
	2.3nm,1.1s,mb3.6,baz=0.0,slow=8.1,SNR=5.0						
CMAR	**Chiang Mai Arr**	**30.00**	**296**	P	**P**	**18 21 44.2**	**+0.1**
	0.6nm,0.6s,mb3.5,baz=104,slow=7.2,SNR=6.4						
ASAR	**Alice Springs**	**30.44**	**168**	P	**P**	**18 21 47.5**	**-0.4**
	0.1nm,0.4s,mb2.9,baz=347,slow=6.9,SNR=7.2						
ASAR				PcP	PcP	18 24 43.5	-0.4
	0.2nm,0.6s,baz=352,slow=3.7,SNR=5.0						
MKAR	**Makanchi Array**	**55.74**	**324**	P	**P**	**18 25 10.8**	**+0.4**
	0.8nm,0.5s,mb3.8,baz=114,slow=7.5,SNR=20						
ZALV	**Zalesovo Beam**	**58.55**	**332**	P	**P**	**18 25 29.6**	**-0.5**
	0.5nm,0.3s,mb3.8,baz=129,slow=5.3,SNR=4.0						
KURK	**Kurchatov**	**59.86**	**327**	*e*P	**P**	**18 25 39.1**	**0.0**
	4.5nm,0.9s,mb4.3						
BVAR	**Borovoye Array**	**65.45**	**326**	P	**P**	**18 26 16.8**	**+0.7**
	1.0nm,0.5s,mb3.9,baz=134,slow=8.5,SNR=4.6						
ILAR	**Eielson Array**	**82.72**	**26**	P	**P**	**18 27 56.6**	**+0.5**
	0.4nm,0.6s,mb3.4,baz=235,slow=6.1,SNR=4.6						
ARCES	**ARCESS Array B**	**88.25**	**340**	P	**P**	**18 28 22.1**	**-1.2**
	1.7nm,0.9s,mb3.9,baz=65,slow=6.8,SNR=6.1						

MAN 18 18:16:46, 18°.02N×120°.14E, h24km, mb4.4, ML3.3, MS3.1, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**0.54**	**56**	⇓*i*P	Pb	18 16 59.0	+2.1
ABRA	**Dolores**	**0.66**	**124**	*e*P	Pb	18 16 59.2	+0.3
ABRA				*e*S	Sb	18 17 05.2	-2.4
APYP	**Conner**	**1.06**	**99**	*e*P	Pn	18 17 05.0	-0.3
APYP				*e*S	Sb	18 17 15.7	-3.4
BOLP	**Bolinao**	**1.65**	**188**	*e*P	Pn	18 17 14.0	+0.6
BOLP				*e*S	Sn	18 17 25.5	-8.4
CAUP	**Cauayan**	**1.93**	**124**	*e*P	Pn	18 17 19.4	+2.1
SCZP	**Santa Cruz**	**2.25**	**186**	*e*P	Pn	18 17 19.3	-2.4
PALP	**Palanan**	**2.38**	**113**	*e*P	Pn	18 17 25.5	+2.0
BALP	**Baler**	**2.65**	**149**	*e*P	Pn	18 17 28.4	+1.1

TAP 18 18:17:28.3, 23°.66N×121°.56E, h44km, ML3.6, 6C-3D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	**0.06**	**342**	*e*P	Pn	18 17 35.6	+0.3
	baz=334						
TEGC				*e*S	Sn	18 17 41.6	+1.3
	baz=334						
ESL	**Shilin**	**0.20**	**324**	⇑*i*P	Pn	18 17 35.8	-0.2
	baz=318						
ESL				*e*S	Sn	18 17 40.6	-0.8
	baz=318						
ESF	**Shoufeng Towns**	**0.22**	**347**	*e*P	Pn	18 17 36.2	0.0
	baz=338						
EHY	**Hungye**	**0.26**	**236**	⇑*i*P	Pn	18 17 36.4	-0.2
	baz=240						
EHY				S	Sn	18 17 41.5	-0.9
	baz=240						
HWA	**Hwalien**	**0.32**	**8**	P	Pn	18 17 37.4	+0.2
	baz=11						
HWA				*e*S	Sn	18 17 44.1	+0.7
	baz=11						
TWF1	**Yuli**	**0.39**	**219**	⇑*i*P	Pn	18 17 37.6	-0.2
	baz=226						
TWF1				S	Sn	18 17 43.9	-0.7
	baz=226						
TWD	**Chiawan**	**0.42**	**5**	⇓*i*P	Pn	18 17 38.1	-0.2
	baz=356						
TWD				S	Sn	18 17 45.1	-0.2
	baz=356						
WHF	**Hehuan Shan**	**0.56**	**331**	⇑*i*P	Pn	18 17 40.2	+0.2
	baz=331						
WHF				S	Sn	18 17 48.5	+0.2
	baz=331						
SMLT	**Sun Moon Lake**	**0.65**	**291**	⇑*i*P	Pn	18 17 42.0	+0.9
	baz=290						
SMLT				S	Sn	18 17 51.5	+1.2
	baz=290						
ELDTW	**Lidau**	**0.68**	**227**	P	Pn	18 17 41.3	-0.3
	baz=224						
TYC	**Yuchr**	**0.69**	**291**	⇑*i*P	Pn	18 17 42.5	+0.8
	baz=291						
TYC				S	Sn	18 17 52.2	+0.8
	baz=291						
TWT	**Tachien**	**0.69**	**330**	*i* P	Pn	18 17 42.7	+1.0
	baz=330						
TWT				S	Sn	18 17 51.8	+0.4
	baz=330						
ENA	**Nanau**	**0.79**	**12**	⇓*i*P	Pn	18 17 42.8	-0.2
	baz=2.0						
NNS	**Nan Shan**	**0.80**	**348**	*e*P	Pn	18 17 43.4	+0.3
	baz=353						
CHN5	**Tsauling**	**0.81**	**266**	P	Pn	18 17 44.6	+1.3
	baz=266						
CHN5				S	Sn	18 17 56.2	+2.0
	baz=266						
WNT	**Mingjian**	**0.83**	**286**	*e*P	Pn	18 17 44.6	+1.0
	baz=285						
WGK	**Gukeng**	**0.92**	**272**	*e*P	Pn	18 17 45.9	+1.2
	baz=272						
WGK				*e*S	Sn	18 17 59.2	+2.5
	baz=272						
TWG	**Pinlang**	**0.94**	**208**	*e*P	Pn	18 17 44.9	-0.2
	baz=198						
TWG				*e*S	Sn	18 17 54.1	-3.4
	baz=198						
TCU	**Taichung**	**0.94**	**301**	P	Pn	18 17 47.0	+1.8
	baz=301						
TCU				*e*S	Sn	18 18 00.6	+3.1
	baz=301						
TTN	**Taitung**	**0.97**	**203**	*e*P	Pn	18 17 45.9	+0.3
	baz=195						
TWC	**Suao**	**0.98**	**16**	P	Pn	18 17 45.9	+0.2
	baz=4.0						
TWC				S	Sn	18 17 59.4	+0.9
	baz=4.0						
TWQ1	**Liyutan**	**1.00**	**314**	*e*P	Pn	18 17 47.5	+1.6
	baz=313						
TWQ1				S	Sn	18 18 01.6	+2.8
	baz=313						
NSK	**Sanguang**	**1.03**	**350**	⇓*i*P	Pn	18 17 47.0	+0.7
	baz=358						
NSK				S	Sn	18 18 00.0	+0.4
	baz=358						
NSY	**Sanyi**	**1.05**	**316**	*e*P	Pn	18 17 48.0	+1.4
	baz=315						
NSY				*e*S	Sn	18 18 03.3	+3.2
	baz=315						
CHY	**Chiayi**	**1.05**	**262**	*e*P	Pn	18 17 47.6	+1.0
	baz=261						
CHY				*e*S	Sn	18 18 02.3	+2.1
	baz=261						
TWK	**Hsinying**	**1.06**	**249**	*e*P	Pn	18 17 48.3	+1.7
	baz=248						
TWK				*e*S	Sn	18 18 03.0	+2.7
	baz=248						
SGST	**Jiashian**	**1.06**	**238**	*e*P	Pn	18 17 48.5	+1.7
	baz=237						
SGST				*e*S	Sn	18 18 03.4	+3.0
	baz=237						
TWE	**Neicheng**	**1.06**	**5**	P	Pn	18 17 46.5	-0.3
	baz=5.0						
TWE				*e*S	Sn	18 17 60.0	-0.5
	baz=5.0						
NSTT	**Nanjuang**	**1.10**	**332**	*e*P	Pn	18 17 48.4	+1.1
	baz=319						
NSTT				*e*S	Sn	18 18 03.4	+2.1
	baz=319						
WTCT	**Ta-ch'eng**	**1.19**	**280**	*e*P	Pn	18 17 51.1	+2.6
	baz=280						
WTCT				*e*S	Sn	18 18 06.7	+3.2
	baz=280						
ECL	**Taimali**	**1.19**	**208**	*e*P	Pn	18 17 46.9	-1.6
	baz=201						
CHN3	**Shinhua**	**1.24**	**242**	*e*P	Pn	18 17 52.3	+3.1
	baz=242						
CHN3				*e*S	Sn	18 18 08.7	+4.0
	baz=242						
SSD	**Sandimen**	**1.24**	**223**	*e*P	Pn	18 17 50.2	+0.9
	baz=210						
SSD				*e*S	Sn	18 18 07.3	+2.5
	baz=210						
CHN8	**Yiju**	**1.27**	**256**	*e*P	Pn	18 17 50.7	+1.0
	baz=255						
CHN8				*e*S	Sn	18 18 07.7	+2.1
	baz=255						
TWA	**Mucha**	**1.32**	**1**	*e*P	Pn	18 17 51.2	+0.9
	baz=11						
TWM1	**Shoushan**	**1.33**	**232**	*e*P	Pn	18 17 53.2	+2.8
	baz=243						
TWM1				*e*S	Sn	18 18 12.0	+5.0
	baz=243						
SCLT	**Jiali**	**1.34**	**249**	*e*P	Pn	18 17 51.9	+1.3
	baz=248						
SCLT				*e*S	Sn	18 18 09.9	+2.7
	baz=248						
NCU	**National Centr**	**1.35**	**346**	*e*P	Pn	18 17 52.3	+1.6
	baz=344						
NCU				*e*S	Sn	18 18 10.7	+3.2
	baz=344						
TAP1	**Taipei**	**1.38**	**359**	*e*P	Pn	18 17 50.8	-0.3
	baz=357						
TWB1	**Santiao Chiao**	**1.40**	**16**	*e*P	Pn	18 17 52.6	+1.2
	baz=27						
TWB1				*e*S	Sn	18 18 10.3	+1.6
	baz=27						
NWF	**Wu-fen Shan**	**1.42**	**8**	*e*P	Pn	18 17 52.4	+0.7
	baz=6.0						
NWF				*e*S	Sn	18 18 10.8	+1.6
	baz=6.0						
EAST	**Anshuo**	**1.43**	**207**	*e*P	Pn	18 17 50.2	-1.6
	baz=200						
TAW	**Tawu**	**1.43**	**205**	*e*P	Pn	18 17 53.5	+1.7
	baz=197						
TAW				*e*S	Sn	18 18 07.4	-2.0
	baz=197						
TWS1	**Kuangyinshan**	**1.44**	**355**	*e*P	Pn	18 17 53.0	+1.0
	baz=5.0						
TWS1				*e*S	Sn	18 18 11.4	+1.6
	baz=5.0						
SCZT	**Fangliau**	**1.54**	**214**	*e*P	Pn	18 17 54.1	+0.7
	baz=213						
SCZT				*e*S	Sn	18 18 15.3	+3.1
	baz=213						
YOJ	**Yonaguni jima**	**1.55**	**59**	*e*P	Pn	18 17 53.4	-0.1
	baz=58						
LAY	**Lan-yu**	**1.61**	**180**	*e*P	Pn	18 17 53.4	-0.9
	baz=176						
HEN	**Hengchun**	**1.81**	**205**	*e*P	Pn	18 17 58.5	+1.5
	baz=194						
PNG	**Penghu**	**1.84**	**268**	*e*P	Pn	18 17 57.9	+0.5
	baz=256						

MAN 18 18:19:05, 16°.86N×121°.85E, h32km, mb4.7, ML3.6, MS3.6, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAUP	**Cauayan**	**0.09**	**340**	*e*P	Pb	18 19 10.9	+0.4
CAUP				*e*S	Sb	18 19 12.0	-2.4
PALP	**Palanan**	**0.58**	**70**	*e*P	Pb	18 19 17.8	+1.0
PALP				*e*S	Sb	18 19 26.5	+1.6
BALP	**Baler**	**1.14**	**194**	*e*P	Pn	18 19 24.8	0.0
BALP				*e*S	Sn	18 19 36.1	-3.3

MAN 18 18:22:13, 13°.55N×120°.71E, h94km, mb4.6, ML3.5, MS3.5, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.48**	**292**	*e*P	Pn	18 22 29.9	+1.9
LUBP				*e*S	Sn	18 22 36.9	-2.4
BOAC	**Boac**	**1.11**	**94**	*e*P	Pn	18 22 35.2	+1.0
BOAC				*e*S	Sn	18 22 42.5	-7.7
BUSP	**Coron**	**1.61**	**198**	*e*P	Pn	18 22 41.4	+0.9
POLP	**Polilio Island**	**1.67**	**45**	*e*P	Pn	18 22 41.9	+0.7
ENPP	**El Nido**	**2.65**	**208**	*e*P	Pn	18 22 55.0	+1.2
CUYO	**Cuyo Island**	**2.70**	**174**	*e*P	Pn	18 22 55.5	+0.8

IDC 18 18:27:37.4±2.8, 24°.15N×143°.58E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.5/23, mbtmp3.6/5, Error ellipse: s-maj=127.2km s-min=24.5km az=79.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.74**	**192**	P	P	18 35 52.9	+0.2
	0.3nm,0.3s,baz=18,slow=9.1,SNR=19						
ASAR	**Alice Springs**	**48.45**	**192**	P	P	18 36 21.4	-0.3
	0.3nm,0.7s,baz=8.4,slow=6.2,SNR=3.3						
MKAR	**Makanchi Array**	**53.33**	**311**	P	P	18 36 57.1	-1.2
	0.2nm,0.4s,baz=80,slow=9.3,SNR=5.2						
BVAR	**Borovoye Array**	**61.06**	**319**	P	P	18 37 52.7	-0.2
	0.4nm,0.4s,baz=72,slow=4.7,SNR=2.9						
FINES	**FINESS Array B**	**81.13**	**334**	P	P	18 39 55.5	+1.1
	0.8nm,0.6s,baz=49,slow=5.8,SNR=7.4						

*DDA **18** 18:37:30.3, 38°.66N×44°.02E, h7km±6km, Md2.9*
*ISCJB **18** 18:37:33.8±0.8, 38°.77N±0°.03×43°.78E±0°.06, h2km±7km, Error ellipse: s-maj=8.4km s-min=5.2km az=178.7*
*ISK **18** 18:37:33.9, 38°.80N×43°.79E, h9km, MD2.9*
*CSEM **18** 18:37:33.6±0.3, 38°.78N×43°.80E, h2km, MD2.9, Error ellipse: s-maj=8.1km s-min=4.7km az=103.0*
ISC 18 18:37:34.4±0.8, 38°.77N±0°.03×43°.78E±0°.07, h8km±8km, n20, σ1°06/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.35**	**240**	*e*PG	**Pg**	**18 37 41.5**	**+0.3**
VANB	**Van**	**0.35**	**240**	*e*Pg	**Pg**	**18 37 41.5**	**+0.3**
TVAN	**Van**	**0.38**	**230**	*i* P	**Pg**	**18 37 41.2**	**-0.5**
TVAN				*i* S	**Sg**	**18 37 55.3**	**+8.5**
TVAN	**Van**	**0.38**	**230**	*i* P	**Pg**	**18 37 41.2**	**-0.6**
CLDR	**Caldiran**	**0.39**	**16**	*e*PG	**Pg**	**18 37 41.5**	**-0.6**
CLDR	**Caldiran**	**0.39**	**16**	*e*Pg	**Pg**	**18 37 41.5**	**-0.6**
VANT	**Van**	**0.53**	**229**	*e*PG	**Pg**	**18 37 45.4**	**+0.7**
DYDN	**Diyadin**	**0.78**	**355**	*i* P	**Pg**	**18 37 48.7**	**-0.7**
DYDN				*i* S	**Sg**	**18 38 01.1**	**+1.6**
DYDN	**Diyadin**	**0.78**	**355**	*i* P	**Pg**	**18 37 48.7**	**-0.7**
DYDN				*i* S	**Sg**	**18 38 01.1**	**+1.6**
TUTA	**Tutak**	**0.98**	**311**	*i* P	**Pg**	**18 37 52.0**	**-1.3**
TUTA				*i* S	**Sg**	**18 38 08.0**	**+2.0**
TUTA	**Tutak**	**0.98**	**311**	*i* P	**Pg**	**18 37 52.0**	**-1.3**
TUTA				*i* S	**Sg**	**18 38 08.0**	**+2.0**
AGRB	**Hanur-Agry**	**1.01**	**323**	*e*PG	**Pg**	**18 37 52.5**	**-1.3**
AGRB				*e*SG	**Sg**	**18 38 08.0**	**+1.0**
AGRB	**Hanur-Agry**	**1.01**	**323**	*e*Pg	**Pg**	**18 37 52.5**	**-1.3**
AGRB				*e*Sg	**Sg**	**18 38 08.0**	**+1.0**
HKR	**Hakkari**	**1.19**	**181**	*e*PN	**Pn**	**18 37 57.7**	**+0.5**
HKR				*e*SN	**Sn**	**18 38 15.2**	**+1.7**
HKR	**Hakkari**	**1.19**	**181**	*e*Pn	**Pn**	**18 37 57.7**	**+0.4**
HKR				*e*Sn	**Sn**	**18 38 15.3**	**+1.7**
TATV	**Tatvan**	**1.21**	**258**	*i* P	**Pb**	**18 37 56.1**	**-1.4**
TATV				*i* S	**Sb**	**18 38 12.4**	**-0.9**
TATV	**Tatvan**	**1.21**	**258**	*i* P	**Pb**	**18 37 56.1**	**-1.4**
TATV				*i* S	**Sb**	**18 38 12.4**	**-0.8**
HAKT	**HAKKARI**	**1.21**	**183**	*i* P	**Pb**	**18 37 51.4**	**-6.1**
HAKT				*i* S	**Sb**	**

MKAR PcP PcP 18 53 27.2 -0.7
0.5nm,0.7s,baz=218,slow=5.7,SNR=3.6
MKAR LR LR 19 16 39.4
comp=Z,57nm,20.6s,MS3.6,baz=274,slow=36
BRTR Keskin Array B 57.32 329 P P 18 52 39.2 +0.5
1.1nm,0.8s,mb4.0,baz=123,slow=9.0,SNR=6.2
ABKAR Akbulak array 57.59 354 *eP* **P 18 52 39.8 -0.5**
2.0nm,0.8s,mb4.2
KURK Kurchatov 59.31 8 *eP* **P 18 52 51.0 -1.3**
3.6nm,1.1s,mb4.3
KURK *e* 18 52 58.7
MAW Mawson 59.50 182 P **P 18 52 51.4 -2.0**
BVAR Borovoye Array 60.95 2 P **P 18 53 03.8 +0.3**
1.5nm,0.9s,mb4.1,baz=133,slow=8.7,SNR=5.3
ZALV Zalesovo Beam 63.43 11 P **P 18 53 19.4 -0.8**
0.5nm,0.6s,mb3.8,baz=216,slow=7.1,SNR=3.2
ZALV LR LR 19 21 51.6
comp=Z,34nm,18.6s,MS3.5,baz=197,slow=37
ASAR Alice Springs 64.62 112 P **P 18 53 29.1 +0.3**
0.7nm,0.8s,mb3.7,baz=276,slow=6.1,SNR=8.1
ARU Arti 64.81 354 *eP* **P 18 53 28.1 -1.1**
4.8nm,1.0s,mb4.5
WRA Warramunga Arr 64.95 108 P **P 18 53 31.6 +0.7**
1.4nm,1.1s,mb3.9,baz=276,slow=5.9,SNR=4.7
SONM Songino Array 65.17 27 P **P 18 53 32.6 +0.9**
1.4nm,0.6s,mb4.2,baz=217,slow=6.9,SNR=11
SONM LR LR 19 21 10.0
comp=Z,125nm,20.3s,MS4.1,baz=245,slow=35
TLY Talaya 66.93 23 P **P 18 53 43.1 +0.1**
KSRS Korea Array 71.86 46 LR LR 19 27 23.0
comp=Z,62nm,18.1s,MS3.9,baz=253,slow=37
CTA Charters Tower 76.15 109 LR LR 19 23 23.9
comp=Z,94nm,21.4s,MS4.1,baz=118,slow=32
MJAR Matsushiro Arr 79.14 50 LR LR 19 27 59.3
comp=Z,66nm,20.2s,MS4.0,baz=220,slow=34
GUMO Guam 79.16 74 LR LR 19 29 40.7
comp=Z,25nm,19.5s,MS3.5,baz=301,slow=36
ESDC Sonseca Array 81.63 312 P **P 18 55 08.6 -0.4**
0.5nm,0.5s,mb3.7,baz=103,slow=5.6,SNR=3.9
ESDC Sonseca Array 81.63 312 P **P 18 55 08.6 -0.4**
PDAR Pinedale Array 145.44 357 PKPbc PKPbc 19 02 29.7 +0.7
0.9nm,0.7s,baz=27,slow=1.7,SNR=8.2
NVAR Mina Array Bea 149.28 10 PKPbc PKPbc 19 02 39.9 0.0
1.3nm,0.8s,baz=257,slow=2.0,SNR=8.5
TXAR Lajitas Array 157.54 341 PKP PKPdf 19 02 49.0 +1.2
0.3nm,0.8s,baz=337,slow=1.4,SNR=3.5
TXAR Lajitas Array 157.54 341 PKP PKPdf 19 02 49.0 +1.2

MAN 18 18:44:08, 9.93N×122.28E, h31km, mb4.0, ML2.8, MS2.5, 1D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**0.75**	**24**	*eP*	Pn	18 44 23.3	+0.8
GUIM				*eS*	Sb	18 44 34.4	+1.7
SNPH	**Sibulan**	**1.11**	**122**	⇓*iP*	Pn	18 44 28.4	+0.9
SNPH				*i* S	Sn	18 44 42.9	+1.2
CUYO	**Cuyo Island**	**1.54**	**306**	*eP*	Pn	18 44 34.3	+1.0
CUYO				*eS*	Sn	18 44 42.5	-10
BUSP	**Coron**	**2.90**	**315**	*eP*	Pn	18 44 53.8	+1.8
ENPP	**El Nido**	**3.08**	**295**	*eP*	Pn	18 44 55.9	+1.4

*IDC **18** 18:50:16.4±1.8, 54.57N×163.26E, h0km, mb3.3/2, mb1 3.8/3, mb1mx3.3/26, mbtmp3.5/3, ML3.4/1, Error ellipse: s-maj=117.3km s-min=24.9km az=154.0*
*ISCJB **18** 18:50:28.3±0.6, 55.23N±0.04×160.71E±0.09, h169km±5km, mb3.1/2, Error ellipse: s-maj=8.9km s-min=5.3km az=27.1*
*KRSC **18** 18:50:28.1±0.6, 55.20N×160.69E, h166km±26km, ML3.8*
ISC 18 18:50:29.2±0.6, 55.22N±0.04×160.70E±0.09, h166km±5km, n22, σ0§69/37, mb3.1/2, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMNR	**Kamenistaya**	**0.59**	**334**	*iP*	**Pn**	**18 50 53.4**	**+0.7**
KMNR				*i* S	**Sn**	**18 51 11.7**	**+0.8**
BZMR	**Bezymyannaya**	**0.72**	**351**	P	**Pn**	**18 50 53.8**	**+0.4**
BZMR				*i* S	**Sn**	**18 51 12.8**	**+0.6**
KPT	**Kopyto**	**0.79**	**340**	*iP*	**Pn**	**18 50 53.7**	**-0.2**
ZLN	**Zelenaya**	**0.80**	**4**	*eP*	**Pn**	**18 50 54.7**	**+0.8**
ZLN				*i* S	**Sn**	**18 51 13.7**	**+0.7**
MKZ	**Mys Kozlova**	**0.90**	**138**	*eP*	**Pn**	**18 50 54.9**	**+0.3**
MKZ				*i* S	**Sn**	**18 51 14.2**	**+0.1**
KOZ	**Kozyrevsk**	**0.96**	**331**	*iP*	**Pn**	**18 50 55.0**	**-0.1**
KOZ				*i* S	**Sn**	**18 51 14.2**	**-0.8**
KRSR	**Krestovskiy**	**1.00**	**356**	*iP*	**Pn**	**18 50 55.6**	**+0.2**
KRSR				*eS*	**Sn**	**18 51 15.4**	**-0.2**
KLY	**Klyuchi**	**1.09**	**359**	*iP*	**Pn**	**18 50 56.2**	**+0.1**
KLY				*i* S	**Sn**	**18 51 16.3**	**-0.6**
SRDR	**Sredinnyy**	**1.23**	**334**	*iP*	**Pn**	**18 50 56.8**	**-0.5**
SRDR				*i* S	**Sn**	**18 51 18.1**	**-0.9**
KII	**Karymskiy**	**1.40**	**212**	*eP*	**Pn**	**18 50 59.5**	**+0.6**
SRKR	**Sorokina**	**1.46**	**10**	*eP*	**Pn**	**18 50 59.6**	**+0.2**
SRKR				*i* S	**Sn**	**18 51 22.5**	**-0.4**
KBTR	**Krutoberegovo**	**1.55**	**50**	*iP*	**Pn**	**18 51 00.4**	**0.0**
KBTR				*i* S	**Sn**	**18 51 23.9**	**-0.6**
SPN	**Mys Shipunski**	**2.17**	**191**	*iP*	**Pn**	**18 51 06.1**	**-1.0**
SPN				*i* S	**Sn**	**18 51 34.5**	**-1.9**
GNL	**Ganaly**	**2.22**	**228**	*iP*	**Pn**	**18 51 08.0**	**+0.2**
AVH	**Avacha**	**2.28**	**211**	*iP*	**Pn**	**18 51 09.2**	**+0.8**
AVH				*eS*	**Sn**	**18 51 38.8**	**+0.2**
PET	**Petropavlovsk**	**2.51**	**209**	*iP*	**Pn**	**18 51 11.2**	**0.0**
PET				*i* S	**Sn**	**18 51 42.7**	**-0.9**
PETK	**Petropavlovsk-**	**2.76**	**221**	Pn	**Pn**	**18 51 14.2**	**+0.1**
	3.3nm,0.3s,baz=62,slow=16,SNR=86						
PETK				Sn	**Sn**	**18 51 55.9**	**+7.0**
	baz=85,slow=19,SNR=2.2						
BKI	**Bering**	**3.02**	**88**	*iP*	**Pn**	**18 51 18.0**	**+0.7**
BKI				*i* S	**Sn**	**18 51 54.9**	**+0.2**
MIPR	**Malaya Ipel'ka**	**3.77**	**220**	P	**Pn**	**18 51 26.8**	**0.0**
ALID	**Alaid**	**5.35**	**218**	P	**Pn**	**18 51 49.0**	**+1.6**
ILAR	**Eielson Array**	**27.09**	**48**	P	**P**	**18 55 54.4**	**-1.5**
	0.2nm,0.4s,mb3.1,baz=261,slow=7.4,SNR=6.2						
TXAR	**Lajitas Array**	**69.49**	**68**	P	**P**	**19 01 19.6**	**+0.2**
	0.2nm,0.4s,mb3.2,baz=294,slow=5.3,SNR=3.8						

*MAN **18** 18:54:09, 6.07N×126.28E, h128km, mb5.1, ML4.1, MS4.3*
*ISCJB **18** 18:54:10.9±0.4, 6.12N±0.03×126.14E±0.06, h138km±3km, mb4.0/28, Error ellipse: s-maj=10.7km s-min=4.6km az=166.2*
*BJI **18** 18:54:10.2, 6.10N×126.10E, h133km, mB4.9/3, mb4.4/3*
*NEIC **18** 18:54:12.3±0.7, 6.13N×126.07E, h134km±7km, mb4.1/13, Error ellipse: s-maj=12.0km s-min=5.2km az=70.0*
*IDC **18** 18:54:12.1±1.1, 6.07N×125.97E, h128km±9km, mb3.7/15, mb1 3.9/15, mb1mx3.8/23, mbtmp3.7/15, MS3.9/2, Ms1 3.9/2, ms1mx3.0/35, Error ellipse: s-maj=26.1km s-min=10.8km az=73.0*
*DJA **18** 18:54:17, 5.68N×126.41E, h128km, MLv4.8/5*
ISC 18 18:54:12.0±0.4, 6.12N±0.03×126.15E±0.06, h131km±3km, n66, σ1§11/76, mb4.0/28, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.83**	**7**	*eP*	**Pn**	**18 54 32.2**	**-1.3**
MATI				*eS*	**Sn**	**18 54 46.0**	**-3.8**
DAV	**Davao City (W)**	**1.10**	**329**	P	**Pn**	**18 54 35.7**	**-0.3**
	498nm,0.3s,baz=238,slow=1.9,SNR=110						
DAV	**Davao City (W)**	**1.10**	**329**	*ePn*	**Pn**	**18 54 35.5**	**-0.5**
DAV				*eSn*	**Sn**	**18 54 54.0**	**+6.5**
DMPH	**Davao City--Mi**	**1.15**	**326**	*eP*	**Pn**	**18 54 35.9**	**-0.6**
DMPH				*i* S	**Sn**	**18 54 55.2**	**+6.5**
GSPH	**General Santos**	**1.20**	**269**	⇑*iP*	**Pn**	**18 54 33.9**	**-2.9**
GSPH				*i* S	**Sn**	**18 54 52.2**	**+2.6**
KCP	**Kidapawan**	**1.38**	**310**	⇑*iP*	**Pn**	**18 54 38.1**	**-0.7**
KCP				*i* S	**Sn**	**18 54 59.0**	**+4.8**
BUKP	**Musuan**	**2.06**	**328**	*eP*	**Pn**	**18 54 47.0**	**+0.3**
BUKP				*eS*	**Sn**	**18 55 14.1**	**+3.5**
CTBH	**Cotabato--PC H**	**2.19**	**300**	*eP*	**Pn**	**18 54 47.3**	**-1.0**
CTBH				*i* S	**Sn**	**18 55 15.0**	**+1.3**
CGP	**Cagayan de Oro**	**2.73**	**328**	⇓*eP*	**Pn**	**18 54 54.9**	**-0.4**
CGP				*i* S	**Sn**	**18 55 30.4**	**+3.4**
BUTP	**Butuan**	**2.88**	**350**	*eP*	**Pn**	**18 54 58.2**	**+1.1**
BUTP				*eS*	**Sn**	**18 55 26.2**	**-4.4**
PAGZ	**Pagadian**	**3.24**	**302**	*eP*	**Pn**	**18 55 01.9**	**+0.1**
PAGZ				*eS*	**Sn**	**18 55 42.3**	**+3.0**
TBP	**Tagbilaran**	**4.21**	**328**	*eP*	**Pn**	**18 55 16.5**	**+1.8**
MNI	**Manado**	**4.82**	**196**	P	**Pn**	**18 55 24.1**	**+1.3**
MNI				S	**Sn**	**18 56 17.0**	**-0.6**
TNTI	**Ternate**	**5.45**	**167**	P	**Pn**	**18 55 29.8**	**-1.4**

TNTI S **Sn 18 56 28.6 -4.1**
KMSI Cibinong 5.92 202 P **Pn 18 55 38.2 +0.7**
0.5nm1μm146nm,1.0s
MRSI Marisa 7.00 217 P **Pn 18 55 53.0 +0.9**
0.4nm1μm83nm,0.7s
LUWI Luwuk 7.87 205 P **Pn 18 56 06.3 +2.5**
0.5nm763nm65nm,1.1s
ENPP El Nido 8.35 308 *eP* **Pn 18 56 12.2 +1.9**
LUBP Lubang 9.54 323 *eP* **Pn 18 56 18.8 -7.5**
KSM Kuching 16.46 254 Pn **Pn 18 57 56.5 +0.9**
3.0nm,0.7s
KAKA Kakadu 19.72 162 *eP* **P 18 58 31.9 +0.4**
56nm,0.6s
KAKA Kakadu 19.72 162 *eP* **P 18 58 31.6 +0.1**
168nm,0.6s
KNA Kununurra 21.88 173 *eP* **P 18 58 54.3 -0.2**
29nm,1.0s,mb4.7
KNA Kununurra 21.88 173 P **P 18 58 54.6 +0.1**
WRAB Tennant Creek 27.11 163 *eP* **P 18 59 43.4 +0.5**
4.1nm,0.5s,mb4.3
WRA Warramunga Arr 27.12 163 P **P 18 59 42.5 -0.4**
2.0nm,0.4s,mb4.1,baz=342,slow=10,SNR=29
WB2 Warramunga Arr 27.12 163 *eP* **P 18 59 42.3 -0.6**
MBWA Marble Bar 27.83 193 *eP* **P 18 59 48.3 -0.9**
2.5nm,0.5s,mb4.2
ENH Enshi 28.69 329 P **P 18 59 56.5 -0.3**
CMAR Chiang Mai Arr 29.22 297 P **P 19 00 01.4 -0.2**
0.9nm,0.7s,mb3.6,baz=106,slow=6.7,SNR=7.8
CMAR ScP ScP 19 06 36.2 +0.6
0.9nm,0.6s,baz=130,slow=1.7,SNR=6.6
ASAR Alice Springs 30.55 166 P **P 19 00 13.4 +0.1**
2.4nm,0.6s,mb4.1,baz=347,slow=7.0,SNR=49
ASAR PcP PcP 19 03 09.6 +0.5
0.4nm,0.5s,baz=346,slow=2.7,SNR=4.6
ASAR ScP ScP 19 06 41.1 +1.3
0.2nm,0.6s,baz=348,slow=2.9,SNR=4.1
KSRS Korea Array 31.23 3 P **P 19 00 20.8 +1.6**
1.9nm,0.7s,mb3.9,baz=188,slow=10,SNR=9.8
XAN Xi'an 32.04 332 P **P 19 00 25.0 -1.3**
CTAO Charters Tower 32.70 143 *eP* **P 19 00 33.4 +1.2**
3.4nm,0.8s,mb4.1
BJT Baijiatuan 34.93 347 *eP* **P 19 00 51.3 +0.1**
12nm,0.4s,mb4.9
EIDS Eidsvold 39.59 143 *eP* **P 19 01 30.7 0.0**
NWAO Narrogin (SRO) 39.74 192 P **P 19 01 32.4 +0.5**
34nm,1.1s,mb4.9,baz=50,slow=7.3,SNR=3.3
BBOO Buckleboo 39.84 167 *eP* **P 19 01 33.5 +0.8**
7.5nm,0.4s,mb4.7
STKA Stephens Creek 40.55 160 *eP* **P 19 01 38.8 +0.2**
6.2nm,0.6s,mb4.4
STKA Stephens Creek 40.55 160 P **P 19 01 39.2 +0.6**
8.2nm,0.7s,mb4.5,baz=334,slow=8.4,SNR=16
STKA LR LR 19 19 12.4
comp=Z,173nm,18.8s,baz=114,slow=37
STKA Stephens Creek 40.55 160 *eP* **P 19 01 39.1 +0.5**
2.0nm,0.7s,mb3.9
STKA LR LR 19 19 12.4
ARMA Armidale 43.77 148 *eP* **P 19 02 05.6 +0.9**
ULN Ulaanbaatar 44.69 342 *eP* **P 19 02 12.3 +0.5**
2.3nm,0.9s,mb3.8
SONM Songino Array 44.87 341 P **P 19 02 13.6 +0.4**
0.9nm,0.7s,mb3.5,baz=153,slow=7.5,SNR=6.4
SONM PcP PcP 19 03 53.9 +1.3
0.3nm,0.6s,baz=165,slow=5.4,SNR=4.2
PETK Petropavlovsk- 53.46 23 P **P 19 03 20.6 +2.1**
0.8nm,0.6s,mb3.6,baz=183,slow=2.5,SNR=2.7
PETK Petropavlovsk- 53.46 23 P **P 19 03 20.6 +2.1**
MK31 Makanchi Array 55.28 325 *eP* **P 19 03 30.8 -1.0**
MKAR Makanchi Array 55.28 325 P **P 19 03 31.3 -0.5**
0.7nm,0.4s,mb3.8,baz=115,slow=7.1,SNR=11
MKAR PcP PcP 19 04 29.7 -1.3
0.4nm,0.3s,baz=108,slow=4.0,SNR=3.9
MKAR Makanchi Array 55.28 325 P **P 19 03 31.3 -0.5**
MKAR PcP PcP 19 04 29.7 -1.3
YAK Yakutsk 55.86 2 *eP* **P 19 03 36.2 +0.6**
11nm,0.9s,mb4.7
UCH Uchtor 58.04 317 P **P 19 03 51.7 +0.3**
ZALV Zalesovo Beam 58.21 333 P **P 19 03 51.5 -0.9**
0.3nm,0.3s,mb3.6,baz=113,slow=11,SNR=2.5
AML Almayashu 58.57 316 P **P 19 03 55.0 0.0**
1.3nm,0.7s,mb3.9
EKS2 Erkin-Say 58.72 317 P **P 19 03 55.1 -1.0**
KURK Kurchatov 59.43 327 *eP* **P 19 03 59.9 -1.0**
1.9nm,0.6s,mb4.1
KBL Kabul 59.63 307 *eP* **P 19 04 01.9 -0.6**
3.4nm,0.8s,mb4.2
ABKAR Akbulak array 69.95 320 *eP* **P 19 05 08.0 -1.1**
0.7nm,0.6s,mb3.6
AKTO Aktyubinsk 71.44 321 LR LR 19 40 02.0
comp=Z,65nm,19.8s,baz=279,slow=38
ARU Arti 72.62 327 P **P 19 05 24.0 -1.0**
2.3nm,0.7s,mb4.0
ILAR Eielson Array 83.21 26 P **P 19 06 23.3 -0.1**
0.3nm,0.6s,mb3.2,baz=279,slow=5.7,SNR=3.2
MMAI Mount Meron Ar 87.33 303 P **P 19 06 44.9 +0.3**
0.8nm,0.6s,mb3.7,baz=76,slow=6.1,SNR=3.1
ARCES ARCESS Array B 88.02 340 P **P 19 06 46.9 -0.2**
2.1nm,0.7s,mb4.1,baz=90,slow=6.1,SNR=10
ARE0 ARCESS Array S 88.02 340 P **P 19 06 45.8 -1.3**
BRTR Keskin Array B 88.06 310 P **P 19 06 46.9 -1.1**
0.5nm,0.6s,mb3.5,baz=114,slow=5.5,SNR=4.3
FINES FINESS Array B 89.47 332 P **P 19 06 53.8 -0.3**
2.8nm,0.7s,mb4.3,baz=96,slow=3.8,SNR=8.7
DBIC Dimbokro 129.49 284 PKP PKPdf 19 13 07.3 +0.9
2.6nm,0.8s,baz=166,slow=4.2,SNR=4.1

*IDC **18** 19:08:54.0±1.4, 21.06N×122.23E, h0km, mb3.9/4, mb1 4.0/5, mb1mx3.6/23, mbtmp3.9/5, ML3.8/1, Error ellipse: s-maj=72.0km s-min=23.6km az=69.0*
*NEIC **18** 19:08:55.1±1.2, 21.24N×122.36E, h10km, mb4.0/1, Error ellipse: s-maj=43.1km s-min=14.4km az=71.0*
*TAP **18** 19:08:58.0, 21.34N×122.14E, h24km±1km, ML3.9, D*
*ISCJB **18** 19:08:60.0±0.8, 21.42N±0.04×122.20E±0.04, h35km±9km, mb3.7/5, Error ellipse: s-maj=6.9km s-min=6.4km az=44.3*
ISC 18 19:09:00.1±1.0, 21.41N±0.04×122.13E±0.04, h21km±8km, n49, σ1§10/79, mb3.7/5, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.82**	**319**	*iP*	**Pb**	**19 09 14.5**	**-1.2**
	baz=322						
LAY				*i* S	**Sb**	**19 09 26.6**	**+0.2**
	baz=322						
TSEB	**Hengchuen, Pin**	**1.24**	**293**	P	**Pn**	**19 09 21.7**	**-0.5**
	baz=295						
TSEB				S	**Sn**	**19 09 39.0**	**+0.6**
	baz=295						
TWK1	**Hengchun**	**1.34**	**293**	P	**Pn**	**19 09 22.5**	**-1.0**
	baz=296						
TWK1				S	**Sn**	**19 09 40.0**	**-0.8**
	baz=296						
HEN	**Hengchun**	**1.42**	**295**	*eP*	**Pn**	**19 09 23.9**	**-0.8**
	baz=310						
HEN				S	**Sn**	**19 09 42.9**	**+0.1**
	baz=310						
TAW	**Tawu**	**1.48**	**310**	P	**Pn**	**19 09 25.0**	**-0.5**
	baz=312						
TAW				S	**Sn**	**19 09 43.2**	**-1.0**
	baz=312						
EAST	**Anshuo**	**1.53**	**309**	*iP*	**Pn**	**19 09 25.4**	**-0.8**
	baz=311						
EAST				S	**Sn**	**19 09 44.8**	**-0.7**
	baz=311						
ECL	**Taimali**	**1.60**	**317**	*eP*	**Pn**	**19 09 25.7**	**-1.5**
	baz=319						
ECL				*eS*	**Sn**	**19 09 46.4**	**-1.0**
	baz=319						
SCZT	**Fangliau**	**1.70**	**305**	*eP*	**Pn**	**19 09 27.8**	**-0.7**
	baz=319						
SCZT				S	**Sn**	**19 09 49.7**	**+0.1**
	baz=319						
TWG	**Pinlang**	**1.71**	**325**	*ePn*	**Pn**	**19 09 26.5**	**-2.2**
TWG	**Pinlang**	**1.71**	**325**	*eP*	**Pn**	**19 09 27.8**	**-0.8**
	baz=311						
TWG				*eS*	**Sn**	**19 09 49.5**	**-0.4**
	baz=311						
SSD	**Sandimen**	**1.92**	**314**	*eP*	**Pn**	**19 09 30.9**	**-0.7**
	baz=316						
SSD				*eS*	**Sn**	**19 09 54.9**	**-0.2**
	baz=316						
ELDTW	**Lidau**	**2.04**	**330**	*eP*	**Pn**	**19 09 31.9**	**-1.4**
	baz=319						
ELDTW				*eS*	**Sn**	**19 09 57.4**	**-0.8**
	baz=319						
TWF1	**Yuli**	**2.08**	**338**	P	**Pn**	**19 09 32.9**	**-0.9**
	baz=348						
TWF1				*eS*	**Sn**	**19 09 57.9**	**-1.1**
	baz=348						
TWM1	**Shoushan**	**2.12**	**312**	*eP*	**Pn**	**19 09 36.6**	**+2.3**
	baz=313						
YULB	**Yu-li**	**2.12**	**339**	*ePn*	**Pn**	**19 09 32.7**	**-1.6**
SGST	**Jiashian**	**2.19**	**320**	*eP*	**Pn**	**19 09 35.7**	**+0.3**
	baz=321						
SGST				*eS*	**Sn**	**19 10 03.2**	**+1.4**
	baz=321						
EHY	**Hungye**	**2.21**	**340**	P	**Pn**	**19 09 34.8**	**-0.8**
	baz=351						
CHN3	**Shinhua**	**2.33**	**316**	*eP*	**Pn**	**19 09 39.6**	**+2.5**
	baz=317						
TPUB	**Ta-pu**	**2.34**	**324**	*ePn*	**Pn**	**19 09 38.3**	**+1.0**
TWK	**Hsinying**	**2.39**	**321**	*eP*	**Pn**	**19 09 38.7**	**+0.7**
	baz=323						
TWK				*eS*	**Sn**	**19 10 08.9**	**+2.2**
	baz=323						
ESL	**Shilin**	**2.47**	**345**	P	**Pn**	**19 09 37.6**	**-1.6**
	baz=355						
ESL				S	**Sn**	**19 10 08.0**	**-0.8**
	baz=355						
CHN5	**Tsauling**	**2.55**	**329**	P	**Pn**	**19 09 42.4**	**+2.1**
	baz=330						
CHN5				*eS*	**Sn**	**19 10 15.7**	**+4.9**
	baz=330						
HWA	**Hwalien**	**2.60**	**349**	*eP*	**Pn**	**19 09 39.7**	**-1.2**
	baz=350						
CHY	**Chiayi**	**2.61**	**323**	*eP*	**Pn**	**19 09 42.4**	**+1.4**
	baz=309						
WGK	**Gukeng**	**2.69**	**328**	*eP*	**Pn**	**19 09 43.6**	**+1.5**
	baz=329						
WGK				*eS*	**Sn**	**19 10 16.8**	**+2.8**
	baz=329						
TWD	**Chiawan**	**2.70**	**350**	*eP*	**Pn**	**19 09 41.5**	**-0.8**
	baz=350						
SMLT	**Sun Moon Lake**	**2.71**	**335**	*eP*	**Pn**	**19 09 43.7**	**+1.3**
	baz=346						
SMLT				*eS*	**Sn**	**19 10 14.6**	**+0.1**
	baz=346						
TYC	**Yuchr**	**2.74**	**335**	*eP*	**Pn**	**19 09 44.2**	**+1.3**
	baz=337						
TYC				*eS*	**Sn**	**19 10 16.8**	**+1.4**
	baz=337						
NACB	**Ninganchiao**	**2.79**	**350**	*ePn*	**Pn**	**19 09 41.8**	**-1.7**
NACB				*eSn*	**Sn**	**19 10 14.8**	**-1.8**
WNT	**Mingjian**	**2.79**	**332**	*eP*	**Pn**	**19 09 45.5**	**+1.9**
	baz=320						
WNT				*eS*	**Sn**	**19 10 17.7**	**+1.1**
	baz=320						
WHF	**Hehuan Shan**	**2.83**	**344**	*eP*	**Pn**	**19 09 44.4**	**+0.3**
	baz=345						
WHF				*eS*	**Sn**	**19 10 17.3**	**-0.4**
	baz=345						
TWT	**Tachien**	**2.96**	**343**	*eP*	**Pn**	**19 09 44.7**	**-1.1**
	baz=352						
ENA	**Nanau**	**3.02**	**353**	P	**Pn**	**19 09 46.5**	**-0.2**
	baz=354						
ENA				*eS*	**Sn**	**19 10 22.1**	**-0.2**
	baz=354						
NNS	**Nan Shan**	**3.09**	**347**	*eP*	**Pn**	**19 09 48.1**	**+0.4**
	baz=348						
NNS				*eS*	**Sn**	**19 10 23.3**	**-0.8**
	baz=348						
TWQ1	**Liyutan**	**3.18**	**337**	*eP*	**Pn**	**19 09 50.7**	**+1.8**
	baz=325						
TWC	**Suao**	**3.19**	**355**	P	**Pn**	**19 09 49.1**	**0.0**
	baz=356						
TWC				*eS*	**Sn**	**19 10 25.4**	**-1.1**
	baz=356						
NSY	**Sanyi**	**3.24**	**337**	*eP*	**Pn**	**19 09 51.2**	**+1.4**
	baz=325						
NSY				*eS*	**Sn**	**19 10 32.8**	**+5.1**
	baz=325						
YHNB	**Yeheng**	**3.31**	**348**	*ePn*	**Pn**	**19 09 50.8**	**0.0**
YHNB				*eSn*	**Sn**	**19 10 31.1**	**+1.6**
TWE	**Neicheng**	**3.32**	**353**	*eP*	**Pn**	**19 09 51.3**	**+0.4**
	baz=353						
TWE				*eS*	**Sn**	**19 10 28.7**	**-0.9**
	baz=353						
NSK	**Sanguang**	**3.32**	**348**	P	**Pn**	**19 09 51.3**	**+0.4**
	baz=360						
NSK				*eS*	**Sn**	**19 10 29.3**	**-0.4**
	baz=360						
NSTT	**Nanjuang**	**3.37**	**342**	*eP*	**Pn**	**19 09 52.3**	**+0.9**
	baz=327						
TATO	**Taipei**	**3.59**	**351**	*ePn*	**Pn**	**19 09 54.0**	**-0.6**
NWF	**Wu-fen Shan**	**3.66**	**355**	*eP*	**Pn**	**19 09 56.9**	**+1.4**
	baz=355						
NWF				*eS*	**Sn**	**19 10 39.4**	**+1.4**
	baz=355						
KSRS	**Korea Array**	**16.75**	**16**	P	**Pn**	**19 12 54.5**	**+1.0**
	0.3nm,0.3s,baz=199,slow=11,SNR=19						
SONM	**Songino Array**	**29.25**	**338**	P	**P**	**19 15 00.7**	**+0.2**
	0.5nm,0.7s,mb3.4,baz=155,slow=11,SNR=4.4						
MKAR	**Makanchi Array**	**40.95**	**318**	P	**P**	**19 16 41.4**	**+0.3**
	1.0nm,0.6s,mb3.6,baz=107,slow=9.9,SNR=12						
WRA	**Warramunga Arr**	**42.80**	**163**	P	**P**	**19 16 50.6**	**-5.9**
	0.6nm,0.4s,mb3.6,baz=346,slow=9.3,SNR=4.4						
ZALV	**Zalesovo Beam**	**43.04**	**328**	P	**P**	**19 16 57.5**	**-0.6**
	2.0nm,0.6s,mb4.0,baz=116,slow=7.6,SNR=10.0						
KURK	**Kurchatov**	**44.78**	**322**	*eP*	**P**	**19 17 11.4**	**-0.7**
	1.4nm,0.7s,mb3.9						

*ISCJB **18** 19:13:37.5±0.4, 59.73N±0.04×152.28W±0.10, h88km±6km, mb3.8/4, Error ellipse: s-maj=8.4km s-min=5.8km az=25.0*
*IDC **18** 19:13:38.2±2.4, 59.73N×152.45W, h70km±36km, mb3.5/4, mb1 3.7/6, mb1mx3.3/25, mbtmp3.6/6, ML4.0/2, Error ellipse: s-maj=48.0km s-min=26.1km az=119.0*
*NEIC **18** 19:13:39.9, 59.71N×152.30W, h63km, ML3.6(PMR), ML3.3(AEIC), After AEIC.*
ISC 18 19:13:38.8±0.4, 59.71N±0.04×152.28W±0.10, h78km±7km, n38, σ0§67/43, mb3.8/4, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRLK	**Bradley Lake**	**0.71**	**85**	P	**Pn**	**19 13 54.0**	**-0.4**
BRLK				S	**Sn**	**19 14 06.2**	**+0.3**
RSO	**Redoubt South**	**0.79**	**343**	*ePg*	**Pn**	**19 13 54.5**	**-0.7**
SLKM	**Skilak Lake**	**1.31**	**51**	P	**Pn**	**19 14 01.3**	**-0.1**
SLKM				S	**Sn**	**19 14 19.0**	**+0.5**
FIB	**Fire Island**	**1.80**	**35**	P	**Pn**	**19 14 09.2**	**+1.4**
RC01	**Rabbit Creek A**	**1.88**	**41**	*ePn*	**Pn**	**19 14 08.9**	**+0.1**
RC01				*eSn*	**Sn**	**19 14 32.5**	**+0.8**
KDAK	**Kodiak Island**	**1.94**	**185**	P	**Pn**	**19 14 09.1**	**-0.6**
	33nm,0.3s,baz=40,slow=12,SNR=92						
KDAK	**Kodiak Island**	**1.94**	**185**	P	**Pn**	**19 14 09.1**	**-0.6**
KDAK				*eSn*	**Sn**	**19 14 33.3**	**0.0**
SVW2	**Sparrevohn**	**2.15**	**312**	*eP*	**Pn**	**19 14 11.7**	**-0.8**
PMR	**Palmer**	**2.44**	**38**	*ePn*	**Pn**	**19 14 15.4**	**-1.1**
PMR				*eSn*	**Sn**	**19 14 40.0**	**-5.4**
OHAK	**Old Harbor**	**2.55**	**192**	*eP*	**Pn**	**19 14 18.2**	**+0.3**
SML	**

0.8nm,0.5s,mb4.0,baz=27,slow=4.8,SNR=6.6
MKAR Makanchi Array 64.89 322 P **P 19 24 08.8 -0.4**
0.4nm,0.6s,mb3.4,baz=40,slow=7.6,SNR=6.4

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*IDC **18** 19:14:53.3±1.1,52°.37N×161°.74E,h0km,mb3.6/6,*
mb1 3.9/7,mb1mx3.5/26,mbtmp3.5/7,Error ellipse:
s-maj=42.4km s-min=19.4km az=179.0
*ISCJB **18** 19:14:55.1±1.6,52°.53N±0°.05×161°.82E±0°.06,*
h22km±12km,mb3.5/6,Error ellipse: s-maj=8.8km
s-min=6.2km az=171.0
*KRSC **18** 19:14:56.1±0.9,52°.54N×161°.83E,h41km±41km,ML3.7*
ISC 18 19:14:55.2±1.3,52°.58N±0°.05×161°.75E±0°.06,h8km±7km,
n18,σ1°.09/28,mb3.5/6,Off east coast of Kamchatka
Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.17**	**297**	*eP*	**Pg**	**19 15 17.0**	**-0.6**
SPN				*i* S	**Sg**	**19 15 32.3**	**-0.5**
NLC	**Nalytchevo**	**1.58**	**293**	*eP*	**Pn**	**19 15 22.9**	**-0.5**
NLC				*i* S	**Sn**	**19 15 42.2**	**-1.8**
PET	**Petropavlovsk**	**1.94**	**285**	P	**Pn**	**19 15 28.4**	**+0.1**
PET				*i* S	**Sn**	**19 15 52.0**	**-0.8**
AVH	**Avacha**	**1.95**	**292**	P	**Pn**	**19 15 29.0**	**+0.4**
AVH				*i* S	**Sn**	**19 15 52.9**	**-0.3**
MKZ	**Mys Kozlova**	**1.98**	**360**	P	**Pn**	**19 15 29.1**	**+0.1**
MKZ				*i* S	**Sn**	**19 15 53.1**	**-0.9**
PETK	**Petropavlovsk-**	**2.52**	**284**	Pn	**Pn**	**19 15 37.1**	**+0.8**
	2.0nm,0.3s,baz=98,slow=19,SNR=32						
PETK				Sn	**Sn**	**19 16 07.6**	**+0.5**
	5.6nm,0.3s,baz=237,slow=7.8,SNR=15						
GNL	**Ganaly**	**2.55**	**297**	*eP*	**Pn**	**19 15 38.7**	**+1.9**
GNL				*i* S	**Sn**	**19 16 09.7**	**+1.6**
MIPR	**Malaya Ipel'ka**	**3.07**	**266**	P	**Pn**	**19 15 44.6**	**+0.6**
KMNR	**Kamenistaya**	**3.31**	**345**	P	**Pn**	**19 15 50.1**	**+2.9**
KMNR				*i* S	**Sn**	**19 16 29.6**	**+3.0**
BKI	**Bering**	**3.62**	**42**	*eP*	**Pn**	**19 15 50.6**	**-0.9**
BKI				*i* S	**Sn**	**19 16 29.8**	**-4.7**
KBTR	**Krutoberegovo**	**3.69**	**9**	*eP*	**Pn**	**19 15 53.0**	**+0.6**
KBTR				*eS*	**Sn**	**19 16 34.3**	**-1.8**
ALID	**Alaid**	**4.22**	**249**	P	**Pn**	**19 15 59.0**	**-0.7**
MKAR	**Makanchi Array**	**49.29**	**297**	P	**P**	**19 23 43.9**	**-0.3**
	2.0nm,0.5s,mb3.4,baz=59,slow=8.2,SNR=3.6						
NVAR	**Mina Array Bea**	**54.97**	**71**	P	**P**	**19 24 27.9**	**+1.4**
	0.1nm,0.4s,mb3.2,baz=290,slow=5.6,SNR=3.6						
PDAR	**Pinedale Array**	**56.89**	**62**	P	**P**	**19 24 39.6**	**-0.7**
	0.3nm,0.5s,mb3.6,baz=318,slow=3.6,SNR=2.6						
ULM	**Lac du Bonnet**	**58.44**	**47**	P	**P**	**19 24 51.8**	**+0.8**
	2.6nm,0.4s,mb4.6,baz=284,slow=4.2,SNR=3.0						
TXAR	**Lajitas Array**	**69.91**	**68**	P	**P**	**19 26 06.4**	**-0.2**
	0.2nm,0.4s,mb3.4,baz=288,slow=5.4,SNR=4.4						
ASAR	**Alice Springs**	**79.72**	**206**	P	**P**	**19 27 01.6**	**-1.6**
	0.2nm,1.0s,mb3.0,baz=11,slow=6.1,SNR=4.3						

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*DDA **18** 19:23:46.1,40°.23N×28°.87E,h7km±3km,Md2.7*
*ISCJB **18** 19:23:47.1±0.7,40°.24N±0°.06×28°.83E±0°.04,h7km±10km,*
Error ellipse: s-maj=9.9km s-min=4.8km az=161.7
*CSEM **18** 19:23:47.1±0.2,40°.22N×28°.82E,h10km,MD2.8,Error*
ellipse: s-maj=5.1km s-min=3.8km az=149.0
*ISK **18** 19:23:47.0,40°.28N×28°.79E,h4km,MD2.8*
ISC 18 19:23:47.3±0.6,40°.24N±0°.06×28°.83E±0°.04,h12km±8km,
n24,σ0°.73/34,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDNY	**Mudanya-Bursa**	**0.13**	**18**	*e*PG	**Pg**	**19 23 50.1**	**-0.5**
MDNY	**Mudanya-Bursa**	**0.13**	**18**	*e*Pg	**Pg**	**19 23 50.1**	**-0.6**
ARMT	**Armutlu**	**0.32**	**4**	*e*PG	**Pg**	**19 23 53.6**	**-0.3**
ARMT				*e*SG	**Sg**	**19 23 58.5**	**+0.2**
ARMT	**Armutlu**	**0.32**	**4**	*e*Pg	**Pg**	**19 23 53.6**	**-0.3**
ARMT				*e*Sg	**Sg**	**19 23 58.5**	**+0.2**
GEMT	**Gemlik**	**0.34**	**55**	*e*PG	**Pg**	**19 23 54.6**	**+0.6**
GEMT	**Gemlik**	**0.34**	**55**	*e*Pg	**Pg**	**19 23 54.7**	**+0.6**
KCTX	**Karacabey (Bur**	**0.36**	**274**	*e*PG	**Pg**	**19 23 54.4**	**-0.2**
KCTX				*e*SG	**Sg**	**19 24 00.3**	**+0.8**
KCTX	**Karacabey (Bur**	**0.36**	**274**	*e*Pg	**Pg**	**19 23 54.4**	**-0.2**
KCTX				*e*Sg	**Sg**	**19 24 00.3**	**+0.8**
HRT	**Hereke**	**0.86**	**48**	*e*PG	**Pg**	**19 24 04.4**	**+0.4**
HRT	**Hereke**	**0.86**	**48**	*e*Pg	**Pg**	**19 24 04.4**	**+0.4**
GONE	**Gonen-Balikesi**	**0.90**	**258**	*e*PG	**Pg**	**19 24 04.4**	**-0.3**
GONE	**Gonen-Balikesi**	**0.90**	**258**	*e*Pg	**Pg**	**19 24 04.4**	**-0.3**
CTKS	**Kestanelik-??a**	**1.02**	**346**	*e*PG	**Pg**	**19 24 06.6**	**-0.5**
CTKS	**Kestanelik-??a**	**1.02**	**346**	*e*Pg	**Pg**	**19 24 06.6**	**-0.5**
BALY	**Balya**	**1.06**	**242**	*i* P	**Pb**	**19 24 06.7**	**-0.9**
BALY				*i* S	**Sb**	**19 24 21.8**	**+0.5**
BALY	**Balya**	**1.06**	**242**	*i* P	**Pb**	**19 24 06.7**	**-0.8**
BALY				*i* S	**Sb**	**19 24 21.8**	**+0.5**
KRBG	**Karabiga-Canak**	**1.18**	**278**	*e*PN	**Pn**	**19 24 09.6**	**-0.1**
KRBG	**Karabiga-Canak**	**1.18**	**278**	*e*Pn	**Pn**	**19 24 09.6**	**0.0**
DEMI	**Demirci**	**1.20**	**184**	*i* P	**Pn**	**19 24 08.5**	**-1.4**
DEMI				*i* S	**Sb**	**19 24 26.4**	**+0.9**
DEMI	**Demirci**	**1.20**	**184**	*i* P	**Pn**	**19 24 08.5**	**-1.4**
DEMI				*i* S	**Sb**	**19 24 26.4**	**+0.9**
BORA	**Eskisehir**	**1.30**	**106**	*i* P	**Pn**	**19 24 10.8**	**-0.4**
BORA				*i* S	**Sb**	**19 24 27.7**	**-0.5**
BORA	**Eskisehir**	**1.30**	**106**	*i* P	**Pn**	**19 24 10.8**	**-0.4**
BORA				*i* S	**Sb**	**19 24 27.7**	**-0.5**
GULT	**Gulveren**	**1.30**	**81**	*e*PN	**Pn**	**19 24 13.1**	**+1.8**
GULT	**Gulveren**	**1.30**	**81**	*e*Pn	**Pn**	**19 24 13.1**	**+1.8**

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*IDC **18** 19:36:38.4±0.7,50°.71N×51°.64E,h0km,mb3.7/10,*
mb1 3.8/14,mb1mx3.7/28,mbtmp3.8/14,ML3.5/4,MS2.7/1,
Ms1 2.8/1,ms1mx2.2/32,Error ellipse: s-maj=19.7km
s-min=9.3km az=176.0
*ISCJB **18** 19:36:38.4±1.8,50°.73N±0°.04×51°.89E±0°.04,h18km±15km,*
mb3.8/11,Error ellipse: s-maj=6.8km s-min=3.9km
az=176.6
*CSEM **18** 19:36:38.1±0.2,50°.73N×51°.74E,h2km,mb4.0/9,Error*
ellipse: s-maj=7.5km s-min=4.1km az=174.0
*NEIC **18** 19:36:39.0±0.3,50°.65N×51°.79E,h10km,mb3.8/7,Error*
ellipse: s-maj=8.7km s-min=5.0km az=177.0
*MOS **18** 19:36:40.3±1.4,50°.72N×51°.92E,h33km,mb4.0/11,Error*
ellipse: s-maj=10.1km s-min=7.9km az=166.3
*NNC **18** 19:36:46.2±5.2,50°.87N×52°.81E,h0km,mb4.2,mpv3.2,*
Error ellipse: s-maj=43.1km s-min=30.4km az=106.0
*NAO **18** 19:36:56.1,51°.78N×50°.26E,h33km,mb3.7*
ISC 18 19:36:41.8±1.9,50°.67N±0°.04×51°.86E±0°.04,h31km±16km,
n136,σ1°.32/153,mb3.8/11,9C-18D,Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKTK	**Aktyubinsk**	**3.93**	**91**	Pn	**Pn**	**19 37 41.3**	**+1.4**
AKTK				Sn	**Sn**	**19 38 29.0**	**+4.0**
AKTK	**Aktyubinsk**	**3.93**	**91**	P	**Pn**	**19 37 41.3**	**+1.4**
	2.0nm,0.3s						
AKTK				S	**Sn**	**19 38 29.0**	**+4.0**
	5.0nm,0.3s						
AKTO	**Aktyubinsk**	**3.93**	**91**	Pn	**Pn**	**19 37 41.3**	**+1.4**
	1.6nm,0.3s,baz=275,slow=10,SNR=52						
AKTO				Sn	**Sn**	**19 38 29.0**	**+4.0**
	4.8nm,0.3s,baz=264,slow=22,SNR=8.8						
AKTO	**Aktyubinsk**	**3.93**	**91**	P	**Pn**	**19 37 41.3**	**+1.4**
AKTO						19 38 29.0	
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKTO				smax			
	comp=N,5.0nm,0.3s						
AB31	**Akbulak array**	**5.41**	**102**	Pn	**Pn**	**19 38 01.7**	**+1.5**
	comp=N,1.3nm,0.3s,baz=290,slow=13,SNR=82						
AB31				⇑Sn	**Sn**	**19 39 00.4**	**-0.8**
	comp=N,6.5nm,0.4s,baz=289,slow=24						
AB31	**Akbulak array**	**5.41**	**102**	P	**Pn**	**19 38 01.6**	**+1.4**
AB31						19 39 00.4	
AB31				pmax	pmax		
	comp=Z,3.0nm,0.2s						
AB31				smax			
	comp=N,5.0nm,0.3s						
AB31	**Akbulak array**	**5.41**	**102**	P	**Pn**	**19 38 01.6**	**+1.4**
	comp=N,3.0nm,0.2s						
ABKAR	**Akbulak array**	**5.41**	**102**	*e*Pn	**Pn**	**19 38 01.3**	**+1.2**
	comp=N,5.8nm,0.4s						
ABKAR				*e*Sn	**Sn**	**19 38 57.5**	**-3.7**
ABKAR	**Akbulak array**	**5.41**	**102**	*e*Pn	**Pn**	**19 38 01.3**	**+1.1**
	comp=N,5.8nm,0.4s						
VRHR	**Novokhopersk**	**6.49**	**278**	*e*P	Px	19 38 27.6	
VRHR				pmax	pmax		
	comp=N,30nm,0.9s						
VRHR				pmax	pmax		
	comp=Z,20nm,0.9s						
VRHR				pmax	pmax		
	comp=E,8.0nm,0.4s						
ARU	**Arti**	**7.01**	**32**	*d i* P	**Pn**	**19 38 21.9**	**-0.3**
ARU				S	**Sn**	**19 39 40.0**	**-0.8**
ARU				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ARU	**Arti**	**7.01**	**32**	*e*Pn	**Pn**	**19 38 22.2**	**0.0**
	comp=Z,12nm,0.5s						
ARU				*e*Sn	**Sn**	**19 39 40.1**	**-0.6**
ARU				*e*Sg	Sn	19 40 17.4	+37
ARU	**Arti**	**7.01**	**32**	*i* P	**Pn**	**19 38 21.9**	**-0.3**
	comp=Z,4.0nm,1.0s						
ARU	**Arti**	**7.01**	**32**	*e*Pn	**Pn**	**19 38 22.2**	**0.0**
	comp=Z,12nm,0.5s						
ARU				*e*Sn	**Sn**	**19 39 40.1**	**-0.7**
VSR	**Storozhevoye**	**8.04**	**279**	*e*P	**Pn**	**19 38 35.2**	**-1.1**
VSR				*e*S	**Sn**	**19 40 00.5**	**-5.5**
VSR				pmax	pmax		
	comp=N,3.0nm,0.4s						
VSR				pmax	pmax		
	comp=Z,8.0nm,0.4s						
VSR				pmax	pmax		
	comp=E,1.0nm,0.2s						
VSR				smax			
	comp=N,30nm,0.9s						
VSR				smax			
	comp=E,30nm,0.9s						
VSR				smax			
	comp=Z,6.0nm,0.4s						
VSR	**Storozhevoye**	**8.04**	**279**	*e*P	**Pn**	**19 38 35.2**	**-1.1**
SVE	**Sverdlovsk**	**8.06**	**37**	⇑*e*P	**Pn**	**19 38 37.9**	**+1.3**
SVE				*e*S	**Sn**	**19 40 07.7**	**+1.1**
SVE				pmax	pmax		
	comp=Z,13nm,0.6s						
SVE				MLR	MLR		
	comp=Z,124nm,8.0s						
SVE	**Sverdlovsk**	**8.06**	**37**	*e*P	**Pn**	**19 38 37.9**	**+1.3**
	comp=Z,13nm,0.6s						
SVE				*e*S	**Sn**	**19 40 07.7**	**+1.1**
	comp=Z,124nm,8.0s						
MAK	**Makhachkala**	**8.27**	**203**	*e*P	**Pn**	**19 38 37.2**	**-2.3**
MAK				MLR	MLR		
	comp=Z,110nm,10.0s						
ZEI	**Tsey**	**9.60**	**218**	*e*P	**Pn**	**19 38 52.8**	**-5.0**
ZEI				pmax	pmax		
	comp=Z,13nm,0.5s						
OBN	**Obninsk**	**10.25**	**302**	Pn	**Pn**	**19 39 05.8**	**-0.7**
OBN	**Obninsk**	**10.25**	**302**	Pn	**Pn**	**19 39 05.8**	**-0.7**
ZRNK	**Zerenda**	**10.86**	**71**	⇑Pn	**Pn**	**19 39 15.1**	**+0.3**
	comp=Z,4.2nm,0.6s						
ZRNK				⇑Sn	**Sn**	**19 41 09.1**	**-6.0**
	comp=Z,7.2nm,0.6s						
ZRNK	**Zerenda**	**10.86**	**71**	*i* P	**Pn**	**19 39 14.3**	**-0.6**
ZRNK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ZRNK	**Zerenda**	**10.86**	**71**	*i* P	**Pn**	**19 39 14.3**	**-0.6**
	comp=Z,4.0nm,0.6s						
BRVK	**Borovoye**	**11.64**	**71**	⇑Pn	**Pn**	**19 39 25.4**	**-0.1**
	comp=Z,4.9nm,0.6s						
BRVK				⇓Sn	**Sn**	**19 41 26.1**	**-8.1**
	comp=Z,9.1nm,0.7s						
BRVK	**Borovoye**	**11.64**	**71**	*e*P	**Pn**	**19 39 25.3**	**-0.2**
BRVK	**Borovoye**	**11.64**	**71**	*e*Pn	**Pn**	**19 39 24.6**	**-0.9**
	comp=Z,5.1nm,0.6s						
BRVK				*e*Sn	**Sn**	**19 41 25.7**	**-8.5**
BRVK	**Borovoye**	**11.64**	**71**	Pn	**Pn**	**19 39 25.4**	**-0.1**
	comp=Z,4.9nm,0.6s						
GNI	**Garni**	**11.64**	**208**	P	**Pn**	**19 39 22.0**	**-3.7**
BVAR	**Borovoye Array**	**11.70**	**71**	Pn	**Pn**	**19 39 26.2**	**-0.1**
	comp=Z,2.2nm,0.3s,baz=281,slow=15,SNR=31						
BVAR				Sn	**Sn**	**19 41 34.8**	**-0.9**
	comp=Z,1.4nm,0.3s,baz=271,slow=26,SNR=5.9						
BVAR	**Borovoye Array**	**11.70**	**71**	P	**Pn**	**19 39 26.2**	**-0.1**
BVAR						19 41 34.8	
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BVAR				smax			
	comp=N,1.0nm,0.3s						
BVAR	**Borovoye Array**	**11.70**	**71**	P	**Pn**	**19 39 26.2**	**-0.1**
	comp=N,2.0nm,0.3s						
VOSK	**Vostochnaya**	**12.04**	**73**	⇑Pn	**Pn**	**19 39 29.6**	**-1.4**
	comp=N,3.6nm,0.7s						
VOSK				⇑Sn	**Sn**	**19 41 38.1**	**-5.9**
	comp=N,6.6nm,0.7s						
VOSK	**Vostochnaya**	**12.04**	**73**	P	**Pn**	**19 39 29.6**	**-1.4**
VOSK						19 41 38.0	
VOSK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
VOSK				smax			
	comp=N,7.0nm,0.7s						
VOSK	**Vostochnaya**	**12.04**	**73**	Pn	**Pn**	**19 39 29.6**	**-1.4**
	comp=N,3.6nm,0.7s						
AKASG	**Malin Array Be**	**14.34**	**279**	Pn	**Pn**	**19 39 57.1**	**-5.4**
	comp=N,1.2nm,0.3s,baz=66,slow=14,SNR=6.9						
AKASG	**Malin Array Be**	**14.34**	**279**	*e*P	**Pn**	**19 40 04.2**	**+1.7**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	**Malin Array Be**	**14.34**	**279**	*e*P	**Pn**	**19 40 04.2**	**+1.7**
	comp=Z,1.0nm,0.3s						
KK31	**Karatay Array**	**14.80**	**114**	⇓P	**Pn**	**19 40 06.9**	**-1.9**
	comp=Z,1.9nm,0.6s,baz=304,slow=14,SNR=30						
KK31	**Karatay Array**	**14.80**	**114**	*i* P	**Pn**	**19 40 06.1**	**-2.7**
KK31				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BR131	**Keskin Array S**	**16.82**	**236**	*e*Pn	**Pn**	**19 40 32.7**	**-2.2**
BR131	**Keskin Array S**	**16.82**	**236**	*e*Pn	**Pn**	**19 40 32.7**	**-2.1**
BRTR	**Keskin Array B**	**16.82**	**236**	Pn	**Pn**	**19 40 34.2**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=32,slow=16,SNR=4.1						
BRTR	**Keskin Array B**	**16.82**	**236**	Pn	**Pn**	**19 40 34.2**	**-0.6**
KURK	**Kurchatov**	**16.93**	**79**	*e*P	**Pn**	**19 40 35.3**	**-0.7**
KURK	**Kurchatov**	**16.93**	**79**	*e*Pn	**Pn**	**19 40 35.3**	**-0.7**
TIRR	**Tirgusor**	**16.96**	**258**	⇓P	**Pn**	**19 40 38.3**	**+1.8**
TIRR	**Tirgusor**	**16.96**	**258**	⇓*i* P	**Pn**	**19 40 38.3**	**+1.8**
TIRR	**Tirgusor**	**16.96**	**258**	P	**Pn**	**19 40 38.3**	**+1.8**
EKS2	**Erkin-Say**	**17.00**	**110**	*e*Pn	**Pn**	**19 40 36.1**	**-0.9**
	comp=Z,4.9nm,0.9s						
EKS2				*e*Sn	**Sn**	**19 43 42.3**	**-2.5**
AML	**Almayashu**	**17.26**	**111**	*e*Pn	**Pn**	**19 40 38.5**	**-1.8**
	comp=Z,1.9nm,0.5s						
VRI	**Vrincioaia**	**17.37**	**264**	⇑P	**Pn**	**19 40 42.2**	**+0.6**
VRI	**Vrincioaia**	**17.37**	**264**	⇑*i* P	**Pn**	**19 40 42.2**	**+0.6**
VRI	**Vrincioaia**	**17.37**	**264**	P	**Pn**	**19 40 42.2**	**+0.6**
PLOR	**Plostina**	**17.43**	**264**	⇓P	**Pn**	**19 40 44.0**	**+1.7**
PLOR	**Plostina**	**17.43**	**264**	⇓*i* P	**Pn**	**19 40 44.0**	**+1.7**
PLOR	**Plostina**	**17.43**	**264**	P	**Pn**	**19 40 44.0**	**+1.7**
AAK	**Ala-Archa**	**17.45**	**109**	P	**Pn**	**19 40 46.3**	**+3.7**
	comp=Z,0.5nm,0.3s,baz=252,slow=9.6,SNR=4.3						
AAK	**Ala-Archa**	**17.45**	**109**	⇓*e*P	**Pn**	**19 40 41.3**	**-1.3**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AAK	**Ala-Archa**	**17.45**	**109**	Pn	**Pn**	**19 40 43.4**	**+0.8**
AAK	**Ala-Archa**	**17.45**	**109**	Pn	**Pn**	**19 40 43.4**	**+0.8**
BURAR	**Bucovina Array**	**17.66**	**270**	⇓P	**Pn**	**19 40 44.0**	**-1.2**
BURAR	**Bucovina Array**	**17.66**	**270**	⇓*i* P	**Pn**	**19 40 44.0**	**-1.2**
BURAR	**Bucovina Array**	**17.66**	**270**	⇓P	**Pn**	**19 40 44.0**	**-1.2**
BUR08	**Bucovina Ar. S**	**17.66**	**270**	*e*Pn	**Pn**	**19 40 42.8**	**-2.4**
BUR08	**Bucovina Ar. S**	**17.66**	**270**	*e*Pn	**Pn**	**19 40 42.8**	**-2.4**
UCH	**Uchtor**	**17.69**	**110**	*e*Pn	**Pn**	**19 40 45.8**	**+0.2**
	comp=Z,4.9nm,0.9s						
UCH	**Uchtor**	**17.69**	**110**	*e*Pn	**Pn**	**19 40 45.8**	**+0.2**
	comp=Z,4.9nm,0.9s						
FINES	**FINESS Array B**	**17.85**	**317**	P	**Pn**	**19 40 42.6**	**-4.8**
	comp=Z,0.5nm,0.3s,baz=121,slow=14,SNR=14						
MLR	**Muntele Rosu**	**18.03**	**263**	⇓P	**Pn**	**19 40 50.2**	**+0.5**
MLR	**Muntele Rosu**	**18.03**	**263**	⇓*i* P	**Pn**	**19 40 50.2**	**+0.5**
MLR	**Muntele Rosu**	**18.03**	**263**	P	**Pn**	**19 40 50.2**	**+0.5**
KAF	**Kangasniemi**	**18.06**	**319**	*e*P	**Pn**	**19 40 46.0**	**-3.9**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KAF	**Kangasniemi**	**18.06**	**319**	*e*p	**Pn**	**19 40 46.0**	**-3.9**
	comp=Z,2.2nm,0.3s						
VOIR		**18.62**	**264**	⇓P	**Pn**	**19 40 58.3**	**+1.4**
VOIR		**18.62**	**264**	⇓*i* P	**Pn**	**19 40 58.3**	**+1.4**
VOIR		**18.62**	**264**	P	**Pn**	**19 40 58.3**	**+1.4**
TRPA	**Tarpa**	**19.20**	**274**	⇓*i* P	**Pn**	**19 41 03.2**	**-0.6**
TRPA	**Tarpa**	**19.20**	**274**	⇓*i* P	**Pn**	**19 41 03.2**	**-0.6**
LVZ	**Lovozero**	**19.25**	**340**	*e*P	**Pn**	**19 41 03.1**	**-1.3**
LVZ				pmax	pmax		
	comp=Z,23nm,1.7s						
LVZ	**Lovozero**	**19.25**	**340**	*e*P	**Pn**	**19 41 03.1**	**-1.3**
	comp=Z,23nm,1.7s						
NVS	**Novosibirsk**	**19.35**	**65**	*e*P	**Pn**	**19 41 09.6**	**+4.0**
NVS				*e*S	**Sn**	**19 44 39.6**	**-1.8**
NVS				pmax	pmax		
	comp=N,7.0nm,1.8s						
NVS				pmax	pmax		
	comp=E,6.0nm,1.8s						
NVS				pmax	pmax		
	comp=Z,10.0nm,1.8s						
NVS				smax			
	comp=N,14nm,2.5s						
NVS				smax			
	comp=E,25nm,2.4s						
ZAA0	**Zalesovo Array**	**20.31**	**68**	*e*P	**P**	**19 41 15.7**	**+0.8**
ZAA0	**Zalesovo Array**	**20.31**	**68**	*e*P	**P**	**19 41 15.6**	**+0.7**
ZALV	**Zalesovo Beam**	**20.31**	**68**	P	**P**	**19 41 15.9**	**+1.0**
	comp=E,2.7nm,0.5s,baz=278,slow=9.8,SNR=9.1						
ZALV	**Zalesovo Beam**	**20.31**	**68**	P	**P**	**19 41 15.9**	**+1.0**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ZALV	**Zalesovo Beam**	**20.31**	**68**	P	**P**	**19 41 15.9**	**+1.0**
	comp=Z,3.0nm,0.5s						
MK31	**Makanchi Array**	**20.37**	**89**	*e*P	**P**	**19 41 17.8**	**+2.3**
MK31	**Makanchi Array**	**20.37**	**89**	*e*P	**P**	**19 41 17.8**	**+2.3**
MKAR	**Makanchi Array**	**20.37**	**89**	P	**P**	**19 41 18.3**	**+2.8**
	comp=Z,1.2nm,0.6s,baz=286,slow=8.5,SNR=9.9						
KBL	**Kabul**	**20.41**	**136**	*e*P	**P**	**19 41 18.0**	**+1.9**
KBL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KBL	**Kabul**	**20.41**	**136**	*e*P	**P**	**19 41 18.0**	**+1.9**
	comp=Z,4.4nm,0.8s						
KBL	**Kabul**	**20.41**	**136**	*e*P	**P**	**19 41 18.0**	**+1.9**
	comp=Z,4.4nm,0.8s						
CSS	**Prodhromos**	**20.68**	**228**	*e*P	**P**	**19 41 16.6**	**-2.3**
PSZ	**Piszkesteto**	**20.94**	**275**	P	**P**	**19 41 15.3**	**-6.5**
MMAI	**Mount Meron Ar**	**21.40**	**221**	P	**P**	**19 41 27.3**	**+0.5**
	comp=Z,1.5nm,0.6s,mb3.5,baz=25,slow=18,SNR=3.6						
ASF	**Jabal al Asfar**	**21.55**	**217**	P	**P**	**19 41 28.9**	**+0.5**
	comp=Z,2.1nm,0.8s,mb3.6,baz=56,slow=3.6,SNR=5.5						
ASF	**Jabal al Asfar**	**21.55**	**217**	P	**P**	**19 41 28.9**	**+0.6**
ASF				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MORC	**Moravsky Berou**	**21.86**	**281**	*e*P	**P**	**19 41 31.2**	**-0.4**
MORC				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb3.9						
MORC	**Moravsky Berou**	**21.86**	**281**	*e*P	**P**	**19 41 31.2**	**-0.4**
	comp=Z,2.9nm,0.6s,mb3.9						
MORC	**Moravsky Berou**	**21.86**	**281**	⇓*i* P	**P**	**19 41 31.8**	**+0.2**
MORC	**Moravsky Berou**	**21.86**	**281**	*e*P	**P**	**19 41 31.2**	**-0.4**
	comp=Z,2.9nm,0.6s,mb3.9						
KEV	**Kevo**	**22.46**	**337**	*e*P	**P**	**19 41 37.8**	**0.0**
KEV				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.2						
KEV	**Kevo**	**22.46**	**337**	*e*P	**P**	**19 41 37.8**	**0.0**
	comp=Z,6.0nm,0.6s,mb4.2						
KEV	**Kevo**	**22.46**	**337**	*e*p	**P**	**19 41 38.4**	**+0.6**
	comp=Z,5.6nm,0.5s,mb4.2						
KEV	**Kevo**	**22.46**	**337**	*e*P	**P**	**19 41 37.8**	**0.0**
	comp=Z,6.0nm,0.6s,mb4.2						
DPC	**Dobruska-Polom**	**22.48**	**283**	*e*P	**P**	**19 41 42.5**	**+4.4**
DPC	**Dobruska-Polom**	**22.48**	**283**	*e*P	**P**	**19 41 42.5**	**+4.4**
ARCES	**ARCESS Array B**	**22.68**	**336**	P	**P**	**19 41 40.5**	**+0.4**
	comp=Z,1.7nm,0.6s,mb3.7,baz=141,slow=10.0,SNR=15						
ARCES	**ARCESS Array B**	**22.68**	**336**	P	**P**	**19 41 40.5**	**+0.4**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ARCES	**ARCESS Array B**	**22.68**	**336**	P	**P**	**19 41 40.5**	**+0.4**
	comp=Z,2.0nm,0.6s,mb3.7						
ARE0	**ARCESS Array S**	**22.68**	**336**	*e*P	**P**	**19 41 39.7**	**-0.5**
ARE0	**ARCESS Array S**	**22.68**	**336**	*e*P	**P**	**19 41 39.7**	**-0.4**
HFS	**Hagfors**	**23.33**	**309**	P	**P**	**19 41 46.0**	**-1.0**
	comp=Z,1.5nm,0.3s,mb3.8,baz=100,slow=13,SNR=15						
HFS	**Hagfors**	**23.33**	**309**	P	**P**	**19 41 46.0**	**-1.0**
HFS				pmax	pmax		
	comp=Z,2.0nm,0.4s						
HFS	**Hagfors**	**23.33**	**309**	P	**P**	**19 41 46.0**	**-1.0**
	comp=Z,2.0nm,0.4s,mb3.9						
EIL	**Elat**	**24.52**	**218**	P	**P**	**19 41 59.2**	**+0.

HOCH				*i* S	Sn	20 17 27.7	+0.6
HOCH				AML	AML	20 17 28.8	
	comp=E,6μm,0.3s						
OSCH	**Osorno**	**1.42**	**8**	*e*P	Pn	20 17 23.9	+0.2
OSCH				*i* S	Sn	20 17 42.3	+0.6
OSCH				AML	AML	20 17 44.7	
	comp=E,3μm,0.7s						
PUYE	**Entre Lagos**	**1.43**	**25**	*e*P	Pn	20 17 25.6	+1.9

*IDC **18** 20:33:04.4±2.5, 15.44S×172.57W, h0km, mb4.6/3, mb1 4.8/3, mb1mx3.9/19, mbtmp4.6/3, Error ellipse: s-maj=86.3km s-min=24.8km az=132.0*
*NOU **18** 20:35:40.6±1.0, 19.70S×169.45E, h10km, MD2.9, ML4.3*
*SZGRF **18** 20:35:42.5, 19.78S×170.93E, h117km, Vanuatu Islands*

ISC 18 20:35:42.8±2.5, 20.2S±0.3×169.5E±0.2, h113km±16km, n27, σ0°95/15, mb4.4/4, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BAYA	**Yate Dam**	**3.15**	**230**	*e*P	**Pn**	**20 36 30.6**	**-0.3**
BAYA				*e*S	**Sn**	**20 37 07.5**	**-0.5**
DZM	**Mont Dzumac**	**3.44**	**236**	*e*P	**Pn**	**20 36 34.2**	**-0.5**
DZM				*e*S	**Sn**	**20 37 13.9**	**-0.8**
DZM				AMP		20 37 19.1	
	comp=Z,7μm,1.1s						
NORM	**Noumea**	**3.49**	**233**	*e*P	**Pn**	**20 36 35.7**	**+0.3**
NORM				*e*S	**Sn**	**20 37 16.6**	**+0.5**
NORM				AMP		20 37 17.5	
	comp=Z,2μm,2.1s						
NOUC	**Port Laguerre**	**3.56**	**237**	*e*P	**Pn**	**20 36 36.8**	**+0.4**
NOUC				*e*S	**Sn**	**20 37 18.1**	**+0.4**
NOUC				AMP		20 37 21.9	
	comp=Z,380nm,2.1s						
ARMA	**Armidale**	**19.10**	**234**	*e*P	**P**	**20 39 58.8**	**+2.1**
CTA	**Charters Tower**	**21.83**	**266**	*e*P	**P**	**20 40 28.2**	**+2.0**
	comp=Z,10.0nm,0.6s,mb4.3						
CNB	**Canberra Magne**	**23.30**	**225**	*e*P	**P**	**20 40 40.4**	**-0.1**
STKA	**Stephens Creek**	**27.58**	**239**	*e*P	**P**	**20 41 19.0**	**-0.3**
	comp=Z,5.4nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**27.58**	**239**	P	**P**	**20 41 19.1**	**-0.3**
	comp=Z,6.5nm,0.7s,mb4.3,baz=78,slow=8.8,SNR=15						
WRA	**Warramunga Arr**	**33.00**	**264**	P	**P**	**20 42 05.9**	**-1.4**
	comp=Z,2.0nm,0.9s,mb4.0,baz=95,slow=6.1,SNR=30						
ASAR	**Alice Springs**	**33.16**	**257**	P	**P**	**20 42 07.5**	**-1.2**
	comp=Z,15nm,0.7s,mb4.9,baz=83,slow=9.4,SNR=250						
BRG	**Berggiesshubel**	**143.80**	**334**	*e*PKPbc	PKPdf	20 55 01.1	-3.3
BRG	**Berggiesshubel**	**143.80**	**334**	*e*P	PKPdf	20 55 01.2	-3.2
	comp=Z,3.7nm,0.8s						
CLL	**Collm**	**143.85**	**335**	*e*PKPbc	PKPdf	20 55 00.8	-3.7
CLZ	**Clausthal**	**144.42**	**338**	*e*PKPbc	PKPdf	20 55 03.1	-2.3
TANN	**Tannenbergstha**	**144.76**	**334**	*e*PKPbc	PKPdf	20 55 03.9	-2.2
WERD	**Werda**	**144.80**	**335**	*e*PKPbc	PKPdf	20 55 04.4	-1.7
PLN	**Plauen**	**144.83**	**335**	*e*PKPbc	PKPdf	20 55 04.6	-1.6
GUNZ	**Gunzen**	**144.85**	**334**	*e*PKPbc	PKPdf	20 55 04.6	-1.6
IBBN	**Ibbenburen**	**144.91**	**340**	*e*PKPbc	PKPdf	20 55 04.3	-2.0
MOX	**Moxa**	**144.92**	**335**	*e*PKPbc	PKPdf	20 55 04.9	-1.4
ROTZ	**Rotzenmuhle**	**145.37**	**334**	*e*PKPbc	PKPbc	20 55 06.8	-0.4
ROTZ				*ep*PKPbc	pPKPbc	20 55 37.6	+0.1
UBBA	**Unterbreizbach**	**145.39**	**337**	*ep*PKPbc	pPKPbc	20 55 38.0	+0.4
GEC2	**GERESS Array S**	**145.42**	**332**	*e*PKPbc	PKPbc	20 55 06.4	-1.0
GEC2				*ep*PKPbc	pPKPbc	20 55 37.9	+0.2
WET	**Wettzell**	**145.56**	**333**	*ep*PKPbc	pPKPbc	20 55 38.2	0.0
GRF	**Grafenberg Arr**	**145.83**	**335**	*e*PKPbc	PKPbc	20 55 07.7	-1.0
RJOB	**Jochberg**	**146.64**	**331**	*e*PKPbc	PKPbc	20 55 11.0	-0.1

*IDC **18** 20:40:50.1±1.6, 52.24N×170.59W, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.7/26, mbtmp3.8/7, ML4.1/1, Error ellipse: s-maj=67.9km s-min=22.1km az=8.0*
*ISCJB **18** 20:40:56.4±1.3, 52.5N±0.2×170.6W±0.1, h58km±10km, mb3.8/6, Error ellipse: s-maj=35.1km s-min=6.9km az=163.3*
*NEIC **18** 20:40:57.0±1.4, 52.42N×170.63W, h47km±12km, ML3.4(AEIC), Error ellipse: s-maj=30.3km s-min=9.8km az=168.0*

ISC 18 20:40:57.4±1.4, 52.4N±0.2×170.6W±0.1, h49km±11km, n11, σ0°98/14, mb3.8/6, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATKA	**Atka Island**	**2.21**	**266**	P	**Pn**	**20 41 30.6**	**-0.8**
ATKA				S	**Sn**	**20 41 58.5**	**+1.0**
UNV	**Unalaska Valle**	**2.86**	**59**	*e*Pn	**Pn**	**20 41 41.1**	**+0.7**
UNV				*e*Sn	**Sn**	**20 42 12.7**	**-0.8**
AKUT	**Akutan**	**3.38**	**58**	*e*Pn	**Pn**	**20 41 48.4**	**+0.9**
AKUT				*e*Sn	**Sn**	**20 42 27.2**	**+0.9**
PPLA	**Purkeypile**	**14.34**	**36**	*e*Pn	**Pn**	**20 44 15.0**	**-2.2**
	25nm,0.5s						
PETK	**Petropavlovsk-**	**19.11**	**285**	P	**Pn**	**20 45 15.2**	**-1.8**
	0.6nm,0.3s,baz=98,slow=15,SNR=4.5						
PDAR	**Pinedale Array**	**41.14**	**78**	P	**P**	**20 48 36.1**	**-0.3**
	0.8nm,0.7s,mb3.5,baz=293,slow=3.8,SNR=6.3						
SONM	**Songino Array**	**50.61**	**300**	P	**P**	**20 49 51.4**	**+0.5**
	0.4nm,0.5s,mb3.6,baz=41,slow=7.8,SNR=3.5						
TXAR	**Lajitas Array**	**53.51**	**88**	P	**P**	**20 50 12.3**	**-0.4**
	0.5nm,0.9s,mb3.5,baz=294,slow=4.9,SNR=3.5						
BVAR	**Borovoye Array**	**63.21**	**324**	P	**P**	**20 51 20.7**	**+0.8**
	0.7nm,0.4s,mb4.1,baz=40,slow=5.9,SNR=4.2						
FINES	**FINESS Array B**	**65.70**	**351**	P	**P**	**20 51 37.0**	**+0.9**
	1.7nm,0.7s,mb4.2,baz=35,slow=5.1,SNR=3.7						
CMAR	**Chiang Mai Arr**	**75.86**	**282**	P	**P**	**20 52 38.5**	**+0.1**
	0.9nm,0.6s,mb3.9,baz=28,slow=6.0,SNR=7.6						

*IDC **18** 20:44:23.8±1.0, 24.06N×143.40E, h0km, mb3.9/9, mb1 4.0/12, mb1mx3.8/26, mbtmp3.8/12, ML3.5/3, MS2.9/1, Ms1 2.9/1, ms1mx2.5/27, Error ellipse: s-maj=34.3km s-min=17.1km az=83.0*
*ISCJB **18** 20:44:27.1±0.8, 24.14N±0.07×143.3E±0.2, h33km, mb4.0/12, Error ellipse: s-maj=27.5km s-min=8.0km az=168.8*
*NEIC **18** 20:44:29.4±1.8, 24.08N×143.31E, h37km±17km, mb4.3/3, Error ellipse: s-maj=26.1km s-min=11.3km az=83.0*

ISC 18 20:44:29.3±0.8, 24.13N±0.07×143.3E±0.2, h35km, n19, σ1°04/19, mb4.0/12, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**3.12**	**341**	Pn	**Pn**	**20 45 14.3**	**-1.7**
	7.8nm,0.3s,baz=274,slow=20,SNR=2.5						
CBIJ				Sn	**Sn**	**20 45 50.0**	**-2.0**
	37nm,0.3s,baz=129,slow=23,SNR=7.1						
GUMO	**Guam**	**10.59**	**172**	LR	LR	20 50 21.9	
	comp=Z,76nm,20.9s,baz=337,slow=34						
MJAR	**Matsushiro Arr**	**13.12**	**342**	Pn	**Pn**	**20 47 33.9**	**+0.7**
	0.4nm,0.3s,baz=182,slow=38,SNR=3.3						
MAJO	**Matsushiro**	**13.12**	**342**	Pn	**Pn**	**20 47 34.2**	**+1.1**
KSRS	**Korea Array**	**18.69**	**319**	P	**Pn**	**20 48 46.0**	**+0.8**
	0.1nm,0.3s,baz=229,slow=38,SNR=5.0						
CMAR	**Chiang Mai Arr**	**41.58**	**271**	P	**P**	**20 52 15.5**	**+1.4**
	0.3nm,0.6s,mb3.1,baz=58,slow=8.2,SNR=6.6						
CTAO	**Charters Tower**	**44.05**	**176**	*e*P	**P**	**20 52 32.9**	**-1.0**
	11nm,1.4s,mb4.4						
WRAB	**Tennant Creek**	**44.66**	**192**	*e*P	**P**	**20 52 38.2**	**-0.5**
	4.9nm,1.0s,mb4.3						
WRA	**Warramunga Arr**	**44.67**	**192**	P	**P**	**20 52 39.2**	**+0.4**
	2.3nm,0.8s,mb4.1,baz=17,slow=9.0,SNR=28						
ASAR	**Alice Springs**	**48.38**	**192**	P	**P**	**20 53 06.5**	**-1.3**
	0.5nm,0.7s,mb3.7,baz=17,slow=9.9,SNR=11						
ASAR				PcP	PcP	20 54 31.7	-2.4
	0.3nm,0.6s,baz=96,slow=8.4,SNR=6.0						
ZALV	**Zalesovo Beam**	**52.39**	**320**	P	**P**	**20 53 37.5**	**-0.5**
	0.3nm,0.4s,mb3.6,baz=77,slow=9.3,SNR=3.8						
MKAR	**Makanchi Array**	**53.16**	**311**	P	**P**	**20 53 43.8**	**+0.1**
	0.4nm,0.3s,mb3.9,baz=94,slow=8.4,SNR=5.8						
KURK	**Kurchatov**	**55.79**	**316**	*e*P	**P**	**20 54 01.6**	**-1.2**
	1.7nm,0.6s,mb4.2						
ILAR	**Eielson Array**	**59.84**	**28**	P	**P**	**20 54 31.9**	**+0.9**
	0.6nm,0.7s,mb3.7,baz=260,slow=5.3,SNR=7.0						
BVAR	**Borovoye Array**	**60.91**	**319**	P	**P**	**20 54 39.1**	**+0.6**
	1.1nm,0.5s,mb4.2,baz=90,slow=8.6,SNR=6.4						
BVAR	**Borovoye Array**	**60.91**	**319**	P	**P**	**20 54 39.1**	**+0.6**
FINES	**FINESS Array B**	**81.04**	**334**	P	**P**	**20 56 41.6**	**+1.2**
	1.2nm,0.5s,mb4.1,baz=82,slow=4.3,SNR=13						
NB2	**NORSAR Subarra**	**86.72**	**339**	P	**P**	**20 57 10.4**	**+1.0**
	comp=Z,0.8nm,0.6s,mb4.1,baz=49,slow=4.6						
NOA	**NORSAR Array B**	**86.72**	**339**	P	**P**	**20 57 09.5**	**+0.1**
	comp=Z,1.2nm,0.7s,mb4.2,baz=46,slow=4.6,SNR=6.0						

*IDC **18** 21:05:35.9±3.2, 7.28S×105.84E, h0km, mb3.7/6, mb1 3.7/6, mb1mx3.6/20, mbtmp3.7/6, Error ellipse: s-maj=146.8km s-min=21.2km az=50.0*
*NEIC **18** 21:05:41.6±0.9, 7.19S×105.98E, h35km, mb4.0/4, Error ellipse: s-maj=45.9km s-min=10.5km az=47.0*
*DJA **18** 21:05:42, 7.51S×105.94E, h11km, MLv3.9/11*
*ISCJB **18** 21:05:43.0±1.6, 7.4S±0.2×105.9E±0.1, h75km±10km, mb3.7/10, Error ellipse: s-maj=29.7km s-min=10.1km az=30.3*

ISC 18 21:05:44.8±1.8, 7.4S±0.2×106.0E±0.1, h68km±11km, n23, σ1°15/26, mb3.7/10, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKJI	**Sukabumi**	**0.67**	**60**	P	**Pn**	**21 05 56.6**	**-2.6**
SKJI				S	**Sn**	**21 06 08.0**	**-1.8**
CGJI	**Cibinong**	**0.78**	**339**	P	**Pn**	**21 05 58.8**	**-1.7**
CGJI				S	**Sn**	**21 06 12.3**	**+0.2**
SBJI	**Serang**	**1.23**	**7**	P	**Pn**	**21 06 06.8**	**+0.7**
CBJI	**Citeko**	**1.26**	**43**	P	**Pn**	**21 06 04.0**	**-2.6**
TNG	**Tangerang**	**1.34**	**30**	P	**Pn**	**21 06 09.2**	**+1.6**
TNG				S	**Sn**	**21 06 29.3**	**+4.5**
RBSI	**Rajabasa**	**1.51**	**351**	P	**Pn**	**21 06 11.7**	**+1.8**
LEM	**Lembang**	**1.71**	**73**	P	**Pn**	**21 06 13.7**	**+1.2**
BLSI	**Bandar Lampung**	**2.10**	**340**	P	**Pn**	**21 06 18.9**	**+1.2**
JCJI	**Jatiwangi**	**2.43**	**70**	P	**Pn**	**21 06 22.8**	**+0.6**
KLI	**Kotabumi**	**2.71**	**336**	P	**Pn**	**21 06 29.9**	**+3.9**
MDSI	**Maura Dua**	**3.36**	**328**	P	**Pn**	**21 06 34.8**	**-0.1**
WRA	**Warramunga Arr**	**30.21**	**117**	P	**P**	**21 11 49.9**	**+0.8**
	0.5nm,0.9s,mb3.1,baz=289,slow=10,SNR=4.0						
ASAR	**Alice Springs**	**31.32**	**124**	P	**P**	**21 11 59.6**	**+0.8**
	0.4nm,0.7s,mb3.3,baz=299,slow=7.3,SNR=5.5						
SONM	**Songino Array**	**54.94**	**0**	P	**P**	**21 15 08.5**	**-0.1**
	0.2nm,0.4s,mb3.5,baz=178,slow=7.7,SNR=4.1						
EKS2	**Erkin-Say**	**57.77**	**332**	*e*P	**P**	**21 15 28.5**	**-0.3**
	1.4nm,0.8s,mb4.0						
MK31	**Makanchi Array**	**57.87**	**341**	*e*P	**P**	**21 15 28.7**	**-0.8**
MKAR	**Makanchi Array**	**57.87**	**341**	P	**P**	**21 15 28.8**	**-0.7**
	0.5nm,0.5s,mb3.8,baz=156,slow=8.6,SNR=10						
KURK	**Kurchatov**	**62.48**	**341**	*e*P	**P**	**21 16 00.4**	**-0.5**
	1.0nm,0.6s,mb4.0						
ZALV	**Zalesovo Beam**	**63.62**	**346**	P	**P**	**21 16 07.1**	**-1.3**
	0.5nm,0.3s,mb3.9,baz=157,slow=7.5,SNR=4.4						
ZALV	**Zalesovo Beam**	**63.62**	**346**	P	**P**	**21 16 07.1**	**-1.3**
BVAR	**Borovoye Array**	**67.29**	**338**	P	**P**	**21 16 32.2**	**+0.1**
	0.9nm,0.6s,mb3.8,baz=134,slow=8.5,SNR=5.9						
ABKAR	**Akbulak array**	**69.19**	**330**	*e*P	**P**	**21 16 43.9**	**-0.2**
	0.7nm,0.5s,mb3.8						
BR131	**Keskin Array S**	**81.30**	**312**	*e*P	**P**	**21 17 54.3**	**+0.5**
	0.5nm,0.5s,mb3.6						

*ISCJB **18** 21:35:53.4±0.6, 32.64N±0.10×136.2E±0.1, h461km±6km, mb3.2/7, Error ellipse: s-maj=18.0km s-min=11.9km az=136.5*
*JMA **18** 21:35:53.5±0.2, 32.51N×136.29E, h453km, M3.4*
*NEIC **18** 21:35:54.2±0.8, 32.64N×136.14E, h451km±10km, MG3.4(JMA), Error ellipse: s-maj=21.7km s-min=13.7km az=92.0*
*IDC **18** 21:35:54.1±1.1, 32.64N×136.18E, h449km±15km, mb2.9/7, mb1 3.0/9, mb1mx2.8/27, mbtmp2.8/9, Error ellipse: s-maj=22.4km s-min=14.1km az=84.0*

ISC 18 21:35:54.7±0.6, 32.70N±0.10×136.2E±0.1, h455km±6km, n25, σ0°62/30, mb3.2/7, Southeast of Shikoku

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JWZ	**Kozaga**	**0.94**	**333**	P	**P**	**21 36 50.7**	**-0.4**
JKN2	**Miekihoku**	**1.54**	**1**	P	**P**	**21 36 53.3**	**0.0**
JWY	**Kouya**	**1.61**	**341**	P	**P**	**21 36 54.0**	**+0.4**
JIE	**Ise**	**1.74**	**13**	P	**P**	**21 36 54.9**	**+0.7**
JAI	**Aioi**	**1.85**	**307**	P	**P**	**21 36 54.7**	**-0.1**
JMN	**Monobe**	**2.22**	**298**	P	**P**	**21 36 57.0**	**+0.2**
JEG	**Eigenji**	**2.44**	**3**	P	**P**	**21 36 58.8**	**+0.7**
HMMJ	**Hamamatsu 2**	**2.49**	**30**	P	**P**	**21 36 58.8**	**+0.4**
JWT	**Wachi**	**2.67**	**345**	P	**P**	**21 36 59.8**	**+0.2**
JWT				S	**S**	**21 37 51.2**	**-1.3**
JNY	**Yasuok**	**2.98**	**27**	P	**P**	**21 37 02.7**	**+0.9**
JGM	**Miyama**	**3.02**	**8**	P	**P**	**21 37 02.6**	**+0.5**
JRY	**Ryogami san**	**3.98**	**33**	P	**P**	**21 37 10.8**	**+0.9**
JRY				*e*S	**S**	**21 38 11.4**	**+0.2**
JHU	**Hanno**	**4.04**	**38**	P	**P**	**21 37 10.1**	**-0.2**
JHU				*e*S	**S**	**21 38 10.0**	**-2.0**
MAJO	**Matsushiro**	**4.17**	**22**	*e*Pn	**P**	**21 37 11.6**	**+0.1**
MAT	**Matsushiro**	**4.17**	**22**	P	**P**	**21 37 11.2**	**-0.3**
MAT				S	**S**	**21 38 14.0**	**-0.2**
MJAR	**Matsushiro Arr**	**4.17**	**23**	P	**P**	**21 37 11.4**	**0.0**
	2.8nm,0.3s,baz=189,slow=8.8,SNR=41						
MJAR				S	**S**	**21 38 14.0**	**-0.2**
	0.3nm,0.3s,baz=41,slow=32,SNR=7.8						
KSRS	**Korea Array**	**8.30**	**307**	P	**P**	**21 37 53.7**	**+0.5**
	0.2nm,0.3s,baz=121,slow=10,SNR=4.1						
CMAR	**Chiang Mai Arr**	**36.30**	**256**	P	**P**	**21 42 17.9**	**-0.5**
	0.3nm,0.5s,mb3.0,baz=46,slow=7.7,SNR=3.2						
ZALV	**Zalesovo Beam**	**41.88**	**316**	P	**P**	**21 43 02.9**	**-0.4**
	0.3nm,0.3s,mb3.2,baz=122,slow=8.3,SNR=2.5						
WRA	**Warramunga Arr**	**52.37**	**182**	P	**P**	**21 44 22.4**	**-0.7**
	0.7nm,0.4s,mb3.4,baz=0.6,slow=7.7,SNR=21						
ILAR	**Eielson Array**	**55.41**	**30**	P	**P**	**21 44 45.2**	**+0.9**
	0.3nm,0.6s,mb2.8,baz=278,slow=6.3,SNR=3.8						
ASAR	**Alice Springs**	**56.09**	**183**	P	**P**	**21 44 49.1**	**-0.4**
	0.4nm,0.6s,mb3.0,baz=13,slow=14,SNR=10						
ARCES	**ARCESS Array B**	**66.53**	**339**	P	**P**	**21 45 57.7**	**0.0**
	4.0nm,1.2s,mb3.9,baz=50,slow=8.1,SNR=4.5						
ARCES	**ARCESS Array B**	**66.53**	**339**	P	**P**	**21 45 57.7**	**0.0**
FINES	**FINESS Array B**	**70.62**	**331**	P	**P**	**21 46 22.5**	**-0.2**
	1.5nm,0.9s,mb3.5,baz=137,slow=28,SNR=3.8						

*CSEM **18** 21:48:40.0, 35.49N×22.76E, h29km, MD2.8, After ATH*

ATH 18 21:48:40.0, 35.49N×22.76E, h29km±3km, MD2.8/4, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KYTH	**Kithira**	**0.82**	**16**	*e*PN	Pn	21 48 56.0	+0.4
KYTH	**Kithira**	**0.82**	**16**	*e*Pn	Pn	21 48 56.0	+0.4
KARN	**Karanos**	**0.95**	**95**	*e*PN	Pn	21 48 58.6	+1.2
KARN				*e*SN	Sn	21 49 12.1	+2.2
KARN	**Karanos**	**0.95**	**95**	*e*Pn	Pn	21 48 58.6	+1.2
KARN				*e*Sn	Sn	21 49 12.1	+2.2
VAM	**Vamos**	**1.18**	**94**	*e*PN	Pn	21 49 01.7	+1.2
VAM	**Vamos**	**1.18**	**94**	*e*Pn	Pn	21 49 01.7	+1.2
VLI	**Veliai**	**1.23**	**7**	*e*PN	Pn	21 49 03.5	+2.2
VLI				*e*SN	Sn	21 49 19.7	+2.7
VLI	**Veliai**	**1.23**	**7**	*e*PN	Pn	21 49 03.5	+2.2
VLI				*e*SN	Sn	21 49 19.7	+2.7
VLI	**Veliai**	**1.23**	**7**	*e*Pn	Pn	21 49 03.5	+2.2
VLI				*e*Sn	Sn	21 49 19.7	+2.7

*CSEM **18** 21:57:14.6±0.2, 44.42N×15.10E, h2km, MD3.1/5, Error ellipse: s-maj=6.2km s-min=4.2km az=114.0*
*ROM **18** 21:57:15.2±0.3, 44.46N×15.33E, h10km, Md3.1/5, Ml2.3/3, Error ellipse: s-maj=5.0km s-min=1.9km az=109.0*
*ISCJB **18** 21:57:16.2±0.6, 44.52N±0.03×15.29E±0.06, h10km, Error ellipse: s-maj=6.0km s-min=4.8km az=158.5*
*VIE **18** 21:57:18.4±0.4, 44.63N×15.18E, h10km±1km, mb2.1/5, ML2.1/5, Error ellipse: s-maj=2.2km s-min=1.9km az=134.0 100 km SSW of Karlovac*

ISC 18 21:57:14.8±0.8, 44.42N±0.03×15.15E±0.06, h3km±5km, n34, σ1°11/55, 9C-2D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NVLJ	**Novalja**	**0.24**	**305**	⇑*i*Pg	**Pg**	**21 57 21.4**	**+1.9**
NVLJ				Sg	**Sg**	**21 57 26.3**	**+3.7**
BOJS	**Bojanci**	**1.08**	**4**	*i* Pg	**Pg**	**21 57 35.4**	**-0.2**
BOJS				*i* Sg	**Sg**	**21 57 49.2**	**-0.4**
	comp=Z,29nm,0.2s						
BOJS	**Bojanci**	**1.08**	**4**	*i* Pg	**Pg**	**21 57 35.4**	**-0.2**
BOJS				*i* Sg	**Sg**	**21 57 49.2**	**-0.4**
	comp=Z,29nm,0.2s						
SKDS	**Skadanscina**	**1.38**	**325**	*i* Pn	**Pn**	**21 57 41.3**	**+0.3**
SKDS				*i* Sn	**Sn**	**21 58 01.0**	**+1.2**
SKDS							
	comp=Z,21nm,0.2s						
TRI	**Trieste**	**1.62**	**323**	Pg	**Pg**	**21 57 45.3**	**-0.5**
	comp=Z,24nm,0.3s						
TRI	**Trieste**	**1.62**	**323**	Pg	**Pg**	**21 57 45.3**	**-0.5**
	comp=Z,24nm,0.3s						
PDKS	**Podkum**	**1.64**	**356**	⇑*i*Pn	**Pn**	**21 57 45.0**	**+0.5**
PDKS				*i* Sn	**Sn**	**21 58 07.1**	**+0.9**
LJU	**Ljubljana**	**1.68**	**345**	*i* Pn	**Pn**	**21 57 46.3**	**+1.2**
LJU	**Ljubljana**	**1.68**	**345**	*i* Pn	**Pn**	**21 57 46.3**	**+1.2**
VOY	**Vojsko**	**1.84**	**332**	*e*Pn	**Pn**	**21 57 48.2**	**+0.9**
VOY				*e*		21 57 48.7	
VOY				*e*Sn	**Sn**	**21 58 14.5**	**+3.5**
VOY	**Vojsko**	**1.84**	**332**	*e*Pn	**Pn**	**21 57 48.2**	**+0.9**
VOY				*e*Sn	**Sn**	**21 58 14.5**	**+3.5**
FSSB	**Fossombrone**	**1.86**	**248**	Pg	**Pg**	**21 57 49.7**	**-0.7**
FSSB				Sg	**Sg**	**21 58 14.4**	**-0.1**
	comp=Z,29nm,0.3s						
FSSB	**Fossombrone**	**1.86**	**248**	Pg	**Pg**	**21 57 49.7**	**-0.7**
FSSB				Sg	**Sg**	**21 58 14.4**	**-0.1**
	comp=Z,29nm,0.3s						
GROS	**Grobnik**	**2.05**	**7**	*i* Pn	**Pn**	**21 57 49.8**	**-0.5**
GROS	**Grobnik**	**2.05**	**7**	*i* Pn	**Pn**	**21 57 49.8**	**-0.4**
PIEI	**Pieia**	**2.08**	**246**	Pg	**Pg**	**21 57 52.7**	**-2.0**
	comp=Z,12nm,0.2s						
PIEI	**Pieia**	**2.08**	**246**	Pg	**Pg**	**21 57 52.7**	**-2.0**
	comp=Z,12nm,0.2s						
OBKA	**Obir**	**2.13**	**349**	⇑*e*Pn	**Pn**	**21 57 51.7**	**+0.5**
	SNR=17						
OBKA				⇑*i*Sn	**Sn**	**21 58 16.7**	**-1.5**
OBKA	**Obir**	**2.13**	**349**	Pn	**Pn**	**21 57 51.7**	**+0.4**
	SNR=17						
OBKA				Sn	**Sn**	**21 58 16.7**	**-1.5**
KOGS	**Kog**	**2.17**	**21**	*i* Pn	**Pn**	**21 57 50.9**	**-1.0**
KOGS	**Kog**	**2.17**	**21**	*i* Pn	**Pn**	**21 57 50.9**	**-0.9**
NRCA	**Norcia**	**2.17**	**224**	Pg	**Pg**	**21 57 53.4**	**-3.0**
	comp=Z,5.0nm,0.2s						
SOKA	**Soboth**	**2.26**	**358**	⇑*i*Pn	**Pn**	**21 57 53.3**	**+0.2**
SOKA				⇑*i*Sn	**Sn**	**21 58 19.7**	**-1.6**
SOKA	**Soboth**	**2.26**	**358**	Pn	**Pn**	**21 57 53.3**	**+0.3**
SOKA				Sn	**Sn**	**21 58 19.7**	**-1.7**
ASS	**Assisi**	**2.26**	**234**	Pg	**Pg**	**21 57 54.9**	**-3.3**
	comp=Z,35nm,0.1s						
PTCC	**Patocco-Chiusa**	**2.35**	**328**	Pg	**Pg**	**21 57 54.8**	**-5.1**
	comp=Z,13nm,0.4s						
STON	**Ston**	**2.42**	**129**	*e*Pn	**Pn**	**21 57 55.7**	**+0.5**
STON				Sn	**Sn**	**21 58 26.4**	**+1.1**
STON	**Ston**	**2.42**	**129**	*e*Pn	**Pn**	**21 57 55.6**	**+0.4**
STON				Sn	**Sn**	**21 58 26.4**	**+1.1**
ARSA	**Arzberg**	**2.84**	**5**	⇓*i*Pn	**Pn**	**21 58 01.1**	**0.0**
ARSA	**Arzberg**	**2.84**	**5**	Pn	**Pn**	**21 58 01.1**	**+0.1**
MOA	**Molln**	**3.48**	**350**	⇓*i*Pn	**Pn**	**21 58 10.2**	**+0.4**
MOA				⇓*i*Sn	**Sn**	**21 58 50.3**	**-1.3**
MOA	**Molln**	**3.48**	**350**	Pn	**Pn**	**21 58 10.2**	**+0.3**
MOA				Sn	**Sn**	**21 58 50.3**	**-1.3**
CONA	**Conrad Observa**	**3.54**	**8**	*i* Pn	**Pn**	**21 58 10.8**	**+0.1**
	SNR=11						
CONA				⇑*i*Sn	**Sn**	**21 58 51.7**	**-1.4**
CONA				⇑*i*Sg	**Sg**	**21 59 09.0**	**+0.5**
	comp=Z,1.7nm,0.5s						
CONA	**Conrad Observa**	**3.54**	**8**	Pn	**Pn**	**21 58 10.8**	**+0.1**
	SNR=11						
CONA				Sn	**Sn**	**21 58 51.7**	**-1.3**
CONA				Sg	**Sg**	**21 59 09.0**	**+0.5**
	comp=Z,1.7nm,0.5s						

*JMA **18** 22:03:57.4±0.1, 33.52N×138.50E, h310km, M3.0*
*ISCJB **18** 22:04:00.4±0.8, 33.7N±0.1×138.5E±0.1, h284km±8km, mb3.0/3, Error ellipse: s-maj=17.2km s-min=13.8km az=166.6*
*IDC **18** 22:04:00.8±3.0, 33.51N×138.23E, h260km±77km, mb2.9/3, mb1 2.9/4, mb1mx2.7/26, mbtmp2.8/4, Error ellipse: s-maj=180.0km s-min=23.2km az=62.0*

ISC 18 22:04:01.4±0.8, 33.7N±0.1×138.5E±0.1, h276km±8km, n16, σ0°91/21, mb3.0/3, Southeast of Honshu

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

0.9nm,0.3s,mb4.0,baz=118,slow=6.5,SNR=9.5
CMAR PcP PcP 23 00 43.0 +1.6
0.7nm,0.4s,baz=153,slow=1.7,SNR=4.3
CHTO Chiang Mai 44.76 300 *e*P **P 22 59 01.0 +0.5**
2.3nm,0.9s,mb4.0
LZH Lanzhou 50.69 323 *e*P **P 22 59 47.0 +0.8**
LZH pP pP 22 59 53.5 -9.3
LZH sP sP 22 59 55.0 -15
LZH pmax pmax
comp=Z,24nm,1.0s,mb5.1
LZH pmax pmax
comp=Z,150nm,4.8s
GTA Gaotai 55.27 324 P **P 23 00 20.4 +0.5**
GTA pP pP 23 00 24.8 -12
GTA sP sP 23 00 27.6 -16
GTA pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
LSA Lhasa 55.91 309 *e*P **P 23 00 26.2 +1.6**
comp=Z,3.3nm,0.6s,mb4.5
ULN Ulaanbaatar 57.67 335 *e*P **P 23 00 36.7 0.0**
comp=Z,1.7nm,0.4s,mb4.4
SONM Songino Array 57.92 335 P **P 23 00 38.6 +0.1**
comp=Z,2.6nm,0.6s,mb4.4,baz=156,slow=7.6,SNR=15
PETK Petropavlovsk- 58.01 13 LR LR 23 21 31.9
comp=Z,46nm,20.3s,baz=119,slow=32
YAK Yakutsk 65.12 355 *e*P **P 23 01 25.8 -0.9**
comp=Z,20nm,0.8s,mb5.2
MK31 Makanchi Array 69.99 322 *e*P **P 23 01 57.8 0.0**
MKAR Makanchi Array 69.99 322 P **P 23 01 58.2 +0.4**
comp=Z,7.5nm,0.5s,mb4.9,baz=108,slow=8.3,SNR=107
KSH Kashi 71.28 313 P **P 23 02 07.9 +2.1**
KSH pmax pmax
comp=Z,12nm,1.2s,mb4.7
KSH pmax pmax
comp=Z,67nm,3.5s
ZAA0 Zalesovo Array 72.14 330 *e*P **P 23 02 09.4 -1.3**
ZALV Zalesovo Beam 72.14 330 P **P 23 02 09.8 -0.8**
comp=Z,3.3nm,0.6s,mb4.5,baz=111,slow=6.8,SNR=17
ZALV Zalesovo Beam 72.14 330 P **P 23 02 09.8 -0.8**
UCH Uchtor 73.25 316 *e*P **P 23 02 18.2 +0.7**
comp=Z,7.1nm,0.8s,mb4.7
AML Almayashu 73.79 315 *e*P **P 23 02 21.8 +1.1**
comp=Z,12nm,0.9s,mb4.8
EKS2 Erkin-Say 73.91 316 *e*P **P 23 02 21.9 +0.6**
comp=Z,2.7nm,0.8s,mb4.2
KURK Kurchatov 73.92 325 *e*P **P 23 02 20.7 -0.5**
comp=Z,8.9nm,0.9s,mb4.7
KBL Kabul 75.12 307 *e*P **P 23 02 28.7 +0.2**
comp=Z,1.9nm,0.8s,mb4.1
BVAR Borovoye Array 79.52 325 P **P 23 02 52.8 +0.1**
comp=Z,7.2nm,0.6s,mb4.8,baz=111,slow=8.1,SNR=41
BRVK Borovoye 79.59 325 *e*P **P 23 02 53.0 -0.1**
comp=Z,9.5nm,0.7s,mb4.8
OHAK Old Harbor 80.66 31 *e*P **P 23 02 58.1 -0.7**
comp=Z,9.5nm,0.8s,mb4.8
TTA Tatalina 81.53 25 *e*P **P 23 03 02.9 -0.4**
comp=Z,15nm,1.4s,mb4.7
MAW Mawson 82.00 202 P **P 23 03 08.5 +2.8**
comp=Z,4.0nm,1.0s,mb4.2,baz=256,slow=1.8,SNR=3.7
RC01 Rabbit Creek A 83.65 28 *e*P **P 23 03 12.8 -1.6**
comp=Z,8.1nm,0.7s,mb5.0
MCK McKinley 84.80 25 *e*P **P 23 03 19.2 -1.0**
comp=Z,5.2nm,0.8s,mb4.7
ABKAR Abkulak array 84.92 320 *e*P **P 23 03 20.5 -0.6**
comp=Z,1.9nm,0.6s,mb4.4
ILAR Eielson Array 85.95 24 P **P 23 03 24.1 -1.8**
comp=Z,4.0nm,0.7s,mb4.7,baz=262,slow=4.7,SNR=42
ARU Arti 87.00 327 *e*P **P 23 03 29.4 -1.8**
comp=Z,2.5nm,0.7s,mb4.5
QSPA South Pole Qui 87.06 180 P **P 23 03 33.6 +2.5**
comp=Z,4.4nm,0.7s,mb4.8,baz=330,slow=2.0,SNR=33
EGAK Eagle 88.35 25 *e*P **P 23 03 37.1 -0.3**
comp=Z,5.3nm,1.0s,mb4.7
DAWY Dawson 88.99 26 *e*P **P 23 03 40.2 -0.3**
SCHQ Schefferville 124.18 18 PKP PKPdf 23 09 44.7 +0.4
comp=Z,2.8nm,0.8s,baz=294,slow=6.0,SNR=3.5
SCHQ Schefferville 124.18 18 PKP PKPdf 23 09 44.7 +0.4
TKL Tuckaleechee C 128.90 45 PKP PKPdf 23 09 53.9 0.0
comp=Z,3.3nm,0.8s,baz=143,slow=3.1,SNR=4.5
DBIC Dimbokro 143.61 277 PKhKP PKPpre 23 10 19.7
comp=Z,2.0nm,0.7s,baz=93,slow=9.3,SNR=3.6
DBIC Dimbokro 143.61 277 PKP PKPpre 23 10 19.7
DBIC *e*PKPdf PKPdf 23 10 21.6 -0.2
CPUP Villa Florida 147.02 153 PKPbc PKPbc 23 10 30.6 +1.2
comp=Z,2.7nm,0.8s,baz=295,slow=0.8,SNR=7.9
CPUP Villa Florida 147.02 153 *e*PKPbc PKPbc 23 10 29.3 0.0
LPAZ La Paz 147.25 126 PKPbc PKPbc 23 10 31.9 +1.7
comp=Z,3.9nm,0.9s,baz=193,slow=1.8,SNR=15
LPAZ La Paz 147.25 126 PKPbc PKPbc 23 10 31.9 +1.7

*ISCJB **18** 22:52:38.7±1.3, 35°.83N±0°.07×27°.9E±0°.1, h56km±12km, Error ellipse: s-maj=19.0km s-min=6.1km az=36.4*
*ATH **18** 22:52:38.8, 35°.72N×27°.84E, h38km±1km, MD3.1/7*
*NEIC **18** 22:52:38.8, 35°.72N×27°.84E, h38km, MD3.1(ATH), After ATH.*
*DDA **18** 22:52:39.0, 36°.05N×27°.97E, h7km±6km, Md2.9*
*CSEM **18** 22:52:39.0±0.9, 35°.81N×27°.92E, h52km±11km, MD3.1, Error ellipse: s-maj=26.5km s-min=7.6km az=128.0*
ISC 18 22:52:39.2±1.3, 35°.81N±0°.08×27°.9E±0°.1, h52km±14km, n26, σ1s09/38, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.45**	**25**	*e*Pn	**Pn**	**22 52 51.0**	**+1.0**
ARG				*e*Sn	**Sn**	**22 52 59.4**	**+1.7**
ARG	**Arkhangelos**	**0.45**	**25**	*e*PN	**Pn**	**22 52 51.0**	**+1.0**
ARG				*e*SN	**Sn**	**22 52 59.4**	**+1.7**
ARG	**Arkhangelos**	**0.45**	**25**	*e*Pn	**Pn**	**22 52 51.0**	**+1.0**
ARG				*e*Sn	**Sn**	**22 52 59.4**	**+1.7**
KARP	**Karpathos**	**0.65**	**246**	*e*Pn	**Pn**	**22 52 51.4**	**-0.9**
KARP				*e*Sn	**Sn**	**22 53 00.0**	**-1.9**
KARP	**Karpathos**	**0.65**	**246**	*e*PN	**Pn**	**22 52 51.4**	**-0.9**
KARP				*e*SN	**Sn**	**22 53 00.0**	**-1.9**
KARP	**Karpathos**	**0.65**	**246**	*e*Pn	**Pn**	**22 52 51.4**	**-0.9**
KARP				*e*Sn	**Sn**	**22 53 00.0**	**-1.9**
TURN	**Turunc**	**1.21**	**28**	*i* P	**Pn**	**22 52 58.5**	**-1.2**
TURN				*i* S	**Sn**	**22 53 12.9**	**-2.1**
TURN	**Turunc**	**1.21**	**28**	*i* P	**Pn**	**22 52 58.5**	**-1.2**
TURN				*i* S	**Sn**	**22 53 12.9**	**-2.1**
BDRM	**Kayabasi**	**1.30**	**344**	*i* P	**Pn**	**22 53 00.3**	**-0.7**
BDRM				*i* S	**Sn**	**22 53 16.9**	**-0.4**
BDRM	**Kayabasi**	**1.30**	**344**	*i* P	**Pn**	**22 53 00.3**	**-0.7**
BDRM				*i* S	**Sn**	**22 53 16.9**	**-0.4**
ZKR	**Zakros**	**1.53**	**243**	*e*Pn	**Pn**	**22 53 04.7**	**+0.6**
ZKR	**Zakros**	**1.53**	**243**	*e*PN	**Pn**	**22 53 04.7**	**+0.6**
ZKR	**Zakros**	**1.53**	**243**	*e*Pn	**Pn**	**22 53 04.7**	**+0.6**
AYDN	**Tasoluk**	**1.84**	**360**	*i* P	**Pn**	**22 53 08.8**	**+0.4**
AYDN				*i* S	**Sn**	**22 53 31.1**	**+0.6**
AYDN	**Tasoluk**	**1.84**	**360**	*i* P	**Pn**	**22 53 08.9**	**+0.5**
AYDN				*i* S	**Sn**	**22 53 31.1**	**+0.5**
NPS	**Neapolis**	**1.94**	**254**	*e*Pn	**Pn**	**22 53 09.4**	**-0.2**
NPS	**Neapolis**	**1.94**	**254**	*e*PN	**Pn**	**22 53 09.4**	**-0.2**
NPS	**Neapolis**	**1.94**	**254**	*e*Pn	**Pn**	**22 53 09.4**	**-0.2**
LAST	**Lasithi**	**2.07**	**252**	*e*Pn	**Pn**	**22 53 11.9**	**+0.4**
LAST	**Lasithi**	**2.07**	**252**	*e*PN	**Pn**	**22 53 11.9**	**+0.4**
LAST	**Lasithi**	**2.07**	**252**	*e*Pn	**Pn**	**22 53 11.9**	**+0.4**
VAM	**Vamos**	**3.03**	**263**	*e*Pn	**Pn**	**22 53 25.8**	**+1.1**
VAM	**Vamos**	**3.03**	**263**	*e*PN	**Pn**	**22 53 25.8**	**+1.1**
VAM	**Vamos**	**3.03**	**263**	*e*Pn	**Pn**	**22 53 25.8**	**+1.1**
KARN	**Karanos**	**3.26**	**264**	*e*PN	**Pn**	**22 53 29.0**	**+1.2**
KARN	**Karanos**	**3.26**	**264**	*e*Pn	**Pn**	**22 53 29.0**	**+1.2**

*ISCJB **18** 22:54:02.6±0.2, 47°.513N±0°.009×13°.72E±0°.01, h1km±1km, mb3.7/2, Error ellipse: s-maj=1.5km s-min=1.4km az=171.5*
*PRU **18** 22:54:03.9, 47°.47N×13°.82E, h0km*
*STR **18** 22:54:03.7±0.2, 47°.43N×13°.90E, h10km, Ml3.6, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*VIE **18** 22:54:03.4±0.2, 47°.49N×13°.74E, h9km±3km, mb2.9/16, ML3.8/18, Error ellipse: s-maj=1.2km s-min=0.9km az=4.0 9 km SSE of Obertraun felt 5 ems98 at Ramsau am Dachstein / STYRIA*
*IDC **18** 22:54:04.6±2.7, 47°.34N×14°.16E, h0km, mb3.7/2, mb1 3.8/7, mb1mx3.5/28, mbtmp3.6/7, ML3.6/5, Error ellipse: s-maj=54.7km s-min=9.2km az=149.0*
*IPEC **18** 22:54:04.4±0.1, 47°.45N×13°.84E, h5km, ML3.4/3, Error ellipse: s-maj=0.8km s-min=0.6km az=106.0*
*CSEM **18** 22:54:04.2±0.1, 47°.49N×13°.78E, h2km, ML4.1/28, Error ellipse: s-maj=1.3km s-min=1.3km az=98.0*
*BGR **18** 22:54:05.5±0.3, 47°.50N×13°.78E, h5km, ML3.8/20, Error ellipse: s-maj=4.4km s-min=3.3km az=92.0*
BGR Felt in Ennstal and Salzkammergut.
*NEIC **18** 22:54:05.2±0.2, 47°.46N×13°.79E, h10km, ML4.1(SZGRF), ML3.8(STR), ML3.6(LDG), Error ellipse: s-maj=3.3km s-min=2.4km az=185.0*
*LDG **18** 22:54:07.5±0.1, 47°.45N×13°.78E, h10km, Ml3.6/39, Error ellipse: s-maj=2.5km s-min=1.8km az=32.0*
*BNS **18** 22:54:11.0±0.6, 47°.68N×13°.49E, h10km, ML3.5*
ISC 18 22:54:04.3±0.2, 47°.502N±0°.008×13°.75E±0°.01, h3km±1km, n341, σ1s11/582, mb3.6/2, 26C-27D, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOA	**Molln**	**0.49**	**45**	*e*Pg	**Pg**	**22 54 14.0**	**+0.3**
MOA				*e*Sg	**Sg**	**22 54 22.8**	**+2.7**
MOA	**Molln**	**0.49**	**45**	⇓*e*Pg	**Pg**	**22 54 13.8**	**+0.1**
MOA				⇓*i*Sg	**Sg**	**22 54 20.9**	**+0.8**
MOA	**Molln**	**0.49**	**45**	Pg	**Pg**	**22 54 13.8**	**+0.1**
MOA				Sg	**Sg**	**22 54 20.9**	**+0.8**
KBA	**Koelnbreinsper**	**0.51**	**213**	*e*Pg	**Pg**	**22 54 13.7**	**-0.2**
KBA				*e*Sg	**Sg**	**22 54 20.0**	**-0.5**
KBA	**Koelnbreinsper**	**0.51**	**213**	*e*Pg	**Pg**	**22 54 13.8**	**-0.2**
KBA				⇑*i*Sg	**Sg**	**22 54 20.1**	**-0.4**
KBA	**Koelnbreinsper**	**0.51**	**213**	Pg	**Pg**	**22 54 13.8**	**-0.1**
KBA				Sg	**Sg**	**22 54 20.1**	**-0.4**
RJOB	**Jochberg**	**0.69**	**290**	*e*Pg	**Pg**	**22 54 17.3**	**-0.2**
RJOB				*e*Sn	**Sg**	**22 54 28.9**	**+2.6**
RJOB	**Jochberg**	**0.69**	**290**	Pg	**Pg**	**22 54 17.3**	**-0.1**
MYKA	**Terra Mystica**	**0.88**	**185**	⇓*i*Pg	**Pg**	**22 54 20.4**	**-0.6**
MYKA				⇑*i*Sg	**Sg**	**22 54 32.0**	**-0.3**
MYKA	**Terra Mystica**	**0.88**	**185**	Pg	**Pg**	**22 54 20.4**	**-0.6**
MYKA				Sg	**Sg**	**22 54 32.0**	**-0.3**
ACOM	**Acomizza, Ital**	**0.97**	**190**	⇑*e*Pg	**Pg**	**22 54 22.3**	**-0.5**
ACOM	**Acomizza, Ital**	**0.97**	**190**	*e*Pg	**Pg**	**22 54 22.3**	**-0.5**
ACOM				*e*Sg	**Sg**	**22 54 38.8**	**+3.5**
LSR	**Lussari**	**1.04**	**188**	⇓*e*Pg	**Pg**	**22 54 23.7**	**-0.5**
LSR				*e*Sg	**Sg**	**22 54 38.1**	**+0.5**
LSR	**Lussari**	**1.04**	**188**	*e*Pg	**Pg**	**22 54 23.7**	**-0.4**
LSR				*e*Sg	**Sg**	**22 54 38.1**	**+0.5**
PLRO	**Paularo**	**1.04**	**204**	⇓*i*Pg	**Pg**	**22 54 23.8**	**-0.3**
PLRO				*i* Sg	**Sg**	**22 54 37.2**	**-0.3**
PLRO	**Paularo**	**1.04**	**204**	*i* Pg	**Pg**	**22 54 23.8**	**-0.3**
PLRO				*i* Sg	**Sg**	**22 54 37.2**	**-0.4**
ZOU	**Zoufplan**	**1.08**	**210**	⇓*e*Pg	**Pg**	**22 54 25.6**	**+0.6**
ZOU				*e*Sg	**Sg**	**22 54 38.8**	**-0.2**
ABTA	**Abfaltersbach**	**1.13**	**229**	⇑*e*Pg	**Pg**	**22 54 25.3**	**-0.7**
ABTA				⇑*i*Sg	**Sg**	**22 54 40.8**	**+0.1**
ABTA	**Abfaltersbach**	**1.13**	**229**	Pg	**Pg**	**22 54 25.3**	**-0.7**
ABTA				Sg	**Sg**	**22 54 40.8**	**+0.2**
OBKA	**Obir**	**1.13**	**151**	*e*Pg	**Pg**	**22 54 25.3**	**-0.7**
OBKA				*e*Sg	**Sg**	**22 54 41.2**	**+0.5**
OBKA	**Obir**	**1.13**	**151**	⇓*e*Pg	**Pg**	**22 54 25.3**	**-0.6**
OBKA				⇓*i*Sg	**Sg**	**22 54 40.6**	**0.0**
OBKA	**Obir**	**1.13**	**151**	*e*Pg	**Pg**	**22 54 25.2**	**-0.8**
OBKA				Sg	**Sg**	**22 54 40.6**	**0.0**
GORS	**Gorjuse**	**1.20**	**172**	⇑*i*Pg	**Pg**	**22 54 26.8**	**-0.4**
GORS				*i* Sg	**Sg**	**22 54 41.8**	**-0.8**
GORS	**Gorjuse**	**1.20**	**172**	⇑*i*Pg	**Pg**	**22 54 26.8**	**-0.4**
GORS				*i* Sg	**Sg**	**22 54 41.8**	**-0.9**
FUSE	**Fusea**	**1.20**	**206**	⇓*e*Pg	**Pg**	**22 54 27.0**	**-0.3**
FUSE				*e*Sg	**Sg**	**22 54 42.6**	**-0.3**
FUSE	**Fusea**	**1.20**	**206**	*e*Pg	**Pg**	**22 54 27.0**	**-0.3**
FUSE				*e*Sg	**Sg**	**22 54 42.6**	**-0.3**
SOKA	**Soboth**	**1.20**	**133**	⇓*i*Pg	**Pg**	**22 54 26.2**	**-1.1**
SOKA				⇑*i*Sg	**Sg**	**22 54 42.1**	**-0.8**
SOKA	**Soboth**	**1.20**	**133**	Pg	**Pg**	**22 54 26.2**	**-1.1**
SOKA				Sg	**Sg**	**22 54 42.1**	**-0.8**
ARSA	**Arzberg**	**1.23**	**101**	*e*Pg	**Pg**	**22 54 26.9**	**-0.9**
ARSA				*e*Sg	**Sg**	**22 54 44.3**	**+0.5**
ARSA	**Arzberg**	**1.23**	**101**	*e*Pg	**Pg**	**22 54 26.9**	**-0.9**
ARSA				⇓*i*Sg	**Sg**	**22 54 44.3**	**+0.5**
ARSA	**Arzberg**	**1.23**	**101**	Pg	**Pg**	**22 54 27.0**	**-0.8**
ARSA				Sg	**Sg**	**22 54 44.3**	**+0.5**
CSMI	**Casera Mimoias**	**1.24**	**218**	⇑*e*Pg	**Pg**	**22 54 27.6**	**-0.5**
CSMI				*e*Sg	**Sg**	**22 54 43.5**	**-0.6**
CSMI	**Casera Mimoias**	**1.24**	**218**	*e*Pg	**Pg**	**22 54 27.6**	**-0.5**
CSMI				*e*Sg	**Sg**	**22 54 43.5**	**-0.7**
BOO	**Bordano**	**1.26**	**201**	⇑*i*Pg	**Pg**	**22 54 28.0**	**-0.4**
BOO	**Bordano**	**1.26**	**201**	*i* Pg	**Pg**	**22 54 28.0**	**-0.5**
BISS	**Bistriski jare**	**1.27**	**132**	*i* Pg	**Pg**	**22 54 27.6**	**-1.0**
BISS	**Bistriski jare**	**1.27**	**132**	*i* Pg	**Pg**	**22 54 27.6**	**-1.0**
CADS	**Cadrg**	**1.27**	**180**	*i* Pg	**Pg**	**22 54 27.8**	**-0.9**
CADS				*e*Sg	**Sg**	**22 54 44.7**	**-0.5**
CADS	**Cadrg**	**1.27**	**180**	*i* Pg	**Pg**	**22 54 27.8**	**-0.9**
CADS				*e*Sg	**Sg**	**22 54 44.7**	**-0.5**
CADS	**Cadrg**	**1.27**	**180**	*i* Pg	**Pg**	**22 54 27.8**	**-0.9**
CADS				*e*Sg	**Sg**	**22 54 44.7**	**-0.5**
PERS	**Pernice**	**1.27**	**132**	*i* Pg	**Pg**	**22 54 27.6**	**-1.1**
PERS				*e*Sg	**Sg**	**22 54 43.9**	**-1.3**
PERS	**Pernice**	**1.27**	**132**	*i* Pg	**Pg**	**22 54 27.6**	**-1.1**
PERS				*e*Sg	**Sg**	**22 54 43.9**	**-1.3**
PERS	**Pernice**	**1.27**	**132**	*i* Pg	**Pg**	**22 54 27.6**	**-1.1**
PERS				*e*Sg	**Sg**	**22 54 43.8**	**-1.4**
VINO	**Villanova**	**1.29**	**195**	⇓*e*Pg	**Pg**	**22 54 28.6**	**-0.3**
VINO				*e*Sg	**Sg**	**22 54 45.3**	**-0.3**
VINO	**Villanova**	**1.29**	**195**	*e*Pg	**Pg**	**22 54 28.6**	**-0.3**
VINO				*e*Sg	**Sg**	**22 54 45.3**	**-0.3**
BAD	**Bernadia**	**1.31**	**196**	⇑*e*Pg	**Pg**	**22 54 28.9**	**-0.5**
BAD				*e*Sg	**Sg**	**22 54 46.6**	**+0.3**
BAD	**Bernadia**	**1.31**	**196**	*e*Pg	**Pg**	**22 54 28.9**	**-0.5**
BAD				*e*Sg	**Sg**	**22 54 46.7**	**+0.3**
DRE	**Drenchia**	**1.33**	**183**	⇑*i*Pg	**Pg**	**22 54 29.2**	**-0.5**
DRE				*i* Sg	**Sg**	**22 54 47.5**	**+0.5**
DRE	**Drenchia**	**1.33**	**183**	*i* Pg	**Pg**	**22 54 29.2**	**-0.5**
DRE				*i* Sg	**Sg**	**22 54 47.5**	**+0.5**
GEC2	**GERESS Array S**	**1.34**	**359**	*e*Pn	**Pn**	**22 54 30.5**	**+0.5**
GEC2				*e*Pg	**Pg**	**22 54 31.0**	**+1.0**
GEC2				*e*Sg	**Sg**	**22 54 48.5**	**+1.1**
GEC2	**GERESS Array S**	**1.34**	**359**	Pn	**Pn**	**22 54 30.5**	**+0.6**
GEC2				Sg	**Sg**	**22 54 48.5**	**+1.0**
BUA	**Buia**	**1.35**	**199**	⇓*e*Pg	**Pg**	**22 54 30.2**	**0.0**
BUA				*e*Sg	**Sg**	**22 54 48.4**	**+0.7**
BUA	**Buia**	**1.35**	**199**	*e*Pg	**Pg**	**22 54 30.2**	**0.0**
BUA				*e*Sg	**Sg**	**22 54 48.4**	**+0.7**
ZAVS	**Zavodnje**	**1.38**	**140**	⇓*i*Pg	**Pg**	**22 54 29.6**	**-1.0**
ZAVS							
COLI	**Coloredo**	**1.39**	**191**	⇓*e*Pg	**Pg**	**22 54 30.8**	**-0.2**
COLI				*e*Sg	**Sg**	**22 54 50.3**	**+1.3**
COLI	**Coloredo**	**1.39**	**191**	*e*Pg	**Pg**	**22 54 30.8**	**-0.1**
COLI				*e*Sg	**Sg**	**22 54 50.3**	**+1.3**
WTTA	**Wattenberg**	**1.46**	**261**	*e*Pg	**Pg**	**22 54 33.3**	**+1.2**
WTTA				*e*Sg	**Sg**	**22 54 53.4**	**+2.4**
WTTA	**Wattenberg**	**1.46**	**261**	⇓*e*Pg	**Pg**	**22 54 32.2**	**0.0**
WTTA				⇓*i*Sg	**Sg**	**22 54 52.2**	**+1.2**
WTTA	**Wattenberg**	**1.46**	**261**	*e*Pn	**Pn**	**22 54 32.1**	**+0.7**
WTTA				Sg	**Sg**	**22 54 52.2**	**+1.2**
VOY	**Vojsko**	**1.47**	**176**	*e*Pn	**Pn**	**22 54 32.2**	**+0.5**
VOY				*e*Sn	**Sn**	**22 54 54.0**	**+2.6**
VOY	**Vojsko**	**1.47**	**176**	*e*Pn	**Pn**	**22 54 32.2**	**+0.5**
VOY				*e*Sn	**Sn**	**22 54 54.0**	**+2.6**
WATA	**Walderalm**	**1.48**	**264**	⇓*e*Pg	**Pg**	**22 54 32.1**	**-0.6**
WATA				⇓*i*Sg	**Sg**	**22 54 53.1**	**+1.2**
WATA	**Walderalm**	**1.48**	**264**	Pg	**Pg**	**22 54 32.1**	**-0.6**
WATA				Sg	**Sg**	**22 54 53.1**	**+1.2**
CONA	**Conrad Observa**	**1.49**	**73**	*e*Pg	**Pg**	**22 54 32.4**	**-0.4**
CONA				⇓*i*Sg	**Sg**	**22 54 53.2**	**+1.1**
CONA	**Conrad Observa**	**1.49**	**73**	Pg	**Pg**	**22 54 32.4**	**-0.4**
CONA				Sg	**Sg**	**22 54 53.2**	**+1.1**
CIMO	**Cimolais**	**1.49**	**217**	⇓*e*Pg	**Pg**	**22 54 32.6**	**-0.3**
CIMO				*e*Sg	**Sg**	**22 54 52.1**	**-0.1**
CIMO	**Cimolais**	**1.49**	**217**	*e*Pg	**Pg**	**22 54 32.6**	**-0.2**
CIMO				*e*Sg	**Sg**	**22 54 52.1**	**-0.1**
SABO	**M.te Sabotino**	**1.53**	**184**	⇑*e*Pg	**Pg**	**22 54 32.5**	**-1.0**
SABO				*e*Sg	**Sg**	**22 54 53.6**	**+0.4**
SABO	**M.te Sabotino**	**1.53**	**184**	*e*Pg	**Pg**	**22 54 32.5**	**-1.0**
SABO				*e*Sg	**Sg**	**22 54 53.6**	**+0.4**
LJU	**Ljubljana**	**1.55**	**160**	*i* Pn	**Pn**	**22 54 33.4**	**+0.6**
LJU	**Ljubljana**	**1.55**	**160**	*i* Pn	**Pn**	**22 54 33.4**	**+0.6**
MLNI	**Malnisio**	**1.56**	**210**	⇑*e*Pg	**Pg**	**22 54 33.8**	**-0.4**
MLNI				*e*Sg	**Sg**	**22 54 53.5**	**-0.9**
MLNI	**Malnisio**	**1.56**	**210**	*e*Pg	**Pg**	**22 54 33.8**	**-0.4**
MLNI				*e*Sg	**Sg**	**22 54 53.5**	**-0.9**
KHC	**Kasperske Hory**	**1.64**	**356**	*e*Pn	**Pn**	**22 54 34.5**	**+0.5**
KHC				*e*Sn	**Sn**	**22 54 56.9**	**+1.4**
KHC	**Kasperske Hory**	**1.64**	**356**	*e*PN	**Pn**	**22 54 34.7**	**+0.8**
KHC				*e*SG	**Sg**	**22 54 56.7**	**-0.1**
KHC	**Kasperske Hory**	**1.64**	**356**	*e*Pn	**Pn**	**22 54 34.5**	**+0.6**
KHC				*e*Sn	**Sn**	**22 54 56.9**	**+1.5**
TLI	**Talmassons**	**1.64**	**196**	⇓*e*Pg	**Pg**	**22 54 35.1**	**-0.6**
TLI				*e*Sg	**Sg**	**22 54 56.8**	**-0.1**
TLI	**Talmassons**	**1.64**	**196**	*e*Pg	**Pg**	**22 54 35.1**	**-0.6**
TLI				*e*Sg	**Sg**	**22 54 56.8**	**-0.2**
WET	**Wettzell**	**1.74**	**341**	*e*Pn	**Pn**	**22 54 35.9**	**+0.5**
WET				*e*Sg	**Sg**	**22 55 00.8**	**+0.6**
WET	**Wettzell**	**1.74**	**341**	Pn	**Pn**	**22 54 35.9**	**+0.5**
WET				Sg	**Sg**	**22 55 00.8**	**+0.5**
CAE	**Caneva**	**1.75**	**212**	⇑*i*Pg	**Pg**	**22 54 36.8**	**-0.9**
CAE				*i* Sg	**Sg**	**22 54 60.0**	**-0.4**
CAE	**Caneva**	**1.75**	**212**	*i* Pg	**Pg**	**22 54 36.8**	**-0.9**
CAE				*i* Sg	**Sg**	**22 55 00.0**	**-0.3**
FAU	**Forcella Aurin**	**1.76**	**224**	⇑*i*Pg	**Pg**	**22 54 37.8**	**-0.2**
FAU	**Forcella Aurin**	**1.76**	**224**	*i* Pg	**Pg**	**22 54 37.8**	**-0.1**
TRI	**Trieste**	**1.79**	**180**	*e*Pg	**Pg**	**22 54 37.1**	**-1.5**
TRI				*e*Sg	**Sg**	**22 55 01.2**	**-0.6**
TRI	**Trieste**	**1.79**	**180**	*e*Pn	**Pn**	**22 54 36.5**	**+0.4**
TRI				*e*Sg	**Sg**	**22 55 01.9**	**+0.1**
TRI	**Trieste**	**1.79**	**180**	*e*Pn	**Pn**	**22 54 36.5**	**+0.4**
TRI	**Trieste**	**1.79**	**180**	*e*Pg	**Pg**	**22 54 37.1**	**-1.5**
TRI				*e*Sg	**Sg**	**22 55 01.9**	**+0.1**
FUR	**Furstenfeldbru**	**1.79**	**293**	*e*Pn	**Pn**	**22 54 38.4**	**+2.3**
FUR				*e*Sg	**Sg**	**22 55 02.9**	**+1.0**
FUR	**Furstenfeldbru**	**1.79**	**293**	Pn	**Pn**	**22 54 38.4**	**+2.3**
FUR				Sg	**Sg**	**22 55 02.9**	**+1.0**
MOTA	**Moosalm**	**1.80**	**266**	⇓*e*Pg	**Pg**	**22 54 38.2**	**-0.6**
MOTA				⇓*i*Sg	**Sg**	**22 55 03.1**	**+0.9**
MOTA	**Moosalm**	**1.80**	**266**	Pg	**Pg**	**22 54 38.2**	**-0.6**
MOTA				Sg	**Sg**	**22 55 03.1**	**+0.9**
VARN	**Col Varnada, M**	**1.89**	**217**	⇑*i*Pn	**Pn**	**22 54 38.6**	**+1.2**
VARN				*i* Sn	**Sn**	**22 55 04.1**	**+2.5**
VARN	**Col Varnada, M**	**1.89**	**217**	*i* Pn	**Pn**	**22 54 38.6**	**+1.3**
VARN				*i* Sn	**Sn**	**22 55 04.1**	**+2.5**
SKDS	**Skadanscina**	**1.96**	**175**	*i* Pn	**Pn**	**22 54 39.4**	**+1.0**
SKDS				*i* Pg	**Pg**	**22 54 41.7**	**-0.2**
SKDS				*e*Sn	**Sn**	**22 55 04.8**	**+1.2**
KOGS	**Kog**	**2.01**	**121**	*i* Pn	**Pn**	**22 54 39.0**	**-0.1**
KOGS				*i* Pg	**Pg**	**22 54 42.7**	**-0.1**
KOGS	**Kog**	**2.01**	**121**	*i* Pn	**Pn**	**22 54 39.0**	**-0.1**
RETA	**Reutte**	**2.03**	**271**	⇓*e*Pg	**Pg**	**22 54 41.9**	**-1.1**
RETA				⇑*i*Sg	**Sg**	**22 55 10.2**	**+0.9**
RETA	**Reutte**	**2.03**	**271**	Pg	**Pg**	**22 54 41.9**	**-1.2**
RETA				Sg	**Sg**	**22 55 10.2**	**+0.9**
MTLO	**Montello**	**2.04**	**215**	⇓*e*Pn	**Pn**	**22 54 41.5**	**+2.1**
MTLO	**Montello**	**2.04**	**215**	*e*Pn	**Pn**	**22 54 41.5**	**+2.1**
CGRP	**Cima Grappa**	**2.10**	**220**	⇑*e*Pn	**Pn**	**22 54 41.6**	**+1.2**
CGRP	**Cima Grappa**	**2.10**	**220**	*e*Pn	**Pn**	**22 54 41.6**	**+1.2**
FETA	**Feichten**	**2.11**	**258**	⇑*i*Sg	**Sg**	**22 55 12.2**	**+0.1**
FETA	**Feichten**	**2.11**	**258**	Sg	**Sg**	**22 55 12.2**	**+0.1**
TREC	**Trest**	**2.14**	**32**	*e*PN	**Pn**	**22 54 41.1**	**+0.3**
TREC				*e*SG	**Sg**	**22 55 11.4**	**-1.4**
TREC	**Trest**	**2.14**	**32**	*e*Pn	**Pn**	**22 54 41.0**	**+0.2**
TREC				Sg	**Sg**	**22 55 11.4**	**-1.4**
BOJS	**Bojanci**	**2.25**	**152**	*i* Pn	**Pn**	**22 54 42.1**	**-0.3**

VRAC *e*Sn **Sn** **22 55 20.3 +0.6**
comp=Z,177nm,0.5s,baz=226
DAVA Damuels 2.64 267⇑ *e*Pn **Pn** **22 54 45.5 -2.2**
SNR=24
DAVA ⇓*i*Sg **Sg** **22 55 29.8 +0.9**
comp=Z,230nm,0.3s
DAVA Damuels 2.64 267 Pn **Pn** **22 54 45.5 -2.2**
SNR=24
DAVA Sg **Sg** **22 55 29.8 +0.9**
comp=Z,230nm,0.3s
SMOL Smolenice 2.67 66 *e*Pn **Pn** **22 54 49.0 +0.9**
SMOL *e*Sn **Sn** **22 55 25.4 +4.4**
SMOL Smolenice 2.67 66 *e*PN **Pn** **22 54 49.0 +0.9**
SMOL *e*SN **Sn** **22 55 25.4 +4.4**
SMOL Smolenice 2.67 66 *e*Pn **Pn** **22 54 49.0 +0.9**
SMOL *e*Sn **Sn** **22 55 25.4 +4.4**
BALD Monte Baldo 2.72 229 *e*Pn **Pn** **22 54 51.3 +2.5**
BALD Monte Baldo 2.72 229 *e*Pn **Pn** **22 54 51.3 +2.5**
DAVOX Davos/Dischmat 2.74 256 Pn **Pn** **22 54 52.4 +3.3**
comp=Z,5.9nm,0.3s,baz=86,slow=14,SNR=20
DAVOX Pg **Pg** **22 54 58.7 +2.0**
comp=Z,11nm,0.3s,baz=252,slow=15,SNR=29
DAVOX Sn **Sn** **22 55 31.9 +9.2**
comp=Z,22nm,0.3s,baz=344,slow=21,SNR=11
DAVOX Lg 22 55 39.9
comp=Z,15nm,0.3s,baz=293,slow=17,SNR=7.4
DAVOX Davos/Dischmat 2.74 256 Pn **Pn** **22 54 52.3 +3.2**
DAVOX Davos/Dischmat 2.74 256 Pg **Pg** **22 54 58.8 +2.1**
GRA1 Grafenberg Arr 2.76 324 Pn **Pn** **22 54 50.1 +0.7**
SNR=9.2
GRA1 Grafenberg Arr 2.76 324 Pg **Pg** **22 54 57.3 +0.2**
SNR=9.2
GRA1 Sg **Sg** **22 55 32.3 -0.6**
SNR=4.4
GRF Grafenberg Arr 2.76 324 *e*Pn **Pn** **22 54 50.1 +0.7**
SNR=9.2
GRF *e*Pg **Pg** **22 54 57.3 +0.2**
SNR=9.2
GRF *e*Sg **Sg** **22 55 32.3 -0.6**
SNR=4.4
GRF Grafenberg Arr 2.76 324 *e*Pn **Pn** **22 54 50.0 +0.6**
GRF *e*Pg **Pg** **22 54 57.2 +0.1**
GRF Grafenberg Arr 2.76 324 *e*Pn **Pn** **22 54 50.0 +0.6**
NKC Novy Kostel 2.87 343 *e*PN **Pn** **22 54 51.3 +0.5**
NKC *e*SG **Sg** **22 55 35.9 -0.4**
comp=Z,199nm,0.5s
NKC Novy Kostel 2.87 343 Pn **Pn** **22 54 51.3 +0.5**
NKC *e*Sg **Sg** **22 55 36.4 +0.1**
baz=161
GUNZ Gunzen 3.01 342 *e*Pn **Pn** **22 54 53.4 +0.6**
SNR=21
GUNZ *e*Pg **Pg** **22 55 02.0 0.0**
SNR=2.0
GUNZ *e*Sg **Sg** **22 55 40.8 -0.2**
SNR=3.8
GUNZ Gunzen 3.01 342 Pn **Pn** **22 54 53.4 +0.6**
SNR=21
TANN Tannenbergstha 3.04 344 *e*Sg **Sg** **22 55 41.6 -0.1**
SNR=4.0
TANN Tannenbergstha 3.04 344 Sg **Sg** **22 55 41.6 -0.2**
SNR=4.0
NVLJ Novalja 3.04 165 *e*Pn **Pn** **22 54 56.1 +2.9**
NVLJ Novalja 3.04 165 *e*Pn **Pn** **22 54 56.1 +2.9**
PVCC Panska Ves 3.08 10 *e*PN **Pn** **22 54 54.2 +0.5**
PVCC *e*SG **Sg** **22 55 42.3 -0.8**
comp=Z,313nm,0.3s
PVCC Panska Ves 3.08 10 *e*Pn **Pn** **22 54 53.8 +0.1**
baz=189
PVCC Sg **Sg** **22 55 42.3 -0.8**
comp=Z,313nm,0.3s
WERD Werda 3.10 343 *e*Pn **Pn** **22 54 54.7 +0.7**
SNR=23
WERD *e*Sg **Sg** **22 55 43.6 -0.1**
SNR=6.9
WERD Werda 3.10 343 Pn **Pn** **22 54 54.7 +0.7**
SNR=23
WERD Sg **Sg** **22 55 43.6 -0.1**
SNR=6.9
PKSG 3.15 90⇑ *e*Pn **Pn** **22 54 56.5 +1.8**
PKSG *e*Sn **Sn** **22 55 33.6 +0.8**
KOLL Kolacno 3.30 69 *e*Pn **Pn** **22 54 57.5 +0.7**
KOLL *e*Sn **Sn** **22 55 35.3 -1.3**
KOLL Kolacno 3.30 69 *e*PN **Pn** **22 54 57.5 +0.7**
KOLL *e*SN **Sn** **22 55 35.3 -1.3**
KOLL Kolacno 3.30 69 *e*Pn **Pn** **22 54 57.5 +0.7**
KOLL *e*Sn **Sn** **22 55 35.3 -1.3**
STU Stuttgart 3.30 294 *e*Pn **Pn** **22 54 57.8 +1.0**
SNR=3.8
STU *e*Sg **Sg** **22 55 49.9 -0.5**
STU Stuttgart 3.30 294 *e*Pn **Pn** **22 54 58.9 +2.0**
STU *e*Sg **Sg** **22 55 51.6 +1.2**
STU Stuttgart 3.30 294 Pn **Pn** **22 54 57.8 +1.0**
SNR=3.8
STU *e*Sg **Sg** **22 55 51.6 +1.2**
DPC Dobruska-Polom 3.32 30 *e*PN **Pn** **22 54 56.6 -0.4**
DPC *e*PG **Pg** **22 55 03.2 -4.6**
DPC *e*SG **Sg** **22 55 48.7 -2.1**
comp=Z,163nm,0.6s
DPC Dobruska-Polom 3.32 30 Pn **Pn** **22 54 56.6 -0.4**
DPC Dobruska-Polom 3.32 30 Pg **Pg** **22 55 03.2 -4.6**
DPC Sg **Sg** **22 55 48.7 -2.1**
comp=Z,163nm,0.6s
BRG Berggiesshubel 3.38 2 *e*Pn **Pn** **22 54 58.4 +0.6**
SNR=4.5
BRG *e*Sg **Sg** **22 55 50.9 -1.8**
SNR=5.9
BRG Berggiesshubel 3.38 2 PN **Pn** **22 54 58.4 +0.6**
BRG *i* 22 55 00.8
BRG Berggiesshubel 3.38 2 PG **Pg** **22 55 08.4 -0.5**
BRG SN **Sn** **22 55 37.1 -1.3**
BRG *i* 22 55 46.8
BRG Berggiesshubel 3.38 2 SG **Sg** **22 55 50.3 -2.4**
comp=Z,162nm,0.5s
BRG Berggiesshubel 3.38 2 Pn **Pn** **22 54 58.4 +0.6**
SNR=4.5
MORC Moravsky Berou 3.39 46 *e*Pn **Pn** **22 54 57.9 -0.2**
MORC *e*Sg **Sg** **22 55 49.8 -3.4**
MORC Moravsky Berou 3.39 46 *e*Pn **Pn** **22 54 58.0 -0.1**
baz=228
MORC *e*Sn **Sn** **22 55 39.3 +0.5**
comp=Z,108nm,0.7s,baz=228
MORC *e*Sg **Sg** **22 55 49.8 -3.4**
SPAK Spaichingen-Ko 3.40 282 P **Pn** **22 54 58.7 +0.6**
SPAK S **Sn** **22 55 43.5 +4.6**
SPAK Spaichingen-Ko 3.40 282 P **Pn** **22 54 58.7 +0.6**
SPAK S **Sn** **22 55 43.5 +4.6**
MOX Moxa 3.44 337 *i* PN **Pn** **22 54 59.2 +0.4**
MOX *e*PG **Pg** **22 55 12.4 +2.2**
MOX *e*SN **Sn** **22 55 39.8 -0.3**
MOX *i* SG **Sg** **22 55 54.8 0.0**
comp=Z,252nm,0.7s
MOX
comp=Z,100nm,13.0s
MOX Moxa 3.44 337 *e*Pn **Pn** **22 54 58.7 -0.1**
SNR=44
MOX *e*Pg **Pg** **22 55 12.4 +2.2**
MOX *e*Sn **Sn** **22 55 39.8 -0.3**
MOX *e*Sg **Sg** **22 55 53.2 -1.7**
SNR=5.9
MOX Moxa 3.44 337 Pn **Pn** **22 54 58.7 -0.1**
SNR=44
RHK3 Tenkes 3.49 116⇑ *e*Pn **Pn** **22 54 58.9 -0.5**
RHK3 *e*Sn **Sn** **22 55 40.6 -0.7**
VYHS Vyhne 3.56 72 *e*Pn **Pn** **22 54 59.9 -0.4**
VYHS *e*Sn **Sn** **22 55 39.3 -3.5**
VYHS Vyhne 3.56 72 *e*PN **Pn** **22 54 59.9 -0.4**
VYHS *e*SN **Sn** **22 55 39.3 -3.5**
VYHS Vyhne 3.56 72 *e*Pn **Pn** **22 54 59.9 -0.4**
VYHS *e*Sn **Sn** **22 55 39.3 -3.5**
BUD Budapest 3.58 88 *e*PB **Pg** **22 55 17.4 +4.6**
BUD *e*Sn **Sg** **22 56 02.7 +3.6**
PKSM Moragy 3.60 109 *e*Pn **Pn** **22 55 00.2 -0.6**
PKSM *e*Sn **Sn** **22 55 41.8 -2.0**
OKC Ostrava-Krasne 3.74 50 *e*PN **Pn** **22 55 02.7 -0.1**
OKC *e*SG **Sg** **22 56 02.2 -2.0**
comp=Z,72nm,0.6s
OKC Ostrava-Krasne 3.74 50 Pn **Pn** **22 55 02.7 -0.1**
OKC Sg **Sg** **22 56 02.2 -2.0**
comp=Z,72nm,0.6s
KSP Ksiaz 3.74 26 *e*Pn **Pn** **22 55 03.2 +0.4**
KSP *e*Pg **Pg** **22 55 15.0 -0.8**
KSP *e*Sn **Sn** **22 55 50.1 +2.8**
KSP *e*Sg **Sg** **22 56 02.9 -1.3**
KSP Ksiaz 3.74 26 *e*Pn **Pn** **22 55 03.2 +0.4**

KSP *e*Pg **Pg** **22 55 14.9 -0.9**
KSP *e*Sn **Sn** **22 55 49.8 +2.5**
KSP *e*Sg **Sg** **22 56 02.3 -1.9**
KSP Ksiaz 3.74 26 *e*Pn **Pn** **22 55 03.2 +0.4**
BFO Black Forest 3.74 285 *e*Pn **Pn** **22 55 03.0 +0.2**
SNR=22
BFO *e*Sn **Sn** **22 55 44.1 -3.2**
SNR=2.0
BFO Black Forest 3.74 285 *e*Pn **Pn** **22 55 03.0 +0.2**
BFO *e*Pg **Pg** **22 55 16.7 +0.8**
BFO *e*Sg **Sg** **22 56 04.6 +0.3**
BFO Black Forest 3.74 285 Pn **Pn** **22 55 03.0 +0.2**
SNR=22
BFO Black Forest 3.74 285 *e*Pg **Pg** **22 55 16.7 +0.8**
CLL Collm 3.84 353 *e*Pn **Pn** **22 55 04.6 +0.3**
SNR=15
CLL *i* Pg **Pg** **22 55 17.1 -0.7**
CLL *i* Sg **Sg** **22 56 06.6 -1.0**
CLL Collm 3.84 353 *e*Pn **Pn** **22 55 05.0 +0.8**
CLL *i* 22 55 08.5
CLL *i* Pg **Pg** **22 55 17.1 -0.7**
CLL *e*Sn **Sn** **22 55 48.0 -1.8**
CLL *i* Sg **Sg** **22 56 06.6 -1.0**
comp=Z,319nm,1.0s
CLL Collm 3.84 353 Pn **Pn** **22 55 04.6 +0.4**
SNR=15
PKS2 Kecel 3.87 103⇑ *e*Pn **Pn** **22 55 03.7 -1.0**
FELD Feldberg im Sc 3.90 278 P **Pn** **22 55 05.1 +0.1**
FELD Feldberg im Sc 3.90 278 P **Pn** **22 55 05.1 +0.1**
TOD Tromm 3.90 304 P **Pn** **22 55 05.2 +0.1**
TOD Tromm 3.90 304 P **Pn** **22 55 05.2 +0.1**
NEUB Neuenburg 3.93 342 *e*Pn **Pn** **22 55 06.5 +1.1**
SNR=3.3
NEUB *e*Sg **Sg** **22 56 09.2 -1.1**
SNR=6.5
NEUB Neuenburg 3.93 342 Pn **Pn** **22 55 06.5 +1.1**
SNR=3.3
NEUB Sg **Sg** **22 56 09.2 -1.2**
SNR=6.5
UBBA Unterbreizbach 4.13 325 *e*Pn **Pn** **22 55 09.1 +0.9**
SNR=2.5
UBBA Unterbreizbach 4.13 325 Pn **Pn** **22 55 09.1 +0.9**
SNR=2.5
PSZ Piszkesteto 4.17 82 *e*Pg **Pg** **22 55 18.1 -6.0**
BBS Basel-Blauen 4.23 272 P **Pn** **22 55 09.6 0.0**
BBS Basel-Blauen 4.23 272 P **Pn** **22 55 09.6 0.0**
LANF Langenberg 4.24 293 P **Pn** **22 55 10.1 +0.4**
LANF S **Sn** **22 56 04.5 +4.9**
LANF Langenberg 4.24 293 P **Pn** **22 55 10.1 +0.4**
LANF S **Sn** **22 56 04.5 +4.9**
TNS Taunus Mts 4.43 310 *e*Pn **Pn** **22 55 13.5 +1.1**
SNR=32
TNS *e*Sn **Sn** **22 56 02.5 -1.9**
SNR=6.6
TNS Taunus Mts 4.43 310 Pn **Pn** **22 55 13.5 +1.1**
SNR=32
CDF Champ du Feu 4.44 284 *e*Pg **Pg** **22 55 30.6 +1.2**
CDF *e*Sg **Sg** **22 56 28.4 +1.5**
comp=Z,93nm,0.5s
CDF Champ du Feu 4.44 284 *e*Pn **Pn** **22 55 12.5 0.0**
CDF *e*Pg **Pg** **22 55 30.6 +1.2**
CDF *e*Sg **Sg** **22 56 28.4 +1.5**
CDF Champ du Feu 4.44 284 *e*Pn **Pn** **22 55 12.5 0.0**
CDF Champ du Feu 4.44 284 *e*Pg **Pg** **22 55 30.6 +1.2**
CDF *e*Sg **Sg** **22 56 28.4 +1.5**
comp=Z,46nm,0.5s
MOF Molkenrain 4.48 277 P **Pn** **22 55 13.0 0.0**
MOF Molkenrain 4.48 277 P **Pn** **22 55 13.0 0.0**
ECH Echery 4.50 282 P **Pn** **22 55 13.2 0.0**
ECH S **Sn** **22 56 11.1 +5.2**
ECH Echery 4.50 282 *e*Pn **Pn** **22 55 13.0 -0.2**
ECH *e*Sg **Sg** **22 56 26.2 -2.4**
ECH Echery 4.50 282 P **Pn** **22 55 13.2 0.0**
ECH S **Sn** **22 56 11.1 +5.2**
ECH *e*Sg **Sg** **22 56 26.2 -2.4**
KECS Kecovo 4.63 75 *e*Pn **Pn** **22 55 15.0 0.0**
KECS *e*Sn **Sn** **22 56 05.5 -3.7**
KECS Kecovo 4.63 75 *e*PN **Pn** **22 55 15.0 0.0**
KECS *e*SN **Sn** **22 56 05.5 -3.7**
HINF Hinteralfeld 4.67 276 *e*Pn **Pn** **22 55 15.2 -0.4**
HINF *e*Sn **Sn** **22 56 08.0 -2.3**
HINF *e*Sg **Sg** **22 56 35.6 +1.4**
comp=Z,71nm,0.6s
HINF Hinteralfeld 4.67 276 *e*Pn **Pn** **22 55 15.2 -0.4**
HINF *e*Sn **Sn** **22 56 08.0 -2.3**
HINF *e*Sg **Sg** **22 56 35.6 +1.4**
comp=Z,35nm,0.6s
GTTG Gvttingen 4.74 330 *e*Sg **Sg** **22 56 35.1 -1.3**
SNR=4.1
GTTG Gvttingen 4.74 330 Sg **Sg** **22 56 35.1 -1.3**
SNR=4.1
NIE Niedzica 4.77 64 *e*Pn **Pn** **22 55 18.6 +1.6**
NIE *e*Sn **Sn** **22 56 11.8 -0.9**
NIE Niedzica 4.77 64 *e*Pn **Pn** **22 55 18.6 +1.6**
NIE *e*Sn **Sn** **22 56 11.8 -0.9**
OJC Ojcow 4.83 54 *e*Pn **Pn** **22 55 18.9 +1.1**
OJC *e*Sn **Sn** **22 56 10.1 -4.1**
KOE Koeppel 4.93 309 *e*Pn **Pn** **22 55 20.3 +1.2**
KOE *e*Sn **Sn** **22 56 13.8 -2.8**
comp=Z,38nm,0.4s
KOE Koeppel 4.93 309 Pn **Pn** **22 55 20.3 +1.2**
RUP Ruppelstein 4.95 299 P **Pn** **22 55 20.0 +0.5**
RUP Ruppelstein 4.95 299 P **Pn** **22 55 20.0 +0.5**
HAU Haudompre 5.02 278 *e*Pn **Pn** **22 55 20.7 +0.3**
HAU *e*Sn **Sn** **22 56 16.8 -2.0**
HAU *e*Sg **Sg** **22 56 45.5 +0.2**
comp=Z,55nm,0.4s
HAU Haudompre 5.02 278 *e*Pn **Pn** **22 55 20.7 +0.3**
HAU *e*Sn **Sn** **22 56 16.8 -2.0**
HAU *e*Sg **Sg** **22 56 45.5 +0.2**
comp=Z,28nm,0.4s
BGG Burgeitz 5.02 305 *e*Pn **Pn** **22 55 21.9 +1.4**
BGG *e*Sn **Sn** **22 56 15.5 -3.5**
comp=Z,24nm,0.7s
BGG Burgeitz 5.02 305 Pn **Pn** **22 55 21.9 +1.4**
LPG La Plagne 5.23 250 *e*Pn **Pn** **22 55 24.1 +0.8**
LPG *e*Sn **Sn** **22 56 21.1 -3.0**
comp=Z,22nm,0.5s
LPG La Plagne 5.23 250 *e*Pn **Pn** **22 55 24.1 +0.8**
LPG *e*Sn **Sn** **22 56 21.1 -3.0**
comp=Z,11nm,0.5s
LPL La Plagne 5.24 250 *e*Pn **Pn** **22 55 24.3 +0.9**
LPL *e*Sn **Sn** **22 56 21.7 -2.5**
comp=Z,14nm,0.7s
LPL La Plagne 5.24 250 *e*Pn **Pn** **22 55 24.3 +0.9**
LPL *e*Sn **Sn** **22 56 21.7 -2.5**
comp=Z,6.9nm,0.7s
THEF They Montfort 5.28 281 P **Pn** **22 55 23.5 -0.4**
THEF They Montfort 5.28 281 P **Pn** **22 55 23.5 -0.4**
CABF La Chapelle 5.31 263 *e*Pn **Pn** **22 55 24.0 -0.4**
CABF *e*Sn **Sn** **22 56 23.3 -2.8**
CABF *e*Sg **Sg** **22 56 55.1 +0.3**
comp=Z,61nm,0.9s
CABF La Chapelle 5.31 263 *e*Pn **Pn** **22 55 24.0 -0.4**
CABF *e*Sn **Sn** **22 56 23.3 -2.8**
CABF *e*Sg **Sg** **22 56 55.1 +0.3**
comp=Z,31nm,0.9s
STHS Stebnicka Huta 5.34 66 *e*Pn **Pn** **22 55 26.0 +1.2**
STHS Stebnicka Huta 5.34 66 *e*PN **Pn** **22 55 26.0 +1.2**
STHS Stebnicka Huta 5.34 66 *e*Pn **Pn** **22 55 26.0 +1.2**
CRVS Cervenica-Dubn 5.34 72 *e*Pn **Pn** **22 55 27.9 +3.0**
CRVS Cervenica-Dubn 5.34 72 *e*PN **Pn** **22 55 27.9 +3.0**
CRVS Cervenica-Dubn 5.34 72 *e*Pn **Pn** **22 55 27.9 +3.0**
BBLS Lazići 5.38 130 *e*Pn **Pn** **22 55 25.5 +0.2**
HOBG Hohbusch 5.46 312 *e*Pn **Pn** **22 55 27.9 +1.5**
HOBG *e*Sn **Sn** **22 56 25.6 -4.1**
comp=Z,78nm,0.6s
HOBG Hohbusch 5.46 312 Pn **Pn** **22 55 27.9 +1.5**
BNI Bardonecchia 5.48 246 *e*Pn **Pn** **22 55 28.9 +2.2**
comp=Z,4.1nm,0.6s
BNI Bardonecchia 5.48 246 *e*Pn **Pn** **22 55 28.9 +2.2**
comp=Z,4.1nm,0.6s
WLF Walferdange 5.49 296 PN **Pn** **22 55 28.3 +1.5**
WLF Walferdange 5.49 296 *e*Pn **Pn** **22 55 28.4 +1.6**
SNR=4.4
WLF Walferdange 5.49 296 *e*Pn **Pn** **22 55 28.2 +1.4**
comp=Z,26nm,0.6s
WLF Walferdange 5.49 296 *e*Pn **Pn** **22 55 28.2 +1.4**
comp=Z,26nm,0.6s
STB Steinbach 5.50 307 *e*Pn **Pn** **22 55 28.5 +1.6**
STB *e*Sn **Sn** **22 56 26.0 -4.6**
comp=Z,28nm,0.7s
STB Steinbach 5.50 307 Pn **Pn** **22 55 28.5 +1.6**

DIVS Divibare 5.53 126 *e*Pn **Pn** **22 55 28.1 +0.6**
MBDF Montbardon 5.59 243 *e*Pn **Pn** **22 55 28.4 +0.2**
MBDF *e*Sn **Sn** **22 56 29.5 -3.4**
comp=Z,13nm,0.6s
MBDF Montbardon 5.59 243 *e*Pn **Pn** **22 55 28.4 +0.2**
RFYF Reffroy 5.66 285 *e*Pn **Pn** **22 55 29.9 +0.7**
baz=106
RFYF Reffroy 5.66 285 *e*Pg **Pg** **22 55 51.3 -1.4**
RFYF *e*Sn **Sn** **22 56 32.0 -2.7**
RFYF *e*Sg **Sg** **22 57 04.7 -1.3**
comp=Z,22nm,0.3s
RFYF Reffroy 5.66 285 *e*Pn **Pn** **22 55 29.9 +0.7**
RFYF *e*Pg **Pg** **22 55 51.3 -1.4**
RFYF *e*Sn **Sn** **22 56 32.0 -2.7**
RFYF *e*Sg **Sg** **22 57 04.7 -1.3**
RFYF Reffroy 5.66 285 *e*Pn **Pn** **22 55 29.9 +0.7**
RFYF Reffroy 5.66 285 *e*Pg **Pg** **22 55 51.3 -1.4**
RFYF *e*Sg **Sg** **22 57 04.7 -1.3**
comp=Z,11nm,0.3s
TRUS Trudelj 5.69 123 *e*Pn **Pn** **22 55 28.8 -0.8**
SBF Sospel 5.73 233 *e*Pn **Pn** **22 55 30.8 +0.7**
SBF *e*Sn **Sn** **22 56 32.5 -3.8**
comp=Z,24nm,0.6s
SBF Sospel 5.73 233 *e*Pn **Pn** **22 55 30.8 +0.7**
KLL Kalltalsperre 5.81 306 *e*Pn **Pn** **22 55 32.3 +1.0**
KLL *e*Sn **Sn** **22 56 33.8 -4.6**
comp=Z,8.0nm,0.4s
KLL Kalltalsperre 5.81 306 Pn **Pn** **22 55 32.3 +1.0**
SFTF Sexfontaines 5.91 280 *e*Pn **Pn** **22 55 32.5 -0.1**
baz=111
SFTF *e*Sn **Sn** **22 56 37.7 -3.0**
SFTF *e*Sg **Sg** **22 57 14.0 +0.2**
comp=Z,39nm,0.6s
SFTF Sexfontaines 5.91 280 *e*Pn **Pn** **22 55 32.5 -0.1**
SFTF *e*Sg **Sg** **22 57 14.0 +0.2**
comp=Z,20nm,0.6s
MEZF Maizieres J'vi 5.92 283 *e*Pn **Pn** **22 55 33.8 +1.0**
baz=106
MEZF *e*Sn **Sn** **22 56 38.1 -3.0**
comp=Z,32nm,0.7s
MEZF Maizieres J'vi 5.92 283 *e*Pn **Pn** **22 55 33.8 +1.0**
MEM Membach 5.96 304 PN **Pn** **22 55 35.6 +2.3**
MEM Membach 5.96 304 Pn **Pn** **22 55 35.6 +2.2**
PGF Pioggiola 5.99 216 *e*Pn **Pn** **22 55 34.1 +0.4**
PGF *e*Sn **Sn** **22 56 38.1 -4.7**
comp=Z,33nm,1.0s
PGF Pioggiola 5.99 216 *e*Pn **Pn** **22 55 34.1 +0.4**
ORIF Oris-en-Rattie 6.04 248 *e*Pn **Pn** **22 55 35.5 +1.1**
ORIF *e*Sn **Sn** **22 56 40.1 -4.0**
comp=Z,11nm,0.4s
ORIF Oris-en-Rattie 6.04 248 *e*Pn **Pn** **22 55 35.5 +1.1**
GRUS Gruza 6.07 124 *e*Pn **Pn** **22 55 33.7 -1.1**
BCLA Clavier 6.28 301 PN **Pn** **22 55 39.8 +2.1**
BCLA Clavier 6.28 301 Pn **Pn** **22 55 39.8 +2.1**
FRF La Foret Royal 6.36 234 *e*Pn **Pn** **22 55 39.6 +0.8**
FRF *e*Sn **Sn** **22 56 47.1 -4.7**
comp=Z,8.8nm,0.7s
FRF La Foret Royal 6.36 234 *e*Pn **Pn** **22 55 39.6 +0.8**
GIVF Givet 6.45 297 *e*Pn **Pn** **22 55 41.0 +1.0**
GIVF *e*Sn **Sn** **22 56 50.9 -3.1**
comp=Z,40nm,0.5s
GIVF Givet 6.45 297 *e*Pn **Pn** **22 55 41.0 +1.0**
DOU Dourbes 6.58 297 PN **Pn** **22 55 43.7 +1.9**
DOU Dourbes 6.58 297 Pn **Pn** **22 55 43.6 +1.8**
LMR La Mourre 6.58 233 *e*Pn **Pn** **22 55 41.8 -0.1**
LMR *e*Sn **Sn** **22 56 52.6 -4.8**
comp=Z,5.7nm,0.7s
LMR La Mourre 6.58 233 *e*Pn **Pn** **22 55 41.8 -0.1**
SMRF Simiane la Rot 6.72 241 *e*Pn **Pn** **22 55 45.0 +1.3**
SMRF *e*Sn **Sn** **22 56 56.2 -4.5**
comp=Z,14nm,0.9s
SMRF Simiane la Rot 6.72 241 *e*Pn **Pn** **22 55 45.0 +1.3**
LOR Lormes 6.72 272 *e*Pn **Pn** **22 55 44.5 +0.7**
baz=89
LOR *e*Sn **Sn** **22 56 56.6 -4.2**
comp=Z,23nm,0.6s
LOR Lormes 6.72 272 *e*Pn **Pn** **22 55 44.5 +0.7**
BAIF Baives 6.80 296 *e*Pn **Pn** **22 55 45.9 +1.0**
BAIF *e*Sn **Sn** **22 56 59.6 -3.2**
comp=Z,11nm,0.5s
BAIF Baives 6.80 296 *e*Pn **Pn** **22 55 45.9 +1.0**
SMF Signal de Mont 6.82 266 *e*Pn **Pn** **22 55 45.9 +0.7**
SMF *e*Sn **Sn** **22 56 59.1 -4.2**
comp=Z,12nm,0.6s
SMF Signal de Mont 6.82 266 *e*Pn **Pn** **22 55 45.9 +0.7**
VIVF Saint-Julien-l 6.83 251 *e*Pn **Pn** **22 55 44.7 -0.6**
VIVF *e*Sn **Sn** **22 56 59.2 -4.4**
comp=Z,5.1nm,0.3s
VIVF Saint-Julien-l 6.83 251 *e*Pn **Pn** **22 55 44.7 -0.6**
SSF Saint Saulge 6.98 270 *e*Pn **Pn** **22 55 48.0 +0.6**
SSF *e*Sn **Sn** **22 57 03.3 -3.9**
comp=Z,22nm,1.0s
SSF Saint Saulge 6.98 270 *e*Pn **Pn** **22 55 48.0 +0.6**
AVF Avril sur Loir 7.13 268 *e*Pn **Pn** **22 55 49.7 +0.4**
AVF *e*Sn **Sn** **22 57 06.7 -4.1**
comp=Z,9.2nm,0.8s
AVF Avril sur Loir 7.13 268 *e*Pn **Pn** **22 55 49.7 +0.4**
BARS Barje 7.38 126 *e*Pn **Pn** **22 55 53.6 +0.8**
BGF Bois d'Agland 7.51 267 *e*Pn **Pn** **22 55 54.2 -0.4**
BGF *e*Sn **Sn** **22 57 16.0 -4.2**
comp=Z,16nm,0.4s
BGF Bois d'Agland 7.51 267 *e*Pn **Pn** **22 55 54.2 -0.4**
HYF Humbligny 7.55 272 *e*Pn **Pn** **22 55 55.5 +0.4**
HYF *e*Sn **Sn** **22 57 16.9 -4.2**
HYF Humbligny 7.55 272 *e*Pn **Pn** **22 55 55.5 +0.4**
LASF Ste Croix 7.72 247 *e*Pn **Pn** **22 55 56.8 -0.6**
LASF *e*Sn **Sn** **22 57 20.2 -5.1**
comp=Z,14nm,0.5s
LASF Ste Croix 7.72 247 *e*Pn **Pn** **22 55 56.8 -0.6**
BUR08 Bucovina Ar. S 7.75 85 *e*Pn **Pn** **22 55 56.0 -1.9**
BUR08 Bucovina Ar. S 7.75 85 *e*Pn **Pn** **22 55 56.0 -1.9**
TCF Toulx Ste Croi 8.00 266 *e*Pn **Pn** **22 56 00.4 -0.9**
TCF *e*Sn **Sn** **22 57 27.3 -4.9**
comp=Z,5.9nm,0.4s
TCF Toulx Ste Croi 8.00 266 *e*Pn **Pn** **22 56 00.4 -0.9**
CAF Calviac 8.50 257 *e*Pn **Pn** **22 56 08.3 +0.1**
CAF *e*Sn **Sn** **22 57 39.4 -5.2**
comp=Z,5.1nm,0.6s
CAF Calviac 8.50 257 *e*Pn **Pn** **22 56 08.3 +0.1**
MTLF Montolieu 9.11 247 *e*Pn **Pn** **22 56 16.6 0.0**
MTLF *e*Sn **Sn** **22 57 53.5 -6.1**
comp=Z,1.6nm,0.5s
MTLF Montolieu 9.11 247 *e*Pn **Pn** **22 56 16.6 0.0**
LDF La Druitiere 9.36 282 *e*Pn **Pn** **22 56 20.2 +0.3**
LDF *e*Sn **Sn** **22 58 00.5 -5.1**
comp=Z,4.4nm,0.5s
LDF La Druitiere 9.36 282 *e*Pn **Pn** **22 56 20.2 +0.3**
MFF Saint Martin d 9.53 270 *e*Pn **Pn** **22 56 22.0 -0.3**
MFF *e*Sn **Sn** **22 58 03.9 -6.0**
comp=Z,3.2nm,0.6s
MFF Saint Martin d 9.53 270 *e*Pn **Pn** **22 56 22.0 -0.3**
FLN La Foliniere 9.60 283 *e*Pn **Pn** **22 56 23.9 +0.6**
baz=100
FLN *e*Sn **Sn** **22 58 06.0 -5.6**
comp=Z,4.8nm,0.5s
FLN La Foliniere 9.60 283 *e*Pn **Pn** **22 56 23.9 +0.6**
GRR Gorron 9.85 281 *e*Pn **Pn** **22 56 27.1 +0.5**
GRR *e*Sn **Sn** **22 58 11.8 -5.8**
comp=Z,2.2nm,0.4s
GRR Gorron 9.85 281 *e*Pn **Pn** **22 56 27.1 +0.5**
SGMF Saint Gilles 10.98 280 *e*Pn **Pn** **22 56 42.5 +0.3**
SGMF *e*Sn **Sn** **22 58 38.9 -6.5**
comp=Z,1.1nm,0.4s
SGMF Saint Gilles 10.98 280 *e*Pn **Pn** **22 56 42.5 +0.3**
QUIF Quistinic 11.41 278 *e*Pn **Pn** **22 56 48.2 +0.2**
QUIF *e*Sn **Sn** **22 58 49.1 -6.8**
comp=Z,1.2nm,0.4s
QUIF Quistinic 11.41 278 *e*Pn **Pn** **22 56 48.2 +0.2**
ROSF Rostrenen 11.46 280 *e*Pn **Pn** **22 56 49.2 +0.5**
ROSF *e*Sn **Sn** **22 58 50.3 -6.8**
comp=Z,3.6nm,0.7s
ROSF Rostrenen 11.46 280 *e*Pn **Pn** **22 56 49.2 +0.5**
EKA Eskdalemuir Ar 13.12 313 Pn **Pn** **22 57 14.2 +2.9**
comp=Z,0.2nm,0.3s,baz=118,slow=13,SNR=5.4
EKA Eskdalemuir Ar 13.12 313 Pn **Pn** **22 57 14.2 +2.9**
NAO01 NORSAR Array S 13.47 354 *e*Pn **Pn** **22 57 17.0 +0.9**
NAO01 NORSAR Array S 13.47 354 *e*Pn **Pn** **22 57 17.0 +0.9**
ESDC Sonseca Array 15.01 245 Pn **Pn** **22 57 41.8 +4.6**
comp=Z,0.2nm,0.3s,baz=55,slow=12,SNR=7.1
FINES FINESS Array B 15.65 22 Pn **Pn** **22 57 44.6 -0.9**
comp=Z,0.4nm,0.3s,baz=195,slow=12,SNR=3.6
FINES FINESS Array B 15.65 22 Pn **Pn** **22 57 44.7 -0.9**
ARCES ARCESS Array B 22.85 11 P **P** **22 59 09.2 +1.0**
comp=Z,1.6nm,0.8s,mb3.5,baz=198,slow=7.1,SNR=5.3

TXAR Lajitas Array 85.09 309 P P 23 06 44.8 +3.3
comp=Z,0.6nm,1.0s,mb3.7,baz=57,slow=3.3,SNR=4.9

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*DJA **18** 22:55:07.2±0.5m×127°.26E±0°.07, h25km, MLv4.9/5*
*ISCJB **18** 22:55:08.2±0.7, 1°.89N±0°.04×127°.14E±0°.07, h70km±6km, mb4.3/24, Error ellipse: s-maj=12.0km s-min=6.4km az=161.5*
*IDC **18** 22:55:10.5±0.7, 1°.79N×127°.09E, h76km±5km, mb3.9/15, mb1 4.0/17, mb1mx3.9/24, mbtmp3.9/17, MS3.7/2, Ms1 3.8/2, ms1mx2.9/21, Error ellipse: s-maj=29.1km s-min=11.1km az=78.0*
*NEIC **18** 22:55:10.4±0.3, 1°.80N×127°.11E, mb4.5/8, Error ellipse: s-maj=10.1km s-min=5.9km az=75.0*

ISC 18 22:55:09.5±0.7, 1°.87N±0°.04×127°.15E±0°.07, h66km±6km, h78km±1.3km; pP-P, n49, σ1§03/47, mb4.3/24, 1C, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.11**	**169**	P	**Pn**	**22 55 29.3**	**+0.1**
MNI	**Manado**	**2.35**	**260**	P	**Pn**	**22 55 44.7**	**-1.1**
SGSI	**Sangihe**	**2.42**	**318**	P	**Pn**	**22 55 45.4**	**-1.4**
LBMI	**Labuha**	**2.52**	**172**	P	**Pn**	**22 55 49.4**	**+1.3**
GSPH	**General Santos**	**4.73**	**332**	⇑*i*P	**Pn**	**22 56 16.0**	**-2.3**
GSPH				*i* S	**Sn**	**22 57 06.7**	**-5.2**
NLAI	**Namlea**	**5.08**	**181**	P	**Pn**	**22 56 24.2**	**+1.1**
	0.9nm3μ65nm,0.7s						
MATI	**Mati**	**5.12**	**350**	*e*P	**Pn**	**22 56 23.5**	**-0.2**
MATI				*e*S	Sn	22 56 31.0	-50
LUWI	**Luwuk**	**5.25**	**237**	P	**Pn**	**22 56 28.1**	**+2.7**
DMPH	**Davao City--Mi**	**5.43**	**342**	*e*P	**Pn**	**22 56 27.7**	**-0.2**
BUKP	**Musuan**	**6.32**	**341**	*e*P	**Pn**	**22 56 40.8**	**+0.7**
BUKP				*e*S	Sn	22 56 55.9	-55
MYLDM	**Lahad Datu**	**9.24**	**291**	P	**Pn**	**22 57 21.7**	**+1.7**
TSM	**Tawau**	**9.57**	**285**	P	**Pn**	**22 57 23.6**	**-1.0**
KAPI	**Kappang**	**10.07**	**227**	P	**Pn**	**22 57 30.8**	**-0.6**
	2.0nm,0.3s,baz=204,slow=7.8,SNR=5.5						
SDKM	**Sandakan**	**10.62**	**291**	P	**Pn**	**22 57 38.6**	**-0.3**
KDM	**Kudat**	**11.44**	**296**	P	**Pn**	**22 57 53.2**	**+3.0**
KSM	**Kuching**	**16.84**	**269**	*e*Pn	**Pn**	**22 59 01.9**	**+0.8**
FITZ	**Fitzroy Crossi**	**19.90**	**184**	P	**Pn**	**22 59 35.4**	**-2.6**
	0.7nm,0.3s,baz=127,slow=8.5,SNR=12						
WRA	**Warramunga Arr**	**22.80**	**162**	P	**P**	**23 00 05.5**	**-1.3**
	9.8nm,0.3s,mb4.6,baz=342,slow=10,SNR=33						
ASAR	**Alice Springs**	**26.22**	**166**	P	**P**	**23 00 37.9**	**-0.4**
	2.5nm,0.3s,mb4.1,baz=346,slow=12,SNR=11						
CTAO	**Charters Tower**	**28.76**	**140**	*e*P	**P**	**23 01 00.9**	**-0.3**
	25nm,1.2s,mb4.7						
CMAR	**Chiang Mai Arr**	**32.20**	**303**	LR	LR	23 14 53.6	
	comp=Z,176nm,19.3s,baz=127,slow=37						
CHTO	**Chiang Mai**	**32.36**	**303**	*e*P	**P**	**23 01 31.4**	**-1.6**
	1.1nm,0.4s,mb3.9						
KSRS	**Korea Array**	**35.42**	**1**	P	**P**	**23 01 60.0**	**+0.8**
	1.9nm,0.8s,mb4.0,baz=180,slow=10,SNR=6.3						
MJAR	**Matsushiro Arr**	**35.98**	**15**	P	**P**	**23 02 03.5**	**-0.6**
	1.7nm,0.6s,mb4.2,baz=183,slow=9.9,SNR=8.8						
STKA	**Stephens Creek**	**36.25**	**159**	P	**P**	**23 02 06.0**	**-0.4**
	4.0nm,0.3s,mb4.8,baz=333,slow=8.4,SNR=18						
STKA	**Stephens Creek**	**36.25**	**159**	P	**P**	**23 02 06.0**	**-0.5**
BJT	**Baijiatuau**	**39.26**	**347**	*e*P	**P**	**23 02 32.6**	**+0.9**
	8.8nm,0.6s,mb4.8						
LSA	**Lhasa**	**43.99**	**313**	*e*P	**P**	**23 03 10.9**	**+0.4**
	3.6nm,0.6s,mb4.3						
ULN	**Ulaanbaatar**	**49.01**	**342**	*e*P	**P**	**23 03 50.4**	**+0.9**
	6.0nm,1.1s,mb4.4						
ULN				*e*pP	pP	23 04 08.5	+2.2
SONM	**Songino Array**	**49.18**	**342**	P	**P**	**23 03 52.5**	**+1.6**
	1.6nm,0.6s,mb4.1,baz=160,slow=7.9,SNR=9.4						
SONM				pP	pP	23 04 11.0	+3.4
	3.1nm,0.8s,baz=158,slow=8.9,SNR=7.7						
PETK	**Petropavlovsk-**	**56.99**	**21**	P	**P**	**23 04 49.6**	**+1.5**
	2.9nm,0.9s,mb4.3,baz=190,slow=4.0,SNR=4.1						
MK31	**Makanchi Array**	**59.31**	**326**	*e*P	**P**	**23 05 04.4**	**-0.1**
MKAR	**Makanchi Array**	**59.31**	**326**	P	**P**	**23 05 04.3**	**-0.2**
	1.6nm,0.4s,mb4.4,baz=116,slow=7.7,SNR=17						
MKAR				pP	pP	23 05 25.0	+3.2
	3.0nm,0.7s,baz=118,slow=9.4,SNR=4.6						
MKAR				LR	LR	23 30 24.0	
	comp=Z,45nm,19.8s,baz=15,slow=36						
MKAR	**Makanchi Array**	**59.31**	**326**	P	**P**	**23 05 04.3**	**-0.2**
MKAR				pP	pP	23 05 25.0	+3.2
MKAR				LR	LR	23 30 24.0	
AML	**Almayashu**	**62.33**	**318**	*e*P	**P**	**23 05 26.3**	**+1.1**
	3.1nm,0.7s,mb4.5						
ZALV	**Zalesovo Beam**	**62.43**	**333**	P	**P**	**23 05 24.9**	**-0.6**
	1.1nm,0.7s,mb4.0,baz=104,slow=6.3,SNR=5.5						
ZALV				pP	pP	23 05 45.4	+2.5
	2.8nm,0.9s,baz=116,slow=5.4,SNR=4.5						
KURK	**Kurchatov**	**63.53**	**328**	*e*P	**P**	**23 05 33.0**	**+0.1**
	10nm,0.6s,mb4.8						
KURK				*e*pP	pP	23 05 54.2	+3.9
KURK				*e*sP	sP	23 06 00.1	+2.4
BVAR	**Borovoye Array**	**69.10**	**327**	P	**P**	**23 06 09.0**	**+0.5**
	2.4nm,0.7s,mb4.1,baz=126,slow=7.5,SNR=7.5						
BVAR				pP	pP	23 06 28.3	+2.1
	5.4nm,0.9s,baz=116,slow=6.8,SNR=6.1						
BVAR	**Borovoye Array**	**69.10**	**327**	P	**P**	**23 06 09.0**	**+0.5**
BVAR				pP	pP	23 06 28.3	+2.1
BRVK	**Borovoye**	**69.17**	**327**	*e*P	**P**	**23 06 08.7**	**-0.2**
	6.0nm,0.8s,mb4.5						
BRVK				*e*pP	pP	23 06 28.8	+2.2
ABKAR	**Akbulak array**	**73.85**	**321**	*e*P	**P**	**23 06 36.6**	**-0.5**
	2.3nm,0.8s,mb4.0						
ABKAR				*e*pP	pP	23 06 57.4	+2.4
AKTK	**Aktyubinsk**	**75.37**	**322**	P	**P**	**23 06 46.1**	**+0.1**
AKTK				pP	pP	23 07 05.7	+1.9
AKTO	**Aktyubinsk**	**75.37**	**322**	P	**P**	**23 06 46.1**	**+0.1**
	2.1nm,0.6s,mb4.1,baz=102,slow=8.8,SNR=9.8						
AKTO				pP	pP	23 07 05.7	+1.9
	2.5nm,0.7s,baz=84,slow=3.6,SNR=4.1						
BRTR	**Keskin Array B**	**91.52**	**310**	P	**P**	**23 08 09.0**	**-0.2**
	0.5nm,0.8s,mb3.8,baz=80,slow=8.9,SNR=3.0						
QSPA	**South Pole Qui**	**91.79**	**180**	P	**P**	**23 08 09.8**	**+0.3**
	0.9nm,0.7s,mb4.1,baz=168,slow=3.1,SNR=5.9						
ARCES	**ARCESS Array B**	**92.33**	**340**	P	**P**	**23 08 10.9**	**-1.3**
	0.7nm,0.7s,mb4.0,baz=60,slow=17,SNR=3.1						
FINES	**FINESS Array B**	**93.66**	**332**	P	**P**	**23 08 18.1**	**-0.4**
	1.7nm,0.9s,mb4.4,baz=247,slow=25,SNR=2.6						
TXAR	**Lajitas Array**	**122.38**	**53**	PKP	PKPdf	23 13 58.7	+0.8
	0.4nm,0.7s,baz=191,slow=2.3,SNR=5.6						
TXAR	**Lajitas Array**	**122.38**	**53**	PKP	PKPdf	23 13 58.7	+0.8

PRE 18 22:57:37.7±0.4, 26°.29S×27°.73E, h2km, ML2.7, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERPM	**east rand prop**	**0.46**	**97**	*e*P	Pg	22 57 46.7	+0.1
ERPM				*e*S	Sg	22 57 53.2	+0.6
ERPM				AML	AML	22 57 57.1	
	comp=Z,294nm,0.5s						
PRYS	**Parys**	**0.71**	**208**	*e*P	Pg	22 57 51.2	-0.2
PRYS				*e*S	Sg	22 58 01.3	+0.6
PRYS				AML	AML	22 58 09.6	
	comp=Z,132nm,0.7s						
PRYS	**Parys**	**0.71**	**208**	*e*P	Pg	22 57 52.9	+1.5
PRYS				*e*S	Sg	22 58 02.2	+1.5
PRYS				AML	AML	22 58 09.6	
	comp=Z,132nm,0.7s						
SLR	**Silverton**	**0.74**	**42**	*e*P	Pg	22 57 51.7	-0.2
SLR				*e*S	Sg	22 58 02.3	+0.7
SLR				AML	AML	22 58 08.5	
	comp=Z,86nm,0.7s						
SLR	**Silverton**	**0.74**	**42**	*e*P	Pg	22 57 52.5	+0.5
SLR				*e*S	Sg	22 58 01.6	0.0
SLR				AML	AML	22 58 08.4	
	comp=Z,86nm,0.7s						
KSR	**Koster**	**0.87**	**300**	*e*P	Pg	22 57 54.5	+0.1
KSR				*e*S	Sg	22 58 06.4	+0.8
KSR				AML	AML	22 58 13.7	
	comp=Z,64nm,0.5s						
KSR	**Koster**	**0.87**	**300**	*e*P	Pg	22 57 55.5	+1.2
KSR				*e*S	Sg	22 58 05.5	-0.1
KSR				AML	AML	22 58 13.6	
	comp=Z,64nm,0.5s						
SEK	**Senekal**	**2.03**	**183**	*e*P	Pn	22 58 13.5	+0.6
SEK				*e*S	Sn	22 58 39.8	+1.0
SEK				AML	AML	22 58 42.5	
	comp=Z,32nm,0.3s						
SEK	**Senekal**	**2.03**	**183**	*e*P	Pn	22 58 15.7	+2.8
SEK				*e*S	Sn	22 58 42.0	+3.2
SEK				AML	AML	22 58 42.5	
	comp=Z,31nm,0.3s						
SWZ	**Schweizer**	**2.32**	**247**	*e*P	Pn	22 58 17.5	+0.6
SWZ				*e*S	Sn	22 58 46.3	+0.2
SWZ				AML	AML	22 58 51.1	
	comp=Z,38nm,0.6s						
SWZ	**Schweizer**	**2.32**	**247**	*e*P	Pn	22 58 17.5	+0.5
SWZ				*e*S	Sn	22 58 49.7	+3.7
SWZ				AML	AML	22 58 50.9	
	comp=Z,38nm,0.6s						
BOSA	**Boshof**	**3.19**	**223**	*e*P	Pn	22 58 29.6	+0.7
BOSA				*e*S	Sn	22 59 07.2	-0.3
BOSA				AML	AML	22 59 18.1	
	comp=Z,5.7nm,0.4s						
POGA	**Pongola**	**3.63**	**108**	*e*P	Pn	22 58 36.4	+1.4
POGA				*e*S	Sn	22 59 19.2	+0.9
POGA				AML	AML	22 59 39.0	
	comp=Z,18nm,0.5s						
PKA	**Prieska**	**5.54**	**231**	*e*P	Pn	22 59 02.1	+0.9
PKA				*e*S	Sn	23 00 03.8	-1.7
PKA				AML	AML	23 00 42.0	
	comp=Z,8.3nm,0.5s						
PKA	**Prieska**	**5.54**	**231**	*e*P	Pn	22 59 00.5	-0.7
PKA				*e*S	Sn	23 00 01.2	-4.2
PKA				AML	AML	23 00 41.9	
	comp=Z,8.3nm,0.5s						

BJI 18 23:30:20.9, 37°.63N×87°.13E, h19km, ML3.5/4, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**6.20**	**4**	*e*Pg	Pn	23 32 11.0	+20
WMQ				Sg	Sn	23 33 33.0	+31
WMQ				smax			
	comp=N,24nm,0.6s						
WMQ				smax			
	comp=E,25nm,0.5s						
KSH	**Kashi**	**8.94**	**286**	*e*Pn	Pn	23 33 13.0	+44
KSH				Sn	Sn	23 35 00.0	+51
KSH				smax			
	comp=N,10.0nm,0.8s						
KSH				smax			
	comp=E,13nm,1.0s						

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*IDC **18** 23:43:31.6±1.1, 13°.84N×89°.00W, h0km, mb3.9/5, mb1 4.0/7, mb1mx3.7/21, mbtmp3.8/7, ML3.3/2, MS3.0/1, Ms1 3.0/1, ms1mx2.5/30, Error ellipse: s-maj=41.8km s-min=12.4km az=41.0*
*CASC **18** 23:43:36.9±1.8, 13°.29N×89°.87W, h30km±6km, MD3.7, mb3.4(NEIC)*
*ISCJB **18** 23:43:37.7±0.8, 13°.41N±0°.10×89°.82W±0°.05, h68km±6km, mb3.9/5, Error ellipse: s-maj=17.1km s-min=5.1km az=22.3*
*NEIC **18** 23:43:41.7±1.3, 13°.68N×89°.63W, h87km±13km, mb3.4/1, Error ellipse: s-maj=23.3km s-min=12.0km az=224.0*

ISC 18 23:43:38.3±0.9, 13°.4N±0°.1×89°.83W±0°.05, h60km±8km, n35, σ1§17/42, mb4.0/5, 2C-5D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOQS	**Boqueron**	**0.64**	**56**	⇑*e*P	**Pn**	**23 43 51.1**	**-0.7**
BOQS				*e*S	**Sn**	**23 44 02.2**	**+0.5**
SNET	**Serv Nac Est T**	**0.65**	**62**	*e*P	**Pn**	**23 43 50.9**	**-1.1**
SNET				*e*S	**Sn**	**23 44 01.9**	**-0.1**
RBDL	**Robledal**	**0.74**	**10**	⇓*i*P	**Pn**	**23 43 52.6**	**-0.5**
LFRS	**El Faro**	**0.78**	**72**	⇓*i*P	**Pn**	**23 43 52.4**	**-1.1**
SNVI	**San Vicente**	**0.99**	**76**	*e*P	**Pn**	**23 43 55.6**	**-0.6**
SNVI				*e*S	**Sn**	**23 44 10.6**	**+1.2**
IXG	**Ixpaco**	**1.00**	**322**	⇑*e*P	**Pn**	**23 43 55.0**	**-1.3**
MTO2	**Montecristo 2**	**1.11**	**24**	⇓*i*P	**Pn**	**23 43 57.7**	**-0.1**
PCG	**Pacaya**	**1.27**	**323**	*e*P	**Pn**	**23 44 02.2**	**+2.3**
NBG	**Las Nubes**	**1.31**	**337**	⇓*e*P	**Pn**	**23 44 01.2**	**+0.8**
FUG	**Fuego 3**	**1.45**	**317**	⇓*e*P	**Pn**	**23 44 01.4**	**-1.0**
VSM	**San Miguel**	**1.51**	**88**	*e*P	**Pn**	**23 44 03.2**	**+0.1**
BLLM	**Bellamira**	**1.55**	**87**	*e*P	**Pn**	**23 44 03.1**	**-0.5**
BLLM				*e*S	**Sn**	**23 44 23.4**	**+0.7**
FG6		**1.56**	**319**	*e*P	**Pn**	**23 44 03.0**	**-0.8**
FG6				*e*S	**Sn**	**23 44 23.1**	**0.0**
CAHU	**Cacacuatique**	**1.62**	**76**	*e*P	**Pn**	**23 44 04.3**	**-0.3**
MRL	**Marmol**	**1.68**	**4**	*e*P	**Pn**	**23 44 06.7**	**+1.2**
APG	**El Apazote**	**1.73**	**339**	Pg	**Pn**	**23 44 06.0**	**-0.1**
APG				Lg		23 44 31.1	
TP2	**Tecpan 2**	**1.82**	**320**	*e*P	**Pn**	**23 44 08.1**	**+0.8**
CNCH	**Conchagua**	**1.94**	**93**	*e*P	**Pn**	**23 44 07.8**	**-1.2**
CNCH				*e*S	**Sn**	**23 44 34.1**	**+1.9**
JAT	**Jato**	**1.99**	**298**	*e*P	**Pn**	**23 44 08.9**	**-0.8**
TGUH	**Tegucigalpa,Un**	**2.57**	**74**	*e*Pn	**Pn**	**23 44 16.7**	**-0.8**
JTS	**JuntasAbangare**	**5.67**	**122**	Pn	**Pn**	**23 44 52.2**	**-7.8**
	0.5nm,0.3s,baz=310,slow=22,SNR=2.2						
JTS				Pg	**Pn**	**23 45 08.6**	**+8.6**
	3.4nm,0.3s,baz=302,slow=16,SNR=10.0						
JTS				Lg		23 46 25.5	
	1.9nm,0.3s,baz=218,slow=11,SNR=8.8						
JTS	**JuntasAbangare**	**5.67**	**122**	*e*Pn	**Pn**	**23 45 04.5**	**+4.5**
	18nm,0.7s						
JTS				*e*Sn	**Sn**	**23 46 20.5**	**+17**
JTS				Lg		23 46 25.5	
CMIG	**Matias Romero**	**6.12**	**308**	Pn	**Pn**	**23 45 07.7**	**+1.5**
	1.3nm,0.3s,baz=96,slow=9.0,SNR=8.2						
CMIG				Sn	**Sn**	**23 46 21.6**	**+6.8**
	1.6nm,0.3s,baz=277,slow=17,SNR=5.1						
TEIG	**Tepich**	**6.97**	**12**	*e*Pn	**Pn**	**23 45 18.6**	**+0.8**
	21nm,0.6s						
TXAR	**Lajitas Array**	**20.42**	**323**	P	**P**	**23 48 11.8**	**+1.2**
	0.5nm,0.5s,baz=143,slow=10,0,SNR=12						
TXAR	**Lajitas Array**	**20.42**	**323**	P	**P**	**23 48 11.8**	**+1.2**
WMOK	**Wichita Mounta**	**22.76**	**341**	*e*P	**P**	**23 48 34.2**	**-1.3**
	1.4nm,0.8s,mb3.4						
TKL	**Tuckaleechee C**	**22.84**	**13**	LR	LR	23 57 50.6	
	comp=Z,40nm,19.0s,baz=267,slow=39						
NVAR	**Mina Array Bea**	**35.49**	**320**	P	**P**	**23 50 31.1**	**+1.9**
	1.2nm,0.7s,mb4.0,baz=133,slow=8.0,SNR=12						
SCHQ	**Schefferville**	**45.10**	**19**	P	**P**	**23 51 45.5**	**-2.8**
	1.1nm,0.5s,mb4.0,baz=209,slow=11,SNR=3.6						
CFAA	**Coronel Fontan**	**49.29**	**156**	P	**P**	**23 52 24.2**	**+3.0**
	1.5nm,0.4s,mb4.4,baz=291,slow=19,SNR=5.5						
CFAA	**Coronel Fontan**	**49.29**	**156**	P	**P**	**23 52 24.2**	**+3.0**
ARCES	**ARCESS Array B**	**86.06**	**19**	P	**P**	**23 56 09.6**	**-2.5**
	1.0nm,0.7s,mb4.2,baz=22,slow=20,SNR=4.1						
ARCES	**ARCESS Array B**	**86.06**	**19**	P	**P**	**23 56 09.6**	**-2.5**
CMAR	**Chiang Mai Arr**	**147.21**	**345**	PKPbc	PKPbc	00 03 14.8	-0.9
	0.6nm,0.4s,baz=344,slow=3.2,SNR=5.2						

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*ISCJB **18** 23:48:50.7±0.4, 39°.67S±0°.04×71°.84W±0°.09, h126km±5km, mb4.0/5, Error ellipse: s-maj=11.2km s-min=6.2km az=2.1*
*GUC **18** 23:48:51.7±0.6, 39°.67S×72°.24W, h138km±6km, ML4.6*
*IDC **18** 23:48:51.3±2.3, 39°.59S×71°.77W, h115km±16km, mb3.9/5, mb1 3.8/8, mb1mx3.7/16, mbtmp3.8/8, Error ellipse: s-maj=39.8km s-min=14.3km az=92.0*
*NEIC **18** 23:48:51.7, 39°.67S×72°.24W, h138km, mb3.9/1, After GUC.*

ISC 18 23:48:51.7±0.4, 39°.67S±0°.04×71°.84W±0°.09, h122km±5km, n29, σ0§93/35, mb4.0/5, 7C-4D, Southern Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TMU	**Temuco**	**1.10**	**328**	⇑*i*P	**Pn**	**23 49 15.5**	**+0.7**
TMU				*i* S	**Sn**	**23 49 33.2**	**+0.8**
TMU	**Temuco**	**1.10**	**328**	⇑*i*P	**Pn**	**23 49 15.5**	**+0.7**
TMU				*i* S	**Sn**	**23 49 33.2**	**+0.8**
PUYE	**Entre Lagos**	**1.17**	**210**	⇓*i*P	**Pn**	**23 49 15.9**	**+0.4**
PUYE				*i* S	**Sn**	**23 49 34.0**	**+0.3**
OSCH	**Osorno**	**1.34**	**227**	⇑*i*P	**Pn**	**23 49 16.6**	**-0.7**
OSCH				*i* S	**Sn**	**23 49 35.5**	**-1.3**
OSCH	**Osorno**	**1.34**	**227**	⇑*i*P	**Pn**	**23 49 16.6**	**-0.7**
OSCH				*i* S	**Sn**	**23 49 35.5**	**-1.3**
OSCH				AML	AML	23 49 37.5	
	comp=N,26μm,0.5s						
PLCA	**Paso Flores**	**1.45**	**137**	P	**Pn**	**23 49 19.2**	**+0.6**
	comp=N,7.4nm,0.3s,baz=317,slow=11,SNR=84						
PLCA				S	**Sn**	**23 49 38.4**	**-0.8**
	comp=N,6.4nm,0.3s,baz=282,slow=12,SNR=7.1						
PMCH	**Puerto Montt**	**1.99**	**203**	⇑*i*P	**Pn**	**23 49 25.0**	**0.0**
PMCH				*i* S	**Sn**	**23 49 50.4**	**-0.2**
PMCH	**Puerto Montt**	**1.99**	**203**	⇑*i*P	**Pn**	**23 49 25.0**	**0.0**
PMCH				*i* S	**Sn**	**23 49 50.4**	**-0.2**
PMCH				AML	AML	23 49 54.9	
	comp=E,3μm,0.3s						
ILCA	**Isla Las Cabra**	**2.44**	**192**	⇓*i*P	**Pn**	**23 49 30.6**	**-0.7**
ILCA				*i* S	**Sn**	**23 50 00.8**	**0.0**
CCHI	**Chillan**	**3.07**	**357**	⇓*i*P	**Pn**	**23 49 39.7**	**+0.7**
CCHI	**Chillan**	**3.07**	**357**	⇓*i*P	**Pn**	**23 49 39.7**	**+0.7**
CCHI				AML	AML	23 50 17.0	
	comp=N,2μm,0.8s						
COCH	**Cobquecura**	**3.61**	**348**	*e*P	**Pn**	**23 49 46.2**	**+0.1**
COCH	**Cobquecura**	**3.61**	**348**	*e*P	**Pn**	**23 49 46.2**	**+0.1**
TRQA	**Tornquist**	**7.86**	**81**	*e*Pn	**Pn**	**23 50 44.8**	**+1.6**
CFAA	**Coronel Fontan**	**8.56**	**21**	P	**Pn**	**23 50 50.6**	**-2.2**
	comp=N,3.5nm,0.3s,baz=192,slow=11,SNR=215						
USHA	**Ushuaia**	**15.34**	**173**	P	**Pn**	**23 52 22.9**	**+1.5**
	comp=N,0.5nm,0.3s,baz=259,slow=4.1,SNR=5.6						
CPUP	**Villa Florida**	**18.00**	**47**	P	**Pn**	**23 52 52.8**	**-1.3**
	comp=N,0.3nm,0.3s,baz=212,slow=10,SNR=3.6						
LPAZ	**La Paz**	**23.52**	**9**	P	**P**	**23 53 50.9**	**+0.2**
	comp=N,2.3nm,0.6s,mb3.7,baz=154,slow=8.0,SNR=10						
LPAZ	**La Paz**	**23.52**	**9**	*e*P	**P**	**23 53 51.1**	**+0.4**
	comp=N,2.4nm,0.5s,mb3.8						
SIV	**San Ignacio**	**25.40**	**25**	P	**P**	**23 54 06.8**	**-1.0**
	comp=N,1.8nm,0.5s,mb3.8,baz=217,slow=10,SNR=10.0						
QSPA	**South Pole Qui**	**50.58**	**180**	P	**P**	**23 57 38.6**	**+1.4**
	comp=N,2.0nm,0.5s,mb4.4,baz=158,slow=1.4,SNR=25						
QSPA	**South Pole Qui**	**50.58**	**180**	P	**P**	**23 57 38.6**	**+1.4**
SYO	**Syowa Base**	**60.56**	**157**	⇑*e*P	**P**	**23 58 47.2**	**-1.5**
DBIC	**Dimbokro**	**76.92**	**70**	P	**P**	**00 00 30.6**	**-0.2**
	comp=N,1.3nm,0.4s,mb4.0,baz=199,slow=5.6,SNR=5.6						
BOSA	**Boshof**	**77.35**	**117**	P	**P**	**00 00 33.7**	**+0.6**
	comp=N,1.1nm,0.4s,mb4.0,baz=217,slow=5.2,SNR=9.0						
BOSA	**Boshof**	**77.35**	**117**	P	**P**	**00 00 33.7**	**+0.6**
WRA	**Warramunga Arr**	**115.85**	**207**	PKP	PKPdf	00 07 19.2	-1.0
	comp=N,0.1nm,0.5s,baz=171,slow=1.7,SNR=6.7						
ABKAR	**Akbulak array**	**144.82**	**58**	*e*PKPdf	PKPdf	00 08 12.4	-1.1
BVAR	**Borovoye Array**	**151.08**	**50**	PKPbc	PKPbc	00 08 30.1	+0.6
	comp=N,0.8nm,0.6s,baz=343,slow=4.5,SNR=5.7						

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*ISCJB **19** 00:15:04.2±0.3, 38°.23N±0°.02×75°.11E±0°.06, h141km±7km, mb4.0/7, Error ellipse: s-maj=8.3km s-min=3.9km az=171.0*
*BJI **19** 00:15:05.7, 38°.26N×74°.94E, h116km, mb4.3/1*
*NEIC **19** 00:15:05.7±1.0, 38°.23N×75°.03E, h135km±6km, mb4.0/4, Error ellipse: s-maj=14.7km s-min=7.3km az=133.0*
*IDC **19** 00:15:08.1±7.1, 38°.47N×74°.89E, h138km±47km, mb3.7/4, mb1 3.6/9, mb1mx3.3/27, mbtmp3.5/9, Error ellipse: s-maj=62.0km s-min=42.3km az=3.0*
*NNC **19** 00:15:10.4±4.5, 38°.80N×73°.99E, h0km, mb4.1, mpv3.6, Error ellipse: s-maj=53.1km s-min=34.4km az=55.0*

ISC 19 00:15:04.9±0.3, 38°.21N±0°.02×75°.09E±0°.06, h131km±6km, n54, σ1§33/71, mb4.0/7, 2C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.47**	**28**	⇓*i*P	**Pn**	**00 15 30.0**	**-2.7**
KSH				S	**Sn**	**00 15 46.8**	**-7.2**
KSH				smax			
	comp=N,930nm,0.4s						
KSH				smax			
	comp=E,830nm,0.5s						
KZA	**Kyzart**	**3.86**	**2**	P	**Pn**	**00 16 03.8**	**+1.1**
	SNR=8.8						
UCH	**Uchtor**	**4.04**	**354**	P	**Pn**	**00 16 06.0**	**+1.0**
	SNR=47						
UCH	**Uchtor**	**4.04**	**354**	*e*Pn	**Pn**	**00 16 05.8**	**+0.8**
UCH				*e*Sn	**Sn**	**00 16 49.9**	**-1.9**
AML	**Almayashu**	**4.06**	**345**	P	**Pn**	**00 16 05.8**	**+0.4**
	SNR=31						
AML	**Almayashu**	**4.06**	**345**	*e*Pn	**Pn**	**00 16 05.7**	**+0.3**
AML				*e*Sn	**Sn**	**00 16 48.4**	**-3.9**
ULHL	**Ulahol**	**4.12**	**12**	P	**Pn**	**00 16 07.5**	**+1.3**
	SNR=11						
AAK	**Ala-Archa**	**4.44**	**354**	P	**Pn**	**00 16 11.0**	**+0.6**
	comp=E,1.7nm,0.3s,baz=150,slow=8.1,SNR=11						
AAK				S	**Sn**	**00 16 59.1**	**-2.3**
	comp=E,3.7nm,0.3s,baz=75,slow=3.7,SNR=4.6						
AAK	**Ala-Archa**	**4.44**	**354**	P	**Pn**	**00 16 11.0**	**+0.6**
AAK				S	**Sn**	**00 16 59.1**	**-2.3**
KBK	**Karagaybulak**	**4.44**	**359**	P	**Pn**	**00 16 11.7**	**+1.3**
	SNR=8.2						
EKS2	**Erkin-Say**	**4.56**	**348**	P	**Pn**	**00 16 13.3**	**+1.3**
	SNR=9.2						
EKS2	**Erkin-Say**	**4.56**	**348**	*e*Pn	**Pn**	**00 16 12.9**	**+1.0**
EKS2				*e*Sn

LZH pmax pmax
comp=Z,18nm,1.3s,mb4.3
AKASG **Malin Array B 34.49 306** P **P 00 21 39.8 -0.2**
comp=Z,0.6nm,0.5s,mb3.6,baz=80,slow=7.6,SNR=4.6
FINES **FINESS Array B 37.96 324** P **P 00 22 09.5 +0.2**
comp=Z,1.9nm,0.3s,mb4.2,baz=116,slow=9.7,SNR=31
KAF **Kangasniemi 38.03 325** *e*p **P 00 22 08.6 -1.3**
comp=Z,3.2nm,0.9s,mb4.0
KEV **Kevo 40.48 336** *e*p **P 00 22 27.0 -3.1**
ARCES **ARCESS Array B 40.87 336** P **P 00 22 33.7 +0.4**
comp=Z,2.1nm,0.5s,mb4.0,baz=113,slow=8.5,SNR=30
NB2 **NORSAR Subarra 45.02 322** P **P 00 23 06.4 -0.4**
comp=Z,1.3nm,0.5s,mb3.8,baz=90,slow=7.9
NOA **NORSAR Array B 45.02 322** P **P 00 23 06.6 -0.2**
comp=Z,1.5nm,0.6s,mb3.8,baz=91,slow=7.8,SNR=9.5

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*BYKL **19** 00:16:40.2±0.6,51°.24N×100°.31E*
*MOS **19** 00:16:41.1±2.1,51°.19N×100°.37E,h23km,mb4.4/1,Error ellipse: s-maj=21.9km s-min=17.7km az=70.6*
*IDC **19** 00:16:42.9±2.4,50°.56N×99°.73E,h0km,mb3.5/1, mb1 3.3/3,mb1mx3.1/24,mbtmp3.3/3,ML2.9/2,MS2.6/1, Ms1 2.6/1,ms1mx2.1/29,Error ellipse: s-maj=118.9km s-min=23.9km az=25.0*
ISC 19 00:16:40.7±0.8,51°.35N±0°.05×100°.49E±0°.04,h10km,n36, σ1§57/66,7C-7D,Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOY	**Mondy**	**0.45**	**44**	⇓*i*PG	**Pg**	**00 16 51.5**	**+2.0**
MOY				*e*		00 16 59.2	
MOY				pmax	pmax		
	comp=Z,2μm,0.4s						
MOY				smax			
	comp=E,6μm,1.0s						
MOY	**Mondy**	**0.45**	**44**	Smax		00 16 00.7	
	comp=E,6μm,0.6s						
MOY				⇓*i*Pg	**Pg**	**00 16 51.5**	**+2.0**
	comp=E,1μm,0.8s						
MOY				⇓*i*Pg	**Pg**	**00 16 51.5**	**+2.0**
	comp=E,846nm,0.8s						
MOY				⇓*i*Pg	**Pg**	**00 16 51.5**	**+2.0**
	comp=E,2μm,0.8s						
MOY				Pmax		00 16 51.8	
	comp=E,2μm,0.8s						
MOY				*i* Sg	**Sg**	**00 16 59.2**	**+3.7**
ORL	**Orlik**	**1.27**	**341**	⇑*i*PN	**Pn**	**00 17 04.6**	**+0.1**
ORL				*e*		00 17 21.3	
ORL				pmax	pmax		
	comp=Z,423nm,0.4s						
ORL				smax			
	comp=E,3μm,1.0s						
ORL	**Orlik**	**1.27**	**341**	⇑*i*Pg	**Pg**	**00 17 04.5**	**-0.5**
	comp=E,130nm,0.5s						
ORL				⇓*i*Pg	**Pg**	**00 17 04.5**	**-0.5**
	comp=E,49nm,0.5s						
ORL				⇑*i*Pg	**Pg**	**00 17 04.5**	**-0.5**
	comp=E,146nm,0.5s						
ORL				*i* Pg	**Pg**	**00 17 07.0**	**+2.0**
ORL				max		00 17 07.2	
	comp=E,373nm,0.4s						
ORL				*e*		00 17 08.9	
ORL				*i* Sg	**Sg**	**00 17 21.3**	**-0.2**
ORL				*e*		00 17 24.3	
ORL				max		00 17 26.7	
	comp=E,3μm,1.1s						
ARS	**Arshan**	**1.34**	**64**	⇑*i*Pg	**Pg**	**00 17 06.8**	**+0.4**
ARS				Pmax		00 17 09.5	
	comp=E,738nm,0.3s						
ARS				*i* Sg	**Sg**	**00 17 26.1**	**+2.4**
ARS				*e*		00 17 30.5	
ARS				max		00 17 31.2	
	comp=E,4μm,0.9s						
TLY	**Talaya**	**2.00**	**79**	*e*PN	**Pb**	**00 17 18.1**	**+0.9**
TLY				*e*		00 17 45.9	
TLY				pmax	pmax		
	comp=Z,78nm,0.6s						
TLY				smax			
	comp=N,3μm,1.6s						
TLY	**Talaya**	**2.00**	**79**	⇓*i*Pg	**Pb**	**00 17 18.0**	**+0.8**
TLY				⇑*i*Pg	**Pg**	**00 17 27.6**	**+8.5**
TLY				max		00 17 29.5	
	comp=N,97nm,1.0s						
TLY				*e*Sg	**Sg**	**00 17 45.8**	**+0.8**
TLY				Smax		00 17 54.0	
	comp=N,3μm,1.6s						
IRK	**Irkutsk**	**2.52**	**68**	*e*PN	**Pb**	**00 17 27.4**	**+1.5**
IRK				*e*		00 18 01.4	
IRK				pmax	pmax		
	comp=Z,148nm,0.2s						
IRK				smax			
	comp=N,3μm,0.9s						
IRK	**Irkutsk**	**2.52**	**68**	*e*Pg	**Pb**	**00 17 26.6**	**+0.7**
IRK				Pmax		00 17 32.5	
	comp=N,189nm,0.4s						
IRK				*i* Sg	**Sg**	**00 18 01.9**	**+0.4**
IRK				Smax		00 18 06.4	
	comp=N,3μm,1.0s						
LSTR	**Listvyanka**	**2.76**	**77**	*e*	**Pn**	**00 17 27.6**	**+2.6**
LSTR				Pg	**Pb**	**00 17 30.6**	**+0.5**
LSTR				*e*		00 17 38.8	
LSTR				max		00 17 40.1	
	comp=N,41nm,0.6s						
LSTR				*e*Sn	**Sn**	**00 17 59.7**	**+1.4**
LSTR				*i* Sg	**Sg**	**00 18 08.6**	**-0.7**
LSTR				Smax		00 18 12.8	
	comp=N,662nm,1.6s						
TDJR	**Todzha**	**2.92**	**293**	⇑*i*Pg	**Pb**	**00 17 30.6**	**-2.2**
TDJR				*e*		00 17 33.8	
TDJR				*i* Sg	**Sg**	**00 18 09.0**	**-5.3**
STDB	**Stepnoy Dvoret**	**3.75**	**75**	*e*Pg	**Pg**	**00 17 50.7**	**-1.7**
STDB				*e*		00 17 59.0	
STDB				max		00 18 06.0	
	comp=N,70nm,1.0s						
STDB				*i* Sg	**Sg**	**00 18 41.8**	**+0.9**
STDB				*e*		00 18 48.9	
STDB				max		00 18 49.9	
	comp=N,2μm,1.1s						
TRG	**Tyrgan**	**3.88**	**66**	*e*PN	**Pg**	**00 17 54.7**	**-0.4**
TRG				*e*S	**Sn**	**00 18 28.7**	**+2.6**
TRG	**Tyrgan**	**3.88**	**66**	*e*	**Pn**	**00 17 46.4**	**+6.0**
TRG				*e*Pg	**Pg**	**00 17 51.2**	**-3.9**
TRG				Pmax		00 17 53.8	
	comp=N,60nm,0.8s						
TRG				*e*		00 18 03.5	
TRG				*e*		00 18 35.0	
TRG				*e*Sg	**Sg**	**00 18 43.4**	**-2.0**
TRG				Smax		00 18 48.5	
	comp=N,377nm,0.9s						
KAB	**Kabansk**	**3.90**	**77**	⇑*i*PN	**Pg**	**00 17 51.8**	**-3.6**
KAB				*e*		00 18 45.2	
KAB				pmax	pmax		
	comp=Z,100nm,0.3s						
KAB				smax			
	comp=E,903nm,0.8s						
KAB	**Kabansk**	**3.90**	**77**	Pg	**Pg**	**00 17 51.8**	**-3.6**
KAB				*e*Sg	**Sg**	**00 18 45.3**	**-0.6**
KAB				Smax		00 19 00.9	
	comp=E,971nm,1.9s						
HRMR	**Khuramsha**	**4.05**	**83**	*e*	**Pn**	**00 17 51.2**	**+8.5**
HRMR				*e*		00 17 53.1	
HRMR				max		00 18 02.6	
	comp=E,78nm,0.4s						
HRMR				*e*Sn	**Sn**	**00 18 29.4**	**-0.8**
HRMR				*i* Sg	**Sg**	**00 18 48.4**	**-2.4**
HRMR				Smax		00 18 50.7	
	comp=E,1μm,0.5s						
ZRHB	**Zarechye**	**4.30**	**71**	Pg	**Pg**	**00 18 01.0**	**-2.0**
ZRHB				*e*		00 18 09.7	
ZRHB				*e*		00 18 19.9	
ZRHB				max		00 18 21.2	
	comp=E,119nm,0.8s						
ZRHB				*e*Sg	**Sg**	**00 18 57.6**	**-1.0**
ZRHB				Smax		00 19 17.6	
	comp=E,982nm,1.3s						
UUDB	**Ulan-Yde**	**4.50**	**81**	*e*Pg	**Pg**	**00 18 02.4**	**-4.5**
UUDB				Pmax		00 18 11.6	
	comp=E,38nm,0.9s						
UUDB				*e*		00 18 56.6	
UUDB				*e*Sg	**Sg**	**00 19 03.3**	**-1.9**
UUDB				Smax		00 19 13.3	
	comp=E,341nm,1.6s						
ORY	**Orie**	**4.89**	**321**	⇓*i*PN	**Pb**	**00 18 05.0**	**-1.3**
OGRR	**Ongureny**	**4.92**	**59**	*e*PN	**Pn**	**00 17 58.2**	**+3.6**
OGRR				*e*		00 18 11.6	
OGRR	**Ongureny**	**4.92**	**59**	*e*Pn	**Pn**	**00 17 58.3**	**+3.7**
OGRR				*e*Pg	**Pg**	**00 18 11.0**	**-3.8**
OGRR				Pmax		00 18 13.9	
	comp=E,48nm,0.6s						
OGRR				*e*Sn	**Sn**	**00 18 54.9**	**+3.5**
OGRR				*e*Sn	**Sn**	**00 19 00.4**	**+9.0**
OGRR				*e*		00 19 13.5	
OGRR				*e*Sg	**Sg**	**00 19 16.4**	**-2.0**
OGRR				Smax		00 19 17.4	
	comp=E,365nm,1.1s						
SONM	**Songino Array**	**5.21**	**130**	Pn	**Pn**	**00 17 59.5**	**+0.9**
	comp=E,0.2nm,0.3s,baz=309,slow=14,SNR=4.6						
SONM				Pg	**Pg**	**00 18 14.4**	**-6.0**
	comp=E,5.6nm,0.3s,baz=312,slow=17,SNR=46						
SONM				Lg		00 19 25.2	
	comp=E,9.0nm,0.3s,baz=307,slow=27,SNR=12						
MXMB	**Maximikha**	**5.42**	**66**	*e*Pg	**Pg**	**00 18 20.0**	**-4.4**
MXMB				Pmax		00 18 26.9	
	comp=E,27nm,0.6s						
MXMB				*e*		00 19 12.6	
MXMB				*e*Sg	**Sg**	**00 19 32.0**	**-2.6**
MXMB				Smax		00 19 36.7	
	comp=E,410nm,0.9s						
ULN	**Ulaanbaatar**	**5.51**	**127**	*e*Pg	**Pg**	**00 18 19.4**	**-6.8**
ULN				*e*Sg	**Sg**	**00 19 32.4**	**-5.1**
NIZ	**Nizh Angarsk**	**6.98**	**47**	*e*Pn	**Pn**	**00 18 26.6**	**+3.7**
NIZ				*e*		00 18 28.8	
NIZ				*e*		00 18 38.3	
NIZ				*e*Pg	**Pg**	**00 18 48.9**	**-5.4**
NIZ				Pmax		00 18 54.6	
	comp=E,17nm,1.0s						
NIZ				*e*Sn	**Sn**	**00 19 43.8**	**+1.5**
NIZ				*e*Sg	**Sg**	**00 20 21.7**	**-2.9**
NIZ				Smax		00 20 26.1	
	comp=E,190nm,1.2s						
KPC	**Khapcheranga**	**7.76**	**98**	*e*	**Pn**	**00 18 38.1**	**+4.5**
KPC				*e*Pg	Pn	00 19 01.7	+28
KPC				Pmax		00 19 05.0	
	comp=E,4.0nm,1.0s						
KPC				*i* Sg	Sn	00 20 44.4	+43
KPC				Smax		00 20 51.9	
	comp=E,152nm,1.4s						
KMO	**Kumora**	**7.83**	**50**	*e*Pn	**Pn**	**00 18 38.0**	**+3.5**
KMO				*e*		00 18 40.6	
KMO				*e*		00 18 51.8	
KMO				*e*Pg	Pn	00 19 05.8	+31
KMO				Pmax		00 19 16.4	
	comp=E,13nm,0.8s						
KMO				*e*		00 20 12.2	
KMO				*i* Sg	Sn	00 20 49.1	+46
KMO				Smax		00 20 56.8	
	comp=E,181nm,1.2s						
YOA	**Uoyan**	**8.20**	**50**	*e*Sg	Sx	00 20 59.4	
ZALV	**Zalesovo Beam**	**9.87**	**291**	Lg		00 21 40.0	
	comp=E,0.3nm,0.3s,baz=116,slow=23,SNR=5.7						
NLYR	**Nelyaty**	**10.34**	**54**	*e*Pn	**Pn**	**00 19 14.2**	**+5.3**
NLYR				*e*		00 19 50.4	
NLYR				max		00 20 01.8	
	comp=E,2.0nm,0.5s						
NLYR				*e*		00 21 26.8	
NLYR				*i* Sg	Sx	00 22 06.0	
NLYR				Smax		00 22 24.6	
	comp=E,65nm,1.7s						
TUP	**Tupik**	**12.15**	**68**	*e*	**Pn**	**00 19 43.8**	**+10**
TUP				*e*		00 20 23.2	
TUP				*e*		00 21 58.3	
TUP				*e*Sg	Sx	00 23 00.7	
TUP				*e*		00 23 08.9	
TUP				max		00 23 21.5	
	comp=E,47nm,1.2s						
KHNR	**Khani**	**12.70**	**56**	*e*Sg	Sx	00 23 16.2	
MKAR	**Makanchi Array**	**12.76**	**256**	Lg		00 23 15.0	
	comp=E,0.1nm,0.3s,baz=68,slow=19,SNR=3.0						
BVAR	**Borovoye Array**	**18.47**	**287**	P	**Pn**	**00 20 56.4**	**-0.1**
	comp=E,0.1nm,0.3s,baz=89,slow=13,SNR=4.5						
KSRS	**Korea Array**	**23.85**	**115**	P	**P**	**00 22 00.1**	**+6.1**
	comp=E,1.2nm,0.7s,baz=323,slow=9.2,SNR=6.4						
KSRS				LR	LR	00 32 20.4	
	comp=E,13nm,19.1s,baz=260,slow=39						

IDC 19 00:17:25.4±1.2,14°.89N×143°.95E,h0km,mb3.9/5, mb1 4.2/5,mb1mx3.7/22,mbtmp3.9/5,Error ellipse: s-maj=45.5km s-min=19.3km az=54.0,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.57**	**145**	Pn	Pn	00 17 55.3	+0.8
	180nm,0.3s,baz=342,slow=9.6,SNR=76						
GUMO				Sn	Sn	00 18 15.5	0.0
	102nm,0.3s,baz=284,slow=22,SNR=12						
MKAR	**Makanchi Array**	**59.94**	**316**	P	P	00 27 33.7	+0.3
	0.3nm,0.3s,baz=94,slow=8.3,SNR=3.5						
ILAR	**Eielson Array**	**67.79**	**26**	P	P	00 28 25.4	+0.6
	0.3nm,0.4s,baz=245,slow=5.8,SNR=7.0						
BVAR	**Borovoye Array**	**68.36**	**321**	P	P	00 28 28.2	-0.4
	0.4nm,0.4s,baz=107,slow=6.4,SNR=3.6						
YKA	**Yellowknife Ar**	**82.12**	**27**	P	P	00 29 48.5	+0.8
	0.5nm,0.4s,baz=284,slow=5.1,SNR=3.2						
NVAR	**Mina Array Bea**	**86.81**	**51**	P	P	00 30 10.9	-1.0
	1.2nm,0.7s,baz=260,slow=5.1,SNR=10						

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*NEIC **19** 00:26:21.4,32°.20S×71°.88W,h22km,ML2.8(GUC),After GUC.*
GUC 19 00:26:21.4±0.5,32°.20S×71°.88W,h22km±5km,MD3.5, ML2.8,1C-1D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.45**	**46**	⇓*i*P	Pb	00 26 30.3	-0.4
CHNG				*i* S	Sb	00 26 37.2	+0.3
JACH	**Jahuel**	**1.19**	**114**	*e*P	Pn	00 26 42.2	-0.5
JACH				*e*S	Sb	00 26 58.4	+0.1
JACH	**Jahuel**	**1.19**	**114**	*e*P	Pn	00 26 42.2	-0.5
JACH				*e*S	Sb	00 26 58.4	+0.1
CMCH	**Combarbala**	**1.27**	**37**	*e*P	Pn	00 26 43.6	-0.2
CMCH				*i* S	Sn	00 27 00.4	+0.3
CMCH	**Combarbala**	**1.27**	**37**	*e*P	Pn	00 26 43.6	-0.2
CMCH				*i* S	Sn	00 27 00.4	+0.3
PEL	**Peldehue**	**1.38**	**133**	⇑*i*P	Pn	00 26 45.2	-0.2
PEL				*i* S	Sn	00 27 03.3	+0.3
PEL				AML	AML	00 27 06.7	
	comp=N,572nm,0.3s						
CLCH	**Cerro Calan**	**1.65**	**137**	*e*P	Pn	00 26 49.3	+0.3
CLCH				*i* S	Sn	00 27 11.0	+1.4
CLCH				AML	AML	00 27 20.8	
	comp=E,186nm,0.4s						
TACH	**Talagante**	**1.66**	**152**	*e*P	Pn	00 26 49.5	+0.4
TACH				*i* S	Sn	00 27 10.9	+1.2
TACH	**Talagante**	**1.66**	**152**	*e*P	Pn	00 26 49.5	+0.4
TACH				*i* S	Sn	00 27 10.9	+1.2
FCH	**Farellones**	**1.75**	**131**	*e*P	Pn	00 26 52.2	+1.7
FCH				AML	AML	00 27 15.4	
	comp=E,109nm,0.4s						
LNV	**Longovilo**	**1.80**	**167**	*e*P	Pn	00 26 52.2	+1.1
LNV	**Longovilo**	**1.80**	**167**	*e*P	Pn	00 26 52.2	+1.1
PCH	**Pirque**	**1.83**	**141**	*e*P	Pn	00 26 52.3	+0.8
PCH				*e*S	Sn	00 27 16.4	+2.4
PCH	**Pirque**	**1.83**	**141**	*e*P	Pn	00 26 52.3	+0.8
PCH				*e*S	Sn	00 27 16.4	+2.4
CACH	**El Canelo**	**2.20**	**151**	*e*P	Pn	00 26 58.4	+1.8
CACH				*e*S	Sn	00 27 27.3	+4.2
CACH	**El Canelo**	**2.20**	**151**	*e*P	Pn	00 26 58.4	+1.8
CACH				*e*S	Sn	00 27 27.3	+4.2

IDC 19 00:28:45.3±5.8,2°.68S×138°.93E,h0km,mb3.3/2, mb1 3.5/3,mb1mx3.3/15,mbtmp3.4/3,ML3.1/1,Error ellipse: s-maj=233.6km s-min=32.7km az=85.0,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.74**	**194**	Pn	Pn	00 32 52.9	-1.0
	0.1nm,0.3s,baz=16,slow=13,SNR=3.1						
ASAR	**Alice Springs**	**21.43**	**193**	P	P	00 33 35.6	+0.6
	0.4nm,0.5s,baz=21,slow=10,SNR=5.8						
MKAR	**Makanchi Array**	**69.90**	**322**	P	P	00 39 58.3	+0.1
	0.3nm,0.4s,baz=106,slow=8.6,SNR=4.1						

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*BJI **19** 00:49:08.8,44°.40N×129°.20W,h20km,mB4.6/1,mb4.5/3*
*IDC **19** 00:49:14.1±1.3,44°.09N×129°.19W,h0km,mb3.7/7, mb1 3.8/13,mb1mx3.7/29,mbtmp3.6/13,ML3.4/6,MS3.2/7, Ms1 3.2/7,ms1mx3.1/36,Error ellipse: s-maj=33.8km s-min=13.1km az=41.0*
*ISCJB **19** 00:49:15.1±0.8,44°.37N±0°.04×129°.17W±0°.10,h10km, mb3.9/11,MS3.2/2,Error ellipse: s-maj=10.1km s-min=5.7km az=166.9*
*NEIC **19** 00:49:16.8±0.7,44°.35N×129°.21W,h10km,mb4.0/16, Error ellipse: s-maj=9.5km s-min=5.8km az=71.0*
ISC 19 00:49:17.1±0.8,44°.36N±0°.04×129°.22W±0°.09,h10km,n91, σ1§24/92,mb3.9/11,MS3.3/2,Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEBO	**Mount Hebo**	**3.98**	**76**	*e*Pn	**Pn**	**00 50 15.9**	**-2.2**
COR	**Corvallis**	**4.24**	**85**	*e*Pn	**Pn**	**00 50 20.2**	**-1.5**
BMW	**Boistfort Moun**	**4.72**	**61**	P	**Pn**	**00 50 25.9**	**-2.3**
NLWA	**Neilton Lookou**	**4.81**	**49**	*e*Pn	**Pn**	**00 50 28.4**	**-1.1**
OOW	**Octopus West**	**4.87**	**44**	P	**Pn**	**00 50 29.3**	**-0.9**
HUMO	**Hull Mountain**	**4.88**	**109**	*e*Pn	**Pn**	**00 50 27.9**	**-2.5**
HUMO				*e*Sn	**Sn**	**00 51 22.0**	**-4.9**
OTR	**Olympics--Tyee**	**5.03**	**40**	P	**Pn**	**00 50 31.9**	**-0.6**
HDW	**Hoodsport**	**5.41**	**50**	P	**Pn**	**00 50 36.4**	**-1.3**
YBH	**Yreka Blue Hor**	**5.44**	**117**	Pn	**Pn**	**00 50 34.4**	**-3.8**
	0.4nm,0.3s,baz=301,slow=12,SNR=5.3						
YBH				Sn	**Sn**	**00 51 37.2**	**-3.6**
	0.2nm,0.3s,baz=254,slow=7.9,SNR=1.2						
YBH				LR	LR	00 51 47.3	
	comp=Z,78nm,18.0s,baz=306,slow=29						
YBH	**Yreka Blue Hor**	**5.44**	**117**	*e*Pn	**Pn**	**00 50 39.6**	**+1.5**
YBH				Sn	**Sn**	**00 51 37.2**	**-3.6**
YBH				LR	LR	00 51 47.3	
GNW	**Green Mountain**	**5.49**	**52**	P	**Pn**	**00 50 37.1**	**-1.7**
BLN	**Blyn Mountain**	**5.67**	**48**	P	**Pn**	**00 50 40.9**	**-0.4**
LON	**Longmire**	**5.73**	**63**	*e*Pn	**Pn**	**00 50 41.3**	**-0.7**
PGC	**Sidney**	**5.86**	**41**	*e*Pn	**Pn**	**00 50 42.1**	**-1.7**
HTW	**Haystack Looko**	**6.22**	**54**	P	**Pn**	**00 50 48.2**	**-0.6**
JCW	**Jim Creek**	**6.34**	**50**	P	**Pn**	**00 50 49.9**	**-0.6**
CMW	**Cultus Mountai**	**6.38**	**48**	P	**Pn**	**00 50 51.0**	**+0.1**
ETW	**Entiat**	**6.99**	**59**	*e*Pn	**Pn**	**00 50 59.7**	**+0.3**
RSW	**Rattlesnake Hi**	**7.08**	**70**	*e*Pn	**Pn**	**00 51 00.6**	**-0.1**
HAWA	**Hanford**	**7.12**	**70**	*e*Pn	**Pn**	**00 51 00.8**	**-0.4**
	6.2nm,0.6s						
BBB	**Bella Bella**	**7.87**	**5**	Pn	**Pn**	**00 51 12.2**	**+0.7**
	0.7nm,0.3s,baz=35,slow=15,SNR=16						
BBB				LR	LR	00 53 30.5	
	comp=Z,48nm,18.3s,baz=311,slow=32						
LNOR	**Lincton Mounta**	**7.88**	**75**	*e*Pn	**Pn**	**00 51 14.5**	**+2.9**
OD2	**Odessa Site #2**	**7.94**	**64**	*e*Pn	**Pn**	**00 51 11.2**	**-1.2**
WVOR	**Wild Horse Val**	**7.94**	**100**	*e*Pn	**Pn**	**00 51 06.2**	**-6.3**
	6.3nm,1.1s						
BMO	**Blue Mountains**	**8.52**	**82**	*e*Pn	**Pn**	**00 51 20.0**	**-0.4**
PAHR	**Pah Rah Range**	**8.67**	**119**	*e*Pn	**Pn**	**00 51 24.4**	**+1.9**
CMB	**Columbia Colle**	**9.17**	**130**	*e*Pn	**Pn**	**00 51 28.1**	**-1.3**
NEW	**Newport**	**9.24**	**61**	*e*Pn	**Pn**	**00 51 30.1**	**-0.1**
WAKR	**Walker**	**9.38**	**125**	*e*Pn	**Pn**	**00 51 33.1**	**+0.8**
NVAR	**Mina Array Bea**	**10.11**	**122**	Pn	**Pn**	**00 51 41.2**	**-1.0**
	0.2nm,0.3s,baz=298,slow=12,SNR=14						
BSMT	**Bassoo Peak**	**10.61**	**66**	*e*Pn	**Pn**	**00 51 50.8**	**+1.8**
HLID	**Hailey**	**10.71**	**89**	*e*Pn	**Pn**	**00 51 52.8**	**+2.4**
ELK	**Elko**	**10.93**	**104**	Pn	**Pn**	**00 51 54.8**	**+1.4**
	0.0nm,0.3s,baz=288,slow=11,SNR=6.8						
ELK				LR	LR	00 56 11.1	
	comp=Z,164nm,18.9s,baz=102,slow=38						
ELK	**Elko**	**10.93**	**104**	Pn	**Pn**	**00 51 54.8**	**+1.4**
ELK				LR	LR	00 56 11.1	
MSO	**Missoula**	**10.99**	**72**	*e*Pn	**Pn**	**00 51 56.1**	**+1.9**
N12A	**Clover Valley,**	**11.02**	**104**	*e*Pn	**Pn**	**00 51 57.9**	**+3.2**
SWMT	**Swartz Lake**	**11.06**	**68**	*e*Pn	**Pn**	**00 51 56.5**	**+1.3**
SLMT	**Seeley Lake**	**11.35**	**70**	*e*Pn	**Pn**	**00 51 59.3**	**+0.1**
CHMT	**Chamberlain Mo**	**11.47**	**72**	*e*Pn	**Pn**	**00 52 02.0**	**+1.2**
WALA	**Waterton Lakes**	**11.51**	**60**	*e*Pn	**Pn**	**00 52 02.1**	**+0.8**
	0.1nm,0.8s						
DLMT	**Dillon**	**11.84**	**79**	*e*Pn	**Pn**	**00 52 07.4**	**+1.6**
	2.6nm,0.8s						
LRM	**Limekiln Ridge**	**11.95**	**77**	*e*Pn	**Pn**	**00 52 08.5**	**+1.2**
HRY	**Holter Researc**	**12.42**	**73**	*e*Pn	**Pn**	**00 52 13.6**	**-0.1**
	2.4nm,0.7s						
BOZ	**Bozeman (W)**	**12.52**	**78**	*e*Pn	**Pn**	**00 52 16.0**	**+0.8**
DUG	**Dugway**	**12.84**	**103**	*e*Pn	**Pn**	**00 52 19.3**	**-0.2**
GSC	**Goldstone**	**13.13**	**129**	*e*Pn	**Pn**	**00 52 23.4**	**-0.2**
TPAW	**Teton Pass**	**13.20**	**87**	*e*Pn	**Pn**	**00 52 23.9**	**-0.6**
HWUT	**Hardware Ranch**	**13.21**	**96**	*e*Pn	**Pn**	**00 52 24.6**	**0.0**
REDW	**Red Top Meadow**	**13.29**	**88**	*e*Pn	**Pn**	**00 52 30.4**	**+4.7**
CCUT	**Cedar City**	**13.77**	**114**	*e*Pn	**Pn**	**00 52 32.3**	**+0.1**
EGMT	**Eagleton**	**13.97**	**68**	*e*Pn	**Pn**	**00 52 43.8**	**+8.9**
MSU	**Marysvale**	**14.04**	**109**	*e*P	**Pn**	**00 52 45.7**	**+10**
DLBC	**Dease Lake**	**14.11**	**358**	LR	LR	00 57 01.6	
	comp=Z,115nm,19.3s,baz=219,slow=32						
RLMT	**Red Lodge**	**14.20**	**80**	*e*Pn	**Pn**	**00 52 39.5**	**+1.4**
RLMT				*e*P		00 52 47.0	
LDFC	**Landfair**	**14.26**	**126**	*e*Pn	**Pn**	**00 52 38.5**	**-0.4**
PDAR	**Pinedale Array**	**14.35**	**89**	Pn	**Pn**	**00 52 41.3**	**+1.2**
	0.0nm,0.3s,baz=291,slow=12,SNR=5.1						
PDAR				LR	LR	00 58 16.0	
	comp=Z,209nm,18.6s,baz=345,slow=38						
SRU	**San Rafael**	**14.90**	**104**	*e*P	**Pn**	**00 52 54.6**	**+7.0**
	31nm,1.0s						
WUAZ	**Wupatki**	**16.26**	**117**	*e*P	**Pn**	**00 53 07.0**	**+1.5**
	12nm,1.1s						
LAO	**LASA Array**	**16.27**	**74**	*e*P	**Pn**	**00 53 09.0**	**+3.5**
	9.3nm,0.8s						
RWWY	**Rawlins**	**16.31**	**92**	*e*P	**Pn**	**00 53 09.6**	**+3.6**
	19nm,1.1s						
PV04	**Paradox Valley**	**16.35**	**104**	*e*P	**Pn**	**00 53 07.5**	**+0.9**
PV01	**Paradox Valley**	**16.71**	**105**	*e*P	**Pn**	**00 53 11.5**	**+0.3**
	2μm,1.3s						
MVCO	**Mesa Verde**	**17.21**	**107**	*e*P	**Pn**	**00 53 17.4**	**0.0**
	40nm,1.5s						
SMCO	**Snowmass**	**17.36**	**100**	*e*P	**Pn**	**00 53 23.3**	**+3.9**
	6.8nm,1.1s						
PHWY	**Pilot Hill**	**17.68**	**92**	*e*P	**Pn**	**00 53 23.1**	**-0.1**
	4.4nm,1.0s						
ISCO	**Idaho Springs**	**18.08**	**96**	*e*

LZH				pP	pP	01 01 59.3	-4.6
LZH				sP	sP	01 02 01.0	-4.1
GYA	**Guiyang**	**92.98**	**312**	*e*P	**P**	**01 02 24.0**	**-6.7**
LSZ	**Lusaka**	**145.25**	**41**	*e*PKPbc	PKPbc	01 08 52.3	-2.5

IDC ***19*** *00:58:37.8±1.2, 6°41S×150°45E, h0km, mb4.0/9, mb1 4.3/9, mb1mx4.1/17, mbtmp4.0/9, MS4.1/1, Ms1 4.1/1, ms1mx2.9/22, Error ellipse: s-maj=40.3km s-min=18.8km az=113.0*

ISCJB ***19*** *00:58:39.4±0.9, 6°58S±0°09×150°8E±0°2, h33km, mb3.9/8, Error ellipse: s-maj=29.0km s-min=12.7km az=3.0*

ISC 19 00:58:41.3±0.9, 6°59S±0°09×150°8E±0°2, h35km, n14, σ1°03/13, mb3.9/8, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EIDS	**Eidsvold**	**18.68**	**179**	*e*P	**Pn**	**01 02 56.6**	**-0.5**
RMQ	**Roma**	**19.88**	**185**	*e*P	**Pn**	**01 03 10.3**	**-1.2**
19nm,0.8s							
WRA	**Warramunga Arr**	**20.77**	**229**	P	**P**	**01 03 20.1**	**+0.6**
7.8nm,0.8s,baz=52,slow=10,SNR=49							
QLP	**Quilpie**	**20.84**	**197**	*e*P	**P**	**01 03 20.6**	**+0.5**
ASAR	**Alice Springs**	**23.49**	**222**	P	**P**	**01 03 48.3**	**0.0**
9.6nm,0.7s,mb4.3,baz=57,slow=9.0,SNR=74							
STKA	**Stephens Creek**	**26.59**	**198**	P	**P**	**01 04 17.7**	**+1.4**
5.8nm,0.9s,mb4.1,baz=4.8,slow=16,SNR=4.9							
FITZ	**Fitzroy Crossi**	**27.06**	**243**	*e*P	**P**	**01 04 19.7**	**-1.1**
7.8nm,0.8s,mb4.3							
FITZ	**Fitzroy Crossi**	**27.06**	**243**	P	**P**	**01 04 19.9**	**-0.9**
2.0nm,0.7s,mb3.8,baz=78,slow=11,SNR=7.0							
RPZ	**Rata Peaks**	**41.04**	**158**	LR	LR	01 19 54.0	
comp=Z,230nm,19.7s,baz=224,slow=31							
KSRS	**Korea Array**	**48.74**	**336**	P	**P**	**01 07 21.4**	**-1.3**
0.6nm,0.6s,mb3.8,baz=157,slow=9.2,SNR=3.5							
SONM	**Songino Array**	**66.79**	**329**	P	**P**	**01 09 28.6**	**-0.7**
0.3nm,0.4s,mb3.7,baz=130,slow=4.5,SNR=3.0							
MKAR	**Makanchi Array**	**80.37**	**320**	P	**P**	**01 10 51.3**	**+2.1**
0.6nm,0.9s,mb3.5,baz=111,slow=7.9,SNR=3.5							
ILAR	**Eielson Array**	**84.56**	**22**	P	**P**	**01 11 11.0**	**+0.4**
0.7nm,0.6s,mb3.9,baz=249,slow=5.5,SNR=6.5							
NVAR	**Mina Array Bea**	**94.75**	**52**	P	**P**	**01 12 04.2**	**+4.7**
0.4nm,0.6s,mb4.0,baz=244,slow=7.7,SNR=3.3							

BJI ***19*** *01:00:19.9, 44°30N×129°30W, h10km, mB5.1/15, mb4.8/18, Ms4.9/14, Ms7 4.6/14*

IDC ***19*** *01:00:20.3±0.7, 44°11N×129°26W, h0km, mb4.1/19, mb1 4.3/25, mb1mx4.2/32, mbtmp4.2/25, ML3.8/6, MS3.9/20, Ms1 3.9/20, ms1mx3.8/30, Error ellipse: s-maj=22.7km s-min=10.2km az=39.0*

ISCJB ***19*** *01:00:21.8±0.3, 44°37N±0°03×129°17W±0°04, h10km, mb4.5/58, MS4.0/21, Error ellipse: s-maj=5.0km s-min=3.0km az=39.5*

NEIC ***19*** *01:00:22.9±0.4, 44°33N×129°30W, h10km, mb4.7/51, Error ellipse: s-maj=6.0km s-min=3.5km az=223.0*

GCMT ***19*** *01:00:23.4±0.4, 44°18N×129°41W, h14km±1km, MW5.0, Moment Tensor Solution. s17,c22; s66,c100; Moment tensor: Scale 10^{16}Nm; M_{rr}-2.45±.22; $M_{\theta\theta}$0.30±.14; $M_{\phi\phi}$2.15±.15; $M_{r\theta}$1.00±.37; $M_{\theta\phi}$-2.18±.10; $M_{\phi r}$1.38±.35; Best double couple: $M_0$3.60000×10^{16} NP1:ϕ_s297.00000°, δ48.00000°, λ-137.00000°. NP2:ϕ_s175.00000°, δ59.00000°, λ-51.00000°. Principal axes: T 3.6600, Plg6.0000°, Azm239.0000°; N -0.1000, Plg33.0000°, Azm333.0000°; P -3.5500, Plg56.0000°, Azm139.0000°; Data Used: II IU CN G IC.*

ISC 19 01:00:23.2±0.3, 44°36N±0°03×129°29W±0°04, h10km, (h14km±1.5km:pP-P), n201, σ1°24/192, mb4.5/58, MS4.0/21, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**3.89**	**111**	*e*Pn	**Pn**	**01 01 18.4**	**-4.6**
HEBO	**Mount Hebo**	**4.03**	**76**	*e*Pn	**Pn**	**01 01 23.1**	**-1.9**
COR	**Corvallis**	**4.29**	**85**	*e*Pn	**Pn**	**01 01 26.4**	**-2.1**
NLO	**Nicolai Mounta**	**4.47**	**65**	P	**Pn**	**01 01 29.4**	**-1.6**
NLWA	**Neilton Lookou**	**4.85**	**49**	*e*Pn	**Pn**	**01 01 35.4**	**-0.7**
OOW	**Octopus West**	**4.90**	**45**	P	**Pn**	**01 01 35.9**	**-0.9**
HUMO	**Hull Mountain**	**4.93**	**109**	*e*Pn	**Pn**	**01 01 33.9**	**-3.4**
HUMO				*e*Sn	**Sn**	**01 02 28.9**	**-5.4**
HDW	**Hoodsport**	**5.45**	**51**	P	**Pn**	**01 01 43.2**	**-1.2**
YBH	**Yreka Blue Hor**	**5.49**	**116**	Pn	**Pn**	**01 01 41.6**	**-3.4**
0.9nm,0.3s,baz=288,slow=10,SNR=12							
YBH				Sn	**Sn**	**01 02 44.4**	**-3.7**
0.7nm,0.3s,baz=222,slow=22,SNR=3.5							
YBH	**Yreka Blue Hor**	**5.49**	**116**	*e*Pn	**Pn**	**01 01 42.1**	**-2.9**
GNW	**Green Mountain**	**5.53**	**52**	P	**Pn**	**01 01 43.9**	**-1.5**
GMW	**Gold Mountain**	**5.54**	**53**	P	**Pn**	**01 01 44.9**	**-0.7**
BLN	**Blyn Mountain**	**5.70**	**48**	P	**Pn**	**01 01 47.5**	**-0.3**
SQM	**Sequim**	**5.70**	**47**	P	**Pn**	**01 01 48.3**	**+0.4**
LON	**Longmire**	**5.77**	**63**	*e*Pn	**Pn**	**01 01 47.9**	**-0.9**
VGZ	**Gonzales**	**5.78**	**43**	P	**Pn**	**01 01 47.6**	**-1.4**
PGC	**Sidney**	**5.88**	**41**	*e*Pn	**Pn**	**01 01 49.5**	**-0.9**
PGC				*e*Sn	**Sn**	**01 02 55.3**	**-2.5**
WDC	**Whiskeytown Da**	**6.26**	**125**	*e*Pn	**Pn**	**01 01 54.6**	**-0.9**
JCW	**Jim Creek**	**6.38**	**50**	P	**Pn**	**01 01 56.5**	**-0.6**
MOD	**Modoc**	**7.02**	**107**	*e*Pn	**Pn**	**01 02 01.7**	**-4.2**
ETW	**Entiat**	**7.03**	**59**	*e*Pn	**Pn**	**01 02 04.8**	**-1.3**
HOPS	**Hopland**	**7.10**	**137**	*e*Pn	**Pn**	**01 02 04.1**	**-3.0**
RSW	**Rattlesnake Hi**	**7.13**	**70**	*e*Pn	**Pn**	**01 02 07.5**	**+0.1**
HAWA	**Hanford**	**7.17**	**70**	*e*Pn	**Pn**	**01 02 06.8**	**-1.2**
22nm,0.7s							
OHCM	**Honcut**	**7.69**	**128**	*e*Sb	**Sb**	**01 04 08.0**	**-0.2**
OHCM				*e*Sg	**Sg**	**01 04 32.3**	**+2.3**
BBB	**Bella Bella**	**7.87**	**5**	Pn	**Pn**	**01 02 20.6**	**+3.1**
1.8nm,0.3s,baz=9.3,slow=13,SNR=38							
BBB				LR	LR	01 05 03.5	
comp=Z,307nm,19.8s,baz=192,slow=35							
LNOR	**Lincton Mounta**	**7.93**	**75**	*e*Pn	**Pn**	**01 02 16.7**	**-1.8**
OD2	**Odessa Site #2**	**7.98**	**64**	*e*Pn	**Pn**	**01 02 17.3**	**-1.9**
WVOR	**Wild Horse Val**	**7.99**	**100**	*e*Pn	**Pn**	**01 02 16.7**	**-2.7**
24nm,0.9s							
BMO	**Blue Mountains**	**8.57**	**83**	*e*Pn	**Pn**	**01 02 25.8**	**-1.4**
DIB	**Dawson Inlet,**	**9.09**	**348**	T		01 11 58.5	
SNR=2.8							
CMB	**Columbia Colle**	**9.21**	**130**	*e*Pn	**Pn**	**01 02 35.4**	**-0.7**
NEW	**Newport**	**9.28**	**61**	*e*Pn	**Pn**	**01 02 35.1**	**-1.8**
WAKR	**Walker**	**9.43**	**125**	*e*Pn	**Pn**	**01 02 39.5**	**+0.5**
BMN	**Battle Mountai**	**9.75**	**110**	*e*Pn	**Pn**	**01 02 45.8**	**+2.3**
NVAR	**Mina Array Bea**	**10.16**	**122**	Pn	**Pn**	**01 02 48.6**	**-0.4**
0.6nm,0.3s,baz=293,slow=14,SNR=35							
BSMT	**Bassoo Peak**	**10.66**	**66**	*e*Pn	**Pn**	**01 02 56.1**	**+0.3**
HLID	**Hailey**	**10.76**	**89**	*e*Pn	**Pn**	**01 02 58.9**	**+1.7**
JTMT	**Jette**	**10.96**	**67**	*e*Pn	**Pn**	**01 03 00.1**	**+0.1**
ELK	**Elko**	**10.98**	**104**	Pn	**Pn**	**01 03 01.4**	**+1.1**
0.1nm,0.3s,baz=284,slow=11,SNR=17							
ELK				LR	LR	01 07 10.0	
comp=Z,722nm,18.8s,baz=287,slow=38							
ELK	**Elko**	**10.98**	**104**	*e*Pn	**Pn**	**01 03 01.1**	**+0.9**
MSO	**Missoula**	**11.04**	**72**	*e*Pn	**Pn**	**01 03 00.7**	**-0.3**
N12A	**Clover Valley,**	**11.07**	**104**	*e*Pn	**Pn**	**01 03 03.2**	**+1.7**
SWMT	**Swartz Lake**	**11.10**	**68**	*e*Pn	**Pn**	**01 03 02.2**	**+0.3**
SLMT	**Seeley Lake**	**11.40**	**70**	*e*Pn	**Pn**	**01 03 05.5**	**-0.4**
M13A	**Montello**	**11.50**	**100**	*e*Pn	**Pn**	**01 03 08.0**	**+0.7**
CHMT	**Chamberlain Mo**	**11.52**	**72**	*e*Pn	**Pn**	**01 03 07.3**	**-0.3**
WALA	**Waterton Lakes**	**11.55**	**61**	*e*Pn	**Pn**	**01 03 07.6**	**-0.4**
N13A	**Wendover, West**	**11.65**	**102**	*e*Pn	**Pn**	**01 03 10.6**	**+1.1**
MCMT	**McKenzie Canyo**	**11.73**	**82**	*e*Pn	**Pn**	**01 03 10.7**	**+0.2**
5.7nm,0.8s							
DLMT	**Dillon**	**11.89**	**79**	*e*Pn	**Pn**	**01 03 13.3**	**+0.6**
LRM	**Limekiln Ridge**	**11.99**	**77**	*e*Pn	**Pn**	**01 03 15.3**	**+1.2**
ISA	**Isabella**	**12.00**	**133**	*e*Pn	**Pn**	**01 03 13.3**	**-0.9**
HVU	**Hansel Valley**	**12.35**	**96**	*e*Pn	**Pn**	**01 03 19.0**	**0.0**
17nm,1.1s							
BGU	**Big Grassy Mou**	**12.46**	**100**	*e*Pn	**Pn**	**01 03 22.6**	**+2.2**
26nm,1.2s							
HRY	**Holter Researc**	**12.47**	**73**	*e*Pn	**Pn**	**01 03 20.2**	**-0.3**
BOZ	**Bozeman (W)**	**12.57**	**78**	*e*Pn	**Pn**	**01 03 22.7**	**+0.7**
12nm,0.8s							
SPUT	**South Promonto**	**12.73**	**98**	*e*Pn	**Pn**	**01 03 25.2**	**+1.0**
44nm,1.5s							
DUG	**Dugway**	**12.89**	**103**	*e*Pn	**Pn**	**01 03 27.6**	**+1.2**
12nm,1.1s							
RRI2	**Red Ridge**	**13.01**	**88**	*e*Pn	**Pn**	**01 03 30.4**	**+2.3**
YMR	**Madison River**	**13.09**	**82**	*e*Pn	**Pn**	**01 03 30.5**	**+1.5**
63nm,1.4s							
GSC	**Goldstone**	**13.17**	**129**	*e*Pn	**Pn**	**01 03 30.1**	**-0.2**
IMW	**Indian Meadow**	**13.20**	**86**	*e*Pn	**Pn**	**01 03 32.8**	**+2.3**
IMW				*e*		01 03 44.7	
TPAW	**Teton Pass**	**13.25**	**87**	*e*Pn	**Pn**	**01 03 33.4**	**+2.1**
HWUT	**Hardware Ranch**	**13.27**	**96**	*e*Pn	**Pn**	**01 03 32.2**	**+0.7**
AHID	**Auburn Hatcher**	**13.29**	**91**	*e*Pn	**Pn**	**01 03 30.9**	**-0.9**
27nm,1.0s							
REDW	**Red Top Meadow**	**13.35**	**88**	*e*Pn	**Pn**	**01 03 33.3**	**+0.8**
SNOW	**Snow King Moun**	**13.40**	**87**	*e*Pn	**Pn**	**01 03 34.5**	**+1.2**
LOHW	**Long Hollow**	**13.48**	**87**	*e*Pn	**Pn**	**01 03 36.6**	**+2.2**
NLU	**North Lily Min**	**13.51**	**103**	*e*Pn	**Pn**	**01 03 35.4**	**+0.6**
31nm,1.3s							
ARUT	**Antelope Range**	**13.63**	**113**	*e*Pn	**Pn**	**01 03 37.7**	**+1.2**
69nm,1.4s							
JLU	**Jordanelle**	**13.69**	**100**	*e*Pn	**Pn**	**01 03 38.1**	**+0.9**
EDM	**Edmonton**	**13.72**	**44**	*e*Pn	**Pn**	**01 03 37.8**	**+0.1**
MPU	**Maple Canyon**	**13.79**	**102**	*e*Pn	**Pn**	**01 03 41.2**	**+2.5**
CCUT	**Cedar City**	**13.81**	**114**	*e*Pn	**Pn**	**01 03 40.0**	**+1.0**
86nm,1.5s							
DAU	**Daniels Canyon**	**13.90**	**100**	*e*Pn	**Pn**	**01 03 43.0**	**+2.8**
EGMT	**Eagleton**	**14.01**	**68**	*e*Pn	**Pn**	**01 03 41.1**	**-0.5**
MSU	**Marysvale**	**14.10**	**109**	*e*Pn	**Pn**	**01 03 43.7**	**+0.8**
DLBC	**Dease Lake**	**14.10**	**358**	Pn	**Pn**	**01 03 49.3**	**+6.5**
0.1nm,0.3s,baz=165,slow=16,SNR=2.7							
DLBC	**Dease Lake**	**14.10**	**358**	*e*Pn	**Pn**	**01 03 53.7**	**+11**
RLMT	**Red Lodge**	**14.25**	**80**	*e*Pn	**Pn**	**01 03 46.3**	**+1.4**
LDFC	**Landfair**	**14.30**	**126**	*e*Pn	**Pn**	**01 03 46.6**	**+0.9**
TMUT	**Trail Mountain**	**14.39**	**104**	*e*Pn	**Pn**	**01 03 48.5**	**+1.6**
BW06	**Boulder Array**	**14.40**	**89**	*e*Pn	**Pn**	**01 03 49.7**	**+2.8**
PDAR	**Pinedale Array**	**14.40**	**89**	Pn	**Pn**	**01 03 47.9**	**+1.0**
0.1nm,0.3s,baz=284,slow=12,SNR=14							
PDAR				LR	LR	01 09 23.1	
comp=Z,1μm,19.1s,baz=288,slow=38							
PFO	**Pinyon Flat Ob**	**14.64**	**133**	*e*Pn	**Pn**	**01 03 47.8**	**-2.5**
SRU	**San Rafael**	**14.95**	**104**	*e*Pn	**Pn**	**01 03 56.3**	**+1.8**
BAR	**Barrett**	**15.26**	**136**	*e*Pn	**Pn**	**01 03 55.8**	**-2.8**
25nm,1.2s							
GLA	**Glamis**	**15.94**	**130**	*e*Pn	**Pn**	**01 04 04.8**	**-2.7**
35nm,1.3s							
WUAZ	**Wupatki**	**16.31**	**117**	*e*Pn	**Pn**	**01 04 12.5**	**+0.3**
288nm,2.2s							
LAO	**LASA Array**	**16.32**	**74**	*e*Pn	**Pn**	**01 04 12.1**	**-0.2**
59nm,0.8s							
RWWY	**Rawlins**	**16.36**	**92**	*e*Pn	**Pn**	**01 04 11.9**	**-0.9**
76nm,1.0s							
PV04	**Paradox Valley**	**16.41**	**104**	*e*Pn	**Pn**	**01 04 14.6**	**+1.1**
PV01	**Paradox Valley**	**16.76**	**105**	*e*Pn	**Pn**	**01 04 17.3**	**-0.6**
6μm,1.3s							
HYT	**Haines Junctio**	**17.20**	**346**	*e*Pn	**Pn**	**01 04 28.7**	**+5.4**
MVCO	**Mesa Verde**	**17.26**	**107**	*e*Pn	**Pn**	**01 04 24.8**	**+0.6**
189nm,1.5s							
SMCO	**Snowmass**	**17.41**	**100**	*e*Pn	**Pn**	**01 04 27.1**	**+1.0**
30nm,1.2s							
PHWY	**Pilot Hill**	**17.73**	**92**	*e*Pn	**Pn**	**01 04 29.8**	**-0.3**
222nm,2.6s							
DGMT	**Dagmar**	**17.75**	**68**	*e*Pn	**Pn**	**01 04 31.1**	**+0.8**
261nm,1.7s							
RSSD	**Black Hills**	**18.08**	**82**	*e*P	**Pn**	**01 04 34.2**	**-0.1**
26nm,0.9s							
ISCO	**Idaho Springs**	**18.14**	**96**	*e*P	**Pn**	**01 04 35.5**	**+0.4**
30nm,0.9s							
TUC	**Tucson**	**18.80**	**124**	*e*P	**Pn**	**01 04 41.9**	**-1.4**
28nm,1.6s							
SDCO	**Great Sand Dun**	**19.08**	**102**	*e*P	**Pn**	**01 04 46.3**	**-0.2**
30nm,1.0s							
LAZ	**Ladron**	**19.75**	**113**	*e*P	**Pn**	**01 04 53.6**	**-1.0**
30nm,1.6s							
ANMO	**Albuquerque**	**19.88**	**110**	P	**Pn**	**01 04 54.0**	**-2.1**
0.1nm,0.3s,baz=322,slow=10,SNR=16							
ANMO				LR	LR	01 12 49.7	
comp=Z,533nm,20.2s,baz=307,slow=38							
ANMO	**Albuquerque**	**19.88**	**110**	*e*P	**Pn**	**01 04 54.3**	**-1.8**
22nm,1.4s							
YKA	**Yellowknife Ar**	**20.07**	**20**	P	**P**	**01 04 56.5**	**+0.2**
5.3nm,0.7s,baz=205,slow=12,SNR=13							
LPM	**Los Pinos Moun**	**20.14**	**112**	*e*P	**P**	**01 04 58.1**	**+0.8**
BNM	**Barren Site**	**20.24**	**113**	*e*P	**P**	**01 04 58.9**	**+0.5**
30nm,1.1s							
OGNE	**Ogallala**	**20.30**	**90**	*e*P	**P**	**01 04 58.8**	**-0.2**
118nm,1.5s							
MENT	**Mentasta**	**20.39**	**341**	*e*P	**P**	**01 05 00.5**	**+0.7**
FFC	**Flin Flon**	**20.40**	**50**	*e*P	**P**	**01 04 59.6**	**-0.4**
27nm,0.7s							
DAWY	**Dawson**	**20.56**	**347**	*e*P	**P**	**01 05 05.5**	**+3.9**
EGAK	**Eagle**	**21.51**	**346**	*e*P	**P**	**01 05 13.5**	**+1.6**
12nm,1.3s,mb4.2							
MCK	**McKinley**	**22.39**	**337**	*e*P	**P**	**01 05 21.0**	**-0.3**
TRF	**Thorefore Moun**	**22.57**	**335**	*e*P	**P**	**01 05 24.2**	**+0.9**
10nm,1.0s,mb4.2							
MNTX	**Cornudas Mount**	**22.59**	**116**	*e*P	**P**	**01 05 22.7**	**-1.0**
14nm,1.3s,mb4.2							
ILAR	**Eielson Array**	**22.70**	**340**	P	**P**	**01 05 26.7**	**+2.2**
7.3nm,1.2s,mb4.0,baz=152,slow=6.9,SNR=21							
ILAR				PcP	PcP	01 09 17.4	+0.9
0.8nm,0.8s,baz=172,slow=2.4,SNR=6.9							
ILAR				LR	LR	01 12 43.5	
comp=Z,314nm,21.1s,MS3.7,baz=295,slow=32							
CBKS	**Cedar Bluff**	**22.72**	**94**	*e*P	**P**	**01 05 26.0**	**+1.0**
53nm,1.2s,mb4.8							
CPRX	**Cap Rock**	**22.75**	**111**	*e*P	**P**	**01 05 25.0**	**-0.4**
25nm,0.7s,mb4.8							
PPLA	**Purkeypile**	**22.77**	**333**	*e*P	**P**	**01 05 27.8**	**+2.4**
58nm,1.5s,mb4.8							
GDL2	**Guadalupe Moun**	**22.93**	**113**	*e*P	**P**	**01 05 26.8**	**-0.5**
COLA	**College**	**23.02**	**340**	*e*P	**P**	**01 05 26.9**	**-1.0**
AMTX	**Amarillo**	**23.18**	**105**	*e*P	**P**	**01 05 28.4**	**-1.6**
38nm,1.1s,mb4.7							
BPAW	**Bear Paw Mtn.**	**23.27**	**336**	*e*P	**P**	**01 05 31.0**	**+0.5**
9.0nm,1.2s,mb4.1							
ULM	**Lac du Bonnet**	**23.28**	**63**	P	**P**	**01 05 30.8**	**-0.1**
21nm,0.9s,mb4.5,baz=275,slow=9.7,SNR=12							
ULM				LR	LR	01 14 31.4	
comp=Z,591nm,18.7s,MS4.1,baz=85,slow=36							
ULM	**Lac du Bonnet**	**23.28**	**63**	*e*P	**P**	**01 05 30.4**	**-0.4**
20nm,0.9s,mb4.5							
AGMN	**Agassiz Nation**	**23.30**	**68**	*e*P	**P**	**01 05 30.8**	**-0.3**
24nm,0.9s,mb4.6							
ECSD	**EROS Data Cent**	**23.41**	**80**	*e*P	**P**	**01 05 32.3**	**-0.1**
110nm,1.4s,mb5.1							
INK	**Inuvik**	**24.11**	**356**	P	**P**	**01 05 40.0**	**+1.4**
1.4nm,0.6s,mb3.5,baz=158,slow=11,SNR=2.8							
INK				LR	LR	01 14 34.9	
comp=Z,172nm,20.3s,MS3.5,baz=165,slow=35							
INK	**Inuvik**	**24.11**	**356**	*e*P	**P**	**01 05 39.4**	**+0.8**
5.2nm,0.9s,mb4.0							
TTA	**Tatalina**	**24.12**	**330**	*e*P	**P**	**01 05 41.8**	**+3.0**
TXAR	**Lajitas Array**	**25.27**	**118**	P	**P**	**01 05 47.6**	**-2.0**
5.1nm,0.9s,mb4.0,baz=298,slow=7.9,SNR=17							
TXAR				LR	LR	01 17 03.1	
comp=Z,47nm,20.8s,MS3.0,baz=150,slow=40							
WMOK	**Wichita Mounta**	**25.29**	**102**	*e*P	**P**	**01 05 48.0**	**-1.7**
43nm,1.1s,mb4.9							
FCC	**Fort Churchill**	**25.82**	**44**	*e*P	**P**	**01 05 55.4**	**+1.1**
1.6nm,1.3s,mb3.4							
EYMN	**Ely**	**26.25**	**69**	*e*P	**P**	**01 05 59.3**	**+1.0**
7.7nm,0.8s,mb4.3							
JCT	**Junction City**	**27.04**	**111**	*e*P	**P**	**01 06 03.7**	**-1.9**
20nm,1.3s,mb4.5							
JFWS	**Jewell Farm**	**28.11**	**79**	*e*P	**P**	**01 06 15.5**	**+0.4**
16nm,0.8s,mb4.7							
COWI	**Conover**	**28.12**	**72**	*e*P	**P**	**01 06 16.3**	**+1.2**
5.7nm,0.8s,mb4.2							
MIAR	**Mount Ida**	**29.07**	**97**	*e*P	**P**	**01 06 25.0**	**+1.4**
28nm,1.1s,mb4.9							
CCM	**Cathedral Cave**	**29.11**	**89**	*e*P	**P**	**01 06 24.0**	**-0.1**
17nm,1.2s,mb4.7							
HDIL	**Hopedale**	**29.55**	**83**	*e*P	**P**	**01 06 27.9**	**0.0**
15nm,0.7s,mb4.8							
FVM	**French Village**	**29.73**	**89**	*e*P	**P**	**01 06 27.2**	**-2.2**
5.0nm,0.8s,mb4.3							
HKT	**Hockley**	**30.06**	**107**	*e*P	**P**	**01 06 31.4**	**-1.0**
29nm,1.5s,mb4.8							
OXF	**Oxford**	**32.06**	**94**	*e*P	**P**	**01 06 48.8**	**-1.2**
96nm,1.0s,mb5.6							
WVT	**Waverly**	**32.41**	**90**	*e*P	**P**	**01 06 53.4**	**+0.3**
14nm,1.2s,mb4.7							
WCI	**Wyandotte Cave**	**32.59**	**86**	*e*P	**P**	**01 06 54.7**	**+0.1**
RES	**Resolute Bay**	**34.00**	**16**	P	**P**	**01 07 06.5**	**0.0**
4.3nm,0.7s,mb4.5,baz=221,slow=5.9,SNR=3.6							
RES	**Resolute Bay**	**34.00**	**16**	*e*P	**P**	**01 07 06.4**	**-0.1**
ACSO	**Alum Creek Sta**	**34.15**	**80**	*e*P	**P**	**01 07 07.9**	**-0.3**
75nm,1.8s,mb5.3							
LRAL	**Lakeview Retre**	**34.54**	**94**	*e*P	**P**	**01 07 12.0**	**+0.3**
17nm,1.4s,mb4.8							
LBNH	**Lisbon**	**40.32**	**69**	*e*P	**P**	**01 08 02.0**	**+1.5**
12nm,0.9s,mb4.6							
SCHQ	**Schefferville**	**40.52**	**52**	LR	LR	01 24 46.2	
comp=Z,581nm,19.5s,MS4.4,baz=295,slow=36							
PETK	**Petropavlovsk-**	**46.98**	**308**	P	**P**	**01 08 54.2**	**+0.1**
3.6nm,0.9s,mb4.3,baz=76,slow=14,SNR=6.9							
PETK				LR	LR	01 25 40.8	
comp=Z,64nm,18.4s,MS3.6,baz=260,slow=32							
PMOR	**Pomariorio Ree**	**61.47**	**201**	*e*T		02 16 56.2	
28nm,0.3s							
ROSC	**El Rosal**	**62.03**	**113**	P	**P**	**01 10 43.4**	**-0.5**
2.7nm,0.4s,mb4.8,baz=261,slow=12,SNR=3.6							
ROSC				LR	LR	01 41 45.5	
comp=Z,79nm,19.5s,MS3.9,baz=37,slow=40							
OTAV	**Otavalo**	**62.88**	**119**	*e*P	**P**	**01 10 48.3**	**-1.2**
3.6nm,1.0s,mb4.5							
TIAR	**Tiarei**	**64.29**	**201**	*e*T		02 20 27.3	
48nm,0.3s							
PPT	**Papeete**	**64.36**	**202**	*e*LQ		01 27 02.2	
586nm,27.0s							
PPT				*e*LR	LR	01 30 05.2	
261nm,26.8s							
ARCES	**ARCESS Array B**	**64.91**	**10**	LR	LR	01 37 58.8	
comp=Z,97nm,20.8s,MS4.0,baz=53,slow=35							
MDJ	**Mudanjiang**	**67.11**	**310**	P	**P**	**01 11 14.9**	**-1.8**
MDJ				pmax	pmax		
comp=Z,10.0nm,2.4s,mb4.4							
MDJ				pmax	pmax		
comp=Z,77nm,5.9s							
MDJ				LR	LR		
comp=N,66nm,37.0s,MS3.7							
MDJ				LR	LR		
comp=E,60nm,37.2s,MS3.7							
MDJ				LR	LR		
comp=Z,51nm,27.9s							
MJAR	**Matsushiro Arr**	**67.18**	**299**	P	**P**	**01 11 17.2**	**-0.1**
comp=Z,1.6nm,0.8s,mb4.1,baz=38,slow=6.2,SNR=4.3							
RKT	**Rikitea**	**67.35**	**186**	*e*T		02 24 18.2	
comp=Z,6.8nm,0.3s							
TBI	**Tubuai**	**69.87**	**200**	*e*T		02 27 25.5	
comp=Z,14nm,0.2s							
NB2	**NORSAR Subarra**	**70.17**	**19**	P	**P**	**01 11 35.1**	**-0.4**
comp=Z,26nm,2.0s,mb4.8,baz=335,slow=6.2							
NOA	**NORSAR Array B**	**70.17**	**19**	P	**P**	**01 11 34.8**	**-0.7**
comp=Z,0.7nm,0.8s,mb3.6,baz=334,slow=5.9,SNR=2.6							
NOA				LR	LR	01 42 03.8	
comp=Z,43nm,18.0s,MS3.7,baz=335,slow=36							
NOA	**NORSAR Array B**	**70.17**	**19**	P	**P**	**01 11 34.8**	**-0.7**
NOA				LR	LR	01 42 03.8	
FINES	**FINESS Array B**	**72.68**	**12**	P	**P**	**01 11 49.8**	**-0.8**
comp=Z,1.4nm,0.7s,mb4.0,baz=352,slow=8.7,SNR=5.0							
TLY	**Talaya**	**73.97**	**329**	*e*P	**P**	**01 11 58.2**	**-0.2**
comp=Z,11nm,1.4s,mb4.6							
SONM	**Songino Array**	**75.97**	**325**	P	**P**	**01 12 11.3**	**+1.2**
comp=Z,2.9nm,0.8s,mb4.2,baz=42,slow=4.5,SNR=18							
SONM				LR	LR	01 45 07.5	
comp=Z,139nm,20.8s,MS4.2,baz=24,slow=35							
SONM

GYA				LR	LR		
	comp=Z,440nm,18.0s,MS5.0						
BRTR	**Keskin Array B**	**94.89**	**13**	LR	LR	02 01 13.4	
	comp=Z,34nm,19.3s,MS3.8,baz=150,slow=38						
KMI	**Kunming**	**96.08**	**314**	P	**P**	**01 13 51.3**	**+0.2**
KMI				pP	pP	01 13 54.0	-0.4
KMI				sP	sP	01 13 55.4	-0.2
KMI				PP	PP	01 17 45.0	+2.0
KMI				S	S	01 25 05.4	-4.8
KMI				SS	SS	01 31 38.9	-1.0
KMI				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb5.2						
KMI				LR	LR		
	comp=N,110nm,19.6s,MS4.6						
KMI				LR	LR		
	comp=E,160nm,18.5s,MS4.6						
KMI				LR	LR		
	comp=Z,120nm,17.4s,MS4.4						
CPUP	**Villa Florida**	**96.20**	**121**	LR	LR	01 59 46.9	
	comp=Z,92nm,18.3s,MS4.3,baz=254,slow=37						
QSPA	**South Pole Qui**	**134.16**	**180**	PKP	PKPdf	01 19 36.9	-2.5
	comp=Z,1.7nm,0.9s,baz=151,slow=2.0,SNR=4.6						
LSZ	**Lusaka**	**145.28**	**40**	*e*PKPbc	PKPbc	01 19 59.6	-1.5

*NEIC **19** 01:05:58.0±0.7,30.°19S×179.°50W,h359km±7km, Error ellipse: s-maj=20.6km s-min=14.2km az=129.0*
*IDC **19** 01:05:58.2±1.2,30.°13S×179.°54W,h356km±12km, mb3.3/5, mb1 3.4/6, mb1mx3.3/18, mbtmp3.3/6, Error ellipse: s-maj=20.9km s-min=19.0km az=172.0*

ISC 19 01:05:58.7±0.9,30.°59S±0.°08×180.°0E±0.°3,h319km±16km, n28,σ1°11/20,mb3.4/5,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.27**	**55**	P	**Pn**	**01 06 48.3**	**-1.1**
	106nm,0.3s,baz=70,slow=23,SNR=12						
RAO				S	**S**	**01 07 20.6**	**-9.3**
	149nm,0.3s,baz=68,slow=20,SNR=6.3						
URZ	**Urewera**	**8.01**	**196**	P	**Pn**	**01 07 57.3**	**+4.9**
	3.1nm,0.3s,baz=354,slow=12,SNR=10.0						
URZ				S	**S**	**01 09 29.9**	**+5.1**
	4.0nm,0.3s,baz=90,slow=23,SNR=23						
URZ	**Urewera**	**8.01**	**196**	*e*PN	**Pn**	**01 07 56.5**	**+4.2**
PNHZ	**Pukenui**	**9.80**	**197**	*e*PN	**Pn**	**01 08 16.1**	**+2.0**
TSZ	**Takapari Road**	**10.00**	**198**	PN	**Pn**	**01 08 18.3**	**+1.8**
BFZ	**Birch Farm**	**10.51**	**196**	SN	**S**	**01 10 20.6**	**-0.2**
MRZ	**Mangatainoka R**	**10.66**	**198**	PN	**Pn**	**01 08 25.0**	**+0.4**
MRZ				*e*SN	**S**	**01 10 22.4**	**-1.7**
HOWZ	**Holdsworth Sta**	**10.90**	**198**	SN	**S**	**01 10 28.6**	**-0.9**
OGWZ	**Otaki Gorge**	**10.92**	**200**	*e*PN	**Pn**	**01 08 27.4**	**-0.3**
TUWZ	**Tuamarina**	**11.86**	**203**	*e*PN	**Pn**	**01 08 39.3**	**+0.2**
KHZ	**Kahutara**	**12.88**	**202**	PN	**Pn**	**01 08 51.9**	**+0.7**
KHZ				SN	**S**	**01 11 12.8**	**-0.8**
STKA	**Stephens Creek**	**32.72**	**258**	P	**P**	**01 12 04.8**	**+2.6**
	1.9nm,0.8s,mb3.4,baz=45,slow=7.1,SNR=2.8						
ASAR	**Alice Springs**	**41.34**	**268**	P	**P**	**01 13 13.7**	**-0.7**
	0.3nm,0.4s,mb2.8,baz=106,slow=7.2,SNR=5.0						
WRA	**Warramunga Arr**	**42.35**	**273**	P	**P**	**01 13 21.4**	**-1.1**
	2.1nm,0.6s,mb3.4,baz=111,slow=7.8,SNR=26						
FITZ	**Fitzroy Crossi**	**50.60**	**271**	P	**P**	**01 14 25.5**	**-0.5**
	3.4nm,1.1s,mb3.5,baz=186,slow=9.2,SNR=2.8						
QSPA	**South Pole Qui**	**59.52**	**180**	P	**P**	**01 15 28.2**	**-0.2**
	1.7nm,0.6s,mb3.7,baz=326,slow=0.8,SNR=21						
MKAR	**Makanchi Array**	**116.55**	**310**	PKP	PKPdf	01 23 58.9	-5.5
	0.2nm,0.4s,baz=209,slow=2.6,SNR=3.8						
KURK	**Kurchatov**	**119.91**	**314**	*e*PKPdf	PKPdf	01 24 05.3	-5.5
BVAR	**Borovoye Array**	**125.31**	**316**	PKP	PKPdf	01 24 16.3	-4.8
	0.4nm,0.3s,baz=67,slow=1.9,SNR=3.5						
ARCES	**ARCESS Array B**	**138.38**	**347**	PKhKP		01 24 32.2	
	1.7nm,1.0s,baz=0.0,slow=1.9,SNR=4.8						
FINES	**FINESS Array B**	**144.70**	**339**	PKP	PKPdf	01 24 50.7	-6.1
	6.6nm,0.6s,baz=53,slow=4.0,SNR=42						
NB2	**NORSAR Subarra**	**148.64**	**349**	PKP	PKPdf	01 25 01.7	-1.6
	comp=Z,1.0nm,0.5s,baz=16,slow=2.6						
NOA	**NORSAR Array B**	**148.64**	**349**	PKPbc	PKPbc	01 25 01.8	-5.7
	comp=Z,1.3nm,0.5s,baz=15,slow=4.2,SNR=5.7						
MMAI	**Mount Meron Ar**	**149.87**	**284**	PKPbc	PKPbc	01 25 08.3	-3.1
	comp=Z,0.6nm,0.6s,baz=69,slow=7.9,SNR=6.3						
AKASG	**Malin Array Be**	**150.36**	**321**	PKPbc	PKPbc	01 25 07.0	-5.0
	comp=Z,1.6nm,0.5s,baz=49,slow=2.9,SNR=6.1						
AKASG	**Malin Array Be**	**150.36**	**321**	PKPbc	PKPbc	01 25 07.0	-5.0
BR131	**Keskin Array S**	**151.13**	**298**	*e*PKPbc	PKPbc	01 25 09.5	-4.6
BRTR	**Keskin Array B**	**151.13**	**298**	PKPbc	PKPbc	01 25 09.6	-4.5
	comp=Z,0.5nm,0.4s,baz=140,slow=4.6,SNR=8.1						

*ISCJB **19** 01:11:13.7±0.8,40.°35S±0.°1×91.°6W±0.°1,h10km,mb4.3/22, MS3.8/8, Error ellipse: s-maj=19.8km s-min=16.3km az=6.2*
*IDC **19** 01:11:13.7±1.0,40.°36S×91.°66W,h0km,mb4.1/11, mb1 4.3/11,mb1mx4.2/18,mbtmp4.1/11,MS3.8/10, Ms1 3.8/10,ms1mx3.7/16, Error ellipse: s-maj=27.8km s-min=23.7km az=140.0*
*NEIC **19** 01:11:15.1±0.6,40.°30S×91.°64W,h10km,mb4.5/14, Error ellipse: s-maj=15.6km s-min=12.8km az=190.0*

ISC 19 01:11:15.5±0.8,40.°3S±0.°1×91.°7W±0.°1,h10km,n36, σ0°91/26,mb4.3/22,MS3.8/8,West Chile Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLCA	**Paso Flores**	**16.05**	**98**	LR	LR	01 19 03.4	
	comp=Z,154nm,21.7s,baz=287,slow=29						
RPN	**Rapa Nui**	**19.68**	**307**	LR	LR	01 20 50.2	
	comp=Z,406nm,18.6s,baz=146,slow=29						
CFAA	**Coronel Fontan**	**20.80**	**73**	P	**P**	**01 15 56.6**	**-0.3**
	1.5nm,1.1s,baz=240,slow=7.9,SNR=6.0						
CFAA				LR	LR	01 21 57.9	
	comp=Z,45nm,20.5s,MS2.8,baz=242,slow=31						
USHA	**Ushuaia**	**21.22**	**141**	LR	LR	01 22 25.1	
	comp=Z,724nm,19.3s,MS4.1,baz=280,slow=32						
PMSA	**Palmer Station**	**29.23**	**156**	LR	LR	01 25 44.7	
	comp=Z,344nm,20.6s,MS4.0,baz=81,slow=30						
LPAZ	**La Paz**	**31.46**	**47**	P	**P**	**01 17 38.0**	**+0.8**
	2.0nm,0.6s,mb4.2,baz=215,slow=6.9,SNR=9.0						
LPAZ				LR	LR	01 27 06.6	
	comp=Z,77nm,18.2s,MS3.4,baz=279,slow=30						
LPAZ	**La Paz**	**31.46**	**47**	*e*P	**P**	**01 17 37.5**	**+0.3**
	2.5nm,0.5s,mb4.3						
LPAZ				LR	LR	01 27 06.6	
CPUP	**Villa Florida**	**31.67**	**75**	P	**P**	**01 17 38.8**	**-0.3**
	1.0nm,0.6s,mb3.8,baz=209,slow=10,SNR=2.7						
CPUP				LR	LR	01 28 44.5	
	comp=Z,98nm,19.5s,MS3.5,baz=45,slow=33						
ATAH	**Atahualpa**	**35.10**	**23**	P	**P**	**01 18 10.9**	**+1.9**
	5.2nm,0.8s,mb4.5,baz=294,slow=3.2,SNR=6.2						
SIV	**San Ignacio**	**35.94**	**56**	P	**P**	**01 18 14.8**	**-1.4**
	2.4nm,1.0s,mb4.1,baz=247,slow=11,SNR=6.3						
RKT	**Rikitea**	**40.20**	**282**	*e*LR	LR	01 29 47.5	
	281nm,27.0s						
OTAV	**Otavalo**	**42.11**	**20**	*e*P	**P**	**01 19 08.2**	**+0.3**
	14nm,1.2s,mb4.5						
ROSC	**El Rosal**	**47.68**	**24**	P	**P**	**01 19 54.1**	**+1.9**
	2.7nm,0.4s,mb4.6,baz=262,slow=18,SNR=7.8						
QSPA	**South Pole Qui**	**49.92**	**180**	P	**P**	**01 20 09.4**	**+0.8**
	3.8nm,1.0s,mb4.4,baz=166,slow=5.8,SNR=5.2						
TBI	**Tubuai**	**51.07**	**271**	*e*LR	LR	01 34 54.8	
	376nm,28.8s						
PPT	**Papeete**	**54.50**	**277**	*e*LR	LR	01 36 27.4	
	308nm,27.2s						
TXAR	**Lajitas Array**	**70.18**	**349**	P	**P**	**01 22 28.1**	**-0.1**
	1.5nm,0.9s,mb3.9,baz=175,slow=11,SNR=5.7						
TXAR				LR	LR	01 47 36.7	
	comp=Z,104nm,21.0s,MS4.1,baz=180,slow=31						
JCT	**Junction City**	**70.84**	**353**	*e*P	**P**	**01 22 31.5**	**-0.7**
	4.7nm,0.8s,mb4.5						
WMOK	**Wichita Mounta**	**74.97**	**354**	*e*P	**P**	**01 22 55.7**	**-0.9**
	1.3nm,0.7s,mb4.0						
ANMO	**Albuquerque**	**76.12**	**348**	P	**P**	**01 23 03.8**	**+0.6**
	1.3nm,0.8s,mb3.9,baz=214,slow=7.3,SNR=3.5						
ANMO	**Albuquerque**	**76.12**	**348**	*e*P	**P**	**01 23 03.2**	**0.0**
	1.5nm,0.8s,mb4.0						
CCM	**Cathedral Cave**	**77.99**	**0**	*e*P	**P**	**01 23 11.9**	**-1.8**
	7.6nm,1.1s,mb4.5						
SDCO	**Great Sand Dun**	**78.71**	**349**	*e*P	**P**	**01 23 17.8**	**+0.2**
	1.1nm,0.6s,mb4.0						
SMCO	**Snowmass**	**80.34**	**348**	*e*P	**P**	**01 23 27.0**	**+0.5**
	14nm,1.6s,mb4.6						
NVAR	**Mina Array Bea**	**82.07**	**339**	P	**P**	**01 23 36.4**	**+0.7**
	1.0nm,0.8s,mb3.8,baz=178,slow=8.7,SNR=6.3						
DUG	**Dugway**	**82.42**	**344**	*e*P	**P**	**01 23 37.9**	**+0.5**
	4.9nm,1.1s,mb4.3						
BW06	**Boulder Array**	**84.27**	**347**	*e*P	**P**	**01 23 46.0**	**-0.9**
	4.9nm,1.1s,mb4.5						
PDAR	**Pinedale Array**	**84.27**	**347**	P	**P**	**01 23 46.7**	**-0.2**
	2.2nm,0.9s,mb4.3,baz=167,slow=7.0,SNR=14						
PDAR				LR	LR	01 57 48.3	
	comp=Z,47nm,18.3s,MS3.9,baz=314,slow=33						
PDAR	**Pinedale Array**	**84.27**	**347**	P	**P**	**01 23 46.7**	**-0.2**
PDAR				LR	LR	01 57 48.3	
RSSD	**Black Hills**	**84.79**	**351**	*e*P	**P**	**01 23 49.4**	**-0.2**
	2.4nm,0.9s,mb4.3						
TPAW	**Teton Pass**	**85.22**	**346**	*e*P	**P**	**01 23 50.1**	**-1.6**
	5.0nm,0.8s,mb4.7						
WVOR	**Wild Horse Val**	**85.91**	**340**	*e*P	**P**	**01 23 55.6**	**+0.4**
	2.9nm,1.0s,mb4.5						
HLID	**Hailey**	**85.98**	**344**	*e*P	**P**	**01 23 55.9**	**+0.4**
	2.8nm,1.1s,mb4.4						
DBIC	**Dimbokro**	**91.83**	**83**	LR	LR	02 01 44.8	
	comp=Z,140nm,19.7s,MS4.4,baz=247,slow=33						
KSRS	**Korea Array**	**149.24**	**278**	PKPbc	PKPbc	01 31 02.7	-1.3
	1.6nm,0.9s,baz=117,slow=3.5,SNR=6.4						
ABKAR	**Akbulak array**	**158.05**	**57**	*e*PKPdf	PKPdf	01 31 10.7	-1.2

*ISK **19** 01:12:54.1,35.°81N×27.°79E,h20km,MD3.2*
*DDA **19** 01:12:55.2,36.°03N×28.°08E,h7km±3km,Md2.9*
*ATH **19** 01:12:56.5,35.°96N×27.°78E,h40km±2km,MD3.0/4*
*ISCJB **19** 01:12:56.2±0.6,35.°88N±0.°04×27.°93E±0.°04,h50km±9km, Error ellipse: s-maj=7.6km s-min=5.0km az=143.6*
*NEIC **19** 01:12:56.2±0.6,35.°96N×27.°78E,h40km,MD3.0(ATH),After ATH.*
*CSEM **19** 01:12:57.1±0.3,35.°94N×27.°90E,h40km,MD3.0, Error ellipse: s-maj=7.8km s-min=4.7km az=143.0*

ISC 19 01:12:56.9±0.6,35.°89N±0.°04×27.°93E±0.°05,h45km±12km, n50,σ0°99/68,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.37**	**26**	*e*P	**Pn**	**01 13 06.0**	**-0.3**
ARG				*e*S	**Sn**	**01 13 13.5**	**+0.5**
ARG	**Arkhangelos**	**0.37**	**26**	*e*P	**Pn**	**01 13 06.0**	**-0.3**
ARG				*e*S	**Sn**	**01 13 13.5**	**+0.5**
ARG	**Arkhangelos**	**0.37**	**26**	*e*P	**Pn**	**01 13 06.0**	**-0.3**
ARG				*e*S	**Sn**	**01 13 13.5**	**+0.5**
KARP	**Karpathos**	**0.71**	**242**	*e*P	**Pn**	**01 13 09.8**	**-0.8**
KARP				*e*S	**Sn**	**01 13 20.1**	**-0.4**
KARP	**Karpathos**	**0.71**	**242**	*e*P	**Pn**	**01 13 09.8**	**-0.8**
KARP				*e*S	**Sn**	**01 13 20.1**	**-0.4**
KARP	**Karpathos**	**0.71**	**242**	*e*P	**Pn**	**01 13 09.8**	**-0.8**
KARP				*e*S	**Sn**	**01 13 20.1**	**-0.4**
DAT	**Datca**	**0.89**	**341**	*e*PG	**Pn**	**01 13 12.8**	**-0.2**
DAT				*e*SG	**Sn**	**01 13 26.0**	**+1.2**
DAT	**Datca**	**0.89**	**341**	*e*Pg	**Pn**	**01 13 12.8**	**-0.2**
DAT				*e*Sg	**Sn**	**01 13 26.0**	**+1.2**
TURN	**Turunc**	**1.12**	**29**	*i* P	**Pn**	**01 13 13.9**	**-2.3**
TURN				*i* S	**Sn**	**01 13 28.1**	**-2.4**
TURN	**Turunc**	**1.12**	**29**	*i* P	**Pn**	**01 13 13.9**	**-2.4**
TURN				*i* S	**Sn**	**01 13 28.1**	**-2.5**
BDRM	**Kayabasi**	**1.24**	**342**	*i* P	**Pn**	**01 13 17.3**	**-0.6**
BDRM				*i* S	**Sn**	**01 13 34.0**	**+0.6**
BDRM	**Kayabasi**	**1.24**	**342**	*i* P	**Pn**	**01 13 17.3**	**-0.5**
BDRM				*i* S	**Sn**	**01 13 34.0**	**+0.6**
BODT	**Bodrum**	**1.28**	**337**	*e*PN	**Pn**	**01 13 17.8**	**-0.5**
BODT				*e*SN	**Sn**	**01 13 35.0**	**+0.7**
BODT	**Bodrum**	**1.28**	**337**	*e*SN	**Sn**	**01 13 35.0**	**+0.7**
YER	**Yerkesik**	**1.28**	**13**	*e*PN	**Pn**	**01 13 18.9**	**+0.5**
YER	**Yerkesik**	**1.28**	**13**	*e*Pn	**Pn**	**01 13 18.9**	**+0.5**
AKAS	**Kas**	**1.40**	**75**	*i* P	**Pn**	**01 13 19.5**	**-0.5**
AKAS				*i* S	**Sn**	**01 13 36.8**	**-0.5**
AKAS	**Kas**	**1.40**	**75**	*i* P	**Pn**	**01 13 19.5**	**-0.5**
AKAS				*i* S	**Sn**	**01 13 36.8**	**-0.5**
MLSB	**Milas**	**1.41**	**355**	*e*PN	**Pn**	**01 13 19.9**	**-0.3**
MLSB	**Milas**	**1.41**	**355**	*e*Pn	**Pn**	**01 13 19.9**	**-0.3**
ZKR	**Zakros**	**1.60**	**242**	*e*P	**Pn**	**01 13 23.8**	**+1.1**
ZKR	**Zakros**	**1.60**	**242**	*e*P	**Pn**	**01 13 23.8**	**+1.1**
ZKR	**Zakros**	**1.60**	**242**	*e*P	**Pn**	**01 13 23.8**	**+1.1**
AYDN	**Tasoluk**	**1.77**	**359**	*i* P	**Pn**	**01 13 25.4**	**+0.3**
AYDN				*i* S	**Sn**	**01 13 43.5**	**-3.0**
GLHS	**Glhisar (BURDU**	**1.79**	**44**	*e*PN	**Pn**	**01 13 26.6**	**+1.2**
GLHS	**Glhisar (BURDU**	**1.79**	**44**	*e*Pn	**Pn**	**01 13 26.6**	**+1.3**
ELL	**Elmali**	**1.81**	**61**	*e*PN	**Pn**	**01 13 26.8**	**+1.1**
ELL	**Elmali**	**1.81**	**61**	*e*Pn	**Pn**	**01 13 26.8**	**+1.1**
GOLH	**Golhisar**	**1.88**	**44**	*i* P	**Pn**	**01 13 26.8**	**+0.2**
GOLH				*i* S	**Sn**	**01 13 51.1**	**+2.0**
GOLH	**Golhisar**	**1.88**	**44**	*i* P	**Pn**	**01 13 26.8**	**+0.2**
GOLH				*i* S	**Sn**	**01 13 51.1**	**+2.0**
NPS	**Neapolis**	**1.99**	**252**	*e*P	**Pn**	**01 13 27.5**	**-0.6**
NPS	**Neapolis**	**1.99**	**252**	*e*P	**Pn**	**01 13 27.5**	**-0.6**
NPS	**Neapolis**	**1.99**	**252**	*e*P	**Pn**	**01 13 27.5**	**-0.6**
SMG	**Samos**	**2.02**	**335**	*e*P	**Pn**	**01 13 28.1**	**-0.4**
SMG	**Samos**	**2.02**	**335**	*e*P	**Pn**	**01 13 28.1**	**-0.4**
SMG	**Samos**	**2.02**	**335**	*e*P	**Pn**	**01 13 28.1**	**-0.4**
LAST	**Lasithi**	**2.13**	**251**	*e*P	**Pn**	**01 13 30.0**	**0.0**
LAST	**Lasithi**	**2.13**	**251**	*e*P	**Pn**	**01 13 30.0**	**0.0**
LAST	**Lasithi**	**2.13**	**251**	*e*P	**Pn**	**01 13 30.0**	**0.0**
APE	**Apeiranthos**	**2.27**	**302**	*e*PN	**Pn**	**01 13 30.6**	**-1.3**
APE	**Apeiranthos**	**2.27**	**302**	*e*P	**Pn**	**01 13 31.5**	**-0.4**
APE	**Apeiranthos**	**2.27**	**302**	*e*P	**Pn**	**01 13 31.5**	**-0.4**
APE	**Apeiranthos**	**2.27**	**302**	*e*Pn	**Pn**	**01 13 30.6**	**-1.3**
APE	**Apeiranthos**	**2.27**	**302**	*e*P	**Pn**	**01 13 31.5**	**-0.4**
SIVA	**Sivas**	**2.69**	**252**	*e*P	**Pn**	**01 13 38.7**	**+1.0**
SIVA	**Sivas**	**2.69**	**252**	*e*P	**Pn**	**01 13 38.7**	**+1.0**
SIVA	**Sivas**	**2.69**	**252**	*e*P	**Pn**	**01 13 38.7**	**+1.0**
VAM	**Vamos**	**3.08**	**262**	*e*P	**Pn**	**01 13 43.5**	**+0.5**
VAM	**Vamos**	**3.08**	**262**	*e*P	**Pn**	**01 13 43.5**	**+0.5**
VAM	**Vamos**	**3.08**	**262**	*e*P	**Pn**	**01 13 43.5**	**+0.5**

*ISCJB **19** 01:27:20.8±0.2,39.°44N±0.°02×33.°10E±0.°02,h10km, Error ellipse: s-maj=2.4km s-min=2.1km az=176.8*
*DDA **19** 01:27:20.5,39.°43N×33.°06E,h5km±1km,Md3.2*
*ISK **19** 01:27:20.7,39.°46N×32.°95E,h5km,MD3.8*
*CSEM **19** 01:27:21.9±0.1,39.°46N×32.°98E,h2km,MD3.2, Error ellipse: s-maj=3.3km s-min=2.8km az=171.0*

ISC 19 01:27:20.5±0.4,39.°41N±0.°02×33.°12E±0.°02,h1km±3km, n144,σ1°14/170,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBAL	**Bala**	**0.13**	**2**	*i* P	**Pg**	**01 27 23.4**	**+0.3**
BBAL				*i* S	**Sg**	**01 27 25.8**	**+1.0**
BBAL	**Bala**	**0.13**	**2**	*i* P	**Pg**	**01 27 23.4**	**+0.3**
BBAL				*i* S	**Sg**	**01 27 25.8**	**+1.0**
LOD	**Lodumlu**	**0.55**	**330**	PG	**Pg**	**01 27 30.1**	**-1.0**
LOD				*e*SG	**Sg**	**01 27 38.1**	**-0.1**
LOD	**Lodumlu**	**0.55**	**330**	*i* Pg	**Pg**	**01 27 30.1**	**-1.0**
LOD				*e*Sg	**Sg**	**01 27 38.1**	**-0.1**
DAD	**Ankara**	**0.57**	**331**	*i* P	**Pg**	**01 27 31.0**	**-0.5**
DAD				*i* S	**Sg**	**01 27 39.0**	**+0.1**
DAD	**Ankara**	**0.57**	**331**	*i* P	**Pg**	**01 27 31.0**	**-0.5**
DAD				*i* S	**Sg**	**01 27 39.0**	**+0.1**
CDAG	**Cicekdag**	**0.99**	**77**	*i* P	**Pg**	**01 27 40.3**	**+0.7**
CDAG				*i* S	**Sg**	**01 27 55.0**	**+2.5**
CDAG	**Cicekdag**	**0.99**	**77**	*i* P	**Pg**	**01 27 40.3**	**+0.7**
CDAG				*i* S	**Sg**	**01 27 55.0**	**+2.5**
KIZT	**Kizilcal**	**1.10**	**242**	PG	**Pg**	**01 27 41.1**	**-0.4**
KIZT				*e*SG	**Sg**	**01 27 57.0**	**+1.2**
KIZT	**Kizilcal**	**1.10**	**242**	*i* Pg	**Pg**	**01 27 41.1**	**-0.5**
KIZT				*e*Sg	**Sg**	**01 27 57.0**	**+1.2**
ELDT	**Eldivan**	**1.10**	**12**	*i* P	**Pg**	**01 27 40.9**	**-0.8**
ELDT				*i* S	**Sg**	**01 27 57.2**	**+1.2**
ELDT	**Eldivan**	**1.10**	**12**	*i* P	**Pg**	**01 27 40.9**	**-0.8**
ELDT				*i* S	**Sg**	**01 27 57.2**	**+1.2**
KDHN	**Kadinhani**	**1.18**	**222**	*i* P	**Pg**	**01 27 42.7**	**-0.4**
KDHN				*i* S	**Sg**	**01 28 00.3**	**+1.8**
KDHN	**Kadinhani**	**1.18**	**222**	*i* P	**Pg**	**01 27 42.7**	**-0.5**
KDHN				*i* S	**Sg**	**01 28 00.3**	**+1.8**
SVRH	**Sivrihisar-ESK**	**1.23**	**272**	PN	**Pg**	**01 27 42.8**	**-1.4**
SVRH				*e*SN	**Sg**	**01 27 59.2**	**-1.0**
SVRH	**Sivrihisar-ESK**	**1.23**	**272**	*i* Pn	**Pg**	**01 27 42.8**	**-1.4**
SVRH				*e*Sn	**Sg**	**01 27 59.3**	**-0.9**
SULT	**Sultanhani-AKS**	**1.25**	**165**	*e*PN	**Pg**	**01 27 47.3**	**+2.8**
SULT	**Sultanhani-AKS**	**1.25**	**165**	*e*Pn	**Pg**	**01 27 47.3**	**+2.8**
LADK	**Ladik-KONYA**	**1.34**	**206**	*e*PN	**Pn**	**01 27 46.6**	**+0.1**
LADK	**Ladik-KONYA**	**1.34**	**206**	*e*Pn	**Pn**	**01 27 46.6**	**+0.2**
CORM	**Corum**	**1.40**	**56**	*e*PN	**Pb**	**01 27 48.5**	**+1.1**
CORM	**Corum**	**1.40**	**56**	*e*Pn	**Pb**	**01 27 48.6**	**+1.2**
SGKT	**Sivrigoynuk**	**1.42**	**325**	*i* P	**Pn**	**01 27 46.8**	**-0.7**
SGKT				*i* S	**Sg**	**01 28 08.1**	**+1.9**
SGKT	**Sivrigoynuk**	**1.42**	**325**	*i* P	**Pn**	**01 27 46.8**	**-0.7**
AVNT	**Avonos**	**1.49**	**114**	*i* P	**Pb**	**01 27 50.2**	**+1.2**
AVNT				*i* S	**Sg**	**01 28 13.4**	**+4.9**
AVNT	**Avonos**	**1.49**	**114**	*i* P	**Pb**	**01 27 50.2**	**+1.2**
AVNT				*i* S	**Sg**	**01 28 13.4**	**+4.9**
KONT	**Konya--Tatoy**	**1.58**	**202**	*e*PN	**Pb**	**01 27 50.7**	**+0.2**
KONT	**Konya--Tatoy**	**1.58**	**202**	*e*Pn	**Pb**	**01 27 50.7**	**+0.2**
ILGA	**Ilgaz**	**1.70**	**15**	*i* P	**Pb**	**01 27 52.4**	**-0.2**
ILGA				*i* S	**Sg**	**01 28 15.3**	**0.0**
ILGA	**Ilgaz**	**1.70**	**15**	*i* P	**Pb**	**01 27 52.4**	**-0.3**
ILGA				*i* S	**Sg**	**01 28 15.3**	**0.0**
YOZ	**Yozgat**	**1.72**	**82**	*e*PN	**Pg**	**01 27 54.8**	**+1.3**
YOZ	**Yozgat**	**1.72**	**82**	*e*Pn	**Pg**	**01 27 54.8**	**+1.3**
ESKT	**Eskisehir**	**1.76**	**274**	*e*PN	**Pn**	**01 27 51.9**	**-0.2**
ESKT	**Eskisehir**	**1.76**	**274**	*i* P	**Pn**	**01 27 51.0**	**-1.2**
ESKT				*i* S	**Sg**	**01 28 19.0**	**+1.9**
ESKT	**Eskisehir**	**1.76**	**274**	*e*Pn	**Pn**	**01 27 51.9**	**-0.3**
SEYT	**Eskypehyr**	**1.76**	**274**	*i* P	**Pn**	**01 27 51.0**	**-1.2**
CTKT	**Corum**	**1.77**	**46**	*i* P	**Pb**	**01 27 54.0**	**+0.3**
CTKT	**Corum**	**1.77**	**46**	*i* P	**Pn**	**01 27 54.0**	**+1.7**
TOS	**Tosya**	**1.77**	**23**	*e*PN	**Pb**	**01 27 53.6**	**-0.1**
TOS	**Tosya**	**1.77**	**23**	*e*Pn	**Pb**	**01 27 53.6**	**-0.1**
MDU	**Mudurnu**	**1.80**	**306**	*e*PN	**Pn**	**01 27 52.5**	**-0.3**
MDU	**Mudurnu**	**1.80**	**306**	*e*Pn	**Pn**	**01 27 52.5**	**-0.3**
BOLV	**Bolvadin**	**1.82**	**248**	*i* P	**Pn**	**01 27 53.2**	**+0.1**
BOLV				*i* S	**Sn**	**01 28 15.7**	**-1.0**
BOLV	**Bolvadin**	**1.82**	**248**	*i* P	**Pn**	**01 27 53.2**	**+0.2**
BOLV				*i* S	**Sn**	**01 28 15.7**	**-1.1**
SAFT	**Safranbolu**	**1.86**	**350**	*e*PN	**Pn**	**01 27 54.4**	**+0.9**
SAFT	**Safranbolu**	**1.86**	**350**	*e*Pn	**Pn**	**01 27 54.4**	**+0.9**
BORA	**Eskisehir**	**2.11**	**284**	*i* P	**Pn**	**01 27 55.8**	**-1.1**
BORA				*i* S	**Sg**	**01 28 30.5**	**+2.2**
BORA	**Eskisehir**	**2.11**	**284**	*i* P	**Pn**	**01 27 55.8**	**-1.2**
BALT	**Daday**	**2.13**	**5**	*i* P	**Pg**	**01 28 00.1**	**-1.3**
BALT				*i* S	**Sg**	**01 28 29.2**	**+0.2**
BALT	**Daday**	**2.13**	**5**	*i* P	**Pg**	**01 28 00.1**	**-1.3**
SHUT	**Suhut-Afyon**	**2.17**	**248**	*e*PN	**Pn**	**01 27 58.5**	**+0.7**
SHUT	**Suhut-Afyon**	**2.17**	**248**	*e*Pn	**Pn**	**01 27 58.6**	**+0.7**
HENT	**Hendek**	**2.21**	**310**	*i* P	**Pg**	**01 28 01.7**	**-1.2**
HENT	**Hendek**	**2.21**	**310**	*i* P	**Pg**	**01 28 01.4**	**-1.5**
HENT	**Hendek**	**2.21**	**310**	*i* P	**Pg**	**01 28 01.4**	**-1.5**
GULT	**Gulveren**	**2.25**	**298**	*e*PN	**Pn**	**01 27 58.8**	**-0.1**
GULT	**Gulveren**	**2.25**	**298**	*e*Pn	**Pn**	**01 27 58.8**	**-0.1**
KDZE	**Karadeniz Ereo**	**2.29**	**327**	*e*PN

*NEIC **19** 01:53:12.1±4.0, 36°.69N×66°.78E, h27km±33km, mb3.8/3, Error ellipse: s-maj=14.8km s-min=12.0km az=51.0*
*ISCJB **19** 01:53:13.8±1.2, 36°.96N±0°.04×66°.76E±0°.07, h48km±15km, mb3.6/8, MS3.3/2, Error ellipse: s-maj=8.8km s-min=7.2km az=171.3*
*NNC **19** 01:53:17.3±1.9, 37°.48N×66°.87E, h0km, mb4.2, mpv4.0, Error ellipse: s-maj=16.7km s-min=13.6km az=141.0*

ISC 19 01:53:14.8±1.0, 36°.91N±0°.05×66°.66E±0°.06, h38km±13km, n33, σ1°.26/49, mb3.6/8, MS3.3/2, 10C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**3.06**	**140**	*e*Pn	**Pn**	**01 53 55.8**	**-4.9**
KBL				*e*Sg	**Sn**	**01 54 36.0**	**0.0**
KK31	**Karatay Array**	**6.86**	**24**	Pn	**Pn**	**01 54 54.0**	**+1.2**
	3.0nm,0.3s,baz=212,slow=15,SNR=128						
KK31				⇑Sn	**Sn**	**01 56 09.9**	**+0.4**
	4.4nm,0.4s,baz=215,slow=27,SNR=5.7						
KK31				⇑Lg		01 56 34.6	
	23nm,0.8s,baz=218,slow=33,SNR=3.8						
AML	**Almayashu**	**7.53**	**44**	*e*Pn	**Pn**	**01 55 01.5**	**-0.5**
	12nm,0.6s						
AML				*e*Sn	**Sn**	**01 56 28.0**	**+1.9**
KSH	**Kashi**	**7.78**	**68**	*e*Pn	**Pn**	**01 55 01.8**	**-3.7**
KSH				Sn	**Sn**	**01 56 17.3**	**-15**
KSH				smax			
	comp=N,27nm,0.4s						
KSH				smax			
	comp=E,37nm,0.8s						
EKS2	**Erkin-Say**	**7.94**	**41**	*e*Pn	**Pn**	**01 55 08.5**	**+0.9**
	comp=E,3.6nm,0.4s						
EKS2				*e*Sn	**Sn**	**01 56 38.6**	**+2.6**
UCH	**Uchtor**	**8.06**	**46**	*e*Pn	**Pn**	**01 55 08.5**	**-0.7**
UCH				*e*Sn	**Sn**	**01 56 39.5**	**+0.4**
AAK	**Ala-Archa**	**8.31**	**44**	Pn	**Pn**	**01 55 13.5**	**+0.9**
	comp=E,2.2nm,0.3s,baz=248,slow=5.4,SNR=6.8						
AAK				Sn	**Sn**	**01 56 46.5**	**+1.3**
	comp=E,0.5nm,0.3s,baz=176,slow=23,SNR=1.2						
AAK	**Ala-Archa**	**8.31**	**44**	Pn	**Pn**	**01 55 13.6**	**+0.9**
AAK				Sn	**Sn**	**01 56 46.5**	**+1.3**
TKM2	**Tokmak 2**	**9.12**	**46**	⇑Pn	**Pn**	**01 55 22.4**	**-1.4**
	comp=E,4.5nm,0.4s						
TKM2				⇓Sn	**Sn**	**01 57 03.2**	**-1.9**
	comp=E,7.8nm,0.9s						
TKM2				⇑Lg		01 57 52.2	
	comp=E,7.7nm,0.8s						
TKM2	**Tokmak 2**	**9.12**	**46**	*e*Pn	**Pn**	**01 55 22.5**	**-1.2**
	comp=E,8.6nm,0.4s						
AB31	**Akbulak array**	**13.27**	**341**	⇑Pn	**Pn**	**01 56 20.4**	**-0.1**
	comp=E,0.7nm,0.5s,baz=164,slow=12,SNR=8.9						
AB31				⇑Sn	**Sn**	**01 58 46.1**	**-0.5**
	comp=E,1.3nm,0.6s,baz=164,slow=24,SNR=4.6						
AB31				⇑Lg		02 00 04.9	
	comp=E,2.5nm,0.7s						
ABKAR	**Akbulak array**	**13.27**	**341**	*e*Pn	**Pn**	**01 56 20.8**	**+0.3**
	comp=E,1.3nm,0.5s						
ABKAR				*e*Sn	**Sn**	**01 58 44.6**	**-2.1**
AKTK	**Aktyubinsk**	**14.88**	**338**	Pn	**Pn**	**01 56 43.6**	**+1.3**
AKTK				Sn	**Sn**	**01 59 26.1**	**+0.2**
AKTO	**Aktyubinsk**	**14.88**	**338**	Pn	**Pn**	**01 56 43.6**	**+1.3**
	comp=E,0.2nm,0.3s,baz=155,slow=15,SNR=2.7						
AKTO				Sn	**Sn**	**01 59 26.1**	**+0.2**
	comp=E,0.2nm,0.3s,baz=314,slow=19,SNR=2.3						
MK31	**Makanchi Array**	**15.25**	**45**	*e*Pn	**Pn**	**01 56 46.5**	**-0.6**
MKAR	**Makanchi Array**	**15.25**	**45**	Pn	**Pn**	**01 56 44.2**	**-2.9**
	comp=E,0.1nm,0.3s,baz=246,slow=11,SNR=3.8						
VOSK	**Vostochnaya**	**16.10**	**10**	⇑Pn	**Pn**	**01 56 56.7**	**-1.4**
	comp=E,1.3nm,0.6s						
VOSK				⇓Sn	**Sn**	**01 59 49.2**	**-6.2**
	comp=E,0.9nm,0.5s						
ZRNK	**Zerenda**	**16.12**	**5**	⇓Pn	**Pn**	**01 56 56.2**	**-2.3**
	comp=E,3.0nm,0.7s						
ZRNK				⇓Sn	**Sn**	**01 59 53.1**	**-2.9**
	comp=E,1.6nm,0.5s						
KURK	**Kurchatov**	**16.25**	**28**	*e*Pn	**Pn**	**01 57 01.9**	**+1.8**
	comp=E,3.4nm,0.8s						
BVAR	**Borovoye Array**	**16.33**	**8**	Pn	**Pn**	**01 57 00.3**	**-0.7**
	comp=E,0.8nm,0.3s,baz=175,slow=11,SNR=9.7						
BVAR				Sn	**Sn**	**01 59 53.5**	**-7.3**
	comp=E,0.3nm,0.3s,baz=233,slow=42,SNR=2.8						
BRVK	**Borovoye**	**16.35**	**8**	⇑Pn	**Pn**	**01 57 03.2**	**+1.9**
	comp=E,12nm,1.3s						
BRVK				⇑Sn	**Sn**	**01 59 55.1**	**-6.2**
	comp=E,3.1nm,0.9s						
BRVK	**Borovoye**	**16.35**	**8**	*e*Pn	**Pn**	**01 57 02.4**	**+1.1**
	comp=E,3.4nm,0.4s						
ARU	**Arti**	**20.27**	**347**	*e*P	**P**	**01 57 50.1**	**+3.2**
	comp=E,4.5nm,0.6s						
ZALV	**Zalesovo Beam**	**21.17**	**31**	P	**P**	**01 57 55.7**	**-0.8**
	comp=E,6.4nm,0.6s,mb4.1,baz=228,slow=10,SNR=21						
BRTR	**Keskin Array B**	**25.98**	**286**	P	**P**	**01 58 44.2**	**+0.4**
	comp=E,0.3nm,0.5s,mb3.1,baz=99,slow=7.6,SNR=4.5						
FINES	**FINESS Array B**	**35.22**	**327**	P	**P**	**02 00 06.0**	**+0.9**
	comp=E,1.4nm,0.9s,mb3.9,baz=126,slow=8.5,SNR=5.5						
ARCES	**ARCESS Array B**	**39.47**	**339**	P	**P**	**02 00 41.3**	**+0.4**
	comp=E,1.3nm,0.8s,mb3.7,baz=106,slow=9.1,SNR=5.0						
NB2	**NORSAR Subarra**	**41.96**	**323**	P	**P**	**02 01 01.6**	**0.0**
	comp=Z,0.5nm,0.6s,mb3.3,baz=101,slow=8.6						
NOA	**NORSAR Array B**	**41.96**	**323**	P	**P**	**02 01 01.4**	**-0.2**
	comp=Z,0.5nm,0.6s,mb3.4,baz=101,slow=8.1,SNR=3.7						
NOA				LR	LR	02 21 50.3	
	comp=Z,29nm,18.0s,MS3.2,baz=90,slow=40						
KSRS	**Korea Array**	**48.03**	**70**	LR	LR	02 24 09.8	
	comp=Z,44nm,18.8s,MS3.5,baz=164,slow=39						
ILAR	**Eielson Array**	**75.29**	**14**	P	**P**	**02 04 53.2**	**-0.2**
	comp=Z,0.3nm,0.7s,mb3.3,baz=336,slow=4.0,SNR=3.6						
WRA	**Warramunga Arr**	**85.20**	**119**	P	**P**	**02 05 42.2**	**-5.2**
	comp=Z,0.2nm,0.7s,mb3.4,baz=326,slow=4.7,SNR=2.7						
ASAR	**Alice Springs**	**87.39**	**122**	P	**P**	**02 05 49.5**	**-8.6**
	comp=Z,0.3nm,0.5s,mb3.8,baz=308,slow=4.8,SNR=4.8						

*THE **19** 01:55:46.5, 38°.10N×21°.31E, h2km±24km, ML2.3/7, Error ellipse: s-maj=24.2km s-min=0.5km az=0.0*
*CSEM **19** 01:55:46.8±0.3, 38°.16N×21°.28E, h15km, MD3.1, Error ellipse: s-maj=6.0km s-min=4.5km az=173.0*
*NEIC **19** 01:55:47.0, 38°.16N×21°.25E, h5km±3km, MD3.1(ATH), After ATH.*

ATH 19 01:55:47.0, 38°.16N×21°.25E, h5km±3km, MD3.1/6, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.20**	**121**	*e*Pg	Pg	01 55 50.7	-0.2
RLS				*e*Sg	Sg	01 55 54.5	+1.0
RLS	**Riolos of Patr**	**0.20**	**121**	*e*PG	Pg	01 55 50.7	-0.2
RLS				*e*SG	Sg	01 55 54.5	+1.0
RLS	**Riolos of Patr**	**0.20**	**121**	*e*Pg	Pg	01 55 50.7	-0.2
RLS				*e*Sg	Sg	01 55 54.5	+1.0
KFL	**Anninata**	**0.37**	**262**	P	Pg	01 55 54.6	+0.5
KFL	**Anninata**	**0.37**	**262**	P	Pg	01 55 54.6	+0.5
UPR	**University Cam**	**0.44**	**74**	P	Pg	01 55 54.6	-0.9
UPR	**University Cam**	**0.44**	**74**	P	Pg	01 55 54.6	-0.9
VLS	**Valsamata**	**0.52**	**272**	*e*Pb	Pg	01 55 56.8	-0.2
VLS				*e*Sb	Sg	01 56 06.0	+2.2
VLS	**Valsamata**	**0.52**	**272**	*e*PB	Pg	01 55 56.8	-0.2
VLS				*e*SB	Sg	01 56 06.0	+2.2
VLS	**Valsamata**	**0.52**	**272**	P	Pg	01 55 56.9	-0.1
VLS	**Valsamata**	**0.52**	**272**	P	Pg	01 55 56.9	-0.1
VLS				*e*Sb	Sg	01 56 06.0	+2.2
LAKA	**Lakka**	**0.58**	**82**	P	Pg	01 55 57.2	-0.9
LAKA				S	Sg	01 56 04.6	-1.1
LAKA	**Lakka**	**0.58**	**82**	P	Pg	01 55 57.2	-0.9
EFP	**Efpalio**	**0.58**	**62**	*e*PB	Pg	01 55 57.7	-0.5
EFP				*e*SB	Sg	01 56 06.8	+1.1
EFP	**Efpalio**	**0.58**	**62**	P	Pg	01 55 57.4	-0.8
EFP				S	Sg	01 56 05.9	+0.2
EFP	**Efpalio**	**0.58**	**62**	P	Pg	01 55 57.4	-0.8
EFP	**Efpalio**	**0.58**	**62**	*e*Pb	Pg	01 55 57.7	-0.5
EFP				S	Sg	01 56 05.9	+0.2
EFP				*e*Sb	Sg	01 56 06.8	+1.1
TRIZ	**Trizonia**	**0.68**	**72**	P	Pg	01 55 58.9	-1.1
TRIZ				S	Sg	01 56 08.3	-0.6
TRIZ	**Trizonia**	**0.68**	**72**	P	Pg	01 55 58.9	-1.1
TRIZ				S	Sg	01 56 08.3	-0.6
KALE	**Kalithea**	**0.74**	**71**	P	Pg	01 55 59.9	-1.3
KALE				S	Sg	01 56 10.0	-0.7
KALE	**Kalithea**	**0.74**	**71**	P	Pg	01 55 59.9	-1.3
KALE				S	Sg	01 56 10.0	-0.7
EVR	**Evrytania**	**0.87**	**30**	*e*Pb	Pg	01 56 04.0	+0.2
EVR	**Evrytania**	**0.87**	**30**	*e*PB	Pg	01 56 04.0	+0.2
EVR	**Evrytania**	**0.87**	**30**	*e*Pb	Pg	01 56 04.0	+0.2
GUR	**Goura**	**0.89**	**104**	*e*PG	Pg	01 56 03.5	-0.6
GUR				*e*SB	Sg	01 56 17.1	+1.5
GUR	**Goura**	**0.89**	**104**	P	Pg	01 56 02.2	-1.9
GUR				S	Sg	01 56 13.9	-1.7
GUR	**Goura**	**0.89**	**104**	P	Pg	01 56 02.2	-1.9
GUR	**Goura**	**0.89**	**104**	*e*Pg	Pg	01 56 03.5	-0.6
GUR				S	Sg	01 56 13.9	-1.7
GUR				*e*Sb	Sb	01 56 17.1	0.0
DSF	**Desfina**	**1.04**	**76**	P	Pg	01 56 05.2	-1.7
DSF				S	Sg	01 56 19.9	-0.4
DSF	**Desfina**	**1.04**	**76**	P	Pg	01 56 05.2	-1.7
DSF				S	Sg	01 56 19.9	-0.4
ITM	**Ithomi**	**1.12**	**151**	*e*Pb	Pg	01 56 09.0	+0.6
ITM	**Ithomi**	**1.12**	**151**	*e*PB	Pg	01 56 09.0	+0.6
ITM	**Ithomi**	**1.12**	**151**	*e*Pb	Pg	01 56 09.0	+0.6
VLX	**Vlachokerasia**	**1.19**	**131**	*e*PB	Pb	01 56 10.0	-0.1
VLX				*e*SB	Sb	01 56 26.9	+1.1
VLX	**Vlachokerasia**	**1.19**	**131**	*e*Pb	Pb	01 56 10.0	-0.1
VLX				*e*Sb	Sb	01 56 26.9	+1.1
AGG	**Agios Georgios**	**1.21**	**44**	*e*Pb	Pb	01 56 10.2	-0.1
AGG	**Agios Georgios**	**1.21**	**44**	*e*PB	Pb	01 56 10.2	-0.1
AGG	**Agios Georgios**	**1.21**	**44**	P	Pg	01 56 09.5	-0.7
AGG				S	Sg	01 56 26.7	+0.9
AGG	**Agios Georgios**	**1.21**	**44**	P	Pg	01 56 09.5	-0.7
AGG	**Agios Georgios**	**1.21**	**44**	*e*Pb	Pb	01 56 10.2	-0.1
AGG				S	Sg	01 56 26.7	+0.9
THL	**Klokotos Trika**	**1.52**	**23**	*e*PB	Pb	01 56 16.3	+0.6
THL	**Klokotos Trika**	**1.52**	**23**	*e*Pb	Pb	01 56 16.3	+0.6

*JMA **19** 02:11:09.1±0.5, 33°.62N×137°.37E, h367km±5km, M2.8*
*ISCJB **19** 02:11:10.3±0.8, 33°.7N±0°.1×137°.41E±0°.09, h352km±8km, mb2.8/2, Error ellipse: s-maj=20.6km s-min=10.2km az=161.7*
*IDC **19** 02:11:10.5±1.9, 33°.47N×137°.31E, h322km±32km, mb2.6/2, mb1 2.7/4, mb1mx2.5/27, mbtmp2.6/4, Error ellipse: s-maj=60.9km s-min=23.9km az=55.0*

ISC 19 02:11:11.4±0.8, 33°.7N±0°.1×137°.41E±0°.09, h343km±8km, n19, σ0°.78/22, mb2.8/2, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIE	**Ise**	**0.93**	**322**	P	**Pn**	**02 11 56.8**	**+0.7**
JKN2	**Miekihoku**	**1.10**	**302**	P	**Pn**	**02 11 57.1**	**+0.3**
JWZ	**Kozaga**	**1.42**	**265**	P	**Pn**	**02 11 58.3**	**-0.1**
JWY	**Kouya**	**1.61**	**291**	P	**Pn**	**02 11 59.7**	**+0.3**
JWT	**Wachi**	**2.32**	**315**	P	**Pn**	**02 12 04.2**	**-0.2**
JAI	**Aioi**	**2.46**	**274**	P	**Pn**	**02 12 05.2**	**-0.4**
JRY	**Ryogami san**	**2.66**	**27**	P	**Pn**	**02 12 08.7**	**+1.6**
JHU	**Hanno**	**2.68**	**35**	P	**Pn**	**02 12 08.2**	**+0.9**
JHU				*e*S	**S**	**02 12 51.6**	**-0.6**
BSO4	**Boso 4**	**2.77**	**60**	P	**Pn**	**02 12 09.1**	**+1.0**
BSO4				*e*S	**S**	**02 12 54.6**	**+0.9**
BSO3	**Boso 3**	**2.81**	**65**	P	**Pn**	**02 12 08.3**	**-0.2**
JMN	**Monobe**	**2.94**	**272**	P	**Pn**	**02 12 09.3**	**-0.4**
MJAR	**Matsushiro Arr**	**2.95**	**13**	P	**Pn**	**02 12 09.2**	**-0.5**
	0.5nm,0.3s,baz=182,slow=9.6,SNR=5.2						
BSO1	**Boso 1**	**3.12**	**70**	P	**Pn**	**02 12 10.6**	**-0.7**
JAG	**Ashikaga**	**3.23**	**31**	P	**Pn**	**02 12 11.8**	**-0.5**
JYT	**Yasato**	**3.44**	**41**	P	**Pn**	**02 12 13.5**	**-0.8**
JHO	**Hitachi**	**3.92**	**40**	P	**Pn**	**02 12 18.1**	**-1.0**
JHO				*e*S	**S**	**02 13 09.8**	**-3.9**
KSRS	**Korea Array**	**8.60**	**299**	P	**Pn**	**02 13 11.8**	**-0.7**
	0.2nm,0.3s,baz=110,slow=13,SNR=8.7						
SONM	**Songino Array**	**27.22**	**311**	P	**P**	**02 16 26.1**	**+1.4**
	0.3nm,0.3s,mb3.0,baz=103,slow=4.6,SNR=3.4						
WRA	**Warramunga Arr**	**53.38**	**184**	P	**P**	**02 19 56.3**	**-0.4**
	0.2nm,0.7s,mb2.5,baz=0.7,slow=7.6,SNR=2.5						

*IDC **19** 02:25:30.2±0.8, 5°.84S×154°.74E, h162km±8km, mb4.3/16, mb1 4.4/17, mb1mx4.3/20, mbtmp4.2/17, MS3.2/1, Ms1 3.2/1, ms1mx2.8/33, Error ellipse: s-maj=16.7km s-min=10.8km az=93.0*
*ISCJB **19** 02:25:37.7±2.2, 6°.00S±0°.07×154°.55E±0°.09, h246km±20km, mb4.6/35, Error ellipse: s-maj=15.5km s-min=10.9km az=156.7*
*DJA **19** 02:25:37, 5°.88S×154°.72E, h249km, mb5.2/13*
*NEIC **19** 02:25:38.5±1.7, 5°.98S×154°.62E, h241km±15km, mb4.4/17, Error ellipse: s-maj=11.6km s-min=8.3km az=74.0*

ISC 19 02:25:38.6±2.2, 5°.98S±0°.07×154°.59E±0°.09, h240km±20km, n61, σ0°.83/60, mb4.6/35, 2D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.12**	**245**	*e*Pn	**Pn**	**02 27 33.1**	**-0.3**
	114nm,0.8s						
PMG				*e*S	**S**	**02 29 12.1**	**+6.3**
PMG	**Port Moresby**	**8.12**	**245**	P	**Pn**	**02 27 33.2**	**-0.2**
	1μm169nm,0.8s						
COEN	**Coen**	**13.75**	**234**	*e*P	**Pn**	**02 28 46.4**	**+2.3**
	164nm,0.8s						
COEN	**Coen**	**13.75**	**234**	P	**Pn**	**02 28 45.8**	**+1.7**
	144nm,0.9s						
CTA	**Charters Tower**	**16.20**	**209**	*e*P	**P**	**02 29 13.3**	**+1.1**
	8.3nm,0.8s						
CTA	**Charters Tower**	**16.20**	**209**	P	**P**	**02 29 12.7**	**+0.5**
	0.7nm,0.3s,baz=32,slow=11,SNR=14						
CTA				LR	LR	02 33 54.4	
	comp=Z,95nm,21.1s,baz=236,slow=31						
CTAO	**Charters Tower**	**16.20**	**209**	*e*P	**P**	**02 29 13.3**	**+1.1**
	10nm,0.8s						
CTAO	**Charters Tower**	**16.20**	**209**	P	**P**	**02 29 11.8**	**-0.4**
	14nm,0.8s						
EIDS	**Eidsvold**	**19.57**	**190**	*e*P	**P**	**02 29 47.1**	**-1.5**
	12nm,0.8s						
TLE	**Tual**	**21.75**	**270**	P	**P**	**02 30 07.2**	**-4.1**
	164nm,0.8s,mb5.6						
KAKA	**Kakadu**	**22.85**	**251**	*e*P	**P**	**02 30 20.7**	**-0.6**
	35nm,0.4s,mb5.2						
KAKA	**Kakadu**	**22.85**	**251**	*e*P	**P**	**02 30 20.8**	**-0.5**
	104nm,0.5s,mb5.6						
KAKA	**Kakadu**	**22.85**	**251**	P	**P**	**02 30 20.8**	**-0.5**
	1μm80nm,0.5s,mb5.5						
SWI	**Sorong**	**23.83**	**281**	P	**P**	**02 30 30.0**	**-0.3**
	45nm,0.6s,mb5.3						
WRAB	**Tennant Creek**	**24.07**	**233**	*e*P	**P**	**02 30 32.6**	**+0.3**
	18nm,0.5s,mb5.0						
WRAB	**Tennant Creek**	**24.07**	**233**	P	**P**	**02 30 32.2**	**-0.1**
	36nm,1.1s,mb4.9						
WRA	**Warramunga Arr**	**24.08**	**233**	P	**P**	**02 30 32.9**	**+0.5**
	18nm,0.5s,mb5.0,baz=58,slow=9.9,SNR=496						
ARMA	**Armidale**	**24.47**	**186**	*e*P	**P**	**02 30 36.2**	**+0.4**
ASAR	**Alice Springs**	**26.56**	**226**	P	**P**	**02 30 54.5**	**-0.2**
	9.6nm,0.5s,mb4.7,baz=57,slow=9.1,SNR=135						
ASAR				pP	pP	02 31 30.1	-12
	1.8nm,0.6s,baz=47,slow=7.4,SNR=2.0						
ASAR				PcP	PcP	02 34 13.7	+1.1
	2.0nm,0.5s,baz=59,slow=2.7,SNR=7.7						
KNA	**Kununurra**	**27.13**	**247**	P	**P**	**02 30 59.8**	**0.0**
	46nm,0.8s,mb5.2						
LBMI	**Labuha**	**27.55**	**280**	P	**P**	**02 31 04.2**	**+0.5**
	123nm,0.9s,mb5.5						
STKA	**Stephens Creek**	**28.49**	**204**	*e*P	**P**	**02 31 11.1**	**-0.6**
	4.6nm,0.6s,mb4.3						
STKA	**Stephens Creek**	**28.49**	**204**	P	**P**	**02 31 11.2**	**-0.5**
	5.3nm,0.5s,mb4.4,baz=1.1,slow=8.4,SNR=15						
FITZ	**Fitzroy Crossi**	**30.71**	**244**	*e*P	**P**	**02 31 30.6**	**-0.9**
	23nm,0.7s,mb4.9						
FITZ	**Fitzroy Crossi**	**30.71**	**244**	*e*P	**P**	**02 31 30.7**	**-0.8**
	13nm,0.8s,mb4.6						
FITZ	**Fitzroy Crossi**	**30.71**	**244**	P	**P**	**02 31 30.9**	**-0.6**
	38nm,0.8s,mb5.1						
KMSI	**Cibinong**	**31.25**	**281**	P	**P**	**02 31 36.0**	**-0.3**
	293nm,0.6s						
PCI	**Palu**	**35.05**	**277**	P	**P**	**02 32 09.9**	**+0.8**
	1μm168nm,1.0s,mb5.5						
FORT	**Forrest**	**35.06**	**222**	*e*P	**P**	**02 32 08.7**	**-0.3**
	26nm,0.7s,mb4.9						
MBWA	**Marble Bar**	**36.98**	**243**	*e*P	**P**	**02 32 24.6**	**-0.7**
	7.5nm,0.5s,mb4.5						
URZ	**Urewera**	**38.08**	**151**	P	**P**	**02 32 34.5**	**+0.3**
	60nm,1.1s,mb5.0,baz=306,slow=7.2,SNR=3.9						
RPZ	**Rata Peaks**	**40.28**	**161**	P	**P**	**02 32 52.2**	**-0.1**
	22nm,0.7s,mb4.7,baz=356,slow=6.4,SNR=12						
KLBR	**Kellerberrin**	**42.84**	**229**	*e*P	**P**	**02 33 12.4**	**-0.9**
	12nm,0.5s,mb4.6						
CGJI	**Cibinong**	**48.59**	**266**	P	**P**	**02 33 56.1**	**-2.4**
KSRS	**Korea Array**	**49.86**	**332**	P	**P**	**02 34 06.3**	**-1.3**
	1.3nm,0.7s,baz=148,slow=7.4,SNR=4.9						
PETK	**Petropavlovsk-**	**58.92**	**2**	P	**P**	**02 35 11.9**	**-0.5**
	3.3nm,0.5s,mb4.2,baz=164,slow=6.9,SNR=6.6						
CMAR	**Chiang Mai Arr**	**59.99**	**295**	P	**P**	**02 35 21.8**	**+1.4**
	4.8nm,0.7s,mb4.2,baz=117,slow=5.3,SNR=22						
CHTO	**Chiang Mai**	**60.10**	**296**	*e*P	**P**	**02 35 21.4**	**+0.3**
CASY	**Casey**	**67.43**	**198**	⇓*i*P	**P**	**02 36 08.4**	**+0.4**
CASY	**Casey**	**67.43**	**198**	*e*P	**P**	**02 36 08.3**	**+0.3**
	5.4nm,0.6s,mb4.3						
ULN	**Ulaanbaatar**	**67.94**	**328**	*e*P	**P**	**02 36 11.9**	**+0.4**
	3.0nm,0.8s,mb4.0						
SONM	**Songino Array**	**68.27**	**327**	P	**P**	**02 36 14.3**	**+0.8**
	3.0nm,0.6s,mb4.1,baz=138,slow=5.0,SNR=20						
MK31	**Makanchi Array**	**82.39**	**319**	*e*P	**P**	**02 37 34.0**	**+0.2**
MKAR	**Makanchi Array**	**82.39**	**319**	P	**P**	**02 37 34.2**	**+0.5**
	11nm,0.8s,mb4.5,baz=103,slow=5.2,SNR=54						
MKAR	**Makanchi Array**	**82.39**	**319**	P	**P**	**02 37 34.2**	**+0.5**
ILAR	**Eielson Array**	**82.58**	**22**	P	**P**	**02 37 33.0**	**-1.4**
	1.7nm,0.9s,mb3.8,baz=246,slow=5.1,SNR=17						
ILAR				pP	pP	02 38 13.8	-18
	1.0nm,0.8s,baz=253,slow=5.2,SNR=4.9						
ZALV	**Zalesovo Beam**	**83.12**	**326**	P	**P**	**02 37 36.5**	**-0.9**
	5.9nm,0.7s,mb4.4,baz=108,slow=5.6,SNR=26						
QSPA	**South Pole Qui**	**83.99**	**180**	*e*P	**P**	**02 37 41.8**	**+0.5**
	9.5nm,1.2s,mb4.4						
MAW	**Mawson**	**85.17**	**203**	⇓*i*P	**P**	**02 37 48.3**	**+0.8**
	7.3nm,0.8s,mb4.5						
MAW	**Mawson**	**85.17**	**203**	P	**P**	**02 37 48.3**	**+0.8**
	9.7nm,0.7s,mb4.7,baz=103,slow=7.0,SNR=28						
KURK	**Kurchatov**	**85.79**	**322**	*e*P	**P**	**02 37 50.2**	**-0.7**
	3.7nm,0.6s,mb4.3						
TKM2	**Tokmak 2**	**86.03**	**314**	*e*P	**P**	**02 37 52.4**	**+0.2**
	1.9nm,0.6s,mb4.0						
AAK	**Ala-Archa**	**86.77**	**313**	*e*P	**P**	**02 37 56.4**	**+0.6**
	3.0nm,0.6s,mb4.2						
AML	**Almayashu**	**87.26**	**313**	*e*P	**P**	**02 37 59.6**	**+1.5**
	3.2nm,0.7s,mb4.2						
EKS2	**Erkin-Say**	**87.30**	**313**	*e*P	**P**	**02 37 58.8**	**+0.5**
	2.0nm,0.7s,mb4.0						
BVAR	**Borovoye Array**	**91.25**	**323**	P	**P**	**02 38 15.4**	**-1.1**
	4.4nm,0.7s,mb4.5,baz=110,slow=6.5,SNR=20						
NVAR	**Mina Array Bea**	**91.41**	**52**	P	**P**	**02 38 18.9**	**+1.2**
	3.0nm,0.9s,mb4.2,baz=253,slow=6.8,SNR=13						
NVAR				pP	pP	02 38 57.1	-19
	0.2nm,0.5s,baz=62,slow=22,SNR=1.9						
WVOR	**Wild Horse Val**	**91.61**	**48**	*e*P	**P**	**02 38 18.7**	**+0.2**
	1.0nm,0.6s,mb3.9						
PDAR	**Pinedale Array**	**98.32**	**48**	P	**P**	**02 38 48.6**	**-0.4**
	0.5nm,0.6s,mb4.0,baz=270,slow=1.5,SNR=5.2						
LPAZ	**La Paz**	**132.29**	**118**	PKP	PKPdf	02 44 26.4	+1.4
	1.2nm,0.7s,baz=237,slow=3.8,SNR=6.0						
LPAZ	**La Paz**	**132.29**	**118**	*e*PKPdf	PKPdf	02 44 26.5	+1.5

*ISCJB **19** 02:28:39.9±1.8, 34°.53N±0°.06×141°.7E±0°.1, h24km±10km, mb3.5/2, Error ellipse: s-maj=16.3km s-min=9.2km az=167.8*
*JMA **19** 02:28:39.5±0.5, 34°.46N×141°.64E, h28km±2km, M2.5*
*IDC **19** 02:28:46.8±1.5, 33°.63N×138°.00E, h0km, mb3.4/2, mb1 3.5/3, mb1mx3.2/26, mbtmp3.2/3, ML2.6/1, Error ellipse: s-maj=26.4km s-min=23.6km az=84.0*

ISC 19 02:28:40.7±1.9, 34°.55N±0°.06×141°.6E±0°.1, h16km±10km, n8, σ0°.71/12, mb3.5/2, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.52**	**282**	P	**Pg**	**02 28 50.9**	**-0.2**
BSO3	**Boso 3**	**0.93**	**286**	P	**Pb**	**02 28 57.7**	**-0.7**
BSO4	**Boso 4**	**1.13**	**293**	P	**Pn**	**02 29 01.0**	**-0.8**
BSO4				*e*S	**Sb**	**02 29 17.2**	**+1.0**
CHOJ	**Chosi**	**1.30**	**332**	P	**Pn**	**02 29 04.2**	**0.0

Azm112.0000°; Data Used: II IU CN IC G. LP body wave period 50 sec. Mantle waves from 105 sta. Surface waves: sta=120, comp=312, per= 50.

SZGRF ***19*** *02:39:34.2, 38.70N×142.66E, h33km, mb6.4, MS7.6, Near east coast of eastern Honshu, Japan*

ISC 19 02:39:29.7±0.1, 37.54N±0.01×142.26E±0.01, h28km, h28km±2.1km; pP-P, n2319, σ0s80/2211, mb6.2/499, MS7.2/276, 754C-263D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.11**	**261**	P	**Pn**	**02 39 48.4**	**-0.9**
JFK				*e*S	**Sn**	**02 40 01.9**	**-1.8**
JIO	**Ouri**	**1.16**	**322**	P	**Pn**	**02 39 49.4**	**-0.6**
JIO				*e*S	**Sn**	**02 40 04.5**	**-0.4**
JMM	**Marumori**	**1.20**	**286**	P	**Pn**	**02 39 50.0**	**-0.6**
JMM				*e*S	**Sn**	**02 40 05.2**	**-0.8**
ONAJ	**Iwakimizuishiy**	**1.24**	**250**	P	**Pn**	**02 39 50.1**	**-1.0**
JOU	**Okura**	**1.50**	**304**	P	**Pn**	**02 39 54.9**	**+0.2**
JOU				*e*S	**Sn**	**02 40 13.8**	**+0.5**
JFT	**Otama**	**1.53**	**270**	P	**Pn**	**02 39 55.4**	**+0.4**
JFT				*e*S	**Sn**	**02 40 14.2**	**+0.3**
OFUJ	**Ofunato**	**1.60**	**343**	P	**Pn**	**02 39 55.1**	**-1.0**
JMK	**Ichinoseki**	**1.63**	**330**	P	**Pn**	**02 39 56.2**	**-0.2**
JMK				*e*S	**Sn**	**02 40 16.7**	**+0.3**
JHO	**Hitachi**	**1.64**	**236**	P	**Pn**	**02 39 54.8**	**-1.8**
JYS	**Shiratake**	**1.86**	**292**	P	**Pn**	**02 40 00.2**	**+0.6**
JYS				*e*S	**Sn**	**02 40 23.8**	**+1.6**
JYK	**Kaneyama**	**2.03**	**313**	P	**Pn**	**02 40 02.4**	**+0.5**
JYK				*e*S	**Sn**	**02 40 27.4**	**+1.1**
JFY	**Yanaizu**	**2.03**	**267**	P	**Pn**	**02 40 02.6**	**+0.6**
MIYJ	**Miyakonagasawa**	**2.06**	**351**	⇓P	**Pn**	**02 40 01.3**	**-1.1**
JOM	**Ohasama**	**2.07**	**339**	P	**Pn**	**02 40 02.4**	**-0.1**
JRG	**Rokugo**	**2.25**	**326**	P	**Pn**	**02 40 05.7**	**+0.8**
JYA	**Atsumi**	**2.26**	**298**	P	**Pn**	**02 40 05.8**	**+0.6**
JNS	**Sasagawa**	**2.35**	**278**	P	**Pn**	**02 40 07.2**	**+0.9**
JTH	**Tanohata**	**2.41**	**353**	P	**Pn**	**02 40 06.2**	**-1.0**
JAG	**Ashikaga**	**2.51**	**244**	P	**Pn**	**02 40 08.2**	**-0.3**
JKZ	**Kuzumaki**	**2.54**	**344**	P	**Pn**	**02 40 09.1**	**+0.1**
JAW	**Awa shima**	**2.54**	**292**	P	**Pn**	**02 40 09.8**	**+0.8**
JHK	**Hiroka**	**2.60**	**264**	P	**Pn**	**02 40 10.4**	**+0.7**
JTB	**Tobi-shima**	**2.69**	**309**	P	**Pn**	**02 40 11.4**	**+0.4**
JAH	**Hinai**	**2.93**	**335**	P	**Pn**	**02 40 15.2**	**+0.9**
JRY	**Ryogami san**	**3.09**	**242**	P	**Pn**	**02 40 16.3**	**-0.3**
JSD	**Sado**	**3.20**	**280**	P	**Pn**	**02 40 18.3**	**+0.2**
JJN	**Nakama**	**3.29**	**264**	P	**Pn**	**02 40 20.7**	**+1.4**
JTM	**Tenmabayashi**	**3.37**	**344**	P	**Pn**	**02 40 20.0**	**-0.4**
MJAR	**Matsushiro Arr**	**3.39**	**254**	Pn	**Pn**	**02 40 22.0**	**+1.4**
	250nm,0.3s,baz=76,slow=15,SNR=371						
MJAR	**Matsushiro Arr**	**3.39**	**254**	P	**Pn**	**02 40 22.0**	**+1.4**
MJAR				pmax	pmax		
	comp=Z,250nm,0.3s						
MAJO	**Matsushiro**	**3.39**	**254**	*e*Pn	**Pn**	**02 40 22.3**	**+1.6**
MAT	**Matsushiro**	**3.39**	**254**	P	**Pn**	**02 40 22.0**	**+1.4**
MAT				*e*S	**Sn**	**02 41 04.8**	**+4.9**
MAT	**Matsushiro**	**3.39**	**254**	P	**Pn**	**02 40 22.0**	**+1.4**
JNG	**Nsakai**	**3.52**	**252**	P	**Pn**	**02 40 23.7**	**+1.3**
AJI	**Ajiro2**	**3.57**	**227**	⇑P	**Pn**	**02 40 22.6**	**-0.5**
JIM2	**Oshima 3**	**3.63**	**220**	P	**Pn**	**02 40 22.5**	**-1.5**
JSZ	**Suzu**	**3.89**	**270**	P	**Pn**	**02 40 28.9**	**+1.3**
SHZ3	**Shizuoka 3**	**4.10**	**234**	P	**Pn**	**02 40 31.6**	**+1.2**
JGN	**Niukaw**	**4.17**	**253**	P	**Pn**	**02 40 33.2**	**+1.8**
JYZW	**Yoshizawa**	**4.45**	**237**	P	**Pn**	**02 40 36.6**	**+1.4**
ERM	**Erimo**	**4.52**	**9**	Pn	**Pn**	**02 40 35.7**	**-0.5**
	comp=Z,9μm,1.1s						
ERM	**Erimo**	**4.52**	**9**	*c iP*	**Pn**	**02 40 34.9**	**-1.3**
ERM	**Erimo**	**4.52**	**9**	⇓*i*Pn	**Pn**	**02 40 34.1**	**-2.1**
ERM				*e*Sn	**Sn**	**02 41 29.2**	**+1.4**
HMMJ	**Hamamatsu 2**	**4.54**	**235**	P	**Pn**	**02 40 37.7**	**+1.2**
JAO	**Obara**	**4.63**	**242**	P	**Pn**	**02 40 39.7**	**+2.0**
JHJ	**Hachijo jima 2**	**4.85**	**205**	Pn	**Pn**	**02 40 39.4**	**-1.4**
	comp=Z,290nm,0.3s,baz=123,slow=1.2,SNR=48						
JHJ				Sn	**Sn**	**02 41 33.0**	**-3.1**
	comp=Z,2μm,0.3s,baz=251,slow=23,SNR=4.4						
JKG	**Kaga**	**4.91**	**257**	P	**Pn**	**02 40 44.5**	**+2.9**
JFM	**Mihama**	**5.44**	**250**	P	**Pn**	**02 40 51.2**	**+2.4**
JKN2	**Miekihoku**	**5.87**	**238**	P	**Pn**	**02 40 55.5**	**+0.8**
JHE	**Heguri**	**6.05**	**244**	P	**Pn**	**02 40 58.3**	**+1.1**
JKY	**Yasaka**	**6.06**	**254**	P	**Pn**	**02 40 59.9**	**+2.5**
JKSM	**Kasumi**	**6.41**	**255**	P	**Pn**	**02 41 04.6**	**+2.4**
ASAJ	**Asahikawa**	**6.57**	**2**	Pn	**Pn**	**02 41 02.9**	**-1.4**
	comp=Z,22nm,0.3s,baz=218,slow=12,SNR=78						
ASAJ				Sn	**Sn**	**02 42 21.4**	**+3.1**
	comp=Z,94nm,0.3s,baz=330,slow=30,SNR=6.2						
ASAJ				LR	LR	02 44 21.0	
	comp=Z,2549μm,20.9s,baz=191,slow=45						
ASAJ	**Asahikawa**	**6.57**	**2**	P	**Pn**	**02 41 02.9**	**-1.4**
ASAJ						02 42 21.4	
ASAJ				pmax	pmax		
	comp=Z,22nm,0.3s						
ASAJ				smax			
	comp=N,94nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,549μm,20.9s						
ASAJ	**Asahikawa**	**6.57**	**2**	P	**Pn**	**02 41 03.5**	**-0.8**
JAJ2	**Tsuna**	**6.74**	**245**	P	**Pn**	**02 41 07.5**	**+0.8**
YUK	**Yuzh-Kuril'sk**	**7.04**	**22**	*e*P	**Pn**	**02 41 08.1**	**-2.6**
YUK				*i* S	**Sn**	**02 42 24.4**	**-5.3**
YUK				pmax	pmax		
	comp=E,2μm,1.1s						
YUK				pmax	pmax		
	comp=Z,4μm,1.1s						
YUK				pmax	pmax		
	comp=N,2μm,0.4s						
YUK				pmax	pmax		
	comp=Z,8μm,1.1s						
YUK				smax			
	comp=N,73μm,1.3s						
YUK				smax			
	comp=E,29μm,1.3s						
YUK				smax			
	comp=N,23μm,0.7s						
YUK				smax			
	comp=E,9μm,0.7s						
JAI	**Aioi**	**7.37**	**242**	P	**Pn**	**02 41 16.5**	**+1.1**
JHS	**Saijyo**	**7.81**	**254**	P	**Pn**	**02 41 23.5**	**+2.2**
KUR	**Kuril'sk**	**8.76**	**27**	*e*P	**Pn**	**02 41 31.0**	**-3.4**
KUR				*e*S	**Sn**	**02 43 05.0**	**-7.1**
KUR				pmax	pmax		
	comp=N,60μm,4.0s						
KUR				pmax	pmax		
	comp=E,20μm,4.0s						
KUR				pmax	pmax		
	comp=Z,28μm,4.0s						
KUR				pmax	pmax		
	comp=N,3μm,1.0s						
KUR				pmax	pmax		
	comp=E,2μm,1.0s						
KUR				pmax	pmax		
	comp=Z,5μm,1.0s						
KUR				smax			
	comp=N,10μm,0.9s						
KUR				smax			
	comp=E,6μm,0.9s						
KUR				smax			
	comp=N,255μm,10.0s						
KUR				smax			
	comp=E,156μm,10.0s						
KUR				MLR	MLR		
	comp=N,207μm,12.0s						
KUR				MLR	MLR		
	comp=Z,18μm,12.0s						
YSS	**Yuzh-Sakhalins**	**9.41**	**2**	*c iP*	**Pn**	**02 41 42.0**	**-1.3**
YSS				*i* S	**Sn**	**02 43 24.0**	**-4.1**
YSS				pmax	pmax		
	comp=N,45μm,14.0s						
YSS				pmax	pmax		
	comp=E,7μm,14.0s						
YSS				pmax	pmax		
	comp=Z,27μm,14.0s						
YSS				smax			
	comp=E,98μm,14.0s						
YSS				MLR	MLR		
	comp=Z,1082μm,19.0s						
YSS	**Yuzh-Sakhalins**	**9.41**	**2**	⇑*i*Pn	**Pn**	**02 41 41.4**	**-1.9**
JNU	**Nakatsue**	**10.29**	**248**	P	**Pn**	**02 41 57.0**	**+1.7**
CBIJ	**Chichi jima**	**10.42**	**180**	Pn	**Pn**	**02 41 53.5**	**-3.7**
	comp=Z,87nm,0.3s,baz=342,slow=5.2,SNR=23						
CBIJ				Sn	**Sn**	**02 43 42.4**	**-11**
	comp=Z,390nm,0.3s,baz=254,slow=22,SNR=7.8						
KSRS	**Korea Array**	**11.39**	**274**	Pn	**Pn**	**02 42 14.1**	**+3.7**
	comp=Z,4.6nm,0.3s,baz=92,slow=12,SNR=197						
KSRS				LR	LR	02 46 30.9	
	comp=Z,1340μm,18.9s,baz=83,slow=37						
KSRS	**Korea Array**	**11.39**	**274**	P	**Pn**	**02 42 14.1**	**+3.7**
KSRS				pmax	pmax		
	comp=Z,5.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,340μm,18.9s						
UGL	**Uglegorsk**	**11.53**	**359**	*c iP*	**Pn**	**02 42 10.0**	**-2.3**
UGL				*e*S	**Sn**	**02 44 15.0**	**-5.0**
UGL				pmax	pmax		
	comp=E,112nm,1.0s						
UGL				pmax	pmax		
	comp=Z,202nm,1.0s						
UGL				pmax	pmax		
	comp=N,45μm,14.0s						
UGL				pmax	pmax		
	comp=E,10μm,14.0s						
UGL				smax			
	comp=N,60μm,12.0s						
UGL				smax			
	comp=E,83μm,12.0s						
MDJ	**Mudanjiang**	**11.88**	**310**	P	**Pn**	**02 42 18.1**	**+1.1**
MDJ				pP		02 42 23.8	
MDJ				sP		02 42 28.8	
MDJ				S	**Sn**	**02 44 34.1**	**+5.6**
MDJ				PcP	PcP	02 48 07.8	+4.7
MDJ				ScP	ScP	02 51 34.1	+0.2
MDJ				pmax	pmax		
	comp=Z,780nm,1.8s						
MDJ				pmax	pmax		
	comp=Z,149μm,14.8s						
MDJ				LR	LR		
	comp=N,837μm,20.0s						
MDJ				LR	LR		
	comp=E,918μm,18.8s						
MDJ				LR	LR		
	comp=Z,1574μm,16.9s						
MDJ	**Mudanjiang**	**11.88**	**310**	⇑*i*Pn	**Pn**	**02 42 18.1**	**+1.1**
	comp=Z,2μm,1.3s						
HABR	**Khabarovsk**	**12.12**	**337**	*i* P	**Pn**	**02 42 18.7**	**-1.7**
HABR				*e*		02 44 33.4	
HABR				pmax	pmax		
	comp=N,687nm,1.3s						
HABR				pmax	pmax		
	comp=E,450nm,1.1s						
HABR				pmax	pmax		
	comp=Z,984nm,1.2s						
HABR				MLR	MLR		
	comp=N,642μm,13.0s						
HABR				MLR	MLR		
	comp=Z,1325μm,16.0s						
HABR				MLR	MLR		
	comp=E,550μm,17.0s						
INCN	**Inchon**	**12.41**	**274**	⇑*i*Pn	**Pn**	**02 42 26.9**	**+2.5**
	comp=E,2μm,1.4s						
INCN	**Inchon**	**12.41**	**274**	Pn	**Pn**	**02 42 27.0**	**+2.7**
	SNR=137						
KLR	**Kul'dur**	**13.94**	**330**	*k iP*	**Pn**	**02 42 38.1**	**-7.1**
KLR				pmax	pmax		
	comp=N,860nm,3.0s						
KLR				pmax	pmax		
	comp=E,1μm,3.0s						
KLR				pmax	pmax		
	comp=Z,1μm,3.0s						
CN2	**Changchun**	**14.20**	**301**	⇑P	**Pn**	**02 42 47.9**	**-0.8**
CN2				*e*sP	sP	02 42 59.0	-8.0
CN2				*e*S	**Sn**	**02 45 23.3**	**-1.8**
SNY	**Shenyang**	**15.00**	**292**	⇑P	**Pn**	**02 42 59.1**	**-0.5**
SNY				pmax	pmax		
	comp=Z,240nm,2.2s						
SNY				pmax	pmax		
	comp=Z,155μm,14.7s						
SNY				LR	LR		
	comp=N,403μm,15.3s						
SNY				LR	LR		
	comp=E,1352μm,17.6s						
SNY				LR	LR		
	comp=Z,1522μm,18.8s						
JOW	**Kunigami**	**15.92**	**232**	P	**Pn**	**02 43 12.0**	**+0.3**
DL2	**Dalian**	**16.27**	**281**	⇑*i*P	**Pn**	**02 43 16.3**	**+0.2**
DL2				pmax	pmax		
	comp=Z,950nm,1.4s						
DL2				pmax	pmax		
	comp=Z,92μm,15.3s						
DL2				LR	LR		
	comp=E,299μm,18.2s						
DL2				LR	LR		
	comp=Z,391μm,19.1s						
SKR	**Severo-Kuril's**	**16.44**	**33**	*c iP*	**Pn**	**02 43 22.0**	**+3.8**
SKR				pmax	pmax		
	comp=N,450nm,1.0s						
SKR				pmax	pmax		
	comp=E,560nm,1.0s						
SKR				pmax	pmax		
	comp=Z,900nm,1.0s						
SKR				pmax	pmax		
	comp=N,28μm,20.0s						
SKR				pmax	pmax		
	comp=E,24μm,20.0s						
SKR				pmax	pmax		
	comp=Z,34μm,20.0s						
SKR				MLR	MLR		
	comp=Z,353μm,16.0s						
SKR				MLR	MLR		
	comp=N,227μm,18.0s						
SKR				MLR	MLR		
	comp=E,182μm,12.0s						
SSE	**Sheshan**	**18.54**	**256**	P	**Pn**	**02 43 41.8**	**-2.5**
SSE				S	**Sn**	**02 47 07.3**	**-3.3**
SSE				pmax	pmax		
	comp=Z,1μm,1.0s						
SSE				pmax	pmax		
	comp=Z,110μm,12.0s						
SSE				LR	LR		
	comp=N,483μm,20.2s						
SSE				LR	LR		
	comp=E,496μm,20.2s						
SSE				LR	LR		
	comp=Z,739μm,21.2s						
PETK	**Petropavlovsk-**	**18.91**	**30**	P	**Pn**	**02 43 47.1**	**-1.5**
	comp=Z,0.8nm,0.3s,baz=206,slow=8.7,SNR=18						
PETK				LR	LR	02 51 50.3	
	comp=Z,344μm,18.9s,baz=217,slow=39						
PETK	**Petropavlovsk-**	**18.91**	**30**	P	**Pn**	**02 43 47.1**	**-1.6**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK				MLR	MLR		
	comp=Z,344μm,18.9s						
PETK	**Petropavlovsk-**	**18.91**	**30**	P	**Pn**	**02 43 47.1**	**-1.5**
PETK				LR	LR	02 51 50.3	
PET	**Petropavlovsk**	**19.23**	**31**	*d iP*	**Pn**	**02 43 47.6**	**-4.9**
PET				*e*S	**Sn**	**02 47 16.5**	**-11**
PET				pmax	pmax		
	comp=Z,26μm,18.7s						
PET				pmax	pmax		
	comp=Z,45μm,18.5s						
PET				smax			
	comp=E,223μm,15.0s						
PET				smax			
	comp=E,199μm,14.7s						
PET				MLR	MLR		
	comp=Z,213nm,20.0s						
PET				MLR	MLR		
	comp=Z,413μm,17.0s						
PET				MLR	MLR		
	comp=Z,396μm,17.0s						
PET	**Petropavlovsk**	**19.23**	**31**	*e*P	**Pn**	**02 43 52.2**	**-0.4**
	comp=Z,757nm,1.2s						
NJ2	**Nanjing**	**19.96**	**261**	*e*P	**Pn**	**02 43 57.4**	**-4.0**
NJ2				pP	pP	02 44 01.4	-5.8
NJ2				PP		02 44 16.9	
NJ2				S	**Sn**	**02 47 41.0**	**-4.1**
NJ2				sS	sS	02 47 46.0	-8.8
NJ2				pmax	pmax		
	comp=Z,300nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,26μm,9.7s						
NJ2				LR	LR		
	comp=N,148μm,22.9s						
NJ2				LR	LR		
	comp=E,169μm,20.6s						
NJ2				LR	LR		
	comp=Z,209μm,20.4s						
HIA	**Hailar**	**20.04**	**313**	⇑*i*P	**P**	**02 43 56.8**	**-3.4**
HIA				pmax	pmax		
	comp=Z,385nm,1.1s						
HIA	**Hailar**	**20.04**	**313**	⇑*i*P	**P**	**02 43 56.8**	**-3.4**
	comp=Z,385nm,1.1s						
TIA	**Tai'an**	**20.14**	**274**	⇑P	**P**	**02 43 59.3**	**-2.1**
TIA				sP	sP	02 44 06.8	-5.9
TIA				PP		02 44 20.3	
TIA				S	**S**	**02 47 43.3**	**-2.8**
TIA				LR	LR		
	comp=N,375μm,15.3s,MS7.1						
TIA				LR	LR		
	comp=E,553μm,17.3s,MS7.1						
BJI	**Beijing**	**20.46**	**285**	P	**P**	**02 44 02.0**	**-2.9**
BJI				S	**S**	**02 47 47.6**	**-4.9**
BJI				sS	sS	02 48 00.3	-4.3
BJI				pmax	pmax		
	comp=Z,690nm,1.7s						
BJI				LR	LR		
	comp=N,137μm,19.9s,MS6.6						
BJI				LR	LR		
	comp=E,265μm,22.5s,MS6.6						
BJI				LR	LR		
	comp=Z,329μm,24.4s,MS6.6						
BJT	**Baijiatuau**	**20.47**	**285**	⇑*i*P	**P**	**02 44 02.2**	**-2.8**
BJT				pmax	pmax		
	comp=Z,777nm,0.6s						
BJT	**Baijiatuau**	**20.47**	**285**	⇑*i*P	**P**	**02 44 02.2**	**-2.8**
	comp=Z,777nm,0.6s						
TATO	**Taipei**	**21.67**	**241**	*e*P	**P**	**02 44 17.1**	**-1.0**
	comp=Z,561nm,1.0s,mb6.0						
TATO				LR	LR		
	comp=Z,157μm,21.0s,MS6.4						
CLNS	**Chul'man**	**22.50**	**335**	*c iP*	**P**	**02 44 25.1**	**-1.5**
CLNS				*e**PP		02 44 39.2	
CLNS				*e*		02 44 48.0	
CLNS				*e*		02 48 16.2	
CLNS				*e*S	**S**	**02 48 26.7**	**-5.4**
CLNS				*e*SS		02 49 10.0	
CLNS				pmax	pmax		
	comp=E,304nm,1.2s						
CLNS				pmax	pmax		
	comp=Z,589nm,1.3s,mb5.9						
CLNS				pmax	pmax		
	comp=N,939nm,1.4s						
CLNS				pmax	pmax		
	comp=N,545nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,525nm,1.0s,mb5.9						
CLNS				pmax	pmax		
	comp=E,603nm,1.2s						
CLNS				smax			
	comp=E,87μm,14.9s						
CLNS				smax			
	comp=N,59μm,12.2s						
CLNS				MLR	MLR		
	comp=Z,374μm,24.0s,MS6.7						
CLNS				MLR	MLR		
	comp=N,282μm,20.0s,MS6.8						
CLNS				MLR	MLR		
	comp=E,234μm,17.0s,MS6.8						
TIY	**Taiyuan**	**23.58**	**280**	⇑P	**P**	**02 44 34.4**	**-3.6**
TIY				S	**S**	**02 48 41.4**	**-8.8**
TIY				pmax	pmax		
	comp=Z,62μm,15.8s						
TIY				LR	LR		
	comp=N,223μm,17.7s,MS7.1						
TIY				LR	LR		
	comp=E,514μm,16.9s,MS7.1						
TIY				LR	LR		
	comp=Z,669μm,17.6s,MS7.2						
QZH	**Quanzhou**	**23.74**	**245**	⇑*i*P	**P**	**02 44 35.1**	**-4.5**
QZH				S	**S**	**02 48 50.0**	**-3.0**
QZH				pmax	pmax		
	comp=Z,1μm,0.9s,mb6.2						
QZH				pmax	pmax		
	comp=Z,17μm,4.8s						
QZH				LR	LR		
	comp=N,227μm,21.2s,MS7.1						
QZH				LR	LR		
	comp=E,601μm,20.2s,MS7.1						
QZH				LR	LR		
	comp=Z,709μm,24.2s,MS7.0						
HHC	**Hu-ho-hao-te**	**23.95**	**287**	⇑*i*P	**P**	**02 44 37.8**	**-3.6**
HHC				sP	sP	02 44 48.6	-4.5
HHC				PP		02 45 10.8	
HHC				PcP	PcP	02 48 22.4	-0.7
HHC				S	**S**	**02 48 48.9**	**-7.3**
HHC				sS	sS	02 49 00.3	-9.5
HHC				SS		02 49 39.4	
HHC				ScP	ScP	02 51 57.6	-1.9
HHC				PcS	PcS	02 52 00.5	-2.2
HHC				pmax	pmax		
	comp=Z,160nm,1.3s,mb5.3						
HHC				pmax	pmax		
	comp=Z,47μm,6.3s						
HHC				LR	LR		
	comp=N,247μm,12.5s,MS7.1						
HHC				LR	LR		
	comp=E,272μm,12.3s,MS7.1						
HHC				LR	LR		
	comp=Z,342μm,12.7s,MS7.0						
GUMO	**Guam**	**23.97**	**174**	P	**P**	**02 44 42.2**	**+0.5**
	comp=Z,243nm,1.1s,mb5.6,baz=163,slow=2.8,SNR=19						
GUMO				LR	LR	02 52 02.9	
	comp=Z,263μm,21.9s,MS6.7,baz=154,slow=32						
GUMO	**Guam**	**23.97**	**174**	*e*P	**P**	**02 44 42.3**	**+0.6**
GUMO				pmax	pmax		
	comp=Z,4μm,1.4s,mb6.6						
GUMO				MLR	MLR		
	comp=Z,238μm,21.0s,MS6.7						
GUMO	**Guam**	**23.97**	**174**	*e*P	**P**	**02 44 42.3**	**+0.6**
	comp=Z,4μm,1.4s,mb6.6						
GUMO				LR	LR		
	comp=Z,238μm,21.0s,MS6.7						
GUMO	**Guam**	**23.97**	**174**	P	**P**	**02 44 42.0**	**+0.3**
	comp=Z,2μm,1.7s,mb6.3						
WHN	**Wuhan**	**24.10**	**261**	⇑P	**P**	**02 44 40.3**	**-2.5**
WHN				pP		02 44 48.9	
WHN				S	**S**	**02 48 47.5**	**-11**
WHN				LR	LR		
	comp=N,624μm,18.6s,MS7.4						
WHN				LR	LR		
	comp=E,1054μm,16.5s,MS7.4						
WHN				LR	LR		
	comp=Z,1407μm,17.7s,MS7.5						
BBP	**Basco**	**24.52**	**232**	*e*P	**P**	**02 44 47.3**	**+0.6**
CIT	**Chita**	**24.79**	**315**	*e*P	**P**	**02 44 49.5**	**+0.6**
CIT				*e*S	**S**	**02 49 05.2**	**-4.2**
CIT				pmax	pmax		
	comp=Z,10μm,1.7s,mb7.1						
BTO	**Baotou**	**25.14**	**287**	*e*P	**P**	**02 44 49.8**	**-2.4**
YAK	**Yakutsk**	**25.73**	**346**	*c iP*	**P**	**02 44 56.5**	**-0.8**
YAK				*e**PP	pP	02 45 08.5	+2.9
YAK				*e*PPP		02 45 42.1	
YAK				*e*S	**S**	**02 49 28.1**	**+3.9**
YAK				*e**SS	sS	02 49 39.0	+1.2
YAK				*e*SS		02 50 26.5	
YAK				*e*SSS		02 50 44.9	
YAK				*e*		02 55 51.6	
YAK				pmax	pmax		
	comp=Z,769nm,1.1s,mb6.1						
YAK				pmax	pmax		
	comp=N,519nm,1.2s						
YAK				pmax	pmax		
	comp=E,315nm,1.3s						
YAK				smax			
	comp=N,97μm,10.9s						
YAK				smax			
	comp=E,93μm,12.1s						
YAK				MLR	MLR		
	comp=Z,714μm,15.0s,MS7.3						
YAK				MLR	MLR		
	comp=N,500μm,16.0s,MS7.2						
YAK				MLR	MLR		
	comp=E,327μm,14.0s,MS7.2						
YAK	**Yakutsk**	**25.73**	**346**	⇑*i*P	**P**	**02 44 56.5**	**-0.8**
	comp=E,2μm,0.9s,mb6.6						
SEY	**Seymchan**	**26.17**	**11**	*c iP*	**P**	**02 45 01.6**	**+0.3**
SMY	**Shemya**	**26.83**	**45**	*e*P	**P**	**02 45 09.8**	**+2.4**
SMY				pmax	pmax		
	comp=Z,1μm,2.2s,mb6.1						
SMY	**Shemya**	**26.83**	**45**	*e*P	**P**	**02 45 09.8**	**+2.4**
	comp=Z,1μm,2.2s,mb6.1						
APYP	**Conner**	**26.91**	**229**	*e*P	**P**	**02 45 08.1**	**-0.3**
XAN	**Xi'an**	**27.18**	**273**	P	**P**	**02 45 09.8**	**-1.0**
XAN				pP	pP	02 45 15.3	-3.7
XAN				pmax	pmax		
	comp=Z,100nm,2.0s,mb5.0						
XAN				LR	LR		
	comp=N,167μm,20.7s						
XAN				LR	LR		

comp=E,65μm,26.2s
XAN LR LR
comp=Z,98μm,17.5s,MS6.4
CAUP Cauayan 27.29 227 *e*P **P 02 45 12.3 +0.4**
ABRA Dolores 27.40 230 *e*P **P 02 45 12.9 +0.1**
ULN Ulaanbaatar 27.63 303⇑*i*P **P 02 45 14.8 +0.2**
ULN pmax pmax
comp=Z,1μm,1.6s,mb6.3
ULN MLR MLR
comp=Z,442μm,19.0s,MS7.1
ULN Ulaanbaatar 27.63 303⇑*i*P **P 02 45 14.8 +0.2**
comp=Z,1μm,1.6s,mb6.3
ULN LR LR
comp=Z,442μm,19.0s,MS7.1
ULN Ulaanbaatar 27.63 303 P **P 02 45 14.9 +0.3**
comp=Z,488nm,1.4s,mb5.9
ULN Ulaanbaatar 27.63 303 P **P 02 45 14.9 +0.3**
SNR=576
WAKE Wake Island 28.00 124⇓*i*P **P 02 45 16.1 -2.0**
comp=Z,5μm,2.3s,mb6.7
WAKE LR LR
comp=Z,339μm,20.0s,MS6.9
ENH Enshi 28.05 265⇑*i*P **P 02 45 17.7 -0.8**
comp=Z,4μm,1.3s,mb6.9
SONM Songino Array 28.07 303 P **P 02 45 18.4 -0.1**
comp=Z,213nm,0.9s,mb5.8,baz=106,slow=7.4,SNR=285
SONM LR LR 02 56 57.2
comp=Z,461μm,19.0s,MS7.1,baz=107,slow=38
SONM P3KPbc 03 17 40.2
comp=Z,0.2nm,0.4s,baz=262,slow=2.9,SNR=2.0
SONM Songino Array 28.07 303 P **P 02 45 18.4 -0.1**
SONM LR LR 02 56 57.2
SONM *e* 03 17 40.2
BALP Baler 28.39 226 *e*P **P 02 45 21.5 -0.2**
HKC Hong Kong Obse 28.55 246 *i*P **P 02 45 22.0 -1.0**
HKC *i*S **S 02 50 10.0 +0.6**
GZH Guangzhou 28.68 248 P **P 02 45 19.8 -4.4**
GZH S **S 02 50 04.4 -7.0**
GZH LR LR
comp=N,234μm,17.5s,MS7.1
GZH LR LR
comp=E,388μm,20.1s,MS7.1
GZH LR LR
comp=Z,728μm,17.9s,MS7.3
PVCP Virac 28.79 219 *e*P **P 02 45 26.0 +0.8**
BOLP Bolinao 28.86 229 *e*P **P 02 45 24.8 -1.0**
SCZP Santa Cruz 29.33 228 *e*P **P 02 45 29.3 -0.7**
GQP Guinayangan 29.41 222⇑*e*P **P 02 45 28.8 -2.0**
CNP Catarman 29.48 217 *e*P **P 02 45 31.6 +0.3**
AUQP San Andres 29.78 221 *e*P **P 02 45 36.0 +2.0**
TGY Tagaytay City 30.08 225 P **P 02 45 37.3 +0.7**
comp=Z,425nm,0.8s,mb6.2,baz=285,slow=5.2,SNR=9.7
TGY Tagaytay City 30.08 225 P **P 02 45 37.3 +0.7**
TGY pmax pmax
comp=Z,425nm,0.8s
BOAC Boac 30.11 223 *e*P **P 02 45 39.2 +2.3**
IRK Irkutsk 30.26 311⇑*i*P **P 02 45 37.6 -0.3**
IRK pmax pmax
comp=Z,1μm,3.0s
TLY Talaya 30.51 310 P **P 02 45 40.6 +0.5**
comp=Z,1μm,1.3s,mb6.6,SNR=85
TLY Talaya 30.51 310*c i*P **P 02 45 40.6 +0.5**
TLY *e* 02 46 52.8
TLY *e*S **S 02 50 42.7 +3.0**
TLY pmax pmax
comp=Z,334nm,1.1s,mb6.1
TLY MLR MLR
comp=Z,740μm,17.0s,MS7.4
TLY Talaya 30.51 310⇑*i*P **P 02 45 40.4 +0.3**
comp=Z,426nm,1.3s,mb6.1
TLY LR LR
comp=Z,657μm,20.0s,MS7.3
TLY Talaya 30.51 310 P **P 02 45 40.8 +0.6**
SNR=215
LZH Lanzhou 30.65 279⇑P **P 02 45 41.4 -0.1**
LZH pP pP 02 45 49.8 0.0
LZH sP sP 02 45 54.5 +1.2
LZH PP PP 02 46 41.5 -9.3
LZH S **S 02 50 39.4 -2.7**
LZH sS sS 02 50 51.0 -4.8
LZH SS SS 02 52 19.5 -34
LZH pmax pmax
comp=Z,2μm,1.5s,mb6.7
LZH pmax pmax
comp=Z,6μm,4.0s
LZH LR LR
comp=E,511μm,16.0s
LZH LR LR
comp=Z,694μm,18.4s,MS7.3
LUBP Lubang 30.76 225 *e*P **P 02 45 41.4 -1.3**
OTRP Odiongan 30.93 221 *e*P **P 02 45 44.8 +0.7**
LLP Lapu-Lapu 31.72 216 *e*P **P 02 45 51.2 +0.1**
GYA Guiyang 31.97 260⇑*i*P **P 02 45 52.3 -1.0**
GYA pP pP 02 46 04.3 +2.7
GYA PP PP 02 47 01.0 -4.7
GYA PcP PcP 02 48 44.4 +1.5
GYA S **S 02 51 05.5 +2.6**
GYA sS sS 02 51 14.8 -1.9
GYA ScP ScP 02 52 24.3 -0.1
GYA SS SS 02 52 53.0 -28
GYA pmax pmax
comp=Z,680nm,1.0s,mb6.4
GYA pmax pmax
comp=Z,43μm,20.1s
GYA LR LR
comp=N,433μm,19.2s,MS7.2
GYA LR LR
comp=E,354μm,20.6s,MS7.2
GYA LR LR
comp=Z,546μm,18.0s,MS7.3
GUIM Jordan 32.11 218 *e*P **P 02 45 54.7 +0.2**
MOY Mondy 32.13 309 *e*P **P 02 45 53.9 -0.5**
MOY pmax pmax
comp=Z,1μm,3.1s
BUSP Coron 32.20 224 *e*P **P 02 45 55.0 -0.3**
TBP Tagbilaran 32.31 216 *e*P **P 02 45 58.5 +2.1**
CD2 Chengdu 32.35 270 P **P 02 45 55.3 -1.2**
CD2 pP pP 02 46 07.3 +2.5
CD2 PP PP 02 47 04.3 -5.5
CD2 S **S 02 51 05.5 -3.3**
CD2 SS SS 02 53 03.0 -25
CD2 pmax pmax
comp=Z,810nm,1.0s,mb6.5
CD2 pmax pmax
comp=Z,61μm,11.6s
CD2 LR LR
comp=N,451μm,19.0s
CD2 LR LR
comp=Z,540μm,17.8s,MS7.3
CUYO Cuyo Island 32.72 221 *e*P **P 02 45 59.7 -0.2**
CGP Cagayan de Oro 33.04 213 *e*P **P 02 46 02.1 -0.5**
GTA Gaotai 33.06 287⇑⇑P **P 02 46 02.6 -0.1**
GTA pP pP 02 46 09.8 -1.2
GTA sP sP 02 46 13.4 -1.1
GTA PP PP 02 47 12.3 -5.3
GTA S **S 02 51 18.0 -1.7**
GTA sS sS 02 51 28.8 -4.6
GTA SS SS 02 53 17.0 -25
GTA ScS ScS 02 56 28.8 +0.6
GTA pmax pmax
comp=Z,290nm,2.5s,mb5.8
GTA LR LR
comp=N,277μm,20.8s,MS7.2
GTA LR LR
comp=E,353μm,21.7s,MS7.2
GTA LR LR
comp=Z,482μm,20.2s,MS7.2
ENPP El Nido 33.28 224 *e*P **P 02 46 04.8 0.0**
BILL Bilibino 33.35 16⇑*i*P **P 02 46 04.0 -0.9**
BILL *e* 02 47 11.0
BILL *i*S **S 02 51 22.0 -1.6**
BILL *e*SS SS 02 53 30.3 -17
BILL pmax pmax
comp=Z,445nm,1.5s,mb6.2
BILL MLR MLR
comp=Z,282μm,17.0s,MS7.0
BILL Bilibino 33.35 16⇑*i*P **P 02 46 03.9 -1.0**
comp=Z,268nm,1.1s,mb6.1
BILL LR LR
comp=Z,243μm,22.0s,MS6.9
BUKP Musuan 33.39 212 *e*P **P 02 46 06.1 +0.3**
ATKA Atka Island 33.61 50 *e*P **P 02 46 08.0 +0.6**
comp=Z,946nm,1.8s,mb6.4
QIZ Qiongzhong 33.75 246 P **P 02 46 09.0 +0.1**
QIZ pP pP 02 46 13.8 -3.4
QIZ sP sP 02 46 21.3 +0.6
QIZ S **S 02 51 32.1 +1.4**
QIZ sS sS 02 51 42.0 -2.5
QIZ pmax pmax
comp=Z,130nm,1.8s,mb5.6
QIZ LR LR
comp=N,185μm,18.7s
QIZ LR LR
comp=E,68μm,24.2s
QIZ LR LR
comp=Z,242μm,19.1s,MS6.9
QIZ Qiongzhong 33.75 246⇑*i*P **P 02 46 09.8 +0.9**
comp=Z,261nm,1.1s,mb6.1
DAV Davao City (W) 33.91 211 P **P 02 46 09.5 -0.8**
comp=Z,163nm,0.4s,mb6.3,baz=357,slow=5.8,SNR=5.2
DAV LR LR 03 00 00.4
comp=Z,178μm,18.8s,MS6.8,baz=254,slow=36
DAV Davao City (W) 33.91 211⇑*e*P **P 02 46 06.1 -4.2**
DAV Davao City (W) 33.91 211 P **P 02 46 11.7 +1.5**
SNR=11
DMPH Davao City--Mi 33.93 211 *e*P **P 02 46 11.7 +1.3**
PAGZ Pagadian 34.16 215 *e*P **P 02 46 13.1 +0.6**
CTBH Cotabato--PC H 34.33 213⇑*e*P **P 02 46 13.5 -0.4**
TIXI Tiksi 34.87 353 *i*P **P 02 46 17.0 -1.0**
TIXI *e* 02 47 33.5
TIXI *e*S **S 02 51 46.1 -0.9**
TIXI pmax pmax
comp=Z,237nm,1.8s,mb5.8
TIXI MLR MLR
comp=N,351μm,17.0s,MS7.1
TIXI MLR MLR
comp=E,100μm,21.0s,MS7.1
TIXI MLR MLR
comp=Z,570μm,17.0s,MS7.4
TIXI Tiksi 34.87 353⇑*i*P **P 02 46 16.6 -1.4**
comp=Z,352nm,1.5s,mb6.1
TIXI LR LR
comp=Z,592μm,19.0s,MS7.3
MIDW Midway 34.94 93⇓*i*P **P 02 46 17.5 -1.6**
comp=Z,474nm,1.4s,mb6.2
MIDW LR LR
comp=Z,330μm,20.0s,MS7.1
KMI Kunming 35.70 261⇑⇑P **P 02 46 25.3 -0.4**
KMI pP pP 02 46 33.9 -0.2
KMI sP sP 02 46 37.8 +0.3
KMI PP PP 02 47 47.4 +0.4
KMI PcP PcP 02 48 55.8 +2.2
KMI S **S 02 51 58.9 -1.8**
KMI sS sS 02 52 11.8 -2.7
KMI PcS PcS 02 52 41.8 +0.8
KMI SS SS 02 54 14.3 -22
KMI ScS ScS 02 56 41.9 -0.8
KMI pmax pmax
comp=Z,260nm,2.0s,mb5.8
KMI pmax pmax
comp=Z,37μm,11.9s
KMI LR LR
comp=N,300μm,16.3s,MS7.3
KMI LR LR
comp=E,468μm,20.8s,MS7.3
KMI LR LR
comp=Z,604μm,19.9s,MS7.4
BATP Bataraza 36.16 224 *e*P **P 02 46 31.0 +1.3**
KWAJ Kwajalein Atol 36.66 135⇓*i*P **P 02 46 32.9 -1.0**
comp=Z,784nm,1.4s,mb6.3
SGSI Sangihe 37.02 208 P **P 02 46 35.7 -1.3**
comp=Z,1μm,1.3s,mb6.5
KRAR Krasnoyarsk 37.57 316*c i*P **P 02 46 41.7 +0.5**
KRAR pmax pmax
comp=Z,971nm,1.4s,mb6.3
KRAR MLR MLR
comp=Z,306μm,19.0s,MS7.1
KDM Kudat 38.25 224 P **P 02 46 48.0 +0.6**
MYLDM Lahad Datu 38.83 220 P **P 02 46 53.5 +1.3**
MYLDM Lahad Datu 38.83 220 P **P 02 46 53.7 +1.4**
comp=Z,574nm,1.3s,mb6.1
BAKI Biak 38.96 190 P **P 02 46 54.5 +1.2**
BAKI Biak 38.96 190 P **P 02 46 53.0 -0.3**
comp=Z,9μmcomp=Z,320nm,1.5s,mb5.8
TNTI Ternate 39.08 204 P **P 02 46 54.1 -0.3**
comp=Z,733nm,1.8s,mb6.1
SDKM Sandakan 39.12 222 P **P 02 46 54.6 -0.1**
KKM Kota Kinabalu 39.31 224 P **P 02 46 56.9 +0.6**
KKM Kota Kinabalu 39.31 224 *e*P **P 02 46 55.9 -0.4**
KKM LR LR
comp=Z,66μm,20.0s,MS6.5
KKM Kota Kinabalu 39.31 224 P **P 02 46 56.6 +0.3**
comp=Z,363nm,3.1s
MNI Manado 39.34 208 P **P 02 46 56.1 -0.4**
comp=Z,707nm,1.3s,mb6.2
SMPI Sarmi 39.47 186 P **P 02 46 58.1 +0.5**
comp=Z,407nm,1.6s,mb5.9
SWI Sorong 39.55 197 P **P 02 46 58.6 +0.4**
SWI Sorong 39.55 197 P **P 02 46 58.4 +0.2**
comp=Z,8μmcomp=Z,351nm,1.0s,mb6.1
UBT Ubonrachathani 39.70 246 P **P 02 47 05.0 +5.4**
comp=Z,451nm,0.9s,mb6.2
TSM Tawau 39.91 220 P **P 02 47 01.3 +0.1**
LBMI Labuha 40.37 203 P **P 02 47 06.2 +1.1**
comp=Z,576nm,1.1s,mb6.2
CHRT Chiangrai 40.81 256⇑⇑P **P 02 47 09.0 +0.2**
comp=Z,3μm,0.9s,mb6.8
WMQ Urumqi 41.21 296 P **P 02 47 12.1 +0.3**
WMQ pP pP 02 47 24.4 +4.1
WMQ PP PP 02 48 50.6 +3.6
WMQ PcP PcP 02 49 12.3 +1.9
WMQ ScP ScP 02 52 56.3 -1.9
WMQ S **S 02 53 21.5 -2.1**
WMQ SS SS 02 56 20.4 -6.5
WMQ ScS ScS 02 57 10.4 -3.5
WMQ pmax pmax
comp=Z,1μm,1.4s,mb6.4
WMQ pmax pmax
comp=Z,66μm,6.8s
WMQ LR LR
comp=N,180μm,21.0s,MS7.1
WMQ LR LR
comp=E,241μm,24.0s,MS7.1
WMQ LR LR
comp=Z,288μm,25.0s,MS7.0
SDPT Sand Point 41.97 46 *e*P **P 02 47 16.3 -1.5**
comp=Z,399nm,1.4s,mb5.8
CHG Chiang Mai 42.07 256⇑⇑P **P 02 47 19.6 +0.5**
comp=Z,230nm,1.1s,mb5.7
CHTO Chiang Mai 42.07 256⇑*i*P **P 02 47 18.8 -0.3**
CHTO pmax pmax
comp=Z,374nm,1.4s,mb5.8
CHTO MLR MLR
comp=Z,244μm,20.0s,MS7.1
CHTO Chiang Mai 42.07 256⇑⇑*i*P **P 02 47 18.8 -0.3**
comp=Z,374nm,1.4s,mb5.8
CHTO LR LR
comp=Z,244μm,20.0s,MS7.1
CHTO Chiang Mai 42.07 256 P **P 02 47 18.2 -0.9**
comp=Z,285nm,1.2s,mb5.8
CHTO Chiang Mai 42.07 256 P **P 02 47 19.2 +0.1**
SNR=114
ZALV Zalesovo Beam 42.07 312 P **P 02 47 18.5 -0.2**
comp=Z,201nm,0.8s,mb5.8,baz=89,slow=7.2,SNR=170
ZALV PcP PcP 02 49 13.9 +0.9
comp=Z,70nm,0.8s,baz=68,slow=3.3,SNR=2.2
ZALV LR LR 03 05 35.8
comp=Z,404μm,18.3s,MS7.3,baz=82,slow=37
ZALV PKPPKP 03 19 25.6
comp=Z,0.6nm,0.4s,baz=337,slow=3.3,SNR=3.6
CM31 Chiang Mai Arr 42.27 255⇑⇑*i*P **P 02 47 20.5 -0.3**
comp=Z,196nm,1.1s,mb5.7
CM31 LR LR
comp=Z,153μm,19.0s,MS6.9
CMAR Chiang Mai Arr 42.27 255 P **P 02 47 20.8 0.0**
comp=Z,16nm,0.6s,mb4.8,baz=44,slow=6.1,SNR=53
CMAR LR LR 03 06 08.7
comp=Z,195μm,20.4s,MS7.0,baz=61,slow=38
CMAR PKP2ab 03 20 38.8
comp=Z,1.1nm,0.3s,baz=276,slow=4.2,SNR=5.9
CMAR Chiang Mai Arr 42.27 255 P **P 02 47 20.8 0.0**
CMAR LR LR 03 06 08.7
LUWI Luwuk 42.41 210 P **P 02 47 20.2 -1.7**
comp=Z,482nm,1.3s,mb6.0
IMP Imphal 42.83 267 *e*PKP **P 02 47 25.0 -0.2**
IMP *ex* x 02 53 53.0
LSA Lhasa 42.83 275 P **P 02 47 28.8 +3.6**
LSA S **S 02 53 54.9 +7.1**
LSA LR LR
comp=E,190μm,30.9s
LSA LR LR
comp=Z,260μm,20.4s
LSA Lhasa 42.83 275⇑*i*P **P 02 47 26.6 +1.4**
LSA pmax pmax
comp=Z,434nm,1.0s,mb6.1
LSA Lhasa 42.83 275⇑*i*P **P 02 47 26.6 +1.3**
comp=Z,434nm,1.0s,mb6.1
NLAI Namlea 42.95 203 P **P 02 47 27.2 +1.0**
comp=Z,9μmcomp=Z,368nm,1.1s,mb6.0
NVS Novosibirsk 42.98 313⇑⇑*i*P **P 02 47 26.1 +0.1**
NVS *i* 02 47 40.4
NVS *i*S **S 02 53 49.7 +0.4**
NVS *e*SS SS 02 57 17.4 +16
NVS pmax pmax
comp=E,1μm,1.5s
NVS pmax pmax
comp=Z,930nm,1.5s,mb6.3
NVS pmax pmax
comp=N,110nm,1.3s
NVS smax
comp=N,1μm,2.6s
NVS smax
comp=E,860nm,2.6s
NST Nakhon Sawan 43.05 251⇓⇓P **P 02 47 27.0 0.0**
comp=E,167nm,1.0s,mb5.7
AAI Ambon 43.05 201 P **P 02 47 27.3 +0.3**
comp=E,721nm,2.0s,mb6.1
CHGN Chignik 43.13 45 *e*P **P 02 47 27.2 0.0**
PCI Palu 43.52 214 P **P 02 47 30.5 -0.3**
PCI Palu 43.52 214 P **P 02 47 29.3 -1.5**
comp=E,787nm,1.4s,mb6.3
TLE Tual 43.86 194 P **P 02 47 34.9 +1.3**
comp=E,442nm,1.9s,mb5.9
SHL Shillong 44.08 269 *i*P **P 02 47 34.0 -1.3**
SHL *i*x x 02 54 10.0
SMKI Samarinda 44.32 217 P **P 02 47 39.1 +1.8**
comp=E,602nm,1.7s,mb6.1
MK31 Makanchi Array 44.42 302 *i*P **P 02 47 37.8 0.0**
MK31 pmax pmax
comp=Z,654nm,0.9s,mb6.4
MK31 Makanchi Array 44.42 302⇑*i*P **P 02 47 38.0 +0.2**
MKAR Makanchi Array 44.42 302 P **P 02 47 37.9 +0.1**
comp=Z,115nm,0.7s,mb5.7,baz=84,slow=8.6,SNR=189
MKAR LR LR 03 07 28.2
comp=Z,164μm,18.8s,MS7.0,baz=82,slow=38
MKAR PKPPKP 03 19 18.2
comp=Z,0.3nm,0.2s,baz=267,slow=2.4,SNR=3.5
MKAR P4KPbc 03 25 31.3
comp=Z,0.3nm,0.2s,baz=86,slow=4.8,SNR=4.5
MKAR Makanchi Array 44.42 302 P **P 02 47 37.9 +0.1**
MKAR LR LR 03 07 28.2
MKAR P'P' 03 19 18.2
SBUM Sibu 44.50 226 P **P 02 47 38.1 -0.6**
SBUM Sibu 44.50 226 P **P 02 47 38.3 -0.4**
comp=Z,271nm,1.8s,mb5.7
TTA Tatalina 44.62 35 *e*P **P 02 47 38.8 -0.3**
SVW2 Sparrevohn 44.71 38 *e*P **P 02 47 41.6 +1.7**
comp=Z,326nm,1.6s,mb5.9
KDI Kendari 45.15 208 P **P 02 47 44.0 +0.2**
comp=Z,217nm,1.9s,mb5.7
NNT Nongplab 45.30 248 P **P 02 47 46.0 +0.9**
TTSI Tana Toraja 45.44 212 P **P 02 47 45.2 -1.0**
comp=Z,8μmcomp=Z,137nm,1.6s,mb5.5
GTK Gangtok 45.86 273 *ex* x 02 47 56.0
GTK *ex* x 02 49 14.5
OHAK Old Harbor 45.93 43 *e*P **P 02 47 49.6 0.0**
comp=Z,296nm,1.5s,mb6.0
RSO Redoubt South 46.09 39 *e*P **P 02 47 52.0 +1.2**
KURK Kurchatov 46.15 308 P **P 02 47 51.9 +0.5**
comp=Z,7μm,0.7s
KURK Kurchatov 46.15 308*c i*P **P 02 47 51.1 -0.3**
KURK pmax pmax
comp=Z,2μm,1.4s,mb6.8
KURK MLR MLR
comp=Z,535μm,18.0s,MS7.5
KURK Kurchatov 46.15 308⇑⇑*i*P **P 02 47 51.3 -0.1**
comp=Z,842nm,0.8s,mb6.7
KURK LR LR
comp=Z,454μm,19.0s,MS7.4
KURK Kurchatov 46.15 308 P **P 02 47 51.5 +0.1**
SNR=527
KDAK Kodiak Island 46.27 42 P **P 02 47 53.0 +0.7**
comp=Z,1μm,0.9s,mb6.9,SNR=22
KDAK Kodiak Island 46.27 42 P **P 02 47 52.8 +0.6**
comp=Z,112nm,0.7s,mb5.9,baz=282,slow=3.5,SNR=59
KDAK LR LR 03 06 52.1
comp=Z,235μm,20.7s,MS7.1,baz=254,slow=36
KDAK Kodiak Island 46.27 42 *i*P **P 02 47 52.2 -0.1**
KDAK Kodiak Island 46.27 42 *e*P **P 02 47 52.3 +0.1**
comp=Z,757nm,1.4s,mb6.4
KDAK LR LR
comp=Z,233μm,20.0s,MS7.1
KSM Kuching 46.39 227 P **P 02 47 53.6 -0.1**
KSM Kuching 46.39 227 PFAKE 02 48 10.0 +16
KSM LR LR
comp=Z,59μm,20.0s,MS6.5
KSM Kuching 46.39 227 P **P 02 47 54.4 +0.7**
comp=Z,331nm,1.0s,mb6.2
KSM Kuching 46.39 227 P **P 02 47 54.3 +0.6**
comp=Z,331nm,1.0s,mb6.2
BNSI Bone 46.54 211 P **P 02 47 54.4 -0.4**
comp=Z,627nm,1.3s,mb6.4
TAPN Taplejung 46.58 274 *e*P **P 02 47 53.9 -1.2**
comp=Z,1μm,1.1s,mb6.8
STKI Sintang 46.87 225 P **P 02 47 58.2 +0.7**
comp=Z,494nm,1.3s,mb6.3
STKI Sintang 46.87 225 P **P 02 47 58.2 +0.7**
comp=Z,494nm,1.3s,mb6.3
PMG Port Moresby 46.93 173*d i*P **P 02 47 57.9 +0.1**
PMG Port Moresby 46.93 173⇓*i*P **P 02 47 57.8 0.0**
comp=Z,355nm,1.2s,mb6.2
PMG LR LR
comp=Z,63μm,21.0s,MS6.5
PMG Port Moresby 46.93 173 P **P 02 47 56.6 -1.2**
comp=Z,8μmcomp=Z,278nm,1.2s,mb6.1
ODAN Odare 47.05 274 *e*P **P 02 47 57.8 -1.0**
comp=Z,910nm,0.9s,mb6.7
JOHN Johnston Islan 47.07 103⇓*i*P **P 02 47 57.5 -1.5**
comp=Z,592nm,1.2s,mb6.4
JOHN LR LR
comp=Z,258μm,20.0s,MS7.2
KAPI Kappang 47.24 211 P **P 02 47 59.7 -0.6**
comp=Z,3μm,1.1s,mb7.1,SNR=52
KAPI Kappang 47.24 211 *e*P **P 02 47 58.8 -1.5**
comp=Z,684nm,1.1s,mb6.5
BKSI Bulukumba 47.37 211 P **P 02 48 00.9 -0.4**
comp=Z,9μmcomp=Z,208nm,1.1s,mb6.0
RC01 Rabbit Creek A 47.55 38 *e*P **P 02 48 01.4 -0.8**
comp=Z,625nm,1.5s,mb6.4
RAMN Ramite 47.64 274 *e*P **P 02 48 02.2 -1.2**
comp=Z,1μm,0.8s,mb7.0
JIRN Jiri 47.64 275 *e*P **P 02 48 02.5 -0.9**
comp=Z,973nm,0.8s,mb6.9
GUN Gumba 47.77 276 *e*P **P 02 48 03.5 -0.9**
comp=Z,2μm,0.8s,mb7.1
PMR Palmer 47.82 37 *e*P **P 02 48 03.7 -0.6**
PMR pmax pmax
comp=Z,257nm,1.4s,mb6.1
PMR Palmer 47.82 37 *e*P **P 02 48 03.7 -0.6**
comp=Z,257nm,1.4s,mb6.1
MCK McKinley 47.84 34 *e*P **P 02 48 04.4 0.0**
MCK pmax pmax
comp=Z,95nm,0.8s,mb5.9
MCK McKinley 47.84 34 *e*P **P 02 48 04.4 0.0**
comp=Z,95nm,0.8s,mb5.9
KTGM Kuala Trenggan 47.93 238 P **P 02 48 04.8 -0.9**
COLA College 48.29 32⇑*i*P **P 02 48 08.1 +0.2**
COLA pmax pmax
comp=Z,1μm,1.9s,mb6.6
COLA MLR MLR
comp=Z,96μm,21.0s,MS6.8
COLA College 48.29 32⇑⇑*i*P **P 02 48 08.1 +0.2**
comp=Z,1μm,1.9s,mb6.6
COLA LR LR
comp=Z,96μm,21.0s,MS6.8
PKI Pulchoki 48.30 275 *e*P **P 02 48 07.4 -1.1**
comp=Z,533nm,0.8s,mb6.6
KKN Kakani 48.30 276 *e*P **P 02 48 07.5 -1.0**
comp=Z,2μm,0.9s,mb7.0
PKIN Phulchoki 48.31 276 *e*P **P 02 48 07.4 -1.1**
comp=Z,783nm,0.9s,mb6.7
CAL Calcutta 48.40 268⇑⇑*i*P **P 02 48 10.6 +1.3**
CAL *e*S **S 02 55 08.9 +0.8**
DMN Daman 48.52 276 *e*P **P 02 48 09.2 -1.0**
comp=Z,2μm,1.3s,mb6.9
ILAR Eielson Array 48.71 33 P **P 02 48 10.2 -0.8**
comp=Z,53nm,0.8s,mb5.6,baz=266,slow=5.6,SNR=246
ILAR Eielson Array 48.71 33 P **P 02 48 10.3 -0.8**

ILAR Eielson Array 48.71 33 P **P** **02 48 10.2 -0.8**
GKN Gorkha 48.72 276 *e*P **P** **02 48 10.6 -1.1**
comp=Z,2µm,0.8s,mb7.1
AAA Alma-Ata 48.93 298 *i* P **P** **02 48 14.6 +1.5**
AAA *i* S **S** **02 55 19.5 +4.3**
AAA pmax pmax
comp=Z,61µm,17.3s
AAA smax
comp=E,96µm,17.7s
AAA MLR MLR
comp=Z,576µm,20.0s,MS7.6
AAA Alma-Ata 48.93 298 *e*P **P** **02 48 14.5 +1.4**
PBKI Pangkalan Bun 49.07 222 P **P** **02 48 19.5 +5.0**
PBKI Pangkalan Bun 49.07 222 P **P** **02 48 14.8 +0.3**
comp=Z,447nm,1.4s,mb6.3
DIV Divide 49.47 37 *e*P **P** **02 48 16.9 0.0**
comp=Z,453nm,1.2s,mb6.4
HNR Honiara 49.58 157 P **P** **02 48 18.5 +0.3**
comp=Z,47nm,0.3s,mb6.0,baz=341,slow=18,SNR=2.5
HNR LR LR 03 06 01.4
comp=Z,132µm,20.8s,MS6.9,baz=325,slow=32
MMRI Maumere 49.61 206 P **P** **02 48 17.7 -0.8**
comp=Z,351nm,1.8s,mb6.1
KULM Kulim 49.65 240 P **P** **02 48 18.2 -0.7**
KULM Kulim 49.65 240 PFAKE 02 48 30.0 +11
KULM LR LR
comp=Z,94µm,19.0s,MS6.8
KULM Kulim 49.65 240 P **P** **02 48 19.2 +0.2**
comp=Z,272nm,1.6s,mb6.0
ULHL Ulahol 49.73 297 P **P** **02 48 19.9 +0.6**
SNR=53
IPM Ipoh 49.98 239 P **P** **02 48 21.1 -0.3**
IPM Ipoh 49.98 239 P **P** **02 48 21.1 -0.3**
comp=Z,366nm,1.2s,mb6.3
TKM2 Tokmak 2 49.98 298 P **P** **02 48 22.2 +1.1**
SNR=252
TKM2 Tokmak 2 49.98 298 *e*P **P** **02 48 21.8 +0.6**
comp=Z,3.2nm,0.8s
MYKOM Kota Tinggi 50.10 234 P **P** **02 48 22.3 -0.1**
MYKOM Kota Tinggi 50.10 234 P **P** **02 48 22.7 +0.3**
comp=Z,235nm,1.5s,mb6.0
MENT Mentasta 50.23 35 *e*P **P** **02 48 23.6 +0.8**
KGM Kluang 50.27 235 P **P** **02 48 23.4 -0.3**
VOSK Vostochnaya 50.45 312 P **P** **02 48 24.0 -0.5**
VOSK pmax pmax
comp=Z,480nm,1.4s,mb6.3
FRIM Kepong 50.48 237 P **P** **02 48 24.8 -0.4**
KZA Kyzart 50.49 297 P **P** **02 48 26.9 +1.9**
SNR=44
KBK Karagaybulak 50.52 298 P **P** **02 48 25.8 +0.6**
SNR=63
CHMS Chumysh 50.55 299 P **P** **02 48 25.4 0.0**
SNR=33
USP Ospenovka 50.64 299 P **P** **02 48 26.5 +0.3**
SNR=99
FRU Bishkek 50.69 298⇑ *i*P **P** **02 48 27.0 +0.5**
FRU *e* 02 55 45.0
FRU pmax pmax
comp=Z,4µm,3.0s
BVAR Borovoye Array 50.73 312 P **P** **02 48 26.7 0.0**
comp=Z,100nm,0.9s,mb5.7,baz=79,slow=8.0,SNR=99
BVAR LR LR 03 10 56.0
comp=Z,5µm,18.4s,baz=178,slow=37
BVAR Borovoye Array 50.73 312 P **P** **02 48 26.7 +0.1**
BVAR pmax pmax
comp=Z,100nm,0.9s
BVAR MLR MLR
comp=Z,5µm,18.4s
BRVK Borovoye 50.78 312 P **P** **02 48 27.2 +0.1**
comp=Z,930nm,1.3s,mb6.5,SNR=92
BRVK Borovoye 50.78 312*c* *i*P **P** **02 48 27.0 -0.1**
BRVK pmax pmax
comp=Z,607nm,2.5s,mb6.1
BRVK MLR MLR
comp=Z,463µm,16.0s,MS7.6
BRVK Borovoye 50.78 312⇑ *i*P **P** **02 48 27.2 +0.1**
comp=Z,236nm,1.1s,mb6.0
BRVK LR LR
comp=Z,403µm,19.0s,MS7.5
KSH Kashi 50.81 294 P **P** **02 48 31.8 +4.3**
KSH pP pP 02 48 39.8 +3.7
KSH sP sP 02 48 42.3 +2.8
KSH PcP PcP 02 49 47.8 +3.8
KSH PP PP 02 50 28.9 +5.3
KSH ScP ScP 02 53 40.4 +2.2
KSH PcS PcS 02 53 43.4 +1.9
KSH S **S** **02 55 45.8 +4.2**
KSH sS sS 02 55 59.8 +4.0
KSH ScS ScS 02 58 17.6 +1.4
KSH SS SS 02 59 21.0 +5.0
KSH pmax pmax
comp=Z,740nm,1.6s,mb6.4
KSH pmax pmax
comp=Z,40µm,14.2s
KSH LR LR
comp=N,320µm,15.6s,MS7.6
KSH LR LR
comp=E,311µm,16.1s,MS7.6
KSH LR LR
comp=Z,483µm,15.7s,MS7.6
KAKA Kakadu 50.83 192 *e*P **P** **02 48 26.1 -1.6**
comp=Z,361nm,0.9s,mb6.3
KAKA Kakadu 50.83 192 *e*P **P** **02 48 26.9 -0.9**
comp=Z,1µm,1.1s,mb6.8
KAKA Kakadu 50.83 192 P **P** **02 48 27.3 -0.4**
comp=Z,4µmcomp=Z,502nm,0.9s,mb6.4
AAK Ala-Archa 50.84 298 P **P** **02 48 28.0 +0.3**
comp=Z,982nm,0.6s,mb6.9,SNR=59
AAK Ala-Archa 50.84 298 P **P** **02 48 26.0 -1.7**
SNR=18
AAK Ala-Archa 50.84 298 LR LR 03 11 41.3
comp=Z,498µm,19.1s,MS7.5,baz=61,slow=38
AAK Ala-Archa 50.84 298⇑ *i*P **P** **02 48 27.8 +0.1**
AAK pmax pmax
comp=Z,205nm,0.8s,mb6.1
AAK MLR MLR
comp=Z,454µm,20.0s,MS7.5
AAK Ala-Archa 50.84 298⇑ *i*P **P** **02 48 27.8 +0.1**
comp=Z,206nm,0.8s,mb6.1
AAK LR LR
comp=Z,454µm,20.0s,MS7.5
AAK Ala-Archa 50.84 298 P **P** **02 48 27.5 -0.2**
comp=Z,5µmcomp=Z,82nm,1.2s,mb5.5
AAK Ala-Archa 50.84 298 P **P** **02 48 28.2 +0.5**
SNR=137
UCH Uchtor 50.96 298 P **P** **02 48 29.6 +1.0**
SNR=75
EGAK Eagle 51.15 32⇑ *i*P **P** **02 48 29.0 -0.7**
comp=Z,2µm,1.5s,mb6.9
EGAK LR LR
comp=Z,109µm,21.0s,MS6.8
COEN Coen 51.23 179 *e*P **P** **02 48 30.8 +0.1**
comp=Z,3µm,1.4s,mb7.1
COEN Coen 51.23 179 P **P** **02 48 30.6 -0.1**
comp=Z,934nm,1.4s,mb6.5
EKS2 Erkin-Say 51.33 298 P **P** **02 48 31.7 +0.3**
SNR=94
EKS2 Erkin-Say 51.33 298 *e*P **P** **02 48 31.2 -0.2**
comp=Z,3.2nm,0.8s
TPI Tanjungpandan 51.35 227 P **P** **02 48 32.2 +0.4**
comp=Z,439nm,1.4s,mb6.2
TPI P 02 48 33.1
comp=Z,439nm,1.4s
TPI Tanjungpandan 51.35 227 P **P** **02 48 32.1 +0.3**
comp=Z,439nm,1.4s,mb6.2
PTH Pithoragarh 51.50 280 *e*PKP **P** **02 48 33.2 +0.4**
ZRNK Zerenda 51.56 312 *i* P **P** **02 48 32.8 -0.1**
ZRNK pmax pmax
comp=Z,506nm,1.4s,mb6.3
AML Almayashu 51.56 298 P **P** **02 48 34.3 +1.2**
SNR=208
KMMI Kalianget 51.63 217 P **P** **02 48 37.4 +3.6**
comp=Z,954nm,1.9s,mb6.4
KMMI Kalianget 51.63 217 P **P** **02 48 32.0 -1.8**
comp=Z,954nm,1.9s,mb6.4
PPBI Pangkal Pinang 51.76 229 P **P** **02 48 35.7 +0.8**
comp=Z,309nm,1.4s,mb6.0
SRBI Singaraja 51.96 215 P **P** **02 48 37.7 +1.5**
SRBI Singaraja 51.96 215 P **P** **02 48 36.1 -0.1**
comp=Z,671nm,1.6s,mb6.3
DAWY Dawson 52.01 33⇑ *e*P **P** **02 48 36.3 +0.2**
KHKI Kahang-Kahang 52.03 214 P **P** **02 48 36.2 -0.6**
KHKI Kahang-Kahang 52.03 214 P **P** **02 48 36.6 -0.1**
comp=Z,1µm,1.7s,mb6.6
ALBI Allahabad 52.21 275 *ex* x 02 48 35.0
TSI Tuntungan 52.37 241 P **P** **02 48 39.7 +0.3**

BYJI Banyuwangi 52.46 216 P **P** **02 48 46.0 +6.0**
comp=Z,1µm,1.7s,mb6.6
BYJI Banyuwangi 52.46 216 P **P** **02 48 40.4 +0.4**
comp=Z,1µm,1.7s,mb6.6
NBBI Negara 52.48 215 P **P** **02 48 40.2 +0.1**
comp=Z,821nm,1.9s,mb6.3
DNP Denpasar 52.48 215 P **P** **02 48 42.2 +2.1**
comp=Z,1µm,1.6s,mb6.5
PSI Prapat 52.63 240 LR LR 03 13 36.9
comp=Z,65µm,19.4s,MS6.7,baz=30,slow=39
RGRI Rengat 52.70 234 P **P** **02 48 43.9 +2.0**
comp=Z,823nm,1.4s,mb6.5
RGRI Rengat 52.70 234 P **P** **02 48 43.4 +1.5**
comp=Z,823nm,1.4s,mb6.5
PNL Peninsula 52.82 39 *e*P **P** **02 48 43.3 +1.1**
comp=Z,289nm,1.4s,mb6.0
DDI Dehra Dun 52.85 282⇑ *i*P **P** **02 48 41.8 -1.0**
DDI *ex* x 02 56 34.0
GMJI Gumukmas 52.94 217 P **P** **02 48 47.3 +3.7**
comp=Z,10µmcomp=Z,224nm,1.4s,mb5.9
GMJI Gumukmas 52.94 217 P **P** **02 48 43.9 +0.3**
comp=Z,10µmcomp=Z,224nm,1.4s,mb5.9
BKNI Bangkinang 53.03 236 P **P** **02 48 45.2 +0.9**
comp=Z,1µm,1.3s,mb6.7
NGJI Ngawi 53.13 219 P **P** **02 48 45.0 0.0**
comp=Z,558nm,2.2s,mb6.1
SDNR Sundarnagar 53.18 284 *e*PKP **P** **02 48 44.5 -0.7**
SDNR *ex* x 02 56 25.5
SJI Sawahan 53.30 219 P **P** **02 48 45.7 -0.5**
comp=Z,860nm,1.8s,mb6.4
KRKI Karangkates 53.32 218 P **P** **02 48 45.6 -0.7**
SMRI Semarang 53.38 221 P **P** **02 48 47.4 +0.6**
comp=Z,786nm,2.3s,mb6.2
KK31 Karatay Array 53.45 300 *i* P **P** **02 48 46.3 -0.8**
KK31 pmax pmax
comp=Z,716nm,1.3s,mb6.4
KK31 Karatay Array 53.45 300 *i* P **P** **02 48 46.4 -0.7**
TPTI 53.51 242 P **P** **02 48 46.0 -1.8**
comp=Z,8µmcomp=Z,84nm,1.4s,mb5.5
PWJI Pagerwojo 53.52 219 P **P** **02 48 46.8 -1.0**
comp=Z,832nm,1.4s,mb6.5
KIP Kipapa 53.58 90⇓ *i*P **P** **02 48 47.6 -0.7**
KIP pmax pmax
comp=Z,480nm,1.5s,mb6.2
KIP MLR MLR
comp=Z,54µm,20.0s,MS6.6
KIP Kipapa 53.58 90⇓ *i*P **P** **02 48 47.6 -0.7**
comp=Z,480nm,1.5s,mb6.2
KIP LR LR
comp=Z,54µm,20.0s,MS6.6
INK Inuvik 53.63 27 LR LR 03 14 39.6
comp=Z,165µm,18.7s,MS7.1,baz=277,slow=39
INK Inuvik 53.63 27⇑ *i*P **P** **02 48 47.8 -0.2**
INK pmax pmax
comp=Z,247nm,1.4s
INK Inuvik 53.63 27⇑ *i*P **P** **02 48 47.8 -0.1**
comp=Z,247nm,1.4s,mb6.0
BHK Bhakra 53.64 284 *ex* **P** **02 48 44.8 -3.8**
BHK *ex* x 02 49 41.8
MNSI Mandailing Nat 53.65 237 P **P** **02 48 48.2 -0.6**
comp=Z,224nm,1.3s,mb5.9
SDSI Sungai Dareh 53.73 234 P **P** **02 48 49.2 -0.2**
SDSI Sungai Dareh 53.73 234 P **P** **02 48 49.9 +0.5**
comp=Z,652nm,1.5s,mb6.3
THN Thein Dam 53.74 286 *e*PKP **P** **02 48 47.1 -2.2**
THN *ex* x 02 56 31.2
PCJI Pacitan 53.98 219 P **P** **02 48 49.8 -1.4**
comp=Z,380nm,2.0s,mb6.0
PPI Padang Panjang 54.04 236 P **P** **02 48 51.6 -0.1**
comp=Z,140nm,1.4s,mb5.7
UGM Wanagama 54.08 220 P **P** **02 48 51.1 -0.8**
comp=Z,2µm,1.7s,mb6.7
NDI New Delhi 54.24 281⇑ *i*x **P** **02 48 49.0 -4.0**
NDI *ex* x 02 56 51.0
PDSI Padang 54.34 235 P **P** **02 48 52.9 -1.0**
comp=Z,247nm,1.3s,mb6.0
KNA Kununurra 54.51 196 P **P** **02 48 54.0 -0.9**
comp=Z,6µmcomp=Z,656nm,1.1s,mb6.6
KRJI Kerinci 54.59 233 P **P** **02 49 03.4 +7.7**
MDSI Maura Dua 54.78 229 P **P** **02 48 56.8 -0.3**
comp=Z,764nm,1.5s,mb6.5
BLSI Bandar Lampung 54.86 227 P **P** **02 48 58.0 +0.4**
comp=Z,644nm,1.0s,mb6.6
SKAG Skagway 54.88 38 *e*P **P** **02 48 59.5 +2.3**
comp=Z,338nm,2.3s,mb6.0
VIS Vishakhapatnam 54.93 266 *e*PKP **P** **02 48 58.6 +0.5**
VIS *i* S **S** **02 56 40.2 +2.1**
RBSI Rajabasa 54.96 226 P **P** **02 48 57.6 -0.7**
comp=Z,327nm,1.6s,mb6.1
KSI Kapahiang 55.09 231 P **P** **02 48 58.8 -0.5**
comp=Z,723nm,1.2s,mb6.6
SVE Sverdlovsk 55.21 319⇓ *e*P **P** **02 49 00.1 +0.5**
SVE *e*S **S** **02 56 43.3 +2.3**
SVE *e* 02 58 40.1
SVE pmax pmax
comp=Z,841nm,1.3s,mb6.6
SVE pmax pmax
comp=Z,40µm,17.6s
SVE MLR MLR
comp=Z,317µm,17.0s,MS7.5
LWLI Liwa 55.28 229 P **P** **02 48 59.3 -1.3**
comp=Z,551nm,1.1s,mb6.5
KASI Kota Agung 55.42 228 P **P** **02 48 59.1 -2.6**
comp=Z,354nm,1.7s,mb6.1
MNAI Manna 55.42 230 P **P** **02 49 00.1 -1.6**
comp=Z,780nm,1.5s,mb6.5
SISI Saibi 55.55 236 P **P** **02 49 01.4 -1.2**
comp=Z,324nm,1.2s,mb6.2
SIT Sitka 55.56 41 *e*P **P** **02 49 02.4 +0.2**
SIT pmax pmax
comp=Z,692nm,2.0s,mb6.3
SIT Sitka 55.56 41 *e*P **P** **02 49 02.4 +0.2**
comp=Z,692nm,2.0s,mb6.3
CGJI Cibinong 55.61 226 P **P** **02 48 59.1 -3.9**
comp=Z,168nm,1.8s,mb5.8
SOKR Solikamsk 56.34 322*c* *i*P **P** **02 49 07.6 -0.1**
SOKR 02 51 18.7
SOKR S **S** **02 56 56.4 +0.5**
SOKR SS SS 03 00 41.0 -1.4
SOKR pmax pmax
comp=Z,440nm,1.1s,mb6.4
SOKR MLR MLR
comp=Z,297µm,17.0s,MS7.5
ARU Arti 56.42 318 P **P** **02 49 08.8 +0.5**
comp=Z,3µm,1.6s,mb7.1
ARU Arti 56.42 318*d* *i*P **P** **02 49 08.2 -0.1**
ARU *e* 02 50 03.3
ARU *e* 02 51 08.9
ARU *e*PPP 02 52 30.7
ARU *e*S **S** **02 56 58.2 +1.1**
ARU 02 58 52.8
ARU SS SS 03 00 43.1 -0.7
ARU SSS 03 02 53.1
ARU pmax pmax
comp=Z,808nm,1.2s,mb6.6
ARU pmax pmax
comp=Z,41µm,18.5s
ARU MLR MLR
comp=Z,627µm,17.0s,MS7.8
ARU Arti 56.42 318⇑ *i*P **P** **02 49 08.1 -0.2**
comp=Z,748nm,1.1s,mb6.6
ARU LR LR
comp=Z,464µm,20.0s,MS7.6
POHA Pohakuloa 56.43 90 *e*P **P** **02 49 11.2 +2.2**
comp=Z,756nm,1.4s,mb6.5
POHA LR LR
comp=Z,61µm,19.0s,MS6.7
NGP Nagpur 56.49 272 *e*PKP **P** **02 49 07.5 -1.8**
NGP *ex* x 02 57 04.2
KHU Kahuku 56.64 91 *e*P **P** **02 49 10.2 -0.2**
BHPL Bhopal 56.70 275 *e*PKP **P** **02 49 09.8 -1.0**
FUNA Funafuti 57.38 135 PFAKE 02 49 30.0 +14
FUNA LR LR
comp=Z,171µm,22.0s,MS7.1
CTA Charters Tower 57.44 176 *e*P **P** **02 49 15.2 -0.7**
comp=Z,49nm,1.9s,mb5.2
CTA *e*S **S** **02 57 06.7 -4.5**
CTAO Charters Tower 57.44 176 *e*P **P** **02 49 15.6 -0.3**
CTAO pmax pmax
comp=Z,662nm,2.0s,mb6.3
CTAO MLR MLR
comp=Z,47µm,21.0s,MS6.6
CTAO Charters Tower 57.44 176 *e*P **P** **02 49 15.6 -0.3**
comp=Z,662nm,2.0s,mb6.3
CTAO LR LR
comp=Z,47µm,21.0s,MS6.6

CTAO Charters Tower 57.44 176 P **P** **02 49 15.9 0.0**
comp=Z,6µmcomp=Z,133nm,2.7s,mb5.5
FITZ Fitzroy Crossi 57.52 199 *e*P **P** **02 49 15.4 -1.0**
comp=Z,200nm,1.4s,mb6.0
FITZ *e*S **S** **02 57 09.9 -2.3**
FITZ Fitzroy Crossi 57.52 199⇑ *i*P **P** **02 49 15.8 -0.6**
comp=Z,309nm,1.3s,mb6.2
FITZ Fitzroy Crossi 57.52 199 P **P** **02 49 16.0 -0.4**
comp=Z,417nm,2.0s,mb6.1
WRAB Tennant Creek 57.65 189 P **P** **02 49 16.0 -1.3**
comp=Z,2µm,0.9s,mb7.2,SNR=74
WRAB Tennant Creek 57.65 189⇑ *i*P **P** **02 49 15.7 -1.6**
WRAB pmax pmax
comp=Z,1µm,1.4s,mb6.7
WRAB MLR MLR
comp=Z,116µm,22.0s,MS6.9
WRAB Tennant Creek 57.65 189⇑ *i*P **P** **02 49 15.7 -1.6**
comp=Z,1µm,1.4s,mb6.7
WRAB LR LR
comp=Z,116µm,22.0s,MS6.9
WRAB Tennant Creek 57.65 189 P **P** **02 49 16.2 -1.1**
comp=Z,9µmcomp=Z,540nm,1.2s,mb6.4
WRA Warramunga Arr 57.66 189 P **P** **02 49 16.0 -1.4**
comp=Z,268nm,0.9s,mb6.3,baz=6.4,slow=7.4,SNR=24
WRA LR LR 03 13 22.9
comp=Z,72µm,22.0s,MS6.7,baz=10.0,slow=35
WRA PKP2bc 03 19 16.2
comp=Z,7.9nm,1.1s,baz=200,slow=1.6,SNR=4.9
WRA Warramunga Arr 57.66 189 P **P** **02 49 16.0 -1.4**
WRA LR LR 03 13 22.9
WRA ⇑*e* 03 19 16.2
DLBC Dease Lake 57.81 38 LR LR 03 11 18.6
comp=Z,56µm,21.2s,MS6.7,baz=301,slow=33
DLBC Dease Lake 57.81 38 *e*P **P** **02 49 17.7 -0.4**
KBL Kabul 57.86 291⇑ *i*P **P** **02 49 18.5 -0.3**
KBL pmax pmax
comp=Z,817nm,1.4s,mb6.6
KBL Kabul 57.86 291⇑ *i*P **P** **02 49 18.5 -0.3**
comp=Z,817nm,1.4s,mb6.6
AB31 Akbulak array 58.13 310 *i* P **P** **02 49 19.8 -0.7**
AB31 pmax pmax
comp=Z,84nm,0.6s,mb6.0
AB31 Akbulak array 58.13 310 *i* P **P** **02 49 19.9 -0.6**
ABKAR Akbulak array 58.13 310⇑ *i*P **P** **02 49 19.9 -0.5**
comp=Z,64nm,0.6s,mb5.8
AKL Akola 58.34 273⇑ *i*P **P** **02 49 22.3 0.0**
AKL *ex* x 02 49 29.5
comp=Z,591nm,2.1s
AKL *i* x x 02 57 43.9
AKTO Aktyubinsk 58.84 312 LR LR 03 16 02.5
comp=Z,259µm,19.0s,MS7.4,baz=244,slow=37
HYB Hyderabad 58.89 269 *e*P **P** **02 49 25.0 -1.2**
HYB *e*S **S** **02 57 28.0 -2.4**
HYB pmax pmax
comp=Z,240nm,1.0s,mb6.2
HYB Hyderabad 58.89 269 *e*P **P** **02 49 25.0 -1.2**
comp=Z,240nm,1.0s,mb6.2
HYB *e*S **S** **02 57 28.0 -2.4**
HYB Hyderabad 58.89 269 *i* P **P** **02 49 25.0 -1.2**
comp=Z,120nm,1.0s,mb5.9
HYB *e*PcP PcP 02 50 17.0 +1.6
HYB *e* 02 50 36.0
HYB *e*PP PP 02 51 40.0 +3.5
HYB *e*ScP ScP 02 54 12.0 -1.9
HYB *e*S **S** **02 57 40.0 +10**
HYB *e*ScS ScS 02 59 15.0 +0.6
HYB *e*SS SS 03 01 28.0 +3.9
HYB LR LR 03 08 00.0
comp=Z,116nm,20.0s
ALE Alert 59.56 4 P **P** **02 49 30.0 0.0**
comp=Z,1µm,1.2s,mb6.8,SNR=20
LATR Latur 59.92 271 *e*PKP **P** **02 49 33.1 -0.3**
KBS Kingsbay 60.27 350⇑ *i*P **P** **02 49 35.0 +0.1**
KBS *e* 02 49 36.0
KBS AMb AMB 02 49 37.8
comp=Z,328nm,0.7s,mb6.5
KBS *e*S **S** **02 57 48.4 +1.7**
KBS AMS AMS 03 18 18.7
comp=Z,87µm,20.0s,MS6.9
KBS Kingsbay 60.27 350*c* *i*P **P** **02 49 35.4 +0.5**
KBS pmax pmax
comp=Z,348nm,1.2s,mb6.3
KBS Kingsbay 60.27 350⇑ *i*P **P** **02 49 35.4 +0.5**
comp=Z,218nm,0.9s,mb6.2
KBS LR LR
comp=Z,100µm,19.0s,MS7.0
HSP Hornsund 61.08 348 *e*P **P** **02 49 40.8 +0.4**
BBB Bella Bella 61.23 45 LR LR 03 13 57.8
comp=Z,61µm,20.5s,MS6.7,baz=122,slow=34
ASAR Alice Springs 61.39 189 P **P** **02 49 41.8 -1.3**
comp=Z,117nm,0.8s,mb6.0,baz=7.4,slow=5.3,SNR=166
ASAR PKPPKP 03 18 59.6
comp=Z,5.4nm,0.9s,baz=151,slow=2.8,SNR=7.1
BHV Bhavnagar 61.65 277 *e*PKP **P** **02 49 45.0 -0.1**
LVZ Lovozero 61.92 336 P **P** **02 49 45.8 -0.4**
comp=Z,1µm,1.0s,mb7.0,SNR=20
LVZ Lovozero 61.92 336*c* *i*P **P** **02 49 46.3 +0.1**
LVZ pmax pmax
comp=Z,357nm,1.1s,mb6.4
LVZ MLR MLR
comp=Z,296µm,16.0s,MS7.5
RES Resolute Bay 61.94 15 LR LR 03 20 50.2
comp=Z,62µm,19.0s,MS6.8,baz=184,slow=40
RES Resolute Bay 61.94 15⇑ *i*P **P** **02 49 45.6 -0.6**
RES pmax pmax
comp=Z,119nm,0.8s,mb6.1
RES Resolute Bay 61.94 15⇑ *i*P **P** **02 49 45.6 -0.7**
comp=Z,119nm,0.8s,mb6.1
POO Poona 62.02 273 *e*PKP **P** **02 49 47.9 +0.3**
BJO Bjornoya 62.11 345⇑ *i*P **P** **02 49 46.4 -1.0**
BJO AMb AMB 02 49 49.8
comp=Z,226nm,0.6s,mb6.5
BJO *e*S **S** **02 58 13.1 +3.0**
BJO *e*SS SS 03 02 15.0 +2.7
BJO AMS AMS 03 20 27.9
comp=Z,206µm,17.7s,MS7.3
MBWA Marble Bar 62.12 204⇑ *i*P **P** **02 49 46.9 -1.2**
comp=Z,410nm,1.3s,mb6.4
MBWA LR LR
comp=Z,28µm,21.0s,MS6.4
MBWA Marble Bar 62.12 204 P **P** **02 49 47.2 -0.8**
comp=Z,8µmcomp=Z,289nm,1.3s,mb6.2
MBWA Marble Bar 62.12 204 P **P** **02 49 47.5 -0.5**
SNR=11
BJO1 Bjornoya 62.15 345⇑ *i*P **P** **02 49 46.4 -1.3**
comp=Z,226nm,0.6s,mb6.5
BJO1 LR LR
comp=Z,206µm,17.7s,MS7.3
KAD Karad 62.42 271 *e*PKP **P** **02 49 50.3 0.0**
APA Apatity 62.50 336⇓ *i*P **P** **02 49 50.0 -0.1**
APA *i* 02 52 06.0
APA *i* PPP 02 53 47.0
APA *i* S **S** **02 58 12.0 -3.2**
APA *i* PS 02 58 32.0
APA *i* 02 59 30.0
APA pmax pmax
comp=Z,468nm,1.2s,mb6.5
APA MLR MLR
comp=Z,395µm,17.0s,MS7.7
BHJ Bhuj 62.82 279 *e*PKP **P** **02 49 53.1 +0.2**
BHJ AMb AMB 02 50 00.5
comp=Z,530nm,1.9s,mb6.3
YKA Yellowknife Ar 63.03 30 P **P** **02 49 53.5 -0.1**
comp=Z,15nm,0.7s,mb5.2,baz=302,slow=6.8,SNR=36
YKA PKP2bc 03 19 00.0
comp=Z,1.9nm,0.9s,baz=123,slow=2.8,SNR=6.1
YKA Yellowknife Ar 63.03 30 P **P** **02 49 53.5 -0.2**
YKA pmax pmax
comp=Z,15nm,0.7s
YKA Yellowknife Ar 63.03 30 P **P** **02 49 53.5 -0.1**
YKA ⇑*e* 03 19 00.1
EIDS Eidsvold 63.12 171 *e*P **P** **02 49 54.1 -0.6**
comp=Z,309nm,1.4s,mb6.2
PALK Pallekele 63.13 258 *i* P **P** **02 49 58.4 +3.3**
PALK Pallekele 63.13 258⇑ *i*P **P** **02 49 55.3 +0.2**
comp=Z,524nm,1.5s,mb6.4
PALK Pallekele 63.13 258 P **P** **02 49 55.6 +0.5**
comp=Z,7µmcomp=Z,100nm,1.7s,mb5.7
KEV Kevo 63.20 339⇑ *i*P **P** **02 49 54.7 0.0**
KEV pmax pmax
comp=Z,436nm,1.4s,mb6.4
KEV MLR MLR
comp=Z,186µm,22.0s,MS7.2
KEV Kevo 63.20 339 *e*P **P** **02 49 55.7 +1.0**
KEV pmax pmax
comp=Z,206nm,1.1s,mb6.2

KEV **Kevo 63.20 339⇑*i*P P 02 49 54.7 -0.1**
comp=Z,436nm,1.4s,mb6.4
KEV LR LR
comp=Z,186μm,22.0s,MS7.2
KEV **Kevo 63.20 339** *e*p **P 02 49 55.7 +1.0**
comp=Z,206nm,1.1s,mb6.2
NOUC **Port Laguerre 63.50 155** *e*P **P 02 49 57.1 -0.1**
DZM **Mont Dzumac 63.52 155** *e*P **P 02 49 57.4 +0.1**
comp=Z,532nm,1.3s,mb6.4
DZM *e*S **S 02 58 26.0 -2.9**
comp=Z,129μm,26.4s
DZM *e*SS SS 03 02 36.3 -0.6
comp=Z,56μm,25.0s
DZM *e*LR LR 03 08 55.1
comp=Z,387μm,21.9s
ARCES **ARCESS Array B 63.76 340** P **P 02 49 58.2 -0.2**
comp=Z,152nm,1.1s,mb6.0,baz=46,slow=6.9,SNR=99
ARCES LR LR 03 25 07.3
comp=Z,146μm,18.0s,MS7.2,baz=219,slow=43
ARCES **ARCESS Array B 63.76 340** P **P 02 49 58.2 -0.2**
ARCES LR LR 03 25 07.3
ARE0 **ARCESS Array S 63.76 340**⇑*i*P **P 02 49 58.3 -0.1**
VAN **Vannovskaya 64.17 299***c i*P **P 02 50 09.1 +7.4**
ABKT **Ailbek 64.17 299** P **P 02 50 01.4 -0.3**
comp=Z,1μm,1.1s,mb6.8,SNR=59
MSVF **Nonsavu 64.48 142** *e*P **P 02 50 04.2 +0.5**
comp=Z,594nm,1.6s,mb6.4
MSVF LR LR
comp=Z,139μm,22.0s,MS7.1
KTK1 **Kautokeino 64.72 340** *e*P **P 02 50 04.7 0.0**
COCO **West Island 65.28 230** *i* P **P 02 50 13.7 +4.7**
COCO **West Island 65.28 230**⇑*i*P **P 02 50 09.1 +0.1**
comp=Z,2μm,1.6s,mb6.8
COCO LR LR
comp=Z,34μm,20.0s,MS6.5
COCO **West Island 65.28 230** P **P 02 50 12.3 +3.3**
comp=Z,718nm,1.7s,mb6.4
TRD **Trivandrum 65.31 262**⇑*i*P **P 02 50 17.0 +7.7**
TRD *i* S S 02 59 03.0 +11
DAG **Danmarks Havn 65.33 355***j i*P **P 02 50 08.0 -0.5**
DAG pmax pmax
comp=Z,250nm,1.2s,mb6.1
DAG MLR MLR
comp=Z,100μm,22.0s,MS7.0
DAG MLR MLR
comp=N,75μm,24.0s,MS7.0
DAG MLR MLR
comp=E,82μm,23.0s,MS7.0
DAG **Danmarks Havn 65.33 355** *i* P **P 02 50 08.0 -0.5**
DAG *i* 02 58 06.0
DAG **Danmarks Havn 65.33 355***j i*P **P 02 50 08.0 -0.5**
comp=E,250nm,1.2s,mb6.1
DAG *i* 02 58 06.0
DAG
comp=Z,103μm,22.0s
TRO **Tromso 65.45 341**⇑*i*P **P 02 50 07.8 -1.6**
TRO AMb AMB 02 50 12.1
comp=Z,271nm,1.9s,mb5.9
TRO *e*S S 02 58 52.4 +0.6
TRO *e*SS SS 03 03 00.7 -3.7
TRO AMS AMS 03 20 48.8
comp=Z,135μm,22.2s,MS7.1
TRO **Tromso 65.45 341**⇑*i*P **P 02 50 07.9 -1.5**
TRO pmax pmax
comp=Z,271nm,1.9s,mb6.0
TRO MLR MLR
comp=Z,135μm,22.2s,MS7.1
TRO **Tromso 65.45 341**⇑*i*P **P 02 50 07.8 -1.6**
comp=Z,271nm,1.9s,mb6.0
TRO LR LR
comp=Z,135μm,22.2s,MS7.1
XMAS **Kiritimati 65.47 107** *e*P **P 02 50 12.3 +1.8**
comp=Z,292nm,1.2s,mb6.2
PGC **Sidney 65.50 47** *e*P **P 02 50 11.0 +0.9**
comp=Z,27nm,1.7s,mb5.0
NLWA **Neilton Lookou 65.88 48**⇓P **P 02 50 13.5 +0.9**
baz=66,SNR=13
NLWA ⇓S S 02 59 00.5 +2.8
baz=66
NLWA **Neilton Lookou 65.88 48** *e*P **P 02 50 13.0 +0.4**
comp=Z,920nm,1.7s,mb6.5
NLWA LR LR
comp=Z,59μm,20.0s,MS6.8
WISH **Wishkah 66.07 48** P **P 02 50 16.3 +2.5**
A05A **Maple Falls 66.11 46**⇓P **P 02 50 13.7 -0.3**
baz=66
A05A ⇓S S 02 58 59.8 -0.6
baz=66
CMW **Cultus Mountai 66.38 46** P **P 02 50 17.3 +1.5**
GNW **Green Mountain 66.40 47** *e*P **P 02 50 18.8 +2.9**
comp=Z,380nm,1.9s,mb6.1
E03A **Lebam 66.48 49**⇑P **P 02 50 16.5 0.0**
baz=66,SNR=6.8
E03A ⇑S S 02 59 05.3 +0.3
baz=66
JCW **Jim Creek 66.61 46** P **P 02 50 18.7 +1.5**
B06A **Marblemount 66.70 46**⇑P **P 02 50 17.8 0.0**
baz=66
B06A ⇓S S 02 59 06.1 -1.5
baz=66
F03A **Seaside 66.79 49**⇓P **P 02 50 18.8 +0.4**
baz=67
F03A ⇓S S 02 59 12.0 +3.2
baz=67
AFI **Afiamalu 66.95 131**⇓*i*P **P 02 50 18.4 -1.3**
AFI MLR MLR
comp=Z,98μm,21.0s,MS7.0
HEBO **Mount Hebo 67.04 50** *e*P **P 02 50 20.8 +0.8**
comp=Z,159nm,1.0s,mb6.0
D05A **Enumclaw 67.08 47**⇑P **P 02 50 20.1 -0.2**
baz=67
D05A ⇑S S 02 59 13.3 +1.0
baz=67
MOS **Moscow 67.24 324***c i*P **P 02 50 21.1 0.0**
MOS *e* 02 50 48.5
MOS *i* 02 52 49.5
MOS *e*PPP 02 54 30.5
MOS *i* S S 02 59 13.3 -0.6
MOS *e* 03 00 15.6
MOS *i* SS SS 03 03 29.2 -3.6
MOS pmax pmax
comp=Z,992nm,2.1s,mb6.5
MOS pmax pmax
comp=Z,6μm,3.7s
MOS MLR MLR
comp=E,179μm,16.0s,MS7.5
MOS MLR MLR
comp=N,127μm,16.0s,MS7.5
MOS MLR MLR
comp=Z,216μm,16.0s,MS7.5
LON **Longmire 67.42 48** *e*P **P 02 50 23.1 +0.7**
LON pmax pmax
comp=Z,150nm,1.5s,mb5.8
LON **Longmire 67.42 48** *e*P **P 02 50 23.1 +0.8**
comp=Z,150nm,1.5s,mb5.8
F04A **Amboy 67.48 49**⇑P **P 02 50 23.1 +0.3**
baz=67,SNR=11
F04A ⇓S S 02 59 18.8 +1.8
baz=67
MTMW **Mount Mitchell 67.55 49** P **P 02 50 25.2 +2.0**
COR **Corvallis 67.64 50** *e*P **P 02 50 25.1 +1.3**
COR pmax pmax
comp=Z,741nm,1.7s,mb6.4
COR MLR MLR
comp=Z,55μm,21.0s,MS6.8
COR **Corvallis 67.64 50** *e*P **P 02 50 25.1 +1.2**
comp=Z,741nm,1.7s,mb6.4
COR LR LR
comp=Z,55μm,21.0s,MS6.8
VRHR **Novokhopersk 67.76 318** *e*P **P 02 50 23.3 -1.2**
VRHR *e* 02 52 51.4
VRHR *e*S S 02 59 17.3 -3.0
VRHR pmax pmax
comp=N,90nm,0.9s
VRHR pmax pmax
comp=E,170nm,0.9s
VRHR pmax pmax
comp=Z,310nm,0.9s,mb6.3
VRHR pmax pmax
comp=Z,580nm,2.2s,mb6.2
VRHR pmax pmax
comp=N,130nm,0.7s
VRHR pmax pmax
comp=E,310nm,1.1s
VRHR smax
comp=N,970nm,5.1s

VRHR smax
comp=E,40nm,2.6s
VRHR smax
comp=Z,10.0nm,2.6s
G04A **Mulino 67.82 49**⇑P **P 02 50 25.0 +0.1**
baz=68,SNR=10.0
G04A ⇑S S 02 59 19.9 -1.2
baz=68
ETW **Entiat 67.83 46** *e*P **P 02 50 26.2 +1.2**
comp=Z,1μm,1.8s,mb6.5
B08A **Colville Reser 68.00 45**⇓P **P 02 50 25.2 -0.8**
baz=68,SNR=25
B08A ⇓S S 02 59 22.1 -1.2
baz=68
OBN **Obninsk 68.09 323** P **P 02 50 26.5 0.0**
comp=Z,2μm,1.1s,mb7.0,SNR=48
OBN **Obninsk 68.09 323**⇑*i*P **P 02 50 26.2 -0.3**
OBN *i* 02 52 53.0
OBN *e*S S 02 59 29.5 +5.4
OBN *i* SS SS 03 03 44.7 -1.2
OBN pmax pmax
comp=Z,590nm,1.4s,mb6.4
OBN MLR MLR
comp=Z,272μm,21.0s,MS7.5
OBN **Obninsk 68.09 323**⇑*i*P **P 02 50 26.1 -0.4**
comp=Z,805nm,1.4s,mb6.6
OBN LR LR
comp=Z,251μm,19.0s,MS7.5
PUL **Pulkovo 68.10 330***c i*P **P 02 50 26.7 +0.3**
PUL pmax pmax
comp=Z,950nm,1.2s,mb6.7
PUL MLR MLR
comp=Z,274μm,16.0s,MS7.6
PUL **Pulkovo 68.10 330**⇑*i*P **P 02 50 26.8 +0.4**
KAF **Kangasniemi 68.16 333** *e*P **P 02 50 25.7 -1.1**
KAF pmax pmax
comp=Z,111nm,0.7s,mb6.0
KAF **Kangasniemi 68.16 333** *e*p **P 02 50 25.7 -1.1**
comp=Z,111nm,0.7s,mb6.0,baz=49,slow=6.1
ARMA **Armidale 68.17 171** *e*P **P 02 50 27.3 +0.2**
ARMA *e*S S 02 59 21.6 -3.8
ARMA **Armidale 68.17 171** *e*P **P 02 50 28.4 +1.2**
comp=Z,682nm,1.8s,mb6.4
H04A **Detroit Lake 68.27 50**⇑P **P 02 50 28.2 +0.4**
baz=68,SNR=18
H04A ⇓S S 02 59 25.0 -1.5
baz=68
EDM **Edmonton 68.53 39**⇑*i*P **P 02 50 28.9 -0.4**
E07A **Sunnyside 68.66 47**⇑P **P 02 50 30.9 +0.7**
baz=68
E07A ⇑S S 02 59 30.7 -0.4
baz=68
MAK **Makhachkala 68.67 308***c i*P **P 02 50 30.4 +0.1**
MAK *i* 02 50 55.8
MAK *e* 02 53 04.8
MAK *i* S S 02 59 31.6 +0.2
MAK *i* 03 00 26.0
MAK pmax pmax
comp=E,426nm,1.6s
MAK pmax pmax
comp=Z,5μm,4.9s
MAK pmax pmax
comp=Z,437nm,1.6s,mb6.1
MAK pmax pmax
comp=N,634nm,1.6s
MAK smax
comp=N,7μm,7.6s
MAK smax
comp=E,12μm,7.8s
MAK MLR MLR
comp=E,211μm,15.0s,MS7.7
MAK MLR MLR
comp=Z,211μm,15.0s,MS7.5
MAK MLR MLR
comp=N,226μm,15.0s,MS7.7
FINES **FINESS Array B 68.68 332** P **P 02 50 29.8 -0.3**
comp=N,218nm,0.7s,mb6.2,baz=57,slow=7.0,SNR=329
FINES LR LR 03 25 47.6
comp=N,202μm,18.7s,MS7.4,baz=45,slow=40
FINES **FINESS Array B 68.68 332** P **P 02 50 29.8 -0.2**
FINES pmax pmax
comp=Z,218nm,0.7s
FINES MLR MLR
comp=Z,202μm,18.7s
VOR **Voronezh 68.69 319**⇑*i*P **P 02 50 29.0 -1.3**
VOR *e*S S 02 59 26.0 -5.3
VOR pmax pmax
comp=Z,800nm,2.0s,mb6.3
OD2 **Odessa Site #2 68.88 46** P **P 02 50 32.4 +0.8**
HUMO **Hull Mountain 68.88 52** *e*P **P 02 50 31.9 +0.2**
comp=Z,392nm,1.9s,mb6.0
HUMO LR LR
comp=Z,46μm,20.0s,MS6.7
C09A **Chrisman Ranch 68.90 45**⇑P **P 02 50 32.3 +0.6**
baz=69
C09A ⇑S S 02 59 31.6 -2.4
baz=69
RSW **Rattlesnake Hi 68.90 47** *e*P **P 02 50 32.4 +0.7**
comp=Z,783nm,1.9s,mb6.3
G06A **Carlson Farm, 68.91 49**⇑P **P 02 50 32.2 +0.4**
baz=69,SNR=20
G06A ⇓S S 02 59 26.2 -7.9
baz=69
D08A **Wollman Farm, 68.94 46**⇓P **P 02 50 31.9 0.0**
baz=69
D08A ⇑S S 02 59 31.3 -3.1
baz=69
HAWA **Hanford 68.94 47** *e*P **P 02 50 32.4 +0.5**
comp=Z,576nm,2.0s,mb6.2
F07A **Phinny Hill Vi 68.97 48**⇑P **P 02 50 32.2 +0.1**
baz=69,SNR=8.7
F07A ⇑S S 02 59 28.8 -6.1
baz=69
VSR **Storozhevoye 68.99 319***c i*P **P 02 50 31.8 -0.4**
VSR *e* 02 53 02.1
VSR *i* PPP 02 54 42.8
VSR *e*S S 02 59 32.6 -2.3
VSR *e*SS SS 03 04 04.2 +4.2
VSR pmax pmax
comp=N,600nm,1.5s
VSR pmax pmax
comp=E,770nm,1.5s
VSR pmax pmax
comp=Z,2μm,1.5s,mb6.8
VSR pmax pmax
comp=N,260nm,1.4s
VSR pmax pmax
comp=E,300nm,1.4s
VSR pmax pmax
comp=Z,510nm,1.4s,mb6.3
VSR pmax pmax
comp=N,5μm,8.9s
VSR pmax pmax
comp=E,7μm,8.9s
VSR pmax pmax
comp=Z,10μm,8.9s
VSR smax
comp=E,21μm,10.6s
VSR smax
comp=N,8μm,5.3s
VSR smax
comp=Z,3μm,5.3s
VSR MLR MLR
comp=N,200μm,23.0s,MS7.5
VSR MLR MLR
comp=E,207μm,23.0s,MS7.5
VSR MLR MLR
comp=Z,218μm,23.0s,MS7.3
STKA **Stephens Creek 69.06 181** *e*P **P 02 50 32.2 -0.5**
comp=Z,47nm,1.0s,mb5.4
STKA *e*S S 02 59 13.4 -22
STKA **Stephens Creek 69.06 181** P **P 02 50 32.4 -0.2**
comp=Z,16nm,0.7s,mb5.1,baz=342,slow=6.8,SNR=24
STKA LR LR 03 18 24.7
comp=Z,64μm,21.7s,MS6.8,baz=354,slow=34
STKA **Stephens Creek 69.06 181** *e*P **P 02 50 33.0 +0.3**
comp=Z,69nm,1.7s,mb5.3
VORD **Divnogorie 69.06 319** *e*P **P 02 50 32.3 -0.3**
VORD *e*S S 02 59 34.4 -1.4
VORD pmax pmax
comp=E,220nm,1.4s
VORD pmax pmax
comp=Z,390nm,1.4s,mb6.1
VORD pmax pmax
comp=N,80nm,0.7s
VORD pmax pmax
comp=Z,3μm,3.0s

VORD pmax pmax
comp=N,370nm,1.5s
VORD pmax pmax
comp=E,290nm,1.0s
VORD smax
comp=E,6μm,6.8s
VORD smax
comp=N,4μm,3.4s
VORD smax
comp=Z,1μm,3.4s
VORD MLR MLR
comp=N,157μm,18.0s,MS7.5
VORD MLR MLR
comp=E,171μm,18.0s,MS7.5
VORD MLR MLR
comp=Z,137μm,18.0s,MS7.2
MOR8 **Moi Rana 69.12 340**⇑*i*P **P 02 50 31.3 -1.4**
MOR8 AMb AMB 02 50 33.9
comp=Z,268nm,1.4s,mb6.0
MOR8 **Moi Rana 69.12 340**⇑*i*P **P 02 50 31.3 -1.4**
comp=Z,268nm,1.4s,mb6.0
E08A **Dider Farm, El 69.16 47**⇓P **P 02 50 33.7 +0.4**
baz=69
E08A ⇑S S 02 59 32.2 -4.9
baz=69
KONS **Konsvik 69.23 341** *e*P **P 02 50 34.7 +1.3**
FORT **Forrest 69.25 193** *e*P **P 02 50 32.6 -1.2**
comp=Z,248nm,0.7s,mb6.2
FORT **Forrest 69.25 193** *e*P **P 02 50 34.4 +0.5**
comp=Z,274nm,0.8s,mb6.2
NEW **Newport 69.30 45**⇑*i*P **P 02 50 34.3 +0.2**
NEW pmax pmax
comp=Z,149nm,1.2s
NEW MLR MLR
comp=Z,46μm,20.0s
NEW **Newport 69.30 45**⇑*i*P **P 02 50 34.3 +0.2**
comp=Z,149nm,1.2s,mb5.8
NEW LR LR
comp=Z,46μm,20.0s,MS6.7
VIPM **Ingram Point 69.31 49** P **P 02 50 35.8 +1.5**
STOK **Stokkvaagen 69.38 340** *e*P **P 02 50 32.8 -1.5**
STOK *e*S S 02 59 41.3 +2.3
STOK *e*SS SS 03 04 06.9 +1.6
YBH **Yreka Blue Hor 69.50 53** LR LR 03 16 06.9
comp=Z,40μm,20.8s,MS6.6,baz=303,slow=32
YBH **Yreka Blue Hor 69.50 53** *e*P **P 02 50 36.0 +0.5**
YBH pmax pmax
comp=Z,177nm,1.4s
YBH MLR MLR
comp=Z,38μm,22.0s
YBH **Yreka Blue Hor 69.50 53** *e*P **P 02 50 36.0 +0.5**
comp=Z,177nm,1.4s,mb5.8
YBH LR LR
comp=Z,38μm,22.0s,MS6.6
E09A **Wood Farm, Sta 69.68 47**⇑P **P 02 50 37.0 +0.5**
baz=70
E09A ⇑S S 02 59 41.5 -1.7
baz=70
A12A **Yaak River Ran 69.74 43**⇑P **P 02 50 36.6 -0.2**
baz=70
A12A ⇓S S 02 59 43.4 -0.4
baz=70
JMIC **Jan Mayen 69.76 350**⇑*i*P **P 02 50 37.1 +0.5**
JMIC AMb AMB 02 50 45.2
comp=Z,308nm,1.6s,mb6.0
JMIC *e*S S 02 59 47.1 +3.7
JMIC AMS AMS 03 24 28.4
comp=Z,35μm,18.1s,MS6.7
JMIC **Jan Mayen 69.76 350**⇑*i*P **P 02 50 37.1 +0.5**
comp=Z,308nm,1.6s,mb6.0
JMIC LR LR
comp=Z,35μm,18.1s,MS6.7
G08A **Pilot Rock 69.87 48**⇑P **P 02 50 37.8 +0.1**
baz=70,SNR=21
G08A ⇑S S 02 59 44.4 -1.1
baz=70
LNOR **Lincton Mounta 69.95 47** *e*P **P 02 50 38.8 +0.6**
LNOR pmax pmax
comp=Z,148nm,1.4s,mb5.7
LNOR **Lincton Mounta 69.95 47** *e*P **P 02 50 38.8 +0.6**
comp=Z,148nm,1.4s,mb5.7
C11A **Tepee Creek (N 70.02 45**⇓P **P 02 50 38.7 +0.1**
baz=70,SNR=23
C11A ⇓S S 02 59 43.5 -3.6
baz=70
B12A **Libby 70.03 44**⇓P **P 02 50 38.8 +0.1**
baz=70
B12A ⇑S S 02 59 43.0 -4.3
baz=70
K05A **Summer Lake 70.10 51**⇓P **P 02 50 40.0 +0.8**
baz=70,SNR=62
K05A ⇓S S 02 59 45.9 -2.4
baz=70
SUMG **Summit 70.18 0**⇑*i*P **P 02 50 39.8 +0.7**
comp=Z,264nm,1.1s,mb6.1
SUMG **Summit 70.18 0**⇑*i*P **P 02 50 39.9 +0.8**
comp=Z,98nm,0.8s,mb5.8
SUMG **Summit 70.18 0** *i* S S 02 59 59.2 +11
I07A **Izee 70.21 49**⇓P **P 02 50 39.5 -0.3**
baz=70
WDC **Whiskeytown Da 70.23 54** *e*P **P 02 50 40.8 +0.8**
WDC pmax pmax
comp=Z,184nm,1.4s,mb5.8
WDC MLR MLR
comp=Z,31μm,20.0s,MS6.6
WDC **Whiskeytown Da 70.23 54** *e*P **P 02 50 40.8 +0.7**
comp=Z,184nm,1.4s,mb5.8
WDC LR LR
comp=Z,31μm,20.0s,MS6.6
VSU **Vasula 70.36 330***c i*P **P 02 50 40.9 +0.5**
VSU pmax pmax
comp=Z,735nm,1.3s,mb6.5
VSU MLR MLR
comp=Z,458μm,22.0s,MS7.7
A13A **Flathead Natio 70.41 43**⇑P **P 02 50 41.0 0.0**
baz=70
F10A **Beach Ranch, E 70.51 47**⇓P **P 02 50 41.9 +0.3**
baz=70,SNR=17
C12B **Naegeli Ranch, 70.53 44**⇓P **P 02 50 41.5 -0.1**
baz=70
LTIM **Timbered Crate 70.58 53** P **P 02 50 43.6 +1.5**
WALA **Waterton Lakes 70.61 43**⇑*i*P **P 02 50 42.0 -0.1**
comp=Z,5.5nm,1.3s
B13A **Whitefish 70.70 43**⇓P **P 02 50 42.3 -0.5**
baz=70,SNR=50
HOPS **Hopland 70.74 55** *e*P **P 02 50 44.2 +1.0**
comp=Z,278nm,1.7s,mb5.9
HOPS LR LR
comp=Z,72μm,21.0s,MS6.9
DGRG **David-gareji 70.82 308** P **P 02 50 43.7 +0.1**
DGRG S S 03 00 13.9 +17
BSMT **Bassoo Peak 70.83 44** *e*P **P 02 50 44.8 +1.3**
comp=Z,149nm,1.5s,mb5.7
MOD **Modoc 70.92 52** *e*P **P 02 50 45.3 +1.1**
comp=Z,143nm,1.2s,mb5.8
MOD LR LR
comp=Z,52μm,21.0s,MS6.8
A14A **Double T Ranch 70.92 42**⇓P **P 02 50 43.8 -0.2**
baz=71,SNR=33
D12A **Red Ives Fores 70.97 45**⇓P **P 02 50 44.1 -0.3**
baz=71
ZEI **Tsey 71.01 310** *e*P **P 02 50 42.4 -2.3**
ZEI pmax pmax
comp=Z,280nm,1.4s,mb6.0
ZEI pmax pmax
comp=N,132nm,1.3s
ZEI pmax pmax
comp=E,335nm,1.5s
NSS **Namsos 71.04 340**⇑*i*P **P 02 50 41.6 -2.9**
NSS AMb AMB 02 50 45.6
comp=Z,227nm,0.7s,mb6.2
NSS *e*S S 02 59 58.9 +0.4
NSS *e*SS SS 03 04 34.5 +3.6
NSS AMS AMS 03 25 24.9
comp=Z,185μm,17.8s,MS7.4
NSS **Namsos 71.04 340**⇑*i*P **P 02 50 41.6 -2.9**
comp=Z,227nm,0.7s,mb6.2
NSS LR LR
comp=Z,185μm,17.8s,MS7.4
MTA **Mtatsminda 71.05 308** P **P 02 50 45.0 0.0**
MTA S S 03 00 03.9 +4.6
TBLG **Delisi 71.06 308** *i* P **P 02 50 45.3 +0.2**
TBLG **Delisi 71.06 308** P **P 02 50 45.3 +0.2**
BMO **Blue Mountains 71.09 48** *e*P **P 02 50 45.2 0.0**
comp=Z,348nm,1.8s,mb6.0
BMO LR LR
comp=Z,32μm,19.0s,MS6.6

JTMT Jette 71.16 44 eP P 02 50 46.9 +1.3
comp=Z,70nm,1.2s,mb5.5
E12A Beaver Dam Sad 71.21 46 ⇑P P 02 50 45.6 -0.2
baz=71,SNR=48
J08A Circle Bar Ran 71.23 49 ⇑P P 02 50 45.5 -0.6
baz=71,SNR=39
KEH Kehvi 71.24 309 P P 02 50 44.7 -1.5
YBMT Yellow Bay 71.25 44 eP P 02 50 47.6 +1.6
comp=Z,66nm,1.3s,mb5.4
A15A Johnson Ranch, 71.29 42 ⇑P P 02 50 45.8 -0.5
baz=71
GOR Gori 71.31 309 P P 02 50 47.1 +0.5
MCCM Marconi Confer 71.33 56 eP P 02 50 47.1 +0.3
comp=Z,620nm,1.9s,mb6.2
MCCM LR LR
comp=Z,63μm,19.0s,MS6.9
B14A Marquette Ranc 71.36 43 ⇑P P 02 50 46.3 -0.4
baz=71,SNR=13
ONI Oni 71.38 310 P P 02 50 47.7 +0.8
ONI S S 03 00 08.8 +5.7
D13A Huson 71.44 45 ⇓P P 02 50 47.0 -0.3
baz=71,SNR=22
C14A Swan Lake 71.45 44 ⇓P P 02 50 47.2 -0.1
baz=71,SNR=8.8
SWMT Swartz Lake 71.46 44 eP P 02 50 47.9 +0.5
comp=Z,344nm,1.8s,mb6.0
WBK Wadi Bani Khal 71.47 285 P P 02 50 48.6 +0.8
SNR=38
RIV Riverview 71.49 172 eP P 02 50 51.7 +4.2
WVOR Wild Horse Val 71.65 50 eP P 02 50 49.5 +0.9
WVOR pmax pmax
comp=Z,884nm,2.0s,mb6.3
WVOR Wild Horse Val 71.65 50 eP P 02 50 49.5 +0.9
comp=Z,884nm,2.0s,mb6.3
SCO Scoresbysund 71.67 354⇑iP P 02 50 48.6 +0.3
SCO pmax pmax
comp=Z,41nm,1.0s,mb5.3
SCO Scoresbysund 71.67 354⇑iP P 02 50 48.6 +0.3
comp=Z,41nm,1.0s,mb5.3
SCO Scoresbysund 71.67 354 iS S 03 00 06.5 +0.8
SCO Scoresbysund 71.67 354 iS S 03 00 06.5 +0.8
BANOM Banah 71.68 289 P P 02 50 49.7 +0.6
SNR=22
F12A Elk City 71.77 46 ⇓P P 02 50 48.4 -0.8
baz=72,SNR=48
B15A Bradely Ranch, 71.77 43 ⇓P P 02 50 49.0 -0.2
baz=72,SNR=55
I10A Payette 71.82 48 ⇑P P 02 50 49.8 +0.2
baz=72,SNR=26
MSO Missoula 71.89 45 eP P 02 50 51.0 +1.1
comp=Z,183nm,1.6s,mb5.8
MSO LR LR
comp=Z,30μm,21.0s,MS6.5
SLMT Seeley Lake 71.89 44 eP P 02 50 50.1 +0.2
comp=Z,188nm,1.3s,mb5.9
A16A West Butte Ran 71.91 42 ⇑P P 02 50 49.7 -0.3
baz=72
SMDO Samad 71.93 285 P P 02 50 51.5 +1.0
SNR=33
GNI Garni 71.94 307 eP P 02 50 51.7 +1.3
GNI Garni 71.94 307c iP P 02 50 51.5 +1.1
GNI pmax pmax
comp=Z,593nm,1.7s
GNI MLR MLR
comp=Z,121μm,15.0s
GNI Garni 71.94 307⇑iP P 02 50 51.2 +0.8
comp=Z,1μm,1.6s,mb6.6
GNI LR LR
comp=Z,138μm,19.0s,MS7.2
GNI Garni 71.94 307 P P 02 50 51.6 +1.2
SNR=116
E13A Victor 71.97 45 ⇑P P 02 50 49.6 -0.8
baz=72,SNR=12
D14A Greenough 71.98 44 ⇓P P 02 50 49.7 -0.8
baz=72,SNR=20
C15A Salmond Ranch, 72.06 43 ⇑P P 02 50 51.0 0.0
baz=72
G12A Big Creek, Yel 72.09 47 ⇓P P 02 50 50.7 -0.5
baz=72,SNR=18
B16A M & M Farms, S 72.17 42 ⇓P P 02 50 51.0 -0.6
baz=72
HOQ Hoqain 72.20 286 P P 02 50 52.4 +0.1
SNR=68
CHMT Chamberlain Mo 72.22 44 eP P 02 50 52.0 +0.1
comp=Z,48nm,1.3s,mb5.3
J10A Berg Farm, Mel 72.22 49 ⇓P P 02 50 51.6 -0.4
baz=72
JMDO Jabal Madar 72.27 285 P P 02 50 52.8 +0.2
SNR=28
F13A Darby 72.27 46 ⇓P P 02 50 51.7 -0.6
baz=72,SNR=28
IZAR Zarasai 72.34 328 eP P 02 50 52.8 +0.4
IZAR AMB AMB 02 50 54.5
comp=Z,118nm,1.5s,mb5.6
E14A Clinton 72.38 45 ⇑P P 02 50 52.6 -0.3
baz=72,SNR=8.4
A17A Triple J Farms 72.39 41 ⇓P P 02 50 52.6 -0.3
baz=72
HATD Hatta, Dubai 72.41 288 P P 02 50 53.9 +0.4
SNR=27
IDID Didziasalis 72.42 327 eP P 02 50 53.3 +0.4
IDID AMB AMB 02 50 57.4
comp=Z,123nm,1.3s,mb5.7
I11A Placerville 72.42 48 ⇑P P 02 50 52.7 -0.5
baz=72,SNR=16
MICGM Minsk 72.45 326⇑iP P 02 50 52.0 -1.2
KLBR Kellerberrin 72.49 202 eP P 02 50 52.3 -1.2
comp=Z,178nm,1.4s,mb5.8
C16A Fuhringer Ranc 72.52 43 ⇑P P 02 50 53.4 -0.3
baz=72,SNR=47
K10A MacKenzie Ranc 72.53 49 ⇓P P 02 50 54.0 +0.2
baz=72,SNR=56
ASHO Ashiyiah 72.55 288 P P 02 50 54.6 +0.3
SNR=33
D15A Lincoln 72.55 44 ⇓P P 02 50 53.8 -0.1
baz=72
IIGN Ignalina 72.61 327 eP P 02 50 54.6 +0.5
IIGN AMB AMB 02 50 58.7
comp=Z,150nm,1.3s,mb5.8
DIGO Kars 72.65 308 iP P 02 50 55.2 +0.5
NACGM Naroch 72.67 327 eP P 02 52.0 -2.5
NAZ Nazwa, Dubai 72.68 288 P P 02 50 55.1 +0.1
SNR=44
H12A Diamond D Ranc 72.70 47 ⇓P P 02 50 54.4 -0.4
baz=72,SNR=41
WCN Washoe City 72.72 54 ⇑P P 02 50 55.1 0.0
baz=72,SNR=20
KARS Kars 72.72 308 eP P 02 50 56.4 +1.4
B17A L&G Farms, Che 72.73 42 ⇓P P 02 50 54.7 -0.3
baz=72,SNR=19
G13A Cobalt 72.74 46 ⇑P P 02 50 54.3 -0.7
baz=72,SNR=46
BSY Bisya 72.75 286 P P 02 50 55.4 -0.1
SNR=42
CAN Canberra 72.77 174 eP P 02 50 56.0 +0.9
CAN pmax pmax
comp=Z,505nm,1.7s,mb6.2
CAN Canberra 72.77 174 eP P 02 50 56.0 +0.9
comp=Z,505nm,1.7s,mb6.2
MFID Camas Ranch 72.79 48 ⇓P P 02 50 55.2 -0.2
baz=73,SNR=51
CNB Canberra Magne 72.79 174 eP P 02 50 54.8 -0.4
CNB eS S 02 59 55.5 -24
F14A Wisdom 72.80 45 ⇑P P 02 50 55.6 +0.1
baz=73,SNR=14
E15A Deer Lodge 72.85 44 ⇑P P 02 50 55.3 -0.3
baz=73,SNR=40
A18A Metzger Ranch, 72.85 41 ⇑P P 02 50 55.0 -0.6
baz=73,SNR=28
FFC Flin Flon 72.92 33 P P 02 50 55.6 -0.3
comp=Z,856nm,0.9s,mb6.7,SNR=68
FFC Flin Flon 72.92 33 iP P 02 50 55.5 -0.4
FFC Flin Flon 72.92 33⇑iP P 02 50 55.4 -0.6
comp=Z,148nm,0.9s,mb5.9
FFC LR LR
comp=Z,66μm,19.0s,MS6.9
ARQ Araqi 72.94 287 P P 02 50 57.0 +0.4
SNR=53
DYDN Diyadin 72.95 307 iP P 02 50 57.2 +0.8
I12A Atlanta 72.98 48 ⇑P P 02 50 56.3 -0.2
baz=73,SNR=101
CMB Columbia Colle 73.03 55 eP P 02 50 57.1 +0.2
CMB pmax pmax
comp=Z,227nm,1.2s,mb6.0
CMB MLR MLR
comp=Z,69μm,22.0s,MS6.9
CMB Columbia Colle 73.03 55 eP P 02 50 57.1 +0.2
comp=Z,228nm,1.2s,mb6.0
CMB LR LR
comp=Z,69μm,22.0s,MS6.9
CLDR Caldiran 73.03 306 eP P 02 50 58.2 +1.3
H13A Challis 73.04 47 ⇑P P 02 50 56.1 -0.7
baz=73,SNR=98
K11A Parker Ranch, 73.04 49 ⇓P P 02 50 56.7 -0.1
baz=73,SNR=30
SAO San Andreas Ge 73.05 57 eP P 02 50 59.1 +2.0
comp=Z,84nm,1.3s,mb5.5
SAO LR LR
comp=Z,53μm,22.0s,MS6.8
SOC Sochi 73.06 312c iP P 02 50 57.0 0.0
SOC e*PP pP 02 51 05.8 -0.1
SOC e 02 51 12.4
SOC e 02 53 41.7
SOC ePPP 02 55 25.8
SOC eS S 03 00 21.1 -1.2
SOC e 03 01 00.6
SOC pmax pmax
comp=Z,4μm,2.7s,mb6.9
SOC pmax pmax
comp=Z,461nm,1.0s,mb6.4
SOC MLR MLR
comp=Z,194μm,17.0s,MS7.5
D16A Dana Ranch, Ca 73.09 43 ⇑P P 02 50 57.0 0.0
baz=73,SNR=34
ARTV Artvin 73.11 309 iP P 02 50 58.0 +0.7
HRY Holter Researc 73.12 44 eP P 02 50 57.9 +0.6
comp=Z,45nm,0.7s,mb5.5
ASUD Al Ashush, Dub 73.13 288 P P 02 50 58.1 +0.4
SNR=26
C17A Wharram Farm, 73.15 43 ⇓P P 02 50 56.9 -0.5
baz=73,SNR=24
BCA Borcka 73.15 309 eP P 02 50 58.1 +0.5
L10A Juniper Basin 73.18 50 ⇑P P 02 50 57.3 -0.4
baz=73,SNR=9.9
DBOC Borcka 73.18 309 iP P 02 50 58.0 +0.3
DAGI Agillar 73.19 309 iP P 02 50 58.5 +0.7
B18A Beardsley Farm 73.21 41 ⇓P P 02 50 57.2 -0.6
baz=73,SNR=21
FCC Fort Churchill 73.25 27⇑iP P 02 50 56.8 -1.0
comp=Z,18nm,1.7s,mb4.7
F15A Butte 73.28 45 ⇑P P 02 50 58.1 -0.1
baz=73,SNR=155
LRM Limekiln Ridge 73.31 45 eP P 02 50 58.7 +0.2
comp=Z,4μm,1.6s,mb7.0
J12A Stokes Ranch, 73.31 48 ⇑P P 02 50 58.8 +0.3
baz=73,SNR=29
E16A East Helena 73.32 44 ⇑P P 02 50 58.4 -0.1
baz=73,SNR=51
AGRB Hanur-Agry 73.37 307 eP P 02 51 00.3 +1.4
DDEM Demirkent 73.39 309 iP P 02 50 59.7 +0.7
EGMT Eagleton 73.45 42 ⇑P P 02 50 58.7 -0.5
baz=73,SNR=23
EGMT Eagleton 73.45 42⇑iP P 02 50 58.9 -0.3
comp=Z,322nm,1.3s,mb6.1
M10A I.L. Ranch, Tu 73.46 50 ⇑P P 02 50 59.3 -0.1
baz=73,SNR=23
D17A Six Diamond Ra 73.48 43 ⇑P P 02 50 59.3 -0.1
baz=73,SNR=34
I13A Wildhorse Cree 73.50 47 ⇑P P 02 50 59.8 +0.3
baz=73,SNR=86
DLMT Dillon 73.51 45 eP P 02 50 59.6 0.0
comp=Z,506nm,1.4s,mb6.3
H14A Leadore 73.52 46 ⇑P P 02 50 59.3 -0.3
baz=73,SNR=12
HLID Hailey 73.53 48 ⇑P P 02 51 00.4 +0.6
baz=73,SNR=62
HLID Hailey 73.53 48 eP P 02 51 00.1 +0.3
comp=Z,107nm,1.1s,mb5.7
HLID LR LR
comp=Z,41μm,22.0s,MS6.7
L11A Cat Creek Ranc 73.56 49 ⇑P P 02 50 59.9 0.0
baz=73,SNR=54
TUTA Tutak 73.59 307 iP P 02 51 01.7 +1.6
ANN Anapa 73.66 314c iP P 02 51 00.1 -0.4
ANN i 02 53 43.6
ANN ePPP 02 55 29.2
ANN iS S 03 00 29.1 0.0
ANN eSS SS 03 05 10.5 -1.3
ANN pmax pmax
comp=Z,702nm,1.3s,mb6.4
ANN MLR MLR
comp=Z,184μm,18.0s,MS7.4
ANN Anapa 73.66 314⇑iP P 02 51 00.0 -0.5
BMN Battle Mountai 73.67 51 eP P 02 51 01.7 +1.1
BMN pmax pmax
comp=Z,428nm,1.6s,mb6.1
BMN MLR MLR
comp=Z,49μm,19.0s,MS6.8
BMN Battle Mountai 73.67 51 eP P 02 51 01.7 +1.1
comp=Z,428nm,1.6s,mb6.1
BMN LR LR
comp=Z,49μm,19.0s,MS6.8
VANB Van 73.68 306 eP P 02 51 01.5 +0.7
MCMT McKenzie Canyo 73.69 46 eP P 02 51 01.2 +0.5
comp=Z,32nm,1.2s,mb5.1
G15A Dillon 73.69 45 ⇓P P 02 50 00.4 -0.3
baz=74,SNR=118
PZAR Pazar-Rize 73.75 310 eP P 02 51 01.9 +0.8
J13A Cove Ranch, Pi 73.77 48 ⇓P P 02 51 01.4 +0.2
baz=74,SNR=37
K12A Draper Farm, C 73.79 49 ⇓P P 02 51 01.0 -0.3
baz=74,SNR=33
F16A Kennard Place, 73.80 44 ⇑P P 02 51 01.0 -0.3
baz=74,SNR=56
E17A Martinsdale 73.81 44 ⇑P P 02 51 01.3 0.0
baz=74,SNR=58
MOL Molde 73.81 340⇑iP P 02 51 01.2 +0.2
MOL AMb AMB 02 51 04.5
comp=Z,280nm,2.2s,mb5.8
MOL eS S 03 00 32.2 +2.0
MOL eSS SS 03 05 14.7 +1.6
MOL AMS AMS 03 27 55.8
comp=Z,179μm,17.8s,MS7.4
MOL Molde 73.81 340⇑iP P 02 51 01.2 +0.2
comp=Z,280nm,2.2s,mb5.8
MOL LR LR
comp=Z,179μm,17.8s,MS7.4
I14A Mackay 73.88 47 ⇓P P 02 51 02.3 +0.5
baz=74,SNR=169
BOZ Bozeman (W) 73.88 45 ⇓P P 02 51 02.1 +0.3
baz=74,SNR=100
BOZ Bozeman (W) 73.88 45⇑eP P 02 51 02.1 +0.3
BOZ pmax pmax
comp=Z,363nm,1.7s,mb6.0
BOZ MLR MLR
comp=Z,44μm,20.0s,MS6.8
BOZ Bozeman (W) 73.88 45⇑eP P 02 51 02.1 +0.3
comp=Z,363nm,1.7s,mb6.0
BOZ LR LR
comp=Z,44μm,20.0s,MS6.8
NWAO Narrogin (SRO) 73.89 202 eP P 02 51 02.2 +0.5
NWAO pmax pmax
comp=Z,81nm,0.9s
NWAO MLR MLR
comp=Z,28μm,21.0s
NWAO Narrogin (SRO) 73.89 202 eP P 02 51 02.2 +0.5
comp=Z,81nm,0.9s,mb5.7
NWAO LR LR
comp=Z,28μm,21.0s,MS6.5
HFA0 Hagfors New Ar 73.90 336 P P 02 51 01.0 -0.6
H15A Lima 73.93 46 ⇓P P 02 51 02.2 +0.2
baz=74,SNR=15
D18A Linhart Farms, 73.93 42 ⇑P P 02 51 02.4 +0.3
baz=74
N10A Dunphy 73.94 51 ⇑P P 02 51 02.7 +0.4
baz=74
M11A Holland Ranch, 73.97 50 ⇑P P 02 51 01.7 -0.6
baz=74
NB2 NORSAR Subarra 73.98 338 P P 02 51 02.0 0.0
comp=Z,416nm,1.2s,mb6.2,baz=40,slow=6.2
NOA NORSAR Array B 73.98 338 P P 02 51 01.9 -0.2
comp=Z,245nm,1.1s,mb6.0,baz=38,slow=5.8,SNR=149
NOA LR LR 03 26 29.4
comp=Z,318μm,20.2s,MS7.6,baz=35,slow=38
NOA NORSAR Array B 73.98 338 P P 02 51 01.9 -0.1
NOA pmax pmax
comp=Z,245nm,1.1s
NOA MLR MLR
comp=Z,318μm,20.2s
NOA NORSAR Array B 73.98 338 P P 02 51 01.9 -0.2
NOA LR LR 03 26 29.4
L12A House Creek Ra 74.01 49 ⇑P P 02 51 03.5 +0.9
baz=74,SNR=20
G16A Moss Hill, Enn 74.03 45 ⇓P P 02 51 03.5 -0.2
baz=74,SNR=47
HKR Hakkari 74.04 305 eP P 02 51 03.2 +0.3
HAKT HAKKARI 74.07 305 iP P 02 50 58.9 -4.2
NVAR Mina Array Bea 74.15 54 P P 02 51 04.5 +1.0
comp=Z,32nm,0.9s,mb5.2,baz=293,slow=5.0,SNR=105
NVAR PKPPKP 03 18 36.1
comp=Z,1.0nm,1.0s,baz=174,slow=0.9,SNR=4.2
O10A Cortez Mining, 74.20 51 ⇓P P 02 51 04.6 +0.8
baz=74,SNR=20
J14A Carey 74.20 47 ⇑P P 02 51 03.6 -0.1
baz=74
ERZM Erzurum 74.20 308 iP P 02 51 05.0 +1.2
EZM Erzurum 74.21 308 eP P 02 51 05.4 +1.6
NAO01 NORSAR Array S 74.23 338⇑iP P 02 51 03.2 -0.4
comp=Z,189nm,1.1s,mb5.9
NAO01 LR LR
comp=Z,331μm,20.0s,MS7.6
F17A Fitzpatrick Pl 74.26 44 ⇑P P 02 51 04.0 +0.1
baz=74,SNR=57
E18A Harlowton 74.26 43 ⇑P P 02 51 03.8 -0.1
baz=74,SNR=46
MLAC Mammoth Lakes 74.27 55 ⇓P P 02 51 05.3 +1.2
baz=74,SNR=10
K13A Stover Farm, H 74.27 48 ⇓P P 02 51 05.0 +0.9
baz=74,SNR=25
AKASG Malin Array Be 74.31 323 P P 02 51 03.8 -0.4
comp=Z,154nm,0.8s,mb6.0,baz=46,slow=6.0,SNR=164
AKASG LR LR 03 26 32.2
comp=Z,261μm,19.0s,MS7.5,baz=35,slow=38
AKASG Malin Array Be 74.31 323 P P 02 51 03.8 -0.4
AKASG pmax pmax
comp=Z,154nm,0.8s
AKASG MLR MLR
comp=Z,261μm,19.0s
AKBB Malin Array Si 74.31 323⇑iP P 02 51 03.7 -0.5
KIEV Kiev 74.32 323⇑iP P 02 51 03.6 -0.6
KIEV pmax pmax
comp=Z,565nm,1.3s,mb6.3
KIEV MLR MLR
comp=Z,149μm,20.0s,MS7.3
KIEV Kiev 74.32 323⇑iP P 02 51 03.6 -0.6
comp=Z,565nm,1.3s,mb6.3
KIEV LR LR
comp=Z,149μm,20.0s,MS7.3
CUKT Cukurca 74.32 305 eP P 02 51 04.8 +0.4
N11A Elko Archery C 74.36 50 ⇓P P 02 51 05.7 +1.0
baz=74,SNR=18
I15A Monteview 74.39 46 ⇓P P 02 51 05.6 +0.8
baz=74
TATV Tatvan 74.45 307 iP P 02 51 06.3 +1.0
M12A Wells 74.51 50 ⇑P P 02 51 06.1 +0.6
baz=74,SNR=69
KTUT Trabzon 74.56 310 eP P 02 51 06.3 +0.5
G17A Pierce Place, 74.57 44 ⇓P P 02 51 06.4 +0.6
baz=74,SNR=29
MACK Trabzon 74.58 310 iP P 02 51 05.5 -0.5
P10A Eureka 74.62 52 ⇓P P 02 51 05.8 -0.4
baz=74,SNR=16
H16A Russell Place, 74.67 45 ⇓P P 02 51 06.5 +0.1
baz=74,SNR=19
KOPT Kop Dagi 74.68 309 iP P 02 51 07.9 +1.4
L13A Double Diamond 74.69 49 ⇑P P 02 51 06.8 +0.2
baz=74,SNR=35
ELK Elko 74.71 50 LR LR 03 18 03.2
comp=Z,53μm,21.7s,MS6.8,baz=96,slow=31
ELK Elko 74.71 50 eP P 02 51 08.0 +1.3
ELK pmax pmax
comp=Z,688nm,2.1s
ELK MLR MLR
comp=Z,64μm,22.0s
ELK Elko 74.71 50 eP P 02 51 08.0 +1.3
comp=Z,688nm,2.1s,mb6.2
ELK LR LR
comp=Z,64μm,22.0s,MS6.9
RCTC Rector, Farmer 74.77 56 ⇑P P 02 51 08.9 +1.8
baz=75
N12A Clover Valley, 74.77 50 ⇓P P 02 51 06.7 -0.3
baz=75,SNR=30
N12A Clover Valley, 74.77 50 eP P 02 51 07.8 +0.8
comp=Z,747nm,1.9s,mb6.3
F18A Big Timber 74.78 43 ⇓P P 02 51 07.0 0.0
baz=74,SNR=82
J15A Blackfoot 74.79 47 ⇓P P 02 51 07.7 +0.7
baz=75,SNR=39
TOO Toolangi 74.80 177 eP P 02 51 07.4 +0.5
TOO eS S 03 00 42.4 +0.8
O11A Cowboy Ranch, 74.82 51 ⇓P P 02 51 07.2 -0.2
baz=75,SNR=21
SUW Suwalki 74.82 328 eP P 02 51 06.7 -0.4
SUW epP pP 02 51 12.7 -3.4
SUW eS S 03 00 41.3 -0.5
SUW esS sS 03 00 58.9 +2.3
SUW eSKS 03 01 09.7
SUW LMZ 03 26 32.1
comp=Z,258μm,17.1s
SUW Suwalki 74.82 328⇑iP P 02 51 06.5 -0.6
SUW pmax pmax
comp=Z,676nm,1.1s,mb6.5
SUW Suwalki 74.82 328⇑iP P 02 51 06.5 -0.6
comp=Z,676nm,1.1s,mb6.5
SMMC Simmler 74.84 57 ⇓P P 02 51 07.5 0.0
baz=75
YMR Madison River 74.85 45 eP P 02 51 08.6 +1.1
comp=Z,719nm,1.7s,mb6.3
K14A Jones Ranch, D 74.87 48 ⇓P P 02 51 07.9 +0.3
baz=75,SNR=47
GCMT Greycliff 74.88 44 eP P 02 51 07.9 +0.4
comp=Z,447nm,1.9s,mb6.1
BNGL BINGOL 74.90 308 iP P 02 51 09.2 +1.3
YNR Norris Junctio 74.98 45 eP P 02 51 09.6 +1.4
comp=Z,346nm,1.5s,mb6.1
M13A Montello 74.99 49 ⇓P P 02 51 08.4 +0.1
baz=75,SNR=10.0
TIN Tinemaha 74.99 55 ⇓P P 02 51 10.5 +2.1
baz=75
OSL Oslo 75.00 337 eP P 02 51 07.8 -0.2
I16A Newdale 75.04 46 ⇑P P 02 51 09.8 +1.3
baz=75,SNR=88
GUMT Gumushane 75.04 310 eP P 02 51 09.8 +1.1
TPH Tonopah 75.05 53 PFAKE 02 51 20.0 +11
TPH LR LR
comp=Z,59μm,22.0s,MS6.8
YFT Old Faithful 75.06 45 eP P 02 51 10.4 +1.8
comp=Z,417nm,1.3s,mb6.2
P11A Circle Ranch, 75.10 51 ⇑P P 02 51 08.9 -0.1
baz=75,SNR=9.3
Q10A Clear Creek Ra 75.12 52 ⇑P P 02 51 09.2 +0.1
baz=75,SNR=26
VES Vestal, Richgr 75.14 56 ⇓P P 02 51 09.3 0.0
baz=75,SNR=16
L14A Malta 75.14 48 ⇓P P 02 51 09.9 +0.8
baz=75,SNR=39
K15A Arbon 75.16 47 ⇓P P 02 51 10.3 +1.0
baz=75,SNR=26
G18A Lazy EL Ranch, 75.23 44 ⇓P P 02 51 09.4 -0.2
baz=75,SNR=16
ESPY Espiye-Giresun 75.23 310 eP P 02 51 09.5 -0.2
LKWY Lake 75.23 45 PFAKE 02 51 20.0 +10
LKWY LR LR
comp=Z,86μm,20.0s,MS7.0
H17A Grant Village 75.24 45 ⇑P P 02 51 09.6 -0.1
baz=75,SNR=26
N13A Wendover, West 75.27 50 ⇑P P 02 51 10.2 +0.2
baz=75,SNR=11
N13A Wendover, West 75.27 50 eP P 02 51 10.6 +0.6
comp=Z,695nm,1.6s,mb6.3
FOO Floro 75.29 340⇑iP P 02 51 06.8 -2.8
FOO AMb AMB 02 51 11.7
comp=Z,252nm,2.4s,mb5.7
FOO eS S 03 00 46.2 -0.5
FOO AMS AMS 03 27 56.8
comp=Z,285μm,20.5s,MS7.6
FOO Floro 75.29 340⇑iP P 02 51 06.8 -2.8
comp=Z,252nm,2.4s,mb5.7
FOO LR LR
comp=Z,285μm,20.5s,MS7.6
O12A Currie 75.30 50 ⇑P P 02 51 10.3 +0.2
baz=75,SNR=64
HYA Hoyanger 75.33 340⇑iP P 02 51 10.9 +1.0
HYA AMb AMB 02 51 13.6
comp=Z,221nm,1.3s,mb5.9
HYA Hoyanger 75.33 340⇑iP P 02 51 10.9 +1.0
comp=Z,221nm,1.3s,mb5.9
J16A Bone 75.34 46 ⇑P P 02 51 11.3 +1.0
baz=75,SNR=21
IMW Indian Meadow 75.34 46⇑eP P 02 51 11.4 +1.2
comp=Z,585nm,1.6s,mb6.3

BINT Bingol 75.36 308 *eP* **P 02 51 11.3 +0.8**
KELT Kelkit 75.37 309 *i* P **P 02 51 11.6 +1.1**
DCID1 Drake Creek 75.39 46 *eP* **P 02 51 11.5 +0.9**
comp=Z,325nm,1.1s,mb6.2
M14A Sheep Mountain 75.40 49 ⇑P **P 02 51 11.1 +0.4**
baz=75,SNR=37
SIM Simferopol' 75.44 316 *eP* **P 02 51 10.8 0.0**
SIM PPP 02 55 49.4
SIM *eS* S 03 00 48.7 -0.2
SIM SS SS 03 05 39.5 +0.8
SIM pmax pmax
comp=Z,319nm,1.0s,mb6.2
SIM pmax pmax
comp=Z,35μm,20.0s
SIM MLR MLR
comp=Z,121μm,15.0s,MS7.3
CWC Cottonwood Cre 75.45 55 ⇓P **P 02 51 11.9 +0.9**
baz=75
RRI2 Red Ridge 75.46 46 *eP* **P 02 51 12.9 +2.0**
comp=Z,531nm,1.5s,mb6.2
R10A Warm Springs 75.50 53 ⇑P **P 02 51 11.7 +0.4**
baz=75
RLMT Red Lodge 75.51 44 ⇑P **P 02 51 11.8 +0.5**
baz=75,SNR=29
RLMT Red Lodge 75.51 44 ⇑*iP* **P 02 51 11.7 +0.5**
comp=Z,380nm,1.8s,mb6.0
RLMT LR LR
comp=Z,59μm,20.0s,MS6.9
I17A Pilgrim Ck. 75.53 45 ⇓P **P 02 51 11.1 -0.3**
baz=75
SBC Santa Barbara 75.53 58 ⇑P **P 02 51 12.3 +0.7**
baz=75
S10A Tonopah Range, 75.53 53 ⇓P **P 02 51 11.7 +0.2**
baz=75,SNR=68
EZC Erzincan 75.55 309 *eP* **P 02 51 13.0 +1.5**
HVU Hansel Valley 75.57 48 *eP* **P 02 51 13.3 +1.7**
HVU pmax pmax
comp=Z,512nm,1.8s,mb6.2
HVU Hansel Valley 75.57 48 *eP* **P 02 51 13.3 +1.7**
comp=Z,512nm,1.8s,mb6.2
KONO Kongsberg 75.57 337 ⇑*iP* **P 02 51 11.1 -0.2**
KONO AMb AMB 02 51 14.2
comp=Z,246nm,2.1s,mb5.8
KONO *eS* S 03 00 52.5 +2.5
KONO *eSS* SS 03 05 42.5 +2.6
KONO AMS AMS 03 27 10.6
comp=Z,277μm,18.9s,MS7.6
KONO Kongsberg 75.57 337 ⇑*iP* **P 02 51 11.2 -0.1**
KONO pmax pmax
comp=Z,398nm,1.5s,mb6.1
KONO MLR MLR
comp=Z,353μm,20.0s,MS7.7
KONO Kongsberg 75.57 337 ⇑*iP* **P 02 51 11.2 -0.1**
comp=Z,398nm,1.5s,mb6.1
KONO LR LR
comp=Z,353μm,20.0s,MS7.7
Q11A Duckwater 75.58 52 ⇓P **P 02 51 12.0 +0.2**
baz=75,SNR=20
GRAC Grapevine Rang 75.58 54 ⇑P **P 02 51 12.3 +0.5**
baz=75,SNR=42
TPAW Teton Pass 75.58 46 *eP* **P 02 51 12.2 +0.6**
comp=Z,534nm,1.5s,mb6.2
K16A Soda Springs 75.62 47 ⇓P **P 02 51 12.1 +0.2**
baz=75,SNR=96
ISA Isabella 75.65 56 ⇓P **P 02 51 11.8 -0.4**
baz=76,SNR=12
L15A Malad City 75.66 48 ⇑P **P 02 51 12.4 +0.2**
baz=75,SNR=33
P12A McGill 75.67 51 ⇓P **P 02 51 12.0 -0.2**
baz=76
LOHW Long Hollow 75.71 46 ⇑*eP* **P 02 51 13.2 +0.8**
comp=Z,423nm,1.9s,mb6.0
SNOW Snow King Moun 75.71 46 ⇑*eP* **P 02 51 13.3 +0.9**
comp=Z,130nm,1.2s,mb5.7
REDW Red Top Meadow 75.72 46 ⇑*eP* **P 02 51 13.1 +0.6**
comp=Z,341nm,1.5s,mb6.1
ARVC Arvin 75.72 57 ⇑P **P 02 51 12.8 +0.1**
baz=76
J17A Brown Place, J 75.80 46 ⇑P **P 02 51 12.6 -0.3**
baz=76,SNR=21
O13A Hicks Ranch, I 75.84 50 ⇑P **P 02 51 13.9 +0.7**
baz=76
BSC Santa Cruz Isl 75.85 58 ⇑P **P 02 51 13.6 +0.2**
baz=76
DAC Darwin (Calif) 75.86 55 PFAKE 02 51 30.0 +17
DAC LR LR
comp=Z,37μm,19.0s,MS6.7
N14A Grayback Hills 75.89 49 ⇓P **P 02 51 13.4 0.0**
baz=76,SNR=59
R11A Troy Canyon, C 75.92 52 ⇑P **P 02 51 13.8 +0.1**
baz=76,SNR=96
BGU Big Grassy Mou 75.94 49 *eP* **P 02 51 13.7 -0.1**
comp=Z,404nm,1.8s,mb6.0
AHID Auburn Hatcher 75.95 47 ⇑*eP* **P 02 51 14.1 +0.3**
comp=Z,225nm,1.3s,mb5.9
AHID LR LR
comp=Z,58μm,22.0s,MS6.8
M15A Larsen Ranch, 75.96 48 ⇑P **P 02 51 13.6 -0.3**
baz=76,SNR=48
Q12A Willow Creek R 75.98 51 ⇑P **P 02 51 14.2 +0.1**
baz=76,SNR=20
DGMT Dagmar 76.02 39 ⇓P **P 02 51 13.6 -0.5**
baz=76,SNR=14
DGMT Dagmar 76.02 39 ⇑*iP* **P 02 51 13.5 -0.6**
comp=Z,115nm,0.8s,mb5.9
DGMT LR LR
comp=Z,72μm,21.0s,MS7.0
PTK Pertek 76.04 308 *eP* **P 02 51 15.8 +1.4**
SPUT South Promonto 76.05 48 *eP* **P 02 51 14.9 +0.6**
comp=Z,698nm,1.8s,mb6.3
MPMC Manual Prospec 76.06 55 ⇑P **P 02 51 14.2 -0.4**
baz=76,SNR=122
K17A Gardner Place, 76.06 47 ⇑P **P 02 51 14.0 -0.4**
baz=76
OSI Osito Adit 76.09 57 ⇓P **P 02 51 14.8 +0.1**
baz=76
OSI Osito Adit 76.09 57 *eP* **P 02 51 15.1 +0.3**
comp=Z,268nm,1.4s,mb6.0
I18A Diamond G Ranc 76.10 45 ⇑P **P 02 51 14.6 0.0**
baz=76,SNR=13
MARD Mardin 76.11 306 *i* P **P 02 51 15.7 +1.0**
BHD Baghdad 76.11 301 *ex* **P 02 51 14.0 -0.9**
BHD *ex* x 02 54 03.0
BHD *ex* S 03 00 55.0 -1.8
BHD *ex* x 03 01 21.0
LAO LASA Array 76.15 41 ⇑*iP* **P 02 51 15.0 +0.1**
comp=Z,189nm,1.1s,mb5.9
LAO LR LR
comp=Z,68μm,19.0s,MS7.0
DIYA Diyarbakir 76.16 307 *i* P **P 02 51 16.1 +1.1**
BLG Laguna Peak 76.16 58 ⇑P **P 02 51 15.4 +0.2**
baz=76
ASK Askoy 76.17 340 *eP* **P 02 51 14.8 +0.1**
KBD Kabd 76.17 296 *eP* **P 02 51 14.2 -1.1**
KBD AMb AMB 02 51 17.9
comp=Z,420nm,1.4s,mb6.2
BER Bergen 76.22 340 ⇑*iP* **P 02 51 15.0 0.0**
BER *eS* S 03 00 57.0 -0.1
BER AMb AMB 03 28 19.4
comp=Z,262μm,18.9s
L16A Fish Haven 76.22 47 ⇓P **P 02 51 14.7 -0.6**
baz=76,SNR=16
FURC Furnace Creek, 76.22 55 ⇑P **P 02 51 15.7 +0.2**
baz=76,SNR=56
P13A Bates Ranch, G 76.23 51 ⇑P **P 02 51 14.9 -0.5**
baz=76,SNR=32
S11A Rachel 76.24 53 ⇑P **P 02 51 15.6 +0.1**
baz=76,SNR=40
ODD1 Odda 76.24 339 *eP* **P 02 51 15.5 +0.4**
N15A Stansbury Isla 76.27 49 ⇑P **P 02 51 15.3 -0.3**
baz=76,SNR=71
LRMC Laurel Mountai 76.27 56 ⇓P **P 02 51 16.0 +0.2**
baz=76,SNR=13
J18A Kendall Valley 76.29 46 ⇑P **P 02 51 15.2 -0.5**
baz=76,SNR=37
KEMA Kemaliye 76.37 309 *i* P **P 02 51 17.4 +1.2**
HWUT Hardware Ranch 76.39 48 *eP* **P 02 51 17.0 +0.7**
comp=Z,899nm,1.8s,mb6.4
HWUT LR LR
comp=Z,32μm,20.0s,MS6.6
SVRC Sivrice-ELAZID 76.40 308 *eP* **P 02 51 18.3 +1.8**
RDF Al-Radifah 76.42 296 *eP* **P 02 51 16.3 -0.4**
RDF AMb AMB 02 51 24.2
comp=Z,2μm,1.0s,mb6.9
EDW2 Edwards Air Fo 76.43 56 ⇑P **P 02 51 16.5 -0.1**
baz=76,SNR=50
L17A Cokeville 76.49 47 ⇑P **P 02 51 16.4 -0.4**
baz=76,SNR=25
DUG Dugway 76.52 50 ⇑P **P 02 51 17.0 -0.1**
baz=76,SNR=65
DUG Dugway 76.52 50 *eP* **P 02 51 17.4 +0.3**
DUG pmax pmax
comp=Z,448nm,1.6s,mb6.2
DUG Dugway 76.52 50 *eP* **P 02 51 17.4 +0.4**
comp=Z,448nm,1.6s,mb6.2
ELZG Elazig 76.53 308 *i* P **P 02 51 18.2 +1.1**
Q13A Wheeler Ranch, 76.53 51 ⇑P **P 02 51 17.1 -0.1**
baz=76,SNR=59
R12A Pony Springs, 76.55 52 ⇑P **P 02 51 17.2 0.0**
baz=76,SNR=36
ERBA Erbaa 76.56 311 *i* P **P 02 51 17.8 +0.5**
DECC Green Verdugo 76.57 57 ⇑P **P 02 51 17.5 0.0**
baz=76
U10A Ash Meadows, A 76.60 54 ⇑P **P 02 51 17.5 -0.1**
baz=76,SNR=25
K18A Toltan Ranch, 76.64 46 ⇓P **P 02 51 17.2 -0.5**
baz=76,SNR=18
NOQ North Oquirrh 76.65 49 *eP* **P 02 51 18.3 +0.5**
comp=Z,1μm,1.8s,mb6.5
O15A The Old Anders 76.67 49 ⇓P **P 02 51 18.3 +0.3**
baz=76
BLS5 Blasjo 76.69 339 *eP* **P 02 51 18.1 +0.4**
BLS5 AMb AMB 02 51 20.7
comp=Z,89nm,1.4s,mb5.5
BLS5 Blasjo 76.69 339 *eP* **P 02 51 18.1 +0.4**
comp=Z,89nm,1.4s,mb5.5
PASC Pasadena Art C 76.72 57 *eP* **P 02 51 19.6 +1.3**
comp=Z,2μm,1.9s,mb6.7
P14A Drum Mountains 76.73 50 ⇑P **P 02 51 18.0 -0.3**
baz=76,SNR=52
KVT Kavak 76.74 312 *eP* **P 02 51 19.4 +1.2**
MWC Mount Wilson 76.77 57 *eP* **P 02 51 19.6 +1.0**
MWC pmax pmax
comp=Z,448nm,1.7s,mb6.1
MWC Mount Wilson 76.77 57 *eP* **P 02 51 19.6 +1.0**
comp=Z,448nm,1.7s,mb6.1
T11A Corn Creek, Al 76.82 53 ⇑P **P 02 51 18.6 -0.2**
baz=77,SNR=60
S12A Delamar Landin 76.83 53 ⇑P **P 02 51 18.6 -0.3**
baz=77,SNR=15
BW06 Boulder Array 76.83 46 ⇑P **P 02 51 18.4 -0.3**
baz=77,SNR=66
BW06 Boulder Array 76.83 46 *eP* **P 02 51 18.4 -0.4**
comp=Z,161nm,1.3s,mb5.8
BW06 LR LR
comp=Z,54μm,22.0s,MS6.8
PDAR Pinedale Array 76.83 46 P **P 02 51 18.5 -0.3**
comp=Z,22nm,0.7s,mb5.2,baz=276,slow=1.3,SNR=106
PDAR LR LR 03 21 26.8
comp=Z,41μm,21.2s,MS6.7,baz=337,slow=33
SCER sogukcermik 76.84 310 *i* P **P 02 51 19.9 +1.0**
DIKM Dikmen 76.85 313 *eP* **P 02 51 19.8 +0.9**
CTU Camp Tracy 76.85 49 *eP* **P 02 51 19.7 +0.8**
comp=Z,1μm,2.1s,mb6.4
SVSK Karacayir 76.88 310 *eP* **P 02 51 20.4 +1.3**
TOKT Tokat 76.91 311 *eP* **P 02 51 20.5 +1.3**
FMP Fort Macarthur 76.91 58 ⇑P **P 02 51 19.2 -0.2**
baz=77
N16A Rees Ranch, Co 76.91 48 ⇑P **P 02 51 19.1 -0.2**
baz=77,SNR=8.8
KIS Kishinev 76.94 320 ⇑*iP* **P 02 51 18.0 -1.3**
comp=Z,3μm,3.0s
KIS Kishinev 76.94 320 *i* PP PP 02 54 20.0 +7.9
comp=Z,15μm,18.0s
KIS Kishinev 76.94 320 *i* PPP 02 56 16.0
KIS *i* S S 03 01 08.0 +2.6
comp=Z,16μm,18.0s
KIS *i* SS SS 03 05 00.0 -61
KIS *i* SSS 03 09 00.0
KIS LRM 03 28 20.0
comp=Z,400μm,16.0s
KIS Kishinev 76.94 320 ⇑*iP* **P 02 51 18.0 -1.3**
KIS *i* 02 54 20.0
KIS *i* S S 03 01 08.0 +2.6
KIS pmax pmax
comp=Z,3μm,3.0s
KIS pmax pmax
comp=N,600nm,2.0s
KIS MLR MLR
comp=E,354μm,16.0s,MS7.9
KIS MLR MLR
comp=Z,660μm,16.0s,MS8.1
KIS MLR MLR
comp=N,375μm,17.0s,MS7.9
KIS MLR MLR
comp=Z,440μm,16.0s
KIS Kishinev 76.94 320 ⇑P **P 02 51 20.7 +1.4**
KIS Kishinev 76.94 320 ⇑*iP* **P 02 51 20.7 +1.4**
SHOC Shoshone 76.94 55 ⇑P **P 02 51 19.0 -0.6**
baz=77
GSC Goldstone 76.96 56 ⇑P **P 02 51 19.8 +0.2**
baz=77,SNR=22
GSC Goldstone 76.96 56 *eP* **P 02 51 20.4 +0.8**
GSC pmax pmax
comp=Z,342nm,1.8s,mb6.0
GSC Goldstone 76.96 56 *eP* **P 02 51 20.4 +0.8**
comp=Z,342nm,1.8s,mb6.0
Q14A Sevier Lake (B 76.97 51 ⇓P **P 02 51 19.8 +0.1**
baz=77,SNR=124
MYA Malataya 76.98 308 *eP* **P 02 51 21.4 +1.7**
DARE Darende-Malaty 76.98 309 *eP* **P 02 51 23.9 +4.1**
WAR Warsaw 76.99 327 *eP* **P 02 51 20.2 +0.7**
WAR *ep*P pP 02 51 26.1 -2.4
WAR *eS* S 03 01 06.8 +1.0
WAR *e*SKS 03 01 24.8
WAR LMZ 03 28 09.4
comp=Z,264μm,17.1s
M17A Scullys Gap (B 77.00 47 ⇑P **P 02 51 19.5 -0.3**
baz=77,SNR=34
CIS Catalina Islan 77.02 58 ⇓P **P 02 51 20.0 0.0**
baz=77
BFSC Mount Baldy Ra 77.03 57 ⇑P **P 02 51 20.1 0.0**
baz=77,SNR=17
R13A O'Grain Ranch, 77.04 52 ⇑P **P 02 51 19.5 -0.5**
baz=77,SNR=29
RRX Edison Barstow 77.08 56 ⇓P **P 02 51 20.6 +0.3**
baz=77
JLU Joanelle 77.08 49 ⇑*eP* **P 02 51 20.8 +0.6**
comp=Z,643nm,1.9s,mb6.2
L18A Fontenelle, Gr 77.09 47 ⇑P **P 02 51 19.9 -0.4**
baz=77,SNR=45
NLU North Lily Min 77.11 49 *eP* **P 02 51 20.7 +0.3**
comp=Z,470nm,1.7s,mb6.1
SCI San Clemente I 77.18 58 ⇑P **P 02 51 21.5 +0.6**
baz=77
K19A Absolon Red Bu 77.20 46 ⇑P **P 02 51 20.1 -0.8**
baz=77,SNR=37
U11A Corn Creek 77.21 54 ⇓P **P 02 51 21.2 +0.2**
baz=77
P15A Leamington 77.22 50 ⇓P **P 02 51 20.5 -0.6**
baz=77,SNR=14
BORG Borgarnes 77.23 353 P **P 02 51 23.9 +3.3**
comp=Z,770nm,1.2s,mb6.5,SNR=10.0
BORG Borgarnes 77.23 353 *eP* **P 02 51 23.0 +2.4**
BORG pmax pmax
comp=Z,181nm,1.1s
BORG Borgarnes 77.23 353 *eP* **P 02 51 23.0 +2.4**
comp=Z,181nm,1.1s,mb5.9
N17A Moffit Pass 77.24 48 ⇓P **P 02 51 21.0 -0.1**
baz=77,SNR=34
BYBT Boyabat 77.25 313 *eP* **P 02 51 21.6 +0.5**
URFA Urfa 77.27 307 *eP* **P 02 51 22.2 +0.8**
O16A Springville 77.30 49 ⇑P **P 02 51 21.4 -0.1**
baz=77,SNR=24
AKCD Akcadag 77.31 309 *i* P **P 02 51 22.7 +1.1**
BSD Bornholm Skovb 77.31 332 ⇑*iP* **P 02 51 21.1 -0.2**
BSD Bornholm Skovb 77.31 332 P **P 02 51 21.6 +0.3**
BSD Bornholm Skovb 77.31 332 ⇑*iP* **P 02 51 21.1 -0.2**
BSD Bornholm Skovb 77.31 332 *i* S S 03 01 06.8 -2.4
BSD Bornholm Skovb 77.31 332 *i* S S 03 01 06.8 -2.4
DAU Daniels Canyon 77.32 49 *eP* **P 02 51 22.6 +1.0**
DAU pmax pmax
comp=Z,295nm,1.5s,mb6.0
DAU Daniels Canyon 77.32 49 *eP* **P 02 51 22.6 +1.1**
comp=Z,294nm,1.5s,mb6.0
MPU Maple Canyon 77.34 49 *eP* **P 02 51 23.0 +1.3**
comp=Z,828nm,1.8s,mb6.4
LVV L'vov 77.36 324 *eP* **P 02 51 21.9 +0.3**
LVV *i* 02 54 19.0
LVV *i* PPP 02 56 10.8
LVV *i* S S 03 01 10.2 +0.3
LVV *i* PS 03 01 55.2
LVV pmax pmax
comp=Z,900nm,1.0s,mb6.7
LVV MLR MLR
comp=N,135μm,16.0s
LVV MLR MLR
comp=Z,200μm,16.0s,MS7.5
L19A Farson 77.37 46 ⇓P **P 02 51 21.7 -0.2**
baz=77,SNR=24
BZK Bozkurt 77.38 313 *eP* **P 02 51 22.6 +0.7**
M18A Lyman 77.38 47 ⇑P **P 02 51 21.6 -0.3**
baz=77,SNR=17
IAS Iasi 77.45 321 ⇑P **P 02 51 23.3 +1.1**
IAS Iasi 77.45 321 ⇑*iP* **P 02 51 23.3 +1.1**
T12A Moapa 77.45 53 ⇑P **P 02 51 22.6 +0.2**
baz=77
TUQ Turquoise Moun 77.45 55 ⇑P **P 02 51 22.3 -0.1**
baz=77,SNR=95
S13A Holt Ranch, En 77.47 52 ⇑P **P 02 51 22.4 -0.1**
baz=77,SNR=62
BBRC Big Bear Solar 77.50 56 ⇓P **P 02 51 23.1 +0.4**
baz=77
Q15A Fillmore 77.52 50 ⇓P **P 02 51 22.4 -0.3**
baz=77,SNR=27
V11A Goodsprings 77.53 54 ⇑P **P 02 51 22.2 -0.6**
baz=77
HEC Hector,Ludlow 77.55 56 ⇓P **P 02 51 22.7 -0.3**
baz=77,SNR=16
R14A James Farms, M 77.55 51 ⇓P **P 02 51 22.7 -0.2**
baz=77
P16A Fountain Green 77.58 49 ⇑P **P 02 51 23.6 +0.6**
baz=77
LEOM Leova 77.58 320 P **P 02 51 23.1 +0.2**
LEOM Leova 77.58 320 ⇓*iP* **P 02 51 23.5 +0.6**
ATAB Bozova 77.59 308 *i* P **P 02 51 24.0 +0.8**
K20A Yellowstone Ra 77.59 45 ⇓P **P 02 51 22.5 -0.6**
baz=77,SNR=27
ARUT Antelope Range 77.61 52 *eP* **P 02 51 24.9 +1.7**
ARUT pmax pmax
comp=Z,406nm,1.7s,mb6.1
ARUT Antelope Range 77.61 52 *eP* **P 02 51 24.9 +1.7**
comp=Z,406nm,1.7s,mb6.1
SOFL Sornfelli, Far 77.66 346 P **P 02 51 22.9 -0.2**
SOFL AMb AMB 02 51 31.9
comp=Z,455nm,1.4s,mb6.2
SOFL AMS AMS 03 27 39.5
comp=Z,77μm,19.6s
SOFL Sornfelli, Far 77.66 346 *eP* **P 02 51 22.9 -0.2**
SOFL AMb AMB 02 51 31.9
comp=Z,455nm,1.4s,mb6.2
SOFL AMS AMS 03 27 39.5
comp=Z,77μm,19.6s,MS7.0
MURC Murrieta 77.71 57 ⇑P **P 02 51 24.2 +0.3**
baz=78,SNR=11
U12A Valley of Fire 77.74 53 ⇑P **P 02 51 24.2 +0.2**
baz=78,SNR=12
O17A Robinson Place 77.76 49 ⇑P **P 02 51 24.5 +0.4**
baz=78,SNR=43
CTKT Corum 77.77 312 *i* P **P 02 51 25.2 +1.1**
COP Copenhagen 77.77 334 ⇑*iP* **P 02 51 24.1 +0.3**
COP *eS* S 03 01 12.2 -1.9
COP pmax pmax
comp=Z,120nm,1.0s,mb5.8
COP MLR MLR
comp=Z,120μm,18.0s,MS7.3
COP Copenhagen 77.77 334 ⇑*iP* **P 02 51 24.1 +0.3**
COP *eS* S 03 01 12.2 -1.9
COP Copenhagen 77.77 334 ⇑*iP* **P 02 51 24.1 +0.3**
comp=Z,125nm,1.0s,mb5.8
COP *eS* S 03 01 12.2 -1.9
COP
comp=Z,125μm,18.0s
T13A Saint George 77.78 53 ⇑P **P 02 51 24.4 +0.1**
baz=78,SNR=52
S14A Cedar City 77.79 52 ⇑P **P 02 51 24.7 +0.4**
baz=78,SNR=14
CCUT Cedar City 77.80 52 *eP* **P 02 51 24.3 0.0**
comp=Z,340nm,1.6s,mb6.0
GKP Gorka Klasztor 77.81 330 *eP* **P 02 51 24.3 +0.3**
GKP *e*PcP PcP 02 51 29.9 -4.0
GKP *eS* S 03 01 20.6 +5.9
GKP *e*SKS 03 01 33.7
GKP LMZ 03 28 18.3
comp=Z,467μm,19.5s
GKP Gorka Klasztor 77.81 330 P **P 02 51 24.4 +0.3**
SARI SarD1z-Kayseri 77.83 310 *eP* **P 02 51 27.8 +3.3**
M19A Rock Springs 77.86 47 ⇑P **P 02 51 24.6 0.0**
baz=78
N18A Larsen Ranch, 77.90 47 ⇓P **P 02 51 24.0 -0.8**
baz=78,SNR=26
MVU Marysvale 77.92 51 PFAKE 02 51 40.0 +15
MVU LR LR
comp=Z,42μm,21.0s,MS6.7
MSU Marysvale 77.94 51 *eP* **P 02 51 25.9 +0.8**
MSU pmax pmax
comp=Z,899nm,1.4s,mb6.5
MSU Marysvale 77.94 51 *eP* **P 02 51 25.9 +0.8**
comp=Z,899nm,1.4s,mb6.5
TOS Tosya 77.95 313 *eP* **P 02 51 26.4 +1.3**
V12A Nelson 77.97 54 ⇑P **P 02 51 25.5 +0.2**
baz=78,SNR=28
BALT Daday 78.01 313 *i* P **P 02 51 26.0 +0.6**
L20A Wamsutter 78.01 46 ⇓P **P 02 51 25.3 -0.1**
baz=78,SNR=30
PINB Pinarbasi 78.02 310 *i* P **P 02 51 26.0 +0.5**
GMRC Granite Mounta 78.02 55 ⇑P **P 02 51 25.5 -0.1**
baz=78,SNR=20
OUZ Omahuta 78.03 154 *eP* **P 02 51 25.8 +0.6**
comp=Z,492nm,2.0s,mb6.1
TMUT Trail Mountain 78.04 49 *eP* **P 02 51 26.6 +0.9**
comp=Z,570nm,1.9s,mb6.2
RBK Rabkut 78.04 283 P **P 02 51 25.9 -0.1**
SNR=9.7
R15A Junction 78.07 51 ⇓P **P 02 51 26.7 +0.9**
baz=78,SNR=26
KWP Kalwaria Pacla 78.11 325 *eP* **P 02 51 26.6 +0.8**
KWP *ep*P pP 02 51 32.4 -2.4
KWP *eS* S 03 01 19.5 +1.5
KWP *e*SKS 03 01 35.7
KWP LMZ 03 29 23.6
comp=Z,224μm,20.9s
KWP Kalwaria Pacla 78.11 325 ⇑*iP* **P 02 51 26.4 +0.6**
KWP pmax pmax
comp=Z,1μm,1.2s,mb6.6
KWP MLR MLR
comp=Z,236μm,20.0s,MS7.5
KWP Kalwaria Pacla 78.11 325 ⇑*iP* **P 02 51 26.4 +0.6**
comp=Z,1μm,1.2s,mb6.6
KWP LR LR
comp=Z,236μm,20.0s,MS7.5
KWP Kalwaria Pacla 78.11 325 ⇓*iP* **P 02 51 26.1 +0.3**
U13A Pakoon Wash 78.12 53 ⇑P **P 02 51 25.9 -0.2**
baz=78,SNR=84
ILGA Ilgaz 78.12 313 *i* P **P 02 51 27.7 +1.6**
LRW Lerwick 78.12 342 P **P 02 51 25.7 0.0**
LRW AMb AMB 02 51 27.6
comp=Z,321nm,2.2s,mb5.9
LRW AMS AMS 03 30 12.7
LRW Lerwick 78.12 342 ⇑*iP* **P 02 51 25.7 0.0**
LRW AMb AMB 02 51 27.6
comp=Z,321nm,2.2s,mb5.9
LRW AMS AMS 03 30 12.7
comp=Z,107μm,18.1s,MS7.2
CORM Corum 78.14 312 *eP* **P 02 51 27.4 +1.3**
O18A Roosevelt 78.15 48 ⇑P **P 02 51 26.2 0.0**
baz=78,SNR=35
LDFC Landfair 78.20 55 *eP* **P 02 51 28.1 +1.6**
comp=Z,225nm,1.2s,mb6.0
109C Camp Elliot, M 78.20 58 ⇓P **P 02 51 26.7 0.0**
baz=78
PFO Pinyon Flat Ob 78.20 57 P **P 02 51 28.6 +2.0**
comp=Z,539nm,1.5s,mb6.3,SNR=11
PFO Pinyon Flat Ob 78.20 57 ⇓P **P 02 51 26.4 -0.2**
baz=78,SNR=16
PFO Pinyon Flat Ob 78.20 57 *eP* **P 02 51 27.7 +1.1**
PFO pmax pmax
comp=Z,505nm,1.8s,mb6.2
PFO MLR MLR
comp=Z,158μm,22.0s,MS7.3
PFO Pinyon Flat Ob 78.20 57 *eP* **P 02 51 27.7 +1.0**
comp=Z,505nm,1.8s,mb6.2
PFO LR LR
comp=Z,158μm,22.0s,MS7.3
P17A Butcher Ranch, 78.21 49 ⇓P **P 02 51 26.0 -0.6**
baz=78,SNR=12
W12A Cal Nev Ari 78.22 55 ⇑P **P 02 51 27.0 +0.3**
baz=78
N19A John Jarvie Ra 78.24 47 ⇓P **P 02 51 25.8 -0.9**

baz=78,SNR=25
BNN Bunyan 78.25 310 *e*P sP 02 51 42.5 +3.4
BELC Belle Mtn. Jos 78.27 56 ⇑P **P 02 51 27.0 0.0**
baz=78,SNR=12
MUD Monsted U'grnd 78.27 336 ⇑*i*P **P 02 51 26.9 +0.3**
MUD pmax pmax
comp=Z,71nm,1.1s,mb5.5
MUD Monsted U'grnd 78.27 336 ⇑*i*P **P 02 51 26.9 +0.3**
comp=Z,71nm,1.1s,mb5.5
MUD Monsted U'grnd 78.27 336 *e*S S 03 01 18.2 -1.3
MUD Monsted U'grnd 78.27 336 *e*S S 03 01 18.2 -1.3
T14A Hurricane 78.28 52 ⇓P **P 02 51 27.2 +0.2**
baz=78,SNR=17
Q16A Castle Valley 78.30 50 ⇑P **P 02 51 26.7 -0.3**
baz=78,SNR=27
BUR08 Bucovina Ar. S 78.32 322 ⇑*i*P **P 02 51 27.3 +0.3**
BURAR Bucovina Array 78.33 322 ⇑P **P 02 51 27.4 +0.3**
BURAR Bucovina Array 78.33 322 ⇑*i*P **P 02 51 27.4 +0.4**
RGN Rugen 78.34 332 ⇑*i*P **P 02 51 27.4 +0.4**
comp=Z,604nm,1.3s,mb6.4
S15A Panguitch 78.35 51 ⇑P **P 02 51 27.2 -0.1**
baz=78,SNR=13
TESR 78.37 321 ⇓P **P 02 51 27.9 +0.6**
TESR 78.37 321 ⇓*i*P **P 02 51 27.9 +0.6**
P18A Preston Nutter 78.41 49 ⇑P **P 02 51 27.6 -0.1**
baz=78,SNR=42
M20A Sweetwater, Wa 78.43 46 ⇓P **P 02 51 28.0 +0.2**
baz=78,SNR=32
KMRS Kahramanmaras 78.44 308 *e*P **P 02 51 28.9 +1.0**
GAZ Gaziantep 78.45 308 *e*P **P 02 51 29.2 +1.3**
V13A Grand Canyon W 78.45 54 ⇓P **P 02 51 27.8 -0.1**
baz=78,SNR=53
CFR Carcaliu 78.51 319 ⇓P **P 02 51 29.4 +1.3**
CFR Carcaliu 78.51 319 ⇓*i*P **P 02 51 29.4 +1.3**
R16A Teasdale 78.51 50 ⇑P **P 02 51 28.4 +0.2**
baz=78,SNR=89
SRU San Rafael 78.57 49 ⇓P **P 02 51 28.3 -0.3**
baz=78,SNR=101
SRU San Rafael 78.57 49 *e*P **P 02 51 28.6 0.0**
SRU pmax pmax
comp=Z,182nm,1.0s,mb6.0
SRU San Rafael 78.57 49 *e*P **P 02 51 28.6 0.0**
comp=Z,182nm,1.0s,mb6.0
L21A Rawlins 78.59 45 ⇑P **P 02 51 28.4 -0.2**
baz=78,SNR=44
SAFT Safranbolu 78.60 314 *e*P **P 02 51 29.6 +1.0**
PETR 78.61 320 ⇑P **P 02 51 30.0 +1.4**
PETR 78.61 320 ⇑*i*P **P 02 51 30.0 +1.3**
U14A Mt Trumbull 78.61 53 ⇑P **P 02 51 28.8 0.0**
baz=78,SNR=48
BAR Barrett 78.62 58 *e*P **P 02 51 29.8 +0.9**
comp=Z,738nm,2.0s,mb6.3
ELDT Eldivan 78.65 313 *i*P **P 02 51 29.3 +0.3**
O19A Miners Draw (B 78.65 48 ⇓P **P 02 51 28.8 -0.2**
baz=78,SNR=14
MONP Monument Peak 78.66 57 ⇓P **P 02 51 29.2 0.0**
baz=78,SNR=13
NEE2 Needles Airpor 78.71 55 ⇑P **P 02 51 29.4 +0.1**
baz=78
ULM Lac du Bonnet 78.71 34 P **P 02 51 28.2 -0.9**
comp=Z,48nm,0.8s,mb5.5,baz=309,slow=6.1,SNR=26
ULM LR LR 03 30 27.7
comp=Z,52μm,18.4s,MS6.9,baz=216,slow=39
ULM Lac du Bonnet 78.71 34 ⇑*i*P **P 02 51 28.1 -1.0**
comp=Z,230nm,1.5s,mb5.9
ULM LR LR
comp=Z,85μm,22.0s,MS7.0
IRM Iron Mountain 78.73 56 ⇑P **P 02 51 29.5 0.0**
baz=78,SNR=27
ANDN Andirin 78.73 309 *i*P **P 02 51 29.7 +0.2**
T15A Red Dirt Ranch 78.74 52 ⇑P **P 02 51 29.3 -0.2**
baz=78,SNR=19
VRI Vrincioaia 78.77 320 P **P 02 51 30.3 +0.8**
VRI Vrincioaia 78.77 320 ⇓P **P 02 51 30.6 +1.0**
VRI Vrincioaia 78.77 320 ⇓*i*P **P 02 51 30.6 +1.1**
KUZU Kuzuini 78.78 308 *i*P **P 02 51 30.6 +0.8**
DGAR Diego Garcia 78.79 252 PFAKE 02 51 40.0 +10
DGAR LR LR
comp=Z,46μm,22.0s,MS6.8
S16A Weppner Ranch, 78.79 51 ⇓P **P 02 51 30.3 +0.5**
baz=79,SNR=60
N20A Spence Gulch, 78.81 47 ⇑P **P 02 51 30.1 +0.3**
baz=79,SNR=79
Q18A Rafter H Ranch 78.81 49 ⇑P **P 02 51 29.5 -0.4**
baz=79,SNR=30
PLOR Plostina 78.82 320 P **P 02 51 30.7 +0.9**
PLOR Plostina 78.82 320 ⇓*i*P **P 02 51 31.2 +1.4**
M21A Separation Pea 78.83 46 ⇑P **P 02 51 29.7 -0.2**
baz=79,SNR=23
ABTO Aybut 78.83 283 P **P 02 51 30.1 -0.3**
SNR=12
BC3 Big Chuckawall 78.84 56 ⇓P **P 02 51 29.9 -0.3**
baz=79,SNR=19
TIRR Tirgusor 78.85 318 ⇑*i*P **P 02 51 29.9 -0.1**
TIRR pmax pmax
comp=Z,284nm,1.3s,mb6.0
TIRR Tirgusor 78.85 318 ⇑*i*P **P 02 51 29.9 -0.1**
comp=Z,284nm,1.3s,mb6.0
TIRR Tirgusor 78.85 318 ⇑*i*P **P 02 51 30.3 +0.3**
RWWY Rawlins 78.86 46 *e*P **P 02 51 30.3 +0.2**
comp=Z,174nm,1.2s,mb5.9
AVNT Avonos 78.89 311 *i*P **P 02 51 30.6 +0.2**
R17A Hanksville Air 78.90 50 ⇓P **P 02 51 30.0 -0.4**
baz=79
STHS Stebnicka Huta 78.93 325 *e*P **P 02 51 30.8 +0.5**
STHS pmax pmax
comp=Z,145nm,1.2s,mb5.8
STHS Stebnicka Huta 78.93 325 *e*P **P 02 51 30.8 +0.5**
comp=Z,145nm,1.2s,mb5.8
STHS *e*PP PP 02 54 40.2 +12
STHS *e*S S 03 01 25.6 -1.2
STHS Stebnicka Huta 78.93 325 *e*P **P 02 51 30.8 +0.5**
STHS *e*PP PP 02 54 40.2 +12
STHS *e*S S 03 01 25.6 -1.2
GRER 78.98 320 ⇓P **P 02 51 32.8 +2.1**
GRER 78.98 320 ⇓*i*P **P 02 51 32.8 +2.1**
W13A Hualapai Mount 78.98 54 ⇓P **P 02 51 30.8 -0.1**
baz=79,SNR=26
OJC Ojcow 78.99 326 ⇑*i*P **P 02 51 28.3 -2.3**
OJC *e* 02 54 26.2
RSSD Black Hills 79.00 42 ⇑*i*P **P 02 51 30.7 -0.1**
RSSD pmax pmax
comp=Z,54nm,0.8s,mb5.5
RSSD MLR MLR
comp=Z,51μm,21.0s,MS6.8
RSSD Black Hills 79.00 42 ⇑*i*P **P 02 51 30.7 -0.2**
comp=Z,54nm,0.8s,mb5.5
RSSD LR LR
comp=Z,51μm,21.0s,MS6.8
UZH Uzhgorod 79.01 324 *e*P **P 02 51 30.7 -0.1**
UZH *e* 02 54 35.5
UZH *e*S S 03 01 23.7 -4.0
UZH MLR MLR
comp=N,353μm,16.0s,MS7.8
UZH MLR MLR
comp=E,105μm,16.0s,MS7.8
UZH MLR MLR
comp=Z,212μm,16.0s,MS7.6
DVTC Desert V Tower 79.02 57 ⇓P **P 02 51 31.4 +0.3**
baz=79,SNR=14
BR131 Keskin Array S 79.02 312 ⇑*i*P **P 02 51 31.0 0.0**
comp=Z,193nm,1.2s,mb5.9
BR131 LR LR
comp=Z,76μm,19.0s,MS7.0
BRTR Keskin Array B 79.02 312 P **P 02 51 31.2 +0.2**
comp=Z,212nm,1.1s,mb6.0,baz=96,slow=3.5,SNR=86
BRTR LR LR 03 31 12.4
comp=Z,86μm,20.1s,MS7.1,baz=235,slow=39
BRTR Keskin Array B 79.02 312 P **P 02 51 31.2 +0.2**
BRTR pmax pmax
comp=Z,212nm,1.2s
BRTR MLR MLR
comp=Z,86μm,20.1s
SWSC Sam W. Stewart 79.05 57 ⇑P **P 02 51 31.2 -0.1**
baz=79,SNR=22
L22A Ellis Ranch, M 79.08 45 ⇑P **P 02 51 31.4 +0.1**
baz=79,SNR=33
KOZT Kozan 79.12 309 *e*P **P 02 51 32.3 +0.8**
BMR Baia Mare 79.12 323 ⇑P **P 02 51 32.2 +0.8**
BMR Baia Mare 79.12 323 ⇑*i*P **P 02 51 32.2 +0.8**
CVD Cernavoda 79.15 318 ⇑P **P 02 51 33.1 +1.5**
CVD Cernavoda 79.15 318 ⇑*i*P **P 02 51 33.1 +1.5**
V14A Boquillas Ranc 79.15 53 ⇑P **P 02 51 32.0 +0.2**
baz=79,SNR=97
P19A Cripple Cowboy 79.16 48 ⇑P **P 02 51 31.8 0.0**
baz=79,SNR=69
U15A North Rim 79.17 52 ⇑P **P 02 51 32.0 +0.1**
baz=79,SNR=63
CRVS Cervenica-Dubn 79.20 325 *e*P **P 02 51 31.6 -0.2**
CRVS *e*S S 03 01 26.8 -2.9
CRVS Cervenica-Dubn 79.20 325 *e*P **P 02 51 31.6 -0.2**
CRVS *e*S S 03 01 26.8 -2.9
CRVS *e*SS SS 03 06 56.4 +21
CRVS Cervenica-Dubn 79.20 325 *e*P **P 02 51 31.6 -0.2**
CRVS *e*S S 03 01 26.8 -2.9
CRVS *e*SS SS 03 06 56.4 +21
TRPA Tarpa 79.25 324 ⇓*i*P **P 02 51 33.3 +1.2**
KDZE Karadeniz Ereo 79.26 314 *e*P **P 02 51 30.8 -1.5**
O20A White River Ci 79.27 47 ⇑P **P 02 51 32.0 -0.4**
baz=79,SNR=27
N21A Black Mountain 79.29 47 ⇓P **P 02 51 32.0 -0.4**
baz=79,SNR=25
PDMCI Parker Dam,Lak 79.31 55 ⇑P **P 02 51 32.5 -0.1**
baz=79,SNR=21
T16A Glen Canyon Da 79.31 51 ⇑P **P 02 51 32.0 -0.7**
baz=79
AMRR Amara 79.31 319 ⇑P **P 02 51 34.5 +1.9**
AMRR Amara 79.31 319 ⇑*i*P **P 02 51 34.5 +2.0**
X13A Yucca 79.33 55 ⇓P **P 02 51 32.7 -0.1**
baz=79,SNR=51
S17A Black Ridge (B 79.34 51 ⇓P **P 02 51 32.0 -0.8**
baz=79,SNR=60
NIE Niedzica 79.35 326 *e*P **P 02 51 33.5 +0.9**
DOPR Dopca 79.38 321 ⇓*i*P **P 02 51 34.8 +1.9**
SGKT Sivrigoynuk 79.39 313 *i*P **P 02 51 32.6 -0.4**
R18A Canyonlands Na 79.41 50 ⇑P **P 02 51 32.8 -0.4**
baz=79,SNR=70
W14A Seligman 79.42 54 ⇓P **P 02 51 32.8 -0.5**
baz=79,SNR=66
LOD Lodumlu 79.43 312 *e*P **P 02 51 34.1 +0.8**
Q19A Hogan Spring (79.43 49 ⇑P **P 02 51 32.8 -0.5**
baz=79,SNR=12
MLR Muntele Rosu 79.43 320 P **P 02 51 33.8 +0.7**
MLR Muntele Rosu 79.43 320 ⇑P **P 02 51 33.9 +0.7**
MLR Muntele Rosu 79.43 320 ⇑*i*P **P 02 51 33.9 +0.8**
BBAL Bala 79.44 312 *i*P **P 02 51 33.9 +0.5**
COBT Iskenderun 79.45 308 *i*P **P 02 51 33.9 +0.4**
CEYT Ceyhan 79.46 309 *e*P **P 02 51 34.8 +1.3**
PSN Preselentsi 79.49 318 P **P 02 51 33.3 -0.2**
P20A De Beque 79.60 48 ⇓P **P 02 51 34.5 +0.4**
baz=79
GLA Glamis 79.62 56 ⇓P **P 02 51 34.5 0.0**
baz=79,SNR=20
GLA Glamis 79.62 56 *e*P **P 02 51 35.1 +0.7**
GLA pmax pmax
comp=Z,512nm,1.6s,mb6.2
GLA Glamis 79.62 56 *e*P **P 02 51 35.1 +0.7**
comp=Z,512nm,1.6s,mb6.2
V15A Kaibab Nationa 79.62 53 ⇓P **P 02 51 35.0 +0.6**
baz=79,SNR=50
YURE YUREGIR 79.65 309 *i*P **P 02 51 35.1 +0.6**
O21A Pagoda 79.67 47 ⇑P **P 02 51 34.9 +0.4**
baz=79
MOO Moorlands 79.73 176 *e*P **P 02 51 41.6 +7.1**
MOO *e*S S 03 01 34.2 -0.7
KARA Karaisali 79.73 309 *e*P **P 02 51 35.8 +0.9**
T17A Navajo Res., N 79.74 51 ⇑P **P 02 51 34.7 -0.3**
baz=80,SNR=40
RUE Ruedersdorf 79.77 331 ⇑*i*P **P 02 51 35.0 +0.1**
comp=Z,917nm,1.8s,mb6.4
HTY Hatay 79.78 308 *e*P **P 02 51 36.8 +1.6**
RAC Raciborz 79.79 327 *e*P **P 02 51 35.9 +0.9**
RAC *e* pP 02 51 43.8 -0.2
RAC *e* 02 54 37.6
RAC *e*S S 03 01 37.0 +1.1
RAC MLR MLR
comp=E,186μm,18.0s,MS7.6
RAC MLR MLR
comp=Z,244μm,18.0s,MS7.6
RAC MLR MLR
comp=N,162μm,17.0s,MS7.6
RAC Raciborz 79.79 327 *e*P **P 02 51 35.9 +0.9**
RAC *e*PcP PcP 02 51 43.8 +1.2
RAC *e*PP PP 02 54 37.6 +1.9
RAC *e*S S 03 01 37.0 +1.1
S18A Hurst Farm, Bl 79.80 50 ⇑P **P 02 51 34.9 -0.3**
baz=80,SNR=98
Y13A Salome 79.81 55 ⇓P **P 02 51 35.4 0.0**
baz=80,SNR=32
SULR 79.83 319 ⇑P **P 02 51 36.8 +1.5**
SULR 79.83 319 ⇑*i*P **P 02 51 36.8 +1.5**
YAYL Yayladag 79.85 308 *i*P **P 02 51 36.3 +0.7**
R19A Curley Farm, L 79.86 49 ⇓P **P 02 51 35.6 0.0**
baz=80,SNR=43
N22A Wattenberg Ran 79.87 46 ⇑P **P 02 51 35.0 -0.6**
baz=80,SNR=29
GULE Gulek 79.89 309 *i*P **P 02 51 36.7 +0.9**
BSEG Bad Segeberg 79.91 333 *e*P **P 02 51 35.7 +0.1**
comp=Z,357nm,1.2s,mb6.2
BSEG *e*S S 03 01 39.2 +2.2
BSEG *e*SS SS 03 06 37.9 -7.5
RAR Rarotonga 79.92 127 PFAKE 02 51 50.0 +14
RAR LR LR
comp=Z,113μm,20.0s,MS7.2
VOIR 79.92 321 ⇑*i*P **P 02 51 36.3 +0.5**
KECS Kecovo 79.95 325 *e*P **P 02 51 36.2 +0.3**
KECS *e* 02 54 34.7
KECS *e*S S 03 01 34.6 -3.0
KECS Kecovo 79.95 325 *e*P **P 02 51 36.2 +0.3**
KECS *e*PP PP 02 54 34.6 -2.5
KECS *e*S S 03 01 34.6 -3.0
MDU Mudurnu 79.95 314 *e*P **P 02 51 36.7 +0.6**
W15A Williams 79.97 53 ⇑P **P 02 51 35.7 -0.6**
baz=80,SNR=37
KRTS Karatas 79.97 309 *e*P **P 02 51 37.9 +1.6**
OKC Ostrava-Krasne 79.99 327 ⇑*i*P **P 02 51 36.5 +0.4**
OKC *e*S S 03 01 40.1 +2.1
OKC MLR MLR
comp=Z,292μm,16.7s,MS7.7
OKC Ostrava-Krasne 79.99 327 P **P 02 51 36.6 +0.5**
OKC Ostrava-Krasne 79.99 327 ⇑*i*P **P 02 51 36.5 +0.4**
OKC *e*S S 03 01 40.1 +2.1
OKC AMS AMS 03 30 00.0
comp=Z,292μm,16.7s
PV04 Paradox Valley 80.00 49 *e*P **P 02 51 37.0 +0.6**
Q20A Ridgley Place, 80.01 48 ⇓P **P 02 51 36.4 0.0**
baz=80,SNR=56
X14A Yava 80.01 54 ⇓P **P 02 51 37.0 +0.5**
baz=80,SNR=60
KSP Ksiaz 80.02 329 *e*P **P 02 51 37.0 +0.7**
KSP *e*pP pP 02 51 43.6 -1.7
KSP *e*S S 03 01 39.0 +0.7
KSP *e*SKS 03 01 55.1
KSP LMZ 03 29 47.1
comp=Z,494μm,19.3s
KSP Ksiaz 80.02 329 ⇑*e*P **P 02 51 36.6 +0.4**
KSP *e*PPP 02 56 27.5
KSP *e*S S 03 01 38.2 -0.1
KSP MLR MLR
comp=Z,571μm,19.3s,MS7.9
KSP Ksiaz 80.02 329 P **P 02 51 36.9 +0.7**
SULT Sultanhani-AKS 80.07 311 *e*P **P 02 51 36.9 +0.1**
U16A Tuba City 80.08 52 ⇓P **P 02 51 37.0 +0.2**
baz=80,SNR=82
U17A Shonto 80.08 51 ⇓P **P 02 51 36.6 -0.2**
baz=80,SNR=24
N23A Red Feather La 80.10 46 ⇑P **P 02 51 37.3 +0.4**
baz=80,SNR=56
112A Yuma 80.10 57 ⇓P **P 02 51 37.2 +0.2**
baz=80
PHWY Pilot Hill 80.11 45 ⇑*i*P **P 02 51 36.7 -0.2**
comp=Z,381nm,1.7s,mb6.0
DRGR 80.12 323 ⇑P **P 02 51 37.5 +0.6**
DRGR 80.12 323 ⇑*i*P **P 02 51 37.5 +0.6**
AGMN Agassiz Nation 80.14 35 ⇑*i*P **P 02 51 35.8 -1.1**
comp=Z,208nm,1.4s,mb5.9
AGMN LR LR
comp=Z,83μm,19.0s,MS7.1
ORE Reay 80.15 343 P **P 02 51 37.5 +0.7**
ORE Reay 80.15 343 *e*P **P 02 51 37.5 +0.7**
LIKS Likavka 80.16 326 *e*P **P 02 51 38.0 +1.0**
LIKS Likavka 80.16 326 *e*P **P 02 51 38.0 +1.0**
T18A Mexican Hat 80.22 51 ⇓P **P 02 51 37.1 -0.5**
baz=80,SNR=66
PRD Provadia 80.24 318 P **P 02 51 38.7 +1.1**
O22A Kremmling 80.24 46 ⇓P **P 02 51 37.6 -0.1**
baz=80,SNR=46
Y14A Wickenburg 80.27 55 ⇓P **P 02 51 37.6 -0.3**
baz=80,SNR=44
S19A Harvey Farm, M 80.28 50 ⇓P **P 02 51 37.7 -0.2**
baz=80,SNR=96
MORC Moravsky Berou 80.30 327 ⇓P **P 02 51 38.0 +0.2**
MORC Moravsky Berou 80.30 327 ⇑*i*P **P 02 51 38.0 +0.3**
comp=Z,255nm,1.1s,mb6.1
MORC Moravsky Berou 80.30 327 ⇓*i*P **P 02 51 38.0 +0.2**
Z13A Yuma Proving G 80.30 56 ⇓P **P 02 51 38.0 -0.1**
baz=80,SNR=42
MERS Mersin 80.31 309 *e*P **P 02 51 38.6 +0.5**
WUAZ Wupatki 80.32 53 ⇑P **P 02 51 38.4 +0.2**
baz=80,SNR=69
WUAZ Wupatki 80.32 53 *e*P **P 02 51 38.8 +0.6**
comp=Z,410nm,1.4s,mb6.2
WUAZ LR LR
comp=Z,49μm,22.0s,MS6.8
SPNC Sapanca-Adapaz 80.32 314 *e*P **P 02 51 38.8 +0.7**
PV01 Paradox Valley 80.37 49 *e*P **P 02 51 38.7 +0.3**
comp=Z,48μm,1.7s
GULT Gulveren 80.37 314 *e*P **P 02 51 38.7 +0.4**
DPC Dobruska-Polom 80.38 328 ⇑*i*P **P 02 51 38.9 +0.7**
DPC *e*S S 03 01 44.0 +1.9
DPC MLR MLR
comp=Z,229μm,17.5s,MS7.6
DPC Dobruska-Polom 80.38 328 P **P 02 51 38.5 +0.3**
DPC Dobruska-Polom 80.38 328 ⇑*i*P **P 02 51 38.9 +0.7**
DPC *e*S S 03 01 44.0 +1.9
DPC AMS AMS 03 29 50.0
comp=Z,229μm,17.5s
SILT Sile 80.39 315 *e*P **P 02 51 39.0 +0.6**
UPC Upice 80.39 329 P **P 02 51 38.7 +0.5**
UPC Upice 80.39 329 ⇑*i*P **P 02 51 38.5 +0.3**
X15A Humboldt 80.42 54 ⇓P **P 02 51 38.7 0.0**
baz=80,SNR=97
SVRH Sivrihisar-ESK 80.44 313 *e*P **P 02 51 38.9 +0.1**
R20A Redvale 80.45 49 ⇑P **P 02 51 38.1 -0.7**
baz=80,SNR=23
W16A Flagstaff 80.49 53 ⇓P **P 02 51 38.9 -0.1**
baz=80,SNR=49
113A Mohawk Valley, 80.50 56 ⇓P **P 02 51 39.4 +0.2**
baz=80,SNR=17
Q21A Lamborn Mesa, 80.51 48 ⇓P **P 02 51 39.1 0.0**
baz=80,SNR=43
O23A Lake Granby, G 80.57 46 ⇓P **P 02 51 39.4 0.0**
baz=80,SNR=39
HRT Hereke 80.59 315 *e*P **P 02 51 39.9 +0.4**
KIZT Kizilcal 80.60 312 *e*P **P 02 51 39.9 +0.3**
V17A Tonalea, Kykot 80.62 52 ⇓P **P 02 51 39.9 +0.2**
baz=80
PSZ Piszkesteto 80.63 325 ⇑*i*P pP 02 51 48.5 -0.1
PSZ pmax pmax
comp=Z,566nm,1.3s,mb6.3
PSZ MLR MLR
comp=Z,275μm,19.0s,MS7.6
PSZ Piszkesteto 80.63 325 ⇑*i*P pP 02 51 48.5 -0.1
comp=Z,566nm,1.3s
PSZ LR LR
comp=Z,275μm,19.0s,MS7.6
PSZ Piszkesteto 80.63 325 ⇑*i*P pP 02 51 49.0 +0.4
SMCO Snowmass 80.64 47 ⇑*e*P **P 02 51 40.4 +0.6**
comp=Z,438nm,1.8s,mb6.1
RSC Scourie 80.66 343 P **P 02 51 39.0 -0.5**
RSC Scourie 80.66 343 ⇑*e*P **P 02 51 39.0 -0.5**
KLYT Kilyos 80.66 315 *e*P **P 02 51 40.2 +0.3**
Z14A Wintersburg 80.67 55 ⇑P **P 02 51 39.9 -0.1**
baz=80,SNR=14
DEV Deva 80.68 322 ⇓*i*P **P 02 51 40.5 +0.6**
U18A Rough Rock, Ch 80.68 51 ⇓P **P 02 51 40.0 0.0**
baz=80,SNR=68
VYHS Vyhne 80.69 326 *e*P **P 02 51 39.5 -0.4**
VYHS pmax pmax
comp=Z,944nm,2.8s,mb6.2
VYHS Vyhne 80.69 326 *e*P **P 02 51 39.5 -0.4**
comp=Z,944nm,2.8s,mb6.2
VYHS *e*PP PP 02 54 46.4 +3.2
VYHS *e*S S 03 01 42.5 -2.9
VYHS *e*SS SS 03 06 45.5 -12
VYHS Vyhne 80.69 326 *e*P **P 02 51 39.5 -0.4**
VYHS *e*PP PP 02 54 46.4 +3.2
VYHS *e*S S 03 01 42.5 -2.9
VYHS *e*SS SS 03 06 45.5 -12
Y15A Casa Rosa Ranc 80.69 54 ⇑P **P 02 51 39.9 -0.3**
baz=80,SNR=59
S20A Disappointment 80.70 49 ⇑P **P 02 51 39.8 -0.3**
baz=80
KDHN Kadinhani 80.70 312 *i*P **P 02 51 40.4 +0.2**
N24A Carr 80.75 45 ⇑P **P 02 51 40.6 +0.3**
baz=80
LADK Ladik-KONYA 80.76 311 *e*P **P 02 51 40.7 +0.3**
BORA Eskisehir 80.77 314 *i*P **P 02 51 40.4 -0.1**
ISK Istanbul-Kandi 80.77 315 *e*P **P 02 51 40.6 +0.1**
ESKT Eskisehir 80.78 313 *e*P **P 02 51 40.6 0.0**
ESKT Eskisehir 80.78 313 *i*P **P 02 51 40.3 -0.2**
FKH Fakeheh 80.80 306 *e*P **P 02 51 41.1 +0.4**
MVH1 Achvaich 80.81 343 P **P 02 51 40.5 +0.2**
MVH1 Achvaich 80.81 343 ⇑*e*P **P 02 51 40.5 +0.2**
ADVT Abdulvahap 80.81 314 *e*P **P 02 51 41.2 +0.5**
KOLL Kolacno 80.82 326 *e*P **P 02 51 40.5 -0.1**
KOLL *e*S S 03 01 52.5 +5.8
KOLL Kolacno 80.82 326 *e*P **P 02 51 40.5 -0.1**
KOLL Kolacno 80.82 326 *e*S S 03 01 52.4 +5.7
R21A Cimarron 80.83 48 ⇓P **P 02 51 39.5 -1.3**
baz=81,SNR=30
BGKT Bogazkoy 80.86 315 *e*P **P 02 51 41.1 +0.1**
Q22A Crested Butte, 80.88 48 ⇓P **P 02 51 41.2 +0.1**
baz=81,SNR=57
MCD Coleburn Disti 80.89 342 P **P 02 51 40.8 0.0**
MCD Coleburn Disti 80.89 342 ⇑*i*P **P 02 51 40.8 0.0**
CAVI Cavuskoy 80.91 314 *e*P **P 02 51 41.9 +0.6**
CTYL Yal??k??y-??at 80.93 316 *e*P **P 02 51 41.7 +0.4**
KONT Konya--Tatoy 80.93 311 *e*P **P 02 51 41.7 +0.3**
YLV Yalova 80.93 315 *e*P **P 02 51 40.8 -0.6**
T19A Beclabito 80.94 50 ⇓P **P 02 51 41.2 -0.2**
baz=81,SNR=50
BRG Berggiesshubel 80.96 330 *e*P **P 02 51 41.2 -0.1**
comp=Z,256nm,1.4s,mb6.0
BRG *e*S S 03 01 45.0 -3.1
BRG *e*SS SS 03 06 50.0 -11
BRG Berggiesshubel 80.96 330 ⇑*i*P **P 02 51 41.3 +0.1**
comp=Z,257nm,1.4s,mb6.0
BRG *i* pP 02 51 50.8 +0.5
comp=Z,155nm,1.2s
BRG *i* PP PP 02 54 37.8 -7.5
comp=Z,215nm,1.8s
BRG Berggiesshubel 80.96 330 ⇑*i*P **P 02 51 41.3 0.0**
BRG *i* pP 02 51 50.8 +0.5
BRG S S 03 01 39.0 -9.1
BRG pmax pmax
comp=Z,154nm,1.4s,mb5.7
CTKS Kestanelik-??a 80.97 316 *e*P **P 02 51 41.7 +0.2**
PVCC Panska Ves 80.97 329 ⇑*i*P **P 02 51 41.9 +0.6**
PVCC *e*S S 03 01 50.6 +2.4
PVCC MLR MLR
comp=Z,453μm,20.1s,MS7.8
PVCC Panska Ves 80.97 329 P **P 02 51 41.5 +0.2**
PVCC Panska Ves 80.97 329 ⇑*i*P **P 02 51 41.9 +0.6**
PVCC *e*S S 03 01 50.6 +2.4
PVCC AMS AMS 03 30 00.0
comp=Z,453μm,20.1s
SZH Strazhica 80.97 318 P **P 02 51 41.7 +0.2**
X16A Lo Mia Camp, P 80.97 53 ⇓P **P 02 51 41.3 -0.3**
baz=81,SNR=56
CLL Collm 80.99 331 *e*P **P 02 51 41.0 -0.4**
comp=Z,306nm,1.1s,mb6.1
CLL *e*S S 03 01 44.7 -3.7
CLL *e*SS SS 03 06 50.3 -11
CLL Collm 80.99 331 ⇑*i*P **P 02 51 41.2 -0.2**
CLL *i* pP 02 51 50.1 -0.4
CLL *i* 02 51 54.5
CLL *e*S S 03 01 48.0 -0.4
CLL pmax pmax
comp=Z,308nm,1.1s,mb6.2
CLL MLR MLR
comp=Z,278μm,19.0s,MS7.6
CLL Collm 80.99 331 ⇑*i*P **P 02 51 41.2 -0.2**
comp=Z,308nm,1.1s,mb6.2
CLL *e*Plp 02 51 43.0
comp=Z,26μm,20.2s
CLL *i* sP sP 02 51 50.1 -3.7
CLL *i* pPcP 02 51 54.5
CLL *e* 02 54 36.0
CLL *e*PP PP 02 54 47.0 +1.4
CLL *e*PPP 02 56 48.0
CLL *e*PPPP 02 57 52.0
CLL *e*S S 03 01 48.0 -0.4
comp=N,14μm,18.8s

CLL eS S 03 01 48.0 -0.4
comp=E,49μm,23.0s
CLL eSS SS 03 06 54.0 -7.7
CLL e 03 07 48.0
CLL eSSS 03 10 30.0
CLL eSSSS 03 13 00.0
CLL ePKPPKPdf 03 18 21.0
CLL LmV 03 30 00.0
comp=Z,28μm,19.0s
MVCO Mesa Verde 81.01 50 ⇓P P 02 51 41.4 -0.5
baz=81,SNR=45
MVCO Mesa Verde 81.01 50⇑iP P 02 51 41.8 0.0
comp=Z,454nm,1.5s,mb6.2
MVCO LR LR
comp=Z,55μm,22.0s,MS6.9
W17A Winslow 81.02 53 ⇓P P 02 51 42.1 +0.2
baz=81
ISCO Idaho Springs 81.02 46⇑eP P 02 51 42.3 +0.5
ISCO pmax pmax
comp=Z,363nm,1.7s,mb6.0
ISCO Idaho Springs 81.02 46⇑eP P 02 51 42.3 +0.5
comp=Z,363nm,1.7s,mb6.0
VRAC Vranov 81.06 327 ⇓P P 02 51 42.5 +0.7
VRAC Vranov 81.06 327⇓iP P 02 51 42.5 +0.7
MME1 Meikle Cairn 81.06 342 P P 02 51 40.9 -0.8
MME1 Meikle Cairn 81.06 342⇑eP P 02 51 40.9 -0.8
HWQ Hawqa 81.06 306 eP P 02 51 42.5 +0.3
ELBA Catalca 81.07 316 iP P 02 51 42.1 0.0
GZR Gura Zlata 81.09 322 ⇓P P 02 51 42.6 +0.6
GZR Gura Zlata 81.09 322⇓iP P 02 51 42.6 +0.5
114A Black Gap (USA 81.09 56 ⇑P P 02 51 42.4 +0.1
baz=81,SNR=19
V18A Ganado 81.10 52 ⇓P P 02 51 42.2 -0.2
baz=81,SNR=34
O24A Longmont 81.11 46 ⇓P P 02 51 42.1 -0.2
baz=81,SNR=19
GEMT Gemlik 81.12 315 eP P 02 51 42.6 +0.3
SLVT Silivri 81.14 316 eP P 02 51 43.1 +0.7
NRDL Niedersach Rie 81.14 333 eP P 02 51 41.1 -1.1
comp=Z,768nm,1.9s,mb6.3
NRDL eS S 03 01 44.7 -5.2
NRDL eSS SS 03 06 53.3 -11
P23A Jefferson 81.17 47 ⇓P P 02 51 42.7 +0.1
baz=81,SNR=32
U19A Dine' College, 81.17 51 ⇓P P 02 51 42.9 +0.2
baz=81,SNR=89
JMB Yambol 81.18 318 P P 02 51 43.4 +0.8
JMB Yambol 81.18 318 P P 02 51 43.7 +1.1
N25A Grover 81.20 45 ⇑P P 02 51 42.9 +0.2
baz=81
ARMT Armutlu 81.22 315 eP P 02 51 42.9 0.0
Z15A Gila River Ind 81.22 55 ⇑P P 02 51 43.2 +0.2
baz=81
IKL Isikli 81.23 309 eP P 02 51 43.1 +0.1
RRR Rubha Reidh 81.25 343 P P 02 51 42.1 -0.5
RRR Rubha Reidh 81.25 343⇑eP P 02 51 42.1 -0.5
BOLV Bolvadin 81.25 312 iP P 02 51 43.6 +0.5
MDO Dochfour 81.29 342 P P 02 51 42.9 0.0
MDO Dochfour 81.29 342⇑eP P 02 51 42.9 0.0
Y16A Circle Bar Ran 81.29 54 ⇑P P 02 51 44.0 +0.6
baz=81,SNR=44
SMOL Smolenice 81.30 326 eP P 02 51 43.1 0.0
SMOL Smolenice 81.30 326 eP P 02 51 43.1 0.0
PVL Pavlikeni 81.32 319 P P 02 51 44.9 +1.5
CRAR CRAIOVA 81.33 320 ⇓P P 02 51 43.6 +0.2
CRAR CRAIOVA 81.33 320⇓iP P 02 51 43.6 +0.2
MDNY Mudanya-Bursa 81.34 315 eP P 02 51 43.8 +0.3
BUD Budapest 81.35 325⇑epP pP 02 51 48.7 -3.8
ULDT Uludag 81.35 315 iP P 02 51 43.3 -0.3
PRA Prague 81.38 329 ⇑P P 02 51 44.0 +0.5
PRA pP pP 02 51 57.0 +4.4
PRA PP PP 02 54 55.0 +6.2
PRA ex x 02 59 43.5
PRA S S 03 01 53.0 +0.5
PRA SS SS 03 07 40.0 +32
PRA AMS AMS 03 30 30.0
EREN Erenkoy 81.39 308 eP P 02 51 44.2 +0.4
RRH Rhenigidale 81.39 344 P P 02 51 43.8 +0.3
RRH Rhenigidale 81.39 344⇑eP P 02 51 43.8 +0.3
R22A Saguache, Gunn 81.39 48 ⇑P P 02 51 43.9 +0.1
baz=81,SNR=60
PRU Pruhonice 81.40 329⇑iP P 02 51 44.4 +0.8
PRU eS S 03 01 54.3 +1.6
PRU MLR MLR
comp=Z,297μm,19.5s,MS7.7
PRU Pruhonice 81.40 329 P P 02 51 44.5 +0.9
PRU Pruhonice 81.40 329⇑iP P 02 51 44.4 +0.8
PRU eS S 03 01 54.3 +1.6
PRU AMS AMS 03 30 10.0
comp=Z,297μm,19.5s
X17A Forest Lakes 81.43 53 ⇑P P 02 51 45.0 +0.9
baz=81
KAC Achnashellach 81.45 343 P P 02 51 44.1 +0.3
KAC Achnashellach 81.45 343⇑iP P 02 51 44.1 +0.3
CRLT Corlu 81.47 316 eP P 02 51 45.4 +1.2
Q23A Hartsel 81.48 47 ⇑P P 02 51 44.6 +0.3
baz=81
BHL Bhannes 81.49 306 eP P 02 51 44.7 +0.3
HDMB Hadim 81.49 310 eP P 02 51 44.3 -0.1
BZS Buzias 81.50 322 ⇓P P 02 51 43.9 -0.3
BZS Buzias 81.50 322⇓iP P 02 51 43.9 -0.3
ALT Altintas 81.52 313 eP P 02 51 44.9 +0.4
ALT Altintas 81.52 313 iP P 02 51 40.9 -3.6
TREC Trest 81.54 328⇑iP P 02 51 44.7 +0.3
TREC eS S 03 01 56.2 +2.0
TREC MLR MLR
comp=Z,251μm,18.7s,MS7.6
TREC Trest 81.54 328⇑iP P 02 51 44.7 +0.3
TREC eS S 03 01 56.2 +2.0
TREC AMS AMS 03 30 40.0
comp=Z,251μm,18.7s
U20A Newcomb 81.54 50 ⇑P P 02 51 44.2 -0.4
baz=81,SNR=21
115A Sonoran Desert 81.55 55 ⇑P P 02 51 44.7 0.0
baz=81
CLZ Clausthal 81.57 332 eP P 02 51 44.8 +0.3
comp=Z,1μm,2.1s,mb6.5
CLZ eS S 03 01 50.9 -3.5
CLZ eSS SS 03 07 01.0 -9.3
SHUT Suhut-Afyon 81.60 313 eP P 02 51 45.6 +0.7
TIM Timisoara 81.60 323⇑iP P 02 51 47.4 +2.6
W18A Petrified Fore 81.60 52 ⇓P P 02 51 45.2 +0.2
baz=81
P24A Kohler Place, 81.61 46 ⇓P P 02 51 45.4 +0.4
baz=81
214A Organ Pipe Nat 81.64 56 ⇑P P 02 51 45.2 0.0
baz=81,SNR=18
V19A Window Rock 81.65 51 ⇓P P 02 51 46.0 +0.8
baz=81,SNR=43
RCY Rachaya 81.65 306 eP P 02 51 45.5 +0.2
O25A Wiggins 81.66 45 ⇑P P 02 51 45.7 +0.5
baz=81,SNR=12
Z16A Peralta Trail, 81.66 54 ⇑P P 02 51 45.9 +0.5
baz=82,SNR=23
S22A 4UR Ranch, Cre 81.67 48 ⇑P P 02 51 45.8 +0.5
baz=81,SNR=74
TKR Tekirdag 81.67 316 eP P 02 51 46.5 +1.2
ZST Bratislava 81.68 326 eP P 02 51 45.4 +0.3
ZST pmax pmax
comp=Z,69nm,1.3s,mb5.4
ZST Bratislava 81.68 326 eP P 02 51 45.4 +0.3
comp=Z,69nm,1.3s,mb5.4
ZST eS S 03 01 57.7 +2.0
ZST Bratislava 81.68 326 eP P 02 51 45.4 +0.3
ZST Bratislava 81.68 326 eS S 03 01 57.7 +2.0
KPL Plockton 81.68 343 P P 02 51 45.2 +0.3
KPL AMb AMB 02 51 52.9
comp=Z,653nm,3.6s
KPL AMS AMS 03 36 45.2
comp=Z,68μm,16.4s
KPL Plockton 81.68 343⇑iP P 02 51 45.2 +0.3
KPL AMb AMB 02 51 52.9
comp=Z,653nm,3.6s
KPL AMS AMS 03 36 45.2
comp=Z,68μm,16.4s,MS7.1
KCTX Karacabey (Bur 81.71 315 eP P 02 51 45.8 +0.3
DJES Djerdap 81.74 321 P P 02 51 43.6 -1.9
T21A Navajo Lake 81.74 49 ⇓P P 02 51 46.1 +0.4
baz=82,SNR=35
KSB Sheil Bridge 81.75 343 P P 02 51 45.5 +0.2
KSB Sheil Bridge 81.75 343⇑iP P 02 51 45.5 +0.2
PHNC Paralimni 81.81 308 P P 02 51 47.4 +1.3
comp=Z,3.1nm,0.9s
Y17A Roosevelt 81.81 54 ⇓P P 02 51 46.2 +0.1
baz=82,SNR=35
W19A Sanders 81.83 52 ⇓P P 02 51 46.6 +0.4
baz=82,SNR=27
Q24A Divide 81.84 47 ⇓P P 02 51 46.2 0.0
baz=82,SNR=12
X18A Snowflake 81.85 53 ⇓P P 02 51 46.5 +0.2
baz=82,SNR=23
GDZ Gediz 81.86 314 iP P 02 51 46.6 +0.3
BNT Bandirma 81.89 315 eP P 02 51 47.9 +1.5
TANN Tannenbergstha 81.90 330 eP P 02 51 46.5 +0.2
comp=Z,428nm,2.0s,mb6.0
TANN eS S 03 01 55.0 -2.9
TANN eSS SS 03 07 05.7 -10
EDC Edincik 81.93 315 eP P 02 51 47.2 +0.6
KSDI Kefar Szold 81.94 306 eP P 02 51 47.5 +0.7
LFK Lefkose 81.95 309 eP P 02 51 47.2 +0.4
MFT Murefte 81.95 316 eP P 02 51 47.2 +0.5
V20A Brimhall 81.95 51 ⇓P P 02 51 46.8 -0.1
baz=82,SNR=51
116A Eloy 81.98 55 ⇑P P 02 51 47.1 0.0
baz=82,SNR=17
URZ Urewera 81.99 153 P P 02 51 44.7 -2.0
comp=Z,23nm,0.9s,mb5.1,baz=354,slow=10,SNR=2.8
URZ Urewera 81.99 153 eP P 02 51 47.5 +0.9
DIM Dimitrovgrad 82.03 318 P P 02 51 48.2 +1.1
P25A Willow Gulch B 82.04 46 ⇑P P 02 51 47.4 +0.2
baz=82,SNR=12
U21A Nageezi 82.04 50 ⇓P P 02 51 47.4 +0.1
baz=82,SNR=67
SUTC Sutluce-Ispart 82.05 312 eP P 02 51 47.5 +0.2
NKC Novy Kostel 82.05 330⇑iP P 02 51 47.1 0.0
NKC eS S 03 02 00.2 +0.8
NKC MLR MLR
comp=Z,271μm,18.9s,MS7.6
NKC Novy Kostel 82.05 330⇑iP P 02 51 47.1 0.0
NKC eS S 03 02 00.2 +0.8
NKC AMS AMS 03 31 00.0
comp=Z,271μm,18.9s
MOX Moxa 82.05 331α iP P 02 51 47.0 -0.1
comp=Z,351nm,2.0s,mb5.9
MOX e 02 52 33.8
MOX e 02 55 09.0
MOX
comp=Z,50μm,19.0s
MOX Moxa 82.05 331 eP P 02 51 47.1 0.0
comp=Z,715nm,2.1s,mb6.2
MOX eS S 03 01 55.9 -3.5
MOX eSS SS 03 07 08.2 -9.3
GAZI Gazipasa 82.07 310 iP P 02 51 46.6 -0.9
SART Tekirdag 82.08 316 iP P 02 51 46.6 -0.8
RKY Sarkoy-Tekirda 82.08 316 eP P 02 51 48.1 +0.7
WIT Witteveen 82.09 335⇑eP P 02 51 48.0 +0.8
comp=Z,2μm,2.7s,mb6.5
ISP Isparta 82.10 312 eP P 02 51 46.9 -0.7
ISP Isparta 82.10 312 ⇓P P 02 51 49.3 +1.7
ISP Isparta 82.10 312⇑iP P 02 51 47.1 -0.5
comp=Z,201nm,1.1s,mb6.0
ISP LR LR
comp=Z,98μm,22.0s,MS7.1
ISP Isparta 82.10 312 P P 02 51 47.0 -0.6
ISP Isparta 82.10 312⇓iP P 02 51 49.3 +1.7
KAR1 Arisaig 82.11 343 P P 02 51 47.9 +0.7
KAR1 Arisaig 82.11 343⇑iP P 02 51 47.9 +0.7
T22A Edith 82.11 49 ⇓P P 02 51 48.0 +0.4
baz=82,SNR=62
IBBN Ibbenburen 82.14 334 eP P 02 51 47.3 -0.2
comp=Z,619nm,1.4s,mb6.3
IBBN eS S 03 01 55.0 -5.2
IBBN eSS SS 03 07 06.6 -12
EBH Black Hill 82.15 342 P P 02 51 47.3 -0.2
EBH Black Hill 82.15 342⇑iP P 02 51 47.3 -0.2
S23A Nye Farm, Mont 82.18 48 ⇑P P 02 51 48.9 +0.9
baz=82
MAMC Mammari 82.21 309 P P 02 51 47.6 -0.6
ESY Stoneypath 82.21 341 P P 02 51 47.6 -0.2
ESY Stoneypath 82.21 341⇑iP P 02 51 47.6 -0.2
KRBG Karabiga-Canak 82.21 326 eP P 02 51 48.6 +0.5
MMAI Mount Meron Ar 82.22 306 P P 02 51 48.9 +0.7
comp=Z,164nm,0.9s,mb6.0,baz=51,slow=6.6,SNR=100
MMAI LR LR 03 32 15.0
comp=Z,148μm,19.3s,MS7.4,baz=45,slow=38
GONE Gonen-Balikesi 82.23 315 eP P 02 51 48.5 +0.3
OGNE Ogallala 82.25 44⇑iP P 02 51 47.8 -0.5
comp=Z,826nm,1.6s,mb6.4
OGNE LR LR
comp=Z,51μm,20.0s,MS6.9
CSS Prodhromos 82.28 308 P P 02 51 48.0 -0.6
Y18A Canyon Day Jun 82.28 53 ⇑P P 02 51 48.8 +0.2
baz=82,SNR=54
BCK Bucak 82.30 312 eP P 02 51 48.2 -0.5
Z17A San Carlos Hig 82.31 54 ⇓P P 02 51 49.4 +0.6
baz=82,SNR=14
X19A St. Johns 82.33 52 ⇓P P 02 51 49.1 +0.3
baz=82,SNR=94
DEMI Demirci 82.33 314 iP P 02 51 48.8 0.0
KHAL Karahalli 82.34 313 iP P 02 51 48.9 +0.1
EYMN Ely 82.35 33⇑iP P 02 51 47.7 -1.0
comp=Z,307nm,1.4s,mb6.0
EYMN LR LR
comp=Z,53μm,20.0s,MS6.9
KHL Karahalli 82.35 313 eP P 02 51 48.8 -0.1
EDI Edinburgh 82.36 341 P P 02 51 47.6 -0.9
EDI AMb AMB 02 51 50.4
comp=Z,310nm,3.5s
EDI 03 02 06.9
EDI AMS AMS 03 32 32.5
EDI Edinburgh 82.36 341⇑iP P 02 51 47.6 -0.9
EDI AMb AMB 02 51 50.4
comp=Z,310nm,3.5s
EDI e 03 02 06.9
EDI AMS AMS 03 32 32.5
comp=Z,118μm,18.5s,MS7.3
R24A Sanders Place, 82.36 47 ⇑P P 02 51 49.4 +0.5
baz=82,SNR=34
W20A Ramah 82.37 51 ⇑P P 02 51 48.9 -0.1
baz=82,SNR=48
KDZ Kurdzhali 82.37 318 P P 02 51 50.0 +1.1
KDZ Kurdzhali 82.37 318 P P 02 51 50.0 +1.1
Q25A Bedland, Calha 82.39 46 ⇑P P 02 51 49.0 -0.1
baz=82
PGB Panagyurishte 82.40 319 P P 02 51 49.4 +0.4
BALB Balikesir 82.40 315 eP P 02 51 49.4 +0.3
EAB Aberfoyle 82.41 342 P P 02 51 48.4 -0.4
EAB Aberfoyle 82.41 342⇑iP P 02 51 48.4 -0.4
CONA Conrad Observa 82.42 327 iP P 02 51 49.7 +0.6
comp=Z,260nm,1.3s,mb6.0,SNR=87
PLD Plovdiv 82.43 318 P P 02 51 50.0 +0.8
PLD Plovdiv 82.43 318 P P 02 51 49.9 +0.7
PLD Plovdiv 82.43 318 P P 02 51 50.3 +1.1
PLD Plovdiv 82.43 318 P P 02 51 49.9 +0.7
LEF Lefka 82.45 309 eP P 02 51 49.2 -0.2
EBL Broad Law 82.45 341 P P 02 51 49.1 +0.1
EBL Broad Law 82.45 341⇑iP P 02 51 49.1 +0.1
SDCO Great Sand Dun 82.45 48⇑eP P 02 51 49.5 +0.1
comp=Z,204nm,1.6s,mb5.8
SDCO LR LR
comp=Z,42μm,22.0s,MS6.8
ERIK Erikli-Kesan 82.45 316 eP P 02 51 49.8 +0.5
ERIK Erikli-Kesan 82.45 316 eP P 02 51 49.8 +0.4
V21A Milan 82.46 50 ⇓P P 02 51 49.9 +0.4
baz=82,SNR=31
KHC Kasperske Hory 82.46 329⇑iP P 02 51 49.5 +0.3
KHC eS S 03 02 04.5 +0.8
KHC MLR MLR
comp=Z,379μm,19.5s,MS7.8
KHC Kasperske Hory 82.46 329⇑iP P 02 51 49.5 +0.2
comp=Z,263nm,1.3s,mb6.0
KHC Kasperske Hory 82.46 329⇑iP P 02 51 49.5 +0.3
KHC eS S 03 02 04.5 +0.8
KHC AMS AMS 03 31 00.0
comp=Z,379μm,19.5s
PKSM Moragy 82.47 324 P P 02 51 49.2 -0.1
PKSM Moragy 82.47 324 ⇑P P 02 51 48.7 -0.6
PKSM Moragy 82.47 324⇑iP P 02 51 48.7 -0.6
BALY Balya 82.48 315 iP P 02 51 49.9 +0.4
EAU Auchinoon 82.49 341 P P 02 51 49.1 -0.1
EAU Auchinoon 82.49 341⇑eP P 02 51 49.1 -0.1
216A Three Points, 82.50 55 ⇑P P 02 51 50.0 +0.3
baz=82,SNR=14
ROTZ Rotzenmuhle 82.52 330 eP P 02 51 50.1 +0.6
comp=Z,675nm,1.8s,mb6.4
ROTZ eS S 03 02 02.2 -2.0
ROTZ eSS SS 03 07 15.7 -8.7
ROTZ Rotzenmuhle 82.52 330 P P 02 51 49.9 +0.4
LPK Lapseki 82.53 316 eP P 02 51 50.3 +0.5
LPK Lapseki 82.53 316 eP P 02 51 50.3 +0.6
UBBA Unterbreizbach 82.53 332 eP P 02 51 49.4 -0.2
comp=Z,261nm,1.6s,mb6.0
UBBA eS S 03 02 00.8 -3.5
UBBA eSS SS 03 07 13.1 -11
ALN Alexandroupoli 82.55 317 P P 02 51 50.3 +0.4
ALN Alexandroupoli 82.55 317 eP P 02 51 50.5 +0.6
ALN Alexandroupoli 82.55 317 P P 02 51 50.3 +0.4
ALN Alexandroupoli 82.55 317 P P 02 51 50.3 +0.4
U22A Llaves 82.56 49 ⇓P P 02 51 50.6 +0.7
baz=82,SNR=29
117A Oracle 82.60 55 ⇓P P 02 51 50.1 -0.2
baz=82,SNR=17
ALFC Alevga 82.61 309 P P 02 51 49.2 -1.1
comp=Z,5.1nm,0.9s
ENEZ Enez 82.61 317 eP P 02 51 50.6 +0.4
ENEZ Enez 82.61 317 eP P 02 51 50.6 +0.4
T23A Casias Ranch, 82.61 49 ⇑P P 02 51 51.0 +0.8
baz=82,SNR=16
GEC2 GERESS Array S 82.63 329 eP P 02 51 50.0 -0.1
comp=Z,479nm,2.1s,mb6.2
GEC2 eS S 03 02 02.6 -2.8
GEC2 eSS SS 03 07 17.6 -8.6
ANTB Antalya 82.64 311 eP P 02 51 49.3 -1.1
Y19A Nutrioso 82.66 53 ⇑P P 02 51 49.5 -1.0
baz=82,SNR=31
GELI Tayfur-Gelibol 82.67 316 eP P 02 51 50.7 +0.3
GELI Tayfur-Gelibol 82.67 316 eP P 02 51 50.7 +0.2
SVIS Svilajnac 82.67 322 P P 02 51 50.7 +0.3
S24A Houchin Ranch, 82.69 48 ⇑P P 02 51 51.2 +0.6
baz=82,SNR=37
RZN Rozhen 82.72 318 P P 02 51 51.2 +0.5
RZN Rozhen 82.72 318 P P 02 51 51.2 +0.5
KULA Kula-Manisa 82.72 314 eP P 02 51 51.0 +0.2
Z18A Geronimo 82.72 54 ⇑P P 02 51 51.6 +0.7
baz=82
WET Wettzell 82.74 329 eP P 02 51 51.0 +0.3
comp=Z,715nm,2.1s,mb6.3
WET eS S 03 02 04.4 -2.1
WET eSS SS 03 07 19.9 -7.8
WET Wettzell 82.74 329 P P 02 51 50.9 +0.2
TUC Tucson 82.74 55 eP P 02 51 52.4 +1.4
TUC pmax pmax
comp=Z,369nm,1.8s,mb6.1
TUC MLR MLR
comp=Z,100μm,22.0s,MS7.1
TUC Tucson 82.74 55 eP P 02 51 52.4 +1.4
comp=Z,369nm,1.8s,mb6.1
TUC LR LR
comp=Z,100μm,22.0s,MS7.1
KORT Korkueli 82.75 312 iP P 02 51 50.6 -0.3
WTSB Winterswijk 82.75 334⇑eP P 02 51 50.0 -0.7
comp=Z,339nm,2.3s,mb6.0
WTSB Winterswijk 82.75 334 ex PcP 02 51 57.8 +2.3
comp=Z,320nm,3.0s
X20A Quemado 82.75 52 ⇑P P 02 51 51.6 +0.5
baz=82,SNR=43
PGBU Glenifferbraes 82.78 342 P P 02 51 50.9 +0.1
PGBU AMb AMB 02 51 52.9
comp=Z,564nm,2.5s,mb6.2
PGBU 03 02 09.8
PGBU AMS AMS 03 32 47.3
PGBU Glenifferbraes 82.78 342⇑iP P 02 51 50.9 +0.1
PGBU AMb AMB 02 51 52.9
comp=Z,564nm,2.5s,mb6.2
PGBU e 03 02 09.8
PGBU AMS AMS 03 32 47.3
comp=Z,124μm,18.2s,MS7.3
V22A San Miguel Ran 82.83 50 ⇓P P 02 51 51.8 +0.4
baz=83
VTS Vitosha 82.87 319 ⇑P P 02 51 52.4 +0.9
VTS Vitosha 82.87 319 P P 02 51 52.5 +1.0
VTS Vitosha 82.87 319 P P 02 51 52.4 +0.9
VTS Vitosha 82.87 319⇑iP P 02 51 52.4 +0.9
VTS Vitosha 82.87 319 P P 02 51 52.4 +0.9
ESK Eskdalemuir 82.90 341 P P 02 51 52.7 +1.3
comp=Z,594nm,1.6s,mb6.4,SNR=10
ESK Eskdalemuir 82.90 341 P P 02 51 51.6 +0.2
ESK AMb AMB 02 51 53.3
comp=Z,294nm,3.4s
ESK 03 02 15.5
ESK AMS AMS 03 32 48.4
ESK Eskdalemuir 82.90 341⇑iP P 02 51 51.6 +0.2
ESK AMb AMB 02 51 53.3
comp=Z,294nm,3.4s
ESK e 03 02 15.5
ESK AMS AMS 03 32 48.4
comp=Z,132μm,18.4s,MS7.3
ESK Eskdalemuir 82.90 341⇑iP P 02 51 51.4 0.0
ESK e 02 55 00.8
ESK pmax pmax
comp=Z,249nm,1.4s,mb6.0
ESK MLR MLR
comp=Z,147μm,19.0s,MS7.4
ESK Eskdalemuir 82.90 341⇑iP P 02 51 51.4 0.0
comp=Z,249nm,1.4s,mb6.0
ESK ePP PP 02 55 00.8 -0.3
ESK LR LR
comp=Z,147μm,19.0s,MS7.4
W21A San Fidel 82.90 51 ⇑P P 02 51 50.3 -1.5
baz=83
PPCY Paphos 82.94 309 P P 02 51 49.7 -2.3
AKHS Akhisar 82.96 314 iP P 02 51 52.1 +0.1
AKS Akhisar 82.96 314 eP P 02 51 51.5 -0.6
GRF Grafenberg Arr 82.96 330 eP P 02 51 52.3 +0.5
comp=Z,3μm,2.3s,mb6.8
GRF eS S 03 02 06.3 -2.5
GRF eSS SS 03 07 21.7 -9.4
GRF ePKPPKPdf 03 18 17.9
GRF eL 03 31 57.5
comp=Z,247μm,19.2s
GRF Grafenberg Arr 82.96 330 eP P 02 51 52.3 +0.5
GRF eS S 03 02 06.3 -2.5
GRF pmax pmax
comp=Z,3μm,2.3s,mb6.8
GRF Grafenberg Arr 82.96 330 eP P 02 51 52.3 +0.5
comp=Z,3μm,2.3s,mb6.8
GRF eS S 03 02 06.3 -2.5
GRF eSS SS 03 07 21.7 -9.4
U23A El Rito 82.99 49 ⇑P P 02 51 52.6 +0.4
baz=83,SNR=52
ECK Cauldkaine Hil 83.00 341 P P 02 51 52.0 +0.1
ECK Cauldkaine Hil 83.00 341⇑iP P 02 51 52.0 +0.1
BUG Bochum--Univer 83.02 334 eP P 02 51 51.7 -0.4
comp=Z,856nm,2.2s,mb6.4
BUG eS S 03 02 05.1 -4.2
BUG eSS SS 03 07 21.5 -10
DENT Denizli 83.02 313 eP P 02 51 53.1 +0.7
XAL Allendale 83.05 340 P P 02 51 51.4 -0.8
XAL Allendale 83.05 340⇑iP P 02 51 51.4 -0.8
118A Homack Ranch, 83.05 54 ⇑P P 02 51 52.7 +0.1
baz=83,SNR=40
DNZL Cakiroluk 83.06 313 iP P 02 51 53.4 +0.9
217A Green Valley 83.06 55 ⇑P P 02 51 53.1 +0.4
baz=83,SNR=20
GOLH Golhisar 83.06 312 iP P 02 51 52.7 +0.2
Z19A T-Link Ranch, 83.08 53 ⇑P P 02 51 53.2 +0.5
baz=83
ARSA Arzberg 83.09 327 P P 02 51 52.7 +0.2
ARSA Arzberg 83.09 327 iP P 02 51 52.7 +0.2
comp=Z,164nm,1.3s,mb5.9,SNR=52
ECSD EROS Data Cent 83.10 39⇑iP P 02 51 51.9 -0.8
comp=Z,199nm,1.4s,mb6.0
ECSD LR LR
comp=Z,64μm,20.0s,MS7.0
GADA Gvkgeada 83.13 316 eP P 02 51 52.9 0.0
S25A Robets Cordova 83.14 47 ⇓P P 02 51 53.0 +0.1
baz=83,SNR=6.7
EZN Ezine 83.14 316 eP P 02 51 53.2 +0.3
GLHS Glhisar (BURDU 83.15 312 eP P 02 51 53.3 +0.2
MOA Molln 83.17 328 P P 02 51 53.0 +0.1
MOA Molln 83.17 328 iP P 02 51 53.1 +0.1
comp=Z,206nm,1.4s,mb6.0,SNR=47
ELL Elmali 83.18 312 eP P 02 51 53.4 +0.2
GRUS Gruza 83.19 322 P P 02 51 52.9 -0.2
Y20A Horse Springs, 83.24 52 ⇓P P 02 51 54.2 +0.7
baz=83,SNR=75
X21A Alamocita Cree 83.26 51 ⇑P P 02 51 54.1 +0.4
baz=83,SNR=75
AYVA Ayvalik 83.30 315 iP P 02 51 53.2 -0.6
AYVA Ayvalik 83.30 315 iP P 02 51 53.2 -0.6
MMB Musomiste 83.31 318 P P 02 51 54.8 +1.0
KAVA Kavala 83.31 318 P P 02 51 54.2 +0.4

V23A	Ortiz Mt. (NFS	83.38	50	⇓P	P	02 51 55.3	+1.0
	baz=83,SNR=51						
KOGS	Kog	83.38	326	⇑iP	P	02 51 53.4	-0.7
KOGS				e		02 52 47.2	
KOGS				ePP	PP	02 55 08.9	+3.5
KOGS				ePPP		02 57 02.8	
KOGS				eS	S	03 02 13.2	+0.1
KOGS				e		03 03 24.5	
KOGS				eSS	SS	03 07 53.9	+16
DIVS	Divibare	83.39	322	P	P	02 51 54.5	+0.3
119A	Ashpeak Ranch,	83.40	54	⇓P	P	02 51 54.5	+0.1
	baz=83,SNR=24						
W22A	Albuquerque	83.41	50	⇑P	P	02 51 54.0	-0.4
	baz=83						
BARS	Barje	83.42	320	⇑iP	P	02 51 54.2	-0.1
218A	Dragoon	83.43	55	⇓P	P	02 51 54.6	0.0
	baz=83,SNR=31						
KKB	Krupnik	83.45	319	P	P	02 51 56.0	+1.5
U24A	Moreno Valley	83.48	49	⇓P	P	02 51 54.5	-0.2
	baz=83,SNR=16						
GCD	Castle Douglas	83.50	341	P	P	02 51 54.3	-0.2
GCD	Castle Douglas	83.50	341	⇑iP	P	02 51 54.3	-0.2
T25A	Trinidad	83.50	48	⇑P	P	02 51 54.8	-0.1
	baz=83,SNR=58						
PRK	Paraskevi	83.58	315	P	P	02 51 55.3	+0.1
PRK	Paraskevi	83.58	315	eP	P	02 51 55.0	-0.2
PRK	Paraskevi	83.58	315	P	P	02 51 55.3	+0.1
TNS	Taunus Mts	83.59	332	eP	P	02 51 55.1	0.0
	comp=Z,1μm,2.2s,mb6.6						
TNS				eS	S	03 02 12.6	-2.5
TNS				eSS	SS	03 07 28.6	-12
KDAG	Bornova	83.60	314	iP	P	02 51 55.3	-0.1
KDAG	Bornova	83.60	314	iP	P	02 51 55.3	0.0
IZM	Izmir	83.60	314	eP	P	02 51 55.5	+0.1
Y21A	Point of Rocks	83.61	52	⇓P	P	02 51 56.3	+0.8
	baz=83,SNR=23						
Z20A	Nine Sixteen R	83.62	53	⇑P	P	02 51 55.7	+0.1
	baz=83,SNR=81						
HPK	Haverah Park	83.68	339	P	P	02 51 55.4	-0.1
HPK				AMb	AMB	02 51 57.5	
	comp=Z,428nm,3.0s,mb6.1						
HPK						03 02 15.0	
HPK				AMS	AMS	03 32 36.9	
HPK	Haverah Park	83.68	339	⇑iP	P	02 51 55.4	-0.1
HPK				AMb	AMB	02 51 57.5	
	comp=Z,428nm,3.0s,mb6.1						
HPK				e		03 02 15.0	
HPK				AMS	AMS	03 32 36.9	
	comp=Z,278μm,20.5s,MS7.6						
LAZ	Ladron	83.69	51	eP	P	02 51 56.2	+0.3
	comp=Z,229nm,1.7s,mb6.0						
GAL1	Galloway	83.69	342	P	P	02 51 55.2	-0.3
GAL1				AMb	AMB	02 51 56.9	
	comp=Z,307nm,3.0s						
GAL1						03 02 16.6	
GAL1				AMS	AMS	03 33 23.8	
GAL1	Galloway	83.69	342	⇑iP	P	02 51 55.2	-0.3
GAL1				AMb	AMB	02 51 56.9	
	comp=Z,307nm,3.0s						
GAL1				e		03 02 16.6	
GAL1				AMS	AMS	03 33 23.8	
	comp=Z,137μm,18.3s,MS7.4						
X22A	Bernardo	83.70	51	⇑P	P	02 51 57.0	+1.0
	baz=84,SNR=15						
XDE	Dent Fell	83.70	341	P	P	02 51 55.2	-0.3
XDE	Dent Fell	83.70	341	⇑eP	P	02 51 55.2	-0.3
AKAS	Kas	83.71	311	iP	P	02 51 55.4	-0.5
SRS	Serrai	83.72	318	P	P	02 51 56.2	+0.3
SRS	Serrai	83.72	318	P	P	02 51 56.2	+0.3
LIA	Limnos Island	83.72	316	P	P	02 51 55.9	0.0
LIA	Limnos Island	83.72	316	P	P	02 51 55.9	0.0
BLCB	Balcova	83.74	314	eP	P	02 51 56.2	+0.1
BLCB	Balcova	83.74	314	P	P	02 51 55.6	-0.4
BLCB	Balcova	83.74	314	P	P	02 51 55.6	-0.4
BLCB	Balcova	83.74	314	P	P	02 51 55.6	-0.4
PERS	Pernice	83.74	326	⇑iP	P	02 51 55.9	0.0
PERS				e		02 59 55.8	
PERS				eS	S	03 02 16.8	0.0
PERS				eSS	SS	03 07 58.1	+15
ANMO	Albuquerque	83.74	50	eP	P	02 51 56.5	+0.4
ANMO				pmax	pmax		
	comp=Z,219nm,1.2s						
ANMO				MLR	MLR		
	comp=Z,46μm,22.0s						
ANMO	Albuquerque	83.74	50	eP	P	02 51 56.5	+0.3
	comp=Z,219nm,1.2s,mb6.2						
ANMO				LR	LR		
	comp=Z,46μm,22.0s,MS6.8						
SOKA	Soboth	83.75	327	⇑iP	P	02 51 56.0	+0.1
	comp=Z,306nm,1.4s,mb6.2						
AYDN	Tasoluk	83.75	313	iP	P	02 51 57.3	+1.2
PMOR	Pomariorio Ree	83.77	114	eP	P	02 51 55.3	-1.1
	comp=Z,820nm,1.5s,mb6.6						
KSL	Kastellorizon	83.78	311	eP	P	02 51 56.0	-0.3
W23A	Werner Place,	83.79	50	⇑P	P	02 51 57.1	+0.7
	baz=84,SNR=43						
318A	Bisbee	83.81	55	⇑P	P	02 51 56.6	+0.1
	baz=84,SNR=53						
MUKL	Al Mukalla	83.83	283	⇑eP	P	02 51 56.9	0.0
MUKL				AMb	AMB	02 51 59.1	
	comp=Z,1μm,2.1s,mb6.7						
SIGR	SIGRI	83.83	316	P	P	02 51 56.6	+0.1
SIGR	SIGRI	83.83	316	P	P	02 51 56.6	+0.1
SIND	Sindeldorf	83.87	331	P	P	02 51 56.8	+0.3
TURN	Turunc	83.87	312	iP	P	02 51 58.7	+2.0
RJOB	Jochberg	83.88	328	eP	P	02 51 56.9	+0.3
	comp=Z,433nm,1.5s,mb6.4						
RJOB				eS	S	03 02 16.0	-2.1
RJOB				eSS	SS	03 07 41.0	-3.7
YER	Yerkesik	83.88	313	eP	P	02 51 57.7	+0.9
SNZO	South Karori	83.90	156	PFAKE		02 52 10.0	+14
SNZO				LR	LR		
	comp=Z,138μm,21.0s,MS7.3						
219A	White Tail Can	83.92	54	⇑P	P	02 51 56.6	-0.5
	baz=84,SNR=83						
V24A	Rampart Ranch,	83.94	49	⇓P	P	02 51 55.9	-1.2
	baz=84,SNR=73						
TOD	Tromm	83.96	332	eP	P	02 51 57.1	+0.1
120A	U Bar Ranch, L	83.97	53	⇑P	P	02 51 56.5	-0.9
	baz=84,SNR=30						
U25A	Circle Dot Ran	84.00	48	⇓P	P	02 51 57.6	+0.2
	baz=84,SNR=53						
URLA	Izmir	84.01	315	iP	P	02 51 57.5	0.0
Y22D	IRIS PASSCAL I	84.04	51	⇑P	P	02 51 56.9	-0.8
	baz=84						
HGN	Heimansgroeve	84.05	334	⇑iP	P	02 51 57.1	-0.3
	comp=Z,342nm,2.4s,mb6.1						
HGN	Heimansgroeve	84.05	334	ex	PcP	02 52 04.9	+3.6
	comp=Z,280nm,1.9s						
HGN	Heimansgroeve	84.05	334	ePP	PP	02 55 10.2	-0.5
HGN	Heimansgroeve	84.05	334	eS	S	03 02 16.0	-3.8
SOH	Sokhos	84.06	318	P	P	02 51 57.3	-0.3
SOH	Sokhos	84.06	318	eP	P	02 51 57.5	-0.1
SOH	Sokhos	84.06	318	P	P	02 51 57.3	-0.3
MLSB	Milas	84.06	313	eP	P	02 51 58.6	+0.8
OUR	Ouranopolis	84.07	317	P	P	02 51 57.7	0.0
OUR	Ouranopolis	84.07	317	P	P	02 51 57.7	0.0
SISC	Sisak	84.07	325	P	P	02 51 57.9	+0.3
Z21A	St. Cloud Mine	84.08	52	⇑P	P	02 51 57.4	-0.5
	baz=84,SNR=74						
OBKA	Obir	84.09	327	P	P	02 51 58.1	+0.4
OBKA	Obir	84.09	327	iP	P	02 51 57.0	-0.7
	comp=Z,96nm,1.1s,mb5.8,SNR=32						
GCAM	G?zelcaml?	84.10	314	iP	P	02 51 58.3	+0.4
GCAM	G?zelcaml?	84.10	314	iP	P	02 51 58.3	+0.4
Y22A	Socorro	84.10	51	⇓P	P	02 51 57.6	-0.4
	baz=84,SNR=53						
VAY	Valandovo	84.11	319	P	P	02 51 57.0	-0.9
VAY				Pn	P	02 51 57.7	-0.2
VAY	Valandovo	84.11	319	⇑iP	P	02 51 57.5	-0.4
VAY				iS	S	03 02 17.3	-3.4
VAY	Valandovo	84.11	319	P	P	02 51 58.1	+0.2
BEBN	Eben Emael	84.12	334	P	P	02 51 57.6	-0.1
X23A	Hourglass Bar	84.16	50	⇓P	P	02 51 58.7	+0.5
	baz=84						
MEM	Membach	84.16	334	P	P	02 51 57.8	-0.1
KBA	Koelnbreinsper	84.16	328	iP	P	02 51 58.0	0.0
	comp=Z,193nm,1.1s,mb6.1,SNR=38						
BNM	Barren Site	84.17	51	eP	P	02 51 58.5	+0.1
	comp=Z,335nm,1.7s,mb6.2						
ABH	Alteburg	84.21	332	eP	P	02 51 58.2	0.0
W24A	Lazy 6 Ranch,	84.21	50	⇓P	P	02 51 58.0	-0.5
	baz=84,SNR=111						
SKO	Skopje	84.22	320	P	P	02 51 59.8	+1.3
SKO	Skopje	84.22	320	⇑iP	P	02 51 59.8	+1.4
SKO				iS	S	03 02 20.2	-1.6
SKO				iS	S	03 02 22.6	+0.8
SKO	Skopje	84.22	320	P	P	02 51 59.8	+1.3
HDH	Heidenheim-Cha	84.25	330	P	P	02 51 58.7	+0.2
PLE	Pljevlja	84.25	322	⇑iP	P	02 51 59.2	+0.6
PLE	Pljevlja	84.25	322	⇑iP	P	02 51 59.2	+0.7
V25A	Rancho No Teng	84.26	49	⇓P	P	02 51 58.5	-0.3
	baz=84,SNR=73						
PPT	Papeete	84.26	117	ePP	PP	02 55 06.9	-7.1
	comp=Z,8μm,27.2s						
PPT				eS	S	03 02 20.5	-2.1
	comp=Z,168μm,31.5s						
PPT				eSS	SS	03 07 47.0	-6.0
	comp=Z,28μm,24.2s						
PPT				eLR	LR	03 18 07.1	
	comp=Z,208μm,24.5s,baz=316						
PPT	Papeete	84.26	117	LR	LR	03 23 54.6	
	comp=Z,109μm,20.7s,MS7.2,baz=289,slow=32						
PPT	Papeete	84.26	117	eP	P	02 51 57.9	-1.0
PPT				eS	S	03 02 20.5	-2.1
PPT				eSS	SS	03 07 47.0	-6.0
PPT				pmax	pmax		
	comp=Z,157nm,1.5s						
PPT				MLR	MLR		
	comp=Z,7μm,19.0s						
PPT	Papeete	84.26	117	eP	P	02 51 57.9	-1.0
	comp=Z,157nm,1.5s,mb5.9						
PPT				ePP	PP	02 55 06.9	-7.1
PPT				eS	S	03 02 20.5	-2.1
PPT				eSS	SS	03 07 47.0	-6.0
PPT				LR	LR		
	comp=Z,7μm,19.0s,MS6.1						
KBI1	Birley Grange	84.28	339	P	P	02 51 58.0	-0.5
KBI1	Birley Grange	84.28	339	⇑eP	P	02 51 58.0	-0.5
CHOS	Chios island	84.30	315	eP	P	02 51 59.0	+0.1
CHOS	Chios island	84.30	315	P	P	02 51 58.6	-0.3
319A	Douglas	84.32	55	⇑P	P	02 51 59.1	-0.1
	baz=84,SNR=28						
PLG	Polygyros	84.33	318	P	P	02 51 58.7	-0.3
PLG	Polygyros	84.33	318	eP	P	02 51 59.0	0.0
PLG	Polygyros	84.33	318	P	P	02 51 58.7	-0.3
IVA	Berane	84.34	321	⇑iP	P	02 51 59.6	+0.6
IVA	Berane	84.34	321	⇑iP	P	02 51 59.6	+0.6
HORT	Hortiatis	84.35	318	P	P	02 51 58.5	-0.6
HORT	Hortiatis	84.35	318	P	P	02 51 58.5	-0.6
MYKA	Terra Mystica	84.39	327	⇑iP	P	02 51 58.5	-0.6
	comp=Z,187nm,1.5s,mb6.0						
THE	Thessaloniki	84.40	318	P	P	02 51 59.0	-0.4
THE	Thessaloniki	84.40	318	P	P	02 51 59.0	-0.4
U26A	Atchley Ranch,	84.40	48	⇓P	P	02 51 59.4	0.0
	baz=84,SNR=51						
BDRM	Kayabasi	84.42	313	iP	P	02 51 59.6	+0.1
BDRM	Kayabasi	84.42	313	iP	P	02 51 59.6	+0.1
TIAR	Tiarei	84.42	117	eP	P	02 51 58.5	-1.2
	comp=Z,244nm,1.1s,mb6.2						
220A	Playas Peak, P	84.46	54	⇑P	P	02 51 59.7	-0.1
	baz=84,SNR=56						
LJU	Ljubljana	84.46	326	⇑iP	P	02 51 58.9	-0.6
LJU				e		02 52 52.8	
LJU				e		02 53 33.3	
LJU				ePP	PP	02 55 17.7	+3.5
LJU				ePPP		02 57 12.6	
LJU				eS	S	03 02 20.4	-3.6
LJU				e		03 03 38.9	
KTD	Kalmit	84.47	332	eP	P	02 51 59.5	0.0
BODT	Bodrum	84.49	313	eP	P	02 52 00.1	+0.2
BODT	Bodrum	84.49	313	eP	P	02 52 00.1	+0.2
STU	Stuttgart	84.49	331	eP	P	02 51 59.7	0.0
	comp=Z,480nm,1.5s,mb6.4						
STU				eS	S	03 02 21.7	-2.5
STU				eSS	SS	03 07 44.6	-9.1
STU	Stuttgart	84.49	331	⇑iP	P	02 51 59.5	-0.2
STU				pmax	pmax		
	comp=Z,435nm,1.4s,mb6.4						
STU	Stuttgart	84.49	331	⇑iP	P	02 51 59.5	-0.2
	comp=Z,435nm,1.4s,mb6.4						
PVY	Plav	84.51	321	⇑iP	P	02 52 00.0	+0.1
PVY	Plav	84.51	321	⇑iP	P	02 52 00.0	+0.1
121A	Cookes Peak, D	84.52	53	⇑P	P	02 51 59.7	-0.4
	baz=84,SNR=49						
PAIG	Paliouri	84.52	317	P	P	02 51 59.6	-0.4
PAIG	Paliouri	84.52	317	P	P	02 51 59.6	-0.4
RUP	Ruppelstein	84.53	333	eP	P	02 52 00.0	+0.1
BOJS	Bojanci	84.55	326	⇑iP	P	02 51 59.5	-0.6
BOJS				e		02 52 53.5	
Z22A	Elephant Butte	84.56	52	⇑P	P	02 52 00.7	+0.4
	baz=84,SNR=20						
BCLA	Clavier	84.56	334	P	P	02 51 59.6	-0.4
DAT	Datca	84.57	313	eP	P	02 51 60.0	-0.3
DAT	Datca	84.57	313	eP	P	02 52 00.0	-0.3
GMM	Mts of Mourne	84.57	342	P	P	02 51 60.0	0.0
GMM	Mts of Mourne	84.57	342	⇑eP	P	02 51 60.0	0.0
KWE	Weaver Farm	84.58	339	P	P	02 51 59.2	-0.8
KWE	Weaver Farm	84.58	339	eP	P	02 51 59.2	-0.8
UPM	Unac-Piva	84.58	322	eP	P	02 51 59.6	-0.7
UPM	Unac-Piva	84.58	322	eP	P	02 51 59.6	-0.6
ARG	Arkhangelos	84.60	312	P	P	02 52 00.4	-0.1
ARG	Arkhangelos	84.60	312	eP	P	02 52 00.5	0.0
ARG	Arkhangelos	84.60	312	P	P	02 52 00.4	-0.1
STNC	Stoke	84.61	339	P	P	02 52 00.4	+0.2
STNC				AMb	AMB	02 52 02.2	
	comp=Z,457nm,2.6s,mb6.1						
STNC						03 02 20.1	
STNC	Stoke	84.61	339	⇑iP	P	02 52 00.4	+0.2
STNC				AMb	AMB	02 52 02.2	
	comp=Z,457nm,2.6s,mb6.1						
STNC				e		03 02 20.1	
X24A	Lazy VL Ranch,	84.63	50	⇓P	P	02 52 01.0	+0.4
	baz=84						
BCI	Bajram Curri	84.63	321	iPN	P	02 52 00.3	-0.2
CADS	Cadrg	84.66	327	⇑iP	P	02 51 59.0	-1.6
CADS				e		02 52 53.1	
CADS				e		02 53 35.9	
CADS				ePP	PP	02 55 19.1	+3.3
EIL	Elat	84.66	303	eP	P	02 52 00.5	-0.4
SCHQ	Schefferville	84.66	16	P	P	02 52 00.1	-0.3
	comp=Z,44nm,0.8s,mb5.6,baz=349,slow=5.7,SNR=51						
SCHQ				LR	LR	03 36 50.8	
	comp=Z,72μm,18.2s,MS7.1,baz=341,slow=41						
SCHQ	Schefferville	84.66	16	⇑iP	P	02 51 59.9	-0.5
	comp=Z,131nm,1.0s,mb6.0						
SCHQ				LR	LR		
	comp=Z,95μm,21.0s,MS7.2						
CWF	Charnwood Fore	84.67	339	P	P	02 51 59.2	-1.2
CWF				AMb	AMB	02 52 08.2	
	comp=Z,353nm,3.3s						
CWF						03 02 18.6	
CWF				AMS	AMS	03 32 55.1	
CWF	Charnwood Fore	84.67	339	⇑iP	P	02 51 59.2	-1.2
CWF				AMb	AMB	02 52 08.2	
	comp=Z,353nm,3.3s						
CWF				e		03 02 18.6	
CWF				AMS	AMS	03 32 55.1	
	comp=Z,180μm,21.5s,MS7.4						
Y23A	Lovelace Mesa,	84.67	51	⇑P	P	02 52 00.6	-0.3
	baz=84,SNR=67						
BUCH	Bad Urach	84.69	331	P	P	02 52 01.4	+0.7
WATA	Walderalm	84.70	329	⇑iP	P	02 52 00.6	-0.1
	comp=Z,87nm,1.0s,mb5.8,SNR=10						
WTTA	Wattenberg	84.73	329	iP	P	02 52 01.0	+0.1
	comp=Z,188nm,1.5s,mb6.0,SNR=28						
LBG	Lerchenberg	84.74	331	P	P	02 52 01.4	+0.5
CEY	Cerknica	84.74	326	⇑iP	P	02 52 00.2	-0.8
VOY	Vojsko	84.75	327	⇑eP	P	02 51 59.8	-1.2
VOY				e		02 54 15.8	
VOY				e		02 54 40.8	
KRUS	Krusevo	84.76	320	⇑iP	P	02 52 00.8	-0.4
KRUS				iS	S	03 02 26.4	-0.8
W25A	X Bar L Ranch,	84.78	49	⇓P	P	02 52 01.8	+0.4
	baz=84,SNR=132						
ABTA	Abfaltersbach	84.78	328	⇑iP	P	02 52 00.1	-1.1
	comp=Z,96nm,1.4s,mb5.7,SNR=31						
COWI	Conover	84.80	33	⇑iP	P	02 52 00.1	-1.2
	comp=Z,204nm,1.4s,mb6.1						
COWI				LR	LR		
	comp=Z,72μm,22.0s,MS7.0						
NKY	Niksic	84.83	322	⇑iP	P	02 52 00.2	-1.3
NKY	Niksic	84.83	322	⇑iP	P	02 52 00.3	-1.2
SNF	Seneffe	84.84	335	P	P	02 52 01.0	-0.3
	comp=Z,170nm,2.1s,mb5.8						
LANF	Langenberg	84.85	332	eP	P	02 52 01.4	-0.1
221A	Mesquite Ranch	84.87	53	⇓P	P	02 52 01.6	-0.3
	baz=85						
MOTA	Moosalm	84.89	329	⇑iP	P	02 52 01.6	-0.1
	comp=Z,201nm,1.4s,mb6.1,SNR=54						
NIS1	Nisyros Isl.	84.89	313	P	P	02 52 01.5	-0.4
NIS1	Nisyros Isl.	84.89	313	P	P	02 52 01.5	-0.4
WLF	Walferdange	84.89	333	P	P	02 52 01.9	+0.2
	comp=Z,248nm,2.6s,mb5.9						
WLF	Walferdange	84.89	333	eP	P	02 52 02.1	+0.4
	comp=Z,684nm,1.7s,mb6.5						
WLF				eS	S	03 02 26.8	-1.4
WLF	Walferdange	84.89	333	⇑iP	P	02 52 01.6	-0.1
WLF				pmax	pmax		
	comp=Z,653nm,1.8s,mb6.5						
WLF				MLR	MLR		
	comp=Z,245μm,22.0s,MS7.5						
WLF	Walferdange	84.89	333	⇑iP	P	02 52 01.6	0.0
	comp=Z,653nm,1.8s,mb6.5						
WLF				LR	LR		
	comp=Z,245μm,22.0s,MS7.5						
122A	Conniff Cattle	84.90	52	⇑P	P	02 52 02.1	0.0
	baz=85						
RETA	Reutte	84.91	329	iP	P	02 52 01.8	0.0
	comp=Z,263nm,1.3s,mb6.2,SNR=121						
WME	Myndd Eilian	84.91	341	P	P	02 52 01.1	-0.6
WME	Myndd Eilian	84.91	341	⇑eP	P	02 52 01.1	-0.6
WPM1	Penmaenmawr	84.93	340	P	P	02 52 02.0	+0.3
WPM1	Penmaenmawr	84.93	340	⇑iP	P	02 52 02.0	+0.3
PHP	Peshkopia	84.94	320	iPN	P	02 52 01.7	-0.4
AOS	Alonnisos	84.95	317	P	P	02 52 01.9	-0.3
AOS	Alonnisos	84.95	317	P	P	02 52 01.9	-0.3
PUK	Puka	84.96	321	iPN	P	02 52 02.1	-0.1
BIA	Bitola	84.98	319	P	P	02 52 00.7	-1.6
BIA	Bitola	84.98	319	⇑iP	P	02 52 01.1	-1.2
BIA	Bitola	84.98	319	P	P	02 52 00.7	-1.6
TTG	Podgorica	84.99	321	⇑iP	P	02 52 01.6	-0.7
BRY	Bratogost	84.99	322	⇑iP	P	02 52 01.6	-0.7
BRY	Bratogost	84.99	322	⇑iP	P	02 52 01.6	-0.7
GIVF	Givet	85.00	334	⇑iP	P	02 52 01.4	-0.8
	comp=Z,966nm,1.8s,mb6.3						
GIVF	Givet	85.00	334	⇑iP	P	02 52 01.4	-0.8
GIVF				pmax	pmax		
	comp=Z,483nm,1.8s,mb6.3						
GIVF	Givet	85.00	334	⇑iP	P	02 52 01.4	-0.8
	comp=Z,483nm,1.8s,mb6.3						
RPZ	Rata Peaks	85.00	159	P	P	02 52 04.0	+2.0
	comp=Z,32nm,1.1s,mb5.3,baz=323,slow=5.1,SNR=2.9						
RPZ	Rata Peaks	85.00	159	eP	P	02 52 01.3	-0.7
CBKS	Cedar Bluff	85.00	44	⇑iP	P	02 52 01.1	-1.3
CBKS				pmax	pmax		
	comp=Z,242nm,1.1s,mb6.2						
CBKS				MLR	MLR		
	comp=Z,47μm,20.0s,MS6.9						
CBKS	Cedar Bluff	85.00	44	⇑iP	P	02 52 01.1	-1.3
	comp=Z,242nm,1.1s,mb6.2						
CBKS				LR	LR		
	comp=Z,47μm,20.0s,MS6.9						
Z23A	Rita Site, Whi	85.01	51	⇓P	P	02 52 02.5	-0.1
	baz=85,SNR=13						
UBR	Ueberruh	85.02	330	P	P	02 52 02.7	+0.4
WLF1	Llynfaes	85.03	341	P	P	02 52 02.0	-0.3
WLF1				AMb	AMB	02 52 03.7	
	comp=Z,1μm,2.8s,mb6.6						
WLF1	Llynfaes	85.03	341	⇑iP	P	02 52 02.0	-0.3
WLF1				AMb	AMB	02 52 03.7	
	comp=Z,1μm,2.8s,mb6.6						
TRI	Trieste	85.05	327	⇑iP	P	02 52 01.0	-1.6
TRI				pmax	pmax		
	comp=Z,139nm,1.3s,mb5.9						
TRI				MLR	MLR		
	comp=Z,244μm,19.0s,MS7.6						
TRI	Trieste	85.05	327	⇑iP	P	02 52 01.0	-1.5
	comp=Z,139nm,1.3s,mb5.9						
TRI				LR	LR		
	comp=Z,244μm,19.0s,MS7.6						
Y24A	Capitan	85.06	51	⇑P	P	02 52 02.5	-0.3
	baz=85,SNR=33						
DOU	Dourbes	85.08	334	P	P	02 52 02.3	-0.3
	comp=Z,97nm,1.9s,mb5.6						
GUT	Gutenstein	85.09	331	P	P	02 52 03.0	+0.3
YLL	Llanberis	85.11	340	P	P	02 52 03.0	+0.3
YLL	Llanberis	85.11	340	⇑eP	P	02 52 03.0	+0.3
YRC	Rhoscolyn	85.11	341	P	P	02 52 02.1	-0.6
YRC	Rhoscolyn	85.11	341	⇑eP	P	02 52 02.1	-0.6
X25A	Clemmons Ranch	85.12	50	⇑P	P	02 52 02.8	-0.4
	baz=85,SNR=19						
FNA	Florina	85.12	319	P	P	02 52 02.9	-0.1
OHR	Ohrid	85.18	320	P	P	02 52 02.6	-0.7
OHR	Ohrid	85.18	320	⇑iP	P	02 52 02.6	-0.7
OHR				iS	S	03 02 29.3	-2.0
OHR	Ohrid	85.18	320	P	P	02 52 02.6	-0.7
XOR	Xorichti	85.18	317	P	P	02 52 02.8	-0.5
XOR	Xorichti	85.18	317	P	P	02 52 02.8	-0.5
BFO	Black Forest	85.19	331	P	P	02 52 03.8	+0.6
	comp=Z,1μm,1.4s,mb6.8,SNR=53						
BFO	Black Forest	85.19	331	eP	P	02 52 03.0	-0.2
	comp=Z,617nm,1.8s,mb6.4						
BFO				eS	S	03 02 28.6	-2.5
BFO				eSS	SS	03 07 55.7	-8.2
BFO	Black Forest	85.19	331	⇑iP	P	02 52 02.7	-0.5
BFO				pmax	pmax		
	comp=Z,334nm,1.3s,mb6.3						
BFO				MLR	MLR		
	comp=Z,177μm,19.0s,MS7.5						
BFO	Black Forest	85.19	331	⇑iP	P	02 52 02.7	-0.5
	comp=Z,334nm,1.3s,mb6.3						
BFO				LR	LR		
	comp=Z,177μm,19.0s,MS7.5						
SPAK	Spaichingen-Ko	85.20	331	eP	P	02 52 03.3	+0.1
222A	Williams Famil	85.23	53

CDF Champ du Feu 85.52 332⇑ iP P 02 52 04.4 -0.4
CDF pmax pmax
comp=Z,422nm,1.5s,mb6.5
CDF Champ du Feu 85.52 332⇑ iP P 02 52 04.4 -0.4
comp=Z,422nm,1.5s,mb6.5
KBN Korca 85.55 319 i PN P 02 52 05.0 -0.1
NEST Nestorio 85.56 319 P P 02 52 05.2 0.0
DLF Lyons Farm 85.57 342 eP P 02 52 01.8 -3.2
DSB Dublin 85.58 342⇑ iP P 02 52 05.0 0.0
comp=Z,140nm,1.2s,mb6.1
LIBD Limburg 85.61 331 eP P 02 52 05.5 +0.2
X26A CR and CF Fran 85.62 49 ⇓P P 02 52 05.7 +0.1
baz=85,SNR=51
KIZ Kirchzarten 85.65 331 P P 02 52 05.6 +0.1
THL Klokotos Trika 85.67 318 P P 02 52 04.7 -1.1
FELD Feldberg im Sc 85.68 331 eP P 02 52 05.5 -0.2
DCN Croghan 85.71 342 eP P 02 52 02.9 -2.8
W27A Bowe Ranch, En 85.72 48 ⇓P P 02 52 05.9 -0.2
baz=86,SNR=131
223A Chaparral, Ant 85.72 53 ⇓P P 02 52 06.1 -0.1
baz=86
ECH Echery 85.73 332 eP P 02 52 05.8 -0.1
ECH Echery 85.73 332⇑ iP P 02 52 05.5 -0.4
ECH pmax pmax
comp=Z,182nm,1.3s,mb6.2
ECH Echery 85.73 332⇑ iP P 02 52 05.5 -0.4
comp=Z,182nm,1.3s,mb6.2
PTL Penteli 85.76 316 eP P 02 52 04.5 -1.7
ATAL Atalanti 85.76 317 P P 02 52 04.7 -1.5
LKR Lokris 85.80 317 P P 02 52 05.0 -1.4
LKR Lokris 85.80 317 P P 02 52 05.0 -1.4
MCH1 Michaelchurch 85.81 339 P P 02 52 06.0 -0.2
MCH1 AMb AMB 02 52 07.5
comp=Z,464nm,2.8s,mb6.2
MCH1 03 02 28.8
MCH1 AMS AMS 03 33 40.8
MCH1 Michaelchurch 85.81 339⇑ iP P 02 52 06.0 -0.2
MCH1 AMb AMB 02 52 07.5
comp=Z,464nm,2.8s,mb6.2
MCH1 e 03 02 28.8
MCH1 AMS AMS 03 33 40.8
comp=Z,224µm,21.4s,MS7.5
HTR Trewern Hill 85.81 339 P P 02 52 05.3 -0.9
HTR Trewern Hill 85.81 339⇑ iP P 02 52 05.3 -0.9
ATHU Athens Univers 85.86 316 P P 02 52 05.6 -1.1
124A Stringfield Ra 85.87 51 ⇑P P 02 52 06.6 -0.3
baz=86,SNR=40
ATH Athens Observa 85.89 316 P P 02 52 05.6 -1.3
ATH Athens Observa 85.89 316 eP P 02 52 05.0 -1.9
AGG Agios Georgios 85.89 317 eP P 02 52 05.5 -1.4
AGG Agios Georgios 85.89 317 P P 02 52 04.4 -2.5
SWN1 Swindon 85.90 338 P P 02 52 06.2 -0.5
SWN1 AMb AMB 02 52 08.1
comp=Z,784nm,2.9s,mb6.4
SWN1 03 02 41.3
SWN1 AMS AMS 03 33 42.6
SWN1 Swindon 85.90 338⇑ iP P 02 52 06.2 -0.5
SWN1 AMb AMB 02 52 08.1
comp=Z,784nm,2.9s,mb6.4
SWN1 e 03 02 41.3
SWN1 AMS AMS 03 33 42.6
comp=Z,184µm,20.6s,MS7.5
WOL Wolverton 85.90 338 P P 02 52 05.7 -1.0
WOL AMb AMB 02 52 07.7
comp=Z,444nm,2.9s,mb6.2
WOL AMS AMS 03 33 51.2
WOL Wolverton 85.90 338⇑ iP P 02 52 05.7 -1.0
WOL AMb AMB 02 52 07.7
comp=Z,444nm,2.9s,mb6.2
WOL AMS AMS 03 33 51.2
comp=Z,187µm,19.9s,MS7.5
Z25A Roswell 85.93 51 ⇓P P 02 52 07.0 -0.2
baz=86
VLY Voula,Athens 85.94 316 eP P 02 52 05.5 -1.6
X27A F and S Farms, 85.98 49 ⇓P P 02 52 07.5 +0.1
baz=86,SNR=23
MOF Molkenrain 86.04 332 eP P 02 52 07.2 -0.2
Y26A Elida 86.04 50 ⇓P P 02 52 07.4 -0.3
baz=86,SNR=6.8
THR5 Thira Island, 86.07 314 P P 02 52 11.7 +3.9
THR5 Thira Island, 86.07 314 P P 02 52 11.7 +3.9
HGH Gray Hill 86.08 339 P P 02 52 06.6 -0.9
HGH Gray Hill 86.08 339⇑ eP P 02 52 06.6 -0.9
ODZ Otahua Downs 86.11 160 eP P 02 52 08.5 +1.0
comp=Z,1µm,1.7s,mb6.9
SCIA State Center 86.13 38⇑ iP P 02 52 07.8 -0.2
comp=Z,534nm,1.4s,mb6.6
SCIA LR LR
comp=Z,63µm,20.0s,MS7.0
THEF They Montfort 86.15 332 eP P 02 52 07.8 -0.2
NAIG Nisos Aigina 86.17 316 eP P 02 52 07.0 -1.3
HINF Hinteralfeld 86.17 332⇑ iP P 02 52 07.2 -0.9
comp=Z,550nm,1.8s,mb6.2
HINF Hinteralfeld 86.17 332⇑ iP P 02 52 07.2 -0.9
HINF pmax pmax
comp=Z,275nm,1.8s,mb6.2
HINF Hinteralfeld 86.17 332⇑ iP P 02 52 07.2 -0.9
comp=Z,275nm,1.8s,mb6.2
HAU Haudompre 86.20 332⇑ iP P 02 52 07.4 -0.8
comp=Z,418nm,1.5s,mb6.1
HAU eMLR MLR
comp=Z,227µm,21.2s,MS7.2
HAU Haudompre 86.20 332⇑ iP P 02 52 07.4 -0.8
HAU pmax pmax
comp=Z,209nm,1.5s,mb6.1
HAU MLR MLR
comp=Z,227µm,21.3s,MS7.5
HAU Haudompre 86.20 332⇑ iP P 02 52 07.4 -0.8
comp=Z,209nm,1.5s,mb6.1
HAU LR LR
comp=Z,227µm,21.3s,MS7.5
BBS Basel-Blauen 86.21 331 eP P 02 52 08.1 -0.2
JAN Janina 86.22 319 eP P 02 52 08.5 0.0
DSF Desfina 86.23 317 P P 02 52 06.6 -2.0
224A Cornudas Mount 86.25 52 ⇑P P 02 52 08.3 -0.4
baz=86,SNR=55
MEZF Maizieres J'vi 86.26 333⇑ iP P 02 52 08.2 -0.3
comp=Z,655nm,1.4s,mb6.4,baz=23
MEZF Maizieres J'vi 86.26 333⇑ iP P 02 52 08.2 -0.3
comp=Z,655nm,1.4s,mb6.7
LTK Loutraki 86.27 316 eP P 02 52 06.5 -2.3
125A Gardner Draw, 86.39 51 ⇓P P 02 52 09.1 -0.3
baz=86,SNR=55
Z26A Caprock 86.39 50 ⇓P P 02 52 09.0 -0.5
baz=86,SNR=37
KALE Kalithea 86.45 317 P P 02 52 08.2 -1.5
Y27A Causey 86.47 49 ⇓P P 02 52 09.1 -0.7
baz=86,SNR=15
ZKR Zakros 86.48 312 P P 02 52 09.3 -0.6
ZKR Zakros 86.48 312 eP P 02 52 10.0 +0.1
ZKR Zakros 86.48 312 P P 02 52 09.3 -0.6
ZKR Zakros 86.48 312 P P 02 52 09.3 -0.6
KSU1 Kansas State U 86.48 42⇑ iP P 02 52 08.5 -1.3
comp=Z,140nm,0.9s,mb6.2
KSU1 LR LR
comp=Z,44µm,19.0s,MS6.9
DID Didima 86.49 316 eP P 02 52 07.5 -2.4
DID Didima 86.49 316 P P 02 52 06.6 -3.3
SRN Sarande 86.50 319 i PN P 02 52 10.5 +0.6
EFP Efpalio 86.56 317 eP P 02 52 09.0 -1.2
EFP Efpalio 86.56 317 P P 02 52 12.5 +2.3
LOMF Lomont 86.57 331 eP P 02 52 10.0 0.0
IGT Igoumenitsa 86.58 319 P P 02 52 09.4 -0.9
IGT Igoumenitsa 86.58 319 P P 02 52 09.4 -0.9
MNTX Cornudas Mount 86.59 52 eP P 02 52 10.1 -0.4
comp=Z,234nm,1.6s,mb6.2
MNTX LR LR
comp=Z,42µm,22.0s,MS6.8
CPRX Cap Rock 86.62 50 eP P 02 52 11.1 +0.5
comp=Z,39nm,1.0s,mb5.6
MSTX Muleshoe 86.64 49 ⇑P P 02 52 09.9 -0.8
baz=86,SNR=24
LAKA Lakka 86.65 317 P P 02 52 09.8 -0.8
AMTX Amarillo 86.66 48⇑ iP P 02 52 10.8 +0.1
comp=Z,179nm,1.0s,mb6.2
AMTX LR LR
comp=Z,44µm,20.0s,MS6.9
225A Deer Hill, Car 86.66 52 ⇓P P 02 52 10.5 -0.3
baz=86,SNR=11
GUR Goura 86.67 317 eP P 02 52 09.0 -1.7
GUR Goura 86.67 317 P P 02 52 09.0 -1.7
324A Moseley Ranch, 86.70 52 ⇓P P 02 52 10.1 -0.8
baz=86,SNR=17
UPR University Cam 86.72 317 eP P 02 52 10.5 -0.5
KEK Kerkira 86.73 319 P P 02 52 10.2 -0.8
KEK Kerkira 86.73 319 eP P 02 52 14.0 -0.7
KEK Kerkira 86.73 319 P P 02 52 10.2 -0.8
NPS Neapolis 86.73 313 eP P 02 52 10.0 -1.1
JFWS Jewell Farm 86.78 36⇑ iP P 02 52 09.8 -1.4
JFWS pmax pmax
comp=Z,185nm,1.4s,mb6.1
JFWS MLR MLR
comp=Z,92µm,20.0s,MS7.2
JFWS Jewell Farm 86.78 36⇑ iP P 02 52 09.8 -1.3
comp=Z,185nm,1.4s,mb6.1
JFWS LR LR
comp=Z,92µm,20.0s,MS7.2
126A Clayton Basin, 86.79 51 ⇓P P 02 52 10.5 -0.9
baz=87,SNR=11
BDHA Al Bayda' 86.81 285⇑ eP P 02 52 12.1 +0.4
Z27A Tatum 86.83 50 ⇑P P 02 52 10.7 -0.9
baz=87,SNR=41
HEX Exmoor 86.87 339 P P 02 52 11.0 -0.4
HEX Exmoor 86.87 339⇑ iP P 02 52 11.0 -0.4
LAST Lasithi 86.88 313 P P 02 52 11.0 -0.8
LAST Lasithi 86.88 313 eP P 02 52 11.5 -0.3
LAST Lasithi 86.88 313 P P 02 52 11.0 -0.8
FIU Minerbio Fiu 86.88 327 P P 02 52 12.3 +0.7
GDL2 Guadalupe Moun 86.89 51 eP P 02 52 11.7 -0.2
comp=Z,96nm,1.2s,mb5.9
LKD2 Lefkada island 86.96 318 P P 02 52 11.8 -0.3
LKD Levkas 87.02 318 eP P 02 52 11.5 -0.9
VLX Vlachokerasia 87.06 316 eP P 02 52 10.5 -2.2
VLX Vlachokerasia 87.06 316 P P 02 52 10.9 -1.8
325A Bean Ranch, Si 87.07 52 ⇓P P 02 52 12.5 -0.3
baz=87,SNR=19
FSSB Fossombrone 87.07 326 P P 02 52 11.6 -1.0
HTL Hartland 87.12 340 P P 02 52 12.7 0.0
HTL AMb AMB 02 52 14.5
comp=Z,343nm,2.0s,mb6.2
HTL AMS AMS 03 34 43.0
HTL Hartland 87.12 340⇑ eP P 02 52 12.7 0.0
HTL AMb AMB 02 52 14.5
comp=Z,343nm,2.0s,mb6.2
HTL AMS AMS 03 34 43.0
comp=Z,204µm,20.9s,MS7.5
CING Cingoli 87.13 325 P P 02 52 13.0 +0.1
CLNB Carlsbad 87.14 51 eP P 02 52 13.8 +0.6
comp=Z,77nm,1.6s,mb5.7
226A Malaga, Loving 87.14 51 ⇑P P 02 52 13.1 -0.1
baz=87,SNR=20
SCTE Santa Cesarea 87.14 320 eP P 02 52 11.5 -1.5
MS1 Monte Sant'Ang 87.15 323 i P P 02 52 12.0 -1.0
127A Arkansas Junct 87.18 50 ⇑P P 02 52 12.7 -0.6
baz=87
SGRT San Giovanni R 87.21 323 P P 02 52 13.4 +0.1
VLI Veliai 87.22 315 eP P 02 52 10.5 -3.0
NOCI Noci 87.31 322 eP P 02 52 12.5 -1.3
DHBB Dhamar BB 87.34 286⇑ eP P 02 52 14.8 +0.4
DHBB AMb AMB 02 52 17.3
comp=Z,2µm,2.0s,mb7.0
SNTG Esanatoglia 87.34 326 P P 02 52 13.8 -0.1
RGNG Rignano Grg 87.35 323 P P 02 52 13.3 -0.7
SIVA Sivas 87.37 313 P P 02 52 13.6 -0.6
SIVA Sivas 87.37 313 eP P 02 52 14.0 -0.2
SIVA Sivas 87.37 313 P P 02 52 13.6 -0.6
KFL Anninata 87.39 318 P P 02 52 14.7 +0.5
VMG Vicchio 87.40 327 P P 02 52 14.9 +0.7
SEI Scarperia 87.41 327 P P 02 52 15.1 +0.9
FNVD Fontana Vidola 87.42 327 P P 02 52 15.3 +1.0
VLS Valsamata 87.44 318 P P 02 52 13.4 -1.1
VLS Valsamata 87.44 318 P P 02 52 13.4 -1.1
ITM Ithomi 87.45 316 P P 02 52 12.8 -1.7
ITM Ithomi 87.45 316 eP P 02 52 13.0 -1.5
ITM Ithomi 87.45 316 P P 02 52 12.8 -1.7
FG2 Serracapriola 87.45 323 P P 02 52 14.9 +0.5
425A Indio Mountain 87.46 53 ⇓P P 02 52 14.1 -0.6
baz=87,SNR=22
CABF La Chapelle 87.47 331⇑ iP P 02 52 13.8 -0.6
comp=Z,362nm,1.8s,mb6.0
CABF La Chapelle 87.47 331⇑ iP P 02 52 13.8 -0.6
CABF pmax pmax
comp=Z,181nm,1.8s,mb6.0
CABF La Chapelle 87.47 331⇑ iP P 02 52 13.8 -0.6
comp=Z,181nm,1.8s,mb6.0
DYA Yadsworthy 87.47 339 P P 02 52 13.9 -0.4
DYA AMb AMB 02 52 15.4
comp=Z,318nm,2.7s,mb6.1
DYA 03 01 54.9
DYA AMS AMS 03 34 42.3
DYA Yadsworthy 87.47 339⇑ iP P 02 52 13.9 -0.4
DYA AMb AMB 02 52 15.4
comp=Z,318nm,2.7s,mb6.1
DYA e 03 01 54.9
DYA AMS AMS 03 34 42.3
comp=Z,216µm,20.7s,MS7.5
KYTH Kithira 87.48 315 eP P 02 52 14.0 -0.7
CDCA Citt' di Caste 87.50 326 P P 02 52 15.0 +0.4
ERBM Eremo 87.52 328 P P 02 52 15.2 +0.5
TERO Teramo 87.54 325 P P 02 52 15.0 +0.1
NRCA Norcia 87.60 325 P P 02 52 15.0 -0.1
KARN Karanos 87.61 314 eP P 02 52 15.0 -0.3
KARN Karanos 87.61 314 P P 02 52 14.4 -0.9
227A Bennet, Jal 87.67 51 ⇓P P 02 52 15.4 -0.3
baz=88
CIGN Sant'Elia a Pi 87.69 323 P P 02 52 15.6 0.0
326A Caldwell Ranch 87.73 52 ⇑P P 02 52 15.3 -0.7
baz=88,SNR=39
GLMI Grayling 87.73 31⇑ iP P 02 52 15.4 -0.3
comp=Z,428nm,1.0s,mb6.6
GLMI LR LR
comp=Z,98µm,19.0s,MS7.2
LOR Lormes 87.73 333⇑ iP P 02 52 14.9 -0.8
comp=Z,508nm,1.3s,mb6.3,baz=42
LOR eMLR MLR
comp=Z,165µm,18.2s,MS7.2
LOR Lormes 87.73 333⇑ iP P 02 52 14.9 -0.8
LOR pmax pmax
comp=Z,254nm,1.3s,mb6.3
LOR MLR MLR
comp=Z,165µm,18.3s,MS7.5
LOR Lormes 87.73 333⇑ iP P 02 52 14.9 -0.8
comp=Z,254nm,1.3s,mb6.3
LOR LR LR
comp=Z,165µm,18.3s,MS7.5
VLC Villacollemand 87.74 328⇑ iP P 02 52 15.0 -0.8
comp=Z,727nm,2.2s,mb6.5
VLC ePP PP 02 55 31.2 -10
VLC LR LR
comp=Z,230µm,19.0s,MS7.6
PYL PYLOS 87.76 316 eP P 02 52 14.0 -2.0
PYL PYLOS 87.76 316 P P 02 52 14.2 -1.8
FG5 Orsara di Pugl 87.80 323 P P 02 52 16.1 0.0
AQU L'Aquila 87.84 325 P P 02 52 16.3 0.0
AQU L'Aquila 87.84 325⇑ iP P 02 52 16.0 -0.3
comp=Z,316nm,1.4s,mb6.3
AQU LR LR
comp=Z,229µm,19.0s,MS7.6
AQU L'Aquila 87.84 325 eP P 02 52 16.0 -0.3
AQU L'Aquila 87.84 325 ⇓ iP P 02 52 15.5 -0.8
ACER Acerenza 87.86 322 P P 02 52 16.9 +0.5
GVD Gavdhos 87.91 313 eP P 02 52 15.3 -1.5
comp=Z,433nm,0.9s,mb6.7
GVD Gavdhos 87.91 313 eP P 02 52 16.0 -0.8
FLN La Foliniere 87.92 336⇑ iP P 02 52 15.9 -0.6
comp=Z,630nm,1.5s,mb6.3,baz=38
FLN eMLR MLR
comp=Z,444µm,18.8s,MS7.6
FLN La Foliniere 87.92 336⇑ iP P 02 52 15.9 -0.6
FLN pmax pmax
comp=Z,315nm,1.5s,mb6.3
FLN MLR MLR
comp=Z,444µm,18.8s,MS7.9
FLN La Foliniere 87.92 336⇑ iP P 02 52 15.9 -0.6
comp=Z,315nm,1.5s,mb6.3
FLN LR LR
comp=Z,444µm,18.8s,MS7.9
LDF La Druitiere 87.95 336⇑ iP P 02 52 15.9 -0.8
comp=Z,67nm,0.7s,mb5.7
LDF La Druitiere 87.95 336⇑ iP P 02 52 15.9 -0.8
LDF pmax pmax
comp=Z,34nm,0.7s,mb5.7
LDF La Druitiere 87.95 336⇑ iP P 02 52 15.9 -0.8
comp=Z,34nm,0.7s,mb5.7
MGAB Montegabbione 87.99 326 P P 02 52 17.6 +0.6
327A Batmorhea Ranc 87.99 51 ⇓P P 02 52 16.4 -0.8
baz=88
MIDA Miranda 88.00 324 P P 02 52 17.6 +0.5
RNI2 Rionero Sannit 88.00 324 P P 02 52 17.2 +0.1
SSF Saint Saulge 88.04 333⇑ iP P 02 52 16.5 -0.6
comp=Z,395nm,1.5s,mb6.1
SSF Saint Saulge 88.04 333⇑ iP P 02 52 16.5 -0.6
SSF pmax pmax
comp=Z,197nm,1.5s,mb6.1
SSF Saint Saulge 88.04 333⇑ iP P 02 52 16.5 -0.6
comp=Z,197nm,1.5s,mb6.1
FIAM Fiamignano 88.04 325 P P 02 52 17.2 -0.1
CCA1 Carnmenellis 88.06 340 P P 02 52 16.7 -0.5
CCA1 AMb AMB 02 52 18.4
comp=Z,266nm,2.6s,mb6.0
CCA1 AMS AMS 03 35 21.4
CCA1 Carnmenellis 88.06 340⇑ iP P 02 52 16.7 -0.5
CCA1 AMb AMB 02 52 18.4
comp=Z,266nm,2.6s,mb6.0
CCA1 AMS AMS 03 35 21.4
comp=Z,176µm,20.1s,MS7.5
MRB1 Monte Rocchett 88.06 323 P P 02 52 17.1 -0.3
PSB1 Pescosannita 88.06 323 P P 02 52 17.4 0.0
JSA Saint Aubin 88.07 338 P P 02 52 16.4 -0.9
JSA AMb AMB 02 52 18.4
comp=Z,318nm,2.7s,mb6.1
JSA AMS AMS 03 36 49.9
JSA Saint Aubin 88.07 338⇑ iP P 02 52 16.4 -0.9
JSA AMb AMB 02 52 18.4
comp=Z,318nm,2.7s,mb6.1
JSA AMS AMS 03 36 49.9
comp=Z,200µm,16.8s,MS7.6
MRLC Muro Lucano 88.10 322 P P 02 52 17.7 +0.1
LPL La Plagne 88.13 330⇑ iP P 02 52 17.3 -0.3
comp=Z,406nm,1.5s,mb6.1
LPL La Plagne 88.13 330⇑ iP P 02 52 17.3 -0.3
LPL pmax pmax
comp=Z,203nm,1.5s,mb6.1
LPL La Plagne 88.13 330⇑ iP P 02 52 17.3 -0.3
comp=Z,203nm,1.5s,mb6.1
LPG La Plagne 88.14 330⇑ iP P 02 52 17.5 -0.1
comp=Z,553nm,1.6s,mb6.2
LPG La Plagne 88.14 330⇑ iP P 02 52 17.5 -0.1
LPG pmax pmax
comp=Z,276nm,1.6s,mb6.2
LPG La Plagne 88.14 330⇑ iP P 02 52 17.5 -0.1
comp=Z,276nm,1.6s,mb6.2
HYF Humbligny 88.17 334⇑ iP P 02 52 17.6 -0.2
TBI Tubuai 88.21 121 ePP PP 02 55 44.9 -1.0
comp=Z,3µm,27.8s
TBI eS S 03 02 56.9 -4.1
comp=Z,63µm,30.5s
TBI eSS SS 03 08 44.8 -6.1
comp=Z,20µm,27.2s
TBI eLR LR 03 19 29.1
comp=Z,162µm,32.0s,baz=313
TBI Tubuai 88.21 121 ePP PP 02 55 44.9 -1.0
TBI eS S 03 02 56.9 -4.1
TBI eSS SS 03 08 44.8 -6.1
SMF Signal de Mont 88.27 333⇑ iP P 02 52 17.7 -0.6
comp=Z,728nm,1.6s,mb6.4
SMF Signal de Mont 88.27 333⇑ iP P 02 52 17.7 -0.6
SMF pmax pmax
comp=Z,364nm,1.6s,mb6.4
SMF Signal de Mont 88.27 333⇑ iP P 02 52 17.7 -0.6
comp=Z,364nm,1.6s,mb6.4
AVF Avril sur Loir 88.32 333⇑ iP P 02 52 17.9 -0.6
comp=Z,780nm,1.6s,mb6.4
AVF Avril sur Loir 88.32 333⇑ iP P 02 52 17.9 -0.6
AVF pmax pmax
comp=Z,390nm,1.6s,mb6.4
AVF Avril sur Loir 88.32 333⇑ iP P 02 52 17.9 -0.6
comp=Z,390nm,1.6s,mb6.4
GRR Gorron 88.37 336⇑ iP P 02 52 18.3 -0.4
comp=Z,553nm,1.3s,mb6.3
GRR Gorron 88.37 336⇑ iP P 02 52 18.3 -0.4
GRR pmax pmax
comp=Z,276nm,1.3s,mb6.3
GRR Gorron 88.37 336⇑ iP P 02 52 18.3 -0.4
comp=Z,276nm,1.3s,mb6.3
RFI Roccamonfina 88.40 324 P P 02 52 18.7 -0.3
427A Hayter Ranch, 88.41 52 ⇑P P 02 52 18.6 -0.6
baz=88,SNR=23
328A Wristen Ranch, 88.41 51 ⇑P P 02 52 18.6 -0.6
baz=88
WMOK Wichita Mounta 88.44 46⇑ iP P 02 52 18.6 -0.7
WMOK pmax pmax
comp=Z,265nm,1.5s,mb6.2
WMOK Wichita Mounta 88.44 46⇑ iP P 02 52 18.6 -0.8
comp=Z,265nm,1.5s,mb6.2
526A Mary Lane Ranc 88.52 53 ⇑P P 02 52 19.1 -0.6
baz=88,SNR=23
BNI Bardonecchia 88.53 330⇑ iP P 02 52 19.2 -0.3
BNI pmax pmax
comp=Z,463nm,2.1s,mb6.4
BNI MLR MLR
comp=Z,156µm,19.0s,MS7.5
BNI Bardonecchia 88.53 330⇑ iP P 02 52 19.2 -0.3
comp=Z,463nm,2.1s,mb6.4
BNI LR LR
comp=Z,156µm,19.0s,MS7.5
GDM Grand'Maison 88.63 331 eP P 02 52 19.1 -0.9
MA9 Marino 88.64 325 P P 02 52 20.1 0.0
BGF Bois d'Agland 88.70 333⇑ iP P 02 52 19.8 -0.5
comp=Z,454nm,1.7s,mb6.2
BGF Bois d'Agland 88.70 333⇑ iP P 02 52 19.8 -0.5
BGF pmax pmax
comp=Z,227nm,1.7s,mb6.2
BGF Bois d'Agland 88.70 333⇑ iP P 02 52 19.8 -0.5
comp=Z,227nm,1.7s,mb6.2
527A Woodward Ranch 88.76 52 ⇓P P 02 52 20.4 -0.5
baz=88
MBDF Montbardon 88.77 330⇑ iP P 02 52 19.7 -0.9
comp=Z,406nm,1.7s,mb6.2
MBDF Montbardon 88.77 330⇑ iP P 02 52 19.7 -0.9
MBDF pmax pmax
comp=Z,203nm,1.7s,mb6.2
MBDF Montbardon 88.77 330⇑ iP P 02 52 19.7 -0.9
comp=Z,203nm,1.7s,mb6.2
626A Big Bend Ranch 88.83 53 ⇓P P 02 52 20.4 -0.8
baz=89,SNR=17
PLDF La Plantade 88.93 333 eP P 02 52 21.8 +0.4
428A Kincaid Ranch, 88.94 51 ⇑P P 02 52 21.2 -0.5
baz=89,SNR=37
SURF Saint Ours 88.95 330 eP P 02 52 20.8 -0.7
ORIF Oris-en-Rattie 88.96 331⇑ iP P 02 52 21.0 -0.5
comp=Z,450nm,1.6s,mb6.2
ORIF eMLR MLR
comp=Z,289µm,20.2s,MS7.4
ORIF Oris-en-Rattie 88.96 331⇑ iP P 02 52 21.0 -0.5
ORIF pmax pmax
comp=Z,225nm,1.6s,mb6.2
ORIF Oris-en-Rattie 88.96 331⇑ iP P 02 52 21.0 -0.5
comp=Z,225nm,1.6s,mb6.2
SGMF Saint Gilles 89.02 337⇑ iP P 02 52 21.4 -0.3
comp=Z,254nm,1.1s,mb6.2
SGMF Saint Gilles 89.02 337⇑ iP P 02 52 21.4 -0.3
SGMF pmax pmax
comp=Z,127nm,1.1s,mb6.2
SGMF Saint Gilles 89.02 337⇑ iP P 02 52 21.4 -0.3
comp=Z,127nm,1.1s,mb6.2
AGO Saint Agoulin 89.03 333 eP P 02 52 21.8 -0.1
HDIL Hopedale 89.06 37⇑ iP P 02 52 21.5 -0.6
comp=Z,365nm,1.1s,mb6.6
HDIL LR LR
comp=Z,70µm,20.0s,MS7.1
SAOF Saorge 89.06 329 eP P 02 52 20.9 -1.2
AUTN L'Aution 89.11 329 eP P 02 52 21.4 -0.9
ROSF Rostrenen 89.16 338⇑ iP P 02 52 22.1 -0.3
comp=Z,586nm,1.4s,mb6.4
ROSF Rostrenen 89.16 338⇑ iP P 02 52 22.1 -0.3
ROSF pmax pmax
comp=Z,293nm,1.4s,mb6.4
ROSF Rostrenen 89.16 338⇑ iP P 02 52 22.1 -0.3
comp=Z,293nm,1.4s,mb6.4
TCF Toulx Ste Croi 89.16 334 eP P 02 52 22.2 -0.3
comp=Z,576nm,1.8s,mb6.3
TCF Toulx Ste Croi 89.16 334 eP P 02 52 22.2 -0.3
TCF pmax pmax
comp=Z,288nm,1.8s,mb6.3
TCF Toulx Ste Croi 89.16 334 eP P 02 52 22.2 -0.3
comp=Z,288nm,1.8s,mb6.3
TOUF Mont Tournerai 89.17 329 eP P 02 52 21.6 -0.9
SSB Saint Sauveur 89.17 332⇑ iP P 02 52 22.2 -0.3
SSB pmax pmax
comp=Z,76nm,1.4s,mb5.8
SSB Saint Sauveur 89.17 332⇑ iP P 02 52 22.2 -0.3
comp=Z,76nm,1.4s,mb5.8
SBF Sospel 89.22 329⇑ iP P 02 52 21.2 -1.6
comp=Z,305nm,1.4s,mb6.1

SBF Sospel 89.22 329⇑iP P 02 52 21.2 -1.6
SBF pmax pmax
comp=Z,153nm,1.4s,mb6.1
SBF Sospel 89.22 329⇑iP P 02 52 21.2 -1.6
comp=Z,153nm,1.4s,mb6.1
LUCF Luceram 89.23 329 eP P 02 52 21.8 -1.0
528A Cox Ranch, San 89.26 52 ⇓iP P 02 52 22.5 -0.8
baz=89
TXAR Lajitas Array 89.28 53 P P 02 52 23.0 -0.3
comp=Z,26nm,0.9s,mb5.5,baz=300,slow=2.8,SNR=79
TXAR PKKPbc PKKPbc 03 10 00.2 +2.0
comp=Z,0.9nm,0.8s,baz=177,slow=4.3,SNR=4.6
TXAR PKPPKP 03 18 06.5
comp=Z,0.2nm,0.6s,baz=186,slow=4.3,SNR=3.8
TXAR LR LR 03 25 43.7
comp=Z,71μm,21.6s,MS7.1,baz=0.0,slow=31
TXAR Lajitas Array 89.28 53 P P 02 52 23.0 -0.3
TXAR PKKPbc PKKPbc 03 10 00.2 +2.0
TXAR P'P' 03 18 06.5
TXAR LR LR 03 25 43.7
MVIF Mont Vial 89.30 329 eP P 02 52 22.4 -0.8
PYM Petit Puy Mans 89.34 333 eP P 02 52 23.4 +0.1
REVF Revere 89.34 329 eP P 02 52 21.8 -1.6
627A Terlingua Ranc 89.37 53 ⇓iP P 02 52 22.6 -1.2
baz=89
BST Brest 89.42 338 eP P 02 52 23.7 +0.1
VIVF Saint-Julien-I 89.48 331⇑iP P 02 52 23.4 -0.6
comp=Z,347nm,1.7s,mb6.1
VIVF Saint-Julien-I 89.48 331⇑iP P 02 52 23.4 -0.6
VIVF pmax pmax
comp=Z,174nm,1.7s,mb6.1
VIVF Saint-Julien-I 89.48 331⇑iP P 02 52 23.4 -0.6
comp=Z,174nm,1.7s,mb6.1
QUIF Quistinic 89.50 338⇑iP P 02 52 23.5 -0.5
comp=Z,279nm,1.4s,mb6.1
QUIF Quistinic 89.50 338⇑iP P 02 52 23.5 -0.5
QUIF pmax pmax
comp=Z,140nm,1.4s,mb6.1
QUIF Quistinic 89.50 338⇑iP P 02 52 23.5 -0.5
comp=Z,140nm,1.4s,mb6.1
CALN Calern 89.53 329 eP P 02 52 22.5 -1.7
PGF Pioggiola 89.64 327⇑iP P 02 52 23.5 -1.3
comp=Z,178nm,1.2s,mb6.0
PGF Pioggiola 89.64 327⇑iP P 02 52 23.5 -1.3
PGF pmax pmax
comp=Z,89nm,1.2s,mb6.0
PGF Pioggiola 89.64 327⇑iP P 02 52 23.5 -1.3
comp=Z,89nm,1.2s,mb6.0
628A Black Gap, Mar 89.67 52 ⇓iP P 02 52 24.7 -0.5
baz=90
LBL Lubilhac 89.69 332 eP P 02 52 25.0 0.0
MFF Saint Martin d 89.70 335⇑iP P 02 52 24.8 -0.2
comp=Z,529nm,1.3s,mb6.4
MFF Saint Martin d 89.70 335⇑iP P 02 52 24.8 -0.2
MFF pmax pmax
comp=Z,265nm,1.3s,mb6.4
MFF Saint Martin d 89.70 335⇑iP P 02 52 24.8 -0.2
comp=Z,265nm,1.3s,mb6.4
FRF La Foret Royal 89.79 329⇑iP P 02 52 24.0 -1.4
comp=Z,422nm,1.9s,mb6.2
FRF La Foret Royal 89.79 329⇑iP P 02 52 24.0 -1.4
FRF pmax pmax
comp=Z,211nm,1.9s,mb6.2
FRF La Foret Royal 89.79 329⇑iP P 02 52 24.0 -1.4
comp=Z,211nm,1.9s,mb6.1
CEL Celeste 89.82 321⇑iP P 02 52 23.8 -1.9
comp=Z,220nm,0.9s,mb6.5
CEL LR LR
comp=Z,279μm,19.0s,MS7.7
CEL Celeste 89.82 321 eP P 02 52 24.0 -1.7
SMRF Simiane la Rot 89.87 330⇑iP P 02 52 25.2 -0.6
comp=Z,336nm,1.9s,mb6.0
SMRF Simiane la Rot 89.87 330⇑iP P 02 52 25.2 -0.6
comp=Z,336nm,1.9s,mb6.3
LMR La Mourre 90.03 329⇑iP P 02 52 25.3 -1.3
comp=Z,561nm,1.8s,mb6.3
LMR La Mourre 90.03 329⇑iP P 02 52 25.3 -1.3
LMR pmax pmax
comp=Z,281nm,1.8s,mb6.3
LMR La Mourre 90.03 329⇑iP P 02 52 25.3 -1.3
comp=Z,281nm,1.8s,mb6.3
CCM Cathedral Cave 90.05 39⇑iP P 02 52 25.9 -0.9
CCM pmax pmax
comp=Z,233nm,1.1s,mb6.4
CCM MLR MLR
comp=Z,69μm,19.0s,MS7.1
CCM Cathedral Cave 90.05 39⇑iP P 02 52 25.9 -0.9
comp=Z,232nm,1.1s,mb6.4
CCM LR LR
comp=Z,69μm,19.0s,MS7.1
SLM Saint Louis 90.10 38⇑iP P 02 52 26.1 -0.9
SLM pmax pmax
comp=Z,207nm,1.1s,mb6.4
SLM Saint Louis 90.10 38⇑iP P 02 52 26.1 -0.9
comp=Z,207nm,1.1s,mb6.4
SLNA Salina 90.11 321 P P 02 52 26.8 -0.3
AAM Ann Arbor 90.20 32⇑iP P 02 52 27.1 -0.3
AAM pmax pmax
comp=Z,247nm,1.3s,mb6.4
AAM MLR MLR
comp=Z,87μm,19.0s,MS7.2
AAM Ann Arbor 90.20 32⇑iP P 02 52 27.1 -0.3
comp=Z,247nm,1.3s,mb6.4
AAM LR LR
comp=Z,87μm,19.0s,MS7.2
RJF Les Rejaudoux 90.26 333⇑iP P 02 52 27.3 -0.3
comp=Z,300nm,1.4s,mb6.1
RJF eMLR MLR
comp=Z,179μm,18.0s,MS7.2
RJF Les Rejaudoux 90.26 333⇑iP P 02 52 27.3 -0.3
RJF pmax pmax
comp=Z,150nm,1.4s,mb6.1
RJF MLR MLR
comp=Z,179μm,18.0s,MS7.5
RJF Les Rejaudoux 90.26 333⇑iP P 02 52 27.3 -0.3
comp=Z,150nm,1.4s,mb6.1
RJF LR LR
comp=Z,179μm,18.0s,MS7.5
MSEY Mahe Island 90.26 264 PFAKE 02 52 40.0 +12
MSEY LR LR
comp=Z,66μm,21.0s,MS7.0
CAF Calviac 90.39 333⇑iP P 02 52 28.2 0.0
comp=Z,312nm,1.3s,mb6.2
CAF Calviac 90.39 333⇑iP P 02 52 28.2 0.0
CAF pmax pmax
comp=Z,156nm,1.3s,mb6.2
CAF Calviac 90.39 333⇑iP P 02 52 28.2 0.0
comp=Z,156nm,1.3s,mb6.2
LASF Ste Croix 90.45 331⇑iP P 02 52 28.1 -0.4
comp=Z,289nm,1.6s,mb6.1
FVM French Village 90.51 39⇑iP P 02 52 28.2 -0.7
FVM pmax pmax
comp=Z,239nm,1.4s,mb6.3
FVM French Village 90.51 39⇑iP P 02 52 28.2 -0.7
comp=Z,239nm,1.4s,mb6.3
LFF La Frestale 90.85 334⇑iP P 02 52 30.3 -0.1
comp=Z,490nm,1.4s,mb6.3
LFF La Frestale 90.85 334⇑iP P 02 52 30.3 -0.1
LFF pmax pmax
comp=Z,245nm,1.4s,mb6.3
LFF La Frestale 90.85 334⇑iP P 02 52 30.3 -0.1
comp=Z,245nm,1.4s,mb6.3
JCT Junction City 90.88 50⇑iP P 02 52 30.0 -0.8
JCT pmax pmax
comp=Z,365nm,1.7s,mb6.4
JCT Junction City 90.88 50⇑iP P 02 52 30.0 -0.8
comp=Z,365nm,1.7s,mb6.4
OLIL Olney 91.06 37⇑iP P 02 52 30.8 -0.7
comp=Z,243nm,1.1s,mb6.4
HVZN Vizzini 91.25 321 P P 02 52 32.2 -0.2
SIUC Southern Illin 91.32 38 eP P 02 52 32.4 -0.3
comp=Z,455nm,1.5s,mb6.6
HMDC Modica 91.38 321 P P 02 52 32.9 -0.1
BLO Bloomington 91.46 36⇑iP P 02 52 32.7 -0.6
BLO pmax pmax
comp=Z,176nm,1.4s,mb6.2
BLO Bloomington 91.46 36⇑iP P 02 52 32.7 -0.6
comp=Z,176nm,1.4s,mb6.2
MIAR Mount Ida 91.49 43⇑iP P 02 52 33.0 -0.6
MIAR pmax pmax
comp=Z,232nm,1.1s,mb6.4
MIAR MLR MLR
comp=Z,53μm,21.0s,MS7.0
MIAR Mount Ida 91.49 43⇑iP P 02 52 33.0 -0.6
comp=Z,232nm,1.1s,mb6.4
MIAR LR LR
comp=Z,53μm,21.0s,MS7.0
ERC Erice 91.62 323 P P 02 52 33.3 -0.8
MTLF Montolieu 91.69 332⇑iP P 02 52 34.1 -0.2
comp=Z,233nm,1.6s,mb6.0
MTLF Montolieu 91.69 332⇑iP P 02 52 34.1 -0.2
MTLF pmax pmax
comp=Z,116nm,1.6s,mb6.0
MTLF Montolieu 91.69 332⇑iP P 02 52 34.1 -0.2
comp=Z,116nm,1.6s,mb6.0
LONY Lake Ozonia 91.69 25⇑iP P 02 52 33.5 -0.8
comp=Z,79nm,1.2s,mb5.9
LONY LR LR
comp=Z,99μm,21.0s,MS7.2
ERPA Erie 91.86 30⇑iP P 02 52 34.8 -0.3
comp=Z,260nm,1.4s,mb6.4
ERPA LR LR
comp=Z,72μm,19.0s,MS7.1
PARMO Parma 91.87 39 eP P 02 52 35.3 0.0
LRDF Laroque-de-Fa 91.92 332 eP P 02 52 35.5 +0.1
VSL Villasalto 91.96 325⇑iP P 02 52 34.5 -1.1
comp=Z,154nm,1.8s,mb6.0
VSL LR LR
comp=Z,131μm,21.0s,MS7.4
UALR University of 91.98 42⇑iP P 02 52 35.2 -0.7
comp=Z,77nm,1.1s,mb5.9
ACSO Alum Creek Sta 92.19 33⇑iP P 02 52 36.1 -0.6
comp=Z,158nm,1.3s,mb6.2
ACSO LR LR
comp=Z,81μm,20.0s,MS7.2
FILF Fillols 92.23 331 eP P 02 52 36.5 -0.3
HBAR Harrisburg 92.27 41 eP P 02 52 37.0 -0.2
CARF Carcanieres 92.27 332 eP P 02 52 36.6 -0.4
GNAR Gosnell 92.28 40⇑iP P 02 52 36.9 -0.3
comp=Z,3μm,1.4s,mb7.4
WCI Wyandotte Cave 92.32 36⇑iP P 02 52 36.8 -0.5
WCI pmax pmax
comp=Z,146nm,1.3s,mb6.2
WCI MLR MLR
comp=Z,54μm,19.0s,MS7.0
WCI Wyandotte Cave 92.32 36⇑iP P 02 52 36.8 -0.6
comp=Z,146nm,1.3s,mb6.2
WCI LR LR
comp=Z,54μm,19.0s,MS7.0
WDD Wield Dalam 92.36 320⇑iP P 02 52 36.3 -1.2
comp=Z,323nm,1.3s,mb6.5
WDD LR LR
comp=Z,204μm,19.0s,MS7.6
NCB Newcomb 92.39 25⇑iP P 02 52 37.1 -0.5
comp=Z,112nm,1.2s,mb6.1
NCB LR LR
comp=Z,93μm,21.0s,MS7.2
GLAT Glass 92.42 39 eP P 02 52 39.0 +1.2
UTMT University of 92.57 39 eP P 02 52 39.4 +0.9
comp=Z,244nm,1.0s,mb6.6
MELF Melles 92.64 333 eP P 02 52 38.0 -0.7
EPF Esparros 92.65 333⇑iP P 02 52 37.9 -0.8
comp=Z,163nm,1.6s,mb5.9
EPF Esparros 92.65 333⇑iP P 02 52 37.9 -0.8
EPF pmax pmax
comp=Z,81nm,1.6s,mb5.9
EPF Esparros 92.65 333⇑iP P 02 52 37.9 -0.8
comp=Z,81nm,1.6s,mb5.9
LABF Labassere 92.73 333 eP P 02 52 38.6 -0.5
MCQ Macquarie Isla 92.79 170 eP P 02 52 39.9 +1.2
MCQ eS SKSac 03 03 10.3 +0.4
PKME Peaks-Kenny Pk 92.80 22⇑iP P 02 52 39.3 -0.1
comp=Z,244nm,1.5s,mb6.4
PKME LR LR
comp=Z,99μm,20.0s,MS7.3
RESF Ens 92.84 333 eP P 02 52 40.5 +0.9
REYF Montagne du Re 92.88 334 eP P 02 52 39.4 -0.4
VIEF Viey 92.89 333 eP P 02 52 40.5 +0.6
LBNH Lisbon 92.91 24⇑iP P 02 52 39.9 0.0
LBNH pmax pmax
comp=Z,135nm,1.4s,mb6.2
LBNH MLR MLR
comp=Z,80μm,21.0s,MS7.2
LBNH Lisbon 92.91 24⇑iP P 02 52 39.9 0.0
comp=Z,135nm,1.4s,mb6.2
LBNH LR LR
comp=Z,80μm,21.0s,MS7.2
ORDF Ordiarp 92.94 334 eP P 02 52 39.4 -0.7
NATX Nacogdoches 92.97 46 eP P 02 52 41.7 +1.2
comp=Z,301nm,1.6s,mb6.5
NATX LR LR
comp=Z,76μm,19.0s,MS7.2
OSSF Osses 93.02 334 eP P 02 52 39.4 -1.0
ETSF Etsaut 93.08 334⇑iP P 02 52 40.9 +0.2
comp=Z,130nm,1.3s,mb5.9
ETSF Etsaut 93.08 334⇑iP P 02 52 40.9 +0.2
ETSF pmax pmax
comp=Z,65nm,1.3s,mb5.9
ETSF Etsaut 93.08 334⇑iP P 02 52 40.9 +0.2
comp=Z,65nm,1.3s,mb5.9
DESE Dese 93.11 286 eP P 02 52 36.2 -5.1
DESE eS SKSac 03 02 29.2 -45
LARF Larrau 93.11 334 eP P 02 52 40.9 0.0
SJPF Ste Jean 93.13 334⇑iP P 02 52 40.7 -0.2
comp=Z,141nm,1.6s,mb5.8
SJPF Ste Jean 93.13 334⇑iP P 02 52 40.7 -0.2
SJPF pmax pmax
comp=Z,70nm,1.6s,mb5.8
SJPF Ste Jean 93.13 334⇑iP P 02 52 40.7 -0.2
comp=Z,70nm,1.6s,mb5.8
WVT Waverly 93.25 38⇑iP P 02 52 40.8 -0.9
WVT pmax pmax
comp=Z,69nm,1.3s,mb5.9
WVT Waverly 93.25 38⇑iP P 02 52 40.8 -0.8
comp=Z,69nm,1.3s,mb5.9
BINY Binghamton 93.32 27⇑iP P 02 52 41.2 -0.7
comp=Z,93nm,1.4s,mb6.0
BINY LR LR
comp=Z,88μm,19.0s,MS7.2
HKT Hockley 93.63 48⇑iP P 02 52 43.3 -0.2
HKT e 02 56 30.5
HKT pmax pmax
comp=Z,231nm,1.6s,mb6.4
HKT MLR MLR
comp=Z,71μm,19.0s,MS7.1
HKT Hockley 93.63 48⇑iP P 02 52 43.3 -0.2
comp=Z,231nm,1.6s,mb6.4
HKT ePP PP 02 56 30.5 +2.7
HKT LR LR
comp=Z,71μm,19.0s,MS7.1
OXF Oxford 93.72 40⇑iP P 02 52 43.0 -0.9
OXF pmax pmax
comp=Z,145nm,1.0s,mb6.4
OXF MLR MLR
comp=Z,43μm,20.0s,MS6.9
OXF Oxford 93.72 40⇑iP P 02 52 43.0 -0.9
comp=Z,144nm,1.0s,mb6.4
OXF LR LR
comp=Z,43μm,20.0s,MS6.9
MCWV Mont Chateau 93.99 31 eP P 02 52 44.5 -0.5
comp=Z,129nm,1.2s,mb6.2
MCWV LR LR
comp=Z,104μm,22.0s,MS7.2
KVTX Kingsville 94.14 51 eP P 02 52 46.4 +0.5
comp=Z,285nm,1.4s,mb6.5
KVTX LR LR
comp=Z,38μm,19.0s,MS6.9
SWET Sewanee 94.91 38⇑iP P 02 52 48.0 -1.3
VBMS Vicksburg 94.92 43 eP P 02 52 51.2 +1.8
comp=Z,257nm,1.5s,mb6.4
VBMS LR LR
comp=Z,65μm,19.0s,MS7.1
CMAH Djebel Manchou 95.19 325 P P 02 52 49.8 -0.7
CPCT Cooper Cave 95.40 37 eP P 02 52 50.8 -0.8
ABSA Djebel Ababsia 95.45 325 P P 02 52 50.8 -0.9
TKL Tuckaleechee C 95.58 36 LR LR 03 34 10.8
comp=Z,58μm,21.2s,MS7.0,baz=331,slow=34
TKL Tuckaleechee C 95.58 36 eP P 02 52 52.1 -0.3
ELN Prospectdale 95.65 33 eP P 02 52 52.0 -0.6
CKFL Kef-Lekhel 95.69 325 P P 02 52 51.9 -0.9
BLA Blacksburg 95.81 33 eP P 02 52 53.6 +0.3
BLA pmax pmax
comp=Z,42nm,1.0s,mb5.8
BLA MLR MLR
comp=Z,81μm,19.0s,MS7.2
BLA Blacksburg 95.81 33 eP P 02 52 53.5 +0.2
comp=Z,42nm,1.0s,mb5.8
BLA LR LR
comp=Z,81μm,19.0s,MS7.2
CASM Ain Smara 95.91 325 P P 02 52 52.5 -1.3
DFRA Djebel Bou Aff 95.95 326 P P 02 52 53.7 -0.3
PBRG Braganca 96.11 337 eP P 02 52 54.1 -0.5
LRAL Lakeview Retre 96.12 40 eP P 02 52 54.9 +0.1
comp=Z,74nm,2.0s,mb5.8
LRAL LR LR
comp=Z,56μm,20.0s,MS7.0
CBN Corbin 96.23 30 eP P 02 52 54.4 -0.9
comp=Z,99nm,1.4s,mb6.0
CBN LR LR
comp=Z,69μm,22.0s,MS7.1
SET Setif 96.45 326 P P 02 52 56.0 -0.3
PCAB Cabril 96.59 338 eP P 02 52 55.8 -1.0
comp=Z,52nm,1.5s,mb5.7
PCAB Cabril 96.59 338 ePP PP 02 56 50.8 +0.6
MVO Moncorvo 96.78 337 eP P 02 52 56.6 -1.1
comp=Z,52nm,1.5s,mb5.7
MVO Moncorvo 96.78 337 ePP PP 02 56 50.1 -1.6
MVO eS SKSac 03 03 33.1 +0.4
MVO eSS SS 03 10 54.2 +3.2
MVO eLQ 03 22 28.9
MVO eLR LR 03 31 41.0
comp=Z,218μm,18.0s
PVRL Vila Real 96.89 338 eP P 02 52 59.2 +1.0
comp=Z,57nm,1.3s,mb5.8
ESDC Sonseca Array 97.13 334 P P 02 52 58.7 -0.6
comp=Z,4.7nm,0.7s,mb5.0,baz=21,slow=3.7,SNR=29
ESDC PP PP 02 56 58.9 +4.4
comp=Z,13nm,1.0s,baz=19,slow=7.3,SNR=4.8
ESDC PKKPbc PKKPbc 03 09 40.0 +1.8
comp=Z,0.5nm,0.7s,baz=243,slow=5.6,SNR=3.5
ESDC LR LR 03 41 56.4
comp=Z,200μm,19.0s,MS7.6,baz=35,slow=39
ESDC Sonseca Array 97.13 334 P P 02 52 58.7 -0.6
ESDC PP PP 02 56 58.9 +4.4
ESDC PKKPbc PKKPbc 03 09 40.0 +1.8
ESDC LR LR 03 41 56.4
ESLA Sonseca Array 97.13 334⇑iP P 02 52 58.9 -0.4
comp=Z,34nm,1.7s,mb5.5
ESLA LR LR
comp=Z,1278μm,19.0s,MS8.4
ATAF Djebel Tarf 97.22 327 P P 02 53 00.4 +0.6
AKET Djebel Ketaf 97.24 327 P P 02 53 00.0 +0.1
ADJB Djebel Djouab 97.34 328 P P 02 53 01.0 +0.7
PAB San Pablo 97.38 335 eP P 02 53 00.4 0.0
PAB e 02 56 57.1
PAB pmax pmax
comp=Z,24nm,1.1s,mb5.5
PAB MLR MLR
comp=Z,265μm,19.0s,MS7.8
PAB San Pablo 97.38 335 eP P 02 53 00.4 0.0
comp=Z,24nm,1.1s,mb5.5
PAB ePP PP 02 56 57.0 +0.7
PAB LR LR
comp=Z,265μm,19.0s,MS7.8
PVIS Viseu 97.46 338 eP P 02 53 00.7 0.0
comp=Z,43nm,1.6s,mb5.6
PVIS Viseu 97.46 338 ePP PP 02 56 58.7 +1.8
EMHD Djebel Mahouad 97.51 328 P P 02 53 00.0 -1.1
GOGA Godfrey 97.56 37 eP P 02 53 02.8 +1.4
GOGA pmax pmax
comp=Z,69nm,1.5s,mb6.0
GOGA MLR MLR
comp=Z,70μm,19.0s,MS7.2
GOGA Godfrey 97.56 37 eP P 02 53 02.8 +1.4
comp=Z,69nm,1.5s,mb6.0
GOGA LR LR
comp=Z,70μm,19.0s,MS7.2
MTE Manteigas 97.64 337 eP P 02 53 00.8 -0.8
comp=Z,43nm,1.9s,mb5.7
MTE Manteigas 97.64 337 ePP PP 02 56 59.9 +1.6
MTE eS SKSac 03 03 38.2 +1.1
MTE eSS SS 03 11 14.0 +11
MTE eLQ 03 22 39.2
MTE eLR LR 03 32 25.7
comp=Z,239μm,18.0s
MTE Manteigas 97.64 337 eP P 02 53 01.9 +0.4
comp=Z,41nm,1.4s,mb5.8
MTE ePP PP 02 56 56.9 -1.4
MTE LR LR
comp=Z,227μm,21.0s,MS7.6
BRAL Brewton 97.69 41 PFAKE 02 53 10.0 +8.0
BRAL LR LR
comp=Z,55μm,19.0s,MS7.1
JSC Jenkinsville 97.88 35 eP P 02 53 03.5 +0.7
EBNR Beni Rached 98.02 329 P P 02 53 10.0 +6.6
PCBR Castelo Branco 98.13 337 eP P 02 53 03.3 -0.5
PCBR Castelo Branco 98.13 337 ePP PP 02 57 04.9 +2.8
ECHA Ech Chlef 98.21 329 P P 02 53 07.0 +2.8
RKT Rikitea 98.33 113 ePP PP 02 57 06.2 +1.0
comp=Z,7μm,29.0s
RKT eSKSac SKSac 03 03 36.1 -4.7
comp=Z,45μm,29.0s
RKT Rikitea 98.33 113 ePS PS 03 05 55.0 -4.1
comp=Z,38μm,30.0s
RKT eSS SS 03 11 14.9 -0.9
comp=Z,37μm,27.8s
RKT eLR LR 03 24 44.2
comp=Z,170μm,23.5s,baz=310
RKT Rikitea 98.33 113 ePP PP 02 57 06.2 +1.0
RKT eSKSac SKSac 03 03 36.1 -4.7
RKT ePS PS 03 05 55.0 -4.1
RKT eSS SS 03 11 14.9 -0.9
PMRV Marv??o 98.48 337 eP P 02 53 04.9 -0.5
comp=Z,35nm,1.2s,mb5.8
PMRV Marv??o 98.48 337 ePP PP 02 57 06.8 +2.0
PMRV eS SKSac 03 03 41.0 -0.4
PMRV eSS SS 03 11 18.1 +3.1
PMRV eLQ 03 23 18.4
PMRV eLR LR 03 33 00.9
comp=Z,167μm,18.0s
EANR 'Ain N'Sour 98.49 329 P P 02 53 06.0 +0.5
CNNC Cliffs of the 98.56 32 PFAKE 02 53 20.0 +14
CNNC LR LR
comp=Z,61μm,20.0s,MS7.1
PTOM Tomar 98.62 337 eP P 02 53 06.5 +0.5
comp=Z,49nm,1.5s,mb5.8
PTOM Tomar 98.62 337 ePP PP 02 57 03.9 -1.9
ETRT Tiaret 98.89 329 P P 02 53 08.0 +0.7
PESTR Estremoz 99.05 337 eP P 02 53 07.2 -0.7
PESTR Estremoz 99.05 337 ePP PP 02 57 10.9 +1.7
PESTR eS SKSac 03 03 45.7 +1.4
PESTR eSS SS 03 11 28.5 +5.5
PESTR eLQ 03 25 37.5
PESTR eLR LR 03 33 30.8
comp=Z,183μm,22.0s
NHSC New Hope 99.36 35 PFAKE 02 53 20.0 +11
NHSC LR LR
comp=Z,80μm,21.0s,MS7.2
EVO Evora 99.49 337 eP P 02 53 10.3 +0.4
comp=Z,120nm,1.8s,mb5.8
EVO eMLR MLR
comp=Z,285μm,22.2s,MS7.4
EVO Evora 99.49 337 eP P 02 53 09.6 -0.3
EVO Evora 99.49 337 ePP PP 02 57 15.0 +2.5
PMAFR Mafra 99.49 338 eP P 02 53 09.4 -0.5
PMAFR Mafra 99.49 338 ePP PP 02 57 14.0 +1.5
PMAFR eS SKSac 03 03 45.4 -1.1
PMAFR eSS SS 03 11 33.7 +4.6
PMAFR eLQ 03 22 34.9
PMAFR eLR LR 03 33 22.5
comp=Z,222μm,20.0s
PBAR Barrancos 99.51 336 eP P 02 53 08.9 -1.1
PBAR Barrancos 99.51 336 ePP PP 02 57 13.9 +1.2
PBAR eS SKSac 03 03 50.1 +3.5
PBAR eSS SS 03 11 33.2 +3.8
PBAR eLQ 03 23 35.8
PBAR eLR LR 03 33 56.4
comp=Z,261μm,20.0s
EVOP Sao Brissos 99.53 337 eP P 02 53 09.4 -0.7
EVOP ePP PP 02 57 13.1 +0.3
EVOP eS SKSac 03 03 45.5 -1.3
EVOP eSS SS 03 11 27.4 -2.3
EVOP AMS AMS 03 41 54.3
comp=Z,172μm,20.1s,MS7.5
EVOP Sao Brissos 99.53 337 eP P 02 53 09.4 -0.7
EVOP e 02 57 13.1
EVOP eS SKSac 03 03 45.4 -1.3
EVOP eSS SS 03 11 27.4 -2.3
LIS Lisbon 99.67 338 eP Pdif 02 53 10.1 -0.6
LIS ePP PP 02 57 14.9 +1.0
LIS eS SKSac 03 03 47.2 -0.3
LIS eS SKSac 03 03 47.6 +0.2
LIS AMS AMS 03 43 02.4
comp=Z,252μm,25.5s,MS7.6
LIS Lisbon 99.67 338 ePP PP 02 57 14.9 +1.0
LIS eS SKSac 03 03 47.2 -0.2
LIS A 03 43 02.4

comp=Z,252μm,25.5s
LIS Lisbon 99.67 338 *e*P Pdif 02 53 10.0 -0.7
LIS *e* 02 57 14.9
LIS *e*S SKSac 03 03 47.1 -0.3
PBEJ Beja 99.91 336 *e*PP PP 02 57 13.8 -1.9
MESJ Messejana 100.19 337 *e*P Pdif 02 53 12.9 -0.1
MESJ *e*PP PP 02 57 17.8 -0.1
MESJ *e*S SKSac 03 03 51.1 +1.1
MESJ *e*S SKSac 03 03 51.5 +1.5
MESJ *e*SS SS 03 11 40.5 +1.6
MESJ *e*SS SS 03 11 41.3 +2.4
MESJ AMS AMS 03 42 20.1
comp=N,165μm,19.0s
MESJ Messejana 100.19 337 *e*P Pdif 02 53 12.9 -0.1
MESJ *e* 02 57 17.7
MESJ *e*S SKSac 03 03 51.4 +1.4
MESJ *e*SS SS 03 11 41.3 +2.4
PCVE Castro Verde 100.33 336 *e*P Pdif 02 53 13.0 -0.6
PCVE Castro Verde 100.33 336 *e*PP PP 02 57 20.5 +1.6
PCVE *e*S SKSac 03 03 54.2 +3.5
PCVE *e*SS SS 03 11 47.2 +6.4
PCVE *e*LQ 03 25 49.3
PCVE *e*LR LR 03 34 19.1
comp=N,227μm,22.0s
PVAQ Vaqueiros 100.43 336 *e*P Pdif 02 53 14.0 0.0
PVAQ Vaqueiros 100.43 336 *e*PP PP 02 57 22.5 +2.8
PVAQ *e*S SKSac 03 03 51.5 +0.3
PVAQ *e*SS SS 03 11 46.8 +4.5
PVAQ *e*LQ 03 25 41.4
PVAQ *e*LR LR 03 34 58.4
comp=N,264μm,22.0s
PBDV Barranco-do-Ve 100.65 336 *e*P Pdif 02 53 15.2 +0.2
PBDV Barranco-do-Ve 100.65 336 *e*PP PP 02 57 23.1 +1.8
PBDV *e*S SKSac 03 03 52.3 +0.1
PBDV *e*SS SS 03 11 51.9 +6.6
PBDV *e*LQ 03 26 04.0
PBDV *e*LR LR 03 32 56.8
comp=N,288μm,20.0s
SFS San Fernando 100.78 335 PFAKE 02 53 30.0 +14
SFS LR LR
comp=Z,674μm,19.0s,MS8.2
MORF Marmelete 100.82 337 *e*PP PP 02 57 24.6 +2.0
MORF *e*S SKSac 03 03 55.1 +2.0
MORF *e*SS SS 03 12 04.0 +16
MORF *e*LQ 03 27 21.9
MORF *e*LR LR 03 34 16.9
comp=Z,132μm,22.0s
MORF Marmelete 100.82 337 *e*P Pdif 02 53 15.5 -0.3
MORF *e* 02 57 23.4
MORF *e*S SKSac 03 03 52.2 -0.9
MORF *e*SS SS 03 11 51.0 +3.3
PFVI Vila Bisbo 101.03 337 *e*P Pdif 02 53 16.3 -0.4
PFVI Vila Bisbo 101.03 337 *e*PP PP 02 57 25.5 +1.3
PFVI *e*S SKSac 03 03 53.6 -0.5
PFVI *e*SS SS 03 11 56.8 +6.2
PFVI *e*LQ 03 26 07.7
PFVI *e*LR LR 03 33 38.4
comp=Z,103μm,20.0s
KMBO Kilima Mbogo 102.57 278 P Pdif 02 53 24.1 +0.6
comp=Z,2.1nm,0.9s,baz=3.3,slow=5.8,SNR=4.3
KMBO PP PP 02 57 40.2 +3.0
comp=Z,9.8nm,1.2s,baz=0.9,slow=24,SNR=3.7
KMBO Kilima Mbogo 102.57 278 *e*P Pdif 02 53 23.9 +0.4
KMBO pmax pmax
comp=Z,39nm,1.6s
KMBO MLR MLR
comp=Z,46μm,20.0s
KMBO Kilima Mbogo 102.57 278 *e*Pdif Pdif 02 53 23.9 +0.3
comp=Z,38nm,1.6s
KMBO LR LR
comp=Z,46μm,20.0s,MS7.0
DWPF Disney 102.91 39 PFAKE 02 53 40.0 +15
DWPF LR LR
comp=Z,72μm,19.0s,MS7.2
PTCN Pitcairn Islan 103.07 112 PFAKE 02 53 40.0 +14
PTCN LR LR
comp=Z,55μm,22.0s,MS7.0
DRV Dumont d'Urvil 103.89 181 Pdif Pdif 02 53 30.0 +0.6
DRV Dumont d'Urvil 103.89 181 PP PP 02 57 51.0 +4.5
DRV SKKS SKSac 03 04 00.0 -5.6
DRV SS SS 03 12 23.0 -8.6
DRV R 03 30 00.0
ABPO Ambohimpanom 105.22 258 PFAKE 02 58 00.0 +10
ABPO LR LR
comp=Z,38μm,20.0s,MS6.9
TEIG Tepich 105.42 49 PFAKE 02 58 00.0 +10
TEIG LR LR
comp=Z,38μm,21.0s,MS6.9
BBSR BB Station 106.04 24 PFAKE 02 58 00.0 +8.9
BBSR LR LR
comp=Z,51μm,21.0s,MS7.0
CASY Casey 106.34 193 *e*PKP PKiKP 02 57 52.3 +1.9
CASY LR LR
comp=Z,29μm,22.0s,MS6.8
TAM Tamanrasset 107.48 318 *e*P Pdif 02 53 47.1 +1.7
TAM pmax pmax
comp=Z,8.0nm,1.4s
TAM Tamanrasset 107.48 318 *e*Pdif Pdif 02 53 47.1 +1.7
comp=Z,7.5nm,1.4s
FUL Funchal 107.53 342 *e*PP PP 02 58 15.6 +3.1
MIR Mirnyy 110.39 199 *i* PKIKP PKiKP 02 58 03.0 +5.0
MIR pmax pmax
comp=Z,48nm,1.4s
TGUH Tegucigalpa,Un 110.75 52 PFAKE 02 58 10.0 +10
TGUH LR LR
comp=Z,39μm,21.0s,MS7.0
GTBY Guantanamo Bay 112.88 38 PFAKE 02 58 20.0 +16
GTBY LR LR
comp=Z,38μm,20.0s,MS7.0
MTDJ Mount Denham 113.07 41 PFAKE 02 58 20.0 +15
MTDJ LR LR
comp=Z,64μm,21.0s,MS7.2
GRTK Grand Turk 113.38 34 PFAKE 02 58 20.0 +15
GRTK LR LR
comp=Z,61μm,20.0s,MS7.2
JTS JuntasAbangare 115.07 53 PFAKE 02 58 20.0 +11
JTS LR LR
comp=Z,26μm,19.0s,MS6.9
SDDR Presa de Saban 115.52 35 PFAKE 02 58 20.0 +11
SDDR LR LR
comp=Z,66μm,20.0s,MS7.2
SBA Scott Base 116.09 174 *e*PKIKP PKPdf 02 58 09.4 +0.8
SBA MLR MLR
comp=Z,16μm,22.0s,MS6.6
LSZ Lusaka 118.15 272 *e*PKIKP PKPdf 02 58 15.4 +1.0
LSZ MLR MLR
comp=Z,60μm,22.0s,MS7.2
SJG San Juan 118.52 31 PFAKE 02 58 30.0 +15
SJG LR LR
comp=Z,46μm,20.0s,MS7.1
BCIP Isla Barro Col 119.10 49 PFAKE 02 58 30.0 +14
BCIP LR LR
comp=Z,25μm,20.0s,MS6.8
PAYG Puerto Ayora 119.37 66 PFAKE 02 58 30.0 +13
PAYG LR LR
comp=Z,61μm,21.0s,MS7.2
RPN Rapa Nui 119.93 103 PFAKE 02 58 30.0 +13
RPN LR LR
comp=Z,99μm,21.0s,MS7.4
MAW Mawson 120.29 206 *e*P PKPdf 02 58 15.4 -1.5
comp=Z,8.7nm,0.7s
MAW Mawson 120.29 206 PKP PKPdf 02 58 16.0 -0.9
comp=Z,9.8nm,0.8s,baz=352,slow=1.6,SNR=17
MAW Mawson 120.29 206 *e*PKPdf PKPdf 02 58 16.1 -0.8
MAW LR LR
comp=Z,34μm,21.0s,MS7.0
ANWB Willy Bob 120.60 27 PFAKE 02 58 30.0 +11
ANWB LR LR
comp=Z,53μm,22.0s,MS7.1
SDV Santo Domingo 124.50 41 *e*PKPdf PKPdf 02 58 26.1 -0.6
SDV LR LR
comp=Z,17μm,19.0s,MS6.7
LBTB Lobatse 125.36 264 *e*PKIKP PKPdf 02 58 27.3 -0.7
LBTB MLR MLR
comp=Z,55μm,20.0s,MS7.2
BBGH Gun Hill 125.58 26 PFAKE 02 58 40.0 +11
BBGH LR LR
comp=Z,91μm,22.0s,MS7.4
GRGR Grenville 125.73 29 PFAKE 02 58 40.0 +11
GRGR LR LR
comp=Z,47μm,21.0s,MS7.1
ROSC El Rosal 125.80 47 PKP PKPdf 02 58 30.3 +1.0
comp=Z,14nm,1.0s,baz=236,slow=2.8,SNR=8.8
ROSC El Rosal 125.80 47 *e*PKPdf PKPdf 02 58 31.0 +1.7
SACV Santiago Islan 126.10 343 PFAKE 02 58 40.0 +10
SACV LR LR
comp=Z,79μm,21.0s,MS7.4
PCRV Puerto La Cruz 126.26 34 PKP PKPdf 02 58 29.1 -1.0
comp=Z,8.3nm,0.9s,baz=324,slow=8.7,SNR=2.5
DBIC Dimbokro 126.37 318 PKP PKPdf 02 58 29.3 -1.0
comp=Z,20nm,1.0s,baz=22,slow=1.6,SNR=9.5
DBIC PP PP 03 00 23.3 -1.4
comp=Z,25nm,1.0s,baz=7.7,slow=6.9,SNR=5.1
DBIC Dimbokro 126.37 318 *e*PKPdf PKPdf 02 58 29.3 -1.0
DBIC *e*PP PP 03 00 22.2 -2.5
TIC Toumodi 126.48 318 *e*PKIKP PKPdf 02 58 30.0 -0.5
comp=Z,173nm,1.2s
KIC Kosan Boka 126.57 318 *e*PKIKP PKPdf 02 58 30.1 -0.6
comp=Z,98nm,1.2s
LIC Lamto 126.84 318 *e*PKIKP PKPdf 02 58 30.6 -0.6
comp=Z,203nm,1.4s
LIC Lamto 126.84 318 *e*PKIKP PKPdf 02 58 29.8 -1.4
comp=Z,223nm,1.4s
LIC *e*MLR MLR
comp=Z,140μm,19.5s,MS7.3
LIC Lamto 126.84 318 *e*PKPdf PKPdf 02 58 29.8 -1.4
LIC LR LR
comp=Z,70μm,19.5s,MS7.3
OTAV Otavalo 126.87 55 *e*PKPdf PKPdf 02 58 33.8 +2.5
OTAV LR LR
comp=Z,35μm,21.0s,MS7.0
QSPA South Pole Qui 127.28 180 *e*PKPdf PKPdf 02 58 29.4 -0.7
QSPA LR LR
comp=Z,29μm,21.0s,MS6.9
BOSA Boshof 127.33 260 PKP PKPdf 02 58 30.6 -1.0
comp=Z,5.3nm,0.9s,baz=73,slow=3.5,SNR=7.6
BOSA Boshof 127.33 260 *e*PKPdf PKPdf 02 58 30.5 -1.1
BOSA LR LR
comp=Z,26μm,20.0s,MS6.9
TSUM Tsumeb 128.73 275 *e*PKPdf PKPdf 02 58 35.9 +1.3
SYO Syowa Base 128.96 207⇑ *e*P PKPdf 02 58 31.8 -1.7
SYO Syowa Base 128.96 207⇓ *e*P PKPdf 02 58 34.0 +0.5
ATAH Atahualpa 132.32 61 PKP PKPdf 02 58 42.6 +1.0
comp=Z,8.0nm,0.9s,baz=292,slow=5.4,SNR=5.9
SUR Sutherland 132.40 258 PFAKE 02 58 50.0 +8.8
SUR LR LR
comp=Z,39μm,20.0s,MS7.1
NNA Nana 136.79 64 PKP PKPdf 02 58 50.2 +0.3
comp=Z,13nm,0.8s,baz=337,slow=11,SNR=4.1
NNA Nana 136.79 64 *e*PKPdf PKPdf 02 58 50.4 +0.5
NVL N'lazarevskaya 138.01 202 *c i*PKIKP PKPdf 02 58 50.0 -0.4
NVL MLR MLR
comp=Z,29μm,20.0s,MS7.0
MAIT Maitri 138.04 202 *e*PKPdif PKPdf 02 58 43.9 -6.6
VNA1 Neumayer--Stat 143.39 196 *e*PKPdf PKPdf 02 58 56.3 -3.9
VNA1 *e* 02 59 00.5
SHEL Horse Pasture 144.51 299 *e*PKIKP PKPdf 02 59 03.8 0.0
SHEL MLR MLR
comp=Z,39μm,19.0s,MS7.2
LPAZ La Paz 145.86 60 PKPbc PKPbc 02 59 06.4 -0.2
comp=Z,45nm,0.9s,baz=348,slow=4.4,SNR=98
LPAZ La Paz 145.86 60 PKPbc PKPbc 02 59 06.4 -0.2
LPAZ LR LR
comp=Z,25μm,20.0s,MS7.0
PSGC Pisagua 146.63 67⇑ *i*P PKPdf 02 59 06.3 -1.0
MNMC Miæe Miæ 146.72 65⇑ *i*P PKPdf 02 59 08.4 +1.0
HMBC Humberston 147.23 67 *e*P PKPbc 02 59 10.3 -0.3
RCBR Riachuelo 148.39 357 *e*PKPbc PKPbc 02 59 13.3 -0.6
RCBR LR LR
comp=Z,30μm,20.0s,MS7.1
PMSA Palmer Station 148.60 159 *e*PKPbc PKPbc 02 59 12.9 0.0
PMSA LR LR
comp=Z,41μm,20.0s,MS7.2
CEN1 Los Morros 148.84 72 ↓ *i*P PKPbc 02 59 14.5 -0.3
SIV San Ignacio 150.24 50 PKP PKPdf 02 59 12.6 -0.7
comp=Z,13nm,1.0s,baz=156,slow=0.5,SNR=22
SIV PKPbc PKPbc 02 59 18.0 -0.4
comp=Z,36nm,0.9s,baz=273,slow=5.9,SNR=56
LCO Las Campanas 151.28 83 *e*PKPbc PKPbc 02 59 20.9 +0.4
LCO *e*PKPab PKPab 02 59 30.1 +1.4
LCO LR LR
comp=Z,58μm,21.0s,MS7.4
LCO Las Campanas 151.28 83 ↓ *i*P PKPbc 02 59 21.6 +1.1
TLL Tololo Astrono 151.68 85 ↓ *i*PKIKP PKPbc 02 59 22.4 +1.0
TLL Tololo Astrono 151.68 85 ↓ *i*P PKPbc 02 59 22.4 +0.9
CMCH Combarbala 151.92 87 *e*P PKPbc 02 59 20.8 -1.2
CMCH Combarbala 151.92 87 *e*P PKPbc 02 59 20.8 -1.2
CLCH Cerro Calan 153.05 91 *e*P PKPdf 02 59 16.4 -0.7
LMEL Las Melosas 153.46 92 *e*P PKPdf 02 59 16.1 -1.5
LMEL Las Melosas 153.46 92 *e*P PKPdf 02 59 16.1 -1.5
PLCA Paso Flores 154.44 107 PKP PKPdf 02 59 19.4 +0.6
comp=Z,7.6nm,1.0s,baz=225,slow=2.7,SNR=3.3
PLCA PKPbc PKPbc 02 59 28.4 +1.2
comp=Z,21nm,1.1s,baz=225,slow=5.3,SNR=6.6
PLCA *e*PKPab PKPab 02 59 42.5 +0.8
comp=Z,18nm,0.9s,baz=288,slow=2.5,SNR=7.2
PLCA Paso Flores 154.44 107 *e*PKPdf PKPdf 02 59 19.2 +0.5
PLCA *e*PKPab PKPab 02 59 42.8 +1.1
PLCA LR LR
comp=Z,31μm,20.0s,MS7.1
CPUP Villa Florida 160.01 62 PKP PKPdf 02 59 25.7 -0.6
comp=Z,1.6nm,0.8s,baz=280,slow=19,SNR=4.3
CPUP PKPab PKPab 03 00 05.2 -0.8
comp=Z,9.6nm,0.9s,baz=279,slow=2.1,SNR=4.9
CPUP Villa Florida 160.01 62 PKP2 PKPab 03 00 05.2 -0.8
CPUP MLR MLR
comp=Z,7μm,20.0s
CPUP Villa Florida 160.01 62 PKP PKPdf 02 59 25.7 -0.6
CPUP PKPab PKPab 03 00 05.2 -0.8
CPUP LR LR
comp=Z,7μm,20.0s
TRQA Tornquist 160.85 99 PFAKE 02 59 40.0 +13
TRQA LR LR
comp=Z,50μm,21.0s
LPA La Plata 163.50 87 *c e*PKP PKPab 03 00 19.0 -2.1
SPB Sao Paulo 163.80 34 *e*PKPdf PKPdf 02 59 31.0 +0.7
SPB *e*PKPab PKPab 03 00 22.3 -0.2
CAM4 Nova Friburgo 164.30 17 ↓ *i*P PKPdf 02 59 30.2 -0.5
CAM4 *i* 03 00 20.3
CAM4 *i* 03 00 40.8

NEIC ***19*** *02:40:42.2, 31.°80S×72.°10W, h6km, ML3.9(GUC), After GUC.*

GUC 19 02:40:42.2±0.9, 31.°80S×72.°10W, h6km±2km, MD4.1, ML3.9, 8C-4D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.52**	**99**	↓ *i*P	Pg	02 40 52.9	+0.8
CHNG				*i* S	Sg	02 41 00.5	+1.6
CHNG				AML	AML	02 41 01.4	
comp=E,3μm,0.6s							
CMCH	**Combarbala**	**1.13**	**57**	↓ *i*P	Pg	02 41 03.5	-0.4
CMCH				*i* S	Sg	02 41 18.7	+0.2
CMCH	**Combarbala**	**1.13**	**57**	↓ *i*P	Pg	02 41 03.5	-0.4
CMCH				*i* S	Sg	02 41 18.7	+0.2
CMCH				AML	AML	02 41 19.6	
comp=E,24μm,0.7s							
OVCH	**Ovalle**	**1.42**	**33**	⇑ *i*P	Pn	02 41 08.1	-0.5
OVCH				*i* S	Sb	02 41 26.9	-0.5
OVCH	**Ovalle**	**1.42**	**33**	⇑ *i*P	Pn	02 41 08.1	-0.5
OVCH				*i* S	Sb	02 41 26.9	-0.5
ROCH	**El Roble**	**1.49**	**142**	*e*P	Pn	02 41 09.3	-0.2
ROCH				*e*S	Sn	02 41 29.5	+0.2
ROCH	**El Roble**	**1.49**	**142**	*e*P	Pn	02 41 09.3	-0.2
ROCH				*e*S	Sn	02 41 29.5	+0.2
JACH	**Jahuel**	**1.55**	**125**	*e*P	Pn	02 41 10.3	-0.1
JACH	**Jahuel**	**1.55**	**125**	*e*P	Pn	02 41 10.3	-0.1
PEL	**Peldehue**	**1.79**	**139**	↓ *i*P	Pn	02 41 13.7	0.0
PEL				*i* S	Sn	02 41 37.9	+1.0
PEL				AML	AML	02 41 43.0	
comp=E,4μm,0.4s							
TLL	**Tololo Astrono**	**1.97**	**35**	*e*P	Pn	02 41 16.7	+0.5
TLL				*i* S	Sn	02 41 43.2	+2.0
TLL	**Tololo Astrono**	**1.97**	**35**	*e*P	Pn	02 41 16.7	+0.5
TLL				*i* S	Sn	02 41 43.2	+2.0
TLL				AML	AML	02 41 55.3	
comp=N,2μm,0.5s							
SAN	**Santiago**	**2.04**	**144**	*e*P	Pn	02 41 17.4	+0.3
SAN				*i* S	Sn	02 41 44.4	+1.4
SAN	**Santiago**	**2.04**	**144**	*e*P	Pn	02 41 17.4	+0.3
SAN				*i* S	Sn	02 41 44.4	+1.4
SAN				AML	AML	02 41 54.4	
comp=N,1μm,0.6s							
CLCH	**Cerro Calan**	**2.06**	**141**	⇑ *i*P	Pn	02 41 17.6	+0.1
CLCH				*i* S	Sn	02 41 45.5	+2.0
CLCH				AML	AML	02 41 53.7	
comp=E,3μm,0.5s							
TACH	**Talagante**	**2.09**	**152**	⇑ *i*P	Pn	02 41 18.2	+0.4
TACH	**Talagante**	**2.09**	**152**	⇑ *i*P	Pn	02 41 18.2	+0.4
FSR	**Penalolen**	**2.13**	**142**	*i* S	Sn	02 41 47.2	+1.9
FSR				AML	AML	02 41 54.1	
comp=N,288nm,0.3s							
ANTU	**Antumapu**	**2.15**	**145**	*e*P	Pn	02 41 19.0	+0.4
ANTU	**Antumapu**	**2.15**	**145**	*e*P	Pn	02 41 19.0	+0.4
ANTU				AML	AML	02 41 55.5	
comp=E,1μm,0.5s							
FCH	**Farellones**	**2.15**	**135**	⇑ *i*P	Pn	02 41 20.5	+1.8
FCH				*i* S	Sn	02 41 48.8	+3.0
FCH				AML	AML	02 41 56.8	
comp=N,1μm,0.7s							
PCH	**Pirque**	**2.25**	**144**	*e*P	Pn	02 41 20.6	+0.6
PCH				*i* S	Sn	02 41 50.5	+2.3
PCH	**Pirque**	**2.25**	**144**	*e*P	Pn	02 41 20.6	+0.6
PCH				*i* S	Sn	02 41 50.5	+2.3
CHCH	**Chadas Angostu**	**2.45**	**151**	*e*P	Pn	02 41 23.5	+0.7
CHCH	**Chadas Angostu**	**2.45**	**151**	*e*P	Pn	02 41 23.5	+0.7
LMEL	**Las Melosas**	**2.59**	**142**	⇑ *i*P	Pn	02 41 25.4	+0.8
LMEL				*i* S	Sn	02 41 59.2	+2.8
LMEL	**Las Melosas**	**2.59**	**142**	⇑ *i*P	Pn	02 41 25.4	+0.8
LMEL				*i* S	Sn	02 41 59.2	+2.8
LMEL				AML	AML	02 42 05.4	
comp=N,578nm,0.2s							
LCO	**Las Campanas**	**3.03**	**24**	*e*Pn	Pn	02 41 30.4	-0.4
LCO				*e*Sn	Sn	02 42 07.2	-0.2

IDC ***19*** *02:47:24.4±0.4, 37.°49N×142.°51E, h0km, mb5.0/32, mb1 5.1/36, mb1mx5.1/37, mbtmp5.0/36, ML4.9/3, Error ellipse: s-maj=13.5km s-min=9.6km az=101.0*
BJI ***19*** *02:47:24.6, 37.°71N×142.°76E, h25km, mB5.7/8, mb5.4/37, Ms5.3/6, Ms7 5.2/5*
JMA ***19*** *02:47:25.6±0.3, 37.°50N×142.°63E, h19km±5km, M5.5*
JMA Felt II J1.
ISCJB ***19*** *02:47:27.6±0.1, 37.°53N±0.°03×142.°45E±0.°02, h28km, mb5.3/223, MS6.0/5, Error ellipse: s-maj=4.0km s-min=2.2km az=169.4*
MOS ***19*** *02:47:28.3±1.1, 37.°69N×142.°50E, h33km, mb5.6/106, Error ellipse: s-maj=9.5km s-min=6.6km az=98.2*
NEIC ***19*** *02:47:29.4±1.3, 37.°56N×142.°40E, h31km±8km, mb5.3/158, Error ellipse: s-maj=3.7km s-min=2.7km az=148.0*
NEIC Recorded [2 JMA] in Miyagi and [1 JMA] in Fukushima, Ibaraki, Iwate and Yamagata.

ISC 19 02:47:29.5±0.1, 37.°56N±0.°03×142.°43E±0.°02, h30km, h30km±1.3km: pP-P, n772, σ0.983/773, mb5.3/223, MS6.0/5, 163C-111D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**1.23**	**317**	↓ P	Pn	02 47 50.3	-0.4
JIO				*e*S	Sn	02 48 07.7	+1.4
JFK	**Kawauchi**	**1.25**	**262**	↓ P	Pn	02 47 50.3	-0.6
JFK				*e*S	Sn	02 48 09.0	+2.2
JMM	**Marumori**	**1.33**	**284**	↓ P	Pn	02 47 51.7	-0.3
ONAJ	**Iwakimizuishiy**	**1.38**	**251**	P	Pn	02 47 52.0	-0.7
ONAJ				*e*S	Sn	02 48 11.1	+1.2
JOU	**Okura**	**1.61**	**300**	↓ P	Pn	02 47 56.4	+0.5
JFT	**Otama**	**1.66**	**269**	P	Pn	02 47 57.3	+0.7
JFT				*e*S	Sn	02 48 19.8	+2.9
JMK	**Ichinoseki**	**1.68**	**326**	⇑ P	Pn	02 47 56.9	0.0
JYS	**Shiratake**	**1.98**	**290**	P	Pn	02 48 02.5	+1.5
JOM	**Ohasama**	**2.11**	**335**	⇑ P	Pn	02 48 02.6	-0.1
JYK	**Kaneyama**	**2.12**	**310**	P	Pn	02 48 03.7	+0.8
JFY	**Yanaizu**	**2.17**	**267**	⇑ P	Pn	02 48 04.7	+1.1
JNS	**Sasagawa**	**2.48**	**277**	⇑ P	Pn	02 48 09.3	+1.5
JAG	**Ashikaga**	**2.64**	**245**	⇑ P	Pn	02 48 10.2	+0.2
JAG				*e*S	Sn	02 48 43.8	+2.8
JAW	**Awa shima**	**2.67**	**291**	↓ P	Pn	02 48 12.4	+2.0
JANG	**Nango**	**2.90**	**346**	P	Pn	02 48 14.7	+1.1
JANG				*e*S	Sn	02 48 51.0	+3.6
MJAR	**Matsushiro Arr**	**3.53**	**255**	Pn	Pn	02 48 24.1	+1.9
61nm,0.3s,baz=84,slow=15,SNR=68							
MJAR	**Matsushiro Arr**	**3.53**	**255**	P	Pn	02 48 24.1	+1.9
MJAR				pmax	pmax		
comp=Z,61nm,0.3s							
MAJO	**Matsushiro**	**3.53**	**255**	*e*Pn	Pn	02 48 21.5	-0.7
MAT	**Matsushiro**	**3.53**	**255**	P	Pn	02 48 24.1	+1.9
MAT				*e*S	Sn	02 49 04.9	+2.0
JHJ	**Hachijo jima 2**	**4.93**	**207**	Pn	Pn	02 48 39.7	-1.8
comp=Z,227nm,0.3s,baz=130,slow=7.2,SNR=24							
JHJ				Sn	Sn	02 49 33.8	-3.7
comp=Z,693nm,0.3s,baz=72,slow=21,SNR=14							
ASAJ	**Asahikawa**	**6.55**	**1**	Pn	Pn	02 49 02.8	-1.0
comp=Z,22nm,0.3s,baz=193,slow=4.4,SNR=18							
ASAJ				Sn	Sn	02 50 15.4	-2.0
comp=Z,13nm,0.3s,baz=41,slow=19,SNR=3.7							
ASAJ	**Asahikawa**	**6.55**	**1**	P	Pn	02 49 02.8	-0.9
ASAJ						02 50 15.4	
ASAJ				pmax	pmax		
comp=Z,22nm,0.3s							
ASAJ				smax			
comp=N,13nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**6.97**	**21**	*e*P	Pn	02 49 08.2	-1.3
YUK				*i* S	Sn	02 50 18.7	-9.0
YUK				pmax	pmax		
comp=N,70nm,0.5s							
YUK				pmax	pmax		
comp=E,270nm,0.5s							
YUK				pmax	pmax		
comp=Z,360nm,0.5s							
YUK				smax			
comp=N,670nm,0.5s							
YUK				smax			
comp=E,1μm,0.5s							
YSS	**Yuzh-Sakhalins**	**9.39**	**1**	*e*Pn	Pn	02 49 40.6	-2.0
CBIJ	**Chichi jima**	**10.44**	**181**	Pn	Pn	02 49 52.2	-4.9
comp=E,39nm,0.3s,baz=317,slow=17,SNR=11							
CBIJ				Sn	Sn	02 51 39.0	-14
comp=E,99nm,0.3s,baz=270,slow=20,SNR=5.1							
KSRS	**Korea Array**	**11.53**	**274**	Pn	Pn	02 50 15.9	+4.0
comp=E,0.9nm,0.3s,baz=93,slow=13,SNR=15							
KSRS	**Korea Array**	**11.53**	**274**	P	Pn	02 50 15.9	+4.0
KSRS				pmax	pmax		
comp=Z,1.0nm,0.3s							
MDJ	**Mudanjiang**	**11.97**	**310**	P	Pn	02 50 16.8	-1.2
MDJ				S	Sn	02 52 30.1	-0.3
MDJ				pmax	pmax		
comp=Z,56nm,1.8s							
MDJ	**Mudanjiang**	**11.97**	**310**	*e*Pn	Pn	02 50 16.9	-1.1
INCN	**Inchon**	**12.55**	**274**	*e*Pn	Pn	02 50 25.7	-0.2
CN2	**Changchun**	**14.30**	**301**	*e*P	Pn	02 50 49.1	-0.7
CN2				*es*P	pP	02 50 58.0	-6.6
CN2				*e*S	Sn	02 53 24.8	-2.6
CN2				pmax	pmax		
comp=Z,20nm,0.7s							
CN2				pmax	pmax		
comp=Z,200nm,4.0s							
CN2				LR	LR		
comp=N,6μm,16.0s							
CN2				LR	LR		
comp=E,7μm,16.0s							
CN2				LR	LR		
comp=Z,8μm,18.0s							
DL2	**Dalian**	**16.40**	**281**	P	Pn	02 51 20.1	+2.7
DL2				pmax	pmax		
comp=Z,130nm,1.0s							
PETK	**Petropavlovsk-**	**18.83**	**29**	P	Pn	02 51 46.8	-0.5
comp=Z,0.1nm,0.3s,baz=205,slow=8.7,SNR=3.7							
NJ2	**Nanjing**	**20.10**	**261**	*e*P	P	02 52 05.8	+5.1
NJ2				pmax	pmax		
comp=Z,50nm,1.0s							
BJI	**Beijing**	**20.59**	**285**	P	P	02 52 04.8	-1.1
BJI				pmax	pmax		
comp=Z,81nm,2.2s							
BJT	**Baijiatuau**	**20.59**	**285**	*e*P	P	02 52 04.1	-1.9
BJT				pmax	pmax		
comp=Z,123nm,0.8s							
BJT	**Baijiatuau**	**20.59**	**285**	*e*P	P	02 52 04.1	-1.9
comp=Z,123nm,0.8s							
TATO	**Taipei**	**21.80**	**241**	*e*P	P	02 52 17.6	-1.5
comp=Z,200nm,1.3s,mb5.4							
YHNB	**Yeheng**	**22.08**	**240**	*e*P	P	02 52 21.5	-0.5
comp=Z,56nm,0.8s,mb5.0							
QZH	**Quanzhou**	**23.87**	**245**	P	P	02 52 38.9	-1.5
QZH				pmax	pmax		
comp=Z,360nm,0.9s,mb5.8							
GUMO	**Guam**	**23.97**	**174**	P	P	02 52 41.6	+0.3
comp=Z,42nm,0.9s,mb4.8,baz=38,slow=7.2,SNR=2.1							
GUMO	**Guam**	**23.97**	**174**	P	P	02 52 41.6	+0.3

GUMO pmax pmax
comp=Z,42nm,1.0s,mb4.8
HHC Hu-ho-hao-te 24.08 287 *eP* **P 02 52 39.8 -2.4**
HHC S **S 02 56 52.0 -5.7**
HHC pmax pmax
comp=Z,79nm,0.6s,mb5.3
WHN Wuhan 24.24 262 ⇓P **P 02 52 43.6 -0.1**
WHN sP 02 52 53.1
YAK Yakutsk 25.74 346 *eP* **P 02 52 56.9 -0.1**
YAK pmax pmax
comp=Z,93nm,0.9s,mb5.3
YAK Yakutsk 25.74 346 *eP* **P 02 52 56.0 -1.0**
comp=Z,225nm,0.9s,mb5.7
SEY Seymchan 26.12 10*c*eP **P 02 53 00.4 -0.1**
SEY Seymchan 26.12 10⇑*e*P **P 02 53 00.5 0.0**
SMY Shemya 26.72 45 *eP* **P 02 53 06.9 +0.9**
SMY pmax pmax
comp=Z,77nm,1.0s,mb5.2
SMY Shemya 26.72 45 *eP* **P 02 53 06.9 +0.9**
comp=Z,77nm,1.0s,mb5.2
ULN Ulaanbaatar 27.74 303 *eP* **P 02 53 15.9 +0.7**
ULN pmax pmax
comp=Z,55nm,0.9s,mb5.2
ULN Ulaanbaatar 27.74 303 *eP* **P 02 53 15.9 +0.8**
comp=Z,55nm,0.9s,mb5.2
SONM Songino Array 28.17 303 P **P 02 53 20.2 +1.1**
comp=Z,62nm,0.9s,mb5.2,baz=100,slow=8.2,SNR=23
SONM Songino Array 28.17 303 P **P 02 53 20.2 +1.2**
SONM pmax pmax
comp=Z,62nm,0.9s
ENH Enshi 28.19 265 *eP* **P 02 53 19.3 0.0**
comp=Z,625nm,0.9s,mb6.2
TGY Tagaytay City 30.19 225 P **P 02 53 37.4 +0.2**
comp=Z,97nm,0.3s,mb6.0,baz=37,slow=20,SNR=2.9
TGY Tagaytay City 30.19 225 P **P 02 53 37.4 +0.2**
TGY pmax pmax
comp=Z,97nm,0.3s
TLY Talaya 30.61 310 *eP* pP 02 53 51.8 +2.4
TLY pmax pmax
comp=Z,86nm,1.1s,mb5.5
TLY Talaya 30.61 310⇑*eP* **P 02 53 39.8 -0.8**
LZH Lanzhou 30.78 279 *eP* **P 02 53 43.0 +0.7**
LZH pP pP 02 53 50.0 -1.1
LZH sP sP 02 53 52.6 -2.2
LZH PP PP 02 54 44.0 -8.0
LZH S **S 02 58 43.0 -0.7**
LZH sS sS 02 58 55.0 -3.2
LZH SS SS 03 00 24.0 -31
LZH pmax pmax
comp=Z,140nm,1.3s,mb5.6
LZH pmax pmax
comp=Z,1μm,6.9s
LZH LR LR
comp=E,12μm,14.0s
LZH LR LR
comp=Z,13μm,15.2s,MS5.7
GYA Guiyang 32.11 260⇑*i*P **P 02 53 54.8 +0.7**
GYA pP pP 02 54 05.9 +3.0
GYA PP PP 02 55 01.3 -5.5
GYA PcP PcP 02 56 45.4 +2.5
GYA S **S 02 59 02.3 -2.3**
GYA sS sS 02 59 20.0 +0.9
GYA ScP ScP 03 00 23.9 -0.3
GYA pmax pmax
comp=Z,50nm,1.0s,mb5.3
GYA pmax pmax
comp=Z,180nm,5.1s
GYA LR LR
comp=N,10μm,17.2s,MS5.7
GYA LR LR
comp=E,8μm,18.6s,MS5.7
GYA LR LR
comp=Z,9μm,17.0s,MS5.5
CD2 Chengdu 32.48 270 P **P 02 53 57.8 +0.5**
CD2 pP pP 02 54 09.6 +3.5
CD2 sP sP 02 54 15.0 +5.2
CD2 PP PP 02 55 05.8 -5.1
CD2 S **S 02 59 07.8 -2.5**
CD2 sS sS 02 59 27.8 +2.9
CD2 SS SS 03 01 05.1 -25
CD2 pmax pmax
comp=Z,80nm,1.1s,mb5.5
GTA Gaotai 33.19 287 *eP* **P 02 54 04.0 +0.6**
GTA pP pP 02 54 11.4 -0.8
GTA sP sP 02 54 14.5 -1.4
GTA pmax pmax
comp=Z,46nm,1.1s,mb5.3
BILL Bilibino 33.30 16⇓*iP* **P 02 54 03.4 -0.6**
BILL pmax pmax
comp=Z,45nm,1.3s,mb5.2
BILL MLR MLR
comp=Z,68μm,18.0s,MS6.4
BILL Bilibino 33.30 16 *eP* **P 02 54 02.9 -1.1**
comp=Z,67nm,1.1s,mb5.5
QIZ Qiongzhong 33.88 246 *eP* **P 02 54 09.5 -0.1**
comp=Z,110nm,1.2s,mb5.7
KMI Kunming 35.84 261 P **P 02 54 26.9 +0.4**
KMI pP pP 02 54 33.4 -2.0
KMI sP sP 02 54 35.8 -3.2
KMI S **S 02 59 59.6 -2.7**
KMI sS sS 03 00 13.5 -3.4
KMI SS SS 03 02 22.4 -17
KMI pmax pmax
comp=Z,68nm,1.8s,mb5.3
GAMB Gambell 37.85 31 *eP* **P 02 54 52.2 +9.1**
comp=Z,9.6nm,0.7s,mb4.6
WMQ Urumqi 41.33 296 *eP* **P 02 55 11.5 -0.8**
WMQ pP pP 02 55 18.9 -2.4
WMQ sP sP 02 55 22.3 -2.6
WMQ pmax pmax
comp=Z,240nm,1.0s,mb5.8
WMQ pmax pmax
comp=Z,3μm,8.6s
ZALV Zalesovo Beam 42.16 312 P **P 02 55 19.4 +0.4**
comp=Z,77nm,1.0s,mb5.3,baz=88,slow=6.7,SNR=17
ZALV PcP PcP 02 57 12.8 -0.1
comp=Z,24nm,0.9s,baz=80,slow=4.2,SNR=5.1
ZALV Zalesovo Beam 42.16 312 P **P 02 55 19.4 +0.4**
ZALV 02 57 12.8
ZALV pmax pmax
comp=Z,77nm,1.0s,mb5.3
ZALV Zalesovo Beam 42.16 312 P **P 02 55 19.4 +0.4**
ZALV PcP PcP 02 57 12.8 -0.1
CHTO Chiang Mai 42.21 256 *eP* **P 02 55 18.1 -1.7**
CHTO pmax pmax
comp=Z,67nm,1.1s,mb5.2
CHTO Chiang Mai 42.21 256 *eP* **P 02 55 18.1 -1.6**
comp=Z,67nm,1.1s,mb5.2
CM31 Chiang Mai Arr 42.41 256 *eP* **P 02 55 22.1 +0.6**
comp=Z,6.5nm,0.6s,mb4.4
CMAR Chiang Mai Arr 42.41 256 P **P 02 55 22.2 +0.7**
comp=Z,6.0nm,0.8s,mb4.2,baz=49,slow=5.8,SNR=4.1
LSA Lhasa 42.97 275 *eP* **P 02 55 28.0 +2.1**
LSA pmax pmax
comp=Z,129nm,1.1s,mb5.6
LSA Lhasa 42.97 275 *eP* **P 02 55 28.0 +2.1**
comp=Z,129nm,1.1s,mb5.6
NVS Novosibirsk 43.07 313 *i* P **P 02 55 26.8 +0.5**
NVS pmax pmax
comp=Z,146nm,1.1s,mb5.6
NVS pmax pmax
comp=N,170nm,1.0s
NVS pmax pmax
comp=E,195nm,1.3s
MK31 Makanchi Array 44.53 302 *eP* **P 02 55 38.2 0.0**
MKAR Makanchi Array 44.53 302 P **P 02 55 38.8 +0.6**
comp=E,20nm,0.8s,mb5.0,baz=86,slow=10,SNR=9.3
MKAR Makanchi Array 44.53 302 P **P 02 55 38.8 +0.6**
MKAR pmax pmax
comp=Z,20nm,0.8s
KDAK Kodiak Island 46.17 42 P **P 02 55 50.1 -0.9**
comp=Z,25nm,0.8s,mb5.2,baz=284,slow=4.9,SNR=18
KDAK Kodiak Island 46.17 42 *i* P **P 02 55 50.3 -0.7**
KDAK Kodiak Island 46.17 42 *eP* **P 02 55 50.4 -0.7**
comp=Z,171nm,1.7s,mb5.7
KURK Kurchatov 46.25 308 P **P 02 55 52.0 +0.2**
comp=Z,1μm,1.0s,mb6.8,SNR=16
KURK Kurchatov 46.25 308 *eP* **P 02 55 51.9 +0.1**
KURK pmax pmax
comp=Z,294nm,1.1s,mb6.1
KURK Kurchatov 46.25 308 *eP* **P 02 55 51.9 +0.1**
comp=Z,294nm,1.1s,mb6.1
KSM Kuching 46.50 227 *eP* **P 02 55 54.5 +0.3**
comp=Z,59nm,0.9s,mb5.5
BPAW Bear Paw Mtn. 46.84 34 *eP* **P 02 55 56.7 +0.5**
comp=Z,19nm,0.7s,mb5.1
PMG Port Moresby 46.93 174*ce*P **P 02 56 02.7 +5.3**
PMG pmax pmax
comp=Z,78nm,1.2s
PMG Port Moresby 46.93 174 *eP* **P 02 55 58.2 +0.8**
comp=Z,122nm,1.4s,mb5.6
TRF Thorofare Moun 47.14 34 *eP* **P 02 55 60.0 +1.4**
comp=Z,17nm,0.7s,mb5.1
KAPI Kappang 47.33 211 P **P 02 55 59.4 -1.2**
comp=Z,43nm,1.0s,mb5.3,baz=350,slow=6.0,SNR=4.9
KAPI Kappang 47.33 211 *eP* **P 02 55 59.7 -0.9**
comp=Z,219nm,1.4s,mb5.9
RC01 Rabbit Creek A 47.45 38 *eP* **P 02 56 00.7 -0.3**
comp=Z,20nm,0.7s,mb5.2
PMR Palmer 47.72 37 *eP* **P 02 56 02.5 -0.6**
PMR pmax pmax
comp=Z,57nm,1.2s,mb5.5
PMR Palmer 47.72 37 *eP* **P 02 56 02.5 -0.6**
comp=Z,57nm,1.2s,mb5.5
MCK McKinley 47.74 34 *eP* **P 02 56 03.0 -0.3**
MCK pmax pmax
comp=Z,32nm,0.9s,mb5.3
MCK McKinley 47.74 34 *eP* **P 02 56 03.0 -0.3**
comp=Z,32nm,0.9s,mb5.3
COLA College 48.20 32 *eP* **P 02 56 06.2 -0.6**
COLA pmax pmax
comp=Z,20nm,0.7s,mb5.3
COLA College 48.20 32 *eP* **P 02 56 06.2 -0.6**
comp=Z,20nm,0.7s,mb5.3
ILAR Eielson Array 48.62 33 P **P 02 56 09.4 -0.6**
comp=Z,16nm,0.8s,mb5.1,baz=265,slow=5.8,SNR=33
ILAR Eielson Array 48.62 33 P **P 02 56 09.4 -0.6**
ILAR pmax pmax
comp=Z,16nm,0.8s
DIV Divide 49.37 37 *eP* **P 02 56 15.8 0.0**
comp=Z,77nm,1.2s,mb5.6
KULM Kulim 49.78 240 *eP* **P 02 56 19.0 -0.5**
comp=Z,53nm,1.1s,mb5.5
BMRM Bremner River 49.95 38 *eP* **P 02 56 20.6 +0.4**
comp=Z,56nm,1.1s,mb5.5
MENT Mentasta 50.14 35 *eP* **P 02 56 22.6 +1.0**
BVAR Borovoye Array 50.82 312 P **P 02 56 26.3 -0.6**
comp=Z,32nm,1.0s,mb5.2,baz=76,slow=8.0,SNR=8.5
BVAR PcP PcP 02 57 43.2 -0.1
comp=Z,16nm,0.8s,baz=83,slow=4.6,SNR=4.4
BVAR Borovoye Array 50.82 312 P **P 02 56 26.3 -0.6**
BVAR 02 57 43.2
BVAR pmax pmax
comp=Z,32nm,1.0s
BRVK Borovoye 50.87 312 *eP* **P 02 56 27.2 -0.1**
BRVK pmax pmax
comp=Z,78nm,1.0s,mb5.6
BRVK Borovoye 50.87 312 *eP* **P 02 56 27.2 -0.1**
comp=Z,78nm,1.0s,mb5.6
KAKA Kakadu 50.88 193 *eP* **P 02 56 26.1 -1.6**
comp=Z,195nm,0.7s,mb6.2
KAKA Kakadu 50.88 193 *eS* **P 02 56 26.6 -1.1**
AAK Ala-Archa 50.95 298 P **P 02 56 27.3 -0.8**
comp=Z,5.8nm,0.6s,mb4.7,baz=72,slow=9.0,SNR=4.2
AAK Ala-Archa 50.95 298 *eP* **P 02 56 26.3 -1.8**
comp=Z,40nm,1.0s,mb5.3
EGAK Eagle 51.06 32 *eP* **P 02 56 28.7 +0.1**
comp=Z,13nm,0.7s,mb5.0
UCH Uchtor 51.07 298 *eP* **P 02 56 29.7 +0.7**
comp=Z,34nm,1.0s,mb5.2
COEN Coen 51.25 179 *eP* **P 02 56 30.6 +0.2**
comp=Z,292nm,0.6s,mb6.4
AML Almayashu 51.68 298 *eP* **P 02 56 33.1 -0.4**
comp=Z,139nm,1.0s,mb5.8
DAWY Dawson 51.92 33 *eP* **P 02 56 35.1 +0.2**
PSI Prapat 52.76 240 P **P 02 56 41.9 0.0**
comp=Z,19nm,0.8s,mb5.0,baz=48,slow=4.5,SNR=3.0
PSI Prapat 52.76 240 P **P 02 56 41.9 0.0**
PSI pmax pmax
comp=Z,19nm,0.8s,mb5.1
HYT Haines Junctio 53.39 37 *eP* **P 02 56 47.9 +2.0**
INK Inuvik 53.55 27 P **P 02 56 47.1 +0.1**
comp=Z,12nm,0.9s,mb4.8,baz=271,slow=9.1,SNR=6.4
INK Inuvik 53.55 27 P **P 02 56 47.1 +0.1**
INK pmax pmax
comp=Z,12nm,0.9s
INK Inuvik 53.55 27 *eP* **P 02 56 46.5 -0.5**
comp=Z,47nm,1.4s,mb5.2
SVE Sverdlovsk 55.29 319⇑*eP* **P 02 57 00.8 +1.0**
SVE pmax pmax
comp=Z,182nm,1.2s,mb6.0
ARU Arti 56.50 319*c i*P **P 02 57 08.2 -0.3**
ARU S **S 03 04 57.7 +0.1**
ARU pmax pmax
comp=Z,177nm,1.7s,mb5.8
ARU Arti 56.50 319 *eP* **P 02 57 06.9 -1.6**
comp=Z,176nm,1.2s,mb6.0
CRAG Craig 57.13 42 *eP* **P 02 57 11.7 -1.2**
CTA Charters Tower 57.45 176 P **P 02 57 14.4 -1.1**
comp=Z,6.0nm,0.9s,mb4.6,baz=4.2,slow=9.6,SNR=3.6
CTAO Charters Tower 57.45 176 *eP* **P 02 57 15.1 -0.4**
FITZ Fitzroy Crossi 57.58 199 *eP* **P 02 57 15.1 -1.3**
comp=Z,98nm,1.9s,mb5.5
FITZ Fitzroy Crossi 57.58 199 P **P 02 57 15.8 -0.6**
comp=Z,19nm,0.9s,mb5.1,baz=20,slow=6.9,SNR=14
WRAB Tennant Creek 57.69 189 P **P 02 57 16.0 -1.2**
comp=Z,601nm,0.8s,mb6.7,SNR=8.6
WRAB Tennant Creek 57.69 189 *eP* **P 02 57 15.9 -1.3**
WRAB pmax pmax
comp=Z,89nm,0.9s,mb5.8
WRAB Tennant Creek 57.69 189 *eP* **P 02 57 15.9 -1.2**
comp=Z,89nm,0.9s,mb5.8
WRA Warramunga Arr 57.70 189 P **P 02 57 15.6 -1.7**
comp=Z,52nm,0.8s,mb5.6,baz=8.9,slow=7.3,SNR=48
WRA S **S 03 05 19.9 +6.0**
comp=Z,1.5nm,1.1s,baz=9.2,slow=15,SNR=3.1
WRA Warramunga Arr 57.70 189 P **P 02 57 15.6 -1.6**
WRA S **S 03 05 19.9 +6.0**
WRA pmax pmax
comp=Z,52nm,0.8s
WRA smax
comp=N,2.0nm,1.1s
DLBC Dease Lake 57.71 38 *eP* **P 02 57 17.7 +0.8**
KBL Kabul 57.98 291 *eP* **P 02 57 19.6 +0.3**
KBL pmax pmax
comp=Z,135nm,1.1s,mb5.9
KBL Kabul 57.98 291 *eP* **P 02 57 19.6 +0.4**
comp=Z,135nm,1.1s,mb5.9
ABKAR Akbulak array 58.22 310 *eP* **P 02 57 19.6 -1.1**
comp=Z,57nm,1.0s,mb5.5
AKTK Aktyubinsk 58.93 312 P **P 02 57 25.3 -0.3**
AKTO Aktyubinsk 58.93 312 P **P 02 57 25.3 -0.3**
comp=Z,23nm,0.9s,mb5.2,baz=71,slow=11,SNR=8.4
AKTO Aktyubinsk 58.93 312 P **P 02 57 25.3 -0.3**
AKTO pmax pmax
comp=Z,23nm,0.9s,mb5.2
HYB Hyderabad 59.03 269 *eP* **P 02 57 27.0 +0.2**
HYB *e* pP 02 57 35.0 -1.0
HYB Hyderabad 59.03 269 *i* P **P 02 57 27.0 +0.2**
LATR Latur 60.06 271 *e*PKP **P 02 57 34.4 +0.5**
SPITS Spitsbergen Ar 60.16 349 P **P 02 57 34.3 +0.6**
comp=Z,6.9nm,0.7s,mb4.8,baz=64,slow=8.9,SNR=3.7
SPITS Spitsbergen Ar 60.16 349 P **P 02 57 34.3 +0.6**
SPITS pmax pmax
comp=Z,7.0nm,0.7s
KBS Kingsbay 60.28 350 *eP* **P 02 57 35.0 +0.5**
KBS pmax pmax
comp=Z,53nm,1.0s,mb5.5
KBS Kingsbay 60.28 350 *eP* **P 02 57 35.0 +0.4**
comp=Z,53nm,1.0s,mb5.5
ASAR Alice Springs 61.42 189 P **P 02 57 42.0 -0.9**
comp=Z,21nm,0.8s,mb5.3,baz=16,slow=8.0,SNR=35
ASAR PKP2bc 03 27 04.0
comp=Z,2.0nm,1.0s,baz=183,slow=1.9,SNR=6.4
ASAR Alice Springs 61.42 189 P **P 02 57 42.0 -0.9**
ASAR ⇑*e* 03 27 04.0
RES Resolute Bay 61.89 15 *eP* **P 02 57 44.8 -0.7**
RES pmax pmax
comp=Z,40nm,0.9s,mb5.5
RES Resolute Bay 61.89 15 *eP* **P 02 57 44.8 -0.6**
comp=Z,40nm,0.9s,mb5.5
LVZ Lovozero 61.96 336⇓*eP* **P 02 57 44.8 -1.2**
LVZ pmax pmax
comp=Z,43nm,1.1s,mb5.5
MBWA Marble Bar 62.19 204 *eP* **P 02 57 47.1 -1.0**
comp=Z,27nm,0.6s,mb5.5
APA Apatity 62.54 336⇓*iP* **P 02 57 50.0 +0.1**
APA *i* 02 58 34.0
APA pmax pmax
comp=Z,49nm,1.0s,mb5.6
YKA Yellowknife Ar 62.95 31 P **P 02 57 52.3 -0.4**
comp=Z,4.3nm,0.8s,mb4.7,baz=303,slow=6.8,SNR=8.3
YKA Yellowknife Ar 62.95 31 P **P 02 57 52.3 -0.4**
EIDS Eidsvold 63.12 171 *eP* **P 02 57 53.5 -0.7**
comp=Z,24nm,0.7s,mb5.4
KEV Kevo 63.24 339 *eP* **P 02 57 54.5 0.0**
KEV pmax pmax
comp=Z,31nm,0.9s,mb5.4
KEV Kevo 63.24 339 *ep* **P 02 57 54.5 0.0**
comp=Z,31nm,0.9s,mb5.4
PALK Pallekele 63.27 258 *eP* **P 02 57 54.8 -0.7**
comp=Z,44nm,1.1s,mb5.5
ARCES ARCESS Array B 63.79 340 P **P 02 57 58.4 +0.3**
comp=Z,21nm,1.0s,mb5.1,baz=39,slow=7.8,SNR=10
ARCES ARCESS Array B 63.79 340 P **P 02 57 58.4 +0.2**
ARCES pmax pmax
comp=Z,21nm,1.0s
ARCES ARCESS Array B 63.79 340 P **P 02 57 58.4 +0.3**
ARE0 ARCESS Array S 63.79 340 *eP* **P 02 57 58.1 0.0**
ABKT Ailbek 64.29 299 P **P 02 58 01.4 -0.6**
comp=Z,281nm,0.8s,mb6.3,SNR=6.2
COCO West Island 65.40 230 *i* P pP 02 58 20.0 +1.3
NLWA Neilton Lookou 65.76 48⇑P **P 02 58 08.3 -3.1**
baz=66
ETW Entiat 67.72 47 *eP* **P 02 58 24.5 +0.6**
VRHR Novokhopersk 67.84 318 *eP* **P 02 58 23.1 -1.5**
VRHR pmax pmax
comp=Z,60nm,0.9s,mb5.6
VRHR pmax pmax
comp=N,10.0nm,0.4s
VRHR pmax pmax
comp=E,10.0nm,0.4s
H04A Detroit Lake 68.15 50⇓P **P 02 58 26.7 +0.1**
baz=68
OBN Obninsk 68.16 323⇓*eP* **P 02 58 25.5 -1.0**
OBN *eS* S 03 07 29.2 +4.9
OBN pmax pmax
comp=Z,117nm,1.3s,mb5.8
OBN Obninsk 68.16 323 *eP* **P 02 58 26.3 -0.2**
comp=Z,115nm,1.2s,mb5.8
ARMA Armidale 68.17 171 *eP* **P 02 58 28.7 +2.0**
ARMA Armidale 68.17 171 *eP* **P 02 58 29.5 +2.8**
comp=Z,42nm,1.3s,mb5.3
KAF Kangasniemi 68.21 333 *eP* **P 02 58 25.9 -0.8**
KAF pmax pmax
comp=Z,45nm,0.7s,mb5.6
KAF Kangasniemi 68.21 333 *ep* **P 02 58 25.9 -0.8**
comp=Z,45nm,0.7s,mb5.6,baz=45,slow=6.2
EDM Edmonton 68.43 39 *eP* **P 02 58 27.7 -0.5**
FINES FINESS Array B 68.73 332 P **P 02 58 29.7 -0.2**
comp=Z,79nm,0.9s,mb5.6,baz=52,slow=7.5,SNR=26
FINES FINESS Array B 68.73 332 P **P 02 58 29.7 -0.2**
FINES pmax pmax
comp=Z,79nm,1.0s
VSR Storozhevoye 69.07 319 *eP* **P 02 58 31.8 -0.4**
VSR pmax pmax
comp=Z,10.0nm,0.4s,mb5.1
VSR pmax pmax
comp=N,40nm,0.9s
VSR pmax pmax
comp=E,50nm,0.9s
STKA Stephens Creek 69.08 181 *eP* pP 02 58 40.3 -1.5
comp=E,13nm,0.6s
STKA Stephens Creek 69.08 181 P **P 02 58 31.3 -1.0**
comp=E,6.0nm,0.8s,mb4.6,baz=355,slow=4.8,SNR=4.2
STKA Stephens Creek 69.08 181 *eP* **P 02 58 31.7 -0.6**
comp=E,50nm,2.5s,mb5.0
NEW Newport 69.19 45 *eP* **P 02 58 33.8 +0.8**
NEW pmax pmax
comp=Z,12nm,1.1s
NEW Newport 69.19 45 *eP* **P 02 58 33.8 +0.7**
comp=Z,12nm,1.1s,mb4.7
FORT Forrest 69.30 193 *eP* **P 02 58 33.1 -0.6**
comp=Z,210nm,0.7s,mb6.2
FORT Forrest 69.30 193 *eP* **P 02 58 33.6 -0.1**
comp=Z,189nm,0.7s,mb6.1
YBH Yreka Blue Hor 69.38 53 *eP* **P 02 58 35.3 +1.0**
YBH pmax pmax
comp=Z,32nm,1.5s
YBH Yreka Blue Hor 69.38 53 *eP* **P 02 58 35.3 +1.0**
comp=Z,32nm,1.5s,mb5.0
G08A Pilot Rock 69.76 48⇓P **P 02 58 36.8 +0.2**
baz=70
C11A Tepee Creek (N 69.91 45⇓P **P 02 58 37.3 -0.2**
baz=70
K05A Summer Lake 69.98 51⇓P **P 02 58 38.7 +0.6**
baz=70
WDC Whiskeytown Da 70.11 54 *eP* **P 02 58 38.2 -0.6**
WDC pmax pmax
comp=Z,16nm,1.0s,mb4.9
WDC Whiskeytown Da 70.11 54 *eP* **P 02 58 38.1 -0.7**
comp=Z,16nm,1.0s,mb4.9
SUMG Summit 70.16 0 *eP* **P 02 58 38.4 -0.2**
comp=Z,62nm,1.1s,mb5.5
SUMG Summit 70.16 0 *i* P **P 02 58 38.9 +0.3**
comp=Z,32nm,1.0s,mb5.2
WALA Waterton Lakes 70.50 43 *eP* **P 02 58 41.0 -0.1**
comp=Z,0.9nm,1.4s
B13A Whitefish 70.59 44⇑P **P 02 58 42.3 +0.7**
baz=70
MOD Modoc 70.80 52 *eP* **P 02 58 43.2 +0.2**
BMO Blue Mountains 70.98 48 *eP* **P 02 58 44.1 +0.1**
comp=Z,5.8nm,0.8s,mb4.6
E12A Beaver Dam Sad 71.10 46⇑P **P 02 58 45.4 +0.7**
baz=71
ZEI Tsey 71.10 310 *eP* **P 02 58 42.9 -2.0**
ZEI pmax pmax
comp=Z,42nm,1.0s,mb5.3
J08A Circle Bar Ran 71.12 50⇑P **P 02 58 45.7 +0.8**
baz=71
B14A Marquette Ranc 71.25 43⇑P **P 02 58 46.3 +0.7**
baz=71
D13A Huson 71.33 45⇓P **P 02 58 45.2 -0.9**
baz=71
SWMT Swartz Lake 71.35 44 *eP* **P 02 58 46.5 +0.3**
WVOR Wild Horse Val 71.54 50 *eP* **P 02 58 46.9 -0.6**
WVOR pmax pmax
comp=Z,26nm,1.3s,mb5.0
WVOR Wild Horse Val 71.54 50 *eP* **P 02 58 46.9 -0.6**
comp=Z,26nm,1.3s,mb5.0
F12A Elk City 71.65 46⇓P **P 02 58 48.8 +0.7**
baz=71
B15A Bradely Ranch, 71.67 43⇑P **P 02 58 48.3 +0.1**
baz=71
SCO Scoresbysund 71.67 355 *i* P **P 02 58 46.5 -1.3**
SCO pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
SCO Scoresbysund 71.67 355 *i* P **P 02 58 46.5 -1.3**
SCO Scoresbysund 71.67 355 *i* P **P 02 58 46.5 -1.3**
comp=Z,8.9nm,1.0s,mb4.7
SCO
comp=Z,62μm,18.0s
I10A Payette 71.71 48⇑P **P 02 58 48.9 +0.4**
baz=72
GNI Garni 72.04 307 *eP* **P 02 58 51.7 +1.1**
GNI pmax pmax
comp=Z,167nm,1.5s
GNI Garni 72.04 307 *eP* **P 02 58 51.7 +1.2**
comp=Z,167nm,1.5s,mb5.8
IZAR Zarasai 72.40 328 *eP* **P 02 58 52.3 -0.1**
IZAR AMB AMB 02 58 53.5
comp=Z,26nm,1.1s,mb5.1
K10A MacKenzie Ranc 72.42 49⇓P **P 02 58 52.9 +0.2**
baz=72
IDID Didziasalis 72.48 327 *eP* **P 02 58 52.9 0.0**
IDID AMB AMB 02 58 54.0
comp=Z,26nm,1.1s,mb5.1
H12A Diamond D Ranc 72.58 47⇑P **P 02 58 53.3 -0.4**
baz=72
WCN Washoe City 72.60 54⇓P **P 02 58 53.6 -0.3**
baz=72
PAHR Pah Rah Range 72.61 53 *eP* **P 02 58 54.3 +0.3**
comp=Z,22nm,1.1s,mb5.0
G13A Cobalt 72.62 46⇑P **P 02 58 54.6 +0.7**
baz=72
MFID Camas Ranch 72.67 48⇑P **P 02 58 54.3 0.0**
baz=72
IIGN Ignalina 72.67 328 *eP* **P 02 58 53.9 -0.1**
IIGN AMB AMB 02 58 55.2
comp=Z,23nm,1.1s,mb5.0
FFC Flin Flon 72.82 33 *eP* **P 02 58 55.1 +0.2**
comp=Z,25nm,0.8s,mb5.2
I12A Atlanta 72.86 48⇑P **P 02 58 55.9 +0.5**
baz=73
CMB Columbia Colle 72.90 55 *eP* **P 02 58 55.7 0.0**
CMB pmax pmax
comp=Z,19nm,1.0s,mb5.0
CMB Columbia Colle 72.90 55 *eP* **P 02 58 55.7 -0.1**

comp=Z,19nm,1.0s,mb5.0
H13A Challis 72.92 47 ⇑P P 02 58 55.7 0.0
baz=73
HRY Holter Researc 73.02 44 eP P 02 58 56.8 +0.5
B18A Beardsley Farm 73.10 42 ⇑P P 02 58 55.9 -0.8
baz=73
SOC Sochi 73.15 312 eP P 02 58 56.1 -1.0
SOC ePPP 03 03 22.7
SOC eS S 03 08 19.2 -3.5
SOC e 03 09 03.2
SOC eSS SS 03 13 09.2 +5.7
SOC pmax pmax
comp=Z,102nm,1.1s,mb5.7
FCC Fort Churchill 73.17 27 eP P 02 58 55.1 -1.8
comp=Z,0.9nm,0.9s
F15A Butte 73.17 45 ⇑P P 02 58 57.8 +0.7
baz=73
LRM Limekiln Ridge 73.20 45 eP P 02 58 58.2 +0.9
M10A I.L. Ranch, Tu 73.34 50 ⇓P P 02 58 59.2 +0.9
baz=73
I13A Wildhorse Cree 73.39 47 ⇓P P 02 58 58.8 +0.3
baz=73
DLMT Dillon 73.40 45 eP P 02 58 59.0 +0.5
comp=Z,55nm,1.5s,mb5.3
HLID Hailey 73.42 48 eP P 02 58 59.1 +0.4
comp=Z,9.4nm,1.0s,mb4.7
L11A Cat Creek Ranc 73.44 49 ⇑P P 02 58 59.2 +0.4
baz=73
BMN Battle Mountai 73.55 52 eP P 02 59 00.1 +0.6
BMN pmax pmax
comp=Z,24nm,1.1s,mb5.0
BMN Battle Mountai 73.55 52 eP P 02 59 00.1 +0.6
comp=Z,24nm,1.1s,mb5.0
G15A Dillon 73.58 45 ⇑P P 02 59 00.1 +0.5
baz=73
J13A Cove Ranch, Pi 73.66 48 ⇑P P 02 59 00.8 +0.7
baz=73
K12A Draper Farm, C 73.68 49 ⇓P P 02 59 00.7 +0.5
baz=74
F16A Kennard Place, 73.69 45 ⇓P P 02 59 00.7 +0.5
baz=74
ANN Anapa 73.75 314 eP P 02 58 59.8 -0.8
ANN pmax pmax
comp=Z,148nm,1.2s,mb5.8
ANN MLR MLR
comp=Z,42µm,14.0s,MS6.9
I14A Mackay 73.76 47 ⇓P P 02 59 01.0 +0.3
baz=74,SNR=10
BOZ Bozeman (W) 73.77 45 ⇑P P 02 59 00.6 -0.1
baz=74
BOZ Bozeman (W) 73.77 45 eP P 02 59 00.8 +0.1
BOZ pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
BOZ Bozeman (W) 73.77 45 eP P 02 59 00.8 +0.1
comp=Z,7.8nm,0.8s,mb4.7
M11A Holland Ranch, 73.85 50 ⇓P P 02 59 00.3 -0.9
baz=74
L12A House Creek Ra 73.90 49 ⇓P P 02 59 00.3 -1.2
baz=74
NB2 NORSAR Subarra 74.01 338 P P 02 59 01.5 -0.3
comp=Z,71nm,1.1s,mb5.5,baz=39,slow=6.2
NOA NORSAR Array B 74.01 338 P P 02 59 01.8 -0.1
comp=Z,37nm,1.0s,mb5.3,baz=39,slow=5.8,SNR=22
NOA NORSAR Array B 74.01 338 P P 02 59 01.8 0.0
NOA pmax pmax
comp=Z,37nm,1.0s
NOA NORSAR Array B 74.01 338 P P 02 59 01.8 -0.1
NVAR Mina Array Bea 74.03 54 P P 02 59 02.9 +0.6
comp=Z,4.9nm,0.8s,mb4.5,baz=302,slow=5.2,SNR=8.5
NVAR Mina Array Bea 74.03 54 P P 02 59 02.9 +0.6
MLAC Mammoth Lakes 74.14 55 ⇓P P 02 59 03.7 +0.6
baz=74
F17A Fitzpatrick Pl 74.15 44 ⇑P P 02 59 03.5 +0.6
baz=74
NAO01 NORSAR Array S 74.27 338 eP P 02 59 02.7 -0.6
comp=Z,27nm,1.0s,mb5.1
AKASG Malin Array Be 74.38 323 P P 02 59 03.9 -0.2
comp=Z,43nm,0.9s,mb5.4,baz=45,slow=6.2,SNR=39
AKASG Malin Array Be 74.38 323 P P 02 59 03.9 -0.2
AKASG pmax pmax
comp=Z,43nm,0.9s
AKBB Malin Array Si 74.38 323 eP P 02 59 03.4 -0.7
KIEV Kiev 74.39 323 eP P 02 59 03.4 -0.8
KIEV pmax pmax
comp=Z,95nm,1.1s,mb5.6
KIEV Kiev 74.39 323 eP P 02 59 03.4 -0.8
comp=Z,95nm,1.1s,mb5.6
M12A Wells 74.39 50 ⇓P P 02 59 04.6 +0.2
baz=74
L13A Double Diamond 74.57 49 ⇑P P 02 59 06.3 +0.9
baz=74
N12A Clover Valley, 74.65 50 ⇓P P 02 59 06.1 +0.2
baz=74
N12A Clover Valley, 74.65 50 eP P 02 59 06.4 +0.5
comp=Z,25nm,1.3s,mb5.0
F18A Big Timber 74.67 44 ⇑P P 02 59 05.1 -0.8
baz=74
J15A Blackfoot 74.67 47 ⇓P P 02 59 04.9 -1.1
baz=74
K14A Jones Ranch, D 74.75 48 ⇑P P 02 59 07.4 +0.9
baz=74
M13A Montello 74.88 49 ⇑P P 02 59 07.4 +0.2
baz=75
M13A Montello 74.88 49 eP P 02 59 08.2 +1.0
comp=Z,196nm,3.0s
SUW Suwalki 74.88 328 eP P 02 59 07.4 +0.4
I16A Newdale 74.93 46 P P 02 59 08.9 +1.5
baz=75,SNR=8.0
L14A Malta 75.03 48 ⇑P P 02 59 07.3 -0.7
baz=75
N13A Wendover, West 75.16 50 eP P 02 59 09.6 +0.8
comp=Z,15nm,0.8s,mb5.0
O12A Currie 75.18 51 ⇑P P 02 59 08.8 -0.2
baz=75
IMW Indian Meadow 75.23 46 eP P 02 59 11.0 +1.8
comp=Z,21nm,0.8s,mb5.1
M14A Sheep Mountain 75.28 49 ⇑P P 02 59 10.1 +0.5
baz=75
CWC Cottonwood Cre 75.33 55 ⇑P P 02 59 10.4 +0.5
baz=75
RRI2 Red Ridge 75.35 46 eP P 02 59 11.2 +1.3
comp=Z,35nm,1.3s,mb5.1
S10A Tonopah Range, 75.41 53 ⇑P P 02 59 09.2 -1.2
baz=75
GRAC Grapevine Rang 75.46 54 ⇑P P 02 59 11.1 +0.5
baz=75
TPAW Teton Pass 75.47 46 eP P 02 59 11.6 +1.0
comp=Z,43nm,1.5s,mb5.2
K16A Soda Springs 75.51 47 ⇓P P 02 59 12.0 +1.2
baz=75,SNR=6.6
SIM Simferopol' 75.52 316 ceP P 02 59 11.0 +0.1
SIM pmax pmax
comp=Z,64nm,1.0s,mb5.5
ISA Isabella 75.52 56 eP P 02 59 17.9 +6.9
ISA pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
ISA Isabella 75.52 56 eP P 02 59 17.9 +6.9
comp=Z,9.1nm,1.0s,mb4.7
L15A Malad City 75.55 48 ⇑P P 02 59 11.6 +0.5
baz=75
P12A McGill 75.55 51 ⇑P P 02 59 11.7 +0.6
baz=75
LOHW Long Hollow 75.59 46 eP P 02 59 11.8 +0.4
comp=Z,7.1nm,0.9s,mb4.6
SNOW Snow King Moun 75.60 46 eP P 02 59 12.0 +0.6
comp=Z,9.1nm,0.7s,mb4.8
REDW Red Top Meadow 75.61 46 eP P 02 59 11.5 +0.1
comp=Z,11nm,1.0s,mb4.7
N14A Grayback Hills 75.77 49 ⇑P P 02 59 12.6 +0.2
baz=76
R11A Troy Canyon, C 75.80 53 ⇓P P 02 59 13.0 +0.4
baz=76
BGU Big Grassy Mou 75.82 49 eP P 02 59 13.3 +0.7
comp=Z,21nm,1.5s,mb4.8
M15A Larsen Ranch, 75.84 48 ⇑P P 02 59 13.1 +0.3
baz=76
MPMC Manual Prospec 75.94 55 ⇑P P 02 59 13.7 +0.3
baz=76
SPUT South Promonto 75.94 49 eP P 02 59 12.2 -1.1
comp=Z,24nm,1.6s,mb4.9
LAO LASA Array 76.05 41 eP P 02 59 12.4 -1.5
FURC Furnace Creek, 76.10 55 ⇓P P 02 59 14.6 +0.3
baz=76
S11A Rachel 76.12 53 ⇓P P 02 59 14.7 +0.2
baz=76
N15A Stansbury Isla 76.15 49 ⇑P P 02 59 15.0 +0.5
baz=76

BHD Baghdad 76.22 301 ex P 02 59 11.0 -4.1
BHD ex S 03 08 55.0 -2.4
HWUT Hardware Ranch 76.28 48 eP P 02 59 15.6 +0.4
comp=Z,35nm,1.3s,mb5.1
EDW2 Edwards Air Fo 76.30 57 ⇓P P 02 59 15.8 +0.3
baz=76
L17A Cokeville 76.38 47 ⇑P P 02 59 16.1 +0.3
baz=76
DUG Dugway 76.40 50 ⇓P P 02 59 16.3 +0.3
baz=76
DUG Dugway 76.40 50 eP P 02 59 17.0 +1.0
DUG pmax pmax
comp=Z,18nm,1.0s,mb5.0
DUG Dugway 76.40 50 eP P 02 59 17.0 +1.1
comp=Z,18nm,1.0s,mb5.0
NOQ North Oquirrh 76.54 49 eP P 02 59 16.4 -0.3
comp=Z,58nm,1.3s,mb5.3
P14A Drum Mountains 76.61 50 ⇑P P 02 59 17.4 +0.2
baz=76
MWC Mount Wilson 76.64 57 eP P 02 59 16.8 -0.7
MWC pmax pmax
comp=Z,33nm,1.4s,mb5.1
MWC Mount Wilson 76.64 57 eP P 02 59 16.8 -0.7
comp=Z,33nm,1.4s,mb5.1
T11A Corn Creek, Al 76.69 53 ⇑P P 02 59 17.8 +0.1
baz=76
BW06 Boulder Array 76.72 46 ⇓P P 02 59 16.9 -0.8
baz=76
BW06 Boulder Array 76.72 46 eP P 02 59 17.5 -0.2
comp=Z,8.2nm,0.8s,mb4.7
PDAR Pinedale Array 76.72 46 P P 02 59 17.8 0.0
comp=Z,3.1nm,0.7s,mb4.4,baz=275,slow=2.5,SNR=8.8
PDAR PKKP PKKPbc 03 18 12.8 -14
comp=Z,0.2nm,0.4s,baz=116,slow=2.1,SNR=3.9
GSC Goldstone 76.83 56 ⇑P P 02 59 18.2 -0.3
baz=77
GSC Goldstone 76.83 56 eP P 02 59 18.5 0.0
GSC pmax pmax
comp=Z,15nm,1.1s,mb4.8
GSC Goldstone 76.83 56 eP P 02 59 18.5 0.0
comp=Z,15nm,1.1s,mb4.8
Q14A Sevier Lake (B 76.85 51 ⇑P P 02 59 17.3 -1.2
baz=77
JLU Jordanelle 76.97 49 eP P 02 59 20.1 +0.9
comp=Z,9.8nm,0.8s,mb4.8
L18A Fontenelle, Gr 76.97 47 ⇓P P 02 59 20.4 +1.2
baz=77
NLU North Lily Min 76.99 49 eP P 02 59 19.8 +0.4
comp=Z,37nm,1.5s,mb5.1
P15A Leamington 77.11 50 ⇑P P 02 59 20.5 +0.5
baz=77
N17A Moffit Pass 77.12 48 ⇑P P 02 59 20.5 +0.5
baz=77
O16A Springville 77.18 49 ⇓P P 02 59 20.7 +0.3
baz=77,SNR=5.5
DAU Daniels Canyon 77.20 49 eP P 02 59 21.0 +0.5
DAU pmax pmax
comp=Z,18nm,0.9s,mb5.0
DAU Daniels Canyon 77.20 49 eP P 02 59 21.0 +0.5
comp=Z,18nm,0.9s,mb5.0
MPU Maple Canyon 77.22 49 eP P 02 59 21.2 +0.6
comp=Z,15nm,0.8s,mb5.0
TUQ Turquoise Moun 77.33 55 ⇑P P 02 59 21.0 -0.3
baz=77
S13A Holt Ranch, En 77.35 52 ⇑P P 02 59 21.2 -0.1
baz=77
BSD Bornholm Skovb 77.36 332 i P P 02 59 19.6 -1.5
BSD pmax pmax
comp=Z,38nm,1.2s,mb5.2
BSD Bornholm Skovb 77.36 332 i P P 02 59 19.6 -1.5
BSD Bornholm Skovb 77.36 332 i P P 02 59 19.6 -1.5
comp=Z,38nm,1.2s,mb5.2
BSD
comp=Z,156µm,20.0s
Q15A Fillmore 77.40 50 ⇓P P 02 59 22.3 +0.7
baz=77
ARUT Antelope Range 77.49 52 eP P 02 59 21.5 -0.6
LEOM Leova 77.66 320 ⇓P P 02 59 23.8 +0.9
LEOM Leova 77.66 320 ⇓/P P 02 59 23.8 +0.9
T13A Saint George 77.66 53 ⇑P P 02 59 24.1 +0.9
baz=78
S14A Cedar City 77.67 52 ⇑P P 02 59 23.7 +0.5
baz=78
CCUT Cedar City 77.68 52 eP P 02 59 24.5 +1.3
comp=Z,22nm,1.3s,mb4.9
N18A Larsen Ranch, 77.78 47 ⇓P P 02 59 24.0 +0.3
baz=78
MSU Marysvale 77.82 51 eP P 02 59 25.1 +1.1
MSU pmax pmax
comp=Z,22nm,1.3s,mb4.9
MSU Marysvale 77.82 51 eP P 02 59 25.1 +1.1
comp=Z,22nm,1.3s,mb4.9
L20A Wamsutter 77.90 46 ⇑P P 02 59 24.4 +0.1
baz=78
R15A Junction 77.95 51 ⇓P P 02 59 24.9 +0.2
baz=78
U13A Pakoon Wash 78.00 53 P P 02 59 25.7 +0.7
baz=78,SNR=8.7
O18A Roosevelt 78.04 48 ⇓P P 02 59 26.2 +1.0
baz=78
LDFC Landfair 78.08 55 eP P 02 59 24.1 -1.4
PFO Pinyon Flat Ob 78.08 57 eP P 02 59 23.5 -2.0
PFO pmax pmax
comp=Z,15nm,1.1s,mb4.8
PFO Pinyon Flat Ob 78.08 57 eP P 02 59 23.5 -2.0
comp=Z,15nm,1.1s,mb4.8
KWP Kalwaria Pacla 78.17 325 eP P 02 59 26.1 +0.4
KWP Kalwaria Pacla 78.17 325 ⇑P P 02 59 26.1 +0.4
KWP Kalwaria Pacla 78.17 325 ⇑/P P 02 59 26.1 +0.4
MUD Monsted U'grnd 78.31 336 i P P 02 59 27.4 +1.0
MUD pmax pmax
comp=Z,16nm,1.0s,mb4.9
MUD Monsted U'grnd 78.31 336 i P P 02 59 27.4 +1.0
MUD Monsted U'grnd 78.31 336 i P P 02 59 27.4 +1.0
comp=Z,16nm,1.0s,mb4.9
MUD
comp=Z,374µm,19.0s
V13A Grand Canyon W 78.33 54 ⇑P P 02 59 27.3 +0.4
baz=78
BUR08 Bucovina Ar. S 78.39 322 eP P 02 59 27.5 +0.6
R16A Teasdale 78.39 51 ⇑P P 02 59 27.8 +0.7
baz=78,SNR=7.3
BURAR Bucovina Array 78.40 322 ⇑P P 02 59 27.5 +0.5
BURAR Bucovina Array 78.40 322 ⇑/P P 02 59 27.5 +0.5
TESR 78.45 321 ⇑P P 02 59 27.6 +0.3
TESR 78.45 321 ⇑/P P 02 59 27.5 +0.2
SRU San Rafael 78.46 49 ⇑P P 02 59 28.0 +0.5
baz=78
SRU San Rafael 78.46 49 eP P 02 59 28.3 +0.8
SRU pmax pmax
comp=Z,20nm,0.7s,mb5.2
SRU San Rafael 78.46 49 eP P 02 59 28.3 +0.8
comp=Z,20nm,0.7s,mb5.2
BAR Barrett 78.49 58 eP P 02 59 28.8 +0.9
comp=Z,14nm,1.0s,mb4.9
U14A Mt Trumbull 78.49 53 ⇓P P 02 59 28.7 +0.9
baz=78
MONP Monument Peak 78.54 57 ⇓P P 02 59 28.0 -0.1
baz=78
O19A Miners Draw (B 78.54 48 ⇑P P 02 59 28.2 +0.3
baz=78
ULM Lac du Bonnet 78.62 34 P P 02 59 28.9 +0.8
comp=Z,6.7nm,0.8s,mb4.7,baz=294,slow=3.2,SNR=3.4
ULM Lac du Bonnet 78.62 34 eP P 02 59 28.5 +0.4
comp=Z,10nm,0.8s,mb4.8
T15A Red Dirt Ranch 78.62 52 ⇓P P 02 59 28.5 0.0
baz=78
S16A Weppner Ranch, 78.67 51 ⇓P P 02 59 28.9 +0.2
baz=78
PETR 78.69 320 ⇓/P P 02 59 30.7 +2.1
N20A Spence Gulch, 78.70 47 ⇑P P 02 59 29.2 +0.4
baz=78
M21A Separation Pea 78.72 46 ⇓P P 02 59 28.4 -0.5
baz=78
R17A Hanksville Air 78.78 50 ⇑P P 02 59 28.4 -0.9
baz=79
VRI Vrincioaia 78.85 320 ⇑P P 02 59 31.5 +2.0
VRI Vrincioaia 78.85 320 ⇑/P P 02 59 31.5 +2.0
RSSD Black Hills 78.90 42 eP P 02 59 29.5 -0.3
RSSD pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
RSSD Black Hills 78.90 42 eP P 02 59 29.5 -0.3
comp=Z,10.0nm,0.8s,mb4.8
PLOR Plostina 78.90 320 ⇑P P 02 59 31.1 +1.3
PLOR Plostina 78.90 320 ⇑/P P 02 59 31.1 +1.3
TIRR Tirgusor 78.93 318 ⇑P P 02 59 30.2 +0.2
TIRR Tirgusor 78.93 318 eP P 02 59 29.4 -0.6

comp=Z,58nm,1.3s,mb5.3
TIRR Tirgusor 78.93 318 ⇑/P P 02 59 30.2 +0.2
STHS Stebnicka Huta 78.99 325 eP P 02 59 30.7 +0.5
STHS Stebnicka Huta 78.99 325 eP P 02 59 30.7 +0.5
V14A Boquillas Ranc 79.03 53 ⇓P P 02 59 30.9 +0.2
baz=79
P19A Cripple Cowboy 79.05 48 ⇓P P 02 59 29.9 -0.8
baz=79
U15A North Rim 79.05 52 ⇓P P 02 59 30.8 0.0
baz=79
OJC Ojcow 79.05 327 eP P 02 59 28.4 -2.1
GRER 79.05 320 ⇓P P 02 59 32.9 +2.3
GRER 79.05 320 ⇓/P P 02 59 32.9 +2.2
BR131 Keskin Array S 79.11 312 eP P 02 59 31.9 +0.8
comp=Z,34nm,1.1s,mb5.2
BRTR Keskin Array B 79.11 312 P P 02 59 31.9 +0.8
comp=Z,31nm,1.1s,mb5.2,baz=115,slow=4.3,SNR=20
BRTR Keskin Array B 79.11 312 P P 02 59 31.9 +0.8
BRTR pmax pmax
comp=Z,31nm,1.1s
O20A White River Ci 79.16 47 ⇑P P 02 59 32.5 +1.2
baz=79
PDMCI Parker Dam,Lak 79.18 55 ⇑P P 02 59 31.1 -0.5
baz=79
X13A Yucca 79.20 55 ⇓P P 02 59 31.9 +0.2
baz=79
S17A Black Ridge (B 79.22 51 ⇓P P 02 59 31.7 0.0
baz=79
R18A Canyonlands Na 79.30 50 ⇓P P 02 59 32.2 +0.1
baz=79
W14A Seligman 79.30 54 ⇑P P 02 59 32.4 +0.2
baz=79
Q19A Hogan Spring (79.31 49 ⇓P P 02 59 31.6 -0.6
baz=79
TRPA Tarpa 79.32 324 ⇓/P P 02 59 33.1 +1.1
DOPR Dopca 79.46 321 ⇓/P P 02 59 34.6 +1.8
GLA Glamis 79.50 56 ⇓P P 02 59 33.4 +0.1
baz=79
GLA Glamis 79.50 56 eP P 02 59 33.6 +0.3
GLA pmax pmax
comp=Z,61nm,0.4s,mb5.9
GLA Glamis 79.50 56 eP P 02 59 33.5 +0.2
comp=Z,61nm,0.4s,mb5.9
V15A Kaibab Nationa 79.50 53 ⇓P P 02 59 33.8 +0.5
baz=79
MLR Muntele Rosu 79.50 320 ⇓P P 02 59 34.1 +1.0
MLR Muntele Rosu 79.50 320 ⇓/P P 02 59 34.1 +1.0
T17A Navajo Res., N 79.62 51 ⇑P P 02 59 33.4 -0.6
baz=79
R19A Curley Farm, L 79.74 49 ⇑P P 02 59 34.8 +0.3
baz=80
W15A Williams 79.84 53 ⇓P P 02 59 36.2 +1.1
baz=80
X14A Yava 79.89 54 P P 02 59 36.2 +0.8
baz=80,SNR=9.4
PV04 Paradox Valley 79.89 49 eP P 02 59 36.1 +0.7
Q20A Ridgley Place, 79.89 48 ⇑P P 02 59 36.0 +0.6
baz=80
SULR 79.91 319 ⇓/P P 02 59 36.1 +0.8
U16A Tuba City 79.96 52 ⇓P P 02 59 35.9 +0.2
baz=80
U17A Shonto 79.96 51 ⇓P P 02 59 35.7 0.0
baz=80
N23A Red Feather La 79.99 46 ⇓P P 02 59 35.7 -0.1
baz=80
VOIR 80.00 321 ⇓P P 02 59 37.1 +1.3
VOIR 80.00 321 ⇓/P P 02 59 37.1 +1.3
KECS Kecovo 80.01 325 eP P 02 59 35.9 +0.1
KECS Kecovo 80.01 325 eP P 02 59 35.9 +0.1
AGMN Agassiz Nation 80.04 35 eP P 02 59 34.8 -1.1
OKC Ostrava-Krasne 80.05 327 eP P 02 59 36.5 +0.5
OKC e pP 02 59 45.6 0.0
OKC Ostrava-Krasne 80.05 327 eP P 02 59 36.5 +0.5
OKC epP pP 02 59 45.6 0.0
KSP Ksiaz 80.08 329 eP P 02 59 36.5 +0.4
T18A Mexican Hat 80.11 51 ⇓P P 02 59 36.0 -0.6
baz=80
Y14A Wickenburg 80.14 55 P P 02 59 37.1 +0.3
baz=80,SNR=6.2
S19A Harvey Farm, M 80.16 50 ⇓P P 02 59 36.6 -0.2
baz=80
Z13A Yuma Proving G 80.18 56 ⇓P P 02 59 36.7 -0.3
baz=80
DRGR 80.19 323 ⇓P P 02 59 37.6 +0.8
DRGR 80.19 323 ⇓/P P 02 59 37.6 +0.8
WUAZ Wupatki 80.20 53 ⇑P P 02 59 37.2 +0.2
baz=80
WUAZ Wupatki 80.20 53 eP P 02 59 37.7 +0.6
comp=Z,23nm,1.1s,mb5.0
PV01 Paradox Valley 80.26 49 eP P 02 59 38.0 +0.7
comp=Z,1µm,0.9s,mb6.8
X15A Humboldt 80.30 54 ⇓P P 02 59 37.8 +0.2
baz=80,SNR=7.1
R20A Redvale 80.34 49 ⇑P P 02 59 37.3 -0.4
baz=80
MORC Moravsky Berou 80.36 327 ⇑P P 02 59 38.5 +0.9
MORC Moravsky Berou 80.36 327 eP P 02 59 37.6 0.0
comp=Z,49nm,1.1s,mb5.3
MORC Moravsky Berou 80.36 327 ⇑/P P 02 59 38.5 +0.9
W16A Flagstaff 80.36 53 ⇑P P 02 59 38.1 +0.2
baz=80
Q21A Lamborn Mesa, 80.40 48 ⇓P P 02 59 38.0 -0.1
baz=80
DPC Dobruska-Polom 80.44 328 eP P 02 59 38.8 +0.7
DPC e pP 02 59 47.8 +0.1
DPC Dobruska-Polom 80.44 328 eP P 02 59 38.8 +0.7
DPC epP pP 02 59 47.8 +0.1
UPC Upice 80.45 329 eP P 02 59 37.0 -1.1
UPC Upice 80.45 329 eP P 02 59 37.0 -1.1
O23A Lake Granby, G 80.46 46 ⇑P P 02 59 37.7 -0.7
baz=80
V17A Tonalea, Kykot 80.50 52 ⇑P P 02 59 38.3 -0.4
baz=80
SMCO Snowmass 80.53 48 eP P 02 59 39.4 +0.6
comp=Z,13nm,1.0s,mb4.8
U18A Rough Rock, Ch 80.57 51 ⇑P P 02 59 39.2 +0.1
baz=80
Y15A Casa Rosa Ranc 80.57 54 ⇑P P 02 59 39.5 +0.4
baz=80
PSZ Piszkesteto 80.70 325 ⇓/P P 02 59 49.0 +10
Q22A Crested Butte, 80.77 48 ⇓P P 02 59 40.7 +0.6
baz=80
T19A Beclabito 80.82 50 ⇓P P 02 59 41.2 +0.8
baz=81
X16A Lo Mia Camp, P 80.85 54 P P 02 59 41.5 +0.9
baz=81,SNR=8.2
KOLL Kolacno 80.88 326 eP P 02 59 40.8 +0.3
KOLL Kolacno 80.88 326 eP P 02 59 40.8 +0.3
MVCO Mesa Verde 80.90 50 ⇓P P 02 59 41.4 +0.6
baz=81
MVCO Mesa Verde 80.90 50 eP P 02 59 41.1 +0.3
comp=Z,19nm,1.0s,mb5.0
V18A Ganado 80.98 52 ⇑P P 02 59 41.2 0.0
baz=81
BRG Berggiesshubel 81.01 330 i P P 02 59 41.3 +0.2
BRG pmax pmax
comp=Z,287nm,1.4s,mb6.0
BRG MLR MLR
comp=Z,2µm,21.2s,MS5.5
PVCC Panska Ves 81.03 329 eP P 02 59 41.8 +0.6
PVCC e pP 02 59 50.7 -0.1
PVCC Panska Ves 81.03 329 eP P 02 59 41.8 +0.6
PVCC epP pP 02 59 50.7 -0.1
CLL Collm 81.04 331 ⇑/P P 02 59 39.9 -1.4
CLL i pP 02 59 50.1 -0.8
CLL pmax pmax
comp=Z,57nm,1.2s,mb5.4
CLL Collm 81.04 331 ⇑/P P 02 59 41.2 -0.1
comp=Z,57nm,1.2s,mb5.4
CLL i pP pP 02 59 50.1 -0.8
CLL i 03 00 05.1
CLL ePP PP 03 02 45.0 -0.6
U19A Dine' College, 81.06 51 ⇓P P 02 59 42.0 +0.3
baz=81,SNR=9.2
VRAC Vranov 81.12 328 ⇑P P 02 59 42.6 +0.9
VRAC Vranov 81.12 328 ⇑/P P 02 59 42.6 +0.9
GZR Gura Zlata 81.16 322 ⇓P P 02 59 42.9 +0.9
GZR Gura Zlata 81.16 322 ⇓/P P 02 59 42.8 +0.8
Y16A Circle Bar Ran 81.17 54 ⇑P P 02 59 40.5 -1.8
baz=81
R22A Saguache, Gunn 81.28 48 ⇑P P 02 59 43.4 +0.6
baz=81
X17A Forest Lakes 81.31 53 ⇑P P 02 59 43.4 +0.3
baz=81
SMOL Smolenice 81.36 327 eP P 02 59 44.0 +1.0

SMOL Smolenice 81.36 327 eP P 02 59 44.0 +1.0
U20A Newcomb 81.42 50 ⇑P P 02 59 43.9 +0.3
baz=81
PRU Pruhonice 81.45 329 eP P 02 59 44.3 +0.8
PRU e pP 02 59 53.3 +0.2
PRU Pruhonice 81.45 329 eP P 02 59 44.3 +0.8
PRU epP pP 02 59 53.3 +0.2
V19A Window Rock 81.53 51 ⇑P P 02 59 44.5 +0.3
baz=81,SNR=6.9
S22A 4UR Ranch, Cre 81.55 49 ⇑P P 02 59 42.7 -1.5
baz=81
BZS Buzias 81.57 322 ⇑P P 02 59 44.0 -0.2
BZS Buzias 81.57 322 ⇑iP P 02 59 44.0 -0.2
TREC Trest 81.60 328 eP P 02 59 44.5 +0.2
TREC e pP 02 59 53.7 -0.1
TREC Trest 81.60 328 eP P 02 59 44.5 +0.2
TREC epP pP 02 59 53.7 -0.1
T21A Navajo Lake 81.62 49 ⇑P P 02 59 44.4 -0.3
baz=81
Y17A Roosevelt 81.69 54 ⇑P P 02 59 45.2 +0.2
baz=82
ZST Bratislava 81.74 327 eP P 02 59 46.2 +1.2
ZST Bratislava 81.74 327 eP P 02 59 46.2 +1.2
V20A Brimhall 81.83 51 ⇓P P 02 59 45.4 -0.4
baz=82
T22A Edith 81.99 49 ⇓P P 02 59 46.5 -0.1
baz=82
NKC Novy Kostel 82.11 330 eP P 02 59 47.1 +0.2
NKC e pP 02 59 56.2 -0.3
NKC Novy Kostel 82.11 330 eP P 02 59 47.1 +0.2
NKC epP pP 02 59 56.2 -0.3
Y18A Canyon Day Jun 82.16 53 ⇓P P 02 59 46.8 -0.7
baz=82
ISP Isparta 82.19 312 eP P 02 59 47.7 +0.1
ISP pmax pmax
comp=Z,44nm,0.9s,mb5.4
ISP Isparta 82.19 312 eP P 02 59 47.7 +0.1
comp=Z,44nm,0.9s,mb5.4
X19A St. Johns 82.21 52 ⇓P P 02 59 47.2 -0.6
baz=82
W20A Ramah 82.25 51 ⇑P P 02 59 46.1 -1.8
baz=82
EYMN Ely 82.26 33 eP P 02 59 46.9 -0.9
comp=Z,22nm,0.8s,mb5.1
MMAI Mount Meron Ar 82.32 306 P P 02 59 49.3 +0.9
comp=Z,55nm,1.1s,mb5.4,baz=54,slow=7.3,SNR=22
SDCO Great Sand Dun 82.34 48 eP P 02 59 49.6 +1.2
comp=Z,8.2nm,1.1s,mb4.6
CSS Prodhromos 82.38 308 eP P 02 59 47.3 -1.3
comp=Z,55nm,1.0s,mb5.4
CONA Conrad Observa 82.48 327 ⇑iPcP P 02 59 49.9 +0.9
comp=Z,41nm,1.2s,mb5.2,SNR=11
KHC Kasperske Hory 82.52 329 eP P 02 59 49.2 +0.1
KHC e pP 02 59 59.0 +0.3
KHC Kasperske Hory 82.52 329 eP P 02 59 49.0 -0.1
comp=Z,32nm,1.1s,mb5.3
KHC Kasperske Hory 82.52 329 eP P 02 59 49.2 +0.1
KHC epP pP 02 59 59.0 +0.3
PKSM Moragy 82.54 324 ⇑P P 02 59 49.0 -0.3
PKSM Moragy 82.54 324 ⇑iP P 02 59 49.0 -0.3
TUC Tucson 82.61 55 eP P 02 59 49.6 -0.3
TUC pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
TUC Tucson 82.61 55 eP P 02 59 49.6 -0.3
comp=Z,7.9nm,1.0s,mb4.7
X20A Quemado 82.63 52 ⇑P P 02 59 50.5 +0.5
baz=82
V22A San Miguel Ran 82.71 50 ⇑P P 02 59 50.3 -0.1
baz=82
U23A El Rito 82.87 49 ⇑P P 02 59 51.8 +0.6
baz=83
118A Homack Ranch, 82.93 54 ⇓P P 02 59 51.2 -0.4
baz=83
ESK Eskdalemuir 82.93 341 eP P 02 59 52.3 +1.2
ESK pmax pmax
comp=Z,39nm,1.2s,mb5.3
ESK Eskdalemuir 82.93 341 iP P 02 59 53.3 +2.2
ESK Eskdalemuir 82.93 341 eP P 02 59 52.3 +1.2
comp=Z,39nm,1.2s,mb5.3
VTS Vitosha 82.95 320 ⇓P P 02 59 52.3 +0.9
VTS Vitosha 82.95 320 ⇓iP P 02 59 52.3 +0.9
ECSD EROS Data Cent 83.00 39 eP P 02 59 50.4 -1.3
comp=Z,13nm,0.8s,mb5.0
S25A Robets Cordova 83.02 47 ⇓P P 02 59 52.1 +0.2
baz=83
Y20A Horse Springs, 83.12 52 ⇑P P 02 59 52.6 +0.1
baz=83
X21A Alamocita Cree 83.14 52 ⇓P P 02 59 53.1 +0.5
baz=83
ARSA Arzberg 83.15 327 ⇑iP P 02 59 52.9 +0.4
comp=Z,24nm,1.2s,mb5.1,SNR=6.3
V23A Ortiz Mt. (NFS 83.26 50 ⇑P P 02 59 54.4 +1.1
baz=83
218A Dragoon 83.31 55 ⇑P P 02 59 54.4 +0.9
baz=83
T25A Trinidad 83.39 48 ⇑P P 02 59 54.2 +0.4
baz=83
Y21A Point of Rocks 83.50 52 ⇑P P 02 59 55.6 +1.2
baz=83
Z20A Nine Sixteen R 83.50 53 ⇓P P 02 59 54.6 +0.1
baz=83
LAZ Ladron 83.57 51 eP P 02 59 55.7 +0.9
comp=Z,7.2nm,1.2s,mb4.7
ANMO Albuquerque 83.62 50 eP P 02 59 55.5 +0.4
ANMO pmax pmax
comp=Z,21nm,1.1s
ANMO Albuquerque 83.62 50 eP P 02 59 55.5 +0.4
comp=Z,21nm,1.1s,mb5.2
W23A Werner Place, 83.67 50 ⇑P P 02 59 56.0 +0.6
baz=84
318A Bisbee 83.69 55 ⇑P P 02 59 55.3 -0.2
baz=84
219A White Tail Can 83.80 54 ⇑P P 02 59 56.4 +0.3
baz=84
SOKA Soboth 83.81 327 ⇑iP P 02 59 55.7 -0.1
comp=Z,54nm,1.3s,mb5.5
V24A Rampart Ranch, 83.83 49 ⇑P P 02 59 56.4 +0.2
baz=84
U25A Circle Dot Ran 83.89 48 ⇓P P 02 59 55.2 -1.2
baz=84
Z21A St. Cloud Mine 83.96 52 ⇓P P 02 59 56.9 +0.1
baz=84
Y22A Socorro 83.98 51 ⇑P P 02 59 57.2 +0.3
baz=84
BNM Barren Site 84.05 51 eP P 02 59 57.8 +0.5
comp=Z,7.2nm,0.7s,mb4.9
W24A Lazy 6 Ranch, 84.09 50 ⇓P P 02 59 58.1 +0.6
baz=84
V25A Rancho No Teng 84.14 49 ⇓P P 02 59 57.8 0.0
baz=84
BEBN Eben Emael 84.16 334 P P 02 59 57.8 +0.3
319A Douglas 84.19 55 ⇑P P 02 59 58.2 +0.2
baz=84
MEM Membach 84.20 334 P P 02 59 57.3 -0.4
comp=Z,16nm,1.4s,mb5.0
U26A Atchley Ranch, 84.29 48 ⇑P P 02 59 59.0 +0.6
baz=84
PLE Pljevlja 84.32 322 ⇑iP P 02 59 58.9 +0.4
PLE Pljevlja 84.32 322 ⇑iP P 02 59 58.9 +0.4
220A Playas Peak, P 84.33 54 ⇑P P 02 59 59.1 +0.3
baz=84
121A Cookes Peak, D 84.40 53 ⇑P P 02 59 58.8 -0.2
baz=84
IVA Berane 84.42 321 ⇑iP P 02 59 59.8 +0.8
IVA Berane 84.42 321 ⇑iP P 02 59 59.8 +0.8
Z22A Elephant Butte 84.44 52 ⇑P P 02 59 58.8 -0.4
baz=84
STU Stuttgart 84.55 331 eP P 02 59 58.6 -0.9
STU pmax pmax
comp=Z,46nm,1.1s,mb5.5
STU Stuttgart 84.55 331 eP P 02 59 58.6 -0.9
comp=Z,46nm,1.1s,mb5.5
Y23A Lovelace Mesa, 84.55 51 ⇓P P 03 00 00.3 +0.4
baz=84
PVY Plav 84.58 321 ⇑iP P 02 59 59.5 -0.3
PVY Plav 84.58 321 ⇑iP P 02 59 59.5 -0.3
BCLA Clavier 84.61 334 P P 02 59 59.9 +0.1
comp=Z,30nm,1.6s,mb5.2
SCHQ Schefferville 84.61 17 P P 02 59 59.7 0.0
comp=Z,16nm,0.9s,mb5.2,baz=353,slow=5.0,SNR=6.6
SCHQ Schefferville 84.61 17 eP P 02 59 59.2 -0.4
comp=Z,28nm,1.0s,mb5.3
UPM Unac-Piva 84.66 322 ⇑iP P 02 59 59.4 -0.8
UPM Unac-Piva 84.66 322 ⇑iP P 02 59 59.5 -0.7
W25A X Bar L Ranch, 84.66 49 ⇓P P 03 00 00.4 0.0
baz=84

SNF Seneffe 84.88 335 P P 03 00 01.5 +0.4
NKY Niksic 84.90 322 ⇑iP P 03 00 00.9 -0.5
NKY Niksic 84.90 322 ⇑iP P 03 00 00.9 -0.5
WLF Walferdange 84.94 333 P P 03 00 02.1 +0.7
comp=Z,43nm,1.8s,mb5.3
WLF Walferdange 84.94 333 eP P 03 00 02.3 +0.8
WLF pmax pmax
comp=Z,97nm,1.6s,mb5.7
WLF Walferdange 84.94 333 eP P 03 00 02.3 +0.8
comp=Z,97nm,1.6s,mb5.7
MOTA Moosalm 84.94 329 ⇓iPcP P 03 00 01.6 +0.1
comp=Z,24nm,1.0s,mb5.3
GIVF Givet 85.04 334 eP P 03 00 01.1 -0.9
comp=Z,113nm,1.4s,mb5.5
GIVF Givet 85.04 334 eP P 03 00 01.1 -0.9
GIVF pmax pmax
comp=Z,56nm,1.4s,mb5.5
GIVF Givet 85.04 334 eP P 03 00 01.1 -0.9
comp=Z,56nm,1.4s,mb5.5
BRY Bratogost 85.06 322 ⇑iP P 03 00 00.7 -1.5
BRY Bratogost 85.06 322 ⇑iP P 03 00 00.7 -1.5
TTG Podgorica 85.06 322 ⇑iP P 03 00 01.2 -1.0
TTG Podgorica 85.06 322 ⇑iP P 03 00 01.2 -1.0
DOU Dourbes 85.12 334 P P 03 00 01.7 -0.7
comp=Z,14nm,1.8s,mb4.8
BFO Black Forest 85.24 331 P P 03 00 03.8 +0.8
comp=Z,233nm,1.1s,mb6.2,SNR=7.5
BFO Black Forest 85.24 331 eP P 03 00 02.8 -0.2
BFO pmax pmax
comp=Z,51nm,1.1s,mb5.6
BFO Black Forest 85.24 331 eP P 03 00 02.8 -0.2
comp=Z,51nm,1.1s,mb5.6
BAIF Baives 85.29 334 eP P 03 00 02.5 -0.7
comp=Z,71nm,1.3s,mb5.3
BAIF Baives 85.29 334 eP P 03 00 02.5 -0.7
BAIF pmax pmax
comp=Z,36nm,1.3s,mb5.3
BAIF Baives 85.29 334 eP P 03 00 02.5 -0.7
comp=Z,36nm,1.3s,mb5.3
BUM Brajici-Budva 85.33 322 ⇑iP P 03 00 03.3 -0.3
BUM Brajici-Budva 85.33 322 ⇑iP P 03 00 03.3 -0.3
FETA Feichten 85.35 329 ⇑iPcP P 03 00 03.7 +0.1
comp=Z,28nm,1.1s,mb5.3
ULC Ulcinj 85.41 321 ⇑iP P 03 00 03.8 -0.2
HCY Herceg Novi 85.42 322 ⇑iP P 03 00 03.5 -0.5
HCY Herceg Novi 85.42 322 ⇑iP P 03 00 03.6 -0.5
DAVA Damuels 85.48 330 ⇑iPcP P 03 00 04.4 +0.2
comp=Z,58nm,1.1s,mb5.6,SNR=12
CDF Champ du Feu 85.57 332 eP P 03 00 04.1 -0.5
comp=Z,117nm,1.3s,mb5.7
CDF Champ du Feu 85.57 332 eP P 03 00 04.1 -0.5
CDF pmax pmax
comp=Z,59nm,1.3s,mb5.7
CDF Champ du Feu 85.57 332 eP P 03 00 04.1 -0.5
comp=Z,59nm,1.3s,mb5.7
DLF Lyons Farm 85.60 342 eP P 03 00 03.0 -1.7
W27A Bowe Ranch, En 85.60 48 ⇑P P 03 00 05.8 +0.7
baz=85
124A Stringfield Ra 85.75 52 ⇑P P 03 00 05.4 -0.5
baz=86
ECH Echery 85.78 332 eP P 03 00 05.0 -0.7
ECH pmax pmax
comp=Z,27nm,1.1s,mb5.4
ECH Echery 85.78 332 eP P 03 00 05.0 -0.7
comp=Z,27nm,1.1s,mb5.4
Z25A Roswell 85.81 51 ⇑P P 03 00 06.2 0.0
baz=86
X27A F and S Farms, 85.86 49 ⇓P P 03 00 05.7 -0.7
baz=86
224A Cornudas Mount 86.13 52 ⇑P P 03 00 07.3 -0.5
baz=86
HINF Hinteralfeld 86.22 332 eP P 03 00 06.9 -1.0
comp=Z,76nm,1.5s,mb5.4
HINF Hinteralfeld 86.22 332 eP P 03 00 06.9 -1.0
HINF pmax pmax
comp=Z,38nm,1.5s,mb5.4
HINF Hinteralfeld 86.22 332 eP P 03 00 06.9 -1.0
comp=Z,38nm,1.5s,mb5.4
HAU Haudompre 86.25 332 eP P 03 00 07.1 -0.9
comp=Z,73nm,1.4s,mb5.4
HAU Haudompre 86.25 332 eP P 03 00 07.1 -0.9
HAU pmax pmax
comp=Z,37nm,1.4s,mb5.4
HAU Haudompre 86.25 332 eP P 03 00 07.1 -0.9
comp=Z,36nm,1.4s,mb5.4
125A Gardner Draw, 86.27 51 ⇓P P 03 00 08.2 -0.2
baz=86
Z26A Caprock 86.27 50 ⇑P P 03 00 08.6 +0.2
baz=86
MEZF Maizieres J'vi 86.31 333 eP P 03 00 07.9 -0.4
comp=Z,174nm,1.4s,mb5.8
MEZF Maizieres J'vi 86.31 333 eP P 03 00 07.9 -0.4
comp=Z,174nm,1.4s,mb6.1
Y27A Causey 86.35 49 ⇑P P 03 00 08.6 -0.2
baz=86
MNTX Cornudas Mount 86.47 52 eP P 03 00 09.4 0.0
comp=Z,7.4nm,1.0s,mb4.9
CPRX Cap Rock 86.51 50 eP P 03 00 09.6 0.0
comp=Z,6.5nm,1.0s,mb4.8
AMTX Amarillo 86.54 48 eP P 03 00 10.4 +0.7
comp=Z,24nm,0.8s,mb5.5
126A Clayton Basin, 86.67 51 ⇓P P 03 00 07.1 -3.3
baz=86
Z27A Tatum 86.71 50 ⇓P P 03 00 08.5 -2.1
baz=86
GDL2 Guadalupe Moun 86.77 51 eP P 03 00 10.8 -0.1
325A Bean Ranch, Si 86.95 52 ⇓P P 03 00 10.1 -1.7
baz=87
226A Malaga, Loving 87.02 51 ⇓P P 03 00 11.0 -1.2
baz=87
CABF La Chapelle 87.52 332 eP P 03 00 13.6 -0.6
comp=Z,198nm,1.8s,mb5.7
CABF La Chapelle 87.52 332 eP P 03 00 13.6 -0.6
CABF pmax pmax
comp=Z,99nm,1.8s,mb5.7
CABF La Chapelle 87.52 332 eP P 03 00 13.6 -0.6
comp=Z,99nm,1.8s,mb5.7
326A Caldwell Ranch 87.61 52 ⇑P P 03 00 10.9 -4.0
baz=87
GLMI Grayling 87.64 31 eP P 03 00 14.0 -0.9
LOR Lormes 87.78 333 eP P 03 00 14.7 -0.8
comp=Z,98nm,1.2s,mb5.6
LOR Lormes 87.78 333 eP P 03 00 14.7 -0.8
LOR pmax pmax
comp=Z,49nm,1.2s,mb5.6
LOR Lormes 87.78 333 eP P 03 00 14.7 -0.8
comp=Z,49nm,1.2s,mb5.6
AQU L'Aquila 87.91 325 eP P 03 00 16.1 -0.1
AQU pmax pmax
comp=Z,34nm,0.9s,mb5.6
AQU L'Aquila 87.91 325 eP P 03 00 16.1 -0.1
comp=Z,34nm,0.9s,mb5.6
FLN La Foliniere 87.96 336 eP P 03 00 15.5 -0.8
comp=Z,88nm,1.2s,mb5.6
FLN La Foliniere 87.96 336 eP P 03 00 15.5 -0.8
FLN pmax pmax
comp=Z,44nm,1.2s,mb5.6
FLN La Foliniere 87.96 336 eP P 03 00 15.5 -0.8
comp=Z,44nm,1.2s,mb5.6
LDF La Druitiere 87.99 336 eP P 03 00 15.5 -0.9
comp=Z,16nm,0.9s,mb5.0
LDF La Druitiere 87.99 336 eP P 03 00 15.5 -0.9
LDF pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
LDF La Druitiere 87.99 336 eP P 03 00 15.5 -0.9
comp=Z,7.9nm,0.9s,mb4.9
GVD Gavdhos 88.00 314 eP P 03 00 16.3 -0.5
SSF Saint Saulge 88.08 333 eP P 03 00 16.2 -0.7
comp=Z,57nm,1.2s,mb5.4
SSF Saint Saulge 88.08 333 eP P 03 00 16.2 -0.7
SSF pmax pmax
comp=Z,29nm,1.2s,mb5.4
SSF Saint Saulge 88.08 333 eP P 03 00 16.2 -0.7
comp=Z,28nm,1.2s,mb5.4
LPL La Plagne 88.18 331 eP P 03 00 17.1 -0.3
comp=Z,32nm,1.1s,mb5.2
LPL La Plagne 88.18 331 eP P 03 00 17.1 -0.3
LPL pmax pmax
comp=Z,16nm,1.1s,mb5.2
LPL La Plagne 88.18 331 eP P 03 00 17.1 -0.3
comp=Z,16nm,1.1s,mb5.2
LPG La Plagne 88.19 331 eP P 03 00 17.3 -0.2
comp=Z,54nm,1.4s,mb5.3
LPG La Plagne 88.19 331 eP P 03 00 17.3 -0.2
LPG pmax pmax
comp=Z,27nm,1.4s,mb5.3
LPG La Plagne 88.19 331 eP P 03 00 17.3 -0.2
comp=Z,27nm,1.4s,mb5.3
HYF Humbligny 88.21 334 eP P 03 00 17.3 -0.2
427A Hayter Ranch, 88.29 52 ⇓P P 03 00 17.4 -0.8
baz=88
SMF Signal de Mont 88.32 333 eP P 03 00 17.4 -0.6
comp=Z,74nm,1.3s,mb5.5
SMF Signal de Mont 88.32 333 eP P 03 00 17.4 -0.6
SMF pmax pmax
comp=Z,37nm,1.3s,mb5.5
SMF Signal de Mont 88.32 333 eP P 03 00 17.4 -0.6
comp=Z,37nm,1.3s,mb5.5
WMOK Wichita Mounta 88.33 46 eP P 03 00 18.2 -0.1
WMOK pmax pmax
comp=Z,16nm,1.1s,mb5.2
WMOK Wichita Mounta 88.33 46 eP P 03 00 18.2 -0.1
comp=Z,16nm,1.1s,mb5.2
AVF Avril sur Loir 88.37 333 eP P 03 00 17.6 -0.7
comp=Z,114nm,1.2s,mb5.7
AVF Avril sur Loir 88.37 333 eP P 03 00 17.6 -0.7
AVF pmax pmax
comp=Z,57nm,1.2s,mb5.7
AVF Avril sur Loir 88.37 333 eP P 03 00 17.6 -0.7
comp=Z,57nm,1.2s,mb5.7
526A Mary Lane Ranc 88.39 53 ⇑P P 03 00 17.2 -1.5
baz=88
GRR Gorron 88.41 337 eP P 03 00 17.9 -0.5
comp=Z,172nm,1.2s,mb5.9
GRR Gorron 88.41 337 eP P 03 00 17.9 -0.5
GRR pmax pmax
comp=Z,86nm,1.2s,mb5.9
GRR Gorron 88.41 337 eP P 03 00 17.9 -0.5
comp=Z,86nm,1.2s,mb5.8
BNI Bardonecchia 88.59 330 eP P 03 00 18.9 -0.4
BNI pmax pmax
comp=Z,28nm,1.5s,mb5.4
BNI Bardonecchia 88.59 330 eP P 03 00 18.9 -0.5
comp=Z,28nm,1.5s,mb5.4
626A Big Bend Ranch 88.71 53 ⇓P P 03 00 19.7 -0.5
baz=88
BGF Bois d'Agland 88.75 333 eP P 03 00 19.5 -0.6
comp=Z,68nm,1.4s,mb5.5
BGF Bois d'Agland 88.75 333 eP P 03 00 19.5 -0.6
BGF pmax pmax
comp=Z,34nm,1.4s,mb5.5
BGF Bois d'Agland 88.75 333 eP P 03 00 19.5 -0.6
comp=Z,34nm,1.4s,mb5.5
428A Kincaid Ranch, 88.82 51 ⇑P P 03 00 20.9 +0.2
baz=89
MBDF Montbardon 88.82 330 eP P 03 00 19.1 -1.4
HDIL Hopedale 88.97 37 eP P 03 00 20.3 -0.9
comp=Z,25nm,0.8s,mb5.6
ORIF Oris-en-Rattie 89.01 331 eP P 03 00 20.2 -1.1
SGMF Saint Gilles 89.05 337 eP P 03 00 21.0 -0.5
comp=Z,112nm,1.2s,mb5.8
SGMF Saint Gilles 89.05 337 eP P 03 00 21.0 -0.5
SGMF pmax pmax
comp=Z,56nm,1.2s,mb5.8
SGMF Saint Gilles 89.05 337 eP P 03 00 21.0 -0.5
comp=Z,56nm,1.2s,mb5.8
TXAR Lajitas Array 89.16 53 P P 03 00 22.1 -0.2
comp=Z,4.1nm,0.8s,mb4.8,baz=308,slow=2.9,SNR=11
TXAR Lajitas Array 89.16 53 P P 03 00 22.1 -0.2
TXAR pmax pmax
comp=Z,4.0nm,0.8s
ROSF Rostrenen 89.19 338 eP P 03 00 21.6 -0.5
comp=Z,123nm,1.2s,mb5.8
ROSF Rostrenen 89.19 338 eP P 03 00 21.6 -0.5
ROSF pmax pmax
comp=Z,61nm,1.2s,mb5.8
ROSF Rostrenen 89.19 338 eP P 03 00 21.6 -0.5
comp=Z,62nm,1.2s,mb5.8
TCF Toulx Ste Croi 89.21 334 eP P 03 00 21.8 -0.4
comp=Z,47nm,1.2s,mb5.4
TCF Toulx Ste Croi 89.21 334 eP P 03 00 21.8 -0.4
TCF pmax pmax
comp=Z,23nm,1.2s,mb5.4
TCF Toulx Ste Croi 89.21 334 eP P 03 00 21.8 -0.4
comp=Z,23nm,1.2s,mb5.4
SBF Sospel 89.27 329 eP P 03 00 21.2 -1.4
VIVF Saint-Julien-l 89.53 331 eP P 03 00 23.2 -0.6
comp=Z,45nm,1.3s,mb5.3
VIVF Saint-Julien-l 89.53 331 eP P 03 00 23.2 -0.6
VIVF pmax pmax
comp=Z,22nm,1.3s,mb5.3
VIVF Saint-Julien-l 89.53 331 eP P 03 00 23.2 -0.6
comp=Z,22nm,1.3s,mb5.3
QUIF Quistinic 89.54 338 eP P 03 00 22.9 -0.8
comp=Z,99nm,1.4s,mb5.6
QUIF Quistinic 89.54 338 eP P 03 00 22.9 -0.8
QUIF pmax pmax
comp=Z,50nm,1.4s,mb5.7
QUIF Quistinic 89.54 338 eP P 03 00 22.9 -0.8
comp=Z,50nm,1.4s,mb5.7
PGF Pioggiola 89.70 328 eP P 03 00 23.2 -1.4
comp=Z,74nm,1.3s,mb5.6
PGF Pioggiola 89.70 328 eP P 03 00 23.2 -1.4
PGF pmax pmax
comp=Z,37nm,1.3s,mb5.5
PGF Pioggiola 89.70 328 eP P 03 00 23.2 -1.4
comp=Z,37nm,1.3s,mb5.5
MFF Saint Martin d 89.74 335 eP P 03 00 24.5 -0.2
comp=Z,104nm,1.1s,mb5.8
MFF Saint Martin d 89.74 335 eP P 03 00 24.5 -0.2
MFF pmax pmax
comp=Z,52nm,1.1s,mb5.8
MFF Saint Martin d 89.74 335 eP P 03 00 24.5 -0.2
comp=Z,52nm,1.1s,mb5.8
FRF La Foret Royal 89.84 330 eP P 03 00 23.8 -1.5
comp=Z,59nm,1.4s,mb5.4
FRF La Foret Royal 89.84 330 eP P 03 00 23.8 -1.5
FRF pmax pmax
comp=Z,29nm,1.4s,mb5.4
FRF La Foret Royal 89.84 330 eP P 03 00 23.8 -1.5
comp=Z,30nm,1.4s,mb5.4
SMRF Simiane la Rot 89.92 330 eP P 03 00 24.9 -0.7
CCM Cathedral Cave 89.94 39 eP P 03 00 24.8 -1.1
LMR La Mourre 90.08 329 eP P 03 00 25.1 -1.3
comp=Z,40nm,1.2s,mb5.3
LMR La Mourre 90.08 329 eP P 03 00 25.1 -1.3
LMR pmax pmax
comp=Z,20nm,1.2s,mb5.3
LMR La Mourre 90.08 329 eP P 03 00 25.1 -1.3
comp=Z,20nm,1.2s,mb5.3
RJF Les Rejaudoux 90.30 334 eP P 03 00 27.0 -0.4
comp=Z,42nm,1.1s,mb5.4
RJF Les Rejaudoux 90.30 334 eP P 03 00 27.0 -0.4
RJF pmax pmax
comp=Z,21nm,1.1s,mb5.4
RJF Les Rejaudoux 90.30 334 eP P 03 00 27.0 -0.4
comp=Z,21nm,1.1s,mb5.4
CAF Calviac 90.43 333 eP P 03 00 28.0 0.0
comp=Z,52nm,1.1s,mb5.5
CAF Calviac 90.43 333 eP P 03 00 28.0 0.0
CAF pmax pmax
comp=Z,26nm,1.1s,mb5.5
CAF Calviac 90.43 333 eP P 03 00 28.0 0.0
comp=Z,26nm,1.1s,mb5.5
LASF Ste Croix 90.50 332 eP P 03 00 27.8 -0.5
comp=Z,105nm,1.6s,mb5.6
JCT Junction City 90.76 50 eP P 03 00 29.2 -0.6
LFF La Frestale 90.89 334 eP P 03 00 30.0 -0.1
comp=Z,122nm,1.3s,mb5.8
LFF La Frestale 90.89 334 eP P 03 00 30.0 -0.1
LFF pmax pmax
comp=Z,61nm,1.3s,mb5.8
LFF La Frestale 90.89 334 eP P 03 00 30.0 -0.1
comp=Z,61nm,1.3s,mb5.8
MIAR Mount Ida 91.38 43 eP P 03 00 32.3 -0.3
MIAR pmax pmax
comp=Z,16nm,0.7s,mb5.5
MIAR Mount Ida 91.38 43 eP P 03 00 32.3 -0.3
comp=Z,16nm,0.7s,mb5.5
MTLF Montolieu 91.74 332 eP P 03 00 33.7 -0.4
comp=Z,37nm,1.2s,mb5.3
MTLF Montolieu 91.74 332 eP P 03 00 33.7 -0.4
MTLF pmax pmax
comp=Z,18nm,1.2s,mb5.3
MTLF Montolieu 91.74 332 eP P 03 00 33.7 -0.4
comp=Z,18nm,1.2s,mb5.3
PARMO Parma 91.77 39 eP P 03 00 34.9 +0.5
WCI Wyandotte Cave 92.22 36 eP P 03 00 36.3 -0.1
WCI pmax pmax
comp=Z,7.0nm,0.6s,mb5.2
WCI Wyandotte Cave 92.22 36 eP P 03 00 36.3 -0.1
comp=Z,6.6nm,0.6s,mb5.1
EPF Esparros 92.70 333 eP P 03 00 37.7 -0.8
comp=Z,27nm,1.3s,mb5.2

EPF Esparros 92.70 333 *eP* **P 03 00 37.7 -0.8**
EPF pmax pmax
comp=Z,14nm,1.3s,mb5.2
EPF Esparros 92.70 333 *eP* **P 03 00 37.7 -0.8**
comp=Z,14nm,1.3s,mb5.2
PKME Peaks-Kenny Pk 92.73 22 *eP* **P 03 00 38.4 -0.2**
comp=Z,18nm,0.8s,mb5.6
ETSF Etsaut 93.13 334 *eP* **P 03 00 40.6 +0.1**
comp=Z,39nm,1.3s,mb5.4
ETSF Etsaut 93.13 334 *eP* **P 03 00 40.6 +0.1**
ETSF pmax pmax
comp=Z,20nm,1.3s,mb5.4
ETSF Etsaut 93.13 334 *eP* **P 03 00 40.6 +0.1**
comp=Z,20nm,1.3s,mb5.4
WVT Waverly 93.15 39 *eP* **P 03 00 40.3 -0.5**
SJPF Ste Jean 93.17 334 *eP* **P 03 00 40.2 -0.5**
comp=Z,26nm,1.2s,mb5.2
SJPF Ste Jean 93.17 334 *eP* **P 03 00 40.2 -0.5**
SJPF pmax pmax
comp=Z,13nm,1.2s,mb5.2
SJPF Ste Jean 93.17 334 *eP* **P 03 00 40.2 -0.5**
comp=Z,13nm,1.2s,mb5.2
ESDC Sonseca Array 97.17 334 P **P 03 00 58.6 -0.4**
comp=Z,3.7nm,0.8s,mb4.8,baz=21,slow=4.6,SNR=5.8
ESDC PP PP 03 04 54.8 +0.4
comp=Z,1.5nm,0.9s,baz=22,slow=9.4,SNR=4.3
KMBO Kilima Mbogo 102.70 278 PP PP 03 05 38.9 +1.0
comp=Z,1.7nm,0.8s,baz=181,slow=24,SNR=4.4
MAW Mawson 120.36 206 PKP PKPdf 03 06 15.8 -0.8
comp=Z,3.4nm,0.7s,baz=8.1,slow=3.2,SNR=5.8
MAW Mawson 120.36 206 PKIKP PKPdf 03 06 15.8 -0.8
MAW pmax pmax
comp=Z,3.0nm,0.7s
LBTB Lobatse 125.50 264 *e*PKIKP PKPdf 03 06 27.9 +0.1
ROSC El Rosal 125.69 47 *e*PKPdf PKPdf 03 06 28.7 +0.1
DBIC Dimbokro 126.45 318 PKP PKPdf 03 06 29.0 -1.0
comp=Z,7.9nm,1.1s,baz=18,slow=5.8,SNR=3.1
DBIC Dimbokro 126.45 318 PKIKP PKPdf 03 06 29.0 -1.0
DBIC pmax pmax
comp=Z,8.0nm,1.1s
QSPA South Pole Qui 127.30 180 *e*PKPdf PKPdf 03 06 28.8 -0.9
BOSA Boshof 127.47 260 PKP PKPdf 03 06 30.7 -0.7
comp=Z,3.6nm,1.1s,baz=143,slow=5.1,SNR=2.2
BOSA Boshof 127.47 260 PKIKP PKPdf 03 06 30.7 -0.8
BOSA pmax pmax
comp=Z,4.0nm,1.1s
VNA1 Neumayer--Stat 143.44 196 *e*PKPdf PKPdf 03 06 55.7 -4.1
VNA1 *e* 03 07 02.4
LPAZ La Paz 145.73 60 PKPbc PKPbc 03 07 05.2 -0.6
comp=Z,7.3nm,0.9s,baz=359,slow=4.8,SNR=8.9
LPAZ La Paz 145.73 60 *e*PKPbc PKPbc 03 07 05.5 -0.4
RCBR Riachuelo 148.38 357 *e*PKPbc PKPbc 03 07 12.7 -0.8
SIV San Ignacio 150.12 50 PKP PKPdf 03 07 12.7 0.0
comp=Z,11nm,0.9s,baz=321,slow=4.4,SNR=3.0
SIV PKPbc PKPbc 03 07 17.1 -0.6
comp=Z,12nm,1.0s,baz=322,slow=2.8,SNR=7.3
LCO Las Campanas 151.14 83 *e*PKPdf PKPdf 03 07 14.7 +0.8
LCO *e*PKPbc PKPbc 03 07 19.9 +0.1
LCO *e*PKPab PKPab 03 07 27.9 +0.3
PLCA Paso Flores 154.31 107 PKPbc PKPbc 03 07 25.7 -0.7
comp=Z,2.2nm,0.8s,baz=270,slow=5.4,SNR=2.1

ISCJB ***19*** *02:49:51.5±2.1, 22°.72N±0°.08×143°.3E±0°.1, h93km±18km, mb4.5/17, Error ellipse: s-maj=21.6km s-min=13.1km az=6.9*
NEIC ***19*** *02:49:51.9±2.1, 22°.73N×143°.29E, h81km±19km, Error ellipse: s-maj=12.2km s-min=7.4km az=99.0*
IDC ***19*** *02:49:53.0±2.5, 22°.75N×143°.27E, h90km±22km, mb4.2/17, mb1 4.4/19, mb1mx4.2/28, mbtmp4.2/19, Error ellipse: s-maj=18.6km s-min=12.4km az=102.0*
ISC 19 02:49:53.3±1.9, 22°.73N±0°.08×143°.3E±0°.1, h92km±16km, n25, σ0.9 57/24, mb4.5/17, 1C, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**4.46**	**347**	P	**Pn**	**02 50 59.4**	**+0.8**
	19nm,0.3s,baz=112,slow=19,SNR=2.4						
CBIJ				S	**Sn**	**02 51 48.8**	**-0.5**
	259nm,0.3s,baz=291,slow=23,SNR=13						
MJAR	**Matsushiro Arr**	**14.45**	**343**	P	**Pn**	**02 53 12.3**	**-0.9**
	1.4nm,0.3s,baz=164,slow=9.8,SNR=5.9						
KSRS	**Korea Array**	**19.75**	**321**	P	**Pn**	**02 54 18.7**	**+0.6**
	4.5nm,0.3s,baz=146,slow=9.3,SNR=55						
SIPP	**Brgy, Tapao**	**21.92**	**262⇑**	*eP*	**P**	**02 54 47.6**	**+8.4**
SONM	**Songino Array**	**38.61**	**320**	P	**P**	**02 57 07.8**	**+0.5**
	4.3nm,0.5s,mb4.5,baz=136,slow=8.4,SNR=11						
CMAR	**Chiang Mai Arr**	**41.60**	**273**	P	**P**	**02 57 33.2**	**+0.7**
	2.2nm,0.4s,mb4.2,baz=54,slow=7.8,SNR=4.1						
WRA	**Warramunga Arr**	**43.30**	**192**	P	**P**	**02 57 45.8**	**-0.3**
	28nm,1.1s,mb4.9,baz=17,slow=8.7,SNR=5.4						
FITZ	**Fitzroy Crossi**	**44.09**	**204**	P	**P**	**02 57 52.2**	**-0.3**
	20nm,1.1s,mb4.8,baz=41,slow=11,SNR=3.3						
ASAR	**Alice Springs**	**47.01**	**192**	P	**P**	**02 58 15.2**	**-0.1**
	12nm,0.8s,mb4.7,baz=9.6,slow=6.8,SNR=3.1						
ZALV	**Zalesovo Beam**	**53.46**	**321**	P	**P**	**02 59 03.8**	**0.0**
	2.8nm,0.3s,mb4.7,baz=110,slow=7.3,SNR=6.8						
MKAR	**Makanchi Array**	**54.07**	**312**	P	**P**	**02 59 08.4**	**+0.1**
	3.5nm,0.7s,mb4.5,baz=93,slow=8.8,SNR=4.3						
STKA	**Stephens Creek**	**54.32**	**182**	P	**P**	**02 59 09.8**	**-0.4**
	10nm,0.9s,mb4.9,baz=355,slow=11,SNR=3.5						
STKA	**Stephens Creek**	**54.32**	**182**	P	**P**	**02 59 09.8**	**-0.4**
KDAK	**Kodiak Island**	**57.31**	**35**	P	**P**	**02 59 31.3**	**+0.1**
	4.2nm,0.5s,mb4.7,baz=307,slow=5.1,SNR=7.3						
ILAR	**Eielson Array**	**61.09**	**27**	P	**P**	**02 59 56.6**	**-0.6**
	3.6nm,0.8s,mb4.5,baz=260,slow=5.5,SNR=7.8						
BVAR	**Borovoye Array**	**61.95**	**319**	P	**P**	**03 00 03.3**	**0.0**
	5.3nm,0.5s,mb4.8,baz=90,slow=6.8,SNR=11						
INK	**Inuvik**	**66.59**	**24**	P	**P**	**03 00 33.3**	**0.0**
	3.5nm,0.7s,mb4.3,baz=306,slow=5.1,SNR=10						
YKA	**Yellowknife Ar**	**75.51**	**28**	P	**P**	**03 01 27.3**	**+0.1**
	2.7nm,0.3s,mb4.4,baz=292,slow=5.9,SNR=19						
YKA	**Yellowknife Ar**	**75.51**	**28**	P	**P**	**03 01 27.3**	**+0.1**
ARCES	**ARCESS Array B**	**77.98**	**341**	P	**P**	**03 01 40.9**	**-0.1**
	1.1nm,0.5s,mb3.8,baz=79,slow=8.7,SNR=5.0						
FINES	**FINESS Array B**	**82.29**	**334**	P	**P**	**03 02 02.9**	**-1.4**
	2.6nm,0.3s,mb4.5,baz=59,slow=5.2,SNR=15						
NVAR	**Mina Array Bea**	**82.44**	**52**	P	**P**	**03 02 06.7**	**+1.1**
	1.7nm,0.7s,mb4.0,baz=272,slow=5.3,SNR=4.8						
PDAR	**Pinedale Array**	**85.61**	**48**	P	**P**	**03 02 27.0**	**+0.5**
	0.6nm,0.7s,mb3.6,baz=240,slow=3.0,SNR=3.3						
PLCA	**Paso Flores**	**146.36**	**130**	PKPbc	PKPbc	03 09 23.6	+0.1
	8.3nm,1.2s,baz=225,slow=3.3,SNR=4.5						
LPAZ	**La Paz**	**149.75**	**83**	PKPbc	PKPbc	03 09 34.1	+0.9
	3.6nm,0.8s,baz=352,slow=6.3,SNR=5.7						

DDA ***19*** *03:15:50.7, 35°.84N×27°.79E, h54km±7km, Md3.1*
ISK ***19*** *03:15:50.2, 35°.85N×27°.74E, h21km, ML2.9*
ISCJB ***19*** *03:15:51.7±0.6, 35°.87N±0°.04×27°.81E±0°.04, h57km±9km, Error ellipse: s-maj=7.2km s-min=4.0km az=140.4*
ATH ***19*** *03:15:52.6, 35°.96N×27°.61E, h35km±2km, MD3.1/6*
CSEM ***19*** *03:15:52.1±0.2, 35°.88N×27°.80E, h30km, MD3.1, Error ellipse: s-maj=6.2km s-min=3.8km az=145.0*
NEIC ***19*** *03:15:52.6, 35°.96N×27°.61E, h35km, MD3.1(ATH), After ATH.*
ISC 19 03:15:52.4±0.5, 35°.86N±0°.04×27°.81E±0°.04, h52km±11km, n51, σ0.9 90/83, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.43**	**36**	*e*Pb	**Pn**	**03 16 03.3**	**+0.2**
ARG				*e*Sb	**Sn**	**03 16 11.8**	**+1.1**
ARG	**Arkhangelos**	**0.43**	**36**	*e*PB	**Pn**	**03 16 03.3**	**+0.2**
ARG				*e*SB	**Sn**	**03 16 11.8**	**+1.1**
ARG	**Arkhangelos**	**0.43**	**36**	*e*Pb	**Pn**	**03 16 03.3**	**+0.2**
ARG				*e*Sb	**Sn**	**03 16 11.8**	**+1.1**
KARP	**Karpathos**	**0.62**	**239**	*e*Pn	**Pn**	**03 16 04.3**	**-0.9**
KARP				*e*Sn	**Sn**	**03 16 13.5**	**-1.0**
KARP	**Karpathos**	**0.62**	**239**	*e*PN	**Pn**	**03 16 04.2**	**-1.0**
KARP				*e*SN	**Sn**	**03 16 13.5**	**-1.0**
KARP	**Karpathos**	**0.62**	**239**	*e*Pn	**Pn**	**03 16 04.3**	**-0.9**
KARP				*e*Sn	**Sn**	**03 16 13.5**	**-1.0**
DAT	**Datca**	**0.88**	**348**	*e*PG	**Pn**	**03 16 08.3**	**-0.3**
DAT				*e*SG	**Sn**	**03 16 20.6**	**+0.1**
DAT	**Datca**	**0.88**	**348**	*e*Pg	**Pn**	**03 16 08.3**	**-0.3**
DAT				*e*Sg	**Sn**	**03 16 20.6**	**+0.1**
TURN	**Turunc**	**1.19**	**32**	*i* P	**Pn**	**03 16 11.2**	**-1.6**
TURN				*i* S	**Sn**	**03 16 24.8**	**-3.0**
TURN	**Turunc**	**1.19**	**32**	*i* P	**Pn**	**03 16 11.2**	**-1.5**
TURN				*i* S	**Sn**	**03 16 24.8**	**-3.1**
BDRM	**Kayabasi**	**1.23**	**346**	*i* P	**Pn**	**03 16 12.9**	**-0.5**
BDRM				*i* S	**Sn**	**03 16 29.1**	**+0.1**

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BDRM	**Kayabasi**	**1.23**	**346**	*i* P	**Pn**	**03 16 12.9**	**-0.4**
BDRM				*i* S	**Sn**	**03 16 29.0**	**+0.1**
BODT	**Bodrum**	**1.26**	**341**	*e*PN	**Pn**	**03 16 12.9**	**-0.8**
BODT				*e*SN	**Sn**	**03 16 29.8**	**+0.2**
BODT	**Bodrum**	**1.26**	**341**	*e*Pn	**Pn**	**03 16 12.9**	**-0.8**
BODT				*e*Sn	**Sn**	**03 16 29.8**	**+0.2**
YER	**Yerkesik**	**1.32**	**16**	*e*PN	**Pn**	**03 16 14.5**	**0.0**
YER	**Yerkesik**	**1.32**	**16**	*e*Pn	**Pn**	**03 16 14.5**	**0.0**
MLSB	**Milas**	**1.43**	**359**	*e*PN	**Pn**	**03 16 15.7**	**-0.2**
MLSB	**Milas**	**1.43**	**359**	*e*Pn	**Pn**	**03 16 15.7**	**-0.3**
AKAS	**Kas**	**1.50**	**75**	*i* P	**Pn**	**03 16 17.0**	**+0.1**
AKAS				*i* S	**Sn**	**03 16 35.6**	**+0.3**
AKAS	**Kas**	**1.50**	**75**	*i* P	**Pn**	**03 16 17.0**	**+0.1**
AKAS				*i* S	**Sn**	**03 16 35.7**	**+0.4**
ZKR	**Zakros**	**1.50**	**241**	*e*Pb	**Pn**	**03 16 17.6**	**+0.6**
ZKR				*e*Sn	**Sn**	**03 16 36.6**	**+1.2**
ZKR	**Zakros**	**1.50**	**241**	*e*PB	**Pn**	**03 16 17.6**	**+0.6**
ZKR				*e*SN	**Sn**	**03 16 36.6**	**+1.2**
AYDN	**Tasoluk**	**1.79**	**2**	*i* P	**Pn**	**03 16 21.5**	**+0.6**
AYDN				*i* S	**Sn**	**03 16 41.4**	**-1.2**
AYDN	**Tasoluk**	**1.79**	**2**	*i* P	**Pn**	**03 16 21.5**	**+0.6**
AYDN				*i* S	**Sn**	**03 16 41.3**	**-1.2**
GLHS	**Glhisar (BURDU**	**1.87**	**46**	*e*PN	**Pn**	**03 16 22.4**	**+0.4**
GLHS	**Glhisar (BURDU**	**1.87**	**46**	*e*Pn	**Pn**	**03 16 22.4**	**+0.4**
NPS	**Neapolis**	**1.89**	**252**	*e*Pn	**Pn**	**03 16 22.3**	**0.0**
NPS				*e*Sn	**Sn**	**03 16 43.9**	**-1.1**
NPS	**Neapolis**	**1.89**	**252**	*e*PN	**Pn**	**03 16 22.3**	**0.0**
NPS				*e*SN	**Sn**	**03 16 43.9**	**-1.1**
NPS	**Neapolis**	**1.89**	**252**	*e*Pn	**Pn**	**03 16 22.3**	**0.0**
NPS				*e*Sn	**Sn**	**03 16 43.9**	**-1.1**
ELL	**Elmali**	**1.91**	**62**	*e*PN	**Pn**	**03 16 23.3**	**+0.8**
ELL	**Elmali**	**1.91**	**62**	*e*Pn	**Pn**	**03 16 23.3**	**+0.8**
GOLH	**Golhisar**	**1.96**	**45**	*i* P	**Pn**	**03 16 24.7**	**+1.5**
GOLH				*i* S	**Sn**	**03 16 50.4**	**+3.7**
GOLH	**Golhisar**	**1.96**	**45**	*i* P	**Pn**	**03 16 24.7**	**+1.5**
GOLH				*i* S	**Sn**	**03 16 50.4**	**+3.7**
SMG	**Samos**	**2.00**	**337**	*e*Pn	**Pn**	**03 16 24.0**	**+0.2**
SMG	**Samos**	**2.00**	**337**	*e*PN	**Pn**	**03 16 24.0**	**+0.2**
SMG	**Samos**	**2.00**	**337**	*e*Pn	**Pn**	**03 16 24.0**	**+0.2**
LAST	**Lasithi**	**2.03**	**250**	*e*Pn	**Pn**	**03 16 24.8**	**+0.6**
LAST				*e*Sn	**Sn**	**03 16 48.9**	**+0.6**
LAST	**Lasithi**	**2.03**	**250**	*e*PN	**Pn**	**03 16 24.8**	**+0.6**
LAST				*e*SN	**Sn**	**03 16 48.9**	**+0.6**
LAST	**Lasithi**	**2.03**	**250**	*e*Pn	**Pn**	**03 16 24.8**	**+0.6**
LAST				*e*Sn	**Sn**	**03 16 48.9**	**+0.6**
APE	**Apeiranthos**	**2.20**	**304**	*e*PN	**Pn**	**03 16 25.6**	**-0.9**
APE	**Apeiranthos**	**2.20**	**304**	*e*Pn	**Pn**	**03 16 26.1**	**-0.3**
APE	**Apeiranthos**	**2.20**	**304**	*e*PN	**Pn**	**03 16 26.1**	**-0.3**
APE	**Apeiranthos**	**2.20**	**304**	*e*Pn	**Pn**	**03 16 26.1**	**-0.3**
KULA	**Kula-Manisa**	**2.73**	**14**	*e*PN	**Pn**	**03 16 34.4**	**+0.6**
KULA	**Kula-Manisa**	**2.73**	**14**	*e*Pn	**Pn**	**03 16 34.4**	**+0.7**
KHAL	**Karahalli**	**2.84**	**28**	*i* P	**Pn**	**03 16 35.6**	**+0.3**
KHAL				*i* S	**Sn**	**03 17 09.1**	**+0.9**
KHAL	**Karahalli**	**2.84**	**28**	*i* P	**Pn**	**03 16 35.6**	**+0.4**
KHAL				*i* S	**Sn**	**03 17 09.1**	**+0.9**
KARN	**Karanos**	**3.21**	**263**	*e*PN	**Pn**	**03 16 40.7**	**+0.4**
KARN	**Karanos**	**3.21**	**263**	*e*Pn	**Pn**	**03 16 40.7**	**+0.4**
GAZI	**Gazipasa**	**3.67**	**83**	*i* P	**Pn**	**03 16 45.2**	**-1.4**
GAZI				*i* S	**Sn**	**03 17 25.6**	**-2.9**
GAZI	**Gazipasa**	**3.67**	**83**	*i* P	**Pn**	**03 16 45.2**	**-1.4**
GAZI				*i* S	**Sn**	**03 17 25.6**	**-2.9**

NEIC ***19*** *03:16:00.0, 15°.58N×97°.23W, h25km, MD3.6(MEX), After MEX.*
MEX 19 03:15:59.2±0.5, 15°.63N×97°.21W, h5km±10km, MD3.6, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.07**	**82**	*i* P	Pg	03 16 17.1	-2.7
HUIG				*e*S	Sg	03 16 30.7	-3.0
HUIG	**Huatulco**	**1.07**	**82**	*i* P	Pg	03 16 17.1	-2.7
HUIG				*e*S	Sg	03 16 30.7	-3.0
PNIG	**Pinotepa**	**1.16**	**311**	*i* P	Pg	03 16 18.5	-3.1
PNIG				*e*S	Sg	03 16 34.6	-2.1
PNIG	**Pinotepa**	**1.16**	**311**	*i* P	Pg	03 16 18.5	-3.1
PNIG				*i* S	Sg	03 16 33.3	-3.4
VHO	**Vista Hermosa**	**1.51**	**18**	*i* P	Pn	03 16 23.1	-3.8
VHO				*e*S	Sn	03 16 43.3	-3.7
VHO	**Vista Hermosa**	**1.51**	**18**	*i* P	Pn	03 16 23.1	-3.8
VHO				*i* S	Sn	03 16 42.5	-4.5
OXX	**Oaxaca**	**1.52**	**18**	*i* P	Pn	03 16 25.3	-1.8
OXX				*e*S	Sn	03 16 42.1	-5.2
OXX	**Oaxaca**	**1.52**	**18**	*i* P	Pn	03 16 24.3	-2.8
OXX				*e*S	Sn	03 16 42.1	-5.2

JMA 19 03:18:34.3±0.2, 39°.74N×144°.39E, h44km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.96**	**277**	P	Pn	03 19 05.9	+1.0
JTH				S	Sn	03 19 29.1	+0.8
MIYJ	**Miyakonagasawa**	**1.99**	**266**	P	Pn	03 19 07.0	+1.6
MIYJ				S	Sn	03 19 30.4	+1.3
OFUJ	**Ofunato**	**2.21**	**254**	P	Pn	03 19 09.4	+1.0
OFUJ				S	Sn	03 19 35.6	+1.1
JANG	**Nango**	**2.29**	**287**	P	Pn	03 19 10.6	+1.0
JANG				*e*S	Sn	03 19 37.6	+1.0
JOM	**Ohasama**	**2.41**	**265**	P	Pn	03 19 12.9	+1.7
JOM				*e*S	Sn	03 19 41.2	+1.8
JMK	**Ichinoseki**	**2.58**	**253**	P	Pn	03 19 14.6	+1.1
JMK				S	Sn	03 19 44.7	+1.0
JNBK	**Urakawa-nobuka**	**2.82**	**335**	P	Pn	03 19 18.7	+1.8
JNBK				S	Sn	03 19 52.5	+2.9
JCH	**Churui**	**2.98**	**345**	P	Pn	03 19 19.3	+0.4
JCH				*e*S	Sn	03 19 53.3	0.0
JOT	**Ohata**	**3.03**	**304**	P	Pn	03 19 21.7	+2.0
JOT				*e*S	Sn	03 19 56.1	+1.4
JYK	**Kaneyama**	**3.23**	**257**	P	Pn	03 19 24.7	+2.2
JYK				*e*S	Sn	03 20 02.8	+3.1
JKB	**Kayabe**	**3.33**	**311**	P	Pn	03 19 26.3	+2.5
JKB				*e*S	Sn	03 20 03.8	+1.7
NEM2	**Nemuro 2**	**3.76**	**15**	P	Pn	03 19 28.1	-1.6
NEM2				*e*S	Sn	03 20 09.2	-3.5
JTKR	**Abashiri--Toko**	**4.24**	**355**	P	Pn	03 19 37.1	+0.8
JTKR				S	Sn	03 20 23.9	-0.7
JOSM	**Okushiri--Mats**	**4.40**	**304**	P	Pn	03 19 40.4	+1.9

JMA ***19*** *03:21:06.8±0.2, 37°.58N×142°.44E, h14km±3km, M3.8*
ISCJB ***19*** *03:21:07.1±1.3, 37°.53N±0°.05×142°.46E±0°.06, h16km±9km, mb3.7/3, Error ellipse: s-maj=8.9km s-min=8.0km az=141.8*
IDC ***19*** *03:21:07.9±1.6, 37°.31N×142°.72E, h0km, mb3.8/3, mb1 3.8/6, mb1mx3.5/26, mbtmp3.8/6, ML3.4/3, Error ellipse: s-maj=34.6km s-min=20.9km az=83.0*
ISC 19 03:21:06.8±1.2, 37°.58N±0°.05×142°.37E±0°.06, h0km±6km, n19, σ0.8 80/30, mb3.8/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**1.19**	**317**	P	**Pg**	**03 21 29.2**	**-0.5**
JFK	**Kawauchi**	**1.21**	**260**	P	**Pg**	**03 21 30.2**	**+0.1**
JFK				*e*S	**Sg**	**03 21 46.2**	**+0.4**
JMM	**Marumori**	**1.29**	**283**	P	**Pg**	**03 21 30.7**	**-0.8**
JMM				*e*S	**Sg**	**03 21 48.4**	**+0.2**
ONAJ	**Iwakimizuishiy**	**1.34**	**250**	P	**Pg**	**03 21 32.0**	**-0.6**
ONAJ				*e*S	**Sg**	**03 21 50.2**	**+0.2**
JOU	**Okura**	**1.56**	**301**	P	**Pn**	**03 21 35.6**	**-0.2**
JOU				*e*S	**Sn**	**03 21 57.0**	**+0.2**
JFT	**Otama**	**1.62**	**268**	P	**Pn**	**03 21 36.5**	**-0.1**
JFT				*e*S	**Sn**	**03 21 57.8**	**-0.4**
JMK	**Ichinoseki**	**1.64**	**327**	P	**Pn**	**03 21 36.1**	**-0.9**
JYS	**Shiratake**	**1.94**	**290**	P	**Pn**	**03 21 40.9**	**0.0**
JYS				*e*S	**Sn**	**03 22 07.1**	**+1.2**
JOM	**Ohasama**	**2.07**	**336**	P	**Pn**	**03 21 41.8**	**-1.0**
JYK	**Kaneyama**	**2.07**	**311**	P	**Pn**	**03 21 42.8**	**-0.1**
JFY	**Yanaizu**	**2.13**	**266**	P	**Pn**	**03 21 44.1**	**+0.5**
JFY				*e*S	**Sn**	**03 22 10.3**	**-0.4**
JAG	**Ashikaga**	**2.61**	**245**	P	**Pn**	**03 21 50.2**	**0.0**
MJAR	**Matsushiro Arr**	**3.49**	**254**	Pn	**Pn**	**03 22 04.6**	**+2.3**
	1.5nm,0.3s,baz=77,slow=14,SNR=12						
MJAR				Sn	**Sn**	**03 22 50.3**	**+6.1**
	2.6nm,0.3s,baz=79,slow=30,SNR=5.3						
MAT	**Matsushiro**	**3.49**	**254**	P	**Pn**	**03 22 03.2**	**+0.9**
MAT				S	**Sn**	**03 22 42.7**	**-1.6**
JHJ	**Hachijo jima 2**	**4.93**	**206**	Pn	**Pn**	**03 22 22.5**	**+0.4**
	12nm,0.3s,baz=104,slow=22,SNR=7.7						
JHJ				Sn	**Sn**	**03 23 13.3**	**-6.5**
	13nm,0.3s,baz=107,slow=19,SNR=3.1						
ASAJ	**Asahikawa**	**6.53**	**1**	Pn	**Pn**	**03 22 47.4**	**+3.2**
	0.8nm,0.3s,baz=230,slow=16,SNR=4.4						
ASAJ				Sn	**Sn**	**03 24 09.2**	**+10**
	0.1nm,0.3s,baz=73,slow=19,SNR=2.5						
SONM	**Songino Array**	**28.12**	**303**	P	**P**	**03 27 05.7**	**+5.4**
	0.2nm,0.3s,mb3.4,baz=92,slow=7.2,SNR=2.5						
WRA	**Warramunga Arr**	**57.71**	**189**	P	**P**	**03 30 58.6**	**-0.7**
	0.7nm,0.4s,mb4.0,baz=7.4,slow=7.1,SNR=9.3						
ASAR	**Alice Springs**	**61.44**	**189**	P	**P**	**03 31 24.6**	**-0.2**
	0.6nm,0.7s,mb3.8,baz=8.1,slow=6.6,SNR=5.9						

IDC ***19*** *03:21:55.9±2.0, 18°.34S×69°.68W, h97km±20km, mb3.6/3, mb1 3.7/8, mb1mx3.5/19, mbtmp3.6/8, Error ellipse: s-maj=28.9km s-min=16.3km az=95.0*
NEIC ***19*** *03:21:56.6±1.1, 18°.30S×69°.68W, h107km±12km, mb4.0/4, Error ellipse: s-maj=21.1km s-min=10.6km az=71.0*
ISCJB ***19*** *03:21:57.1±0.6, 18°.28S±0°.05×69°.54W±0°.10, h127km±6km, mb4.0/4, Error ellipse: s-maj=15.7km s-min=6.8km az=17.1*
GUC ***19*** *03:21:58.0±0.5, 18°.26S×69°.37W, h90km, ML3.8*
ISC 19 03:21:58.2±0.6, 18°.30S±0°.05×69°.51W±0°.10, h123km±6km, n25, σ1.9 24/25, mb4.0/4, 2C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**1.42**	**204⇑**	*i* P	**Pn**	**03 22 24.3**	**-0.7**
PSGC				*e*S	**Sn**	**03 22 44.4**	**-0.9**
PSGC				AML	AML	03 22 45.9	
	comp=N,1μm,0.3s						
HMBC	**Humberston**	**2.00**	**190⇑**	*i* P	**Pn**	**03 22 32.0**	**+0.1**
HMBC				*e*S	**Sn**	**03 22 57.7**	**0.0**
HMBC				AML	AML	03 23 08.2	
	comp=N,664nm,0.6s						
LPAZ	**La Paz**	**2.39**	**34**	P	**Pn**	**03 22 37.7**	**+0.9**
	comp=N,21nm,0.3s,baz=227,slow=7.0,SNR=940						
LPAZ				S	**Sn**	**03 23 07.1**	**+0.8**
	comp=N,4.2nm,0.3s,baz=50,slow=16,SNR=3.5						
LPAZ	**La Paz**	**2.39**	**34**	P	**Pn**	**03 22 37.7**	**+0.9**
LPAZ				S	**Sn**	**03 23 07.1**	**+0.8**
PB01	**Plate Boundary**	**2.73**	**180⇓**	*i* P	**Pn**	**03 22 41.7**	**+0.6**
PB01				*i* S	**Sn**	**03 23 14.8**	**+0.6**
PB01				AML	AML	03 23 17.4	
	comp=N,290nm,0.4s						
PB04	**Plate Boundary**	**3.95**	**180**	*e*P	**Pn**	**03 22 58.9**	**+1.8**
PB04				AML	AML	03 24 10.7	
	comp=N,186nm,0.5s						
SIV	**San Ignacio**	**8.38**	**75**	P	**Pn**	**03 23 55.1**	**-1.9**
	comp=N,1.5nm,0.3s,baz=269,slow=12,SNR=43						
SIV				S	**Sn**	**03 25 25.1**	**-4.8**
	comp=N,0.6nm,0.3s,baz=353,slow=23,SNR=7.0						
NNA	**Nana**	**9.46**	**311**	P	**Pn**	**03 24 07.6**	**-4.0**
	comp=N,1.6nm,0.3s,baz=117,slow=6.8,SNR=3.5						
NNA	**Nana**	**9.46**	**311**	*e*Pn	**Pn**	**03 24 07.4**	**-4.1**
CFAA	**Coronel Fontan**	**13.30**	**175**	P	**Pn**	**03 24 59.9**	**-2.3**
	comp=N,0.1nm,0.3s,baz=350,slow=16,SNR=8.4						
CPUP	**Villa Florida**	**13.81**	**128**	P	**Pn**	**03 25 07.7**	**-1.1**
	comp=N,0.2nm,0.3s,baz=290,slow=11,SNR=3.8						
OTAV	**Otavalo**	**20.41**	**334**	*e*P	**P**	**03 26 26.3**	**+0.5**
	comp=N,3.7nm,0.8s						
TRQA	**Tornquist**	**20.76**	**163**	*e*P	**P**	**03 26 30.8**	**+1.6**
	comp=N,9.0nm,0.9s						
PLCA	**Paso Flores**	**22.38**	**182**	P	**P**	**03 26 44.7**	**-1.7**
	comp=N,3.1nm,1.0s,mb3.6,baz=2.0,slow=12,SNR=2.3						
PLCA	**Paso Flores**	**22.38**	**182**	*e*P	**P**	**03 26 47.0**	**+0.6**
	comp=N,7.5nm,1.2s,mb3.9						
WVT	**Waverly**	**56.84**	**342**	*e*P	**P**	**03 31 28.2**	**-1.7**
	comp=N,2.1nm,0.6s,mb4.3						
QSPA	**South Pole Qui**	**71.88**	**180**	P	**P**	**03 33 09.6**	**+2.3**
	comp=N,1.6nm,1.0s,mb3.8,ba

BVAR	**Borovoye Array**	**66.02**	**320**	P		**P**	**03 40 29.8**	**+0.4**
	2.3nm,0.7s,mb3.9,baz=81,slow=11,SNR=5.6							
ARCES	**ARCESS Array B**	**82.09**	**342**	P		**P**	**03 42 01.9**	**0.0**
	1.8nm,0.9s,mb3.7,baz=38,slow=8.0,SNR=2.8							
NVAR	**Mina Array Bea**	**83.21**	**52**	P		**P**	**03 42 09.2**	**+0.9**
	1.8nm,0.6s,mb4.0,baz=269,slow=5.4,SNR=12							
FINES	**FINESS Array B**	**86.46**	**335**	P		**P**	**03 42 21.9**	**-2.1**
	0.4nm,0.3s,mb3.6,baz=72,slow=4.5,SNR=10							
FINES				pP		pP	03 43 23.9	+2.6
	3.3nm,1.1s,baz=43,slow=3.9,SNR=2.2							
FINES	**FINESS Array B**	**86.46**	**335**	P		**P**	**03 42 21.9**	**-2.1**
FINES				pP		pP	03 43 23.9	+2.6
PDAR	**Pinedale Array**	**87.84**	**45**	P		**P**	**03 42 30.7**	**-0.2**
	0.2nm,0.5s,mb3.2,baz=312,slow=3.3,SNR=3.4							
LPAZ	**La Paz**	**148.01**	**90**	PKPbc		PKPbc	03 49 27.6	+1.0
	1.0nm,0.5s,baz=297,slow=4.5,SNR=12							

*ISK **19** 03:30:12.2, 39°.24N×25°.99E, h6km, MD3.2*
*CSEM **19** 03:30:14.4±0.2, 39°.26N×26°.18E, h5km, ML2.8/5, Error ellipse: s-maj=4.2km s-min=2.9km az=79.0*
*ISCJB **19** 03:30:14.4±0.4, 39°.27N±0°.02×26°.18E±0°.03, h5km±3km, Error ellipse: s-maj=4.3km s-min=2.9km az=155.3*
*DDA **19** 03:30:14.4, 39°.27N×26°.21E, h8km±4km, Md3.1*
*THE **19** 03:30:15.0, 39°.26N×26°.20E, h6km, ML2.8/5, Error ellipse: s-maj=1.0km s-min=0.5km az=150.0*
*ATH **19** 03:30:15.0, 39°.27N×26°.18E, h5km, MD2.8/4*
ISC 19 03:30:14.9±0.4, 39°.27N±0°.02×26°.19E±0°.03, h6km±3km, n67, σ0°.92/98, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.07**	**113**	*e*PG	**Pg**	**03 30 16.4**	**-0.1**
PRK				*e*SG	**Sg**	**03 30 17.9**	**+0.2**
PRK	**Paraskevi**	**0.07**	**113**	P	**Pg**	**03 30 16.4**	**-0.1**
PRK				S	**Sg**	**03 30 17.9**	**+0.2**
PRK	**Paraskevi**	**0.07**	**113**	P	**Pg**	**03 30 16.4**	**-0.1**
PRK				S	**Sg**	**03 30 17.9**	**+0.2**
SIGR	**SIGRI**	**0.27**	**257**	P	**Pg**	**03 30 20.2**	**0.0**
SIGR				S	**Sg**	**03 30 24.4**	**+0.7**
SIGR	**SIGRI**	**0.27**	**257**	P	**Pg**	**03 30 20.2**	**0.0**
SIGR				S	**Sg**	**03 30 24.4**	**+0.7**
AYVA	**Ayvalik**	**0.39**	**84**	*i* P	**Pg**	**03 30 22.2**	**-0.2**
AYVA				*i* S	**Sg**	**03 30 28.2**	**+0.7**
AYVA	**Ayvalik**	**0.39**	**84**	*i* P	**Pg**	**03 30 22.2**	**-0.2**
AYVA				*i* S	**Sg**	**03 30 28.2**	**+0.7**
EZN	**Ezine**	**0.56**	**10**	*e*PG	**Pg**	**03 30 25.1**	**-0.7**
EZN				*e*SG	**Sg**	**03 30 33.9**	**+0.8**
EZN	**Ezine**	**0.56**	**10**	*e*Pg	**Pg**	**03 30 25.1**	**-0.7**
EZN				*e*Sg	**Sg**	**03 30 33.9**	**+0.8**
BOZC	**Bozcaada**	**0.58**	**349**	*i* P	**Pg**	**03 30 25.9**	**-0.2**
BOZC				*i* S	**Sg**	**03 30 36.3**	**+2.6**
CHOS	**Chios island**	**0.89**	**187**	*e*PG	**Pg**	**03 30 31.9**	**-0.1**
CHOS				*e*SB	**Sg**	**03 30 44.8**	**+1.3**
CHOS	**Chios island**	**0.89**	**187**	P	**Pg**	**03 30 31.5**	**-0.5**
CHOS				S	**Sg**	**03 30 44.9**	**+1.4**
CHOS	**Chios island**	**0.89**	**187**	P	**Pg**	**03 30 31.5**	**-0.5**
CHOS	**Chios island**	**0.89**	**187**	*e*Pg	**Pg**	**03 30 31.9**	**-0.1**
CHOS				*e*Sb	**Sg**	**03 30 44.8**	**+1.3**
GADA	**Gvkgeada**	**0.95**	**346**	*e*PG	**Pg**	**03 30 30.3**	**-2.8**
GADA				*e*SG	**Sg**	**03 30 45.1**	**-0.3**
GADA	**Gvkgeada**	**0.95**	**346**	*e*Pg	**Pg**	**03 30 30.3**	**-2.8**
GADA				*e*Sg	**Sg**	**03 30 45.1**	**-0.3**
URLA	**Izmir**	**0.96**	**161**	*i* P	**Pg**	**03 30 31.7**	**-1.7**
URLA				*i* S	**Sg**	**03 30 45.9**	**0.0**
URLA	**Izmir**	**0.96**	**161**	*i* P	**Pg**	**03 30 31.7**	**-1.7**
URLA				*i* S	**Sg**	**03 30 45.9**	**0.0**
LIA	**Limnos Island**	**1.00**	**309**	*e*PB	**Pg**	**03 30 34.1**	**0.0**
LIA	**Limnos Island**	**1.00**	**309**	P	**Pg**	**03 30 34.0**	**-0.1**
LIA				S	**Sg**	**03 30 48.6**	**+1.5**
LIA	**Limnos Island**	**1.00**	**309**	P	**Pg**	**03 30 34.0**	**-0.1**
LIA				S	**Sg**	**03 30 48.6**	**+1.5**
BLCB	**Balcova**	**1.11**	**143**	*e*PN	**Pg**	**03 30 35.3**	**-0.8**
BLCB	**Balcova**	**1.11**	**143**	P	**Pg**	**03 30 35.0**	**-1.1**
BLCB	**Balcova**	**1.11**	**143**	P	**Pg**	**03 30 35.0**	**-1.1**
BLCB	**Balcova**	**1.11**	**143**	*e*Pn	**Pg**	**03 30 35.3**	**-0.8**
GELI	**Tayfur-Gelibol**	**1.15**	**11**	*e*PN	**Pg**	**03 30 36.4**	**-0.5**
GELI	**Tayfur-Gelibol**	**1.15**	**11**	*e*Pn	**Pg**	**03 30 36.4**	**-0.5**
LPK	**Lapseki**	**1.18**	**21**	*e*PN	**Pn**	**03 30 37.0**	**-1.0**
LPK	**Lapseki**	**1.18**	**21**	*e*Pn	**Pn**	**03 30 37.0**	**-1.0**
BALY	**Balya**	**1.20**	**67**	*i* P	**Pg**	**03 30 36.8**	**-1.1**
BALY				*i* S	**Sg**	**03 30 53.8**	**+0.4**
BALY	**Balya**	**1.20**	**67**	*i* P	**Pg**	**03 30 36.8**	**-1.1**
BALY				*i* S	**Sg**	**03 30 53.8**	**+0.4**
KDAG	**Bornova**	**1.21**	**136**	*i* P	**Pg**	**03 30 35.8**	**-2.3**
KDAG				*i* S	**Sg**	**03 30 54.7**	**+1.0**
KDAG	**Bornova**	**1.21**	**136**	*i* P	**Pg**	**03 30 35.8**	**-2.2**
KDAG				*i* S	**Sg**	**03 30 54.7**	**+1.0**
IZM	**Izmir**	**1.21**	**136**	*e*PN	**Pn**	**03 30 37.5**	**-0.9**
AKS	**Akhisar**	**1.32**	**107**	*e*PN	**Pn**	**03 30 39.9**	**0.0**
AKS	**Akhisar**	**1.32**	**107**	*e*Pn	**Pn**	**03 30 39.9**	**0.0**
AKHS	**Akhisar**	**1.32**	**107**	*i* P	**Pn**	**03 30 39.9**	**0.0**
AKHS				*i* S	**Sb**	**03 30 57.3**	**+0.1**
AKHS	**Akhisar**	**1.32**	**107**	*i* P	**Pn**	**03 30 39.8**	**-0.1**
AKHS				*i* S	**Sb**	**03 30 57.3**	**0.0**
GONE	**Gonen-Balikesi**	**1.39**	**56**	*e*PN	**Pn**	**03 30 41.0**	**+0.2**
GONE	**Gonen-Balikesi**	**1.39**	**56**	*e*Pn	**Pn**	**03 30 41.1**	**+0.3**
KRBG	**Karabiga-Canak**	**1.41**	**37**	*e*PN	**Pn**	**03 30 40.9**	**-0.2**
KRBG	**Karabiga-Canak**	**1.41**	**37**	*e*Pn	**Pn**	**03 30 40.9**	**-0.2**
ERIK	**Erikli-Kesan**	**1.42**	**10**	*e*PN	**Pn**	**03 30 39.8**	**-1.4**
ERIK	**Erikli-Kesan**	**1.42**	**10**	*e*Pn	**Pn**	**03 30 39.8**	**-1.4**
ENEZ	**Enez**	**1.46**	**359**	*e*PN	**Pn**	**03 30 40.0**	**-1.9**
ENEZ	**Enez**	**1.46**	**359**	*e*Pn	**Pn**	**03 30 40.0**	**-1.8**
RKY	**Sarkoy-Tekirda**	**1.60**	**28**	*e*PN	**Pn**	**03 30 43.7**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.60**	**28**	*e*Pn	**Pn**	**03 30 43.7**	**-0.1**
SART	**Tekirdag**	**1.61**	**28**	*i* P	**Pn**	**03 30 44.3**	**+0.5**
SART				*i* S	**Sn**	**03 31 05.6**	**+0.8**
SART	**Tekirdag**	**1.61**	**28**	*i* P	**Pn**	**03 30 44.3**	**+0.5**
SART				*i* S	**Sn**	**03 31 05.6**	**+0.8**
ALN	**Alexandroupoli**	**1.63**	**356**	P	**Pn**	**03 30 43.5**	**-0.6**
ALN				S	**Sn**	**03 31 04.9**	**-0.5**
ALN	**Alexandroupoli**	**1.63**	**356**	P	**Pn**	**03 30 43.5**	**-0.6**
ALN				S	**Sn**	**03 31 04.9**	**-0.5**
SMG	**Samos**	**1.64**	**162**	*e*PB	**Pb**	**03 30 46.6**	**+1.1**
SMG	**Samos**	**1.64**	**162**	*e*Pb	**Pb**	**03 30 46.6**	**+1.1**
BNT	**Bandirma**	**1.71**	**50**	*e*PN	**Pn**	**03 30 45.4**	**+0.1**
KCTX	**Karacabey (Bur**	**1.94**	**59**	*e*PN	**Pn**	**03 30 48.7**	**+0.3**
KCTX	**Karacabey (Bur**	**1.94**	**59**	*e*Pn	**Pn**	**03 30 48.7**	**+0.3**
DEMI	**Demirci**	**1.98**	**96**	*i* P	**Pn**	**03 30 50.0**	**+1.1**
DEMI				*i* S	**Sn**	**03 31 14.4**	**+0.5**
DEMI	**Demirci**	**1.98**	**96**	*i* P	**Pn**	**03 30 50.0**	**+1.1**
DEMI				*i* S	**Sn**	**03 31 14.4**	**+0.5**
KULA	**Kula-Manisa**	**2.07**	**111**	*e*PN	**Pn**	**03 30 50.2**	**0.0**
KULA	**Kula-Manisa**	**2.07**	**111**	*e*Pn	**Pn**	**03 30 50.2**	**0.0**
ARMT	**Armutlu**	**2.42**	**57**	*e*PN	**Pn**	**03 30 56.5**	**+1.5**
ARMT	**Armutlu**	**2.42**	**57**	*e*Pn	**Pn**	**03 30 56.5**	**+1.4**
CTKS	**Kestanelik-??a**	**2.64**	**41**	*e*PN	**Pn**	**03 30 58.4**	**+0.3**
CTKS	**Kestanelik-??a**	**2.64**	**41**	*e*Pn	**Pn**	**03 30 58.4**	**+0.3**
YLV	**Yalova**	**2.77**	**61**	*e*PN	**Pn**	**03 31 00.8**	**+1.0**
YLV	**Yalova**	**2.77**	**61**	*e*Pn	**Pn**	**03 31 00.8**	**+1.0**

*MOS **19** 03:36:47.4±0.7, 52°.08N×159°.90E, h21km, mb4.1/1, Error ellipse: s-maj=39.6km s-min=12.7km az=88.8*
*ISCJB **19** 03:36:48.5±1.4, 52°.12N±0°.05×159°.89E±0°.09, h26km±9km, Error ellipse: s-maj=11.1km s-min=5.9km az=34.5*
*KRSC **19** 03:36:48.2±0.9, 52°.15N×159°.86E, h23km±22km, ML4.1*
ISC 19 03:36:48.8±1.9, 52°.15N±0°.04×159°.9E±0°.1, h17km±13km, n12, σ0°.96/23, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.96**	**6**	*e*P	**Pb**	**03 37 07.3**	**+0.4**
SPN				*i* S	**Sb**	**03 37 21.0**	**+1.7**
NLC	**Nalytchevo**	**1.07**	**344**	*i* P	**Pb**	**03 37 07.6**	**-1.2**
NLC				*i* S	**Sb**	**03 37 21.7**	**-0.8**
PET	**Petropavlovsk**	**1.14**	**321**	*e*PN	**Pn**	**03 37 08.8**	**-1.2**
PET				*e*S	**Sb**	**03 37 24.0**	**-0.5**
PET				pmax	pmax		
	comp=Z,170nm,0.3s						
PET				smax			
	comp=E,326nm,0.5s						
PET				smax			
	comp=N,479nm,0.8s						
PET	**Petropavlovsk**	**1.14**	**321**	*i* P	**Pn**	**03 37 08.7**	**-1.3**
PET				*i* S	**Sb**	**03 37 23.6**	**-0.9**
AVH	**Avacha**	**1.31**	**329**	*e*P	**Pn**	**03 37 11.7**	**-0.5**
AVH				*i* S	**Sn**	**03 37 28.7**	**-0.6**
MIPR	**Malaya Ipel'ka**	**1.91**	**275**	*e*P	**Pn**	**03 37 21.5**	**+1.0**
MIPR				*i* S	**Sn**	**03 37 45.5**	**+1.5**
KII	**Karymskiy**	**1.91**	**353**	P	**Pn**	**03 37 21.1**	**+0.6**
KII				*i* S	**Sn**	**03 37 45.5**	**+1.5**
GNL	**Ganaly**	**1.93**	**324**	*e*P	**Pn**	**03 37 21.1**	**+0.3**
GNL				*i* S	**Sn**	**03 37 44.7**	**0.0**
MKZ	**Mys Kozlova**	**2.66**	**24**	*e*P	**Pn**	**03 37 30.4**	**-0.5**
MKZ				*i* S	**Sn**	**03 38 00.9**	**-1.8**
SKR	**Severo-Kuril's**	**2.76**	**239**	*e*PN	**Pn**	**03 37 32.2**	**0.0**
SKR				*e*S	**Sn**	**03 38 04.5**	**-0.6**
SKR				pmax	pmax		
	comp=Z,30nm,0.5s						
SKR				smax			
	comp=N,230nm,0.3s						
SKR				smax			
	comp=E,90nm,0.3s						
SKR				smax			
	comp=Z,50nm,0.5s						
ALID	**Alaid**	**2.98**	**246**	*e*P	**Pn**	**03 37 35.5**	**+0.3**
ALID				*e*S	**Sn**	**03 38 09.8**	**-0.6**
KMNR	**Kamenistaya**	**3.62**	**3**	P	**Pn**	**03 37 45.4**	**+1.4**

DJA 19 03:38:58.3±57S×127°.79E, h10km, MLv3.5/4, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.42**	**106**	P	Pg	03 39 06.8	+0.5
AAI				S	Sg	03 39 13.8	+2.0
NLAI	**Namlea**	**0.76**	**295**	P	Pg	03 39 14.3	+1.5
NLAI				S	Sg	03 39 22.9	+0.2
LBMI	**Labuha**	**2.93**	**354**	P	Pn	03 39 45.3	+0.7

*IDC **19** 04:09:31.3±0.7, 39°.16N×140°.81E, h0km, mb3.7/13, mb1 3.9/15, mb1mx3.8/25, mbtmp3.7/15, ML3.2/2, Error ellipse: s-maj=20.5km s-min=12.9km az=115.0*
*ISCJB **19** 04:09:32.5±0.5, 39°.12N±0°.03×140°.88E±0°.04, h21km±4km, mb3.9/18, Error ellipse: s-maj=5.5km s-min=5.1km az=172.2*
*JMA **19** 04:09:32.9, 39°.11N×140°.85E, h12km±1km, M4.2*
JMA Felt II J1.
*NEIC **19** 04:09:32.9±0.3, 39°.21N×140°.83E, h10km, mb4.3/5, Error ellipse: s-maj=9.4km s-min=7.0km az=111.0*
NEIC Recorded [2 JMA] in Akita and Iwate; [1 JMA] in Miyagi.
ISC 19 04:09:33.0±0.5, 39°.10N±0°.03×140°.86E±0°.04, h12km±3km, n34, σ0°.81/42, mb3.9/18, 3C-4D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.32**	**117**	⇓P	**Pg**	**04 09 39.1**	**-0.3**
JMK				*e*S	**Sg**	**04 09 43.5**	**-0.2**
JRG	**Rokugo**	**0.34**	**330**	⇑P	**Pg**	**04 09 39.7**	**-0.2**
JRG				*e*S	**Sg**	**04 09 45.0**	**+0.4**
JYK	**Kaneyama**	**0.43**	**245**	⇓P	**Pg**	**04 09 41.3**	**-0.1**
JYK				S	**Sg**	**04 09 47.1**	**0.0**
JOM	**Ohasama**	**0.51**	**42**	⇓P	**Pg**	**04 09 42.5**	**-0.4**
JOU	**Okura**	**0.75**	**192**	⇑P	**Pg**	**04 09 47.3**	**-0.1**
JOU				S	**Sg**	**04 09 57.4**	**+0.2**
JIO	**Ouri**	**0.75**	**149**	⇑P	**Pg**	**04 09 47.0**	**-0.5**
JIO				S	**Sg**	**04 09 57.0**	**-0.3**
JYA	**Atsumi**	**1.02**	**241**	⇓P	**Pb**	**04 09 52.0**	**-0.6**
MAJO	**Matsushiro**	**3.30**	**220**	*e*Pn	**Pn**	**04 10 26.3**	**+1.8**
MAT	**Matsushiro**	**3.30**	**220**	P	**Pn**	**04 10 26.1**	**+1.6**
MAT				S	**Sn**	**04 11 02.2**	**-1.5**
MJAR	**Matsushiro Arr**	**3.30**	**220**	Pn	**Pn**	**04 10 26.2**	**+1.8**
	2.0nm,0.3s,baz=24,slow=16,SNR=9.6						
MJAR				Pg	**Pg**	**04 10 32.1**	**-4.1**
	3.3nm,0.3s,baz=27,slow=16,SNR=13						
MJAR				Lg		04 11 17.2	
	2.6nm,0.3s,baz=20,slow=25,SNR=7.1						
ERM	**Erimo**	**3.40**	**30**	*e*Pn	**Pn**	**04 10 29.0**	**+3.2**
ASAJ	**Asahikawa**	**5.18**	**14**	Pn	**Pn**	**04 10 51.3**	**+1.0**
	1.0nm,0.3s,baz=233,slow=10,SNR=3.1						
ASAJ				Sn	**Sn**	**04 11 58.6**	**+8.7**
	0.5nm,0.3s,baz=184,slow=15,SNR=2.2						
KSRS	**Korea Array**	**10.30**	**265**	Pn	**Pn**	**04 12 04.4**	**+3.8**
	1.2nm,0.3s,baz=77,slow=14,SNR=26						
KSRS				Sn	**Sn**	**04 14 00.8**	**+4.8**
	0.9nm,0.3s,baz=76,slow=24,SNR=15						
ZALV	**Zalesovo Beam**	**40.22**	**311**	P	**P**	**04 17 08.1**	**-1.0**
	0.4nm,0.3s,mb3.6,baz=78,slow=8.0,SNR=3.8						
MK31	**Makanchi Array**	**42.68**	**300**	*e*P	**P**	**04 17 29.1**	**-0.3**
MKAR	**Makanchi Array**	**42.68**	**300**	P	**P**	**04 17 29.2**	**-0.2**
	0.3nm,0.2s,mb3.6,baz=92,slow=8.2,SNR=6.0						
KURK	**Kurchatov**	**44.34**	**306**	*e*P	**P**	**04 17 42.4**	**-0.4**
	1.0nm,0.4s,mb3.9						
ILAR	**Eielson Array**	**48.00**	**33**	P	**P**	**04 18 11.8**	**+0.5**
	0.4nm,0.6s,mb3.6,baz=269,slow=5.6,SNR=8.2						
TKM2	**Tokmak 2**	**48.29**	**297**	*e*P	**P**	**04 18 13.4**	**-0.5**
	2.1nm,0.8s,mb4.2						
BVAR	**Borovoye Array**	**48.88**	**311**	P	**P**	**04 18 17.9**	**-0.4**
	0.3nm,0.4s,mb3.7,baz=76,slow=6.1,SNR=2.7						
BRVK	**Bovoye**	**48.93**	**311**	*e*P	**P**	**04 18 18.3**	**-0.4**
	1.8nm,0.6s,mb4.3						
ARU	**Arti**	**54.53**	**317**	*e*P	**P**	**04 19 00.2**	**-0.3**
	2.5nm,0.5s,mb4.5						
ABKAR	**Akbulak array**	**56.29**	**309**	*e*P	**P**	**04 19 12.6**	**-0.6**
	1.3nm,0.5s,mb4.2						
WRA	**Warramunga Arr**	**59.04**	**187**	P	**P**	**04 19 32.7**	**-0.2**
	1.0nm,0.7s,mb4.0,baz=5.0,slow=7.6,SNR=12						
ARCES	**ARCESS Array B**	**61.92**	**339**	P	**P**	**04 19 51.9**	**-0.1**
	1.8nm,1.0s,mb4.2,baz=73,slow=6.7,SNR=3.3						
ASAR	**Alice Springs**	**62.77**	**187**	P	**P**	**04 19 59.0**	**+0.9**
	0.5nm,0.6s,mb3.8,baz=6.2,slow=5.5,SNR=6.9						
FINES	**FINESS Array B**	**66.79**	**332**	P	**P**	**04 20 23.6**	**-0.3**
	1.6nm,0.7s,mb4.1,baz=12,slow=10,SNR=6.7						
NB2	**NORSAR Subarra**	**72.12**	**337**	P	**P**	**04 20 56.6**	**-0.3**
	comp=Z,0.3nm,0.4s,mb3.6,baz=36,slow=6.5						
NOA	**NORSAR Array B**	**72.12**	**337**	P	**P**	**04 20 56.7**	**-0.2**
	comp=Z,0.4nm,0.5s,mb3.6,baz=24,slow=5.4,SNR=2.9						
AKASG	**Malin Array Be**	**72.40**	**322**	P	**P**	**04 20 58.2**	**-0.6**
	comp=Z,0.7nm,0.5s,mb3.9,baz=41,slow=6.1,SNR=4.3						
NVAR	**Mina Array Bea**	**74.11**	**53**	P	**P**	**04 21 10.5**	**+1.4**
	comp=Z,0.2nm,0.3s,mb3.5,baz=297,slow=4.0,SNR=3.0						
PDAR	**Pinedale Array**	**76.54**	**46**	P	**P**	**04 21 22.6**	**-0.4**
	comp=Z,0.4nm,0.7s,mb3.4,baz=305,slow=5.2,SNR=4.1						
TXAR	**Lajitas Array**	**89.21**	**52**	P	**P**	**04 22 28.3**	**-0.6**
	comp=Z,0.1nm,0.5s,mb3.4,baz=287,slow=6.2,SNR=2.7						
SIV	**San Ignacio**	**150.02**	**46**	PKPbc	PKPbc	04 29 24.0	+0.2
	comp=Z,0.5nm,0.5s,baz=318,slow=9.9,SNR=3.9						

*ATH **19** 04:12:05.2, 35°.93N×24°.06E, h31km±1km, MD3.4/18*
*NEIC **19** 04:12:05.2, 35°.93N×24°.06E, h31km, MD3.4(ATH), After ATH.*
*ISCJB **19** 04:12:06.6±0.7, 35°.91N±0°.02×24°.04E±0°.03, h31km±7km, Error ellipse: s-maj=4.9km s-min=3.0km az=143.3*
*CSEM **19** 04:12:06.7±0.1, 35°.90N×24°.04E, h24km±1km, ML4.3/3, Error ellipse: s-maj=3.0km s-min=1.5km az=39.0*
*THE **19** 04:12:07.5, 35°.86N×24°.00E, h30km±2km, ML4.3/3, Error ellipse: s-maj=2.8km s-min=0.5km az=211.0*
ISC 19 04:12:06.9±0.8, 35°.90N±0°.03×24°.04E±0°.03, h26km±8km, n86, σ0°.53/134, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARN	**Karanos**	**0.51**	**192**	*e*PN	**Pn**	**04 12 17.4**	**-1.0**
KARN				*e*SN	**Sb**	**04 12 24.4**	**+0.2**
KARN	**Karanos**	**0.51**	**192**	P	**Pb**	**04 12 17.1**	**-0.1**
KARN				S	**Sb**	**04 12 24.3**	**+0.1**
KARN	**Karanos**	**0.51**	**192**	P	**Pb**	**04 12 17.1**	**-0.1**
KARN	**Karanos**	**0.51**	**192**	*e*Pn	**Pn**	**04 12 17.4**	**-1.0**
KARN				*e*Sn	**Sb**	**04 12 24.4**	**+0.2**
VAM	**Vamos**	**0.51**	**165**	*e*Pn	**Pn**	**04 12 17.2**	**-1.2**
VAM				*e*Sn	**Sb**	**04 12 24.4**	**+0.2**
VAM	**Vamos**	**0.51**	**165**	*e*PN	**Pn**	**04 12 17.2**	**-1.2**
VAM				*e*SN	**Sb**	**04 12 24.4**	**+0.2**
VAM	**Vamos**	**0.51**	**165**	*e*Pn	**Pn**	**04 12 17.2**	**-1.2**
VAM				*e*Sn	**Sb**	**04 12 24.4**	**+0.2**
GVD	**Gavdhos**	**1.06**	**178**	*e*Pn	**Pn**	**04 12 26.1**	**+0.1**
GVD				*e*Sn	**Sn**	**04 12 41.4**	**+1.5**
GVD	**Gavdhos**	**1.06**	**178**	*e*PN	**Pn**	**04 12 26.1**	**+0.1**
GVD				*e*SN	**Sn**	**04 12 41.4**	**+1.5**
GVD	**Gavdhos**	**1.06**	**178**	*e*Pn	**Pn**	**04 12 26.1**	**+0.1**
GVD				*e*Sn	**Sn**	**04 12 41.4**	**+1.5**
SIVA	**Sivas**	**1.08**	**144**	*e*Pn	**Pn**	**04 12 26.6**	**+0.3**
SIVA				*e*Sn	**Sn**	**04 12 40.1**	**-0.3**
SIVA	**Sivas**	**1.08**	**144**	*e*PN	**Pn**	**04 12 26.6**	**+0.3**
SIVA				*e*SN	**Sn**	**04 12 40.1**	**-0.3**
SIVA	**Sivas**	**1.08**	**144**	P	**Pn**	**04 12 25.8**	**-0.5**
SIVA	**Sivas**	**1.08**	**144**	P	**Pn**	**04 12 25.8**	**-0.5**
SIVA	**Sivas**	**1.08**	**144**	*e*Pn	**Pn**	**04 12 26.6**	**+0.3**
SIVA				*e*Sn	**Sn**	**04 12 40.1**	**-0.3**
THR5	**Thira Island,**	**1.18**	**63**	P	**Pn**	**04 12 27.9**	**+0.3**
THR5	**Thira Island,**	**1.18**	**63**	P	**Pn**	**04 12 27.9**	**+0.3**
THR6	**Thira Island,**	**1.19**	**67**	P	**Pn**	**04 12 28.0**	**+0.2**
THR6	**Thira Island,**	**1.19**	**67**	P	**Pn**	**04 12 28.0**	**+0.2**
THR3	**Thira Island,**	**1.21**	**65**	P	**Pn**	**04 12 28.4**	**+0.3**
THR3	**Thira Island,**	**1.21**	**65**	P	**Pn**	**04 12 28.4**	**+0.3**
VLI	**Veliai**	**1.21**	**313**	*e*Pn	**Pn**	**04 12 27.3**	**-0.8**
VLI				*e*Sn	**Sn**	**04 12 43.8**	**+0.1**
VLI	**Veliai**	**1.21**	**313**	*e*PN	**Pn**	**04 12 27.3**	**-0.8**
VLI				*e*SN	**Sn**	**04 12 43.8**	**+0.1**
VLI	**Veliai**	**1.21**	**313**	*e*Pn	**Pn**	**04 12 27.3**	**-0.8**
VLI				*e*Sn	**Sn**	**04 12 43.8**	**+0.1**
THR1	**Thera Island**	**1.24**	**67**	P	**Pn**	**04 12 28.7**	**+0.2**
THR1	**Thera Island**	**1.24**	**67**	P	**Pn**	**04 12 28.7**	**+0.2**
LAST	**Lasithi**	**1.38**	**122**	*e*Pb	**Pn**	**04 12 29.7**	**-0.8**
LAST				*e*Sn	**Sn**	**04 12 48.4**	**+0.5**
LAST	**Lasithi**	**1.38**	**122**	*e*PB	**Pn**	**04 12 29.7**	**-0.8**
LAST				*e*SN	**Sn**	**04 12 48.4**	**+0.5**
LAST	**Lasithi**	**1.38**	**122**	P	**Pn**	**04 12 29.8**	**-0.7**
LAST				S	**Sn**	**04 12 47.5**	**-0.4**
LAST	**Lasithi**	**1.38**	**122**	P	**Pn**	**04 12 29.8**	**-0.7**
LAST				S	**Sn**	**04 12 47.5**	**-0.4**
LAST				*e*Sn	**Sn**	**04 12 48.4**	**+0.5**
NPS	**Neapolis**	**1.43**	**116**	*e*Pn	**Pn**	**04 12 30.5**	**-0.6**
NPS	**Neapolis**	**1.43**	**116**	*e*PN	**Pn**	**04 12 30.5**	**-0.6**
NPS	**Neapolis**	**1.43**	**116**	*e*Pn	**Pn**	**04 12 30.5**	**-0.6**
APE	**Apeiranthos**	**1.67**	**45**	*e*Pn	**Pn**	**04 12 34.2**	**-0.3**
APE				*e*Sn	**Sn**	**04 12 54.8**	**-0.3**
APE	**Apeiranthos**	**1.67**	**45**	*e*PN	**Pn**	**04 12 34.2**	**-0.3**
APE				*e*SN	**Sn**	**04 12 54.8**	**-0.3**
APE	**Apeiranthos**	**1.67**	**45**	P	**Pn**	**04 12 34.1**	**-0.4**
APE	**Apeiranthos**	**1.67**	**45**	*e*Pn	**Pn**	**04 12 34.2**	**-0.3**
APE				*e*Sn	**Sn**	**04 12 54.8**	**-0.3**
DID	**Didima**	**1.73**	**338**	P	**Pn**	**04 12 34.9**	**-0.4**
DID				S	**Sn**	**04 12 57.5**	**+1.0**
DID	**Didima**	**1.73**	**338**	P	**Pn**	**04 12 34.9**	**-0.4**
DID				S	**Sn**	**04 12 57.5**	**+1.0**
ZKR	**Zakros**	**1.94**	**113**	*e*Pn	**Pn**	**04 12 37.9**	**-0.2**
ZKR	**Zakros**	**1.94**	**113**	*e*PN	**Pn**	**04 12 37.9**	**-0.2**
ZKR	**Zakros**	**1.94**	**113**	P	**Pn**	**04 12 38.1**	**0.0**
ZKR	**Zakros**	**1.94**	**113**	P	**Pn**	**04 12 38.1**	**0.0**
VLY	**Voula,Athens**	**1.96**	**354**	*e*Pb	**Pn**	**04 12 39.0**	**+0.6**
VLY	**Voula,Athens**	**1.96**	**354**	*e*PB	**Pn**	**04 12 39.0**	**+0.6**
VLY	**Voula,Athens**	**1.96**	**354**	*e*Pb	**Pn**	**04 12 39.0**	**+0.6**
VLX	**Vlachokerasia**	**1.99**	**318**	*e*PN	**Pn**	**04 12 38.9**	**+0.1**
VLX				*e*SN	**

KURK *e*pP pP 04 58 56.2 -5.3
ZALV Zalesovo Beam 65.93 345 P **P 04 58 53.2 -0.5**
1.5nm,0.5s,mb4.3,baz=151,slow=3.4,SNR=4.3
BVAR Borovoye Array 69.79 337 P **P 04 59 18.6 +0.6**
1.8nm,0.7s,mb4.1,baz=143,slow=10,SNR=10
ABKAR Akbulak array 71.81 329 *e*P **P 04 59 30.0 -0.4**
2.5nm,0.6s,mb4.3
QSPA South Pole Qui 80.75 180 P **P 05 00 21.6 +0.9**
0.9nm,1.0s,mb3.7,baz=305,slow=1.6,SNR=3.9

DJA 19 05:14:36,2.10S×100.11E,h28km,MLv3.5/5,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**1.23**	**17**	P	Pn	05 14 56.9	-0.5
PDSI				S	Sn	05 15 12.3	-0.8
SISI	**Saibi**	**1.28**	**307**	P	Pn	05 14 57.5	-0.5
PPI	**Padang Panjang**	**1.66**	**10**	P	Pn	05 15 04.1	+0.9
SDSI	**Sungai Dareh**	**1.75**	**49**	P	Pn	05 15 06.5	+1.9
BKNI	**Bangkinang**	**2.58**	**21**	P	Pn	05 15 28.1	+12
MNAI	**Manna**	**3.62**	**128**	P	Pn	05 15 32.2	+1.9
MNAI				S	Sn	05 16 13.9	+1.8

IDC ***19*** *06:03:14.6±0.5,24.°05N×143.°05E,h0km,mb4.6/22, mb1 4.7/24,mb1mx4.7/27,mbtmp4.5/24,ML4.0/3,MS4.7/1, Ms1 4.7/1,ms1mx3.4/34,Error ellipse: s-maj=17.3km s-min=12.8km az=84.0*
BJI ***19*** *06:03:18.1,24.°11N×143.°00E,h30km,mB5.3/20,mb4.8/39, Ms4.8/25,Ms7 4.7/25*
ISCJB ***19*** *06:03:18.2±0.1,24.°07N±0.°03×142.°96E±0.°03,h32km, mb4.8/120,MS4.7/11,Error ellipse: s-maj=4.2km s-min=3.4km az=21.6*
MOS ***19*** *06:03:18.2±1.1,24.°04N×142.°95E,h33km,mb5.1/41, MS4.8/4,Error ellipse: s-maj=10.0km s-min=5.6km az=104.4*
JMA ***19*** *06:03:20.2±0.3,24.°42N×143.°70E,h99km,M4.4*
NEIC ***19*** *06:03:20.2±0.8,24.°05N×142.°99E,h35km±7km,mb4.8/69, Error ellipse: s-maj=5.0km s-min=4.4km az=110.0*
ISC 19 06:03:18.4±1.1,24.°07N±0.°03×143.°02E±0.°03,h22km±7km, h30km±2.9km:pP-P,n402,σ0.985/414,mb4.8/120,MS4.7/11, 80C-82D,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**2.66**	**344**	P	**Pn**	**06 04 01.3**	**+1.4**
JHHJ				*e*S	**Sn**	**06 04 31.6**	**+0.2**
CBIJ	**Chichi jima**	**3.10**	**346**	Pn	**Pn**	**06 04 06.5**	**+0.5**
	15nm,0.3s,baz=151,slow=19,SNR=5.1						
CBIJ				Sn	**Sn**	**06 04 43.7**	**+1.3**
	172nm,0.3s,baz=107,slow=20,SNR=15						
CBIJ	**Chichi jima**	**3.10**	**346**	P	**Pn**	**06 04 06.3**	**+0.3**
CBIJ				*e*S	**Sn**	**06 04 43.2**	**+0.8**
GUMO	**Guam**	**10.57**	**170**	*e*Pn	**Pn**	**06 05 53.0**	**+4.4**
	3.1nm,0.3s,baz=16,slow=20,SNR=3.2						
GUMO	**Guam**	**10.57**	**170**	*e*Pn	**Pn**	**06 05 49.9**	**+1.3**
GUMO				Pn	**Pn**	**06 05 53.0**	**+4.4**
BSO1	**Boso 1**	**10.69**	**351**	P	**Pn**	**06 05 49.7**	**-0.5**
BSO1				*e*S	**Sn**	**06 07 44.1**	**-5.1**
BSO3	**Boso 3**	**10.91**	**349**	P	**Pn**	**06 05 52.2**	**-1.0**
BSO4	**Boso 4**	**11.13**	**349**	P	**Pn**	**06 05 55.6**	**-0.5**
BSO4				*e*S	**Sn**	**06 07 56.8**	**-3.0**
JOD2	**Odawara 2**	**11.66**	**344**	P	**Pn**	**06 06 02.7**	**-0.7**
JNY	**Yasuok**	**12.10**	**339**	P	**Pn**	**06 06 09.5**	**0.0**
JAO	**Obara**	**12.22**	**337**	P	**Pn**	**06 06 10.8**	**-0.3**
JRY	**Ryogami san**	**12.42**	**344**	P	**Pn**	**06 06 12.0**	**-1.8**
JHO	**Hitachi**	**12.67**	**351**	P	**Pn**	**06 06 15.3**	**-2.0**
JAG	**Ashikaga**	**12.69**	**347**	P	**Pn**	**06 06 15.8**	**-1.7**
MJAR	**Matsushiro Arr**	**13.10**	**343**	Pn	**Pn**	**06 06 22.3**	**-0.8**
	1.5nm,0.3s,baz=158,slow=10,SNR=9.1						
MJAR				Sn	**Sn**	**06 08 40.7**	**-7.4**
	0.3nm,0.3s,baz=160,slow=18,SNR=4.5						
MJAR	**Matsushiro Arr**	**13.10**	**343**	Pn	**Pn**	**06 06 22.3**	**-0.8**
MJAR				Sn	**Sn**	**06 08 40.7**	**-7.4**
MAJO	**Matsushiro**	**13.10**	**343**	*e*Pn	**Pn**	**06 06 23.0**	**-0.1**
MAT	**Matsushiro**	**13.10**	**343**	P	**Pn**	**06 06 18.3**	**-4.8**
MAT				S	**Sn**	**06 08 40.5**	**-7.6**
JMK	**Ichinoseki**	**14.91**	**355**	P	**Pn**	**06 06 46.7**	**-1.1**
ERM	**Erimo**	**17.89**	**0**	*e*P	**Pn**	**06 07 28.1**	**+2.4**
ERM	**Erimo**	**17.89**	**0**	*e*P	**Pn**	**06 07 27.9**	**+2.2**
	44nm,1.1s						
KSRS	**Korea Array**	**18.57**	**319**	P	**Pn**	**06 07 33.9**	**-0.2**
	0.4nm,0.3s,baz=129,slow=13,SNR=28						
YHNB	**Yeheng**	**19.73**	**276**	*e*P	**Pn**	**06 07 48.3**	**+0.2**
	24nm,0.7s						
YULB	**Yu-li**	**19.90**	**272**	*e*P	**Pn**	**06 07 48.6**	**-1.5**
	35nm,0.8s						
ASAJ	**Asahikawa**	**20.00**	**359**	P	**Pn**	**06 07 50.5**	**-0.6**
	4.9nm,0.7s,baz=168,slow=14,SNR=3.2						
NJ2	**Nanjing**	**22.73**	**296**	*e*P	**P**	**06 08 19.9**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,40nm,0.5s,mb5.1						
YSS	**Yuzh-Sakhalins**	**22.83**	**360**	*e*P	pP	06 08 27.8	+1.8
YSS				*e*		06 08 32.0	
MDJ	**Mudanjiang**	**23.24**	**335**	P	**P**	**06 08 24.9**	**+0.8**
MDJ				pmax	pmax		
	comp=Z,12nm,1.4s,mb4.1						
CN2	**Changchun**	**24.40**	**328**	*e*P	**P**	**06 08 36.8**	**+1.8**
CN2				*es*P	sP	06 08 51.8	+7.4
CN2				*e*S	**S**	**06 12 52.4**	**-1.0**
CN2				pmax	pmax		
	comp=Z,20nm,0.6s,mb4.7						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,500nm,13.0s,MS4.4						
CN2				LR	LR		
	comp=E,700nm,13.0s,MS4.4						
CN2				LR	LR		
	comp=Z,800nm,15.0s,MS4.3						
HABR	**Khabarovsk**	**25.16**	**347**	*e*P	**P**	**06 08 43.3**	**+1.5**
HABR				*e**PP	pP	06 08 50.2	+1.7
HABR				*e**SP	sP	06 08 54.5	+3.3
HABR				*e*PPP		06 09 24.4	
HABR				*e*		06 12 13.7	
HABR				*e*S	**S**	**06 13 06.6**	**+1.1**
HABR				*e**SS	sS	06 13 20.7	+4.2
HABR				*e*SS		06 13 57.6	
HABR				*e*SSS		06 14 13.2	
HABR				*e*		06 19 39.0	
HABR				pmax	pmax		
	comp=E,57nm,2.2s						
HABR				pmax	pmax		
	comp=Z,83nm,2.1s,mb4.9						
HABR				pmax	pmax		
	comp=N,26nm,1.5s						
HABR				MLR	MLR		
	comp=Z,1μm,18.0s,MS4.4						
TIA	**Tai'an**	**25.37**	**304**	⇑P	**P**	**06 08 43.8**	**-0.1**
WHN	**Wuhan**	**26.23**	**291**	⇓P	**P**	**06 08 52.6**	**+0.8**
WHN				pP	pP	06 09 00.8	+2.3
WHN				S	**S**	**06 13 27.9**	**+4.9**
KLR	**Kul'dur**	**26.63**	**343**	*e*P	**P**	**06 08 51.8**	**-3.3**
BJT	**Baijiatuau**	**27.62**	**312**	*e*P	**P**	**06 09 04.9**	**+0.7**
BJT				pmax	pmax		
	comp=Z,15nm,0.7s						
BJT	**Baijiatuau**	**27.62**	**312**	*e*P	**P**	**06 09 04.9**	**+0.8**
	comp=Z,15nm,0.7s,mb4.7						
BJI	**Beijing**	**27.62**	**312**	P	**P**	**06 09 04.6**	**+0.4**
BJI				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.5						
PETK	**Petropavlovsk-**	**31.05**	**17**	P	**P**	**06 09 36.1**	**+1.6**
	comp=Z,1.3nm,0.8s,mb3.8,baz=189,slow=8.3,SNR=3.1						
HHC	**Hu-ho-hao-te**	**31.16**	**310**	*e*P	**P**	**06 09 36.1**	**+0.6**
HHC				sP	sP	06 09 49.8	+4.8
HHC				PP	PP	06 10 38.9	-7.1
HHC				PcP	PcP	06 12 31.3	+1.0
HHC				S	**S**	**06 14 38.3**	**-1.9**
HHC				sS	sS	06 14 54.3	+3.1
HHC				ScP	ScP	06 16 10.3	-1.7
HHC				PcS	PcS	06 16 14.3	-0.1
HHC				SS	SS	06 16 24.1	-30
HHC				ScS	ScS	06 20 05.8	-3.3
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.7						
HHC				pmax	pmax		
	comp=Z,760nm,6.0s						
HHC				LR	LR		
	comp=N,770nm,12.1s,MS4.8						
HHC				LR	LR		
	comp=E,960nm,12.1s,MS4.8						
HHC				LR	LR		
	comp=Z,1μm,12.9s,MS4.8						
XAN	**Xi'an**	**31.29**	**296**	P	**P**	**06 09 35.4**	**-1.5**
XAN				pP	pP	06 09 47.4	+3.8
GYA	**Guiyang**	**32.90**	**282**	⇑*i*P	**P**	**06 09 51.8**	**+0.8**
GYA				pP	pP	06 10 02.4	+4.7
GYA				PP	PP	06 11 01.8	-3.7
GYA				PcP	PcP	06 12 36.5	+1.2
GYA				S	**S**	**06 15 05.4**	**-2.3**
GYA				sS	sS	06 15 23.3	+4.5
GYA				ScP	ScP	06 16 16.5	-1.7
GYA				SS	SS	06 17 06.0	-24
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
GYA				pmax	pmax		
	comp=Z,120nm,5.1s						
GYA				LR	LR		
	comp=N,2μm,17.0s,MS5.0						
GYA				LR	LR		
	comp=E,1μm,18.2s,MS5.0						
GYA				LR	LR		
	comp=Z,2μm,17.6s,MS5.0						
CD2	**Chengdu**	**35.35**	**290**	P	**P**	**06 10 12.6**	**+0.3**
CD2				pP	pP	06 10 24.8	+5.8
CD2				sP	sP	06 10 30.1	+8.3
CD2				PP	PP	06 11 33.6	+0.9
CD2				S	**S**	**06 15 42.8**	**-2.8**
CD2				sS	sS	06 16 03.1	+6.4
CD2				SS	SS	06 18 01.6	-18
CD2				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
CD2				pmax	pmax		
	comp=Z,520nm,11.3s						
CD2				LR	LR		
	comp=N,960nm,14.3s						
CD2				LR	LR		
	comp=Z,990nm,14.9s,MS4.7						
LZH	**Lanzhou**	**35.73**	**299**	*e*P	**P**	**06 10 17.3**	**+1.9**
LZH				pP	pP	06 10 27.5	+5.3
LZH				sP	sP	06 10 31.0	+6.1
LZH				PP	PP	06 11 38.9	+2.2
LZH				*e*S	**S**	**06 15 51.0**	**-0.2**
LZH				sS	sS	06 16 07.3	+5.0
LZH				SS	SS	06 18 10.3	-17
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
LZH				pmax	pmax		
	comp=Z,60nm,4.0s						
LZH				LR	LR		
	comp=E,800nm,15.0s						
LZH				LR	LR		
	comp=Z,930nm,16.2s,MS4.6						
KMI	**Kunming**	**36.55**	**280**	P	**P**	**06 10 24.6**	**+2.0**
KMI				pP	pP	06 10 34.0	+4.7
KMI				sP	sP	06 10 38.1	+6.0
KMI				PP	PP	06 11 48.1	+2.2
KMI				S	**S**	**06 16 02.4**	**-1.6**
KMI				sS	sS	06 16 20.3	+5.2
KMI				SS	SS	06 18 28.9	-15
KMI				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.8						
KMI				pmax	pmax		
	comp=Z,500nm,8.3s						
KMI				LR	LR		
	comp=N,370nm,20.1s,MS4.4						
KMI				LR	LR		
	comp=E,570nm,18.4s,MS4.4						
KMI				LR	LR		
	comp=Z,560nm,21.8s,MS4.3						
ULN	**Ulaanbaatar**	**37.06**	**319**	*e*P	**P**	**06 10 26.3**	**-0.3**
	comp=Z,3.1nm,0.9s,mb4.1						
SONM	**Songino Array**	**37.44**	**319**	P	**P**	**06 10 29.5**	**-0.4**
	comp=Z,1.9nm,0.8s,mb4.0,baz=119,slow=7.8,SNR=6.9						
SONM				PcP	PcP	06 12 48.7	+0.5
	comp=Z,2.8nm,1.0s,baz=120,slow=4.5,SNR=5.7						
COEN	**Coen**	**37.80**	**180**	*e*P	**P**	**06 10 33.4**	**+0.3**
	comp=Z,96nm,0.8s,mb5.6						
KAKA	**Kakadu**	**37.99**	**197**	*e*P	**P**	**06 10 34.2**	**-0.6**
	comp=Z,11nm,1.1s,mb4.5						
KAKA	**Kakadu**	**37.99**	**197**	*e*P	**P**	**06 10 34.0**	**-0.9**
	comp=Z,30nm,0.9s,mb5.0						
YAK	**Yakutsk**	**39.01**	**350**	*e*P	**P**	**06 10 42.3**	**-0.6**
YAK				pmax	pmax		
	comp=Z,25nm,0.9s,mb4.9						
SEY	**Seymchan**	**39.35**	**7**	*ce*P	**P**	**06 10 47.4**	**+1.7**
GTA	**Gaotai**	**39.41**	**303**	*e*P	**P**	**06 10 43.3**	**-3.3**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.0						
CHTO	**Chiang Mai**	**41.23**	**271**	*e*P	**P**	**06 11 03.0**	**+1.1**
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.4						
CHTO	**Chiang Mai**	**41.23**	**271**	*e*P	**P**	**06 11 03.0**	**+1.1**
	comp=Z,7.8nm,0.8s,mb4.4						
CM31	**Chiang Mai Arr**	**41.33**	**271**	*e*P	**P**	**06 11 05.1**	**+2.4**
	comp=Z,5.6nm,0.5s,mb4.5						
CMAR	**Chiang Mai Arr**	**41.33**	**271**	P	**P**	**06 11 04.4**	**+1.7**
	comp=Z,4.9nm,0.6s,mb4.3,baz=59,slow=7.9,SNR=26						
CMAR				PcP	PcP	06 13 01.9	+0.8
	comp=Z,0.7nm,0.3s,baz=86,slow=1.4,SNR=4.3						
CTA	**Charters Tower**	**44.01**	**176**	*e*P	**P**	**06 11 23.9**	**-0.4**
	comp=Z,10nm,0.9s,mb4.6						
CTAO	**Charters Tower**	**44.01**	**176**	*e*P	**P**	**06 11 23.4**	**-0.9**
CTAO				pmax	pmax		
	comp=Z,22nm,0.6s,mb5.1						
CTAO	**Charters Tower**	**44.01**	**176**	*e*P	**P**	**06 11 23.4**	**-0.8**
	comp=Z,22nm,0.6s,mb5.1						
WRAB	**Tennant Creek**	**44.55**	**192**	*e*P	**P**	**06 11 27.8**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,33nm,0.8s,mb5.2						
WRAB	**Tennant Creek**	**44.55**	**192**	*e*P	**P**	**06 11 27.8**	**-0.8**
	comp=Z,33nm,0.8s,mb5.2						
WRA	**Warramunga Arr**	**44.56**	**192**	P	**P**	**06 11 28.2**	**-0.5**
	comp=Z,26nm,0.8s,mb5.1,baz=11,slow=8.1,SNR=188						
FITZ	**Fitzroy Crossi**	**45.22**	**204**	*e*P	**P**	**06 11 33.3**	**-0.7**
	comp=Z,20nm,0.9s,mb4.9						
FITZ	**Fitzroy Crossi**	**45.22**	**204**	*e*P	**P**	**06 11 33.5**	**-0.5**
	comp=Z,11nm,0.9s,mb4.7						
FITZ				*e*		06 11 45.9	
SHL	**Shillong**	**46.20**	**283**	*e*PKP	**P**	**06 11 42.0**	**+0.1**
SHL				*i*S	x	06 13 05.0	
BILL	**Bilibino**	**46.23**	**12**	⇑*e*P	**P**	**06 11 42.1**	**+0.6**
BILL				pmax	pmax		
	comp=Z,21nm,1.7s,mb4.8						
BILL	**Bilibino**	**46.23**	**12**	*e*P	**P**	**06 11 41.5**	**0.0**
	comp=Z,4.7nm,0.4s,mb4.8						
LSA	**Lhasa**	**46.29**	**289**	*e*P	**P**	**06 11 45.0**	**+2.5**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
LSA	**Lhasa**	**46.29**	**289**	*e*P	**P**	**06 11 45.0**	**+2.5**
	comp=Z,7.3nm,0.6s,mb4.8						
ASAR	**Alice Springs**	**48.27**	**191**	P	**P**	**06 11 56.7**	**-1.1**
	comp=Z,3.6nm,0.7s,mb4.5,baz=13,slow=8.0,SNR=42						
TIXI	**Tiksi**	**48.28**	**354**	*e*P	**P**	**06 11 57.4**	**0.0**
TIXI				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.9						
TIXI	**Tiksi**	**48.28**	**354**	*e*P	**P**	**06 11 57.4**	**0.0**
	comp=Z,14nm,1.1s,mb4.9						
WMQ	**Urumqi**	**48.98**	**308**	*e*P	**P**	**06 12 05.4**	**+2.2**
WMQ				pP	pP	06 12 15.4	+5.3
WMQ				sP	sP	06 12 19.3	+6.5
WMQ				PP	PP	06 13 59.0	+2.3
WMQ				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.2						
WMQ				pmax	pmax		
	comp=Z,1μm,10.2s						
TAPN	**Taplejung**	**49.60**	**286**	*e*P	**P**	**06 12 09.7**	**+1.5**
	comp=Z,27nm,0.7s,mb5.4						
EIDS	**Eidsvold**	**49.77**	**170**	*e*P	**P**	**06 12 08.0**	**-1.2**
	comp=Z,5.8nm,0.9s,mb4.6						
ODAN	**Odare**	**49.97**	**286**	*e*P	**P**	**06 12 12.7**	**+1.7**
	comp=Z,40nm,0.9s,mb5.5						
MBWA	**Marble Bar**	**50.35**	**209**	*e*P	**P**	**06 12 13.7**	**0.0**
	comp=Z,12nm,0.8s,mb5.0						
RAMN	**Ramite**	**50.65**	**286**	*e*P	**P**	**06 12 17.6**	**+1.5**
	comp=Z,40nm,0.8s,mb5.4						
JIRN	**Jiri**	**50.88**	**287**	*e*P	**P**	**06 12 18.1**	**+0.2**
	comp=Z,36nm,0.6s,mb5.5						
GUN	**Gumba**	**51.12**	**287**	*e*P	**P**	**06 12 19.0**	**-0.6**
	comp=Z,30nm,0.6s,mb5.4						
PKI	**Pulchoki**	**51.58**	**287**	*e*P	**P**	**06 12 22.9**	**-0.2**
	comp=Z,41nm,1.2s,mb5.2						
PKIN	**Phulchoki**	**51.59**	**287**	*e*P	**P**	**06 12 22.9**	**-0.3**
	comp=Z,8.8nm,0.7s,mb4.8						
DMN	**Daman**	**51.84**	**287**	*e*P	**P**	**06 12 24.5**	**-0.6**
	comp=Z,34nm,1.1s,mb5.2						
GKN	**Gorkha**	**52.18**	**288**	*e*P	**P**	**06 12 25.7**	**-1.9**
	comp=Z,45nm,1.0s,mb5.3						
ZAA0	**Zalesovo Array**	**52.28**	**321**	*e*P	**P**	**06 12 27.1**	**-0.8**
ZALV	**Zalesovo Beam**	**52.28**	**321**	P	**P**	**06 12 26.9**	**-0.9**
	comp=Z,6.1nm,0.7s,mb4.6,baz=101,slow=6.8,SNR=20						
ZALV				PcP	PcP	06 13 38.0	-1.0
	comp=Z,4.9nm,0.6s,baz=114,slow=4.0,SNR=7.6						
ZALV				LR	LR	06 36 39.8	
	comp=Z,741nm,18.8s,MS4.8,baz=68,slow=38						
ZALV	**Zalesovo Beam**	**52.28**	**321**	P	**P**	**06 12 26.9**	**-1.0**
ZALV						06 13 38.0	
MK31	**Makanchi Array**	**53.00**	**311**	*e*P	**P**	**06 12 32.4**	**-1.0**
MKAR	**Makanchi Array**	**53.00**	**311**	P	**P**	**06 12 33.1**	**-0.3**
	comp=Z,4.6nm,0.5s,mb4.7,baz=89,slow=8.9,SNR=40						
NVS	**Novosibirsk**	**53.35**	**321**	*i*P	**P**	**06 12 35.2**	**-0.6**
NVS				pmax	pmax		
	comp=Z,22nm,1.9s,mb4.8						
NVS				pmax	pmax		
	comp=N,8.0nm,1.8s						
NVS				pmax	pmax		
	comp=E,23nm,1.8s						
ARMA	**Armidale**	**54.80**	**171**	*e*P	**P**	**06 12 46.3**	**-0.3**
STKA	**Stephens Creek**	**55.65**	**181**	*e*P	**P**	**06 12 51.9**	**-0.8**
	comp=E,11nm,1.0s,mb4.8						
STKA	**Stephens Creek**	**55.65**	**181**	P	**P**	**06 12 51.7**	**-1.0**
	comp=E,10nm,0.7s,mb5.0,baz=352,slow=8.2,SNR=16						
STKA	**Stephens Creek**	**55.65**	**181**	*e*P	**P**	**06 12 51.4**	**-1.3**
STKA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
STKA	**Stephens Creek**	**55.65**	**181**	*e*P	**P**	**06 12 51.4**	**-1.3**
	comp=Z,3.7nm,1.0s,mb4.4						
KURK	**Kurchatov**	**55.66**	**316**	*ce*P	**P**	**06 12 52.3**	**-0.3**
KURK				pmax	pmax		
	comp=Z,22nm,1.0s,mb5.1						
KURK	**Kurchatov**	**55.66**	**316**	*e*P	**P**	**06 12 51.4**	**-1.2**
	comp=Z,21nm,1.0s,mb5.1						
TTA	**Tatalina**	**55.69**	**29**	*e*P	**P**	**06 12 53.4**	**+0.7**
TTA				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.7						
TTA	**Tatalina**	**55.69**	**29**	*e*P	**P**	**06 12 53.4**	**+0.7**
	comp=Z,10nm,1.3s,mb4.7						
KDAK	**Kodiak Island**	**56.35**	**35**	P	**P**	**06 12 57.1**	**-0.3**
	comp=Z,5.4nm,0.6s,mb4.7,baz=276,slow=11,SNR=5.5						
KDAK	**Kodiak Island**	**56.35**	**35**	*i*P	**P**	**06 12 59.3**	**+1.8**
FORT	**Forrest**	**56.39**	**195**	*e*P	**P**	**06 12 56.8**	**-1.2**
	comp=Z,21nm,0.6s,mb5.3						
TKM2	**Tokmak 2**	**57.79**	**307**	*e*P	**P**	**06 13 09.2**	**+1.3**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
TKM2	**Tokmak 2**	**57.79**	**307**	*e*P	**P**	**06 13 09.2**	**+1.3**
	comp=Z,4.0nm,0.6s,mb4.6						
TKM2	**Tokmak 2**	**57.79**	**307**	⇑S	**P**	**06 13 09.6**	**+1.7**
	comp=Z,2.7nm,0.8s,mb4.4						
KSH	**Kashi**	**57.81**	**303**	P	**P**	**06 13 12.3**	**+4.2**
KSH				pP	pP	06 13 22.3	+7.2
KSH				sP	sP	06 13 26.6	+8.8
KSH				PcP	PcP	06 14 03.3	+2.7
KSH				PP	PP	06 15 22.5	+6.3
KSH				ScP	ScP	06 17 59.3	-0.1
KSH				PcS	PcS	06 18 04.0	+2.2
KSH				S	**S**	**06 21 08.9**	**+2.6**
KSH				sS	sS	06 21 26.0	+8.2
KSH				ScS	ScS	06 22 55.3	-1.2
KSH				SS	SS	06 25 01.1	+4.3
KSH				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.8						
KSH				pmax	pmax		
	comp=Z,210nm,7.5s						
KSH				LR	LR		
	comp=N,320nm,9.5s						
KSH				LR	LR		
	comp=E,780nm,14.5s						
KSH				LR	LR		
	comp=Z,880nm,21.6s						
TRF	**Thorofare Moun**	**58.34**	**29**	*e*P	**P**	**06 13 11.6**	**+0.2**
	comp=Z,16nm,1.0s,mb5.0						
TRF				*e*		06 13 22.3	
PMR	**Palmer**	**58.60**	**31**	*e*P	**P**	**06 13 13.3**	**+0.1**
PMR				*e*		06 13 24.0	
PMR				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
PMR	**Palmer**	**58.60**	**31**	*e*P	**P**	**06 13 13.3**	**0.0**
	comp=Z,14nm,1.0s,mb4.9						
PMR				*e*		06 13 17.4	
PMR				*e*		06 13 24.0	
AAK	**Ala-Archa**	**58.62**	**306**	*ce*P	**P**	**06 13 15.2**	**+1.4**
AAK	**Ala-Archa**	**58.62**	**306**	*e*P	**P**	**06 13 14.4**	**+0.6**
	comp=Z,3.6nm,0.7s,mb4.5						
UCH	**Uchtor**	**58.65**	**306**	*e*P	**P**	**06 13 15.4**	**+1.5**
UCH				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
UCH	**Uchtor**	**58.65**	**306**	*e*P	**P**	**06 13 15.4**	**+1.4**
	comp=Z,10nm,1.1s,mb4.8						
MCK	**McKinley**	**58.98**	**29**	*e*P	**P**	**06 13 15.4**	**-0.5**
MCK				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.2						
MCK	**McKinley**	**58.98**	**29**	*e*P	**P**	**06 13 15.4**	**-0.4**
	comp=Z,29nm,1.3s,mb5.2						
CNB	**Canberra Magne**	**59.37**	**174**	*e*P	**P**	**06 13 19.2**	**+0.4**
ILAR	**Eielson Array**	**60.01**	**28**	P	**P**	**06 13 21.8**	**-1.2**
	comp=Z,4.4nm,0.7s,mb4.6,baz=259,slow=5.6,SNR=51						
BMRM	**Bremner River**	**60.72**	**32**	*e*P	**P**	**06 13 28.6**	**+0.7**
	comp=Z,38nm,1.1s,mb5.4						
BVAR	**Borovoye Array**	**60.79**	**319**	P	**P**	**06 13 28.5**	**+0.1**
	comp=Z,7.3nm,0.5s,mb5.1,baz=96,slow=8.1,SNR=43						
BRVK	**Borovoye**	**60.85**	**319**	*e*P	**P**	**06 13 29.2**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.1						
BRVK	**Borovoye**	**60.85**	**319**	*e*P	**P**	**06 13 29.2**	**+0.3**
	comp=Z,15nm,1.0s,mb5.1						
MENT	**Mentasta**	**61.24**	**30**	*e*P	**P**	**06 13 31.6**	**+0.2**
TOO	**Toolangi**	**61.36**	**178**	*e*P	**P**	**06 13 33.7**	**+1.3**
EGAK	**Eagle**	**62.46**	**28**	*e*P	**P**	**06 13 39.9**	**+0.4**
	comp=Z,44nm,2.1s,mb5.2						
DAWY	**Dawson**	**63.21**	**29**	*e*P	**P**	**06 13 44.8**

LON Longmire 76.24 45 eP P 06 15 05.8 +0.7
comp=Z,5.8nm,1.0s,mb4.5
G04A Mulino 76.34 46 ⇓P P 06 15 05.1 -0.7
baz=76
ARCES ARCESS Array B 76.63 341 P P 06 15 07.7 +0.7
comp=Z,4.3nm,0.6s,mb4.5,baz=76,slow=7.5,SNR=34
ARE0 ARCESS Array S 76.63 341 eP P 06 15 07.6 +0.7
ETW Entiat 76.88 44 eP P 06 15 09.8 +1.1
B08A Colville Reser 77.23 43 ⇓P P 06 15 09.8 -0.8
baz=77
HAWA Hanford 77.83 45 eP P 06 15 14.1 0.0
comp=Z,7.3nm,0.9s,mb4.6
D08A Wollman Farm, 77.97 44 ⇑P P 06 15 14.3 -0.5
baz=78
OD2 Odessa Site #2 77.98 43 eP P 06 15 15.2 +0.4
OD2 e 06 15 25.0
C09A Chrisman Ranch 78.09 43 ⇓P P 06 15 15.0 -0.5
baz=78
K05A Summer Lake 78.30 48 ⇓P P 06 15 15.9 -0.9
baz=78
VRHR Novokhopersk 78.41 321 eP P 06 15 17.0 -0.2
VRHR pmax pmax
comp=E,20nm,0.9s
VRHR pmax pmax
comp=Z,20nm,0.9s,mb5.0
VRHR pmax pmax
comp=N,4.0nm,0.5s
G08A Pilot Rock 78.62 45 ⇓P P 06 15 18.4 -0.1
baz=78
NEW Newport 78.63 42 eP P 06 15 19.3 +0.8
NEW e 06 15 29.6
NEW pmax pmax
comp=Z,12nm,1.0s
NEW Newport 78.63 42 eP P 06 15 19.3 +0.8
comp=Z,12nm,1.0s,mb4.8
NEW e 06 15 23.2
NEW e 06 15 29.6
E09A Wood Farm, Sta 78.67 44 ⇑P P 06 15 19.0 +0.3
baz=78
EDM Edmonton 78.78 37 eP P 06 15 20.0 +0.8
MOD Modoc 79.02 49 eP P 06 15 20.7 0.0
comp=Z,11nm,1.3s,mb4.6
C11A Tepee Creek (N 79.33 42 ⇓P P 06 15 20.1 -2.2
baz=79
OBN Obninsk 79.44 326⇑eP P 06 15 22.3 -0.5
OBN eS S 06 25 17.0 -5.5
OBN pmax pmax
comp=Z,14nm,1.0s,mb4.8
OBN MLR MLR
comp=Z,600nm,18.0s,MS5.0
F10A Beach Ranch, E 79.47 44 ⇓P P 06 15 22.9 -0.2
baz=79
J08A Circle Bar Ran 79.70 47 ⇓P P 06 15 23.7 -0.8
baz=80
VSR Storozhevoye 79.77 322 eP P 06 15 25.3 +0.7
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,10.0nm,0.9s
VSR pmax pmax
comp=Z,30nm,0.9s,mb5.2
VSR MLR MLR
comp=N,630nm,20.0s,MS5.0
VSR MLR MLR
comp=E,470nm,20.0s,MS5.0
VSR MLR MLR
comp=Z,980nm,20.0s,MS5.2
VORD Divnogorie 79.80 321 eP P 06 15 23.7 -1.1
VORD pmax pmax
comp=N,10.0nm,1.0s
VORD pmax pmax
comp=E,20nm,1.0s
VORD pmax pmax
comp=Z,20nm,1.0s,mb5.0
BMO Blue Mountains 79.87 45 eP P 06 15 25.6 +0.3
comp=Z,7.4nm,0.9s,mb4.6
BSMT Bassoo Peak 80.22 42 eP P 06 15 27.2 0.0
WALA Waterton Lakes 80.24 41 eP P 06 15 28.4 +1.2
comp=Z,0.5nm,0.9s
WALA e 06 15 32.4
WALA e 06 15 39.1
ZEI Tsey 80.34 312 eP P 06 15 27.5 -0.4
ZEI pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
C13A Hot Springs 80.43 42 ⇓P P 06 15 28.0 -0.3
baz=80
CMB Columbia Colle 80.44 53 eP P 06 15 28.9 +0.3
CMB pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
CMB Columbia Colle 80.44 53 eP P 06 15 28.9 +0.4
comp=Z,9.7nm,0.8s,mb4.8
KAF Kangasniemi 80.52 335 eP P 06 15 27.2 -1.3
KAF pmax pmax
comp=Z,29nm,1.3s,mb5.0
KAF Kangasniemi 80.52 335 ep P 06 15 27.2 -1.3
comp=Z,29nm,1.3s,mb5.0,baz=61,slow=4.9
A14A Double T Ranch 80.57 40 ⇓P P 06 15 29.4 +0.4
baz=80,SNR=11
JTMT Jette 80.58 42 eP P 06 15 30.1 +1.0
JTMT e 06 15 34.3
JTMT e 06 15 40.5
KIV Kislovodsk 80.67 314⇓eP P 06 15 31.3 +1.6
KIV e 06 18 30.7
KIV eS S 06 25 31.7 -4.2
KIV pmax pmax
comp=Z,18nm,0.9s,mb5.0
GNI Garni 80.82 310ceP P 06 15 31.4 +0.9
GNI pmax pmax
comp=Z,8.0nm,1.0s
F12A Elk City 80.82 44 ⇑P P 06 15 29.5 -0.9
baz=81
SWMT Swartz Lake 80.85 42 eP P 06 15 31.6 +1.0
C14A Swan Lake 80.89 42 ⇑P P 06 15 29.5 -1.2
baz=81
B14A Marquette Ranc 80.92 41 ⇑P P 06 15 31.9 +1.0
baz=81,SNR=8.5
WAKR Walker 80.95 52 eP P 06 15 32.4 +1.1
A15A Johnson Ranch, 80.97 40 ⇑P P 06 15 30.7 -0.4
baz=81,SNR=11
FINES FINESS Array B 80.98 334 P P 06 15 30.7 -0.3
comp=Z,9.2nm,0.5s,mb5.0,baz=64,slow=5.3,SNR=116
K10A MacKenzie Ranc 81.00 47 ⇓P P 06 15 30.7 -0.8
baz=81
G12A Big Creek, Yel 81.04 45 ⇑P P 06 15 30.8 -0.8
baz=81
E13A Victor 81.20 43 ⇑P P 06 15 32.1 -0.3
baz=81
SLMT Seeley Lake 81.28 42 eP P 06 15 33.6 +0.7
D14A Greenough 81.34 42 ⇑P P 06 15 32.2 -0.9
baz=81
B15A Bradely Ranch, 81.37 41 ⇑P P 06 15 33.5 +0.2
baz=81,SNR=9.4
F13A Darby 81.39 44 ⇓P P 06 15 33.0 -0.4
baz=81
MFID Camas Ranch 81.43 46 ⇑P P 06 15 33.8 0.0
baz=81
L10A Juniper Basin 81.56 48 ⇓P P 06 15 35.0 +0.5
baz=81
K11A Parker Ranch, 81.57 47 ⇑P P 06 15 33.7 -0.8
baz=81
H12A Diamond D Ranc 81.59 45 ⇓P P 06 15 33.9 -0.6
baz=81
A16A West Butte Ran 81.66 40 ⇑P P 06 15 34.5 -0.3
baz=82,SNR=16
I12A Atlanta 81.73 46 ⇓P P 06 15 33.7 -1.6
baz=82
G13A Cobalt 81.75 44 ⇑P P 06 15 34.8 -0.6
baz=82
NVAR Mina Array Bea 81.79 52 P P 06 15 36.2 +0.5
comp=Z,5.3nm,0.9s,mb4.5,baz=281,slow=5.4,SNR=15
H13A Challis 81.97 45 ⇓P P 06 15 36.9 +0.3
baz=82
L11A Cat Creek Ranc 82.01 47 ⇓P P 06 15 37.1 +0.3
baz=82
C16A Fuhringer Ranc 82.09 41 ⇓P P 06 15 36.5 -0.6
baz=82
E15A Deer Lodge 82.17 43 P P 06 15 37.9 +0.4
baz=82,SNR=12
A17A Triple J Farms 82.18 40 ⇓P P 06 15 37.1 -0.4
baz=82
HLID Hailey 82.30 46 ⇓P P 06 15 39.1 +0.8
baz=82
HLID Hailey 82.30 46 eP P 06 15 39.0 +0.7
comp=Z,3.8nm,0.9s,mb4.3
HLID e 06 15 43.4
HLID e 06 15 49.5
I13A Wildhorse Cree 82.34 45 ⇑P P 06 15 38.8 +0.3
baz=82
B17A L&G Farms, Che 82.43 40 ⇓P P 06 15 38.9 0.0
baz=82,SNR=13
H14A Leadore 82.52 44 ⇓P P 06 15 39.6 +0.2
baz=82
L12A House Creek Ra 82.52 47 ⇑P P 06 15 39.3 -0.2
baz=82
F15A Butte 82.52 43 ⇑P P 06 15 38.9 -0.5
baz=82
LRM Limekiln Ridge 82.55 43 eP P 06 15 40.5 +0.9
D16A Dana Ranch, Ca 82.56 42 ⇓P P 06 15 40.1 +0.5
baz=82,SNR=7.7
DLMT Dillon 82.67 44 eP P 06 15 40.7 +0.5
comp=Z,13nm,1.2s,mb4.8
A18A Metzger Ranch, 82.69 39 ⇑P P 06 15 40.4 +0.2
baz=82,SNR=10.0
C17A Wharram Farm, 82.75 41 ⇑P P 06 15 40.4 -0.1
baz=83
I14A Mackay 82.77 45 ⇑P P 06 15 41.5 +0.8
baz=83
M12A Wells 82.90 48 ⇑P P 06 15 41.1 -0.3
baz=83
H15A Lima 82.98 44 ⇑P P 06 15 41.5 -0.3
baz=83
D17A Six Diamond Ra 83.03 41 ⇓P P 06 15 42.3 +0.3
baz=83,SNR=11
F16A Kennard Place, 83.08 43 ⇑P P 06 15 42.7 +0.3
baz=83
BOZ Bozeman (W) 83.15 43 ⇓P P 06 15 42.5 -0.2
baz=83,SNR=7.9
BOZ Bozeman (W) 83.15 43 eP P 06 15 43.4 +0.8
BOZ pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
BOZ Bozeman (W) 83.15 43 eP P 06 15 43.4 +0.7
comp=Z,2.5nm,0.8s,mb4.3
S10A Tonopah Range, 83.23 52 ⇓P P 06 15 43.3 +0.1
baz=83
G16A Moss Hill, Enn 83.23 43 ⇓P P 06 15 42.3 -0.8
baz=83,SNR=8.1
L13A Double Diamond 83.26 47 ⇓P P 06 15 43.6 +0.3
baz=83
MPMC Manual Prospec 83.36 54 ⇑P P 06 15 43.3 -0.7
baz=83
M13A Montello 83.43 48 eP P 06 15 42.6 -1.6
comp=Z,4.8nm,0.8s,mb4.6
LRMC Laurel Mountai 83.46 54 ⇓P P 06 15 44.6 +0.1
baz=83
O12A Currie 83.52 49 ⇓P P 06 15 43.7 -1.0
baz=83
K14A Jones Ranch, D 83.56 46 ⇓P P 06 15 44.0 -0.8
baz=83
SUMG Summit 83.60 0 eP P 06 15 45.5 +1.0
SUMG pmax pmax
comp=Z,6.0nm,0.8s
SUMG Summit 83.60 0 eP P 06 15 45.5 +1.0
comp=Z,6.4nm,0.8s,mb4.8
SUMG Summit 83.60 0 iP P 06 15 45.5 +1.0
comp=Z,5.9nm,0.8s,mb4.8
R11A Troy Canyon, C 83.76 51 ⇓P P 06 15 45.9 -0.1
baz=84
E18A Harlowton 83.77 42 ⇓P P 06 15 45.5 -0.3
baz=84,SNR=9.6
FFC Flin Flon 83.90 32 iP P 06 15 47.1 +0.8
FFC Flin Flon 83.90 32 eP P 06 15 46.3 0.0
comp=Z,21nm,1.1s,mb5.2
FFC e pP 06 15 51.0 -2.6
FFC e 06 15 57.3
M14A Sheep Mountain 83.92 47 ⇑P P 06 15 45.0 -1.7
baz=84
YMR Madison River 84.02 44 eP P 06 15 47.8 +0.6
comp=Z,9.1nm,0.7s,mb5.0
YMR e pP 06 15 52.9 -1.6
YMR e 06 16 01.0
U10A Ash Meadows, A 84.06 53 ⇑P P 06 15 47.3 -0.2
baz=84
MICGM Minsk 84.09 328 e P 06 15 46.0 -1.3
MNK Minsk 84.11 328 eP P 06 15 46.0 -1.4
GSC Goldstone 84.19 54 eP P 06 15 48.4 +0.2
GSC pmax pmax
comp=Z,10.0nm,1.2s,mb4.8
GSC Goldstone 84.19 54 eP P 06 15 48.4 +0.2
comp=Z,9.5nm,1.2s,mb4.8
YFT Old Faithful 84.20 44 eP P 06 15 49.2 +1.1
comp=Z,5.1nm,0.7s,mb4.8
F18A Big Timber 84.21 42 ⇑P P 06 15 47.9 -0.2
baz=84
N14A Grayback Hills 84.32 48 ⇑P P 06 15 48.5 -0.2
baz=84
NACGM Naroch 84.39 329 e P 06 15 46.0 -2.8
IMW Indian Meadow 84.40 44 eP P 06 15 51.0 +1.9
comp=Z,6.5nm,0.9s,mb4.8
IMW e 06 15 54.9
IMW e 06 16 01.3
K16A Soda Springs 84.47 45 ⇓P P 06 15 49.1 -0.4
baz=84
LOHW Long Hollow 84.74 44 eP P 06 15 51.7 +0.9
comp=Z,5.1nm,1.1s,mb4.6
RLMT Red Lodge 84.86 43 ⇑P P 06 15 51.8 +0.4
baz=85,SNR=6.7
RLMT Red Lodge 84.86 43 eP P 06 15 53.2 +1.8
comp=Z,5.5nm,0.6s,mb4.9
DUG Dugway 84.87 48 ⇑P P 06 15 51.2 -0.4
baz=85,SNR=7.0
DUG Dugway 84.87 48 eP P 06 15 51.6 0.0
DUG pmax pmax
comp=Z,17nm,1.4s,mb5.0
DUG Dugway 84.87 48 eP P 06 15 51.6 0.0
comp=Z,17nm,1.4s,mb5.0
V11A Goodsprings 84.97 53 ⇑P P 06 15 51.4 -0.7
baz=85
P14A Drum Mountains 84.97 49 ⇑P P 06 15 51.7 -0.4
baz=85
HWUT Hardware Ranch 85.06 47 eP P 06 15 53.0 +0.6
comp=Z,8.8nm,1.1s,mb4.8
Q14A Sevier Lake (B 85.10 49 ⇑P P 06 15 51.8 -0.9
baz=85,SNR=7.8
J18A Kendall Valley 85.31 45 ⇓P P 06 15 53.5 -0.2
baz=85,SNR=8.8
AKASG Malin Array Be 85.50 324 P P 06 15 54.0 -0.5
comp=Z,3.0nm,0.6s,mb4.6,baz=48,slow=5.0,SNR=17
AKBB Malin Array Si 85.50 324 eP P 06 15 54.0 -0.5
KIEV Kiev 85.51 324 eP P 06 15 53.3 -1.2
KIEV pmax pmax
comp=Z,13nm,1.1s,mb5.1
KIEV Kiev 85.51 324 eP P 06 15 53.3 -1.2
comp=Z,13nm,1.1s,mb5.1
ARUT Antelope Range 85.53 51 eP P 06 15 55.9 +1.0
ARUT pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
ARUT Antelope Range 85.53 51 eP P 06 15 55.9 +0.9
comp=Z,8.0nm,0.9s,mb5.0
T13A Saint George 85.54 51 ⇑P P 06 15 54.6 -0.4
baz=85
K18A Toltan Ranch, 85.57 45 ⇓P P 06 15 56.2 +1.2
baz=85
JLU Jordanelle 85.61 47 eP P 06 15 55.6 +0.4
comp=Z,6.6nm,0.9s,mb4.9
CCUT Cedar City 85.69 51 eP P 06 15 56.5 +0.7
comp=Z,4.9nm,1.0s,mb4.7
CCUT e 06 16 00.5
CCUT e 06 16 06.9
M17A Scullys Gap (B 85.72 46 ⇓P P 06 15 55.0 -0.7
baz=86
U13A Pakoon Wash 85.77 52 ⇑P P 06 15 55.9 -0.3
baz=86,SNR=12
BW06 Boulder Array 85.82 45 eP P 06 15 56.1 -0.1
comp=Z,2.8nm,1.0s,mb4.5
PDAR Pinedale Array 85.82 45 P P 06 15 56.5 +0.3
comp=Z,1.5nm,0.8s,mb4.3,baz=277,slow=2.2,SNR=7.4
DAU Daniels Canyon 85.83 47 eP P 06 15 57.4 +1.1
MSU Marysvale 86.08 49 eP P 06 15 58.8 +1.2
T14A Hurricane 86.11 51 ⇓P P 06 15 58.2 +0.4
baz=86
K19A Absolon Red Bu 86.25 44 ⇓P P 06 15 57.5 -0.9
baz=86
O17A Robinson Place 86.28 47 ⇓P P 06 15 58.8 +0.2
baz=86,SNR=7.9
U14A Mt Trumbull 86.34 52 ⇑P P 06 15 59.0 +0.1
baz=86
Q16A Castle Valley 86.59 49 ⇓P P 06 15 59.5 -0.6
baz=86,SNR=5.9
N18A Larsen Ranch, 86.61 46 ⇑P P 06 15 59.4 -0.8
baz=86
T15A Red Dirt Ranch 86.63 51 ⇑P P 06 16 00.2 -0.1
baz=86,SNR=7.7
K20A Yellowstone Ra 86.66 44 ⇓P P 06 15 59.9 -0.4
baz=86
R16A Teasdale 86.67 49 ⇑P P 06 16 00.4 -0.1
baz=86,SNR=11
NB2 NORSAR Subarra 86.69 339 P P 06 15 59.3 -0.8
comp=Z,15nm,0.8s,mb5.3,baz=46,slow=4.8
NB2 NORSAR Subarra 86.69 339 P P 06 15 59.3 -0.8
baz=46,slow=4.8
NB2 NORSAR Subarra 86.69 339 P P 06 15 59.3 -0.8
NB2 NORSAR Subarra 86.69 339 P P 06 15 59.3 -0.8
NOA NORSAR Array B 86.69 339 P P 06 15 59.8 -0.3
comp=Z,12nm,0.8s,mb5.2,baz=48,slow=4.7,SNR=35
X13A Yucca 86.69 54 ⇓P P 06 16 01.6 +0.8
baz=87
O18A Roosevelt 86.73 47 ⇓P P 06 16 01.3 +0.5
baz=87
V14A Boquillas Ranc 86.75 52 ⇓P P 06 16 00.9 -0.1
baz=87,SNR=9.7
S16A Weppner Ranch, 86.86 50 ⇑P P 06 16 01.0 -0.4
baz=87
P18A Preston Nutter 86.88 48 P P 06 16 02.6 +1.1
baz=87,SNR=6.2
SRU San Rafael 86.94 48 P P 06 16 02.2 +0.3
baz=87,SNR=9.4
SRU San Rafael 86.94 48 eP P 06 16 02.1 +0.3
SRU pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
SRU San Rafael 86.94 48 eP P 06 16 02.1 +0.2
comp=Z,5.2nm,0.7s,mb4.9
W14A Seligman 86.96 53 ⇓P P 06 16 01.9 -0.1
baz=87,SNR=8.3
U15A North Rim 86.97 51 ⇓P P 06 16 01.7 -0.3
baz=87,SNR=7.9
Y13A Salome 87.05 54 ⇑P P 06 16 02.3 -0.1
baz=87
R17A Hanksville Air 87.14 49 ⇑P P 06 16 02.4 -0.4
baz=87
Q18A Rafter H Ranch 87.21 48 ⇓P P 06 16 03.4 +0.2
baz=87
V15A Kaibab Nationa 87.34 52 ⇓P P 06 16 03.7 -0.1
baz=87
X14A Yava 87.44 53 ⇓P P 06 16 04.2 -0.1
baz=87
S17A Black Ridge (B 87.45 50 ⇓P P 06 16 03.1 -1.3
baz=87
Z13A Yuma Proving G 87.45 55 ⇓P P 06 16 04.1 -0.3
baz=87
Y14A Wickenburg 87.60 54 ⇓P P 06 16 04.5 -0.6
baz=88
R18A Canyonlands Na 87.72 49 ⇑P P 06 16 05.0 -0.6
baz=88
P19A Cripple Cowboy 87.73 47 ⇓P P 06 16 06.2 +0.5
baz=88,SNR=11
T17A Navajo Res., N 87.75 50 ⇑P P 06 16 06.2 +0.3
baz=88
M21A Separation Pea 87.81 45 ⇓P P 06 16 06.3 +0.4
baz=88
Q19A Hogan Spring (87.87 48 ⇓P P 06 16 05.4 -1.0
baz=88
X15A Humboldt 87.91 53 ⇓P P 06 16 06.5 -0.2
baz=88,SNR=14
U16A Tuba City 87.93 51 ⇑P P 06 16 06.0 -0.6
baz=88,SNR=9.6
S18A Hurst Farm, Bl 87.99 49 ⇑P P 06 16 05.3 -1.6
baz=88
U17A Shonto 88.05 51 ⇓P P 06 16 07.7 +0.5
baz=88,SNR=9.3
WUAZ Wupatki 88.05 52 eP P 06 16 07.2 -0.1
comp=Z,7.0nm,1.0s,mb4.8
Y15A Casa Rosa Ranc 88.09 54 ⇓P P 06 16 07.5 0.0
baz=88,SNR=8.9
N21A Black Mountain 88.14 46 ⇑P P 06 16 07.7 +0.2
baz=88
R19A Curley Farm, L 88.20 49 ⇓P P 06 16 07.8 -0.2
baz=88
PV10 Paradox Valley 88.31 48 eP P 06 16 09.5 +1.1
comp=Z,215nm,0.9s
T18A Mexican Hat 88.34 50 ⇑P P 06 16 08.3 -0.3
baz=88
PV04 Paradox Valley 88.39 48 eP P 06 16 09.6 +0.8
V17A Tonalea, Kykot 88.42 52 ⇑P P 06 16 09.3 +0.3
baz=88,SNR=8.4
X16A Lo Mia Camp, P 88.52 53 ⇑P P 06 16 09.0 -0.5
baz=88
Q20A Ridgley Place, 88.53 48 ⇓P P 06 16 09.6 +0.2
baz=88,SNR=21
S19A Harvey Farm, M 88.55 49 ⇓P P 06 16 09.3 -0.3
baz=88
BR131 Keskin Array S 88.61 313 eP P 06 16 09.8 0.0
comp=Z,2.1nm,0.6s,mb4.6
BRTR Keskin Array B 88.61 313 P P 06 16 09.7 -0.2
comp=Z,4.5nm,0.8s,mb4.8,baz=98,slow=3.7,SNR=23
U18A Rough Rock, Ch 88.69 50 ⇓P P 06 16 10.1 -0.2
baz=88,SNR=9.0
Y16A Circle Bar Ran 88.75 53 ⇑P P 06 16 09.8 -0.8
baz=89
PV01 Paradox Valley 88.75 48 eP P 06 16 11.1 +0.6
comp=Z,431nm,1.1s
S20A Disappointment 89.05 49 ⇓P P 06 16 11.9 0.0
baz=89
Q21A Lamborn Mesa, 89.08 47 ⇓P P 06 16 12.0 0.0
baz=89
U19A Dine' College, 89.22 50 ⇑P P 06 16 13.5 +0.8
baz=89,SNR=5.7
SMCO Snowmass 89.31 47 eP P 06 16 14.1 +1.0
comp=Z,3.5nm,0.9s,mb4.7
R21A Cimarron 89.33 48 ⇑P P 06 16 12.9 -0.3
baz=89,SNR=5.4
BUR08 Bucovina Ar. S 89.41 323 eP P 06 16 12.9 -0.5
Q22A Crested Butte, 89.51 47 ⇓P P 06 16 13.6 -0.5
baz=89
W19A Sanders 89.67 51 ⇑P P 06 16 16.2 +1.3
baz=90
Y18A Canyon Day Jun 89.85 53 ⇓P P 06 16 16.1 +0.3
baz=90
R22A Saguache, Gunn 89.94 48 ⇑P P 06 16 16.5 +0.5
baz=90
V20A Brimhall 89.98 50 ⇑P P 06 16 16.0 -0.4
baz=90
X19A St. Johns 90.08 52 ⇓P P 06 16 16.3 -0.5
baz=90
S22A 4UR Ranch, Cre 90.14 48 ⇑P P 06 16 16.8 -0.2
baz=90
STHS Stebnicka Huta 90.41 326 eP P 06 16 15.2 -2.8
STHS e 06 26 21.3
STHS Stebnicka Huta 90.41 326 eP P 06 16 15.2 -2.8
STHS ePP SKSac 06 26 21.3 -27
T22A Edith 90.46 49 ⇓P P 06 16 18.8 +0.3
baz=90
X20A Quemado 90.59 52 ⇓P P 06 16 19.9 +0.8
baz=90
CRVS Cervenica-Dubn 90.62 326 eP P 06 16 19.1 +0.1
CRVS e 06 26 13.2
CRVS Cervenica-Dubn 90.62 326 eP P 06 16 19.1 +0.1
CRVS e 06 26 13.2
MMAI Mount Meron Ar 90.72 307 P P 06 16 19.0 -0.8
comp=Z,0.4nm,0.4s,mb4.2,baz=60,slow=5.7,SNR=3.9
AGMN Agassiz Nation 90.77 35 eP P 06 16 20.0 +0.2
comp=Z,3.3nm,0.9s,mb4.7
SDCO Great Sand Dun 91.03 48 eP P 06 16 21.4 +0.2
comp=Z,1.9nm,0.8s,mb4.5
R24A Sanders Place, 91.04 47 ⇑P P 06 16 21.5 +0.3
baz=91
X21A Alamocita Cree 91.14 51 ⇓P P 06 16 22.4 +0.6
baz=91
S24A Houchin Ranch, 91.28 48 ⇑P P 06 16 22.5 +0.1
baz=91
219A White Tail Can 91.29 54 ⇓P P 06 16 21.9 -0.5
baz=91
U23A El Rito 91.30 49 ⇑P P 06 16 22.2 -0.2
baz=91
Y21A Point of Rocks 91.44 52 ⇑P P 06 16 23.8 +0.6
baz=91
V23A Ortiz Mt. (NFS 91.61 50 ⇑P P 06 16 23.8 -0.1
baz=92
LAZ Ladron 91.63 51 eP P 06 16 24.8 +0.8
comp=Z,1.4nm,1.0s,mb4.2
OKC Ostrava-Krasne 91.68 328 eP P 06 16 30.7 +6.8
OKC e pP 06 16 36.8 +5.6
OKC Ostrava-Krasne 91.68 328 eP P 06 16 30.7 +6.8
OKC epP pP 06 16 36.8 +5.6
Z21A St. Cloud Mine 91.80 52 ⇓P P 06 16 24.6 -0.2
baz=92
ANMO Albuquerque 91.83 50 eP P 06 16 25.9 +1.0
ANMO pmax pmax
comp=Z,6.0nm,0.9s
ANMO Albuquerque 91.83 50 eP P 06 16 25.9 +0.9
comp=Z,6.2nm,0.9s,mb4.9
220A Playas Peak, P 91.88 54 ⇓P P 06 16 24.5 -0.7

baz=92
Y22A Socorro 91.99 51 ⇓P **P 06 16 25.3 -0.4**
baz=92
T25A Trinidad 92.09 48 ⇓P **P 06 16 25.2 -0.9**
baz=92
BNM Barren Site 92.12 51 *e*P **P 06 16 26.9 +0.6**
comp=Z,4.3nm,1.2s,mb4.7
DPC Dobruska-Polom 92.21 329 *e*P **P 06 16 26.4 +0.1**
DPC Dobruska-Polom 92.21 329 *e*P **P 06 16 26.4 +0.1**
UPC Upice 92.24 329 *e*P **P 06 16 26.6 +0.1**
UPC Upice 92.24 329 *e*P **P 06 16 26.6 +0.1**
Z22A Elephant Butte 92.34 52 ⇑P **P 06 16 26.9 -0.4**
baz=92
W24A Lazy 6 Ranch, 92.43 50 ⇓P **P 06 16 28.3 +0.6**
baz=92
U25A Circle Dot Ran 92.49 48 ⇑P **P 06 16 27.9 -0.1**
baz=92
Y23A Lovelace Mesa, 92.64 51 ⇓P **P 06 16 28.6 -0.1**
baz=92
V25A Rancho No Teng 92.64 49 ⇓P **P 06 16 29.1 +0.4**
baz=92
U26A Atchley Ranch, 92.94 48 ⇑P **P 06 16 30.1 +0.1**
baz=93
CLL Collm 93.05 331 *e*P **P 06 16 29.0 -1.2**
CLL Collm 93.05 331 *e*P **P 06 16 29.0 -1.2**
CLL *e*PP PP 06 20 15.0 +2.5
ECSD EROS Data Cent 93.18 39 *e*P **P 06 16 30.8 -0.2**
comp=Z,4.9nm,0.9s,mb4.9
Y25A Mesa, Roswell 93.61 50 ⇑P **P 06 16 32.9 -0.3**
baz=94
Z25A Roswell 93.93 51 ⇑P **P 06 16 34.9 +0.2**
baz=94
224A Cornudas Mount 93.98 52 ⇑P **P 06 16 34.6 -0.3**
baz=94
KHC Kasperske Hory 94.33 329 *e*P **P 06 16 42.5 +6.3**
KHC *e* pP 06 16 49.5 +6.0
KHC Kasperske Hory 94.33 329 *e*P **P 06 16 42.5 +6.3**
KHC *e*pP pP 06 16 49.5 +6.0
325A Bean Ranch, Si 94.75 53 ⇑P **P 06 16 39.0 +0.5**
baz=95
TXAR Lajitas Array 96.79 54 P **P 06 16 46.7 -1.1**
comp=Z,0.7nm,0.8s,mb4.1,baz=270,slow=1.3,SNR=5.7
DBIC Dimbokro 136.23 310 PKP PKPdf 06 22 38.2 -0.7
comp=Z,2.7nm,0.9s,baz=11,slow=14,SNR=3.9
PLCA Paso Flores 147.39 129 PKPbc PKPbc 06 23 00.8 +0.3
comp=Z,11nm,0.6s,baz=219,slow=3.1,SNR=38
PLCA Paso Flores 147.39 129 *e*PKPbc PKPbc 06 23 00.4 0.0
LPAZ La Paz 149.80 81 PKP PKPdf 06 23 03.4 +0.8
comp=Z,2.6nm,1.0s,baz=24,slow=6.2,SNR=7.2
LPAZ PKPbc PKPbc 06 23 08.8 +1.4
comp=Z,7.6nm,0.7s,baz=320,slow=2.8,SNR=35
LPAZ La Paz 149.80 81 *e*PKPdf PKPdf 06 23 03.7 +1.1
LPAZ *e*PKPbc PKPbc 06 23 08.6 +1.3

NNC 19 06:09:34.8±9.7, 36°.13N±0°.05 × 69°.94E, h0km, mb4.1, mpv3.5, 5C, Error ellipse: s-maj=100.9km s-min=69.6km az=141.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.98**	**3**	P	Pn	06 11 20.9	+2.8
	0.8nm,0.2s,baz=176,slow=11,SNR=40						
KK31				⇑S	Sn	06 12 36.9	-1.3
	1.1nm,0.3s,baz=187,slow=24,SNR=6.0						
TKM2	**Tokmak 2**	**8.06**	**31**	⇑P	Pn	06 11 30.6	-2.5
	1.1nm,0.5s						
AB31	**Akbulak array**	**15.02**	**334**	P	Pn	06 13 12.7	+4.6
	0.3nm,0.3s,baz=159,slow=13,SNR=17						
VOSK	**Vostochnaya**	**16.61**	**2**	⇑P	Pn	06 13 25.4	-3.4
	14nm,1.5s						
ZRNK	**Zerenda**	**16.83**	**358**	⇑P	Pn	06 13 33.5	+1.9
	10nm,1.0s						
BRVK	**Borovoye**	**16.93**	**1**	⇑P	Pn	06 13 28.6	-4.2
	25nm,1.2s						

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*ISCJB **19** 06:12:59.5±0.9, 37°.37N±0°.05 × 142°.32E±0°.08, h33km, mb4.0/3, Error ellipse: s-maj=9.4km s-min=6.5km az=32.8*
*JMA **19** 06:12:59.3±0.2, 37°.38N × 142°.25E, h31km±5km, M4.0*
*IDC **19** 06:13:13.1±3.8, 37°.72N × 141°.01E, h74km±35km, mb3.6/8, mb1 3.8/9, mb1mx3.6/24, mbtmp3.5/9, ML3.2/1, Error ellipse: s-maj=29.7km s-min=19.9km az=82.0*
ISC 19 06:13:00.7±2.1, 37°.38N±0°.05 × 142°.21E±0°.09, h28km±20km, **n25**, σ0°**88**/27, **mb4.0**/3, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.06**	**270**	P	**Pn**	**06 13 18.8**	**-0.9**
JFK				S	**Sn**	**06 13 32.8**	**-0.8**
ONAJ	**Iwakimizuishiy**	**1.16**	**257**	P	**Pn**	**06 13 19.9**	**-1.1**
ONAJ				*e*S	**Sn**	**06 13 34.7**	**-1.2**
JMM	**Marumori**	**1.22**	**294**	P	**Pn**	**06 13 21.1**	**-0.9**
JIO	**Ouri**	**1.27**	**328**	P	**Pn**	**06 13 21.7**	**-1.0**
JIO				S	**Sn**	**06 13 37.7**	**-1.1**
JFT	**Otama**	**1.49**	**276**	P	**Pn**	**06 13 26.0**	**+0.3**
JFT				S	**Sn**	**06 13 46.1**	**+1.8**
JOU	**Okura**	**1.57**	**309**	P	**Pn**	**06 13 26.6**	**-0.1**
JOU				S	**Sn**	**06 13 46.6**	**+0.5**
JMK	**Ichinoseki**	**1.75**	**334**	P	**Pn**	**06 13 29.1**	**-0.2**
JYS	**Shiratake**	**1.89**	**297**	P	**Pn**	**06 13 32.4**	**+1.2**
JFY	**Yanaizu**	**1.99**	**272**	P	**Pn**	**06 13 32.9**	**+0.4**
JYK	**Kaneyama**	**2.12**	**317**	P	**Pn**	**06 13 34.3**	**0.0**
JOM	**Ohasama**	**2.21**	**341**	P	**Pn**	**06 13 35.7**	**+0.1**
JAG	**Ashikaga**	**2.40**	**248**	P	**Pn**	**06 13 38.2**	**0.0**
MJAR	**Matsushiro Arr**	**3.31**	**257**	P	**Pn**	**06 13 51.5**	**+0.9**
	4.6nm,0.3s,baz=72,slow=7.4,SNR=22						
MAT	**Matsushiro**	**3.31**	**257**	P	**Pn**	**06 13 51.7**	**+1.0**
MAT				S	**Sn**	**06 14 32.9**	**+3.8**
JHJ	**Hachijo jima 2**	**4.69**	**206**	P	**Pn**	**06 14 09.9**	**+0.3**
	14nm,0.3s,baz=261,slow=22,SNR=5.5						
JHJ				S	**Sn**	**06 14 59.8**	**-3.3**
	22nm,0.3s,baz=300,slow=14,SNR=3.8						
ASAJ	**Asahikawa**	**6.74**	**2**	P	**Pn**	**06 14 37.8**	**0.0**
	1.3nm,0.3s,baz=180,slow=15,SNR=4.1						
KSRS	**Korea Array**	**11.36**	**275**	P	**Pn**	**06 15 45.2**	**+4.1**
	0.2nm,0.3s,baz=89,slow=14,SNR=9.7						
SONM	**Songino Array**	**28.12**	**303**	P	**P**	**06 18 50.8**	**+0.6**
	2.3nm,0.8s,mb3.8,baz=99,slow=9.1,SNR=11						
ZALV	**Zalesovo Beam**	**42.15**	**312**	P	**P**	**06 20 50.7**	**+0.2**
	2.7nm,0.6s,mb4.1,baz=96,slow=7.6,SNR=8.9						
ILAR	**Eielson Array**	**48.87**	**33**	P	pP	06 21 52.1	+0.3
	0.6nm,0.8s,baz=262,slow=6.4,SNR=5.9						
WRA	**Warramunga Arr**	**57.49**	**189**	P	pP	06 22 54.9	-1.0
	1.5nm,0.7s,baz=3.8,slow=7.3,SNR=6.6						
ASAR	**Alice Springs**	**61.22**	**189**	P	pP	06 23 22.6	+1.0
	0.4nm,0.5s,baz=16,slow=7.2,SNR=5.4						
FINES	**FINESS Array B**	**68.81**	**332**	P	**P**	**06 24 02.5**	**+0.5**
	2.0nm,0.7s,mb4.2,baz=26,slow=9.1,SNR=7.6						
PDAR	**Pinedale Array**	**76.98**	**46**	P	pP	06 25 01.1	+1.5
	0.3nm,0.6s,baz=280,slow=5.4,SNR=3.7						
TXAR	**Lajitas Array**	**89.41**	**53**	P	pP	06 26 05.9	+1.8
	0.3nm,0.7s,baz=263,slow=4.9,SNR=3.6						

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*ISCJB **19** 06:17:41.5±0.4, 37°.86N±0°.02 × 72°.71E±0°.03, h109km±4km, mb4.4/64, Error ellipse: s-maj=4.2km s-min=3.1km az=152.2*
*SZGRF **19** 06:17:44.0, 38°.12N × 71°.53E, h33km, mb4.4, Afghanistan-Tajikistan border region*
*NEIC **19** 06:17:45.8±0.7, 38°.06N × 72°.73E, h128km±6km, mb4.5/27, Error ellipse: s-maj=7.3km s-min=5.4km az=174.0*
*BJI **19** 06:17:45.0, 38°.09N × 72°.78E, h130km, mB5.3/13, mb4.6/27*
*MOS **19** 06:17:45.0±1.0, 38°.09N × 72°.73E, h134km, mb4.4/31, Error ellipse: s-maj=7.6km s-min=4.5km az=113.5*
*IDC **19** 06:17:47.8±0.9, 38°.13N × 72°.78E, h146km±7km, mb3.8/13, mb1 4.0/18, mb1mx3.8/27, mbtmp3.9/18, Error ellipse: s-maj=12.5km s-min=11.2km az=173.0*
*NNC **19** 06:17:49.4±4.8, 38°.39N × 72°.49E, h192km±44km, mb3.9, mpv4.8, Error ellipse: s-maj=47.2km s-min=21.2km az=8.0*
ISC 19 06:17:43.8±0.3, **37°.88**N±0°.02 × **72.79E**±0°.03, **h117**km±3km, **h136**km±3.2km: **pP-P, n249**, σ**1**9**21**/286, **mb4.4**/64, **18C-28D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**2.98**	**56**	⇑*i*P	**Pn**	**06 18 28.1**	**-1.6**
KSH				sP		06 18 53.5	
KSH				S	**Sn**	**06 18 58.0**	**-7.1**
KSH				smax			
	comp=N,4μm,0.8s						
KSH				smax			
	comp=E,2μm,0.4s						
CEP	**Cherat**	**4.11**	**190**	P	**Pn**	**06 18 48.1**	**+3.3**
CEP				S	**Sn**	**06 19 26.0**	**-6.0**
CHCP	**Chirah Chowk**	**4.23**	**175**	⇑P	**Pn**	**06 18 50.4**	**+4.0**
AML	**Almayashu**	**4.30**	**9**	P	**Pn**	**06 18 48.4**	**+1.1**
	SNR=46						
AML	**Almayashu**	**4.30**	**9**	*e*Pn	**Pn**	**06 18 48.5**	**+1.2**
AML				*e*Sn	**Sn**	**06 19 34.7**	**-1.9**
KBL	**Kabul**	**4.50**	**223**	*e*Pn	**Pn**	**06 18 52.7**	**+2.7**
KBL				*e*Sn	**Sn**	**06 19 44.1**	**+2.8**
UCH	**Uchtor**	**4.54**	**16**	P	**Pn**	**06 18 52.2**	**+1.7**
	SNR=134						
UCH	**Uchtor**	**4.54**	**16**	*e*Pn	**Pn**	**06 18 51.9**	**+1.5**
UCH				*e*Sn	**Sn**	**06 19 41.1**	**-1.2**
KZA	**Kyzart**	**4.60**	**24**	P	**Pn**	**06 18 52.7**	**+1.4**
	SNR=20						
EKS2	**Erkin-Say**	**4.84**	**9**	P	**Pn**	**06 18 55.9**	**+1.5**
	SNR=92						
EKS2	**Erkin-Say**	**4.84**	**9**	*e*Pn	**Pn**	**06 18 55.7**	**+1.2**
EKS2				*e*Sn	**Sn**	**06 19 49.5**	**+0.1**
AAK	**Ala-Archa**	**4.93**	**15**	P	**Pn**	**06 18 57.5**	**+1.9**
	SNR=52						
AAK	**Ala-Archa**	**4.93**	**15**	P	**Pn**	**06 18 56.5**	**+0.9**
	comp=E,20nm,0.3s,baz=176,slow=6.7,SNR=57						
AAK				S	**Sn**	**06 19 51.4**	**-0.1**
	comp=E,36nm,0.3s,baz=127,slow=20,SNR=44						
AAK	**Ala-Archa**	**4.93**	**15**	*ce*PN	**Pn**	**06 18 57.3**	**+1.7**
AAK				pmax	pmax		
	comp=Z,33nm,0.8s						
AAK	**Ala-Archa**	**4.93**	**15**	*e*Pn	**Pn**	**06 18 57.1**	**+1.5**
AAK				*e*Sn	**Sn**	**06 19 51.5**	**0.0**
KBK	**Karagaybulak**	**5.05**	**18**	P	**Pn**	**06 18 59.0**	**+1.7**
	SNR=26						
ULHL	**Ulahol**	**5.10**	**30**	P	**Pn**	**06 18 59.3**	**+1.3**
	SNR=76						
FRU	**Bishkek**	**5.14**	**15**	*e*PN	**Pn**	**06 19 01.0**	**+2.4**
FRU				*e*S	**Sn**	**06 19 56.0**	**-0.8**
FRU				pmax	pmax		
	comp=Z,57nm,1.8s						
FRU				smax			
	comp=E,820nm,1.8s						
THW	**Thamme Wali**	**5.14**	**190**	P	**Pn**	**06 19 01.4**	**+2.7**
CHMS	**Chumysh**	**5.33**	**16**	P	**Pn**	**06 19 02.4**	**+1.3**
	SNR=26						
TKM2	**Tokmak 2**	**5.47**	**22**	⇓P	**Pn**	**06 19 03.8**	**+0.8**
	comp=E,26nm,0.6s						
TKM2				⇓S	**Sn**	**06 20 05.5**	**+0.7**
	comp=E,105nm,0.7s						
TKM2	**Tokmak 2**	**5.47**	**22**	P	**Pn**	**06 19 04.5**	**+1.4**
	SNR=65						
TKM2	**Tokmak 2**	**5.47**	**22**	*e*PN	**Pn**	**06 19 04.0**	**+1.0**
TKM2				pmax	pmax		
	comp=Z,43nm,0.4s						
TKM2	**Tokmak 2**	**5.47**	**22**	*e*Pn	**Pn**	**06 19 04.0**	**+1.0**
	comp=Z,43nm,0.4s						
KK31	**Karatay Array**	**5.50**	**342**	P	**Pn**	**06 19 03.0**	**-0.4**
	comp=Z,167nm,0.4s,baz=155,slow=11,SNR=2055						
KK31				⇑S	**Sn**	**06 20 01.3**	**-4.0**
	comp=Z,293nm,0.5s,baz=150,slow=27,SNR=4.2						
KK31	**Karatay Array**	**5.50**	**342**	*i* PN	**Pn**	**06 19 03.0**	**-0.4**
KK31				pmax	pmax		
	comp=Z,221nm,0.2s						
USP	**Ospenovka**	**5.54**	**13**	P	**Pn**	**06 19 04.9**	**+1.0**
	SNR=23						
THN	**Thein Dam**	**5.94**	**155**	*e*PKP	**Pn**	**06 19 10.4**	**+1.0**
THN				*e*S	**Sn**	**06 20 15.7**	**-0.4**
SARP	**Sargodha**	**5.94**	**181**	P	**Pn**	**06 19 12.1**	**+2.6**
BHK	**Bhakra**	**7.11**	**154**	*e*PKP	**Pn**	**06 19 23.6**	**-1.6**
BHK				*e*S	**Sn**	**06 20 40.1**	**-4.3**
DDI	**Dehra Dun**	**8.71**	**148**	*e*PKP	**Pn**	**06 19 44.5**	**-2.4**
DDI				*e*S	**Sn**	**06 21 18.0**	**-5.3**
JOSI	**Joshimath**	**9.21**	**141**	*e*PKP	**Pn**	**06 19 53.9**	**+0.3**
JOSI				*e*S	**Sn**	**06 21 28.7**	**-6.6**
JOSI				AML	AML	06 21 37.3	
	comp=E,430nm,1.0s						
JOSI				AML	AML	06 21 37.4	
	comp=N,410nm,0.6s						
NDI	**New Delhi**	**9.89**	**157**	*e*PKP	**Pn**	**06 20 01.0**	**-1.9**
NDI				*e*S	**Sn**	**06 21 45.0**	**-7.0**
KHET	**Khetri**	**10.10**	**165**	*e*PKP	**Pn**	**06 20 03.7**	**-2.0**
KHET				*e*S	**Sn**	**06 21 50.8**	**-6.3**
KHET				AML	AML	06 21 57.4	
	comp=N,47nm,0.4s						
KHET				AML	AML	06 21 57.9	
	comp=E,52nm,0.5s						
JASL	**Jaisalmer**	**11.04**	**189**	*e*PKP	**Pn**	**06 20 17.1**	**-1.1**
MK31	**Makanchi Array**	**11.34**	**35**	⇑P	**Pn**	**06 20 22.0**	**-0.1**
	comp=E,9.2nm,0.8s,baz=222,slow=9.6,SNR=44						
MK31	**Makanchi Array**	**11.34**	**35**	*ce*P	**Pn**	**06 20 22.0**	**-0.1**
MK31				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MK31	**Makanchi Array**	**11.34**	**35**	*e*Pn	**Pn**	**06 20 22.3**	**+0.2**
MKAR	**Makanchi Array**	**11.34**	**35**	P	**Pn**	**06 20 22.1**	**0.0**
	comp=Z,0.9nm,0.3s,baz=217,slow=14,SNR=44						
MKAR	**Makanchi Array**	**11.34**	**35**	P	**Pn**	**06 20 22.1**	**0.0**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AJM	**Ajmer**	**11.47**	**172**	*e*PKP	**Pn**	**06 20 22.0**	**-2.1**
AJM				*i* S	**Sn**	**06 22 21.0**	**-9.4**
WMQ	**Urumqi**	**12.75**	**58**	P	**Pn**	**06 20 42.0**	**+1.3**
WMQ				sP		06 21 15.5	
WMQ				S	**Sn**	**06 23 00.9**	**0.0**
WMQ				PcP	PcP	06 26 10.0	+2.8
WMQ				pmax	pmax		
	comp=Z,21nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,460nm,5.9s						
KURK	**Kurchatov**	**13.49**	**16**	⇑P	**Pn**	**06 20 46.8**	**-3.5**
	comp=Z,12nm,0.9s						
KURK	**Kurchatov**	**13.49**	**16**	*de*P	**Pn**	**06 20 47.5**	**-2.8**
KURK				pmax	pmax		
	comp=Z,11nm,1.7s						
KURK	**Kurchatov**	**13.49**	**16**	*e*Pn	**Pn**	**06 20 46.9**	**-3.4**
	comp=Z,12nm,0.9s						
GKN	**Gorkha**	**13.99**	**131**	*e*P	**Pn**	**06 20 54.6**	**-2.3**
	comp=Z,52nm,0.3s						
KKN	**Kakani**	**14.53**	**130**	*e*P	**Pn**	**06 21 01.6**	**-2.2**
	comp=Z,70nm,0.5s						
DMN	**Daman**	**14.56**	**131**	*e*P	**Pn**	**06 21 02.5**	**-1.6**
	comp=Z,50nm,0.4s						
AB31	**Akbulak array**	**14.67**	**325**	⇓P	**Pn**	**06 21 02.2**	**-3.2**
	comp=Z,63nm,0.8s,baz=115,slow=14,SNR=390						
AB31				S	**Sn**	**06 23 32.2**	**-15**
	comp=Z,18nm,0.5s,baz=157,slow=23,SNR=13						
AB31	**Akbulak array**	**14.67**	**325**	*i* P	**Pn**	**06 21 02.2**	**-3.2**
AB31				pmax	pmax		
	comp=Z,10.0nm,0.2s						
ABKAR	**Akbulak array**	**14.67**	**325**	*e*Pn	**Pn**	**06 21 01.7**	**-3.7**
ABKAR	comp=Z,52nm,0.6s						
				*e*Sn	**Sn**	**06 23 29.0**	**-18**
PKIN	**Phulchoki**	**14.75**	**130**	*e*P	**Pn**	**06 21 04.7**	**-1.9**
	comp=Z,32nm,0.4s						
PKI	**Pulchoki**	**14.77**	**130**	*e*P	**Pn**	**06 21 04.8**	**-2.0**
	comp=Z,29nm,0.4s						
GUN	**Gumba**	**14.81**	**128**	*e*P	**Pn**	**06 21 05.3**	**-2.0**
	comp=Z,57nm,0.4s						
VOSK	**Vostochnaya**	**14.90**	**356**	⇓P	**Pn**	**06 21 05.4**	**-2.8**
	comp=Z,7.9nm,0.7s						
VOSK	**Vostochnaya**	**14.90**	**356**	P	**Pn**	**06 21 05.4**	**-2.9**
VOSK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
JIRN	**Jiri**	**15.18**	**128**	*e*P	**Pn**	**06 21 10.1**	**-1.9**
	comp=Z,50nm,0.3s						
BVAR	**Borovoye Array**	**15.24**	**354**	P	**Pn**	**06 21 10.2**	**-2.3**
	comp=Z,1.6nm,0.3s,baz=160,slow=13,SNR=36						
BVAR	**Borovoye Array**	**15.24**	**354**	P	**Pn**	**06 21 10.2**	**-2.3**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BRVK	**Borovoye**	**15.28**	**354**	⇑P	**Pn**	**06 21 10.4**	**-2.6**
	comp=Z,48nm,1.2s						
BRVK	**Borovoye**	**15.28**	**354**	*c i*P	**Pn**	**06 21 10.4**	**-2.6**
BRVK				pmax	pmax		
	comp=Z,32nm,0.9s						
BRVK	**Borovoye**	**15.28**	**354**	*e*Pn	**Pn**	**06 21 10.6**	**-2.4**
	comp=Z,23nm,0.9s						
BRVK				*e*Sn	**Sn**	**06 23 53.8**	**-8.1**
ZRNK	**Zerenda**	**15.30**	**351**	⇓P	**Pn**	**06 21 10.6**	**-2.7**
	comp=Z,42nm,0.7s						
ZRNK	**Zerenda**	**15.30**	**351**	*i* P	**Pn**	**06 21 11.0**	**-2.3**
ZRNK				pmax	pmax		
	comp=Z,42nm,0.6s						
RAMN	**Ramite**	**15.94**	**129**	*e*P	**Pn**	**06 21 20.0**	**-1.5**
	comp=Z,68nm,0.6s						
TAPN	**Taplejung**	**16.36**	**126**	*e*P	**Pn**	**06 21 25.2**	**-1.4**
	comp=Z,62nm,0.6s						
AKTK	**Aktyubinsk**	**16.39**	**325**	P	**Pn**	**06 21 25.1**	**-1.7**
AKTK				S	**S**	**06 24 12.8**	**-20**
AKTO	**Aktyubinsk**	**16.39**	**325**	P	**Pn**	**06 21 25.1**	**-1.7**
	comp=Z,5.0nm,0.3s,baz=135,slow=13,SNR=120						
AKTO				S	**S**	**06 24 12.8**	**-20**
	comp=Z,1.1nm,0.3s,baz=180,slow=20,SNR=6.2						
AKTO	**Aktyubinsk**	**16.39**	**325**	P	**Pn**	**06 21 25.1**	**-1.7**
AKTO				S	**S**	**06 24 12.9**	**-20**
AKTO				pmax	pmax		
	comp=Z,5.0nm,0.3s						
AKTO				smax			
	comp=N,1.0nm,0.3s						
ODAN	**Odare**	**16.50**	**128**	*e*P	**Pn**	**06 21 27.2**	**-1.1**
	comp=N,97nm,0.8s						
LSA	**Lhasa**	**17.29**	**113**	P	**Pn**	**06 21 37.8**	**-0.1**
LSA	**Lhasa**	**17.29**	**113**	*e*P	**Pn**	**06 21 40.6**	**+2.7**
LSA				pmax	pmax		
	comp=Z,18nm,0.6s						
LSA	**Lhasa**	**17.29**	**113**	*e*P	**Pn**	**06 21 40.6**	**+2.6**
	comp=Z,18nm,0.6s						
ZAA0	**Zalesovo Array**	**18.08**	**23**	*e*P	**P**	**06 21 45.8**	**-0.2**
ZALV	**Zalesovo Beam**	**18.08**	**23**	P	**P**	**06 21 45.7**	**-0.4**
	comp=Z,2.6nm,0.3s,baz=213,slow=10,SNR=75						
ZALV				S	**S**	**06 25 01.5**	**-5.5**
	comp=Z,0.1nm,0.3s,baz=206,slow=19,SNR=2.3						
ZALV	**Zalesovo Beam**	**18.08**	**23**	P	**P**	**06 21 45.7**	**-0.3**
ZALV				S	**S**	**06 25 01.5**	**-5.5**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.3s						
NVS	**Novosibirsk**	**18.40**	**19**	⇓*i*P	**P**	**06 21 48.8**	**-0.7**
NVS				*i* S	**S**	**06 25 08.2**	**-5.2**
NVS				pmax	pmax		
	comp=N,18nm,1.4s						
NVS				pmax	pmax		
	comp=E,8.0nm,1.4s						
NVS				pmax	pmax		
	comp=Z,16nm,1.4s						
NVS				smax			
	comp=N,64nm,2.0s						
NVS				smax			
	comp=E,28nm,2.0s						
SHL	**Shillong**	**20.31**	**122**	*e*PKP	**P**	**06 22 13.0**	**+2.4**
SVE	**Sverdlovsk**	**20.61**	**341**	⇓*e*P	**P**	**06 22 13.1**	**-0.3**
SVE				pmax	pmax		
	comp=Z,50nm,0.8s						
ARU	**Arti**	**20.85**	**337**	*d i*P	**P**	**06 22 15.3**	**-0.7**
ARU				*e*		06 22 44.2	
ARU				S	**S**	**06 25 57.9**	**-4.0**
ARU				SS		06 26 39.8	
ARU				pmax	pmax		
	comp=Z,40nm,0.8s						
ARU	**Arti**	**20.85**	**337**	*e*P	**P**	**06 22 15.1**	**-0.9**
	comp=Z,32nm,0.8s						
HYB	**Hyderabad**	**21.00**	**164**	*i* P	**P**	**06 22 23.0**	**+5.0**
GTA	**Gaotai**	**21.14**	**77**	*e*P	**P**	**06 22 21.0**	**+1.7**
GTA				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb3.9						
DGRG	**David-gareji**	**21.37**	**288**	P	**P**	**06 22 23.0**	**+1.3**
MTA	**Mtatsminda**	**21.81**	**289**	P	**P**	**06 22 27.1**	**+0.7**
TBLG	**Delisi**	**21.85**	**289**	*e*P	**P**	**06 22 28.5**	**+1.7**
TBLG	**Delisi**	**21.85**	**289**	P	**P**	**06 22 28.5**	**+1.7**
GNI	**Garni**	**21.88**	**285**	*de*P	**P**	**06 22 28.1**	**+1.0**
GNI				pmax	pmax		
	comp=Z,54nm,1.2s						
GNI	**Garni**	**21.88**	**285**	*e*P	**P**	**06 22 29.2**	**+2.0**
	comp=Z,28nm,0.8s,mb4.6						
ZEI	**Tsey**	**22.50**	**292**	*e*P	**P**	**06 22 36.1**	**+2.4**
ZEI				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.5						
ONI	**Oni**	**22.82**	**291**	P	**P**	**06 22 38.8**	**+2.0**
KIV	**Kislovodsk**	**23.46**	**295**	*c i*P	**P**	**06 22 42.7**	**+0.1**
KIV				*e**PP		06 23 08.1	
KIV				*e*S	**S**	**06 26 48.1**	**+0.9**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb3.9						
LZH	**Lanzhou**	**24.82**	**85**	*e*P	**P**	**06 22 57.0**	**+1.9**
LZH				pP		06 23 25.0	
LZH				sP	sP	06 23 39.5	+5.8
LZH				PP		06 23 40.5	
LZH				*e*S	**S**	**06 27 08.3**	**-0.8**
LZH				sS	sS	06 27 54.0	+0.9
LZH				SS		06 28 16.3	
LZH				pmax	pmax		
	comp=Z,28nm,1.5s,mb4.5						
LZH				pmax	pmax		
	comp=Z,79nm,5.0s						
VRHR	**Novokhopersk**	**25.64**	**311**	*e*P	**P**	**06 23 01.4**	**-0.9**
VRHR				pmax	pmax		
	comp=N,7.0nm,1.0s						
VRHR				pmax	pmax		
	comp=E,10.0nm,1.0s						
VRHR				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.2						
SONM	**Songino Array**	**26.38**	**57**	P	**P**	**06 23 10.8**	**+1.8**
	comp=Z,3.7nm,0.7s,mb3.9,baz=258,slow=9.3,SNR=24						
SONM				pP	pP	06 23 40.2	+6.0
	comp=Z,3.1nm,0.8s,baz=263,slow=10,SNR=2.0						
SONM	**Songino Array**	**26.38**	**57**	P	**P**	**06 23 10.8**	**+1.8**
SONM				*PP	pP	06 23 40.2	+5.9
SONM				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CD2	**Chengdu**	**26.40**	**96**	P	**P**	**06 23 12.4**	**+3.0**
CD2				pP	pP	06 23 39.0	+4.4
CD2				sP	sP	06 23 54.1	+5.9
CD2				PP		06 24 01.4	
CD2				S	**S**	**06 27 35.3**	**+1.0**
CD2				sS	sS	06 28 22.0	+3.4
CD2				SS		06 28 56.4	
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.5						
CD2				pmax	pmax		
	comp=Z,300nm,9.8s						
CD2				LR	LR		
	comp=N,690nm,14.9s						
CD2				LR	LR		
	comp=Z,710nm,15.5s						
ULN	**Ulaanbaatar**	**26.83**	**57**	*e*P	**P**	**06 23 14.4**	**+1.4**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.9						
ULN	**Ulaanbaatar

HHC LR LR
comp=N,560nm,11.8s
HHC LR LR
comp=E,520nm,11.4s
HHC LR LR
comp=Z,550nm,11.2s
BR131 Keskin Array S 30.40 286 *e*P **P 06 23 45.4 +0.6**
comp=Z,4.8nm,0.8s,mb4.2
BRTR Keskin Array B 30.40 286 P **P 06 23 45.4 +0.5**
comp=Z,3.3nm,0.8s,mb4.0,baz=98,slow=7.6,SNR=19
BRTR Keskin Array B 30.40 286 P **P 06 23 45.4 +0.5**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
GYA Guiyang 30.70 102 P **P 06 23 50.5 +2.9**
GYA pP pP 06 24 19.0 +5.9
GYA sP sP 06 24 35.4 +8.8
GYA PP PP 06 24 57.9 -1.1
GYA PcP PcP 06 26 45.5 +2.8
GYA S **S 06 28 44.0 +2.2**
GYA sS sS 06 29 33.4 +7.1
GYA ScP ScP 06 30 15.0 +0.5
GYA PcS PcS 06 30 29.3 +2.5
GYA ScS ScS 06 34 09.8 -1.5
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
AKASG Malin Array Be 33.23 307 P **P 06 24 08.8 -0.6**
comp=Z,4.7nm,0.6s,mb4.5,baz=82,slow=7.3,SNR=17
AKASG Malin Array Be 33.23 307 P **P 06 24 08.8 -0.6**
AKASG pmax pmax
comp=Z,5.0nm,0.6s
AKBB Malin Array Si 33.23 307 *e*P **P 06 24 08.8 -0.6**
KIEV Kiev 33.24 307 *e*P **P 06 24 08.5 -1.0**
KIEV pmax pmax
comp=Z,8.0nm,0.8s,mb4.6
KIEV Kiev 33.24 307 *e*P **P 06 24 08.5 -1.1**
comp=Z,8.4nm,0.8s,mb4.6
VRI Vrincioaia 34.81 298 ⇑P **P 06 24 24.9 +1.7**
VRI Vrincioaia 34.81 298 ⇑*i*P **P 06 24 24.9 +1.7**
TESR 34.83 299 ⇓P **P 06 24 23.4 +0.1**
TESR 34.83 299 ⇓*i*P **P 06 24 23.4 +0.1**
PLOR Plostina 34.86 298 ⇓P **P 06 24 25.0 +1.4**
PLOR Plostina 34.86 298 ⇓*i*P **P 06 24 25.0 +1.4**
MLR Muntele Rosu 35.38 298 ⇓P **P 06 24 29.7 +1.6**
MLR Muntele Rosu 35.38 298 ⇓*i*P **P 06 24 29.7 +1.6**
BURAR Bucovina Array 35.76 301 ⇓P **P 06 24 31.7 +0.4**
BURAR Bucovina Array 35.76 301 ⇓*i*P **P 06 24 31.7 +0.4**
BUR08 Bucovina Ar. S 35.77 301 *e*P **P 06 24 31.3 -0.1**
VOIR 36.01 298 ⇓P **P 06 24 34.5 +1.0**
VOIR 36.01 298 ⇓*i*P **P 06 24 34.5 +1.0**
APA Apatity 36.94 336⇑*e*P **P 06 24 39.0 -2.0**
APA pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
APA MLR MLR
comp=Z,900nm,20.0s
FINES FINESS Array B 37.16 325 P **P 06 24 42.7 -0.3**
comp=Z,11nm,0.6s,mb5.0,baz=112,slow=9.2,SNR=44
FINES FINESS Array B 37.16 325 P **P 06 24 42.7 -0.3**
FINES pmax pmax
comp=Z,11nm,0.6s
FINES FINESS Array B 37.16 325 P **P 06 24 42.7 -0.3**
KAF Kangasniemi 37.27 326 *e*P **P 06 24 42.8 -1.1**
KAF pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
KAF Kangasniemi 37.27 326 *e*p **P 06 24 42.8 -1.1**
comp=Z,5.3nm,0.6s,mb4.7,baz=110,slow=8.5
KWP Kalwaria Pacla 37.37 305 *e*P **P 06 24 45.9 +0.9**
KWP Kalwaria Pacla 37.37 305 ⇓P **P 06 24 46.0 +1.1**
KWP Kalwaria Pacla 37.37 305 *e*P **P 06 24 45.0 0.0**
comp=Z,6.0nm,0.5s,mb4.8
KWP Kalwaria Pacla 37.37 305 ⇓*i*P **P 06 24 46.0 +1.1**
DRGR 37.52 300 ⇓P **P 06 24 47.1 +0.9**
DRGR 37.52 300 ⇓*i*P **P 06 24 47.0 +0.8**
TRPA Tarpa 37.54 302⇑*i*P **P 06 24 47.7 +1.3**
NJ2 Nanjing 37.90 85 *e*P **P 06 24 53.3 +3.7**
NJ2 pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
CN2 Changchun 39.72 64 *e*P **P 06 25 06.6 +2.0**
CN2 *es*P sP 06 25 51.5 +7.3
CN2 *e*S **S 06 30 59.8 +0.3**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
CN2 pmax pmax
comp=Z,200nm,3.0s
KEV Kevo 40.07 337 *e*P **P 06 25 06.0 -1.2**
KEV Kevo 40.07 337 *e*p **P 06 25 06.0 -1.2**
ARCES ARCESS Array B 40.43 337 P **P 06 25 09.6 -0.6**
comp=Z,2.9nm,0.5s,mb4.3,baz=114,slow=8.8,SNR=37
ARCES ARCESS Array B 40.43 337 P **P 06 25 09.6 -0.6**
ARCES pmax pmax
comp=Z,3.0nm,0.5s
MORC Moravsky Berou 40.71 305 ⇑P **P 06 25 13.1 +0.3**
MORC Moravsky Berou 40.71 305 *e*P **P 06 25 12.7 0.0**
comp=Z,1.3nm,0.6s,mb3.9
MORC Moravsky Berou 40.71 305⇑*i*P **P 06 25 13.1 +0.3**
VRAC Vranov 41.37 305 ⇓P **P 06 25 18.8 +0.7**
VRAC Vranov 41.37 305 ⇓*i*P **P 06 25 18.8 +0.7**
DPC Dobruska-Polom 41.45 306 *e*P **P 06 25 19.4 +0.6**
DPC Dobruska-Polom 41.45 306 *e*P **P 06 25 19.4 +0.6**
UPC Upice 41.63 306 *e*P **P 06 25 20.8 +0.5**
UPC Upice 41.63 306 *e*P **P 06 25 20.8 +0.5**
MDJ Mudanjiang 42.49 62 P **P 06 25 27.9 +0.6**
MDJ pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
MDJ pmax pmax
comp=Z,430nm,9.6s
PVCC Panska Ves 42.55 307 *e*P **P 06 25 27.7 0.0**
PVCC Panska Ves 42.55 307 *e*P **P 06 25 27.7 0.0**
PRU Pruhonice 42.63 306 *e*P **P 06 25 29.3 +1.0**
PRU Pruhonice 42.63 306 *e*P **P 06 25 29.3 +1.0**
BRG Berggiesshubel 42.91 307 *e*P **P 06 25 30.8 +0.2**
comp=Z,9.0nm,0.9s,mb4.5
BRG Berggiesshubel 42.91 307 *e*P **P 06 25 31.0 +0.4**
BRG *e* pP 06 26 02.3 +5.1
BRG pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
BRG MLR MLR
comp=N,2μm,24.5s
BRG MLR MLR
comp=E,648nm,18.8s
BRG MLR MLR
comp=Z,205nm,24.1s
KSRS Korea Array 43.10 73 P **P 06 25 33.6 +1.3**
comp=Z,0.7nm,0.3s,mb3.8,baz=295,slow=6.2,SNR=5.1
KSRS Korea Array 43.10 73 P **P 06 25 33.6 +1.3**
KSRS pmax pmax
comp=Z,1.0nm,0.4s,mb3.9
GEC2 GERESS Array S 43.32 304 *e*P **P 06 25 33.8 -0.1**
comp=Z,10.0nm,1.7s,mb4.3
KHC Kasperske Hory 43.36 305 *e*P **P 06 25 34.3 +0.1**
KHC Kasperske Hory 43.36 305 *e*P **P 06 25 34.3 +0.1**
CLL Collm 43.45 308 *e*P **P 06 25 34.5 -0.5**
comp=Z,7.0nm,0.8s,mb4.4
CLL Collm 43.45 308 ⇓*i*P **P 06 25 34.7 -0.3**
CLL pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
CLL Collm 43.45 308 ⇓*i*P **P 06 25 34.7 -0.3**
comp=Z,7.0nm,0.8s,mb4.4
CLL *e* 06 27 29.0
WET Wettzell 43.81 305 *e*P **P 06 25 38.2 +0.4**
comp=Z,6.0nm,1.3s,mb4.2
TANN Tannenbergstha 43.90 307 *e*P **P 06 25 38.6 +0.1**
comp=Z,4.0nm,1.0s,mb4.1
ROTZ Rotzenmuhle 44.15 306 *e*P **P 06 25 41.1 +0.5**
comp=Z,8.0nm,1.3s,mb4.3
NB2 NORSAR Subarra 44.16 322 P **P 06 25 39.5 -0.9**
comp=Z,7.9nm,0.6s,mb4.6,baz=91,slow=7.9
NOA NORSAR Array B 44.16 322 P **P 06 25 39.8 -0.7**
comp=Z,8.6nm,0.7s,mb4.6,baz=93,slow=7.8,SNR=33
NOA PP PP 06 27 25.1 -0.2
comp=Z,3.4nm,0.9s,baz=93,slow=11,SNR=4.6
NOA NORSAR Array B 44.16 322 P **P 06 25 39.8 -0.6**
NOA 06 27 25.1
NOA pmax pmax
comp=Z,9.0nm,0.7s
NAO01 NORSAR Array S 44.31 322 *e*P **P 06 25 40.3 -1.3**
comp=Z,13nm,0.9s,mb4.7
MOX Moxa 44.41 307 *e*P **P 06 25 42.7 +0.1**
comp=Z,5.0nm,0.9s,mb4.2
GRF Grafenberg Arr 44.80 306 *e*P **P 06 25 46.3 +0.6**
BSEG Bad Segeberg 44.82 312 *e*P **P 06 25 46.1 +0.3**
comp=Z,10.0nm,0.7s,mb4.7
CLZ Clausthal 45.02 309 *e*P **P 06 25 47.1 -0.3**
comp=Z,27nm,2.1s,mb4.6
NRDL Niedersach Rie 45.10 310 *e*P **P 06 25 47.2 -0.8**
comp=Z,13nm,1.0s,mb4.6

SPITS Spitsbergen Ar 46.49 346 P **P 06 25 58.7 +0.1**
comp=Z,3.6nm,0.6s,mb4.2,baz=92,slow=14,SNR=3.2
SPITS Spitsbergen Ar 46.49 346 P **P 06 25 58.7 +0.1**
SPITS pmax pmax
comp=Z,4.0nm,0.6s
CDF Champ du Feu 47.59 305 *e*P **P 06 26 07.7 +0.2**
comp=Z,4.4nm,0.5s,mb4.2
CDF Champ du Feu 47.59 305 *e*P **P 06 26 07.7 +0.2**
CDF pmax pmax
comp=Z,2.0nm,0.5s,mb4.2
CDF Champ du Feu 47.59 305 *e*P **P 06 26 07.7 +0.2**
comp=Z,2.2nm,0.5s,mb4.2
PGF Pioggiola 47.92 297 *e*P **P 06 26 09.5 -0.7**
HAU Haudompre 48.28 304 *e*P **P 06 26 12.4 -0.5**
comp=Z,12nm,0.8s,mb4.5
HAU Haudompre 48.28 304 *e*P **P 06 26 12.4 -0.5**
HAU pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
HAU Haudompre 48.28 304 *e*P **P 06 26 12.4 -0.5**
comp=Z,5.9nm,0.8s,mb4.5
SBF Sospel 48.63 299 *e*P **P 06 26 15.4 -0.3**
LPG La Plagne 48.65 301 *e*P **P 06 26 15.6 -0.1**
LPL La Plagne 48.66 301 *e*P **P 06 26 15.7 -0.1**
MBDF Montbardon 48.85 300 *e*P **P 06 26 16.5 -0.8**
comp=Z,7.3nm,0.8s,mb4.4
MBDF Montbardon 48.85 300 *e*P **P 06 26 16.5 -0.8**
MBDF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
MBDF Montbardon 48.85 300 *e*P **P 06 26 16.5 -0.8**
comp=Z,3.7nm,0.8s,mb4.4
MEZF Maizieres J'vi 49.01 305 *e*P **P 06 26 18.4 0.0**
comp=Z,19nm,0.8s,mb4.8
MEZF Maizieres J'vi 49.01 305 *e*P **P 06 26 18.4 0.0**
comp=Z,19nm,0.8s,mb5.1
BAIF Baives 49.18 308 *e*P **P 06 26 19.7 0.0**
comp=Z,8.3nm,0.7s,mb4.5
BAIF Baives 49.18 308 *e*P **P 06 26 19.7 0.0**
BAIF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
BAIF Baives 49.18 308 *e*P **P 06 26 19.7 0.0**
comp=Z,4.2nm,0.7s,mb4.5
FRF La Foret Royal 49.27 299 *e*P **P 06 26 19.9 -0.6**
comp=Z,12nm,0.7s,mb4.6
FRF La Foret Royal 49.27 299 *e*P **P 06 26 19.9 -0.6**
FRF pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
FRF La Foret Royal 49.27 299 *e*P **P 06 26 19.9 -0.6**
comp=Z,6.2nm,0.7s,mb4.7
ORIF Oris-en-Rattie 49.40 301 *e*P **P 06 26 20.5 -1.0**
LMR La Mourre 49.43 298 *e*P **P 06 26 21.1 -0.6**
SMRF Simiane la Rot 49.88 299 *e*P **P 06 26 25.5 +0.3**
VIVF Saint-Julien-l 50.24 301 *e*P **P 06 26 27.4 -0.4**
comp=Z,4.1nm,0.5s,mb4.3
VIVF Saint-Julien-l 50.24 301 *e*P **P 06 26 27.4 -0.4**
VIVF pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
VIVF Saint-Julien-l 50.24 301 *e*P **P 06 26 27.4 -0.4**
comp=Z,2.0nm,0.5s,mb4.3
SMF Signal de Mont 50.28 303 *e*P **P 06 26 27.4 -0.7**
comp=Z,12nm,0.7s,mb4.6
SMF Signal de Mont 50.28 303 *e*P **P 06 26 27.4 -0.7**
SMF pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
SMF Signal de Mont 50.28 303 *e*P **P 06 26 27.4 -0.7**
comp=Z,5.8nm,0.7s,mb4.6
SSF Saint Saulge 50.39 304 *e*P **P 06 26 28.1 -0.8**
comp=Z,7.0nm,0.7s,mb4.4
SSF Saint Saulge 50.39 304 *e*P **P 06 26 28.1 -0.8**
SSF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
SSF Saint Saulge 50.39 304 *e*P **P 06 26 28.1 -0.8**
comp=Z,3.5nm,0.7s,mb4.4
AVF Avril sur Loir 50.56 304 *e*P **P 06 26 29.5 -0.7**
comp=Z,12nm,0.6s,mb4.8
AVF Avril sur Loir 50.56 304 *e*P **P 06 26 29.5 -0.7**
AVF pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
AVF Avril sur Loir 50.56 304 *e*P **P 06 26 29.5 -0.7**
comp=Z,6.3nm,0.6s,mb4.8
BGF Bois d'Agland 50.96 303 *e*P **P 06 26 33.2 -0.1**
LASF Ste Croix 51.03 300 *e*P **P 06 26 33.7 -0.1**
MJAR Matsushiro Arr 51.13 70 P **P 06 26 35.0 +0.4**
comp=Z,1.3nm,0.7s,mb4.0,baz=294,slow=12,SNR=5.3
TCF Toulx Ste Croi 51.47 303 *e*P **P 06 26 36.7 -0.3**
comp=Z,9.4nm,0.8s,mb4.6
TCF Toulx Ste Croi 51.47 303 *e*P **P 06 26 36.7 -0.3**
TCF pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
TCF Toulx Ste Croi 51.47 303 *e*P **P 06 26 36.7 -0.3**
comp=Z,4.7nm,0.8s,mb4.6
CAF Calviac 51.98 302 *e*P **P 06 26 40.8 -0.1**
comp=Z,9.3nm,0.8s,mb4.5
CAF Calviac 51.98 302 *e*P **P 06 26 40.8 -0.1**
CAF pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
CAF Calviac 51.98 302 *e*P **P 06 26 40.8 -0.1**
comp=Z,4.7nm,0.8s,mb4.6
RJF Les Rejaudoux 52.23 302 *e*P **P 06 26 42.7 0.0**
LDF La Druitiere 52.29 307 *e*P **P 06 26 42.1 -1.0**
comp=Z,6.4nm,0.5s,mb4.6
MTLF Montolieu 52.40 300 *e*P **P 06 26 43.6 -0.3**
comp=Z,3.7nm,0.7s,mb4.2
FLN La Foliniere 52.47 307 *e*P **P 06 26 43.4 -1.0**
GRR Gorron 52.82 307 *e*P **P 06 26 46.0 -1.0**
comp=Z,10nm,0.6s,mb4.7
LFF La Frestale 52.87 302 *e*P **P 06 26 47.1 -0.3**
MFF Saint Martin d 52.92 304 *e*P **P 06 26 47.4 -0.3**
SGMF Saint Gilles 53.94 307 *e*P **P 06 26 54.5 -0.7**
QUIF Quistinic 54.44 307 *e*P **P 06 26 58.3 -0.5**
ETSF Etsaut 54.46 300 *e*P **P 06 26 58.8 -0.2**
comp=Z,6.3nm,0.7s,mb4.4
BILL Bilibino 56.74 27⇑*e*P **P 06 27 15.2 +0.3**
BILL *e**PP pP 06 27 44.2 +1.3
BILL *e* 06 29 20.8
BILL *e*S **S 06 34 50.4 -7.9**
BILL pmax pmax
comp=Z,2.0nm,1.0s,mb4.1
ESDC Sonseca Array 58.08 298 P **P 06 27 24.6 -0.2**
comp=Z,2.0nm,0.6s,mb4.3,baz=57,slow=7.3,SNR=14
ESDC pP pP 06 28 00.4 +7.6
comp=Z,0.4nm,0.3s,baz=46,slow=8.4,SNR=2.7
SUMG Summit 60.22 341 *e*P **P 06 27 39.8 +0.8**
comp=Z,6.4nm,0.8s,mb4.7
SUMG Summit 60.22 341 *i* P **P 06 27 39.4 +0.4**
comp=Z,5.6nm,0.8s,mb4.7
ILAR Eielson Array 73.06 17 P **P 06 29 00.3 -0.3**
comp=Z,0.9nm,0.8s,mb3.6,baz=323,slow=5.3,SNR=8.8
YKA Yellowknife Ar 79.80 3 P **P 06 29 38.7 +0.1**
comp=Z,0.5nm,0.5s,mb3.6,baz=349,slow=5.4,SNR=4.6
YKA Yellowknife Ar 79.80 3 P **P 06 29 38.7 +0.1**
WRA Warramunga Arr 81.53 123 P **P 06 29 48.6 +0.2**
WRAB Tennant Creek 81.53 123 *e*P **P 06 29 49.2 +0.7**
WRAB pmax pmax
comp=Z,3.0nm,0.9s,mb4.1
WRAB Tennant Creek 81.53 123 *e*P **P 06 29 49.2 +0.7**
comp=Z,2.8nm,0.9s,mb4.1
ASAR Alice Springs 83.89 126 P **P 06 30 01.7 +1.1**
comp=Z,0.5nm,0.6s,mb3.5,baz=331,slow=6.8,SNR=4.2
ASAR pP pP 06 30 37.2 +6.7
comp=Z,0.3nm,0.7s,baz=319,slow=5.5,SNR=1.8

*ISCJB **19** 06:38:00.6±0.6, 32.°19N±0.°05×105.°28E±0.°06, h10km, mb3.6/7, Error ellipse: s-maj=9.1km s-min=5.2km az=135.5*
*IDC **19** 06:38:02.3±0.9, 32.°29N×105.°39E, h0km, mb3.6/7, mb1 3.7/9, mb1mx3.6/25, mbtmp3.5/9, ML3.3/2, Error ellipse: s-maj=38.0km s-min=18.6km az=56.0*
*BJI **19** 06:38:03.8, 32.°36N×105.°20E, h12km, ML3.5/12*
ISC 19 06:38:02.8±0.6, 32.°22N±0.°05×105.°21E±0.°06, h10km, n12, σ1°31/17, mb3.6/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.80**	**224**	Pg	**Pg**	**06 38 36.6**	**-0.8**
CD2				Sg	**Sg**	**06 38 59.6**	**-1.1**
CD2				smax			
comp=N,400nm,0.6s							
XAN	**Xi'an**	**3.61**	**59**	Pg	**Pg**	**06 39 09.4**	**-2.5**
XAN				Sg	**Sg**	**06 39 59.0**	**+0.3**
XAN				smax			
comp=N,110nm,0.4s							
XAN				smax			
comp=E,76nm,0.5s							
LZH	**Lanzhou**	**4.02**	**344**	Pn	**Pn**	**06 39 04.9**	**+0.5**
LZH				Pg	**Pg**	**06 39 16.8**	**-3.0**
LZH				Sn	**Sn**	**06 39 50.6**	**-0.9**
LZH				Sg	**Sg**	**06 40 05.5**	**-6.3**
LZH				smax			
comp=N,130nm,0.5s							
LZH				smax			
comp=E,290nm,0.5s							
SONM	**Songino Array**	**15.62**	**3**	Pn	**Pn**	**06 41 43.9**	**+1.0**
comp=E,0.1nm,0.3s,baz=186,slow=7.0,SNR=2.5							
KSRS	**Korea Array**	**19.35**	**68**	P	**Pn**	**06 42 27.4**	**-2.1**
comp=E,0.1nm,0.3s,baz=258,slow=9.7,SNR=2.9							
MKAR	**Makanchi Array**	**22.79**	**316**	P	**P**	**06 43 05.4**	**0.0**
comp=E,0.4nm,0.5s,mb3.1,baz=115,slow=12,SNR=5.0							
ARCES	**ARCESS Array B**	**56.63**	**336**	P	**P**	**06 47 46.9**	**+1.3**
comp=E,2.7nm,1.1s,mb4.2,baz=74,slow=9.0,SNR=5.1							
FINES	**FINESS Array B**	**57.17**	**326**	P	**P**	**06 47 51.2**	**+1.7**
comp=E,1.4nm,0.9s,mb4.0,baz=82,slow=10.0,SNR=3.7							
WRA	**Warramunga Arr**	**58.89**	**148**	P	**P**	**06 48 02.7**	**+0.6**
comp=E,0.4nm,0.7s,mb3.6,baz=342,slow=7.5,SNR=6.8							
ASAR	**Alice Springs**	**61.97**	**150**	P	**P**	**06 48 24.2**	**+1.2**
comp=E,0.3nm,0.6s,mb3.6,baz=335,slow=6.3,SNR=3.7							
NOA	**NORSAR Array B**	**64.23**	**327**	P	**P**	**06 48 39.6**	**+2.0**
comp=E,0.2nm,0.4s,mb3.5,baz=86,slow=5.4,SNR=2.8							
ILAR	**Eielson Array**	**68.42**	**26**	P	**P**	**06 49 04.0**	**-0.4**
comp=E,0.2nm,0.7s,mb3.2,baz=282,slow=5.3,SNR=4.1							

IDC 19 06:39:40.1±13.0, 23.°52N×141.°60E, h423km±156km, mb2.9/5, mb1 3.1/5, mb1mx2.8/23, mbtmp2.9/5, Error ellipse: s-maj=40.9km s-min=27.4km az=77.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**43.77**	**190**	P	P	06 47 06.4	-0.1
0.5nm,0.3s,baz=8.3,slow=7.9,SNR=11							
MKAR	**Makanchi Array**	**52.40**	**312**	P	P	06 48 11.3	+0.1
0.2nm,0.4s,baz=88,slow=3.3,SNR=4.4							
ILAR	**Eielson Array**	**61.10**	**28**	P	P	06 49 11.2	+0.1
0.3nm,0.8s,baz=266,slow=6.1,SNR=4.4							
ARCES	**ARCESS Array B**	**76.74**	**341**	P	P	06 50 45.7	-0.2
0.8nm,0.7s,baz=46,slow=6.4,SNR=3.5							
FINES	**FINESS Array B**	**80.91**	**334**	P	P	06 51 08.9	+0.4
2.3nm,1.0s,baz=63,slow=5.1,SNR=7.8							

JMA 19 06:50:36.2±0.2, 37.°55N×142.°64E, h23km, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**1.36**	**312**	P	Pn	06 51 00.2	+0.4
JFK	**Kawauchi**	**1.42**	**263**	P	Pn	06 51 01.1	+0.6
JFK				S	Sn	06 51 18.9	+0.4
JMM	**Marumori**	**1.50**	**283**	P	Pn	06 51 01.6	-0.1
ONAJ	**Iwakimizuishiy**	**1.54**	**254**	P	Pn	06 51 02.6	+0.5
ONAJ				S	Sn	06 51 21.9	+0.5
JOU	**Okura**	**1.76**	**298**	P	Pn	06 51 06.3	+1.0
JOU				*e*S	Sn	06 51 27.6	+0.6
JMK	**Ichinoseki**	**1.79**	**322**	P	Pn	06 51 06.7	+1.0
JFT	**Otama**	**1.83**	**270**	P	Pn	06 51 07.4	+1.2
JYS	**Shiratake**	**2.14**	**289**	P	Pn	06 51 12.7	+2.2
JOM	**Ohasama**	**2.19**	**332**	P	Pn	06 51 12.1	+0.9
JYK	**Kaneyama**	**2.26**	**308**	P	Pn	06 51 13.5	+1.4
JAG	**Ashikaga**	**2.79**	**247**	P	Pn	06 51 20.7	+1.3
MAT	**Matsushiro**	**3.69**	**256**	P	Pn	06 51 34.3	+2.6
MAT				*e*S	Sn	06 52 15.2	+0.7

IDC 19 06:53:37.3±1.2, 24.°03N×143.°20E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/23, mbtmp3.6/5, Error ellipse: s-maj=55.2km s-min=23.7km az=93.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.55**	**192**	P	P	07 01 51.1	+0.1
0.5nm,0.3s,baz=17,slow=10.0,SNR=6.5							
ASAR	**Alice Springs**	**48.26**	**191**	P	P	07 02 20.0	-0.1
0.3nm,0.6s,baz=13,slow=12,SNR=3.7							
MKAR	**Makanchi Array**	**53.16**	**311**	P	P	07 02 57.0	0.0
0.2nm,0.4s,baz=103,slow=6.2,SNR=4.5							
ILAR	**Eielson Array**	**59.97**	**28**	P	P	07 03 45.2	0.0
0.4nm,0.8s,baz=260,slow=4.8,SNR=4.8							
FINES	**FINESS Array B**	**81.10**	**334**	P	P	07 05 54.2	0.0
0.8nm,0.5s,baz=73,slow=4.7,SNR=8.7							

*ISCJB **19** 06:54:47.4±0.3, 43.°79N±0.°02×18.°58E±0.°03, h10km, Error ellipse: s-maj=2.9km s-min=2.4km az=180.0*
*PDG **19** 06:54:47.4±0.1, 43.°79N×18.°58E, h11km, MD2.8/1, ML2.7/9, Error ellipse: s-maj=0.3km s-min=0.6km az=0.0*
*NEIC **19** 06:54:47.4, 43.°79N×18.°58E, h11km, ML2.7(PDG), After PDG.*
*CSEM **19** 06:54:47.1±0.2, 43.°79N×18.°58E, h2km, ML2.7, Error ellipse: s-maj=3.7km s-min=3.1km az=82.0*
*BEO **19** 06:54:48.1±0.3, 43.°80N×18.°58E, h4km±2km, ML2.7/7*
ISC 19 06:54:47.5±0.5, 43.°81N±0.°02×18.°58E±0.°03, h1km±4km, n46, σ1°04/88, 16C-11D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBLS	**Lazići**	**0.60**	**85**	*e*Pg	**Pg**	**06 54 59.9**	**+0.8**
BBLS				*i* Sg	**Sg**	**06 55 07.5**	**+0.6**
BBLS	**Lazići**	**0.60**	**85**	*e*Pg	**Pg**	**06 54 59.9**	**+0.8**
BBLS				*i* Sg	**Sg**	**06 55 07.5**	**+0.6**
UPM	**Unac-Piva**	**0.66**	**158**	⇓*i*Pg	**Pg**	**06 54 59.3**	**-0.8**
UPM				*i* Sg	**Sg**	**06 55 08.8**	**+0.2**
UPM	**Unac-Piva**	**0.66**	**158**	⇓*i*Pg	**Pg**	**06 54 59.3**	**-0.8**
UPM				*i* Sg	**Sg**	**06 55 08.8**	**+0.2**
PLE	**Pljevlja**	**0.77**	**129**	⇓*i*Pg	**Pg**	**06 55 01.4**	**-0.8**
PLE				*i* Sg	**Sg**	**06 55 13.2**	**+1.0**
PLE	**Pljevlja**	**0.77**	**129**	⇓*i*Pg	**Pg**	**06 55 01.4**	**-0.8**
PLE				*i* Sg	**Sg**	**06 55 13.2**	**+1.0**
BRY	**Bratogost**	**0.91**	**181**	⇑*i*Pg	**Pg**	**06 55 03.7**	**-1.3**
BRY				*i* Sg	**Sg**	**06 55 17.7**	**+0.9**
BRY	**Bratogost**	**0.91**	**181**	⇑*i*Pg	**Pg**	**06 55 03.7**	**-1.3**
BRY				*i* Sg	**Sg**	**06 55 17.7**	**+0.9**
NKY	**Niksic**	**1.05**	**163**	⇑*i*Pg	**Pg**	**06 55 06.3**	**-1.3**
NKY				*i* Sg	**Sg**	**06 55 22.2**	**+1.1**
NKY	**Niksic**	**1.05**	**163**	⇑*i*Pg	**Pg**	**06 55 06.3**	**-1.3**
NKY				*i* Sg	**Sg**	**06 55 22.2**	**+1.1**
DIVS	**Divibare**	**1.06**	**74**	*e*Pg	**Pg**	**06 55 08.0**	**+0.1**
DIVS				*i* Sg	**Sg**	**06 55 22.4**	**+0.8**
DIVS	**Divibare**	**1.06**	**74**	*e*Pg	**Pg**	**06 55 08.0**	**+0.1**
DIVS				*i* Sg	**Sg**	**06 55 22.4**	**+0.8**
TREB	**Trebinje**	**1.11**	**189**	*e*Pg	**Pg**	**06 55 07.4**	**-1.4**
TREB				*i* Sg	**Sg**	**06 55 23.7**	**+0.6**
STON	**Ston**	**1.14**	**214**	*e*Pg	**Pg**	**06 55 07.7**	**-1.6**
STON				Sg	**Sg**	**06 55 23.8**	**-0.2**
STON	**Ston**	**1.14**	**214**	*e*Pg	**Pg**	**06 55 07.7**	**-1.6**
STON				Sg	**Sg**	**06 55 23.8**	**-0.3**
SJES	**Sjenica**	**1.16**	**118**	*e*Pg	**Pg**	**06 55 08.4**	**-1.3**
SJES				*i* Sg	**Sg**	**06 55 23.6**	**-1.1**
BEY	**Berane**	**1.35**	**134**	⇑*i*Pg	**Pn**	**06 55 12.2**	**-1.2**
BEY				*i* Sg	**Sg**	**06 55 33.0**	**+2.2**
IVA	**Berane**	**1.35**	**134**	⇑*i*Pg	**Pn**	**06 55 12.2**	**-1.2**
IVA				*i* Sg	**Sg**	**06 55 33.0**	**+2.2**
IVA	**Berane**	**1.35**	**134**	⇑*i*Pg	**Pn**	**06 55 12.2**	**-1.2**
IVA				*i* Sg	**Sg**	**06 55 33.0**	**+2.2**
HCY	**Herceg Novi**	**1.37**	**182**	⇓*i*Pg	**Pn**	**06 55 12.4**	**-1.3**
HCY				*i* Sg	**Sg**	**06 55 33.3**	**+1.9**
HCY	**Herceg Novi**	**1.37**	**182**	⇓*i*Pg	**Pn**	**06 55 12.4**	**-1.3**
HCY				*i* Sg	**Sg**	**06 55 33.3**	**+1.9**
BLY	**Banja Luka**	**1.37**	**314**	*e*Pg	**Pn**	**06 55 13.9**	**+0.2**
BLY				*e*Sg	**Sg**	**06 55 32.3**	**+0.8**
BLY	**Banja Luka**	**1.37**	**314**	*e*Pg	**Pn**	**06 55 13.9**	**+0.2**
BLY				*e*Sg	**Sg**	**06 55 32.3**	**+0.8**
TRUS	**Trudelj**	**1.38**	**72**	⇓*i*Pg	**Pn**	**06 55 12.5**	**-1.4**
TRUS				*i* Sg	**Sg**	**06 55 30.9**	**-1.0**
TRUS	**Trudelj**	**1.38**	**72**	⇓*i*Pg	**Pn**	**06 55 12.5**	**-1.4**
TRUS				*i* Sg	**Sg**	**06 55 30.9**	**-1.0**
PDG	**Podgorica**	**1.47**	**160**	⇑*i*Pg	**Pn**	**06 55 13.8**	**-1.3**
PDG				*i* Sg	**Sg**	**06 55 35.9**	**+1.1**
TTG	**Podgorica**	**1.47**	**160**	⇑*i*Pg	**Pn**	**06 55 13.8**	**-1.3**
TTG				*i* Sg	**Sg**	**06

GRUS	**Gruza**	**1.55**	**87**	*e*Pn	**Pn**	06 55 15.7	-0.5
GRUS				*e*Sn	**Sn**	06 55 37.1	+0.2
PVY	**Plav**	**1.59**	**140**	⇑*i*Pg	**Pn**	06 55 16.4	-0.4
PVY				*i* Sg	**Sg**	06 55 38.8	+0.2
PVY	**Plav**	**1.59**	**140**	⇑*i*Pg	**Pn**	06 55 16.4	-0.4
PVY				*i* Sg	**Sg**	06 55 38.8	+0.2
FGSL	**Fruska Gora**	**1.61**	**33**	*e*Pn	**Pn**	06 55 15.8	-1.2
FGSL				*e*Sn	**Sn**	06 55 39.9	+1.5
FRGS	**Fruska Gora**	**1.61**	**33**	*e*Pn	**Pn**	06 55 15.8	-1.2
FRGS				*e*Sn	**Sn**	06 55 39.9	+1.5
ULC	**Ulcinj**	**1.92**	**165**	⇑*i*Pn	**Pn**	06 55 20.8	-0.4
ULC				*i* Sn	**Sn**	06 55 47.0	+1.1
ULC	**Ulcinj**	**1.92**	**165**	⇑*i*Pn	**Pn**	06 55 20.8	-0.4
ULC				*i* Sn	**Sn**	06 55 47.0	+1.1
PKSM	**Moragy**	**2.40**	**1**	⇓*e*Pn	**Pn**	06 55 27.2	-0.7
BARS	**Barje**	**2.57**	**112**	*e*Pn	**Pn**	06 55 30.0	-0.2
BARS				*i* Sn	**Sn**	06 56 02.5	+0.5
BARS	**Barje**	**2.57**	**112**	*e*Pn	**Pn**	06 55 30.0	-0.2
BARS				*i* Sn	**Sn**	06 56 02.5	+0.5
NVLJ	**Novalja**	**2.77**	**287**	*e*Pn	**Pn**	06 55 33.9	+0.9
NVLJ				Sn	**Sn**	06 56 08.5	+1.5
NVLJ	**Novalja**	**2.77**	**287**	*e*Pn	**Pn**	06 55 33.8	+0.8
NVLJ				Sn	**Sn**	06 56 08.4	+1.4
PKS9	**Tamasi**	**2.78**	**356**	⇓*e*Pn	**Pn**	06 55 33.2	+0.1
ZAPS	**Zavoj**	**3.00**	**99**	*e*Pn	**Pn**	06 55 36.7	+0.6
ZAPS	**Zavoj**	**3.00**	**99**	*e*Pn	**Pn**	06 55 36.9	+0.8
ZAPS				*i* Sn	**Sn**	06 56 12.3	-0.4
BUD	**Budapest**	**3.68**	**5**	⇓*e*PB	**Pg**	06 56 01.2	+3.1

IDC 19 06:58:43.0±2.1, 23°.93N×142°.17E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.6/23, mbtmp3.8/5, MS3.6/1, Ms1 3.6/1, ms1mx2.7/30, Error ellipse: s-maj=111.2km s-min=22.8km az=82.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**9.39**	**348**	LR	LR	07 03 27.0	
	comp=Z,340nm,19.1s,baz=136,slow=30						
WRA	**Warramunga Arr**	**44.27**	**191**	P	P	07 06 54.9	+0.4
	0.7nm,0.4s,baz=7.3,slow=7.8,SNR=18						
ASAR	**Alice Springs**	**47.99**	**190**	P	P	07 07 23.1	-0.7
	0.6nm,0.3s,baz=23,slow=7.3,SNR=3.9						
MKAR	**Makanchi Array**	**52.51**	**311**	P	P	07 07 58.5	+0.6
	0.3nm,0.4s,baz=83,slow=9.1,SNR=5.0						
ARCES	**ARCESS Array B**	**76.52**	**341**	P	P	07 10 35.0	+0.4
	1.5nm,1.0s,baz=65,slow=7.3,SNR=4.0						
FINES	**FINESS Array B**	**80.77**	**334**	P	P	07 10 57.6	-0.5
	1.1nm,0.6s,baz=66,slow=4.7,SNR=13						

IDC 19 07:12:00.4±7.8, 21°.62N×143°.31E, h299km±80km, mb3.1/9, mb1 3.2/9, mb1mx3.0/24, mbtmp3.1/9, Error ellipse: s-maj=38.0km s-min=15.8km az=80.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.64**	**323**	P	P	07 16 17.5	-0.5
	0.8nm,0.6s,baz=147,slow=8.5,SNR=4.3						
WRA	**Warramunga Arr**	**42.23**	**193**	P	P	07 19 25.1	+0.1
	1.6nm,0.9s,baz=12,slow=8.4,SNR=6.7						
ASAR	**Alice Springs**	**45.94**	**192**	P	P	07 19 53.9	-0.2
	0.4nm,0.7s,baz=23,slow=11,SNR=4.9						
ZALV	**Zalesovo Beam**	**54.34**	**322**	P	P	07 20 56.9	+0.5
	2.2nm,0.5s,baz=22,slow=16,SNR=7.8						
MKAR	**Makanchi Array**	**54.83**	**313**	P	P	07 21 00.3	+0.2
	0.2nm,0.2s,baz=99,slow=8.9,SNR=1.7						
ILAR	**Eielson Array**	**62.05**	**27**	P	P	07 21 49.5	+0.2
	0.2nm,0.6s,baz=255,slow=5.7,SNR=5.3						
BVAR	**Borovoye Array**	**62.80**	**320**	P	P	07 21 54.4	-0.1
	0.8nm,0.3s,baz=102,slow=7.7,SNR=4.6						
ARCES	**ARCESS Array B**	**79.03**	**342**	P	P	07 23 31.5	+0.3
	1.6nm,0.7s,baz=75,slow=9.2,SNR=6.9						
FINES	**FINESS Array B**	**83.30**	**335**	P	P	07 23 52.6	-1.1
	0.5nm,0.5s,baz=38,slow=7.2,SNR=5.4						

JMA 19 07:21:03.8±0.1, 37°.47N×142°.79E, h42km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**1.50**	**311**	P	Pn	07 21 29.2	+0.9
JIO				S	Sn	07 21 47.6	+0.9
JFK	**Kawauchi**	**1.53**	**267**	P	Pn	07 21 29.6	+1.0
JFK				S	Sn	07 21 48.4	+1.2
ONAJ	**Iwakimizuishiy**	**1.63**	**258**	P	Pn	07 21 31.1	+1.1
ONAJ				S	Sn	07 21 50.9	+1.2
JMM	**Marumori**	**1.63**	**285**	P	Pn	07 21 30.8	+0.8
JMM				S	Sn	07 21 50.6	+0.8
JOU	**Okura**	**1.90**	**299**	P	Pn	07 21 35.2	+1.5
JOU				S	Sn	07 21 57.2	+0.7
JMK	**Ichinoseki**	**1.93**	**321**	P	Pn	07 21 35.2	+1.1
JMK				S	Sn	07 21 58.8	+1.7
JOM	**Ohasama**	**2.32**	**330**	P	Pn	07 21 40.6	+1.1
JOM				S	Sn	07 22 08.6	+1.9
JYK	**Kaneyama**	**2.40**	**308**	P	Pn	07 21 42.0	+1.5
JAG	**Ashikaga**	**2.87**	**250**	P	Pn	07 21 48.9	+1.9
JAW	**Awa shima**	**2.97**	**290**	S	Sn	07 22 22.4	-0.3
BSO1	**Boso 1**	**3.17**	**208**	S	Sn	07 22 29.4	+1.7
JRY	**Ryogami san**	**3.44**	**246**	P	Pn	07 21 57.0	+2.1
MAT	**Matsushiro**	**3.78**	**257**	P	Pn	07 22 03.2	+3.6
MAT				*e*S	Sn	07 22 45.7	+2.9

IDC 19 07:23:54.8±7.8, 22°.81N×108°.20W, h0km, mb1 3.5/3, mb1mx3.3/20, mbtmp3.0/3, ML3.1/2, Error ellipse: s-maj=109.4km s-min=39.6km az=146.0, Off coast of central Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**7.67**	**31**	P	Pn	07 25 49.6	+1.8
	0.1nm,0.3s,baz=208,slow=15,SNR=5.4						
TXAR				Sn	Sn	07 27 20.2	+4.8
	0.0nm,0.3s,baz=209,slow=30,SNR=3.8						
TXAR				Lg		07 27 56.5	
	0.1nm,0.3s,baz=223,slow=27,SNR=4.4						
NVAR	**Mina Array Bea**	**17.81**	**333**	P	Pn	07 28 05.2	+1.2
	0.0nm,0.3s,baz=150,slow=14,SNR=3.6						
PDAR	**Pinedale Array**	**19.93**	**357**	P	Pn	07 28 27.7	-2.1
	0.0nm,0.3s,baz=171,slow=12,SNR=4.5						

IDC 19 07:43:43.5±4.8, 2°.68S×140°.02E, h0km, mb3.2/2, mb1 3.4/3, mb1mx3.3/15, mbtmp3.3/3, ML3.5/1, Error ellipse: s-maj=185.3km s-min=30.1km az=89.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.04**	**197**	P	Pn	07 47 56.9	+1.2
	0.2nm,0.3s,baz=18,slow=12,SNR=2.6						
ASAR	**Alice Springs**	**21.69**	**195**	P	P	07 48 35.3	-0.8
	0.5nm,1.0s,baz=17,slow=9.8,SNR=3.7						
MKAR	**Makanchi Array**	**70.56**	**322**	P	P	07 55 00.7	+0.3
	0.3nm,0.3s,baz=100,slow=8.0,SNR=4.7						

PGC ***19*** *07:49:08.6±12.0, 66°.00N×142°.63W, h20km, ML2.8/2, 263km Wnw of Dawson, Yt Alaska*

NEIC 19 07:49:06.0, 66°.08N×142°.82W, h5km, ML2.8(AEIC), 3D, After AEIC., Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGAK	**Eagle**	**1.48**	**151**	P	Pn	07 49 33.0	-0.2
EGAK				S	Sn	07 49 52.4	-0.5
BM3	**Burnt Mountain**	**1.52**	**333**	P	Pn	07 49 33.2	-0.5
COLA	**College**	**2.42**	**242**	P	Pn	07 49 47.0	+0.9
COLA				S	Sn	07 50 19.4	+3.3
DAWY	**Dawson**	**2.49**	**143**	P	Pn	07 49 46.8	-0.3
DAWY				S	Sn	07 50 19.7	+2.0
DAWY	**Dawson**	**2.49**	**143**	⇑Pn	Pn	07 49 46.5	-0.5
DAWY				⇓Sg	Sg	07 50 22.9	-2.9
DOT	**Dot Lake**	**2.50**	**193**	P	Pn	07 49 47.3	+0.2
BCA3	**Beaver Creek A**	**3.06**	**171**	P	Pn	07 49 54.6	-0.3
COLD	**Coldfoot**	**3.16**	**295**	P	Pn	07 49 57.3	+1.1
MENT	**Mentasta**	**3.18**	**187**	Pn	Pn	07 49 59.0	+2.5
MENT				*e*Pg	Pg	07 50 07.3	+0.6
MENT				*e*Sg	Sg	07 50 50.8	+3.0
DHY	**Denali Highway**	**3.59**	**215**	P	Pn	07 50 03.1	+0.9
RND	**Reindeer**	**3.72**	**227**	P	Pn	07 50 04.2	+0.3
BPAW	**Bear Paw Mtn.**	**3.98**	**244**	*e*Pn	Pn	07 50 06.6	-0.9
BPAW				*e*Pg	Pg	07 50 19.6	-2.6
BPAW				*e*S	Sn	07 51 09.3	+15
INK	**Inuvik**	**4.26**	**54**	⇓Pn	Pn	07 50 10.7	-0.6
INK				⇑Sn	Sn	07 50 58.3	-2.9
IM3	**Indian Mountai**	**4.46**	**274**	P	Pn	07 50 14.6	+0.5
HYT	**Haines Junctio**	**5.79**	**153**	⇓Sg	Sg	07 52 03.4	-8.1

BJI ***19*** *08:13:52.6, 11°.45S×65°.49E, h10km, mB5.0/12, mb4.7/17, Ms4.7/10, Ms7 4.5/10*

ISCJB ***19*** *08:13:57.3±0.4, 11°.23S±0°.08×66°.38E±0°.06, h10km, mb4.5/50, MS4.2/16, Error ellipse: s-maj=11.2km s-min=8.7km az=159.7*

IDC ***19*** *08:13:57.3±0.5, 11°.24S×66°.44E, h0km, mb4.3/22, mb1 4.4/22, mb1mx4.3/25, mbtmp4.3/22, MS4.2/11, Ms1 4.1/11, ms1mx3.8/32, Error ellipse: s-maj=16.7km s-min=14.6km az=151.0*

NEIC ***19*** *08:13:59.2±0.2, 11°.16S×66°.40E, h10km, mb4.7/15, Error ellipse: s-maj=9.2km s-min=8.2km az=173.0*

SZGRF ***19*** *08:14:05.1, 10°.63S×66°.21E, h20km, mb5.0, Mid-Indian Ridge*

ISC 19 08:13:59.2±0.4, 11°.24S±0°.07×66°.34E±0°.06, h10km, (h17km±1.3km: pP-P), n134, σ0s 86/91, mb4.5/50, MS4.2/16, 1C-1D, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo**	**30.57**	**287**	P	**P**	**08 20 14.9**	**+1.5**
	1.5nm,0.7s,mb4.0,baz=180,slow=20,SNR=4.6						
KMBO				LR	LR	08 31 17.5	
	comp=Z,456nm,18.2s,MS4.2,baz=89,slow=34						
LSZ	**Lusaka**	**37.31**	**260**	P	**P**	**08 21 13.0**	**+1.0**
	8.4nm,1.0s,mb4.5,baz=87,slow=8.3,SNR=8.0						
LSZ	**Lusaka**	**37.31**	**260**	*e*P	**P**	**08 21 13.5**	**+1.5**
	18nm,1.2s,mb4.8						
LBTB	**Lobatse**	**40.90**	**245**	P	**P**	**08 21 42.5**	**+0.6**
	3.1nm,0.8s,mb4.0,baz=94,slow=7.0,SNR=5.1						
LBTB	**Lobatse**	**40.90**	**245**	*e*P	**P**	**08 21 43.1**	**+1.2**
	4.1nm,0.8s,mb4.1						
BOSA	**Boshof**	**42.06**	**240**	P	**P**	**08 21 51.5**	**+0.2**
	2.1nm,0.9s,mb3.7,baz=3.7,slow=7.8,SNR=4.0						
BOSA				LR	LR	08 37 14.4	
	comp=Z,365nm,19.1s,MS4.3,baz=147,slow=33						
BOSA	**Boshof**	**42.06**	**240**	P	**P**	**08 21 51.5**	**+0.2**
BOSA				LR	LR	08 37 14.4	
CMAR	**Chiang Mai Arr**	**43.65**	**48**	P	**P**	**08 22 03.8**	**-0.6**
	1.6nm,0.4s,mb4.1,baz=241,slow=9.2,SNR=7.0						
CMAR				PcP	PcP	08 23 51.8	+0.1
	0.7nm,0.3s,baz=239,slow=5.2,SNR=5.4						
CMAR				LR	LR	08 36 40.7	
	comp=Z,207nm,20.9s,MS4.0,baz=242,slow=31						
KMI	**Kunming**	**50.65**	**44**	P	**P**	**08 23 01.0**	**+2.1**
KMI				pP	pP	08 23 03.9	+1.8
KMI				sP	sP	08 23 05.1	+1.8
KMI				PP	PP	08 24 58.4	+3.3
KMI				S	**S**	**08 30 15.6**	**+1.5**
KMI				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
KMI				pmax	pmax		
	comp=Z,82nm,3.8s						
KMI				LR	LR		
	comp=N,130nm,18.5s,MS4.2						
KMI				LR	LR		
	comp=E,200nm,19.4s,MS4.2						
KMI				LR	LR		
	comp=Z,220nm,20.3s,MS4.2						
KSH	**Kashi**	**51.28**	**10**	P	**P**	**08 23 00.3**	**-3.1**
KSH				pP	pP	08 23 04.3	-2.3
KSH				sP	sP	08 23 07.3	-0.5
KSH				PcP	PcP	08 24 17.5	-0.9
KSH				PP	PP	08 24 56.3	-4.2
KSH				ScP	ScP	08 28 11.5	-3.7
KSH				PcS	PcS	08 28 13.5	-2.5
KSH				S	**S**	**08 30 13.5**	**-8.8**
KSH				sS	sS	08 30 21.6	-5.9
KSH				ScS	ScS	08 32 47.8	-6.3
KSH				SS	SS	08 33 45.8	-12
KSH				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.1						
KSH				pmax	pmax		
	comp=Z,67nm,5.4s						
KSH				LR	LR		
	comp=N,160nm,7.1s						
KSH				LR	LR		
	comp=E,110nm,5.5s						
KSH				LR	LR		
	comp=Z,130nm,5.4s						
MMAI	**Mount Meron Ar**	**52.98**	**327**	LR	LR	08 43 53.3	
	comp=Z,140nm,19.8s,MS4.0,baz=130,slow=34						
GYA	**Guiyang**	**54.22**	**46**	*e*P	**P**	**08 23 26.9**	**+1.5**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
CD2	**Chengdu**	**55.20**	**39**	P	**P**	**08 23 35.1**	**+2.7**
CD2				pP	pP	08 23 39.8	+4.2
CD2				sP	sP	08 23 42.1	+5.3
CD2				PP	PP	08 25 40.3	+4.2
CD2				S	**S**	**08 31 17.3**	**+1.4**
CD2				SS	SS	08 35 02.1	+1.6
CD2				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.3						
CD2				pmax	pmax		
	comp=Z,150nm,4.7s						
CD2				LR	LR		
	comp=N,290nm,7.1s						
CD2				LR	LR		
	comp=Z,230nm,11.8s,MS4.5						
MAW	**Mawson**	**56.35**	**182**	P	**P**	**08 23 39.4**	**-0.7**
	comp=Z,7.5nm,1.0s,mb4.7,baz=9.1,slow=10,SNR=11						
MAW				LR	LR	08 42 34.5	
	comp=Z,201nm,20.6s,MS4.2,baz=336,slow=30						
MAW	**Mawson**	**56.35**	**182**	*e*P	**P**	**08 23 40.4**	**+0.2**
	comp=Z,1.6nm,0.9s,mb4.0						
WMQ	**Urumqi**	**58.14**	**18**	*e*P	**P**	**08 23 53.5**	**+0.4**
WMQ				pP	pP	08 23 58.1	+1.8
WMQ				sP	sP	08 24 00.5	+3.0
WMQ				PP	PP	08 26 03.8	+1.7
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
WMQ				pmax	pmax		
	comp=Z,110nm,4.8s						
WMQ				LR	LR		
	comp=N,200nm,22.8s						
WMQ				LR	LR		
	comp=Z,230nm,20.8s,MS4.3						
BRTR	**Keskin Array B**	**59.10**	**331**	P	**P**	**08 24 00.9**	**+1.0**
	comp=Z,1.0nm,0.9s,mb3.8,baz=158,slow=12,SNR=3.7						
GTA	**Gaotai**	**59.23**	**30**	*e*P	**P**	**08 24 01.1**	**+0.3**
GTA				pP	pP	08 24 05.3	+1.3
GTA				sP	sP	08 24 08.8	+3.6
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
MKAR	**Makanchi Array**	**59.51**	**13**	P	**P**	**08 24 01.7**	**-0.8**
	comp=Z,1.0nm,0.6s,mb4.0,baz=208,slow=8.3,SNR=10.0						
MKAR	**Makanchi Array**	**59.51**	**13**	P	**P**	**08 24 01.7**	**-0.8**
SYO	**Syowa Base**	**60.24**	**191**	⇓*e*X	**P**	**08 24 06.0**	**-1.3**
SYO	**Syowa Base**	**60.24**	**191**	⇑*e*pP	pP	08 24 12.0	+1.4
ABKAR	**Akbulak array**	**60.49**	**355**	*e*P	**P**	**08 24 07.8**	**-1.4**
	comp=Z,5.3nm,0.8s,mb4.6						
XAN	**Xi'an**	**60.53**	**40**	P	**P**	**08 24 16.4**	**+6.6**
XAN				pP	pP	08 24 22.6	+10
XAN				pmax	pmax		
	comp=Z,2.0nm,1.6s,mb4.0						
AKTK	**Aktyubinsk**	**61.84**	**354**	P	**P**	**08 24 17.6**	**-0.7**
AKTO	**Aktyubinsk**	**61.84**	**354**	P	**P**	**08 24 17.6**	**-0.7**
	comp=Z,4.4nm,0.9s,mb4.6,baz=174,slow=7.8,SNR=12						
BVAR	**Borovoye Array**	**64.10**	**3**	P	**P**	**08 24 32.6**	**-0.7**
	comp=Z,2.1nm,0.8s,mb4.2,baz=202,slow=7.3,SNR=2.2						
ASAR	**Alice Springs**	**65.13**	**111**	P	**P**	**08 24 39.7**	**-1.1**
	comp=Z,4.1nm,0.7s,mb4.6,baz=275,slow=6.1,SNR=44						
WRA	**Warramunga Arr**	**65.71**	**107**	P	**P**	**08 24 43.9**	**-0.7**
	comp=Z,5.5nm,0.7s,mb4.7,baz=275,slow=5.8,SNR=34						
WRA	**Warramunga Arr**	**65.71**	**107**	P	**P**	**08 24 43.9**	**-0.7**
WRAB	**Tennant Creek**	**65.72**	**107**	*e*P	**P**	**08 24 45.4**	**+0.7**
	comp=Z,9.2nm,0.8s,mb4.9						
NJ2	**Nanjing**	**66.13**	**47**	*e*P	**P**	**08 24 47.1**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
HHC	**Hu-ho-hao-te**	**66.55**	**36**	*e*P	**P**	**08 24 49.4**	**-0.1**
HHC				sP	sP	08 24 54.8	+0.9
HHC				PcP	PcP	08 25 19.0	+0.1
HHC				PP	PP	08 27 17.8	+1.6
HHC				ScP		08 29 20.3	
HHC				PcS		08 29 21.5	
HHC				S	S	08 33 39.1	-1.4
HHC				ScS	ScS	08 34 41.5	-5.1
HHC				SS	SS	08 37 57.8	-0.2
HHC				pmax	pmax		
	comp=Z,19nm,0.6s,mb5.3						
HHC				pmax	pmax		
	comp=Z,120nm,6.2s						
HHC				LR	LR		
	comp=N,120nm,16.7s,MS4.4						
HHC				LR	LR		
	comp=E,160nm,16.7s,MS4.4						
HHC				LR	LR		
	comp=Z,170nm,16.1s,MS4.3						
ZAA0	**Zalesovo Array**	**66.81**	**12**	*e*P	**P**	**08 24 49.9**	**-0.9**
ZALV	**Zalesovo Beam**	**66.81**	**12**	P	**P**	**08 24 50.0**	**-0.9**
	comp=Z,1.3nm,0.5s,mb4.2,baz=197,slow=4.6,SNR=7.7						
ZALV				LR	LR	08 52 31.8	
	comp=Z,69nm,19.2s,MS3.9,baz=42,slow=35						
ARU	**Arti**	**67.72**	**355**	*e*P	**P**	**08 24 56.3**	**-0.3**
	comp=Z,2.3nm,0.6s,mb4.4						
SONM	**Songino Array**	**68.72**	**28**	P	**P**	**08 25 03.8**	**+0.7**
	comp=Z,3.4nm,0.8s,mb4.3,baz=220,slow=6.0,SNR=16						
SONM				LR	LR	08 54 09.0	
	comp=Z,201nm,21.6s,MS4.3,baz=168,slow=35						
AKASG	**Malin Array Be**	**69.63**	**336**	P	**P**	**08 25 07.7**	**-0.9**
	comp=Z,3.2nm,0.7s,mb4.3,baz=168,slow=5.4,SNR=8.8						
STKA	**Stephens Creek**	**71.69**	**120**	LR	LR	08 51 51.9	
	comp=Z,273nm,21.1s,MS4.5,baz=207,slow=32						
CRVS	**Cervenica-Dubn**	**71.74**	**331**	*e*P	**P**	**08 25 18.9**	**-2.6**
CRVS	**Cervenica-Dubn**	**71.74**	**331**	*e*P	**P**	**08 25 18.9**	**-2.6**
KECS	**Kecovo**	**71.93**	**330**	*e*P	**P**	**08 25 22.5**	**-0.2**
KECS	**Kecovo**	**71.93**	**330**	*e*P	**P**	**08 25 22.5**	**-0.2**
VYHS	**Vyhne**	**72.76**	**329**	*e*P	**P**	**08 25 27.6**	**-0.1**
VYHS	**Vyhne**	**72.76**	**329**	*e*P	**P**	**08 25 27.6**	**-0.1**
KIC	**Kosan Boka**	**72.85**	**280**	*e*P	**P**	**08 25 29.4**	**+0.5**
	comp=Z,51nm,1.4s,mb5.3						
DBIC	**Dimbokro**	**73.03**	**281**	P	**P**	**08 25 30.2**	**+0.1**
	comp=Z,4.5nm,0.8s,mb4.5,baz=94,slow=2.2,SNR=5.4						
DBIC	**Dimbokro**	**73.03**	**281**	P	**P**	**08 25 30.2**	**+0.1**
KOLL	**Kolacno**	**73.04**	**329**	*e*P	**P**	**08 25 29.1**	**-0.2**
KOLL	**Kolacno**	**73.04**	**329**	*e*P	**P**	**08 25 29.1**	**-0.2**
LIC	**Lamto**	**73.09**	**280**	*e*P	**P**	**08 25 30.7**	**+0.3**
	comp=Z,67nm,1.6s,mb5.3						
LIC	**Lamto**	**73.09**	**280**	*e*P	**P**	**08 25 30.6**	**+0.2**
	comp=Z,14nm,0.7s,mb4.7						
LIC				*e*MLR	MLR		
	comp=Z,492nm,23.0s,MS4.4						
LIC	**Lamto**	**73.09**	**280**	*e*P	**P**	**08 25 30.6**	**+0.2**
	comp=Z,6.8nm,0.7s,mb4.7						
LIC				LR	LR		
	comp=Z,250nm,23.0s,MS4.4						
TIC	**Toumodi**	**73.18**	**280**	*e*P	**P**	**08 25 31.2**	**+0.3**
	comp=Z,126nm,1.7s,mb5.6						
MORC	**Moravsky Berou**	**74.24**	**330**	*e*P	**P**	**08 25 36.4**	**+0.1**
	comp=Z,6.0nm,1.1s,mb4.4						
DPC	**Dobruska-Polom**	**75.21**	**329**	*e*P	**P**	**08 25 42.2**	**+0.2**
DPC				*e*pP	pP	08 25 47.1	+1.8
KSRS	**Korea Array**	**75.27**	**46**	P	**P**	**08 25 42.0**	**-0.6**
	comp=Z,1.3nm,0.9s,mb3.9,baz=250,slow=6.3,SNR=5.2						
KSRS				LR	LR	08 59 52.7	
	comp=Z,121nm,18.1s,MS4.2,baz=205,slow=37						
UPC	**Upice**	**75.47**	**329**	*e*P	**P**	**08 25 44.4**	**+1.0**
KHC	**Kasperske Hory**	**75.88**	**327**	*e*P	**P**	**08 25 44.7**	**-1.1**
	comp=Z,1.9nm,0.8s,mb4.1						
KHC	**Kasperske Hory**	**75.88**	**327**	*e*P	**P**	**08 25 43.2**	**-2.6**
KHC				*e*pP	pP	08 25 49.8	+0.7
PRU	**Pruhonice**	**75.89**	**328**	*e*P	**P**	**08 25 45.5**	**-0.3**
PRU				*e*pP	pP	08 25 52.6	+3.5
PVCC	**Panska Ves**	**76.20**	**329**	*e*P	**P**	**08 25 47.9**	**+0.3**
PVCC				*e*x	x	08 25 54.9	
CN2	**Changchun**	**76.64**	**40**	*e*P	**P**	**08 25 51.3**	**+1.1**
CTA	**Charters Tower**	**76.85**	**108**	LR	LR	08 56 01.8	
	comp=Z,154nm,19.2s,MS4.3,baz=229,slow=33						
NKC	**Novy Kostel**	**77.12**	**328**	*e*P	**P**	**08 25 54.0**	**+1.2**
NKC				*e*x	x	08 26 00.5	
MBDF	**Montbardon**	**77.38**	**321**	*e*P	**P**	**08 25 54.3**	**-0.1**
	comp=Z,8.8nm,0.9s,mb4.4						
MBDF	**Montbardon**	**77.38**	**321**	*e*P	**P**	**08 25 54.3**	**-0.1**
	comp=Z,4.4nm,0.9s,mb4.4						
GRF	**Grafenberg Arr**	**77.46**	**327**	*e*P	**P**	**08 25 55.3**	**+0.6**
	comp=Z,18nm,1.4s,mb4.8						
GRF				*e*pP	pP	08 26 01.2	+3.2
CLL	**Collm**	**77.47**	**329**	*e*P	**P**	**08 25 55.0**	**+0.3**
	comp=Z,5.0nm,0.9s,mb4.4						
CLL				*i* sP	sP	08 26 02.0	+2.8
	comp=Z,13nm,1.3s						
RUE	**Ruedersdorf**	**77.78**	**330**	*e*P	**P**	**08 25 57.3**	**+0.8**
ORIF	**Oris-en-Rattie**	**78.03**	**321**	*e*P	**P**	**08 25 58.2**	**+0.2**
	comp=Z,11nm,0.9s,mb4.5						
ORIF	**Oris-en-Rattie**	**78.03**	**321**	*e*P	**P**	**08 25 58.2**	**+0.2**
	comp=Z,5.3nm,0.9s,mb4.5						
VIVF	**Saint-Julien-l**	**78.75**	**320**	*e*P	**P**	**08 26 01.3**	**-0.7**
	comp=Z,17nm,1.2s,mb4.6						
VIVF	**Saint-Julien-l**	**78.75**	**320**	*e*P	**P**	**08 26 01.3**	**-0.7**
	comp=Z,8.6nm,1.2s,mb4.6						
CDF	**Champ du Feu**	**78.95**	**324**	*e*P	**P**	**08 26 02.0**	**-1.0**
FINES	**FINESS Array B**	**79.05**	**342**	P	**P**	**08 26 03.3

HWUT	**Hardware Ranch**	**149.69**	**357**	*e*PKPbc	PKPbc	08 33 50.0	+0.4
M13A	**Montello**	**149.99**	**1**	*e*PKPbc	PKPbc	08 33 50.2	0.0
MIAR	**Mount Ida**	**150.44**	**325**	*e*PKPbc	PKPbc	08 33 52.5	+0.9
N12A	**Clover Valley,**	**150.48**	**2**	*e*PKPbc	PKPbc	08 33 51.6	+0.2
DAU	**Daniels Canyon**	**150.86**	**356**	*e*PKPbc	PKPbc	08 33 52.7	+0.3
DUG	**Dugway**	**151.15**	**359**	*e*PKPbc	PKPbc	08 33 53.4	+0.3
SMCO	**Snowmass**	**151.54**	**349**	*e*PKPbc	PKPbc	08 33 54.5	+0.5
SRU	**San Rafael**	**152.10**	**355**	*e*PKPbc	PKPbc	08 33 55.3	+0.1
NVAR	**Mina Array Bea**	**152.60**	**8**	PKPbc	PKPbc	08 33 56.5	+0.1
	comp=Z,3.0nm,0.8s,baz=307,slow=1.4,SNR=20						
NVAR				PP	PP	08 37 38.2	+0.1
	comp=Z,0.2nm,0.7s,baz=335,slow=4.0,SNR=2.5						
PV01	**Paradox Valley**	**152.83**	**351**	*e*PKPdf	PKPdf	08 33 52.8	+3.0
WMOK	**Wichita Mounta**	**152.96**	**332**	*e*PKPbc	PKPbc	08 33 57.6	+0.2
TXAR	**Lajitas Array**	**159.72**	**334**	PKP	PKPdf	08 33 59.3	+0.2
	comp=Z,0.4nm,0.9s,baz=44,slow=3.8,SNR=4.4						
TXAR				PKPab	PKPab	08 34 37.3	-0.3
	comp=Z,0.5nm,0.7s,baz=66,slow=4.2,SNR=5.7						

ISCJB ***19*** *08:21:26.5±0.9, 50.°76N±0.°10×73.°86E±0.°08, h10km, Error ellipse: s-maj=14.6km s-min=5.6km az=19.5*
IDC ***19*** *08:21:28.5±1.1, 50.°96N×73.°88E, h0km, mb3.2/1, mb1 3.3/5, mb1mx3.2/26, mbtmp3.2/5, ML3.1/4, Error ellipse: s-maj=21.7km s-min=10.3km az=29.0*
NNC ***19*** *08:21:29.4±1.8, 50.°93N×73.°81E, h0km, mb3.3, mpv3.0, Error ellipse: s-maj=33.5km s-min=6.5km az=24.0*
ISC 19 08:21:29.3±0.8, 50.°80N±0.°09×73.°73E±0.°07, h10km, n12, σ1°21/18, 11C-6D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VOSK	**Vostochnaya**	**2.58**	**320**	⇑Pn	**Pn**	**08 22 11.3**	**+0.3**
	2.8nm,0.6s						
VOSK				⇓Pg	**Pb**	**08 22 14.5**	**-0.9**
	5.2nm,0.5s						
VOSK				⇑Sn	**Sn**	**08 22 43.9**	**+1.6**
	27nm,0.7s						
VOSK				⇓Rg		08 23 03.2	
	60nm,1.4s						
BVAR	**Borovoye Array**	**3.04**	**318**	Pn	**Pn**	**08 22 18.1**	**+0.7**
	1.8nm,0.3s,baz=130,slow=16,SNR=15						
BVAR				Pg	**Pb**	**08 22 21.3**	**-2.1**
	1.8nm,0.3s,baz=137,slow=18,SNR=16						
BVAR				Lg		08 23 01.7	
	4.3nm,0.3s,baz=128,slow=30,SNR=10						
KURK	**Kurchatov**	**3.11**	**90**	⇑Pn	**Pn**	**08 22 19.7**	**+1.4**
	2.7nm,0.7s						
KURK				⇓Pg	**Pg**	**08 22 25.5**	**-3.2**
	4.2nm,0.6s						
KURK				⇑Sn	**Sn**	**08 22 56.5**	**+1.1**
	4.7nm,0.6s						
KURK				⇑Lg		08 23 07.0	
	22nm,0.6s						
BRVK	**Borovoye**	**3.11**	**318**	⇑Pn	**Pn**	**08 22 21.5**	**+3.3**
	6.0nm,0.7s						
BRVK				⇑Pg	**Pg**	**08 22 28.3**	**-0.5**
	5.8nm,0.5s						
BRVK				⇑Lg		08 23 01.9	
	39nm,0.7s						
ZRNK	**Zerenda**	**3.64**	**308**	⇑Pn	**Pn**	**08 22 25.1**	**-0.4**
	1.3nm,0.5s						
ZRNK				⇓Pg	**Pg**	**08 22 34.0**	**-4.8**
	1.8nm,0.4s						
ZRNK				⇑Sn	**Sn**	**08 23 09.5**	**+1.1**
	7.4nm,0.8s						
ZRNK				⇑Lg		08 23 19.1	
	27nm,0.9s						
MK31	**Makanchi Array**	**6.93**	**122**	Lg		08 25 04.0	
	4.5nm,0.6s,baz=308,slow=24,SNR=5.6						
MKAR	**Makanchi Array**	**6.93**	**122**	Pn	**Pn**	**08 23 11.1**	**+0.3**
	0.2nm,0.3s,baz=313,slow=13,SNR=2.5						
MKAR				Lg		08 25 07.2	
	0.4nm,0.3s,baz=314,slow=28,SNR=4.6						
ZALV	**Zalesovo Beam**	**7.49**	**61**	Pn	**Pn**	**08 23 14.5**	**-3.9**
	0.4nm,0.3s,baz=253,slow=15,SNR=2.7						
ZALV				Sn	**Sn**	**08 24 42.5**	**-0.7**
	0.3nm,0.3s,baz=255,slow=22,SNR=3.6						
TKM2	**Tokmak 2**	**7.98**	**170**	⇓Lg		08 25 45.4	
	11nm,0.7s						
KK31	**Karatay Array**	**8.01**	**197**	⇓Lg		08 25 44.6	
	3.6nm,0.8s,baz=79,slow=21,SNR=2.9						
AKTO	**Aktyubinsk**	**10.00**	**274**	Pn	**Pn**	**08 23 51.9**	**-0.9**
	0.4nm,0.3s,baz=104,slow=10,SNR=7.0						
AKTO				Lg		08 26 48.7	
	0.1nm,0.3s,baz=202,slow=19,SNR=2.3						
ILAR	**Eielson Array**	**60.54**	**19**	P	**P**	**08 31 38.5**	**-0.6**
	0.2nm,0.5s,baz=326,slow=5.1,SNR=4.7						

IDC 19 08:29:26.0±3.2, 9.°28S×66.°99E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.4/23, mbtmp3.6/4, MS4.0/1, Ms1 4.0/1, ms1mx2.8/36, Error ellipse: s-maj=111.0km s-min=34.0km az=60.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**34.01**	**71**	LR	LR	08 46 36.5	
	comp=Z,211nm,19.1s,baz=257,slow=30						
MKAR	**Makanchi Array**	**57.47**	**12**	P	P	08 39 17.1	+0.4
	0.2nm,0.2s,baz=205,slow=6.4,SNR=3.8						
ASAR	**Alice Springs**	**65.24**	**112**	P	P	08 40 10.3	+0.4
	0.3nm,0.5s,baz=280,slow=6.4,SNR=5.8						
WRA	**Warramunga Arr**	**65.67**	**108**	P	P	08 40 12.6	-0.2
	0.4nm,0.8s,baz=282,slow=6.0,SNR=3.4						
SONM	**Songino Array**	**66.70**	**28**	P	P	08 40 18.9	+0.2
	0.6nm,0.8s,baz=212,slow=5.3,SNR=3.9						
NVAR	**Mina Array Bea**	**150.59**	**8**	PKPbc	PKPbc	08 49 20.1	-0.2
	baz=297,slow=0.4						

ISCJB ***19*** *08:47:39.6±0.9, 8.°1S±0.°1×68.°3E±0.°1, h10km, mb4.0/12, Error ellipse: s-maj=22.3km s-min=19.4km az=35.7*
IDC ***19*** *08:47:40.3±0.9, 8.°17S×68.°26E, h0km, mb3.9/10, mb1 4.0/10, mb1mx3.8/24, mbtmp3.9/10, MS4.0/1, Ms1 4.0/1, ms1mx3.0/29, Error ellipse: s-maj=26.9km s-min=23.0km az=35.0*
NEIC ***19*** *08:47:41.7±0.6, 8.°15S×68.°25E, h10km, mb4.2/3, Error ellipse: s-maj=15.0km s-min=13.6km az=211.0*
ISC 19 08:47:41.7±0.9, 8.°2S±0.°1×68.°2E±0.°1, h10km, n19, σ0°45/16, mb4.0/12, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**32.48**	**72**	LR	LR	09 04 59.0	
	comp=Z,228nm,18.3s,baz=242,slow=32						
LSZ	**Lusaka**	**39.80**	**256**	P	**P**	**08 55 15.7**	**+0.3**
	1.4nm,0.4s,mb4.1,baz=58,slow=17,SNR=6.2						
LSZ	**Lusaka**	**39.80**	**256**	*e*P	**P**	**08 55 15.9**	**+0.6**
	5.8nm,1.0s,mb4.3						
CMAR	**Chiang Mai Arr**	**40.21**	**49**	P	**P**	**08 55 19.6**	**+1.0**
	0.6nm,0.3s,mb3.8,baz=240,slow=10,SNR=5.0						
MKAR	**Makanchi Array**	**56.12**	**12**	P	**P**	**08 57 20.9**	**-0.2**
	0.3nm,0.3s,mb3.6,baz=203,slow=9.1,SNR=6.8						
BRTR	**Keskin Array B**	**57.40**	**329**	P	**P**	**08 57 30.5**	**+0.1**
	0.8nm,0.8s,mb3.8,baz=120,slow=7.3,SNR=5.1						
BRTR	**Keskin Array B**	**57.40**	**329**	P	**P**	**08 57 30.5**	**+0.1**
ABKAR	**Akbulak array**	**57.63**	**354**	*e*P	**P**	**08 57 31.6**	**-0.3**
	1.9nm,0.8s,mb4.2						
AKTK	**Aktyubinsk**	**59.02**	**352**	P	**P**	**08 57 41.2**	**-0.3**
AKTO	**Aktyubinsk**	**59.02**	**352**	P	**P**	**08 57 41.2**	**-0.3**
	3.3nm,1.0s,mb4.3,baz=173,slow=6.3,SNR=9.2						
KURK	**Kurchatov**	**59.32**	**8**	*e*P	**P**	**08 57 43.2**	**-0.4**
	2.1nm,0.9s,mb4.2						
BVAR	**Borovoye Array**	**60.97**	**1**	P	**P**	**08 57 55.0**	**+0.1**
	0.4nm,0.4s,mb3.9,baz=182,slow=8.6,SNR=4.7						
ZALV	**Zalesovo Beam**	**63.44**	**11**	P	**P**	**08 58 11.3**	**-0.1**
	0.4nm,0.3s,mb4.0,baz=196,slow=9.9,SNR=3.1						
ASAR	**Alice Springs**	**64.51**	**112**	P	**P**	**08 58 18.9**	**-0.2**
	0.6nm,0.9s,mb3.6,baz=281,slow=6.2,SNR=4.9						
WRA	**Warramunga Arr**	**64.84**	**108**	P	**P**	**08 58 20.9**	**-0.5**
	1.3nm,1.0s,mb3.9,baz=276,slow=7.4,SNR=5.0						
WRA	**Warramunga Arr**	**64.84**	**108**	P	**P**	**08 58 20.9**	**-0.5**
SONM	**Songino Array**	**65.14**	**27**	P	**P**	**08 58 23.6**	**+0.8**
	1.8nm,1.0s,mb4.1,baz=222,slow=7.5,SNR=9.8						
PDAR	**Pinedale Array**	**145.47**	**357**	PKPbc	PKPbc	09 07 21.6	+1.2
	1.0nm,1.1s,baz=20,slow=3.0,SNR=5.4						
NVAR	**Mina Array Bea**	**149.29**	**10**	PKP	PKPdf	09 07 27.6	+0.8
	0.2nm,0.7s,baz=285,slow=1.8,SNR=2.7						
NVAR				PKPbc	PKPbc	09 07 32.3	+1.2
	0.7nm,0.8s,baz=346,slow=0.8,SNR=5.6						

ISCJB ***19*** *09:09:28.7±0.9, 37.°24N±0.°05×28.°29E±0.°06, h15km±8km, Error ellipse: s-maj=9.9km s-min=6.4km az=39.2*

ISK ***19*** *09:09:28.1, 37.°30N×28.°30E, h5km, ML2.3*
CSEM ***19*** *09:09:29.0±0.4, 37.°24N×28.°29E, h10km, ML2.3, Error ellipse: s-maj=8.6km s-min=6.3km az=51.0*
DDA ***19*** *09:09:29.1, 37.°21N×28.°21E, h7km±7km, Md2.7*
ISC 19 09:09:29.0±0.9, 37.°24N±0.°05×28.°31E±0.°06, h14km±8km, n18, σ0°88/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.10**	**193**	*e*PG	**Pg**	**09 09 31.9**	**-0.3**
YER				*e*SG	**Sg**	**09 09 35.0**	**+0.5**
YER	**Yerkesik**	**0.10**	**193**	*e*Pg	**Pg**	**09 09 31.9**	**-0.3**
YER				*e*Sg	**Sg**	**09 09 35.0**	**+0.6**
MLSB	**Milas**	**0.43**	**278**	*e*PG	**Pg**	**09 09 36.5**	**-1.0**
MLSB				*e*SG	**Sg**	**09 09 43.1**	**-0.3**
MLSB	**Milas**	**0.43**	**278**	*e*Pg	**Pg**	**09 09 36.6**	**-1.0**
MLSB				*e*Sg	**Sg**	**09 09 43.1**	**-0.3**
TURN	**Turunc**	**0.43**	**147**	*i* P	**Pg**	**09 09 38.0**	**+0.4**
TURN				*i* S	**Sg**	**09 09 49.6**	**+6.2**
TURN	**Turunc**	**0.43**	**147**	*i* P	**Pg**	**09 09 38.0**	**+0.4**
AYDN	**Tasoluk**	**0.55**	**321**	*i* P	**Pg**	**09 09 38.7**	**-1.0**
AYDN				*i* S	**Sg**	**09 09 46.9**	**-0.1**
AYDN	**Tasoluk**	**0.55**	**321**	*i* P	**Pg**	**09 09 38.7**	**-1.0**
AYDN				*i* S	**Sg**	**09 09 46.9**	**-0.1**
BDRM	**Kayabasi**	**0.71**	**256**	*i* P	**Pg**	**09 09 41.2**	**-1.6**
BDRM				*i* S	**Sg**	**09 09 53.6**	**+1.3**
BDRM	**Kayabasi**	**0.71**	**256**	*i* P	**Pg**	**09 09 41.2**	**-1.7**
BDRM				*i* S	**Sg**	**09 09 53.6**	**+1.3**
DAT	**Datca**	**0.78**	**229**	*e*PG	**Pg**	**09 09 44.1**	**+0.1**
DAT	**Datca**	**0.78**	**229**	*e*Pg	**Pg**	**09 09 44.1**	**+0.1**
BODT	**Bodrum**	**0.82**	**258**	*e*PG	**Pg**	**09 09 43.9**	**-1.0**
BODT	**Bodrum**	**0.82**	**258**	*e*Pg	**Pg**	**09 09 43.9**	**-1.0**
GCAM	**G?zelcaml?**	**0.97**	**299**	*i* P	**Pg**	**09 09 49.0**	**+1.2**
GCAM				*i* S	**Sg**	**09 10 01.7**	**+1.1**
GCAM	**G?zelcaml?**	**0.97**	**299**	*i* P	**Pg**	**09 09 49.0**	**+1.2**
GCAM				*i* S	**Sg**	**09 10 01.7**	**+1.1**
KULA	**Kula-Manisa**	**1.30**	**12**	*e*PN	**Pn**	**09 09 53.3**	**+0.5**
KULA	**Kula-Manisa**	**1.30**	**12**	*e*Pn	**Pn**	**09 09 53.3**	**+0.5**

ISCJB ***19*** *09:27:00.8±0.8, 11.°06S±0.°02×164.°47E±0.°02, h14km±5km, mb6.0/306, MS6.4/294, Error ellipse: s-maj=4.0km s-min=2.6km az=171.8*
NEIC ***19*** *09:27:01.5±0.1, 11.°04S×164.°49E, h11km, mb6.1/187, ME6.4, MS6.4/203, MW6.6, MWW6.6, Error ellipse: s-maj=3.5km s-min=2.9km az=154.0, Moment Tensor Solution. s59 Moment tensor: Scale 10^18 Nm; Mrr=6.84; Mθθ=3.28; Mφφ=3.56; Mrθ=0.42; Mθφ=3.69; Mφr=5.24; Best double couple: M0=8.70000×10^18 NP1:φ=203.00000°, δ=63.00000°, λ=-110.00000°. NP2:φ=62.00000°, δ=33.00000°, λ=-56.00000°. Principal axes: T 8.3100, Plg=16.0000°, Azm=307.0000°; N 0.8100, Plg=17.0000°, Azm=212.0000°; P -9.1100, Plg=65.0000°, Azm=77.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*
BJI ***19*** *09:27:02.2, 10.°91S×164.°89E, h33km, mB6.8/56, mb5.8/63, Ms6.6/76, Ms7 6.4/62*
SZGRF ***19*** *09:27:03.1, 10.°79S×165.°25E, h33km, mb6.7, Santa Cruz Islands*
MOS ***19*** *09:27:03.5±0.8, 11.°00S×164.°41E, h33km, mb6.3/89, MS6.4/97, Error ellipse: s-maj=6.4km s-min=6.1km az=145.0*
DJA ***19*** *09:27:04, 11.°09S×164.°39E, h10km, Mw6.8/67*
IDC ***19*** *09:27:05.0±1.5, 11.°10S×164.°48E, h32km±10km, mb5.6/28, mb1 5.7/30, mb1mx5.7/31, mbtmp5.7/30, ML6.1/2, MS6.2/28, Ms1 6.2/28, ms1mx6.1/34, Error ellipse: s-maj=8.5km s-min=8.0km az=51.0*
GCMT ***19*** *09:27:07.6±0.0, 11.°12S×164.°47E, h14km, MW6.6, Moment Tensor Solution. s116,c283; s99,c231; Moment tensor: Scale 10^18 Nm; Mrr=8.48±.04; Mθθ=3.35±.03; Mφφ=5.12±.04; Mrθ=-1.06±.09; Mθφ=4.96±.03; Mφr=1.57±.09; Best double couple: M0=9.10000×10^18 NP1:φ=52.00000°, δ=45.00000°, λ=-72.00000°. NP2: φ=208.00000°, δ=48.00000°, λ=-107.00000°. Principal axes: T 9.2900, Plg2.0000°, Azm310.0000°; N -0.3900, Plg13.0000°, Azm219.0000°; P -8.9000, Plg77.0000°, Azm47.0000°; Data Used: II IU CN IC G. LP body wave period 50 sec. Mantle waves from 109 sta. Surface waves: sta=119, comp=305, per= 50.*
ISC 19 09:27:04.6±0.9, 11.°07S±0.°02×164.°53E±0.°02, h29km±6km, h33km±1.4km: pP-P, n1886, σ0°78/1114, mb6.0/307, MS6.4/294, 200C-267D, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.79**	**289**	Pn	**Pn**	**09 28 15.4**	**+0.6**
	2μm,0.3s,baz=158,slow=4.7,SNR=108						
HNR				Sn	**Sn**	**09 29 12.1**	**+2.6**
	2μm,0.3s,baz=204,slow=22,SNR=4.7						
HNR	**Honiara**	**4.79**	**289**	*e*Pn	**Pn**	**09 28 14.9**	**0.0**
HNR				*e*Sn	**Sn**	**09 29 07.7**	**-1.8**
DZM	**Mont Dzumac**	**11.09**	**171**	*e*Pn	**Pn**	**09 29 39.4**	**-1.9**
	5μm,1.4s						
DZM				*e*LR	LR	09 32 16.3	
	407μm,26.1s						
NOUC	**Port Laguerre**	**11.10**	**171**	*e*P	**Pn**	**09 29 39.2**	**-2.2**
NOUC				*e*S	**Sn**	**09 31 37.2**	**-7.4**
BAYA	**Yate Dam**	**11.25**	**169**	*e*P	**Pn**	**09 29 41.5**	**-2.0**
BAYA				*e*S	**Sn**	**09 31 42.9**	**-5.4**
MSVF	**Nonsavu**	**14.67**	**118**	Pn	**Pn**	**09 30 31.0**	**+0.7**
	3μm,1.1s,SNR=20						
MSVF	**Nonsavu**	**14.67**	**118**	*e*Pn	**Pn**	**09 30 30.8**	**+0.5**
	2μm,1.5s						
MSVF				*e*Sn	**Sn**	**09 33 24.9**	**+13**
FUNA	**Funafuti**	**14.68**	**81**	*e*Pn	**Pn**	**09 30 29.6**	**-0.7**
	973nm,1.2s						
FUNA				*e*Sn	**Sn**	**09 33 15.3**	**+3.3**
PMG	**Port Moresby**	**17.17**	**274**	*c i*P	**Pn**	**09 31 02.6**	**0.0**
PMG				pmax	pmax		
	comp=Z,169nm,1.0s						
PMG	**Port Moresby**	**17.17**	**274**	*e*Pn	**Pn**	**09 31 02.5**	**-0.1**
	comp=Z,828nm,1.2s						
PMG	**Port Moresby**	**17.17**	**274**	P	**Pn**	**09 31 02.3**	**-0.3**
	comp=Z,736nm,1.2s						
PMG	**Port Moresby**	**17.17**	**274**	P	**Pn**	**09 31 03.0**	**+0.4**
	comp=Z,736nm,1.2s						
EIDS	**Eidsvold**	**19.09**	**220**	*e*P	**Pn**	**09 31 26.7**	**+0.8**
	comp=Z,690nm,1.1s						
CTA	**Charters Tower**	**19.74**	**241**	⇓*i*P	**Pn**	**09 31 33.2**	**-0.5**
	comp=Z,2μm,1.2s						
CTA				*e*S	**Sn**	**09 35 14.9**	**+0.1**
CTA	**Charters Tower**	**19.74**	**241**	P	**Pn**	**09 31 33.0**	**-0.7**
	comp=Z,18nm,0.3s,baz=68,slow=12,SNR=216						
CTA				S	**Sn**	**09 35 17.0**	**+2.2**
	comp=Z,0.3nm,0.3s,baz=217,slow=20,SNR=3.2						
CTA	**Charters Tower**	**19.74**	**241**	P	**Pn**	**09 31 33.0**	**-0.7**
CTA				S	**Sn**	**09 35 17.0**	**+2.2**
CTA				pmax	pmax		
	comp=Z,18nm,0.3s						
CTAO	**Charters Tower**	**19.74**	**241**	*e*P	**Pn**	**09 31 33.8**	**+0.1**
CTAO				pmax	pmax		
	comp=Z,2μm,1.1s						
CTAO	**Charters Tower**	**19.74**	**241**	*e*P	**Pn**	**09 31 33.8**	**0.0**
	comp=Z,2μm,1.1s						
CTAO	**Charters Tower**	**19.74**	**241**	P	**Pn**	**09 31 34.0**	**+0.3**
	comp=Z,2μm,1.2s						
CTAO	**Charters Tower**	**19.74**	**241**	P	**Pn**	**09 31 33.4**	**-0.3**
	comp=Z,2μm,1.2s						
KWAJ	**Kwajalein Atol**	**19.98**	**9**	*e*P	**Pn**	**09 31 35.7**	**-0.9**
	comp=Z,1μm,0.7s						
KWAJ				*e*S	**Sn**	**09 35 26.7**	**+6.0**
COEN	**Coen**	**21.04**	**260**	*e*P	**P**	**09 31 46.3**	**-0.1**
	comp=Z,19μm,1.6s,mb7.2						
COEN				*e*S	**S**	**09 35 35.5**	**-3.8**
COEN	**Coen**	**21.04**	**260**	P	**P**	**09 31 46.5**	**+0.2**
	comp=Z,4μm,1.7s,mb6.4						
COEN	**Coen**	**21.04**	**260**	P	**P**	**09 31 46.4**	**+0.1**
	comp=Z,4μm,1.7s,mb6.4						
ARMA	**Armidale**	**22.68**	**210**	*e*P	**P**	**09 32 03.7**	**0.0**
ARMA				*e*S	**S**	**09 36 16.9**	**+6.3**
ARMA	**Armidale**	**22.68**	**210**	*e*P	**P**	**09 32 04.7**	**+1.0**
	comp=Z,810nm,1.1s,mb6.1						
AFI	**Afiamalu**	**23.30**	**99**	P	**P**	**09 32 11.2**	**+0.8**
	comp=Z,125nm,0.9s,mb5.3,baz=77,slow=12,SNR=6.6						
AFI				S	**S**	**09 36 20.6**	**-0.4**
	comp=Z,58nm,1.1s,baz=60,slow=20,SNR=1.9						
AFI				LR	LR	09 39 04.9	
	comp=Z,95μm,21.5s,MS6.2,baz=78,slow=31						
AFI	**Afiamalu**	**23.30**	**99**	*e*P	**P**	**09 32 10.4**	**-0.1**
AFI				*e*S	**S**	**09 36 20.5**	**-0.6**
AFI				pmax	pmax		
	comp=Z,4μm,2.2s,mb6.4						
AFI				MLR	MLR		
	comp=Z,77μm,21.0s,MS6.1						
AFI	**Afiamalu**	**23.30**	**99**	*e*P	**P**	**09 32 10.4**	**0.0**
	comp=Z,4μm,2.2s,mb6.5						
AFI				*e*S	**S**	**09 36 20.5**	**-0.6**
AFI				LR	LR		
	comp=Z,77μm,21.0s,MS6.1						
MMPI	**Merauke**	**23.93**	**274**	P	**P**	**09 32 14.2**	**-2.2**
	comp=Z,638nm,2.1s,mb5.7						
RAO	**Raoul Island**	**24.41**	**140**	P	**P**	**09 32 23.3**	**+2.8**
	comp=Z,1μm,0.9s,mb6.3,baz=64,slow=24,SNR=8.2						
RAO				S	**S**	**09 36 40.6**	**+1.9**
	comp=Z,158nm,0.4s,baz=107,slow=19,SNR=1.7						
RAO				LR	LR	09 40 23.4	
	comp=Z,29μm,20.0s,MS5.8,baz=125,slow=33						
JAY	**Jayapura**	**25.11**	**288**	P	**P**	**09 32 23.6**	**-3.6**
JAY	**Jayapura**	**25.11**	**288**	P	**P**	**09 32 24.9**	**-2.3**
	comp=Z,315nm,1.1s,mb5.7						
JAY	**Jayapura**	**25.11**	**288**	P	**P**	**09 32 24.7**	**-2.5**
	comp=Z,315nm,1.1s,mb5.7						
OUZ	**Omahuta**	**25.42**	**163**	*e*P	**P**	**09 32 30.7**	**+1.0**
	comp=Z,519nm,1.2s,mb5.9						
OUZ				*e*S	**S**	**09 36 50.2**	**-4.5**
RIV	**Riverview**	**25.75**	**206**	⇓*i*P	**P**	**09 32 35.1**	**+2.4**
RIV				*e*SCP	ScP	09 39 59.9	+20
WCZ	**Waipu Caves**	**26.31**	**162**	P*	**P**	**09 32 39.6**	**+1.8**
SMPI	**Sarmi**	**27.16**	**288**	P	**P**	**09 32 43.8**	**-1.9**
	comp=Z,1μm,1.2s,mb6.4						
SMPI	**Sarmi**	**27.16**	**288**	P	**P**	**09 32 44.0**	**-1.7**
	comp=Z,1μm,1.2s,mb6.4						
KUZ	**Kuaotunu**	**27.49**	**160**	*e*P*	**P**	**09 32 52.0**	**+3.7**
CNB	**Canberra Magne**	**27.79**	**207**	*e*P	**P**	**09 32 53.1**	**+2.0**
CNB				*e*PCP	PcP	09 36 08.7	+1.6
CNB				*e*S	**S**	**09 37 41.2**	**+9.0**
HIZ	**Hauiti**	**28.85**	**163**	P	**P**	**09 33 01.3**	**+0.8**
URZ	**Urewera**	**29.32**	**160**	P	**P**	**09 33 05.8**	**+1.1**
	comp=Z,99nm,0.9s,mb5.5,baz=6.1,slow=4.4,SNR=9.6						
URZ				S	**S**	**09 37 57.8**	**+1.5**
	comp=Z,11nm,0.9s,baz=354,slow=18,SNR=2.1						
URZ				LR	LR	09 42 18.3	
	comp=Z,61μm,18.5s,MS6.3,baz=200,slow=31						
URZ	**Urewera**	**29.32**	**160**	*e*P	**P**	**09 33 04.1**	**-0.6**
	comp=Z,230nm,1.0s,mb5.9						
URZ				*e*PcP	PcP	09 36 10.2	-0.7
URZ				*e*S	**S**	**09 37 54.2**	**-2.1**
STKA	**Stephens Creek**	**29.61**	**222**	*e*P	**P**	**09 33 07.4**	**+0.1**
	comp=Z,265nm,1.9s,mb5.6						
STKA				*e*	pP	09 33 14.2	-1.7
STKA				*e*PCP	PcP	09 36 12.2	+0.5
STKA				*e*S	**S**	**09 38 05.1**	**+4.2**
STKA				*e*PCS	PcS	09 39 52.8	-2.1
STKA	**Stephens Creek**	**29.61**	**222**	P	**P**	**09 33 07.4**	**+0.1**
	comp=Z,182nm,1.0s,mb5.8,baz=34,slow=8.5,SNR=92						
STKA				PcP	PcP	09 36 12.9	+1.2
	comp=Z,40nm,0.8s,baz=66,slow=5.5,SNR=3.0						
STKA				S	**S**	**09 37 57.1**	**-3.8**
	comp=Z,16nm,1.1s,baz=205,slow=15,SNR=2.1						
STKA	**Stephens Creek**	**29.61**	**222**	*e*P	**P**	**09 33 07.4**	**+0.1**
	comp=Z,114nm,1.3s,mb5.4						
STKA				*e*S	**S**	**09 37 53.8**	**-7.1**
WPVZ	**Whakapapa**	**29.69**	**163**	P	**P**	**09 33 08.2**	**+0.3**
BAKI	**Biak**	**29.88**	**287**	P	**P**	**09 33 07.7**	**-2.2**
BAKI	**Biak**	**29.88**	**287**	P	**P**	**09 33 08.1**	**-1.8**
	comp=Z,9μmcomp=Z,401nm,1.3s,mb6.0						
BAKI	**Biak**	**29.88**	**287**	P	**P**	**09 33 09.0**	**-0.9**
	comp=Z,9μmcomp=Z,401nm,1.3s,mb6.0						
WAKE	**Wake Island**	**30.23**	**4**	*e*P	**P**	**09 33 15.0**	**+2.1**
	comp=Z,845nm,1.4s,mb6.3						
WAKE				LR	LR		
	comp=Z,41μm,19.0s,MS6.1						
WRAB	**Tennant Creek**	**30.34**	**249**	P	**P**	**09 33 13.0**	**-1.0**
	comp=Z,4μm,1.0s,mb7.1,SNR=96						
WRAB	**Tennant Creek**	**30.34**	**249**	*e*P	**P**	**09 33 13.0**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,1μm,1.3s,mb6.5						
WRAB				MLR	MLR		
	comp=Z,66μm,19.0s,MS6.3						
WRAB	**Tennant Creek**	**30.34**	**249**	*e*P	**P**	**09 33 13.0**	**-0.9**
	comp=Z,1μm,1.3s,mb6.5						
WRAB				LR	LR		
	comp=Z,66μm,19.0s,MS6.3						
WRAB	**Tennant Creek**	**30.34**	**249**	P	**P**	**09 33 12.7**	**-1.3**
	comp=Z,861nm,1.3s,mb6.3						
WRAB	**Tennant Creek**	**30.34**	**249**	P	**P**	**09 33 12.8**	**-1.2**
	comp=Z,

FOZ Fox Glacier 32.68 173 P **P** **09 33 33.6 -0.6**
FOZ Fox Glacier 32.68 173 *e*P* **P** **09 33 33.5 -0.7**
RPZ Rata Peaks 33.01 171 P **P** **09 33 36.8 -0.3**
comp=N,133nm,0.9s,mb5.9,baz=346,slow=3.4,SNR=30
RPZ LR LR 09 46 09.0
comp=N,74μm,18.1s,MS6.4,baz=345,slow=35
RPZ Rata Peaks 33.01 171 P **P** **09 33 36.7 -0.4**
RPZ Rata Peaks 33.01 171 *e*P* **P** **09 33 36.4 -0.7**
LBZ Lake Benmore 33.55 173 P* **P** **09 33 42.8 +1.0**
WKZ Wanaka 33.86 174 P **P** **09 33 44.4 -0.1**
WKZ Wanaka 33.86 174 P* **P** **09 33 44.4 -0.1**
ODZ Otahua Downs 34.26 172 *e*P **P** **09 33 47.7 -0.3**
comp=N,614nm,1.2s,mb6.4
ODZ *e*PcP PcP 09 36 26.1 +2.0
ODZ Otahua Downs 34.26 172 *e*P* **P** **09 33 45.3 -2.6**
ODZ PcP PcP 09 36 25.7 +1.6
EAZ Earnscleugh 34.29 174 P **P** **09 33 47.8 -0.4**
EAZ Earnscleugh 34.29 174 P* **P** **09 33 47.8 -0.4**
SWI Sorong 34.56 285 P **P** **09 33 47.4 -3.6**
SWI Sorong 34.56 285 P **P** **09 33 49.2 -1.8**
comp=N,5μmcomp=N,164nm,1.2s,mb5.8
SWI Sorong 34.56 285 P **P** **09 33 49.5 -1.5**
comp=N,5μmcomp=N,164nm,1.2s,mb5.8
MOO Moorlands 34.73 203 *e*P **P** **09 33 53.8 +1.8**
MOO *e*PCP PcP 09 36 27.1 +1.6
MOO *e*S **S** **09 39 25.0 +4.6**
WHZ Wether Hill Ro 34.83 176 P **P** **09 33 51.7 -1.2**
WHZ Wether Hill Ro 34.83 176 P* **P** **09 33 51.7 -1.2**
TUZ Tuapeka 35.04 174 P **P** **09 33 54.1 -0.6**
TUZ Tuapeka 35.04 174 P* **P** **09 33 54.1 -0.6**
TUZ PcP PcP 09 36 25.9 -0.4
KNA Kununurra 35.07 258 P **P** **09 33 53.9 -1.4**
KNA Kununurra 35.07 258 P **P** **09 33 54.2 -1.1**
comp=N,3μm,0.9s,mb7.2
KNA Kununurra 35.07 258 P **P** **09 33 54.0 -1.3**
comp=N,3μm,0.9s,mb7.2
RAR Rarotonga 35.66 111 LR LR 09 46 41.4
comp=N,8μm,18.9s,MS5.5,baz=284,slow=33
RAR Rarotonga 35.66 111 PFAKE 09 34 10.0 +10
RAR LR LR
comp=Z,26μm,19.0s,MS6.0
APZ The Paps 35.76 176 *e*P* **P** **09 33 58.5 -2.4**
APZ PcP PcP 09 36 28.9 +0.5
AAI Ambon 36.74 279 P **P** **09 34 12.8 +3.1**
comp=Z,7μmcomp=Z,159nm,1.1s,mb5.8
AAI Ambon 36.74 279 P **P** **09 34 14.4 +4.7**
comp=Z,9μmcomp=Z,159nm,1.1s,mb5.8
JOHN Johnston Islan 37.70 43 *e*P **P** **09 34 17.1 -0.6**
comp=Z,647nm,1.4s,mb6.2
JOHN LR LR
comp=Z,27μm,19.0s,MS6.1
NLAI Namlea 37.91 279 P **P** **09 34 18.0 -1.6**
comp=Z,8μmcomp=Z,420nm,1.6s,mb5.9
NLAI Namlea 37.91 279 P **P** **09 34 19.6 0.0**
comp=Z,8μmcomp=Z,420nm,1.6s,mb5.9
LBMI Labuha 38.21 283 P **P** **09 34 22.0 -0.2**
comp=Z,532nm,1.7s,mb6.0
LBMI Labuha 38.21 283 P **P** **09 34 22.1 -0.1**
comp=Z,532nm,1.7s,mb6.0
FITZ Fitzroy Crossi 38.22 255 ||*i*P **P** **09 34 20.3 -1.9**
comp=Z,736nm,0.9s,mb6.4
FITZ *e*PP PP 09 35 54.6 +4.7
FITZ *e*S **S** **09 40 11.4 -3.0**
FITZ Fitzroy Crossi 38.22 255 P **P** **09 34 20.8 -1.4**
comp=Z,377nm,0.9s,mb6.1,baz=94,slow=6.5,SNR=168
FITZ S **S** **09 40 09.2 -5.1**
comp=Z,11nm,0.9s,baz=61,slow=19,SNR=2.3
FITZ LR LR 09 49 42.7
comp=Z,34μm,18.4s,MS6.2,baz=78,slow=36
FITZ Fitzroy Crossi 38.22 255 *e*P **P** **09 34 20.8 -1.5**
comp=Z,395nm,0.9s,mb6.1
FITZ *e*S **S** **09 40 12.3 -2.0**
FITZ Fitzroy Crossi 38.22 255 P **P** **09 34 20.9 -1.3**
comp=Z,1μm,1.4s,mb6.5
FITZ Fitzroy Crossi 38.22 255 P **P** **09 34 20.5 -1.7**
comp=Z,1μm,1.4s,mb6.5
TNTI Ternate 38.77 285 P **P** **09 34 30.1 +3.2**
comp=Z,8μmcomp=Z,245nm,1.3s,mb5.8
TNTI Ternate 38.77 285 P **P** **09 34 29.9 +3.0**
comp=Z,8μmcomp=Z,245nm,1.3s,mb5.8
FORT Forrest 39.05 234 *e*P **P** **09 34 29.0 -0.1**
comp=Z,841nm,0.9s,mb6.5
FORT *e*PCP PP 09 36 08.3 +9.4
FORT Forrest 39.05 234 *e*P **P** **09 34 28.6 -0.4**
comp=Z,2μm,1.1s,mb6.7
FORT *e*PP PP 09 36 06.7 +7.8
XMAS Kiritimati 40.00 73 PFAKE 09 34 50.0 +13
XMAS LR LR
comp=Z,33μm,19.0s,MS6.2
MNI Manado 41.38 285 P **P** **09 34 45.2 -3.3**
MNI Manado 41.38 285 P **P** **09 34 48.8 +0.3**
comp=Z,306nm,1.0s,mb5.9
MNI Manado 41.38 285 P **P** **09 34 50.8 +2.3**
comp=Z,305nm,1.0s,mb5.9
SGSI Sangihe 41.48 289 P **P** **09 34 49.1 -0.3**
comp=Z,642nm,1.1s,mb6.2
SGSI Sangihe 41.48 289 P **P** **09 34 50.6 +1.2**
comp=Z,659nm,1.0s,mb6.2
MMRI Maumere 41.71 269 P **P** **09 34 48.2 -3.1**
MMRI Maumere 41.71 269 P **P** **09 34 49.2 -2.1**
comp=Z,9μmcomp=Z,453nm,1.2s,mb6.0
MMRI Maumere 41.71 269 P **P** **09 34 51.3 0.0**
comp=Z,9μmcomp=Z,453nm,1.2s,mb6.0
KMSI Cibinong 41.93 283 P **P** **09 34 55.7 +2.6**
comp=Z,1μm,1.4s,mb6.3
KMSI Cibinong 41.93 283 P **P** **09 34 56.4 +3.3**
comp=Z,1μm,1.4s,mb6.3
KDI Kendari 42.11 276 P **P** **09 34 56.6 +2.1**
comp=Z,6μmcomp=Z,70nm,1.6s,mb5.0
KDI Kendari 42.11 276 P **P** **09 34 57.5 +3.0**
comp=Z,6μmcomp=Z,70nm,1.6s,mb5.0
LUWI Luwuk 42.64 281 P **P** **09 35 01.8 +2.9**
comp=Z,9μmcomp=Z,409nm,1.4s,mb6.0
LUWI Luwuk 42.64 281 P **P** **09 35 02.5 +3.6**
comp=Z,9μmcomp=Z,409nm,1.8s,mb5.9
DAV Davao City (W) 42.75 293 LR LR 09 51 46.2
comp=Z,26μm,19.1s,MS6.1,baz=312,slow=35
DAV Davao City (W) 42.75 293 PFAKE 09 35 10.0 +10
DAV LR LR
comp=Z,32μm,19.0s,MS6.2
DAV Davao City (W) 42.75 293 ||*e*P **P** **09 34 58.1 -1.6**
MIDW Midway 42.80 24 PFAKE 09 35 10.0 +10
MIDW LR LR
comp=Z,24μm,19.0s,MS6.1
WSI Waingapu 43.50 268 P pP 09 35 17.5 +2.9
MCQ Macquarie Isla 43.54 185 *e*P **P** **09 35 05.6 +0.1**
MCQ Macquarie Isla 43.54 185 *e*P **P** **09 35 06.1 +0.6**
MCQ pmax pmax
comp=Z,10μm,1.7s,mb7.3
MCQ Macquarie Isla 43.54 185 *e*P **P** **09 35 06.1 +0.6**
comp=Z,92μm,1.7s
CBIJ Chichi jima 43.70 331 P **P** **09 35 07.5 +0.3**
comp=Z,154nm,0.7s,mb5.8,baz=85,slow=21,SNR=6.4
CBIJ Chichi jima 43.70 331 P **P** **09 35 05.9 -1.2**
MRSI Marisa 43.85 282 P **P** **09 35 09.4 +0.7**
comp=Z,4μmcomp=Z,74nm,1.4s,mb5.2
MRSI Marisa 43.85 282 P **P** **09 35 10.1 +1.4**
comp=Z,4μmcomp=Z,77nm,1.4s,mb5.2
MBWA Marble Bar 44.06 251 *e*P **P** **09 35 09.3 -0.9**
comp=Z,273nm,0.9s,mb6.0
MBWA LR LR
comp=Z,36μm,20.0s,MS6.3
MBWA Marble Bar 44.06 251 P **P** **09 35 10.0 -0.2**
comp=Z,463nm,1.0s,mb6.2
MBWA Marble Bar 44.06 251 P **P** **09 35 09.9 -0.3**
comp=Z,463nm,1.0s,mb6.2
BKSI Bulukumba 44.28 274 P **P** **09 35 12.2 +0.1**
comp=Z,6μmcomp=Z,114nm,1.1s,mb5.5
BKSI Bulukumba 44.28 274 P **P** **09 35 15.2 +3.1**
comp=Z,6μmcomp=Z,114nm,1.1s,mb5.5
BNSI Bone 44.47 275 P **P** **09 35 12.8 -0.8**
comp=Z,9μmcomp=Z,345nm,1.0s,mb6.0
BNSI Bone 44.47 275 P **P** **09 35 12.9 -0.7**
comp=Z,9μmcomp=Z,345nm,1.0s,mb6.0
KAPI Kappang 44.70 274 P **P** **09 35 15.9 +0.4**
comp=Z,1μm,1.2s,mb6.6,SNR=11
KAPI Kappang 44.70 274 PFAKE 09 35 30.0 +15
KAPI LR LR
comp=Z,11μm,20.0s,MS5.8
PPT Papeete 44.85 104 *e*P **P** **09 35 22.7 +6.1**
comp=Z,123nm,1.3s,mb5.6
PPT *e*S **S** **09 42 00.1 +7.4**
comp=Z,42μm,27.8s
PPT *e*LQ 09 46 08.9
comp=Z,193μm,28.0s
PPT *e*LR LR 09 47 53.8
comp=Z,59μm,24.0s,baz=274
PPT Papeete 44.85 104 LR LR 09 50 58.3
comp=Z,38μm,18.1s,MS6.4,baz=277,slow=32
SPSI Sidrap Palu 44.89 276 P **P** **09 35 14.7 -2.3**
TTSI Tana Toraja 45.03 277 P **P** **09 35 18.7 +0.6**
comp=Z,6μmcomp=Z,107nm,1.7s,mb5.4
TTSI Tana Toraja 45.03 277 P **P** **09 35 21.2 +3.1**
comp=Z,6μmcomp=Z,107nm,2.1s,mb5.3
TIAR Tiarei 45.07 104 *e*P **P** **09 35 22.2 +3.9**
comp=Z,100nm,0.7s,mb5.7
TIAR Tiarei 45.07 104 *e*P **P** **09 35 22.2 +3.9**
comp=Z,100nm,0.7s,mb5.8
TBP Tagbilaran 45.40 296 *e*P **P** **09 35 20.6 -0.3**
TBI Tubuai 45.43 112 *e*P **P** **09 35 25.5 +4.4**
comp=Z,596nm,1.2s,mb6.3
TBI *e*S **S** **09 42 08.1 +7.1**
comp=Z,38μm,29.5s
TBI *e*LQ 09 46 22.0
comp=Z,94μm,29.8s
TBI *e*LR LR 09 48 11.0
comp=Z,183μm,30.2s,baz=284
TBI Tubuai 45.43 112 *e*P **P** **09 35 25.5 +4.4**
comp=Z,596nm,1.2s,mb6.3
TBI *e*S **S** **09 42 08.1 +7.1**
TBI *e*LQ 09 46 22.0
PCI Palu 45.51 280 P **P** **09 35 21.0 -0.9**
PCI Palu 45.51 280 P **P** **09 35 21.2 -0.7**
comp=Z,317nm,1.1s,mb6.2
PCI Palu 45.51 280 P **P** **09 35 25.2 +3.3**
comp=Z,317nm,1.1s,mb6.2
MEH Mehetia 46.30 104 *e*P **P** **09 35 34.0 +5.9**
comp=Z,228nm,1.1s,mb6.0
PMOR Pomariorio Ree 46.45 100 *e*P **P** **09 35 35.0 +5.7**
comp=Z,357nm,1.4s,mb6.1
KLBR Kellerberrin 47.69 237 ||*i*P **P** **09 35 37.4 -1.3**
comp=Z,276nm,0.8s,mb6.3
KLBR *e* 09 36 33.5
KLBR *e*PP PP 09 37 30.6 +0.1
SMKI Samarinda 48.17 279 P **P** **09 35 43.5 +0.8**
comp=Z,183nm,1.0s,mb6.1
SMKI Samarinda 48.17 279 P **P** **09 35 48.0 +5.3**
KHKI Kahang-Kahang 48.25 269 P **P** **09 35 39.7 -3.7**
comp=Z,6μmcomp=Z,162nm,1.1s,mb6.0
KHKI Kahang-Kahang 48.25 269 P **P** **09 35 44.4 +1.0**
comp=Z,7μmcomp=Z,162nm,1.1s,mb6.0
NWAO Narrogin (SRO) 48.46 236 P **P** **09 35 44.9 +0.2**
comp=Z,390nm,0.9s,mb6.4,baz=76,slow=8.6,SNR=43
NWAO PP PP 09 37 39.8 +2.2
comp=Z,132nm,0.9s,baz=118,slow=4.0,SNR=5.9
NWAO Narrogin (SRO) 48.46 236 P **P** **09 35 44.9 +0.2**
NWAO 09 37 39.8
NWAO pmax pmax
comp=Z,390nm,0.9s
NWAO pmax pmax
comp=Z,132nm,0.9s
NWAO Narrogin (SRO) 48.46 236 *e*P **P** **09 35 45.0 +0.3**
NWAO pmax pmax
comp=Z,678nm,1.1s
NWAO MLR MLR
comp=Z,30μm,19.0s
NWAO Narrogin (SRO) 48.46 236 *e*P **P** **09 35 45.0 +0.3**
comp=Z,678nm,1.1s,mb6.6
NWAO LR LR
comp=Z,30μm,19.0s,MS6.3
KBKI Kotabaru 48.54 275 P **P** **09 35 44.5 -1.1**
comp=Z,6μmcomp=Z,69nm,2.1s,mb5.3
MYLDM Lahad Datu 48.57 287 P **P** **09 35 46.4 +0.6**
MYLDM Lahad Datu 48.57 287 P **P** **09 35 46.1 +0.3**
comp=Z,284nm,1.5s,mb6.1
MYLDM Lahad Datu 48.57 287 P **P** **09 35 47.2 +1.4**
comp=Z,284nm,1.5s,mb6.1
SRBI Singaraja 48.68 269 P **P** **09 35 46.3 -0.3**
comp=Z,218nm,2.3s,mb5.8
SRBI Singaraja 48.68 269 P **P** **09 35 49.0 +2.4**
comp=Z,218nm,2.3s,mb5.8
TSM Tawau 48.87 286 P **P** **09 35 47.5 -0.7**
HON Honolulu 48.90 49 *e*P **P** **09 35 48.2 +0.1**
KIP Kipapa 48.95 49 *d*i*P **P** **09 35 49.1 +0.6**
KIP Kipapa 48.95 49 *e*P **P** **09 35 48.5 0.0**
comp=Z,1μm,2.4s,mb6.6
KIP LR LR
comp=Z,15μm,20.0s,MS6.0
KHU Kahuku 49.50 53 *e*P **P** **09 35 52.8 0.0**
POHA Pohakuloa 49.85 52 *e*P **P** **09 35 55.7 +0.3**
comp=Z,266nm,0.8s,mb6.3
POHA LR LR
comp=Z,18μm,19.0s,MS6.1
JHJ Hachijo jima 2 49.88 333 P **P** **09 35 56.3 +0.9**
comp=Z,291nm,1.0s,mb6.3,baz=225,slow=23,SNR=5.8
JHJ LR LR 09 56 11.0
comp=Z,21μm,19.8s,MS6.2,baz=152,slow=35
SDKM Sandakan 49.95 287 P **P** **09 35 58.8 +2.5**
GMJI Gumukmas 50.39 268 P **P** **09 35 59.7 0.0**
comp=Z,6μmcomp=Z,122nm,1.1s,mb5.8
GMJI Gumukmas 50.39 268 P **P** **09 36 05.7 +6.0**
KKM Kota Kinabalu 51.00 287 P **P** **09 36 04.6 +0.3**
KKM Kota Kinabalu 51.00 287 *e*P **P** **09 36 02.5 -1.7**
comp=Z,198nm,0.8s,mb6.1
KKM *e*S **S** **09 43 09.5 -11**
KKM LR LR
comp=Z,16μm,21.0s,MS6.0
KKM Kota Kinabalu 51.00 287 P **P** **09 36 03.4 -0.9**
comp=Z,9μmcomp=Z,285nm,1.1s,mb6.1
KKM Kota Kinabalu 51.00 287 P **P** **09 36 04.8 +0.5**
comp=Z,9μmcomp=Z,285nm,1.1s,mb6.1
KRKI Karangkates 51.38 268 P **P** **09 36 07.4 +0.3**
comp=Z,536nm,1.2s,mb6.4
KRKI Karangkates 51.38 268 P **P** **09 36 13.7 +6.6**
JOW Kunigami 51.56 318 P **P** **09 36 09.0 +0.8**
PWJI Pagerwojo 52.03 268 P **P** **09 36 12.9 +0.9**
comp=Z,8μmcomp=Z,117nm,1.5s,mb5.6
PWJI Pagerwojo 52.03 268 P **P** **09 36 13.1 +1.1**
comp=Z,8μmcomp=Z,117nm,1.5s,mb5.6
SJI Sawahan 52.11 269 P **P** **09 36 13.3 +0.7**
comp=Z,218nm,2.8s,mb5.6
SJI Sawahan 52.11 269 P **P** **09 36 13.6 +1.0**
comp=Z,219nm,2.8s,mb5.6
NGJI Ngawi 52.46 269 P **P** **09 36 16.3 +1.1**
comp=Z,239nm,1.4s,mb5.9
NGJI Ngawi 52.46 269 P pP 09 36 27.0 +2.9
PCJI Pacitan 52.62 268 P **P** **09 36 16.1 -0.3**
comp=Z,320nm,1.2s,mb6.1
PCJI Pacitan 52.62 268 P **P** **09 36 17.0 +0.6**
comp=Z,319nm,1.2s,mb6.1
PBKI Pangkalan Bun 53.06 275 P **P** **09 36 18.4 -1.3**
comp=Z,10μmcomp=Z,235nm,0.9s,mb6.1
UGM Wanagama 53.30 268 P **P** **09 36 21.7 +0.3**
UGM Wanagama 53.30 268 P **P** **09 36 22.2 +0.8**
comp=Z,9μmcomp=Z,285nm,1.1s,mb6.1
UGM Wanagama 53.30 268 P **P** **09 36 25.3 +3.9**
comp=Z,9μmcomp=Z,284nm,1.1s,mb6.1
MJAR Matsushiro Arr 53.45 334 P **P** **09 36 21.2 -0.9**
comp=Z,175nm,1.3s,mb5.8,baz=171,slow=8.5,SNR=81
MJAR PKPPKP 10 06 32.0
comp=Z,1.6nm,0.9s,baz=298,slow=3.4,SNR=4.7
MJAR Matsushiro Arr 53.45 334 P **P** **09 36 21.2 -0.9**
MJAR P'P' 10 06 32.0
MAJO Matsushiro 53.45 334 *e*P **P** **09 36 21.5 -0.6**
MAJO pmax pmax
comp=Z,392nm,1.4s,mb6.2
MAJO MLR MLR
comp=Z,36μm,21.0s,MS6.4
MAJO Matsushiro 53.45 334 *e*P **P** **09 36 21.5 -0.6**
comp=Z,392nm,1.4s,mb6.2
MAJO LR LR
comp=Z,36μm,21.0s,MS6.4
MAT Matsushiro 53.45 334 P **P** **09 36 21.3 -0.8**
MAT S **S** **09 43 48.0 -4.8**
SMRI Semarang 53.51 269 P **P** **09 36 23.1 +0.2**
comp=Z,309nm,2.0s,mb5.9
SMRI Semarang 53.51 269 P **P** **09 36 27.7 +4.8**
comp=Z,309nm,2.0s,mb5.9
YOGI Yogyakarta 53.54 268 P **P** **09 36 22.7 -0.5**
comp=Z,955nm,1.1s,mb6.7
YOGI Yogyakarta 53.54 268 P **P** **09 36 26.7 +3.5**
comp=Z,953nm,1.1s,mb6.7
SBUM Sibu 53.73 281 P **P** **09 36 27.3 +2.7**
SBUM Sibu 53.73 281 P **P** **09 36 23.9 -0.7**
comp=Z,6μmcomp=Z,69nm,2.6s,mb5.1
SBUM Sibu 53.73 281 P **P** **09 36 25.7 +1.1**
comp=Z,6μmcomp=Z,69nm,2.6s,mb5.1
STKI Sintang 53.85 278 P **P** **09 36 28.0 +2.5**
comp=Z,75nm,1.6s,mb5.4
TWG Pinlang 54.27 309 *e*P **P** **09 36 29.9 +1.6**
comp=Z,218nm,1.4s,mb5.9
JNU Nakatsue 54.41 325 P **P** **09 36 29.3 +0.2**
YULB Yu-li 54.42 309 *e*P **P** **09 36 28.9 -0.5**
comp=Z,155nm,0.9s,mb5.9
YULB *e*S **S** **09 43 57.1 -9.2**
NACB Ninganchiao 54.64 310 *e*P **P** **09 36 31.2 +0.3**
comp=Z,404nm,1.3s,mb6.3
NACB *e*S **S** **09 44 06.0 -3.2**
TPUB Ta-pu 54.88 309 *e*P **P** **09 36 32.2 -0.5**
comp=Z,747nm,1.5s,mb6.5
SSLB Suanglung 54.90 309 *e*P **P** **09 36 32.2 -0.7**
comp=Z,144nm,1.0s,mb6.0
SSLB *e*S **S** **09 44 15.9 +3.1**
YHNB Yeheng 55.09 311 *e*P **P** **09 36 34.5 +0.3**
comp=Z,259nm,1.0s,mb6.2
YHNB LR LR
comp=Z,36μm,22.0s,MS6.4
TATO Taipei 55.18 311 *e*P **P** **09 36 36.0 +1.1**
TATO LR LR
comp=Z,34μm,19.0s,MS6.4
KSM Kuching 55.33 280 P **P** **09 36 38.5 +2.3**
KSM Kuching 55.33 280 *e*P **P** **09 36 35.4 -0.8**
KSM LR LR
comp=Z,9μm,21.0s,MS5.8
KSM Kuching 55.33 280 P **P** **09 36 35.5 -0.7**
comp=Z,5μmcomp=Z,102nm,1.0s,mb5.8
KSM Kuching 55.33 280 P **P** **09 36 36.4 +0.2**
comp=Z,5μmcomp=Z,102nm,1.0s,mb5.8
JCJI Jatiwangi 55.72 270 P **P** **09 36 38.6 -0.4**
comp=Z,555nm,1.0s,mb6.5
JCJI Jatiwangi 55.72 270 P **P** **09 36 42.8 +3.8**
comp=Z,555nm,1.0s,mb6.5
LEM Lembang 56.31 269 P **P** **09 36 42.4 -0.8**
LEM Lembang 56.31 269 P **P** **09 36 43.6 +0.4**
comp=Z,328nm,0.9s,mb6.4
LEM Lembang 56.31 269 P **P** **09 36 43.6 +0.4**
comp=Z,328nm,0.9s,mb6.4
ERM Erimo 56.36 341 P **P** **09 36 44.7 +1.7**
comp=Z,539nm,0.8s,mb6.6,SNR=22
ERM Erimo 56.36 341 *c*i*P **P** **09 36 42.8 -0.2**
ERM Erimo 56.36 341 *e*P **P** **09 36 44.1 +1.2**
ERM LR LR
comp=Z,33μm,20.0s,MS6.4
TPI Tanjungpandan 56.98 274 P **P** **09 36 47.4 -0.6**
TPI Tanjungpandan 56.98 274 P **P** **09 36 48.9 +0.9**
comp=Z,6μmcomp=Z,87nm,1.2s,mb5.7
TPI Tanjungpandan 56.98 274 P **P** **09 36 51.7 +3.7**
comp=Z,6μmcomp=Z,87nm,1.2s,mb5.7
CBJI Citeko 57.12 269 P **P** **09 36 52.0 +3.0**
comp=Z,455nm,1.4s,mb6.3
CBJI Citeko 57.12 269 P **P** **09 36 52.5 +3.5**
comp=Z,455nm,1.4s,mb6.3
QZH Quanzhou 57.33 309 ||*i*P **P** **09 36 50.9 +0.6**
QZH S **S** **09 44 44.3 -0.8**
QZH pmax pmax
comp=Z,170nm,0.7s,mb6.2
QZH pmax pmax
comp=Z,15μm,5.9s
QZH LR LR
comp=N,16μm,13.8s
QZH LR LR
comp=E,33μm,19.9s
QZH LR LR
comp=Z,41μm,23.0s
YUK Yuzh-Kuril'sk 57.41 344 *d*i*P **P** **09 36 49.9 -0.5**
YUK *i* S **S** **09 44 42.3 -3.1**
YUK *i* SSS 09 48 33.8
YUK pmax pmax
comp=N,8μm,6.5s
YUK pmax pmax
comp=E,5μm,6.5s
YUK pmax pmax
comp=Z,8μm,6.5s
YUK smax
comp=N,26μm,18.0s
YUK smax
comp=E,13μm,16.0s
SBJI Serang 57.88 270 P **P** **09 36 54.1 -0.3**
comp=E,7μmcomp=E,141nm,1.2s,mb5.9
DRV Dumont d'Urvil 57.94 191 P **P** **09 36 57.0 +3.1**
DRV S **S** **09 44 52.0 +0.1**
DRV L 09 51 00.0
DRV R 09 55 00.0
CGJI Cibinong 58.23 269 P **P** **09 36 56.5 -0.3**
comp=E,9μmcomp=E,341nm,1.2s,mb6.3
CGJI Cibinong 58.23 269 P **P** **09 36 57.0 +0.2**
comp=E,9μmcomp=E,341nm,1.2s,mb6.3
ASAJ Asahikawa 58.43 342 P **P** **09 36 58.4 +0.8**
comp=E,148nm,0.8s,mb6.0,baz=204,slow=11,SNR=50
ASAJ LR LR 09 57 56.8
comp=E,32μm,20.8s,MS6.4,baz=167,slow=32
ASAJ PKP2bc 10 06 52.1
comp=E,16nm,1.1s,baz=22,slow=10,SNR=4.0
ASAJ Asahikawa 58.43 342 P **P** **09 36 58.0 +0.4**
PPBI Pangkal Pinang 58.58 274 P **P** **09 37 00.0 +0.7**
comp=E,5μmcomp=E,77nm,1.3s,mb5.6
PPBI Pangkal Pinang 58.58 274 P **P** **09 37 01.5 +2.2**
comp=E,5μmcomp=E,77nm,1.3s,mb5.6
RKT Rikitea 58.70 110 *e*P **P** **09 37 05.7 +5.7**
comp=E,208nm,1.4s,mb6.0
RKT *e*S **S** **09 45 09.3 +6.1**
comp=E,11μm,23.2s
RKT *e*SS SS 09 48 53.1 -3.5
comp=E,24μm,31.8s
RKT *e*LQ 09 51 53.2
comp=E,37μm,32.2s
RKT *e*LR LR 09 54 19.9
comp=E,135μm,31.8s,baz=277
SSE Sheshan 59.04 317 P **P** **09 37 03.1 +1.0**
SSE pP pP 09 37 14.8 +3.7
SSE PP PP 09 39 14.6 +1.6
SSE S **S** **09 45 08.8 +1.6**
SSE sS sS 09 45 28.8 +6.7
SSE pmax pmax
comp=Z,200nm,1.0s,mb6.1
SSE pmax pmax
comp=Z,6μm,9.7s
SSE LR LR
comp=N,16μm,27.0s,MS6.2
SSE LR LR
comp=E,22μm,27.0s,MS6.2
SSE LR LR
comp=Z,33μm,27.5s,MS6.3
KSRS Korea Array 59.23 326 P **P** **09 37 03.4 +0.1**
comp=Z,59nm,1.0s,mb5.6,baz=139,slow=7.2,SNR=88
KSRS LR LR 10 00 27.6
comp=Z,23μm,18.3s,MS6.3,baz=134,slow=34
KSRS PKP2bc 10 06 40.0
comp=Z,2.5nm,1.0s,baz=268,slow=2.8,SNR=6.2
HKC Hong Kong Obse 59.47 304 *i* P **P** **09 37 10.0 +4.8**
HKC S **S** **09 45 08.0 -5.0**
KASI Kota Agung 59.58 270 P **P** **09 37 05.9 -0.3**
comp=Z,5μmcomp=Z,132nm,1.2s,mb5.8
KASI Kota Agung 59.58 270 P **P** **09 37 09.2 +3.0**
comp=Z,5μmcomp=Z,132nm,1.2s,mb5.8
INCN Inchon 59.96 326 *e*P **P** **09 37 09.2 +0.9**
INCN LR LR
comp=Z,32μm,22.0s,MS6.4
INCN Inchon 59.96 326 P **P** **09 37 11.7 +3.4**
SNR=9.4
MDSI Maura Dua 60.07 271 P **P** **09 37 09.5 -0.1**
comp=Z,4μmcomp=Z,70nm,1.4s,mb5.5
MDSI Maura Dua 60.07 271 P **P** **09 37 09.5 -0.1**
comp=Z,4μmcomp=Z,70nm,1.4s,mb5.5
GZH Guangzhou 60.51 304 P **P** **09 37 13.3 +0.9**
GZH S **S** **09 45 24.6 -1.8**
GZH LR LR
comp=N,16μm,23.6s,MS6.2
GZH LR LR
comp=E,12μm,26.5s,MS6.2
YSS Yuzh-Sakhalins 60.95 343 ||*i*P **P** **09 37 15.3 +0.4**
YSS *e* pP 09 37 23.0 -0.9
YSS *i* *SP sP 09 37 30.0 +2.6
YSS *e*PPP 09 40 59.0
YSS *e*S **S** **09 45 30.0 -1.2**
YSS *e*PPS 09 45 57.0
YSS *e*SS SS 09 49 36.0 +4.8
YSS pmax pmax
comp=Z,410nm,1.2s,mb6.4
YSS pmax pmax
comp=Z,9μm,7.0s
YSS pmax pmax
comp=N,4μm,6.0s
YSS pmax pmax
comp=E,2μm,6.0s
YSS MLR MLR
comp=N,19μm,20.0s
YSS MLR MLR
comp=Z,19μm,20.0s,MS6.2

YSS	**Yuzh-Sakhalins**	**60.95 343**	*e*P	**P**	**09 37 15.6 +0.7**
YSS			LR	LR	
	comp=Z,7μm,20.0s,MS5.8				
NJ2	**Nanjing**	**61.20 316**	*e*P	**P**	**09 37 18.3 +1.4**
NJ2			pP	pP	09 37 28.4 +2.4
NJ2			sP	sP	09 37 32.3 +2.9
NJ2			PP	PP	09 39 35.3 +3.2
NJ2			S	**S**	**09 45 34.0 -1.0**
NJ2			sS	sS	09 45 51.0 +1.1
NJ2			pmax	pmax	
	comp=Z,50nm,0.9s,mb5.6				
NJ2			pmax	pmax	
	comp=Z,7μm,7.1s				
NJ2			LR	LR	
	comp=N,20μm,17.6s,MS6.4				
NJ2			LR	LR	
	comp=E,10μm,13.7s,MS6.4				
NJ2			LR	LR	
	comp=Z,19μm,14.6s,MS6.4				
QIZ	**Qiongzhong**	**61.64 299**	P	**P**	**09 37 21.3 +1.2**
QIZ			pP	pP	09 37 27.3 -1.9
QIZ			sP	sP	09 37 34.1 +1.5
QIZ			S	**S**	**09 45 39.4 -1.5**
QIZ			pmax	pmax	
	comp=Z,79nm,1.6s,mb5.6				
QIZ			pmax	pmax	
	comp=Z,7μm,13.0s				
QIZ			LR	LR	
	comp=N,10μm,22.0s,MS6.0				
QIZ			LR	LR	
	comp=E,6μm,22.0s,MS6.0				
QIZ			LR	LR	
	comp=Z,21μm,24.6s,MS6.2				
QIZ	**Qiongzhong**	**61.64 299**	P	**P**	**09 37 19.8 -0.3**
	comp=Z,136nm,1.1s,mb6.0				
QIZ			*e*S	**S**	**09 45 40.8 -0.1**
QIZ			LR	LR	
	comp=Z,24μm,22.0s,MS6.3				
MYKOM	**Kota Tinggi**	**61.67 278**	P	**P**	**09 37 23.1 +2.7**
MYKOM	**Kota Tinggi**	**61.67 278**	P	**P**	**09 37 21.1 +0.7**
	comp=Z,6μmcomp=Z,56nm,1.5s,mb5.5				
MYKOM	**Kota Tinggi**	**61.67 278**	P	**P**	**09 37 22.7 +2.3**
	comp=Z,6μmcomp=Z,56nm,1.5s,mb5.5				
KSI	**Kapahiang**	**61.77 272**	P	**P**	**09 37 18.4 -2.8**
KSI	**Kapahiang**	**61.77 272**	P	**P**	**09 37 20.9 -0.3**
	comp=Z,143nm,0.8s,mb6.2				
KSI	**Kapahiang**	**61.77 272**	P	**P**	**09 37 24.1 +2.9**
	comp=Z,157nm,1.1s,mb6.1				
SKR	**Severo-Kuril's**	**61.93 354**	*d i*P	**P**	**09 37 22.0 +0.6**
SKR			*e*		09 38 04.0
SKR			*e*		09 39 39.0
SKR			*e*PPP		09 41 06.0
SKR			*e*S	**S**	**09 45 42.0 -1.4**
SKR			*e*SS	SS	09 49 46.0 -0.4
SKR			pmax	pmax	
	comp=Z,1μm,1.4s,mb6.8				
SKR			pmax	pmax	
	comp=N,4μm,6.0s				
SKR			pmax	pmax	
	comp=E,5μm,6.0s				
SKR			pmax	pmax	
	comp=Z,8μm,6.0s				
SKR			pmax	pmax	
	comp=N,2μm,10.0s				
SKR			pmax	pmax	
	comp=E,2μm,10.0s				
SKR			pmax	pmax	
	comp=Z,3μm,10.0s				
SKR			smax		
	comp=N,29μm,26.0s				
SKR			smax		
	comp=E,12μm,26.0s				
SKR			MLR	MLR	
	comp=N,15μm,18.0s,MS6.3				
SKR			MLR	MLR	
	comp=Z,24μm,18.0s,MS6.4				
SKR			MLR	MLR	
	comp=E,8μm,14.0s,MS6.3				
KGM	**Kluang**	**62.24 278**	P	**P**	**09 37 24.9 +0.7**
RGRI	**Rengat**	**62.67 275**	P	**P**	**09 37 28.1 +0.9**
	comp=E,307nm,0.5s,mb6.7				
PTCN	**Pitcairn Islan**	**63.17 113**	PFAKE		09 37 40.0 +10
PTCN			LR	LR	
	comp=Z,19μm,19.0s,MS6.3				
KTGM	**Kuala Trenggan**	**63.23 282**	P	**P**	**09 37 33.6 +2.7**
SDSI	**Sungai Dareh**	**63.44 275**	P	**P**	**09 37 31.8 -0.5**
	comp=Z,106nm,1.1s,mb5.9				
SDSI	**Sungai Dareh**	**63.44 275**	P	**P**	**09 37 32.8 +0.5**
	comp=Z,106nm,1.1s,mb5.9				
AMKA	**Amchitka**	**63.50 10**	*e*P	**P**	**09 37 32.6 +0.8**
	comp=Z,187nm,1.3s,mb6.1				
WHN	**Wuhan**	**63.52 312**	P	**P**	**09 37 33.3 +0.9**
WHN			pP	pP	09 37 41.1 -0.4
WHN			PP	PP	09 39 53.1 +0.6
WHN			S	**S**	**09 46 04.0 -0.2**
WHN			SS	SS	09 50 17.1 +5.1
WHN			pmax	pmax	
	comp=Z,150nm,1.1s,mb5.9				
WHN			pmax	pmax	
	comp=Z,11μm,7.5s				
WHN			LR	LR	
	comp=N,22μm,14.2s,MS6.6				
WHN			LR	LR	
	comp=E,19μm,17.3s,MS6.6				
WHN			LR	LR	
	comp=Z,54μm,21.5s,MS6.7				
DL2	**Dalian**	**63.78 324** ⇓	*i*P	**P**	**09 37 34.3 +0.3**
DL2			S	**S**	**09 46 09.3 +2.1**
DL2			SS	SS	09 50 15.8 -0.1
DL2			pmax	pmax	
	comp=Z,100nm,1.6s,mb5.6				
DL2			pmax	pmax	
	comp=Z,4μm,6.4s				
DL2			LR	LR	
	comp=N,7μm,25.6s,MS6.0				
DL2			LR	LR	
	comp=E,10μm,24.2s,MS6.0				
DL2			LR	LR	
	comp=Z,20μm,30.8s				
MDJ	**Mudanjiang**	**63.82 333**	P	**P**	**09 37 34.6 +0.5**
MDJ			pP	pP	09 37 44.3 +1.1
MDJ			S	**S**	**09 46 12.6 +5.2**
MDJ			SS	SS	09 50 16.6 +0.4
MDJ			pmax	pmax	
	comp=Z,190nm,1.4s,mb5.9				
MDJ			pmax	pmax	
	comp=Z,9μm,6.5s				
MDJ			LR	LR	
	comp=N,29μm,26.1s,MS6.4				
MDJ			LR	LR	
	comp=E,16μm,26.6s,MS6.4				
MDJ			LR	LR	
	comp=Z,25μm,30.1s,MS6.2				
MDJ	**Mudanjiang**	**63.82 333**	*e*P	**P**	**09 37 34.4 +0.3**
	comp=Z,366nm,1.4s,mb6.2				
MDJ			LR	LR	
	comp=Z,22μm,22.0s,MS6.3				
PET	**Petropavlovsk**	**64.03 356** ⇓	*i*P	**P**	**09 37 35.1 -0.2**
PET			*e*		09 39 55.3
PET			*i*S	**S**	**09 46 10.5 +0.8**
PET			*e*PS		09 46 35.2
PET			*i*SS	SS	09 50 22.1 +2.9
PET			pmax	pmax	
	comp=Z,7μm,6.8s				
PET			pmax	pmax	
	comp=Z,6μm,7.9s				
PET			pmax	pmax	
	comp=Z,421nm,1.2s,mb6.3				
PET			pmax	pmax	
	comp=Z,3μm,10.2s				
PET			smax		
	comp=E,6μm,13.9s				
PET			smax		
	comp=N,6μm,8.1s				
PET			smax		
	comp=E,9μm,22.7s				
PET	**Petropavlovsk**	**64.03 356**	*i*P	**P**	**09 37 34.9 -0.4**
SMY	**Shemya**	**64.07 6**	*e*P	**P**	**09 37 36.1 +0.5**
SMY			pmax	pmax	
	comp=Z,1μm,1.6s,mb6.7				
SMY	**Shemya**	**64.07 6**	*e*P	**P**	**09 37 36.1 +0.5**
	comp=Z,1μm,1.6s,mb6.7				
BKNI	**Bangkinang**	**64.08 276**	P	**P**	**09 37 36.9 +0.4**
	comp=Z,492nm,1.2s,mb6.4				
BKNI	**Bangkinang**	**64.08 276**	P	**P**	**09 37 39.0 +2.5**
	comp=Z,492nm,1.2s,mb6.4				
FRIM	**Kepong**	**64.17 279**	P	**P**	**09 37 39.5 +2.5**
PEA0B	**Petropavlovsk-**	**64.19 355**	*e*P	**P**	**09 37 36.5 +0.2**
PETK	**Petropavlovsk-**	**64.19 355**	P	**P**	**09 37 36.6 +0.3**
	comp=Z,213nm,0.8s,mb6.2,baz=135,slow=7.1,SNR=160				
PETK			LR	LR	10 00 11.1
	comp=Z,18μm,20.8s,MS6.2,baz=172,slow=31				
PETK			PKPPKP		10 06 21.6
	comp=Z,2.4nm,1.0s,baz=93,slow=10,SNR=3.7				
PDSI	**Padang**	**64.39 274**	P	**P**	**09 37 38.8 +0.3**
	comp=Z,70nm,3.0s				
PDSI	**Padang**	**64.39 274**	P	**P**	**09 37 43.4 +4.9**
	comp=Z,70nm,3.0s				
PPI	**Padang Panjang**	**64.55 275**	P	**P**	**09 37 37.9 -1.7**
PPI	**Padang Panjang**	**64.55 275**	P	**P**	**09 37 39.3 -0.3**
	comp=Z,145nm,1.1s,mb5.9				
PPI	**Padang Panjang**	**64.55 275**	P	**P**	**09 37 40.1 +0.5**
	comp=Z,145nm,1.1s,mb5.9				
HABR	**Khabarovsk**	**64.77 339**	*i*P	**P**	**09 37 40.8 +0.6**
HABR			*e**PP	pP	09 37 48.7 -0.6
HABR			*e**SP	sP	09 37 52.9 +0.1
HABR					09 38 12.3
HABR			*e*		09 40 00.9
HABR			*e*PPP		09 41 33.0
HABR			*e*S	**S**	**09 46 21.0 +2.1**
HABR			*SS	sS	09 46 34.5 +0.6
HABR			*e*		09 47 30.3
HABR			*e*SS	SS	09 50 29.4 -1.4
HABR			pmax	pmax	
	comp=N,157nm,1.6s				
HABR			pmax	pmax	
	comp=Z,9μm,5.8s				
HABR			pmax	pmax	
	comp=Z,825nm,1.5s,mb6.5				
HABR			pmax	pmax	
	comp=E,115nm,1.0s				
HABR			MLR	MLR	
	comp=Z,13μm,19.0s,MS6.1				
TIA	**Tai'an**	**64.84 319** ⇓	P	**P**	**09 37 40.6 -0.4**
TIA			pP	pP	09 37 55.0 +4.9
TIA			PP	PP	09 40 03.5 -0.5
TIA			S	**S**	**09 46 20.8 +0.4**
TIA			LR	LR	
	comp=N,20μm,20.5s,MS6.4				
TIA			LR	LR	
	comp=E,21μm,22.4s,MS6.4				
IPM	**Ipoh**	**65.05 280**	P	**P**	**09 37 42.5 -0.3**
IPM	**Ipoh**	**65.05 280**	P	**P**	**09 37 42.4 -0.4**
IPM	**Ipoh**	**65.05 280**	P	**P**	**09 37 42.5 -0.3**
	comp=E,8μmcomp=E,167nm,1.3s,mb5.9				
IPM	**Ipoh**	**65.05 280**	P	**P**	**09 37 42.6 -0.2**
	comp=E,8μmcomp=E,167nm,1.3s,mb5.9				
CN2	**Changchun**	**65.16 330** ⇓	P	**P**	**09 37 43.1 +0.2**
CN2			*e*pP	pP	09 37 53.5 +1.5
CN2			PP	PP	09 40 06.6 0.0
CN2			*e*S	S	09 46 22.8 -1.1
CN2			SS	SS	09 50 36.5 -0.6
CN2			LR	LR	
	comp=N,25μm,18.0s,MS6.6				
CN2			LR	LR	
	comp=E,20μm,18.0s,MS6.6				
CN2			LR	LR	
	comp=Z,27μm,20.0s,MS6.5				
MNSI	**Mandailing Nat**	**65.61 276**	P	**P**	**09 37 45.9 -0.6**
	comp=Z,9μmcomp=Z,226nm,0.9s,mb6.2				
MNSI	**Mandailing Nat**	**65.61 276**	P	**P**	**09 37 45.4 -1.1**
	comp=Z,9μmcomp=Z,226nm,0.9s,mb6.2				
KULM	**Kulim**	**65.61 281**	P	**P**	**09 37 46.9 +0.4**
KULM	**Kulim**	**65.61 281**	*e*P	**P**	**09 37 46.0 -0.5**
	comp=Z,116nm,1.4s,mb5.7				
KULM			*e*S	S	09 46 25.3 -5.4
KULM			LR	LR	
	comp=Z,9μm,20.0s,MS6.0				
KULM	**Kulim**	**65.61 281**	P	**P**	**09 37 46.2 -0.3**
	comp=Z,6μmcomp=Z,73nm,1.7s,mb5.4				
KULM	**Kulim**	**65.61 281**	P	**P**	**09 37 47.6 +1.1**
	comp=Z,6μmcomp=Z,73nm,1.8s,mb5.4				
ATKA	**Atka Island**	**65.63 14**	*e*P	**P**	**09 37 45.7 -0.1**
SISI	**Saibi**	**65.65 274**	P	**P**	**09 37 47.0 +0.3**
	comp=Z,9μmcomp=Z,139nm,1.2s,mb5.8				
CASY	**Casey**	**65.92 201** ⇓	*i*P	**P**	**09 37 47.2 -0.3**
CASY			*e*S	S	09 46 34.4 +1.7
CASY	**Casey**	**65.92 201**	*e*P	**P**	**09 37 47.4 -0.2**
	comp=Z,471nm,1.3s,mb6.4				
CASY			LR	LR	
	comp=Z,11μm,19.0s,MS6.1				
COCO	**West Island**	**66.15 262**	*i*P	**P**	**09 37 56.4 +6.5**
COCO	**West Island**	**66.15 262**	PFAKE		09 38 00.0 +10
COCO			LR	LR	
	comp=Z,11μm,21.0s,MS6.1				
COCO	**West Island**	**66.15 262**	P	**P**	**09 37 50.3 +0.4**
	comp=Z,395nm,2.1s,mb6.1				
COCO	**West Island**	**66.15 262**	P	**P**	**09 37 56.9 +7.0**
	comp=Z,392nm,2.1s,mb6.1				
KLR	**Kul'dur**	**66.61 337** α	*i*P	**P**	**09 37 48.8 -3.3**
KLR			*e*S	S	09 46 31.0 -10
KLR			pmax	pmax	
	comp=N,520nm,3.0s				
KLR			pmax	pmax	
	comp=E,130nm,3.0s				
KLR			pmax	pmax	
	comp=Z,2μm,3.0s				
KLR			pmax	pmax	
	comp=N,3μm,11.0s				
KLR			pmax	pmax	
	comp=E,2μm,11.0s				
KLR			pmax	pmax	
	comp=Z,15μm,11.0s				
KLR			smax		
	comp=N,5μm,11.0s				
KLR			smax		
	comp=E,4μm,11.0s				
PSI	**Prapat**	**66.69 278**	P	**P**	**09 37 51.7 -1.7**
	comp=E,71nm,1.0s,mb5.7,baz=156,slow=2.7,SNR=18				
PSI			PKPPKP		10 06 24.1
	comp=E,11nm,0.9s,baz=194,slow=3.4,SNR=3.6				
PSI			LR	LR	10 09 45.1
	comp=E,12μm,18.8s,MS6.1,baz=123,slow=38				
SBA	**Scott Base**	**66.78 179**	*e*P	**P**	**09 37 54.5 +1.6**
SBA			MLR	MLR	
	comp=Z,17μm,20.0s,MS6.3				
ENH	**Enshi**	**66.99 310**	*e*P	**P**	**09 37 54.2 -0.7**
	comp=Z,311nm,1.2s,mb6.2				
ENH			LR	LR	
	comp=Z,26μm,22.0s,MS6.4				
TSI	**Tuntungan**	**67.20 279**	P	**P**	**09 37 55.9 -0.8**
GYA	**Guiyang**	**67.45 305** ⇑	*i*P	**P**	**09 37 57.9 0.0**
GYA			pP	pP	09 38 10.3 +3.2
GYA			PP	PP	09 40 30.6 +3.6
GYA			ScP		09 42 27.4
GYA			S	S	09 46 54.6 +2.2
GYA			sS	sS	09 47 08.5 +1.0
GYA			SKS		09 47 51.3
GYA			SS	SS	09 51 16.8 +3.5
GYA			pmax	pmax	
	comp=Z,90nm,1.0s,mb5.8				
GYA			LR	LR	
	comp=N,38μm,20.0s,MS6.7				
GYA			LR	LR	
	comp=E,29μm,21.2s,MS6.7				
GYA			LR	LR	
	comp=Z,32μm,20.6s,MS6.5				
BJT	**Baijiatuau**	**67.75 322**	*e*P	**P**	**09 37 59.3 -0.2**
BJT			*e*		09 40 26.6
BJT			*e*S	S	09 46 48.7 -6.8
BJT			pmax	pmax	
	comp=Z,210nm,1.4s				
BJT			MLR	MLR	
	comp=Z,24μm,20.0s				
BJT	**Baijiatuau**	**67.75 322**	*e*P	**P**	**09 37 59.3 -0.3**
	comp=Z,210nm,1.4s,mb6.0				
BJT			*e*PP	PP	09 40 26.6 -2.8
BJT			*e*S	S	09 46 48.7 -6.8
BJT			LR	LR	
	comp=Z,24μm,20.0s,MS6.4				
BJI	**Beijing**	**67.75 322**	P	**P**	**09 37 59.3 -0.3**
BJI			sP	sP	09 38 11.3 -0.9
BJI			PP	PP	09 40 28.0 -1.4
BJI			S	S	09 46 57.6 +2.0
BJI			sS	sS	09 47 14.3 +3.6
BJI			pmax	pmax	
	comp=Z,96nm,1.3s,mb5.7				
BJI			pmax	pmax	
	comp=Z,10μm,5.5s				
BJI			LR	LR	
	comp=N,33μm,23.8s,MS6.5				
BJI			LR	LR	
	comp=E,20μm,25.9s,MS6.5				
BJI			LR	LR	
	comp=Z,62μm,37.1s				
TPTI		**68.49 278**	P	**P**	**09 38 03.5 -1.3**
	comp=Z,4μmcomp=Z,53nm,1.9s,mb5.2				
TPTI		**68.49 278**	P	**P**	**09 38 06.2 +1.4**
	comp=Z,4μmcomp=Z,53nm,1.9s,mb5.2				
TIY	**Taiyuan**	**68.77 318** ⇓	*i*P	**P**	**09 38 06.6 +0.6**
TIY			S	S	09 46 58.3 -10
TIY			pmax	pmax	
	comp=Z,8μm,6.2s				
TIY			LR	LR	
	comp=N,16μm,17.4s,MS6.3				
TIY			LR	LR	
	comp=E,4μm,15.8s,MS6.3				
TIY			LR	LR	
	comp=Z,21μm,16.5s,MS6.5				
NST	**Nakhon Sawan**	**69.06 292**	P	**P**	**09 38 10.0 +1.8**
UNV	**Unalaska Valle**	**69.19 18**	*e*P	**P**	**09 38 08.2 0.0**
XAN	**Xi'an**	**69.26 313**	P	**P**	**09 38 09.8 +0.7**
XAN			pP	pP	09 38 20.6 +2.3
XAN			S	S	09 47 15.5 +1.8
XAN			SS	SS	09 51 46.8 +5.7
XAN			pmax	pmax	
	comp=Z,30nm,1.0s,mb5.2				
XAN			pmax	pmax	
	comp=Z,2μm,12.6s				
XAN			LR	LR	
	comp=N,11μm,28.7s				
XAN			LR	LR	
	comp=E,5μm,41.0s				
XAN			LR	LR	
	comp=Z,7μm,20.5s				
AKUT	**Akutan**	**69.66 18**	*e*P	**P**	**09 38 12.6 +1.4**
	comp=Z,551nm,2.1s,mb6.1				
KMI	**Kunming**	**70.12 302** ⇓	P	**P**	**09 38 16.1 +1.5**
KMI			pP	pP	09 38 26.3 +2.5
KMI			sP	sP	09 38 29.8 +2.6
KMI			PcP	PcP	09 38 38.9 +2.4
KMI			PP	PP	09 40 54.5 +4.3
KMI			S	S	09 47 25.1 +0.9
KMI			sS	sS	09 47 40.3 +1.0
KMI			SKS		09 48 12.1
KMI			SS	SS	09 51 57.3 +2.7
KMI			pmax	pmax	
	comp=Z,210nm,1.4s,mb5.9				
KMI			pmax	pmax	
	comp=Z,9μm,5.8s				
KMI			LR	LR	
	comp=N,10μm,26.3s,MS6.1				
KMI			LR	LR	
	comp=E,12μm,27.1s,MS6.1				
KMI			LR	LR	
	comp=Z,24μm,18.1s				
CHRT	**Chiangrai**	**70.75 296** ⇓	P	**P**	**09 38 19.0 +0.4**
	comp=Z,500nm,1.0s,mb6.4				
CMAR	**Chiang Mai Arr**	**71.03 294**	P	**P**	**09 38 21.2 +1.0**
	comp=Z,17nm,0.8s,mb5.0,baz=120,slow=4.4,SNR=60				
CMAR			PKPPKP		10 06 16.2
	comp=Z,10nm,1.1s,baz=284,slow=4.8,SNR=14				
CMAR			LR	LR	10 09 25.6
	comp=Z,8μm,19.8s,MS6.0,baz=271,slow=36				
HHC	**Hu-ho-hao-te**	**71.08 320** ⇓	P	**P**	**09 38 20.6 +0.5**
HHC			pP	pP	09 38 30.1 +0.8
HHC			sP	sP	09 38 34.1 +1.3
HHC			PcP	PcP	09 38 40.8 +0.6
HHC			PP	PP	09 41 01.3 +3.1
HHC			S	S	09 47 34.1 -0.7
HHC			sS	sS	09 47 50.4 +0.5
HHC			SKS		09 48 15.8
HHC			ScS	ScS	09 48 19.1 -3.3
HHC			SS	SS	09 52 10.5 +1.6
HHC			pmax	pmax	
	comp=Z,48nm,0.9s,mb5.4				
HHC			pmax	pmax	
	comp=Z,9μm,6.4s				
HHC			LR	LR	
	comp=N,24μm,16.9s,MS6.6				
HHC			LR	LR	
	comp=E,15μm,16.6s,MS6.6				
HHC			LR	LR	
	comp=Z,26μm,16.8s,MS6.6				
SPIA	**Saint Paul Isl**	**71.12 14**	*e*P	**P**	**09 38 20.7 +0.7**
CHG	**Chiang Mai**	**71.14 294** ⇓	P	**P**	**09 38 21.2 +0.2**
	comp=Z,92nm,1.2s,mb5.6				
CHTO	**Chiang Mai**	**71.14 294**	*e*P	**P**	**09 38 20.8 -0.2**
CHTO			*e*		09 40 58.2
CHTO			*e*S	S	09 47 36.7 +0.4
CHTO			pmax	pmax	
	comp=Z,338nm,1.8s,mb6.0				
CHTO			MLR	MLR	
	comp=Z,9μm,22.0s,MS6.0				
CHTO	**Chiang Mai**	**71.14 294**	*e*P	**P**	**09 38 20.8 -0.2**
	comp=Z,338nm,1.8s,mb6.0				
CHTO			*e*PP	PP	09 40 58.2 -0.9
CHTO			*e*S	S	09 47 36.7 +0.4
CHTO			LR	LR	
	comp=Z,9μm,22.0s,MS6.0				
CHTO	**Chiang Mai**	**71.14 294**	P	**P**	**09 38 21.2 +0.2**
	comp=Z,7μmcomp=Z,103nm,2.5s,mb5.3				
CHTO	**Chiang Mai**	**71.14 294**	P	**P**	**09 38 21.4 +0.4**
	comp=Z,7μmcomp=Z,103nm,2.5s,mb5.3				
CHTO	**Chiang Mai**	**71.14 294**	P	**P**	**09 38 21.0 0.0**
	SNR=37				
CD2	**Chengdu**	**71.67 308**	P	**P**	**09 38 23.9 0.0**
CD2			pP	pP	09 38 34.3 +1.2
CD2			sP	sP	09 38 38.3 +1.8
CD2			PP	PP	09 41 05.0 +1.6
CD2			S	S	09 47 40.3 -1.7
CD2			sS	sS	09 47 57.3 +0.1
CD2			SKS		09 48 20.3
CD2			pmax	pmax	
	comp=Z,250nm,0.9s,mb6.1				
CD2			pmax	pmax	
	comp=Z,10μm,7.7s				
CD2			LR	LR	
	comp=N,15μm,22.6s				
CD2			LR	LR	
	comp=Z,21μm,25.0s,MS6.3				
HIA	**Hailar**	**71.81 331**	*e*P	**P**	**09 38 24.6 +0.3**
HIA			*e*S	S	09 47 31.3 -12
HIA			pmax	pmax	
	comp=Z,454nm,1.3s				
HIA			MLR	MLR	
	comp=Z,17μm,20.0s				
HIA	**Hailar**	**71.81 331**	*e*P	**P**	**09 38 24.6 +0.3**
	comp=Z,454nm,1.3s,mb6.2				
HIA			*e*S	S	09 47 31.3 -11
HIA			LR	LR	
	comp=Z,17μm,20.0s,MS6.3				
BTO	**Baotou**	**71.92 319**	*e*P	**P**	**09 38 25.5 +0.3**
BTO			pmax	pmax	
	comp=Z,53nm,1.5s,mb5.2				
SDPT	**Sand Point**	**72.38 20**	*e*P	**P**	**09 38 27.3 -0.3**
MIR	**Mirnyy**	**72.58 203** ⇓	*i*P	**P**	**09 38 28.4 -0.3**
MIR			*i*		09 38 42.0
MIR			*i*		09 41 10.0
MIR			*e*S	S	09 47 55.0 +3.7
MIR			*e*S	S	09 47 56.0 +4.7
MIR			pmax	pmax	
	comp=Z,1μm,2.0s,mb6.5				
MIR			pmax	pmax	
	comp=Z,9μm,7.0s				
MIR			pmax	pmax	
	comp=N,3μm,10.0s				
MIR			pmax	pmax	
	comp=E,4μm,9.0s				
MIR			smax		
	comp=E,5μm,8.0s				
MIR			smax		
	comp=N,4μm,10.0s				
CHGN	**Chignik**	**73.84 20**	*e*P	**P**	**09 38 35.4 -0.8**
LZH	**Lanzhou**	**73.89 313** ⇓	P	**P**	**09 38 38.3 +1.3**
LZH			pP	pP	09 38 48.0 +1.8
LZH			sP	sP	09 38 52.3 +2.6
LZH			PP	PP	09 41 25.0 +2.7
LZH			S	S	09 48 07.5 +0.4
LZH			sS	sS	09 48 24.3 +1.9
LZH			SS	SS	09 52 54.0 +1.9
LZH			pmax	pmax	
	comp=Z,200nm,1.0s,mb6.0				
LZH			pmax	pmax	
	comp=Z,1μm,6.3s				
LZH			LR	LR	

comp=E,14μm,17.7s
LZH LR LR
comp=Z,29μm,18.2s,MS6.6
SEY Seymchan 74.37 354 *d iP* **P 09 38 39.0 -0.2**
CLNS Chul'man 75.16 339 *eP* **P 09 38 44.8 +0.9**
CLNS *e* pP 09 38 54.4 +1.3
CLNS *e**PP pP 09 39 00.4 +7.3
CLNS *e* 09 41 35.2
CLNS *e*PPP 09 43 18.9
CLNS *e*S S 09 48 19.6 -0.8
CLNS *e* 09 48 54.6
CLNS pmax pmax
comp=Z,202nm,1.1s,mb6.0
CLNS pmax pmax
comp=N,132nm,1.2s
CLNS pmax pmax
comp=E,79nm,1.1s
CLNS pmax pmax
comp=E,24nm,1.0s
CLNS pmax pmax
comp=Z,28nm,1.2s,mb5.1
CLNS pmax pmax
comp=N,44nm,1.3s
CLNS smax
comp=N,6μm,10.9s
CLNS smax
comp=E,6μm,12.4s
CLNS MLR MLR
comp=N,8μm,14.0s
CLNS MLR MLR
comp=Z,12μm,17.0s,MS6.3
OHAK Old Harbor 76.37 22 *eP* **P 09 38 50.7 -0.1**
comp=Z,464nm,1.6s,mb6.2
CIT Chita 76.59 330 *eP* **P 09 38 52.8 +0.6**
CIT *e* pP 09 39 02.1 +0.7
CIT *e* 09 39 09.6
CIT pmax pmax
comp=Z,1μm,1.5s,mb6.5
GAMB Gambell 76.81 11 *eP* **P 09 38 53.5 +0.4**
comp=Z,759nm,1.3s,mb6.5
GAMB *e*PP PP 09 41 44.2 -2.1
KDAK Kodiak Island 77.04 22 P **P 09 38 54.6 0.0**
comp=Z,601nm,1.1s,mb6.4,SNR=12
KDAK Kodiak Island 77.04 22 LR LR 10 11 54.6
comp=Z,12μm,18.0s,MS6.3,baz=229,slow=35
KDAK Kodiak Island 77.04 22 *i P* **P 09 38 56.2 +1.6**
KDAK Kodiak Island 77.04 22 *eP* **P 09 38 55.1 +0.5**
comp=Z,153nm,1.1s,mb5.8
KDAK LR LR
comp=Z,12μm,20.0s,MS6.2
IMP Imphal 77.47 299 *e*PKP **P 09 38 57.0 -0.8**
ULN Ulaanbaatar 77.62 324 *i P* **P 09 38 58.8 +0.7**
ULN Ulaanbaatar 77.62 324 *eP* **P 09 38 58.8 +0.8**
comp=Z,132nm,0.8s,mb5.9
ULN LR LR
comp=Z,26μm,22.0s,MS6.5
ULN Ulaanbaatar 77.62 324 P **P 09 38 58.9 +0.8**
comp=Z,10μmcomp=Z,230nm,1.1s,mb6.0
ULN Ulaanbaatar 77.62 324 P **P 09 38 58.5 +0.4**
comp=Z,10μmcomp=Z,230nm,1.1s,mb6.0
ULN Ulaanbaatar 77.62 324 P **P 09 38 59.1 +1.1**
SNR=198
YAK Yakutsk 77.78 344 *d iP* **P 09 38 58.5 -0.2**
YAK *e* pP 09 39 07.4 -0.5
YAK *e**PP pP 09 39 08.6 +0.7
YAK *e* 09 41 52.8
YAK *e*S S 09 48 49.6 +0.6
YAK *e**SS sS 09 49 04.2 -0.1
YAK *e* 09 49 13.7
YAK *e*SS SS 09 53 44.1 -5.9
YAK *e*SSS 09 57 08.5
YAK pmax pmax
comp=Z,406nm,1.1s,mb6.3
YAK pmax pmax
comp=N,160nm,1.4s
YAK pmax pmax
comp=E,67nm,1.0s
YAK pmax pmax
comp=Z,2μm,7.2s
YAK smax
comp=N,4μm,6.5s
YAK smax
comp=E,2μm,6.1s
YAK MLR MLR
comp=N,12μm,17.0s,MS6.4
YAK MLR MLR
comp=Z,17μm,18.0s,MS6.4
YAK MLR MLR
comp=E,10μm,19.0s,MS6.4
YAK Yakutsk 77.78 344 *eP* **P 09 38 58.4 -0.2**
comp=E,435nm,0.6s,mb6.6
YAK *e*S S 09 48 47.1 -1.9
YAK LR LR
comp=Z,21μm,20.0s,MS6.5
SONM Songino Array 77.98 324 P **P 09 39 00.6 +0.6**
comp=Z,74nm,0.8s,mb5.7,baz=138,slow=6.0,SNR=158
SONM S S 09 48 55.2 +3.4
comp=Z,1.5nm,1.0s,baz=87,slow=6.3,SNR=2.7
SONM PKKPbc PKKPbc 09 58 01.2 -1.6
comp=Z,2.2nm,0.8s,baz=276,slow=1.3,SNR=6.8
SONM PKP2ab 10 05 50.0
comp=Z,2.3nm,1.1s,baz=274,slow=2.3,SNR=5.2
SONM LR LR 10 11 02.6
comp=Z,28μm,20.3s,MS6.6,baz=120,slow=34
SONM Songino Array 77.98 324 P **P 09 39 00.6 +0.5**
SONM S S 09 48 55.2 +3.5
SONM pmax pmax
comp=Z,74nm,0.8s
SONM smax
comp=N,2.0nm,1.0s
GTA Gaotai 78.22 314 ⇓P **P 09 39 02.5 +0.9**
GTA pP pP 09 39 09.8 -1.1
GTA sP sP 09 39 13.6 -0.7
GTA PP PP 09 42 00.8 +2.1
GTA S S 09 48 59.3 +4.7
GTA sS sS 09 49 12.4 +2.4
GTA pmax pmax
comp=Z,58nm,1.3s,mb5.3
GTA pmax pmax
comp=Z,10μm,7.1s
GTA LR LR
comp=N,13μm,20.5s,MS6.3
GTA LR LR
comp=E,12μm,23.8s,MS6.3
GTA LR LR
comp=Z,18μm,22.0s,MS6.4
SVW2 Sparrevohn 78.51 19 *eP* **P 09 39 02.9 +0.2**
comp=Z,746nm,1.8s,mb6.3
BILL Bilibino 78.91 1⇓*eP* **P 09 39 04.7 -0.1**
BILL *e* 09 42 05.7
BILL *i* S S 09 49 02.9 +2.0
BILL *i* SS SS 09 54 01.4 -5.3
BILL pmax pmax
comp=Z,605nm,1.0s,mb6.5
BILL MLR MLR
comp=Z,15μm,20.0s,MS6.3
BILL Bilibino 78.91 1 *eP* **P 09 39 04.7 -0.1**
comp=Z,729nm,1.2s,mb6.5
BILL LR LR
comp=Z,15μm,20.0s,MS6.3
QSPA South Pole Qui 78.93 180 P **P 09 39 05.7 +0.8**
comp=Z,282nm,1.1s,mb6.1,baz=14,slow=1.9,SNR=149
QSPA PKiKP PKiKP 09 44 39.6 +0.7
comp=Z,10nm,1.1s,baz=324,slow=2.1,SNR=3.7
QSPA S S 09 49 04.0 +2.9
comp=Z,2.1nm,0.9s,baz=336,slow=20,SNR=3.2
QSPA PKKPbc PKKPbc 09 57 57.0 -3.9
comp=Z,6.1nm,1.1s,baz=283,slow=3.0,SNR=6.8
QSPA PKPPKP 10 05 59.9
comp=Z,3.2nm,1.0s,baz=256,slow=5.3,SNR=4.1
QSPA LR LR 10 10 55.5
comp=Z,15μm,18.6s,MS6.3,baz=209,slow=33
RSO Redoubt South 78.95 20 *eP* **P 09 39 04.5 -0.7**
TNA Tin City 79.13 11 *eP* **P 09 39 06.3 +0.4**
comp=Z,292nm,1.2s,mb6.1
TNA *e*PP PP 09 42 04.4 -1.3
SHL Shillong 79.48 299 *i P* **P 09 39 09.0 +0.2**
SHL *i* S S 09 49 09.0 +0.3
AGT Agartala 79.53 297 *i P* **P 09 39 08.0 -1.1**
AGT *i* x x 09 40 09.0
TTA Tatalina 79.80 17 *eP* **P 09 39 10.3 +0.6**
RC01 Rabbit Creek A 80.43 21 *eP* **P 09 39 12.9 -0.3**
comp=Z,329nm,1.2s,mb6.1
RC01 *e*PP PP 09 42 10.6 -6.1
MID Middleton Isla 80.54 23 *eP* **P 09 39 13.8 0.0**
MID pmax pmax
comp=Z,176nm,1.0s,mb6.0
MID Middleton Isla 80.54 23 *eP* **P 09 39 13.8 0.0**
comp=Z,176nm,1.0s,mb5.9
PPLA Purkeypile 80.93 19 *eP* **P 09 39 14.8 -1.0**
comp=Z,194nm,1.2s,mb5.9
PPLA *e*PP PP 09 42 18.1 -2.6
PMR Palmer 80.99 21 *eP* **P 09 39 15.7 -0.5**
PMR pmax pmax
comp=Z,464nm,2.4s,mb6.0
PMR Palmer 80.99 21 *eP* **P 09 39 15.7 -0.5**
comp=Z,464nm,2.4s,mb6.0
LSA Lhasa 81.36 303 P **P 09 39 18.1 -0.7**
LSA S S 09 49 29.8 +1.6
LSA LR LR
comp=E,3μm,8.3s
LSA LR LR
comp=Z,5μm,13.0s,MS6.1
LSA Lhasa 81.36 303 *eP* **P 09 39 19.8 +1.0**
LSA *e*S S 09 49 31.3 +3.1
LSA pmax pmax
comp=Z,62nm,1.1s,mb5.5
LSA MLR MLR
comp=Z,11μm,21.0s,MS6.2
LSA Lhasa 81.36 303 *eP* **P 09 39 19.8 +0.9**
comp=Z,62nm,1.1s,mb5.5
LSA *e*S S 09 49 31.3 +3.1
LSA LR LR
comp=Z,11μm,21.0s,MS6.2
IRK Irkutsk 81.43 327 ⇓*iP* **P 09 39 17.9 -0.8**
IRK *e*S S 09 49 29.4 +1.4
IRK pmax pmax
comp=Z,191nm,1.7s,mb5.8
TLY Talaya 81.48 327 P **P 09 39 18.7 -0.3**
comp=Z,748nm,0.7s,mb6.7,SNR=52
TLY Talaya 81.48 327 *eP* **P 09 39 18.6 -0.4**
TLY *e*S S 09 49 28.6 0.0
TLY pmax pmax
comp=Z,110nm,0.9s,mb5.8
TLY Talaya 81.48 327 *eP* **P 09 39 18.8 -0.2**
comp=Z,86nm,0.8s,mb5.7
TLY *e*S S 09 49 27.1 -1.4
TLY LR LR
comp=Z,15μm,19.0s,MS6.4
TLY Talaya 81.48 327 P **P 09 39 19.1 +0.1**
SNR=60
RPN Rapa Nui 81.64 116 P **P 09 39 21.4 +0.9**
comp=Z,53nm,0.8s,mb5.5,baz=42,slow=0.3,SNR=3.6
RPN LR LR 10 09 58.9
comp=Z,12μm,18.0s,MS6.3,baz=278,slow=32
RPN Rapa Nui 81.64 116 *eP* **P 09 39 21.2 +0.8**
comp=Z,957nm,1.8s,mb6.4
RPN LR LR
comp=Z,14μm,19.0s,MS6.3
CAL Calcutta 81.73 295 *e*PKP **P 09 39 20.4 -0.6**
CAL *e*S S 09 49 31.9 -0.5
DIV Divide 81.88 22 *eP* **P 09 39 20.8 0.0**
comp=Z,350nm,1.1s,mb6.2
DIV *e*PP PP 09 42 22.2 -6.4
TRF Thorofare Moun 81.92 19 *eP* **P 09 39 20.0 -1.1**
comp=Z,123nm,0.8s,mb5.9
BPAW Bear Paw Mtn. 82.17 18 *eP* **P 09 39 21.0 -1.3**
comp=Z,83nm,1.1s,mb5.6
BMRM Bremner River 82.20 22 *eP* **P 09 39 22.4 -0.1**
comp=Z,444nm,1.2s,mb6.3
BMRM *e*PP PP 09 42 25.4 -5.9
MCK McKinley 82.55 19 *eP* **P 09 39 23.3 -1.0**
MCK pmax pmax
comp=Z,324nm,1.1s,mb6.3
MCK McKinley 82.55 19 *eP* **P 09 39 23.3 -1.0**
comp=Z,324nm,1.1s,mb6.3
MCK *e*PP PP 09 42 28.0 -6.2
MOY Mondy 82.92 326 *eP* **P 09 39 26.3 -0.2**
MOY pmax pmax
comp=Z,692nm,5.9s
MCCM Marconi Confer 83.44 49 *eP* **P 09 39 28.7 -0.8**
comp=Z,202nm,1.1s,mb6.1
MCCM LR LR
comp=Z,10μm,19.0s,MS6.2
PNL Peninsula 83.47 25 *eP* **P 09 39 28.7 -0.4**
comp=Z,407nm,1.1s,mb6.4
TAPN Taplejung 83.57 299 *eP* **P 09 39 31.0 +0.5**
comp=Z,651nm,1.7s,mb6.5
HOPS Hopland 83.58 48 *eP* **P 09 39 30.0 -0.3**
comp=Z,262nm,1.3s,mb6.2
HOPS LR LR
comp=Z,15μm,19.0s,MS6.4
COLA College 83.69 19 *eP* **P 09 39 28.8 -1.4**
COLA pmax pmax
comp=Z,424nm,1.1s,mb6.5
COLA MLR MLR
comp=Z,11μm,20.0s,MS6.2
COLA College 83.69 19 *eP* **P 09 39 28.8 -1.3**
comp=Z,424nm,1.1s,mb6.5
COLA LR LR
comp=Z,11μm,20.0s,MS6.2
ODAN Odare 83.72 299 *eP* **P 09 39 31.5 +0.3**
comp=Z,472nm,1.1s,mb6.5
MENT Mentasta 83.78 21 *eP* **P 09 39 30.9 +0.2**
ILAR Eielson Array 83.92 19 P **P 09 39 30.4 -1.0**
comp=Z,91nm,0.8s,mb6.0,baz=236,slow=3.9,SNR=178
ILAR PKKP PKKPbc 09 57 44.5 -5.5
comp=Z,3.8nm,0.9s,baz=310,slow=2.0,SNR=14
ILAR PKPPKP 10 05 46.6
comp=Z,2.9nm,1.0s,baz=337,slow=2.1,SNR=8.5
ILAR LR LR 10 16 25.1
comp=Z,11μm,18.1s,MS6.3,baz=241,slow=35
SAO San Andreas Ge 84.07 51 *eP* **P 09 39 32.5 -0.3**
SAO pmax pmax
comp=Z,186nm,1.4s,mb6.0
SAO MLR MLR
comp=Z,21μm,19.0s,MS6.5
SAO San Andreas Ge 84.07 51 *eP* **P 09 39 32.5 -0.3**
comp=Z,186nm,1.4s,mb6.0
SAO LR LR
comp=Z,21μm,19.0s,MS6.5
CRAG Craig 84.11 30 *eP* **P 09 39 30.1 -2.4**
comp=Z,137nm,1.2s,mb6.0
BOK Bokaro 84.23 295 *e*PKP **P 09 39 34.0 +0.2**
MAW Mawson 84.25 202 ⇓*iP* **P 09 39 33.6 +0.5**
comp=Z,168nm,1.2s,mb6.0
MAW Mawson 84.25 202 P **P 09 39 32.7 -0.5**
comp=Z,149nm,1.0s,mb6.1,baz=99,slow=6.1,SNR=101
MAW PKiKP PKiKP 09 44 48.4 +0.9
comp=Z,3.0nm,0.9s,baz=90,slow=5.1,SNR=3.2
MAW PKKPbc PKKPbc 09 57 46.8 -1.6
comp=Z,3.0nm,0.6s,baz=309,slow=4.8,SNR=9.7
MAW PKPPKP 10 05 42.4
comp=Z,2.4nm,1.0s,baz=285,slow=7.4,SNR=3.7
MAW LR LR 10 12 17.6
comp=Z,11μm,19.7s,MS6.3,baz=88,slow=32
MAW Mawson 84.25 202 *eP* **P 09 39 33.4 +0.3**
MAW pmax pmax
comp=Z,179nm,1.5s
MAW MLR MLR
comp=Z,17μm,19.0s
MAW Mawson 84.25 202 *eP* **P 09 39 33.4 +0.3**
comp=Z,179nm,1.5s,mb6.0
MAW LR LR
comp=Z,17μm,19.0s,MS6.5
RAMN Ramite 84.42 299 *eP* **P 09 39 34.8 0.0**
comp=Z,157nm,0.9s,mb6.1
WDC Whiskeytown Da 84.50 47 *eP* **P 09 39 34.7 -0.2**
WDC *e* 09 42 48.2
WDC pmax pmax
comp=Z,163nm,1.4s,mb6.0
WDC MLR MLR
comp=Z,15μm,19.0s,MS6.4
WDC Whiskeytown Da 84.50 47 *eP* **P 09 39 34.7 -0.2**
comp=Z,163nm,1.4s,mb6.0
WDC *e*PP PP 09 42 48.2 -2.4
WDC LR LR
comp=Z,15μm,19.0s,MS6.4
BSC Santa Cruz Isl 84.64 54 ⇑P **P 09 39 35.9 +0.1**
baz=85
COLD Coldfoot 84.65 16 *eP* **P 09 39 35.7 +0.7**
comp=Z,132nm,1.0s,mb6.0
SMMC Simmler 84.74 53 ⇓P **P 09 39 36.1 -0.2**
baz=85
YBH Yreka Blue Hor 84.77 46 *eP* **P 09 39 36.5 +0.3**
YBH *e* 09 42 50.0
YBH pmax pmax
comp=Z,121nm,1.1s
YBH MLR MLR
comp=Z,8μm,20.0s
YBH Yreka Blue Hor 84.77 46 *eP* **P 09 39 36.5 +0.3**
comp=Z,121nm,1.1s,mb5.9
YBH *e*PP PP 09 42 50.0 -2.8
YBH LR LR
comp=Z,8μm,20.0s,MS6.1
HUMO Hull Mountain 84.89 45 *eP* **P 09 39 37.0 +0.3**
comp=Z,186nm,1.1s,mb6.1
HUMO LR LR
comp=Z,15μm,19.0s,MS6.4
JIRN Jiri 84.96 299 *eP* **P 09 39 37.8 +0.3**
comp=Z,865nm,1.6s,mb6.6
SKAG Skagway 85.09 26 *eP* **P 09 39 37.7 +0.3**
comp=Z,223nm,1.6s,mb6.0
VIS Vishakhapatnam 85.10 289 *e*PKP **P 09 39 38.2 -0.2**
VIS AMb AMB 09 39 43.2
comp=Z,184nm,1.3s,mb6.1
VIS *i* x x 09 42 39.1
HEBO Mount Hebo 85.26 42 *eP* **P 09 39 39.0 +0.4**
comp=Z,283nm,1.3s,mb6.2
HEBO *e*PP PP 09 42 56.1 -0.5
CMB Columbia Colle 85.27 50 *eP* **P 09 39 38.3 -0.5**
CMB pmax pmax
comp=Z,104nm,1.1s,mb5.9
CMB MLR MLR
comp=Z,18μm,19.0s,MS6.5
CMB Columbia Colle 85.27 50 *eP* **P 09 39 38.3 -0.5**
comp=Z,104nm,1.1s,mb5.9
CMB LR LR
comp=Z,18μm,19.0s,MS6.5
GUN Gumba 85.29 299 *eP* **P 09 39 39.4 +0.3**
comp=Z,1μm,1.8s,mb6.8
COR Corvallis 85.33 43 *eP* **P 09 39 39.1 +0.1**
COR *e* 09 42 52.4
COR pmax pmax
comp=Z,360nm,1.7s,mb6.2
COR MLR MLR
comp=Z,15μm,20.0s,MS6.4
COR Corvallis 85.33 43 *eP* **P 09 39 39.1 +0.1**
comp=Z,360nm,1.7s,mb6.2
COR *e*PP PP 09 42 52.4 -4.9
COR LR LR
comp=Z,15μm,20.0s,MS6.4
PALK Pallekele 85.37 278 P **P 09 39 41.6 +1.8**
comp=Z,722nm,0.9s,mb6.8,SNR=7.6
PALK Pallekele 85.37 278 *i P* **P 09 39 41.7 +1.9**
PALK Pallekele 85.37 278 *eP* **P 09 39 39.8 0.0**
comp=Z,154nm,1.0s,mb6.1
PALK Pallekele 85.37 278 P **P 09 39 41.1 +1.3**
comp=Z,3μmcomp=Z,81nm,1.1s,mb5.8
PALK Pallekele 85.37 278 P **P 09 39 42.6 +2.8**
comp=Z,3μmcomp=Z,81nm,1.1s,mb5.8
CIS Catalina Islan 85.46 55 ⇑P **P 09 39 39.2 -0.7**
baz=86
OSI Osito Adit 85.54 54 ⇓P **P 09 39 39.9 -0.4**
baz=86
OSI Osito Adit 85.54 54 *eP* **P 09 39 40.1 -0.2**
comp=Z,242nm,1.5s,mb6.2
PKI Pulchoki 85.60 299 *eP* **P 09 39 40.6 -0.1**
comp=Z,672nm,1.5s,mb6.7
ARVC Arvin 85.61 53 ⇓P **P 09 39 40.3 -0.2**
baz=86,SNR=18
VES Vestal, Richgr 85.61 52 ⇓P **P 09 39 39.6 -0.9**
baz=86,SNR=36
PKIN Phulchoki 85.61 299 *eP* **P 09 39 40.5 -0.3**
comp=Z,536nm,1.6s,mb6.5
RCTC Rector, Farmer 85.63 52 ⇓P **P 09 39 40.6 0.0**
baz=86,SNR=8.0
FMP Fort Macarthur 85.63 55 ⇓P **P 09 39 40.2 -0.5**
baz=86
F03A Seaside 85.64 42 ⇓P **P 09 39 41.3 +0.9**
baz=86,SNR=6.7
KKN Kakani 85.77 299 *eP* **P 09 39 41.5 0.0**
comp=Z,932nm,1.7s,mb6.7
EGAK Eagle 85.81 20 *eP* **P 09 39 41.1 +0.2**
comp=Z,604nm,1.1s,mb6.7
EGAK *e*PP PP 09 42 60.0 -0.7
EGAK LR LR
comp=Z,12μm,20.0s,MS6.3
PASC Pasadena Art C 85.84 54 *eP* **P 09 39 41.5 -0.3**
comp=Z,640nm,1.4s,mb6.7
E03A Lebam 85.85 41 ⇓P **P 09 39 41.2 -0.3**
baz=86,SNR=27
DMN Daman 85.87 299 *eP* **P 09 39 41.8 -0.3**
comp=Z,1μm,1.6s,mb6.9
OOW Octopus West 85.88 40 P **P 09 39 42.4 +0.8**
TIXI Tiksi 85.89 349 *d iP* **P 09 39 40.3 -0.8**
TIXI *e*S S 09 50 03.7 -8.5
TIXI *e* 09 55 46.3
TIXI pmax pmax
comp=Z,408nm,1.5s,mb6.4
TIXI pmax pmax
comp=N,106nm,1.5s
TIXI pmax pmax
comp=E,158nm,1.1s
TIXI pmax pmax
comp=Z,4μm,8.8s
TIXI smax
comp=N,8μm,9.5s
TIXI smax
comp=E,646nm,4.7s
TIXI MLR MLR
comp=E,5μm,17.0s,MS6.2
TIXI MLR MLR
comp=N,6μm,15.0s,MS6.2
TIXI MLR MLR
comp=Z,15μm,17.0s,MS6.5
TIXI Tiksi 85.89 349 *eP* **P 09 39 40.3 -0.9**
comp=Z,394nm,1.4s,mb6.5
TIXI *e*S S 09 50 10.4 -1.8
TIXI LR LR
comp=Z,12μm,19.0s,MS6.3
NLWA Neilton Lookou 85.96 40 ⇓P **P 09 39 42.2 +0.2**
baz=86,SNR=16
NLWA Neilton Lookou 85.96 40 *eP* **P 09 39 42.1 +0.1**
comp=Z,94nm,1.1s,mb5.9
NLWA LR LR
comp=Z,18μm,19.0s,MS6.5
MWC Mount Wilson 85.96 54 *eP* **P 09 39 42.2 -0.1**
MWC pmax pmax
comp=Z,396nm,1.4s,mb6.5
MWC Mount Wilson 85.96 54 *eP* **P 09 39 42.2 -0.2**
comp=Z,396nm,1.4s,mb6.5
DAWY Dawson 86.01 21 *eP* **P 09 39 41.9 0.0**
ISA Isabella 86.04 53 ⇓P **P 09 39 42.5 -0.2**
baz=86,SNR=48
G04A Mulino 86.10 43 ⇓P **P 09 39 42.5 -0.2**
baz=86,SNR=20
H04A Detroit Lake 86.12 43 ⇑P **P 09 39 42.2 -0.6**
baz=86,SNR=28
WCN Washoe City 86.13 49 ⇑P **P 09 39 43.3 +0.3**
baz=86
EDW2 Edwards Air Fo 86.20 54 ⇓P **P 09 39 43.5 0.0**
baz=86,SNR=57
BFSC Mount Baldy Ra 86.28 54 P **P 09 39 43.5 -0.4**
baz=86,SNR=43
BKCOR Black Crater 86.32 44 P **P 09 39 44.1 +0.2**
MLAC Mammoth Lakes 86.32 51 ⇓P **P 09 39 44.3 +0.2**
baz=86,SNR=31
109C Camp Elliot, M 86.36 56 ⇓P **P 09 39 44.1 -0.2**
baz=86,SNR=18
K05A Summer Lake 86.37 45 ⇓P **P 09 39 44.4 +0.3**
baz=86,SNR=63
GKN Gorkha 86.37 299 *eP* **P 09 39 43.9 -0.6**
comp=Z,619nm,1.6s,mb6.6
F04A Amboy 86.38 42 ⇑P **P 09 39 43.8 -0.3**
baz=86,SNR=32
MURC Murrieta 86.48 55 P **P 09 39 44.7 -0.2**
baz=87,SNR=21
MOD Modoc 86.52 46 *eP* **P 09 39 44.7 -0.2**
comp=Z,292nm,1.5s,mb6.3
MOD LR LR
comp=Z,9μm,19.0s,MS6.2
CWC Cottonwood Cre 86.56 52 ⇓P **P 09 39 45.0 -0.3**
baz=87,SNR=8.5
LRMC Laurel Mountai 86.60 53 ⇓P **P 09 39 45.6 +0.1**
baz=87,SNR=36
TIN Tinemaha 86.62 51 ⇑P **P 09 39 45.4 -0.2**
baz=87,SNR=8.7
BAR Barrett 86.66 56 *eP* **P 09 39 45.4 -0.5**
comp=Z,75nm,1.2s,mb5.8
BAR *e*PP PP 09 43 06.4 -1.9
PGC Sidney 86.67 39 *eP* **P 09 39 45.2 -0.3**
comp=Z,16nm,1.3s,mb5.1
PGC *e*PP PP 09 43 04.8 -3.2
GNW Green Mountain 86.68 40 *eP* **P 09 39 45.5 0.0**
comp=Z,96nm,1.3s,mb5.9
VFP Flag Point 86.81 43 P **P 09 39 46.3 0.0**
BBRC Big Bear Solar 86.88 54 ⇓P **P 09 39 46.7 -0.2**
baz=87,SNR=15
DAC Darwin (Calif) 86.89 52 PFAKE 09 40 00.0 +13

DAC LR LR
comp=Z,22µm,20.0s,MS6.6
MPMC Manual Prospec 86.92 53 ⇑P P 09 39 46.9 -0.1
baz=87,SNR=48
MONP Monument Peak 86.92 56 ⇓P P 09 39 47.2 +0.1
baz=87,SNR=74
NVAR Mina Array Bea 86.95 50 P P 09 39 47.2 +0.1
comp=Z,44nm,1.0s,mb5.7,baz=235,slow=7.2,SNR=153
NVAR PP PP 09 43 05.2 -5.4
comp=Z,1.1nm,0.9s,baz=212,slow=8.4,SNR=2.6
NVAR PKKPbc PKKPbc 09 57 42.6 +1.1
comp=Z,2.4nm,0.7s,baz=104,slow=3.3,SNR=14
NVAR PKPPKP 10 05 42.8
comp=Z,1.3nm,0.9s,baz=116,slow=2.6,SNR=5.0
RRX Edison Barstow 86.98 54 ⇓P P 09 39 47.4 +0.1
baz=87
DLBC Dease Lake 87.00 29 eP P 09 39 45.5 -1.3
LON Longmire 87.06 41 eP P 09 39 46.8 -0.6
LON pmax pmax
comp=Z,104nm,1.4s,mb5.9
LON Longmire 87.06 41 eP P 09 39 46.8 -0.6
comp=Z,104nm,1.4s,mb5.9
PFO Pinyon Flat Ob 87.08 55 P P 09 39 48.0 +0.2
comp=Z,330nm,1.0s,mb6.5,SNR=17
PFO Pinyon Flat Ob 87.08 55 ⇓P P 09 39 47.9 0.0
baz=87,SNR=33
PFO Pinyon Flat Ob 87.08 55 eP P 09 39 47.7 -0.1
PFO e 09 43 10.7
PFO pmax pmax
comp=Z,91nm,1.2s,mb5.9
PFO MLR MLR
comp=Z,13µm,20.0s,MS6.3
PFO Pinyon Flat Ob 87.08 55 eP P 09 39 47.7 -0.2
comp=Z,91nm,1.2s,mb5.9
PFO ePP PP 09 43 10.7 -1.0
PFO LR LR
comp=Z,13µm,20.0s,MS6.3
D05A Enumclaw 87.09 41 ⇑P P 09 39 47.5 -0.1
baz=87,SNR=74
DVTC Desert V Tower 87.12 56 ⇓P P 09 39 48.1 0.0
baz=87,SNR=13
VIPM Ingram Point 87.12 44 P P 09 39 47.9 +0.1
WPW White Pass 87.21 41 P P 09 39 48.1 0.0
GSC Goldstone 87.25 53 ⇑P P 09 39 48.4 -0.2
baz=87,SNR=28
GSC Goldstone 87.25 53 eP P 09 39 48.6 0.0
GSC pmax pmax
comp=Z,245nm,1.8s,mb6.1
GSC Goldstone 87.25 53 eP P 09 39 48.6 0.0
comp=Z,246nm,1.8s,mb6.1
GRAC Grapevine Rang 87.27 52 ⇓P P 09 39 48.6 -0.1
baz=87,SNR=62
RMW Rattlesnake Mo 87.30 41 P P 09 39 48.6 0.0
G06A Carlson Farm, 87.34 43 ⇓P P 09 39 48.3 -0.5
baz=87,SNR=20
SWSC Sam W. Stewart 87.44 56 ⇑P P 09 39 49.3 -0.3
baz=88,SNR=5.2
JCW Jim Creek 87.46 40 P P 09 39 49.3 0.0
HEC Hector,Ludlow 87.50 54 ⇑P P 09 39 49.4 -0.5
baz=88,SNR=56
FURC Furnace Creek, 87.52 52 ⇑P P 09 39 49.7 -0.2
baz=88,SNR=62
BELC Belle Mtn. Jos 87.55 55 ⇑P P 09 39 50.1 0.0
baz=88,SNR=125
A05A Maple Falls 87.63 39 ⇑P P 09 39 48.7 -1.4
baz=88,SNR=11
TPH Tonopah 87.67 51 PFAKE 09 40 00.0 +9.4
TPH LR LR
comp=Z,15µm,20.0s,MS6.4
I07A Izee 87.75 44 ⇑P P 09 39 50.8 0.0
baz=88
SHOC Shoshone 87.82 53 ⇑P P 09 39 50.7 -0.6
baz=88,SNR=32
B06A Marblemount 87.85 40 ⇑P P 09 39 50.5 -0.7
baz=88
WVOR Wild Horse Val 87.86 46 eP P 09 39 51.4 0.0
WVOR pmax pmax
comp=Z,161nm,1.4s,mb6.1
WVOR MLR MLR
comp=Z,12µm,20.0s,MS6.3
WVOR Wild Horse Val 87.86 46 eP P 09 39 51.4 -0.1
comp=Z,162nm,1.4s,mb6.1
WVOR LR LR
comp=Z,12µm,20.0s,MS6.3
BC3 Big Chuckawall 87.90 55 ⇑P P 09 39 52.2 +0.4
baz=88,SNR=69
U10A Ash Meadows, A 87.92 52 ⇑P P 09 39 51.5 -0.3
baz=88,SNR=23
TUQ Turquoise Moun 87.98 53 ⇓P P 09 39 52.0 -0.1
baz=88,SNR=26
F07A Phinny Hill Vi 88.02 43 ⇓P P 09 39 51.8 -0.2
baz=88,SNR=19
GMRC Granite Mounta 88.02 54 ⇓P P 09 39 52.2 -0.1
baz=88,SNR=108
S10A Tonopah Range, 88.11 51 ⇓P P 09 39 52.7 0.0
baz=88,SNR=88
J08A Circle Bar Ran 88.25 45 ⇓P P 09 39 53.4 +0.2
baz=88,SNR=86
GLA Glamis 88.25 56 ⇑P P 09 39 54.0 +0.5
baz=88,SNR=63
GLA Glamis 88.25 56 eP P 09 39 54.1 +0.6
GLA pmax pmax
comp=Z,383nm,1.4s,mb6.4
GLA Glamis 88.25 56 eP P 09 39 54.1 +0.6
comp=Z,383nm,1.4s,mb6.4
WMQ Urumqi 88.27 315 P P 09 39 52.8 -0.5
WMQ pP pP 09 40 03.4 +0.7
WMQ sP sP 09 40 07.3 +1.2
WMQ PP PP 09 43 21.9 +0.9
WMQ SKS 09 50 16.6
WMQ S S 09 50 33.0 -3.3
WMQ sS sS 09 50 50.6 -1.2
WMQ pmax pmax
comp=Z,170nm,1.4s,mb6.1
WMQ pmax pmax
comp=Z,8µm,6.4s
WMQ LR LR
comp=N,15µm,23.0s,MS6.6
WMQ LR LR
comp=E,19µm,22.3s,MS6.6
WMQ LR LR
comp=Z,25µm,23.0s,MS6.6
IRM Iron Mountain 88.27 55 P P 09 39 54.0 +0.5
baz=88,SNR=124
E07A Sunnyside 88.27 42 ⇑P P 09 39 53.0 -0.3
baz=88
ETW Entiat 88.29 41 eP P 09 39 53.2 -0.1
comp=Z,151nm,1.3s,mb6.1
BMN Battle Mountai 88.32 48 eP P 09 39 53.8 +0.2
BMN pmax pmax
comp=Z,201nm,1.7s,mb6.1
BMN MLR MLR
comp=Z,12µm,19.0s,MS6.3
BMN Battle Mountai 88.32 48 eP P 09 39 53.8 +0.1
comp=Z,201nm,1.7s,mb6.1
BMN LR LR
comp=Z,12µm,19.0s,MS6.3
112A Yuma 88.33 57 ⇓P P 09 39 54.6 +0.7
baz=88,SNR=26
RSW Rattlesnake Hi 88.39 42 eP P 09 39 54.1 +0.3
comp=Z,73nm,1.0s,mb5.9
R10A Warm Springs 88.43 51 ⇓P P 09 39 54.7 +0.5
baz=88
HAWA Hanford 88.43 42 eP P 09 39 53.9 -0.1
comp=Z,144nm,1.4s,mb6.0
HAWA LR LR
comp=Z,15µm,19.0s,MS6.4
V11A Goodsprings 88.47 53 ⇑P P 09 39 54.3 -0.1
baz=88,SNR=73
G08A Pilot Rock 88.48 43 P P 09 39 54.4 +0.1
baz=89,SNR=68
Q10A Clear Creek Ra 88.50 50 ⇓P P 09 39 54.6 +0.1
baz=89,SNR=27
LDFC Landfair 88.53 54 eP P 09 39 55.1 +0.4
comp=Z,488nm,1.4s,mb6.6
U11A Corn Creek 88.65 53 ⇑P P 09 39 55.3 0.0
baz=89,SNR=22
P10A Eureka 88.66 49 ⇓P P 09 39 55.1 -0.1
baz=89
S11A Rachel 88.68 51 P P 09 39 55.6 +0.2
baz=89,SNR=34
E08A Dider Farm, El 88.77 42 ⇓P P 09 39 55.8 +0.2
baz=89,SNR=14
W12A Cal Nev Ari 88.78 54 ⇑P P 09 39 56.2 +0.3
baz=89,SNR=21
O10A Cortez Mining, 88.81 49 ⇓P P 09 39 56.1 +0.1
baz=89,SNR=24

NEE2 Needles Airpor 88.84 54 ⇑P P 09 39 56.5 +0.3
baz=89
V12A Nelson 88.90 53 P P 09 39 56.8 +0.4
baz=89,SNR=76
N10A Dunphy 88.92 48 ⇓P P 09 39 57.0 +0.6
baz=89
T11A Corn Creek, Al 88.99 52 P P 09 39 57.3 +0.4
baz=89,SNR=109
R11A Troy Canyon, C 88.99 51 P P 09 39 56.9 0.0
baz=89,SNR=118
D08A Wollman Farm, 89.03 42 ⇓P P 09 39 56.7 -0.1
baz=89,SNR=26
113A Mohawk Valley, 89.05 56 P P 09 39 57.6 +0.4
baz=89,SNR=41
Q11A Duckwater 89.06 50 P P 09 39 57.5 +0.3
baz=89,SNR=154
LNOR Lincton Mounta 89.11 43 eP P 09 39 56.7 -0.5
LNOR pmax pmax
comp=Z,33nm,1.4s,mb5.5
LNOR Lincton Mounta 89.11 43 eP P 09 39 56.7 -0.5
comp=Z,33nm,1.4s,mb5.5
M10A I.L. Ranch, Tu 89.11 47 ⇓P P 09 39 57.6 +0.3
baz=89,SNR=53
PDMCI Parker Dam,Lak 89.11 55 P P 09 39 58.1 +0.6
baz=89,SNR=54
B08A Colville Reser 89.16 40 ⇑P P 09 39 56.7 -0.7
baz=89,SNR=45
P11A Circle Ranch, 89.17 50 ⇓P P 09 39 58.1 +0.4
baz=89,SNR=28
K10A MacKenzie Ranc 89.21 46 P P 09 39 58.0 +0.3
baz=89,SNR=96
Z13A Yuma Proving G 89.24 56 P P 09 39 58.7 +0.6
baz=89,SNR=88
TRD Trivandrum 89.25 279 ⇑ix x 09 40 09.0
Y13A Salome 89.25 55 ⇓P P 09 39 58.6 +0.5
baz=89,SNR=105
T12A Moapa 89.25 52 ⇑P P 09 39 58.3 +0.2
baz=89,SNR=29
OD2 Odessa Site #2 89.27 41 eP P 09 39 57.8 -0.1
comp=Z,172nm,1.4s,mb6.2
L10A Juniper Basin 89.31 47 P P 09 39 58.5 +0.3
baz=89,SNR=61
U12A Valley of Fire 89.32 53 P P 09 39 58.6 +0.2
baz=89,SNR=41
S12A Delamar Landin 89.36 52 P P 09 39 59.3 +0.7
baz=89,SNR=111
E09A Wood Farm, Sta 89.38 42 ⇑P P 09 39 58.3 -0.2
baz=90,SNR=14
O11A Cowboy Ranch, 89.39 49 ⇑P P 09 39 59.2 +0.6
baz=90
X13A Yucca 89.43 55 ⇓P P 09 39 58.6 -0.5
baz=90,SNR=71
J10A Berg Farm, Mel 89.46 46 ⇓P P 09 39 58.6 -0.3
baz=90,SNR=36
BMO Blue Mountains 89.48 44 eP P 09 39 58.6 -0.4
BMO pmax pmax
comp=Z,206nm,1.7s,mb6.2
BMO MLR MLR
comp=Z,14µm,19.0s,MS6.4
BMO Blue Mountains 89.48 44 eP P 09 39 58.6 -0.3
comp=Z,206nm,1.7s,mb6.2
BMO LR LR
comp=Z,14µm,19.0s,MS6.4
HYB Hyderabad 89.48 288 iP P 09 39 58.5 -1.1
HYB ePP PP 09 43 32.0 +0.7
HYB eSKS 09 50 28.0
HYB eScS ScS 09 50 56.0 +2.6
HYB eSS SS 09 56 40.0 -5.0
W13A Hualapai Mount 89.51 54 ⇑P P 09 39 59.4 0.0
baz=90,SNR=70
N11A Elko Archery C 89.51 48 ⇓P P 09 39 59.4 +0.2
baz=90,SNR=12
V13A Grand Canyon W 89.61 53 ⇓P P 09 39 59.5 -0.3
baz=90,SNR=125
I10A Payette 89.61 45 ⇑P P 09 39 59.6 0.0
baz=90,SNR=40
M11A Holland Ranch, 89.63 48 ⇑P P 09 40 00.2 +0.5
baz=90,SNR=86
214A Organ Pipe Nat 89.65 57 ⇓P P 09 40 00.4 +0.3
baz=90,SNR=44
C09A Chrisman Ranch 89.67 41 P P 09 39 59.7 -0.1
baz=90,SNR=12
R12A Pony Springs, 89.73 51 P P 09 40 00.8 +0.6
baz=90,SNR=162
Q12A Willow Creek R 89.73 50 ⇑P P 09 39 60.0 -0.3
baz=90,SNR=98
U13A Pakoon Wash 89.76 53 ⇓P P 09 39 59.7 -0.8
baz=90,SNR=81
114A Black Gap (USA 89.77 57 ⇑P P 09 39 59.9 -0.8
baz=90,SNR=36
P12A McGill 89.78 50 ⇓P P 09 40 00.6 +0.1
baz=90
K11A Parker Ranch, 89.81 46 P P 09 40 01.0 +0.4
baz=90,SNR=112
F10A Beach Ranch, E 89.84 43 P P 09 40 00.6 0.0
baz=90,SNR=89
L11A Cat Creek Ranc 89.85 47 ⇑P P 09 40 00.9 +0.1
baz=90,SNR=120
ELK Elko 89.86 48 eP P 09 40 01.2 +0.4
ELK pmax pmax
comp=Z,194nm,1.4s
ELK MLR MLR
comp=Z,9µm,19.0s
ELK Elko 89.86 48 eP P 09 40 01.2 +0.3
comp=Z,194nm,1.4s,mb6.2
ELK LR LR
comp=Z,9µm,19.0s,MS6.2
Z14A Wintersburg 89.86 56 ⇑P P 09 40 01.4 +0.3
baz=90,SNR=27
Y14A Wickenburg 89.94 56 P P 09 40 01.8 +0.4
baz=90,SNR=35
T13A Saint George 89.95 52 P P 09 40 01.9 +0.6
baz=90,SNR=176
N12A Clover Valley, 90.03 48 P P 09 40 02.4 +0.7
baz=90,SNR=134
N12A Clover Valley, 90.03 48 eP P 09 40 01.8 +0.1
comp=Z,332nm,1.3s,mb6.5
N12A ePP PP 09 43 34.0 -1.2
O12A Currie 90.10 49 P P 09 40 02.6 +0.6
baz=90,SNR=197
MFID Camas Ranch 90.12 46 ⇑P P 09 40 01.9 -0.1
baz=90,SNR=123
S13A Holt Ranch, En 90.12 52 ⇓P P 09 40 02.4 +0.2
baz=90
I11A Placerville 90.16 45 P P 09 40 02.4 +0.3
baz=90,SNR=185
X14A Yava 90.16 55 ⇓P P 09 40 03.1 +0.7
baz=90,SNR=114
W14A Seligman 90.17 54 ⇓P P 09 40 02.8 +0.4
baz=90,SNR=85
R13A O'Grain Ranch, 90.18 51 ⇑P P 09 40 02.5 +0.1
baz=90,SNR=84
V14A Boquillas Ranc 90.25 54 P P 09 40 03.3 +0.5
baz=90,SNR=102
M12A Wells 90.26 48 P P 09 40 03.5 +0.7
baz=90,SNR=82
115A Sonoran Desert 90.30 57 ⇓P P 09 40 03.8 +0.7
baz=90
INK Inuvik 90.31 19 PKKP PKKPbc 09 57 31.1 -3.3
comp=Z,10nm,0.9s,baz=40,slow=4.3,SNR=9.8
INK LR LR 10 19 49.0
comp=Z,8µm,19.1s,MS6.2,baz=237,slow=35
INK Inuvik 90.31 19 eP P 09 40 01.6 -0.7
INK pmax pmax
comp=Z,118nm,1.1s
INK Inuvik 90.31 19 eP P 09 40 01.6 -0.7
comp=Z,118nm,1.1s,mb6.1
Q13A Wheeler Ranch, 90.33 50 P P 09 40 03.5 +0.5
baz=90,SNR=125
L12A House Creek Ra 90.37 47 P P 09 40 04.0 +0.7
baz=90,SNR=126
U14A Mt Trumbull 90.38 53 P P 09 40 04.1 +0.7
baz=90,SNR=145
P13A Bates Ranch, G 90.45 50 ⇑P P 09 40 03.2 -0.4
baz=90,SNR=184
Z15A Gila River Ind 90.49 56 ⇑P P 09 40 04.2 +0.2
baz=91,SNR=23
Y15A Casa Rosa Ranc 90.49 56 ⇓P P 09 40 02.5 -1.4
baz=91,SNR=88
ARUT Antelope Range 90.49 52 eP P 09 40 04.4 +0.5
ARUT pmax pmax
comp=Z,110nm,1.1s,mb6.1
ARUT Antelope Range 90.49 52 eP P 09 40 04.4 +0.5
comp=Z,110nm,1.1s,mb6.1
CCUT Cedar City 90.50 52 eP P 09 40 04.6 +0.7
comp=Z,205nm,1.4s,mb6.3
CCUT ePP PP 09 43 36.6 -2.4
PTH Pithoragarh 90.50 300 ex PcP 09 40 06.2 +1.0

NEW Newport 90.54 41 eP P 09 40 03.4 -0.4
NEW pmax pmax
comp=Z,68nm,1.3s
NEW MLR MLR
comp=Z,14µm,19.0s
NEW Newport 90.54 41 eP P 09 40 03.4 -0.4
comp=Z,68nm,1.3s,mb5.8
NEW LR LR
comp=Z,14µm,19.0s,MS6.4
K12A Draper Farm, C 90.58 47 P P 09 40 04.6 +0.5
baz=91,SNR=132
J12A Stokes Ranch, 90.59 46 P P 09 40 04.7 +0.5
baz=91,SNR=268
T14A Hurricane 90.60 52 P P 09 40 04.7 +0.3
baz=91,SNR=148
DGAR Diego Garcia 90.62 262 PFAKE 09 40 20.0 +15
DGAR LR LR
comp=Z,9µm,22.0s,MS6.2
O13A Hicks Ranch, I 90.64 49 ⇑P P 09 40 04.9 +0.4
baz=91,SNR=48
N13A Wendover, West 90.65 49 P P 09 40 05.0 +0.4
baz=91,SNR=50
N13A Wendover, West 90.65 49 eP P 09 40 04.7 +0.2
comp=Z,172nm,1.1s,mb6.3
X15A Humboldt 90.69 55 ⇑P P 09 40 02.9 -2.0
baz=91,SNR=82
S14A Cedar City 90.70 52 ⇓P P 09 40 04.8 0.0
baz=91,SNR=63
116A Eloy 90.70 57 ⇑P P 09 40 05.0 0.0
baz=91,SNR=36
I12A Atlanta 90.70 46 P P 09 40 05.1 +0.4
baz=91,SNR=158
216A Three Points, 90.78 58 ⇑P P 09 40 06.1 +0.7
baz=91,SNR=55
M13A Montello 90.80 48 ⇑P P 09 40 05.6 +0.4
baz=91,SNR=63
M13A Montello 90.80 48 eP P 09 40 05.5 +0.2
comp=Z,241nm,1.3s,mb6.4
W15A Williams 90.82 54 ⇓P P 09 40 06.5 +1.1
baz=91,SNR=35
Q14A Sevier Lake (B 90.90 51 P P 09 40 06.5 +0.7
baz=91,SNR=208
G12A Big Creek, Yel 90.91 44 ⇑P P 09 40 05.7 +0.1
baz=91
R14A James Farms, M 90.93 51 ⇓P P 09 40 06.3 +0.3
baz=91,SNR=26
C11A Tepee Creek (N 90.99 41 ⇑P P 09 40 05.9 -0.1
baz=91
V15A Kaibab Nationa 91.03 54 ⇓P P 09 40 06.7 +0.3
baz=91,SNR=132
E12A Beaver Dam Sad 91.07 43 ⇓P P 09 40 06.2 -0.1
baz=91
U15A North Rim 91.08 53 ⇑P P 09 40 07.0 +0.4
baz=91,SNR=155
H12A Diamond D Ranc 91.09 45 P P 09 40 06.4 -0.1
baz=91,SNR=107
Z16A Peralta Trail, 91.09 56 ⇑P P 09 40 07.1 +0.3
baz=91,SNR=13
F12A Elk City 91.11 44 P P 09 40 06.2 -0.3
baz=91,SNR=146
L13A Double Diamond 91.13 47 ⇑P P 09 40 07.2 +0.5
baz=91,SNR=45
T15A Red Dirt Ranch 91.14 53 ⇓P P 09 40 06.8 -0.1
baz=91,SNR=55
HLID Hailey 91.15 46 P P 09 40 07.3 +0.5
baz=91,SNR=119
HLID Hailey 91.15 46 eP P 09 40 07.1 +0.3
comp=Z,178nm,1.4s,mb6.2
HLID LR LR
comp=Z,10µm,19.0s,MS6.3
K13A Stover Farm, H 91.17 47 P P 09 40 07.6 +0.7
baz=91,SNR=65
Y16A Circle Bar Ran 91.17 56 ⇓P P 09 40 07.7 +0.5
baz=91,SNR=54
P14A Drum Mountains 91.19 50 ⇑P P 09 40 07.6 +0.5
baz=91,SNR=84
217A Green Valley 91.27 58 ⇓P P 09 40 08.3 +0.7
baz=91,SNR=61
J13A Cove Ranch, Pi 91.28 46 P P 09 40 08.1 +0.7
baz=91,SNR=128
S15A Panguitch 91.30 52 P P 09 40 09.2 +1.6
baz=91,SNR=28
X16A Lo Mia Camp, P 91.31 55 P P 09 40 08.8 +1.0
baz=91,SNR=52
D12A Red Ives Fores 91.38 42 ⇑P P 09 40 07.8 0.0
baz=92
W16A Flagstaff 91.39 55 ⇑P P 09 40 08.6 +0.5
baz=92,SNR=16
N14A Grayback Hills 91.39 49 P P 09 40 08.5 +0.5
baz=92,SNR=38
TUC Tucson 91.41 58 eP P 09 40 08.1 -0.2
TUC pmax pmax
comp=Z,56nm,1.2s,mb5.8
TUC MLR MLR
comp=Z,15µm,19.0s,MS6.5
TUC Tucson 91.41 58 eP P 09 40 08.1 -0.2
comp=Z,56nm,1.2s,mb5.8
TUC LR LR
comp=Z,15µm,19.0s,MS6.5
SYO Syowa Base 91.41 197 ⇑iP P 09 40 06.0 -1.6
SYO Syowa Base 91.41 197 ⇓ipP P 09 40 09.6 +2.0
M14A Sheep Mountain 91.43 48 P P 09 40 08.7 +0.6
baz=92,SNR=136
I13A Wildhorse Cree 91.45 46 P P 09 40 08.7 +0.5
baz=92,SNR=254
C12B Naegeli Ranch, 91.46 42 ⇑P P 09 40 07.9 -0.2
baz=92
R15A Junction 91.48 51 ⇑P P 09 40 09.3 +0.8
baz=92,SNR=60
117A Oracle 91.50 57 ⇑P P 09 40 07.4 -1.3
baz=92,SNR=41
H13A Challis 91.51 45 ⇓P P 09 40 08.7 +0.3
baz=92,SNR=185
DUG Dugway 91.52 49 P P 09 40 08.8 +0.2
baz=92,SNR=53
DUG Dugway 91.52 49 eP P 09 40 08.6 0.0
DUG pmax pmax
comp=Z,139nm,1.4s,mb6.1
DUG MLR MLR
comp=Z,11µm,19.0s,MS6.3
DUG Dugway 91.52 49 eP P 09 40 08.6 -0.1
comp=Z,140nm,1.4s,mb6.1
DUG LR LR
comp=Z,11µm,19.0s,MS6.3
BGU Big Grassy Mou 91.53 49 eP P 09 40 08.3 -0.3
comp=Z,156nm,1.4s,mb6.2
AKL Akola 91.56 291 ⇑iP P 09 40 08.2 -1.0
AKL ex x 09 40 12.5
comp=Z,114nm,1.2s
AKL i x x 09 50 35.2
Q15A Fillmore 91.58 51 P P 09 40 09.4 +0.5
baz=92,SNR=22
B12A Libby 91.58 41 ⇑P P 09 40 08.8 +0.2
baz=92,SNR=9.3
MVU Marysvale 91.60 51 PFAKE 09 40 20.0 +11
MVU LR LR
comp=Z,21µm,19.0s,MS6.6
WUAZ Wupatki 91.60 54 P P 09 40 09.8 +0.7
baz=92,SNR=60
WUAZ Wupatki 91.60 54 eP P 09 40 09.4 +0.3
comp=Z,135nm,1.1s,mb6.2
WUAZ LR LR
comp=Z,7µm,20.0s,MS6.1
MSU Marysvale 91.63 51 eP P 09 40 09.8 +0.7
MSU pmax pmax
comp=Z,252nm,1.4s,mb6.4
MSU Marysvale 91.63 51 eP P 09 40 09.8 +0.7
comp=Z,252nm,1.4s,mb6.4
L14A Malta 91.63 48 P P 09 40 09.8 +0.7
baz=92,SNR=117
Y17A Roosevelt 91.65 56 P P 09 40 09.9 +0.6
baz=92,SNR=25
G13A Cobalt 91.65 44 ⇓P P 09 40 08.3 -0.8
baz=92,SNR=135
A12A Yaak River Ran 91.66 40 ⇓P P 09 40 08.5 -0.5
baz=92,SNR=13
BHPL Bhopal 91.67 293 ePKP P 09 40 08.8 -0.9
J14A Carey 91.73 46 ⇓P P 09 40 10.1 +0.6
baz=92,SNR=43
F13A Darby 91.75 44 P P 09 40 09.5 0.0
baz=92,SNR=268
P15A Leamington 91.78 50 ⇑P P 09 40 09.8 0.0
baz=92,SNR=16
K14A Jones Ranch, D 91.79 47 P P 09 40 10.5 +0.7
baz=92,SNR=112
O15A The Old Anders 91.80 49 ⇑P P 09 40 10.5 +0.7
baz=92,SNR=12
X17A Forest Lakes 91.81 56 P P 09 40 11.1 +1.0

baz=92,SNR=55
T16A Glen Canyon Da 91.81 53 ⇑P P 09 40 10.4 +0.3
baz=92,SNR=11
318A Bisbee 91.89 58 ⇓P P 09 40 11.1 +0.6
baz=92,SNR=51
N15A Stansbury Isla 91.90 49 ⇑P P 09 40 10.1 -0.2
baz=92,SNR=9.0
S16A Weppner Ranch, 91.90 52 ⇑P P 09 40 10.6 +0.2
baz=92,SNR=87
HVU Hansel Valley 91.91 48 *eP* **P 09 40 10.8 +0.4**
HVU pmax pmax
comp=Z,276nm,1.4s,mb6.4
HVU Hansel Valley 91.91 48 *eP* **P 09 40 10.8 +0.5**
comp=Z,276nm,1.4s,mb6.4
I14A Mackay 91.92 46 ⇑P P 09 40 10.9 +0.6
baz=92
U16A Tuba City 91.93 54 P **P 09 40 11.5 +0.9**
baz=92,SNR=111
BSMT Bassoo Peak 91.95 42 *eP* **P 09 40 10.2 -0.2**
comp=Z,120nm,1.4s,mb6.0
218A Dragoon 91.95 58 ⇑P P 09 40 11.6 +0.8
baz=92,SNR=11
D13A Huson 91.98 42 ⇓P P 09 40 09.8 -0.8
baz=92,SNR=28
E13A Victor 92.00 43 ⇑P P 09 40 09.5 -1.2
baz=92,SNR=74
NLU North Lily Min 92.02 50 *eP* **P 09 40 11.0 +0.1**
comp=Z,83nm,1.1s,mb6.0
W17A Winslow 92.04 55 ⇓P P 09 40 11.8 +0.7
baz=92
SPUT South Promonto 92.04 48 *eP* **P 09 40 11.0 0.0**
comp=Z,162nm,1.5s,mb6.1
C13A Hot Springs 92.05 42 ⇑P P 09 40 10.3 -0.6
baz=92
M15A Larsen Ranch, 92.08 48 ⇑P P 09 40 11.3 +0.2
baz=92,SNR=16
V17A Tonalea, Kykot 92.09 54 ⇑P P 09 40 11.7 +0.4
baz=92,SNR=94
R16A Teasdale 92.11 52 ⇓P P 09 40 12.5 +1.1
baz=92,SNR=92
H14A Leadore 92.13 45 P **P 09 40 11.9 +0.6**
baz=92,SNR=118
NOQ North Oquirrh 92.14 49 *eP* **P 09 40 11.6 +0.2**
comp=Z,166nm,1.4s,mb6.2
118A Homack Ranch, 92.15 57 ⇓P P 09 40 12.3 +0.6
baz=92
Z18A Geronimo 92.18 57 ⇑P P 09 40 12.5 +0.7
baz=92,SNR=9.0
L15A Malad City 92.24 48 ⇑P P 09 40 11.7 -0.2
baz=92,SNR=75
JTMT Jette 92.25 42 *eP* **P 09 40 11.5 -0.3**
comp=Z,48nm,1.2s,mb5.7
P16A Fountain Green 92.26 50 ⇓P P 09 40 12.8 +0.7
baz=92,SNR=45
MSO Missoula 92.26 43 *eP* **P 09 40 10.9 -0.9**
comp=Z,44nm,1.4s,mb5.6
MSO LR LR
comp=Z,9μm,19.0s,MS6.2
B13A Whitefish 92.28 41 P **P 09 40 11.8 -0.1**
baz=92,SNR=32
K15A Arbon 92.29 47 ⇑P P 09 40 12.5 +0.5
baz=92,SNR=52
Y18A Canyon Day Jun 92.32 56 ⇑P P 09 40 13.2 +0.7
baz=92,SNR=39
MPU Maple Canyon 92.37 50 *eP* **P 09 40 12.8 +0.2**
comp=Z,179nm,1.5s,mb6.2
T17A Navajo Res., N 92.37 53 ⇑P P 09 40 13.1 +0.5
baz=92,SNR=76
SWMT Swartz Lake 92.38 42 *eP* **P 09 40 11.7 -0.7**
comp=Z,40nm,1.3s,mb5.6
U17A Shonto 92.39 53 ⇓P P 09 40 13.5 +0.7
baz=92,SNR=12
F14A Wisdom 92.41 44 ⇑P P 09 40 11.8 -0.8
baz=92,SNR=60
CTU Camp Tracy 92.42 49 *eP* **P 09 40 12.9 +0.1**
comp=Z,90nm,1.2s,mb6.0
A13A Flathead Natio 92.45 41 ⇓P P 09 40 13.0 +0.3
baz=92
YBMT Yellow Bay 92.46 42 *eP* **P 09 40 12.8 0.0**
comp=Z,38nm,1.4s,mb5.5
E14A Clinton 92.46 43 ⇓P P 09 40 11.8 -1.0
baz=92,SNR=53
319A Douglas 92.47 59 ⇓P P 09 40 13.8 +0.6
baz=92,SNR=26
Q16A Castle Valley 92.48 51 ⇓P P 09 40 11.8 -1.2
baz=93,SNR=53
DDI Dehra Dun 92.50 300 *e*PKP **P 09 40 12.8 -0.6**
DDI *ex* x 09 43 33.5
S17A Black Ridge (B 92.50 52 ⇑P P 09 40 12.7 -0.5
baz=93,SNR=58
O16A Springville 92.50 50 ⇑P P 09 40 12.9 -0.3
baz=93,SNR=46
J15A Blackfoot 92.52 46 ⇓P P 09 40 13.6 +0.5
baz=93,SNR=67
TMUT Trail Mountain 92.53 51 *eP* **P 09 40 13.8 +0.5**
comp=Z,73nm,1.2s,mb6.0
TMUT *e*PP PP 09 43 52.8 -2.3
MCMT McKenzie Canyo 92.54 45 *eP* **P 09 40 13.4 +0.2**
comp=Z,21nm,0.9s,mb5.6
X18A Snowflake 92.54 55 ⇑P P 09 40 14.0 +0.5
baz=93,SNR=22
219A White Tail Can 92.61 58 ⇓P P 09 40 13.6 -0.3
baz=93,SNR=55
C14A Swan Lake 92.61 42 ⇑P P 09 40 12.6 -0.8
baz=93
D14A Greenough 92.61 43 ⇓P P 09 40 12.1 -1.3
baz=93,SNR=62
I15A Monteview 92.61 46 ⇑P P 09 40 13.7 +0.2
baz=93,SNR=71
JLU Jordanelle 92.63 49 *eP* **P 09 40 14.0 +0.3**
comp=Z,157nm,1.5s,mb6.2
H15A Lima 92.64 45 P **P 09 40 14.1 +0.5**
baz=93,SNR=225
SLMT Seeley Lake 92.65 42 *eP* **P 09 40 12.3 -1.3**
comp=Z,60nm,1.3s,mb5.9
N16A Rees Ranch, Co 92.70 49 ⇓P P 09 40 14.6 +0.5
baz=93,SNR=48
119A Ashpeak Ranch, 92.72 57 ⇑P P 09 40 14.9 +0.6
baz=93,SNR=17
MK31 Makanchi Array 92.72 317 *i* P **P 09 40 13.6 -0.4**
MK31 pmax pmax
comp=Z,69nm,0.7s,mb6.2
MK31 Makanchi Array 92.72 317 *eP* **P 09 40 13.6 -0.4**
MKAR Makanchi Array 92.72 317 P **P 09 40 13.7 -0.3**
comp=Z,42nm,0.6s,mb6.0,baz=95,slow=5.8,SNR=195
MKAR PP PP 09 43 56.3 0.0
comp=Z,5.9nm,0.9s,baz=109,slow=8.3,SNR=3.3
MKAR PKKP PKKPbc 09 57 25.1 -2.3
comp=Z,10nm,0.8s,baz=292,slow=2.2,SNR=34
MKAR PKPPKP 10 05 36.0
comp=Z,1.0nm,0.7s,baz=289,slow=3.7,SNR=7.3
MKAR LR LR 10 24 32.4
comp=Z,9μm,19.0s,MS6.2,baz=98,slow=37
DAU Daniels Canyon 92.73 50 *eP* **P 09 40 14.4 +0.2**
DAU pmax pmax
comp=Z,235nm,1.9s,mb6.3
DAU Daniels Canyon 92.73 50 *eP* **P 09 40 14.4 +0.2**
comp=Z,235nm,1.9s,mb6.3
R17A Hanksville Air 92.73 52 P **P 09 40 14.7 +0.4**
baz=93,SNR=115
CHMT Chamberlain Mo 92.74 43 *eP* **P 09 40 13.5 -0.5**
comp=Z,108nm,1.5s,mb6.1
HWUT Hardware Ranch 92.75 48 *eP* **P 09 40 14.2 -0.1**
comp=Z,53nm,1.1s,mb5.9
HWUT LR LR
comp=Z,6μm,20.0s,MS6.0
V18A Ganado 92.79 54 ⇑P P 09 40 15.1 +0.5
baz=93,SNR=21
WALA Waterton Lakes 92.80 41 *eP* **P 09 40 14.1 -0.2**
comp=Z,4.3nm,1.3s,mb4.7
W18A Petrified Fore 92.83 55 ⇑P P 09 40 15.3 +0.5
baz=93
DLMT Dillon 92.84 44 *eP* **P 09 40 14.6 +0.1**
comp=Z,311nm,1.4s,mb6.5
DLMT *e*PP PP 09 43 55.8 -1.4
Z19A T-Link Ranch, 92.86 57 ⇓P P 09 40 15.5 +0.5
baz=93
G15A Dillon 92.87 45 ⇑P P 09 40 15.0 +0.3
baz=93,SNR=118
ZAA0 Zalesovo Array 92.88 324 *eP* **P 09 40 12.7 -1.8**
ZALV Zalesovo Beam 92.88 324 P **P 09 40 13.2 -1.4**
comp=Z,137nm,1.2s,mb6.3,baz=107,slow=5.1,SNR=81
ZALV PP PP 09 43 57.9 +0.6
comp=Z,2.1nm,0.6s,baz=126,slow=7.3,SNR=2.7
ZALV PKKP PKKPbc 09 57 26.7 -0.6
comp=Z,1.5nm,0.6s,baz=301,slow=2.0,SNR=4.3
ZALV PKPPKP 10 05 33.9
comp=Z,0.9nm,0.4s,baz=303,slow=3.0,SNR=5.3
ZALV LR LR 10 20 52.5
comp=Z,10μm,20.5s,MS6.3,baz=109,slow=35
ZALV Zalesovo Beam 92.88 324 P **P 09 40 13.2 -1.3**
ZALV PP PP 09 43 57.9 +0.6
ZALV PKKP PKKPbc 09 57 26.7 -0.6
ZALV P'P' 10 05 33.9
ZALV LR LR 10 20 52.5
NDI New Delhi 92.90 299 *e*PKP **P 09 40 11.0 -4.3**
NDI *e*S SKSac 09 50 44.0 -3.5
P17A Butcher Ranch, 92.92 51 ⇓P P 09 40 15.1 0.0
baz=93,SNR=31
L16A Fish Haven 92.94 48 ⇓P P 09 40 14.5 -0.6
baz=93,SNR=34
U18A Rough Rock, Ch 92.98 54 ⇓P P 09 40 14.9 -0.6
baz=93,SNR=23
Y19A Nutrioso 93.00 56 ⇑P P 09 40 16.3 +0.7
baz=93,SNR=39
K16A Soda Springs 93.00 47 ⇓P P 09 40 16.1 +0.8
baz=93,SNR=13
F15A Butte 93.01 44 ⇑P P 09 40 14.8 -0.5
baz=93,SNR=85
SRU San Rafael 93.02 51 ⇑P P 09 40 15.2 -0.4
baz=93,SNR=34
SRU San Rafael 93.02 51 *eP* **P 09 40 15.3 -0.2**
SRU *e* 09 43 54.9
SRU pmax pmax
comp=Z,32nm,1.1s,mb5.7
SRU San Rafael 93.02 51 *eP* **P 09 40 15.3 -0.2**
comp=Z,32nm,1.1s,mb5.7
SRU *e*PP PP 09 43 54.9 -3.9
LRM Limekiln Ridge 93.04 44 *eP* **P 09 40 15.6 +0.1**
comp=Z,1μm,1.5s,mb7.0
E15A Deer Lodge 93.04 43 ⇓P P 09 40 15.0 -0.4
baz=93,SNR=110
B14A Marquette Ranc 93.06 41 ⇑P P 09 40 15.0 -0.5
baz=93,SNR=61
X19A St. Johns 93.06 56 ⇑P P 09 40 16.3 +0.4
baz=93
J16A Bone 93.07 47 ⇓P P 09 40 16.4 +0.7
baz=93,SNR=35
O17A Robinson Place 93.08 50 ⇑P P 09 40 16.4 +0.6
baz=93,SNR=60
320A Kipp Ranch, An 93.09 59 ⇑P P 09 40 16.8 +0.7
baz=93
A14A Double T Ranch 93.10 41 ⇓P P 09 40 15.6 0.0
baz=93,SNR=52
W19A Sanders 93.11 55 ⇑P P 09 40 16.5 +0.4
baz=93
T18A Mexican Hat 93.12 53 ⇑P P 09 40 16.1 0.0
baz=93,SNR=33
S18A Hurst Farm, Bl 93.14 52 ⇓P P 09 40 16.3 +0.2
baz=93,SNR=27
N17A Moffit Pass 93.16 49 ⇓P P 09 40 16.2 0.0
baz=93,SNR=7.9
220A Playas Peak, P 93.20 58 ⇑P P 09 40 17.0 +0.4
baz=93
120A U Bar Ranch, L 93.23 58 ⇓P P 09 40 17.1 +0.4
baz=93
D15A Lincoln 93.26 43 ⇑P P 09 40 16.0 -0.5
baz=93,SNR=50
I16A Newdale 93.29 46 P **P 09 40 17.6 +1.0**
baz=93,SNR=63
RRI2 Red Ridge 93.30 47 *eP* **P 09 40 17.1 +0.4**
comp=Z,92nm,1.4s,mb6.0
RRI2 *e*PP PP 09 44 01.2 +0.2
Q18A Rafter H Ranch 93.31 51 ⇑P P 09 40 16.4 -0.5
baz=93,SNR=20
P18A Preston Nutter 93.33 50 ⇑P P 09 40 17.4 +0.4
baz=93,SNR=37
AHID Auburn Hatcher 93.33 47 PFAKE 09 40 30.0 +13
AHID LR LR
comp=Z,11μm,19.0s,MS6.3
G16A Moss Hill, Enn 93.35 45 ⇑P P 09 40 17.1 +0.1
baz=93,SNR=78
R18A Canyonlands Na 93.35 52 P **P 09 40 17.5 +0.4**
baz=93,SNR=47
C15A Salmond Ranch, 93.36 42 P **P 09 40 16.4 -0.6**
baz=93,SNR=122
L17A Cokeville 93.36 48 ⇑P P 09 40 17.0 -0.1
baz=93
Z20A Nine Sixteen R 93.38 57 ⇑P P 09 40 17.4 0.0
baz=93,SNR=12
M17A Scullys Gap (B 93.39 49 ⇑P P 09 40 16.5 -0.7
baz=94,SNR=25
DCID1 Drake Creek 93.45 46 *eP* **P 09 40 17.7 +0.3**
comp=Z,59nm,1.0s,mb6.0
DCID1 *e*PP PP 09 43 59.5 -2.5
K17A Gardner Place, 93.46 47 ⇑P P 09 40 17.8 +0.3
baz=94,SNR=8.4
U19A Dine' College, 93.48 54 ⇑P P 09 40 18.3 +0.5
baz=94,SNR=44
V19A Window Rock 93.50 54 ⇑P P 09 40 18.6 +0.7
baz=94
B15A Bradely Ranch, 93.51 42 P **P 09 40 16.6 -0.9**
baz=94,SNR=52
A15A Johnson Ranch, 93.54 41 P **P 09 40 17.4 -0.3**
baz=94,SNR=54
KAD Karad 93.56 287 *e*PKP **P 09 40 18.2 -0.3**
KAD AMb AMB 09 40 22.1
comp=Z,96nm,1.1s,mb6.2
BOZ Bozeman (W) 93.56 44 P **P 09 40 18.2 +0.3**
baz=94,SNR=120
BOZ Bozeman (W) 93.56 44 *eP* **P 09 40 17.8 -0.1**
BOZ *e* 09 43 59.8
BOZ pmax pmax
comp=Z,145nm,1.4s,mb6.2
BOZ MLR MLR
comp=Z,15μm,19.0s,MS6.5
BOZ Bozeman (W) 93.56 44 *eP* **P 09 40 17.8 -0.1**
comp=Z,145nm,1.4s,mb6.2
BOZ *e*PP PP 09 43 59.8 -3.2
BOZ LR LR
comp=Z,15μm,19.0s,MS6.5
TPAW Teton Pass 93.59 47 *eP* **P 09 40 18.2 +0.1**
comp=Z,116nm,1.5s,mb6.1
TPAW *e*PP PP 09 44 01.3 -1.9
F16A Kennard Place, 93.59 44 P **P 09 40 18.5 +0.5**
baz=94,SNR=80
H16A Russell Place, 93.63 45 P **P 09 40 19.2 +1.0**
baz=94,SNR=89
REDW Red Top Meadow 93.64 47 *eP* **P 09 40 18.2 0.0**
comp=Z,109nm,1.4s,mb6.1
REDW *e*PP PP 09 44 01.2 -2.4
O18A Roosevelt 93.64 50 P **P 09 40 19.0 +0.6**
baz=94,SNR=35
SDNR Sundarnagar 93.64 301 *e*PKP **P 09 40 17.5 -1.1**
HRY Holter Researc 93.65 43 *eP* **P 09 40 18.4 +0.2**
comp=Z,149nm,1.6s,mb6.2
IMW Indian Meadow 93.68 46 *eP* **P 09 40 18.7 +0.2**
comp=Z,84nm,1.4s,mb6.0
IMW *e*PP PP 09 44 02.7 -1.2
Y20A Horse Springs, 93.70 56 P **P 09 40 19.4 +0.5**
baz=94,SNR=33
E16A East Helena 93.71 43 ⇑P P 09 40 18.7 +0.1
baz=94,SNR=25
X20A Quemado 93.72 56 ⇓P P 09 40 19.5 +0.6
baz=94
SNOW Snow King Moun 93.72 47 *eP* **P 09 40 18.9 +0.2**
comp=Z,54nm,1.2s,mb5.9
T19A Beclabito 93.73 53 ⇓P P 09 40 19.1 +0.2
baz=94
J17A Brown Place, J 93.73 47 ⇑P P 09 40 19.0 +0.2
baz=94,SNR=34
S19A Harvey Farm, M 93.82 52 P **P 09 40 19.5 +0.2**
baz=94,SNR=26
M18A Lyman 93.82 49 ⇓P P 09 40 19.4 +0.2
baz=94,SNR=36
YMR Madison River 93.82 45 *eP* **P 09 40 19.4 +0.3**
comp=Z,192nm,1.4s,mb6.3
YMR *e*PP PP 09 44 06.5 +1.5
R19A Curley Farm, L 93.82 52 ⇑P P 09 40 19.4 +0.2
baz=94,SNR=39
W20A Ramah 93.83 55 ⇓P P 09 40 19.9 +0.5
baz=94,SNR=16
221A Mesquite Ranch 93.85 58 ⇓P P 09 40 20.2 +0.7
baz=94,SNR=16
LOHW Long Hollow 93.86 46 *eP* **P 09 40 19.1 -0.3**
comp=Z,49nm,1.3s,mb5.8
YFT Old Faithful 93.87 46 *eP* **P 09 40 21.1 +1.8**
comp=Z,68nm,1.2s,mb6.0
YFT *e*PP PP 09 44 04.3 -1.0
D16A Dana Ranch, Ca 93.90 43 P **P 09 40 19.7 +0.3**
baz=94,SNR=35
C16A Fuhringer Ranc 93.93 42 ⇑P P 09 40 19.2 -0.4
baz=94
121A Cookes Peak, D 93.94 58 ⇓P P 09 40 20.7 +0.7
baz=94,SNR=22
L18A Fontenelle, Gr 93.94 48 ⇑P P 09 40 19.4 -0.3
baz=94,SNR=23
I17A Pilgrim Ck. 93.94 46 ⇓P P 09 40 20.6 +0.9
baz=94
Q19A Hogan Spring (93.95 51 ⇑P P 09 40 19.6 -0.2
baz=94
V20A Brimhall 93.98 54 ⇓P P 09 40 20.2 +0.2
baz=94,SNR=8.2
NVS Novosibirsk 93.99 325 *i*P **P 09 40 18.4 -1.2**
NVS *i* S SKSac 09 50 53.2 +0.9
NVS pmax pmax
comp=N,50nm,1.6s
NVS pmax pmax
comp=E,133nm,1.6s
NVS pmax pmax
comp=Z,254nm,1.6s,mb6.4
NVS smax
comp=N,160nm,3.6s
NVS smax
comp=E,670nm,3.2s
N18A Larsen Ranch, 94.02 49 P **P 09 40 20.2 +0.1**
baz=94,SNR=29
H17A Grant Village 94.04 46 ⇑P P 09 40 21.5 +1.4
baz=94,SNR=21
U20A Newcomb 94.04 54 ⇑P P 09 40 20.4 0.0
baz=94
K18A Toltan Ranch, 94.07 48 P **P 09 40 20.7 +0.4**
baz=94,SNR=22
B16A M & M Farms, S 94.08 42 ⇑P P 09 40 19.6 -0.6
baz=94,SNR=14
POO Poona 94.09 288 *e*PKP **P 09 40 19.3 -1.7**
POO AMb AMB 09 40 24.4
comp=Z,92nm,1.3s,mb6.0
EDM Edmonton 94.10 37 *eP* **P 09 40 19.1 -1.1**
G17A Pierce Place, 94.11 45 ⇓P P 09 40 21.5 +1.1
baz=94,SNR=18
PV04 Paradox Valley 94.12 52 *eP* **P 09 40 20.5 -0.1**
PV04 *e*PP PP 09 44 12.0 +4.5
Z21A St. Cloud Mine 94.17 57 ⇑P P 09 40 21.6 +0.6
baz=94,SNR=49
LKWY Lake 94.19 46 *eP* **P 09 40 22.3 +1.5**
LKWY *e* 09 44 11.4
LKWY pmax pmax
comp=Z,52nm,1.3s,mb5.8
LKWY MLR MLR
comp=Z,29μm,19.0s,MS6.8
LKWY Lake 94.19 46 *eP* **P 09 40 22.3 +1.5**
comp=Z,52nm,1.3s,mb5.8
LKWY *e*PP PP 09 44 11.4 +3.5
LKWY LR LR
comp=Z,29μm,19.0s,MS6.8
J18A Kendall Valley 94.20 47 P **P 09 40 20.9 0.0**
baz=94,SNR=31
MVCO Mesa Verde 94.22 53 ⇓P P 09 40 21.3 +0.2
baz=94
MVCO Mesa Verde 94.22 53 *eP* **P 09 40 21.2 +0.1**
comp=Z,28nm,1.3s,mb5.5
MVCO *e*PP PP 09 44 08.6 +0.4
MVCO LR LR
comp=Z,8μm,19.0s,MS6.2
E17A Martinsdale 94.25 44 P **P 09 40 21.5 +0.4**
baz=94,SNR=33
A16A West Butte Ran 94.27 41 ⇑P P 09 40 20.8 -0.3
baz=94,SNR=16
F17A Fitzpatrick Pl 94.28 44 P **P 09 40 22.0 +0.8**
baz=94,SNR=55
X21A Alamocita Cree 94.28 56 P **P 09 40 21.9 +0.4**
baz=94,SNR=23
P19A Cripple Cowboy 94.29 51 ⇑P P 09 40 21.5 +0.1
baz=94,SNR=9.4
Y21A Point of Rocks 94.30 56 ⇓P P 09 40 22.3 +0.8
baz=94,SNR=25
O19A Miners Draw (B 94.31 50 P **P 09 40 21.4 0.0**
baz=94,SNR=36
PV01 Paradox Valley 94.33 52 *eP* **P 09 40 21.4 -0.2**
comp=Z,2μm,0.8s,mb7.5
N19A John Jarvie Ra 94.38 49 ⇑P P 09 40 21.3 -0.5
baz=94
222A Williams Famil 94.43 58 ⇓P P 09 40 22.4 +0.2
baz=94,SNR=15
S20A Disappointment 94.44 52 ⇑P P 09 40 22.2 +0.1
baz=94
I18A Diamond G Ranc 94.44 46 ⇓P P 09 40 21.9 0.0
baz=94,SNR=32
BW06 Boulder Array 94.45 47 ⇓P P 09 40 21.1 -1.0
baz=94,SNR=35
BW06 Boulder Array 94.45 47 PFAKE 09 40 30.0 +8.0
BW06 LR LR
comp=Z,9μm,19.0s,MS6.2
PDAR Pinedale Array 94.45 47 P **P 09 40 21.6 -0.4**
comp=Z,14nm,0.9s,mb5.4,baz=225,slow=1.9,SNR=77
PDAR PP PP 09 44 16.6 +6.6
comp=Z,9.8nm,1.2s,baz=245,slow=6.0,SNR=4.7
PDAR PKKP PKKPbc 09 57 22.3 -0.4
comp=Z,2.1nm,0.8s,baz=90,slow=4.4,SNR=9.8
PDAR PKPPKP 10 05 23.6
comp=Z,0.4nm,0.7s,baz=0.0,slow=1.5,SNR=4.0
PDAR LR LR 10 15 53.5
comp=Z,7μm,20.1s,MS6.1,baz=263,slow=31
L19A Farson 94.47 48 P **P 09 40 22.3 +0.2**
baz=94,SNR=22
R20A Redvale 94.49 52 ⇑P P 09 40 22.1 -0.3
baz=95
D17A Six Diamond Ra 94.50 43 P **P 09 40 22.1 -0.1**
baz=95,SNR=32
M19A Rock Springs 94.51 49 ⇑P P 09 40 21.9 -0.5
baz=95
W21A San Fidel 94.51 55 ⇓P P 09 40 22.8 +0.2
baz=95
C17A Wharram Farm, 94.55 43 P **P 09 40 21.9 -0.5**
baz=95,SNR=54
122A Conniff Cattle 94.62 58 ⇓P P 09 40 23.4 +0.3
baz=95
V21A Milan 94.64 55 P **P 09 40 23.4 +0.3**
baz=95,SNR=8.1
B17A L&G Farms, Che 94.65 42 ⇓P P 09 40 22.2 -0.7
baz=95,SNR=39
Q20A Ridgley Place, 94.69 51 ⇓P P 09 40 23.2 -0.1
baz=95,SNR=9.6
P20A De Beque 94.71 51 ⇓P P 09 40 23.3 -0.1
baz=95,SNR=38
U21A Nageezi 94.74 54 ⇓P P 09 40 23.3 -0.2
baz=95,SNR=58
Z22A Elephant Butte 94.75 57 ⇑P P 09 40 23.8 +0.1
baz=95
AJM Ajmer 94.75 296 *e*PKP **P 09 40 21.5 -2.3**
AJM *e*PKP 09 40 22.5
AJM AMb AMB 09 40 26.8
comp=Z,113nm,1.3s,mb6.1
AJM AMb AMB 09 40 27.9
comp=Z,117nm,1.4s,mb6.1
LAZ Ladron 94.80 56 *eP* **P 09 40 23.9 0.0**
comp=Z,14nm,1.4s,mb5.2
A17A Triple J Farms 94.85 41 ⇓P P 09 40 23.6 -0.1
baz=95,SNR=46
Y22A Socorro 94.86 57 ⇓P P 09 40 23.9 -0.2
baz=95,SNR=21
E18A Harlowton 94.91 44 ⇓P P 09 40 24.9 +0.8
baz=95,SNR=28
G18A Lazy EL Ranch, 94.92 45 ⇓P P 09 40 24.4 +0.2
baz=95,SNR=15
Y22D IRIS PASSCAL I 94.92 56 ⇓P P 09 40 24.8 +0.4
baz=95
X22A Bernardo 94.92 56 ⇑P P 09 40 24.9 +0.4
baz=95
F18A Big Timber 94.92 44 ⇑P P 09 40 24.6 +0.4
baz=95,SNR=26
T21A Navajo Lake 94.94 53 ⇑P P 09 40 24.7 +0.2
baz=95
GCMT Greycliff 94.94 44 *eP* **P 09 40 24.2 0.0**
comp=Z,30nm,1.2s,mb5.6
GCMT *e*PP PP 09 44 09.9 -3.7
O20A White River Ci 94.94 50 ⇑P P 09 40 24.6 +0.2
baz=95,SNR=12
K19A Absolon Red Bu 94.97 47 ⇑P P 09 40 23.7 -0.8
baz=95,SNR=40
223A Chaparral, Ant 94.97 59 ⇓P P 09 40 25.0 +0.3
baz=95
N20A Spence Gulch, 95.05 50 ⇓P P 09 40 24.6 -0.2
baz=95,SNR=21
RLMT Red Lodge 95.09 45 ⇓P P 09 40 25.6 +0.7
baz=95,SNR=21
RLMT Red Lodge 95.09 45 *eP* **P 09 40 25.4 +0.5**
comp=Z,44nm,1.4s,mb5.7
RLMT LR LR
comp=Z,15μm,19.0s,MS6.5
D18A Linhart Farms, 95.11 43 ⇓P P 09 40 25.1 +0.2
baz=95,SNR=12

W22A Albuquerque 95.14 55 ⇑P P 09 40 25.1 -0.3
baz=95
R21A Cimarron 95.16 52 ⇑P P 09 40 25.0 -0.4
baz=95,SNR=55
BNM Barren Site 95.17 56 *e*P **P 09 40 25.5 -0.1**
comp=Z,30nm,1.1s,mb5.6
L20A Wamsutter 95.20 48 ⇓P P 09 40 25.3 -0.2
baz=95,SNR=22
123A Bell Site, Whi 95.22 58 ⇓P P 09 40 25.9 +0.1
baz=95
M20A Sweetwater, Wa 95.22 49 ⇓P P 09 40 25.3 -0.3
baz=95,SNR=16
Q21A Lamborn Mesa, 95.22 52 ⇓P P 09 40 26.0 +0.3
baz=95,SNR=31
V22A San Miguel Ran 95.25 55 ⇑P P 09 40 25.8 0.0
baz=95
EGMT Eagleton 95.29 42 ⇓P P 09 40 25.4 -0.3
baz=95,SNR=41
EGMT Eagleton 95.29 42 *e*P **P 09 40 25.4 -0.4**
comp=Z,92nm,1.0s,mb6.2
EGMT LR LR
comp=Z,8μm,20.0s,MS6.2
K20A Yellowstone Ra 95.31 48 ⇓P P 09 40 25.2 -0.8
baz=95,SNR=19
B18A Beardsley Farm 95.34 42 P **P 09 40 25.9 -0.1**
baz=95,SNR=21
Z23A Rita Site, Whi 95.35 57 ⇓P P 09 40 25.6 -0.8
baz=95
U22A Llaves 95.37 54 ⇑P P 09 40 26.1 -0.3
baz=95,SNR=25
A18A Metzger Ranch, 95.39 41 ⇑P P 09 40 25.6 -0.6
baz=96,SNR=19
T22A Edith 95.44 53 ⇑P P 09 40 27.1 +0.4
baz=96
ANMO Albuquerque 95.44 56 *e*P **P 09 40 26.6 -0.2**
ANMO *e* 09 44 18.1
ANMO pmax pmax
comp=Z,27nm,1.0s
ANMO MLR MLR
comp=Z,13μm,20.0s
ANMO Albuquerque 95.44 56 *e*P **P 09 40 26.6 -0.2**
comp=Z,27nm,1.0s,mb5.6
ANMO *e*PP PP 09 44 18.1 +0.2
ANMO LR LR
comp=Z,13μm,20.0s,MS6.4
O21A Pagoda 95.54 50 ⇑P P 09 40 26.6 -0.5
baz=96
YKA Yellowknife Ar 95.55 27 P **P 09 40 25.0 -1.6**
comp=Z,28nm,0.8s,mb5.7,baz=255,slow=4.6,SNR=73
YKA PP PP 09 44 07.7 -10
comp=Z,2.3nm,1.0s,baz=256,slow=6.8,SNR=2.7
YKA PKKP PKKPbc 09 57 09.3 -11
comp=Z,1.0nm,0.7s,baz=84,slow=3.5,SNR=4.6
N21A Black Mountain 95.59 50 ⇓P P 09 40 27.4 +0.1
baz=96,SNR=26
X23A Hourglass Bar 95.61 56 ⇑P P 09 40 27.4 -0.1
baz=96
Y23A Lovelace Mesa, 95.61 57 ⇑P P 09 40 27.2 -0.4
baz=96,SNR=10
S22A 4UR Ranch, Cre 95.62 53 P **P 09 40 28.2 +0.7**
baz=96,SNR=45
324A Moseley Ranch, 95.67 59 P **P 09 40 27.7 -0.2**
baz=96,SNR=34
W23A Werner Place, 95.73 55 ⇓P P 09 40 27.6 -0.5
baz=96,SNR=15
Q22A Crested Butte, 95.74 52 ⇑P P 09 40 28.1 +0.1
baz=96,SNR=40
SMCO Snowmass 95.74 51 *e*P **P 09 40 28.1 +0.1**
comp=Z,52nm,1.4s,mb5.8
224A Cornudas Mount 95.74 59 P **P 09 40 28.3 +0.1**
baz=96,SNR=38
R22A Saguache, Gunn 95.75 52 ⇓P P 09 40 27.3 -0.8
baz=96,SNR=17
V23A Ortiz Mt. (NFS 95.80 55 ⇑P P 09 40 29.0 +0.6
baz=96,SNR=30
MNTX Cornudas Mount 95.80 59 *e*P **P 09 40 27.8 -0.7**
comp=Z,21nm,1.1s,mb5.5
MNTX LR LR
comp=Z,6μm,20.0s,MS6.1
KSH Kashi 95.84 309 P **P 09 40 30.3 +1.8**
KSH pP pP 09 40 40.5 +2.6
KSH sP sP 09 40 44.4 +3.1
KSH PP PP 09 44 25.0 +4.2
KSH S S 09 51 42.8 -1.9
KSH sS sS 09 52 00.5 +0.1
KSH SS SS 09 58 18.3 +3.0
KSH pmax pmax
comp=Z,18nm,1.0s,mb5.5
KSH pmax pmax
comp=Z,3μm,6.4s
KSH LR LR
comp=N,8μm,16.4s,MS6.4
KSH LR LR
comp=E,9μm,17.8s,MS6.4
KSH LR LR
comp=Z,15μm,30.5s
M21A Separation Pea 95.85 49 ⇑P P 09 40 28.0 -0.5
baz=96,SNR=14
U23A El Rito 95.89 54 ⇑P P 09 40 28.4 -0.4
baz=96,SNR=27
KURK Kurchatov 95.90 320 P **P 09 40 27.7 -0.8**
comp=Z,227nm,1.6s,mb6.3,SNR=30
KURK Kurchatov 95.90 320 *e*P **P 09 40 26.9 -1.6**
KURK *e* 09 44 17.4
KURK pmax pmax
comp=Z,131nm,1.5s,mb6.1
KURK MLR MLR
comp=Z,17μm,19.0s,MS6.5
KURK Kurchatov 95.90 320 *e*P **P 09 40 26.9 -1.6**
comp=Z,131nm,1.5s,mb6.1
KURK *e*PP PP 09 44 17.4 -3.5
KURK LR LR
comp=Z,17μm,19.0s,MS6.5
KURK Kurchatov 95.90 320 P **P 09 40 27.4 -1.0**
SNR=43
124A Stringfield Ra 95.90 58 P **P 09 40 28.9 0.0**
baz=96,SNR=18
L21A Rawlins 95.90 49 ⇑P P 09 40 28.1 -0.6
baz=96,SNR=18
P22A Eagle 95.97 51 ⇑P P 09 40 29.4 +0.3
baz=96
RWWY Rawlins 95.98 49 *e*P **P 09 40 28.4 -0.7**
comp=Z,64nm,1.4s,mb5.9
425A Indio Mountain 95.99 60 ⇓P P 09 40 29.0 -0.4
baz=96,SNR=34
Z24A Sheeppen Canyo 96.08 57 ⇓P P 09 40 29.3 -0.5
baz=96
PMSA Palmer Station 96.08 161 P **P 09 40 28.3 -0.8**
comp=Z,25nm,1.1s,mb5.6,baz=192,slow=4.6,SNR=16
PMSA LR LR 10 17 19.6
comp=Z,7μm,21.7s,MS6.1,baz=227,slow=31
PMSA Palmer Station 96.08 161 *e*P **P 09 40 29.3 +0.2**
comp=Z,243nm,1.7s,mb6.3
PMSA LR LR
comp=Z,7μm,22.0s,MS6.1
325A Bean Ranch, Si 96.09 59 ⇓P P 09 40 29.2 -0.7
baz=96,SNR=43
Y24A Capitan 96.11 57 ⇓P P 09 40 29.4 -0.5
baz=96,SNR=12
T23A Casias Ranch, 96.12 54 ⇓P P 09 40 30.2 +0.3
baz=96,SNR=14
X24A Lazy VL Ranch, 96.22 56 ⇑P P 09 40 29.4 -0.9
baz=96
O22A Kremmling 96.23 50 ⇑P P 09 40 30.4 +0.2
baz=96,SNR=21
S23A Nye Farm, Mont 96.26 53 ⇓P P 09 40 31.0 +0.6
baz=96
NVL N'lazarevskaya 96.26 189 *e*P **P 09 40 28.3 -1.5**
NVL *e**PP pP 09 40 41.9 +2.6
NVL *e*SSS 10 01 58.9
NVL pmax pmax
comp=Z,95nm,1.3s,mb6.1
NVL MLR MLR
comp=Z,33μm,16.0s,MS6.9
MAIT Maitri 96.27 189 *e*P **P 09 40 29.7 -0.2**
225A Deer Hill, Car 96.34 59 ⇓P P 09 40 30.8 -0.1
baz=96
W24A Lazy 6 Ranch, 96.34 55 ⇓P P 09 40 30.5 -0.4
baz=96,SNR=27
N22A Wattenberg Ran 96.40 50 ⇓P P 09 40 31.3 +0.3
baz=96
626A Big Bend Ranch 96.52 61 ⇑P P 09 40 31.4 -0.4
baz=97,SNR=17
V24A Rampart Ranch, 96.53 55 ⇑P P 09 40 31.4 -0.3
baz=97,SNR=32
125A Gardner Draw, 96.56 58 ⇑P P 09 40 31.5 -0.5
baz=97,SNR=7.2

Q23A Hartsel 96.57 52 ⇓P P 09 40 32.3 +0.5
baz=97
L22A Ellis Ranch, M 96.60 49 ⇑P P 09 40 31.9 0.0
baz=97,SNR=12
Z25A Roswell 96.61 57 ⇑P P 09 40 31.7 -0.4
baz=97
U24A Moreno Valley 96.63 54 ⇑P P 09 40 31.7 -0.5
baz=97
526A Mary Lane Ranc 96.64 61 ⇑P P 09 40 31.8 -0.6
baz=97,SNR=10
P23A Jefferson 96.64 51 ⇓P P 09 40 32.5 +0.4
baz=97
SDCO Great Sand Dun 96.66 53 *e*P **P 09 40 32.2 -0.1**
comp=Z,8.6nm,1.1s,mb5.1
SDCO LR LR
comp=Z,11μm,19.0s,MS6.4
TKM2 Tokmak 2 96.66 312 *e*P **P 09 40 31.8 -0.3**
TKM2 pmax pmax
comp=Z,20nm,1.1s,mb5.5
TKM2 MLR MLR
comp=Z,10μm,19.0s,MS6.3
TKM2 Tokmak 2 96.66 312 *e*P **P 09 40 31.8 -0.4**
comp=Z,20nm,1.1s,mb5.5
TKM2 LR LR
comp=Z,10μm,19.0s,MS6.3
O23A Lake Granby, G 96.71 50 ⇓P P 09 40 30.8 -1.6
baz=97
Y25A Mesa, Roswell 96.72 57 ⇑P P 09 40 30.9 -1.8
baz=97
GDL2 Guadalupe Moun 96.73 59 *e*P **P 09 40 27.1 -5.7**
comp=Z,30nm,1.3s,mb5.6
N23A Red Feather La 96.79 50 ⇑P P 09 40 30.7 -2.1
baz=97,SNR=14
X25A Clemmons Ranch 96.84 56 ⇑P P 09 40 32.2 -1.0
baz=97
S24A Houchin Ranch, 96.87 53 ⇑P P 09 40 33.7 +0.5
baz=97
ISCO Idaho Springs 96.88 51 *e*P **P 09 40 33.5 +0.3**
ISCO pmax pmax
comp=Z,11nm,1.1s,mb5.2
ISCO MLR MLR
comp=Z,15μm,20.0s,MS6.5
ISCO Idaho Springs 96.88 51 *e*P **P 09 40 33.5 +0.3**
comp=Z,11nm,1.1s,mb5.2
ISCO LR LR
comp=Z,15μm,20.0s,MS6.5
TXAR Lajitas Array 96.89 62 P **P 09 40 33.4 -0.1**
comp=Z,6.0nm,0.9s,mb5.0,baz=239,slow=5.0,SNR=29
TXAR PP PP 09 44 28.4 -0.8
comp=Z,3.9nm,1.2s,baz=221,slow=8.0,SNR=4.4
TXAR PKKP PKKPbc 09 57 17.5 +1.9
comp=Z,1.3nm,0.7s,baz=102,slow=3.6,SNR=9.4
TXAR PKPPKP 10 05 27.5
comp=Z,0.6nm,0.9s,baz=116,slow=4.1,SNR=3.1
TXAR LR LR 10 19 00.9
comp=Z,7μm,19.4s,MS6.2,baz=30,slow=32
TXAR Lajitas Array 96.89 62 P **P 09 40 33.4 -0.1**
TXAR 09 44 28.4
TXAR pmax pmax
comp=Z,6.0nm,0.9s
TXAR Lajitas Array 96.89 62 P **P 09 40 33.4 -0.1**
TXAR PP PP 09 44 28.4 -0.8
TXAR PKKP PKKPbc 09 57 17.5 +1.9
TXAR P'P' 10 05 27.5
TXAR LR LR 10 19 00.9
326A Caldwell Ranch 96.92 60 ⇑P P 09 40 32.7 -0.9
baz=97
226A Malaga, Loving 96.93 59 ⇑P P 09 40 32.9 -0.8
baz=97,SNR=24
R24A Sanders Place, 97.04 53 ⇓P P 09 40 34.4 +0.4
baz=97
527A Woodward Ranch 97.06 61 ⇑P P 09 40 32.6 -1.6
baz=97,SNR=9.4
V25A Rancho No Teng 97.07 55 ⇑P P 09 40 33.9 -0.2
baz=97,SNR=26
126A Clayton Basin, 97.09 58 ⇓P P 09 40 33.5 -0.8
baz=97
W25A X Bar L Ranch, 97.11 56 ⇑P P 09 40 33.0 -1.4
baz=97,SNR=41
Q24A Divide 97.11 52 ⇓P P 09 40 34.4 +0.1
baz=97,SNR=9.4
627A Terlingua Ranc 97.15 61 ⇑P P 09 40 34.4 -0.3
baz=97
CLNB Carlsbad 97.15 59 *e*P **P 09 40 34.4 -0.2**
comp=Z,6.8nm,1.1s,mb5.0
Z26A Caprock 97.22 58 ⇓P P 09 40 33.8 -1.1
baz=97
PHWY Pilot Hill 97.22 49 *e*P **P 09 40 34.4 -0.3**
comp=Z,35nm,1.6s,mb5.5
PHWY *e*PP PP 09 44 30.1 -1.3
CPRX Cap Rock 97.27 58 *e*P **P 09 40 34.9 -0.3**
comp=Z,3.3nm,0.3s,mb5.2
U25A Circle Dot Ran 97.32 54 ⇓P P 09 40 34.5 -0.8
baz=97,SNR=8.0
O24A Longmont 97.34 51 ⇑P P 09 40 35.3 0.0
baz=97
327A Balmorhea Ranc 97.34 60 ⇓P P 09 40 35.0 -0.5
baz=97
427A Hayter Ranch, 97.34 60 P **P 09 40 35.2 -0.3**
baz=97,SNR=19
UCH Uchtor 97.35 312 *e*P **P 09 40 35.4 +0.1**
comp=Z,36nm,1.4s,mb5.6
UCH *e*PP PP 09 44 28.8 -3.6
UCH LR LR
comp=Z,11μm,19.0s,MS6.4
FRU Bishkek 97.36 312 *e*P **P 09 40 34.0 -1.3**
FRU *e* 09 51 13.0
FRU *e* 09 53 25.0
FRU pmax pmax
comp=Z,57nm,1.8s,mb5.7
P24A Kohler Place, 97.38 51 ⇓P P 09 40 34.9 -0.6
baz=97
AAK Ala-Archa 97.42 312 P **P 09 40 36.5 +0.9**
comp=Z,78nm,0.8s,mb6.2,SNR=5.5
AAK Ala-Archa 97.42 312 PKKPbc PKKPbc 09 57 13.3 -1.3
comp=Z,4.0nm,0.7s,baz=200,slow=5.7,SNR=8.8
AAK LR LR 10 24 30.4
comp=Z,11μm,22.0s,MS6.3,baz=67,slow=35
AAK Ala-Archa 97.42 312 *ce*P **P 09 40 35.5 -0.1**
AAK pmax pmax
comp=Z,8.0nm,1.2s,mb5.0
AAK Ala-Archa 97.42 312 *e*P **P 09 40 35.5 -0.1**
comp=Z,40nm,1.4s,mb5.7
AAK *e*PP PP 09 44 31.6 -1.4
AAK LR LR
comp=Z,11μm,19.0s,MS6.3
AAK Ala-Archa 97.42 312 P **P 09 40 35.1 -0.5**
comp=Z,429nmcomp=Z,4.8nm,2.0s,mb4.6
AAK Ala-Archa 97.42 312 P **P 09 40 37.5 +1.9**
comp=Z,428nmcomp=Z,4.7nm,2.0s,mb4.6
AAK PKKP PKKPbc 09 57 15.1 +0.4
comp=Z,428nmcomp=Z,4.7nm,2.0s
AAK Ala-Archa 97.42 312 P **P 09 40 35.4 -0.2**
SNR=15
T25A Trinidad 97.42 54 ⇓P P 09 40 34.9 -0.9
baz=98
Y26A Elida 97.44 57 ⇑P P 09 40 34.8 -1.1
baz=98
LAO LASA Array 97.44 44 *e*P **P 09 40 36.0 +0.4**
comp=Z,83nm,1.2s,mb6.0
LAO LR LR
comp=Z,11μm,19.0s,MS6.4
S25A Robets Cordova 97.48 53 P **P 09 40 36.0 0.0**
baz=98,SNR=14
X26A CR and CF Fran 97.54 56 ⇓P P 09 40 35.7 -0.6
baz=98
N24A Carr 97.58 50 ⇓P P 09 40 36.4 +0.1
baz=98
628A Black Gap, Mar 97.59 61 ⇑P P 09 40 36.0 -0.6
baz=98,SNR=14
227A Bennet, Jal 97.61 59 ⇑P P 09 40 34.7 -2.0
baz=98
127A Arkansas Junct 97.65 58 ⇑P P 09 40 35.3 -1.5
baz=98,SNR=13
W26A Owens Ranch, T 97.65 56 ⇑P P 09 40 35.8 -1.0
baz=98
528A Cox Ranch, San 97.77 61 ⇑P P 09 40 36.4 -1.1
baz=98,SNR=25
Q25A Bedland, Calha 97.80 52 ⇓P P 09 40 36.8 -0.6
baz=98
U26A Atchley Ranch, 97.85 54 ⇓P P 09 40 37.3 -0.4
baz=98,SNR=12
Z27A Tatum 97.86 58 ⇑P P 09 40 36.5 -1.3
baz=98
328A Wristen Ranch, 97.92 60 ⇓P P 09 40 37.1 -1.0
baz=98
428A Kincaid Ranch, 97.94 60 ⇓P P 09 40 38.2 0.0
baz=98

AML Almayashu 97.94 311 *e*P **P 09 40 38.0 +0.1**
comp=Z,59nm,1.4s,mb5.9
AML LR LR
comp=Z,14μm,22.0s,MS6.4
P25A Willow Gulch B 97.94 51 ⇑P P 09 40 38.0 0.0
baz=98
EKS2 Erkin-Say 97.95 312 *e*P **P 09 40 37.2 -0.8**
comp=Z,58nm,1.6s,mb5.9
EKS2 *e*PP PP 09 44 37.4 +0.4
EKS2 LR LR
comp=Z,10μm,19.0s,MS6.3
Y27A Causey 97.98 57 ⇑P P 09 40 37.2 -1.1
baz=98,SNR=9.6
O25A Wiggins 98.06 51 ⇑P P 09 40 38.7 +0.2
baz=98
X27A F and S Farms, 98.14 56 ⇓P P 09 40 38.0 -1.0
baz=98
N25A Grover 98.18 50 ⇓P P 09 40 39.4 +0.4
baz=98
W27A Bowe Ranch, En 98.22 56 ⇑P P 09 40 38.2 -1.2
baz=98
MSTX Muleshoe 98.31 57 ⇓P P 09 40 38.6 -1.2
baz=98,SNR=14
VNA1 Neumayer--Stat 98.32 182 *e*P **P 09 40 38.4 -0.7**
VNA1 *e* pP 09 40 46.4 -2.2
RSSD Black Hills 98.63 47 *e*P **P 09 40 40.5 -0.5**
RSSD pmax pmax
comp=Z,19nm,1.3s,mb5.5
RSSD MLR MLR
comp=Z,9μm,19.0s,MS6.3
RSSD Black Hills 98.63 47 *e*P **P 09 40 40.5 -0.5**
comp=Z,19nm,1.3s,mb5.5
RSSD LR LR
comp=Z,9μm,19.0s,MS6.3
DGMT Dagmar 99.03 42 ⇓P P 09 40 42.1 -0.5
baz=99
DGMT Dagmar 99.03 42 *e*P **P 09 40 42.1 -0.5**
comp=Z,56nm,1.1s,mb6.0
DGMT LR LR
comp=Z,8μm,19.0s,MS6.2
AMTX Amarillo 99.32 56 *e*P **P 09 40 43.4 -0.9**
comp=Z,34nm,1.0s,mb5.8
AMTX LR LR
comp=Z,12μm,20.0s,MS6.4
OGNE Ogallala 99.74 50 PFAKE 09 41 00.0 +14
OGNE LR LR
comp=Z,10μm,19.0s,MS6.4
JCT Junction City 100.37 61 *e*P Pdif 09 40 47.4 -1.2
JCT pmax pmax
comp=Z,24nm,1.0s
JCT MLR MLR
comp=Z,13μm,19.0s,MS6.5
JCT Junction City 100.37 61 *e*Pdif Pdif 09 40 47.4 -1.2
comp=Z,24nm,1.0s
JCT LR LR
comp=Z,13μm,19.0s,MS6.5
KK31 Karatay Array 100.38 312 *i* P Pdif 09 40 48.2 -0.4
KK31 pmax pmax
comp=Z,30nm,1.1s
KBL Kabul 100.67 303 *e*P Pdif 09 40 49.5 -0.4
KBL pmax pmax
comp=Z,12nm,1.0s
KBL Kabul 100.67 303 *e*Pdif Pdif 09 40 49.5 -0.4
comp=Z,12nm,1.0s
VOSK Vostochnaya 100.86 322 P Pdif 09 40 48.2 -2.5
VOSK pmax pmax
comp=Z,43nm,1.4s
FFC Flin Flon 100.96 36 *i* P Pdif 09 40 50.5 -0.7
FFC Flin Flon 100.96 36 *e*Pdif Pdif 09 40 49.9 -1.3
comp=Z,33nm,1.4s
FFC LR LR
comp=Z,14μm,19.0s,MS6.5
BVAR Borovoye Array 101.23 322 P Pdif 09 40 50.6 -1.8
comp=Z,16nm,0.8s,baz=108,slow=4.8,SNR=50
BVAR PP PP 09 44 49.4 -12
comp=Z,8.0nm,1.1s,baz=98,slow=6.1,SNR=4.5
BVAR PKKPbc PKKPbc 09 56 59.7 -4.5
comp=Z,1.8nm,0.6s,baz=288,slow=4.9,SNR=6.6
CBKS Cedar Bluff 101.29 52 PFAKE 09 41 00.0 +7.4
CBKS LR LR
comp=Z,8μm,19.0s,MS6.3
BRVK Borovoye 101.30 322 *d i* P Pdif 09 40 51.4 -1.3
BRVK pmax pmax
comp=Z,58nm,1.7s
BRVK Borovoye 101.30 322 *e*Pdif Pdif 09 40 51.3 -1.4
comp=Z,27nm,1.0s
BRVK LR LR
comp=Z,14μm,21.0s,MS6.5
BRVK Borovoye 101.30 322 Pdiff Pdif 09 40 51.3 -1.4
SNR=32
WMOK Wichita Mounta 101.68 57 *e*P Pdif 09 40 53.5 -0.9
WMOK pmax pmax
comp=Z,7.0nm,1.0s
WMOK MLR MLR
comp=Z,11μm,19.0s,MS6.4
WMOK Wichita Mounta 101.68 57 *e*Pdif Pdif 09 40 53.5 -0.9
comp=Z,7.1nm,1.0s
WMOK LR LR
comp=Z,11μm,19.0s,MS6.4
KVTX Kingsville 101.70 64 PFAKE 09 41 10.0 +16
KVTX LR LR
comp=Z,7μm,19.0s,MS6.2
ZRNK Zerenda 102.07 322 *i* P Pdif 09 40 53.4 -2.7
ZRNK pmax pmax
comp=Z,33nm,1.1s
HKT Hockley 103.73 62 *e*P Pdif 09 41 03.1 -0.4
HKT pmax pmax
comp=Z,38nm,1.8s
HKT MLR MLR
comp=Z,8μm,19.0s,MS6.3
HKT Hockley 103.73 62 *e*Pdif Pdif 09 41 03.1 -0.4
comp=Z,38nm,1.8s
HKT LR LR
comp=Z,8μm,19.0s,MS6.3
KSU1 Kansas State U 103.74 52 *e*Pdif Pdif 09 41 04.2 +0.7
KSU1 LR LR
comp=Z,10μm,20.0s,MS6.4
ECSD EROS Data Cent 103.94 48 *e*Pdif Pdif 09 41 03.5 -0.9
comp=Z,25nm,1.5s
ECSD LR LR
comp=Z,11μm,19.0s,MS6.4
ULM Lac du Bonnet 104.56 41 Pdiff Pdif 09 41 06.2 -0.9
comp=Z,11nm,1.0s,baz=262,slow=2.6,SNR=5.2
ULM PKiKP PKiKP 09 45 21.6 -1.5
comp=Z,10.0nm,0.9s,baz=268,slow=2.0,SNR=5.0
ULM Lac du Bonnet 104.56 41 *e*Pdif Pdif 09 41 06.2 -1.0
comp=Z,18nm,1.2s
ULM LR LR
comp=Z,10μm,19.0s,MS6.4
AGMN Agassiz Nation 104.56 43 *e*Pdif Pdif 09 41 06.1 -1.1
comp=Z,16nm,1.4s
AGMN LR LR
comp=Z,7μm,19.0s,MS6.2
PAYG Puerto Ayora 104.77 94 PFAKE 09 41 20.0 +12
PAYG LR LR
comp=Z,8μm,19.0s,MS6.3
NATX Nacogdoches 104.88 60 PFAKE 09 41 20.0 +11
NATX LR LR
comp=Z,5μm,19.0s,MS6.1
MIAR Mount Ida 105.95 57 *e*PKPdf PKiKP 09 45 34.0 +7.8
MIAR LR LR
comp=Z,6μm,19.0s,MS6.2
SCIA State Center 106.41 50 PFAKE 09 45 40.0 +13
SCIA LR LR
comp=Z,11μm,19.0s,MS6.4
SVE Sverdlovsk 106.79 326 *e*P Pdif 09 41 20.3 +3.2
SVE *i* 09 45 39.0
SVE *e* 09 51 58.0
SVE *e*SP SP 09 54 52.5 -6.1
SVE *e*PS PS 09 55 03.4 +0.4
SVE *e*SS SS 10 00 49.5 +3.2
SVE pmax pmax
comp=Z,36nm,1.5s
EYMN Ely 107.50 43 PFAKE 09 45 40.0 +11
EYMN LR LR
comp=Z,8μm,19.0s,MS6.3
PLCA Paso Flores 107.64 139 PKiKP PKiKP 09 45 30.0 +0.8
comp=Z,3.6nm,1.0s,baz=3.7,slow=1.1,SNR=3.6
PLCA PKKPbc PKKPbc 09 56 43.0 -1.4
comp=Z,4.2nm,1.1s,baz=118,slow=4.0,SNR=3.0
PLCA PKKPab PKKPab 09 56 57.2 -1.9
comp=Z,11nm,1.2s,baz=25,slow=4.8,SNR=3.9
PLCA Paso Flores 107.64 139 *e*PKPdf PKiKP 09 45 29.5 +0.3
PLCA LR LR
comp=Z,8μm,21.0s,MS6.2
MSEY Mahe Island 107.69 261 PFAKE 09 45 40.0 +10
MSEY LR LR

comp=Z,8μm,20.0s,MS6.3
AB31 Akbulak array 107.82 318 *i* P Pdif 09 41 20.5 -1.2
ABKAR Akbulak array 107.82 318 *e*Pdif Pdif 09 41 20.8 -0.9
comp=Z,2.2nm,0.8s
CCM Cathedral Cave 107.91 54 PFAKE 09 45 40.0 +10
CCM LR LR
comp=Z,11μm,20.0s,MS6.4
ARU Arti 107.98 326 P Pdif 09 41 20.1 -2.3
ARU S SKSac 09 51 57.1 -3.0
ARU PS PS 09 55 07.7 -7.4
ARU Arti 107.98 326 *e*Pdif Pdif 09 41 20.3 -2.1
comp=Z,30nm,1.6s
ARU LR LR
comp=Z,16μm,22.0s,MS6.5
VBMS Vicksburg 108.42 60 PFAKE 09 45 40.0 +9.2
VBMS LR LR
comp=Z,8μm,19.0s,MS6.3
JFWS Jewell Farm 108.59 48 *e*PKPdf PKiKP 09 45 29.2 -1.6
JFWS LR LR
comp=Z,13μm,19.0s,MS6.5
AKTO Aktyubinsk 108.97 320 PKKPbc PKKPbc 09 56 39.5 -1.1
comp=Z,6.0nm,0.9s,baz=248,slow=3.7,SNR=9.4
AKTO PKKPab PKKPab 09 56 52.0 +1.1
comp=Z,7.0nm,0.9s,baz=262,slow=6.6,SNR=6.4
OXF Oxford 109.38 57 PFAKE 09 45 40.0 +7.4
OXF LR LR
comp=Z,8μm,19.0s,MS6.3
HDIL Hopedale 109.39 51 PFAKE 09 45 40.0 +7.6
HDIL LR LR
comp=Z,13μm,20.0s,MS6.5
TEIG Tepich 109.76 72 PFAKE 09 45 50.0 +16
TEIG LR LR
comp=Z,7μm,19.0s,MS6.2
TGUH Tegucigalpa,Un 110.09 79 PFAKE 09 45 50.0 +16
TGUH LR LR
comp=Z,14μm,20.0s,MS6.5
WVT Waverly 110.66 56 PFAKE 09 45 50.0 +15
WVT LR LR
comp=Z,10μm,20.0s,MS6.4
KBS Kingsbay 110.83 355 *e*PP PP 09 46 10.4 -1.3
KBS *e*SS SS 10 01 43.3 +3.8
KBS Kingsbay 110.83 355 *e*P Pdif 09 41 35.3 +0.2
KBS MLR MLR
comp=Z,7μm,21.0s,MS6.2
BRAL Brewton 111.35 61 PFAKE 09 45 50.0 +14
BRAL LR LR
comp=Z,5μm,19.0s,MS6.1
LRAL Lakeview Retre 111.40 59 PFAKE 09 45 50.0 +14
LRAL LR LR
comp=Z,7μm,20.0s,MS6.2
OPO Ambohidratompo111.55 245 PKiKP PKiKP 09 45 37.0 -0.1
comp=Z,8.1nm,0.8s,baz=110,slow=3.3,SNR=7.1
BLO Bloomington 111.58 52 *e*PKIKP PKiKP 09 45 36.7 +0.1
WCI Wyandotte Cave 111.81 53 *e*PKIKP PKiKP 09 45 36.5 -0.5
WCI MLR MLR
comp=Z,12μm,20.0s,MS6.5
JTS JuntasAbangare 111.87 83 PFAKE 09 45 50.0 +12
JTS LR LR
comp=Z,12μm,20.0s,MS6.5
GLMI Grayling 112.50 46 *e*PKPdf PKiKP 09 45 37.6 -0.5
GLMI LR LR
comp=Z,11μm,20.0s,MS6.5
LCO Las Campanas 113.47 128 PFAKE 09 45 50.0 +9.5
LCO LR LR
comp=Z,9μm,21.0s,MS6.3
AAM Ann Arbor 113.49 49 PFAKE 09 45 50.0 +10
AAM LR LR
comp=Z,11μm,19.0s,MS6.5
BJO Bjornoya 113.63 350 *e*PP PP 09 46 30.6 -1.0
BJO AMS AMS 10 37 45.8
comp=Z,7μm,21.8s,MS6.2
TKL Tuckaleechee C 113.97 56 *e*PKIKP PKiKP 09 45 40.7 -0.5
CFAA Coronel Fontan 114.04 132 PKP PKiKP 09 45 40.9 -0.7
comp=Z,1.1nm,0.8s,baz=254,slow=3.8,SNR=20
CFAA PP PP 09 46 35.3 -0.1
comp=Z,1.1nm,1.1s,baz=239,slow=5.9,SNR=7.6
CFAA PKKPbc PKKPbc 09 56 19.0 -4.3
comp=Z,0.2nm,0.8s,baz=90,slow=1.0,SNR=2.5
ACSO Alum Creek Sta 114.22 51 *e*PKPdf PKiKP 09 45 40.6 -1.0
ACSO LR LR
comp=Z,12μm,19.0s,MS6.5
DAG Danmarks Havn 114.29 1κ*e*PKIKP PKiKP 09 45 39.6 -1.1
DAG pmax pmax
comp=Z,5.0nm,0.5s
DAG MLR MLR
comp=N,6μm,20.0s
DAG MLR MLR
comp=Z,9μm,20.0s,MS6.4
DAG Danmarks Havn 114.29 1 *e*P PKiKP 09 45 39.6 -1.1
DAG Danmarks Havn 114.29 1κ *i*P PKiKP 09 45 39.6 -1.1
comp=Z,4.9nm,0.5s
DAG
comp=Z,9μm,20.0s
GOGA Godfrey 114.34 58 PFAKE 09 45 50.0 +8.0
GOGA LR LR
comp=Z,7μm,19.0s,MS6.3
LVZ Lovozero 114.50 341 *i* PKIKP PKiKP 09 45 41.0 -0.3
LVZ pmax pmax
comp=Z,32nm,1.7s
LVZ Lovozero 114.50 341 *e*PKP PKiKP 09 45 41.0 -0.3
TRQA Tornquist 114.60 141 PFAKE 09 45 50.0 +7.6
TRQA LR LR
comp=Z,6μm,21.0s,MS6.2
ATAH Atahualpa 114.83 103 PKP PKiKP 09 45 43.6 +0.1
comp=Z,12nm,0.9s,baz=77,slow=1.8,SNR=7.6
ATAH PP PP 09 46 45.8 +3.8
comp=Z,5.2nm,0.7s,baz=244,slow=9.2,SNR=4.3
NNA Nana 114.89 109 PFAKE 09 46 00.0 +16
NNA LR LR
comp=Z,9μm,20.0s,MS6.4
APA Apatity 115.08 341 ||*i*P Pdif 09 41 52.0 -2.0
APA *i* 09 45 42.0
APA *i* 09 52 32.0
APA *i* PS PS 09 56 20.0 -1.9
APA pmax pmax
comp=Z,400nm,8.0s
APA pmax pmax
comp=Z,21nm,1.0s
APA MLR MLR
comp=Z,15μm,21.0s,MS6.6
KEV Kevo 115.52 345 *e*PKIKP PKPdf 09 45 41.8 -1.4
KEV pmax pmax
comp=Z,11nm,0.7s
KEV Kevo 115.52 345 *e*PKPdf PKPdf 09 45 42.7 -0.5
KEV LR LR
comp=Z,11μm,21.0s,MS6.5
KEV Kevo 115.52 345 *e*pkp PKPdf 09 45 41.8 -1.4
comp=Z,11nm,0.7s
ARCES ARCESS Array B 116.06 345 PKP PKPdf 09 45 43.7 -0.5
comp=Z,17nm,0.7s,baz=97,slow=1.1,SNR=71
ARCES PKKPbc PKKPbc 09 56 14.3 -3.0
comp=Z,4.9nm,0.7s,baz=231,slow=1.3,SNR=20
ARCES ARCESS Array B 116.06 345 PKP PKPdf 09 45 43.7 -0.6
ARCES PKKPbc PKKPbc 09 56 14.3 -3.0
ARE0 ARCESS Array S 116.06 345 *e*PKPdf PKPdf 09 45 43.7 -0.5
ERPA Erie 116.21 48 PFAKE 09 46 00.0 +15
ERPA LR LR
comp=Z,13μm,19.0s,MS6.6
DWPF Disney 116.27 64 PFAKE 09 46 00.0 +14
DWPF LR LR
comp=Z,4μm,19.0s,MS6.1
BLA Blacksburg 116.53 54 *e*PKIKP PKPdf 09 45 45.7 -0.4
BLA MLR MLR
comp=Z,10μm,21.0s,MS6.4
OTAV Otavalo 116.54 95 *e*PKPdf PKPdf 09 45 47.5 +0.6
OTAV *e*PP PP 09 46 53.8 -0.3
OTAV LR LR
comp=Z,5μm,20.0s,MS6.1
MCWV Mont Chateau 116.68 51 PFAKE 09 46 00.0 +14
MCWV LR LR
comp=Z,26μm,19.0s,MS6.9
BCIP Isla Barro Col 116.71 85 PFAKE 09 46 00.0 +13
BCIP LR LR
comp=Z,5μm,20.0s,MS6.1
KTK1 Kautokeino 117.00 345 *e*PP PP 09 46 56.7 +1.4
KTK1 *e*SS SS 10 03 08.3 +7.4
SUMG Summit 117.01 8 *e*PKPdf PKPdf 09 45 46.2 +0.2
SUMG *e*SKPdf SKPdf 09 49 20.5 +0.9
SUMG Summit 117.01 8 *i* P PKPdf 09 45 47.2 +1.2
SUMG *i* 09 46 48.0
NHSC New Hope 117.11 58 PFAKE 09 46 00.0 +13
NHSC LR LR
comp=Z,8μm,19.0s,MS6.4
MAK Makhachkala 117.19 313 *e*P Pdif 09 42 01.5 -1.8
MAK *i* 09 45 44.4
MAK *e* 09 46 56.0
MAK *e* 09 52 31.7
MAK *i* 09 52 53.8
MAK *e*PS PS 09 56 38.7 -3.4
MAK *e*SS SS 10 03 08.1 +2.8
MAK *e*SSS 10 07 29.8
MAK pmax pmax
comp=Z,220nm,1.6s
MAK MLR MLR
comp=E,15μm,18.0s,MS6.8
MAK MLR MLR
comp=N,15μm,17.0s,MS6.8
MAK MLR MLR
comp=Z,15μm,23.0s
TRO Tromso 117.53 347 *e*PP PP 09 46 58.1 -1.0
TRO *e*SS SS 10 03 06.6 -1.3
TRO AMS AMS 10 35 53.6
comp=Z,9μm,23.2s,MS6.3
TRO Tromso 117.53 347 *e*P Pdif 09 42 08.7 +3.8
TRO MLR MLR
comp=Z,9μm,23.2s,MS6.3
CNNC Cliffs of the 118.79 56 PFAKE 09 46 00.0 +9.5
CNNC LR LR
comp=Z,10μm,21.0s,MS6.4
CBN Corbin 118.80 52 PFAKE 09 46 00.0 +10
CBN LR LR
comp=Z,22μm,20.0s,MS6.8
VRHR Novokhopersk 118.97 323 *e*PKIKP PKPdf 09 45 50.2 -0.1
VRHR *e* 09 47 09.5
VRHR pmax pmax
comp=E,10.0nm,0.8s
VRHR pmax pmax
comp=Z,30nm,0.8s
VRHR pmax pmax
comp=N,5.0nm,0.3s
VRHR pmax pmax
comp=Z,1μm,1.2s
VRHR pmax pmax
comp=N,50nm,1.4s
VRHR pmax pmax
comp=E,100nm,1.4s
DGRG David-gareji 119.03 311 P PKPdf 09 45 50.6 -0.2
DGRG S PS 09 57 00.2 +1.4
BINY Binghamton 119.12 48 *e*PKPdf PKPdf 09 45 50.2 -0.7
BINY LR LR
comp=Z,16μm,20.0s,MS6.7
MOS Moscow 119.39 329 *i* PKIKP PKPdf 09 45 52.0 +1.0
MOS *e* 09 52 48.2
MOS *e*PS PS 09 56 52.3 -9.0
MOS pmax pmax
comp=Z,65nm,0.8s
MOS MLR MLR
comp=E,6μm,20.0s,MS6.4
MOS MLR MLR
comp=Z,10μm,20.0s,MS6.4
MOS MLR MLR
comp=N,6μm,20.0s,MS6.4
MTA Mtatsminda 119.41 312 P PKPdf 09 45 50.5 -1.0
MTA S PS 09 56 59.1 -3.2
TBLG Delisi 119.44 312 PKIKP PKPdf 09 45 52.4 +0.8
TBLG Delisi 119.44 312 P PKPdf 09 45 52.4 +0.9
TBLG S PKKPbc 09 55 58.1 -6.4
LONY Lake Ozonia 119.57 45 *e*PKPdf PKPdf 09 45 51.0 -0.7
LONY LR LR
comp=Z,8μm,19.0s,MS6.3
GNI Garni 119.76 310*c i*PKIKP PKPdf 09 45 52.7 +0.5
GNI pmax pmax
comp=Z,53nm,1.2s
GNI Garni 119.76 310 *e*PKPdf PKPdf 09 45 53.2 +1.0
GNI LR LR
comp=Z,7μm,20.0s,MS6.3
GNI Garni 119.76 310 PKPdf PKPdf 09 45 53.6 +1.4
SNR=9.9
MTDJ Mount Denham 119.76 75 PFAKE 09 46 00.0 +7.2
MTDJ LR LR
comp=Z,6μm,20.0s,MS6.2
ZEI Tsey 119.83 313 *i* PKIKP PKPdf 09 45 50.3 -2.0
ZEI pmax pmax
comp=Z,29nm,1.0s
GOR Gori 119.85 312 P PKPdf 09 45 53.3 +1.0
KEH Kehvi 119.90 313 P PKPdf 09 45 51.7 -0.8
JMIC Jan Mayen 119.97 357 *e*P Pdif 09 42 12.6 -3.1
JMIC *e*PP PP 09 47 14.7 -1.1
JMIC *e*PP PP 09 47 15.6 -0.2
NCB Newcomb 119.98 45 *e*PKPdf PKPdf 09 45 51.5 -1.0
NCB LR LR
comp=Z,10μm,19.0s,MS6.5
ONI Oni 120.19 313 P PKPdf 09 45 51.7 -1.3
ONI S PS 09 57 07.4 -1.7
OBN Obninsk 120.20 328 ||*i*PKIKP PKPdf 09 45 51.9 -0.7
OBN *i* 09 47 15.4
OBN *i* 09 52 52.7
OBN *i* PS PS 09 57 06.2 -2.5
OBN *i* SS SS 10 03 59.7 +16
OBN pmax pmax
comp=Z,71nm,1.6s
OBN Obninsk 120.20 328 *e*PKPdf PKPdf 09 45 52.1 -0.5
OBN LR LR
comp=Z,14μm,21.0s,MS6.6
KSD Kokstad 120.24 225 *e*P PKPdf 09 45 46.8 -6.7
KSD AMS AMS 10 36 02.0
comp=Z,60μm,16.9s,MS7.3
VSR Storozhevoye 120.37 324 *e*PKIKP PKPdf 09 45 52.9 -0.1
VSR *e* 09 47 15.4
VSR *e* 09 57 04.1
VSR pmax pmax
comp=Z,60nm,1.3s
VSR pmax pmax
comp=N,120nm,5.3s
VSR pmax pmax
comp=E,190nm,5.3s
VSR Storozhevoye 120.37 324 *i* PKP PKPdf 09 45 52.3 -0.7
VORD Divnogorie 120.39 323 *e*PKIKP PKPdf 09 45 52.8 -0.3
VORD *e* 09 47 16.3
VORD *e* 09 57 04.0
VORD pmax pmax
comp=Z,530nm,5.6s
VORD pmax pmax
comp=N,30nm,0.6s
VORD pmax pmax
comp=E,30nm,0.9s
KIV Kislovodsk 120.40 315⇑*i*PKIKP PKPdf 09 45 53.0 -0.3
KIV *i* 09 47 15.4
KIV *e* 09 52 58.8
KIV *i* PS PS 09 57 04.3 -6.6
KIV *e*SS SS 10 04 06.5 +20
KIV pmax pmax
comp=Z,44nm,1.3s
KIV Kislovodsk 120.40 315 *e*PKPdf PKPdf 09 45 53.5 +0.1
KIV LR LR
comp=Z,13μm,20.0s,MS6.6
KIV Kislovodsk 120.40 315 PKPdf PKPdf 09 45 54.0 +0.7
SNR=9.2
POGA Pongola 120.48 229 *e*P PKPdf 09 45 46.5 -7.5
POGA AMS AMS 10 33 49.0
comp=Z,16μm,19.1s,MS6.7
SCO Scoresbysund 120.50 3 *i* PKIKP PKPdf 09 45 52.2 -0.5
SCO pmax pmax
comp=Z,12nm,1.0s
SCO MLR MLR
comp=Z,6μm,20.0s,MS6.2
SCO Scoresbysund 120.50 3 *i* P PKPdf 09 45 52.2 -0.5
SCO *i* 09 47 14.0
SCO Scoresbysund 120.50 3 *i* P PKPdf 09 45 52.2 -0.5
comp=Z,12nm,1.0s
SCO *i* 09 47 14.0
SCO
comp=Z,6μm,20.0s
SCHQ Schefferville 120.68 32 PKP PKPdf 09 45 53.0 -0.5
comp=Z,10.0nm,0.6s,baz=303,slow=1.2,SNR=19
SCHQ PP PP 09 47 17.6 -3.6
comp=Z,4.2nm,1.0s,baz=296,slow=9.8,SNR=3.7
SCHQ PKKPbc PKKPbc 09 55 59.2 -1.0
comp=Z,19nm,1.0s,baz=119,slow=4.0,SNR=12
SCHQ Schefferville 120.68 32 *e*PKPdf PKPdf 09 45 53.1 -0.4
SCHQ *e*PP PP 09 47 16.7 -4.5
SCHQ LR LR
comp=Z,14μm,19.0s,MS6.6
DIGO Kars 120.73 311 *i* P PKPdf 09 45 54.7 +0.6
KAF Kangasniemi 120.83 339 *e*PKIKP PKPdf 09 45 52.6 -1.0
KAF pmax pmax
comp=Z,17nm,0.7s
KAF Kangasniemi 120.83 339 *e*pkp PKPdf 09 45 52.6 -1.0
comp=Z,17nm,0.7s,baz=51,slow=2.0
HAKT HAKKARI 121.03 307 *i* P PKPdf 09 45 50.3 -4.4
BHD Baghdad 121.14 302 *ex* x 09 45 52.0
BHD *ex* x 09 47 22.0
BHD *ex* x 09 49 25.0
BHD *ex* x 09 49 29.0
BHD *ex* x 09 52 47.0
BHD *ex* x 09 55 11.0
LPAZ La Paz 121.24 117 PKP PKPdf 09 45 56.6 +0.9
comp=Z,17nm,0.7s,baz=290,slow=1.2,SNR=58
LPAZ PP PP 09 47 24.4 -1.8
comp=Z,4.5nm,1.0s,baz=225,slow=11,SNR=2.3
LPAZ La Paz 121.24 117 *e*PKPdf PKPdf 09 45 56.5 +0.8
LPAZ LR LR
comp=Z,8μm,20.0s,MS6.3
MOR8 Moi Rana 121.33 346 *e*PKPdf PKPdf 09 45 53.1 -1.4
MOR8 Moi Rana 121.33 346 *e*P PKPdf 09 45 53.1 -1.4
FINES FINESS Array B 121.35 338 PKP PKPdf 09 45 54.2 -0.4
comp=Z,23nm,0.9s,baz=93,slow=3.8,SNR=46
FINES PP PP 09 47 21.6 -3.9
comp=Z,5.6nm,0.8s,baz=27,slow=9.4,SNR=3.0
FINES PKKPbc PKKPbc 09 55 57.9 0.0
comp=Z,4.6nm,1.0s,baz=175,slow=4.8,SNR=5.7
FINES FINESS Array B 121.35 338 PKIKP PKPdf 09 45 54.2 -0.4
FINES 09 47 21.6
FINES pmax pmax
comp=Z,23nm,0.9s
FINES pmax pmax
comp=Z,6.0nm,0.9s
FINES pmax pmax
comp=Z,5.0nm,1.0s
FINES FINESS Array B 121.35 338 PKP PKPdf 09 45 54.2 -0.4
FINES PP PP 09 47 21.6 -3.9
FINES PKKPbc PKKPbc 09 55 57.9 0.0
KONS Konsvik 121.36 347 *e*PKPdf PKPdf 09 45 54.4 -0.1
SOE Somerset East 121.44 220 *e*P PKPdf 09 45 52.9 -2.9
SOE AMS AMS 10 37 45.9
comp=Z,15μm,19.1s,MS6.7
ROSC El Rosal 121.46 91 PKP PKPdf 09 45 56.9 +0.6
comp=Z,18nm,0.7s,baz=106,slow=4.2,SNR=14
ROSC PP PP 09 47 28.1 0.0
comp=Z,3.5nm,0.5s,baz=80,slow=22,SNR=3.5
ROSC El Rosal 121.46 91 *e*PKPdf PKPdf 09 45 55.9 -0.4
LBNH Lisbon 121.50 45 *e*PKIKP PKPdf 09 45 55.3 -0.1
LBNH *e* 09 47 23.1
LBNH MLR MLR
comp=Z,11μm,19.0s,MS6.5
STOK Stokkvaagen 121.52 347 *e*PP PP 09 47 25.3 -1.2
DAGI Agillar 121.66 312 ||*i*P PKPdf 09 45 53.0 -2.9
DBOC Borcka 121.78 312 ||*i*P PKPdf 09 45 56.1 +0.1
DDEM Demirkent 121.82 311 ||*i*P PKPdf 09 45 55.8 -0.4
GTBY Guantanamo Bay 122.10 73 PFAKE 09 46 10.0 +13
GTBY LR LR
comp=Z,4μm,19.0s,MS6.1
SOC Sochi 122.57 315 *i* PKIKP PKPdf 09 45 55.5 -2.0
SOC *e* 09 47 30.6
SOC *e*PS PS 09 57 20.0 -10
SOC *e*SS SS 10 04 14.6 +0.3
SOC pmax pmax
comp=Z,40nm,1.1s
SOC MLR MLR
comp=Z,15μm,19.0s,MS6.7
MOPA Mopani 122.70 233 *e*P PKPdf 09 45 57.9 -0.5
MOPA AMS AMS 10 39 47.0
comp=Z,20μm,16.6s,MS6.8
BNGL BINGOL 122.72 309 ||*i*P PKPdf 09 45 58.9 +1.0
SEK Senekal 122.81 226 *e*P PKPdf 09 45 57.8 -0.7
SEK AMS AMS 10 37 55.7
comp=Z,14μm,16.8s,MS6.7
HVD Gariep Dam 122.85 222 *e*P PKPdf 09 45 53.0 -5.6
HVD AMS AMS 10 36 54.7
comp=Z,7μm,17.2s,MS6.4
KOPT Kop Dagi 122.96 311 *i* P PKPdf 09 45 59.1 +0.8
PKME Peaks-Kenny Pk 122.98 43 *e*PKPdf PKPdf 09 45 57.5 -0.7
PKME LR LR
comp=Z,8μm,20.0s,MS6.4
VSU Vasula 122.99 335*d i*PKIKP PKPdf 09 45 56.9 -0.9
VSU Vasula 122.99 335 *i* PKP PKPdf 09 45 56.9 -0.9
NSS Namsos 123.28 346 *e*P PKPdf 09 45 57.9 -0.3
NSS *e*PP PP 09 47 36.1 -2.3
NSS *e*SS SS 10 04 27.2 +5.6
NSS AMS AMS 10 40 19.0
comp=Z,12μm,21.6s,MS6.5
NSS Namsos 123.28 346 *e*P PKPdf 09 45 56.7 -1.5
NSS LR LR
comp=Z,12μm,21.6s,MS6.5
MARD Mardin 123.36 307 ||*i*P PKPdf 09 45 59.0 -0.3
DIYA Diyarbakir 123.74 308 *i* P PKPdf 09 46 01.2 +1.3
ANN Anapa 123.74 317*de*P Pdif 09 42 34.1 +1.6
ANN *i* 09 45 57.7
ANN *i* 09 47 40.5
ANN *i* 09 52 55.3
ANN *e*SS SS 10 04 30.4 +1.3
ANN *e*SSS 10 09 01.8
ANN pmax pmax
comp=Z,55nm,1.0s
ANN MLR MLR
comp=Z,20μm,24.0s,MS6.7
PRYS Parys 123.83 227⇑*i*P PKPdf 09 46 00.6 +0.1
PRYS AMS AMS 10 35 34.2
comp=Z,8μm,18.4s,MS6.4
KELT Kelkit 123.85 311 ||*i*P PKPdf 09 45 59.8 -0.3
SLR Silverton 123.86 229 *e*P PKPdf 09 45 59.4 -1.2
SLR AMS AMS 10 35 54.0
comp=Z,18μm,18.8s,MS6.8
BOSA Boshof 124.27 224 PKP PKPdf 09 46 01.5 +0.2
comp=Z,46nm,0.7s,baz=118,slow=1.8,SNR=82
BOSA PP PP 09 47 44.7 -1.2
comp=Z,17nm,1.2s,baz=163,slow=14,SNR=1.9
BOSA Boshof 124.27 224 PKIKP PKPdf 09 46 01.5 +0.2
BOSA 09 47 44.7
BOSA pmax pmax
comp=Z,47nm,0.7s
BOSA pmax pmax
comp=Z,17nm,1.2s
BOSA Boshof 124.27 224 *e*PKPdf PKPdf 09 46 01.4 +1.0
BOSA *e*PP PP 09 47 44.8 -1.1
BOSA LR LR
comp=Z,12μm,19.0s,MS6.6
MSNA Messina 124.40 233 *e*P PKPdf 09 46 01.7 0.0
MSNA AMS AMS 10 41 04.3
comp=Z,18μm,16.6s,MS6.8
ELZG Elazig 124.47 309 ||*i*P PKPdf 09 46 02.4 +1.0
SUR Sutherland 124.60 217 *e*PKPdf PKPdf 09 46 02.6 +0.8
SUR LR LR
comp=Z,12μm,19.0s,MS6.6
SUR Sutherland 124.60 217 ||*i*P PKPdf 09 46 02.5 +0.7
SUR AMS AMS 10 41 52.4
comp=Z,10μm,17.6s,MS6.5
SUR Sutherland 124.60 217 PKPdf PKPdf 09 46 03.3 +1.5
SNR=5.3
KEMA Kemaliye 124.65 310 ||*i*P PKPdf 09 46 02.1 +0.5
MICGM Minsk 124.84 331 ||*e*PKP PKPdf 09 46 02.0 +0.5
IZAR Zarasai 124.86 333 *e*P PKPdf 09 46 01.7 +0.2
IZAR AMB AMB 09 46 04.6
comp=Z,24nm,0.9s
MNK Minsk 124.86 331 ||*e*PKIKP PKPdf 09 46 02.0 +0.4
MNK *e* 09 47 50.0
MNK *e*PPP 09 50 32.0
MNK *e* 09 53 06.0
MNK *e* 09 57 42.0
MNK *e*SS SS 10 05 08.0 +26
MNK *e*SSS 10 09 26.0
MNK pmax pmax
comp=Z,2μm,4.0s
CPUP Villa Florida 124.89 133 PKP PKPdf 09 46 02.2 -0.3
comp=Z,29nm,0.7s,baz=236,slow=1.2,SNR=66
CPUP PP PP 09 47 49.6 -0.5
comp=Z,2.3nm,0.8s,baz=311,slow=20,SNR=1.2
CPUP Villa Florida 124.89 133 PKP PKPdf 09 46 02.2 -0.3
CPUP PP PP 09 47 49.6 -0.5
CPUP LR LR
comp=Z,1μm,20.0s,MS5.6
IDID Didziasalis 124.90 332 *e*P PKPdf 09 46 01.4 -0.2
IDID AMB AMB 09 46 04.6
comp=Z,30nm,1.1s
SWZ Schweizer 125.11 225 *e*P PKPdf 09 46 03.0 0.0
SWZ AMS AMS 10 39 08.8
comp=Z,14μm,17.1s,MS6.7
IIGN Ignalina 125.12 332 *e*P PKPdf 09 46 02.0 0.0
IIGN AMB AMB 09 46 05.1
comp=Z,38nm,1.0s
NACGM Naroch 125.13 332 *e*PKP PKPdf 09 46 01.0 -1.1
PKA Prieska 125.25 221⇑*i*P PKPdf 09 46 04.0 +0.9
PKA AMS AMS 10 42 07.7
comp=Z,3μm,17.4s,MS6.0

ATAB Bozova 125.25 308 ⇓iP PKPdf 09 46 03.1 +0.3
SCER sogukcermik 125.50 311 ⇓iP PKPdf 09 46 03.5 +0.2
ERBA Erbaa 125.53 312 ⇓iP PKPdf 09 46 03.5 +0.2
SDV Santo Domingo 125.69 87 ePKPdf PKPdf 09 46 04.1 -0.2
SDV ePP PP 09 47 54.7 -2.0
SDV LR LR
comp=Z,2μm,19.0s,MS5.8
SDDR Presa de Saban 125.70 75 ePKPdf PKPdf 09 46 03.6 -0.6
SDDR LR LR
comp=Z,15μm,19.0s,MS6.7
GRTK Grand Turk 125.82 71 PFAKE 09 46 20.0 +16
GRTK LR LR
comp=Z,7μm,21.0s,MS6.3
TOKA Tokat 125.84 312 i P PKPdf 09 46 06.1 +2.2
SIM Simferopol' 125.89 318 eP Pdif 09 42 42.7 +0.7
SIM e 09 46 03.8
SIM 09 47 57.3
SIM SS SS 10 05 11.7 +16
SIM pmax pmax
comp=Z,96nm,11.0s
SIM MLR MLR
comp=Z,7μm,17.0s,MS6.4
MOL Molde 125.98 347 eP PKPdf 09 46 03.1 -0.4
MOL ePP PP 09 47 58.3 +1.9
MOL eSS SS 10 04 57.6 +2.0
MOL Molde 125.98 347 eP PKPdf 09 46 00.1 -3.3
DESE Dese 125.99 276 eP PKPdf 09 46 07.3 +2.4
KMBO Kilima Mbogo 126.20 260 PKP PKPdf 09 46 05.6 +0.2
comp=Z,11nm,1.0s,baz=0.2,slow=24,SNR=16
KMBO PP PP 09 47 58.2 -1.8
comp=Z,2.4nm,1.1s,baz=180,slow=20,SNR=2.2
KMBO Kilima Mbogo 126.20 260 PKIKP PKPdf 09 46 05.6 +0.2
KMBO 09 47 58.2
KMBO pmax pmax
comp=Z,11nm,1.0s
KMBO Kilima Mbogo 126.20 260 ePKPdf PKPdf 09 46 06.2 +0.8
KMBO ePP PP 09 47 59.7 -0.3
KMBO LR LR
comp=Z,8μm,20.0s,MS6.4
KMBO Kilima Mbogo 126.20 260 eP PKPdf 09 46 06.1 +0.7
KMBO Kilima Mbogo 126.20 260 PKPdf PKPdf 09 46 06.9 +1.6
SNR=6.4
AKASG Malin Array Be 126.23 326 PKP PKPdf 09 46 03.5 -0.8
comp=Z,24nm,1.0s,baz=62,slow=1.9,SNR=44
AKASG PP PP 09 47 59.0 +0.3
comp=Z,0.3nm,0.3s,baz=36,slow=8.8,SNR=3.5
AKASG Malin Array Be 126.23 326 PKIKP PKPdf 09 46 03.5 -0.8
AKASG 09 47 59.0
AKASG pmax pmax
comp=Z,25nm,1.0s
AKASG Malin Array Be 126.23 326 PKP PKPdf 09 46 03.5 -0.8
AKASG PP PP 09 47 59.0 +0.3
AKBB Malin Array Si 126.23 326 ePKIKP PKPdf 09 46 03.6 -0.7
KIEV Kiev 126.24 326 ePKIKP PKPdf 09 46 03.5 -0.8
KIEV MLR MLR
comp=Z,13μm,22.0s,MS6.6
BORG Borgarnes 126.24 3 PFAKE 09 46 20.0 +16
BORG LR LR
comp=Z,4μm,19.0s,MS6.1
LBTB Lobatse 126.24 228 ePKIKP PKPdf 09 46 05.1 -0.1
LBTB MLR MLR
comp=Z,8μm,20.0s,MS6.4
LBTB Lobatse 126.24 228 ePKPdf PKPdf 09 46 05.1 -0.1
LBTB LR LR
comp=Z,8μm,20.0s,MS6.4
LBTB Lobatse 126.24 228 eP PKPdf 09 46 05.3 +0.1
LBTB AMS AMS 10 42 02.5
comp=Z,13μm,16.8s,MS6.7
KUZU Kuzuini 126.37 308 ⇓iP PKPdf 09 46 04.9 -0.1
PINB Pinarbasi 126.38 310 i P PKPdf 09 46 04.7 -0.3
NB2 NORSAR Subarra126.41 344 PKPdf PKPdf 09 46 03.5 -0.8
comp=Z,2.3nm,0.8s,baz=48,slow=2.6
NB2 NORSAR Subarra126.41 344 PKPdf PKPdf 09 46 03.5 -0.8
baz=48,slow=2.6
NB2 NORSAR Subarra126.41 344 PKIKP PKPdf 09 46 03.5 -0.8
NB2 NORSAR Subarra126.41 344 PKPdf PKPdf 09 46 03.5 -0.8
NOA NORSAR Array B 126.41 344 PKP PKPdf 09 46 03.9 -0.4
comp=Z,23nm,0.9s,baz=37,slow=1.9,SNR=53
NOA PP PP 09 47 59.7 +0.3
comp=Z,3.2nm,1.0s,baz=32,slow=6.5,SNR=4.3
NOA PKKP 09 56 21.6
comp=Z,1.4nm,0.8s,baz=216,slow=2.2,SNR=4.0
NOA NORSAR Array B 126.41 344 PKIKP PKPdf 09 46 03.9 -0.4
NOA 09 47 59.7
NOA pmax pmax
comp=Z,23nm,0.9s
NOA pmax pmax
comp=Z,3.0nm,1.0s
HFA0 Hagfors New Ar 126.45 342 PKPdf PKPdf 09 46 03.0 -1.4
NAO01 NORSAR Array S 126.66 344 ePKPdf PKPdf 09 46 04.8 0.0
NAO01 LR LR
comp=Z,7μm,19.0s,MS6.3
ANDN Andirin 126.72 309 ⇑iP PKPdf 09 46 04.9 -0.8
COBT Iskenderun 127.07 308 ⇑iP PKPdf 09 46 07.2 +0.8
UPI Upington 127.10 221 ⇓iP PKPdf 09 46 07.8 +1.0
UPI AMS AMS 10 41 45.9
comp=Z,9μm,17.4s,MS6.5
YAYL Yayladag 127.31 307 i P PKPdf 09 46 05.2 -1.6
SUW Suwalki 127.33 332 ePKPdf 09 46 06.7 +0.4
SUW eSKS SKSdf 09 53 13.8 -2.2
SUW LMZ 10 36 28.6
comp=Z,11μm,29.2s
SUW Suwalki 127.33 332 ePKIKP PKPdf 09 46 06.7 +0.4
SUW e 09 53 13.8
SUW Suwalki 127.33 332 ePKPdf PKPdf 09 46 06.5 +0.2
FOO Floro 127.38 348 eP PKPdf 09 46 05.7 -0.5
FOO ePP PP 09 48 07.1 +1.4
FOO eSS SS 10 05 19.4 +6.4
FOO AMS AMS 10 37 30.9
comp=Z,8μm,29.4s,MS6.2
SIV San Ignacio 127.47 120 PKP PKPdf 09 46 07.6 -0.1
comp=Z,38nm,1.0s,baz=244,slow=1.8,SNR=63
SIV PP PP 09 48 07.3 -0.5
comp=Z,4.0nm,0.9s,baz=253,slow=10,SNR=3.4
ILGA Ilgaz 127.59 314 i P PKPdf 09 46 07.8 +0.6
CDAG Cicekdag 127.60 312 ⇓iP PKPdf 09 46 06.8 -0.5
BALT Daday 127.66 314 ⇑iP PKPdf 09 46 08.0 +0.6
ELDT Eldivan 127.99 313 ⇓iP PKPdf 09 46 07.9 -0.1
GULE Gulek 128.01 309 ⇓iP PKPdf 09 46 07.9 -0.2
KONO Kongsberg 128.02 344 eP PKPdf 09 46 06.2 -1.2
KONO ePP PP 09 48 10.2 +0.3
KONO AMS AMS 10 46 21.3
comp=Z,7μm,15.6s,MS6.5
KONO Kongsberg 128.02 344 eP Pdif 09 42 54.3 +2.8
KONO e 09 46 06.7
BR131 Keskin Array S 128.10 312 ePKPdf PKPdf 09 46 08.0 -0.2
BR131 ePP PP 09 48 12.6 +1.1
BR131 LR LR
comp=Z,4μm,19.0s,MS6.2
BRTR Keskin Array B 128.10 312 PKP PKPdf 09 46 08.1 -0.1
comp=Z,17nm,1.0s,baz=111,slow=2.8,SNR=36
BRTR PP PP 09 48 14.5 +2.9
comp=Z,12nm,1.1s,baz=90,slow=6.2,SNR=6.8
BRTR Keskin Array B 128.10 312 PKIKP PKPdf 09 46 08.1 -0.1
BRTR 09 48 14.5
BRTR pmax pmax
comp=Z,17nm,1.0s
BRTR pmax pmax
comp=Z,12nm,1.1s
BHL Bhannes 128.19 305 eP PKPdf 09 46 08.4 -0.2
KIS Kishinev 128.32 322 eP Pdif 09 42 52.0 -0.8
KIS Kishinev 128.32 322 ePKP PKPdf 09 46 05.0 -3.4
KIS Kishinev 128.32 322 ePP PP 09 48 08.0 -4.6
KIS Kishinev 128.32 322 ePPP 09 51 02.0
KIS eSKKS SKKSac 09 55 10.0 +1.8
KIS Kishinev 128.32 322 eP Pdif 09 42 52.0 -0.8
KIS e 09 46 05.0
KIS e 09 48 08.0
KIS ePPP 09 51 02.0
BER Bergen 128.42 347 eP PKPdf 09 46 06.2 -2.0
BER ePP PP 09 48 14.9 +2.4
BER AMS AMS 10 45 57.1
comp=Z,10μm,23.6s,MS6.4
BER Bergen 128.42 347 eP Pdif 09 42 56.4 +3.2
BER e 09 46 08.5
BER MLR MLR
comp=Z,10μm,23.6s,MS6.4
MMAI Mount Meron Ar 128.60 303 PKP PKPdf 09 46 09.4 +0.1
comp=Z,52nm,1.1s,baz=70,slow=7.2,SNR=14
SGKT Sivrigoynuk 128.94 314 ⇑iP PKPdf 09 46 09.2 -0.6
LSZ Lusaka 129.45 240 PFAKE 09 46 20.0 +8.5
LSZ LR LR
comp=Z,10μm,19.0s,MS6.5
WAR Warsaw 129.47 332 ePKP PKPdf 09 46 11.3 +0.9

WAR ePKS 09 49 35.3
WAR LMZ 10 35 06.2
comp=Z,11μm,28.4s
LVV L'vov 129.49 328 i PKIKP PKPdf 09 46 09.4 -1.1
LVV i 09 48 22.0
LVV e 09 53 09.8
LVV i SS SS 10 06 08.0 +28
LVV L'vov 129.49 328 eP PKPdf 09 46 09.0 -1.6
CFR Carcaliu 129.61 321 P PKPdf 09 46 11.2 +0.2
KDHN Kadinhani 129.62 311 i P PKPdf 09 46 11.1 -0.1
CRPR Cabo Rojo, PR 129.67 76 ePKPdf PKPdf 09 46 11.1 -0.8
TIRR Tirgusor 129.78 320 ⇓PKIKP PKPdf 09 46 10.8 -0.5
TIRR Tirgusor 129.78 320 ePKPdf PKPdf 09 46 11.5 +0.2
TIRR Tirgusor 129.78 320 ⇓iP PKPdf 09 46 10.8 -0.5
CSS Prodhromos 129.78 306 ePKPdf PKPdf 09 46 11.4 -0.2
CSS ePP PP 09 48 21.4 -1.4
CSS LR LR
comp=Z,8μm,21.0s,MS6.4
TESR 129.85 323 ⇑P PKPdf 09 46 11.0 -0.4
TESR 129.85 323 ⇑iP PKPdf 09 46 11.0 -0.3
LRW Lerwick 129.88 351 AMS AMS 10 39 02.8
comp=Z,7μm,27.8s,MS6.2
BSD Bornholm Skovb 129.99 338 ⇓iPKIKP PKPdf 09 46 10.8 -0.5
BSD i 09 48 21.8
BSD pmax pmax
comp=Z,33nm,1.1s
BSD MLR MLR
comp=Z,9μm,19.0s,MS6.5
BSD Bornholm Skovb 129.99 338 ⇓iP PKPdf 09 46 10.8 -0.5
BSD i 09 48 21.8
BSD Bornholm Skovb 129.99 338 ⇓iP PKPdf 09 46 10.8 -0.5
comp=Z,33nm,1.1s
BSD i 09 48 21.8
BSD
comp=Z,9μm,19.0s
BUR08 Bucovina Ar. S 130.09 325 ePKPdf PKPdf 09 46 11.1 -0.6
BURAR Bucovina Array 130.10 325 ⇓PKIKP PKPdf 09 46 12.2 +0.4
BURAR Bucovina Array 130.10 325 ⇓iP PKPdf 09 46 12.2 +0.4
BBSR BB Station 130.10 57 PFAKE 09 46 20.0 +7.7
BBSR LR LR
comp=Z,7μm,19.0s,MS6.4
VRI Vrincioaia 130.14 322 ⇑PKIKP PKPdf 09 46 11.6 -0.3
VRI Vrincioaia 130.14 322 ⇑iP PKPdf 09 46 11.6 -0.3
GAZI Gazipasa 130.20 308 ⇓iP PKPdf 09 46 11.0 -1.4
ICM Isla Caja Muer 130.23 76 ePKPdf PKPdf 09 46 11.1 -1.8
PSN Preselentsi 130.28 319 i P PKPdf 09 46 11.5 -0.8
KWP Kalwaria Pacla 130.29 328 ePKP PKPdf 09 46 12.7 +0.7
KWP ePP PP 09 48 27.1 +1.8
KWP ePKS 09 49 40.7
KWP LMZ 10 36 31.5
comp=Z,13μm,29.4s
KWP Kalwaria Pacla 130.29 328 ePKIKP PKPdf 09 46 12.7 +0.6
KWP e 09 48 27.1
KWP Kalwaria Pacla 130.29 328 ePKPdf PKPdf 09 46 12.5 +0.4
KWP LR LR
comp=Z,12μm,20.0s,MS6.6
KWP Kalwaria Pacla 130.29 328 ⇑iP PKPdf 09 46 12.2 +0.1
BORA Eskisehir 130.34 314 ⇓iP PKPdf 09 46 11.8 -0.7
BOLV Bolvadin 130.41 312 ⇓iP PKPdf 09 46 11.7 -1.0
GKP Gorka Klasztor 130.44 335 ePKP PKPdf 09 46 12.4 +0.2
GKP ePKS 09 49 36.4
GKP ePS PS 09 58 31.8 -6.8
GKP LMZ 10 43 26.4
comp=Z,10μm,23.7s
GKP Gorka Klasztor 130.44 335 ePKIKP PKPdf 09 46 12.4 +0.2
GKP ePS PS 09 58 31.8 -6.8
GKP MLR MLR
comp=Z,10μm,23.7s,MS6.5
SJG San Juan 130.58 76 ePKIKP PKPdf 09 46 13.4 -0.1
SJG MLR MLR
comp=Z,6μm,21.0s
MLR Muntele Rosu 130.80 322 ⇓P PKPdf 09 46 12.5 -0.7
MLR Muntele Rosu 130.80 322 ⇓iP PKPdf 09 46 12.5 -0.7
CBYP Canovanas 130.86 75 ePKPdf PKPdf 09 46 12.9 -1.1
PRD Provadia 131.01 319 i P PKPdf 09 46 14.0 +0.3
BMR Baia Mare 131.03 326 P PKPdf 09 46 14.1 +0.5
ISP Isparta 131.04 311 PKIKP PKPdf 09 46 15.0 +1.1
ISP MLR MLR
comp=Z,5μm,20.0s,MS6.2
ISP Isparta 131.04 311 P PKPdf 09 46 15.0 +1.1
UZH Uzhgorod 131.11 327 i PKIKP PKPdf 09 46 13.7 0.0
UZH e 09 46 23.3
UZH e 09 53 10.6
UZH i SS SS 10 05 52.0 -8.0
UZH Uzhgorod 131.11 327 eP PKPdf 09 46 13.0 -0.7
ULDT Uludag 131.16 314 i P PKPdf 09 46 14.0 0.0
STHS Stebnicka Huta 131.18 329 ePKIKP PKPdf 09 46 14.7 +0.9
STHS Stebnicka Huta 131.18 329 ePKP PKPdf 09 46 14.7 +0.9
ELBA Catalca 131.24 316 ⇓iP PKPdf 09 46 13.2 -1.0
TRPA Tarpa 131.28 327 ⇓iP PKPdf 09 46 13.7 -0.3
GDZ Gediz 131.33 313 ⇓iP PKPdf 09 46 13.3 -1.1
VOIR 131.37 322 ⇓P PKPdf 09 46 14.2 -0.1
VOIR 131.37 322 ⇓iP PKPdf 09 46 14.2 -0.1
OJC Ojcow 131.38 330 ePKIKP PKPdf 09 46 10.5 -3.6
OJC e 09 48 30.3
OJC e 09 53 18.6
OJC ePS PS 09 58 33.9 -13
OJC eSS SS 10 06 05.2 +2.1
OJC MLR MLR
comp=Z,13μm,20.6s,MS6.6
CRVS Cervenica-Dubn 131.38 328 ePKIKP PKPdf 09 46 13.0 -1.2
CRVS e 09 48 32.1
CRVS Cervenica-Dubn 131.38 328 ePKP PKPdf 09 46 13.0 -1.2
CRVS ePP PP 09 48 32.1 -0.3
KORT Korkueli 131.45 310 ⇓iP PKPdf 09 46 13.7 -1.0
KHAL Karahalli 131.60 312 ⇓iP PKPdf 09 46 13.4 -1.6
JMB Yambol 131.88 318 PKIKP PKPdf 09 46 15.3 0.0
JMB Yambol 131.88 318 P PKPdf 09 46 15.3 0.0
JMB Yambol 131.88 318 i P PKPdf 09 46 15.3 0.0
DEMI Demirci 131.90 313 i P PKPdf 09 46 16.6 +1.1
SZH Strazhica 131.92 320 i P PKPdf 09 46 14.4 -1.0
GOLH Golhisar 131.96 311 ⇓iP PKPdf 09 46 15.0 -0.6
DRGR 131.97 325 ⇓P PKPdf 09 46 15.2 -0.2
DRGR 131.97 325 ⇓iP PKPdf 09 46 15.2 -0.2
DNZL Cakiroluk 132.18 311 ⇓iP PKPdf 09 46 15.9 -0.1
RAC Raciborz 132.24 331 ePKIKP PKPdf 09 46 15.7 -0.1
RAC e 09 48 34.8
RAC MLR MLR
comp=E,14μm,22.0s
RAC MLR MLR
comp=Z,13μm,20.0s,MS6.6
RAC Raciborz 132.24 331 ePKPdf PKPdf 09 46 15.7 -0.1
RAC ePP PP 09 48 34.8 -2.9
AKAS Kas 132.28 309 ⇓iP PKPdf 09 46 14.7 -1.6
SART Tekirdag 132.29 316 ⇓iP PKPdf 09 46 14.8 -1.4
PVL Pavlikeni 132.33 320 i P PKPdf 09 46 16.8 +0.7
BALY Balya 132.39 314 ⇓iP PKPdf 09 46 15.7 -0.7
OKC Ostrava-Krasne 132.43 331 ePKIKP PKPdf 09 46 16.1 0.0
OKC e 09 48 40.6
OKC e 10 06 11.8
OKC MLR MLR
comp=Z,9μm,20.1s,MS6.5
OKC Ostrava-Krasne 132.43 331 P PKPdf 09 46 17.2 +1.1
OKC Ostrava-Krasne 132.43 331 ePKPdf PKPdf 09 46 16.1 0.0
OKC ePP PP 09 48 40.6 +1.6
OKC ePKS 09 49 45.6
OKC eSS SS 10 06 11.8 -4.0
OKC AMS AMS 10 42 50.0
comp=Z,9μm,20.1s
RUE Ruedersdorf 132.44 336 ePKPdf PKPdf 09 46 16.3 +0.3
RUE ePP PP 09 48 38.5 -0.3
RUE e 09 49 44.0
MVH1 Achvaich 132.46 352 P PKPdf 09 46 14.5 -1.4
MVH1 Achvaich 132.46 352 eP PKPdf 09 46 14.5 -1.4
BSEG Bad Segeberg 132.57 340 ePKPdf PKPdf 09 46 15.7 -0.6
BSEG ePP PP 09 48 38.8 -0.8
KSP Ksiaz 132.58 333 ePKP PKPdf 09 46 17.3 +0.9
KSP ePP PP 09 48 38.9 -1.0
KSP ePKS 09 49 48.6
KSP ePS PS 09 58 49.6 -7.5
KSP LMZ 10 39 45.9
comp=Z,14μm,26.1s
KSP Ksiaz 132.58 333 ⇓ePKIKP PKPdf 09 46 16.5 +0.1
KSP e 09 48 39.0
KSP eSP SP 09 58 46.0 -6.3
KSP ePPS 10 00 35.0
KSP eSS SS 10 06 17.0 -0.6
KSP MLR MLR
comp=Z,22μm,21.0s,MS6.8
AKHS Akhisar 132.61 313 ⇓iP PKPdf 09 46 14.3 -2.5
MORC Moravsky Berou 132.76 331 ePKPdf PKPdf 09 46 16.8 +0.1

MORC Moravsky Berou 132.76 331 ⇓iP PKPdf 09 46 17.0 +0.3
TURN Turunc 132.81 311 ⇓iP PKPdf 09 46 17.3 +0.1
PSZ Piszkesteto 132.81 328 ePKPdf PKPdf 09 46 24.9 +8.0
PSZ LR LR
comp=Z,10μm,20.0s,MS6.5
PSZ Piszkesteto 132.81 328 ⇓iP PKPdf 09 46 26.3 +9.4
MME1 Meikle Cairn 132.86 351 P PKPdf 09 46 13.8 -2.9
MME1 Meikle Cairn 132.86 351 eP PKPdf 09 46 13.8 -2.9
DPC Dobruska-Polom 132.92 333 ePKIKP PKPpre 09 46 08.1
DPC e 09 46 16.5
DPC e 09 48 40.8
DPC MLR MLR
comp=Z,9μm,18.1s,MS6.5
DPC Dobruska-Polom 132.92 333 ePKPpre PKPpre 09 46 08.1
DPC ePKPdf PKPdf 09 46 16.5 -0.5
DPC ePP PP 09 48 40.8 -1.3
DPC AMS AMS 10 49 50.0
comp=Z,9μm,18.1s
UPC Upice 132.95 333 ePKIKP PKPdf 09 46 18.8 +1.7
UPC Upice 132.95 333 ePKPdf PKPdf 09 46 18.8 +1.7
ALN Alexandroupoli 132.97 317 P PKPdf 09 46 15.8 -1.6
VYHS Vyhne 132.99 329 ePKP PKPdf 09 46 16.7 -0.5
VYHS ePP PP 09 48 40.7 -1.9
VYHS eP PP 09 48 42.6 0.0
VYHS Vyhne 132.99 329 ePKP PKPdf 09 46 16.7 -0.5
VYHS ePP PP 09 48 42.6 0.0
KAC Achnashellach 133.02 353 P PKPdf 09 46 17.6 +0.6
KAC Achnashellach 133.02 353 eP PKPdf 09 46 17.6 +0.6
AYDN Tasoluk 133.04 312 ⇓iP PKPdf 09 46 17.9 +0.2
KPL Plockton 133.22 353 AMS AMS 10 48 05.7
comp=Z,7μm,22.2s,MS6.3
BZS Buzias 133.27 324 ⇓P PKPdf 09 46 17.3 -0.6
BZS Buzias 133.27 324 ⇓iP PKPdf 09 46 17.3 -0.5
PLD Plovdiv 133.28 319 PKIKP PKPdf 09 46 16.7 -1.3
PLD Plovdiv 133.28 319 P PKPdf 09 46 16.7 -1.3
PLD Plovdiv 133.28 319 i P PKPdf 09 46 17.6 -0.4
BLCB Balcova 133.36 313 P PKPdf 09 46 19.5 +1.2
BLCB Balcova 133.36 313 P PKPdf 09 46 19.5 +1.2
ARG Arkhangelos 133.40 310 PKIKP PKPdf 09 46 19.5 +1.1
ARG Arkhangelos 133.40 310 P PKPdf 09 46 19.5 +1.1
PGB Panagyurishte 133.40 320 i P PKPdf 09 46 17.6 -0.6
RZN Rozhen 133.48 318 i P PKPdf 09 46 17.6 -0.8
GCAM G?zelcaml? 133.50 312 ⇓iP PKPdf 09 46 18.0 -0.6
VRAC Vranov 133.53 331 ⇑P PKPdf 09 46 18.0 -0.2
VRAC Vranov 133.53 331 ⇑iP PKPdf 09 46 18.0 -0.2
BUD Budapest 133.54 328 ⇓esPKP/D pPKPdf 09 46 26.0 -2.0
PRK Paraskevi 133.55 314 PKIKP PKPdf 09 46 17.5 -1.1
PRK Paraskevi 133.55 314 eP PKPdf 09 46 20.0 +1.4
PRK Paraskevi 133.55 314 P PKPdf 09 46 17.5 -1.1
PVCC Panska Ves 133.57 334 ePKIKP PKPdf 09 46 18.4 +0.2
PVCC e 09 48 43.7
PVCC MLR MLR
comp=Z,16μm,22.5s,MS6.7
PVCC Panska Ves 133.57 334 P PKPdf 09 46 19.0 +0.8
PVCC Panska Ves 133.57 334 ePKPdf PKPdf 09 46 18.4 +0.2
PVCC ePP PP 09 48 43.7 -2.5
PVCC AMS AMS 10 46 20.0
comp=Z,16μm,22.5s
BRG Berggiesshubel 133.58 335 ePKPdf PKPdf 09 46 17.8 -0.5
BRG ePP PP 09 48 44.9 -1.3
BRG Berggiesshubel 133.58 335 i PKIKP PKPdf 09 46 18.0 -0.3
BRG pmax pmax
comp=Z,7.0nm,1.2s
BRG MLR MLR
comp=N,27μm,18.6s,MS7.0
BRG MLR MLR
comp=E,7μm,18.5s,MS7.0
BRG MLR MLR
comp=Z,6μm,18.5s,MS6.4
CLL Collm 133.64 336 ePKPdf PKPdf 09 46 17.6 -0.8
CLL ePP PP 09 48 45.2 -1.4
CLL Collm 133.64 336 ⇓iPKIKP PKPdf 09 46 17.7 -0.7
CLL i 09 46 23.8
CLL pmax pmax
comp=Z,41nm,1.0s
CLL MLR MLR
comp=Z,10μm,20.6s,MS6.5
CLL Collm 133.64 336 ⇓iPKPdf PKPdf 09 46 17.7 -0.7
comp=Z,41nm,1.0s
CLL i (sPKiKP) 09 46 23.8
CLL ePP PP 09 48 48.0 +1.4
CLL e(SKPbc) 09 49 49.0
CLL i PKSdf 09 49 56.1
comp=Z,2μm,4.1s
CLL e 09 50 47.0
CLL ePPP 09 51 46.0
CLL e 09 53 06.0
CLL eSKSac SKSac 09 53 36.0 +7.6
CLL eSKKSac SKKSac 09 55 42.0 +1.2
CLL ePS PS 09 59 04.0 -2.2
CLL ePPS 10 00 46.0
CLL e 10 01 56.0
CLL e 10 05 18.0
CLL eSS SS 10 06 28.0 -2.3
CLL ePSPS 10 07 28.0
CLL e 10 10 26.0
CLL eSSS 10 11 30.0
CLL e 10 16 12.0
CLL LmV 10 48 00.0
comp=Z,10μm,20.6s
URLA Izmir 133.69 313 ⇓iP PKPdf 09 46 18.1 -0.8
NRDL Niedersach Rie 133.81 339 ePKPdf PKPdf 09 46 17.1 -1.5
NRDL ePP PP 09 48 45.5 -2.1
KAVA Kavala 133.95 318 P PKPdf 09 46 18.2 -1.1
PRA Prague 133.97 333 PKPdf PKPdf 09 46 19.0 0.0
PRA PP PP 09 48 49.0 +0.3
PRA PKS 09 49 59.0
PRA SS SS 10 06 30.0 -4.3
PRA AMS AMS 10 47 00.0
PRU Pruhonice 133.98 333 ePKIKP PKPdf 09 46 19.1 +0.1
PRU e 09 48 46.8
PRU e 10 06 29.5
PRU MLR MLR
comp=Z,12μm,20.4s,MS6.6
PRU Pruhonice 133.98 333 P PKPdf 09 46 20.0 +1.0
PRU Pruhonice 133.98 333 ePKPdf PKPdf 09 46 19.1 +0.1
PRU ePP PP 09 48 46.8 -2.0
PRU eSS SS 10 06 29.5 -4.9
PRU AMS AMS 10 46 30.0
comp=Z,12μm,20.4s
VTS Vitosha 133.99 320 ⇓PKIKP PKPdf 09 46 19.1 -0.2
VTS Vitosha 133.99 320 P PKPdf 09 46 19.2 -0.1
VTS Vitosha 133.99 320 i P PKPdf 09 46 19.0 -0.3
VTS Vitosha 133.99 320 ⇓iP PKPdf 09 46 19.1 -0.2
LIA Limnos Island 134.01 316 P PKPdf 09 46 19.0 -0.4
LIA Limnos Island 134.01 316 eP PKPdf 09 46 18.0 -1.4
LIA Limnos Island 134.01 316 P PKPdf 09 46 19.0 -0.4
ZST Bratislava 134.05 330 ePKIKP PKPdf 09 46 19.3 +0.1
ZST e 09 48 48.5
ZST Bratislava 134.05 330 ePKP PKPdf 09 46 19.3 +0.1
ZST ePP PP 09 48 48.5 -0.8
TREC Trest 134.05 332 ePKIKP PKPdf 09 46 19.7 +0.5
TREC e 09 48 45.4
TREC MLR MLR
comp=Z,13μm,21.4s,MS6.6
TREC Trest 134.05 332 ePKPdf PKPdf 09 46 19.7 +0.5
TREC ePP PP 09 48 45.4 -3.9
TREC AMS AMS 10 44 40.0
comp=Z,13μm,21.4s
ESY Stoneypath 134.14 350 P PKPdf 09 46 18.5 -0.6
ESY Stoneypath 134.14 350 eP PKPdf 09 46 18.5 -0.6
EAB Aberfoyle 134.16 351 P PKPdf 09 46 19.6 +0.4
EAB Aberfoyle 134.16 351 eP PKPdf 09 46 19.6 +0.4
MMB Musomiste 134.17 319 i P PKPdf 09 46 18.0 -1.7
NVR Nevrokopi 134.20 318 eP PKPdf 09 46 19.5 -0.2
EDI Edinburgh 134.23 350 P PKPdf 09 46 13.9 -5.4
EDI AMS AMS 10 48 19.3
comp=Z,5μm,20.0s
EDI Edinburgh 134.23 350 eP PKPdf 09 46 13.9 -5.4
EDI AMS AMS 10 48 19.3
comp=Z,5μm,20.0s,MS6.2
CLZ Clausthal 134.25 338 ePKPdf PKPdf 09 46 19.3 -0.2
CLZ ePP PP 09 48 49.6 -0.7
EAU Auchinoon 134.35 351 P PKPdf 09 46 20.0 +0.5
EAU Auchinoon 134.35 351 eP PKPdf 09 46 20.0 +0.5
KKB Krupnik 134.44 319 i P PKPdf 09 46 19.4 -0.8
SRS Serrai 134.50 318 PKIKP PKPdf 09 46 18.5 -1.8
SRS Serrai 134.50 318 P PKPdf 09 46 18.5 -1.8
PGBU Glenifferbraes 134.54 351 P PKPdf 09 46 17.0 -2.9
PGBU AMS AMS 10 51 36.9
comp=Z,6μm,19.8s
PGBU Glenifferbraes 134.54 351 eP PKPdf 09 46 17.0 -2.9

PGBU AMS AMS 10 51 36.9
comp=Z,6µm,19.8s,MS6.3
TANN Tannenbergstha 134.54 335 ePKPdf PKPdf 09 46 19.8 -0.3
TANN ePP PP 09 48 51.4 -0.9
PKSM Moragy 134.56 327 ⇓P PKPdf 09 46 19.9 -0.4
PKSM Moragy 134.56 327 ⇓iP PKPdf 09 46 19.9 -0.3
OUR Ouranopolis 134.62 317 PKIKP PKPdf 09 46 19.2 -1.3
OUR Ouranopolis 134.62 317 P PKPdf 09 46 19.2 -1.3
GUNZ Gunzen 134.64 335 P PKPdf 09 46 20.9 +0.6
NKC Novy Kostel 134.69 335 ePKIKP PKPdf 09 46 20.8 +0.4
NKC e 09 48 52.2
NKC e 10 06 39.6
NKC MLR MLR
comp=Z,12µm,17.3s,MS6.7
NKC Novy Kostel 134.69 335 PKIKP PKPdf 09 46 21.2 +0.8
NKC Novy Kostel 134.69 335 P PKPdf 09 46 21.2 +0.8
NKC Novy Kostel 134.69 335 ePKPdf PKPdf 09 46 20.8 +0.4
NKC ePP PP 09 48 52.2 -1.0
NKC eSKP 09 49 43.8
NKC eSS SS 10 06 39.6 -3.3
NKC AMS AMS 10 54 20.0
comp=Z,12µm,17.3s
WIT Witteveen 134.71 341 ePKP PKPdf 09 46 21.4 +1.0
comp=Z,378nm,1.4s
WIT Witteveen 134.71 341 ePP PP 09 48 54.8 +1.6
MOX Moxa 134.71 336 ePDIFF Pdif 09 43 27.0 +5.8
MOX Moxa 134.71 336 ePKP PKPdf 09 46 21.9 +1.5
comp=Z,31nm,1.6s
MOX
comp=Z,34µm,20.0s
MOX Moxa 134.71 336 ePKPdf PKPdf 09 46 19.9 -0.5
MOX ePP PP 09 48 52.5 -0.9
ANWB Willy Bob 134.75 76 PFAKE 09 46 30.0 +8.6
ANWB LR LR
comp=Z,6µm,19.0s,MS6.3
IBBN Ibbenburen 134.78 340 ePKPdf PKPdf 09 46 20.1 -0.4
IBBN ePP PP 09 48 52.4 -1.3
IBBN eSS SS 10 06 48.8 +5.0
GRGR Grenville 134.79 84 PFAKE 09 46 30.0 +8.4
GRGR LR LR
comp=Z,6µm,19.0s,MS6.3
SOH Sokhos 134.80 318 PKIKP PKPdf 09 46 21.7 +0.8
SOH Sokhos 134.80 318 P PKPdf 09 46 21.7 +0.8
ESK Eskdalemuir 134.82 350 P PKPdf 09 46 16.9 -3.6
ESK AMS AMS 10 47 43.5
comp=Z,7µm,22.0s
ESK Eskdalemuir 134.82 350 eP PKPdf 09 46 16.9 -3.6
ESK AMS AMS 10 47 43.5
comp=Z,7µm,22.0s,MS6.3
ESK Eskdalemuir 134.82 350 PFAKE 09 46 30.0 +10
ESK LR LR
comp=Z,8µm,21.0s,MS6.4
CONA Conrad Observa 134.84 330 ⇑iPKIKP PKiKP 09 46 21.0 -1.2
comp=Z,41nm,1.1s,SNR=12
PLG Polygyros 134.96 317 PKIKP PKPdf 09 46 21.2 0.0
PLG Polygyros 134.96 317 eP PKPdf 09 46 20.0 -1.2
PLG Polygyros 134.96 317 P PKPdf 09 46 21.2 0.0
APE Apeiranthos 135.00 312 ⇓PKIKP PKPdf 09 46 19.6 -1.8
APE Apeiranthos 135.00 312 P PKPdf 09 46 19.8 -1.6
APE Apeiranthos 135.00 312 ⇓iP PKPdf 09 46 19.6 -1.8
PAIG Paliouri 135.02 317 PKIKP PKPdf 09 46 21.8 +0.5
PAIG Paliouri 135.02 317 P PKPdf 09 46 21.8 +0.5
KHC Kasperske Hory 135.03 333 ePKPdf PKPdf 09 46 20.8 -0.3
KHC e 09 49 53.0
KHC Kasperske Hory 135.03 333 ePKPpre PKPpre 09 46 09.8
KHC ePKPdf PKPdf 09 46 20.5 -0.5
KHC ePP PP 09 48 55.7 +0.2
KHC eSKP 09 49 48.3
KHC eSS SS 10 06 43.4 -3.8
KHC AMS AMS 10 43 50.0
comp=Z,11µm,21.8s
VAY Valandovo 135.06 319 PKIKP PKPdf 09 46 21.3 0.0
VAY Valandovo 135.06 319 ⇓eP PKPdf 09 46 19.0 -2.3
VAY Valandovo 135.06 319 P PKPdf 09 46 21.3 0.0
HORT Hortiatis 135.08 318 P PKPdf 09 46 21.8 +0.4
HORT Hortiatis 135.08 318 P PKPdf 09 46 21.8 +0.4
DIVS Divibare 135.10 324 P PKPdf 09 46 21.3 0.0
ROTZ Rotzenmuhle 135.15 335 ePKPdf PKPdf 09 46 21.0 -0.2
ROTZ ePP PP 09 48 55.4 -0.7
ROTZ eSS SS 10 06 52.4 +4.0
THE Thessaloniki 135.15 318 PKIKP PKPdf 09 46 20.1 -1.4
THE Thessaloniki 135.15 318 P PKPdf 09 46 20.1 -1.4
GEC2 GERESS Array S 135.19 333 ePKPdf PKPdf 09 46 20.9 -0.4
GEC2 ePP PP 09 48 55.4 -1.1
GEC2 eSS SS 10 06 52.2 +3.2
UBBA Unterbreizbach 135.21 337 ePKPdf PKPdf 09 46 20.9 -0.4
UBBA ePP PP 09 48 55.5 -0.9
AOS Alonnisos 135.24 316 P PKPdf 09 46 21.3 -0.4
AOS Alonnisos 135.24 316 P PKPdf 09 46 21.3 -0.4
ZKR Zakros 135.25 309 P PKPdf 09 46 21.3 -0.6
ZKR Zakros 135.25 309 P PKPdf 09 46 21.3 -0.6
WET Wettzell 135.33 334 ePKPdf PKPdf 09 46 21.4 -0.2
WET ePP PP 09 48 56.4 -0.9
WET eSS SS 10 06 53.8 +3.1
WET Wettzell 135.33 334 P PKPdf 09 46 22.0 +0.4
WTSB Winterswijk 135.39 340 ePKP PKPdf 09 46 21.4 -0.3
comp=Z,104nm,1.2s
WTSB Winterswijk 135.39 340 ePP PP 09 48 54.8 -2.7
SKO Skopje 135.43 320 PKIKP PKPdf 09 46 24.1 +2.1
SKO Skopje 135.43 320 ⇓eP PKPdf 09 46 22.1 +0.1
SKO Skopje 135.43 320 P PKPdf 09 46 24.1 +2.1
GAL1 Galloway 135.49 351 P PKPdf 09 46 18.8 -2.9
GAL1 AMS AMS 10 49 08.5
comp=Z,5µm,21.0s
GAL1 Galloway 135.49 351 eP PKPdf 09 46 18.8 -2.9
GAL1 AMS AMS 10 49 08.5
comp=Z,5µm,21.0s,MS6.2
GRF Grafenberg Arr 135.61 335 ePKPdf PKPdf 09 46 21.8 -0.3
GRF ePP PP 09 48 58.1 -1.0
GRF eSS SS 10 06 58.3 +4.3
GRF eL 10 49 52.2
comp=Z,16µm,21.6s
XOR Xorichti 135.62 316 P PKPdf 09 46 20.4 -2.0
XOR Xorichti 135.62 316 P PKPdf 09 46 20.4 -2.0
NEO Neokhori 135.62 316 eP PKPdf 09 46 23.5 +1.0
TSUM Tsumeb 135.66 228 ePKPdf PKPdf 09 46 22.9 -0.2
TSUM LR LR
comp=Z,11µm,20.0s,MS6.6
KOGS Kog 135.66 329 ePKPdf PKPdf 09 46 21.6 -0.7
KOGS ePP PP 09 48 56.6 -2.9
BUG Bochum--Univer 135.68 340 ePKPdf PKPdf 09 46 21.7 -0.5
BUG ePP PP 09 48 58.0 -1.3
XRY Khrisi 135.74 309 eP PKPdf 09 46 25.0 +2.2
LAST Lasithi 135.79 310 P PKPdf 09 46 22.7 -0.2
LAST Lasithi 135.79 310 P PKPdf 09 46 22.7 -0.2
HPK Haverah Park 135.82 348 P PKPdf 09 46 19.0 -3.4
HPK AMS AMS 10 50 34.0
comp=Z,8µm,20.2s
HPK Haverah Park 135.82 348 eP PKPdf 09 46 19.0 -3.4
HPK AMS AMS 10 50 34.0
comp=Z,8µm,20.2s,MS6.4
ATHU Athens Univers 135.86 314 P PKPdf 09 46 23.9 +1.0
KRUS Krusevo 135.88 320 eP PKPdf 09 46 21.5 -1.4
ATH Athens Observa 135.91 314 PKIKP PKPdf 09 46 23.9 +0.9
ATAL Atalanti 136.06 315 P PKPdf 09 46 23.6 +0.3
BCI Bajram Curri 136.06 322 ePN PKPdf 09 46 24.0 +0.8
LKR Lokris 136.09 315 P PKPdf 09 46 21.8 -1.5
LKR Lokris 136.09 315 eP PKPdf 09 46 22.5 -0.8
LKR Lokris 136.09 315 P PKPdf 09 46 21.8 -1.5
KZN Kozani 136.10 318 PKIKP PKPdf 09 46 23.6 +0.3
KZN Kozani 136.10 318 eP PKPdf 09 46 23.0 -0.3
KZN Kozani 136.10 318 P PKPdf 09 46 23.6 +0.3
PERS Pernice 136.10 330 ePKPdf PKPdf 09 46 22.3 -0.8
FNA Florina 136.11 319 PKIKP PKPdf 09 46 22.3 -1.0
FNA Florina 136.11 319 P PKPdf 09 46 22.3 -1.0
TNS Taunus Mts 136.27 338 ePKPdf PKPdf 09 46 23.1 -0.2
TNS ePP PP 09 49 02.4 -0.7
TNS eSS SS 10 07 06.6 +4.9
OHR Ohrid 136.30 320 PKIKP PKPdf 09 46 24.0 +0.3
OHR Ohrid 136.30 320 ⇓eP PKPdf 09 46 22.3 -1.4
OHR Ohrid 136.30 320 P PKPdf 09 46 24.0 +0.3
THL Klokotos Trika 136.31 317 eP PKPdf 09 46 26.5 +2.8
THL Klokotos Trika 136.31 317 P PKPdf 09 46 22.2 -1.5
PUK Puka 136.35 321 ePN PKPdf 09 46 23.5 -0.2
SIVA Sivas 136.35 310 P PKPdf 09 46 24.1 +0.1
SIVA Sivas 136.35 310 eP PKPdf 09 46 24.5 +0.5
SIVA Sivas 136.35 310 P PKPdf 09 46 24.1 +0.1
AGG Agios Georgios 136.37 316 PKIKP PKPdf 09 46 22.7 -1.2
AGG Agios Georgios 136.37 316 P PKPdf 09 46 22.7 -1.2
LTK Loutraki 136.41 315 P PKPdf 09 46 22.5 -1.5
RJOB Jochberg 136.41 332 ePKPdf PKPdf 09 46 23.0 -0.7

RJOB ePP PP 09 49 03.9 -0.3
DID Didima 136.46 314 P PKPdf 09 46 24.0 -0.1
NEST Nestorio 136.51 319 P PKPdf 09 46 25.4 +1.3
DSF Desfina 136.53 315 P PKPdf 09 46 25.0 +0.8
SIND Sindeldorf 136.53 336 P PKPdf 09 46 24.9 +1.1
KBN Korca 136.57 319 ePN PKPdf 09 46 25.5 +1.3
TOD Tromm 136.64 337 P PKPdf 09 46 25.7 +1.7
KBA Koelnbreinsper 136.64 331 ⇑iPKPdf PKPdf 09 46 23.8 -0.3
comp=Z,48nm,1.1s,SNR=10
VAM Vamos 136.66 311 eP PKPdf 09 46 29.5 +5.0
HGN Heimansgroeve 136.70 340 ePKP PKPdf 09 46 22.5 -1.6
comp=Z,71nm,3.3s
HGN Heimansgroeve 136.70 340 ePP PP 09 49 06.4 +0.7
comp=Z,19nm,31.5s
BEBN Eben Emael 136.76 340 APKP PKPdf 09 46 26.3 +2.1
TIR Tirane 136.76 321 PKIKP PKPdf 09 46 26.1 +1.6
TIR MLR MLR
comp=Z,10µm,22.0s,MS6.5
TIR Tirane 136.76 321 P PKPdf 09 46 26.1 +1.6
EVR Evrytania 136.78 316 eP PKPdf 09 46 28.5 +3.9
LJU Ljubljana 136.81 329 ePKIKP PKPdf 09 46 24.0 -0.4
LJU e 09 49 03.7
LJU Ljubljana 136.81 329 ePKPdf PKPdf 09 46 24.0 -0.5
LJU ePP PP 09 49 03.6 -3.1
LJU e 10 06 55.2
LJU e 10 12 56.4
LJU e 10 18 03.5
MEM Membach 136.81 340 PKP PKPdf 09 46 24.0 -0.3
MEM APKP 09 46 27.0
BOJS Bojanci 136.81 328 ePKPdf PKPdf 09 46 24.6 +0.2
TRIZ Trizonia 136.87 316 P PKPdf 09 46 24.0 -0.8
KARN Karanos 136.87 311 eP PKPdf 09 46 29.0 +4.1
KARN Karanos 136.87 311 P PKPdf 09 46 24.8 -0.1
ABH Alteburg 136.88 338 PKP PKPdf 09 46 23.2 -1.2
BBGH Gun Hill 136.88 83 PFAKE 09 46 40.0 +15
BBGH LR LR
comp=Z,8µm,19.0s,MS6.5
GUR Goura 136.88 315 P PKPdf 09 46 24.5 -0.3
HDH Heidenheim-Cha 136.89 335 P PKPdf 09 46 27.2 +2.7
WPM1 Penmaenmawr 136.91 350 P PKPdf 09 46 24.4 0.0
WPM1 Penmaenmawr 136.91 350 eP PKPdf 09 46 24.4 0.0
EFP Efpalio 136.95 316 P PKPdf 09 46 26.9 +1.9
GVD Gavdhos 136.97 310 ePKPdf PKPdf 09 46 23.7 -1.4
GVD ePP PP 09 49 06.6 -2.0
GVD Gavdhos 136.97 310 P PKPdf 09 46 24.9 -0.2
LAKA Lakka 136.99 315 P PKPdf 09 46 24.5 -0.5
JAN Janina 137.04 318 eP PKPdf 09 46 29.0 +3.9
CADS Cadrg 137.06 330 ePKPdf PKPdf 09 46 24.0 -0.9
CADS e 09 47 09.3
CADS ePP PP 09 49 03.6 -4.7
CADS e 09 50 08.2
UPR University Cam 137.10 316 P PKPdf 09 46 27.1 +1.9
VLX Vlachokerasia 137.12 314 P PKPdf 09 46 24.6 -0.7
VOY Vojsko 137.13 330 ePKPdf PKPdf 09 46 24.5 -0.5
VOY e 09 46 28.5
VOY e 09 49 49.8
VOY e 09 50 06.2
STU Stuttgart 137.16 336 ePKPdf PKPdf 09 46 24.9 -0.1
STU ePP PP 09 49 07.7 -1.0
STU Stuttgart 137.16 336 ePKPdf PKPdf 09 46 24.4 -0.6
STU ePP PP 09 49 10.1 +1.3
BCLA Clavier 137.20 340 PKP PKPdf 09 46 24.8 -0.3
BCLA APKP 09 46 28.7
RUP Ruppelstein 137.21 339 PKP PKPdf 09 46 22.4 -2.7
KNDS Knezji Dol 137.24 329 ePKPdf PKPdf 09 46 24.8 -0.4
KNDS e 09 56 04.0
WTTA Wattenberg 137.29 333 ⇓iPKPdf PKPdf 09 46 21.2 -4.1
comp=Z,112nm,1.2s,SNR=20
BUCH Bad Urach 137.35 336 P PKPdf 09 46 26.0 +0.6
TRI Trieste 137.42 330 ePKIKP PKPdf 09 46 25.4 -0.2
TRI MLR MLR
comp=Z,10µm,20.0s,MS6.5
RLS Riolos of Patr 137.43 315 eP PKPdf 09 46 26.0 +0.1
IGT Igoumenitsa 137.45 318 PKIKP PKPdf 09 46 27.9 +2.1
IGT Igoumenitsa 137.45 318 P PKPdf 09 46 27.9 +2.1
SNF Seneffe 137.45 341 PKP PKPdf 09 46 25.2 -0.3
SNF APKP 09 46 28.0
CAM4 Nova Friburgo 137.47 141 eP PKPdf 09 46 17.3 -9.1
CAM4 i 09 46 19.7
CAM4 i 09 46 22.9
CAM4 i 09 46 31.3
CAM4 i 09 46 33.7
CAM4 i 09 46 39.6
CAM4 i 09 46 53.9
SRN Sarande 137.48 319 ePN PKPdf 09 46 25.5 -0.4
LANF Langenberg 137.53 337 PKP PKPdf 09 46 20.0 -5.7
ITM Ithomi 137.53 314 P PKPdf 09 46 27.5 +1.4
ITM Ithomi 137.53 314 eP PKPdf 09 46 27.5 +1.4
ITM Ithomi 137.53 314 P PKPdf 09 46 27.5 +1.4
WLF Walferdange 137.56 339 APKP PKPdf 09 46 28.7 +3.0
WLF Walferdange 137.56 339 ePKPdf PKPdf 09 46 26.4 +0.7
WLF ePP PP 09 49 10.6 -0.5
WLF Walferdange 137.56 339 ePKIKP PKPdf 09 46 24.6 -1.1
WLF e 09 49 11.6
WLF MLR MLR
comp=Z,13µm,21.0s,MS6.7
WLF Walferdange 137.56 339 ePKPdf PKPdf 09 46 24.6 -1.1
WLF ePP PP 09 49 11.6 +0.4
WLF LR LR
comp=Z,13µm,21.0s,MS6.7
LKD2 Lefkada island 137.62 317 P PKPdf 09 46 25.3 -0.9
GIVF Givet 137.63 341 ePKIKP PKPdf 09 46 22.0 -3.8
comp=Z,168nm,1.2s
UBR Ueberruh 137.64 334 P PKPdf 09 46 26.6 +0.7
KEK Kerkira 137.70 319 P PKPdf 09 46 25.1 -1.2
KEK Kerkira 137.70 319 eP PKPdf 09 46 30.0 +3.7
KEK Kerkira 137.70 319 P PKPdf 09 46 25.1 -1.2
DOU Dourbes 137.71 341 PKP PKPdf 09 46 25.7 -0.3
DOU APKP 09 46 28.6
GUT Gutenstein 137.75 335 P PKPdf 09 46 26.9 +0.8
ELSH Elham, Standar 137.79 344 P PKPdf 09 46 23.3 -2.8
ELSH AMb AMB 09 46 32.2
comp=Z,176nm,5.1s
ELSH Elham, Standar 137.79 344 eP PKPdf 09 46 23.3 -2.8
ELSH AMb AMB 09 46 32.2
comp=Z,176nm,5.1s
PYL PYLOS 137.79 314 P PKPdf 09 46 26.4 -0.2
BFO Black Forest 137.85 336 ePKPdf PKPdf 09 46 26.0 -0.3
BFO ePP PP 09 49 11.9 -1.2
BFO Black Forest 137.85 336 ePKIKP PKPdf 09 46 27.1 +0.8
BFO MLR MLR
comp=Z,9µm,21.0s,MS6.5
BFO Black Forest 137.85 336 ePKPdf PKPdf 09 46 27.1 +0.8
BFO LR LR
comp=Z,9µm,21.0s,MS6.5
SPAK Spaichingen-Ko 137.86 336 PKP PKPdf 09 46 21.5 -4.8
BAIF Baives 137.87 341 ePKIKP PKPdf 09 46 23.7 -2.6
comp=Z,94nm,1.3s
FETA Feichten 137.88 333 ⇑iPKPdf PKPdf 09 46 20.5 -5.9
comp=Z,82nm,1.2s,SNR=17
MCH1 Michaelchurch 137.95 348 P PKPdf 09 46 25.7 -0.7
MCH1 AMS AMS 10 54 31.5
comp=Z,8µm,19.7s
MCH1 Michaelchurch 137.95 348 eP PKPdf 09 46 25.7 -0.7
MCH1 AMS AMS 10 54 31.5
comp=Z,8µm,19.7s,MS6.4
VLS Valsamata 137.97 316 PKIKP PKPdf 09 46 26.4 -0.4
VLS Valsamata 137.97 316 eP PKPdf 09 46 26.0 -0.8
VLS Valsamata 137.97 316 P PKPdf 09 46 26.4 -0.4
DAVA Damuels 138.04 334 P PKPdf 09 46 18.6 -8.1
comp=Z,36nm,0.9s,SNR=6.8
SWN1 Swindon 138.16 347 P PKPdf 09 46 24.5 -2.2
SWN1 AMS AMS 10 46 35.1
comp=Z,6µm,20.6s
SWN1 Swindon 138.16 347 eP PKPdf 09 46 24.5 -2.2
SWN1 AMS AMS 10 46 35.1
comp=Z,6µm,20.6s,MS6.3
CDF Champ du Feu 138.19 337 ePKIKP PKPdf 09 46 21.8 -5.1
comp=Z,156nm,1.4s
WOL Wolverton 138.22 347 P PKPdf 09 46 25.4 -1.5
WOL AMS AMS 10 53 47.3
comp=Z,5µm,21.1s
WOL Wolverton 138.22 347 eP PKPdf 09 46 25.4 -1.5
WOL AMS AMS 10 53 47.3
comp=Z,5µm,21.1s,MS6.2
ECH Echery 138.40 337 PKP PKPdf 09 46 20.2 -7.1
MOF Molkenrain 138.71 337 PKP PKPdf 09 46 19.3 -8.6
MOF Molkenrain 138.71 337 P PKPdf 09 46 29.3 +1.4
THEF They Montfort 138.83 338 PKP PKPdf 09 46 22.4 -5.7
HINF Hinteralfeld 138.85 337 ePKIKP PKPdf 09 46 23.5 -4.6
comp=Z,147nm,1.4s
BBS Basel-Blauen 138.88 336 P PKPdf 09 46 30.9 +2.7

HAU Haudompre 138.88 338 ePKIKP PKPdf 09 46 23.5 -4.7
comp=Z,99nm,1.2s
HAU eMLR MLR
comp=Z,9µm,20.0s,MS6.2
HAU Haudompre 138.88 338 ePKPdf PKPdf 09 46 23.5 -4.7
HAU LR LR
comp=Z,9µm,20.0s,MS6.5
MEZF Maizieres J'vi 138.93 339 ePKIKP PKPdf 09 46 25.2 -3.1
comp=Z,193nm,1.2s
HTL Hartland 139.19 349 P PKPdf 09 46 25.4 -3.3
HTL AMS AMS 10 54 53.6
comp=Z,7µm,20.4s
HTL Hartland 139.19 349 eP PKPdf 09 46 25.4 -3.3
HTL AMS AMS 10 54 53.6
comp=Z,7µm,20.4s,MS6.4
LOMF Lomont 139.24 337 PKP PKPdf 09 46 21.7 -7.2
DYA Yadsworthy 139.62 349 AMS AMS 10 48 48.7
comp=Z,6µm,23.8s,MS6.2
AQU L'Aquila 139.93 326 ePKIKP PKPdf 09 46 29.7 -0.6
AQU e 09 49 22.8
AQU MLR MLR
comp=Z,14µm,21.0s,MS6.7
AQU L'Aquila 139.93 326 PKIKP PKPdf 09 46 30.2 -0.1
AQU L'Aquila 139.93 326 ⇑iP PKPpre 09 46 22.3
CABF La Chapelle 140.14 337 ePKIKP PKPdf 09 46 26.3 -4.2
comp=Z,167nm,1.3s
VLC Villacollemand 140.19 331 PFAKE 09 46 40.0 +9.3
VLC LR LR
comp=Z,11µm,20.0s,MS6.6
FLN La Foliniere 140.40 344 ePKIKP PKPdf 09 46 28.0 -2.9
comp=Z,163nm,1.1s
FLN eMLR MLR
comp=Z,18µm,21.2s,MS6.5
FLN La Foliniere 140.40 344 ePKPdf PKPdf 09 46 28.0 -2.9
FLN LR LR
comp=Z,18µm,21.3s,MS6.8
LOR Lormes 140.40 339 ePKIKP PKPdf 09 46 26.0 -5.0
comp=Z,131nm,1.1s
LOR eMLR MLR
comp=Z,12µm,20.0s,MS6.3
LOR Lormes 140.40 339 ePKPdf PKPdf 09 46 26.0 -5.0
LOR LR LR
comp=Z,12µm,20.0s,MS6.6
LDF La Druitiere 140.46 344 ePKIKP PKPdf 09 46 27.8 -3.2
comp=Z,25nm,0.9s
SSF Saint Saulge 140.70 339 ePKIKP PKPdf 09 46 26.6 -4.9
comp=Z,98nm,1.1s
LPL La Plagne 140.78 335 ePKIKP PKPdf 09 46 26.8 -4.9
comp=Z,146nm,1.3s
LPG La Plagne 140.78 335 ePKIKP PKPdf 09 46 26.9 -4.8
comp=Z,61nm,0.9s
GRR Gorron 140.84 345 ePKIKP PKPdf 09 46 28.5 -3.2
comp=Z,87nm,1.1s
SMF Signal de Mont 140.94 339 ePKIKP PKPdf 09 46 26.9 -5.1
comp=Z,158nm,1.5s
AVF Avril sur Loir 140.99 339 ePKIKP PKPdf 09 46 26.8 -5.3
comp=Z,75nm,1.2s
CEL Celeste 141.03 319 ePKPdf PKPdf 09 46 25.2 -7.2
CEL ePP PP 09 49 33.7 +0.5
CEL LR LR
comp=Z,7µm,20.0s,MS6.4
BNI Bardonecchia 141.17 335 ePKHKP PKPdf 09 46 23.8 -8.7
BNI MLR MLR
comp=Z,17µm,22.0s,MS6.8
BGF Bois d'Agland 141.37 340 ePKIKP PKPdf 09 46 28.1 -4.6
SGMF Saint Gilles 141.39 346 ePKIKP PKPdf 09 46 28.3 -4.4
comp=Z,234nm,1.5s
MBDF Montbardon 141.40 334 ePKIKP PKPdf 09 46 28.2 -4.7
comp=Z,96nm,1.3s
ROSF Rostrenen 141.47 347 ePKIKP PKPdf 09 46 27.6 -5.3
comp=Z,76nm,1.0s
SURF Saint Ours 141.57 334 PKP PKPdf 09 46 31.4 -1.8
SURF Saint Ours 141.57 334 eP PKPdf 09 46 31.4 -1.8
ORIF Oris-en-Rattie 141.61 335 ePKIKP PKPdf 09 46 26.8 -6.4
comp=Z,123nm,1.2s
ORIF eMLR MLR
comp=Z,13µm,22.2s,MS6.3
SAOF Saorge 141.64 333 PKP PKPdf 09 46 28.2 -5.1
AUTN L'Aution 141.69 333 PKP PKPdf 09 46 27.7 -5.7
AGO Saint Agoulin 141.70 339 PKP PKPdf 09 46 28.4 -5.0
TOUF Mont Tournerai 141.76 333 PKP PKPdf 09 46 28.9 -4.6
SBF Sospel 141.79 333 ePKIKP PKPdf 09 46 29.3 -4.3
comp=Z,166nm,1.0s
LUCF Luceram 141.81 333 PKP PKPdf 09 46 27.2 -6.4
TCF Toulx Ste Croi 141.81 340 ePKIKP PKPdf 09 46 28.8 -4.8
comp=Z,97nm,1.1s
SSB Saint Sauveur 141.84 337 PKP PKPdf 09 46 28.7 -4.9
QUIF Quistinic 141.84 347 ePKIKP PKPdf 09 46 30.0 -3.6
comp=Z,190nm,1.7s
MVIF Mont Vial 141.89 333 PKP PKPdf 09 46 29.7 -4.1
PYM Petit Puy Mans 142.01 339 PKP PKPdf 09 46 29.5 -4.4
PGF Pioggiola 142.07 330 ePKIKP PKPdf 09 46 30.1 -4.0
comp=Z,259nm,1.2s
VIVF Saint-Julien-l 142.15 336 ePKIKP PKPdf 09 46 28.1 -6.1
comp=Z,165nm,1.4s
MFF Saint Martin d 142.27 343 ePKIKP PKPdf 09 46 30.1 -4.3
comp=Z,170nm,1.3s
LBL Lubilhac 142.37 338 PKP PKPdf 09 46 30.4 -4.2
FRF La Foret Royal 142.38 333 ePKIKP PKPdf 09 46 30.4 -4.3
comp=Z,214nm,1.4s
SMRF Simiane la Rot 142.51 335 ePKIKP PKPdf 09 46 31.8 -3.1
comp=Z,255nm,1.5s
LMR La Mourre 142.62 333 ePKIKP PKPdf 09 46 30.3 -4.8
comp=Z,334nm,1.5s
RJF Les Rejaudoux 142.91 340 ePKIKP PKPdf 09 46 31.5 -4.0
comp=Z,412nm,1.6s
RJF eMLR MLR
comp=Z,13µm,19.5s,MS6.4
RJF Les Rejaudoux 142.91 340 ePKPdf PKPdf 09 46 31.5 -4.0
RJF LR LR
comp=Z,13µm,19.5s,MS6.7
CAF Calviac 143.06 339 ePKIKP PKPdf 09 46 32.4 -3.4
comp=Z,222nm,1.4s
LASF Ste Croix 143.12 337 ePKIKP PKPdf 09 46 31.8 -4.2
comp=Z,488nm,1.8s
WDD Wield Dalam 143.30 317 PFAKE 09 46 50.0 +13
WDD LR LR
comp=Z,5µm,21.0s,MS6.2
LFF La Frestale 143.49 341 ePKIKP PKPdf 09 46 32.7 -3.9
comp=Z,646nm,1.4s
VSL Villasalto 144.10 326 ePKPdf PKPdf 09 46 35.7 -2.2
VSL LR LR
comp=Z,7µm,22.0s,MS6.4
MTLF Montolieu 144.37 338 ePKIKP PKPdf 09 46 36.6 -1.6
comp=Z,1µm,1.5s
LRDF Laroque-de-Fa 144.59 337 PKP PKPdf 09 46 36.3 -2.3
EJON La Jonquera 144.87 336 PKP PKPdf 09 46 41.4 +2.3
FILF Fillols 144.91 337 PKP PKPdf 09 46 38.0 -1.1
CARF Carcanieres 144.95 337 PKP PKPdf 09 46 38.0 -1.2
CLLI Llivia 145.20 337 PKP PKPdf 09 46 39.0 -0.6
MELF Melles 145.31 339 PKP PKPdf 09 46 38.6 -1.2
EPF Esparros 145.31 339 ePKIKP PKPdf 09 46 37.9 -1.9
comp=Z,1µm,1.8s
LABF Labassere 145.39 340 PKP PKPdf 09 46 39.0 -0.9
RESF Ens 145.51 339 PKP PKPdf 09 46 40.6 +0.4
REYF Montagne du Re 145.53 340 PKP PKPdf 09 46 39.4 -0.8
VIEF Viey 145.55 340 PKP PKPdf 09 46 40.4 +0.2
ORDF Ordiarp 145.57 341 PKP PKPdf 09 46 38.8 -1.5
CSOR Sort 145.60 338 PKP PKPdf 09 46 40.9 +0.5
CFON Fontmartina 145.63 336 PKP PKPdf 09 46 40.4 -0.1
OSSF Osses 145.64 341 PKP PKPdf 09 46 39.3 -1.1
EBIE Bielsa 145.69 339 PKP PKPdf 09 46 41.0 +0.6
ETSF Etsaut 145.74 340 ePKIKP PKPdf 09 46 40.7 +0.2
comp=Z,1µm,1.5s
EALK Alkurruntz 145.75 342 PKP PKPdf 09 46 41.2 +0.6
LARF Larrau 145.75 341 PKP PKPdf 09 46 40.2 -0.4
SJPF Ste Jean 145.76 341 ePKIKP PKPdf 09 46 39.6 -1.0
comp=Z,295nm,1.2s
ELIZ Elizondo 145.81 342 PKP PKPdf 09 46 41.4 +0.7
EMIR Miracle 145.86 337 PKP PKPdf 09 46 41.0 +0.2
ELAN Lanestosa 146.29 344 PKP PKPdf 09 46 41.4 -0.1
EPOB Poblet 146.51 337 PKP PKPdf 09 46 42.4 +0.5
EARI Arriondas 146.67 346 PKP PKPbc 09 46 43.7 0.0
ESAC San Caprasio 146.75 339 PKP PKPab 09 46 44.6 -0.6
EPON Pontenova 147.06 349 PKP PKPdf 09 46 43.7 +1.0
ERTA Horta de San J 147.13 338 PKP PKPdf 09 46 42.8 -0.2
ETOS Mallorca 147.13 334 PKP PKPdf 09 46 43.2 +0.2
CMAH Djebel Manchou 147.23 325 P PKPdf 09 46 43.6 +0.3
CAEH 'Ain El Ouahch 147.44 325 P PKPab 09 46 47.9 -0.2
ABSA Djebel Ababsia 147.44 324 P PKPbc 09 46 45.8 -0.3
EMAZ Mazaricos 147.74 351 PKP PKPbc 09 46 45.4 -1.3
CKFL Kef-Lekhel 147.78 325 P PKPbc 09 46 46.9 -0.2
EMOS Mosqueruela 147.95 338 PKP PKPdf 09 46 45.1 +0.7
ERUA La Rua 147.96 348 PKP2 PKPbc 09 46 46.8 -0.5
CASM Ain Smara 148.01 325 P PKPbc 09 46 47.5 -0.2

ETOR	Torete	148.09 341	PKP2	PKPbc	09 46 47.2	-0.5
DFRA	Djebel Bou Aff	148.14 326	P	PKPbc	09 46 47.9	-0.1
CTEI	Djebel Teioual	148.20 325	P	PKPbc	09 46 48.5	+0.3
ECAL	Calabor	148.31 348	PKP	PKPdf	09 46 44.8	-0.1
EIBI	Ibiza	148.38 335	PKP	PKPdf	09 46 46.1	+1.0
PBRG	Braganca	148.44 347	ePKPdf	PKPdf	09 46 45.3	+0.2
EZAM	Zamans	148.48 350	PKP2	PKPbc	09 46 49.0	+0.3
ELOB	Lobios	148.64 349	PKP	PKPdf	09 46 45.3	-0.1
SET	Setif	148.66 326	P	PKPab	09 46 51.0	-1.9
CKHR	Kef el Ahmar	148.73 326	P	PKPbc	09 46 49.5	-0.1
PCAB	Cabril	148.79 349	ePKPdf	PKPdf	09 46 46.5	+0.8
GUD	Guadarrama	148.90 343	PKP	PKPdf	09 46 45.4	-0.5
MVO	Moncorvo	149.12 348	ePKPdf	PKPdf	09 46 46.1	-0.1
MVO	Moncorvo	149.12 348	ePP	PP	09 50 20.2	-0.3
MVO			eSS	SS	10 09 33.4	+3.6
MVO			eP		10 15 45.2	
MVO			eLR	LR	10 47 04.7	
	comp=Z,8μm,18.0s					
MVO	Moncorvo	149.12 348	PKP	PKPdf	09 46 46.2	0.0
PVRL	Vila Real	149.15 349	ePKPdf	PKPdf	09 46 47.4	+1.1
EBEN	Beniarda	149.30 336	PKP	PKPdf	09 46 47.0	+0.4
PVIS	Viseu	149.72 349	ePKPdf	PKPdf	09 46 47.0	-0.2
ESBB	Sonseca Array	149.73 342	PKP	PKPdf	09 46 47.3	+0.1
ESDC	Sonseca Array	149.73 342	PKP	PKPdf	09 46 47.5	+0.2
	comp=Z,15nm,1.0s,baz=348,slow=2.8,SNR=13					
ESDC			PKPbc	PKPbc	09 46 52.5	+0.5
	comp=Z,64nm,1.1s,baz=9.2,slow=2.6,SNR=26					
ESDC			PP	PP	09 50 16.0	-8.2
	comp=Z,8.1nm,1.1s,baz=19,slow=7.1,SNR=6.6					
ESDC	Sonseca Array	149.73 342	PKP	PKPdf	09 46 47.2	-0.1
ESLA	Sonseca Array	149.73 342	ePKPdf	PKPdf	09 46 47.6	+0.4
ESLA			ePKPbc	PKPbc	09 46 52.6	+0.7
ESLA			LR	LR		
	comp=Z,55μm,20.0s,MS7.3					
ETOB	Tobarra	149.85 338	PKP	PKPdf	09 46 48.0	+0.5
EMHD	Djebel Mahouad	149.94 329	P	PKPdf	09 46 48.0	+0.3
EPLA	Plasencia	149.95 346	PKP	PKPdf	09 46 48.2	+0.6
MTE	Manteigas	149.96 348	ePKPdf	PKPdf	09 46 46.4	-1.2
MTE	Manteigas	149.96 348	ePP	PP	09 50 26.1	+0.7
MTE			eSS	SS	10 09 35.7	-3.5
MTE			eP		10 16 00.0	
MTE			eLQ		10 40 59.8	
MTE			eLR	LR	10 46 56.7	
	comp=Z,8μm,20.0s					
MTE	Manteigas	149.96 348	ePKPbc	PKPdf	09 46 47.6	0.0
MTE			LR	LR		
	comp=Z,9μm,22.0s,MS6.5					
PAB	San Pablo	149.97 343	ePKHKP	PKPdf	09 46 47.6	0.0
PAB			e		09 46 53.6	
PAB			MLR	MLR		
	comp=Z,10μm,20.0s,MS6.6					
PCED	Cedros	150.12 21	ePKP	PKPbc	09 46 54.3	+1.4
CALA	Caldeira	150.16 21	ePKP	PKPbc	09 46 54.7	+1.7
ROSA	Rosais	150.20 20	ePKP	PKPbc	09 46 54.5	+1.4
PMAN	Manadas	150.33 20	ePKP	PKPbc	09 46 54.5	+1.1
PCAN	Candelaria	150.34 21	ePKP	PKPbc	09 46 54.2	+0.7
EMUR	La Murta	150.44 337	PKP	PKPdf	09 46 47.3	-1.1
PCBR	Castelo Branco	150.48 347	ePKPdf	PKPdf	09 46 47.7	-0.7
PID	Ribeirinha	150.49 20	ePKP	PKPbc	09 46 56.2	+2.4
EBNR	Beni Rached	150.56 331	P	PKPbc	09 46 54.2	+0.1
CART	Cartagena	150.57 336	ePKPbc	PKPbc	09 46 53.3	-0.8
ADH	Angra Heroismo	150.59 19	ePKP	PKPbc	09 46 55.0	+0.9
ECHA	Ech Chlef	150.75 331	P	PKPbc	09 46 54.5	0.0
PMRV	Marv??o	150.86 347	ePKPdf	PKPdf	09 46 49.0	0.0
PMRV			eP		10 16 09.4	
PMRV			eLQ		10 41 19.4	
PMRV			eLR	LR	10 49 33.6	
	comp=Z,11μm,18.0s					
PMRV	Marv??o	150.86 347	eP	PKPdf	09 46 48.4	-0.6
PTOM	Tomar	150.88 349	ePKPdf	PKPdf	09 46 49.9	+0.8
PTOM	Tomar	150.88 349	ePP	PP	09 50 31.3	+0.6
EHUE	Huescar	150.97 339	PKIKP	PKPbc	09 46 51.9	-3.1
EANR	'Ain N'Sour	151.04 331	P	PKPbc	09 46 53.0	-2.2
EBAN	Banos Encina	151.06 341	PKP	PKPdf	09 46 49.5	+0.1
EQES	Quesada	151.15 339	PKP	PKPdf	09 46 49.0	-0.5
EADA	Adamuz	151.31 342	PKP	PKPdf	09 46 49.7	-0.1
ALMR	Almeirim	151.37 349	eP	PKPdf	09 46 50.2	+0.3
ALMR	Almeirim	151.37 349	ePKIKP	PKPdf	09 46 50.1	+0.3
ETRT	Tiaret	151.39 330	P	PKPdf	09 46 50.5	+0.5
EBAD	Badajoz	151.41 346	PKP	PKPdf	09 46 49.7	-0.2
PESTR	Estremoz	151.44 347	ePKPdf	PKPdf	09 46 49.4	-0.5
PESTR	Estremoz	151.44 347	ePP	PP	09 50 35.2	+1.3
PESTR			eP		10 16 18.9	
PESTR			eLR	LR	10 48 32.3	
	comp=Z,10μm,20.0s					
SHEL	Horse Pasture	151.47 200	ePKIKP	PKPbc	09 46 58.3	+1.6
SHEL			MLR	MLR		
	comp=Z,6μm,19.0s,MS6.4					
ECAB	El Cabril	151.64 343	PKP	PKPbc	09 46 53.5	-3.0
OJBR	Djebel Berber	151.69 332	P	PKPbc	09 46 58.0	+1.3
PMAFR	Mafra	151.69 350	ePKPdf	PKPdf	09 46 50.3	0.0
PMAFR	Mafra	151.69 350	ePP	PP	09 50 36.0	+0.7
PMAFR			eSS	SS	10 09 58.9	+0.6
PMAFR			eP		10 15 54.0	
PMAFR			eLQ		10 40 40.8	
PMAFR			eLR	LR	10 49 37.6	
	comp=Z,10μm,20.0s					
EVO	Evora	151.85 348	ePKIKP	PKPdf	09 46 49.9	-0.7
	comp=Z,408nm,1.3s					
EVO			eMLR	MLR		
	comp=Z,15μm,21.0s,MS6.5					
EVO	Evora	151.85 348	ePKPdf	PKPdf	09 46 50.2	-0.4
EVO	Evora	151.85 348	eP	PKPdf	09 46 50.8	+0.2
EVOP	Sao Brissos	151.88 348	eP	PKPdf	09 46 50.3	-0.3
EVOP			ePP	PP	09 50 37.3	+0.9
EVOP			eSS	SS	10 10 04.3	+3.8
EVOP			eSS	SS	10 10 05.5	+5.0
EVOP			AMS	AMS	11 00 46.4	
	comp=Z,9μm,18.7s,MS6.6					
EVOP	Sao Brissos	151.88 348	ePKIKP	PKPdf	09 46 50.2	-0.4
EVOP			e		09 50 37.2	
EVOP			eSS	SS	10 10 04.3	+3.8
EBER	Berja	151.89 338	PKP	PKPdf	09 46 49.5	-1.2
LIS	Lisbon	151.90 349	eP	PKPdf	09 46 50.1	-0.5
LIS			ePP	PP	09 50 37.0	+0.6
LIS			eSS	SS	10 10 00.5	-0.2
LIS			AMS	AMS	10 58 58.7	
	comp=E,9μm,21.4s					
LIS	Lisbon	151.90 349	ePKIKP	PKPdf	09 46 50.0	-0.6
LIS			e		09 50 37.0	
LIS			eSS	SS	10 10 00.4	-0.2
PDA	Ponta Delgada	151.91 17	ePKP	PKPbc	09 46 53.6	-3.5
PBAR	Barrancos	151.97 346	ePKPdf	PKPdf	09 46 50.4	-0.4
PBAR	Barrancos	151.97 346	ePP	PP	09 50 38.7	+1.7
PBAR			eSS	SS	10 10 07.9	+6.3
PBAR			eP		10 16 24.3	
PBAR			eLQ		10 39 58.7	
PBAR			eLR	LR	10 46 37.2	
	comp=E,10μm,18.0s					
EMIN	Mina Concepcio	152.27 345	PKP	PKPbc	09 46 54.3	-3.7
PBEJ	Beja	152.31 347	ePKPdf	PKPdf	09 46 51.8	+0.5
PBEJ	Beja	152.31 347	ePP	PP	09 50 44.3	+5.5
MESJ	Messejana	152.56 347	eP	PKPdf	09 46 51.1	-0.6
MESJ			ePP	PP	09 50 41.4	+1.1
MESJ			eSS	SS	10 10 08.9	+0.9
MESJ			AMS	AMS	11 02 08.0	
	comp=Z,11μm,18.7s,MS6.7					
MESJ	Messejana	152.56 347	ePP	PP	09 50 41.4	+1.1
MESJ			eSS	SS	10 10 08.9	+0.9
MESJ			A		11 02 08.0	
	comp=Z,11μm,18.7s					
MESJ	Messejana	152.56 347	ePKIKP	PKPdf	09 46 51.0	-0.6
MESJ			e		09 50 41.3	
MESJ			eSS	SS	10 10 08.8	+0.8
ODZI	Dziouia	152.63 334	P	PKPbc	09 47 02.0	+3.1
EGRO	El Granado	152.69 346	PKP	PKPdf	09 46 51.6	-0.2
PCVE	Castro Verde	152.72 347	ePKPdf	PKPdf	09 46 51.5	-0.4
PCVE	Castro Verde	152.72 347	ePP	PP	09 50 42.6	+1.4
PCVE			eSS	SS	10 10 17.5	+7.7
PCVE			eP		10 16 41.4	
PCVE			eLQ		10 40 52.9	
PCVE			eLR	LR	10 47 02.4	
	comp=Z,7μm,18.0s					
PSMA	Santa Maria	152.76 17	ePKP	PKPdf	09 46 53.7	+1.7
PSMN	Pico do Norte,	152.77 17	eP	PKPbc	09 46 56.5	-2.6
EALB	Alboran	152.80 338	PKP	PKPbc	09 46 56.5	-2.7
EMIJ	Mijas	152.84 341	PKP	PKPdf	09 46 50.6	-1.5
PVAQ	Vaqueiros	152.87 346	ePKPdf	PKPdf	09 46 51.5	-0.6
PVAQ	Vaqueiros	152.87 346	ePP	PP	09 50 43.4	+1.3
PVAQ			eSS	SS	10 10 04.4	-7.0
PVAQ			eP		10 16 38.4	
PVAQ			eLQ		10 40 43.9	
PVAQ			eLR	LR	10 44 21.5	
	comp=Z,7μm,20.0s					
ESPR	Espera	152.89 343	PKP	PKPdf	09 46 52.5	+0.3
PTEO	Sao Teotonio	152.95 348	ePKPdf	PKPdf	09 46 53.5	+1.3
PTEO	Sao Teotonio	152.95 348	ePP	PP	09 50 45.5	+3.0
PBDV	Barranco-do-Ve	153.07 347	ePKPdf	PKPdf	09 46 50.6	-1.8
PBDV	Barranco-do-Ve	153.07 347	ePP	PP	09 50 43.8	+0.6
PBDV			eP		10 16 39.4	
PBDV			eLQ		10 40 35.5	
PBDV			eLR	LR	10 44 26.9	
	comp=Z,8μm,20.0s					
MORF	Marmelete	153.17 348	ePKPdf	PKPdf	09 46 52.9	+0.4
MORF	Marmelete	153.17 348	ePP	PP	09 50 44.5	+0.8
MORF			eLQ		10 40 44.1	
MORF			eLR	LR	10 48 24.1	
	comp=Z,9μm,20.0s					
MORF	Marmelete	153.17 348	ePKIKP	PKPdf	09 46 51.9	-0.6
MORF			e		09 50 44.7	
MORF			eSS	SS	10 10 15.7	+1.1
MORF	Marmelete	153.17 348	eP	PKPdf	09 46 53.2	+0.7
SFS	San Fernando	153.37 343	ePKIKP	PKPdf	09 46 53.8	+0.9
SFS			MLR	MLR		
	comp=Z,20μm,20.0s,MS6.9					
PFVI	Vila Bisbo	153.37 348	ePKPdf	PKPdf	09 46 53.0	+0.2
PFVI	Vila Bisbo	153.37 348	ePP	PP	09 50 45.2	+0.3
PFVI			eSS	SS	10 10 22.6	+5.7
PFVI			eP		10 16 50.3	
PFVI			eLQ		10 40 47.4	
PFVI			eLR	LR	10 48 26.4	
	comp=Z,9μm,18.0s					
PFVI	Vila Bisbo	153.37 348	eP	PKPdf	09 46 52.8	0.0
RCBR	Riachuelo	153.63 129	ePKPdf	PKPdf	09 46 54.0	0.0
RCBR			LR	LR		
	comp=Z,8μm,19.0s,MS6.5					
PMPS	Porto Santo	158.10 2	ePKPdf	PKPdf	09 46 59.6	+0.3
PMPS	Porto Santo	158.10 2	ePKPab	PKPab	09 47 33.3	+0.6
PMPS	Porto Santo	158.10 2	ePP	PP	09 51 11.5	+0.4
PMAR	Madeira	158.41 3	ePKPdf	PKPdf	09 47 00.2	+0.5
PMAR	Madeira	158.41 3	ePKPab	PKPab	09 47 35.4	+1.4
PMAR	Madeira	158.41 3	ePP	PP	09 51 13.5	+0.7
TOA0	Torodi Ar. Sit	163.09 279	ePKPdf	PKPdf	09 47 04.5	-0.7
TOA0			ePKPab	PKPab	09 47 55.9	+0.7
TORD	Torodi Ar. Bea	163.09 279	PKP	PKPdf	09 47 04.6	-0.6
	comp=Z,59nm,1.0s,baz=24,slow=0.9,SNR=97					
TORD			PKPab	PKPab	09 47 56.2	+1.0
	comp=Z,25nm,1.0s,baz=85,slow=2.9,SNR=3.4					
KIC	Kosan Boka	168.41 247	ePKIKP	PKPdf	09 47 08.3	-1.3
	comp=Z,108nm,1.0s					
LIC	Lamto	168.61 246	ePKIKP	PKPdf	09 47 08.7	-1.1
	comp=Z,211nm,1.1s					
LIC	Lamto	168.61 246	ePKIKP	PKPdf	09 47 08.2	-1.6
	comp=Z,176nm,1.1s					
LIC			eMLR	MLR		
	comp=Z,15μm,18.5s					
LIC	Lamto	168.61 246	ePKPdf	PKPdf	09 47 08.2	-1.6
LIC			LR	LR		
	comp=Z,7μm,18.5s					
DBIC	Dimbokro	168.64 248	PKP	PKPdf	09 47 09.2	-0.5
	comp=Z,52nm,1.1s,baz=98,slow=0.5,SNR=21					
DBIC			PP	PP	09 52 08.7	-0.2
	comp=Z,6.4nm,0.8s,baz=124,slow=6.5,SNR=5.5					
DBIC	Dimbokro	168.64 248	ePKPdf	PKPdf	09 47 08.9	-0.9
DBIC			ePKPab	PKPab	09 48 18.5	-1.2
DBIC			LR	LR		
	comp=Z,4μm,19.0s					
TIC	Toumodi	168.78 248	ePKIKP	PKPdf	09 47 09.0	-0.9
	comp=Z,37nm,0.2s					
SACV	Santiago Islan	171.18 63	ePP	PP	09 52 20.1	-1.4
SACV			LR	LR		
	comp=Z,7μm,20.0s					

CSEM ***19*** *09:31:27.4±0.3, 34°.46N×36°.60E, h15km, ML2.9, Error ellipse: s-maj=5.9km s-min=5.1km az=77.0*
NSSC ***19*** *09:31:27, 34°.48N×36°.63E, h16km±4km*
ICSJB ***19*** *09:31:28.1±0.6, 34°.44N±0°.03×36°.59E±0°.04, h14km±4km, Error ellipse: s-maj=6.1km s-min=4.7km az=179.3*
GRAL ***19*** *09:31:32.1±0.3, 34°.28N×36°.47E, h0km±13km, MD2.9*

ISC 19 09:31:28.4±0.6, 34°.42N±0°.03×36°.58E±0°.04, h10km±6km, n23, σ1s03/39, 8D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAWK	Haweek	0.18	306	⇧P	Pg	09 31 33.0	+0.8
HAWK				⇧S	Sg	09 31 36.0	+1.2
HAWK	Haweek	0.18	306	⇧iP	Pg	09 31 33.2	+1.0
HAWK				⇧iS	Sg	09 31 36.7	+1.9
FKH	Fakeheh	0.23	219	eP	Pg	09 31 33.0	-0.1
FKH	Fakeheh	0.23	219	eP	Pg	09 31 33.0	-0.2
MARH	Ras Al Marh	0.40	192	⇩P	Pg	09 31 36.0	-0.2
MARH				⇩S	Sg	09 31 42.0	+0.5
MARH	Ras Al Marh	0.40	192	⇩iP	Pg	09 31 36.3	+0.1
MARH				⇩iS	Sg	09 31 42.5	+1.0
HWQ	Hawqa	0.54	255	eP	Pg	09 31 39.8	+0.9
HWQ				eS	Sg	09 31 45.5	-0.6
HWQ	Hawqa	0.54	255	eP	Pg	09 31 39.8	+0.9
HWQ				eS	Sg	09 31 45.5	-0.5
BIDA	Albida	0.63	340	⇧P	Pg	09 31 38.0	-2.6
BIDA				⇧S	Sg	09 31 48.0	-0.9
BIDA	Albida	0.63	340	⇧iP	Pg	09 31 38.4	-2.2
BIDA				⇧iS	Sg	09 31 48.0	-0.9
ROOS	tl_alroos	0.64	113	⇧P	Pg	09 31 40.0	-0.7
ROOS				⇧S	Sg	09 31 49.0	-0.1
ROOS	tl_alroos	0.64	113	⇧iP	Pg	09 31 40.2	-0.5
ROOS				⇧iS	Sg	09 31 49.1	0.0
QASN	Qassioun	0.92	196	⇩P	Pg	09 31 45.0	-1.1
QASN				⇩S	Sg	09 31 59.0	+1.0
QASN	Qassioun	0.92	196	⇩iP	Pg	09 31 45.0	-1.1
QASN				⇩iS	Sg	09 31 59.7	+1.7
BHL	Bhannes	0.92	236	eP	Pg	09 31 46.0	-0.2
BHL				eS	Sg	09 31 56.2	-2.0
BHL	Bhannes	0.92	236	eP	Pg	09 31 46.0	-0.2
BHL				eS	Sg	09 31 56.2	-2.0
RCY	Rachaya	1.13	214	eP	Pb	09 31 49.0	-0.9
RCY	Rachaya	1.13	214	eP	Pb	09 31 49.0	-0.9
BRBR	Barbar	1.13	208	⇧P	Pb	09 31 50.0	0.0
BRBR				⇧S	Sb	09 32 05.0	+0.2
BRBR	Barbar	1.13	208	⇧iP	Pb	09 31 50.3	+0.3
BRBR				⇧iS	Sb	09 32 05.8	+1.0
YAYL	Yayladag	1.66	347	iP	Pn	09 31 59.0	+1.5
YAYL	Yayladag	1.66	347	iP	Pn	09 31 59.0	+1.5
KUZU	Kuzuini	2.38	10	iP	Pg	09 32 14.6	+0.5

IDC ***19*** *09:34:25.0±0.5, 11°.05S×164°.63E, h0km, mb5.0/20, mb1 5.1/22, mb1mx5.1/25, mbtmp5.0/22, ML4.9/2, Error ellipse: s-maj=16.9km s-min=13.4km az=108.0*
NEIC ***19*** *09:34:26.8±0.2, 11°.04S×164°.53E, h10km, mb5.5/43, Error ellipse: s-maj=6.6km s-min=4.8km az=145.0*
MOS ***19*** *09:34:27.9±0.7, 11°.04S×164°.57E, h33km, mb5.7/21, Error ellipse: s-maj=22.7km s-min=16.3km az=170.6*
ISCJB ***19*** *09:34:28.8±0.2, 11°.08S±0°.04×164°.50E±0°.03, h33km, mb5.2/86, MS5.8/5, Error ellipse: s-maj=5.9km s-min=3.9km az=164.4*
BJI ***19*** *09:34:30.9, 10°.45S×164°.41E, h25km, mB5.9/21, mb5.3/35, Ms5.9/6, Ms7 5.9/9*
DJA ***19*** *09:34:40, 11°.06S×164°.20E, h104km, mb5.3/26*

ISC 19 09:34:30.6±0.1, 11°.13S±0°.03×164°.57E±0°.03, h35km, (h34km±1.1km:pP-P), n306, σ0s81/280, mb5.2/86, MS5.8/5, 49C-59D, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	4.85	290	Pn	Pn	09 35 41.7	+0.5
	90nm,0.3s,baz=161,slow=6.4,SNR=8.4						
HNR				Sn	Sn	09 36 37.6	+1.5
	225nm,0.3s,baz=280,slow=19,SNR=7.7						
HNR	Honiara	4.85	290	ePn	Pn	09 35 40.0	-1.1
HNR				eSn	Sn	09 36 37.3	+1.2
NOUC	Port Laguerre	11.04	172	eP	Pn	09 37 05.3	-0.7
NOUC				eS	Sn	09 39 05.5	-2.8
BAYA	Yate Dam	11.19	169	eP	Pn	09 37 08.4	+0.3
BAYA				eS	Sn	09 39 10.1	-1.8
MSVF	Nonsavu	14.61	118	ePn	Pn	09 37 56.4	+1.5
PMG	Port Moresby	17.22	274	eP	Pn	09 38 31.5	+3.0
PMG	Port Moresby	17.22	274	P	Pn	09 38 36.1	+7.6
CTA	Charters Tower	19.75	241	eP	Pn	09 38 59.3	+0.1
	263nm,1.1s						
CTA	Charters Tower	19.75	241	P	Pn	09 38 59.4	+0.1
	1.8nm,0.3s,baz=70,slow=12,SNR=23						
CTAO	Charters Tower	19.75	241	P	Pn	09 38 59.6	+0.4
	449nm,1.3s						
COEN	Coen	21.07	260	eP	P	09 39 12.3	+0.3
	1μm,1.5s,mb6.0						
COEN	Coen	21.07	260	P	P	09 39 13.1	+1.1
	401nm,2.9s,mb5.2						
ARMA	Armidale	22.65	210	eP	P	09 39 29.8	+1.1
ARMA	Armidale	22.65	210	eP	P	09 39 28.2	-0.5
	132nm,1.4s,mb5.2						
JAY	Jayapura	25.17	288	P	P	09 39 52.8	-0.2
	38nm,1.0s,mb4.9						
SMPI	Sarmi	27.22	288	P	P	09 40 10.0	-1.5
	107nm,1.1s,mb5.3						
CNB	Canberra Magne	27.77	207	eP	P	09 40 18.8	+2.7
STKA	Stephens Creek	29.60	222	eP	P	09 40 33.7	+1.2
	20nm,1.1s,mb4.8						
STKA	Stephens Creek	29.60	222	P	P	09 40 32.9	+0.4
	21nm,1.0s,mb4.8,baz=20,slow=12,SNR=6.7						
WRAB	Tennant Creek	30.36	250	P	P	09 40 39.3	-0.1
	585nm,1.5s,mb6.1,SNR=6.7						
WRAB	Tennant Creek	30.36	250	eP	P	09 40 39.1	-0.3
WRAB				pmax	pmax		
	comp=Z,194nm,1.3s,mb5.7						
WRAB	Tennant Creek	30.36	250	eP	P	09 40 39.1	-0.3
	comp=Z,194nm,1.3s,mb5.7						
WRAB	Tennant Creek	30.36	250	P	P	09 40 38.9	-0.5
	comp=Z,122nm,1.5s,mb5.4						
WRA	Warramunga Arr	30.37	250	P	P	09 40 38.8	-0.7
	comp=Z,58nm,0.9s,mb5.3,baz=82,slow=8.6,SNR=28						
WRA				PcP	PcP	09 43 39.6	+0.6
	comp=Z,4.3nm,1.1s,baz=2.8,slow=0.6,SNR=4.0						
TOO	Toolangi	31.42	210	eP	P	09 40 49.2	+0.7
KAKA	Kakadu	31.47	264	eP	P	09 40 47.1	-2.1
	comp=Z,30nm,0.6s,mb5.3						
KAKA	Kakadu	31.47	264	eP	P	09 40 47.1	-2.1
	comp=Z,76nm,0.6s,mb5.7						
KAKA	Kakadu	31.47	264	P	P	09 40 47.6	-1.6
	comp=Z,76nm,0.6s,mb5.7						
ASAR	Alice Springs	31.73	243	P	P	09 40 50.5	-0.9
	comp=Z,44nm,0.9s,mb5.3,baz=63,slow=10.0,SNR=44						
ASAR				PcP	PcP	09 43 42.8	+0.2
	comp=Z,3.0nm,0.7s,baz=66,slow=2.7,SNR=4.9						
TLE	Tual	31.95	277	P	P	09 40 51.7	-1.7
	comp=Z,144nm,3.4s						
RPZ	Rata Peaks	32.95	171	P	P	09 41 00.8	-1.1
	comp=Z,27nm,0.7s,mb5.3,baz=209,slow=1.3,SNR=13						
SWI	Sorong	34.62	285	P	P	09 41 15.1	-1.6
	comp=Z,27nm,1.1s,mb5.1						
MOO	Moorlands	34.69	203	eP	P	09 41 19.8	+2.8
KNA	Kununurra	35.10	258	P	P	09 41 21.1	+0.3
	comp=Z,2μmcomp=Z,245nm,1.1s,mb6.0						
FITZ	Fitzroy Crossi	38.25	255	eP	P	09 41 46.6	-1.1
	comp=Z,90nm,0.8s,mb5.5						
FITZ	Fitzroy Crossi	38.25	255	P	P	09 41 46.9	-0.7
	comp=Z,52nm,0.9s,mb5.3,baz=95,slow=8.5,SNR=27						
FITZ	Fitzroy Crossi	38.25	255	eP	P	09 41 46.6	-1.0
	comp=Z,55nm,0.9s,mb5.3						
FITZ	Fitzroy Crossi	38.25	255	P	P	09 41 46.6	-1.1
	comp=Z,191nm,1.2s,mb5.7						
LBMI	Labuha	38.26	283	P	P	09 41 50.6	+2.7
	comp=Z,71nm,1.2s,mb5.3						
FORT	Forrest	39.06	234	eP	P	09 41 54.9	+0.6
	comp=Z,169nm,1.5s,mb5.5						
FORT	Forrest	39.06	234	eP	P	09 41 55.0	+0.7
	comp=Z,574nm,1.5s,mb6.1						
MBWA	Marble Bar	44.08	251	eP	P	09 42 35.1	-0.5
	comp=Z,63nm,1.1s,mb5.3						
MBWA	Marble Bar	44.08	251	P	P	09 42 35.6	0.0
	comp=Z,64nm,1.5s,mb5.1						
KLBR	Kellerberrin	47.69	237	eP	P	09 43 04.2	+0.2
	comp=Z,94nm,1.3s,mb5.7						
NWAO	Narrogin (SRO)	48.46	236	eP	P	09 43 10.1	+0.2
NWAO				pmax	pmax		
	comp=Z,138nm,1.2s						
NWAO	Narrogin (SRO)	48.46	236	eP	P	09 43 10.1	+0.2
	comp=Z,138nm,1.2s,mb5.9						
MYLDM	Lahad Datu	48.63	287	P	P	09 43 13.6	+2.2
	comp=Z,57nm,3.7s						
KKM	Kota Kinabalu	51.06	287	P	P	09 43 20.3	-10
SJI	Sawahan	52.15	269	P	P	09 43 39.7	+1.6
	comp=Z,6μmcomp=Z,54nm,1.6s,mb5.2						
MJAR	Matsushiro Arr	53.52	334	P	P	09 43 46.9	-0.9
	comp=Z,11nm,1.1s,mb4.7,baz=163,slow=6.9,SNR=15						
MAJO	Matsushiro	53.52	334	eP	P	09 43 47.2	-0.6
MAJO				pmax	pmax		
	comp=Z,77nm,1.6s,mb5.4						
MAJO	Matsushiro	53.52	334	eP	P	09 43 47.2	-0.5
	comp=Z,77nm,1.6s,mb5.4						
MAT	Matsushiro	53.52	334	P	P	09 43 46.9	-0.9
YHNB	Yeheng	55.15	311	eP	P	09 43 59.4	-0.5
	comp=Z,118nm,1.4s,mb5.7						
LEM	Lembang	56.35	269	P	P	09 44 07.2	-1.5
	comp=Z,73nm,1.5s,mb5.5						
ASAJ	Asahikawa	58.50	342	P	P	09 44 23.5	+0.3
	comp=Z,31nm,1.0s,mb5.3,baz=232,slow=13,SNR=9.8						
KSRS	Korea Array	59.30	326	P	P	09 44 29.0	+0.1
	comp=Z,7.9nm,0.9s,mb4.7,baz=137,slow=7.3,SNR=15						
YSS	Yuzh-Sakhalins	61.02	343

comp=Z,15nm,0.6s,mb5.2
GYA Guiyang 67.51 305⇑ *i*P P 09 45 25.0 +1.5
GYA pP pP 09 45 36.5 +2.2
GYA PP PP 09 47 55.3 +2.5
GYA ScP 09 49 52.0
GYA S S 09 54 18.3 +0.5
GYA sS sS 09 54 34.3 -1.4
GYA SS SS 09 58 40.0 +0.9
GYA pmax pmax
comp=Z,60nm,1.0s,mb5.6
GYA pmax pmax
comp=Z,250nm,6.0s
GYA LR LR
comp=N,2µm,20.6s,MS5.5
GYA LR LR
comp=E,1µm,21.8s,MS5.5
GYA LR LR
comp=Z,3µm,20.0s,MS5.6
BJI Beijing 67.83 322 P P 09 45 24.8 -0.4
BJI pmax pmax
comp=Z,16nm,1.4s,mb4.9
KMI Kunming 70.18 302 P P 09 45 41.8 +1.6
KMI pP pP 09 45 52.3 +1.3
KMI sP sP 09 45 56.1 +1.0
KMI PP PP 09 48 19.9 +3.9
KMI S S 09 54 49.0 -0.5
KMI sS sS 09 55 06.6 -0.8
KMI pmax pmax
comp=Z,24nm,1.2s,mb5.0
KMI pmax pmax
comp=Z,580nm,5.1s
KMI LR LR
comp=Z,11µm,22.1s,MS6.0
CMAR Chiang Mai Arr 71.09 294 P P 09 45 46.5 +0.6
comp=Z,2.6nm,0.7s,mb4.3,baz=129,slow=4.4,SNR=7.8
HHC Hu-ho-hao-te 71.15 320 *e*P P 09 45 46.3 +0.6
HHC S S 09 54 59.6 -0.6
HHC pmax pmax
comp=Z,26nm,0.7s,mb5.3
HHC pmax pmax
comp=Z,2µm,6.9s
CHTO Chiang Mai 71.20 294 P P 09 45 41.7 -4.8
CD2 Chengdu 71.74 308 P P 09 45 50.4 +0.9
CD2 pP pP 09 46 00.8 +0.4
CD2 sP sP 09 46 04.6 +0.2
CD2 PP PP 09 48 31.4 +2.2
CD2 S S 09 55 06.6 -0.8
CD2 sS sS 09 55 23.9 -1.5
CD2 SKS 09 55 46.9
CD2 SS SS 09 59 44.4 +0.4
CD2 pmax pmax
comp=Z,50nm,1.0s,mb5.4
CD2 pmax pmax
comp=Z,1µm,7.7s
CD2 LR LR
comp=N,3µm,15.5s
CD2 LR LR
comp=Z,5µm,15.5s,MS5.9
HIA Hailar 71.87 331 *e*P P 09 45 47.5 -2.4
HIA Hailar 71.87 331 *e*P P 09 45 50.0 +0.1
comp=Z,70nm,1.2s,mb5.5
LZH Lanzhou 73.96 313 *e*P P 09 46 03.8 +1.2
LZH pP pP 09 46 14.0 +0.5
LZH sP sP 09 46 19.3 +1.8
LZH PP PP 09 48 50.8 +2.7
LZH S S 09 55 33.0 +0.5
LZH sS sS 09 55 50.0 -0.5
LZH pmax pmax
comp=Z,210nm,1.6s,mb5.8
LZH pmax pmax
comp=Z,1µm,7.6s
SEY Seymchan 74.43 354 *ce*P P 09 46 04.7 0.0
SEY Seymchan 74.43 354⇑ *e*P P 09 46 04.8 +0.1
KDAK Kodiak Island 77.08 22 P P 09 46 18.7 -1.2
comp=Z,7.0nm,0.9s,mb4.6,baz=241,slow=10,SNR=2.4
ULN Ulaanbaatar 77.69 324 *e*P P 09 46 24.3 +0.7
ULN pmax pmax
comp=Z,34nm,1.0s,mb5.2
ULN Ulaanbaatar 77.69 324 *e*P P 09 46 24.3 +0.7
comp=Z,34nm,1.0s,mb5.2
ULN Ulaanbaatar 77.69 324 P P 09 46 24.5 +0.9
YAK Yakutsk 77.85 344 *e*P P 09 46 23.2 -1.0
YAK pmax pmax
comp=Z,35nm,0.8s,mb5.3
YAK pmax pmax
comp=N,17nm,1.5s
YAK Yakutsk 77.85 344 *e*P P 09 46 23.9 -0.2
comp=N,58nm,0.7s,mb5.6
SONM Songino Array 78.05 324 P P 09 46 26.4 +0.8
comp=N,12nm,0.9s,mb4.8,baz=146,slow=6.0,SNR=16
GTA Gaotai 78.29 314 *e*P P 09 46 27.8 +0.7
GTA pP pP 09 46 37.9 -0.2
GTA sP sP 09 46 42.3 +0.2
GTA PP PP 09 49 26.0 +1.5
GTA S S 09 56 19.3 -0.7
GTA sS sS 09 56 35.9 -2.2
GTA SS SS 10 01 24.3 +1.1
GTA pmax pmax
comp=Z,33nm,1.3s,mb5.1
GTA pmax pmax
comp=Z,1µm,4.0s
GTA LR LR
comp=Z,7µm,18.7s,MS6.0
QSPA South Pole Qui 78.88 180 P P 09 46 31.5 +1.8
comp=Z,38nm,0.9s,mb5.3,baz=6.3,slow=5.1,SNR=13
QSPA South Pole Qui 78.88 180 P P 09 46 31.5 +1.8
BILL Bilibino 78.97 1⇑ *e*P P 09 46 29.7 -0.5
BILL *e*S S 09 56 20.7 -5.4
BILL pmax pmax
comp=Z,88nm,1.7s,mb5.4
BILL Bilibino 78.97 1 *e*P P 09 46 30.3 +0.1
comp=Z,60nm,1.2s,mb5.4
RSO Redoubt South 78.99 20 *e*P P 09 46 32.7 +2.2
TTA Tatalina 79.84 17 *e*P P 09 46 35.0 -0.1
PMR Palmer 81.03 20 *e*P P 09 46 42.4 +0.9
PMR pmax pmax
comp=Z,42nm,1.5s,mb5.2
PMR Palmer 81.03 20 *e*P P 09 46 42.4 +0.9
comp=Z,42nm,1.5s,mb5.2
TLY Talaya 81.55 327 *e*P P 09 46 43.1 -1.4
TLY pmax pmax
comp=Z,27nm,1.3s,mb5.0
TLY Talaya 81.55 327 *e*P P 09 46 44.1 -0.4
comp=Z,12nm,0.8s,mb4.9
TRF Thorofare Moun 81.96 19 *e*P P 09 46 45.4 -1.0
comp=Z,13nm,1.0s,mb4.8
MCK McKinley 82.59 19 *e*P P 09 46 50.1 +0.4
MCK pmax pmax
comp=Z,257nm,2.7s,mb5.8
MCK McKinley 82.59 19 *e*P P 09 46 50.1 +0.5
comp=Z,257nm,2.7s,mb5.8
COLA College 83.72 18 *e*P P 09 46 54.5 -1.0
COLA pmax pmax
comp=Z,21nm,0.9s,mb5.3
COLA College 83.72 18 *e*P P 09 46 54.5 -1.0
comp=Z,21nm,0.9s,mb5.3
MENT Mentasta 83.82 21 *e*P P 09 46 55.8 -0.2
ILAR Eielson Array 83.96 19 P P 09 46 55.2 -1.4
comp=Z,6.0nm,0.8s,mb4.8,baz=204,slow=4.1,SNR=21
MAW Mawson 84.21 202 *e*P P 09 46 59.2 +1.1
comp=Z,31nm,1.1s,mb5.3
MAW Mawson 84.21 202 P P 09 46 59.7 +1.6
comp=Z,34nm,1.0s,mb5.4,baz=89,slow=6.6,SNR=16
MAW Mawson 84.21 202 *e*P P 09 46 59.3 +1.2
MAW pmax pmax
comp=Z,17nm,1.2s
MAW Mawson 84.21 202 *e*P P 09 46 59.3 +1.2
comp=Z,18nm,1.2s,mb5.1
COLD Coldfoot 84.69 16 *e*P P 09 47 00.3 0.0
comp=Z,11nm,1.0s,mb5.0
YBH Yreka Blue Hor 84.77 46 *e*P P 09 47 01.4 0.0
YBH pmax pmax
comp=Z,32nm,1.7s
YBH Yreka Blue Hor 84.77 46 *e*P P 09 47 01.4 +0.1
comp=Z,32nm,1.7s,mb5.2
CMB Columbia Colle 85.27 50 *e*P P 09 47 03.9 -0.1
CMB pmax pmax
comp=Z,6.0nm,0.7s,mb4.8
CMB Columbia Colle 85.27 50 *e*P P 09 47 03.9 -0.1
comp=Z,5.6nm,0.7s,mb4.8
PALK Pallekele 85.42 278 *i*P P 09 47 07.1 +1.9
EGAK Eagle 85.85 20 *e*P P 09 47 06.7 +0.5
comp=Z,36nm,0.9s,mb5.6
TIXI Tiksi 85.95 349 *e*P P 09 47 05.9 -0.7
TIXI pmax pmax
comp=Z,51nm,1.5s,mb5.5
TIXI Tiksi 85.95 349 *e*P P 09 47 06.1 -0.5
comp=Z,65nm,1.5s,mb5.6
MWC Mount Wilson 85.96 54 *e*P P 09 47 07.3 -0.2
MWC pmax pmax
comp=Z,54nm,1.7s,mb5.5
MWC Mount Wilson 85.96 54 *e*P P 09 47 07.3 -0.2
comp=Z,54nm,1.7s,mb5.5
DAWY Dawson 86.05 21 *e*P P 09 47 08.0 +0.8
EDW2 Edwards Air Fo 86.20 54 ⇓P P 09 47 08.2 -0.4
baz=86
BFSC Mount Baldy Ra 86.28 54 ⇓P P 09 47 07.9 -1.2
baz=86
MTUM Tungsten Hills 86.45 51 *e*P P 09 47 10.6 +0.7
PAHR Pah Rah Range 86.53 49 *e*P P 09 47 10.5 +0.4
comp=Z,29nm,1.5s,mb5.3
LRMC Laurel Mountai 86.60 53 ⇑P P 09 47 11.0 +0.4
baz=87
MONP Monument Peak 86.91 56 ⇓P P 09 47 13.1 +0.9
baz=87
MPMC Manual Prospec 86.92 53 ⇑P P 09 47 12.2 +0.1
baz=87
NVAR Mina Array Bea 86.96 50 P P 09 47 12.4 +0.2
comp=Z,2.4nm,0.9s,mb4.4,baz=235,slow=7.1,SNR=4.4
PFO Pinyon Flat Ob 87.08 55 ⇑P P 09 47 12.9 0.0
baz=87
D05A Enumclaw 87.10 41 ⇓P P 09 47 13.3 +0.5
baz=87
HEC Hector,Ludlow 87.50 54 ⇓P P 09 47 14.4 -0.6
baz=88
BELC Belle Mtn. Jos 87.54 55 ⇓P P 09 47 14.7 -0.5
baz=88,SNR=6.4
I07A Izee 87.76 44 ⇑P P 09 47 15.5 -0.5
baz=88
WVOR Wild Horse Val 87.87 46 *e*P P 09 47 16.8 +0.2
WVOR pmax pmax
comp=Z,28nm,1.6s,mb5.2
WVOR Wild Horse Val 87.87 46 *e*P P 09 47 16.8 +0.2
comp=Z,28nm,1.6s,mb5.2
BC3 Big Chuckawall 87.89 55 ⇓P P 09 47 17.0 +0.1
baz=88
GMRC Granite Mounta 88.02 54 ⇓P P 09 47 17.7 +0.3
baz=88
GLA Glamis 88.25 56 ⇓P P 09 47 18.1 -0.5
baz=88,SNR=5.6
GLA Glamis 88.25 56 *e*P P 09 47 18.8 +0.2
GLA pmax pmax
comp=Z,70nm,1.6s,mb5.6
GLA Glamis 88.25 56 *e*P P 09 47 18.8 +0.1
comp=Z,70nm,1.6s,mb5.6
IRM Iron Mountain 88.27 55 ⇓P P 09 47 17.9 -0.8
baz=88,SNR=8.8
WMQ Urumqi 88.34 315 *e*P P 09 47 18.9 +0.1
WMQ pP pP 09 47 29.5 -0.4
WMQ sP sP 09 47 33.4 -0.5
WMQ pmax pmax
comp=Z,24nm,1.6s,mb5.2
V11A Goodsprings 88.47 53 ⇓P P 09 47 19.7 +0.1
baz=89
LDFC Landfair 88.53 54 *e*P P 09 47 20.7 +0.8
V12A Nelson 88.89 53 ⇓P P 09 47 21.1 -0.5
baz=89
T11A Corn Creek, Al 88.99 52 ⇑P P 09 47 22.0 0.0
baz=89
R11A Troy Canyon, C 88.99 51 ⇑P P 09 47 22.2 +0.2
baz=89
D08A Wollman Farm, 89.05 42 ⇑P P 09 47 21.6 -0.5
baz=89
113A Mohawk Valley, 89.05 56 ⇑P P 09 47 22.0 -0.4
baz=89
Q11A Duckwater 89.07 50 ⇑P P 09 47 22.1 -0.2
baz=89,SNR=5.6
PDMCI Parker Dam,Lak 89.11 55 ⇑P P 09 47 23.0 +0.4
baz=89
M10A I.L. Ranch, Tu 89.12 47 ⇓P P 09 47 22.6 +0.1
baz=89
Z13A Yuma Proving G 89.24 56 ⇓P P 09 47 23.5 +0.2
baz=89
Y13A Salome 89.25 55 P P 09 47 23.8 +0.5
baz=89,SNR=7.8
T12A Moapa 89.25 52 ⇑P P 09 47 22.5 -0.8
baz=89
OD2 Odessa Site #2 89.28 41 *e*P P 09 47 23.0 -0.1
L10A Juniper Basin 89.31 47 ⇓P P 09 47 22.8 -0.6
baz=89
S12A Delamar Landin 89.36 52 ⇓P P 09 47 23.9 +0.2
baz=90
O11A Cowboy Ranch, 89.40 49 ⇑P P 09 47 24.2 +0.4
baz=90
J10A Berg Farm, Mel 89.47 46 ⇓P P 09 47 23.7 -0.4
baz=90
BMO Blue Mountains 89.49 44 *e*P P 09 47 24.0 -0.1
BMO pmax pmax
comp=Z,16nm,1.6s,mb5.1
BMO Blue Mountains 89.49 44 *e*P P 09 47 24.0 -0.1
comp=Z,16nm,1.6s,mb5.1
W13A Hualapai Mount 89.51 54 ⇑P P 09 47 23.8 -0.7
baz=90
V13A Grand Canyon W 89.61 53 ⇑P P 09 47 24.8 -0.2
baz=90
214A Organ Pipe Nat 89.64 57 ⇑P P 09 47 25.5 +0.3
baz=90
R12A Pony Springs, 89.73 51 ⇓P P 09 47 25.5 0.0
baz=90,SNR=7.9
Q12A Willow Creek R 89.74 50 ⇓P P 09 47 25.8 +0.4
baz=90
U13A Pakoon Wash 89.76 53 ⇑P P 09 47 26.1 +0.4
baz=90
P12A McGill 89.79 50 ⇓P P 09 47 25.0 -0.7
baz=90
K11A Parker Ranch, 89.81 46 ⇓P P 09 47 25.6 -0.1
baz=90,SNR=6.1
F10A Beach Ranch, E 89.85 43 ⇑P P 09 47 25.6 -0.2
baz=90
L11A Cat Creek Ranc 89.85 47 ⇑P P 09 47 25.8 -0.2
baz=90
Z14A Wintersburg 89.86 56 ⇓P P 09 47 26.9 +0.8
baz=90
T13A Saint George 89.95 52 ⇓P P 09 47 26.3 -0.2
baz=90,SNR=8.2
N12A Clover Valley, 90.04 48 ⇓P P 09 47 26.5 -0.4
baz=90,SNR=5.8
N12A Clover Valley, 90.04 48 *e*P P 09 47 27.6 +0.8
comp=Z,35nm,1.4s,mb5.5
O12A Currie 90.11 49 ⇓P P 09 47 27.1 -0.1
baz=90
S13A Holt Ranch, En 90.12 52 ⇓P P 09 47 27.0 -0.3
baz=90
MFID Camas Ranch 90.13 46 ⇓P P 09 47 27.5 +0.3
baz=90
X14A Yava 90.16 55 ⇑P P 09 47 27.0 -0.5
baz=90
I11A Placerville 90.17 45 ⇓P P 09 47 26.6 -0.7
baz=90,SNR=5.5
W14A Seligman 90.17 54 ⇑P P 09 47 28.4 +0.8
baz=90
R13A O'Grain Ranch, 90.18 51 ⇓P P 09 47 27.9 +0.3
baz=90,SNR=6.7
M12A Wells 90.27 48 ⇓P P 09 47 27.4 -0.5
baz=90
Q13A Wheeler Ranch, 90.33 50 ⇓P P 09 47 28.7 +0.5
baz=90,SNR=5.6
U14A Mt Trumbull 90.38 53 ⇑P P 09 47 28.6 +0.1
baz=90,SNR=6.0
L12A House Creek Ra 90.38 47 ⇓P P 09 47 28.6 +0.3
baz=90
P13A Bates Ranch, G 90.45 50 ⇓P P 09 47 28.8 0.0
baz=90,SNR=6.4
Y15A Casa Rosa Ranc 90.49 56 ⇑P P 09 47 29.0 -0.1
baz=91
ARUT Antelope Range 90.49 52 *e*P P 09 47 29.3 +0.3
CCUT Cedar City 90.50 52 *e*P P 09 47 29.4 +0.4
comp=Z,89nm,2.2s,mb5.7
K12A Draper Farm, C 90.58 47 ⇓P P 09 47 29.3 0.0
baz=91,SNR=5.0
J12A Stokes Ranch, 90.60 46 ⇑P P 09 47 30.0 +0.6
baz=91,SNR=7.1
T14A Hurricane 90.60 52 ⇓P P 09 47 29.8 +0.3
baz=91
N13A Wendover, West 90.65 49 *e*P P 09 47 30.3 +0.6
comp=Z,18nm,1.0s,mb5.3
X15A Humboldt 90.69 55 ⇓P P 09 47 30.5 +0.5
baz=91,SNR=6.8
I12A Atlanta 90.71 46 ⇓P P 09 47 30.5 +0.6
baz=91
M13A Montello 90.80 48 ⇓P P 09 47 30.6 +0.2
baz=91
W15A Williams 90.81 54 ⇑P P 09 47 30.8 +0.2
baz=91
Q14A Sevier Lake (B 90.90 51 ⇓P P 09 47 31.0 +0.2
baz=91,SNR=7.4
G12A Big Creek, Yel 90.92 44 ⇓P P 09 47 30.8 0.0
baz=91
C11A Tepee Creek (N 91.00 41 ⇑P P 09 47 31.2 +0.1
baz=91
V15A Kaibab Nationa 91.03 54 ⇓P P 09 47 32.4 +0.8
baz=91
U15A North Rim 91.08 53 ⇓P P 09 47 32.0 +0.2
baz=91
E12A Beaver Dam Sad 91.08 43 ⇓P P 09 47 30.5 -1.0
baz=91
Z16A Peralta Trail, 91.09 56 ⇑P P 09 47 32.1 +0.2
baz=91
H12A Diamond D Ranc 91.09 45 ⇓P P 09 47 31.5 -0.1
baz=91
F12A Elk City 91.12 44 ⇑P P 09 47 30.9 -0.9
baz=91,SNR=6.2
T15A Red Dirt Ranch 91.14 53 ⇓P P 09 47 31.7 -0.3
baz=91
HLID Hailey 91.16 46 ⇑P P 09 47 32.1 +0.1
baz=91
HLID Hailey 91.16 46 *e*P P 09 47 32.2 +0.2
comp=Z,5.3nm,1.0s,mb4.8
Y16A Circle Bar Ran 91.17 56 ⇑P P 09 47 32.9 +0.6
baz=91
K13A Stover Farm, H 91.17 47 ⇑P P 09 47 31.6 -0.5
baz=91
P14A Drum Mountains 91.20 50 ⇑P P 09 47 32.0 -0.3
baz=91
217A Green Valley 91.26 58 ⇓P P 09 47 31.9 -0.8
baz=91
J13A Cove Ranch, Pi 91.29 46 ⇓P P 09 47 32.7 +0.1
baz=91
SYO Syowa Base 91.37 197⇑ *e*P P 09 47 31.0 -1.5
SYO Syowa Base 91.37 197⇓ *e*sP sP 09 47 38.0 -10
D12A Red Ives Fores 91.39 42 ⇓P P 09 47 32.7 -0.2
baz=92
M14A Sheep Mountain 91.43 48 ⇑P P 09 47 33.8 +0.5
baz=92,SNR=5.2
I13A Wildhorse Cree 91.45 46 ⇑P P 09 47 33.9 +0.6
baz=92,SNR=5.9
H13A Challis 91.51 45 ⇓P P 09 47 34.0 +0.5
baz=92
WUAZ Wupatki 91.60 54 ⇑P P 09 47 35.0 +0.8
baz=92
WUAZ Wupatki 91.60 54 *e*P P 09 47 35.2 +1.0
comp=Z,26nm,1.6s,mb5.3
MSU Marysvale 91.63 51 *e*P P 09 47 34.6 +0.3
L14A Malta 91.63 48 ⇓P P 09 47 34.0 -0.2
baz=92
G13A Cobalt 91.66 44 ⇑P P 09 47 33.5 -0.7
baz=92
F13A Darby 91.76 44 ⇓P P 09 47 34.1 -0.6
baz=92,SNR=11
K14A Jones Ranch, D 91.80 47 ⇑P P 09 47 34.5 -0.5
baz=92
S16A Weppner Ranch, 91.90 52 ⇑P P 09 47 35.5 0.0
baz=92
HVU Hansel Valley 91.91 48 *e*P P 09 47 36.5 +1.0
HVU pmax pmax
comp=Z,59nm,1.9s,mb5.6
HVU Hansel Valley 91.91 48 *e*P P 09 47 36.5 +1.0
comp=Z,60nm,1.9s,mb5.6
I14A Mackay 91.92 46 ⇓P P 09 47 35.9 +0.4
baz=92
U16A Tuba City 91.93 54 ⇓P P 09 47 35.8 +0.1
baz=92
E13A Victor 92.01 43 ⇑P P 09 47 34.8 -1.0
baz=92
H14A Leadore 92.14 45 ⇓P P 09 47 36.5 0.0
baz=92
MPU Maple Canyon 92.37 50 *e*P P 09 47 38.4 +0.7
comp=Z,51nm,1.9s,mb5.5
E14A Clinton 92.47 43 ⇑P P 09 47 37.9 -0.1
baz=93
MCMT McKenzie Canyo 92.55 45 *e*P P 09 47 39.1 +0.7
comp=Z,1.5nm,0.9s,mb4.4
I15A Monteview 92.62 46 ⇓P P 09 47 39.6 +0.9
baz=93
H15A Lima 92.65 45 ⇓P P 09 47 39.4 +0.6
baz=93,SNR=7.5
CHMT Chamberlain Mo 92.75 43 *e*P P 09 47 39.3 +0.1
MK31 Makanchi Array 92.79 317 *e*P P 09 47 39.2 -0.2
MKAR Makanchi Array 92.79 317 P P 09 47 39.5 0.0
comp=Z,8.5nm,0.8s,mb5.2,baz=103,slow=5.4,SNR=13
MKAR PKKP PKKPbc 10 04 50.4 -2.0
comp=Z,0.4nm,0.3s,baz=300,slow=2.4,SNR=7.3
MKAR Makanchi Array 92.79 317 P P 09 47 39.5 0.0
MKAR PKKP PKKPbc 10 04 50.4 -2.0
DLMT Dillon 92.84 44 *e*P P 09 47 39.7 -0.1
comp=Z,19nm,1.3s,mb5.4
G15A Dillon 92.88 45 ⇓P P 09 47 39.7 -0.2
baz=93
ZAA0 Zalesovo Array 92.95 324 *e*P P 09 47 38.2 -1.7
ZALV Zalesovo Beam 92.95 324 P P 09 47 38.7 -1.3
comp=Z,6.3nm,0.9s,mb5.0,baz=104,slow=6.3,SNR=6.6
F15A Butte 93.02 44 ⇑P P 09 47 39.8 -0.8
baz=93
LRM Limekiln Ridge 93.05 44 *e*P P 09 47 41.0 +0.4
E15A Deer Lodge 93.05 43 ⇓P P 09 47 40.5 -0.1
baz=93
G16A Moss Hill, Enn 93.36 45 ⇑P P 09 47 42.4 +0.3
baz=93
C15A Salmond Ranch, 93.37 42 ⇑P P 09 47 41.2 -0.9
baz=94
BOZ Bozeman (W) 93.57 44 *e*P P 09 47 43.5 +0.4
BOZ pmax pmax
comp=Z,46nm,2.1s,mb5.5
BOZ Bozeman (W) 93.57 44 *e*P P 09 47 43.5 +0.5
comp=Z,46nm,2.1s,mb5.5
F16A Kennard Place, 93.60 44 ⇑P P 09 47 42.7 -0.5
baz=94
HRY Holter Researc 93.66 43 *e*P P 09 47 43.9 +0.5
YKA Yellowknife Ar 95.57 27 P P 09 47 49.9 -1.9
comp=Z,1.0nm,0.8s,mb4.3,baz=249,slow=5.1,SNR=3.7
YKA Yellowknife Ar 95.57 27 P P 09 47 49.9 -1.9
BVAR Borovoye Array 101.31 322 P Pdif 09 48 16.4 -1.4
comp=Z,2.4nm,0.8s,baz=96,slow=6.4,SNR=3.8
ARCES ARCESS Array B 116.12 345 PKP PKPdf 09 53 09.1 -0.4
comp=Z,2.0nm,0.7s,baz=107,slow=1.3,SNR=8.3
ARCES ARCESS Array B 116.12 345 PKP PKPdf 09 53 09.1 -0.4
LPAZ La Paz 121.18 117 PKP PKPdf 09 53 21.6 +0.8
comp=Z,2.8nm,0.9s,baz=350,slow=4.7,SNR=5.3
BHD Baghdad 121.21 302 *ex* x 09 53 17.0
BHD *ex* x 09 56 50.0
BHD *ex* x 10 02 36.0
FINES FINESS Array B 121.42 338 PKP PKPdf 09 53 18.8 -1.1
comp=Z,3.5nm,0.8s,baz=211,slow=3.3,SNR=5.9
BOSA Boshof 124.27 224 PKP PKPdf 09 53 27.2 +0.8
comp=Z,5.1nm,0.8s,baz=69,slow=1.0,SNR=11
CPUP Villa Florida 124.82 133 PKP PKPdf 09 53 27.7 +0.2
comp=Z,5.6nm,0.9s,baz=10,slow=1.3,SNR=7.3
CPUP Villa Florida 124.82 133 PKP PKPdf 09 53 27.7 +0.1
LBTB Lobatse 126.24 228 PKP PKPdf 09 53 31.1 +0.8
comp=Z,3.9nm,0.7s,baz=216,slow=3.6,SNR=4.5
AKASG Malin Array Be 126.30 326 PKP PKPdf 09 53 28.9 -0.6
comp=Z,0.5nm,0.4s,baz=62,slow=1.7,SNR=4.9
NB2 NORSAR Subarra126.47 344 PKPdf PKPdf 09 53 28.8 -0.8
comp=Z,3.8nm,1.0s,baz=31,slow=1.9
NOA NORSAR Array B126.47 344 PKP PKPdf 09 53 29.0 -0.6
comp=Z,3.3nm,0.8s,baz=35,slow=2.0,SNR=7.7
SIV San Ignacio 127.41 120 PKP PKPdf 09 53 33.0 +0.3
comp=Z,3.6nm,1.0s,baz=248,slow=7.3,SNR=5.0
BRTR Keskin Array B 128.17 312 PKhKP PKPpre 09 53 30.4
comp=Z,1.8nm,1.0s,baz=163,slow=1.3,SNR=4.8
CLL Collm 133.71 336 *e*PKIKP PKPdf 09 53 44.0 +0.4
CLL Collm 133.71 336 *e*PKPdf PKPdf 09 53 44.0 +0.4
CLL *e*(PKSdf) 09 57 26.0
CLL *e* 09 58 12.0
CLL *e*PPP 09 59 03.0
SSF Saint Saulge 140.77 339 *e*PKIKP PKPdf 09 53 52.0 -4.8
comp=Z,24nm,1.3s
LPG La Plagne 140.85 335 *e*PKIKP PKPdf 09 53 51.3 -5.7
comp=Z,41nm,1.5s
ORIF Oris-en-Rattie 141.68 335 *e*PKIKP PKPdf 09 53 51.6 -6.9
comp=Z,16nm,1.0s
PGF Pioggiola 142.14 330 *e*PKIKP PKPdf 09 53 55.1 -4.3
comp=Z,49nm,1.2s
MFF Saint Martin d 142.34 343 *e*PKIKP PKPdf 09 53 54.6 -5.0
comp=Z,72nm,1.6s
CAF Calviac 143.12 339 *e*PKIKP PKPdf 09 53 56.4 -4.6
LASF Ste Croix 143.19 337 *e*PKIKP PKPdf 09 53 56.7 -4.5
MTLF Montolieu 144.44 338 *e*PKIKP PKPdf 09 54 01.6 -1.8
comp=Z,184nm,1.6s
EPF Esparros 145.38 339 *e*PKIKP PKPdf 09 54 02.6 -2.4

ETSF	Etsaut	145.80 340	*e*PKIKP	PKPdf	09 54 05.3	-0.5
	comp=Z,116nm,1.6s					
ESDC	Sonseca Array	149.80 342	PKPbc	PKPbc	09 54 17.7	+0.5
	comp=Z,4.4nm,0.9s,baz=22,slow=2.1,SNR=8.5					
ESLA	Sonseca Array	149.80 342	*e*PKPdf	PKPdf	09 54 12.6	+0.1
PAB	San Pablo	150.03 343	*e*PKP2	PKPbc	09 54 18.4	+0.6

IDC 19 09:41:05.9±1.3, 11°.03S×164°.51E, h0km, mb4.1/6, mb1 4.3/7, mb1mx4.0/20, mbtmp4.2/7, ML4.6/1, Error ellipse: s-maj=32.9km s-min=28.2km az=173.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	Honiara	4.76	289	Pn		Pn	Pn	09 42 20.1	+1.1
	25nm,0.3s,baz=162,slow=9.6,SNR=5.2								
HNR						Sn	Sn	09 43 18.2	+3.2
	17nm,0.3s,baz=156,slow=19,SNR=2.5								
WRA	Warramunga Arr	30.35	249	P		P	P	09 47 19.8	+0.2
	1.1nm,0.5s,baz=79,slow=9.1,SNR=7.8								
ASAR	Alice Springs	31.72	243	P		P	P	09 47 31.3	-0.4
	1.8nm,0.7s,baz=67,slow=9.4,SNR=9.0								
FITZ	Fitzroy Crossi	38.22	255	P		P	P	09 48 27.8	0.0
	3.3nm,0.8s,baz=88,slow=8.5,SNR=6.7								
QSPA	South Pole Qui	78.97	180	P		P	P	09 53 11.6	+0.5
	3.1nm,1.0s,baz=33,slow=1.3,SNR=4.6								
ILAR	Eielson Array	83.89	19	P		P	P	09 53 38.0	+0.9
	0.5nm,0.7s,baz=232,slow=5.0,SNR=4.2								
MKAR	Makanchi Array	92.68	317	P		P	P	09 54 18.7	-1.1
	0.3nm,0.2s,baz=106,slow=3.1,SNR=2.8								

IDC 19 09:42:05.0±0.7, 24°.04N×143°.17E, h0km, mb4.1/14, mb1 4.2/16, mb1mx4.1/25, mbtmp4.0/16, ML3.7/2, Error ellipse: s-maj=24.6km s-min=15.8km az=83.0
NEIC 19 09:42:10.2±0.5, 24°.11N×143°.18E, h35km, mb4.3/2, Error ellipse: s-maj=16.8km s-min=10.0km az=84.0

ISC 19 09:42:05.2±4.9, 24°.09N±0°.06×143°.2E±0°.1, h2km±30km, n30, σ0°88/29, mb4.1/16, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.15	343	Pn		Pn	Pn	09 43 01.1	+5.4
	7.4nm,0.3s,baz=253,slow=19,SNR=2.8								
CBIJ						Sn	Sn	09 43 33.4	-0.5
	159nm,0.3s,baz=287,slow=19,SNR=23								
MJAR	Matsushiro Arr	13.15	342	Pn		Pn	Pn	09 45 11.7	-1.3
	0.4nm,0.3s,baz=157,slow=11,SNR=4.2								
MAJO	Matsushiro	13.15	342	*e*Pn		Pn	Pn	09 45 13.2	+0.2
KSRS	Korea Array	18.70	319	P		Pn	Pn	09 46 25.6	+0.6
	0.2nm,0.3s,baz=131,slow=13,SNR=5.1								
TWG	Pinlang	20.38	271	*e*P		P	P	09 46 44.7	+1.4
	6.6nm,0.4s								
CMAR	Chiang Mai Arr	41.53	271	P		P	P	09 49 55.6	+1.3
	0.8nm,0.5s,mb3.6,baz=63,slow=8.1,SNR=4.1								
WRAB	Tennant Creek	44.60	192	*e*P		P	P	09 50 18.7	-0.3
	2.1nm,0.4s,mb4.3								
WRA	Warramunga Arr	44.62	192	P		P	P	09 50 18.6	-0.5
	1.8nm,0.4s,mb4.2,baz=7.8,slow=7.9,SNR=42								
ASAR	Alice Springs	48.33	191	P		P	P	09 50 47.7	-0.5
	0.7nm,0.7s,mb3.8,baz=15,slow=9.3,SNR=8.1								
ZALV	Zalesovo Beam	52.39	321	P		P	P	09 51 17.4	-1.4
	1.5nm,0.6s,mb4.1,baz=73,slow=5.0,SNR=3.1								
MKAR	Makanchi Array	53.15	311	P		P	P	09 51 24.0	-0.5
	1.1nm,0.4s,mb4.1,baz=87,slow=9.2,SNR=7.0								
STKA	Stephens Creek	55.67	182	P		P	P	09 51 41.9	-0.9
	2.9nm,0.9s,mb4.3,baz=323,slow=5.1,SNR=2.6								
STKA	Stephens Creek	55.67	182	P		P	P	09 51 41.9	-0.9
ILAR	Eielson Array	59.90	28	P		P	P	09 52 12.5	+0.2
	1.2nm,0.8s,mb4.0,baz=269,slow=5.3,SNR=8.7								
BVAR	Borovoye Array	60.91	319	P		P	P	09 52 19.2	-0.1
	1.8nm,0.5s,mb4.4,baz=82,slow=7.3,SNR=7.1								
YKA	Yellowknife Ar	74.33	28	P		P	P	09 53 45.2	+1.2
	1.2nm,0.7s,mb3.9,baz=308,slow=5.6,SNR=4.2								
YKA	Yellowknife Ar	74.33	28	P		P	P	09 53 45.2	+1.2
KEV	Kevo	76.12	341	*e*p		P	P	09 53 58.5	+4.3
ARCES	ARCESS Array B	76.69	341	P		P	P	09 53 59.0	+1.7
	1.6nm,0.8s,mb4.0,baz=67,slow=6.9,SNR=5.3								
KAF	Kangasniemi	80.59	335	*e*p		P	P	09 54 17.9	-1.1
	3.5nm,0.7s,mb4.4								
FINES	FINESS Array B	81.06	334	P		P	P	09 54 21.7	+0.1
	2.5nm,0.5s,mb4.4,baz=65,slow=5.1,SNR=30								
FINES	FINESS Array B	81.06	334	P		P	P	09 54 21.7	+0.1
NVAR	Mina Array Bea	81.62	52	P		P	P	09 54 26.0	+1.0
	0.5nm,0.7s,mb3.6,baz=256,slow=7.0,SNR=3.2								
NVAR	Mina Array Bea	81.62	52	P		P	P	09 54 26.0	+1.0
NB2	NORSAR Subarra	86.75	339	P		P	P	09 54 50.1	-0.5
	comp=Z,4.4nm,1.0s,mb4.6,baz=43,slow=5.1								
NOA	NORSAR Array B	86.75	339	P		P	P	09 54 50.7	+0.1
	comp=Z,2.3nm,0.9s,mb4.4,baz=48,slow=4.7,SNR=5.2								
NOA	NORSAR Array B	86.75	339	P		P	P	09 54 50.7	+0.1
BRTR	Keskin Array B	88.75	313	P		P	P	09 55 00.4	-0.3
	comp=Z,1.0nm,0.8s,mb4.2,baz=105,slow=4.2,SNR=3.1								
PLCA	Paso Flores	147.24	129	PKPbc		PKPbc	PKPbc	10 01 50.7	+0.4
	comp=Z,1.4nm,0.5s,baz=284,slow=4.6,SNR=5.7								
PLCA	Paso Flores	147.24	129	PKPbc		PKPbc	PKPbc	10 01 50.7	+0.4

WEL 19 09:43:46.0±0.1, 39°.70S×176°.87E, h38km±2km, ML3.5/9, 2C, Error ellipse: s-maj=1.3km s-min=0.8km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAHZ	Kahuranaki	0.10	178	⇑PN		PN	Pn	09 43 51.7	-0.7
KAHZ						SN	Sn	09 43 56.8	0.0
CKHZ	Cape Kidnapper	0.16	76	⇑PN		PN	Pn	09 43 52.5	-0.3
CKHZ						SN	Sn	09 43 58.3	+0.8
MCHZ	McNeill Hill	0.29	332	PN		PN	Pn	09 43 52.3	-1.6
MCHZ						SN	Sn	09 43 57.9	-1.6
PXZ	Pawanui	0.33	181	PN		PN	Pn	09 43 54.6	+0.1
PXZ						SN	Sn	09 44 01.7	+1.3
WPHZ	Waipukurau	0.49	222	PN		PN	Pn	09 43 56.2	-0.4
PNHZ	Pukenui	0.56	247	PN		PN	Pn	09 43 56.4	-1.1
PNHZ						SN	Sn	09 44 04.6	-1.0
PRHZ	Porangahau	0.60	198	PN		PN	Pn	09 43 58.1	+0.1
PRHZ						SN	Sn	09 44 08.3	+1.8
NMHZ	Naumai	0.60	355	PN		PN	Pn	09 43 57.7	-0.4
NMHZ						SN	Sn	09 44 07.1	+0.5
BKZ	Black Stump Fm	0.61	331	PN		PN	Pn	09 43 56.8	-1.3
BKZ						SN	Sn	09 44 05.5	-1.3
TSZ	Takapari Road	0.79	243	PN		PN	Pn	09 43 59.7	-0.9
TSZ						SN	Sn	09 44 10.8	-0.3
RAHZ	Arahi	0.80	12	PN		PN	Pn	09 44 00.8	+0.1
RAHZ						SN	Sn	09 44 12.7	+1.3
DVHZ	Dannevirke	0.81	222	PN		PN	Pn	09 44 00.3	-0.6
DVHZ						SN	Sn	09 44 12.3	+0.6
MOVZ	Moawhango	0.91	288	PN		PN	Pn	09 44 01.5	-0.8
KNZ	Kokohu	0.92	43	PN		PN	Pn	09 44 01.9	-0.5
MHGZ	Mahia Peninsul	0.97	56	PN		PN	Pn	09 44 03.0	-0.1
HATZ	Hinemaiaia	1.01	323	PN		PN	Pn	09 44 03.3	-0.3
TUVZ	Tukino	1.04	294	PN		PN	Pn	09 44 04.0	0.0
WNVZ	Wahianoa	1.05	290	PN		PN	Pn	09 44 04.2	0.0
RITZ	Rihia Road	1.07	312	PN		PN	Pn	09 44 04.5	+0.1
OTVZ	Oturere	1.08	299	PN		PN	Pn	09 44 04.6	0.0
BFZ	Birch Farm	1.09	206	PN		PN	Pn	09 44 04.3	-0.4
POWZ	Post Office Ro	1.09	230	PN		PN	Pn	09 44 04.5	-0.3
DRZ	Dome Shelter	1.10	292	PN		PN	Pn	09 44 05.1	+0.3
TRVZ	Turoa	1.10	291	PN		PN	Pn	09 44 04.9	+0.1
PRGZ	Paritu Road	1.10	46	PN		PN	Pn	09 44 04.5	-0.4
FWVZ	Far West T-bar	1.11	293	PN		PN	Pn	09 44 04.9	-0.2
NGZ	Ngauruhoe	1.11	298	PN		PN	Pn	09 44 05.2	+0.2
KRVZ	Karewarewa	1.13	302	PN		PN	Pn	09 44 05.1	-0.1
MTVZ	Mangateitei	1.13	286	PN		PN	Pn	09 44 05.7	+0.4
WTVZ	West Tongariro	1.15	300	PN		PN	Pn	09 44 05.6	0.0
KATZ	Kakaramea	1.17	308	PN		PN	Pn	09 44 05.2	-0.5
ALRZ	Allen Road	1.21	340	PN		PN	Pn	09 44 06.1	-0.2
PKVZ	Pokaka	1.25	289	PN		PN	Pn	09 44 07.1	+0.1
PRRZ	Plateau Road	1.26	343	PN		PN	Pn	09 44 06.9	-0.1
TIWZ	Tintock	1.31	215	PN		PN	Pn	09 44 08.0	+0.2
MRZ	Mangatainoka R	1.38	225	PN		PN	Pn	09 44 07.7	-1.0
HRRZ	Handcock Road	1.39	340	PN		PN	Pn	09 44 08.3	-0.5
RRRZ	Republican Roa	1.39	348	PN		PN	Pn	09 44 08.7	-0.1
URZ	Urewera	1.45	7	PN		PN	Pn	09 44 09.1	-0.6
MWZ	Matawai	1.46	21	PN		PN	Pn	09 44 09.1	-0.6
WAZ	Wanganui	1.46	267	PN		PN	Pn	09 44 10.5	+0.7
OGWZ	Otaki Gorge	1.72	229	PN		PN	Pn	09 44 12.4	-1.0
MTW	Mount Morrison	1.79	215	PN		PN	Pn	09 44 13.2	-1.2
KIW	Kapiti Island	1.90	232	PN		PN	Pn	09 44 14.9	-1.0
PUZ	Puketiti	1.95	34	PN		PN	Pn	09 44 15.3	-1.3
HIZ	Hauiti	1.97	306	PN		PN	Pn	09 44 16.0	-0.8
CAW	Cannon Point	1.97	224	PN		PN	Pn	09 44 15.3	-1.6
MSWZ	Moikau Station	2.11	215	PN		PN	Pn	09 44 17.3	-1.5

PLWZ	Palliser	2.24	213	PN		Pn	09 44 18.9	-1.6

IDC 19 09:44:34.2±1.0, 11°.17S×164°.52E, h0km, mb4.2/7, mb1 4.4/8, mb1mx4.1/20, mbtmp4.2/8, ML5.0/1, Error ellipse: s-maj=30.5km s-min=21.7km az=149.0
ISCJB 19 09:44:40.9±4.7, 11°.1S±0°.2×164°.4E±0°.2, h59km±39km, mb4.1/7, Error ellipse: s-maj=34.0km s-min=21.9km az=34.4

ISC 19 09:44:41.8±4.3, 11°.2S±0°.2×164°.4E±0°.2, h53km±36km, n10, σ0°52/11, mb4.1/7, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	Honiara	4.74	291	Pn		Pn	Pn	09 45 50.2	-0.6
	56nm,0.3s,baz=139,slow=9.1,SNR=11								
HNR						Sn	Sn	09 46 45.1	+0.6
	25nm,0.3s,baz=156,slow=12,SNR=3.6								
CTA	Charters Tower	19.62	241	P		Pn	Pn	09 49 08.1	+0.4
	0.2nm,0.3s,baz=73,slow=11,SNR=7.0								
WRA	Warramunga Arr	30.24	250	P		P	P	09 50 47.6	-0.1
	2.0nm,0.7s,mb3.9,baz=80,slow=9.0,SNR=7.8								
ASAR	Alice Springs	31.60	243	P		P	P	09 50 59.2	-0.4
	1.8nm,0.7s,mb4.0,baz=63,slow=9.9,SNR=15								
FITZ	Fitzroy Crossi	38.11	255	*e*P		P	P	09 51 55.3	-0.6
	9.4nm,0.4s,mb4.9								
FITZ	Fitzroy Crossi	38.11	255	P		P	P	09 51 55.5	-0.5
	4.9nm,0.7s,mb4.3,baz=87,slow=6.7,SNR=10								
PETK	Petropavlovsk-	64.27	355	P		P	P	09 55 11.5	+0.2
	1.1nm,0.6s,mb4.1,baz=141,slow=9.6,SNR=3.6								
QSPA	South Pole Qui	78.84	180	P		P	P	09 56 39.2	+0.6
	4.4nm,1.1s,mb4.3,baz=20,slow=1.5,SNR=7.6								
ILAR	Eielson Array	84.03	19	P		P	P	09 57 05.5	-0.7
	0.6nm,0.8s,mb3.8,baz=226,slow=5.8,SNR=5.6								
NVAR	Mina Array Bea	87.08	50	P		P	P	09 57 22.6	+0.6
	1.3nm,1.0s,mb4.1,baz=193,slow=2.8,SNR=4.4								

IDC 19 09:46:31.1±1.8, 11°.18S×164°.79E, h0km, mb4.1/5, mb1 4.3/6, mb1mx4.0/19, mbtmp4.2/6, ML4.7/1, MS4.8/1, Ms1 4.8/1, ms1mx4.5/24, Error ellipse: s-maj=47.5km s-min=25.1km az=140.0
ISCJB 19 09:46:39.9±5.2, 11°.0S±0°.2×164°.6E±0°.2, h75km±42km, mb3.9/5, Error ellipse: s-maj=41.8km s-min=24.9km az=34.3

ISC 19 09:46:40.4±4.8, 11°.1S±0°.2×164°.6E±0°.2, h64km±39km, n8, σ0°77/9, mb4.0/5, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	Honiara	4.86	289	Pn		Pn	Pn	09 47 50.7	-0.3
	27nm,0.3s,baz=14,slow=4.2,SNR=5.2								
HNR						Sn	Sn	09 48 46.2	+0.2
	10nm,0.3s,baz=233,slow=20,SNR=1.9								
HNR						LR	LR	09 48 46.4	
	comp=Z,10μm,21.1s,baz=9.9,slow=27								
CTA	Charters Tower	19.80	241	*e*P		Pn	Pn	09 51 08.3	+0.5
	5.1nm,0.8s								
CTA	Charters Tower	19.80	241	P		Pn	Pn	09 51 07.9	+0.1
	0.2nm,0.3s,baz=66,slow=14,SNR=3.0								
WRA	Warramunga Arr	30.42	249	P		P	P	09 52 47.6	+0.7
	2.9nm,0.8s,mb4.0,baz=81,slow=9.0,SNR=8.2								
ASAR	Alice Springs	31.78	243	P		P	P	09 52 59.3	+0.5
	2.2nm,0.7s,mb4.1,baz=65,slow=10,SNR=17								
FITZ	Fitzroy Crossi	38.29	255	P		P	P	09 53 52.9	-2.0
	1.7nm,0.7s,mb3.9,baz=82,slow=7.8,SNR=3.5								
PETK	Petropavlovsk-	64.19	355	P		P	P	09 57 08.5	+0.4
	2.7nm,0.8s,mb4.3,baz=190,slow=7.2,SNR=4.4								
ILAR	Eielson Array	83.89	19	P		P	P	09 59 02.6	-0.1
	0.7nm,0.7s,mb3.9,baz=250,slow=2.6,SNR=4.2								

IDC 19 09:55:27.9±2.7, 21°.44N×146°.46E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.6/24, mbtmp3.7/6, Error ellipse: s-maj=112.7km s-min=21.5km az=80.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	22.63	319	P		P	P	10 00 31.3	+0.9
	0.6nm,0.5s,baz=147,slow=8.6,SNR=4.8								
SONM	Songino Array	41.50	319	P		P	P	10 03 16.4	-0.3
	0.4nm,0.5s,baz=125,slow=8.5,SNR=4.5								
WRA	Warramunga Arr	42.80	197	P		P	P	10 03 27.6	+0.1
	0.4nm,0.3s,baz=12,slow=8.3,SNR=16								
ASAR	Alice Springs	46.47	196	P		P	P	10 03 56.6	-0.1
	0.4nm,0.8s,baz=14,slow=6.2,SNR=4.8								
BVAR	Borovoye Array	64.85	320	P		P	P	10 06 08.4	-0.2
	1.6nm,0.4s,baz=90,slow=7.4,SNR=6.7								
FINES	FINESS Array B	84.71	335	P		P	P	10 08 03.8	+0.2
	0.8nm,0.3s,baz=86,slow=5.0,SNR=14								

IDC 19 10:01:53.0±1.9, 18°.69N×145°.89E, h0km, mb3.7/4, mb1 4.0/4, mb1mx3.6/23, mbtmp3.7/4, Error ellipse: s-maj=182.5km s-min=23.8km az=114.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	40.03	197	P		P	P	10 09 29.9	0.0
	0.6nm,0.3s,baz=21,slow=9.0,SNR=26								
ASAR	Alice Springs	43.69	196	P		P	P	10 09 59.6	-0.1
	0.2nm,0.5s,baz=13,slow=6.9,SNR=5.7								
ILAR	Eielson Array	63.58	26	P		P	P	10 12 25.1	-0.1
	0.4nm,0.7s,baz=251,slow=6.0,SNR=5.6								
NVAR	Mina Array Bea	83.01	52	P		P	P	10 14 21.0	+0.6
	0.7nm,0.8s,baz=269,slow=6.7,SNR=5.1								

CASC 19 10:25:16.4±3.2, 11°.88N×87°.34W, h5km±17km, MD4.0, ML2.6, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
COPN	Copaltepe	0.79	68	*e*P		Pg	Pg	10 25 33.5	+1.9
SCIN	San Cristobal	0.86	19	*e*P		Pg	Pg	10 25 31.9	-1.0
CRIN				*e*S		Sg	Sg	10 25 46.0	+1.9
CRIN				AML		AML	AML	10 25 47.2	
	comp=E,156nm,0.4s								
MOMN	Momotombo	0.94	56	*e*P		Pg	Pg	10 25 33.6	-0.9
CSAN		0.95	72	*e*P		Pg	Pg	10 25 34.8	+0.1
APYN	Apoyeque	1.03	70	*e*P		Pg	Pg	10 25 34.6	-1.6
SSN	San Juan del S	1.57	111	*e*P		Pn	Pn	10 25 44.8	-0.2
CONN	Concepcion	1.71	101	*e*P		Pn	Pn	10 25 44.9	-2.0
JCR	Jicaral	2.98	132	*e*P		Pn	Pn	10 26 05.1	+0.7
JCR				*e*S		Sn	Sn	10 26 43.7	+3.1
CGA2	Cerro Gallo 2	3.38	123	*e*P		Pn	Pn	10 26 10.5	+0.6
CGA2				*e*S		Sn	Sn	10 26 52.5	+2.1
PRS1	Puriscal	3.53	122	*e*P		Pn	Pn	10 26 11.8	0.0
PRS1				*e*S		Sn	Sn	10 26 55.0	+1.0
BAR1		4.75	123	*e*P		Pn	Pn	10 26 27.9	-0.8
BAR1				*e*S		Sn	Sn	10 27 22.2	-2.2

IDC 19 10:26:34.7±3.7, 4°.47S×150°.99E, h0km, mb3.9/2, mb1 4.1/3, mb1mx3.6/18, mbtmp3.9/3, ML3.6/1, Error ellipse: s-maj=118.2km s-min=47.4km az=108.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	16.20	196	Pn		Pn	Pn	10 30 25.9	+2.0
	0.2nm,0.3s,baz=4.1,slow=14,SNR=2.5								
KAKA	Kakadu	20.08	245	*e*P		P	P	10 31 12.9	+3.0
	17nm,0.5s								
WRA	Warramunga Arr	22.36	225	P		P	P	10 31 34.9	+0.5
	3.4nm,0.5s,baz=49,slow=9.8								
ASAR	Alice Springs	25.22	219	P		P	P	10 32 01.7	-0.7
	2.0nm,0.8s,baz=59,slow=8.6,SNR=14								
FITZ	Fitzroy Crossi	28.26	239	*e*P		P	P	10 32 30.4	+0.5
	9.9nm,0.4s								
TORD	Torodi Ar. Bea	148.49	288	PKPbc		PKPbc	PKPbc	10 46 24.2	-0.4
	0.7nm,0.7s,baz=83,slow=2.6,SNR=3.7								

DJA 19 10:32:05.0±0.58N×96°.55E, h73km, MLv4.6/7
ISCJB 19 10:32:06.3±0.5, 0°.21N±0°.06×96°.69E±0°.05, h28km, mb4.2/16, Error ellipse: s-maj=10.2km s-min=5.4km az=33.4
IDC 19 10:32:08.2±0.7, 0°.15N×96°.52E, h27km±3km, mb4.0/14, mb1 4.0/16, mb1mx3.9/24, mbtmp3.9/16, ML3.6/2, MS4.0/1, Ms1 4.0/1, ms1mx3.4/40, Error ellipse: s-maj=26.3km s-min=11.1km az=52.0
NEIC 19 10:32:08.3±0.4, 0°.22N×96°.68E, mb4.3/2, Error ellipse: s-maj=12.1km s-min=7.5km az=58.0

ISC 19 10:32:08.7±0.5, 0°.23N±0°.06×96°.72E±0°.05, h29km, h29km±4km: pP-P, n36, σ0°67/37, mb4.2/16, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SISI	Saibi	2.83	123	P		Pn	Pn	10 32 51.3	-0.7
MNSI	Mandailing Nat	2.92	79	P		Pn	Pn	10 32 52.4	-0.8
MNSI				S		Sn	Sn	10 33 27.7	+0.5
TPTI		3.04	9	P		Pn	Pn	10 32 44.9	-10
TPTI				S		Sn	Sn	10 33 20.2	-10
PSI	Prapat	3.37	41	Pn		Pn	Pn	10 32 58.6	-0.8
	2.5nm,0.3s,baz=248,slow=7.7,SNR=8.1								
PSI				LR		LR	LR	10 34 17.8	
	comp=Z,2μm,18.3s,baz=144,slow=37								
PPI	Padang Panjang	3.74	101	P		Pn	Pn	10 33 04.2	-0.3
PPI				S		Sn	Sn	10 33 48.0	+0.3
PDSI	Padang	3.91	107	P		Pn	Pn	10 33 06.7	-0.2
SDSI	Sungai Dareh	4.85	104	P		Pn	Pn	10 33 20.7	+0.9
	0.4nm54nm,0.7s								
KULM	Kulim	6.38	38	*e*Pn		Pn	Pn	10 33 39.7	-1.1
	30nm,0.9s								
KULM	Kulim	6.38	38	P		Pn	Pn	10 33 39.9	-0.9
MNAI	Manna	7.72	126	P		Pn	Pn	10 33 58.4	-0.9
	245nm,0.8s								
MDSI	Maura Dua	8.80	122	P		Pn	Pn	10 34 13.7	-0.4
	48nm,0.8s								
KLSI		9.38	122	P		Pn	Pn	10 34 22.1	+0.1
CMAR	Chiang Mai Arr	18.24	7	Pn		Pn	Pn	10 36 20.3	+0.4
	0.1nm,0.3s,baz=199,slow=13,SNR=5.0								
FITZ	Fitzroy Crossi	33.77	124	P		P	P	10 38 48.4	+0.2
	3.1nm,0.6s,mb4.4,baz=276,slow=7.2,SNR=12								
FITZ				pP		pP	pP	10 38 56.9	+0.1
	2.4nm,0.6s,baz=327,slow=6.5,SNR=2.9								
WRA	Warramunga Arr	41.95	121	P		P	P	10 39 57.9	+0.7
WRAB	Tennant Creek	41.95	121	*e*P		P	P	10 39 55.9	-1.4
ASAR	Alice Springs	43.21	126	P		P	P	10 40 08.2	+0.7
	1.8nm,0.6s,mb4.0,baz=300,slow=8.2,SNR=25								
ASAR				pP		pP	pP	10 40 16.7	+0.5
	1.1nm,0.6s,baz=302,slow=7.6,SNR=5.7								
KSRS	Korea Array	46.91	34	P		P	P	10 40 37.6	+0.9
	0.7nm,0.8s,mb3.7,baz=223,slow=7.3,SNR=4.4								
KSRS				pP		pP	pP	10 40 45.9	+0.4
	1.7nm,0.7s,baz=223,slow=8.6,SNR=5.7								
MK31	Makanchi Array	48.06	347	*e*P		P	P	10 40 45.6	+0.2
MKAR	Makanchi Array	48.06	347	P		P	P	10 40 46.2	+0.8
	3.4nm,0.7s,mb4.5,baz=157,slow=7.6,SNR=21								
MKAR				pP		pP	pP	10 40 54.9	+0.6
	6.0nm,0.6s,baz=160,slow=7.8,SNR=14								
MKAR	Makanchi Array	48.06	347	P		P	P	10 40 46.2	+0.8
MKAR				pP		pP	pP	10 40 54.9	+0.6
SONM	Songino Array	48.15	9	P		P	P	10 40 46.8	+0.6
	0.6nm,0.5s,mb3.9,baz=191,slow=13,SNR=4.2								
SONM				pP		pP	pP	10 40 55.4	+0.4
	1.5nm,0.7s,baz=190,slow=9.1,SNR=7.0								
SONM				PcP		PcP	PcP	10 42 13.4	+0.1
	0.7nm,0.7s,baz=194,slow=5.5,SNR=2.1								
SONM				pPcP				10 42 22.5	
	1.2nm,1.1s,baz=191,slow=3.9,SNR=3.6								
CTA	Charters Tower	52.51	116	P		P	P	10 41 20.3	+0.7
	5.0nm,0.9s,mb4.5,baz=315,slow=5.7,SNR=2.5								
KURK	Kurchatov	52.60	346	*e*P		P	P	10 41 20.4	+0.7
	4.0nm,1.1s,mb4.3								
KURK				*e*pP		pP	pP	10 41 28.7	0.0
STKA	Stephens Creek	53.08	131	P		P	P	10 41 24.9	+1.2
	2.2nm,0.6s,mb4.3,baz=308,slow=6.8,SNR=5.9								
ZAA0	Zalesovo Array	54.43

az=31.1

ISC 19 10:40:44.8±1.8, 11°34S±0°08×164°5E±0°1, h35km±16km, n18, σ0°84/18, mb4.2/10, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.88**	**292**	Pn	**Pn**	**10 41 55.4**	**-0.4**
	72nm,0.3s,baz=151,slow=7.7,SNR=13						
HNR				Sn	**Sn**	**10 42 50.5**	**-0.6**
	22nm,0.3s,baz=184,slow=18,SNR=2.2						
DZM	**Mont Dzumac**	**10.83**	**170**	*e*P	**Pn**	**10 43 19.0**	**+1.6**
DZM				*e*S	**Sn**	**10 45 15.9**	**-1.6**
CTA	**Charters Tower**	**19.60**	**241**	*e*P	**Pn**	**10 45 13.0**	**+1.3**
	7.2nm,0.8s						
CTA	**Charters Tower**	**19.60**	**241**	P	**Pn**	**10 45 13.4**	**+1.7**
	1.0nm,0.3s,baz=60,slow=11,SNR=21						
CTAO	**Charters Tower**	**19.60**	**241**	*e*P	**Pn**	**10 45 13.1**	**+1.4**
	10.0nm,0.8s						
WRAB	**Tennant Creek**	**30.24**	**250**	*e*P	**P**	**10 46 52.0**	**-0.5**
	35nm,1.5s,mb4.9						
WRA	**Warramunga Arr**	**30.26**	**250**	P	**P**	**10 46 52.9**	**+0.3**
	3.5nm,0.5s,mb4.3,baz=79,slow=9.3,SNR=28						
ASAR	**Alice Springs**	**31.59**	**243**	P	**P**	**10 47 04.2**	**-0.1**
	3.0nm,0.8s,mb4.2,baz=62,slow=10.0,SNR=36						
FITZ	**Fitzroy Crossi**	**38.15**	**255**	P	**P**	**10 48 00.7**	**-0.3**
	6.2nm,0.6s,mb4.5,baz=78,slow=8.7,SNR=26						
MJAR	**Matsushiro Arr**	**53.68**	**334**	P	**P**	**10 50 03.9**	**+0.7**
	0.8nm,0.9s,mb3.7,baz=155,slow=6.7,SNR=3.5						
PETK	**Petropavlovsk-**	**64.45**	**355**	P	**P**	**10 51 16.8**	**-0.6**
	1.6nm,0.6s,mb4.2,baz=168,slow=3.9,SNR=11						
SONM	**Songino Array**	**78.19**	**324**	P	**P**	**10 52 41.4**	**+0.9**
	0.8nm,0.6s,mb3.8,baz=137,slow=5.4,SNR=7.7						
ILAR	**Eielson Array**	**84.17**	**19**	P	**P**	**10 53 10.8**	**-1.1**
	0.6nm,0.5s,mb4.0,baz=231,slow=5.1,SNR=13						
NVAR	**Mina Array Bea**	**87.13**	**50**	P	**P**	**10 53 27.4**	**+0.1**
	1.5nm,1.1s,mb4.1,baz=235,slow=7.1,SNR=4.9						
NVAR	**Mina Array Bea**	**87.13**	**50**	P	**P**	**10 53 27.4**	**+0.1**
MKAR	**Makanchi Array**	**92.91**	**317**	P	**P**	**10 53 54.1**	**-0.1**
	0.3nm,0.2s,mb4.3,baz=101,slow=7.8,SNR=4.2						
ARCES	**ARCESS Array B**	**116.31**	**345**	PKP	PKPdf	10 59 23.5	-0.5
	1.5nm,0.9s,baz=86,slow=1.7,SNR=5.4						
TORD	**Torodi Ar. Bea**	**163.12**	**278**	PKP	PKPdf	11 00 45.1	+0.6
	0.4nm,0.7s,baz=113,slow=0.7,SNR=2.6						

JMA 19 10:42:37.2, 33°77N×134°79E, h40km±1km, M3.9, 7C-6D
Broadband fault plane solution: P waves. NP1:
ϕ_s=55.00000°, δ67.00000°, λ8.00000°. **NP2:**ϕ_s=321.00000°, δ83.00000°, λ156.00000°. **Principal axes:** T Plg22.0000°, Azm276.0000°; N Plg65.0000°, Azm125.0000°; P Plg11.0000°, Azm10.0000°; **Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAI	**Aioi**	**0.28**	**275**	⇑P	Pn	10 42 45.2	-0.1
JAI				S	Sn	10 42 50.5	-0.4
JWM	**Minabe**	**0.48**	**80**	⇑P	Pn	10 42 47.4	-0.2
JWM				S	Sn	10 42 54.4	-0.5
JAJ2	**Tsuna**	**0.65**	**7**	⇓P	Pn	10 42 50.2	+0.2
JAJ2				S	Sn	10 42 59.3	+0.2
MRT2	**Murotomisaki 2**	**0.66**	**235**	⇑P	Pn	10 42 49.6	-0.5
MRT2				S	Sn	10 42 58.6	-0.7
JMN	**Monobe**	**0.76**	**267**	⇑P	Pn	10 42 51.4	0.0
JMN				S	Sn	10 43 01.6	-0.1
JWY	**Kouya**	**0.80**	**56**	⇓P	Pn	10 42 52.1	+0.1
JWY				S	Sn	10 43 02.5	-0.3
JWZ	**Kozaga**	**0.81**	**107**	⇑P	Pn	10 42 51.9	-0.2
JWZ				S	Sn	10 43 02.4	-0.5
JJS	**Sakaide**	**0.93**	**310**	⇑P	Pn	10 42 53.7	-0.1
JJS				S	Sn	10 43 05.1	-0.9
JMIK	**Miki**	**1.06**	**12**	⇓P	Pn	10 42 55.5	0.0
JMIK				S	Sn	10 43 09.1	+0.1
JHE	**Heguri**	**1.15**	**40**	⇓P	Pn	10 42 56.6	-0.2
JHE				S	Sn	10 43 10.9	-0.5
JKS	**Kasai**	**1.21**	**2**	⇓P	Pn	10 42 57.5	-0.1
JKS				S	Sn	10 43 11.9	-0.9
JAD	**Aida**	**1.28**	**336**	⇓P	Pn	10 42 58.0	-0.5
JAD				S	Sn	10 43 12.7	-1.7
JKN2	**Miekihoku**	**1.32**	**69**	⇑P	Pn	10 42 58.6	-0.5
MAT	**Matsushiro**	**3.94**	**44**	P	Pn	10 43 36.1	+1.0
MAT				S	Sn	10 44 20.1	+0.1

*IDC **19** 10:48:57.1±0.5, 10°19S×75°44W, h0km, mb4.3/15, mb1 4.5/18, mb1mx4.4/24, mbtmp4.3/18, ML4.1/3 Error ellipse: s-maj=15.7km s-min=12.1km az=78.0*
*NEIC **19** 10:49:00.8±1.8, 10°22S×75°40W, h24km±13km, mb4.8/53, Error ellipse: s-maj=8.7km s-min=5.0km az=57.0*
NEIC Felt [II] at Huancabamba and Oxapampa.
*ISCJB **19** 10:49:02.0±1.2, 10°10S±0°05×75°26W±0°06, h49km±10km, mb4.7/67, Error ellipse: s-maj=11.6km s-min=7.3km az=143.5*
*BJI **19** 10:49:02.7, 10°20S×75°40W, h23km, mB4.9/1*
ISC 19 10:49:03.8±0.9, 10°13S±0°05×75°23W±0°06, h47km±9km, h61km±9.1km; pP-P, n410, σ0°61/393, mb4.7/67, 139C-146D, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.43**	**221**	Pn	**Pn**	**10 49 35.2**	**-5.9**
	181nm,0.3s,baz=34,slow=13,SNR=168						
NNA				Sn	**Sn**	**10 50 02.8**	**-6.8**
	176nm,0.3s,baz=134,slow=22,SNR=8.7						
NNA				Lg		10 50 09.2	
	495nm,0.3s,baz=139,slow=23,SNR=19						
NNA	**Nana**	**2.43**	**221**	*e*Pn	**Pn**	**10 49 35.3**	**-5.8**
NNA				*e*Sn	**Sn**	**10 50 08.2**	**-1.4**
ATAH	**Atahualpa**	**4.32**	**313**	Pn	**Pn**	**10 50 08.0**	**+1.0**
	18nm,0.3s,baz=131,slow=8.3,SNR=66						
ATAH				Lg		10 51 06.3	
	12nm,0.3s,baz=45,slow=20,SNR=2.9						
LPAZ	**La Paz**	**9.23**	**132**	Pn	**Pn**	**10 51 15.6**	**+1.2**
	0.3nm,0.3s,baz=283,slow=4.9,SNR=9.5						
LPAZ				Lg		10 53 46.5	
	0.7nm,0.3s,baz=204,slow=20,SNR=2.6						
LPAZ	**La Paz**	**9.23**	**132**	Pn	**Pn**	**10 51 15.6**	**+1.2**
LPAZ				Lg		10 53 46.5	
OTAV	**Otavalo**	**10.79**	**343**	*e*Pn	**Pn**	**10 51 36.8**	**+1.0**
SIV	**San Ignacio**	**14.96**	**114**	Pn	**Pn**	**10 52 31.7**	**-0.8**
	0.4nm,0.3s,baz=294,slow=13,SNR=5.9						
SIV				Lg		10 56 48.6	
	0.9nm,0.3s,baz=39,slow=22,SNR=6.2						
SDV	**Santo Domingo**	**19.44**	**14**	P	**Pn**	**10 53 27.1**	**-0.9**
	27nm,0.6s						
CFAA	**Coronel Fontan**	**22.33**	**164**	P	**P**	**10 53 56.0**	**-1.6**
	0.8nm,0.8s,baz=337,slow=12,SNR=7.8						
CFAA	**Coronel Fontan**	**22.33**	**164**	P	**P**	**10 53 56.0**	**-1.6**
JTS	**JuntasAbangare**	**22.48**	**334**	P	**P**	**10 53 57.3**	**-2.0**
	4.2nm,0.9s,mb3.9,baz=0.0,slow=10,SNR=2.6						
CPUP	**Villa Florida**	**23.37**	**136**	P	**P**	**10 54 08.2**	**-0.3**
	4.2nm,0.9s,mb3.9,baz=299,slow=10,SNR=6.7						
CPUP	**Villa Florida**	**23.37**	**136**	*e*P	**P**	**10 54 09.1**	**+0.5**
CELP	**Cerrillos**	**29.30**	**17**	*e*P	**P**	**10 55 03.8**	**+1.8**
SJG	**San Juan**	**29.46**	**18**	*e*P	**P**	**10 55 03.1**	**-0.4**
TEIG	**Tepich**	**32.79**	**337**	*e*P	**P**	**10 55 31.1**	**-1.7**
LRAL	**Lakeview Retre**	**44.37**	**346**	*e*P	**P**	**10 57 09.7**	**0.0**
	11nm,0.9s,mb4.6						
OXF	**Oxford**	**46.39**	**344**	*e*P	**P**	**10 57 25.1**	**-0.6**
	33nm,1.1s,mb5.2						
UALR	**University of**	**47.51**	**341**	*e*P	**P**	**10 57 33.9**	**-0.6**
	15nm,0.9s,mb5.0						
UALR				*e*pP	pP	10 57 47.2	-0.1
WVT	**Waverly**	**47.52**	**346**	*e*P	**P**	**10 57 32.8**	**-1.7**
	16nm,1.3s,mb4.9						
628A	**Black Gap, Mar**	**47.56**	**327**	⇓P	**P**	**10 57 35.5**	**+0.5**
	baz=48,SNR=13						
MIAR	**Mount Ida**	**47.72**	**339**	*e*P	**P**	**10 57 35.7**	**-0.4**
	12nm,1.0s,mb4.9						
627A	**Terlingua Ranc**	**47.81**	**326**	⇑P	**P**	**10 57 37.3**	**+0.4**
	baz=48						
TXAR	**Lajitas Array**	**47.87**	**326**	P	**P**	**10 57 37.2**	**-0.1**
	5.0nm,1.0s,mb4.5,baz=146,slow=9.1,SNR=36						
TXAR				PcP	PcP	10 59 05.8	+0.4
	1.0nm,0.9s,baz=158,slow=6.7,SNR=4.1						
TXAR	**Lajitas Array**	**47.87**	**326**	P	**P**	**10 57 37.2**	**-0.1**
TXAR				PcP	PcP	10 59 05.8	+0.4
528A	**Cox Ranch, San**	**48.04**	**327**	⇑P	**P**	**10 57 38.6**	**-0.1**
	baz=48,SNR=8.1						
626A	**Big Bend Ranch**	**48.30**	**326**	P	**P**	**10 57 41.1**	**+0.4**
	baz=48,SNR=31						
428A	**Kincaid Ranch,**	**48.43**	**328**	⇓P	**P**	**10 57 40.9**	**-0.7**
	baz=49,SNR=5.8						
527A	**Woodward Ranch**	**48.47**	**327**	⇑P	**P**	**10 57 41.3**	**-0.7**
	baz=49,SNR=12						
526A	**Mary Lane Ranc**	**48.66**	**326**	⇑P	**P**	**10 57 43.5**	**+0.1**
	baz=49,SNR=12						
427A	**Hayter Ranch,**	**48.91**	**327**	⇓P	**P**	**10 57 45.3**	**0.0**
	baz=49						
328A	**Wristen Ranch,**	**49.02**	**328**	⇑P	**P**	**10 57 46.2**	**+0.1**
	baz=49,SNR=6.3						
SIUC	**Southern Illin**	**49.37**	**345**	*e*P	**P**	**10 57 47.8**	**-0.9**
	23nm,0.8s,mb5.2						
326A	**Caldwell Ranch**	**49.58**	**327**	⇓P	**P**	**10 57 49.7**	**-0.8**
	baz=50,SNR=11						
425A	**Indio Mountain**	**49.71**	**326**	⇑P	**P**	**10 57 51.5**	**0.0**
	baz=50,SNR=20						
WMOK	**Wichita Mounta**	**49.90**	**335**	*e*P	**P**	**10 57 51.7**	**-1.1**
	6.8nm,1.4s,mb4.5						
FVM	**French Village**	**49.93**	**344**	*e*P	**P**	**10 57 52.1**	**-0.8**
	16nm,0.8s,mb5.1						
325A	**Bean Ranch, Si**	**50.16**	**326**	⇓P	**P**	**10 57 54.4**	**-0.4**
	baz=50,SNR=12						
CCM	**Cathedral Cave**	**50.22**	**344**	*e*P	**P**	**10 57 54.0**	**-1.2**
	5.8nm,0.9s,mb4.6						
226A	**Malaga, Loving**	**50.23**	**328**	⇑P	**P**	**10 57 55.5**	**+0.2**
	baz=50,SNR=11						
127A	**Arkansas Junct**	**50.33**	**329**	⇑P	**P**	**10 57 56.0**	**-0.1**
	baz=50,SNR=5.6						
GDL2	**Guadalupe Moun**	**50.47**	**328**	*e*P	**P**	**10 57 57.4**	**+0.2**
	5.9nm,1.1s,mb4.5						
324A	**Moseley Ranch,**	**50.49**	**326**	⇑P	**P**	**10 57 56.5**	**-0.8**
	baz=51,SNR=12						
126A	**Clayton Basin,**	**50.64**	**328**	⇓P	**P**	**10 57 59.0**	**+0.5**
	baz=51						
225A	**Deer Hill, Car**	**50.65**	**327**	⇓P	**P**	**10 57 58.9**	**+0.4**
	baz=51,SNR=9.4						
Z27A	**Tatum**	**50.76**	**330**	⇓P	**P**	**10 57 59.0**	**-0.4**
	baz=51,SNR=10						
CPRX	**Cap Rock**	**50.87**	**329**	*e*P	**P**	**10 58 00.7**	**+0.5**
	8.5nm,0.8s,mb4.7						
125A	**Gardner Draw,**	**50.98**	**328**	⇓P	**P**	**10 58 00.3**	**-0.7**
	baz=51,SNR=7.9						
224A	**Cornudas Mount**	**51.00**	**327**	⇓P	**P**	**10 58 00.2**	**-1.0**
	baz=51,SNR=9.7						
MSTX	**Muleshoe**	**51.07**	**330**	⇓P	**P**	**10 58 01.0**	**-0.7**
	baz=51,SNR=5.3						
Z26A	**Caprock**	**51.12**	**329**	⇓P	**P**	**10 58 01.3**	**-0.7**
	baz=51						
Y27A	**Causey**	**51.20**	**330**	⇑P	**P**	**10 58 02.0**	**-0.6**
	baz=51,SNR=9.2						
124A	**Stringfield Ra**	**51.44**	**327**	⇓P	**P**	**10 58 04.0**	**-0.5**
	baz=52,SNR=7.0						
Z25A	**Roswell**	**51.50**	**328**	⇓P	**P**	**10 58 04.8**	**-0.1**
	baz=52						
X27A	**F and S Farms,**	**51.78**	**331**	⇓P	**P**	**10 58 06.4**	**-0.6**
	baz=52,SNR=5.8						
Z24A	**Sheeppen Canyo**	**51.88**	**328**	⇑P	**P**	**10 58 06.9**	**-0.9**
	baz=52						
Y25A	**Mesa, Roswell**	**51.99**	**329**	⇑P	**P**	**10 58 08.3**	**-0.3**
	baz=52						
X26A	**CR and CF Fran**	**52.05**	**330**	⇑P	**P**	**10 58 08.3**	**-0.7**
	baz=52,SNR=6.5						
HDIL	**Hopedale**	**52.08**	**346**	*e*P	**P**	**10 58 08.2**	**-0.9**
	22nm,0.8s,mb5.2						
W27A	**Bowe Ranch, En**	**52.10**	**331**	⇑P	**P**	**10 58 08.9**	**-0.4**
	baz=52,SNR=10						
320A	**Kipp Ranch, An**	**52.14**	**323**	⇑P	**P**	**10 58 10.2**	**+0.5**
	baz=52						
W26A	**Owens Ranch, T**	**52.46**	**330**	⇑P	**P**	**10 58 11.9**	**-0.1**
	baz=53						
220A	**Playas Peak, P**	**52.55**	**324**	P	**P**	**10 58 13.5**	**+0.8**
	baz=53,SNR=20						
121A	**Cookes Peak, D**	**52.59**	**325**	⇑P	**P**	**10 58 13.5**	**+0.5**
	baz=53,SNR=7.6						
319A	**Douglas**	**52.61**	**323**	⇓P	**P**	**10 58 13.7**	**+0.5**
	baz=53,SNR=13						
Z22A	**Elephant Butte**	**52.68**	**326**	⇑P	**P**	**10 58 14.0**	**+0.4**
	baz=53,SNR=8.9						
Y23A	**Lovelace Mesa,**	**52.71**	**328**	⇑P	**P**	**10 58 14.1**	**+0.2**
	baz=53						
W25A	**X Bar L Ranch,**	**52.90**	**330**	⇓P	**P**	**10 58 15.1**	**-0.2**
	baz=53,SNR=9.9						
219A	**White Tail Can**	**53.05**	**323**	⇑P	**P**	**10 58 16.7**	**+0.3**
	baz=53,SNR=12						
318A	**Bisbee**	**53.08**	**322**	⇓P	**P**	**10 58 17.1**	**+0.4**
	baz=53,SNR=10						
120A	**U Bar Ranch, L**	**53.08**	**324**	⇓P	**P**	**10 58 17.1**	**+0.4**
	baz=53,SNR=6.3						
Z21A	**St. Cloud Mine**	**53.11**	**326**	⇑P	**P**	**10 58 16.9**	**0.0**
	baz=53,SNR=8.6						
Y22A	**Socorro**	**53.20**	**327**	⇑P	**P**	**10 58 16.8**	**-0.7**
	baz=53,SNR=6.9						
W24A	**Lazy 6 Ranch,**	**53.37**	**329**	⇑P	**P**	**10 58 18.8**	**+0.1**
	baz=54,SNR=5.4						
V25A	**Rancho No Teng**	**53.47**	**330**	⇓P	**P**	**10 58 19.3**	**-0.2**
	baz=54,SNR=17						
Z20A	**Nine Sixteen R**	**53.48**	**325**	⇑P	**P**	**10 58 20.5**	**+0.9**
	baz=54,SNR=19						
218A	**Dragoon**	**53.49**	**323**	⇑P	**P**	**10 58 19.9**	**+0.2**
	baz=54,SNR=7.3						
U26A	**Atchley Ranch,**	**53.50**	**331**	⇑P	**P**	**10 58 19.1**	**-0.5**
	baz=54,SNR=9.0						
Y21A	**Point of Rocks**	**53.63**	**326**	⇑P	**P**	**10 58 20.3**	**-0.4**
	baz=54,SNR=15						
ANMO	**Albuquerque**	**53.71**	**328**	P	**P**	**10 58 20.9**	**-0.2**
	3.7nm,1.0s,mb4.3,baz=140,slow=10,SNR=11						
V24A	**Rampart Ranch,**	**53.71**	**330**	⇑P	**P**	**10 58 21.3**	**+0.1**
	baz=54,SNR=6.0						
W23A	**Werner Place,**	**53.71**	**329**	⇓P	**P**	**10 58 20.7**	**-0.5**
	baz=54						
217A	**Green Valley**	**53.82**	**322**	⇑P	**P**	**10 58 22.1**	**0.0**
	baz=54						
U25A	**Circle Dot Ran**	**53.82**	**331**	⇑P	**P**	**10 58 21.8**	**-0.2**
	baz=54,SNR=12						
118A	**Homack Ranch,**	**53.93**	**323**	⇓P	**P**	**10 58 22.6**	**-0.2**
	baz=54						
Y20A	**Horse Springs,**	**53.95**	**326**	⇑P	**P**	**10 58 23.4**	**+0.5**
	baz=54,SNR=5.9						
W22A	**Albuquerque**	**54.01**	**328**	⇑P	**P**	**10 58 24.3**	**+0.9**
	baz=54						
X21A	**Alamocita Cree**	**54.02**	**327**	⇑P	**P**	**10 58 24.7**	**+1.2**
	baz=54,SNR=18						
TUC	**Tucson**	**54.17**	**323**	*e*P	**P**	**10 58 24.3**	**-0.4**
	2.9nm,0.8s,mb4.3						
V23A	**Ortiz Mt. (NFS**	**54.18**	**329**	⇓P	**P**	**10 58 25.4**	**+0.8**
	baz=54						
U24A	**Moreno Valley**	**54.25**	**330**	⇑P	**P**	**10 58 25.7**	**+0.6**
	baz=54						
117A	**Oracle**	**54.33**	**323**	⇑P	**P**	**10 58 25.2**	**-0.6**
	baz=54,SNR=12						
216A	**Three Points,**	**54.36**	**322**	⇑P	**P**	**10 58 26.0**	**-0.1**
	baz=55,SNR=5.2						
T25A	**Trinidad**	**54.42**	**331**	⇓P	**P**	**10 58 26.8**	**+0.5**
	baz=55,SNR=17						
Y19A	**Nutrioso**	**54.47**	**325**	⇓P	**P**	**10 58 27.7**	**+0.9**
	baz=55,SNR=13						
X20A	**Quemado**	**54.48**	**326**	⇑P	**P**	**10 58 27.5**	**+0.6**
	baz=55,SNR=5.4						
U23A	**El Rito**	**54.64**	**329**	⇓P	**P**	**10 58 28.9**	**+0.9**
	baz=55,SNR=5.2						
V22A	**San Miguel Ran**	**54.68**	**328**	⇓P	**P**	**10 58 28.8**	**+0.5**
	baz=55						
Y18A	**Canyon Day Jun**	**54.78**	**324**	⇓P	**P**	**10 58 28.4**	**-0.7**
	baz=55,SNR=6.0						
X19A	**St. Johns**	**54.84**	**326**	⇓P	**P**	**10 58 29.9**	**+0.5**
	baz=55						
S25A	**Robets Cordova**	**54.85**	**332**	⇑P	**P**	**10 58 29.2**	**-0.3**
	baz=55,SNR=9.6						
116A	**Eloy**	**54.90**	**322**	⇑P	**P**	**10 58 29.6**	**-0.4**
	baz=55,SNR=5.5						
W20A	**Ramah**	**54.92**	**327**	⇑P	**P**	**10 58 31.1**	**+1.0**
	baz=55,SNR=6.9						
U22A	**Llaves**	**55.01**	**329**	⇑P	**P**	**10 58 31.7**	**+1.0**
	baz=55,SNR=6.3						
T23A	**Casias Ranch,**	**55.12**	**330**	⇑P	**P**	**10 58 32.0**	**+0.6**
	baz=55						
214A	**Organ Pipe Nat**	**55.16**	**321**	⇓P	**P**	**10 58 31.4**	**-0.4**
	baz=55,SNR=6.5						
Y17A	**Roosevelt**	**55.19**	**324**	⇑P	**P**	**10 58 32.1**	**+0.1**
	baz=55						
S24A	**Houchin Ranch,**	**55.20**	**331**	⇓P	**P**	**10 58 31.2**	**-0.7**
	baz=55						
X18A	**Snowflake**	**55.28**	**325**	⇓P	**P**	**10 58 32.7**	**0.0**
	baz=56,SNR=10.0						
Z16A	**Peralta Trail,**	**55.28**	**323**	⇓P	**P**	**10 58 31.4**	**-1.3**
	baz=56,SNR=5.7						
V20A	**Brimhall**	**55.41**	**327**	⇓P	**P**	**10 58 33.8**	**+0.3**
	baz=56						
SDCO	**Great Sand Dun**	**55.42**	**331**	*e*P	**P**	**10 58 34.0**	**+0.4**
	13nm,1.0s,mb4.9						
U21A	**Nageezi**	**55.46**	**328**	⇑P	**P**	**10 58 33.1**	**-0.8**
	baz=56						
T22A	**Edith**	**55.53**	**329**	⇓P	**P**	**10 58 34.6**	**+0.2**
	baz=56						
W18A	**Petrified Fore**	**55.59**	**326**	⇑P	**P**	**10 58 35.4**	**+0.5**
	baz=56,SNR=6.7						
X17A	**Forest Lakes**	**55.63**	**324**	⇓P	**P**	**10 58 34.6**	**-0.6**
	baz=56,SNR=8.3						
Z15A	**Gila River Ind**	**55.68**	**322**	⇑P	**P**	**10 58 35.8**	**+0.3**
	baz=56						
Y16A	**Circle Bar Ran**	**55.69**	**323**	⇓P	**P**	**10 58 36.0**	**+0.4**
	baz=56,SNR=11						
114A	**Black Gap (USA**	**55.75**	**321**	⇓P	**P**	**10 58 36.1**	**0.0**
	baz=56						
X16A	**Lo Mia Camp, P**	**56.05**	**324**	⇑P	**P**	**10 58 38.6**	**+0.4**
	baz=56,SNR=16						
S22A	**4UR Ranch, Cre**	**56.06**	**330**	⇓P	**P**	**10 58 38.4**	**+0.2**
	baz=56						
Y15A	**Casa Rosa Ranc**	**56.25**	**323**	⇑P	**P**	**10 58 39.7**	**+0.1**
	baz=56,SNR=6.6						
R22A	**Saguache, Gunn**	**56.41**	**330**	⇓P	**P**	**10 58 41.3**	**+0.7**
	baz=57						
T19A	**Beclabito**	**56.48**	**328**	⇓P	**P**	**10 58 41.3**	**+0.1**
	baz=57,SNR=8.0						
MVCO	**Mesa Verde**	**56.49**	**328**	⇑P	**P**	**10 58 41.7**	**+0.4**
	baz=57						
V17A	**Tonalea, Kykot**	**56.55**	**325**	⇓P	**P**	**10 58 42.4**	**+0.7**
	baz=57,SNR=22						
X15A	**Humboldt**	**56.57**	**323**	⇓P	**P**	**10 58 41.7**	**-0.1**
	baz=57,SNR=11						
W16A	**Flagstaff**	**56.59**	**324**	⇓P	**P**	**10 58 42.3**	**+0.3**
	baz=57,SNR=9.9						
U18A	**Rough Rock, Ch**	**56.63**	**327**	⇓P	**P**	**10 58 42.5**	**+0.3**
	baz=57						
Y14A	**Wickenburg**	**56.64**	**322**	⇑P	**P**	**10 58 42.0**	**-0.4**
	baz=57						
WUAZ	**Wupatki**	**56.80**	**325**	P	**P**	**10 58 44.0**	**+0.5**
	baz=57,SNR=17						
WUAZ	**Wupatki**	**56.80**	**325**	*e*P	**P**	**10 58 44.0**	**+0.5**
	19nm,1.0s,mb5.1						
P23A	**Jefferson**	**56.88**	**332**	⇓P	**P**	**10 58 45.1**	**+1.2**
	baz=57,SNR=6.9						
S20A	**Disappointment**	**56.90**	**329**	⇑P	**P**	**10 58 44.1**	**0.0**
	baz=57						
R21A	**Cimarron**	**56.91**	**330**	⇑P	**P**	**10 58 44.5**	**+0.3**
	baz=57						
X14A	**Yava**	**56.94**	**323**	⇑P	**P**	**10 58 45.0**	**+0.5**
	baz=57,SNR=8.2						
Q22A	**Crested Butte,**	**56.98**	**331**	⇓P	**P**	**10 58 45.2**	**+0.5**
	baz=57						
ECSD	**EROS Data Cent**	**57.03**	**342**	*e*P	**P**	**10 58 43.9**	**-1.1**
	13nm,1.0s,mb4.9						
ECSD				*e*pP	pP	10 58 59.2	+1.2
ECSD				*e*PcP	PcP	10 59 39.1	-0.4
U16A	**Tuba City**	**57.12**	**326**	⇓P	**P**	**10 58 45.3**	**-0.4**
	baz=57,SNR=11						
ISCO	**Idaho Springs**	**57.12**	**332**	*e*P	**P**	**10 58 45.8**	**+0.1**
	3.9nm,1.1s,mb4.3						
T18A	**Mexican Hat**	**57.16**	**327**	⇑P	**P**	**10 58 45.2**	**-0.8**
	baz=57,SNR=14						
R20A	**Redvale**	**57.18**	**329**	⇓P	**P**	**10 58 47.0**	**+0.9**
	baz=57,SNR=11						
U17A	**Shonto**	**57.19**	**326**	⇓P	**P**	**10 58 45.7**	**-0.6**
	baz=57,SNR=7.2						
S19A	**Harvey Farm, M**	**57.23**	**328**	⇑P	**P**	**10 58 45.8**	**-0.7**
	baz=57,SNR=14						
PV01	**Paradox Valley**	**57.24**	**329**	*e*P	**P**	**10 58 47.0**	**+0.5**
	1μm,1.1s						
SMCO	**Snowmass**	**57.26**	**331**	*e*P	**P**	**10 58 47.2**	**+0.5**
	6.4nm,1.0s,mb4.6						
SMCO				*e*pP	pP	10 59 08.2	+8.5
V15A	**Kaibab Nationa**	**57.47**	**325**	⇑P	**P**	**10 58 48.7**	**+0.4**
	baz=58,SNR=6.8						
P22A	**Eagle**	**57.49**	**331**	⇓P	**P**	**10 58 47.5**	**-0.7**
	baz=58						
T17A	**Navajo Res., N**	**57.56**	**327**	P	**P**	**10 58 49.8**	**+1.0**
	baz=58,SNR=21						
W14A	**Seligman**	**57.57**	**323**	⇓P	**P**	**10 58 49.0**	**+0.1**
	baz=58						
PDMCI	**Parker Dam,Lak**	**57.57**	**322**	⇑P	**P**	**10 58 49.4**	**+0.4**
	baz=58						
O23A	**Lake Granby, G**	**57.59**	**332**	⇓P	**P**	**10 58 48.6**	**-0.4**
	baz=58,SNR=9.8						
X13A	**Yucca**	**57.59**	**322**	⇓P	**P**	**10 58 48.3**	**-0.7**
	baz=

EYMN	Ely	59.60	347	eP	P	10 59 01.3 -1.5
	4.8nm,0.9s,mb4.5					
L21A	Rawlins	59.65	333	⇓P	P	10 59 03.3 +0.1
	baz=60,SNR=5.8					
M20A	Sweetwater, Wa	59.65	332	⇑P	P	10 59 03.0 -0.3
	baz=60					
N19A	John Jarvie Ra	59.65	331	⇑P	P	10 59 02.3 -1.0
	baz=60					
S13A	Holt Ranch, En	59.67	325	⇓P	P	10 59 03.2 -0.3
	baz=60					
GSC	Goldstone	59.87	321	⇓P	P	10 59 04.6 -0.3
	baz=60,SNR=6.8					
O17A	Robinson Place	59.90	329	⇓P	P	10 59 05.0 0.0
	baz=60,SNR=6.8					
SHOC	Shoshone	59.95	322	⇑P	P	10 59 05.8 +0.3
	baz=60					
N18A	Larsen Ranch,	59.96	330	⇓P	P	10 59 05.9 +0.5
	baz=60					
MWC	Mount Wilson	59.97	319	eP	P	10 59 06.0 +0.4
	15nm,1.1s,mb4.9					
PASC	Pasadena Art C	60.02	319	P	P	10 59 06.1 +0.2
	27nm,0.8s,mb5.3					
R13A	O'Grain Ranch,	60.16	325	⇓P	P	10 59 07.5 +0.7
	baz=60,SNR=9.0					
T11A	Corn Creek, Al	60.22	324	⇑P	P	10 59 07.6 +0.3
	baz=60,SNR=12					
P15A	Leamington	60.23	328	⇑P	P	10 59 07.6 +0.3
	baz=60					
O16A	Springville	60.29	329	⇑P	P	10 59 07.6 -0.1
	baz=60,SNR=6.7					
DAU	Daniels Canyon	60.32	329	eP	P	10 59 08.1 +0.2
U10A	Ash Meadows, A	60.32	322	⇓P	P	10 59 08.4 +0.4
	baz=60					
EDW2	Edwards Air Fo	60.34	320	⇑P	P	10 59 08.3 +0.1
	baz=60					
Q14A	Sevier Lake (B	60.35	326	⇓P	P	10 59 08.3 +0.1
	baz=60,SNR=17					
N17A	Moffit Pass	60.50	330	⇓P	P	10 59 10.5 +1.3
	baz=61,SNR=7.7					
LRMC	Laurel Mountai	60.54	321	⇓P	P	10 59 09.6 +0.1
	baz=61					
JLU	Jordanelle	60.56	329	eP	P	10 59 10.0 +0.5
	13nm,1.1s,mb5.0					
R12A	Pony Springs,	60.62	325	⇑P	P	10 59 10.4 +0.4
	baz=61,SNR=7.7					
K20A	Yellowstone Ra	60.63	332	⇑P	P	10 59 09.5 -0.5
	baz=61					
P14A	Drum Mountains	60.67	327	⇓P	P	10 59 10.7 +0.4
	baz=61,SNR=5.9					
L19A	Farson	60.67	331	⇓P	P	10 59 09.9 -0.4
	baz=61					
FURC	Furnace Creek,	60.67	322	⇑P	P	10 59 10.4 0.0
	baz=61,SNR=6.6					
Q13A	Wheeler Ranch,	60.73	326	⇓P	P	10 59 10.6 -0.1
	baz=61					
N16A	Rees Ranch, Co	60.77	329	⇑P	P	10 59 10.9 0.0
	baz=61,SNR=5.6					
MPMC	Manual Prospec	60.79	321	⇓P	P	10 59 10.4 -0.8
	baz=61,SNR=5.4					
S11A	Rachel	60.80	324	⇑P	P	10 59 10.0 -1.2
	baz=61,SNR=5.7					
M17A	Scullys Gap (B	60.82	330	⇓P	P	10 59 11.0 -0.3
	baz=61,SNR=7.7					
BSC	Santa Cruz Isl	60.85	318	⇑P	P	10 59 11.0 -0.6
	baz=61					
L18A	Fontenelle, Gr	60.86	331	⇑P	P	10 59 11.8 +0.2
	baz=61					
DUG	Dugway	60.97	328	⇓P	P	10 59 12.5 +0.2
	baz=61,SNR=11					
DUG	Dugway	60.97	328	eP	P	10 59 13.0 +0.7
	17nm,1.0s,mb5.1					
AGMN	Agassiz Nation	60.97	344	eP	P	10 59 12.0 -0.2
	7.9nm,0.8s,mb4.9					
K19A	Absolon Red Bu	61.00	332	⇓P	P	10 59 11.6 -0.8
	baz=61,SNR=6.5					
P13A	Bates Ranch, G	61.08	326	⇓P	P	10 59 13.5 +0.4
	baz=61,SNR=6.9					
ISA	Isabella	61.15	320	⇑P	P	10 59 13.3 -0.3
	baz=61,SNR=6.6					
ISA	Isabella	61.15	320	eP	P	10 59 13.8 +0.2
	6.5nm,0.8s,mb4.8					
R11A	Troy Canyon, C	61.19	324	⇑P	P	10 59 14.2 +0.3
	baz=61,SNR=15					
Q12A	Willow Creek R	61.24	326	⇑P	P	10 59 14.7 +0.6
	baz=61,SNR=5.9					
BW06	Boulder Array	61.28	332	⇓P	P	10 59 13.4 -1.0
	baz=62,SNR=6.6					
BW06	Boulder Array	61.28	332	eP	P	10 59 13.7 -0.6
	8.6nm,1.3s,mb4.7					
PDAR	Pinedale Array	61.28	332	P	P	10 59 14.3 -0.1
	4.4nm,1.1s,mb4.5,baz=145,slow=6.5,SNR=17					
GRAC	Grapevine Rang	61.33	322	⇑P	P	10 59 14.2 -0.7
	baz=62					
HWUT	Hardware Ranch	61.37	330	eP	P	10 59 14.5 -0.5
	14nm,1.0s,mb5.0					
CWC	Cottonwood Cre	61.40	321	⇓P	P	10 59 15.3 0.0
	baz=62					
K18A	Toltan Ranch,	61.41	331	⇓P	P	10 59 15.2 -0.1
	baz=62,SNR=11					
S10A	Tonopah Range,	61.48	324	⇓P	P	10 59 16.0 +0.2
	baz=62,SNR=20					
Q11A	Duckwater	61.57	325	⇓P	P	10 59 16.4 0.0
	baz=62,SNR=21					
P12A	McGill	61.58	326	⇓P	P	10 59 16.7 +0.2
	baz=62					
L16A	Fish Haven	61.61	330	⇓P	P	10 59 16.2 -0.4
	baz=62					
N14A	Grayback Hills	61.64	328	⇓P	P	10 59 17.0 +0.2
	baz=62					
VES	Vestal, Richgr	61.64	320	⇓P	P	10 59 16.2 -0.8
	baz=62,SNR=6.0					
J18A	Kendall Valley	61.84	332	⇓P	P	10 59 17.5 -0.6
	baz=62,SNR=6.0					
SMMC	Simmler	61.89	319	⇓P	P	10 59 18.9 +0.2
	baz=62					
Q10A	Clear Creek Ra	61.98	324	⇓P	P	10 59 18.9 -0.2
	baz=62,SNR=7.7					
RCTC	Rector, Farmer	62.03	321	⇓P	P	10 59 19.8 +0.2
	baz=62					
O12A	Currie	62.05	327	⇓P	P	10 59 19.7 0.0
	baz=62,SNR=16					
L15A	Malad City	62.07	329	⇑P	P	10 59 19.5 -0.2
	baz=62,SNR=10					
I18A	Diamond G Ranc	62.12	332	⇑P	P	10 59 19.4 -0.6
	baz=62					
N13A	Wendover, West	62.18	327	eP	P	10 59 20.6 +0.1
	14nm,1.1s,mb5.0					
M14A	Sheep Mountain	62.20	328	⇑P	P	10 59 20.3 -0.3
	baz=62,SNR=12					
J17A	Brown Place, J	62.28	331	⇓P	P	10 59 21.3 +0.3
	baz=62,SNR=5.3					
MTUM	Tungsten Hills	62.28	322	eP	P	10 59 22.0 +0.8
REDW	Red Top Meadow	62.34	331	eP	P	10 59 21.6 +0.1
	7.1nm,1.3s,mb4.6					
SNOW	Snow King Moun	62.38	331	eP	P	10 59 21.5 -0.2
	11nm,1.4s,mb4.8					
O11A	Cowboy Ranch,	62.45	326	⇓P	P	10 59 22.5 +0.1
	baz=63					
P10A	Eureka	62.55	325	⇑P	P	10 59 22.9 -0.1
	baz=63					
RRI2	Red Ridge	62.56	331	eP	P	10 59 23.4 +0.4
	17nm,1.1s,mb5.1					
J16A	Bone	62.64	331	⇓P	P	10 59 22.4 -1.1
	baz=63					
K15A	Arbon	62.65	330	⇓P	P	10 59 23.1 -0.4
	baz=63					
ELK	Elko	62.65	327	P	P	10 59 24.3 +0.6
	3.6nm,0.9s,mb4.5,baz=108,slow=5.0,SNR=14					
ULM	Lac du Bonnet	62.77	345	P	P	10 59 23.6 -0.7
	10.0nm,0.8s,mb5.0,baz=160,slow=7.8,SNR=7.8					
IMW	Indian Meadow	62.79	332	eP	P	10 59 25.0 +0.5
	8.6nm,1.2s,mb4.8					
NVAR	Mina Array Bea	62.83	323	P	P	10 59 25.5 +0.7
	5.1nm,0.9s,mb4.7,baz=145,slow=6.7,SNR=36					
NVAR	Mina Array Bea	62.83	323	P	P	10 59 25.5 +0.7
K14A	Jones Ranch, D	62.87	329	⇓P	P	10 59 23.4 -1.7
	baz=63					
L13A	Double Diamond	62.93	328	⇓P	P	10 59 25.6 +0.2
	baz=63,SNR=9.0					
M12A	Wells	62.95	327	⇑P	P	10 59 25.8 +0.2
	baz=63,SNR=5.3					
RLMT	Red Lodge	62.98	334	⇓P	P	10 59 25.9 +0.2
	baz=63					
RLMT	Red Lodge	62.98	334	eP	P	10 59 25.9 +0.1
	7.0nm,1.1s,mb4.7					
I16A	Newdale	63.03	331	⇑P	P	10 59 25.9 -0.2
	baz=63,SNR=7.3					
O10A	Cortez Mining,	63.03	326	⇑P	P	10 59 27.0 +0.8
	baz=63,SNR=8.6					
J15A	Blackfoot	63.13	330	⇓P	P	10 59 26.9 +0.1
	baz=63,SNR=9.0					
G18A	Lazy EL Ranch,	63.27	334	⇓P	P	10 59 27.1 -0.5
	baz=64,SNR=8.2					
M11A	Holland Ranch,	63.43	327	⇑P	P	10 59 29.2 +0.4
	baz=64,SNR=6.4					
L12A	House Creek Ra	63.52	328	⇓P	P	10 59 29.7 +0.3
	baz=64,SNR=6.1					
H16A	Russell Place,	63.55	332	P	P	10 59 30.7 +1.2
	baz=64,SNR=9.6					
WAKR	Walker	63.55	322	eP	P	10 59 30.4 +0.7
J14A	Carey	63.61	330	⇓P	P	10 59 30.2 +0.3
	baz=64					
GCMT	Greycliff	63.69	334	eP	P	10 59 30.7 +0.4
	9.0nm,1.0s,mb4.8					
DGMT	Dagmar	63.71	339	⇑P	P	10 59 30.6 +0.1
	baz=64,SNR=6.1					
DGMT	Dagmar	63.71	339	eP	P	10 59 31.1 +0.6
	23nm,0.9s,mb5.2					
F18A	Big Timber	63.80	334	⇑P	P	10 59 30.7 -0.4
	baz=64,SNR=15					
K12A	Draper Farm, C	63.81	328	⇓P	P	10 59 30.9 -0.4
	baz=64,SNR=16					
CMB	Columbia Colle	63.83	321	eP	P	10 59 31.4 -0.1
	5.6nm,1.0s,mb4.5					
L11A	Cat Creek Ranc	63.93	327	⇓P	P	10 59 31.5 -0.5
	baz=64,SNR=9.3					
J13A	Cove Ranch, Pi	63.99	329	⇑P	P	10 59 32.7 +0.3
	baz=64,SNR=5.3					
I14A	Mackay	64.02	330	⇑P	P	10 59 32.5 -0.1
	baz=64					
H15A	Lima	64.14	331	⇓P	P	10 59 33.4 0.0
	baz=64,SNR=11					
G16A	Moss Hill, Enn	64.21	332	⇓P	P	10 59 33.1 -0.7
	baz=64					
F17A	Fitzpatrick Pl	64.21	333	⇑P	P	10 59 33.7 -0.2
	baz=64,SNR=6.5					
HLID	Hailey	64.23	329	⇑P	P	10 59 33.9 -0.1
	baz=64,SNR=8.5					
HLID	Hailey	64.23	329	eP	P	10 59 34.7 +0.7
	5.5nm,1.1s,mb4.5					
L10A	Juniper Basin	64.25	327	⇑P	P	10 59 34.6 +0.5
	baz=64					
WCN	Washoe City	64.25	323	⇓P	P	10 59 33.6 -0.6
	baz=64,SNR=9.7					
PAHR	Pah Rah Range	64.30	323	eP	P	10 59 35.6 +1.1
	21nm,1.0s,mb5.1					
I13A	Wildhorse Cree	64.34	330	⇑P	P	10 59 35.0 +0.3
	baz=64,SNR=9.5					
J12A	Stokes Ranch,	64.35	329	⇓P	P	10 59 35.0 +0.2
	baz=64					
MCMT	McKenzie Canyo	64.39	331	eP	P	10 59 35.9 +0.8
	2.4nm,1.1s,mb4.1					
E18A	Harlowton	64.40	334	⇑P	P	10 59 34.3 -0.7
	baz=65,SNR=8.7					
BOZ	Bozeman (W)	64.45	333	⇓P	P	10 59 35.2 -0.2
	baz=65,SNR=9.3					
BOZ	Bozeman (W)	64.45	333	eP	P	10 59 35.0 -0.4
	5.0nm,1.0s,mb4.5					
G15A	Dillon	64.48	332	⇑P	P	10 59 35.4 -0.2
	baz=65					
H14A	Leadore	64.49	331	⇓P	P	10 59 35.9 +0.2
	baz=65,SNR=5.7					
K11A	Parker Ranch,	64.50	328	⇓P	P	10 59 35.8 +0.1
	baz=65,SNR=6.4					
DLMT	Dillon	64.68	332	eP	P	10 59 37.2 +0.3
	9.6nm,1.4s,mb4.6					
E17A	Martinsdale	64.73	334	P	P	10 59 37.4 +0.2
	baz=65,SNR=8.4					
I12A	Atlanta	64.76	329	⇓P	P	10 59 37.0 -0.5
	baz=65,SNR=8.5					
MFID	Camas Ranch	64.84	328	⇓P	P	10 59 38.4 +0.4
	baz=65,SNR=22					
D18A	Linhart Farms,	64.85	335	⇓P	P	10 59 37.1 -0.8
	baz=65,SNR=8.5					
H13A	Challis	64.88	330	⇓P	P	10 59 38.1 -0.1
	baz=65,SNR=6.7					
K10A	MacKenzie Ranc	64.94	327	⇑P	P	10 59 39.0 +0.3
	baz=65,SNR=10					
G14A	Jackson	64.99	331	⇑P	P	10 59 39.6 +0.7
	baz=65					
E16A	East Helena	65.14	333	⇑P	P	10 59 40.4 +0.5
	baz=65					
H12A	Diamond D Ranc	65.16	330	⇑P	P	10 59 40.6 +0.5
	baz=65,SNR=7.6					
D17A	Six Diamond Ra	65.19	334	⇑P	P	10 59 39.9 -0.3
	baz=65,SNR=11					
G13A	Cobalt	65.25	331	⇑P	P	10 59 40.4 -0.2
	baz=66					
I11A	Placerville	65.26	329	⇑P	P	10 59 40.3 -0.4
	baz=66,SNR=17					
HRY	Holter Researc	65.35	333	eP	P	10 59 41.3 +0.1
	3.5nm,0.9s,mb4.4					
D16A	Dana Ranch, Ca	65.47	334	⇓P	P	10 59 41.6 -0.4
	baz=66,SNR=7.6					
EGMT	Eagleton	65.48	335	⇑P	P	10 59 41.3 -0.7
	baz=66,SNR=6.3					
EGMT	Eagleton	65.48	335	eP	P	10 59 42.3 +0.2
	9.6nm,0.9s,mb4.8					
E15A	Deer Lodge	65.50	332	⇓P	P	10 59 42.0 -0.2
	baz=66					
C17A	Wharram Farm,	65.59	334	⇓P	P	10 59 41.8 -1.0
	baz=66,SNR=9.0					
B18A	Beardsley Farm	65.78	336	⇑P	P	10 59 43.8 -0.1
	baz=66,SNR=6.7					
F13A	Darby	65.81	331	⇓P	P	10 59 44.6 +0.3
	baz=66					
G12A	Big Creek, Yel	65.81	330	⇓P	P	10 59 44.8 +0.5
	baz=66					
E14A	Clinton	65.88	332	⇑P	P	10 59 45.2 +0.6
	baz=66,SNR=5.1					
B17A	L&G Farms, Che	66.12	335	⇓P	P	10 59 46.5 +0.3
	baz=66					
C16A	Fuhringer Ranc	66.15	334	⇑P	P	10 59 45.8 -0.5
	baz=66					
J08A	Circle Bar Ran	66.20	327	⇑P	P	10 59 45.5 -1.3
	baz=66					
E13A	Victor	66.22	332	⇑P	P	10 59 46.8 -0.1
	baz=66,SNR=9.0					
A18A	Metzger Ranch,	66.22	336	⇑P	P	10 59 46.5 -0.4
	baz=66,SNR=7.2					
F12A	Elk City	66.23	331	⇑P	P	10 59 46.5 -0.5
	baz=66,SNR=5.8					
MOD	Modoc	66.25	325	eP	P	10 59 47.7 +0.6
	14nm,1.0s,mb4.9					
D14A	Greenough	66.38	332	⇑P	P	10 59 47.9 0.0
	baz=67					
MSO	Missoula	66.39	332	eP	P	10 59 48.2 +0.3
	8.8nm,1.0s,mb4.7					
SLMT	Seeley Lake	66.50	333	eP	P	10 59 49.2 +0.6
C15A	Salmond Ranch,	66.50	333	⇑P	P	10 59 49.1 +0.5
	baz=67					
A17A	Triple J Farms	66.59	335	⇓P	P	10 59 48.5 -0.7
	baz=67,SNR=11					
B15A	Bradely Ranch,	66.89	334	⇓P	P	10 59 50.1 -0.9
	baz=67,SNR=7.8					
SWMT	Swartz Lake	66.92	333	eP	P	10 59 50.1 -1.2
A16A	West Butte Ran	66.97	335	⇓P	P	10 59 51.7 +0.2
	baz=67,SNR=8.2					
C14A	Swan Lake	67.00	333	⇓P	P	10 59 51.5 -0.3
	baz=67					
K05A	Summer Lake	67.11	325	⇑P	P	10 59 53.0 +0.4
	baz=67,SNR=7.0					
D12A	Red Ives Fores	67.22	331	⇓P	P	10 59 53.3 +0.1
	baz=67					
JTMT	Jette	67.23	333	eP	P	10 59 53.9 +0.7
B14A	Marquette Ranc	67.24	334	⇑P	P	10 59 52.4 -0.8
	baz=67,SNR=7.9					
I07A	Izee	67.24	327	⇑P	P	10 59 53.3 -0.1
	baz=67,SNR=15					
C13A	Hot Springs	67.31	332	⇓P	P	10 59 53.0 -0.8
	baz=68					
F10A	Beach Ranch, E	67.35	330	⇑P	P	10 59 54.0 0.0
	baz=68,SNR=9.6					
A15A	Johnson Ranch,	67.47	334	⇑P	P	10 59 53.8 -0.9
	baz=68					
YBH	Yreka Blue Hor	67.53	323	P	P	10 59 53.1 -2.2
	4.4nm,0.9s,mb4.5,baz=132,slow=6.4,SNR=6.7					
BSMT	Bassoo Peak	67.54	332	eP	P	10 59 56.5 +1.4
A14A	Double T Ranch	67.76	334	⇑P	P	10 59 55.6 -1.0
	baz=68,SNR=6.5					
G08A	Pilot Rock	67.76	328	⇓P	P	10 59 56.8 +0.1
	baz=68,SNR=5.7					
WALA	Waterton Lakes	68.04	334	eP	P	10 59 58.8 +0.4
	0.2nm,0.8s					
A13A	Flathead Natio	68.17	333	⇓P	P	10 59 59.6 +0.5
	baz=68					
C11A	Tepee Creek (N	68.21	332	⇑P	P	10 59 59.6 +0.2
	baz=68					
B12A	Libby	68.35	332	⇓P	P	11 00 00.4 +0.1
	baz=68					
G06A	Carlson Farm,	68.61	327	⇑P	P	11 00 03.2 +1.2
	baz=69					
A12A	Yaak River Ran	68.72	333	⇑P	P	11 00 02.9 +0.3
	baz=69,SNR=6.5					
OD2	Odessa Site #2	69.07	330	eP	P	11 00 04.8 0.0
	15nm,1.0s,mb4.9					
F04A	Amboy	70.01	327	⇑P	P	11 00 09.7 -0.9
	baz=70					
B08A	Colville Reser	70.04	330	⇓P	P	11 00 10.3 -0.5
	baz=70,SNR=6.1					
A05A	Maple Falls	71.83	330	⇑P	P	11 00 21.1 -0.4
	baz=72					
DBIC	Dimbokro	72.04	80	P	P	11 00 24.1 +0.5
	3.5nm,1.1s,mb4.2,baz=244,slow=17,SNR=2.1					
VNA1	Neumayer--Stat	72.95	161	eP	P	11 00 27.9 -0.1
VNA1				e	pP	11 00 39.7 -1.8
YKA	Yellowknife Ar	78.55	343	P	P	11 00 58.5 -1.4
	4.9nm,0.9s,mb4.4,baz=138,slow=6.3,SNR=17					
YKA	Yellowknife Ar	78.55	343	P	P	11 00 58.5 -1.4
TORD	Torodi Ar. Bea	79.77	75	P	P	11 01 09.1 +1.3
	4.6nm,0.8s,mb4.5,baz=268,slow=5.1,SNR=10					
QSPA	South Pole Qui	79.99	180	P	P	11 01 07.8 +0.1
	baz=152,slow=5.0					
DLBC	Dease Lake	81.38	334	P	P	11 01 16.0 +0.7
	5.2nm,1.0s,mb4.4,baz=134,slow=11,SNR=3.7					
DLBC	Dease Lake	81.38	334	P	P	11 01 16.0 +0.7
ESDC	Sonseca Array	82.36	48	P	P	11 01 23.6 +2.7
	1.4nm,0.8s,mb4.0,baz=250,slow=6.3,SNR=8.6					
DAWY	Dawson	88.18	337	eP	P	11 01 49.7 +0.2
EGAK	Eagle	89.19	337	eP	P	11 01 54.5 +0.3
	15nm,0.8s,mb5.4					
SYO	Syowa Base	89.19	161	⇑eX	P	11 01 48.0 -6.3
ILAR	Eielson Array	91.44	336	P	P	11 02 04.7 0.0
	1.7nm,0.9s,mb4.4,baz=152,slow=3.4,SNR=14					
ILAR				PP	PP	11 05 40.5 -2.5
	0.6nm,0.9s,baz=124,slow=7.1,SNR=5.0					
RSO	Redoubt South	92.66	331	eP	P	11 02 10.7 +0.3
RSO				epP	pP	11 02 39.5 +15
BPAW	Bear Paw Mtn.	92.90	335	eP	P	11 02 11.2 -0.3
	8.1nm,1.0s,mb5.1					
AKTK	Aktyubinsk	124.45	34	PKP	PKPdf	11 07 58.7 +0.8
AKTO	Aktyubinsk	124.45	34	PKP	PKPdf	11 07 58.7 +0.8
	0.6nm,0.6s,baz=57,slow=2.9,SNR=3.9					
ABKAR	Akbulak array	126.12	35	ePKPdf	PKPdf	11 08 02.1 +1.0
BVAR	Borovoye Array	129.06	26	PKP	PKPdf	11 08 07.8 +1.2
	1.2nm,0.9s,baz=321,slow=2.1,SNR=4.5					
ZALV	Zalesovo Beam	133.47	16	PKP	PKPdf	11 08 14.7 -0.2
	2.2nm,0.3s,baz=224,slow=1.7,SNR=5.0					
MKAR	Makanchi Array	138.77	23	PKP	PKPdf	11 08 25.2 +0.2
	0.3nm,0.3s,baz=344,slow=1.8,SNR=4.7					
MKAR	Makanchi Array	138.77	23	PKP	PKPdf	11 08 25.2 +0.2
MDJ	Mudanjiang	139.51	332	PKP	PKPdf	11 08 25.3 -1.1
MJAR	Matsushiro Arr	139.94	316	PKhKP	PKPpre	11 08 19.1
	1.4nm,0.9s,baz=69,slow=3.0,SNR=4.8					
SONM	Songino Array	142.40	358	PKP	PKPdf	11 08 30.6 -0.9
	0.6nm,0.6s,baz=336,slow=3.3,SNR=4.0					
WMQ	Urumqi	143.31	21	ePKP	PKPdf	11 08 31.6 -1.6
KSRS	Korea Array	145.72	326	PKPbc	PKPbc	11 08 38.1 0.0
	16nm,1.0s,baz=47,slow=3.3,SNR=49					
HHC	Hu-ho-hao-te	148.82	350	ePKPbc	PKPdf	11 08 40.3 -2.4
HHC				PP	PP	11 12 18.1 +2.2
GTA	Gaotai	150.51	8	ePKPbc	PKPbc	11 08 51.5 +0.7
GTA				pPKP	pPKPdf	11 08 56.3 -3.5
GTA				sPKP		11 08 59.3
LZH	Lanzhou	154.15	2	ePKPbc	PKPdf	11 08 53.5 +2.6
LZH				pPKP	pPKPdf	11 09 04.0 -1.3
NJ2	Nanjing	154.59	331	ePKPbc	PKPdf	11 08 53.6 +1.9
GYA	Guiyang	163.66	354	ePKP	PKPdf	11 09 01.3 -1.1
GYA				PKPab	PKPab	11 09 54.8 +0.7
GYA				PKS		11 12 31.9
GYA				PP	PP	11 13 41.6 +3.5
GYA				AMB	AMB	
	comp=Z,90nm,8.0s					
KMI	Kunming	164.97	7	PKP	PKPdf	11 09 02.1 -1.5
CMAR	Chiang Mai Arr	169.98	34	PKPab	PKPab	11 10 23.1 +0.8
	comp=Z,1.7nm,0.9s,baz=320,slow=5.8,SNR=8.1					

*ISCJB **19** 10:50:34.0±0.4, 39°.65N±0°.03×29°.48E±0°.03, h0km, Error ellipse: s-maj=3.9km s-min=3.5km az=31.4*
*CSEM **19** 10:50:33.7±0.2, 39°.61N×29°.47E, h1km, MD2.8, Error ellipse: s-maj=5.7km s-min=4.2km az=26.0*
*ISK **19** 10:50:33.6, 39°.59N×29°.42E, h8km, MD2.8*

ISC 19 10:50:34.3±0.5, 39°.63N±0°.03×29°.47E±0°.03, h0km, n32, σ1§21/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	Gediz	0.54	179	i P	Pg	10 50 44.0	-0.6
GDZ	Gediz	0.54	179	i P	Pg	10 50 44.0	-0.6
GDZ				i S	Sg	10 50 55.0	+3.5
ULDT	Uludag	0.58	333	i P	Pg	10 50 43.9	-1.4
ULDT	Uludag	0.58	333	i P	Pg	10 50 43.9	-1.4
ULDT				i S	Sg	10 50 52.6	-0.2
BORA	Eskisehir	0.80	71	i P	Pg	10 50 48.6	-0.9
BORA	Eskisehir	0.80	71	i P	Pg	10 50 48.7	-0.9
BORA				i S	Sg	10 51 01.0	+1.1
DEMI	Demirci	0.83	225	i P	Pg	10 50 50.2	+0.1
DEMI	Demirci	0.83	225	i P	Pg	10 50 50.2	+0.1
DEMI				i S	Sg	10 51 03.8	+2.9
MDNY	Mudanya-Bursa	0.87	329	ePG	Pg	10 50 51.4	+0.5
MDNY	Mudanya-Bursa	0.87	329	ePg	Pg	10 50 51.4	+0.5
YLV	Yalova	0.94	355	ePG	Pg	10 50 52.9	+0.5
YLV				eSG	Sg	10 51 06.6	+2.0
YLV	Yalova	0.94	355	ePg	Pg	10 50 52.9	+0.5
YLV				eSg	Sg	10 51 06.6	+2.0
ARMT	Armutlu	1.05	334	ePG	Pg	10 50 53.5	-0.8
ARMT				eSG	Sg	10 51 09.5	+1.5
ARMT	Armutlu	1.05	334	ePg	Pg	10 50 53.6	-0.8
ARMT				eSg	Sg	10 51 09.5	+1.5
ESKT	Eskisehir	1.07	95	ePN	Pn	10 50 54.6	-1.9
ESKT	Eskisehir	1.07	95	i P	Pg	10 50 53.9	-0.9
ESKT	Eskisehir	1.07	95	ePn	Pn	10 50 54.6	-1.9
SEYT	Eskypehyr

3.0nm,1.1s,baz=79,slow=9.3,SNR=7.6
ASAR Alice Springs 31.53 242 P P 10 58 17.3 -1.1
1.1nm,0.9s,baz=70,slow=10,SNR=6.0
PETK Petropavlovsk- 63.91 356 P P 11 02 29.0 +0.2
1.0nm,0.5s,baz=142,slow=7.2,SNR=3.7
SONM Songino Array 77.57 324 P P 11 03 53.4 +1.2
0.5nm,0.8s,baz=144,slow=10.0,SNR=3.6
ILAR Eielson Array 83.79 19 P P 11 04 24.4 -0.7
0.4nm,0.8s,baz=229,slow=5.9,SNR=4.9

*ISCJB **19** 10:55:52.1±0.4, 0.°27N±0.°04×96.°71E±0.°04, h29km, mb4.2/19, Error ellipse: s-maj=6.5km s-min=5.3km az=142.3*
*NEIC **19** 10:55:54.0±0.3, 0.°29N×96.°66E, mb4.3/3, Error ellipse: s-maj=9.8km s-min=6.9km az=67.0*
*IDC **19** 10:55:54.1±0.7, 0.°23N×96.°58E, h29km±4km, mb4.0/16, mb1 4.1/18, mb1mx3.9/26, mbtmp4.0/18, ML4.2/2, MS3.7/1, Ms1 3.7/1, ms1mx3.4/43, Error ellipse: s-maj=22.0km s-min=12.1km az=56.0*
*DJA **19** 10:55:55, 0.°32N×96.°81E, h30km, MLv4.7/13*
ISC 19 10:55:54.4±0.4, 0.°28N±0.°04×96.°72E±0.°04, h31km, h31km±.4km:pP-P, n46, σ0s77/45, mb4.2/19, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**2.86**	**124**	P	**Pn**	**10 56 36.6**	**-1.3**
MNSI	**Mandailing Nat**	**2.91**	**80**	P	**Pn**	**10 56 38.5**	**0.0**
MNSI				S	**Sn**	**10 57 12.2**	**-0.2**
TPTI		**2.99**	**9**	P	**Pn**	**10 56 38.3**	**-1.5**
PSI	**Prapat**	**3.33**	**41**	Pn	**Pn**	**10 56 43.9**	**-0.6**
	3.5nm,0.3s,baz=255,slow=6.8,SNR=15						
PSI				Sn	**Sn**	**10 57 24.6**	**+1.6**
	8.1nm,0.3s,baz=176,slow=20,SNR=8.6						
PSI				LR	LR	10 58 23.3	
	comp=Z,1μm,19.8s,baz=176,slow=44						
TSI	**Tuntungan**	**3.69**	**30**	P	**Pn**	**10 56 49.9**	**+0.5**
PPI	**Padang Panjang**	**3.75**	**101**	P	**Pn**	**10 56 48.6**	**-1.6**
PDSI	**Padang**	**3.92**	**108**	P	**Pn**	**10 56 52.7**	**+0.1**
BKNI	**Bangkinang**	**4.32**	**89**	P	**Pb**	**10 57 07.9**	**-1.8**
SDSI	**Sungai Dareh**	**4.86**	**104**	P	**Pn**	**10 57 06.3**	**+0.8**
KRJI	**Kerinci**	**5.29**	**116**	P	**Pn**	**10 57 11.9**	**+0.5**
	4.5nm830nm,0.7s						
IPM	**Ipoh**	**5.99**	**46**	*e*Pn	**Pn**	**10 57 21.3**	**+0.3**
	23nm,0.7s						
IPM				*e*Sn	**Sn**	**10 58 28.4**	**-0.2**
IPM	**Ipoh**	**5.99**	**46**	P	**Pn**	**10 57 21.9**	**+0.9**
	0.1nm35nm,0.7s						
KULM	**Kulim**	**6.34**	**38**	*e*Pn	**Pn**	**10 57 25.2**	**-0.6**
	25nm,0.8s						
KULM	**Kulim**	**6.34**	**38**	P	**Pn**	**10 57 25.3**	**-0.5**
	0.1nm36nm,1.0s						
KSI	**Kapahiang**	**7.05**	**124**	P	**Pn**	**10 57 36.6**	**+1.0**
	1.7nm194nm,0.3s						
MYKOM	**Kota Tinggi**	**7.29**	**78**	P	**Pn**	**10 57 39.0**	**+0.2**
	0.1nm16nm,1.2s						
MNAI	**Manna**	**7.75**	**127**	P	**Pn**	**10 57 44.9**	**-0.3**
	1.4nm253nm,1.8s						
MDSI	**Maura Dua**	**8.83**	**123**	P	**Pn**	**10 57 59.3**	**-0.7**
	37nm,0.8s						
KLSI		**9.40**	**122**	P	**Pn**	**10 58 07.5**	**-0.4**
CMAR	**Chiang Mai Arr**	**18.19**		7 P	**Pn**	**11 00 04.7**	**-0.1**
	1.1nm,0.3s,baz=200,slow=11,SNR=8.3						
MBWA	**Marble Bar**	**30.98**	**135**	*e*P	**P**	**11 02 10.0**	**+0.8**
	7.8nm,1.1s,mb4.5						
FITZ	**Fitzroy Crossi**	**33.80**	**124**	P	**P**	**11 02 33.7**	**-0.2**
	3.4nm,0.6s,mb4.5,baz=287,slow=7.8,SNR=13						
WRA	**Warramunga Arr**	**41.97**	**121**	P	**P**	**11 03 43.1**	**+0.2**
	2.9nm,0.7s,mb4.0,baz=300,slow=9.6,SNR=32						
WRA				PcP	PcP	11 05 37.7	-0.3
	0.8nm,0.8s,baz=303,slow=2.5,SNR=3.9						
WRAB	**Tennant Creek**	**41.98**	**121**	*e*P	**P**	**11 03 43.1**	**+0.1**
	4.2nm,0.7s,mb4.2						
ASAR	**Alice Springs**	**43.24**	**126**	P	**P**	**11 03 53.5**	**+0.4**
	1.9nm,0.6s,mb4.0,baz=300,slow=8.2,SNR=27						
ASAR				PcP	PcP	11 05 42.4	+0.2
	0.9nm,0.7s,baz=325,slow=2.4,SNR=5.2						
KSRS	**Korea Array**	**46.87**	**34**	P	**P**	**11 04 22.3**	**+0.5**
	3.3nm,1.2s,mb4.1,baz=227,slow=9.8,SNR=5.1						
MK31	**Makanchi Array**	**48.01**	**347**	*e*P	**P**	**11 04 31.1**	**+0.6**
MK31				*e*pP	pP	11 04 40.3	+0.4
MKAR	**Makanchi Array**	**48.01**	**347**	P	**P**	**11 04 31.4**	**+0.8**
	1.9nm,0.5s,mb4.3,baz=162,slow=8.2,SNR=20						
MKAR				pP	pP	11 04 40.4	+0.5
	4.6nm,0.6s,baz=156,slow=8.2,SNR=12						
SONM	**Songino Array**	**48.10**	**9**	P	**P**	**11 04 32.4**	**+1.2**
	0.6nm,0.5s,mb3.9,baz=195,slow=8.3,SNR=6.8						
SONM				pP	pP	11 04 41.4	+0.8
	1.0nm,0.6s,baz=198,slow=7.5,SNR=3.7						
SONM				PcP	PcP	11 05 58.7	+0.1
	0.7nm,0.5s,baz=199,slow=4.3,SNR=2.5						
CTA	**Charters Tower**	**52.53**	**116**	P	**P**	**11 05 06.0**	**+0.8**
	6.3nm,1.1s,mb4.5,baz=303,slow=9.8,SNR=4.3						
STKA	**Stephens Creek**	**53.11**	**131**	P	**P**	**11 05 10.3**	**+1.0**
	4.1nm,0.7s,mb4.5,baz=213,slow=15,SNR=5.5						
ZALV	**Zalesovo Beam**	**54.38**	**351**	P	**P**	**11 05 18.6**	**+0.4**
	5.3nm,0.5s,mb4.7,baz=178,slow=7.4,SNR=25						
ZALV				pP	pP	11 05 28.1	+0.4
	3.0nm,0.4s,baz=210,slow=5.2,SNR=7.6						
BVAR	**Borovoye Array**	**56.96**	**341**	P	**P**	**11 05 35.8**	**-0.9**
	0.5nm,0.5s,mb3.8,baz=157,slow=15,SNR=3.7						
BVAR				pP	pP	11 05 44.3	-1.9
	1.0nm,0.5s,baz=149,slow=12,SNR=4.8						
ABKAR	**Akbulak array**	**58.10**	**332**	*e*P	**P**	**11 05 44.3**	**-0.5**
	1.0nm,0.7s,mb4.0						
ABKAR				*e*pP	pP	11 05 52.9	-1.4
BRTR	**Keskin Array B**	**69.37**	**313**	P	**P**	**11 06 58.6**	**-0.8**
	0.9nm,0.8s,mb3.8,baz=141,slow=8.0,SNR=5.9						
BRTR				pP	pP	11 07 07.8	-1.3
	1.1nm,0.7s,baz=142,slow=6.3,SNR=5.0						
AKASG	**Malin Array Be**	**75.69**	**323**	P	**P**	**11 07 35.7**	**-1.1**
	1.4nm,0.5s,mb4.2,baz=91,slow=5.1,SNR=5.0						
AKASG	**Malin Array Be**	**75.69**	**323**	P	**P**	**11 07 35.7**	**-1.1**
FINES	**FINESS Array B**	**80.59**	**333**	P	**P**	**11 08 03.3**	**-0.4**
	1.1nm,0.5s,mb4.0,baz=90,slow=5.7,SNR=9.8						
FINES				pP	pP	11 08 12.4	-1.1
	1.1nm,0.6s,baz=108,slow=6.2,SNR=2.8						
ARCES	**ARCESS Array B**	**83.23**	**340**	P	**P**	**11 08 17.4**	**0.0**
	0.5nm,0.4s,mb3.9,baz=94,slow=6.2,SNR=11						
NOA	**NORSAR Array B**	**87.57**	**331**	P	**P**	**11 08 39.1**	**-0.1**
	1.0nm,0.8s,mb4.1,baz=90,slow=4.0,SNR=2.7						
QSPA	**South Pole Qui**	**90.23**	**180**	P	**P**	**11 08 52.3**	**+0.8**
	0.8nm,0.8s,mb4.1,baz=10,slow=3.8,SNR=8.0						
QSPA	**South Pole Qui**	**90.23**	**180**	P	**P**	**11 08 52.3**	**+0.8**
DAC	**Darwin (Calif)**	**131.65**	**38**	*e*PKPdf	PKPdf	11 15 02.9	-1.8
CPUP	**Villa Florida**	**144.01**	**222**	PKP	PKPdf	11 15 25.8	-1.9
	0.5nm,0.4s,baz=134,slow=3.8,SNR=5.0						
CPUP	**Villa Florida**	**144.01**	**222**	PKP	PKPdf	11 15 25.8	-1.9
CFAA	**Coronel Fontan**	**145.75**	**203**	PKPbc	PKPbc	11 15 31.0	0.0
	0.1nm,0.4s,baz=161,slow=2.9,SNR=3.6						

*ISCJB **19** 10:59:37.8±0.5, 24.°17N±0.°03×122.°73E±0.°02, h51km±11km, Error ellipse: s-maj=5.8km s-min=3.2km az=4.3*
*TAP **19** 10:59:37.7, 24.°20N×122.°72E, h72km±1km, ML3.3, D*
*JMA **19** 10:59:38.2±0.1, 24.°38N×122.°78E, h62km±1km, M2.6*
ISC 19 10:59:38.4±0.5, 24.°18N±0.°03×122.°74E±0.°02, h46km±14km, n34, σ0s65/66, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.38**	**41**	P	**Pn**	**10 59 47.9**	**-0.1**
YOJ				S	**Sn**	**10 59 55.1**	**+0.3**
TWC	**Suao**	**0.92**	**298**	*i* P	**Pn**	**10 59 55.0**	**+0.1**
	baz=305						
TWC				*i* S	**Sn**	**11 00 06.7**	**-0.4**
	baz=305						
IRIF	**Iriomote-Funau**	**0.92**	**80**	P	**Pn**	**10 59 54.6**	**-0.3**
IRIF				*e*S	**Sn**	**11 00 06.2**	**-0.9**
ENA	**Nanau**	**0.94**	**286**	*i* P	**Pn**	**10 59 55.4**	**+0.1**
	baz=284						
ENA				*i* S	**Sn**	**11 00 08.4**	**+0.7**
	baz=284						
HATJ	**Hateruma jima**	**0.98**	**97**	P	**Pn**	**10 59 56.3**	**+0.5**
HATJ				*e*S	**Sn**	**11 00 09.4**	**+0.8**
TWD	**Chiawan**	**1.05**	**265**	P	**Pn**	**10 59 56.5**	**-0.2**
	baz=255						
TWD				S	**Sn**	**11 00 09.9**	**-0.2**
	baz=255						
TWB1	**Santiao Chiao**	**1.07**	**321**	P	**Pn**	**10 59 56.6**	**-0.5**
	baz=321						
TWB1				*e*S	**Sn**	**11 00 10.0**	**-0.8**
	baz=321						
TWE	**Neicheng**	**1.12**	**299**	P	**Pn**	**10 59 57.7**	**0.0**
	baz=308						
TWE				S	**Sn**	**11 00 12.1**	**+0.2**
	baz=308						
JKRS	**Kuro-shima**	**1.16**	**87**	P	**Pn**	**10 59 58.4**	**+0.1**
JKRS				*e*S	**Sn**	**11 00 13.8**	**+0.8**
ESL	**Shilin**	**1.25**	**253**	P	**Pn**	**10 59 58.7**	**-0.7**
	baz=251						
ESL				S	**Sn**	**11 00 14.7**	**-0.3**
	baz=251						
NWF	**Wu-fen Shan**	**1.25**	**316**	P	**Pn**	**10 59 59.2**	**-0.2**
	baz=307						
NWF				*e*S	**Sn**	**11 00 14.6**	**-0.5**
	baz=307						
NNS	**Nan Shan**	**1.27**	**282**	P	**Pn**	**11 00 00.0**	**+0.3**
	baz=281						
NNS				S	**Sn**	**11 00 16.2**	**+0.5**
	baz=281						
JIJ	**Ishigaki jima**	**1.30**	**81**	P	**Pn**	**10 59 59.6**	**-0.5**
JIJ				S	**Sn**	**11 00 15.2**	**-1.0**
TWA	**Mucha**	**1.32**	**308**	P	**Pn**	**11 00 00.5**	**+0.1**
	baz=308						
TWA				S	**Sn**	**11 00 16.6**	**-0.3**
	baz=308						
WHF	**Hehuan Shan**	**1.35**	**269**	P	**Pn**	**11 00 00.9**	**+0.2**
	baz=259						
WHF				S	**Sn**	**11 00 17.9**	**+0.4**
	baz=259						
NSK	**Sanguang**	**1.35**	**292**	*e*P	**Pn**	**11 00 01.6**	**+0.7**
	baz=292						
NSK				*e*S	**Sn**	**11 00 18.2**	**+0.5**
	baz=292						
TWT	**Tachien**	**1.43**	**273**	*e*P	**Pn**	**11 00 02.3**	**+0.5**
	baz=272						
TWT				*e*S	**Sn**	**11 00 20.3**	**+0.8**
	baz=272						
EHY	**Hungye**	**1.46**	**243**	*e*P	**Pn**	**11 00 01.9**	**-0.4**
	baz=240						
TWS1	**Kuangyinshan**	**1.51**	**308**	*e*P	**Pn**	**11 00 03.3**	**+0.3**
	baz=308						
TWS1				*e*S	**Sn**	**11 00 21.0**	**-0.6**
	baz=308						
TWF1	**Yuli**	**1.55**	**238**	*e*P	**Pn**	**11 00 03.7**	**+0.1**
	baz=230						
TWF1				*e*S	**Sn**	**11 00 22.4**	**-0.2**
	baz=230						
NSTT	**Nanjuang**	**1.65**	**286**	*e*P	**Pn**	**11 00 05.1**	**+0.2**
	baz=297						
NSTT				*e*S	**Sn**	**11 00 25.2**	**+0.3**
	baz=297						
SMLT	**Sun Moon Lake**	**1.71**	**261**	*e*P	**Pn**	**11 00 06.0**	**+0.3**
	baz=259						
SMLT				*e*S	**Sn**	**11 00 26.6**	**+0.3**
	baz=259						
TYC	**Yuchr**	**1.74**	**261**	*e*P	**Pn**	**11 00 06.3**	**+0.2**
	baz=260						
TYC				*e*S	**Sn**	**11 00 26.9**	**-0.3**
	baz=260						
TWQ1	**Liyutan**	**1.80**	**276**	*e*P	**Pn**	**11 00 07.3**	**+0.3**
	baz=286						
TWQ1				*e*S	**Sn**	**11 00 28.4**	**-0.2**
	baz=286						
NSY	**Sanyi**	**1.82**	**278**	*e*P	**Pn**	**11 00 07.1**	**-0.1**
	baz=278						
NSY				*e*S	**Sn**	**11 00 28.6**	**-0.5**
	baz=278						
JTJ	**Tarama**	**1.85**	**75**	P	**Pn**	**11 00 07.5**	**-0.2**
ELDTW	**Lidau**	**1.86**	**238**	*e*P	**Pn**	**11 00 07.5**	**-0.3**
	baz=236						
ELDTW				*e*S	**Sn**	**11 00 28.8**	**-1.2**
	baz=236						
WNT	**Mingjian**	**1.90**	**261**	*e*P	**Pn**	**11 00 08.5**	**+0.2**
	baz=251						
WNT				*e*S	**Sn**	**11 00 29.9**	**-1.2**
	baz=251						
CHN5	**Tsauling**	**1.97**	**253**	*e*P	**Pn**	**11 00 09.4**	**0.0**
	baz=252						
CHN5				*e*S	**Sn**	**11 00 32.9**	**+0.1**
	baz=252						
TWG	**Pinlang**	**2.04**	**229**	*e*P	**Pn**	**11 00 10.0**	**-0.3**
	baz=237						
TWG				*e*S	**Sn**	**11 00 33.5**	**-1.0**
	baz=237						
SGST	**Jiashian**	**2.26**	**242**	*e*P	**Pn**	**11 00 15.0**	**+1.7**
	baz=252						
SGST				*e*S	**Sn**	**11 00 42.4**	**+2.5**
	baz=252						
SSD	**Sandimen**	**2.40**	**234**	*e*P	**Pn**	**11 00 15.5**	**+0.2**
	baz=226						
SSD				*e*S	**Sn**	**11 00 43.1**	**-0.3**
	baz=226						
EAST	**Anshuo**	**2.49**	**225**	*e*P	**Pn**	**11 00 16.5**	**0.0**
	baz=226						
EAST				*e*S	**Sn**	**11 00 44.3**	**-1.3**
	baz=226						
TWM1	**Shoushan**	**2.52**	**238**	*e*P	**Pn**	**11 00 19.5**	**+2.7**
	baz=235						
TWM1				*e*S	**Sn**	**11 00 52.3**	**+6.0**
	baz=235						

*NOU **19** 11:01:14.9±0.9, 10.°64S×165.°03E, h30km*
*ISCJB **19** 11:01:14.9±1.1, 11.°15S±0.°03×164.°58E±0.°02, h5km±7km, mb5.7/162, MS5.9/256, Error ellipse: s-maj=4.9km s-min=3.2km az=172.1*
*IDC **19** 11:01:15.3±0.3, 11.°05S×164.°57E, h0km, mb5.4/33, mb1 5.4/35, mb1mx5.4/36, mbtmp5.4/35, ML5.3/2, MS5.8/26, Ms1 5.8/26, ms1mx5.7/31, Error ellipse: s-maj=10.2km s-min=9.0km az=136.0*
*NEIC **19** 11:01:17.7±0.1, 11.°07S×164.°62E, h10km, mb5.8/81, MS5.9/202, MW6.2, MW6.2, Error ellipse: s-maj=5.9km s-min=5.1km az=156.0, Moment Tensor Solution. s38 Moment tensor: Scale 10^18Nm; Mrr=2.09; Mθθ=1.13; Mφφ=0.96; Mrθ=0.45; Mθφ=0.58; Mφr=2.17; Best double couple: M0=2.90000×10^18 NP1:φ=202.00000°, δ=70.00000°, λ=-102.00000°. NP2:φ=54.00000°, δ=23.00000°, λ=-60.00000°. Principal axes: T 2.4700, Plg=24.0000°, Azm=301.0000°; N 0.7500, Plg=11.0000°, Azm=206.0000°; P -3.2200, Plg=62.0000°, Azm=93.0000°;*
*BJI **19** 11:01:17.0, 10.°97S×165.°60E, h41km, mB6.2/45, mb5.4/58, Ms6.2/67, Ms7 6.0/59*
*DJA **19** 11:01:19, 11.°38S×164.°68E, h30km, mb5.7/36*
*MOS **19** 11:01:20.6±1.4, 10.°92S×164.°44E, h33km, mb5.8/54, MS6.0/52, Error ellipse: s-maj=9.5km s-min=7.3km az=119.2*
*GCMT **19** 11:01:23.7±0.1, 11.°18S×164.°45E, h12km, MW6.2, Moment Tensor Solution. s99,c203; s97,c147; Moment tensor: Scale 10^18Nm; Mrr=2.26±.02; Mθθ=1.06±.02; Mφφ=1.21±.02; Mrθ=0.55±.05; Mθφ=1.12±.01; Mφr=0.51±.05; Best double couple: M0=2.40000×10^18 NP1:φ=207.00000°, δ=47.00000°, λ=-113.00000°. NP2:φ=59.00000°, δ=47.00000°, λ=-67.00000°. Principal axes: T 2.2600, Plg=0.0000°, Azm=133.0000°; N 0.2300, Plg=17.0000°, Azm=223.0000°; P -2.4800, Plg=73.0000°, Azm=43.0000°; Data Used: II IU IC G CN. Surface waves: sta=117, comp=286, per= 50.*
ISC 19 11:01:19.6±1.1, 11.°16S±0.°03×164.°63E±0.°02, h25km±7km, h39km±1.4km:pP-P, n1182, σ0s85/720, mb5.7/162, MS5.9/256, 191C-196D, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.92**	**290**	Pn	**Pn**	**11 02 31.0**	**-1.0**
	413nm,0.3s,baz=170,slow=4.0,SNR=41						
HNR				Sn	**Sn**	**11 03 27.1**	**-1.0**
	278nm,0.3s,baz=137,slow=19,SNR=2.6						
HNR	**Honiara**	**4.92**	**290**	P	**Pn**	**11 02 31.0**	**-1.0**
HNR						11 03 27.1	
HNR				pmax	pmax		
	comp=Z,413nm,0.3s						
HNR				smax			
	comp=N,278nm,0.3s						
HNR	**Honiara**	**4.92**	**290**	*e*Pn	**Pn**	**11 02 31.2**	**-0.7**
HNR				*e*Sn	**Sn**	**11 03 29.1**	**+1.0**
DZM	**Mont Dzumac**	**10.99**	**171**	*e*Pn	**Pn**	**11 03 55.0**	**-0.3**
	comp=N,2μm,1.4s						
DZM				*e*LR	LR	11 06 34.3	
	comp=N,200μm,23.8s						
DZM	**Mont Dzumac**	**10.99**	**171**	*e*P	**Pn**	**11 03 54.6**	**-0.7**
DZM				*e*S	**Sn**	**11 05 54.2**	**-3.3**
NOUC	**Port Laguerre**	**11.00**	**172**	*e*P	**Pn**	**11 03 54.6**	**-0.9**
NOUC				*e*S	**Sn**	**11 05 53.3**	**-4.5**
BAYA	**Yate Dam**	**11.15**	**169**	*e*P	**Pn**	**11 03 57.1**	**-0.3**
NORM	**Noumea**	**11.15**	**171**	*e*P	**Pn**	**11 03 57.3**	**-0.3**
NORM				*e*S	**Sn**	**11 05 57.6**	**-3.8**
LASL	**Noumea**	**11.16**	**171**	*e*P	**Pn**	**11 03 58.4**	**+0.8**
PLUM	**Mont Dore**	**11.22**	**170**	*e*P	**Pn**	**11 03 58.4**	**-0.1**
ONTRN	**Noumea**	**11.22**	**171**	*e*P	**Pn**	**11 03 59.4**	**+0.9**
ONTRN				*e*S	**Sn**	**11 06 00.2**	**-3.0**
MSVF	**Nonsavu**	**14.54**	**118**	P	**Pn**	**11 04 49.9**	**+6.0**
	comp=N,2μm,1.7s,SNR=26						
MSVF	**Nonsavu**	**14.54**	**118**	*e*Pn	**Pn**	**11 04 47.0**	**+3.1**
	comp=N,7μm,2.5s						
MSVF				*e*Sn	Sx	11 08 27.5	
FUNA	**Funafuti**	**14.59**	**81**	Pn	**Pn**	**11 04 43.2**	**-1.3**
PMG	**Port Moresby**	**17.28**	**274**	*ce*P	**Pn**	**11 05 19.5**	**+0.2**
PMG				pmax	pmax		
	comp=Z,189nm,1.2s						
PMG	**Port Moresby**	**17.28**	**274**	*e*P	**Pn**	**11 05 19.8**	**+0.5**
	comp=Z,537nm,1.4s						
PMG	**Port Moresby**	**17.28**	**274**	P	**Pn**	**11 05 20.0**	**+0.7**
	comp=Z,272nm,1.4s						
EIDS	**Eidsvold**	**19.09**	**220**	*e*P	**Pn**	**11 05 41.1**	**-0.3**
	comp=Z,297nm,1.2s						
CTA	**Charters Tower**	**19.78**	**241**	*e*P	**Pn**	**11 05 48.1**	**-1.7**
	comp=Z,472nm,1.0s						
CTA				*e*S	**Sn**	**11 09 34.2**	**+2.7**
CTA	**Charters Tower**	**19.78**	**241**	P	**Pn**	**11 05 48.3**	**-1.5**
	comp=Z,2.7nm,0.3s,baz=67,slow=12,SNR=72						
CTA				S	**Sn**	**11 09 32.6**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=0.0,slow=20,SNR=2.2						
CTA				LR	LR	11 12 49.6	
	comp=Z,19μm,18.2s,baz=62,slow=35						
CTA	**Charters Tower**	**19.78**	**241**	P	**Pn**	**11 05 48.3**	**-1.5**
CTA				S	**Sn**	**11 09 32.7**	**+1.2**
CTA				pmax	pmax		
	comp=Z,3.0nm,0.3s						
CTA				MLR	MLR		
	comp=Z,19μm,18.2s						
CTAO	**Charters Tower**	**19.78**	**241**	*e*P	**Pn**	**11 05 48.7**	**-1.1**
CTAO				pmax	pmax		
	comp=Z,1μm,1.3s						
CTAO	**Charters Tower**	**19.78**	**241**	*e*P	**Pn**	**11 05 48.7**	**-1.1**
	comp=Z,1μm,1.3s						
CTAO	**Charters Tower**	**19.78**	**241**	P	**Pn**	**11 05 48.5**	**-1.3**
	comp=Z,863nm,2.1s						
KWAJ	**Kwajalein Atol**	**20.05**	**9**	*e*P	**P**	**11 05 51.8**	**+0.8**
	comp=Z,272nm,0.7s						
COEN	**Coen**	**21.12**	**260**	*e*P	**P**	**11 06 02.8**	**0.0**
	comp=Z,3μm,1.4s,mb6.5						
COEN	**Coen**	**21.12**	**260**	P	**P**	**11 06 01.9**	**-0.8**
	comp=Z,905nm,1.4s,mb5.9						
ARMA	**Armidale**	**22.65**	**210**	*e*P	**P**	**11 06 18.7**	**-0.3**
ARMA				*e*S	**S**	**11 10 30.8**	**+4.7**
ARMA	**Armidale**	**22.65**	**210**	*e*P	**P**	**11 06 19.0**	**0.0**
	comp=Z,638nm,1.7s,mb5.8						
AFI	**Afiamalu**	**23.19**	**99**	P	**P**	**11 06 23.9**	**-0.9**
	comp=Z,43nm,0.9s,mb4.9,baz=108,slow=20,SNR=2.5						
AFI				LR	LR	11 13 33.9	
	comp=Z,25μm,20.2s,MS5.7,baz=279,slow=32						
AFI	**Afiamalu**	**23.19**	**99**	P	**P**	**11 06 23.9**	**-0.9**
AFI				pmax	pmax		
	comp=Z,43nm,0.9s,mb4.9						
AFI				MLR	MLR		
	comp=Z,25μm,20.2s,MS5.7						
AFI	**Afiamalu**	**23.19**	**99**	*e*P	**P**	**11 06 25.3**	**+0.5**
	comp=Z,164nm,1.2s,mb5.3						
AFI				LR	LR		
	comp=Z,26μm,21.0s,MS5.7						
RAO	**Raoul Island**	**24.28**	**140**	P	**P**	**11 06 35.7**	**+0.7**
	comp=Z,221nm,0.3s,mb6.0,baz=58,slow=19,SNR=2.8						
RAO				LR	LR	11 14 39.1	
	comp=Z,15μm,21.0s,MS5.5,baz=126,slow=33						
RAO	**Raoul Island**	**24.28**	**140**	P	**P**	**11 06 35.7**	**+0.7**
RAO				pmax	pmax		
	comp=Z,221nm,0.4s,mb5.9						
RAO				MLR	MLR		
	comp=Z,15μm,21.0s,MS5.5						
RIV	**Riverview**	**25.71**	**207**	*e*P	**P**	**11 06 50.9**	**+2.9**
SMPI	**Sarmi**	**27.28**	**288**	P	**P**	**11 06 59.7**	**-2.7**
	comp=Z,288nm,1.2s,mb5.7						
CNB	**Canberra Magne**	**27.76**	**208**	*e*P	**P**	**11 07 07.0**	**+0.6**
CNB				*e*PCP	PcP	11 10 23.6	+0.9
CNB				*e*S	**S**	**11 11 56.8**	**+9.1**
URZ	**Urewera**	**29.21**	**160**	P	**P**	**11 07 20.6**	**+1.3**
	comp=Z,15nm,0.8s,mb4.8,baz=163,slow=19,SNR=2.0						
URZ				S	**S**	**11 12 16.3**	**+5.9**
	comp=Z,19nm,1.0s,baz=138,slow=15,SNR=1.7						
URZ				LR	LR	11 17 55.5	
	comp=Z,42μm,18.5s,MS6.1,baz=348,slow=34						
URZ	**Urewera**	**29.21**	**160**	*e*P	**P**	**11 07 20.3**	**+1.1**
	comp=Z,74nm,1.0s,mb5.4						
STKA	**Stephens Creek**	**29.61**	**222**	*e*P	**P**	**11 07 23.0**	**+0.1**
	comp=Z,43nm,0.9s,mb5.2						
STKA				*e*PCP	PcP	11 10 30.2	+2.8
STKA				*e*S	**S**	**11 12 13.3**	**-3.6**
STKA				*e*PCS	PcS	11 14 12.1	+1.5
STKA	**Stephens Creek**	**29.61**	**222**	P	**P**	**11 07 23.6**	**+0.7**
	comp=Z,29nm,0.8s,mb5.0,baz=41,slow=11,SNR=15						
STKA				PcP	PcP	11 10 30.1	+2.7
	comp=Z,40nm,0.9s,baz=72,slow=1.7,SNR=4.9						
STKA				LR	LR	11 18 31.9	
	comp=Z,23μm,18.3s,MS5.8,baz=41,slow=35						
STKA	**Stephens Creek**	**29.61**	**222**	*e*P	**P**	**11 07 23.5**	**+0.5**
	comp=Z,16nm,1.0s,mb4.7						
BAKI	**Biak**	**30.00**	**287**	P	**P**	**11 07 27.8**	**+1.2**
	comp=Z,91nm,1.2s,mb5.4						
WAKE	**Wake Island**	**30.31**	**4**	P	**P**	**11 07 21.8**	**-7.4**
	comp=Z,42nm,0.7s,mb5.3						
WAKE				LR	LR		
	comp=Z,9μm,19.0s,MS5.4						
WRAB	**Tennant Creek**	**30.40**	**250**	*e*P	**P**	**11 07 27.6**	**-2.5**
WRAB				pmax	pmax		
	comp=Z,636nm,1.2s,mb6.2						
WRAB				MLR	MLR		
	comp=Z,30μm,19.0s,

KAKA Kakadu 31.52 264 P P 11 07 37.6 -2.4
comp=Z,1μmcomp=Z,133nm,0.7s,mb5.9
ASAR Alice Springs 31.76 243 P P 11 07 39.6 -2.5
comp=Z,30nm,0.7s,mb5.2,baz=69,slow=9.7,SNR=101
ASAR PcP PcP 11 10 33.4 +0.2
comp=Z,13nm,0.8s,baz=62,slow=3.1,SNR=6.8
ASAR PKiKP PKiKP 11 18 00.9 -1.3
comp=Z,1.5nm,1.0s,baz=96,slow=1.3,SNR=5.4
ASAR Alice Springs 31.76 243 P P 11 07 39.6 -2.5
ASAR PcP PcP 11 10 33.4 +0.2
KHZ Kahutara 32.10 168 *e*P **P 11 07 47.9 +3.2**
comp=Z,95nm,1.2s,mb5.5
LTZ Lake Taylor 32.20 169 P* **P 11 07 47.6 +2.0**
RPZ Rata Peaks 32.91 171 P **P 11 07 51.8 0.0**
comp=Z,57nm,0.7s,mb5.6,baz=31,slow=2.1,SNR=19
RPZ LR LR 11 19 24.9
comp=Z,46μm,21.5s,MS6.2,baz=344,slow=33
RPZ Rata Peaks 32.91 171 *e*P **P 11 07 52.0 +0.1**
comp=Z,147nm,1.0s,mb5.9
RPZ *e*PcP PcP 11 10 38.9 +3.0
RPZ Rata Peaks 32.91 171 *e*P* **P 11 07 51.2 -0.7**
MOO Moorlands 34.68 203 *e*P **P 11 08 10.2 +2.9**
MOO *e*PCP PcP 11 10 40.8 -0.2
MOO *e*S **S 11 13 46.4 +11**
TUZ Tuapeka 34.94 174 *e*P* **P 11 08 07.1 -2.3**
TUZ PcP PcP 11 10 43.3 +1.6
KNA Kununurra 35.15 259 P **P 11 08 10.5 -1.1**
comp=Z,7μmcomp=Z,887nm,1.0s,mb6.7
RAR Rarotonga 35.54 111 LR LR 11 19 49.0
comp=Z,18μm,21.9s,MS5.8,baz=279,slow=31
RAR Rarotonga 35.54 111 PFAKE 11 08 30.0 +15
RAR LR LR
comp=Z,18μm,22.0s,MS5.8
JOHN Johnston Islan 37.70 43 PFAKE 11 08 40.0 +6.7
JOHN LR LR
comp=Z,7μm,19.0s,MS5.5
NLAI Namlea 38.02 279 P **P 11 08 40.7 +4.5**
FITZ Fitzroy Crossi 38.29 255⇓*i*P **P 11 08 35.6 -2.8**
comp=Z,263nm,0.9s,mb6.0
FITZ *e*PP PP 11 10 10.6 +4.4
FITZ *e*S **S 11 14 27.9 -3.5**
FITZ Fitzroy Crossi 38.29 255 P **P 11 08 36.3 -2.1**
comp=Z,93nm,0.7s,mb5.6,baz=102,slow=9.3,SNR=64
FITZ S **S 11 14 29.8 -1.6**
comp=Z,15nm,1.2s,baz=202,slow=19,SNR=3.3
FITZ Fitzroy Crossi 38.29 255 *e*PKPdf **P 11 08 35.8 -2.6**
FITZ Fitzroy Crossi 38.29 255 P **P 11 08 35.2 -3.2**
comp=Z,9μmcomp=Z,478nm,1.5s,mb6.0
LBMI Labuha 38.33 283 P **P 11 08 37.5 -1.3**
comp=Z,4μmcomp=Z,180nm,1.2s,mb5.7
FORT Forrest 39.08 234 *e*P **P 11 08 43.2 -1.7**
comp=Z,326nm,1.3s,mb5.9
FORT Forrest 39.08 234 *e*P **P 11 08 44.6 -0.3**
comp=Z,649nm,1.3s,mb6.2
XMAS Kiritimati 39.93 73 PFAKE 11 09 00.0 +7.8
XMAS LR LR
comp=Z,16μm,19.0s,MS5.9
SGSI Sangihe 41.60 289 P **P 11 09 06.6 +0.6**
comp=Z,7μmcomp=Z,283nm,1.0s,mb5.9
MMRI Maumere 41.81 269 P **P 11 09 05.5 -2.2**
comp=Z,4μmcomp=Z,298nm,1.2s,mb5.8
MIDW Midway 42.84 24 PFAKE 11 09 30.0 +14
MIDW LR LR
comp=Z,6μm,21.0s,MS5.5
DAV Davao City (W) 42.87 293 LR LR 11 24 54.4
comp=Z,10μm,21.0s,MS5.7,baz=99,slow=33
DAV Davao City (W) 42.87 293 PFAKE 11 09 30.0 +14
DAV LR LR
comp=Z,9μm,19.0s,MS5.7
DAV Davao City (W) 42.87 293⇓*e*P **P 11 09 20.7 +4.3**
MBWA Marble Bar 44.12 251 *e*P **P 11 09 24.5 -1.9**
comp=Z,191nm,1.0s,mb5.8
MBWA LR LR
comp=Z,12μm,20.0s,MS5.8
MBWA Marble Bar 44.12 251 P **P 11 09 25.0 -1.3**
comp=Z,232nm,1.1s,mb5.8
MBWA Marble Bar 44.12 251 P **P 11 09 29.0 +2.6**
SNR=8.6
BKSI Bulukumba 44.39 274 P **P 11 09 32.0 +3.4**
BNSI Bone 44.58 275 P **P 11 09 30.5 +0.4**
comp=Z,4μmcomp=Z,164nm,1.1s,mb5.8
PPT Papeete 44.73 104 *e*S **S 11 16 15.1 +8.1**
comp=Z,9μm,26.8s
PPT *e*LQ 11 20 25.0
comp=Z,45μm,28.0s
PPT *e*LR LR 11 22 11.2
comp=Z,32μm,28.0s,baz=277
PPT Papeete 44.73 104 LR LR 11 24 40.0
comp=Z,12μm,18.6s,MS5.8,baz=276,slow=31
KAPI Kappang 44.81 274 P **P 11 09 32.6 +0.7**
comp=Z,448nm,1.0s,mb6.2,SNR=8.1
KAPI Kappang 44.81 274 P **P 11 09 30.3 -1.6**
comp=Z,23nm,0.9s,mb5.0,baz=123,slow=9.0,SNR=4.4
KAPI Kappang 44.81 274 *e*P **P 11 09 32.3 +0.4**
comp=Z,102nm,1.1s,mb5.6
KAPI LR LR
comp=Z,7μm,22.0s,MS5.5
SPSI Sidrap Palu 44.99 276 P **P 11 09 31.0 -2.4**
comp=Z,1μmcomp=Z,41nm,1.2s,mb5.1
TTSI Tana Toraja 45.14 277 P **P 11 09 33.8 -0.8**
comp=Z,2μmcomp=Z,46nm,0.9s,mb5.3
TBI Tubuai 45.31 112 *e*S **S 11 16 23.0 +7.9**
comp=Z,10μm,29.0s
TBI *e*LQ 11 20 39.7
comp=Z,28μm,30.8s
TBI *e*LR LR 11 22 30.3
comp=Z,71μm,29.2s,baz=281
TBP Tagbilaran 45.52 296 *e*P **P 11 09 38.4 +0.8**
PCI Palu 45.62 280 P **P 11 09 39.1 +0.7**
comp=Z,3μmcomp=Z,196nm,1.2s,mb5.9
KLBR Kellerberrin 47.72 237 *e*P **P 11 09 54.8 +0.2**
comp=Z,397nm,1.2s,mb6.3
KLBR *e*PP PP 11 11 45.7 -0.7
NWAO Narrogin (SRO) 48.49 236 P **P 11 10 00.3 -0.2**
comp=Z,178nm,1.0s,mb6.0,baz=80,slow=9.7,SNR=11
NWAO Narrogin (SRO) 48.49 236 *e*P **P 11 10 01.1 +0.6**
NWAO pmax pmax
comp=Z,530nm,1.4s
NWAO MLR MLR
comp=Z,13μm,20.0s
NWAO Narrogin (SRO) 48.49 236 *e*P **P 11 10 01.1 +0.6**
comp=Z,530nm,1.4s,mb6.4
NWAO LR LR
comp=Z,13μm,20.0s,MS5.9
NWAO Narrogin (SRO) 48.49 236 P **P 11 10 07.3 +6.7**
SNR=5.8
MYLDM Lahad Datu 48.69 287 P **P 11 10 02.9 +0.6**
MYLDM Lahad Datu 48.69 287 P **P 11 10 03.0 +0.7**
comp=Z,3μmcomp=Z,101nm,1.2s,mb5.7
KIP Kipapa 48.93 49 PFAKE 11 10 20.0 +16
KIP LR LR
comp=Z,5μm,20.0s,MS5.5
TSM Tawau 48.99 286 P **P 11 10 03.8 -0.8**
POHA Pohakuloa 49.83 52 PFAKE 11 10 20.0 +9.1
POHA LR LR
comp=Z,5μm,19.0s,MS5.5
TGY Tagaytay City 50.06 299 LR LR 11 29 07.4
comp=Z,44nm,19.3s,baz=65,slow=34
SDKM Sandakan 50.07 287 P **P 11 10 15.9 +3.1**
KDM Kudat 50.84 288 P **P 11 10 23.8 +5.1**
KKM Kota Kinabalu 51.12 287 P **P 11 10 21.6 +0.8**
KKM Kota Kinabalu 51.12 287 PFAKE 11 10 30.0 +9.2
KKM LR LR
comp=Z,5μm,20.0s,MS5.5
PWJI Pagerwojo 52.13 268 P **P 11 10 28.1 -0.2**
comp=Z,3μmcomp=Z,83nm,1.1s,mb5.6
SJI Sawahan 52.20 269 P **P 11 10 27.6 -1.3**
comp=Z,5μmcomp=Z,136nm,1.4s,mb5.7
PCJI Pacitan 52.72 268 P **P 11 10 34.6 +1.9**
MJAR Matsushiro Arr 53.57 334 P **P 11 10 37.7 -0.9**
comp=Z,21nm,0.9s,mb5.1,baz=161,slow=6.3,SNR=29
MJAR Matsushiro Arr 53.57 334 P **P 11 10 37.7 -0.9**
MJAR pmax pmax
comp=Z,21nm,0.9s
MAJO Matsushiro 53.58 334 *e*P **P 11 10 38.1 -0.5**
MAJO pmax pmax
comp=Z,3.0nm,0.3s,mb4.7
MAJO MLR MLR
comp=Z,17μm,21.0s,MS6.1
MAJO Matsushiro 53.58 334 *e*P **P 11 10 38.1 -0.5**
comp=Z,3.0nm,0.3s,mb4.7
MAJO LR LR
comp=Z,17μm,21.0s,MS6.1
MAT Matsushiro 53.58 334 P **P 11 10 37.1 -1.5**
MAT S **S 11 18 10.0 -0.4**
SBUM Sibu 53.85 281 P **P 11 10 43.2 +2.1**

SBUM Sibu 53.85 281 P **P 11 10 40.9 -0.1**
comp=Z,2μmcomp=Z,28nm,1.3s,mb5.0
YULB Yu-li 54.55 309 *e*P **P 11 10 46.4 +0.4**
comp=Z,75nm,0.8s,mb5.8
NACB Ninganchiao 54.77 310 *e*P **P 11 10 48.5 +1.0**
comp=Z,62nm,0.9s,mb5.6
TPUB Ta-pu 55.01 309 *e*P **P 11 10 50.4 +1.1**
comp=Z,127nm,0.8s,mb6.0
SSLB Suanglung 55.03 309 *e*P **P 11 10 49.4 -0.1**
comp=Z,50nm,0.8s,mb5.6
YHNB Yeheng 55.22 311 *e*P **P 11 10 53.0 +2.2**
comp=Z,101nm,1.0s,mb5.8
YHNB LR LR
comp=Z,15μm,22.0s,MS6.0
TATO Taipei 55.31 311 PFAKE 11 11 00.0 +8.6
TATO LR LR
comp=Z,14μm,20.0s,MS6.0
KSM Kuching 55.44 280 P **P 11 10 54.8 +2.2**
KSM Kuching 55.44 280 *e*P **P 11 10 54.2 +1.6**
comp=Z,49nm,1.1s,mb5.5
KSM LR LR
comp=Z,4μm,22.0s,MS5.4
KSM Kuching 55.44 280 P **P 11 10 53.7 +1.1**
comp=Z,1μmcomp=Z,45nm,1.2s,mb5.3
JCJI Jatiwangi 55.82 270 P **P 11 10 55.8 +0.5**
comp=Z,329nm,1.5s,mb6.2
LEM Lembang 56.41 269 P **P 11 10 56.6 -3.0**
comp=Z,5μmcomp=Z,204nm,1.1s,mb6.1
ERM Erimo 56.47 341 *e*P **P 11 11 01.5 +2.1**
ERM pmax pmax
comp=Z,91nm,1.7s,mb5.5
ERM Erimo 56.47 341 *e*P **P 11 11 00.8 +1.3**
comp=Z,89nm,1.2s,mb5.7
ERM LR LR
comp=Z,16μm,22.0s,MS6.1
QZH Quanzhou 57.47 309⇑*i*P **P 11 11 12.0 +5.2**
QZH S **S 11 19 05.0 +2.2**
QZH LR LR
comp=N,8μm,15.2s,MS6.2
QZH LR LR
comp=E,15μm,19.6s,MS6.2
QZH LR LR
comp=Z,16μm,19.9s,MS6.1
DRV Dumont d'Urvil 57.88 191 S **S 11 19 06.0 -1.0**
DRV L 11 26 00.0
DRV R 11 30 00.0
CGJI Cibinong 58.33 269 P **P 11 11 11.9 -1.2**
comp=Z,4μmcomp=Z,135nm,1.9s,mb5.6
ASAJ Asahikawa 58.54 342 LR LR 11 32 22.8
comp=Z,13μm,20.9s,MS6.0,baz=183,slow=32
RKT Rikitea 58.58 110 *e*S **S 11 19 26.4 +8.8**
comp=Z,8μm,30.2s
RKT *e*SS SS 11 23 10.2 -0.4
comp=Z,5μm,31.0s
RKT *e*LQ 11 26 06.6
comp=Z,11μm,31.8s
RKT *e*LR LR 11 28 36.1
comp=Z,54μm,28.2s,baz=277
SSE Sheshan 59.17 317 P **P 11 11 20.4 +1.8**
SSE pP pP 11 11 32.0 +5.5
SSE S **S 11 19 25.3 +0.4**
SSE sS sS 11 19 45.5 +7.6
SSE SS SS 11 23 21.8 +2.0
SSE pmax pmax
comp=Z,96nm,0.8s,mb5.9
SSE pmax pmax
comp=Z,2μm,9.6s
SSE LR LR
comp=N,5μm,25.0s,MS5.8
SSE LR LR
comp=E,7μm,25.0s,MS5.8
SSE LR LR
comp=Z,10μm,28.2s,MS5.8
KSRS Korea Array 59.36 326 P **P 11 11 18.8 -1.0**
comp=Z,28nm,0.9s,mb5.3,baz=136,slow=7.3,SNR=49
KSRS LR LR 11 34 52.9
comp=Z,8μm,18.9s,MS5.9,baz=140,slow=34
KSRS PKP2bc 11 40 57.4
comp=Z,1.8nm,1.0s,baz=330,slow=3.9,SNR=5.1
INCN Inchon 60.09 326 *e*P **P 11 11 25.2 +0.4**
comp=Z,118nm,1.3s,mb5.8
INCN LR LR
comp=Z,14μm,22.0s,MS6.1
MDSI Maura Dua 60.17 271 P **P 11 11 25.4 -0.5**
comp=Z,36nm,2.1s,mb5.0
GZH Guangzhou 60.64 304 P **P 11 11 33.9 +5.0**
GZH S **S 11 19 49.3 +5.2**
GZH LR LR
comp=N,6μm,23.0s,MS5.9
GZH LR LR
comp=E,7μm,23.4s,MS5.9
GZH LR LR
comp=Z,14μm,24.2s,MS6.0
YSS Yuzh-Sakhalins 61.07 343 *e*P **P 11 11 28.0 -3.3**
YSS *e* 11 11 37.8
YSS *e*S **S 11 19 38.0 -11**
YSS *e*PS 11 19 56.0
YSS *e*PPS 11 20 15.0
YSS MLR MLR
comp=E,7μm,18.0s,MS6.1
YSS MLR MLR
comp=Z,9μm,18.0s,MS6.0
YSS MLR MLR
comp=N,10μm,20.0s,MS6.1
YSS Yuzh-Sakhalins 61.07 343 *e*P **P 11 11 30.3 -0.9**
comp=N,172nm,1.0s,mb6.1
YSS LR LR
comp=Z,3μm,21.0s,MS5.4
NJ2 Nanjing 61.33 316 *e*P **P 11 11 33.5 +0.1**
NJ2 pP pP 11 11 43.6 +2.3
NJ2 sP sP 11 11 47.5 +3.2
NJ2 PP PP 11 13 50.5 +1.7
NJ2 S **S 11 19 46.0 -6.6**
NJ2 pmax pmax
comp=Z,30nm,1.2s,mb5.3
NJ2 pmax pmax
comp=Z,4μm,7.3s
NJ2 LR LR
comp=N,4μm,16.2s,MS5.8
NJ2 LR LR
comp=E,5μm,17.3s,MS5.8
NJ2 LR LR
comp=Z,6μm,16.3s,MS5.8
QIZ Qiongzhong 61.77 299 P **P 11 11 35.5 -1.1**
QIZ pP pP 11 11 47.8 +3.3
QIZ sP sP 11 11 56.3 +8.8
QIZ S **S 11 19 55.8 -2.8**
QIZ pmax pmax
comp=Z,17nm,2.0s,mb4.8
QIZ pmax pmax
comp=Z,1μm,7.9s
QIZ LR LR
comp=N,3μm,21.0s,MS5.5
QIZ LR LR
comp=E,3μm,25.6s,MS5.5
QIZ LR LR
comp=Z,11μm,23.1s,MS6.0
QIZ Qiongzhong 61.77 299 *e*P **P 11 11 39.2 +2.7**
comp=Z,84nm,1.3s,mb5.7
QIZ *e*PP PP 11 13 55.0 +2.1
QIZ *e*S **S 11 20 03.3 +4.7**
QIZ LR LR
comp=Z,12μm,22.0s,MS6.0
MYKOM Kota Tinggi 61.78 278 P **P 11 11 38.4 +1.6**
SKR Severo-Kuril's 62.02 354 *e*P **P 11 11 39.0 +1.3**
SKR *e* 11 12 14.0
SKR S **S 11 19 58.0 -2.6**
SKR pmax pmax
comp=E,110nm,1.0s
SKR pmax pmax
comp=Z,220nm,1.0s,mb6.2
SKR pmax pmax
comp=N,320nm,1.4s
SKR pmax pmax
comp=E,3μm,12.0s
SKR pmax pmax
comp=Z,6μm,12.0s
SKR pmax pmax
comp=N,1μm,6.0s
SKR smax
comp=N,9μm,28.0s
SKR smax
comp=E,6μm,28.0s
SKR MLR MLR
comp=N,6μm,18.0s,MS5.9
SKR MLR MLR

comp=Z,7μm,18.0s,MS5.8
SKR MLR MLR
comp=E,4μm,16.0s,MS5.9
KGM Kluang 62.35 278 P **P 11 11 42.2 +1.5**
PTCN Pitcairn Islan 63.05 112 PFAKE 11 12 00.0 +15
PTCN LR LR
comp=Z,10μm,22.0s,MS6.0
KTGM Kuala Trenggan 63.34 282 P **P 11 11 50.0 +2.7**
SDSI Sungai Dareh 63.54 275 P **P 11 11 48.2 -0.4**
comp=Z,2μmcomp=Z,62nm,2.1s,mb5.3
AMKA Amchitka 63.56 10 *e*P **P 11 11 49.2 +1.3**
comp=Z,135nm,1.6s,mb5.7
WHN Wuhan 63.65 312 P **P 11 11 49.0 +0.1**
WHN S **S 11 20 21.3 -0.5**
WHN pmax pmax
comp=Z,59nm,1.0s,mb5.6
WHN LR LR
comp=N,16μm,21.0s,MS6.3
WHN LR LR
comp=E,13μm,20.2s,MS6.3
WHN LR LR
comp=Z,26μm,22.2s,MS6.4
DL2 Dalian 63.91 324 *e*P **P 11 11 52.0 +1.5**
DL2 S **S 11 20 26.6 +1.8**
DL2 pmax pmax
comp=Z,30nm,1.1s,mb5.2
DL2 LR LR
comp=N,2μm,30.3s,MS5.5
DL2 LR LR
comp=E,4μm,26.8s,MS5.5
DL2 LR LR
comp=Z,8μm,29.4s,MS5.8
MDJ Mudanjiang 63.94 333 P **P 11 11 50.6 +0.1**
MDJ pP pP 11 12 02.3 +3.8
MDJ sP sP 11 12 07.3 +5.9
MDJ PcP PcP 11 12 25.8 -0.1
MDJ PP PP 11 14 11.5 0.0
MDJ S **S 11 20 27.9 +3.0**
MDJ SS SS 11 24 32.8 -1.2
MDJ pmax pmax
comp=Z,86nm,1.9s,mb5.5
MDJ pmax pmax
comp=Z,2μm,10.7s
MDJ LR LR
comp=N,9μm,27.7s,MS5.9
MDJ LR LR
comp=E,5μm,27.0s,MS5.9
MDJ LR LR
comp=Z,10μm,28.4s,MS5.8
MDJ Mudanjiang 63.94 333 *e*P **P 11 11 50.4 -0.2**
comp=Z,108nm,1.1s,mb5.8
MDJ LR LR
comp=Z,5μm,21.0s,MS5.6
PET Petropavlovsk 64.13 356 *e*P **P 11 11 51.0 -0.6**
PET *e*S **S 11 20 25.0 -1.9**
PET *e*SS SS 11 24 36.5 -0.1
PET pmax pmax
comp=Z,2μm,12.3s
PET pmax pmax
comp=Z,3μm,7.7s
PET pmax pmax
comp=Z,173nm,1.1s,mb6.0
PET MLR MLR
comp=Z,5μm,14.0s,MS5.8
PET Petropavlovsk 64.13 356 *e*P **P 11 11 50.5 -1.1**
comp=Z,178nm,1.1s,mb6.0
PET LR LR
comp=Z,7μm,21.0s,MS5.8
SMY Shemya 64.15 6 *e*P **P 11 11 52.2 +0.5**
SMY pmax pmax
comp=Z,714nm,1.6s,mb6.5
SMY Shemya 64.15 6 *e*P **P 11 11 52.2 +0.5**
comp=Z,714nm,1.6s,mb6.5
BKNI Bangkinang 64.19 276 P **P 11 11 52.2 -0.6**
comp=Z,4μmcomp=Z,219nm,1.4s,mb6.0
FRIM Kepong 64.28 279 P **P 11 11 54.8 +1.4**
PEA0B Petropavlovsk- 64.28 355 *e*P **P 11 11 52.2 -0.4**
PETK Petropavlovsk- 64.28 355 P **P 11 11 52.0 -0.5**
comp=Z,84nm,0.8s,mb5.8,baz=126,slow=7.5,SNR=44
PETK LR LR 11 34 35.8
comp=Z,8μm,21.1s,MS5.8,baz=178,slow=31
PETK PKPPKP 11 40 42.0
comp=Z,5.4nm,1.2s,baz=93,slow=8.3,SNR=3.7
HABR Khabarovsk 64.88 339 *de*P **P 11 11 56.5 -0.1**
HABR *e**PP pP 11 12 05.4 +0.8
HABR *e**SP sP 11 12 09.6 +2.1
HABR 11 12 28.7
HABR 11 14 17.5
HABR *e*PPP 11 15 49.9
HABR *e*S **S 11 20 35.9 -0.5**
HABR *e**SS sS 11 20 51.8 +2.3
HABR 11 21 46.7
HABR *e*SS SS 11 24 46.5 -2.1
HABR pmax pmax
comp=Z,283nm,1.5s,mb6.1
HABR pmax pmax
comp=N,78nm,1.8s
HABR pmax pmax
comp=Z,4μm,8.5s
HABR pmax pmax
comp=E,47nm,1.2s
HABR MLR MLR
comp=Z,4μm,21.0s,MS5.5
TIA Tai'an 64.97 319⇓P **P 11 11 59.4 +1.9**
IPM Ipoh 65.16 280 P **P 11 12 01.2 +2.0**
IPM Ipoh 65.16 280 P **P 11 11 58.2 -1.0**
comp=Z,2μmcomp=Z,75nm,1.3s,mb5.6
CN2 Changchun 65.28 330 *e*P **P 11 11 58.9 -0.4**
CN2 *e*pP pP 11 12 09.3 +2.1
CN2 *e*S S 11 20 44.0 +2.6
CN2 SS SS 11 24 51.9 -3.0
CN2 pmax pmax
comp=Z,20nm,1.0s,mb5.1
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,6μm,18.0s,MS6.0
CN2 LR LR
comp=E,6μm,18.0s,MS6.0
CN2 LR LR
comp=Z,6μm,20.0s,MS5.8
ATKA Atka Island 65.69 14 *e*P **P 11 12 02.2 +0.4**
comp=Z,365nm,1.5s,mb6.2
MNSI Mandailing Nat 65.71 276 P **P 11 12 03.5 +0.7**
comp=Z,99nm,0.9s,mb5.8
KULM Kulim 65.73 281 P **P 11 12 04.8 +2.0**
KULM Kulim 65.73 281 *e*P **P 11 12 04.0 +1.2**
comp=Z,46nm,1.1s,mb5.4
KULM LR LR
comp=Z,3μm,20.0s,MS5.5
KULM Kulim 65.73 281 P **P 11 12 02.7 -0.1**
comp=Z,45nm,1.5s,mb5.3
CASY Casey 65.88 201 *e*P **P 11 12 03.2 +0.3**
comp=Z,70nm,1.0s,mb5.6
CASY LR LR
comp=Z,3μm,20.0s,MS5.5
COCO West Island 66.24 262 PFAKE 11 12 20.0 +14
COCO LR LR
comp=Z,4μm,22.0s,MS5.6
SBA Scott Base 66.69 180 *e*P **P 11 12 09.3 +1.4**
SBA pmax pmax
comp=Z,448nm,1.9s,mb6.2
SBA MLR MLR
comp=Z,8μm,22.0s,MS5.9
SBA Scott Base 66.69 180 *e*P **P 11 12 09.3 +1.4**
comp=Z,448nm,1.9s,mb6.2
SBA LR LR
comp=Z,8μm,22.0s,MS5.9
KLR Kul'dur 66.73 337 *e*P **P 11 12 04.2 -4.3**
KLR pmax pmax
comp=Z,170nm,2.0s,mb5.7
PSI Prapat 66.80 278 P **P 11 12 09.3 -0.5**
comp=Z,22nm,0.8s,mb5.2,baz=126,slow=1.8,SNR=11
PSI Prapat 66.80 278 P **P 11 12 09.3 -0.4**
PSI pmax pmax
comp=Z,22nm,0.8s,mb5.2
PSI Prapat 66.80 278 P **P 11 12 09.3 -0.5**
ENH Enshi 67.12 310 P **P 11 12 10.6 -0.9**
comp=Z,103nm,1.0s,mb5.8
ENH LR LR
comp=Z,8μm,22.0s,MS5.9
GYA Guiyang 67.58 305⇑*i*P **P 11 12 16.5 +2.1**
GYA pP pP 11 12 28.0 +5.6
GYA PP PP 11 14 44.5 +0.8
GYA ScP 11 16 41.8
GYA S S 11 21 08.9 -1.1

GYA sS sS 11 21 28.4 +5.3
GYA SKS 11 22 05.0
GYA pmax pmax
comp=Z,80nm,1.0s,mb5.7
GYA pmax pmax
comp=Z,250nm,6.8s
GYA LR LR
comp=N,28μm,20.4s,MS6.5
GYA LR LR
comp=E,19μm,21.8s,MS6.5
GYA LR LR
comp=Z,22μm,20.9s,MS6.3
BJT Baijiatuau 67.88 322 *e*P **P 11 12 16.0 0.0**
BJT pmax pmax
comp=Z,42nm,1.0s
BJT MLR MLR
comp=Z,10μm,22.0s
BJT Baijiatuau 67.88 322 *e*P **P 11 12 16.0 0.0**
comp=Z,42nm,1.0s,mb5.4
BJT LR LR
comp=Z,10μm,22.0s,MS6.0
BJI Beijing 67.88 322 P **P 11 12 15.3 -0.7**
BJI pP pP 11 12 25.8 +1.8
BJI sP sP 11 12 29.9 +2.9
BJI S S 11 21 12.9 -0.3
BJI sS sS 11 21 32.9 +6.6
BJI pmax pmax
comp=Z,39nm,1.7s,mb5.2
BJI pmax pmax
comp=Z,2μm,6.0s
BJI LR LR
comp=N,13μm,24.3s,MS6.2
BJI LR LR
comp=E,9μm,23.3s,MS6.2
BJI LR LR
comp=Z,24μm,29.9s
TIY Taiyuan 68.90 318 *e*P **P 11 12 25.3 +2.8**
TIY pmax pmax
comp=Z,2μm,6.7s
TIY LR LR
comp=N,4μm,14.9s
TIY LR LR
comp=E,7μm,23.8s
TIY LR LR
comp=Z,7μm,18.4s,MS6.0
NST Nakhon Sawan 69.18 292 P **P 11 12 25.0 +0.4**
UNV Unalaska Valle 69.25 18 *e*P **P 11 12 23.3 -0.9**
comp=Z,53nm,0.9s,mb5.5
XAN Xi'an 69.39 313 P **P 11 12 24.5 -1.1**
XAN pP pP 11 12 34.8 +1.2
XAN S S 11 21 32.8 +1.5
XAN SS SS 11 26 03.5 +4.5
XAN pmax pmax
comp=Z,16nm,1.1s,mb4.9
XAN pmax pmax
comp=Z,860nm,13.8s
XAN LR LR
comp=N,3μm,21.4s,MS5.6
XAN LR LR
comp=E,3μm,21.8s,MS5.6
XAN LR LR
comp=Z,3μm,20.8s,MS5.6
KMI Kunming 70.25 302 ⇑P **P 11 12 32.3 +1.3**
KMI pP pP 11 12 44.5 +5.5
KMI sP sP 11 12 49.5 +7.5
KMI PcP PcP 11 12 54.0 +1.3
KMI PP PP 11 15 09.8 +2.9
KMI S S 11 21 40.4 -1.3
KMI sS sS 11 22 03.3 +8.4
KMI SKS 11 22 24.3
KMI pmax pmax
comp=Z,59nm,1.3s,mb5.4
KMI pmax pmax
comp=Z,2μm,6.3s
KMI LR LR
comp=N,3μm,17.6s,MS6.0
KMI LR LR
comp=E,7μm,20.3s,MS6.0
KMI LR LR
comp=Z,10μm,22.4s,MS6.0
CHRT Chiangrai 70.88 296 P **P 11 12 35.0 0.0**
comp=Z,210nm,0.9s,mb6.1
CM31 Chiang Mai Arr 71.15 294 *e*P **P 11 12 37.1 +0.4**
comp=Z,35nm,1.0s,mb5.2
CM31 LR LR
comp=Z,4μm,21.0s,MS5.7
CMAR Chiang Mai Arr 71.15 294 P **P 11 12 35.6 -1.0**
comp=Z,10nm,1.0s,mb4.7,baz=119,slow=3.9,SNR=15
CMAR PKPPKP 11 40 32.0
comp=Z,7.2nm,1.2s,baz=275,slow=5.1,SNR=15
CMAR LR LR 11 41 14.2
comp=Z,4μm,21.9s,MS5.7,baz=279,slow=34
SPIA Saint Paul Isl 71.18 14 *e*P **P 11 12 39.4 +3.4**
comp=Z,457nm,1.4s,mb6.2
HHC Hu-ho-hao-te 71.21 320 ⇑P **P 11 12 36.9 +0.3**
HHC pP pP 11 12 50.3 +5.7
HHC sP sP 11 12 54.8 +7.3
HHC PcP PcP 11 12 56.8 +0.4
HHC PP PP 11 15 17.0 +2.1
HHC S S 11 21 49.3 -3.0
HHC sS sS 11 22 11.0 +5.5
HHC SKS 11 22 31.5
HHC ScS ScS 11 22 34.3 -5.2
HHC SS SS 11 26 25.3 -1.5
HHC pmax pmax
comp=Z,65nm,1.1s,mb5.5
HHC pmax pmax
comp=Z,2μm,6.3s
HHC LR LR
comp=N,8μm,18.1s,MS6.1
HHC LR LR
comp=E,6μm,17.8s,MS6.1
HHC LR LR
comp=Z,12μm,18.2s,MS6.2
CHG Chiang Mai 71.27 294 ⇑P **P 11 12 37.6 +0.2**
comp=Z,35nm,0.8s,mb5.3
CHTO Chiang Mai 71.27 294 *e*P **P 11 12 37.4 0.0**
CHTO pmax pmax
comp=Z,25nm,1.1s,mb5.1
CHTO MLR MLR
comp=Z,5μm,22.0s,MS5.8
CHTO Chiang Mai 71.27 294 *e*P **P 11 12 37.4 +0.1**
comp=Z,25nm,1.1s,mb5.1
CHTO LR LR
comp=Z,5μm,22.0s,MS5.8
CHTO Chiang Mai 71.27 294 P **P 11 12 37.5 +0.1**
comp=Z,36nm,1.4s,mb5.1
CHTO Chiang Mai 71.27 294 P **P 11 12 38.0 +0.6**
SNR=14
CD2 Chengdu 71.80 308 P **P 11 12 40.5 +0.1**
CD2 pP pP 11 12 50.8 +2.4
CD2 sP sP 11 12 54.8 +3.5
CD2 PP PP 11 15 21.5 +1.4
CD2 S S 11 21 56.8 -2.7
CD2 SKS 11 22 37.0
CD2 pmax pmax
comp=Z,30nm,0.7s,mb5.3
CD2 pmax pmax
comp=Z,3μm,6.0s
CD2 LR LR
comp=N,8μm,23.0s
CD2 LR LR
comp=Z,7μm,23.5s,MS5.8
HIA Hailar 71.93 331 *e*P **P 11 12 40.7 0.0**
HIA pmax pmax
comp=Z,152nm,1.1s
HIA MLR MLR
comp=Z,7μm,20.0s
HIA Hailar 71.93 331 *e*P **P 11 12 40.7 0.0**
comp=Z,152nm,1.1s,mb5.8
HIA LR LR
comp=Z,7μm,20.0s,MS5.9
BTO Baotou 72.06 319 *e*P **P 11 12 42.0 +0.3**
SDPT Sand Point 72.43 20 *e*P **P 11 12 43.1 -0.5**
comp=Z,135nm,1.0s,mb5.8
MIR Mirnyy 72.54 203 *e*P **P 11 12 44.0 -0.1**
MIR pmax pmax
comp=Z,36nm,1.2s,mb5.2
CHGN Chignik 73.89 20 *e*P **P 11 12 52.2 +0.1**
LZH Lanzhou 74.02 313 *e*P **P 11 12 56.0 +2.6**
LZH pP pP 11 13 09.0 +7.5
LZH sP sP 11 13 12.3 +7.9
LZH PP PP 11 15 43.0 +4.0
LZH S S 11 22 24.0 -0.6
LZH sS sS 11 22 46.0 +8.1
LZH SS SS 11 27 11.6 +1.6
LZH pmax pmax
comp=Z,180nm,1.0s,mb6.0
LZH pmax pmax
comp=Z,2μm,5.8s
LZH LR LR
comp=E,10μm,17.5s
LZH LR LR
comp=Z,12μm,18.4s,MS6.2
SEY Seymchan 74.47 354 *de*P **P 11 12 54.7 -0.7**
SEY Seymchan 74.47 354 *e*P **P 11 12 54.7 -0.7**
CLNS Chul'man 75.28 339 *e*P **P 11 13 00.4 +0.2**
CLNS *e* 11 13 11.8
CLNS *e**PP pP 11 13 16.3 +8.0
CLNS *e* 11 15 50.4
CLNS *e*PPP 11 17 34.4
CLNS *e*S S 11 22 36.3 -1.5
CLNS *e* 11 23 15.0
CLNS pmax pmax
comp=Z,74nm,1.0s,mb5.6
CLNS pmax pmax
comp=E,28nm,1.3s
CLNS pmax pmax
comp=N,58nm,1.3s
CLNS pmax pmax
comp=N,13nm,0.9s
CLNS pmax pmax
comp=Z,11nm,1.0s,mb4.7
CLNS pmax pmax
comp=E,10.0nm,1.0s
CLNS smax
comp=N,2μm,12.5s
CLNS smax
comp=E,2μm,12.0s
CLNS MLR MLR
comp=E,3μm,19.0s
OHAK Old Harbor 76.42 22 *e*P **P 11 13 09.7 +3.0**
comp=E,302nm,1.9s,mb5.9
CIT Chita 76.71 330 *e*P **P 11 13 08.9 +0.4**
CIT *e* 11 13 18.5
CIT pmax pmax
comp=Z,1μm,1.5s,mb6.5
GAMB Gambell 76.88 11 *e*P **P 11 13 09.5 +0.4**
comp=Z,567nm,1.6s,mb6.2
KDAK Kodiak Island 77.09 22 P **P 11 13 10.6 +0.1**
comp=Z,297nm,1.5s,mb6.0,SNR=5.9
KDAK Kodiak Island 77.09 22 P **P 11 13 10.4 -0.1**
comp=Z,38nm,0.9s,mb5.3,baz=184,slow=0.7,SNR=14
KDAK LR LR 11 48 00.1
comp=Z,2μm,18.2s,MS5.6,baz=226,slow=36
KDAK Kodiak Island 77.09 22 *i*P **P 11 13 13.3 +2.8**
KDAK Kodiak Island 77.09 22 *e*P **P 11 13 10.5 +0.1**
KDAK LR LR
comp=Z,3μm,20.0s,MS5.6
IMP Imphal 77.60 299 *e*PKP **P 11 13 15.0 +0.9**
ULN Ulaanbaatar 77.75 324 *e*P **P 11 13 14.2 -0.2**
ULN Ulaanbaatar 77.75 324 *e*P **P 11 13 14.4 0.0**
ULN LR LR
comp=Z,10μm,22.0s,MS6.1
ULN Ulaanbaatar 77.75 324 P **P 11 13 14.2 -0.2**
comp=Z,3μmcomp=Z,153nm,1.1s,mb5.8
ULN Ulaanbaatar 77.75 324 P **P 11 13 14.2 -0.2**
SNR=86
YAK Yakutsk 77.90 344 *d i*P **P 11 13 14.2 -0.7**
YAK *e* pP 11 13 20.2 -2.8
YAK *e**PP pP 11 13 25.6 +2.6
YAK *e*PPP 11 18 00.4
YAK *e*S S 11 23 05.8 -0.4
YAK *e**SS sS 11 23 18.3 -1.3
YAK *e* 11 23 30.0
YAK *e*SS SS 11 28 05.5 -2.1
YAK pmax pmax
comp=E,34nm,1.4s
YAK pmax pmax
comp=Z,186nm,1.1s,mb5.9
YAK pmax pmax
comp=N,42nm,1.1s
YAK smax
comp=N,2μm,10.1s
YAK smax
comp=E,2μm,14.1s
YAK Yakutsk 77.90 344 *e*P **P 11 13 13.0 -1.9**
YAK LR LR
comp=Z,9μm,21.0s,MS6.1
SONM Songino Array 78.11 324 P **P 11 13 16.5 +0.1**
comp=Z,44nm,0.9s,mb5.4,baz=137,slow=6.0,SNR=45
SONM PKPPKP 11 40 19.6
comp=Z,4.5nm,1.2s,baz=192,slow=1.5,SNR=8.0
SONM LR LR 11 47 47.7
comp=Z,10μm,20.7s,MS6.1,baz=120,slow=36
GTA Gaotai 78.35 314 P **P 11 13 18.1 +0.2**
GTA pP pP 11 13 28.5 +2.5
GTA sP sP 11 13 32.8 +3.8
GTA S S 11 23 20.4 +8.3
GTA SKS 11 23 28.8
GTA pmax pmax
comp=Z,21nm,1.3s,mb4.9
GTA pmax pmax
comp=Z,3μm,7.1s
GTA LR LR
comp=N,4μm,25.9s,MS5.9
GTA LR LR
comp=E,5μm,23.2s,MS5.9
GTA LR LR
comp=Z,9μm,22.3s,MS6.0
SVW2 Sparrevohn 78.56 18 *e*P **P 11 13 17.3 -1.3**
comp=Z,573nm,1.9s,mb6.2
QSPA South Pole Qui 78.85 180 P **P 11 13 20.2 +0.2**
comp=Z,54nm,1.1s,mb5.4,baz=22,slow=1.7,SNR=43
QSPA South Pole Qui 78.85 180 P **P 11 13 20.2 +0.2**
QSPA LR LR
comp=Z,6μm,19.0s,MS6.0
BILL Bilibino 79.00 1 ⇑*e*P **P 11 13 20.3 -0.6**
BILL *e* 11 16 20.3
BILL *e*S S 11 23 23.8 +6.0
BILL pmax pmax
comp=Z,425nm,1.7s,mb6.1
BILL MLR MLR
comp=Z,6μm,21.0s,MS5.9
BILL Bilibino 79.00 1 *e*P **P 11 13 20.4 -0.5**
comp=Z,457nm,1.4s,mb6.2
BILL LR LR
comp=Z,6μm,20.0s,MS5.9
RSO Redoubt South 79.00 20 *e*P **P 11 13 21.9 +0.8**
TNA Tin City 79.19 11 P **P 11 13 21.3 -0.7**
comp=Z,97nm,1.2s,mb5.6
SHL Shillong 79.61 299 *e*PKP **P 11 13 25.0 -0.2**
SHL *i* x x 11 23 25.0
RC01 Rabbit Creek A 80.48 21 *e*P **P 11 13 28.8 -0.2**
comp=Z,39nm,0.8s,mb5.4
RC01 *e*PP PP 11 16 33.4 +0.8
PPLA Purkeypile 80.98 19 *e*P **P 11 13 31.6 -0.1**
comp=Z,72nm,1.3s,mb5.5
LSA Lhasa 81.49 302 P **P 11 13 30.3 -4.9**
LSA S S 11 23 45.6 0.0
LSA LR LR
comp=E,4μm,3.3s
LSA LR LR
comp=Z,8μm,4.4s
LSA Lhasa 81.49 302 *e*P **P 11 13 36.4 +1.2**
LSA pmax pmax
comp=Z,107nm,1.8s,mb5.5
LSA MLR MLR
comp=Z,8μm,22.0s,MS6.0
LSA Lhasa 81.49 302 *e*P **P 11 13 36.4 +1.2**
comp=Z,107nm,1.8s,mb5.5
LSA LR LR
comp=Z,8μm,22.0s,MS6.0
RPN Rapa Nui 81.51 116 LR LR 11 44 44.9
comp=Z,3μm,18.1s,MS5.7,baz=289,slow=32
RPN Rapa Nui 81.51 116 PFAKE 11 13 50.0 +15
RPN LR LR
comp=Z,3μm,20.0s,MS5.7
IRK Irkutsk 81.56 327 *e*P **P 11 13 34.2 -0.8**
IRK pmax pmax
comp=Z,88nm,1.9s,mb5.4
TLY Talaya 81.61 327 P **P 11 13 34.3 -1.0**
comp=Z,320nm,0.8s,mb6.3,SNR=11
TLY Talaya 81.61 327 *e*P **P 11 13 34.8 -0.5**
TLY *e*S S 11 23 45.7 -0.2
TLY *e*SS SS 11 28 58.2 -5.5
TLY pmax pmax
comp=Z,66nm,1.0s,mb5.5
TLY Talaya 81.61 327 PFAKE 11 13 50.0 +15
TLY LR LR
comp=Z,7μm,19.0s,MS6.0
TLY Talaya 81.61 327 P **P 11 13 35.2 -0.1**
SNR=27
CAL Calcutta 81.86 295 *e*PKP **P 11 13 35.7 -1.6**
CAL *ex* x 11 23 58.4
TRF Thorofare Moun 81.97 19 *e*P **P 11 13 36.7 -0.3**
comp=Z,63nm,0.9s,mb5.5
BPAW Bear Paw Mtn. 82.23 18 *e*P **P 11 13 37.4 -0.9**
comp=Z,41nm,1.2s,mb5.2
BMRM Bremner River 82.25 22 *e*P **P 11 13 38.8 +0.3**
comp=Z,99nm,1.1s,mb5.7
MOY Mondy 83.05 326 *e*P **P 11 13 42.7 -0.1**
MOY pmax pmax
comp=Z,233nm,3.7s
MCCM Marconi Confer 83.42 49 PFAKE 11 14 00.0 +15
MCCM LR LR
comp=Z,3μm,20.0s,MS5.7
HOPS Hopland 83.57 48 PFAKE 11 14 00.0 +14
HOPS LR LR
comp=Z,3μm,19.0s,MS5.7
COLA College 83.74 18 *i*P **P 11 13 44.9 -1.2**
COLA College 83.74 18 *e*P **P 11 13 44.8 -1.3**
comp=Z,76nm,0.8s,mb5.9
COLA LR LR
comp=Z,4μm,20.0s,MS5.8
MENT Mentasta 83.83 21 *e*P **P 11 13 46.8 +0.3**
ILAR Eielson Array 83.97 19 P **P 11 13 45.9 -1.4**
comp=Z,37nm,0.9s,mb5.5,baz=232,slow=6.0,SNR=55
ILAR PKKPbc PKKPbc 11 32 03.5 -2.0
comp=Z,2.5nm,0.9s,baz=350,slow=2.0,SNR=9.2
ILAR PKPPKP 11 40 06.2
comp=Z,1.6nm,1.0s,baz=304,slow=1.4,SNR=6.9
ILAR LR LR 11 46 18.6
comp=Z,4μm,20.1s,MS5.7,baz=95,slow=32
SAO San Andreas Ge 84.05 51 PFAKE 11 14 00.0 +12
SAO LR LR
comp=Z,5μm,20.0s,MS5.9
MAW Mawson 84.21 202 *e*P **P 11 13 48.5 -0.1**
comp=Z,54nm,1.1s,mb5.6
MAW Mawson 84.21 202 P **P 11 13 48.7 +0.1**
comp=Z,110nm,1.2s,mb5.9,baz=93,slow=6.6,SNR=31
MAW LR LR 11 50 22.6
comp=Z,2μm,18.6s,MS5.6,baz=62,slow=35
MAW Mawson 84.21 202 P **P 11 13 48.7 +0.1**
MAW pmax pmax
comp=Z,110nm,1.2s
MAW MLR MLR
comp=Z,2μm,18.6s
BOK Bokaro 84.36 295 *e*PKP **P 11 13 51.6 +1.4**
WDC Whiskeytown Da 84.49 47 PFAKE 11 14 00.0 +10
WDC LR LR
comp=Z,3μm,20.0s,MS5.7
COLD Coldfoot 84.71 16 *e*P **P 11 13 51.9 +1.0**
comp=Z,259nm,1.8s,mb6.1
YBH Yreka Blue Hor 84.75 46 P **P 11 13 51.8 0.0**
comp=Z,24nm,0.8s,mb5.4,baz=245,slow=6.3,SNR=16
YBH LR LR 11 45 22.3
comp=Z,3μm,18.5s,MS5.7,baz=162,slow=31
YBH Yreka Blue Hor 84.75 46 PFAKE 11 14 00.0 +8.2
YBH LR LR
comp=Z,2μm,20.0s,MS5.6
HUMO Hull Mountain 84.88 45 PFAKE 11 14 00.0 +7.6
HUMO LR LR
comp=Z,4μm,20.0s,MS5.8
JIRN Jiri 85.08 299 *e*P **P 11 13 56.2 +2.4**
comp=Z,525nm,1.8s,mb6.4
VIS Vishakhapatnam 85.22 289 *e*PKP **P 11 13 55.5 +0.8**
CMB Columbia Colle 85.25 50 PFAKE 11 14 10.0 +16
CMB LR LR
comp=Z,5μm,19.0s,MS5.9
BBB Bella Bella 85.29 35 P **P 11 13 53.6 -0.6**
comp=Z,14nm,1.1s,mb5.0,baz=52,slow=2.9,SNR=5.9
COR Corvallis 85.33 43 PFAKE 11 14 10.0 +15
COR LR LR
comp=Z,3μm,19.0s,MS5.6
GUN Gumba 85.42 299 *e*P **P 11 13 57.9 +2.5**
comp=Z,107nm,1.0s,mb5.9
LBCM Butte Creek Ri 85.43 47 P **P 11 13 55.0 -0.1**
LTIM Timbered Crate 85.44 47 P **P 11 13 55.5 +0.3**
PALK Pallekele 85.48 278 *e*P **P 11 13 59.0 +3.0**
PALK pmax pmax
comp=Z,99nm,1.1s,mb5.8
PALK Pallekele 85.48 278 *e*P **P 11 13 59.0 +2.9**
comp=Z,99nm,1.1s,mb5.8
PALK Pallekele 85.48 278 P **P 11 13 56.6 +0.6**
ARVC Arvin 85.58 53 ⇑P **P 11 13 56.1 0.0**
baz=86
VES Vestal, Richgr 85.59 52 ⇓P **P 11 13 55.3 -0.8**
baz=86
RCTC Rector, Farmer 85.60 52 ⇑P **P 11 13 55.3 -0.9**
baz=86
HOG Hogback Mounta 85.63 46 P **P 11 13 57.2 +1.1**
F03A Seaside 85.64 42 ⇑P **P 11 13 55.9 -0.2**
baz=86
PKI Pulchoki 85.73 299 *e*P **P 11 13 56.4 -0.6**
PKIN Phulchoki 85.74 299 *e*P **P 11 13 56.2 -0.9**
E03A Lebam 85.85 41 ⇑P **P 11 13 57.0 -0.2**
baz=86,SNR=7.7
EGAK Eagle 85.86 20 PFAKE 11 14 10.0 +13
EGAK LR LR
comp=Z,3μm,19.0s,MS5.7
KKN Kakani 85.90 299 *e*P **P 11 13 57.4 -0.4**
comp=Z,258nm,1.6s,mb6.2
NLWA Neilton Lookou 85.96 40 ⇑P **P 11 13 57.2 -0.4**
baz=86,SNR=5.1
NLWA Neilton Lookou 85.96 40 PFAKE 11 14 10.0 +12
NLWA LR LR
comp=Z,4μm,19.0s,MS5.8
TIXI Tiksi 85.99 349 *i*P **P 11 13 56.4 -0.9**
TIXI *e*S S 11 24 18.3 -11
TIXI *e*SS SS 11 30 02.5 -5.2
TIXI pmax pmax
comp=Z,177nm,1.6s,mb6.0
TIXI pmax pmax
comp=N,47nm,1.8s
TIXI pmax pmax
comp=E,89nm,1.9s
TIXI pmax pmax
comp=Z,2μm,15.0s
TIXI smax
comp=N,3μm,10.5s
TIXI smax
comp=E,902nm,11.0s
TIXI MLR MLR
comp=Z,4μm,17.0s,MS5.9
TIXI Tiksi 85.99 349 PFAKE 11 14 10.0 +13
TIXI LR LR
comp=Z,4μm,20.0s,MS5.8
DMN Daman 86.00 299 *e*P **P 11 13 56.0 -2.3**
comp=Z,351nm,1.4s,mb6.4
ISA Isabella 86.01 53 ⇑P **P 11 13 58.3 +0.1**
baz=86,SNR=34
G04A Mulino 86.10 43 ⇑P **P 11 13 58.6 +0.2**
baz=86,SNR=7.6
WCN Washoe City 86.11 49 ⇑P **P 11 13 58.4 -0.2**
baz=86
H04A Detroit Lake 86.11 43 ⇓P **P 11 13 56.9 -1.6**
baz=86,SNR=10
EDW2 Edwards Air Fo 86.17 54 ⇓P **P 11 13 58.6 -0.4**
baz=86,SNR=31
BFSC Mount Baldy Ra 86.25 54 ⇑P **P 11 13 59.5 +0.1**
baz=86,SNR=30
MLAC Mammoth Lakes 86.30 51 ⇑P **P 11 13 59.5 -0.1**
baz=86
109C Camp Elliot, M 86.33 56 ⇓P **P 11 13 59.1 -0.7**
baz=86
K05A Summer Lake 86.36 45 ⇑P **P 11 13 59.7 0.0**
baz=86
F04A Amboy 86.38 42 ⇑P **P 11 13 59.7 -0.1**
baz=87,SNR=7.7
MURC Murrieta 86.45 55 ⇑P **P 11 14 00.2 -0.2**
baz=87,SNR=6.9
GKN Gorkha 86.50 299 *e*P **P 11 13 59.2 -1.6**
comp=Z,211nm,1.5s,mb6.1
MOD Modoc 86.51 46 PFAKE 11 14 10.0 +9.5
MOD LR LR
comp=Z,3μm,19.0s,MS5.7
LRMC Laurel Mountai 86.57 53 ⇑P **P 11 14 00.8 -0.1**
baz=87,SNR=12
TIN Tinemaha 86.60 51 ⇓P **P 11 14 01.6 +0.5**
baz=87
GNW Green Mountain 86.68 40 *e*P **P 11 14 01.3 +0.1**
comp=Z,54nm,1.4s,mb5.6
BBRC Big Bear Solar 86.85 54 ⇓P **P 11 14 02.7 +0.3**
baz=87
DAC Darwin (Calif) 86.87 52 PFAKE 11 14 10.0 +7.6
DAC LR LR
comp=Z,6μm,20.0s,MS6.0
MONP Monument Peak 86.89 56 ⇓P **P 11 14 02.9 +0.3**

baz=87,SNR=34
MPMC Manual Prospec 86.89 53 ⇑P P 11 14 02.4 -0.2
baz=87,SNR=32
NVAR Mina Array Bea 86.93 50 P P 11 14 02.8 +0.1
comp=Z,27nm,1.0s,mb5.4,baz=235,slow=5.9,SNR=58
NVAR PKKPbc PKKPbc 11 32 00.0 +2.8
comp=Z,1.4nm,0.8s,baz=117,slow=2.9,SNR=7.0
NVAR PKPPKP 11 40 01.6
comp=Z,1.1nm,0.9s,baz=88,slow=3.6,SNR=3.5
DLBC Dease Lake 87.03 29 P P 11 14 02.5 -0.1
comp=Z,14nm,0.9s,mb5.2,baz=228,slow=11,SNR=6.7
DLBC LR LR 11 49 40.5
comp=Z,3μm,18.4s,MS5.7,baz=263,slow=33
PFO Pinyon Flat Ob 87.05 55 P P 11 14 04.0 +0.7
comp=Z,159nm,2.0s,mb5.9,SNR=9.2
PFO Pinyon Flat Ob 87.05 55 ⇑P P 11 14 03.4 0.0
baz=87,SNR=12
PFO Pinyon Flat Ob 87.05 55 P P 11 14 04.3 +1.0
PFO Pinyon Flat Ob 87.05 55 PFAKE 11 14 20.0 +17
PFO LR LR
comp=Z,5μm,19.0s,MS5.9
DVTC Desert V Tower 87.08 56 ⇓P P 11 14 01.9 -1.7
baz=87,SNR=8.6
D05A Enumclaw 87.09 41 ⇑P P 11 14 03.6 +0.5
baz=87,SNR=25
VIPM Ingram Point 87.11 44 P P 11 14 04.0 +0.6
WPW White Pass 87.21 41 P P 11 14 03.9 +0.1
GSC Goldstone 87.22 53 ⇓P P 11 14 02.9 -1.2
baz=87,SNR=22
GRAC Grapevine Rang 87.24 52 ⇑P P 11 14 02.8 -1.4
baz=87,SNR=23
G06A Carlson Farm, 87.33 43 ⇓P P 11 14 04.1 -0.4
baz=88,SNR=9.0
SWSC Sam W. Stewart 87.41 56 ⇑P P 11 14 05.9 +0.8
baz=88,SNR=15
HEC Hector,Ludlow 87.47 54 P P 11 14 05.8 +0.4
baz=88,SNR=30
FURC Furnace Creek, 87.49 52 ⇓P P 11 14 05.0 -0.5
baz=88,SNR=33
BELC Belle Mtn. Jos 87.52 55 ⇑P P 11 14 05.9 +0.3
baz=88,SNR=61
A05A Maple Falls 87.64 39 ⇓P P 11 14 05.6 -0.2
baz=88
TPH Tonopah 87.65 51 PFAKE 11 14 20.0 +14
TPH LR LR
comp=Z,5μm,20.0s,MS5.9
NAC Naches 87.69 42 P P 11 14 06.8 +0.7
I07A Izee 87.74 44 ⇑P P 11 14 05.5 -1.0
baz=88,SNR=39
SHOC Shoshone 87.79 53 ⇓P P 11 14 06.0 -0.8
baz=88,SNR=18
WVOR Wild Horse Val 87.85 46 *e*P P **11 14 07.7 +0.7**
WVOR pmax pmax
comp=Z,317nm,1.9s,mb6.2
WVOR MLR MLR
comp=Z,4μm,20.0s,MS5.8
WVOR Wild Horse Val 87.85 46 *e*P P **11 14 07.7 +0.6**
comp=Z,317nm,1.9s,mb6.2
WVOR LR LR
comp=Z,4μm,20.0s,MS5.8
BC3 Big Chuckawall 87.87 55 ⇓P P 11 14 07.1 -0.1
baz=88,SNR=46
U10A Ash Meadows, A 87.89 52 ⇑P P 11 14 06.2 -1.1
baz=88,SNR=18
TUQ Turquoise Moun 87.95 53 ⇓P P 11 14 07.4 -0.2
baz=88,SNR=18
GMRC Granite Mounta 87.99 54 ⇑P P 11 14 08.0 +0.1
baz=88,SNR=42
F07A Phinny Hill Vi 88.01 43 ⇓P P 11 14 07.3 -0.4
baz=88
S10A Tonopah Range, 88.09 51 ⇑P P 11 14 08.0 -0.2
baz=88,SNR=59
GLA Glamis 88.22 56 ⇓P P 11 14 09.2 +0.2
baz=88,SNR=17
IRM Iron Mountain 88.24 55 ⇑P P 11 14 08.8 -0.3
baz=88,SNR=67
J08A Circle Bar Ran 88.24 45 P P 11 14 08.6 -0.2
baz=88,SNR=36
BMN Battle Mountai 88.30 48 PFAKE 11 14 20.0 +11
BMN LR LR
comp=Z,2μm,19.0s,MS5.6
WMQ Urumqi 88.40 315 P P 11 14 09.4 -0.2
WMQ pP pP 11 14 22.9 +5.1
WMQ sP sP 11 14 28.0 +7.3
WMQ PP PP 11 17 39.3 +1.6
WMQ SKS 11 24 32.0
WMQ S S 11 24 48.5 -5.1
WMQ sS sS 11 25 11.3 +4.2
WMQ pmax pmax
comp=Z,66nm,1.4s,mb5.7
WMQ pmax pmax
comp=Z,2μm,5.8s
WMQ LR LR
comp=N,6μm,21.8s,MS6.2
WMQ LR LR
comp=E,8μm,23.2s,MS6.2
WMQ LR LR
comp=Z,12μm,24.0s,MS6.2
HAWA Hanford 88.43 42 PFAKE 11 14 20.0 +10
HAWA LR LR
comp=Z,3μm,19.0s,MS5.7
GBB Gable Butte 88.43 42 P P 11 14 10.4 +0.8
V11A Goodsprings 88.44 53 ⇑P P 11 14 09.5 -0.5
baz=89,SNR=38
Q10A Clear Creek Ra 88.48 50 ⇓P P 11 14 07.0 -3.0
baz=89,SNR=14
G08A Pilot Rock 88.48 43 ⇓P P 11 14 09.3 -0.6
baz=89,SNR=40
U11A Corn Creek 88.63 53 ⇑P P 11 14 10.1 -0.8
baz=89,SNR=5.3
P10A Eureka 88.64 49 ⇓P P 11 14 11.3 +0.5
baz=89
S11A Rachel 88.66 51 ⇓P P 11 14 10.6 -0.3
baz=89,SNR=19
W12A Cal Nev Ari 88.75 54 ⇓P P 11 14 11.8 +0.4
baz=89,SNR=6.0
E08A Dider Farm, El 88.77 42 ⇓P P 11 14 11.9 +0.6
baz=89
O10A Cortez Mining, 88.80 49 ⇑P P 11 14 10.2 -1.3
baz=89,SNR=12
NEE2 Needles Airpor 88.81 54 ⇓P P 11 14 11.9 +0.1
baz=89
V12A Nelson 88.87 53 ⇑P P 11 14 11.1 -0.9
baz=89,SNR=36
T11A Corn Creek, Al 88.96 52 ⇓P P 11 14 12.5 +0.2
baz=89,SNR=57
R11A Troy Canyon, C 88.97 51 ⇓P P 11 14 12.6 +0.2
baz=89,SNR=54
113A Mohawk Valley, 89.02 56 ⇑P P 11 14 13.1 +0.3
baz=89,SNR=13
D08A Wollman Farm, 89.03 42 ⇓P P 11 14 12.4 0.0
baz=89,SNR=14
Q11A Duckwater 89.04 50 ⇓P P 11 14 12.9 +0.2
baz=89,SNR=89
PDMCI Parker Dam,Lak 89.08 55 ⇓P P 11 14 12.5 -0.6
baz=89,SNR=26
M10A I.L. Ranch, Tu 89.10 47 ⇓P P 11 14 13.0 +0.1
baz=89,SNR=38
P11A Circle Ranch, 89.15 50 ⇑P P 11 14 13.5 +0.3
baz=89,SNR=17
B08A Colville Reser 89.16 40 P P 11 14 12.8 -0.2
baz=89,SNR=22
K10A MacKenzie Ranc 89.20 46 ⇑P P 11 14 13.4 0.0
baz=89,SNR=64
Z13A Yuma Proving G 89.21 56 ⇑P P 11 14 14.0 +0.3
baz=89,SNR=38
Y13A Salome 89.22 55 ⇓P P 11 14 14.3 +0.6
baz=89,SNR=17
T12A Moapa 89.22 52 ⇓P P 11 14 13.5 -0.1
baz=89,SNR=21
U12A Valley of Fire 89.29 53 ⇑P P 11 14 13.0 -0.9
baz=90,SNR=40
L10A Juniper Basin 89.30 47 ⇑P P 11 14 13.2 -0.7
baz=90,SNR=21
S12A Delamar Landin 89.34 52 ⇓P P 11 14 14.7 +0.5
baz=90,SNR=67
O11A Cowboy Ranch, 89.38 49 ⇓P P 11 14 14.1 -0.2
baz=90
E09A Wood Farm, Sta 89.38 42 ⇓P P 11 14 13.4 -0.7
baz=90
X13A Yucca 89.40 55 ⇑P P 11 14 13.7 -0.8
baz=90,SNR=38
J10A Berg Farm, Mel 89.45 46 ⇑P P 11 14 14.5 0.0
baz=90,SNR=17
BMO Blue Mountains 89.47 44 PFAKE 11 14 30.0 +15
BMO LR LR
comp=Z,4μm,19.0s,MS5.8
W13A Hualapai Mount 89.48 54 ⇓P P 11 14 14.8 0.0
baz=90,SNR=46
N11A Elko Archery C 89.50 48 ⇓P P 11 14 15.1 +0.4
baz=90,SNR=5.2
V13A Grand Canyon W 89.58 53 ⇑P P 11 14 15.2 -0.1
baz=90,SNR=85
HYB Hyderabad 89.60 288 *i*P P **11 14 16.5 +0.7**
HYB *e*SKS 11 24 44.0
HYB *e*PS PS 11 26 16.0 +1.7
I10A Payette 89.61 45 ⇓P P 11 14 14.7 -0.5
baz=90,SNR=19
214A Organ Pipe Nat 89.61 57 ⇓P P 11 14 16.8 +1.2
baz=90,SNR=24
M11A Holland Ranch, 89.61 48 ⇑P P 11 14 15.2 -0.2
baz=90,SNR=84
C09A Chrisman Ranch 89.67 41 ⇓P P 11 14 14.6 -0.8
baz=90
R12A Pony Springs, 89.70 51 ⇑P P 11 14 16.1 +0.3
baz=90,SNR=85
Q12A Willow Creek R 89.71 50 ⇑P P 11 14 16.0 +0.2
baz=90,SNR=57
U13A Pakoon Wash 89.73 53 ⇑P P 11 14 16.3 +0.3
baz=90,SNR=58
114A Black Gap (USA 89.74 57 ⇓P P 11 14 15.4 -0.7
baz=90,SNR=15
P12A McGill 89.77 50 ⇓P P 11 14 16.1 +0.1
baz=90,SNR=66
K11A Parker Ranch, 89.79 46 ⇓P P 11 14 15.9 -0.3
baz=90,SNR=53
Z14A Wintersburg 89.83 56 ⇑P P 11 14 17.0 +0.5
baz=90,SNR=15
L11A Cat Creek Ranc 89.83 47 ⇑P P 11 14 16.6 +0.2
baz=90,SNR=62
F10A Beach Ranch, E 89.84 43 P **P 11 14 15.7 -0.6**
baz=90,SNR=57
ELK Elko 89.84 48 *e*P **P 11 14 17.4 +1.0**
ELK pmax pmax
comp=Z,122nm,1.4s
ELK MLR MLR
comp=Z,3μm,19.0s
ELK Elko 89.84 48 *e*P **P 11 14 17.4 +1.0**
comp=Z,122nm,1.4s,mb6.0
ELK LR LR
comp=Z,3μm,19.0s,MS5.7
Y14A Wickenburg 89.91 55 ⇓P P 11 14 17.0 +0.1
baz=90,SNR=19
T13A Saint George 89.92 52 ⇓P P 11 14 17.4 +0.5
baz=90,SNR=141
N12A Clover Valley, 90.02 48 ⇓P P 11 14 17.7 +0.5
baz=90,SNR=82
N12A Clover Valley, 90.02 48 *e*P **P 11 14 17.7 +0.5**
comp=Z,208nm,1.3s,mb6.3
O12A Currie 90.08 49 ⇓P P 11 14 17.9 +0.3
baz=90,SNR=73
S13A Holt Ranch, En 90.10 52 ⇓P P 11 14 17.7 0.0
baz=90
MFID Camas Ranch 90.11 46 ⇑P P 11 14 17.6 0.0
baz=90,SNR=56
X14A Yava 90.13 55 ⇑P P 11 14 18.6 +0.7
baz=90,SNR=55
W14A Seligman 90.14 54 ⇓P P 11 14 18.3 +0.3
baz=90,SNR=54
I11A Placerville 90.15 45 ⇑P P 11 14 17.8 0.0
baz=90,SNR=86
R13A O'Grain Ranch, 90.16 51 ⇑P P 11 14 18.7 +0.7
baz=90,SNR=65
V14A Boquillas Ranc 90.23 54 ⇓P P 11 14 19.0 +0.7
baz=90,SNR=52
M12A Wells 90.25 48 ⇓P P 11 14 18.6 +0.4
baz=90,SNR=54
115A Sonoran Desert 90.26 57 ⇓P P 11 14 19.5 +0.9
baz=90
Q13A Wheeler Ranch, 90.31 50 ⇑P P 11 14 19.0 +0.4
baz=90,SNR=74
U14A Mt Trumbull 90.35 53 ⇑P P 11 14 19.5 +0.6
baz=90,SNR=102
L12A House Creek Ra 90.36 47 ⇓P P 11 14 19.5 +0.7
baz=90,SNR=76
INK Inuvik 90.36 19 P **P 11 14 17.8 -0.5**
comp=Z,6.2nm,0.7s,mb5.1,baz=216,slow=5.8,SNR=7.7
INK LR LR 11 48 50.4
comp=Z,2μm,20.4s,MS5.6,baz=228,slow=32
P13A Bates Ranch, G 90.43 50 ⇑P P 11 14 19.7 +0.5
baz=91,SNR=50
Y15A Casa Rosa Ranc 90.46 56 ⇑P P 11 14 19.4 -0.1
baz=91,SNR=51
ARUT Antelope Range 90.47 52 *e*P **P 11 14 19.8 +0.4**
ARUT pmax pmax
comp=Z,87nm,1.3s,mb5.9
ARUT Antelope Range 90.47 52 *e*P **P 11 14 19.8 +0.3**
comp=Z,87nm,1.3s,mb5.9
NEW Newport 90.54 41 PFAKE 11 14 30.0 +11
NEW LR LR
comp=Z,3μm,19.0s,MS5.8
K12A Draper Farm, C 90.56 47 P **P 11 14 19.9 +0.1**
baz=91,SNR=58
T14A Hurricane 90.57 52 ⇓P P 11 14 20.1 +0.2
baz=91,SNR=76
J12A Stokes Ranch, 90.58 46 P **P 11 14 20.2 +0.4**
baz=91,SNR=130
O13A Hicks Ranch, I 90.62 49 ⇓P P 11 14 20.1 0.0
baz=91,SNR=20
N13A Wendover, West 90.63 49 ⇑P P 11 14 20.3 +0.2
baz=91,SNR=28
N13A Wendover, West 90.63 49 *e*P **P 11 14 20.5 +0.4**
comp=Z,158nm,1.3s,mb6.2
X15A Humboldt 90.66 55 ⇓P P 11 14 20.3 -0.1
baz=91,SNR=56
116A Eloy 90.66 57 ⇓P P 11 14 22.0 +1.6
baz=91,SNR=15
S14A Cedar City 90.67 52 ⇓P P 11 14 21.0 +0.6
baz=91,SNR=27
I12A Atlanta 90.69 46 ⇑P P 11 14 20.6 +0.3
baz=91,SNR=83
DGAR Diego Garcia 90.71 262 PFAKE 11 14 30.0 +8.9
DGAR LR LR
comp=Z,4μm,21.0s,MS5.8
216A Three Points, 90.75 58 ⇑P P 11 14 21.7 +0.9
baz=91,SNR=31
M13A Montello 90.78 48 ⇑P P 11 14 20.8 0.0
baz=91,SNR=19
W15A Williams 90.79 54 ⇓P P 11 14 21.9 +0.9
baz=91,SNR=21
Q14A Sevier Lake (B 90.88 51 ⇓P P 11 14 21.3 0.0
baz=91,SNR=88
G12A Big Creek, Yel 90.90 44 ⇑P P 11 14 20.9 -0.3
baz=91
R14A James Farms, M 90.91 51 ⇑P P 11 14 21.7 +0.2
baz=91,SNR=18
C11A Tepee Creek (N 90.99 41 ⇓P P 11 14 21.5 -0.1
baz=91
V15A Kaibab Nationa 91.01 54 ⇓P P 11 14 22.4 +0.5
baz=91,SNR=72
U15A North Rim 91.05 53 ⇓P P 11 14 23.0 +0.8
baz=91,SNR=80
Z16A Peralta Trail, 91.06 56 ⇑P P 11 14 22.7 +0.4
baz=91,SNR=19
E12A Beaver Dam Sad 91.07 43 ⇑P P 11 14 21.4 -0.6
baz=91
H12A Diamond D Ranc 91.08 45 ⇓P P 11 14 21.6 -0.5
baz=91,SNR=40
F12A Elk City 91.11 44 P **P 11 14 21.6 -0.6**
baz=91,SNR=87
T15A Red Dirt Ranch 91.11 53 ⇓P P 11 14 22.1 -0.3
baz=91,SNR=32
L13A Double Diamond 91.12 47 ⇓P P 11 14 22.7 +0.3
baz=91,SNR=26
Y16A Circle Bar Ran 91.14 56 ⇓P P 11 14 23.1 +0.4
baz=91,SNR=30
HLID Hailey 91.14 46 ⇓P P 11 14 22.4 0.0
baz=91,SNR=67
HLID Hailey 91.14 46 PFAKE 11 14 30.0 +7.6
HLID LR LR
comp=Z,3μm,19.0s,MS5.8
K13A Stover Farm, H 91.15 47 ⇓P P 11 14 22.9 +0.4
baz=91,SNR=32
P14A Drum Mountains 91.17 50 ⇑P P 11 14 22.6 0.0
baz=91,SNR=45
217A Green Valley 91.23 58 ⇓P P 11 14 24.1 +1.0
baz=91,SNR=30
J13A Cove Ranch, Pi 91.27 46 ⇓P P 11 14 22.9 -0.1
baz=91,SNR=72
S15A Panguitch 91.27 52 ⇓P P 11 14 24.6 +1.4
baz=91,SNR=28
X16A Lo Mia Camp, P 91.28 55 ⇑P P 11 14 23.8 +0.5
baz=92,SNR=27
SYO Syowa Base 91.36 197 ⇓*e*X **P 11 14 20.0 -3.0**
W16A Flagstaff 91.36 55 ⇓P P 11 14 24.0 +0.4
baz=92,SNR=31
TUC Tucson 91.37 57 *e*P **P 11 14 24.2 +0.5**
TUC pmax pmax
comp=Z,59nm,1.4s,mb5.7
TUC MLR MLR
comp=Z,4μm,20.0s,MS5.8
TUC Tucson 91.37 57 *e*P **P 11 14 24.2 +0.5**
comp=Z,59nm,1.4s,mb5.7
TUC LR LR
comp=Z,4μm,20.0s,MS5.8
D12A Red Ives Fores 91.38 42 ⇓P P 11 14 22.7 -0.7
baz=92
N14A Grayback Hills 91.38 49 ⇑P P 11 14 23.9 +0.3
baz=92,SNR=15
M14A Sheep Mountain 91.41 48 ⇓P P 11 14 23.5 -0.2
baz=92,SNR=70
I13A Wildhorse Cree 91.44 46 ⇓P P 11 14 23.6 -0.1
baz=92,SNR=119
R15A Junction 91.46 51 ⇑P P 11 14 24.9 +0.9
baz=92,SNR=24
117A Oracle 91.46 57 ⇑P P 11 14 24.3 +0.1
baz=92,SNR=28
C12B Naegeli Ranch, 91.46 42 ⇓P P 11 14 24.1 +0.3
baz=92
H13A Challis 91.50 45 P **P 11 14 23.9 -0.2**
baz=92,SNR=108
DUG Dugway 91.50 49 ⇓P P 11 14 23.6 -0.5
baz=92,SNR=18
DUG Dugway 91.50 49 PFAKE 11 14 40.0 +16
DUG LR LR
comp=Z,5μm,19.0s,MS6.0
BGU Big Grassy Mou 91.51 49 *e*P **P 11 14 24.8 +0.6**
comp=Z,88nm,1.3s,mb5.9
Q15A Fillmore 91.56 51 ⇑P P 11 14 25.0 +0.5
baz=92
MVU Marysvale 91.58 51 PFAKE 11 14 40.0 +15
MVU LR LR
comp=Z,6μm,19.0s,MS6.1
WUAZ Wupatki 91.58 54 ⇑P P 11 14 24.3 -0.3
baz=92,SNR=32
WUAZ Wupatki 91.58 54 PFAKE 11 14 40.0 +15
WUAZ LR LR
comp=Z,3μm,19.0s,MS5.8
B12A Libby 91.58 41 ⇑P P 11 14 25.0 +0.7
baz=92
Y17A Roosevelt 91.61 56 ⇑P P 11 14 25.1 +0.3
baz=92,SNR=15
L14A Malta 91.61 48 ⇑P P 11 14 25.0 +0.4
baz=92,SNR=50
G13A Cobalt 91.64 44 ⇓P P 11 14 24.6 -0.1
baz=92,SNR=71
A12A Yaak River Ran 91.66 40 ⇑P P 11 14 25.0 +0.3
baz=92
AKL Akola 91.68 291 *e*PKP **P 11 14 26.1 +0.6**
J14A Carey 91.72 46 ⇓P P 11 14 24.7 -0.4
baz=92,SNR=30
F13A Darby 91.74 44 P **P 11 14 24.6 -0.5**
baz=92,SNR=145
P15A Leamington 91.76 50 ⇓P P 11 14 25.5 +0.1
baz=92,SNR=19
K14A Jones Ranch, D 91.78 47 ⇑P P 11 14 25.8 +0.5
baz=92,SNR=32
O15A The Old Anders 91.78 49 ⇓P P 11 14 26.0 +0.6
baz=92
X17A Forest Lakes 91.78 56 ⇑P P 11 14 26.2 +0.6
baz=92,SNR=24
T16A Glen Canyon Da 91.79 53 ⇑P P 11 14 27.1 +1.5
baz=92
BHPL Bhopal 91.80 293 *e*PKP **P 11 14 24.3 -1.6**
Z17A San Carlos Hig 91.83 57 ⇑P P 11 14 25.9 0.0
baz=92,SNR=6.0
318A Bisbee 91.85 58 ⇓P P 11 14 25.9 0.0
baz=92,SNR=24
S16A Weppner Ranch, 91.88 52 ⇑P P 11 14 26.7 +0.7
baz=92,SNR=43
N15A Stansbury Isla 91.88 49 ⇑P P 11 14 26.5 +0.7
baz=92
U16A Tuba City 91.90 54 ⇓P P 11 14 26.2 +0.1
baz=92,SNR=23
I14A Mackay 91.91 46 ⇓P P 11 14 26.5 +0.5
baz=92
218A Dragoon 91.91 58 ⇑P P 11 14 26.4 +0.2
baz=92,SNR=28
D13A Huson 91.98 42 ⇓P P 11 14 25.7 -0.5
baz=92,SNR=21
E13A Victor 92.00 43 ⇑P P 11 14 26.1 -0.2
baz=92,SNR=44
W17A Winslow 92.01 55 ⇑P P 11 14 27.0 +0.4
baz=92
SPUT South Promonto 92.03 48 *e*P **P 11 14 27.5 +0.9**
comp=Z,56nm,1.2s,mb5.8
C13A Hot Springs 92.04 42 ⇓P P 11 14 25.3 -1.1
baz=92
V17A Tonalea, Kykot 92.06 54 ⇓P P 11 14 27.4 +0.5
baz=92,SNR=54
M15A Larsen Ranch, 92.06 48 ⇓P P 11 14 27.2 +0.5
baz=92,SNR=14
R16A Teasdale 92.09 52 ⇑P P 11 14 27.7 +0.8
baz=92,SNR=55
118A Homack Ranch, 92.11 57 ⇑P P 11 14 26.7 -0.5
baz=92
H14A Leadore 92.12 45 ⇓P P 11 14 27.1 +0.2
baz=92,SNR=76
G14A Jackson 92.21 44 ⇓P P 11 14 27.5 +0.2
baz=92
L15A Malad City 92.23 48 ⇓P P 11 14 27.6 +0.1
baz=92,SNR=30
P16A Fountain Green 92.24 50 ⇓P P 11 14 27.7 +0.2
baz=92,SNR=14
MSO Missoula 92.26 43 PFAKE 11 14 40.0 +13
MSO LR LR
comp=Z,2μm,20.0s,MS5.5
K15A Arbon 92.28 47 ⇑P P 11 14 27.8 +0.1
baz=92,SNR=22
B13A Whitefish 92.28 41 ⇓P P 11 14 26.9 -0.6
baz=92,SNR=23
Y18A Canyon Day Jun 92.29 56 ⇑P P 11 14 27.5 -0.4
baz=92,SNR=22
T17A Navajo Res., N 92.34 53 ⇓P P 11 14 28.9 +0.8
baz=92,SNR=33
U17A Shonto 92.37 53 ⇑P P 11 14 28.5 +0.3
baz=92
F14A Wisdom 92.40 44 P **P 11 14 28.1 -0.1**
baz=93,SNR=20
319A Douglas 92.43 59 ⇑P P 11 14 28.4 -0.2
baz=93,SNR=20
A13A Flathead Natio 92.45 41 ⇑P P 11 14 28.0 -0.3
baz=93,SNR=10.0
E14A Clinton 92.46 43 ⇑P P 11 14 28.0 -0.4
baz=93,SNR=32
Q16A Castle Valley 92.46 51 ⇑P P 11 14 28.9 +0.3
baz=93,SNR=28
S17A Black Ridge (B 92.47 52 ⇓P P 11 14 29.3 +0.6
baz=93,SNR=31
O16A Springville 92.48 50 ⇓P P 11 14 29.2 +0.5
baz=93,SNR=19
J15A Blackfoot 92.50 46 ⇓P P 11 14 29.3 +0.6
baz=93,SNR=37
X18A Snowflake 92.51 55 ⇑P P 11 14 29.4 +0.5
baz=93,SNR=21
MCMT McKenzie Canyo 92.53 45 *e*P **P 11 14 29.5 +0.6**
comp=Z,58nm,1.7s,mb5.7
219A White Tail Can 92.57 58 ⇓P P 11 14 29.6 +0.3
baz=93,SNR=35
I15A Monteview 92.60 46 ⇑P P 11 14 30.0 +0.8
baz=93,SNR=21
D14A Greenough 92.61 43 ⇑P P 11 14 28.5 -0.6
baz=93,SNR=31
C14A Swan Lake 92.61 42 ⇑P P 11 14 28.3 -0.8
baz=93
DDI Dehra Dun 92.63 300 *ex* **P 11 14 28.0 -1.6**
H15A Lima 92.63 45 ⇓P P 11 14 29.8 +0.5
baz=93,SNR=83
N16A Rees Ranch, Co 92.68 49 ⇓P P 11 14 29.5 -0.1
baz=93,SNR=20
119A Ashpeak Ranch, 92.69 57 ⇑P P 11 14 31.0 +1.2
baz=93,SNR=8.7
R17A Hanksville Air 92.71 52 ⇑P P 11 14 30.5 +0.7
baz=93,SNR=53
HWUT Hardware Ranch 92.74 48 PFAKE 11 14 40.0 +10
HWUT LR LR
comp=Z,3μm,20.0s,MS5.7
V18A Ganado 92.76 54 ⇑P P 11 14 30.5 +0.4
baz=93,SNR=22
W18A Petrified Fore 92.80 55 ⇑P P 11 14 31.1 +0.8
baz=93
MK31 Makanchi Array 92.85 317 *e*P **P 11 14 29.5 -0.7**
MKAR Makanchi Array 92.85 317 P **P 11 14 29.1 -1.1**

comp=Z,20nm,0.7s,mb5.7,baz=98,slow=6.2,SNR=41
MKAR PKKP PKKPbc 11 31 42.2 -0.5
comp=Z,5.4nm,0.9s,baz=300,slow=2.4,SNR=10
MKAR PKPPKP 11 39 55.8
comp=Z,0.2nm,0.3s,baz=316,slow=3.3,SNR=6.3
MKAR LR LR 11 57 37.9
comp=Z,3µm,19.5s,MS5.8,baz=106,slow=36
G15A Dillon 92.86 45 ⇑P **P 11 14 30.4 0.0**
baz=93
P17A Butcher Ranch, 92.90 50 ⇓P **P 11 14 30.3 -0.3**
baz=93,SNR=7.3
L16A Fish Haven 92.92 48 ⇑P **P 11 14 30.9 +0.2**
baz=93,SNR=19
U18A Rough Rock, Ch 92.96 54 ⇓P **P 11 14 31.2 +0.2**
baz=93,SNR=16
Y19A Nutrioso 92.96 56 ⇓P **P 11 14 31.9 +0.8**
baz=93,SNR=15
K16A Soda Springs 92.98 47 ⇑P **P 11 14 31.2 +0.3**
baz=93
SRU San Rafael 92.99 51 ⇑P **P 11 14 31.0 -0.1**
baz=93,SNR=6.5
F15A Butte 93.00 44 ⇑P **P 11 14 30.7 -0.2**
baz=93,SNR=49
ZALV Zalesovo Beam 93.01 324 P **P 11 14 29.6 -1.2**
comp=Z,35nm,1.1s,mb5.7,baz=120,slow=4.8,SNR=29
ZALV Zalesovo Beam 93.01 324 P **P 11 14 29.6 -1.2**
ZALV pmax pmax
comp=Z,35nm,1.1s,mb5.7
X19A St. Johns 93.03 56 ⇑P **P 11 14 31.3 -0.1**
baz=93,SNR=9.5
NDI New Delhi 93.03 298 *ex* x 11 14 22.0
E15A Deer Lodge 93.03 43 P **P 11 14 31.1 0.0**
baz=93,SNR=49
B14A Marquette Ranc 93.05 41 ⇑P **P 11 14 31.6 +0.5**
baz=93,SNR=16
O17A Robinson Place 93.06 50 ⇓P **P 11 14 31.4 0.0**
baz=93,SNR=22
J16A Bone 93.06 47 ⇓P **P 11 14 30.9 -0.4**
baz=93,SNR=27
T18A Mexican Hat 93.10 53 ⇓P **P 11 14 31.2 -0.4**
baz=93,SNR=27
A14A Double T Ranch 93.10 41 ⇑P **P 11 14 30.9 -0.5**
baz=93,SNR=20
S18A Hurst Farm, Bl 93.11 52 ⇓P **P 11 14 32.2 +0.5**
baz=93,SNR=13
N17A Moffit Pass 93.14 49 ⇓P **P 11 14 31.8 +0.1**
baz=93
220A Playas Peak, P 93.16 58 ⇓P **P 11 14 31.5 -0.5**
baz=93,SNR=12
120A U Bar Ranch, L 93.20 58 ⇑P **P 11 14 32.3 +0.1**
baz=93,SNR=9.7
D15A Lincoln 93.25 43 ⇓P **P 11 14 32.0 -0.1**
baz=93,SNR=24
I16A Newdale 93.28 46 ⇓P **P 11 14 32.6 +0.3**
baz=93,SNR=34
P18A Preston Nutter 93.31 50 ⇑P **P 11 14 32.8 +0.3**
baz=94,SNR=8.2
AHID Auburn Hatcher 93.32 47 PFAKE 11 14 40.0 +7.5
AHID LR LR
comp=Z,3µm,19.0s,MS5.8
R18A Canyonlands Na 93.33 52 ⇑P **P 11 14 32.7 0.0**
baz=94,SNR=22
Z20A Nine Sixteen R 93.34 57 ⇑P **P 11 14 33.8 +1.0**
baz=94,SNR=7.9
G16A Moss Hill, Enn 93.34 45 ⇓P **P 11 14 32.6 0.0**
baz=94,SNR=35
C15A Salmond Ranch, 93.36 42 ⇓P **P 11 14 32.1 -0.5**
baz=94
M17A Scullys Gap (B 93.37 49 ⇓P **P 11 14 32.1 -0.6**
baz=94,SNR=25
K17A Gardner Place, 93.45 47 ⇓P **P 11 14 33.0 -0.1**
baz=94,SNR=7.4
U19A Dine' College, 93.45 54 ⇓P **P 11 14 32.5 -0.7**
baz=94,SNR=20
B15A Bradely Ranch, 93.51 42 ⇓P **P 11 14 32.6 -0.6**
baz=94,SNR=23
A15A Johnson Ranch, 93.54 41 ⇑P **P 11 14 32.4 -1.0**
baz=94,SNR=21
BOZ Bozeman (W) 93.55 44 ⇓P **P 11 14 32.9 -0.6**
baz=94,SNR=64
BOZ Bozeman (W) 93.55 44 PFAKE 11 14 50.0 +17
BOZ LR LR
comp=Z,3µm,19.0s,MS5.8
F16A Kennard Place, 93.58 44 ⇑P **P 11 14 33.6 -0.1**
baz=94,SNR=49
O18A Roosevelt 93.62 50 ⇑P **P 11 14 34.3 +0.4**
baz=94,SNR=16
H16A Russell Place, 93.62 45 ⇓P **P 11 14 34.2 +0.4**
baz=94,SNR=48
Y20A Horse Springs, 93.67 56 ⇓P **P 11 14 35.1 +0.8**
baz=94,SNR=14
KAD Karad 93.68 287 *e*PKP **P 11 14 34.6 0.0**
KAD AMb AMB 11 14 40.9
comp=Z,48nm,1.6s,mb5.7
GOA Goa 93.69 285 *ex* x 11 14 25.5
X20A Quemado 93.69 56 ⇑P **P 11 14 34.5 +0.1**
baz=94,SNR=18
T19A Beclabito 93.70 53 ⇓P **P 11 14 34.7 +0.3**
baz=94
E16A East Helena 93.71 43 ⇓P **P 11 14 34.2 0.0**
baz=94,SNR=18
J17A Brown Place, J 93.72 47 ⇓P **P 11 14 34.0 -0.3**
baz=94,SNR=15
S19A Harvey Farm, M 93.79 52 ⇓P **P 11 14 34.2 -0.5**
baz=94,SNR=12
W20A Ramah 93.80 55 ⇑P **P 11 14 35.0 +0.1**
baz=94
R19A Curley Farm, L 93.80 52 ⇓P **P 11 14 34.6 -0.2**
baz=94,SNR=21
M18A Lyman 93.80 49 ⇓P **P 11 14 34.1 -0.7**
baz=94,SNR=6.6
YMR Madison River 93.81 45 *e*P **P 11 14 35.9 +1.2**
comp=Z,142nm,1.7s,mb6.1
121A Cookes Peak, D 93.90 58 ⇑P **P 11 14 35.6 +0.2**
baz=94,SNR=21
D16A Dana Ranch, Ca 93.90 43 ⇓P **P 11 14 35.0 0.0**
baz=94,SNR=17
L18A Fontenelle, Gr 93.92 48 ⇓P **P 11 14 35.8 +0.5**
baz=94,SNR=12
Q19A Hogan Spring (93.92 51 ⇓P **P 11 14 35.4 0.0**
baz=94,SNR=7.9
C16A Fuhringer Ranc 93.93 42 ⇓P **P 11 14 35.1 -0.1**
baz=94
I17A Pilgrim Ck. 93.93 46 ⇓P **P 11 14 35.7 +0.4**
baz=94
V20A Brimhall 93.95 54 ⇓P **P 11 14 35.0 -0.5**
baz=94
N18A Larsen Ranch, 94.01 49 ⇑P **P 11 14 34.9 -0.8**
baz=94
H17A Grant Village 94.03 46 ⇓P **P 11 14 37.1 +1.4**
baz=94,SNR=11
K18A Toltan Ranch, 94.06 48 ⇑P **P 11 14 36.3 +0.4**
baz=94
B16A M & M Farms, S 94.08 42 ⇓P **P 11 14 36.5 +0.6**
baz=94
G17A Pierce Place, 94.10 45 ⇓P **P 11 14 36.8 +0.8**
baz=94
NVS Novosibirsk 94.12 325 *e*P **P 11 14 34.8 -1.1**
NVS *e* 11 18 24.0
NVS *e*S SKSac 11 25 10.6 +1.5
NVS pmax pmax
comp=N,43nm,1.9s
NVS pmax pmax
comp=E,91nm,1.9s
NVS pmax pmax
comp=Z,148nm,1.9s,mb6.1
NVS smax
comp=N,39nm,2.4s
NVS smax
comp=E,271nm,3.0s
Z21A St. Cloud Mine 94.14 57 ⇓P **P 11 14 37.4 +0.9**
baz=94,SNR=17
LKWY Lake 94.18 46 PFAKE 11 14 50.0 +14
LKWY LR LR
comp=Z,8µm,19.0s,MS6.2
J18A Kendall Valley 94.19 47 ⇓P **P 11 14 36.0 -0.5**
baz=94,SNR=14
MVCO Mesa Verde 94.19 53 ⇑P **P 11 14 36.0 -0.6**
baz=94
MVCO Mesa Verde 94.19 53 PFAKE 11 14 50.0 +13
MVCO LR LR
comp=Z,4µm,20.0s,MS5.9
POO Poona 94.21 288 *e*PKP **P 11 14 36.2 -1.0**
E17A Martinsdale 94.25 44 ⇓P **P 11 14 35.7 -1.0**
baz=94,SNR=20
X21A Alamocita Cree 94.25 56 ⇑P **P 11 14 36.7 -0.3**
baz=94,SNR=9.0
Y21A Point of Rocks 94.26 56 ⇑P **P 11 14 37.6 +0.5**
baz=94,SNR=13
A16A West Butte Ran 94.27 41 ⇑P **P 11 14 35.8 -0.9**
baz=94,SNR=12
P19A Cripple Cowboy 94.27 51 ⇑P **P 11 14 36.3 -0.6**
baz=94
F17A Fitzpatrick Pl 94.27 44 ⇓P **P 11 14 37.7 +0.9**
baz=94,SNR=40
O19A Miners Draw (B 94.29 50 ⇑P **P 11 14 37.3 +0.3**
baz=94,SNR=13
PV01 Paradox Valley 94.30 52 *e*P **P 11 14 38.2 +1.0**
comp=Z,863nm,0.9s
N19A John Jarvie Ra 94.36 49 ⇑P **P 11 14 37.5 +0.1**
baz=94
S20A Disappointment 94.41 52 ⇑P **P 11 14 37.2 -0.5**
baz=95
I18A Diamond G Ranc 94.43 46 ⇓P **P 11 14 37.5 -0.1**
baz=95
BW06 Boulder Array 94.43 47 ⇑P **P 11 14 37.7 0.0**
baz=95,SNR=19
BW06 Boulder Array 94.43 47 PFAKE 11 14 50.0 +12
BW06 LR LR
comp=Z,3µm,19.0s,MS5.7
PDAR Pinedale Array 94.43 47 P **P 11 14 37.0 -0.6**
comp=Z,8.1nm,0.9s,mb5.2,baz=252,slow=3.0,SNR=30
PDAR PKKP PKKPbc 11 31 38.8 +0.3
comp=Z,1.1nm,0.8s,baz=87,slow=4.9,SNR=6.2
PDAR PKPPKP 11 39 45.7
comp=Z,1.3nm,1.1s,baz=264,slow=4.5,SNR=3.6
L19A Farson 94.45 48 ⇓P **P 11 14 37.7 -0.1**
baz=95,SNR=12
R20A Redvale 94.46 52 ⇓P **P 11 14 38.8 +0.9**
baz=95
M19A Rock Springs 94.49 49 ⇑P **P 11 14 38.3 +0.4**
baz=95
D17A Six Diamond Ra 94.50 43 ⇑P **P 11 14 37.8 0.0**
baz=95,SNR=26
C17A Wharram Farm, 94.55 42 ⇓P **P 11 14 37.5 -0.5**
baz=95,SNR=28
B17A L&G Farms, Che 94.65 42 ⇑P **P 11 14 39.1 +0.6**
baz=95,SNR=5.2
Q20A Ridgley Place, 94.67 51 ⇑P **P 11 14 38.2 -0.6**
baz=95,SNR=12
P20A De Beque 94.69 51 ⇑P **P 11 14 38.5 -0.4**
baz=95,SNR=13
Z22A Elephant Butte 94.71 57 ⇑P **P 11 14 38.6 -0.5**
baz=95,SNR=13
U21A Nageezi 94.71 54 ⇑P **P 11 14 38.5 -0.5**
baz=95,SNR=32
LAZ Ladron 94.77 56 *e*P **P 11 14 40.4 +1.1**
comp=Z,5.3nm,1.3s,mb4.8
Y22A Socorro 94.83 57 ⇑P **P 11 14 39.3 -0.4**
baz=95
A17A Triple J Farms 94.85 41 ⇑P **P 11 14 38.4 -0.9**
baz=95,SNR=20
AJM Ajmer 94.88 296 *e*PKP **P 11 14 40.1 +0.1**
AJM AMb AMB 11 14 44.0
comp=Z,42nm,1.6s,mb5.6
E18A Harlowton 94.91 44 ⇑P **P 11 14 39.7 0.0**
baz=95,SNR=23
G18A Lazy EL Ranch, 94.91 45 ⇓P **P 11 14 39.7 0.0**
baz=95,SNR=6.0
F18A Big Timber 94.92 44 ⇓P **P 11 14 40.1 +0.3**
baz=95,SNR=14
O20A White River Ci 94.92 50 ⇑P **P 11 14 38.1 -1.8**
baz=95,SNR=6.7
GCMT Greycliff 94.93 44 *e*P **P 11 14 41.1 +1.3**
comp=Z,47nm,1.8s,mb5.6
K19A Absolon Red Bu 94.96 47 ⇓P **P 11 14 38.6 -1.4**
baz=95,SNR=11
N20A Spence Gulch, 95.03 50 ⇓P **P 11 14 39.6 -0.8**
baz=95,SNR=6.7
RLMT Red Lodge 95.08 45 ⇑P **P 11 14 39.6 -0.9**
baz=95
RLMT Red Lodge 95.08 45 *e*P **P 11 14 41.7 +1.2**
comp=Z,54nm,1.8s,mb5.7
RLMT LR LR
comp=Z,4µm,20.0s,MS5.8
D18A Linhart Farms, 95.10 43 ⇑P **P 11 14 39.9 -0.7**
baz=95
R21A Cimarron 95.14 52 ⇓P **P 11 14 41.4 +0.4**
baz=95,SNR=21
BNM Barren Site 95.14 56 *e*P **P 11 14 41.7 +0.6**
comp=Z,21nm,1.2s,mb5.5
Q21A Lamborn Mesa, 95.20 52 ⇓P **P 11 14 41.7 +0.5**
baz=95,SNR=15
EGMT Eagleton 95.29 42 ⇑P **P 11 14 41.1 -0.3**
baz=95,SNR=14
EGMT Eagleton 95.29 42 PFAKE 11 14 50.0 +8.6
EGMT LR LR
comp=Z,2µm,19.0s,MS5.7
K20A Yellowstone Ra 95.30 48 ⇓P **P 11 14 41.5 -0.1**
baz=96,SNR=6.4
U22A Llaves 95.34 54 ⇓P **P 11 14 41.2 -0.7**
baz=96
B18A Beardsley Farm 95.34 42 ⇓P **P 11 14 41.5 -0.1**
baz=96,SNR=11
A18A Metzger Ranch, 95.39 41 ⇑P **P 11 14 41.8 -0.1**
baz=96
T22A Edith 95.41 53 ⇑P **P 11 14 42.1 -0.2**
baz=96
ANMO Albuquerque 95.41 56 P **P 11 14 41.8 -0.5**
comp=Z,7.5nm,1.0s,mb5.1,baz=236,slow=4.9,SNR=16
ANMO Albuquerque 95.41 56 P **P 11 14 41.8 -0.5**
ANMO pmax pmax
comp=Z,8.0nm,1.0s
ANMO Albuquerque 95.41 56 PFAKE 11 14 50.0 +7.7
ANMO LR LR
comp=Z,2µm,20.0s,MS5.7
N21A Black Mountain 95.57 50 ⇑P **P 11 14 43.8 +0.9**
baz=96,SNR=5.7
Y23A Lovelace Mesa, 95.57 57 ⇓P **P 11 14 43.9 +0.8**
baz=96
YKA Yellowknife Ar 95.58 27 P **P 11 14 40.4 -2.0**
comp=Z,16nm,0.8s,mb5.5,baz=256,slow=4.4,SNR=21
YKA PKKP PKKPbc 11 31 35.8 -0.2
comp=Z,2.1nm,0.9s,baz=73,slow=2.7,SNR=7.1
S22A 4UR Ranch, Cre 95.59 53 ⇑P **P 11 14 43.4 +0.4**
baz=96,SNR=14
324A Moseley Ranch, 95.63 59 ⇓P **P 11 14 43.3 -0.1**
baz=96,SNR=14
W23A Wilmer Place, 95.70 55 ⇑P **P 11 14 43.1 -0.5**
baz=96
224A Cornudas Mount 95.70 59 ⇑P **P 11 14 43.3 -0.5**
baz=96,SNR=17
Q22A Crested Butte, 95.72 52 ⇓P **P 11 14 44.0 +0.4**
baz=96,SNR=18
R22A Saguache, Gunn 95.73 52 ⇓P **P 11 14 45.1 +1.5**
baz=96,SNR=9.3
MNTX Cornudas Mount 95.76 59 PFAKE 11 15 00.0 +16
MNTX LR LR
comp=Z,3µm,20.0s,MS5.8
V23A Ortiz Mt. (NFS 95.77 55 ⇓P **P 11 14 44.5 +0.6**
baz=96,SNR=11
U23A El Rito 95.86 54 ⇓P **P 11 14 44.5 +0.2**
baz=96,SNR=16
124A Stringfield Ra 95.86 58 ⇓P **P 11 14 45.2 +0.8**
baz=96,SNR=12
L21A Rawlins 95.89 49 ⇓P **P 11 14 43.8 -0.5**
baz=96
425A Indio Mountain 95.95 60 ⇓P **P 11 14 44.6 -0.2**
baz=96,SNR=12
P22A Eagle 95.95 51 ⇓P **P 11 14 45.2 +0.5**
baz=96
PMSA Palmer Station 95.97 161 P **P 11 14 44.3 +0.1**
comp=Z,20nm,1.1s,mb5.5,baz=272,slow=4.8,SNR=2.8
PMSA Palmer Station 95.97 161 *e*P **P 11 14 45.7 +1.5**
comp=Z,60nm,1.4s,mb5.8
PMSA LR LR
comp=Z,4µm,22.0s,MS5.8
KSH Kashi 95.97 309 P **P 11 14 48.6 +3.9**
KSH Kashi 95.97 309 P **P 11 14 48.4 +3.7**
KSH pP pP 11 14 59.4 +6.5
KSH sP sP 11 15 03.3 +7.4
KSH PP PP 11 18 45.3 +7.8
KSH SKS 11 25 21.3
KSH S S 11 26 03.6 +1.7
KSH sS sS 11 26 20.1 +4.5
KSH SS SS 11 32 40.8 +7.6
KSH pmax pmax
comp=Z,9.0nm,1.0s,mb5.2
KSH pmax pmax
comp=Z,2µm,13.8s
KSH LR LR
comp=N,5µm,19.3s,MS6.1
KSH LR LR
comp=E,4µm,18.5s,MS6.1
KSH LR LR
comp=Z,6µm,24.6s
KURK Kurchatov 96.03 320 P **P 11 14 43.3 -1.4**
comp=Z,125nm,1.3s,mb6.2,SNR=7.8
KURK Kurchatov 96.03 320 *e*P **P 11 14 42.9 -1.8**
KURK pmax pmax
comp=Z,51nm,1.7s,mb5.7
KURK Kurchatov 96.03 320 *e*P **P 11 14 43.2 -1.5**
comp=Z,64nm,1.5s,mb5.8
KURK LR LR
comp=Z,7µm,22.0s,MS6.1
KURK Kurchatov 96.03 320 P **P 11 14 43.5 -1.2**
SNR=20
325A Bean Ranch, Si 96.05 59 ⇑P **P 11 14 45.2 -0.2**
baz=96,SNR=14
T23A Casias Ranch, 96.09 54 ⇓P **P 11 14 44.0 -1.4**
baz=96
NVL N'lazarevskaya 96.19 189 *e*P **P 11 14 46.0 +0.8**
MAIT Maitri 96.20 189 *e*P **P 11 14 46.0 +0.8**
O22A Kremmling 96.20 50 ⇑P **P 11 14 46.0 +0.2**
baz=96,SNR=15
225A Deer Hill, Car 96.30 59 ⇓P **P 11 14 46.0 -0.4**
baz=96
W24A Lazy 6 Ranch, 96.31 55 ⇑P **P 11 14 46.6 +0.3**
baz=96,SNR=8.7
626A Big Bend Ranch 96.48 61 ⇑P **P 11 14 46.7 -0.5**
baz=97
V24A Rampart Ranch, 96.50 55 ⇑P **P 11 14 46.8 -0.4**
baz=97,SNR=14
Z25A Roswell 96.57 57 ⇑P **P 11 14 46.6 -1.0**
baz=97
L22A Ellis Ranch, M 96.59 49 ⇓P **P 11 14 47.0 -0.4**
baz=97,SNR=7.1
526A Mary Lane Ranc 96.59 61 ⇑P **P 11 14 47.2 -0.6**
baz=97,SNR=7.8
U24A Moreno Valley 96.60 54 ⇑P **P 11 14 46.6 -1.0**
baz=97
Y25A Mesa, Roswell 96.69 57 ⇑P **P 11 14 46.6 -1.5**
baz=97
N23A Red Feather La 96.77 50 ⇑P **P 11 14 48.0 -0.3**
baz=97,SNR=6.7
TKM2 Tokmak 2 96.79 312 PFAKE 11 15 00.0 +12
TKM2 LR LR
comp=Z,5µm,21.0s,MS5.9
TXAR Lajitas Array 96.85 62 P **P 11 14 48.8 -0.1**
comp=Z,2.3nm,0.8s,mb4.7,baz=230,slow=5.4,SNR=20
TXAR PP PP 11 18 42.5 -2.0
comp=Z,1.8nm,1.0s,baz=250,slow=7.4,SNR=6.4
TXAR PKKP PKKPbc 11 31 34.9 +3.5
comp=Z,0.8nm,0.8s,baz=109,slow=3.3,SNR=7.7
TXAR PKPPKP 11 39 46.6
comp=Z,0.4nm,0.9s,baz=93,slow=6.5,SNR=3.8
TXAR LR LR 11 50 40.2
comp=Z,4µm,20.5s,MS5.9,baz=0.0,slow=31
TXAR Lajitas Array 96.85 62 P **P 11 14 48.8 -0.1**
TXAR 11 18 42.5
TXAR pmax pmax
comp=Z,2.0nm,0.8s
TXAR pmax pmax
comp=Z,2.0nm,1.0s
ISCO Idaho Springs 96.86 51 PFAKE 11 15 00.0 +11
ISCO LR LR
comp=Z,4µm,20.0s,MS5.9
326A Caldwell Ranch 96.88 60 ⇑P **P 11 14 48.5 -0.6**
baz=97
226A Malaga, Loving 96.89 59 ⇑P **P 11 14 48.6 -0.5**
baz=97,SNR=7.7
527A Woodward Ranch 97.02 61 ⇓P **P 11 14 49.3 -0.4**
baz=97,SNR=7.4
V25A Rancho No Teng 97.04 55 ⇑P **P 11 14 50.0 +0.3**
baz=97,SNR=10.0
W25A X Bar L Ranch, 97.07 56 ⇑P **P 11 14 49.2 -0.6**
baz=97,SNR=15
627A Terlingua Ranc 97.10 61 ⇑P **P 11 14 49.0 -1.1**
baz=97
Z26A Caprock 97.18 58 ⇑P **P 11 14 48.4 -1.9**
baz=97
CPRX Cap Rock 97.24 58 *e*P **P 11 14 51.0 +0.4**
comp=Z,10nm,1.2s,mb5.1
U25A Circle Dot Ran 97.29 54 ⇑P **P 11 14 49.5 -1.3**
baz=98
427A Hayter Ranch, 97.30 60 ⇓P **P 11 14 51.0 0.0**
baz=98
LAO LASA Array 97.44 44 *e*P **P 11 14 52.2 +1.1**
comp=Z,109nm,1.6s,mb6.0
LAO LR LR
comp=Z,3µm,19.0s,MS5.8
S25A Robets Cordova 97.45 53 ⇑P **P 11 14 51.1 -0.4**
baz=98
UCH Uchtor 97.48 311 *e*P **P 11 14 51.5 0.0**
comp=Z,9.1nm,1.1s,mb5.1
UCH LR LR
comp=Z,6µm,21.0s,MS6.0
FRU Bishkek 97.49 312 *e*P **P 11 14 52.0 +0.5**
FRU pmax pmax
comp=Z,34nm,1.8s,mb5.5
628A Black Gap, Mar 97.54 61 ⇓P **P 11 14 51.7 -0.4**
baz=98
AAK Ala-Archa 97.55 312 PKKPbc PKKPbc 11 31 29.7 -0.2
comp=Z,1.5nm,0.3s,baz=303,slow=5.9,SNR=6.7
AAK LR LR 11 58 56.8
comp=Z,5µm,21.7s,MS6.0,baz=66,slow=36
AAK Ala-Archa 97.55 312 PFAKE 11 15 00.0 +8.2
AAK LR LR
comp=Z,5µm,21.0s,MS6.0
127A Arkansas Junct 97.61 58 ⇑P **P 11 14 51.1 -1.2**
baz=98
W26A Owens Ranch, T 97.62 56 ⇑P **P 11 14 50.6 -1.7**
baz=98
528A Cox Ranch, San 97.72 61 ⇑P **P 11 14 51.7 -1.2**
baz=98
U26A Atchley Ranch, 97.82 54 ⇓P **P 11 14 51.8 -1.4**
baz=98
AML Almayashu 98.07 311 *e*P **P 11 14 53.6 -0.6**
comp=Z,123nm,0.6s,mb6.6
AML LR LR
comp=Z,6µm,21.0s,MS6.1
EKS2 Erkin-Say 98.08 312 PFAKE 11 15 10.0 +16
EKS2 LR LR
comp=Z,4µm,22.0s,MS5.9
X27A F and S Farms, 98.10 56 ⇓P **P 11 14 54.3 -0.2**
baz=98
VNA1 Neumayer--Stat 98.24 182 *e*P **P 11 14 55.1 +0.7**
VNA1 *e* 11 14 57.8
MSTX Muleshoe 98.27 57 ⇑P **P 11 14 55.1 -0.2**
baz=98
RSSD Black Hills 98.62 47 PFAKE 11 15 10.0 +13
RSSD LR LR
comp=Z,3µm,19.0s,MS5.7
DGMT Dagmar 99.03 42 ⇑P **P 11 14 58.6 +0.4**
baz=99
DGMT Dagmar 99.03 42 PFAKE 11 15 10.0 +12
DGMT LR LR
comp=Z,3µm,19.0s,MS5.7
AMTX Amarillo 99.29 56 PFAKE 11 15 10.0 +10
AMTX LR LR
comp=Z,2µm,19.0s,MS5.7
OGNE Ogallala 99.72 50 PFAKE 11 15 10.0 +8.7
OGNE LR LR
comp=Z,3µm,19.0s,MS5.9
JCT Junction City 100.33 61 PFAKE 11 15 20.0 +16
JCT LR LR
comp=Z,5µm,19.0s,MS6.1
FFC Flin Flon 100.97 36 *i*P Pdif 11 15 07.6 +0.7
FFC Flin Flon 100.97 36 *e*Pdif Pdif 11 15 05.7 -1.2
comp=Z,11nm,1.2s
FFC LR LR
comp=Z,3µm,19.0s,MS5.9
CBKS Cedar Bluff 101.26 52 PFAKE 11 15 20.0 +12
CBKS LR LR
comp=Z,3µm,19.0s,MS5.8
BVAR Borovoye Array 101.36 322 P Pdif 11 15 07.5 -1.1
comp=Z,9.5nm,0.9s,baz=98,slow=4.5,SNR=18
BVAR PKKPbc PKKPbc 11 31 20.9 +1.4
comp=Z,0.7nm,0.5s,baz=338,slow=0.8,SNR=4.3
BRVK Borovoye 101.43 322 *d*P Pdif 11 15 07.6 -1.3
BRVK pmax pmax
comp=Z,43nm,2.5s
BRVK Borovoye 101.43 322 *e*Pdif Pdif 11 15 07.3 -1.6
comp=Z,16nm,1.0s
BRVK LR LR
comp=Z,7µm,21.0s,MS6.2
BRVK Borovoye 101.43 322 Pdiff Pdif 11 15 11.0 +2.1
SNR=12
WMOK Wichita Mounta 101.64 57 PFAKE 11 15 20.0 +10
WMOK LR LR
comp=Z,4µm,19.0s,MS5.9
KVTX Kingsville 101.64 64 PFAKE 11 15 20.0 +10
KVTX LR LR

comp=Z,3μm,21.0s,MS5.7
RES Resolute Bay 103.46 16 Pdiff Pdif 11 15 20.4 +2.4
comp=Z,2.7nm,0.7s,baz=270,slow=9.1,SNR=3.5
RES Resolute Bay 103.46 16 P Pdif 11 15 20.4 +2.5
RES pmax pmax
comp=Z,3.0nm,0.7s
HKT Hockley 103.69 62 PFAKE 11 15 30.0 +11
HKT LR LR
comp=Z,5μm,20.0s,MS6.0
KSU1 Kansas State U 103.72 52 PFAKE 11 15 30.0 +11
KSU1 LR LR
comp=Z,4μm,19.0s,MS5.9
ECSD EROS Data Cent 103.93 48 PFAKE 11 15 30.0 +10
ECSD LR LR
comp=Z,3μm,19.0s,MS5.8
ULM Lac du Bonnet 104.56 41 Pdiff Pdif 11 15 25.0 +2.2
comp=Z,2.2nm,0.4s,baz=268,slow=4.3,SNR=3.0
ULM Lac du Bonnet 104.56 41 Pdif Pdif 11 15 25.0 +2.2
ULM LR LR
comp=Z,3μm,19.0s,MS5.9
AGMN Agassiz Nation 104.56 43 PFAKE 11 15 30.0 +7.2
AGMN LR LR
comp=Z,3μm,19.0s,MS5.8
PAYG Puerto Ayora 104.66 94 PFAKE 11 15 40.0 +17
PAYG LR LR
comp=Z,3μm,22.0s,MS5.7
NATX Nacogdoches 104.84 60 PFAKE 11 15 40.0 +16
NATX LR LR
comp=Z,5μm,20.0s,MS6.1
MIAR Mount Ida 105.91 57 PFAKE 11 19 50.0 +8.3
MIAR LR LR
comp=Z,5μm,19.0s,MS6.1
SCIA State Center 106.39 50 PFAKE 11 19 50.0 +7.6
SCIA LR LR
comp=Z,3μm,19.0s,MS5.9
EYMN Ely 107.49 43 PFAKE 11 20 00.0 +16
EYMN LR LR
comp=Z,2μm,19.0s,MS5.7
PLCA Paso Flores 107.51 139 PFAKE 11 20 00.0 +15
PLCA LR LR
comp=Z,3μm,20.0s,MS5.9
MSEY Mahe Island 107.78 261 PFAKE 11 20 00.0 +14
MSEY LR LR
comp=Z,3μm,21.0s,MS5.9
CCM Cathedral Cave 107.89 54 PFAKE 11 20 00.0 +15
CCM LR LR
comp=Z,3μm,19.0s,MS5.9
ABKAR Akbulak array 107.95 318 *e*Pdif Pdif 11 15 38.8 +0.8
comp=Z,1.0nm,0.7s
ABKAR *e*PKPdf PKiKP 11 19 43.1 -2.0
ARU Arti 108.10 326 *e*PKPdf PKiKP 11 19 47.9 +2.8
ARU LR LR
comp=Z,6μm,22.0s,MS6.1
VBMS Vicksburg 108.38 60 PFAKE 11 20 00.0 +14
VBMS LR LR
comp=Z,4μm,20.0s,MS6.0
JFWS Jewell Farm 108.57 48 PFAKE 11 20 00.0 +14
JFWS LR LR
comp=Z,3μm,19.0s,MS5.9
AKTO Aktyubinsk 109.10 320 PKKPbc PKKPbc 11 30 55.0 -0.7
comp=Z,3.2nm,1.0s,baz=280,slow=5.3,SNR=7.3
OXF Oxford 109.35 57 PFAKE 11 20 00.0 +12
OXF LR LR
comp=Z,3μm,20.0s,MS5.9
HDIL Hopedale 109.36 51 PFAKE 11 20 00.0 +12
HDIL LR LR
comp=Z,3μm,22.0s,MS5.8
TEIG Tepich 109.69 72 PFAKE 11 20 00.0 +11
TEIG LR LR
comp=Z,3μm,19.0s,MS5.8
TGUH Tegucigalpa,Un 110.01 79 PFAKE 11 20 00.0 +10
TGUH LR LR
comp=Z,5μm,20.0s,MS6.1
WVT Waverly 110.63 56 PFAKE 11 20 00.0 +9.5
WVT LR LR
comp=Z,3μm,20.0s,MS5.8
KBS Kingsbay 110.93 355 PFAKE 11 20 00.0 +10
KBS LR LR
comp=Z,3μm,22.0s,MS5.8
BRAL Brewton 111.31 61 PFAKE 11 20 00.0 +8.1
BRAL LR LR
comp=Z,4μm,19.0s,MS6.0
LRAL Lakeview Retre 111.36 59 PFAKE 11 20 00.0 +8.0
LRAL LR LR
comp=Z,4μm,20.0s,MS6.0
JTS JuntasAbangare 111.78 83 PFAKE 11 20 10.0 +17
JTS LR LR
comp=Z,5μm,21.0s,MS6.1
WCI Wyandotte Cave 111.78 53 PFAKE 11 20 00.0 +7.4
WCI LR LR
comp=Z,4μm,20.0s,MS5.9
GLMI Grayling 112.49 46 PFAKE 11 20 10.0 +16
GLMI LR LR
comp=Z,4μm,19.0s,MS6.0
LCO Las Campanas 113.34 128 PFAKE 11 20 10.0 +14
LCO LR LR
comp=Z,5μm,21.0s,MS6.1
AAM Ann Arbor 113.47 49 PFAKE 11 20 10.0 +14
AAM LR LR
comp=Z,3μm,20.0s,MS6.0
CFAA Coronel Fontan 113.91 132 PKiKP PKiKP 11 19 57.9 +0.9
comp=Z,0.4nm,0.8s,baz=257,slow=3.7,SNR=5.0
ACSO Alum Creek Sta 114.20 51 PFAKE 11 20 10.0 +13
ACSO LR LR
comp=Z,4μm,19.0s,MS6.0
GOGA Godfrey 114.31 58 PFAKE 11 20 10.0 +12
GOGA LR LR
comp=Z,5μm,19.0s,MS6.1
TRQA Tornquist 114.47 141 PFAKE 11 20 10.0 +12
TRQA LR LR
comp=Z,4μm,22.0s,MS6.0
LVZ Lovozero 114.62 341 PFAKE 11 20 10.0 +13
LVZ LR LR
comp=Z,5μm,22.0s,MS6.1
NNA Nana 114.77 109 PFAKE 11 20 10.0 +11
NNA LR LR
comp=Z,3μm,21.0s,MS5.9
APA Apatity 115.20 341 ⇑*i*PKIKP PKiKP 11 19 58.0 -0.3
APA *e*PS PS 11 30 28.0 -11
APA *e*SSS 11 41 03.0
APA pmax pmax
comp=Z,16nm,1.0s
APA MLR MLR
comp=Z,6μm,23.0s,MS6.1
KEV Kevo 115.63 345 PFAKE 11 20 10.0 +11
KEV LR LR
comp=Z,4μm,19.0s,MS6.1
ARCES ARCESS Array B 116.17 345 PKP PKPdf 11 19 58.8 -1.3
comp=Z,8.9nm,0.8s,baz=48,slow=1.8,SNR=20
ARCES PKKPbc PKKPbc 11 30 30.5 -2.1
comp=Z,1.3nm,0.5s,baz=240,slow=2.4,SNR=14
ARE0 ARCESS Array S 116.17 345 *e*PKPdf PKPdf 11 20 00.7 +0.6
ERPA Erie 116.20 49 PFAKE 11 20 10.0 +9.0
ERPA LR LR
comp=Z,3μm,19.0s,MS6.0
DWPF Disney 116.22 64 PFAKE 11 20 10.0 +8.6
DWPF LR LR
comp=Z,2μm,19.0s,MS5.7
SADO Sadowa 116.35 45 PKP PKPdf 11 20 00.6 -0.6
comp=Z,4.6nm,0.8s,baz=301,slow=5.0,SNR=5.0
OTAV Otavalo 116.43 95 PFAKE 11 20 20.0 +18
OTAV LR LR
comp=Z,2μm,19.0s,MS5.8
BLA Blacksburg 116.50 54 PFAKE 11 20 10.0 +8.3
BLA LR LR
comp=Z,3μm,21.0s,MS5.9
BCIP Isla Barro Col 116.62 85 PFAKE 11 20 10.0 +7.4
BCIP LR LR
comp=Z,3μm,21.0s,MS5.8
MCWV Mont Chateau 116.66 51 PFAKE 11 20 10.0 +8.1
MCWV LR LR
comp=Z,5μm,19.0s,MS6.2
NHSC New Hope 117.07 59 PFAKE 11 20 20.0 +17
NHSC LR LR
comp=Z,4μm,22.0s,MS6.0
SUMG Summit 117.08 8 *e*PKPdf PKPdf 11 20 02.8 +1.0
CNNC Cliffs of the 118.76 56 PFAKE 11 20 20.0 +14
CNNC LR LR
comp=Z,3μm,19.0s,MS5.9
CBN Corbin 118.77 53 PFAKE 11 20 20.0 +14
CBN LR LR
comp=Z,4μm,20.0s,MS6.1
VRHR Novokhopersk 119.10 323 *e*PKIKP PKPdf 11 20 06.1 -0.2
VRHR pmax pmax
comp=N,10.0nm,1.0s
VRHR pmax pmax
comp=Z,30nm,1.0s
VRHR pmax pmax
comp=E,5.0nm,0.5s
BINY Binghamton 119.11 48 PFAKE 11 20 20.0 +13
BINY LR LR
comp=Z,4μm,19.0s,MS6.1
LONY Lake Ozonia 119.56 45 PFAKE 11 20 20.0 +13
LONY LR LR
comp=Z,3μm,20.0s,MS6.0
MTDJ Mount Denham 119.69 75 PFAKE 11 20 20.0 +12
MTDJ LR LR
comp=Z,2μm,20.0s,MS5.8
GNI Garni 119.89 310 *i* PKIKP PKPdf 11 20 08.7 +0.6
GNI Garni 119.89 310 *e*PKP PKPdf 11 20 08.7 +0.6
GNI LR LR
comp=Z,3μm,20.0s,MS5.9
ZEI Tsey 119.96 313 *i* PKIKP PKPdf 11 20 10.7 +2.5
ZEI pmax pmax
comp=Z,13nm,0.5s
NCB Newcomb 119.97 46 PFAKE 11 20 20.0 +12
NCB LR LR
comp=Z,3μm,19.0s,MS5.9
OBN Obninsk 120.33 328 ⇓*i*PKIKP PKPdf 11 20 07.8 -0.7
OBN *e*PS PS 11 31 27.4 +2.0
OBN pmax pmax
comp=Z,40nm,1.6s
OBN MLR MLR
comp=Z,6μm,21.0s,MS6.2
OBN Obninsk 120.33 328 ⇓*e*PKP PKPdf 11 20 06.9 -1.6
OBN LR LR
comp=Z,6μm,20.0s,MS6.2
VSR Storozhevoye 120.50 324 *e*PKIKP PKPdf 11 20 06.5 -2.5
VSR *e* 11 21 32.8
VSR pmax pmax
comp=N,140nm,4.2s
VSR pmax pmax
comp=E,180nm,4.2s
VSR pmax pmax
comp=Z,70nm,2.1s
VSR pmax pmax
comp=N,210nm,6.7s
VSR pmax pmax
comp=E,530nm,6.7s
VSR pmax pmax
comp=Z,1μm,6.7s
VSR MLR MLR
comp=N,1μm,24.0s,MS5.9
VSR MLR MLR
comp=E,3μm,24.0s,MS5.9
VSR MLR MLR
comp=Z,6μm,24.0s,MS6.1
VORD Divnogorie 120.52 323 *e*PKIKP PKPdf 11 20 07.0 -2.0
VORD pmax pmax
comp=Z,330nm,5.0s
VORD pmax pmax
comp=N,110nm,0.8s
VORD pmax pmax
comp=E,200nm,0.7s
VORD MLR MLR
comp=N,1μm,20.0s,MS5.9
VORD MLR MLR
comp=E,2μm,20.0s,MS5.9
VORD MLR MLR
comp=Z,4μm,20.0s,MS6.0
KIV Kislovodsk 120.53 315 ⇑*i*PKIKP PKPdf 11 20 08.7 -0.5
KIV *e* 11 21 35.2
KIV *e* 11 26 57.3
KIV *e*PS PS 11 31 18.5 -9.2
KIV pmax pmax
comp=Z,19nm,1.2s
KIV MLR MLR
comp=Z,6μm,22.0s,MS6.2
KIV Kislovodsk 120.53 315 *e*PKP PKPdf 11 20 08.8 -0.4
KIV LR LR
comp=Z,6μm,21.0s,MS6.2
SCHQ Schefferville 120.70 32 PKP PKPdf 11 20 10.1 +0.9
comp=Z,4.0nm,0.8s,baz=340,slow=3.4,SNR=5.5
SCHQ PKKPab PKKPab 11 30 16.0 +1.3
comp=Z,9.1nm,1.0s,baz=89,slow=8.0,SNR=4.9
SCHQ Schefferville 120.70 32 PKP PKPdf 11 20 10.1 +0.9
SCHQ PKKPab PKKPab 11 30 16.0 +1.3
SCHQ LR LR
comp=Z,4μm,19.0s,MS6.1
LPAZ La Paz 121.11 117 PKP PKPdf 11 20 11.8 +0.7
comp=Z,33nm,1.2s,baz=294,slow=1.7,SNR=26
LPAZ La Paz 121.11 117 PKIKP PKPdf 11 20 11.8 +0.6
LPAZ pmax pmax
comp=Z,33nm,1.2s
LPAZ La Paz 121.11 117 *e*PKPdf PKPdf 11 20 12.9 +1.7
LPAZ LR LR
comp=Z,4μm,20.0s,MS6.0
BHD Baghdad 121.27 302 *ex* x 11 20 10.0
FINES FINESS Array B 121.47 338 PKP PKPdf 11 20 09.8 -0.7
comp=Z,14nm,0.9s,baz=102,slow=2.7,SNR=21
FINES PKKPbc PKKPbc 11 30 14.4 +1.3
comp=Z,1.3nm,1.0s,baz=198,slow=5.6,SNR=4.0
FINES FINESS Array B 121.47 338 PKP PKPdf 11 20 09.8 -0.7
FINES PKKPbc PKKPbc 11 30 14.4 +1.3
LBNH Lisbon 121.50 45 PFAKE 11 20 20.0 +8.9
LBNH LR LR
comp=Z,3μm,21.0s,MS5.8
GTBY Guantanamo Bay 122.03 73 PFAKE 11 20 20.0 +7.2
GTBY LR LR
comp=Z,2μm,20.0s,MS5.7
PKME Peaks-Kenny Pk 122.97 43 PFAKE 11 20 30.0 +16
PKME LR LR
comp=Z,2μm,19.0s,MS5.9
VSU Vasula 123.11 335 *i* PKIKP PKPdf 11 20 13.2 -0.5
VSU Vasula 123.11 335 *e*PKP PKPdf 11 20 13.2 -0.5
ANN Anapa 123.88 317 *i* PKIKP PKPdf 11 20 08.2 -7.4
ANN *e* 11 21 57.2
ANN pmax pmax
comp=Z,48nm,1.5s
ANN MLR MLR
comp=Z,9μm,23.0s,MS6.4
BOSA Boshof 124.28 224 PKP PKPdf 11 20 16.8 -0.2
comp=Z,31nm,0.9s,baz=123,slow=2.4,SNR=42
BOSA Boshof 124.28 224 PKIKP PKPdf 11 20 16.8 -0.2
BOSA pmax pmax
comp=Z,31nm,0.9s
BOSA Boshof 124.28 224 *e*PKPdf PKPdf 11 20 17.9 +0.9
BOSA LR LR
comp=Z,4μm,20.0s,MS6.0
SUR Sutherland 124.59 217 *e*PKPdf PKPdf 11 20 18.7 +1.2
SUR LR LR
comp=Z,4μm,19.0s,MS6.1
CPUP Villa Florida 124.76 133 PKP PKPdf 11 20 17.6 -0.4
comp=Z,20nm,0.9s,baz=235,slow=1.2,SNR=11
CPUP Villa Florida 124.76 133 PKP PKPdf 11 20 17.6 -0.4
CPUP LR LR
comp=Z,607nm,19.0s,MS5.3
MICGM Minsk 124.97 331 ⇑*e*P PKPdf 11 20 18.0 +0.6
IZAR Zarasai 124.99 333 *e*P PKPdf 11 20 17.3 -0.1
IZAR AMB AMB 11 20 21.4
comp=Z,11nm,1.6s
MNK Minsk 124.99 331 ⇑*e*PKIKP PKPdf 11 20 18.0 +0.5
MNK pmax pmax
comp=Z,60nm,1.0s
MNK MLR MLR
comp=Z,9μm,20.0s,MS6.5
IDID Didziasalis 125.02 332 *e*P PKPdf 11 20 17.7 +0.2
IDID AMB AMB 11 20 21.3
comp=Z,16nm,1.2s
IIGN Ignalina 125.24 332 *e*P PKPdf 11 20 18.0 +0.1
IIGN AMB AMB 11 20 21.9
comp=Z,18nm,1.0s
NACGM Naroch 125.25 332 *e* PKPdf 11 20 16.0 -2.0
SDV Santo Domingo 125.60 87 *e*PKPdf PKPdf 11 20 19.3 -0.5
SDV LR LR
comp=Z,859nm,20.0s,MS5.4
SDDR Presa de Saban 125.63 75 PFAKE 11 20 30.0 +10
SDDR LR LR
comp=Z,5μm,19.0s,MS6.2
GRTK Grand Turk 125.75 72 PFAKE 11 20 30.0 +10
GRTK LR LR
comp=Z,3μm,21.0s,MS5.9
SIM Simferopol' 126.02 318 PKIKP PKPdf 11 20 23.1 +3.4
SIM pmax pmax
comp=Z,15nm,0.9s
LBTB Lobatse 126.26 228 *e*PKIKP PKPdf 11 20 20.4 -0.5
LBTB MLR MLR
comp=Z,4μm,19.0s,MS6.2
KMBO Kilima Mbogo 126.29 260 *e*PKIKP PKPdf 11 20 22.9 +1.7
KMBO MLR MLR
comp=Z,2μm,20.0s
BORG Borgarnes 126.33 3 PFAKE 11 20 30.0 +10
BORG LR LR
comp=Z,2μm,19.0s,MS5.7
AKASG Malin Array Be 126.35 326 PKP PKPdf 11 20 18.7 -1.5
comp=Z,12nm,0.9s,baz=61,slow=2.0,SNR=20
AKASG Malin Array Be 126.35 326 PKIKP PKPdf 11 20 18.7 -1.5
AKASG pmax pmax
comp=Z,12nm,0.9s
AKBB Malin Array Si 126.35 326 *e*PKIKP PKPdf 11 20 19.8 -0.4
KIEV Kiev 126.36 326 *e*PKIKP PKPdf 11 20 19.6 -0.6
KIEV *e* 11 22 13.3
KIEV MLR MLR
comp=Z,4μm,21.0s,MS6.1
NB2 NORSAR Subarra 126.52 344 PKPdf PKPdf 11 20 18.1 -2.1
comp=Z,7.1nm,1.0s,baz=39,slow=1.9
NB2 NORSAR Subarra 126.52 344 PKPdf PKPdf 11 20 18.1 -2.1
baz=39,slow=1.9
NB2 NORSAR Subarra 126.52 344 PKIKP PKPdf 11 20 18.1 -2.1
NB2 NORSAR Subarra 126.52 344 PKPdf PKPdf 11 20 18.1 -2.1
NOA NORSAR Array B 126.52 344 PKP PKPdf 11 20 19.1 -1.1
comp=Z,10nm,0.9s,baz=37,slow=2.0,SNR=18
NOA NORSAR Array B 126.52 344 PKIKP PKPdf 11 20 19.2 -1.0
NOA pmax pmax
comp=Z,10.0nm,0.9s
NAO01 NORSAR Array S 126.77 344 *e*PKPdf PKPdf 11 20 20.4 -0.3
NAO01 LR LR
comp=Z,3μm,20.0s,MS6.0
SIV San Ignacio 127.34 120 PKP PKPdf 11 20 23.0 -0.1
comp=Z,21nm,1.0s,baz=219,slow=2.8,SNR=21
SUW Suwalki 127.46 332 *e*PKIKP PKPdf 11 20 22.6 +0.4
KONO Kongsberg 128.13 344 PFAKE 11 20 40.0 +17
KONO LR LR
comp=Z,3μm,20.0s,MS6.0
BR131 Keskin Array S 128.23 312 *e*PKPdf PKPdf 11 20 23.0 -1.2
BR131 LR LR
comp=Z,2μm,21.0s,MS5.8
BRTR Keskin Array B 128.23 312 PKP PKPdf 11 20 23.9 -0.2
comp=Z,9.5nm,1.0s,baz=90,slow=1.7,SNR=16
BRTR PP PP 11 22 25.1 -2.9
comp=Z,3.0nm,1.0s,baz=96,slow=2.9,SNR=2.8
BRTR PKKP 11 30 37.2
comp=Z,0.4nm,0.6s,baz=169,slow=2.5,SNR=3.5
BRTR Keskin Array B 128.23 312 PKIKP PKPdf 11 20 24.0 -0.1
BRTR 11 22 25.1
BRTR pmax pmax
comp=Z,10.0nm,1.0s
BRTR pmax pmax
comp=Z,3.0nm,1.0s
MMAI Mount Meron Ar 128.73 303 PKP PKPdf 11 20 26.5 +1.2
comp=Z,13nm,1.0s,baz=126,slow=2.5,SNR=9.7
LSZ Lusaka 129.49 240 *e*PKIKP PKPdf 11 20 28.1 +0.9
LSZ MLR MLR
comp=Z,3μm,22.0s,MS6.0
LVV L'vov 129.62 328 *i* PKIKP PKPdf 11 20 26.2 -0.3
LVV *e* 11 22 44.4
LVV *e* 11 32 36.8
TIRR Tirgusor 129.91 320 *e*PKIKP PKPdf 11 20 28.0 +0.8
TIRR Tirgusor 129.91 320 ⇓*i*P PKPdf 11 20 27.8 +0.6
CSS Prodhromos 129.91 306 *e*PKPdf PKPdf 11 20 26.9 -0.6
CSS LR LR
comp=Z,3μm,20.0s,MS5.9
TESR 129.98 323 ⇓P PKPdf 11 20 28.9 +1.6
TESR 129.98 323 ⇓*i*P PKPdf 11 20 28.9 +1.6
BBSR BB Station 130.07 57 PFAKE 11 20 40.0 +12
BBSR LR LR
comp=Z,2μm,20.0s,MS5.8
BUR08 Bucovina Ar. S 130.22 325 *e*PKPdf PKPdf 11 20 28.8 +1.1
BURAR Bucovina Array 130.22 325 ⇑PKIKP PKPdf 11 20 28.5 +0.8
BURAR Bucovina Array 130.22 325 ⇑*i*P PKPdf 11 20 28.5 +0.8
KWP Kalwaria Pacla 130.42 328 PFAKE 11 20 40.0 +12
KWP LR LR
comp=Z,7μm,22.0s,MS6.3
SJG San Juan 130.51 76 PFAKE 11 20 40.0 +11
SJG LR LR
comp=Z,2μm,20.0s,MS5.8
MLR Muntele Rosu 130.93 322 PKIKP PKPdf 11 20 29.7 +0.6
MLR Muntele Rosu 130.93 322 ⇓P PKPdf 11 20 31.3 +2.2
MLR Muntele Rosu 130.93 322 ⇓*i*P PKPdf 11 20 31.3 +2.2
ISP Isparta 131.17 311 PFAKE 11 20 40.0 +10
ISP LR LR
comp=Z,2μm,22.0s,MS5.8
UZH Uzhgorod 131.24 327 *e*PKIKP PKPdf 11 20 29.9 +0.3
STHS Stebnicka Huta 131.30 329 *e*PKIKP PKPdf 11 20 31.3 +1.6
STHS Stebnicka Huta 131.30 329 *e*PKP PKPdf 11 20 31.3 +1.6
TRPA Tarpa 131.41 327 ⇑*i*P PKPdf 11 20 21.3 -8.6
VOIR 131.50 322 ⇓PKIKP PKPdf 11 20 31.5 +1.3
VOIR 131.50 322 ⇓*i*P PKPdf 11 20 31.5 +1.3
OJC Ojcow 131.50 330 *e*PKIKP PKPdf 11 20 29.2 -0.8
OJC *e* 11 20 39.7
OJC *e* 11 22 47.6
OJC *e* 11 27 35.0
OJC *e*SS SS 11 40 21.4 +0.8
OJC MLR MLR
comp=Z,5μm,20.4s,MS6.2
CRVS Cervenica-Dubn 131.51 328 *e*PKIKP PKPdf 11 20 31.1 +1.0
CRVS Cervenica-Dubn 131.51 328 *e*PKP PKPdf 11 20 31.1 +1.0
NIE Niedzica 131.77 329 *e*PKP PKPdf 11 20 33.2 +2.6
DRGR 132.10 325 ⇑PKIKP PKPdf 11 20 31.8 +0.5
DRGR 132.10 325 ⇑*i*P PKPdf 11 20 31.8 +0.5
KECS Kecovo 132.28 328 *e*PKIKP PKPdf 11 20 34.2 +2.7
KECS Kecovo 132.28 328 *e*PKP PKPdf 11 20 34.2 +2.7
OKC Ostrava-Krasne 132.55 331 *e*PKIKP PKPdf 11 20 33.8 +1.8
OKC MLR MLR
comp=Z,4μm,20.6s,MS6.1
OKC Ostrava-Krasne 132.55 331 *e*PKPdf PKPdf 11 20 33.8 +1.8
OKC AMS AMS 12 17 00.0
comp=Z,4μm,20.6s
RUE Ruedersdorf 132.56 336 *e*PKPdf PKPdf 11 20 33.7 +1.8
BSEG Bad Segeberg 132.69 340 *e*PKPdf PKPdf 11 20 34.7 +2.6
KSP Ksiaz 132.71 333 *e*PKIKP PKPdf 11 20 33.1 +0.8
KSP *e*SS SS 11 40 30.0 -5.1
MBAR Mbarara 132.71 259 PFAKE 11 20 50.0 +17
MBAR LR LR
comp=Z,581nm,19.0s,MS5.3
MORC Moravsky Berou 132.88 331 PKIKP PKPdf 11 20 34.9 +2.3
MORC Moravsky Berou 132.88 331 *e*PKPdf PKPdf 11 20 33.2 +0.6
MORC Moravsky Berou 132.88 331 ⇑*i*P PKPdf 11 20 34.3 +1.7
PSZ Piszkesteto 132.94 328 *e*PKPdf PKPdf 11 20 44.3 +11
PSZ LR LR
comp=Z,4μm,20.0s,MS6.1
PSZ Piszkesteto 132.94 328 ⇓*i*P PKPdf 11 20 44.8 +12
DPC Dobruska-Polom 133.04 333 *e*PKIKP PKPdf 11 20 34.8 +1.9
DPC *e* 11 23 06.5
DPC MLR MLR
comp=Z,4μm,22.9s,MS6.0
DPC Dobruska-Polom 133.04 333 *e*PKPdf PKPdf 11 20 34.8 +1.9
DPC *e*PP PP 11 23 06.5 +8.0
DPC AMS AMS 12 17 20.0
comp=Z,4μm,22.9s
UPC Upice 133.07 333 *e*PKIKP PKPdf 11 20 33.6 +0.6
UPC *e* 11 23 03.8
UPC Upice 133.07 333 *e*PKPdf PKPdf 11 20 33.6 +0.6
UPC *e*PP PP 11 23 03.8 +5.2
VYHS Vyhne 133.11 329 *e*PKP PKPdf 11 20 36.9 +3.8
VYHS Vyhne 133.11 329 *e*PKP PKPdf 11 20 36.9 +3.8
BZS Buzias 133.40 324 ⇓PKIKP PKPdf 11 20 30.9 -2.9
BZS Buzias 133.40 324 P PKPdf 11 20 34.3 +0.6
BZS Buzias 133.40 324 ⇓*i*P PKPdf 11 20 30.9 -2.9
VRAC Vranov 133.65 331 ⇑PKIKP PKPdf 11 20 35.3 +1.2
VRAC Vranov 133.65 331 ⇑*i*P PKPdf 11 20 35.3 +1.2
BUD Budapest 133.67 328 ⇓*es*PKP/D 11 20 44.9
PVCC Panska Ves 133.69 334 *e*PKIKP PKPdf 11 20 36.7 +2.6
PVCC *e* 11 23 04.8
PVCC MLR MLR
comp=Z,7μm,24.5s,MS6.3
PVCC Panska Ves 133.69 334 *e*PKPdf PKPdf 11 20 36.7 +2.6
PVCC *e*PP PP 11 23 04.8 +2.2
PVCC AMS AMS 12 17 10.0
comp=Z,7μm,24.5s
BRG Berggiesshubel 133.70 335 *e*PKPdf PKPdf 11 20 36.8 +2.7
BRG Berggiesshubel 133.70 335 *i* PKIKP PKPdf 11 20 36.4 +2.3
BRG pmax pmax
comp=Z,18nm,1.6s
CLL Collm 133.76 336 *e*PKPdf PKPdf 11 20 36.6 +2.4
CLL Collm 133.76 336 *i* PKIKP PKPdf 11 20 35.7 +1.5
CLL pmax pmax
comp=Z,28nm,1.1s
CLL MLR MLR
comp=Z,5μm,21.1s,MS6.2
CLL Collm 133.76 336 *i* PKPdf PKPdf 11 20 35.7 +1.5
comp=Z,28nm,1.1s
CLL *e*PP PP 11 23 04.0 +1.0
CLL *e* 11 23 15.0

CLL ePKSbc 11 24 06.0
CLL eSS SS 11 40 54.0 +6.3
CLL eSSS 11 45 48.0
CLL e(SSSS) 11 50 18.0
CLL LmV 12 19 00.0
comp=Z,5μm,21.1s
CLL LV(360 12 56 00.0
comp=Z,1μm,21.0s
NRDL Niedersach Rie 133.93 339 ePKPdf PKPdf 11 20 37.1 +2.6
PRA Prague 134.09 334 PKPdf PKPdf 11 20 35.0 +0.1
PRA PP PP 11 23 05.0 -0.1
PRA AMS AMS 12 15 50.0
PRU Pruhonice 134.10 333 ePKIKP PKPdf 11 20 38.3 +3.4
PRU e 11 23 07.4
PRU MLR MLR
comp=Z,6μm,24.1s,MS6.2
PRU Pruhonice 134.10 333 ePKPdf PKPdf 11 20 38.3 +3.4
PRU ePP PP 11 23 07.4 +2.2
PRU AMS AMS 12 15 20.0
comp=Z,6μm,24.1s
VTS Vitosha 134.12 320 ||PKIKP PKPdf 11 20 38.7 +3.5
VTS Vitosha 134.12 320 || iP PKPdf 11 20 38.7 +3.5
TREC Trest 134.18 332 ePKIKP PKPdf 11 20 39.4 +4.3
TREC MLR MLR
comp=Z,6μm,23.0s,MS6.3
TREC Trest 134.18 332 ePKPdf PKPdf 11 20 39.4 +4.3
TREC AMS AMS 12 18 30.0
comp=Z,6μm,23.0s
CLZ Clausthal 134.36 338 ePKPdf PKPdf 11 20 38.4 +3.0
TANN Tannenbergstha 134.67 335 ePKPdf PKPdf 11 20 38.9 +2.9
ANWB Willy Bob 134.67 76 PFAKE 11 20 50.0 +13
ANWB LR LR
comp=Z,2μm,21.0s,MS5.9
PKSM Moragy 134.69 327 ||PKIKP PKPdf 11 20 35.5 -0.6
PKSM Moragy 134.69 327 || iP PKPdf 11 20 35.5 -0.6
GRGR Grenville 134.70 84 PFAKE 11 20 50.0 +13
GRGR LR LR
comp=Z,1μm,20.0s,MS5.7
NKC Novy Kostel 134.81 335 ePKIKP PKPdf 11 20 36.6 +0.4
NKC MLR MLR
comp=Z,5μm,22.0s,MS6.2
NKC Novy Kostel 134.81 335 ePKPdf PKPdf 11 20 36.6 +0.4
NKC AMS AMS 12 19 10.0
comp=Z,5μm,22.0s
MOX Moxa 134.83 336 ePKP PKPdf 11 20 40.5 +4.2
MOX
comp=Z,27nm,2.0s
comp=Z,3μm,23.0s
MOX Moxa 134.83 336 ePKPdf PKPdf 11 20 39.0 +2.7
IBBN Ibbenburen 134.90 340 ePKPdf PKPdf 11 20 39.2 +2.9
ESK Eskdalemuir 134.92 350 PFAKE 11 20 50.0 +14
ESK LR LR
comp=Z,3μm,22.0s,MS6.0
KHC Kasperske Hory 135.16 333 ePKIKP PKPdf 11 20 37.3 +0.4
KHC MLR MLR
comp=Z,7μm,24.2s,MS6.3
KHC Kasperske Hory 135.16 333 ePKPdf PKPdf 11 20 37.5 +0.6
KHC Kasperske Hory 135.16 333 ePKPdf PKPdf 11 20 37.3 +0.4
KHC AMS AMS 12 15 10.0
comp=Z,7μm,24.2s
VAY Valandovo 135.19 319 eP PKPdf 11 20 38.1 +0.8
ROTZ Rotzenmuhle 135.27 335 ePKPdf PKPdf 11 20 40.1 +3.0
GEC2 GERESS Array S 135.31 333 ePKPdf PKPdf 11 20 39.9 +2.7
UBBA Unterbreizbach 135.32 337 ePKPdf PKPdf 11 20 40.0 +2.8
WET Wettzell 135.45 334 ePKPdf PKPdf 11 20 40.6 +3.1
TSUM Tsumeb 135.67 227 ePKPdf PKPdf 11 20 30.2 -8.6
TSUM ePP PP 11 23 18.5 +2.6
TSUM LR LR
comp=Z,4μm,19.0s,MS6.2
GRF Grafenberg Arr 135.73 335 ePP PP 11 23 16.9 +1.5
KOGS Kog 135.78 329 ePKPdf PKPdf 11 20 39.5 +1.3
BUG Bochum--Univer 135.79 340 ePKPdf PKPdf 11 20 41.0 +3.0
KRUS Krusevo 136.01 320 eP PKPdf 11 20 37.4 -1.3
SOKA Soboth 136.24 330 ||PKPdf PKPdf 11 20 38.8 -0.2
comp=Z,22nm,1.4s
TNS Taunus Mts 136.39 338 ePKPdf PKPdf 11 20 42.1 +2.9
OHR Ohrid 136.43 320 eP PKPdf 11 20 40.4 +0.8
RJOB Jochberg 136.54 332 ePKPdf PKPdf 11 20 42.1 +2.6
BBGH Gun Hill 136.80 83 PFAKE 11 20 50.0 +9.0
BBGH LR LR
comp=Z,3μm,20.0s,MS6.1
TIR Tirane 136.89 321 PFAKE 11 20 50.0 +10
TIR LR LR
comp=Z,4μm,22.0s,MS6.2
MEM Membach 136.92 340 APKP pPKPdf 11 20 45.1 -3.5
LJU Ljubljana 136.93 329 ePKPdf PKPdf 11 20 41.7 +1.4
CADS Cadrg 137.19 330 ePKPdf PKPdf 11 20 41.7 +0.9
VOY Vojsko 137.25 330 ePKPdf PKPdf 11 20 41.4 +0.5
VOY e 11 20 44.7
STU Stuttgart 137.28 336 ePKPdf PKPdf 11 20 44.0 +3.1
STU Stuttgart 137.28 336 ePKPdf PKPdf 11 20 40.3 -0.6
BCLA Clavier 137.32 341 APKP pPKPdf 11 20 44.1 -5.2
RUP Ruppelstein 137.32 339 PKP PKPdf 11 20 42.1 +1.2
CAM4 Nova Friburgo 137.34 141 (P) PKPdf 11 20 33.3 -8.6
CAM4 i 11 20 34.5
CAM4 i 11 20 37.2
CAM4 i 11 20 42.6
CAM4 i 11 20 45.9
CAM4 i 11 20 54.4
CAM4 i 11 21 23.8
ABTA Abfaltersbach 137.40 332 || iPKiKP PKiKP 11 20 42.2 -0.8
comp=Z,32nm,1.3s,SNR=8.5
TRI Trieste 137.54 330 PFAKE 11 20 50.0 +8.5
TRI LR LR
comp=Z,5μm,21.0s,MS6.3
SNF Seneffe 137.57 341 APKP PKPdf 11 20 44.6 +3.2
LANF Langenberg 137.65 337 PKP PKPdf 11 20 43.9 +2.3
WLF Walferdange 137.68 339 APKP PKPdf 11 20 44.5 +2.9
WLF Walferdange 137.68 339 ePKPdf PKPdf 11 20 44.5 +2.9
WLF Walferdange 137.68 339 ePKIKP PKPdf 11 20 44.1 +2.5
WLF MLR MLR
comp=Z,4μm,21.0s,MS6.2
WLF Walferdange 137.68 339 ePKPdf PKPdf 11 20 44.1 +2.5
WLF LR LR
comp=Z,4μm,21.0s,MS6.2
GIVF Givet 137.75 341 ePKIKP PKPdf 11 20 36.9 -4.8
comp=Z,80nm,1.1s
DOU Dourbes 137.83 341 APKP PKPdf 11 20 45.3 +3.5
BFO Black Forest 137.97 336 ePKPdf PKPdf 11 20 45.1 +2.9
BFO Black Forest 137.97 336 ePKIKP PKPdf 11 20 42.2 0.0
BFO e 11 23 25.1
BFO MLR MLR
comp=Z,3μm,20.0s,MS6.1
BFO Black Forest 137.97 336 ePKPdf PKPdf 11 20 42.2 0.0
BFO ePP PP 11 23 25.1 -4.4
BFO LR LR
comp=Z,3μm,20.0s,MS6.1
SPAK Spaichingen-Ko 137.98 336 PKP PKPdf 11 20 43.6 +1.4
BAIF Baives 137.98 341 ePKIKP PKPdf 11 20 38.2 -3.9
comp=Z,40nm,1.2s
FETA Feichten 138.00 333 || iPKPdf PKPdf 11 20 39.4 -2.9
comp=Z,42nm,1.0s,SNR=16
CDF Champ du Feu 138.31 337 ePKIKP PKPdf 11 20 37.4 -5.4
comp=Z,83nm,1.3s
FELD Feldberg im Sc 138.47 336 PKP PKPdf 11 20 41.5 -1.6
MOF Molkenrain 138.83 337 PKP PKPdf 11 20 44.9 +1.1
HINF Hinterlafeld 138.97 337 ePKIKP PKPdf 11 20 40.7 -3.3
comp=Z,100nm,1.6s
HAU Haudompre 139.00 338 ePKIKP PKPdf 11 20 40.5 -3.6
comp=Z,52nm,1.2s
HAU eMLR MLR
comp=Z,5μm,22.2s,MS5.9
HAU Haudompre 139.00 338 ePKPdf PKPdf 11 20 40.5 -3.6
HAU LR LR
comp=Z,5μm,22.3s,MS6.2
BBS Basel-Blauen 139.00 336 PKP PKPdf 11 20 45.6 +1.5
MEZF Maizieres J'vi 139.05 339 ePKIKP PKPdf 11 20 40.9 -3.2
comp=Z,161nm,1.3s
LOMF Lomont 139.36 337 PKP PKPdf 11 20 46.2 +1.4
AQU L'Aquila 140.06 326 PFAKE 11 21 00.0 +14
AQU LR LR
comp=Z,5μm,22.0s,MS6.2
CABF La Chapelle 140.26 337 ePKIKP PKPdf 11 20 41.7 -4.7
comp=Z,208nm,1.7s
VLC Villacollemand 140.32 331 PFAKE 11 21 00.0 +13
VLC LR LR
comp=Z,4μm,20.0s,MS6.2
FLN La Foliniere 140.51 344 ePKIKP PKPdf 11 20 43.3 -3.5
comp=Z,216nm,1.6s
FLN eMLR MLR
comp=Z,6μm,21.5s,MS6.0
FLN La Foliniere 140.51 344 ePKPdf PKPdf 11 20 43.3 -3.5
FLN LR LR
comp=Z,6μm,21.5s,MS6.3

LOR Lormes 140.52 339 ePKIKP PKPdf 11 20 43.9 -3.0
comp=Z,80nm,1.3s
LOR eMLR MLR
comp=Z,5μm,22.8s,MS5.9
LOR Lormes 140.52 339 ePKPdf PKPdf 11 20 43.9 -3.0
LOR LR LR
comp=Z,5μm,22.8s,MS6.2
LDF La Druitiere 140.57 344 ePKIKP PKPdf 11 20 43.7 -3.2
comp=Z,21nm,1.2s
SSF Saint Saulge 140.82 340 ePKIKP PKPdf 11 20 43.9 -3.5
comp=Z,92nm,1.4s
LPL La Plagne 140.90 335 ePKIKP PKPdf 11 20 42.2 -5.4
comp=Z,68nm,1.4s
LPG La Plagne 140.90 335 ePKIKP PKPdf 11 20 41.9 -5.7
comp=Z,70nm,1.3s
GRR Gorron 140.95 345 ePKIKP PKPdf 11 20 44.4 -3.2
comp=Z,134nm,1.5s
SMF Signal de Mont 141.06 339 ePKIKP PKPdf 11 20 43.1 -4.8
comp=Z,65nm,1.4s
AVF Avril sur Loir 141.10 339 ePKIKP PKPdf 11 20 43.7 -4.2
comp=Z,46nm,1.3s
CEL Celeste 141.16 319 PFAKE 11 21 00.0 +12
CEL LR LR
comp=Z,2μm,20.0s,MS5.9
BNI Bardonecchia 141.29 335 ePKIKP PKPdf 11 20 46.1 -2.2
BNI MLR MLR
comp=Z,8μm,22.0s,MS6.4
BGF Bois d'Agland 141.48 340 ePKIKP PKPdf 11 20 44.9 -3.7
comp=Z,90nm,1.2s
SGMF Saint Gilles 141.49 346 ePKIKP PKPdf 11 20 43.3 -5.3
comp=Z,115nm,1.5s
MBDF Montbardon 141.52 334 ePKIKP PKPdf 11 20 43.0 -5.7
comp=Z,70nm,1.3s
ROSF Rostrenen 141.58 347 ePKIKP PKPdf 11 20 43.5 -5.2
SURF Saint Ours 141.70 334 PKP PKPdf 11 20 48.7 -0.4
ORIF Oris-en-Rattie 141.73 335 ePKIKP PKPdf 11 20 42.7 -6.4
comp=Z,75nm,1.2s
ORIF eMLR MLR
comp=Z,6μm,21.8s,MS6.0
AUTN L'Aution 141.81 333 PKP PKPdf 11 20 49.9 +0.6
SBF Sospel 141.91 333 ePKIKP PKPdf 11 20 45.2 -4.3
comp=Z,65nm,1.0s
TCF Toulx Ste Croi 141.93 340 ePKIKP PKPdf 11 20 45.9 -3.5
comp=Z,89nm,1.2s
QUIF Quistinic 141.95 347 ePKIKP PKPdf 11 20 45.7 -3.7
comp=Z,126nm,1.7s
SSB Saint Sauveur 141.96 337 PKP PKPdf 11 20 45.3 -4.2
PYM Petit Puy Mans 142.12 339 PKP PKPdf 11 20 45.4 -4.4
PGF Pioggiola 142.19 330 ePKIKP PKPdf 11 20 45.4 -4.6
comp=Z,232nm,1.4s
VIVF Saint-Julien-l 142.26 337 ePKIKP PKPdf 11 20 43.4 -6.7
comp=Z,163nm,1.5s
MFF Saint Martin d 142.39 343 ePKIKP PKPdf 11 20 46.2 -4.0
comp=Z,76nm,1.3s
LBL Lubilhac 142.49 338 PKP PKPdf 11 20 45.4 -5.1
FRF La Foret Royal 142.50 333 ePKIKP PKPdf 11 20 45.6 -4.9
comp=Z,121nm,1.6s
SMRF Simiane la Rot 142.63 335 ePKIKP PKPdf 11 20 46.7 -4.1
comp=Z,84nm,1.2s
LMR La Mourre 142.75 333 ePKIKP PKPdf 11 20 45.3 -5.7
comp=Z,124nm,1.3s
RJF Les Rejaudoux 143.03 340 ePKIKP PKPdf 11 20 48.5 -2.9
comp=Z,241nm,1.5s
RJF eMLR MLR
comp=Z,4μm,19.2s,MS5.9
RJF Les Rejaudoux 143.03 340 ePKPdf PKPdf 11 20 48.5 -2.9
RJF LR LR
comp=Z,4μm,19.3s,MS6.2
CAF Calviac 143.17 339 ePKIKP PKPdf 11 20 49.1 -2.6
comp=Z,228nm,1.8s
LASF Ste Croix 143.24 337 ePKIKP PKPdf 11 20 47.3 -4.5
comp=Z,138nm,1.4s
WDD Wield Dalam 143.44 317 PFAKE 11 21 00.0 +7.6
WDD LR LR
comp=Z,2μm,21.0s,MS5.8
LFF La Frestale 143.61 341 ePKIKP PKPdf 11 20 48.4 -4.1
comp=Z,403nm,1.6s
VSL Villasalto 144.23 326 ePKPdf PKPdf 11 20 54.6 +0.9
VSL LR LR
comp=Z,2μm,22.0s,MS5.9
MTLF Montolieu 144.49 338 ePKIKP PKPdf 11 20 51.8 -2.2
comp=Z,537nm,1.4s
LRDF Laroque-de-Fa 144.71 337 PKP PKPdf 11 20 53.6 -0.8
FILF Fillols 145.02 337 PKP PKPdf 11 20 52.6 -2.4
CARF Carcanieres 145.07 337 PKP PKPdf 11 20 53.0 -2.1
CLLI Llivia 145.32 337 PKP PKPdf 11 20 55.8 +0.3
MELF Melles 145.42 339 PKP PKPdf 11 20 55.0 -0.7
EPF Esparros 145.43 340 ePKIKP PKPdf 11 20 53.7 -2.0
comp=Z,494nm,1.8s
LABF Labassere 145.51 340 PKP PKPdf 11 20 55.8 0.0
RESF Ens 145.63 339 PKP PKPdf 11 20 57.2 +1.2
REYF Montagne du Re 145.64 340 PKP PKPdf 11 20 56.4 +0.4
VIEF Viey 145.67 340 PKP PKPdf 11 20 57.4 +1.3
ORDF Ordiarp 145.69 341 PKP PKPdf 11 20 56.0 -0.1
CSOR Sort 145.72 338 PKP PKPdf 11 20 57.7 +1.5
CFON Fontmartina 145.75 336 PKP PKPdf 11 20 56.5 +0.2
OSSF Osses 145.75 342 PKP PKPdf 11 20 56.0 -0.2
EBIE Bielsa 145.80 339 PKP PKPdf 11 20 57.9 +1.6
ETSF Etsaut 145.85 340 ePKIKP PKPdf 11 20 56.4 0.0
comp=Z,367nm,1.4s
EALK Alkurruntz 145.86 342 PKP PKPdf 11 20 56.9 +0.4
LARF Larrau 145.86 341 PKP PKPdf 11 20 56.0 -0.4
SJPF Ste Jean 145.87 341 ePKIKP PKPdf 11 20 56.3 -0.1
comp=Z,386nm,1.6s
ELIZ Elizondo 145.92 342 PKP2 PKPab 11 20 56.8 -0.8
EMIR Miracle 145.97 337 PKP PKPdf 11 20 57.5 +0.8
ELAN Lanestosa 146.40 344 PKP PKPdf 11 20 58.5 +1.2
EPOB Poblet 146.63 337 PKP PKPdf 11 20 59.6 +1.8
EARI Arriondas 146.78 346 PKP PKPab 11 21 01.3 +0.4
ESAC San Caprasio 146.87 339 PKP PKPab 11 21 01.9 +0.6
EPON Pontenova 147.16 349 PKP PKPbc 11 21 01.1 +0.4
ERTA Horta de San J 147.25 338 PKP PKPbc 11 21 01.0 -0.1
ETOS Mallorca 147.26 334 PKP PKPbc 11 21 01.3 +0.1
CMAH Djebel Manchou 147.35 325 P PKPab 11 21 02.2 -1.2
CAEH 'Ain El Ouahch 147.56 326 P PKPbc 11 21 02.6 +0.5
ABSA Djebel Ababsia 147.57 324 P PKPbc 11 21 02.2 0.0
STS Santiago 147.84 351 PKP2 PKPbc 11 21 02.0 -0.7
EMAZ Mazaricos 147.84 351 PKP PKPbc 11 21 02.9 +0.2
CKFL Kef-Lekhel 147.91 325 P PKPbc 11 21 03.0 -0.1
ERUA La Rua 148.06 348 PKP2 PKPab 11 21 05.8 -0.2
EMOS Mosqueruela 148.07 338 PKP PKPbc 11 21 03.6 +0.2
CASM Ain Smara 148.14 325 P PKPbc 11 21 04.0 +0.3
ETOR Torete 148.21 341 PKP2 PKPbc 11 21 02.5 -1.2
DFRA Djebel Bou Aff 148.27 326 P PKPab 11 21 05.2 -1.8
CTEI Djebel Teioual 148.33 325 P PKPab 11 21 06.8 -0.5
ECAL Calabor 148.42 348 PKP PKPbc 11 21 04.8 +0.5
EIBI Ibiza 148.50 335 PKP PKPab 11 21 07.3 -0.6
PBRG Braganca 148.55 348 ePKP PKPab 11 21 07.0 -0.9
ELOB Lobios 148.75 349 PKP PKPbc 11 21 04.0 -1.1
SET Setif 148.78 326 P PKPbc 11 21 06.0 +0.6
CKHR Kef el Ahmar 148.86 326 P PKPab 11 21 07.8 -1.6
PCAB Cabril 148.89 349 ePKP PKPbc 11 21 03.7 -1.7
ECHE Chera 148.93 338 PKP2 PKPbc 11 21 07.1 +1.5
GUD Guadarrama 149.01 343 PKIKP PKPbc 11 21 03.9 -1.9
MVO Moncorvo 149.22 348 ePKP PKPab 11 21 09.1 -1.6
MVO Moncorvo 149.22 348 PKP PKPbc 11 21 07.5 +1.2
PVRL Vila Real 149.25 349 ePKP PKPbc 11 21 08.2 +1.8
EBEN Beniarda 149.42 336 PKP PKPbc 11 21 06.3 -0.6
PVIS Viseu 149.83 349 ePKP PKPab 11 21 10.4 -2.8
ESDC Sonseca Array 149.85 342 PKPbc PKPbc 11 21 05.5 -2.4
comp=Z,8.0nm,1.1s,baz=11,slow=2.5,SNR=21
ESDC PP PP 11 24 32.8 -7.7
comp=Z,2.8nm,0.9s,baz=23,slow=7.0,SNR=5.0
ESDC Sonseca Array 149.85 342 PKP PKPbc 11 21 06.5 -1.4
ESLA Sonseca Array 149.85 342 ePKPdf PKPbc 11 21 06.0 -1.9
ESLA LR LR
comp=Z,15μm,21.0s,MS6.8
ETOB Tobarra 149.97 338 PKP PKPbc 11 21 08.5 +0.3
EPLA Plasencia 150.06 346 PKP2 PKPbc 11 21 09.8 +1.4
EMHD Djebel Mahouad 150.06 329 P PKPbc 11 21 09.7 +1.2
MTE Manteigas 150.06 348 ePKP PKPab 11 21 11.2 -2.9
MTE Manteigas 150.06 348 ePKPdf PKPdf 11 21 04.4 +1.0
MTE LR LR
comp=Z,3μm,22.0s,MS6.1
PAB San Pablo 150.08 343 ePKHKP PKPdf 11 21 05.7 +2.2
PAB MLR MLR
comp=Z,3μm,20.0s,MS6.1
CALA Caldeira 150.21 21 ePKP PKPab 11 21 11.4 -3.4
ROSA Rosais 150.25 21 ePKP PKPbc 11 21 07.4 -1.5
EVIA Vianos 150.32 339 PKIKP PKPbc 11 21 07.8 -1.3
PMAN Manadas 150.38 20 ePKP PKPbc 11 21 10.5 +1.3
PCAN Candelaria 150.39 21 ePKP PKPbc 11 21 08.2 -1.0
PID Ribeirinha 150.54 21 ePKP PKPbc 11 21 10.8 +1.2
EMUR La Murta 150.56 337 PKP PKPbc 11 21 10.0 +0.3

PCBR Castelo Branco 150.59 348 ePKP PKPbc 11 21 13.1 +3.4
ADH Angra Heroismo 150.64 19 ePKP PKPbc 11 21 09.7 -0.1
EBNR Beni Rached 150.68 331 P PKPbc 11 21 11.5 +1.5
CART Cartagena 150.69 336 ePKPbc PKPbc 11 21 10.3 +0.3
PMRV Marv??o 150.97 347 ePKP PKPbc 11 21 13.4 +2.8
PTOM Tomar 150.99 349 ePKP PKPbc 11 21 13.2 +2.6
EHUE Huescar 151.09 339 PKIKP PKPbc 11 21 08.5 -2.4
EANR 'Ain N'Sour 151.16 332 P PKPbc 11 21 12.0 +0.9
EBAN Banos Encina 151.18 341 PKIKP PKPbc 11 21 08.8 -2.3
EQES Quesada 151.26 339 PKP PKPbc 11 21 10.5 -0.8
EADA Adamuz 151.42 342 PKP PKPbc 11 21 11.9 +0.3
SHEL Horse Pasture 151.42 200 ePKIKP PKPdf 11 21 08.2 +2.0
SHEL e 11 21 14.0
SHEL MLR MLR
comp=Z,3μm,19.0s,MS6.1
ETRT Tiaret 151.52 331 P PKPbc 11 21 09.2 -2.8
EBAD Badajoz 151.52 346 PKP PKPbc 11 21 12.7 +0.8
PESTR Estremoz 151.55 347 ePKP PKPbc 11 21 15.3 +3.4
ENIJ Nijar 151.69 337 PKIKP PKPbc 11 21 13.9 +1.6
ECAB El Cabril 151.75 343 PKP PKPbc 11 21 16.2 +3.8
PMAFR Mafra 151.79 350 ePKP PKPab 11 21 18.4 -2.9
ECOG Cogollos-Vega 151.91 340 PKIKP PKPbc 11 21 11.8 -1.0
EVO Evora 151.96 348 ePKIKP PKPdf 11 21 05.4 -1.0
comp=Z,264nm,1.5s
EVO eMLR MLR
comp=Z,4μm,22.8s,MS5.8
EVO Evora 151.96 348 ePKP PKPbc 11 21 15.9 +3.0
EVOP Sao Brissos 151.99 348 eP PKPdf 11 21 05.1 -1.3
LIS Lisbon 152.00 350 eP PKPdf 11 21 05.5 -0.9
EBER Berja 152.01 338 PKP PKPbc 11 21 17.6 +4.5
PBAR Barrancos 152.08 346 ePKP PKPbc 11 21 15.4 +2.2
ELOJ Sierra Loja 152.22 341 PKIKP PKPbc 11 21 12.3 -1.2
ERON Agron 152.22 340 PKP PKPbc 11 21 13.2 -0.4
EGUA Guajares 152.31 339 PKIKP PKPbc 11 21 12.8 -0.9
EMIN Mina Concepcio 152.38 345 PKP PKPbc 11 21 10.7 -3.2
PBEJ Beja 152.41 347 ePKP PKPbc 11 21 17.5 +3.6
MESJ Messejana 152.67 348 eP PKPdf 11 21 07.3 -0.1
EGRO El Granado 152.80 346 PKP PKPbc 11 21 14.0 -0.8
PSMA Santa Maria 152.81 17 ePKP PKPbc 11 21 17.3 +2.4
PCVE Castro Verde 152.83 347 ePKP PKPbc 11 21 18.6 +3.7
EMIJ Mijas 152.95 341 PKP PKPbc 11 21 11.6 -3.6
PVAQ Vaqueiros 152.98 346 ePKP PKPbc 11 21 18.7 +3.5
ESPR Espera 153.00 343 PKP PKPbc 11 21 12.0 -3.3
PTEO Sao Teotonio 153.06 348 ePKP PKPbc 11 21 18.9 +3.5
PBDV Barranco-do-Ve 153.18 347 ePKP PKPab 11 21 21.2 -6.0
SFS San Fernando 153.48 343 PFAKE 11 21 20.0 +11
SFS LR LR
comp=Z,6μm,20.0s,MS6.4
RCBR Riachuelo 153.50 129 ePKPdf PKPdf 11 21 10.0 +0.6
RCBR LR LR
comp=Z,2μm,20.0s,MS6.0
MDT Midelt 156.28 337 PKP PKPdf 11 21 14.0 +1.4
comp=Z,11nm,1.1s,baz=158,slow=2.5,SNR=12
TORD Torodi Ar. Bea 163.20 279 PKP PKPdf 11 21 21.2 +0.2
comp=Z,26nm,1.0s,baz=72,slow=0.3,SNR=38
TORD PKPab PKPab 11 22 12.8 +1.5
comp=Z,8.0nm,0.9s,baz=98,slow=4.4,SNR=2.9
KIC Kosan Boka 168.47 246 ePKIKP PKPdf 11 21 27.6 +2.3
comp=Z,127nm,1.2s
KIC Kosan Boka 168.47 246 ePKPdf PKPdf 11 21 27.6 +2.3
LIC Lamto 168.66 245 ePKIKP PKPdf 11 21 27.7 +2.2
comp=Z,200nm,1.7s
LIC Lamto 168.66 245 ePKIKP PKPdf 11 21 24.8 -0.7
comp=Z,133nm,1.3s
LIC eMLR MLR
comp=Z,6μm,22.8s
LIC Lamto 168.66 245 ePKPdf PKPdf 11 21 24.8 -0.7
LIC LR LR
comp=Z,3μm,22.8s
DBIC Dimbokro 168.70 248 PKP PKPdf 11 21 25.4 -0.1
comp=Z,30nm,1.0s,baz=118,slow=0.4,SNR=11
DBIC Dimbokro 168.70 248 PKP PKPdf 11 21 25.4 -0.1
DBIC LR LR
comp=Z,3μm,22.0s
TIC Toumodi 168.84 247 ePKIKP PKPdf 11 21 27.8 +2.2
comp=Z,61nm,0.7s
TIC Toumodi 168.84 247 ePKIKP PKPdf 11 21 27.8 +2.2
TIC Toumodi 168.84 247 ePKPdf PKPdf 11 21 27.8 +2.2
SACV Santiago Islan 171.13 64 PFAKE 11 21 40.0 +13
SACV LR LR
comp=Z,2μm,20.0s

NOU ***19*** *11:15:19.3±1.0, 10.35S×165.55E, h30km*
ISCJB ***19*** *11:15:21.5±2.5, 11.06S±0.05×164.53E±0.03, h3km±15km, mb5.1/88, MS5.4/11, Error ellipse: s-maj=7.8km s-min=5.3km az=177.1*
IDC ***19*** *11:15:22.4±0.4, 11.05S×164.61E, h0km, mb5.0/21, mb1 5.1/23, mb1mx5.1/24, mbtmp4.9/23, ML4.9/2, MS5.2/2, Ms1 5.2/2, ms1mx4.3/25, Error ellipse: s-maj=16.2km s-min=13.3km az=111.0*
NEIC ***19*** *11:15:24.2±0.2, 11.03S×164.56E, h10km, mb5.2/51, Error ellipse: s-maj=6.9km s-min=4.3km az=143.0*
MOS ***19*** *11:15:26.8±0.8, 10.92S×164.41E, h33km, mb5.5/25, Error ellipse: s-maj=9.7km s-min=8.8km az=69.0*
BJI ***19*** *11:15:29.8, 10.57S×164.45E, h46km, mB5.8/13, mb5.0/40, Ms5.6/23, Ms7 5.4/23*

ISC 19 11:15:27.8±2.1, 11.13S±0.04×164.58E±0.03, h35km±15km, h40km±2.3km: pP-P, n417, σ0.970/357, mb5.1/88, MS5.4/11, 89C-99D, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.86**	**290**	Pn	Pn	**Pn**	**11 16 38.3**	**-0.1**
	109nm,0.3s,baz=136,slow=6.0,SNR=16							
HNR				Sn	Sn	**Sn**	**11 17 33.7**	**+0.2**
	211nm,0.3s,baz=333,slow=20,SNR=10							
HNR	**Honiara**	**4.86**	**290**	ePn	Pn	**Pn**	**11 16 38.0**	**-0.4**
HNR				eSn	Sn	**Sn**	**11 17 34.2**	**+0.7**
DZM	**Mont Dzumac**	**11.03**	**171**	ePn	Pn	**Pn**	**11 18 03.0**	**-0.1**
	41nm,0.3s							
DZM				eLR	LR	LR	11 20 38.3	
	9μm,23.7s							
DZM	**Mont Dzumac**	**11.03**	**171**	eP	Pn	**Pn**	**11 18 02.1**	**-0.9**
DZM				eS	Sn	**Sn**	**11 20 04.3**	**-0.9**
NOUC	**Port Laguerre**	**11.04**	**172**	eP	Pn	**Pn**	**11 18 02.8**	**-0.4**
NOUC				eS	Sn	**Sn**	**11 20 03.5**	**-1.9**
LASL	**Noumea**	**11.20**	**171**	eP	Pn	**Pn**	**11 18 06.1**	**+0.6**
EIDS	**Eidsvold**	**19.08**	**220**	eP	Pn	**Pn**	**11 19 49.3**	**+0.9**
	55nm,1.1s							
CTA	**Charters Tower**	**19.75**	**241**	eP	Pn	**Pn**	**11 19 56.4**	**-0.1**
	88nm,1.0s							
CTA	**Charters Tower**	**19.75**	**241**	P	Pn	**Pn**	**11 19 56.6**	**+0.1**
	1.5nm,0.3s,baz=70,slow=12,SNR=53							
CTAO	**Charters Tower**	**19.75**	**241**	eP	Pn	**Pn**	**11 19 56.0**	**-0.5**
CTAO				pmax	pmax			
	comp=Z,145nm,1.0s							
CTAO	**Charters Tower**	**19.75**	**241**	eP	Pn	**Pn**	**11 19 56.0**	**-0.5**
	comp=Z,145nm,1.0s							
ARMA	**Armidale**	**22.65**	**210**	eP	P	**P**	**11 20 26.9**	**+0.9**
ARMA	**Armidale**	**22.65**	**210**	eP	P	**P**	**11 20 27.0**	**+1.1**
	comp=Z,78nm,1.4s,mb5.0							
AFI	**Afiamalu**	**23.25**	**99**	LR	LR	LR	11 27 14.7	
	comp=Z,4μm,19.0s,MS4.9,baz=113,slow=31							
CNB	**Canberra Magne**	**27.77**	**207**	eP	P	**P**	**11 21 16.5**	**+3.2**
STKA	**Stephens Creek**	**29.60**	**222**	eP	P	**P**	**11 21 30.6**	**+0.9**
	comp=Z,14nm,1.0s,mb4.7							
STKA	**Stephens Creek**	**29.60**	**222**	P	P	**P**	**11 21 30.6**	**+0.9**
	comp=Z,13nm,0.8s,mb4.7,baz=36,slow=9.0,SNR=12							
STKA	**Stephens Creek**	**29.60**	**222**	eP	P	**P**	**11 21 30.7**	**+1.0**
	comp=Z,49nm,2.5s,mb4.8							
WRAB	**Tennant Creek**	**30.37**	**250**	P	P	**P**	**11 21 35.9**	**-0.7**
	comp=Z,408nm,1.1s,mb6.1,SNR=14							
WRAB	**Tennant Creek**	**30.37**	**250**	eP	P	**P**	**11 21 36.1**	**-0.5**
WRAB				pmax	pmax			
	comp=Z,73nm,1.0s,mb5.4							
WRAB	**Tennant Creek**	**30.37**	**250**	eP	P	**P**	**11 21 36.0**	**-0.6**
	comp=Z,73nm,1.0s,mb5.4							
WRA	**Warramunga Arr**	**30.38**	**250**	P	P	**P**	**11 21 35.9**	**-0.9**
	comp=Z,55nm,1.0s,mb5.3,baz=78,slow=9.3,SNR=8.7							
TOO	**Toolangi**	**31.42**	**210**	eP	P	**P**	**11 21 46.9**	**+1.2**
KAKA	**Kakadu**	**31.47**	**264**	eP	P	**P**	**11 21 44.1**	**-2.4**
	comp=Z,24nm,0.5s,mb5.3							
KAKA	**Kakadu**	**31.47**	**264**	eP	P	**P**	**11 21 44.0**	**-2.5**
	comp=Z,72nm,0.6s,mb5.7							
ASAR	**Alice Springs**	**31.73**	**243**	P	P	**P**	**11 21 47.6**	**-1.0**
	comp=Z,18nm,0.6s,mb5.0,baz=65,slow=9.8,SNR=274							
ASAR				PcP	PcP		11 24 39.9	+0.1
	comp=Z,3.0nm,0.8s,baz=67,slow=4.3,SNR=4.2							
RPZ	**Rata Peaks**	**32.95**	**171**	P	P	**P**	**11 21 58.8**	**-0.3**
	comp=Z,18nm,0.7s,mb5.1,baz=57,slow=17,SNR=8.4							
RAR	**Rarotonga**	**35.60**	**111**	LR	LR	LR	11 33 40.7	
	comp=Z,5μm,18.2s,MS5.3,baz=102,slow=31							

FITZ	Fitzroy Crossi	38.25	255	eP	P	11 22 43.4	-1.5
	comp=Z,50nm,0.7s,mb5.3						
FORT	Forrest	39.06	234	eP	P	11 22 52.6	+1.1
	comp=Z,73nm,0.9s,mb5.4						
FORT	Forrest	39.06	234	eP	P	11 22 52.7	+1.1
	comp=Z,453nm,1.5s,mb6.0						
PPT	Papeete	44.79	104	eLQ		11 34 28.3	
	comp=Z,3µm,27.0s						
PPT				eLR	LR	11 36 16.9	
	comp=Z,3µm,26.5s						
TBI	Tubuai	45.37	112	eLR	LR	11 36 33.2	
	comp=Z,6µm,28.2s						
KLBR	Kellerberrin	47.70	237	eP	P	11 24 00.3	-0.9
	comp=Z,45nm,1.0s,mb5.5						
MJAR	Matsushiro Arr	53.52	334	P	P	11 24 43.9	-1.1
	comp=Z,14nm,1.1s,mb4.8,baz=164,slow=7.9,SNR=20						
MAJO	Matsushiro	53.52	334	eP	P	11 24 44.3	-0.7
MAJO				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.1						
MAJO	Matsushiro	53.52	334	eP	P	11 24 44.3	-0.8
	comp=Z,25nm,0.9s,mb5.1						
MAT	Matsushiro	53.52	334	P	P	11 24 44.0	-1.0
YHNB	Yeheng	55.16	311	eP	P	11 24 56.7	-0.4
	comp=Z,40nm,1.0s,mb5.4						
ASAJ	Asahikawa	58.50	342	P	P	11 25 20.9	+0.5
	comp=Z,9.1nm,0.6s,mb5.0,baz=208,slow=12,SNR=9.3						
RKT	Rikitea	58.64	110	eLR	LR	11 42 38.5	
	comp=Z,3µm,31.0s						
KSRS	Korea Array	59.30	326	P	P	11 25 26.1	0.0
	comp=Z,7.7nm,0.9s,mb4.7,baz=138,slow=6.6,SNR=20						
YSS	Yuzh-Sakhalins	61.02	343⇑	eP	P	11 25 38.3	+0.6
NJ2	Nanjing	61.28	316	eP	P	11 25 39.8	0.0
NJ2				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.2						
WHN	Wuhan	63.59	312	P	P	11 25 55.0	-0.3
MDJ	Mudanjiang	63.89	333	P	P	11 25 57.3	+0.3
MDJ				sP	sP	11 26 12.1	+0.3
MDJ				PP	PP	11 28 17.5	-0.5
MDJ				S	S	11 34 31.0	+0.9
MDJ				sS	sS	11 34 51.0	+3.2
MDJ				pmax	pmax		
	comp=Z,27nm,1.7s,mb5.0						
MDJ				pmax	pmax		
	comp=Z,3µm,16.2s						
MDJ				LR	LR		
	comp=N,1µm,24.3s,MS5.1						
MDJ				LR	LR		
	comp=E,670nm,25.1s,MS5.1						
MDJ				LR	LR		
	comp=Z,2µm,25.9s,MS5.1						
MDJ	Mudanjiang	63.89	333	eP	P	11 25 57.1	+0.2
	comp=Z,40nm,1.2s,mb5.3						
PET	Petropavlovsk	64.09	356	i P	P	11 25 58.1	0.0
PET				pmax	pmax		
	comp=Z,52nm,0.9s,mb5.6						
PET	Petropavlovsk	64.09	356	eP	P	11 25 57.9	-0.2
	comp=Z,46nm,1.0s,mb5.5						
SMY	Shemya	64.12	6	eP	P	11 25 59.5	+1.2
SMY				pmax	pmax		
	comp=Z,126nm,1.2s,mb5.8						
SMY	Shemya	64.12	6	eP	P	11 25 59.5	+1.2
	comp=Z,126nm,1.2s,mb5.8						
PETK	Petropavlovsk-	64.25	355	P	P	11 25 59.5	+0.4
	comp=Z,56nm,1.1s,mb5.5,baz=132,slow=6.2,SNR=28						
HABR	Khabarovsk	64.84	339	eP	P	11 26 01.9	-1.2
HABR				*PP	pP	11 26 10.7	-3.1
HABR				e		11 26 34.1	
HABR				ePPP		11 29 54.9	
HABR				S	S	11 34 40.1	-1.6
HABR				e		11 35 51.9	
HABR				eSS	SS	11 38 50.4	-3.5
HABR				pmax	pmax		
	comp=E,16nm,1.2s						
HABR				pmax	pmax		
	comp=N,34nm,1.8s						
HABR				pmax	pmax		
	comp=Z,96nm,1.5s,mb5.6						
HABR				MLR	MLR		
	comp=Z,2µm,17.0s,MS5.4						
CN2	Changchun	65.23	330	eP	P	11 26 05.9	+0.2
CN2				epP	pP	11 26 17.5	+1.0
CN2				eS	S	11 34 46.3	-0.3
CN2				pmax	pmax		
	comp=Z,20nm,1.3s,mb5.0						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,3µm,17.0s,MS5.6						
CN2				LR	LR		
	comp=E,2µm,17.0s,MS5.6						
CN2				LR	LR		
	comp=Z,3µm,19.0s,MS5.5						
CASY	Casey	65.89	201	eP	P	11 26 10.1	+0.4
KLR	Kul'dur	66.68	337	eP	P	11 26 11.2	-3.8
ENH	Enshi	67.06	310	eP	P	11 26 17.1	-0.7
	comp=Z,37nm,1.0s,mb5.4						
GYA	Guiyang	67.52	305⇑	i P	P	11 26 21.8	+1.0
GYA				pP	pP	11 26 35.0	+3.4
GYA				sP	sP	11 26 41.3	+5.7
GYA				PP	PP	11 28 54.8	+4.7
GYA				ScP		11 30 48.5	
GYA				S	S	11 35 14.0	-1.1
GYA				sS	sS	11 35 33.8	+0.9
GYA				SKS		11 36 11.9	
GYA				SS	SS	11 39 35.8	-0.6
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
GYA				pmax	pmax		
	comp=Z,140nm,6.0s						
GYA				LR	LR		
	comp=N,650nm,20.7s,MS4.9						
GYA				LR	LR		
	comp=E,520nm,21.5s,MS4.9						
GYA				LR	LR		
	comp=Z,780nm,20.3s,MS4.9						
BJI	Beijing	67.83	322	P	P	11 26 23.3	+0.9
BJI				pmax	pmax		
	comp=Z,12nm,1.5s,mb4.7						
XAN	Xi'an	69.33	313	P	P	11 26 31.3	-0.7
XAN				pP	pP	11 26 44.9	+2.1
XAN				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
KMI	Kunming	70.19	302	P	P	11 26 38.8	+1.4
KMI				pP	pP	11 26 51.8	+3.5
KMI				sP	sP	11 26 56.9	+4.6
KMI				PcP	PcP	11 27 01.0	+1.8
KMI				S	S	11 35 44.8	-2.0
KMI				sS	sS	11 36 07.0	+2.3
KMI				pmax	pmax		
	comp=Z,25nm,1.4s,mb5.0						
KMI				pmax	pmax		
	comp=Z,2µm,12.4s						
KMI				LR	LR		
	comp=N,2µm,15.1s,MS5.5						
KMI				LR	LR		
	comp=E,2µm,18.3s,MS5.5						
KMI				LR	LR		
	comp=Z,1µm,15.9s,MS5.3						
CMAR	Chiang Mai Arr	71.09	294	P	P	11 26 43.0	0.0
	comp=Z,3.1nm,0.8s,mb4.3,baz=122,slow=4.5,SNR=14						
HHC	Hu-ho-hao-te	71.16	320	eP	P	11 26 45.3	+2.3
HHC				S	S	11 35 57.6	+0.1
HHC				pmax	pmax		
	comp=Z,31nm,0.9s,mb5.2						
HHC				pmax	pmax		
	comp=Z,1µm,7.0s						
CHTO	Chiang Mai	71.21	294	eP	P	11 26 44.0	+0.2
CHTO				pmax	pmax		
	comp=Z,14nm,1.4s,mb4.7						
CHTO	Chiang Mai	71.21	294	eP	P	11 26 44.0	+0.2
	comp=Z,14nm,1.4s,mb4.7						
CD2	Chengdu	71.74	308	P	P	11 26 46.8	+0.1
CD2				pP	pP	11 26 57.1	-0.5
CD2				sP	sP	11 27 01.1	-0.6
CD2				PP	PP	11 29 28.3	+1.8
CD2				S	S	11 36 03.0	-1.7
CD2				sS	sS	11 36 20.4	-2.2
CD2				SKS		11 36 43.3	
CD2				SS	SS	11 40 40.8	-0.5
CD2				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.4						
CD2				pmax	pmax		
	comp=Z,3µm,11.7s						
CD2				LR	LR		
	comp=N,2µm,14.3s						
CD2				LR	LR		
	comp=Z,3µm,16.1s,MS5.7						
HIA	Hailar	71.88	331⇓	i P	P	11 26 45.9	-1.2
HIA	Hailar	71.88	331	eP	P	11 26 47.1	-0.1
	comp=Z,66nm,1.3s,mb5.4						
MIR	Mirnyy	72.54	203⇑	i P	P	11 26 52.6	+1.7
MIR				pmax	pmax		
	comp=Z,57nm,1.0s,mb5.5						
LZH	Lanzhou	73.97	313	eP	P	11 27 01.0	+1.2
LZH				pP	pP	11 27 14.0	+3.3
LZH				sP	sP	11 27 19.0	+4.2
LZH				PP	PP	11 29 48.0	+2.6
LZH				S	S	11 36 29.0	-0.8
LZH				sS	sS	11 36 51.0	+3.2
LZH				pmax	pmax		
	comp=Z,130nm,1.0s,mb5.8						
LZH				pmax	pmax		
	comp=Z,490nm,4.0s						
LZH				LR	LR		
	comp=E,2µm,15.6s						
LZH				LR	LR		
	comp=Z,2µm,17.6s,MS5.4						
SEY	Seymchan	74.43	354	ceP	P	11 27 02.0	+0.1
CLNS	Chul'man	75.23	339	eP	P	11 27 07.4	+0.7
CLNS				pmax	pmax		
	comp=Z,37nm,1.2s,mb5.2						
CLNS				pmax	pmax		
	comp=N,18nm,1.1s						
CLNS				pmax	pmax		
	comp=E,13nm,1.0s						
OHAK	Old Harbor	76.41	22	eP	P	11 27 13.3	-0.1
	comp=E,18nm,1.0s,mb5.0						
ULN	Ulaanbaatar	77.70	324⇑	eP	P	11 27 21.5	+0.6
ULN	Ulaanbaatar	77.70	324	eP	P	11 27 21.7	+0.8
	comp=E,35nm,1.0s,mb5.2						
YAK	Yakutsk	77.85	344	eP	P	11 27 20.4	-1.0
YAK				pmax	pmax		
	comp=E,13nm,1.2s						
YAK				pmax	pmax		
	comp=Z,77nm,1.4s,mb5.4						
YAK				pmax	pmax		
	comp=N,22nm,1.3s						
YAK	Yakutsk	77.85	344	eP	P	11 27 20.4	-1.0
	comp=N,59nm,0.7s,mb5.6						
SONM	Songino Array	78.06	324	P	P	11 27 23.3	+0.5
	comp=N,23nm,1.1s,mb5.0,baz=143,slow=6.0,SNR=44						
GTA	Gaotai	78.29	314	P	P	11 27 25.1	+0.7
GTA				pP	pP	11 27 33.0	-2.3
GTA				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.8						
SVW2	Sparrevohn	78.55	19	eP	P	11 27 24.9	-0.4
	comp=Z,50nm,1.3s,mb5.3						
QSPA	South Pole Qui	78.88	180	P	P	11 27 28.4	+1.5
	comp=Z,27nm,1.0s,mb5.1,baz=14,slow=1.7,SNR=36						
BILL	Bilibino	78.97	1⇑	i P	P	11 27 28.0	+0.6
BILL				e		11 30 22.7	
BILL				i S	S	11 37 25.6	+2.3
BILL				pmax	pmax		
	comp=Z,80nm,1.2s,mb5.5						
BILL	Bilibino	78.97	1	eP	P	11 27 27.8	+0.4
	comp=Z,74nm,1.2s,mb5.5						
RSO	Redoubt South	78.99	20	eP	P	11 27 28.8	+1.1
TTA	Tatalina	79.84	17	eP	P	11 27 32.8	+0.5
TTA				pmax	pmax		
	comp=Z,11nm,0.3s,mb5.3						
TTA	Tatalina	79.84	17	eP	P	11 27 32.8	+0.5
	comp=Z,11nm,0.3s,mb5.3						
TLY	Talaya	81.56	327	eP	P	11 27 41.7	0.0
TLY				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.0						
TLY	Talaya	81.56	327	eP	P	11 27 41.8	+0.1
	comp=Z,18nm,1.0s,mb5.0						
TRF	Thorofare Moun	81.96	19	eP	P	11 27 42.8	-0.8
	comp=Z,8.3nm,0.9s,mb4.7						
BMRM	Bremner River	82.24	22	eP	P	11 27 44.7	-0.4
	comp=Z,28nm,1.3s,mb5.0						
MCK	McKinley	82.59	19	eP	P	11 27 45.9	-1.0
MCK				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.1						
MCK	McKinley	82.59	19	eP	P	11 27 45.9	-1.0
	comp=Z,21nm,1.1s,mb5.1						
MOY	Mondy	83.00	326	eP	P	11 27 49.1	-0.2
MOY				e		11 32 53.2	
COLA	College	83.72	18	eP	P	11 27 50.9	-1.8
COLA				pmax	pmax		
	comp=Z,11nm,0.7s,mb5.1						
COLA	College	83.72	18	eP	P	11 27 50.9	-1.8
	comp=Z,11nm,0.7s,mb5.1						
MENT	Mentasta	83.82	21	eP	P	11 27 53.3	+0.1
ILAR	Eielson Array	83.96	19	P	P	11 27 52.8	-1.1
	comp=Z,7.4nm,0.8s,mb4.9,baz=220,slow=5.6,SNR=67						
MAW	Mawson	84.21	202	eP	P	11 27 56.4	+1.1
	comp=Z,14nm,1.0s,mb5.1						
MAW	Mawson	84.21	202	P	P	11 27 56.6	+1.2
	comp=Z,15nm,0.9s,mb5.1,baz=98,slow=6.7,SNR=18						
WDC	Whiskeytown Da	84.50	47	eP	P	11 27 58.3	+1.0
WDC				pmax	pmax		
	comp=Z,19nm,1.4s,mb5.0						
WDC	Whiskeytown Da	84.50	47	eP	P	11 27 58.3	+1.0
	comp=Z,19nm,1.4s,mb5.0						
COLD	Coldfoot	84.69	16	eP	P	11 27 58.0	+0.4
	comp=Z,7.0nm,0.8s,mb4.8						
YBH	Yreka Blue Hor	84.77	46	P	P	11 27 59.3	+0.7
	baz=153,slow=6.6						
HUMO	Hull Mountain	84.90	45	eP	P	11 28 00.0	+0.8
CMB	Columbia Colle	85.27	50	eP	P	11 28 01.3	+0.1
CMB				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.9						
CMB	Columbia Colle	85.27	50	eP	P	11 28 01.3	+0.1
	comp=Z,9.6nm,1.1s,mb4.8						
ARVC	Arvin	85.60	53	⇓P	P	11 28 02.2	-0.7
	baz=86						
VES	Vestal, Richgr	85.61	52	⇑P	P	11 28 02.0	-0.9
	baz=86						
EGAK	Eagle	85.85	20	eP	P	11 28 03.7	+0.3
	comp=Z,35nm,1.0s,mb5.5						
E03A	Lebam	85.86	41	⇑P	P	11 28 03.5	-0.4
	baz=86						
TIXI	Tiksi	85.95	349	eP	P	11 28 03.2	-0.6
TIXI				pmax	pmax		
	comp=Z,48nm,1.5s,mb5.5						
TIXI	Tiksi	85.95	349	eP	P	11 28 03.6	-0.2
MWC	Mount Wilson	85.96	54	eP	P	11 28 05.1	+0.4
MWC				pmax	pmax		
	comp=Z,35nm,1.4s,mb5.4						
MWC	Mount Wilson	85.96	54	eP	P	11 28 05.0	+0.4
	comp=Z,35nm,1.4s,mb5.4						
ISA	Isabella	86.03	53	⇑P	P	11 28 05.2	+0.2
	baz=86						
ISA	Isabella	86.03	53	eP	P	11 28 05.1	+0.1
ISA				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.9						
ISA	Isabella	86.03	53	eP	P	11 28 05.1	+0.1
	comp=Z,9.3nm,1.1s,mb4.9						
WAKR	Walker	86.12	50	eP	P	11 28 06.2	+0.8
H04A	Detroit Lake	86.13	43	⇓P	P	11 28 03.8	-1.5
	baz=86						
WCN	Washoe City	86.13	49	⇓P	P	11 28 05.8	+0.4
	baz=86						
EDW2	Edwards Air Fo	86.19	54	⇓P	P	11 28 05.7	-0.1
	baz=86						
BFSC	Mount Baldy Ra	86.28	54	P	P	11 28 06.3	0.0
	baz=86,SNR=6.1						
MLAC	Mammoth Lakes	86.32	51	⇓P	P	11 28 06.8	+0.4
	baz=86						
K05A	Summer Lake	86.37	45	⇓P	P	11 28 06.2	-0.4
	baz=86						
MTUM	Tungsten Hills	86.45	51	eP	P	11 28 07.5	+0.5
MURC	Murrieta	86.47	55	⇓P	P	11 28 07.0	-0.3
	baz=87						
PAHR	Pah Rah Range	86.52	49	eP	P	11 28 07.7	+0.3
	comp=Z,29nm,1.4s,mb5.3						
MOD	Modoc	86.53	46	eP	P	11 28 07.5	+0.1
	comp=Z,27nm,1.6s,mb5.2						
LRMC	Laurel Mountai	86.60	53	⇓P	P	11 28 07.9	+0.1
	baz=87						
BAR	Barrett	86.65	56	eP	P	11 28 07.7	-0.4
	comp=Z,18nm,1.4s,mb5.1						
MONP	Monument Peak	86.91	56	⇓P	P	11 28 07.6	-1.8
	baz=87						
MPMC	Manual Prospec	86.91	53	⇑P	P	11 28 08.4	-1.0
	baz=87						
NVAR	Mina Array Bea	86.95	50	P	P	11 28 09.6	+0.1
	comp=Z,11nm,1.1s,mb5.0,baz=234,slow=6.8,SNR=27						
NVAR	Mina Array Bea	86.95	50	P	P	11 28 09.6	+0.1
PFO	Pinyon Flat Ob	87.07	55	⇓P	P	11 28 10.1	0.0
	baz=87						
GRAC	Grapevine Rang	87.26	52	⇑P	P	11 28 10.9	-0.1
	baz=87						
G06A	Carlson Farm,	87.35	43	⇑P	P	11 28 11.2	0.0
	baz=87						
JCW	Jim Creek	87.47	40	eP	P	11 28 11.4	-0.4
HEC	Hector,Ludlow	87.49	54	⇓P	P	11 28 11.9	-0.3
	baz=88						
BELC	Belle Mtn. Jos	87.54	55	P	P	11 28 12.6	+0.1
	baz=88,SNR=8.8						
I07A	Izee	87.76	44	⇑P	P	11 28 13.0	-0.2
	baz=88						
SHOC	Shoshone	87.81	53	⇑P	P	11 28 13.7	0.0
	baz=88						
BC3	Big Chuckawall	87.89	55	⇓P	P	11 28 14.2	+0.1
	baz=88,SNR=6.9						
U10A	Ash Meadows, A	87.91	52	⇓P	P	11 28 13.7	-0.4
	baz=88						
GMRC	Granite Mounta	88.01	54	P	P	11 28 14.5	-0.1
	baz=88,SNR=7.9						
S10A	Tonopah Range,	88.11	51	⇑P	P	11 28 14.9	-0.1
	baz=88,SNR=7.6						
GLA	Glamis	88.25	56	eP	P	11 28 16.7	+0.9
GLA				pmax	pmax		
	comp=Z,34nm,1.3s,mb5.4						
GLA	Glamis	88.25	56	eP	P	11 28 16.7	+0.9
	comp=Z,34nm,1.3s,mb5.4						
J08A	Circle Bar Ran	88.25	45	⇑P	P	11 28 15.3	-0.3
	baz=88						
IRM	Iron Mountain	88.26	55	⇓P	P	11 28 16.0	+0.1
	baz=88,SNR=14						
WMQ	Urumqi	88.34	315	eP	P	11 28 16.4	+0.4
WMQ				pP	pP	11 28 29.9	+2.8
WMQ				sP	sP	11 28 35.0	+3.9
WMQ				pmax	pmax		
	comp=Z,17nm,1.3s,mb5.1						
WMQ				pmax	pmax		
	comp=Z,870nm,6.8s						
WMQ				LR	LR		
	comp=N,2µm,18.2s,MS5.7						
WMQ				LR	LR		
	comp=E,2µm,20.8s,MS5.7						
WMQ				LR	LR		
	comp=Z,5µm,20.0s,MS5.9						
RSW	Rattlesnake Hi	88.40	42	eP	P	11 28 16.6	+0.3
	comp=Z,10nm,0.8s,mb5.1						
HAWA	Hanford	88.44	42	eP	P	11 28 16.6	+0.1
	comp=Z,14nm,1.4s,mb5.0						
V11A	Goodsprings	88.47	53	⇑P	P	11 28 17.0	+0.3
	baz=89,SNR=7.1						
G08A	Pilot Rock	88.49	43	⇑P	P	11 28 16.4	-0.2
	baz=89						
LDFC	Landfair	88.53	54	eP	P	11 28 17.2	+0.1
V12A	Nelson	88.89	53	⇓P	P	11 28 17.7	-1.1
	baz=89,SNR=5.9						
T11A	Corn Creek, Al	88.98	52	⇑P	P	11 28 19.0	-0.1
	baz=89,SNR=11						
R11A	Troy Canyon, C	88.99	51	⇑P	P	11 28 18.8	-0.4
	baz=89,SNR=9.7						
113A	Mohawk Valley,	89.04	56	⇓P	P	11 28 19.2	-0.4
	baz=89						
Q11A	Duckwater	89.06	50	⇑P	P	11 28 19.7	+0.2
	baz=89,SNR=18						
PDMCI	Parker Dam,Lak	89.11	55	⇑P	P	11 28 20.1	+0.2
	baz=89,SNR=5.5						
M10A	I.L. Ranch, Tu	89.11	47	⇑P	P	11 28 19.2	-0.5
	baz=89,SNR=6.7						
B08A	Colville Reser	89.17	40	⇑P	P	11 28 19.3	-0.5
	baz=89						
P11A	Circle Ranch,	89.17	50	⇓P	P	11 28 19.2	-0.8
	baz=89						
K10A	MacKenzie Ranc	89.22	46	⇓P	P	11 28 20.4	+0.3
	baz=89,SNR=9.1						
Z13A	Yuma Proving G	89.24	56	⇑P	P	11 28 21.0	+0.5
	baz=89,SNR=8.2						
Y13A	Salome	89.24	55	⇑P	P	11 28 20.8	+0.3
	baz=89,SNR=15						
T12A	Moapa	89.25	52	⇑P	P	11 28 20.7	+0.3
	baz=89						
OD2	Odessa Site #2	89.28	41	eP	P	11 28 20.0	-0.3
U12A	Valley of Fire	89.31	53	P	P	11 28 21.4	+0.6
	baz=89,SNR=7.1						
S12A	Delamar Landin	89.36	52	⇓P	P	11 28 21.7	+0.7
	baz=90,SNR=12						
O11A	Cowboy Ranch,	89.39	49	⇓P	P	11 28 21.2	+0.2
	baz=90						
X13A	Yucca	89.43	55	P	P	11 28 21.8	+0.4
	baz=90,SNR=7.2						
J10A	Berg Farm, Mel	89.47	46	⇑P	P	11 28 21.3	0.0
	baz=90						
BMO	Blue Mountains	89.49	44	eP	P	11 28 21.2	-0.2
BMO				pmax	pmax		
	comp=Z,19nm,1.8s,mb5.1						
BMO	Blue Mountains	89.49	44	eP	P	11 28 21.2	-0.1
	comp=Z,19nm,1.8s,mb5.1						
W13A	Hualapai Mount	89.50	54	⇑P	P	11 28 21.9	+0.2
	baz=90,SNR=8.1						
V13A	Grand Canyon W	89.61	53	⇓P	P	11 28 22.1	-0.1
	baz=90,SNR=16						
M11A	Holland Ranch,	89.63	48	⇓P	P	11 28 22.5	+0.4
	baz=90,SNR=7.1						
214A	Organ Pipe Nat	89.64	57	⇓P	P	11 28 23.1	+0.7
	baz=90						
R12A	Pony Springs,	89.73	51	⇓P	P	11 28 22.8	+0.1
	baz=90,SNR=18						
Q12A	Willow Creek R	89.73	50	⇑P	P	11 28 22.8	+0.2
	baz=90,SNR=7.2						
U13A	Pakoon Wash	89.76	53	⇓P	P	11 28 22.8	0.0
	baz=90						
P12A	McGill	89.78	50	⇑P	P	11 28 23.2	+0.3
	baz=90,SNR=9.6						
K11A	Parker Ranch,	89.81	46	⇑P	P	11 28 22.6	-0.3
	baz=90,SNR=11						
F10A	Beach Ranch, E	89.85	43	⇓P	P	11 28 22.2	-0.8
	baz=90,SNR=7.9						
L11A	Cat Creek Ranc	89.85	47	⇑P	P	11 28 22.5	-0.6
	baz=90,SNR=9.1						
Z14A	Wintersburg	89.85	56	⇓P	P	11 28 23.4	0.0
	baz=90						
Y14A	Wickenburg	89.94	55	⇓P	P	11 28 23.8	0.0
	baz=90						
T13A	Saint George	89.95	52	⇓P	P	11 28 23.7	0.0
	baz=90,SNR=18						
N12A	Clover Valley,	90.03	48	⇑P	P	11 28 24.2	+0.2
	baz=90,SNR=12						
N12A	Clover Valley,	90.03	48	eP	P	11 28 25.0	+1.0
	comp=Z,32nm,1.3s,mb5.5						
O12A	Currie	90.10	49	P	P	11 28 25.0	+0.6
	baz=90,SNR=15						
S13A	Holt Ranch, En	90.12	52	⇑P	P	11 28 24.6	+0.1
	baz=90						
MFID	Camas Ranch	90.12	46	⇓P	P	11 28 24.2	-0.2
	baz=90,SNR=8.0						
X14A	Yava	90.15	55	⇓P	P	11 28 25.1	+0.3
	baz=90,SNR=11						
I11A	Placerville	90.16	45	⇓P	P	11 28 24.5	0.0
	baz=90,SNR=17						
W14A	Seligman	90.17	54	⇓P	P	11 28 25.4	+0.6
	baz=90,SNR=6.7						
R13A	O'Grain Ranch,	90.18	51	⇓P	P	11 28 25.0	+0.3
	baz=90,SNR=9.6						
V14A	Boquillas Ranc	90.25	54	⇑P	P	11 28 26.0	+0.8
	baz=90,SNR=14						
M12A	Wells	90.27	48	⇓P	P	11 28 25.4	+0.4
	baz=90,SNR=9.2						
Q13A	Wheeler Ranch,	90.33	50	⇑P	P	11 28 25.1	-0.3
	baz=90,SNR=12						
INK	Inuvik	90.35	19	P	P	11 28 24.5	-0.4
	comp=Z,5.4nm,1.1s,mb4.8,baz=256,slow=4.2,SNR=2.9						
U14A	Mt Trumbull	90.37	53	⇑P	P	11 28 26.5	+0.8
	baz=90,SNR=24						
L12A	House Creek Ra	90.38	47	⇑P	P	11 28 25.9	+0.4
	baz=90,SNR=

T14A	Hurricane	90.60	52	⇓P		P	11 28 27.0 +0.2
	baz=91,SNR=14						
N13A	Wendover, West	90.65	49	⇓P		P	11 28 26.2 -0.7
	baz=91						
N13A	Wendover, West	90.65	49	eP		P	11 28 27.8 +0.9
X15A	Humboldt	90.68	55	⇑P		P	11 28 27.5 +0.3
	baz=91,SNR=11						
116A	Eloy	90.69	57	⇓P		P	11 28 28.3 +1.0
	baz=91						
S14A	Cedar City	90.69	52	P		P	11 28 28.1 +1.0
	baz=91,SNR=5.9						
I12A	Atlanta	90.71	46	⇓P		P	11 28 27.5 +0.4
	baz=91,SNR=14						
216A	Three Points,	90.77	58	⇓P		P	11 28 28.2 +0.6
	baz=91,SNR=7.3						
M13A	Montello	90.80	48	⇑P		P	11 28 27.9 +0.3
	baz=91,SNR=7.2						
M13A	Montello	90.80	48	eP		P	11 28 28.2 +0.6
	comp=Z,15nm,1.0s,mb5.3						
W15A	Williams	90.81	54	⇑P		P	11 28 28.0 +0.2
	baz=91,SNR=6.4						
Q14A	Sevier Lake (B	90.90	51	⇓P		P	11 28 28.8 +0.7
	baz=91,SNR=24						
G12A	Big Creek, Yel	90.92	44	⇑P		P	11 28 27.8 -0.2
	baz=91						
C11A	Tepee Creek (N	91.00	41	⇑P		P	11 28 28.2 -0.1
	baz=91						
V15A	Kaibab Nationa	91.03	54	⇓P		P	11 28 29.1 +0.4
	baz=91,SNR=14						
U15A	North Rim	91.07	53	P		P	11 28 30.1 +1.1
	baz=91,SNR=15						
E12A	Beaver Dam Sad	91.08	43	⇓P		P	11 28 28.0 -0.7
	baz=91						
H12A	Diamond D Ranc	91.09	45	P		P	11 28 29.0 +0.1
	baz=91,SNR=12						
F12A	Elk City	91.12	44	⇓P		P	11 28 28.7 -0.3
	baz=91,SNR=18						
T15A	Red Dirt Ranch	91.13	53	⇓P		P	11 28 29.5 +0.2
	baz=91						
L13A	Double Diamond	91.14	47	⇑P		P	11 28 29.2 +0.1
	baz=91,SNR=5.9						
HLID	Hailey	91.16	46	⇑P		P	11 28 29.3 +0.1
	baz=91,SNR=14						
HLID	Hailey	91.16	46	eP		P	11 28 29.8 +0.6
Y16A	Circle Bar Ran	91.16	56	⇓P		P	11 28 29.9 +0.5
	baz=91,SNR=12						
K13A	Stover Farm, H	91.17	47	⇑P		P	11 28 30.2 +0.9
	baz=91,SNR=7.9						
P14A	Drum Mountains	91.19	50	⇓P		P	11 28 29.7 +0.3
	baz=91,SNR=5.8						
217A	Green Valley	91.26	58	⇓P		P	11 28 29.9 0.0
	baz=91,SNR=5.5						
J13A	Cove Ranch, Pi	91.29	46	⇑P		P	11 28 30.0 +0.2
	baz=91,SNR=13						
S15A	Panguitch	91.30	52	⇓P		P	11 28 30.5 +0.5
	baz=91,SNR=6.1						
X16A	Lo Mia Camp, P	91.31	55	⇓P		P	11 28 30.6 +0.5
	baz=91,SNR=10						
SYO	Syowa Base	91.37	197	⇓eP		P	11 28 29.0 -0.7
SYO	Syowa Base	91.37	197	⇓/PcP		PcP	11 28 31.6 +0.9
W16A	Flagstaff	91.38	55	⇑P		P	11 28 30.9 +0.5
	baz=92,SNR=6.3						
D12A	Red Ives Fores	91.39	42	⇓P		P	11 28 30.0 -0.1
	baz=92						
TUC	Tucson	91.39	57	eP		P	11 28 32.0 +1.4
M14A	Sheep Mountain	91.43	48	⇑P		P	11 28 30.7 +0.2
	baz=92,SNR=14						
I13A	Wildhorse Cree	91.45	46	⇑P		P	11 28 30.9 +0.4
	baz=92,SNR=30						
117A	Oracle	91.49	57	⇓P		P	11 28 31.4 +0.4
	baz=92,SNR=6.0						
H13A	Challis	91.51	45	⇓P		P	11 28 31.2 +0.4
	baz=92,SNR=21						
DUG	Dugway	91.52	49	⇑P		P	11 28 31.3 +0.3
	baz=92,SNR=5.1						
DUG	Dugway	91.52	49	eP		P	11 28 31.6 +0.7
WUAZ	Wupatki	91.60	54	⇑P		P	11 28 32.1 +0.6
	baz=92,SNR=6.2						
MSU	Marysvale	91.62	51	eP		P	11 28 32.8 +1.3
L14A	Malta	91.63	48	⇓P		P	11 28 31.8 +0.3
	baz=92,SNR=11						
G13A	Cobalt	91.66	44	⇑P		P	11 28 30.8 -0.6
	baz=92,SNR=18						
F13A	Darby	91.76	44	⇑P		P	11 28 31.3 -0.6
	baz=92,SNR=31						
K14A	Jones Ranch, D	91.80	47	⇓P		P	11 28 32.4 +0.2
	baz=92,SNR=9.3						
X17A	Forest Lakes	91.80	56	⇓P		P	11 28 32.4 0.0
	baz=92,SNR=8.3						
S16A	Weppner Ranch,	91.90	52	⇑P		P	11 28 32.6 -0.2
	baz=92,SNR=7.7						
HVU	Hansel Valley	91.91	48	eP		P	11 28 33.8 +1.1
HVU				pmax		pmax	
	comp=Z,21nm,1.2s,mb5.3						
HVU	Hansel Valley	91.91	48	eP		P	11 28 33.8 +1.0
	comp=Z,21nm,1.2s,mb5.3						
I14A	Mackay	91.92	46	⇓P		P	11 28 33.4 +0.7
	baz=92						
U16A	Tuba City	91.93	54	⇑P		P	11 28 33.6 +0.6
	baz=92,SNR=11						
BSMT	Bassoo Peak	91.96	42	eP		P	11 28 32.8 0.0
E13A	Victor	92.01	43	⇑P		P	11 28 32.2 -0.9
	baz=92,SNR=7.4						
C13A	Hot Springs	92.06	42	⇓P		P	11 28 33.0 -0.3
	baz=92						
V17A	Tonalea, Kykot	92.08	54	⇑P		P	11 28 34.1 +0.5
	baz=92,SNR=12						
R16A	Teasdale	92.11	52	⇓P		P	11 28 34.5 +0.8
	baz=92,SNR=12						
H14A	Leadore	92.14	45	⇑P		P	11 28 33.6 -0.1
	baz=92,SNR=14						
G14A	Jackson	92.22	44	⇓P		P	11 28 33.6 -0.5
	baz=92						
L15A	Malad City	92.25	48	⇑P		P	11 28 32.4 -1.9
	baz=92,SNR=5.5						
K15A	Arbon	92.29	47	⇓P		P	11 28 35.1 +0.6
	baz=92						
B13A	Whitefish	92.30	41	⇓P		P	11 28 34.3 0.0
	baz=92,SNR=6.3						
T17A	Navajo Res., N	92.36	53	⇑P		P	11 28 34.8 -0.1
	baz=92,SNR=8.3						
MPU	Maple Canyon	92.37	50	eP		P	11 28 35.8 +0.9
	comp=Z,14nm,1.2s,mb5.2						
F14A	Wisdom	92.42	44	⇓P		P	11 28 34.5 -0.5
	baz=92						
A13A	Flathead Natio	92.47	41	⇑P		P	11 28 34.5 -0.6
	baz=92						
E14A	Clinton	92.47	43	⇓P		P	11 28 34.9 -0.3
	baz=93,SNR=8.6						
S17A	Black Ridge (B	92.50	52	⇑P		P	11 28 33.9 -1.7
	baz=93						
J15A	Blackfoot	92.52	46	⇑P		P	11 28 35.0 -0.5
	baz=93,SNR=5.5						
X18A	Snowflake	92.54	55	⇓P		P	11 28 35.6 -0.2
	baz=93,SNR=5.2						
MCMT	McKenzie Canyo	92.55	45	eP		P	11 28 35.6 0.0
	comp=Z,3.2nm,1.1s,mb4.7						
219A	White Tail Can	92.60	58	⇓P		P	11 28 35.4 -0.8
	baz=93						
D14A	Greenough	92.62	43	⇓P		P	11 28 34.5 -1.3
	baz=93,SNR=5.5						
C14A	Swan Lake	92.62	42	⇑P		P	11 28 34.4 -1.5
	baz=93						
JLU	Jordanelle	92.63	49	eP		P	11 28 37.0 +1.0
	comp=Z,7.8nm,1.1s,mb5.0						
H15A	Lima	92.64	45	⇑P		P	11 28 36.1 +0.1
	baz=93,SNR=24						
R17A	Hanksville Air	92.73	52	⇓P		P	11 28 37.0 +0.4
	baz=93,SNR=12						
CHMT	Chamberlain Mo	92.75	43	eP		P	11 28 36.4 0.0
V18A	Ganado	92.79	54	⇓P		P	11 28 36.6 -0.3
	baz=93						
MK31	Makanchi Array	92.80	317	eP		P	11 28 36.8 +0.1
MKAR	Makanchi Array	92.80	317	P		P	11 28 36.4 -0.3
	comp=Z,12nm,0.9s,mb5.3,baz=100,slow=6.3,SNR=37						
MKAR				PKKP		PKKPbc	11 45 48.1 -1.5
	comp=Z,1.0nm,0.7s,baz=297,slow=3.5,SNR=6.7						
MKAR	Makanchi Array	92.80	317	P		P	11 28 36.4 -0.3
MKAR				PKKP		PKKPbc	11 45 48.1 -1.5
WALA	Waterton Lakes	92.82	41	eP		P	11 28 37.0 +0.3
	comp=Z,0.7nm,1.4s,mb3.9						
DLMT	Dillon	92.84	44	eP		P	11 28 37.0 0.0
	comp=Z,23nm,1.3s,mb5.5						
G15A	Dillon	92.87	45	⇓P		P	11 28 36.1 -0.9
	baz=93						
L16A	Fish Haven	92.94	48	⇑P		P	11 28 35.7 -1.7
	baz=93						
ZALV	Zalesovo Beam	92.95	324	P		P	11 28 36.2 -1.0
	comp=Z,12nm,1.0s,mb5.3,baz=114,slow=3.8,SNR=19						
ZALV	Zalesovo Beam	92.95	324	P		P	11 28 36.2 -1.1
Y19A	Nutrioso	92.99	56	⇑P		P	11 28 36.3 -1.6
	baz=93						
F15A	Butte	93.02	44	P		P	11 28 38.1 +0.3
	baz=93,SNR=5.4						
LRM	Limekiln Ridge	93.04	44	eP		P	11 28 37.5 -0.4
E15A	Deer Lodge	93.05	43	⇓P		P	11 28 38.1 +0.2
	baz=93,SNR=12						
B14A	Marquette Ranc	93.07	41	⇑P		P	11 28 37.0 -0.9
	baz=93,SNR=8.8						
O17A	Robinson Place	93.08	50	⇓P		P	11 28 38.7 +0.5
	baz=93						
J16A	Bone	93.08	47	⇓P		P	11 28 38.0 -0.1
	baz=93						
A14A	Double T Ranch	93.11	41	⇓P		P	11 28 38.1 0.0
	baz=93						
D15A	Lincoln	93.27	43	⇓P		P	11 28 38.2 -0.6
	baz=93						
I16A	Newdale	93.30	46	⇓P		P	11 28 38.6 -0.4
	baz=93,SNR=5.9						
G16A	Moss Hill, Enn	93.36	45	⇓P		P	11 28 38.4 -1.0
	baz=93,SNR=10.0						
C15A	Salmond Ranch,	93.37	42	⇑P		P	11 28 39.0 -0.3
	baz=93						
B15A	Bradely Ranch,	93.52	42	⇓P		P	11 28 38.9 -1.1
	baz=94						
A15A	Johnson Ranch,	93.55	41	⇓P		P	11 28 39.7 -0.5
	baz=94,SNR=5.7						
BOZ	Bozeman (W)	93.57	44	⇓P		P	11 28 40.2 -0.1
	baz=94,SNR=14						
BOZ	Bozeman (W)	93.57	44	eP		P	11 28 40.6 +0.3
BOZ				pmax		pmax	
	comp=Z,18nm,1.5s,mb5.3						
BOZ	Bozeman (W)	93.57	44	eP		P	11 28 40.6 +0.4
	comp=Z,18nm,1.5s,mb5.3						
F16A	Kennard Place,	93.60	44	⇓P		P	11 28 40.8 +0.3
	baz=94,SNR=8.6						
H16A	Russell Place,	93.64	45	⇓P		P	11 28 41.7 +1.0
	baz=94,SNR=11						
REDW	Red Top Meadow	93.64	47	eP		P	11 28 41.5 +0.8
	comp=Z,9.0nm,1.4s,mb5.0						
HRY	Holter Researc	93.66	43	eP		P	11 28 40.8 +0.1
IMW	Indian Meadow	93.69	46	eP		P	11 28 41.6 +0.7
	comp=Z,11nm,1.5s,mb5.1						
E16A	East Helena	93.72	43	⇓P		P	11 28 41.2 +0.2
	baz=94,SNR=5.5						
J17A	Brown Place, J	93.74	47	⇑P		P	11 28 41.4 +0.3
	baz=94						
D16A	Dana Ranch, Ca	93.91	43	⇑P		P	11 28 41.9 +0.1
	baz=94,SNR=6.2						
C16A	Fuhringer Ranc	93.94	42	⇓P		P	11 28 41.9 -0.1
	baz=94						
NVS	Novosibirsk	94.07	325	eP		P	11 28 41.4 -0.9
E17A	Martinsdale	94.26	44	⇑P		P	11 28 41.7 -1.7
	baz=94						
F17A	Fitzpatrick Pl	94.29	44	⇑P		P	11 28 43.3 -0.3
	baz=94,SNR=6.6						
BW06	Boulder Array	94.45	47	⇑P		P	11 28 44.2 -0.2
	baz=94						
PDAR	Pinedale Array	94.45	47	P		P	11 28 44.3 -0.1
	comp=Z,2.3nm,1.0s,mb4.6,baz=325,slow=1.8,SNR=12						
L19A	Farson	94.47	48	⇑P		P	11 28 44.9 +0.4
	baz=94						
D17A	Six Diamond Ra	94.51	43	⇓P		P	11 28 44.8 +0.2
	baz=95						
C17A	Wharram Farm,	94.56	42	P		P	11 28 44.5 -0.3
	baz=95,SNR=6.1						
B17A	L&G Farms, Che	94.67	42	⇑P		P	11 28 44.7 -0.5
	baz=95						
P20A	De Beque	94.71	51	⇓P		P	11 28 46.0 +0.3
	baz=95,SNR=5.6						
U21A	Nageezi	94.73	54	⇑P		P	11 28 44.8 -1.1
	baz=95						
A17A	Triple J Farms	94.86	41	⇑P		P	11 28 45.4 -0.7
	baz=95,SNR=7.3						
E18A	Harlowton	94.92	44	⇑P		P	11 28 45.3 -1.1
	baz=95						
F18A	Big Timber	94.93	44	⇓P		P	11 28 46.8 +0.3
	baz=95						
K19A	Absolon Red Bu	94.98	47	⇑P		P	11 28 46.2 -0.6
	baz=95						
EGMT	Eagleton	95.30	42	⇓P		P	11 28 47.9 -0.3
	baz=95						
EGMT	Eagleton	95.30	42	eP		P	11 28 48.5 +0.3
ANMO	Albuquerque	95.44	56	P		P	11 28 49.4 +0.3
	comp=Z,2.0nm,1.0s,mb4.5,baz=258,slow=5.8,SNR=5.4						
YKA	Yellowknife Ar	95.57	27	P		P	11 28 47.3 -1.7
	comp=Z,2.8nm,0.8s,mb4.7,baz=254,slow=4.4,SNR=7.5						
224A	Cornudas Mount	95.73	59	⇑P		P	11 28 49.8 -0.8
	baz=96						
Q22A	Crested Butte,	95.74	52	⇑P		P	11 28 49.9 -0.5
	baz=96						
V23A	Ortiz Mt. (NFS	95.79	55	⇓P		P	11 28 49.7 -1.0
	baz=96						
124A	Stringfield Ra	95.89	58	⇑P		P	11 28 49.3 -1.9
	baz=96						
KURK	Kurchatov	95.97	320	ceP		P	11 28 50.8 -0.3
KURK				pmax		pmax	
	comp=Z,12nm,1.2s,mb5.2						
425A	Indio Mountain	95.98	60	⇓P		P	11 28 51.5 -0.2
	baz=96						
MAIT	Maitri	96.22	189	eP		P	11 28 52.4 +0.4
TXAR	Lajitas Array	96.88	62	P		P	11 28 55.8 0.0
	comp=Z,0.8nm,1.1s,mb4.1,baz=233,slow=6.1,SNR=4.9						
V25A	Rancho No Teng	97.07	55	⇑P		P	11 28 57.2 +0.7
	baz=97						
528A	Cox Ranch, San	97.76	61	⇓P		P	11 29 00.7 +1.0
	baz=98						
BVAR	Borovoye Array	101.31	322	P		Pdif	11 29 13.2 -1.9
	comp=Z,3.9nm,1.0s,baz=94,slow=6.2,SNR=11						
BRVK	Borovoye	101.38	322	eP		Pdif	11 29 13.4 -2.0
BRVK				pmax		pmax	
	comp=Z,5.0nm,1.2s						
APA	Apatity	115.15	341	⇓iPKIKP		PKiKP	11 34 04.0 -0.8
APA				pmax		pmax	
	comp=Z,10.0nm,1.0s						
APA				MLR		MLR	
	comp=Z,2μm,18.0s,MS5.7						
ARCES	ARCESS Array B	116.12	345	PKP		PKPdf	11 34 06.2 -0.5
	comp=Z,2.2nm,0.7s,baz=64,slow=2.8,SNR=12						
ARCES				PKKPbc		PKKPbc	11 44 34.3 -5.2
	comp=Z,0.5nm,0.7s,baz=169,slow=2.5,SNR=5.6						
OBN	Obninsk	120.28	328	⇓iPKIKP		PKPdf	11 34 15.3 +0.2
OBN				e			11 35 36.6
OBN				pmax		pmax	
	comp=Z,14nm,1.3s						
KIV	Kislovodsk	120.47	315	⇓iPKIKP		PKPdf	11 34 16.2 +0.4
KIV				eS		SKSac	11 41 05.1 -5.7
KIV				pmax		pmax	
	comp=Z,21nm,1.7s						
LPAZ	La Paz	121.17	117	PKP		PKPdf	11 34 19.1 +1.2
	comp=Z,2.1nm,0.7s,baz=340,slow=2.1,SNR=6.8						
FINES	FINESS Array B	121.42	338	PKP		PKPdf	11 34 16.4 -0.7
	comp=Z,4.7nm,0.9s,baz=103,slow=4.3,SNR=6.4						
FINES	FINESS Array B	121.42	338	PKP		PKPdf	11 34 16.4 -0.7
ANN	Anapa	123.82	317	iPKIKP		PKPdf	11 34 15.0 -7.2
ANN				e			11 41 11.8
ANN				pmax		pmax	
	comp=Z,58nm,1.4s						
BOSA	Boshof	124.27	224	PKP		PKPdf	11 34 24.4 +0.7
	comp=Z,5.4nm,0.8s,baz=259,slow=1.4,SNR=12						
SUR	Sutherland	124.58	217	PKP		PKPdf	11 34 25.6 +1.4
	comp=Z,16nm,1.1s,baz=342,slow=3.3,SNR=3.6						
CPUP	Villa Florida	124.81	133	PKP		PKPdf	11 34 25.0 +0.3
	comp=Z,2.9nm,0.8s,baz=283,slow=3.2,SNR=7.2						
CPUP	Villa Florida	124.81	133	PKP		PKPdf	11 34 25.0 +0.3
AKASG	Malin Array Be	126.30	326	PKP		PKPdf	11 34 26.3 -0.4
	comp=Z,1.4nm,0.7s,baz=62,slow=2.1,SNR=5.7						
NB2	NORSAR Subarra	126.47	344	PKPdf		PKPdf	11 34 26.1 -0.7
	comp=Z,2.1nm,1.0s,baz=39,slow=1.9						
NOA	NORSAR Array B	126.47	344	PKP		PKPdf	11 34 26.4 -0.4
	comp=Z,2.0nm,0.8s,baz=34,slow=1.9,SNR=6.5						
NOA	NORSAR Array B	126.47	344	PKP		PKPdf	11 34 26.4 -0.4
SIV	San Ignacio	127.40	120	PKP		PKPdf	11 34 29.9 0.0
	comp=Z,2.5nm,0.9s,baz=279,slow=4.3,SNR=6.6						
BRTR	Keskin Array B	128.17	312	PKP		PKPdf	11 34 30.5 -0.2
	comp=Z,2.5nm,1.0s,baz=56,slow=3.1,SNR=4.8						
BRTR				PP		PP	11 36 35.2 +0.7
	comp=Z,1.3nm,0.8s,baz=104,slow=5.2,SNR=6.0						
DPC	Dobruska-Polom	132.99	333	ePKIKP		PKPdf	11 34 41.2 +1.7
DPC	Dobruska-Polom	132.99	333	ePKPdf		PKPdf	11 34 41.2 +1.7
UPC	Upice	133.02	333	ePKIKP		PKPdf	11 34 41.5 +2.0
UPC	Upice	133.02	333	ePKPdf		PKPdf	11 34 41.5 +2.0
CLL	Collm	133.71	336	ePKIKP		PKPdf	11 34 42.0 +1.2
CLL				pmax		pmax	
	comp=Z,7.0nm,1.3s						
CLL	Collm	133.71	336	ePKPdf		PKPdf	11 34 42.0 +1.2
	comp=Z,7.0nm,1.3s						
CLL				ePKSdf			11 38 17.0
PRU	Pruhonice	134.05	333	ePKIKP		PKPdf	11 34 43.7 +2.2
PRU	Pruhonice	134.05	333	ePKPdf		PKPdf	11 34 43.7 +2.2
KHC	Kasperske Hory	135.11	333	ePKPdf		PKPdf	11 34 43.3 -0.2
GRF	Grafenberg Arr	135.68	335	ePKP		PKPdf	11 34 45.4 +0.8
CDF	Champ du Feu	138.27	337	ePKIKP		PKPdf	11 34 44.0 -5.4
	comp=Z,2.7nm,0.6s						
LOR	Lormes	140.47	339	ePKIKP		PKPdf	11 34 47.5 -5.9
SSF	Saint Saulge	140.77	339	ePKIKP		PKPdf	11 34 48.4 -5.6
MFF	Saint Martin d	142.34	343	ePKIKP		PKPdf	11 34 51.7 -5.1
	comp=Z,14nm,0.9s						
RJF	Les Rejaudoux	142.98	340	ePKIKP		PKPdf	11 34 53.5 -4.5
	comp=Z,56nm,1.5s						
CAF	Calviac	143.12	339	ePKIKP		PKPdf	11 34 54.6 -3.7
	comp=Z,26nm,1.3s						
LASF	Ste Croix	143.19	337	ePKIKP		PKPdf	11 34 54.2 -4.2
	comp=Z,37nm,1.4s						
LFF	La Frestale	143.56	341	ePKIKP		PKPdf	11 34 54.4 -4.6
	comp=Z,60nm,1.3s						
MTLF	Montolieu	144.44	338	ePKIKP		PKPdf	11 34 58.7 -1.9
	comp=Z,120nm,1.3s						
EPF	Esparros	145.38	339	ePKIKP		PKPdf	11 35 00.3 -2.0
	comp=Z,47nm,1.4s						
ETSF	Etsaut	145.81	340	ePKIKP		PKPdf	11 35 03.1 +0.1
	comp=Z,50nm,1.2s						
SJPF	Ste Jean	145.83	341	ePKIKP		PKPdf	11 35 02.1 -0.9
	comp=Z,44nm,1.4s						
MVO	Moncorvo	149.18	348	ePKP		PKPbc	11 35 13.3 +0.4
MVO				eLR		LR	12 13 13.7
	comp=Z,3μm,20.0s						
PVRL	Vila Real	149.21	349	ePKP		PKPbc	11 35 13.3 +0.4
PVIS	Viseu	149.79	349	ePKP		PKPbc	11 35 14.2 -0.2
ESDC	Sonseca Array	149.80	342	PKPbc		PKPbc	11 35 14.0 -0.4
	comp=Z,4.0nm,0.9s,baz=16,slow=2.4,SNR=13						
MTE	Manteigas	150.02	348	ePKP		PKPbc	11 35 15.5 +0.5
MTE				eLR		LR	12 13 09.9
	comp=Z,3μm,22.0s						
PMRV	Marv??o	150.92	347	ePKP		PKPbc	11 35 17.0 -0.1
PMRV				eLR		LR	12 12 41.3
	comp=Z,3μm,20.0s						
PTOM	Tomar	150.95	349	ePKP		PKPbc	11 35 17.5 +0.3
PESTR	Estremoz	151.51	347	eLR		LR	12 13 14.5
	comp=Z,2μm,20.0s						
PMAFR	Mafra	151.75	350	eLR		LR	12 14 21.7
	comp=Z,3μm,20.0s						
PBAR	Barrancos	152.04	346	eLR		LR	12 14 34.1
	comp=Z,3μm,18.0s						
PCVE	Castro Verde	152.79	347	eLR		LR	12 14 39.8
	comp=Z,2μm,20.0s						
PVAQ	Vaqueiros	152.94	346	eLR		LR	12 15 19.7
	comp=Z,3μm,22.0s						
PBDV	Barranco-do-Ve	153.14	347	eLR		LR	12 15 07.9
	comp=Z,3μm,20.0s						
MORF	Marmelete	153.23	348	eLR		LR	12 15 34.7
	comp=Z,3μm,20.0s						
PFVI	Vila Bisbo	153.44	348	eLR		LR	12 13 49.3
	comp=Z,2μm,22.0s						
MDT	Midelt	156.23	337	PKP		PKPdf	11 35 20.2 +1.0
	comp=Z,2.8nm,1.1s,baz=36,slow=0.9,SNR=3.1						
MDT				PKPab		PKPab	11 35 48.2 +1.1
	comp=Z,8.0nm,1.1s,baz=57,slow=6.3,SNR=6.3						
TORD	Torodi Ar. Bea	163.14	279	PKP		PKPdf	11 35 27.8 +0.2
	comp=Z,4.8nm,1.0s,baz=66,slow=1.0,SNR=12						
TORD	Torodi Ar. Bea	163.14	279	PKP		PKPdf	11 35 27.8 +0.2

DJA 19 11:15:30.2 91S×122.48E, h23km, MLv3.9/7, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDI	Kendari	1.05	172	P	Pn	11 15 48.5	-0.8
LUWI	Luwuk	1.88	9	P	Pn	11 16 03.7	+3.0
APSI	Ampana	2.15	337	P	Pn	11 16 03.9	-0.6
TTSI	Tana Toraja	2.66	267	P	Pn	11 16 10.9	-0.6
BNSI	Bone	2.79	238	P	Pn	11 16 14.7	+1.4
SPSI	Sidrap Palu	2.90	249	P	Pn	11 16 14.8	0.0
PCI	Palu	3.31	307	P	Pn	11 16 21.6	+1.2
BKSI	Bulukumba	3.36	224	P	Pn	11 16 21.2	+0.1
MRSI	Marisa	3.41	351	P	Pn	11 16 21.3	-0.5
LBMI	Labuha	5.50	66	P	Pn	11 16 50.4	-0.2

GUC 19 11:21:17.5±1.3, 31.87S×72.03W, h4km±5km, MD3.5, ML3.0, 2C-2D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	Los Chungos	0.45	92	⇓iP	Pg	11 21 26.4	+0.2
CHNG				iS	Sg	11 21 33.7	+1.6
CMCH	Combarbala	1.12	52	⇓iP	Pg	11 21 38.2	-0.7
CMCH				iS	Sg	11 21 54.6	+1.2
CMCH				AML	AML	11 21 57.7	
	comp=E,772nm,0.7s						
PEL	Peldehue	1.71	139	⇑iP	Pn	11 21 47.4	-0.7
PEL				iS	Sn	11 22 10.5	+0.2
PEL				AML	AML	11 22 16.1	
	comp=N,271nm,0.5s						
CLCH	Cerro Calan	1.98	141	eP	Pn	11 21 50.5	-1.2
CLCH				iS	Sn	11 22 17.5	+0.4
CLCH				AML	AML	11 22 24.9	
	comp=E,130nm,0.5s						
TLL	Tololo Astrono	1.99	32	eP	Pn	11 21 51.5	-0.4
TLL				eS	Sn	11 22 18.7	+1.4
FCH	Farellones	2.07	135

1.9nm,0.5s,baz=44,slow=4.7,SNR=10.0
BRTR Keskin Array B 146.84 313 PKPbc PKPbc 11 42 11.2 -0.5
1.9nm,0.7s,baz=144,slow=5.0,SNR=6.1
CLL Collm 147.77 347 *e*PKPbc PKPbc 11 42 13.1 -0.7
CLL Collm 147.77 347 ||*i*PKPbc PKPbc 11 42 13.3 -0.5
comp=Z,7.0nm,0.6s
MMAI Mount Meron Ar 147.93 300 PKPbc PKPbc 11 42 15.2 +0.4
comp=Z,3.3nm,0.6s,baz=63,slow=5.8,SNR=4.2
BRG Berggiesshubel 147.97 346 *e*PKPbc PKPbc 11 42 13.9 -0.4
PLN Plauen 148.72 348 *e*PKPbc PKPbc 11 42 15.8 -0.4
TANN Tannenbergstha 148.72 348 *e*PKPbc PKPbc 11 42 15.9 -0.3
WERD Werda 148.72 348 *e*PKPbc PKPbc 11 42 15.9 -0.3
VYHS Vyhne 148.73 339 *e*PKP PKPbc 11 42 15.8 -0.5
GUNZ Gunzen 148.80 348 *e*PKPbc PKPbc 11 42 16.2 -0.2
TORD Torodi Ar. Bea 173.04 174 PKP PKPdf 11 42 36.5 -1.4
comp=Z,0.5nm,0.8s,baz=219,slow=1.8,SNR=2.5
TORD PKPab PKPab 11 44 08.7 +0.1
comp=Z,0.4nm,0.6s,baz=211,slow=4.3,SNR=2.6

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*ISCJB **19** 11:28:17.5±0.6,29°.31N±0°.04×141°.7E±0°.2, h56km±8km, mb4.1/11, Error ellipse: s-maj=26.8km s-min=4.3km az=166.7*
*JMA **19** 11:28:17.3±0.1,29°.36N×141°.99E, h51km, M4.3*
*IDC **19** 11:28:21.1±0.7,29°.07N×141°.22E, h57km±6km, mb3.8/9, mb1 4.0/11, mb1mx3.8/21, mbtmp3.8/11, MS4.4/2, Ms1 4.4/2, ms1mx3.6/39, Error ellipse: s-maj=23.9km s-min=7.6km az=67.0*
*NEIC **19** 11:28:21.1±0.5,29°.10N×141°.20E, mb4.3/1, Error ellipse: s-maj=18.7km s-min=8.9km az=80.0*
ISC 19 11:28:19.2±0.5,29°.25N±0°.04×141°.6E±0°.2, h50km±7km, h61km±1.8km:pP-P, n37, σ1°.11/45, mb4.1/11, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.20 167**		P		**Pn**	**11 28 53.8 +0.5**
	148nm,0.3s,baz=349,slow=9.5,SNR=23						
CBIJ				S		**Sn**	**11 29 20.3 +0.9**
	221nm,0.3s,baz=287,slow=20,SNR=16						
CBIJ				LR	LR	11 29 36.5	
	comp=Z,5μm,20.1s,baz=198,slow=35						
CBIJ	**Chichi jima**	**2.20 167**		P		**Pn**	**11 28 53.3 0.0**
CBIJ				*e*S		**Sn**	**11 29 19.4 0.0**
JHHJ	**Haha-jima-NKT**	**2.66 169**		P		**Pn**	**11 28 59.7 +0.1**
JHHJ				*e*S		**Sn**	**11 29 29.9 -0.6**
JHJ2	**Mitsune**	**4.15 338**		P		**Pn**	**11 29 19.3 -0.7**
JHJ2				*e*S		**Sn**	**11 30 02.3 -5.0**
JHJ	**Hachijo jima 2**	**4.17 338**		P		**Pn**	**11 29 19.3 -1.0**
	21nm,0.3s,baz=26,slow=23,SNR=5.8						
JHJ				S		**Sn**	**11 30 07.5 -0.2**
	38nm,0.3s,baz=104,slow=20,SNR=5.4						
JHJ				LR	LR	11 30 26.5	
	comp=Z,8μm,21.4s,baz=164,slow=30						
JKO	**Kozu shima**	**5.36 337**		P		**Pn**	**11 29 37.6 +1.0**
BSO1	**Boso 1**	**5.41 354**		P		**Pn**	**11 29 36.2 -1.2**
BSO3	**Boso 3**	**5.61 351**		P		**Pn**	**11 29 39.6 -0.5**
JOD2	**Odawara 2**	**6.37 341**		P		**Pn**	**11 29 51.0 +0.5**
JOD2				*e*S		**Sn**	**11 31 02.8 +1.0**
JHU	**Hanno**	**6.87 344**		P		**Pn**	**11 29 57.6 +0.2**
JHU				*e*S		**Sn**	**11 31 13.2 -1.0**
JNY	**Yasuok**	**6.87 333**		P		**Pn**	**11 30 00.0 +2.6**
JRY	**Ryogami san**	**7.13 342**		P		**Pn**	**11 30 01.5 +0.6**
JRY				*e*S		**Sn**	**11 31 19.9 -0.6**
JAG	**Ashikaga**	**7.38 346**		P		**Pn**	**11 30 03.7 -0.7**
JAG				*e*S		**Sn**	**11 31 25.5 -1.3**
JHO	**Hitachi**	**7.39 353**		P		**Pn**	**11 30 03.6 -0.9**
JHO				*e*S		**Sn**	**11 31 22.4 -4.6**
MJAR	**Matsushiro Arr**	**7.82 339**		*e*Pn		**Pn**	**11 30 12.5 +2.2**
	2.2nm,0.3s,baz=162,slow=13,SNR=23						
MAJO	**Matsushiro**	**7.82 339**		*e*Pn		**Pn**	**11 30 12.4 +2.1**
	10nm,0.4s						
MAJO				*e*Sn		**Sn**	**11 31 37.9 +0.4**
MAT	**Matsushiro**	**7.82 339**		P		**Pn**	**11 30 12.3 +2.0**
MAT				*e*S		**Sn**	**11 31 31.9 -5.5**
MAT	**Matsushiro**	**7.82 339**		P		**Pn**	**11 30 11.6 +1.3**
ERM	**Erimo**	**12.79 5**		*e*Pn		**Pn**	**11 31 16.6 -1.8**
	26nm,1.0s						
ERM				*e*Sn		**Sn**	**11 33 27.6 -12**
ASAJ	**Asahikawa**	**14.86 3**		P		**Pn**	**11 31 45.2 -0.9**
	0.9nm,0.3s,baz=202,slow=19,SNR=9.0						
CMAR	**Chiang Mai Arr**	**40.30 264**		P		**P**	**11 35 50.2 -1.6**
	0.7nm,0.6s,mb3.5,baz=42,slow=9.6,SNR=5.5						
ZALV	**Zalesovo Beam**	**47.56 318**		PcP		PcP	11 38 18.7 -0.1
	1.5nm,0.5s,baz=119,slow=3.6,SNR=5.8						
MKAR	**Makanchi Array**	**48.75 308**		PcP		PcP	11 38 22.6 -0.6
	0.3nm,0.2s,baz=88,slow=4.1,SNR=3.7						
WRA	**Warramunga Arr**	**49.41 189**		P		**P**	**11 37 03.3 -0.8**
	4.5nm,0.7s,mb4.6,baz=6.3,slow=7.6,SNR=37						
WRA				pP		pP	11 37 18.9 +1.2
	2.2nm,0.5s,baz=8.7,slow=8.4,SNR=4.8						
WRA				PcP		PcP	11 38 26.7 +0.8
	0.9nm,0.5s,baz=359,slow=3.7,SNR=4.7						
ASAR	**Alice Springs**	**53.14 189**		P		**P**	**11 37 31.2 -0.8**
	1.5nm,0.8s,mb4.0,baz=5.9,slow=7.7,SNR=16						
BVAR	**Borovoye Array**	**56.14 316**		P		**P**	**11 37 52.6 -1.0**
	0.7nm,0.4s,mb4.0,baz=79,slow=7.7,SNR=3.8						
BVAR				PcP		PcP	11 38 52.6 +1.7
	0.8nm,0.5s,baz=108,slow=4.7,SNR=2.6						
ABKAR	**Akbulak array**	**63.26 313**		*e*P		**P**	**11 38 42.4 -0.1**
	1.6nm,0.5s,mb4.4						
ARCES	**ARCESS Array B**	**71.35 341**		P		**P**	**11 39 34.4 +1.0**
	1.6nm,0.9s,mb3.9,baz=60,slow=6.1,SNR=3.6						
FINES	**FINESS Array B**	**75.81 333**		P		**P**	**11 40 00.2 +0.5**
	1.6nm,0.9s,mb4.0,baz=86,slow=5.9,SNR=6.6						
FINES				pP		pP	11 40 15.6 +1.7
	1.3nm,0.5s,baz=63,slow=5.0,SNR=4.0						
FINES	**FINESS Array B**	**75.81 333**		P		**P**	**11 40 00.2 +0.5**
FINES				pP		pP	11 40 15.6 +1.7
NVAR	**Mina Array Bea**	**79.57 52**		P		**P**	**11 40 24.6 +3.5**
	1.0nm,0.8s,mb3.8,baz=281,slow=5.5,SNR=5.3						
AKASG	**Malin Array Be**	**80.60 323**		pP		pP	11 40 43.9 +3.2
	2.2nm,0.6s,baz=48,slow=5.6,SNR=4.8						
NB2	**NORSAR Subarra**	**81.44 338**		P		**P**	**11 40 49.0 +18**
	comp=Z,1.2nm,0.6s,mb4.0,baz=41,slow=5.6						
NOA	**NORSAR Array B**	**81.44 338**		pP		pP	11 40 48.4 +3.4
	comp=Z,1.1nm,0.7s,baz=42,slow=5.4,SNR=3.6						
BRTR	**Keskin Array B**	**84.19 312**		P		**P**	**11 40 45.8 +0.5**
	comp=Z,2.4nm,0.8s,mb4.3,baz=112,slow=3.3,SNR=13						
BRTR				pP		pP	11 41 03.0 +3.2
	comp=Z,1.0nm,0.6s,baz=100,slow=3.9,SNR=4.1						
TXAR	**Lajitas Array**	**94.70 53**		P		**P**	**11 41 38.4 +2.9**
	comp=Z,0.3nm,0.5s,mb4.0,baz=287,slow=1.5,SNR=6.8						
TXAR				pP		pP	11 41 55.7 +5.7
	comp=Z,0.2nm,0.5s,baz=245,slow=1.4,SNR=2.4						
LPAZ	**La Paz**	**149.77 71**		PKPbc		PKPbc	11 48 07.2 +3.0
	comp=Z,1.3nm,0.8s,baz=304,slow=3.6,SNR=4.4						

IDC 19 11:28:22.8±3.3,54°.03N×87°.25E, h0km, mb1 3.2/2, mb1mx3.1/27, mbtmp3.2/2, ML3.1/2, Error ellipse: s-maj=34.6km s-min=18.7km az=47.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.44 268**		Pg	Pg	11 28 47.3	-3.0
	1.1nm,0.3s,baz=81,slow=16,SNR=3.6						
ZALV				Lg		11 29 07.9	
	2.1nm,0.3s,baz=77,slow=26,SNR=10						
MKAR	**Makanchi Array**	**7.90 206**		Pn	Pn	11 30 19.9	+1.0
	0.2nm,0.3s,baz=35,slow=13,SNR=4.0						
MKAR				Lg		11 32 35.5	
	0.2nm,0.3s,baz=27,slow=26,SNR=3.5						
BVAR	**Borovoye Array**	**10.09 271**		Pn	Pn	11 30 48.6	-0.2
	0.2nm,0.3s,baz=55,slow=15,SNR=4.1						
BVAR				Sn	Sn	11 32 33.5	-9.1
	0.2nm,0.3s,baz=74,slow=15,SNR=6.6						

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*IDC **19** 11:43:14.4±0.9,32°.04N×104°.67E, h0km, mb3.8/9, mb1 3.8/11, mb1mx3.7/26, mbtmp3.7/11, Error ellipse: s-maj=32.1km s-min=17.8km az=50.0*
*BJI **19** 11:43:17.1,32°.14N×104°.84E, h9km, ML3.6/18*
*NEIC **19** 11:43:18.6±0.6,32°.52N×104°.76E, h10km, Error ellipse: s-maj=16.5km s-min=11.8km az=55.0*
ISC 19 11:43:14.8±0.8,32°.11N±0°.03×104°.81E±0°.05, h0km±6km, n20, σ1°.26/28, mb3.9/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.49 217**		Pg	**Pg**	**11 43 43.9**	**+0.5**
CD2				Sg	**Sg**	**11 44 04.6**	**+1.9**
CD2				smax			
	comp=N,2μm,0.5s						
XAN	**Xi'an**	**3.95 60**		Pg	**Pg**	**11 44 29.3**	**-1.3**
XAN				Sg	**Sg**	**11 45 23.8**	**+2.0**
XAN				smax			
	comp=N,170nm,0.7s						
XAN				smax			
	comp=E,86nm,0.8s						
LZH	**Lanzhou**	**4.05 349**		Pn	**Pn**	**11 44 23.1**	**+5.1**
LZH				Pg	**Pg**	**11 44 31.9**	**-0.5**
LZH				Sn	**Sn**	**11 45 07.8**	**+1.7**
LZH				Sg	**Sg**	**11 45 22.1**	**-2.9**
LZH				smax			
	comp=N,180nm,0.6s						
LZH				smax			
	comp=E,230nm,0.7s						
ENH	**Enshi**	**4.40 113**		Pn	**Pn**	**11 44 29.0**	**+6.2**
ENH				*e*Sn	**Sn**	**11 45 21.0**	**+6.2**
GYA	**Guiyang**	**5.86 163**		Pn	**Pn**	**11 44 48.3**	**+5.5**
GYA				Sn	**Sn**	**11 45 49.5**	**-1.1**
GYA				Sg	**Sg**	**11 46 20.8**	**-2.1**
GYA				smax			
	comp=N,140nm,0.8s						
GYA				smax			
	comp=E,80nm,0.8s						
CMAR	**Chiang Mai Arr**	**14.58 203**		Pn	**Pn**	**11 46 50.1**	**+7.7**
	comp=E,0.4nm,0.3s,baz=9.0,slow=9.1,SNR=12						
SONM	**Songino Array**	**15.76 4**		Pn	**Pn**	**11 46 60.0**	**+2.1**
	comp=E,0.1nm,0.3s,baz=173,slow=13,SNR=2.6						
KSRS	**Korea Array**	**19.70 68**		P	**Pn**	**11 47 48.0**	**+1.0**
	comp=E,0.1nm,0.3s,baz=249,slow=9.8,SNR=4.3						
MKAR	**Makanchi Array**	**22.64 317**		P	**P**	**11 48 17.6**	**+0.5**
	comp=E,0.7nm,0.7s,mb3.3,baz=119,slow=9.9,SNR=6.0						
ZALV	**Zalesovo Beam**	**26.10 333**		P	**P**	**11 48 49.7**	**-0.2**
	comp=E,1.8nm,0.6s,mb3.9,baz=136,slow=9.7,SNR=6.6						
PETK	**Petropavlovsk-**	**43.05 45**		P	**P**	**11 51 16.2**	**+0.1**
	comp=E,1.7nm,0.7s,mb3.9,baz=300,slow=19,SNR=5.2						
PETK	**Petropavlovsk-**	**43.05 45**		P	**P**	**11 51 16.2**	**+0.1**
ARCES	**ARCESS Array B**	**56.60 336**		P	**P**	**11 52 58.2**	**-0.7**
	comp=E,0.8nm,0.6s,mb4.0,baz=82,slow=8.0,SNR=11						
ARCES	**ARCESS Array B**	**56.60 336**		P	**P**	**11 52 58.2**	**-0.7**
BRTR	**Keskin Array B**	**56.78 299**		P	**P**	**11 53 01.1**	**+0.5**
	comp=E,0.7nm,0.7s,mb3.8,baz=54,slow=6.7,SNR=3.9						
FINES	**FINESS Array B**	**57.08 326**		P	**P**	**11 53 01.8**	**-0.6**
	comp=E,0.9nm,0.5s,mb4.1,baz=80,slow=6.5,SNR=13						
FINES	**FINESS Array B**	**57.08 326**		P	**P**	**11 53 01.8**	**-0.6**
WRA	**Warramunga Arr**	**58.98 147**		P	**P**	**11 53 16.4**	**+0.3**
	comp=E,1.2nm,0.6s,mb4.1,baz=322,slow=9.6,SNR=7.3						
ASAR	**Alice Springs**	**62.04 150**		P	**P**	**11 53 36.2**	**-0.8**
	comp=E,0.9nm,0.8s,mb4.0,baz=331,slow=6.5,SNR=4.4						
NOA	**NORSAR Array B**	**64.14 327**		P	**P**	**11 53 48.8**	**-1.7**
	comp=E,0.4nm,0.5s,mb3.9,baz=74,slow=6.5,SNR=3.4						

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*DJA **19** 11:45:19, 10°.90S×167°.37E, h30km, mb5.1/5*
*IDC **19** 11:45:39.0±0.5, 11°.00S×164°.67E, h0km, mb4.8/18, mb1 4.9/20, mb1mx4.9/21, mbtmp4.8/20, ML4.6/2, MS4.6/1, Ms1 4.6/1, ms1mx3.4/29, Error ellipse: s-maj=18.1km s-min=14.5km az=124.0*
*ISCJB **19** 11:45:38.9±2.8, 11°.00S±0°.05×164°.56E±0°.03, h8km±17km, mb5.0/62, MS5.1/7, Error ellipse: s-maj=8.7km s-min=5.4km az=175.9*
*BJI **19** 11:45:40.1, 10°.48S×164°.80E, h7km, mB5.5/17, mb5.0/40, Ms5.4/20, Ms7 5.1/20*
*NEIC **19** 11:45:40.8±0.2, 10°.99S×164°.62E, h10km, mb5.2/27, Error ellipse: s-maj=6.9km s-min=4.7km az=140.0*
*MOS **19** 11:45:43.3±0.9, 10°.87S×164°.46E, h33km, mb5.4/19, Error ellipse: s-maj=10.4km s-min=9.5km az=81.2*
ISC 19 11:45:43.1±2.5, 11°.02S±0°.05×164°.60E±0°.04, h25km±18km, h17km±3.1km:pP-P, n299, σ0°.77/266, mb5.0/62, MS5.1/7, 57C-84D, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.84 289**		Pn	**Pn**	**11 46 55.2**	**+0.7**
	31nm,0.3s,baz=62,slow=1.2,SNR=9.4						
HNR				Sn	**Sn**	**11 47 50.3**	**+0.5**
	60nm,0.3s,baz=26,slow=22,SNR=6.4						
HNR	**Honiara**	**4.84 289**		*e*Pn	**Pn**	**11 46 54.7**	**+0.2**
NOUC	**Port Laguerre**	**11.14 172**		*e*P	**Pn**	**11 48 20.2**	**-0.8**
MSVF	**Nonsavu**	**14.63 119**		*e*Pn	**Pn**	**11 49 08.4**	**-0.3**
	36nm,1.1s						
EIDS	**Eidsvold**	**19.18 220**		*e*Pn	**Pn**	**11 50 06.8**	**+0.8**
	104nm,1.8s						
CTA	**Charters Tower**	**19.83 241**		*e*P	**Pn**	**11 50 13.6**	**-0.2**
	34nm,0.9s						
CTA	**Charters Tower**	**19.83 241**		P	**Pn**	**11 50 13.9**	**0.0**
	1.0nm,0.3s,baz=68,slow=13,SNR=29						
CTAO	**Charters Tower**	**19.83 241**		*e*P	**Pn**	**11 50 13.5**	**-0.3**
CTAO				pmax	pmax		
	comp=Z,65nm,1.1s						
CTAO	**Charters Tower**	**19.83 241**		*e*P	**Pn**	**11 50 13.5**	**-0.3**
	comp=Z,65nm,1.1s						
CTAO	**Charters Tower**	**19.83 241**		P	**Pn**	**11 50 13.5**	**-0.3**
	comp=Z,57nm,1.1s						
COEN	**Coen**	**21.12 260**		*e*P	**P**	**11 50 26.9**	**+0.6**
	comp=Z,332nm,1.3s,mb5.5						
COEN	**Coen**	**21.12 260**		P	**P**	**11 50 29.9**	**+3.6**
	comp=Z,104nm,1.7s,mb4.9						
ARMA	**Armidale**	**22.76 210**		*e*P	**P**	**11 50 44.2**	**+0.5**
ARMA	**Armidale**	**22.76 210**		*e*P	**P**	**11 50 43.9**	**+0.2**
	comp=Z,312nm,3.0s						
SMPI	**Sami**	**27.22 287**		P	**P**	**11 51 23.7**	**-1.6**
	comp=Z,42nm,1.3s,mb4.8						
CNB	**Canberra Magne**	**27.87 207**		*e*P	**P**	**11 51 33.3**	**+2.3**
STKA	**Stephens Creek**	**29.70 222**		*e*P	**P**	**11 51 47.9**	**+0.6**
	comp=Z,6.7nm,1.0s,mb4.3						
STKA	**Stephens Creek**	**29.70 222**		P	**P**	**11 51 48.0**	**+0.7**
	comp=Z,8.7nm,1.0s,mb4.5,baz=45,slow=6.0,SNR=6.5						
STKA				PcP	PcP	11 54 51.2	+0.1
	comp=Z,4.7nm,0.9s,baz=338,slow=5.4,SNR=2.8						
WRAB	**Tennant Creek**	**30.43 249**		P	**P**	**11 51 53.3**	**-0.6**
	comp=Z,188nm,0.9s,mb5.8,SNR=8.6						
WRAB	**Tennant Creek**	**30.43 249**		*e*P	**P**	**11 51 52.9**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.1						
WRAB	**Tennant Creek**	**30.43 249**		*e*P	**P**	**11 51 52.9**	**-0.9**
	comp=Z,36nm,1.0s,mb5.1						
WRAB	**Tennant Creek**	**30.43 249**		P	**P**	**11 51 53.0**	**-0.9**
	comp=Z,38nm,1.3s,mb5.0						
WRA	**Warramunga Arr**	**30.44 249**		P	**P**	**11 51 52.8**	**-1.2**
	comp=Z,31nm,1.0s,mb5.0,baz=79,slow=9.1,SNR=11						
WRA				PcP	PcP	11 54 52.9	-0.4
	comp=Z,3.2nm,1.1s,baz=76,slow=3.1,SNR=5.6						
KAKA	**Kakadu**	**31.51 264**		*e*P	**P**	**11 52 01.2**	**-2.3**
	comp=Z,3.3nm,0.5s,mb4.4						
TOO	**Toolangi**	**31.52 210**		*e*P	**P**	**11 52 04.5**	**+1.2**
ASAR	**Alice Springs**	**31.80 243**		P	**P**	**11 52 04.7**	**-1.3**
	comp=Z,13nm,0.9s,mb4.8,baz=64,slow=10.0,SNR=79						
ASAR				PcP	PcP	11 54 56.8	-0.1
	comp=Z,1.5nm,0.8s,baz=52,slow=3.0,SNR=5.2						
RPZ	**Rata Peaks**	**33.06 171**		P	**P**	**11 52 16.1**	**-0.6**
	comp=Z,16nm,0.8s,mb5.0,baz=36,slow=8.7,SNR=4.9						
KNA	**Kununurra**	**35.15 258**		P	**P**	**11 52 33.3**	**-1.9**
FITZ	**Fitzroy Crossi**	**38.30 255**		*e*P	**P**	**11 53 00.3**	**-1.8**
	comp=Z,25nm,0.9s,mb5.0						
FORT	**Forrest**	**39.14 234**		*e*P	**P**	**11 53 09.3**	**+0.3**
	comp=Z,50nm,0.8s,mb5.3						
FORT	**Forrest**	**39.14 234**		*e*P	**P**	**11 53 09.5**	**+0.5**
	comp=Z,73nm,0.9s,mb5.4						
DAV	**Davao City (W)**	**42.79 293**		LR	LR	12 09 01.1	
	comp=Z,758nm,18.6s,MS4.6,baz=137,slow=33						
KLBR	**Kellerberrin**	**47.78 237**		*e*P	**P**	**11 54 18.1**	**-0.5**
	comp=Z,25nm,1.1s,mb5.2						
MJAR	**Matsushiro Arr**	**53.44 334**		P	**P**	**11 55 00.3**	**-0.8**
	comp=Z,5.2nm,0.8s,mb4.5,baz=167,slow=8.9,SNR=19						
MAJO	**Matsushiro**	**53.44 334**		*e*P	**P**	**11 55 00.3**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
MAJO	**Matsushiro**	**53.44 334**		*e*P	**P**	**11 55 00.3**	**-0.8**
	comp=Z,20nm,1.0s,mb5.0						
MAT	**Matsushiro**	**53.44 334**		P	**P**	**11 55 00.3**	**-0.8**
KSRS	**Korea Array**	**59.22 326**		P	**P**	**11 55 42.6**	**+0.2**
	comp=Z,6.3nm,0.9s,mb4.6,baz=140,slow=7.4,SNR=21						
YSS	**Yuzh-Sakhalins**	**60.92 343**		*e*P	**P**	**11 55 54.9**	**+1.0**
YSS				pmax	pmax		
	comp=Z,51nm,1.2s,mb5.5						
YSS	**Yuzh-Sakhalins**	**60.92 343**		*e*P	**P**	**11 55 54.9**	**+1.1**
	comp=Z,50nm,1.2s,mb5.5						
NJ2	**Nanjing**	**61.21 316**		*e*P	**P**	**11 55 56.8**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.5						
MDJ	**Mudanjiang**	**63.80 333**		P	**P**	**11 56 13.8**	**+0.6**
MDJ				pP	pP	11 56 16.5	-4.5
MDJ				PP	PP	11 58 34.3	+0.4
MDJ				pmax	pmax		
	comp=Z,21nm,1.5s,mb5.0						
PET	**Petropavlovsk**	**63.99 356**		*i*P	**P**	**11 56 14.5**	**+0.3**
PET				pmax	pmax		
	comp=Z,42nm,1.3s,mb5.3						
PET	**Petropavlovsk**	**63.99 356**		*e*P	**P**	**11 56 14.6**	**+0.4**
	comp=Z,52nm,1.2s,mb5.4						
SMY	**Shemya**	**64.01 6**		*e*P	**P**	**11 56 14.3**	**-0.1**
SMY				pmax	pmax		
	comp=Z,175nm,1.6s,mb5.8						
SMY	**Shemya**	**64.01 6**		*e*P	**P**	**11 56 14.3**	**0.0**
	comp=Z,175nm,1.6s,mb5.8						
PETK	**Petropavlovsk-**	**64.14 355**		P	**P**	**11 56 15.9**	**+0.7**
	comp=Z,30nm,0.8s,mb5.4,baz=148,slow=7.9,SNR=56						
HABR	**Khabarovsk**	**64.74 339**		*e*P	**P**	**11 56 17.7**	**-1.6**
HABR				*PP	pP	11 56 27.7	+0.6
HABR				*e*		11 56 50.9	
HABR				S	**S**	**12 04 57.4**	**-0.8**
HABR				*e*		12 06 10.3	
HABR				*e*SS	SS	12 09 11.8	+1.8
HABR				pmax	pmax		
	comp=Z,101nm,1.7s,mb5.6						
HABR				pmax	pmax		
	comp=N,34nm,2.0s						
HABR				pmax	pmax		
	comp=E,25nm,1.1s						
HABR				MLR	MLR		
	comp=Z,619nm,15.0s,MS4.9						
CN2	**Changchun**	**65.14 330**		*e*P	**P**	**11 56 21.6**	**-0.4**
CN2				*e*pP	pP	11 56 32.0	+2.2
CN2				*e*S	S	12 05 02.0	-1.4
CN2				pmax	pmax		
	comp=Z,20nm,1.3s,mb5.0						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,3μm,18.0s,MS5.7						
CN2				LR	LR		
	comp=E,3μm,18.0s,MS5.7						
CN2				LR	LR		
	comp=Z,4μm,19.0s,MS5.6						
CASY	**Casey**	**66.00 201**		*e*P	**P**	**11 56 27.4**	**+0.2**
CASY	**Casey**	**66.00 201**		*e*P	**P**	**11 56 27.2**	**0.0**
	comp=Z,12nm,1.1s,mb4.8						
KLR	**Kul'dur**	**66.59 337**		*e*P	**P**	**11 56 27.6**	**-3.6**
KLR				pmax	pmax		
	comp=E,28nm,1.4s						
KLR				pmax	pmax		
	comp=Z,43nm,1.4s,mb5.3						
SBA	**Scott Base**	**66.83 180**		*e*P	**P**	**11 56 34.7**	**+2.3**
SBA				pmax	pmax		
	comp=Z,218nm,2.8s,mb5.7						
SBA	**Scott Base**	**66.83 180**		*e*P	**P**	**11 56 34.7**	**+2.3**
	comp=Z,218nm,2.8s,mb5.7						
ENH	**Enshi**	**67.01 310**		*e*P	**P**	**11 56 33.8**	**-0.5**
	comp=Z,21nm,1.0s,mb5.1						
GYA	**Guiyang**	**67.47 305**		*i*P	**P**	**11 56 40.0**	**+2.7**
GYA				PP	PP	11 59 11.8	+5.4
GYA				ScP		12 01 09.3	
GYA				S	S	12 05 35.4	+3.0
GYA				SKS		12 06 33.8	
GYA				SS	SS	12 09 57.8	+4.5
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
GYA				pmax	pmax		
	comp=Z,140nm,6.0s						
GYA				LR	LR		
	comp=N,850nm,20.9s,MS5.1						
GYA				LR	LR		
	comp=E,720nm,21.6s,MS5.1						
GYA				LR	LR		
	comp=Z,980nm,20.8s,MS5.0						
BJI	**Beijing**	**67.76 322**		P	**P**	**11 56 39.3**	**+0.5**
BJI				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.2						
XAN	**Xi'an**	**69.27 313**		P	**P**	**11 56 48.8**	**+0.4**
XAN				pP	pP	11 56 55.8	-0.5
XAN				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
KMI	**Kunming**	**70.15 302**		⇑P	**P**	**11 56 55.8**	**+1.8**
KMI				pP	pP	11 56 59.6	-2.3
KMI				sP	sP	11 57 00.9	-4.0
KMI				PP	PP	11 59 30.5	+0.9
KMI				S	S	12 06 07.3	+3.2
KMI				sS	sS	12 06 12.5	-4.7
KMI				SKS		12 06 53.8	
KMI				pmax	pmax		
	comp=Z,17nm,1.4s,mb4.8						
KMI				pmax	pmax		
	comp=Z,610nm,11.6s						
KMI				LR	LR		
	comp=N,620nm,17.5s,MS5.1						
KMI				LR	LR		
	comp=E,790nm,19.5s,MS5.1						
KMI				LR	LR		
	comp=Z,820nm,21.6s,MS4.9						
CMAR	**Chiang Mai Arr**	**71.07 294**		P	**P**	**11 57 00.5**	**+0.7**
	comp=Z,3.1nm,0.9s,mb4.2,baz=116,slow=4.4,SNR=14						
HHC	**Hu-ho-hao-te**	**71.08 320**		*e*P	**P**	**11 57 00.8**

BILL eS S 12 07 32.9 -7.0
BILL pmax pmax
comp=Z,67nm,1.2s,mb5.5
BILL Bilibino 78.86 1 eP **P 11 57 44.0 +0.4**
comp=Z,76nm,1.2s,mb5.5
RSO Redoubt South 78.88 20 eP **P 11 57 46.2 +2.2**
PMR Palmer 80.92 20 eP **P 11 57 55.8 +0.8**
PMR pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
PMR Palmer 80.92 20 eP **P 11 57 55.8 +0.8**
comp=Z,8.7nm,1.0s,mb4.6
TLY Talaya 81.48 327 eP **P 11 57 58.5 +0.3**
TLY pmax pmax
comp=Z,13nm,0.9s,mb4.9
BMRM Bremner River 82.13 22 eP **P 11 58 01.5 +0.1**
comp=Z,8.7nm,0.7s,mb4.8
MCK McKinley 82.48 19 eP **P 11 58 02.4 -0.7**
MCK pmax pmax
comp=Z,11nm,0.8s,mb4.8
MCK McKinley 82.48 19 eP **P 11 58 02.4 -0.8**
comp=Z,12nm,0.8s,mb4.9
COLA College 83.61 18 P **P 11 58 06.0 -3.0**
COLA pmax pmax
comp=Z,15nm,0.8s,mb5.2
COLA College 83.61 18 P **P 11 58 06.0 -2.9**
comp=Z,16nm,0.8s,mb5.2
MENT Mentasta 83.71 21 eP **P 11 58 09.4 -0.1**
ILAR Eielson Array 83.84 19 P **P 11 58 09.3 -0.8**
comp=Z,9.7nm,0.7s,mb5.0,baz=227,slow=5.3,SNR=85
MAW Mawson 84.33 202 eP **P 11 58 13.6 +0.9**
comp=Z,6.7nm,1.1s,mb4.7
MAW Mawson 84.33 202 P **P 11 58 13.7 +1.0**
comp=Z,7.6nm,1.0s,mb4.8,baz=117,slow=5.0,SNR=5.5
COLD Coldfoot 84.58 16 eP **P 11 58 14.9 +1.0**
comp=Z,5.5nm,0.7s,mb4.8
YBH Yreka Blue Hor 84.68 46 eP **P 11 58 15.5 +0.5**
CMB Columbia Colle 85.18 50 eP **P 11 58 17.3 -0.3**
EGAK Eagle 85.74 20 eP **P 11 58 20.7 +1.0**
comp=Z,30nm,0.8s,mb5.6
TIXI Tiksi 85.85 349 eP **P 11 58 19.6 -0.6**
TIXI pmax pmax
comp=Z,38nm,1.3s,mb5.5
TIXI Tiksi 85.85 349 eP **P 11 58 19.9 -0.2**
DAWY Dawson 85.94 21 eP **P 11 58 21.3 +0.6**
ISA Isabella 85.95 53 ⇓P **P 11 58 21.2 -0.3**
baz=86,SNR=5.5
ISA Isabella 85.95 53 eP **P 11 58 21.1 -0.4**
ISA pmax pmax
comp=Z,6.0nm,1.1s,mb4.7
ISA Isabella 85.95 53 eP **P 11 58 21.1 -0.3**
comp=Z,6.5nm,1.1s,mb4.8
H04A Detroit Lake 86.03 43 ⇓P **P 11 58 21.3 -0.3**
baz=86
WAKR Walker 86.03 50 eP **P 11 58 22.0 +0.2**
WCN Washoe City 86.04 49 ⇑P **P 11 58 21.9 +0.1**
baz=86
EDW2 Edwards Air Fo 86.11 54 ⇓P **P 11 58 22.0 -0.2**
baz=86,SNR=5.6
BFSC Mount Baldy Ra 86.19 54 ⇑P **P 11 58 22.3 -0.4**
baz=86
K05A Summer Lake 86.28 45 ⇑P **P 11 58 23.1 +0.2**
baz=86
MTUM Tungsten Hills 86.36 51 eP **P 11 58 23.9 +0.5**
LRMC Laurel Mountai 86.51 53 ⇓P **P 11 58 24.1 -0.1**
baz=86
MPMC Manual Prospec 86.83 53 ⇓P **P 11 58 26.0 +0.2**
baz=87,SNR=6.2
MONP Monument Peak 86.83 56 ⇑P **P 11 58 26.0 +0.2**
baz=87
NVAR Mina Array Bea 86.86 50 P **P 11 58 26.4 +0.5**
comp=Z,4.8nm,1.0s,mb4.7,baz=234,slow=7.3,SNR=26
NVAR Mina Array Bea 86.86 50 P **P 11 58 26.4 +0.5**
GRAC Grapevine Rang 87.18 52 ⇑P **P 11 58 27.9 +0.5**
baz=87
FURC Furnace Creek, 87.43 52 ⇑P **P 11 58 28.8 +0.1**
baz=87
BELC Belle Mtn. Jos 87.46 55 ⇓P **P 11 58 29.4 +0.5**
baz=88,SNR=6.1
I07A Izee 87.66 44 ⇑P **P 11 58 29.4 -0.2**
baz=88,SNR=8.4
GMRC Granite Mounta 87.93 54 ⇓P **P 11 58 30.9 -0.3**
baz=88,SNR=5.0
S10A Tonopah Range, 88.02 51 ⇓P **P 11 58 31.6 +0.1**
baz=88,SNR=6.5
J08A Circle Bar Ran 88.16 45 ⇓P **P 11 58 31.5 -0.5**
baz=88,SNR=8.0
IRM Iron Mountain 88.18 55 ⇑P **P 11 58 30.2 -2.1**
baz=88,SNR=5.6
V11A Goodsprings 88.38 53 ⇓P **P 11 58 32.8 -0.5**
baz=88
G08A Pilot Rock 88.39 43 ⇓P **P 11 58 33.0 -0.1**
baz=88,SNR=12
V12A Nelson 88.81 53 ⇑P **P 11 58 35.1 -0.1**
baz=89
T11A Corn Creek, Al 88.90 52 ⇓P **P 11 58 35.6 0.0**
baz=89
R11A Troy Canyon, C 88.90 51 ⇓P **P 11 58 35.2 -0.4**
baz=89
D08A Wollman Farm, 88.94 42 ⇑P **P 11 58 34.9 -0.8**
baz=89
Q11A Duckwater 88.97 50 ⇑P **P 11 58 35.8 -0.2**
baz=89,SNR=10
M10A I.L. Ranch, Tu 89.02 47 ⇑P **P 11 58 36.2 +0.1**
baz=89
B08A Colville Reser 89.07 40 ⇑P **P 11 58 35.7 -0.5**
baz=89
K10A MacKenzie Ranc 89.12 46 ⇓P **P 11 58 35.9 -0.7**
baz=89,SNR=6.8
Z13A Yuma Proving G 89.15 56 ⇑P **P 11 58 37.2 +0.3**
baz=89,SNR=5.2
Y13A Salome 89.16 55 ⇓P **P 11 58 38.0 +1.1**
baz=89
U12A Valley of Fire 89.23 53 ⇓P **P 11 58 37.5 +0.3**
baz=89,SNR=5.3
S12A Delamar Landin 89.28 52 ⇓P **P 11 58 38.1 +0.7**
baz=89,SNR=8.1
BMO Blue Mountains 89.39 44 eP **P 11 58 37.5 -0.3**
W13A Hualapai Mount 89.42 54 ⇓P **P 11 58 38.2 +0.1**
baz=89
V13A Grand Canyon W 89.52 53 ⇓P **P 11 58 39.0 +0.4**
baz=90,SNR=9.6
M11A Holland Ranch, 89.54 48 ⇓P **P 11 58 38.9 +0.3**
baz=90,SNR=6.6
R12A Pony Springs, 89.64 51 ⇓P **P 11 58 39.3 +0.2**
baz=90,SNR=9.4
Q12A Willow Creek R 89.65 50 ⇓P **P 11 58 39.5 +0.4**
baz=90
U13A Pakoon Wash 89.67 53 ⇑P **P 11 58 39.2 -0.1**
baz=90,SNR=9.3
P12A McGill 89.69 50 ⇓P **P 11 58 39.7 +0.4**
baz=90,SNR=6.0
K11A Parker Ranch, 89.72 46 ⇑P **P 11 58 39.0 -0.4**
baz=90,SNR=8.3
F10A Beach Ranch, E 89.75 43 ⇑P **P 11 58 39.1 -0.4**
baz=90,SNR=7.6
L11A Cat Creek Ranc 89.76 47 ⇓P **P 11 58 39.0 -0.6**
baz=90,SNR=7.4
Y14A Wickenburg 89.86 55 ⇓P **P 11 58 40.0 -0.2**
baz=90
T13A Saint George 89.86 52 ⇓P **P 11 58 40.4 +0.3**
baz=90,SNR=16
N12A Clover Valley, 89.94 48 ⇓P **P 11 58 40.8 +0.3**
baz=90,SNR=8.7
N12A Clover Valley, 89.94 48 eP **P 11 58 41.4 +0.9**
O12A Currie 90.01 49 ⇑P **P 11 58 40.8 0.0**
baz=90,SNR=12
MFID Camas Ranch 90.03 46 ⇑P **P 11 58 40.2 -0.6**
baz=90
S13A Holt Ranch, En 90.03 52 ⇓P **P 11 58 41.0 0.0**
baz=90
I11A Placerville 90.07 45 ⇑P **P 11 58 41.1 +0.2**
baz=90,SNR=14
X14A Yava 90.07 55 ⇓P **P 11 58 41.8 +0.6**
baz=90,SNR=6.9
W14A Seligman 90.08 54 ⇑P **P 11 58 41.5 +0.3**
baz=90,SNR=5.3
R13A O'Grain Ranch, 90.09 51 ⇓P **P 11 58 41.9 +0.7**
baz=90,SNR=5.7
V14A Boquillas Ranc 90.17 54 ⇓P **P 11 58 41.4 -0.2**
baz=90,SNR=7.3
M12A Wells 90.17 48 ⇓P **P 11 58 42.1 +0.6**
baz=90,SNR=8.5
Q13A Wheeler Ranch, 90.24 50 ⇓P **P 11 58 41.4 -0.5**
baz=90,SNR=7.3
L12A House Creek Ra 90.28 47 ⇓P **P 11 58 42.5 +0.5**
baz=90,SNR=8.5
U14A Mt Trumbull 90.29 53 ⇓P **P 11 58 42.8 +0.6**
baz=90,SNR=17
P13A Bates Ranch, G 90.36 50 ⇓P **P 11 58 43.1 +0.7**
baz=90,SNR=8.6
Y15A Casa Rosa Ranc 90.40 56 ⇓P **P 11 58 43.2 +0.5**
baz=90,SNR=8.9
CCUT Cedar City 90.41 52 eP **P 11 58 43.1 +0.4**
NEW Newport 90.46 41 eP **P 11 58 41.7 -1.0**
K12A Draper Farm, C 90.49 47 ⇓P **P 11 58 43.1 +0.2**
baz=90,SNR=7.4
J12A Stokes Ranch, 90.50 46 ⇑P **P 11 58 43.9 +0.9**
baz=90,SNR=19
T14A Hurricane 90.51 52 ⇑P **P 11 58 43.3 +0.1**
baz=90,SNR=8.1
X15A Humboldt 90.60 55 P **P 11 58 44.4 +0.7**
baz=91,SNR=8.8
116A Eloy 90.61 57 ⇑P **P 11 58 43.1 -0.7**
baz=91
I12A Atlanta 90.61 46 ⇓P **P 11 58 43.7 +0.2**
baz=91,SNR=9.3
216A Three Points, 90.69 58 ⇑P **P 11 58 43.9 -0.3**
baz=91
M13A Montello 90.71 48 ⇑P **P 11 58 44.4 +0.4**
baz=91,SNR=12
M13A Montello 90.71 48 eP **P 11 58 44.4 +0.4**
comp=Z,36nm,1.5s,mb5.5
Q14A Sevier Lake (B 90.81 51 ⇑P **P 11 58 45.0 +0.5**
baz=91,SNR=14
G12A Big Creek, Yel 90.82 44 ⇑P **P 11 58 44.6 +0.2**
baz=91
C11A Tepee Creek (N 90.90 41 ⇑P **P 11 58 44.6 -0.2**
baz=91
V15A Kaibab Nationa 90.95 54 ⇓P **P 11 58 45.6 +0.4**
baz=91,SNR=9.2
E12A Beaver Dam Sad 90.98 43 ⇓P **P 11 58 44.7 -0.4**
baz=91
U15A North Rim 90.99 53 ⇓P **P 11 58 46.1 +0.7**
baz=91,SNR=13
H12A Diamond D Ranc 91.00 45 ⇑P **P 11 58 45.0 -0.3**
baz=91,SNR=7.7
F12A Elk City 91.03 44 ⇑P **P 11 58 44.8 -0.6**
baz=91,SNR=15
L13A Double Diamond 91.04 47 ⇓P **P 11 58 45.9 +0.3**
baz=91
HLID Hailey 91.06 46 ⇓P **P 11 58 46.1 +0.6**
baz=91,SNR=11
Y16A Circle Bar Ran 91.08 56 ⇓P **P 11 58 46.5 +0.6**
baz=91,SNR=6.2
P14A Drum Mountains 91.10 50 ⇓P **P 11 58 46.1 +0.2**
baz=91,SNR=5.6
J13A Cove Ranch, Pi 91.19 46 ⇓P **P 11 58 46.9 +0.7**
baz=91,SNR=7.6
X16A Lo Mia Camp, P 91.23 55 ⇓P **P 11 58 46.6 0.0**
baz=91,SNR=6.0
D12A Red Ives Fores 91.29 42 ⇑P **P 11 58 46.3 -0.3**
baz=91
M14A Sheep Mountain 91.34 48 ⇓P **P 11 58 47.2 +0.2**
baz=91,SNR=11
I13A Wildhorse Cree 91.36 46 ⇑P **P 11 58 46.2 -0.8**
baz=91,SNR=23
H13A Challis 91.42 45 ⇓P **P 11 58 47.4 +0.2**
baz=92,SNR=12
SYO Syowa Base 91.48 197 ⇑eP **P 11 58 45.6 -1.5**
WUAZ Wupatki 91.52 54 ⇑P **P 11 58 48.7 +0.8**
baz=92
WUAZ Wupatki 91.52 54 eP **P 11 58 48.3 +0.4**
MSU Marysvale 91.54 51 eP **P 11 58 49.6 +1.7**
L14A Malta 91.54 48 ⇑P **P 11 58 47.6 -0.3**
baz=92,SNR=9.6
Y17A Roosevelt 91.56 56 ⇓P **P 11 58 47.9 -0.2**
baz=92
G13A Cobalt 91.56 44 ⇓P **P 11 58 47.7 -0.2**
baz=92,SNR=16
J14A Carey 91.64 46 ⇓P **P 11 58 48.0 -0.3**
baz=92
F13A Darby 91.66 44 ⇓P **P 11 58 47.9 -0.4**
baz=92,SNR=26
K14A Jones Ranch, D 91.70 47 ⇓P **P 11 58 47.5 -1.1**
baz=92,SNR=5.1
X17A Forest Lakes 91.72 56 ⇓P **P 11 58 49.2 +0.3**
baz=92
S16A Weppner Ranch, 91.81 52 ⇓P **P 11 58 48.8 -0.4**
baz=92,SNR=6.3
HVU Hansel Valley 91.82 48 eP **P 11 58 50.2 +1.0**
I14A Mackay 91.83 46 ⇓P **P 11 58 48.9 -0.2**
baz=92
BSMT Bassoo Peak 91.86 42 eP **P 11 58 49.5 +0.3**
D13A Huson 91.89 42 ⇓P **P 11 58 48.7 -0.7**
baz=92
E13A Victor 91.92 43 ⇑P **P 11 58 48.6 -0.9**
baz=92
C13A Hot Springs 91.96 42 ⇑P **P 11 58 47.6 -2.0**
baz=92
V17A Tonalea, Kykot 92.00 54 ⇑P **P 11 58 47.1 -3.1**
baz=92
R16A Teasdale 92.02 52 ⇑P **P 11 58 50.6 +0.5**
baz=92,SNR=7.5
H14A Leadore 92.05 45 ⇓P **P 11 58 50.6 +0.5**
baz=92,SNR=15
G14A Jackson 92.13 44 ⇑P **P 11 58 50.7 +0.2**
baz=92
L15A Malad City 92.15 48 ⇑P **P 11 58 49.7 -1.0**
baz=92
B13A Whitefish 92.20 41 ⇑P **P 11 58 49.7 -1.0**
baz=92
T17A Navajo Res., N 92.28 53 ⇓P **P 11 58 52.2 +0.9**
baz=92
E14A Clinton 92.38 43 ⇑P **P 11 58 51.1 -0.5**
baz=92
O16A Springville 92.42 50 ⇓P **P 11 58 51.0 -0.9**
baz=92
J15A Blackfoot 92.43 46 ⇑P **P 11 58 52.4 +0.5**
baz=92,SNR=5.8
MCMT McKenzie Canyo 92.45 45 eP **P 11 58 52.5 +0.4**
comp=Z,1.8nm,0.9s,mb4.4
X18A Snowflake 92.45 55 ⇑P **P 11 58 51.8 -0.4**
baz=92
219A White Tail Can 92.52 58 ⇓P **P 11 58 52.6 -0.1**
baz=92
D14A Greenough 92.52 43 ⇓P **P 11 58 51.5 -0.8**
baz=93
C14A Swan Lake 92.52 42 ⇓P **P 11 58 51.5 -0.7**
baz=93
H15A Lima 92.55 45 ⇑P **P 11 58 52.8 +0.4**
baz=93,SNR=15
R17A Hanksville Air 92.64 52 ⇓P **P 11 58 53.3 +0.3**
baz=93
CHMT Chamberlain Mo 92.65 43 eP **P 11 58 53.0 +0.1**
HWUT Hardware Ranch 92.67 48 eP **P 11 58 53.4 +0.3**
WALA Waterton Lakes 92.72 41 eP **P 11 58 53.7 +0.6**
MK31 Makanchi Array 92.73 317 eP **P 11 58 53.2 0.0**
MKAR Makanchi Array 92.73 317 P **P 11 58 53.2 0.0**
comp=Z,12nm,0.8s,mb5.4,baz=100,slow=6.3,SNR=70
MKAR PKKP PKKPbc 12 16 04.5 -2.1
comp=Z,0.4nm,0.3s,baz=304,slow=2.8,SNR=4.6
MKAR Makanchi Array 92.73 317 P **P 11 58 53.2 0.0**
MKAR PKKP PKKPbc 12 16 04.5 -2.1
DLMT Dillon 92.75 44 eP **P 11 58 53.8 +0.5**
comp=Z,14nm,1.1s,mb5.3
G15A Dillon 92.78 45 ⇑P **P 11 58 53.9 +0.4**
baz=93
ZALV Zalesovo Beam 92.88 324 P **P 11 58 52.8 -0.9**
comp=Z,6.2nm,0.8s,mb5.1,baz=108,slow=4.8,SNR=21
Y19A Nutrioso 92.91 56 ⇑P **P 11 58 54.8 +0.4**
baz=93
K16A Soda Springs 92.91 47 ⇓P **P 11 58 54.9 +0.8**
baz=93
F15A Butte 92.92 44 ⇑P **P 11 58 54.0 -0.1**
baz=93,SNR=8.9
LRM Limekiln Ridge 92.95 44 eP **P 11 58 54.5 +0.3**
E15A Deer Lodge 92.95 43 ⇑P **P 11 58 54.3 0.0**
baz=93,SNR=7.7
G16A Moss Hill, Enn 93.26 45 ⇓P **P 11 58 54.6 -1.1**
baz=93,SNR=7.8
C15A Salmond Ranch, 93.27 42 ⇑P **P 11 58 55.4 -0.3**
baz=93
A15A Johnson Ranch, 93.45 41 ⇓P **P 11 58 55.9 -0.7**
baz=94
BOZ Bozeman (W) 93.47 44 ⇓P **P 11 58 57.0 +0.3**
baz=94,SNR=7.0
F16A Kennard Place, 93.50 44 ⇓P **P 11 58 56.9 +0.1**
baz=94,SNR=5.9
H16A Russell Place, 93.54 45 ⇑P **P 11 58 57.0 0.0**
baz=94,SNR=6.8
HRY Holter Researc 93.56 43 eP **P 11 58 57.6 +0.6**
D16A Dana Ranch, Ca 93.81 43 ⇑P **P 11 58 57.4 -0.8**
baz=94
C16A Fuhringer Ranc 93.84 42 ⇓P **P 11 58 56.5 -1.8**
baz=94
NVS Novosibirsk 93.99 325 iP **P 11 58 57.0 -1.8**
J18A Kendall Valley 94.11 47 ⇑P **P 11 58 59.7 0.0**
baz=94
F17A Fitzpatrick Pl 94.19 44 ⇓P **P 11 59 00.4 +0.4**
baz=94,SNR=5.8
BW06 Boulder Array 94.36 47 eP **P 11 59 01.0 +0.1**
PDAR Pinedale Array 94.36 47 P **P 11 59 00.9 +0.1**
comp=Z,1.9nm,0.8s,mb4.5,baz=247,slow=3.1,SNR=14
C17A Wharram Farm, 94.46 42 ⇓P **P 11 59 00.4 -0.8**
baz=94,SNR=6.5
B17A L&G Farms, Che 94.57 42 ⇓P **P 11 59 01.1 -0.6**
baz=95
U21A Nageezi 94.65 54 ⇑P **P 11 59 03.0 +0.7**
baz=95
A17A Triple J Farms 94.76 41 ⇓P **P 11 59 01.6 -0.9**
baz=95
E18A Harlowton 94.83 44 ⇓P **P 11 59 03.4 +0.5**
baz=95,SNR=5.0
F18A Big Timber 94.84 44 ⇓P **P 11 59 03.3 +0.3**
baz=95
K19A Absolon Red Bu 94.89 47 ⇓P **P 11 59 02.7 -0.6**
baz=95
YKA Yellowknife Ar 95.46 27 P **P 11 59 04.1 -1.3**
comp=Z,2.5nm,0.8s,mb4.7,baz=262,slow=4.2,SNR=8.4
YKA Yellowknife Ar 95.46 27 P **P 11 59 04.1 -1.3**
KURK Kurchatov 95.90 320 ⇓eP **P 11 59 06.2 -1.5**
KURK pmax pmax
comp=Z,5.0nm,1.1s,mb4.9
TXAR Lajitas Array 96.80 62 P **P 11 59 11.1 -1.2**
comp=Z,0.3nm,0.8s,mb3.8,baz=232,slow=9.8,SNR=3.2
BVAR Borovoye Array 101.24 322 P Pdif 11 59 30.5 -1.2
comp=Z,2.7nm,0.8s,baz=72,slow=4.8,SNR=13
ARCES ARCESS Array B 116.02 345 PKP PKPdf 12 04 22.8 -0.6
comp=Z,2.1nm,0.6s,baz=109,slow=1.5,SNR=17
OBN Obninsk 120.19 328 ⇓iPKIKP PKPdf 12 04 28.9 -2.9
OBN e 12 05 59.2
OBN eSS SS 12 22 27.4 +4.7
OBN pmax pmax
comp=Z,3.0nm,0.5s
KIV Kislovodsk 120.41 315 ⇑iPKIKP PKPdf 12 04 30.4 -2.2
KIV e 12 05 57.5
KIV pmax pmax
comp=Z,6.0nm,1.2s
LPAZ La Paz 121.20 117 PKP PKPdf 12 04 35.6 +0.7
comp=Z,1.7nm,0.8s,baz=146,slow=1.3,SNR=5.4
LPAZ La Paz 121.20 117 ePKPdf PKPdf 12 04 36.0 +1.1
FINES FINESS Array B 121.33 338 PKP PKPdf 12 04 32.9 -0.9
comp=Z,3.4nm,1.0s,baz=114,slow=8.5,SNR=7.0
FINES FINESS Array B 121.33 338 PKP PKPdf 12 04 32.9 -0.9
BOSA Boshof 124.36 224 PKP PKPdf 12 04 41.3 +0.6
comp=Z,4.2nm,0.9s,baz=94,slow=6.6,SNR=6.4
CPUP Villa Florida 124.87 133 PKP PKPdf 12 04 41.8 +0.1
comp=Z,3.0nm,0.7s,baz=102,slow=2.9,SNR=7.8
AKASG Malin Array Be 126.22 326 PKP PKPdf 12 04 42.9 -0.6
comp=Z,0.3nm,0.2s,baz=77,slow=0.9,SNR=5.9
NB2 NORSAR Subarra 126.38 344 PKPdf PKPdf 12 04 42.7 -0.8
comp=Z,1.2nm,0.8s,baz=39,slow=1.9
NOA NORSAR Array B 126.38 344 PKP PKPdf 12 04 42.8 -0.7
comp=Z,2.2nm,0.8s,baz=35,slow=1.9,SNR=6.8
HFS Hagfors 126.42 342 PKP PKPdf 12 04 43.2 -0.4
comp=Z,2.0nm,0.8s,baz=33,slow=3.4,SNR=3.0
BRTR Keskin Array B 128.12 312 PKP PKPdf 12 04 48.0 +0.5
comp=Z,2.7nm,1.2s,baz=157,slow=0.9,SNR=6.2
BRTR PP PP 12 06 48.7 -2.2
comp=Z,0.4nm,0.5s,baz=107,slow=4.1,SNR=4.4
CLL Collm 133.62 336 ePKIKP PKPdf 12 04 58.0 +0.4
CLL pmax pmax
comp=Z,6.0nm,1.1s
CLL Collm 133.62 336 ePKPdf PKPdf 12 04 58.0 +0.4
comp=Z,6.0nm,1.1s
DAVOX Davos/Dischmat 138.42 334 PKP PKPdf 12 05 06.0 -0.6
comp=Z,2.2nm,0.5s,baz=3.1,slow=4.9,SNR=4.5
LASF Ste Croix 143.10 337 ePKIKP PKPdf 12 05 11.4 -3.8
comp=Z,45nm,1.5s
MTLF Montolieu 144.35 338 ePKIKP PKPdf 12 05 15.4 -2.0
comp=Z,114nm,1.5s
EPF Esparros 145.29 340 ePKIKP PKPdf 12 05 17.1 -1.9
ETSF Etsaut 145.71 340 ePKIKP PKPdf 12 05 19.8 +0.1
SJPF Ste Jean 145.73 341 ePKIKP PKPdf 12 05 19.0 -0.8
comp=Z,43nm,1.5s
MVO Moncorvo 149.08 348 ePKP PKPab 12 05 31.8 -1.9
PVRL Vila Real 149.11 349 ePKP PKPbc 12 05 29.5 -0.1
PVIS Viseu 149.69 349 ePKP PKPbc 12 05 31.6 +0.6
ESDC Sonseca Array 149.71 342 PKPbc PKPbc 12 05 31.3 +0.2
comp=Z,1.3nm,0.6s,baz=32,slow=2.3,SNR=12
MTE Manteigas 149.92 348 ePKP PKPbc 12 05 31.5 -0.1
PMRV Marv??o 150.82 347 ePKP PKPbc 12 05 34.0 +0.2
PTOM Tomar 150.85 349 ePKP PKPbc 12 05 33.7 -0.2
PESTR Estremoz 151.40 347 ePKP PKPbc 12 05 35.2 0.0
PBEJ Beja 152.27 347 ePKP PKPbc 12 05 37.8 +0.6
MDT Midelt 156.14 337 PKPab PKPab 12 06 04.6 +1.1
comp=Z,7.5nm,0.9s,baz=41,slow=4.4,SNR=11
TORD Torodi Ar. Bea 163.15 279 PKP PKPdf 12 05 44.5 -0.1
comp=Z,4.1nm,1.0s,baz=74,slow=1.0,SNR=13

IDC 19 12:14:18.4±2.7,22°.09N×143°.68E,h0km,mb3.9/5, mb1 4.0/5,mb1mx3.6/25,mbtmp3.9/5,Error ellipse: s-maj=147.2km s-min=32.8km az=88.0,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**42.76**	**193**	P	P	12 22 18.2	+0.5
	1.6nm,0.5s,baz=15,slow=8.9,SNR=44						
FITZ	**Fitzroy Crossi**	**43.67**	**205**	P	P	12 22 24.5	-0.6
	1.4nm,0.7s,baz=14,slow=11,SNR=6.6						
ASAR	**Alice Springs**	**46.46**	**192**	P	P	12 22 47.2	-0.1
	0.4nm,0.6s,baz=15,slow=11,SNR=12						
STKA	**Stephens Creek**	**53.70**	**182**	P	P	12 23 41.8	-0.3
	1.7nm,0.7s,baz=342,slow=6.4,SNR=2.9						
FINES	**FINESS Array B**	**83.03**	**335**	P	P	12 26 45.4	0.0
	0.8nm,0.8s,baz=65,slow=11,SNR=3.7						

*IDC **19** 12:18:50.6±1.7,36°.94N×25°.16E,h0km,mb3.7/3, mb1 3.5/4,mb1mx3.2/26,mbtmp3.5/4,ML2.7/1,Error ellipse: s-maj=192.6km s-min=25.8km az=142.0*
*ATH **19** 12:18:53.0,35°.63N×26°.39E,h30km±1km,MD3.4/9*
*THE **19** 12:18:53.8,35°.39N×26°.29E,h66km±6km,Error ellipse: s-maj=7.4km s-min=1.4km az=212.0*
*NEIC **19** 12:18:53.0,35°.63N×26°.39E,h30km,MD3.4(ATH),After ATH.*
*ISCJB **19** 12:18:53.2±0.8,35°.56N±0°.03×26°.43E±0°.03,h21km±7km, mb3.5/3,Error ellipse: s-maj=6.1km s-min=4.2km az=155.8*
*CSEM **19** 12:18:54.9±0.2,35°.52N×26°.43E,h40km,MD3.4,Error ellipse: s-maj=6.5km s-min=4.6km az=156.0*

ISC 19 12:18:54.3±0.7,35°.59N±0°.03×26°.39E±0°.03,h22km±7km, n49,σ1°.06/79,mb3.5/3,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.49**	**197**	ePn	**Pb**	**12 19 03.9**	**-0.5**
ZKR				eSn	**Sb**	**12 19 12.6**	**+1.4**
ZKR	**Zakros**	**0.49**	**197**	ePN	**Pb**	**12 19 03.9**	**-0.5**
ZKR				eSN	**Sb**	**12 19 12.6**	**+1.4**
ZKR	**Zakros**	**0.49**	**197**	P	**Pb**	**12 19 03.8**	**-0.6**
ZKR	**Zakros**	**0.49**	**197**	ePn	**Pb**	**12 19 03.9**	**-0.5**
ZKR				eSn	**Sb**	**12 19 12.6**	**+1.4**
KARP	**Karpathos**	**0.63**	**94**	ePn	**Pn**	**12 19 05.9**	**-2.0**
KARP				eSn	**Sb**	**12 19 16.0**	**+1.0**
KARP	**Karpathos**	**0.63**	**94**	ePN	**Pn**	**12 19 05.9**	**-2.0**
KARP				eSN	**Sb**	**12 19 16.0**	**+1.0**
KARP	**Karpathos**	**0.63**	**94**	ePn	**Pn**	**12 19 05.9**	**-2.0**
KARP				eSn	**Sb**	**12 19 16.0**	**+1.0**
NPS	**Neapolis**	**0.71**	**243**	ePn	**Pn**	**12 19 07.8**	**-1.3**
NPS				eSn	**Sn**	**12 19 18.0**	**-1.4**
NPS	**Neapolis**	**0.71**	**243**	ePN	**Pn**	**12 19 07.8**	**-1.3**
NPS				eSN	**Sn**	**12 19 18.0**	**-1.4**
NPS	**Neapolis**	**0.71**	**243**	ePn	**Pn**	**12 19 07.8**	**-1.3**
NPS				eSn	**Sn**	**12 19 18.0**	**-1.4**
LAST	**Lasithi**	**0.86**	**240**	ePn	**Pn**	**12 19 10.4**	**-0.7**
LAST				eSn	**Sn**	**12 19 23.2**	**+0.2**
LAST	**Lasithi**	**0.86**	**240**	ePN	**Pn**	**12 19 10.4**	**-0.7**
LAST				eSN	**Sn**	**12 19 23.2**	**+0.2**
LAST	**Lasithi**	**0.86**	**240**	ePn	**Pn**	**12 19 10.4**	**-0.7**
LAST				eSn	**Sn**	**12 19 23.2**	**+0.2**
THR1	**Thera Island**	**1.08**	**316**	P	**Pn**	**12 19 13.9**	**-0.3**
	415nm,0.5s						
THR1				S	**Sb**	**12 19 29.6**	**+1.5**
THR1	**Thera Island**	**1.08**	**316**	P	**Pn**	**12 19 13.9**	**-0.3**
	415nm,0.5s						

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
THR1				S	Sb	12 19 29.6	+1.5
THR6	Thira Island,	1.11	314	P	Pn	12 19 14.4	-0.2
THR6	Thira Island,	1.11	314	P	Pn	12 19 14.4	-0.2
THR3	Thira Island,	1.15	316	P	Pn	12 19 15.1	+0.1
THR3	Thira Island,	1.15	316	P	Pn	12 19 15.1	+0.1
THR5	Thira Island,	1.18	315	P	Pn	12 19 15.3	-0.2
THR5	Thira Island,	1.18	315	P	Pn	12 19 15.3	-0.2
NIS1	Nisyros Isl.	1.20	32	P	Pn	12 19 17.2	+1.5
NIS1	Nisyros Isl.	1.20	32	P	Pn	12 19 17.2	+1.5
SIVA	Sivas	1.41	247	ePn	Pn	12 19 19.1	+0.4
SIVA				eSn	Sn	12 19 37.9	+1.3
SIVA	Sivas	1.41	247	ePN	Pn	12 19 19.1	+0.4
SIVA				eSN	Sn	12 19 37.9	+1.3
SIVA	Sivas	1.41	247	ePn	Pn	12 19 19.1	+0.4
SIVA				eSn	Sn	12 19 37.9	+1.3
ARG	Arkhangelos	1.54	66	ePn	Pn	12 19 20.6	+0.1
ARG				eSn	Sn	12 19 39.8	0.0
ARG	Arkhangelos	1.54	66	ePN	Pn	12 19 20.6	+0.1
ARG				eSN	Sn	12 19 39.8	0.0
ARG	Arkhangelos	1.54	66	P	Pn	12 19 20.6	+0.1
ARG	Arkhangelos	1.54	66	ePn	Pn	12 19 20.6	+0.1
ARG				eSn	Sn	12 19 39.8	0.0
APE	Apeiranthos	1.63	335	ePb	Pb	12 19 20.9	-2.8
APE				eSn	Sn	12 19 41.9	-0.1
APE	Apeiranthos	1.63	335	ePB	Pb	12 19 20.9	-2.8
APE				eSN	Sn	12 19 41.9	-0.1
APE	Apeiranthos	1.63	335	P	Pn	12 19 21.1	-0.6
APE				S	Sn	12 19 43.8	+1.8
APE	Apeiranthos	1.63	335	ePb	Pb	12 19 20.9	-2.8
APE				eSn	Sn	12 19 41.9	-0.1
APE				S	Sn	12 19 43.8	+1.8
VAM	Vamos	1.80	265	ePb	Pb	12 19 23.9	-2.6
VAM				eSn	Sn	12 19 47.2	+1.1
VAM	Vamos	1.80	265	ePB	Pb	12 19 23.9	-2.6
VAM				eSN	Sn	12 19 47.2	+1.1
VAM	Vamos	1.80	265	ePb	Pb	12 19 23.9	-2.6
VAM				eSn	Sn	12 19 47.2	+1.1
KARN	Karanos	2.03	265	ePN	Pn	12 19 26.9	-0.2
KARN				eSN	Sn	12 19 52.0	+0.2
KARN	Karanos	2.03	265	ePn	Pn	12 19 26.9	-0.2
KARN				eSn	Sn	12 19 52.0	+0.2
GVD	Gavdhos	2.03	249	ePn	Pn	12 19 27.6	+0.4
GVD	Gavdhos	2.03	249	ePN	Pn	12 19 27.6	+0.4
GVD	Gavdhos	2.03	249	ePn	Pn	12 19 27.6	+0.4
KYTH	Kithira	2.81	285	ePn	Pn	12 19 38.3	+0.4
KYTH	Kithira	2.81	285	ePN	Pn	12 19 38.2	+0.3
KYTH	Kithira	2.81	285	ePn	Pn	12 19 38.3	+0.4
BRTR	Keskin Array B	7.08	52	Pn	Pn	12 20 37.8	+1.3
	0.1nm,0.3s,baz=217,slow=16,SNR=4.5						
TORD	Torodi Ar. Bea	31.54	231	P	P	12 25 15.7	+0.7
	0.2nm,0.5s,mb3.2,baz=34,slow=8.8,SNR=4.2						
MKAR	Makanchi Array	42.70	57	P	P	12 26 49.7	+0.3
	0.5nm,0.5s,mb3.5,baz=285,slow=6.4,SNR=4.8						
ZALV	Zalesovo Beam	43.98	46	P	P	12 26 57.8	-1.9
	0.6nm,0.4s,mb3.7,baz=270,slow=7.2,SNR=3.0						

*IDC **19** 12:31:14.6±1.2, 37.°45N×142.°74E, h0km, mb3.5/5, mb1 3.6/8, mb1mx3.5/26, mbtmp3.6/8, ML3.5/3, MS4.2/1, Ms1 4.2/1, ms1mx3.0/28, Error ellipse: s-maj=30.9km s-min=20.7km az=96.0*
*ISCJB **19** 12:31:17.0±2.0, 37.°51N±0.°05×142.°70E±0.°07, h32km±17km, mb3.5/5, Error ellipse: s-maj=9.7km s-min=7.9km az=2.4*
*JMA **19** 12:31:16.2±0.2, 37.°54N×142.°64E, h20km±4km, M3.7*
*NEIC **19** 12:31:16.3, 37.°54N×142.°64E, h20km, MG3.7(JMA), After JMA.*

ISC 19 12:31:18.0±2.1, 37.°55N±0.°04×142.°62E±0.°07, h23km±17km, n24,σ0.°85/32, mb3.5/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIO	Ouri	1.35	312	P	Pn	12 31 40.3	-1.1
JIO				S	Sn	12 31 58.3	-0.3
JFK	Kawauchi	1.40	263	P	Pn	12 31 41.2	-0.9
JMM	Marumori	1.48	283	P	Pn	12 31 41.9	-1.3
JMM				S	Sn	12 32 01.0	-0.9
ONAJ	Iwakimizuishiy	1.52	253	P	Pn	12 31 42.8	-1.0
JOU	Okura	1.75	298	P	Pn	12 31 46.6	-0.3
JMK	Ichinoseki	1.78	322	P	Pn	12 31 47.3	0.0
JFT	Otama	1.82	270	P	Pn	12 31 47.7	-0.1
JFT				S	Sn	12 32 10.6	+0.5
JYS	Shiratake	2.13	289	P	Pn	12 31 52.7	+0.6
JOM	Ohasama	2.18	332	P	Pn	12 31 52.8	-0.1
JOM				S	Sn	12 32 19.3	+0.2
JYK	Kaneyama	2.24	308	P	Pn	12 31 54.0	+0.3
JAG	Ashikaga	2.77	247	P	Pn	12 32 01.1	+0.1
JAW	Awa shima	2.81	290	P	Pn	12 32 02.6	+1.1
JANG	Nango	2.94	343	P	Pn	12 32 04.1	+0.8
MJAR	Matsushiro Arr	3.67	255	Pn	Pn	12 32 14.4	+1.1
	2.2nm,0.3s,baz=84,slow=15,SNR=16						
MJAR				Sn	Sn	12 33 03.9	+8.0
	0.8nm,0.3s,baz=96,slow=3.8,SNR=2.9						
MAJO	Matsushiro	3.67	255	ePn	Pn	12 32 14.4	+1.0
MAT	Matsushiro	3.67	255	P	Pn	12 32 14.6	+1.2
MAT				S	Sn	12 33 02.6	+6.7
JHJ	Hachijo jima 2	5.00	208	Pn	Pn	12 32 29.7	-1.8
	11nm,0.3s,baz=70,slow=23,SNR=5.3						
JHJ				Sn	Sn	12 33 24.1	-4.5
	16nm,0.3s,baz=73,slow=24,SNR=7.6						
ASAJ	Asahikawa	6.56	360	Pn	Pn	12 32 53.1	+0.2
	0.7nm,0.3s,baz=187,slow=28,SNR=9.0						
ASAJ				Sn	Sn	12 34 05.5	-1.5
	0.4nm,0.3s,baz=102,slow=20,SNR=2.3						
SONM	Songino Array	28.30	303	P	P	12 37 10.7	+1.1
	0.7nm,0.8s,mb3.3,baz=105,slow=8.0,SNR=3.9						
SONM				LR	LR	12 47 39.3	
	comp=Z,453nm,21.4s,baz=132,slow=35						
SONM	Songino Array	28.30	303	P	P	12 37 10.7	+1.1
SONM				LR	LR	12 47 39.3	
MKAR	Makanchi Array	44.66	302	P	P	12 39 29.8	+1.0
	0.1nm,0.4s,mb3.0,baz=81,slow=8.9,SNR=2.6						
ILAR	Eielson Array	48.54	33	P	P	12 39 59.6	+0.8
	0.4nm,0.7s,mb3.6,baz=275,slow=6.7,SNR=5.3						
WRA	Warramunga Arr	57.72	189	P	P	12 41 06.4	-0.5
	0.7nm,0.6s,mb3.9,baz=5.5,slow=6.8						
ASAR	Alice Springs	61.44	189	P	P	12 41 32.2	-0.3
	0.9nm,1.1s,mb3.8,baz=16,slow=7.0,SNR=4.7						

*IDC **19** 12:35:02.9±1.0, 34.°24N×25.°34E, h0km, mb3.8/10, mb1 3.9/17, mb1mx3.8/32, mbtmp3.8/17, ML3.9/7, Error ellipse: s-maj=21.4km s-min=16.0km az=4.0*
*ISCJB **19** 12:35:06.3±0.7, 34.°24N±0.°05×25.°27E±0.°03, h49km±5km, mb3.7/13, Error ellipse: s-maj=8.3km s-min=4.2km az=6.1*
*NEIC **19** 12:35:07.0, 34.°32N×25.°22E, h42km, mb3.7/3, MD3.9(ATH), After ATH.*
*CSEM **19** 12:35:07.3±0.2, 34.°22N×25.°28E, h40km, ML3.7, Error ellipse: s-maj=5.4km s-min=3.1km az=22.0*
*ATH **19** 12:35:07.0, 34.°32N×25.°22E, h42km±1km, MD3.9/15, ML3.7*
*THE **19** 12:35:09.7, 34.°37N×25.°25E, h78km±5km, ML4.6/3, Error ellipse: s-maj=5.1km s-min=1.3km az=124.0*

ISC 19 12:35:07.8±0.6, 34.°25N±0.°04×25.°26E±0.°03, h39km±6km, n208,σ0.°98/238, mb3.7/13, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
XRY	Khrisi	0.71	30	eP	Pn	12 35 20.9	-0.5
XRY	Khrisi	0.71	30	eP	Pn	12 35 20.9	-0.5
XRY	Khrisi	0.71	30	eP	Pn	12 35 20.9	-0.5
SIVA	Sivas	0.85	334	eP	Pn	12 35 23.2	0.0
SIVA	Sivas	0.85	334	eP	Pn	12 35 23.2	0.0
SIVA	Sivas	0.85	334	eP	Pn	12 35 23.2	0.0
LAST	Lasithi	0.92	11	eP	Pn	12 35 24.2	0.0
LAST				eS	Sn	12 35 36.1	-0.2
LAST	Lasithi	0.92	11	eP	Pn	12 35 24.2	0.0
LAST				eS	Sn	12 35 36.1	-0.2
LAST	Lasithi	0.92	11	eP	Pn	12 35 24.2	0.0
LAST				eS	Sn	12 35 36.1	-0.2
NPS	Neapolis	1.05	16	eP	Pn	12 35 25.7	-0.2
NPS				eS	Sn	12 35 38.7	-0.6
NPS	Neapolis	1.05	16	eP	Pn	12 35 25.7	-0.2
NPS				eS	Sn	12 35 38.7	-0.6
NPS	Neapolis	1.05	16	eP	Pn	12 35 25.7	-0.2
NPS				eS	Sn	12 35 38.7	-0.6
IDI	Anoyia	1.08	344	P	Pn	12 35 26.3	-0.1
IDI	Anoyia	1.08	344	P	Pn	12 35 26.3	-0.1
GVD	Gavdhos	1.13	301	eP	Pn	12 35 27.1	0.0
GVD	Gavdhos	1.13	301	eP	Pn	12 35 27.1	0.0
GVD	Gavdhos	1.13	301	P	Pn	12 35 28.6	+1.5
GVD	Gavdhos	1.13	301	eP	Pn	12 35 27.1	0.0
ZKR	Zakros	1.16	42	eP	Pn	12 35 28.0	+0.4
ZKR				eS	Sn	12 35 43.2	+1.0
ZKR	Zakros	1.16	42	eP	Pn	12 35 28.0	+0.4
ZKR				eS	Sn	12 35 43.2	+1.0
ZKR	Zakros	1.16	42	P	Pn	12 35 28.2	+0.6
ZKR	Zakros	1.16	42	eP	Pn	12 35 28.0	+0.4
ZKR				eS	Sn	12 35 43.2	+1.0
VAM	Vamos	1.45	323	eP	Pn	12 35 31.5	+0.1
VAM				eS	Sn	12 35 48.7	-0.5
VAM	Vamos	1.45	323	eP	Pn	12 35 31.5	+0.1
VAM				eS	Sn	12 35 48.7	-0.5
VAM	Vamos	1.45	323	eP	Pn	12 35 31.5	+0.1
VAM				eS	Sn	12 35 48.7	-0.5
KARN	Karanos	1.59	316	eP	Pn	12 35 33.3	-0.1
KARN	Karanos	1.59	316	P	Pn	12 35 34.8	+1.4
KARN	Karanos	1.59	316	eP	Pn	12 35 33.3	-0.1
KARP	Karpathos	2.02	50	eP	Pn	12 35 40.0	+0.6
KARP	Karpathos	2.02	50	eP	Pn	12 35 40.0	+0.6
KARP	Karpathos	2.02	50	eP	Pn	12 35 40.0	+0.6
THR1	Thera Island	2.12	4	P	Pn	12 35 41.0	+0.3
	265nm,1.0s						
THR1				S	Sn	12 36 05.6	-0.1
THR1	Thera Island	2.12	4	P	Pn	12 35 41.0	+0.3
	265nm,1.0s						
THR1				S	Sn	12 36 05.6	-0.1
THR3	Thira Island,	2.15	3	P	Pn	12 35 42.0	+0.9
THR3	Thira Island,	2.15	3	P	Pn	12 35 42.0	+0.9
THR3	Thira Island,	2.15	3	P	Pn	12 35 42.0	+0.9
THR5	Thira Island,	2.16	2	P	Pn	12 35 41.5	+0.3
THR5	Thira Island,	2.16	2	P	Pn	12 35 41.5	+0.3
THR5	Thira Island,	2.16	2	P	Pn	12 35 41.5	+0.3
THR2	Thira island,	2.19	4	P	Pn	12 35 41.9	+0.2
THR2	Thira island,	2.19	4	P	Pn	12 35 41.9	+0.2
KYTH	Kithira	2.72	319	eP	Pn	12 35 49.8	+0.8
KYTH	Kithira	2.72	319	eP	Pn	12 35 49.8	+0.8
KYTH	Kithira	2.72	319	eP	Pn	12 35 49.8	+0.8
APE	Apeiranthos	2.82	4	eP	Pn	12 35 50.0	-0.3
APE				eS	Sn	12 36 22.9	-0.1
APE	Apeiranthos	2.82	4	eP	Pn	12 35 50.0	-0.3
APE				eS	Sn	12 36 22.9	-0.1
APE	Apeiranthos	2.82	4	P	Pn	12 35 50.0	-0.3
APE	Apeiranthos	2.82	4	eP	Pn	12 35 50.0	-0.3
APE				eS	Sn	12 36 22.9	-0.1
ARG	Arkhangelos	3.05	49	eP	Pn	12 35 54.2	+0.7
ARG	Arkhangelos	3.05	49	eP	Pn	12 35 54.2	+0.7
ARG	Arkhangelos	3.05	49	P	Pn	12 35 54.4	+0.9
ARG	Arkhangelos	3.05	49	eP	Pn	12 35 54.2	+0.7
VLI	Veliai	3.11	323	eP	Pn	12 35 54.0	-0.2
VLI	Veliai	3.11	323	eP	Pn	12 35 54.0	-0.2
VLI	Veliai	3.11	323	eP	Pn	12 35 54.0	-0.2
BDRM	Kayabasi	3.32	32	iP	Pn	12 35 56.7	-0.4
BDRM	Kayabasi	3.32	32	iP	Pn	12 35 56.7	-0.5
DID	Didima	3.64	334	eP	Pn	12 36 02.0	+0.5
DID	Didima	3.64	334	P	Pn	12 36 01.0	-0.6
DID				S	Sn	12 36 41.5	-1.7
DID	Didima	3.64	334	eP	Pn	12 36 02.0	+0.5
DID				S	Sn	12 36 41.5	-1.7
SMG	Samos	3.68	20	eP	Pn	12 36 01.9	-0.2
SMG	Samos	3.68	20	eP	Pn	12 36 01.9	-0.2
SMG	Samos	3.68	20	eP	Pn	12 36 01.9	-0.2
TURN	Turunc	3.77	45	iP	Pn	12 35 59.5	-3.9
TURN	Turunc	3.77	45	iP	Pn	12 35 59.5	-3.9
NAIG	Nisos Aigina	3.78	338	eP	Pn	12 36 03.8	+0.3
NAIG	Nisos Aigina	3.78	338	eP	Pn	12 36 03.8	+0.3
NAIG	Nisos Aigina	3.78	338	eP	Pn	12 36 03.8	+0.3
VLY	Voula,Athens	3.78	342	eP	Pn	12 36 03.9	+0.4
VLY	Voula,Athens	3.78	342	eP	Pn	12 36 03.9	+0.4
VLY	Voula,Athens	3.78	342	eP	Pn	12 36 03.9	+0.4
VLX	Vlachokerasia	3.89	324	eP	Pn	12 36 05.3	+0.2
VLX	Vlachokerasia	3.89	324	P	Pn	12 36 05.2	+0.1
VLX				S	Sn	12 36 47.9	-1.6
VLX	Vlachokerasia	3.89	324	eP	Pn	12 36 05.3	+0.2
VLX				S	Sn	12 36 47.9	-1.6
PYL	PYLOS	3.90	314	eP	Pn	12 36 05.5	+0.4
PYL	PYLOS	3.90	314	eP	Pn	12 36 05.5	+0.4
ATH	Athens Observa	3.92	342	eP	Pn	12 36 05.4	0.0
ATH	Athens Observa	3.92	342	eP	Pn	12 36 05.4	0.0
ATH	Athens Observa	3.92	342	eP	Pn	12 36 05.4	0.0
PTL	Penteli	3.95	344	P	Pn	12 36 07.9	+2.0
PTL	Penteli	3.95	344	P	Pn	12 36 07.9	+2.0
ITM	Ithomi	3.99	318	eP	Pn	12 36 06.7	+0.4
ITM	Ithomi	3.99	318	eP	Pn	12 36 06.7	+0.4
ITM	Ithomi	3.99	318	eP	Pn	12 36 06.7	+0.4
AYDN	Tasoluk	4.01	31	iP	Pn	12 36 07.2	+0.6
AYDN	Tasoluk	4.01	31	iP	Pn	12 36 07.2	+0.6
AKAS	Kas	4.07	60	iP	Pn	12 36 06.8	-0.6
AKAS	Kas	4.07	60	iP	Pn	12 36 06.8	-0.6
AKAS				iS	Sn	12 36 52.7	-1.1
LTK	Loutraki	4.20	334	eP	Pn	12 36 09.6	+0.4
LTK	Loutraki	4.20	334	P	Pn	12 36 08.5	-0.7
LTK	Loutraki	4.20	334	eP	Pn	12 36 09.6	+0.4
GUR	Goura	4.37	328	eP	Pn	12 36 11.4	-0.2
GUR	Goura	4.37	328	P	Pn	12 36 11.6	0.0
GUR				S	Sn	12 36 59.6	-1.6
GUR	Goura	4.37	328	P	Pn	12 36 11.6	0.0
GUR				S	Sn	12 36 59.6	-1.6
GOLH	Golhisar	4.59	48	iP	Pn	12 36 14.9	+0.3
GOLH	Golhisar	4.59	48	iP	Pn	12 36 14.9	+0.3
LKR	Lokris	4.75	338	eP	Pn	12 36 17.4	+0.6
LKR	Lokris	4.75	338	eP	Pn	12 36 17.4	+0.6
LKR	Lokris	4.75	338	P	Pn	12 36 16.7	-0.1
LKR	Lokris	4.75	338	P	Pn	12 36 16.7	-0.1
LAKA	Lakka	4.78	327	P	Pn	12 36 16.6	-0.7
LAKA	Lakka	4.78	327	P	Pn	12 36 16.6	-0.7
RLS	Riolos of Patr	4.88	322	P	Pn	12 36 21.8	+3.2
RLS	Riolos of Patr	4.88	322	P	Pn	12 36 21.8	+3.2
KORT	Korkueli	4.97	55	iP	Pn	12 36 21.1	+1.3
KORT	Korkueli	4.97	55	iP	Pn	12 36 21.1	+1.3
EFP	Efpalio	4.97	328	eP	Pn	12 36 20.2	+0.4
EFP	Efpalio	4.97	328	eP	Pn	12 36 20.2	+0.4
NEO	Neokhori	5.30	343	eP	Pn	12 36 25.1	+0.7
NEO	Neokhori	5.30	343	eP	Pn	12 36 25.1	+0.7
NEO	Neokhori	5.30	343	eP	Pn	12 36 25.1	+0.7
AGG	Agios Georgios	5.31	334	eP	Pn	12 36 25.4	+0.9
AGG	Agios Georgios	5.31	334	eP	Pn	12 36 25.4	+0.9
AGG	Agios Georgios	5.31	334	eP	Pn	12 36 25.4	+0.9
KHAL	Karahalli	5.34	39	iP	Pn	12 36 24.4	-0.5
KHAL	Karahalli	5.34	39	iP	Pn	12 36 24.4	-0.5
EVR	Evrytania	5.42	330	eP	Pn	12 36 27.3	+1.3
EVR	Evrytania	5.42	330	eP	Pn	12 36 27.3	+1.3
EVR	Evrytania	5.42	330	eP	Pn	12 36 27.3	+1.3
VLS	Valsamata	5.44	317	P	Pn	12 36 28.2	+1.9
VLS	Valsamata	5.44	317	P	Pn	12 36 26.1	-0.2
VLS	Valsamata	5.44	317	P	Pn	12 36 26.1	-0.2
THL	Klokotos Trika	5.90	335	eP	Pn	12 36 34.2	+1.5
THL	Klokotos Trika	5.90	335	eP	Pn	12 36 34.2	+1.5
GAZI	Gazipasa	6.10	69	iP	Pn	12 36 33.5	-1.9
GAZI	Gazipasa	6.10	69	iP	Pn	12 36 33.5	-1.9
PLG	Polygyros	6.28	347	eP	Pn	12 36 38.7	+0.9
PLG	Polygyros	6.28	347	eP	Pn	12 36 38.7	+0.9
PLG	Polygyros	6.28	347	eP	Pn	12 36 38.7	+0.9
JAN	Janina	6.45	328	P	Pn	12 36 43.4	+3.3
IGT	Igoumenitsa	6.58	325	P	Pn	12 36 42.4	+0.4
IGT	Igoumenitsa	6.58	325	P	Pn	12 36 42.4	+0.4
KEK	Kerkira	6.99	323	P	Pn	12 36 47.3	-0.2
KEK	Kerkira	6.99	323	P	Pn	12 36 47.3	-0.2
FNA	Florina	7.21	336	P	Pn	12 36 51.6	+1.0
FNA	Florina	7.21	336	P	Pn	12 36 51.6	+1.0
GULE	Gulek	8.30	66	iP	Pn	12 37 06.2	+0.6
GULE	Gulek	8.30	66	iP	Pn	12 37 06.2	+0.6
MMAI	Mount Meron Ar	8.55	95	Pn	Pn	12 37 06.2	-2.8
	2.7nm,0.3s,baz=268,slow=12,SNR=9.1						
MMAI				Sn	Sn	12 38 37.9	-6.2
	9.4nm,0.3s,baz=274,slow=24,SNR=12						
CEL	Celeste	8.56	301	P	Pn	12 37 09.6	+0.5
CEL	Celeste	8.56	301	P	Pn	12 37 09.6	+0.5
BRTR	Keskin Array B	8.64	48	Pn	Pn	12 37 09.4	-0.8
	0.2nm,0.3s,baz=216,slow=15,SNR=6.9						
BRTR				Sn	Sn	12 38 40.9	-5.4
	0.1nm,0.3s,baz=218,slow=21,SNR=2.6						
BRTR	Keskin Array B	8.64	48	Pn	Pn	12 37 09.4	-0.8
PE1	Pezze di Greco	9.03	319	ePn	Pn	12 37 13.4	-2.1
VAE	Valguarnera	9.38	293	Pn	Pn	12 37 21.9	+1.6
	1.6nm,0.3s,baz=114,slow=20,SNR=3.4						
VAE				Sn	Sn	12 38 55.5	-8.9
	0.8nm,0.3s,baz=67,slow=13,SNR=1.8						
VAE	Valguarnera	9.38	293	Pn	Pn	12 37 21.9	+1.6
EIL	Elat	9.41	116	Pn	Pn	12 37 19.1	-1.7
	1.0nm,0.3s,baz=27,slow=14,SNR=24						
EIL				Sn	Sn	12 38 52.5	-13
	1.2nm,0.3s,baz=345,slow=16,SNR=3.4						
EIL	Elat	9.41	116	Pn	Pn	12 37 19.1	-1.7
SG1	Sgolgore (BA)	9.47	316	ePn	Pn	12 37 19.9	-1.6
ASF	Jabal al Asfar	9.97	99	Pn	Pn	12 37 27.5	-0.9
	0.4nm,0.3s,baz=180,slow=3.0,SNR=2.6						
ASF				Sn	Sn	12 39 12.0	-6.9
	0.8nm,0.3s,baz=255,slow=8.0,SNR=5.5						
STON	Ston	10.44	328	ePn	Pn	12 37 30.4	-4.5
STON				Sn	Sn	12 39 18.5	-12
VRAC	Vranov	16.35	339	Pn	Pn	12 38 55.1	+0.8
	0.2nm,0.3s,baz=131,slow=19,SNR=2.9						
VRAC	Vranov	16.35	339	Pn	Pn	12 38 55.1	+0.8
AKASG	Malin Array Be	16.69	9	Pn	Pn	12 38 58.8	+0.3
	2.7nm,0.3s,baz=200,slow=11,SNR=6.8						
AKASG	Malin Array Be	16.69	9	Pn	Pn	12 38 58.8	+0.3
MBDF	Montbardon	17.66	312	eP	Pn	12 39 08.7	-1.9
LPG	La Plagne	18.06	314	eP	Pn	12 39 14.2	-1.4
LPG	La Plagne	18.06	314	eP	Pn	12 39 14.2	-1.4
CABF	La Chapelle	19.06	316	eP	Pn	12 39 26.8	-0.8
CABF	La Chapelle	19.06	316	eP	Pn	12 39 26.8	-0.8
HINF	Hinteralfeld	19.34	320	eP	Pn	12 39 29.2	-1.7
	7.0nm,0.8s						
HINF	Hinteralfeld	19.34	320	eP	Pn	12 39 29.2	-1.7
	3.5nm,0.8s						
HINF	Hinteralfeld	19.34	320	eP	Pn	12 39 29.2	-1.7
	3.5nm,0.8s						
CDF	Champ du Feu	19.49	322	eP	Pn	12 39 31.4	-1.3
CDF	Champ du Feu	19.49	322	eP	Pn	12 39 31.4	-1.3
HAU	Haudompre	19.72	320	eP	Pn	12 39 34.5	-1.0
	7.5nm,0.7s						
HAU	Haudompre	19.72	320	eP	Pn	12 39 34.5	-1.0
	3.8nm,0.7s						
HAU	Haudompre	19.72	320	eP	Pn	12 39 34.5	-1.0
	3.8nm,0.7s						
LOR	Lormes	20.70	315	eP	P	12 39 44.8	+0.4
LOR	Lormes	20.70	315	eP	P	12 39 44.8	+0.4
AVF	Avril sur Loir	20.76	314	eP	P	12 39 44.5	-0.5
AVF	Avril sur Loir	20.76	314	eP	P	12 39 44.5	-0.5
SSF	Saint Saulge	20.80	314	eP	P	12 39 45.8	+0.3
SSF	Saint Saulge	20.80	314	eP	P	12 39 45.8	+0.3
BGF	Bois d'Agland	20.95	313	eP	P	12 39 47.5	+0.4
BGF	Bois d'Agland	20.95	313	eP	P	12 39 47.5	+0.4
RJF	Les Rejaudoux	21.25	308	eP	P	12 39 50.7	+0.3
RJF	Les Rejaudoux	21.25	308	eP	P	12 39 50.7	+0.3
ETSF	Etsaut	21.89	301	eP	P	12 39 56.0	-1.3
ETSF	Etsaut	21.89	301	eP	P	12 39 56.0	-1.3
BAIF	Baives	22.09	322	eP	P	12 39 58.0	-1.3
BAIF	Baives	22.09	322	eP	P	12 39 58.0	-1.3
MFF	Saint Martin d	22.83	310	eP	P	12 40 05.6	-1.6
	3.4nm,0.5s,mb3.8						
MFF	Saint Martin d	22.83	310	eP	P	12 40 05.6	-1.6
	3.0nm,0.5s,mb4.0						
LDF	La Druitiere	23.68	315	eP	P	12 40 14.6	-1.1
	3.9nm,0.5s,mb3.8						
LDF	La Druitiere	23.68	315	eP	P	12 40 14.6	-1.1
	3.0nm,0.5s,mb4.0						
ESDC	Sonseca Array	23.91	292	P	P	12 40 17.8	-0.1
	0.6nm,0.6s,mb3.2,baz=82,slow=9.3,SNR=4.1						
ESDC	Sonseca Array	23.91	292	P	P	12 40 17.8	-0.1
HFS	Hagfors	26.98	347	P	P	12 40 47.2	+1.7
	0.6nm,0.4s,mb3.5,baz=110,slow=16,SNR=5.7						
HFS	Hagfors	26.98	347	P	P	12 40 47.2	+1.8
FINES	FINESS Array B	27.21	1	P	P	12 40 48.3	+0.8
	1.0nm,0.7s,mb3.5,baz=167,slow=11,SNR=5.0						
FINES	FINESS Array B	27.21	1	P	P	12 40 48.3	+0.8
NOA	NORSAR Array B	28.30	346	P	P	12 40 59.3	+2

*NEIC **19** 13:01:24.9±3.5, 37°.28N×142°.77E, h1km±21km, mb4.4/11, Error ellipse: s-maj=10.3km s-min=7.0km az=131.0*
*IDC **19** 13:01:24.9±0.7, 37°.26N×142°.78E, h0km, mb4.1/15, mb1 4.2/19, mb1mx4.1/27, mbtmp4.1/19, ML3.6/4, MS3.7/2, Ms1 3.7/2, ms1mx3.4/31, Error ellipse: s-maj=18.0km s-min=15.5km az=111.0*
*ISCJB **19** 13:01:26.7±1.4, 37°.27N±0°.03×142°.75E±0°.04, h26km±10km, mb4.2/27, Error ellipse: s-maj=6.3km s-min=5.0km az=139.0*
*JMA **19** 13:01:27.9±0.1, 37°.29N×142°.72E, h44km, M4.5*
*MOS **19** 13:01:27.5±0.9, 37°.28N×142°.76E, h33km, mb4.7/5, Error ellipse: s-maj=12.1km s-min=9.1km az=106.7*
*BJI **19** 13:01:29.8, 37°.62N×142°.02E, h5km, mB4.8/3, mb4.5/10, Ms4.2/1, Ms7 4.2/1*
ISC 19 13:01:28.5±1.5, 37°.29N±0°.03×142°.68E±0°.04, h23km±11km, n61, σ0°97/76, mb4.1/27, 5C-1D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.44**	**274**	⇑P	**Pn**	**13 01 52.4**	**-0.7**
JFK				S	**Sn**	**13 02 10.6**	**-0.8**
ONAJ	**Iwakimizuishiy**	**1.52**	**263**	P	**Pn**	**13 01 53.5**	**-0.7**
ONAJ				S	**Sn**	**13 02 12.4**	**-0.8**
JIO	**Ouri**	**1.57**	**318**	⇑P	**Pn**	**13 01 54.2**	**-0.7**
JIO				S	**Sn**	**13 02 13.7**	**-0.8**
JMM	**Marumori**	**1.61**	**291**	⇑P	**Pn**	**13 01 54.7**	**-0.7**
JMM				S	**Sn**	**13 02 14.7**	**-0.7**
JFT	**Otama**	**1.88**	**278**	P	**Pn**	**13 01 59.4**	**+0.2**
JFT				S	**Sn**	**13 02 23.0**	**+0.8**
JOU	**Okura**	**1.92**	**304**	P	**Pn**	**13 01 59.7**	**-0.1**
JMK	**Ichinoseki**	**2.02**	**326**	P	**Pn**	**13 02 00.8**	**-0.3**
JMK				S	**Sn**	**13 02 25.1**	**-0.5**
JOM	**Ohasama**	**2.44**	**334**	⇓P	**Pn**	**13 02 06.9**	**+0.1**
JYK	**Kaneyama**	**2.45**	**312**	⇑P	**Pn**	**13 02 07.1**	**+0.1**
JAG	**Ashikaga**	**2.73**	**252**	⇑P	**Pn**	**13 02 11.1**	**+0.2**
JAG				S	**Sn**	**13 02 42.7**	**-0.4**
JAW	**Awa shima**	**2.96**	**294**	P	**Pn**	**13 02 16.1**	**+2.2**
BSO1	**Boso 1**	**2.97**	**208**	P	**Pn**	**13 02 13.4**	**-0.8**
BSO1				*e*S	**Sn**	**13 02 47.8**	**-1.3**
JRY	**Ryogami san**	**3.29**	**248**	P	**Pn**	**13 02 18.7**	**+0.1**
JRY				S	**Sn**	**13 02 55.6**	**-1.5**
MJAR	**Matsushiro Arr**	**3.66**	**260**	Pn	**Pn**	**13 02 24.7**	**+1.0**
	4.3nm,0.3s,baz=90,slow=15,SNR=29						
MJAR				Sn	**Sn**	**13 03 10.2**	**+4.1**
	3.8nm,0.3s,baz=48,slow=22,SNR=7.2						
MAJO	**Matsushiro**	**3.66**	**260**	*e*P	**Pn**	**13 02 23.6**	**-0.1**
MAT	**Matsushiro**	**3.66**	**260**	P	**Pn**	**13 02 24.7**	**+1.0**
MAT				S	**Sn**	**13 03 08.1**	**+1.9**
ERM	**Erimo**	**4.73**	**4**	*e*Pn	**Pn**	**13 02 37.1**	**-1.2**
ERM				*e*Sn	**Sn**	**13 03 22.4**	**-10**
JHJ	**Hachijo jima 2**	**4.79**	**211**	Pn	**Pn**	**13 02 39.0**	**-0.2**
	8.1nm,0.3s,baz=175,slow=21,SNR=13						
JHJ				Sn	**Sn**	**13 03 29.1**	**-4.9**
	13nm,0.3s,baz=53,slow=22,SNR=3.5						
ASAJ	**Asahikawa**	**6.82**	**359**	Pn	**Pn**	**13 03 06.6**	**-0.4**
	2.1nm,0.3s,baz=199,slow=11,SNR=21						
ASAJ				Sn	**Sn**	**13 04 20.4**	**-3.5**
	baz=108,slow=20,SNR=2.4						
ASAJ				LR	LR	13 06 29.7	
	comp=Z,524nm,20.4s,baz=194,slow=44						
ASAJ	**Asahikawa**	**6.82**	**359**	P	**Pn**	**13 03 06.6**	**-0.4**
ASAJ						13 04 20.4	
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,524nm,20.4s						
YUK	**Yuzh-Kuril'sk**	**7.16**	**19**	P	**Pb**	**13 03 26.3**	**-5.6**
YUK				*i* S	**Sn**	**13 04 25.5**	**-6.7**
YUK				pmax	pmax		
	comp=N,40nm,0.4s						
YUK				pmax	pmax		
	comp=Z,100nm,0.4s						
YUK				pmax	pmax		
	comp=E,60nm,0.2s						
YUK				smax			
	comp=E,110nm,0.3s						
YUK				smax			
	comp=N,100nm,0.4s						
YSS	**Yuzh-Sakhalins**	**9.66**	**0**	*e*P	**Pn**	**13 03 48.4**	**+2.5**
YSS	**Yuzh-Sakhalins**	**9.66**	**0**	*e*P	**Pn**	**13 03 44.4**	**-1.5**
	comp=N,17nm,0.8s						
KSRS	**Korea Array**	**11.75**	**275**	Pn	**Pn**	**13 04 17.2**	**+2.7**
	comp=N,0.1nm,0.3s,baz=88,slow=13,SNR=11						
KSRS				LR	LR	13 08 35.1	
	comp=N,472nm,18.5s,baz=340,slow=36						
ULN	**Ulaanbaatar**	**28.05**	**303**	*e*P	**P**	**13 07 18.7**	**+0.8**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.1						
ULN	**Ulaanbaatar**	**28.05**	**303**	*e*P	**P**	**13 07 18.7**	**+0.8**
	comp=Z,4.0nm,0.8s,mb4.1						
ENH	**Enshi**	**28.36**	**266**	*e*P	**P**	**13 07 19.6**	**-1.3**
	comp=Z,14nm,1.1s,mb4.5						
SONM	**Songino Array**	**28.49**	**303**	P	**P**	**13 07 23.3**	**+1.6**
	comp=Z,8.4nm,0.9s,mb4.4,baz=101,slow=8.9,SNR=38						
GTA	**Gaotai**	**33.46**	**287**	*e*P	**P**	**13 08 07.0**	**+1.4**
GTA				pP	pP	13 08 11.4	-1.1
GTA				sP	sP	13 08 15.0	-0.4
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
ZALV	**Zalesovo Beam**	**42.49**	**312**	P	**P**	**13 09 22.1**	**+0.5**
	comp=Z,3.8nm,0.9s,mb4.0,baz=85,slow=7.9,SNR=10						
CMAR	**Chiang Mai Arr**	**42.54**	**256**	P	**P**	**13 09 23.4**	**+0.9**
	comp=Z,0.6nm,0.4s,mb3.7,baz=35,slow=5.9,SNR=4.0						
NVS	**Novosibirsk**	**43.40**	**314**	*e*P	**P**	**13 09 27.8**	**-1.1**
MK31	**Makanchi Array**	**44.84**	**302**	*e*P	**P**	**13 09 40.4**	**-0.2**
MKAR	**Makanchi Array**	**44.84**	**302**	P	**P**	**13 09 40.9**	**+0.3**
	comp=Z,4.5nm,1.1s,mb4.2,baz=87,slow=9.8,SNR=12						
KURK	**Kurchatov**	**46.57**	**308**	*e*P	**P**	**13 09 54.2**	**0.0**
KURK				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
KURK	**Kurchatov**	**46.57**	**308**	*e*P	**P**	**13 09 54.2**	**0.0**
	comp=Z,7.0nm,0.6s,mb4.8						
PMR	**Palmer**	**47.81**	**37**	P	**P**	**13 10 00.0**	**-3.8**
PMR				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
PMR	**Palmer**	**47.81**	**37**	P	**P**	**13 10 00.0**	**-3.7**
	comp=Z,3.5nm,1.0s,mb4.3						
ILAR	**Eielson Array**	**48.73**	**32**	P	**P**	**13 10 10.7**	**-0.1**
	comp=Z,1.0nm,0.7s,mb3.9,baz=266,slow=6.6,SNR=17						
TKM2	**Tokmak 2**	**50.40**	**299**	*e*P	**P**	**13 10 23.3**	**-0.5**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
TKM2	**Tokmak 2**	**50.40**	**299**	*e*P	**P**	**13 10 23.3**	**-0.6**
	comp=Z,4.0nm,0.7s,mb4.6						
BVAR	**Borovoye Array**	**51.15**	**312**	P	**P**	**13 10 28.6**	**-0.7**
	comp=Z,0.8nm,0.7s,mb3.8,baz=87,slow=7.6,SNR=4.8						
UCH	**Uchtor**	**51.37**	**298**	*e*P	**P**	**13 10 32.8**	**+1.6**
	comp=Z,1.4nm,0.8s,mb3.9						
EKS2	**Erkin-Say**	**51.75**	**299**	P	**P**	**13 10 30.5**	**-3.5**
	comp=Z,3.6nm,0.8s,mb4.3						
AML	**Almayashu**	**51.98**	**298**	*e*P	**P**	**13 10 37.8**	**+2.1**
	comp=Z,5.9nm,0.8s,mb4.6						
WRAB	**Tennant Creek**	**57.45**	**189**	*e*P	**P**	**13 11 14.9**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
WRAB	**Tennant Creek**	**57.45**	**189**	*e*P	**P**	**13 11 14.9**	**-0.5**
	comp=Z,8.1nm,1.0s,mb4.7						
WRA	**Warramunga Arr**	**57.47**	**189**	P	**P**	**13 11 15.0**	**-0.5**
	comp=Z,3.9nm,0.8s,mb4.5,baz=8.6,slow=7.2,SNR=28						
ABKAR	**Akbulak array**	**58.55**	**310**	*e*P	**P**	**13 11 23.0**	**+0.1**
	comp=Z,1.4nm,0.6s,mb4.2						
ASAR	**Alice Springs**	**61.19**	**189**	P	**P**	**13 11 41.0**	**-0.2**
	comp=Z,1.7nm,0.8s,mb4.2,baz=15,slow=8.0,SNR=19						
ARCES	**ARCESS Array B**	**64.11**	**340**	P	**P**	**13 12 00.7**	**+0.4**
	comp=Z,1.0nm,0.8s,mb3.9,baz=77,slow=7.7,SNR=2.9						
FINES	**FINESS Array B**	**69.06**	**333**	P	**P**	**13 12 31.9**	**-0.1**
	comp=Z,1.3nm,0.6s,mb4.0,baz=36,slow=7.1,SNR=6.2						
BOZ	**Bozeman (W)**	**73.82**	**45**	*e*P	**P**	**13 13 00.0**	**-1.0**
BOZ				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.8						
BOZ	**Bozeman (W)**	**73.82**	**45**	*e*P	**P**	**13 12 60.0**	**-1.0**
	comp=Z,0.8nm,0.8s,mb3.7						
NVAR	**Mina Array Bea**	**74.02**	**54**	P	**P**	**13 13 02.9**	**+0.6**
	comp=Z,0.9nm,0.9s,mb3.7,baz=299,slow=6.5,SNR=6.6						
NB2	**NORSAR Subarra**	**74.34**	**338**	P	**P**	**13 13 04.3**	**+0.6**
	comp=Z,2.5nm,0.9s,mb4.1,baz=39,slow=5.9						
NOA	**NORSAR Array B**	**74.34**	**338**	P	**P**	**13 13 04.3**	**+0.6**
	comp=Z,0.9nm,0.6s,mb3.9,baz=38,slow=5.9,SNR=3.8						
NOA	**NORSAR Array B**	**74.34**	**338**	P	**P**	**13 13 04.3**	**+0.6**
AKASG	**Malin Array Be**	**74.71**	**323**	P	**P**	**13 13 06.0**	**0.0**
	comp=Z,0.5nm,0.3s,mb3.9,baz=45,slow=5.7,SNR=4.3						
PDAR	**Pinedale Array**	**76.76**	**46**	P	**P**	**13 13 19.1**	**+1.1**
	comp=Z,0.5nm,0.6s,mb3.6,baz=322,slow=1.5,SNR=5.0						
TXAR	**Lajitas Array**	**89.16**	**53**	P	**P**	**13 14 23.0**	**+0.6**
	comp=Z,0.4nm,0.8s,mb3.8,baz=292,slow=3.9,SNR=6.3						

*DDA **19** 13:18:41.9, 39°.08N×33°.25E, h14km±8km, Md3.2*
*ISCJB **19** 13:18:43.5±0.7, 39°.07N±0°.03×33°.27E±0°.04, h10km±6km, Error ellipse: s-maj=5.1km s-min=5.0km az=16.8*
*ISK **19** 13:18:43.4, 39°.06N×33°.27E, h12km, MD2.9*
*CSEM **19** 13:18:43.7±0.2, 39°.06N×33°.28E, h12km, MD3.2, Error ellipse: s-maj=3.9km s-min=3.5km az=86.0*
ISC 19 13:18:44.1±0.7, 39°.07N±0°.03×33°.28E±0°.04, h15km±6km, n23, σ0°82/35, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBAL	**Bala**	**0.48**	**346**	*i* P	**Pg**	**13 18 52.6**	**-1.1**
BBAL				*i* S	**Sg**	**13 19 00.4**	**+0.2**
BBAL	**Bala**	**0.48**	**346**	*i* P	**Pg**	**13 18 52.6**	**-1.1**
BBAL				*i* S	**Sg**	**13 19 00.4**	**+0.2**
SULT	**Sultanhani-AKS**	**0.89**	**168**	*e*PG	**Pg**	**13 19 00.6**	**-0.8**
SULT				*e*SG	**Sg**	**13 19 14.1**	**+0.9**
SULT	**Sultanhani-AKS**	**0.89**	**168**	*e*Pg	**Pg**	**13 19 00.6**	**-0.8**
SULT				*e*Sg	**Sg**	**13 19 14.1**	**+1.0**
LOD	**Lodumlu**	**0.91**	**334**	*e*PG	**Pg**	**13 19 02.1**	**+0.4**
LOD				*e*SG	**Sg**	**13 19 14.5**	**+0.9**
LOD	**Lodumlu**	**0.91**	**334**	*e*Pg	**Pg**	**13 19 02.1**	**+0.4**
LOD				*e*Sg	**Sg**	**13 19 14.5**	**+0.9**
CDAG	**Cicekdag**	**1.01**	**57**	*i* P	**Pb**	**13 19 00.2**	**-3.1**
CDAG				*i* S	**Sb**	**13 19 16.0**	**-0.5**
CDAG	**Cicekdag**	**1.01**	**57**	*i* S	**Sb**	**13 19 16.0**	**-0.4**
KDHN	**Kadinhani**	**1.06**	**239**	*i* P	**Pb**	**13 19 00.4**	**-3.8**
KDHN				*i* S	**Sb**	**13 19 17.5**	**-0.4**
KIZT	**Kizilcal**	**1.11**	**260**	*e*PN	**Pn**	**13 19 05.2**	**+0.1**
KIZT				*e*SN	**Sn**	**13 19 20.4**	**+0.3**
KIZT	**Kizilcal**	**1.11**	**260**	*e*Pn	**Pn**	**13 19 05.2**	**+0.1**
KIZT				*e*Sn	**Sn**	**13 19 20.4**	**+0.3**
LADK	**Ladik-KONYA**	**1.13**	**220**	*e*PN	**Pn**	**13 19 04.4**	**-1.0**
LADK	**Ladik-KONYA**	**1.13**	**220**	*e*Pn	**Pn**	**13 19 04.4**	**-1.0**
AVNT	**Avonos**	**1.27**	**103**	*i* P	**Pn**	**13 19 07.4**	**+0.1**
AVNT				*i* S	**Sb**	**13 19 24.8**	**+1.0**
AVNT	**Avonos**	**1.27**	**103**	*i* P	**Pn**	**13 19 07.4**	**+0.1**
AVNT				*i* S	**Sb**	**13 19 24.8**	**+1.0**
KONT	**Konya--Tatoy**	**1.34**	**213**	*e*PN	**Pn**	**13 19 08.5**	**+0.3**
KONT	**Konya--Tatoy**	**1.34**	**213**	*e*Pn	**Pn**	**13 19 08.5**	**+0.3**
SVRH	**Sivrihisar-ESK**	**1.41**	**286**	*e*PN	**Pn**	**13 19 10.0**	**+0.7**
SVRH	**Sivrihisar-ESK**	**1.41**	**286**	*e*Pn	**Pn**	**13 19 10.0**	**+0.7**
CORM	**Corum**	**1.52**	**43**	*e*PN	**Pn**	**13 19 10.9**	**+0.1**
CORM	**Corum**	**1.52**	**43**	*e*Pn	**Pn**	**13 19 10.9**	**+0.1**
YOZ	**Yozgat**	**1.68**	**70**	*e*PN	**Pn**	**13 19 13.1**	**+0.1**
YOZ	**Yozgat**	**1.68**	**70**	*e*Pn	**Pn**	**13 19 13.1**	**+0.1**

*BJI **19** 13:39:41.4, 11°.85N×93°.09E, h14km, mb4.4/4*
*ISCJB **19** 13:39:50.8±3.0, 12°.96N±0°.08×93°.27E±0°.07, h11km±19km, mb4.0/18, Error ellipse: s-maj=16.0km s-min=9.1km az=141.4*
*IDC **19** 13:39:50.9±0.8, 12°.97N×93°.23E, h0km, mb4.0/13, mb1 4.1/14, mb1mx3.9/23, mbtmp4.0/14, ML4.2/1, Error ellipse: s-maj=23.7km s-min=17.9km az=64.0*
*NEIC **19** 13:39:55.5±5.0, 13°.02N×93°.26E, h28km±33km, mb4.0/3, Error ellipse: s-maj=19.9km s-min=11.2km az=49.0*
ISC 19 13:39:51.8±3.6, 12°.94N±0°.08×93°.20E±0°.07, h6km±22km, n27, σ0°93/28, mb4.0/18, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**7.79**	**45**	*e*Pn	**Pn**	**13 41 44.5**	**-1.3**
	5.5nm,0.5s						
CM31				*e*Sn	**Sn**	**13 43 14.8**	**+0.5**
CMAR	**Chiang Mai Arr**	**7.79**	**45**	Pn	**Pn**	**13 41 47.0**	**+1.3**
	1.0nm,0.3s,baz=237,slow=15,SNR=53						
CMAR				Sn	**Sn**	**13 43 16.0**	**+1.7**
	0.3nm,0.3s,baz=237,slow=27,SNR=4.6						
CHTO	**Chiang Mai**	**8.04**	**43**	*e*Pn	**Pn**	**13 41 50.6**	**+1.4**
	6.9nm,0.6s						
CHTO				*e*Sn	**Sn**	**13 43 19.0**	**-1.5**
LSA	**Lhasa**	**16.79**	**354**	P	**Pn**	**13 43 46.8**	**-0.8**
ENH	**Enshi**	**22.90**	**39**	*e*P	**P**	**13 44 54.9**	**-1.5**
	14nm,0.8s,mb4.5						
LZH	**Lanzhou**	**24.96**	**21**	*e*P	**P**	**13 45 15.0**	**-1.1**
LZH				pP		13 45 20.0	
LZH				sP	sP	13 45 23.1	+4.4
LZH				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.4						
GTA	**Gaotai**	**27.01**	**11**	*e*P	**P**	**13 45 35.9**	**+1.3**
GTA				pP	pP	13 45 40.8	+4.4
GTA				sP	sP	13 45 43.8	+6.6
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.0						
MK31	**Makanchi Array**	**34.97**	**347**	*e*P	**P**	**13 46 44.7**	**0.0**
MKAR	**Makanchi Array**	**34.97**	**347**	P	**P**	**13 46 45.0**	**+0.3**
	comp=Z,1.8nm,0.7s,mb4.1,baz=161,slow=7.7,SNR=15						
SONM	**Songino Array**	**36.49**	**15**	P	**P**	**13 46 57.8**	**+0.1**
	comp=Z,1.8nm,0.9s,mb4.0,baz=198,slow=8.4,SNR=7.4						
KSRS	**Korea Array**	**39.43**	**46**	P	**P**	**13 47 22.1**	**-0.7**
	comp=Z,2.4nm,0.7s,mb4.0,baz=241,slow=9.0,SNR=11						
TLY	**Talaya**	**39.55**	**10**	*e*P	**P**	**13 47 24.6**	**+1.1**
	comp=Z,1.7nm,0.7s,mb3.9						
ZALV	**Zalesovo Beam**	**41.44**	**353**	P	**P**	**13 47 38.9**	**-0.2**
	comp=Z,2.7nm,0.5s,mb4.1,baz=174,slow=9.4,SNR=8.2						
BVAR	**Borovoye Array**	**43.93**	**340**	P	**P**	**13 47 59.6**	**+0.2**
	comp=Z,0.8nm,0.5s,mb3.7,baz=162,slow=11,SNR=5.0						
ABKAR	**Akbulak array**	**45.39**	**330**	*e*P	**P**	**13 48 11.4**	**+0.4**
	comp=Z,0.7nm,0.5s,mb3.8						
WRA	**Warramunga Arr**	**52.03**	**128**	P	**P**	**13 49 02.3**	**-0.2**
	comp=Z,0.6nm,0.7s,mb3.6,baz=311,slow=8.0						
ASAR	**Alice Springs**	**53.92**	**132**	P	**P**	**13 49 16.6**	**+0.1**
	comp=Z,0.3nm,0.5s,mb3.5,baz=307,slow=6.6,SNR=9.7						
PETK	**Petropavlovsk-**	**64.50**	**37**	P	**P**	**13 50 28.4**	**-0.9**
	comp=Z,0.9nm,0.8s,mb3.9,baz=217,slow=4.5,SNR=4.1						
FINES	**FINESS Array B**	**67.84**	**331**	P	**P**	**13 50 50.4**	**-0.2**
	comp=Z,2.0nm,0.6s,mb4.3,baz=141,slow=7.3,SNR=8.4						
ARCES	**ARCESS Array B**	**70.22**	**340**	P	**P**	**13 51 05.5**	**+0.2**
	comp=Z,0.5nm,0.4s,mb3.8,baz=96,slow=7.4,SNR=10						
NB2	**NORSAR Subarra**	**74.90**	**330**	P	**P**	**13 51 32.6**	**-0.7**
	comp=Z,1.0nm,0.6s,mb3.9,baz=88,slow=5.9						
NOA	**NORSAR Array B**	**74.90**	**330**	P	**P**	**13 51 32.7**	**-0.6**
	comp=Z,2.0nm,0.8s,mb4.1,baz=89,slow=5.8,SNR=5.4						
NOA	**NORSAR Array B**	**74.90**	**330**	P	**P**	**13 51 32.7**	**-0.6**
BOSA	**Boshof**	**77.53**	**237**	P	**P**	**13 51 50.4**	**+1.5**
	comp=Z,2.0nm,0.8s,mb4.1,baz=261,slow=13,SNR=3.7						
ILAR	**Eielson Array**	**90.42**	**22**	P	**P**	**13 52 52.9**	**-1.1**
	comp=Z,0.3nm,0.6s,mb3.8,baz=288,slow=5.5,SNR=7.3						
NVAR	**Mina Array Bea**	**121.01**	**29**	PKP	PKPdf	13 58 46.5	+0.8
	comp=Z,0.4nm,0.6s,baz=317,slow=3.7,SNR=3.7						
TXAR	**Lajitas Array**	**134.93**	**21**	PKP	PKPdf	13 59 13.4	+0.9
	comp=Z,0.1nm,0.3s,baz=17,slow=1.9,SNR=4.4						

*IDC **19** 13:40:10.9±2.1, 11°.37S×164°.59E, h0km, mb4.0/5, mb1 4.2/6, mb1mx3.9/18, mbtmp4.1/6, ML4.6/1, Error ellipse: s-maj=63.7km s-min=24.6km az=136.0*
*NEIC **19** 13:40:13.2±0.9, 11°.19S×164°.54E, h10km, mb4.3/5, Error ellipse: s-maj=23.1km s-min=15.1km az=132.0*
*ISCJB **19** 13:40:15.7±4.3, 11°.2S±0°.1×164°.4E±0°.2, h37km±33km, mb4.1/9, Error ellipse: s-maj=29.4km s-min=20.6km az=15.1*
ISC 19 13:40:16.4±6.4, 11°.3S±0°.1×164°.5E±0°.1, h30km±44km, n15, σ0°61/16, mb4.1/9, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.78**	**292**	Pn	**Pn**	**13 41 26.5**	**+0.1**
	24nm,0.3s,baz=153,slow=8.9,SNR=10						
HNR				Sn	**Sn**	**13 42 21.1**	**+0.2**
	23nm,0.3s,baz=348,slow=23,SNR=7.4						
CTA	**Charters Tower**	**19.58**	**241**	P	**Pn**	**13 44 44.4**	**+0.7**
	0.1nm,0.3s,baz=68,slow=17,SNR=4.7						
CTAO	**Charters Tower**	**19.58**	**241**	*e*P	**Pn**	**13 44 44.4**	**+0.8**
	4.2nm,0.8s						
WRAB	**Tennant Creek**	**30.21**	**250**	*e*P	**P**	**13 46 23.8**	**-0.7**
	5.0nm,1.0s,mb4.2						
WRA	**Warramunga Arr**	**30.22**	**250**	P	**P**	**13 46 24.3**	**-0.3**
WRA	**Warramunga Arr**	**30.22**	**250**	P	**P**	**13 46 24.3**	**-0.3**
ASAR	**Alice Springs**	**31.57**	**243**	P	**P**	**13 46 36.0**	**-0.5**
	1.8nm,0.7s,mb4.0,baz=68,slow=9.5,SNR=19						
FITZ	**Fitzroy Crossi**	**38.10**	**255**	P	**P**	**13 47 32.3**	**-0.6**
	8.4nm,0.9s,mb4.5,baz=89,slow=7.8,SNR=11						
PETK	**Petropavlovsk-**	**64.36**	**355**	P	**P**	**13 50 48.8**	**-0.4**
	1.9nm,0.8s,mb4.2,baz=125,slow=7.4,SNR=4.6						
ULN	**Ulaanbaatar**	**77.72**	**325**	P	**P**	**13 52 10.6**	**+0.3**
	1.4nm,0.7s,mb4.0						
QSPA	**South Pole Qui**	**78.76**	**180**	*e*P	**P**	**13 52 16.4**	**+0.8**
	4.0nm,1.1s,mb4.3						
LSA	**Lhasa**	**81.38**	**303**	P	**P**	**13 52 30.3**	**-0.4**
	4.0nm,0.5s,mb4.6						
ILAR	**Eielson Array**	**84.11**	**19**	P	**P**	**13 52 43.6**	**-0.5**
	0.3nm,0.7s,mb3.5,baz=235,slow=5.2,SNR=5.2						
ILAR	**Eielson Array**	**84.11**	**19**	P	**P**	**13 52 43.6**	**-0.5**
MKAR	**Makanchi Array**	**92.80**	**317**	P	**P**	**13 53 27.5**	**+1.4**
	0.2nm,0.5s,mb3.8,baz=117,slow=5.0,SNR=3.8						

*ISK **19** 13:40:44.7, 37°.10N×27°.93E, h28km, ML1.9*
*CSEM **19** 13:40:45.5±0.3, 37°.04N×27°.99E, h5km, ML1.9, Error ellipse: s-maj=6.6km s-min=5.1km az=153.0*
*DDA **19** 13:40:45.5, 37°.01N×27°.86E, h7km±7km, Md2.8*
ISC 19 13:40:45.0±0.7, 37°.01N±0°.05×27°.99E±0°.04, h21km±13km, n16, σ1°20/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.27**	**63**	*e*PG	**Pb**	**13 40 51.9**	**+0.6**
YER				*e*SG	**Sb**	**13 40 58.1**	**+2.6**
YER	**Yerkesik**	**0.27**	**63**	*e*Pg	**Pb**	**13 40 51.9**	**+0.6**
MLSB	**Milas**	**0.33**	**329**	*e*PG	**Pb**	**13 40 51.9**	**-0.3**
MLSB				*e*SG	**Sb**	**13 40 56.2**	**-0.9**
MLSB	**Milas**	**0.33**	**329**	*e*Pg	**Pb**	**13 40 51.9**	**-0.3**
MLSB				*e*Sg	**Sb**	**13 40 56.2**	**-0.9**
DAT	**Datca**	**0.43**	**229**	*e*PG	**Pb**	**13 40 55.0**	**+1.0**
DAT	**Datca**	**0.43**	**229**	*e*Pg	**Pb**	**13 40 55.0**	**+1.0**
BDRM	**Kayabasi**	**0.44**	**277**	*i* P	**Pb**	**13 40 53.1**	**-0.9**
BDRM				*i* S	**Sb**	**13 41 01.3**	**+1.2**
BDRM	**Kayabasi**	**0.44**	**277**	*i* P	**Pb**	**13 40 53.2**	**-0.8**
BDRM				*i* S	**Sb**	**13 41 01.3**	**+1.1**
TURN	**Turunc**	**0.51**	**106**	*i* P	**Pb**	**13 40 53.2**	**-2.2**
TURN				*i* S	**Sb**	**13 41 01.0**	**-1.4**
TURN	**Turunc**	**0.51**	**106**	*i* P	**Pb**	**13 40 53.2**	**-2.2**
TURN				*i* S	**Sb**	**13 41 01.0**	**-1.4**
BODT	**Bodrum**	**0.54**	**275**	*e*PG	**Pb**	**13 40 55.6**	**-0.2**
BODT	**Bodrum**	**0.54**	**275**	*e*Pg	**Pb**	**13 40 55.6**	**-0.2**
AYDN	**Tasoluk**	**0.65**	**353**	*i* P	**Pb**	**13 40 57.1**	**-0.6**
AYDN				*i* S	**Sb**	**13 41 05.9**	**-0.5**
AYDN	**Tasoluk**	**0.65**	**353**	*i* P	**Pb**	**13 40 57.2**	**-0.5**
AYDN				*i* S	**Sb**	**13 41 05.9**	**-0.5**
DNZL	**Cakiroluk**	**1.08**	**51**	*i* P	**Pn**	**13 41 06.7**	**+1.7**
DNZL				*i* S	**Sb**	**13 41 25.4**	**+6.7**
DNZL	**Cakiroluk**	**1.08**	**51**	*i* P	**Pn**	**13 41 06.7**	**+1.8**

*ISCJB **19** 14:06:58.2±1.4, 35°.80N±0°.07×27°.80E±0°.08, h35km±49km, Error ellipse: s-maj=13.8km s-min=8.4km az=33.3*
*CSEM **19** 14:06:58.0±0.2, 35°.86N×27°.80E, h20km, ML2.9, Error ellipse: s-maj=4.6km s-min=3.0km az=25.0*
*DDA **19** 14:06:58.0, 35°.88N×27°.74E, h51km±5km, Md3.4*
*ISK **19** 14:06:59.6, 35°.88N×27°.63E, h30km, ML2.9*
ISC 19 14:06:58.2±1.6, 35°.81N±0°.07×27°.78E±0°.07, h27km±12km, n24, σ1°13/43, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.93**	**350**	*e*PG	**Pn**	**14 07 15.8**	**+0.4**
DAT				*e*SG	**Sb**	**14 07 27.3**	**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOT	Ohata	0.79	253	⇑P	Pn	14 24 17.0	-0.4
JOT				eS	Sn	14 24 28.6	+0.2
JKB	Kayabe	0.81	289	P	Pn	14 24 17.1	-0.5
JKB				eS	Sn	14 24 28.4	-0.4
JNBK	Urakawa-nobuka	0.84	38	⇓P	Pn	14 24 17.3	-0.7
ERM	Erimo	0.91	64	ePn	Pn	14 24 18.4	-0.5
ERM				eSn	Sn	14 24 30.0	-1.2
JEM	Erimo	0.91	64	⇑P	Pn	14 24 18.5	-0.5
JEM				eS	Sn	14 24 30.6	-0.6
JTM	Tenmabayashi	1.12	222	⇑P	Pn	14 24 21.5	-0.2
JTM				eS	Sn	14 24 35.8	-0.3
JNB	Noboribetsu	1.13	319	⇑P	Pn	14 24 21.3	-0.6
JNB				eS	Sn	14 24 35.8	-0.6
JEW	Eniwo	1.30	340	⇓P	Pn	14 24 24.3	+0.2
JEW				eS	Sn	14 24 40.6	+0.2
JANG	Nango	1.31	198	⇓P	Pn	14 24 23.5	-0.8
JANG				eS	Sn	14 24 39.6	-1.1
JCH	Churui	1.39	44	P	Pn	14 24 25.6	+0.3
JCH				eS	Sn	14 24 43.5	+0.9
JFR	Furan	1.59	14	P	Pn	14 24 27.9	-0.1
JOSM	Okushiri--Mats	1.98	284	⇑P	Pn	14 24 32.8	-0.5
JSK	Shakotan	2.08	327	P	Pn	14 24 35.0	+0.2
JAR	Ashorobuto	2.10	37	P	Pn	14 24 35.3	+0.3
JAR				eS	Sn	14 25 00.6	+0.7
ASAJ	Asahikawa	2.52	9	P	Pn	14 24 41.5	+0.7
ASAJ	39nm,0.3s,baz=221,slow=12,SNR=231			S	Sn	14 25 11.6	+1.3
	12nm,0.3s,baz=325,slow=27,SNR=6.2						
YSS	Yuzh-Sakhalins	5.35	5	ePn	Pn	14 25 21.6	+2.1
	20nm,0.6s						
MAJO	Matsushiro	5.89	212	eP	Pn	14 25 28.1	+1.2
	7.7nm,0.6s						
MAT	Matsushiro	5.89	212	P	Pn	14 25 28.5	+1.6
MAT				eS	Sn	14 26 34.0	+1.0
MJAR	Matsushiro Arr	5.89	212	P	Pn	14 25 28.9	+2.0
	0.8nm,0.3s,baz=23,slow=16,SNR=14						
KSRS	Korea Array	11.68	254	P	Pn	14 26 50.6	+4.6
	0.2nm,0.3s,baz=68,slow=14,SNR=8.6						
PET	Petropavlovsk	15.98	39	ePn	Pn	14 27 42.8	-0.4
	9.0nm,1.1s						
SONM	Songino Array	25.92	296	P	P	14 29 28.6	-0.4
	0.7nm,0.6s,mb3.4,baz=80,slow=6.9,SNR=4.9						
ZALV	Zalesovo Beam	39.32	308	P	P	14 31 25.1	-0.6
	0.9nm,0.6s,mb3.7,baz=89,slow=6.8,SNR=4.9						
MK31	Makanchi Array	42.25	298	eP	P	14 31 48.9	-1.0
MKAR	Makanchi Array	42.25	298	P	P	14 31 49.3	-0.6
	0.4nm,0.3s,mb3.6,baz=84,slow=11,SNR=8.9						
CMAR	Chiang Mai Arr	43.30	251	P	P	14 31 59.6	+0.9
	0.4nm,0.4s,mb3.5,baz=34,slow=9.2,SNR=5.0						
ILAR	Eielson Array	45.40	35	P	P	14 32 14.8	-0.1
	1.7nm,0.9s,mb3.9,baz=278,slow=6.3,SNR=16						
BVAR	Borovoye Array	47.95	309	P	P	14 32 34.8	-0.1
	0.4nm,0.4s,mb3.8,baz=72,slow=8.5,SNR=4.1						
FINES	FINESS Array B	65.01	332	P	P	14 34 35.0	-1.0
	1.1nm,0.8s,mb3.9,baz=33,slow=7.3,SNR=5.7						

IDC 19 14:45:35.6±2.6, 5°.20N×93°.69E, h0^{km}, mb3.6/4, mb1 3.8/5, mb1mx3.4/23, mbtmp3.6/5, ML4.0/1, Error ellipse: s-maj=101.0km s-min=23.8km az=61.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.14	21	Pn	Pn	14 48 58.7	+1.4
	0.2nm,0.3s,baz=214,slow=12,SNR=10						
MKAR	Makanchi Array	42.59	348	P	P	14 53 33.4	+0.1
	0.8nm,0.6s,baz=166,slow=8.6,SNR=6.2						
WRA	Warramunga Arr	47.13	123	P	P	14 54 09.5	-0.4
	0.4nm,0.4s,baz=306,slow=8.7,SNR=4.8						
ASAR	Alice Springs	48.59	128	P	P	14 54 21.4	+0.2
	0.3nm,0.4s,baz=304,slow=8.2,SNR=7.3						
ZALV	Zalesovo Beam	49.14	353	P	P	14 54 24.6	-0.4
	0.8nm,0.5s,baz=159,slow=8.0,SNR=4.2						

*ISCJB **19** 14:46:27.8±2.0, 6°.5N±0°.4×127°.0E±0°.3, h175^{km}±15^{km}, mb3.9/3, Error ellipse: s-maj=79.2km s-min=23.2km az=40.3*
*MAN **19** 14:46:29, 5°.53N×126°.28E, h80^{km}, mb4.6, ML3.5, MS3.5*
*IDC **19** 14:46:42.8±7.5, 2°.66N×126°.67E, h0^{km}, mb3.9/3, mb1 4.1/3, mb1mx3.5/21, mbtmp3.9/3, Error ellipse: s-maj=170.6km s-min=118.6km az=74.0*
ISC 19 14:46:28.7±2.2, 6°.6N±0°.3×127°.2E±0°.3, h165^{km}±16^{km}, n7, σ1§26/10, mb3.9/3, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	Mati	0.97	293	eP	Pn	14 46 54.1	-0.5
MATI				eS	Sn	14 47 14.4	-0.2
DMPH	Davao City--Mi	1.72	287	eP	Pn	14 47 08.2	+6.5
DMPH				eS	Sn	14 47 28.1	+1.0
BUKP	Musuan	2.46	302	eP	Pn	14 47 11.5	+1.5
BUKP				eS	Sn	14 47 40.8	-1.2
PAGZ	Pagadian	3.96	289	eP	Pn	14 47 25.1	-3.7
WRA	Warramunga Arr	27.27	165	P	P	14 51 56.6	-1.1
	3.4nm,0.8s,mb4.0,baz=339,slow=10,SNR=17						
ASAR	Alice Springs	30.76	168	P	P	14 52 27.9	-0.7
	0.7nm,0.7s,mb3.5,baz=359,slow=8.2,SNR=11						
STKA	Stephens Creek	40.63	161	P	P	14 53 55.0	+2.4
	3.9nm,0.8s,mb4.1,baz=348,slow=9.9,SNR=6.1						

RSPR 19 14:56:24.9, 19°.08N×65°.18W, h157^{km}±12^{km}, MD3.8/3, 1C-5D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STVI	Saint Thomas	0.75	164	⇑eP	Pn	14 56 47.6	-0.9
STVI	Saint Thomas	0.75	164	eS	Sn	14 57 06.6	0.0
TBVI	Tortola	0.84	141	⇓eP	Pn	14 56 49.8	+0.6
TBVI				eS	Sn	14 57 07.7	+0.1
CBYP	Canovanas	1.03	219	⇓eP	Pn	14 56 49.8	-0.8
MTP	Monte Pirata	1.04	200	⇓eP	Pn	14 56 50.1	-0.6
MTP	Monte Pirata	1.04	200	eS	Sn	14 57 09.7	-0.7
AOPR	Arecibo Observ	1.66	244	⇓eP	Pn	14 56 56.3	-0.4
CELP	Cerrillos	1.66	233	⇓eP	Pn	14 56 56.9	+0.2
CELP				eS	Sn	14 57 22.1	+1.0

IDC 19 15:07:10.4±1.7, 3°.12S×142°.23E, h0^{km}, mb3.6/4, mb1 3.8/5, mb1mx3.5/17, mbtmp3.6/5, ML3.5/1, MS3.1/2, Ms1 3.1/2, ms1mx2.5/21, Error ellipse: s-maj=77.4km s-min=25.3km az=111.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.41	204	P	Pn	15 11 27.6	+0.4
	0.2nm,0.3s,baz=22,slow=12,SNR=6.3						
HNR	Honiara	18.68	110	LR	LR	15 18 10.4	
	comp=Z,4s3nm,18.2s,baz=176,slow=35						
ASAR	Alice Springs	21.95	201	P	P	15 12 06.8	+1.0
	0.6nm,0.8s,baz=25,slow=9.9,SNR=8.5						
FITZ	Fitzroy Crossi	22.05	226	P	P	15 12 05.2	-1.7
	2.7nm,0.7s,baz=36,slow=8.7,SNR=5.9						
CBIJ	Chichi jima	30.04	360	LR	LR	15 22 52.6	
	comp=Z,30nm,19.7s,baz=220,slow=31						
BVAR	Borovoye Array	81.67	325	P	P	15 19 32.4	+1.8
	0.6nm,0.5s,baz=95,slow=7.7,SNR=4.6						
ILAR	Eielson Array	84.76	24	P	P	15 19 44.8	-1.5
	0.3nm,0.9s,baz=233,slow=4.5,SNR=4.4						

IDC 19 15:08:38.5±24.0, 16°.08S×174°.22W, h0^{km}, mb4.2/4, mb1 4.4/4, mb1mx3.8/18, mbtmp4.2/4, Error ellipse: s-maj=457.0km s-min=147.8km az=71.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	37.72	258	P	P	15 15 56.9	+0.7
	1.9nm,0.7s,baz=76,slow=8.3,SNR=4.5						
STKA	Stephens Creek	43.01	240	P	P	15 16 39.9	0.0
	1.8nm,0.7s,baz=90,slow=10,SNR=8.2						
WRA	Warramunga Arr	48.92	257	P	P	15 17 26.2	-0.5
	1.0nm,0.3s,baz=93,slow=7.5,SNR=36						
ASAR	Alice Springs	49.15	252	P	P	15 17 28.1	-0.3
	4.8nm,0.6s,baz=88,slow=8.6,SNR=86						

*ISCJB **19** 15:21:08.1±0.6, 23°.77N±0°.05×108°.56W±0°.04, h10^{km}, mb4.5/33, MS3.7/9, Error ellipse: s-maj=7.7km s-min=4.7km az=23.9*
*MEX **19** 15:21:10.9±0.3, 23°.02N×109°.02W, h23^{km}±13^{km}, MD4.5*
*IDC **19** 15:21:10.8±1.2, 24°.13N×108°.63W, h0^{km}, mb4.0/5, mb1 4.2/9, mb1mx4.1/22, mbtmp3.9/9, ML3.8/4, MS3.7/13, Ms1 3.7/13, ms1mx3.6/27, Error ellipse: s-maj=26.1km s-min=19.0km az=90.0*
*NEIC **19** 15:21:10.9±0.8, 23°.87N×108°.64W, h10^{km}, mb4.5/58, Error ellipse: s-maj=13.5km s-min=7.3km az=216.0*
*BJI **19** 15:21:19.4, 23°.97N×108°.55W, h91^{km}, mB5.2/2, mb4.7/2*
ISC 19 15:21:08.5±0.5, 23°.62N±0°.05×108°.64W±0°.04, h10^{km}, n299, σ1§26/291, mb4.5/33, MS3.7/9, 88C-80D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAIG	Mazatlaan	2.08	101	i P	Pn	15 21 46.5	+3.1
MAIG				eS	Sn	15 22 14.7	+5.3
MAIG	Mazatlaan	2.08	101	i P	Pn	15 21 46.5	+3.1
MAIG				eS	Sn	15 22 14.7	+5.3
HPIG		4.26	39	i P	Pn	15 22 22.1	+8.7
HPIG				eS	Sn	15 23 17.9	+15
ANIG	Ahuacatlan	4.59	123	i P	Pn	15 22 18.4	+0.5
ANIG				eS	Sn	15 23 10.2	-1.1
SRIG	Santa Rosalia	4.92	319	i P	Pn	15 22 25.5	+3.0
SRIG				eS	Sn	15 23 24.2	+4.8
HSIG		5.77	339	⇓iP	Pn	15 22 39.3	+5.2
HSIG				eS	Sn	15 23 49.1	+8.7
626A	Big Bend Ranch	7.16	33	⇑P	Pn	15 22 51.5	-1.7
	baz=6.9						
TXAR	Lajitas Array	7.23	37	Pn	Pn	15 22 52.8	-1.4
	0.4nm,0.3s,baz=200,slow=17,SNR=17						
TXAR				Sn	Sn	15 24 11.7	-4.7
	0.3nm,0.3s,baz=216,slow=25,SNR=3.9						
TXAR				Lg		15 24 44.6	
	0.5nm,0.3s,baz=201,slow=35,SNR=2.8						
627A	Terlingua Ranc	7.47	38	⇓P	Pn	15 22 56.0	-1.5
	baz=7.2						
628A	Black Gap, Mar	7.79	40	⇓P	Pn	15 23 01.0	-0.9
	baz=7.5						
425A	Indio Mountain	7.85	24	⇑P	Pn	15 23 01.2	-1.4
	baz=7.6,SNR=13						
527A	Woodward Ranch	7.90	34	⇓P	Pn	15 23 01.9	-1.5
	baz=7.6						
324A	Moseley Ranch,	8.28	19	⇑P	Pn	15 23 06.8	-1.8
	baz=8.0						
MNTX	Cornudas Mount	8.55	19	ePn	Pn	15 23 09.8	-2.5
	13nm,1.0s						
326A	Caldwell Ranch	8.71	27	⇑P	Pn	15 23 13.1	-1.5
	baz=8.4						
428A	Kincaid Ranch,	8.84	36	⇓P	Pn	15 23 16.4	+0.1
	baz=8.6,SNR=5.6						
TUC	Tucson	8.87	348	ePn	Pn	15 23 21.4	+4.8
224A	Cornudas Mount	8.87	17	⇑P	Pn	15 23 14.2	-2.4
	baz=8.6						
225A	Deer Hill, Car	9.11	21	⇑P	Pn	15 23 17.8	-2.2
	baz=8.8,SNR=6.4						
117A	Oracle	9.11	349	⇓P	Pn	15 23 16.7	-3.3
	baz=8.8,SNR=8.2						
GDL2	Guadalupe Moun	9.35	23	ePn	Pn	15 23 29.5	+6.3
GDL2				eSg	Sn	15 26 03.4	+55
Z20A	Nine Sixteen R	9.46	0	⇑P	Pn	15 23 24.6	-0.2
	baz=9.2						
124A	Stringfield Ra	9.47	17	⇑P	Pn	15 23 24.5	-0.5
	baz=9.2,SNR=7.4						
125A	Gardner Draw,	9.67	20	⇓P	Pn	15 23 26.6	-1.1
	baz=9.4						
Z21A	St. Cloud Mine	9.69	5	⇓P	Pn	15 23 29.5	+1.5
	baz=9.4,SNR=14						
Z22A	Elephant Butte	9.71	8	⇓P	Pn	15 23 28.1	-0.2
	baz=9.4,SNR=6.0						
Z24A	Sheeppen Canyo	10.10	16	⇓P	Pn	15 23 32.6	-0.9
	baz=9.8						
Y22A	Socorro	10.39	8	⇓P	Pn	15 23 37.5	0.0
	baz=10						
Y21A	Point of Rocks	10.39	4	⇓P	Pn	15 23 38.3	+0.8
	baz=10						
Z26A	Caprock	10.45	22	⇓P	Pn	15 23 37.1	-1.4
	baz=10						
Y23A	Lovelace Mesa,	10.52	12	⇓P	Pn	15 23 36.5	-2.8
	baz=10						
BNM	Barren Site	10.64	9	ePn	Pn	15 23 41.5	+0.5
	6.3nm,1.1s						
BNM				eSn	Sn	15 26 34.4	+54
Z27A	Tatum	10.77	25	⇑P	Pn	15 23 40.4	-2.4
	baz=10,SNR=5.3						
LAZ	Ladron	10.83	7	ePn	Pn	15 23 44.8	+1.3
	7.9nm,1.1s						
Y27A	Causey	11.30	24	⇑P	Pn	15 23 51.6	+1.6
	baz=11						
ANMO	Albuquerque	11.45	9	Pn	Pn	15 23 51.7	-0.4
	0.1nm,0.3s,baz=229,slow=12,SNR=4.1						
ANMO				LR	LR	15 28 46.4	
	comp=Z,164nm,18.3s,baz=197,slow=42						
ANMO	Albuquerque	11.45	9	Pn	Pn	15 23 51.7	-0.4
ANMO				LR	LR	15 28 46.4	
MSTX	Muleshoe	11.52	25	⇓P	Pn	15 23 54.7	+1.7
	baz=11						
BC3	Big Chuckawall	11.65	331	⇓P	Pn	15 23 54.1	-0.7
	baz=11						
W24A	Lazy 6 Ranch,	11.89	13	⇓P	Pn	15 23 59.3	+1.3
	baz=12						
IRM	Iron Mountain	11.95	333	⇑P	Pn	15 23 59.8	+0.9
	baz=12,SNR=6.5						
PFO	Pinyon Flat Ob	12.09	327	ePn	Pn	15 24 01.0	+0.2
WUAZ	Wupatki	12.09	349	ePn	Pn	15 24 03.1	+2.2
GMRC	Granite Mounta	12.70	333	⇓P	Pn	15 24 08.9	-0.2
	baz=12,SNR=5.6						
LDFC	Landfair	12.73	335	ePn	Pn	15 24 11.8	+2.2
U15A	North Rim	13.15	347	⇓P	Pn	15 24 16.9	+1.6
	baz=13,SNR=10						
U25A	Circle Dot Ran	13.25	15	⇓P	Pn	15 24 19.3	+2.6
	baz=13,SNR=5.7						
U14A	Mt Trumbull	13.35	344	⇓P	Pn	15 24 18.3	+0.3
	baz=13,SNR=12						
TUQ	Turquoise Moun	13.37	333	⇓P	Pn	15 24 19.0	+0.7
	baz=13						
T22A	Edith	13.44	6	⇓P	Pn	15 24 21.0	+1.8
	baz=13,SNR=5.8						
T17A	Navajo Res., N	13.47	353	⇑P	Pn	15 24 20.0	+0.4
	baz=13,SNR=6.4						
T18A	Mexican Hat	13.52	356	⇑P	Pn	15 24 23.6	+3.3
	baz=13,SNR=15						
MVCO	Mesa Verde	13.55	0	ePn	Pn	15 24 22.2	+1.5
U13A	Pakoon Wash	13.56	341	⇑P	Pn	15 24 20.8	0.0
	baz=13						
GSC	Goldstone	13.64	330	⇓P	Pn	15 24 23.5	+1.5
	baz=13,SNR=5.3						
GSC	Goldstone	13.64	330	ePn	Pn	15 24 18.7	-3.2
T15A	Red Dirt Ranch	13.74	347	⇑P	Pn	15 24 25.9	+2.5
	baz=14						
SHOC	Shoshone	13.92	333	⇑P	Pn	15 24 26.9	+1.1
	baz=14						
T14A	Hurricane	13.94	345	⇑P	Pn	15 24 27.1	+1.1
	baz=14,SNR=8.5						
WMOK	Wichita Mounta	14.02	36	ePn	Pn	15 24 24.1	-3.1
	3.4nm,0.8s						
S17A	Black Ridge (B	14.10	353	⇓P	Pn	15 24 29.3	+1.1
	baz=14						
T13A	Saint George	14.11	342	⇑P	Pn	15 24 27.6	-0.7
	baz=14,SNR=11						
SDCO	Great Sand Dun	14.34	10	ePn	Pn	15 24 37.2	+5.7
CMIG	Matias Romero	14.44	114	LR	LR	15 30 30.0	
	comp=Z,588nm,19.6s,baz=301,slow=38						
CCUT	Cedar City	14.47	345	ePn	Pn	15 24 35.3	+2.1
PV01	Paradox Valley	14.47	0	ePn	Pn	15 24 33.6	+0.3
	312nm,1.1s						
MPMC	Manual Prospec	14.58	330	⇓P	Pn	15 24 34.9	+0.2
	baz=14,SNR=7.0						
S13A	Holt Ranch, En	14.62	343	⇑P	Pn	15 24 36.6	+1.2
	baz=14						
FURC	Furnace Creek,	14.64	333	⇑P	Pn	15 24 36.7	+1.0
	baz=14						
T11A	Corn Creek, Al	14.71	339	⇓P	Pn	15 24 37.1	+0.5
	baz=14,SNR=11						
ISA	Isabella	14.73	327	ePn	Pn	15 24 40.9	+4.1
PV04	Paradox Valley	14.73	359	ePn	Pn	15 24 35.2	-1.7
R18A	Canyonlands Na	14.76	356	⇓P	Pn	15 24 39.0	+1.8
	baz=14						
R16A	Teasdale	14.82	351	⇑P	Pn	15 24 40.6	+2.5
	baz=15,SNR=8.0						
R17A	Hanksville Air	14.86	354	⇓P	Pn	15 24 39.7	+1.1
	baz=15,SNR=24						
R24A	Sanders Place,	14.88	11	⇑P	Pn	15 24 41.2	+2.3
	baz=15						
S12A	Delamar Landin	14.93	341	⇑P	Pn	15 24 41.2	+1.7
	baz=15,SNR=5.5						
MSU	Marysvale	15.15	349	ePn	Pn	15 24 44.5	+1.9
R13A	O'Grain Ranch,	15.21	344	⇑P	Pn	15 24 44.8	+1.5
	baz=15,SNR=8.9						
Q22A	Crested Butte,	15.27	5	⇓P	Pn	15 24 45.0	+0.9
	baz=15,SNR=6.0						
Q16A	Castle Valley	15.40	353	⇑P	Pn	15 24 47.0	+1.1
	baz=15,SNR=8.2						
Q18A	Rafter H Ranch	15.49	356	⇓P	Pn	15 24 45.4	-1.5
	baz=15						
R12A	Pony Springs,	15.53	342	⇓P	Pn	15 24 48.8	+1.3
	baz=15,SNR=12						
SRU	San Rafael	15.53	355	⇓P	Pn	15 24 46.5	-1.0
	baz=15						
SRU	San Rafael	15.53	355	ePn	Pn	15 24 45.8	-1.7
	15nm,1.1s						
SMCO	Snowmass	15.58	5	ePn	Pn	15 24 54.5	+6.4
Q24A	Divide	15.59	10	⇑P	Pn	15 24 52.0	+3.8
	baz=15,SNR=5.1						
TMUT	Trail Mountain	15.78	353	ePn	Pn	15 24 48.2	-2.6
	63nm,1.8s						
S10A	Tonopah Range,	15.80	336	⇑P	Pn	15 24 51.0	0.0
	baz=16,SNR=11						
Q14A	Sevier Lake (B	15.82	347	⇓P	Pn	15 24 53.1	+1.8
	baz=16,SNR=10						
R11A	Troy Canyon, C	15.84	340	⇑P	Pn	15 24 52.3	+0.8
	baz=16						
P23A	Jefferson	15.89	8	⇓P	Pn	15 24 55.4	+3.2
	baz=16,SNR=8.6						
Q13A	Wheeler Ranch,	15.96	345	⇓P	Pn	15 24 53.9	+0.8
	baz=16,SNR=11						
P18A	Preston Nutter	16.02	355	⇓P	Pn	15 24 54.1	+0.2
	baz=16,SNR=17						
R10A	Warm Springs	16.02	338	⇓P	Pn	15 24 54.5	+0.6
	baz=16						
MTUM	Tungsten Hills	16.13	330	ePn	Pn	15 24 55.7	+0.5
Q12A	Willow Creek R	16.25	343	⇑P	Pn	15 24 57.9	+1.0
	baz=16,SNR=11						
ISCO	Idaho Springs	16.34	8	ePn	Pn	15 24 59.2	+1.3
	37nm,1.3s						
P14A	Drum Mountains	16.36	348	⇑P	Pn	15 24 56.7	-1.5
	baz=16,SNR=15						
P13A	Bates Ranch, G	16.43	345	⇓P	Pn	15 24 57.4	-1.8
	baz=16						
O20A	White River Ci	16.47	1	⇑P	Pn	15 25 01.8	+2.1
	baz=16,SNR=5.8						
Q10A	Clear Creek Ra	16.54	338	⇑P	Pn	15 24 59.4	-1.1
	baz=16						
MPU	Maple Canyon	16.55	352	ePn	Pn	15 25 02.9	+2.3
	20nm,1.2s						
NLU	North Lily Min	16.55	351	ePn	Pn	15 25 01.2	+0.7
	19nm,1.3s						
O22A	Kremmling	16.59	6	⇑P	Pn	15 25 03.9	+2.7
	baz=16						
O17A	Robinson Place	16.62	354	⇓P	Pn	15 25 00.6	-0.9
	baz=16,SNR=5.4						
O19A	Miners Draw (B	16.64	359	⇑P	Pn	15 25 01.8	+0.1
	baz=16,SNR=12						
O18A	Roosevelt	16.64	356	⇓P	Pn	15 25 01.7	-0.1
	baz=16,SNR=9.8						
P12A	McGill	16.68	343	⇑P	Pn	15 25 01.0	-1.3
	baz=16,SNR=5.7						
DAU	Daniels Canyon	16.89	353	ePn	Pn	15 25 05.6	+0.6
DUG	Dugway	16.90	349	⇓P	Pn	15 25 03.0	-2.1
	baz=17,SNR=6.6						
DUG	Dugway	16.90	349	ePn	Pn	15 25 07.4	+2.3
	152nm,2.2s						
NVAR	Mina Array Bea	16.91	333	Pn	Pn	15 25 05.8	+0.6
	0.1nm,0.3s,baz=154,slow=11,SNR=30						
MIAR	Mount Ida	17.07	47	ePn	Pn	15 25 09.5	+2.3
	9.4nm,1.0s						
JLU	Jordanelle	17.10	353	ePn	Pn	15 25 09.9	+2.3
	62nm,1.9s						
N21A	Black Mountain	17.12	3	⇑P	Pn	15 25 09.2	+1.3
	baz=17						
N20A	Spence Gulch,	17.17	1	⇓P	Pn	15 25 10.7	+2.3
	baz=17,SNR=8.4						
CTU	Camp Tracy	17.23	352	ePn	Pn	15 25 09.9	+0.8
	54nm,1.7s						
N19A	John Jarvie Ra	17.23	359	⇑P	Pn	15 25 09.7	+0.4
	baz=17						
N22A	Wattenberg Ran	17.23	6	⇑P	Pn	15 25 09.5	+0.3
	baz=17						
N18A	Larsen Ranch,	17.33	357	⇑P	Pn	15 25 11.1	+0.6
	baz=17						
O12A	Currie	17.38	344	⇓P	Pn	15 25 11.2	+0.1
	baz=17						
WAKR	Walker	17.47	331	ePn	Pn	15 25 13.3	+1.1
CMB	Columbia Colle	17.54	328	ePn	Pn	15 25 10.7	-2.3
	52nm,2.3s						
N14A	Grayback Hills	17.61	349	⇓P	Pn	15 25 15.5	+1.6
	baz=17,SNR=7.3						
BGU	Big Grassy Mou	17.65	349	Pn	Pn	15 25 16.5	+2.1
	17nm,1.4s						
O10A	Cortez Mining,	17.90	340	⇓P	Pn	15 25 15.9	-1.6
	baz=18						
ELK	Elko	17.96	344	P	Pn	15 25 17.9	-0.3
	0.1nm,0.3s,baz=161,slow=9.9,SNR=8.8						
ELK				LR	LR	15 32 00.2	
	comp=Z,288nm,18.8s,baz=160,slow=37						
ELK	Elko	17.96	344	P	Pn	15 25 17.9	-0.3
ELK				LR	LR	15 32 00.2	
N12A	Clover Valley,	18.01	344	ePn	Pn	15 25 19.4	+0.5
	14nm,1.3s						
RWWY	Rawlins	18.06	3	ePn	Pn	15 25 20.6	+1.1
	123nm,2.3s						
HWUT	Hardware Ranch	18.11	353	ePn	Pn	15 25 21.1	+1.0
	17nm,1.1s						
BMN	Battle Mountai	18.26	339	ePn	Pn	15 25 22.5	+0.6
	9.0nm,0.9s						
M14A	Sheep Mountain	18.27	349	⇑P	Pn	15 25 22.1	+0.1
	baz=18						
M13A	Montello	18.29	347	ePn	Pn	15 25 22.8	+0.5
	12nm,1.2s						
L18A	Fontenelle,

27nm,1.0s
TPAW Teton Pass 19.91 355 *e*Pn Pn 15 25 40.5 -1.3
28nm,1.2s
J15A Blackfoot 19.98 352 ⇓P Pn 15 25 41.8 -0.8
baz=20
LOHW Long Hollow 20.01 356 *e*P Pn 15 25 41.8 -1.2
8.4nm,0.8s
DCID1 Drake Creek 20.04 355 *e*Pn P 15 25 42.6 +1.1
89nm,1.4s
I18A Diamond G Ranc 20.06 358 ⇑P P 15 25 42.2 +0.5
baz=20,SNR=13
K11A Parker Ranch, 20.06 344 ⇑P P 15 25 41.6 -0.2
baz=20
J14A Carey 20.06 350 ⇑P P 15 25 42.1 +0.2
baz=20
J13A Cove Ranch, Pi 20.25 348 ⇑P P 15 25 43.5 -0.4
baz=20,SNR=8.3
K10A MacKenzie Ranc 20.29 342 ⇓P P 15 25 43.7 -0.6
baz=20
J12A Stokes Ranch, 20.30 346 ⇑P P 15 25 43.7 -0.7
baz=20,SNR=6.8
I17A Pilgrim Ck. 20.31 356 ⇑P P 15 25 45.2 +0.7
baz=20
IMW Indian Meadow 20.32 355 *e*P P 15 25 45.7 +1.1
27nm,1.1s
I16A Newdale 20.34 354 ⇑P P 15 25 44.0 -0.9
baz=20
HLID Hailey 20.46 348 ⇑P P 15 25 45.2 -0.9
baz=20,SNR=9.1
HLID Hailey 20.46 348 *e*P P 15 25 47.0 +0.9
19nm,1.4s
WVOR Wild Horse Val 20.52 338 *e*Pn P 15 25 46.8 0.0
46nm,1.7s
I15A Monteview 20.58 352 ⇓P P 15 25 47.0 -0.4
baz=20
MFID Camas Ranch 20.62 345 ⇑P P 15 25 45.7 -2.2
baz=20
I14A Mackay 20.64 350 ⇓P P 15 25 48.0 -0.1
baz=20
MOD Modoc 20.67 335 *e*Pn P 15 25 48.8 +0.4
81nm,1.9s
I13A Wildhorse Cree 20.74 349 ⇓P P 15 25 49.9 +0.7
baz=20,SNR=6.6
H17A Grant Village 20.79 356 ⇑P P 15 25 51.2 +1.5
baz=20,SNR=7.3
RSSD Black Hills 20.80 9 *e*Pn P 15 25 49.7 -0.1
13nm,1.3s
I12A Atlanta 20.82 347 ⇑P P 15 25 49.7 -0.4
baz=21,SNR=7.8
YFT Old Faithful 20.86 356 *e*Pn P 15 25 52.7 +2.2
19nm,0.9s
LKWY Lake 20.95 356 *e*Pn P 15 25 52.3 +0.9
33nm,1.3s
I11A Placerville 21.12 345 ⇑P P 15 25 53.4 +0.1
baz=21
H16A Russell Place, 21.14 355 ⇑P P 15 25 54.3 +0.8
baz=21,SNR=8.1
LRAL Lakeview Retre 21.20 59 *e*Pn P 15 26 00.5 +6.2
91nm,2.5s,mb4.7
H15A Lima 21.20 352 ⇑P P 15 25 55.2 +1.0
baz=21,SNR=17
H14A Leadore 21.30 351 ⇑P P 15 25 55.4 +0.2
baz=21,SNR=8.7
H13A Challis 21.40 349 ⇑P P 15 25 54.8 -1.5
baz=21
MCMT McKenzie Canyo 21.44 352 *e*P P 15 25 58.1 +1.5
12nm,1.2s,mb4.1
RLMT Red Lodge 21.46 359 ⇓P P 15 25 57.4 +0.5
baz=21
RLMT Red Lodge 21.46 359 *e*P P 15 25 57.5 +0.6
20nm,1.2s,mb4.3
H12A Diamond D Ranc 21.49 348 ⇓P P 15 25 57.2 -0.1
baz=21,SNR=12
YBH Yreka Blue Hor 21.55 330 LR LR 15 34 32.9
comp=Z,161nm,18.2s,MS3.5,baz=146,slow=38
G18A Lazy EL Ranch, 21.66 358 ⇑P P 15 25 57.8 -1.3
baz=21,SNR=12
G16A Moss Hill, Enn 21.71 354 ⇑P P 15 26 00.4 +0.8
baz=21
G17A Pierce Place, 21.72 356 ⇓P P 15 26 00.2 +0.5
baz=22
G15A Dillon 21.73 353 ⇓P P 15 26 00.3 +0.5
baz=22
SIUC Southern Illin 21.77 45 *e*P P 15 26 05.8 +5.4
43nm,1.1s,mb4.8
WVT Waverly 21.88 51 *e*P P 15 26 04.2 +2.7
144nm,2.8s,mb4.9
G13A Cobalt 21.91 349 ⇓P P 15 26 01.9 +0.2
baz=22,SNR=12
DLMT Dillon 21.93 353 *e*P P 15 26 03.1 +1.1
11nm,1.1s,mb4.2
BOZ Bozeman (W) 22.11 354 ⇑P P 15 26 03.2 -0.7
baz=22,SNR=8.8
BOZ Bozeman (W) 22.11 354 *e*P P 15 26 03.5 -0.4
17nm,1.3s,mb4.3
G12A Big Creek, Yel 22.14 347 ⇓P P 15 26 04.3 0.0
baz=22
F16A Kennard Place, 22.25 354 ⇑P P 15 26 05.3 -0.1
baz=22
F18A Big Timber 22.25 358 ⇓P P 15 26 04.9 -0.6
baz=22,SNR=15
I07A Izee 22.28 339 ⇑P P 15 26 04.7 -1.0
baz=22
F17A Fitzpatrick Pl 22.30 356 ⇓P P 15 26 06.5 +0.6
baz=22,SNR=9.2
BMO Blue Mountains 22.34 344 *e*P P 15 26 05.6 -0.7
5.9nm,1.1s,mb3.9
LRM Limekiln Ridge 22.37 353 *e*P P 15 26 06.5 -0.2
ECSD EROS Data Cent 22.38 23 *e*P P 15 26 08.4 +1.7
15nm,0.8s,mb4.5
F13A Darby 22.60 350 ⇑P P 15 26 08.2 -0.8
baz=22,SNR=8.4
F12A Elk City 22.73 348 ⇑P P 15 26 09.1 -1.4
baz=22
SWET Sewanee 22.85 54 *e*P P 15 26 15.3 +3.4
E17A Martinsdale 22.86 356 ⇑P P 15 26 12.3 +0.4
baz=23,SNR=11
E18A Harlowton 22.92 358 P P 15 26 13.0 +0.5
baz=23,SNR=8.2
E15A Deer Lodge 22.98 353 ⇓P P 15 26 12.8 -0.4
baz=23
E16A East Helena 23.00 355 ⇑P P 15 26 13.0 -0.3
baz=23
LAO LASA Array 23.10 4 *e*P P 15 26 14.6 +0.2
165nm,1.9s,mb5.1
HRY Holter Researc 23.19 354 *e*P P 15 26 15.3 0.0
F10A Beach Ranch, E 23.36 345 ⇑P P 15 26 15.9 -1.3
baz=23
E12A Beaver Dam Sad 23.43 348 ⇑P P 15 26 17.1 -0.7
baz=23
HDIL Hopedale 23.45 39 *e*P P 15 26 17.5 -0.6
D16A Dana Ranch, Ca 23.48 355 ⇑P P 15 26 17.1 -1.3
baz=23,SNR=9.0
CHMT Chamberlain Mo 23.54 352 *e*P P 15 26 18.2 -0.8
D17A Six Diamond Ra 23.54 356 ⇑P P 15 26 17.0 -2.1
baz=23,SNR=11
D18A Linhart Farms, 23.55 358 ⇑P P 15 26 19.8 +0.8
baz=23
MSO Missoula 23.55 351 *e*P P 15 26 18.5 -0.6
32nm,1.6s,mb4.5
D15A Lincoln 23.58 353 ⇓P P 15 26 17.1 -2.3
baz=23,SNR=5.8
D14A Greenough 23.74 352 ⇑P P 15 26 19.6 -1.2
baz=24,SNR=15
D13A Huson 23.89 350 ⇓P P 15 26 20.9 -1.3
baz=24
SLMT Seeley Lake 23.89 352 *e*P P 15 26 21.8 -0.4
WCI Wyandotte Cave 23.99 47 *e*P P 15 26 26.9 +3.6
176nm,2.2s,mb5.1
D12A Red Ives Fores 24.00 349 ⇓P P 15 26 21.7 -1.5
baz=24
CPCT Cooper Cave 24.00 55 *e*P P 15 26 25.5 +2.1
C17A Wharram Farm, 24.02 356 ⇑P P 15 26 22.7 -0.7
baz=24,SNR=14
SWMT Swartz Lake 24.22 351 *e*P P 15 26 24.6 -0.7
8.5nm,1.3s,mb4.0
C16A Fuhringer Ranc 24.26 355 ⇑P P 15 26 24.3 -1.3
baz=24
C15A Salmond Ranch, 24.32 353 ⇓P P 15 26 23.8 -2.3
baz=24
EGMT Eagleton 24.37 358 *e*P P 15 26 27.3 +0.7
34nm,1.1s,mb4.7
C14A Swan Lake 24.44 352 ⇑P P 15 26 25.8 -1.4
baz=24
C13A Hot Springs 24.48 350 ⇑P P 15 26 26.3 -1.2
baz=24
JFWS Jewell Farm 24.54 34 *e*P P 15 26 29.3 +1.1
TKL Tuckaleechee C 24.64 55 LR LR 15 37 02.6
comp=Z,235nm,20.3s,MS3.7,baz=80,slow=39
TKL Tuckaleechee C 24.64 55 *e*P P 15 26 26.5 -2.8
B17A L&G Farms, Che 24.68 357 ⇓P P 15 26 28.9 -0.5
baz=24
B15A Bradely Ranch, 24.84 354 ⇑P P 15 26 29.4 -1.4
baz=25
C11A Tepee Creek (N 24.92 348 ⇓P P 15 26 30.4 -1.2
baz=25
DGMT Dagmar 25.05 7 *e*P P 15 26 34.6 +1.8
19nm,1.1s,mb4.5
B13A Whitefish 25.14 351 ⇓P P 15 26 31.9 -1.7
baz=25
A17A Triple J Farms 25.33 357 ⇑P P 15 26 33.6 -1.7
baz=25,SNR=10
A16A West Butte Ran 25.39 355 ⇑P P 15 26 36.2 +0.4
baz=25,SNR=7.2
LON Longmire 25.40 339 *e*P P 15 26 36.4 +0.4
9.4nm,1.1s,mb4.2
A15A Johnson Ranch, 25.52 354 ⇑P P 15 26 37.5 +0.5
baz=25,SNR=9.6
A14A Double T Ranch 25.59 353 ⇓P P 15 26 37.8 +0.1
baz=25
WALA Waterton Lakes 25.73 352 *e*P P 15 26 38.6 -0.3
0.6nm,1.4s
JSC Jenkinsville 26.13 60 *e*P P 15 26 43.4 +0.6
JTS JuntasAbangare 26.19 116 LR LR 15 37 13.4
comp=Z,199nm,20.6s,MS3.6,baz=192,slow=36
AGMN Agassiz Nation 26.64 19 *e*P P 15 26 47.4 +0.2
26nm,1.2s,mb4.6
COWI Conover 27.41 30 *e*P P 15 26 54.3 +0.2
34nm,1.0s,mb4.8
EYMN Ely 27.85 25 *e*P P 15 26 58.1 0.0
29nm,1.1s,mb4.8
ULM Lac du Bonnet 28.39 17 *e*P P 15 27 08.6 +5.8
35nm,1.5s,mb4.8
MCWV Mont Chateau 29.10 50 *e*P P 15 27 07.8 -1.6
29nm,0.5s,mb5.3
JSRW J. Sargeant Re 29.80 55 *e*P P 15 27 21.2 +5.7
BINY Binghamton 32.81 48 *e*P P 15 27 43.6 +1.5
24nm,0.9s,mb5.1
NCB Newcomb 34.72 46 *e*P P 15 27 58.9 +0.4
6.8nm,0.9s,mb4.6
FCC Fort Churchill 36.61 13 *e*P P 15 28 12.9 -1.8
0.7nm,1.0s,mb3.5
OTAV Otavalo 37.39 124 P P 15 28 27.2 +5.4
15nm,1.5s,mb4.6
ROSC El Rosal 37.96 114 LR LR 15 43 30.0
comp=Z,101nm,21.5s,MS3.6,baz=20,slow=35
YKA Yellowknife Ar 39.07 356 P P 15 28 34.3 -1.0
0.7nm,0.6s,mb3.6,baz=148,slow=7.7,SNR=5.1
SCHQ Schefferville 43.91 34 P P 15 29 15.3 +0.2
1.2nm,0.5s,mb3.9,baz=242,slow=15,SNR=3.5
SCHQ LR LR 15 46 15.7
comp=Z,38nm,19.2s,MS3.3,baz=235,slow=35
LZG Guadaloupe-1 44.54 91 *e*P P 15 29 25.7 +4.9
BCG Bois Riant Cap 44.70 91 *e*P P 15 29 25.7 +3.7
PHG Guadaloupe-2 44.70 91 *e*P P 15 29 26.3 +4.3
DEG La Desirade 45.14 90 *e*P P 15 29 26.9 +1.3
DEG *e*S sP 15 29 38.7 +8.8
ILAR Eielson Array 48.04 339 P P 15 29 47.2 -0.3
1.5nm,1.0s,mb4.0,baz=148,slow=7.1,SNR=12
TRF Thorofare Moun 48.41 336 *e*P P 15 29 50.7 +0.3
15nm,1.0s,mb5.0
PPLA Purkeypile 48.81 335 *e*P P 15 29 53.7 +0.2
11nm,1.0s,mb4.9
LPAZ La Paz 56.03 131 P P 15 30 55.5 +7.8
1.4nm,0.8s,mb4.0,baz=356,slow=9.3,SNR=3.9
PPT Papeete 57.22 228 *e*LR LR 15 47 57.6
108nm,22.2s
CPUP Villa Florida 70.19 132 LR LR 16 04 03.2
comp=Z,62nm,18.2s,MS3.9,baz=89,slow=36
PLCA Paso Flores 73.16 151 P P 15 32 45.4 +6.2
3.0nm,0.8s,mb4.3,baz=323,slow=9.0,SNR=2.9
PLCA Paso Flores 73.16 151 P P 15 32 45.4 +6.2
PETK Petropavlovsk- 73.59 321 LR LR 15 58 27.4
comp=Z,46nm,20.0s,MS3.8,baz=173,slow=31
NOA NORSAR Array B 82.78 25 LR LR 16 09 07.5
comp=Z,32nm,20.8s,MS3.7,baz=295,slow=35
ESDC Sonseca Array 85.76 48 LR LR 16 10 12.4
comp=Z,64nm,19.0s,MS4.0,baz=155,slow=34
MDJ Mudanjiang 93.79 323 P P 15 34 26.4 +0.5
MDJ pmax pmax
comp=Z,7.0nm,1.8s,mb4.8
MDJ pmax pmax
comp=Z,72nm,5.1s
DZM Mont Dzumac 94.21 248 *e*LR LR 16 04 48.1
comp=Z,92nm,23.1s
CN2 Changchun 96.59 324 *e*P P 15 34 41.0 +2.3
WMQ Urumqi 111.24 347 *e*PKP PKiKP 15 39 42.3 -0.4
LZH Lanzhou 113.15 332 *e*PKP PKiKP 15 39 48.5 +2.0
LZH sPKP 15 40 20.3
CD2 Chengdu 117.52 329 PKP PKPdf 15 39 53.9 -1.2

*ISCJB **19** 15:49:24.7±0.7, 13°.3N±0°.1×50°.84E±0°.09, h10km, mb3.8/10, MS2.8/2, Error ellipse: s-maj=18.9km s-min=11.0km az=155.6*
*IDC **19** 15:49:25.1±1.0, 13°.32N×50°.90E, h0km, mb3.8/10, mb1 3.9/11, mb1mx3.7/23, mbtmp3.8/11, ML4.0/1, MS2.8/2, Ms1 2.9/2, ms1mx2.6/25, Error ellipse: s-maj=28.8km s-min=21.7km az=134.0*
*CSEM **19** 15:49:26.8±0.3, 13°.37N×50°.85E, h10km, Error ellipse: s-maj=19.9km s-min=11.4km az=156.0*
*NEIC **19** 15:49:26.6±0.6, 13°.33N×50°.90E, h10km, Error ellipse: s-maj=19.0km s-min=11.9km az=147.0*
ISC 19 15:49:26.7±0.7, 13°.3N±0°.1×50°.87E±0°.09, h10km, n27, σ0°.89/27, mb3.8/10, MS2.8/2, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDHA	**Al Bayda'**	**5.20**	**278**	*i* P	**Pn**	**15 50 43.8**	**-0.7**
BDHA				*e*		15 50 44.1	
baz=109,slow=14							
BDHA				AML	AML	15 50 59.6	
comp=Z,22nm,0.4s							
BDHA				*i* S	**Sn**	**15 51 34.0**	**-11**
BDHA	**Al Bayda'**	**5.20**	**278**	*i* P	**Pn**	**15 50 43.8**	**-0.7**
comp=Z,11nm,0.4s							
BDHA				*i* S	**Sn**	**15 51 34.0**	**-11**
ATD	**Arta Tunnel**	**8.04**	**258**	Pn	**Pn**	**15 51 24.2**	**+0.6**
comp=Z,2.2nm,0.3s,baz=24,slow=19,SNR=3.9							
ATD	**Arta Tunnel**	**8.04**	**258**	Pn	**Pn**	**15 51 24.2**	**+0.6**
EIL	**Elat**	**21.95**	**320**	LR	LR	16 02 19.2	
comp=Z,35nm,20.7s,MS2.8,baz=101,slow=35							
ABKAR	**Akbulak array**	**36.60**	**10**	*e*P	**P**	**15 56 29.0**	**-3.9**
AKTK	**Aktyubinsk**	**37.46**	**8**	P	**P**	**15 56 41.3**	**+1.1**
AKTK	**Aktyubinsk**	**37.46**	**8**	P	**P**	**15 56 41.3**	**+1.1**
AKTO	**Aktyubinsk**	**37.46**	**8**	P	**P**	**15 56 41.3**	**+1.1**
comp=Z,1.1nm,0.7s,mb3.8,baz=184,slow=8.8,SNR=4.3							
MKAR	**Makanchi Array**	**42.51**	**32**	P	**P**	**15 57 22.5**	**+0.3**
comp=Z,0.8nm,0.5s,mb3.7,baz=222,slow=8.1,SNR=8.6							
MKAR	**Makanchi Array**	**42.51**	**32**	P	**P**	**15 57 22.5**	**+0.3**
BVAR	**Borovoye Array**	**42.55**	**17**	P	**P**	**15 57 22.7**	**+0.3**
comp=Z,0.7nm,0.5s,mb3.6,baz=191,slow=7.2,SNR=6.6							
BVAR	**Borovoye Array**	**42.55**	**17**	P	**P**	**15 57 22.7**	**+0.3**
CMAR	**Chiang Mai Arr**	**46.41**	**77**	P	**P**	**15 57 52.6**	**-1.3**
comp=Z,0.8nm,0.8s,mb3.7,baz=273,slow=9.1,SNR=4.6							
CMAR	**Chiang Mai Arr**	**46.41**	**77**	P	**P**	**15 57 52.6**	**-1.3**
BOSA	**Boshof**	**48.50**	**210**	P	**P**	**15 58 09.9**	**+0.1**
comp=Z,1.7nm,0.7s,mb4.2,baz=48,slow=8.0,SNR=4.1							
BOSA	**Boshof**	**48.50**	**210**	P	**P**	**15 58 09.9**	**0.0**
ZALV	**Zalesovo Beam**	**48.54**	**26**	P	**P**	**15 58 08.0**	**-1.9**
comp=Z,0.7nm,0.5s,mb3.9,baz=240,slow=8.1,SNR=4.7							
FINES	**FINESS Array B**	**51.28**	**345**	P	**P**	**15 58 30.3**	**-0.3**
comp=Z,0.6nm,0.7s,mb3.7,baz=133,slow=8.1,SNR=3.8							
FINES	**FINESS Array B**	**51.28**	**345**	P	**P**	**15 58 30.3**	**-0.3**
ESDC	**Sonseca Array**	**54.67**	**309**	P	**P**	**15 58 55.4**	**-0.6**
comp=Z,0.2nm,0.4s,mb3.5,baz=142,slow=7.8,SNR=3.8							
ESDC	**Sonseca Array**	**54.67**	**309**	P	**P**	**15 58 55.4**	**-0.6**
NOA	**NORSAR Array B**	**55.61**	**338**	LR	LR	16 22 36.8	
comp=Z,7.6nm,21.3s,MS2.8,baz=90,slow=36							
SONM	**Songino Array**	**57.28**	**41**	P	**P**	**15 59 15.1**	**+0.6**
comp=Z,0.5nm,0.6s,mb3.7,baz=274,slow=7.3,SNR=4.0							
SONM	**Songino Array**	**57.28**	**41**	P	**P**	**15 59 15.1**	**+0.6**
ASAR	**Alice Springs**	**89.03**	**114**	P	**P**	**16 02 23.2**	**+0.7**
comp=Z,1.9nm,1.1s,mb4.3,baz=293,slow=4.7,SNR=4.0							
ASAR	**Alice Springs**	**89.03**	**114**	P	**P**	**16 02 23.2**	**+0.7**

*IDC **19** 16:07:59.4±2.0, 11°.31S×164°.70E, h0km, mb4.0/7, mb1 4.2/9, mb1mx4.0/19, mbtmp4.1/9, ML4.1/2, MS3.5/6, Ms1 3.5/6, ms1mx3.2/22, Error ellipse: s-maj=57.9km s-min=22.3km az=131.0*
*NEIC **19** 16:08:01.6±1.1, 11°.21S×164°.60E, h10km, mb4.3/2, Error ellipse: s-maj=26.6km s-min=12.4km az=130.0*
*ISCJB **19** 16:08:03.5±2.5, 11°.2S±0°.1×164°.5E±0°.1, h34km±21km, mb4.0/8, MS3.5/4, Error ellipse: s-maj=21.9km s-min=13.5km az=143.6*
ISC 19 16:08:05.7±1.9, 11°.29S±0°.09×164°.5E±0°.1, h37km±17km, n17, σ0°.90/16, mb4.0/8, MS3.5/4, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.85**	**292**	Pn	**Pn**	**16 09 15.9**	**-0.2**
26nm,0.3s,baz=175,slow=6.1,SNR=7.2							
HNR				Sn	**Sn**	**16 10 10.7**	**-0.3**
23nm,0.3s,baz=42,slow=23,SNR=7.5							
HNR				LR	LR	16 11 05.3	
comp=Z,523nm,21.8s,baz=88,slow=37							
HNR	**Honiara**	**4.85**	**292**	*e*Pn	**Pn**	**16 09 15.3**	**-0.8**
HNR				Sn	**Sn**	**16 10 10.8**	**-0.3**
HNR				LR	LR	16 11 05.2	
DZM	**Mont Dzumac**	**10.88**	**170**	*e*Pn	**Pn**	**16 10 41.1**	**+2.1**
1.7nm,0.2s							
DZM				*e*Sn	**Sn**	**16 12 37.8**	**-1.8**
1.8nm,0.3s							
DZM				*e*LR	LR	16 13 14.7	
358nm,23.4s							
CTA	**Charters Tower**	**19.61**	**241**	P	**Pn**	**16 12 33.1**	**+0.6**
0.1nm,0.3s,baz=58,slow=12,SNR=9.8							
CTA				LR	LR	16 19 08.3	
comp=Z,55nm,19.2s,baz=229,slow=34							
CTAO	**Charters Tower**	**19.61**	**241**	*e*Pn	**Pn**	**16 12 33.5**	**+1.0**
9.5nm,0.9s							
WRAB	**Tennant Creek**	**30.24**	**250**	*e*P	**P**	**16 14 13.1**	**-0.1**
11nm,1.1s,mb4.5							
WRA	**Warramunga Arr**	**30.26**	**250**	P	**P**	**16 14 13.6**	**+0.3**
7.0nm,1.1s,mb4.3,baz=77,slow=9.6,SNR=11							
GUMO	**Guam**	**31.46**	**321**	LR	LR	16 25 44.5	
comp=Z,149nm,18.9s,MS3.7,baz=112,slow=34							
ASAR	**Alice Springs**	**31.60**	**243**	P	**P**	**16 14 25.0**	**-0.1**
1.4nm,0.7s,mb3.9,baz=67,slow=10,SNR=11							
CBIJ	**Chichi jima**	**43.87**	**331**	LR	LR	16 29 39.7	
comp=Z,51nm,21.8s,MS3.4,baz=144,slow=30							
PPT	**Papeete**	**44.82**	**104**	LR	LR	16 31 17.8	
comp=Z,29nm,18.8s,MS3.2,baz=316,slow=31							
TBI	**Tubuai**	**45.38**	**112**	*e*LR	LR	16 29 13.3	
181nm,30.2s							
MJAR	**Matsushiro Arr**	**53.63**	**334**	P	**P**	**16 17 22.8**	**-0.7**
0.9nm,0.9s,mb3.7,baz=161,slow=6.4,SNR=4.6							
PETK	**Petropavlovsk-**	**64.40**	**355**	P	**P**	**16 18 38.0**	**+0.3**
1.6nm,0.8s,mb4.1,baz=144,slow=6.2,SNR=3.6							
SONM	**Songino Array**	**78.14**	**324**	P	**P**	**16 20 02.0**	**+1.1**
1.3nm,1.1s,mb3.8,baz=129,slow=4.0,SNR=5.3							
SONM				LR	LR	16 55 08.3	
comp=Z,51nm,18.2s,MS3.9,baz=319,slow=36							
ILAR	**Eielson Array**	**84.13**	**19**	P	**P**	**16 20 31.4**	**-1.0**
0.5nm,0.8s,mb3.7,baz=232,slow=5.5,SNR=7.6							
MKAR	**Makanchi Array**	**92.86**	**317**	P	**P**	**16 21 14.7**	**0.0**
0.5nm,0.8s,mb4.0,baz=106,slow=8.9,SNR=3.9							

*IDC **19** 16:15:18.7±5.4, 24°.26N×108°.35W, h0km, mb3.4/1, mb1 3.7/5, mb1mx3.6/22, mbtmp3.3/5, ML3.6/2, Error ellipse: s-maj=77.6km s-min=28.3km az=153.0*
*NEIC **19** 16:15:26.1±4.7, 24°.84N×108°.13W, h10km, mb3.5/1, Error ellipse: s-maj=59.0km s-min=23.7km az=177.0*
ISC 19 16:15:26.1±4.4, 24°.8N±0°.4×108°.2W±0°.2, h10km, n11, σ0°.76/11, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**6.02**	**41**	Pn	**Pn**	**16 16 55.6**	**+0.4**
0.2nm,0.3s,baz=210,slow=15,SNR=8.0							
TXAR				Lg		16 18 47.2	
0.1nm,0.3s,baz=232,slow=31,SNR=2.5							
TXAR	**Lajitas Array**	**6.02**	**41**	Pn	**Pn**	**16 16 55.6**	**+0.4**
TXAR				Lg		16 18 47.2	
MNTX	**Cornudas Mount**	**7.27**	**19**	*e*Pn	**Pn**	**16 17 12.5**	**+0.2**
SDCO	**Great Sand Dun**	**13.07**	**9**	Pn	**Pn**	**16 18 30.7**	**-1.0**
MVU	**Marysvale**	**14.04**	**347**	Pn	**Pn**	**16 18 44.8**	**-0.3**
NVAR	**Mina Array Bea**	**16.04**	**330**	Pn	**Pn**	**16 19 12.0**	**+0.3**
0.1nm,0.3s,baz=158,slow=15,SNR=5.3							
ELK	**Elko**	**16.92**	**341**	Pn	**Pn**	**16 19 26.4**	**+3.5**
0.1nm,0.3s,baz=190,slow=12,SNR=4.6							
ELK	**Elko**	**16.92**	**341**	Pn	**Pn**	**16 19 26.4**	**+3.5**
BW06	**Boulder Array**	**17.92**	**357**	*e*Pn	**Pn**	**16 19 36.1**	**+0.8**
5.7nm,1.3s							
PDAR	**Pinedale Array**	**17.92**	**357**	P	**Pn**	**16 19 34.9**	**-0.5**
0.0nm,0.3s,baz=182,slow=9.5,SNR=3.7							
ILAR	**Eielson Array**	**47.05**	**339**	P	**P**	**16 23 57.0**	**-0.6**
0.7nm,1.0s,baz=155,slow=7.0,SNR=5.2							

IDC 19 16:20:26.9±5.2, 11°.94N×141°.40E, h122km±65km, mb3.2/4, mb1 3.4/5, mb1mx3.1/24, mbtmp3.2/5, Error ellipse: s-maj=53.9km s-min=24.8km az=91.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.76**	**64**	P	Pn	16 21 23.6	+0.3
4.5nm,0.3s,baz=191,slow=12,SNR=4.2							
GUMO				S	Sn	16 22 07.4	+0.4
8.9nm,0.3s,baz=28,slow=20,SNR=8.2							
WRA	**Warramunga Arr**	**32.44**	**192**	P	P	16 26 45.3	-0.1
0.4nm,0.8s,baz=9.6,slow=10.0,SNR=7.5							
CMAR	**Chiang Mai Arr**	**41.40**	**284**	P	P	16 28 01.8	+0.3
0.5nm,0.6s,baz=85,slow=6.8,SNR=4.4							
MKAR	**Makanchi Array**	**60.36**	**317**	P	P	16 30 23.0	0.0
0.3nm,0.2s,baz=87,slow=9.8,SNR=2.2							
BVAR	**Borovoye Array**	**69.13**	**322**	P	P	16 31 19.8	0.0
0.5nm,0.5s,baz=92,slow=8.3,SNR=4.2							

GUC 19 16:30:30.1±0.7, 21°.27S×68°.11W, h160km, ML3.7, 2C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**1.31**	**280**	⇓*i*P	Pn	16 30 59.6	+1.1
PB01				AML	AML	16 31 25.5	
comp=E,407nm,0.1s							
PB04	**Plate Boundary**	**1.62**	**232**	*e*P	Pn	16 31 08.8	+7.2
PB04				*i* S	Sn	16 31 37.8	+12
PB04				AML	AML	16 31 41.4	
comp=N,318nm,0.3s							
MACH	**Maria Elena**	**1.79**	**239**	⇓*i*P	Pn	16 31 05.0	+1.6
MACH				*i* S	Sn	16 31 31.3	+2.1
HMBC	**Humberston**	**1.94**	**300**	⇑*i*P	Pn	16 31 06.1	+0.9
HMBC				*i* S	Sn	16 31 33.7	+1.7
HMBC				AML	AML	16 31 34.8	
comp=N,964nm,0.2s							
PSGC	**Pisagua**	**2.52**	**311**	*e*P	Pn	16 31 12.0	0.0
PSGC				*i* S	Sn	16 31 44.9	+0.7
PSGC				AML	AML	16 31 48.1	
comp=N,147nm,0.4s							
MNMC	**Miæe Miæ**	**2.55**	**326**	⇑*i*P	Pn	16 31 13.6	+1.3
MNMC				*i* S	Sn	16 31 47.1	+2.2
MNMC				AML	AML	16 31 48.9	
comp=E,557nm,0.6s							
CEN1	**Los Morros**	**2.87**	**222**	*e*P	Pn	16 31 21.2	+5.0
CEN1				*e*S	Sn	16 31 59.3	+7.4

GUC 19 17:01:13.7±0.7, 31°.56S×71°.53W, h37km±2km, MD3.6, ML2.8, 3C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.32**	**176**	⇑*i*P	Pn	17 01 21.7	-0.2
CHNG				*i* S	Sn	17 01 27.7	0.0
CMCH	**Combarbala**	**0.59**	**49**	⇑*i*P	Pn	17 01 26.2	+0.5
CMCH				*i* S	Sn	17 01 34.8	+0.6
CMCH				AML	AML	17 01 35.7	
comp=E,4μm,0.5s							
TLL	**Tololo Astrono**	**1.52**	**24**	*e*P	Pn	17 01 40.1	+1.7
TLL				*i* S	Sn	17 02 00.5	+3.5
TLL				AML	AML	17 02 04.2	
comp=E,94nm,0.5s							
PEL	**Peldehue**	**1.73**	**156**	⇑*i*P	Pn	17 01 43.1	+1.8
PEL				*i* S	Sn	17 02 04.7	+2.6
PEL				AML	AML	17 02 07.5	
comp=E,201nm,0.5s							
FCH	**Farellones**	**2.05**	**150**	*e*P	Pn	17 01 47.7	+2.1
FCH				*i* S	Sn	17 02 13.4	+3.5
FCH				AML	AML	17 02 17.0	
comp=E,67nm,0.3s							
LMEL	**Las Melosas**	**2.54**	**154**	*e*P	Pn	17 01 53.7	+1.3

LMEL				iS	Sn	17 02 24.8	+2.8
LMEL				AML	AML	17 02 32.5	
	comp=N,57nm,0.3s						

ISCJB **19** *17:03:14.1±0.3, 43°.18N±0°.02×0°.36W±0°.02, h11km±3km, Error ellipse: s-maj=3.2km s-min=2.4km az=162.5*
CSEM **19** *17:03:15.2±0.1, 43°.14N×0°.38W, h10km, ML2.6/13, Error ellipse: s-maj=2.4km s-min=1.8km az=166.0*
STR **19** *17:03:15.9±0.1, 43°.07N×0°.40W, h5km, Ml2.7, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
MDD **19** *17:03:16.3±0.2, 43°.09N×0°.40W, h0km, mbLg1.8/19, Error ellipse: s-maj=2.6km s-min=1.6km az=10.0*
NEIC **19** *17:03:16.3, 43°.13N×0°.41W, h2km, ML2.7(LDG), ML2.4(STR), After LDG.*
LDG **19** *17:03:16.3±0.1, 43°.13N×0°.41W, h2km, Md2.5/3, Ml2.7/10, Error ellipse: s-maj=1.8km s-min=1.3km az=162.0*
ISC 19 17:03:15.3±0.2, **43°.14N**±0°.02×**0°.38W**±0°.02, **h10**km±3km, **n133**, σ**0s.87**/170, **Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
REYF	**Montagne du Re**	**0.07**	**188**	Pg	**Pg**	**17 03 16.6**	**-0.9**
REYF				Sg	**Sg**	**17 03 17.6**	**-1.4**
REYF	**Montagne du Re**	**0.07**	**188**	Pg	**Pg**	**17 03 16.7**	**-0.8**
REYF				Lg		17 03 17.4	
REYF	**Montagne du Re**	**0.07**	**188**	Pg	**Pg**	**17 03 16.7**	**-0.8**
REYF				Lg		17 03 17.4	
REYF	**Montagne du Re**	**0.07**	**188**	Pg	**Pg**	**17 03 16.6**	**-0.9**
REYF				Sg	**Sg**	**17 03 17.6**	**-1.4**
ETSF	**Etsaut**	**0.28**	**209**	ePg	**Pg**	**17 03 19.6**	**-1.2**
ETSF				eSg	**Sg**	**17 03 22.7**	**-1.9**
	51nm,0.2s						
ETSF	**Etsaut**	**0.28**	**209**	Pg	**Pg**	**17 03 19.6**	**-1.2**
ETSF				Lg		17 03 22.7	
	25nm,0.2s						
ETSF	**Etsaut**	**0.28**	**209**	Pg	**Pg**	**17 03 19.6**	**-1.2**
ETSF				Lg		17 03 22.7	
	25nm,0.2s						
ETSF	**Etsaut**	**0.28**	**209**	ePg	**Pg**	**17 03 19.6**	**-1.2**
ETSF				eSg	**Sg**	**17 03 22.7**	**-1.9**
	25nm,0.2s						
LABF	**Labassere**	**0.34**	**106**	Pg	**Pg**	**17 03 23.1**	**+1.0**
LABF				Sg	**Sg**	**17 03 28.2**	**+1.5**
LABF	**Labassere**	**0.34**	**106**	Pg	**Pg**	**17 03 23.0**	**+0.9**
LABF				Lg		17 03 28.0	
LABF	**Labassere**	**0.34**	**106**	Pg	**Pg**	**17 03 23.0**	**+0.9**
LABF				Lg		17 03 28.0	
LABF	**Labassere**	**0.34**	**106**	Pg	**Pg**	**17 03 23.1**	**+1.0**
LABF				Sg	**Sg**	**17 03 28.2**	**+1.5**
FDAF	**Les Forges d'A**	**0.35**	**203**	Pg	**Pg**	**17 03 21.0**	**-1.2**
FDAF				Lg		17 03 25.3	
FDAF	**Les Forges d'A**	**0.35**	**203**	Pg	**Pg**	**17 03 21.0**	**-1.2**
FDAF				Lg		17 03 25.3	
VIEF	**Viey**	**0.39**	**131**	Pg	**Pg**	**17 03 22.6**	**-0.4**
VIEF				Sg	**Sg**	**17 03 28.2**	**0.0**
VIEF	**Viey**	**0.39**	**131**	Pg	**Pg**	**17 03 22.7**	**-0.3**
VIEF				Lg		17 03 27.7	
VIEF	**Viey**	**0.39**	**131**	Pg	**Pg**	**17 03 22.7**	**-0.3**
VIEF				Lg		17 03 27.7	
VIEF	**Viey**	**0.39**	**131**	Pg	**Pg**	**17 03 22.6**	**-0.4**
VIEF				Sg	**Sg**	**17 03 28.2**	**0.0**
ORDF	**Ordiarp**	**0.41**	**280**	Pg	**Pg**	**17 03 24.0**	**+0.6**
ORDF				Sg	**Sg**	**17 03 30.9**	**+2.0**
ORDF	**Ordiarp**	**0.41**	**280**	Pg	**Pg**	**17 03 23.7**	**+0.3**
ORDF				Lg		17 03 29.7	
ORDF	**Ordiarp**	**0.41**	**280**	Pg	**Pg**	**17 03 23.7**	**+0.3**
ORDF				Lg		17 03 29.7	
ORDF	**Ordiarp**	**0.41**	**280**	Pg	**Pg**	**17 03 24.0**	**+0.6**
ORDF				Sg	**Sg**	**17 03 30.9**	**+2.0**
LARF	**Larrau**	**0.46**	**257**	Pg	**Pg**	**17 03 23.6**	**-0.6**
LARF				Sg	**Sg**	**17 03 31.1**	**+0.8**
LARF	**Larrau**	**0.46**	**257**	Pg	**Pg**	**17 03 24.0**	**-0.3**
LARF				Lg		17 03 30.3	
LARF	**Larrau**	**0.46**	**257**	Pg	**Pg**	**17 03 24.0**	**-0.3**
LARF				Lg		17 03 30.3	
LARF	**Larrau**	**0.46**	**257**	Pg	**Pg**	**17 03 23.6**	**-0.6**
LARF				Sg	**Sg**	**17 03 31.1**	**+0.8**
EPF	**Esparros**	**0.54**	**102**	ePg	**Pg**	**17 03 26.5**	**+0.8**
EPF				eSg	**Sg**	**17 03 34.2**	**+1.4**
	48nm,0.3s						
EPF	**Esparros**	**0.54**	**102**	Pg	**Pg**	**17 03 26.5**	**+0.8**
EPF				Lg		17 03 34.2	
	24nm,0.3s						
EPF	**Esparros**	**0.54**	**102**	Pg	**Pg**	**17 03 26.5**	**+0.8**
EPF				Lg		17 03 34.2	
	24nm,0.3s						
EPF	**Esparros**	**0.54**	**102**	ePg	**Pg**	**17 03 26.5**	**+0.8**
EPF				eSg	**Sg**	**17 03 34.2**	**+1.4**
	24nm,0.3s						
EBIE	**Bielsa**	**0.59**	**140**	Pg	**Pg**	**17 03 26.3**	**-0.5**
	1.5nm,0.1s,SNR=25						
EBIE				Lg		17 03 34.5	
	17nm,0.1s,SNR=34						
EBIE	**Bielsa**	**0.59**	**140**	Pg	**Pg**	**17 03 26.3**	**-0.5**
	1.5nm,0.1s,SNR=25						
EBIE				Lg		17 03 34.5	
	17nm,0.1s,SNR=34						
EBIE	**Bielsa**	**0.59**	**140**	Pg	**Pg**	**17 03 26.3**	**-0.5**
	1.5nm,0.1s,SNR=25						
EBIE				Lg		17 03 34.5	
	17nm,0.1s,SNR=34						
SJPF	**Ste Jean**	**0.62**	**268**	ePg	**Pg**	**17 03 27.6**	**+0.3**
SJPF				eSg	**Sg**	**17 03 35.5**	**+0.1**
	33nm,0.3s						
SJPF	**Ste Jean**	**0.62**	**268**	Pg	**Pg**	**17 03 27.6**	**+0.3**
SJPF				Lg		17 03 35.5	
	17nm,0.3s						
SJPF	**Ste Jean**	**0.62**	**268**	Pg	**Pg**	**17 03 27.6**	**+0.3**
SJPF				Lg		17 03 35.5	
	17nm,0.3s						
SJPF	**Ste Jean**	**0.62**	**268**	ePg	**Pg**	**17 03 27.6**	**+0.3**
SJPF				eSg	**Sg**	**17 03 35.5**	**+0.1**
	17nm,0.3s						
OSSF	**Osses**	**0.66**	**280**	Pg	**Pg**	**17 03 28.0**	**0.0**
OSSF				Sg	**Sg**	**17 03 37.7**	**+1.1**
OSSF	**Osses**	**0.66**	**280**	Pg	**Pg**	**17 03 28.2**	**+0.2**
OSSF				Lg		17 03 37.1	
OSSF	**Osses**	**0.66**	**280**	Pg	**Pg**	**17 03 28.2**	**+0.2**
OSSF				Lg		17 03 37.1	
OSSF	**Osses**	**0.66**	**280**	Pg	**Pg**	**17 03 28.0**	**0.0**
OSSF				Sg	**Sg**	**17 03 37.7**	**+1.1**
EORO	**Oroz-Betelu**	**0.73**	**250**	Pg	**Pg**	**17 03 29.2**	**-0.2**
	1.8nm,0.1s,SNR=7.9						
EORO				Lg		17 03 38.6	
	6.4nm,0.1s,SNR=7.9						
EORO	**Oroz-Betelu**	**0.73**	**250**	Pg	**Pg**	**17 03 29.2**	**-0.2**
	1.8nm,0.1s,SNR=7.9						
EORO				Lg		17 03 38.6	
	6.4nm,0.1s,SNR=7.9						
EORO	**Oroz-Betelu**	**0.73**	**250**	Pg	**Pg**	**17 03 29.2**	**-0.1**
	1.8nm,0.1s,SNR=7.9						
EORO				Lg		17 03 38.6	
	6.4nm,0.1s,SNR=7.9						
EALK	**Alkurruntz**	**0.83**	**276**	Pg	**Pg**	**17 03 31.5**	**+0.3**
	0.9nm,0.1s,SNR=6.8						
EALK				Lg		17 03 42.8	
	18nm,0.3s,SNR=4.8						
EALK	**Alkurruntz**	**0.83**	**276**	Pg	**Pg**	**17 03 31.5**	**+0.3**
	0.9nm,0.1s,SNR=6.8						
EALK				Lg		17 03 42.8	
	18nm,0.3s,SNR=4.8						
EALK	**Alkurruntz**	**0.83**	**276**	Pg	**Pg**	**17 03 30.9**	**-0.4**
	0.9nm,0.1s,SNR=6.8						
EALK				Lg		17 03 42.8	
	18nm,0.3s,SNR=4.8						
IZUN	**Zunzarren**	**0.84**	**251**	Pg	**Pg**	**17 03 31.2**	**-0.3**
	0.4nm,0.1s,SNR=7.9						
IZUN				Lg		17 03 43.9	
	3.3nm,0.1s,SNR=7.9						
IZUN	**Zunzarren**	**0.84**	**251**	Pg	**Pg**	**17 03 31.2**	**-0.3**
	0.4nm,0.1s,SNR=7.9						
IZUN				Lg		17 03 43.9	
	3.3nm,0.1s,SNR=7.9						
IZUN	**Zunzarren**	**0.84**	**251**	Pg	**Pg**	**17 03 31.2**	**-0.3**
	0.4nm,0.1s,SNR=7.9						
IZUN				Lg		17 03 43.9	
	3.3nm,0.1s,SNR=7.9						
ELIZ	**Elizondo**	**0.84**	**272**	Pg	**Pg**	**17 03 32.0**	**+0.5**
	3.2nm,0.2s,SNR=7.9						
ELIZ				Lg		17 03 43.2	
	6.4nm,0.2s,SNR=7.9						
ELIZ	**Elizondo**	**0.84**	**272**	Pg	**Pg**	**17 03 32.0**	**+0.5**
	3.2nm,0.2s,SNR=7.9						
ELIZ				Lg		17 03 43.2	
	6.4nm,0.2s,SNR=7.9						
ELIZ	**Elizondo**	**0.84**	**272**	Pg	**Pg**	**17 03 32.0**	**+0.5**
	3.2nm,0.2s,SNR=7.9						
ELIZ				Lg		17 03 43.2	
	6.4nm,0.2s,SNR=7.9						
MELF	**Melles**	**0.88**	**108**	Pg	**Pg**	**17 03 31.8**	**-0.4**
MELF				Sg	**Sg**	**17 03 45.5**	**+1.9**
MELF	**Melles**	**0.88**	**108**	Lg		17 03 43.5	
MELF	**Melles**	**0.88**	**108**	Lg		17 03 43.5	
MELF	**Melles**	**0.88**	**108**	Pg	**Pg**	**17 03 31.8**	**-0.4**
MELF				Sg	**Sg**	**17 03 45.5**	**+1.9**
IUSE	**Utxeti**	**0.88**	**258**	Pg	**Pg**	**17 03 32.7**	**+0.5**
	0.6nm,0.1s,SNR=7.9						
IUSE				Lg		17 03 43.9	
	4.7nm,0.2s,SNR=7.9						
IUSE	**Utxeti**	**0.88**	**258**	Pg	**Pg**	**17 03 32.7**	**+0.5**
	0.6nm,0.1s,SNR=7.9						
IUSE				Lg		17 03 43.9	
	4.7nm,0.2s,SNR=7.9						
IUSE	**Utxeti**	**0.88**	**258**	Pg	**Pg**	**17 03 32.7**	**+0.5**
	0.6nm,0.1s,SNR=7.9						
IUSE				Lg		17 03 43.9	
	4.7nm,0.2s,SNR=7.9						
IUNC	**Unciti**	**0.91**	**245**	Pg	**Pg**	**17 03 33.4**	**+0.6**
	1.7nm,0.2s,SNR=7.9						
IUNC				Lg		17 03 44.9	
	5.0nm,0.1s,SNR=7.9						
IUNC	**Unciti**	**0.91**	**245**	Pg	**Pg**	**17 03 33.4**	**+0.6**
	1.7nm,0.2s,SNR=7.9						
IUNC				Lg		17 03 44.9	
	5.0nm,0.1s,SNR=7.9						
IUNC	**Unciti**	**0.91**	**245**	Pg	**Pg**	**17 03 33.4**	**+0.6**
	1.7nm,0.2s,SNR=7.9						
IUNC				Lg		17 03 45.8	
	5.0nm,0.1s,SNR=7.9						
SALF	**Salau**	**1.21**	**108**	Pg	**Pg**	**17 03 39.0**	**+0.4**
SALF				Lg		17 03 55.0	
SALF	**Salau**	**1.21**	**108**	Pg	**Pg**	**17 03 39.0**	**+0.4**
SALF				Lg		17 03 55.0	
CSOR	**Sort**	**1.35**	**124**	Pg	**Pg**	**17 03 41.2**	**0.0**
	2.6nm,0.2s,SNR=7.9						
CSOR				Lg		17 04 00.6	
	3.3nm,0.2s,SNR=7.9						
CSOR	**Sort**	**1.35**	**124**	Pg	**Pg**	**17 03 41.2**	**0.0**
	2.6nm,0.2s,SNR=7.9						
CSOR				Lg		17 04 00.6	
	3.3nm,0.2s,SNR=7.9						
CSOR	**Sort**	**1.35**	**124**	Pn	**Pn**	**17 03 41.0**	**+0.8**
	0.2nm,0.3s,SNR=20						
CSOR	**Sort**	**1.35**	**124**	Pg	**Pg**	**17 03 43.1**	**+1.9**
	2.6nm,0.2s,SNR=7.9						
CSOR				Lg		17 04 00.6	
	3.3nm,0.2s,SNR=7.9						
ESAC	**San Caprasio**	**1.42**	**183**	Pg	**Pg**	**17 03 42.9**	**+0.4**
	4.6nm,0.1s,SNR=6.9						
ESAC				Lg		17 04 00.2	
	13nm,0.2s,SNR=10.0						
ESAC	**San Caprasio**	**1.42**	**183**	Pg	**Pg**	**17 03 42.9**	**+0.4**
	4.6nm,0.1s,SNR=6.9						
ESAC				Lg		17 04 00.2	
	13nm,0.2s,SNR=10.0						
ESAC	**San Caprasio**	**1.42**	**183**	Pg	**Pg**	**17 03 42.9**	**+0.3**
	4.6nm,0.1s,SNR=6.9						
ESAC				Lg		17 04 00.2	
	13nm,0.2s,SNR=10.0						
CLLI	**Llivia**	**1.85**	**110**	Pg	**Pg**	**17 03 52.3**	**+1.5**
	SNR=7.9						
CLLI				Lg		17 04 17.4	
	4.2nm,0.2s,SNR=7.9						
CLLI	**Llivia**	**1.85**	**110**	Pg	**Pg**	**17 03 52.3**	**+1.5**
	SNR=7.9						
CLLI				Lg		17 04 17.4	
	4.2nm,0.2s,SNR=7.9						
CLLI	**Llivia**	**1.85**	**110**	Pg	**Pg**	**17 03 52.3**	**+1.5**
	SNR=7.9						
CLLI				Lg		17 04 17.4	
	4.2nm,0.2s,SNR=7.9						
EMIR	**Miracle**	**1.87**	**130**	Lg		17 04 17.1	
	2.8nm,0.1s,SNR=7.9						
EMIR	**Miracle**	**1.87**	**130**	Lg		17 04 17.1	
	2.8nm,0.1s,SNR=7.9						
EMIR	**Miracle**	**1.87**	**130**	Lg		17 04 17.1	
	2.8nm,0.1s,SNR=7.9						
MTLF	**Montolieu**	**1.91**	**83**	ePg	**Pg**	**17 03 52.1**	**+0.3**
MTLF				eSg	**Sg**	**17 04 17.4**	**+0.8**
	7.6nm,0.3s						
MTLF	**Montolieu**	**1.91**	**83**	Pg	**Pg**	**17 03 52.1**	**+0.3**
MTLF				Lg		17 04 17.4	
	3.8nm,0.3s						
MTLF	**Montolieu**	**1.91**	**83**	Pg	**Pg**	**17 03 52.1**	**+0.3**
MTLF				Lg		17 04 17.4	
	3.8nm,0.3s						
MTLF	**Montolieu**	**1.91**	**83**	ePg	**Pg**	**17 03 52.1**	**+0.3**
MTLF				eSg	**Sg**	**17 04 17.4**	**+0.8**
	3.8nm,0.3s						
VALF	**Valcebollere**	**1.91**	**112**	Lg		17 04 16.8	
VALF	**Valcebollere**	**1.91**	**112**	Lg		17 04 16.8	
LFF	**La Frestale**	**1.97**	**24**	ePg	**Pg**	**17 03 53.4**	**+0.4**
LFF				eSg	**Sg**	**17 04 19.0**	**+0.4**
	9.2nm,0.2s						
LFF	**La Frestale**	**1.97**	**24**	Pg	**Pg**	**17 03 53.4**	**+0.4**
LFF				Lg		17 04 19.0	
	4.6nm,0.2s						
LFF	**La Frestale**	**1.97**	**24**	Pg	**Pg**	**17 03 53.4**	**+0.4**
LFF				Lg		17 04 19.0	
	4.6nm,0.2s						
LFF	**La Frestale**	**1.97**	**24**	ePg	**Pg**	**17 03 53.4**	**+0.4**
LFF				eSg	**Sg**	**17 04 19.0**	**+0.4**
	4.6nm,0.2s						
EPOB	**Poblet**	**2.09**	**148**	Pg	**Pg**	**17 03 54.1**	**-1.3**
	0.4nm,0.1s,SNR=7.9						
EPOB				Lg		17 04 20.8	
	SNR=7.9						
EPOB	**Poblet**	**2.09**	**148**	Pg	**Pg**	**17 03 54.1**	**-1.3**
	0.4nm,0.1s,SNR=7.9						
EPOB				Lg		17 04 20.8	
	SNR=7.9						
EPOB	**Poblet**	**2.09**	**148**	Pg	**Pg**	**17 03 54.1**	**-1.3**
	0.4nm,0.1s,SNR=7.9						
EPOB				Lg		17 04 20.8	
	SNR=7.9						
ELAN	**Lanestosa**	**2.24**	**273**	Pg	**Pg**	**17 03 58.3**	**+0.2**
	0.3nm,0.2s,SNR=7.9						
ELAN				Lg		17 04 23.9	
	1.4nm,0.2s,SNR=7.9						
ELAN	**Lanestosa**	**2.24**	**273**	Pg	**Pg**	**17 03 58.3**	**+0.2**
	0.3nm,0.2s,SNR=7.9						
ELAN				Lg		17 04 23.9	
	1.4nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**2.25**	**166**	Pg	**Pg**	**17 03 57.1**	**-1.3**
	1.3nm,0.4s,SNR=7.9						
ERTA				Lg		17 04 25.6	
	5.5nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**2.25**	**166**	Pg	**Pg**	**17 03 57.1**	**-1.3**
	1.3nm,0.4s,SNR=7.9						
ERTA				Lg		17 04 25.6	
	5.5nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**2.25**	**166**	Pg	**Pg**	**17 03 57.1**	**-1.3**
	1.3nm,0.4s,SNR=7.9						
ERTA				Lg		17 04 27.8	
	SNR=7.9						
CFON	**Fontmartina**	**2.50**	**123**	Pg	**Pg**	**17 04 02.7**	**-0.4**
	1.3nm,0.2s,SNR=7.9						
CFON				Lg		17 04 34.5	
	SNR=7.9						
CFON	**Fontmartina**	**2.50**	**123**	Pg	**Pg**	**17 04 02.7**	**-0.4**
	1.3nm,0.2s,SNR=7.9						
CFON				Lg		17 04 34.5	
	SNR=7.9						
CFON	**Fontmartina**	**2.50**	**123**	Lg		17 04 35.2	
	SNR=7.9						
CAF	**Calviac**	**2.51**	**44**	ePg	**Pg**	**17 04 03.3**	**0.0**
CAF				eSg	**Sg**	**17 04 35.8**	**0.0**
	4.6nm,0.2s						
CAF	**Calviac**	**2.51**	**44**	Pg	**Pg**	**17 04 03.3**	**0.0**
CAF				Lg		17 04 35.8	
	2.3nm,0.2s						
CAF	**Calviac**	**2.51**	**44**	Pg	**Pg**	**17 04 03.3**	**0.0**
CAF				Lg		17 04 35.8	
	2.3nm,0.2s						
CAF	**Calviac**	**2.51**	**44**	ePg	**Pg**	**17 04 03.3**	**0.0**
CAF				eSg	**Sg**	**17 04 35.8**	**0.0**
	2.3nm,0.2s						
RJF	**Les Rejaudoux**	**2.55**	**32**	Pg	**Pg**	**17 04 04.2**	**0.0**
RJF				eSg	**Sg**	**17 04 37.5**	**+0.2**
	12nm,0.4s						
RJF	**Les Rejaudoux**	**2.55**	**32**	Pg	**Pg**	**17 04 04.2**	**0.0**
RJF				Lg		17 04 37.5	
	5.8nm,0.4s						
RJF	**Les Rejaudoux**	**2.55**	**32**	Pg	**Pg**	**17 04 04.2**	**0.0**
RJF				Lg		17 04 37.5	
	5.8nm,0.4s						
RJF	**Les Rejaudoux**	**2.55**	**32**	ePg	**Pg**	**17 04 04.2**	**0.0**
RJF				eSg	**Sg**	**17 04 37.5**	**+0.2**
	5.8nm,0.4s						
ETOR	**Torete**	**2.64**	**209**	Pn	**Pn**	**17 03 58.1**	**+0.2**
	1.8nm,0.1s,SNR=6.0						
ETOR				Sn	**Sn**	**17 04 30.8**	**+0.8**
	6.7nm,0.4s,SNR=4.8						
ETOR	**Torete**	**2.64**	**209**	Pn	**Pn**	**17 03 58.1**	**+0.2**
	1.8nm,0.1s,SNR=6.0						
ETOR				Sn	**Sn**	**17 04 30.8**	**+0.8**
	6.7nm,0.4s,SNR=4.8						
ETOR	**Torete**	**2.64**	**209**	Pn	**Pn**	**17 03 58.1**	**+0.2**
	1.8nm,0.1s,SNR=6.0						
ETOR				Sn	**Sn**	**17 04 30.8**	**+0.8**
	6.7nm,0.4s,SNR=4.8						
EMOS	**Mosqueruela**	**2.78**	**181**	Sn	**Sn**	**17 04 32.3**	**-1.2**
	SNR=7.9						
EMOS	**Mosqueruela**	**2.78**	**181**	Sn	**Sn**	**17 04 32.3**	**-1.2**
	SNR=7.9						
EMOS	**Mosqueruela**	**2.78**	**181**	Sn	**Sn**	**17 04 32.3**	**-1.1**
	SNR=7.9						
LASF	**Ste Croix**	**3.21**	**72**	ePn	**Pn**	**17 04 05.7**	**-0.2**
LASF				eSn	**Sn**	**17 04 42.9**	**-1.3**
LASF				eSg	**Sg**	**17 04 57.9**	**-0.6**
	2.7nm,0.3s						
LASF	**Ste Croix**	**3.21**	**72**	Pn	**Pn**	**17 04 05.7**	**-0.2**
LASF				Sn	**Sn**	**17 04 42.9**	**-1.3**
LASF				Lg		17 04 57.9	
	1.4nm,0.3s						
LASF	**Ste Croix**	**3.21**	**72**	Pn	**Pn**	**17 04 05.7**	**-0.2**
LASF				Sn	**Sn**	**17 04 42.9**	**-1.3**
LASF				Lg		17 04 57.9	
	1.4nm,0.3s						
LASF	**Ste Croix**	**3.21**	**72**	ePn	**Pn**	**17 04 05.7**	**-0.2**
LASF				eSn	**Sn**	**17 04 42.9**	**-1.3**
LASF				eSg	**Sg**	**17 04 57.9**	**-0.6**
	1.4nm,0.3s						
MFF	**Saint Martin d**	**3.46**	**3**	ePg	**Pg**	**17 04 20.6**	**-1.0**
MFF				eSg	**Sg**	**17 05 05.5**	**-1.0**
	3.6nm,0.3s						
MFF	**Saint Martin d**	**3.46**	**3**	Pg	**Pg**	**17 04 20.6**	**-1.0**
MFF				Lg		17 05 05.5	
	1.8nm,0.3s						
MFF	**Saint Martin d**	**3.46**	**3**	Pg	**Pg**	**17 04 20.6**	**-1.0**
MFF				Lg		17 05 05.5	
	1.8nm,0.3s						
MFF	**Saint Martin d**	**3.46**	**3**	ePg	**Pg**	**17 04 20.6**	**-1.0**
MFF				eSg	**Sg**	**17 05 05.5**	**-1.0**
	1.8nm,0.3s						
TCF	**Toulx Ste Croi**	**3.65**	**29**	ePn	**Pn**	**17 04 11.7**	**-0.1**
TCF				eSg	**Sg**	**17 05 11.6**	**-0.7**
	3.1nm,0.3s						
TCF	**Toulx Ste Croi**	**3.65**	**29**	Pn	**Pn**	**17 04 11.7**	**-0.1**
TCF				Lg		17 05 11.6	
	1.6nm,0.3s						
TCF	**Toulx Ste Croi**	**3.65**	**29**	Pn	**Pn**	**17 04 11.7**	**-0.1**
TCF				Lg		17 05 11.6	
	1.6nm,0.3s						
TCF	**Toulx Ste Croi**	**3.65**	**29**	ePn	**Pn**	**17 04 11.7**	**-0.1**
TCF				eSg	**Sg**	**17 05 11.6**	**-0.7**
	1.5nm,0.3s						
BGF	**Bois d'Agland**	**4.11**	**33**	ePn	**Pn**	**17 04 18.5**	**+0.3**
BGF				eSg	**Sg**	**17 05 26.2**	**-1.1**
	12nm,0.4s						
BGF	**Bois d'Agland**	**4.11**	**33**	Pn	**Pn**	**17 04 18.5**	**+0.3**
BGF				Lg		17 05 26.2	
	5.8nm,0.4s						
BGF	**Bois d'Agland**	**4.11**	**33**	Pn	**Pn**	**17 04 18.5**	**+0.3**
BGF				Lg		17 05 26.2	
	5.8nm,0.4s						
BGF	**Bois d'Agland**	**4.11**	**33**	ePn	**Pn**	**17 04 18.5**	**+0.3**
BGF				eSg	**Sg**	**17 05 26.2**	**-1.1**
	5.8nm,0.4s						
AVF	**Avril sur Loir**	**4.51**	**35**	ePn	**Pn**	**17 04 23.7**	**+0.1**
AVF				eSg	**Sg**	**17 05 38.4**	**-1.5**
	4.1nm,0.6s						
AVF	**Avril sur Loir**	**4.51**	**35**	Pn	**Pn**	**17 04 23.7**	**+0.1**
AVF				Lg		17 05 38.4	
	2.0nm,0.6s						
AVF	**Avril sur Loir**	**4.51**	**35**	Pn	**Pn**	**17 04 23.7**	**+0.1**
AVF				Lg		17 05 38.4	
	2.0nm,0.6s						
AVF	**Avril sur Loir**	**4.51**	**35**	ePn	**Pn**	**17 04 23.7**	**+0.1**
AVF				eSg	**Sg**	**17 05 38.4**	**-1.5**
	2.0nm,0.6s						

GUC 19 17:03:27.2±0.8, **20°.18S×69°.22W, h99**km±6km, **ML4.5, 4C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMBC	**Humberston**	**0.64**	**261**	⇑iP	Pn	17 03 44.0	+0.1
HMBC				iS	Sn	17 03 57.3	+0.8
HMBC				AML	AML	17 03 57.8	
	comp=E,27μm,0.2s						
PB01	**Plate Boundary**	**0.90**	**196**	⇑iP	Pn	17 03 46.7	+0.3
PB01				iS	Sn	17 04 01.6	+0.7
PB01				AML	AML	17 04 03.2	
	comp=N,30μm,0.3s						
PSGC	**Pisagua**	**1.03**	**304**	⇑iP	Pn	17 03 47.8	0.0
PSGC				iS	Sn	17 04 04.0	+0.6
PSGC				AML	AML	17 04 06.6	
	comp=E,13μm,0.4s						
MNMC	**Miæe Miæ**	**1.10**	**341**	⇓iP	Pn	17 03 49.2	+0.6
MNMC				iS	Sn	17 04 06.4	+1.6
MNMC				AML	AML	17 04 08.6	
	comp=N,14μm,0.3s						
MACH	**Maria Elena**	**2.07**	**194**	⇑iP	Pn	17 04 01.5	+0.9
MACH				iS	Sn	17 04 26.3	+0.2
PB04	**Plate Boundary**	**2.09**	**187**	eP	Pn	17 04 04.4	+3.5
PB04				iS	Sn	17 04 31.6	+5.0
PB04				AML	AML	17 04 41.5	
	comp=E,2μm,0.6s						
TOCH	**Tocopilla**	**2.11**	**205**	eP	Pn	17 04 02.5	+1.2
TOCH				iS	Sn	17 04 28.5	+1.3
TOCH				AML	AML	17 04 32.7	
	comp=E,3μm,0.6s						

IDC **19** *17:21:42.2±2.0, 19°.13N×108°.34W, h0km, mb3.3/5, mb1 3.8/6, mb1mx3.7/19, mbtmp3.4/6, ML3.2/1, MS3.3/1, Ms1 3.3/1, ms1mx2.7/14, Error ellipse: s-maj=70.5km s-min=23.9km az=62.0*
NEIC **19** *17:21:43.8±1.2, 19°.14N×108°.29W, h10km, mb4.2/2, Error ellipse: s-maj=25.1km s-min=15.8km az=66.0*
ISCJB **19** *17:21:45.9±1.4, 19°.3N±0°.1×108°.2W±0°.2, h33km, mb3.5/7, Error ellipse: s-maj=29.0km s-min=18.7km az=157.4*
ISC 19 17:21:48.2±1.4, **19°.3N**±0°.1×**108°.2W**±0°.2, **h35**km, **n12**, σ**0s.80**/11, **mb3.5/7, Revilla Gigedo Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**10.86**	**22**	Pn	**Pn**	**17 24 22.5**	**+1.4**
	0.0nm,0.3s,baz=207,slow=13,SNR=17						
ANMO	**Albuquerque**	**15.71**	**5**	Pn	**Pn**	**17 25 31.6**	**+4.7**
	0.1nm,0.3s,baz=197,slow=8.3,SNR=4.0						
WMOK	**Wichita Mounta**	**17.55**	**27**	Pn	**Pn**	**17 25 48.9**	**-1.2**
PV10	**Paradox Valley**	**19.07**	**358**	P	**Pn**	**17 26 07.5**	**-1.0**
NVAR	**Mina Array Bea**	**21.02**	**337**	P	**P**	**17 26 28.7**	**-0.1**
	0.8nm,0.8s,mb3.1,baz=154,slow=11,SNR=5.3						
DUG	**Dugway**	**21.24**	**350**	eP	**P**	**17 26 31.7**	**+0.5**
	15nm,1.6s,mb4.1						
DAU	**Daniels Canyon**	**21.25**	**354**	eP	**P**	**17 26 31.1**	**-0.1**
	14nm,1.4s,mb4.1						
ELK	**Elko**	**22.25**	**346**	P	**P**	**17 26 43.0**	**+1.1**
	1.1nm,0.8s,mb3.3,baz=170,slow=6.6,SNR=3.8						
PDAR	**Pinedale Array**	**23.47**	**358**	P	**P**	**17 26 54.5**	**-0.2**
	0.7nm,0.8s,mb3.1,baz=156,slow=7.6,SNR=3.8						
YBH	**Yreka Blue Hor**	**25.58**	**334**	LR	LR	17 36 32.7	
	comp=Z,60nm,18.6s,baz=163,slow=35						
ILAR	**Eielson Array**	**52.25**	**340**	P	**P**	**17 30 55.0**	**-0.6**
	0.6nm,0.7s,mb3.6,baz=154,slow=6.0,SNR=7.1						
LPAZ	**La Paz**	**52.93**	**129**	P	**P**	**17 31 01.4**	**+0.2**
	0.4nm,0.8s,mb3.4,baz=335,slow=17,SNR=1.7						

IDC 19 17:42:48.6±8.6, 30.′06S×177.′42W, h33km±57km, mb3.6/3, mb1 3.8/3, mb1mx3.5/16, mbtmp3.6/3, Error ellipse: s-maj=56.1km s-min=34.5km az=108.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.92**	**332**	Pn	Pn	17 43 05.3	+0.1
	256nm,0.3s,baz=95,slow=10,SNR=13						
RAO				Sn	Sn	17 43 15.9	-1.4
	902nm,0.3s,baz=79,slow=23,SNR=17						
STKA	**Stephens Creek**	**35.05**	**256**	P	P	17 49 39.1	+0.7
	1.2nm,0.7s,baz=72,slow=9.6,SNR=3.2						
ASAR	**Alice Springs**	**43.63**	**266**	P	P	17 50 49.5	-0.7
	0.5nm,0.6s,baz=102,slow=7.3,SNR=9.8						
WRA	**Warramunga Arr**	**44.59**	**271**	P	P	17 50 57.3	-0.6
	0.8nm,0.3s,baz=110,slow=8.1,SNR=20						
FINES	**FINESS Array B**	**145.00**	**340**	PKPbc	PKPdf	18 02 21.0	-0.7
	1.0nm,0.4s,baz=45,slow=3.9,SNR=12						

MAN 19 17:45:20, 6.′86N×125.′75E, h36km, mb4.2, ML3.0, MS2.7, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMPH	**Davao City--Mi**	**0.33**	**313**	*e*P	Pn	17 45 29.8	+1.5
DMPH				*i* S	Sn	17 45 35.3	+1.2
MATI	**Mati**	**0.51**	**80**	*e*P	Pn	17 45 32.1	+1.2
MATI				*e*S	Sn	17 45 41.0	+2.6
BUKP	**Musuan**	**1.22**	**326**	*e*P	Pn	17 45 41.8	+1.2
BUKP				*e*S	Sn	17 45 52.6	-3.3

BJI ***19*** *17:49:10.7, 36.′34N×70.′29E, h236km, mB4.4/1, mb4.5/2*
ISCJB ***19*** *17:49:11.5±0.3, 36.′48N±0.′03×70.′31E±0.′05, h218km±4km, mb3.5/11, Error ellipse: s-maj=6.8km s-min=4.0km az=170.5*
IDC ***19*** *17:49:12.6±3.2, 36.′46N×70.′27E, h215km±31km, mb3.2/10, mb1 3.4/14, mb1mx3.2/27, mbtmp3.3/14, Error ellipse: s-maj=20.9km s-min=14.5km az=19.0*
MOS ***19*** *17:49:12.0±1.2, 36.′51N×70.′23E, h222km, mb4.4/1, Error ellipse: s-maj=14.6km s-min=8.0km az=81.0*
NEIC ***19*** *17:49:12.7±0.7, 36.′51N×70.′25E, h213km±8km, mb4.3/10, Error ellipse: s-maj=9.5km s-min=8.7km az=111.0*
ISC 19 17:49:12.3±0.3, 36.′50N±0.′02×70.′29E±0.′05, h210km±4km, n70, σ1°14/87, mb3.5/11, 5C, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.20**	**208**	*e*PN	Pn	17 49 54.1	+0.4
KBL				*e*S	S	17 50 25.3	-0.7
CEP	**Cherat**	**2.98**	**153**	⇑P	Pn	17 50 03.8	+1.5
CEP				S	S	17 50 42.0	+0.6
CHCP	**Chirah Chowk**	**3.74**	**138**	⇑P	Pn	17 50 13.0	+1.7
THW	**Thamme Wali**	**3.88**	**162**	⇑P	Pn	17 50 13.8	+0.7
THW				S	S	17 50 59.0	-1.9
KSH	**Kashi**	**5.41**	**54**	P	Pn	17 50 28.5	-3.5
KSH				S	S	17 51 25.3	-10
KSH				smax			
	comp=N,190nm,0.4s						
KSH				smax			
	comp=E,310nm,0.7s						
AML	**Almayashu**	**6.21**	**24**	P	Pn	17 50 43.1	+0.7
	SNR=67						
AML	**Almayashu**	**6.21**	**24**	*e*Pn	Pn	17 50 42.9	+0.5
	comp=E,66nm,0.5s						
AML				*e*S	S	17 51 48.6	-5.3
UCH	**Uchtor**	**6.59**	**28**	P	Pn	17 50 48.3	+1.1
	SNR=54						
UCH	**Uchtor**	**6.59**	**28**	*e*P	Pn	17 50 47.9	+0.7
	comp=E,26nm,0.7s						
UCH				*e*S	S	17 52 00.8	-1.9
KK31	**Karatay Array**	**6.60**	**1**	P	Pn	17 50 47.1	-0.2
	comp=E,17nm,0.7s,baz=188,slow=13,SNR=144						
KK31				⇑S	S	17 51 59.5	-3.4
	comp=E,13nm,0.3s,baz=190,slow=26,SNR=10.0						
EKS2	**Erkin-Say**	**6.72**	**23**	P	Pn	17 50 49.9	+1.0
	SNR=19						
EKS2	**Erkin-Say**	**6.72**	**23**	*e*Pn	Pn	17 50 49.5	+0.7
	comp=E,32nm,0.7s						
EKS2				*e*S	S	17 52 03.7	-2.0
KZA	**Kyzart**	**6.77**	**33**	P	Pn	17 50 50.3	+0.8
	SNR=18						
AAK	**Ala-Archa**	**6.93**	**27**	P	Pn	17 50 52.6	+1.0
	SNR=12						
AAK	**Ala-Archa**	**6.93**	**27**	P	Pn	17 50 52.9	+1.3
	comp=E,4.3nm,0.3s,baz=187,slow=3.7,SNR=26						
AAK				S	S	17 52 11.0	+0.3
	comp=E,3.3nm,0.3s,baz=304,slow=23,SNR=9.8						
AAK	**Ala-Archa**	**6.93**	**27**	P	Pn	17 50 52.9	+1.3
AAK				S	S	17 52 11.0	+0.3
KBK	**Karagaybulak**	**7.12**	**29**	P	Pn	17 50 55.1	+1.0
	SNR=14						
FRU	**Bishkek**	**7.15**	**26**	*e*PN	Pn	17 50 55.0	+0.5
FRU				*i*		17 52 17.0	
FRU				pmax	pmax		
	comp=Z,42nm,1.8s						
FRU				pmax	pmax		
	comp=E,205nm,1.8s						
BHK	**Bhakra**	**7.18**	**133**	*e*S	S	17 52 08.4	-8.3
CHMS	**Chumysh**	**7.34**	**27**	P	Pn	17 50 57.3	+0.3
	SNR=8.4						
ULHL	**Ulahol**	**7.36**	**37**	P	Pn	17 50 58.2	+1.0
	SNR=16						
SDNR	**Sundarnagar**	**7.46**	**130**	*e*PKP	Pn	17 50 57.1	-1.4
SDNR				*e*S	S	17 52 17.5	-5.7
USP	**Ospenovka**	**7.49**	**24**	P	Pn	17 50 59.1	+0.2
	SNR=13						
KLP	**Kalpa**	**8.26**	**125**	*e*PKP	Pn	17 51 08.8	-0.1
KLP				*e*S	S	17 52 35.4	-6.6
KLP				AML	AML	17 52 43.9	
	comp=E,273nm,0.6s						
KLP				AML	AML	17 52 44.0	
	comp=N,202nm,0.4s						
DDI	**Dehra Dun**	**8.95**	**131**	*e*PKP	Pn	17 51 17.0	-0.8
DDI				*ex*	x	17 53 04.5	
KHET	**Khetri**	**9.61**	**149**	*e*PKP	Pn	17 51 24.6	-1.8
KHET				*e*S	S	17 53 04.7	-9.4
NDI	**New Delhi**	**9.74**	**141**	*ex*	x	17 51 51.0	
NDI				*e*S	S	17 53 08.0	-9.2
SONA	**Sohna**	**10.03**	**143**	*e*PKP	Pn	17 51 31.2	-0.5
SONA				*e*S	S	17 53 15.4	-8.7
AGRA	**Agra**	**11.29**	**143**	*e*S	S	17 53 44.1	-10
AGRA				AML	AML	17 53 50.9	
	comp=N,51nm,0.3s						
AGRA				AML	AML	17 53 52.0	
	comp=E,42nm,0.2s						
MK31	**Makanchi Array**	**13.63**	**37**	*e*P	Pn	17 52 17.2	+0.1
MKAR	**Makanchi Array**	**13.63**	**37**	P	Pn	17 52 17.5	+0.3
	comp=E,0.6nm,0.3s,baz=227,slow=12,SNR=42						
GKN	**Gorkha**	**14.79**	**121**	*e*P	Pn	17 52 31.6	+0.1
	comp=E,14nm,0.3s						
AB31	**Akbulak array**	**14.82**	**333**	P	Pn	17 52 29.6	-2.0
	comp=E,7.6nm,0.8s,baz=156,slow=11,SNR=41						
AB31				⇑S	S	17 55 15.1	-0.7
	comp=E,3.2nm,0.9s						
ABKAR	**Akbulak array**	**14.82**	**333**	*e*Pn	Pn	17 52 30.2	-1.5
	comp=E,5.3nm,0.6s						
ABKAR				*e*S	S	17 55 13.4	-2.5
DMN	**Daman**	**15.36**	**121**	*e*P	Pn	17 52 39.4	+0.9
	comp=E,7.3nm,0.3s						
KKN	**Kakani**	**15.37**	**120**	*e*P	Pn	17 52 37.8	-0.8
	comp=E,34nm,0.5s						
KURK	**Kurchatov**	**15.42**	**20**	*e*P	Pn	17 52 37.8	-1.2
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KURK	**Kurchatov**	**15.42**	**20**	*e*P	Pn	17 52 37.8	-1.2
	comp=Z,4.6nm,0.8s						
PKIN	**Phulchoki**	**15.58**	**121**	*e*P	Pn	17 52 41.2	+0.1
	comp=Z,14nm,0.5s						
PKI	**Pulchoki**	**15.59**	**121**	*e*P	Pn	17 52 41.3	0.0
	comp=Z,9.7nm,0.3s						
GUN	**Gumba**	**15.71**	**119**	*e*P	Pn	17 52 40.4	-2.3
	comp=Z,18nm,0.4s						
JIRN	**Jiri**	**16.09**	**119**	*e*P	P	17 52 45.9	-0.6
	comp=Z,19nm,0.4s						
AKTK	**Aktyubinsk**	**16.50**	**331**	P	P	17 52 51.9	+1.0
AKTO	**Aktyubinsk**	**16.50**	**331**	P	P	17 52 51.9	+1.0
	comp=Z,1.0nm,0.3s,baz=140,slow=9.4,SNR=21						
BVAR	**Borovoye Array**	**16.53**	**0**	P	P	17 52 51.9	+0.9
	comp=Z,1.6nm,0.3s,baz=164,slow=12,SNR=18						
BRVK	**Borovoye**	**16.56**	**360**	*e*P	P	17 52 51.9	+0.5
BRVK				pmax	pmax		
	comp=Z,17nm,0.9s						
BRVK	**Borovoye**	**16.56**	**360**	*e*P	P	17 52 51.9	+0.5
	comp=Z,18nm,0.9s						
TAPN	**Taplejung**	**17.35**	**117**	*e*P	P	17 53 01.9	+1.5
	comp=Z,10nm,0.4s						
ODAN	**Odare**	**17.42**	**119**	*e*P	P	17 53 03.8	+2.7
	comp=Z,17nm,0.7s						
LSA	**Lhasa**	**18.73**	**105**	P	P	17 53 18.8	+3.5
LSA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
LSA	**Lhasa**	**18.73**	**105**	P	P	17 53 18.8	+3.5
	comp=Z,2.1nm,0.7s						
ZALV	**Zalesovo Beam**	**20.16**	**25**	P	P	17 53 30.7	+0.3
	comp=Z,3.5nm,0.4s,baz=220,slow=11,SNR=23						
GNI	**Garni**	**20.35**	**288**	*e*P	P	17 53 34.7	+2.1
GNI				pmax	pmax		
	comp=Z,19nm,1.2s						
GNI	**Garni**	**20.35**	**288**	*e*P	P	17 53 34.7	+2.1
	comp=Z,19nm,1.2s						
NVS	**Novosibirsk**	**20.39**	**22**	*e*P	P	17 53 33.3	+0.5
ARU	**Arti**	**21.45**	**342**	P	P	17 53 44.0	0.0
ARU	**Arti**	**21.45**	**342**	*e*P	P	17 53 43.8	-0.2
	comp=Z,5.6nm,1.0s,mb4.0						
SONM	**Songino Array**	**28.81**	**55**	P	P	17 54 52.9	+2.3
	comp=Z,0.6nm,0.8s,mb3.3,baz=270,slow=8.7,SNR=3.7						
BRTR	**Keskin Array B**	**28.89**	**288**	P	P	17 54 51.3	-0.2
	comp=Z,0.5nm,0.7s,mb3.3,baz=116,slow=5.0,SNR=3.4						
CMAR	**Chiang Mai Arr**	**30.96**	**118**	P	P	17 55 10.3	+0.5
	comp=Z,0.6nm,0.8s,mb3.3,baz=290,slow=6.8,SNR=4.3						
HHC	**Hu-ho-hao-te**	**32.30**	**69**	*e*P	P	17 55 21.0	-0.4
HHC				S	S	18 00 17.3	-1.8
HHC				pmax	pmax		
	comp=Z,13nm,0.6s,mb4.6						
HHC				pmax	pmax		
	comp=Z,64nm,6.1s						
FINES	**FINESS Array B**	**37.17**	**326**	P	P	17 56 03.2	+0.5
	comp=Z,1.3nm,0.9s,mb3.5,baz=121,slow=14,SNR=3.6						
FINES	**FINESS Array B**	**37.17**	**326**	P	P	17 56 03.2	+0.5
ARCES	**ARCESS Array B**	**40.93**	**338**	P	P	17 56 33.3	-0.4
	comp=Z,2.1nm,0.9s,mb3.5,baz=108,slow=7.8,SNR=3.9						
NB2	**NORSAR Subarra**	**44.04**	**323**	P	P	17 56 58.6	-0.2
	comp=Z,1.0nm,0.8s,mb3.2,baz=96,slow=7.9						
NOA	**NORSAR Array B**	**44.04**	**323**	P	P	17 56 58.5	-0.3
	comp=Z,1.4nm,0.8s,mb3.3,baz=96,slow=7.8,SNR=4.0						
KMBO	**Kilima Mbogo**	**48.41**	**227**	P	P	17 57 34.0	+0.6
	comp=Z,0.3nm,0.4s,mb3.0,baz=181,slow=24,SNR=4.2						
KMBO	**Kilima Mbogo**	**48.41**	**227**	P	P	17 57 33.7	+0.3
	comp=Z,1.2nm,0.6s,mb3.4						
WRA	**Warramunga Arr**	**82.48**	**121**	P	P	18 01 10.6	-0.8
	comp=Z,0.4nm,0.8s,mb3.1,baz=326,slow=4.9,SNR=4.8						
ASAR	**Alice Springs**	**84.72**	**124**	P	P	18 01 20.9	-1.8
	comp=Z,0.7nm,0.8s,mb3.5,baz=309,slow=5.2,SNR=7.6						

NIED ***19*** *18:04:00, 37.′50N×142.′70E, h23km, Mw3.6 Best double couple: M0:3.11000×10^14 NP1:φ=37.00000°, δ=68.00000°, λ=63.00000°. NP2:φ=271.00000°, δ=34.00000°, λ=138.00000°.*
NEIC ***19*** *18:04:00.3±0.9, 37.′29N×143.′01E, h10km, mb4.2/1, Error ellipse: s-maj=17.8km s-min=16.5km az=148.0*
JMA ***19*** *18:04:02.8±0.2, 37.′52N×142.′69E, h24km±5km, M3.7*
ISCJB ***19*** *18:04:03.1±0.7, 37.′49N±0.′04×142.′77E±0.′05, h33km, mb3.8/8, Error ellipse: s-maj=6.0km s-min=5.4km az=27.2*
IDC ***19*** *18:04:07.4±4.1, 37.′17N×142.′89E, h67km±38km, mb3.3/6, mb1 3.4/8, mb1mx3.3/25, mbtmp3.4/8, ML3.5/2, MS2.7/1, Ms1 2.7/1, ms1mx2.1/29, Error ellipse: s-maj=30.3km s-min=17.5km az=64.0*
ISC 19 18:04:04.2±1.8, 37.′49N±0.′04×142.′72E±0.′06, h28km±15km, n26, σ1°07/40, mb3.8/8, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**1.45**	**312**	P	Pn	18 04 27.3	-1.2
JIO				S	Sn	18 04 45.3	-1.2
JFK	**Kawauchi**	**1.47**	**266**	P	Pn	18 04 28.2	-0.6
JFK				S	Sn	18 04 46.6	-0.5
JMM	**Marumori**	**1.57**	**284**	P	Pn	18 04 28.7	-1.5
JMM				S	Sn	18 04 48.4	-1.2
ONAJ	**Iwakimizuishiy**	**1.58**	**256**	P	Pn	18 04 29.6	-0.7
ONAJ				S	Sn	18 04 48.5	-1.2
JOU	**Okura**	**1.84**	**299**	P	Pn	18 04 33.6	-0.3
JOU				*e*S	Sn	18 04 56.7	+0.4
JMK	**Ichinoseki**	**1.88**	**322**	P	Pn	18 04 34.0	-0.4
JMK				S	Sn	18 04 57.0	-0.1
JFT	**Otama**	**1.89**	**272**	P	Pn	18 04 34.5	-0.1
JFT				*e*S	Sn	18 04 58.4	+0.9
JYS	**Shirataka**	**2.22**	**290**	P	Pn	18 04 39.4	+0.3
JYS				*e*S	Sn	18 05 06.9	+1.3
JOM	**Ohasama**	**2.27**	**331**	P	Pn	18 04 39.5	-0.3
JOM				*e*S	Sn	18 05 05.5	-1.4
JYK	**Kaneyama**	**2.34**	**308**	P	Pn	18 04 40.8	0.0
JYK				*e*S	Sn	18 05 08.5	-0.1
JAG	**Ashikaga**	**2.82**	**249**	P	Pn	18 04 47.8	+0.4
JAG				*e*S	Sn	18 05 20.2	-0.2
MJAR	**Matsushiro Arr**	**3.73**	**257**	P	Pn	18 05 01.5	+1.6
	3.1nm,0.3s,baz=82,slow=15,SNR=66						
MJAR				S	Sn	18 05 47.8	+4.9
	0.9nm,0.3s,baz=24,slow=28,SNR=4.8						
MAJO	**Matsushiro**	**3.73**	**257**	*e*Pn	Pn	18 05 01.5	+1.6
MAT	**Matsushiro**	**3.73**	**257**	P	Pn	18 05 01.5	+1.6
MAT				S	Sn	18 05 45.0	+2.1
JHJ	**Hachijo jima 2**	**4.98**	**210**	P	Pn	18 05 17.1	+0.1
	6.1nm,0.3s,baz=72,slow=19,SNR=4.8						
JHJ				S	Sn	18 06 11.1	-2.6
	23nm,0.3s,baz=80,slow=23,SNR=5.6						
ASAJ	**Asahikawa**	**6.62**	**359**	P	Pn	18 05 39.9	+0.3
	0.7nm,0.3s,baz=236,slow=14,SNR=7.2						
ASAJ				LR	LR	18 08 52.8	
	comp=Z,56nm,20.8s,baz=36,slow=41						
GUMO	**Guam**	**23.88**	**175**	P	P	18 09 13.1	-2.3
	9.8nm,0.6s,mb4.4,baz=0.0,slow=20,SNR=3.6						
SONM	**Songino Array**	**28.40**	**303**	P	P	18 09 57.3	+1.3
	0.5nm,0.6s,mb3.3,baz=84,slow=5.9,SNR=4.6						
ENH	**Enshi**	**28.41**	**265**	P	P	18 09 56.6	+0.3
MKAR	**Makanchi Array**	**44.76**	**302**	P	P	18 12 16.6	+1.5
	0.3nm,0.6s,mb3.3,baz=82,slow=9.2,SNR=4.5						
KURK	**Kurchatov**	**46.47**	**308**	*e*P	P	18 12 27.6	-0.8
	1.4nm,0.6s,mb4.1						
ILAR	**Eielson Array**	**48.55**	**33**	P	P	18 12 45.0	+0.5
	0.2nm,0.6s,mb3.3,baz=264,slow=5.8,SNR=3.8						
ASAR	**Alice Springs**	**61.39**	**189**	P	P	18 14 13.5	-4.1
	1.6nm,1.1s,mb4.1,baz=5.9,slow=6.7,SNR=3.1						
FINES	**FINESS Array B**	**68.89**	**333**	P	P	18 15 07.0	+1.1
	0.8nm,0.6s,mb3.8,baz=35,slow=5.1,SNR=4.6						
AKASG	**Malin Array Be**	**74.57**	**323**	P	P	18 15 41.0	+0.7
	0.7nm,0.5s,mb3.9,baz=46,slow=5.7,SNR=5.0						
AKASG	**Malin Array Be**	**74.57**	**323**	P	P	18 15 41.0	+0.7

BJI ***19*** *18:11:31.2, 21.′49N×144.′30E, h151km, mB4.8/6, mb4.6/12*
IDC ***19*** *18:11:38.8±0.9, 22.′16N×143.′41E, h129km±7km, mb3.9/19, mb1 4.1/21, mb1mx4.0/27, mbtmp4.0/21, MS3.2/2, Ms1 3.2/2, ms1mx2.6/36, Error ellipse: s-maj=16.9km s-min=9.6km az=83.0*
ISCJB ***19*** *18:11:39.1±1.1, 22.′21N±0.′05×143.′47E±0.′08, h147km±9km, mb4.3/47, Error ellipse: s-maj=12.4km s-min=7.9km az=177.8*
NEIC ***19*** *18:11:41.1±1.2, 22.′16N×143.′47E, h152km±11km, mb4.6/21, Error ellipse: s-maj=9.5km s-min=6.0km az=79.0*
ISC 19 18:11:40.1±1.0, 22.′21N±0.′05×143.′49E±0.′08, h140km±9km, h129km±1.4km: pP-P, n71, σ0°98/69, mb4.3/47, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.01**	**347**	P	Pn	18 12 53.8	+0.3
	62nm,0.3s,baz=118,slow=11,SNR=15						
CBIJ				S	Sn	18 13 49.5	-1.1
	128nm,0.3s,baz=132,slow=23,SNR=15						
GUMO	**Guam**	**8.67**	**171**	P	Pn	18 13 44.5	+1.9
	0.8nm,0.3s,baz=44,slow=12,SNR=3.7						
GUMO	**Guam**	**8.67**	**171**	*e*Pn	Pn	18 13 43.7	+1.2
MJAR	**Matsushiro Arr**	**15.01**	**343**	P	Pn	18 15 03.8	-1.2
	4.8nm,0.3s,baz=161,slow=11,SNR=60						
MAJO	**Matsushiro**	**15.01**	**343**	*e*Pn	Pn	18 15 04.4	-0.5
	46nm,0.8s						
MAT	**Matsushiro**	**15.01**	**343**	P	Pn	18 15 03.0	-1.9
NACB	**Ninganchiao**	**20.22**	**280**	P	P	18 16 03.5	-0.7
	21nm,0.8s						
KSRS	**Korea Array**	**20.29**	**322**	P	P	18 16 03.4	-1.4
	23nm,0.6s,baz=146,slow=7.9,SNR=88						
KSRS				LR	LR	18 24 30.7	
	comp=Z,19nm,18.1s,baz=140,slow=38						
YHNB	**Yeheng**	**20.44**	**281**	*e*P	P	18 16 06.9	+0.4
	40nm,1.0s						
SSLB	**Suanglung**	**20.80**	**279**	*e*P	P	18 16 12.3	+1.9
	30nm,0.5s						
INCN	**Inchon**	**21.06**	**320**	P	P	18 16 15.3	+2.3
	23nm,0.9s,mb4.5						
ASAJ	**Asahikawa**	**21.87**	**358**	P	P	18 16 24.7	+3.2
	5.7nm,0.5s,mb4.3,baz=131,slow=5.1,SNR=10						
MDJ	**Mudanjiang**	**25.11**	**336**	P	P	18 16 50.9	-0.9
	10.0nm,1.0s,mb4.3						
ENH	**Enshi**	**31.45**	**292**	*e*P	P	18 17 48.1	-0.2
	5.0nm,0.6s,mb4.4						
PETK	**Petropavlovsk-**	**32.71**	**16**	P	P	18 18 00.6	+1.6
	2.3nm,0.8s,mb3.9,baz=193,slow=4.6,SNR=6.9						
PET	**Petropavlovsk**	**32.89**	**17**	*e*P	P	18 18 02.0	+1.5
	7.6nm,0.6s,mb4.6						
HIA	**Hailar**	**32.91**	**331**	*e*P	P	18 18 01.2	+0.4
HNR	**Honiara**	**35.34**	**151**	LR	LR	18 30 45.0	
	comp=Z,151nm,20.2s,baz=79,slow=32						
LZH	**Lanzhou**	**37.03**	**301**	*e*P	P	18 18 37.0	+0.7
LZH				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.6						
ULN	**Ulaanbaatar**	**38.76**	**320**	*e*P	P	18 18 51.5	+0.9
	comp=Z,5.6nm,0.5s,mb4.5						
SONM	**Songino Array**	**39.13**	**320**	P	P	18 18 54.5	+0.7
	comp=Z,5.5nm,0.6s,mb4.4,baz=132,slow=7.5,SNR=46						
GTA	**Gaotai**	**40.81**	**305**	*e*P	P	18 19 08.8	+1.0
GTA				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.0						
YAK	**Yakutsk**	**40.92**	**350**	*e*P	P	18 19 08.4	+0.1
	comp=Z,12nm,0.8s,mb4.6						
CMAR	**Chiang Mai Arr**	**41.83**	**273**	P	P	18 19 16.1	-0.3
	comp=Z,0.6nm,0.4s,mb3.6,baz=59,slow=8.0,SNR=6.4						
CTA	**Charters Tower**	**42.12**	**176**	P	P	18 19 18.4	-0.2
	comp=Z,4.9nm,1.0s,mb4.1,baz=346,slow=8.5,SNR=7.0						
CTAO	**Charters Tower**	**42.12**	**176**	*e*P	P	18 19 18.3	-0.2
TLY	**Talaya**	**42.52**	**324**	P	P	18 19 21.7	+0.2
	comp=Z,7.6nm,1.0s,mb4.3						
WRAB	**Tennant Creek**	**42.82**	**193**	*e*P	P	18 19 24.0	-0.2
	comp=Z,5.5nm,0.6s,mb4.4						
FITZ	**Fitzroy Crossi**	**43.70**	**205**	P	P	18 19 30.5	-0.8
	comp=Z,2.1nm,0.4s,mb4.1,baz=32,slow=8.4,SNR=24						
FITZ	**Fitzroy Crossi**	**43.70**	**205**	*e*P	P	18 19 30.4	-0.9
ASAR	**Alice Springs**	**46.54**	**192**	P	P	18 19 52.5	-1.1
	comp=Z,2.1nm,0.4s,mb4.1,baz=9.4,slow=7.3,SNR=93						
ASAR				PcP	PcP	18 21 25.4	-0.3
	comp=Z,0.8nm,0.7s,baz=14,slow=5.6,SNR=4.7						
LSA	**Lhasa**	**47.32**	**290**	*e*P	P	18 20 01.7	+1.8
	comp=Z,2.9nm,0.5s,mb4.2						
BILL	**Bilibino**	**47.97**	**11**	*e*P	P	18 20 05.1	+0.9
MBWA	**Marble Bar**	**48.94**	**210**	*e*P	P	18 20 11.3	-0.8
ODAN	**Odare**	**50.91**	**287**	*e*P	P	18 20 26.9	-0.2
	comp=Z,14nm,0.8s,mb4.6						
JIRN	**Jiri**	**51.86**	**288**	*e*P	P	18 20 34.8	+0.6
	comp=Z,24nm,0.6s,mb5.0						
PKI	**Pulchoki**	**52.56**	**288**	*e*P	P	18 20 39.3	-0.1
	comp=Z,7.8nm,0.5s,mb4.7						
PKI	**Pulchoki**	**52.56**	**288**	*e*P	P	18 20 39.4	0.0
PKIN	**Phulchoki**	**52.57**	**288**	*e*P	P	18 20 39.4	-0.1
	comp=Z,5.2nm,0.5s,mb4.5						
KKN	**Kakani**	**52.64**	**289**	*e*P	P	18 20 40.0	0.0
	comp=Z,9.7nm,0.8s,mb4.6						
DMN	**Daman**	**52.82**	**288**	*e*P	P	18 20 41.6	+0.3
	comp=Z,7.5nm,0.5s,mb4.6						
GKN	**Gorkha**	**53.18**	**289**	*e*P	P	18 20 44.1	+0.2
	comp=Z,8.0nm,0.4s,mb4.8						
STKA	**Stephens Creek**	**53.80**	**182**	P	P	18 20 46.5	-1.7
	comp=Z,2.0nm,0.7s,mb4.0,baz=330,slow=15,SNR=6.1						
STKA	**Stephens Creek**	**53.80**	**182**	*e*P	P	18 20 45.1	-3.1
ZALV	**Zalesovo Beam**	**53.99**	**321**	P	P	18 20 49.1	-0.3
	comp=Z,2.7nm,0.3s,mb4.4,baz=105,slow=7.6,SNR=21						
MK31	**Makanchi Array**	**54.57**	**312**	*e*P	P	18 20 54.1	+0.4
MKAR	**Makanchi Array**	**54.57**	**312**	P	P	18 20 54.2	+0.5
	comp=Z,3.9nm,0.5s,mb4.4,baz=88,slow=8.8,SNR=77						
MKAR				pP	pP	18 21 24.5	-1.9
	comp=Z,0.8nm,0.6s,baz=93,slow=12,SNR=2.1						
KURK	**Kurchatov**	**57.30**	**317**	*e*P	P	18 21 12.9	-0.2
	comp=Z,9.4nm,0.4s,mb5.0						
UCH	**Uchtor**	**60.10**	**307**	*e*P	P	18 21 33.9	+1.4
	comp=Z,1.8nm,0.5s,mb4.2						
EKS2	**Erkin-Say**	**60.61**	**307**	P	P	18 21 36.5	+0.4
AML	**Almayashu**	**60.71**	**307**	*e*P	P	18 21 37.8	+1.0
	comp=Z,6.3nm,0.8s,mb4.5						
ILAR	**Eielson Array**	**61.46**	**27**	P	P	18 21 41.0	-0.4
	comp=Z,1.5nm,0.9s,mb3.8,baz=260,slow=5.1,SNR=12						
ILAR				pP	pP	18 22 12.6	-2.2
	comp=Z,0.7nm,0.7s,baz=252,slow=4.7,SNR=3.9						
BVAR	**Borovoye Array**	**62.47**	**319**

0.4nm783nm44nm,1.7s
PSI Prapat 6.46 344 Pn **Pn 18 17 33.0 -3.2**
0.6nm,0.3s,baz=165,slow=11,SNR=6.7
PSI Sn **Sn 18 18 58.0 +9.3**
0.7nm,0.3s,baz=153,slow=18,SNR=6.8
PSI LR LR 18 19 48.1
comp=Z,342nm,19.9s,baz=50,slow=37
CBJI Citeko 6.80 116 P **Pn 18 17 42.5 +1.7**
1.2nm259nm,0.8s
TSI Tuntungan 7.23 343 P **Pn 18 17 47.6 +0.9**
TPTI 7.54 332 P **Pn 18 17 50.8 -0.2**
0.1nm35nm,0.7s
LEM Lembang 7.66 116 P **Pn 18 17 54.0 +1.4**
0.3nm74nm,0.9s
IPM Ipoh 7.89 2 P **Pn 18 17 57.9 +2.1**
26nm,1.4s
KULM Kulim 8.69 360 *e*Pn **Pn 18 18 06.0 -0.8**
18nm,1.1s
KULM Kulim 8.69 360 P **Pn 18 18 07.2 +0.5**
33nm,1.5s
SJI Sawahan 11.81 112 P **Pn 18 18 49.4 0.0**
39nm,1.0s
SBUM Sibu 12.93 63 P **Pn 18 19 08.0 +3.3**
13nm,1.8s
SPSI Sidrap Palu 19.04 92 P **Pn 18 20 21.7 -1.4**
859nm32nm,1.0s
KAPI Kappang 19.07 95 P **Pn 18 20 21.2 -2.2**
1.3nm,0.3s,baz=260,slow=9.4,SNR=11
PCI Palu 19.29 83 P **Pn 18 20 26.7 +0.6**
33nm,1.4s
BNSI Bone 19.39 93 P **Pn 18 20 26.4 -0.8**
39nm,1.4s
BKSI Bulukumba 19.46 96 P **Pn 18 20 26.7 -1.3**
478nm50nm,1.4s
MYLDM Lahad Datu 19.75 64 P **Pn 18 20 32.2 +0.7**
35nm,1.1s
CM31 Chiang Mai Arr 21.84 356 *e*P **P 18 20 50.9 -1.3**
8.7nm,0.8s,mb4.2
CMAR Chiang Mai Arr 21.84 356 P **P 18 20 50.5 -1.7**
6.8nm,0.7s,mb4.2,baz=182,slow=8.3,SNR=19
CMAR LR LR 18 28 56.4
comp=Z,283nm,21.2s,MS3.6,baz=10,slow=36
LUWI Luwuk 22.19 84 P **P 18 20 56.0 0.0**
545nm59nm,1.1s,mb4.9
CHTO Chiang Mai 22.20 356 *e*P **P 18 20 52.9 -3.1**
12nm,1.3s,mb4.2
CHTO Chiang Mai 22.20 356 P **P 18 20 54.4 -1.6**
9.6nm,1.1s,mb4.1
MNI Manado 24.62 79 P **P 18 21 20.2 +0.4**
54nm,0.5s,mb5.3
FITZ Fitzroy Crossi 28.44 123 P **P 18 21 56.1 +2.1**
5.4nm,0.8s,mb4.3,baz=305,slow=1.3,SNR=6.1
FITZ LR LR 18 32 49.5
comp=Z,291nm,19.7s,MS3.9,baz=314,slow=36
KMI Kunming 28.48 4 P **P 18 21 54.4 +0.1**
KMI pmax pmax
comp=Z,4.0nm,1.6s,mb3.8
KMI LR LR
comp=N,470nm,16.6s,MS4.2
KMI LR LR
comp=E,390nm,20.7s,MS4.2
KMI LR LR
comp=Z,560nm,13.8s
ODAN Odare 32.77 338 *e*P **P 18 22 33.2 +1.0**
comp=Z,20nm,0.5s,mb5.3
TAPN Taplejung 33.09 339 *e*P **P 18 22 36.8 +1.8**
comp=Z,58nm,0.9s,mb5.5
JIRN Jiri 33.95 337 *e*P **P 18 22 43.9 +1.4**
comp=Z,27nm,0.7s,mb5.3
PKI Pulchoki 34.19 335 *e*P **P 18 22 45.9 +1.3**
comp=Z,9.0nm,0.6s,mb4.9
PKI Pulchoki 34.19 335 *e*P **P 18 22 46.0 +1.4**
PKIN Phulchoki 34.20 335 *e*P **P 18 22 46.0 +1.3**
comp=Z,5.3nm,0.5s,mb4.8
GUN Gumba 34.30 336 *e*P **P 18 22 46.6 +1.1**
comp=Z,43nm,0.5s,mb5.6
DMN Daman 34.35 335 *e*P **P 18 22 47.2 +1.2**
comp=Z,12nm,0.7s,mb4.9
KKN Kakani 34.44 335 *e*P **P 18 22 47.5 +0.8**
comp=Z,25nm,0.8s,mb5.2
GKN Gorkha 34.89 335 *e*P **P 18 22 51.0 +0.3**
comp=Z,15nm,0.5s,mb5.1
WRAB Tennant Creek 36.68 119 *e*P **P 18 23 06.5 +0.4**
comp=Z,19nm,1.3s,mb4.8
ASAR Alice Springs 37.84 125 P **P 18 23 15.8 -0.1**
comp=Z,5.7nm,0.7s,mb4.4,baz=298,slow=7.7,SNR=35
XAN Xi'an 38.09 11 P **P 18 23 16.9 -1.0**
XAN pP pP 18 23 25.3 -5.2
XAN pmax pmax
comp=Z,7.0nm,1.1s,mb4.3
LZH Lanzhou 39.45 4 *e*P **P 18 23 30.0 +0.8**
LZH pP pP 18 23 35.5 -6.4
LZH sP sP 18 23 38.0 -9.4
LZH pmax pmax
comp=Z,51nm,1.1s,mb5.2
LZH pmax pmax
comp=Z,160nm,4.0s
LZH LR LR
comp=E,360nm,14.6s
LZH LR LR
comp=Z,510nm,16.0s,MS4.5
GTA Gaotai 42.66 359 *e*P **P 18 23 55.9 +0.3**
GTA pP pP 18 24 00.0 -8.4
GTA sP sP 18 24 03.5 -10
GTA pmax pmax
comp=Z,9.0nm,1.3s,mb4.3
BJT Baijiatuau 45.54 17 *e*P **P 18 24 19.1 +0.5**
comp=Z,26nm,1.3s,mb5.0
CTA Charters Tower 47.36 114 P **P 18 24 32.8 -0.5**
comp=Z,6.6nm,0.9s,mb4.6,baz=301,slow=7.6,SNR=5.5
CTAO Charters Tower 47.36 114 *e*P **P 18 24 33.3 0.0**
comp=Z,9.6nm,1.0s,mb4.7
STKA Stephens Creek 47.67 131 P **P 18 24 39.9 +4.4**
comp=Z,6.0nm,0.7s,mb4.7,baz=290,slow=7.6,SNR=9.7
STKA LR LR 18 46 12.9
comp=Z,346nm,19.5s,MS4.3,baz=336,slow=38
KSRS Korea Array 47.93 29 P **P 18 24 36.4 -0.9**
comp=Z,8.5nm,1.0s,mb4.7,baz=217,slow=8.2,SNR=22
KBL Kabul 48.12 324 *e*P **P 18 24 37.0 -1.9**
comp=Z,7.3nm,1.3s,mb4.5
KSH Kashi 48.44 334 P **P 18 24 41.8 +0.6**
KSH pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
KSH pmax pmax
comp=Z,55nm,4.0s
WMQ Urumqi 48.50 347 *e*P **P 18 24 41.0 -0.6**
WMQ pP pP 18 24 51.0 -3.6
WMQ sP sP 18 24 54.9 -5.2
WMQ PP PP 18 26 39.3 +4.5
WMQ ScS ScS 18 34 25.4 -4.8
WMQ pmax pmax
comp=Z,21nm,0.8s,mb5.2
WMQ LR LR
comp=N,140nm,21.7s,MS4.0
WMQ LR LR
comp=E,130nm,21.0s,MS4.0
WMQ LR LR
comp=Z,130nm,24.8s,MS3.8
UCH Uchtor 51.30 335 *e*P **P 18 25 02.9 -0.1**
comp=Z,4.0nm,0.9s,mb4.3
SONM Songino Array 51.32 5 P **P 18 25 04.2 +1.3**
comp=Z,11nm,1.0s,mb4.8,baz=189,slow=9.0,SNR=48
ULN Ulaanbaatar 51.41 5 *e*P **P 18 25 04.5 +0.9**
comp=Z,13nm,1.1s,mb4.8
ULN *e* pP 18 25 13.1 -3.6
AAK Ala-Archa 51.65 335 P **P 18 25 05.8 +0.3**
EKS2 Erkin-Say 51.97 335 *e*P **P 18 25 08.3 +0.4**
comp=Z,7.5nm,0.8s,mb4.7
MK31 Makanchi Array 52.61 344 *e*P **P 18 25 12.3 -0.3**
MKAR Makanchi Array 52.61 344 P **P 18 25 12.6 0.0**
comp=Z,4.3nm,0.7s,mb4.5,baz=152,slow=3.7,SNR=32
MAJO Matsushiro 52.98 38 *e*P **P 18 25 14.2 -1.3**
MJAR Matsushiro Arr 52.98 38 P **P 18 25 14.6 -0.9**
comp=Z,3.6nm,1.1s,mb4.2,baz=219,slow=8.2,SNR=15
KURK Kurchatov 57.19 343 *e*P **P 18 25 45.3 -0.4**
comp=Z,15nm,1.1s,mb4.9
ZALV Zalesovo Beam 58.72 349 P **P 18 25 55.4 -0.9**
comp=Z,10nm,0.9s,mb4.8,baz=174,slow=5.5,SNR=34
BVAR Borovoye Array 61.78 340 P **P 18 26 16.5 -0.7**
comp=Z,1.5nm,0.7s,mb4.3,baz=144,slow=8.9,SNR=7.5
YSS Yuzh-Sakhalins 62.35 31 *e*P **P 18 26 21.0 -0.2**
comp=Z,14nm,0.9s,mb5.1
ABKAR Akbulak array 63.24 331 *e*P **P 18 26 26.0 -1.1**
comp=Z,2.3nm,0.6s,mb4.5
AKTO Aktyubinsk 64.96 331 LR LR 18 57 44.7
comp=Z,54nm,21.0s,MS3.7,baz=333,slow=39
ARU Arti 68.81 336 *e*P **P 18 27 01.9 -0.8**
comp=Z,4.6nm,0.9s,mb4.4
YAK Yakutsk 68.97 14 *e*P **P 18 27 02.5 -1.0**
comp=Z,14nm,1.1s,mb4.8
MAW Mawson 69.05 195 LR LR 18 50 21.7
comp=Z,160nm,20.3s,MS4.2,baz=353,slow=30
ASF Jabal al Asfar 70.00 306 LR LR 18 57 53.8
comp=Z,108nm,18.7s,MS4.1,baz=139,slow=36
EIL Elat 70.89 303 LR LR 18 57 34.2
comp=Z,135nm,18.4s,MS4.2,baz=277,slow=35
MMAI Mount Meron Ar 71.45 306 LR LR 19 01 29.2
comp=Z,147nm,18.0s,MS4.3,baz=130,slow=38
PETK Petropavlovsk- 73.74 32 P **P 18 27 32.6 +0.1**
comp=Z,2.1nm,0.9s,mb4.1,baz=189,slow=15,SNR=4.3
BRTR Keskin Array B 74.81 313 P **P 18 27 38.3 -0.8**
comp=Z,0.4nm,0.6s,mb3.5,baz=127,slow=6.3,SNR=3.0
BOSA Boshof 75.57 241 LR LR 18 53 47.3
comp=Z,124nm,20.7s,MS4.2,baz=272,slow=30
FINES FINESS Array B 85.72 332 P **P 18 28 37.4 +0.2**
comp=Z,1.1nm,0.9s,mb4.1,baz=122,slow=7.7,SNR=2.6
FINES LR LR 19 11 07.7
comp=Z,80nm,20.1s,MS4.1,baz=131,slow=39
ARCES ARCESS Array B 88.07 340 P **P 18 28 49.6 +1.1**
comp=Z,2.6nm,1.1s,mb4.4,baz=106,slow=7.7,SNR=4.6
JMIC Jan Mayen 99.45 342 LR LR 19 18 10.3
comp=Z,57nm,21.8s,MS4.0,baz=71,slow=38
SCHQ Schefferville 127.79 351 PKiKP 18 35 01.1
comp=Z,2.9nm,0.8s,baz=293,slow=2.6,SNR=3.7
WMOK Wichita Mounta 144.00 28 *e*PKPdf PKPdf 18 35 31.6 -2.8
TXAR Lajitas Array 145.41 39 PKPbc PKPbc 18 35 37.9 +0.9
comp=Z,7.3nm,0.8s,baz=290,slow=1.6,SNR=73
JCT Junction City 146.87 34 *e*PKPbc PKPbc 18 35 41.2 -0.1

SZGRF ***19*** *18:27:42.9,35.°80N×72.°20E,h142km,mb4.6,Pakistan*
BJI ***19*** *18:27:56.8,36.°20N×70.°10E,h117km,mB4.9/21,mb4.6/32*
TEH ***19*** *18:27:58.8,36.°29N×70.°59E,h106km*
ISCJB ***19*** *18:28:00.0±0.1,36.°04N±0.°02×70.°55E±0.°02,h137km, mb4.5/88, Error ellipse: s-maj=2.7km s-min=2.3km az=33.5*
MOS ***19*** *18:28:00.6±0.8,36.°15N×70.°49E,h134km,mb4.6/32, Error ellipse: s-maj=6.9km s-min=4.3km az=111.9*
NEIC ***19*** *18:28:01.2±0.6,36.°14N×70.°51E,h127km±5km,mb4.7/38, Error ellipse: s-maj=5.6km s-min=4.2km az=175.0*
IDC ***19*** *18:28:02.6±0.5,36.°17N×70.°53E,h139km±4km,mb4.1/19, mb1 4.2/23,mb1mx4.2/27,mbtmp4.1/23, Error ellipse: s-maj=10.7km s-min=8.8km az=23.0*
NNC ***19*** *18:28:03.7±6.4,36.°42N×69.°94E,h144km±62km,mb4.7, mpv5.7, Error ellipse: s-maj=48.8km s-min=37.9km az=29.0*

ISC 19 18:28:01.7±0.1,36.°02N±0.°02×70.°59E±0.°02,h139km, h139km±2.0km:pP-P,n294,σ1°17/332,mb4.5/88,28C-13D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**1.95**	**221**	⇑*e*Pn	**Pn**	**18 28 35.1**	**-0.4**
KBL				*e*Sn	**Sn**	**18 29 00.8**	**-0.6**
CEP	**Cherat**	**2.45**	**153**	⇑P	**Pn**	**18 28 43.0**	**+1.4**
CHCP	**Chirah Chowk**	**3.23**	**136**	⇑P	**Pn**	**18 28 52.9**	**+1.4**
THW	**Thamme Wali**	**3.36**	**163**	⇑P	**Pn**	**18 28 53.9**	**+0.6**
THW				S	**Sn**	**18 29 32.0**	**-1.1**
SARP	**Sargodha**	**4.44**	**156**	⇑P	**Pn**	**18 29 08.3**	**+0.8**
JMU	**Jammu**	**4.86**	**132**	*e*PKP	**Pn**	**18 29 11.5**	**-1.5**
JMU				*e*S	**Sn**	**18 30 05.0**	**-3.5**
KSH	**Kashi**	**5.51**	**49**	P	**Pn**	**18 29 17.1**	**-4.5**
KSH				sP		18 29 46.5	
KSH				S	**Sn**	**18 30 15.0**	**-9.0**
KSH	comp=N,2μm,0.5s			smax			
KSH	comp=E,3μm,0.9s			smax			
AML	**Almayashu**	**6.56**	**21**	P	**Pn**	**18 29 34.7**	**-1.0**
AML	SNR=1430 **Almayashu**	**6.56**	**21**	*e*Pn	**Pn**	**18 29 34.5**	**-1.2**
AML	comp=E,966nm,0.5s			*e*Sn	**Sn**	**18 30 44.8**	**-4.4**
BHK	**Bhakra**	**6.68**	**132**	*e*PKP	**Pn**	**18 29 32.0**	**-5.4**
BHK				*e*S	**Sn**	**18 30 44.4**	**-7.9**
UCH	**Uchtor**	**6.90**	**25**	P	**Pn**	**18 29 39.7**	**-0.6**
UCH	SNR=317 **Uchtor**	**6.90**	**25**	*e*Pn	**Pn**	**18 29 39.5**	**-0.8**
UCH				*e*Sn	**Sn**	**18 30 47.1**	**-10**
SDNR	**Sundarnagar**	**6.97**	**129**	*e*PKP	**Pn**	**18 29 39.5**	**-1.8**
SDNR				*e*S	**Sn**	**18 30 55.5**	**-3.7**
KZA	**Kyzart**	**7.05**	**30**	P	**Pn**	**18 29 41.7**	**-0.5**
KK31	SNR=46 **Karatay Array**	**7.07**	**360**	P	**Pn**	**18 29 40.5**	**-2.0**
KK31	comp=E,301nm,0.5s,baz=185,slow=13,SNR=3038			⇓S	**Sn**	**18 30 56.2**	**-5.3**
KK31	comp=E,1μm,0.9s,baz=190,slow=22,SNR=30						
KK31	**Karatay Array**	**7.07**	**360**	*i* PN	**Pn**	**18 29 40.5**	**-2.0**
KK31				pmax	pmax		
EKS2	comp=Z,384nm,0.4s **Erkin-Say**	**7.07**	**19**	P	**Pn**	**18 29 41.7**	**-0.8**
EKS2	SNR=134 **Erkin-Say**	**7.07**	**19**	*e*Pn	**Pn**	**18 29 41.4**	**-1.2**
EKS2	comp=Z,163nm,0.5s			*e*Sn	**Sn**	**18 30 48.6**	**-13**
AAK	**Ala-Archa**	**7.26**	**23**	P	**Pn**	**18 29 44.6**	**-0.5**
AAK	SNR=125 **Ala-Archa**	**7.26**	**23**	P	**Pn**	**18 29 44.6**	**-0.5**
AAK	comp=Z,57nm,0.3s,baz=172,slow=5.3,SNR=90			S	**Sn**	**18 31 03.6**	**-2.5**
AAK	comp=Z,41nm,0.3s,baz=321,slow=22,SNR=13						
AAK	**Ala-Archa**	**7.26**	**23**	*de*PN	**Pn**	**18 29 44.4**	**-0.7**
AAK				pmax	pmax		
AAK	comp=Z,74nm,0.8s **Ala-Archa**	**7.26**	**23**	*e*Pn	**Pn**	**18 29 44.3**	**-0.8**
AAK	comp=Z,148nm,0.4s			*e*Sn	**Sn**	**18 31 01.6**	**-4.4**
KBK	**Karagaybulak**	**7.43**	**26**	P	**Pn**	**18 29 47.4**	**-0.1**
FRU	SNR=58 **Bishkek**	**7.48**	**23**	⇓*i*PN	**Pn**	**18 29 47.0**	**-1.0**
FRU				pmax	pmax		
ULHL	comp=Z,130nm,1.6s **Ulahol**	**7.61**	**34**	P	**Pn**	**18 29 49.1**	**-0.7**
CHMS	SNR=44 **Chumysh**	**7.67**	**24**	P	**Pn**	**18 29 49.7**	**-0.9**
USP	SNR=100 **Ospenovka**	**7.84**	**21**	P	**Pn**	**18 29 52.2**	**-0.6**
DDI	SNR=178 **Dehra Dun**	**8.45**	**130**	*e*PKP	**Pn**	**18 30 01.5**	**+0.3**
DDI				*ex*	x	18 31 00.0	
IMYA	**Miami**	**8.49**	**275**	*e*P	**Pn**	**18 29 59.9**	**-1.7**
KNDC	**Almaty**	**8.70**	**32**	⇑P	**Pn**	**18 30 04.9**	**+0.4**
KNDC	comp=Z,209nm,0.8s			⇑S	**Sn**	**18 31 42.4**	**+1.5**
ISRO	comp=Z,178nm,0.8s **Mashad**	**9.00**	**275**	*e*P	**Pn**	**18 30 06.4**	**-2.0**
IMOG	**Moghan**	**9.11**	**274**	*e*P	**Pn**	**18 30 07.9**	**-2.1**
NDI	**New Delhi**	**9.22**	**141**	*e*PKP	**Pn**	**18 30 09.0**	**-2.4**
NDI				*e*S	**Sn**	**18 31 45.0**	**-8.5**
IPAY	**Payeh**	**9.38**	**276**	*e*P	**Pn**	**18 30 11.2**	**-2.3**
IAKL	**Akhelmad**	**9.57**	**277**	*e*P	**Pn**	**18 30 13.2**	**-2.9**
IEMG	**Emamgholi**	**9.69**	**282**	*e*P	**Pn**	**18 30 14.2**	**-3.4**
ASH	**Ashkhabad**	**9.98**	**285**	*e*P	**Pn**	**18 30 20.4**	**-1.1**
ASH				*e*S	**Sn**	**18 32 08.8**	**-3.0**
AJM	**Ajmer**	**10.12**	**159**	*e*PKP	**Pn**	**18 30 22.9**	**-0.7**
AJM				AMb	AMB	18 30 23.9	
ISFR	comp=Z,112nm,0.4s **Sfrayin**	**10.18**	**280**	*e*P	**Pn**	**18 30 21.8**	**-2.4**
PTH	**Pithoragarh**	**10.36**	**126**	*e*PKP	**Pn**	**18 30 24.4**	**-2.2**
PTH				*ex*	x	18 32 16.6	
ISHV	**Shirvan**	**10.45**	**282**	*e*P	**Pn**	**18 30 24.7**	**-3.0**
BHJ	**Bhuj**	**12.75**	**184**	*e*PKP	**Pn**	**18 30 56.1**	**-1.9**
MK31	**Makanchi Array**	**13.87**	**36**	⇓P	**Pn**	**18 31 10.8**	**-1.4**
MK31	comp=Z,45nm,0.7s,baz=198,slow=14,SNR=348 **Makanchi Array**	**13.87**	**36**	*e*Pn	**Pn**	**18 31 10.8**	**-1.4**
MKAR	**Makanchi Array**	**13.87**	**36**	P	**Pn**	**18 31 11.5**	**-0.7**
MKAR	comp=Z,1.6nm,0.3s,baz=220,slow=13,SNR=72 **Makanchi Array**	**13.87**	**36**	P	**Pn**	**18 31 11.5**	**-0.7**
BHPL	**Bhopal**	**14.05**	**153**	*e*PKP	**Pn**	**18 31 14.3**	**-0.4**
BHPL				AMb	AMB	18 31 14.9	
BHV	comp=Z,110nm,0.6s **Bhavnagar**	**14.29**	**174**	*ex*	**Pn**	**18 31 16.0**	**-1.7**
GKN	**Gorkha**	**14.34**	**120**	*e*P	**Pn**	**18 31 15.8**	**-2.5**
IFIR	comp=Z,428nm,0.6s **Firoozkooh**	**14.48**	**274**	*e*P	**Pn**	**18 31 22.5**	**+2.5**
DMN	**Daman**	**14.91**	**120**	*e*P	**Pn**	**18 31 23.1**	**-2.4**
KKN	comp=Z,153nm,0.6s **Kakani**	**14.92**	**119**	*e*P	**Pn**	**18 31 23.3**	**-2.3**
IDMV	comp=Z,462nm,0.6s **Damavand**	**15.07**	**274**	*e*P	**Pn**	**18 31 29.8**	**+2.4**
PKIN	**Phulchoki**	**15.13**	**120**	*e*P	**Pn**	**18 31 26.1**	**-2.2**
PKI	comp=Z,163nm,0.5s **Pulchoki**	**15.14**	**120**	*e*P	**Pn**	**18 31 26.3**	**-2.1**
WMQ	comp=Z,208nm,0.6s **Urumqi**	**15.24**	**54**	P	**Pn**	**18 31 30.0**	**+0.5**
WMQ				sP	sP	18 32 04.8	-8.0
WMQ				S	**S**	**18 34 15.0**	**-10**
WMQ				PcP	PcP	18 36 29.3	+3.6
WMQ				ScP	ScP	18 39 50.3	+3.5
WMQ				pmax	pmax		
WMQ	comp=Z,28nm,0.6s			pmax	pmax		
GUN	comp=Z,130nm,3.4s **Gumba**	**15.28**	**118**	*e*P	**Pn**	**18 31 28.3**	**-1.8**
AB31	comp=Z,169nm,0.6s **Akbulak array**	**15.35**	**333**	⇑P	**Pn**	**18 31 29.4**	**-1.3**
AB31	comp=Z,73nm,0.6s			⇑S	**S**	**18 34 06.7**	**-20**
AB31	comp=Z,60nm,0.5s **Akbulak array**	**15.35**	**333**	*i* P	**Pn**	**18 31 29.3**	**-1.4**
AB31				pmax	pmax		
ABKAR	comp=Z,37nm,0.2s **Akbulak array**	**15.35**	**333**	*e*Pn	**Pn**	**18 31 28.0**	**-2.7**
ABKAR	comp=Z,81nm,0.5s			*e*Sb	**Sn**	**18 34 05.2**	**-16**
IZEF	**Zefreh**	**15.38**	**264**	*e*P	**Pn**	**18 31 32.5**	**+1.2**
JIRN	**Jiri**	**15.65**	**118**	*e*P	**Pn**	**18 31 32.8**	**-1.8**
KURK	comp=Z,261nm,0.5s **Kurchatov**	**15.79**	**19**	⇓P	**Pn**	**18 31 32.7**	**-3.4**
KURK	comp=Z,47nm,0.9s **Kurchatov**	**15.79**	**19**	*ce*P	**Pn**	**18 31 33.4**	**-2.7**
KURK				pmax	pmax		
KURK	comp=Z,43nm,0.7s **Kurchatov**	**15.79**	**19**	*e*Pn	**Pn**	**18 31 32.2**	**-4.0**
IKLH	comp=Z,47nm,0.9s **Kolahrood**	**15.87**	**266**	*e*P	**Pn**	**18 31 39.1**	**+1.7**
ISRV	**Sarvestan**	**16.12**	**251**	*e*P	**Pn**	**18 31 39.6**	**-0.9**
AKL	**Akola**	**16.27**	**158**	*i* P	**Pn**	**18 31 42.1**	**-0.2**
AKL				*i* P		18 31 42.1	
AKL				*ex*	x	18 31 46.0	
AKL	comp=Z,140nm,1.0s			*i* x	x	18 34 33.6	
RAMN	**Ramite**	**16.36**	**119**	*e*P	**Pn**	**18 31 42.4**	**-1.0**
IPIR	comp=Z,323nm,0.7s **Pirpir**	**16.60**	**264**	*e*P	**Pn**	**18 31 45.6**	**-0.7**
VOSK	**Vostochnaya**	**16.70**	**1**	⇑P	**Pn**	**18 31 44.5**	**-2.8**
VOSK	comp=Z,55nm,0.9s			S	**S**	**18 34 45.6**	**-7.4**
VOSK	**Vostochnaya**	**16.70**	**1**	P	**Pn**	**18 31 44.4**	**-2.9**
VOSK				pmax	pmax		
IRAZ	comp=Z,55nm,1.0s **Razeghan**	**16.79**	**274**	*e*P	**Pn**	**18 31 50.3**	**+1.7**
TAPN	**Taplejung**	**16.93**	**116**	*e*P	**Pn**	**18 31 49.8**	**-0.4**
ZRNK	comp=Z,240nm,0.5s **Zerenda**	**16.96**	**357**	⇑P	**Pn**	**18 31 48.9**	**-1.5**
ZRNK	comp=Z,36nm,0.5s			S	**S**	**18 34 48.5**	**-10**
ZRNK	**Zerenda**	**16.96**	**357**	*i* P	**Pn**	**18 31 48.9**	**-1.5**
ZRNK				pmax	pmax		
ODAN	comp=Z,36nm,0.5s **Odare**	**16.98**	**118**	*e*P	**Pn**	**18 31 50.2**	**-0.7**
BVAR	comp=Z,197nm,0.6s **Borovoye Array**	**17.00**	**360**	P	**Pn**	**18 31 49.2**	**-1.7**
BVAR	comp=Z,6.4nm,0.3s,baz=169,slow=13,SNR=52			S	**S**	**18 34 54.4**	**-5.4**
AKTK	comp=Z,2.6nm,0.3s,baz=170,slow=26,SNR=5.2 **Aktyubinsk**	**17.03**	**332**	P	**Pn**	**18 31 50.6**	**-0.7**
AKTK				S	**S**	**18 34 53.2**	**-7.5**
AKTO	**Aktyubinsk**	**17.03**	**332**	P	**Pn**	**18 31 50.6**	**-0.7**
AKTO	comp=Z,7.2nm,0.3s,baz=142,slow=9.8,SNR=185			S	**S**	**18 34 53.2**	**-7.5**
BRVK	comp=Z,6.2nm,0.3s,baz=200,slow=23,SNR=13 **Borovoye**	**17.03**	**359**	⇑P	**Pn**	**18 31 49.6**	**-1.7**
BRVK	comp=Z,66nm,0.7s			⇑S	**S**	**18 34 57.2**	**-3.4**
BRVK	comp=Z,106nm,1.5s **Borovoye**	**17.03**	**359**	*c i*P	**Pn**	**18 31 49.6**	**-1.7**
BRVK				pmax	pmax		
BRVK	comp=Z,66nm,0.7s **Borovoye**	**17.03**	**359**	*e*Pn	**Pn**	**18 31 49.4**	**-1.9**
BRVK	comp=Z,46nm,0.6s			*e*Sn	**Sn**	**18 34 54.9**	**-6.5**
POO	**Poona**	**17.66**	**170**	*e*PKP	**Pn**	**18 31 59.6**	**+0.4**
POO				AMb	AMB	18 32 01.7	
BOK	comp=Z,72nm,0.6s **Bokaro**	**17.98**	**128**	*e*PKP	**Pn**	**18 32 02.1**	**-0.8**
BOK				AMb	AMB	18 32 06.0	
LSA	comp=Z,75nm,0.8s **Lhasa**	**18.37**	**104**	P	**P**	**18 32 09.3**	**+3.5**
LSA	**Lhasa**	**18.37**	**104**	*e*P	**P**	**18 32 09.6**	**+3.8**
LSA				pmax	pmax		
LSA	comp=Z,32nm,0.6s **Lhasa**	**18.37**	**104**	*e*P	**P**	**18 32 09.6**	**+3.8**
ISRB	comp=Z,32nm,0.6s **Sarab**	**18.41**	**282**	*e*P	**P**	**18 32 11.2**	**+5.1**
KAD	**Karad**	**18.91**	**169**	*e*PKP	**P**	**18 32 12.3**	**+0.6**
KAD				AMb	AMB	18 32 16.4	
IAZR	comp=Z,27nm,1.5s **Azarshahr**	**19.75**	**282**	*e*P	**P**	**18 32 16.5**	**-4.2**
HYB	**Hyderabad**	**19.84**	**157**	⇓*i*P	**P**	**18 32 24.0**	**+2.3**
HYB	comp=Z,50nm,1.0s			*e*S	**S**	**18 35 58.0**	**+0.4**
ISHB	**Shabestar**	**20.02**	**284**	*e*P	**P**	**18 32 25.1**	**+1.5**
KBD	**Kabd**	**20.44**	**257**	*e*P	**P**	**18 32 27.4**	**-0.7**
KBD				AMb	AMB	18 32 32.8	
ZALV	comp=Z,23nm,1.0s **Zalesovo Beam**	**20.48**	**25**	P	**P**	**18 32 28.3**	**-0.1**
RDF	comp=Z,176nm,0.6s,baz=222,slow=11,SNR=842 **Al-Radifah**	**20.66**	**257**	*e*P	**P**	**18 32 30.5**	**0.0**
RDF				AMb	AMB	18 32 35.3	
GNI	comp=Z,28nm,0.6s **Garni**	**20.73**	**289**	*ce*P	**P**	**18 32 33.5**	**+2.3**
GNI				pmax	pmax		
GNI	comp=Z,65nm,0.6s **Garni**	**20.73**	**289**	*e*P	**P**	**18 32 33.4**	**+2.3**
NVS	comp=Z,69nm,0.7s **Novosibirsk**	**20.74**	**21**	*i* P	**P**	**18 32 30.8**	**-0.3**
NVS				*e*S	**S**	**18 36 13.6**	**-1.2**
NVS				pmax	pmax		
NVS	comp=Z,158nm,1.1s			pmax	pmax		
NVS	comp=N,123nm,0.9s			pmax	pmax		
NVS	comp=E,26nm,0.7s			smax			
NVS	comp=N,79nm,1.6s			smax			
NVS	comp=E,34nm,1.6s						
NAY	**Al-Naaiem**	**20.76**	**258**	*e*P	**P**	**18 32 31.0**	**-0.7**
NAY				AMb	AMB	18 32 36.6	
MTA	comp=Z,18nm,0.5s **Mtatsminda**	**20.83**	**294**	P	**P**	**18 32 32.7**	**+0.5**
TBLG	**Delisi**	**20.88**	**294**	*e*P	**P**	**18 32 33.6**	**+0.9**
TBLG	**Delisi**	**20.88**	**294**	P	**P**	**18 32 33.6**	**+0.8**
SHL	**Shillong**	**21.01**	**114**	*e*PKP	**P**	**18 32 35.0**	**+0.7**
SHL				*i* x	x	18 36 20.0	
VIS	**Vishakhapatnam**	**21.44**	**145**	*i* P	**P**	**18 32 43.1**	**+4.2**
VIS				*i* S	**S**	**18 36 37.0**	**+8.1**
KEH	**Kehvi**	**21.55**	**295**	P	**P**	**18 32 40.3**	**+0.5**
ZEI	**Tsey**	**21.64**	**296**	*e*P	**P**	**18 32 42.5**	**+1.6**
ZEI				pmax	pmax		
SVE	comp=Z,15nm,0.4s,mb4.8 **Sverdlovsk**	**21.87**	**345**	⇓*e*P	**P**	**18 32 42.9**	**-0.1**
SVE				*e*S	**S**	**18 36 38.1**	**+2.8**
SVE				pmax	pmax		
ONI	comp=Z,56nm,1.1s,mb4.9 **Oni**	**21.94**	**296**	P	**P**	**18 32 47.0**	**+3.0**
ARU	**Arti**	**21.98**	**342**	*c i*P	**P**	**18 32 43.8**	**-0.4**
ARU				*e*		18 33 21.6	
ARU				S	**S**	**18 36 34.5**	**-2.7**
ARU				pmax	pmax		
ARU	comp=Z,124nm,1.2s,mb5.2 **Arti**	**21.98**	**342**	*e*P	**P**	**18 32 44.0**	**-0.2**
ARU	comp=Z,74nm,0.8s,mb5.2			*e*S	**S**	**18 36 41.1**	**+4.0**
KIV	**Kislovodsk**	**22.72**	**299**	⇓*e*P	**P**	**18 32 51.4**	**-0.3**
KIV				pmax	pmax		
KIV	comp=Z,12nm,1.5s,mb4.1 **Kislovodsk**	**22.72**	**299**	*e*P	**P**	**18 32 50.9**	**-0.8**
KIV	comp=Z,26nm,0.6s,mb4.8			*e*S	**S**	**18 36 59.7**	**+10**
GTA	**Gaotai**	**23.32**	**73**	P	**P**	**18 33 00.0**	**+2.8**
GTA				pP		18 33 25.6	
GTA				sP	sP	18 33 41.6	+0.4

GTA sS sS 18 37 45.3 -2.6
GTA SS 18 37 59.5
GTA pmax pmax
comp=Z,21nm,1.0s,mb4.5
GTA pmax pmax
comp=Z,140nm,6.0s
GTA LR LR
comp=N,200nm,14.9s
GTA LR LR
comp=E,150nm,19.0s
GTA LR LR
comp=Z,230nm,13.4s
SOC Sochi 24.79 297 *e*P **P 18 33 09.9 -0.7**
SOC *e* 18 33 54.4
SOC *e*S **S 18 37 20.9 -1.8**
SOC *e**SS sS 18 38 23.1 +9.2
SOC pmax pmax
comp=Z,23nm,0.8s,mb4.8
SOKR Solikamsk 25.21 343*c i*P **P 18 33 15.5 +1.3**
SOKR pmax pmax
comp=Z,20nm,0.9s,mb4.7
VRHR Novokhopersk 25.62 315 *e*P **P 18 33 18.0 0.0**
VRHR *e* pP 18 33 47.0 -0.1
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,4.0nm,0.5s
VRHR pmax pmax
comp=Z,10.0nm,0.5s,mb4.7
MOY Mondy 26.68 45 *e*P **P 18 33 29.2 +1.7**
LZH Lanzhou 26.81 80 *e*P **P 18 33 31.5 +2.6**
LZH pP pP 18 33 56.3 -1.9
LZH sP sP 18 34 11.3 -2.9
LZH PP PP 18 34 22.1 -10
LZH S **S 18 37 56.5 +1.7**
LZH sS sS 18 38 43.5 -3.1
LZH SS 18 39 19.5
LZH pmax pmax
comp=Z,14nm,1.0s,mb4.5
LZH pmax pmax
comp=Z,64nm,4.1s
LZH LR LR
comp=N,320nm,11.8s
LZH LR LR
comp=Z,510nm,12.8s
VSR Storozhevoye 27.09 314 *e*P **P 18 33 30.9 -0.3**
VSR *e* pP 18 34 01.7 +1.2
VSR pmax pmax
comp=N,2.0nm,0.5s
VSR pmax pmax
comp=E,5.0nm,0.5s
VSR pmax pmax
comp=Z,7.0nm,0.5s,mb4.5
TRD Trivandrum 28.00 166⇑*ex* x 18 28 49.0
CD2 Chengdu 28.05 91 P **P 18 33 43.0 +3.0**
CD2 pP pP 18 34 09.8 +0.4
CD2 sP sP 18 34 24.8 -0.6
CD2 PP PP 18 34 38.5 -7.4
CD2 S **S 18 38 17.3 +2.9**
CD2 sS sS 18 39 04.5 -1.7
CD2 SS SS 18 39 50.0 -28
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.8
CD2 pmax pmax
comp=Z,170nm,5.9s
CD2 LR LR
comp=N,460nm,10.1s
CD2 LR LR
comp=Z,500nm,14.3s
TLY Talaya 28.21 46 *e*P **P 18 33 43.0 +1.9**
TLY *e* 18 34 45.5
TLY *e*S **S 18 38 06.8 -10**
TLY pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
SONM Songino Array 28.88 55 P **P 18 33 49.0 +1.8**
comp=Z,8.1nm,0.8s,mb4.5,baz=262,slow=9.3,SNR=47
MMAI Mount Meron Ar 29.05 274 P **P 18 33 49.2 +0.4**
comp=Z,3.3nm,0.6s,mb4.2,baz=61,slow=8.7,SNR=7.1
BR131 Keskin Array S 29.27 289 *e*P **P 18 33 51.5 +0.8**
comp=Z,5.9nm,0.7s,mb4.4
BRTR Keskin Array B 29.27 289 P **P 18 33 51.6 +0.9**
comp=Z,7.2nm,0.7s,mb4.5,baz=100,slow=8.7,SNR=52
BRTR pP pP 18 34 21.0 +0.8
comp=Z,0.9nm,0.5s,baz=97,slow=8.6,SNR=2.9
ULN Ulaanbaatar 29.32 55 *e*P **P 18 33 52.2 +1.2**
ULN pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
ULN Ulaanbaatar 29.32 55 *e*P **P 18 33 52.2 +1.2**
comp=Z,5.0nm,0.8s,mb4.3
KMI Kunming 29.61 103 P **P 18 33 56.8 +3.0**
KMI pP pP 18 34 24.8 +1.4
KMI sP sP 18 34 37.9 -1.5
KMI PP PP 18 34 59.5 -3.8
KMI S **S 18 38 42.6 +3.6**
KMI sS sS 18 39 31.1 +0.2
KMI pmax pmax
comp=Z,2.0nm,1.3s,mb3.7
KMI pmax pmax
comp=Z,180nm,5.8s
KMI LR LR
comp=N,120nm,19.6s
KMI LR LR
comp=E,110nm,15.9s
KMI LR LR
comp=Z,90nm,17.8s
OBN Obninsk 30.09 320⇑*e*P **P 18 33 57.8 +0.1**
OBN pmax pmax
comp=Z,17nm,0.4s,mb5.1
OBN Obninsk 30.09 320 *e*P **P 18 33 57.7 0.0**
comp=Z,22nm,0.4s,mb5.2
CMAR Chiang Mai Arr 30.52 117 P **P 18 34 05.0 +3.0**
comp=Z,1.3nm,0.8s,mb3.7,baz=297,slow=8.3,SNR=8.2
CMAR pP pP 18 34 34.5 +2.9
comp=Z,2.3nm,0.9s,baz=295,slow=10,SNR=3.7
CMAR ScP ScP 18 40 26.3 -0.8
comp=Z,0.7nm,0.8s,baz=292,slow=5.3,SNR=4.1
CMAR Chiang Mai Arr 30.52 117 P **P 18 34 05.0 +3.1**
CMAR *PP pP 18 34 34.5 +2.9
XAN Xi'an 31.32 82 P **P 18 34 10.8 +2.0**
XAN pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
HHC Hu-ho-hao-te 32.24 69 *e*P **P 18 34 18.3 +1.5**
HHC pP pP 18 34 45.8 -0.7
HHC sP sP 18 35 00.8 -1.7
HHC PP PP 18 35 30.5 -1.8
HHC PcP PcP 18 37 03.6 +1.7
HHC S **S 18 39 21.0 +1.2**
HHC sS sS 18 40 08.8 -3.1
HHC ScP ScP 18 40 34.9 +2.3
HHC PcS PcS 18 40 47.6 +0.8
HHC SS SS 18 41 23.9 -20
HHC ScS ScS 18 44 32.5 +0.7
HHC pmax pmax
comp=Z,18nm,0.6s,mb5.0
HHC pmax pmax
comp=Z,110nm,6.2s
HHC LR LR
comp=N,810nm,12.5s
HHC LR LR
comp=E,810nm,12.4s
HHC LR LR
comp=Z,830nm,12.4s
TLCR 32.70 299⇑*i*P **P 18 34 21.3 +0.6**
AKASG Malin Array Be 32.99 309 P **P 18 34 22.8 -0.4**
comp=Z,5.2nm,0.5s,mb4.5,baz=80,slow=7.4,SNR=40
AKASG PcP PcP 18 37 03.0 -0.7
comp=Z,2.9nm,0.6s,baz=92,slow=3.2,SNR=8.7
AKBB Malin Array Si 32.99 309 *e*P **P 18 34 22.6 -0.6**
KIEV Kiev 33.00 309 *e*P **P 18 34 22.2 -1.0**
KIEV pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
KIEV Kiev 33.00 309 *e*P **P 18 34 22.2 -1.1**
comp=Z,6.3nm,0.6s,mb4.5
TESR 34.25 302⇑*i*P **P 18 34 34.6 +0.5**
MLR Muntele Rosu 34.73 300||*i*P **P 18 34 40.2 +1.9**
BURAR Bucovina Array 35.27 303⇑*i*P **P 18 34 43.5 +0.6**
BUR08 Bucovina Ar. S 35.28 304 *e*P **P 18 34 43.0 0.0**
VOIR 35.36 300||*i*P **P 18 34 44.8 +1.1**
IDID Didziasalis 35.45 317 *e*P **P 18 34 44.2 -0.1**
IDID AMB AMB 18 34 45.6
comp=Z,5.6nm,0.8s,mb4.3
IIGN Ignalina 35.75 317 *e*P **P 18 34 46.7 -0.1**
IIGN AMB AMB 18 34 48.0
comp=Z,6.8nm,0.7s,mb4.4
BJI Beijing 35.83 70 P **P 18 34 49.9 +2.1**
BJI S **S 18 40 17.0 +2.0**
BJI sS sS 18 41 04.3 -3.3
BJI pmax pmax
comp=Z,19nm,0.7s,mb4.8
BJI LR LR
comp=N,630nm,15.8s
BJI LR LR
comp=E,300nm,16.3s
BJI LR LR
comp=Z,290nm,16.9s
IZAR Zarasai 35.83 318 *e*P **P 18 34 47.4 -0.2**
IZAR AMB AMB 18 34 48.6
comp=Z,6.6nm,0.7s,mb4.4
VSU Vasula 36.35 322*ce*P **P 18 34 51.7 -0.3**
VSU pmax pmax
comp=Z,15nm,0.7s,mb4.7
DRGR 36.97 302||*i*P **P 18 34 58.7 +1.4**
KWP Kalwaria Pacla 37.03 307||*i*P **P 18 34 58.8 +1.0**
FINES FINESS Array B 37.70 327 P **P 18 35 03.7 +0.5**
comp=Z,14nm,0.6s,mb4.8,baz=106,slow=10,SNR=60
FINES FINESS Array B 37.70 327 P **P 18 35 03.7 +0.5**
BZS Buzias 37.76 300⇑*i*P **P 18 35 04.9 +0.9**
LVZ Lovozero 37.78 339*ce*P **P 18 35 04.1 +0.2**
LVZ pmax pmax
comp=Z,27nm,1.1s,mb4.8
KAF Kangasniemi 37.85 328 *e*P **P 18 35 04.5 0.0**
KAF pmax pmax
comp=Z,16nm,0.8s,mb4.7
KAF Kangasniemi 37.85 328 *ep* **P 18 35 04.5 0.0**
comp=Z,16nm,0.8s,mb4.7,baz=111,slow=8.1
APA Apatity 37.95 338||*i*P **P 18 35 05.5 +0.2**
APA pmax pmax
comp=Z,14nm,0.7s,mb4.7
STHS Stebnicka Huta 37.97 306 *e*P **P 18 35 03.8 -1.9**
STHS Stebnicka Huta 37.97 306 *e*P **P 18 35 03.8 -1.9**
QIZ Qiongzhong 38.41 106 P **P 18 35 11.0 +1.3**
NIE Niedzica 38.58 306 *e*P **P 18 35 12.4 +1.6**
MORC Moravsky Berou 40.38 307 *e*P **P 18 35 25.6 -0.2**
comp=Z,1.3nm,0.6s,mb3.7
KEV Kevo 41.12 339 *e*P **P 18 35 31.3 -0.2**
KEV pmax pmax
comp=Z,18nm,0.4s,mb5.0
KEV Kevo 41.12 339 *ep* **P 18 35 31.3 -0.2**
comp=Z,18nm,0.4s,mb5.0
DPC Dobruska-Polom 41.16 308 *ep*P pP 18 36 04.5 +1.6
UPC Upice 41.35 308 *ep*P pP 18 36 06.2 +1.7
ARCES ARCESS Array B 41.46 338 P **P 18 35 34.7 +0.4**
comp=Z,32nm,0.7s,mb5.0,baz=116,slow=8.4,SNR=234
ARCES pP pP 18 36 05.0 -0.1
comp=Z,8.8nm,0.8s,baz=108,slow=7.8,SNR=4.2
ARE0 ARCESS Array S 41.46 338 *e*P **P 18 35 34.4 +0.1**
KTK1 Kautokeino 41.92 337 *e*P **P 18 35 38.8 +0.7**
CN2 Changchun 42.12 62 *e*P **P 18 35 41.3 +1.2**
CN2 *ep*P pP 18 36 09.8 -1.1
CN2 *e*S **S 18 41 50.3 +1.1**
CN2 pmax pmax
comp=Z,20nm,0.6s,mb4.9
CN2 pmax pmax
comp=Z,200nm,3.0s
PSI Prapat 42.17 135 P **P 18 35 43.3 +2.5**
comp=Z,3.0nm,0.4s,mb4.3,baz=331,slow=9.3,SNR=3.6
CLL Collm 43.23 309 *e*P **P 18 35 49.0 +0.1**
CLL *e**PP pP 18 36 24.0 +4.1
CLL pmax pmax
comp=Z,2.0nm,0.8s,mb3.8
CLL Collm 43.23 309 *e*P **P 18 35 49.0 +0.1**
comp=Z,2.0nm,0.8s,mb3.8
CLL *e* pP 18 36 24.0 +4.1
CLL *e*PP PP 18 37 33.0 +1.1
CLL *i* 18 38 17.8
CLL *e*SS SS 18 45 40.0 +17
MOR8 Moi Rana 44.07 331 *e*P **P 18 35 54.9 -0.5**
MOR8 AMb AMB 18 35 55.8
comp=Z,29nm,1.0s,mb4.8
MOR8 Moi Rana 44.07 331 *e*P **P 18 35 54.9 -0.5**
comp=Z,29nm,1.0s,mb4.9
GRF Grafenberg Arr 44.48 307 *e*P **P 18 35 59.6 +0.7**
comp=Z,9.0nm,1.4s,mb4.2
GRF *ep*P pP 18 36 31.5 +1.5
GRF Grafenberg Arr 44.48 307 *e*P **P 18 35 59.6 +0.7**
GRF *e**PP pP 18 36 31.5 +1.5
GRF pmax pmax
comp=Z,9.0nm,1.4s,mb4.2
YAK Yakutsk 44.55 35 *e*P **P 18 35 58.5 -0.7**
YAK pmax pmax
comp=Z,12nm,0.6s,mb4.7
YAK Yakutsk 44.55 35 *e*P **P 18 35 59.0 -0.2**
comp=Z,12nm,0.5s,mb4.8
NB2 NORSAR Subarra 44.56 323 P **P 18 35 58.9 -0.5**
comp=Z,7.7nm,0.4s,mb4.7,baz=98,slow=8.6
NOA NORSAR Array B 44.56 323 P **P 18 35 59.0 -0.3**
comp=Z,7.4nm,0.5s,mb4.6,baz=98,slow=7.8,SNR=42
NOA pP pP 18 36 30.6 +0.1
comp=Z,4.0nm,0.6s,baz=98,slow=8.1,SNR=3.9
MDJ Mudanjiang 44.93 60 P **P 18 36 02.5 0.0**
MDJ pP pP 18 36 29.9 -3.8
MDJ S **S 18 42 29.8 -0.2**
MDJ pmax pmax
comp=Z,7.0nm,1.1s,mb4.2
MDJ pmax pmax
comp=Z,64nm,3.9s
MDJ LR LR
comp=E,140nm,21.7s
MDJ LR LR
comp=Z,120nm,21.7s
KSRS Korea Array 45.35 70 P **P 18 36 06.9 +1.0**
comp=Z,2.7nm,0.8s,mb3.9,baz=275,slow=7.0,SNR=9.4
KSRS pP pP 18 36 38.9 +1.7
comp=Z,5.7nm,1.2s,baz=268,slow=6.7,SNR=3.2
KSRS Korea Array 45.35 70 P **P 18 36 06.9 +1.0**
KSRS *PP pP 18 36 38.9 +1.7
KSRS pmax pmax
comp=Z,3.0nm,0.8s,mb4.0
TIXI Tiksi 46.34 22*c i*P **P 18 36 13.7 +0.5**
TIXI pmax pmax
comp=Z,22nm,0.9s,mb4.8
TIXI Tiksi 46.34 22 *e*P **P 18 36 13.3 +0.1**
comp=Z,15nm,0.6s,mb4.8
PGF Pioggiola 47.20 298 *e*P **P 18 36 19.5 -0.8**
comp=Z,7.5nm,0.7s,mb4.1
PGF Pioggiola 47.20 298 *e*P **P 18 36 19.5 -0.8**
PGF pmax pmax
comp=Z,4.0nm,0.7s,mb4.2
PGF Pioggiola 47.20 298 *e*P **P 18 36 19.5 -0.8**
comp=Z,3.8nm,0.7s,mb4.1
CDF Champ du Feu 47.22 306 *e*P **P 18 36 21.5 +1.1**
HINF Hinteralfeld 47.60 305 *e*P **P 18 36 23.0 -0.3**
comp=Z,3.6nm,0.6s,mb3.9
HINF *ep*P pP 18 36 55.1 +0.3
HINF Hinteralfeld 47.60 305 *e*P **P 18 36 23.0 -0.3**
HINF *e**PP pP 18 36 55.1 +0.3
HINF pmax pmax
comp=Z,2.0nm,0.6s,mb3.9
HINF Hinteralfeld 47.60 305 *e*P **P 18 36 23.0 -0.3**
comp=Z,1.8nm,0.6s,mb3.9
HINF *ep*P pP 18 36 55.1 +0.3
HAU Haudompre 47.90 305 *e*P **P 18 36 25.5 -0.1**
HAU *e*MLR MLR
comp=Z,82nm,22.2s
HAU Haudompre 47.90 305 *e*P **P 18 36 25.5 -0.1**
HAU LR LR
comp=Z,80nm,22.3s
SBF Sospel 48.00 300 *e*P **P 18 36 26.2 -0.3**
comp=Z,25nm,0.9s,mb4.5
SBF Sospel 48.00 300 *e*P **P 18 36 26.2 -0.3**
SBF pmax pmax
comp=Z,13nm,0.9s,mb4.6
SBF Sospel 48.00 300 *e*P **P 18 36 26.2 -0.3**
comp=Z,13nm,0.9s,mb4.5
LPG La Plagne 48.12 302 *e*P **P 18 36 27.7 +0.4**
LPL La Plagne 48.13 302 *e*P **P 18 36 27.6 +0.2**
comp=Z,7.5nm,0.7s,mb4.1
LPL La Plagne 48.13 302 *e*P **P 18 36 27.6 +0.2**
LPL pmax pmax
comp=Z,4.0nm,0.7s,mb4.2
LPL La Plagne 48.13 302 *e*P **P 18 36 27.6 +0.2**
comp=Z,3.8nm,0.7s,mb4.1
MBDF Montbardon 48.27 301 *e*P **P 18 36 29.2 +0.7**
comp=Z,6.9nm,0.5s,mb4.2
MBDF Montbardon 48.27 301 *e*P **P 18 36 29.2 +0.7**
MBDF pmax pmax
comp=Z,3.0nm,0.5s,mb4.2
MBDF Montbardon 48.27 301 *e*P **P 18 36 29.2 +0.7**
comp=Z,3.5nm,0.5s,mb4.2
CABF La Chapelle 48.34 304 *e*P **P 18 36 30.1 +1.1**
GIVF Givet 48.53 308 *e*P **P 18 36 31.1 +0.7**
FRF La Foret Royal 48.63 300 *e*P **P 18 36 31.0 -0.3**
MEZF Maizieres J'vi 48.66 306 *e*P **P 18 36 31.8 +0.3**
LMR La Mourre 48.78 299 *e*P **P 18 36 32.5 0.0**
ORIF Oris-en-Rattie 48.85 301 *e*P **P 18 36 32.6 -0.3**
BAIF Baives 48.93 308 *e*P **P 18 36 34.1 +0.6**
KBS Kingsbay 49.00 347 *e*P **P 18 36 35.2 +1.5**
KBS AMb AMB 18 36 36.0
comp=Z,55nm,0.8s,mb5.2
KBS *e*PP PP 18 38 27.2 -0.9
KBS Kingsbay 49.00 347 *e*P **P 18 36 34.6 +0.9**
KBS pmax pmax
comp=Z,37nm,0.9s,mb5.0
KBS Kingsbay 49.00 347 *e*P **P 18 36 34.6 +1.0**
comp=Z,37nm,0.9s,mb5.0
VIVF Saint-Julien-I 49.69 302 *e*P **P 18 36 39.4 0.0**
comp=Z,4.0nm,0.5s,mb4.0
VIVF Saint-Julien-I 49.69 302 *e*P **P 18 36 39.4 0.0**
VIVF pmax pmax
comp=Z,2.0nm,0.5s,mb4.0
VIVF Saint-Julien-I 49.69 302 *e*P **P 18 36 39.4 0.0**
comp=Z,2.0nm,0.5s,mb4.0
LOR Lormes 49.70 305 *e*P **P 18 36 38.7 -0.6**
LOR *e*MLR MLR
comp=Z,41nm,21.2s
LOR Lormes 49.70 305 *e*P **P 18 36 38.7 -0.6**
LOR LR LR
comp=Z,40nm,21.3s
SMF Signal de Mont 49.84 304 *e*P **P 18 36 40.3 -0.2**
comp=Z,14nm,0.7s,mb4.4
SMF Signal de Mont 49.84 304 *e*P **P 18 36 40.3 -0.2**
SMF pmax pmax
comp=Z,7.0nm,0.7s,mb4.4
SMF Signal de Mont 49.84 304 *e*P **P 18 36 40.3 -0.2**
comp=Z,6.8nm,0.7s,mb4.4
SSF Saint Saulge 49.98 305 *e*P **P 18 36 41.1 -0.4**
AVF Avril sur Loir 50.14 304 *e*P **P 18 36 42.5 -0.2**
comp=Z,15nm,0.8s,mb4.4
AVF *ep*P pP 18 37 15.0 +0.5
AVF Avril sur Loir 50.14 304 *e*P **P 18 36 42.5 -0.2**
AVF *e**PP pP 18 37 15.0 +0.5
AVF pmax pmax
comp=Z,7.0nm,0.8s,mb4.3
AVF Avril sur Loir 50.14 304 *e*P **P 18 36 42.5 -0.2**
comp=Z,7.4nm,0.8s,mb4.4
AVF *ep*P pP 18 37 15.0 +0.5
LASF Ste Croix 50.45 301 *e*P **P 18 36 45.3 +0.2**
comp=Z,41nm,1.3s,mb4.6
BGF Bois d'Agland 50.53 304 *e*P **P 18 36 45.3 -0.3**
TCF Toulx Ste Croi 51.02 304 *e*P **P 18 36 49.5 +0.2**
comp=Z,11nm,0.7s,mb4.3
TCF *ep*P pP 18 37 22.2 +1.0
TCF Toulx Ste Croi 51.02 304 *e*P **P 18 36 49.5 +0.2**
TCF *e**PP pP 18 37 22.2 +1.0
TCF pmax pmax
comp=Z,6.0nm,0.7s,mb4.3
TCF Toulx Ste Croi 51.02 304 *e*P **P 18 36 49.5 +0.2**
comp=Z,5.5nm,0.7s,mb4.3
TCF *ep*P pP 18 37 22.2 +1.0
CAF Calviac 51.47 302 *e*P **P 18 36 53.0 +0.3**
comp=Z,7.2nm,0.7s,mb4.1
CAF *ep*P pP 18 37 25.3 +0.7
CAF Calviac 51.47 302 *e*P **P 18 36 53.0 +0.3**
CAF *e**PP pP 18 37 25.3 +0.7
CAF pmax pmax
comp=Z,4.0nm,0.7s,mb4.2
CAF Calviac 51.47 302 *e*P **P 18 36 53.0 +0.3**
comp=Z,3.6nm,0.7s,mb4.1
CAF *ep*P pP 18 37 25.3 +0.7
RJF Les Rejaudoux 51.74 303 *e*P **P 18 36 55.7 +1.0**
RJF *e*MLR MLR
comp=Z,44nm,21.5s
RJF Les Rejaudoux 51.74 303 *e*P **P 18 36 55.7 +1.0**
RJF LR LR
comp=Z,40nm,21.5s
MTLF Montolieu 51.80 300 *e*P **P 18 36 55.8 +0.7**
LDF La Druitiere 52.00 307 *e*P **P 18 36 56.0 -0.6**
comp=Z,7.0nm,0.5s,mb4.2
LDF La Druitiere 52.00 307 *e*P **P 18 36 56.0 -0.6**
LDF pmax pmax
comp=Z,4.0nm,0.5s,mb4.3
LDF La Druitiere 52.00 307 *e*P **P 18 36 56.0 -0.6**
comp=Z,3.5nm,0.5s,mb4.2
FLN La Foliniere 52.19 308 *e*P **P 18 36 57.9 -0.1**
FLN *e*MLR MLR
comp=Z,34nm,18.2s
FLN La Foliniere 52.19 308 *e*P **P 18 36 57.9 -0.1**
FLN LR LR
comp=Z,30nm,18.3s
LFF La Frestale 52.37 303 *e*P **P 18 36 59.6 +0.2**
comp=Z,7.2nm,0.5s,mb4.2
LFF La Frestale 52.37 303 *e*P **P 18 36 59.6 +0.2**
LFF pmax pmax
comp=Z,4.0nm,0.5s,mb4.3
LFF La Frestale 52.37 303 *e*P **P 18 36 59.6 +0.2**
comp=Z,3.6nm,0.5s,mb4.3
GRR Gorron 52.53 307 *e*P **P 18 36 59.9 -0.5**
MAT Matsushiro 53.44 68 P **P 18 37 07.4 +0.1**
MJAR Matsushiro Arr 53.44 68 P **P 18 37 07.8 +0.5**
comp=Z,1.8nm,0.8s,mb3.9,baz=294,slow=10.0,SNR=8.3
SGMF Saint Gilles 53.66 307 *e*P **P 18 37 08.4 -0.3**
ETSF Etsaut 53.87 301 *e*P **P 18 37 10.5 +0.1**
comp=Z,11nm,0.5s,mb4.5
ETSF Etsaut 53.87 301 *e*P **P 18 37 10.5 +0.1**
ETSF pmax pmax
comp=Z,6.0nm,0.5s,mb4.6
ETSF Etsaut 53.87 301 *e*P **P 18 37 10.5 +0.1**
comp=Z,5.7nm,0.5s,mb4.6
ROSF Rostrenen 54.09 308 *e*P **P 18 37 11.5 -0.4**
QUIF Quistinic 54.14 307 *e*P **P 18 37 12.6 +0.4**
ESDC Sonseca Array 57.39 298 P **P 18 37 35.8 +0.2**
comp=Z,3.1nm,0.5s,mb4.4,baz=58,slow=7.5,SNR=31
ESDC pP pP 18 38 08.2 +0.1
comp=Z,1.8nm,0.7s,baz=54,slow=7.4,SNR=3.8
BILL Bilibino 59.18 26||*e*P **P 18 37 48.1 +0.6**
BILL *e* 18 39 57.9
BILL *e*S **S 18 45 36.4 -7.4**
BILL pmax pmax
comp=Z,15nm,1.7s,mb4.5
PVRL Vila Real 59.43 301 *e*P **P 18 37 51.1 +1.5**
comp=Z,19nm,1.8s,mb4.6
MTE Manteigas 59.65 300 *e*P **P 18 37 52.2 +1.0**
comp=Z,30nm,1.8s,mb4.8
PVIS Viseu 59.77 300 *e*P **P 18 37 52.9 +0.9**
comp=Z,22nm,1.5s,mb4.8
PBAR Barrancos 60.18 297 *e*P **P 18 37 55.2 +0.4**
comp=Z,24nm,1.9s,mb4.7
PESTR Estremoz 60.29 298 *e*P **P 18 37 55.6 0.0**
comp=Z,13nm,1.7s,mb4.5
PETK Petropavlovsk- 60.54 44 P **P 18 37 56.7 -0.3**
comp=Z,0.7nm,0.5s,mb3.7,baz=335,slow=6.6,SNR=7.1
PETK Petropavlovsk- 60.54 44 P **P 18 37 56.7 -0.4**
PTOM Tomar 60.57 299 *e*P **P 18 37 58.1 +0.6**
comp=Z,33nm,1.7s,mb4.9
EVO Evora 60.73 298 *e*P **P 18 37 59.5 +0.9**
comp=Z,7.0nm,0.7s,mb4.3
EVO Evora 60.73 298 *e*P **P 18 37 59.0 +0.4**
comp=Z,24nm,1.5s,mb4.8
PBEJ Beja 60.84 298 *e*P **P 18 37 59.7 +0.4**
comp=Z,32nm,1.9s,mb4.8
PVAQ Vaqueiros 60.99 297 *e*P **P 18 38 00.7 +0.4**
comp=Z,55nm,2.0s,mb5.0
PBDV Barranco-do-Ve 61.21 297 *e*P **P 18 38 02.5 +0.7**
comp=Z,99nm,2.0s,mb5.3
SUMG Summit 61.40 341 *e*P **P 18 38 03.7 +1.2**
comp=Z,16nm,0.8s,mb4.9
KAPI Kappang 61.49 121 P **P 18 38 05.6 +1.6**
comp=Z,6.6nm,0.4s,mb4.9,baz=216,slow=10,SNR=5.2
COLD Coldfoot 72.52 15 *e*P **P 18 39 13.4 +0.6**
comp=Z,3.2nm,0.6s,mb4.2
DBIC Dimbokro 74.34 267 P **P 18 39 23.6 -0.8**
comp=Z,3.9nm,0.7s,mb4.2,baz=84,slow=4.4,SNR=4.9
KIC Kosan Boka 74.43 267 *e*P **P 18 39 23.5 -1.4**
comp=Z,20nm,1.0s,mb4.8
INK Inuvik 74.43 9 *e*P **P 18 39 24.6 +0.6**
INK pmax pmax
comp=Z,8.0nm,0.6s
INK Inuvik 74.43 9 *e*P **P 18 39 24.6 +0.6**
comp=Z,7.5nm,0.6s,mb4.6
TIC Toumodi 74.49 267 *e*P **P 18 39 24.2 -1.1**
comp=Z,92nm,1.5s,mb5.3
TIC Toumodi 74.49 267 *e*P **P 18 39 24.2 -1.1**
TIC pmax pmax
comp=Z,93nm,1.5s,mb5.3
LIC Lamto 74.74 267 *e*P **P 18 39 25.6 -1.1**
comp=Z,114nm,1.7s,mb5.2

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
BPAW	Bear Paw Mtn.	74.95	18	eP	P	18 39 26.9	-0.1
	comp=Z,3.8nm,0.5s,mb4.3						
ILAR	Eielson Array	75.33	16	P	P	18 39 28.9	-0.4
	comp=Z,2.2nm,0.5s,mb4.1,baz=296,slow=4.9,SNR=51						
ILAR				pP	pP	18 40 03.4	-0.1
	comp=Z,0.5nm,0.5s,baz=333,slow=5.8,SNR=9.3						
ILAR				PP	PP	18 42 22.0	+3.0
	comp=Z,1.0nm,0.7s,baz=316,slow=7.6,SNR=4.8						
PPLA	Purkeypile	75.64	19	eP	P	18 39 31.2	+0.1
	comp=Z,6.6nm,0.5s,mb4.5						
BOSA	Boshof	77.17	220	P	P	18 39 41.5	+1.5
	comp=Z,2.4nm,0.7s,mb4.0,baz=326,slow=5.1,SNR=7.2						
BOSA				pP	pP	18 40 15.5	+1.1
	comp=Z,2.3nm,0.7s,baz=23,slow=5.2,SNR=2.2						
BOSA	Boshof	77.17	220	P	P	18 39 41.5	+1.5
BOSA				*PP	pP	18 40 15.5	+1.1
BOSA				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.9						
DAWY	Dawson	77.46	13	eP	P	18 39 40.9	-0.4
KDAK	Kodiak Island	79.76	22	iP	P	18 39 54.5	+0.5
YKA	Yellowknife Ar	81.74	2	P	P	18 40 04.5	+0.2
	comp=Z,3.2nm,0.7s,mb4.1,baz=350,slow=5.5,SNR=11						
YKA				pP	pP	18 40 39.6	+0.5
	comp=Z,1.7nm,0.5s,baz=351,slow=5.4,SNR=3.8						
ASAR	Alice Springs	84.25	125	P	P	18 40 18.2	+0.4
	comp=Z,0.9nm,0.5s,mb3.7,baz=313,slow=4.6,SNR=36						
ASAR				pP	pP	18 40 53.3	+0.5
	comp=Z,3.3nm,0.8s,baz=316,slow=5.6,SNR=7.9						
CPUP	Villa Florida	134.86	267	PKP	PKPdf	18 47 05.1	+0.8
	comp=Z,0.5nm,0.5s,baz=72,slow=15,SNR=2.9						
PLCA	Paso Flores	149.35	249	PKPbc	PKPbc	18 47 35.2	+1.3
	comp=Z,2.8nm,1.0s,baz=12,slow=12,SNR=3.2						

IDC 19 18:44:07.9±4.7, 3°.30S×100°.42E, h0km, mb3.5/3, mb1 3.6/3, mb1mx3.3/19, mbtmp3.5/3, Error ellipse: s-maj=199.3km s-min=28.4km az=57.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
ASAR	Alice Springs	38.16	125	P	P	18 51 29.2	0.0
	0.3nm,0.4s,baz=299,slow=7.9,SNR=13						
SONM	Songino Array	51.19	5	P	P	18 53 13.4	+0.5
	0.5nm,0.4s,baz=185,slow=6.8,SNR=3.5						
MKAR	Makanchi Array	52.38	344	P	P	18 53 21.5	-0.3
	0.1nm,0.3s,baz=161,slow=8.3,SNR=5.2						

NIED 19 18:58:00, 39°.10N×140°.80E, h17km, Mw3.4 Best double couple: M0 1.64000×10^14 NP1: φs32.00000°, δ77.00000°, λ81.00000°. NP2: φs245.00000°, δ16.00000°, λ123.00000°.
ISCJB 19 18:58:59.5±0.6, 39°.10N±0°.03×140°.85E±0°.04, h13km±4km, mb3.6/5, Error ellipse: s-maj=5.5km s-min=5.0km az=139.1
JMA 19 18:58:59.8, 39°.10N×140°.84E, h12km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φs228.00000°, δ9.00000°, λ126.00000°. NP2: φs12.00000°, δ82.00000°, λ85.00000°. Principal axes: T Plg52.0000°, Azm276.0000°; N Plg5.0000°, Azm13.0000°; P Plg37.0000°, Azm107.0000°;
JMA Felt II J1.
IDC 19 18:59:04.8±5.8, 39°.24N×140°.56E, h33km±47km, mb3.4/5, mb1 3.4/7, mb1mx3.3/24, mbtmp3.3/7, ML3.1/2 Error ellipse: s-maj=34.6km s-min=19.8km az=104.0
ISC 19 18:59:00.2±0.6, 39°.09N±0°.03×140°.87E±0°.04, h4km±5km, n15, σ1§08/24, mb3.6/5, 2C-4D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
JMK	Ichinoseki	0.31	116	⇑P	Pg	18 59 06.1	0.0
JMK				S	Sg	18 59 10.7	+0.5
JRG	Rokugo	0.35	330	⇓P	Pg	18 59 06.6	-0.4
JRG				S	Sg	18 59 12.0	+0.3
JYK	Kaneyama	0.43	247	⇓P	Pg	18 59 08.1	-0.3
JYK				S	Sg	18 59 13.6	-0.4
JOM	Ohasama	0.51	41	⇑P	Pg	18 59 09.6	-0.3
JIO	Ouri	0.74	149	⇓P	Pg	18 59 14.0	-0.3
JIO				S	Sg	18 59 23.9	0.0
JOU	Okura	0.74	192	⇓P	Pg	18 59 14.1	-0.3
JOU				S	Sg	18 59 24.3	+0.3
MJAR	Matsushiro Arr	3.30	220	Pn	Pn	18 59 53.2	+0.6
	0.6nm,0.3s,baz=23,slow=15,SNR=17						
MJAR				Sn	Sn	19 00 30.8	-1.4
	1.1nm,0.3s,baz=171,slow=16,SNR=4.8						
MAT	Matsushiro	3.30	220	P	Pn	18 59 53.1	+0.6
MAT				S	Sn	19 00 31.7	-0.5
ASAJ	Asahikawa	5.19	14	Pn	Pn	19 00 20.2	+1.8
	1.0nm,0.3s,baz=184,slow=18,SNR=10.0						
ASAJ				Sn	Sn	19 01 25.9	+7.3
	baz=133,slow=33,SNR=2.5						
KSRS	Korea Array	10.31	265	Pn	Pn	19 01 30.9	+2.2
	0.5nm,0.3s,baz=74,slow=14,SNR=16						
KSRS				Sn	Sn	19 03 26.7	+2.1
	0.3nm,0.3s,baz=73,slow=23,SNR=6.5						
ZALV	Zalesovo Beam	40.23	311	P	P	19 06 35.5	-2.1
	0.4nm,0.4s,mb3.5,baz=79,slow=7.8,SNR=3.1						
MKAR	Makanchi Array	42.69	300	P	P	19 06 55.6	-2.2
	0.6nm,0.7s,mb3.5,baz=89,slow=9.8,SNR=7.1						
ILAR	Eielson Array	48.01	33	P	P	19 07 38.8	-1.0
	0.3nm,0.7s,mb3.4,baz=277,slow=7.4,SNR=3.7						
ASAR	Alice Springs	62.77	187	P	P	19 09 28.0	+1.6
	0.8nm,1.1s,mb3.7,baz=359,slow=7.4,SNR=3.3						
FINES	FINESS Array B	66.80	332	P	P	19 09 51.9	-0.6
	0.9nm,0.8s,mb3.9,baz=27,slow=8.8,SNR=4.1						

NEIC 19 19:24:03.3, 19°.20N×64°.67W, h56km, MD3.7(RSPR), After RSPR.
RSPR 19 19:24:03.3, 19°.20N×64°.67W, h56km±10km, MD3.6/13, 9C-6D, Virgin Islands

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
TBVI	Tortola	0.78	176	⇓eP	Pn	19 24 17.9	-0.4
STVI	Saint Thomas	0.89	198	⇑eP	Pn	19 24 18.8	-0.9
STVI	Saint Thomas	0.89	198	eS	Sn	19 24 30.8	-0.9
MTP	Monte Pirata	1.38	217	⇑eP	Pn	19 24 25.7	-0.6
MTP	Monte Pirata	1.38	217	eS	Sn	19 24 42.5	-1.0
MTP	Monte Pirata	1.38	217	ePn	Pn	19 24 25.4	-0.8
MTP				eSn	Sn	19 24 42.1	-1.4
CBYP	Canovanas	1.46	231	⇓eP	Pn	19 24 26.1	-1.2
CBYP	Canovanas	1.46	231	ePn	Pn	19 24 25.6	-1.6
CBYP				eSn	Sn	19 24 44.0	-1.3
HUMP	Col San Antoni	1.54	227	⇑eP	Pn	19 24 27.4	-1.0
HUMP	Col San Antoni	1.54	227	eS	Sn	19 24 46.9	-0.3
SJG	San Juan	1.77	233	⇓eP	Pn	19 24 30.5	-1.1
SJG	San Juan	1.77	233	eS	Sn	19 24 51.8	-1.2
SJG	San Juan	1.77	233	ePn	Pn	19 24 30.0	-1.6
SJG				eSn	Sn	19 24 47.5	-5.5
CELP	Cerrillos	2.13	239	⇑eP	Pn	19 24 35.7	-0.7
CELP				eS	Sn	19 25 00.9	-0.8
AOPR	Arecibo Observ	2.15	247	⇑eP	Pn	19 24 35.8	-0.9
AOPR	Arecibo Observ	2.15	247	eS	Sn	19 25 03.3	+1.1
OBIP	Obispado Ponce	2.17	238	⇑eP	Pn	19 24 36.1	-0.8
OBIP	Obispado Ponce	2.17	238	eS	Sn	19 25 01.8	-0.8
ICM	Isla Caja Muer	2.19	234	⇓eP	Pn	19 24 37.1	-0.1
ICM	Isla Caja Muer	2.19	234	eS	Sn	19 25 04.0	+0.9
ICM	Isla Caja Muer	2.19	234	ePn	Pn	19 24 36.7	-0.5
LRS	Lares	2.25	247	⇑eP	Pn	19 24 37.3	-0.8
AGPR	Aguadilla, PR	2.42	253	⇑eP	Pn	19 24 39.4	-1.0
AGPR	Aguadilla, PR	2.42	253	eS	Sn	19 25 08.9	-0.1
AGPR	Aguadilla, PR	2.42	253	ePn	Pn	19 24 39.1	-1.4
GBPR	Guanica, Bosqu	2.42	240	⇓eP	Pn	19 24 40.5	0.0
LSP	Las Mesas	2.51	246	⇓eP	Pn	19 24 40.8	-0.8
CRPR	Cabo Rojo, PR	2.60	243	⇑eP	Pn	19 24 42.1	-0.8
CRPR	Cabo Rojo, PR	2.60	243	eS	Sn	19 25 12.6	-0.7
CRPR	Cabo Rojo, PR	2.60	243	ePn	Pn	19 24 42.0	-0.9
CRPR				eSn	Sn	19 25 12.3	-1.0
SKI	Saint Kitts	2.61	135	eP	Pn	19 24 47.4	+4.4
SKI				eS	Sn	19 25 20.6	+7.0
SKI	Saint Kitts	2.61	135	eP	Pn	19 24 47.4	+4.4
SKI				eS	Sn	19 25 20.6	+7.0
LZG	Guadaloupe-1	4.11	137	eP	Pn	19 25 07.0	+3.4
SDDR	Presa de Saban	6.26	269	ePn	Pn	19 25 32.6	-0.5
	18nm,0.5s						
SDDR				eSn	Sn	19 26 42.1	-1.2
GRTK	Grand Turk	6.48	292	ePn	Pn	19 25 33.1	-3.0
GRTK				eSn	Sn	19 26 41.4	-7.3

MAN 19 19:26:13, 13°.43N×124°.84E, h89km, mb5.2, ML4.2, MS4.3, Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
PVCP	Virac	0.69	284	eP	Pn	19 26 31.2	+1.9
PVCP				eS	Sn	19 26 38.1	-3.4
CNP	Catarman	0.93	191	eP	Pn	19 26 33.4	+1.5
BALP	Baler	3.91	306	eP	Pn	19 27 12.7	+1.9
CAUP	Cauayan	4.55	321	eP	Pn	19 27 21.1	+1.5
APYP	Conner	5.61	322	eP	Pn	19 27 37.3	+3.4

NEIC 19 19:57:54.2, 29°.49S×71°.90W, h45km, MD3.9(GUC), After GUC.
GUC 19 19:57:54.2±0.5, 29°.49S×71°.90W, h45km±12km, MD3.9, ML3.5, 6D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
LCO	Las Campanas	1.15	66	⇓iP	Pn	19 58 15.2	+1.4
LCO				iS	Sn	19 58 31.1	+2.7
LCO	Las Campanas	1.15	66	⇓iP	Pn	19 58 15.2	+1.4
LCO				iS	Sn	19 58 31.1	+2.7
LCO				AML	AML	19 58 36.0	
	comp=E,1μm,0.7s						
TLL	Tololo Astrono	1.17	126	⇓iP	Pn	19 58 15.4	+1.3
TLL				iS	Sn	19 58 31.7	+2.8
TLL	Tololo Astrono	1.17	126	⇓iP	Pn	19 58 15.4	+1.3
TLL				iS	Sn	19 58 31.7	+2.8
TLL				AML	AML	19 58 34.4	
	comp=N,935nm,0.6s						
OVCH	Ovalle	1.27	152	eP	Pn	19 58 16.2	+0.7
OVCH				iS	Sn	19 58 32.7	+1.3
OVCH	Ovalle	1.27	152	eP	Pn	19 58 16.2	+0.7
OVCH				iS	Sn	19 58 32.7	+1.3
OVCH				AML	AML	19 58 40.2	
	comp=N,751nm,0.8s						
CMCH	Combarbala	1.85	155	⇓iP	Pn	19 58 24.2	+0.7
CMCH				iS	Sn	19 58 47.0	+1.4
CMCH	Combarbala	1.85	155	⇓iP	Pn	19 58 24.2	+0.7
CMCH				iS	Sn	19 58 47.0	+1.4
CMCH				AML	AML	19 58 52.5	
	comp=E,2μm,0.9s						
PEL	Peldehue	3.79	164	eP	Pn	19 58 51.1	+1.1
PEL				eS	Sn	19 59 34.4	+1.0
PEL				AML	AML	19 59 57.0	
	comp=E,138nm,1.0s						

NEIC 19 19:58:35.2, 16°.16N×96°.79W, h30km, MD3.8(MEX), After MEX.
MEX 19 19:58:35.2±0.3, 16°.16N×96°.79W, h30km±37km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
HUIG	Huatulco	0.77	121	iP	Pn	19 58 47.7	-2.2
HUIG				eS	Sb	19 58 57.2	-2.9
HUIG	Huatulco	0.77	121	iP	Pn	19 58 47.7	-2.2
HUIG				eS	Sb	19 58 57.2	-2.9
VHO	Vista Hermosa	0.91	4	iP	Pn	19 58 49.6	-2.3
VHO				eS	Sn	19 59 01.2	-2.7
VHO	Vista Hermosa	0.91	4	iP	Pn	19 58 49.6	-2.3
VHO				eS	Sn	19 59 01.2	-2.7
OXX	Oaxaca	0.92	4	iP	Pn	19 58 50.3	-1.7
OXX				eS	Sn	19 59 01.5	-2.7
OXX	Oaxaca	0.92	4	iP	Pn	19 58 50.3	-1.7
OXX				eS	Sn	19 59 01.5	-2.7
PNIG	Pinotepa	1.30	280	iP	Pn	19 58 55.3	-2.0
PNIG				eS	Sn	19 59 11.1	-2.6
PNIG	Pinotepa	1.30	280	iP	Pn	19 58 55.3	-2.0
PNIG				eS	Sn	19 59 11.1	-2.6

CSEM 19 20:02:50.7±1.0, 35°.06N×1°.65W, h5km, mb3.2/7, Error ellipse: s-maj=24.3km s-min=10.8km az=10.0
LDG 19 20:02:52.5±0.8, 34°.95N×1°.72W, h10km, Ml2.8/4, Error ellipse: s-maj=16.1km s-min=10.2km az=160.0
ISCJB 19 20:02:53.1±1.3, 35°.12N±0°.08×1°.91W±0°.06, h10km, Error ellipse: s-maj=11.4km s-min=7.3km az=11.6
NEIC 19 20:02:53.6, 35°.06N×1°.94W, h0km, MG3.2(MDD), After MDD.
MDD 19 20:02:53.3±1.8, 35°.05N×1°.90W, h0km, mb3.3/8, Error ellipse: s-maj=20.0km s-min=7.8km az=14.0
ISC 19 20:02:52.6±1.3, 35°.06N±0°.08×1°.86W±0°.06, h10km, n42, σ1§21/81, Northern Algeria

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
ODZI	Dziouia	0.56	66	P	Pg	20 03 04.0	+0.5
ODZI	Dziouia	0.56	66	P	Pg	20 03 04.0	+0.5
ODZI	Dziouia	0.56	66	P	Pg	20 03 04.0	+0.5
EBER	Berja	2.01	336	P	Pn	20 03 26.5	-0.2
EBER				S	Sn	20 03 53.6	+1.8
EBER	Berja	2.01	336	P	Pn	20 03 26.5	-0.2
	4.2nm,0.6s,SNR=5.0						
EBER				S	Sn	20 03 53.6	+1.8
	11nm,0.4s						
EBER	Berja	2.01	336	P	Pn	20 03 26.5	-0.2
	4.2nm,0.6s,SNR=5.0						
EBER				S	Sn	20 03 53.6	+1.8
	11nm,0.4s						
EBER	Berja	2.01	336	P	Pn	20 03 26.5	-0.1
	4.2nm,0.6s,SNR=5.0						
EBER				S	Sn	20 03 53.6	+1.8
	11nm,0.4s						
EGUA	Guajares	2.24	322	P	Pn	20 03 29.1	-0.7
EGUA				S	Sn	20 03 57.6	0.0
EGUA	Guajares	2.24	322	P	Pn	20 03 29.1	-0.7
	18nm,0.4s,SNR=7.9						
EGUA				S	Sn	20 03 57.6	0.0
	68nm,0.8s,SNR=7.9						
EGUA	Guajares	2.24	322	P	Pn	20 03 29.1	-0.7
	18nm,0.4s,SNR=7.9						
EGUA				S	Sn	20 03 57.6	0.0
	68nm,0.8s,SNR=7.9						
EGUA	Guajares	2.24	322	P	Pn	20 03 29.1	-0.7
	18nm,0.4s,SNR=7.9						
EGUA				S	Sn	20 03 57.6	0.0
	68nm,0.8s,SNR=7.9						
EQUE	Quentar	2.49	330	P	Pn	20 03 33.3	+0.1
	1.7nm,0.3s,SNR=9.4						
EQUE				S	Sn	20 04 03.9	+0.3
	1.3nm,0.4s,SNR=7.9						
EQUE	Quentar	2.49	330	P	Pn	20 03 33.3	+0.1
	1.7nm,0.3s,SNR=9.4						
EQUE				S	Sn	20 04 03.9	+0.3
	1.3nm,0.4s,SNR=7.9						
EQUE	Quentar	2.49	330	P	Pn	20 03 33.3	+0.1
	1.7nm,0.3s,SNR=9.4						
EQUE				S	Sn	20 04 03.9	+0.3
	1.3nm,0.4s,SNR=7.9						
EMIJ	Mijas	2.80	303	P	Pn	20 03 39.0	+1.5
EMIJ				S	Sn	20 04 10.3	-1.0
EMIJ	Mijas	2.80	303	P	Pn	20 03 39.0	+1.5
	1.9nm,0.6s,SNR=4.0						
EMIJ				S	Sn	20 04 10.3	-1.0
	3.6nm,0.5s,SNR=7.9						
EMIJ	Mijas	2.80	303	P	Pn	20 03 39.0	+1.5
	1.9nm,0.6s,SNR=4.0						
EMIJ				S	Sn	20 04 10.3	-1.0
	3.6nm,0.5s,SNR=7.9						
EMIJ	Mijas	2.80	303	P	Pn	20 03 39.0	+1.5
	1.9nm,0.6s,SNR=7.9						
EMIJ				S	Sn	20 04 10.3	-1.0
	3.6nm,0.5s,SNR=7.9						
EMUR	La Murta	2.82	10	P	Pn	20 03 38.8	+1.1
EMUR				S	Sn	20 04 12.7	+1.0
EMUR	La Murta	2.82	10	P	Pn	20 03 38.8	+1.1
	1.9nm,0.3s,SNR=5.2						
EMUR				S	Sn	20 04 12.7	+1.0
	3.0nm,0.7s,SNR=7.9						
EMUR	La Murta	2.82	10	P	Pn	20 03 38.8	+1.1
	1.9nm,0.3s,SNR=5.2						
EMUR				S	Sn	20 04 12.7	+1.0
	3.0nm,0.7s,SNR=7.9						
EMUR	La Murta	2.82	10	P	Pn	20 03 38.8	+1.1
	1.9nm,0.3s,SNR=5.2						
EMUR				S	Sn	20 04 12.7	+1.0
	3.0nm,0.7s,SNR=7.9						
EQES	Quesada	2.90	341	P	Pn	20 03 40.5	+1.7
EQES				S	Sn	20 04 12.1	-1.7
EQES	Quesada	2.90	341	P	Pn	20 03 40.5	+1.7
	1.7nm,0.5s,SNR=7.9						
EQES				S	Sn	20 04 12.1	-1.7
	1.6nm,0.5s,SNR=4.0						
EQES	Quesada	2.90	341	P	Pn	20 03 40.5	+1.7
	1.7nm,0.5s,SNR=7.9						
EQES				S	Sn	20 04 12.1	-1.7
	1.6nm,0.5s,SNR=4.0						
EQES	Quesada	2.90	341	P	Pn	20 03 40.5	+1.6
	1.7nm,0.5s,SNR=7.9						
EQES				S	Sn	20 04 12.1	-1.7
	1.6nm,0.5s,SNR=7.9						
ETOB	Tobarra	3.58	4	P	Pn	20 03 50.3	+2.1
ETOB				S	Sn	20 04 30.7	+0.2
ETOB	Tobarra	3.58	4	P	Pn	20 03 50.3	+2.1
	2.4nm,0.4s,SNR=8.0						
ETOB				S	Sn	20 04 30.7	+0.2
	3.0nm,0.6s,SNR=7.9						
ETOB	Tobarra	3.58	4	P	Pn	20 03 50.3	+2.1
	2.4nm,0.4s,SNR=8.0						
ETOB				S	Sn	20 04 30.7	+0.2
	3.0nm,0.6s,SNR=7.9						
ETOB	Tobarra	3.58	4	P	Pn	20 03 50.3	+2.1
	2.4nm,0.4s,SNR=8.0						
ETOB				S	Sn	20 04 30.7	+0.1
	3.0nm,0.6s,SNR=7.9						
EADA	Adamuz	3.79	326	P	Pn	20 03 50.5	-0.6
EADA				S	Sn	20 04 35.2	-0.5
EADA	Adamuz	3.79	326	P	Pn	20 03 52.7	+1.6
	1.5nm,0.6s,SNR=7.9						
EADA				S	Sn	20 04 35.2	-0.5
	1.0nm,0.6s,SNR=7.9						
EADA	Adamuz	3.79	326	P	Pn	20 03 52.7	+1.6
	1.5nm,0.6s,SNR=7.9						
EADA				S	Sn	20 04 35.2	-0.5
	1.0nm,0.6s,SNR=7.9						
EADA	Adamuz	3.79	326	P	Pn	20 03 50.5	-0.6
	1.5nm,0.6s,SNR=7.9						
EADA				S	Sn	20 04 35.2	-0.5
	1.0nm,0.6s,SNR=7.9						
ETSF	Etsaut	7.89	7	ePn	Pn	20 04 46.0	-1.3
ETSF				eSn	Sn	20 06 10.4	-6.2
	0.5nm,0.3s						
ETSF	Etsaut	7.89	7	ePn	Pn	20 04 46.0	-1.3
ETSF				eSn	Sn	20 06 10.4	-6.2
	0.2nm,0.3s						
SJPF	Ste Jean	8.05	3	ePn	Pn	20 04 48.1	-1.5
SJPF				eSn	Sn	20 06 14.3	-6.4
	0.8nm,0.3s						
SJPF	Ste Jean	8.05	3	ePn	Pn	20 04 48.1	-1.5
SJPF				eSn	Sn	20 06 14.3	-6.4
	0.4nm,0.3s						
EPF	Esparros	8.14	11	ePn	Pn	20 04 49.1	-1.6
EPF				eSn	Sn	20 06 16.2	-6.5
	1.0nm,0.4s						
EPF	Esparros	8.14	11	ePn	Pn	20 04 49.1	-1.6
EPF				eSn	Sn	20 06 16.2	-6.5
	0.5nm,0.4s						
MTLF	Montolieu	8.85	20	ePn	Pn	20 04 58.3	-2.2
MTLF				eSn	Sn	20 06 32.8	-7.4
	0.9nm,0.5s						
MTLF	Montolieu	8.85	20	ePn	Pn	20 04 58.3	-2.2
MTLF				eSn	Sn	20 06 32.8	-7.4
	0.4nm,0.5s						

GUC 19 20:04:22.1±0.6, 22°.26S×66°.68W, h280km, ML3.8, 1C-2D, Jujuy Province

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
PB04	Plate Boundary	2.60	269	⇓iP	Pn	20 05 21.7	+9.2
PB04				iS	S	20 06 06.8	+14
PB04				AML	AML	20 06 12.8	
	comp=E,32nm,0.3s						
PB01	Plate Boundary	2.88	294	eP	Pn	20 05 18.0	+2.7
PB01				eS	S	20 06 00.5	+2.9
PB01				AML	AML	20 06 02.4	
	comp=N,46nm,0.6s						
HMBC	Humberston	3.59	303	⇑iP	Pn	20 05 25.4	+2.6
HMBC				iS	S	20 06 14.0	+2.9
HMBC				AML	AML	20 06 15.6	
	comp=E,52nm,0.4s						
MNMC	Miæe Miæ	4.14	318	⇓iP	Pn	20 05 32.6	+3.6
MNMC				eS	S	20 06 26.6	+4.2
MNMC				AML	AML	20 06 28.3	
	comp=N,46nm,0.3s						
PSGC	Pisagua	4.17	309	eP	Pn	20 05 31.6	+2.3
PSGC				eS	S	20 06 25.1	+2.1
PSGC				AML	AML	20 06 28.5	
	comp=N,14nm,0.5s						

IDC 19 20:09:41.1±3.9, 22°.82S×175°.22W, h0km, mb4.1/6, mb1 4.2/6, mb1mx3.9/19, mbtmp4.1/6, Error ellipse: s-maj=151.9km s-min=34.3km az=145.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
CTA	Charters Tower	35.90	267	P	P	20 16 44.5	+1.4
	2.6nm,0.3s,baz=88,slow=11,SNR=15						
STKA	Stephens Creek	39.20	247	P	P	20 17 10.1	-1.0
	3.7nm,0.8s,baz=94,slow=11,SNR=5.6						
ASAR	Alice Springs	46.55	258	P	P	20 18 10.0	-0.8
	0.4nm,0.3s,baz=90,slow=6.6,SNR=23						
WRA	Warramunga Arr	46.88	264	P	P	20 18 12.9	-0.5
	1.3nm,0.4s,baz=97,slow=8.4,SNR=35						
FITZ	Fitzroy Crossi	55.31	263	P	P	20 19 17.8	+0.9
	1.1nm,0.5s,baz=117,slow=14,SNR=1.4						
ILAR	Eielson Array	90.02	12	P	P	20 22 42.0	+0.1
	0.4nm,0.8s,baz=218,slow=5.3,SNR=3.9						

MEX 19 20:15:10.8±1.0, 14°.60N×93°.64W, h16km±21km, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
PCIG		1.17	20	eP	Pn	20 15 27.9	-4.7
PCIG				iS	Sb	20 15 42.0	-5.7
THIG		1.36	77	iP	Pn	20 15 31.5	-3.6
THIG				eS	Sn	20 15 47.4	-5.5
TGIG		2.22	13	iP	Pn	20 15 44.5	-2.6
TGIG				iS	Sn	20 16 09.6	-4.7
SCX	San Cristobal	2.33	24	iP	Pn	20 15 46.5	-2.1
SCX				iS	Sn	20 16 13.7	-3.2
HUIG	Huatulco	2.66	296	iP	Pn	20 15 49.5	-3.5
HUIG				eS	Sn	20 16 20.5	-4.3

IDC 19 20:43:52.2±0.8, 11°.17S×164°.53E, h0km, mb4.1/13, mb1 4.3/15, mb1mx4.3/19, mbtmp4.2/15, ML4.7/2, MS3.5/10, Ms1 3.5/10, ms1mx3.2/25, Error ellipse: s-maj=27.0km s-min=17.7km az=133.0
NEIC 19 20:43:53.4±0.5, 11°.19S×164°.56E, h10km, mb4.5/10, Error ellipse: s-maj=16.0km s-min=10.3km az=138.0
ISCJB 19 20:43:58.5±3.3, 11°.14S±0°.08×164°.3E±0°.1, h56km±26km, mb4.3/20, MS3.5/9, Error ellipse: s-maj=23.1km s-min=12.6km az=11.1
ISC 19 20:43:59.4±3.0, 11°.18S±0°.08×164°.4E±0°.1, h50km±24km, n41, σ0§86/33, mb4.3/20, MS3.5/9, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
HNR	Honiara	4.69	291	Pn	Pn	20 45 07.6	-0.1
	135nm,0.3s,baz=146,slow=6.8,SNR=19						
HNR				Sn	Sn	20 46 02.2	+1.3
	37nm,0.3s,baz=61,slow=23,SNR=7.7						
HNR	Honiara	4.69	291	Pn	Pn	20 45 07.6	-0.1
HNR				eSn	Sn	20 45 57.8	-3.1
CTA	Charters Tower	19.56	241	eP	Pn	20 48 24.2	-0.7
	5.8nm,0.9s						
CTA	Charters Tower	19.56	241	P	Pn	20 48 25.1	+0.2
	0.5nm,0.3s,baz=60,slow=11,SNR=10						
CTA				LR	LR	20 53 19.3	
	comp=Z,50nm,19.6s,baz=57,slow=29						
CTAO	Charters Tower	19.56	241	eP	Pn	20 48 23.6	-1.2
	8.8nm,0.9s						
COEN	Coen	20.88	260	eP	P	20 48 39.0	+1.4
COEN	Coen	20.88	260	eP	P	20 48 39.0	+1.4
	148nm,1.3s						
RMQ	Roma	21.19	222	eP	P	20 48 41.6	+0.8
	40nm,1.6s,mb4.5						
ARMA	Armidale	22.52	210	eP	P	20 48 55.0	+0.1

AFI Afiamalu 23.43 99 LR LR 20 55 30.3
comp=Z,103nm,21.3s,MS3.3,baz=193,slow=30
STKA Stephens Creek 29.44 222 P **P 20 49 59.6 +1.2**
3.1nm,0.8s,mb4.1,baz=350,slow=22,SNR=4.1
STKA LR LR 21 01 59.6
comp=Z,110nm,18.4s,MS3.5,baz=206,slow=37
STKA Stephens Creek 29.44 222 *eP* **P 20 49 59.3 +0.9**
2.1nm,1.2s,mb3.7
STKA LR LR 21 01 59.6
WRAB Tennant Creek 30.17 250 *eP* **P 20 50 04.5 -0.6**
3.7nm,0.6s,mb4.3
WRA Warramunga Arr 30.18 250 P **P 20 50 04.8 -0.3**
3.2nm,0.4s,mb4.4,baz=79,slow=9.0,SNR=32
KAKA Kakadu 31.28 264 *eP* **P 20 50 13.1 -1.8**
15nm,0.4s,mb5.2
GUMO Guam 31.30 321 LR LR 21 02 48.3
comp=Z,69nm,18.4s,MS3.4,baz=103,slow=36
ASAR Alice Springs 31.54 243 P **P 20 50 16.2 -0.9**
3.7nm,0.7s,mb4.3,baz=65,slow=9.7,SNR=12
FITZ Fitzroy Crossi 38.05 255 *eP* **P 20 51 13.0 -0.4**
17nm,0.5s,mb5.0
FITZ Fitzroy Crossi 38.05 255 *eP* **P 20 51 12.9 -0.4**
6.9nm,0.5s,mb4.6
DAV Davao City (W) 42.65 293 LR LR 21 07 28.1
comp=Z,69nm,18.2s,MS3.6,baz=172,slow=33
CBIJ Chichi jima 43.72 331 LR LR 21 07 25.5
comp=Z,73nm,18.7s,MS3.6,baz=102,slow=32
MJAR Matsushiro Arr 53.48 334 P **P 20 53 14.2 -0.5**
0.6nm,0.7s,mb3.7,baz=168,slow=8.6,SNR=5.4
MAJO Matsushiro 53.48 334 P **P 20 53 14.4 -0.3**
4.2nm,1.0s,mb4.3
KSRS Korea Array 59.24 327 P **P 20 53 56.2 +0.5**
1.4nm,0.9s,mb4.0,baz=144,slow=5.4,SNR=3.6
KSRS LR LR 21 16 15.5
comp=Z,27nm,18.1s,MS3.4,baz=115,slow=33
PETK Petropavlovsk- 64.28 356 P **P 20 54 29.9 +0.6**
3.7nm,0.8s,mb4.5,baz=134,slow=6.2,SNR=4.5
PETK LR LR 21 17 00.9
comp=Z,27nm,20.3s,MS3.4,baz=327,slow=31
CMAR Chiang Mai Arr 70.94 294 LR LR 21 26 40.4
comp=Z,23nm,20.7s,MS3.4,baz=30,slow=36
ULN Ulaanbaatar 77.62 325 *eP* **P 20 55 50.4 0.0**
3.8nm,0.9s,mb4.3
SONM Songino Array 77.98 324 P **P 20 55 53.8 +1.5**
0.7nm,0.7s,mb3.7,baz=151,slow=5.3,SNR=4.3
SONM LR LR 21 27 18.1
comp=Z,41nm,18.7s,MS3.8,baz=250,slow=33
QSPA South Pole Qui 78.83 180 *eP* **P 20 55 56.3 -0.2**
12nm,1.2s,mb4.7
ILAR Eielson Array 84.06 19 P **P 20 56 23.6 -0.8**
0.8nm,0.7s,mb4.0,baz=215,slow=6.0,SNR=11
ILAR pP pP 20 56 35.5 -3.3
1.5nm,0.8s,baz=232,slow=5.5,SNR=7.9
MAW Mawson 84.10 202 P **P 20 56 25.3 +0.7**
3.7nm,1.1s,mb4.4,baz=72,slow=10,SNR=4.3
MAW Mawson 84.10 202 *eP* **P 20 56 24.4 -0.2**
1.4nm,1.1s,mb4.0
NVAR Mina Array Bea 87.13 50 P **P 20 56 41.0 +0.8**
1.2nm,0.9s,mb4.1,baz=230,slow=8.7,SNR=5.2
MKAR Makanchi Array 92.70 317 P **P 20 57 06.7 +0.6**
0.3nm,0.3s,mb4.2,baz=101,slow=6.1,SNR=7.3
ZALV Zalesovo Beam 92.88 324 P **P 20 57 06.8 +0.1**
0.3nm,0.3s,mb4.2,baz=122,slow=5.2,SNR=3.6
PDAR Pinedale Array 94.63 47 P **P 20 57 13.5 -1.5**
0.5nm,1.0s,mb3.9,baz=282,slow=4.5,SNR=4.0
ARCES ARCESS Array B 116.12 345 PKP PKPdf 21 02 36.7 +0.2
1.2nm,0.9s,baz=54,slow=2.1,SNR=4.9
ARCES ARCESS Array B 116.12 345 PKP PKPdf 21 02 36.7 +0.2
BOSA Boshof 124.10 224 PKP PKPdf 21 02 53.8 +0.8
1.4nm,0.8s,baz=141,slow=4.1,SNR=3.8
BRTR Keskin Array B 128.06 312 PKP PKPdf 21 03 01.5 +1.3
0.6nm,0.9s,baz=26,slow=4.3,SNR=4.0
ESDC Sonseca Array 149.79 342 PKP PKPdf 21 03 37.6 -1.9
0.1nm,0.4s,baz=30,slow=1.9,SNR=1.6
ESDC PKPbc PKPbc 21 03 45.1 +0.9
0.3nm,0.7s,baz=51,slow=2.0,SNR=4.4

*ISCJB **19** 20:45:00.5±0.7, 21°.16S±0°.05×68°.5W±0°.1, h132km±16km, Error ellipse: s-maj=22.0km s-min=7.5km az=10.3*
*IDC **19** 20:45:02.2±2.4, 21°.43S×68°.09W, h100km±23km, mb4.2/1, mb1 3.6/5, mb1mx3.4/16, mbtmp3.5/5, Error ellipse: s-maj=54.6km s-min=20.6km az=98.0*
*GUC **19** 20:45:03.0±0.8, 21°.11S×68°.82W, h135km±7km, ML4.1*
ISC 19 20:45:01.5±0.7, 21°.16S±0°.05×68°.5W±0°.1, h125km±16km, n15, σ1§06/20, 5C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**0.90**	**277**	↑*iP*	**Pn**	**20 45 23.7**	**+0.6**
PB01				*i* S	**Sn**	**20 45 39.4**	**0.0**
PB01				AML	AML	20 45 41.4	
	comp=E,3μm,0.2s						
PB04	**Plate Boundary**	**1.42**	**219**	↑*iP*	**Pn**	**20 45 34.7**	**+6.4**
PB04				*i* S	**Sn**	**20 45 58.2**	**+9.4**
PB04				AML	AML	20 46 01.8	
	comp=N,1μm,0.3s						
MACH	**Maria Elena**	**1.54**	**228**	↓↓*iP*	**Pn**	**20 45 30.9**	**+1.2**
HMBC	**Humberston**	**1.54**	**304**	↑↑*iP*	**Pn**	**20 45 30.2**	**+0.4**
HMBC				*i* S	**Sn**	**20 45 50.7**	**-0.6**
HMBC				AML	AML	20 45 51.7	
	comp=N,5μm,0.7s						
TOCH	**Tocopilla**	**1.81**	**239**	*eP*	**Pn**	**20 45 33.6**	**+0.7**
TOCH				*i* S	**Sn**	**20 45 56.2**	**-0.7**
TOCH				AML	AML	20 45 59.2	
	comp=N,2μm,0.4s						
PSGC	**Pisagua**	**2.16**	**316**	↑*iP*	**Pn**	**20 45 36.9**	**-0.3**
PSGC				*i* S	**Sn**	**20 46 02.9**	**-1.6**
PSGC				AML	AML	20 46 06.2	
	comp=N,983nm,0.3s						
MNMC	**Miæe Miæ**	**2.25**	**333**	↑*iP*	**Pn**	**20 45 39.6**	**+1.2**
MNMC				*i* S	**Sn**	**20 46 07.5**	**+0.8**
MNMC				AML	AML	20 46 10.0	
	comp=N,3μm,1.0s						
LPAZ	**La Paz**	**4.86**	**5**	P	**Pn**	**20 46 15.6**	**+2.8**
	comp=N,5.2nm,0.3s,baz=200,slow=6.1,SNR=133						
LPAZ				S	**Sn**	**20 47 07.2**	**-0.9**
	baz=195,slow=12,SNR=1.0						
SIV	**San Ignacio**	**8.74**	**55**	P	**Pn**	**20 47 04.2**	**-0.9**
	comp=N,2.4nm,0.3s,baz=253,slow=11,SNR=29						
CFAA	**Coronel Fontan**	**10.41**	**179**	P	**Pn**	**20 47 25.4**	**-1.9**
	comp=N,0.3nm,0.3s,baz=3.5,slow=12,SNR=19						
CFAA				S	**Sn**	**20 49 13.4**	**-8.7**
	comp=N,0.0nm,0.3s,baz=237,slow=17,SNR=1.2						
PLCA	**Paso Flores**	**19.59**	**185**	P	**P**	**20 49 20.4**	**+0.6**
	comp=N,0.1nm,0.3s,baz=15,slow=16,SNR=1.9						
ULM	**Lac du Bonnet**	**75.10**	**342**	P	**P**	**20 56 37.1**	**+7.6**
	comp=N,1.5nm,0.3s,baz=154,slow=3.7,SNR=3.0						
ASAR	**Alice Springs**	**130.38**	**207**	PKP	PKPdf	21 04 00.1	+2.2
	comp=N,0.2nm,0.5s,baz=132,slow=2.6,SNR=3.1						
WRA	**Warramunga Arr**	**133.43**	**210**	PKP	PKPdf	21 04 05.9	+2.2
	comp=N,0.3nm,0.6s,baz=154,slow=1.8,SNR=6.6						
MKAR	**Makanchi Array**	**145.15**	**36**	PKPbc	PKPbc	21 04 26.6	+2.6
	comp=N,0.6nm,0.4s,baz=324,slow=3.5,SNR=12						

*ISCJB **19** 20:55:27.0±1.5, 25°.70S±0°.07×70°.4W±0°.2, h51km±16km, mb4.2/4, Error ellipse: s-maj=30.5km s-min=11.5km az=179.9*
*NEIC **19** 20:55:29.1±1.2, 25°.78S×70°.26W, h52km±11km, Error ellipse: s-maj=25.5km s-min=10.0km az=95.0*
*IDC **19** 20:55:30.2±0.8, 25°.85S×70°.31W, h62km±6km, mb3.9/4, mb1 3.9/6, mb1mx3.7/14, mbtmp3.8/6, Error ellipse: s-maj=38.6km s-min=21.0km az=81.0*
ISC 19 20:55:29.5±1.3, 25°.79S±0°.07×70°.3W±0°.2, h55km±13km, n15, σ1§08/11, mb4.2/4, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**3.24**	**187**	*eP*	**Pn**	**20 56 16.5**	**-1.3**
CFAA	**Coronel Fontan**	**6.06**	**164**	P	**Pn**	**20 56 57.1**	**+0.6**
	0.3nm,0.3s,baz=352,slow=14,SNR=13						
CFAA				S	**Sn**	**20 58 10.4**	**+6.0**
	0.9nm,0.3s,baz=355,slow=23,SNR=7.5						
LPAZ	**La Paz**	**9.65**	**12**	P	**Pn**	**20 57 47.5**	**+1.7**
	0.7nm,0.3s,baz=204,slow=5.8,SNR=18						
LPAZ	**La Paz**	**9.65**	**12**	P	**Pn**	**20 57 47.5**	**+1.7**
SIV	**San Ignacio**	**12.97**	**43**	P	**Pn**	**20 58 29.0**	**-2.1**
	0.6nm,0.3s,baz=270,slow=7.2,SNR=7.8						
TRQA	**Tornquist**	**14.10**	**152**	Pn	**Pn**	**20 58 47.5**	**+1.2**
TXAR	**Lajitas Array**	**63.50**	**327**	P	**P**	**21 05 53.9**	**-0.1**
	0.3nm,0.6s,mb3.6,baz=152,slow=5.7,SNR=4.0						
DBIC	**Dimbokro**	**71.15**	**73**	P	**P**	**21 06 43.0**	**+0.2**
	3.6nm,0.5s,mb4.5,baz=213,slow=5.7,SNR=9.9						
MAW	**Mawson**	**80.59**	**164**	P	**P**	**21 07 35.7**	**-0.1**
	1.9nm,0.6s,mb4.2,baz=196,slow=4.8,SNR=7.5						
MAW				pP	pP	21 07 51.9	+0.7
	0.7nm,0.4s,baz=245,slow=14,SNR=1.7						
BOSA	**Boshof**	**82.52**	**118**	P	**P**	**21 07 46.4**	**-0.4**
	3.3nm,1.1s,mb4.3,baz=243,slow=6.8,SNR=5.6						
ASAR	**Alice Springs**	**125.56**	**207**	PKP	PKPdf	21 14 24.6	-0.7
	0.3nm,0.7s,baz=146,slow=1.8,SNR=3.9						
ASAR				pPKP	pPKPdf	21 14 41.9	+0.3
	0.3nm,0.5s,baz=130,slow=1.7,SNR=1.8						
BVAR	**Borovoye Array**	**139.98**	**37**	PKP	PKPdf	21 14 52.8	+1.5
	0.6nm,0.7s,baz=283,slow=3.5,SNR=2.6						
ZALV	**Zalesovo Beam**	**146.32**	**27**	PKPbc	PKPbc	21 15 03.1	-0.6
	7.0nm,0.8s,baz=307,slow=3.8,SNR=26						
ZALV				pPKPbc	pPKPbc	21 15 21.4	+1.5
	3.2nm,0.8s,baz=317,slow=3.6,SNR=4.9						
ZALV				sPKPbc		21 15 28.1	
	1.3nm,0.5s,baz=306,slow=3.4,SNR=3.2						
MKAR	**Makanchi Array**	**149.77**	**39**	PKPbc	PKPbc	21 15 13.3	+0.2
	2.8nm,0.7s,baz=314,slow=2.5,SNR=24						
MKAR				pPKPbc	pPKPbc	21 15 31.1	+1.7
	1.5nm,0.6s,baz=343,slow=2.5,SNR=3.9						
MKAR				sPKPbc		21 15 37.5	
	0.9nm,0.6s,baz=286,slow=2.1,SNR=2.1						
MKAR	**Makanchi Array**	**149.77**	**39**	PKPbc	PKPbc	21 15 13.3	+0.2
MKAR				pPKPbc	pPKPbc	21 15 31.1	+1.7
MKAR				sPKPbc		21 15 37.5	

*IDC **19** 21:00:26.8±2.8, 15°.34N×122°.80E, h0km, mb3.5/3, mb1 3.9/4, mb1mx3.4/23, mbtmp3.7/4, Error ellipse: s-maj=51.7km s-min=26.4km az=17.0*
*MAN **19** 21:00:29, 15°.34N×122°.40E, h5km*
*ISCJB **19** 21:00:31.2±0.8, 15°.42N±0°.05×122°.69E±0°.09, h48km±12km, mb3.5/3, Error ellipse: s-maj=13.9km s-min=7.6km az=175.3*
ISC 19 21:00:32.1±0.9, 15°.41N±0°.05×122°.70E±0°.09, h42km±14km, n15, σ1§01/17, mb3.5/3, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**1.00**	**227**	*eP*	**Pn**	**21 00 44.3**	**-5.3**
BALP	**Baler**	**1.13**	**287**	*eP*	**Pn**	**21 00 46.5**	**-4.9**
GQP	**Guinayangan**	**1.52**	**189**	↑*iP*	**Pn**	**21 00 55.6**	**-1.2**
GQP				*i* S	**Sn**	**21 01 15.0**	**-0.3**
PALP	**Palanan**	**1.66**	**351**	*eP*	**Pn**	**21 00 58.5**	**-0.3**
CAUP	**Cauayan**	**1.74**	**331**	*eP*	**Pn**	**21 00 59.0**	**-0.8**
BOAC	**Boac**	**2.11**	**203**	*eP*	**Pn**	**21 01 04.8**	**-0.1**
TGY	**Tagaytay City**	**2.15**	**233**	Pn	**Pn**	**21 01 05.1**	**-0.3**
	109nm,0.3s,baz=9.4,slow=1.6,SNR=10						
TGY				Sn	**Sn**	**21 01 32.4**	**+1.6**
	195nm,0.3s,baz=112,slow=22,SNR=8.5						
PVCP	**Virac**	**2.29**	**142**	*eP*	**Pn**	**21 01 09.9**	**+2.5**
APYP	**Conner**	**2.81**	**330**	*eP*	**Pn**	**21 01 15.8**	**+1.3**
BOLP	**Bolinao**	**2.85**	**290**	*eP*	**Pn**	**21 01 13.5**	**-1.5**
LUBP	**Lubang**	**2.90**	**235**	*eP*	**Pn**	**21 01 15.1**	**-0.6**
ABRA	**Dolores**	**2.93**	**320**	*eP*	**Pn**	**21 01 16.7**	**+0.5**
CMAR	**Chiang Mai Arr**	**22.92**	**281**	P	**P**	**21 05 33.5**	**+0.8**
	0.3nm,0.5s,mb3.0,baz=102,slow=8.7,SNR=4.0						
WRA	**Warramunga Arr**	**36.95**	**162**	P	**P**	**21 07 36.4**	**-0.9**
	1.1nm,0.5s,mb3.9,baz=343,slow=9.3						
ASAR	**Alice Springs**	**40.35**	**164**	P	**P**	**21 08 06.0**	**+0.2**
	0.3nm,0.3s,mb3.5,baz=340,slow=7.3,SNR=8.4						

GUC 19 21:28:38.5±0.8, 23°.78S×67°.30W, h220km, ML3.9, 4C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**2.69**	**278**	*eP*	Pn	21 29 30.0	+4.3
CEN1				*i* S	S	21 30 08.0	+5.3
ANCH	**Antofagasta**	**2.85**	**271**	↑*iP*	Pn	21 29 29.0	+1.5
ANCH				*i* S	S	21 30 07.8	+1.9
PB01	**Plate Boundary**	**3.39**	**323**	↑*iP*	Pn	21 29 35.7	+1.9
PB01				*i* S	S	21 30 19.8	+2.6
PB01				AML	AML	21 30 22.4	
	comp=E,90nm,0.2s						
HMBC	**Humberston**	**4.23**	**325**	↑*iP*	Pn	21 29 44.7	+0.8
HMBC				*i* S	S	21 30 36.8	+1.3
MNMC	**Miæe Miæ**	**5.09**	**335**	↑*iP*	Pn	21 29 56.1	+1.5
MNMC				*i* S	S	21 30 56.2	+1.3

*NIED **19** 21:36:00, 38°.60N×144°.30E, h5km, Mw3.4 Best double couple: M0=1.66000×10^14 NP1:φ=209.00000°, δ53.00000°, λ-67.00000°. NP2:φ=354.00000°, δ43.00000°, λ-117.00000°.*
*IDC **19** 21:36:23.5±1.8, 38°.50N×144°.62E, h0km, mb3.8/3, mb1 3.9/6, mb1mx3.5/26, mbtmp3.9/6, ML3.6/3, Error ellipse: s-maj=40.9km s-min=24.4km az=94.0*
*ISCJB **19** 21:36:26.7±0.8, 38°.71N±0°.04×144°.41E±0°.06, h33km, mb3.9/3, Error ellipse: s-maj=7.6km s-min=4.4km az=33.2*
*JMA **19** 21:36:28.0±0.2, 38°.62N×144°.27E, h33km, M3.6*
*NEIC **19** 21:36:28.7±1.6, 38°.58N×144°.48E, h35km, MG3.6(JMA), Error ellipse: s-maj=29.4km s-min=15.7km az=111.0*
ISC 19 21:36:28.6±0.8, 38°.71N±0°.04×144°.41E±0°.06, h35km, n28, σ1§02/42, mb3.9/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.17**	**281**	P	**Pn**	**21 37 02.1**	**-0.1**
MIYJ	**Miyakonagasawa**	**2.19**	**294**	P	**Pn**	**21 37 02.4**	**-0.1**
MIYJ				*eS*	**Sn**	**21 37 27.7**	**-0.7**
JMK	**Ichinoseki**	**2.50**	**277**	P	**Pn**	**21 37 06.9**	**+0.2**
JOM	**Ohasama**	**2.54**	**288**	P	**Pn**	**21 37 07.7**	**+0.4**
JOM				*eS*	**Sn**	**21 37 36.8**	**-0.2**
JOU	**Okura**	**2.96**	**264**	P	**Pn**	**21 37 13.0**	**0.0**
JOU				*eS*	**Sn**	**21 37 46.4**	**-0.8**
JRG	**Rokugo**	**3.02**	**284**	P	**Pn**	**21 37 14.8**	**+1.0**
JYK	**Kaneyama**	**3.17**	**275**	P	**Pn**	**21 37 16.5**	**+0.6**
JYK				*eS*	**Sn**	**21 37 53.3**	**+0.8**
JAH	**Hinai**	**3.27**	**298**	P	**Pn**	**21 37 18.5**	**+1.2**
JFT	**Otama**	**3.42**	**251**	P	**Pn**	**21 37 19.5**	**+0.1**
JFT				S	**Sn**	**21 37 57.8**	**-1.0**
ERM	**Erimo**	**3.44**	**344**	*ePn*	**Pn**	**21 37 20.4**	**+0.8**
JYS	**Shiratake**	**3.44**	**263**	P	**Pn**	**21 37 19.9**	**+0.2**
JYS				*eS*	**Sn**	**21 37 59.1**	**-0.2**
JOT	**Ohata**	**3.71**	**317**	*eS*	**Sn**	**21 38 05.2**	**-0.6**
JCH	**Churui**	**3.98**	**349**	P	**Pn**	**21 37 27.3**	**+0.2**
JCH				*eS*	**Sn**	**21 38 11.7**	**-0.8**
JKB	**Kayabe**	**4.09**	**322**	*eS*	**Sn**	**21 38 13.8**	**-1.4**
NEM2	**Nemuro 2**	**4.76**	**12**	P	**Pn**	**21 37 35.9**	**-1.8**
NEM2				*eS*	**Sn**	**21 38 27.3**	**-4.3**
JOSM	**Okushiri--Mats**	**5.05**	**313**	P	**Pn**	**21 37 43.3**	**+1.5**
JRY	**Ryogami san**	**5.14**	**240**	P	**Pn**	**21 37 41.9**	**-1.2**
JRY				*eS*	**Sn**	**21 38 37.3**	**-3.9**
JTKR	**Abashiri--Toko**	**5.27**	**356**	P	**Pn**	**21 37 44.3**	**-0.5**
JTKR				*eS*	**Sn**	**21 38 42.1**	**-2.1**
MJAR	**Matsushiro Arr**	**5.38**	**248**	Pn	**Pn**	**21 37 46.5**	**+0.2**
	1.4nm,0.3s,baz=63,slow=12,SNR=26						
MJAR				Sn	**Sn**	**21 38 47.3**	**+0.4**
	0.8nm,0.3s,baz=34,slow=28,SNR=2.3						
MAJO	**Matsushiro**	**5.38**	**248**	*ePn*	**Pn**	**21 37 46.2**	**-0.1**
	11nm,0.6s						
MAT	**Matsushiro**	**5.38**	**248**	P	**Pn**	**21 37 47.2**	**+0.9**
MAT				S	**Sn**	**21 38 47.2**	**+0.3**
MAT	**Matsushiro**	**5.38**	**248**	P	**Pn**	**21 37 46.9**	**+0.6**
JOD2	**Odawara 2**	**5.47**	**233**	*eS*	**Sn**	**21 38 44.0**	**-5.3**
ASAJ	**Asahikawa**	**5.57**	**346**	Pn	**Pn**	**21 37 49.8**	**+0.9**
	1.3nm,0.3s,baz=283,slow=22,SNR=14						
ASAJ				Sn	**Sn**	**21 38 53.1**	**+1.5**
	0.4nm,0.3s,baz=342,slow=34,SNR=1.3						
JHJ	**Hachijo jima 2**	**6.72**	**215**	Pn	**Pn**	**21 38 02.0**	**-2.7**
	6.8nm,0.3s,baz=58,slow=8.0,SNR=1.5						
JHJ				Sn	**Sn**	**21 39 13.2**	**-6.9**
	9.2nm,0.3s,baz=110,slow=16,SNR=1.4						
MKAR	**Makanchi Array**	**45.26**	**301**	P	**P**	**21 44 45.1**	**+2.7**
	0.3nm,0.2s,mb3.7,baz=72,slow=11,SNR=3.7						
WRA	**Warramunga Arr**	**59.10**	**191**	P	**P**	**21 46 24.3**	**-1.1**
	0.5nm,0.6s,mb3.7,baz=8.6,slow=7.0,SNR=7.9						
FINES	**FINESS Array B**	**68.42**	**333**	P	**P**	**21 47 28.2**	**+1.8**
	1.9nm,1.0s,mb4.1,baz=38,slow=7.5,SNR=3.4						

KRSC 19 22:23:39.1±0.0, 51°.25N×157°.76E, h96km±96km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIPR	**Malaya Ipel'ka**	**1.20**	**329**	P	Pn	22 24 04.1	+2.6
ALID	**Alaid**	**1.45**	**256**	*eP*	Pn	22 24 06.2	+1.8
ALID				*eS*	Sn	22 24 25.9	+2.3
PET	**Petropavlovsk**	**1.86**	**17**	P	Pn	22 24 12.2	+2.6
PET				*i* S	Sn	22 24 37.4	+4.5
SDLR	**Sedlovina**	**2.15**	**18**	*eP*	Pn	22 24 17.0	+3.7
SDLR				*i* S	Sn	22 24 43.5	+4.0
NLC	**Nalytchevo**	**2.16**	**26**	P	Pn	22 24 16.1	+2.6
NLC				*i* S	Sn	22 24 42.5	+2.7
SPN	**Mys Shipunski**	**2.32**	**36**	*eP*	Pn	22 24 19.1	+3.5
SPN				*i* S	Sn	22 24 47.2	+3.7
GNL	**Ganaly**	**2.45**	**3**	*eP*	Pn	22 24 19.4	+2.0
GNL				*eS*	Sn	22 24 48.6	+1.9
MKZ	**Mys Kozlova**	**4.09**	**34**	P	Pn	22 24 41.3	+2.0
MKZ				*i* S	Sn	22 25 26.7	+0.6
KBTR	**Krutoberegovo**	**5.80**	**29**	P	Pn	22 25 04.6	+2.1

*NEIC **19** 22:28:51.2±1.9, 39°.15N×73°.46E, h10km, Error ellipse: s-maj=38.1km s-min=10.0km az=114.0*
ISC 19 22:28:50.8±1.8, 39°.15N±0°.06×73°.29E±0°.09, h0km±16km, n15, σ1§24/20, 3C, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**2.11**	**79**	Pn	**Pg**	**22 29 30.8**	**-0.5**
KSH				Sn	**Sg**	**22 29 58.9**	**+0.3**
KSH				smax			
	comp=N,370nm,0.5s						
KSH				smax			
	comp=E,330nm,0.3s						
AML	**Almayashu**	**2.99**	**6**	P	**Pg**	**22 29 49.6**	**+1.5**
	SNR=163						
AML	**Almayashu**	**2.99**	**6**	*e*Pg	**Pg**	**22 29 49.6**	**+1.5**
AML				*eS*	**Sg**	**22 30 29.8**	**+3.0**
UCH	**Uchtor**	**3.21**	**16**	P	**Pg**	**22 29 53.1**	**+0.9**
	SNR=19						
UCH	**Uchtor**	**3.21**	**16**	*e*Pg	**Pg**	**22 29 53.1**	**+0.9**
UCH				*eS*	**Sg**	**22 30 35.1**	**+1.2**
EKS2	**Erkin-Say**	**3.52**	**6**	P	**Pg**	**22 29 58.0**	**-0.3**
	SNR=16						
EKS2	**Erkin-Say**	**3.52**	**6**	*e*Pg	**Pg**	**22 29 57.2**	**-1.1**
EKS2				*eS*	**Sg**	**22 30 42.0**	**-1.9**
AAK	**Ala-Archa**	**3.59**	**14**	*e*Pg	**Pg**	**22 29 58.8**	**-0.8**
KBK	**Karagaybulak**	**3.72**	**19**	P	**Pg**	**22 30 00.8**	**-1.3**
	SNR=6.4						
CHMS	**Chumysh**	**4.00**	**16**	P	**Pn**	**22 29 51.7**	**-1.5**
	SNR=7.0						
USP	**Ospenovka**	**4.21**	**12**	P	**Pb**	**22 30 07.0**	**+1.3**
	SNR=6.3						
KK31	**Karatay Array**	**4.47**	**333**	↑Pn	**Pb**	**22 30 06.9**	**-3.2**
	comp=E,1.4nm,0.2s,baz=145,slow=12,SNR=186						
KBL	**Kabul**	**5.73**	**218**	*e*Pn	**Pn**	**22 30 17.4**	**+0.4**
	comp=E,13nm,0.8s						
AB31	**Akbulak array**	**13.89**	**321**	↑Pn	**Pn**	**22 32 09.1**	**+0.3**
	comp=E,0.5nm,0.4s,baz=119,slow=13,SNR=17						
AB31				↑↑Sn	**Sn**	**22 34 34.2**	**-9.4**
	comp=E,0.4nm,0.4s,baz=131,slow=24,SNR=4.8						
ABKAR	**Akbulak array**	**13.89**	**321**	*e*Pn	**Pn**	**22 32 09.4**	**+0.6**
	comp=E,0.6nm,0.3s						

*SZGRF **19** 22:34:09.8, 20°.33S×177°.92W, h516km, Fiji Islands region*
*ISCJB **19** 22:34:15.7±0.7, 20°.13S±0°.05×178°.52W±0°.04, h575km±8km, mb4.7/102, Error ellipse: s-maj=8.1km s-min=4.9km az=162.7*
*NEIC **19** 22:34:16.8±0.6, 20°.09S×178°.48W, h576km±7km, mb4.7/63, Error ellipse: s-maj=9.0km s-min=5.4km az=140.0*
*IDC **19** 22:34:17.2±1.0, 20°.12S×178°.38W, h584km±10km, mb4.2/26, mb1 4.3/27, mb1mx4.3/29, mbtmp4.2/27, Error ellipse: s-maj=12.8km s-min=9.5km az=130.0*
*DJA **19** 22:34:18, 20°.06S×178°.79W, h572km, mb5.0/15*
ISC 19 22:34:16.5±0.7, 20°.12S±0°.05×178°.48W±0°.04, h571km±8km, h573km±1.8km; pP-P, n608, σ0§61/446, mb4.7/102, 174C-135D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.05**	**305**	*e*Pn	**P**	**22 35 41.2**	**+0.9**
AFI	**Afiamalu**	**8.90**	**47**	P	**P**	**22 36 22.7**	**-1.1**
	18nm,0.3s,baz=28,slow=2.4,SNR=14						
AFI				S	**S**	**22 38 01.5**	**-6.8**
	11nm,0.3s,baz=357,slow=22,SNR=7.9						
AFI	**Afiamalu**	**8.90**	**47**	*e*Pn	**P**	**22 36 22.8**	**-1.0**
	109nm,0.8s						
RAO	**Raoul Island**	**9.11**	**177**	P	**P**	**22 36 18.5**	**-7.1**
	451nm,0.3s,baz=232,slow=22,SNR=9.0						
RAO				S	**S**	**22 38 08.9**	**-2.7**
	31nm,0.3s,baz=107,slow=20,SNR=3.2						
DZM	**Mont Dzumac**	**14.20**	**259**	*eP*	**P**	**22 37 21.9**	**+4.3**
OUZ	**Omahuta**	**16.59**	**203**	*eP*	**P**	**22 37 43.2**	**+2.9**
	249nm,0.9s						
URZ	**Urewera**	**18.48**	**191**	P	**P**	**22 37 54.8**	**-2.8**
	23nm,0.3s,baz=27,slow=1.7,SNR=56						
URZ				S	**S**	**22 40 50.7**	**-6.4**
	1.3nm,0.3s,baz=142,slow=22,SNR=6.0						
URZ	**Urewera**	**18.48**	**191**	*eP*	**P**	**22 37 55.3**	**-2.2**
	128nm,0.7s						
SNZO	**South Karori**	**21.90**	**194**	*eP*	**P**	**22 38 27.4**	**-1.1**
	64nm,0.6s,mb5.4						
KHZ	**Kahutara**	**23.23**	**195**	*eP*	**P**	**22 38 38.9**	**-1.3**
	56nm,0.8s,mb5.2						
RPZ	**Rata Peaks**	**25.10**	**198**	P	**P**	**22

4.3nm,0.4s,mb4.1
LBMI **Labuha** 56.23 283 P P 22 43 05.5 +1.8
36nm,0.8s,mb4.6
MBWA **Marble Bar** 57.49 257 eP P 22 43 12.0 -0.3
7.2nm,0.6s,mb4.1
SBA **Scott Base** 58.22 184 eP P 22 43 18.1 +1.9
54nm,1.2s,mb4.7
SBA e 22 45 16.6
CBIJ **Chichi jima** 60.46 319 P P 22 43 31.9 0.0
27nm,0.4s,mb5.0,baz=140,slow=11,SNR=3.2
KAPI **Kappang** 61.80 275 P P 22 43 40.1 -0.9
3.1nm,0.6s,mb3.9,baz=164,slow=8.4,SNR=4.5
PCI **Palu** 63.19 280 P P 22 43 49.8 -0.2
650nm70nm,1.0s,mb5.0
CASY **Casey** 64.11 205⇑ iP P 22 43 54.6 -0.3
CASY **Casey** 64.11 205 eP P 22 43 54.7 -0.2
CASY e 22 44 06.2
JHJ **Hachijo jima 2** 66.26 322 P P 22 44 08.8 0.0
87nm,0.4s,mb5.6,baz=234,slow=21,SNR=6.6
MJAR **Matsushiro Arr** 69.64 324 P P 22 44 28.7 -0.6
10nm,0.5s,mb4.6,baz=157,slow=6.2,SNR=75
MAJO **Matsushiro** 69.64 324 eP P 22 44 28.9 -0.3
23nm,0.5s,mb5.0
MAT **Matsushiro** 69.64 324 P P 22 44 28.6 -0.7
QSPA **South Pole Qui** 69.94 180 P P 22 44 30.8 +0.4
50nm,0.9s,mb5.0,baz=21,slow=1.2,SNR=253
AMKA **Amchitka** 71.21 359 eP P 22 44 36.8 -1.4
13nm,0.7s,mb4.6
ATKA **Atka Island** 72.11 3 eP P 22 44 42.3 -1.1
70nm,0.8s,mb5.1
SMY **Shemya** 72.83 355 eP P 22 44 46.4 -1.1
56nm,0.9s,mb5.0
KSM **Kuching** 72.91 278 eP P 22 44 49.4 +0.5
17nm,0.5s,mb4.7
ASAJ **Asahikawa** 73.18 332 P P 22 44 51.0 +1.3
49nm,0.8s,mb5.0,baz=216,slow=8.3,SNR=33
YSS **Yuzh-Sakhalins** 75.36 334 eP P 22 45 02.7 +0.8
53nm,0.8s,mb5.0
PET **Petropavlovsk** 75.49 346 eP P 22 45 01.4 -1.1
10.0nm,0.6s,mb4.4
PETK **Petropavlovsk-** 75.79 345 P P 22 45 03.5 -0.7
25nm,0.7s,mb4.8,baz=125,slow=7.5,SNR=67
KSRS **Korea Array** 76.31 319 P P 22 45 07.7 +0.3
7.3nm,0.7s,mb4.2,baz=126,slow=6.1,SNR=42
MDSI **Maura Dua** 76.59 270 P P 22 45 08.3 -1.2
23nm,1.0s,mb4.6
CHGN **Chignik** 77.99 11 eP P 22 45 14.7 -1.4
SAO **San Andreas Ge** 78.06 44 eP P 22 45 17.8 +0.8
16nm,0.8s,mb4.4
109C **Camp Elliot, M** 78.82 49 ⇓P P 22 45 21.3 +0.3
baz=79
ARVC **Arvin** 78.86 46 ⇑P P 22 45 21.6 +0.4
baz=79
VES **Vestal, Richgr** 79.08 45 ⇓P P 22 45 22.5 +0.1
baz=79
MURC **Murrieta** 79.14 48 ⇑P P 22 45 23.5 +0.8
baz=79
EDW2 **Edwards Air Fo** 79.29 47 ⇓P P 22 45 23.6 0.0
baz=80
NJ2 **Nanjing** 79.29 310 eP P 22 45 22.1 -1.5
NJ2 pmax pmax
comp=Z,40nm,0.6s,mb4.9
MONP **Monument Peak** 79.30 49 ⇑P P 22 45 23.7 +0.1
baz=80
ISA **Isabella** 79.39 46 ⇑P P 22 45 24.7 +0.6
baz=80
ISA **Isabella** 79.39 46 eP P 22 45 24.8 +0.8
comp=Z,29nm,1.5s,mb4.4
DVTC **Desert V Tower** 79.41 49 ⇑P P 22 45 24.2 0.0
baz=80
CMB **Columbia Colle** 79.49 43 eP P 22 45 24.8 +0.2
comp=Z,14nm,0.9s,mb4.3
PFO **Pinyon Flat Ob** 79.66 49 ⇓P P 22 45 25.7 +0.1
baz=80
WDC **Whiskeytown Da** 79.67 40 eP P 22 45 25.1 -0.3
comp=Z,14nm,0.9s,mb4.3
SWSC **Sam W. Stewart** 79.78 49 ⇑P P 22 45 26.6 +0.5
baz=80
OHAK **Old Harbor** 79.89 14 eP P 22 45 25.2 -0.8
comp=Z,37nm,1.2s,mb4.6
MDJ **Mudanjiang** 79.95 325 P P 22 45 27.3 +0.6
MDJ pP pP 22 47 28.3 +0.7
MDJ PP PP 22 48 39.3 -0.2
MDJ S S 22 54 47.1 +3.0
MDJ sS sS 22 58 20.5 +1.1
MDJ pmax pmax
comp=Z,26nm,1.3s,mb4.4
MDJ pmax pmax
comp=Z,43nm,3.1s
MDJ **Mudanjiang** 79.95 325 eP P 22 45 27.6 +0.8
comp=Z,24nm,1.0s,mb4.5
BELC **Belle Mtn. Jos** 80.19 48 ⇑P P 22 45 28.6 +0.4
baz=80,SNR=5.5
YBH **Yreka Blue Hor** 80.28 39 P P 22 45 29.3 +0.7
comp=Z,20nm,0.8s,mb4.5,baz=208,slow=1.4,SNR=28
YBH **Yreka Blue Hor** 80.28 39 eP P 22 45 29.3 +0.8
comp=Z,20nm,0.8s,mb4.5
MPMC **Manual Prospec** 80.28 46 ⇓P P 22 45 29.2 +0.5
baz=80,SNR=12
GSC **Goldstone** 80.33 47 ⇓P P 22 45 29.4 +0.4
baz=80
GSC **Goldstone** 80.33 47 eP P 22 45 29.5 +0.5
comp=Z,10nm,1.2s,mb4.0
TIN **Tinemaha** 80.34 45 ⇓P P 22 45 29.8 +0.8
baz=80
WAKR **Walker** 80.37 43 eP P 22 45 29.7 +0.6
HEC **Hector,Ludlow** 80.41 48 ⇑P P 22 45 29.6 +0.3
baz=81,SNR=5.4
112A **Yuma** 80.44 50 ⇑P P 22 45 30.0 +0.4
baz=81
GLA **Glamis** 80.53 50 ⇓P P 22 45 29.8 -0.2
baz=81
KDAK **Kodiak Island** 80.56 14 P P 22 45 28.9 -0.7
comp=Z,14nm,0.7s,mb4.5,baz=230,slow=5.6,SNR=8.6
HUMO **Hull Mountain** 80.67 38 eP P 22 45 31.5 +0.9
comp=Z,14nm,1.0s,mb4.3
GMRC **Granite Mounta** 80.84 48 ⇑P P 22 45 31.4 -0.2
baz=81
IRM **Iron Mountain** 80.87 49 ⇑P P 22 45 32.2 +0.4
baz=81
GRAC **Grapevine Rang** 80.88 45 ⇑P P 22 45 31.9 +0.1
baz=81,SNR=11
FURC **Furnace Creek,** 80.93 46 ⇓P P 22 45 31.8 -0.2
baz=81
TUQ **Turquoise Moun** 81.01 47 ⇓P P 22 45 32.1 -0.3
baz=81,SNR=7.0
NVAR **Mina Array Bea** 81.06 44 P P 22 45 32.9 +0.2
comp=Z,10nm,0.8s,mb4.3,baz=224,slow=9.3,SNR=61
PAHR **Pah Rah Range** 81.10 42 eP P 22 45 33.2 +0.3
comp=Z,22nm,1.1s,mb4.5
113A **Mohawk Valley,** 81.14 50 ⇑P P 22 45 33.7 +0.5
baz=81,SNR=5.0
U10A **Ash Meadows, A** 81.26 46 ⇑P P 22 45 33.7 0.0
baz=81,SNR=5.1
LDFC **Landfair** 81.39 48 eP P 22 45 35.1 +0.7
comp=Z,35nm,0.9s,mb4.8
Z13A **Yuma Proving G** 81.44 50 ⇑P P 22 45 35.4 +0.7
baz=82,SNR=7.8
V11A **Goodsprings** 81.56 47 ⇓P P 22 45 35.3 0.0
baz=82,SNR=6.4
Y13A **Salome** 81.63 50 ⇑P P 22 45 36.4 +0.7
baz=82,SNR=6.2
W12A **Cal Nev Ari** 81.67 48 ⇑P P 22 45 35.8 0.0
baz=82
CN2 **Changchun** 81.72 323 ⇓P P 22 45 35.0 -0.9
CN2 eS S 22 54 59.1 -3.0
CN2 pmax pmax
comp=Z,20nm,0.8s,mb4.6
CN2 pmax pmax
comp=Z,200nm,3.0s
MAW **Mawson** 81.77 200 P P 22 45 35.4 -0.4
comp=Z,3.9nm,0.7s,mb4.0,baz=103,slow=6.1,SNR=12
MAW **Mawson** 81.77 200 eP P 22 45 35.3 -0.5
comp=Z,0.7nm,0.6s
114A **Black Gap (USA** 81.78 51 ⇑P P 22 45 36.5 0.0
baz=82,SNR=5.4
MOD **Modoc** 81.82 40 eP P 22 45 36.8 +0.4
comp=Z,20nm,0.8s,mb4.6
WHN **Wuhan** 81.86 307 P P 22 45 34.5 -2.4
S10A **Tonopah Range,** 81.90 45 ⇑P P 22 45 37.1 +0.2
baz=82,SNR=24
K05A **Summer Lake** 81.95 39 ⇓P P 22 45 38.0 +0.9
baz=82
X13A **Yucca** 82.03 49 ⇑P P 22 45 38.2 +0.5
baz=82,SNR=8.0
Z14A **Wintersburg** 82.04 50 ⇑P P 22 45 38.9 +1.1
baz=82
115A **Sonoran Desert** 82.23 51 ⇓P P 22 45 39.5 +0.7
baz=82
W13A **Hualapai Mount** 82.25 48 ⇓P P 22 45 38.6 -0.2
baz=82,SNR=6.8
Y14A **Wickenburg** 82.29 50 ⇓P P 22 45 39.1 +0.1
baz=82,SNR=7.7
R10A **Warm Springs** 82.29 45 ⇓P P 22 45 39.5 +0.6
baz=82,SNR=15
S11A **Rachel** 82.31 45 ⇓P P 22 45 38.9 -0.2
baz=82,SNR=8.1
BKCOR **Black Crater** 82.44 37 P P 22 45 40.2 +0.7
T11A **Corn Creek, Al** 82.45 46 ⇑P P 22 45 40.3 +0.5
baz=83
216A **Three Points,** 82.46 52 ⇑P P 22 45 40.6 +0.7
baz=83
U12A **Valley of Fire** 82.49 47 ⇓P P 22 45 40.4 +0.4
baz=83,SNR=12
Q10A **Clear Creek Ra** 82.52 44 ⇓P P 22 45 40.3 +0.3
baz=83
116A **Eloy** 82.55 52 ⇓P P 22 45 41.1 +0.8
baz=83,SNR=5.5
V13A **Grand Canyon W** 82.57 48 ⇓P P 22 45 40.6 +0.2
baz=83,SNR=13
X14A **Yava** 82.64 49 ⇑P P 22 45 41.2 +0.4
baz=83,SNR=11
BPO **Bald Peter** 82.66 37 P P 22 45 41.2 +0.6
Y15A **Casa Rosa Ranc** 82.78 50 ⇑P P 22 45 41.6 +0.1
baz=83
R11A **Troy Canyon, C** 82.80 45 ⇓P P 22 45 41.1 -0.3
baz=83,SNR=6.9
E03A **Lebam** 82.80 35 ⇓P P 22 45 41.6 +0.3
baz=83,SNR=7.1
217A **Green Valley** 82.82 53 ⇑P P 22 45 42.2 +0.5
baz=83,SNR=8.7
W14A **Seligman** 82.88 49 ⇑P P 22 45 41.9 -0.1
baz=83,SNR=10.0
U13A **Pakoon Wash** 82.88 47 ⇑P P 22 45 42.2 +0.3
baz=83,SNR=25
BMN **Battle Mountai** 82.88 42 eP P 22 45 42.0 +0.2
comp=Z,18nm,0.9s,mb4.6
S12A **Delamar Landin** 82.90 46 ⇓P P 22 45 42.5 +0.5
baz=83,SNR=16
VBEM **Beaver Butte** 82.96 37 P P 22 45 42.5 +0.4
RSO **Redoubt South** 82.97 13 eP P 22 45 40.2 -1.6
Q11A **Duckwater** 83.02 44 ⇑P P 22 45 41.7 -0.9
baz=83,SNR=7.5
F04A **Amboy** 83.04 36 ⇓P P 22 45 42.5 +0.1
baz=83
V14A **Boquillas Ranc** 83.07 48 ⇑P P 22 45 42.9 0.0
baz=83,SNR=8.7
X15A **Humboldt** 83.11 50 ⇑P P 22 45 43.8 +0.7
baz=83,SNR=9.4
WVOR **Wild Horse Val** 83.13 40 eP P 22 45 43.2 +0.2
comp=Z,16nm,1.0s,mb4.5
VLL **Laurance Lake** 83.16 36 P P 22 45 43.4 +0.3
NLWA **Neilton Lookou** 83.17 34 ⇓P P 22 45 43.9 +0.8
baz=83,SNR=6.3
NLWA **Neilton Lookou** 83.17 34 eP P 22 45 43.5 +0.4
VIPM **Ingram Point** 83.18 38 P P 22 45 43.5 +0.2
OOW **Octopus West** 83.23 34 P P 22 45 44.4 +1.0
T13A **Saint George** 83.23 47 ⇑P P 22 45 43.6 -0.1
baz=83,SNR=11
O10A **Cortez Mining,** 83.26 43 ⇓P P 22 45 43.8 +0.1
baz=83,SNR=5.8
117A **Oracle** 83.26 52 ⇑P P 22 45 43.8 -0.2
baz=83,SNR=7.1
KULM **Kulim** 83.27 278 eP P 22 45 44.8 +0.4
comp=Z,9.0nm,0.6s,mb4.5
318A **Bisbee** 83.28 53 ⇓P P 22 45 44.4 +0.4
baz=83,SNR=12
Y16A **Circle Bar Ran** 83.36 50 ⇑P P 22 45 44.3 -0.1
baz=84,SNR=9.3
U14A **Mt Trumbull** 83.42 48 ⇑P P 22 45 45.1 +0.4
baz=84,SNR=26
218A **Dragoon** 83.49 53 ⇓P P 22 45 45.8 +0.7
baz=84
S13A **Holt Ranch, En** 83.55 46 ⇓P P 22 45 45.4 +0.2
baz=84,SNR=8.3
I07A **Izee** 83.57 38 ⇓P P 22 45 45.4 +0.2
baz=84
X16A **Lo Mia Camp, P** 83.65 50 ⇓P P 22 45 46.0 +0.2
baz=84,SNR=8.4
Q12A **Willow Creek R** 83.67 45 ⇑P P 22 45 45.7 -0.1
baz=84,SNR=5.5
O11A **Cowboy Ranch,** 83.71 43 ⇓P P 22 45 45.9 -0.1
baz=84,SNR=9.2
Y17A **Roosevelt** 83.73 51 ⇓P P 22 45 47.0 +0.8
baz=84
J08A **Circle Bar Ran** 83.76 39 ⇑P P 22 45 46.2 0.0
baz=84
R13A **O'Grain Ranch,** 83.79 46 ⇓P P 22 45 46.9 +0.5
baz=84
T14A **Hurricane** 83.81 47 ⇓P P 22 45 47.0 +0.5
baz=84
V15A **Kaibab Nationa** 83.82 48 ⇓P P 22 45 47.3 +0.6
baz=84,SNR=8.1
GNW **Green Mountain** 83.83 34 eP P 22 45 46.7 +0.3
comp=Z,4.7nm,0.8s,mb4.1
P12A **McGill** 83.85 44 ⇑P P 22 45 47.0 +0.4
baz=84
118A **Homack Ranch,** 83.87 52 ⇑P P 22 45 47.7 +0.8
baz=84
LON **Longmire** 83.87 35 eP P 22 45 46.5 -0.1
comp=Z,2.7nm,0.8s,mb3.8
M10A **I.L. Ranch, Tu** 83.91 42 ⇑P P 22 45 47.1 +0.2
baz=84,SNR=10
W16A **Flagstaff** 83.92 49 ⇑P P 22 45 47.6 +0.5
baz=84,SNR=5.9
PSI **Prapat** 84.01 275 P P 22 45 47.6 -0.4
comp=Z,9.3nm,0.9s,mb4.3,baz=298,slow=5.8,SNR=6.4
U15A **North Rim** 84.04 48 ⇑P P 22 45 48.1 +0.4
baz=84,SNR=18
D05A **Enumclaw** 84.05 35 ⇑P P 22 45 46.8 -0.6
baz=84
X17A **Forest Lakes** 84.07 50 ⇓P P 22 45 49.1 +1.3
baz=84
219A **White Tail Can** 84.09 53 ⇓P P 22 45 47.5 -0.5
baz=84
Q13A **Wheeler Ranch,** 84.16 45 P P 22 45 48.4 +0.1
baz=84,SNR=7.0
WUAZ **Wupatki** 84.24 49 ⇓P P 22 45 49.1 +0.4
baz=84,SNR=5.2
WUAZ **Wupatki** 84.24 49 eP P 22 45 49.5 +0.8
comp=Z,8.8nm,1.0s,mb4.2
L10A **Juniper Basin** 84.26 41 ⇑P P 22 45 48.7 +0.1
baz=84
T15A **Red Dirt Ranch** 84.28 47 ⇑P P 22 45 48.6 -0.3
baz=84,SNR=9.3
M11A **Holland Ranch,** 84.33 42 ⇓P P 22 45 48.5 -0.6
baz=84
320A **Kipp Ranch, An** 84.34 54 ⇑P P 22 45 49.5 +0.3
baz=84
O12A **Currie** 84.38 44 P P 22 45 49.3 +0.1
baz=85,SNR=6.3
NAC **Naches** 84.40 36 P P 22 45 49.2 0.0
K10A **MacKenzie Ranc** 84.40 41 ⇑P P 22 45 49.7 +0.4
baz=85,SNR=9.1
P13A **Bates Ranch, G** 84.42 45 ⇑P P 22 45 49.6 +0.1
baz=85,SNR=6.9
G08A **Pilot Rock** 84.59 38 P P 22 45 50.4 +0.2
baz=85,SNR=20
220A **Playas Peak, P** 84.60 53 ⇓P P 22 45 50.3 -0.2
baz=85
S15A **Panguitch** 84.62 47 ⇓P P 22 45 50.7 +0.2
baz=85
TTA **Tatalina** 84.65 10 eP P 22 45 50.0 0.0
Q14A **Sevier Lake (B** 84.67 45 ⇑P P 22 45 50.8 +0.1
baz=85,SNR=15
JCW **Jim Creek** 84.70 34 eP P 22 45 50.6 0.0
V17A **Tonalea, Kykot** 84.70 49 P P 22 45 51.3 +0.4
baz=85,SNR=9.4
U16A **Tuba City** 84.72 49 ⇓P P 22 45 51.3 +0.3
baz=85
L11A **Cat Creek Ranc** 84.76 42 ⇑P P 22 45 51.1 0.0
baz=85,SNR=11
PMR **Palmer** 84.76 14 eP P 22 45 49.3 -1.3
comp=Z,47nm,1.4s,mb4.8
TBM **Table Mountain** 84.79 35 P P 22 45 51.0 -0.1
M12A **Wells** 84.88 43 ⇑P P 22 45 51.9 +0.3
baz=85,SNR=5.9
RSW **Rattlesnake Hi** 84.88 37 eP P 22 45 52.3 +0.7
HAWA **Hanford** 84.91 37 eP P 22 45 52.2 +0.5
comp=Z,25nm,1.2s,mb4.6
K11A **Parker Ranch,** 84.91 41 ⇑P P 22 45 51.7 -0.1
baz=85,SNR=7.5
Y19A **Nutrioso** 85.02 51 ⇑P P 22 45 52.9 +0.4
baz=85
P14A **Drum Mountains** 85.12 45 ⇓P P 22 45 52.8 -0.1
baz=85
ETW **Entiat** 85.19 35 eP P 22 45 53.0 0.0
comp=Z,14nm,0.7s,mb4.6
L12A **House Creek Ra** 85.21 42 ⇑P P 22 45 53.9 +0.7
baz=85
X19A **St. Johns** 85.21 51 ⇓P P 22 45 53.0 -0.5
baz=85
221A **Mesquite Ranch** 85.22 54 ⇑P P 22 45 53.8 +0.3
baz=85
E08A **Dider Farm, El** 85.24 37 ⇑P P 22 45 53.4 +0.2
baz=85
BJT **Baijiatuau** 85.30 316 eP P 22 45 53.7 0.0
comp=Z,17nm,0.6s,mb4.8
BMO **Blue Mountains** 85.30 39 eP P 22 45 53.3 -0.3
comp=Z,6.2nm,0.8s,mb4.2
BJI **Beijing** 85.31 316 P P 22 45 53.8 0.0
BJI pmax pmax
comp=Z,26nm,0.8s,mb4.8
M13A **Montello** 85.33 43 ⇓P P 22 45 54.3 +0.4
baz=86
V18A **Ganado** 85.36 49 ⇓P P 22 45 54.3 +0.2
baz=86
T17A **Navajo Res., N** 85.36 48 ⇑P P 22 45 54.6 +0.5
baz=86,SNR=6.3
MFID **Camas Ranch** 85.39 40 P P 22 45 54.1 0.0
baz=86,SNR=14
121A **Cookes Peak, D** 85.45 53 ⇑P P 22 45 53.8 -0.8
baz=86
ENH **Enshi** 85.45 304 eP P 22 45 55.3 +0.6
comp=Z,12nm,0.7s,mb4.5
NLW **Nelson Butte** 85.47 35 P P 22 45 54.3 -0.1
R16A **Teasdale** 85.53 47 ⇓P P 22 45 55.1 +0.2
baz=86,SNR=6.6
K12A **Draper Farm, C** 85.54 42 ⇑P P 22 45 54.7 -0.1
baz=86
I11A **Placerville** 85.58 40 ⇑P P 22 45 55.0 0.0
baz=86
Y20A **Horse Springs,** 85.64 52 ⇓P P 22 45 56.0 +0.4
baz=86
D08A **Wollman Farm,** 85.64 36 P P 22 45 55.3 +0.1
baz=86,SNR=6.8
S17A **Black Ridge (B** 85.68 47 ⇓P P 22 45 55.6 0.0
baz=86
U18A **Rough Rock, Ch** 85.74 49 ⇓P P 22 45 55.9 -0.1
baz=86,SNR=5.8
J12A **Stokes Ranch,** 85.75 41 ⇓P P 22 45 55.8 0.0
baz=86,SNR=14
E09A **Wood Farm, Sta** 85.76 37 ⇓P P 22 45 55.7 -0.1
baz=86,SNR=7.2
X20A **Quemado** 85.84 51 ⇓P P 22 45 56.7 +0.3
baz=86
L13A **Double Diamond** 85.85 42 ⇑P P 22 45 56.6 +0.3
baz=86
M14A **Sheep Mountain** 85.93 43 ⇑P P 22 45 56.5 -0.1
baz=86,SNR=7.5
OD2 **Odessa Site #2** 85.95 36 eP P 22 45 56.4 -0.3
F10A **Beach Ranch, E** 85.98 38 ⇓P P 22 45 56.3 -0.5
baz=86,SNR=46
I12A **Atlanta** 86.02 40 P P 22 45 57.2 +0.1
baz=86,SNR=25
Q16A **Castle Valley** 86.05 46 ⇑P P 22 45 57.2 -0.1
baz=86
K13A **Stover Farm, H** 86.06 42 ⇑P P 22 45 57.1 -0.2
baz=86
GYA **Guiyang** 86.07 300 P P 22 45 58.8 +1.1
GYA pP pP 22 48 03.3 +2.4
GYA sP sP 22 48 58.9 +0.5
GYA PP PP 22 49 31.3 +2.3
GYA SKS 22 55 28.8
GYA S S 22 55 45.0 -0.1
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
T18A **Mexican Hat** 86.08 48 P P 22 45 58.0 +0.4
baz=86,SNR=22
W20A **Ramah** 86.11 51 ⇑P P 22 45 57.7 0.0
baz=86
R17A **Hanksville Air** 86.12 47 P P 22 45 58.1 +0.4
baz=86,SNR=6.6
N15A **Stansbury Isla** 86.15 44 ⇑P P 22 45 57.7 0.0
baz=86
U19A **Dine' College,** 86.15 49 ⇑P P 22 45 57.7 -0.2
baz=86
B08A **Colville Reser** 86.18 35 ⇓P P 22 45 57.4 -0.4
baz=86,SNR=13
Y21A **Point of Rocks** 86.20 52 ⇓P P 22 45 57.8 -0.3
baz=86
S18A **Hurst Farm, Bl** 86.26 48 ⇓P P 22 45 57.5 -0.9
baz=86
L14A **Malta** 86.27 43 ⇑P P 22 45 58.2 -0.1
baz=86
HLID **Hailey** 86.34 41 ⇑P P 22 45 58.9 +0.4
baz=86,SNR=29
HLID **Hailey** 86.34 41 eP P 22 45 59.0 +0.5
comp=Z,11nm,0.8s,mb4.5
Z22A **Elephant Butte** 86.39 53 ⇓P P 22 45 59.2 +0.1
baz=86,SNR=5.8
J13A **Cove Ranch, Pi** 86.40 41 ⇑P P 22 45 59.3 +0.4
baz=87,SNR=12
C09A **Chrisman Ranch** 86.43 36 ⇑P P 22 45 58.9 0.0
baz=87,SNR=6.1
V20A **Brimhall** 86.45 50 ⇓P P 22 45 59.2 -0.1
baz=87
M15A **Larsen Ranch,** 86.48 43 ⇑P P 22 45 59.3 0.0
baz=87
T19A **Beclabito** 86.53 49 ⇑P P 22 45 59.7 +0.1
baz=87
K14A **Jones Ranch, D** 86.58 42 P P 22 45 60.0 +0.2
baz=87,SNR=5.6
SRU **San Rafael** 86.59 46 ⇑P P 22 45 59.9 0.0
baz=87,SNR=7.1
H12A **Diamond D Ranc** 86.59 40 ⇓P P 22 45 59.7 0.0
baz=87,SNR=37
G12A **Big Creek, Yel** 86.63 39 ⇓P P 22 45 59.7 -0.2
baz=87
R18A **Canyonlands Na** 86.67 47 ⇓P P 22 46 00.3 0.0
baz=87,SNR=9.0
MCK **McKinley** 86.70 13 eP P 22 45 58.7 -1.1
comp=Z,33nm,1.0s,mb4.9
I13A **Wildhorse Cree** 86.71 41 ⇑P P 22 46 00.5 +0.2
baz=87,SNR=15
324A **Moseley Ranch,** 86.71 55 ⇑P P 22 46 00.2 -0.5
baz=87,SNR=14
J14A **Carey** 86.77 41 ⇑P P 22 46 00.9 +0.3
baz=87
425A **Indio Mountain** 86.81 56 ⇑P P 22 46 01.3 +0.1
baz=87,SNR=14
626A **Big Bend Ranch** 86.96 57 ⇓P P 22 46 02.1 +0.2
baz=87,SNR=13
224A **Cornudas Mount** 86.96 54 ⇓P P 22 46 02.3 +0.5
baz=87,SNR=8.1
H13A **Challis** 86.97 40 ⇑P P 22 46 01.8 +0.3
baz=87
O17A **Robinson Place** 86.97 45 ⇑P P 22 46 02.1 +0.5
baz=87,SNR=12
SYO **Syowa Base** 86.99 193|| eP P 22 45 58.4 -2.9
F12A **Elk City** 87.01 39 P P 22 46 01.6 -0.1
baz=87,SNR=65
BNM **Barren Site** 87.04 52 P P 22 46 02.5 +0.4
comp=Z,1.8nm,0.6s,mb3.9
K15A **Arbon** 87.06 42 ⇓P P 22 46 01.7 -0.3
baz=87
R19A **Curley Farm, L** 87.06 47 ⇑P P 22 46 02.1 0.0
baz=87,SNR=6.0
325A **Bean Ranch, Si** 87.08 55 P P 22 46 02.6 +0.2
baz=87,SNR=14
I14A **Mackay** 87.12 41 P P 22 46 03.0 +0.7
baz=87,SNR=22
E12A **Beaver Dam Sad** 87.18 38 ⇓P P 22 46 02.0 -0.5
baz=87
526A **Mary Lane Ranc** 87.21 57 ⇓P P 22 46 03.1 +0.1
baz=87,SNR=11
TXAR **Lajitas Array** 87.23 58 P P 22 46 03.6 +0.4
comp=Z,7.8nm,0.8s,mb4.4,baz=218,slow=6.3,SNR=77
G13A **Cobalt** 87.26 40 ⇑P P 22 46 02.8 -0.1
baz=87,SNR=16
124A **Stringfield Ra** 87.28 54 ⇑P P 22 46 03.1 -0.2
baz=87,SNR=5.8
U21A **Nageezi** 87.32 50 ⇑P P 22 46 03.3 -0.1
baz=88,SNR=17
Y23A **Lovelace Mesa,** 87.37 53 ⇑P P 22 46 03.2 -0.5
baz=88
Q19A **Hogan Spring (** 87.37 47 ⇓P P 22 46 02.8 -0.7
baz=88,SNR=6.3
PV01 **Paradox Valley** 87.47 48 eP P 22 46 04.0 0.0
comp=Z,344nm,0.9s,mb6.0
J15A **Blackfoot** 87.48 42 ⇓P P 22 46 04.5 +0.5
baz=88,SNR=21
627A **Terlingua Ranc** 87.50 58 P P 22 46 04.7 +0.3
baz=88,SNR=15

225A Deer Hill, Car 87.51 55 ⇓P P 22 46 04.6 +0.2
baz=88,SNR=5.8
ANMO Albuquerque 87.52 51 eP P 22 46 04.7 +0.3
comp=Z,11nm,1.3s,mb4.4
H14A Leadore 87.53 40 ⇓P P 22 46 04.2 0.0
baz=88,SNR=18
XAN Xi'an 87.54 308 P P 22 46 04.8 +0.3
XAN pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
F13A Darby 87.57 39 ⇓P P 22 46 03.7 -0.6
baz=88,SNR=24
C11A Tepee Creek (N 87.58 37 ⇑P P 22 46 04.3 0.0
baz=88
527A Woodward Ranch 87.62 57 ⇓P P 22 46 04.4 -0.6
baz=88,SNR=13
Z24A Sheeppen Canyo 87.62 53 ⇑P P 22 46 04.0 -0.8
baz=88
D12A Red Ives Fores 87.66 38 ⇓P P 22 46 04.3 -0.4
baz=88
T21A Navajo Lake 87.67 49 ⇓P P 22 46 04.9 -0.1
baz=88
K16A Soda Springs 87.73 43 ⇑P P 22 46 05.2 +0.1
baz=88,SNR=11
I15A Monteview 87.76 41 ⇑P P 22 46 05.8 +0.6
baz=88,SNR=5.6
G14A Jackson 87.80 40 ⇓P P 22 46 05.6 +0.2
baz=88
Y24A Capitan 87.83 53 ⇑P P 22 46 06.0 +0.2
baz=88,SNR=27
125A Gardner Draw, 87.87 54 ⇑P P 22 46 05.1 -1.0
baz=88,SNR=5.6
U22A Llaves 87.87 50 ⇑P P 22 46 06.0 0.0
baz=88
DLBC Dease Lake 87.88 23 eP P 22 46 05.5 +0.1
P19A Cripple Cowboy 87.89 46 ⇑P P 22 46 05.9 0.0
baz=88
628A Black Gap, Mar 87.92 58 ⇓P P 22 46 05.9 -0.4
baz=88
J16A Bone 87.94 42 P P 22 46 06.8 +0.7
baz=88,SNR=17
COLA College 87.94 13 eP P 22 46 04.0 -1.6
comp=Z,30nm,0.7s,mb5.1
C12B Naegeli Ranch, 87.94 37 ⇑P P 22 46 06.1 0.0
baz=88
MCMT McKenzie Canyo 87.96 40 eP P 22 46 06.8 +0.7
comp=Z,11nm,1.1s,mb4.5
H15A Lima 87.97 41 P P 22 46 06.9 +0.7
baz=88,SNR=17
E13A Victor 88.00 39 ⇑P P 22 46 05.9 -0.4
baz=88
M18A Lyman 88.02 44 P P 22 46 07.0 +0.5
baz=88,SNR=6.3
Q20A Ridgley Place, 88.04 47 ⇓P P 22 46 05.8 -0.9
baz=88,SNR=6.2
226A Malaga, Loving 88.04 55 ⇓P P 22 46 06.7 -0.1
baz=88,SNR=8.2
ILAR Eielson Array 88.05 13 P P 22 46 04.4 -1.7
comp=Z,13nm,0.8s,mb4.7,baz=220,slow=5.6,SNR=126
ILAR PP PP 22 49 39.6 -4.2
comp=Z,0.9nm,1.0s,baz=223,slow=7.3,SNR=3.9
N18A Larsen Ranch, 88.06 45 ⇓P P 22 46 06.8 +0.1
baz=88
427A Hayter Ranch, 88.08 56 P P 22 46 07.3 +0.3
baz=88,SNR=20
V23A Ortiz Mt. (NFS 88.08 51 ⇑P P 22 46 07.3 +0.4
baz=88
Z25A Roswell 88.09 54 ⇓P P 22 46 06.8 -0.2
baz=88
O19A Miners Draw (B 88.11 46 ⇑P P 22 46 06.2 -0.8
baz=88,SNR=5.2
F14A Wisdom 88.16 39 ⇑P P 22 46 07.1 0.0
baz=88
D13A Huson 88.19 38 ⇓P P 22 46 06.3 -0.9
baz=88
P20A De Beque 88.23 47 ⇓P P 22 46 07.5 0.0
baz=88
528A Cox Ranch, San 88.27 57 ⇑P P 22 46 07.9 -0.1
baz=88,SNR=5.3
R21A Cimarron 88.28 48 ⇑P P 22 46 07.5 -0.4
baz=88,SNR=8.3
B12A Libby 88.30 36 ⇑P P 22 46 07.7 +0.1
baz=88
I16A Newdale 88.32 42 ⇑P P 22 46 08.1 +0.3
baz=88,SNR=15
G15A Dillon 88.35 40 ⇑P P 22 46 08.0 +0.1
baz=88,SNR=9.3
MSO Missoula 88.35 38 eP P 22 46 07.4 -0.5
comp=Z,2.6nm,1.0s,mb3.9
N19A John Jarvie Ra 88.35 45 ⇓P P 22 46 07.8 -0.3
baz=88
Y25A Mesa, Roswell 88.39 53 ⇓P P 22 46 07.8 -0.6
baz=88,SNR=8.4
DLMT Dillon 88.39 40 eP P 22 46 08.4 +0.3
comp=Z,18nm,1.1s,mb4.7
E14A Clinton 88.40 39 P P 22 46 08.3 +0.2
baz=89,SNR=5.8
W24A Lazy 6 Ranch, 88.41 52 ⇑P P 22 46 08.2 -0.3
baz=89,SNR=5.8
BSMT Bassoo Peak 88.41 37 eP P 22 46 08.0 -0.2
C13A Hot Springs 88.44 37 ⇓P P 22 46 08.1 -0.3
baz=89
REDW Red Top Meadow 88.46 42 eP P 22 46 08.8 +0.3
comp=Z,15nm,1.0s,mb4.7
S22A 4UR Ranch, Cre 88.51 49 ⇑P P 22 46 09.0 +0.1
baz=89,SNR=6.7
A12A Yaak River Ran 88.52 36 ⇑P P 22 46 08.4 -0.3
baz=89
J17A Brown Place, J 88.55 42 ⇓P P 22 46 09.3 +0.3
baz=89,SNR=11
SNOW Snow King Moun 88.57 42 eP P 22 46 09.7 +0.6
comp=Z,20nm,0.9s,mb5.0
K18A Toltan Ranch, 88.62 43 ⇑P P 22 46 09.3 -0.1
baz=89,SNR=16
Z26A Caprock 88.65 54 P P 22 46 09.3 -0.4
baz=89,SNR=9.2
M19A Rock Springs 88.66 45 ⇑P P 22 46 08.8 -0.7
baz=89
IMW Indian Meadow 88.67 42 eP P 22 46 10.1 +0.6
comp=Z,17nm,1.0s,mb4.8
F15A Butte 88.69 40 P P 22 46 09.4 -0.2
baz=89,SNR=8.3
LRM Limekiln Ridge 88.71 40 eP P 22 46 10.0 +0.3
V24A Rampart Ranch, 88.73 51 ⇑P P 22 46 09.6 -0.4
baz=89
LOHW Long Hollow 88.74 42 eP P 22 46 10.0 +0.2
comp=Z,3.9nm,0.7s,mb4.3
328A Wristen Ranch, 88.76 56 ⇓P P 22 46 08.9 -1.3
baz=89
HHC Hu-ho-hao-te 88.77 315 eP P 22 46 09.8 -0.2
HHC S S 22 56 08.1 -1.4
HHC pmax pmax
comp=Z,21nm,0.8s,mb5.0
HHC pmax pmax
comp=Z,110nm,6.9s
KMI Kunming 88.77 297 P P 22 46 11.6 +1.2
KMI pP pP 22 48 16.8 +2.2
KMI sP sP 22 49 13.1 +1.3
KMI S S 22 56 09.1 -1.2
KMI pmax pmax
comp=Z,17nm,1.1s,mb4.8
KMI pmax pmax
comp=Z,77nm,4.1s
R22A Saguache, Gunn 88.78 48 ⇑P P 22 46 10.0 -0.1
baz=89
CHMT Chamberlain Mo 88.80 39 eP P 22 46 09.8 -0.2
G16A Moss Hill, Enn 88.80 40 ⇑P P 22 46 10.1 +0.1
baz=89,SNR=6.2
L19A Farson 88.81 44 ⇓P P 22 46 10.1 -0.1
baz=89,SNR=12
127A Arkansas Junct 88.87 55 ⇓P P 22 46 10.2 -0.5
baz=89,SNR=6.2
B13A Whitefish 88.87 37 ⇑P P 22 46 09.6 -0.7
baz=89
H16A Russell Place, 88.88 41 ⇑P P 22 46 10.7 +0.3
baz=89,SNR=5.8
J18A Kendall Valley 88.92 43 P P 22 46 10.8 +0.1
baz=89,SNR=32
N20A Spence Gulch, 88.94 46 ⇑P P 22 46 10.7 -0.1
baz=89,SNR=13
C14A Swan Lake 88.96 38 ⇓P P 22 46 09.7 -1.1
baz=89
BW06 Boulder Array 89.00 43 P P 22 46 10.7 -0.4
baz=89,SNR=9.1
BW06 Boulder Array 89.00 43 eP P 22 46 11.0 0.0
PDAR Pinedale Array 89.00 43 P P 22 46 10.4 -0.6
comp=Z,8.6nm,0.8s,mb4.6,baz=218,slow=2.8,SNR=58
SMCO Snowmass 89.05 47 eP P 22 46 11.8 +0.4
comp=Z,5.2nm,0.9s,mb4.4

W25A X Bar L Ranch, 89.11 52 ⇓P P 22 46 11.0 -0.8
baz=89,SNR=8.1
BOZ Bozeman (W) 89.12 40 ⇓P P 22 46 11.1 -0.4
baz=89,SNR=6.8
BOZ Bozeman (W) 89.12 40 eP P 22 46 11.5 0.0
comp=Z,6.3nm,0.9s,mb4.5
F16A Kennard Place, 89.19 40 ⇓P P 22 46 11.3 -0.6
baz=89,SNR=6.3
A13A Flathead Natio 89.20 36 ⇑P P 22 46 11.4 -0.5
baz=89
DAWY Dawson 89.22 16 eP P 22 46 11.3 -0.2
Z27A Tatum 89.25 54 ⇓P P 22 46 11.8 -0.6
baz=89
V25A Rancho No Teng 89.26 51 ⇓P P 22 46 12.4 -0.1
baz=89,SNR=5.4
I18A Diamond G Ranc 89.28 43 ⇑P P 22 46 12.8 +0.5
baz=90
M20A Sweetwater, Wa 89.29 45 ⇑P P 22 46 12.9 +0.4
baz=90
D15A Lincoln 89.30 39 ⇑P P 22 46 12.3 0.0
baz=90
CHRT Chiangrai 89.34 291 ⇓P P 22 46 14.0 +0.9
comp=Z,132nm,0.7s,mb5.9
EGAK Eagle 89.36 15 eP P 22 46 11.4 -0.7
comp=Z,22nm,0.8s,mb5.0
P22A Eagle 89.39 47 ⇓P P 22 46 12.2 -0.8
baz=90
N21A Black Mountain 89.40 46 ⇑P P 22 46 13.2 +0.3
baz=90,SNR=8.4
L20A Wamsutter 89.43 45 P P 22 46 13.5 +0.4
baz=90,SNR=8.1
SDCO Great Sand Dun 89.45 49 eP P 22 46 13.2 -0.1
comp=Z,6.0nm,1.4s,mb4.2
K19A Absolon Red Bu 89.49 44 ⇓P P 22 46 12.7 -0.6
baz=90
HRY Holter Researc 89.53 39 eP P 22 46 13.4 0.0
B14A Marquette Ranc 89.54 37 P P 22 46 13.3 -0.1
baz=90,SNR=8.8
WALA Waterton Lakes 89.55 36 eP P 22 46 12.9 -0.5
comp=Z,0.2nm,0.8s
CMAR Chiang Mai Arr 89.56 290 P P 22 46 15.2 +1.0
comp=Z,11nm,0.9s,mb4.7,baz=124,slow=2.8,SNR=50
CMAR PP PP 22 50 00.9 +4.3
comp=Z,1.8nm,1.1s,baz=150,slow=6.1,SNR=4.3
S24A Houchin Ranch, 89.61 49 ⇑P P 22 46 14.4 +0.3
baz=90
C15A Salmond Ranch, 89.62 38 ⇑P P 22 46 12.8 -1.0
baz=90
U25A Circle Dot Ran 89.66 51 ⇓P P 22 46 13.8 -0.5
baz=90
CHG Chiang Mai 89.69 290 ⇓P P 22 46 15.6 +0.8
comp=Z,20nm,0.9s,mb5.0
CHTO Chiang Mai 89.69 290 eP P 22 46 15.5 +0.7
comp=Z,7.7nm,0.6s,mb4.7
CHTO Chiang Mai 89.69 290 P P 22 46 14.7 -0.1
K20A Yellowstone Ra 89.74 44 P P 22 46 14.0 -0.5
baz=90,SNR=5.8
A14A Double T Ranch 89.78 37 P P 22 46 14.1 -0.4
baz=90,SNR=16
O22A Kremmling 89.79 47 ⇑P P 22 46 15.0 +0.2
baz=90,SNR=8.1
F17A Fitzpatrick Pl 89.83 40 ⇑P P 22 46 15.1 +0.3
baz=90,SNR=7.4
MSTX Muleshoe 89.85 54 ⇓P P 22 46 14.6 -0.6
baz=90
D16A Dana Ranch, Ca 89.86 39 P P 22 46 15.3 +0.3
baz=90,SNR=8.7
M21A Separation Pea 89.89 45 ⇓P P 22 46 15.2 -0.1
baz=90,SNR=13
B15A Bradely Ranch, 89.92 38 ⇑P P 22 46 14.1 -1.1
baz=90
T25A Trinidad 89.97 50 ⇓P P 22 46 15.5 -0.2
baz=90
L21A Rawlins 90.05 45 ⇓P P 22 46 15.6 -0.3
baz=90
W27A Bowe Ranch, En 90.09 53 ⇓P P 22 46 15.9 -0.4
baz=90
C16A Fuhringer Ranc 90.13 38 ⇓P P 22 46 15.6 -0.5
baz=90,SNR=8.0
U26A Atchley Ranch, 90.14 51 ⇓P P 22 46 16.0 -0.5
baz=90
N22A Wattenberg Ran 90.14 46 ⇓P P 22 46 16.9 +0.5
baz=90
A15A Johnson Ranch, 90.17 37 P P 22 46 15.7 -0.6
baz=90,SNR=7.6
S25A Robets Cordova 90.18 50 ⇑P P 22 46 15.9 -0.7
baz=90,SNR=5.9
CD2 Chengdu 90.20 303 P P 22 46 17.4 +0.5
CD2 pP pP 22 48 22.6 +1.2
CD2 sP sP 22 49 18.5 +0.1
CD2 PP PP 22 50 04.0 +2.5
CD2 SKS 22 55 53.8
CD2 S S 22 56 21.5 -1.5
CD2 sS sS 23 00 03.6 -1.7
CD2 SS SS 23 02 43.4 +2.8
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.9
CD2 pmax pmax
comp=Z,120nm,5.5s
G18A Lazy EL Ranch, 90.22 41 ⇑P P 22 46 16.9 +0.2
baz=90
Q24A Divide 90.23 48 ⇓P P 22 46 17.0 +0.1
baz=90
RLMT Red Lodge 90.31 41 ⇑P P 22 46 17.5 +0.4
baz=90
RLMT Red Lodge 90.31 41 eP P 22 46 17.8 +0.7
comp=Z,3.3nm,0.8s,mb4.2
F18A Big Timber 90.41 41 ⇓P P 22 46 17.9 +0.4
baz=91
D17A Six Diamond Ra 90.43 39 ⇑P P 22 46 17.4 -0.1
baz=91,SNR=14
B16A M & M Farms, S 90.47 38 ⇑P P 22 46 16.2 -1.4
baz=91,SNR=6.7
N23A Red Feather La 90.53 46 ⇓P P 22 46 17.6 -0.6
baz=91,SNR=7.4
E18A Harlowton 90.61 40 ⇑P P 22 46 18.4 0.0
baz=91
C17A Wharram Farm, 90.62 39 ⇑P P 22 46 18.0 -0.4
baz=91,SNR=17
L22A Ellis Ranch, M 90.71 45 ⇑P P 22 46 19.2 +0.3
baz=91
JCT Junction City 90.77 58 eP P 22 46 19.1 -0.5
A16A West Butte Ran 90.80 37 ⇑P P 22 46 18.8 -0.4
baz=91,SNR=19
B17A L&G Farms, Che 90.93 38 ⇑P P 22 46 19.6 -0.2
baz=91
D18A Linhart Farms, 90.98 39 ⇓P P 22 46 20.3 +0.2
baz=91
P25A Willow Gulch B 91.16 48 ⇑P P 22 46 21.7 +0.6
baz=91
A17A Triple J Farms 91.31 38 P P 22 46 21.4 -0.1
baz=92,SNR=6.6
B18A Beardsley Farm 91.58 38 ⇑P P 22 46 22.6 -0.2
baz=92
YAK Yakutsk 91.59 338 eP P 22 46 21.4 -1.2
comp=Z,18nm,0.7s,mb5.2
A18A Metzger Ranch, 91.79 38 ⇓P P 22 46 22.9 -0.9
baz=92
INK Inuvik 94.03 15 P P 22 46 32.5 -1.1
comp=Z,4.2nm,0.7s,mb4.7,baz=236,slow=7.5,SNR=6.5
SONM Songino Array 95.17 319 P P 22 46 38.7 -0.5
comp=Z,1.6nm,0.8s,mb4.2,baz=133,slow=5.5,SNR=6.8
YKA Yellowknife Ar 96.36 25 P P 22 46 42.6 -1.6
comp=Z,1.5nm,0.7s,mb4.3,baz=240,slow=4.8,SNR=3.8
GTA Gaotai 96.38 310 eP P 22 46 44.9 0.0
GTA pmax pmax
comp=Z,3.0nm,1.2s,mb4.4
ZALV Zalesovo Beam 109.92 321 PKiKP PKiKP 22 51 41.0 -2.1
comp=Z,2.2nm,0.6s,baz=140,slow=0.7,SNR=15
ZALV Zalesovo Beam 109.92 321 PKPdf PKiKP 22 51 41.0 -2.1
MK31 Makanchi Array 110.61 314 ePKPdf PKiKP 22 51 42.7 -2.0
MKAR Makanchi Array 110.61 314 Pdiff Pdif 22 47 48.7 +0.6
comp=Z,0.3nm,0.6s,baz=26,slow=4.3,SNR=5.6
MKAR PKiKP PKiKP 22 51 42.7 -2.0
comp=Z,2.1nm,0.6s,baz=69,slow=0.8,SNR=40
MKAR Makanchi Array 110.61 314 Pdif Pdif 22 47 48.7 +0.6
MKAR PKPdf PKiKP 22 51 42.7 -2.2
KURK Kurchatov 113.41 318 ePKPdf PKiKP 22 51 47.7 -2.2
BVAR Borovoye Array 118.50 320 PKP PKPdf 22 51 57.8 -1.8
comp=Z,6.8nm,0.6s,baz=124,slow=1.0,SNR=33
KBL Kabul 119.31 299 ePKPdf PKPdf 22 52 01.1 -0.7
SUR Sutherland 124.63 200 PKP PKPdf 22 52 11.7 -0.4
comp=Z,8.3nm,1.0s,baz=310,slow=22,SNR=2.9
ARU Arti 124.63 325 ePKPdf PKPdf 22 52 10.2 -1.1
ABKAR Akbulak array 125.50 317 ePKPdf PKPdf 22 52 11.8 -1.3
KEV Kevo 128.01 349 ep PKPdf 22 52 15.2 -2.2
comp=Z,4.3nm,0.8s

ARCES ARCESS Array B 128.47 349 PKhKP PKPpre 22 52 04.4
comp=Z,2.0nm,0.9s,baz=107,slow=1.3,SNR=6.2
ARCES PKP PKPdf 22 52 16.6 -1.6
comp=Z,5.6nm,0.6s,baz=210,slow=1.0,SNR=11
ARCES SKPbc 22 54 43.3
comp=Z,4.5nm,0.9s,baz=46,slow=5.2,SNR=7.1
ARE0 ARCESS Array B 128.47 349 ePKPdf PKPdf 22 52 16.7 -1.5
LBTB Lobatse 129.39 209 SKPbc SKPbc 22 54 49.4 -0.9
comp=Z,2.5nm,0.8s,baz=170,slow=3.3,SNR=5.0
KAF Kangasniemi 134.66 344 ep PKPdf 22 52 27.4 -2.7
comp=Z,5.9nm,0.5s
FINES FINESS Array B 135.28 344 PKhKP PKPpre 22 52 17.0
comp=Z,0.7nm,0.7s,baz=37,slow=4.8,SNR=7.1
FINES PKP PKPdf 22 52 29.1 -2.2
comp=Z,3.8nm,0.6s,baz=64,slow=4.4,SNR=13
FINES PKiKP PKiKP 22 52 31.1 -1.8
comp=Z,3.9nm,0.6s,baz=90,slow=3.8,SNR=13
FINES SKPbc SKPbc 22 55 06.8 -2.4
comp=Z,1.8nm,0.6s,baz=0.0,slow=1.9,SNR=6.8
FINES SKPab 22 55 11.7
comp=Z,3.7nm,0.7s,baz=2.5,slow=4.4,SNR=8.4
FINES FINESS Array B 135.28 344 PKP PKPpre 22 52 17.0
FINES PKP PKPdf 22 52 29.1 -2.2
FINES PKPdf PKPdf 22 52 31.1 -0.2
FINES SKPbc SKPbc 22 55 06.8 -2.4
FINES SKPab 22 55 11.7
NB2 NORSAR Subarra 138.55 353 PKP PKPpre 22 52 26.5
comp=Z,1.1nm,0.5s,baz=16,slow=3.2
NOA NORSAR Array B 138.55 353 PKhKP PKPpre 22 52 25.8
comp=Z,3.6nm,0.7s,baz=16,slow=4.7,SNR=16
NOA PKiKP PKiKP 22 52 38.1 -1.5
comp=Z,1.5nm,0.5s,baz=13,slow=4.0,SNR=5.2
NOA SKPbc SKPbc 22 55 16.4 -2.3
comp=Z,2.2nm,0.9s,baz=14,slow=4.4,SNR=4.8
SUW Suwalki 142.33 339 ePKP PKPdf 22 52 39.5 -4.8
AKASG Malin Array Be 142.47 331 PKhKP PKPpre 22 52 40.1
comp=Z,25nm,0.5s,baz=43,slow=4.3,SNR=96
AKASG PKiKP PKiKP 22 52 46.1 -1.8
comp=Z,2.5nm,0.6s,baz=62,slow=2.1,SNR=4.9
AKASG SKPbc SKPbc 22 55 27.1 -2.0
comp=Z,2.4nm,0.6s,baz=38,slow=2.9,SNR=8.3
MUD Monsted U'grnd 143.27 353 i P PKPdf 22 52 43.0 -2.9
comp=Z,50nm,0.8s
COP Copenhagen 143.55 350 i P PKPdf 22 52 43.8 -2.6
comp=Z,38nm,0.8s
BSD Bornholm Skovb 143.62 347 i P PKPdf 22 52 43.8 -2.8
comp=Z,71nm,0.8s
GKP Gorka Klasztor 144.76 344 ePKP PKPdf 22 52 47.0 -1.6
KIS Kishinev 145.17 327 eP PKPdf 22 52 48.0 -1.5
BSEG Bad Segeberg 145.58 351 ePKPbc PKPbc 22 52 50.5 -1.0
LEOM Leova 145.81 326 ⇑iP PKPdf 22 52 51.5 +0.9
KWP Kalwaria Pacla 146.05 335 ePKP PKPdf 22 52 52.0 +1.1
KWP Kalwaria Pacla 146.05 335 ePKPbc PKPbc 22 52 52.1 -0.9
KWP Kalwaria Pacla 146.05 335 ⇓iP PKPdf 22 52 52.0 +1.1
BR131 Keskin Array S 146.25 312 ePKPdf PKPdf 22 52 50.5 -1.0
BR131 ePKPbc PKPbc 22 52 53.1 -0.8
BRTR Keskin Array B 146.25 312 PKP PKPdf 22 52 49.9 -1.7
comp=Z,11nm,0.6s,baz=140,slow=2.6,SNR=79
BRTR PKPbc PKPbc 22 52 52.6 -1.2
comp=Z,11nm,0.6s,baz=134,slow=4.1,SNR=80
BRTR PKiKP PKiKP 22 52 56.2 +0.1
comp=Z,4.7nm,0.7s,baz=54,slow=2.1,SNR=15
BRTR SKPbc SKPbc 22 55 34.8 -3.6
comp=Z,1.5nm,0.8s,baz=125,slow=3.2,SNR=5.6
DLF Lyons Farm 146.31 9 eP PKPdf 22 52 51.0 -0.2
RUE Ruedersdorf 146.32 346 ePKPdf PKPdf 22 52 50.8 -0.5
RUE ePKPbc PKPbc 22 52 52.8 -0.8
TLCR 146.34 324 ⇑P PKPdf 22 52 53.1 +1.6
TLCR 146.34 324 ⇑iP PKPdf 22 52 53.1 +1.6
BUR08 Bucovina Ar. S 146.50 331 ePKPdf PKPdf 22 52 51.9 +0.2
BUR08 ePKPbc PKPbc 22 52 54.1 -0.1
BURAR Bucovina Array 146.51 330 ⇓P PKPbc 22 52 53.8 -0.5
BURAR Bucovina Array 146.51 330 ⇓iP PKPbc 22 52 53.8 -0.5
TESR 146.60 328 ⇓P PKPbc 22 52 53.4 -1.1
TESR 146.60 328 ⇓iP PKPbc 22 52 53.4 -1.2
CFR Carcaliu 146.72 325 ⇑P PKPbc 22 52 55.0 +0.1
CFR Carcaliu 146.72 325 ⇑iP PKPbc 22 52 55.0 +0.1
STHS Stebnicka Huta 146.79 336 ePKP PKPbc 22 52 54.7 -0.3
STHS Stebnicka Huta 146.79 336 ePKP PKPbc 22 52 54.7 -0.3
NRDL Niedersach Rie 147.00 350 ePKPbc PKPdf 22 52 53.2 +0.8
VRI Vrincioaia 147.00 327 ⇑P PKPbc 22 52 54.9 -0.8
VRI Vrincioaia 147.00 327 ⇑iP PKPbc 22 52 54.8 -0.9
TIRR Tirgusor 147.02 323 ePKPbc PKPbc 22 52 54.6 -1.1
TIRR ePKPab PKPab 22 52 58.9 -0.3
TIRR Tirgusor 147.02 323 ⇓iP PKPdf 22 52 54.5 +1.8
PLOR Plostina 147.06 327 ⇑iP PKPbc 22 52 54.8 -1.0
CRVS Cervenica-Dubn 147.12 336 ePKP PKPbc 22 52 54.9 -1.0
CRVS Cervenica-Dubn 147.12 336 ePKP PKPbc 22 52 54.9 -1.0
WIT Witteveen 147.13 354 ePKP PKPbc 22 52 55.7 -0.1
NIE Niedzica 147.13 337 ePKP PKPbc 22 52 55.6 -0.3
KSP Ksiaz 147.20 343 ePKP PKPbc 22 52 55.5 -0.5
MMAI Mount Meron Ar 147.23 300 PKPbc PKPbc 22 52 56.4 -0.3
comp=Z,26nm,0.6s,baz=71,slow=5.4,SNR=54
MMAI PKiKP PKiKP 22 52 59.5 +1.2
comp=Z,13nm,0.6s,baz=87,slow=6.1,SNR=15
BMR Baia Mare 147.24 332 P PKPbc 22 52 55.3 -0.9
TRPA Tarpa 147.30 334 ⇑iP PKPbc 22 52 55.2 -1.2
IBBN Ibbenburen 147.51 353 ePKPbc PKPbc 22 52 55.9 -0.8
OKC Ostrava-Krasne 147.52 340 ⇑iPKP PKPbc 22 52 56.0 -0.9
OKC ePKPAB PKPab 22 53 00.4 -0.6
UPC Upice 147.58 343 ⇑iPKP PKPbc 22 52 56.4 -0.6
UPC ePKPAB PKPab 22 53 01.1 -0.1
CLL Collm 147.59 347 ePKPbc PKPbc 22 52 56.0 -1.0
CLL ePKPab PKPab 22 53 00.3 -0.9
CLL Collm 147.59 347 ⇓iPKPbc PKPbc 22 52 56.1 -0.9
comp=Z,58nm,0.8s
CLL ⇑iPKPab PKPab 22 53 00.2 -1.0
comp=Z,33nm,0.7s
CLZ Clausthal 147.59 350 ePKPbc PKPbc 22 52 56.5 -0.5
CLZ ePKPab PKPab 22 52 59.9 -1.3
DOPR Dopca 147.61 328 ⇑iP PKPbc 22 52 57.1 -0.1
DPC Dobruska-Polom 147.63 342 ePKPDF PKPdf 22 52 54.2 +0.7
DPC ⇑iPKP PKPbc 22 52 56.7 -0.4
DPC ePKPAB PKPab 22 53 01.2 -0.2
DPC epPKP pPKPdf 22 55 14.5 +7.8
MLR Muntele Rosu 147.66 327 ⇓P PKPbc 22 52 56.1 -1.3
MLR Muntele Rosu 147.66 327 ⇓iP PKPbc 22 52 56.1 -1.3
MORC Moravsky Berou 147.77 340 ePKPbc PKPbc 22 52 56.8 -0.7
MORC ePKPab PKPab 22 53 01.8 -0.2
MORC Moravsky Berou 147.77 340 ⇓iP PKPbc 22 52 57.1 -0.4
BRG Berggiesshubel 147.78 345 ePKPbc PKPbc 22 52 56.7 -0.8
BRG ePKPab PKPab 22 53 01.3 -0.7
KECS Kecovo 147.84 336 ePKP PKPbc 22 52 57.1 -0.6
KECS Kecovo 147.84 336 ePKP PKPbc 22 52 57.1 -0.6
PVCC Panska Ves 147.94 344 ⇑iPKP PKPbc 22 52 57.3 -0.6
WTSB Winterswijk 147.95 354 ePKP PKPbc 22 52 56.9 -1.0
WTSB Winterswijk 147.95 354 ex PKPab 22 53 01.6 -1.0
VOIR 148.15 328 ⇑P PKPbc 22 52 57.9 -0.7
VOIR 148.15 328 ⇑iP PKPbc 22 52 57.9 -0.7
DRGR 148.26 332 ⇑P PKPbc 22 52 57.8 -1.0
DRGR 148.26 332 ⇑iP PKPbc 22 52 57.8 -1.0
PRA Prague 148.40 344 ⇑PKP PKPbc 22 52 58.5 -0.6
PRU Pruhonice 148.45 344 ⇑iPKP PKPbc 22 52 58.9 -0.3
PRU ePKPAB PKPab 22 53 04.9 +0.2
VRAC Vranov 148.48 341 ⇑P PKPbc 22 52 58.9 -0.3
VRAC Vranov 148.48 341 ⇑iP PKPbc 22 52 58.9 -0.4
MOX Moxa 148.51 348 ePKP PKPbc 22 52 58.4 -0.9
comp=Z,25nm,1.4s
MOX e 22 53 04.0
MOX Moxa 148.51 348 ePKPbc PKPbc 22 52 58.4 -0.9
MOX ePKPab PKPab 22 53 03.9 -1.1
KOLL Kolacno 148.52 338 ePKP PKPbc 22 52 58.8 -0.6
KOLL Kolacno 148.52 338 ePKP PKPbc 22 52 58.8 -0.6
TANN Tannenbergstha 148.55 347 ePKPbc PKPbc 22 52 58.8 -0.6
TANN ePKPab PKPab 22 53 04.2 -0.9
NKC Novy Kostel 148.72 346 ⇑iPKP PKPbc 22 52 59.1 -0.8
NKC ePKPAB PKPab 22 53 04.8 -1.1
TREC Trest 148.82 342 ⇑iPKP PKPbc 22 52 59.2 -0.9
TREC ePKPAB PKPab 22 53 05.9 -0.4
ROTZ Rotzenmuhle 149.22 346 ePKPbc PKPbc 22 53 00.3 -0.8
ROTZ ePKPab PKPab 22 53 07.6 -0.3
BUD Budapest 149.22 337 ⇓ePKP PKPab 22 53 09.5 +1.5
HGN Heimansgroeve 149.22 355 ePKP PKPbc 22 52 59.9 -1.1
comp=Z,19nm,0.8s
HGN Heimansgroeve 149.22 355 ex PKPab 22 53 06.4 -1.5
GZR Gura Zlata 149.29 330 ⇑P PKPbc 22 53 00.4 -1.0
GZR Gura Zlata 149.29 330 ⇑iP PKPbc 22 53 00.4 -1.0
MEM Membach 149.37 354 PKPbc PKPbc 22 53 00.7 -0.7
TNS Taunus Mts 149.46 351 ePKPbc PKPbc 22 53 01.0 -0.6
TNS ePKPab PKPab 22 53 08.3 -0.6
KHC Kasperske Hory 149.48 344 ePKPdf PKPdf 22 52 55.3 -1.2
KHC ePKPbc PKPbc 22 53 01.1 -0.6

KHC				*e*PKPab	PKPab	22 53 09.0	0.0
KHC	**Kasperske Hory**	**149.48**	**344**	*e*PKPDF	PKPdf	22 52 56.2	-0.3
KHC				⇑*i*PKP	PKPbc	22 53 01.0	-0.7
KHC				*e*PKPAB	PKPab	22 53 08.7	-0.4
KHC				*ex*	x	22 54 59.3	
GRF	**Grafenberg Arr**	**149.50**	**348**	*e*PKPbc	PKPbc	22 53 01.1	-0.6
GRF				*e*PKPab	PKPab	22 53 08.5	-0.6
GRF				*ep*PKPbc	pPKPbc	22 55 01.4	-12
SNF	**Seneffe**	**149.60**	**357**	PKPbc	PKPbc	22 53 01.1	-0.8
SNF				PKPab	PKPab	22 53 08.6	-0.9
BCLA	**Clavier**	**149.62**	**355**	PKPab	PKPab	22 53 08.4	-1.2
MENF	**Mencas**	**149.62**	**359**	PKP	PKPbc	22 53 01.3	-0.7
WET	**Wettzell**	**149.64**	**345**	*e*PKPbc	PKPbc	22 53 01.2	-0.9
WET				*e*PKPab	PKPab	22 53 09.4	-0.3
BZS	**Buzias**	**149.65**	**331**	⇑*i*P	PKPbc	22 53 00.9	-1.4
BZS	**Buzias**	**149.65**	**331**	⇑*i*P	PKPbc	22 53 00.9	-1.3
GEC2	**GERESS Array S**	**149.72**	**344**	*e*PKPbc	PKPbc	22 53 01.3	-1.0
GEC2				*e*PKPab	PKPab	22 53 09.4	-0.6
ABH	**Alteburg**	**149.92**	**352**	PKP	PKPbc	22 53 01.8	-0.9
CONA	**Conrad Observa**	**149.93**	**341**	⇓*i*PKPbc	PKPbc	22 53 02.1	-0.7
	comp=Z,19nm,0.6s						
GIVF	**Givet**	**149.97**	**356**	*e*PKP1	PKPbc	22 53 01.7	-1.1
	comp=Z,72nm,0.7s						
DOU	**Dourbes**	**149.99**	**356**	PKPbc	PKPbc	22 53 02.3	-0.6
TOD	**Tromm**	**150.01**	**350**	PKP	PKPbc	22 53 01.8	-1.1
BAIF	**Baives**	**150.05**	**357**	*e*PKP1	PKPbc	22 53 02.0	-1.0
	comp=Z,59nm,0.9s						
RUP	**Ruppelstein**	**150.16**	**353**	PKP	PKPbc	22 53 02.5	-0.8
WLF	**Walferdange**	**150.29**	**354**	PKPbc	PKPbc	22 53 03.5	-0.1
WLF				PKPab	PKPab	22 53 11.8	-0.6
WLF	**Walferdange**	**150.29**	**354**	*e*PKPbc	PKPbc	22 53 03.1	-0.5
WLF				*e*PKPab	PKPab	22 53 11.5	-0.9
WLF				*ep*PKPbc	pPKPbc	22 55 04.0	-11
PKSM	**Moragy**	**150.42**	**336**	⇑P	PKPbc	22 53 02.5	-1.5
PKSM	**Moragy**	**150.42**	**336**	⇑*i*P	PKPbc	22 53 02.5	-1.5
MOA	**Molln**	**150.47**	**342**	⇓*i*PKPbc	PKPbc	22 53 02.3	-1.8
	comp=Z,7.2nm,0.5s						
STU	**Stuttgart**	**150.76**	**350**	*e*PKPbc	PKPbc	22 53 03.9	-0.8
STU				*e*PKPab	PKPab	22 53 13.2	-1.2
STU	**Stuttgart**	**150.76**	**350**	*e*PKPdf	PKPdf	22 52 57.5	-1.0
STU				*e*PKPbc	PKPbc	22 53 03.9	-0.8
STU				*e*PKPab	PKPab	22 53 13.4	-1.0
LANF	**Langenberg**	**150.77**	**352**	PKP	PKPbc	22 53 02.9	-1.8
RJOB	**Jochberg**	**150.97**	**344**	*e*PKPbc	PKPbc	22 53 03.6	-1.6
RJOB				*e*PKPab	PKPab	22 53 15.2	-0.1
VTS	**Vitosha**	**151.09**	**326**	⇑P	PKPbc	22 53 05.1	-0.6
VTS	**Vitosha**	**151.09**	**326**	⇑*i*P	PKPbc	22 53 05.1	-0.6
KOGS	**Kog**	**151.10**	**339**	*e*PKPbc	PKPbc	22 53 03.9	-1.7
KOGS				*i* PKPab	PKPab	22 53 14.8	-1.1
BFO	**Black Forest**	**151.33**	**351**	*e*PKPbc	PKPbc	22 53 04.6	-1.4
BFO				*e*PKPab	PKPab	22 53 15.8	-1.0
BFO	**Black Forest**	**151.33**	**351**	*e*PKPbc	PKPbc	22 53 04.8	-1.2
BFO				*e*PKPab	PKPab	22 53 15.9	-0.9
FLN	**La Foliniere**	**151.38**	**3**	*e*PKP1	PKPbc	22 53 04.4	-1.7
	comp=Z,79nm,1.1s						
CDF	**Champ du Feu**	**151.40**	**352**	*e*PKP1	PKPbc	22 53 04.8	-1.4
	comp=Z,26nm,0.9s						
SPAK	**Spaichingen-Ko**	**151.47**	**350**	PKP	PKPbc	22 53 05.5	-0.8
MEZF	**Maizieres J'vi**	**151.54**	**355**	*e*PKP1	PKPbc	22 53 05.4	-1.1
	comp=Z,30nm,0.9s						
LDF	**La Druitiere**	**151.56**	**2**	*e*PKP1	PKPbc	22 53 04.7	-1.8
	comp=Z,14nm,0.7s						
ROSF	**Rostrenen**	**151.59**	**7**	*e*PKP1	PKPbc	22 53 04.7	-1.9
	comp=Z,15nm,0.7s						
WATA	**Walderalm**	**151.65**	**346**	⇓*i*PKPbc	PKPbc	22 53 05.2	-1.5
	comp=Z,9.4nm,0.5s,SNR=9.6						
WTTA	**Wattenberg**	**151.70**	**345**	⇑*i*PKPbc	PKPbc	22 53 04.9	-2.0
	comp=Z,18nm,0.5s						
THEF	**They Montfort**	**151.73**	**354**	PKP	PKPbc	22 53 05.5	-1.4
GRR	**Gorron**	**151.74**	**3**	*e*PKP1	PKPbc	22 53 05.4	-1.5
	comp=Z,20nm,0.6s						
SGMF	**Saint Gilles**	**151.74**	**6**	*e*PKP1	PKPbc	22 53 05.1	-1.8
	comp=Z,30nm,0.7s						
HAU	**Haudompre**	**151.91**	**353**	*e*PKP1	PKPbc	22 53 05.8	-1.5
	comp=Z,12nm,0.7s						
QUIF	**Quistinic**	**152.01**	**7**	*e*PKP1	PKPbc	22 53 05.6	-1.9
LJU	**Ljubljana**	**152.02**	**340**	*i* PKPbc	PKPbc	22 53 06.4	-1.2
HINF	**Hinteralfeld**	**152.04**	**352**	*e*PKP1	PKPbc	22 53 05.9	-1.7
	comp=Z,4.8nm,0.7s						
FETA	**Feichten**	**152.13**	**346**	⇑*i*PKPdf	PKPdf	22 52 59.7	-0.9
	comp=Z,6.3nm,0.8s						
VOY	**Vojsko**	**152.23**	**341**	*e*PKPbc	PKPbc	22 53 06.7	-1.4
BOJS	**Bojanci**	**152.26**	**339**	*i* PKPdf	PKPdf	22 53 00.4	-0.4
BOJS				*i* PKPbc	PKPbc	22 53 07.2	-1.0
CEY	**Cerknica**	**152.32**	**340**	*i* PKPbc	PKPbc	22 53 06.9	-1.4
CEY				*i* PKPab	PKPab	22 53 19.9	-1.2
LOR	**Lormes**	**152.85**	**357**	*e*PKP1	PKPbc	22 53 08.0	-1.4
	comp=Z,14nm,0.8s						
SSF	**Saint Saulge**	**153.08**	**357**	*e*PKP1	PKPbc	22 53 08.5	-1.4
	comp=Z,8.4nm,0.7s						
CABF	**La Chapelle**	**153.31**	**353**	*e*PKP1	PKPbc	22 53 09.5	-0.9
	comp=Z,13nm,0.9s						
MFF	**Saint Martin d**	**153.55**	**3**	*e*PKP1	PKPbc	22 53 09.3	-1.6
	comp=Z,14nm,0.9s						
BGF	**Bois d'Agland**	**153.61**	**358**	*e*PKP1	PKPbc	22 53 09.6	-1.4
	comp=Z,6.1nm,0.7s						
TCF	**Toulx Ste Croi**	**153.90**	**359**	*e*PKP1	PKPbc	22 53 10.0	-1.7
	comp=Z,8.3nm,0.9s						
LPL	**La Plagne**	**154.31**	**352**	*e*PKP1	PKPbc	22 53 11.9	-0.7
	comp=Z,3.7nm,0.7s						
LPG	**La Plagne**	**154.33**	**351**	*e*PKP1	PKPbc	22 53 12.0	-0.6
	comp=Z,7.2nm,0.9s						
ORIF	**Oris-en-Rattie**	**155.01**	**353**	*e*PKP1	PKPdf	22 53 12.9	+8.2
	comp=Z,11nm,1.0s						
MBDF	**Montbardon**	**155.08**	**351**	*e*PKP1	PKPdf	22 53 12.9	+8.1
	comp=Z,14nm,0.9s						
VIVF	**Saint-Julien-l**	**155.19**	**355**	*e*PKP1	PKPdf	22 53 13.3	+8.3
EVO	**Evora**	**159.88**	**22**	*e*PKIKP	PKPdf	22 53 09.7	-1.2
	comp=Z,22nm,1.2s						
ESDC	**Sonseca Array**	**159.95**	**12**	PKP	PKPdf	22 53 09.1	-1.9
	comp=Z,0.1nm,0.3s,baz=346,slow=1.0,SNR=4.9						
ESDC				PKPab	PKPab	22 53 53.1	-1.1
	comp=Z,2.1nm,0.7s,baz=338,slow=4.2,SNR=17						
ESDC	**Sonseca Array**	**159.95**	**12**	PKP	PKPdf	22 53 09.1	-1.9
ESDC				PKPab	PKPab	22 53 53.1	-1.1

NOU ***19*** *22:39:04.3±0.6, 7°.42S×177°.34E, h0km±999km*
SZGRF ***19*** *22:39:09.5, 18°.41S×177°.48W, h382km, Fiji Islands region*
BGS ***19*** *22:39:49.6±8.2, 17°.34S×177°.31W, h391km, mb5.9(NEIC)*
BJI ***19*** *22:39:50.5, 17°.08S×176°.96W, h384km, mB5.9/48, mb5.8/59*
MOS ***19*** *22:39:50.8±0.9, 17°.33S×177°.33W, h384km, mb6.0/64, MS5.4/11, Error ellipse: s-maj=8.5km s-min=6.3km az=67.8*
DJA ***19*** *22:39:51, 17°.47S×177°.11W, h393km, Mw6.1/65*
ISCJB ***19*** *22:39:51.1±0.1, 17°.40S±0°.02×177°.31W±0°.02, h387km, mb5.9/306, Error ellipse: s-maj=3.0km s-min=1.8km az=140.5*
NEIC ***19*** *22:39:52.7±0.1, 17°.34S×177°.31W, mb5.9/207, ME5.6, MW6.4, MW6.3, Error ellipse: s-maj=3.4km s-min=2.4km az=128.0 Broadband fault plane solution: P waves. NP1:ϕs135.00000°, δ65.00000°, λ-80.00000°. NP2: ϕs292.00000°, δ27.00000°, λ-110.00000°. Principal axes: T Plg19.0000°, Azm218.0000°; N Plg0.0000°, Azm0.0000°; P Plg68.0000°, Azm65.0000°; Moment Tensor Solution. s98 Moment tensor: Scale 10^18 Nm; Mrr-2.69; Mθθ2.26; Mφφ0.43; Mrθ-0.95; Mθφ-1.09; Mφr1.85; Best double couple: M0 3.40000×10^18 NP1:ϕs135.00000°, δ64.00000°, λ-71.00000°. NP2:ϕs278.00000°, δ32.00000°, λ-123.00000°. Principal axes: T 3.2600, Plg16.0000°, Azm211.0000°; N 0.3100, Plg16.0000°, Azm306.0000°; P -3.5800, Plg65.0000°, Azm79.0000°; Depth from broadband displacement seismograms. Energy computed from BB mechanism.*
IDC ***19*** *22:39:52.7±0.3, 17°.30S×177°.31W, h387km±2km, mb5.5/33, mb1 5.6/34, mb1mx5.6/34, mbtmp5.5/34 Error ellipse: s-maj=7.5km s-min=6.6km az=163.0*
GCMT ***19*** *22:39:56.8±0.1, 17°.22S×177°.05W, h395km, MW6.4, Moment Tensor Solution. s115,c306; s99,c194; Moment tensor: Scale 10^18 Nm; Mrr-3.50±.02; Mθθ3.72±.04; Mφφ-0.22±.04; Mrθ-0.77±.03; Mθφ-3.19±.04; Mφr2.02±.03; Best double couple: M0 5.20000×10^18 NP1:ϕs271.00000°, δ42.00000°, λ-134.00000°. NP2: ϕs143.00000°, δ61.00000°, λ-58.00000°. Principal axes: T 5.8000, Plg10.0000°, Azm211.0000°; N -1.2700, Plg28.0000°, Azm307.0000°; P -4.5300, Plg60.0000°, Azm102.0000°; Data Used: II IU CN IC G. Mantle waves*

from 106 sta.
ISC 19 22:39:52.6±0.1, 17°.40S±0°.02×177°.28W±0°.02, h389km, h389km±1.4km; pP-P, n2109, o0°.78/1087, mb5.9/306, 295C-368D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.46**	**265**	Pn	**Pn**	**22 41 09.0**	**+0.4**
	186μm,0.9s						
MSVF	**Nonsavu**	**4.46**	**265**	⇓*i*Pn	**Pn**	**22 41 09.9**	**+1.3**
MSVF				*e*S	**S**	**22 42 15.0**	**+4.8**
MSVF	**Nonsavu**	**4.46**	**265**	Pn	**Pn**	**22 41 09.7**	**+1.1**
	1.0nm,1.0s						
AFI	**Afiamalu**	**6.34**	**58**	P	**Pn**	**22 41 22.0**	**-6.6**
	454nm,0.3s,baz=217,slow=4.2,SNR=70						
AFI				S	**S**	**22 42 33.6**	**-13**
	baz=52,slow=22,SNR=2.1						
AFI	**Afiamalu**	**6.34**	**58**	⇑*i*P	**Pn**	**22 41 21.8**	**-6.8**
AFI				*e*S	**S**	**22 42 37.0**	**-10**
AFI				pmax	pmax		
	comp=Z,4μm,1.1s						
AFI	**Afiamalu**	**6.34**	**58**	⇑*i*Pn	**Pn**	**22 41 21.8**	**-6.8**
	comp=Z,4μm,1.1s						
AFI				*e*S	**S**	**22 42 37.0**	**-10**
FUNA	**Funafuti**	**9.46**	**338**	*e*Pn	**Pn**	**22 42 01.2**	**-3.2**
	comp=Z,919nm,0.6s						
RAO	**Raoul Island**	**11.81**	**183**	P	**Pn**	**22 42 29.6**	**-2.0**
	comp=Z,533nm,0.3s,baz=168,slow=4.5,SNR=15						
RAO				S	**S**	**22 44 38.1**	**-2.9**
	comp=Z,841nm,0.3s,baz=100,slow=23,SNR=9.6						
BAYA	**Yate Dam**	**15.63**	**250**	*e*P	**P**	**22 43 13.0**	**+0.7**
PLUM	**Mont Dore**	**15.88**	**250**	*e*P	**P**	**22 43 16.1**	**+1.0**
DZM	**Mont Dzumac**	**16.01**	**250**	*e*P	**P**	**22 43 16.8**	**+0.4**
	comp=Z,3μm,1.3s						
DZM	**Mont Dzumac**	**16.01**	**250**	*e*P	**P**	**22 43 15.8**	**-0.6**
NOUC	**Port Laguerre**	**16.14**	**251**	*e*P	**P**	**22 43 16.9**	**-0.9**
RAR	**Rarotonga**	**16.96**	**106**	P	**P**	**22 43 26.2**	**-0.4**
	comp=Z,9.2nm,0.3s,baz=247,slow=7.5,SNR=21						
RAR				S	**S**	**22 46 25.8**	**+2.0**
	comp=Z,1.0nm,0.3s,baz=249,slow=13,SNR=1.5						
RAR	**Rarotonga**	**16.96**	**106**	P	**P**	**22 43 26.2**	**-0.4**
RAR				S	**S**	**22 46 25.8**	**+2.0**
RAR				pmax	pmax		
	comp=Z,9.0nm,0.3s						
RAR				smax			
	comp=N,1.0nm,0.3s						
OUZ	**Omahuta**	**19.52**	**203**	*e*P	**P**	**22 43 54.7**	**+1.4**
	comp=N,1μm,1.0s						
OUZ	**Omahuta**	**19.52**	**203**	*e*PN	**P**	**22 43 54.5**	**+1.2**
WCZ	**Waipu Caves**	**19.91**	**200**	P	**P**	**22 43 58.0**	**+1.2**
WCZ	**Waipu Caves**	**19.91**	**200**	PN	**P**	**22 43 57.9**	**+1.1**
KUZ	**Kuaotunu**	**20.24**	**196**	P	**P**	**22 44 00.2**	**+0.4**
KUZ	**Kuaotunu**	**20.24**	**196**	PN	**P**	**22 44 00.2**	**+0.4**
MKAZ	**Moumakai**	**20.74**	**197**	P	**P**	**22 44 05.6**	**+1.2**
MKAZ	**Moumakai**	**20.74**	**197**	PN	**P**	**22 44 05.6**	**+1.2**
WTAZ	**Waiatarua**	**20.75**	**199**	*e*P	**P**	**22 44 06.5**	**+2.0**
WTAZ	**Waiatarua**	**20.75**	**199**	*e*PN	**P**	**22 44 06.5**	**+2.1**
PUZ	**Puketiti**	**20.97**	**190**	P	**P**	**22 44 06.5**	**+0.1**
PUZ	**Puketiti**	**20.97**	**190**	PN	**P**	**22 44 06.5**	**0.0**
PUZ				*e*SN	**S**	**22 47 30.3**	**-3.3**
OPRZ	**Ohinepanea**	**21.08**	**194**	PN	**P**	**22 44 07.4**	**0.0**
TOZ	**Tahuroa Road**	**21.23**	**196**	P	**P**	**22 44 10.3**	**+1.5**
TOZ	**Tahuroa Road**	**21.23**	**196**	PN	**P**	**22 44 10.3**	**+1.5**
MWZ	**Matawai**	**21.35**	**191**	P	**P**	**22 44 08.1**	**-1.8**
MWZ				S	**S**	**22 47 37.3**	**-2.5**
MWZ	**Matawai**	**21.35**	**191**	PN	**P**	**22 44 08.1**	**-1.8**
MWZ				SN	**S**	**22 47 37.3**	**-2.4**
URZ	**Urewera**	**21.36**	**192**	P	**P**	**22 44 08.1**	**-1.9**
	comp=N,473nm,0.3s,mb6.4,baz=334,slow=2.8,SNR=155						
URZ				S	**S**	**22 47 36.4**	**-3.5**
	comp=N,95nm,0.9s,baz=194,slow=20,SNR=8.8						
URZ	**Urewera**	**21.36**	**192**	P	**P**	**22 44 07.8**	**-2.2**
URZ	**Urewera**	**21.36**	**192**	PN	**P**	**22 44 07.8**	**-2.2**
URZ				SN	**S**	**22 47 38.2**	**-1.7**
OMRZ	**Omania**	**21.37**	**194**	PN	**P**	**22 44 10.2**	**0.0**
HRRZ	**Handcock Road**	**21.66**	**194**	*e*PN	**P**	**22 44 12.1**	**-0.7**
PRRZ	**Plateau Road**	**21.74**	**193**	*e*PN	**P**	**22 44 12.4**	**-1.1**
KNZ	**Kokohu**	**21.99**	**191**	P	**P**	**22 44 15.3**	**-0.4**
KNZ	**Kokohu**	**21.99**	**191**	PN	**P**	**22 44 15.3**	**-0.5**
HIZ	**Hauiti**	**22.13**	**197**	*e*PN	**P**	**22 44 19.2**	**+2.1**
BKZ	**Black Stump Fm**	**22.36**	**193**	*e*PN	**P**	**22 44 17.4**	**-1.7**
FWVZ	**Far West T-bar**	**22.66**	**195**	P	**P**	**22 44 21.1**	**-0.7**
FWVZ	**Far West T-bar**	**22.66**	**195**	PN	**P**	**22 44 21.0**	**-0.8**
WNVZ	**Wahianoa**	**22.71**	**194**	PN	**P**	**22 44 22.5**	**+0.2**
VRZ	**Vera Road**	**22.73**	**196**	P	**P**	**22 44 23.2**	**+0.7**
VRZ	**Vera Road**	**22.73**	**196**	*e*PN	**P**	**22 44 23.0**	**+0.5**
MOVZ	**Moawhango**	**22.75**	**194**	P	**P**	**22 44 21.7**	**-1.0**
MOVZ	**Moawhango**	**22.75**	**194**	*e*PN	**P**	**22 44 21.3**	**-1.4**
KAHZ	**Kahuranaki**	**22.89**	**192**	PN	**P**	**22 44 22.9**	**-0.9**
PXZ	**Pawanui**	**23.12**	**192**	*e*PN	**P**	**22 44 23.8**	**-2.1**
NRZ	**Ngariki Road**	**23.16**	**198**	PN	**P**	**22 44 29.0**	**+2.7**
WPHZ	**Waipukurau**	**23.23**	**192**	*e*PN	**P**	**22 44 25.4**	**-1.6**
PRHZ	**Porangahau**	**23.39**	**192**	PN	**P**	**22 44 27.7**	**-0.7**
HNR	**Honiara**	**23.50**	**287**	P	**P**	**22 44 31.9**	**+2.2**
	comp=N,2μm,0.8s,mb6.7,baz=204,slow=1.3,SNR=91						
HNR				S	**S**	**22 48 15.0**	**+0.4**
	comp=N,164nm,1.1s,baz=179,slow=6.9,SNR=3.6						
HNR				ScP	ScP	22 51 05.4	+1.7
	comp=N,177nm,0.9s,baz=235,slow=7.6,SNR=3.1						
HNR	**Honiara**	**23.50**	**287**	*e*P	**P**	**22 44 30.5**	**+0.7**
	comp=N,3μm,0.9s,mb6.7						
BFZ	**Birch Farm**	**23.87**	**192**	P	**P**	**22 44 31.0**	**-1.7**
BFZ	**Birch Farm**	**23.87**	**192**	*e*PN	**P**	**22 44 31.0**	**-1.7**
MRZ	**Mangatainoka R**	**23.99**	**193**	*e*PN	**P**	**22 44 32.2**	**-1.6**
HOWZ	**Holdsworth Sta**	**24.23**	**193**	*e*PN	**P**	**22 44 34.6**	**-1.4**
OGWZ	**Otaki Gorge**	**24.23**	**194**	PN	**P**	**22 44 34.6**	**-1.3**
KIW	**Kapiti Island**	**24.33**	**194**	PN	**P**	**22 44 36.3**	**-0.6**
TMWZ	**Te Maipa**	**24.35**	**193**	PN	**P**	**22 44 35.9**	**-1.2**
CAW	**Cannon Point**	**24.53**	**194**	P	**P**	**22 44 36.9**	**-1.7**
CAW	**Cannon Point**	**24.53**	**194**	PN	**P**	**22 44 36.9**	**-1.7**
SNZO	**South Karori**	**24.81**	**194**	*e*P	**P**	**22 44 40.9**	**-0.2**
	comp=N,623nm,0.8s,mb6.1						
SNZO				*e*S	**S**	**22 48 34.1**	**-0.4**
QRZ	**Quartz Range**	**24.95**	**199**	P	**P**	**22 44 42.2**	**-0.2**
QRZ	**Quartz Range**	**24.95**	**199**	PN	**P**	**22 44 42.2**	**-0.1**
NNZ	**Nelson**	**25.06**	**197**	P	**P**	**22 44 42.4**	**-1.0**
NNZ	**Nelson**	**25.06**	**197**	PN	**P**	**22 44 42.4**	**-1.0**
THZ	**Tophouse**	**25.70**	**197**	P	**P**	**22 44 48.5**	**-0.6**
THZ	**Tophouse**	**25.70**	**197**	*e*PN	**P**	**22 44 48.2**	**-0.9**
THZ				*e*SN	**S**	**22 48 46.3**	**-2.3**
DSZ	**Denniston Nort**	**26.01**	**199**	P	**P**	**22 44 51.0**	**-0.8**
DSZ	**Denniston Nort**	**26.01**	**199**	*e*PN	**P**	**22 44 50.7**	**-1.1**
KHZ	**Kahutara**	**26.14**	**196**	*e*P	**P**	**22 44 51.2**	**-1.7**
	comp=N,675nm,0.8s,mb6.1						
KHZ				*e*S	**S**	**22 48 53.2**	**-2.2**
KHZ	**Kahutara**	**26.14**	**196**	PN	**P**	**22 44 51.2**	**-1.8**
KHZ				*e*SN	**S**	**22 48 53.3**	**-2.1**
PPT	**Papeete**	**26.42**	**95**	*e*P	**P**	**22 44 55.3**	**-0.5**
	comp=N,670nm,1.3s,mb5.9						
PPT	**Papeete**	**26.42**	**95**	P	**P**	**22 44 55.7**	**0.0**
	comp=N,341nm,0.8s,mb5.8,baz=269,slow=2.7,SNR=11						
PPT	**Papeete**	**26.42**	**95**	P	**P**	**22 44 55.7**	**-0.1**
PPT				pmax	pmax		
	comp=Z,341nm,0.9s						
TIAR	**Tiarei**	**26.64**	**95**	*e*P	**P**	**22 44 56.7**	**-1.0**
	comp=Z,528nm,0.9s,mb6.0						
TBI	**Tubuai**	**26.72**	**107**	*e*P	**P**	**22 44 58.8**	**+0.4**
	comp=Z,1μm,0.9s,mb6.4						
LTZ	**Lake Taylor**	**26.82**	**197**	*e*PN	**P**	**22 44 56.8**	**-2.2**
XMAS	**Kiritimati**	**27.49**	**47**	*e*P	**P**	**22 45 03.5**	**-1.8**
	comp=Z,682nm,1.2s,mb6.0						
WVZ	**Waitaha Valley**	**27.55**	**199**	P	**P**	**22 45 04.4**	**-1.0**
WVZ	**Waitaha Valley**	**27.55**	**199**	*e*PN	**P**	**22 45 04.0**	**-1.4**
MQZ	**McQueen's Vall**	**27.58**	**196**	*e*PN	**P**	**22 45 04.4**	**-1.3**
MEH	**Mehetia**	**27.84**	**95**	*e*P	**P**	**22 45 07.2**	**-1.1**
	comp=Z,448nm,1.5s,mb5.6						
RPZ	**Rata Peaks**	**28.03**	**198**	P	**P**	**22 45 09.3**	**-0.4**
	comp=Z,96nm,0.5s,mb5.4,baz=16,slow=1.0,SNR=30						
RPZ				S	**S**	**22 49 21.2**	**-3.9**
	comp=Z,18nm,0.8s,baz=159,slow=19,SNR=1.6						
RPZ	**Rata Peaks**	**28.03**	**198**	*e*P	**P**	**22 45 10.5**	**+0.8**
	comp=Z,117nm,0.5s,mb5.5						
RPZ				*e*S	**S**	**22 49 28.2**	**+3.1**
PMOR	**Pomariorio Ree**	**28.31**	**89**	*e*P	**P**	**22 45 11.9**	**-0.6**
	comp=Z,2μm,1.1s,mb6.3						
VAH	**Vaihoa**	**28.53**	**90**	*e*P	**P**	**22 45 13.5**	**-0.9**
	comp=Z,1μm,1.2s,mb6.2						
JCZ	**Jackson Bay**	**29.09**	**201**	PN	**P**	**22 45 17.9**	**-1.0**
JCZ				*e*SN	**S**	**22 49 42.0**	**+0.4**
ODZ	**Otahua Downs**	**29.36**	**198**	*e*P	**P**	**22 45 21.0**	**-0.3**
	comp=Z,322nm,0.8s,mb5.7						
ODZ	**Otahua Downs**	**29.36**	**198**	*e*PN	**P**	**22 45 21.4**	**+0.1**
KWAJ	**Kwajalein Atol**	**30.01**	**329**	*e*P	**P**	**22 45 27.2**	**-0.2**
	comp=Z,247nm,0.8s,mb5.6						
MLZ	**Mavora Lakes**	**30.41**	**200**	P	**P**	**22 45 31.2**	**+0.7**
MLZ	**Mavora Lakes**	**30.41**	**200**	*e*PN	**P**	**22 45 30.5**	**0.0**
EIDS	**Eidsvold**	**30.45**	**249**	*e*P	**P**	**22 45 30.9**	**-0.2**
	comp=Z,850nm,0.9s,mb6.1						
EIDS				*e*S	**S**	**22 50 05.2**	**+1.9**
TUZ	**Tuapeka**	**30.49**	**198**	PN	**P**	**22 45 31.1**	**-0.1**
ARMA	**Armidale**	**31.12**	**240**	⇑*i*P	**P**	**22 45 37.7**	**+0.8**
ARMA				*e*S	**S**	**22 50 15.3**	**+1.7**
ARMA				*e*SCP	ScP	22 51 32.5	+5.8
ARMA				*e*SCS	ScS	22 55 32.5	+7.6
ARMA	**Armidale**	**31.12**	**240**	*e*P	**P**	**22 45 37.8**	**+0.9**
	comp=Z,811nm,1.0s,mb6.0						
ARMA				ScP	ScP	22 51 32.2	+5.6
SYZ	**Scrubby Hill**	**31.16**	**198**	PN	**P**	**22 45 36.9**	**-0.1**
APZ	**The Paps**	**31.78**	**199**	P	**P**	**22 45 42.4**	**+0.1**
APZ	**The Paps**	**31.78**	**199**	PN	**P**	**22 45 42.4**	**+0.1**
APZ				SN	**S**	**22 50 24.0**	**+0.8**
RIV	**Riverview**	**32.65**	**234**	⇑*i*P	**P**	**22 45 51.4**	**+1.3**
RIV				*e*SCP	ScP	22 51 36.4	+4.6
RIV				*e*SCS	ScS	22 55 41.0	+8.4
CNB	**Canberra Magne**	**34.59**	**232**	⇑*i*P	**P**	**22 46 07.6**	**+1.0**
CNB				*e*S	**S**	**22 51 07.8**	**+1.2**
CNB				*e*SCP	ScP	22 51 43.9	+5.2
CTA	**Charters Tower**	**34.59**	**260**	⇑*i*P	**P**	**22 46 06.1**	**-0.7**
	comp=Z,296nm,0.9s,mb5.6						
CTA				*e*S	**S**	**22 51 02.8**	**-4.2**
CTA				*e*SCP	ScP	22 51 43.0	+4.0
CTA	**Charters Tower**	**34.59**	**260**	P	**P**	**22 46 06.3**	**-0.5**
	comp=Z,327nm,0.9s,mb5.7,baz=86,slow=11,SNR=125						
CTA				pP	pP	22 47 19.5	0.0
	comp=Z,58nm,0.8s,baz=70,slow=9.5,SNR=1.1						
CTA				S	**S**	**22 51 00.5**	**-6.5**
	comp=Z,23nm,0.9s,baz=80,slow=11,SNR=1.9						
CTA				ScP	ScP	22 51 43.2	+4.2
	comp=Z,156nm,1.0s,baz=13,slow=2.8,SNR=14						
CTA	**Charters Tower**	**34.59**	**260**	P	**P**	**22 46 06.3**	**-0.5**
CTA				*PP	pP	22 47 19.5	0.0
CTA				S	**S**	**22 51 00.5**	**-6.5**
CTA	**Charters Tower**	**34.59**	**260**	P	**P**	**22 46 06.3**	**-0.5**
CTA				pP	pP	22 47 19.5	0.0
CTA				S	**S**	**22 51 00.5**	**-6.5**
CTA				ScP	ScP	22 51 43.2	+4.2
CTAO	**Charters Tower**	**34.59**	**260**	*e*P	**P**	**22 46 06.3**	**-0.5**
CTAO				pmax	pmax		
	comp=Z,718nm,1.3s,mb5.8						
CTAO	**Charters Tower**	**34.59**	**260**	*e*P	**P**	**22 46 06.3**	**-0.5**
	comp=Z,718nm,1.3s,mb5.8						
CTAO				*e*ScP	ScP	22 51 42.7	+3.7
CTAO	**Charters Tower**	**34.59**	**260**	P	**P**	**22 46 06.4**	**-0.4**
	comp=Z,6μmcomp=Z,428nm,1.2s,

FITZ Fitzroy Crossi 54.17 260 *e*P **P 22 48 40.0 +0.2**
comp=Z,816nm,1.7s,mb5.7
FITZ *e*SCP ScP 22 53 02.4 +3.4
FITZ *e*S **S 22 55 46.3 -0.1**
FITZ Fitzroy Crossi 54.17 260 P **P 22 48 40.3 +0.5**
comp=Z,131nm,0.6s,mb5.3,baz=105,slow=5.2,SNR=128
FITZ pP pP 22 50 00.6 +0.5
comp=Z,53nm,1.0s,baz=78,slow=13,SNR=1.2
FITZ SCP ScP 22 53 02.5 +3.5
comp=Z,50nm,0.9s,baz=24,slow=2.3,SNR=5.3
FITZ S **S 22 55 46.9 +0.5**
comp=Z,18nm,1.0s,baz=278,slow=19,SNR=8.4
FITZ Fitzroy Crossi 54.17 260 *e*P **P 22 48 40.2 +0.4**
comp=Z,581nm,1.4s,mb5.6
FITZ *e*ScP ScP 22 53 02.7 +3.7
FITZ *e*S **S 22 55 48.5 +2.1**
FITZ Fitzroy Crossi 54.17 260 P **P 22 48 40.2 +0.4**
comp=Z,731nm,1.4s,mb5.7
AAI Ambon 55.11 278 P **P 22 48 47.7 +1.2**
comp=Z,9μmcomp=Z,908nm,1.3s,mb5.8
NLAI Namlea 56.29 278 P **P 22 48 55.0 +0.2**
comp=Z,8μmcomp=Z,773nm,1.4s,mb5.9
DRV Dumont d'Urvil 56.49 199 P **P 22 48 58.0 +2.7**
DRV S **S 22 56 20.0 +4.7**
LBMI Labuha 56.77 281 P **P 22 48 58.7 +0.5**
comp=Z,8μmcomp=Z,725nm,1.1s,mb5.9
TNTI Ternate 57.40 282 P **P 22 49 03.0 +0.5**
comp=Z,1μm,0.9s,mb6.2
CBIJ Chichi jima 59.18 318 P **P 22 49 13.9 -0.4**
comp=Z,284nm,0.9s,mb5.6,baz=219,slow=2.9,SNR=12
MBWA Marble Bar 59.24 255 *e*P **P 22 49 15.3 +0.3**
comp=Z,710nm,1.1s,mb5.9
MBWA *e*ScP ScP 22 53 25.2 +3.9
MBWA S **S 22 56 50.4 -1.7**
MBWA Marble Bar 59.24 255 P **P 22 49 15.5 +0.5**
comp=Z,8μmcomp=Z,708nm,1.5s,mb5.8
MBWA Marble Bar 59.24 255 P **P 22 49 16.0 +1.0**
SNR=14
MMRI Maumere 59.37 270 P **P 22 49 15.9 -0.1**
comp=Z,9μmcomp=Z,868nm,0.8s,mb6.1
MNI Manado 59.99 282 P **P 22 49 20.0 -0.2**
comp=Z,6μmcomp=Z,613nm,1.0s,mb6.0
KLBR Kellerberrin 60.02 243 *e*P **P 22 49 20.0 -0.1**
comp=Z,2μm,0.8s,mb6.5
KLBR *e*S **S 22 56 58.2 -3.4**
SGSI Sangihe 60.17 285 P **P 22 49 22.0 +0.6**
comp=Z,8μmcomp=Z,596nm,0.7s,mb6.2
KDI Kendari 60.31 275 P **P 22 49 22.5 +0.2**
comp=Z,3μmcomp=Z,224nm,1.4s,mb5.4
NWAO Narrogin (SRO) 60.40 242 P **P 22 49 22.1 -0.5**
comp=Z,388nm,0.9s,mb5.8,baz=107,slow=6.0,SNR=160
NWAO S **S 22 57 05.5 -0.9**
comp=Z,12nm,1.1s,baz=257,slow=19,SNR=2.0
NWAO Narrogin (SRO) 60.40 242 P **P 22 49 22.1 -0.5**
NWAO S **S 22 57 05.5 -0.9**
NWAO pmax pmax
comp=Z,388nm,0.9s
NWAO smax
comp=N,12nm,1.1s
NWAO Narrogin (SRO) 60.40 242 *e*P **P 22 49 23.2 +0.7**
comp=N,581nm,1.1s,mb5.9
NWAO *e*S **S 22 57 16.0 +10**
NWAO Narrogin (SRO) 60.40 242 P **P 22 49 24.4 +1.8**
SNR=15
WSI Waingapu 60.96 268 P **P 22 49 27.7 +1.1**
comp=N,1μm,0.7s,mb6.4
SBA Scott Base 60.99 184 *e*P **P 22 49 28.3 +2.5**
SBA pmax pmax
comp=Z,209nm,1.0s,mb5.5
SBA Scott Base 60.99 184 *e*P **P 22 49 28.2 +2.5**
comp=Z,209nm,1.0s,mb5.5
LUWI Luwuk 61.09 279 P **P 22 49 28.4 +0.9**
comp=Z,9μmcomp=Z,941nm,1.2s,mb6.1
DAV Davao City (W) 61.45 288 P **P 22 49 30.8 +0.9**
comp=Z,127nm,0.4s,mb5.7,baz=217,slow=1.6,SNR=12
DAV Davao City (W) 61.45 288⇓*e*P **P 22 49 26.7 -3.2**
DMPH Davao City--Mi 61.52 288 *e*P **P 22 49 30.0 -0.3**
APSI Ampana 62.19 278 P **P 22 49 30.8 -4.0**
BUKP Musuan 62.25 289 *e*P **P 22 49 36.4 +1.3**
BKSI Bulukumba 62.29 273 P **P 22 49 35.4 0.0**
comp=Z,2μmcomp=Z,201nm,0.8s,mb5.7
BNSI Bone 62.57 274 P **P 22 49 37.8 +0.5**
comp=Z,5μmcomp=Z,473nm,1.2s,mb5.9
KAPI Kappang 62.73 273 P **P 22 49 37.3 -1.0**
comp=Z,1μm,0.7s,mb6.6,SNR=19
KAPI Kappang 62.73 273 P **P 22 49 37.5 -0.8**
comp=Z,133nm,0.7s,mb5.6,baz=158,slow=3.2,SNR=42
KAPI pP pP 22 51 00.7 -0.8
comp=Z,70nm,1.1s,baz=93,slow=9.1,SNR=1.7
KAPI PP PP 22 51 56.5 -5.6
comp=Z,40nm,0.7s,baz=120,slow=8.1,SNR=3.8
KAPI S **S 22 57 35.7 -0.4**
comp=Z,2.7nm,0.3s,baz=343,slow=22,SNR=6.5
RPN Rapa Nui 62.98 112 P **P 22 49 42.3 +2.6**
comp=Z,2μm,1.8s,mb6.4,SNR=5.1
RPN Rapa Nui 62.98 112 *e*P **P 22 49 40.9 +1.2**
RPN pmax pmax
comp=Z,915nm,1.4s,mb6.1
RPN Rapa Nui 62.98 112 *e*P **P 22 49 40.9 +1.2**
comp=Z,915nm,1.4s,mb6.1
SPSI Sidrap Palu 63.02 274 P **P 22 49 39.5 -0.7**
comp=Z,255nm,0.9s,mb5.8
TTSI Tana Toraja 63.25 275 P **P 22 49 42.6 +0.9**
comp=Z,2μmcomp=Z,199nm,0.8s,mb5.7
PAGZ Pagadian 63.76 288 *e*P **P 22 49 46.2 +1.3**
PCI Palu 63.91 278 P **P 22 49 47.5 +1.6**
comp=Z,1μm,1.0s,mb6.3
TBP Tagbilaran 64.08 290 *e*P **P 22 49 48.6 +1.6**
TBP *e*S PcP 22 50 12.7 -5.8
CNP Catarman 64.57 293 *e*P **P 22 49 50.2 +0.1**
PVCP Virac 65.49 294 *e*P **P 22 49 56.3 +0.3**
KHKI Kahang-Kahang 65.77 269 P **P 22 49 56.9 -0.9**
comp=Z,3μmcomp=Z,326nm,0.9s,mb6.0
SRBI Singaraja 66.22 269 P **P 22 50 00.5 -0.1**
comp=Z,7μmcomp=Z,588nm,0.8s,mb6.3
KBKI Kotabaru 66.65 274 P **P 22 50 05.3 +1.9**
comp=Z,334nm,1.4s,mb5.8
CASY Casey 67.05 205 *e*P **P 22 50 04.7 -0.2**
CASY *e*S S 22 58 25.7 -0.7
CASY Casey 67.05 205 *e*P **P 22 50 05.1 +0.2**
comp=Z,256nm,1.0s,mb5.8
CASY *e*S S 22 58 28.5 +2.1
CUYO Cuyo Island 67.10 290 *e*P **P 22 50 07.0 +0.9**
MYLDM Lahad Datu 67.23 283 P **P 22 50 08.5 +1.5**
MYLDM Lahad Datu 67.23 283 P **P 22 50 08.6 +1.6**
comp=Z,5μmcomp=Z,419nm,1.2s,mb5.9
BOAC Boac 67.45 293 *e*P **P 22 50 09.0 +0.7**
TSM Tawau 67.50 282 P **P 22 50 09.1 +0.4**
KMMI Kalianget 67.69 269 P **P 22 50 09.7 -0.1**
comp=Z,6μmcomp=Z,683nm,0.7s,mb6.4
GMJI Gumukmas 67.86 268 P **P 22 50 10.4 -0.4**
comp=Z,5μmcomp=Z,471nm,0.7s,mb6.3
MJAR Matsushiro Arr 68.15 323 P **P 22 50 10.9 -1.2**
comp=Z,227nm,0.9s,mb5.8,baz=161,slow=6.0,SNR=269
MJAR pP pP 22 51 35.2 -1.8
comp=Z,5.9nm,0.9s,baz=43,slow=41,SNR=2.0
MJAR S S 22 58 40.3 +0.1
comp=Z,1.9nm,1.1s,baz=173,slow=11,SNR=3.9
MJAR PKPPKP 23 18 25.9
comp=Z,25nm,1.4s,baz=303,slow=2.8,SNR=18
MJAR Matsushiro Arr 68.15 323 P **P 22 50 10.9 -1.2**
MJAR *PP pP 22 51 35.2 -1.7
MJAR S S 22 58 40.3 +0.1
MAJO Matsushiro 68.15 323 *e*P **P 22 50 10.9 -1.2**
MAJO pmax pmax
comp=Z,324nm,0.9s,mb6.0
MAJO Matsushiro 68.15 323 *e*P **P 22 50 10.9 -1.2**
comp=Z,324nm,0.9s,mb6.0
MAT Matsushiro 68.15 323 P **P 22 50 10.7 -1.4**
MAT S S 22 58 40.0 -0.2
BUSP Coron 68.30 291 *e*P **P 22 50 13.5 0.0**
TGY Tagaytay City 68.53 293 P **P 22 50 15.9 +1.1**
comp=Z,118nm,0.4s,mb5.9,baz=167,slow=7.2,SNR=8.7
AMKA Amchitka 68.54 358 *e*P **P 22 50 13.5 -0.7**
comp=Z,196nm,0.9s,mb5.7
SDKM Sandakan 68.61 283 P **P 22 50 15.5 0.0**
ENPP El Nido 68.67 290 *e*P **P 22 50 16.1 +0.3**
BALP Baler 68.67 295 *e*P **P 22 50 15.6 -0.1**
KRKI Karangkates 68.83 268 P **P 22 50 18.1 +1.3**
LUBP Lubang 68.98 293 *e*P **P 22 50 16.7 -0.9**
BATP Bataraza 69.21 287 *e*P **P 22 50 19.3 +0.2**
ATKA Atka Island 69.36 2 *e*P **P 22 50 17.4 -1.7**
comp=Z,1μm,1.0s,mb6.4
KDM Kudat 69.40 285 P **P 22 50 20.5 +0.2**
PWJI Pagerwojo 69.49 268 P **P 22 50 19.9 -0.9**
comp=Z,5μmcomp=Z,599nm,0.6s,mb6.4

ERM Erimo 69.49 330 P **P 22 50 20.8 +0.6**
comp=Z,705nm,0.8s,mb6.3,SNR=19
ERM Erimo 69.49 330*c i*P **P 22 50 19.2 -1.0**
ERM pmax pmax
comp=Z,170nm,1.2s,mb5.5
ERM Erimo 69.49 330 *e*P **P 22 50 20.0 -0.1**
comp=Z,106nm,0.9s,mb5.5
SJI Sawahan 69.60 268 P **P 22 50 22.0 +0.5**
comp=Z,7μmcomp=Z,566nm,0.7s,mb6.2
YUK Yuzh-Kuril'sk 69.81 333*d i*P **P 22 50 21.1 -0.9**
YUK *i* *PP pP 22 51 43.0 -4.3
YUK *i* PPP 22 54 41.0
YUK *i* S S 22 59 01.5 +2.4
YUK *i* 22 59 43.7
YUK pmax pmax
comp=Z,1μm,10.0s
YUK pmax pmax
comp=N,300nm,5.0s
YUK pmax pmax
comp=E,200nm,5.0s
YUK smax
comp=N,2μm,9.0s
YUK smax
comp=E,600nm,9.0s
APYP Conner 69.90 297 *e*P **P 22 50 23.4 +0.2**
NGJI Ngawi 69.99 268 P **P 22 50 26.4 +2.6**
comp=E,268nm,0.8s,mb5.8
PCJI Pacitan 70.04 267 P **P 22 50 24.6 +0.5**
SMY Shemya 70.23 354⇓*e*P **P 22 50 22.6 -1.8**
SMY pmax pmax
comp=Z,1μm,0.9s,mb6.4
SMY Shemya 70.23 354⇓*e*P **P 22 50 22.6 -1.8**
comp=Z,1μm,0.9s,mb6.4
BOLP Bolinao 70.39 295 *e*P **P 22 50 26.6 +0.5**
BBP Basco 70.47 300 *e*P **P 22 50 23.9 -2.6**
UGM Wanagama 70.74 268 P **P 22 50 27.9 -0.4**
comp=Z,8μmcomp=Z,748nm,0.6s,mb6.4
YOGI Yogyakarta 70.98 268 P **P 22 50 29.9 +0.1**
comp=Z,967nm,0.9s,mb6.3
SMRI Semarang 71.05 268 P **P 22 50 30.5 +0.3**
comp=Z,6μmcomp=Z,623nm,0.8s,mb6.2
ASAJ Asahikawa 71.35 331 P **P 22 50 31.4 +0.2**
comp=Z,474nm,0.8s,mb6.0,baz=211,slow=5.1,SNR=149
ASAJ Asahikawa 71.35 331 P **P 22 50 31.5 +0.2**
ASAJ pmax pmax
comp=Z,474nm,0.9s
UNV Unalaska Valle 71.56 7 *e*P **P 22 50 30.1 -2.1**
comp=Z,388nm,0.8s,mb6.0
BTM Bintulu 71.62 279 P **P 22 50 34.2 +0.6**
BTM Bintulu 71.62 279 P pP 22 51 59.4 +0.1
SKR Severo-Kuril's 71.71 343*d i*P **P 22 50 34.0 +0.8**
SKR *e* 22 50 53.0
SKR *PP pP 22 51 58.0 -1.0
SKR *e* 23 00 07.0
SKR pmax pmax
comp=N,130nm,1.0s
SKR pmax pmax
comp=Z,830nm,1.0s,mb6.2
SKR pmax pmax
comp=E,600nm,1.4s
SKR pmax pmax
comp=N,2μm,10.0s
SKR pmax pmax
comp=Z,3μm,10.0s
SKR pmax pmax
comp=E,2μm,4.0s
SKR MLR MLR
comp=N,1μm,18.0s
SKR MLR MLR
comp=E,1μm,18.0s
SKR MLR MLR
comp=Z,2μm,18.0s
AKUT Akutan 71.92 7 *e*P **P 22 50 32.0 -2.4**
comp=Z,167nm,0.7s,mb5.7
STKI Sintang 72.14 276 P **P 22 50 37.5 +0.9**
comp=Z,5μmcomp=Z,371nm,1.2s,mb5.8
SBUM Sibu 72.19 278 P **P 22 50 37.7 +0.8**
SBUM Sibu 72.19 278 P pP 22 52 03.1 +0.3
SBUM Sibu 72.19 278 P **P 22 50 37.3 +0.4**
comp=Z,3μmcomp=Z,209nm,1.1s,mb5.6
TWG Pinlang 72.31 302 *e*P **P 22 50 35.8 -1.6**
comp=Z,100nm,0.6s,mb5.5
YULB Yu-li 72.40 302 *e*P **P 22 50 36.8 -1.1**
comp=Z,119nm,0.8s,mb5.5
YULB *e*pP pP 22 52 05.6 +1.8
NACB Ninganchiao 72.53 303 *e*P **P 22 50 37.9 -0.8**
comp=Z,542nm,1.1s,mb6.0
NACB *e*pP pP 22 52 03.7 -0.9
QSPA South Pole Qui 72.65 180 P **P 22 50 39.8 +1.4**
comp=Z,143nm,0.7s,mb5.6,baz=33,slow=1.5,SNR=372
QSPA pP pP 22 52 05.6 +1.2
comp=Z,34nm,0.9s,baz=6.2,slow=4.7,SNR=1.4
QSPA PKiKP PKiKP 22 56 35.4 +0.9
comp=Z,4.4nm,0.7s,baz=235,slow=2.8,SNR=6.5
QSPA S S 22 59 32.8 +2.2
comp=Z,22nm,1.1s,baz=155,slow=20,SNR=24
QSPA South Pole Qui 72.65 180 *e*P **P 22 50 39.7 +1.3**
comp=Z,256nm,0.9s,mb5.8
SSLB Suanglung 72.86 302 *e*P **P 22 50 39.4 -1.2**
comp=Z,319nm,0.9s,mb5.8
TPUB Ta-pu 72.90 302 *e*P **P 22 50 39.6 -1.2**
comp=Z,726nm,0.9s,mb6.2
YHNB Yeheng 72.95 303 *e*P **P 22 50 40.7 -0.4**
comp=Z,345nm,1.1s,mb5.8
TATO Taipei 73.00 304 *e*P **P 22 50 41.3 0.0**
comp=Z,260nm,1.0s,mb5.7
PET Petropavlovsk 73.15 345⇓*i*P **P 22 50 39.7 -1.9**
PET *e**PP pP 22 52 04.4 -3.4
PET *e**SP sP 22 52 48.1 -0.9
PET *i* S S 22 59 34.2 -2.5
PET *e*SP 23 00 06.3
PET *e*SS SS 23 04 26.4 -1.7
PET pmax pmax
comp=Z,240nm,0.8s,mb5.8
PET pmax pmax
comp=Z,2μm,5.8s
PET pmax pmax
comp=Z,2μm,13.7s
PET MLR MLR
comp=Z,1μm,15.0s
PET MLR MLR
comp=Z,1μm,17.0s
PET Petropavlovsk 73.15 345 *e*P **P 22 50 40.2 -1.4**
comp=Z,150nm,0.7s,mb5.6
JCJI Jatiwangi 73.28 268 P **P 22 50 43.2 0.0**
comp=Z,1μm,0.9s,mb6.3
YSS Yuzh-Sakhalins 73.45 333*d i*P **P 22 50 43.0 -0.4**
YSS *i* *PP pP 22 52 08.0 -1.7
YSS *e**SP sP 22 52 50.0 -1.0
YSS *e* 22 53 34.0
YSS *i* S S 22 59 42.0 +1.7
YSS *e* 23 00 16.0
YSS *e*SS SS 23 04 34.0 +1.1
YSS pmax pmax
comp=E,230nm,1.0s
YSS pmax pmax
comp=Z,630nm,1.0s,mb6.1
YSS pmax pmax
comp=N,1μm,7.0s
YSS pmax pmax
comp=Z,3μm,7.0s
YSS smax
comp=N,4μm,14.0s
YSS smax
comp=E,2μm,14.0s
YSS MLR MLR
comp=E,800nm,16.0s
YSS MLR MLR
comp=Z,600nm,16.0s
YSS Yuzh-Sakhalins 73.45 333 *e*P **P 22 50 43.5 +0.1**
comp=Z,663nm,1.0s,mb6.1
PETK Petropavlovsk- 73.47 345 P **P 22 50 42.2 -1.2**
comp=Z,366nm,0.8s,mb6.0,baz=121,slow=6.3,SNR=238
PETK pP pP 22 52 08.7 -1.0
comp=Z,14nm,0.9s,baz=105,slow=5.0,SNR=0.8
PETK PKiKP PKiKP 22 56 36.3 +0.1
comp=Z,6.9nm,0.9s,baz=142,slow=5.1,SNR=3.8
PETK Petropavlovsk- 73.47 345 P **P 22 50 42.2 -1.2**
PETK pP pP 22 52 08.7 -1.0
KSM Kuching 73.69 277 P **P 22 50 46.1 +0.5**
KSM Kuching 73.69 277 P pP 22 52 11.2 -0.7
KSM Kuching 73.69 277 *e*P **P 22 50 46.0 +0.5**
comp=Z,727nm,1.0s,mb6.3
KSM *e*pP pP 22 52 12.7 +0.8
KSM Kuching 73.69 277 P **P 22 50 46.2 +0.6**
comp=Z,6μmcomp=Z,774nm,1.1s,mb6.2

LEM Lembang 73.81 268 P **P 22 50 46.6 +0.3**
comp=Z,1μm,0.8s,mb6.6
SDPT Sand Point 73.85 10 *e*P **P 22 50 44.5 -1.0**
comp=Z,702nm,1.0s,mb6.2
MIR Mirnyy 74.08 205⇓*i*P **P 22 50 47.4 +0.6**
MIR *i* 22 50 58.0
MIR *i* 22 53 39.0
MIR *e*S S 22 59 48.0 +1.2
MIR PS 23 00 20.0
MIR pmax pmax
comp=Z,609nm,0.8s,mb6.3
MIR pmax pmax
comp=Z,185nm,1.0s,mb5.7
MIR smax
comp=N,3μm,14.0s
MIR smax
comp=E,6μm,18.0s
MIR MLR MLR
comp=N,1μm,15.0s
MIR MLR MLR
comp=E,2μm,15.0s
MIR MLR MLR
comp=Z,2μm,15.0s
SPIA Saint Paul Isl 74.52 4 *e*P **P 22 50 49.1 -0.3**
comp=Z,650nm,1.0s,mb6.2
CBJI Citeko 74.65 268 P **P 22 50 50.2 -0.9**
comp=Z,2μm,0.7s,mb6.8
SKJI Sukabumi 74.77 267 P **P 22 50 51.0 -0.8**
comp=Z,2μm,0.6s,mb6.9
TPI Tanjungpandan 74.93 272 P **P 22 50 53.4 +0.7**
comp=Z,2μmcomp=Z,208nm,1.4s,mb5.6
BSC Santa Cruz Isl 74.98 47⇓P **P 22 50 53.2 +0.6**
baz=75
KSRS Korea Array 75.04 318 P **P 22 50 53.0 +0.2**
comp=Z,150nm,1.0s,mb5.6,baz=134,slow=6.2,SNR=190
KSRS pP pP 22 52 19.2 -0.2
comp=Z,9.2nm,0.9s,baz=134,slow=6.9,SNR=2.2
KSRS PKiKP PKiKP 22 56 39.6 +0.6
comp=Z,3.1nm,0.9s,baz=167,slow=0.3,SNR=4.3
KSRS PKP2ab 23 18 08.9
comp=Z,2.7nm,1.1s,baz=274,slow=3.3,SNR=4.4
KSRS Korea Array 75.04 318 P **P 22 50 53.0 +0.2**
KSRS *PP pP 22 52 19.2 -0.3
KSRS pmax pmax
comp=Z,150nm,1.0s,mb5.6
CHGN Chignik 75.11 11 *e*P **P 22 50 51.9 -0.8**
SAC San Andreas 75.16 42 *e*P **P 22 50 53.5 +0.1**
SBC Santa Barbara 75.17 46⇑P **P 22 50 54.4 +0.8**
baz=75,SNR=8.0
SCI San Clemente I 75.20 48 P **P 22 50 54.3 +0.6**
baz=75,SNR=21
MCCM Marconi Confer 75.20 42 *e*P **P 22 50 54.3 +0.7**
comp=Z,274nm,1.0s,mb5.8
QZH Quanzhou 75.31 302⇓*i*P **P 22 50 54.8 +0.3**
QZH pP pP 22 52 18.8 -2.5
QZH S S 23 00 03.4 +1.8
QZH pmax pmax
comp=Z,910nm,1.2s,mb6.3
QZH pmax pmax
comp=Z,3μm,8.2s
SAO San Andreas Ge 75.32 43 *e*P **P 22 50 54.4 +0.1**
SAO *e**PP pP 22 52 22.2 +1.1
SAO pmax pmax
comp=Z,293nm,1.1s,mb5.8
SAO San Andreas Ge 75.32 43 *e*P **P 22 50 54.4 0.0**
comp=Z,293nm,1.1s,mb5.8
SAO *e*pP pP 22 52 22.1 +1.0
SBJI Serang 75.42 268 P **P 22 50 55.2 -0.3**
comp=Z,8μmcomp=Z,645nm,1.1s,mb6.2
BLG Laguna Peak 75.44 47⇑P **P 22 50 55.5 +0.4**
baz=76,SNR=6.7
SMMC Simmler 75.46 45⇓P **P 22 50 55.9 +0.8**
baz=76,SNR=28
CIS Catalina Islan 75.53 48⇑P **P 22 50 54.9 -0.7**
baz=76
HOPS Hopland 75.59 41 *e*P **P 22 50 56.1 +0.3**
comp=Z,465nm,1.1s,mb6.0
KCPM Cahto Peak 75.69 40 *e*P **P 22 50 57.8 +1.5**
comp=Z,218nm,1.2s,mb5.7
CGJI Cibinong 75.70 267 P **P 22 50 57.0 0.0**
RBSI Rajabasa 75.87 268 P **P 22 50 57.4 -0.6**
comp=Z,4μmcomp=Z,343nm,1.2s,mb5.8
INCN Inchon 75.89 317 *e*P **P 22 50 58.0 +0.5**
comp=Z,206nm,0.9s,mb5.8
INCN Inchon 75.89 317 P **P 22 50 58.6 +1.1**
SNR=11
OSI Osito Adit 75.95 46⇓P **P 22 50 57.2 -0.7**
baz=76,SNR=12
OSI Osito Adit 75.95 46 *e*P **P 22 50 58.0 0.0**
comp=Z,285nm,1.4s,mb5.7
DECC Green Verdugo 76.03 47⇑P **P 22 50 58.1 -0.3**
baz=76,SNR=23
PASC Pasadena Art C 76.09 47 *e*P **P 22 50 58.7 0.0**
comp=Z,844nm,1.0s,mb6.3
ARVC Arvin 76.16 46⇑P **P 22 50 58.8 -0.3**
baz=76,SNR=34
109C Camp Elliot, M 76.18 49⇓P **P 22 50 58.8 -0.5**
baz=76,SNR=15
MWC Mount Wilson 76.20 47 *e*P **P 22 50 59.2 -0.2**
MWC *e**PP pP 22 52 23.5 -2.9
MWC pmax pmax
comp=Z,271nm,1.0s,mb5.8
MWC Mount Wilson 76.20 47 *e*P **P 22 50 59.2 -0.2**
comp=Z,271nm,1.0s,mb5.8
MWC *e*pP pP 22 52 23.5 -2.8
SSE Sheshan 76.25 309 P **P 22 50 59.0 -0.7**
SSE pP pP 22 52 27.8 +1.1
SSE S S 23 00 10.5 -1.1
SSE pmax pmax
comp=Z,84nm,1.0s,mb5.3
SSE pmax pmax
comp=Z,1μm,7.9s
SSE LR LR
comp=N,4μm,26.3s
SSE LR LR
comp=E,4μm,26.3s
SSE LR LR
comp=Z,860nm,17.2s
KHMM Horse Mountain 76.32 39 *e*P **P 22 51 01.0 +1.2**
comp=Z,290nm,1.0s,mb5.9
VES Vestal, Richgr 76.37 45⇑P **P 22 51 00.2 0.0**
baz=76,SNR=73
BAR Barrett 76.38 49 *e*P **P 22 51 00.1 -0.3**
comp=Z,114nm,1.0s,mb5.5
BLSI Bandar Lampung 76.48 269 P **P 22 51 00.8 -0.6**
comp=Z,5μmcomp=Z,404nm,0.6s,mb6.2
MURC Murrieta 76.48 48 P **P 22 51 01.0 +0.1**
baz=77,SNR=46
BFSC Mount Baldy Ra 76.49 47⇓P **P 22 51 00.4 -0.6**
baz=77,SNR=71
RCTC Rector, Farmer 76.53 45⇓P **P 22 51 01.3 +0.2**
baz=77,SNR=8.1
EDW2 Edwards Air Fo 76.60 47⇓P **P 22 51 01.1 -0.4**
baz=77,SNR=192
MONP Monument Peak 76.67 49⇓P **P 22 51 02.2 +0.2**
baz=77,SNR=182
ISA Isabella 76.69 46⇑P **P 22 51 01.9 -0.1**
baz=77,SNR=86
ISA Isabella 76.69 46 *e*P **P 22 51 02.0 0.0**
ISA pmax pmax
comp=Z,277nm,1.2s,mb5.8
ISA Isabella 76.69 46 *e*P **P 22 51 02.0 0.0**
comp=Z,277nm,1.2s,mb5.8
CMB Columbia Colle 76.74 43 *e*P **P 22 51 01.9 -0.3**
CMB pmax pmax
comp=Z,242nm,1.2s,mb5.7
CMB Columbia Colle 76.74 43 *e*P **P 22 51 01.9 -0.4**
comp=Z,242nm,1.2s,mb5.7
DVTC Desert V Tower 76.78 49⇑P **P 22 51 02.7 +0.1**
baz=77,SNR=98
OHCM Honcut 76.78 41 *e*P **P 22 51 01.9 -0.5**
WDC Whiskeytown Da 76.86 40 *e*P **P 22 51 02.7 -0.2**
WDC *e**PP pP 22 52 31.4 +1.4
WDC pmax pmax
comp=Z,266nm,1.2s,mb5.8
WDC Whiskeytown Da 76.86 40 *e*P **P 22 51 02.7 -0.2**
comp=Z,266nm,1.2s,mb5.8
WDC *e*pP pP 22 52 31.4 +1.4
OHAK Old Harbor 76.99 13 *e*P **P 22 51 02.5 -0.6**
comp=Z,462nm,1.0s,mb6.1
KLI Kotabumi 76.99 269 P **P 22 51 03.9 -0.3**
comp=Z,5μmcomp=Z,142nm,0.9s,mb5.6
PFO Pinyon Flat Ob 77.02 48 P **P 22 51 03.2 -0.7**
comp=Z,831nm,1.0s,mb6.3,SNR=45
PFO Pinyon Flat Ob 77.02 48⇑P **P 22 51 03.6 -0.3**
baz=77,SNR=76
PFO Pinyon Flat Ob 77.02 48 *e*P **P 22 51 03.9 0.0**

PFO pmax pmax
comp=Z,231nm,1.2s,mb5.7
PFO Pinyon Flat Ob 77.02 48 *e*P **P 22 51 03.9 0.0**
comp=Z,231nm,1.2s,mb5.7
LRMC Laurel Mountai 77.13 46 P **P 22 51 04.6 +0.1**
baz=77,SNR=55
SWSC Sam W. Stewart 77.15 49 ⇑P **P 22 51 04.4 -0.2**
baz=77,SNR=64
KLSI 77.16 269 P **P 22 51 04.6 -0.6**
comp=Z,133nm,1.5s,mb5.3
KEBM Edson Butte 77.20 37 *e*P **P 22 51 04.4 -0.3**
comp=Z,291nm,1.1s,mb5.8
RRX Edison Barstow 77.29 47 ⇓P **P 22 51 05.9 +0.6**
baz=77,SNR=13
CWC Cottonwood Cre 77.38 45 ⇑P **P 22 51 06.6 +0.8**
baz=78,SNR=5.7
YBH Yreka Blue Hor 77.45 39 P **P 22 51 06.3 +0.2**
comp=Z,149nm,1.0s,mb5.6,baz=204,slow=2.2,SNR=95
YBH pP pP 22 52 34.5 +1.1
comp=Z,17nm,0.9s,baz=118,slow=10,SNR=1.9
YBH Yreka Blue Hor 77.45 39 P **P 22 51 06.3 +0.2**
YBH *PP pP 22 52 34.5 +1.1
YBH pmax pmax
comp=Z,149nm,1.0s
YBH Yreka Blue Hor 77.45 39 *e*P **P 22 51 06.4 +0.4**
comp=Z,245nm,1.2s,mb5.7
YBH *e*pP pP 22 52 36.1 +2.7
MLAC Mammoth Lakes 77.53 44 ⇓P **P 22 51 07.2 +0.7**
baz=78,SNR=22
BELC Belle Mtn. Jos 77.54 48 P **P 22 51 06.9 +0.2**
baz=78,SNR=149
MTUM Tungsten Hills 77.55 44 *e*P **P 22 51 07.0 +0.3**
MPMC Manual Prospec 77.58 46 ⇑P **P 22 51 06.8 -0.1**
baz=78,SNR=177
TIN Tinemaha 77.61 45 ⇓P **P 22 51 07.4 +0.3**
baz=78,SNR=24
WAKR Walker 77.62 43 *e*P **P 22 51 07.3 +0.2**
GSC Goldstone 77.65 47 P **P 22 51 07.2 -0.1**
baz=78,SNR=169
GSC Goldstone 77.65 47 *e*P **P 22 51 07.1 -0.2**
GSC *e*PP pP 22 52 36.5 +1.8
GSC pmax pmax
comp=Z,230nm,1.0s,mb5.8
GSC Goldstone 77.65 47 *e*P **P 22 51 07.1 -0.2**
comp=Z,230nm,1.0s,mb5.8
GSC *e*pP pP 22 52 36.5 +1.8
KDAK Kodiak Island 77.66 13 P **P 22 51 06.4 -0.4**
comp=Z,3μm,0.8s,mb7.0,SNR=31
KDAK Kodiak Island 77.66 13 P **P 22 51 05.9 -0.9**
comp=Z,408nm,0.9s,mb6.0,baz=196,slow=2.9,SNR=107
KDAK pP pP 22 52 33.9 -0.3
comp=Z,15nm,0.8s,baz=231,slow=6.5,SNR=0.9
KDAK Kodiak Island 77.66 13 *i*P **P 22 51 05.6 -1.2**
KDAK Kodiak Island 77.66 13 *e*P **P 22 51 05.8 -1.0**
comp=Z,626nm,1.1s,mb6.2
LWLI Liwa 77.71 269 P **P 22 51 07.7 -0.5**
comp=Z,1μm,0.7s,mb6.7
HEC Hector,Ludlow 77.74 47 ⇓P **P 22 51 07.3 -0.5**
baz=78,SNR=172
BC3 Big Chuckawall 77.76 49 ⇓P **P 22 51 08.1 +0.2**
baz=78,SNR=75
HKC Hong Kong Obse 77.80 298 ⇑*i*P **P 22 51 08.0 -0.4**
HKC *i*S S 23 00 26.0 -2.5
112A Yuma 77.83 50 ⇓P **P 22 51 08.6 +0.2**
baz=78,SNR=42
HUMO Hull Mountain 77.84 38 *e*P **P 22 51 08.4 +0.3**
HUMO *e*pP pP 22 52 37.7 +2.1
WCN Washoe City 77.86 42 ⇑P **P 22 51 08.3 -0.1**
baz=78,SNR=44
GLA Glamis 77.91 50 P **P 22 51 09.3 +0.5**
baz=78,SNR=104
GLA Glamis 77.91 50 *e*P **P 22 51 09.5 +0.7**
GLA pmax pmax
comp=Z,500nm,1.1s,mb6.1
GLA Glamis 77.91 50 *e*P **P 22 51 09.4 +0.7**
comp=Z,500nm,1.1s,mb6.1
HABR Khabarovsk 78.11 330 *d i*P **P 22 51 09.8 +0.3**
HABR 22 51 16.0
HABR *e*PP pP 22 52 35.7 -1.3
HABR *e*SP sP 22 53 18.7 +0.8
HABR 22 54 09.8
HABR PPP 22 55 59.1
HABR *e*S S 23 00 29.8 -0.8
HABR *e* 23 00 48.4
HABR *e*SS SS 23 05 37.6 -5.2
HABR *e*SSS 23 09 04.6
HABR pmax pmax
comp=Z,604nm,1.0s,mb6.2
HABR pmax pmax
comp=E,221nm,1.0s
HABR pmax pmax
comp=N,148nm,1.1s
HABR pmax pmax
comp=Z,4μm,7.3s
HABR MLR MLR
comp=Z,531nm,22.0s
GRAC Grapevine Rang 78.16 45 ⇓P **P 22 51 10.0 0.0**
baz=78,SNR=63
GMRC Granite Mounta 78.18 48 ⇑P **P 22 51 09.9 -0.3**
baz=78,SNR=131
FURC Furnace Creek, 78.23 46 ⇑P **P 22 51 10.2 -0.2**
baz=78,SNR=51
IRM Iron Mountain 78.23 48 ⇑P **P 22 51 10.3 -0.2**
baz=78,SNR=178
NVAR Mina Array Bea 78.32 43 P **P 22 51 10.9 0.0**
comp=Z,133nm,0.7s,mb5.7,baz=226,slow=8.3,SNR=267
NVAR pP pP 22 52 38.4 0.0
comp=Z,2.2nm,0.8s,baz=307,slow=25,SNR=1.3
NVAR PKiKP PKiKP 22 56 45.5 +1.6
comp=Z,2.9nm,0.8s,baz=225,slow=3.1,SNR=3.9
NVAR S S 23 00 38.8 +5.5
comp=Z,2.1nm,1.0s,baz=255,slow=5.7,SNR=3.4
NVAR Mina Array Bea 78.32 43 P **P 22 51 10.9 0.0**
NVAR pP pP 22 52 38.4 0.0
PAHR Pah Rah Range 78.33 42 *e*P **P 22 51 10.8 0.0**
comp=Z,237nm,1.1s,mb5.7
SHOC Shoshone 78.33 46 ⇓P **P 22 51 11.6 +0.6**
baz=78,SNR=38
TUQ Turquoise Moun 78.33 47 ⇓P **P 22 51 10.8 -0.2**
baz=78,SNR=11
MDJ Mudanjiang 78.39 324 P **P 22 51 11.9 +0.8**
MDJ pP pP 22 52 38.6 -0.1
MDJ sP sP 22 53 20.3 +0.7
MDJ PP PP 22 54 14.8 -0.3
MDJ S S 23 00 37.3 +3.5
MDJ pmax pmax
comp=Z,240nm,1.2s,mb5.7
MDJ pmax pmax
comp=Z,2μm,8.8s
MDJ Mudanjiang 78.39 324 *e*P **P 22 51 11.7 +0.6**
comp=Z,239nm,1.0s,mb5.8
NJ2 Nanjing 78.45 309 *e*P **P 22 51 12.3 +0.6**
NJ2 pP pP 22 52 38.9 -0.4
NJ2 sP sP 22 53 18.1 -2.1
NJ2 PP PP 22 54 17.0 +1.2
NJ2 S S 23 00 39.0 +4.0
NJ2 SKS 23 00 49.0
NJ2 pmax pmax
comp=Z,270nm,1.0s,mb5.8
NJ2 pmax pmax
comp=Z,2μm,8.2s
NJ2 LR LR
comp=N,6μm,24.2s
NJ2 LR LR
comp=E,3μm,25.9s
NJ2 LR LR
comp=Z,1μm,23.0s
113A Mohawk Valley, 78.54 50 ⇑P **P 22 51 12.2 0.0**
baz=79,SNR=142
U10A Ash Meadows, A 78.56 46 ⇓P **P 22 51 12.0 -0.2**
baz=79,SNR=68
MPOR Mary's Peak 78.66 36 P **P 22 51 13.7 +1.1**
LDFC Landfair 78.72 48 *e*P **P 22 51 14.3 +1.1**
comp=Z,1μm,1.3s,mb6.3
GZH Guangzhou 78.82 299 P **P 22 51 14.6 +0.7**
GZH S S 23 00 41.9 +2.7
GZH pmax pmax
comp=Z,2μm,7.8s
Z13A Yuma Proving G 78.83 50 ⇓P **P 22 51 14.0 +0.2**
baz=79,SNR=191
COR Corvallis 78.85 36 *e*P **P 22 51 13.7 +0.1**
COR pmax pmax
comp=Z,186nm,1.1s,mb5.6
COR Corvallis 78.85 36 *e*P **P 22 51 13.7 +0.1**
comp=Z,186nm,1.1s,mb5.6

214A Organ Pipe Nat 78.86 51 ⇑P **P 22 51 14.3 +0.4**
baz=79,SNR=139
V11A Goodsprings 78.89 47 ⇑P **P 22 51 13.8 -0.2**
baz=79,SNR=107
MNAI Manna 78.95 269 P **P 22 51 14.7 -0.2**
comp=Z,893nm,0.8s,mb6.5
HEBO Mount Hebo 78.99 35 *e*P **P 22 51 15.7 +1.4**
comp=Z,453nm,1.2s,mb6.0
W12A Cal Nev Ari 79.00 48 ⇑P **P 22 51 14.4 -0.2**
baz=79,SNR=25
MOD Modoc 79.01 40 *e*P **P 22 51 14.5 0.0**
comp=Z,263nm,1.3s,mb5.7
MOD *e*pP pP 22 52 45.4 +3.2
Y13A Salome 79.01 49 ⇑P **P 22 51 14.9 +0.2**
baz=79,SNR=252
PDMCI Parker Dam,Lak 79.02 49 ⇓P **P 22 51 14.9 +0.1**
baz=79,SNR=62
K05A Summer Lake 79.13 39 ⇓P **P 22 51 15.3 +0.2**
baz=79,SNR=116
S10A Tonopah Range, 79.18 45 ⇓P **P 22 51 15.2 -0.3**
baz=79,SNR=108
114A Black Gap (USA 79.18 51 ⇑P **P 22 51 15.4 -0.2**
baz=79,SNR=83
U11A Corn Creek 79.22 46 ⇑P **P 22 51 16.5 +0.7**
baz=79,SNR=29
V12A Nelson 79.23 47 ⇑P **P 22 51 15.8 -0.1**
baz=79,SNR=83
X13A Yucca 79.39 49 ⇓P **P 22 51 16.8 +0.1**
baz=80,SNR=155
KMOR Kings Mountain 79.40 35 P **P 22 51 17.5 +1.0**
Z14A Wintersburg 79.43 50 ⇑P **P 22 51 17.4 +0.4**
baz=80,SNR=94
KSI Kapahiang 79.50 269 P **P 22 51 17.2 -0.6**
comp=Z,6μmcomp=Z,628nm,0.7s,mb6.4
F03A Seaside 79.54 35 ⇓P **P 22 51 18.2 +0.9**
baz=80,SNR=14
H04A Detroit Lake 79.54 37 ⇑P **P 22 51 16.7 -0.6**
baz=80,SNR=33
R10A Warm Springs 79.56 44 ⇑P **P 22 51 17.6 +0.1**
baz=80,SNR=263
S11A Rachel 79.60 45 ⇑P **P 22 51 18.2 +0.4**
baz=80,SNR=68
W13A Hualapai Mount 79.60 48 P **P 22 51 18.3 +0.5**
baz=80,SNR=200
115A Sonoran Desert 79.64 51 ⇓P **P 22 51 18.3 +0.2**
baz=80,SNR=52
Y14A Wickenburg 79.67 50 ⇑P **P 22 51 18.1 -0.1**
baz=80,SNR=160
G04A Mulino 79.70 36 ⇓P **P 22 51 17.3 -0.8**
baz=80,SNR=26
T11A Corn Creek, Al 79.75 46 ⇓P **P 22 51 18.7 +0.1**
baz=80
Q10A Clear Creek Ra 79.78 44 ⇑P **P 22 51 18.1 -0.6**
baz=80,SNR=70
U12A Valley of Fire 79.81 47 ⇓P **P 22 51 18.9 -0.1**
baz=80,SNR=64
T12A Moapa 79.84 46 ⇑P **P 22 51 18.8 -0.2**
baz=80,SNR=18
216A Three Points, 79.89 52 ⇑P **P 22 51 20.2 +0.7**
baz=80,SNR=149
V13A Grand Canyon W 79.91 47 ⇑P **P 22 51 19.4 -0.1**
baz=80,SNR=103
MYKOM Kota Tinggi 79.92 275 P **P 22 51 20.9 +0.8**
MYKOM Kota Tinggi 79.92 275 P pP 22 52 48.2 +0.3
MYKOM Kota Tinggi 79.92 275 P **P 22 51 21.0 +1.0**
comp=Z,2μmcomp=Z,264nm,1.2s,mb5.7
E03A Lebam 79.93 34 ⇓P **P 22 51 19.0 -0.3**
baz=80,SNR=79
DL2 Dalian 79.96 316 ⇓*i*P **P 22 51 20.3 +0.6**
DL2 pP pP 22 52 45.1 -2.5
DL2 sP sP 22 53 26.4 -2.0
DL2 S S 23 00 53.3 +2.8
DL2 pmax pmax
comp=Z,90nm,1.1s,mb5.3
DL2 pmax pmax
comp=Z,1μm,9.3s
116A Eloy 79.97 51 ⇓P **P 22 51 20.3 +0.4**
baz=80,SNR=59
Z15A Gila River Ind 79.98 51 ⇑P **P 22 51 20.3 +0.5**
baz=80,SNR=44
X14A Yava 80.01 49 ⇑P **P 22 51 20.4 +0.4**
baz=80,SNR=281
R11A Troy Canyon, C 80.08 45 ⇑P **P 22 51 19.7 -0.6**
baz=80,SNR=134
RSO Redoubt South 80.08 12 *e*P **P 22 51 18.7 -1.0**
BMN Battle Mountai 80.11 42 *e*P **P 22 51 20.5 +0.1**
BMN *e*PP pP 22 52 50.8 +2.4
BMN pmax pmax
comp=Z,283nm,1.1s,mb5.8
BMN Battle Mountai 80.11 42 *e*P **P 22 51 20.5 +0.1**
comp=Z,283nm,1.1s,mb5.8
BMN *e*pP pP 22 52 50.8 +2.4
SVW2 Sparrevohn 80.14 11 *e*P **P 22 51 18.5 -1.6**
comp=Z,241nm,1.1s,mb5.7
Y15A Casa Rosa Ranc 80.16 50 ⇓P **P 22 51 21.3 +0.4**
baz=80,SNR=148
P10A Eureka 80.16 43 ⇑P **P 22 51 20.3 -0.4**
baz=80,SNR=54
F04A Amboy 80.17 35 ⇓P **P 22 51 20.1 -0.5**
baz=80,SNR=39
S12A Delamar Landin 80.19 46 ⇑P **P 22 51 21.3 +0.4**
baz=80,SNR=143
U13A Pakoon Wash 80.20 47 ⇓P **P 22 51 21.2 +0.2**
baz=80,SNR=190
KLR Kul'dur 80.23 329 *α i*P **P 22 51 17.1 -3.7**
KLR *e* pP 22 52 48.5 -0.3
KLR *e*S S 23 00 51.0 -1.7
KLR pmax pmax
comp=E,100nm,1.2s
KLR pmax pmax
comp=Z,160nm,1.2s,mb5.5
KLR pmax pmax
comp=Z,3μm,3.0s
KLR smax
comp=N,4μm,14.0s
KLR smax
comp=E,2μm,14.0s
W14A Seligman 80.23 48 ⇑P **P 22 51 21.6 +0.5**
baz=80,SNR=206
QIZ Qiongzhong 80.23 293 P **P 22 51 21.6 +0.1**
QIZ pP pP 22 52 45.8 -3.7
QIZ sP sP 22 53 26.3 -4.0
QIZ S S 23 00 51.8 -2.2
QIZ pmax pmax
comp=Z,1μm,12.8s
QIZ Qiongzhong 80.23 293 *e*P **P 22 51 22.1 +0.6**
comp=Z,154nm,1.6s,mb5.4
217A Green Valley 80.27 52 ⇓P **P 22 51 22.2 +0.7**
baz=80,SNR=282
CN2 Changchun 80.28 322 *e*P **P 22 51 21.8 +0.6**
CN2 *e*pP pP 22 52 49.0 -0.2
CN2 *e*sP sP 22 53 27.9 -2.1
CN2 *e*S S 23 00 53.6 +0.1
CN2 SS SS 23 06 20.8 +5.4
CN2 pmax pmax
comp=Z,200nm,3.0s
Q11A Duckwater 80.29 44 ⇑P **P 22 51 21.3 -0.1**
baz=80,SNR=258
NLWA Neilton Lookou 80.29 34 ⇑P **P 22 51 21.1 -0.1**
baz=80,SNR=74
NLWA Neilton Lookou 80.29 34 *e*P **P 22 51 21.2 0.0**
comp=Z,299nm,1.1s,mb5.8
NLWA *e*pP pP 22 52 50.7 +1.5
SNY Shenyang 80.29 319 ⇓P **P 22 51 20.9 -0.4**
SNY pP pP 22 52 47.4 -2.0
SNY S S 23 00 58.8 +5.0
SNY pmax pmax
comp=Z,91nm,1.2s,mb5.3
WVOR Wild Horse Val 80.33 40 *e*P **P 22 51 21.5 0.0**
WVOR pmax pmax
comp=Z,242nm,1.0s,mb5.8
WVOR Wild Horse Val 80.33 40 *e*P **P 22 51 21.5 0.0**
comp=Z,242nm,1.0s,mb5.8
VIPM Ingram Point 80.34 37 P **P 22 51 21.2 -0.3**
STD Studebaker Rid 80.47 35 P **P 22 51 22.3 +0.1**
X15A Humboldt 80.49 49 ⇑P **P 22 51 23.0 +0.5**
baz=81,SNR=291
KGM Kluang 80.49 275 P **P 22 51 23.8 +0.7**
KGM Kluang 80.49 275 P pP 22 52 52.5 +1.4
O10A Cortez Mining, 80.50 43 ⇑P **P 22 51 22.3 -0.2**
baz=81,SNR=52
Z16A Peralta Trail, 80.54 51 ⇓P **P 22 51 23.4 +0.5**
baz=81,SNR=108
TUC Tucson 80.54 52 *e*P **P 22 51 23.8 +0.9**
TUC pmax pmax
comp=Z,481nm,1.1s,mb6.1

TUC Tucson 80.54 52 *e*P **P 22 51 23.8 +0.9**
comp=Z,481nm,1.1s,mb6.1
T13A Saint George 80.54 46 P **P 22 51 23.1 +0.4**
baz=81,SNR=118
P11A Circle Ranch, 80.59 44 ⇓P **P 22 51 23.6 +0.6**
baz=81,SNR=14
117A Oracle 80.69 52 ⇑P **P 22 51 24.4 +0.7**
baz=81,SNR=280
RGRI Rengat 80.72 273 P **P 22 51 24.9 +0.6**
comp=Z,809nm,0.8s,mb6.5
N10A Dunphy 80.72 42 ⇑P **P 22 51 24.4 +0.8**
baz=81,SNR=6.6
R12A Pony Springs, 80.72 45 ⇑P **P 22 51 23.9 +0.2**
baz=81,SNR=86
I07A Izee 80.74 38 ⇑P **P 22 51 23.6 0.0**
baz=81,SNR=264
318A Bisbee 80.75 53 ⇑P **P 22 51 24.5 +0.6**
baz=81,SNR=246
U14A Mt Trumbull 80.75 47 ⇓P **P 22 51 24.1 +0.2**
baz=81,SNR=204
Y16A Circle Bar Ran 80.75 50 ⇓P **P 22 51 24.4 +0.4**
baz=81,SNR=201
W15A Williams 80.80 49 ⇓P **P 22 51 24.9 +0.8**
baz=81,SNR=28
S13A Holt Ranch, En 80.86 46 ⇓P **P 22 51 24.5 +0.1**
baz=81,SNR=128
Q12A Willow Creek R 80.94 44 ⇑P **P 22 51 24.7 -0.1**
baz=81,SNR=70
218A Dragoon 80.94 53 ⇓P **P 22 51 25.5 +0.5**
baz=81,SNR=111
J08A Circle Bar Ran 80.94 39 ⇓P **P 22 51 24.5 -0.2**
baz=81
GNW Green Mountain 80.95 34 *e*P **P 22 51 24.8 +0.2**
comp=Z,100nm,1.0s,mb5.5
O11A Cowboy Ranch, 80.96 43 ⇑P **P 22 51 24.8 -0.1**
baz=81,SNR=172
LON Longmire 81.00 35 *e*P **P 22 51 24.3 -0.6**
LON pmax pmax
comp=Z,129nm,1.2s,mb5.5
LON Longmire 81.00 35 *e*P **P 22 51 24.2 -0.7**
comp=Z,129nm,1.2s,mb5.5
GAMB Gambell 81.03 3 *e*P **P 22 51 24.4 -0.3**
comp=Z,280nm,0.9s,mb6.0
X16A Lo Mia Camp, P 81.03 50 ⇓P **P 22 51 26.1 +0.7**
baz=81,SNR=269
R13A O'Grain Ranch, 81.08 45 ⇑P **P 22 51 25.8 +0.3**
baz=81,SNR=54
P12A McGill 81.11 44 ⇑P **P 22 51 25.5 -0.2**
baz=81
M10A I.L. Ranch, Tu 81.13 42 ⇓P **P 22 51 25.9 +0.2**
baz=81,SNR=133
T14A Hurricane 81.14 47 ⇓P **P 22 51 25.9 0.0**
baz=81,SNR=88
Y17A Roosevelt 81.14 51 ⇑P **P 22 51 26.3 +0.4**
baz=81,SNR=128
D05A Enumclaw 81.17 35 ⇑P **P 22 51 25.8 0.0**
baz=81,SNR=64
V15A Kaibab Nationa 81.17 48 ⇓P **P 22 51 26.6 +0.5**
baz=81
WHN Wuhan 81.17 306 ⇓P **P 22 51 26.8 +0.6**
WHN pP pP 22 52 53.1 -1.4
WHN S S 23 01 03.8 +0.5
WHN pmax pmax
comp=Z,480nm,1.2s,mb6.1
WHN pmax pmax
comp=Z,3μm,7.1s
CCUT Cedar City 81.18 46 *e*P **P 22 51 26.8 +0.7**
comp=Z,217nm,1.2s,mb5.8
Z17A San Carlos Hig 81.23 51 ⇓P **P 22 51 27.1 +0.7**
baz=81,SNR=75
ARUT Antelope Range 81.25 46 *e*P **P 22 51 27.0 +0.6**
ARUT pmax pmax
comp=Z,197nm,1.2s,mb5.7
ARUT Antelope Range 81.25 46 *e*P **P 22 51 27.0 +0.6**
comp=Z,197nm,1.2s,mb5.7
319A Douglas 81.26 53 ⇑P **P 22 51 27.6 +0.9**
baz=81,SNR=327
N11A Elko Archery C 81.27 42 ⇓P **P 22 51 27.1 +0.6**
baz=81,SNR=12
RC01 Rabbit Creek A 81.28 13 *e*P **P 22 51 25.1 -0.9**
comp=Z,392nm,1.1s,mb6.0
RC01 *e*pP pP 22 52 52.8 -1.6
W16A Flagstaff 81.29 49 ⇑P **P 22 51 27.3 +0.6**
baz=81,SNR=86
PGC Sidney 81.30 33 *e*P **P 22 51 26.5 +0.1**
comp=Z,26nm,1.3s,mb4.8
118A Homack Ranch, 81.30 52 ⇓P **P 22 51 27.7 +0.8**
baz=81,SNR=352
U15A North Rim 81.38 48 ⇑P **P 22 51 27.8 +0.6**
baz=82,SNR=216
SDSI Sungai Dareh 81.41 272 P **P 22 51 27.1 -0.8**
comp=Z,2μmcomp=Z,152nm,0.9s,mb5.7
S14A Cedar City 81.42 46 ⇓P **P 22 51 27.4 +0.1**
baz=82,SNR=40
RMW Rattlesnake Mo 81.44 34 P **P 22 51 26.9 -0.3**
Q13A Wheeler Ranch, 81.44 45 ⇓P **P 22 51 27.4 0.0**
baz=82,SNR=103
Z18A Geronimo 81.46 52 ⇑P **P 22 51 27.2 -0.4**
baz=82,SNR=24
L10A Juniper Basin 81.47 41 ⇓P **P 22 51 27.4 -0.1**
baz=82,SNR=73
F07A Phinny Hill Vi 81.55 36 ⇑P **P 22 51 27.6 -0.2**
baz=82,SNR=30
219A White Tail Can 81.55 53 ⇓P **P 22 51 28.8 +0.7**
baz=82,SNR=246
ELK Elko 81.55 43 *e*P **P 22 51 28.4 +0.4**
ELK pmax pmax
comp=Z,88nm,1.1s
ELK Elko 81.55 43 *e*P **P 22 51 28.4 +0.4**
comp=Z,88nm,1.1s,mb5.4
M11A Holland Ranch, 81.56 42 ⇑P **P 22 51 28.2 +0.3**
baz=82,SNR=81
WUAZ Wupatki 81.60 49 ⇓P **P 22 51 28.7 +0.4**
baz=82,SNR=147
WUAZ Wupatki 81.60 49 *e*P **P 22 51 28.9 +0.6**
comp=Z,350nm,1.1s,mb6.0
K10A MacKenzie Ranc 81.60 40 ⇓P **P 22 51 28.1 -0.1**
baz=82,SNR=238
T15A Red Dirt Ranch 81.60 47 ⇓P **P 22 51 28.5 +0.2**
baz=82,SNR=193
CRAG Craig 81.62 24 *e*P **P 22 51 28.2 +0.3**
comp=Z,221nm,1.0s,mb5.8
O12A Currie 81.63 43 ⇑P **P 22 51 28.3 -0.1**
baz=82,SNR=62
KTGM Kuala Trenggan 81.69 278 P **P 22 51 30.3 +1.0**
P13A Bates Ranch, G 81.69 44 ⇓P **P 22 51 28.6 -0.1**
baz=82,SNR=207
TIA Tai'an 81.70 312 P **P 22 51 28.9 +0.1**
TIA LR LR
comp=N,2μm,18.6s
TIA LR LR
comp=E,1μm,19.6s
N12A Clover Valley, 81.74 43 ⇑P **P 22 51 28.8 -0.1**
baz=82,SNR=148
N12A Clover Valley, 81.74 43 *e*P **P 22 51 29.0 +0.1**
comp=E,283nm,1.1s,mb5.9
G08A Pilot Rock 81.75 37 P **P 22 51 28.6 -0.2**
baz=82,SNR=360
Y18A Canyon Day Jun 81.77 51 ⇓P **P 22 51 30.2 +0.9**
baz=82,SNR=315
R14A James Farms, M 81.79 46 ⇓P **P 22 51 29.7 +0.5**
baz=82,SNR=15
TTA Tatalina 81.79 10 *e*P **P 22 51 28.0 -0.6**
JCW Jim Creek 81.82 34 *e*P **P 22 51 28.7 -0.4**
JCW *e*pP pP 22 52 58.6 +1.1
320A Kipp Ranch, An 81.82 54 ⇑P **P 22 51 30.3 +0.7**
baz=82,SNR=218
PMR Palmer 81.86 13 *e*P **P 22 51 27.5 -1.5**
PMR pmax pmax
comp=Z,427nm,1.1s,mb6.1
PMR Palmer 81.86 13 *e*P **P 22 51 27.5 -1.5**
comp=Z,427nm,1.1s,mb6.1
119A Ashpeak Ranch, 81.86 52 ⇓P **P 22 51 30.6 +0.8**
baz=82,SNR=187
W17A Winslow 81.87 49 ⇓P **P 22 51 30.3 +0.6**
baz=82,SNR=21
TBM Table Mountain 81.92 35 P **P 22 51 29.9 +0.2**
S15A Panguitch 81.94 47 ⇓P **P 22 51 31.2 +1.2**
baz=82,SNR=63
Q14A Sevier Lake (B 81.96 45 ⇑P **P 22 51 30.3 +0.3**
baz=82,SNR=613
L11A Cat Creek Ranc 81.97 41 P **P 22 51 30.1 0.0**
baz=82,SNR=254
E07A Sunnyside 81.97 36 ⇑P **P 22 51 29.7 -0.3**
baz=82,SNR=31
SIT Sitka 82.01 22 *e*P **P 22 51 30.5 +0.6**
SIT pmax pmax
comp=Z,138nm,1.1s,mb5.6

SIT Sitka 82.01 22 eP P 22 51 30.5 +0.7
comp=Z,138nm,1.1s,mb5.6
J10A Berg Farm, Mel 82.02 40 ⇑P P 22 51 30.6 +0.3
baz=82,SNR=17
RSW Rattlesnake Hi 82.03 36 eP P 22 51 30.8 +0.5
HAWA Hanford 82.06 36 eP P 22 51 30.3 -0.2
comp=Z,483nm,1.2s,mb6.1
O13A Hicks Ranch, I 82.06 44 ⇓P P 22 51 30.7 +0.2
baz=82,SNR=33
V17A Tonalea, Kykot 82.07 49 P P 22 51 31.4 +0.6
baz=82,SNR=374
U16A Tuba City 82.07 48 ⇓P P 22 51 30.8 +0.1
baz=82,SNR=121
220A Playas Peak, P 82.07 53 ⇑P P 22 51 31.9 +1.0
baz=82,SNR=389
M12A Wells 82.11 42 ⇑P P 22 51 30.8 -0.1
baz=82,SNR=194
K11A Parker Ranch, 82.12 41 ⇓P P 22 51 30.8 0.0
baz=82,SNR=178
Z19A T-Link Ranch, 82.12 52 ⇓P P 22 51 31.6 +0.6
baz=82
BKNI Bangkinang 82.15 273 P P 22 51 31.6 -0.1
comp=Z,8µmcomp=Z,838nm,1.2s,mb6.4
X18A Snowflake 82.18 50 ⇓P P 22 51 32.1 +0.7
baz=82,SNR=64
T16A Glen Canyon Da 82.20 47 ⇑P P 22 51 31.6 +0.2
baz=82
A05A Maple Falls 82.22 33 ⇓P P 22 51 31.4 +0.2
baz=82,SNR=15
DIV Divide 82.23 15 eP P 22 51 30.3 -0.6
comp=Z,396nm,0.8s,mb6.2
B06A Marblemount 82.25 34 ⇓P P 22 51 31.3 -0.1
baz=82,SNR=15
R15A Junction 82.26 46 ⇓P P 22 51 32.3 +0.7
baz=82,SNR=53
120A U Bar Ranch, L 82.27 53 ⇑P P 22 51 32.4 +0.5
baz=82,SNR=126
N13A Wendover, West 82.28 43 ⇑P P 22 51 31.7 0.0
baz=82,SNR=116
N13A Wendover, West 82.28 43 eP P 22 51 32.3 +0.6
comp=Z,780nm,1.1s,mb6.3
ETW Entiat 82.32 35 eP P 22 51 31.5 -0.2
ETW epP pP 22 53 01.0 +0.8
PDSI Padang 82.34 271 P P 22 51 32.1 -0.6
comp=Z,4µmcomp=Z,503nm,0.7s,mb6.4
BMRM Bremner River 82.38 15 eP P 22 51 30.8 -0.9
comp=Z,431nm,1.0s,mb6.1
E08A Dider Farm, El 82.38 36 ⇑P P 22 51 31.4 -0.7
baz=82,SNR=62
P14A Drum Mountains 82.40 45 ⇑P P 22 51 32.3 0.0
baz=82,SNR=382
PPLA Purkeypile 82.42 11 eP P 22 51 30.1 -1.8
comp=Z,81nm,0.8s,mb5.5
L12A House Creek Ra 82.43 42 ⇑P P 22 51 32.4 0.0
baz=83,SNR=38
Y19A Nutrioso 82.43 51 ⇑P P 22 51 33.2 +0.6
baz=82,SNR=568
MSU Marysvale 82.47 46 eP P 22 51 33.6 +0.9
LNOR Lincton Mounta 82.47 37 eP P 22 51 32.6 +0.1
FRIM Kepong 82.48 276 P P 22 51 33.7 +0.3
BMO Blue Mountains 82.48 38 eP P 22 51 31.9 -0.7
BMO e*PP pP 22 53 03.8 +2.6
BMO pmax pmax
comp=Z,201nm,1.1s,mb5.8
BMO Blue Mountains 82.48 38 eP P 22 51 31.9 -0.7
comp=Z,201nm,1.1s,mb5.8
BMO epP pP 22 53 03.8 +2.6
BMO ePP PP 22 54 45.4 -3.1
S16A Weppner Ranch, 82.49 47 P P 22 51 33.0 +0.1
baz=83,SNR=130
PPI Padang Panjang 82.53 272 P P 22 51 33.0 -0.7
comp=Z,2µmcomp=Z,258nm,0.8s,mb6.0
Z20A Nine Sixteen R 82.55 52 ⇑P P 22 51 34.1 +0.8
baz=83,SNR=350
COCO West Island 82.57 260 i P P 22 51 37.2 +3.4
COCO West Island 82.57 260 eP P 22 51 33.7 -0.1
comp=Z,353nm,1.3s,mb5.9
M13A Montello 82.57 43 ⇑P P 22 51 33.1 -0.1
baz=83,SNR=268
M13A Montello 82.57 43 eP P 22 51 33.2 +0.1
comp=Z,457nm,1.2s,mb6.1
Q15A Fillmore 82.57 45 ⇓P P 22 51 33.5 +0.2
baz=83,SNR=143
MFID Camas Ranch 82.59 40 ⇓P P 22 51 33.0 -0.2
baz=83,SNR=271
W18A Petrified Fore 82.60 50 ⇓P P 22 51 33.9 +0.4
baz=83,SNR=53
X19A St. Johns 82.62 51 ⇓P P 22 51 34.3 +0.8
baz=83,SNR=215
U17A Shonto 82.62 48 ⇑P P 22 51 34.2 +0.6
baz=83,SNR=126
221A Mesquite Ranch 82.69 53 ⇓P P 22 51 35.1 +1.1
baz=83,SNR=81
T17A Navajo Res., N 82.70 48 ⇓P P 22 51 34.6 +0.6
baz=83,SNR=242
V18A Ganado 82.73 49 ⇑P P 22 51 34.8 +0.7
baz=83,SNR=148
PNL Peninsula 82.74 18 eP P 22 51 33.0 -0.6
comp=Z,542nm,1.0s,mb6.2
K12A Draper Farm, C 82.76 41 ⇑P P 22 51 33.9 -0.2
baz=83,SNR=137
I11A Placerville 82.78 40 ⇓P P 22 51 33.9 -0.3
baz=83,SNR=72
D08A Wollman Farm, 82.79 36 ⇑P P 22 51 33.7 -0.4
baz=83,SNR=101
R16A Teasdale 82.84 46 ⇑P P 22 51 35.5 +0.9
baz=83,SNR=284
W19A Sanders 82.85 50 ⇑P P 22 51 35.3 +0.5
baz=83,SNR=14
DUG Dugway 82.87 44 ⇑P P 22 51 34.2 -0.5
baz=83,SNR=172
DUG Dugway 82.87 44 eP P 22 51 34.5 -0.2
DUG pmax pmax
comp=Z,191nm,1.1s,mb5.7
DUG Dugway 82.87 44 eP P 22 51 34.5 -0.2
comp=Z,191nm,1.1s,mb5.7
121A Cookes Peak, D 82.91 53 ⇑P P 22 51 35.9 +0.8
baz=83,SNR=227
E09A Wood Farm, Sta 82.92 37 ⇓P P 22 51 33.8 -1.0
baz=83,SNR=81
P15A Leamington 82.92 45 ⇓P P 22 51 35.0 0.0
baz=83,SNR=96
N14A Grayback Hills 82.95 43 ⇑P P 22 51 34.8 -0.3
baz=83,SNR=71
J12A Stokes Ranch, 82.95 41 ⇑P P 22 51 35.1 0.0
baz=83,SNR=218
S17A Black Ridge (B 83.00 47 ⇑P P 22 51 35.1 -0.3
baz=83,SNR=59
TNA Tin City 83.01 4 eP P 22 51 34.7 -0.1
comp=Z,1µm,1.0s,mb6.5
Y20A Horse Springs, 83.06 51 ⇓P P 22 51 36.7 +0.8
baz=83,SNR=407
L13A Double Diamond 83.08 42 ⇑P P 22 51 35.8 +0.1
baz=83,SNR=136
BGU Big Grassy Mou 83.09 43 eP P 22 51 35.4 -0.4
comp=Z,120nm,1.3s,mb5.5
BGU epP pP 22 53 09.0 +4.5
U18A Rough Rock, Ch 83.10 49 ⇓P P 22 51 36.4 +0.4
baz=83,SNR=234
O15A The Old Anders 83.14 44 ⇑P P 22 51 36.2 +0.1
baz=83,SNR=24
F10A Beach Ranch, E 83.14 37 ⇓P P 22 51 35.2 -0.7
baz=83,SNR=441
M14A Sheep Mountain 83.17 43 ⇓P P 22 51 35.7 -0.5
baz=83,SNR=582
I12A Atlanta 83.22 40 ⇓P P 22 51 36.6 +0.2
baz=83,SNR=545
NLU North Lily Min 83.24 45 eP P 22 51 37.3 +0.7
comp=Z,135nm,1.2s,mb5.5
NLU ePP PP 22 54 52.1 -2.7
222A Williams Famil 83.25 54 ⇓P P 22 51 37.3 +0.5
baz=83,SNR=5.9
X20A Quemado 83.25 51 ⇓P P 22 51 37.6 +0.8
baz=83,SNR=154
K13A Stover Farm, H 83.28 42 ⇓P P 22 51 37.0 +0.2
baz=83,SNR=159
TRF Thorofare Moun 83.29 12 eP P 22 51 34.8 -1.5
comp=Z,684nm,0.8s,mb6.4
B08A Colville Reser 83.31 35 ⇑P P 22 51 35.6 -1.2
baz=83,SNR=167
Z21A St. Cloud Mine 83.33 52 ⇓P P 22 51 37.9 +0.7
baz=83,SNR=323
P16A Fountain Green 83.35 45 ⇓P P 22 51 37.7 +0.5
baz=84
Q16A Castle Valley 83.36 46 ⇓P P 22 51 37.8 +0.6
baz=84,SNR=128
V19A Window Rock 83.37 50 ⇑P P 22 51 38.0 +0.7
baz=84,SNR=65
N15A Stansbury Isla 83.41 44 ⇓P P 22 51 37.2 -0.2
baz=84,SNR=124
IPM Ipoh 83.42 277 P P 22 51 38.9 +0.7
IPM Ipoh 83.42 277 P P 22 51 37.7 -0.5
comp=Z,5µmcomp=Z,659nm,0.9s,mb6.4
T18A Mexican Hat 83.43 48 ⇑P P 22 51 37.9 +0.3
baz=84,SNR=1000
R17A Hanksville Air 83.44 47 ⇓P P 22 51 37.5 -0.2
baz=84,SNR=347
L14A Malta 83.51 42 ⇑P P 22 51 37.8 -0.1
baz=84,SNR=180
W20A Ramah 83.51 50 ⇑P P 22 51 38.7 +0.6
baz=84,SNR=213
TMUT Trail Mountain 83.51 46 eP P 22 51 39.0 +1.0
comp=Z,638nm,1.0s,mb6.3
U19A Dine' College, 83.52 49 ⇓P P 22 51 38.5 +0.4
baz=84,SNR=324
SEY Seymchan 83.53 347 eP P 22 51 36.1 -1.4
SEY Seymchan 83.53 347 eP P 22 51 36.1 -1.4
HLID Hailey 83.54 41 ⇑P P 22 51 38.2 +0.2
baz=84,SNR=348
HLID Hailey 83.54 41 eP P 22 51 38.2 +0.2
comp=Z,279nm,1.1s,mb5.9
HLID epP pP 22 53 07.0 +0.1
NOQ North Oquirrh 83.55 44 eP P 22 51 38.3 +0.1
comp=Z,347nm,1.1s,mb6.0
MPU Maple Canyon 83.57 45 eP P 22 51 38.5 +0.3
comp=Z,253nm,1.1s,mb5.9
C09A Chriman Ranch 83.57 36 ⇑P P 22 51 37.0 -1.0
baz=84,SNR=62
122A Conniff Cattle 83.58 53 ⇓P P 22 51 39.2 +0.7
baz=84,SNR=9.1
S18A Hurst Farm, Bl 83.60 47 ⇓P P 22 51 38.4 -0.1
baz=84,SNR=122
J13A Cove Ranch, Pi 83.61 41 ⇓P P 22 51 38.5 +0.1
baz=84,SNR=239
Y21A Point of Rocks 83.63 52 ⇓P P 22 51 39.3 +0.6
baz=84,SNR=302
SPUT South Promonto 83.66 43 eP P 22 51 38.7 +0.1
comp=Z,335nm,1.1s,mb6.0
HVU Hansel Valley 83.68 43 eP P 22 51 38.9 +0.1
HVU e 22 54 56.0
HVU pmax pmax
comp=Z,373nm,1.2s,mb6.0
HVU Hansel Valley 83.68 43 eP P 22 51 38.9 +0.2
comp=Z,373nm,1.2s,mb6.0
HVU ePP PP 22 54 56.0 -2.3
MNSI Mandailing Nat 83.69 273 P P 22 51 38.8 -0.7
comp=Z,131nm,1.4s,mb5.5
223A Chaparral, Ant 83.73 54 ⇑P P 22 51 39.7 +0.5
baz=84,SNR=38
M15A Larsen Ranch, 83.73 43 ⇑P P 22 51 38.7 -0.4
baz=84,SNR=340
X21A Alamocita Cree 83.74 51 ⇑P P 22 51 39.9 +0.6
baz=84,SNR=83
BPAW Bear Paw Mtn. 83.75 11 eP P 22 51 36.4 -2.1
comp=Z,112nm,0.8s,mb5.7
BPAW e 22 53 19.4
O16A Springville 83.75 45 ⇑P P 22 51 39.1 0.0
baz=84,SNR=86
H12A Diamond D Ranc 83.79 40 ⇓P P 22 51 39.0 -0.3
baz=84,SNR=501
K14A Jones Ranch, D 83.80 42 ⇓P P 22 51 39.5 +0.1
baz=84,SNR=194
G12A Big Creek, Yel 83.81 39 ⇑P P 22 51 39.1 -0.2
baz=84
MCK McKinley 83.81 12 eP P 22 51 38.0 -0.9
MCK pmax pmax
comp=Z,922nm,1.0s,mb6.5
MCK McKinley 83.81 12 eP P 22 51 38.0 -0.9
comp=Z,922nm,1.0s,mb6.5
CTU Camp Tracy 83.82 44 eP P 22 51 39.6 +0.2
comp=Z,279nm,1.1s,mb5.9
V20A Brimhall 83.83 50 ⇓P P 22 51 39.8 +0.1
baz=84,SNR=52
Z22A Elephant Butte 83.84 53 ⇓P P 22 51 40.4 +0.6
baz=84,SNR=124
SKAG Skagway 83.85 20 eP P 22 51 40.6 +1.4
comp=Z,809nm,1.8s,mb6.2
PMSA Palmer Station 83.85 157 P P 22 51 40.8 +1.5
comp=Z,241nm,0.9s,mb5.9,baz=236,slow=4.3,SNR=86
PMSA pP pP 22 53 08.9 +0.8
comp=Z,29nm,1.1s,baz=285,slow=13,SNR=1.2
PMSA S S 23 01 28.7 -0.2
comp=Z,3.1nm,0.7s,baz=123,slow=23,SNR=5.6
PMSA Palmer Station 83.85 157 eP P 22 51 40.8 +1.5
comp=Z,749nm,1.4s,mb6.2
SRU San Rafael 83.89 46 ⇑P P 22 51 39.8 -0.1
baz=84,SNR=227
SRU San Rafael 83.89 46 eP P 22 51 40.1 +0.2
SRU pmax pmax
comp=Z,542nm,1.1s,mb6.2
SRU San Rafael 83.89 46 eP P 22 51 40.1 +0.2
comp=Z,542nm,1.1s,mb6.2
T19A Beclabito 83.89 49 ⇑P P 22 51 39.9 -0.1
baz=84,SNR=259
I13A Wildhorse Cree 83.91 40 ⇑P P 22 51 39.9 +0.1
baz=84,SNR=180
P17A Butcher Ranch, 83.91 46 ⇓P P 22 51 40.0 0.0
baz=84,SNR=64
JLU Jordanelle 83.97 44 eP P 22 51 40.6 +0.3
comp=Z,246nm,1.1s,mb5.8
JLU pP pP 22 53 15.6 +6.4
J14A Carey 83.98 41 ⇑P P 22 51 40.8 +0.6
baz=84
R18A Canyonlands Na 83.99 47 ⇑P P 22 51 40.4 0.0
baz=84,SNR=382
DAU Daniels Canyon 84.01 45 eP P 22 51 40.8 +0.3
KULM Kulim 84.03 277 P P 22 51 42.1 +0.9
KULM Kulim 84.03 277 eP P 22 51 42.0 +0.9
comp=Z,366nm,1.1s,mb6.0
KULM epP pP 22 53 11.8 +1.7
KULM Kulim 84.03 277 P P 22 51 41.1 -0.1
comp=Z,3µmcomp=Z,290nm,1.1s,mb5.9
L15A Malad City 84.04 43 ⇓P P 22 51 40.3 -0.3
baz=84,SNR=165
U20A Newcomb 84.05 49 ⇑P P 22 51 41.0 +0.2
baz=84,SNR=101
123A Bell Site, Whi 84.12 53 ⇓P P 22 51 41.9 +0.7
baz=84,SNR=24
N16A Rees Ranch, Co 84.12 44 ⇑P P 22 51 41.2 +0.2
baz=84,SNR=93
W21A San Fidel 84.13 51 ⇓P P 22 51 41.7 +0.5
baz=84,SNR=15
Y22A Socorro 84.13 52 ⇑P P 22 51 41.4 +0.2
baz=84,SNR=88
Q18A Rafter H Ranch 84.16 46 ⇑P P 22 51 40.8 -0.4
baz=84,SNR=142
H13A Challis 84.16 40 ⇓P P 22 51 41.0 -0.1
baz=84
BJT Baijiatuau 84.18 315 eP P 22 51 41.6 +0.3
BJT e pP 22 53 13.2 +3.0
BJT pmax pmax
comp=Z,287nm,1.0s
BJT Baijiatuau 84.18 315 eP P 22 51 41.6 +0.3
comp=Z,287nm,1.0s,mb6.0
BJT e pP 22 53 13.2 +3.0
BJI Beijing 84.18 315 P P 22 51 41.8 +0.5
BJI pP pP 22 53 05.3 -5.0
BJI sP sP 22 53 48.8 -2.0
BJI S S 23 01 28.1 -4.9
BJI sS sS 23 04 12.1 +1.0
BJI pmax pmax
comp=Z,310nm,1.0s,mb6.0
BJI pmax pmax
comp=Z,2µm,6.1s
F12A Elk City 84.18 38 ⇑P P 22 51 40.6 -0.6
baz=84,SNR=963
LAZ Ladron 84.20 51 eP P 22 51 42.3 +0.8
comp=Z,127nm,1.4s,mb5.5
324A Moseley Ranch, 84.22 55 ⇓P P 22 51 42.1 +0.4
baz=84,SNR=386
LENM Lemitar 84.22 52 eP P 22 51 42.3 +0.6
Y22D IRIS PASSCAL I 84.22 52 ⇓P P 22 51 41.6 -0.1
baz=84,SNR=10
S19A Harvey Farm, M 84.23 48 ⇓P P 22 51 41.8 +0.2
baz=84
HYT Haines Junctio 84.23 18 eP P 22 51 40.6 -0.5
O17A Robinson Place 84.26 45 ⇓P P 22 51 42.2 +0.5
baz=84,SNR=567
K15A Arbon 84.29 42 ⇓P P 22 51 41.8 0.0
baz=84,SNR=90
P18A Preston Nutter 84.32 46 ⇓P P 22 51 42.2 +0.1
baz=84,SNR=110
I14A Mackay 84.33 41 ⇓P P 22 51 42.3 +0.3
baz=84,SNR=193
425A Indio Mountain 84.35 55 ⇑P P 22 51 43.1 +0.8
baz=84,SNR=633
E12A Beaver Dam Sad 84.35 38 ⇓P P 22 51 40.2 -1.8
baz=84
HWUT Hardware Ranch 84.38 43 eP P 22 51 42.0 -0.3
comp=Z,153nm,1.1s,mb5.6
R19A Curley Farm, L 84.39 47 ⇓P P 22 51 42.2 -0.1
baz=84,SNR=82
Z23A Rita Site, Whi 84.40 53 ⇓P P 22 51 42.9 +0.3
baz=84,SNR=35
MNTX Cornudas Mount 84.41 54 eP P 22 51 43.2 +0.6
comp=Z,420nm,1.2s,mb6.0
V21A Milan 84.44 50 ⇓P P 22 51 42.5 -0.2
baz=85,SNR=34
G13A Cobalt 84.45 39 ⇓P P 22 51 42.2 -0.3
baz=85,SNR=215
224A Cornudas Mount 84.45 54 ⇑P P 22 51 43.7 +0.8
baz=85,SNR=337
NEW Newport 84.47 36 eP P 22 51 41.6 -0.9
NEW pmax pmax
comp=Z,110nm,1.0s
NEW Newport 84.47 36 eP P 22 51 41.6 -0.9
comp=Z,110nm,1.0s,mb5.5
BNM Barren Site 84.48 52 eP P 22 51 43.5 +0.6
comp=Z,56nm,0.3s,mb5.8
626A Big Bend Ranch 84.53 57 ⇓P P 22 51 44.1 +0.8
baz=85,SNR=494
LPM Los Pinos Moun 84.54 52 eP P 22 51 43.8 +0.6
N17A Moffit Pass 84.55 44 ⇓P P 22 51 43.1 0.0
baz=85,SNR=63
PV10 Paradox Valley 84.58 47 eP P 22 51 43.7 +0.3
comp=Z,5µm,1.0s,mb7.2
325A Bean Ranch, Si 84.59 55 ⇑P P 22 51 43.9 +0.3
baz=85,SNR=631
L16A Fish Haven 84.67 43 ⇓P P 22 51 43.8 +0.2
baz=85,SNR=32
PV04 Paradox Valley 84.68 47 eP P 22 51 44.1 +0.2
Q19A Hogan Spring (84.69 47 ⇓P P 22 51 43.7 -0.1
baz=85,SNR=160
W22A Albuquerque 84.69 51 ⇓P P 22 51 44.6 +0.6
baz=85,SNR=26
MAW Mawson 84.70 200 eP P 22 51 43.6 +0.2
comp=Z,62nm,0.9s,mb5.3
MAW eS S 23 01 26.3 -11
MAW Mawson 84.70 200 P P 22 51 44.2 +0.7
comp=Z,76nm,0.8s,mb5.5,baz=125,slow=5.9,SNR=95
MAW pP pP 22 53 13.0 +0.5
comp=Z,26nm,0.9s,baz=149,slow=1.6,SNR=2.3
MAW S S 23 01 31.0 -6.1
comp=Z,5.0nm,0.9s,baz=276,slow=21,SNR=10.0
MAW PKKPbc PKKPbc 23 09 51.3 -1.4
comp=Z,4.4nm,0.8s,baz=315,slow=4.3,SNR=7.0
MAW PKPPKP 23 17 52.5
comp=Z,7.0nm,1.1s,baz=320,slow=6.2,SNR=4.0
MAW Mawson 84.70 200 eP P 22 51 43.9 +0.5
MAW e*PP pP 22 53 16.4 +3.9
MAW pmax pmax
comp=Z,23nm,1.0s
MAW Mawson 84.70 200 eP P 22 51 43.9 +0.5
comp=Z,23nm,1.0s,mb4.9
MAW epP pP 22 53 16.4 +3.9
U21A Nageezi 84.70 49 ⇑P P 22 51 44.3 +0.4
baz=85,SNR=334
J15A Blackfoot 84.70 41 ⇑P P 22 51 44.5 +0.7
baz=85,SNR=298
C11A Tepee Creek (N 84.72 36 ⇓P P 22 51 43.4 -0.4
baz=85
H14A Leadore 84.73 40 ⇑P P 22 51 44.0 +0.1
baz=85,SNR=218
F13A Darby 84.75 39 ⇑P P 22 51 43.4 -0.6
baz=85,SNR=441
124A Stringfield Ra 84.76 54 ⇑P P 22 51 45.0 +0.6
baz=85,SNR=168
526A Mary Lane Ranc 84.77 56 ⇑P P 22 51 45.3 +0.8
baz=85,SNR=340
O18A Roosevelt 84.78 45 ⇓P P 22 51 44.4 +0.1
baz=85,SNR=38
PV01 Paradox Valley 84.80 48 eP P 22 51 44.2 -0.2
comp=Z,827nm,0.9s,mb6.5
S20A Disappointment 84.81 48 ⇓P P 22 51 44.6 +0.1
baz=85
D12A Red Ives Fores 84.82 37 ⇑P P 22 51 43.4 -0.8
baz=85
Y23A Lovelace Mesa, 84.82 52 ⇑P P 22 51 44.6 0.0
baz=85,SNR=109
TXAR Lajitas Array 84.82 57 P P 22 51 45.9 +1.2
comp=Z,447nm,1.0s,mb6.2,baz=220,slow=5.1,SNR=419
TXAR PKKPbc PKKPbc 23 09 53.0 +1.4
comp=Z,0.9nm,0.7s,baz=156,slow=4.2,SNR=5.2
TXAR PKPPKP 23 17 54.4
comp=Z,0.5nm,0.8s,baz=349,slow=1.3,SNR=3.4
ENH Enshi 84.88 304 eP P 22 51 46.0 +1.0
comp=Z,17nm,0.5s,mb5.0
M17A Scullys Gap (B 84.91 44 ⇑P P 22 51 44.2 -0.7
baz=85,SNR=58
PSI Prapat 84.91 275 PKKPbc PKKPbc 23 09 52.2 +1.8
comp=Z,14nm,0.9s,baz=265,slow=7.5,SNR=7.9
ANMO Albuquerque 84.94 51 eP P 22 51 45.5 +0.3
ANMO pmax pmax
comp=Z,207nm,1.1s
ANMO Albuquerque 84.94 51 eP P 22 51 45.5 +0.3
comp=Z,207nm,1.1s,mb5.8
DLBC Dease Lake 84.94 23 P P 22 51 44.5 -0.1
comp=Z,228nm,1.0s,mb5.9,baz=219,slow=5.4,SNR=130
DLBC Dease Lake 84.94 23 eP P 22 51 44.7 +0.1
DLBC epP pP 22 53 14.8 +1.0
R20A Redvale 84.96 48 ⇑P P 22 51 44.9 -0.3
baz=85,SNR=67
K16A Soda Springs 84.96 42 ⇑P P 22 51 45.2 +0.1
baz=85,SNR=172
I15A Monteview 84.97 41 ⇑P P 22 51 45.5 +0.3
baz=85,SNR=101
X23A Hourglass Bar 84.99 52 ⇓P P 22 51 45.6 +0.2
baz=85,SNR=5.5
G14A Jackson 84.99 40 ⇓P P 22 51 45.1 -0.1
baz=85
225A Deer Hill, Car 85.01 54 ⇑P P 22 51 46.1 +0.5
baz=85,SNR=271
V22A San Miguel Ran 85.02 50 ⇑P P 22 51 45.5 -0.1
baz=85,SNR=57
T21A Navajo Lake 85.03 49 ⇑P P 22 51 45.8 +0.2
baz=85,SNR=80
COLA College 85.05 12 eP P 22 51 43.4 -1.6
COLA e*PP pP 22 53 11.8 -2.4
COLA pmax pmax
comp=Z,603nm,0.8s,mb6.4
COLA College 85.05 12 eP P 22 51 43.4 -1.6
comp=Z,603nm,0.8s,mb6.4
COLA epP pP 22 53 11.8 -2.4
L17A Cokeville 85.07 43 ⇑P P 22 51 44.8 -0.9
baz=85,SNR=10.0
627A Terlingua Ranc 85.09 57 ⇓P P 22 51 47.1 +1.1
baz=85,SNR=700
Z24A Sheeppen Canyo 85.09 53 ⇓P P 22 51 46.1 +0.1
baz=85,SNR=81
C12B Naegeli Ranch, 85.10 37 ⇑P P 22 51 44.7 -0.9
baz=85,SNR=38
ILAR Eielson Array 85.16 13 P P 22 51 43.8 -1.8
comp=Z,227nm,0.7s,mb6.0,baz=223,slow=5.1,SNR=744
ILAR pP pP 22 53 13.6 -1.1
comp=Z,20nm,1.1s,baz=233,slow=6.2,SNR=2.0
ILAR PKiKP PKiKP 22 56 53.2 -0.6
comp=Z,3.0nm,0.6s,baz=267,slow=3.0,SNR=12
ILAR S S 23 01 26.0 -15
comp=Z,2.1nm,1.1s,baz=184,slow=5.4,SNR=4.1
ILAR PKKPbc PKKPbc 23 09 51.0 -1.8
comp=Z,1.0nm,0.5s,baz=315,slow=2.0,SNR=9.1
ILAR PKPPKP 23 17 49.0
comp=Z,2.0nm,1.1s,baz=348,slow=3.8,SNR=8.9
ILAR Eielson Array 85.16 13 P P 22 51 43.8 -1.8
ILAR pP pP 22 53 13.7 -1.1
MCMT McKenzie Canyo 85.16 40 eP P 22 51 46.4 +0.4
comp=Z,194nm,1.1s,mb5.8
J16A Bone 85.16 42 ⇑P P 22 51 46.2 +0.2
baz=85,SNR=173
E13A Victor 85.17 38 ⇓P P 22 51 44.9 -1.1
baz=85,SNR=166
H15A Lima 85.18 40 ⇑P P 22 51 46.3 +0.2
baz=85,SNR=208
527A Woodward Ranch 85.18 57 ⇓P P 22 51 47.1 +0.6
baz=85,SNR=504
P19A Cripple Cowboy 85.19 46 ⇓P P 22 51 46.0 -0.3
baz=85,SNR=54
AHID Auburn Hatcher 85.25 43 eP P 22 51 47.3 +0.8
comp=Z,236nm,1.3s,mb5.8
U22A Llaves 85.26 50 ⇑P P 22 51 46.9 +0.2
baz=85,SNR=35
W23A Werner Place, 85.26 51 ⇓P P 22 51 47.0 +0.2
baz=85,SNR=27

Y24A Capitan 85.28 52 ⇑P P 22 51 47.1 +0.2
baz=85,SNR=253
M18A Lyman 85.29 44 ⇓P P 22 51 46.5 -0.2
baz=85,SNR=133
F14A Wisdom 85.34 39 ⇓P P 22 51 46.3 -0.6
baz=86,SNR=87
N18A Larsen Ranch, 85.34 45 ⇑P P 22 51 46.4 -0.6
baz=86,SNR=52
326A Caldwell Ranch 85.35 55 ⇑P P 22 51 47.4 +0.1
baz=86,SNR=48
K17A Gardner Place, 85.35 43 ⇓P P 22 51 47.1 +0.1
baz=86,SNR=72
D13A Huson 85.36 38 ⇓P P 22 51 45.6 -1.3
baz=86,SNR=157
125A Gardner Draw, 85.36 54 ⇑P P 22 51 47.1 -0.2
baz=86,SNR=130
Q20A Ridgley Place, 85.36 47 ⇑P P 22 51 46.9 -0.2
baz=86,SNR=118
RRI2 Red Ridge 85.39 42 eP P 22 51 47.6 +0.5
comp=Z,383nm,1.1s,mb6.0
O19A Miners Draw (B 85.40 45 ⇑P P 22 51 46.8 -0.5
baz=86
GDL2 Guadalupe Moun 85.40 54 eP P 22 51 48.3 +0.7
B12A Libby 85.44 36 ⇓P P 22 51 46.8 -0.5
baz=86,SNR=33
V23A Ortiz Mt. (NFS 85.48 51 ⇑P P 22 51 48.4 +0.6
baz=86,SNR=97
T22A Edith 85.50 49 P P 22 51 47.9 0.0
baz=86,SNR=53
628A Black Gap, Mar 85.50 57 ⇑P P 22 51 48.6 +0.5
baz=86,SNR=212
MSO Missoula 85.52 38 eP P 22 51 46.8 -0.9
comp=Z,124nm,1.3s,mb5.5
MSO PP PP 22 55 06.1 -7.0
I16A Newdale 85.53 41 ⇑P P 22 51 48.5 +0.6
baz=86,SNR=205
P20A De Beque 85.54 46 ⇓P P 22 51 47.9 -0.1
baz=86,SNR=75
L18A Fontenelle, Gr 85.54 44 ⇑P P 22 51 47.3 -0.6
baz=86,SNR=23
X24A Lazy VL Ranch, 85.55 52 ⇓P P 22 51 47.3 -0.8
baz=86,SNR=14
G15A Dillon 85.55 40 ⇑P P 22 51 47.9 -0.1
baz=86,SNR=360
226A Malaga, Loving 85.55 55 ⇑P P 22 51 48.5 +0.3
baz=86,SNR=238
Z25A Roswell 85.56 53 ⇑P P 22 51 48.6 +0.3
baz=86
BSMT Bassoo Peak 85.56 37 eP P 22 51 47.2 -0.7
E14A Clinton 85.57 39 ⇓P P 22 51 47.5 -0.5
baz=86,SNR=188
DLMT Dillon 85.58 40 eP P 22 51 48.1 +0.1
comp=Z,516nm,1.2s,mb6.1
DCID1 Drake Creek 85.59 42 eP P 22 51 48.8 +0.6
comp=Z,421nm,1.4s,mb6.0
C13A Hot Springs 85.60 37 ⇑P P 22 51 46.8 -1.3
baz=86
427A Hayter Ranch, 85.62 56 ⇓P P 22 51 49.2 +0.6
baz=86,SNR=440
R21A Cimarron 85.62 48 ⇑P P 22 51 48.8 +0.3
baz=86,SNR=232
N19A John Jarvie Ra 85.64 45 ⇓P P 22 51 47.7 -0.8
baz=86,SNR=51
A12A Yaak River Ran 85.65 36 ⇓P P 22 51 48.0 -0.4
baz=86,SNR=54
TPAW Teton Pass 85.69 42 eP P 22 51 48.7 +0.1
comp=Z,204nm,1.1s,mb5.8
TPAW e 22 53 23.3
REDW Red Top Meadow 85.69 42 eP P 22 51 48.6 -0.1
comp=Z,377nm,1.2s,mb6.0
GYA Guiyang 85.72 299 ⇓iP P 22 51 49.9 +0.7
GYA pP pP 22 53 21.8 +3.3
GYA sP sP 22 54 02.3 +3.3
GYA PP PP 22 55 18.9 +3.8
GYA S S 23 01 39.8 -8.7
GYA sS sS 23 04 27.3 +0.1
GYA SS SS 23 07 36.9 +0.8
GYA pmax pmax
comp=Z,170nm,1.0s,mb5.7
GYA pmax pmax
comp=Z,2μm,6.8s
GYA LR LR
comp=N,14μm,22.9s
GYA LR LR
comp=E,13μm,24.6s
GYA LR LR
comp=Z,17μm,22.8s
U23A El Rito 85.72 50 ⇓P P 22 51 49.3 +0.3
baz=86,SNR=56
TIY Taiyuan 85.73 312 eP P 22 51 49.8 +0.8
TIY pP pP 22 53 16.6 -1.7
TIY S S 23 01 39.9 -8.2
TIY pmax pmax
comp=Z,550nm,0.8s,mb6.3
327A Balmorhea Ranc 85.75 55 ⇓P P 22 51 49.3 0.0
baz=86,SNR=6.8
J17A Brown Place, J 85.78 42 P P 22 51 49.3 +0.2
baz=86,SNR=132
JTMT Jette 85.80 37 eP P 22 51 49.0 -0.1
SNOW Snow King Moun 85.80 42 eP P 22 51 49.6 +0.5
comp=Z,238nm,1.0s,mb5.9
SNOW e pP 22 53 21.5 +2.9
CLNB Carlsbad 85.80 54 eP P 22 51 50.1 +0.6
comp=Z,64nm,1.2s,mb5.2
Q21A Lamborn Mesa, 85.81 47 P P 22 51 49.5 +0.2
baz=86,SNR=104
W24A Lazy 6 Ranch, 85.83 51 ⇑P P 22 51 49.0 -0.6
baz=86,SNR=161
SWMT Swartz Lake 85.84 37 eP P 22 51 47.9 -1.4
528A Cox Ranch, San 85.84 57 ⇑P P 22 51 50.5 +0.8
baz=86,SNR=302
528A ⇑PcP PcP 22 51 51.8 0.0
baz=86
Y25A Mesa, Roswell 85.84 53 ⇑P P 22 51 49.4 -0.2
baz=86,SNR=143
126A Clayton Basin, 85.85 54 ⇑P P 22 51 49.7 0.0
baz=86,SNR=75
S22A 4UR Ranch, Cre 85.87 49 ⇑P P 22 51 50.0 +0.4
baz=86,SNR=278
K18A Toltan Ranch, 85.87 43 ⇑P P 22 51 49.6 +0.1
baz=86,SNR=189
F15A Butte 85.88 39 ⇑P P 22 51 49.0 -0.5
baz=86,SNR=209
IMW Indian Meadow 85.89 42 eP P 22 51 50.0 +0.4
comp=Z,314nm,1.1s,mb6.0
IMW e pP 22 53 23.2 +4.2
IMW ePP PP 22 55 13.1 -3.0
LRM Limekiln Ridge 85.90 39 eP P 22 51 49.4 -0.2
D14A Greenough 85.91 38 ⇑P P 22 51 48.4 -1.2
baz=86,SNR=97
O20A White River Ci 85.93 46 ⇑P P 22 51 49.6 -0.3
baz=86,SNR=62
M19A Rock Springs 85.93 44 ⇑P P 22 51 49.2 -0.6
baz=86,SNR=23
LOHW Long Hollow 85.97 42 eP P 22 51 50.0 0.0
comp=Z,206nm,1.3s,mb5.7
LOHW epP pP 22 53 20.9 +1.5
CHMT Chamberlain Mo 85.97 38 eP P 22 51 49.2 -0.7
SLMT Seeley Lake 86.00 38 eP P 22 51 49.1 -1.0
G16A Moss Hill, Enn 86.00 40 ⇓P P 22 51 50.0 -0.1
baz=86,SNR=144
YBMT Yellow Bay 86.02 37 eP P 22 51 49.7 -0.4
B13A Whitefish 86.02 36 ⇓P P 22 51 49.0 -1.1
baz=86,SNR=99
BILL Bilibino 86.04 354 ⇓eP P 22 51 48.6 -1.2
BILL e*PP pP 22 53 19.4 +0.2
BILL e 22 55 12.9
BILL eS S 23 01 51.5 +1.7
BILL pmax pmax
comp=Z,701nm,1.0s,mb6.3
BILL Bilibino 86.04 354 eP P 22 51 48.9 -0.8
comp=Z,645nm,0.9s,mb6.4
BILL epP pP 22 53 17.3 -1.9
L19A Farson 86.07 44 ⇓P P 22 51 50.2 -0.3
baz=86,SNR=66
E15A Deer Lodge 86.09 39 ⇓P P 22 51 49.7 -0.7
baz=86,SNR=150
H16A Russell Place, 86.09 41 ⇑P P 22 51 51.2 +0.7
baz=86,SNR=238
X25A Clemmons Ranch 86.11 52 ⇑P P 22 51 50.3 -0.6
baz=86,SNR=46
CPRX Cap Rock 86.12 54 eP P 22 51 51.7 +0.7
comp=Z,77nm,1.0s,mb5.4
C14A Swan Lake 86.12 37 ⇑P P 22 51 49.2 -1.4
baz=86
Z26A Caprock 86.13 54 ⇓P P 22 51 50.8 -0.2
baz=86,SNR=177

R22A Saguache, Gunn 86.13 48 ⇓P P 22 51 51.3 +0.4
baz=86,SNR=213
T23A Casias Ranch, 86.13 49 ⇓P P 22 51 51.0 0.0
baz=86,SNR=33
428A Kincaid Ranch, 86.14 56 ⇑P P 22 51 51.8 +0.7
baz=86,SNR=92
V24A Rampart Ranch, 86.15 51 ⇓P P 22 51 51.1 0.0
baz=86,SNR=88
J18A Kendall Valley 86.15 43 ⇑P P 22 51 50.7 -0.2
baz=86,SNR=250
227A Bennet, Jal 86.16 55 ⇑P P 22 51 50.6 -0.6
baz=86,SNR=20
YFT Old Faithful 86.22 41 eP P 22 51 52.9 +1.7
comp=Z,252nm,1.1s,mb5.9
N20A Spence Gulch, 86.22 45 ⇑P P 22 51 50.9 -0.4
baz=86,SNR=133
BW06 Boulder Array 86.25 43 ⇓P P 22 51 50.7 -0.6
baz=86,SNR=78
BW06 Boulder Array 86.25 43 eP P 22 51 50.9 -0.4
comp=Z,105nm,1.1s,mb5.5
PDAR Pinedale Array 86.25 43 P P 22 51 50.8 -0.6
comp=Z,55nm,1.0s,mb5.3,baz=214,slow=2.3,SNR=168
PDAR pP pP 22 53 21.7 +0.9
comp=Z,14nm,0.9s,baz=222,slow=4.0,SNR=3.7
PDAR PKKPbc PKKPbc 23 09 49.7 +0.7
comp=Z,4.5nm,1.0s,baz=111,slow=3.3,SNR=6.6
PDAR PKPPKP 23 17 47.9
comp=Z,0.8nm,0.7s,baz=99,slow=3.7,SNR=5.9
YMR Madison River 86.25 41 eP P 22 51 52.4 +1.1
comp=Z,564nm,1.3s,mb6.1
YMR epP pP 22 53 23.1 +2.4
Q22A Crested Butte, 86.29 47 ⇑P P 22 51 51.5 -0.2
baz=86,SNR=92
328A Wristen Ranch, 86.30 56 ⇑P P 22 51 51.6 -0.2
baz=86,SNR=100
DAWY Dawson 86.31 16 eP P 22 51 50.5 -0.7
BOZ Bozeman (W) 86.31 40 ⇑P P 22 51 51.5 -0.1
baz=86,SNR=368
BOZ Bozeman (W) 86.31 40 eP P 22 51 51.5 -0.1
BOZ pmax pmax
comp=Z,252nm,1.1s,mb5.9
BOZ Bozeman (W) 86.31 40 eP P 22 51 51.5 -0.1
comp=Z,252nm,1.1s,mb5.9
USHA Ushuaia 86.33 147 P P 22 51 53.3 +1.6
comp=Z,179nm,1.2s,mb5.7,baz=232,slow=6.1,SNR=19
A13A Flathead Natio 86.35 36 ⇓P P 22 51 51.3 -0.4
baz=86
127A Arkansas Junct 86.37 54 ⇑P P 22 51 51.9 -0.3
baz=86,SNR=55
F16A Kennard Place, 86.38 40 ⇓P P 22 51 51.9 0.0
baz=86,SNR=229
SMCO Snowmass 86.38 47 eP P 22 51 52.3 +0.2
comp=Z,136nm,1.0s,mb5.6
U24A Moreno Valley 86.43 50 ⇑P P 22 51 53.4 +1.0
baz=86,SNR=12
S23A Nye Farm, Mont 86.44 49 ⇑P P 22 51 53.3 +0.8
baz=87,SNR=15
EGAK Eagle 86.45 15 eP P 22 51 51.0 -0.8
comp=Z,242nm,0.9s,mb5.9
YNR Norris Junctio 86.45 41 eP P 22 51 53.5 +1.2
comp=Z,173nm,1.1s,mb5.7
D15A Lincoln 86.47 38 ⇑P P 22 51 51.8 -0.5
baz=87,SNR=189
O21A Pagoda 86.49 46 ⇑P P 22 51 52.1 -0.5
baz=87,SNR=20
Y26A Elida 86.50 53 ⇑P P 22 51 52.4 -0.4
baz=87,SNR=35
I18A Diamond G Ranc 86.52 42 ⇓P P 22 51 52.2 -0.4
baz=87,SNR=37
W25A X Bar L Ranch, 86.54 52 ⇑P P 22 51 52.4 -0.6
baz=87,SNR=164
LKWY Lake 86.55 41 P P 22 51 54.4 +1.6
LKWY pmax pmax
comp=Z,319nm,1.0s,mb6.0
LKWY Lake 86.55 41 P P 22 51 54.4 +1.6
comp=Z,319nm,1.0s,mb6.0
M20A Sweetwater, Wa 86.57 45 ⇓P P 22 51 52.9 0.0
baz=87,SNR=32
HIA Hailar 86.58 324 eP P 22 51 52.7 -0.1
HIA pmax pmax
comp=Z,235nm,1.1s
HIA Hailar 86.58 324 eP P 22 51 52.7 -0.1
comp=Z,235nm,1.1s,mb5.8
V25A Rancho No Teng 86.68 51 ⇓P P 22 51 53.3 -0.2
baz=87,SNR=101
WALA Waterton Lakes 86.69 36 eP P 22 51 53.3 -0.1
comp=Z,9.0nm,1.1s,mb4.4
B14A Marquette Ranc 86.70 37 ⇓P P 22 51 52.6 -0.8
baz=87,SNR=308
N21A Black Mountain 86.70 46 ⇑P P 22 51 53.5 -0.1
baz=87,SNR=110
G17A Pierce Place, 86.70 40 ⇑P P 22 51 54.0 +0.5
baz=87,SNR=132
L20A Wamsutter 86.70 44 ⇓P P 22 51 53.4 -0.1
baz=87,SNR=55
TPTI 86.71 274 P P 22 51 54.1 -0.2
comp=Z,2μmcomp=Z,225nm,1.0s,mb5.8
HRY Holter Researc 86.71 39 eP P 22 51 53.4 0.0
E16A East Helena 86.72 39 ⇑P P 22 51 53.1 -0.4
baz=87,SNR=107
COLD Coldfoot 86.72 10 eP P 22 51 52.6 -0.4
comp=Z,202nm,0.8s,mb5.9
Z27A Tatum 86.73 54 ⇑P P 22 51 52.0 -1.9
baz=87,SNR=18
K19A Absolon Red Bu 86.74 43 ⇑P P 22 51 52.7 -1.0
baz=87,SNR=75
X26A CR and CF Fran 86.77 52 ⇑P P 22 51 52.6 -1.5
baz=87,SNR=28
C15A Salmond Ranch, 86.78 38 ⇓P P 22 51 52.5 -1.2
baz=87,SNR=351
XAN Xi'an 86.81 307 P P 22 51 55.6 +1.3
XAN pP pP 22 53 18.8 -5.0
XAN pmax pmax
comp=Z,160nm,1.2s,mb5.6
XAN pmax pmax
comp=Z,430nm,10.3s
XAN LR LR
comp=N,1μm,27.4s
XAN LR LR
comp=E,230nm,24.9s
XAN LR LR
comp=Z,440nm,32.5s
SDCO Great Sand Dun 86.82 49 eP P 22 51 54.1 -0.1
comp=Z,109nm,1.1s,mb5.5
SDCO epP pP 22 53 26.2 +2.4
A14A Double T Ranch 86.92 36 ⇓P P 22 51 53.9 -0.6
baz=87,SNR=316
PAYG Puerto Ayora 86.93 90 eP P 22 51 57.3 +1.9
comp=Z,420nm,1.3s,mb6.0
PAYG e 22 52 10.7
S24A Houchin Ranch, 86.98 49 ⇓P P 22 51 55.2 +0.3
baz=87,SNR=120
K20A Yellowstone Ra 86.99 44 ⇑P P 22 51 53.9 -1.0
baz=87,SNR=46
Y27A Causey 86.99 53 ⇓P P 22 51 54.5 -0.7
baz=87,SNR=53
W26A Owens Ranch, T 87.01 52 ⇓P P 22 51 54.5 -0.7
baz=87
F17A Fitzpatrick Pl 87.03 40 ⇑P P 22 51 55.3 +0.3
baz=87,SNR=310
D16A Dana Ranch, Ca 87.04 39 ⇓P P 22 51 54.8 -0.3
baz=87,SNR=403
U25A Circle Dot Ran 87.06 51 ⇑P P 22 51 53.7 -1.7
baz=87,SNR=54
Q23A Hartsel 87.07 48 ⇓P P 22 51 55.4 +0.1
baz=87,SNR=5.5
B15A Bradely Ranch, 87.08 37 ⇑P P 22 51 53.7 -1.5
baz=87,SNR=173
O22A Kremmling 87.11 46 ⇑P P 22 51 55.3 -0.2
baz=87,SNR=106
M21A Separation Pea 87.18 45 ⇑P P 22 51 55.2 -0.6
baz=87,SNR=72
E17A Martinsdale 87.18 39 ⇑P P 22 51 55.5 -0.2
baz=87,SNR=78
P23A Jefferson 87.26 47 ⇑P P 22 51 56.0 -0.3
baz=87,SNR=32
C16A Fuhringer Ranc 87.30 38 ⇓P P 22 51 55.3 -0.9
baz=87,SNR=256
R24A Sanders Place, 87.30 49 P P 22 51 56.5 +0.1
baz=87,SNR=66
RWWY Rawlins 87.32 45 eP P 22 51 56.7 +0.2
comp=Z,260nm,1.4s,mb5.8
A15A Johnson Ranch, 87.32 37 ⇑P P 22 51 55.1 -1.1
baz=87,SNR=208
MSTX Muleshoe 87.33 53 P P 22 51 56.5 -0.2
baz=87,SNR=108
L21A Rawlins 87.33 45 ⇓P P 22 51 56.0 -0.5
baz=87,SNR=33

X27A F and S Farms, 87.34 53 ⇑P P 22 51 56.1 -0.6
baz=88
T25A Trinidad 87.36 50 ⇓P P 22 51 56.2 -0.6
baz=88,SNR=76
G18A Lazy EL Ranch, 87.43 41 ⇓P P 22 51 56.8 -0.1
baz=88,SNR=198
N22A Wattenberg Ran 87.44 46 ⇓P P 22 51 57.1 0.0
baz=88,SNR=65
RLMT Red Lodge 87.53 41 ⇓P P 22 51 57.6 +0.2
baz=88,SNR=247
RLMT Red Lodge 87.53 41 eP P 22 51 57.7 +0.4
comp=Z,349nm,1.1s,mb6.0
W27A Bowe Ranch, En 87.53 52 ⇓P P 22 51 56.8 -0.8
baz=88,SNR=109
U26A Atchley Ranch, 87.55 51 ⇓P P 22 51 56.5 -1.2
baz=88,SNR=73
S25A Robets Cordova 87.56 49 ⇑P P 22 51 57.0 -0.7
baz=88,SNR=165
O23A Lake Granby, G 87.56 47 ⇓P P 22 51 57.6 0.0
baz=88,SNR=21
Q24A Divide 87.58 48 ⇓P P 22 51 57.6 -0.1
baz=88,SNR=33
GCMT Greycliff 87.59 40 eP P 22 51 58.2 +0.5
comp=Z,158nm,1.1s,mb5.7
ISCO Idaho Springs 87.60 47 eP P 22 51 58.1 +0.3
ISCO pmax pmax
comp=Z,69nm,1.3s,mb5.2
ISCO Idaho Springs 87.60 47 eP P 22 51 58.1 +0.2
comp=Z,69nm,1.3s,mb5.2
ISCO e 22 53 34.0
F18A Big Timber 87.61 40 ⇑P P 22 51 57.6 -0.1
baz=88,SNR=177
D17A Six Diamond Ra 87.61 39 ⇑P P 22 51 57.5 -0.2
baz=88,SNR=293
B16A M & M Farms, S 87.63 37 ⇓P P 22 51 56.6 -1.2
baz=88,SNR=122
HHC Hu-ho-hao-te 87.69 314 ⇓iP P 22 51 58.6 +0.4
HHC pP pP 22 53 26.8 -1.2
HHC sP sP 22 54 06.3 -2.1
HHC PP PP 22 55 32.4 +1.9
HHC SKS 23 01 48.1
HHC S S 23 02 06.1 -0.5
HHC sS sS 23 04 42.3 -3.8
HHC SS SS 23 08 05.8 +1.7
HHC pmax pmax
comp=Z,270nm,1.0s,mb5.9
HHC pmax pmax
comp=Z,2μm,7.1s
NST Nakhon Sawan 87.77 287 P P 22 52 01.0 +1.8
C17A Wharram Farm, 87.80 38 ⇓P P 22 51 57.9 -0.6
baz=88,SNR=363
E18A Harlowton 87.80 40 ⇓P P 22 51 58.7 +0.1
baz=88,SNR=202
N23A Red Feather La 87.83 46 ⇑P P 22 51 58.6 -0.3
baz=88,SNR=93
A16A West Butte Ran 87.95 37 P P 22 51 58.9 -0.4
baz=88,SNR=250
P24A Kohler Place, 87.98 48 ⇑P P 22 51 58.9 -0.8
baz=88,SNR=5.0
L22A Ellis Ranch, M 87.99 45 ⇓P P 22 51 60.0 +0.4
baz=88,SNR=40
B17A L&G Farms, Che 88.10 38 ⇑P P 22 51 59.1 -0.8
baz=88,SNR=107
O24A Longmont 88.11 47 ⇓P P 22 52 00.3 +0.1
baz=88,SNR=31
D18A Linhart Farms, 88.17 39 ⇓P P 22 52 00.5 +0.2
baz=88,SNR=116
Q25A Bedland, Calha 88.20 48 ⇑P P 22 52 00.4 -0.3
baz=88,SNR=24
CLNS Chul'man 88.21 332 diP P 22 52 00.6 +0.3
CLNS e*PP pP 22 53 27.3 -2.9
CLNS e 22 55 36.9
CLNS eS SKSac 23 01 51.7 +1.0
CLNS e 23 02 11.4
CLNS pmax pmax
comp=Z,770nm,1.1s,mb6.3
CLNS pmax pmax
comp=N,351nm,1.2s
CLNS pmax pmax
comp=E,255nm,1.2s
CLNS pmax pmax
comp=Z,50nm,1.4s,mb5.0
CLNS pmax pmax
comp=E,15nm,1.3s
CLNS pmax pmax
comp=N,52nm,1.4s
CLNS smax
comp=N,2μm,13.9s
CLNS smax
comp=E,930nm,15.0s
PHWY Pilot Hill 88.34 46 eP P 22 52 01.6 +0.3
comp=E,89nm,1.0s,mb5.5
PHWY ePP PP 22 55 33.4 -2.2
JCT Junction City 88.36 57 eP P 22 52 01.5 -0.1
JCT pmax pmax
comp=Z,281nm,1.3s,mb5.8
JCT Junction City 88.36 57 eP P 22 52 01.5 -0.1
comp=Z,281nm,1.3s,mb5.8
A17A Triple J Farms 88.47 37 P P 22 52 01.6 -0.1
baz=89,SNR=215
P25A Willow Gulch B 88.50 48 ⇑P P 22 52 01.8 -0.2
baz=89,SNR=58
AMTX Amarillo 88.51 53 eP P 22 52 01.9 -0.3
comp=Z,219nm,1.1s,mb5.8
AMTX e 22 52 15.3
N24A Carr 88.54 46 ⇓P P 22 52 02.1 -0.1
baz=89
N24A ⇓PcP PcP 22 52 03.8 +0.3
baz=89,SNR=21
KMI Kunming 88.56 297 ⇓P P 22 52 04.4 +1.7
KMI pP pP 22 53 31.1 -1.6
KMI sP sP 22 54 14.9 +1.9
KMI PP PP 22 55 38.0 +0.2
KMI SKS 23 01 56.4
KMI S S 23 02 15.3 -0.1
KMI sS sS 23 04 55.4 +0.1
KMI SS SS 23 08 18.1 +0.8
KMI pmax pmax
comp=Z,160nm,1.2s,mb5.6
KMI pmax pmax
comp=Z,1μm,3.1s
KMI LR LR
comp=N,1μm,19.7s
KMI LR LR
comp=E,890nm,28.7s
KMI LR LR
comp=Z,2μm,22.7s
EGMT Eagleton 88.58 38 ⇓P P 22 52 02.0 -0.3
baz=89,SNR=7.5
EGMT Eagleton 88.58 38 eP P 22 52 02.1 -0.2
comp=Z,270nm,1.4s,mb5.8
BTO Baotou 88.65 313 eP P 22 52 02.4 -0.3
B18A Beardsley Farm 88.74 38 ⇓P P 22 52 02.7 -0.3
baz=89,SNR=52
O25A Wiggins 88.78 47 ⇑P P 22 52 03.0 -0.3
baz=89,SNR=6.0
KVTX Kingsville 88.89 61 eP P 22 52 05.8 +1.6
comp=Z,428nm,1.4s,mb6.0
A18A Metzger Ranch, 88.95 38 ⇓P P 22 52 03.1 -0.8
baz=89,SNR=95
ILCA Isla Las Cabra 89.00 134 ⇑iP P 22 52 01.8 -2.8
N25A Grover 89.08 47 ⇑P P 22 52 05.3 +0.5
baz=89
EDM Edmonton 89.15 33 eP P 22 52 04.0 -0.8
EDM e*PP pP 22 53 35.7 +0.8
CHRT Chiangrai 89.42 291 ⇓P P 22 52 08.0 +1.2
comp=Z,592nm,1.0s,mb6.3
YAK Yakutsk 89.51 338 diP P 22 52 04.3 -1.9
YAK e*PP pP 22 53 31.5 -4.9
YAK e 22 55 39.2
YAK ePPP 22 57 41.3
YAK eS SKSac 23 01 55.4 -2.7
YAK e 23 02 17.2
YAK pmax pmax
comp=E,45nm,1.1s
YAK pmax pmax
comp=Z,251nm,0.9s,mb6.0
YAK pmax pmax
comp=N,49nm,1.2s
YAK pmax pmax
comp=Z,212nm,3.4s
YAK pmax pmax
comp=E,338nm,5.2s
YAK pmax pmax
comp=N,404nm,5.3s
YAK smax

comp=E,315nm,3.0s
YAK smax
comp=N,512nm,2.1s
YAK Yakutsk 89.51 338 *e*P **P 22 52 04.7 -1.5**
comp=N,227nm,0.8s,mb6.0
CD2 Chengdu 89.70 302 P **P 22 52 08.9 +1.0**
CD2 pP pP 22 53 34.1 -3.9
CD2 sP sP 22 54 21.3 +3.0
CD2 PP PP 22 55 48.8 +2.1
CD2 SKS 23 01 59.8
CD2 S S 23 02 23.8 -1.8
CD2 sS sS 23 05 06.1 +0.1
CD2 SS SS 23 08 35.3 +1.8
CD2 pmax pmax
comp=Z,190nm,1.3s,mb5.8
CD2 pmax pmax
comp=Z,1μm,8.8s
CM31 Chiang Mai Arr 89.73 289 *e*P **P 22 52 09.9 +1.7**
comp=Z,74nm,1.0s,mb5.5
CMAR Chiang Mai Arr 89.73 289 P **P 22 52 09.1 +0.9**
comp=Z,82nm,1.0s,mb5.5,baz=100,slow=1.8,SNR=72
CMAR pP pP 22 53 39.0 +0.6
comp=Z,6.9nm,1.0s,baz=127,slow=2.6,SNR=1.6
CMAR PKKPbc PKKPbc 23 09 41.4 +2.1
comp=Z,9.0nm,0.8s,baz=283,slow=4.3,SNR=15
CMAR PKPPKP 23 17 37.3
comp=Z,1.6nm,0.9s,baz=303,slow=5.0,SNR=6.4
CMAR Chiang Mai Arr 89.73 289 P **P 22 52 09.1 +0.8**
CMAR *PP pP 22 53 39.0 +0.6
CMAR Chiang Mai Arr 89.73 289 P **P 22 52 09.1 +0.8**
CMAR pP pP 22 53 39.0 +0.6
CMAR PKKPbc PKKPbc 23 09 41.4 +2.1
CMAR P'P' 23 17 37.3
CHTO Chiang Mai 89.84 290 *e*P **P 22 52 09.5 +0.7**
CHTO *e**PP pP 22 53 40.1 +1.2
CHTO pmax pmax
comp=Z,75nm,1.0s,mb5.5
CHTO Chiang Mai 89.84 290 *e*P **P 22 52 09.5 +0.7**
comp=Z,75nm,1.0s,mb5.5
CHTO *e*pP pP 22 53 40.1 +1.2
CHTO Chiang Mai 89.84 290 P **P 22 52 09.0 +0.2**
comp=Z,1μmcomp=Z,107nm,1.1s,mb5.6
CHTO Chiang Mai 89.84 290 P **P 22 52 10.1 +1.3**
SNR=23
SYO Syowa Base 89.89 192⇑*i*P **P 22 52 06.2 -1.8**
LAO LASA Array 90.13 41 *e*P **P 22 52 10.4 +0.9**
comp=Z,702nm,1.2s,mb6.4
LAO *e* 22 53 50.2
RSSD Black Hills 90.46 44 *e*P **P 22 52 10.6 -0.5**
RSSD pmax pmax
comp=Z,284nm,1.1s,mb6.0
RSSD Black Hills 90.46 44 *e*P **P 22 52 10.6 -0.4**
comp=Z,284nm,1.1s,mb6.0
OGNE Ogallala 90.56 47 *e*P **P 22 52 12.0 +0.4**
comp=Z,206nm,1.4s,mb5.8
WMOK Wichita Mounta 90.68 54 *e*P **P 22 52 11.4 -0.9**
WMOK pmax pmax
comp=Z,84nm,1.2s,mb5.5
WMOK Wichita Mounta 90.68 54 *e*P **P 22 52 11.4 -0.9**
comp=Z,84nm,1.2s,mb5.5
PLCA Paso Flores 90.90 133 P **P 22 52 15.0 +1.7**
comp=Z,112nm,0.9s,mb5.7,baz=238,slow=4.9,SNR=91
PLCA PKKPbc PKKPbc 23 09 36.9 0.0
comp=Z,17nm,1.0s,baz=63,slow=3.8,SNR=16
PLCA PKPPKP 23 17 35.6
comp=Z,2.2nm,0.9s,baz=45,slow=4.3,SNR=2.7
PLCA Paso Flores 90.90 133 *e*P **P 22 52 15.0 +1.7**
PLCA *e* 22 55 54.4
PLCA pmax pmax
comp=Z,87nm,0.9s
PLCA Paso Flores 90.90 133 *e*P **P 22 52 15.0 +1.7**
comp=Z,87nm,0.9s,mb5.6
PLCA *e*PP PP 22 55 54.4 -0.9
INK Inuvik 91.12 15 P **P 22 52 11.9 -1.6**
comp=Z,203nm,1.0s,mb5.9,baz=218,slow=5.0,SNR=76
INK PKKPbc PKKPbc 23 09 38.1 -0.1
comp=Z,4.3nm,0.9s,baz=42,slow=8.6,SNR=5.4
INK Inuvik 91.12 15 *e*P **P 22 52 12.4 -1.1**
INK pmax pmax
comp=Z,281nm,1.1s
INK Inuvik 91.12 15 *e*P **P 22 52 12.4 -1.2**
comp=Z,281nm,1.1s,mb6.0
HKT Hockley 91.40 59 *e*P **P 22 52 16.4 +0.6**
HKT pmax pmax
comp=Z,280nm,1.4s,mb5.9
HKT Hockley 91.40 59 *e*P **P 22 52 16.4 +0.6**
comp=Z,280nm,1.4s,mb5.9
CBKS Cedar Bluff 91.41 50 *e*P **P 22 52 16.3 +0.7**
CBKS pmax pmax
comp=Z,167nm,1.3s,mb5.7
CBKS Cedar Bluff 91.41 50 *e*P **P 22 52 16.3 +0.7**
comp=Z,167nm,1.3s,mb5.7
LZH Lanzhou 91.43 307 ⇓P **P 22 52 17.0 +1.2**
LZH pP pP 22 53 46.0 0.0
LZH sP sP 22 54 25.0 -1.3
LZH PP PP 22 56 02.9 +2.7
LZH SKS 23 02 11.5
LZH S S 23 02 40.5 -0.5
LZH sS sS 23 05 17.3 -4.8
LZH SS SS 23 08 59.8 +1.7
LZH pmax pmax
comp=Z,300nm,1.0s,mb6.1
LZH pmax pmax
comp=Z,1μm,5.7s
CCHI Chillan 91.44 129 *e*P **P 22 52 17.2 +1.3**
CCHI Chillan 91.44 129 *e*P **P 22 52 17.2 +1.3**
MAIT Maitri 91.83 183 *e*P **P 22 52 17.1 +0.1**
NVL N'lazarevskaya 91.84 183 *e*P **P 22 52 15.6 -1.4**
NVL *e* pP 22 53 49.7 +2.4
NVL *e**SS SKKSac 23 02 37.5 +7.8
NVL pmax pmax
comp=Z,73nm,0.6s,mb5.8
VNA1 Neumayer--Stat 91.85 176 *e*P **P 22 52 17.8 +0.7**
VNA1 *e* pP 22 53 51.6 +4.3
DGMT Dagmar 92.12 40 ⇓P **P 22 52 18.7 +0.1**
baz=92,SNR=137
DGMT Dagmar 92.12 40 *e*P **P 22 52 19.0 +0.4**
comp=Z,1μm,1.0s,mb6.7
NATX Nacogdoches 92.94 58 *e*P **P 22 52 23.7 +0.9**
YKA Yellowknife Ar 93.42 24 P **P 22 52 23.1 -1.1**
comp=Z,96nm,0.8s,mb5.8,baz=243,slow=4.4,SNR=135
YKA PKiKP PKiKP 22 57 07.3 -0.5
comp=Z,2.7nm,0.7s,baz=246,slow=1.4,SNR=7.7
YKA PKKP PKKPbc 23 09 28.9 -3.0
comp=Z,1.3nm,0.5s,baz=48,slow=2.0,SNR=8.3
YKA PKPPKP 23 17 32.7
comp=Z,1.0nm,0.8s,baz=15,slow=2.6,SNR=3.0
YKA Yellowknife Ar 93.42 24 P **P 22 52 23.1 -1.2**
YKA 23 09 28.9
YKA pmax pmax
comp=Z,96nm,0.8s
ULN Ulaanbaatar 93.47 319 *e*P **P 22 52 24.7 -0.1**
ULN Ulaanbaatar 93.47 319 *e*P **P 22 52 24.8 -0.1**
comp=Z,113nm,1.2s,mb5.7
ULN *e*pP pP 22 53 57.7 +2.5
ULN *e*PP PP 22 56 15.2 -0.5
ULN Ulaanbaatar 93.47 319 P **P 22 52 24.8 -0.1**
ULN Ulaanbaatar 93.47 319 P **P 22 52 24.8 -0.1**
SNR=84
KSU1 Kansas State U 93.80 50 *e*P **P 22 52 27.3 +0.7**
comp=Z,377nm,1.1s,mb6.3
SONM Songino Array 93.87 319 P **P 22 52 26.4 -0.3**
comp=Z,30nm,1.0s,mb5.3,baz=121,slow=3.6,SNR=104
SONM pP pP 22 53 55.8 -1.3
comp=Z,3.4nm,1.0s,baz=128,slow=2.4,SNR=1.1
SONM PP PP 22 56 17.8 -0.9
comp=Z,7.1nm,1.1s,baz=122,slow=6.9,SNR=3.6
SONM S SKSac 23 02 21.6 -1.5
comp=Z,0.9nm,0.8s,baz=107,slow=5.0,SNR=2.3
SONM PKKPbc PKKPbc 23 09 31.0 +1.0
comp=Z,6.7nm,0.9s,baz=250,slow=2.7,SNR=9.8
SONM PKPPKP 23 17 32.9
comp=Z,1.7nm,0.9s,baz=230,slow=1.1,SNR=5.2
SONM Songino Array 93.87 319 P **P 22 52 26.4 -0.3**
SONM *PP pP 22 53 55.8 -1.3
SONM 22 56 17.8
SONM S SKSac 23 02 21.6 -1.5
SONM 23 09 31.0
FCH Farellones 94.08 127 *e*P **P 22 52 25.2 -2.9**
TGUH Tegucigalpa,Un 94.12 77 *e*P **P 22 52 29.2 +0.6**
comp=Z,132nm,1.2s,mb5.8
MIAR Mount Ida 94.67 55 *e*P **P 22 52 30.6 -0.1**
MIAR pmax pmax
comp=Z,69nm,1.2s,mb5.6
MIAR Mount Ida 94.67 55 *e*P **P 22 52 30.6 -0.1**
comp=Z,69nm,1.2s,mb5.6
TLL Tololo Astrono 94.93 124 *e*P **P 22 52 33.5 +1.4**
TLL Tololo Astrono 94.93 124 *e*P **P 22 52 33.5 +1.4**
JTS JuntasAbangare 95.22 81 P **P 22 52 35.3 +1.7**
comp=Z,584nm,1.0s,mb6.6,SNR=14
JTS JuntasAbangare 95.22 81⇓*e*P **P 22 52 34.3 +0.7**
JTS pmax pmax
comp=Z,112nm,1.0s
JTS JuntasAbangare 95.22 81⇓*e*P **P 22 52 34.3 +0.7**
comp=Z,112nm,1.0s,mb5.8
ECSD EROS Data Cent 95.31 46 *e*P **P 22 52 32.3 -1.1**
comp=Z,234nm,1.1s,mb6.1
LCO Las Campanas 95.47 123 *e*P **P 22 52 36.7 +2.2**
comp=Z,121nm,1.4s,mb5.7
LCO *e*PP PP 22 56 31.7 +0.7
GTA Gaotai 95.54 309 P **P 22 52 34.8 +0.3**
GTA pP pP 22 54 04.3 -0.7
GTA sP sP 22 54 42.8 -2.3
GTA SKS 23 02 32.3
GTA S S 23 03 13.5 -3.1
GTA pmax pmax
comp=Z,59nm,1.1s,mb5.6
GTA pmax pmax
comp=Z,590nm,10.7s
GTA LR LR
comp=N,2μm,25.0s
GTA LR LR
comp=E,1μm,25.6s
GTA LR LR
comp=Z,840nm,25.5s
UALR University of 95.70 55 *e*P **P 22 52 35.8 +0.4**
comp=Z,89nm,1.0s,mb5.8
FFC Flin Flon 95.83 34 P **P 22 52 34.7 -0.7**
comp=Z,112nm,1.6s,mb5.8,SNR=7.5
FFC Flin Flon 95.83 34 *e*P **P 22 52 34.5 -0.9**
FFC pmax pmax
comp=Z,45nm,1.4s,mb5.4
FFC Flin Flon 95.83 34 *e*P **P 22 52 34.5 -1.0**
comp=Z,45nm,1.4s,mb5.4
TIXI Tiksi 95.94 345 *i*P **P 22 52 33.6 -2.0**
TIXI *e**PP pP 22 54 01.1 -5.0
TIXI *e**SP sP 22 54 40.5 -5.7
TIXI *e*S SKSac 23 02 31.4 -1.6
TIXI *e* 23 03 11.8
TIXI pmax pmax
comp=N,19nm,1.3s
TIXI pmax pmax
comp=Z,104nm,1.1s,mb5.9
TIXI pmax pmax
comp=E,36nm,1.4s
TIXI pmax pmax
comp=Z,382nm,9.4s
TIXI Tiksi 95.94 345 *e*P **P 22 52 34.0 -1.5**
comp=Z,72nm,1.0s,mb5.8
TIXI *e*PP PP 22 56 30.5 -3.6
IMP Imphal 96.05 294 *e*PKP **P 22 52 37.0 -0.2**
IMP *ex* x 22 54 10.0
CFAA Coronel Fontan 96.36 126 P **P 22 52 39.0 +0.5**
comp=Z,3.3nm,1.0s,baz=243,slow=3.2,SNR=21
CFAA PP PP 22 56 34.9 -3.0
comp=Z,2.2nm,1.0s,baz=245,slow=6.3,SNR=9.6
CFAA PKKP PKKPbc 23 09 22.2 -0.2
comp=Z,1.0nm,0.9s,baz=55,slow=2.2,SNR=9.9
VBMS Vicksburg 96.43 58 *e*P **P 22 52 39.7 +1.0**
comp=Z,46nm,0.7s,mb5.7
IRK Irkutsk 96.71 323 *e*P **P 22 52 38.3 -1.1**
IRK *e* pP 22 54 08.3 -1.7
IRK *e* 23 02 40.7
IRK *e*S S 23 03 30.1 +4.1
IRK pmax pmax
comp=Z,23nm,1.5s,mb5.1
TLY Talaya 96.89 322 P **P 22 52 39.2 -1.1**
comp=Z,92nm,0.9s,mb5.9,SNR=6.1
TLY Talaya 96.89 322 *e*P **P 22 52 40.0 -0.3**
TLY *e* pP 22 54 07.8 -3.0
TLY *e* 23 02 41.4
TLY *e*S S 23 03 29.7 +2.1
TLY *e* 23 04 59.4
TLY *e*SS SS 23 10 13.9 -0.5
TLY pmax pmax
comp=Z,11nm,0.7s,mb5.1
TLY Talaya 96.89 322 *e*P **P 22 52 39.8 -0.5**
comp=Z,10nm,0.9s,mb5.0
TLY Talaya 96.89 322 P **P 22 52 40.4 +0.1**
SNR=7.1
SCIA State Center 97.13 48 *e*P **P 22 52 41.5 -0.1**
AGMN Agassiz Nation 97.25 42 *e*P **P 22 52 41.4 -0.6**
HBAR Harrisburg 97.25 55 *e*P **P 22 52 43.4 +1.1**
CCM Cathedral Cave 97.49 53 *e*P **P 22 52 42.7 -0.6**
CCM pmax pmax
comp=Z,52nm,1.0s,mb5.6
CCM Cathedral Cave 97.49 53 *e*P **P 22 52 42.6 -0.7**
comp=Z,52nm,1.0s,mb5.6
ULM Lac du Bonnet 97.83 40 P **P 22 52 43.0 -1.5**
comp=Z,38nm,1.1s,mb5.5,baz=248,slow=4.4,SNR=22
ULM pP pP 22 54 15.8 +0.6
comp=Z,4.1nm,0.8s,baz=272,slow=6.4,SNR=1.7
ULM Lac du Bonnet 97.83 40 P **P 22 52 43.0 -1.5**
ULM pP pP 22 54 15.8 +0.6
OXF Oxford 97.95 56 *e*P **P 22 52 44.8 -0.7**
OXF pmax pmax
comp=Z,123nm,1.2s,mb6.0
OXF Oxford 97.95 56 *e*P **P 22 52 44.8 -0.7**
comp=Z,123nm,1.2s,mb6.0
TRQA Tornquist 98.03 134 *e*P **P 22 52 46.7 +0.8**
comp=Z,39nm,1.1s,mb5.5
FVM French Village 98.09 53 *e*P **P 22 52 45.3 -0.7**
GLAT Glass 98.51 55 *e*Pdif Pdif 22 52 47.7 0.0
LRAL Lakeview Retre 99.51 58 *e*Pdif Pdif 22 52 53.1 +0.9
LSA Lhasa 99.74 298 P Pdif 22 52 52.4 -0.8
LSA LR LR
comp=E,690nm,4.1s
LSA LR LR
comp=Z,2μm,3.7s
LSA Lhasa 99.74 298 *e*P Pdif 22 52 54.6 +1.4
LSA pmax pmax
comp=Z,9.0nm,0.8s,mb5.2
LSA Lhasa 99.74 298 *e*P Pdif 22 52 54.6 +1.4
comp=Z,8.9nm,0.8s
CAL Calcutta 100.42 290 *e*PKP Pdif 22 52 55.9 -0.2
CAL *ex* x 22 54 26.0
COWI Conover 101.07 45 *e*Pdif Pdif 22 52 58.9 -0.1
comp=Z,63nm,1.0s
WCI Wyandotte Cave 101.31 53 *e*P Pdif 22 53 00.2 +0.1
WCI pmax pmax
comp=Z,9.0nm,0.9s
WCI Wyandotte Cave 101.31 53 *e*Pdif Pdif 22 53 00.2 0.0
comp=Z,8.8nm,0.9s
CPCT Cooper Cave 102.07 57 *e*Pdif Pdif 22 53 04.0 +0.5
TAPN Taplejung 102.12 295 *e*P PKiKP 22 57 25.1 +0.7
comp=Z,38nm,0.7s
ODAN Odare 102.28 294 *e*P PKiKP 22 57 25.8 +1.1
comp=Z,110nm,0.9s
LPAZ La Paz 102.59 112 P Pdif 22 53 08.8 +3.0
comp=Z,14nm,1.0s,baz=266,slow=2.3,SNR=21
LPAZ PP PP 22 57 27.1 +1.9
comp=Z,7.6nm,0.9s,baz=237,slow=7.6,SNR=12
LPAZ PKKPbc PKKPbc 23 09 05.5 +0.9
comp=Z,7.1nm,1.0s,baz=280,slow=1.1,SNR=9.5
LPAZ La Paz 102.59 112 P Pdif 22 53 08.8 +3.0
LPAZ 22 57 27.1
LPAZ La Paz 102.59 112 P Pdif 22 53 08.8 +3.0
LPAZ PP PP 22 57 27.1 +1.9
LPAZ PKKPbc PKKPbc 23 09 05.5 +0.9
TKL Tuckaleechee C 102.71 56 *e*P Pdif 22 53 06.1 -0.3
RAMN Ramite 102.99 294 *e*P PKiKP 22 57 26.7 +0.7
comp=Z,74nm,0.7s
JIRN Jiri 103.50 295 *e*P PKiKP 22 57 26.7 -0.2
comp=Z,54nm,0.5s
GUN Gumba 103.83 295 *e*P PKiKP 22 57 26.9 -0.6
comp=Z,50nm,0.7s
AAM Ann Arbor 104.13 50 *e*P Pdif 22 53 11.8 -0.9
AAM pmax pmax
comp=Z,17nm,0.7s
AAM Ann Arbor 104.13 50 *e*Pdif Pdif 22 53 11.8 -0.9
comp=Z,17nm,0.7s
PKI Pulchoki 104.16 295 *e*P PKiKP 22 57 27.8 -0.3
comp=Z,94nm,1.0s
PKIN Phulchoki 104.17 295 *e*P PKiKP 22 57 27.8 -0.3
comp=Z,32nm,0.6s
KKN Kakani 104.32 295 *e*P PKiKP 22 57 27.7 -0.7
comp=Z,73nm,0.9s
DMN Daman 104.43 295 *e*P PKiKP 22 57 27.7 -0.9
comp=Z,30nm,0.5s
RES Resolute Bay 104.65 16 Pdiff Pdif 22 53 14.4 -0.5
comp=Z,10.0nm,0.8s,baz=230,slow=7.8,SNR=5.7
RES PKiKP PKiKP 22 57 27.1 -0.5
comp=Z,13nm,0.8s,baz=338,slow=2.4,SNR=6.4
GKN Gorkha 104.92 295 *e*P PKiKP 22 57 27.9 -1.6
comp=Z,38nm,0.8s
WMQ Urumqi 105.40 312 *e*P PKiKP 22 57 28.8 -1.1
WMQ Urumqi 105.40 312 Pdif Pdif 22 53 17.8 -0.5
WMQ PP PP 22 57 47.1 +1.5
WMQ S Sdif 23 04 32.5 -6.5
WMQ SS SS 23 12 07.8 -4.2
WMQ AMB AMB
comp=Z,370nm,4.8s
MDRS Chennai 105.53 279 *ex* x 23 04 29.2
CPUP Villa Florida 107.26 125 Pdiff Pdif 22 53 33.3 +6.7
comp=Z,3.5nm,0.9s,baz=238,slow=6.4,SNR=6.9
CPUP PKiKP PKiKP 22 57 34.3 +0.3
comp=Z,3.9nm,0.9s,baz=260,slow=5.3,SNR=5.6
CPUP PKKPbc PKKPbc 23 08 51.5 +0.5
comp=Z,2.0nm,0.6s,baz=280,slow=3.4,SNR=4.9
CPUP PKKPab PKKPab 23 09 05.2 -3.3
comp=Z,0.4nm,0.4s,baz=35,slow=4.5,SNR=4.1
SADO Sadowa 107.75 48 PKKP PKKPbc 23 09 02.6 +13
comp=Z,5.1nm,0.9s,baz=58,slow=5.0,SNR=4.8
HYB Hyderabad 108.15 283 *i* PP PP 22 58 07.0 +0.8
HYB *e*SKS SKSac 23 03 32.0 -0.8
HYB *e* 23 04 30.0
HYB *e* 23 05 00.0
HYB *e*SP SP 23 06 56.0 +4.5
HYB *e* 23 12 32.0
HYB *e* 23 13 04.0
ZALV Zalesovo Beam 108.50 322 Pdiff Pdif 22 53 31.4 -0.7
comp=Z,3.7nm,1.0s,baz=90,slow=4.4,SNR=9.5
ZALV PKiKP PKiKP 22 57 34.4 -0.9
comp=Z,15nm,0.6s,baz=102,slow=0.8,SNR=36
ZALV PKKPbc PKKPbc 23 08 46.8 -1.3
comp=Z,1.1nm,0.3s,baz=258,slow=3.2,SNR=5.5
ZALV PKKP PKKPbc 23 09 01.7 +14
comp=Z,3.2nm,0.8s,baz=243,slow=6.5,SNR=4.1
ZALV Zalesovo Beam 108.50 322 P Pdif 22 53 31.4 -0.7
ZALV 23 08 46.8
ZALV Zalesovo Beam 108.50 322 Pdif Pdif 22 53 31.4 -0.7
ZALV PKPdf PKiKP 22 57 34.4 -0.9
ZALV PKKPbc PKKPbc 23 08 46.8 -1.3
ZALV PKKP PKKPbc 23 09 01.7 +14
SIV San Ignacio 108.92 114 Pdiff Pdif 22 53 36.6 +2.7
comp=Z,1.9nm,0.8s,baz=212,slow=4.3,SNR=12
SIV PKiKP PKiKP 22 57 37.4 +0.1
comp=Z,2.4nm,0.6s,baz=247,slow=2.3,SNR=9.0
SIV PP PP 22 58 11.3 -0.1
comp=Z,11nm,1.0s,baz=245,slow=12,SNR=13
SIV PKKPbc PKKPbc 23 08 43.9 -1.7
comp=Z,8.0nm,0.9s,baz=82,slow=3.8,SNR=16
SIV PKKP PKKPbc 23 09 00.7 +15
comp=Z,6.2nm,1.0s,baz=80,slow=7.7,SNR=6.7
SIV SKKP 23 11 54.2
comp=Z,3.5nm,0.9s,baz=104,slow=6.3,SNR=4.6
NVS Novosibirsk 109.48 323 *e*P Pdif 22 53 35.4 -1.0
NVS pmax pmax
comp=E,8.0nm,1.7s
NVS pmax pmax
comp=Z,11nm,1.7s
NVS pmax pmax
comp=N,5.0nm,1.5s
MK31 Makanchi Array 109.55 314 *e*Pdif Pdif 22 53 36.4 -0.3
MK31 *e*PKPdf PKiKP 22 57 36.8 -0.7
MKAR Makanchi Array 109.55 314 Pdiff Pdif 22 53 36.5 -0.3
comp=N,6.0nm,1.0s,baz=87,slow=6.2,SNR=24
MKAR PKiKP PKiKP 22 57 36.5 -1.0
comp=N,45nm,1.1s,baz=98,slow=1.2,SNR=35
MKAR S SKSac 23 03 41.2 +3.8
comp=N,3.5nm,0.9s,baz=108,slow=4.7,SNR=6.0
MKAR PKKPbc PKKPbc 23 08 43.5 -1.0
comp=N,25nm,0.9s,baz=298,slow=2.6,SNR=28
MKAR Makanchi Array 109.55 314 P Pdif 22 53 36.5 -0.3
MKAR S SKSac 23 03 41.2 +3.8
MKAR Makanchi Array 109.55 314 Pdif Pdif 22 53 36.5 -0.3
MKAR PKPdf PKiKP 22 57 36.5 -1.0
MKAR S SKSac 23 03 41.2 +3.8
MKAR PKKPbc PKKPbc 23 08 43.5 -0.9
BHPL Bhopal 110.38 289 *e*PKP PKiKP 22 57 39.5 -0.3
BHPL *i* x x 22 59 34.1
AGRA Agra 110.61 293 *e*PKP PKiKP 22 57 39.3 -0.8
AGRA *ex* x 23 03 38.1
DDI Dehra Dun 110.99 296 *ex* PKiKP 22 57 40.5 -0.3
KLP Kalpa 111.00 298 *e*PKP PKiKP 22 57 41.0 +0.2
KLP *i* x x 23 03 43.8
NCB Newcomb 111.19 49 *e*PKPdf PKiKP 22 57 40.3 -0.4
BISR Bishrakh 111.27 294 *e*PKP PKiKP 22 57 40.7 -0.7
NDI New Delhi 111.48 295 *e*PKP PKiKP 22 57 39.0 -2.7
SONA Sohna 111.53 294 *e*PKP PKiKP 22 57 41.2 -0.6
SONA AMb AMB 22 57 42.8
comp=Z,74nm,1.1s
KKR Kurukshetra 112.00 296 *e*PKP PKiKP 22 57 41.7 -1.0
SDNR Sundarnagar 112.08 297 *e*PKP PKiKP 22 57 41.5 -1.3
KURK Kurchatov 112.16 318*c i*PKIKP PKiKP 22 57 41.0 -1.3
KURK pmax pmax
comp=Z,110nm,1.2s
KURK Kurchatov 112.16 318 *e*Pdif Pdif 22 53 47.5 -0.9
KURK *e*PKPdf PKiKP 22 57 41.6 -0.7
KURK Kurchatov 112.16 318 PKiKP PKiKP 22 57 41.8 -0.5
SNR=22
KAD Karad 112.20 282 *e*PKP PKiKP 22 57 42.1 -1.3
BHK Bhakra 112.54 297 *e*PKP PKiKP 22 57 40.8 -2.9
KHET Khetri 112.62 294 *e*PKP PKiKP 22 57 42.7 -1.2
KHET *i* x x 23 03 48.2
POO Poona 112.76 283 *e*PKP PKiKP 22 57 43.9 -0.5
LBNH Lisbon 112.85 49 *e*PKIKP PKiKP 22 57 44.8 +0.9
AJM Ajmer 113.41 292 *e*PKP PKiKP 22 57 44.8 -0.7
AJM *e*PP PP 22 58 42.0 -1.6
ULHL Ulahol 113.59 309 P PKiKP 22 57 45.9 +0.6
SNR=26
KSH Kashi 113.65 306 PKP PKiKP 22 57 46.3 +0.8
KSH PKS 23 01 22.5
KSH LR LR
comp=N,150nm,5.1s
KSH LR LR
comp=E,180nm,5.8s
KSH LR LR
comp=Z,530nm,17.6s
KZA Kyzart 114.32 309 P PKiKP 22 57 47.8 +1.0
SNR=11
KBK Karagaybulak 114.56 309 P PKiKP 22 57 47.4 +0.2
SNR=32
KBK Karagaybulak 114.56 309 P PKKPbc 23 08 28.8 +1.0
SNR=6.0
CHMS Chumysh 114.71 310 P PKiKP 22 57 46.3 -1.2
SNR=35
CHMS Chumysh 114.71 310 P PKKPbc 23 08 27.9 +0.5
SNR=7.9
PKME Peaks-Kenny Pk 114.75 48 *e*PKPdf PKiKP 22 57 47.8 +0.4
SJG San Juan 114.78 78 *e*PKIKP PKPdf 22 57 48.3 0.0
FRU Bishkek 114.81 310 *e*PKIKP PKPdf 22 57 47.0 -0.7
FRU *e* 23 04 01.0
FRU pmax pmax
comp=Z,124nm,1.6s
UCH Uchtor 114.87 309 P PKPdf 22 57 48.8 +1.0
SNR=60
UCH Uchtor 114.87 309 P PKKPbc 23 08 28.4 +1.6
SNR=11
UCH Uchtor 114.87 309 *e*PKPdf PKPdf 22 57 48.5 +0.7
AAK Ala-Archa 114.89 309 P PKPdf 22 57 48.0 +0.2
SNR=19
AAK Ala-Archa 114.89 309 P PKKPbc 23 08 27.2 +0.5
SNR=6.7
AAK Ala-Archa 114.89 309 PKiKP PKiKP 22 57 47.9 +0.1
comp=Z,27nm,0.9s,baz=257,slow=2.5,SNR=39
AAK Ala-Archa 114.89 309*d i*PKIKP PKPdf 22 57 47.4 -0.4
AAK pmax pmax
comp=Z,33nm,1.2s
AAK Ala-Archa 114.89 309 *e*PKPdf PKPdf 22 57 47.9 0.0
AAK Ala-Archa 114.89 309 PKPdf PKPdf 22 57 47.6 -0.2
SNR=18
USP Ospenovka 114.90 310 P PKPdf 22 57 47.4 -0.5
SNR=44
USP Ospenovka 114.90 310 P PKKPbc 23 08 27.1 +0.3
SNR=12
MTP Monte Pirata 115.34 78 *e*PKPdf PKPdf 22 57 48.7 -0.7
EKS2 Erkin-Say 115.42 309 P PKPdf 22 57 48.9 +0.1
SNR=61
EKS2 Erkin-Say 115.42 309 P PKKPbc 23 08 25.9 +1.0
SNR=6.7
EKS2 Erkin-Say 115.42 309 *e*PKPdf PKPdf 22 57 49.0 +0.1
EKS2 *e* 23 08 25.0
AML Almayashu 115.48 309 P PKPdf 22 57 49.2 +0.2
SNR=63
AML Almayashu 115.48 309 *e*PKPdf PKPdf 22 57 49.5 +0.5

SCHQ Schefferville 115.81 37 PKP PKPdf 22 57 48.7 -0.5
comp=Z,25nm,1.0s,baz=322,slow=2.3,SNR=16
SCHQ PKKPab PKKPab 23 08 26.4 -1.0
comp=Z,2.4nm,0.6s,baz=60,slow=0.5,SNR=5.8
SCHQ Schefferville 115.81 37 *e*PKPdf PKPdf 22 57 48.9 -0.3
VOSK Vostochnaya 116.81 321 PKIKP PKPdf 22 57 50.0 -1.2
VOSK pmax pmax
comp=Z,140nm,1.2s
BVAR Borovoye Array 117.13 321 PKP PKPdf 22 57 50.8 -1.0
comp=Z,43nm,0.5s,baz=119,slow=1.9,SNR=88
BVAR PKKPbc PKKPbc 23 08 18.9 -0.5
comp=Z,5.6nm,1.0s,baz=274,slow=4.2,SNR=7.7
BRVK Borovoye 117.19 321 *d i*PKIKP PKPdf 22 57 51.2 -0.7
BRVK pmax pmax
comp=Z,118nm,1.0s
BRVK Borovoye 117.19 321 *e*PKPdf PKPdf 22 57 51.4 -0.5
BRVK Borovoye 117.19 321 PKPdf PKPdf 22 57 51.6 -0.3
SNR=45
BHJ Bhuj 117.43 288 *e*PKP PKPdf 22 57 53.1 -0.2
BBSR BB Station 117.95 62 *e*PKPdf PKPdf 22 57 54.2 +0.1
BBSR *e*PP PP 22 59 13.3 -1.6
ZRNK Zerenda 117.97 321 PKIKP PKPdf 22 57 52.2 -1.2
ZRNK pmax pmax
comp=Z,162nm,1.3s
KBS Kingsbay 118.28 358 *e*PKPdf PKPdf 22 57 54.4 +1.0
KBS AMB AMB 22 57 55.0
comp=Z,66nm,1.4s
KBS *e*PP PP 22 59 12.4 -3.3
KBS *e*SS SS 23 15 00.8 +1.1
KBS Kingsbay 118.28 358 *c i*PKIKP PKPdf 22 57 52.9 -0.5
KBS pmax pmax
comp=Z,78nm,1.0s
KBS Kingsbay 118.28 358 *e*PKPdf PKPdf 22 57 53.3 -0.1
KBS *e*PP PP 22 59 13.8 -1.9
FDF Fort de France 118.82 82 *e*P PKPdf 22 57 56.3 +0.2
SPITS Spitsbergen Ar 118.82 357 PKKPab PKKPab 23 08 14.9 +1.3
comp=Z,1.7nm,0.4s,baz=131,slow=3.5,SNR=5.7
KBL Kabul 118.96 300 *e*PKIKP PKPdf 22 57 56.1 +0.2
DAG Danmarks Havn 119.60 6 ⇓*i*PKIKP PKPdf 22 57 55.0 -1.0
DAG *i* 22 59 26.2
DAG Danmarks Havn 119.60 6 ⇓*i*P PKPdf 22 57 55.0 -1.0
comp=Z,40nm,1.0s
DAG *i* 22 59 26.2
SUMG Summit 120.00 13 *e*PKPdf PKPdf 22 57 57.5 +0.7
SUMG Summit 120.00 13 ⇓*i*P PKPdf 22 57 56.7 -0.1
comp=Z,64nm,1.0s
SUMG
comp=Z,850nm,20.0s
CAM4 Nova Friburgo 120.63 130 ⇓*i*P PKPdf 22 57 59.4 -0.2
CAM4 *i* 22 58 04.8
CAM4 *i* 22 58 07.4
CAM4 *i* 22 58 19.9
CAM4 *i* 22 58 25.6
CAM4 *i* 22 58 36.0
CAM4 *i* 22 58 48.3
CAM4 *i* 22 59 11.2
CAM4 *i* 22 59 34.0
CAM4 *i* 22 59 43.2
CAM4 *i* 23 00 12.8
SVE Sverdlovsk 121.81 327 ⇓*e*PKIKP PKPdf 22 58 00.8 +0.1
SVE pmax pmax
comp=Z,219nm,1.1s
SOKR Solikamsk 122.75 331 *d i*PKIKP PKPdf 22 58 01.7 -0.7
SOKR pmax pmax
comp=Z,370nm,1.1s
ARU Arti 123.02 327 *i*PKIKP PKPdf 22 58 02.1 -0.9
ARU 23 04 22.8
ARU PS SP 23 09 09.9 +5.9
ARU Arti 123.02 327 *e*PKPdf PKPdf 22 58 02.3 -0.7
OPO Ambohidratompo 123.52 233 PKP PKPdf 22 58 05.0 -0.1
comp=Z,19nm,0.8s,baz=138,slow=3.2,SNR=16
OPO PKKPab PKKPab 23 07 58.3 +1.5
comp=Z,4.7nm,0.9s,baz=27,slow=5.7,SNR=4.5
AB31 Akbulak array 124.28 318 *i*PKIKP PKPdf 22 58 04.4 -1.3
AB31 pmax pmax
comp=Z,171nm,1.2s
ABKAR Akbulak array 124.28 318 *e*PKPdf PKPdf 22 58 05.4 -0.3
SCO Scoresbysund 124.86 10 ⇓*i*PKIKP PKPdf 22 58 05.8 -0.4
SCO Scoresbysund 124.86 10 ⇓*i*P PKPdf 22 58 05.8 -0.4
comp=Z,103nm,1.0s
SCO
comp=Z,670nm,20.0s
AKTO Aktyubinsk 125.18 320 PKKPbc PKKPbc 23 07 48.9 -0.3
comp=Z,7.6nm,0.8s,baz=237,slow=3.5,SNR=9.8
KEV Kevo 125.56 350 *e*PKIKP PKPdf 22 58 07.1 -0.4
LVZ Lovozero 125.57 346 *c i*PKIKP PKPdf 22 58 06.5 -1.1
LVZ pmax pmax
comp=Z,122nm,0.8s
LVZ Lovozero 125.57 346 ⇑*e*PKP PKPdf 22 58 06.6 -1.0
JMIC Jan Mayen 125.99 5 *e*PKPdf PKPdf 22 58 08.3 0.0
JMIC AMB AMB 22 58 10.9
comp=Z,231nm,0.8s
JMIC *e*PP PP 23 00 06.5 -0.8
JMIC *e*SS SS 23 16 38.6 +1.7
JMIC Jan Mayen 125.99 5 *e*P PKPdf 22 58 07.9 -0.5
ARCES ARCESS Array B 126.00 350 PKhKP PKPpre 22 57 50.4
comp=Z,0.6nm,0.5s,baz=67,slow=1.3,SNR=6.6
ARCES PKP PKPdf 22 58 08.2 -0.2
comp=Z,180nm,0.8s,baz=48,slow=1.8,SNR=110
ARCES pPKP pPKPdf 22 59 43.6 -0.2
comp=Z,13nm,0.8s,baz=338,slow=2.6,SNR=3.1
ARCES PKKPab 23 07 44.0
comp=Z,4.8nm,0.8s,baz=210,slow=2.7,SNR=14
ARCES PKKP 23 08 26.4
comp=Z,3.9nm,0.7s,baz=164,slow=3.3,SNR=9.9
ARCES SKKPbc 23 10 59.3
comp=Z,6.2nm,0.9s,baz=232,slow=2.9,SNR=6.1
ARCES SKKP 23 11 27.9
comp=Z,4.3nm,0.9s,baz=214,slow=1.3,SNR=4.3
ARCES ARCESS Array B 126.00 350 PKHKP PKPpre 22 57 50.4
ARCES 22 58 08.2
ARCES 22 59 43.6
ARE0 ARCESS Array S 126.00 350 *e*PKPdf PKPdf 22 58 08.4 0.0
APA Apatity 126.12 346 ⇑*i*PKIKP PKPdf 22 58 07.7 -1.0
APA *e*PPP 23 02 51.0
APA *e* 23 04 39.0
APA *e*SS SS 23 16 40.0 +1.3
APA pmax pmax
comp=Z,150nm,1.0s
APA pmax pmax
comp=Z,400nm,5.0s
TRO Tromso 126.83 353 *e*PKPdf PKPdf 22 58 08.5 -1.4
TRO AMB AMB 22 58 10.9
comp=Z,198nm,0.3s
TRO *e*PP PP 23 00 08.8 -4.0
TRO *e*SS SS 23 16 55.6 +8.4
TRO Tromso 126.83 353 *e*P PKPdf 22 58 09.0 -1.0
SUR Sutherland 127.56 199 PKP PKPdf 22 58 13.6 +1.0
comp=Z,49nm,0.9s,baz=144,slow=2.7,SNR=29
SUR SKPab 23 00 57.5
comp=Z,38nm,0.9s,baz=116,slow=1.9,SNR=7.3
SUR Sutherland 127.56 199 *e*PKPdf PKPdf 22 58 14.1 +1.5
SUR Sutherland 127.56 199 PKPdf PKPdf 22 58 13.9 +1.3
SNR=5.5
JMDO Jabal Madar 127.92 285 PKPdf PKPdf 22 58 14.1 +0.6
SNR=14
SMDO Samad 128.02 286 PKPdf PKPdf 22 58 14.7 +1.1
SNR=25
HOQ Hoqain 128.74 287 PKPdf PKPdf 22 58 15.6 +0.6
SNR=18
BSY Bisya 128.78 285 PKPdf PKPdf 22 58 15.6 +0.5
SNR=19
BOSA Boshof 129.33 206 PKhKP PKPpre 22 58 02.1
comp=Z,2.4nm,0.6s,baz=182,slow=4.5,SNR=11
BOSA PKP PKPdf 22 58 17.3 +1.3
comp=Z,17nm,0.9s,baz=175,slow=3.6,SNR=3.1
BOSA SKPab 23 01 02.9
comp=Z,23nm,1.0s,baz=156,slow=6.1,SNR=4.3
BOSA PKKP 23 08 22.0
comp=Z,6.1nm,0.8s,baz=72,slow=1.8,SNR=8.8
BOSA SKKP 23 11 14.2
comp=Z,6.9nm,0.9s,baz=326,slow=6.5,SNR=4.1
BOSA Boshof 129.33 206 PKHKP PKPpre 22 58 02.2
BOSA 22 58 17.3
ARQ Araqi 129.44 286 PKPdf PKPdf 22 58 17.0 +0.6
SNR=11
HATD Hatta, Dubai 129.88 288 PKPdf PKPdf 22 58 16.5 -0.7
SNR=23
ASHO Ashiyiah 129.94 288 PKPdf PKPdf 22 58 17.4 +0.1
SNR=26
BORG Borgarnes 129.98 13 SKPbc SKPbc 23 01 05.6 +4.0
comp=Z,18nm,0.9s,baz=50,slow=2.1,SNR=4.7
BORG Borgarnes 129.98 13 *e*PKIKP PKPdf 22 58 16.8 +0.7
NAZ Nazwa, Dubai 130.31 288 PKPdf PKPdf 22 58 17.3 -0.6
SNR=28

KONS Konsvik 130.46 355 *e*PKPdf PKPdf 22 58 17.0 0.0
FLOS Flostrand 130.59 354 *e*PKPdf PKPdf 22 58 17.1 -0.1
ASUD Al Ashush, Dub 130.60 288 PKPdf PKPdf 22 58 19.0 +0.5
SNR=13
MOR8 Moi Rana 130.65 354 *e*PKPdf PKPdf 22 58 15.7 -1.7
MOR8 AMB AMB 22 58 18.1
comp=Z,57nm,1.4s
MOR8 Moi Rana 130.65 354 *e*P PKPpre 22 58 11.7
RBK Rabkut 131.01 278 PKPdf PKPdf 22 58 20.8 +1.3
SNR=9.6
LBTB Lobatse 132.31 208 PKP PKPdf 22 58 23.9 +2.1
comp=Z,16nm,0.6s,baz=162,slow=2.1,SNR=4.5
LBTB SKPab 23 01 15.2
comp=Z,103nm,1.1s,baz=140,slow=4.7,SNR=18
LBTB PKKP 23 08 16.2
comp=Z,4.2nm,0.8s,baz=0.8,slow=1.6,SNR=3.8
LBTB Lobatse 132.31 208 *e*PKPdf PKPdf 22 58 22.1 +0.3
FINES FINESS Array B 132.99 345 PKhKP PKPpre 22 58 06.7
comp=Z,3.7nm,0.5s,baz=40,slow=3.8,SNR=29
FINES PKP PKPdf 22 58 21.5 -0.3
comp=Z,129nm,0.9s,baz=64,slow=3.2,SNR=51
FINES SKPab 23 01 15.3
comp=Z,64nm,0.9s,baz=45,slow=4.0,SNR=16
FINES PKKP 23 08 13.5
comp=Z,1.4nm,0.5s,baz=294,slow=2.8,SNR=6.7
FINES SKKPbc 23 10 36.2
comp=Z,1.8nm,0.8s,baz=178,slow=1.0,SNR=6.5
FINES FINESS Array B 132.99 345 PKHKP PKPpre 22 58 06.7
FINES 22 58 21.5
FINES FINESS Array B 132.99 345 PKP PKPpre 22 58 06.7
FINES PKP PKPdf 22 58 21.5 -0.3
FINES SKPab 23 01 15.3
FINES PKKP 23 08 13.5
FINES SKKPbc 23 10 36.2
OBN Obninsk 134.33 333 ⇓*i*PKIKP PKPdf 22 58 23.8 -0.8
OBN *e* 23 00 57.7
OBN *e*PS SP 23 10 36.8 -4.8
OBN pmax pmax
comp=Z,328nm,1.2s
OBN Obninsk 134.33 333 *e*PKPdf PKPdf 22 58 23.6 -0.9
OBN *e*PP PP 23 00 58.2 -3.2
VRHR Novokhopersk 134.36 326 *e*PKIKP PKPdf 22 58 24.4 -0.3
VRHR pmax pmax
comp=N,10.0nm,0.8s
VRHR pmax pmax
comp=E,50nm,0.8s
VRHR pmax pmax
comp=Z,150nm,0.8s
MAK Makhachkala 134.37 314 *e*P Pdif 22 55 25.2 -1.9
MAK *e* 22 58 23.1
MAK *e* 23 01 01.9
MAK *e*PPP 23 03 56.9
MAK *e* 23 04 59.1
MAK *e*SS SS 23 18 23.0 +2.2
MAK pmax pmax
comp=Z,280nm,1.1s
VOR Voronezh 135.25 328 ⇑*i*PKIKP PKPdf 22 58 25.0 -1.4
VOR pmax pmax
comp=Z,440nm,1.2s
VSU Vasula 135.34 342 *d i*PKIKP PKPdf 22 58 26.0 -0.3
RCBR Riachuelo 135.42 118 *e*PKPdf PKPdf 22 58 27.9 0.0
VSR Storozhevoye 135.57 328 *e*PKIKP PKPdf 22 58 26.4 -0.6
VSR *e* 23 01 06.6
VSR *e*PPP 23 04 12.7
VSR *e*SPP 23 12 31.5
VSR pmax pmax
comp=N,40nm,1.3s
VSR pmax pmax
comp=E,100nm,1.3s
VSR pmax pmax
comp=Z,290nm,1.3s
VSR pmax pmax
comp=N,40nm,1.1s
VSR pmax pmax
comp=Z,40nm,1.1s
VSR pmax pmax
comp=E,50nm,0.8s
VSR Storozhevoye 135.57 328 *i*PKP PKPdf 22 58 26.5 -0.5
FOO Floro 135.82 358 *e*PKPdf PKPdf 22 58 25.4 -1.7
FOO *e*PP PP 23 01 09.1 -1.1
FOO *e*SS SS 23 18 41.0 +5.1
FOO Floro 135.82 358 *e*P PKPpre 22 58 21.7
NB2 NORSAR Subarra 135.99 354 PKP PKPpre 22 58 14.3
comp=Z,37nm,1.0s,baz=17,slow=2.6
NB2 NORSAR Subarra 135.99 354 PKP PKPpre 22 58 14.3
baz=17,slow=2.6
NB2 NORSAR Subarra 135.99 354 PKHKP PKPpre 22 58 14.3
NB2 NORSAR Subarra 135.99 354 PKPab PKPpre 22 58 14.3
NOA NORSAR Array B 135.99 354 PKhKP PKPpre 22 58 16.0
comp=Z,6.6nm,0.8s,baz=7.0,slow=4.0,SNR=26
NOA PKP PKPdf 22 58 27.3 -0.2
comp=Z,58nm,1.0s,baz=15,slow=3.7,SNR=29
NOA PP PP 23 01 08.8 -2.5
comp=Z,15nm,1.0s,baz=10.0,slow=6.3,SNR=5.7
NOA SKP 23 01 25.9
comp=Z,19nm,1.0s,baz=6.3,slow=4.0,SNR=11
NOA SKPab 23 01 30.9
comp=Z,27nm,0.9s,baz=9.2,slow=3.1,SNR=14
NOA SKKPbc 23 10 24.2
comp=Z,4.4nm,1.0s,baz=187,slow=4.0,SNR=3.7
NOA NORSAR Array B 135.99 354 PKHKP PKPpre 22 58 16.0
NOA 22 58 27.3
NOA 23 01 08.8
NAO01 NORSAR Array S 136.22 354 *e*PKPdf PKPpre 22 58 18.2
DGRG David-gareji 136.37 312 P PKPdf 22 58 20.6 -8.3
GOF Gofitskoye 136.52 318 *e*PKIKP PKPdf 22 58 39.3 +10
GOF pmax pmax
comp=Z,230nm,1.3s
HFS Hagfors 136.59 352 PKhKP PKPpre 22 58 16.3
comp=Z,18nm,0.7s,baz=72,slow=4.8,SNR=32
HFS PKP PKPdf 22 58 27.9 -0.7
comp=Z,62nm,0.8s,baz=106,slow=4.7,SNR=14
HFS SKP 23 01 26.8
comp=Z,22nm,0.8s,baz=38,slow=2.6,SNR=7.3
HFS SKPbc SKPbc 23 01 33.2 +9.4
comp=Z,22nm,0.9s,baz=84,slow=4.6,SNR=4.7
HFS SKKPbc 23 10 21.5
comp=Z,5.0nm,0.9s,baz=180,slow=0.6,SNR=4.1
HFS Hagfors 136.59 352 PKHKP PKPpre 22 58 16.3
HFS 22 58 27.9
MTA Mtatsminda 136.70 313 P PKPpre 22 58 18.1
TBLG Delisi 136.72 313 *e*PKHKP PKPpre 22 58 21.0
TBLG Delisi 136.72 313 P PKPpre 22 58 21.0
ZEI Tsey 136.91 315 *e*PKHKP PKPpre 22 58 20.7
ZEI pmax pmax
comp=Z,127nm,1.3s
BER Bergen 137.03 358 *e*PP PP 23 01 17.4 -0.3
KEH Kehvi 137.06 314 P PKPdf 22 58 29.3 -0.8
GOR Gori 137.06 314 P PKPdf 22 58 29.5 -0.5
OSL Oslo 137.12 354 *e* PKPdf 22 58 20.9 -8.7
KIV Kislovodsk 137.23 317 ⇓*i*PKIKP PKPdf 22 58 29.7 -0.6
KIV *e* 23 01 19.4
KIV *e*PS 23 11 53.5
KIV pmax pmax
comp=Z,126nm,1.4s
KIV Kislovodsk 137.23 317 *e*PKPdf PKPpre 22 58 23.8
KIV *i*PKP PKPdf 22 58 29.7 -0.6
KIV Kislovodsk 137.23 317 PKPdf PKPpre 22 58 24.3
SNR=41
GNI Garni 137.27 311 *e*P PKPpre 22 58 22.2
GNI Garni 137.27 311 *d i*PKIKP PKPdf 22 58 30.7 +0.2
GNI Garni 137.27 311 *e*PKPdf PKPpre 22 58 23.1
GNI *i*PKP PKPdf 22 58 30.7 +0.2
GNI Garni 137.27 311 PKPdf PKPpre 22 58 22.6
SNR=32
ONI Oni 137.28 315 P PKPdf 22 58 25.8 -4.7
KBD Kabd 137.29 294 *e*P PKPdf 22 58 20.6 -10
KBD AMb AMB 22 58 34.3
comp=Z,204nm,1.2s
RDF Al-Radifah 137.44 294 *e*P PKPdf 22 58 21.6 -10
RDF AMb AMB 22 58 35.7
comp=Z,595nm,1.1s
KONO Kongsberg 137.51 355 *e* PKPpre 22 58 19.7
KONO AMB AMB 22 58 34.4
comp=Z,107nm,0.8s
KONO *e*PP PP 23 01 19.3 -1.4
KONO Kongsberg 137.51 355 *e*PKPpre PKPpre 22 58 19.2
KONO *e*PKPdf PKPdf 22 58 30.9 +0.5
IZAR Zarasai 137.74 340 *e*P PKPdf 22 58 23.2 -7.7
IZAR AMB AMB 22 58 35.0
comp=Z,59nm,1.0s
IDID Didziasalis 137.94 340 *e*P PKPdf 22 58 21.4 -10
IDID AMB AMB 22 58 35.2
comp=Z,45nm,1.1s

IIGN Ignalina 138.08 340 *e*P PKPdf 22 58 22.2 -9.3
IIGN AMB AMB 22 58 35.7
comp=Z,66nm,1.1s
MICGM Minsk 138.20 338 *e*PKP PKPpre 22 58 22.0
MNK Minsk 138.22 338 *e*PKHKP PKPpre 22 58 22.0
MNK *e* 22 58 28.0
MNK *e* 23 01 30.0
MNK *e*PS 23 11 14.0
DYDN Diyadin 138.24 310 ⇑*i*P PKPdf 22 58 23.1 -9.2
NACGM Naroch 138.26 339 *e*PKP PKPdf 22 58 23.0 -8.9
KARS Kars 138.29 312 *e*P PKPdf 22 58 23.3 -9.1
RSC Scourie 138.70 6 P PKPdf 22 58 22.1 -10
RSC Scourie 138.70 6 *e*P PKPdf 22 58 22.1 -10
AGRB Hanur-Agry 138.73 311 *e*P PKPdf 22 58 29.7 -3.6
VANB Van 138.77 309 *e*P PKPdf 22 58 32.0 -1.3
HKR Hakkari 138.83 308 *e*P PKPdf 22 58 25.8 -7.7
HAKT HAKKARI 138.87 308 ⇑*i*P PKPdf 22 58 20.8 -13
ARTV Artvin 138.88 313 ⇓*i*P PKPdf 22 58 24.7 -8.8
DAGI Agillar 138.93 313 ⇓*i*P PKPdf 22 58 23.3 -10
RRH Rhenigidale 138.94 8 P PKPdf 22 58 24.1 -8.9
RRH Rhenigidale 138.94 8 *e*P PKPdf 22 58 24.1 -8.9
LSZ Lusaka 138.95 219 PP PP 23 01 35.8 +5.6
comp=Z,30nm,1.0s,baz=205,slow=3.9,SNR=5.7
LSZ SKPab 23 01 46.9
comp=Z,84nm,1.1s,baz=184,slow=3.6,SNR=8.0
LSZ Lusaka 138.95 219 *e*PKHKP PKPpre 22 58 25.5
LSZ Lusaka 138.95 219 PKPdf PKPdf 22 58 36.6 +2.3
SNR=7.8
BCA Borcka 138.99 314 *e*P PKPdf 22 58 23.9 -10
CUKT Cukurca 139.03 307 *e*P PKPdf 22 58 25.8 -8.1
DBAD Bademkaya 139.11 313 ⇓*i*P PKPdf 22 58 22.4 -11
RRR Rubha Reidh 139.11 7 P PKPdf 22 58 24.1 -9.2
RRR Rubha Reidh 139.11 7 *e*P PKPdf 22 58 24.1 -9.2
MVH1 Achvaich 139.21 6 P PKPdf 22 58 25.0 -8.5
MVH1 Achvaich 139.21 6 *e*P PKPdf 22 58 25.0 -8.5
SOC Sochi 139.31 318 *e*PKIKP PKPdf 22 58 33.1 -1.0
SOC *e* 23 00 04.8
SOC *e* 23 01 31.0
SOC pmax pmax
comp=Z,87nm,1.1s
BHD Baghdad 139.45 301 *ex* x 22 58 34.0
BHD *ex* x 22 01 30.0
BHD *ex* x 22 02 10.0
KAC Achnashellach 139.52 7 P PKPdf 22 58 25.4 -8.6
KAC Achnashellach 139.52 7 *e*P PKPdf 22 58 25.4 -8.6
MCD Coleburn Disti 139.63 5 P PKPdf 22 58 24.3 -10
MCD Coleburn Disti 139.63 5 *e*P PKPdf 22 58 24.3 -10
KPL Plockton 139.63 7 P PKPdf 22 58 26.3 -7.9
KPL Plockton 139.63 7 *e*P PKPdf 22 58 26.3 -7.9
MDO Dochfour 139.67 6 P PKPdf 22 58 26.1 -8.2
MDO Dochfour 139.67 6 *e*P PKPdf 22 58 26.1 -8.2
ERZM Erzurum 139.78 312 ⇑*i*P PKPdf 22 58 29.5 -5.6
EZM Erzurum 139.78 312 *e*P PKPdf 22 58 32.2 -2.9
KSB Sheil Bridge 139.79 7 P PKPdf 22 58 25.4 -9.2
KSB Sheil Bridge 139.79 7 *e*P PKPdf 22 58 25.4 -9.2
KAR1 Arisaig 140.03 7 P PKPdf 22 58 27.1 -7.9
KAR1 Arisaig 140.03 7 *e*P PKPdf 22 58 27.1 -7.9
ANN Anapa 140.13 321 *c i*PKHKP PKPpre 22 58 27.2
ANN *i* 22 58 31.1
ANN *i* 23 01 34.1
ANN pmax pmax
comp=Z,104nm,1.1s
SUW Suwalki 140.16 341 *e*PKP PKPdf 22 58 27.8 -7.5
SUW *e*PP PP 23 01 32.7 -4.4
SUW Suwalki 140.16 341 *e*PKPdf PKPdf 22 58 28.7 -6.7
BNGL BINGOL 140.29 311 ⇑*i*P PKPdf 22 58 30.6 -5.5
KTUT Trabzon 140.45 314 *e*P PKPdf 22 58 34.4 -1.9
BEST Besiri 140.58 309 ⇑*i*P PKPdf 22 58 32.1 -4.5
AKASG Malin Array Be 140.60 333 PKhKP PKPpre 22 58 29.1
comp=Z,7.2nm,0.4s,baz=38,slow=4.0,SNR=24
AKASG PKP PKPdf 22 58 35.0 -1.2
comp=Z,216nm,1.2s,baz=40,slow=3.5,SNR=40
AKASG SKiKP 23 01 38.1
comp=Z,12nm,0.9s,baz=35,slow=4.1,SNR=5.4
AKASG PKKP 23 07 58.7
comp=Z,0.5nm,0.4s,baz=238,slow=3.5,SNR=4.1
AKASG SKKPbc 23 10 07.5
comp=Z,15nm,1.1s,baz=234,slow=3.9,SNR=11
AKASG Malin Array Be 140.60 333 PKHKP PKPpre 22 58 29.2
AKASG 22 58 35.1
AKASG Malin Array Be 140.60 333 PKP PKPpre 22 58 29.1
AKASG PKP PKPdf 22 58 35.0 -1.2
AKASG PKKP 23 07 58.7
AKASG SKKPbc 23 10 07.5
AKBB Malin Array Si 140.60 333 *e*PKHKP PKPpre 22 58 29.4
KIEV Kiev 140.61 333 *e*PKHKP PKPpre 22 58 29.3
MUD Monsted U'grnd 140.71 354 ⇑*i*PKHKP PKPpre 22 58 31.3
MUD Monsted U'grnd 140.71 354 ⇑*i*P PKPpre 22 58 31.3
comp=Z,56nm,0.9s
MUD
comp=Z,650nm,20.0s
ATD Arta Tunnel 140.76 267 PKP PKPdf 22 58 37.9 +0.3
comp=Z,15nm,1.0s,baz=331,slow=10,SNR=3.4
ATD SKiKP 23 01 41.5
comp=Z,64nm,1.0s,baz=96,slow=1.6,SNR=11
BINT Bingol 140.79 311 *e*P PKPdf 22 58 32.2 -4.7
TSUM Tsumeb 140.80 203 PKKP 23 07 59.6
comp=Z,2.8nm,0.8s,baz=222,slow=8.5,SNR=3.8
TSUM Tsumeb 140.80 203 *e*PKPdf PKPdf 22 58 32.1 -5.5
GUMT Gumushane 140.87 314 *e*P PKPdf 22 58 32.6 -4.5
EAB Aberfoyle 140.91 6 P PKPdf 22 58 30.2 -6.4
EAB Aberfoyle 140.91 6 *e*P PKPdf 22 58 30.2 -6.4
EBH Black Hill 140.93 6 P PKPdf 22 58 30.4 -6.2
EBH Black Hill 140.93 6 *e*P PKPdf 22 58 30.4 -6.2
COP Copenhagen 141.07 351 *i*PKIKP PKPdf 22 58 32.9 -4.0
COP Copenhagen 141.07 351 *i*P PKPdf 22 58 32.9 -4.0
comp=Z,55nm,0.9s
COP
comp=Z,250nm,20.0s
KELT Kelkit 141.16 313 ⇑*i*P PKPdf 22 58 30.0 -7.6
ESPY Espiye-Giresun 141.19 315 *e*P PKPdf 22 58 33.1 -4.5
PMSU Muirshiel 141.20 7 P PKPdf 22 58 31.0 -6.1
PMSU Muirshiel 141.20 7 *e*P PKPdf 22 58 31.0 -6.1
BSD Bornholm Skovb 141.21 349 *i*PKIKP PKPdf 22 58 32.8 -4.4
BSD Bornholm Skovb 141.21 349 *i*P PKPdf 22 58 32.8 -4.4
comp=Z,147nm,1.0s
BSD
comp=Z,470nm,19.0s
PGBU Glenifferbraes 141.27 6 P PKPdf 22 58 30.6 -6.6
PGBU Glenifferbraes 141.27 6 *e*P PKPdf 22 58 30.6 -6.6
EDI Edinburgh 141.28 5 P PKPdf 22 58 31.2 -6.1
EDI Edinburgh 141.28 5 *e*P PKPdf 22 58 31.2 -6.1
KMBO Kilima Mbogo 141.32 245 PKhKP PKPpre 22 58 35.0
comp=Z,12nm,0.9s,baz=0.4,slow=24,SNR=18
KMBO PKP PKPdf 22 58 40.4 +1.7
comp=Z,34nm,0.9s,baz=22,slow=6.8,SNR=21
KMBO PP PP 23 01 41.5 -4.1
comp=Z,38nm,1.0s,baz=360,slow=22,SNR=7.8
KMBO Kilima Mbogo 141.32 245 *i*PKIKP PKPpre 22 58 35.1
KMBO 23 01 41.5
KMBO pmax pmax
comp=Z,12nm,0.9s
KMBO Kilima Mbogo 141.32 245 *e*PKPdf PKPpre 22 58 34.4
KMBO PKP PKPdf 22 58 40.4 +1.7
KMBO PP PP 23 01 41.5 -4.1
KMBO Kilima Mbogo 141.32 245 PKPdf PKPdf 22 58 35.4 -3.2
SNR=14
EAU Auchinoon 141.34 6 P PKPdf 22 58 32.3 -5.1
EAU Auchinoon 141.34 6 *e*P PKPdf 22 58 32.3 -5.1
ESY Stoneypath 141.34 5 P PKPdf 22 58 33.0 -4.4
ESY Stoneypath 141.34 5 *e*P PKPdf 22 58 33.0 -4.4
EBL Broad Law 141.44 5 P PKPdf 22 58 31.6 -6.0
EBL Broad Law 141.44 5 *e*P PKPdf 22 58 31.6 -6.0
PTK Pertek 141.58 311 *e*P PKPdf 22 58 32.5 -5.9
SVRC Sivrice-ELAZID 141.84 311 *e*P PKPdf 22 58 33.1 -5.7
EKA Eskdalemuir Ar 141.87 5 PKhKP PKPpre 22 58 32.4
comp=Z,32nm,0.8s,baz=331,slow=2.7,SNR=42
EKA PKP PKPdf 22 58 37.0 -1.4
comp=Z,30nm,0.7s,baz=350,slow=2.9,SNR=29
EKA PP PP 23 01 43.9 -3.3
comp=Z,7.6nm,0.9s,baz=8.5,slow=6.7,SNR=3.9
EKA SKKPbc 23 10 02.0
comp=Z,5.9nm,1.0s,baz=182,slow=5.0,SNR=5.6
EKA Eskdalemuir Ar 141.87 5 PKHKP PKPpre 22 58 32.4
EKA 22 58 37.0
EKA 23 01 43.9
ESK Eskdalemuir 141.88 5 P PKPpre 22 58 33.2
ESK Eskdalemuir 141.88 5 *e*P PKPpre 22 58 33.2
ESK Eskdalemuir 141.88 5 *e*PKPdf PKPpre 22 58 33.5
SIM Simferopol' 142.00 323 PKHKP PKPpre 22 58 34.2
SIM pmax pmax
comp=Z,92nm,0.9s

ECK	**Cauldkaine Hil**	**142.02**	**5**	P	PKPdf	22 58 33.0	-5.6
ECK	**Cauldkaine Hil**	**142.02**	**5**	*e*P	PKPdf	22 58 33.0	-5.6
KEMA	**Kemaliye**	**142.06 312**		⇑*i*P	PKPdf	22 58 33.1	-6.2
GAL1	**Galloway**	**142.17**	**7**	P	PKPdf	22 58 32.9	-6.0
GAL1	**Galloway**	**142.17**	**7**	*e*P	PKPdf	22 58 32.9	-6.0
WAR	**Warsaw**	**142.35 342**		*e*PKP	PKPdf	22 58 35.5	-3.9
XAL	**Allendale**	**142.42**	**5**	P	PKPdf	22 58 34.4	-4.9
XAL	**Allendale**	**142.42**	**5**	*e*P	PKPdf	22 58 34.4	-4.9
GKP	**Gorka Klasztor**	**142.45 346**		*e*PKP	PKPdf	22 58 34.1	-5.4
GKP				*e*PP	PP	23 01 43.6	-7.2
MYA	**Malataya**	**142.50 311**		*e*P	PKPdf	22 58 37.6	-2.4
URFA	**Urfa**	**142.56 310**		*e*P	PKPdf	22 58 36.0	-4.2
GMM	**Mts of Mourne**	**142.62**	**8**	P	PKPdf	22 58 35.0	-4.7
GMM	**Mts of Mourne**	**142.62**	**8**	*e*P	PKPdf	22 58 35.0	-4.7
ERBA	**Erbaa**	**142.63 315**		⇑*i*P	PKPdf	22 58 36.7	-3.5
XDE	**Dent Fell**	**142.66**	**6**	P	PKPdf	22 58 35.1	-4.7
XDE	**Dent Fell**	**142.66**	**6**	*e*P	PKPdf	22 58 35.1	-4.7
DARE	**Darende-Malaty**	**142.68 312**		*e*P	PKPdf	22 58 38.4	-2.0
SCER	**sogukcermik**	**142.75 314**		⇓*i*P	PKPdf	22 58 38.4	-2.1
SVSK	**Karacayir**	**142.82 314**		*e*P	PKPdf	22 58 36.7	-3.9
AKCD	**Akcadag**	**142.87 311**		⇓*i*P	PKPdf	22 58 37.5	-3.2
KVT	**Kavak**	**142.91 316**		*e*P	PKPdf	22 58 37.0	-3.6
ATAB	**Bozova**	**142.93 310**		⇓*i*P	PKPdf	22 58 37.7	-3.1
TOKT	**Tokat**	**142.94 315**		*e*P	PKPdf	22 58 39.1	-1.7
BSEG	**Bad Segeberg**	**143.06 353**		*e*PKP	PKPdf	22 58 36.5	-4.0
DIKM	**Dikmen**	**143.13 318**		*e*P	PKPdf	22 58 37.4	-3.6
HPK	**Haverah Park**	**143.36**	**4**	P	PKPdf	22 58 37.6	-3.5
HPK	**Haverah Park**	**143.36**	**4**	*e*P	PKPdf	22 58 37.6	-3.5
LVV	**L'vov**	**143.38 337**		*i* PKIKP	PKPdf	22 58 38.2	-3.0
DLF	**Lyons Farm**	**143.46**	**9**	⇑*i*P	PKPdf	22 58 37.8	-3.4
KIS	**Kishinev**	**143.47 330**		⇓*i*PKP	PKPdf	22 58 37.0	-4.5
KIS				M		22 58 38.0	
	comp=Z,600nm,1.0s						
KIS				*e*pPKP	pPKPdf	23 00 10.0	-7.0
KIS	**Kishinev**	**143.47 330**		*e*PP	PP	23 01 44.0	-13
KIS				*e*SKKS	SKKSac	23 08 10.0	-0.4
KIS				*i* SKSP		23 11 30.0	
KIS	**Kishinev**	**143.47 330**κ		*i* PKIKP	PKPdf	22 58 38.0	-3.5
KIS				*e*		23 00 10.0	
KIS				*e*		23 20 02.0	
KIS				pmax	pmax		
	comp=Z,600nm,1.0s						
KIS				pmax	pmax		
	comp=Z,2μm,10.0s						
KIS	**Kishinev**	**143.47 330**		⇓P	PKPdf	22 58 39.2	-2.3
KIS	**Kishinev**	**143.47 330**		⇓*i*P	PKPdf	22 58 39.2	-2.3
DSB	**Dublin**	**143.53**	**9**	*e*PKPdf	PKPdf	22 58 38.7	-2.7
BYBT	**Boyabat**	**143.54 318**		*e*P	PKPdf	22 58 40.7	-1.1
SARI	**SarD1z-Kayseri**	**143.58 313**		*e*P	PKPdf	22 58 41.4	-0.6
WME	**Myndd Eilian**	**143.66**	**7**	P	PKPdf	22 58 37.8	-3.8
WME	**Myndd Eilian**	**143.66**	**7**	*e*P	PKPdf	22 58 37.8	-3.8
DESE	**Dese**	**143.72 265**		*e*P	PKPdf	22 58 43.8	+0.9
WLF1	**Llynfaes**	**143.75**	**7**	P	PKPdf	22 58 37.5	-4.3
WLF1	**Llynfaes**	**143.75**	**7**	*e*P	PKPdf	22 58 37.5	-4.3
BZK	**Bozkurt**	**143.76 319**		*e*P	PKPdf	22 58 40.2	-1.9
YRC	**Rhoscolyn**	**143.77**	**7**	P	PKPdf	22 58 38.5	-3.3
YRC	**Rhoscolyn**	**143.77**	**7**	*e*P	PKPdf	22 58 38.5	-3.3
PINB	**Pinarbasi**	**143.79 313**		⇑*i*P	PKPdf	22 58 40.7	-1.6
WPM1	**Penmaenmawr**	**143.84**	**7**	P	PKPdf	22 58 38.6	-3.3
WPM1	**Penmaenmawr**	**143.84**	**7**	*e*P	PKPdf	22 58 38.6	-3.3
RUE	**Ruedersdorf**	**143.93 349**		*e*PKPdf	PKPdf	22 58 40.2	-1.9
IAS	**Iasi**	**143.93 331**		PKIKP	PKPdf	22 58 40.3	-1.9
YLL	**Llanberis**	**143.93**	**7**	P	PKPdf	22 58 39.9	-2.1
YLL	**Llanberis**	**143.93**	**7**	*e*P	PKPdf	22 58 39.9	-2.1
KMRS	**Kahramanmaras**	**143.93 311**		*e*P	PKPdf	22 58 41.7	-0.9
CTKT	**Corum**	**143.96 317**		⇓*i*P	PKPdf	22 58 43.0	+0.4
KWP	**Kalwaria Pacla**	**144.02 338**		*e*PKPdf	PKPdf	22 58 41.0	-1.4
KWP	**Kalwaria Pacla**	**144.02 338**		⇓*i*P	PKPdf	22 58 40.7	-1.6
YRE	**Yr Eifl**	**144.05**	**7**	P	PKPdf	22 58 39.5	-2.8
YRE	**Yr Eifl**	**144.05**	**7**	*e*P	PKPdf	22 58 39.5	-2.8
KBI1	**Birley Grange**	**144.07**	**4**	P	PKPdf	22 58 39.3	-3.0
KBI1	**Birley Grange**	**144.07**	**4**	*e*P	PKPdf	22 58 39.3	-3.0
YOZ	**Yozgat**	**144.09 315**		*e*P	PKPdf	22 58 42.8	0.0
KUZU	**Kuzuini**	**144.10 309**		⇑*i*P	PKPdf	22 58 42.3	-0.6
LEOM	**Leova**	**144.12 329**		⇓PKIKP	PKPdf	22 58 40.9	-1.7
LEOM	**Leova**	**144.12 329**		⇓*i*P	PKPdf	22 58 40.9	-1.7
STNC	**Stoke**	**144.18**	**5**	P	PKPdf	22 58 40.9	-1.6
STNC	**Stoke**	**144.18**	**5**	*e*P	PKPdf	22 58 40.9	-1.6
TOS	**Tosya**	**144.24 316**		*e*P	PKPdf	22 58 43.4	+0.4
KWE	**Weaver Farm**	**144.28**	**5**	P	PKPdf	22 58 41.0	-1.6
KWE	**Weaver Farm**	**144.28**	**5**	*e*P	PKPdf	22 58 41.0	-1.6
CORM	**Corum**	**144.29 316**		*e*P	PKPdf	22 58 42.7	-0.4
ANDN	**Andirin**	**144.30 311**		⇓*i*P	PKPdf	22 58 43.2	0.0
BALT	**Daday**	**144.38 319**		⇓*i*P	PKPdf	22 58 43.4	+0.2
ILGA	**Ilgaz**	**144.43 318**		⇑*i*P	PKPdf	22 58 43.0	-0.3
OJC	**Ojcow**	**144.50 341**		*e*PKHKP	PKPpre	22 58 39.7	
OJC				*e*		23 02 01.6	
OJC				MLR	MLR		
	comp=Z,1μm,23.2s						
NRDL	**Niedersach Rie**	**144.50 352**		*e*PKP	PKPdf	22 58 40.3	-2.8
WIT	**Witteveen**	**144.53 356**		*e*PKP	PKPdf	22 58 42.3	-0.8
	comp=Z,5μm,1.2s						
ABA1	**Baconsthorpe**	**144.56**	**2**	P	PKPdf	22 58 42.1	-1.0
ABA1	**Baconsthorpe**	**144.56**	**2**	*e*P	PKPdf	22 58 42.1	-1.0
CWF	**Charnwood Fore**	**144.59**	**4**	P	PKPdf	22 58 41.2	-2.0
CWF	**Charnwood Fore**	**144.59**	**4**	*e*P	PKPdf	22 58 41.2	-2.0
AWI1	**Witton**	**144.63**	**1**	P	PKPdf	22 58 42.6	-0.7
AWI1	**Witton**	**144.63**	**1**	*e*P	PKPdf	22 58 42.6	-0.7
BUR08	**Bucovina Ar. S**	**144.64 333**		*e*PKPdf	PKPdf	22 58 43.6	+0.1
BURAR	**Bucovina Array**	**144.66 333**		⇓PKIKP	PKPdf	22 58 42.7	-0.8
BURAR	**Bucovina Array**	**144.66 333**		⇓*i*P	PKPdf	22 58 42.7	-0.8
HLM1	**Long Mynd**	**144.68**	**6**	P	PKPdf	22 58 41.9	-1.5
HLM1	**Long Mynd**	**144.68**	**6**	*e*P	PKPdf	22 58 41.9	-1.5
STHS	**Stebnicka Huta**	**144.72 339**		*e*PKP	PKPdf	22 58 44.4	+0.9
STHS				*e*		23 09 50.3	
STHS	**Stebnicka Huta**	**144.72 339**		*e*PKP	PKPdf	22 58 44.4	+0.9
STHS				*e*		23 09 50.3	
KOZT	**Kozan**	**144.72 311**		*e*P	PKPdf	22 58 43.4	-0.6
CDAG	**Cicekdag**	**144.74 315**		⇓*i*P	PKPdf	22 58 43.6	-0.3
TLCR		**144.74 327**		⇓PKIKP	PKPdf	22 58 43.3	-0.4
TLCR		**144.74 327**		⇓*i*P	PKPdf	22 58 43.3	-0.4
COBT	**Iskenderun**	**144.81 309**		⇓*i*P	PKPdf	22 58 45.0	+0.8
AEU	**East Anglia Un**	**144.84**	**2**	P	PKPdf	22 58 43.0	-0.6
AEU	**East Anglia Un**	**144.84**	**2**	*e*P	PKPdf	22 58 43.0	-0.6
TESR		**144.85 331**		⇓P	PKPdf	22 58 43.2	-0.7
TESR		**144.85 331**		⇓*i*P	PKPdf	22 58 43.2	-0.7
KSP	**Ksiaz**	**144.91 345**		*e*PKPdf	PKPdf	22 58 44.2	+0.4
KSP	**Ksiaz**	**144.91 345**		⇓*e*PKIKP	PKPdf	22 58 43.8	0.0
KSP				*e*		23 00 13.2	
ELDT	**Eldivan**	**144.92 317**		⇓*i*P	PKPdf	22 58 44.6	+0.4
IBBN	**Ibbenburen**	**144.94 355**		*e*PKP	PKPdf	22 58 43.5	-0.3
CEYT	**Ceyhan**	**144.97 311**		*e*P	PKPdf	22 58 42.8	-1.6
SAFT	**Safranbolu**	**144.98 319**		*e*P	PKPdf	22 58 44.2	0.0
UZH	**Uzhgorod**	**145.00 337**		⇓*i*PKIKP	PKPdf	22 58 44.0	-0.1
NIE	**Niedzica**	**145.03 340**		*e*PKP	PKPdf	22 58 44.5	+0.4
NIE				*e*pPKP	SKPbc	23 01 50.7	+4.6
HTY	**Hatay**	**145.05 309**		*e*P	PKPdf	22 58 45.2	+0.6
HTR	**Trewern Hill**	**145.07**	**6**	P	PKPdf	22 58 43.0	-1.1
HTR	**Trewern Hill**	**145.07**	**6**	*e*P	PKPdf	22 58 43.0	-1.1
CRVS	**Cervenica-Dubn**	**145.08 338**		*e*PKP	PKPdf	22 58 44.6	+0.4
CRVS				*e*		23 09 48.1	
CRVS	**Cervenica-Dubn**	**145.08 338**		*e*PKP	PKPdf	22 58 44.6	+0.4
CRVS				*e*		23 09 48.1	
CFR	**Carcaliu**	**145.09 328**		PKIKP	PKPdf	22 58 44.6	+0.3
CFR	**Carcaliu**	**145.09 328**		⇓P	PKPdf	22 58 44.7	+0.4
CFR	**Carcaliu**	**145.09 328**		⇓*i*P	PKPdf	22 58 44.7	+0.4
RAC	**Raciborz**	**145.10 343**		*e*PKIKP	PKPdf	22 58 41.5	-2.7
RAC				*e*		22 58 44.5	
RAC				*e*		23 00 16.2	
CLZ	**Clausthal**	**145.10 352**		*e*PKP	PKPdf	22 58 44.2	+0.1
YAYL	**Yayladag**	**145.11 309**		⇓*i*P	PKPdf	22 58 44.7	+0.1
YURE	**YÜREGIR**	**145.14 310**		⇓*i*P	PKPdf	22 58 44.2	-0.5
PETR		**145.15 329**		⇑P	PKPdf	22 58 44.2	-0.2
PETR		**145.15 329**		⇑*i*P	PKPdf	22 58 44.2	-0.2
BR131	**Keskin Array S**	**145.18 316**		*e*PKPdf	PKPdf	22 58 44.9	+0.2
BRTR	**Keskin Array B**	**145.18 316**		PKP	PKPdf	22 58 43.9	-0.8
	comp=Z,436nm,0.9s,baz=138,slow=2.9,SNR=334						
BRTR				PKPbc	PKPbc	22 58 45.4	+0.2
	comp=Z,436nm,0.9s,baz=139,slow=2.8,SNR=351						
BRTR				pPKPbc		23 00 19.0	
	comp=Z,61nm,1.2s,baz=90,slow=0.7,SNR=2.5						
MCH1	**Michaelchurch**	**145.18**	**6**	P	PKPdf	22 58 43.3	-0.9
MCH1	**Michaelchurch**	**145.18**	**6**	*e*P	PKPdf	22 58 43.3	-0.9
CLL	**Collm**	**145.19 349**		*e*PKPbc	PKPbc	22 58 45.0	+0.2
CLL	**Collm**	**145.19 349**		⇓*i*PKP2	PKPab	22 58 44.6	-0.8
CLL				*e*		23 14 10.0	
CLL				pmax	pmax		
	comp=Z,2μm,1.0s						
CLL	**Collm**	**145.19 349**		⇓*i*PKPdf	PKPdf	22 58 44.6	+0.3
	comp=Z,2μm,1.0s						
CLL				*e*PKPlp		22 58 46.0	
	comp=Z,2μm,19.6s						
CLL				*e*		22 58 50.0	
CLL				*e*pPKiKP		23 00 25.0	
CLL				*e*(SKPdf)		23 01 36.0	
CLL				*e*PP	PP	23 02 06.0	-1.0
CLL				*e*pPP		23 03 30.0	
CLL				*e*sPP		23 04 13.0	
CLL				*e*PPPP		23 07 30.0	
CLL				*i* SKKPbc		23 09 46.6	
	comp=Z,17nm,1.4s						
CLL				*e*SKKSacre		23 13 36.0	
CLL				*e*SPP		23 14 10.0	
CLL				*e*		23 17 24.0	
CLL				*e*sSS		23 22 54.0	
CLL				*e*sSSS		23 28 21.0	
CLL				*e*SSPrev		23 33 18.0	
CLL				*e*		23 38 48.0	
VRI	**Vrincioaia**	**145.29 330**		⇓PKIKP	PKPdf	22 58 43.8	-0.8
VRI	**Vrincioaia**	**145.29 330**		⇓*i*P	PKPdf	22 58 43.8	-0.8
UPC	**Upice**	**145.29 345**		*e*PKP2	PKPab	22 58 44.5	-1.4
UPC	**Upice**	**145.29 345**		*e*PKP	PKPdf	22 58 44.5	0.0
UPC				*e*x	x	22 58 46.6	
BMR	**Baia Mare**	**145.32 335**		⇑PKP2	PKPab	22 58 45.4	-0.7
BMR	**Baia Mare**	**145.32 335**		⇑*i*P	PKPdf	22 58 45.4	+0.8
TRPA	**Tarpa**	**145.33 336**		⇑*i*P	PKPdf	22 58 43.8	-0.8
OKC	**Ostrava-Krasne**	**145.33 342**		*e*PKP2	PKPab	22 58 44.7	-1.3
OKC	**Ostrava-Krasne**	**145.33 342**		*e*PKP	PKPdf	22 58 44.7	+0.1
OKC				*e*SKKP		23 09 44.2	
OKC				*e*x	x	23 23 06.8	
PLOR	**Plostina**	**145.34 330**		⇓PKP2	PKPab	22 58 44.8	-1.4
PLOR	**Plostina**	**145.34 330**		⇓*i*P	PKPdf	22 58 44.8	+0.1
DPC	**Dobruska-Polom**	**145.36 345**		*e*PKP2	PKPab	22 58 44.7	-1.4
DPC				*e*		22 58 46.7	
DPC				*e*		23 00 16.3	
DPC	**Dobruska-Polom**	**145.36 345**		*e*PKP	PKPdf	22 58 44.7	+0.1
DPC				*e*x	x	22 58 46.7	
DPC				*e*pPKP	pPKPdf	23 00 16.3	-3.9
DPC				*e*SKKP		23 09 45.6	
DPC				*e*x	x	23 22 51.7	
WTSB	**Winterswijk**	**145.36 356**		*e*PKP	PKPdf	22 58 44.5	0.0
	comp=Z,2μm,1.1s						
KARA	**Karaisali**	**145.37 311**		*e*P	PKPdf	22 58 44.6	-0.4
PCED	**Cedros**	**145.38**	**46**	*e*PKP	PKPdf	22 58 46.8	+1.8
CALA	**Caldeira**	**145.41**	**46**	*e*PKP	PKPdf	22 58 46.7	+1.6
BRG	**Berggiesshubel**	**145.42 347**		*e*PKPbc	PKPbc	22 58 46.1	+0.6
BRG	**Berggiesshubel**	**145.42 347**		*i* PKP2	PKPab	22 58 45.7	-0.6
BRG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KRTS	**Karatas**	**145.43 310**		*e*P	PKPdf	22 58 46.3	+1.1
TIRR	**Tirgusor**	**145.44 327**		⇑PKIKP	PKPdf	22 58 44.3	-0.7
TIRR	**Tirgusor**	**145.44 327**		*e*PKPdf	PKPdf	22 58 45.9	+0.9
TIRR	**Tirgusor**	**145.44 327**		⇑*i*P	PKPdf	22 58 44.3	-0.7
NEUB	**Neuenburg**	**145.50 350**		*e*PKPbc	PKPbc	22 58 46.2	+0.4
GRER		**145.52 329**		⇑P	PKPdf	22 58 46.1	+1.0
GRER		**145.52 329**		⇑*i*P	PKPdf	22 58 46.1	+1.0
HARR	**Harsova**	**145.53 328**		⇑PKP2	PKPab	22 58 49.3	+2.3
HARR	**Harsova**	**145.53 328**		⇑*i*P	PKPab	22 58 49.3	+2.3
FKH	**Fakeheh**	**145.56 306**		*e*P	PKPdf	22 58 46.2	+0.7
MORC	**Moravsky Berou**	**145.56 346**		PKP2	PKPdf	22 58 45.3	+0.3
MORC	**Moravsky Berou**	**145.56 343**		*e*PKPdf	PKPdf	22 58 45.2	+0.2
MORC	**Moravsky Berou**	**145.56 343**		⇓*i*P	PKPdf	22 58 45.0	0.0
HGH	**Gray Hill**	**145.56**	**6**	P	PKPdf	22 58 44.9	0.0
HGH	**Gray Hill**	**145.56**	**6**	*e*P	PKPdf	22 58 44.9	0.0
PVCC	**Panska Ves**	**145.61 347**		*e*PKP2	PKPdf	22 58 45.1	+0.1
PVCC	**Panska Ves**	**145.61 347**		*e*PKP	PKPdf	22 58 45.1	+0.1
BBAL	**Bala**	**145.61 316**		⇑*i*P	PKPdf	22 58 44.5	-0.9
PCAN	**Candelaria**	**145.61**	**46**	*e*PKP	PKPdf	22 58 46.7	+1.3
ROSA	**Rosais**	**145.65**	**46**	*e*PKP	PKPdf	22 58 47.3	+1.8
LOD	**Lodumlu**	**145.66 317**		*e*P	PKPdf	22 58 45.4	-0.1
KDZE	**Karadeniz Ereo**	**145.71 320**		*e*P	PKPdf	22 58 45.4	-0.1
CVD	**Cernavoda**	**145.74 327**		⇓PKP2	PKPab	22 58 47.4	-0.4
CVD	**Cernavoda**	**145.74 327**		⇓*i*P	PKPdf	22 58 47.4	+1.9
SGKT	**Sivrigoynuk**	**145.75 318**		⇓*i*P	PKPdf	22 58 45.8	+0.2
SWN1	**Swindon**	**145.78**	**5**	P	PKPdf	22 58 46.1	+0.8
SWN1	**Swindon**	**145.78**	**5**	*e*P	PKPdf	22 58 46.1	+0.8
KECS	**Kecovo**	**145.78 339**		*e*PKP	PKPdf	22 58 46.5	+1.1
KECS				*e*		23 09 44.5	
KECS	**Kecovo**	**145.78 339**		*e*PKP	PKPdf	22 58 46.5	+1.1
KECS				*e*		23 09 44.5	
PMAN	**Manadas**	**145.80**	**46**	*e*PKP	PKPdf	22 58 46.6	+0.8
SHEL	**Horse Pasture**	**145.82 165**		*e*PKPdf	PKPdf	22 58 47.4	+1.0
SHEL				*e*PKPbc	PKPbc	22 58 49.5	+1.7
ASF	**Jabal al Asfar**	**145.83 302**		SKKPab		23 09 48.4	
	comp=Z,9.0nm,1.1s,baz=258,slow=0.7,SNR=4.9						
DOPR	**Dopca**	**145.84 331**		⇑*i*P	PKPbc	22 58 47.7	+0.8
BUG	**Bochum--Univer**	**145.84 355**		*e*PKPdf	PKPdf	22 58 45.6	+0.2
PID	**Ribeirinha**	**145.87**	**46**	*e*PKP	PKPdf	22 58 47.6	+1.7
HWQ	**Hawqa**	**145.89 306**		*e*P	PKPdf	22 58 46.0	-0.1
AMRR	**Amara**	**145.89 328**		⇓P	PKPbc	22 58 47.9	+0.7
AMRR	**Amara**	**145.89 328**		⇓*i*P	PKPbc	22 58 47.9	+0.8
MERS	**Mersin**	**145.92 311**		*e*P	PKPdf	22 58 46.2	+0.2
MLR	**Muntele Rosu**	**145.94 330**		⇓PKIKP	PKPdf	22 58 45.1	-0.7
MLR	**Muntele Rosu**	**145.94 330**		⇓*i*P	PKPdf	22 58 45.0	-0.8
HTL	**Hartland**	**145.99**	**8**	P	PKPdf	22 58 44.7	-1.0
HTL	**Hartland**	**145.99**	**8**	*e*P	PKPdf	22 58 44.7	-1.0
HEX	**Exmoor**	**146.01**	**7**	P	PKPdf	22 58 45.9	+0.2
HEX	**Exmoor**	**146.01**	**7**	*e*P	PKPdf	22 58 45.9	+0.2
SULT	**Sultanhani-AKS**	**146.02 314**		*e*P	PKPdf	22 58 45.2	-0.9
WOL	**Wolverton**	**146.02**	**4**	P	PKPdf	22 58 46.4	+0.6
WOL	**Wolverton**	**146.02**	**4**	*e*P	PKPdf	22 58 46.4	+0.6
PRA	**Prague**	**146.07 346**		PKP	PKPdf	22 58 46.0	+0.2
PRA				pPKP	pPKPdf	23 00 19.0	-2.4
PRA				*e*x	x	23 23 09.0	
MOX	**Moxa**	**146.07 350**		⇑*i*PKP	PKPdf	22 58 46.0	+0.2
	comp=Z,509nm,1.4s						
MOX				*e*		22 58 59.9	
MOX				*e*		23 00 20.0	
MOX				*e*		23 02 08.0	
MOX							
	comp=Z,600nm,21.0s						
MOX	**Moxa**	**146.07 350**		*e*PKPdf	PKPdf	22 58 45.8	0.0
PSN	**Preselentsi**	**146.09 326**		*e*P	PKPdf	22 58 46.2	+0.1
PRU	**Pruhonice**	**146.12 346**		*e*PKP2	PKPdf	22 58 46.4	+0.5
PRU				*e*		23 14 14.1	
PRU	**Pruhonice**	**146.12 346**		*e*PKP	PKPdf	22 58 46.4	+0.5
PRU				*e*pPKP	pPKPdf	23 00 17.4	-4.1
PRU				*e*SKKP		23 09 43.1	
PRU				*e*SKKS	SKKSdf	23 14 14.1	-11
PRU				*e*x	x	23 22 50.7	
TANN	**Tannenbergstha**	**146.15 349**		*e*PKPdf	PKPdf	22 58 45.8	-0.1
TANN				*e*PKPbc	PKPbc	22 58 48.3	+0.6
TANN				*e*pPKPbc	pPKPbc	23 00 23.1	+1.6
UBBA	**Unterbreizbach**	**146.15 352**		*e*PKPdf	PKPdf	22 58 45.6	-0.3
MDB	**Medias**	**146.16 333**		⇓PKP2	PKPab	22 58 48.8	-0.6
MDB	**Medias**	**146.16 333**		⇓*i*P	PKPdf	22 58 48.8	+2.7
VRAC	**Vranov**	**146.24 344**		PKP	PKPdf	22 58 46.3	+0.2
	comp=Z,284nm,1.1s,baz=37,slow=1.8,SNR=80						
VRAC				PKPbc	PKPbc	22 58 49.2	+1.2
	comp=Z,231nm,1.0s,baz=22,slow=1.7,SNR=109						
VRAC				pPKPbc	pPKPbc	23 00 20.5	-1.4
	comp=Z,57nm,1.1s,baz=60,slow=2.0,SNR=2.2						
VRAC				SKKPab		23 09 39.9	
	comp=Z,15nm,1.1s,baz=185,slow=4.3,SNR=3.1						
VRAC	**Vranov**	**146.24 344**		⇑P	PKPdf	22 58 46.0	-0.2
VRAC	**Vranov**	**146.24 344**		⇑*i*P	PKPdf	22 58 46.0	-0.1
BHL	**Bhannes**	**146.25 306**		*e*P	PKPdf	22 58 46.7	+0.1
RCY	**Rachaya**	**146.27 305**		*e*P	PKPdf	22 58 47.3	+0.6
ELSH	**Elham, Standar**	**146.31**	**2**	P	PKPdf	22 58 46.4	+0.2
ELSH	**Elham, Standar**	**146.31**	**2**	*e*P	PKPdf	22 58 46.4	+0.2
VYHS	**Vyhne**	**146.31 341**		*e*PKP	PKPdf	22 58 46.2	-0.1
VYHS				*e*		23 09 41.6	
VYHS	**Vyhne**	**146.31 341**		*e*PKP	PKPdf	22 58 46.2	-0.1
VYHS				*e*		23 09 41.6	
NKC	**Novy Kostel**	**146.32 349**		*e*PKPbc	PKPbc	22 58 49.2	+1.0
NKC	**Novy Kostel**	**146.32 349**		*e*PKIKP	PKPdf	22 58 46.5	+0.2
NKC				*e*		23 00 17.9	
NKC				*e*		23 14 17.5	
NKC	**Novy Kostel**	**146.32 349**		*e*PKP	PKPdf	22 58 46.5	+0.2
NKC				*e*pPKP	pPKPdf	23 00 17.9	-3.9
NKC				*e*SKKS	SKKSdf	23 14 17.5	-6.8
NKC				*e*x	x	23 23 03.1	
HENT	**Hendek**	**146.33 320**		⇑*i*P	PKPdf	22 58 47.1	+0.6
MDU	**Mudurnu**	**146.34 319**		*e*P	PKPdf	22 58 46.2	-0.4
DRGR		**146.35 335**		⇓PKIKP	PKPdf	22 58 46.0	-0.4
DRGR		**146.35 335**		⇓*i*P	PKPdf	22 58 46.0	-0.4
ADH	**Angra Heroismo**	**146.37**	**45**	*e*PKP	PKPbc	22 58 48.8	+0.1
KOLL	**Kolacno**	**146.37 341**		*e*PKP	PKPdf	22 58 47.2	+0.8
KOLL				*e*		22 58 47.4	
KOLL	**Kolacno**	**146.37 341**		*e*PKP	PKPdf	22 58 47.2	+0.8
SULR		**146.38 329**		⇓P	PKPdf	22 58 46.0	-0.5
SULR		**146.38 329**		⇓*i*P	PKPdf	22 58 46.0	-0.5
VOIR		**146.40 331**		⇑PKIKP	PKPdf	22 58 45.8	-0.7
VOIR		**146.40 331**		⇑*i*P	PKPdf	22 58 45.8	-0.7
PSZ	**Piszkesteto**	**146.46 339**		⇓PKP2	PKPab	22 58 56.9	+6.4
PSZ	**Piszkesteto**	**146.46 339**		⇓*i*P	PKPab	22 58 56.9	+6.4
TREC	**Trest**	**146.54 345**		*e*PKIKP	PKPdf	22 58 46.7	+0.1
TREC				*e*		23 00 18.3	
TREC	**Trest**	**146.54 345**		*e*PKP	PKPdf	22 58 46.7	+0.1
TREC				*e*pPKP	pPKPdf	23 00 18.3	-3.9
TREC				*e*SKKP		23 09 40.0	
TREC				*e*x	x	23 14 34.0	
BEBN	**Eben Emael**	**146.60 357**		PKP	PKPdf	22 58 46.6	-0.1
INCR	**INCERC-Sediu C**	**146.60 329**		⇓*i*P	PKPdf	22 58 48.1	+1.2
DYA	**Yadsworthy**	**146.61**	**8**	P	PKPdf	22 58 47.4	+0.7
DYA	**Yadsworthy**	**146.61**	**8**	*e*P	PKPdf	22 58 47.4	+0.7
HGN	**Heimansgroeve**	**146.62 356**		*e*PKP	PKPdf	22 58 46.5	-0.2
	comp=Z,388nm,1.1s						
HGN

ISP	**Isparta**	**148.25**	**315**	P		PKPdf	22 58 48.6	-1.2
STU	**Stuttgart**	**148.27**	**352**	*e*	PKPdf	PKPdf	22 58 49.2	-0.3
STU				*e*	PKPbc	PKPbc	22 58 54.3	+0.9
STU				*e*	pPKPbc	pPKPbc	23 00 26.5	-1.4
STU	**Stuttgart**	**148.27**	**352**	*e*	PKPdf	PKPdf	22 58 49.9	+0.3
STU					PKPbc	PKPbc	22 58 54.5	+1.1
PKSM	**Moragy**	**148.37**	**339**	⇓	PKHKP	PKPdf	22 58 49.0	-0.8
PKSM	**Moragy**	**148.37**	**339**	⇓	*i*P	PKPdf	22 58 49.0	-0.8
PPCY	**Paphos**	**148.38**	**309**		P	PKPdf	22 58 49.7	-0.5
BCK	**Bucak**	**148.39**	**315**		*e*P	PKPdf	22 58 48.7	-1.4
ARSA	**Arzberg**	**148.41**	**343**	⇓	PKPdf	PKPdf	22 58 49.1	-0.7
	comp=Z,327nm,1.2s,SNR=78							
BNT	**Bandirma**	**148.42**	**322**		*e*P	PKPbc	22 58 54.2	+0.1
EDC	**Edincik**	**148.46**	**322**		*e*P	PKPbc	22 58 53.6	-0.6
MFT	**Murefte**	**148.52**	**323**		*e*P	PKPbc	22 58 53.2	-1.1
FLN	**La Foliniere**	**148.61**	**4**	⇓	PKIKP	PKPdf	22 58 49.8	-0.3
	comp=Z,531nm,1.3s							
FLN				*e*	MLR	MLR		
	comp=Z,2μm,22.0s							
FLN	**La Foliniere**	**148.61**	**4**	⇓	PKPdf	PKPdf	22 58 49.8	-0.3
FLN					LR	LR		
	comp=Z,2μm,22.0s							
KHAL	**Karahalli**	**148.62**	**317**	⇑	*i*P	PKPdf	22 58 49.3	-1.1
DIM	**Dimitrovgrad**	**148.63**	**326**		*e*P	PKPdf	22 58 50.0	-0.3
RJOB	**Jochberg**	**148.63**	**347**		*e*PKPdf	PKPdf	22 58 49.6	-0.5
RJOB					*e*PKPbc	PKPbc	22 58 55.0	+0.6
ANTB	**Antalya**	**148.64**	**314**		*e*P	PKPdf	22 58 52.4	+1.9
RKY	**Sarkoy-Tekirda**	**148.64**	**323**		*e*P	PKPdf	22 58 49.6	-0.8
PSMA	**Santa Maria**	**148.65**	**46**		*e*PKP	PKPdf	22 58 51.2	+0.7
PSMN	**Pico do Norte,**	**148.69**	**46**		*e*PKP	PKPdf	22 58 51.7	+1.1
DEMI	**Demirci**	**148.73**	**319**	⇓	*i*P	PKPdf	22 58 50.5	-0.1
GONE	**Gonen-Balikesi**	**148.75**	**321**		*e*P	PKPdf	22 58 49.4	-1.2
ROSF	**Rostrenen**	**148.76**	**8**	⇓	PKIKP	PKPdf	22 58 49.9	-0.4
	comp=Z,169nm,1.1s							
KRBG	**Karabiga-Canak**	**148.76**	**322**		*e*P	PKPdf	22 58 50.1	-0.5
KORT	**Korkueli**	**148.79**	**314**	⇓	*i*P	PKPdf	22 58 50.5	-0.3
LDF	**La Druitiere**	**148.80**	**4**	⇓	PKIKP	PKPdf	22 58 50.0	-0.4
	comp=Z,140nm,1.1s							
BFO	**Black Forest**	**148.81**	**353**	*e*	PKPdf	PKPdf	22 58 50.0	-0.4
BFO				*e*	PKPbc	PKPbc	22 58 55.3	+0.5
BFO	**Black Forest**	**148.81**	**353**	*e*	PKPdf	PKPdf	22 58 50.6	+0.2
BFO				*e*	PKPbc	PKPbc	22 58 55.3	+0.6
CDF	**Champ du Feu**	**148.84**	**354**	⇓	PKIKP	PKPdf	22 58 50.2	-0.3
	comp=Z,178nm,1.4s							
BALB	**Balikesir**	**148.89**	**321**		*e*P	PKPdf	22 58 49.2	-1.6
MEZF	**Maizieres J'vi**	**148.92**	**357**	⇓	PKIKP	PKPdf	22 58 50.6	0.0
	comp=Z,260nm,1.4s							
SGMF	**Saint Gilles**	**148.93**	**7**	⇓	PKIKP	PKPdf	22 58 50.1	-0.5
	comp=Z,251nm,1.2s							
KOGS	**Kog**	**148.93**	**342**		*i*PKPdf	PKPdf	22 58 50.0	-0.6
KOGS				*e*	PKPbc	PKPbc	22 58 54.6	-0.5
KOGS				*i*			22 59 08.4	
GRR	**Gorron**	**148.96**	**5**	⇓	PKIKP	PKPdf	22 58 50.4	-0.2
	comp=Z,355nm,1.3s							
KDZ	**Kurdzhali**	**148.97**	**326**		*e*P	PKPdf	22 58 50.0	-0.9
PGB	**Panagyurishte**	**148.97**	**328**		*e*P	PKPdf	22 58 50.4	-0.5
SPAK	**Spaichingen-Ko**	**148.98**	**352**		PKP	PKPdf	22 58 50.3	-0.4
BALY	**Balya**	**148.98**	**321**	⇓	*i*P	PKPdf	22 58 50.5	-0.4
PLD	**Plovdiv**	**149.03**	**327**		P	PKPbc	22 58 56.1	+0.6
PLD	**Plovdiv**	**149.03**	**327**		*e*P	PKPdf	22 58 50.2	-0.8
ERIK	**Erikli-Kesan**	**149.03**	**323**		*e*P	PKPdf	22 58 50.3	-0.7
ECH	**Echery**	**149.05**	**354**		PKP	PKPdf	22 58 50.3	-0.5
LIBD	**Limburg**	**149.07**	**354**		PKP	PKPdf	22 58 50.8	0.0
SOKA	**Soboth**	**149.07**	**343**	⇓	PKPdf	PKPdf	22 58 49.9	-1.0
	comp=Z,647nm,1.2s							
KULA	**Kula-Manisa**	**149.08**	**318**		*e*P	PKPdf	22 58 50.3	-0.8
LPK	**Lapseki**	**149.09**	**323**		*e*P	PKPdf	22 58 51.3	+0.2
KBA	**Koelnbreinsper**	**149.13**	**346**	⇑	PKPdf	PKPdf	22 58 50.1	-0.9
	comp=Z,562nm,1.1s,SNR=54							
THEF	**They Montfort**	**149.14**	**356**		PKP	PKPdf	22 58 50.8	-0.1
ALN	**Alexandroupoli**	**149.15**	**324**		P	PKPdf	22 58 49.5	-1.7
QUIF	**Quistinic**	**149.18**	**8**	⇓	PKIKP	PKPdf	22 58 50.6	-0.4
	comp=Z,296nm,1.4s							
ENEZ	**Enez**	**149.19**	**324**		*e*P	PKPdf	22 58 49.5	-1.7
GOLH	**Golhisar**	**149.20**	**315**	⇑	*i*P	PKPdf	22 58 50.6	-0.8
ELL	**Elmali**	**149.23**	**314**		*e*P	PKPdf	22 58 50.3	-1.2
GELI	**Tayfur-Gelibol**	**149.24**	**323**		*e*P	PKPdf	22 58 50.4	-0.9
WATA	**Walderalm**	**149.27**	**348**	⇑	PKPdf	PKPdf	22 58 50.6	-0.5
	comp=Z,890nm,1.2s,SNR=149							
DENT	**Denizli**	**149.27**	**317**		*e*P	PKPbc	22 58 57.0	+0.8
RETA	**Reutte**	**149.27**	**349**	⇓	PKPdf	PKPdf	22 58 50.6	-0.5
	comp=Z,692nm,1.1s,SNR=30							
GLHS	**Glhisar (BURDU**	**149.29**	**315**		*e*P	PKPdf	22 58 51.3	-0.2
DNZL	**Cakiroluk**	**149.30**	**316**	⇑	*i*P	PKPdf	22 58 51.3	-0.2
FELD	**Feldberg im Sc**	**149.30**	**353**		PKP	PKPdf	22 58 51.2	0.0
RZN	**Rozhen**	**149.32**	**327**		*e*P	PKPdf	22 58 50.8	-0.6
WTTA	**Wattenberg**	**149.32**	**348**	⇓	PKPdf	PKPdf	22 58 51.0	-0.3
	comp=Z,876nm,1.0s,SNR=234							
HAU	**Haudompre**	**149.33**	**355**	⇓	PKIKP	PKPdf	22 58 51.0	-0.2
	comp=Z,200nm,1.4s							
HAU				*e*	MLR	MLR		
	comp=Z,1μm,22.2s							
HAU	**Haudompre**	**149.33**	**355**	⇓	PKPdf	PKPdf	22 58 51.0	-0.2
HAU					LR	LR		
	comp=Z,1μm,22.3s							
MOTA	**Moosalm**	**149.35**	**349**	⇓	PKPdf	PKPdf	22 58 50.8	-0.5
	comp=Z,697nm,1.0s,SNR=55							
OBKA	**Obir**	**149.36**	**344**	⇓	PKPdf	PKPdf	22 58 50.5	-0.9
	comp=Z,284nm,1.2s,SNR=33							
AKHS	**Akhisar**	**149.39**	**319**	⇓	*i*P	PKPdf	22 58 51.2	-0.5
AKS	**Akhisar**	**149.39**	**319**		*e*P	PKPdf	22 58 52.6	+0.9
MOF	**Molkenrain**	**149.41**	**354**		PKP	PKPdf	22 58 51.2	-0.2
VTS	**Vitosha**	**149.41**	**329**	⇓	PKHKP	PKPdf	22 58 51.0	-0.6
VTS	**Vitosha**	**149.41**	**329**		P	PKPdf	22 58 50.3	-1.3
VTS	**Vitosha**	**149.41**	**329**		*e*P	PKPdf	22 58 51.0	-0.6
VTS	**Vitosha**	**149.41**	**329**	⇓	*i*P	PKPdf	22 58 51.0	-0.6
HINF	**Hinteralfeld**	**149.47**	**355**	⇓	PKIKP	PKPdf	22 58 51.2	-0.3
	comp=Z,240nm,1.4s							
MYKA	**Terra Mystica**	**149.48**	**345**	⇓	PKPdf	PKPdf	22 58 50.4	-1.1
	comp=Z,682nm,1.2s							
DAVA	**Damuels**	**149.62**	**350**	⇓	PKPdf	PKPdf	22 58 51.5	-0.2
	comp=Z,1μm,1.1s,SNR=42							
ABTA	**Abfaltersbach**	**149.63**	**347**	⇓	PKPdf	PKPdf	22 58 50.8	-1.0
	comp=Z,1μm,1.0s,SNR=135							
DIVS	**Divibare**	**149.66**	**335**		P	PKPdf	22 58 51.5	-0.4
EZN	**Ezine**	**149.70**	**322**		*e*P	PKPdf	22 58 51.4	-0.7
GADA	**Gvkgeada**	**149.70**	**323**		*e*P	PKPdf	22 58 51.6	-0.5
AKAS	**Kas**	**149.70**	**314**	⇑	*i*P	PKPdf	22 58 50.8	-1.5
FETA	**Feichten**	**149.73**	**349**		*i*PKPdf	PKPdf	22 58 51.9	0.0
	comp=Z,1μm,1.1s,SNR=111							
BBS	**Basel-Blauen**	**149.76**	**354**		PKP	PKPdf	22 58 51.9	0.0
KSL	**Kastellorizon**	**149.76**	**313**		*e*P	PKPbc	22 58 57.5	0.0
SISC	**Sisak**	**149.77**	**341**		P	PKPdf	22 58 51.8	-0.2
LJU	**Ljubljana**	**149.79**	**344**		*i*PKHKP	PKPdf	22 58 51.8	-0.2
LJU				*e*			23 14 51.8	
LJU				*e*			23 21 58.3	
LJU	**Ljubljana**	**149.79**	**344**		*i*PKPdf	PKPdf	22 58 51.8	-0.3
LJU				*i*	PKPbc	PKPbc	22 58 57.2	-0.1
LJU				*e*	pPKPdf	pPKPdf	23 00 24.0	-3.7
LJU				*e*	pPKPbc	pPKPbc	23 00 33.0	+1.0
LJU				*e*			23 01 11.6	
LJU				*e*			23 14 51.8	
LJU				*e*			23 17 24.8	
LJU				*e*			23 21 58.2	
LJU				*e*			23 23 57.7	
LJU				*e*			23 29 15.1	
AYVA	**Ayvalik**	**149.81**	**321**	⇑	*i*P	PKPdf	22 58 52.4	+0.1
MMB	**Musomiste**	**149.90**	**328**		*e*P	PKPdf	22 58 51.4	-1.0
KAVA	**Kavala**	**149.91**	**326**		P	PKPdf	22 58 51.9	-0.5
LOMF	**Lomont**	**149.94**	**354**		PKP	PKPdf	22 58 52.5	+0.3
VOY	**Vojsko**	**149.97**	**344**		*e*PKPdf	PKPdf	22 58 51.8	-0.5
VOY				*i*	PKPbc	PKPbc	22 58 57.8	+0.1
VOY				*e*	pPKPbc	pPKPbc	23 00 33.2	+0.8
NVR	**Nevrokopi**	**150.00**	**327**		*e*P	PKPbc	22 58 55.5	-2.4
KKB	**Krupnik**	**150.02**	**329**		*e*P	PKPdf	22 58 51.9	-0.6
KDAG	**Bornova**	**150.02**	**319**	⇑	*i*P	PKPdf	22 58 52.7	+0.1
IZM	**Izmir**	**150.03**	**319**		*e*P	PKPbc	22 58 57.9	-0.2
TURN	**Turunc**	**150.04**	**315**	⇓	*i*P	PKPdf	22 58 53.3	+0.6
AYDN	**Tasoluk**	**150.07**	**317**	⇓	*i*P	PKPdf	22 58 52.7	-0.1
BOJS	**Bojanci**	**150.09**	**342**		*e*PKPdf	PKPdf	22 58 52.4	-0.1
BOJS				*e*	PKPbc	PKPbc	22 58 58.2	+0.3
CEY	**Cerknica**	**150.10**	**343**		*e*PKPdf	PKPdf	22 58 51.8	-0.8
CEY				*i*	PKPbc	PKPbc	22 58 57.9	-0.1
PRK	**Paraskevi**	**150.10**	**321**		*e*P	PKPdf	22 58 54.5	+1.7
PRK	**Paraskevi**	**150.10**	**321**		P	PKPdf	22 58 51.2	-1.6
DAVOX	**Davos/Dischmat**	**150.11**	**350**		PKP	PKPdf	22 58 52.6	+0.1
	comp=Z,109nm,0.9s,baz=255,slow=1.1,SNR=70							
DAVOX					PKPbc	PKPbc	22 58 58.6	+0.6
	comp=Z,1μm,0.8s,baz=229,slow=1.0,SNR=146							
YER	**Yerkesik**	**150.11**	**316**		*e*P	PKPdf	22 58 51.8	-1.0
BLCB	**Balcova**	**150.17**	**319**		*e*P	PKPdf	22 58 51.0	-1.9
BLCB	**Balcova**	**150.17**	**319**		P	PKPdf	22 58 51.5	-1.4
LOR	**Lormes**	**150.20**	**358**	⇓	*i*PKIKP	PKPdf	22 58 52.7	+0.1
	comp=Z,302nm,1.5s							
LOR				*e*	MLR	MLR		
	comp=Z,1μm,19.5s							
LOR	**Lormes**	**150.20**	**358**	⇓	*i*PKPdf	PKPdf	22 58 52.7	+0.1
LOR					LR	LR		
	comp=Z,1μm,19.5s							
HYF	**Humbligny**	**150.21**	**0**	⇓	*i*PKIKP	PKPdf	22 58 53.1	+0.4
LIA	**Limnos Island**	**150.31**	**324**		*e*P	PKPbc	22 58 58.0	-0.7
LIA	**Limnos Island**	**150.31**	**324**		P	PKPdf	22 58 51.5	-1.5
TRI	**Trieste**	**150.31**	**344**		*e*PKPdf	PKPdf	22 58 52.8	0.0
TRI					*e*PKPbc	PKPbc	22 58 58.5	+0.1
SRS	**Serrai**	**150.31**	**327**		P	PKPdf	22 58 49.7	-3.3
MLSB	**Milas**	**150.35**	**317**		*e*P	PKPdf	22 58 53.0	-0.2
SIGR	**SIGRI**	**150.37**	**322**		P	PKPbc	22 58 57.9	-0.9
SSF	**Saint Saulge**	**150.41**	**359**		*e*PKIKP	PKPdf	22 58 52.7	-0.3
	comp=Z,321nm,1.5s							
URLA	**Izmir**	**150.47**	**320**	⇓	*i*P	PKPdf	22 58 52.4	-1.0
GCAM	**G?zelcaml?**	**150.47**	**318**	⇑	*i*P	PKPdf	22 58 52.5	-0.8
PLE	**Pljevlja**	**150.53**	**335**	⇑	*i*PKP	PKPdf	22 58 52.9	-0.4
PLE	**Pljevlja**	**150.53**	**335**	⇑	*i*PKP	PKPdf	22 58 53.0	-0.3
SOH	**Sokhos**	**150.65**	**327**		P	PKPdf	22 58 51.2	-2.4
OUR	**Ouranopolis**	**150.67**	**326**		P	PKPdf	22 58 52.5	-1.1
VAY	**Valandovo**	**150.68**	**329**		*i*PKP	PKPdf	22 58 51.8	-1.8
VAY					*i*PKP	PKPbc	22 58 58.2	-1.3
VAY	**Valandovo**	**150.68**	**329**		P	PKPdf	22 58 51.6	-2.0
AVF	**Avril sur Loir**	**150.69**	**359**	⇓	*i*PKIKP	PKPdf	22 58 53.0	-0.4
	comp=Z,178nm,1.5s							
BDRM	**Kayabasi**	**150.70**	**317**		*i*P	PKPdf	22 58 53.1	-0.7
IVA	**Berane**	**150.70**	**334**	⇑	*i*PKP	PKPdf	22 58 52.6	-1.0
IVA	**Berane**	**150.70**	**334**	⇑	*i*PKP	PKPdf	22 58 52.6	-0.9
SMG	**Samos**	**150.71**	**319**		*e*P	PKPbc	22 58 59.0	-0.7
ARG	**Arkhangelos**	**150.72**	**315**		*e*P	PKPbc	22 58 59.0	-0.8
SKO	**Skopje**	**150.73**	**331**		*i*PKP	PKPdf	22 58 53.6	0.0
SKO					*i*PKP	PKPbc	22 59 00.1	+0.5
SKO	**Skopje**	**150.73**	**331**		P	PKPdf	22 58 54.1	+0.5
CABF	**La Chapelle**	**150.74**	**355**	⇓	*i*PKIKP	PKPdf	22 58 54.0	+0.5
	comp=Z,425nm,1.5s							
CHOS	**Chios island**	**150.78**	**320**		*e*P	PKPdf	22 58 54.5	+0.7
CHOS	**Chios island**	**150.78**	**320**		P	PKPdf	22 58 53.5	-0.3
MFF	**Saint Martin d**	**150.78**	**4**	⇓	*i*PKIKP	PKPdf	22 58 53.3	-0.3
	comp=Z,422nm,1.2s							
BODT	**Bodrum**	**150.79**	**317**		*e*P	PKPbc	22 58 58.7	-1.2
DAT	**Datca**	**150.81**	**316**		*e*P	PKPbc	22 58 58.8	-1.1
SMF	**Signal de Mont**	**150.82**	**358**	⇓	*i*PKIKP	PKPdf	22 58 53.3	-0.3
	comp=Z,193nm,1.3s							
UPM	**Unac-Piva**	**150.84**	**335**	⇑	*i*PKP	PKPdf	22 58 53.1	-0.7
UPM	**Unac-Piva**	**150.84**	**335**	⇑	*i*PKP	PKPdf	22 58 53.2	-0.6
PVY	**Plav**	**150.90**	**333**	⇑	*i*PKP	PKPdf	22 58 53.3	-0.6
PVY	**Plav**	**150.90**	**333**	⇑	*i*PKP	PKPdf	22 58 53.4	-0.5
BGF	**Bois d'Agland**	**150.92**	**360**	⇓	*i*PKIKP	PKPdf	22 58 53.8	0.0
	comp=Z,402nm,1.6s							
PLG	**Polygyros**	**150.93**	**326**		*e*P	PKPbc	22 58 58.0	-2.1
PLG	**Polygyros**	**150.93**	**326**		P	PKPdf	22 58 54.5	+0.5
HORT	**Hortiatis**	**150.95**	**327**		P	PKPdf	22 58 52.5	-1.5
THE	**Thessaloniki**	**150.99**	**327**		P	PKPdf	22 58 52.5	-1.6
BCI	**Bajram Curri**	**151.04**	**333**		*e*PN	PKPdf	22 58 54.1	0.0
NVLJ	**Novalja**	**151.05**	**342**		P	PKPdf	22 58 53.1	-1.0
PAIG	**Paliouri**	**151.12**	**325**		P	PKPdf	22 58 53.8	-0.5
NKY	**Niksic**	**151.12**	**335**	⇑	*i*PKP	PKPdf	22 58 54.1	-0.1
NKY	**Niksic**	**151.12**	**335**	⇑	*i*PKP	PKPdf	22 58 54.1	-0.1
NIS1	**Nisyros Isl.**	**151.14**	**316**		P	PKPbc	22 58 59.1	-1.6
TCF	**Toulx Ste Croi**	**151.19**	**1**		*e*PKIKP	PKPdf	22 58 53.9	-0.3
	comp=Z,325nm,1.3s							
BRY	**Bratogost**	**151.23**	**335**	⇑	*i*PKP	PKPdf	22 58 53.5	-0.9
BRY	**Bratogost**	**151.23**	**335**	⇑	*i*PKP	PKPdf	22 58 53.6	-0.8
KRUS	**Krusevo**	**151.29**	**330**		*i*PKP	PKPdf	22 58 57.7	-1.8
KRUS					*i*PKP	PKPbc	22 58 60.0	-0.9
TTG	**Podgorica**	**151.33**	**334**	⇑	*i*PKP	PKPdf	22 58 54.1	-0.4
PUK	**Puka**	**151.38**	**333**		*e*PN	PKPdf	22 58 54.1	-0.5
AGO	**Saint Agoulin**	**151.43**	**359**		PKP	PKPdf	22 58 54.5	-0.1
PLDF	**La Plantade**	**151.50**	**359**		PKP	PKPdf	22 58 55.0	+0.3
BIA	**Bitola**	**151.53**	**330**		*i*PKP	PKPdf	22 58 53.3	-1.6
BIA					*i*PKP	PKPbc	22 59 00.5	-0.9
BIA	**Bitola**	**151.53**	**330**		P	PKPdf	22 58 53.3	-1.6
AOS	**Alonnisos**	**151.54**	**324**		P	PKPdf	22 58 52.5	-2.5
STON	**Ston**	**151.59**	**336**		P	PKPdf	22 58 53.6	-1.3
BUM	**Brajici-Budva**	**151.59**	**334**	⇑	*i*PKP	PKPdf	22 58 54.6	-0.3
HCY	**Herceg Novi**	**151.63**	**335**	⇑	*i*PKP	PKPdf	22 58 54.5	-0.5
FNA	**Florina**	**151.68**	**329**		P	PKPdf	22 58 53.3	-1.8
OHR	**Ohrid**	**151.70**	**330**		*i*PKP	PKPdf	22 58 53.9	-1.2
OHR					*i*PKP	PKPbc	22 59 01.0	-0.9
OHR	**Ohrid**	**151.70**	**330**		P	PKPdf	22 58 53.8	-1.3
ULC	**Ulcinj**	**151.72**	**333**	⇑	*i*PKP	PKPdf	22 58 54.9	-0.2
PYM	**Petit Puy Mans**	**151.73**	**360**		PKP	PKPdf	22 58 55.0	0.0
KARP	**Karpathos**	**151.75**	**315**		*e*P	PKPbc	22 58 59.0	-3.1
LPL	**La Plagne**	**151.76**	**354**	⇓	*i*PKIKP	PKPdf	22 58 55.7	+0.6
	comp=Z,155nm,1.5s							
LPG	**La Plagne**	**151.78**	**354**	⇓	*i*PKIKP	PKPdf	22 58 55.8	+0.7
	comp=Z,197nm,1.5s							
XOR	**Xorichti**	**151.78**	**325**		P	PKPdf	22 58 52.6	-2.7
NEO	**Neokhori**	**151.81**	**325**		*e*P	PKPdf	22 58 55.5	+0.2
KZN	**Kozani**	**151.84**	**328**		*e*P	PKPdf	22 58 57.5	+2.1
KZN	**Kozani**	**151.84**	**328**		P	PKPdf	22 58 54.1	-1.3
APE	**Apeiranthos**	**151.93**	**319**		*e*P	PKPdf	22 58 53.5	-2.1
APE	**Apeiranthos**	**151.93**	**319**	⇓	P	PKPbc	22 59 02.4	-0.1
APE	**Apeiranthos**	**151.93**	**319**		*e*P	PKPdf	22 58 55.5	-0.1
APE	**Apeiranthos**	**151.93**	**319**		P	PKPdf	22 58 53.8	-1.8
APE	**Apeiranthos**	**151.93**	**319**	⇓	*i*P	PKPbc	22 59 02.4	-0.1
TIR	**Tirane**	**151.95**	**332**		*e*PKPdf	PKPdf	22 58 55.3	-0.2
TIR					*e*PKPbc	PKPbc	22 59 02.8	+0.4
TIR	**Tirane**	**151.95**	**332**		P	PKPdf	22 58 54.5	-1.0
COLF	**Collangettes**	**151.95**	**359**		PKP	PKPdf	22 58 55.8	+0.4
KBN	**Korca**	**152.09**	**330**		*e*PN	PKPdf	22 58 54.8	-0.9
NEST	**Nestorio**	**152.12**	**329**		P	PKPdf	22 58 54.6	-1.2
GDM	**Grand'Maison**	**152.13**	**355**		PKP	PKPdf	22 58 56.8	+1.2
RJF	**Les Rejaudoux**	**152.16**	**2**	⇓	*i*PKIKP	PKPdf	22 58 55.6	-0.1
	comp=Z,354nm,1.1s							
RJF				*e*	MLR	MLR		
	comp=Z,943nm,22.0s							
RJF	**Les Rejaudoux**	**152.16**	**2**	⇓	*i*PKPdf	PKPdf	22 58 55.6	-0.1
RJF					LR	LR		
	comp=Z,940nm,22.0s							
SSB	**Saint Sauveur**	**152.16**	**357**		PKP	PKPdf	22 58 56.0	+0.3
BNI	**Bardonecchia**	**152.23**	**354**		*e*PKPdf	PKPdf	22 58 56.9	+1.1
BNI					*e*PKPbc	PKPbc	22 59 04.2	+1.3
LBL	**Lubilhac**	**152.25**	**359**		PKP	PKPdf	22 58 56.0	+0.2
THL	**Klokotos Trika**	**152.27**	**327**		*e*P	PKPdf	22 58 54.5	-1.5
THL	**Klokotos Trika**	**152.27**	**327**		P	PKPdf	22 58 54.1	-1.9
PTL	**Penteli**	**152.31**	**322**		*e*P	PKPdf	22 58 56.0	-0.1
ATAL	**Atalanti**	**152.35**	**324**		P	PKPdf	22 58 54.4	-1.8
LKR	**Lokris**	**152.39**	**324**		*e*P	PKPdf	22 58 56.0	-0.2
LKR	**Lokris**	**152.39**	**324**		P	PKPdf	22 58 54.6	-1.6
THR1	**Thera Island**	**152.40**	**318**		P	PKPbc	22 59 04.1	+0.6
ATHU	**Athens Univers**	**152.41**	**322**		P	PKPdf	22 58 55.3	-1.0
THR3	**Thira Island,**	**152.41**	**318**		P	PKPdf	22 58 58.2	+1.9
ORIF	**Oris-en-Rattie**	**152.44**	**355**	⇓	*i*PKIKP	PKPdf	22 58 56.3	+0.2
	comp=Z,243nm,1.5s							
THR5	**Thira Island,**	**152.44**	**318**		P	PKPdf	22 58 56.0	-0.4
ATH	**Athens Observa**	**152.45**	**322**		*e*P	PKPbc	22 59 01.5	-2.1
LFF	**La Frestale**	**152.49**	**3**	⇓	*i*PKIKP	PKPdf	22 58 55.0	-1.2
	comp=Z,233nm,1.1s							
AGG	**Agios Georgios**	**152.50**	**326**		*e*P	PKPdf	22 58 55.5	-0.9
AGG	**Agios Georgios**	**152.50**	**326**		P	PKPdf	22 58 54.9	-1.5
MBDF	**Montbardon**	**152.54**	**354**	⇓	*i*PKIKP	PKPdf	22 58 56.4	+0.1
	comp=Z,282nm,1.5s							
VLC	**Villacollemand**	**152.55**	**348**		*e*PKPdf	PKPdf	22 58 55.6	-0.7
VLC					*e*PKPbc	PKPbc	22 59 03.5	-0.1
CAF	**Calviac**	**152.55**	**1**	⇓	*i*PKIKP	PKPdf	22 58 56.4	+0.1
	comp=Z,234nm,1.2s							
VIVF	**Saint-Julien-l**	**152.58**	**357**	⇓	*i*PKIKP	PKPdf	22 58 56.4	+0.1
	comp=Z,274nm,1.4s							
ZKR	**Zakros**	**152.63**	**315**		*e*P	PKPbc	22 59 04.0	-0.1
ZKR	**Zakros**	**152.63**	**315**		P	PKPdf	22 58 55.7	-1.0
EMAZ	**Mazaricos**	**152.66**	**19**		PKP	PKPdf	22 58 56.6	+0.1
NAIG	**Nisos Aigina**	**152.72**	**322**		*e*P	PKPdf	22 58 57.0	+0.3
SURF	**Saint Ours**	**152.78**	**354**		PKP	PKPdf	22 58 57.4	+0.8
JAN	**Janina**	**152.80**	**328**		*e*P	PKPdf	22 58 58.5	+1.7
OCF	**Saint Nazaire**	**152.82**	**356**		PKP	PKPdf	22 58 57.1	+0.4
OG26	**St.-Nazaire-De**	**152.82**	**356**		PKP	PKPdf	22 58 57.1	+0.4
DSF	**Desfina**	**152.82**	**324**		P	PKPdf	22 58 54.6	-2.3
EPON	**Pontenova**	**152.83**	**16**		PKP	PKPdf	22 58 56.8	+0.1
LTK	**Loutraki**	**152.84**	**323**		*e*P	PKPdf	22 58 56.5	-0.4
LTK	**Loutraki**	**152.84**	**323**		P	PKPdf	22 58 54.4	-2.5
STS	**Santiago**	**152.84**	**18**		PKIKP	PKPdf	22 58 57.6	+0.8
EVR	**Evrytania**	**152.85**	**326**		*e*P	PKPdf	22 58 59.0	+2.1
NPS	**Neapolis**	**152.95**	**316**		*e*P	PKPdf	22 58 59.0	+1.8
DID	**Didima**	**153.04**	**322**		*e*P	PKPdf	22 58 56.5	-0.7
DID	**Didima**	**153.04**	**322**		P	PKPdf	22 58 54.8	-2.4
SRN	**Sarande**	**153.04**	**330**		*e*PN	PKPdf	22 58 56.0	-1.1
LAST	**Lasithi**	**153.10**	**316**		*e*

MESJ *e*SS SS 23 22 39.6 0.0
MESJ *e*SS SS 23 22 40.3 +0.7
MESJ AMS AMS 23 29 45.0
comp=N,2μm,18.6s
MESJ Messejana 157.48 23 *e*PKIKP PKPdf 22 59 03.0 -0.2
MESJ *e* 23 03 17.0
MESJ *e*SS SS 23 22 39.5 -0.1
PTEO Sao Teotonio 157.55 24 *e*PKPdf PKPdf 22 59 04.0 +0.8
PTEO Sao Teotonio 157.55 24 *e*PKPab PKPab 22 59 36.9 -0.4
PBAR Barrancos 157.60 21 *e*PKPdf PKPdf 22 59 03.7 +0.4
PBAR Barrancos 157.60 21 *e*PKPab PKPab 22 59 36.5 -1.1
PBAR *e*P 23 23 44.1
ECHE Chera 157.66 8 PKIKP PKPdf 22 59 03.9 +0.6
ETOS Mallorca 157.71 360 PKP PKPdf 22 59 02.9 -0.4
PCVE Castro Verde 157.73 23 *e*PKPdf PKPdf 22 59 04.2 +0.7
PCVE Castro Verde 157.73 23 *e*PKPab PKPab 22 59 38.0 -0.2
PCVE *e*P 23 23 43.2
MORF Marmelete 157.78 25 *e*PKPdf PKPdf 22 59 04.6 +1.1
MORF Marmelete 157.78 25 *e*PKPab PKPab 22 59 38.3 -0.1
MORF Marmelete 157.78 25 *e*PKIKP PKPdf 22 59 03.0 -0.5
MORF *e* 23 03 18.8
MORF *e*SS SS 23 22 42.7 -0.2
PFVI Vila Bisbo 157.86 25 *e*PKPdf PKPdf 22 59 04.4 +0.8
PFVI Vila Bisbo 157.86 25 *e*PKPab PKPab 22 59 38.9 +0.2
PFVI Vila Bisbo 157.86 25 PKP PKPdf 22 59 04.0 +0.4
EGRO El Granado 158.02 22 PKP PKPdf 22 59 04.0 +0.2
PVAQ Vaqueiros 158.06 23 *e*PKPdf PKPdf 22 59 04.6 +0.7
PVAQ Vaqueiros 158.06 23 *e*PKPab PKPab 22 59 39.7 +0.1
PVAQ *e*P 23 23 48.6
EMIN Mina Concepcio 158.09 20 PKP PKPdf 22 59 03.4 -0.6
PBDV Barranco-do-Ve 158.12 23 *e*PKPdf PKPdf 22 59 04.7 +0.8
PBDV Barranco-do-Ve 158.12 23 *e*PKPab PKPab 22 59 40.0 +0.2
PBDV *e*P 23 23 49.6
EHIG Higuera 158.12 56 PKP PKPdf 22 59 05.6 +1.4
ECAB El Cabril 158.20 18 PKP PKPdf 22 59 03.1 -0.9
EADA Adamuz 158.34 16 PKP PKPdf 22 59 04.0 -0.2
CHIE El Hierro 158.34 58 PKP PKPdf 22 59 06.3 +1.8
EVIA Vianos 158.35 11 PKIKP PKPdf 22 59 04.3 +0.1
EIBI Ibiza 158.42 3 PKP PKPdf 22 59 04.1 -0.1
ETOB Tobarra 158.51 9 PKP PKPdf 22 59 04.0 -0.4
EBAN Banos Encina 158.54 14 PKIKP PKPdf 22 59 04.2 -0.2
EBEN Beniarda 158.62 6 PKP PKPdf 22 59 04.6 +0.1
EGOM La Gomera 158.76 56 PKP PKPdf 22 59 04.7 -0.3
EQES Quesada 159.05 13 PKP PKPdf 22 59 04.1 -0.9
EHUE Huescar 159.13 12 PKIKP PKPdf 22 59 04.4 -0.7
ESPR Espera 159.18 20 PKP PKPdf 22 59 05.9 +0.7
CCAN Las Canadas 159.22 55 PKP PKPdf 22 59 07.3 +1.7
EMUR La Murta 159.34 9 PKP PKPdf 22 59 04.5 -0.9
ELOJ Sierra Loja 159.41 16 PKIKP PKPdf 22 59 05.2 -0.3
ECOG Cogollos-Vega 159.44 14 PKIKP PKPdf 22 59 04.8 -0.7
ERON Agron 159.62 15 PKP PKPdf 22 59 04.9 -0.8
EJIF Jimena Fronter 159.69 19 PKIKP PKPdf 22 59 06.1 +0.3
EMIJ Mijas 159.79 18 PKP PKPdf 22 59 05.1 -0.8
EGUA Guajares 159.86 15 PKIKP PKPdf 22 59 05.7 -0.3
EBER Berja 159.96 13 PKP PKPdf 22 59 07.2 +1.1
ENIJ Nijar 160.02 12 PKIKP PKPdf 22 59 06.2 0.0
EOSO Osorio 160.11 55 PKP PKPdf 22 59 06.4 -0.1
CAEH 'Ain El Ouahch 160.35 350 P PKPdf 22 59 06.4 -0.1
CMAH Djebel Manchou 160.40 349 P PKPdf 22 59 06.8 +0.2
DFRA Djebel Bou Aff 160.72 352 P PKPdf 22 59 08.0 +1.1
ABSA Djebel Ababsia 160.73 348 P PKPdf 22 59 07.2 +0.2
CKFL Kef-Lekhel 160.74 350 P PKPdf 22 59 07.6 +0.6
EALB Alboran 160.84 14 PKP PKPdf 22 59 06.8 -0.3
CASM Ain Smara 160.92 351 P PKPdf 22 59 07.4 +0.2
CFTV Fuerteventura 161.06 52 PKP PKPdf 22 59 07.1 -0.4
EFAM Famara 161.08 49 PKP PKPdf 22 59 07.3 -0.3
SET Setif 161.12 353 P PKPdf 22 59 09.0 +1.6
CTEI Djebel Teioual 161.12 351 P PKPdf 22 59 08.2 +0.8
CKHR Kef el Ahmar 161.29 353 P PKPdf 22 59 08.2 +0.6
MDT Midelt 163.28 22 PP PP 23 03 49.3 +1.5
comp=N,6.3nm,1.0s,baz=63,slow=2.8,SNR=4.0
LIC Lamto 166.56 145 *e*PKIKP PKPdf 22 59 11.0 -2.0
comp=N,622nm,1.2s
LIC Lamto 166.56 145 ⇓*i*PKIKP PKPdf 22 59 12.1 -0.9
comp=N,548nm,1.2s
LIC *e*MLR MLR
comp=Z,1μm,21.2s
LIC Lamto 166.56 145 ⇓*i*PKPdf PKPdf 22 59 12.1 -0.9
LIC LR LR
comp=Z,600nm,21.3s
KIC Kosan Boka 166.83 146 *e*PKIKP PKPdf 22 59 11.6 -1.6
comp=Z,372nm,1.0s
TIC Toumodi 166.91 144 *e*PKIKP PKPdf 22 59 11.6 -1.6
comp=Z,463nm,1.1s
DBIC Dimbokro 167.02 144 PKP PKPdf 22 59 12.6 -0.7
comp=Z,116nm,1.0s,baz=125,slow=0.9,SNR=34
DBIC PKPab PKPab 23 00 19.9 +0.4
comp=Z,32nm,0.8s,baz=190,slow=6.3,SNR=5.9
DBIC Dimbokro 167.02 144 PKIKP PKPdf 22 59 12.6 -0.7
DBIC 23 00 19.9
DBIC pmax pmax
comp=Z,116nm,1.0s
DBIC pmax pmax
comp=Z,32nm,0.8s
DBIC Dimbokro 167.02 144 *e*PKPdf PKPdf 22 59 12.8 -0.5

*NNC **19** 23:08:31.3±2.8, 38°.22N×71°.21E, h2km±25km, mb4.6, mpv4.5, Error ellipse: s-maj=30.3km s-min=16.2km az=17.0*
*IDC **19** 23:08:32.1±1.0, 38°.09N×71°.43E, h0km, mb4.0/14, mb1 4.2/17, mb1mx4.0/30, mbtmp4.1/17, ML3.9/3, Error ellipse: s-maj=20.7km s-min=13.5km az=149.0*
*MOS **19** 23:08:35.5±1.6, 38°.05N×71°.58E, h33km, mb4.6/7, Error ellipse: s-maj=10.2km s-min=6.3km az=101.6*
*BJI **19** 23:08:35.2, 38°.31N×71°.56E, h23km, mb3.9/2, ML4.2/2, Ms4.2/1*
*NEIC **19** 23:08:40.9±1.0, 38°.39N×71°.45E, h49km±10km, mb4.4/5, Error ellipse: s-maj=14.9km s-min=9.1km az=139.0*
ISC 19 23:08:40.1±0.9,**38°.23N**±0°.06×**71°.42E**±0°.06,**h42**km±8km, **n88**,σ1§**35**/101,**mb4.1**/23,**4C-6D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**3.78**	**69**	Pg	**Pn**	**23 09 33.8**	**-2.0**
KSH				Sg	**Sn**	**23 10 19.6**	**+0.5**
KSH				smax			
	comp=N,800nm,1.2s						
KSH				smax			
	comp=E,520nm,0.9s						
KBL	**Kabul**	**4.15**	**208**	*e*Pn	**Pn**	**23 09 43.2**	**+2.4**
KBL				*e*Sn	**Sn**	**23 10 39.6**	**+12**
AML	**Almayashu**	**4.27**	**23**	P	**Pn**	**23 09 42.2**	**-0.4**
	SNR=26						
AML	**Almayashu**	**4.27**	**23**	*e*Pn	**Pn**	**23 09 42.0**	**-0.5**
AML				*e*S	**Sn**	**23 10 23.2**	**-7.9**
UCH	**Uchtor**	**4.65**	**30**	P	**Pn**	**23 09 47.0**	**-0.6**
	SNR=17						
UCH	**Uchtor**	**4.65**	**30**	*e*Pn	**Pn**	**23 09 46.9**	**-0.7**
UCH				*e*S	**Sn**	**23 10 48.7**	**+8.4**
EKS2	**Erkin-Say**	**4.78**	**21**	P	**Pn**	**23 09 53.4**	**+3.8**
	SNR=15						
EKS2	**Erkin-Say**	**4.78**	**21**	*e*Pn	**Pn**	**23 09 49.2**	**-0.3**
EKS2				*e*S	**Sn**	**23 10 48.3**	**+4.6**
KZA	**Kyzart**	**4.84**	**36**	P	**Pn**	**23 09 54.6**	**+4.2**
	SNR=6.7						
KK31	**Karatay Array**	**4.92**	**352**	Pn	**Pn**	**23 09 49.3**	**-2.1**
	comp=E,46nm,0.7s,baz=177,slow=12,SNR=278						
KK31				⇓Sn	**Sn**	**23 10 49.8**	**+2.8**
	comp=E,87nm,0.6s,baz=179,slow=22,SNR=4.9						
KK31				Lg		23 11 06.0	
	comp=E,141nm,0.6s,baz=173,slow=31,SNR=6.7						
AAK	**Ala-Archa**	**4.99**	**27**	P	**Pn**	**23 09 56.0**	**+3.6**
	SNR=11						
AAK	**Ala-Archa**	**4.99**	**27**	Pn	**Pn**	**23 09 53.5**	**+1.1**
	comp=E,5.9nm,0.3s,baz=189,slow=5.5,SNR=12						
AAK				Sn	**Sn**	**23 10 54.4**	**+5.7**
	baz=173,slow=22,SNR=1.2						
AAK				Lg		23 11 15.4	
	comp=E,6.8nm,0.3s,baz=7.3,slow=19,SNR=4.2						
AAK	**Ala-Archa**	**4.99**	**27**	*e*PN	**Pn**	**23 09 51.9**	**-0.5**
AAK						23 10 54.5	
AAK	**Ala-Archa**	**4.99**	**27**	*e*Pn	**Pn**	**23 09 51.9**	**-0.5**
AAK				Sn	**Sn**	**23 10 54.5**	**+5.7**
AAK				Lg		23 11 15.4	
KBK	**Karagaybulak**	**5.18**	**30**	P	**Pn**	**23 09 56.3**	**+1.3**
	SNR=11						
FRU	**Bishkek**	**5.21**	**27**	*e*PN	**Pn**	**23 09 57.0**	**+1.6**
FRU				*e*S	Sn	23 11 20.0	+26
FRU				pmax	pmax		
	comp=Z,160nm,1.6s						
CHMS	**Chumysh**	**5.40**	**27**	P	**Pn**	**23 09 58.3**	**+0.3**
	SNR=14						
ULHL	**Ulahol**	**5.45**	**41**	P	**Pn**	**23 09 59.2**	**+0.4**
	SNR=7.0						
USP	**Ospenovka**	**5.55**	**24**	P	**Pn**	**23 10 02.5**	**+2.5**
	SNR=19						
KNDC	**Almaty**	**6.53**	**38**	⇑Pn	**Pn**	**23 10 11.7**	**-1.7**
	comp=Z,27nm,0.8s						
KNDC				⇓Sn	**Sn**	**23 11 27.6**	**+1.0**
	comp=Z,82nm,0.8s						
KNDC				⇑Lg		23 11 58.1	
	comp=Z,124nm,0.8s						
SDNR	**Sundarnagar**	**8.11**	**144**	*e*PKP	**Pn**	**23 10 30.5**	**-4.8**
SDNR				*e*S	**Sn**	**23 12 16.5**	**+11**
MK31	**Makanchi Array**	**11.72**	**40**	Pn	**Pn**	**23 11 22.9**	**-1.8**
	comp=Z,12nm,0.9s,baz=226,slow=5.7,SNR=37						
MK31	**Makanchi Array**	**11.72**	**40**	*e*Pn	**Pn**	**23 11 23.9**	**-0.7**
MKAR	**Makanchi Array**	**11.72**	**40**	Pn	**Pn**	**23 11 23.8**	**-0.8**
	comp=Z,0.9nm,0.3s,baz=229,slow=14,SNR=29						
MKAR	**Makanchi Array**	**11.72**	**40**	Pn	**Pn**	**23 11 23.8**	**-0.8**
KURK	**Kurchatov**	**13.49**	**20**	*e*P	**Pn**	**23 11 45.3**	**-3.4**
AB31	**Akbulak array**	**13.78**	**327**	⇓Pn	**Pn**	**23 11 43.7**	**-8.9**
	comp=Z,3.3nm,0.5s,baz=167,slow=13,SNR=49						
AB31				⇑Sn	**Sn**	**23 14 18.5**	**-5.6**
	comp=Z,7.8nm,0.6s,baz=166,slow=21,SNR=4.1						
ABKAR	**Akbulak array**	**13.78**	**327**	*e*Pn	**Pn**	**23 11 44.7**	**-7.9**
	comp=Z,4.6nm,0.5s						
ABKAR				*e*S	**Sn**	**23 14 13.3**	**-11**
VOSK	**Vostochnaya**	**14.50**	**359**	⇑Pn	**Pn**	**23 11 58.4**	**-4.0**
	comp=Z,9.6nm,1.1s						
BVAR	**Borovoye Array**	**14.82**	**358**	Pn	**Pn**	**23 12 04.1**	**-2.5**
	comp=Z,0.8nm,0.3s,baz=169,slow=10.0,SNR=7.6						
ZRNK	**Zerenda**	**14.82**	**354**	⇓Pn	**Pn**	**23 12 01.3**	**-5.3**
	comp=Z,10nm,1.2s						
BRVK	**Borovoye**	**14.85**	**357**	*e*P	**Pn**	**23 12 07.4**	**+0.3**
GKN	**Gorkha**	**15.04**	**129**	*e*P	**Pn**	**23 12 03.7**	**-6.0**
	comp=Z,19nm,0.6s						
AKTK	**Aktyubinsk**	**15.49**	**326**	Pn	**Pn**	**23 12 15.7**	**+0.3**
AKTO	**Aktyubinsk**	**15.49**	**326**	Pn	**Pn**	**23 12 15.7**	**+0.3**
	comp=Z,0.9nm,0.3s,baz=143,slow=7.1,SNR=24						
KKN	**Kakani**	**15.59**	**128**	*e*P	**Pn**	**23 12 11.1**	**-5.7**
	comp=Z,18nm,0.6s						
DMN	**Daman**	**15.61**	**129**	*e*P	**Pn**	**23 12 10.3**	**-6.8**
	comp=Z,22nm,0.8s						
PKIN	**Phulchoki**	**15.81**	**128**	*e*P	**Pn**	**23 12 13.1**	**-6.6**
	comp=Z,11nm,0.6s						
PKI	**Pulchoki**	**15.82**	**128**	*e*P	**Pn**	**23 12 13.1**	**-6.8**
	comp=Z,18nm,0.7s						
GUN	**Gumba**	**15.88**	**126**	*e*P	**Pn**	**23 12 16.1**	**-4.5**
	comp=Z,26nm,0.6s						
JIRN	**Jiri**	**16.25**	**126**	*e*P	**Pn**	**23 12 20.1**	**-5.2**
	comp=Z,26nm,0.5s						
ZALV	**Zalesovo Beam**	**18.21**	**26**	P	**Pn**	**23 12 45.7**	**-3.7**
	comp=Z,1.2nm,0.3s,baz=222,slow=11,SNR=15						
ZALV	**Zalesovo Beam**	**18.21**	**26**	P	**Pn**	**23 12 45.7**	**-3.8**
NVS	**Novosibirsk**	**18.45**	**22**	*e*P	**Pn**	**23 12 54.4**	**+2.0**
NVS				*e*S	**S**	**23 16 22.4**	**+2.1**
ARU	**Arti**	**20.12**	**339**	*e*P	**P**	**23 13 06.4**	**-3.8**
ARU				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ARU	**Arti**	**20.12**	**339**	*e*P	**P**	**23 13 06.4**	**-3.8**
	comp=Z,4.8nm,0.8s						
GNI	**Garni**	**20.74**	**284**	*e*P	**P**	**23 13 18.6**	**+1.6**
GNI				pmax	pmax		
	comp=Z,38nm,1.4s						
GNI	**Garni**	**20.74**	**284**	*e*P	**P**	**23 13 18.6**	**+1.5**
	comp=Z,38nm,1.4s						
ZEI	**Tsey**	**21.37**	**291**	*e*P	**P**	**23 13 29.0**	**+5.2**
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.4s,mb4.5						
GTA	**Gaotai**	**22.13**	**78**	*e*P	**P**	**23 13 32.8**	**+0.9**
GTA				pP		23 13 37.3	
GTA				sP	sP	23 13 40.5	-7.0
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb3.9						
KIV	**Kislovodsk**	**22.33**	**294**	*e*P	**P**	**23 13 33.5**	**-0.5**
KIV				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.5						
KIV	**Kislovodsk**	**22.33**	**294**	*e*P	**P**	**23 13 33.5**	**-0.6**
	comp=Z,17nm,0.9s,mb4.5						
BRTR	**Keskin Array B**	**29.27**	**285**	P	**P**	**23 14 37.5**	**-0.7**
	comp=Z,0.9nm,0.7s,mb3.6,baz=112,slow=6.4,SNR=2.5						
AKASG	**Malin Array Be**	**32.15**	**307**	P	**P**	**23 15 02.6**	**-0.8**
	comp=Z,0.3nm,0.3s,mb3.6,baz=83,slow=7.6,SNR=4.1						
FINES	**FINESS Array B**	**36.25**	**325**	P	**P**	**23 15 36.6**	**-2.2**
	comp=Z,4.4nm,0.8s,mb4.4,baz=125,slow=8.0,SNR=12						
STHS	**Stebnicka Huta**	**37.24**	**304**	*e*P	**P**	**23 15 52.0**	**+4.6**
STHS	**Stebnicka Huta**	**37.24**	**304**	*e*P	**P**	**23 15 52.0**	**+4.6**
ARCES	**ARCESS Array B**	**39.69**	**337**	P	**P**	**23 16 05.6**	**-2.1**
	comp=Z,2.7nm,0.8s,mb4.0,baz=110,slow=8.0,SNR=16						
ARCES	**ARCESS Array B**	**39.69**	**337**	P	**P**	**23 16 05.6**	**-2.1**
VRAC	**Vranov**	**40.28**	**304**	P	**P**	**23 16 14.9**	**+2.0**
	comp=Z,1.2nm,0.5s,mb3.9,baz=88,slow=14,SNR=4.3						
BRG	**Berggiesshubel**	**41.84**	**307**	*i* P	**P**	**23 16 27.4**	**+1.8**
BRG				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
HFS	**Hagfors**	**41.93**	**321**	P	**P**	**23 16 24.4**	**-1.8**
	comp=Z,6.0nm,0.5s,mb4.5,baz=110,slow=8.5,SNR=18						
CLL	**Collm**	**42.38**	**308**	⇓*i* P	**P**	**23 16 30.7**	**+0.6**
CLL				*e*	pP	23 16 41.0	-0.7
CLL				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.1						
CLL	**Collm**	**42.38**	**308**	⇓*i* P	**P**	**23 16 30.7**	**+0.6**
	comp=Z,5.0nm,0.9s,mb4.1						
CLL				*e*pP	pP	23 16 41.0	-0.7
NB2	**NORSAR Subarra**	**43.22**	**322**	P	**P**	**23 16 34.6**	**-2.1**
	comp=Z,7.7nm,1.0s,mb4.4,baz=93,slow=8.6						
NOA	**NORSAR Array B**	**43.22**	**322**	P	**P**	**23 16 34.7**	**-2.0**
	comp=Z,3.8nm,0.8s,mb4.2,baz=93,slow=8.0,SNR=13						
DAVOX	**Davos/Dischmat**	**45.12**	**302**	P	**P**	**23 16 53.1**	**+1.0**
	comp=Z,3.3nm,0.8s,mb4.2,baz=96,slow=9.2,SNR=3.3						
SPITS	**Spitsbergen Ar**	**45.89**	**346**	P	**P**	**23 16 57.9**	**+0.1**
	comp=Z,4.1nm,1.0s,mb4.3,baz=108,slow=12,SNR=2.6						
SPITS	**Spitsbergen Ar**	**45.89**	**346**	P	**P**	**23 16 57.9**	**+0.1**
CDF	**Champ du Feu**	**46.50**	**304**	*e*P	**P**	**23 17 04.0**	**+1.0**
LPG	**La Plagne**	**47.54**	**300**	*e*P	**P**	**23 17 11.8**	**+0.7**
	comp=Z,4.5nm,0.7s,mb4.3						
LPG	**La Plagne**	**47.54**	**300**	*e*P	**P**	**23 17 11.8**	**+0.7**
LPG				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
LPG	**La Plagne**	**47.54**	**300**	*e*P	**P**	**23 17 11.8**	**+0.7**
	comp=Z,2.3nm,0.7s,mb4.3						
LPL	**La Plagne**	**47.55**	**301**	*e*P	**P**	**23 17 12.0**	**+0.8**
FRF	**La Foret Royal**	**48.15**	**298**	*e*P	**P**	**23 17 15.8**	**-0.1**
	comp=Z,9.0nm,0.9s,mb4.5						
FRF	**La Foret Royal**	**48.15**	**298**	*e*P	**P**	**23 17 15.8**	**-0.1**
FRF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
FRF	**La Foret Royal**	**48.15**	**298**	*e*P	**P**	**23 17 15.8**	**-0.1**
	comp=Z,4.5nm,0.9s,mb4.5						
SSF	**Saint Saulge**	**49.29**	**303**	*e*P	**P**	**23 17 25.2**	**+0.6**
AVF	**Avril sur Loir**	**49.47**	**303**	*e*P	**P**	**23 17 26.0**	**0.0**
EKA	**Eskdalemuir Ar**	**51.29**	**315**	P	**P**	**23 17 38.6**	**-1.0**
	comp=Z,0.7nm,0.6s,mb3.8,baz=270,slow=36,SNR=3.1						
MJAR	**Matsushiro Arr**	**52.03**	**70**	P	**P**	**23 17 44.9**	**-0.6**
	comp=Z,1.1nm,0.9s,mb3.8,baz=294,slow=9.5,SNR=4.2						
ESDC	**Sonseca Array**	**56.96**	**297**	P	**P**	**23 18 19.7**	**-1.5**
	comp=Z,0.6nm,0.5s,mb3.9,baz=61,slow=6.9,SNR=6.7						
ESDC	**Sonseca Array**	**56.96**	**297**	P	**P**	**23 18 19.7**	**-1.5**
INK	**Inuvik**	**72.15**	**9**	P	**P**	**23 19 59.7**	**-0.1**
	comp=Z,2.1nm,0.8s,mb4.1,baz=7.4,slow=9.2,SNR=4.0						
INK	**Inuvik**	**72.15**	**9**	P	**P**	**23 19 59.7**	**-0.1**
ILAR	**Eielson Array**	**73.03**	**16**	P	**P**	**23 20 05.3**	**+0.2**
	comp=Z,0.2nm,0.6s,mb3.2,baz=350,slow=3.7,SNR=4.1						
YKA	**Yellowknife Ar**	**79.51**	**3**	P	**P**	**23 20 42.1**	**+0.2**
	comp=Z,1.4nm,0.8s,mb4.0,baz=355,slow=6.2,SNR=3.6						
WRA	**Warramunga Arr**	**82.63**	**122**	P	**P**	**23 20 55.6**	**-3.4**
	comp=Z,0.4nm,0.7s,mb3.6,baz=324,slow=4.8						

*IDC **19** 23:19:53.3±0.4, 0°.42S×96°.91E, h0km, mb4.9/31, mb1 5.0/33, mb1mx4.9/34, mbtmp4.9/33, ML5.2/2, MS4.5/2, Ms1 4.7/2, ms1mx3.6/29, Error ellipse: s-maj=12.0km s-min=9.5km az=56.0*
*BJI **19** 23:19:53.0, 0°.98S×96°.91E, h37km, mB5.4/26, mb5.3/50, Ms4.9/34, Ms7 4.7/32*
*ISCJB **19** 23:19:54.2±0.9, 0°.44S±0°.03×96°.95E±0°.02, h15km±6km, mb5.2/158, MS4.7/17, Error ellipse: s-maj=4.5km s-min=3.7km az=30.8*
*MOS **19** 23:19:56.8±0.9, 0°.39S×96°.97E, h33km, mb5.3/56, MS4.7/4, Error ellipse: s-maj=8.0km s-min=4.7km az=113.8*
*DJA **19** 23:19:57.7±1.2, 0°S±3°×9°7E±°, h14km±8km, mb5.4/42, mB5.8/22, MLv5.7/14, Mw(mB)5.5/22*
*NEIC **19** 23:19:58.5±0.1, 0°.44S×96°.95E, h35km, mb5.2/78, Error ellipse: s-maj=4.2km s-min=3.5km az=216.0*
NEIC Felt [III] at Gunungsitoli, Nias.
*SZGRF **19** 23:19:58.0, 0°.84S×96°.43E, h20km, mb4.9, Southwest of Sumatera, Indonesia*
*TEH **19** 23:19:59.0, 0°.41S×96°.96E, h35km*
ISC 19 23:19:57.8±1.0,**0°.45S**±0°.03×**96°.97E**±0°.02,**h28**km±6km, **h35**km±2.2km:**pP-P,n475,**σ0§**95**/461,**mb5.2**/158,**MS4.7**/17, **25C-12D, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**2.30**	**112**	P	**Pn**	**23 20 32.4**	**-1.4**
SISI				S	**Sn**	**23 20 56.0**	**-5.1**
MNSI	**Mandailing Nat**	**2.89**	**65**	P	**Pn**	**23 20 41.1**	**-0.9**
MNSI				S	**Sn**	**23 21 13.9**	**-1.9**
PPI	**Padang Panjang**	**3.43**	**90**	P	**Pn**	**23 20 48.5**	**-0.9**
PDSI	**Padang**	**3.53**	**98**	P	**Pn**	**23 20 49.5**	**-1.2**
TPTI		**3.69**	**3**	P	**Pn**	**23 20 50.4**	**-2.5**
PSI	**Prapat**	**3.77**	**31**	Pn	**Pn**	**23 20 52.1**	**-2.0**
	69nm,0.3s,baz=181,slow=9.2,SNR=114						
PSI				Sn	**Sn**	**23 21 36.5**	**-1.1**
	70nm,0.3s,baz=178,slow=22,SNR=3.1						
BKNI	**Bangkinang**	**4.15**	**79**	P	**Pn**	**23 20 59.0**	**-0.2**
SDSI	**Sungai Dareh**	**4.49**	**96**	P	**Pn**	**23 21 03.7**	**-0.3**
KRJI	**Kerinci**	**4.78**	**110**	P	**Pn**	**23 21 08.4**	**+0.4**
RGRI	**Rengat**	**5.37**	**89**	P	**Pn**	**23 21 16.2**	**+0.1**
	4.3nm701nm,0.9s						
FRIM	**Kepong**	**5.92**	**52**	P	**Pn**	**23 21 23.4**	**-0.3**
IPM	**Ipoh**	**6.36**	**40**	P	**Pn**	**23 21 29.6**	**-0.1**
IPM	**Ipoh**	**6.36**	**40**	P	**Pn**	**23 21 29.3**	**-0.3**
	1.6nm4μm468nm,1.0s						
KSI	**Kapahiang**	**6.46**	**120**	P	**Pn**	**23 21 29.7**	**-1.4**
	9.2nm1μm,0.7s						
KULM	**Kulim**	**6.78**	**33**	P	**Pn**	**23 21 34.6**	**-0.9**
KULM	**Kulim**	**6.78**	**33**	*e*Pn	**Pn**	**23 21 34.3**	**-1.2**
	801nm,0.6s						
KULM				S	**Sn**	**23 22 48.3**	**-3.6**
KULM	**Kulim**	**6.78**	**33**	P	**Pn**	**23 21 34.1**	**-1.4**
	4.5nm1μm,1.0s						
KGM	**Kluang**	**6.81**	**69**	P	**Pn**	**23 21 36.1**	**+0.2**
MNAI	**Manna**	**7.14**	**123**	P	**Pn**	**23 21 38.5**	**-1.9**
	9.6nm2μm,0.8s						
MYKOM	**Kota Tinggi**	**7.23**	**72**	P	**Pn**	**23 21 41.8**	**+0.1**
MYKOM	**Kota Tinggi**	**7.23**	**72**	P	**Pn**	**23 21 40.7**	**-1.0**
	0.9nm2μm292nm,0.8s						
MDSI	**Maura Dua**	**8.25**	**119**	P	**Pn**	**23 21 54.1**	**-1.5**
	3μm224nm,1.1s						
LWLI	**Liwa**	**8.41**	**123**	P	**Pn**	**23 21 56.0**	**-1.9**
	1μm,0.7s						
KTGM	**Kuala Trenggan**	**8.42**	**47**	P	**Pn**	**23 21 57.4**	**-0.5**
KLI	**Kotabumi**	**9.02**	**119**	P	**Pn**	**23 22 04.9**	**-1.3**
	287nm,0.8s						
RBSI	**Rajabasa**	**10.27**	**122**	P	**Pn**	**23 22 27.6**	**+4.2**
	209nm,1.1s						
CGJI	**Cibinong**	**10.65**	**125**	P	**Pn**	**23 22 24.2**	**-4.3**
	2μm185nm,0.6s						
CBJI	**Citeko**	**11.51**	**121**	P	**Pn**	**23 22 41.6**	**+1.2**
	453nm,0.7s						
LEM	**Lembang**	**12.37**	**121**	P	**Pn**	**23 22 55.1**	**+2.9**
	9μm103nm,1.6s						
KSM	**Kuching**	**13.48**	**82**	P	**Pn**	**23 23 08.6**	**+1.3**
KSM	**Kuching**	**13.48**	**82**	*e*Pn	**Pn**	**23 23 05.3**	**-2.0**
KSM	**Kuching**	**13.48**	**82**	P	**Pn**	**23 23 08.1**	**+0.8**
	61nm,1.0s						
STKI	**Sintang**	**14.52**	**88**	P	**Pn**	**23 23 28.7**	**+7.2**
SBUM	**Sibu**	**15.52**	**79**	P	**Pn**	**23 23 35.4**	**+0.6**
SBUM	**Sibu**	**15.52**	**79**	P	**Pn**	**23 23 34.6**	**-0.2**
	2μm307nm,0.9s						
PCJI	**Pacitan**	**16.12**	**119**	P	**Pn**	**23 23 49.7**	**+7.2**
SJI	**Sawahan**	**16.43**	**117**	P	**Pn**	**23 23 51.6**	**+5.0**
BTM	**Bintulu**	**16.51**	**77**	P	**Pn**	**23 23 48.9**	**+1.3**
PWJI	**Pagerwojo**	**16.59**	**117**	P	**Pn**	**23 23 50.3**	**+1.7**
	63nm,1.1s						
PALK	**Pallekele**	**17.94**	**296**	P	**Pn**	**23 24 06.5**	**+1.1**
GMJI	**Gumukmas**	**18.17**	**116**	P	**Pn**	**23 24 12.4**	**+4.2**
CM31	**Chiang Mai Arr**	**18.89**	**6**	*e*P	**Pn**	**23 24 16.8**	**0.0**
	103nm,0.8s						
CMAR	**Chiang Mai Arr**	**18.89**	**6**	P	**Pn**	**23 24 16.5**	**-0.4**
	5.4nm,0.3s,baz=194,slow=11,SNR=478						
CMAR				LR	LR	23 32 43.0	
	comp=Z,2μm,18.4s,baz=77,slow=41						
CHG	**Chiang Mai**	**19.24**	**6**	⇑P	**Pn**	**23 24 20.2**	**-0.9**
	99nm,0.8s						
CHTO	**Chiang Mai**	**19.

GYA pP pP 23 26 01.8 +4.1
GYA PP PP 23 26 43.5 -10
GYA PcP PcP 23 29 03.8 +1.9
GYA sS sS 23 30 54.3 +6.2
GYA SS 23 32 04.6
GYA ScP ScP 23 32 40.9 -0.4
GYA ScS ScS 23 36 33.8 -0.5
GYA pmax pmax
comp=Z,30nm,0.8s,mb5.0
GYA pmax pmax
comp=Z,160nm,4.8s
GYA LR LR
comp=N,3µm,14.9s,MS5.0
GYA LR LR
comp=E,2µm,15.6s,MS5.0
GYA LR LR
comp=Z,4µm,14.8s,MS5.1
ODAN Odare 28.67 342 *e*P **P 23 25 53.7 +1.4**
comp=Z,46nm,0.6s,mb5.4
RAMN Ramite 29.01 341 *e*P **P 23 25 56.8 +1.5**
comp=Z,55nm,0.6s,mb5.5
TAPN Taplejung 29.03 343 *e*P **P 23 25 57.2 +1.6**
comp=Z,84nm,0.9s,mb5.5
POO Poona 29.52 311 *e*PKP **P 23 26 01.1 +1.1**
POO AMb AMB 23 26 07.1
comp=Z,43nm,1.4s,mb5.0
JIRN Jiri 29.80 341 *e*P **P 23 26 03.9 +1.5**
comp=Z,73nm,0.7s,mb5.5
PKI Pulchoki 29.99 339 *e*P **P 23 26 04.9 +0.9**
comp=Z,73nm,1.1s,mb5.3
PKI Pulchoki 29.99 339 *e*P **P 23 26 05.0 +1.0**
PKIN Phulchoki 30.00 339 *e*P **P 23 26 05.0 +0.9**
comp=Z,26nm,0.6s,mb5.2
DMN Daman 30.13 339 *e*P **P 23 26 06.3 +1.0**
comp=Z,54nm,0.8s,mb5.3
GUN Gumba 30.14 340 *e*P **P 23 26 06.7 +1.4**
comp=Z,117nm,0.7s,mb5.7
KKN Kakani 30.23 339 *e*P **P 23 26 07.2 +1.0**
comp=Z,73nm,0.9s,mb5.4
NLAI Namlea 30.24 96 P **P 23 26 07.6 +1.1**
comp=Z,51nm,0.8s,mb5.3
BHPL Bhopal 30.26 322 *ex* x 23 26 55.5
MBWA Marble Bar 30.30 134 *e*P **P 23 26 07.3 +0.4**
comp=Z,39nm,1.2s,mb5.0
LSA Lhasa 30.49 350 P **P 23 26 08.8 +0.4**
LSA Lhasa 30.49 350 *e*P **P 23 26 10.0 +1.6**
LSA pmax pmax
comp=Z,20nm,0.7s,mb5.0
LSA Lhasa 30.49 350 *e*P **P 23 26 10.0 +1.6**
comp=Z,20nm,0.7s,mb5.0
LBMI Labuha 30.54 90 P **P 23 26 11.2 +2.1**
comp=Z,2µmcomp=Z,124nm,1.4s,mb5.5
GKN Gorkha 30.66 338 *e*P **P 23 26 10.6 +0.6**
comp=Z,84nm,0.8s,mb5.6
CD2 Chengdu 31.84 11 P **P 23 26 20.3 -0.1**
CD2 pP pP 23 26 32.9 +4.2
CD2 sP sP 23 26 36.8 +4.6
CD2 PP PP 23 27 30.0 -2.7
CD2 S **S 23 31 31.6 +2.3**
CD2 sS sS 23 31 47.6 +4.5
CD2 SS SS 23 33 25.0 -22
CD2 pmax pmax
comp=Z,110nm,0.8s,mb5.7
CD2 pmax pmax
comp=Z,420nm,3.8s
CD2 LR LR
comp=N,2µm,16.6s
CD2 LR LR
comp=Z,2µm,17.8s,MS4.8
ENH Enshi 32.79 20 *e*P **P 23 26 28.6 -0.1**
comp=Z,121nm,0.8s,mb5.9
TWG Pinlang 32.95 44 *e*P **P 23 26 29.9 -0.3**
comp=Z,45nm,0.8s,mb5.5
TPUB Ta-pu 32.96 43 *e*P **P 23 26 30.5 +0.2**
comp=Z,332nm,0.9s,mb6.3
FITZ Fitzroy Crossi 33.19 124 *e*P **P 23 26 31.4 -1.0**
comp=Z,52nm,1.0s,mb5.4
FITZ Fitzroy Crossi 33.19 124 P **P 23 26 31.7 -0.6**
comp=Z,28nm,0.9s,mb5.2,baz=300,slow=5.4,SNR=23
FITZ LR LR 23 39 52.7
comp=Z,469nm,20.1s,MS4.2,baz=356,slow=36
FITZ Fitzroy Crossi 33.19 124 *e*P **P 23 26 31.9 -0.4**
comp=Z,42nm,1.0s,mb5.3
FITZ Fitzroy Crossi 33.19 124 P **P 23 26 32.0 -0.4**
comp=Z,94nm,1.4s,mb5.5
YULB Yu-li 33.48 43 *e*P **P 23 26 35.5 +0.7**
comp=Z,128nm,0.8s,mb5.9
SSLB Suanglung 33.51 42 *e*P **P 23 26 35.9 +0.9**
comp=Z,248nm,0.9s,mb6.1
NACB Ninganchiao 34.20 43 *e*P **P 23 26 42.0 +1.0**
comp=Z,147nm,1.1s,mb5.8
YHNB Yeheng 34.39 42 *e*P **P 23 26 43.4 +0.7**
comp=Z,31nm,0.6s,mb5.4
NDI New Delhi 34.59 328 *e*PKP **P 23 26 44.0 -0.4**
TATO Taipei 34.67 41 *e*P **P 23 26 46.4 +1.2**
comp=Z,121nm,0.9s,mb5.8
KNA Kununurra 34.87 117 P **P 23 26 45.7 -1.3**
comp=Z,1µmcomp=Z,162nm,1.0s,mb5.9
WHN Wuhan 34.98 27 P **P 23 26 48.0 +0.3**
DDI Dehra Dun 35.50 331 *ex* **P 23 26 54.0 +1.8**
KLBR Kellerberrin 36.70 150 *e*P **P 23 27 02.7 +0.3**
comp=Z,55nm,1.2s,mb5.3
LZH Lanzhou 36.91 9 *e*P **P 23 27 04.8 +0.7**
LZH pP pP 23 27 15.0 +2.4
LZH sP sP 23 27 19.5 +3.5
LZH PP PP 23 28 31.8 +3.2
LZH S **S 23 32 48.0 +0.7**
LZH sS sS 23 33 03.5 +2.3
LZH SS SS 23 35 18.9 -11
LZH pmax pmax
comp=Z,120nm,1.4s,mb5.5
LZH pmax pmax
comp=Z,570nm,5.6s
LZH LR LR
comp=E,2µm,15.4s
LZH LR LR
comp=Z,2µm,16.9s,MS5.0
SDNR Sundarnagar 37.00 331 *e*PKP **P 23 27 04.9 -0.1**
KAKA Kakadu 37.22 111 *e*P **P 23 27 04.7 -2.4**
comp=Z,37nm,0.6s,mb5.4
KAKA Kakadu 37.22 111 *e*P **P 23 27 05.1 -2.0**
comp=Z,105nm,0.6s,mb5.8
KAKA *e* 23 28 44.8
KAKA Kakadu 37.22 111 P **P 23 27 05.3 -1.8**
comp=Z,766nmcomp=Z,100nm,0.6s,mb5.8
NWAO Narrogin (SRO) 37.52 151 P **P 23 27 09.8 +0.4**
comp=Z,20nm,0.7s,mb4.9,baz=291,slow=5.5,SNR=11
NWAO Narrogin (SRO) 37.52 151 *e*P **P 23 27 10.0 +0.6**
NWAO pmax pmax
comp=Z,15nm,0.8s
NWAO Narrogin (SRO) 37.52 151 *e*P **P 23 27 10.0 +0.6**
comp=Z,15nm,0.8s,mb4.8
NJ2 Nanjing 38.39 31 *e*P **P 23 27 17.3 +0.6**
NJ2 pP pP 23 27 27.0 +1.8
NJ2 sP sP 23 27 30.9 +2.3
NJ2 PP PP 23 28 49.1 +4.2
NJ2 S **S 23 33 09.0 -0.9**
NJ2 sS sS 23 33 30.0 +6.2
NJ2 pmax pmax
comp=Z,40nm,1.1s,mb5.1
NJ2 pmax pmax
comp=Z,570nm,6.4s
NJ2 LR LR
comp=N,720nm,14.6s
NJ2 LR LR
comp=E,2µm,33.7s
NJ2 LR LR
comp=Z,880nm,12.4s,MS4.8
GTA Gaotai 39.75 3 P **P 23 27 28.3 +0.3**
GTA pP pP 23 27 37.8 +1.3
GTA sP sP 23 27 41.5 +1.6
GTA PP PP 23 29 04.1 +4.4
GTA S **S 23 33 29.5 -0.7**
GTA sS sS 23 33 46.4 +2.2
GTA pmax pmax
comp=Z,53nm,1.2s,mb5.2
GTA pmax pmax
comp=Z,320nm,6.5s
GTA LR LR
comp=N,480nm,18.7s,MS4.5
GTA LR LR
comp=E,480nm,16.9s,MS4.5
GTA LR LR
comp=Z,450nm,15.2s,MS4.4
WRAB Tennant Creek 41.40 120 P **P 23 27 41.0 -0.9**
comp=Z,311nm,1.0s,mb5.9,SNR=19
WRAB Tennant Creek 41.40 120 *e*P **P 23 27 41.7 -0.2**
WRAB pmax pmax
comp=Z,54nm,1.0s,mb5.1
WRAB Tennant Creek 41.40 120 *e*P **P 23 27 41.7 -0.2**
comp=Z,54nm,1.0s,mb5.1
WRAB PP PP 23 29 11.2 -6.7
WRAB Tennant Creek 41.40 120 P **P 23 27 41.8 -0.1**
comp=Z,66nm,1.0s,mb5.2
SMPI Sarmi 41.76 92 P pP 23 27 55.8 +2.2
FORT Forrest 42.19 139 *e*P **P 23 27 49.0 +0.7**
comp=Z,46nm,0.7s,mb5.2
FORT Forrest 42.19 139 *e*P **P 23 27 49.6 +1.3**
comp=Z,55nm,0.7s,mb5.3
BTO Baotou 42.55 15 *e*P **P 23 27 41.1 -10**
ASAR Alice Springs 42.62 126 P **P 23 27 52.0 +0.2**
comp=Z,39nm,0.7s,mb5.2,baz=298,slow=7.9,SNR=375
ASAR ScP ScP 23 33 34.0 +1.0
comp=Z,1.0nm,0.7s,baz=290,slow=3.8,SNR=5.1
HHC Hu-ho-hao-te 43.19 16 *e*P **P 23 27 57.6 +1.4**
HHC sP sP 23 28 11.5 +3.3
HHC PP PP 23 29 40.6 +3.6
HHC PcP PcP 23 29 47.0 +1.6
HHC ScP ScP 23 33 34.3 -0.6
HHC PcS PcS 23 33 38.3 +0.5
HHC S **S 23 34 22.4 +1.2**
HHC sS sS 23 34 39.4 +4.1
HHC SS SS 23 37 29.3 -5.6
HHC ScS ScS 23 37 52.6 -2.1
HHC pmax pmax
comp=Z,31nm,0.6s,mb5.2
HHC pmax pmax
comp=Z,850nm,6.4s
HHC LR LR
comp=N,860nm,16.5s,MS4.8
HHC LR LR
comp=E,670nm,16.7s,MS4.8
HHC LR LR
comp=Z,760nm,16.3s,MS4.7
BJT Baijiatuau 43.92 21 *e*P **P 23 28 03.4 +1.3**
comp=Z,128nm,0.7s,mb5.8
BJI Beijing 43.95 21 P **P 23 28 03.5 +1.2**
BJI S **S 23 34 37.3 +5.0**
BJI pmax pmax
comp=Z,170nm,0.6s,mb6.0
BJI LR LR
comp=N,420nm,19.4s,MS4.6
BJI LR LR
comp=E,540nm,15.8s,MS4.6
BJI LR LR
comp=Z,540nm,20.2s,MS4.5
KSH Kashi 44.17 337 P **P 23 28 03.0 -1.1**
KSH pP pP 23 28 12.9 +0.2
KSH sP sP 23 28 16.1 0.0
KSH PP PP 23 29 46.1 -1.4
KSH PcP PcP 23 29 49.3 +0.6
KSH ScP ScP 23 33 37.5 -1.4
KSH PcS PcS 23 33 41.8 0.0
KSH S **S 23 34 30.4 -5.2**
KSH ScS ScS 23 37 56.8 -4.1
KSH pmax pmax
comp=Z,23nm,0.8s,mb5.0
KSH pmax pmax
comp=Z,190nm,3.0s
KSH LR LR
comp=N,570nm,12.1s,MS4.8
KSH LR LR
comp=E,440nm,12.3s,MS4.8
KSH LR LR
comp=Z,430nm,21.2s
SMDO Samad 44.47 304 P **P 23 28 11.8 +5.0**
SNR=6.8
WMQ Urumqi 44.84 350 *e*P **P 23 28 10.4 +1.0**
WMQ pP pP 23 28 20.3 +2.3
WMQ sP sP 23 28 24.3 +2.9
WMQ PP PP 23 29 56.0 +1.4
WMQ pmax pmax
comp=Z,62nm,1.1s,mb5.3
WMQ pmax pmax
comp=Z,920nm,10.0s
BSY Bisya 45.04 303 P **P 23 28 18.0 +6.6**
SNR=8.1
HOQ Hoqain 45.31 305 P **P 23 28 20.1 +6.6**
SNR=8.8
ULHL Ulahol 46.43 339 P **P 23 28 27.7 +5.7**
SNR=5.1
UCH Uchtor 47.06 337 P **P 23 28 28.0 +1.1**
SNR=14
UCH Uchtor 47.06 337 *e*P **P 23 28 27.9 +1.0**
comp=Z,32nm,0.8s,mb5.3
KBK Karagaybulak 47.26 338 P **P 23 28 30.1 +1.6**
SNR=12
NAZ Nazwa, Dubai 47.28 305 P **P 23 28 34.5 +5.6**
SNR=5.6
AML Almayashu 47.30 336 P **P 23 28 34.3 +5.5**
SNR=24
AML Almayashu 47.30 336 *e*P **P 23 28 29.8 +1.0**
comp=Z,68nm,1.2s,mb5.5
KSRS Korea Array 47.33 34 P **P 23 28 28.9 -0.2**
comp=Z,22nm,0.9s,mb5.1,baz=218,slow=8.8,SNR=60
KSRS Korea Array 47.33 34 P **P 23 28 29.0 -0.2**
KSRS pmax pmax
comp=Z,22nm,0.9s,mb5.1
ASUD Al Ashush, Dub 47.39 305 P **P 23 28 35.3 +5.5**
SNR=11
AAK Ala-Archa 47.41 337 *ce*P **P 23 28 31.3 +1.6**
AAK pmax pmax
comp=Z,21nm,1.7s,mb4.8
AAK Ala-Archa 47.41 337 *e*P **P 23 28 30.6 +0.9**
comp=Z,35nm,1.4s,mb5.1
AAK Ala-Archa 47.41 337 P **P 23 28 33.1 +3.4**
comp=Z,160nmcomp=Z,5.2nm,1.4s,mb4.3
AAK Ala-Archa 47.41 337 P **P 23 28 35.5 +5.8**
SNR=14
FRU Bishkek 47.54 338 *e*P **P 23 28 35.0 +4.3**
FRU pmax pmax
comp=Z,76nm,1.8s,mb5.4
CHMS Chumysh 47.63 338 P **P 23 28 36.7 +5.3**
SNR=9.6
COEN Coen 47.65 108 *e*P **P 23 28 31.1 -0.9**
comp=Z,190nm,1.1s,mb6.0
COEN Coen 47.65 108 P **P 23 28 32.1 +0.1**
comp=Z,88nm,1.2s,mb5.7
EKS2 Erkin-Say 47.72 337 P **P 23 28 32.3 +0.3**
SNR=10
EKS2 Erkin-Say 47.72 337 *e*P **P 23 28 32.7 +0.7**
comp=Z,27nm,0.8s,mb5.3
USP Ospenovka 47.95 338 P **P 23 28 34.1 +0.2**
SNR=19
MK31 Makanchi Array 48.77 347 *e*P **P 23 28 40.5 +0.4**
MKAR Makanchi Array 48.77 347 P **P 23 28 40.4 +0.2**
comp=Z,35nm,0.6s,mb5.6,baz=156,slow=7.9,SNR=297
MKAR S **S 23 35 42.5 +1.2**
comp=Z,0.4nm,0.9s,baz=167,slow=13,SNR=2.9
SONM Songino Array 48.78 8 P **P 23 28 40.8 +0.7**
comp=Z,9.7nm,0.7s,mb4.9,baz=188,slow=8.7,SNR=60
ULN Ulaanbaatar 48.91 9 *e*P **P 23 28 41.8 +0.6**
ULN pmax pmax
comp=Z,12nm,0.9s,mb4.9
ULN Ulaanbaatar 48.91 9 *e*P **P 23 28 41.8 +0.6**
comp=Z,12nm,0.9s,mb4.9
ULN Ulaanbaatar 48.91 9 P **P 23 28 41.8 +0.6**
comp=Z,17nm,1.0s,mb5.1
ULN Ulaanbaatar 48.91 9 P **P 23 28 42.1 +1.0**
SNR=9.5
ITEG Tejag 48.94 316 *e*P **P 23 28 42.3 +0.6**
KK31 Karatay Array 49.43 335 *i* P **P 23 28 45.6 +0.4**
KK31 pmax pmax
comp=Z,22nm,0.9s,mb5.2
GUMO Guam 49.46 72 P **P 23 28 47.4 +1.5**
comp=Z,9.1nm,0.3s,mb5.2,baz=348,slow=20,SNR=3.1
IMYA Miami 50.10 321 *e*P **P 23 28 49.9 -0.6**
IBAF Bafgh 50.50 313 *e*P **P 23 28 53.4 -0.2**
PMG Port Moresby 50.73 102 *e*P **P 23 28 54.4 -1.2**
CN2 Changchun 50.87 26 ⇑P **P 23 28 56.3 +0.2**
CN2 *es*P sP 23 29 11.1 +2.9
CN2 *e*S **S 23 36 09.8 -0.9**
CN2 pmax pmax
comp=Z,40nm,0.7s,mb5.5
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,400nm,16.0s,MS4.7
CN2 LR LR
comp=E,500nm,16.0s,MS4.7
CN2 LR LR
comp=Z,700nm,17.0s,MS4.8
IPAY Payeh 50.87 320 *e*P **P 23 28 55.7 -0.6**
IAKL Akhelmad 51.12 320 *e*P **P 23 28 57.5 -0.7**
ISRV Sarvestan 51.27 309 *e*P **P 23 28 59.4 -0.1**
IKRD Kardeh 51.38 320 *e*P **P 23 28 54.9 -5.2**
IPAR Pars 51.54 310 *e*P **P 23 29 01.5 +0.1**
CTA Charters Tower 52.00 115 *e*P **P 23 29 04.7 -0.3**
comp=Z,34nm,0.8s,mb5.3
CTA Charters Tower 52.00 115 P **P 23 29 05.5 +0.5**
comp=Z,41nm,0.8s,mb5.4,baz=286,slow=8.9,SNR=38
CTA Charters Tower 52.00 115 P **P 23 29 05.5 +0.4**
CTAO Charters Tower 52.00 115 *e*P **P 23 29 05.2 +0.2**
CTAO *e* 23 30 17.7
CTAO pmax pmax
comp=Z,51nm,0.9s,mb5.5
CTAO Charters Tower 52.00 115 *e*P **P 23 29 05.2 +0.2**
comp=Z,51nm,0.9s,mb5.5
CTAO *e*PcP PcP 23 30 17.7 +0.4
CTAO Charters Tower 52.00 115 P **P 23 29 04.9 -0.1**
comp=Z,66nm,0.9s,mb5.6
MOY Mondy 52.03 3 *e*P **P 23 29 05.2 +0.5**
ISAD Sadrabad 52.05 312 *e*P **P 23 29 06.0 +0.8**
OPO Ambohidratompo 52.05 247 P **P 23 29 05.7 +0.2**
comp=Z,12nm,1.1s,mb4.8,baz=70,slow=6.6,SNR=5.1
ABKT Ailbek 52.33 321 P **P 23 29 07.2 0.0**
comp=Z,119nm,0.9s,mb5.8,SNR=5.2
STKA Stephens Creek 52.45 131 ⇓*i*P **P 23 29 08.6 +0.4**
comp=Z,26nm,0.7s,mb5.3
STKA Stephens Creek 52.45 131 P **P 23 29 08.6 +0.4**
comp=Z,51nm,1.0s,mb5.4,baz=305,slow=7.4,SNR=36
STKA Stephens Creek 52.45 131 *e*P **P 23 29 08.3 +0.2**
comp=Z,18nm,1.3s,mb4.8
IRK Irkutsk 52.86 6 *e*P **P 23 29 11.5 +0.7**
IRK *e* 23 30 15.2
IRK pmax pmax
comp=Z,35nm,2.0s,mb4.9
MAJO Matsushiro 53.06 42 *e*P **P 23 29 11.9 -0.7**
MAJO pmax pmax
comp=Z,16nm,1.0s,mb4.9
MAJO Matsushiro 53.06 42 *e*P **P 23 29 11.9 -0.7**
comp=Z,16nm,1.0s,mb4.9
MAT Matsushiro 53.06 42 P **P 23 29 11.8 -0.8**
MJAR Matsushiro Arr 53.06 42 P **P 23 29 12.1 -0.5**
comp=Z,11nm,1.0s,mb4.7,baz=224,slow=7.1,SNR=34
HIA Hailar 53.27 18 *e*P **P 23 29 14.1 +0.2**
HIA pmax pmax
comp=Z,38nm,1.0s
HIA Hailar 53.27 18 *e*P **P 23 29 14.1 +0.2**
comp=Z,38nm,1.0s,mb5.3
KURK Kurchatov 53.31 346 P **P 23 29 18.0 +3.8**
comp=Z,144nm,0.8s,mb6.0,SNR=5.5
KURK Kurchatov 53.31 346 P **P 23 29 16.8 +2.6**
KURK pmax pmax
comp=Z,36nm,1.1s,mb5.2
KURK Kurchatov 53.31 346 P **P 23 29 19.1 +4.9**
SNR=17
MDJ Mudanjiang 53.41 29 P **P 23 29 15.4 +0.4**
MDJ pP pP 23 29 23.6 -0.1
MDJ sP sP 23 29 27.0 -0.1
MDJ S **S 23 36 45.6 +0.1**
MDJ pmax pmax
comp=Z,14nm,1.1s,mb4.8
MDJ pmax pmax
comp=Z,220nm,10.8s
MDJ LR LR
comp=N,350nm,20.4s,MS4.7
MDJ LR LR
comp=E,560nm,18.5s,MS4.7
MDJ LR LR
comp=Z,830nm,18.5s,MS4.8
MDJ Mudanjiang 53.41 29 *e*P **P 23 29 15.6 +0.6**
comp=Z,8.9nm,0.7s,mb4.8
IGAR Gharneh 53.50 312 *e*P **P 23 29 15.8 -0.1**
IZEF Zefreh 53.52 313 *e*P **P 23 29 15.0 -1.1**
IKLH Kolahrood 54.28 313 *e*P **P 23 29 25.6 +4.0**
IPIR Pirpir 54.49 312 *e*P **P 23 29 23.0 -0.1**
IDMV Damavand 55.07 315 *e*P **P 23 29 26.2 -1.1**
ZALV Zalesovo Beam 55.14 351 P **P 23 29 27.4 0.0**
comp=Z,9.4nm,0.4s,mb5.2,baz=177,slow=5.9,SNR=64
NVS Novosibirsk 56.25 350 *e*P **P 23 29 34.2 -1.2**
NVS pmax pmax
comp=N,37nm,1.4s
NVS pmax pmax
comp=E,22nm,1.4s
NVS pmax pmax
comp=Z,35nm,1.4s,mb5.2
VOSK Vostochnaya 57.28 342 P **P 23 29 41.4 -1.3**
VOSK pmax pmax
comp=Z,15nm,0.9s,mb5.0
IKOM Komasi 57.68 312 *e*P **P 23 29 45.1 -0.9**
BVAR Borovoye Array 57.72 341 P **P 23 29 44.8 -1.0**
comp=Z,7.8nm,1.0s,mb4.7,baz=162,slow=5.6,SNR=12
EIDS Eidsvold 57.76 120 *e*P **P 23 29 47.1 +0.5**
comp=Z,86nm,1.3s,mb5.6
BRVK Borovoye 57.78 341 *e*P **P 23 29 47.5 +1.2**
BRVK pmax pmax
comp=Z,12nm,1.0s,mb4.9
BRVK Borovoye 57.78 341 *e*P **P 23 29 44.8 -1.5**
comp=Z,8.1nm,0.6s,mb4.9
KLR Kul'dur 57.82 26 *e*P **P 23 29 43.0 -3.6**
KLR pmax pmax
comp=E,28nm,1.2s
KLR pmax pmax
comp=Z,47nm,1.2s,mb5.4
TOO Toolangi 57.93 135 *e*P **P 23 29 48.4 +0.7**
ZRNK Zerenda 58.11 340 P **P 23 29 47.3 -1.3**
ZRNK pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
IVIS Veis 58.33 312 *e*P **P 23 29 49.2 -1.3**
IGHG Ghaleghazi 58.45 312 *e*P **P 23 29 49.9 -1.5**
HABR Khabarovsk 58.80 29 *e*P **P 23 29 50.9 -2.6**
HABR *e**PP pP 23 30 00.9 -1.4
HABR *SP sP 23 30 05.1 -0.6
HABR *e* 23 30 42.2
HABR S **S 23 37 53.0 -4.0**
HABR *e**SS sS 23 38 09.9 -1.6
HABR *e* 23 39 39.1
HABR *e*SS SS 23 41 48.5 -2.3
HABR pmax pmax
comp=Z,47nm,1.4s,mb5.3
HABR pmax pmax
comp=N,26nm,2.6s
HABR pmax pmax
comp=E,52nm,2.4s
HABR MLR MLR
comp=Z,333nm,18.0s,MS4.5
AB31 Akbulak array 58.85 333 *i* P **P 23 29 52.5 -1.3**
AB31 pmax pmax
comp=Z,15nm,0.7s,mb5.1
ABKAR Akbulak array 58.85 333 *e*P **P 23 29 52.7 -1.2**
comp=Z,13nm,0.6s,mb5.1
ISRB Sarab 59.23 316 *e*P **P 23 29 56.2 -0.5**
ERM Erimo 59.29 39 *d*/*i*P **P 23 29 57.1 +0.1**
ERM pmax pmax
comp=Z,16nm,0.9s,mb5.0
ERM Erimo 59.29 39 *e*P **P 23 29 57.0 0.0**
comp=Z,19nm,0.9s,mb5.1
KMBO Kilima Mbogo 59.71 269 P **P 23 30 01.2 +0.7**
comp=Z,6.7nm,1.1s,mb4.6,baz=167,slow=13,SNR=6.4
KMBO Kilima Mbogo 59.71 269 P **P 23 30 01.2 +0.7**
ARMA Armidale 59.77 125 *e*P **P 23 30 02.3 +1.7**
ARMA Armidale 59.77 125 P **P 23 30 00.2 -0.4**
comp=Z,55nm,0.9s,mb5.6
CNB Canberra Magne 59.77 131 ⇓*i*P **P 23 30 01.0 +0.5**
ASAJ Asahikawa 60.12 36 P **P 23 30 03.3 +0.7**
comp=Z,12nm,0.7s,mb5.0,baz=243,slow=14,SNR=17
ASAJ Asahikawa 60.12 36 P **P 23 30 03.3 +0.7**
ASAJ pmax pmax
comp=Z,12nm,0.7s
IAZR Azarshahr 60.35 315 *e*P **P 23 30 08.2 +3.8**
AKTK Aktyubinsk 60.57 333 P **P 23 30 04.9 -0.7**
AKTO Aktyubinsk 60.57 333 P **P 23 30 04.9 -0.7**
baz=125,slow=9.7
ISHB Shabestar 60.87 315 *e*P **P 23 30 08.0 0.0**
YSS Yuzh-Sakhalins 61.84 34 ⇓*i*P **P 23 30 15.0 +0.7**
YSS *e* 23 30 28.7
YSS pmax pmax
comp=Z,90nm,1.2s,mb5.8
YSS Yuzh-Sakhalins 61.84 34 P **P 23 30 13.9 -0.4**
comp=Z,81nm,1.0s,mb5.8
GNI Garni 62.32 317 *de*P **P 23 30 22.4 +4.7**
GNI pmax pmax
comp=Z,57nm,1.7s
GNI Garni 62.32 317 P **P 23 30 20.9 +3.2**
comp=Z,48nm,1.4s,mb5.4
GNI Garni 62.32 317 P **P 23 30 21.5 +3.9**

SNR=9.9
DGRG **David-gareji** 62.49 318 P P 23 30 19.8 +1.0
MTA **Mtatsminda** 62.99 318 P P 23 30 22.0 -0.1
TBLG **Delisi** 63.04 318 eP P 23 30 22.8 +0.3
TBLG **Delisi** 63.04 318 P P 23 30 22.8 +0.4
HNR **Honiara** 63.29 100 P P 23 30 24.8 +0.2
comp=Z,121nm,0.7s,mb6.2,baz=233,slow=3.0,SNR=5.8
KEH **Kehvi** 63.84 319 P P 23 30 30.2 +2.5
ZEI **Tsey** 64.07 319 eP P 23 30 29.5 +0.2
ZEI pmax pmax
comp=Z,12nm,0.4s,mb5.3
SVE **Sverdlovsk** 64.12 339⇑ eP P 23 30 31.4 +2.1
SVE pmax pmax
comp=Z,46nm,1.3s,mb5.3
ONI **Oni** 64.28 319 P P 23 30 35.1 +4.5
ARU **Arti** 64.60 338c iP P 23 30 35.2 +2.8
ARU 23 32 55.1
ARU S S 23 39 14.8 +4.6
ARU SS SS 23 43 24.8 +3.5
ARU pmax pmax
comp=Z,36nm,1.7s,mb5.1
ARU **Arti** 64.60 338 eP P 23 30 31.6 -0.8
comp=Z,33nm,1.4s,mb5.2
ASF **Jabal al Asfar** 65.23 306 P P 23 30 37.8 +0.8
comp=Z,5.7nm,0.9s,mb4.6,baz=320,slow=7.3,SNR=5.8
KIV **Kislovodsk** 65.40 320⇑ eP P 23 30 42.4 +4.5
KIV e 23 33 04.0
KIV pmax pmax
comp=Z,53nm,1.7s,mb5.3
KIV **Kislovodsk** 65.40 320 eP P 23 30 37.8 -0.1
comp=Z,45nm,1.3s,mb5.3
KIV **Kislovodsk** 65.40 320 P P 23 30 42.7 +4.8
SNR=12
EIL **Elat** 66.14 303 P P 23 30 43.0 +0.1
comp=Z,6.5nm,0.7s,mb4.7,baz=18,slow=3.7,SNR=7.2
CASY **Casey** 66.40 174 eP P 23 30 44.0 +0.1
CASY **Casey** 66.40 174 eP P 23 30 44.2 +0.3
comp=Z,55nm,1.3s,mb5.4
MMAI **Mount Meron Ar** 66.68 306 P P 23 30 46.9 +0.6
comp=Z,5.8nm,0.8s,mb4.6,baz=99,slow=5.2,SNR=5.2
YAK **Yakutsk** 67.06 16 eP P 23 30 46.8 -1.3
YAK pmax pmax
comp=Z,46nm,0.9s,mb5.5
YAK pmax pmax
comp=N,16nm,1.3s
YAK pmax pmax
comp=E,16nm,1.5s
YAK **Yakutsk** 67.06 16 eP P 23 30 46.9 -1.3
comp=E,100nm,0.9s,mb5.8
VRHR **Novokhopersk** 69.35 326 eP P 23 31 02.4 -0.4
VRHR pmax pmax
comp=N,20nm,1.2s
VRHR pmax pmax
comp=Z,30nm,1.2s,mb5.1
VRHR pmax pmax
comp=E,10.0nm,0.6s
LSZ **Lusaka** 69.43 254 eP P 23 31 03.3 -0.6
LSZ pmax pmax
comp=Z,14nm,1.1s,mb4.8
LSZ **Lusaka** 69.43 254 eP P 23 31 03.3 -0.6
comp=Z,14nm,1.1s,mb4.8
BR131 **Keskin Array S** 70.05 313 eP P 23 31 06.0 -1.3
comp=Z,3.1nm,0.7s,mb4.3
BRTR **Keskin Array B** 70.05 313 P P 23 31 05.8 -1.5
comp=Z,1.6nm,0.8s,mb4.0,baz=138,slow=8.2,SNR=12
VSR **Storozhevoye** 70.78 326 eP P 23 31 09.6 -1.9
VSR pmax pmax
comp=N,10.0nm,1.1s
VSR pmax pmax
comp=E,20nm,1.1s
VSR pmax pmax
comp=Z,20nm,1.1s,mb5.0
MAW **Mawson** 71.06 193⇓ iP P 23 31 13.6 +0.7
comp=Z,18nm,0.9s,mb5.0
MAW **Mawson** 71.06 193 P P 23 31 13.6 +0.7
comp=Z,20nm,0.9s,mb5.1,baz=18,slow=6.5,SNR=28
MAW **Mawson** 71.06 193 P P 23 31 13.6 +0.7
MAW pmax pmax
comp=Z,21nm,0.9s
MAW **Mawson** 71.06 193 eP P 23 31 13.4 +0.4
comp=Z,6.1nm,0.9s,mb4.5
LBTB **Lobatse** 72.95 244 P P 23 31 25.0 -0.1
comp=Z,14nm,0.8s,mb5.0,baz=118,slow=5.5,SNR=31
LBTB **Lobatse** 72.95 244 eP P 23 31 25.0 -0.1
LBTB pmax pmax
comp=Z,76nm,1.7s,mb5.3
LBTB **Lobatse** 72.95 244 eP P 23 31 25.0 -0.1
comp=Z,76nm,1.7s,mb5.3
PETK **Petropavlovsk-** 73.23 33 P P 23 31 26.1 -0.1
comp=Z,3.7nm,0.8s,mb4.3,baz=191,slow=4.4,SNR=8.3
PET **Petropavlovsk** 73.72 34 eP P 23 31 28.8 -0.3
PET e 23 31 34.1
PET e 23 31 40.7
PET pmax pmax
comp=Z,27nm,0.8s,mb5.2
PET **Petropavlovsk** 73.72 34 eP P 23 31 29.0 -0.1
comp=Z,44nm,0.8s,mb5.4
BOSA **Boshof** 73.76 240 P P 23 31 29.3 -0.5
comp=Z,8.7nm,0.5s,mb4.9,baz=94,slow=5.2,SNR=40
OBN **Obninsk** 73.89 329⇑ eP P 23 31 33.6 +3.6
OBN e 23 34 15.7
OBN eS S 23 40 55.7 -4.2
OBN pmax pmax
comp=Z,63nm,1.7s,mb5.3
OBN **Obninsk** 73.89 329 P P 23 31 29.8 -0.2
comp=Z,75nm,1.5s,mb5.4
TIXI **Tiksi** 74.84 10 eP P 23 31 33.9 -1.3
TIXI pmax pmax
comp=Z,38nm,1.4s,mb5.1
TIXI MLR MLR
comp=Z,413nm,16.0s,MS4.8
TIXI **Tiksi** 74.84 10 eP P 23 31 34.0 -1.3
comp=Z,14nm,0.6s,mb5.1
TIRR **Tirgusor** 75.14 316 eP P 23 31 35.6 -1.9
TIRR pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
TIRR **Tirgusor** 75.14 316 eP P 23 31 35.6 -1.9
comp=Z,7.0nm,1.0s,mb4.5
SEY **Seymchan** 75.36 23 eP P 23 31 38.6 +0.2
AKASG **Malin Array Be** 76.41 323 P P 23 31 43.2 -1.5
comp=Z,2.1nm,0.5s,mb4.3,baz=86,slow=5.3,SNR=12
AKASG **Malin Array Be** 76.41 323 P P 23 31 43.2 -1.5
AKBB **Malin Array Si** 76.41 323 eP P 23 31 43.8 -0.8
KIEV **Kiev** 76.42 323 eP P 23 31 43.6 -1.1
KIEV pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
KIEV **Kiev** 76.42 323 eP P 23 31 43.6 -1.0
comp=Z,9.1nm,0.7s,mb4.8
VRI **Vrincioaia** 76.66 317 ⇑P P 23 31 45.5 -0.7
VRI **Vrincioaia** 76.66 317 ⇑iP P 23 31 45.5 -0.7
TESR 76.88 318 ⇓P P 23 31 46.7 -0.7
TESR 76.88 318 ⇓iP P 23 31 46.7 -0.7
MLR **Muntele Rosu** 77.10 317 ⇑P P 23 31 48.7 +0.1
MLR **Muntele Rosu** 77.10 317 ⇑iP P 23 31 48.7 +0.1
VOIR 77.70 317 ⇑P P 23 31 55.6 +3.6
VOIR 77.70 317 ⇑iP P 23 31 55.6 +3.6
SUR **Sutherland** 78.08 237 P P 23 31 55.2 +0.8
comp=Z,129nm,0.8s,mb5.9,SNR=5.7
BURAR **Bucovina Array** 78.10 319 ⇓P P 23 31 54.5 +0.3
BURAR **Bucovina Array** 78.10 319 ⇓iP P 23 31 54.5 +0.3
BUR08 **Bucovina Ar. S** 78.12 319 eP P 23 31 54.5 +0.2
RPZ **Rata Peaks** 78.22 135 P P 23 31 54.8 -0.1
comp=Z,19nm,0.6s,mb5.2,baz=209,slow=2.4,SNR=11
SYO **Syowa Base** 78.38 198⇑ eP P 23 31 54.0 -1.3
VTS **Vitosha** 78.39 314 ⇓P P 23 31 54.2 -1.7
VTS **Vitosha** 78.39 314 ⇓iP P 23 31 54.2 -1.7
IDID **Didziasalis** 79.22 327 eP P 23 32 00.0 -0.2
LVV **L'vov** 79.39 321 eP P 23 32 04.8 +3.6
IIGN **Ignalina** 79.51 327 eP P 23 32 01.7 -0.1
DRGR 79.58 318 ⇑P P 23 32 02.4 +0.1
DRGR 79.58 318 ⇑iP P 23 32 02.3 0.0
IZAR **Zarasai** 79.61 327 eP P 23 32 02.3 0.0
TSUM **Tsumeb** 79.82 251 eP P 23 32 04.5 +0.3
comp=Z,11nm,1.0s,mb4.7
BZS **Buzias** 80.09 316 ⇑P P 23 32 04.7 -0.4
BZS **Buzias** 80.09 316 ⇑iP P 23 32 04.7 -0.4
BZS **Buzias** 80.09 316 ⇑iP P 23 32 04.7 -0.4
KWP **Kalwaria Pacla** 80.18 321 ⇑P P 23 32 05.5 0.0
KWP **Kalwaria Pacla** 80.18 321 eP P 23 32 05.1 -0.5
comp=Z,21nm,1.1s,mb5.0
KWP **Kalwaria Pacla** 80.18 321 ⇑iP P 23 32 05.5 0.0
UZH **Uzhgorod** 80.24 320 eP P 23 32 05.7 -0.1
LVZ **Lovozero** 80.29 340 eP P 23 32 06.2 +0.5
LVZ pmax pmax
comp=Z,6.0nm,0.8s,mb4.6

APA **Apatity** 80.58 340⇑ eP P 23 32 06.5 -0.8
APA pmax pmax
comp=Z,13nm,1.0s,mb4.8
APA MLR MLR
comp=Z,600nm,25.0s,MS4.8
CRVS **Cervenica-Dubn** 80.83 320 eP P 23 32 14.1 +5.1
CRVS **Cervenica-Dubn** 80.83 320 ePCP P 23 32 14.1 +5.1
SUW **Suwalki** 80.88 325 eP P 23 32 08.0 -1.1
SUW pmax pmax
comp=Z,46nm,1.1s,mb5.3
SUW **Suwalki** 80.88 325 eP P 23 32 08.0 -1.1
comp=Z,46nm,1.1s,mb5.3
STHS **Stebnicka Huta** 81.07 320 eP P 23 32 10.5 +0.2
STHS pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
STHS **Stebnicka Huta** 81.07 320 eP P 23 32 10.5 +0.2
comp=Z,4.2nm,0.9s,mb4.4
STHS **Stebnicka Huta** 81.07 320 eP P 23 32 10.5 +0.2
FINES **FINESS Array B** 81.34 333 P P 23 32 10.9 -0.6
comp=Z,4.9nm,0.6s,mb4.6,baz=101,slow=5.5,SNR=45
KECS **Kecovo** 81.39 319 eP P 23 32 11.3 -0.7
KECS **Kecovo** 81.39 319 eP P 23 32 11.3 -0.7
KAF **Kangasniemi** 81.44 333 eP P 23 32 09.4 -2.6
KAF pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
KAF **Kangasniemi** 81.44 333 ep P 23 32 09.4 -2.6
comp=Z,8.5nm,0.6s,mb4.8,baz=101,slow=4.7
URZ **Urewera** 81.98 128 P P 23 32 15.2 -0.2
comp=Z,37nm,1.0s,mb5.3,baz=313,slow=2.8,SNR=5.3
OJC **Ojcow** 82.14 321 eP P 23 32 12.6 -3.3
VYHS **Vyhne** 82.47 319 eP P 23 32 17.2 -0.5
VYHS pmax pmax
comp=Z,7.0nm,1.5s,mb4.4
VYHS **Vyhne** 82.47 319 eP P 23 32 17.2 -0.5
comp=Z,7.2nm,1.5s,mb4.4
VYHS **Vyhne** 82.47 319 eP P 23 32 17.2 -0.5
BILL **Bilibino** 82.78 21⇑ eP P 23 32 19.9 +1.0
BILL eS S 23 42 40.7 +5.9
BILL pmax pmax
comp=Z,3.0nm,1.2s,mb4.2
BILL MLR MLR
comp=Z,300nm,15.0s,MS4.8
OKC **Ostrava-Krasne** 83.13 320 eP P 23 32 20.8 -0.3
OKC **Ostrava-Krasne** 83.13 320 eP P 23 32 20.8 -0.3
OKC ePCP PcP 23 32 24.9 -0.7
ZST **Bratislava** 83.57 318 eP P 23 32 23.2 -0.2
ZST **Bratislava** 83.57 318 eP P 23 32 23.2 -0.2
KOGS **Kog** 83.92 317 i P P 23 32 25.1 -0.1
ARCES **ARCESS Array B** 84.00 340 P P 23 32 25.1 0.0
comp=Z,6.6nm,0.9s,mb4.8,baz=117,slow=4.2,SNR=38
ARE0 **ARCESS Array S** 84.00 340 eP P 23 32 25.2 +0.1
DPC **Dobruska-Polom** 84.36 321 eP P 23 32 27.7 +0.3
DPC **Dobruska-Polom** 84.36 321 eP P 23 32 27.7 +0.3
DPC ePCP PcP 23 32 32.3 +1.3
KSP **Ksiaz** 84.45 321 eP P 23 32 31.8 +4.0
BOJS **Bojanci** 84.50 316 eP P 23 32 28.1 -0.1
UPC **Upice** 84.58 321 eP P 23 32 28.5 0.0
UPC **Upice** 84.58 321 eP P 23 32 28.5 0.0
PERS **Pernice** 84.72 317 i P P 23 32 29.3 +0.1
LJU **Ljubljana** 85.06 316 eP P 23 32 31.1 +0.1
SBA **Scott Base** 85.37 168 eP P 23 32 32.4 +0.5
SBA pmax pmax
comp=Z,22nm,1.1s,mb5.2
SBA **Scott Base** 85.37 168 eP P 23 32 32.4 +0.4
comp=Z,22nm,1.1s,mb5.2
AQU **L'Aquila** 85.53 312 eP P 23 32 33.6 +0.1
AQU pmax pmax
comp=Z,15nm,0.9s,mb5.2
AQU **L'Aquila** 85.53 312 eP P 23 32 33.6 +0.2
comp=Z,15nm,0.9s,mb5.2
BRG **Berggiesshubel** 85.93 321 eP P 23 32 34.8 -0.4
BRG pmax pmax
comp=Z,3.0nm,1.1s,mb4.4
KHC **Kasperske Hory** 86.00 319 eP P 23 32 36.2 +0.6
KHC **Kasperske Hory** 86.00 319 eP P 23 32 36.2 +0.6
CLL **Collm** 86.56 321 eP P 23 32 37.0 -1.3
CLL pmax pmax
comp=Z,5.0nm,0.9s,mb4.7
CLL **Collm** 86.56 321 eP P 23 32 38.0 -0.3
GRF **Grafenberg Arr** 87.58 320 eP P 23 32 43.0 -0.3
comp=Z,6.0nm,0.9s,mb4.8
GRF epP pP 23 32 48.9 -3.5
GRF **Grafenberg Arr** 87.58 320 eP P 23 32 43.0 -0.3
GRF e*PP pP 23 32 48.9 -3.5
GRF pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
MAIT **Maitri** 88.00 199 eP P 23 32 46.9 +2.0
NB2 **NORSAR Subarra** 88.32 331 P P 23 32 45.9 -0.7
comp=Z,6.6nm,0.9s,mb4.9,baz=99,slow=4.6
NOA **NORSAR Array B** 88.32 331 P P 23 32 45.8 -0.8
comp=Z,4.4nm,0.9s,mb4.7,baz=96,slow=4.8,SNR=12
SPITS **Spitsbergen Ar** 88.50 348 P P 23 32 46.4 -0.8
comp=Z,3.8nm,0.6s,mb4.9,baz=107,slow=7.9,SNR=8.5
PGF **Pioggiola** 88.80 312 eP P 23 32 48.8 -0.5
comp=Z,19nm,1.0s,mb5.1
PGF **Pioggiola** 88.80 312 eP P 23 32 48.8 -0.5
PGF pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
PGF **Pioggiola** 88.80 312 eP P 23 32 48.8 -0.5
comp=Z,9.6nm,1.0s,mb5.1
QSPA **South Pole Qui** 89.51 180 eP P 23 32 52.3 +0.4
comp=Z,12nm,0.9s,mb5.2
SBF **Sospel** 89.97 314 eP P 23 32 54.3 -0.4
CDF **Champ du Feu** 90.12 318 eP P 23 32 54.1 -1.2
HINF **Hinteralfeld** 90.40 318 eP P 23 32 56.4 -0.2
HINF **Hinteralfeld** 90.40 318 eP P 23 32 56.4 -0.2
HINF **Hinteralfeld** 90.40 318 eP P 23 32 56.4 -0.2
MBDF **Montbardon** 90.45 315 eP P 23 32 56.0 -0.9
comp=Z,11nm,0.8s,mb4.9
MBDF **Montbardon** 90.45 315 eP P 23 32 56.0 -0.9
MBDF pmax pmax
comp=Z,5.0nm,0.8s,mb4.9
MBDF **Montbardon** 90.45 315 eP P 23 32 56.0 -0.9
comp=Z,5.4nm,0.8s,mb4.9
LPG **La Plagne** 90.47 315 eP P 23 32 56.9 -0.1
comp=Z,21nm,0.9s,mb5.2
LPG **La Plagne** 90.47 315 eP P 23 32 56.9 -0.1
LPG pmax pmax
comp=Z,11nm,0.9s,mb5.2
LPG **La Plagne** 90.47 315 eP P 23 32 56.9 -0.1
comp=Z,11nm,0.9s,mb5.2
LPL **La Plagne** 90.48 315 eP P 23 32 57.0 -0.1
comp=Z,17nm,0.7s,mb5.2
LPL **La Plagne** 90.48 315 eP P 23 32 57.0 -0.1
LPL pmax pmax
comp=Z,8.0nm,0.7s,mb5.2
LPL **La Plagne** 90.48 315 eP P 23 32 57.0 -0.1
comp=Z,8.3nm,0.7s,mb5.2
FRF **La Foret Royal** 90.54 313 eP P 23 32 57.1 -0.3
comp=Z,8.2nm,0.6s,mb4.9
FRF **La Foret Royal** 90.54 313 eP P 23 32 57.1 -0.3
FRF pmax pmax
comp=Z,4.0nm,0.6s,mb4.9
FRF **La Foret Royal** 90.54 313 eP P 23 32 57.1 -0.3
comp=Z,4.1nm,0.6s,mb4.9
LMR **La Mourre** 90.64 313 eP P 23 32 57.4 -0.4
HAU **Haudompre** 90.74 318 eP P 23 32 57.6 -0.6
comp=Z,40nm,1.2s,mb5.3
HAU **Haudompre** 90.74 318 eP P 23 32 57.6 -0.6
HAU pmax pmax
comp=Z,20nm,1.2s,mb5.3
HAU **Haudompre** 90.74 318 eP P 23 32 57.6 -0.6
comp=Z,20nm,1.2s,mb5.3
CABF **La Chapelle** 90.93 316 eP P 23 32 59.0 -0.1
comp=Z,18nm,0.7s,mb5.2
CABF **La Chapelle** 90.93 316 eP P 23 32 59.0 -0.1
CABF pmax pmax
comp=Z,9.0nm,0.7s,mb5.2
CABF **La Chapelle** 90.93 316 eP P 23 32 59.0 -0.1
comp=Z,8.9nm,0.7s,mb5.2
MEM **Membach** 90.95 320 P P 23 32 59.1 0.0
ORIF **Oris-en-Rattie** 91.08 315 eP P 23 32 59.9 0.0
comp=Z,6.7nm,0.5s,mb4.9
ORIF **Oris-en-Rattie** 91.08 315 eP P 23 32 59.9 0.0
ORIF pmax pmax
comp=Z,3.0nm,0.5s,mb4.9
ORIF **Oris-en-Rattie** 91.08 315 eP P 23 32 59.9 0.0
comp=Z,3.3nm,0.5s,mb4.9
SMRF **Simiane la Rot** 91.31 314 eP P 23 33 01.2 +0.2
comp=Z,24nm,1.1s,mb5.1
SMRF **Simiane la Rot** 91.31 314 eP P 23 33 01.2 +0.2
comp=Z,24nm,1.1s,mb5.4
MEZF **Maizieres J'vi** 91.60 318 eP P 23 33 01.9 -0.3
comp=Z,27nm,0.9s,mb5.3
MEZF **Maizieres J'vi** 91.60 318 eP P 23 33 01.9 -0.3
comp=Z,27nm,0.9s,mb5.6
GIVF **Givet** 91.72 320 eP P 23 33 02.3 -0.4
DOU **Dourbes** 91.87 320 P P 23 33 03.3 0.0
comp=Z,9.6nm,1.7s,mb4.8
VIVF **Saint-Julien-l** 91.94 315 eP P 23 33 03.6 -0.3
BAIF **Baives** 92.12 320 eP P 23 33 04.6 +0.1
comp=Z,21nm,0.8s,mb5.2
BAIF **Baives** 92.12 320 eP P 23 33 04.6 +0.1
BAIF pmax pmax
comp=Z,11nm,0.8s,mb5.2
BAIF **Baives** 92.12 320 eP P 23 33 04.6 +0.1
comp=Z,11nm,0.8s,mb5.2
LOR **Lormes** 92.44 317 eP P 23 33 05.7 -0.4
comp=Z,30nm,1.0s,mb5.3
LOR **Lormes** 92.44 317 eP P 23 33 05.7 -0.4
LOR pmax pmax
comp=Z,15nm,1.0s,mb5.3
LOR **Lormes** 92.44 317 eP P 23 33 05.7 -0.4
comp=Z,15nm,1.0s,mb5.3
SMF **Signal de Mont** 92.47 316 eP P 23 33 05.8 -0.5
comp=Z,19nm,0.8s,mb5.2
SMF **Signal de Mont** 92.47 316 eP P 23 33 05.8 -0.5
SMF pmax pmax
comp=Z,10.0nm,0.8s,mb5.2
SMF **Signal de Mont** 92.47 316 eP P 23 33 05.8 -0.5
comp=Z,9.6nm,0.8s,mb5.2
LASF **Ste Croix** 92.55 314 eP P 23 33 06.7 0.0
SSF **Saint Saulge** 92.69 317 eP P 23 33 07.1 -0.2
AVF **Avril sur Loir** 92.80 317 eP P 23 33 08.0 +0.2
comp=Z,16nm,0.9s,mb5.1
AVF **Avril sur Loir** 92.80 317 eP P 23 33 08.0 +0.2
AVF pmax pmax
comp=Z,8.0nm,0.9s,mb5.2
AVF **Avril sur Loir** 92.80 317 eP P 23 33 08.0 +0.2
comp=Z,7.9nm,0.9s,mb5.1
BGF **Bois d'Agland** 93.16 316 eP P 23 33 09.4 -0.1
MTLF **Montolieu** 93.77 313 eP P 23 33 12.2 -0.1
comp=Z,6.0nm,0.8s,mb4.8
MTLF **Montolieu** 93.77 313 eP P 23 33 12.2 -0.1
MTLF pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
MTLF **Montolieu** 93.77 313 eP P 23 33 12.2 -0.1
comp=Z,3.0nm,0.8s,mb4.8
CAF **Calviac** 93.79 315 eP P 23 33 12.4 0.0
RJF **Les Rejaudoux** 94.16 315 eP P 23 33 14.0 -0.1
LFF **La Frestale** 94.73 315 eP P 23 33 16.7 0.0
LDF **La Druitiere** 95.03 319 eP P 23 33 17.9 -0.1
comp=Z,3.9nm,0.7s,mb4.7
LDF **La Druitiere** 95.03 319 eP P 23 33 17.9 -0.1
LDF pmax pmax
comp=Z,2.0nm,0.7s,mb4.7
LDF **La Druitiere** 95.03 319 eP P 23 33 17.9 -0.1
comp=Z,2.0nm,0.7s,mb4.7
FLN **La Foliniere** 95.25 319 eP P 23 33 19.2 +0.2
SJPF **Ste Jean** 96.29 313 eP P 23 33 23.9 0.0
comp=Z,20nm,1.2s,mb5.1
SJPF **Ste Jean** 96.29 313 eP P 23 33 23.9 0.0
SJPF pmax pmax
comp=Z,10.0nm,1.2s,mb5.1
SJPF **Ste Jean** 96.29 313 eP P 23 33 23.9 0.0
comp=Z,10nm,1.2s,mb5.1
SGMF **Saint Gilles** 96.68 318 eP P 23 33 25.7 +0.2
QUIF **Quistinic** 97.13 318 eP P 23 33 26.9 -0.6
ROSF **Rostrenen** 97.14 319 eP P 23 33 26.7 -0.9
comp=Z,23nm,1.0s,mb5.3
ROSF **Rostrenen** 97.14 319 eP P 23 33 26.7 -0.9
ROSF pmax pmax
comp=Z,12nm,1.0s,mb5.3
ROSF **Rostrenen** 97.14 319 eP P 23 33 26.7 -0.9
comp=Z,12nm,1.0s,mb5.3
FFC **Flin Flon** 123.71 13 i PKIKP PKPdf 23 38 52.7 -0.1
SCHQ **Schefferville** 124.19 349 PKP PKPdf 23 38 53.1 -0.6
comp=Z,1.2nm,0.5s,baz=315,slow=4.3,SNR=3.4
BSMT **Bassoo Peak** 125.34 26 ePKPdf PKPdf 23 38 55.7 -0.4
SWMT **Swartz Lake** 125.94 26 ePKPdf PKPdf 23 38 56.9 -0.4
WVOR **Wild Horse Val** 127.38 33 ePKIKP PKPdf 23 39 01.0 +0.8
ULM **Lac du Bonnet** 129.19 11 PKP PKPdf 23 39 02.6 -0.8
comp=Z,6.5nm,0.8s,baz=332,slow=4.5,SNR=4.5
NVAR **Mina Array Bea** 130.24 36 PKP PKPdf 23 39 07.4 +1.6
comp=Z,1.9nm,0.8s,baz=276,slow=1.7,SNR=9.3
M13A **Montello** 130.50 31 ePKPdf PKPdf 23 39 06.7 +0.5
PDAR **Pinedale Array** 131.62 26 PKhKP PKPpre 23 38 55.5
comp=Z,2.3nm,0.5s,baz=69,slow=5.9,SNR=11
PDAR PKP PKPdf 23 39 08.7 +0.4
comp=Z,1.8nm,0.7s,baz=113,slow=2.3,SNR=4.9
PDAR **Pinedale Array** 131.62 26 PKP PKPdf 23 39 08.7 +0.4
MSU **Marysvale** 133.63 32 ePKIKP PKPdf 23 39 13.9 +1.7
ECSD **EROS Data Cent** 135.23 14 ePKPdf PKPdf 23 39 13.8 -1.2
PLCA **Paso Flores** 137.47 194 PKP PKPdf 23 39 20.9 +1.7
comp=Z,1.3nm,0.6s,baz=80,slow=5.4,SNR=2.9
WMOK **Wichita Mounta** 142.85 22 ePKIKP PKPdf 23 39 24.3 -4.9
CPUP **Villa Florida** 143.63 221 PKhKP PKPpre 23 39 27.7
comp=Z,9.1nm,0.7s,baz=97,slow=3.0,SNR=30
CPUP **Villa Florida** 143.63 221 PKP PKPpre 23 39 27.7
WVT **Waverly** 144.22 7 ePKIKP PKPdf 23 39 29.2 -2.4
MIAR **Mount Ida** 144.68 15 ePKIKP PKPdf 23 39 30.9 -1.5
UALR **University of** 144.76 13 ePKPdf PKPdf 23 39 31.1 -1.5
TKL **Tuckaleechee C** 144.96 1 ePKIKP PKPdf 23 39 30.9 -2.0
CPCT **Cooper Cave** 145.15 2 ePKPdf PKPdf 23 39 32.0 -1.2
TXAR **Lajitas Array** 145.18 33 PKPbc PKPbc 23 39 33.4 +0.3
comp=Z,15nm,0.7s,baz=268,slow=1.2,SNR=121
SWET **Sewanee** 145.30 4 ePKPdf PKPdf 23 39 32.0 -1.5
JCT **Junction City** 146.15 27 ePKPdf PKPdf 23 39 34.9 -0.1
JCT ePKPbc PKPbc 23 39 36.1 +0.1
JSC **Jenkinsville** 146.30 357 ePKP2 PKPbc 23 39 35.1 -1.2
NATX **Nacogdoches** 146.97 18 ePKPdf PKPdf 23 39 36.1 -0.3
NATX ePKPbc PKPbc 23 39 38.7 +0.4
GOGA **Godfrey** 147.21 1 PKIKP PKPdf 23 39 36.6 -0.2
GOGA e 23 39 38.7
LRAL **Lakeview Retre** 147.37 6 ePKPbc PKPbc 23 39 38.5 -1.0
HKT **Hockley** 148.23 21 ePKIKP PKPdf 23 39 38.4 -0.2
HKT e 23 39 42.1
LPAZ **La Paz** 157.80 221 PKP PKPdf 23 39 53.2 +0.4
comp=Z,2.7nm,0.8s,baz=112,slow=1.8,SNR=12
LPAZ PKPab PKPab 23 40 25.8 +0.5
comp=Z,3.1nm,0.8s,baz=156,slow=3.8,SNR=6.9
LPAZ **La Paz** 157.80 221 PKP PKPdf 23 39 53.2 +0.4
LPAZ PKPab PKPab 23 40 25.8 +0.5

DJA 19 23:23:46,8.22S×107.91E,h12km,MLv4.2/7,Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	Lembang	1.41	348	P	Pn	23 24 11.1	-0.5
SKJI	Sukabumi	1.81	312	P	Pn	23 24 16.4	-0.5
UGM	Wanagama	2.61	83	P	Pn	23 24 27.7	-0.3
SMRI	Semarang	2.77	65	P	Pn	23 24 30.8	+0.6
PCJI	Pacitan	3.23	90	P	Pn	23 24 37.3	+0.7
PWJI	Pagerwojo	3.86	87	P	Pn	23 24 45.6	+0.4

IDC 19 23:25:05.0±11.0,5.90S×148.78E,h303km±122km, mb3.5/7,mb1 3.7/7,mb1mx3.4/16,mbtmp3.5/7,Error ellipse: s-maj=54.0km s-min=28.8km az=110.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	22.73	218	P	P	23 29 41.9	+0.4
	5.7nm,0.5s,baz=53,slow=8.4,SNR=11						
FITZ	Fitzroy Crossi	25.63	240	P	P	23 30 07.3	-0.4
	9.7nm,0.4s,baz=61,slow=9.3,SNR=20						
FITZ	Fitzroy Crossi	25.63	240	e	P	23 30 06.9	-0.8
KSRS	Korea Array	47.31	337	P	P	23 33 08.6	-0.2
	1.1nm,0.6s,baz=151,slow=7.6,SNR=4.9						
PETK	Petropavlovsk-	59.27	6	P	P	23 34 35.3	+0.3
	2.8nm,0.5s,baz=160,slow=6.5,SNR=7.0						
MKAR	Makanchi Array	78.55	320	P	P	23 36 34.2	+1.1
	0.2nm,0.4s,baz=97,slow=7.9,SNR=1.4						
ZALV	Zalesovo Beam	79.87	327	P	P	23 36 39.8	-0.4
	0.6nm,0.4s,baz=104,slow=5.4,SNR=2.4						
ILAR	Eielson Array	84.70	23	P	P	23 37 04.3	-0.4
	0.7nm,0.6s,baz=256,slow=5.2,SNR=11						

*IDC **19** 23:29:29.3±0.6,24.06N×143.12E,h0km,mb4.2/18, mb1 4.4/21,mb1mx4.3/28,mbtmp4.2/21,ML4.0/3,Error ellipse: s-maj=20.7km s-min=13.3km az=86.0*
*ISCJB **19** 23:29:30.4±2.1,24.12N±0.05×143.1E±0.1,h17km±14km, mb4.3/29,MS4.5/3,Error ellipse: s-maj=16.3km s-min=8.0km az=175.6*
*MOS **19** 23:29:33.8±0.9,24.49N×142.91E,h23km,mb4.9/9,Error ellipse: s-maj=21.6km s-min=8.5km az=112.3*

BJI 19 23:29:34.6, 24.'10N×143.'00E, h20km, mB4.7/4, mb4.4/8, Ms4.6/1, Ms7 4.5/2
NEIC 19 23:29:34.6±0.4, 24.'11N×143.'04E, h35km, mb4.4/2, Error ellipse: s-maj=14.1km s-min=7.5km az=86.0
JMA 19 23:29:35.9±0.1, 24.'39N×143.'55E, h96km, M4.3
ISC 19 23:29:33.5±1.8, 24.'08N±0.'04×143.'1E±0.'1, h27km±12km, n68, σ1.9 08/76, mb4.3/29, MS4.5/3, 2C-2D, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**2.67**	**342**	P	**Pn**	**23 30 16.2**	**+1.4**
JHHJ				*e*S	**Sn**	23 30 47.3	+1.0
CBIJ	**Chichi jima**	**3.11**	**345**	Pn	**Pn**	**23 30 21.6**	**+0.7**
	23nm,0.3s,baz=100,slow=18,SNR=8.6						
CBIJ				Sn	**Sn**	**23 30 57.6**	**+0.4**
	171nm,0.3s,baz=81,slow=23,SNR=18						
CBIJ	**Chichi jima**	**3.11**	**345**	P	**Pn**	**23 30 21.7**	**+0.8**
CBIJ				*e*S	**Sn**	**23 30 56.9**	**-0.3**
JMY	**Miyakejima3**	**10.44**	**343**	*e*S	**Sn**	**23 33 48.8**	**-8.7**
JKO	**Kozu shima**	**10.65**	**342**	P	**Pn**	**23 32 05.8**	**+1.5**
BSO1	**Boso 1**	**10.70**	**351**	P	**Pn**	**23 32 04.4**	**-0.6**
BSO3	**Boso 3**	**10.92**	**349**	P	**Pn**	**23 32 06.8**	**-1.2**
JWZ	**Kozaga**	**11.42**	**327**	P	**Pn**	**23 32 17.4**	**+2.5**
JOD2	**Odawara 2**	**11.67**	**344**	P	**Pn**	**23 32 18.3**	**-0.1**
HMMJ	**Hamamatsu 2**	**11.71**	**338**	P	**Pn**	**23 32 19.6**	**+0.7**
JNY	**Yasuok**	**12.12**	**339**	P	**Pn**	**23 32 24.3**	**-0.2**
JNY				*e*S	**Sn**	**23 34 24.6**	**-14**
JHU	**Hanno**	**12.19**	**345**	P	**Pn**	**23 32 23.0**	**-2.4**
JHU				*e*S	**Sn**	**23 34 32.9**	**-7.4**
JAO	**Obara**	**12.24**	**337**	P	**Pn**	**23 32 26.5**	**+0.3**
JRY	**Ryogami san**	**12.44**	**344**	P	**Pn**	**23 32 26.1**	**-2.7**
JRY				*e*S	**Sn**	**23 34 44.2**	**-2.2**
MJAR	**Matsushiro Arr**	**13.11**	**342**	Pn	**Pn**	**23 32 36.0**	**-2.1**
	1.2nm,0.3s,baz=161,slow=12,SNR=9.6						
MAJO	**Matsushiro**	**13.12**	**342**	*e*P	**Pn**	**23 32 35.3**	**-2.8**
ERM	**Erimo**	**17.89**	**0**	*e*P	**Pn**	**23 33 42.2**	**+1.8**
ERM	**Erimo**	**17.89**	**0**	P	**Pn**	**23 33 40.8**	**+0.5**
KSRS	**Korea Array**	**18.61**	**319**	P	**Pn**	**23 33 49.9**	**+0.5**
	0.2nm,0.3s,baz=129,slow=12,SNR=15						
ASAJ	**Asahikawa**	**19.99**	**359**	P	**Pn**	**23 34 10.7**	**+5.0**
	5.1nm,0.7s,baz=183,slow=12,SNR=3.3						
YSS	**Yuzh-Sakhalins**	**22.82**	**359**	*e*P	**P**	**23 34 39.5**	**+5.2**
HABR	**Khabarovsk**	**25.16**	**347**	*e*P	**P**	**23 34 55.9**	**-0.6**
HABR				*e**PP	pP	23 35 05.2	+0.9
HABR						23 35 30.7	
HABR				*e*PPP		23 35 39.1	
HABR				S	**S**	**23 39 19.9**	**0.0**
HABR				*e*SS		23 40 12.6	
HABR				*e*SSS		23 40 27.5	
HABR				*e*		23 45 53.2	
HABR				MLR	MLR		
	comp=Z,478nm,18.0s,MS4.0						
WHN	**Wuhan**	**26.30**	**291**	P	**P**	**23 35 09.8**	**+2.8**
WHN				S	**S**	**23 39 30.3**	**-7.9**
WHN				LR	LR		
	comp=Z,1μm,13.7s,MS4.7						
KLR	**Kul'dur**	**26.64**	**343**	*e*P	**P**	**23 35 05.8**	**-4.1**
HIA	**Hailar**	**31.10**	**330**	*e*P	**P**	**23 35 48.2**	**-1.4**
SONM	**Songino Array**	**37.48**	**319**	P	**P**	**23 36 45.2**	**+0.3**
	comp=Z,0.7nm,0.8s,mb3.6,baz=125,slow=7.2,SNR=3.1						
YAK	**Yakutsk**	**39.02**	**350**	*e*P	**P**	**23 36 58.2**	**+0.7**
SEY	**Seymchan**	**39.34**	**7**	*e*P	**P**	**23 37 02.4**	**+2.2**
CMAR	**Chiang Mai Arr**	**41.40**	**271**	P	**P**	**23 37 19.1**	**+1.3**
	comp=Z,1.1nm,0.6s,mb3.7,baz=60,slow=7.3,SNR=6.6						
CTA	**Charters Tower**	**44.01**	**176**	P	**P**	**23 37 38.8**	**-0.1**
	comp=Z,2.8nm,0.2s,mb4.6,baz=31,slow=6.9,SNR=3.6						
WRAB	**Tennant Creek**	**44.57**	**192**	*e*P	**P**	**23 37 42.6**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
WRAB	**Tennant Creek**	**44.57**	**192**	*e*P	**P**	**23 37 42.6**	**-0.8**
	comp=Z,6.4nm,0.8s,mb4.5						
WRA	**Warramunga Arr**	**44.58**	**192**	P	**P**	**23 37 42.8**	**-0.7**
	baz=12,slow=8.5						
FITZ	**Fitzroy Crossi**	**45.26**	**204**	P	**P**	**23 37 48.4**	**-0.5**
	comp=Z,1.9nm,0.4s,mb4.2,baz=26,slow=11,SNR=9.4						
BILL	**Bilibino**	**46.21**	**12**	⇓*e*P	**P**	**23 37 56.5**	**+0.6**
BILL				*e*S	**S**	**23 44 37.1**	**-3.3**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.1						
ASAR	**Alice Springs**	**48.29**	**191**	P	**P**	**23 38 11.6**	**-0.9**
	comp=Z,1.2nm,0.7s,mb4.0,baz=13,slow=10,SNR=11						
ZALV	**Zalesovo Beam**	**52.31**	**321**	P	**P**	**23 38 42.1**	**-0.7**
	comp=Z,1.6nm,0.6s,mb4.1,baz=95,slow=6.4,SNR=7.1						
ZALV				PcP	PcP	23 39 53.5	-0.2
	comp=Z,1.8nm,0.7s,baz=110,slow=4.2,SNR=5.3						
ZALV	**Zalesovo Beam**	**52.31**	**321**	P	**P**	**23 38 42.1**	**-0.7**
ZALV				PcP	PcP	23 39 53.5	-0.2
MK31	**Makanchi Array**	**53.05**	**311**	*e*P	**P**	**23 38 48.0**	**-0.3**
MKAR	**Makanchi Array**	**53.05**	**311**	P	**P**	**23 38 48.3**	**0.0**
	comp=Z,1.4nm,0.4s,mb4.2,baz=86,slow=9.5,SNR=33						
KURK	**Kurchatov**	**55.70**	**316**	*e*P	**P**	**23 39 07.8**	**+0.3**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
ILAR	**Eielson Array**	**59.97**	**28**	P	**P**	**23 39 36.9**	**-0.3**
	comp=Z,2.2nm,0.8s,mb4.3,baz=260,slow=5.2,SNR=12						
BVAR	**Borovoye Array**	**60.83**	**319**	P	**P**	**23 39 43.4**	**+0.1**
	comp=Z,2.1nm,0.4s,mb4.7,baz=99,slow=7.9,SNR=20						
BRVK	**Borovoye**	**60.89**	**319**	*e*P	**P**	**23 39 44.6**	**+0.9**
BRVK				pmax	pmax		
	comp=Z,12nm,2.5s,mb4.6						
INK	**Inuvik**	**65.43**	**24**	P	**P**	**23 40 14.1**	**+0.5**
	comp=Z,2.2nm,0.8s,mb4.3,baz=196,slow=13,SNR=4.1						
ARU	**Arti**	**67.31**	**323**	*d*iP	**P**	**23 40 26.3**	**+0.5**
ARU				*e*		23 42 52.3	
ARU				S	S	23 49 23.0	+3.7
ARU				SS	SS	23 53 41.6	+2.9
ARU				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
ABKAR	**Akbulak array**	**67.80**	**315**	*e*P	**P**	**23 40 29.0**	**-0.1**
	comp=Z,1.8nm,0.8s,mb4.2						
YKA	**Yellowknife Ar**	**74.40**	**28**	P	**P**	**23 41 09.3**	**+0.5**
	comp=Z,0.4nm,0.3s,mb3.8,baz=290,slow=5.3,SNR=12						
ARCES	**ARCESS Array B**	**76.65**	**341**	P	**P**	**23 41 22.1**	**+0.5**
	comp=Z,1.9nm,0.6s,mb4.2,baz=71,slow=6.8,SNR=9.7						
VRHR	**Novokhopersk**	**78.45**	**321**	*e*P	**P**	**23 41 28.9**	**-3.1**
VRHR				pmax	pmax		
	comp=N,20nm,0.9s						
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
VRHR				pmax	pmax		
	comp=E,4.0nm,0.5s						
OBN	**Obninsk**	**79.47**	**326**	⇑*e*P	**P**	**23 41 37.6**	**+0.1**
OBN				*e*		23 44 32.8	
OBN				pmax	pmax		
	comp=Z,15nm,1.7s,mb4.7						
OBN				MLR	MLR		
	comp=Z,400nm,20.0s,MS4.8						
VSR	**Storozhevoye**	**79.80**	**322**	*e*P	**P**	**23 41 39.9**	**+0.5**
VSR				pmax	pmax		
	comp=N,7.0nm,0.9s						
VSR				pmax	pmax		
	comp=E,10.0nm,0.9s						
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
KAF	**Kangasniemi**	**80.54**	**335**	*e*P	**P**	**23 41 41.7**	**-1.4**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.6						
KAF	**Kangasniemi**	**80.54**	**335**	*e*p	**P**	**23 41 41.7**	**-1.4**
	comp=Z,3.9nm,0.5s,mb4.6						
KIV	**Kislovodsk**	**80.72**	**314**	⇑*e*P	**P**	**23 41 44.7**	**+0.3**
KIV				*e*		23 44 50.5	
KIV				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
FINES	**FINESS Array B**	**81.01**	**334**	P	**P**	**23 41 45.9**	**+0.2**
	comp=Z,3.4nm,0.4s,mb4.6,baz=74,slow=4.9,SNR=31						
NVAR	**Mina Array Bea**	**81.73**	**52**	P	**P**	**23 41 49.8**	**-0.1**
	comp=Z,1.2nm,0.8s,mb3.9,baz=289,slow=5.6,SNR=4.3						
FFC	**Flin Flon**	**83.85**	**32**	*e*P	**P**	**23 42 02.1**	**+1.5**
AKASG	**Malin Array Be**	**85.53**	**324**	P	**P**	**23 42 09.0**	**-0.2**
	comp=Z,0.3nm,0.3s,mb4.0,baz=48,slow=4.5,SNR=4.2						
PDAR	**Pinedale Array**	**85.76**	**45**	P	**P**	**23 42 11.3**	**+0.8**
	comp=Z,0.7nm,0.8s,mb3.9,baz=288,slow=6.5,SNR=3.0						
NB2	**NORSAR Subarra**	**86.71**	**339**	P	**P**	**23 42 14.7**	**-0.1**
	comp=Z,8.3nm,1.0s,mb4.9,baz=46,slow=4.8						
NB2	**NORSAR Subarra**	**86.71**	**339**	P	**P**	**23 42 14.7**	**-0.1**
	baz=46,slow=4.8						
NB2	**NORSAR Subarra**	**86.71**	**339**	P	**P**	**23 42 14.7**	**-0.1**
NB2	**NORSAR Subarra**	**86.71**	**339**	P	**P**	**23 42 14.7**	**-0.1**
NOA	**NORSAR Array B**	**86.71**	**339**	P	**P**	**23 42 14.6**	**-0.1**
	comp=Z,6.0nm,0.9s,mb4.8,baz=48,slow=4.7,SNR=11						
BRTR	**Keskin Array B**	**88.66**	**313**	P	**P**	**23 42 24.4**	**-0.2**
	comp=Z,1.6nm,0.9s,mb4.3,baz=96,slow=2.8,SNR=9.0						
CLL	**Collm**	**93.08**	**331**	*e*P	**P**	**23 42 44.0**	**-0.9**
PLCA	**Paso Flores**	**147.34**	**129**	PKPbc	PKPbc	23 49 15.7	+0.8
	comp=Z,3.4nm,0.6s,baz=210,slow=1.6,SNR=7.1						

ISCJB 19 23:30:06.1±0.2, 47.'10N±0.'01×10.'15E±0.'02, h5km±2km, Error ellipse: s-maj=2.5km s-min=1.8km az=16.0
ZUR 19 23:30:07.3, 47.'11N×10.'18E, h3km±1km, ML2.5/12
NEIC 19 23:30:07.4, 47.'10N×10.'18E, h3km, ML2.6(STR), ML2.4(ZUR), ML2.6(LDG), After ZUR.
VIE 19 23:30:07.1±0.1, 47.'11N×10.'19E, h8km±1km, mb1.5/9, ML2.5/11, Error ellipse: s-maj=0.6km s-min=0.5km az=173.0 3 km SSW of Sankt Christoph am Arlberg felt 4 ems98 at Sankt Anton am Arlberg / TYROL
CSEM 19 23:30:07.2±0.1, 47.'09N×10.'18E, h10km, ML2.8/20, Error ellipse: s-maj=1.9km s-min=1.4km az=10.0
ROM 19 23:30:08.8±0.4, 47.'02N×10.'12E, h10km, Md2.7/6, Ml1.8/4, Error ellipse: s-maj=3.7km s-min=3.0km az=167.0
PRU 19 23:30:08.8, 47.'23N×10.'18E, h8km
BGR 19 23:30:09.4±0.5, 47.'18N×10.'17E, h10km, ML2.3, Error ellipse: s-maj=11.1km s-min=4.4km az=12.0
BGR Felt in St. Anton.
LDG 19 23:30:09.1±0.1, 47.'07N×10.'14E, h10km, Ml2.6/25, Error ellipse: s-maj=2.1km s-min=1.9km az=104.0
STR 19 23:30:11.4±0.3, 47.'12N×9.'94E, h10km, Ml2.6, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0
ISC 19 23:30:07.1±0.2, 47.'09N±0.'01×10.'15E±0.'01, h7km±2km, n153, σ1.9 04/269, 14C-19D, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAVA	**Damuels**	**0.27**	**318**	*e*Pg	**Pg**	**23 30 12.9**	**+0.4**
DAVA				*e*Sg	**Sg**	**23 30 16.8**	**+0.8**
DAVA	**Damuels**	**0.27**	**318**	⇓*e*Pg	**Pg**	**23 30 12.7**	**+0.3**
	12nm,0.1s,SNR=251						
DAVA				⇓*i*Sg	**Sg**	**23 30 16.8**	**+0.7**
	108nm,0.1s						
DAVA	**Damuels**	**0.27**	**318**	Pg	**Pg**	**23 30 12.9**	**+0.5**
DAVA				Sg	**Sg**	**23 30 16.8**	**+0.8**
	108nm,0.1s						
DAVOX	**Davos/Dischmat**	**0.36**	**211**	⇑*i*Pg	**Pg**	**23 30 15.1**	**+1.1**
	1μm,0.5s						
DAVOX				*i* Sg	**Sg**	**23 30 20.5**	**+1.8**
	1μm,0.5s						
DAVOX	**Davos/Dischmat**	**0.36**	**211**	⇑*i*Pg	**Pg**	**23 30 15.1**	**+1.1**
DAVOX				*e*Sg	**Sg**	**23 30 20.6**	**+1.9**
DAVOX	**Davos/Dischmat**	**0.36**	**211**	Pg	**Pg**	**23 30 15.1**	**+1.1**
DAVOX				Sg	**Sg**	**23 30 20.5**	**+1.8**
DAVOX	**Davos/Dischmat**	**0.36**	**211**	⇑*i*Pg	**Pg**	**23 30 15.1**	**+1.1**
	1μm,0.5s						
DAVOX				*i* Sg	**Sg**	**23 30 20.5**	**+1.8**
	1μm,0.5s						
FETA	**Feichten**	**0.40**	**99**	*e*Pg	**Pg**	**23 30 14.8**	**-0.1**
	13nm,0.1s,SNR=91						
FETA				⇑*i*Sg	**Sg**	**23 30 20.1**	**-0.1**
	90nm,0.2s						
FETA	**Feichten**	**0.40**	**99**	Pg	**Pg**	**23 30 14.8**	**-0.1**
	13nm,0.1s,SNR=91						
FETA				Sg	**Sg**	**23 30 20.1**	**-0.1**
	90nm,0.2s						
FUORN	**Ofenpass-Fuorn**	**0.47**	**170**	⇓*i*Pg	**Pg**	**23 30 17.0**	**+0.8**
	174nm,0.7s						
FUORN				*e*Sg	**Sg**	**23 30 23.9**	**+1.5**
	174nm,0.7s						
FUORN	**Ofenpass-Fuorn**	**0.47**	**170**	Pg	**Pg**	**23 30 17.0**	**+0.8**
FUORN				Sg	**Sg**	**23 30 24.0**	**+1.6**
FUORN	**Ofenpass-Fuorn**	**0.47**	**170**	⇓*i*P	**Pg**	**23 30 17.0**	**+0.8**
FUORN				*e*Sg	**Sg**	**23 30 23.9**	**+1.5**
	174nm,0.7s						
LIENZ	**Kamor/St.Gall**	**0.49**	**295**	*e*Pg	**Pg**	**23 30 17.5**	**+0.9**
	187nm,0.5s						
LIENZ	**Kamor/St.Gall**	**0.49**	**295**	*e*Pg	**Pg**	**23 30 17.5**	**+0.9**
	187nm,0.5s						
PLONS	**Plons/SG**	**0.53**	**266**	⇓*i*Pg	**Pg**	**23 30 18.1**	**+0.9**
	205nm,0.3s						
PLONS	**Plons/SG**	**0.53**	**266**	⇓*i*Pg	**Pg**	**23 30 18.1**	**+0.9**
RETA	**Reutte**	**0.58**	**46**	⇓*e*Pg	**Pg**	**23 30 17.4**	**-0.9**
	1.6nm,0.1s,SNR=38						
RETA				⇑*i*Sg	**Sg**	**23 30 25.1**	**-0.7**
	22nm,0.1s						
RETA	**Reutte**	**0.58**	**46**	Pg	**Pg**	**23 30 17.4**	**-0.9**
	1.6nm,0.1s,SNR=38						
RETA				Sg	**Sg**	**23 30 25.1**	**-0.7**
	22nm,0.1s						
BRMO	**Bormio**	**0.63**	**166**	Pg	**Pg**	**23 30 19.5**	**+0.3**
BRMO				Sg	**Sg**	**23 30 28.2**	**+0.8**
	43nm,0.3s						
BRMO	**Bormio**	**0.63**	**166**	Pg	**Pg**	**23 30 19.5**	**+0.3**
BRMO				Sg	**Sg**	**23 30 28.2**	**+0.8**
	43nm,0.3s						
BERNI	**Berninapass**	**0.68**	**187**	⇓*i*Pg	**Pg**	**23 30 20.7**	**+0.6**
	170nm,0.5s						
BERNI	**Berninapass**	**0.68**	**187**	Pg	**Pg**	**23 30 20.9**	**+0.8**
BERNI				Sg	**Sg**	**23 30 29.9**	**+1.0**
BERNI	**Berninapass**	**0.68**	**187**	Pg	**Pg**	**23 30 20.9**	**+0.8**
BERNI				Sg	**Sg**	**23 30 29.9**	**+1.0**
MOTA	**Moosalm**	**0.70**	**68**	⇓*e*Pg	**Pg**	**23 30 20.0**	**-0.6**
	1.2nm,0.1s,SNR=22						
MOTA				⇓*i*Sg	**Sg**	**23 30 29.4**	**-0.3**
	21nm,0.2s						
MOTA	**Moosalm**	**0.70**	**68**	Pg	**Pg**	**23 30 20.0**	**-0.6**
	1.2nm,0.1s,SNR=22						
MOTA				Sg	**Sg**	**23 30 29.4**	**-0.3**
	21nm,0.2s						
VDL	**Val di Lei**	**0.77**	**219**	*e*Pg	**Pg**	**23 30 22.5**	**+0.6**
	223nm,0.4s						
VDL	**Val di Lei**	**0.77**	**219**	⇑*i*P	**Pg**	**23 30 22.5**	**+0.6**
WEIN	**Weingarten**	**0.91**	**300**	⇓*i*P	**Pg**	**23 30 25.8**	**+1.3**
	345nm,0.4s						
WEIN	**Weingarten**	**0.91**	**300**	⇓*i*P	**Pg**	**23 30 25.8**	**+1.3**
	345nm,0.4s						
WATA	**Walderalm**	**1.01**	**75**	⇓*i*Pg	**Pg**	**23 30 26.1**	**-0.3**
	2.3nm,0.1s						
WATA				⇑*i*Sg	**Sg**	**23 30 39.4**	**-0.1**
	28nm,0.2s						
WATA	**Walderalm**	**1.01**	**75**	Pg	**Pg**	**23 30 26.1**	**-0.3**
	2.3nm,0.1s						
WATA				Sg	**Sg**	**23 30 39.4**	**-0.1**
	28nm,0.2s						
WTTA	**Wattenberg**	**1.03**	**80**	*e*Pn	**Pn**	**23 30 26.4**	**-1.5**
WTTA				*e*Sg	**Sg**	**23 30 41.9**	**+1.6**
WTTA	**Wattenberg**	**1.03**	**80**	⇑*i*Pg	**Pg**	**23 30 26.0**	**-0.9**
	1.9nm,0.1s						
WTTA	**Wattenberg**	**1.03**	**80**	Pg	**Pg**	**23 30 26.0**	**-0.9**
	1.9nm,0.1s						
WTTA	**Wattenberg**	**1.03**	**80**	Pn	**Pn**	**23 30 26.4**	**-1.5**
WTTA				Sg	**Sg**	**23 30 41.9**	**+1.6**
MABI	**Malga Bissina**	**1.06**	**166**	Pg	**Pg**	**23 30 27.6**	**+0.1**
MABI				Sg	**Sg**	**23 30 41.3**	**+0.1**
	16nm,0.5s						
MABI	**Malga Bissina**	**1.06**	**166**	Pg	**Pg**	**23 30 27.6**	**+0.1**
MABI				Sg	**Sg**	**23 30 41.3**	**+0.1**
	16nm,0.5s						
FUSIO	**Fusio**	**1.20**	**239**	*e*P	**Pg**	**23 30 30.5**	**+0.4**
	94nm,0.4s						
FUSIO	**Fusio**	**1.20**	**239**	⇑*i*Pn	**Pn**	**23 30 30.6**	**+0.4**
FUSIO	**Fusio**	**1.20**	**239**	⇑*i*Pn	**Pn**	**23 30 30.6**	**+0.4**
SLE	**Schleitheim**	**1.31**	**302**	⇓*i*P	**Pn**	**23 30 32.5**	**+0.7**
	638nm,0.5s						
SLE	**Schleitheim**	**1.31**	**302**	⇓*i*P	**Pn**	**23 30 32.5**	**+0.7**
	638nm,0.5s						
MDI	**Monti di Nese**	**1.34**	**193**	Pg	**Pg**	**23 30 33.2**	**+0.4**
	49nm,0.6s						
MDI	**Monti di Nese**	**1.34**	**193**	Pg	**Pg**	**23 30 33.2**	**+0.4**
	49nm,0.6s						
SPAK	**Spaichingen-Ko**	**1.37**	**318**	Pn	**Pn**	**23 30 34.2**	**+1.6**
SPAK				Sg	**Sg**	**23 30 52.7**	**+1.5**
SPAK	**Spaichingen-Ko**	**1.37**	**318**	Pn	**Pn**	**23 30 34.2**	**+1.6**
SPAK				Sg	**Sg**	**23 30 52.7**	**+1.5**
MUGIO	**Muggio**	**1.39**	**214**	*e*P	**Pn**	**23 30 33.7**	**+0.8**
	103nm,0.4s						
MUGIO	**Muggio**	**1.39**	**214**	*e*P	**Pn**	**23 30 33.7**	**+0.8**
	103nm,0.4s						
SULZ	**Cheisacher**	**1.45**	**288**	*e*Pn	**Pn**	**23 30 34.6**	**+0.9**
	579nm,0.6s						
SULZ	**Cheisacher**	**1.45**	**288**	*e*Pn	**Pn**	**23 30 34.6**	**+0.9**
	579nm,0.6s						
CTI	**Castel Tesino**	**1.47**	**134**	Pg	**Pg**	**23 30 35.4**	**+0.2**
	339nm,5.5s						
CTI	**Castel Tesino**	**1.47**	**134**	Pg	**Pg**	**23 30 35.4**	**+0.2**
	339nm,5.5s						
FELD	**Feldberg im Sc**	**1.65**	**299**	Pn	**Pn**	**23 30 37.0**	**+0.5**
FELD				Sg	**Sg**	**23 31 01.3**	**+1.1**
FELD	**Feldberg im Sc**	**1.65**	**299**	Pn	**Pn**	**23 30 37.0**	**+0.5**
FELD				Sg	**Sg**	**23 31 01.3**	**+1.1**
ABTA	**Abfaltersbach**	**1.66**	**101**	⇑*e*Pg	**Pg**	**23 30 38.7**	**-0.2**
	1.4nm,0.2s,SNR=10						
ABTA				⇓*i*Sg	**Sg**	**23 31 01.5**	**+1.2**
	4.8nm,0.2s						
ABTA	**Abfaltersbach**	**1.66**	**101**	Pg	**Pg**	**23 30 38.7**	**-0.1**
	1.4nm,0.2s,SNR=10						
ABTA				Sg	**Sg**	**23 31 01.5**	**+1.2**
	4.8nm,0.2s						
CGRP	**Cima Grappa**	**1.66**	**136**	⇑*e*Pg	**Pg**	**23 30 39.9**	**+1.0**
CGRP				*e*Sg	**Sg**	**23 30 59.9**	**-0.6**
CGRP	**Cima Grappa**	**1.66**	**136**	*e*Pg	**Pg**	**23 30 39.9**	**+1.0**
CGRP				*e*Sg	**Sg**	**23 30 59.9**	**-0.6**
BALST	**Balsthal**	**1.69**	**279**	*e*Pn	**Pn**	**23 30 37.9**	**+0.9**
	241nm,0.4s						
BALST	**Balsthal**	**1.69**	**279**	⇑*i*Pn	**Pn**	**23 30 37.9**	**+0.9**
BALST	**Balsthal**	**1.69**	**279**	*e*Pn	**Pn**	**23 30 37.9**	**+0.9**
	241nm,0.4s						
BFO	**Black Forest**	**1.75**	**316**	*e*Pn	**Pn**	**23 30 38.1**	**+0.4**
BFO				*e*Sg	**Sg**	**23 31 03.8**	**+0.6**
BFO	**Black Forest**	**1.75**	**316**	*e*Pn	**Pn**	**23 30 38.1**	**+0.3**
BFO				*e*S	**Sn**	**23 30 59.8**	**-0.4**
BFO	**Black Forest**	**1.75**	**316**	Pn	**Pn**	**23 30 38.1**	**+0.3**
BFO				*e*S	**Sn**	**23 30 59.8**	**-0.4**
BFO				Sg	**Sg**	**23 31 03.8**	**+0.6**
CIMO	**Cimolais**	**1.76**	**115**	⇓*e*Pg	**Pg**	**23 30 41.7**	**+0.9**
CIMO				*e*Sg	**Sg**	**23 31 04.0**	**+0.4**
CIMO	**Cimolais**	**1.76**	**115**	*e*Pg	**Pg**	**23 30 41.7**	**+0.9**
CIMO				*e*Sg	**Sg**	**23 31 04.0**	**+0.4**
STU	**Stuttgart**	**1.80**	**340**	*e*Pn	**Pn**	**23 30 38.9**	**+0.3**
STU				*e*Sn	**Sn**	**23 31 02.7**	**+1.1**
STU	**Stuttgart**	**1.80**	**340**	*e*Pn	**Pn**	**23 30 38.8**	**+0.3**
STU				*e*Sn	**Sn**	**23 31 02.7**	**+1.1**
STU				Sg	**Sg**	**23 31 05.6**	**+0.6**
BBS	**Basel-Blauen**	**1.83**	**283**	Pn	**Pn**	**23 30 39.8**	**+0.9**
BBS				Pg	**Pg**	**23 30 43.0**	**+0.8**
BBS				Sg	**Sg**	**23 31 07.4**	**+1.4**
BBS	**Basel-Blauen**	**1.83**	**283**	Pn	**Pn**	**23 30 39.8**	**+0.9**
RJOB	**Jochberg**	**1.91**	**69**	*e*Pn	**Pn**	**23 30 43.1**	**+3.0**
RJOB				*e*Sg	**Sg**	**23 31 09.9**	**+1.3**
MOF	**Molkenrain**	**2.18**	**292**	Pn	**Pn**	**23 30 44.5**	**+0.8**
MOF	**Molkenrain**	**2.18**	**292**	Pn	**Pn**	**23 30 44.5**	**+0.8**
KBA	**Koelnbreinsper**	**2.19**	**89**	⇓*i*Pg	**Pg**	**23 30 48.6**	**-0.3**
	2.1nm,0.2s						
KBA				⇓*i*Sn	**Sn**	**23 31 11.1**	**+0.1**
KBA				⇑*i*Sg	**Sg**	**23 31 18.5**	**+1.2**
	7.4nm,0.3s						
KBA	**Koelnbreinsper**	**2.19**	**89**	Pg	**Pg**	**23 30 48.6**	**-0.4**
	2.1nm,0.2s						
KBA				Sn	**Sn**	**23 31 11.1**	**+0.1**
KBA				Sg	**Sg**	**23 31 18.5**	**+1.2**
	7.4nm,0.3s						
PTCC	**Patocco-Chiusa**	**2.31**	**106**	Pg	**Pb**	**23 30 48.1**	**-0.9**
	12nm,0.9s						
PTCC	**Patocco-Chiusa**	**2.31**	**106**	Pg	**Pb**	**23 30 48.1**	**-0.9**
	12nm,0.9s						
VINO	**Villanova**	**2.31**	**110**	*e*Pg	**Pb**	**23 30 49.8**	**+0.7**
VINO				*e*Sg	**Sg**	**23 31 20.4**	**-1.0**
VINO	**Villanova**	**2.31**	**110**	*e*Pg	**Pb**	**23 30 49.8**	**+0.7**
VINO				*e*Sg	**Sg**	**23 31 20.3**	**-1.0**
ECH	**Echery**	**2.31**	**300**	Pn	**Pn**	**23 30 46.1**	**+0.6**
ECH				Sg	**Sg**	**23 31 21.7**	**+0.3**
ECH	**Echery**	**2.31**	**300**	Pn	**Pn**	**23 30 46.1**	**+0.6**
ECH				Sg	**Sg**	**23 31 21.7**	**+0.3**
CDF	**Champ du Feu**	**2.35**	**305**	*e*Pg	**Pg**	**23 30 52.7**	**+0.6**
CDF				*e*Sg	**Sg**	**23 31 22.8**	**+0.3**
	24nm,0.4s						
**

MEZF Maizieres J'vi 3.71 294 ePn Pn 23 31 04.2 -0.6
MEZF eSg Sg 23 32 05.4 -0.9
comp=Z,2.7nm,0.5s
SBF Sospel 3.75 212 ePn Pn 23 31 04.7 -0.5
SBF eSg Sg 23 32 05.3 -2.0
comp=Z,3.0nm,0.4s
SBF Sospel 3.75 212 ePn Pn 23 31 04.7 -0.5
SBF eSg Sg 23 32 05.3 -2.0
comp=Z,1.5nm,0.4s
PRU Pruhonice 4.12 44 eSG Sg 23 32 15.5 -3.8
comp=Z,3.5nm,0.6s
PRU Pruhonice 4.12 44 Sg Sg 23 32 15.5 -3.8
comp=Z,3.5nm,0.6s
LOR Lormes 4.29 275 ePn Pn 23 31 13.3 +0.6
baz=92
LOR eSg Sg 23 32 23.0 -1.8
comp=Z,5.3nm,0.4s
LOR Lormes 4.29 275 ePn Pn 23 31 13.3 +0.6
LOR eSg Sg 23 32 23.0 -1.8
comp=Z,2.7nm,0.4s
FRF La Foret Royal 4.30 216 ePn Pn 23 31 12.7 -0.2
FRF eSg Sg 23 32 22.8 -2.4
comp=Z,2.5nm,0.6s
FRF La Foret Royal 4.30 216 ePn Pn 23 31 12.7 -0.2
FRF eSg Sg 23 32 22.8 -2.4
comp=Z,1.2nm,0.6s
SMF Signal de Mont 4.35 266 ePg Pg 23 31 28.8 -1.5
SMF eSg Sg 23 32 24.8 -1.8
comp=Z,2.0nm,0.3s
SMF Signal de Mont 4.35 266 ePn Pn 23 31 13.5 0.0
SMF ePg Pg 23 31 28.8 -1.5
SMF eSg Sg 23 32 24.8 -1.8
SMF Signal de Mont 4.35 266 ePn Pn 23 31 13.5 0.0
SMF Signal de Mont 4.35 266 ePg Pg 23 31 28.8 -1.5
SMF eSg Sg 23 32 24.8 -1.8
comp=Z,1.0nm,0.3s
VIVF Saint-Julien-l 4.42 242 ePn Pn 23 31 14.7 +0.2
VIVF eSg Sg 23 32 26.7 -2.3
comp=Z,1.3nm,0.2s
VIVF Saint-Julien-l 4.42 242 ePn Pn 23 31 14.7 +0.2
VIVF eSg Sg 23 32 26.7 -2.3
comp=Z,0.6nm,0.2s
SMRF Simiane la Rot 4.47 228 ePn Pn 23 31 15.6 +0.4
SMRF eSg Sg 23 32 28.4 -2.2
comp=Z,2.9nm,0.5s
SMRF Simiane la Rot 4.47 228 ePn Pn 23 31 15.6 +0.4
SMRF eSg Sg 23 32 28.4 -2.2
comp=Z,1.5nm,0.5s
SSF Saint Saulge 4.54 272 ePn Pn 23 31 17.2 +1.1
SSF eSg Sg 23 32 30.7 -2.0
comp=Z,3.5nm,0.5s
SSF Saint Saulge 4.54 272 ePn Pn 23 31 17.2 +1.1
SSF eSg Sg 23 32 30.7 -2.0
comp=Z,1.8nm,0.5s
LMR La Mourre 4.55 216 ePn Pn 23 31 15.7 -0.5
LMR eSg Sg 23 32 30.1 -3.0
comp=Z,1.1nm,0.5s
LMR La Mourre 4.55 216 ePn Pn 23 31 15.7 -0.5
LMR eSg Sg 23 32 30.1 -3.0
comp=Z,0.6nm,0.5s
CLL Collm 4.62 23 ePn Pn 23 31 16.0 -1.2
CLL e(Pg) Pg 23 31 31.0 -4.6
CLL eSg Sg 23 32 35.0 -0.4
AVF Avril sur Loir 4.66 269 ePn Pn 23 31 18.1 +0.3
AVF eSg Sg 23 32 34.8 -2.0
comp=Z,0.8nm,0.3s
AVF Avril sur Loir 4.66 269 ePn Pn 23 31 18.1 +0.3
AVF eSg Sg 23 32 34.8 -2.0
comp=Z,0.4nm,0.3s
VRAC Vranov 4.85 60 eSn Sn 23 32 15.0 -1.7
VRAC eSg Sg 23 32 37.8 -5.0
BAIF Baives 4.94 309 ePn Pn 23 31 21.4 -0.2
BAIF eSn Sn 23 32 15.4 -3.5
comp=Z,2.1nm,0.4s
BAIF Baives 4.94 309 ePn Pn 23 31 21.4 -0.2
BAIF eSn Sn 23 32 15.4 -3.5
comp=Z,1.0nm,0.4s
BGF Bois d'Agland 5.04 267 ePn Pn 23 31 23.0 0.0
BGF eSn Sn 23 32 17.3 -4.1
comp=Z,3.1nm,0.3s
BGF Bois d'Agland 5.04 267 ePn Pn 23 31 23.0 0.0
BGF eSn Sn 23 32 17.3 -4.1
comp=Z,1.5nm,0.3s
LASF Ste Croix 5.34 238 ePn Pn 23 31 26.7 -0.5
LASF Ste Croix 5.34 238 ePn Pn 23 31 26.7 -0.5

*ISCJB **19** 23:31:15.3±0.2, 43.14N±0.02×0.19E±0.02, h14km±2km, Error ellipse: s-maj=2.7km s-min=2.1km az=149.6*
*CSEM **19** 23:31:16.5±0.1, 43.10N×0.18E, h10km, ML2.6/21, Error ellipse: s-maj=2.4km s-min=1.8km az=146.0*
*LDG **19** 23:31:17.4±0.0, 43.06N×0.17E, h5km, Md2.5/3, Ml2.7/14, Error ellipse: s-maj=0.9km s-min=0.8km az=148.0*
*MDD **19** 23:31:17.8±0.2, 43.06N×0.17E, h10km, mbLg2.3/35, Error ellipse: s-maj=2.4km s-min=1.6km az=11.0*
*STR **19** 23:31:17.4±0.3, 43.05N×0.16E, h5km, Ml2.8, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*NEIC **19** 23:31:17.4, 43.05N×0.16E, h5km, ML2.8(STR), ML2.7(LDG), MN2.5(MDD), After STR.*
ISC 19 23:31:16.5±0.2, 43.11N±0.01×0.18E±0.02, h13km±2km, n221, σ0.87/322, 6C-2D, France

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LABF Labassere 0.10 233 Pg Pg 23 31 20.3 +0.9
LABF Sg Sg 23 31 21.7 +0.2
LABF Labassere 0.10 233 Pg Pg 23 31 20.4 +1.0
LABF Lg 23 31 22.5
LABF Labassere 0.10 233 Pg Pg 23 31 20.4 +1.0
LABF Lg 23 31 22.5
LABF Labassere 0.10 233 Pg Pg 23 31 20.3 +0.9
LABF Sg Sg 23 31 21.7 +0.2
EPF Esparros 0.14 122 ePg Pg 23 31 20.8 +0.8
EPF eSg Sg 23 31 23.6 +1.2
440nm,0.3s
EPF Esparros 0.14 122 Pg Pg 23 31 20.8 +0.8
EPF Lg 23 31 23.6
220nm,0.3s
EPF Esparros 0.14 122 Pg Pg 23 31 20.8 +0.8
EPF Lg 23 31 23.6
220nm,0.3s
EPF Esparros 0.14 122 ePg Pg 23 31 20.8 +0.8
EPF eSg Sg 23 31 23.6 +1.2
220nm,0.3s
VIEF Viey 0.25 207 Pg Pg 23 31 21.7 0.0
VIEF Sg Sg 23 31 24.2 -1.1
VIEF Viey 0.25 207 Pg Pg 23 31 21.8 0.0
VIEF Lg 23 31 24.8
VIEF Viey 0.25 207 Pg Pg 23 31 21.8 0.0
VIEF Lg 23 31 24.8
VIEF Viey 0.25 207 Pg Pg 23 31 21.7 0.0
VIEF Sg Sg 23 31 24.2 -1.1
RESF Ens 0.32 158 Pg Pg 23 31 23.2 +0.2
RESF Sg Sg 23 31 27.4 +0.1
RESF Ens 0.32 158 Pg Pg 23 31 23.3 +0.3
RESF Lg 23 31 27.5
RESF Ens 0.32 158 Pg Pg 23 31 23.3 +0.3
RESF Lg 23 31 27.5
RESF Ens 0.32 158 Pg Pg 23 31 23.2 +0.2
RESF Sg Sg 23 31 27.4 +0.1
EBIE Bielsa 0.42 184 Pg Pg 23 31 24.6 -0.2
EBIE Lg 23 31 29.5
EBIE Bielsa 0.42 184 ⇑Pg Pg 23 31 24.6 -0.2
5.5nm,0.1s,SNR=18
EBIE Lg 23 31 29.5
76nm,0.1s,SNR=7.9
EBIE Bielsa 0.42 184 ⇑Pg Pg 23 31 24.6 -0.2
5.5nm,0.1s,SNR=18
EBIE Lg 23 31 29.5
76nm,0.1s,SNR=7.9
EBIE Bielsa 0.42 184 Pg Pg 23 31 24.6 -0.2
5.5nm,0.1s,SNR=107
EBIE Lg 23 31 29.5
76nm,0.1s,SNR=7.9
REYF Montagne du Re 0.42 265 Pg Pg 23 31 25.0 +0.2
REYF Sg Sg 23 31 31.1 +0.6
REYF Montagne du Re 0.42 265 Pg Pg 23 31 24.9 +0.1
REYF Lg 23 31 31.2
REYF Montagne du Re 0.42 265 Pg Pg 23 31 24.9 +0.1
REYF Lg 23 31 31.2
REYF Montagne du Re 0.42 265 Pg Pg 23 31 25.0 +0.2
REYF Sg Sg 23 31 31.1 +0.6
MELF Melles 0.48 118 Pg Pg 23 31 26.0 0.0
MELF Sg Sg 23 31 33.8 +1.3
MELF Melles 0.48 118 Pg Pg 23 31 26.1 0.0
MELF Lg 23 31 32.5
MELF Melles 0.48 118 Pg Pg 23 31 26.1 0.0
MELF Lg 23 31 32.5
MELF Melles 0.48 118 Pg Pg 23 31 26.0 0.0
MELF Sg Sg 23 31 33.8 +1.3
ETSF Etsaut 0.58 249 ePg Pg 23 31 27.8 0.0
ETSF eSg Sg 23 31 34.9 -0.6
171nm,0.3s
ETSF Etsaut 0.58 249 Pg Pg 23 31 27.8 0.0
ETSF Lg 23 31 34.9
86nm,0.3s
ETSF Etsaut 0.58 249 Pg Pg 23 31 27.8 0.0
ETSF Lg 23 31 34.9
86nm,0.3s
ETSF Etsaut 0.58 249 ePg Pg 23 31 27.8 0.0
ETSF eSg Sg 23 31 34.9 -0.6
86nm,0.3s
FDAF Les Forges d'A 0.62 243 Pg Pg 23 31 28.4 -0.1
FDAF Lg 23 31 36.2
FDAF Les Forges d'A 0.62 243 Pg Pg 23 31 28.4 -0.1
FDAF Lg 23 31 36.2
ORDF Ordiarp 0.82 278 Lg 23 31 44.4
ORDF Ordiarp 0.82 278 Lg 23 31 44.4
LARF Larrau 0.86 266 Pg Pg 23 31 33.3 +0.2
LARF Sg Sg 23 31 45.0 +0.7
LARF Larrau 0.86 266 Pg Pg 23 31 33.3 +0.3
LARF Lg 23 31 44.9
LARF Larrau 0.86 266 Pg Pg 23 31 33.3 +0.3
LARF Lg 23 31 44.9
LARF Larrau 0.86 266 Pg Pg 23 31 33.3 +0.2
LARF Sg Sg 23 31 45.0 +0.7
CTRE Tremp 0.90 150 Pg Pg 23 31 34.0 +0.2
CTRE Tremp 0.90 150 Pg Pg 23 31 34.0 +0.2
CEST Esterri de Car 0.94 122 Pg Pg 23 31 34.6 0.0
CEST Lg 23 31 47.0
21nm,0.1s
CEST Esterri de Car 0.94 122 Pg Pg 23 31 34.6 0.0
CEST Lg 23 31 47.0
21nm,0.1s
CSOR Sort 1.01 136 Pg Pg 23 31 36.1 +0.1
CSOR Lg 23 31 49.6
CSOR Sort 1.01 136 ⇓Pg Pg 23 31 36.1 +0.1
2.2nm,0.1s,SNR=18
CSOR Lg 23 31 48.9
12nm,0.1s,SNR=13
CSOR Sort 1.01 136 ⇓Pg Pg 23 31 36.1 +0.1
2.2nm,0.1s,SNR=18
CSOR Lg 23 31 48.9
12nm,0.1s,SNR=13
CSOR Sort 1.01 136 Pg Pg 23 31 36.1 +0.1
2.2nm,0.1s,SNR=61
CSOR Lg 23 31 49.6
12nm,0.1s,SNR=13
SJPF Ste Jean 1.03 271 ePg Pg 23 31 36.2 -0.1
SJPF eSg Sg 23 31 50.2 +0.5
22nm,0.3s
SJPF Ste Jean 1.03 271 Pg Pg 23 31 36.2 -0.1
SJPF Lg 23 31 50.2
11nm,0.3s
SJPF Ste Jean 1.03 271 Pg Pg 23 31 36.2 -0.1
SJPF Lg 23 31 50.2
11nm,0.3s
SJPF Ste Jean 1.03 271 ePg Pg 23 31 36.2 -0.1
SJPF eSg Sg 23 31 50.2 +0.5
11nm,0.3s
OSSF Osses 1.06 279 Pg Pg 23 31 36.2 -0.8
OSSF Osses 1.06 279 Pg Pg 23 31 36.4 -0.6
OSSF Lg 23 31 49.7
OSSF Osses 1.06 279 Pg Pg 23 31 36.4 -0.6
OSSF Lg 23 31 49.7
OSSF Osses 1.06 279 Pg Pg 23 31 36.2 -0.8
EORO Oroz-Betelu 1.11 260 ⇑Pg Pg 23 31 37.8 -0.1
3.8nm,0.3s,SNR=18
EORO Lg 23 31 52.9
16nm,0.2s,SNR=7.9
EORO Oroz-Betelu 1.11 260 ⇑Pg Pg 23 31 37.8 -0.1
3.8nm,0.3s,SNR=18
EORO Lg 23 31 52.9
16nm,0.2s,SNR=7.9
EORO Oroz-Betelu 1.11 260 Pg Pg 23 31 37.6 -0.3
3.8nm,0.3s,SNR=7.9
EORO Lg 23 31 52.9
16nm,0.2s,SNR=7.9
CORG Organya 1.21 136 Pg Pg 23 31 39.8 0.0
CORG Lg 23 31 56.0
7.1nm,0.2s
CORG Organya 1.21 136 Pg Pg 23 31 39.8 0.0
CORG Lg 23 31 56.0
7.1nm,0.2s
IZUN Zunzarren 1.22 259 Pg Pg 23 31 39.8 -0.3
3.2nm,0.1s,SNR=7.9
IZUN Lg 23 31 55.9
14nm,0.2s,SNR=7.9
IZUN Zunzarren 1.22 259 Pg Pg 23 31 39.8 -0.3
3.2nm,0.1s,SNR=7.9
IZUN Lg 23 31 55.9
14nm,0.2s,SNR=7.9
IZUN Zunzarren 1.22 259 Pg Pg 23 31 39.8 -0.3
3.2nm,0.1s,SNR=7.9
IZUN Lg 23 31 55.9
14nm,0.2s,SNR=7.9
EALK Alkurruntz 1.24 276 Pg Pg 23 31 40.2 -0.2
EALK Lg 23 31 56.9
EALK Alkurruntz 1.24 276 Pg Pg 23 31 40.2 -0.2
2.7nm,0.2s,SNR=36
EALK Lg 23 31 56.9
26nm,0.2s,SNR=8.0
EALK Alkurruntz 1.24 276 Pg Pg 23 31 40.2 -0.2
2.7nm,0.2s,SNR=36
EALK Lg 23 31 56.9
26nm,0.2s,SNR=8.0
EALK Alkurruntz 1.24 276 Pg Pg 23 31 40.2 -0.1
2.7nm,0.2s,SNR=36
EALK Lg 23 31 56.9
26nm,0.2s,SNR=8.0
ELIZ Elizondo 1.25 273 Pg Pg 23 31 40.8 +0.2
ELIZ Lg 23 31 58.5
ELIZ Elizondo 1.25 273 Pg Pg 23 31 40.8 +0.2
1.5nm,0.1s,SNR=15
ELIZ Lg 23 31 58.5
10.0nm,0.1s,SNR=13
ELIZ Elizondo 1.25 273 Pg Pg 23 31 40.8 +0.2
1.5nm,0.1s,SNR=15
ELIZ Lg 23 31 58.5
10.0nm,0.1s,SNR=13
ELIZ Elizondo 1.25 273 Pg Pg 23 31 40.8 +0.2
1.5nm,0.1s,SNR=15
ELIZ Lg 23 31 58.5
10.0nm,0.1s,SNR=13
IUSE Utxeti 1.28 263 Pg Pg 23 31 41.1 +0.1
1.7nm,0.1s,SNR=7.9
IUSE Lg 23 31 58.3
11nm,0.1s,SNR=7.9
IUSE Utxeti 1.28 263 Pg Pg 23 31 41.1 +0.1
1.7nm,0.1s,SNR=7.9
IUSE Lg 23 31 58.3
11nm,0.1s,SNR=7.9
IUSE Utxeti 1.28 263 Pg Pg 23 31 41.1 +0.1
1.7nm,0.1s,SNR=7.9
IUSE Lg 23 31 58.3
11nm,0.1s,SNR=7.9
IUNC Unciti 1.28 255 Pg Pg 23 31 41.5 +0.4
6.0nm,0.2s,SNR=7.9
IUNC Lg 23 31 59.2
21nm,0.2s,SNR=7.9
IUNC Unciti 1.28 255 Pg Pg 23 31 41.5 +0.4
6.0nm,0.2s,SNR=7.9
IUNC Lg 23 31 59.2
21nm,0.2s,SNR=7.9
IUNC Unciti 1.28 255 Pg Pg 23 31 41.5 +0.4
6.0nm,0.2s,SNR=7.9
IUNC Lg 23 31 59.2
21nm,0.2s,SNR=7.9
CAVN Les Avellanes 1.29 161 Pg Pg 23 31 41.2 -0.2
CAVN Lg 23 31 58.0
21nm,0.1s
CAVN Les Avellanes 1.29 161 Pg Pg 23 31 41.2 -0.2
CAVN Lg 23 31 58.0
21nm,0.1s
EARA Aranguren 1.33 256 Pg Pg 23 31 42.3 +0.2
4.9nm,0.3s,SNR=6.3
EARA Lg 23 32 01.3
12nm,0.1s,SNR=5.0
EARA Aranguren 1.33 256 Pg Pg 23 31 42.3 +0.2
4.9nm,0.3s,SNR=6.3
EARA Lg 23 32 01.3
12nm,0.1s,SNR=5.0
EARA Aranguren 1.33 256 Pg Pg 23 31 42.3 +0.2
4.9nm,0.3s,SNR=6.3
EARA Lg 23 32 01.3
12nm,0.1s,SNR=5.0
CLLI Llivia 1.46 115 Pg Pg 23 31 44.8 +0.2
CLLI Lg 23 32 04.2
CLLI Llivia 1.46 115 Pg Pg 23 31 44.8 +0.2
4.8nm,0.2s,SNR=53
CLLI Lg 23 32 04.2
16nm,0.3s,SNR=16
CLLI Llivia 1.46 115 Pg Pg 23 31 44.8 +0.2
4.8nm,0.2s,SNR=53
CLLI Lg 23 32 04.2
16nm,0.3s,SNR=16
CLLI Llivia 1.46 115 Pg Pg 23 31 44.8 +0.2
4.8nm,0.2s,SNR=53
CLLI Lg 23 32 04.2
16nm,0.3s,SNR=16
ESAC San Caprasio 1.46 199 Pg Pg 23 31 44.6 0.0
ESAC Lg 23 32 03.3
ESAC San Caprasio 1.46 199 ⇑Pg Pg 23 31 44.6 0.0
25nm,0.2s,SNR=18
ESAC Lg 23 32 03.3
176nm,0.3s,SNR=25
ESAC San Caprasio 1.46 199 ⇑Pg Pg 23 31 44.6 0.0
25nm,0.2s,SNR=18
ESAC Lg 23 32 03.3
176nm,0.3s,SNR=25
ESAC San Caprasio 1.46 199 Pg Pg 23 31 44.6 0.0
25nm,0.2s,SNR=14
ESAC Lg 23 32 03.3
176nm,0.3s,SNR=25
CARF Carcanieres 1.47 105 Lg 23 32 04.7
CARF Carcanieres 1.47 105 Lg 23 32 04.7
MTLF Montolieu 1.51 80 ePn Pn 23 31 43.6 +0.4
MTLF Montolieu 1.51 80 ePg Pg 23 31 46.1 +0.6
MTLF eSg Sg 23 32 06.1 +1.0
7.8nm,0.2s
MTLF Montolieu 1.51 80 ePn Pn 23 31 43.6 +0.4
MTLF Montolieu 1.51 80 Pn Pn 23 31 43.6 +0.4
MTLF Pg Pg 23 31 46.1 +0.6
MTLF Lg 23 32 06.1
3.9nm,0.2s
MTLF Montolieu 1.51 80 Pn Pn 23 31 43.6 +0.4
MTLF Pg Pg 23 31 46.1 +0.6
MTLF Lg 23 32 06.1
3.9nm,0.2s
MTLF Montolieu 1.51 80 ePn Pn 23 31 43.6 +0.4
MTLF Montolieu 1.51 80 ePg Pg 23 31 46.1 +0.6
MTLF eSg Sg 23 32 06.1 +1.0
3.9nm,0.2s
VALF Valcebollere 1.53 117 Pg Pg 23 31 45.8 0.0
VALF Lg 23 32 06.8
VALF Valcebollere 1.53 117 Pg Pg 23 31 45.8 0.0
VALF Lg 23 32 06.8
EMIR Miracle 1.55 140 Pg Pg 23 31 45.9 -0.4
EMIR Lg 23 32 06.2
EMIR Miracle 1.55 140 Pg Pg 23 31 45.9 -0.4
7.0nm,0.3s,SNR=23
EMIR Lg 23 32 06.2
16nm,0.1s,SNR=13
EMIR Miracle 1.55 140 Pg Pg 23 31 45.9 -0.4
7.0nm,0.3s,SNR=23
EMIR Lg 23 32 06.2
16nm,0.1s,SNR=13
EMIR Miracle 1.55 140 Pg Pg 23 31 45.9 -0.4
7.0nm,0.3s,SNR=23
EMIR Lg 23 32 06.2
16nm,0.1s,SNR=13
CBRU Bruguera 1.69 118 Pg Pg 23 31 48.3 -0.6
CBRU Lg 23 32 10.7
9.2nm,0.4s
CBRU Bruguera 1.69 118 Pg Pg 23 31 48.3 -0.6
CBRU Lg 23 32 10.7
9.2nm,0.4s
LRDF Laroque-de-Fa 1.74 95 Lg 23 32 12.4
LRDF Laroque-de-Fa 1.74 95 Lg 23 32 12.4
CORI Orista 1.79 129 Pg Pg 23 31 50.1 -0.7
CORI Lg 23 32 13.4
25nm,0.4s
CORI Orista 1.79 129 Pg Pg 23 31 50.1 -0.7
CORI Lg 23 32 13.4
25nm,0.4s
EPOB Poblet 1.87 159 Pg Pg 23 31 51.1 -1.3
EPOB Lg 23 32 14.5
EPOB Poblet 1.87 159 Pg Pg 23 31 51.1 -1.3
2.0nm,0.2s,SNR=7.9
EPOB Sn Sn 23 32 12.0 +0.2
1.5nm,0.1s,SNR=7.9
EPOB Lg 23 32 14.5
6.2nm,0.1s,SNR=7.9
EPOB Poblet 1.87 159 Pg Pg 23 31 51.1 -1.3
2.0nm,0.2s,SNR=7.9
EPOB Sn Sn 23 32 12.0 +0.2
1.5nm,0.1s,SNR=7.9
EPOB Lg 23 32 14.5
6.2nm,0.1s,SNR=7.9
EPOB Poblet 1.87 159 Pg Pg 23 31 51.1 -1.3
2.0nm,0.2s,SNR=7.9
EPOB Lg 23 32 14.5
6.2nm,0.1s,SNR=7.9
LFF La Frestale 1.88 12 ePn Pn 23 31 48.6 +0.3
LFF La Frestale 1.88 12 ePg Pg 23 31 53.8 +1.3
LFF eSg Sg 23 32 17.9 +1.0
18nm,0.3s
LFF La Frestale 1.88 12 ePn Pn 23 31 48.6 +0.3
LFF La Frestale 1.88 12 ePg Pg 23 31 53.8 +1.3
LFF eSg Sg 23 32 17.9 +1.0
LFF La Frestale 1.88 12 Pn Pn 23 31 48.6 +0.3
LFF Pg Pg 23 31 53.8 +1.3
LFF Lg 23 32 17.9
9.2nm,0.3s
LFF La Frestale 1.88 12 Pn Pn 23 31 48.6 +0.3
LFF Pg Pg 23 31 53.8 +1.3
LFF Lg 23 32 17.9
9.2nm,0.3s
LFF La Frestale 1.88 12 ePn Pn 23 31 48.6 +0.3
LFF La Frestale 1.88 12 ePg Pg 23 31 53.8 +1.3
LFF eSg Sg 23 32 17.9 +1.0
9.2nm,0.3s
CFON Fontmartina 2.14 128 Pn Pn 23 31 54.4 +2.5
CFON Pg Pg 23 31 56.6 -0.9
CFON Lg 23 32 24.5
CFON Fontmartina 2.14 128 Pn Pn 23 31 54.4 +2.5
3.1nm,0.2s,SNR=7.9
CFON Lg 23 32 24.5
101nm,0.2s,SNR=7.9
CFON Fontmartina 2.14 128 Pn Pn 23 31 54.4 +2.5
3.1nm,0.2s,SNR=7.9
CFON Lg 23 32 24.5
101nm,0.2s,SNR=7.9
CFON Fontmartina 2.14 128 Pn Pn 23 31 54.4 +2.5
3.1nm,0.2s,SNR=7.9
CFON Fontmartina 2.14 128 Pg Pg 23 31 56.6 -1.0
4.0nm,0.2s,SNR=7.9
CFON Lg 23 32 24.5
101nm,0.2s,SNR=7.9
ERTA Horta de San J 2.15 177 Pg Pg 23 31 56.3 -1.4
ERTA Lg 23 32 23.4
ERTA Horta de San J 2.15 177 Pg Pg 23 31 56.3 -1.4
1.0nm,0.1s,SNR=7.9
ERTA Lg 23 32 23.0
18nm,0.3s,SNR=7.9
ERTA Horta de San J 2.15 177 Pg Pg 23 31 56.3 -1.4
1.0nm,0.1s,SNR=7.9
ERTA Lg 23 32 23.0
18nm,0.3s,SNR=7.9
ERTA Horta de San J 2.15 177 Pg Pg 23 31 56.3 -1.4
1.0nm,0.1s,SNR=7.9
ERTA Lg 23 32 23.4
18nm,0.3s,SNR=7.9
CAF Calviac 2.27 36 ePg Pg 23 32 00.3 +0.2
CAF eSg Sg 23 32 30.1 +0.6
5.3nm,0.2s
CAF Calviac 2.27 36 ePn Pn 23 31 54.0 +0.3
CAF ePg Pg 23 32 00.3 +0.2
CAF eSg Sg 23 32 30.1 +0.6
CAF Calviac 2.27 36 Pn Pn 23 31 54.0 +0.3
CAF Pg Pg 23 32 00.3 +0.2
CAF Lg 23 32 30.1
2.7nm,0.2s

CAF	**Calvinac**	**2.27**	**36**	Pn	**Pn**	**23 31 54.0**	**+0.3**
CAF				Pg	**Pg**	**23 32 00.3**	**+0.2**
CAF				Lg		23 32 30.1	
	2.7nm,0.2s						
CAF	**Calvinac**	**2.27**	**36**	*e*Pn	**Pn**	**23 31 54.0**	**+0.3**
CAF	**Calvinac**	**2.27**	**36**	*e*Pg	**Pg**	**23 32 00.3**	**+0.2**
CAF				*e*Sg	**Sg**	**23 32 30.1**	**+0.6**
	2.7nm,0.2s						
RJF	**Les Rejaudoux**	**2.40**	**23**	*e*Pg	**Pg**	**23 32 03.2**	**+0.7**
RJF				*e*Sg	**Sg**	**23 32 34.2**	**+0.6**
	13nm,0.2s						
RJF	**Les Rejaudoux**	**2.40**	**23**	*e*Pn	**Pn**	**23 31 54.7**	**-0.8**
RJF				*e*Pg	**Pg**	**23 32 03.2**	**+0.7**
RJF				*e*Sg	**Sg**	**23 32 34.2**	**+0.6**
RJF	**Les Rejaudoux**	**2.40**	**23**	Pn	**Pn**	**23 31 54.7**	**-0.8**
RJF				Pg	**Pg**	**23 32 03.2**	**+0.7**
RJF				Lg		23 32 34.2	
	6.4nm,0.2s						
RJF	**Les Rejaudoux**	**2.40**	**23**	Pn	**Pn**	**23 31 54.7**	**-0.8**
RJF				Pg	**Pg**	**23 32 03.2**	**+0.7**
RJF				Lg		23 32 34.2	
	6.4nm,0.2s						
RJF	**Les Rejaudoux**	**2.40**	**23**	*e*Pn	**Pn**	**23 31 54.7**	**-0.8**
RJF	**Les Rejaudoux**	**2.40**	**23**	*e*Pg	**Pg**	**23 32 03.2**	**+0.7**
RJF				*e*Sg	**Sg**	**23 32 34.2**	**+0.6**
	6.4nm,0.2s						
ELAN	**Lanestosa**	**2.65**	**274**	Pn	**Pn**	**23 32 00.8**	**+2.0**
ELAN				Sn	**Sn**	**23 32 30.6**	**-0.2**
ELAN	**Lanestosa**	**2.65**	**274**	Pg	**Pg**	**23 32 05.8**	**-1.4**
	0.3nm,0.3s,SNR=7.9						
ELAN				Sn	**Sn**	**23 32 28.9**	**-1.8**
	0.8nm,0.2s,SNR=7.9						
ELAN	**Lanestosa**	**2.65**	**274**	Pg	**Pg**	**23 32 05.8**	**-1.4**
	0.3nm,0.3s,SNR=7.9						
ELAN				Sn	**Sn**	**23 32 28.9**	**-1.8**
	0.8nm,0.2s,SNR=7.9						
ELAN	**Lanestosa**	**2.65**	**274**	Pn	**Pn**	**23 32 00.8**	**+1.9**
	0.3nm,0.3s,SNR=7.9						
ELAN				Sn	**Sn**	**23 32 30.6**	**-0.2**
	0.8nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**2.78**	**190**	Pn	**Pn**	**23 32 03.0**	**+2.3**
EMOS				Sn	**Sn**	**23 32 33.0**	**-1.1**
EMOS				Lg		23 32 42.8	
EMOS	**Mosqueruela**	**2.78**	**190**	Pn	**Pn**	**23 32 02.2**	**+1.5**
	0.3nm,0.2s,SNR=7.9						
EMOS				Sn	**Sn**	**23 32 33.0**	**-1.1**
	0.9nm,0.2s,SNR=7.9						
EMOS				Lg		23 32 42.8	
	2.3nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**2.78**	**190**	Pn	**Pn**	**23 32 02.2**	**+1.5**
	0.3nm,0.2s,SNR=7.9						
EMOS				Sn	**Sn**	**23 32 33.0**	**-1.1**
	0.9nm,0.2s,SNR=7.9						
EMOS				Lg		23 32 42.8	
	2.3nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**2.78**	**190**	Pn	**Pn**	**23 32 03.0**	**+2.3**
	0.3nm,0.2s,SNR=7.9						
EMOS				Sn	**Sn**	**23 32 33.0**	**-1.1**
	0.9nm,0.2s,SNR=7.9						
EMOS				Lg		23 32 42.8	
	2.3nm,0.2s,SNR=7.9						
ETOR	**Torete**	**2.83**	**217**	Pn	**Pn**	**23 32 03.0**	**+1.6**
ETOR				Sn	**Sn**	**23 32 34.2**	**-1.0**
ETOR				Lg		23 32 45.3	
ETOR	**Torete**	**2.83**	**217**	Pn	**Pn**	**23 32 03.0**	**+1.6**
	2.0nm,0.1s,SNR=7.8						
ETOR				Sn	**Sn**	**23 32 34.2**	**-1.0**
	8.2nm,0.2s,SNR=7.9						
ETOR				Lg		23 32 45.3	
	12nm,0.2s,SNR=7.2						
ETOR	**Torete**	**2.83**	**217**	Pn	**Pn**	**23 32 03.0**	**+1.6**
	2.0nm,0.1s,SNR=7.8						
ETOR				Sn	**Sn**	**23 32 34.2**	**-1.0**
	8.2nm,0.2s,SNR=7.9						
ETOR				Lg		23 32 45.3	
	12nm,0.2s,SNR=7.2						
ETOR	**Torete**	**2.83**	**217**	Pn	**Pn**	**23 32 03.0**	**+1.7**
	2.0nm,0.1s,SNR=7.8						
ETOR				Sn	**Sn**	**23 32 34.2**	**-1.0**
	8.2nm,0.2s,SNR=7.9						
ETOR				Lg		23 32 45.3	
	12nm,0.2s,SNR=7.2						
LASF	**Ste Croix**	**2.84**	**69**	*e*Pg	**Pg**	**23 32 10.2**	**-0.8**
LASF				*e*Sg	**Sg**	**23 32 47.5**	**-0.3**
	4.1nm,0.3s						
LASF	**Ste Croix**	**2.84**	**69**	*e*Pn	**Pn**	**23 32 00.9**	**-0.7**
LASF				*e*Pg	**Pg**	**23 32 10.2**	**-0.8**
LASF				*e*Sg	**Sg**	**23 32 47.5**	**-0.3**
LASF	**Ste Croix**	**2.84**	**69**	Pn	**Pn**	**23 32 00.9**	**-0.7**
LASF				Pg	**Pg**	**23 32 10.2**	**-0.8**
LASF				Lg		23 32 47.5	
	2.0nm,0.3s						
LASF	**Ste Croix**	**2.84**	**69**	Pn	**Pn**	**23 32 00.9**	**-0.7**
LASF				Pg	**Pg**	**23 32 10.2**	**-0.8**
LASF				Lg		23 32 47.5	
	2.0nm,0.3s						
LASF	**Ste Croix**	**2.84**	**69**	*e*Pn	**Pn**	**23 32 00.9**	**-0.7**
LASF	**Ste Croix**	**2.84**	**69**	*e*Pg	**Pg**	**23 32 10.2**	**-0.8**
LASF				*e*Sg	**Sg**	**23 32 47.5**	**-0.3**
	2.0nm,0.3s						
TCF	**Toulx Ste Croi**	**3.50**	**24**	*e*Pg	**Pg**	**23 32 22.9**	**-0.6**
TCF				*e*Sg	**Sg**	**23 33 08.3**	**-0.5**
	3.4nm,0.2s						
TCF	**Toulx Ste Croi**	**3.50**	**24**	*e*Pn	**Pn**	**23 32 11.4**	**+0.9**
TCF				*e*Pg	**Pg**	**23 32 22.9**	**-0.6**
TCF				*e*Sg	**Sg**	**23 33 08.3**	**-0.5**
TCF	**Toulx Ste Croi**	**3.50**	**24**	Pn	**Pn**	**23 32 11.4**	**+0.9**
TCF				Pg	**Pg**	**23 32 22.9**	**-0.6**
TCF				Lg		23 33 08.3	
	1.7nm,0.2s						
TCF	**Toulx Ste Croi**	**3.50**	**24**	Pn	**Pn**	**23 32 11.4**	**+0.9**
TCF				Pg	**Pg**	**23 32 22.9**	**-0.6**
TCF				Lg		23 33 08.3	
	1.7nm,0.2s						
TCF	**Toulx Ste Croi**	**3.50**	**24**	*e*Pn	**Pn**	**23 32 11.4**	**+0.9**
TCF	**Toulx Ste Croi**	**3.50**	**24**	*e*Pg	**Pg**	**23 32 22.9**	**-0.6**
TCF				*e*Sg	**Sg**	**23 33 08.3**	**-0.5**
	1.7nm,0.2s						
MFF	**Saint Martin d**	**3.50**	**356**	*e*Pg	**Pg**	**23 32 23.8**	**+0.2**
MFF				*e*Sg	**Sg**	**23 33 08.6**	**-0.4**
	3.7nm,0.3s						
MFF	**Saint Martin d**	**3.50**	**356**	*e*Pn	**Pn**	**23 32 10.2**	**-0.5**
MFF				*e*Pg	**Pg**	**23 32 23.8**	**+0.2**
MFF				*e*Sg	**Sg**	**23 33 08.6**	**-0.4**
MFF	**Saint Martin d**	**3.50**	**356**	Pn	**Pn**	**23 32 10.2**	**-0.5**
MFF				Pg	**Pg**	**23 32 23.8**	**+0.2**
MFF				Lg		23 33 08.6	
	1.9nm,0.3s						
MFF	**Saint Martin d**	**3.50**	**356**	Pn	**Pn**	**23 32 10.2**	**-0.5**
MFF				Pg	**Pg**	**23 32 23.8**	**+0.2**
MFF				Lg		23 33 08.6	
	1.9nm,0.3s						
MFF	**Saint Martin d**	**3.50**	**356**	*e*Pg	**Pg**	**23 32 23.8**	**+0.2**
MFF	**Saint Martin d**	**3.50**	**356**	*e*Pn	**Pn**	**23 32 10.2**	**-0.5**
MFF				*e*Sg	**Sg**	**23 33 08.6**	**-0.4**
	1.9nm,0.3s						
ECHE	**Chera**	**3.62**	**194**	Sn	**Sn**	**23 32 51.6**	**-3.1**
	1.9nm,0.4s,SNR=7.9						
ECHE				Lg		23 33 09.8	
	2.0nm,0.4s,SNR=7.9						
ECHE	**Chera**	**3.62**	**194**	Sn	**Sn**	**23 32 51.6**	**-3.1**
	1.9nm,0.4s,SNR=7.9						
ECHE				Lg		23 33 09.8	
	2.0nm,0.4s,SNR=7.9						
ECHE	**Chera**	**3.62**	**194**	Sn	**Sn**	**23 32 50.8**	**-3.9**
	1.9nm,0.4s,SNR=7.9						
ECHE				Lg		23 33 08.4	
	2.0nm,0.4s,SNR=7.9						
VIVF	**Saint-Julien-I**	**3.69**	**60**	*e*Pg	**Pg**	**23 32 26.0**	**-1.1**
VIVF				*e*Sg	**Sg**	**23 33 13.8**	**-1.0**
	1.3nm,0.2s						
VIVF	**Saint-Julien-I**	**3.69**	**60**	*e*Pn	**Pn**	**23 32 13.5**	**+0.4**
VIVF				*e*Pg	**Pg**	**23 32 26.0**	**-1.1**
VIVF				*e*Sg	**Sg**	**23 33 13.8**	**-1.0**
VIVF	**Saint-Julien-I**	**3.69**	**60**	Pn	**Pn**	**23 32 13.5**	**+0.4**
VIVF				Pg	**Pg**	**23 32 26.0**	**-1.1**
VIVF				Lg		23 33 13.8	
	0.6nm,0.2s						
VIVF	**Saint-Julien-I**	**3.69**	**60**	Pn	**Pn**	**23 32 13.5**	**+0.4**
VIVF				Pg	**Pg**	**23 32 26.0**	**-1.1**
VIVF				Lg		23 33 13.8	
	0.6nm,0.2s						
VIVF	**Saint-Julien-I**	**3.69**	**60**	*e*Pn	**Pn**	**23 32 13.5**	**+0.4**
VIVF	**Saint-Julien-I**	**3.69**	**60**	*e*Pg	**Pg**	**23 32 26.0**	**-1.1**
VIVF				*e*Sg	**Sg**	**23 33 13.8**	**-1.0**
	0.6nm,0.2s						
BGF	**Bois d'Agland**	**3.94**	**28**	*e*Pg	**Pg**	**23 32 31.7**	**-0.2**
BGF				*e*Sg	**Sg**	**23 33 22.2**	**-0.8**
	12nm,0.3s						
BGF	**Bois d'Agland**	**3.94**	**28**	*e*Pn	**Pn**	**23 32 16.6**	**0.0**
BGF				*e*Pg	**Pg**	**23 32 31.7**	**-0.2**
BGF				*e*Sg	**Sg**	**23 33 22.2**	**-0.8**
BGF	**Bois d'Agland**	**3.94**	**28**	Pn	**Pn**	**23 32 16.6**	**0.0**
BGF				Pg	**Pg**	**23 32 31.7**	**-0.2**
BGF				Lg		23 33 22.2	
	6.1nm,0.3s						
BGF	**Bois d'Agland**	**3.94**	**28**	Pn	**Pn**	**23 32 16.6**	**0.0**
BGF				Pg	**Pg**	**23 32 31.7**	**-0.2**
BGF				Lg		23 33 22.2	
	6.1nm,0.3s						
BGF	**Bois d'Agland**	**3.94**	**28**	*e*Pn	**Pn**	**23 32 16.6**	**0.0**
BGF	**Bois d'Agland**	**3.94**	**28**	*e*Pg	**Pg**	**23 32 31.7**	**-0.2**
BGF				*e*Sg	**Sg**	**23 33 22.2**	**-0.8**
	6.1nm,0.3s						
EARI	**Arriondas**	**3.94**	**275**	Pn	**Pn**	**23 32 19.1**	**+2.4**
EARI				Sn	**Sn**	**23 33 03.6**	**+0.8**
EARI	**Arriondas**	**3.94**	**275**	Pn	**Pn**	**23 32 19.1**	**+2.4**
	0.3nm,0.3s,SNR=7.9						
EARI				Sn	**Sn**	**23 33 02.5**	**-0.3**
	0.9nm,0.4s,SNR=7.9						
EARI	**Arriondas**	**3.94**	**275**	Pn	**Pn**	**23 32 19.1**	**+2.4**
	0.3nm,0.3s,SNR=7.9						
EARI				Sn	**Sn**	**23 33 02.5**	**-0.3**
	0.9nm,0.4s,SNR=7.9						
EARI	**Arriondas**	**3.94**	**275**	Pn	**Pn**	**23 32 19.1**	**+2.4**
	0.3nm,0.3s,SNR=7.9						
EARI				Sn	**Sn**	**23 33 03.6**	**+0.8**
	0.9nm,0.4s,SNR=7.9						
GUD	**Guadarrama**	**4.06**	**234**	Pn	**Pn**	**23 32 19.3**	**+0.9**
GUD				Pg	**Pg**	**23 32 31.9**	**-2.4**
GUD				Sn	**Sn**	**23 33 05.4**	**-0.3**
GUD				Lg		23 33 21.0	
GUD	**Guadarrama**	**4.06**	**234**	Pn	**Pn**	**23 32 19.3**	**+0.9**
	0.2nm,0.1s,SNR=7.9						
GUD				Pg	**Pg**	**23 32 31.9**	**-2.4**
	0.7nm,0.3s,SNR=7.9						
GUD				Sn	**Sn**	**23 33 03.9**	**-1.8**
	1.4nm,0.3s,SNR=7.9						
GUD				Lg		23 33 21.0	
	1.2nm,0.3s,SNR=7.9						
GUD	**Guadarrama**	**4.06**	**234**	Pn	**Pn**	**23 32 19.3**	**+0.9**
	0.2nm,0.1s,SNR=7.9						
GUD				Pg	**Pg**	**23 32 31.9**	**-2.4**
	0.7nm,0.3s,SNR=7.9						
GUD				Sn	**Sn**	**23 33 03.9**	**-1.8**
	1.4nm,0.3s,SNR=7.9						
GUD				Lg		23 33 21.0	
	1.2nm,0.3s,SNR=7.9						
GUD	**Guadarrama**	**4.06**	**234**	Pn	**Pn**	**23 32 19.3**	**+1.0**
	0.2nm,0.1s,SNR=7.9						
GUD	**Guadarrama**	**4.06**	**234**	Pg	**Pg**	**23 32 31.9**	**-2.4**
	0.7nm,0.3s,SNR=7.9						
GUD				Sn	**Sn**	**23 33 05.4**	**-0.4**
	1.4nm,0.3s,SNR=7.9						
AVF	**Avril sur Loir**	**4.32**	**30**	*e*Pn	**Pn**	**23 32 22.3**	**+0.5**
AVF				*e*Sg	**Sg**	**23 33 33.9**	**-1.2**
	1.4nm,0.2s						
AVF	**Avril sur Loir**	**4.32**	**30**	Pn	**Pn**	**23 32 22.3**	**+0.5**
AVF				Lg		23 33 33.9	
	0.7nm,0.2s						
AVF	**Avril sur Loir**	**4.32**	**30**	Pn	**Pn**	**23 32 22.3**	**+0.5**
AVF				Lg		23 33 33.9	
	0.7nm,0.2s						
AVF	**Avril sur Loir**	**4.32**	**30**	*e*Pn	**Pn**	**23 32 22.3**	**+0.5**
AVF				*e*Sg	**Sg**	**23 33 33.9**	**-1.2**
	0.7nm,0.2s						
SMF	**Signal de Mont**	**4.39**	**35**	*e*Pn	**Pn**	**23 32 23.4**	**+0.5**
SMF				*e*Sg	**Sg**	**23 33 36.3**	**-1.2**
	1.2nm,0.3s						
SMF	**Signal de Mont**	**4.39**	**35**	Pn	**Pn**	**23 32 23.4**	**+0.5**
SMF				Lg		23 33 36.3	
	0.6nm,0.3s						
SMF	**Signal de Mont**	**4.39**	**35**	Pn	**Pn**	**23 32 23.4**	**+0.5**
SMF				Lg		23 33 36.3	
	0.6nm,0.3s						
SMF	**Signal de Mont**	**4.39**	**35**	*e*Pn	**Pn**	**23 32 23.4**	**+0.5**
SMF				*e*Sg	**Sg**	**23 33 36.3**	**-1.2**
	0.6nm,0.3s						
HYF	**Humbligny**	**4.51**	**22**	*e*Pn	**Pn**	**23 32 25.2**	**+0.7**
HYF				*e*Sg	**Sg**	**23 33 40.4**	**-0.9**
HYF	**Humbligny**	**4.51**	**22**	Pn	**Pn**	**23 32 25.2**	**+0.7**
HYF				Lg		23 33 40.4	
HYF	**Humbligny**	**4.51**	**22**	Pn	**Pn**	**23 32 25.2**	**+0.7**
HYF				Lg		23 33 40.4	
HYF	**Humbligny**	**4.51**	**22**	*e*Pn	**Pn**	**23 32 25.2**	**+0.7**
HYF				*e*Sg	**Sg**	**23 33 40.4**	**-0.9**
SSF	**Saint Saulge**	**4.61**	**30**	*e*Pn	**Pn**	**23 32 26.2**	**+0.4**
SSF				*e*Sg	**Sg**	**23 33 43.0**	**-1.3**
	1.8nm,0.3s						
SSF	**Saint Saulge**	**4.61**	**30**	Pn	**Pn**	**23 32 26.2**	**+0.4**
SSF				Lg		23 33 43.0	
	0.9nm,0.3s						
SSF	**Saint Saulge**	**4.61**	**30**	Pn	**Pn**	**23 32 26.2**	**+0.4**
SSF				Lg		23 33 43.0	
	0.9nm,0.3s						
SSF	**Saint Saulge**	**4.61**	**30**	*e*Pn	**Pn**	**23 32 26.2**	**+0.4**
SSF				*e*Sg	**Sg**	**23 33 43.0**	**-1.3**
	0.9nm,0.3s						
PAB	**San Pablo**	**4.92**	**225**	Pn	**Pn**	**23 32 30.9**	**+0.7**
PAB	**San Pablo**	**4.92**	**225**	Pn	**Pn**	**23 32 30.9**	**+0.7**
ECAL	**Calabor**	**5.24**	**260**	Pn	**Pn**	**23 32 35.9**	**+1.3**
ECAL				Sn	**Sn**	**23 33 33.3**	**-1.5**
ECAL	**Calabor**	**5.24**	**260**	Pn	**Pn**	**23 32 35.9**	**+1.3**
	0.2nm,0.1s,SNR=7.9						
ECAL				Sn	**Sn**	**23 33 33.3**	**-1.5**
	4.5nm,0.4s,SNR=7.9						
ECAL	**Calabor**	**5.24**	**260**	Pn	**Pn**	**23 32 35.9**	**+1.3**
	0.2nm,0.1s,SNR=7.9						
ECAL				Sn	**Sn**	**23 33 33.3**	**-1.5**
	4.5nm,0.4s,SNR=7.9						
ECAL	**Calabor**	**5.24**	**260**	Pn	**Pn**	**23 32 35.9**	**+1.4**
	0.2nm,0.1s,SNR=7.9						
ECAL				Sn	**Sn**	**23 33 33.3**	**-1.5**
	4.5nm,0.4s,SNR=7.9						

BJI ***20*** *00:02:21.0, 18°.80N×102°.90W, h64km, mB5.1/2*
MEX ***20*** *00:02:22.6±0.4, 18°.57N×102°.91W, h70km±7km, MD4.5*
IDC ***20*** *00:02:22.0±0.7, 18°.79N×102°.63W, h62km±4km, mb3.9/16, mb1 4.1/16, mb1mx4.1/21, mbtmp3.9/16, MS3.6/2, Ms1 3.6/2, ms1mx3.3/26, Error ellipse: s-maj=24.9km s-min=12.4km az=60.0*
NEIC ***20*** *00:02:22.0, 18°.76N×102°.95W, h65km, mb4.4/54, MD4.4(MEX), After MEX.*
NEIC Felt at Zihuatanejo.
ISCJB ***20*** *00:02:23.5±0.5, 18°.68N±0°.04×102°.72W±0°.03, h97km±4km, mb4.3/52, Error ellipse: s-maj=7.3km s-min=2.6km az=37.1*
ISC 20 00:02:24.8±0.5, 18°.68N±0°.04×102°.73W±0°.03, h96km±3km, h64km±2.9km:pP-P, n319, σ0°97/336, mb4.3/52, 94C-76D, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.70**	**236**	*i* P	**Pn**	**00 02 34.0**	**-7.8**
MMIG				*e*S	**Sn**	**00 02 43.5**	**-11**
MOIG	**Morelia**	**1.76**	**56**	*i* P	**Pn**	**00 02 51.4**	**-2.7**
MOIG				*e*S	**Sn**	**00 03 12.8**	**-3.7**
MOIG	**Morelia**	**1.76**	**56**	*i* P	**Pn**	**00 02 52.2**	**-1.9**
MOIG				*i* S	**Sn**	**00 03 16.6**	**+0.2**
CAIG	**El Cayaco**	**2.86**	**124**	*i* P	**Pn**	**00 03 06.1**	**-2.4**
CAIG				*e*S	**Sn**	**00 03 40.6**	**-1.6**
CAIG	**El Cayaco**	**2.86**	**124**	*i* P	**Pn**	**00 03 05.9**	**-2.6**
CAIG				*i* S	**Sn**	**00 03 39.2**	**-3.0**
ANIG	**Ahuacatlan**	**2.90**	**325**	*e*P	**Pn**	**00 03 05.3**	**-3.7**
ANIG				*i* S	**Sn**	**00 03 38.0**	**-5.1**
MEIG	**Mezcala**	**3.05**	**104**	*i* P	**Pn**	**00 03 09.2**	**-1.9**
MEIG				*i* S	**Sn**	**00 03 45.2**	**-1.7**
PLIG	**Platanillo**	**3.08**	**95**	*i* P	**Pn**	**00 03 10.0**	**-1.4**
PLIG				*e*S	**Sn**	**00 03 47.6**	**+0.1**
PLIG	**Platanillo**	**3.08**	**95**	*i* P	**Pn**	**00 03 10.0**	**-1.4**
PLIG				*e*S	**Sn**	**00 03 47.6**	**+0.1**
ACX	**Acapulco**	**3.28**	**123**	*i* P	**Pn**	**00 03 09.0**	**-5.2**
UNM	**Universidad Na**	**3.42**	**79**	*i* P	**Pn**	**00 03 16.1**	**0.0**
UNM				*e*S	**Sn**	**00 03 57.0**	**+1.2**
UNM	**Universidad Na**	**3.42**	**79**	*i* P	**Pn**	**00 03 16.1**	**0.0**
UNM				*e*S	**Sn**	**00 03 57.0**	**+1.2**
YAIG	**Yautepec**	**3.48**	**86**	*e*P	**Pn**	**00 03 16.4**	**-0.4**
YAIG				*i* S	**Sn**	**00 03 57.3**	**+0.2**
DEIG	**Demacu**	**3.84**	**65**	*e*P	**Pn**	**00 03 21.3**	**-0.4**
DEIG				*i* S	**Sn**	**00 04 06.3**	**+0.4**
PPM	**Popocatepetl**	**3.91**	**84**	*i* P	**Pn**	**00 03 23.1**	**+0.5**
PPM				*i* S	**Sn**	**00 04 09.8**	**+2.3**
PNIG	**Pinotepa**	**4.95**	**117**	*i* P	**Pn**	**00 03 35.1**	**-1.7**
PNIG				*e*S	**Sn**	**00 04 33.9**	**+1.0**
PNIG	**Pinotepa**	**4.95**	**117**	*i* P	**Pn**	**00 03 35.1**	**-1.7**
PNIG				*i* S	**Sn**	**00 04 31.6**	**-1.2**
TPIG	**Tehuac#an**	**5.10**	**92**	*i* P	**Pn**	**00 03 39.1**	**+0.3**
TPIG				*i* S	**Sn**	**00 04 37.4**	**+0.8**
VHO	**Vista Hermosa**	**5.94**	**105**	*i* P	**Pn**	**00 03 50.8**	**+0.7**
VHO				*i* S	**Sn**	**00 04 57.0**	**+0.2**
LVIG	**Laguna Verde**	**6.06**	**79**	*e*P	**Pn**	**00 03 51.8**	**0.0**
LVIG				*i* S	**Sn**	**00 05 00.7**	**+0.9**
LNIG	**Linares**	**6.89**	**26**	*i* P	**Pn**	**00 04 02.9**	**-0.2**
LNIG				*i* S	**Sn**	**00 05 20.8**	**+0.8**
HUIG	**Huatulco**	**6.96**	**114**	*i* P	**Pn**	**00 04 03.9**	**-0.3**
HUIG				*i* S	**Sn**	**00 05 21.7**	**-0.2**
CMIG	**Matias Romero**	**7.64**	**101**	P	**Pn**	**00 04 13.4**	**+0.1**
	18nm,0.3s,baz=273,slow=9.9,SNR=226						
CMIG				S	**Sn**	**00 05 38.4**	**0.0**
	12nm,0.3s,baz=129,slow=21,SNR=7.5						
CMIG				LR	LR	00 07 26.6	
	comp=Z,726nm,20.7s,baz=79,slow=40						
TGIG		**9.35**	**100**	*e*P	**Pn**	**00 04 36.0**	**-0.7**
PCIG		**9.56**	**107**	*e*P	**Pn**	**00 04 40.3**	**+0.7**
TXAR	**Lajitas Array**	**10.64**	**356**	P	**Pn**	**00 04 55.0**	**+0.9**
	0.4nm,0.3s,baz=176,slow=12,SNR=62						
627A	**Terlingua Ranc**	**10.74**	**357**	⇑P	**Pn**	**00 04 56.3**	**+0.8**
	baz=10,SNR=42						
628A	**Black Gap, Mar**	**10.76**	**359**	⇑P	**Pn**	**00 04 56.6**	**+0.9**
	baz=10,SNR=9.9						
626A	**Big Bend Ranch**	**10.90**	**354**	⇓P	**Pn**	**00 04 58.9**	**+1.3**
	baz=11,SNR=11						
526A	**Mary Lane Ranc**	**11.39**	**354**	P	**Pn**	**00 05 05.5**	**+1.1**
	baz=11,SNR=42						
428A	**Kincaid Ranch,**	**11.99**	**0**	⇓P	**Pn**	**00 05 13.1**	**+0.8**
	baz=12,SNR=8.6						
JCT	**Junction City**	**12.04**	**12**	*e*Pn	**Pn**	**00 05 13.2**	**+0.2**
427A	**Hayter Ranch,**	**12.13**	**357**	⇑P	**Pn**	**00 05 15.3**	**+1.0**
	baz=12,SNR=5.4						
425A	**Indio Mountain**	**12.22**	**351**	⇑P	**Pn**	**00 05 16.1**	**+0.6**
	baz=12,SNR=14						
APG	**El Apazote**	**12.30**	**105**	P	**Pn**	**00 05 19.1**	**+2.5**
APG				S	**Sn**	**00 07 31.9**	**0.0**
APG				LR	LR	00 10 18.0	
	comp=Z,165nm,19.7s,baz=93,slow=39						
326A	**Caldwell Ranch**	**12.63**	**355**	⇑P	**Pn**	**00 05 21.9**	**+1.1**
	baz=12						
328A	**Wristen Ranch,**	**12.64**	**360**	⇓P	**Pn**	**00 05 22.7**	**+1.6**
	baz=12,SNR=5.3						
325A	**Bean Ranch, Si**	**12.79**	**351**	⇑P	**Pn**	**00 05 22.5**	**-0.5**
	baz=13,SNR=22						
324A	**Moseley Ranch,**	**12.95**	**349**	⇑P	**Pn**	**00 05 25.0**	**0.0**
	baz=13,SNR=8.5						
MNTX	**Cornudas Mount**	**13.18**	**350**	*e*Pn	**Pn**	**00 05 28.2**	**+0.2**
227A	**Bennet, Jal**	**13.28**	**358**	⇓P	**Pn**	**00 05 36.9**	**+7.4**
	baz=13,SNR=9.1						
226A	**Malaga, Loving**	**13.38**	**355**	⇓P	**Pn**	**00 05 31.2**	**+0.5**
	baz=13						
225A	**Deer Hill, Car**	**13.50**	**352**	P	**Pn**	**00 05 33.4**	**+1.1**
	baz=13,SNR=5.2						
GDL2	**Guadalupe Moun**	**13.54**	**354**	*e*Pn	**Pn**	**00 05 34.3**	**+1.5**
	10nm,0.8s						
224A	**Cornudas Mount**	**13.57**	**350**	P	**Pn**	**00 05 33.8**	**+0.6**
	baz=13,SNR=17						
320A	**Kipp Ranch, An**	**13.64**	**339**	⇓P	**Pn**	**00 05 34.7**	**+0.5**
	baz=14,SNR=8.6						
127A	**Arkansas Junct**	**13.95**	**358**	⇑P	**Pn**	**00 05 37.9**	**-0.2**
	baz=14						
127A				⇑P		00 05 43.2	
	baz=14,SNR=11						
126A	**Clayton Basin,**	**13.95**	**355**	⇑P	**Pn**	**00 05 43.1**	**+4.9**
	baz=14,SNR=9.9						
319A	**Douglas**	**13.96**	**336**	⇑P	**Pn**	**00 05 38.6**	**+0.4**
	baz=14,SNR=9.4						
125A	**Gardner Draw,**	**14.02**	**353**	⇑P	**Pn**	**00 05 39.9**	**+0.7**
	baz=14						
125A				⇓P		00 05 44.7	
	baz=14,SNR=14						
220A	**Playas Peak, P**	**14.16**	**339**	⇓P	**Pn**	**00 05 40.9**	**0.0**
	baz=14,SNR=15						
124A	**Stringfield Ra**	**14.17**	**351**	⇓P	**Pn**	**00 05 41.9**	**+0.9**
	baz=14,SNR=38						
**318A

WMOK	Wichita Mounta	16.37	12	*e*Pn	Pn	00 06 09.1	+0.3
	7.3nm,0.8s						
WMOK				*e*S	S	00 09 03.0	-13
Y18A	Canyon Day Jun	16.39	338	⇓P	Pn	00 06 09.2	+0.2
	baz=16,SNR=12						
ANMO	Albuquerque	16.54	349	P	Pn	00 06 13.6	+2.8
	0.2nm,0.3s,baz=166,slow=12,SNR=26						
ANMO	Albuquerque	16.54	349	*e*Pn	Pn	00 06 12.6	+1.8
	9.8nm,0.9s						
W25A	X Bar L Ranch,	16.54	355	⇓P	Pn	00 06 10.9	0.0
	baz=16,SNR=8.1						
Z16A	Peralta Trail,	16.54	334	⇓P	Pn	00 06 10.8	-0.1
	baz=16						
Y17A	Roosevelt	16.62	336	⇑P	Pn	00 06 11.8	0.0
	baz=16,SNR=7.1						
W24A	Lazy 6 Ranch,	16.63	352	⇑P	Pn	00 06 12.5	+0.5
	baz=16,SNR=27						
W23A	Werner Place,	16.69	350	⇓P	Pn	00 06 12.9	+0.2
	baz=16,SNR=11						
114A	Black Gap (USA	16.71	329	⇑P	Pn	00 06 13.8	+0.8
	baz=17						
X19A	St. Johns	16.73	341	⇓P	Pn	00 06 14.1	+0.9
	baz=17,SNR=7.6						
Y16A	Circle Bar Ran	17.03	334	⇑P	Pn	00 06 17.1	+0.2
	baz=17,SNR=13						
V24A	Rampart Ranch,	17.12	353	⇑P	Pn	00 06 17.8	-0.3
	baz=17,SNR=10						
W20A	Ramah	17.16	344	⇓P	Pn	00 06 18.8	+0.3
	baz=17,SNR=17						
V25A	Rancho No Teng	17.17	355	⇑P	Pn	00 06 18.3	-0.2
	baz=17						
X17A	Forest Lakes	17.17	337	⇓P	Pn	00 06 19.2	+0.6
	baz=17,SNR=14						
113A	Mohawk Valley,	17.17	327	⇑P	Pn	00 06 18.8	+0.1
	baz=17,SNR=7.9						
Z14A	Wintersburg	17.24	330	⇓P	Pn	00 06 18.4	-1.1
	baz=17						
V23A	Ortiz Mt. (NFS	17.27	351	⇓P	Pn	00 06 19.9	+0.1
	baz=17,SNR=6.9						
W19A	Sanders	17.40	341	⇓P	Pn	00 06 21.7	+0.3
	baz=17,SNR=7.3						
Y15A	Casa Rosa Ranc	17.46	332	⇓P	Pn	00 06 22.2	+0.1
	baz=17,SNR=7.5						
X16A	Lo Mia Camp, P	17.48	335	⇑P	Pn	00 06 22.6	+0.1
	baz=17,SNR=12						
W18A	Petrified Fore	17.51	341	⇓P	Pn	00 06 23.1	+0.3
	baz=17,SNR=6.7						
V22A	San Miguel Ran	17.56	349	⇓P	Pn	00 06 22.9	-0.4
	baz=17,SNR=14						
U25A	Circle Dot Ran	17.71	356	⇑P	Pn	00 06 24.4	-0.7
	baz=18,SNR=12						
MIAR	Mount Ida	17.78	25	*e*Pn	Pn	00 06 24.8	-1.3
	9.1nm,1.0s						
V20A	Brimhall	17.79	345	⇓P	Pn	00 06 25.7	-0.4
	baz=18,SNR=5.9						
U23A	El Rito	17.84	351	⇑P	Pn	00 06 25.7	-1.1
	baz=18,SNR=12						
X15A	Humboldt	17.87	334	⇑P	Pn	00 06 27.1	0.0
	baz=18,SNR=12						
GLA	Glamis	17.95	325	*e*P	Pn	00 06 27.3	-0.9
	15nm,1.5s						
U22A	Llaves	18.00	349	⇑P	Pn	00 06 28.4	-0.2
	baz=18,SNR=7.1						
V18A	Ganado	18.12	341	⇑P	Pn	00 06 29.7	-0.3
	baz=18,SNR=12						
X14A	Yava	18.14	332	⇑P	Pn	00 06 30.1	-0.3
	baz=18,SNR=5.0						
U21A	Nageezi	18.20	347	⇑P	Pn	00 06 32.5	+1.5
	baz=18,SNR=44						
V17A	Tonalea, Kykot	18.32	339	⇑P	Pn	00 06 32.1	-0.4
	baz=18,SNR=28						
U20A	Newcomb	18.35	345	⇑P	Pn	00 06 32.2	-0.6
	baz=18,SNR=5.3						
WUAZ	Wupatki	18.43	337	⇑P	Pn	00 06 33.5	-0.3
	baz=18,SNR=26						
WUAZ	Wupatki	18.43	337	*e*P	Pn	00 06 35.3	+1.5
	45nm,0.8s						
T25A	Trinidad	18.45	356	⇓P	Pn	00 06 32.7	-1.3
	baz=18						
U19A	Dine' College,	18.45	343	⇓P	Pn	00 06 33.6	-0.4
	baz=18,SNR=7.9						
T23A	Casias Ranch,	18.51	352	⇑P	Pn	00 06 32.8	-1.9
	baz=18,SNR=5.5						
T22A	Edith	18.62	350	⇓P	Pn	00 06 35.3	-0.8
	baz=18,SNR=9.7						
T21A	Navajo Lake	18.72	348	⇑P	Pn	00 06 36.6	-0.7
	baz=18,SNR=12						
U18A	Rough Rock, Ch	18.75	342	⇑P	Pn	00 06 36.8	-0.8
	baz=19,SNR=6.6						
W14A	Seligman	18.85	333	⇑P	Pn	00 06 38.2	-0.6
	baz=19,SNR=11						
T19A	Beclabito	18.91	344	⇑P	Pn	00 06 38.6	-0.9
	baz=19,SNR=13						
U16A	Tuba City	18.91	339	⇓P	Pn	00 06 38.6	-0.8
	baz=19,SNR=10						
S25A	Robets Cordova	18.97	356	⇓P	Pn	00 06 38.3	-1.8
	baz=19,SNR=7.6						
V15A	Kaibab Nationa	19.00	336	⇑P	Pn	00 06 39.6	-1.0
	baz=19,SNR=10						
S24A	Houchin Ranch,	19.01	354	⇑P	Pn	00 06 39.2	-1.5
	baz=19,SNR=21						
MVCO	Mesa Verde	19.14	346	⇑P	Pn	00 06 41.2	-1.0
	baz=19,SNR=38						
MVCO	Mesa Verde	19.14	346	*e*P	Pn	00 06 41.8	-0.4
	38nm,0.8s						
SDCO	Great Sand Dun	19.15	353	*e*P	Pn	00 06 41.3	-0.9
	29nm,1.4s						
U17A	Shonto	19.16	340	⇓P	Pn	00 06 41.4	-1.1
	baz=19,SNR=8.7						
V14A	Boquillas Ranc	19.22	334	⇑P	Pn	00 06 42.6	-0.6
	baz=19,SNR=16						
PFO	Pinyon Flat Ob	19.27	323	⇓P	Pn	00 06 42.5	-1.4
	baz=19						
PFO	Pinyon Flat Ob	19.27	323	P	Pn	00 06 42.0	-1.8
	5.5nm,1.1s						
S22A	4UR Ranch, Cre	19.33	350	⇑P	Pn	00 06 42.8	-1.7
	baz=19,SNR=21						
T18A	Mexican Hat	19.42	343	⇑P	Pn	00 06 43.6	-2.0
	baz=19,SNR=14						
T17A	Navajo Res., N	19.57	340	⇑P	Pn	00 06 46.0	-1.4
	baz=19,SNR=15						
U15A	North Rim	19.58	336	⇑P	Pn	00 06 46.4	-1.0
	baz=19,SNR=10						
R24A	Sanders Place,	19.59	354	⇑P	Pn	00 06 45.4	-2.1
	baz=19,SNR=12						
S20A	Disappointment	19.70	347	⇓P	Pn	00 06 46.7	-2.1
	baz=20						
OXF	Oxford	19.73	34	*e*P	Pn	00 06 46.1	-3.0
	40nm,0.9s						
V13A	Grand Canyon W	19.78	332	⇑P	Pn	00 06 48.4	-1.4
	baz=20						
R22A	Saguache, Gunn	19.79	351	⇑P	Pn	00 06 48.1	-1.7
	baz=20						
T16A	Glen Canyon Da	19.79	339	⇑P	Pn	00 06 48.3	-1.5
	baz=20						
S19A	Harvey Farm, M	19.80	345	⇑P	Pn	00 06 48.0	-2.0
	baz=20						
U14A	Mt Trumbull	19.92	335	⇑P	Pn	00 06 49.7	-1.7
	baz=20,SNR=27						
S18A	Hurst Farm, Bl	19.97	343	⇑P	Pn	00 06 49.9	-2.0
	baz=20,SNR=30						
PV01	Paradox Valley	20.04	346	*e*P	P	00 06 50.6	+0.5
	771nm,1.1s						
R20A	Redvale	20.05	347	⇑P	P	00 06 50.2	0.0
	baz=20,SNR=9.0						
R21A	Cimarron	20.06	349	⇑P	P	00 06 50.6	+0.3
	baz=20,SNR=7.5						
LRAL	Lakeview Retre	20.08	42	*e*P	P	00 06 50.3	-0.3
	24nm,0.8s						
T15A	Red Dirt Ranch	20.14	337	⇓P	P	00 06 51.5	+0.4
	baz=20						
S17A	Black Ridge (B	20.16	341	⇓P	P	00 06 52.2	+0.8
	baz=20						
Q25A	Bedland, Calha	20.20	357	⇓P	P	00 06 51.8	-0.1
	baz=20,SNR=10						
CBKS	Cedar Bluff	20.23	7	*e*P	P	00 06 51.8	-0.4
	35nm,0.7s						
U13A	Pakoon Wash	20.25	333	P	P	00 06 53.4	+1.0
	baz=20,SNR=9.3						
R19A	Curley Farm, L	20.35	345	⇑P	P	00 06 53.4	-0.1
	baz=20,SNR=28						
PV04	Paradox Valley	20.36	346	*e*P	P	00 06 53.5	-0.1
Q22A	Crested Butte,	20.43	351	⇑P	P	00 06 54.2	-0.1
	baz=20,SNR=6.6						
T14A	Hurricane	20.44	336	⇑P	P	00 06 55.2	+0.8
	baz=20						
V11A	Goodsprings	20.44	329	⇑P	P	00 06 55.0	+0.5
	baz=20						
S16A	Weppner Ranch,	20.49	340	⇑P	P	00 06 54.8	-0.2
	baz=20						
R18A	Canyonlands Na	20.60	344	⇓P	P	00 06 56.1	0.0
	baz=20,SNR=13						
GSC	Goldstone	20.73	326	⇑P	P	00 06 57.8	+0.3
	baz=21						
GSC	Goldstone	20.73	326	*e*P	P	00 06 58.2	+0.7
	34nm,1.8s						
T13A	Saint George	20.74	334	⇓P	P	00 06 58.4	+0.7
	baz=21,SNR=10						
SMCO	Snowmass	20.75	351	*e*P	P	00 06 58.9	+1.2
	8.2nm,0.9s						
Q20A	Ridgley Place,	20.77	348	⇑P	P	00 06 58.3	+0.3
	baz=21						
R17A	Hanksville Air	20.86	342	⇑P	P	00 06 58.3	-0.6
	baz=21,SNR=10						
CCUT	Cedar City	20.98	336	*e*P	P	00 07 03.9	+3.7
	4.4nm,0.8s						
ISCO	Idaho Springs	21.19	354	*e*P	P	00 07 02.4	0.0
	8.3nm,1.1s,mb4.0						
S13A	Holt Ranch, En	21.20	335	⇑P	P	00 07 03.2	+0.6
	baz=21,SNR=8.0						
ARUT	Antelope Range	21.21	336	*e*P	P	00 07 03.8	+1.1
	14nm,0.7s,mb4.4						
LRMC	Laurel Mountai	21.33	325	⇓P	P	00 07 04.0	0.0
	baz=21						
Q18A	Rafter H Ranch	21.34	344	⇑P	P	00 07 03.8	-0.2
	baz=21						
MSU	Marysvale	21.40	339	*e*P	P	00 07 05.1	+0.4
SRU	San Rafael	21.45	343	⇓P	P	00 07 05.5	+0.2
	baz=21,SNR=5.4						
SRU	San Rafael	21.45	343	*e*P	P	00 07 05.9	+0.7
	6.9nm,0.8s,mb4.0						
Q16A	Castle Valley	21.45	342	⇑P	P	00 07 04.9	-0.4
	baz=21,SNR=8.5						
S12A	Delamar Landin	21.63	333	⇓P	P	00 07 07.1	-0.1
	baz=22						
O22A	Kremmling	21.66	352	⇓P	P	00 07 06.6	-0.9
	baz=21						
MPMC	Manual Prospec	21.66	326	⇑P	P	00 07 07.7	+0.2
	baz=22,SNR=7.7						
CCM	Cathedral Cave	21.75	25	*e*P	P	00 07 07.7	-0.7
	8.0nm,0.6s,mb4.2						
R13A	O'Grain Ranch,	21.76	336	⇑P	P	00 07 07.6	-1.0
	baz=22,SNR=5.6						
TMUT	Trail Mountain	21.81	342	*e*P	P	00 07 09.7	+0.6
	7.8nm,0.4s,mb4.4						
P17A	Butcher Ranch,	21.85	343	⇑P	P	00 07 09.4	0.0
	baz=22						
P18A	Preston Nutter	21.86	344	P	P	00 07 10.0	+0.4
	baz=22,SNR=7.3						
ISA	Isabella	21.91	324	*e*P	P	00 07 12.2	+2.1
	29nm,1.5s,mb4.4						
FVM	French Village	22.03	27	*e*P	P	00 07 10.4	-1.0
	9.9nm,0.7s,mb4.2						
SWET	Sewanee	22.20	39	*e*P	P	00 07 11.8	-1.5
Q14A	Sevier Lake (B	22.21	338	⇑P	P	00 07 14.1	+0.8
	baz=22						
O19A	Miners Draw (B	22.23	347	⇓P	P	00 07 13.4	-0.2
	baz=22						
VES	Vestal, Richgr	22.38	323	⇑P	P	00 07 16.1	+0.9
	baz=22,SNR=8.5						
Q13A	Wheeler Ranch,	22.45	336	⇓P	P	00 07 16.2	+0.3
	baz=22						
O17A	Robinson Place	22.52	344	⇓P	P	00 07 16.4	-0.1
	baz=22						
R11A	Troy Canyon, C	22.57	333	⇑P	P	00 07 17.0	-0.1
	baz=22,SNR=7.9						
GOGA	Godfrey	22.63	46	*e*P	P	00 07 16.5	-1.3
	14nm,0.7s,mb4.4						
P14A	Drum Mountains	22.67	339	⇓P	P	00 07 17.7	-0.4
	baz=22,SNR=6.8						
S10A	Tonopah Range,	22.67	331	⇓P	P	00 07 17.8	-0.4
	baz=22						
N19A	John Jarvie Ra	22.82	347	⇑P	P	00 07 18.3	-1.3
	baz=23,SNR=7.3						
R10A	Warm Springs	22.84	332	⇑P	P	00 07 19.9	0.0
	baz=23						
DAU	Daniels Canyon	22.86	343	*e*P	P	00 07 20.0	-0.1
	5.8nm,0.9s,mb3.9						
P13A	Bates Ranch, G	22.89	337	⇓P	P	00 07 20.2	-0.2
	baz=23						
DUG	Dugway	23.13	340	⇓P	P	00 07 21.8	-0.8
	baz=23						
DUG	Dugway	23.13	340	*e*P	P	00 07 23.4	+0.8
	7.6nm,1.2s,mb3.9						
CPCT	Cooper Cave	23.21	40	*e*P	P	00 07 21.9	-1.5
P12A	McGill	23.24	336	⇓P	P	00 07 23.7	+0.1
	baz=23						
OLIL	Olney	23.68	29	*e*P	P	00 07 27.3	-0.3
	20nm,0.6s,mb4.6						
TKL	Tuckaleechee C	23.81	41	P	P	00 07 27.9	-0.9
	17nm,0.7s,mb4.5,baz=204,slow=9.7,SNR=27						
TKL	Tuckaleechee C	23.81	41	*e*P	P	00 07 27.7	-1.1
N14A	Grayback Hills	23.85	340	⇑P	P	00 07 28.2	-0.9
	baz=24						
NVAR	Mina Array Bea	23.89	329	P	P	00 07 30.6	+1.0
	3.0nm,0.7s,mb3.8,baz=158,slow=8.3,SNR=21						
WCI	Wyandotte Cave	24.18	33	*e*P	P	00 07 31.0	-1.2
	19nm,0.6s,mb4.6						
K20A	Yellowstone Ra	24.37	350	⇓P	P	00 07 32.2	-1.6
	baz=24						
ELK	Elko	24.47	337	P	P	00 07 36.3	+1.5
	1.3nm,0.8s,mb3.3,baz=164,slow=13,SNR=4.1						
M14A	Sheep Mountain	24.49	341	⇑P	P	00 07 33.2	-1.7
	baz=24						
WAKR	Walker	24.52	327	*e*P	P	00 07 36.9	+1.6
HDIL	Hopedale	24.67	25	*e*P	P	00 07 36.0	-0.6
	32nm,0.8s,mb4.8						
BW06	Boulder Array	24.70	348	*e*P	P	00 07 37.3	+0.5
	3.4nm,0.8s,mb3.8						
PDAR	Pinedale Array	24.70	348	P	P	00 07 36.2	-0.6
	2.5nm,0.8s,mb3.7,baz=157,slow=8.1,SNR=18						
PDAR				pP		00 07 53.3	
	1.8nm,0.8s,baz=161,slow=9.4,SNR=4.7						
PDAR				sP	sP	00 08 00.3	-8.9
	2.1nm,0.9s,baz=134,slow=11,SNR=4.5						
BLO	Bloomington	24.79	31	*e*P	P	00 07 36.5	-1.1
	28nm,0.6s,mb4.9						
M12A	Wells	24.94	338	⇑P	P	00 07 38.6	-0.4
	baz=25,SNR=11						
K15A	Arbon	25.33	343	⇑P	P	00 07 42.2	-0.3
	baz=25						
ECSD	EROS Data Cent	25.50	10	*e*P	P	00 07 43.3	-0.8
	6.0nm,1.0s,mb4.0						
TPAW	Teton Pass	25.68	346	*e*P	P	00 07 46.2	+0.5
	8.9nm,1.1s,mb4.1						
LOHW	Long Hollow	25.72	347	*e*P	P	00 07 46.1	0.0
	4.2nm,0.6s,mb4.0						
J15A	Blackfoot	25.96	344	⇑P	P	00 07 47.6	-0.7
	baz=26						
JFWS	Jewell Farm	26.37	21	*e*P	P	00 07 52.0	+0.1
	8.5nm,0.6s,mb4.3						
J12A	Stokes Ranch,	26.62	340	⇓P	P	00 07 54.1	-0.1
	baz=26						
MOD	Modoc	27.56	331	*e*P	P	00 08 03.5	+0.9
BOZ	Bozeman (W)	27.88	347	⇑P	P	00 08 04.1	-1.3
	baz=28						
BOZ	Bozeman (W)	27.88	347	*e*P	P	00 08 05.2	-0.2
J08A	Circle Bar Ran	27.95	335	⇑P	P	00 08 06.2	0.0
	baz=28						
F16A	Kennard Place,	28.01	347	⇑P	P	00 08 05.5	-1.2
	baz=28						
LRM	Limekiln Ridge	28.24	346	*e*P	P	00 08 08.7	+0.1
F15A	Butte	28.26	346	⇑P	P	00 08 08.0	-0.8
	baz=28,SNR=6.2						
E17A	Martinsdale	28.50	348	⇓P	P	00 08 10.0	-1.0
	baz=28						
AAM	Ann Arbor	28.58	30	*e*P	P	00 08 10.9	-0.8
	47nm,0.8s,mb5.2						
F13A	Darby	28.69	343	⇓P	P	00 08 11.9	-0.7
	baz=28,SNR=6.1						
E15A	Deer Lodge	28.85	346	⇓P	P	00 08 12.8	-1.2
	baz=29						
F12A	Elk City	28.93	342	⇓P	P	00 08 13.6	-1.1
	baz=29						
D18A	Linhart Farms,	29.02	350	⇓P	P	00 08 14.6	-0.9
	baz=29						
D17A	Six Diamond Ra	29.13	349	⇓P	P	00 08 15.3	-1.2
	baz=29						
E13A	Victor	29.25	344	⇓P	P	00 08 16.2	-1.4
	baz=29						
DGMT	Dagmar	29.73	358	⇑P	P	00 08 19.3	-2.5
	baz=30						
AGMN	Agassiz Nation	30.06	9	*e*P	P	00 08 24.0	-0.8
	6.0nm,0.5s,mb4.5						
OTAV	Otavalo	30.07	125	*e*P	P	00 08 29.0	+3.8
	9.0nm,1.3s,mb4.2						
EYMN	Ely	30.59	15	*e*P	P	00 08 27.7	-1.7
	7.6nm,0.4s,mb4.8						
A17A	Triple J Farms	30.87	350	⇓P	P	00 08 30.7	-1.1
	baz=31						
ULM	Lac du Bonnet	31.97	8	P	P	00 08 40.3	-1.2
	2.4nm,0.4s,mb4.3,baz=181,slow=6.4,SNR=3.0						
SDV	Santo Domingo	32.61	103	*e*P	P	00 08 49.6	+2.1
	3.0nm,0.4s,mb4.5						
SJG	San Juan	34.68	85	*e*P	P	00 09 06.0	+0.5
	30nm,0.8s,mb5.2						
MTP	Monte Pirata	35.25	85	*e*P	P	00 09 10.9	+0.5
	60nm,1.1s,mb5.3						
YKA	Yellowknife Ar	44.54	352	P	P	00 10 25.6	-1.1
	0.8nm,0.3s,mb3.9,baz=162,slow=7.2,SNR=11						
YKA				pP	pP	00 10 42.6	-6.6
	0.9nm,0.6s,baz=155,slow=7.3,SNR=3.1						
YKA				sP	sP	00 10 49.1	-11
	0.9nm,0.7s,baz=157,slow=8.5,SNR=2.7						
YKA	Yellowknife Ar	44.54	352	P	P	00 10 25.6	-1.1
YKA				pP	pP	00 10 42.6	-6.6
YKA				sP	sP	00 10 49.1	-11
SCHQ	Schefferville	45.25	29	P	P	00 10 31.3	-1.2
	6.5nm,0.7s,mb4.5,baz=232,slow=6.1,SNR=9.5						
LPAZ	La Paz	48.66	133	P	P	00 11 00.9	+1.5
	1.6nm,0.7s,mb4.0,baz=322,slow=4.3,SNR=9.8						
LPAZ				pP	pP	00 11 16.6	-5.7
	0.7nm,0.6s,baz=261,slow=7.1,SNR=2.6						
LPAZ				sP	sP	00 11 25.0	-8.0
	1.9nm,1.1s,baz=221,slow=13,SNR=2.2						
EGAK	Eagle	52.70	340	*e*P	P	00 11 29.5	+0.4
	8.1nm,1.1s,mb4.7						
KDAK	Kodiak Island	53.39	329	P	P	00 11 34.9	+0.6
	2.0nm,0.4s,mb4.5,baz=312,slow=15,SNR=3.3						
ILAR	Eielson Array	54.61	339	P	P	00 11 43.2	+0.2
	5.0nm,0.8s,mb4.6,baz=146,slow=6.2,SNR=38						
ILAR				PcP	PcP	00 12 45.6	+0.8
	0.9nm,0.7s,baz=168,slow=2.2,SNR=7.2						
TRF	Thorofare Moun	55.11	336	*e*P	P	00 11 47.4	+0.7
	17nm,0.7s,mb5.2						
CPUP	Villa Florida	62.82	134	P	P	00 12 41.4	+0.8
	2.2nm,0.5s,mb4.3,baz=306,slow=7.0,SNR=13						
PETK	Petropavlovsk-	80.85	323	P	P	00 14 29.3	+1.2
	1.3nm,0.4s,mb4.1,baz=78,slow=9.6,SNR=10						
PETK				pP	pP	00 14 46.0	-6.9
	5.7nm,1.0s,baz=80,slow=14,SNR=6.8						
PETK				sP	sP	00 14 53.6	-10
	2.8nm,0.7s,baz=84,slow=8.7,SNR=4.5						
EVO	Evora	82.16	52	*e*P	P	00 14 35.0	-0.3
	12nm,0.9s,mb4.4						
QUIF	Quistinic	82.55	42	*e*P	P	00 14 38.5	+1.4
FLN	La Foliniere	83.94	41	*e*P	P	00 14 45.1	+0.9
LDF	La Druitiere	84.22	41	*e*P	P	00 14 47.0	+1.3
ARCES	ARCESS Array B	84.74	16	P	P	00 14 48.7	+0.9
	3.2nm,0.6s,mb4.4,baz=284,slow=4.3,SNR=45						
ARCES	ARCESS Array B	84.74	16	P	P	00 14 48.7	+0.9
ARE0	ARCESS Array S	84.74	16	*e*P	P	00 14 48.8	+0.9
ESDC	Sonseca Array	84.78	50	P	P	00 14 49.6	+1.0
	0.4nm,0.5s,mb3.6,baz=304,slow=5.0,SNR=6.8						
NB2	NORSAR Subarra	84.79	27	P	P	00 14 49.5	+1.3
	comp=Z,1.1nm,0.7s,mb3.9,baz=308,slow=5.1						
NOA	NORSAR Array B	84.79	27	P	P	00 14 50.0	+1.8
	comp=Z,1.1nm,0.8s,mb3.9,baz=308,slow=5.1,SNR=4.4						
MFF	Saint Martin d	84.94	42	*e*P	P	00 14 49.7	+0.4
SJPF	Ste Jean	85.51	46	*e*P	P	00 14 52.7	+0.5
ETSF	Etsaut	86.04	46	*e*P	P	00 14 55.8	+0.9
	comp=Z,7.2nm,0.8s,mb4.3						
ETSF	Etsaut	86.04	46	*e*P	P	00 14 55.8	+0.9
	comp=Z,3.6nm,0.8s,mb4.3						
LFF	La Frestale	86.14	44	*e*P	P	00 14 56.0	+0.7
	comp=Z,22nm,1.0s,mb4.7						
LFF	La Frestale	86.14	44	*e*P	P	00 14 56.0	+0.7
	comp=Z,11nm,1.0s,mb4.7						
BAIF	Baives	86.25	38	*e*P	P	00 14 57.2	+1.5
RJF	Les Rejaudoux	86.51	43	*e*P	P	00 14 57.7	+0.6
	comp=Z,9.3nm,0.8s,mb4.4						
RJF	Les Rejaudoux	86.51	43	*e*P	P	00 14 57.7	+0.6
	comp=Z,4.7nm,0.8s,mb4.5						
TCF	Toulx Ste Croi	86.57	42	*e*P	P	00 14 57.6	+0.2
EPF	Esparros	86.60	46	*e*P	P	00 14 58.3	+0.7
	comp=Z,2.7nm,0.5s,mb4.1						
EPF	Esparros	86.60	46	*e*P	P	00 14 58.3	+0.7
	comp=Z,1.4nm,0.5s,mb4.2						
BGF	Bois d'Agland	86.86	42	*e*P	P	00 14 59.9	+1.1
	comp=Z,10nm,0.8s,mb4.5						
BGF	Bois d'Agland	86.86	42	*e*P	P	00 14 59.9	+1.1
	comp=Z,5.1nm,0.8s,mb4.5						
SSF	Saint Saulge	87.07	41	*e*P	P	00 15 00.0	+0.2
LOR	Lormes	87.20	41	*e*P	P	00 15 00.2	-0.2
	comp=Z,5.1nm,0.6s,mb4.3						
LOR	Lormes	87.20	41	*e*P	P	00 15 00.2	-0.2
	comp=Z,2.5nm,0.6s,mb4.3						
MTLF	Montolieu	87.75	45	*e*P	P	00 15 03.9	+0.8
LASF	Ste Croix	88.53	44	*e*P	P	00 15 07.0	+0.2
VIVF	Saint-Julien-l	88.73	43	*e*P	P	00 15 08.8	+1.0
MBDF	Montbardon	90.13	42	*e*P	P	00 15 15.1	+0.8
	comp=Z,7.5nm,0.9s,mb4.5						
MBDF	Montbardon	90.13	42	*e*P	P	00 15 15.1	+0.8
	comp=Z,3.8nm,0.9s,mb4.5						
FINES	FINESS Array B	90.36	22	P	P	00 15 14.9	-0.1
	comp=Z,0.9nm,0.8s,mb4.0,baz=310,slow=2.8,SNR=6.3						
HHC

baz=256
NSK S Sg 00 05 12.7 -0.5
baz=256
NNS Nan Shan 1.01 247 P Pg 00 05 01.6 -0.3
baz=231
NNS S Sg 00 05 14.8 -0.3
baz=231
WHF Hehuan Shan 1.24 236 P Pn 00 05 05.6 -0.5
baz=232
WHF eS Sb 00 05 21.8 -0.5
baz=232
TWT Tachien 1.25 242 eP Pn 00 05 06.3 0.0
baz=229
NSTT Nanjuang 1.28 261 eP Pn 00 05 06.5 -0.2
baz=277
NSTT eS Sb 00 05 22.0 -1.5
baz=277
IRIF Iriomote-Funau 1.32 112 P Pn 00 05 07.1 -0.1
HATJ Hateruma jima 1.51 121 P Pn 00 05 10.7 +0.9
TWQ1 Liyutan 1.55 252 eP Pn 00 05 10.4 0.0
baz=267
TWQ1 eS Sn 00 05 30.6 -0.2
baz=267
JKRS Kuro-shima 1.59 112 P Pn 00 05 12.1 +1.1
SMLT Sun Moon Lake 1.66 235 eP Pn 00 05 12.8 +0.8
baz=232
SMLT eS Sn 00 05 33.4 -0.1
baz=232
JIJ Ishigaki jima 1.67 106 S Sn 00 05 32.4 -1.1
TYC Yuchr 1.68 236 eP Pn 00 05 12.4 +0.2
baz=234
TYC eS Sn 00 05 34.8 +0.8
baz=234
CHN5 Tsauling 2.00 232 eP Pn 00 05 17.5 +1.0
baz=230

*ISCJB **20** 00:33:53.7±0.7, 4°.00S±0°.05×130°.82E±0°.06, h58km±9km, mb3.9/8, Error ellipse: s-maj=10.1km s-min=7.2km az=154.2*
*DJA **20** 00:33:57, 3°.84S×130°.81E, h100km, MLv4.7/8*
*NEIC **20** 00:33:59.2±2.6, 4°.18S×130°.91E, h102km±29km, mb4.2/2, Error ellipse: s-maj=24.3km s-min=13.5km az=219.0*
*IDC **20** 00:34:03.2±6.5, 3°.98S×130°.76E, h124km±67km, mb3.5/7, mb1 3.8/9, mb1mx3.6/19, mbtmp3.7/9, Error ellipse: s-maj=47.8km s-min=17.9km az=52.0*
ISC 20 00:33:55.5±0.6, 4°.03S±0°.05×130°.82E±0°.06, h57km±8km, n34, σ1§23/43, mb3.9/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**2.48**	**130**	P	**Pn**	**00 34 39.0**	**+5.4**
AAI	**Ambon**	**2.65**	**277**	P	**Pn**	**00 34 37.2**	**+1.5**
SWI	**Sorong**	**3.18**	**8**	P	**Pn**	**00 34 41.5**	**-1.6**
NLAI	**Namlea**	**3.80**	**282**	P	**Pn**	**00 34 53.9**	**+2.3**
LBMI	**Labuha**	**4.73**	**315**	P	**Pn**	**00 35 02.9**	**-1.5**
TNTI	**Ternate**	**5.89**	**324**	P	**Pn**	**00 35 19.3**	**-1.0**
0.4nm91nm,0.8s							
BAKI	**Biak**	**5.99**	**62**	P	**Pn**	**00 35 21.3**	**-0.2**
0.5nm1μm102nm,0.7s							
SMPI	**Sarmi**	**8.13**	**76**	P	**Pn**	**00 35 52.8**	**+1.8**
3μm22nm,1.2s							
KAKA	**Kakadu**	**8.77**	**170**	eP	**Pn**	**00 36 00.8**	**+1.1**
24nm,0.3s							
KAKA				eS	**Sn**	**00 37 29.1**	**-8.0**
KAKA	**Kakadu**	**8.77**	**170**	ePn	**Pn**	**00 36 00.8**	**+1.1**
120nm,0.5s							
KAKA				eSn	**Sn**	**00 37 33.2**	**-3.9**
MRSI	**Marisa**	**9.94**	**297**	P	**Pn**	**00 36 14.9**	**-0.9**
88nm,0.5s							
KAPI	**Kappang**	**11.08**	**265**	P	**Pn**	**00 36 37.3**	**+6.0**
2.1nm,0.3s,baz=133,slow=5.8,SNR=8.6							
KNA	**Kununurra**	**11.82**	**190**	P	**Pn**	**00 36 41.7**	**+0.3**
FITZ	**Fitzroy Crossi**	**14.87**	**200**	eP	**Pn**	**00 37 21.8**	**-0.7**
5.6nm,0.3s							
FITZ				eS	**Sn**	**00 39 53.1**	**-13**
FITZ	**Fitzroy Crossi**	**14.87**	**200**	P	**Pn**	**00 37 22.9**	**+0.4**
0.9nm,0.3s,baz=36,slow=9.9,SNR=12							
FITZ				S	**Sn**	**00 39 57.4**	**-8.8**
1.3nm,0.3s,baz=141,slow=5.4,SNR=9.5							
FITZ	**Fitzroy Crossi**	**14.87**	**200**	ePn	**Pn**	**00 37 23.4**	**+0.9**
FITZ				eSn	**Sn**	**00 39 57.3**	**-8.9**
MYLDM	**Lahad Datu**	**15.34**	**307**	P	**Pn**	**00 37 27.3**	**-1.3**
46nm,1.4s							
COEN	**Coen**	**15.68**	**130**	ePn	**Pn**	**00 37 34.0**	**+1.1**
228nm,0.7s							
COEN				eSn	**Sn**	**00 40 19.0**	**-6.7**
COEN	**Coen**	**15.68**	**130**	P	**Pn**	**00 37 33.1**	**+0.2**
168nm,0.8s							
WRAB	**Tennant Creek**	**16.17**	**168**	ePn	**Pn**	**00 37 36.9**	**-2.2**
12nm,0.5s							
WRAB				eS	**S**	**00 40 28.8**	**-19**
WRAB	**Tennant Creek**	**16.17**	**168**	P	**Pn**	**00 37 37.7**	**-1.4**
WRA	**Warramunga Arr**	**16.18**	**168**	P	**Pn**	**00 37 36.8**	**-2.4**
1.1nm,0.3s,baz=352,slow=13,SNR=38							
WRA				S	**S**	**00 40 29.4**	**-19**
4.8nm,0.3s,baz=352,slow=22,SNR=14							
KKM	**Kota Kinabalu**	**17.69**	**304**	eP	**Pn**	**00 37 57.9**	**-0.2**
66nm,1.3s							
ASAR	**Alice Springs**	**19.74**	**172**	P	**Pn**	**00 38 24.1**	**+1.4**
4.2nm,0.3s,baz=351,slow=11,SNR=246							
ASAR				S	**S**	**00 41 46.6**	**-14**
0.3nm,0.3s,baz=350,slow=15,SNR=4.2							
MBWA	**Marble Bar**	**20.15**	**211**	eP	**P**	**00 38 26.3**	**+1.2**
CTA	**Charters Tower**	**21.93**	**138**	P	**P**	**00 38 48.0**	**+3.7**
4.7nm,0.7s,mb4.0,baz=320,slow=13,SNR=6.8							
STKA	**Stephens Creek**	**29.49**	**161**	P	**P**	**00 39 56.4**	**+2.1**
3.5nm,0.9s,mb4.1,baz=349,slow=10,SNR=4.4							
SONM	**Songino Array**	**55.92**	**340**	P	**P**	**00 43 29.0**	**+1.4**
0.1nm,0.3s,mb3.3,baz=134,slow=4.2,SNR=2.5							
PETK	**Petropavlovsk-**	**61.27**	**18**	P	**P**	**00 44 04.5**	**-0.1**
2.4nm,0.8s,mb4.4,baz=157,slow=4.9,SNR=4.6							
MK31	**Makanchi Array**	**66.23**	**326**	eP	**P**	**00 44 37.5**	**+0.1**
MKAR	**Makanchi Array**	**66.23**	**326**	P	**P**	**00 44 37.5**	**+0.1**
1.1nm,0.4s,mb4.2,baz=121,slow=8.1,SNR=18							
ZALV	**Zalesovo Beam**	**69.31**	**333**	P	**P**	**00 44 56.0**	**-0.7**
0.3nm,0.2s,mb3.8,baz=134,slow=6.4,SNR=3.0							
KURK	**Kurchatov**	**70.44**	**328**	eP	**P**	**00 45 03.6**	**-0.1**
1.9nm,0.7s,mb4.1							
ILAR	**Eielson Array**	**90.33**	**25**	P	**P**	**00 46 49.8**	**-0.2**
0.1nm,0.5s,mb3.4,baz=271,slow=4.6,SNR=3.2							

IDC 20 00:36:11.2±16.0, 11°.17S×164°.52E, h84km±162km, mb3.7/4, mb1 3.8/5, mbtmp3.7/5, ML4.2/1, MS3.3/1, Ms1 3.3/1, ms1mx2.6/20, Error ellipse: s-maj=116.7km s-min=60.1km az=145.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.82**	**291**	S	Sn	00 38 12.0	-4.1
18nm,0.3s,baz=37,slow=23,SNR=4.2							
HNR				LR	LR	00 39 05.0	
comp=Z,327nm,21.8s,baz=112,slow=36							
CTA	**Charters Tower**	**19.69**	**241**	P	Pn	00 40 34.0	-2.1
0.4nm,0.3s,baz=52,slow=12,SNR=4.2							
PETK	**Petropavlovsk-**	**64.28**	**355**	P	P	00 46 37.4	-0.1
2.4nm,0.8s,baz=146,slow=8.2,SNR=5.7							
SONM	**Songino Array**	**78.06**	**324**	P	P	00 48 01.5	+0.8
0.7nm,0.6s,baz=139,slow=6.6,SNR=4.9							
ILAR	**Eielson Array**	**84.01**	**19**	P	P	00 48 32.1	+0.2
0.8nm,0.8s,baz=230,slow=6.2,SNR=8.8							
MKAR	**Makanchi Array**	**92.79**	**317**	P	P	00 49 13.8	-0.6
0.5nm,0.6s,baz=101,slow=4.9,SNR=5.1							

*IDC **20** 01:03:11.2±1.8, 12°.06N×142°.48E, h0km, mb3.9/6, mb1 4.1/7, mb1mx3.7/25, mbtmp3.9/7, ML3.5/1, Error ellipse: s-maj=54.5km s-min=27.6km az=173.0*
*NEIC **20** 01:03:19.5±5.2, 12°.28N×142°.63E, h54km±34km, mb4.1/2, Error ellipse: s-maj=69.4km s-min=24.5km az=198.0*
ISC 20 01:03:11.9±7.0, 11°.8N±0°.4×142°.5E±0°.2, h9km±45km, n10, σ0§96/10, mb3.9/8, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.90**	**53**	Pn	**Pn**	**01 03 58.2**	**0.0**
7.9nm,0.3s,baz=201,slow=13,SNR=7.2							
GUMO				Sn	**Sn**	**01 04 33.5**	**+0.2**
18nm,0.3s,baz=359,slow=23,SNR=6.9							
MKAR	**Makanchi Array**	**61.15**	**317**	P	**P**	**01 13 28.0**	**+1.2**
0.2nm,0.5s,mb3.5,baz=88,slow=9.2,SNR=3.1							
KURK	**Kurchatov**	**64.44**	**321**	eP	**P**	**01 13 48.7**	**+0.2**
1.2nm,0.7s,mb4.0							

BVAR	**Borovoye Array**	**69.86**	**322**	P	**P**	**01 14 23.3**	**+0.3**
0.9nm,0.4s,mb4.0,baz=98,slow=7.7,SNR=7.0							
BRVK	**Borovoye**	**69.93**	**322**	eP	**P**	**01 14 23.8**	**+0.4**
1.7nm,0.6s,mb4.2							
ILAR	**Eielson Array**	**71.13**	**25**	P	**P**	**01 14 28.9**	**-1.5**
0.1nm,0.4s,mb3.1,baz=246,slow=5.8,SNR=6.2							
ARCES	**ARCESS Array B**	**88.01**	**342**	P	**P**	**01 16 01.5**	**-0.6**
2.2nm,1.0s,mb4.3,baz=69,slow=6.8,SNR=3.6							
NVAR	**Mina Array Bea**	**89.82**	**51**	P	**P**	**01 16 12.8**	**+1.5**
0.3nm,0.5s,mb3.9,baz=255,slow=6.4,SNR=3.2							
FINES	**FINESS Array B**	**91.74**	**334**	P	**P**	**01 16 18.1**	**-1.7**
0.9nm,0.9s,mb4.1,baz=69,slow=4.6,SNR=3.9							
LPAZ	**La Paz**	**149.99**	**102**	PKPbc	PKPbc	01 23 05.3	+1.5
0.5nm,0.5s,baz=292,slow=5.4,SNR=2.7							

*ISCJB **20** 01:14:09.7±0.7, 40°.74N±0°.07×52°.11E±0°.05, h33km, mb3.5/4, Error ellipse: s-maj=11.3km s-min=3.6km az=154.6*
*IDC **20** 01:14:12.8±4.3, 40°.43N×52°.03E, h34km±39km, mb3.4/4, mb1 3.4/9, mb1mx3.3/27, mbtmp3.4/9, ML4.1/4, Error ellipse: s-maj=34.6km s-min=16.8km az=147.0*
*CSEM **20** 01:14:13.8±0.7, 40°.84N×51°.92E, h46km±8km, mb3.7, Error ellipse: s-maj=23.4km s-min=7.1km az=153.0*
*NEIC **20** 01:14:13.0±1.4, 40°.73N×51°.94E, h38km±15km, mb3.5/2, Error ellipse: s-maj=22.0km s-min=7.1km az=159.0*
*NNC **20** 01:14:21.9±4.1, 41°.00N×53°.68E, h0km, mb3.7, Error ellipse: s-maj=35.8km s-min=26.3km az=26.0*
ISC 20 01:14:12.0±0.7, 40°.65N±0°.07×52°.11E±0°.05, h35km, n47, σ1§40/60, mb3.5/4, 5C-2D, Turkmenistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GALA	**Gala**	**1.51**	**261**	P	**Pn**	**01 14 40.6**	**+4.1**
NDR	**Nardaran**	**1.62**	**268**	P	**Pn**	**01 14 39.9**	**+2.0**
SNR=4.0							
SIZA	**Siyzn**	**2.47**	**281**	P	**Pn**	**01 14 51.8**	**+2.1**
SNR=4.2							
IML	**Ismayilli**	**2.99**	**274**	P	**Pn**	**01 14 56.3**	**-0.5**
GLBA	**Cilabad**	**3.19**	**245**	P	**Pn**	**01 14 56.3**	**-3.2**
SNR=5.2							
SEKA	**Sheki**	**3.76**	**280**	P	**Pn**	**01 15 07.3**	**-0.1**
SNR=13							
BRDA	**Brd**	**3.78**	**266**	P	**Pn**	**01 15 06.9**	**-0.8**
SNR=3.8							
BRDA				S	**Sn**	**01 15 50.7**	**-0.2**
GANJ	**Ganja**	**4.40**	**272**	P	**Pn**	**01 15 14.0**	**-2.2**
SNR=6.8							
DGRG	**David-gareji**	**5.16**	**281**	P	**Pn**	**01 15 26.3**	**-0.2**
DGRG				S	**Sn**	**01 16 28.2**	**+3.4**
MTA	**Mtatsminda**	**5.62**	**283**	P	**Pn**	**01 15 31.8**	**-1.2**
MTA				S	**Sn**	**01 16 38.6**	**+2.4**
GNI	**Garni**	**5.65**	**267**	ePn	**Pn**	**01 15 32.5**	**-0.8**
2.6nm,0.6s							
GNI	**Garni**	**5.65**	**267**	ePn	**Pn**	**01 15 32.5**	**-0.8**
2.6nm,0.6s							
TBLG	**Delisi**	**5.67**	**283**	P	**Pn**	**01 15 32.5**	**-1.1**
TBLG				S	**Sn**	**01 16 39.1**	**+1.8**
KIV	**Kislovodsk**	**7.72**	**298**	ePn	**Pn**	**01 16 02.1**	**+0.2**
KIV	**Kislovodsk**	**7.72**	**298**	ePn	**Pn**	**01 16 02.1**	**+0.3**
AB31	**Akbulak array**	**10.23**	**30**	Pn	**Pn**	**01 16 36.4**	**+0.2**
0.2nm,0.2s,baz=210,slow=13,SNR=40							
AB31				⇑Sn	**Sn**	**01 18 28.5**	**-1.0**
4.0nm,0.7s,baz=211,slow=24,SNR=10							
AB31	**Akbulak array**	**10.23**	**30**	Pn	**Pn**	**01 16 36.4**	**+0.2**
0.2nm,0.2s,baz=210,SNR=40							
AB31				Sn	**Sn**	**01 18 28.5**	**-1.0**
4.0nm,0.7s,baz=211,SNR=10							
ABKAR	**Akbulak array**	**10.23**	**30**	ePn	**Pn**	**01 16 36.2**	**+0.1**
1.1nm,0.3s							
ABKAR	**Akbulak array**	**10.23**	**30**	ePn	**Pn**	**01 16 36.2**	**0.0**
1.1nm,0.3s							
AKTK	**Aktyubinsk**	**10.62**	**21**	Pn	**Pn**	**01 16 43.0**	**+1.5**
AKTK				Sn	**Sn**	**01 18 37.0**	**-2.0**
AKTK	**Aktyubinsk**	**10.62**	**21**	Pn	**Pn**	**01 16 43.0**	**+1.5**
AKTK				Sn	**Sn**	**01 18 37.0**	**-2.0**
AKTO	**Aktyubinsk**	**10.62**	**21**	Pn	**Pn**	**01 16 43.0**	**+1.5**
1.1nm,0.3s,baz=206,slow=10,SNR=28							
AKTO				Sn	**Sn**	**01 18 37.0**	**-2.0**
1.2nm,0.3s,baz=209,slow=23,SNR=13							
KK31	**Karatay Array**	**13.93**	**74**	⇑Pn	**Pn**	**01 17 26.4**	**-0.3**
0.7nm,0.5s,baz=237,slow=62,SNR=4.0							
KK31				⇑Sn	**Sn**	**01 19 51.5**	**-8.5**
1.1nm,0.6s							
BR131	**Keskin Array S**	**14.15**	**272**	ePn	**Pn**	**01 17 29.3**	**-0.5**
BR131	**Keskin Array S**	**14.15**	**272**	ePn	**Pn**	**01 17 29.3**	**-0.5**
BRTR	**Keskin Array B**	**14.15**	**272**	Pn	**Pn**	**01 17 29.3**	**-0.5**
0.1nm,0.3s,baz=94,slow=13,SNR=2.5							
BRTR	**Keskin Array B**	**14.15**	**272**	Pn	**Pn**	**01 17 29.3**	**-0.5**
MMAI	**Mount Meron Ar**	**15.38**	**246**	Pn	**Pn**	**01 17 44.1**	**-2.2**
0.6nm,0.3s,baz=39,slow=18,SNR=4.4							
ARU	**Arti**	**16.34**	**13**	eP	**Pn**	**01 17 59.1**	**+0.7**
2.0nm,0.4s							
ARU	**Arti**	**16.34**	**13**	eP	**Pn**	**01 17 59.2**	**+0.7**
2.0nm,0.4s							
ZRNK	**Zerenda**	**16.83**	**37**	⇓Pn	**Pn**	**01 18 04.3**	**-0.4**
1.1nm,0.6s							
ZRNK				⇓Sn	**Sn**	**01 21 05.6**	**-4.8**
1.6nm,0.7s							
BVAR	**Borovoye Array**	**17.53**	**39**	Pn	**Pn**	**01 18 13.6**	**+0.3**
0.6nm,0.3s,baz=238,slow=9.4,SNR=15							
BVAR				Sn	**Sn**	**01 21 19.6**	**-7.6**
0.2nm,0.3s,baz=222,slow=23,SNR=3.2							
BVAR	**Borovoye Array**	**17.53**	**39**	Pn	**Pn**	**01 18 13.6**	**+0.3**
VOSK	**Vostochnaya**	**17.64**	**40**	⇑Pn	**Pn**	**01 18 15.5**	**+0.8**
2.3nm,1.0s							
VOSK				⇑Sn	**Sn**	**01 21 17.0**	**-13**
0.8nm,0.7s							
VOSK	**Vostochnaya**	**17.64**	**40**	Pn	**Pn**	**01 18 15.5**	**+0.8**
2.3nm,1.0s							
AKASG	**Malin Array Be**	**18.81**	**310**	Pn	**Pn**	**01 18 27.0**	**-2.0**
1.0nm,0.3s,baz=99,slow=8.5,SNR=4.0							
AKASG	**Malin Array Be**	**18.81**	**310**	Pn	**Pn**	**01 18 27.0**	**-2.0**
BUR08	**Bucovina Ar. S**	**20.47**	**299**	eP	**P**	**01 18 45.1**	**-1.3**
BUR08	**Bucovina Ar. S**	**20.47**	**299**	eP	**P**	**01 18 45.1**	**-1.3**
KURK	**Kurchatov**	**20.97**	**52**	eP	**P**	**01 18 53.5**	**+1.6**
2.0nm,0.9s							
KURK	**Kurchatov**	**20.97**	**52**	eP	**P**	**01 18 53.5**	**+1.7**
2.0nm,0.9s							
MKAR	**Makanchi Array**	**22.57**	**64**	P	**P**	**01 19 11.3**	**+2.3**
0.2nm,0.4s,mb2.9,baz=265,slow=12,SNR=3.7							
MKAR	**Makanchi Array**	**22.57**	**64**	P	**P**	**01 19 11.3**	**+2.3**
FINES	**FINESS Array B**	**26.15**	**331**	P	**P**	**01 19 46.4**	**+3.8**
0.7nm,0.4s,mb3.5,baz=130,slow=12,SNR=13							
HFS	**Hagfors**	**30.66**	**322**	P	**P**	**01 20 23.3**	**+0.5**
0.9nm,0.6s,mb3.8,baz=113,slow=11,SNR=4.1							
HFS	**Hagfors**	**30.66**	**322**	P	**P**	**01 20 23.3**	**+0.5**
ARCES	**ARCESS Array B**	**32.14**	**343**	P	**P**	**01 20 38.8**	**+3.1**
1.0nm,0.9s,mb3.6,baz=135,slow=10,SNR=3.1							

CASC 20 01:16:48.9±1.1, 13°.25N×89°.60W, h44km±19km, MD3.5, 5C-1D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNET	**Serv Nac Est T**	**0.57**	**40**	eP	Pn	01 17 00.6	0.0
SNET				eS	Sn	01 17 10.3	+1.2
BOQS	**Boqueron**	**0.58**	**33**	⇑eP	Pn	01 17 01.1	+0.3
BOQS				eS	Sn	01 17 10.6	+1.2
SBLS	**San Blas**	**0.59**	**358**	⇑eP	Pn	01 17 01.0	0.0
SNJE	**San Jose**	**0.62**	**360**	⇑eP	Pn	01 17 01.3	0.0
LFRS	**El Faro**	**0.65**	**55**	⇓iP	Pn	01 17 01.8	+0.1
RTR	**El Retiro**	**0.65**	**356**	⇑iP	Pn	01 17 01.8	0.0
LBRS	**Las Brisas**	**0.73**	**48**	eP	Pn	01 17 02.9	+0.1
SNVI	**San Vicente**	**0.83**	**64**	eP	Pn	01 17 04.2	+0.1
SNVI				eS	Sn	01 17 16.8	+1.5
RBDL	**Robledal**	**0.86**	**355**	⇑iP	Pn	01 17 04.2	-0.5
RBDL				eS	Sn	01 17 17.0	+0.9
MTO2	**Montecristo 2**	**1.17**	**12**	eP	Pn	01 17 08.2	-0.6
VSM	**San Miguel**	**1.31**	**82**	eP	Pn	01 17 11.2	+0.5
BLLM	**Bellamira**	**1.34**	**82**	eP	Pn	01 17 11.3	+0.1
BLLM				eS	Sn	01 17 29.6	+1.7
CAHU	**Cacacuatique**	**1.45**	**69**	eP	Pn	01 17 12.4	-0.3
NBG	**Las Nubes**	**1.51**	**332**	eP	Pn	01 17 14.4	+0.8
FUG	**Fuego 3**	**1.69**	**315**	eP	Pn	01 17 16.3	+0.3
FUG				eS	Sn	01 17 38.6	+2.2
FG6		**1.80**	**317**	eP	Pn	01 17 17.8	+0.3
FG6				eS	Sn	01 17 40.7	+1.6
MRL	**Marmol**	**1.81**	**357**	eP	Pn	01 17 18.3	+0.7

IDC 20 01:21:02.2±4.3, 2°.99S×131°.00E, h0km, mb3.6/2, mb1 3.6/3, mb1mx3.4/20, mbtmp3.4/3, ML2.8/1, MS3.5/1, Ms1 3.5/1, ms1mx2.5/27, Error ellipse: s-maj=303.7km s-min=29.1km az=72.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.16**	**169**	P	Pn	01 25 04.1	+0.6
0.0nm,0.3s,baz=350,slow=11,SNR=4.7							
ASAR	**Alice Springs**	**20.75**	**172**	P	P	01 25 44.3	-0.3
1.4nm,0.6s,baz=351,slow=10,SNR=16							
HNR	**Honiara**	**29.46**	**104**	LR	LR	01 38 05.8	
comp=Z,88nm,18.2s,baz=129,slow=35							
MKAR	**Makanchi Array**	**65.47**	**325**	P	P	01 31 47.3	+0.2
0.3nm,0.6s,baz=107,slow=7.8,SNR=4.3							

CASC 20 01:26:53.7±1.9, 8°.81N×82°.51W, h12km±3km, MD3.6, 3C-1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBS2		**0.15**	**266**	⇑iP	Pg	01 27 01.9	+4.7
TBS2				eS	Sg	01 27 05.4	+5.8
BRU2	**Volcan**	**0.18**	**267**	⇑iP	Pg	01 26 57.9	+0.2
BRU2				eS	Sg	01 27 02.0	+1.5
BAR1		**0.91**	**299**	eP	Pg	01 27 09.8	-1.5
BAR1				eS	Sg	01 27 23.0	-0.1
URSC	**Urasca**	**1.62**	**309**	⇓eP	Pn	01 27 22.1	-0.1
URSC				eS	Sn	01 27 44.6	+1.6
LAJ	**Bijagual**	**1.91**	**304**	eP	Pn	01 27 29.5	+3.4
PRS1	**Puriscal**	**2.13**	**303**	⇑eP	Pn	01 27 28.3	-0.9
PRS1				eS	Sn	01 27 55.8	+0.2
CGA2	**Cerro Gallo 2**	**2.28**	**302**	eP	Pn	01 27 30.9	-0.3
CGA2				eS	Sn	01 27 59.9	+0.6

IDC 20 01:33:47.9±4.0, 11°.25S×164°.62E, h0km, mb3.8/3, mb1 4.1/4, mb1mx3.7/18, mbtmp3.9/4, ML4.0/1, Error ellipse: s-maj=200.7km s-min=32.1km az=138.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**19.73**	**241**	P	Pn	01 38 20.8	+0.1
0.3nm,0.3s,baz=73,slow=10,SNR=4.5							
WRA	**Warramunga Arr**	**30.37**	**250**	P	P	01 40 00.7	-1.2
1.2nm,0.9s,baz=82,slow=9.2,SNR=6.0							
ASAR	**Alice Springs**	**31.71**	**243**	P	P	01 40 14.0	+0.4
2.5nm,1.1s,baz=63,slow=10,SNR=6.7							
ILAR	**Eielson Array**	**84.06**	**19**	P	P	01 46 20.3	+0.2
0.5nm,1.0s,baz=221,slow=5.7,SNR=4.2							

*IDC **20** 01:36:22.9±8.3, 36°.83N×143°.32E, h0km, mb3.6/3, mb1 3.5/4, mb1mx3.3/23, mbtmp3.5/4, ML3.2/1, Error ellipse: s-maj=155.4km s-min=50.9km az=151.0*
*NEIC **20** 01:36:26.7±10.0, 37°.21N×143°.17E, h10km, mb4.1/2, Error ellipse: s-maj=198.0km s-min=18.5km az=137.0*
*JMA **20** 01:36:30.0±0.1, 37°.30N×142°.71E, h29km, M3.6*
ISC 20 01:36:31.1±2.0, 37°.34N±0°.06×142°.60E±0°.09, h14km±16km, n20, σ0§86/30, mb3.7/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.38**	**272**	P	**Pn**	**01 36 55.2**	**-0.7**
JFK				eS	**Sb**	**01 37 13.0**	**-1.1**
ONAJ	**Iwakimizuishiy**	**1.46**	**261**	P	**Pn**	**01 36 56.0**	**-1.0**
JIO	**Ouri**	**1.49**	**319**	P	**Pn**	**01 36 56.8**	**-0.7**
JIO				eS	**Sn**	**01 37 16.6**	**-0.2**
JMM	**Marumori**	**1.53**	**291**	P	**Pn**	**01 36 57.3**	**-0.7**
JMM				eS	**Sn**	**01 37 17.2**	**-0.5**
JFT	**Otama**	**1.81**	**276**	P	**Pn**	**01 37 02.1**	**+0.2**
JFT				eS	**Sn**	**01 37 25.7**	**+1.0**
JOU	**Okura**	**1.84**	**304**	P	**Pn**	**01 37 02.7**	**+0.4**
JOU				eS	**Sn**	**01 37 26.8**	**+1.3**
JMK	**Ichinoseki**	**1.94**	**326**	P	**Pn**	**01 37 03.4**	**-0.3**
JMK				eS	**Sn**	**01 37 27.9**	**-0.1**
JOM	**Ohasama**	**2.37**	**335**	P	**Pn**	**01 37 09.1**	**-0.4**
JYK	**Kaneyama**	**2.37**	**312**	P	**Pn**	**01 37 09.9**	**+0.3**
JAG	**Ashikaga**	**2.68**	**251**	P	**Pn**	**01 37 13.7**	**-0.2**
JAG				eS	**Sn**	**01 37 45.7**	**-0.5**
JRY	**Ryogami san**	**3.25**	**247**	P	**Pn**	**01 37 21.3**	**-0.4**
JRY				eS	**Sn**	**01 37 58.4**	**-1.8**
MJAR	**Matsushiro Arr**	**3.61**	**259**	Pn	**Pn**	**01 37 28.2**	**+1.6**
1.3nm,0.3s,baz=90,slow=15,SNR=13							
MJAR				Sn	**Sn**	**01 38 14.6**	**+5.6**
0.9nm,0.3s,baz=150,slow=19,SNR=5.4							
MAJO	**Matsushiro**	**3.61**	**259**	ePn	**Pn**	**01 37 28.9**	**+2.4**
MAT	**Matsushiro**	**3.61**	**259**	P	**Pn**	**01 37 27.9**	**+1.3**
MAT				eS	**Sn**	**01 38 13.0**	**+4.0**
SONM	**Songino Array**	**28.41**	**303**	P	**P**	**01 42 25.2**	**+0.2**
0.8nm,0.6s,mb3.5,baz=110,slow=8.1,SNR=5.2							
ZALV	**Zalesovo Beam**	**42.41**	**312**	P	**P**	**01 44 25.2**	**+0.2**
0.3nm,0.3s,mb3.5,baz=105,slow=9.5,SNR=3.1							
MK31	**Makanchi Array**	**44.76**	**302**	eP	**P**	**01 44 43.7**	**-0.3**
MKAR	**Makanchi Array**	**44.76**	**302**	P	**P**	**01 44 44.3**	**+0.2**
0.3nm,0.5s,mb3.4,baz=87,slow=9.8,SNR=4.0							
KURK	**Kurchatov**	**46.49**	**308**	eP	**P**	**01 44 56.8**	**-0.9**
1.2nm,0.6s,mb4.0							
TKM2	**Tokmak 2**	**50.32**	**299**	eP	**P**	**01 45

DAV	Davao City (W)	1.44 358	P	Pn	01 52 44.3	+1.0
	130nm,0.3s,baz=108,slow=2.3,SNR=15					
DAV			S	Sn	01 53 07.8	+10
	100nm,0.3s,baz=241,slow=21,SNR=8.0					
DAV	Davao City (W)	1.44 358	P	Pn	01 52 44.3	+1.0
DAV			S	Sn	01 53 07.8	+10
DAV	Davao City (W)	1.44 358	P	Pn	01 52 45.1	+1.8
MATI	Mati	1.46 25	*e*P	Pn	01 52 43.2	-0.2
MATI			*e*S	Sn	01 52 57.4	-0.8
SGSI	Sangihe	1.92 183	P	Pn	01 52 47.9	-0.3
CTBH	Cotabato--PC H	2.11 319	⇑P	Pn	01 52 50.8	+0.5
CTBH			*i* S	Sn	01 53 18.9	+5.0
BUKP	Musuan	2.32 346	*e*P	Pn	01 52 53.4	+0.8
BUKP			*e*S	Sn	01 53 13.4	-5.6
PAGZ	Pagadian	3.15 315	*e*P	Pn	01 53 03.8	+1.2
PAGZ			*e*S	Sn	01 53 41.0	+2.1
TNTI	Ternate	5.11 160	P	Pn	01 53 26.5	-1.2
MRSI	Marisa	6.30 216	P	Pn	01 53 49.5	+6.2
	0.2nm1μm24nm,0.7s					
LBMI	Labuha	6.49 163	P	Pn	01 53 45.2	-0.5
	1.0nm3μm60nm,0.4s					
MYLDM	Lahad Datu	7.12 267	P	Pn	01 53 58.4	+4.3
	0.1nm22nm,1.0s					
SWI	Sorong	8.54 139	P	Pn	01 54 12.8	0.0
	1μm16nm,0.5s					
NLAI	Namlea	8.92 171	P	Pn	01 54 15.9	-1.9
TTSI	Tana Toraja	10.38 214	P	Pn	01 54 42.2	+5.2
	1μm14nm,0.8s					
BNSI	Bone	11.38 209	P	Pn	01 54 52.8	+2.8
KAKA	Kakadu	19.42 160	*e*P	P	01 56 25.8	+0.4
	22nm,0.6s					
KAKA	Kakadu	19.42 160	*e*P	P	01 56 25.5	+0.1
	65nm,0.6s					
FITZ	Fitzroy Crossi	23.57 180	*e*P	P	01 57 07.1	0.0
	12nm,0.4s,mb4.8					
FITZ	Fitzroy Crossi	23.57 180	P	P	01 57 07.2	+0.1
	4.6nm,0.3s,mb4.5,baz=5.2,slow=6.0,SNR=54					
FITZ	Fitzroy Crossi	23.57 180	*e*P	P	01 57 07.0	-0.2
	7.1nm,0.5s,mb4.5					
COEN	Coen	26.10 138	*e*P	P	01 57 29.9	-0.2
	76nm,1.2s,mb5.2					
ASAR	Alice Springs	30.20 165	P	P	01 58 06.4	-0.1
	1.6nm,0.5s,mb4.0,baz=345,slow=7.5,SNR=50					
ASAR			ScP	ScP	02 04 28.3	-0.9
	0.4nm,0.5s,baz=341,slow=2.9,SNR=8.3					
KSRS	Korea Array	31.75 3	P	P	01 58 20.6	+0.6
	2.3nm,0.8s,mb4.0,baz=187,slow=10,SNR=7.3					
CTA	Charters Tower	32.61 142	P	P	01 58 28.9	+1.3
	2.1nm,0.6s,mb4.0,baz=11,slow=10,SNR=3.0					
MAJO	Matsushiro	32.86 19	*e*P	P	01 58 28.1	-1.5
	3.2nm,0.6s,mb4.2					
MJAR	Matsushiro Arr	32.86 19	P	P	01 58 28.3	-1.3
	0.6nm,0.5s,mb3.6,baz=198,slow=8.9,SNR=4.4					
NWAO	Narrogin (SRO)	39.16 191	P	P	01 59 23.5	+0.4
	6.6nm,0.5s,mb4.6,baz=43,slow=6.7,SNR=9.9					
STKA	Stephens Creek	40.27 159	P	P	01 59 33.0	+0.7
	7.3nm,0.7s,mb4.4,baz=343,slow=8.1,SNR=10.0					
ASAJ	Asahikawa	41.14 19	P	P	01 59 40.7	+1.5
	2.8nm,0.3s,mb4.3,baz=243,slow=13,SNR=6.8					
PETK	Petropavlovsk-	54.12 23	P	P	02 01 20.8	+1.8
	1.2nm,0.5s,mb3.9,baz=188,slow=4.4,SNR=3.6					
MK31	Makanchi Array	55.40 325	*e*P	P	02 01 27.7	-0.6
MKAR	Makanchi Array	55.40 325	P	P	02 01 28.0	-0.4
	0.7nm,0.3s,mb3.9,baz=120,slow=8.2,SNR=8.7					
ZALV	Zalesovo Beam	58.42 333	P	P	02 01 48.2	-1.3
	0.3nm,0.3s,mb3.5,baz=85,slow=3.0,SNR=2.7					
BVAR	Borovoye Array	65.16 327	P	P	02 02 34.6	+0.1
	0.3nm,0.3s,mb3.6,baz=112,slow=6.7,SNR=4.1					
ILAR	Eielson Array	83.88 26	P	P	02 04 21.9	-0.2
	0.4nm,0.7s,mb3.2,baz=243,slow=4.9,SNR=4.8					
ARCES	ARCESS Array B	88.31 340	P	P	02 04 42.1	-1.6
	1.8nm,1.1s,mb3.8,baz=71,slow=5.8,SNR=2.7					

IDC 20 02:18:20.1±3.7, 11°.94S×65°.54E, h0km, mb3.8/2, mb1 4.0/2, mb1mx3.4/20, mbtmp3.8/2, Error ellipse: s-maj=331.4km s-min=31.2km az=32.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	65.61	111	P	P	02 29 07.3	+0.9
	0.6nm,0.7s,baz=269,slow=6.3,SNR=6.2						
WRA	Warramunga Arr	66.25	107	P	P	02 29 09.7	-0.9
	baz=271,slow=5.7						
ESDC	Sonseca Array	82.31	313	P	P	02 30 43.6	-0.2
	0.1nm,0.2s,baz=96,slow=4.4,SNR=6.3						
PDAR	Pinedale Array	148.99	353	PKPbc	PKPbc	02 38 10.0	-0.3
	1.3nm,1.1s,baz=8.5,slow=1.8,SNR=3.6						
NVAR	Mina Array Bea	153.39	7	PKPbc	PKPbc	02 38 22.0	+1.2
	0.7nm,0.7s,baz=220,slow=2.6,SNR=3.9						

WEL 20 02:18:33.7±0.2, 45°.14S×167°.37E, h123km±2km, ML3.5/8, 2C-1D, Error ellipse: s-maj=2.1km s-min=1.3km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	Deep Cove	0.37	205	PN	Pn	02 18 50.8	-0.4
DCZ				SN	Sn	02 19 03.4	-1.1
MLZ	Mavora Lakes	0.60	110	⇑PN	Pn	02 18 52.4	-0.1
MLZ				SN	Sn	02 19 06.3	-0.5
MSZ	Milford Sound	0.61	40	PN	Pn	02 18 52.8	+0.1
WHZ	Wether Hill Ro	0.85	152	PN	Pn	02 18 54.6	0.0
WHZ				SN	Sn	02 19 09.9	-0.6
PYZ	Puysegur Point	1.14	205	PN	Pn	02 18 57.4	+0.1
WKZ	Wanaka	1.21	76	PN	Pn	02 18 58.1	+0.1
EAZ	Earnscleugh	1.37	95	PN	Pn	02 18 59.6	-0.2
JCZ	Jackson Bay	1.45	43	PN	Pn	02 19 00.4	-0.3
APZ	The Paps	1.75	166	PN	Pn	02 19 03.8	-0.3
TUZ	Tuapeka	1.78	118	PN	Pn	02 19 04.3	-0.3
SYZ	Scrubby Hill	1.86	139	⇓PN	Pn	02 19 05.4	-0.2
LBZ	Lake Benmore	2.14	70	PN	Pn	02 19 07.5	-1.5
FOZ	Fox Glacier	2.29	47	PN	Pn	02 19 11.1	+0.3
ODZ	Otahua Downs	2.32	89	⇑PN	Pn	02 19 10.0	-1.2

*NEIC **20** 02:21:58.4, 37°.94S×176°.07E, h169km, MG3.7(WEL), After WEL.*

WEL 20 02:21:58.4±0.3, 37°.95S×176°.07E, h170km±2km, ML3.6/13, Error ellipse: s-maj=3.7km s-min=2.8km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	0.88	111	PN	Pn	02 22 24.4	+0.2
URZ				SN	Sn	02 22 44.0	+0.1
URZ	Urewera	0.88	111	P	Pn	02 22 24.4	+0.2
MWZ	Matawai	1.21	109	PN	Pn	02 22 27.1	+0.3
MWZ				SN	Sn	02 22 48.5	-0.1
MWZ	Matawai	1.21	109	P	Pn	02 22 27.1	+0.3
MWZ				S	Sn	02 22 48.5	-0.1
BKZ	Black Stump Fm	1.26	165	PN	Pn	02 22 27.4	+0.1
BKZ				SN	Sn	02 22 49.1	-0.5
BKZ	Black Stump Fm	1.26	165	P	Pn	02 22 27.4	+0.1
BKZ				S	Sn	02 22 49.1	-0.5
MOVZ	Moawhango	1.48	190	PN	Pn	02 22 29.3	0.0
MCHZ	McNeill Hill	1.57	162	PN	Pn	02 22 30.8	+0.6
MCHZ				SN	Sn	02 22 55.4	+0.6
KNZ	Kokohu	1.65	131	PN	Pn	02 22 30.9	-0.1
PRGZ	Paritu Road	1.73	125	PN	Pn	02 22 31.7	0.0
PUZ	Puketiti	1.73	95	PN	Pn	02 22 31.5	-0.4
PUZ	Puketiti	1.73	95	P	Pn	02 22 31.5	-0.3
MHGZ	Mahia Peninsul	1.88	131	PN	Pn	02 22 33.5	+0.1
CKHZ	Cape Kidnapper	1.88	156	PN	Pn	02 22 33.5	0.0
KAHZ	Kahuranaki	1.95	161	PN	Pn	02 22 34.2	0.0
PNHZ	Pukenui	1.97	177	PN	Pn	02 22 33.9	-0.5
WPHZ	Waipukurau	2.14	172	PN	Pn	02 22 35.6	-0.7
PXZ	Pawanui	2.17	164	PN	Pn	02 22 36.1	-0.6
PRHZ	Porangahau	2.36	169	PN	Pn	02 22 38.0	-0.9
POWZ	Post Office Ro	2.46	185	PN	Pn	02 22 38.5	-1.4
BFZ	Birch Farm	2.73	177	PN	Pn	02 22 41.5	-1.8
MRZ	Mangatainoka R	2.74	188	PN	Pn	02 22 41.4	-2.0
OGWZ	Otaki Gorge	2.95	193	PN	Pn	02 22 43.9	-2.0
HOWZ	Holdsworth Sta	2.98	188	PN	Pn	02 22 44.0	-2.3
KIW	Kapiti Island	3.05	197	PN	Pn	02 22 44.6	-2.5
KIW	Kapiti Island	3.05	197	P	Pn	02 22 44.6	-2.5
TMWZ	Te Maipa	3.16	182	PN	Pn	02 22 46.2	-2.3
MTW	Mount Morrison	3.24	188	PN	Pn	02 22 46.5	-3.0
MTW	Mount Morrison	3.24	188	P	Pn	02 22 46.5	-3.0
CAW	Cannon Point	3.25	193	PN	Pn	02 22 47.1	-2.6
CAW	Cannon Point	3.25	193	P	Pn	02 22 47.1	-2.6
TRWZ	Traveller	3.46	185	PN	Pn	02 22 49.4	-2.8
MSWZ	Moikau Station	3.52	190	PN	Pn	02 22 49.9	-3.1
MSWZ	Moikau Station	3.52	190	P	Pn	02 22 49.9	-3.1
PLWZ	Palliser	3.67	190	PN	Pn	02 22 51.5	-3.4
TUWZ	Tuamarina	3.85	205	PN	Pn	02 22 54.2	-3.0
NNZ	Nelson	3.87	212	PN	Pn	02 22 54.1	-3.4
KHZ	Kahutara	4.87	203	PN	Pn	02 23 06.6	-3.8
LTZ	Lake Taylor	5.64	210	PN	Pn	02 23 16.3	-4.1
LTZ	Lake Taylor	5.64	210	P	Pn	02 23 16.3	-4.1

*NIED **20** 02:22:00, 37°.50N×143°.10E, h17km, Mw4.6 Best double couple: M0 9.21000×10^15 NP1:φ0 7.00000°, δ62.00000°, λ77.00000°. NP2:φ0 213.00000°, δ31.00000°, λ113.00000°.*
*BJI **20** 02:22:52.6, 37°.59N×142°.75E, h12km, mB4.9/32, mb4.8/51, Ms4.5/43, Ms7 4.4/38*
*ISCJB **20** 02:22:53.0±0.8, 37°.52N±0°.03×142°.92E±0°.03, h16km±5km, mb4.7/113, MS4.4/42, Error ellipse: s-maj=5.3km s-min=3.5km az=144.9*
*JMA **20** 02:22:53.0±0.2, 37°.49N×143°.06E, h38km, M4.9*
*NEIC **20** 02:22:53.9±0.3, 37°.56N×142°.87E, h10km, mb4.8/52, MW4.6(NIED), Error ellipse: s-maj=9.1km s-min=5.2km az=162.0*
*IDC **20** 02:22:56.9±4.0, 37°.51N×142°.98E, h33km±30km, mb4.2/21, mb1 4.3/26, mb1mx4.3/29, mbtmp4.2/26, ML3.8/5, MS3.8/12, Ms1 3.9/12, ms1mx3.7/37, Error ellipse: s-maj=18.4km s-min=13.7km az=152.0*
*MOS **20** 02:22:57.2±0.9, 37°.82N×142°.72E, h33km, mb5.1/54, MS4.5/22, Error ellipse: s-maj=8.0km s-min=4.6km az=110.8*
*SZGRF **20** 02:23:07.7, 39°.51N×142°.71E, h33km, mb5.0, Near east coast of eastern Honshu, Japan*

ISC 20 02:22:55.0±0.9, 37°.54N±0°.03×142°.87E±0°.03, h17km±5km, h19km±2.6km: pP-P, n317, σ0 9.92/342, mb4.7/113, MS4.4/42, 53C-11D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	Ouri	1.51	308	⇑P	Pn	02 23 20.8	-0.4
JIO				*e*S	Sn	02 23 41.4	+0.9
JFK	Kawauchi	1.60	264	⇑P	Pn	02 23 21.9	-0.5
JFK				*e*S	Sn	02 23 43.0	+0.4
JMM	Marumori	1.68	282	⇑P	Pn	02 23 23.0	-0.5
ONAJ	Iwakimizuishiy	1.71	256	⇑P	Pn	02 23 23.3	-0.6
JMK	Ichinoseki	1.92	318	⇑P	Pn	02 23 26.3	-0.5
JOU	Okura	1.93	296	⇑P	Pn	02 23 27.2	+0.2
JOU				*e*S	Sn	02 23 52.8	+1.9
JFT	Otama	2.02	270	⇑P	Pn	02 23 28.5	+0.4
JOM	Ohasama	2.29	328	⇑P	Pn	02 23 31.3	-0.7
JOM				*e*S	Sn	02 24 00.0	+0.1
JYS	Shirataka	2.32	288	P	Pn	02 23 32.7	+0.3
JYK	Kaneyama	2.41	306	⇑P	Pn	02 23 33.7	+0.1
JFY	Yanaizu	2.52	268	⇑P	Pn	02 23 35.6	+0.5
JRG	Rokugo	2.56	317	⇑P	Pn	02 23 35.3	-0.3
JYA	Atsumi	2.71	294	⇑P	Pn	02 23 38.0	+0.4
JNS	Sasagawa	2.83	277	P	Pn	02 23 40.1	+0.7
JAG	Ashikaga	2.95	249	⇑P	Pn	02 23 41.0	-0.1
JAG				*e*S	Sn	02 24 16.8	+0.7
JAW	Awa shima	3.00	289	P	Pn	02 23 42.9	+1.1
JANG	Nango	3.02	340	P	Pn	02 23 40.4	-1.6
BSO1	Boso 1	3.26	209	⇓P	Pn	02 23 43.7	-1.6
BSO1				*e*S	Sn	02 24 21.7	-2.0
JRY	Ryogami san	3.53	246	P	Pn	02 23 48.7	-0.3
JRY				*e*S	Sn	02 24 29.8	-0.5
JOD2	Odawara 2	3.80	234	P	Pn	02 23 52.1	-0.6
MJAR	Matsushiro Arr	3.86	256	Pn	Pn	02 23 54.6	+1.1
	10.0nm,0.3s,baz=77,slow=12,SNR=195						
MJAR				LR	LR	02 25 22.9	
	comp=Z,1μm,19.4s,baz=80,slow=37						
MAJO	Matsushiro	3.86	257	*e*Pn	Pn	02 23 55.1	+1.6
MAT	Matsushiro	3.86	257	P	Pn	02 23 55.0	+1.5
MAT				*e*S	Sn	02 24 38.2	-0.3
JOT	Ohata	4.09	340	P	Pn	02 23 57.0	+0.3
ERM	Erimo	4.48	3	*c i*P	Pn	02 23 59.8	-2.2
ERM	Erimo	4.48	3	*e*Pn	Pn	02 23 58.8	-3.2
JHJ	Hachijo jima 2	5.08	211	Pn	Pn	02 24 11.0	+0.7
	45nm,0.3s,baz=238,slow=20,SNR=11						
JHJ				Sn	Sn	02 25 04.6	-4.0
	130nm,0.3s,baz=279,slow=23,SNR=9.9						
JHJ				LR	LR	02 25 43.8	
	comp=Z,255nm,20.9s,baz=100,slow=33						
ASAJ	Asahikawa	6.58	358	Pn	Pn	02 24 31.1	+0.2
	2.4nm,0.3s,baz=215,slow=15,SNR=18						
ASAJ				Sn	Sn	02 25 43.9	-1.5
	2.8nm,0.3s,baz=68,slow=31,SNR=4.3						
ASAJ				LR	LR	02 27 52.8	
	comp=Z,1μm,19.1s,baz=179,slow=45						
ASAJ	Asahikawa	6.58	358	P	Pn	02 24 31.1	+0.3
ASAJ						02 25 43.9	
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				smax			
	comp=N,3.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,1μm,19.1s						
KUR	Kuril'sk	8.55	24	*e*P	Pn	02 24 57.0	-0.9
KUR				*i* S	Sn	02 26 25.3	-8.7
KUR				smax			
	comp=N,130nm,0.7s						
KUR				smax			
	comp=E,260nm,0.7s						
KUR				MLR	MLR		
	comp=N,2μm,12.0s						
KUR				MLR	MLR		
	comp=E,3μm,12.0s						
KUR				MLR	MLR		
	comp=Z,2μm,12.0s						
YSS	Yuzh-Sakhalins	9.41	360	⇓*e*P	Pn	02 25 11.0	+1.3
YSS				*e*S	Sn	02 26 58.0	+3.0
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				MLR	MLR		
	comp=E,1μm,16.0s						
YSS				MLR	MLR		
	comp=Z,1μm,16.0s						
YSS				MLR	MLR		
	comp=N,900nm,17.0s						
YSS	Yuzh-Sakhalins	9.41	360	*e*Pn	Pn	02 25 11.1	+1.5
CBIJ	Chichi jima	10.43	183	Pn	Pn	02 25 19.3	-4.4
	comp=N,6.5nm,0.3s,baz=258,slow=20,SNR=2.7						
CBIJ				Sn	Sn	02 27 05.3	-15
	comp=N,41nm,0.3s,baz=327,slow=23,SNR=8.3						
CBIJ				LR	LR	02 29 07.7	
	comp=N,258nm,19.7s,baz=316,slow=36						
KSRS	Korea Array	11.88	274	Pn	Pn	02 25 46.7	+3.2
	comp=N,0.1nm,0.3s,baz=97,slow=14,SNR=14						
KSRS				LR	LR	02 30 05.5	
	comp=N,814nm,18.4s,baz=109,slow=36						
MDJ	Mudanjiang	12.26	309	P	Pn	02 25 48.3	-0.3
MDJ				pP		02 25 51.6	
MDJ				sP		02 25 54.8	
MDJ				S	Sn	02 28 04.1	-0.6
MDJ				ScP	ScP	02 35 04.8	+2.0
MDJ				PcS	PcS	02 35 05.8	+1.2
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,86nm,4.7s						
MDJ				LR	LR		
	comp=N,620nm,15.5s						
MDJ				LR	LR		
	comp=E,530nm,16.6s						
MDJ				LR	LR		
	comp=Z,1μm,15.5s						
HABR	Khabarovsk	12.33	335	*e*P	Pn	02 25 47.4	-2.2
HABR				*e*		02 28 03.9	
HABR				pmax	pmax		
	comp=E,16nm,1.4s						
HABR				pmax	pmax		
	comp=Z,36nm,1.2s						
HABR				pmax	pmax		
	comp=N,23nm,1.4s						
HABR				MLR	MLR		
	comp=Z,748nm,16.0s						
KLR	Kul'dur	14.19	329	*e*P	Pn	02 26 08.6	-6.4
KLR				MLR	MLR		
	comp=N,1μm,12.0s						
KLR				MLR	MLR		
	comp=Z,6μm,12.0s						
CN2	Changchun	14.62	301	*e*P	Pn	02 26 21.3	+0.5
CN2				*es*P	sP	02 26 28.0	-6.2
CN2				*e*S	Sn	02 29 00.8	-1.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,1μm,14.0s						
CN2				LR	LR		
	comp=E,900nm,14.0s						
CN2				LR	LR		
	comp=Z,1μm,15.0s						
SNY	Shenyang	15.46	292	⇑P	Pn	02 26 35.4	+3.4
SNY				pmax	pmax		
	comp=Z,11nm,1.3s						
SNY				LR	LR		
	comp=N,580nm,11.1s						
SNY				LR	LR		
	comp=E,1μm,13.2s						
SNY				LR	LR		
	comp=Z,1μm,14.1s						
DL2	Dalian	16.75	281	P	Pn	02 26 48.1	-0.6
DL2				pmax	pmax		
	comp=Z,20nm,1.2s						
DL2				pmax	pmax		
	comp=Z,150nm,5.3s						
DL2				LR	LR		
	comp=N,280nm,13.3s						
DL2				LR	LR		
	comp=E,360nm,13.2s						
DL2				LR	LR		
	comp=Z,430nm,18.2s						
PETK	Petropavlovsk-	18.68	29	P	Pn	02 27 11.9	-0.5
	comp=Z,0.1nm,0.3s,baz=182,slow=10,SNR=3.3						
SSE	Sheshan	19.01	257	P	Pn	02 27 15.5	-1.1
SSE				S	Sn	02 30 47.1	-2.0
SSE				pmax	pmax		
	comp=Z,27nm,0.7s						
SSE				pmax	pmax		
	comp=Z,160nm,4.5s						
SSE				LR	LR		
	comp=N,460nm,19.2s						
SSE				LR	LR		
	comp=E,170nm,19.2s						
SSE				LR	LR		
	comp=Z,350nm,19.2s						
NJ2	Nanjing	20.45	262	*e*P	P	02 27 33.3	+1.8
NJ2				pP		02 27 39.1	
NJ2				sP	sP	02 27 42.0	+3.4
NJ2				PP		02 27 54.3	
NJ2				S	S	02 31 16.0	-3.8
NJ2				sS	sS	02 31 23.5	-4.0
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,260nm,4.6s						
NJ2				LR	LR		
	comp=N,510nm,14.7s						
NJ2				LR	LR		
	comp=E,850nm,20.6s						
NJ2				LR	LR		
	comp=Z,590nm,12.3s,MS4.2						
TIA	Tai'an	20.62	274	⇓P	P	02 27 32.4	-1.0
BJI	Beijing	20.93	285	P	P	02 27 35.4	-1.3
BJI				S	S	02 31 31.3	+1.9
BJI				pmax	pmax		
	comp=Z,13nm,0.7s						
BJI				pmax	pmax		
	comp=Z,120nm,4.2s						
BJI				LR	LR		
	comp=N,280nm,15.0s,MS3.9						
BJI				LR	LR		
	comp=E,240nm,14.4s,MS3.9						
BJT	Baijiatuau	20.94	285	*e*P	P	02 27 35.8	-1.0
BJT				pmax	pmax		
	comp=Z,19nm,0.6s						
BJT	Baijiatuau	20.94	285	*e*P	P	02 27 35.8	-1.0
	comp=Z,19nm,0.6s						
CLNS	Chul'man	22.72	334	*e*P	P	02 27 54.4	-1.3
CLNS				*e*PP		02 28 02.9	
CLNS				*e*		02 28 16.9	
CLNS				*e*PPP		02 28 30.5	
CLNS				*e*SS		02 32 51.6	
CLNS				pmax	pmax		
	comp=Z,33nm,1.0s,mb4.7						
CLNS				pmax	pmax		
	comp=N,37nm,1.4s						
CLNS				pmax	pmax		
	comp=E,20nm,1.2s						
CLNS				pmax	pmax		
	comp=Z,31nm,1.0s,mb4.7						
CLNS				pmax	pmax		
	comp=N,24nm,0.9s						
CLNS				pmax	pmax		
	comp=E,23nm,1.1s						
CLNS				MLR	MLR		
	comp=Z,612nm,15.0s,MS4.2						
CLNS				MLR	MLR		
	comp=N,551nm,15.0s,MS4.3						
CLNS				MLR	MLR		
	comp=E,525nm,15.0s,MS4.3						
GUMO	Guam	23.92	175	LR	LR	02 36 40.4	
	comp=E,99nm,19.0s,MS3.3,baz=65,slow=34						
HHC	Hu-ho-hao-te	24.42	288	*e*P	P	02 28 12.3	-0.2
HHC				sP	sP	02 28 17.9	-1.9
HHC				PP		02 28 48.1	
HHC				PcP	PcP	02 31 53.3	+2.1
HHC				S	S	02 32 28.0	-3.6
HHC				sS	sS	02 32 34.1	-6.0
HHC				SS		02 33 21.0	
HHC				ScP	ScP	02 35 29.3	+0.2
HHC				PcS	PcS	02 35 31.3	+0.3
HHC				pmax	pmax		
	comp=Z,20nm,0.5s,mb4.8						
HHC				pmax	pmax		
	comp=Z,140nm,5.2s						
HHC				LR	LR		
	comp=N,1μm,11.0s,MS4.7						
HHC				LR	LR		
	comp=E,1μm,11.2s,MS4.7						
HHC				LR	LR		
	comp=Z,1μm,11.3s,MS4.6						
WHN	Wuhan	24.58	262	⇑P	P	02 28 13.5	-0.6
WHN				sP	sP	02 28 22.5	+1.1
WHN				pmax	pmax		
	comp=Z,100nm,1.0s,mb5.3						
WHN				pmax	pmax		
	comp=Z,300nm,9.9s						
WHN				LR	LR		
	comp=N,1μm,12.0s,MS4.8						
WHN				LR	LR		
	comp=E,1μm,11.8s,MS4.8						
WHN				LR	LR		
	comp=Z,2μm,12.7s,MS4.7						
CIT	Chita	25.14	315	*e*P	P	02 28 18.6	-0.3
CIT				*e*		02 28 29.0	
CIT				*e*		02 28 55.8	
CIT				pmax	pmax		
	comp=Z,251nm,1.9s,mb5.4						
YAK	Yakutsk	25.85	346	*e*P	P	02 28 23.2	-2.0
YAK				*e*PP	pP	02 28 34.5	+4.1
YAK				*e*		02 29 04.1	
YAK				*e*PPP		02 29 12.3	
YAK				*e*		02 32 02.5	
YAK				*e*S	S	02 32 55.5	+1.6
YAK				*e*SS		02 33 51.2	
YAK				pmax	pmax		
	comp=E,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,31nm,0.9s,mb4.8						
YAK				pmax	pmax		
	comp=N,14nm,1.4s						
YAK				pmax	pmax		
	comp=Z,4.0nm,0.2s,mb4.6						
YAK				smax			
	comp=N,67nm,3.2s						
YAK				smax			
	comp=E,34nm,1.8s						
YAK				MLR	MLR		
	comp=Z,540nm,16.0s,MS4.2						
YAK				MLR	MLR		
	comp=E,190nm,14.0s,MS4.1						
YAK				MLR	MLR		
	comp=N,357nm,15.0s,MS4.1				

XAN pP pP 02 28 50.4 +3.2
XAN pmax pmax
comp=Z,4.0nm,1.1s,mb4.0
ULN Ulaanbaatar 28.04 303 *e*P **P** **02 28 46.3 +1.2**
ULN pmax pmax
comp=Z,54nm,1.7s,mb4.9
ULN Ulaanbaatar 28.04 303 *e*P **P** **02 28 46.3 +1.1**
comp=Z,54nm,1.7s,mb4.9
SONM Songino Array 28.48 303 P **P** **02 28 50.0 +1.0**
comp=Z,14nm,0.9s,mb4.6,baz=106,slow=9.1,SNR=72
SONM LR LR 02 40 29.7
comp=Z,353nm,18.2s,MS4.0,baz=332,slow=37
ENH Enshi 28.53 265 *e*P **P** **02 28 50.1 +0.4**
comp=Z,83nm,1.1s,mb5.4
TLY Talaya 30.89 310 *e*P **P** **02 29 11.2 +0.9**
TLY *e* 02 30 18.2
TLY pmax pmax
comp=Z,12nm,1.0s,mb4.7
TLY MLR MLR
comp=Z,563nm,15.0s,MS4.3
TLY Talaya 30.89 310 *e*P **P** **02 29 11.3 +1.0**
comp=Z,9.4nm,0.9s,mb4.6
LZH Lanzhou 31.13 279 *e*P **P** **02 29 13.0 +0.4**
LZH pP pP 02 29 16.8 -1.0
LZH sP sP 02 29 18.3 -1.7
LZH PP PP 02 30 15.5 -7.4
LZH *e*S **S** **02 34 16.0 -1.5**
LZH sS sS 02 34 23.0 -3.1
LZH SS SS 02 35 59.6 -31
LZH pmax pmax
comp=Z,27nm,1.0s,mb5.0
LZH pmax pmax
comp=Z,150nm,5.0s
LZH LR LR
comp=E,690nm,13.7s
LZH LR LR
comp=Z,820nm,14.0s,MS4.5
GYA Guiyang 32.45 261 P **P** **02 29 26.0 +1.7**
GYA PP PP 02 30 33.3 -4.4
GYA PcP PcP 02 32 14.9 +3.6
GYA S **S** **02 34 40.0 +1.7**
GYA ScP ScP 02 35 57.6 +3.3
GYA SS SS 02 36 33.3 -25
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
GYA pmax pmax
comp=Z,110nm,4.9s
GYA LR LR
comp=N,450nm,17.9s,MS4.3
GYA LR LR
comp=E,320nm,18.6s,MS4.3
GYA LR LR
comp=Z,480nm,17.8s,MS4.2
MOY Mondy 32.51 309 *e*P **P** **02 29 25.0 +0.4**
MOY pmax pmax
comp=Z,21nm,2.4s,mb4.6
CD2 Chengdu 32.84 270 P **P** **02 29 27.3 -0.3**
CD2 pP pP 02 29 31.6 -1.3
CD2 sP sP 02 29 33.3 -1.7
CD2 PP PP 02 30 36.1 -5.8
CD2 S **S** **02 34 42.5 -1.7**
CD2 sS sS 02 34 49.5 -3.3
CD2 SS SS 02 36 39.0 -27
CD2 pmax pmax
comp=Z,20nm,0.9s,mb5.0
CD2 pmax pmax
comp=Z,150nm,5.3s
CD2 LR LR
comp=N,550nm,13.7s
CD2 LR LR
comp=Z,580nm,12.5s,MS4.5
BILL Bilibino 33.22 16 *e*P **P** **02 29 32.6 +2.0**
BILL *i* 02 30 44.0
BILL pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
BILL MLR MLR
comp=Z,200nm,18.0s,MS3.9
GTA Gaotai 33.53 287 *e*P **P** **02 29 34.4 +0.8**
GTA pP pP 02 29 38.9 +0.1
GTA sP sP 02 29 42.0 +1.0
GTA PP PP 02 30 46.3 -3.2
GTA S **S** **02 34 54.0 -0.8**
GTA sS sS 02 35 09.5 +6.0
GTA SS SS 02 36 59.0 -21
GTA pmax pmax
comp=Z,19nm,1.0s,mb5.0
GTA pmax pmax
comp=Z,140nm,5.7s
GTA LR LR
comp=N,210nm,16.4s,MS4.2
GTA LR LR
comp=E,380nm,17.5s,MS4.2
GTA LR LR
comp=Z,560nm,17.2s,MS4.3
DAV Davao City (W) 34.16 212 LR LR 02 44 20.2
comp=Z,134nm,18.3s,MS3.7,baz=113,slow=38
QIZ Qiongzhong 34.20 247 P **P** **02 29 39.3 -0.3**
QIZ sP sP 02 29 43.8 -3.1
QIZ S **S** **02 35 06.8 +1.3**
QIZ pmax pmax
comp=Z,12nm,1.5s,mb4.6
QIZ pmax pmax
comp=Z,45nm,3.3s
QIZ LR LR
comp=N,320nm,13.2s
QIZ LR LR
comp=E,54nm,8.2s
QIZ LR LR
comp=Z,260nm,18.1s,MS4.0
KMI Kunming 36.19 262 P **P** **02 29 56.8 +0.1**
KMI pP pP 02 30 03.0 +1.0
KMI sP sP 02 30 05.3 +1.2
KMI PP PP 02 31 20.9 +1.9
KMI S **S** **02 35 36.0 0.0**
KMI SS SS 02 37 59.3 -15
KMI pmax pmax
comp=Z,15nm,1.2s,mb4.8
KMI pmax pmax
comp=Z,85nm,5.7s
KMI LR LR
comp=N,220nm,13.4s,MS4.4
KMI LR LR
comp=E,440nm,15.3s,MS4.4
KMI LR LR
comp=Z,380nm,19.1s,MS4.2
WMQ Urumqi 41.65 297 P **P** **02 30 43.0 +0.7**
WMQ pP pP 02 30 47.5 -0.1
WMQ sP sP 02 30 50.0 +0.3
WMQ PP PP 02 32 22.5 +4.0
WMQ PcP PcP 02 32 41.0 +2.1
WMQ ScP ScP 02 36 29.4 +1.1
WMQ S **S** **02 36 57.8 -0.2**
WMQ sS sS 02 37 05.3 -1.4
WMQ SS SS 02 39 57.3 -5.9
WMQ ScS ScS 02 40 44.0 -0.8
WMQ pmax pmax
comp=Z,22nm,1.1s,mb4.7
WMQ pmax pmax
comp=Z,160nm,4.4s
WMQ LR LR
comp=N,150nm,15.6s,MS4.1
WMQ LR LR
comp=E,130nm,14.2s,MS4.1
WMQ LR LR
comp=Z,140nm,14.0s,MS4.0
ZALV Zalesovo Beam 42.44 312 P **P** **02 30 48.9 +0.3**
comp=Z,16nm,0.9s,mb4.7,baz=90,slow=7.4,SNR=58
ZALV PcP PcP 02 32 40.8 -0.5
comp=Z,2.9nm,0.7s,baz=88,slow=3.4,SNR=4.1
CHTO Chiang Mai 42.54 256 *e*P **P** **02 30 50.4 +0.6**
CHTO pmax pmax
comp=Z,12nm,1.2s,mb4.5
CHTO Chiang Mai 42.54 256 *e*P **P** **02 30 50.4 +0.5**
comp=Z,12nm,1.2s,mb4.5
CMAR Chiang Mai Arr 42.75 256 P **P** **02 30 52.2 +0.8**
comp=Z,2.3nm,0.8s,mb4.0,baz=49,slow=5.7,SNR=8.0
LSA Lhasa 43.32 275 *e*P **P** **02 30 50.1 -5.9**
LSA pmax pmax
comp=Z,8.0nm,0.5s,mb4.7
LSA Lhasa 43.32 275 *e*P **P** **02 30 50.1 -5.9**
comp=Z,8.1nm,0.5s,mb4.7
NVS Novosibirsk 43.34 313 *i*P **P** **02 30 54.7 -1.1**
SHL Shillong 44.57 270 *e*PKP **P** **02 31 06.0 -0.1**
MK31 Makanchi Array 44.84 302 *ce*P **P** **02 31 08.0 0.0**
MK31 pmax pmax
comp=Z,18nm,0.9s,mb4.9
MK31 Makanchi Array 44.84 302 *e*P **P** **02 31 08.3 +0.4**
MKAR Makanchi Array 44.84 302 P **P** **02 31 08.2 +0.3**
comp=Z,5.4nm,0.8s,mb4.5,baz=83,slow=10,SNR=40
MKAR LR LR 02 50 08.2
comp=Z,69nm,18.2s,MS3.6,baz=78,slow=36
KDAK Kodiak Island 45.95 42 P **P** **02 31 15.8 -0.8**
comp=Z,5.8nm,0.7s,mb4.6,baz=311,slow=6.4,SNR=7.7
KDAK Kodiak Island 45.95 42 *ce*P **P** **02 31 16.0 -0.6**
KURK Kurchatov 46.54 308 P **P** **02 31 20.8 -0.6**
KURK pmax pmax
comp=Z,30nm,0.7s,mb5.3
KURK Kurchatov 46.54 308 *e*P **P** **02 31 21.2 -0.2**
comp=Z,38nm,0.8s,mb5.4
ODAN Odare 47.54 274 *e*P **P** **02 31 29.9 +0.4**
RAMN Ramite 48.13 274 *e*P **P** **02 31 35.0 +1.0**
JIRN Jiri 48.13 276 *e*P **P** **02 31 35.0 +0.9**
GUN Gumba 48.26 276 *e*P **P** **02 31 35.3 +0.2**
comp=Z,56nm,0.8s,mb5.6
ILAR Eielson Array 48.45 33 P **P** **02 31 34.8 -1.2**
comp=Z,1.4nm,0.7s,mb4.1,baz=263,slow=6.2,SNR=22
PKI Pulchoki 48.79 276 *e*P **P** **02 31 39.0 -0.1**
KKN Kakani 48.79 276 *e*P **P** **02 31 39.6 +0.4**
comp=Z,35nm,0.7s,mb5.5
PKIN Phulchoki 48.79 276 *e*P **P** **02 31 38.7 -0.5**
comp=Z,27nm,0.7s,mb5.4
DMN Daman 49.01 276 *e*P **P** **02 31 41.1 +0.3**
GKN Gorkha 49.20 277 *e*P **P** **02 31 42.6 +0.3**
comp=Z,76nm,1.0s,mb5.7
TKM2 Tokmak 2 50.41 298 P **P** **02 31 52.7 +1.3**
SNR=22
VOSK Vostochnaya 50.81 312 P **P** **02 31 53.3 -0.9**
VOSK pmax pmax
comp=Z,31nm,1.0s,mb5.2
KZA Kyzart 50.92 298 P **P** **02 31 57.6 +2.4**
SNR=5.5
KBK Karagaybulak 50.95 298 P **P** **02 31 56.0 +0.6**
SNR=11
USP Ospenovka 51.07 299 P **P** **02 31 56.4 +0.1**
SNR=6.4
BVAR Borovoye Array 51.09 312 P **P** **02 31 56.4 +0.1**
comp=Z,7.9nm,0.8s,mb4.7,baz=79,slow=7.7,SNR=41
BVAR PcP PcP 02 33 11.1 -0.7
comp=Z,2.6nm,0.7s,baz=64,slow=3.4,SNR=3.9
BRVK Borovoye 51.15 312 *c i*P **P** **02 31 55.7 -1.0**
BRVK pmax pmax
comp=Z,20nm,0.9s,mb5.0
BRVK pmax pmax
comp=Z,12nm,0.7s,mb4.9
BRVK Borovoye 51.15 312 *e*P **P** **02 31 56.5 -0.2**
comp=Z,12nm,0.8s,mb4.9
KSH Kashi 51.26 294 P **P** **02 32 02.3 +4.5**
KSH pP pP 02 32 07.3 +4.1
KSH sP sP 02 32 10.0 +4.7
KSH PcP PcP 02 33 16.9 +4.2
KSH PP PP 02 34 00.9 +6.4
KSH ScP ScP 02 37 10.5 +2.1
KSH PcS PcS 02 37 12.4 +2.0
KSH S **S** **02 39 21.5 +5.8**
KSH sS sS 02 39 28.6 +4.0
KSH ScS ScS 02 41 49.1 +1.6
KSH SS SS 02 42 55.3 +4.3
KSH pmax pmax
comp=Z,18nm,0.9s,mb5.0
KSH pmax pmax
comp=Z,110nm,3.6s
KSH LR LR
comp=N,130nm,6.0s
KSH LR LR
comp=E,170nm,6.2s
KSH LR LR
comp=Z,460nm,16.1s,MS4.6
AAK Ala-Archa 51.27 298 LR LR 02 55 15.9
comp=Z,244nm,18.4s,MS4.3,baz=49,slow=38
AAK Ala-Archa 51.27 298 *ce*P **P** **02 31 58.3 +0.5**
AAK pmax pmax
comp=Z,7.0nm,1.7s,mb4.3
AAK Ala-Archa 51.27 298 *e*P **P** **02 31 58.8 +1.0**
comp=Z,6.7nm,1.0s,mb4.5
UCH Uchtor 51.39 298 P **P** **02 32 00.1 +1.4**
SNR=5.3
EKS2 Erkin-Say 51.77 299 P **P** **02 32 02.0 +0.6**
SNR=7.0
ZRNK Zerenda 51.93 312 *i*P **P** **02 32 01.5 -1.0**
ZRNK pmax pmax
comp=Z,16nm,0.9s,mb5.0
AML Almayashu 52.00 298 P **P** **02 32 04.8 +1.5**
SNR=20
INK Inuvik 53.41 27 P **P** **02 32 13.1 -0.2**
comp=Z,3.9nm,1.0s,mb4.3,baz=343,slow=11,SNR=8.9
INK Inuvik 53.41 27 *e*P **P** **02 32 12.9 -0.4**
INK pmax pmax
comp=Z,5.0nm,0.9s
INK Inuvik 53.41 27 *e*P **P** **02 32 12.9 -0.3**
comp=Z,4.6nm,0.9s,mb4.4
KK31 Karatay Array 53.88 300 *ce*P **P** **02 32 16.4 -0.7**
KK31 pmax pmax
comp=Z,22nm,0.9s,mb5.1
SVE Sverdlovsk 55.54 319 ⇓*e*P **P** **02 32 29.1 +0.2**
SVE pmax pmax
comp=Z,25nm,1.0s,mb5.2
SVE MLR MLR
comp=Z,661nm,16.0s,MS4.8
ARU Arti 56.75 319 *c i*P **P** **02 32 37.4 -0.2**
ARU *e* 02 34 41.7
ARU PPP 02 35 57.2
ARU S **S** **02 40 30.0 +0.6**
ARU SS SS 02 44 15.7 -1.1
ARU pmax pmax
comp=Z,23nm,1.2s,mb5.1
ARU MLR MLR
comp=Z,519nm,17.0s,MS4.7
ARU Arti 56.75 319 *e*P **P** **02 32 37.2 -0.4**
comp=Z,14nm,0.9s,mb5.0
WRAB Tennant Creek 57.72 189 *e*P **P** **02 32 44.4 -0.3**
WRAB pmax pmax
comp=Z,76nm,2.0s,mb5.4
WRAB Tennant Creek 57.72 189 *e*P **P** **02 32 44.4 -0.3**
comp=Z,76nm,2.0s,mb5.4
KBL Kabul 58.32 291 *e*P **P** **02 32 49.1 +0.1**
KBL pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
KBL Kabul 58.32 291 *e*P **P** **02 32 49.1 +0.1**
comp=Z,3.5nm,0.6s,mb4.6
AB31 Akbulak array 58.50 310 *ce*P **P** **02 32 49.5 -0.5**
AB31 pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
ASAR Alice Springs 61.46 189 P **P** **02 33 09.3 -1.1**
comp=Z,1.6nm,0.7s,mb4.2,baz=9.8,slow=7.0,SNR=14
RES Resolute Bay 61.82 15 *e*P **P** **02 33 11.7 -0.7**
RES pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
RES Resolute Bay 61.82 15 *e*P **P** **02 33 11.7 -0.7**
comp=Z,7.5nm,0.8s,mb4.9
APA Apatity 62.70 336 ⇑*i*P **P** **02 33 19.0 +0.6**
APA pmax pmax
comp=Z,13nm,1.0s,mb5.0
APA MLR MLR
comp=Z,400nm,16.0s,MS4.7
YKA Yellowknife Ar 62.79 31 P **P** **02 33 18.2 -0.8**
comp=Z,1.0nm,0.6s,mb4.1,baz=303,slow=6.7,SNR=3.6
YKA Yellowknife Ar 62.79 31 P **P** **02 33 18.2 -0.8**
ARCES ARCESS Array B 63.93 340 P **P** **02 33 26.5 0.0**
comp=Z,3.9nm,0.8s,mb4.5,baz=37,slow=8.2,SNR=11
ARCES ARCESS Array B 63.93 340 P **P** **02 33 26.5 0.0**
VRHR Novokhopersk 68.09 318 *e*P **P** **02 33 52.3 -1.2**
VRHR pmax pmax
comp=N,3.0nm,0.7s
VRHR pmax pmax
comp=E,5.0nm,0.7s
VRHR pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
OBN Obninsk 68.39 324 *e*P **P** **02 33 54.4 -0.9**
OBN *e* 02 34 22.7
OBN pmax pmax
comp=Z,31nm,1.6s,mb5.1
OBN MLR MLR
comp=Z,300nm,14.0s,MS4.7
KAF Kangasniemi 68.39 333 *e*P **P** **02 33 53.3 -1.9**
KAF Kangasniemi 68.39 333 *ep* **P** **02 33 53.3 -1.9**
FINES FINESS Array B 68.91 333 P **P** **02 33 58.4 -0.1**
comp=Z,12nm,0.7s,mb4.9,baz=53,slow=7.9,SNR=53
VSR Storozhevoye 69.32 319 *e*P **P** **02 34 00.2 -0.9**
VSR pmax pmax
comp=N,10.0nm,0.6s
VSR pmax pmax
comp=E,9.0nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VSR MLR MLR
comp=N,300nm,17.0s,MS4.9
VSR MLR MLR
comp=E,550nm,17.0s,MS4.9
VSR MLR MLR
comp=Z,750nm,17.0s,MS5.0
VORD Divnogorie 69.39 319 *e*P **P** **02 34 01.3 -0.3**
VORD pmax pmax
comp=E,30nm,1.4s
VORD pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
VORD pmax pmax
comp=N,8.0nm,0.7s
SUMG Summit 70.18 0 *i*P **P** **02 34 05.3 -0.8**
SUMG Summit 70.18 0 *i*P **P** **02 34 05.3 -0.8**
comp=N,5.5nm,0.8s,mb4.5
WVOR Wild Horse Val 71.28 51 *e*P **P** **02 34 15.6 +2.3**
WVOR pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
WVOR Wild Horse Val 71.28 51 *e*P **P** **02 34 15.6 +2.3**
comp=Z,1.3nm,0.6s,mb4.0
ZEI Tsey 71.39 310 *e*P **P** **02 34 12.9 -1.1**
ZEI pmax pmax
comp=Z,12nm,0.5s,mb5.1
KIV Kislovodsk 71.45 311 *e*P **P** **02 34 14.8 +0.5**
KIV pmax pmax
comp=Z,34nm,0.9s,mb5.3
KIV MLR MLR
comp=Z,240nm,19.0s,MS4.5
KIV Kislovodsk 71.45 311 *e*P **P** **02 34 15.1 +0.8**
comp=Z,39nm,1.0s,mb5.3
GNI Garni 72.33 307 *de*P **P** **02 34 21.2 +1.5**
GNI pmax pmax
comp=Z,20nm,1.7s
GNI Garni 72.33 307 *e*P **P** **02 34 21.1 +1.4**
comp=Z,9.1nm,0.9s,mb4.7
IZAR Zarasai 72.60 328 *e*P **P** **02 34 21.4 +0.4**
IZAR AMB AMB 02 34 21.7
comp=Z,3.5nm,1.4s,mb4.1
FFC Flin Flon 72.65 33 *ce*P **P** **02 34 21.7 +0.4**
FFC Flin Flon 72.65 33 *e*P **P** **02 34 20.9 -0.4**
comp=Z,3.5nm,0.8s,mb4.3
IDID Didziasalis 72.68 327 *e*P **P** **02 34 21.9 +0.4**
IDID AMB AMB 02 34 22.3
comp=Z,4.4nm,1.0s,mb4.3
IIGN Ignalina 72.88 328 *e*P **P** **02 34 23.0 +0.4**
IIGN AMB AMB 02 34 23.5
comp=Z,5.3nm,1.0s,mb4.4
LRM Limekiln Ridge 72.97 45 *e*P **P** **02 34 23.2 -0.2**
comp=Z,16nm,0.8s,mb5.0
FCC Fort Churchill 73.03 27 *e*P **P** **02 34 25.0 +1.5**
comp=Z,0.4nm,1.0s
HLID Hailey 73.18 48 *e*P **P** **02 34 27.0 +2.3**
comp=Z,1.2nm,0.9s,mb3.8
SOC Sochi 73.42 312 *e*P **P** **02 34 25.4 -0.7**
SOC MLR MLR
comp=Z,148nm,15.0s,MS4.4
BOZ Bozeman (W) 73.54 45 *e*P **P** **02 34 29.5 +2.7**
BOZ pmax pmax
comp=Z,21nm,2.3s,mb4.7
BOZ Bozeman (W) 73.54 45 *e*P **P** **02 34 29.5 +2.7**
comp=Z,21nm,2.3s,mb4.7
NVAR Mina Array Bea 73.75 54 P **P** **02 34 29.1 +1.0**
comp=Z,1.6nm,0.8s,mb4.0,baz=289,slow=6.9,SNR=8.8
ANN Anapa 74.02 314 *e*P **P** **02 34 28.6 -1.0**
ANN pmax pmax
comp=Z,25nm,1.2s,mb5.0
ANN MLR MLR
comp=N,228nm,18.0s,MS4.6
ANN MLR MLR
comp=E,161nm,18.0s,MS4.6
ANN MLR MLR
comp=Z,192nm,18.0s,MS4.4
NB2 NORSAR Subarra 74.17 338 P **P** **02 34 30.0 -0.1**
comp=Z,9.3nm,0.8s,mb4.8,baz=40,slow=6.2
NOA NORSAR Array B 74.17 338 P **P** **02 34 29.9 -0.2**
comp=Z,5.7nm,0.7s,mb4.6,baz=39,slow=5.8,SNR=28
NOA LR LR 03 10 24.5
comp=Z,200nm,18.2s,MS4.4,baz=295,slow=38
NOA NORSAR Array B 74.17 338 P **P** **02 34 29.9 -0.2**
NOA LR LR 03 10 24.5
NAO01 NORSAR Array S 74.42 338 *e*P **P** **02 34 31.1 -0.6**
comp=Z,6.4nm,0.8s,mb4.6
AKASG Malin Array Be 74.61 323 P **P** **02 34 32.4 -0.5**
comp=Z,5.5nm,0.6s,mb4.7,baz=45,slow=6.0,SNR=26
AKASG Malin Array Be 74.61 323 P **P** **02 34 32.4 -0.5**
AKBB Malin Array Si 74.61 323 *e*P **P** **02 34 32.0 -0.9**
AKBB *e* 02 34 41.8
KIEV Kiev 74.62 323 *e*P **P** **02 34 32.1 -0.9**
KIEV pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
KIEV Kiev 74.62 323 *e*P **P** **02 34 32.1 -0.9**
comp=Z,8.2nm,0.9s,mb4.7
IMW Indian Meadow 74.99 46 *e*P **P** **02 34 36.2 +0.9**
comp=Z,1.8nm,0.6s,mb4.2
TPAW Teton Pass 75.23 46 *e*P **P** **02 34 36.9 +0.3**
comp=Z,1.9nm,0.6s,mb4.2
HWUT Hardware Ranch 76.03 48 *e*P **P** **02 34 43.7 +2.4**
comp=Z,2.9nm,1.0s,mb4.2
DUG Dugway 76.15 50 *e*P **P** **02 34 42.4 +0.5**
DUG pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
DUG Dugway 76.15 50 *e*P **P** **02 34 42.4 +0.5**
comp=Z,2.7nm,0.7s,mb4.3
BW06 Boulder Array 76.48 46 *e*P **P** **02 34 43.5 -0.4**
comp=Z,1.0nm,0.7s,mb3.9
PDAR Pinedale Array 76.48 46 P **P** **02 34 43.5 -0.4**
comp=Z,0.9nm,0.7s,mb3.8,baz=289,slow=1.9,SNR=10
KWP Kalwaria Pacla 78.39 325 *e*P **P** **02 34 55.4 +1.1**
KWP Kalwaria Pacla 78.39 325 *e*P **P** **02 34 54.9 +0.5**
KWP pmax pmax
comp=Z,17nm,1.0s,mb4.9
KWP Kalwaria Pacla 78.39 325 *e*P **P** **02 34 54.9 +0.5**
comp=Z,17nm,1.0s,mb4.9
KWP Kalwaria Pacla 78.39 325 ⇑*i*P **P** **02 34 55.5 +1.1**
BUR08 Bucovina Ar. S 78.62 322 *e*P **P** **02 34 55.5 -0.1**
BURAR Bucovina Array 78.63 322 ⇑P **P** **02 34 56.0 +0.3**
BURAR Bucovina Array 78.63 322 ⇑*i*P **P** **02 34 56.0 +0.3**
TESR 78.69 321 ⇑P **P** **02 34 56.1 0.0**
TESR 78.69 321 ⇑*i*P **P** **02 34 56.1 +0.1**
VRI Vrincioaia 79.09 320 ⇑P **P** **02 34 59.7 +1.4**
VRI Vrincioaia 79.09 320 ⇑*i*P **P** **02 34 59.7 +1.4**
STHS Stebnicka Huta 79.21 326 *e*P **P** **02 34 59.7 +0.8**
STHS Stebnicka Huta 79.21 326 *e*P **P** **02 34 59.7 +0.8**
OJC Ojcow 79.26 327 *e*P **P** **02 34 56.5 -2.6**
BR131 Keskin Array S 79.38 312 *e*P **P** **02 35 00.6 +0.6**
BRTR Keskin Array B 79.38 312 P **P** **02 35 00.5 +0.5**
comp=Z,4.0nm,1.1s,mb4.3,baz=99,slow=3.9,SNR=18
TRPA Tarpa 79.54 324 ⇓*i*P **P** **02 35 01.5 +0.8**
NIE Niedzica 79.62 326 *e*P **P** **02 35 02.0 +0.9**
MLR Muntele Rosu 79.75 320 ⇓P **P** **02 35 01.9 0.0**
MLR Muntele Rosu 79.75 320 ⇓*i*P **P** **02 35 01.9 0.0**
PV01 Paradox Valley 80.01 49 *e*P **P** **02 35 05.7 +2.3**
comp=Z,98nm,0.6s,mb5.9
VOIR 80.24 321 ⇑P **P** **02 35 05.2 +0.7**
VOIR 80.24 321 ⇑*i*P **P** **02 35 05.2 +0.7**
OKC Ostrava-Krasne 80.26 327 *e*P **P** **02 35 04.3 -0.2**
OKC MLR MLR
comp=Z,300nm,15.8s,MS4.7
OKC Ostrava-Krasne 80.26 327 ⇑*e*P **P** **02 35 04.3 -0.2**
OKC AMS AMS 03 13 40.0
comp=Z,300nm,15.8s
MORC Moravsky Berou 80.57 328 *e*P **P** **02 35 06.9 +0.7**
MORC Moravsky Berou 80.57 328 ⇑*i*P **P** **02 35 07.1 +0.9**
DPC Dobruska-Polom 80.64 329 ⇑*i*P **P** **02 35 07.0 +0.4**
DPC MLR MLR
comp=Z,200nm,13.9s,MS4.6
DPC Dobruska-Polom 80.64 329 ⇑*i*P **P** **02 35 07.0 +0.4**
DPC AMS AMS 03 15 50.0
comp=Z,200nm,13.9s
UPC Upice 80.65 329 ⇑*i*P **P** **02 35 06.6 0.0**
UPC *e* 02 35 15.2
UPC Upice 80.65 329 ⇑*i*P **P** **02 35 06.6 0.0**
UPC *e*PCP PcP 02 35 15.2 +1.8
PSZ Piszkesteto 80.92 325 *e*P sP 02 35 19.9 +4.1
VYHS Vyhne 80.97 326 *e*P **P** **02 35 08.7 +0.4**
VYHS Vyhne 80.97 326 *e*P **P** **02 35 08.7 +0.4**
BRG Berggiesshubel 81.20 330 *e*P **P** **02 35 09.4 -0.2**
comp=Z,4.3nm,1.1s,mb4.3
BRG
comp=N,271nm,13.2s
BRG

comp=E,220nm,12.8s
BRG
comp=Z,394nm,13.8s
BRG Berggiesshubel 81.20 330 *e*P **P 02 35 09.4 -0.2**
BRG pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
BRG MLR MLR
comp=N,3μm,13.2s,MS5.8
BRG MLR MLR
comp=E,162nm,12.8s,MS5.8
BRG MLR MLR
comp=Z,132nm,13.8s,MS4.5
PVCC Panska Ves 81.22 330 *e*P **P 02 35 10.3 +0.6**
PVCC MLR MLR
comp=Z,300nm,14.7s,MS4.8
PVCC Panska Ves 81.22 330⇑ *e*P **P 02 35 10.3 +0.6**
PVCC AMS AMS 03 14 30.0
comp=Z,300nm,14.7s
CLL Collm 81.23 331⇑ *i*P **P 02 35 09.3 -0.4**
CLL *i* 02 35 18.9
CLL pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
CLL Collm 81.23 331⇑ *i*P **P 02 35 09.3 -0.4**
comp=Z,7.0nm,1.0s,mb4.5
CLL *i* pP pP 02 35 13.0 -2.4
CLL *i* pPcP 02 35 18.9
CLL *e*PP PP 02 38 18.0 +3.6
CLL LmH 03 11 00.0
comp=N,100nm,20.8s
CLL LmH 03 11 00.0
comp=E,300nm,18.2s
VRAC Vranov 81.33 328 ||P **P 02 35 08.6 -1.6**
VRAC Vranov 81.33 328 ||*i*P **P 02 35 08.6 -1.6**
GZR Gura Zlata 81.39 322 ⇑P **P 02 35 11.1 +0.4**
GZR Gura Zlata 81.39 322 ⇑*i*P **P 02 35 11.1 +0.4**
PRU Pruhonice 81.65 329 *e*P **P 02 35 12.5 +0.5**
PRU MLR MLR
comp=Z,300nm,13.6s,MS4.8
PRU Pruhonice 81.65 329⇑ *e*P **P 02 35 12.5 +0.5**
PRU AMS AMS 03 14 40.0
comp=Z,300nm,13.6s
BZS Buzias 81.80 323 ⇑P **P 02 35 12.4 -0.4**
BZS Buzias 81.80 323 ⇑*i*P **P 02 35 12.4 -0.4**
TREC Trest 81.80 328 *e*P **P 02 35 13.2 +0.4**
TREC MLR MLR
comp=Z,200nm,13.4s,MS4.7
TREC Trest 81.80 328⇑ *e*P **P 02 35 13.2 +0.4**
TREC AMS AMS 03 17 00.0
comp=Z,200nm,13.4s
ZST Bratislava 81.95 327 *e*P **P 02 35 14.5 +0.9**
ZST Bratislava 81.95 327 *e*P **P 02 35 14.5 +0.9**
MMAI Mount Meron Ar 82.62 306 P **P 02 35 18.3 +0.9**
comp=Z,3.5nm,0.7s,mb4.5,baz=30,slow=6.8,SNR=8.3
MMAI LR LR 03 13 56.3
comp=Z,71nm,19.9s,MS4.0,baz=90,slow=37
KHC Kasperske Hory 82.72 329⇑ *i*P **P 02 35 17.7 +0.1**
KHC *e* 02 35 26.9
KHC MLR MLR
comp=Z,300nm,15.1s,MS4.8
KHC Kasperske Hory 82.72 329 *e*P **P 02 35 17.5 -0.1**
comp=Z,2.5nm,0.8s,mb4.3
KHC Kasperske Hory 82.72 329⇑ *i*P **P 02 35 17.7 +0.1**
KHC *e*pP pP 02 35 26.9 +3.7
KHC AMS AMS 03 17 30.0
comp=Z,300nm,15.1s
VTS Vitosha 83.19 320 ⇑P **P 02 35 20.6 +0.5**
VTS Vitosha 83.19 320⇑ *i*P **P 02 35 20.6 +0.5**
GRF Grafenberg Arr 83.21 331 *e*P **P 02 35 20.1 0.0**
comp=Z,29nm,1.8s,mb5.0
GRF Grafenberg Arr 83.21 331 *e*P **P 02 35 20.1 0.0**
GRF pmax pmax
comp=Z,29nm,1.8s,mb5.0
ANMO Albuquerque 83.37 51 *e*P **P 02 35 25.2 +3.9**
GROS Grobnik 83.98 326 *e*P **P 02 35 23.7 -0.4**
PERS Pernice 84.02 327 *e*P **P 02 35 24.2 -0.1**
SCHQ Schefferville 84.53 17 P **P 02 35 26.4 -0.3**
comp=Z,2.2nm,0.9s,mb4.3,baz=358,slow=12,SNR=3.2
STU Stuttgart 84.73 331 *e*P **P 02 35 28.2 +0.3**
STU pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
STU Stuttgart 84.73 331 *e*P **P 02 35 28.2 +0.3**
comp=Z,7.4nm,0.8s,mb4.9
BCLA Clavier 84.78 334 P **P 02 35 28.5 +0.4**
comp=Z,17nm,2.7s,mb4.7
CADS Cadrg 84.93 327 *e*P **P 02 35 27.3 -1.6**
SNF Seneffe 85.05 335 P **P 02 35 29.6 +0.1**
GIVF Givet 85.21 334 *e*P **P 02 35 29.7 -0.6**
DOU Dourbes 85.30 335 P **P 02 35 30.9 +0.2**
comp=Z,13nm,2.5s,mb4.6
BFO Black Forest 85.43 332 *e*P **P 02 35 31.1 -0.3**
BFO pmax pmax
comp=Z,18nm,1.4s,mb5.0
BFO Black Forest 85.43 332 *e*P **P 02 35 31.1 -0.3**
comp=Z,18nm,1.4s,mb5.0
BAIF Baives 85.46 335 *e*P **P 02 35 31.0 -0.5**
comp=Z,22nm,1.1s,mb4.9
BAIF Baives 85.46 335 *e*P **P 02 35 31.0 -0.5**
BAIF pmax pmax
comp=Z,11nm,1.0s,mb4.9
BAIF Baives 85.46 335 *e*P **P 02 35 31.0 -0.5**
comp=Z,11nm,1.0s,mb5.0
CDF Champ du Feu 85.75 332 *e*P **P 02 35 32.6 -0.4**
comp=Z,21nm,1.1s,mb5.0
CDF Champ du Feu 85.75 332 *e*P **P 02 35 32.6 -0.4**
CDF pmax pmax
comp=Z,11nm,1.1s,mb5.0
CDF Champ du Feu 85.75 332 *e*P **P 02 35 32.6 -0.4**
comp=Z,11nm,1.1s,mb5.0
HINF Hinteralfeld 86.41 332 *e*P **P 02 35 35.4 -0.8**
HAU Haudompre 86.44 332 *e*P **P 02 35 35.6 -0.8**
comp=Z,7.4nm,0.9s,mb4.6
HAU *e*MLR MLR
comp=Z,250nm,23.0s,MS4.2
HAU Haudompre 86.44 332 *e*P **P 02 35 35.6 -0.8**
HAU pmax pmax
comp=Z,4.0nm,0.9s,mb4.7
HAU MLR MLR
comp=Z,250nm,23.0s,MS4.5
HAU Haudompre 86.44 332 *e*P **P 02 35 35.6 -0.8**
comp=Z,3.7nm,0.9s,mb4.6
HAU LR LR
comp=Z,250nm,23.0s,MS4.5
MEZF Maizieres J'vi 86.49 333 *e*P **P 02 35 36.4 -0.2**
LOR Lormes 87.96 333 *e*P **P 02 35 43.2 -0.6**
comp=Z,23nm,1.3s,mb5.0
LOR *e*MLR MLR
comp=Z,347nm,19.8s,MS4.5
LOR Lormes 87.96 333 *e*P **P 02 35 43.2 -0.6**
LOR pmax pmax
comp=Z,11nm,1.3s,mb4.9
LOR MLR MLR
comp=Z,350nm,19.8s,MS4.8
LOR Lormes 87.96 333 *e*P **P 02 35 43.2 -0.6**
comp=Z,11nm,1.3s,mb4.9
LOR LR LR
comp=Z,350nm,19.8s,MS4.8
FLN La Foliniere 88.12 337 *e*P **P 02 35 43.8 -0.7**
comp=Z,21nm,0.9s,mb5.0
FLN *e*MLR MLR
comp=Z,302nm,19.5s,MS4.4
FLN La Foliniere 88.12 337 *e*P **P 02 35 43.8 -0.7**
FLN pmax pmax
comp=Z,11nm,0.9s,mb5.1
FLN MLR MLR
comp=Z,300nm,19.5s,MS4.7
FLN La Foliniere 88.12 337 *e*P **P 02 35 43.8 -0.7**
comp=Z,11nm,0.9s,mb5.1
FLN LR LR
comp=Z,300nm,19.5s,MS4.7
AQU L'Aquila 88.13 325 *e*P **P 02 35 44.1 -0.6**
AQU pmax pmax
comp=Z,3.0nm,0.6s,mb4.7
AQU L'Aquila 88.13 325 *e*P **P 02 35 44.1 -0.6**
comp=Z,2.8nm,0.6s,mb4.7
LDF La Druitiere 88.15 336 *e*P **P 02 35 43.8 -0.9**
comp=Z,8.8nm,0.9s,mb4.7
LDF La Druitiere 88.15 336 *e*P **P 02 35 43.8 -0.9**
LDF pmax pmax
comp=Z,4.0nm,0.9s,mb4.7
LDF La Druitiere 88.15 336 *e*P **P 02 35 43.8 -0.9**
comp=Z,4.4nm,0.9s,mb4.7
SSF Saint Saulge 88.26 334 *e*P **P 02 35 44.8 -0.4**
LPL La Plagne 88.37 331 *e*P **P 02 35 45.8 0.0**
comp=Z,13nm,1.1s,mb4.8
LPL La Plagne 88.37 331 *e*P **P 02 35 45.8 0.0**
LPL pmax pmax
comp=Z,7.0nm,1.1s,mb4.8
LPL La Plagne 88.37 331 *e*P **P 02 35 45.8 0.0**
comp=Z,6.5nm,1.1s,mb4.8
LPG La Plagne 88.38 331 *e*P **P 02 35 46.0 +0.2**
comp=Z,15nm,1.1s,mb4.8
LPG La Plagne 88.38 331 *e*P **P 02 35 46.0 +0.2**
LPG pmax pmax
comp=Z,8.0nm,1.1s,mb4.9
LPG La Plagne 88.38 331 *e*P **P 02 35 46.0 +0.2**
comp=Z,7.5nm,1.1s,mb4.8
HYF Humbligny 88.39 334 *e*P **P 02 35 45.7 -0.1**
SMF Signal de Mont 88.50 333 *e*P **P 02 35 45.9 -0.4**
comp=Z,30nm,1.5s,mb5.0
SMF Signal de Mont 88.50 333 *e*P **P 02 35 45.9 -0.4**
SMF pmax pmax
comp=Z,15nm,1.5s,mb5.0
SMF Signal de Mont 88.50 333 *e*P **P 02 35 45.9 -0.4**
comp=Z,15nm,1.5s,mb5.0
AVF Avril sur Loir 88.55 333 *e*P **P 02 35 46.1 -0.5**
comp=Z,14nm,0.9s,mb5.0
AVF Avril sur Loir 88.55 333 *e*P **P 02 35 46.1 -0.5**
AVF pmax pmax
comp=Z,7.0nm,0.9s,mb5.0
AVF Avril sur Loir 88.55 333 *e*P **P 02 35 46.1 -0.5**
comp=Z,7.0nm,0.9s,mb5.0
GRR Gorron 88.56 337 *e*P **P 02 35 46.3 -0.3**
TXAR Lajitas Array 88.89 53 P **P 02 35 48.0 -0.5**
comp=Z,0.5nm,0.6s,mb4.0,baz=303,slow=3.1,SNR=12
TCF Toulx Ste Croi 89.38 334 *e*P **P 02 35 50.2 -0.3**
QUIF Quistinic 89.69 338 *e*P **P 02 35 51.4 -0.5**
VIVF Saint-Julien-l 89.71 332 *e*P **P 02 35 51.6 -0.5**
comp=Z,7.2nm,1.1s,mb4.6
VIVF Saint-Julien-l 89.71 332 *e*P **P 02 35 51.6 -0.5**
VIVF pmax pmax
comp=Z,4.0nm,1.1s,mb4.7
VIVF Saint-Julien-l 89.71 332 *e*P **P 02 35 51.6 -0.5**
comp=Z,3.6nm,1.1s,mb4.6
CCM Cathedral Cave 89.74 40 *e*P **P 02 35 54.4 +2.1**
CCM pmax pmax
comp=Z,3.0nm,1.0s,mb4.6
CCM Cathedral Cave 89.74 40 *e*P **P 02 35 54.4 +2.1**
comp=Z,3.5nm,1.0s,mb4.6
MFF Saint Martin d 89.91 335 *e*P **P 02 35 52.8 -0.2**
comp=Z,25nm,1.1s,mb5.1
MFF Saint Martin d 89.91 335 *e*P **P 02 35 52.8 -0.2**
MFF pmax pmax
comp=Z,12nm,1.1s,mb5.1
MFF Saint Martin d 89.91 335 *e*P **P 02 35 52.8 -0.2**
comp=Z,12nm,1.1s,mb5.2
FRF La Foret Royal 90.04 330 *e*P **P 02 35 52.1 -1.5**
LMR La Mourre 90.28 330 *e*P **P 02 35 53.4 -1.4**
RJF Les Rejaudoux 90.48 334 *e*P **P 02 35 55.5 -0.1**
comp=Z,14nm,0.9s,mb5.0
RJF *e*MLR MLR
comp=Z,264nm,21.0s,MS4.3
RJF Les Rejaudoux 90.48 334 *e*P **P 02 35 55.5 -0.1**
RJF pmax pmax
comp=Z,7.0nm,0.9s,mb5.0
RJF MLR MLR
comp=Z,260nm,21.0s,MS4.6
RJF Les Rejaudoux 90.48 334 *e*P **P 02 35 55.5 -0.1**
comp=Z,6.9nm,0.9s,mb5.0
RJF LR LR
comp=Z,260nm,21.0s,MS4.6
CAF Calviac 90.61 333 *e*P **P 02 35 56.4 +0.1**
comp=Z,18nm,1.0s,mb5.0
CAF Calviac 90.61 333 *e*P **P 02 35 56.4 +0.1**
CAF pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
CAF Calviac 90.61 333 *e*P **P 02 35 56.4 +0.1**
comp=Z,8.9nm,1.0s,mb5.0
LASF Ste Croix 90.69 332 *e*P **P 02 35 56.4 -0.2**
comp=Z,27nm,1.4s,mb5.1
LFF La Frestale 91.07 334 *e*P **P 02 35 58.6 +0.2**
comp=Z,18nm,1.1s,mb5.0
LFF La Frestale 91.07 334 *e*P **P 02 35 58.6 +0.2**
LFF pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
LFF La Frestale 91.07 334 *e*P **P 02 35 58.6 +0.2**
comp=Z,8.9nm,1.0s,mb5.0
MTLF Montolieu 91.92 332 *e*P **P 02 36 02.1 -0.3**
comp=Z,3.9nm,0.8s,mb4.5
MTLF Montolieu 91.92 332 *e*P **P 02 36 02.1 -0.3**
MTLF pmax pmax
comp=Z,2.0nm,0.8s,mb4.5
MTLF Montolieu 91.92 332 *e*P **P 02 36 02.1 -0.3**
comp=Z,2.0nm,0.8s,mb4.5
ETSF Etsaut 93.31 334 *e*P **P 02 36 08.9 +0.1**
SJPF Ste Jean 93.35 335 *e*P **P 02 36 08.3 -0.7**
ESDC Sonseca Array 97.34 335 P **P 02 36 26.9 -0.4**
comp=Z,0.1nm,0.3s,mb3.8,baz=17,slow=4.2,SNR=6.1

KRSC 20 02:29:40.5±0.1, 54°.12N×159°.78E, h137km±26km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KII	**Karymskiy**	**0.21**	**247**	*e*P		Pn		02 30 00.4	+1.2
NLC	**Nalytchevo**	**0.98**	**195**	*e*P		Pn		02 30 04.7	+0.8
NLC				*e*S		Sn		02 30 22.6	+1.0
SPN	**Mys Shipunski**	**1.03**	**172**	*e*P		Pn		02 30 05.1	+0.8
SPN				*e*S		Sn		02 30 22.6	+0.2
AVH	**Avacha**	**1.06**	**216**	*e*P		Pn		02 30 05.9	+1.4
AVH				*e*S		Sn		02 30 25.0	+2.2
GNL	**Ganaly**	**1.17**	**249**	*e*P		Pn		02 30 05.8	+0.2
GNL				*e*S		Sn		02 30 25.1	+0.5
MKZ	**Mys Kozlova**	**1.22**	**68**	*e*P		Pn		02 30 07.7	+1.6
MKZ				*e*S		Sn		02 30 26.7	+1.1
PET	**Petropavlovsk**	**1.29**	**212**	*e*P		Pn		02 30 07.6	+0.8
PET				*e*S		Sn		02 30 27.6	+0.8
KMNR	**Kamenistaya**	**1.66**	**9**	*e*P		Pn		02 30 12.6	+1.8
BZMR	**Bezymyannaya**	**1.86**	**12**	*e*P		Pn		02 30 15.1	+2.0
KPT	**Kopyto**	**1.87**	**8**	*e*P		Pn		02 30 14.5	+1.3
KOZ	**Kozyrevsk**	**1.94**	**2**	*e*P		Pn		02 30 15.2	+1.1
SRDR	**Sredinnyy**	**2.20**	**359**	*e*P		Pn		02 30 18.0	+0.8
MIPR	**Malaya Ipel'ka**	**2.59**	**226**	*e*P		Pn		02 30 23.7	+1.6
KBTR	**Krutoberegovo**	**2.72**	**39**	*e*P		Pn		02 30 25.8	+2.1
KBTR				*e*S		Sn		02 30 57.9	+0.8
BKI	**Bering**	**3.76**	**71**	*e*S		Sn		02 31 20.4	-0.6

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*ISCJB **20** 02:34:10.6±0.2, 10°.65N±0°.03×85°.78W±0°.03, h61km±2km, mb4.6/93, Error ellipse: s-maj=6.3km s-min=3.0km az=43.3*
*IDC **20** 02:34:10.4±0.5, 10°.92N×85°.60W, h35km±3km, mb4.2/19, mb1 4.4/20, mb1mx4.3/25, mbtmp4.3/20, ML3.8/1, MS4.1/21, Ms1 4.1/21, ms1mx4.1/26, Error ellipse: s-maj=19.7km s-min=6.5km az=60.0*
*CASC **20** 02:34:11.5±2.0, 10°.61N×85°.82W, h32km±3km, MD3.6, ML4.6, mb4.7(NEIC)*
*NEIC **20** 02:34:12.9±0.4, 10°.67N×85°.78W, h63km±4km, mb4.7/84, MD4.8(HDC), MD4.7(CASC), Error ellipse: s-maj=7.5km s-min=3.9km az=224.0*
NEIC Minor damage at Nicoya. Felt at Liberia and Santa Cruz.
*GCMT **20** 02:34:13.5±0.5, 10°.53N×85°.93W, h40km, MW5.1, Moment Tensor Solution. s34,c43; s56,c73; Moment tensor: Scale 10^{16}Nm; M_{rr}-5.70±.37; $M_{\theta\theta}$3.85±.23; $M_{\phi\phi}$1.85±.28; $M_{r\theta}$1.56±.15; $M_{\theta\phi}$-1.96±.13; $M_{\phi r}$1.36±.22; Best double couple: $M_0$5.70000×10^{16} NP1:ϕ_s136.00000°, δ44.00000°, λ-67.00000°. NP2:ϕ_s285.00000°, δ51.00000°, λ-111.00000°. Principal axes: T 5.0900, Plg4.0000°, Azm30.0000°; N 1.2100, Plg16.0000°, Azm299.0000°; P -6.3000, Plg74.0000°, Azm132.0000°; Data Used: II IU IC G CN.*

ISC 20 02:34:11.9±0.2, 10°.69N±0°.03×85°.75W±0°.03, h54km±2km, h40km±1.8km:pP-P, n406, σ1$00/398, mb4.6/93, MS4.2/22, 109C-86D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NY14	**Universidad de**	**0.22**	**100⇑**	*i*P		**Pn**		**02 34 19.4**	**-1.4**
NY14				*i* S		**Sn**		**02 34 26.7**	**-0.4**
GBS3	**Finca Las lm¯¡**	**0.31**	**72⇑**	*i*P		**Pn**		**02 34 20.1**	**-1.3**
GBS3				*i* S		**Sn**		**02 34 27.5**	**-0.7**
LAPC	**Finca la Perla**	**0.32**	**75⇑**	*i*P		**Pn**		**02 34 20.2**	**-1.3**
GB1A	**Borinquen Arri**	**0.37**	**69⇑**	*i*P		**Pn**		**02 34 21.2**	**-0.8**
GB1A				*i* S		**Sn**		**02 34 29.2**	**-0.1**
GPS3	**Bodega del ICE**	**0.39**	**80⇑**	*i*P		**Pn**		**02 34 21.3**	**-0.9**
GPS3				*i* S		**Sn**		**02 34 29.7**	**+0.2**
GPS2	**Hotel Rinc¯‡n**	**0.40**	**80⇑**	*i*P		**Pn**		**02 34 21.4**	**-0.8**
GPS2				*i* S		**Sn**		**02 34 29.7**	**-0.1**
GPS1	**Guardaparques**	**0.40**	**77⇑**	*i*P		**Pn**		**02 34 21.6**	**-0.8**
LIM1	**Limonal**	**0.49**	**88⇑**	*i*P		**Pn**		**02 34 22.7**	**-0.6**
LIM1				*i* S		**Sn**		**02 34 31.7**	**+0.2**
A490	**San Lazaro**	**0.50**	**145⇑**	*i*P		**Pn**		**02 34 21.3**	**-2.1**
A490				*i* S		**Sn**		**02 34 30.0**	**-1.7**
GUAB	**Guayabo de Bag**	**0.51**	**87⇑**	*i*P		**Pn**		**02 34 22.9**	**-0.6**
GUAB				*i* S		**Sn**		**02 34 31.8**	**-0.1**
A494	**Palo Verde**	**0.52**	**130⇑**	*i*P		**Pn**		**02 34 22.2**	**-1.4**
COLC	**Colonia**	**0.54**	**92⇑**	*i*P		**Pn**		**02 34 23.3**	**-0.5**
COLC				*i* S		**Sn**		**02 34 33.1**	**+0.6**
MESS	**Mesas**	**0.55**	**84⇑**	*i*P		**Pn**		**02 34 23.5**	**-0.4**
MESS				*i* S		**Sn**		**02 34 33.1**	**+0.4**
VCR	**Vista de Mar**	**0.57**	**168⇑**	*i*P		**Pn**		**02 34 21.6**	**-2.6**
VCR	**Vista de Mar**	**0.57**	**168⇑**	*i*P		**Pn**		**02 34 21.6**	**-2.6**
VCR				*e*S		**Sn**		**02 34 29.1**	**-3.9**
CUI	**Cuipilapa**	**0.58**	**93⇑**	*i*P		**Pn**		**02 34 24.0**	**-0.3**
SSN	**San Juan del S**	**0.62**	**351**	*e*P		**Pn**		**02 34 23.9**	**-1.0**
PTEN	**Parque Tenorio**	**0.75**	**88**	*i* P		**Pn**		**02 34 27.0**	**+0.6**
PTEN				*i* S		**Sn**		**02 34 40.3**	**+3.2**
JTS	**JuntasAbangare**	**0.88**	**116**	Pg		**Pn**		**02 34 28.2**	**+0.1**
	3μm,0.3s,baz=313,slow=8.6,SNR=2863								
JTS				Lg				02 34 40.9	
	3μm,0.3s,baz=35,slow=22,SNR=17								
CONN	**Concepcion**	**0.88**	**8**	*e*P		**Pn**		**02 34 28.7**	**+0.5**
JCR	**Jicaral**	**1.04**	**143**	*e*P		**Pn**		**02 34 29.0**	**-1.3**
JCR	**Jicaral**	**1.04**	**143**	‖*i*P		**Pn**		**02 34 28.9**	**-1.3**
JCR				*e*S		**Sn**		**02 34 40.5**	**-3.4**
APON	**Apoyo**	**1.26**	**346**	*e*P		**Pn**		**02 34 33.9**	**+0.6**
MASN	**Masaya**	**1.35**	**343**	*e*P		**Pn**		**02 34 34.5**	**0.0**
CRUN	**El Crucero**	**1.40**	**337**	*e*P		**Pn**		**02 34 35.9**	**+0.8**
TICN	**Ticuantepe**	**1.42**	**341**	*e*P		**Pn**		**02 34 35.7**	**+0.3**
CGA2	**Cerro Gallo 2**	**1.43**	**118**	‖*e*P		**Pn**		**02 34 36.2**	**+0.8**
CGA2	**Cerro Gallo 2**	**1.43**	**118**	‖*e*P		**Pn**		**02 34 36.2**	**+0.8**
WILN	**Americas 2**	**1.53**	**344**	*e*P		**Pn**		**02 34 36.9**	**+0.1**
MGAN	**Managua**	**1.53**	**342**	*e*P		**Pn**		**02 34 37.0**	**+0.1**
XAVN	**Gruta Xavier**	**1.56**	**339**	*e*P		**Pn**		**02 34 37.4**	**+0.1**
PRS1	**Puriscal**	**1.58**	**116**	‖*e*P		**Pn**		**02 34 38.1**	**+0.6**
PRS1	**Puriscal**	**1.58**	**116**	‖*e*P		**Pn**		**02 34 38.2**	**+0.6**
CSAN		**1.63**	**336**	*e*P		**Pn**		**02 34 37.9**	**-0.3**
APYN	**Apoyeque**	**1.65**	**339**	*e*P		**Pn**		**02 34 38.7**	**+0.2**
HUEN		**1.69**	**346⇑**	*e*P		**Pn**		**02 34 39.4**	**+0.3**
HUEN				*e*S		**Sn**		**02 34 59.4**	**-0.3**
COPN	**Copaltepe**	**1.70**	**331**	*e*P		**Pn**		**02 34 38.8**	**-0.4**
LAJ	**Bijagual**	**1.80**	**117**	*e*P		**Pn**		**02 34 36.3**	**-4.2**
LAJ	**Bijagual**	**1.80**	**117**	*e*P		**Pn**		**02 34 36.2**	**-4.3**
LAJ				*e*S		**Sn**		**02 34 54.0**	**-8.2**
SJS	**Escuela Geolog**	**1.83**	**114**	*e*P		**Pn**		**02 34 42.3**	**+1.4**
SJS				*e*S		**Sn**		**02 35 08.8**	**+5.9**
SJS	**Escuela Geolog**	**1.83**	**114**	*e*P		**Pn**		**02 34 42.3**	**+1.4**
SJS				*e*S		**Sn**		**02 35 03.2**	**+0.3**
MOMN	**Momotombo**	**1.88**	**336**	*e*P		**Pn**		**02 34 42.0**	**+0.3**
QCR	**Quepos**	**2.00**	**129**	*e*P		**Pn**		**02 34 42.9**	**-0.4**
QCR	**Quepos**	**2.00**	**129**	‖*e*P		**Pn**		**02 34 43.0**	**-0.3**
CNGN	**Cerro Negro**	**2.03**	**333**	*e*P		**Pn**		**02 34 43.5**	**-0.2**
CNGN				AML		AML		02 35 14.2	
	comp=E,4μm,0.4s								
LEON	**Leon**	**2.05**	**327**	*e*P		**Pn**		**02 34 43.4**	**-0.6**
URSC	**Urasca**	**2.12**	**113**	‖*e*P		**Pn**		**02 34 46.3**	**+1.4**
URSC	**Urasca**	**2.12**	**113**	‖*e*P		**Pn**		**02 34 46.3**	**+1.4**
TELN	**Telica**	**2.18**	**331**	*e*P		**Pn**		**02 34 46.3**	**+0.5**
BUS	**Buena Vista**	**2.26**	**120**	*e*P		**Pn**		**02 34 48.2**	**+1.4**
BUS	**Buena Vista**	**2.26**	**120**	‖*e*P		**Pn**		**02 34 48.2**	**+1.4**
CRIN	**San Cristobal**	**2.37**	**328**	*e*P		**Pn**		**02 34 48.1**	**-0.3**
CRIN				AML		AML		02 35 33.2	
	comp=E,10μm,0.4s								
BAR1		**2.80**	**121⇑**	*e*P		**Pn**		**02 34 54.8**	**+0.6**
CNCH	**Conchagua**	**3.28**	**322**	*e*P		**Pn**		**02 35 01.7**	**+0.8**
CNI	**Changuinola**	**3.42**	**111**	*e*P		**Pn**		**02 35 03.8**	**+0.9**
BRU2	**Volcan**	**3.55**	**122⇑**	*i*P		**Pn**		**02 35 06.1**	**+1.5**
TBS2		**3.58**	**121**	*e*P		**Pn**		**02 35 10.4**	**+5.4**
BLLM	**Bellamira**	**3.66**	**319**	*e*P		**Pn**		**02 35 07.3**	**+1.2**
TGUH	**Tegucigalpa,Un**	**3.67**	**336**	*e*Pn		**Pn**		**02 35 06.9**	**+0.8**
TGUH	**Tegucigalpa,Un**	**3.67**	**336⇑**	*e*P		**Pn**		**02 35 07.1**	**+1.0**
TGUH				*e*P				02 35 07.2	
VSM	**San Miguel**	**3.68**	**318**	*e*P		**Pn**		**02 35 07.7**	**+1.4**
CAHU	**Cacacuatique**	**3.90**	**322**	*e*P		**Pn**		**02 35 10.7**	**+1.4**
CAHU				*e*S		**Sn**		**02 35 59.0**	**+5.2**
SNVI	**San Vicente**	**4.19**	**314**	*e*P		**Pn**		**02 35 15.3**	**+1.9**
LFRS	**El Faro**	**4.36**	**312**	*e*P		**Pn**		**02 35 17.2**	**+1.5**
BOQS	**Boqueron**	**4.59**	**312**	*e*P		**Pn**		**02 35 21.8**	**+3.0**
BCIP	**Isla Barro Col**	**6.02**	**104**	*e*Pn		**Pn**		**02 35 39.4**	**+1.0**
BCIP	**Isla Barro Col**	**6.02**	**104**	*e*P		**Pn**		**02 35 39.0**	**+0.7**
APG	**El Apazote**	**6.29**	**314**	Pn		**Pn**		**02 35 45.0**	**+2.9**
APG				LR		LR		02 38 36.3	
	comp=E,1μm,21.6s,baz=91,slow=43								
TEIG	**Tepich**	**9.79**	**346**	*e*Pn		**Pn**		**02 36 34.8**	**+4.7**
CMIG	**Matias Romero**	**10.91**	**307**	Pn		**Pn**		**02 36 46.9**	**+1.4**
	comp=E,1.1nm,0.3s,baz=124,slow=10.0,SNR=28								
CMIG				Sn		**Sn**		**02 38 53.9**	**+7.8**
	comp=E,0.5nm,0.3s,baz=344,slow=16,SNR=3.9								
CMIG				LR		LR		02 41 34.0	
	comp=E,1μm,20.0s,baz=135,slow=41								
OTAV	**Otavalo**	**12.66**	**145**	*e*Pn		**Pn**		**02 37 11.9**	**+2.5**
OTAV	**Otavalo**	**12.66**	**145**	*e*P		**Pn**		**02 37 11.8**	**+2.5**
ROSC	**El Rosal**	**12.71**	**116**	Pn		**Pn**		**02 37 18.1**	**+8.1**
	comp=E,2.0nm,0.3s,baz=114,slow=13,SNR=6.1								
SDV	**Santo Domingo**	**15.01**	**96**	*e*Pn		**Pn**		**02 37 43.6**	**+2.8**
	comp=E,30nm,0.8s								
SDDR	**Presa de Saban**	**16.22**	**58**	*e*Pn		**Pn**		**02 37 58.8**	**+2.4**
	comp=E,66nm,1.2s								
ATAH	**Atahualpa**	**19.16**	**157**	P		**Pn**		**02 38 34.5**	**+2.1**
	comp=E,0.3nm,0.3s,baz=8.2,slow=6.4,SNR=10								
ATAH				LR		LR		02 44 58.2	
	comp=E,2μm,21.9s,baz=332,slow=34								
AOPR	**Arecibo Observ**	**19.89**	**65**	*e*P		**Pn**		**02 38 41.1**	**+0.1**
	comp=E,20nm,0.8s								
OBIP	**Obispado Ponce**	**19.93**	**66**	*e*P		**Pn**		**02 38 40.9**	**-0.6**
	comp=E,95nm,1.1s								
OBIP				*e*pP		pP		02 38 52.4	+1.0
ICM	**Isla Caja Muer**	**19.95**	**67**	*e*P		**Pn**		**02 38 41.4**	**-0.4**
CELP	**Cerrillos**	**19.96**	**66**	*e*P		**Pn**		**02 38 41.3**	**-0.5**
BRAL	**Brewton**	**20.26**	**357**	*e*P		**P**		**02 38 43.7**	**+0.7**
	comp=E,69nm,0.8s								
SJG	**San Juan**	**20.36**	**67**	P		**P**		**02 38 45.6**	**+1.5**
	comp=E,35nm,0.9s,baz=268,slow=7.6,SNR=5.7								
SJG				LR		LR		02 45 37.7	
	comp=E,386nm,21.2s,MS3.7,baz=22,slow=34								
SJG	**San Juan**	**20.36**	**67**	*e*P		**P**		**02 38 45.4**	**+1.3**
	comp=E,129nm,1.4s								
PCRV	**Puerto La Cruz**	**20.77**	**89**	P		**P**		**02 38 49.8**	**+1.2**
	comp=E,23nm,0.8s,baz=213,slow=5.1,SNR=11								
HKT	**Hockley**	**21.35**	**335**	*e*P		**P**		**02 38 54.0**	**-0.7**
	comp=E,139nm,1.6s,mb5.0								
VBMS	**Vicksburg**	**21.88**	**349**	*e*P		**P**		**02 39 01.5**	**+1.2**
	comp=E,43nm,0.7s,mb5.0								
LRAL	**Lakeview Retre**	**22.27**	**357**	*e*P		**P**		**02 39 05.9**	**+1.4**
	comp=E,199nm,2.0s,mb5.2								
NATX	**Nacogdoches**	**22.53**	**340**	*e*P		**P**		**02 39 07.8**	**+0.5**
	comp=E,65nm

528A Cox Ranch, San 25.04 323 ⇑P P 02 39 31.6 +0.4
baz=25,SNR=9.8
428A Kincaid Ranch, 25.40 324 ⇑P P 02 39 34.7 +0.3
baz=25,SNR=31
WVT Waverly 25.40 356 eP P 02 39 34.0 -0.3
comp=E,28nm,1.4s,mb4.6
626A Big Bend Ranch 25.43 320 ⇑P P 02 39 35.0 +0.3
baz=26
527A Woodward Ranch 25.52 322 ⇓P P 02 39 36.0 +0.5
baz=26,SNR=20
526A Mary Lane Ranc 25.76 321 ⇑P P 02 39 39.1 +1.5
baz=26,SNR=12
427A Hayter Ranch, 25.91 323 ⇓P P 02 39 40.0 +1.0
baz=26
328A Wristen Ranch, 25.96 325 ⇑P P 02 39 41.0 +1.6
baz=26,SNR=50
PARMO Parma 26.12 353 eP P 02 39 41.7 +1.0
326A Caldwell Ranch 26.59 323 ⇓P P 02 39 46.9 +1.8
baz=27,SNR=12
227A Bennet, Jal 26.70 325 ⇓P P 02 39 47.1 +1.0
baz=27,SNR=7.1
WMOK Wichita Mounta 26.73 336 eP P 02 39 45.4 -1.0
comp=E,50nm,1.0s,mb5.0
WMOK epP pP 02 39 58.4 -1.5
ELN Prospectdale 26.81 9 eP P 02 39 48.4 +1.4
425A Indio Mountain 26.82 321 ⇑P P 02 39 48.0 +0.8
baz=27,SNR=9.1
BLA Blacksburg 26.84 9 eP P 02 39 49.1 +1.8
comp=E,54nm,1.2s,mb5.0
BLA epP pP 02 39 58.9 -2.0
SIUC Southern Illin 27.09 354 eP P 02 39 49.9 +0.3
comp=E,41nm,0.8s,mb5.0
226A Malaga, Loving 27.20 324 ⇑P P 02 39 51.4 +0.8
baz=27,SNR=7.0
325A Bean Ranch, Si 27.22 322 ⇑P P 02 39 51.4 +0.6
baz=27,SNR=7.7
CLNB Carlsbad 27.22 325 eP P 02 39 52.4 +1.6
comp=E,3.1nm,0.7s,mb4.0
127A Arkansas Junct 27.24 326 ⇑P P 02 39 52.1 +1.1
baz=27,SNR=7.4
WCI Wyandotte Cave 27.43 359 eP P 02 39 53.1 +0.5
comp=E,32nm,0.8s,mb4.9
GDL2 Guadalupe Moun 27.45 324 eP P 02 39 53.9 +1.0
324A Moseley Ranch, 27.58 321 ⇑P P 02 39 55.4 +1.4
baz=28,SNR=20
126A Clayton Basin, 27.59 325 ⇑P P 02 39 56.2 +2.1
baz=28,SNR=8.3
Z27A Tatum 27.65 327 ⇑P P 02 39 52.9 -1.7
baz=28
225A Deer Hill, Car 27.65 323 ⇑P P 02 39 56.1 +1.4
baz=28,SNR=13
MNTX Cornudas Mount 27.70 322 eP P 02 39 55.1 0.0
comp=E,5.4nm,0.7s,mb4.3
CPRX Cap Rock 27.79 326 eP P 02 39 56.1 +0.2
comp=E,6.0nm,0.8s,mb4.3
MSTX Muleshoe 27.93 329 ⇑P P 02 39 54.9 -2.2
baz=28
125A Gardner Draw, 27.96 324 ⇑P P 02 39 56.0 -1.3
baz=28,SNR=13
OLIL Olney 28.01 356 eP P 02 39 57.7 -0.1
comp=E,28nm,0.8s,mb4.9
224A Cornudas Mount 28.05 322 ⇑P P 02 39 57.3 -0.9
baz=28,SNR=19
Y27A Causey 28.07 328 ⇑P P 02 39 57.4 -0.9
baz=28
AMTX Amarillo 28.13 331 eP P 02 40 00.4 +1.6
comp=E,15nm,0.7s,mb4.7
BLO Bloomington 28.38 359 eP P 02 40 01.1 +0.1
comp=E,24nm,0.7s,mb4.9
CBN Corbin 28.41 14 eP P 02 40 02.5 +1.1
comp=E,29nm,0.9s,mb4.9
Z25A Roswell 28.45 325 ⇑P P 02 40 02.1 +0.3
baz=28
124A Stringfield Ra 28.45 323 ⇓P P 02 40 01.8 0.0
baz=28,SNR=14
Z24A Sheeppen Canyo 28.85 324 ⇑P P 02 40 05.3 0.0
baz=29,SNR=7.3
Y25A Mesa, Roswell 28.91 326 ⇑P P 02 40 05.6 -0.2
baz=29
W27A Bowe Ranch, En 28.94 330 ⇓P P 02 40 05.8 -0.3
baz=29
Y24A Capitan 29.33 325 ⇓P P 02 40 09.8 +0.2
baz=29,SNR=6.1
MCWV Mont Chateau 29.33 9 eP P 02 40 12.3 +2.8
comp=E,16nm,0.6s,mb4.9
320A Kipp Ranch, An 29.45 318 ⇑P P 02 40 11.0 +0.3
baz=30,SNR=8.8
ACSO Alum Creek Sta 29.53 4 eP P 02 40 11.4 +0.1
Y23A Lovelace Mesa, 29.68 324 ⇑P P 02 40 12.1 -0.6
baz=30
Z22A Elephant Butte 29.74 322 ⇓P P 02 40 11.9 -1.3
baz=30
121A Cookes Peak, D 29.75 320 ⇓P P 02 40 12.5 -0.8
baz=30,SNR=8.5
W25A X Bar L Ranch, 29.77 328 ⇓P P 02 40 11.2 -2.2
baz=30
220A Playas Peak, P 29.81 319 ⇓P P 02 40 11.4 -2.4
baz=30,SNR=8.6
HDIL Hopedale 29.91 355 eP P 02 40 14.8 +0.1
comp=E,63nm,0.8s,mb5.4
BNM Barren Site 30.17 324 eP P 02 40 17.3 +0.3
comp=E,12nm,1.1s,mb4.5
Y22A Socorro 30.21 323 ⇑P P 02 40 17.7 +0.3
baz=30,SNR=9.8
W24A Lazy 6 Ranch, 30.27 327 ⇓P P 02 40 17.6 -0.2
baz=30
V25A Rancho No Teng 30.33 329 ⇑P P 02 40 18.1 -0.3
baz=30
U26A Atchley Ranch, 30.34 330 ⇑P P 02 40 17.7 -0.7
baz=30
219A White Tail Can 30.35 318 ⇓P P 02 40 18.7 0.0
baz=30,SNR=5.9
MVL Millersville 30.36 14 eP P 02 40 19.9 +1.2
comp=E,28nm,1.1s,mb4.9
MVL epP pP 02 40 30.2 -2.1
V24A Rampart Ranch, 30.59 328 ⇑P P 02 40 20.4 -0.3
baz=31
W23A Werner Place, 30.63 326 ⇓P P 02 40 21.1 0.0
baz=31
Z20A Nine Sixteen R 30.64 320 ⇑P P 02 40 21.9 +0.7
baz=31,SNR=7.8
LAZ Ladron 30.64 324 eP P 02 40 23.0 +1.8
comp=E,4.9nm,1.0s,mb4.3
ANMO Albuquerque 30.65 325 P P 02 40 22.2 +0.9
comp=E,2.4nm,0.8s,mb4.1,baz=126,slow=6.9,SNR=9.1
ANMO LR LR 02 54 00.4
comp=E,236nm,21.2s,MS3.8,baz=275,slow=39
ANMO Albuquerque 30.65 325 eP P 02 40 22.6 +1.3
comp=E,10nm,1.0s,mb4.6
Y21A Point of Rocks 30.68 323 ⇓P P 02 40 22.0 +0.4
baz=31,SNR=9.1
119A Ashpeak Ranch, 30.87 319 ⇑P P 02 40 24.4 +1.2
baz=31,SNR=8.8
Y20A Horse Springs, 31.04 322 ⇑P P 02 40 25.2 +0.5
baz=31,SNR=9.2
X21A Alamocita Cree 31.05 323 ⇓P P 02 40 25.4 +0.5
baz=31,SNR=8.1
118A Homack Ranch, 31.22 318 ⇓P P 02 40 26.6 +0.3
baz=31,SNR=11
U23A El Rito 31.53 327 ⇓P P 02 40 28.4 -0.6
baz=32,SNR=9.4
TUC Tucson 31.56 317 eP P 02 40 30.9 +1.6
comp=E,5.7nm,0.9s,mb4.4
Y19A Nutrioso 31.61 321 ⇑P P 02 40 29.9 +0.1
baz=32,SNR=7.3
S25A Robets Cordova 31.68 331 ⇓P P 02 40 30.2 0.0
baz=32
117A Oracle 31.69 317 ⇑P P 02 40 31.7 +1.2
baz=32,SNR=5.0
U22A Llaves 31.92 327 ⇓P P 02 40 32.6 +0.2
baz=32
V21A Milan 31.93 325 ⇑P P 02 40 32.9 +0.4
baz=32
X19A St. Johns 31.95 321 ⇑P P 02 40 33.2 +0.6
baz=32,SNR=9.3
W20A Ramah 31.95 323 ⇑P P 02 40 31.5 -1.2
baz=32
LPAZ La Paz 31.97 147 P P 02 40 34.7 +1.7
comp=E,4.8nm,0.8s,mb4.4,baz=327,slow=8.0,SNR=21
LPAZ pP pP 02 40 46.3 -0.4
comp=E,2.6nm,0.7s,baz=345,slow=22,SNR=4.4
LPAZ ScP ScP 02 47 05.0 +3.6
comp=E,0.4nm,0.4s,baz=300,slow=7.8,SNR=7.6
LPAZ LR LR 02 54 25.3
comp=E,526nm,21.0s,MS4.2,baz=252,slow=38
LPAZ La Paz 31.97 147 eP P 02 40 34.8 +1.7
comp=E,8.3nm,0.9s,mb4.6
Y18A Canyon Day Jun 31.99 320 ⇑P P 02 40 33.8 +0.8
baz=32,SNR=9.2
S24A Houchin Ranch, 32.04 330 ⇓P P 02 40 33.9 +0.5
baz=32
SDCO Great Sand Dun 32.26 330 eP P 02 40 35.6 +0.2
comp=E,6.3nm,0.8s,mb4.5
JFWS Jewell Farm 32.35 354 eP P 02 40 35.8 -0.2
comp=E,31nm,0.8s,mb5.2
X18A Snowflake 32.42 321 ⇓P P 02 40 37.6 +0.8
baz=32,SNR=5.2
R24A Sanders Place, 32.45 331 ⇓P P 02 40 37.5 +0.5
baz=32
W19A Sanders 32.47 322 ⇓P P 02 40 37.4 +0.1
baz=32
BINY Binghamton 32.54 14 eP P 02 40 38.5 +0.7
comp=E,31nm,0.9s,mb5.2
X17A Forest Lakes 32.84 320 ⇓P P 02 40 40.9 +0.4
baz=33,SNR=7.1
U20A Newcomb 32.84 325 ⇓P P 02 40 42.1 +1.6
baz=33
S22A 4UR Ranch, Cre 32.93 328 ⇓P P 02 40 41.7 +0.4
baz=33
U19A Dine' College, 33.17 324 ⇑P P 02 40 43.0 -0.4
baz=33
R22A Saguache, Gunn 33.26 329 ⇑P P 02 40 44.8 +0.7
baz=33
X16A Lo Mia Camp, P 33.29 319 ⇓P P 02 40 45.0 +0.5
baz=33,SNR=10
OGNE Ogallala 33.39 337 eP P 02 40 46.6 +1.5
MVCO Mesa Verde 33.43 326 ⇓P P 02 40 45.9 +0.3
baz=34
MVCO Mesa Verde 33.43 326 eP P 02 40 45.8 +0.2
comp=E,8.9nm,0.9s,mb4.7
T19A Beclabito 33.45 325 ⇓P P 02 40 46.3 +0.5
baz=34
TRY Troy 33.62 16 epP pP 02 40 59.3 -1.6
V17A Tonalea, Kykot 33.66 322 ⇑P P 02 40 48.5 +0.9
baz=34,SNR=8.0
P23A Jefferson 33.71 331 ⇑P P 02 40 48.0 0.0
baz=34
X15A Humboldt 33.85 319 ⇓P P 02 40 48.5 -0.8
baz=34,SNR=5.3
ISCO Idaho Springs 33.94 332 eP P 02 40 51.7 +1.7
WUAZ Wupatki 33.95 321 eP P 02 40 52.2 +2.0
comp=E,18nm,1.2s,mb4.9
Z13A Yuma Proving G 34.04 315 ⇓P P 02 40 50.5 -0.5
baz=34
SMCO Snowmass 34.10 330 eP P 02 40 53.7 +2.3
PV01 Paradox Valley 34.14 327 eP P 02 40 52.2 +0.5
comp=E,384nm,1.0s
T18A Mexican Hat 34.15 324 ⇑P P 02 40 51.0 -0.8
baz=34
S19A Harvey Farm, M 34.16 326 ⇓P P 02 40 50.6 -1.4
baz=34
U16A Tuba City 34.21 322 ⇑P P 02 40 53.5 +1.1
baz=34,SNR=5.4
ECSD EROS Data Cent 34.25 346 eP P 02 40 50.3 -2.3
comp=E,8.0nm,0.7s,mb4.8
SADO Sadowa 34.44 8 P P 02 40 53.1 -1.1
comp=E,11nm,0.7s,mb4.9,baz=209,slow=8.3,SNR=18
SADO pP pP 02 41 04.0 -3.9
comp=E,12nm,0.7s,baz=205,slow=6.8,SNR=8.7
SADO LR LR 02 55 14.4
comp=E,571nm,19.1s,MS4.3,baz=190,slow=37
PV04 Paradox Valley 34.51 327 eP P 02 40 55.3 +0.4
T17A Navajo Res., N 34.59 323 ⇓P P 02 40 55.6 -0.1
baz=35
S18A Hurst Farm, Bl 34.60 325 ⇑P P 02 40 56.2 +0.4
baz=35
V15A Kaibab Nationa 34.64 320 ⇑P P 02 40 56.5 +0.4
baz=35,SNR=6.9
O22A Kremmling 34.66 331 ⇑P P 02 40 55.9 -0.3
baz=35
N23A Red Feather La 34.97 333 ⇓P P 02 40 59.1 +0.2
baz=35
R18A Canyonlands Na 35.04 326 ⇓P P 02 40 57.9 -1.6
baz=35
PHWY Pilot Hill 35.09 334 eP P 02 41 02.1 +2.2
comp=E,3.9nm,0.6s,mb4.5
Q19A Hogan Spring (35.11 327 ⇓P P 02 40 59.5 -0.6
baz=35
LONY Lake Ozonia 35.16 14 eP P 02 40 60.0 -0.5
comp=E,22nm,1.0s,mb5.0
COWI Conover 35.41 356 eP P 02 41 00.9 -1.7
comp=E,6.7nm,0.8s,mb4.6
R17A Hanksville Air 35.52 325 ⇓P P 02 41 03.3 -0.3
baz=36,SNR=9.8
T15A Red Dirt Ranch 35.55 322 ⇓P P 02 41 03.3 -0.6
baz=36
U14A Mt Trumbull 35.65 320 ⇓P P 02 41 04.6 -0.3
baz=36,SNR=6.5
R16A Teasdale 35.86 324 ⇑P P 02 41 06.4 -0.2
baz=36,SNR=8.3
SRU San Rafael 35.90 326 ⇓P P 02 41 05.3 -1.6
baz=36,SNR=12
SRU San Rafael 35.90 326 eP P 02 41 07.1 +0.2
N20A Spence Gulch, 36.01 330 ⇑P P 02 41 06.0 -1.8
baz=36,SNR=5.9
SIV San Ignacio 36.05 137 P P 02 41 09.0 +0.6
comp=E,22nm,1.0s,mb5.0,baz=316,slow=9.3,SNR=70
SIV PcP PcP 02 43 34.4 +0.5
comp=E,2.8nm,0.5s,baz=278,slow=2.0,SNR=7.8
RWWY Rawlins 36.18 332 eP P 02 41 09.2 0.0
comp=E,32nm,0.9s,mb4.7
M21A Separation Pea 36.18 332 ⇑P P 02 41 09.0 -0.3
baz=36
TMUT Trail Mountain 36.41 326 epP pP 02 41 28.6 +3.6
MSU Marysvale 36.41 324 eP P 02 41 12.6 +1.3
L21A Rawlins 36.47 332 ⇓P P 02 41 11.2 -0.5
baz=36
CCUT Cedar City 36.48 322 eP P 02 41 13.8 +1.8
N19A John Jarvie Ra 36.50 330 ⇓P P 02 41 11.8 -0.2
baz=37
ARUT Antelope Range 36.68 322 eP P 02 41 14.7 +1.1
comp=E,6.3nm,0.7s,mb4.5
O17A Robinson Place 36.79 327 ⇓P P 02 41 14.3 -0.2
baz=37
S13A Holt Ranch, En 36.81 321 ⇑P P 02 41 14.9 +0.2
baz=37,SNR=17
N18A Larsen Ranch, 36.81 329 ⇑P P 02 41 15.0 +0.3
baz=37
RSSD Black Hills 36.88 338 eP P 02 41 15.8 +0.7
MPU Maple Canyon 37.15 326 epP pP 02 41 34.7 +3.4
DAU Daniels Canyon 37.22 327 eP P 02 41 19.6 +1.5
PKME Peaks-Kenny Pk 37.24 19 eP P 02 41 18.6 +0.4
comp=E,18nm,0.9s,mb4.9
R13A O'Grain Ranch, 37.26 322 ⇓P P 02 41 18.8 +0.3
baz=37
Q14A Sevier Lake (B 37.37 324 ⇑P P 02 41 19.7 +0.2
baz=37
T11A Corn Creek, Al 37.45 320 ⇓P P 02 41 19.5 -0.6
baz=38
JLU Jordanelle 37.46 327 eP P 02 41 24.4 +4.3
JLU epP pP 02 41 31.0 -3.0
M17A Scullys Gap (B 37.68 329 ⇑P P 02 41 21.7 -0.3
baz=38
L18A Fontenelle, Gr 37.70 330 ⇓P P 02 41 20.7 -1.5
baz=38
Q13A Wheeler Ranch, 37.79 323 ⇑P P 02 41 23.7 +0.7
baz=38,SNR=23
K19A Absolon Red Bu 37.82 332 ⇑P P 02 41 22.0 -1.2
baz=38
DUG Dugway 37.92 325 eP P 02 41 24.5 +0.4
comp=E,5.7nm,1.0s,mb4.3
S11A Rachel 38.02 320 ⇓P P 02 41 25.7 +0.7
baz=38,SNR=5.1
FURC Furnace Creek, 38.06 318 ⇑P P 02 41 26.0 +0.6
baz=38,SNR=5.2
BW06 Boulder Array 38.11 331 ⇓P P 02 41 24.3 -1.3
baz=38
PDAR Pinedale Array 38.11 331 P P 02 41 24.9 -0.7
comp=E,2.1nm,0.7s,mb4.0,baz=126,slow=11,SNR=13
PDAR PcP PcP 02 43 40.0 +0.2
comp=E,0.8nm,0.6s,baz=128,slow=4.4,SNR=3.7
PDAR ScP ScP 02 47 26.2 +3.1
comp=E,2.9nm,1.1s,baz=127,slow=3.9,SNR=9.3
PDAR LR LR 02 59 33.9
comp=E,272nm,21.9s,MS4.0,baz=140,slow=40
P13A Bates Ranch, G 38.11 324 ⇓P P 02 41 25.5 -0.2
baz=38
HWUT Hardware Ranch 38.24 328 eP P 02 41 26.7 -0.1
comp=E,8.2nm,0.6s,mb4.6
K18A Toltan Ranch, 38.24 331 ⇑P P 02 41 27.1 +0.4
baz=38
MPMC Manual Prospec 38.26 316 ⇓P P 02 41 27.5 +0.6
baz=38,SNR=5.9
R11A Troy Canyon, C 38.35 321 ⇑P P 02 41 27.4 -0.3
baz=38
AGMN Agassiz Nation 38.44 349 eP P 02 41 26.6 -1.7
comp=E,12nm,0.8s,mb4.7
SPUT South Promonto 38.49 327 eP P 02 41 29.4 +0.6
BGU Big Grassy Mou 38.54 326 eP P 02 41 29.8 +0.5
comp=E,7.9nm,1.0s,mb4.4
N14A Grayback Hills 38.58 326 ⇑P P 02 41 29.6 0.0
baz=39,SNR=7.6
M15A Larsen Ranch, 38.60 327 ⇑P P 02 41 29.1 -0.7
baz=39,SNR=9.2
J18A Kendall Valley 38.67 331 ⇑P P 02 41 30.1 -0.1
baz=39
Q11A Duckwater 38.70 321 ⇑P P 02 41 30.4 -0.3
baz=39
S10A Tonopah Range, 38.73 320 ⇑P P 02 41 31.0 +0.1
baz=39,SNR=7.0
I18A Diamond G Ranc 38.95 332 ⇑P P 02 41 31.2 -1.4
baz=39
L15A Malad City 38.95 328 ⇑P P 02 41 28.8 -3.9
baz=39
O12A Currie 39.07 324 ⇓P P 02 41 33.2 -0.5
baz=39,SNR=5.6
J17A Brown Place, J 39.11 331 ⇓P P 02 41 33.4 -0.6
baz=39,SNR=12
M14A Sheep Mountain 39.11 327 ⇓P P 02 41 33.7 -0.4
baz=39,SNR=15
N13A Wendover, West 39.15 325 ⇓P P 02 41 34.2 -0.2
baz=39,SNR=9.9
REDW Red Top Meadow 39.18 331 eP P 02 41 34.8 +0.2
SNOW Snow King Moun 39.21 331 eP P 02 41 35.0 +0.2
comp=E,22nm,1.0s,mb4.8
LOHW Long Hollow 39.25 331 eP P 02 41 34.2 -1.0
comp=E,3.4nm,0.6s,mb4.2
TPAW Teton Pass 39.32 331 eP P 02 41 35.8 0.0
comp=E,11nm,1.1s,mb4.5
L14A Malta 39.43 327 ⇓P P 02 41 36.3 -0.4
baz=40,SNR=5.9
M13A Montello 39.47 326 ⇑P P 02 41 36.7 -0.2
baz=40,SNR=6.5
J16A Bone 39.48 330 ⇓P P 02 41 37.6 +0.5
baz=40
O11A Cowboy Ranch, 39.51 323 ⇑P P 02 41 37.8 +0.4
baz=40
N12A Clover Valley, 39.62 324 ⇑P P 02 41 38.0 -0.3
baz=40,SNR=8.8
IMW Indian Meadow 39.62 331 eP P 02 41 37.9 -0.3
comp=E,3.4nm,0.6s,mb4.2
K14A Jones Ranch, D 39.75 328 P P 02 41 38.9 -0.5
baz=40,SNR=16
RLMT Red Lodge 39.81 334 ⇓P P 02 41 38.7 -1.1
baz=40
RLMT Red Lodge 39.81 334 eP P 02 41 39.1 -0.7
comp=E,3.9nm,0.6s,mb4.3
I16A Newdale 39.87 331 ⇑P P 02 41 40.7 +0.4
baz=40
LAO LASA Array 39.87 338 eP P 02 41 39.6 -0.7
comp=E,5.1nm,0.8s,mb4.3
J15A Blackfoot 39.98 329 ⇑P P 02 41 40.4 -0.8
baz=40,SNR=8.7
NVAR Mina Array Bea 40.12 319 P P 02 41 44.1 +1.6
comp=E,14nm,0.7s,mb4.8,baz=127,slow=7.6,SNR=47
NVAR PcP PcP 02 43 47.5 +1.3
comp=E,1.9nm,0.8s,baz=130,slow=4.1,SNR=5.0
NVAR ScP ScP 02 47 34.4 +3.4
comp=E,1.5nm,0.8s,baz=135,slow=3.8,SNR=7.0
NVAR Mina Array Bea 40.12 319 P P 02 41 44.1 +1.7
NVAR PcP PcP 02 43 47.5 +1.3
NVAR ScP ScP 02 47 34.4 +3.4
ULM Lac du Bonnet 40.32 350 P P 02 41 42.6 -1.4
comp=E,4.6nm,0.7s,mb4.3,baz=158,slow=8.6,SNR=3.9
ULM LR LR 02 59 56.4
comp=E,263nm,21.4s,MS4.1,baz=190,slow=38
ULM Lac du Bonnet 40.32 350 eP P 02 41 42.3 -1.6
comp=E,7.3nm,0.8s,mb4.5
J14A Carey 40.48 328 ⇑P P 02 41 43.3 -2.1
baz=40,SNR=12
GCMT Greycliff 40.51 334 eP P 02 41 44.9 -0.7
comp=E,3.4nm,0.6s,mb4.2
F18A Big Timber 40.62 334 ⇓P P 02 41 45.5 -1.0
baz=41,SNR=7.6
BMN Battle Mountai 40.63 322 eP P 02 41 47.3 +0.6
comp=E,9.6nm,0.7s,mb4.5
DGMT Dagmar 40.71 341 eP P 02 41 47.7 +0.5
comp=E,20nm,0.6s,mb4.9
K12A Draper Farm, C 40.73 327 ⇓P P 02 41 46.5 -1.0
baz=41
J13A Cove Ranch, Pi 40.87 328 ⇑P P 02 41 47.7 -0.9
baz=41,SNR=6.1
I14A Mackay 40.88 329 ⇑P P 02 41 47.4 -1.2
baz=41,SNR=9.3
L11A Cat Creek Ranc 40.89 325 ⇓P P 02 41 47.6 -1.2
baz=41,SNR=8.2
M10A I.L. Ranch, Tu 40.91 324 ⇓P P 02 41 48.5 -0.5
baz=41
H15A Lima 40.98 330 ⇑P P 02 41 49.4 0.0
baz=41,SNR=11
G16A Moss Hill, Enn 41.03 332 ⇓P P 02 41 49.5 -0.4
baz=41
HLID Hailey 41.11 328 P P 02 41 50.9 +0.4
baz=41,SNR=16
HLID Hailey 41.11 328 eP P 02 41 50.6 0.0
comp=E,4.8nm,0.7s,mb4.2
I13A Wildhorse Cree 41.20 329 ⇑P P 02 41 51.3 0.0
baz=41,SNR=10
E18A Harlowton 41.23 335 ⇑P P 02 41 51.4 -0.1
baz=41
MCMT McKenzie Canyo 41.23 331 eP P 02 41 52.0 +0.4
comp=E,3.2nm,0.8s,mb4.0
J12A Stokes Ranch, 41.26 327 ⇓P P 02 41 51.1 -0.7
baz=41,SNR=7.3
BOZ Bozeman (W) 41.27 332 ⇑P P 02 41 51.0 -0.9
baz=41,SNR=12
BOZ Bozeman (W) 41.27 332 eP P 02 41 50.9 -0.9
comp=E,2.8nm,0.6s,mb4.1
G15A Dillon 41.31 331 ⇑P P 02 41 52.4 +0.2
baz=41
H14A Leadore 41.33 330 ⇓P P 02 41 52.5 +0.1
baz=41,SNR=7.1
K11A Parker Ranch, 41.44 326 ⇓P P 02 41 52.8 -0.5
baz=42,SNR=11
DLMT Dillon 41.50 331 eP P 02 41 53.7 -0.1
comp=E,20nm,1.5s,mb4.5
I12A Atlanta 41.65 328 ⇑P P 02 41 54.6 -0.4
baz=42,SNR=6.9
D18A Linhart Farms, 41.69 335 ⇓P P 02 41 55.0 -0.2
baz=42
H13A Challis 41.73 329 ⇑P P 02 41 55.1 -0.5
baz=42
LRM Limekiln Ridge 41.78 332 eP P 02 41 56.0 0.0
comp=E,21nm,0.8s,mb4.8
K10A MacKenzie Ranc 41.91 325 ⇑P P 02 41 56.3 -0.8
baz=42
D17A Six Diamond Ra 42.02 335 ⇑P P 02 41 56.4 -1.5
baz=42,SNR=7.0
H12A Diamond D Ranc 42.03 329 ⇑P P 02 41 57.9 -0.2
baz=42,SNR=7.0
G13A Cobalt 42.10 330 ⇑P P 02 41 57.4 -1.2
baz=42
E15A Deer Lodge 42.32 332 ⇓P P 02 41 59.4 -1.0
baz=42
EGMT Eagleton 42.33 336 eP P 02 42 01.4 +1.0
comp=E,5.3nm,0.6s,mb4.3
C17A Wharram Farm, 42.43 335 P P 02 42 00.7 -0.6
baz=42,SNR=8.1
F13A Darby 42.65 330 ⇓P P 02 42 00.8 -2.3
baz=43
G12A Big Creek, Yel 42.67 329 ⇓P P 02 42 01.7 -1.6
baz=43
WVOR Wild Horse Val 42.70 324 eP P 02 42 03.4 -0.2
comp=E,25nm,0.9s,mb4.9
WVOR e 02 44 07.5
F12A Elk City 43.08 330 ⇓P P 02 42 04.6 -1.9
baz=43,SNR=13
MSO Missoula 43.22 332 eP P 02 42 06.5 -1.2
comp=E,7.7nm,1.4s,mb4.2
C15A Salmond Ranch, 43.33 334 ⇓P P 02 42 07.4 -1.1
baz=43
A17A Triple J Farms 43.44 336 ⇓P P 02 42 09.3 -0.2
baz=44
BMO Blue Mountains 43.51 327 eP P 02 42 08.7 -1.4
comp=E,4.2nm,0.9s,mb4.2
E12A Beaver Dam Sad 43.70 330 ⇑P P 02 42 09.3 -2.3
baz=44
B15A Bradely Ranch, 43.72 334 ⇓P P 02 42 09.9 -1.8
baz=44
A16A West Butte Ran 43.81 335 ⇑P P 02 42 11.5 -0.9
baz=44
C14A Swan Lake 43.83 333 ⇑P P 02 42 11.7 -0.9
baz=44
D12A Red Ives Fores 44.05 331 ⇑P P 02 42 12.9 -1.4

baz=44
I07A Izee 44.22 325 ⇑P P 02 42 14.5 -1.3
baz=44
F10A Beach Ranch, E 44.22 329 ⇓P P 02 42 14.3 -1.5
baz=44
A15A Johnson Ranch, 44.30 335 ⇑P P 02 42 14.5 -1.8
baz=44,SNR=9.8
A14A Double T Ranch 44.59 334 ⇑P P 02 42 17.3 -1.4
baz=45,SNR=6.4
YBH Yreka Blue Hor 44.76 320 P P 02 42 18.6 -1.6
comp=E,1.7nm,0.6s,mb4.1,baz=167,slow=4.2,SNR=6.5
C11A Tepee Creek (N 45.04 331 ⇓P P 02 42 21.1 -1.1
baz=45
CFAA Coronel Fontan 45.27 159 P P 02 42 25.9 +1.7
comp=E,0.7nm,0.7s,mb3.6,baz=339,slow=6.4,SNR=5.8
CFAA pP pP 02 42 36.9 -1.6
comp=E,1.3nm,1.0s,baz=276,slow=11,SNR=2.6
CFAA sP sP 02 42 41.0 -3.7
comp=E,1.3nm,1.0s,baz=349,slow=7.4,SNR=3.9
CFAA Coronel Fontan 45.27 159 P P 02 42 25.9 +1.6
CFAA pP pP 02 42 36.9 -1.6
CFAA sP sP 02 42 41.0 -3.7
HAWA Hanford 45.70 327 *eP* **P 02 42 26.6 -0.9**
comp=E,4.3nm,0.7s,mb4.5
HAWA *e* pP 02 42 36.9 -4.8
FFC Flin Flon 45.77 347 *eP* **P 02 42 26.3 -1.6**
comp=E,4.4nm,0.9s,mb4.4
OD2 Odessa Site #2 45.93 329 *eP* **P 02 42 28.3 -1.0**
comp=E,22nm,1.3s,mb4.9
CPUP Villa Florida 46.01 144 P P 02 42 29.9 -0.3
comp=E,12nm,0.8s,mb4.9,baz=316,slow=8.2,SNR=28
CPUP PcP PcP 02 44 05.9 -0.2
comp=E,2.8nm,0.6s,baz=291,slow=2.8,SNR=4.8
CPUP LR LR 03 03 59.6
comp=E,204nm,18.3s,MS4.1,baz=300,slow=39
CPUP Villa Florida 46.01 144 *eP* **P 02 42 29.9 -0.3**
comp=E,48nm,0.8s,mb5.5
SCHQ Schefferville 46.51 15 P P 02 42 31.9 -1.9
comp=E,8.8nm,0.6s,mb4.9,baz=220,slow=6.1,SNR=30
SCHQ pP pP 02 42 42.0 -6.0
comp=E,13nm,0.7s,baz=213,slow=5.3,SNR=8.1
SCHQ LR LR 03 02 52.8
comp=E,484nm,18.6s,MS4.5,baz=212,slow=37
SCHQ Schefferville 46.51 15 *eP* **P 02 42 31.6 -2.1**
comp=E,33nm,1.2s,mb5.1
PLCA Paso Flores 53.05 166 P P 02 43 24.7 +1.1
comp=E,16nm,0.8s,mb5.0,baz=339,slow=8.8,SNR=24
PLCA pP pP 02 43 36.8 -1.2
comp=E,11nm,0.9s,baz=334,slow=10,SNR=6.0
PLCA LR LR 03 01 49.7
comp=E,110nm,18.5s,MS3.9,baz=279,slow=31
PLCA Paso Flores 53.05 166 *eP* **P 02 43 24.0 +0.5**
comp=E,20nm,0.9s,mb5.1
TRQA Tornquist 53.34 157 *eP* **P 02 43 26.0 +0.2**
comp=E,9.3nm,1.1s,mb4.6
YKA Yellowknife Ar 55.75 344 P P 02 43 41.2 -1.7
comp=E,1.2nm,0.6s,mb4.1,baz=139,slow=7.3,SNR=5.2
YKA pP pP 02 43 52.4 -5.0
comp=E,1.8nm,0.6s,baz=138,slow=7.2,SNR=5.4
DLBC Dease Lake 58.21 334 P P 02 44 00.6 +0.3
comp=E,1.6nm,0.5s,mb4.3,baz=141,slow=7.3,SNR=3.8
DLBC pP pP 02 44 10.0 -5.0
comp=E,7.4nm,1.0s,baz=125,slow=9.4,SNR=4.2
DLBC Dease Lake 58.21 334 P P 02 44 00.6 +0.3
DLBC pP pP 02 44 10.0 -5.0
RKT Rikitea 58.73 235 *eT* 03 47 06.8
comp=E,9.5nm,0.2s
INK Inuvik 65.38 342 P P 02 44 47.6 -0.8
comp=E,3.2nm,1.0s,mb4.3,baz=118,slow=16,SNR=5.2
INK pP pP 02 44 59.5 -3.8
comp=E,3.9nm,0.8s,baz=115,slow=9.4,SNR=3.8
INK Inuvik 65.38 342 *eP* **P 02 44 49.2 +0.8**
comp=E,5.0nm,0.9s,mb4.5
EGAK Eagle 66.08 337 *eP* **P 02 44 53.1 +0.2**
comp=E,4.1nm,1.0s,mb4.4
PMOR Pomariorio Ree 66.64 249 *eT* 03 57 10.9
comp=E,6.9nm,0.2s
SUMG Summit 67.88 14 *eP* **P 02 45 04.1 -0.2**
comp=E,14nm,1.0s,mb5.0
SUMG Summit 67.88 14 *i P* pP 02 45 22.6 +3.3
comp=E,12nm,1.0s
ILAR Eielson Array 68.30 336 P P 02 45 05.6 -1.4
comp=E,1.8nm,0.8s,mb4.2,baz=125,slow=4.4,SNR=28
ILAR pP pP 02 45 17.5 -4.5
comp=E,3.7nm,0.7s,baz=130,slow=4.4,SNR=15
ILAR PKPPKP 03 13 23.3
comp=E,0.5nm,1.0s,baz=289,slow=4.5,SNR=5.0
ILAR LR LR 03 20 16.3
comp=E,146nm,19.0s,MS4.2,baz=302,slow=41
COLA College 68.72 336 *eP* **P 02 45 10.0 +0.3**
comp=E,4.1nm,0.8s,mb4.4
PPT Papeete 69.00 246 *eS* S 02 54 21.6 +8.1
comp=E,132nm,29.8s
PPT *e*LR LR 03 06 08.1
comp=E,241nm,27.2s
PPT Papeete 69.00 246 LR LR 03 08 10.5
comp=E,158nm,19.9s,MS4.2,baz=42,slow=30
BPAW Bear Paw Mtn. 69.74 335 *eP* **P 02 45 14.8 -1.2**
comp=E,15nm,1.2s,mb4.8
TBI Tubuai 70.88 241 *e*LR LR 03 07 14.1
comp=E,202nm,25.8s
TBI *e*T 04 02 28.5
comp=E,9.5nm,0.3s
ESDC Sonseca Array 76.97 52 P P 02 45 57.1 -1.9
comp=E,1.8nm,0.7s,mb4.1,baz=280,slow=5.4,SNR=12
ESDC pP pP 02 46 08.9 -5.4
comp=E,3.6nm,0.9s,baz=280,slow=5.1,SNR=7.3
ESDC sP sP 02 46 15.6 -4.7
comp=E,2.1nm,0.8s,baz=286,slow=5.8,SNR=3.4
ESLA Sonseca Array 76.97 52 *eP* **P 02 45 54.8 -4.3**
comp=E,2.6nm,1.3s,mb4.0
NOA NORSAR Array B 84.09 29 P P 02 46 35.7 -1.1
comp=E,0.8nm,1.0s,mb3.8,baz=58,slow=2.7,SNR=3.3
NOA LR LR 03 22 12.4
comp=E,72nm,20.4s,MS4.0,baz=285,slow=34
AMKA Amchitka 84.81 321 *eP* **P 02 46 41.0 +0.4**
comp=E,17nm,0.5s,mb5.4
ARCES ARCESS Array B 87.30 19 P P 02 46 50.1 -2.4
comp=E,1.8nm,1.0s,mb4.3,baz=320,slow=3.6,SNR=3.6
ARCES ARCESS Array B 87.30 19 P P 02 46 50.1 -2.4
FINES FINESS Array B 90.81 26 LR LR 03 23 32.5
comp=E,239nm,20.2s,MS4.6,baz=308,slow=33
PETK Petropavlovsk- 96.77 327 LR LR 03 31 10.9
comp=E,58nm,19.3s,MS4.1,baz=256,slow=35
AKASG Malin Array Be 96.99 36 LR LR 03 33 05.8
comp=E,121nm,18.5s,MS4.4,baz=40,slow=37
BRTR Keskin Array B 104.76 44 PKKPbc PKKPbc 03 03 56.0 -1.3
comp=E,0.6nm,1.0s,baz=123,slow=4.6,SNR=4.2
CN2 Changchun 118.80 335 *e*PKP PKPdf 02 52 50.4 -4.0
SONM Songino Array 120.75 351 PKP PKPdf 02 52 57.2 -0.9
comp=E,0.4nm,0.4s,baz=342,slow=3.2,SNR=3.8
SONM PKKPbc PKKPbc 03 03 02.1 -2.1
comp=E,0.6nm,0.7s,baz=172,slow=3.0,SNR=4.7
KSRS Korea Array 122.64 328 PKP PKPdf 02 53 01.2 -0.8
comp=E,1.8nm,0.7s,baz=124,slow=38,SNR=5.2
WMQ Urumqi 125.43 6 *e*PKP PKPdf 02 53 06.8 -0.4
WMQ LR LR
comp=N,130nm,22.8s,MS4.6
WMQ LR LR
comp=E,68nm,20.0s,MS4.6
WMQ LR LR
comp=Z,140nm,21.6s,MS4.6
BJI Beijing 125.59 339 PKP PKPdf 02 53 07.8 +0.2
BJI SS SS 03 11 53.0 0.0
BJI LR LR
comp=N,110nm,24.7s,MS4.6
BJI LR LR
comp=E,100nm,25.5s,MS4.6
BJI LR LR
comp=Z,100nm,30.7s
HHC Hu-ho-hao-te 126.29 344 *e*PKP PKPdf 02 53 04.3 -4.6
HHC PP PP 02 55 03.3 +0.5
HHC PKS 02 56 39.3
HHC SKS SKSdf 03 00 06.1 -10
HHC SKKS SKKSac 03 01 48.0 -9.5
HHC AMB AMB
comp=Z,80nm,9.4s
HHC LR LR
comp=N,120nm,19.4s,MS4.7
HHC LR LR
comp=E,120nm,19.3s,MS4.7
HHC LR LR
comp=Z,130nm,19.4s,MS4.6
NJ2 Nanjing 131.42 332 *e*PKP PKPdf 02 53 23.3 +4.3
LZH Lanzhou 132.61 349 *e*PKP PKPdf 02 53 19.0 -2.1
CD2 Chengdu 137.65 348 PKP PKPdf 02 53 29.4 -1.2
ASAR Alice Springs 140.12 246 PKhKP PKPpre 02 53 28.1
comp=Z,0.6nm,0.5s,baz=117,slow=3.8,SNR=11
ASAR PKP PKPdf 02 53 35.6 +0.4
comp=Z,4.3nm,0.9s,baz=119,slow=2.0,SNR=21
ASAR SKPbc SKPbc 02 57 11.8 +4.7
comp=Z,0.6nm,0.6s,baz=105,slow=3.4,SNR=5.8
WRAB Tennant Creek 140.33 252 *e*PKPdf PKPdf 02 53 37.3 +1.5
GYA Guiyang 141.16 342 *e*PKP PKPdf 02 53 37.1 -0.1
GYA sPKP 02 54 03.8
GYA PP PP 02 56 42.3 +4.7
GYA AMB AMB
comp=Z,90nm,7.9s
KMI Kunming 143.46 347 PKP PKPdf 02 53 40.3 -1.0
KMI pPKP pPKPdf 02 53 58.8 +1.4
KMI sPKP 02 54 06.8
KMI PP PP 02 56 54.9 +3.5
KMI SS SS 03 15 22.9 -4.8
KMI AMB AMB
comp=Z,79nm,7.5s
KMI LR LR
comp=N,100nm,20.0s,MS4.7
KMI LR LR
comp=E,98nm,18.6s,MS4.7
KMI LR LR
comp=Z,140nm,21.8s,MS4.7
CMAR Chiang Mai Arr 150.68 351 PKP PKPdf 02 53 53.9 +0.4
comp=Z,1.8nm,0.6s,baz=284,slow=1.2,SNR=4.0
CMAR PKPbc PKPbc 02 53 58.5 -0.5
comp=Z,4.9nm,1.1s,baz=325,slow=2.5,SNR=9.6

NIED ***20*** *02:36:00,37.°50N×143.°10E,h17km,Mw4.4 Best double couple: M0=4.38000×10^15 NP1:φ=15.00000°,δ=59.00000°, λ=82.00000°. NP2:φ=210.00000°,δ=32.00000°,λ=103.00000°.*
JMA ***20*** *02:36:35.7±0.2,37.°51N×143.°10E,h25km,M4.3*
ISCJB ***20*** *02:36:36.7±1.5,37.°52N±0.°04×143.°00E±0.°06, h17km±10km,mb4.2/27,MS3.8/2,Error ellipse: s-maj=8.4km s-min=5.2km az=27.1*
NEIC ***20*** *02:36:37.6±0.4,37.°58N×143.°03E,h10km,mb4.5/11, MW4.4(NIED),Error ellipse: s-maj=8.5km s-min=7.4km az=152.0*
MOS ***20*** *02:36:39.0±1.0,37.°55N×143.°01E,h33km,mb4.7/7,Error ellipse: s-maj=11.8km s-min=8.2km az=115.0*
IDC ***20*** *02:36:40.8±4.7,37.°48N×142.°98E,h32km±34km,mb3.9/13, mb1 3.9/18,mb1mx3.8/28,mbtmp3.9/18,ML3.7/5,MS3.7/5, Ms1 3.7/5,ms1mx3.2/33,Error ellipse: s-maj=19.8km s-min=16.5km az=75.0*
BJI ***20*** *02:36:42.5,37.°85N×142.°08E,h15km,mB4.8/5,mb4.5/11, Ms4.3/4,Ms7 4.0/3*
ISC 20 02:36:38.1±1.7,37.°54N±0.°03×142.°94E±0.°05,h13km±11km, n85,σ1§05/90,mb4.2/27,MS3.8/2,1C,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**1.55**	**306**	P	**Pn**	**02 37 04.4**	**-1.0**
JFK	**Kawauchi**	**1.65**	**265**	P	**Pn**	**02 37 05.7**	**-1.1**
JMM	**Marumori**	**1.73**	**281**	P	**Pn**	**02 37 06.6**	**-1.3**
ONAJ	**Iwakimizuishiy**	**1.76**	**256**	P	**Pn**	**02 37 07.2**	**-1.1**
ONAJ				*e*S	**Sn**	**02 37 29.2**	**-1.3**
JMK	**Ichinoseki**	**1.95**	**317**	P	**Pn**	**02 37 09.8**	**-1.1**
JOM	**Ohasama**	**2.32**	**327**	P	**Pn**	**02 37 14.8**	**-1.2**
JOM				*e*S	**Sn**	**02 37 43.2**	**-1.2**
JYK	**Kaneyama**	**2.45**	**305**	P	**Pn**	**02 37 17.5**	**-0.3**
JNS	**Sasagawa**	**2.89**	**277**	P	**Pn**	**02 37 24.0**	**+0.2**
JAG	**Ashikaga**	**3.00**	**249**	P	**Pn**	**02 37 25.4**	**0.0**
JANG	**Nango**	**3.04**	**339**	P	**Pn**	**02 37 25.5**	**-0.3**
JAW	**Awa shima**	**3.06**	**289**	P	**Pn**	**02 37 26.9**	**+0.8**
BSO1	**Boso 1**	**3.29**	**209**	P	**Pn**	**02 37 28.2**	**-1.1**
BSO1				*e*S	**Sn**	**02 38 07.1**	**-1.2**
JRY	**Ryogami san**	**3.58**	**246**	P	**Pn**	**02 37 33.3**	**0.0**
JOD2	**Odawara 2**	**3.85**	**235**	P	**Pn**	**02 37 36.7**	**-0.3**
JOD2				*e*S	**Sn**	**02 38 21.8**	**-0.3**
MJAR	**Matsushiro Arr**	**3.91**	**257**	Pn	**Pn**	**02 37 39.5**	**+1.7**
5.4nm,0.3s,baz=77,slow=14,SNR=87							
MJAR				LR	LR	02 39 07.9	
comp=Z,482nm,20.5s,baz=65,slow=38							
MAJO	**Matsushiro**	**3.91**	**257**	*e*P	**Pn**	**02 37 39.6**	**+1.7**
MAT	**Matsushiro**	**3.91**	**257**	P	**Pn**	**02 37 38.9**	**+1.0**
MAT				S	**Sn**	**02 38 25.7**	**+2.0**
MAT	**Matsushiro**	**3.91**	**257**	P	**Pn**	**02 37 39.5**	**+1.6**
JYN	**Shimob**	**4.08**	**241**	P	**Pn**	**02 37 41.0**	**+0.8**
ERM	**Erimo**	**4.47**	**2**	*e*P	**Pn**	**02 37 43.6**	**-1.9**
ERM	**Erimo**	**4.47**	**2**	*e*Pn	**Pn**	**02 37 43.2**	**-2.3**
ERM				*e*Sn	**Sn**	**02 38 32.5**	**-4.9**
JHJ	**Hachijo jima 2**	**5.11**	**211**	Sn	**Sn**	**02 38 49.7**	**-3.5**
45nm,0.3s,baz=250,slow=23,SNR=5.4							
ASAJ	**Asahikawa**	**6.57**	**358**	Pn	**Pn**	**02 38 15.0**	**+0.6**
1.5nm,0.3s,baz=218,slow=15,SNR=10							
ASAJ				Sn	**Sn**	**02 39 27.3**	**-1.9**
2.1nm,0.3s,baz=344,slow=32,SNR=5.1							
ASAJ				LR	LR	02 41 36.7	
comp=Z,469nm,21.1s,baz=157,slow=45							
ASAJ	**Asahikawa**	**6.57**	**358**	P	**Pn**	**02 38 15.0**	**+0.6**
ASAJ						02 39 27.3	
ASAJ				pmax	pmax		
comp=Z,2.0nm,0.3s							
ASAJ				smax			
comp=N,2.0nm,0.3s							
ASAJ				MLR	MLR		
comp=Z,469nm,21.1s							
YUK	**Yuzh-Kuril'sk**	**6.86**	**18**	*e*P	**Pn**	**02 38 14.2**	**-4.1**
YUK				*i* S	**Sn**	**02 39 28.3**	**-7.8**
YUK				pmax	pmax		
comp=Z,130nm,1.2s							
YUK				pmax	pmax		
comp=N,40nm,0.6s							
YUK				pmax	pmax		
comp=E,50nm,0.6s							
YUK				smax			
comp=E,80nm,0.3s							
YUK				smax			
comp=N,340nm,0.6s							
YUK				smax			
comp=N,1μm,1.7s							
YUK				smax			
comp=E,200nm,0.6s							
KUR	**Kuril'sk**	**8.53**	**24**	P	**Pn**	**02 38 30.0**	**-11**
KUR				S	**Sn**	**02 40 10.0**	**-7.3**
KUR				smax			
comp=N,70nm,0.5s							
KUR				smax			
comp=E,80nm,0.5s							
YSS	**Yuzh-Sakhalins**	**9.41**	**359**	*e*P	**Pn**	**02 38 49.0**	**-4.3**
CBIJ	**Chichi jima**	**10.43**	**184**	Pn	**Pn**	**02 39 05.7**	**-1.7**
comp=E,6.7nm,0.3s,baz=230,slow=17,SNR=2.3							
CBIJ				Sn	**Sn**	**02 40 53.2**	**-11**
comp=E,9.3nm,0.3s,baz=271,slow=23,SNR=3.0							
KSRS	**Korea Array**	**11.93**	**274**	Pn	**Pn**	**02 39 31.1**	**+3.2**
comp=E,0.1nm,0.3s,baz=92,slow=14,SNR=4.9							
KSRS				LR	LR	02 43 49.6	
comp=E,436nm,18.3s,baz=263,slow=36							
MDJ	**Mudanjiang**	**12.29**	**309**	*e*Pn	**Pn**	**02 39 32.7**	**-0.1**
comp=E,12nm,0.8s							
KLR	**Kul'dur**	**14.22**	**329**	*e*P	**Pn**	**02 40 02.2**	**+3.2**
PETK	**Petropavlovsk-**	**18.65**	**29**	P	**Pn**	**02 40 56.4**	**+0.7**
comp=E,0.1nm,0.3s,baz=13,slow=28,SNR=3.2							
SEY	**Seymchan**	**26.07**	**10**	*e*P	**P**	**02 42 13.4**	**+2.4**
XAN	**Xi'an**	**27.73**	**273**	P	**P**	**02 42 25.3**	**-0.9**
XAN				pP	pP	02 42 34.8	+4.6
XAN				pmax	pmax		
comp=Z,2.0nm,0.9s,mb3.8							
ULN	**Ulaanbaatar**	**28.09**	**303**	*e*P	**P**	**02 42 30.1**	**+0.8**
ULN				pmax	pmax		
comp=Z,8.0nm,1.0s,mb4.3							
ULN	**Ulaanbaatar**	**28.09**	**303**	*e*P	**P**	**02 42 30.1**	**+0.8**
comp=Z,7.5nm,1.0s,mb4.3							
SONM	**Songino Array**	**28.52**	**303**	P	**P**	**02 42 34.4**	**+1.2**
comp=Z,4.5nm,1.0s,mb4.2,baz=105,slow=9.8,SNR=23							
SONM				LR	LR	02 54 40.9	
comp=Z,171nm,20.6s,MS3.6,baz=352,slow=38							
MOY	**Mondy**	**32.55**	**309**	*e*P	**P**	**02 43 18.6**	**+10**
ZALV	**Zalesovo Beam**	**42.48**	**312**	P	**P**	**02 44 32.9**	**+0.3**
comp=Z,1.4nm,0.3s,mb4.1,baz=90,slow=7.4,SNR=9.3							
ZALV				PcP	PcP	02 46 25.0	-0.2
comp=Z,0.9nm,0.5s,baz=141,slow=4.8,SNR=1.8							
NVS	**Novosibirsk**	**43.37**	**313**	*i* P	**P**	**02 44 40.1**	**+0.2**
MK31	**Makanchi Array**	**44.88**	**302**	*e*P	**P**	**02 44 52.1**	**0.0**
MKAR	**Makanchi Array**	**44.88**	**302**	P	**P**	**02 44 52.1**	**+0.1**
comp=Z,1.8nm,0.7s,mb4.0,baz=86,slow=10,SNR=15							
KDAK	**Kodiak Island**	**45.91**	**42**	P	**P**	**02 44 60.0**	**-0.1**
comp=Z,3.5nm,0.8s,mb4.3,baz=228,slow=6.7,SNR=2.6							
KURK	**Kurchatov**	**46.58**	**308**	*e*P	**P**	**02 45 05.7**	**+0.3**
KURK				pmax	pmax		
comp=Z,16nm,0.8s,mb5.0							
KURK	**Kurchatov**	**46.58**	**308**	*e*P	**P**	**02 45 04.7**	**-0.8**
comp=Z,14nm,0.8s,mb5.0							
TKM2	**Tokmak 2**	**50.46**	**298**	*e*P	**P**	**02 45 35.4**	**0.0**
TKM2				pmax	pmax		
comp=Z,5.0nm,0.8s,mb4.6							
TKM2	**Tokmak 2**	**50.46**	**298**	*e*P	**P**	**02 45 35.4**	**0.0**
comp=Z,5.3nm,0.8s,mb4.6							
BVAR	**Borovoye Array**	**51.13**	**312**	P	**P**	**02 45 39.8**	**-0.6**
comp=Z,3.7nm,0.9s,mb4.3,baz=81,slow=9.2,SNR=9.8							
BVAR	**Borovoye Array**	**51.13**	**312**	P	**P**	**02 45 39.8**	**-0.6**
BRVK	**Borovoye**	**51.19**	**312**	*e*P	**P**	**02 45 41.9**	**+1.1**
BRVK				pmax	pmax		
comp=Z,8.0nm,1.7s,mb4.4							
BRVK	**Borovoye**	**51.19**	**312**	*e*P	**P**	**02 45 40.1**	**-0.7**
comp=Z,5.9nm,0.8s,mb4.6							
AAK	**Ala-Archa**	**51.32**	**298**	LR	LR	03 08 49.1	
comp=Z,110nm,19.0s,MS3.9,baz=56,slow=38							
AAK	**Ala-Archa**	**51.32**	**298**	*e*P	**P**	**02 45 41.7**	**-0.2**
UCH	**Uchtor**	**51.44**	**298**	*e*P	**P**	**02 45 45.6**	**+2.8**
comp=Z,3.6nm,0.9s,mb4.3							
UCH				*e*pP	pP	02 45 56.6	+10
EKS2	**Erkin-Say**	**51.81**	**299**	*e*P	**P**	**02 45 46.2**	**+0.6**
comp=Z,2.1nm,0.8s,mb4.1							
AML	**Almayashu**	**52.04**	**298**	*e*P	**P**	**02 45 48.7**	**+1.4**
comp=Z,148nm,0.8s							
ARU	**Arti**	**56.78**	**319**	P	**P**	**02 46 21.6**	**0.0**
ARU	**Arti**	**56.78**	**319**	*e*P	**P**	**02 46 21.5**	**-0.1**
comp=Z,3.3nm,0.7s,mb4.5							
WRAB	**Tennant Creek**	**57.73**	**190**	*e*P	**P**	**02 46 29.2**	**+0.6**
WRAB				pmax	pmax		
comp=Z,4.0nm,0.8s,mb4.5							
WRAB	**Tennant Creek**	**57.73**	**190**	*e*P	**P**	**02 46 29.2**	**+0.5**
comp=Z,3.6nm,0.8s,mb4.5							
WRA	**Warramunga Arr**	**57.74**	**190**	P	**P**	**02 46 27.8**	**-0.8**
baz=9.1,slow=7.3							
ABKAR	**Akbulak array**	**58.54**	**310**	*e*P	**P**	**02 46 33.9**	**-0.2**
comp=Z,1.7nm,0.6s,mb4.2							
AKTK	**Aktyubinsk**	**59.24**	**312**	P	**P**	**02 46 39.0**	**+0.1**
AKTO	**Aktyubinsk**	**59.24**	**312**	P	**P**	**02 46 39.0**	**+0.1**
comp=Z,2.1nm,0.8s,mb4.2,baz=82,slow=13,SNR=7.7							
ASAR	**Alice Springs**	**61.47**	**189**	P	**P**	**02 46 54.1**	**-0.2**
comp=Z,0.6nm,0.8s,mb3.8,baz=19,slow=8.3,SNR=4.9							
APA	**Apatity**	**62.72**	**336**	*e*P	sP	02 47 12.6	+4.5
OBN	**Obninsk**	**68.42**	**324**	*e*P	**P**	**02 47 37.9**	**-1.4**
OBN				pmax	pmax		
comp=Z,5.0nm,1.0s,mb4.5							
FINES	**FINESS Array B**	**68.93**	**333**	P	**P**	**02 47 42.6**	**+0.2**
comp=Z,3.4nm,0.7s,mb4.4,baz=36,slow=7.1,SNR=13							
KIV	**Kislovodsk**	**71.49**	**311**	*e*P	**P**	**02 47 59.7**	**+1.3**
KIV				pmax	pmax		
comp=Z,9.0nm,1.0s,mb4.7							
KIV	**Kislovodsk**	**71.49**	**311**	*e*P	**P**	**02 47 59.8**	**+1.5**
comp=Z,6.7nm,0.8s,mb4.6							
NVAR	**Mina Array Bea**	**73.71**	**54**	P	**P**	**02 48 15.3**	**+3.6**
comp=Z,0.5nm,0.6s,mb3.6,baz=286,slow=7.2,SNR=3.8							
NB2	**NORSAR Subarra**	**74.18**	**338**	P	**P**	**02 48 14.1**	**+0.1**
comp=Z,1.1nm,0.7s,mb3.9,baz=40,slow=5.9							
NOA	**NORSAR Array B**	**74.18**	**338**	P	**P**	**02 48 14.3**	**+0.3**
comp=Z,1.9nm,0.9s,mb4.0,baz=43,slow=5.5,SNR=8.3							
NOA	**NORSAR Array B**	**74.18**	**338**	P	**P**	**02 48 14.3**	**+0.3**
AKASG	**Malin Array Be**	**74.64**	**323**	P	**P**	**02 48 16.6**	**-0.2**
comp=Z,2.4nm,0.6s,mb4.3,baz=45,slow=6.1,SNR=10							
KIEV	**Kiev**	**74.65**	**323**	*e*P	**P**	**02 48 16.6**	**-0.3**
KIEV				pmax	pmax		
comp=Z,4.0nm,0.7s,mb4.5							
KIEV	**Kiev**	**74.65**	**323**	*e*P	**P**	**02 48 16.6**	**-0.3**
comp=Z,4.2nm,0.7s,mb4.5							
PDAR	**Pinedale Array**	**76.44**	**46**	P	**P**	**02 48 28.0**	**+0.7**
comp=Z,0.2nm,0.4s,mb3.4,baz=298,slow=1.9,SNR=2.0							
PDAR	**Pinedale Array**	**76.44**	**46**	P	**P**	**02 48 28.0**	**+0.7**
BUR08	**Bucovina Ar. S**	**78.65**	**322**	*e*P	**P**	**02 48 40.0**	**+0.3**
BRTR	**Keskin Array B**	**79.42**	**312**	P	**P**	**02 48 44.8**	**+0.8**
comp=Z,1.0nm,0.9s,mb3.7,baz=116,slow=5.6,SNR=7.5							
TXAR	**Lajitas Array**	**88.85**	**53**	P	**P**	**02 49 32.0**	**-0.2**
comp=Z,0.2nm,0.6s,mb3.6,baz=301,slow=3.2,SNR=3.0							
LPAZ	**La Paz**	**145.39**	**61**	PKPbc	PKPbc	02 56 16.4	+0.4
comp=Z,0.3nm,0.4s,baz=288,slow=3.2,SNR=2.3							
LPAZ	**La Paz**	**145.39**	**61**	PKPbc	PKPbc	02 56 16.4	+0.4
SIV	**San Ignacio**	**149.82**	**51**	PKPbc	PKPbc	02 56 27.3	-1.0
comp=Z,0.6nm,0.7s,baz=225,slow=2.9,SNR=3.2							

IDC 20 03:01:50.1±8.5,0.°12N×97.°67E,h87km±67km,mb3.6/4, mb1 3.5/6,mb1mx3.2/21,mbtmp3.4/6,ML3.3/2,Error ellipse: s-maj=82.7km s-min=19.4km az=59.0,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.94**	**25**	P	Pn	03 02 33.9	-0.9
0.6nm,0.3s,baz=181,slow=10,SNR=4.2							
PSI				S	Sn	03 03 07.7	-1.6
0.9nm,0.3s,baz=115,slow=20,SNR=3.8							
CMAR	**Chiang Mai Arr**	**18.27**	**4**	P	Pn	03 05 57.9	+0.1
0.2nm,0.3s,baz=196,slow=13,SNR=4.6							
WRA	**Warramunga Arr**	**41.07**	**121**	P	P	03 09 25.5	0.0
baz=302,slow=9.0							
ASAR	**Alice Springs**	**42.38**	**126**	P	P	03 09 35.9	-0.1
0.7nm,1.0s,baz=312,slow=9.9,SNR=3.4							
MKAR	**Makanchi Array**	**48.40**	**346**	P	P	03 10 22.6	-0.6
1.2nm,0.6s,baz=159,slow=8.4,SNR=8.8							
ZALV	**Zalesovo Beam**	**54.69**	**351**	P	P	03 11 10.2	+0.2
1.0nm,0.4s,baz=173,slow=5.3,SNR=5.6							
ARCES	**ARCESS Array B**	**83.70**	**340**	P	P	03 14 09.2	+0.3
0.9nm,0.8s,baz=94,slow=5.1,SNR=3.8							

CSEM ***20*** *03:30:23.6±0.3,37.°39N×20.°35E,h2km,ML3.6/9,Error ellipse: s-maj=7.2km s-min=3.9km az=51.0*
ISCJB ***20*** *03:30:24.4±0.6,37.°42N±0.°03×20.°34E±0.°05,h10km,Error ellipse: s-maj=5.5km s-min=3.9km az=153.0*
ATH ***20*** *03:30:24.4,37.°44N×20.°41E,h15km±1km,MD3.7/27*
NEIC ***20*** *03:30:24.3,37.°44N×20.°41E,h15km,MD3.7(ATH),After ATH.*
THE ***20*** *03:30:24.9,37.°43N×20.°44E,h0km±2km,ML3.6/9,Error ellipse: s-maj=3.6km s-min=0.8km az=233.0*
ISC 20 03:30:25.3±0.7,37.°43N±0.°03×20.°36E±0.°05,h10km,n124, σ1§07/165,Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KFL	**Anninata**	**0.76**	**26**	P	**Pg**	**03 30 38.7**	**-1.3**
KFL	**Anninata**	**0.76**	**26**	P	**Pg**	**03 30 38.7**	**-1.3**
VLS	**Valsamata**	**0.77**	**14**	*e*Pn	**Pg**	**03 30 39.2**	**-1.0**
VLS				*e*Sn	**Sg**	**03 30 49.2**	**-1.0**
VLS	**Valsamata**	**0.77**	**14**	*e*PN	**Pg**	**03 30 39.2**	**-1.0**
VLS				*e*SN	**Sg**	**03 30 49.2**	**-1.0**
VLS	**Valsamata**	**0.77**	**14**	P	**Pg**	**03 30 39.1**	**-1.1**
VLS	**Valsamata**	**0.77**	**14**	P	**Pg**	**03 30 39.1**	**-1.1**
VLS				*e*Sn	**Sg**	**03 30 49.2**	**-1.0**
RLS	**Riolos of Patr**	**1.08**	**54**	*e*Pn	**Pg**	**03 30 44.0**	**-2.1**
RLS				*e*Sn	**Sg**	**03 30 58.8**	**-1.

EFP				S	Sn	03 31 14.2	+0.4
EFP				eSn	Sn	03 31 14.8	+1.0
VLX	Vlachokerasia	1.61	91	ePN	Pn	03 30 53.1	-0.6
VLX				eSN	Sn	03 31 15.7	+1.1
VLX	Vlachokerasia	1.61	91	P	Pn	03 30 52.8	-0.9
VLX				S	Sn	03 31 14.2	-0.4
VLX	Vlachokerasia	1.61	91	P	Pn	03 30 52.8	-0.9
VLX	Vlachokerasia	1.61	91	ePn	Pn	03 30 53.1	-0.6
VLX				S	Sn	03 31 14.2	-0.4
VLX				eSn	Sn	03 31 15.7	+1.1
TRIZ	Trizonia	1.65	55	P	Pn	03 30 53.9	-0.4
TRIZ	Trizonia	1.65	55	P	Pn	03 30 53.9	-0.4
GUR	Goura	1.66	71	ePN	Pn	03 30 53.7	-0.6
GUR	Goura	1.66	71	P	Pn	03 30 53.8	-0.5
GUR				S	Sn	03 31 16.2	+0.6
GUR	Goura	1.66	71	P	Pn	03 30 53.8	-0.5
GUR				S	Sn	03 31 16.2	+0.6
KALE	Kalithea	1.71	55	P	Pn	03 30 54.5	-0.6
KALE				S	Sn	03 31 17.7	+0.8
KALE	Kalithea	1.71	55	P	Pn	03 30 54.5	-0.6
KALE				S	Sn	03 31 17.7	+0.8
EVR	Evrytania	1.88	37	ePn	Pn	03 30 58.4	+1.0
EVR				eSn	Sn	03 31 22.9	+1.8
EVR	Evrytania	1.88	37	ePN	Pn	03 30 58.4	+1.0
EVR				eSN	Sn	03 31 21.9	+0.8
EVR	Evrytania	1.88	37	ePn	Pn	03 30 58.4	+1.0
EVR				eSn	Sn	03 31 22.9	+1.8
DSF	Desfina	1.98	60	P	Pn	03 30 58.7	-0.1
DSF				S	Sn	03 31 24.1	+0.5
DSF	Desfina	1.98	60	P	Pn	03 30 58.7	-0.1
DSF				S	Sn	03 31 24.1	+0.5
IGT	Igoumenitsa	2.10	359	P	Pg	03 31 05.2	-0.4
IGT	Igoumenitsa	2.10	359	P	Pn	03 31 01.1	+0.6
IGT	Igoumenitsa	2.10	359	P	Pn	03 31 01.1	+0.6
LTK	Loutraki	2.15	73	ePB	Pn	03 31 00.6	-0.6
LTK	Loutraki	2.15	73	P	Pn	03 31 00.4	-0.8
LTK	Loutraki	2.15	73	P	Pn	03 31 00.4	-0.8
VLI	Veliai	2.18	108	ePn	Pn	03 31 02.4	+0.8
VLI	Veliai	2.18	108	ePN	Pn	03 31 02.4	+0.8
VLI	Veliai	2.18	108	ePn	Pn	03 31 02.4	+0.8
AGG	Agios Georgios	2.23	44	ePn	Pn	03 31 02.5	+0.3
AGG	Agios Georgios	2.23	44	ePN	Pn	03 31 02.5	+0.3
AGG	Agios Georgios	2.23	44	P	Pn	03 31 02.0	-0.2
AGG				S	Sn	03 31 31.2	+1.5
AGG	Agios Georgios	2.23	44	P	Pn	03 31 02.0	-0.2
AGG	Agios Georgios	2.23	44	ePn	Pn	03 31 02.5	+0.3
AGG				S	Sn	03 31 31.2	+1.5
JAN	Janina	2.26	10	ePn	Pn	03 31 03.0	+0.3
JAN	Janina	2.26	10	ePN	Pn	03 31 03.0	+0.3
JAN	Janina	2.26	10	ePn	Pn	03 31 03.0	+0.3
DID	Didima	2.29	87	ePB	Pn	03 31 02.7	-0.4
DID				eSN	Sn	03 31 31.4	0.0
DID	Didima	2.29	87	P	Pn	03 31 01.7	-1.4
DID				S	Sn	03 31 32.1	+0.7
DID	Didima	2.29	87	P	Pn	03 31 01.7	-1.4
DID				eSn	Sn	03 31 31.4	0.0
DID				S	Sn	03 31 32.1	+0.7
KEK	Kerkira	2.33	349	P	Pg	03 31 12.4	+2.6
KEK	Kerkira	2.33	349	P	Pn	03 31 04.0	+0.4
KEK	Kerkira	2.33	349	P	Pn	03 31 04.0	+0.4
LKR	Lokris	2.42	59	ePb	Pn	03 31 03.9	-0.9
LKR				eSn	Sn	03 31 34.4	-0.1
LKR	Lokris	2.42	59	ePB	Pn	03 31 04.9	+0.1
LKR				eSN	Sn	03 31 34.4	-0.1
LKR	Lokris	2.42	59	P	Pn	03 31 04.1	-0.7
LKR				S	Sn	03 31 35.1	+0.6
LKR	Lokris	2.42	59	P	Pn	03 31 04.1	-0.7
LKR				eSn	Sn	03 31 34.4	-0.1
LKR				S	Sn	03 31 35.1	+0.6
KYTH	Kithira	2.43	117	ePn	Pn	03 31 05.9	+0.8
KYTH	Kithira	2.43	117	ePN	Pn	03 31 05.9	+0.8
KYTH	Kithira	2.43	117	ePn	Pn	03 31 05.9	+0.8
THL	Klokotos Trika	2.50	31	ePN	Pn	03 31 06.5	+0.5
THL	Klokotos Trika	2.50	31	P	Pn	03 31 05.8	-0.2
THL				S	Sn	03 31 37.3	+0.8
THL	Klokotos Trika	2.50	31	P	Pn	03 31 05.8	-0.2
THL	Klokotos Trika	2.50	31	ePn	Pn	03 31 06.5	+0.5
THL				S	Sn	03 31 37.3	+0.8
NAIG	Nisos Aigina	2.51	81	ePn	Pn	03 31 06.8	+0.7
NAIG	Nisos Aigina	2.51	81	ePN	Pn	03 31 06.8	+0.7
NAIG	Nisos Aigina	2.51	81	ePn	Pn	03 31 06.8	+0.7
VLY	Voula,Athens	2.76	80	ePn	Pn	03 31 09.9	+0.4
VLY	Voula,Athens	2.76	80	ePN	Pn	03 31 09.9	+0.4
VLY	Voula,Athens	2.76	80	ePn	Pn	03 31 09.9	+0.4
PTL	Penteli	2.85	76	ePb	Pn	03 31 11.6	+0.8
PTL	Penteli	2.85	76	ePB	Pn	03 31 11.6	+0.8
PTL	Penteli	2.85	76	ePb	Pn	03 31 11.6	+0.8
NEO	Neokhori	2.93	49	ePn	Pn	03 31 11.5	-0.4
NEO	Neokhori	2.93	49	ePN	Pn	03 31 12.5	+0.6
NEO	Neokhori	2.93	49	ePn	Pn	03 31 11.5	-0.4
XOR	Xorichti	2.95	48	P	Pn	03 31 12.8	+0.6
XOR	Xorichti	2.95	48	P	Pn	03 31 11.4	-0.8
XOR	Xorichti	2.95	48	P	Pn	03 31 11.4	-0.8
NEST	Nestorio	3.03	10	P	Pn	03 31 14.2	+0.9
NEST	Nestorio	3.03	10	P	Pn	03 31 14.2	+0.9
KZN	Kozani	3.08	21	ePb	Pn	03 31 16.1	+2.2
KZN	Kozani	3.08	21	ePN	Pn	03 31 15.1	+1.2
KZN	Kozani	3.08	21	P	Pn	03 31 13.8	-0.1
KZN	Kozani	3.08	21	P	Pn	03 31 13.8	-0.1
KZN	Kozani	3.08	21	ePb	Pn	03 31 16.1	+2.2
AOS	Alonnisos	3.27	57	P	Pb	03 31 20.0	-3.4
AOS	Alonnisos	3.27	57	P	Pb	03 31 20.0	-3.4
FNA	Florina	3.44	13	P	Pb	03 31 23.4	-2.9
FNA	Florina	3.44	13	P	Pb	03 31 23.4	-2.9
VAM	Vamos	3.70	122	ePb	Pn	03 31 24.9	+2.5
VAM	Vamos	3.70	122	ePN	Pn	03 31 23.9	+1.5
VAM	Vamos	3.70	122	ePb	Pn	03 31 24.9	+2.5
PLG	Polygyros	3.80	38	ePn	Pn	03 31 23.3	-0.6
PLG	Polygyros	3.80	38	ePN	Pn	03 31 23.3	-0.6
PLG	Polygyros	3.80	38	ePn	Pn	03 31 23.3	-0.6
HORT	Hortiatis	3.82	33	P	Pn	03 31 27.2	+3.1
HORT	Hortiatis	3.82	33	P	Pn	03 31 27.2	+3.1
SOH	Sokhos	4.11	34	ePn	Pn	03 31 28.6	+0.5
SOH	Sokhos	4.11	34	ePN	Pn	03 31 28.6	+0.5
SOH	Sokhos	4.11	34	ePn	Pn	03 31 28.6	+0.5
IDI	Anoyia	4.24	119	ePn	Pn	03 31 31.7	+1.9
IDI	Anoyia	4.24	119	ePN	Pn	03 31 31.7	+1.9
IDI	Anoyia	4.24	119	ePn	Pn	03 31 31.7	+1.9
NVR	Nevrokopi	4.77	34	ePn	Pn	03 31 36.9	-0.2
NVR	Nevrokopi	4.77	34	ePN	Pn	03 31 37.9	+0.8
NVR	Nevrokopi	4.77	34	ePn	Pn	03 31 36.9	-0.2
STON	Ston	5.81	340	ePn	Pn	03 31 49.5	-1.9
STON				Sn	Sn	03 32 53.2	-4.8
STON	Ston	5.81	340	ePn	Pn	03 31 49.5	-1.9

*NEIC **20** 03:31:35.2, 16°.73N×98°.62W, h27km, MD4.0(MEX), After MEX.*

MEX 20 03:31:33.9±0.8, 16°.62N×98°.75W, h9km±7km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.64	111	iP	Pg	03 31 44.6	-1.7
PNIG				eS	Sg	03 31 53.0	-1.6
PNIG	Pinotepa	0.64	111	iP	Pg	03 31 45.1	-1.2
PNIG				iS	Sg	03 31 53.9	-0.7
ACX	Acapulco	1.09	283	iP	Pg	03 31 51.8	-3.1
ACX				iS	Sg	03 32 06.5	-2.6
CAIG	El Cayaco	1.51	287	iP	Pn	03 31 59.2	-2.0
CAIG				eS	Sn	03 32 19.6	-1.5
CAIG	El Cayaco	1.51	287	eP	Pn	03 31 57.5	-3.7
CAIG				iS	Sn	03 32 16.7	-4.3
MEIG	Mezcala	1.54	328	iP	Pn	03 31 58.8	-2.8
MEIG				iS	Sn	03 32 16.9	-4.8
PLIG	Platanillo	1.90	338	iP	Pn	03 32 03.2	-3.4
PLIG				eS	Sn	03 32 25.5	-5.1
PLIG	Platanillo	1.90	338	iP	Pn	03 32 03.2	-3.4
PLIG				eS	Sn	03 32 25.5	-5.1
VHO	Vista Hermosa	1.98	77	iP	Pn	03 32 03.1	-4.5
VHO				eS	Sn	03 32 25.4	-7.2
VHO	Vista Hermosa	1.98	77	iP	Pn	03 32 04.3	-3.3
VHO				iS	Sn	03 32 27.8	-4.9
TPIG	Tehuac#an	2.23	36	iP	Pn	03 32 07.5	-3.5
TPIG				iS	Sn	03 32 35.2	-3.4
YAIG	Yautepec	2.25	352	eP	Pn	03 32 08.9	-2.4
YAIG				iS	Sn	03 32 34.5	-4.7
HUIG	Huatulco	2.68	108	iP	Pn	03 32 13.2	-4.0
HUIG				eS	Sn	03 32 43.3	-6.4
HUIG	Huatulco	2.68	108	iP	Pn	03 32 14.2	-3.0
HUIG				iS	Sn	03 32 46.1	-3.6

*ISCJB **20** 04:17:17.9±1.3, 17°.4N±0°.2×145°.6E±0°.2, h319km±19km, mb3.6/15, Error ellipse: s-maj=28.9km s-min=22.3km az=140.9*

*IDC **20** 04:17:18.2±1.3, 17°.41N×145°.58E, h303km±16km, mb3.3/11, mb1 3.4/12, mb1mx3.3/25, mbtmp3.3/12, Error ellipse: s-maj=20.1km s-min=16.2km az=121.0*

*NEIC **20** 04:17:19.1±1.3, 17°.39N×145°.57E, h316km±15km, mb4.0/3, Error ellipse: s-maj=19.1km s-min=17.4km az=146.0*

ISC 20 04:17:18.7±1.3, 17°.3N±0°.2×145°.6E±0°.2, h314km±19km, n17, σ0°91/17, mb3.6/15, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	3.80	191	P	Pn	04 18 24.2	+0.6
GUMO	24nm,0.3s,baz=100,slow=5.6,SNR=26						
GUMO				S	S	04 19 14.9	-0.7
GUMO	43nm,0.3s,baz=343,slow=19,SNR=12						
PETK	Petropavlovsk-	36.93	12	P	P	04 23 58.6	+0.4
PETK	0.7nm,0.4s,mb3.4,baz=174,slow=9.4,SNR=5.9						
FITZ	Fitzroy Crossi	40.32	210	P	P	04 24 27.3	+0.7
FITZ	4.0nm,1.1s,mb3.7,baz=45,slow=11,SNR=12						
SONM	Songino Array	44.13	322	P	P	04 24 58.1	+1.3
SONM	0.5nm,0.5s,mb3.0,baz=135,slow=6.7,SNR=4.7						
CMAR	Chiang Mai Arr	44.30	279	P	P	04 24 59.2	+0.6
CMAR	0.5nm,0.3s,mb3.2,baz=77,slow=7.4,SNR=4.5						
ZALV	Zalesovo Beam	59.02	323	P	P	04 26 46.1	-0.1
ZALV	0.7nm,0.3s,mb3.5,baz=100,slow=7.8,SNR=4.4						
MKAR	Makanchi Array	59.32	314	P	P	04 26 48.7	+0.4
MKAR	0.5nm,0.4s,mb3.3,baz=87,slow=9.3,SNR=4.7						
MKAR				PcP	PcP	04 27 32.8	0.0
MKAR	0.4nm,0.5s,baz=91,slow=5.9,SNR=3.3						
KDAK	Kodiak Island	60.55	33	P	P	04 26 57.1	+0.8
KDAK	1.4nm,0.3s,mb4.0,baz=270,slow=2.0,SNR=7.5						
KURK	Kurchatov	62.20	319	eP	P	04 27 06.8	-0.7
KURK	2.7nm,0.7s,mb4.0						
ILAR	Eielson Array	64.90	26	P	P	04 27 23.8	-1.0
ILAR	0.5nm,0.4s,mb3.5,baz=251,slow=6.1,SNR=10						
BVAR	Borovoye Array	67.44	321	P	P	04 27 40.9	-0.2
BVAR	1.5nm,0.5s,mb4.0,baz=94,slow=8.0,SNR=9.6						
BRVK	Borovoye	67.51	321	eP	P	04 27 42.3	+0.9
BRVK	2.3nm,0.8s,mb4.0						
ABKAR	Akbulak array	74.25	317	eP	P	04 28 21.0	-0.9
ABKAR	1.1nm,0.4s,mb3.8						
ARCES	ARCESS Array B	83.74	342	P	P	04 29 11.4	-1.2
ARCES	1.3nm,0.7s,mb3.9,baz=52,slow=6.5,SNR=7.4						
NVAR	Mina Array Bea	84.06	52	P	P	04 29 15.8	+1.0
NVAR	0.3nm,0.7s,mb3.2,baz=275,slow=4.4,SNR=3.1						
FINES	FINESS Array B	88.06	335	P	P	04 29 31.4	-2.3
FINES	1.0nm,0.6s,mb3.8,baz=90,slow=1.9,SNR=6.3						
LPAZ	La Paz	147.74	93	PKPbc	PKPbc	04 36 29.1	+1.6
LPAZ	0.5nm,0.5s,baz=342,slow=3.2,SNR=4.3						

*ISCJB **20** 04:28:06.2±0.6, 13°.43N±0°.09×93°.0E±0°.1, h24km, mb3.9/13, MS3.6/2, Error ellipse: s-maj=14.6km s-min=12.3km az=176.4*

*IDC **20** 04:28:07.8±0.9, 13°.44N×92°.91E, h21km±5km, mb3.8/9, mb1 3.9/10, mb1mx3.7/21, mbtmp3.8/10, MS3.6/2, Ms1 3.6/2, ms1mx2.8/28, Error ellipse: s-maj=28.3km s-min=17.1km az=64.0*

*NEIC **20** 04:28:08.3±0.6, 13°.42N×92°.91E, mb3.8/2, Error ellipse: s-maj=15.4km s-min=13.0km az=81.0*

ISC 20 04:28:08.5±0.6, 13°.42N±0°.09×92°.9E±0°.1, h25km, h25km±2.1km: pP-P, n24, σ0°85/21, mb3.9/13, MS3.6/2, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.65	48	Pn	Pn	04 29 57.3	-1.1
CMAR	baz=243,slow=16,SNR=2.6						
CMAR				Sn	Sn	04 31 20.3	-3.9
CMAR	0.4nm,0.3s,baz=239,slow=28,SNR=4.4						
CHTO	Chiang Mai	7.88	46	ePn	Pn	04 30 03.0	+1.4
CHTO	9.3nm,0.8s						
VIS	Vishakhapatnam	10.19	296	iP	Pn	04 30 26.1	-7.1
VIS				iS	Sn	04 32 16.2	-11
VIS				iS	Sn	04 32 16.2	-11
VIS				ex	x	04 32 17.0	
VIS	comp=N,28nm,0.4s						
VIS				ex	x	04 32 18.1	
VIS	comp=E,18nm,0.3s						
LZH	Lanzhou	24.61	22	eP	P	04 33 36.5	+10
LZH				pP		04 33 40.5	
LZH				sP	sP	04 33 42.3	+5.0
LZH				pmax	pmax		
LZH	comp=Z,16nm,1.1s,mb4.5						
XAN	Xi'an	25.14	33	P	P	04 33 31.0	-0.6
XAN				pP	pP	04 33 39.8	+0.7
XAN				pmax	pmax		
XAN	comp=Z,1.0nm,0.9s,mb3.4						
MKAR	Makanchi Array	34.45	347	P	P	04 34 53.9	-0.2
MKAR	comp=Z,0.1nm,0.3s,mb3.2,baz=157,slow=7.8,SNR=2.8						
MKAR				pP	pP	04 35 00.2	-1.3
MKAR	comp=Z,0.9nm,0.6s,baz=160,slow=8.5,SNR=5.0						
MKAR	Makanchi Array	34.45	347	P	P	04 34 53.9	-0.2
MKAR				pP	pP	04 35 00.2	-1.3
SONM	Songino Array	36.10	15	P	P	04 35 08.7	+0.5
SONM	comp=Z,0.2nm,0.3s,mb3.5,baz=177,slow=8.7,SNR=2.6						
KURK	Kurchatov	38.97	346	eP	P	04 35 34.0	+1.5
KURK	comp=Z,2.0nm,0.9s,mb3.9						
KSRS	Korea Array	39.28	46	LR	LR	04 54 13.4	
KSRS	comp=Z,39nm,20.0s,MS3.2,baz=96,slow=40						
ZALV	Zalesovo Beam	40.94	353	P	P	04 35 48.7	-0.1
ZALV	comp=Z,0.4nm,0.4s,mb3.4,baz=176,slow=8.7,SNR=2.6						
ZALV				pP	pP	04 35 54.6	-1.8
ZALV	comp=Z,1.8nm,0.7s,baz=171,slow=7.1,SNR=4.8						
ZALV	Zalesovo Beam	40.94	353	P	P	04 35 48.7	-0.1
ZALV				pP	pP	04 35 54.6	-1.8
BVAR	Borovoye Array	43.39	340	pP	pP	04 36 14.6	-1.8
BVAR	comp=Z,0.4nm,0.4s,baz=172,slow=12,SNR=1.8						
ABKAR	Akbulak array	44.85	330	eP	P	04 36 19.7	-0.8
ABKAR	comp=Z,0.5nm,0.4s,mb3.7						
FITZ	Fitzroy Crossi	44.97	133	P	P	04 36 21.5	-0.4
FITZ	comp=Z,3.5nm,0.6s,mb4.4,baz=340,slow=7.3,SNR=9.5						
NWAO	Narrogin (SRO)	51.61	154	P	P	04 37 12.7	-0.2
NWAO	comp=Z,6.5nm,0.6s,mb4.7,baz=344,slow=11,SNR=4.8						
ASAR	Alice Springs	54.44	132	P	P	04 37 34.2	+0.3
ASAR	comp=Z,3.9nm,0.6s,mb4.5,baz=310,slow=6.7,SNR=34						
BRTR	Keskin Array B	57.99	309	P	P	04 37 57.9	-1.3
BRTR	comp=Z,0.8nm,0.7s,mb3.9,baz=117,slow=5.0,SNR=5.7						
BRTR				pP	pP	04 38 05.9	-1.2
BRTR	comp=Z,0.9nm,0.7s,baz=119,slow=8.7,SNR=3.9						
STKA	Stephens Creek	64.81	135	LR	LR	05 06 20.4	
STKA	comp=Z,118nm,21.6s,MS4.0,baz=206,slow=35						
FINES	FINESS Array B	67.29	331	pP	pP	04 39 07.0	-1.8
FINES	comp=Z,1.5nm,0.8s,baz=92,slow=4.3,SNR=2.8						
ARCES	ARCESS Array B	69.68	340	P	P	04 39 15.8	+0.3
ARCES	comp=Z,0.8nm,0.9s,mb3.6,baz=110,slow=7.8,SNR=3.8						
ARCES				pP	pP	04 39 22.8	-0.8
ARCES	comp=Z,0.6nm,0.5s,baz=104,slow=7.5,SNR=2.0						
BOSA	Boshof	77.58	236	P	P	04 40 03.6	+0.8
BOSA	comp=Z,2.0nm,1.1s,mb4.0,baz=72,slow=7.3,SNR=3.6						
ILAR	Eielson Array	90.07	22	pP	pP	04 41 12.9	-1.3
ILAR	comp=Z,0.2nm,0.6s,baz=298,slow=5.6,SNR=3.6						
TXAR	Lajitas Array	134.57	20	PKP	PKPdf	04 47 28.2	+2.9
TXAR	comp=Z,0.0nm,0.3s,baz=205,slow=4.0,SNR=2.5						

*ISCJB **20** 04:35:27.6±2.2, 2°.54S±0°.06×99°.65E±0°.07, h26km±15km, mb4.4/23, MS3.1/2, Error ellipse: s-maj=14.1km s-min=6.6km az=143.0*

*IDC **20** 04:35:30.4±1.0, 2°.47S×99°.78E, h28km±5km, mb4.1/15, mb1 4.2/16, mb1mx4.0/22, mbtmp4.1/16, ML3.2/1, MS3.2/3, Ms1 3.3/3, ms1mx2.8/25, Error ellipse: s-maj=30.4km s-min=14.7km az=53.0*

*BJI **20** 04:35:30.0, 1°.89S×100°.60E, h6km, mB4.9/1, mb4.8/4*

*NEIC **20** 04:35:30.6±0.4, 2°.41S×99°.89E, mb4.6/10, Error ellipse: s-maj=12.0km s-min=5.5km az=54.0*

*DJA **20** 04:35:30, 2°.54S×99°.60E, h66km, MLv4.7/13*

ISC 20 04:35:27.2±2.5, 2°.53S±0°.05×99°.65E±0°.06, h8km±16km, h29km±.9km: pP-P, n52, σ0°97/47, mb4.4/23, MS3.1/2, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	Saibi	1.32	335	P	Pn	04 35 52.6	+0.7
PDSI	Padang	1.80	27	P	Pn	04 35 58.2	-0.3
KRJI	Kerinci	1.86	77	P	Pn	04 36 02.1	+2.7
KRJI				S	Sn	04 36 24.0	+0.9
SDSI	Sungai Dareh	2.38	48	P	Pn	04 36 07.2	+0.7
KSI	Kapahiang	3.14	111	P	Pn	04 36 17.1	+0.1
BKNI	Bangkinang	3.16	26	P	Pn	04 36 18.5	+1.3
MNSI	Mandailing Nat	3.30	359	P	Pn	04 36 19.3	+0.1
MNAI	Manna	3.77	119	P	Pn	04 36 26.2	+0.6
MDSI	Maura Dua	4.92	113	P	Pn	04 36 42.5	+1.0
LWLI	Liwa	5.04	119	P	Pn	04 36 43.5	+0.3
LWLI	2.1nm7μm257nm,0.8s						
PSI	Prapat	5.34	352	Pn	Pn	04 36 45.8	-1.5
PSI	0.9nm,0.3s,baz=177,slow=10,SNR=4.5						
PSI				LR	LR	04 38 53.0	
PSI	comp=Z,160nm,19.3s,baz=28,slow=39						
KLSI		5.50	113	P	Pn	04 36 50.7	+1.2
KLSI	0.4nm102nm,0.7s						
KASI	Kota Agung	5.67	122	P	Pn	04 36 51.9	0.0
KASI	0.7nm3μm90nm,0.7s						
MYKOM	Kota Tinggi	6.00	44	P	Pn	04 36 56.3	0.0
MYKOM	0.2nm54nm,1.0s						
CGJI	Cibinong	7.26	124	P	Pn	04 37 11.6	-2.1
KULM	Kulim	7.83	7	ePn	Pn	04 37 20.3	-1.1
KKM	Kota Kinabalu	18.60	63	eP	Pn	04 39 43.3	-2.0
KKM	15nm,0.9s						
KAPI	Kappang	20.21	98	LR	LR	04 48 11.2	
KAPI	comp=Z,78nm,20.6s,MS3.0,baz=287,slow=38						
CMAR	Chiang Mai Arr	20.86	358	P	P	04 40 09.3	-0.4
CMAR	4.1nm,0.7s,baz=187,slow=10,SNR=21						
CMAR				LR	LR	04 48 45.0	
CMAR	comp=Z,76nm,18.7s,MS3.1,baz=170,slow=38						
CHTO	Chiang Mai	21.22	358	eP	P	04 40 12.7	-0.9
CHTO	1.8nm,0.4s,mb3.8						
FITZ	Fitzroy Crossi	29.81	123	P	P	04 41 34.2	-0.7
FITZ	4.4nm,1.0s,mb4.1,baz=299,slow=9.0,SNR=3.6						
XAN	Xi'an	37.41	13	P	P	04 42 39.6	-1.1
WRAB	Tennant Creek	38.04	120	eP	P	04 42 45.3	-1.0
WRAB	13nm,0.6s,mb4.8						
ASAR	Alice Springs	39.23	125	P	P	04 42 55.6	-0.7
ASAR	3.3nm,0.6s,mb4.2,baz=302,slow=7.9,SNR=44						
KSRS	Korea Array	47.65	31	P	P	04 44 03.0	-1.0
KSRS	5.1nm,0.9s,mb4.6,baz=219,slow=7.6,SNR=6.9						
CTAO	Charters Tower	48.69	115	eP	P	04 44 11.6	-0.8
CTAO	5.6nm,0.8s,mb4.7						
STKA	Stephens Creek	49.06	131	P	P	04 44 15.2	+0.2
STKA	3.6nm,0.8s,mb4.5,baz=299,slow=9.4,SNR=4.9						
TKM2	Tokmak 2	50.18	337	eP	P	04 44 24.3	+1.0
TKM2	3.0nm,0.5s,mb4.6						
TKM2				epP	pP	04 44 31.6	+5.7
AML	Almayashu	50.29	335	eP	P	04 44 25.6	+1.4
AML	2.5nm,0.7s,mb4.3						
SONM	Songino Array	50.50	6	P	P	04 44 26.4	+0.7
SONM	7.0nm,0.9s,mb4.6,baz=184,slow=9.0,SNR=34						
SONM				pP	pP	04 44 34.6	+6.4
SONM	10nm,0.8s,baz=186,slow=8.9,SNR=24						
SONM				PcP	PcP	04 45 44.2	+0.6
SONM	0.8nm,0.5s,baz=185,slow=5.3,SNR=2.6						
ULN	Ulaanbaatar	50.60	6	eP	P	04 44 26.6	+0.2
ULN	6.0nm,0.8s,mb4.6						
ULN				epP	pP	04 44 35.2	+6.2
EKS2	Erkin-Say	50.69	335	eP	P	04 44 28.5	+1.2
EKS2	3.4nm,0.6s,mb4.5						
MK31	Makanchi Array	51.44	345	eP	P	04 44 33.7	+0.9
MKAR	Makanchi Array	51.44	345	P	P	04 44 33.6	+0.8
MKAR	6.3nm,0.7s,mb4.7,baz=148,slow=8.2,SNR=51						
MJAR	Matsushiro Arr	52.90	39	P	P	04 44 42.1	-1.8
MJAR	1.2nm,0.6s,mb4.0,baz=220,slow=8.2,SNR=8.5						
KURK	Kurchatov	56.01	344	eP	P	04 45 06.5	+0.3
KURK	6.3nm,0.8s,mb4.7						
ZALV	Zalesovo Beam	57.62	350	P	P	04 45 17.4	-0.1
ZALV	6.2nm,0.9s,mb4.7,baz=160,slow=4.6,SNR=24						
BVAR	Borovoye Array	60.56	340	P	P	04 45 37.4	-0.5
BVAR	1.4nm,0.7s,mb4.2,baz=146,slow=9.0,SNR=7.7						
ABKAR	Akbulak array	61.94	332	eP	P	04 45 47.1	-0.2
ABKAR	5.3nm,0.8s,mb4.7						
AKTK	Aktyubinsk	63.65	332	P	P	04 45 58.1	-0.7
AKTO	Aktyubinsk	63.65	332	P	P	04 45 58.1	-0.7
AKTO	1.5nm,0.7s,mb4.1,baz=112,slow=7.2,SNR=4.6						
BRTR	Keskin Array B	73.42	313	P	P	04 47 00.1	0.0
BRTR	1.0nm,0.8s,mb3.

Error ellipse: s-maj=5.1km s-min=4.5km az=42.2
*DDA **20** 05:03:20.4, 40°.35N×27°.59E, h7km±6km, Md2.6*
*ISK **20** 05:03:20.8, 40°.36N×27°.59E, h8km, MD2.6*
*CSEM **20** 05:03:21.0±0.1, 40°.36N×27°.59E, h10km, MD2.6, Error ellipse: s-maj=3.3km s-min=2.7km az=15.0*

ISC 20 05:03:21.1±0.4, **40°.36N**±0°.03×**27°.60E**±0°.04, **h11**km±5km, **n31**, σ0**58**/42, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRBG	**Karabiga-Canak**	**0.23**	**278**	*e*PG	**Pg**	**05 03 25.8**	**-0.2**
KRBG				*e*SG	**Sg**	**05 03 29.5**	**+0.3**
KRBG	**Karabiga-Canak**	**0.23**	**278**	*e*Pg	**Pg**	**05 03 25.8**	**-0.2**
KRBG				*e*Sg	**Sg**	**05 03 29.5**	**+0.3**
BNT	**Bandirma**	**0.25**	**91**	*e*PG	**Pg**	**05 03 26.4**	**+0.1**
BNT				*e*SG	**Sg**	**05 03 30.2**	**+0.5**
GONE	**Gonen-Balikesi**	**0.32**	**168**	*e*PG	**Pg**	**05 03 27.8**	**+0.2**
GONE				*e*SG	**Sg**	**05 03 32.9**	**+0.9**
GONE	**Gonen-Balikesi**	**0.32**	**168**	*e*Pg	**Pg**	**05 03 27.8**	**+0.2**
GONE				*e*Sg	**Sg**	**05 03 32.9**	**+0.9**
RKY	**Sarkoy-Tekirda**	**0.46**	**316**	*e*PG	**Pg**	**05 03 29.6**	**-0.5**
RKY	**Sarkoy-Tekirda**	**0.46**	**316**	*e*Pg	**Pg**	**05 03 29.6**	**-0.5**
MFT	**Murefte**	**0.49**	**331**	*e*PG	**Pg**	**05 03 30.9**	**+0.2**
MFT				*e*SG	**Sg**	**05 03 37.9**	**+0.8**
MFT	**Murefte**	**0.49**	**331**	*e*Pg	**Pg**	**05 03 30.9**	**+0.2**
MFT				*e*Sg	**Sg**	**05 03 37.9**	**+0.7**
KCTX	**Karacabey (Bur**	**0.59**	**99**	*e*PG	**Pg**	**05 03 32.0**	**-0.6**
KCTX	**Karacabey (Bur**	**0.59**	**99**	*e*Pg	**Pg**	**05 03 32.0**	**-0.6**
BALY	**Balya**	**0.62**	**178**	*i* P	**Pg**	**05 03 31.5**	**-1.7**
BALY				*i* S	**Sg**	**05 03 41.4**	**0.0**
BALY	**Balya**	**0.62**	**178**	*i* P	**Pg**	**05 03 31.5**	**-1.7**
BALY				*i* S	**Sg**	**05 03 41.4**	**0.0**
GELI	**Tayfur-Gelibol**	**0.86**	**273**	*e*PG	**Pg**	**05 03 37.5**	**-0.2**
GELI	**Tayfur-Gelibol**	**0.86**	**273**	*e*Pg	**Pg**	**05 03 37.5**	**-0.2**
ERIK	**Erikli-Kesan**	**0.88**	**291**	*e*PG	**Pg**	**05 03 38.2**	**0.0**
ERIK	**Erikli-Kesan**	**0.88**	**291**	*e*Pg	**Pg**	**05 03 38.2**	**+0.1**
MDNY	**Mudanya-Bursa**	**0.98**	**89**	*e*PG	**Pg**	**05 03 40.0**	**-0.1**
MDNY	**Mudanya-Bursa**	**0.98**	**89**	*e*Pg	**Pg**	**05 03 40.0**	**-0.1**
ELBA	**Catalca**	**1.01**	**39**	*i* P	**Pg**	**05 03 39.9**	**-0.7**
ELBA				*i* S	**Sg**	**05 03 53.3**	**-0.4**
ELBA	**Catalca**	**1.01**	**39**	*i* P	**Pg**	**05 03 39.9**	**-0.7**
ELBA				*i* S	**Sg**	**05 03 53.3**	**-0.4**
EZN	**Ezine**	**1.11**	**242**	*e*PN	**Pn**	**05 03 42.6**	**0.0**
EZN	**Ezine**	**1.11**	**242**	*e*Pn	**Pn**	**05 03 42.6**	**0.0**
CTKS	**Kestanelik-??a**	**1.11**	**38**	*e*PN	**Pn**	**05 03 42.2**	**-0.5**
CTKS	**Kestanelik-??a**	**1.11**	**38**	*e*Pn	**Pn**	**05 03 42.2**	**-0.5**
CTYL	**Yal??k??y-??at**	**1.23**	**25**	*e*PN	**Pn**	**05 03 44.2**	**0.0**
CTYL	**Yal??k??y-??at**	**1.23**	**25**	*e*Pn	**Pn**	**05 03 44.2**	**0.0**
YLV	**Yalova**	**1.37**	**81**	*e*PN	**Pn**	**05 03 47.1**	**+0.9**
YLV	**Yalova**	**1.37**	**81**	*e*Pn	**Pn**	**05 03 47.1**	**+0.9**
KLYT	**Kilyos**	**1.41**	**50**	*e*PN	**Pn**	**05 03 47.4**	**+0.6**
KLYT	**Kilyos**	**1.41**	**50**	*e*Pn	**Pn**	**05 03 47.4**	**+0.6**

CASC 20 05:06:41.9±1.6, **13°.21N**×**89°.92W**, **h30**km±4km, **MD3.7, 7C-1D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.68**	**25**	⇑*i*P	Pb	05 06 55.3	-0.1
SBLS				*e*S	Sb	05 07 06.1	+1.6
SNJE	**San Jose**	**0.72**	**25**	⇑*e*P	Pb	05 06 55.7	-0.2
SNJE				*e*S	Sb	05 07 06.5	+1.0
RTR	**El Retiro**	**0.73**	**21**	⇑*e*P	Pn	05 06 56.0	-0.1
RTR				*e*S	Sb	05 07 07.2	+1.4
BOQS	**Boqueron**	**0.81**	**50**	⇓*e*P	Pn	05 06 57.0	-0.2
BOQS				*e*S	Sb	05 07 08.9	+0.9
RBDL	**Robledal**	**0.92**	**14**	⇑*i*P	Pn	05 06 59.0	+0.2
LFRS	**El Faro**	**0.93**	**64**	⇑*i*P	Pn	05 06 58.3	-0.5
LFRS				*e*S	Sn	05 07 11.3	+0.2
LBRS	**Las Brisas**	**0.99**	**58**	⇑*e*P	Pn	05 06 59.7	-0.1
LBRS				*e*S	Sn	05 07 14.3	+1.4
SNVI	**San Vicente**	**1.12**	**69**	*e*P	Pn	05 07 01.3	-0.2
SNVI				*e*S	Sn	05 07 17.5	+1.6
NBG	**Las Nubes**	**1.43**	**343**	*e*P	Pn	05 07 07.2	+1.4
FUG	**Fuego 3**	**1.52**	**324**	*e*P	Pn	05 07 07.2	+0.1
VSM	**San Miguel**	**1.61**	**82**	*e*P	Pn	05 07 08.4	+0.2
FG6		**1.64**	**325**	*e*P	Pn	05 07 09.0	+0.4
FG6				*e*S	Sn	05 07 27.9	-0.7
BLLM	**Bellamira**	**1.65**	**82**	*e*P	Pn	05 07 09.0	+0.2
CAHU	**Cacacuatique**	**1.75**	**71**	*e*P	Pn	05 07 10.2	+0.1
TP2	**Tecpan 2**	**1.89**	**326**	*e*P	Pn	05 07 13.7	+1.5
TP2				*e*S	Sn	05 07 38.2	+3.2
CNCH	**Conchagua**	**2.03**	**88**	⇑*e*P	Pn	05 07 14.0	0.0

*NEIC **20** 05:19:57.1, 32°.22S×71°.86W, h9km, ML2.8(GUC), After GUC.*

GUC 20 05:19:57.1±0.8, **32°.22S**×**71°.86W**, **h9**km±3km, **MD3.5, ML2.8, 2C-8D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.46**	**42**	⇓*i*P	Pg	05 20 06.5	+0.6
CHNG				*i* S	Sg	05 20 13.8	+1.8
CHNG				AML	AML	05 20 14.1	
	comp=N,744nm,0.4s						
JACH	**Jahuel**	**1.17**	**114**	*e*P	Pb	05 20 18.3	-1.1
JACH				*i* S	Sb	05 20 34.0	-0.6
JACH	**Jahuel**	**1.17**	**114**	*e*P	Pb	05 20 18.3	-1.1
JACH				*i* S	Sb	05 20 34.0	-0.6
CMCH	**Combarbala**	**1.28**	**35**	⇓*i*P	Pn	05 20 20.2	-0.9
CMCH				*i* S	Sb	05 20 37.3	-0.5
CMCH	**Combarbala**	**1.28**	**35**	⇓*i*P	Pn	05 20 20.2	-0.9
CMCH				*i* S	Sb	05 20 37.3	-0.5
CMCH				AML	AML	05 20 46.2	
	comp=N,494nm,0.6s						
PEL	**Peldehue**	**1.35**	**133**	⇓*i*P	Pn	05 20 21.5	-0.7
PEL				*i* S	Sb	05 20 39.5	-0.5
PEL				AML	AML	05 20 43.0	
	comp=N,616nm,0.3s						
TACH	**Talagante**	**1.62**	**152**	⇓*i*P	Pn	05 20 25.6	-0.2
TACH				*i* S	Sn	05 20 47.0	+0.1
TACH	**Talagante**	**1.62**	**152**	⇓*i*P	Pn	05 20 25.6	-0.2
TACH				*i* S	Sn	05 20 47.0	+0.1
FCH	**Farellones**	**1.72**	**130**	⇑*i*P	Pn	05 20 27.3	+0.1
FCH				*i* S	Sn	05 20 50.8	+1.5
FCH	**Farellones**	**1.72**	**130**	⇑*i*P	Pn	05 20 27.3	+0.1
FCH				*i* S	Sn	05 20 50.8	+1.5
LMEL	**Las Melosas**	**2.14**	**140**	⇓*i*P	Pn	05 20 33.4	+0.5
LMEL				*i* S	Sn	05 21 01.7	+2.1
LMEL	**Las Melosas**	**2.14**	**140**	⇓*i*P	Pn	05 20 33.4	+0.5
LMEL				*i* S	Sn	05 21 01.7	+2.1
LMEL				AML	AML	05 21 08.7	
	comp=N,104nm,0.2s						
TLL	**Tololo Astrono**	**2.24**	**24**	*e*P	Pn	05 20 36.6	+2.3
TLL				*i* S	Sn	05 21 06.7	+4.6
TLL	**Tololo Astrono**	**2.24**	**24**	*e*P	Pn	05 20 36.6	+2.3
TLL				*i* S	Sn	05 21 06.7	+4.6
TLL				AML	AML	05 21 13.5	
	comp=E,67nm,0.6s						

*NIED **20** 05:29:00, 41°.70N×144°.20E, h20km, Mw3.9 Best double couple: M0 6.92000×10^14 NP1:φs 11.00000°, δ78.00000°, λ45.00000°. NP2:φs 270.00000°, δ47.00000°, λ163.00000°.*
*IDC **20** 05:29:14.7±1.6, 41°.79N×143°.97E, h0km, mb3.7/8, mb1 3.9/9, mb1mx3.7/24, mbtmp3.7/9, ML2.9/2, Error ellipse: s-maj=36.9km s-min=23.2km az=162.0*
*ISCJB **20** 05:29:15.9±2.6, 41°.62N±0°.07×144°.3E±0°.1, h33km±20km, mb3.6/8, Error ellipse: s-maj=16.9km s-min=10.8km az=10.7*
*JMA **20** 05:29:17.1±0.2, 41°.72N×144°.23E, h31km±3km, M3.7*
*NEIC **20** 05:29:17.2, 41°.72N×144°.23E, h31km, MG3.7(JMA), After JMA.*

ISC 20 05:29:16.5±2.0, **41°.75N**±0°.07×**144°.2E**±0°.1, **h16**km±11km, **n17**, σ0**97**/20, **mb3.6**/8, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERM	**Erimo**	**0.85**	**288**	*e*Pn	**Pn**	**05 29 33.7**	**-0.1**
ERM				*e*Sn	**Sn**	**05 29 49.3**	**+3.4**
JEM	**Erimo**	**0.85**	**288**	P	**Pg**	**05 29 33.5**	**+0.5**
JCH	**Churui**	**1.08**	**323**	P	**Pb**	**05 29 36.6**	**-0.2**
JOB	**Onbets**	**1.19**	**346**	P	**Pn**	**05 29 38.3**	**-0.1**
JNBK	**Urakawa-nobuka**	**1.23**	**296**	P	**Pn**	**05 29 39.2**	**+0.2**
JAK	**Akkeshi**	**1.29**	**15**	P	**Pn**	**05 29 39.6**	**-0.2**
JAR	**Ashorobuto**	**1.58**	**347**	P	**Pn**	**05 29 43.4**	**-0.4**
JAR				*e*S	**Sn**	**05 30 03.3**	**-0.7**
ASAJ	**Asahikawa**	**2.65**	**334**	Pn	**Pn**	**05 29 58.5**	**0.0**
	1.2nm,0.3s,baz=152,slow=13,SNR=14						
ASAJ				Sn	**Sn**	**05 30 34.4**	**+4.0**
	6.0nm,0.3s,baz=349,slow=33,SNR=6.6						
MJAR	**Matsushiro Arr**	**7.00**	**224**	Pn	**Pn**	**05 30 57.8**	**-0.5**
	0.3nm,0.3s,baz=32,slow=13,SNR=7.0						
SONM	**Songino Array**	**27.33**	**296**	P	**P**	**05 35 00.2**	**-0.3**
	1.1nm,0.8s,mb3.5,baz=86,slow=9.4,SNR=7.9						
ZALV	**Zalesovo Beam**	**40.52**	**308**	P	**P**	**05 36 53.8**	**-0.8**
	0.6nm,0.4s,mb3.6,baz=79,slow=7.7,SNR=4.4						
MKAR	**Makanchi Array**	**43.63**	**299**	P	**P**	**05 37 18.9**	**-1.1**
	0.3nm,0.2s,mb3.6,baz=81,slow=8.8,SNR=5.0						
ILAR	**Eielson Array**	**44.36**	**35**	P	**P**	**05 37 28.1**	**+2.5**
	0.1nm,0.7s,mb2.7,baz=282,slow=9.0,SNR=4.9						
BVAR	**Borovoye Array**	**49.12**	**310**	P	**P**	**05 38 02.2**	**-0.8**
	0.6nm,0.4s,mb3.9,baz=61,slow=7.6,SNR=4.4						
INK	**Inuvik**	**49.20**	**29**	P	**P**	**05 38 04.0**	**+0.7**
	4.3nm,1.1s,mb4.4,baz=307,slow=8.5,SNR=2.7						
FINES	**FINESS Array B**	**65.66**	**332**	P	**P**	**05 39 58.0**	**-1.5**
	1.7nm,0.8s,mb4.1,baz=41,slow=9.2,SNR=5.5						
TXAR	**Lajitas Array**	**85.55**	**54**	P	**P**	**05 41 55.8**	**+1.7**
	0.2nm,0.8s,mb3.4,baz=308,slow=4.4,SNR=3.6						

*IDC **20** 05:31:30.2±4.0, 20°.45S×176°.23W, h60km±38km, mb3.5/5, mb1 3.9/7, mb1mx3.6/19, mbtmp3.8/7, ML3.5/2, Error ellipse: s-maj=46.5km s-min=21.9km az=137.0*
*NEIC **20** 05:31:31.9±2.0, 20°.53S×175°.88W, h93km±21km, mb4.2/2, Error ellipse: s-maj=31.5km s-min=15.7km az=133.0*

ISC 20 05:31:28.9±2.1, **20°.5S**±0°.2×**176°.3W**±0°.2, **h45**km±24km, **n13**, σ0**95**/14, **mb3.8**/5, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.83**	**34**	P	**Pn**	**05 33 20.3**	**0.0**
	4.6nm,0.3s,baz=163,slow=19,SNR=4.4						
AFI				S	**Sn**	**05 34 54.8**	**+7.1**
	4.5nm,0.3s,baz=240,slow=20,SNR=4.3						
AFI	**Afiamalu**	**7.83**	**34**	P	**Pn**	**05 33 20.3**	**0.0**
AFI				S	**Sn**	**05 34 54.8**	**+7.1**
DZM	**Mont Dzumac**	**16.15**	**261**	*e*Pn	**Pn**	**05 35 20.1**	**+7.3**
	5.7nm,0.7s						
URZ	**Urewera**	**18.62**	**196**	P	**Pn**	**05 35 43.1**	**-0.2**
	1.5nm,0.3s,baz=354,slow=2.5,SNR=6.2						
CTA	**Charters Tower**	**35.06**	**264**	P	**P**	**05 38 20.1**	**+2.3**
	2.1nm,0.3s,mb4.5,baz=89,slow=8.8,SNR=8.5						
CTAO	**Charters Tower**	**35.06**	**264**	*e*P	**P**	**05 38 19.5**	**+1.8**
	2.3nm,0.4s,mb4.5						
COEN	**Coen**	**39.16**	**273**	*e*P	**P**	**05 38 49.2**	**-3.3**
	102nm,1.3s						
ASAR	**Alice Springs**	**46.06**	**256**	P	**P**	**05 39 48.0**	**-0.6**
	0.4nm,0.3s,mb3.8,baz=81,slow=9.0,SNR=11						
WRAB	**Tennant Creek**	**46.16**	**262**	*e*P	**P**	**05 39 49.2**	**-0.2**
MJAR	**Matsushiro Arr**	**71.13**	**323**	P	**P**	**05 42 42.4**	**-0.3**
	0.6nm,0.6s,mb3.7,baz=158,slow=7.9,SNR=3.8						
NVAR	**Mina Array Bea**	**79.92**	**43**	P	**P**	**05 43 33.8**	**+0.7**
	0.2nm,0.5s,mb3.3,baz=246,slow=6.5,SNR=2.8						
ILAR	**Eielson Array**	**87.94**	**12**	P	**P**	**05 44 12.8**	**-0.5**
	0.4nm,0.9s,mb3.6,baz=210,slow=5.3,SNR=4.3						
BRTR	**Keskin Array B**	**147.97**	**313**	PKPbc	PKPbc	05 51 07.5	-1.9
	0.5nm,0.4s,baz=104,slow=4.0,SNR=3.6						

*NIED **20** 05:33:00, 41°.70N×144°.20E, h26km, Mw4.7 Best double couple: M0 1.24000×10^16 NP1:φs 4.00000°, δ90.00000°, λ1.00000°. NP2:φs 274.00000°, δ89.00000°, λ180.00000°.*
*IDC **20** 05:33:12.4±0.8, 41°.87N×144°.00E, h0km, mb4.2/17, mb1 4.3/21, mb1mx4.2/27, mbtmp4.1/21, ML3.6/4, MS3.9/18, Ms1 4.0/18, ms1mx3.7/39, Error ellipse: s-maj=20.7km s-min=14.9km az=149.0*
*BJI **20** 05:33:13.2, 41°.83N×144°.23E, h31km, mB4.9/25, mb4.7/34, Ms4.5/25, Ms7 4.3/25*
*ISCJB **20** 05:33:14.5±1.0, 41°.78N±0°.04×144°.09E±0°.05, h28km±6km, mb4.5/67, MS4.2/32, Error ellipse: s-maj=7.9km s-min=4.0km az=43.4*
*NEIC **20** 05:33:14.8, 41°.71N×144°.23E, h31km, mb4.7/30, MW4.7(NIED), After JMA.*
NEIC Recorded [1 JMA] in southeastern Hokkaido.
*JMA **20** 05:33:14.7±0.3, 41°.71N×144°.23E, h31km±3km, M4.8*
JMA Felt I J1.
*MOS **20** 05:33:15.4±0.9, 41°.82N×144°.04E, h33km, mb4.8/33, Error ellipse: s-maj=8.8km s-min=5.6km az=107.5*
*SZGRF **20** 05:33:21.0, 42°.99N×145°.48E, h33km, mb4.6, Hokkaido, Japan, region*

ISC 20 05:33:16.8±0.9, **41°.82N**±0°.04×**144°.06E**±0°.05, **h31**km±5km, **h35**km±1.9km: **pP-P**, **n181**, σ0**97**/192, **mb4.5**/67, **MS4.2**/32, **13C-4D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERM	**Erimo**	**0.70**	**287**	*d i*P	**Pb**	**05 33 31.1**	**+0.5**
ERM	**Erimo**	**0.70**	**287**	*e*Pn	**Pn**	**05 33 31.3**	**+0.7**
ERM				*e*Sn	**Sn**	**05 33 47.7**	**+7.3**
JEM	**Erimo**	**0.70**	**287**	⇑P	**Pb**	**05 33 31.1**	**+0.5**
JCH	**Churui**	**0.95**	**327**	⇑P	**Pn**	**05 33 34.1**	**+0.1**
JNBK	**Urakawa-nobuka**	**1.08**	**296**	⇑P	**Pn**	**05 33 36.9**	**+1.2**
JOB	**Onbets**	**1.10**	**351**	⇑P	**Pn**	**05 33 36.0**	**0.0**
JAK	**Akkeshi**	**1.27**	**22**	P	**Pn**	**05 33 37.2**	**-1.1**
JAK				*e*S	**Sn**	**05 33 53.9**	**-0.4**
JAR	**Ashorobuto**	**1.49**	**352**	⇑P	**Pn**	**05 33 41.0**	**-0.4**
ASAJ	**Asahikawa**	**2.54**	**335**	Pn	**Pn**	**05 33 55.9**	**+0.1**
	6.8nm,0.3s,baz=199,slow=14,SNR=52						
ASAJ				LR	LR	05 35 18.8	
	comp=Z,3μm,18.2s,baz=21,slow=51						
ASAJ	**Asahikawa**	**2.54**	**335**	P	**Pn**	**05 33 55.9**	**+0.1**
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,3μm,18.2s						
YUK	**Yuzh-Kuril'sk**	**2.58**	**30**	*e*P	**Pn**	**05 33 56.2**	**-0.2**
YUK				*i* S	**Sn**	**05 34 26.3**	**-0.3**
YUK				pmax	pmax		
	comp=E,190nm,0.5s						
YUK				pmax	pmax		
	comp=Z,270nm,0.5s						
YUK				pmax	pmax		
	comp=N,150nm,0.3s						
YUK				smax			
	comp=E,940nm,0.3s						
YUK				smax			
	comp=N,2μm,0.6s						
YUK				smax			
	comp=N,300nm,0.8s						
YUK				smax			
	comp=E,2μm,0.8s						
YUK				MLR	MLR		
	comp=N,3μm,15.0s						
YUK				MLR	MLR		
	comp=E,3μm,15.0s						
YUK				MLR	MLR		
	comp=Z,2μm,15.0s						
KUR	**Kuril'sk**	**4.39**	**38**	P	**Pn**	**05 34 19.5**	**-1.8**
KUR				*e*S	**Sn**	**05 35 10.6**	**-0.8**
KUR				pmax	pmax		
	comp=N,30nm,0.7s						
KUR				pmax	pmax		
	comp=E,30nm,0.7s						
KUR				pmax	pmax		
	comp=Z,90nm,0.7s						
KUR				smax			
	comp=N,180nm,0.6s						
KUR				smax			
	comp=E,120nm,0.6s						
YSS	**Yuzh-Sakhalins**	**5.22**	**350**	*e*P	**Pn**	**05 34 34.0**	**+1.4**
YSS				*e*S	**Sn**	**05 35 32.0**	**+0.3**
YSS				MLR	MLR		
	comp=Z,2μm,13.0s						
YSS				MLR	MLR		
	comp=N,2μm,12.0s						
YSS	**Yuzh-Sakhalins**	**5.22**	**350**	*e*Pn	**Pn**	**05 34 34.2**	**+1.6**
MAJO	**Matsushiro**	**6.96**	**223**	*e*P	**Pn**	**05 34 55.3**	**-1.2**
MAT	**Matsushiro**	**6.96**	**223**	P	**Pn**	**05 34 54.8**	**-1.7**
MAT				*e*S	**Sn**	**05 36 18.1**	**+3.5**
MJAR	**Matsushiro Arr**	**6.96**	**223**	Pn	**Pn**	**05 34 55.3**	**-1.2**
	comp=N,2.7nm,0.3s,baz=28,slow=15,SNR=44						
MJAR				Sn	**Sn**	**05 36 14.8**	**+0.2**
	baz=54,slow=23,SNR=2.6						
HABR	**Khabarovsk**	**9.21**	**319**	*e*P	**Pn**	**05 35 26.7**	**-0.6**
HABR						05 37 11.1	
HABR				MLR	MLR		
	comp=Z,550nm,16.0s						
JHJ	**Hachijo jima 2**	**9.32**	**203**	LR	LR	05 38 56.9	
	comp=Z,366nm,19.3s,baz=64,slow=37						
MDJ	**Mudanjiang**	**10.93**	**290**	P	**Pn**	**05 35 48.4**	**-2.5**
MDJ				pP		05 35 55.4	
MDJ				sP		05 36 00.8	
MDJ				S	**Sn**	**05 37 48.3**	**-3.6**
MDJ				ScP	ScP	05 45 19.0	+0.1
MDJ				PcS	PcS	05 45 22.5	+0.2
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,56nm,4.2s						
MDJ				LR	LR		
	comp=N,620nm,18.6s						
MDJ				LR	LR		
	comp=E,950nm,18.8s						
MDJ				LR	LR		
	comp=Z,1μm,18.6s						
MDJ	**Mudanjiang**	**10.93**	**290**	*e*Pn	**Pn**	**05 35 49.8**	**-1.0**
	comp=Z,11nm,0.9s						
KLR	**Kul'dur**	**11.37**	**315**	*e*P	**Pn**	**05 35 58.0**	**+1.1**
KLR				MLR	MLR		
	comp=N,700nm,13.0s						
KLR				MLR	MLR		
	comp=Z,3μm,13.0s						
KSRS	**Korea Array**	**13.18**	**256**	Pn	**Pn**	**05 36 21.3**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=58,slow=13,SNR=5.4						
KSRS				LR	LR	05 41 35.3	
	comp=Z,627nm,18.6s,baz=70,slow=38						
CN2	**Changchun**	**13.81**	**284**	*e*P	**Pn**	**05 36 32.9**	**+2.6**
CN2				*es*P		05 36 45.1	
CN2				pmax	pmax		
	comp=Z,20nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
PETK	**Petropavlovsk-**	**14.55**	**34**	Pn	**Pn**	**05 36 38.2**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=194,slow=8.5,SNR=4.9						
PETK				LR	LR	05 42 25.5	
	comp=Z,227nm,19.4s,baz=196,slow=38						
CBIJ	**Chichi jima**	**14.77**	**187**	LR	LR	05 42 32.3	
	comp=Z,223nm,18.4s,baz=94,slow=38						
HIA	**Hailar**	**18.54**	**302**	*e*P	**Pn**	**05 37 29.1**	**-1.9**
HIA				pmax	pmax		
	comp=Z,29nm,0.9s						
HIA	**Hailar**	**18.54**	**302**	*e*P	**Pn**	**05 37 29.1**	**-1.9**
	comp=Z,28nm,0.9s						
CLNS	**Chul'man**	**19.44**	**327**	*e*P	**Pn**	**05 37 35.4**	**-6.3**
CLNS				pmax	pmax		
	comp=N,8.0nm,0.7s						
CLNS				pmax	pmax		
	comp=Z,14nm,0.7s						
CLNS				pmax	pmax		
	comp=E,4.0nm,0.6s						
CLNS				MLR	MLR		
	comp=E,387nm,14.0s						
CLNS				MLR	MLR		
	comp=Z,489nm,15.0s						
CLNS				MLR	MLR		
	comp=N,368nm,12.0s						
BJI	**Beijing**	**21.11**	**274**	P	**P**	**05 37 57.6**	**-1.1**
BJI				S	**S**	**05 41 49.3**	**-2.6**
BJI				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.2						
BJI				pmax	pmax		
	comp=Z,110nm,3.7s						
BJI				LR	LR		
	comp=N,660nm,14.7s,MS4.5						
BJI				LR	LR		
	comp=E,1μm,16.1s,MS4.5						
BJI				LR	LR		
	comp=Z,640nm,17.0s,MS4.1						
SEY	**Seymchan**	**21.71**	**10**	⇓*e*P	**P**	**05 38 01.9**	**-3.0**
YAK	**Yakutsk**	**22.00**	**342**	*e*P	**P**	**05 38 03.0**	**-5.0**
YAK				*e*S	**S**	**05 42 00.2**	**-8.7**
YAK				*e*		05 42 03.8	
YAK				pmax	pmax		
	comp=Z,29nm,0.9s,mb4.7						
YAK				pmax	pmax		
	comp=N,9.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.1s						
YAK				smax			
	comp=N,150nm,1.8s						
YAK				smax			
	comp=E,70nm,1.6s						
YAK				MLR	MLR		
	comp=Z,499nm,15.0s,MS4.0						
YAK				MLR	MLR		
	comp=N,252nm,14.0s,MS3.9						
YAK				MLR	MLR		
	comp=E,245nm,16.0s,MS3.9						
YAK	**Yakutsk**	**22.00**	**342**	*e*P	**P**	**05 38 03.8**	**-4.2**
	comp=E,33nm,0.8s,mb4.8						
NJ2	**Nanjing**	**22.32**	**252**	*e*P	**P**	**05 38 09.8**	**-1.8**
NJ2				pP		05 38 18.9	
NJ2				sP	sP	05 38 23.1	-0.8
NJ2				PP		05 38 36.8	
NJ2				S	**S**	**05 42 08.0**	**-7.5**
NJ2				sS	sS	05 42 24.5	-4.4
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s,mb4.7						
NJ2				pmax	pmax		
	comp=Z,240nm,4.3s						
NJ2				LR	LR		
	comp=N,620nm,17.1s,MS4.3						
NJ2				LR	LR		
	comp=E,750nm,18.5s,MS4.3						
NJ2				LR	LR		
	comp=Z,1μm,16.0s,MS4.4						
HHC	**Hu-ho-hao-te**	**24.35**	**279**	*e*P	**P**	**05 38 32.3**	**+0.6**
HHC				sP	sP	05 38 46.0	+1.6
HHC				PP		05 39 07.9	
HHC				PcP	PcP	05 42 12.9	+2.3
HHC				S	**S**	**05 42 46.3**	**-2.7**
HHC				sS	sS	05 43 02.5	-1.2
HHC				SS		05 43 40.5	
HHC				ScP	ScP	05 45 47.3	+0.5
HHC				PcS	PcS	05 45 51.3	+0.9
HHC				pmax	pmax		
	comp=Z,14nm,0.5s,mb4.7						
HHC				pmax	pmax		
	comp=Z,140nm,4.8s						
HHC				LR	LR		
	comp

comp=Z,36nm,1.6s,mb5.0
LZH pmax pmax
comp=Z,170nm,4.9s
LZH LR LR
comp=E,730nm,14.2s
LZH LR LR
comp=Z,950nm,15.0s,MS4.6
GTA Gaotai 33.40 281 eP **P 05 39 53.3 +0.9**
GTA pP pP 05 39 58.0 -3.4
GTA sP sP 05 40 00.6 -4.5
GTA pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
CD2 Chengdu 33.95 265 P **P 05 39 56.5 -0.8**
CD2 pP pP 05 40 06.3 0.0
CD2 sP sP 05 40 10.1 +0.1
CD2 PP PP 05 41 10.0 -4.3
CD2 PcP PcP 05 42 35.5 +0.5
CD2 S **S 05 45 17.1 -3.0**
CD2 sS sS 05 45 33.0 -2.0
CD2 SS SS 05 47 23.9 -24
CD2 pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
CD2 pmax pmax
comp=Z,130nm,5.9s
CD2 LR LR
comp=N,430nm,12.5s
CD2 LR LR
comp=Z,480nm,14.3s,MS4.4
GYA Guiyang 34.24 255 P **P 05 40 01.0 +1.2**
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
QIZ Qiongzhong 36.87 242 P **P 05 40 22.0 -0.4**
QIZ pP pP 05 40 30.3 -1.2
QIZ sP sP 05 40 34.6 -0.6
QIZ S **S 05 46 04.3 -0.7**
QIZ pmax pmax
comp=Z,11nm,1.5s,mb4.5
QIZ pmax pmax
comp=Z,90nm,4.0s
QIZ LR LR
comp=N,310nm,19.3s,MS4.1
QIZ LR LR
comp=E,150nm,24.3s,MS4.1
QIZ LR LR
comp=Z,310nm,19.7s,MS4.1
KMI Kunming 37.88 257 P **P 05 40 30.3 -0.6**
KMI pP pP 05 40 40.9 +0.9
KMI sP sP 05 40 45.4 +1.7
KMI PP PP 05 42 00.8 +3.2
KMI S **S 05 46 19.3 -1.0**
KMI sS sS 05 46 36.3 +1.0
KMI SS SS 05 48 53.8 -13
KMI pmax pmax
comp=Z,9.0nm,0.7s,mb4.6
KMI pmax pmax
comp=Z,87nm,4.5s
KMI LR LR
comp=N,370nm,16.9s,MS4.2
KMI LR LR
comp=E,190nm,21.7s,MS4.2
KMI LR LR
comp=Z,440nm,17.6s,MS4.3
ZAA0 Zalesovo Array 40.38 308 eP **P 05 40 51.1 -0.4**
ZALV Zalesovo Beam 40.38 308 P **P 05 40 51.5 0.0**
comp=Z,3.7nm,0.4s,mb4.4,baz=85,slow=8.0,SNR=24
ZALV PcP PcP 05 42 54.3 +0.2
comp=Z,0.8nm,0.4s,baz=128,slow=4.0,SNR=4.5
ZALV LR LR 05 58 57.1
comp=Z,166nm,19.1s,MS3.9,baz=162,slow=38
ZALV Zalesovo Beam 40.38 308 P **P 05 40 51.5 0.0**
ZALV 05 42 54.4
WMQ Urumqi 40.71 292 P **P 05 40 56.0 +1.6**
WMQ pP pP 05 41 05.8 +2.3
WMQ sP sP 05 41 09.8 +2.6
WMQ PP PP 05 42 33.8 +5.5
WMQ PcP PcP 05 42 57.8 +2.4
WMQ S **S 05 47 04.0 +1.5**
WMQ ScS ScS 05 50 54.3 -2.8
WMQ pmax pmax
comp=Z,12nm,1.0s,mb4.5
WMQ pmax pmax
comp=Z,90nm,4.4s
WMQ LR LR
comp=N,260nm,17.8s,MS4.5
WMQ LR LR
comp=E,500nm,20.0s,MS4.5
WMQ LR LR
comp=Z,570nm,17.2s,MS4.5
MK31 Makanchi Array 43.48 298 *c*eP **P 05 41 16.6 -0.3**
MK31 pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
MK31 Makanchi Array 43.48 298 eP **P 05 41 17.0 +0.1**
MKAR Makanchi Array 43.48 298 P **P 05 41 16.7 -0.2**
comp=Z,2.0nm,0.4s,mb4.2,baz=76,slow=10,SNR=31
MKAR LR LR 06 00 40.7
comp=Z,231nm,18.9s,MS4.1,baz=298,slow=38
PMR Palmer 43.60 40 P **P 05 41 18.2 +0.5**
PMR pmax pmax
comp=Z,7.0nm,0.9s,mb4.4
PMR Palmer 43.60 40 P **P 05 41 18.2 +0.6**
comp=Z,6.5nm,0.9s,mb4.4
COLA College 43.96 35 eP **P 05 41 21.2 +0.7**
COLA pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
COLA College 43.96 35 eP **P 05 41 21.2 +0.7**
comp=Z,4.5nm,0.9s,mb4.2
LSA Lhasa 43.98 272 eP **P 05 41 22.8 +1.7**
LSA pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
LSA Lhasa 43.98 272 eP **P 05 41 22.8 +1.7**
comp=Z,7.8nm,0.8s,mb4.5
ILAR Eielson Array 44.38 35 P **P 05 41 23.6 -0.2**
comp=Z,2.1nm,0.9s,mb3.9,baz=270,slow=6.8,SNR=20
ILAR LR LR 06 01 26.8
comp=Z,107nm,18.4s,MS3.8,baz=329,slow=38
CHTO Chiang Mai 44.56 253 eP **P 05 41 26.1 +0.3**
CHTO pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
CHTO Chiang Mai 44.56 253 eP **P 05 41 26.1 +0.2**
comp=Z,3.1nm,0.8s,mb4.2
KURK Kurchatov 44.74 305 *c* iP **P 05 41 26.4 -0.6**
KURK pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
KURK Kurchatov 44.74 305 eP **P 05 41 26.5 -0.5**
comp=Z,6.2nm,0.8s,mb4.5
CMAR Chiang Mai Arr 44.79 253 P **P 05 41 27.8 +0.1**
comp=Z,1.8nm,0.9s,mb3.9,baz=44,slow=6.5,SNR=10
CMAR LR LR 06 00 07.1
comp=Z,153nm,20.9s,MS3.9,baz=60,slow=36
CMAR Chiang Mai Arr 44.79 253 P **P 05 41 27.8 +0.1**
CMAR pmax pmax
comp=Z,2.0nm,0.9s
CMAR MLR MLR
comp=Z,153nm,20.9s
EGAK Eagle 46.82 35 eP **P 05 41 43.9 +0.8**
comp=Z,15nm,1.7s,mb4.6
VOSK Vostochnaya 48.73 309 P **P 05 41 58.9 +0.8**
VOSK pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
BVAR Borovoye Array 48.98 310 P **P 05 42 00.3 +0.2**
comp=Z,4.9nm,0.5s,mb4.8,baz=69,slow=8.6,SNR=19
BRVK Borovoye 49.03 310 eP **P 05 42 00.5 +0.1**
INK Inuvik 49.21 29 P **P 05 42 01.6 0.0**
comp=Z,4.0nm,0.5s,mb4.7,baz=282,slow=6.0,SNR=29
HYT Haines Junctio 49.27 39 eP **P 05 42 05.1 +3.0**
TKM2 Tokmak 2 49.29 296 eP **P 05 42 03.0 +0.5**
TKM2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
TKM2 Tokmak 2 49.29 296 eP **P 05 42 03.0 +0.5**
comp=Z,9.9nm,0.8s,mb4.9
ZRNK Zerenda 49.80 310 P **P 05 42 05.6 -0.7**
ZRNK pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
AAK Ala-Archa 50.15 296⇑ eP **P 05 42 09.4 +0.3**
AAK pmax pmax
comp=Z,1.0nm,0.6s,mb4.0
SVE Sverdlovsk 52.99 317⇑ eP **P 05 42 30.5 +0.4**
SVE *e* 05 43 42.9
SVE *e*S **S 05 50 04.9 +7.5**
SVE pmax pmax
comp=Z,13nm,1.0s,mb4.8
ARU Arti 54.20 317 *c* iP **P 05 42 38.5 -0.5**
ARU *e* 05 44 40.8
ARU *e*PPP 05 45 50.2
ARU S **S 05 50 15.9 +2.1**
ARU SS SS 05 53 52.1 -3.1
ARU pmax pmax
comp=Z,11nm,1.0s,mb4.7
ARU MLR MLR
comp=Z,300nm,17.0s,MS4.4
ARU Arti 54.20 317 eP **P 05 42 38.5 -0.4**
comp=Z,4.7nm,0.6s,mb4.6
SPITS Spitsbergen Ar 56.24 349 LR LR 06 10 03.9
comp=Z,102nm,19.4s,MS3.9,baz=80,slow=39
AB31 Akbulak array 56.50 309 *c*eP **P 05 42 55.4 -0.2**
AB31 pmax pmax
comp=Z,3.0nm,0.3s,mb4.8
ABKAR Akbulak array 56.50 309 eP **P 05 42 55.5 -0.1**
comp=Z,4.0nm,0.5s,mb4.7
RES Resolute Bay 57.46 16 eP **P 05 43 01.6 -0.4**
RES pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
RES Resolute Bay 57.46 16 eP **P 05 43 01.6 -0.5**
comp=Z,9.4nm,0.8s,mb4.9
LVZ Lovozero 58.61 335⇓ eP **P 05 43 10.2 0.0**
LVZ pmax pmax
comp=Z,15nm,2.5s,mb4.6
KEV Kevo 59.71 339 eP **P 05 43 17.1 -0.7**
KEV Kevo 59.71 339 *e*p **P 05 43 17.1 -0.7**
ARCES ARCESS Array B 60.25 339 P **P 05 43 22.5 +1.0**
comp=Z,0.6nm,0.5s,mb3.9,baz=51,slow=7.1,SNR=18
ARCES LR LR 06 14 09.5
comp=Z,126nm,18.1s,MS4.1,baz=100,slow=41
ARE0 ARCESS Array S 60.26 339 eP **P 05 43 22.4 +0.9**
KAF Kangasniemi 65.00 333 eP **P 05 43 50.3 -3.0**
KAF Kangasniemi 65.00 333 *e*p **P 05 43 50.3 -3.0**
FINES FINESS Array B 65.54 332 P **P 05 43 55.5 -1.3**
comp=Z,5.5nm,0.6s,mb4.8,baz=48,slow=7.3,SNR=36
FINES LR LR 06 15 53.1
comp=Z,358nm,18.8s,MS4.6,baz=221,slow=39
ASAR Alice Springs 65.83 190 P **P 05 44 00.2 +1.2**
comp=Z,0.5nm,0.8s,mb3.6,baz=4.2,slow=5.5,SNR=4.3
SUMG Summit 65.89 1 eP **P 05 43 59.2 +0.3**
comp=Z,5.4nm,0.6s,mb4.8
SUMG Summit 65.89 1 *i* P **P 05 43 58.5 -0.4**
comp=Z,6.4nm,0.8s,mb4.7
KIV Kislovodsk 69.33 311 eP **P 05 44 22.1 +1.0**
KIV pmax pmax
comp=Z,16nm,0.9s,mb5.0
KIV MLR MLR
comp=Z,183nm,19.0s,MS4.3
KIV Kislovodsk 69.33 311 eP **P 05 44 22.4 +1.3**
comp=Z,16nm,0.8s,mb5.0
ZEI Tsey 69.37 309 eP **P 05 44 20.6 -0.7**
ZEI pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
BOZ Bozeman (W) 69.89 46 eP **P 05 44 25.3 +0.8**
BOZ *e**PP pP 05 44 36.2 +2.1
GNI Garni 70.50 307⇓ eP **P 05 44 29.7 +1.4**
GNI pmax pmax
comp=Z,15nm,1.7s
NVAR Mina Array Bea 70.54 56 P **P 05 44 30.0 +1.4**
comp=Z,0.3nm,0.7s,mb3.3,baz=282,slow=2.9,SNR=3.8
NB2 NORSAR Subarra 70.56 338 P **P 05 44 27.6 -0.7**
comp=Z,4.1nm,1.0s,mb4.3,baz=36,slow=6.2
NOA NORSAR Array B 70.56 338 P **P 05 44 27.5 -0.8**
comp=Z,2.8nm,0.9s,mb4.2,baz=38,slow=6.1,SNR=7.7
SFJD Kangerlussuaq 70.94 6 LR LR 06 21 10.6
comp=Z,98nm,18.7s,MS4.1,slow=41
FRB Frobisher Bay 71.64 15 LR LR 06 20 59.3
comp=Z,99nm,18.5s,MS4.1,baz=357,slow=40
AKASG Malin Array Be 71.76 323 P **P 05 44 35.1 -0.6**
comp=Z,2.8nm,0.4s,mb4.5,baz=42,slow=6.2,SNR=12
PDAR Pinedale Array 72.89 48 P **P 05 44 45.0 +2.4**
comp=Z,0.3nm,0.5s,mb3.5,baz=174,slow=2.2,SNR=4.6
BUR08 Bucovina Ar. S 75.80 322 eP **P 05 44 59.7 +0.3**
OJC Ojcow 76.19 327 eP **P 05 44 59.5 -2.1**
BRTR Keskin Array B 77.19 312 P **P 05 45 07.3 -0.2**
comp=Z,1.1nm,0.9s,mb3.8,baz=46,slow=7.1,SNR=5.8
BRTR LR LR 06 24 00.5
comp=Z,67nm,19.6s,MS4.0,baz=272,slow=40
DPC Dobruska-Polom 77.47 329 eP **P 05 45 09.4 +0.5**
DPC Dobruska-Polom 77.47 329 eP **P 05 45 09.4 +0.5**
CLL Collm 77.94 331⇑ *i* P **P 05 45 11.0 -0.5**
CLL pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
CLL MLR MLR
comp=Z,300nm,20.0s,MS4.6
CLL Collm 77.94 331⇑ *i* P **P 05 45 11.0 -0.5**
comp=Z,7.0nm,0.9s,mb4.6
CLL *e*(SS) 06 00 54.0
CLL LmH 06 19 00.0
comp=N,100nm,18.3s
CLL LmH 06 19 00.0
comp=E,300nm,20.2s
CLL LmV 06 24 00.0
comp=Z,300nm,20.0s
BRG Berggiesshubel 77.95 330 eP **P 05 45 11.4 -0.1**
comp=Z,1.8nm,0.9s,mb4.0
BRG Berggiesshubel 77.95 330 eP **P 05 45 11.4 -0.1**
BRG pmax pmax
comp=Z,1.0nm,0.9s,mb3.8
PVCC Panska Ves 78.00 330 eP **P 05 45 12.6 +0.8**
PVCC MLR MLR
comp=Z,200nm,14.5s,MS4.6
PVCC Panska Ves 78.00 330 eP **P 05 45 12.6 +0.8**
PVCC AMS AMS 06 24 00.0
comp=Z,200nm,14.5s
PRU Pruhonice 78.44 329 eP **P 05 45 15.3 +1.0**
PRU MLR MLR
comp=Z,200nm,17.3s,MS4.5
PRU Pruhonice 78.44 329 eP **P 05 45 15.3 +1.0**
PRU AMS AMS 06 24 10.0
comp=Z,200nm,17.3s
KHC Kasperske Hory 79.51 329 eP **P 05 45 20.7 +0.6**
KHC pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
KHC Kasperske Hory 79.51 329 eP **P 05 45 20.7 +0.6**
comp=Z,3.1nm,0.8s,mb4.3
KHC Kasperske Hory 79.51 329 eP **P 05 45 20.7 +0.6**
KHC AMS AMS 06 24 40.0
comp=Z,300nm,11.6s
GRF Grafenberg Arr 79.92 331 eP **P 05 45 22.4 +0.1**
comp=Z,7.0nm,1.1s,mb4.5
GRF Grafenberg Arr 79.92 331 eP **P 05 45 22.4 +0.1**
GRF pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
MMAI Mount Meron Ar 80.83 306 P **P 05 45 28.2 +0.6**
comp=Z,1.4nm,0.5s,mb4.2,baz=27,slow=9.7,SNR=4.0
MMAI LR LR 06 24 05.4
comp=Z,119nm,21.6s,MS4.2,baz=35,slow=38
CDF Champ du Feu 82.39 333 eP **P 05 45 35.1 -0.4**
comp=Z,9.3nm,1.1s,mb4.3
CDF Champ du Feu 82.39 333 eP **P 05 45 35.1 -0.4**
CDF pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
CDF Champ du Feu 82.39 333 eP **P 05 45 35.1 -0.4**
comp=Z,4.7nm,1.1s,mb4.3
HINF Hinteralfeld 83.05 333 eP **P 05 45 39.0 +0.1**
HAU Haudompre 83.06 333 eP **P 05 45 38.4 -0.6**
HAU *e*MLR MLR
comp=Z,224nm,21.2s,MS4.2
HAU Haudompre 83.06 333 eP **P 05 45 38.4 -0.6**
HAU LR LR
comp=Z,220nm,21.3s,MS4.5
PMOR Pomariorio Ree 84.31 116 *e*T 07 18 32.7
comp=Z,5.8nm,0.2s
CABF La Chapelle 84.35 332 eP **P 05 45 45.3 -0.3**
LOR Lormes 84.53 334 eP **P 05 45 46.1 -0.4**
comp=Z,20nm,1.2s,mb4.8
LOR *e*MLR MLR
comp=Z,197nm,20.2s,MS4.2
LOR Lormes 84.53 334 eP **P 05 45 46.1 -0.4**
LOR pmax pmax
comp=Z,10.0nm,1.2s,mb4.8
LOR MLR MLR
comp=Z,200nm,20.3s,MS4.5
LOR Lormes 84.53 334 eP **P 05 45 46.1 -0.4**
comp=Z,9.9nm,1.2s,mb4.8
LOR LR LR
comp=Z,200nm,20.3s,MS4.5
SSF Saint Saulge 84.83 334 eP **P 05 45 47.8 -0.2**
comp=Z,6.7nm,0.9s,mb4.5
SSF Saint Saulge 84.83 334 eP **P 05 45 47.8 -0.2**
SSF pmax pmax
comp=Z,3.0nm,0.9s,mb4.4
SSF Saint Saulge 84.83 334 eP **P 05 45 47.8 -0.2**
comp=Z,3.3nm,0.9s,mb4.5
PPT Papeete 85.03 119 *e*LR LR 06 12 40.0
comp=Z,123nm,24.0s
LPL La Plagne 85.07 331 eP **P 05 45 49.6 +0.3**
comp=Z,11nm,0.9s,mb4.7
LPL La Plagne 85.07 331 eP **P 05 45 49.6 +0.3**
LPL pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
LPL La Plagne 85.07 331 eP **P 05 45 49.6 +0.3**
comp=Z,5.3nm,0.9s,mb4.7
LPG La Plagne 85.08 331 eP **P 05 45 49.8 +0.5**
comp=Z,17nm,1.0s,mb4.8
LPG La Plagne 85.08 331 eP **P 05 45 49.8 +0.5**
LPG pmax pmax
comp=Z,8.0nm,1.0s,mb4.8
LPG La Plagne 85.08 331 eP **P 05 45 49.8 +0.5**
comp=Z,8.4nm,1.0s,mb4.8
SMF Signal de Mont 85.08 334 eP **P 05 45 49.1 -0.2**
AVF Avril sur Loir 85.12 334 eP **P 05 45 49.3 -0.2**
comp=Z,8.5nm,1.0s,mb4.5
AVF Avril sur Loir 85.12 334 eP **P 05 45 49.3 -0.2**
AVF pmax pmax
comp=Z,4.0nm,1.0s,mb4.5
AVF Avril sur Loir 85.12 334 eP **P 05 45 49.3 -0.2**
comp=Z,4.3nm,1.0s,mb4.5
TXAR Lajitas Array 85.62 54 P **P 05 45 52.4 0.0**
comp=Z,0.3nm,0.6s,mb3.7,baz=299,slow=3.7,SNR=7.9
MBDF Montbardon 85.74 331 eP **P 05 45 52.2 -0.4**
comp=Z,6.7nm,0.9s,mb4.6
MBDF Montbardon 85.74 331 eP **P 05 45 52.2 -0.4**
MBDF pmax pmax
comp=Z,3.0nm,0.9s,mb4.5
MBDF Montbardon 85.74 331 eP **P 05 45 52.2 -0.4**
comp=Z,3.3nm,0.9s,mb4.6
ORIF Oris-en-Rattie 85.89 332 eP **P 05 45 53.6 +0.2**
comp=Z,14nm,1.1s,mb4.8
ORIF *e*MLR MLR
comp=Z,149nm,19.2s,MS4.1
ORIF Oris-en-Rattie 85.89 332 eP **P 05 45 53.6 +0.2**
ORIF pmax pmax
comp=Z,7.0nm,1.1s,mb4.8
ORIF Oris-en-Rattie 85.89 332 eP **P 05 45 53.6 +0.2**
comp=Z,7.2nm,1.1s,mb4.8
VIVF Saint-Julien-I 86.37 332 eP **P 05 45 55.8 +0.1**
comp=Z,11nm,0.9s,mb4.8
VIVF Saint-Julien-I 86.37 332 eP **P 05 45 55.8 +0.1**
VIVF pmax pmax
comp=Z,5.0nm,0.9s,mb4.7
VIVF Saint-Julien-I 86.37 332 eP **P 05 45 55.8 +0.1**
comp=Z,5.3nm,0.9s,mb4.8
PGF Pioggiola 86.76 328 eP **P 05 45 56.4 -1.3**
comp=Z,20nm,0.9s,mb5.0
PGF Pioggiola 86.76 328 eP **P 05 45 56.4 -1.3**
PGF pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
PGF Pioggiola 86.76 328 eP **P 05 45 56.4 -1.3**
comp=Z,10nm,0.9s,mb5.0
RJF Les Rejaudoux 87.03 335 eP **P 05 45 59.3 +0.3**
RJF *e*MLR MLR
comp=Z,219nm,21.8s,MS4.2
RJF Les Rejaudoux 87.03 335 eP **P 05 45 59.3 +0.3**
RJF LR LR
comp=Z,220nm,21.8s,MS4.5
CAF Calviac 87.19 334 eP **P 05 46 00.4 +0.7**
comp=Z,10nm,0.8s,mb4.8
CAF Calviac 87.19 334 eP **P 05 46 00.4 +0.7**
CAF pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
CAF Calviac 87.19 334 eP **P 05 46 00.4 +0.7**
comp=Z,5.2nm,0.8s,mb4.8
LASF Ste Croix 87.33 332 eP **P 05 46 00.5 0.0**
LFF La Frestale 87.60 335 eP **P 05 46 01.2 -0.5**
MTLF Montlieu 88.54 333 eP **P 05 46 05.6 -0.6**
comp=Z,7.3nm,1.0s,mb4.7
MTLF Montolieu 88.54 333 eP **P 05 46 05.6 -0.6**
MTLF pmax pmax
comp=Z,4.0nm,1.0s,mb4.7
MTLF Montolieu 88.54 333 eP **P 05 46 05.6 -0.6**
comp=Z,3.7nm,1.0s,mb4.7
TBI Tubuai 89.29 123 *e*T 07 24 47.4
comp=Z,4.4nm,0.3s
ETSF Etsaut 89.85 335 eP **P 05 46 13.4 +1.0**
BCIP Isla Barro Col 115.26 49 *e*PKPdf PKiKP 05 51 54.0 -1.5

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*IDC **20** 05:37:44.1±1.6, 30°.93N×139°.98E, h0km, mb3.6/3, mb1 3.9/4, mb1mx3.5/23, mbtmp3.6/4, ML2.8/1, Error ellipse: s-maj=81.9km s-min=28.7km az=98.0*
*JMA **20** 05:37:45.5±0.3, 31°.43N×139°.49E, h0km, M3.3*
*ISCJB **20** 05:37:48.5±2.9, 31°.1N±0°.1×139°.2E±0°.2, h55km±28km, mb3.6/3, Error ellipse: s-maj=23.1km s-min=20.9km az=149.1*
ISC 20 05:37:50.6±2.7, 31°.2N±0°.1×139°.2E±0°.2, h56km±27km, n10, σ0 70/11, mb3.6/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TK01	**Tokai 1**	**2.95**	**332**	*e*S	**Sn**	**05 39 08.7**	**-0.6**
TK02	**Tokai 2**	**3.05**	**336**	*e*S	**Sn**	**05 39 11.7**	**0.0**
BSO3	**Boso 3**	**3.79**	**16**	*e*S	**Sn**	**05 39 22.3**	**-7.6**
JWZ	**Kozaga**	**3.81**	**309**	P	**Pn**	**05 38 46.5**	**-0.2**
JWZ				*e*S	**Sn**	**05 39 30.5**	**+0.2**
JKN2	**Miekihoku**	**3.96**	**322**	*e*S	**Sn**	**05 39 34.3**	**+0.2**
MJAR	**Matsushiro Arr**	**5.44**	**351**	Pn	**Pn**	**05 39 10.5**	**+1.4**
	0.3nm,0.3s,baz=150,slow=13,SNR=7.3						
MAT	**Matsushiro**	**5.44**	**351**	P	**Pn**	**05 39 08.1**	**-1.1**
ASAR	**Alice Springs**	**54.74**	**186**	P	**P**	**05 47 14.5**	**+0.1**
	0.4nm,0.6s,mb3.6,baz=17,slow=13,SNR=6.0						
ILAR	**Eielson Array**	**55.45**	**30**	P	**P**	**05 47 19.9**	**+0.9**
	0.4nm,0.7s,mb3.5,baz=265,slow=4.5,SNR=4.6						
TXAR	**Lajitas Array**	**95.17**	**51**	P	**P**	**05 51 07.3**	**-0.9**
	0.2nm,0.7s,mb3.7,baz=316,slow=3.8,SNR=4.0						

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*ISCJB **20** 05:39:29.3±0.6, 44°.29N±0°.04×11°.28E±0°.04, h17km±7km, Error ellipse: s-maj=6.8km s-min=4.5km az=178.2*
*ROM **20** 05:39:29.7±0.2, 44°.25N×11°.26E, h14km±3km, Md2.4/13, Ml2.0/9, Error ellipse: s-maj=2.6km s-min=1.3km az=14.0*
*CSEM **20** 05:39:29.4±0.2, 44°.26N×11°.28E, h17km±1km, ML2.6/7, Error ellipse: s-maj=3.1km s-min=2.1km az=3.0*
ISC 20 05:39:29.3±0.6, 44°.28N±0°.04×11°.28E±0°.04, h17km±4km, n30, σ0 63/48, 2D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FNVD	**Fontana Vidola**	**0.16**	**224**	Pg	**Pg**	**05 39 33.2**	**-0.4**
FNVD				Sg	**Sg**	**05 39 36.4**	**-0.1**
	3μm,0.2s						
FNVD	**Fontana Vidola**	**0.16**	**224**	Pg	**Pg**	**05 39 33.2**	**-0.4**
FNVD				Sg	**Sg**	**05 39 36.4**	**-0.1**
	3μm,0.2s						
MTRZ	**Monterenzio**	**0.16**	**56**⇓	*i*Pg	**Pg**	**05 39 34.0**	**+0.4**
MTRZ				Sg	**Sg**	**05 39 36.5**	**-0.1**
	772nm,0.4s						
MTRZ	**Monterenzio**	**0.16**	**56**⇓	*i*Pg	**Pg**	**05 39 34.0**	**+0.4**
MTRZ				Sg	**Sg**	**05 39 36.5**	**-0.1**
	772nm,0.4s						
ZCCA	**Zocca**	**0.23**	**287**	Pg	**Pg**	**05 39 35.3**	**+0.7**
ZCCA				Sg	**Sg**	**05 39 38.1**	**-0.1**
	114nm,0.3s						
ZCCA	**Zocca**	**0.23**	**287**	Pg	**Pg**	**05 39 35.3**	**+0.7**
ZCCA				Sg	**Sg**	**05 39 38.1**	**-0.1**
	114nm,0.3s						
SEI	**Scarperia**	**0.24**	**166**	Pg	**Pg**	**05 39 34.2**	**-0.5**
SEI				Sg	**Sg**	**05 39 38.5**	**+0.1**
	506nm,0.2s						
SEI	**Scarperia**	**0.24**	**166**	Pg	**Pg**	**05 39 34.2**	**-0.5**
SEI				Sg	**Sg**	**05 39 38.5**	**+0.1**
	506nm,0.2s						
PZZT	**Monte Pizzetto**	**0.34**	**243**	Pg	**Pg**	**05 39 36.5**	**+0.1**
PZZT				Sg	**Sg**	**05 39 41.0**	**-0.2**
	175nm,0.5s						
PZZT	**Monte Pizzetto**	**0.34**	**243**	Pg	**Pg**	**05 39 36.5**	**+0.1**
PZZT				Sg	**Sg**	**05 39 41.0**	**-0.2**
	175nm,0.5s						
VMG	**Vicchio**	**0.38**	**149**	Pg	**Pg**	**05 39 36.4**	**-0.7**
	122nm,0.3s						
VMG	**Vicchio**	**0.38**	**149**	Pg	**Pg**	**05 39 36.4**	**-0.7**
	122nm,0.3s						
BDI	**Bagni Di Lucca**	**0.54**	**246**	Pg	**Pg**	**05 39 40.3**	**+0.3**
	116nm,0.6s						
BDI	**Bagni Di Lucca**	**0.54**	**246**	Pg	**Pg**	**05 39 40.3**	**+0.3**
	116nm,0.6s						
CRMI	**Carmignano**	**0.54**	**204**	Pg	**Pg**	**05 39 39.8**	**-0.3**
	42nm,0.5s						
CRMI	**Carmignano**	**0.54**	**204**	Pg	**Pg**	**05 39 39.8**	**-0.3**
	42nm,0.5s						
SFI	**Santa Sofia**	**0.56**	**133**	Pg	**Pg**	**05 39 40.3**	**-0.1**
SFI				Sg	**Sg**	**05 39 48.2**	**+0.3**

SFI	**Santa Sofia**	**0.56 133**	Pg	**Pg**	**05 39 40.3**	**-0.1**
SFI			Sg	**Sg**	**05 39 48.2**	**+0.3**
ASQU	**Asqua**	**0.61 143**	Pg	**Pg**	**05 39 41.6**	**+0.2**
ASQU			Sg	**Sg**	**05 39 50.2**	**+0.7**
50nm,0.5s						
ASQU	**Asqua**	**0.61 143**	Pg	**Pg**	**05 39 41.6**	**+0.2**
ASQU			Sg	**Sg**	**05 39 50.2**	**+0.7**
50nm,0.5s						
MAIM	**Mastiano**	**0.68 237**	Pg	**Pg**	**05 39 42.6**	**0.0**
MAIM			Sg	**Sg**	**05 39 51.6**	**0.0**
66nm,0.6s						
MAIM	**Mastiano**	**0.68 237**	Pg	**Pg**	**05 39 42.6**	**0.0**
MAIM			Sg	**Sg**	**05 39 51.6**	**0.0**
66nm,0.6s						
PII	**Pisa**	**0.78 224**	Pg	**Pg**	**05 39 44.1**	**-0.5**
98nm,0.3s						
PII	**Pisa**	**0.78 224**	Pg	**Pg**	**05 39 44.1**	**-0.5**
98nm,0.3s						
CAFI	**Castiglion Fio**	**1.08 152**	Pg	**Pg**	**05 39 49.7**	**-0.5**
25nm,1.1s						
CAFI	**Castiglion Fio**	**1.08 152**	Pg	**Pg**	**05 39 49.7**	**-0.5**
25nm,1.1s						
NRCA	**Norcia**	**1.97 137**	Pg	**Pn**	**05 40 03.8**	**+1.9**
3.0nm,0.2s						
NRCA	**Norcia**	**1.97 137**	Pg	**Pn**	**05 40 03.8**	**+1.9**
3.0nm,0.2s						
NVLJ	**Novalja**	**2.59 83**	*e*Pn	**Pn**	**05 40 11.1**	**+0.6**
NVLJ			Sn	**Sn**	**05 40 39.7**	**-1.8**
NVLJ	**Novalja**	**2.59 83**	*e*Pn	**Pn**	**05 40 11.0**	**+0.6**
NVLJ			Sn	**Sn**	**05 40 39.6**	**-1.8**

NEIC ***20*** *05:44:54.2±0.9, 20.°5N×122.°6E, h10km, Error ellipse: s-maj=28.2km s-min=10.6km az=73.0*
NEIC Felt [IV PIVS] at Basco and [III PIVS] at Mahatao.
ISCJB ***20*** *05:44:55.5±0.8, 20.°56N±0.°08×122.°7E±0.°2, h33km, mb3.6/8, Error ellipse: s-maj=24.5km s-min=7.2km az=158.7*
IDC ***20*** *05:45:01.2±7.5, 20.°27N×122.°29E, h51km±73km, mb3.4/7, mb1 3.5/8, mb1mx3.4/22, mbtmp3.4/8, ML3.3/1, MS3.3/1, Ms1 3.3/1, ms1mx2.6/22, Error ellipse: s-maj=39.0km s-min=24.5km az=75.0*
MAN ***20*** *06:44:52, 20.°58N×121.°72E, h1km, mb4.8, ML3.7, MS3.7*
MAN INTENSITY IV - BASCO BATANES INTENSITY III - MAHATAO BATANES.

ISC 20 05:44:57.6±0.8, 20.°54N±0.°08×122.°6E±0.°2, h35km, n15, σ1§25/20, mb3.6/8, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**2.68**	**328**	*e*Pn	**Pn**	**05 45 35.4**	**-3.0**
TWG				*e*Sn	**Sn**	**05 46 08.7**	**-1.0**
YULB	**Yu-li**	**3.09**	**337**	*e*Pn	**Pn**	**05 45 37.1**	**-6.9**
TPUB	**Ta-pu**	**3.31**	**326**	*e*Pn	**Pn**	**05 45 46.0**	**-0.9**
TPUB				*e*Sn	**Sn**	**05 46 26.0**	**+1.0**
SSLB	**Suanglung**	**3.58**	**335**	*e*Pn	**Pn**	**05 45 49.3**	**-1.4**
SSLB				*e*Sn	**Sn**	**05 46 35.4**	**+3.6**
NACB	**Ninganchiao**	**3.74**	**346**	*e*Pn	**Pn**	**05 45 52.1**	**-0.7**
NACB				*e*Sn	**Sn**	**05 46 30.8**	**-4.8**
YHNB	**Yeheng**	**4.27**	**345**	*e*Pn	**Pn**	**05 45 59.2**	**-0.9**
YHNB				*e*Sn	**Sn**	**05 46 49.4**	**+0.7**
KSRS	**Korea Array**	**17.47**	**14**	P	**Pn**	**05 49 07.0**	**+8.5**
0.1nm,0.3s,baz=207,slow=11,SNR=5.3							
KSRS				LR	LR	05 56 58.7	
comp=Z,97nm,18.0s,baz=346,slow=40							
CMAR	**Chiang Mai Arr**	**22.41**	**269**	P	**P**	**05 49 53.0**	**-0.3**
2.3nm,1.1s,mb3.5,baz=72,slow=8.0,SNR=6.2							
SONM	**Songino Array**	**30.22**	**338**	P	**P**	**05 51 06.7**	**+1.8**
0.2nm,0.3s,mb3.3,baz=156,slow=7.3,SNR=3.7							
WRAB	**Tennant Creek**	**41.83**	**163**	*e*P	**P**	**05 52 43.3**	**-1.0**
18nm,1.5s,mb4.5							
MKAR	**Makanchi Array**	**41.90**	**318**	P	**P**	**05 52 45.1**	**+0.6**
0.8nm,0.5s,mb3.6,baz=113,slow=9.2,SNR=5.8							
ZALV	**Zalesovo Beam**	**44.02**	**329**	P	**P**	**05 53 05.6**	**+4.0**
1.7nm,0.6s,mb3.9,baz=115,slow=7.9,SNR=7.6							
ASAR	**Alice Springs**	**45.30**	**165**	P	**P**	**05 53 12.3**	**+0.2**
0.4nm,0.9s,mb3.3,baz=342,slow=6.9,SNR=4.0							
BVAR	**Borovoye Array**	**51.34**	**322**	P	**P**	**05 53 59.3**	**+0.9**
0.8nm,0.6s,mb3.8,baz=108,slow=9.5,SNR=3.2							
BRTR	**Keskin Array B**	**76.41**	**308**	P	**P**	**05 56 46.0**	**+2.3**
0.4nm,0.8s,mb3.4,baz=85,slow=3.3,SNR=2.9							

MEX ***20*** *05:54:48.2±0.8, 14.°10N×93.°88W, h10km, MD4.0*
NEIC ***20*** *05:54:48.0, 14.°07N×93.°86W, h10km, mb3.7/2, MD4.0(MEX), After MEX.*
IDC ***20*** *05:54:52.5±9.7, 15.°18N×94.°02W, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.4/19, mbtmp3.3/4, ML3.1/1, Error ellipse: s-maj=292.3km s-min=76.4km az=34.0*

ISC 20 05:54:48.1±3.1, 14.°22N±0.°08×93.°76W±0.°08, h11km±23km, n13, σ1§22/17, mb3.7/3, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.57**	**19**	*i* P	**Pn**	**05 55 14.2**	**-1.7**
PCIG				*e*S	**Sn**	**05 55 35.0**	**-1.2**
THIG		**1.60**	**64**	*i* P	**Pn**	**05 55 15.1**	**-1.3**
THIG				*i* S	**Sn**	**05 55 37.0**	**0.0**
TGIG		**2.62**	**13**	*i* P	**Pn**	**05 55 30.5**	**+0.1**
TGIG				*i* S	**Sn**	**05 56 02.9**	**+0.6**
SCX	**San Cristobal**	**2.73**	**23**	*i* P	**Pn**	**05 55 33.5**	**+1.6**
SCX				*i* S	**Sn**	**05 56 05.8**	**+0.9**
TEIG	**Tepich**	**7.95**	**40**	*e*Pn	**Pn**	**05 56 44.3**	**+0.7**
JTS	**JuntasAbangare**	**9.45**	**113**	*e*Pn	**Pn**	**05 57 04.7**	**+0.5**
JCT	**Junction City**	**17.12**	**342**	*e*Pn	**Pn**	**05 58 49.4**	**+2.0**
4.2nm,0.8s							
TXAR	**Lajitas Array**	**17.62**	**330**	Pn	**Pn**	**05 58 49.3**	**-4.4**
0.0nm,0.3s,baz=145,slow=4.9,SNR=2.8							
MIAR	**Mount Ida**	**20.24**	**0**	*e*P	**P**	**05 59 22.2**	**-1.3**
3.7nm,0.7s							
YKA	**Yellowknife Ar**	**50.44**	**348**	P	**P**	**06 03 44.1**	**-1.4**
1.0nm,0.7s,mb3.9,baz=145,slow=7.6,SNR=3.2							
YKA	**Yellowknife Ar**	**50.44**	**348**	P	**P**	**06 03 44.1**	**-1.4**
ILAR	**Eielson Array**	**61.98**	**337**	P	**P**	**06 05 07.3**	**-0.6**
0.2nm,0.6s,mb3.4,baz=150,slow=6.2,SNR=4.5							
ARCES	**ARCESS Array B**	**86.46**	**18**	P	**P**	**06 07 32.8**	**+2.2**
0.6nm,0.9s,mb3.8,baz=308,slow=6.6,SNR=4.6							

GUC 20 05:55:06.7±0.6, 23.°85S×67.°28W, h220km, ML4.1,2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**2.57**	**307**	‖ *i* P	Pn	05 56 01.0	+8.3
PB04				*i* S	S	05 56 40.9	+12
PB04				AML	AML	05 56 42.9	
comp=N,235nm,0.4s							
CEN1	**Los Morros**	**2.71**	**279**	*i* P	Pn	05 55 57.0	+2.8
CEN1				*i* S	S	05 56 35.4	+4.0
CEN1				AML	AML	05 56 37.7	
comp=N,294nm,0.3s							
HMBC	**Humberston**	**4.30**	**325**	‖ *i* P	Pn	05 56 15.7	+2.7
HMBC				*i* S	S	05 57 09.0	+3.7
PSGC	**Pisagua**	**4.99**	**328**	*e*P	Pn	05 56 24.7	+3.2
PSGC				*i* S	S	05 57 23.7	+2.9
MNMC	**Miæe Miæ**	**5.17**	**335**	*e*P	Pn	05 56 27.3	+3.5
MNMC				*i* S	S	05 57 30.2	+5.3

ISCJB ***20*** *06:09:25.1±1.2, 13.°0N±0.°2×144.°0E±0.°1, h131km±9km, mb3.7/13, Error ellipse: s-maj=33.0km s-min=19.1km az=157.6*
IDC ***20*** *06:09:27.7±1.6, 13.°24N×144.°13E, h133km±7km, mb3.5/12, mb1 3.7/12, mb1mx3.7/23, mbtmp3.5/12, Error ellipse: s-maj=39.1km s-min=19.2km az=30.0*
NEIC ***20*** *06:09:28.6±1.0, 13.°34N×144.°18E, h139km±8km, mb3.7/1, Error ellipse: s-maj=20.8km s-min=15.1km az=65.0*

ISC 20 06:09:26.5±1.3, 13.°0N±0.°2×144.°1E±0.°1, h132km±8km, n21, σ0§97/18, mb3.7/13, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.97**	**52**	P	**Pn**	**06 09 49.8**	**+0.6**
368nm,0.3s,baz=305,slow=1.1,SNR=248							
GUMO				S	**Sn**	**06 10 06.1**	**-0.5**
272nm,0.3s,baz=327,slow=23,SNR=44							
MJAR	**Matsushiro Arr**	**24.03**	**348**	P	**P**	**06 14 29.2**	**0.0**
0.5nm,0.4s,mb3.4,baz=162,slow=10,SNR=4.1							
MYLDM	**Lahad Datu**	**26.41**	**255**	P	**P**	**06 14 49.4**	**-1.6**
KDM	**Kudat**	**27.49**	**260**	P	**P**	**06 15 02.6**	**+1.9**
KSRS	**Korea Array**	**28.32**	**332**	P	**P**	**06 15 08.5**	**+0.8**
1.3nm,0.8s,mb3.7,baz=144,slow=9.9,SNR=3.0							
UBT	**Ubonrachathani**	**37.92**	**278**	P	**P**	**06 16 27.5**	**-3.8**
SONM	**Songino Array**	**46.78**	**326**	P	**P**	**06 17 43.0**	**+0.5**
0.4nm,0.4s,mb3.4,baz=151,slow=9.2,SNR=3.3							
MKAR	**Makanchi Array**	**61.39**	**316**	P	**P**	**06 19 28.6**	**+0.1**
0.7nm,0.4s,mb3.8,baz=91,slow=7.9,SNR=8.8							
ZALV	**Zalesovo Beam**	**61.66**	**325**	P	**P**	**06 19 30.0**	**-0.2**
0.6nm,0.4s,mb3.8,baz=147,slow=8.1,SNR=3.4							
ZALV				PcP	PcP	06 20 09.1	-1.4
0.8nm,0.4s,baz=106,slow=5.3,SNR=4.7							
ILAR	**Eielson Array**	**69.43**	**25**	P	**P**	**06 20 18.4**	**-1.5**
0.2nm,0.5s,mb3.1,baz=248,slow=5.8,SNR=6.8							
BVAR	**Borovoye Array**	**69.92**	**322**	P	**P**	**06 20 23.4**	**+0.3**
2.3nm,0.4s,mb4.3,baz=103,slow=7.9,SNR=17							
ABKAR	**Akbulak array**	**76.47**	**318**	*e*P	**P**	**06 21 01.6**	**-0.1**
0.9nm,0.6s,mb3.6							
YKA	**Yellowknife Ar**	**83.74**	**27**	P	**P**	**06 21 41.2**	**+0.7**
0.5nm,0.4s,mb3.6,baz=283,slow=4.9,SNR=3.7							
ARCES	**ARCESS Array B**	**87.41**	**342**	P	**P**	**06 21 58.2**	**-0.2**
0.8nm,0.8s,mb3.6,baz=57,slow=6.6,SNR=3.4							
NVAR	**Mina Array Bea**	**87.89**	**51**	P	**P**	**06 22 02.8**	**+1.4**
2.4nm,0.7s,mb4.2,baz=262,slow=5.7,SNR=18							
FINES	**FINESS Array B**	**91.37**	**335**	P	**P**	**06 22 15.4**	**-1.8**
0.7nm,0.6s,mb3.8,baz=90,slow=3.8,SNR=6.3							
PDAR	**Pinedale Array**	**92.92**	**45**	P	**P**	**06 22 24.7**	**-0.1**
0.2nm,0.5s,mb3.5,baz=250,slow=3.0,SNR=3.5							
DBIC	**Dimbokro**	**143.47**	**301**	PKhKP	PKPpre	06 28 43.5	
5.3nm,0.9s,baz=231,slow=20,SNR=4.5							
CFAA	**Coronel Fontan**	**145.02**	**127**	PKPbc	PKPbc	06 28 49.5	+1.3
0.2nm,0.6s,baz=252,slow=2.8,SNR=5.0							
LPAZ	**La Paz**	**148.68**	**100**	PKPbc	PKPbc	06 29 01.3	+2.2
1.4nm,0.8s,baz=18,slow=5.2,SNR=7.3							
LPAZ	**La Paz**	**148.68**	**100**	PKPbc	PKPbc	06 29 01.3	+2.2

IDC ***20*** *06:10:57.8±0.4, 8.°65S×111.°24E, h0km, mb5.1/23, mb1 5.1/24, mb1mx5.1/25, mbtmp5.1/24, ML4.9/1, MS4.5/27, Ms1 4.5/27, ms1mx4.4/34, Error ellipse: s-maj=15.6km s-min=11.4km az=74.0*
TEH ***20*** *06:11:03.0, 8.°67S×111.°25E, h35km*
MOS ***20*** *06:11:04.2±1.1, 8.°41S×111.°30E, h52km, mb5.6/56, MS4.6/8, Error ellipse: s-maj=8.6km s-min=5.0km az=113.5*
DJA ***20*** *06:11:07.6±0.2, 9.°S±3.°×11.°1E±.°, h53km±3km, mB6.0/53, mb5.5/77, MLv6.0/28, Mw(mB)5.6/53*
ISCJB ***20*** *06:11:07.3±0.3, 8.°71S±0.°03×111.°26E±0.°02, h90km±2km, mb5.3/136, Error ellipse: s-maj=4.6km s-min=3.0km az=12.0*
BJI ***20*** *06:11:08.2, 8.°60S×111.°20E, h83km, mB5.3/39, mb5.2/54, Ms4.8/46, Ms7 4.6/44*
NEIC ***20*** *06:11:08.2±1.0, 8.°64S×111.°23E, h78km±8km, mb5.3/60, Error ellipse: s-maj=6.8km s-min=4.8km az=221.0*
NEIC Felt [IV] at Bantul, Pacitan, Tulungagung and Wonogiri; [III] at Karangkates, Klaten, Sawahan, Trenggalek and Yogyakarta.
GCMT ***20*** *06:11:09.4±0.2, 9.°25S×111.°42E, h71km±1km, MW5.3, Moment Tensor Solution. s76,c129; s87,c160; Moment tensor: Scale 10^17^Nm; Mrr0.75±.03; Mθθ-1.21±.02; Mφφ0.46±.03; Mrθ0.52±.02; Mrφ0.32±.02; Mθφ-0.55±.02; Best double couple: M0 1.30000×10^17^ NP1:φs248.00000°, δ39.00000°, λ37.00000°. NP2:φs128.00000°, δ68.00000°, λ123.00000°. Principal axes: T 1.1900, Plg55.0000°, Azm80.0000°; N 0.2500, Plg30.0000°, Azm294.0000°; P -1.4500, Plg16.0000°, Azm194.0000°; Data Used: II IU IC G CN.*

ISC 20 06:11:08.8±0.3, 8.°72S±0.°03×111.°27E±0.°02, h89km±2km, h70km±2.4km:pP-P, n807, σ1§17/506, mb5.3/136, 178C-118D, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**0.53**	**350**	P	**Pn**	**06 11 19.8**	**-3.9**
PCJI				S	**Sn**	**06 11 29.7**	**-5.1**
PWJI	**Pagerwojo**	**0.88**	**37**	P	**Pn**	**06 11 24.5**	**-2.5**
PWJI				S	**Sn**	**06 11 38.4**	**-2.2**
UGM	**Wanagama**	**1.09**	**317**	P	**Pn**	**06 11 27.3**	**-2.2**
UGM				S	**Sn**	**06 11 42.0**	**-0.5**
SJI	**Sawahan**	**1.10**	**27**	P	**Pn**	**06 11 28.3**	**-1.3**
KRKI	**Karangkates**	**1.30**	**64**	P	**Pn**	**06 11 30.1**	**-1.9**
KRKI				S	**Sn**	**06 11 48.9**	**+1.3**
YOGI	**Yogyakarta**	**1.32**	**313**	P	**Pn**	**06 11 29.8**	**-2.4**
YOGI				S	**Sn**	**06 11 48.9**	**+0.8**
NGJI	**Ngawi**	**1.36**	**8**	P	**Pn**	**06 11 35.1**	**+2.3**
SMRI	**Semarang**	**1.85**	**334**	P	**Pn**	**06 11 39.7**	**+0.6**
GMJI	**Gumukmas**	**2.20**	**78**	P	**Pn**	**06 11 41.2**	**-2.4**
CLJI	**Cilicap**	**2.44**	**294**	P	**Pn**	**06 11 45.0**	**-1.8**
TGJI	**Tegal**	**2.81**	**311**	P	**Pn**	**06 11 47.0**	**-4.8**
ABJI	**Asem Bagus**	**3.08**	**73**	P	**Pn**	**06 11 54.9**	**-0.4**
BYJI	**Banyuwangi**	**3.10**	**81**	P	**Pn**	**06 11 56.1**	**+0.5**
KMMI	**Kalianget**	**3.15**	**58**	P	**Pn**	**06 11 55.8**	**-0.5**
NBBI	**Negara**	**3.33**	**84**	P	**Pn**	**06 11 58.5**	**-0.3**
DNP	**Denpasar**	**3.90**	**90**	P	**Pn**	**06 12 05.8**	**-0.6**
SRBI	**Singaraja**	**3.95**	**81**	P	**Pn**	**06 12 07.0**	**-0.2**
LEM	**Lembang**	**4.08**	**297**	P	**Pn**	**06 12 08.7**	**-0.2**
KHKI	**Kahang-Kahang**	**4.31**	**86**	P	**Pn**	**06 12 09.9**	**-2.1**
SKJI	**Sukabumi**	**4.97**	**290**	P	**Pn**	**06 12 20.5**	**-0.5**
43nm2μm,0.8s							
TNG	**Tangerang**	**5.24**	**299**	P	**Pn**	**06 12 25.8**	**+1.1**
29nm2μm,0.8s							
TNG				P		06 12 31.8	
SBJI	**Serang**	**5.71**	**297**	P	**Pn**	**06 12 33.9**	**+2.7**
9.4nm1μm,1.0s							
CGJI	**Cibinong**	**5.91**	**290**	P	**Pn**	**06 12 30.9**	**-2.9**
PBKI	**Pangkalan Bun**	**5.99**	**4**	P	**Pn**	**06 12 37.2**	**+2.2**
8.4nm2μm,1.2s							
RBSI	**Rajabasa**	**6.18**	**297**	P	**Pn**	**06 12 38.4**	**+0.8**
4.2nm879nm,1.0s							
BLSI	**Bandar Lampung**	**6.84**	**299**	P	**Pn**	**06 12 49.4**	**+2.8**
9μm728nm,1.0s							
TPI	**Tanjungpandan**	**6.93**	**329**	P	**Pn**	**06 12 51.7**	**+3.9**
1.5nm2μm171nm,0.9s							
KBKI	**Kotabaru**	**7.26**	**42**	P	**Pn**	**06 12 55.1**	**+2.8**
1.7nm3μm310nm,1.0s							
KLI	**Kotabumi**	**7.43**	**301**	P	**Pn**	**06 12 56.6**	**+2.0**
5.5nm7μm799nm,1.1s							
KASI	**Kota Agung**	**7.43**	**295**	P	**Pn**	**06 12 53.9**	**-0.7**
2.7nm6μm570nm,0.9s							
KLSI		**7.63**	**301**	P	**Pn**	**06 12 58.9**	**+1.6**
3.5nm5μm455nm,1.3s							
LWLI	**Liwa**	**8.05**	**297**	P	**Pn**	**06 13 04.6**	**+1.6**
9μm675nm,0.7s							
MDSI	**Maura Dua**	**8.20**	**300**	P	**Pn**	**06 13 06.2**	**+1.1**
0.7nm3μm214nm,1.0s							
PPBI	**Pangkal Pinang**	**8.28**	**322**	P	**Pn**	**06 13 07.9**	**+1.7**
1.2nm341nm,0.8s							
PMBI	**Palembang**	**8.65**	**311**	P	**Pn**	**06 13 19.1**	**+7.8**
STKI	**Sintang**	**8.73**	**1**	P	**Pn**	**06 13 16.4**	**+4.1**
341nm,0.9s							
WSI	**Waingapu**	**8.96**	**97**	P	**Pn**	**06 13 13.3**	**-2.2**
3μm,0.3s							
KAPI	**Kappang**	**9.19**	**67**	Pn	**Pn**	**06 13 19.6**	**+1.0**
4μm,1.1s,SNR=36							
KAPI	**Kappang**	**9.19**	**67**	Pn	**Pn**	**06 13 17.7**	**-0.9**
6.9nm,0.3s,baz=248,slow=10,SNR=32							
KAPI				Sn	**Sn**	**06 15 00.4**	**0.0**
2.3nm,0.3s,baz=68,slow=23,SNR=1.8							
KAPI				LR	LR	06 17 30.0	
comp=Z,3μm,21.0s,baz=67,slow=43							
KAPI	**Kappang**	**9.19**	**67**	*e*Pn	**Pn**	**06 13 18.9**	**+0.3**
883nm,1.1s							
KAPI				*e*Sn	**Sn**	**06 15 12.5**	**+12**
MNAI	**Manna**	**9.33**	**297**	P	**Pn**	**06 13 21.6**	**+1.2**
584nm,1.2s							
BKSI	**Bulukumba**	**9.41**	**70**	P	**Pn**	**06 13 21.9**	**+0.3**
4μm240nm,1.7s							
SPSI	**Sidrap Palu**	**9.68**	**61**	P	**Pn**	**06 13 26.8**	**+1.6**
6μm469nm,1.5s							
BNSI	**Bone**	**9.77**	**64**	P	**Pn**	**06 13 30.4**	**+3.9**
629nm,1.8s							
KSI	**Kapahiang**	**9.99**	**300**	P	**Pn**	**06 13 28.2**	**-1.2**
7μm712nm,0.7s							
KSM	**Kuching**	**10.17**	**355**	P	**Pn**	**06 13 35.6**	**+3.6**
KSM	**Kuching**	**10.17**	**355**	*e*Pn	**Pn**	**06 13 33.4**	**+1.4**
250nm,1.2s							
KSM	**Kuching**	**10.17**	**355**	P	**Pn**	**06 13 35.0**	**+3.0**
2μm206nm,1.3s							
TTSI	**Tana Toraja**	**10.20**	**57**	P	**Pn**	**06 13 37.1**	**+4.7**
7μm458nm,1.6s							
MMRI	**Maumere**	**10.85**	**90**	P	**Pn**	**06 13 37.7**	**-3.4**
8μm743nm,1.0s							
SBUM	**Sibu**	**11.14**	**5**	P	**Pn**	**06 13 49.7**	**+4.6**
SBUM	**Sibu**	**11.14**	**5**	P	**Pn**	**06 13 49.5**	**+4.4**
3μm105nm,2.1s							
PCI	**Palu**	**11.54**	**48**	P	**Pn**	**06 13 54.2**	**+3.7**
1μm,1.8s							
KRJI	**Kerinci**	**11.77**	**303**	P	**Pn**	**06 13 57.2**	**+3.4**
1μm,0.4s							
BTM	**Bintulu**	**11.98**	**9**	P	**Pn**	**06 14 02.0**	**+5.4**
KDI	**Kendari**	**12.23**	**68**	P	**Pn**	**06 14 00.6**	**+0.7**
3μm225nm,1.1s							
MPSI	**Mapaga**	**12.45**	**44**	P	**Pn**	**06 14 04.2**	**+1.4**
815nm,0.6s							
SDSI	**Sungai Dareh**	**12.49**	**308**	P	**Pn**	**06 14 01.9**	**-1.4**
1μm58nm,1.5s							
MYKOM	**Kota Tinggi**	**12.80**	**324**	P	**Pn**	**06 14 11.1**	**+3.7**
MYKOM	**Kota Tinggi**	**12.80**	**324**	P	**Pn**	**06 14 11.0**	**+3.6**
1μm65nm,1.2s							
PDSI	**Padang**	**13.27**	**305**	P	**Pn**	**06 14 12.4**	**-1.3**
192nm,1.1s							
KGM	**Kluang**	**13.29**	**323**	P	**Pn**	**06 14 17.9**	**+4.0**
PPI	**Padang Panjang**	**13.59**	**307**	P	**Pn**	**06 14 19.2**	**+1.3**
66nm,0.9s							
BKNI	**Bangkinang**	**13.59**	**311**	P	**Pn**	**06 14 22.2**	**+4.3**
140nm,0.8s							
LUWI	**Luwuk**	**13.76**	**57**	P	**Pn**	**06 14 24.8**	**+4.6**
4μm378nm,1.2s							
MRSI	**Marisa**	**14.02**	**50**	P	**Pn**	**06 14 24.2**	**+0.7**
3μm391nm,1.1s							
SISI	**Saibi**	**14.18**	**301**	P	**Pn**	**06 14 25.6**	**0.0**
180nm,1.1s							
TSM	**Tawau**	**14.51**	**27**	P	**Pn**	**06 14 35.5**	**+5.6**
COCO	**West Island**	**14.61**	**255**	*i* P	**Pn**	**06 14 32.9**	**+1.8**
COCO	**West Island**	**14.61**	**255**	*e*Pn	**Pn**	**06 14 32.6**	**+1.5**
COCO	**West Island**	**14.61**	**255**	P	**Pn**	**06 14 31.4**	**+0.3**
344nm,1.0s							
MBWA	**Marble Bar**	**14.81**	**148**	*e*Pn	**Pn**	**06 14 25.5**	**-8.2**
110nm,0.4s							
MBWA	**Marble Bar**	**14.81**	**148**	P	**Pn**	**06 14 26.3**	**-7.4**
246nm,0.8s							
MNSI	**Mandailing Nat**	**15.00**	**309**	P	**Pn**	**06 14 36.4**	**+0.2**
2μm62nm,0.7s							
FRIM	**Kepong**	**15.28**	**321**	P	**Pn**	**06 14 44.8**	**+5.1**
SDKM	**Sandakan**	**15.44**	**23**	P	**Pn**	**06 14 47.9**	**+6.2**
KKM	**Kota Kinabalu**	**15.48**	**19**	P	**Pn**	**06 14 48.8**	**+6.7**
KKM	**Kota Kinabalu**	**15.48**	**19**	*e*P	**Pn**	**06 14 42.2**	**+0.1**
117nm,1.0s							
KKM	**Kota Kinabalu**	**15.48**	**19**	P	**Pn**	**06 14 43.3**	**+1.1**
2μm121nm,1.1s							
MYLDM	**Lahad Datu**	**15.58**	**28**	P	**Pn**	**06 14 48.0**	**+4.5**
7μm418nm,1.3s							
KMSI	**Cibinong**	**15.68**	**55**	P	**Pn**	**06 14 52.6**	**+7.9**
KTGM	**Kuala Trenggan**	**16.14**	**330**	P	**Pn**	**06 14 57.0**	**+6.4**
IPM	**Ipoh**	**16.62**	**322**	P	**Pn**	**06 15 00.7**	**+4.3**
IPM	**Ipoh**	**16.62**	**322**	P	**Pn**	**06 15 02.2**	**+5.7**
1μm73nm,1.1s							
NLAI	**Namlea**	**16.66**	**72**	P	**Pn**	**06 14 58.8**	**+1.9**
5μm565nm,1.0s							
FITZ	**Fitzroy Crossi**	**16.79**	**125**	*e*P	**Pn**	**06 14 54.2**	**-4.3**
151nm,1.0s							
FITZ				*e*S	S	06 17 45.6	-24
FITZ	**Fitzroy Crossi**	**16.79**	**125**	Pn	**Pn**	**06 14 54.9**	**-3.6**
3.2nm,0.3s,baz=298,slow=7.3,SNR=71							
FITZ				Sn	Sn	06 17 42.9	-22
2.3nm,0.3s,baz=190,slow=20,SNR=6.0							
FITZ				LR	LR	06 21 25.7	
comp=Z,1μm,21.7s,baz=305,slow=37							
FITZ	**Fitzroy Crossi**	**16.79**	**125**	*e*Pn	**Pn**	**06 14 55.0**	**-3.5**
210nm,1.2s							
FITZ				*e*Sn	Sn	06 17 44.1	-21
FITZ	**Fitzroy Crossi**	**16.79**	**125**	P	**Pn**	**06 14 56.3**	**-2.2**
4μm288nm,1.2s							
PSI	**Prapat**	**16.81**	**312**	Pn	**Pn**	**06 14 59.7**	**+1.0**
0.8nm,0.3s,baz=220,slow=5.8,SNR=3.5							
PSI				LR	LR	06 22 22.0	
comp=Z,2μm,18.5s,baz=25,slow=41							
PSI	**Prapat**	**16.81**	**312**	Pn	**Pn**	**06 14 59.7**	**+0.9**
PSI				LR	LR	06 22 22.0	
MNI	**Manado**	**16.88**	**54**	P	**Pn**	**06 15 05.8**	**+6.1**
4μm326nm,1.1s							
KULM	**Kulim**	**17.49**	**322**	P	**Pn**	**06 15 12.1**	**+5.0**
KULM	**Kulim**	**17.49**	**322**	*e*Pn	**Pn**	**06 15 06.8**	**-0.3**
54nm,1.1s							
KULM	**Kulim**	**17.49**	**322**	P	**Pn**	**06 15 13.8**	**+6.7**
52nm,1.2s							
AAI	**Ambon**	**17.55**	**74**	P	**Pn**	**06 15 07.7**	**-0.2**
7μm584nm,1.2s							
**LBM

FORT	**Forrest**	**26.97**	**147**	*e*P	**P**	**06 16 41.4**	**-0.7**
	comp=Z,157nm,0.7s,mb5.7						
FORT				*e*S	S	06 21 38.2	+25
FORT	**Forrest**	**26.97**	**147**	*e*P	**P**	**06 16 42.0**	**-0.1**
	comp=Z,389nm,1.0s,mb5.9						
QIZ	**Qiongzhong**	**27.61**	**357**	P	**P**	**06 16 46.8**	**-1.2**
QIZ				pP	pP	06 17 08.0	-0.2
QIZ				sP	sP	06 17 17.1	-1.4
QIZ				S	**S**	**06 21 27.4**	**+4.1**
QIZ				pmax	pmax		
	comp=Z,13nm,1.9s,mb4.1						
QIZ				pmax	pmax		
	comp=Z,210nm,13.1s						
QIZ				LR	LR		
	comp=N,600nm,27.7s						
QIZ				LR	LR		
	comp=E,130nm,14.2s						
QIZ				LR	LR		
	comp=Z,2μm,31.6s						
SMPI	**Sarmi**	**28.11**	**78**	P	**P**	**06 16 52.0**	**-0.6**
	comp=Z,108nm,1.6s,mb5.1						
CM31	**Chiang Mai Arr**	**29.62**	**336**	*e*P	**P**	**06 17 05.6**	**-0.2**
	comp=Z,15nm,0.8s,mb4.7						
CMAR	**Chiang Mai Arr**	**29.62**	**336**	P	**P**	**06 17 05.5**	**-0.3**
	comp=Z,3.8nm,0.6s,mb4.2,baz=170,slow=7.8,SNR=12						
CMAR				PcP	PcP	06 20 10.8	+2.1
	comp=Z,6.0nm,0.7s,baz=184,slow=3.2,SNR=6.0						
CMAR				ScP	ScP	06 23 46.8	+4.0
	comp=Z,1.1nm,0.5s,baz=198,slow=4.2,SNR=5.1						
CMAR				LR	LR	06 30 08.5	
	comp=Z,2μm,18.9s,baz=159,slow=39						
CMAR	**Chiang Mai Arr**	**29.62**	**336**	P	**P**	**06 17 05.6**	**-0.2**
CMAR						06 20 10.8	
CMAR						06 23 46.8	
CHTO	**Chiang Mai**	**29.94**	**336**	*e*P	**P**	**06 17 08.3**	**-0.4**
CHTO				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.4						
CHTO	**Chiang Mai**	**29.94**	**336**	*e*P	**P**	**06 17 08.3**	**-0.3**
	comp=Z,11nm,1.0s,mb4.5						
CHTO	**Chiang Mai**	**29.94**	**336**	P	**P**	**06 17 13.2**	**+4.5**
	comp=Z,15nm,1.0s,mb4.6						
BBP	**Basco**	**30.83**	**20**	*e*P	**P**	**06 17 16.7**	**+0.2**
COEN	**Coen**	**31.69**	**102**	*e*P	**P**	**06 17 24.1**	**-0.2**
	comp=Z,1μm,1.4s,mb6.5						
COEN	**Coen**	**31.69**	**102**	P	**P**	**06 17 24.3**	**+0.1**
	comp=Z,4μmcomp=Z,343nm,1.4s,mb5.9						
YULB	**Yu-li**	**33.39**	**17**	*e*P	**P**	**06 17 39.0**	**+0.1**
	comp=Z,22nm,0.8s,mb5.0						
SSLB	**Suanglung**	**33.67**	**16**	*e*P	**P**	**06 17 42.2**	**+0.8**
	comp=Z,125nm,1.1s,mb5.7						
PALK	**Pallekele**	**34.36**	**297**	*e*P	**P**	**06 17 48.4**	**+0.9**
	comp=Z,17nm,1.0s,mb4.8						
PALK	**Pallekele**	**34.36**	**297**	P	pP	06 18 04.5	-3.5
YHNB	**Yeheng**	**34.62**	**16**	P	**P**	**06 17 50.5**	**+0.9**
	comp=Z,74nm,1.0s,mb5.5						
KMI	**Kunming**	**34.65**	**346**	P	**P**	**06 17 54.5**	**+4.7**
KMI				pP	pP	06 18 13.6	+3.3
KMI				sP	sP	06 18 23.4	+2.8
KMI				PP	PP	06 19 14.3	+4.2
KMI				S	**S**	**06 23 17.9**	**+4.8**
KMI				sS	sS	06 23 50.8	+2.3
KMI				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.7						
KMI				pmax	pmax		
	comp=Z,160nm,5.1s						
KMI				LR	LR		
	comp=N,1μm,17.3s						
KMI				LR	LR		
	comp=E,720nm,17.3s						
KMI				LR	LR		
	comp=Z,1μm,16.0s						
GYA	**Guiyang**	**35.26**	**353⇑**	*i*P	**P**	**06 17 58.0**	**+3.0**
GYA				pP	pP	06 18 19.3	+3.7
GYA				sP	sP	06 18 28.3	+2.5
GYA				PP	PP	06 19 21.0	+4.3
GYA				PcP	PcP	06 20 27.6	+3.6
GYA				S	**S**	**06 23 27.9**	**+5.6**
GYA				sS	sS	06 24 01.3	+3.5
GYA				ScP	ScP	06 24 04.3	+2.4
GYA				PcS	PcS	06 24 14.0	+2.8
GYA				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.2						
GYA				pmax	pmax		
	comp=Z,150nm,4.9s						
GYA				LR	LR		
	comp=N,850nm,16.9s						
GYA				LR	LR		
	comp=E,620nm,17.6s						
GYA				LR	LR		
	comp=Z,880nm,16.8s						
PMG	**Port Moresby**	**35.44**	**94**	*ce*P	**P**	**06 17 56.9**	**+0.1**
PMG				pmax	pmax		
	comp=Z,82nm,1.2s						
PMG	**Port Moresby**	**35.44**	**94**	*e*P	**P**	**06 17 57.6**	**+0.8**
	comp=Z,91nm,1.3s,mb5.4						
PMG	**Port Moresby**	**35.44**	**94**	P	**P**	**06 18 00.5**	**+3.7**
	comp=Z,1μmcomp=Z,63nm,1.5s,mb5.2						
CTA	**Charters Tower**	**35.64**	**112**	*e*P	**P**	**06 17 58.6**	**+0.2**
	comp=Z,30nm,1.0s,mb5.2						
CTA	**Charters Tower**	**35.64**	**112**	P	**P**	**06 17 58.9**	**+0.5**
	comp=Z,44nm,1.1s,mb5.3,baz=288,slow=10.0,SNR=21						
CTA				LR	LR	06 34 12.8	
	comp=Z,990nm,19.4s,baz=280,slow=39						
CTAO	**Charters Tower**	**35.64**	**112**	*e*P	**P**	**06 17 59.1**	**+0.7**
CTAO				pmax	pmax		
	comp=Z,68nm,1.1s,mb5.5						
CTAO	**Charters Tower**	**35.64**	**112**	*e*P	**P**	**06 17 59.1**	**+0.7**
	comp=Z,68nm,1.1s,mb5.5						
CTAO	**Charters Tower**	**35.64**	**112**	P	**P**	**06 17 59.3**	**+0.9**
	comp=Z,59nm,1.4s,mb5.3						
STKA	**Stephens Creek**	**36.38**	**134**	*e*P	**P**	**06 18 04.4**	**-0.2**
	comp=Z,16nm,0.6s,mb5.1						
STKA	**Stephens Creek**	**36.38**	**134**	P	**P**	**06 18 04.5**	**0.0**
	comp=Z,16nm,0.6s,mb5.1,baz=306,slow=8.6,SNR=27						
STKA				PcP	PcP	06 20 28.7	+1.4
	comp=Z,24nm,0.9s,baz=310,slow=11,SNR=3.9						
STKA				LR	LR	06 33 14.4	
	comp=Z,2μm,21.1s,baz=298,slow=37						
STKA	**Stephens Creek**	**36.38**	**134**	*e*P	**P**	**06 18 04.5**	**-0.1**
	comp=Z,16nm,1.3s,mb4.8						
ENH	**Enshi**	**38.81**	**358**	*e*P	**P**	**06 18 25.6**	**+0.6**
	comp=Z,22nm,0.6s,mb5.2						
SHL	**Shillong**	**38.96**	**332**	*e*PKP	**P**	**06 18 26.0**	**-0.4**
SHL				*e*S	**S**	**06 24 19.0**	**+0.4**
SHL				*ex*	x	06 28 19.0	
WHN	**Wuhan**	**39.15**	**4**	P	**P**	**06 18 29.0**	**+1.1**
WHN				pP	pP	06 18 50.4	+1.6
WHN				S	**S**	**06 24 16.6**	**-4.8**
WHN				sS	sS	06 24 53.3	-4.0
WHN				pmax	pmax		
	comp=Z,170nm,1.6s,mb5.6						
WHN				pmax	pmax		
	comp=Z,360nm,10.3s						
WHN				LR	LR		
	comp=N,2μm,33.4s						
WHN				LR	LR		
	comp=E,1μm,22.6s						
WHN				LR	LR		
	comp=Z,2μm,30.4s						
GUMO	**Guam**	**40.05**	**57**	P	**P**	**06 18 35.0**	**-0.6**
	comp=Z,107nm,0.7s,mb5.8,baz=214,slow=5.1,SNR=11						
GUMO				LR	LR	06 34 01.8	
	comp=Z,314nm,21.9s,baz=257,slow=35						
GUMO	**Guam**	**40.05**	**57**	*e*P	**P**	**06 18 35.0**	**-0.6**
GUMO	**Guam**	**40.05**	**57**	P	**P**	**06 18 34.6**	**-1.0**
	comp=Z,158nm,0.8s,mb5.9						
SSE	**Sheshan**	**40.72**	**13**	P	**P**	**06 18 42.6**	**+1.8**
SSE				S	**S**	**06 24 47.6**	**+2.9**
SSE				pmax	pmax		
	comp=Z,74nm,1.1s,mb5.4						
SSE				pmax	pmax		
	comp=Z,410nm,4.9s						
SSE				LR	LR		
	comp=N,510nm,32.0s						
SSE				LR	LR		
	comp=E,180nm,32.6s						
SSE				LR	LR		
	comp=Z,670nm,27.2s						
BOK	**Bokaro**	**40.74**	**323**	*e*PKP	**P**	**06 18 40.4**	**-0.8**
NJ2	**Nanjing**	**41.19**	**10**	*e*P	**P**	**06 18 45.5**	**+0.8**
NJ2				pP	pP	06 19 03.1	-2.6
NJ2				sP	sP	06 19 19.8	+4.0
NJ2				PP	PP	06 20 25.4	+3.9
NJ2				S	**S**	**06 24 59.0**	**+7.3**
NJ2				pmax	pmax		
	comp=Z,90nm,0.8s,mb5.7						
NJ2				pmax	pmax		
	comp=Z,280nm,5.5s						
NJ2				LR	LR		
	comp=N,950nm,23.0s						
NJ2				LR	LR		
	comp=E,3μm,26.6s						
NJ2				LR	LR		
	comp=Z,1μm,25.3s						
EIDS	**Eidsvold**	**41.31**	**119**	*e*P	**P**	**06 18 46.5**	**+0.6**
	comp=Z,17nm,0.8s,mb4.9						
HYB	**Hyderabad**	**41.47**	**309**	*i*P	**P**	**06 18 46.5**	**-0.8**
TOO	**Toolangi**	**42.19**	**138**	*e*P	**P**	**06 18 54.0**	**+1.2**
ODAN	**Odare**	**42.28**	**327**	*e*P	**P**	**06 18 53.1**	**-0.6**
	comp=Z,49nm,0.7s,mb5.3						
TAPN	**Taplejung**	**42.51**	**328**	*e*P	**P**	**06 18 56.5**	**+0.9**
	comp=Z,49nm,0.7s,mb5.3						
XAN	**Xi'an**	**42.58**	**357**	P	**P**	**06 18 55.3**	**-0.7**
XAN				S	**S**	**06 25 10.8**	**-1.5**
XAN				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.2						
XAN				pmax	pmax		
	comp=Z,57nm,8.6s						
XAN				LR	LR		
	comp=N,510nm,26.2s						
XAN				LR	LR		
	comp=E,150nm,23.4s						
XAN				LR	LR		
	comp=Z,280nm,24.8s						
LSA	**Lhasa**	**42.83**	**334**	P	**P**	**06 18 51.4**	**-6.7**
LSA				S	S	06 24 39.3	-37
LSA				LR	LR		
	comp=E,8μm,1.5s						
LSA				LR	LR		
	comp=Z,2μm,1.6s						
LSA	**Lhasa**	**42.83**	**334**	*e*P	**P**	**06 18 58.4**	**+0.3**
LSA				pmax	pmax		
	comp=Z,34nm,0.7s,mb5.2						
LSA	**Lhasa**	**42.83**	**334**	*e*P	**P**	**06 18 58.4**	**+0.3**
	comp=Z,34nm,0.7s,mb5.2						
ARMA	**Armidale**	**43.40**	**125**	*e*P	**P**	**06 19 05.2**	**+2.4**
ARMA	**Armidale**	**43.40**	**125**	*e*P	**P**	**06 19 05.8**	**+3.0**
	comp=Z,27nm,1.4s,mb4.8						
JIRN	**Jiri**	**43.56**	**327**	*e*P	**P**	**06 19 03.5**	**-0.5**
	comp=Z,49nm,0.6s,mb5.4						
CNB	**Canberra Magne**	**43.70**	**133**	*e*P	**P**	**06 19 05.1**	**0.0**
PKI	**Pulchoki**	**43.92**	**326**	*e*P	**P**	**06 19 06.0**	**-0.9**
GUN	**Gumba**	**43.93**	**327**	*e*P	**P**	**06 19 06.8**	**-0.2**
	comp=Z,43nm,0.4s,mb5.5						
DMN	**Daman**	**44.12**	**326**	*e*P	**P**	**06 19 07.9**	**-0.6**
	comp=Z,27nm,0.5s,mb5.2						
KKN	**Kakani**	**44.16**	**326**	*e*P	**P**	**06 19 08.5**	**-0.3**
GOA	**Goa**	**44.21**	**303**	*ex*	**P**	**06 19 03.5**	**-5.9**
AKL	**Akola**	**44.60**	**311**	*e*PKP	**P**	**06 19 12.2**	**-0.2**
GKN	**Gorkha**	**44.68**	**326**	*e*P	**P**	**06 19 11.6**	**-1.4**
	comp=Z,43nm,0.3s,mb5.7						
KAD	**Karad**	**44.86**	**305**	*e*PKP	**P**	**06 19 14.5**	**-0.1**
TIA	**Tai'an**	**45.03**	**7**	*e*P	**P**	**06 19 09.3**	**-6.3**
LZH	**Lanzhou**	**45.11**	**352**	*e*P	**P**	**06 19 17.8**	**+1.5**
LZH				pP	pP	06 19 36.5	-1.1
LZH				sP	sP	06 19 45.6	-2.0
LZH				PP	PP	06 21 05.6	+2.1
LZH				S	**S**	**06 25 51.5**	**+2.5**
LZH				sS	sS	06 26 23.5	-2.0
LZH				SS	SS	06 29 07.8	-5.8
LZH				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.0						
LZH				pmax	pmax		
	comp=Z,300nm,5.6s						
LZH				LR	LR		
	comp=N,770nm,14.4s						
LZH				LR	LR		
	comp=Z,960nm,15.1s						
POO	**Poona**	**45.78**	**306**	*e*PKP	**P**	**06 19 21.1**	**-0.7**
POO				AMb	AMB	06 19 23.2	
	comp=Z,32nm,0.4s,mb5.4						
BHPL	**Bhopal**	**45.88**	**314**	*e*PKP	**P**	**06 19 21.4**	**-1.2**
DL2	**Dalian**	**48.35**	**11**	P	**P**	**06 19 40.8**	**-0.7**
DL2				*e*S	**S**	**06 26 38.5**	**+3.3**
DL2				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.2						
DL2				LR	LR		
	comp=N,350nm,16.0s						
DL2				LR	LR		
	comp=Z,510nm,25.0s						
KSRS	**Korea Array**	**48.51**	**18**	P	**P**	**06 19 42.7**	**0.0**
	comp=Z,22nm,1.0s,mb5.0,baz=200,slow=8.0,SNR=20						
KSRS				ScP	ScP	06 24 58.8	+4.4
	comp=Z,3.6nm,1.0s,baz=213,slow=4.3,SNR=4.8						
KSRS				LR	LR	06 40 07.6	
	comp=Z,288nm,21.4s,baz=205,slow=36						
BJT	**Baijiatuau**	**48.71**	**5**	*e*P	**P**	**06 19 44.1**	**-0.1**
BJT				*e*		06 21 10.0	
BJT				pmax	pmax		
	comp=Z,81nm,0.8s						
BJT	**Baijiatuau**	**48.71**	**5**	*e*P	**P**	**06 19 44.1**	**-0.1**
	comp=Z,81nm,0.8s,mb5.7						
BJT				*e*PcP	PcP	06 21 10.0	+1.9
BJI	**Beijing**	**48.73**	**5**	P	**P**	**06 19 44.3**	**-0.1**
BJI				S	**S**	**06 26 45.3**	**+4.9**
BJI				pmax	pmax		
	comp=Z,94nm,1.1s,mb5.6						
BJI				pmax	pmax		
	comp=Z,380nm,3.7s						
BJI				LR	LR		
	comp=N,460nm,24.7s						
BJI				LR	LR		
	comp=E,300nm,19.6s						
BJI				LR	LR		
	comp=Z,760nm,29.8s						
GTA	**Gaotai**	**49.05**	**348**	*e*P	**P**	**06 19 47.6**	**+0.7**
GTA				pP	pP	06 20 06.3	-2.1
GTA				sP	sP	06 20 14.8	-3.6
GTA				PcP	PcP	06 21 09.4	0.0
GTA				PP	PP	06 21 42.3	+0.9
GTA				ScP	ScP	06 25 00.6	+3.9
GTA				S	**S**	**06 26 47.9**	**+2.9**
GTA				sS	sS	06 27 17.3	-4.6
GTA				ScS	ScS	06 29 32.3	+1.9
GTA				SS	SS	06 30 11.9	-5.5
GTA				pmax	pmax		
	comp=Z,15nm,1.5s,mb4.7						
GTA				pmax	pmax		
	comp=Z,290nm,5.7s						
GTA				LR	LR		
	comp=N,520nm,19.3s						
GTA				LR	LR		
	comp=E,620nm,22.6s						
GTA				LR	LR		
	comp=Z,810nm,23.5s						
BTO	**Baotou**	**49.09**	**359**	*e*P	**P**	**06 19 46.5**	**-0.6**
HHC	**Hu-ho-hao-te**	**49.33**	**0**	*e*P	**P**	**06 19 49.0**	**+0.1**
HHC				pP	pP	06 20 09.3	-1.2
HHC				sP	sP	06 20 18.1	-2.4
HHC				PcP	PcP	06 21 10.0	-0.3
HHC				PP	PP	06 21 44.3	+0.5
HHC				ScP	ScP	06 24 57.4	-0.4
HHC				PcS	PcS	06 25 05.6	-1.3
HHC				S	**S**	**06 26 48.9**	**+0.2**
HHC				sS	sS	06 27 23.0	-2.7
HHC				ScS	ScS	06 29 30.4	-1.8
HHC				SS	SS	06 30 18.6	-3.1
HHC				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.3						
HHC				pmax	pmax		
	comp=Z,350nm,6.6s						
HHC				LR	LR		
	comp=N,640nm,16.4s						
HHC				LR	LR		
	comp=E,670nm,16.3s						
HHC				LR	LR		
	comp=Z,650nm,15.9s						
NDI	**New Delhi**	**49.63**	**320**	*e*PKP	**P**	**06 19 48.0**	**-3.5**
NDI				*ex*	x	06 26 46.0	
JHJ	**Hachijo jima 2**	**49.68**	**32**	LR	LR	06 40 22.1	
	comp=Z,379nm,20.3s,baz=240,slow=36						
AJM	**Ajmer**	**49.89**	**316**	*e*PKP	**P**	**06 19 53.2**	**-0.2**
DDI	**Dehra Dun**	**50.25**	**322**	*e*PKP	**P**	**06 19 54.0**	**-2.1**
SNY	**Shenyang**	**51.55**	**12**	⇑P	**P**	**06 20 04.9**	**-0.8**
SNY				S	**S**	**06 27 18.9**	**-0.7**
SNY				pmax	pmax		
	comp=Z,64nm,0.7s,mb5.8						
SNY				LR	LR		
	comp=N,450nm,26.4s						
SNY				LR	LR		
	comp=E,440nm,21.3s						
SNY				LR	LR		
	comp=Z,690nm,25.2s						
MAJO	**Matsushiro**	**51.65**	**28**	*e*P	**P**	**06 20 05.0**	**-1.5**
MAJO				pmax	pmax		
	comp=Z,258nm,1.8s,mb6.0						
MAJO	**Matsushiro**	**51.65**	**28**	*e*P	**P**	**06 20 05.0**	**-1.6**
	comp=Z,258nm,1.8s,mb6.0						
MAT	**Matsushiro**	**51.65**	**28**	P	**P**	**06 20 05.0**	**-1.5**
MAT				S	**S**	**06 27 28.0**	**+6.9**
MJAR	**Matsushiro Arr**	**51.65**	**28**	P	**P**	**06 20 04.9**	**-1.7**
	comp=Z,10nm,0.6s,mb5.0,baz=202,slow=7.8,SNR=63						
MJAR				ScP	ScP	06 25 12.3	+4.4
	comp=Z,1.6nm,0.8s,baz=197,slow=4.4,SNR=4.5						
MJAR				LR	LR	06 41 54.5	
	comp=Z,491nm,21.8s,baz=200,slow=36						
SDNR	**Sundarnagar**	**51.74**	**322**	*e*PKP	**P**	**06 20 04.9**	**-2.4**
THN	**Thein Dam**	**53.15**	**322**	*e*PKP	**P**	**06 20 14.6**	**-3.1**
THN				*e*S	**S**	**06 27 37.1**	**-4.6**
CN2	**Changchun**	**53.84**	**13**	⇓P	**P**	**06 20 22.3**	**-0.2**
CN2				*e*sP	sP	06 20 54.0	-0.3
CN2				*e*S	**S**	**06 27 50.6**	**0.0**
CN2				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.4						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,500nm,16.0s						
CN2				LR	LR		
	comp=E,300nm,16.0s						
CN2				LR	LR		
	comp=Z,600nm,17.0s						
DZM	**Mont Dzumac**	**54.55**	**111**	*e*P	**P**	**06 20 30.0**	**+1.8**
	comp=Z,63nm,1.4s,mb5.4						
DZM				*e*LR	LR	06 36 34.1	
	comp=Z,1μm,26.9s						
DZM	**Mont Dzumac**	**54.55**	**111**	*e*P	**P**	**06 20 29.8**	**+1.6**
	comp=Z,89nm,0.6s,mb6.0						
MDJ	**Mudanjiang**	**55.61**	**16**	P	**P**	**06 20 34.8**	**-0.5**
MDJ				pP	pP	06 20 54.8	-2.5
MDJ				sP	sP	06 21 04.0	-3.2
MDJ				ScP	ScP	06 25 25.4	+0.4
MDJ				PcS	PcS	06 25 34.3	+0.3
MDJ				S	**S**	**06 28 13.3**	**-1.1**
MDJ				sS	sS	06 28 48.5	-3.5
MDJ				ScS	ScS	06 30 16.3	+0.3
MDJ				pmax	pmax		
	comp=Z,26nm,1.5s,mb5.0						
MDJ				pmax	pmax		
	comp=Z,140nm,3.6s						
MDJ				LR	LR		
	comp=N,190nm,30.4s						
MDJ				LR	LR		
	comp=E,220nm,29.6s						
MDJ				LR	LR		
	comp=Z,320nm,37.6s						
MDJ	**Mudanjiang**	**55.61**	**16**	*e*P	**P**	**06 20 34.9**	**-0.4**
	comp=Z,40nm,1.1s,mb5.4						
MDJ				*e*pP	pP	06 20 50.5	-6.8
ULN	**Ulaanbaatar**	**56.46**	**357**	*e*P	**P**	**06 20 41.2**	**-0.1**
ULN				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.3						
ULN	**Ulaanbaatar**	**56.46**	**357**	*e*P	**P**	**06 20 41.2**	**-0.1**
	comp=Z,26nm,0.8s,mb5.3						
ULN	**Ulaanbaatar**	**56.46**	**357**	P	**P**	**06 20 41.6**	**+0.3**
	comp=Z,435nmcomp=Z,32nm,1.2s,mb5.2						
ULN	**Ulaanbaatar**	**56.46**	**357**	P	**P**	**06 20 41.6**	**+0.4**
	SNR=14						
SONM	**Songino Array**	**56.47**	**356**	P	**P**	**06 20 41.0**	**-0.3**
	comp=Z,12nm,0.6s,mb5.1,baz=177,slow=8.3,SNR=78						
SONM				PcP	PcP	06 21 38.3	+1.1
	comp=Z,8.2nm,0.3s,baz=184,slow=3.8,SNR=17						
SONM				ScP	ScP	06 25 32.3	+3.6
	comp=Z,9.3nm,1.2s,baz=180,slow=3.7,SNR=10						
SONM				LR	LR	06 47 35.1	
	comp=Z,567nm,20.2s,baz=178,slow=39						
SONM	**Songino Array**	**56.47**	**356**	P	**P**	**06 20 41.0**	**-0.4**
SONM						06 21 38.3	
WMQ	**Urumqi**	**56.50**	**340**	P	**P**	**06 20 42.8**	**+1.1**
WMQ				pP	pP	06 21 04.3	+0.6
WMQ				sP	sP	06 21 14.3	+0.7
WMQ				PcP	PcP	06 21 38.3	+0.9
WMQ				PP	PP	06 22 51.3	+2.8
WMQ				S	**S**	**06 28 25.5**	**-0.7**
WMQ				sS	sS	06 29 06.0	+2.1
WMQ				ScS	ScS	06 30 18.8	-3.7
WMQ				SS	SS	06 32 13.9	-1.2
WMQ				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.2						
WMQ				pmax	pmax		
	comp=Z,330nm,4.8s						
WMQ				LR	LR		
	comp=N,400nm,23.0s						
WMQ				LR	LR		
	comp=E,520nm,24.0s						
WMQ				LR	LR		
	comp=Z,470nm,23.0s						
CASY	**Casey**	**57.47**	**180**	*e*P	**P**	**06 20 46.8**	**-1.4**
CASY	**Casey**	**57.47**	**180**	*e*P	**P**	**06 20 47.5**	**-0.6**
	comp=Z,25nm,1.1s,mb5.2						
KSH	**Kashi**	**58.09**	**328**	P	**P**	**06 20 51.5**	**-1.4**
KSH				pP	pP	06 21 10.3	-4.8
KSH				PcP	PcP	06 21 44.5	+0.7
KSH				PP	PP	06 23 00.9	-1.7
KSH				ScP	ScP	06 25 39.8	+3.7
KSH				PcS	PcS	06 25 44.8	-0.4
KSH				S	**S**	**06 28 40.4**	**-6.8**
KSH				ScS	ScS	06 30 29.6	-4.6
KSH				pmax	pmax		
	comp=Z,12nm,0.5s,mb5.2						
KSH				pmax	pmax		
	comp=Z,150nm,4.8s						
KSH				LR	LR		
	comp=N,130nm,7.3s						
KSH				LR	LR		
	comp=E,140nm,8.7s						
KSH				LR	LR		
	comp=Z,310nm,20.7s						
ERM	**Erimo**	**58.33**	**28**	P	**P**	**06 20 54.0**	**-0.5**
	comp=Z,216nm,1.0s,mb6.1,SNR=5.6						
ERM	**Erimo**	**58.33**	**28**	*d i*P	**P**	**06 20 54.0**	**-0.5**
ERM				pmax	pmax		
	comp=Z,56nm,1.1s,mb5.5						
ERM	**Erimo**	**58.33**	**28**	*e*P	**P**	**06 20 54.3**	**-0.2**
	comp=Z,40nm,1.1s,mb5.4						
KBL	**Kabul**	**58.72**	**320**	*e*P	**P**	**06 20 56.0**	**-1.4**
KBL				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.0						
KBL	**Kabul**	**58.72**	**320**	*e*P	**P**	**06 20 56.0**	**-1.5**
	comp=Z,13nm,0.8s,mb5.0						
MIR	**Mirnyy**	**59.08**	**188⇓**	*i*P	**P**	**06 20 59.8**	**+0.4**
MIR				*i*	pP	06 21 19.0	-2.6
MIR				pmax	pmax		
	comp=Z,69nm,1.2s,mb5.6						
ASAJ	**Asahikawa**	**59.75**	**26**	P	**P**	**06 21 04.0**	**-0.4**
	comp=Z,7.6nm,0.3s,mb5.2,baz=245,slow=12,SNR=26						
ASAJ				LR	LR	06 46 08.8	
	comp=Z,332nm,22.0s,baz=210,slow=35						
ULHL	**Ulahol**	**59.99**	**331**	P	**P**	**06 21 06.0**	**0.0**
	SNR=9.4						
KLR	**Kul'dur**	**60.44**	**15**	*e*P	**P**	**06 21 04.2**	**-4.7**
KLR				*e*		06 29 41.5	
KLR				pmax	pmax		
	comp=E,64nm,1.8s						
KLR				pmax	pmax		
	comp=Z,150nm,1.8s,mb5.7						
TLY	**Talaya**	**60.52**	**355**	*c i*P	**P**	**06 21 09.0**	**-0.4**
TLY				*e*		06 21 24.2	
TLY				*e*		06 21 52.8	
TLY				*e*		06 23 21.8	
TLY				*e*S	**S**	**06 29 16.6**	**-1.5**
TLY				*e*		06 29 49.2	
TLY				*e*		06 30 48.4	
TLY				pmax	pmax		
	comp=Z,39nm,2.4s,mb5.0						
TLY				MLR	MLR		
	comp=Z,392nm

HABR Khabarovsk 60.69 18 *eP* **P 06 21 09.2 -1.4**
HABR *e**PP pP 06 21 28.1 -4.9
HABR *e* 06 21 51.6
HABR S **S 06 29 18.7 -1.7**
HABR *e**SS sS 06 29 53.2 -5.3
HABR *e* 06 30 50.4
HABR pmax pmax
comp=E,41nm,2.0s
HABR pmax pmax
comp=Z,64nm,2.0s,mb5.3
HABR pmax pmax
comp=N,37nm,2.1s
HABR MLR MLR
comp=Z,153nm,19.0s
MOY Mondy 60.79 353 *eP* **P 06 21 11.5 +0.2**
MOY pmax pmax
comp=Z,75nm,2.1s,mb5.3
TKM2 Tokmak 2 60.81 331 P **P 06 21 11.1 -0.4**
SNR=38
TKM2 Tokmak 2 60.81 331 *eP* **P 06 21 11.0 -0.6**
TKM2 *e* 06 23 22.7
TKM2 pmax pmax
comp=Z,15nm,0.4s,mb5.4
TKM2 Tokmak 2 60.81 331 *eP* **P 06 21 11.0 -0.5**
comp=Z,15nm,0.4s,mb5.4
TKM2 *e*PP PP 06 23 22.7 -4.0
UCH Uchtor 60.83 329 P **P 06 21 12.2 +0.4**
SNR=9.1
UCH Uchtor 60.83 329 *eP* **P 06 21 12.0 +0.3**
UCH *e* 06 23 27.1
UCH pmax pmax
comp=Z,20nm,1.1s,mb5.1
UCH Uchtor 60.83 329 *eP* **P 06 21 12.0 +0.3**
comp=Z,20nm,1.1s,mb5.1
UCH *e*PP PP 06 23 27.1 +0.2
SMDO Samad 60.89 302 P **P 06 21 13.6 +1.0**
SNR=9.0
KBK Karagaybulak 60.93 330 P **P 06 21 12.8 +0.4**
SNR=10
MK31 Makanchi Array 61.01 338*c eP* **P 06 21 11.8 -1.0**
MK31 pmax pmax
comp=Z,11nm,0.4s,mb5.2
MK31 Makanchi Array 61.01 338 *eP* **P 06 21 12.4 -0.4**
MK31 *e*pP pP 06 21 29.0 -6.1
MK31 *e*ScP ScP 06 25 52.0 +3.2
MKAR Makanchi Array 61.01 338 P **P 06 21 12.1 -0.8**
comp=Z,14nm,0.3s,mb5.4,baz=151,slow=7.5,SNR=102
MKAR LR LR 06 50 34.8
comp=Z,374nm,21.1s,baz=142,slow=39
MKAR PKP2bc 06 50 35.3
comp=Z,0.3nm,0.3s,baz=338,slow=2.6,SNR=3.5
MKAR Makanchi Array 61.01 338 P **P 06 21 12.1 -0.8**
MKAR LR LR 06 50 34.8
MKAR ⇑*e* 06 50 35.3
IRK Irkutsk 61.02 355 *eP* **P 06 21 12.0 -0.8**
IRK *e* 06 21 49.8
IRK pmax pmax
comp=Z,57nm,2.1s,mb5.2
DRV Dumont d'Urvil 61.09 167 S **S 06 29 24.0 -1.0**
DRV R 06 39 00.0
AAK Ala-Archa 61.14 330 P **P 06 21 13.9 +0.1**
SNR=6.3
AAK Ala-Archa 61.14 330 ScP ScP 06 25 54.8 +5.3
comp=Z,1.3nm,0.3s,baz=209,slow=14,SNR=3.8
AAK PKP2bc 06 50 40.2
comp=Z,2.2nm,0.6s,baz=227,slow=4.5,SNR=4.3
AAK LR LR 06 51 34.6
comp=Z,418nm,21.9s,baz=140,slow=40
AAK Ala-Archa 61.14 330*c iP* **P 06 21 13.2 -0.6**
AAK pmax pmax
comp=Z,12nm,1.2s,mb4.8
AAK Ala-Archa 61.14 330 *eP* **P 06 21 13.9 +0.1**
comp=Z,24nm,1.0s,mb5.2
AAK *e*ScP ScP 06 25 51.3 +1.8
AAK Ala-Archa 61.14 330 P **P 06 21 14.5 +0.7**
SNR=10
AML Almayashu 61.18 329 P **P 06 21 14.2 +0.1**
SNR=8.9
AML Almayashu 61.18 329 *eP* **P 06 21 14.0 -0.1**
AML pmax pmax
comp=Z,13nm,0.6s,mb5.1
AML Almayashu 61.18 329 *eP* **P 06 21 14.0 -0.1**
comp=Z,13nm,0.6s,mb5.1
AML *e*ScP ScP 06 25 55.0 +5.3
FRU Bishkek 61.23 330 *i P* **P 06 21 14.0 -0.4**
FRU pmax pmax
comp=Z,80nm,1.6s,mb5.5
CHMS Chumysh 61.28 330 P pP 06 21 34.3 -2.8
SNR=19
BSY Bisya 61.47 302 P **P 06 21 17.3 +0.8**
SNR=6.4
EKS2 Erkin-Say 61.52 329 P **P 06 21 17.0 +0.7**
SNR=11
EKS2 Erkin-Say 61.52 329 *eP* **P 06 21 16.8 +0.4**
EKS2 pmax pmax
comp=Z,24nm,0.9s,mb5.2
EKS2 Erkin-Say 61.52 329 *eP* **P 06 21 16.8 +0.4**
comp=Z,24nm,0.9s,mb5.2
EKS2 *e*ScP ScP 06 25 56.7 +5.5
USP Ospenovka 61.60 330 P **P 06 21 16.6 -0.3**
SNR=13
HOQ Hoqain 61.72 303 P **P 06 21 19.1 +1.0**
SNR=10
YSS Yuzh-Sakhalins 62.11 24⇑*eP* **P 06 21 19.8 -0.5**
YSS *e* 06 21 35.0
YSS pmax pmax
comp=N,130nm,1.4s
YSS pmax pmax
comp=Z,270nm,1.4s,mb6.1
YSS Yuzh-Sakhalins 62.11 24 *eP* **P 06 21 20.3 0.0**
comp=Z,211nm,1.3s,mb6.0
RPZ Rata Peaks 62.32 135 *eP* **P 06 21 23.9 +2.0**
comp=Z,70nm,1.1s,mb5.6
HATD Hatta, Dubai 63.22 303 P **P 06 21 28.7 +0.6**
SNR=11
ASHO Ashiyiah 63.22 303 P **P 06 21 28.9 +0.8**
SNR=8.5
KK31 Karatay Array 63.52 328*c eP* **P 06 21 28.6 -1.1**
KK31 Karatay Array 63.52 328⇑*eP* **P 06 21 28.7 -1.0**
NAZ Nazwa, Dubai 63.67 303 P **P 06 21 31.7 +0.6**
SNR=9.3
ASUD Al Ashush, Dub 63.80 303 P **P 06 21 32.6 +0.6**
SNR=15
ITEG Tejag 64.87 312 *eP* **P 06 21 38.2 -0.6**
KURK Kurchatov 65.61 338 P **P 06 21 42.5 -0.7**
comp=Z,187nm,0.5s,mb6.2,SNR=17
KURK Kurchatov 65.61 338*c iP* **P 06 21 42.0 -1.2**
KURK pmax pmax
comp=Z,55nm,1.7s,mb5.1
KURK Kurchatov 65.61 338 *eP* **P 06 21 42.4 -0.8**
comp=Z,25nm,0.8s,mb5.1
KURK Kurchatov 65.61 338 P **P 06 21 42.6 -0.5**
SNR=21
URZ Urewera 65.71 128 P **P 06 21 45.8 +1.6**
comp=Z,25nm,0.9s,mb5.0
CLNS Chul'man 66.29 8*c iP* **P 06 21 47.6 +0.3**
CLNS *e**PP pP 06 21 58.0 -12
CLNS *e* pP 06 22 08.1 -1.9
CLNS *e* 06 24 09.6
CLNS *e* 06 31 39.1
CLNS pmax pmax
comp=Z,112nm,1.2s,mb5.6
CLNS pmax pmax
comp=E,33nm,1.1s
CLNS pmax pmax
comp=N,86nm,1.5s
CLNS pmax pmax
comp=Z,13nm,0.8s,mb4.8
CLNS pmax pmax
comp=N,30nm,1.6s
CLNS pmax pmax
comp=E,11nm,1.1s
CLNS MLR MLR
comp=E,152nm,14.0s
CLNS MLR MLR
comp=Z,198nm,17.0s
CLNS MLR MLR
comp=N,250nm,17.0s
ZAA0 Zalesovo Array 66.32 343 *eP* **P 06 21 46.4 -1.2**
ZALV Zalesovo Beam 66.32 343 P **P 06 21 46.1 -1.5**
comp=N,12nm,0.3s,mb5.2,baz=151,slow=5.4,SNR=76
ZALV S S 06 30 27.7 -2.4
comp=N,0.6nm,0.3s,baz=140,slow=12,SNR=4.6
ZALV PKPPKP 06 50 21.3
comp=N,0.7nm,0.6s,baz=256,slow=6.0,SNR=5.7
ZALV PKP2ab 06 50 35.9
comp=N,0.4nm,0.4s,baz=285,slow=2.9,SNR=4.5
ZALV LR LR 06 53 08.6
comp=N,373nm,19.1s,baz=150,slow=38
ZALV Zalesovo Beam 66.32 343 P **P 06 21 46.1 -1.5**
ZALV S S 06 30 27.7 -2.4
ZALV Zalesovo Beam 66.32 343 P **P 06 21 46.1 -1.5**
ZALV S S 06 30 27.7 -2.4
ZALV P'P' 06 50 21.3
ZALV P'P'ab 06 50 35.9
ZALV LR LR 06 53 08.6
IBAF Bafgh 66.62 310 *eP* **P 06 21 48.5 -1.5**
IAKL Akhelmad 66.75 316 *eP* **P 06 21 49.6 -1.2**
MAW Mawson 67.00 198 *eP* **P 06 21 51.9 +0.1**
comp=N,22nm,0.9s,mb5.0
MAW Mawson 67.00 198 P **P 06 21 52.0 +0.1**
comp=N,30nm,0.9s,mb5.1,baz=50,slow=7.6,SNR=61
MAW LR LR 06 44 42.2
comp=N,792nm,20.7s,baz=46,slow=30
MAW PKPPKP 06 50 18.4
comp=N,7.4nm,1.1s,baz=236,slow=2.6,SNR=6.0
MAW Mawson 67.00 198 *eP* **P 06 21 51.7 -0.1**
MAW pmax pmax
comp=Z,29nm,1.5s
MAW Mawson 67.00 198 *eP* **P 06 21 51.7 -0.1**
comp=Z,29nm,1.5s,mb4.9
IMEH Mehriz 67.26 309 *eP* **P 06 21 52.8 -1.3**
ISFR Sfrayin 67.50 316 *eP* **P 06 21 55.4 -0.1**
NVS Novosibirsk 67.55 343⇑*iP* **P 06 21 53.8 -1.6**
NVS pmax pmax
comp=N,73nm,1.8s
NVS pmax pmax
comp=E,54nm,1.8s
NVS pmax pmax
comp=Z,80nm,1.8s,mb5.2
ISRV Sarvestan 67.56 307 *eP* **P 06 21 56.1 0.0**
ICHK Chekchek 67.79 310 *eP* **P 06 21 55.6 -1.8**
IPAR Pars 67.81 307 *eP* **P 06 21 57.9 +0.3**
ABKT Ailbek 67.88 317 P **P 06 21 57.3 -0.6**
comp=Z,193nm,1.1s,mb5.8,SNR=8.7
VAN Vannovskaya 67.89 317 *i P* **P 06 21 57.9 -0.1**
IANJ Anjilo 69.62 313 *eP* **P 06 22 08.0 -0.7**
IZEF Zefreh 69.66 310 *eP* **P 06 22 07.6 -1.4**
IGAR Gharneh 69.67 309 *eP* **P 06 22 08.5 -0.6**
IKIA Kiasar 70.12 313 *eP* **P 06 22 11.5 -0.3**
IGLO Ghaloghah 70.16 314 *eP* **P 06 22 13.5 +1.5**
VOSK Vostochnaya 70.18 335 P **P 06 22 10.5 -1.3**
VOSK pmax pmax
comp=Z,24nm,0.9s,mb5.0
ISHM Shahmirzad 70.22 313 *eP* **P 06 22 12.4 0.0**
ILAS Lasjerd 70.27 312 *eP* **P 06 22 12.0 -0.8**
IKLH Kolahrood 70.40 310 *eP* **P 06 22 11.9 -1.7**
BVAR Borovoye Array 70.64 335 P **P 06 22 14.0 -0.6**
comp=Z,12nm,0.6s,mb4.9,baz=141,slow=8.7,SNR=68
IPIR Pirpir 70.66 309 *eP* **P 06 22 16.0 +0.8**
IALA Alasht 70.70 313 *eP* **P 06 22 15.1 -0.2**
BRVK Borovoye 70.71 335 P **P 06 22 14.0 -1.0**
comp=Z,106nm,0.7s,mb5.8,SNR=5.5
BRVK Borovoye 70.71 335*c iP* **P 06 22 13.9 -1.1**
BRVK pmax pmax
comp=Z,55nm,2.5s,mb4.9
BRVK Borovoye 70.71 335 *eP* **P 06 22 14.2 -0.9**
comp=Z,27nm,1.1s,mb5.0
BRVK Borovoye 70.71 335 P **P 06 22 14.7 -0.3**
SNR=11
SKR Severo-Kuril's 70.75 28 *eP* **P 06 22 16.2 +0.9**
SKR pmax pmax
comp=Z,320nm,1.4s,mb6.0
SKR pmax pmax
comp=Z,1μm,2.0s,mb6.3
SKR MLR MLR
comp=Z,1μm,20.0s
IVRN Varamin 71.01 312 *eP* **P 06 22 17.0 -0.2**
IVRN *eP* 06 22 17.3
IDMV Damavand 71.04 312 *eP* **P 06 22 17.4 0.0**
IPRN Peran 71.11 313 *eP* **P 06 22 16.5 -1.3**
ZRNK Zerenda 71.17 335 *i P* **P 06 22 16.9 -0.9**
ZRNK pmax pmax
comp=Z,28nm,0.8s,mb5.1
IR3 Iran Long-Peri 71.74 312 *eP* **P 06 22 20.0 -1.6**
KBD Kabd 71.84 304 *eP* **P 06 22 22.4 +0.1**
KBD AMb AMB 06 22 38.5
comp=Z,102nm,0.6s,mb5.8
YAK Yakutsk 71.98 9*c iP* **P 06 22 21.8 -0.7**
YAK *e* 06 22 37.4
YAK *e* 06 24 59.6
YAK *e*S S 06 31 35.0 -1.6
YAK *e* 06 32 03.0
YAK pmax pmax
comp=Z,115nm,1.0s,mb5.7
YAK pmax pmax
comp=N,50nm,1.1s
YAK pmax pmax
comp=E,26nm,1.3s
YAK pmax pmax
comp=Z,4.0nm,0.6s,mb4.4
YAK smax
comp=E,163nm,2.2s
YAK smax
comp=N,79nm,1.7s
YAK MLR MLR
comp=N,204nm,17.0s
YAK MLR MLR
comp=Z,353nm,22.0s
YAK Yakutsk 71.98 9 *eP* **P 06 22 21.5 -0.9**
comp=Z,161nm,0.8s,mb5.9
NAY Al-Naaiem 72.23 304 *eP* **P 06 22 23.6 -1.1**
NAY AMb AMB 06 22 40.6
comp=Z,103nm,0.7s,mb5.8
IRAZ Razeghan 72.52 311 *eP* **P 06 22 26.4 +0.1**
AB31 Akbulak array 73.09 328*c eP* **P 06 22 28.7 -0.6**
AB31 pmax pmax
comp=Z,22nm,0.3s,mb5.5
AB31 Akbulak array 73.09 328⇑*eP* **P 06 22 28.8 -0.5**
ABKAR Akbulak array 73.09 328 *eP* **P 06 22 28.9 -0.4**
comp=Z,37nm,0.4s,mb5.6
PEA0B Petropavlovsk- 73.11 27 *eP* **P 06 22 29.1 -0.2**
PETK Petropavlovsk- 73.11 27 P **P 06 22 29.2 -0.1**
comp=Z,27nm,0.8s,mb5.1,baz=211,slow=2.9,SNR=54
PETK LR LR 06 53 15.9
comp=Z,150nm,20.6s,baz=220,slow=35
PET Petropavlovsk 73.48 28 *eP* **P 06 22 31.3 -0.3**
PET pmax pmax
comp=Z,500nm,6.0s
PET pmax pmax
comp=Z,200nm,21.7s
PET MLR MLR
comp=Z,400nm,19.0s
PET MLR MLR
comp=Z,400nm,21.0s
PET Petropavlovsk 73.48 28⇑*eP* **P 06 22 31.1 -0.5**
IKOM Komasi 73.85 309 *eP* **P 06 22 32.5 -1.6**
KMBO Kilima Mbogo 74.03 271 P **P 06 22 37.5 +1.8**
comp=Z,8.0nm,1.0s,mb4.4,baz=179,slow=24,SNR=11
KMBO LR LR 06 49 21.5
comp=Z,465nm,21.4s,baz=90,slow=31
KMBO Kilima Mbogo 74.03 271 *eP* **P 06 22 37.4 +1.7**
KMBO pmax pmax
comp=Z,19nm,1.3s
KMBO Kilima Mbogo 74.03 271 *eP* **P 06 22 37.4 +1.7**
comp=Z,19nm,1.3s,mb4.7
IVIS Veis 74.49 309 *eP* **P 06 22 36.3 -1.6**
ILIN Lien 74.55 310 *eP* **P 06 22 36.6 -1.6**
SBA Scott Base 74.58 170 *eP* **P 06 22 37.7 +0.1**
SBA pmax pmax
comp=Z,18nm,1.1s,mb4.7
SBA Scott Base 74.58 170 *eP* **P 06 22 37.7 0.0**
comp=Z,18nm,1.1s,mb4.7
IGHG Ghaleghazi 74.63 309 *eP* **P 06 22 35.8 -2.9**
ISRB Sarab 75.16 313 *eP* **P 06 22 41.3 -0.4**
SYO Syowa Base 75.37 201⇑*eX* **P 06 22 40.8 -1.5**
IHRS Heris 75.81 313 *eP* **P 06 22 44.9 -0.5**
BHD Baghdad 75.95 307 *ex* **P 06 22 43.0 -3.2**
BHD *ex* S 06 32 18.0 -4.3
BHD *ex* x 06 32 52.0
ISHB Shabestar 76.83 313 *eP* **P 06 22 50.7 -0.4**
POGA Pongola 76.89 244⇑*iP* **P 06 22 53.7 +1.9**
POGA AMS AMS 07 12 27.9
comp=Z,2μm,20.1s
MOPA Mopani 77.33 248 *eP* **P 06 22 54.2 -0.1**
MOPA AMS AMS 07 14 51.8
comp=Z,1μm,23.3s
SVE Sverdlovsk 77.36 334⇑*eP* **P 06 22 54.0 +0.4**
SVE pmax pmax
comp=Z,76nm,1.5s,mb5.2
MAK Makhachkala 77.38 318 *eP* **P 06 22 54.2 +0.1**
MAK *i* 06 23 05.9
MAK *e*PPP 06 27 39.7
MAK *e*S S 06 32 35.7 -1.8
MAK *e* 06 33 05.7
MAK *e**SS sS 06 33 17.9 +0.7
MAK *e*SSS 06 41 02.5
MAK pmax pmax
comp=Z,114nm,1.5s,mb5.4
ARU Arti 78.03 333 P **P 06 22 57.5 +0.1**
comp=Z,194nm,1.1s,mb5.8,SNR=8.1
ARU Arti 78.03 333*c iP* **P 06 22 56.8 -0.6**
ARU *e**PP pP 06 23 17.9 -2.7
ARU *e* 06 25 51.5
ARU S S 06 32 42.8 -1.1
ARU pmax pmax
comp=Z,80nm,1.7s,mb5.2
ARU Arti 78.03 333 *eP* **P 06 22 57.1 -0.3**
comp=Z,79nm,1.4s,mb5.2
SEY Seymchan 78.07 18*c iP* **P 06 22 57.8 +0.3**
SEY Seymchan 78.07 18⇑*iP* **P 06 22 57.9 +0.4**
GNI Garni 78.17 314*c iP* **P 06 22 59.2 +0.7**
GNI pmax pmax
comp=Z,29nm,1.0s
GNI Garni 78.17 314 *eP* **P 06 22 59.9 +1.4**
comp=Z,55nm,0.9s,mb5.3
GNI Garni 78.17 314 P **P 06 23 00.1 +1.6**
SNR=8.8
DGRG David-gareji 78.22 315 P **P 06 22 60.0 +1.2**
MSNA Messina 78.68 249 *eP* **P 06 23 01.8 0.0**
MSNA AMS AMS 06 52 07.2
comp=Z,510nm,21.6s
MTA Mtatsminda 78.72 316 P **P 06 23 00.1 -1.4**
TBLG Delisi 78.77 316 *eP* **P 06 23 02.4 +0.6**
TBLG Delisi 78.77 316 P **P 06 23 02.4 +0.6**
KEH Kehvi 79.54 316 P **P 06 23 05.9 -0.1**
ZEI Tsey 79.74 316 *eP* **P 06 23 06.1 -1.0**
ZEI *e* 06 23 23.3
ZEI *e*S S 06 33 03.7 +1.0
ZEI *e*SSS 06 41 34.9
ZEI pmax pmax
comp=Z,52nm,1.5s,mb5.1
ONI Oni 79.98 316 P **P 06 23 09.2 +0.8**
SLR Silverton 79.98 245⇑*iP* **P 06 23 10.6 +1.7**
SLR AMS AMS 06 53 49.2
comp=Z,316nm,19.7s
SEK Senekal 80.35 243⇑*iP* **P 06 23 12.4 +1.7**
SEK AMS AMS 06 51 37.5
comp=Z,692nm,22.7s
MBAR Mbarara 80.55 271*c iP* **P 06 23 13.3 +1.2**
SOKR Solikamsk 80.64 335*c iP* **P 06 23 11.1 -0.4**
SOKR pmax pmax
comp=Z,70nm,1.4s,mb5.3
SOKR MLR MLR
comp=Z,460nm,24.0s
PRYS Parys 80.70 244 *eP* **P 06 23 12.9 +0.2**
PRYS AMS AMS 06 55 11.9
comp=Z,446nm,21.2s
GRM Grahamstown 80.91 238 *eP* **P 06 23 15.4 +1.7**
KIV Kislovodsk 81.00 317 P **P 06 23 15.4 +1.6**
comp=Z,228nm,0.8s,mb6.0,SNR=7.2
KIV Kislovodsk 81.00 317 *eP* **P 06 23 13.0 -0.8**
KIV *e**PP pP 06 23 31.8 -5.4
KIV *e*S S 06 33 16.4 +0.6
KIV pmax pmax
comp=Z,29nm,1.0s,mb5.1
KIV Kislovodsk 81.00 317 *eP* **P 06 23 14.3 +0.5**
comp=Z,40nm,0.8s,mb5.3
KIV *e*pP pP 06 23 32.0 -5.1
KIV Kislovodsk 81.00 317 P **P 06 23 14.5 +0.7**
SNR=16
TIXI Tiksi 81.05 6 *eP* **P 06 23 12.7 -0.8**
comp=Z,68nm,0.8s,mb5.5
TIXI *e*pP pP 06 23 29.5 -7.3
SMY Shemya 81.09 33 *eP* **P 06 23 14.3 +0.2**
SMY pmax pmax
comp=Z,64nm,1.4s,mb5.3
SMY Shemya 81.09 33 *eP* **P 06 23 14.3 +0.2**
comp=Z,64nm,1.4s,mb5.3
LSZ Lusaka 81.12 256 *eP* **P 06 23 16.6 +1.5**
LSZ pmax pmax
comp=Z,58nm,1.3s,mb5.2
LSZ Lusaka 81.12 256 *eP* **P 06 23 16.6 +1.5**
comp=Z,58nm,1.3s,mb5.2
LSZ Lusaka 81.12 256 P **P 06 23 17.2 +2.2**
SNR=6.5
QSPA South Pole Qui 81.27 180 *eP* **P 06 23 15.3 +0.6**
comp=Z,80nm,1.3s,mb5.4
QSPA *e*pP pP 06 23 36.3 -1.7
SOE Somerset East 81.75 238 *eP* **P 06 23 19.2 +1.0**
HVD Gariep Dam 82.00 240 *eP* **P 06 23 21.4 +1.9**
HVD AMS AMS 06 52 21.2
comp=Z,694nm,22.5s
BOSA Boshof 82.40 242 P **P 06 23 22.8 +1.2**
comp=Z,24nm,1.1s,mb4.9,baz=95,slow=6.6,SNR=16
BOSA LR LR 06 52 43.1
comp=Z,1μm,21.4s,baz=109,slow=30
BOSA Boshof 82.40 242 *eP* **P 06 23 22.8 +1.2**
BOSA pmax pmax
comp=Z,33nm,1.1s,mb5.1
BOSA Boshof 82.40 242 *eP* **P 06 23 22.8 +1.2**
comp=Z,33nm,1.1s,mb5.1
BOSA Boshof 82.40 242 *eP* **P 06 23 22.9 +1.3**
BOSA AMS AMS 06 53 22.1
comp=Z,1μm,21.5s
LBTB Lobatse 82.47 246 *eP* **P 06 23 23.5 +1.5**
LBTB pmax pmax
comp=Z,61nm,1.4s,mb5.2
LBTB Lobatse 82.47 246 *eP* **P 06 23 23.5 +1.5**
comp=Z,61nm,1.4s,mb5.2
LBTB Lobatse 82.47 246 *eP* **P 06 23 23.5 +1.4**
LBTB AMS AMS 06 58 10.2
comp=Z,200nm,19.5s
SWZ Schweizer 82.48 244⇑*iP* **P 06 23 23.9 +1.8**
SWZ AMS AMS 07 20 06.8
comp=Z,611nm,20.2s
RCY Rachaya 82.83 305 *eP* **P 06 23 25.4 +1.8**
SOC Sochi 82.89 316*c iP* **P 06 23 28.8 +0.1**
SOC *e**PP pP 06 23 37.9 -9.3
SOC *e*S S 06 33 35.2 0.0
SOC *e*SS SS 06 38 55.8 -4.6
SOC pmax pmax
comp=Z,88nm,1.1s,mb5.5
HWQ Hawqa 82.94 306 *eP* **P 06 23 25.2 +1.0**
MMAI Mount Meron Ar 83.04 305 P **P 06 23 27.2 +2.4**
comp=Z,11nm,0.6s,mb4.9,baz=84,slow=8.7,SNR=21
MMAI LR LR 07 00 46.5
comp=Z,158nm,20.1s,baz=100,slow=36
BHL Bhannes 83.07 306 *eP* **P 06 23 26.6 +1.7**
AMKA Amchitka 83.43 36 *eP* **P 06 23 26.2 -0.1**
comp=Z,17nm,1.1s,mb4.8
VRHR Novokhopersk 84.27 324 *eP* **P 06 23 30.7 +0.1**
VRHR *e**PP pP 06 23 46.5 -7.6
VRHR *e**SP sP 06 23 52.8 -11
VRHR *e*S S 06 33 46.5 -2.3
VRHR pmax pmax
comp=N,10.0nm,1.2s
VRHR pmax pmax
comp=E,60nm,1.2s
VRHR pmax pmax
comp=Z,70nm,1.2s,mb5.4
VRHR smax
comp=E,160nm,1.5s
VRHR smax
comp=N,40nm,0.8s
VRHR smax
comp=Z,10.0nm,0.8s
PKA Prieska 84.46 241 *eP* **P 06 23 33.7 +1.5**
PKA AMS AMS 06 53 59.6
comp=Z,223nm,21.7s
ANN Anapa 84.83 317 *eP* **P 06 23 33.1 -0.5**
ANN *e**PP pP 06 23 54.1 -3.0
ANN *e*S S 06 33 49.4 -5.3
ANN pmax pmax
comp=Z,87nm,1.7s,mb5.4
NVL N'lazarevskaya 84.93 199 *eP* **P 06 23 30.2 -3.4**
NVL pmax pmax
comp=Z,19nm,1.2s,mb4.9
CSS Prodhromos 85.20 306 *eP* **P 06 23 35.1 -0.5**
comp=Z,78nm,0.8s,mb5.7
CSS *e*pP pP 06 23 52.4 -6.9
VORD Divnogorie 85.60 323 *eP* **P 06 23 37.6 +0.3**
VORD *e* 06 23 53.1
VORD pmax pmax
comp=N,30nm,0.6s
VORD pmax pmax

comp=Z,10.0nm,0.6s,mb4.9
VORD pmax pmax
VSR Storozhevoye 85.76 323*c i*P **P 06 23 37.5 -0.5**
VSR *e**PP pP 06 23 53.8 -7.8
VSR *e**SP sP 06 24 00.4 -11
VSR *e* 06 33 54.3
VSR *e*S S 06 34 02.2 -1.3
VSR pmax pmax
comp=Z,10.0nm,0.4s,mb5.1
VSR pmax pmax
comp=N,10.0nm,1.1s
VSR pmax pmax
comp=E,40nm,1.1s
VSR smax
comp=N,170nm,1.0s
VSR smax
comp=E,90nm,1.0s
VSR smax
comp=Z,6.0nm,0.5s
VSR Storozhevoye 85.76 323⇑*i*P **P 06 23 37.3 -0.7**
BILL Bilibino 85.78 18*i*P **P 06 23 37.4 -0.4**
SUR Sutherland 85.78 238 LR LR 06 53 17.9
comp=Z,430nm,21.0s,baz=129,slow=30
UPI Upington 85.93 242⇑*i*P **P 06 23 41.5 +2.0**
BR131 Keskin Array S 86.13 311 *e*P **P 06 23 40.5 +0.3**
comp=Z,30nm,0.8s,mb5.3
BR131 *ep*P pP 06 23 56.5 -7.2
BRTR Keskin Array B 86.13 311 P **P 06 23 40.2 +0.1**
comp=Z,14nm,0.8s,mb5.0,baz=132,slow=5.5,SNR=78
BRTR LR LR 07 06 02.9
comp=Z,68nm,21.5s,baz=277,slow=38
SIM Simferopol' 87.13 316*d i* ***PP** pP 06 24 01.8 -6.8
SIM *i* 06 34 06.0
SIM *i* S S 06 34 19.0 +1.9
SIM pmax pmax
comp=Z,54nm,0.4s,mb5.8
ISP Isparta 88.06 309 *e*P **P 06 23 49.1 -0.4**
ISP *e**PP pP 06 24 06.9 -6.3
ISP pmax pmax
comp=Z,15nm,0.7s,mb5.1
ISP Isparta 88.06 309 *e*P **P 06 23 49.1 -0.4**
comp=Z,15nm,0.7s,mb5.1
ISP *ep*P pP 06 24 06.9 -6.3
OBN Obninsk 88.48 326 P **P 06 23 52.1 +1.0**
comp=Z,437nm,1.1s,mb6.4,SNR=8.1
OBN Obninsk 88.48 326*c i*P **P 06 23 50.8 -0.3**
OBN *i* 06 24 08.0
OBN *i* S S 06 34 27.7 -1.8
OBN pmax pmax
comp=Z,197nm,1.6s,mb5.9
OBN Obninsk 88.48 326 *e*P **P 06 23 51.3 +0.2**
comp=Z,125nm,0.8s,mb6.0
OBN *ep*P pP 06 24 07.7 -7.1
TLCR 90.84 315 ⇑P **P 06 24 01.3 -1.1**
TLCR 90.84 315⇑*i*P **P 06 24 01.3 -1.1**
TIRR Tirgusor 90.98 315 ⇑P **P 06 23 57.9 -5.1**
TIRR Tirgusor 90.98 315⇑*i*P **P 06 23 57.9 -5.1**
VNA1 Neumayer--Stat 91.17 197 *e*P **P 06 24 04.8 +1.4**
VNA1 *e* 06 24 07.6
AKASG Malin Array Be 91.68 321 P **P 06 24 05.1 -1.0**
comp=Z,1.4nm,0.3s,mb4.6,baz=82,slow=4.9,SNR=22
AKASG LR LR 07 13 57.3
comp=Z,144nm,19.5s,baz=60,slow=41
AKBB Malin Array Si 91.68 321 *e*P **P 06 24 05.1 -1.0**
AKBB *e**PP pP 06 24 21.7 -8.2
AKBB *e**SP sP 06 24 28.4 -11
KIEV Kiev 91.69 321 *e*P **P 06 24 05.1 -1.1**
KIEV *e**PP pP 06 24 21.6 -8.3
KIEV *e**SP sP 06 24 28.3 -11
KIEV pmax pmax
comp=Z,10.0nm,0.8s,mb5.1
KIEV Kiev 91.69 321 *e*P **P 06 24 05.1 -1.1**
comp=Z,10nm,0.8s,mb5.1
KIEV *ep*P pP 06 24 21.6 -8.3
KIEV *es*P sP 06 24 28.3 -11
VRI Vrincioaia 92.41 316 ⇑P **P 06 24 09.7 +0.1**
VRI Vrincioaia 92.41 316⇑*i*P **P 06 24 09.7 +0.1**
PLOR Plostina 92.46 316 ⇑P **P 06 24 10.8 +0.9**
PLOR Plostina 92.46 316⇑*i*P **P 06 24 10.8 +0.9**
TESR 92.58 317 ⇑P **P 06 24 08.8 -1.6**
TESR 92.58 317⇑*i*P **P 06 24 08.8 -1.6**
MLR Muntele Rosu 92.89 315 ⇓P **P 06 24 12.0 +0.2**
MLR Muntele Rosu 92.89 315⇓*i*P **P 06 24 12.0 +0.2**
LVZ Lovozero 93.03 338*de*P **P 06 24 11.0 -1.0**
LVZ pmax pmax
comp=Z,24nm,2.0s,mb5.2
LVZ Lovozero 93.03 338 *e*P **P 06 24 11.1 -0.9**
MICGM Minsk 93.21 325 *e* **P 06 24 11.0 -2.1**
MNK Minsk 93.24 325 *e*P **P 06 24 11.0 -2.2**
APA Apatity 93.40 338⇑*i*P **P 06 24 22.5 +8.8**
APA MLR MLR
comp=Z,400nm,19.0s
VOIR 93.50 315 ⇑P **P 06 24 13.8 -0.9**
VOIR 93.50 315⇑*i*P **P 06 24 13.8 -0.9**
BURAR Bucovina Array 93.72 317 ⇑P **P 06 24 15.8 +0.2**
BURAR Bucovina Array 93.72 317⇑*i*P **P 06 24 15.8 +0.2**
BUR08 Bucovina Ar. S 93.74 317 *e*P **P 06 24 16.4 +0.7**
IDID Didziasalis 94.00 325 *e*P **P 06 24 17.0 +0.3**
IDID AMB AMB 06 24 17.6
comp=Z,5.0nm,1.6s,mb4.6
IIGN Ignalina 94.30 325 *e*P **P 06 24 18.2 +0.1**
IIGN AMB AMB 06 24 20.5
comp=Z,5.0nm,1.3s,mb4.7
IZAR Zarasai 94.35 326 *e*P **P 06 24 18.4 +0.1**
IZAR AMB AMB 06 24 19.2
comp=Z,5.4nm,1.6s,mb4.6
VSU Vasula 94.51 328*de*P **P 06 24 19.3 +0.3**
VSU pmax pmax
comp=Z,44nm,1.2s,mb5.8
LVV L'vov 94.81 320 *e*P **P 06 24 20.1 -0.5**
LVV *e* 06 24 32.2
TBI Tubuai 94.99 114 *e*LR LR 06 55 16.0
comp=Z,570nm,27.0s
KAF Kangasniemi 95.29 332 *e*P **P 06 24 21.0 -1.5**
KAF Kangasniemi 95.29 332 *ep* **P 06 24 21.0 -1.5**
FINES FINESS Array B 95.30 331 P **P 06 24 22.8 +0.3**
comp=Z,6.8nm,0.8s,mb5.1,baz=114,slow=6.3,SNR=18
FINES PKKP PKKPbc 06 41 17.3 -0.8
comp=Z,3.3nm,1.1s,baz=349,slow=1.9,SNR=5.8
FINES LR LR 07 17 41.4
comp=Z,128nm,18.4s,baz=280,slow=42
FINES FINESS Array B 95.30 331 P **P 06 24 22.8 +0.3**
FINES PKKP PKKPbc 06 41 17.3 -0.8
FINES LR LR 07 17 41.4
SUW Suwalki 95.86 324 *e*P **P 06 24 25.5 +0.2**
SUW Suwalki 95.86 324 *e*P **P 06 24 25.3 +0.1**
comp=Z,30nm,0.9s,mb5.7
BZS Buzias 95.92 315 ⇑P **P 06 24 25.9 +0.2**
BZS Buzias 95.92 315⇑*i*P **P 06 24 25.9 +0.2**
PPT Papeete 96.02 109 *e*LR LR 06 55 45.1
comp=Z,384nm,23.5s
PPT Papeete 96.02 109 LR LR 07 02 36.9
comp=Z,118nm,21.1s,baz=283,slow=32
KEV Kevo 96.13 340 *e*P **P 06 24 25.5 -0.7**
KEV Kevo 96.13 340 *ep* **P 06 24 25.5 -0.7**
STHS Stebnicka Huta 96.57 319 *e*P pP 06 24 44.4 -8.0
STHS Stebnicka Huta 96.57 319 *ep*P pP 06 24 44.4 -8.0
ARCES ARCESS Array B 96.62 339 P **P 06 24 27.7 -0.7**
comp=Z,2.6nm,0.9s,mb4.7,baz=98,slow=7.7,SNR=13
ARCES LR LR 07 13 06.1
comp=Z,179nm,21.5s,baz=283,slow=39
ARE0 ARCESS Array S 96.62 339 *e*P **P 06 24 27.9 -0.5**
PSZ Piszkesteto 97.32 317 ⇑P **P 06 24 39.1 +7.1**
PSZ Piszkesteto 97.32 317⇑*i*P **P 06 24 39.1 +7.1**
TTA Tatalina 98.94 28 *e*P **P 06 24 40.6 +1.7**
KDAK Kodiak Island 100.60 33 P Pdif 06 24 46.5 -0.1
comp=Z,4.4nm,0.8s,baz=229,slow=9.3,SNR=3.5
CLL Collm 101.92 321 *e*PP PP 06 29 04.0 -0.6
CLL *e*(pPP) 06 29 20.0
CLL *e*SS SS 06 43 29.0 -3.7
CLL *e*SSS 06 47 18.0
CLL *e* 06 48 59.0
NB2 NORSAR Subarra102.45 331 P Pdif 06 24 54.8 0.0
comp=Z,4.1nm,0.9s,baz=86,slow=4.6
NOA NORSAR Array B102.45 331 PP PKiKP 06 29 21.5 +5.9
comp=Z,1.1nm,0.8s,baz=113,slow=8.2,SNR=3.4
ILAR Eielson Array 102.89 25 P Pdif 06 24 55.9 -0.9
comp=Z,0.4nm,0.7s,baz=287,slow=3.4,SNR=5.4
ILAR PP PP 06 29 18.8 +7.3
comp=Z,1.3nm,1.0s,baz=282,slow=7.4,SNR=6.5
ILAR PKKP PKKPbc 06 41 08.7 +12
comp=Z,0.5nm,0.9s,baz=104,slow=2.2,SNR=4.4

ILAR Eielson Array 102.89 25 P Pdif 06 24 55.9 -0.9
ILAR 06 29 18.8
RKT Rikitea 107.93 118 *e*LR LR 07 01 16.9
comp=Z,534nm,32.8s
ESDC Sonseca Array 114.90 310 PKP PKiKP 06 29 39.4 -0.1
comp=Z,0.1nm,0.3s,baz=316,slow=5.4,SNR=3.3
ESDC PP PP 06 30 49.4 +10
comp=Z,0.1nm,0.3s,baz=80,slow=6.5,SNR=4.0
YKA Yellowknife Ar 116.94 22 PKP PKPdf 06 29 43.5 +0.7
comp=Z,1.5nm,0.7s,baz=322,slow=0.7,SNR=8.0
JCW Jim Creek 120.55 38 *e*PKPdf PKPdf 06 29 51.5 +1.3
B08A Colville Reser 122.06 37 ⇓P PKPdf 06 29 54.0 +0.9
baz=122
YBH Yreka Blue Hor 122.35 46 PKP PKPdf 06 29 57.0 +3.2
comp=Z,1.7nm,0.7s,baz=214,slow=3.6,SNR=4.1
HAWA Hanford 122.77 40 *e*PKPdf PKPdf 06 29 56.6 +2.1
HAWA *e*SKPdf SKPdf 06 33 26.5 +4.3
OD2 Odessa Site #2 122.85 38 *e*PKPdf PKPdf 06 29 55.8 +1.1
D08A Wollman Farm, 122.87 39 ⇓P PKPdf 06 29 55.6 +0.9
baz=123
EDM Edmonton 122.92 30 *e*PKIKP PKPdf 06 29 55.5 +0.9
K05A Summer Lake 123.28 44 ⇑P PKPdf 06 29 56.5 +0.8
baz=123
NEW Newport 123.42 37 *e*PKIKP PKPdf 06 29 57.1 +1.4
G08A Pilot Rock 123.58 41 ⇑P PKPdf 06 29 56.8 +0.7
baz=124
I07A Izee 123.71 42 ⇓P PKPdf 06 29 57.4 +1.0
baz=124
MOD Modoc 123.98 45 *e*PKPdf PKPdf 06 29 59.2 +2.3
MOD *ep*PKPdf pPKPdf 06 30 19.1 -2.6
C11A Tepee Creek (N 124.13 37 ⇓P PKPdf 06 29 57.7 +0.6
baz=124
F10A Beach Ranch, E 124.39 39 ⇑P PKPdf 06 29 58.1 +0.5
baz=124
A13A Flathead Natio 124.66 35 ⇓P PKPdf 06 29 59.0 +0.9
baz=125
BMO Blue Mountains 124.83 41 *e*PKIKP PKPdf 06 30 00.1 +1.6
WALA Waterton Lakes 124.88 35 *e*PKPdf PKPdf 06 29 59.5 +1.0
B13A Whitefish 124.92 36 ⇓P PKPdf 06 29 59.9 +1.4
baz=125
WVOR Wild Horse Val 124.94 44 *e*PKIKP PKPdf 06 29 59.8 +1.0
BSMT Bassoo Peak 124.99 36 *e*PKPdf PKPdf 06 29 59.9 +1.1
BSMT *e*SKPdf SKPdf 06 33 31.1 +4.8
D12A Red Ives Fores 125.05 37 ⇓P PKPdf 06 29 59.6 +0.8
baz=125
D13A Huson 125.56 37 ⇓P PKPdf 06 30 00.3 +0.5
baz=126
A15A Johnson Ranch, 125.58 34 ⇑P PKPdf 06 30 00.6 +0.8
baz=126
SWMT Swartz Lake 125.62 36 *e*PKPdf PKPdf 06 30 00.3 +0.4
SWMT *e*PP PP 06 31 48.0 -4.3
C14A Swan Lake 125.64 36 ⇓P PKPdf 06 30 00.4 +0.5
baz=126
F12A Elk City 125.72 39 ⇑P PKPdf 06 30 00.4 +0.2
baz=126
G12A Big Creek, Yel 125.97 39 ⇑P PKPdf 06 30 00.7 0.0
baz=126
K10A MacKenzie Ranc 125.99 43 ⇑P PKPdf 06 30 00.9 +0.1
baz=126
MSO Missoula 126.00 37 *e*PKPdf PKPdf 06 30 01.9 +1.2
B15A Bradely Ranch, 126.03 35 ⇓P PKPdf 06 30 01.3 +0.6
baz=126,SNR=8.8
E13A Victor 126.04 38 ⇑P PKPdf 06 30 00.9 +0.1
baz=126
SLMT Seeley Lake 126.06 36 *e*PKPdf PKPdf 06 30 01.4 +0.6
D14A Greenough 126.13 37 ⇓P PKPdf 06 30 01.6 +0.7
baz=126,SNR=9.2
A16A West Butte Ran 126.23 34 ⇑P PKPdf 06 30 00.6 -0.5
baz=126
F13A Darby 126.27 38 ⇑P PKPdf 06 30 01.6 +0.3
baz=126
C15A Salmond Ranch, 126.29 35 ⇑P PKPdf 06 30 01.7 +0.5
baz=127,SNR=9.4
CHMT Chamberlain Mo 126.36 37 *e*PKPdf PKPdf 06 30 02.7 +1.3
B16A M & M Farms, S 126.46 34 ⇑P PKPdf 06 30 01.5 -0.1
baz=126,SNR=7.4
H12A Diamond D Ranc 126.53 40 ⇓P PKPdf 06 30 02.5 +0.7
baz=126
NVAR Mina Array Bea 126.64 48 PKP PKPdf 06 30 04.0 +1.8
comp=Z,2.5nm,0.8s,baz=257,slow=1.7,SNR=16
NVAR PP PP 06 31 54.7 -4.8
comp=Z,1.3nm,1.0s,baz=282,slow=4.2,SNR=2.6
NVAR SKKPab 06 43 46.2
comp=Z,0.4nm,0.7s,baz=149,slow=3.5,SNR=3.5
NVAR Mina Array Bea 126.64 48 PKP PKPdf 06 30 04.0 +1.8
NVAR PP PP 06 31 54.7 -4.8
NVAR SKKPab 06 43 46.2
I12A Atlanta 126.70 41 ⇓P PKPdf 06 30 02.9 +0.7
baz=127
A17A Triple J Farms 126.72 33 ⇑P PKPdf 06 30 02.9 +0.9
baz=127,SNR=21
D15A Lincoln 126.73 36 ⇓P PKPdf 06 30 03.5 +1.4
baz=127,SNR=5.6
C16A Fuhringer Ranc 126.77 35 ⇓P PKPdf 06 30 03.0 +0.9
baz=127
H13A Challis 126.90 40 ⇑P PKPdf 06 30 03.5 +1.0
baz=127
J12A Stokes Ranch, 126.96 41 ⇓P PKPdf 06 30 03.2 +0.6
baz=127
E15A Deer Lodge 126.97 37 ⇑P PKPdf 06 30 03.4 +0.8
baz=127
L11A Cat Creek Ranc 127.00 43 ⇓P PKPdf 06 30 03.6 +0.8
baz=127
B17A L&G Farms, Che 127.03 34 ⇑P PKPdf 06 30 01.9 -0.7
baz=127,SNR=6.6
FFC Flin Flon 127.04 23 *e*PKIKP PKPdf 06 30 03.5 +1.1
FFC *e* 06 31 59.7
A18A Metzger Ranch, 127.19 33 ⇓P PKPdf 06 30 03.6 +0.7
baz=127
HLID Hailey 127.27 41 ⇑P PKPdf 06 30 03.8 +0.6
baz=127
HLID Hailey 127.27 41 *e*PKPdf PKPdf 06 30 05.4 +2.2
I13A Wildhorse Cree 127.30 40 ⇓P PKPdf 06 30 04.5 +1.3
baz=127,SNR=15
D16A Dana Ranch, Ca 127.30 36 ⇑P PKPdf 06 30 03.8 +0.7
baz=127,SNR=9.7
ARVC Arvin 127.31 52 ⇑P PKPdf 06 30 04.1 +0.6
baz=127
F15A Butte 127.36 37 ⇑P PKPdf 06 30 03.9 +0.6
baz=127
LRM Limekiln Ridge 127.40 37 *e*PKPdf PKPdf 06 30 04.7 +1.3
C17A Wharram Farm, 127.42 35 ⇓P PKPdf 06 30 03.8 +0.4
baz=127,SNR=13
J13A Cove Ranch, Pi 127.50 41 ⇑P PKPdf 06 30 04.7 +1.1
baz=127,SNR=16
B18A Beardsley Farm 127.53 34 ⇑P PKPdf 06 30 03.8 +0.2
baz=127
DLMT Dillon 127.54 38 *e*PKPdf PKPdf 06 30 05.4 +1.7
MCMT McKenzie Canyo 127.65 39 *e*PKPdf PKPdf 06 30 06.0 +2.1
G15A Dillon 127.71 38 ⇓P PKPdf 06 30 05.2 +1.2
baz=128,SNR=8.3
I14A Mackay 127.71 40 ⇑P PKPdf 06 30 03.8 -0.3
baz=128
D17A Six Diamond Ra 127.73 35 ⇓P PKPdf 06 30 05.1 +1.1
baz=128,SNR=5.8
EGMT Eagleton 127.76 34 ⇓P PKPdf 06 30 04.5 +0.4
baz=128,SNR=8.1
EGMT Eagleton 127.76 34 *e*PKPdf PKPdf 06 30 05.8 +1.8
H15A Lima 127.89 39 ⇓P PKPdf 06 30 05.7 +1.3
baz=128,SNR=7.7
M12A Wells 127.89 43 ⇑P PKPdf 06 30 05.5 +1.0
baz=128,SNR=9.7
K13A Stover Farm, H 127.90 42 ⇑P PKPdf 06 30 05.7 +1.3
baz=128,SNR=12
O11A Cowboy Ranch, 127.91 45 ⇓P PKPdf 06 30 05.8 +1.3
baz=128,SNR=6.5
F16A Kennard Place, 127.91 37 ⇓P PKPdf 06 30 05.6 +1.2
baz=128
J14A Carey 127.96 41 ⇑P PKPdf 06 30 05.8 +1.2
baz=128,SNR=7.3
BOZ Bozeman (W) 127.98 37 ⇑P PKPdf 06 30 05.3 +0.8
baz=128,SNR=14
BOZ Bozeman (W) 127.98 37 *e*PKPdf PKPdf 06 30 05.8 +1.3
BOZ *e*SKPdf SKPdf 06 33 37.0 +5.0
E17A Martinsdale 128.00 36 ⇓P PKPdf 06 30 04.9 +0.4
baz=128
N12A Clover Valley, 128.04 44 ⇓P PKPdf 06 30 04.9 +0.2
baz=128,SNR=9.2
N12A Clover Valley, 128.04 44 *e*PKPdf PKPdf 06 30 06.5 +1.7
EDW2 Edwards Air Fo 128.04 52 ⇑P PKPdf 06 30 06.0 +1.1
baz=128,SNR=8.0
MPMC Manual Prospec 128.05 51 ⇑P PKPdf 06 30 05.9 +1.0
baz=128,SNR=8.4
S10A Tonopah Range, 128.08 48 ⇓P PKPdf 06 30 05.0 0.0
baz=128,SNR=11
G16A Moss Hill, Enn 128.09 38 ⇑P PKPdf 06 30 05.2 +0.4
baz=128,SNR=10.0

L13A Double Diamond 128.24 42 ⇓P PKPdf 06 30 05.3 +0.2
baz=128,SNR=12
Q11A Duckwater 128.42 47 ⇓P PKPdf 06 30 07.3 +1.8
baz=128,SNR=8.1
M13A Montello 128.42 43 ⇑P PKPdf 06 30 06.7 +1.2
baz=128,SNR=8.5
M13A Montello 128.42 43 *e*PKPdf PKPdf 06 30 07.8 +2.3
F17A Fitzpatrick Pl 128.42 37 ⇓P PKPdf 06 30 06.2 +0.9
baz=128,SNR=6.9
O12A Currie 128.49 45 ⇓P PKPdf 06 30 06.3 +0.6
baz=128,SNR=8.8
E18A Harlowton 128.49 35 ⇓P PKPdf 06 30 06.8 +1.3
baz=128
K14A Jones Ranch, D 128.54 41 ⇑P PKPdf 06 30 07.3 +1.6
baz=128,SNR=14
J15A Blackfoot 128.62 40 ⇑P PKPdf 06 30 06.2 +0.4
baz=128,SNR=12
J15A ⇓SKPdf SKPdf 06 33 24.3 -9.1
baz=128
R11A Troy Canyon, C 128.66 47 ⇓P PKPdf 06 30 07.0 +1.0
baz=129,SNR=18
G17A Pierce Place, 128.68 37 ⇑P PKPdf 06 30 07.4 +1.5
baz=129
P12A McGill 128.70 46 ⇓P PKPdf 06 30 08.9 +2.8
baz=129,SNR=5.5
H16A Russell Place, 128.70 38 ⇑P PKPdf 06 30 07.8 +1.9
baz=129
H16A ⇑SKPdf SKPdf 06 33 23.8 -10
baz=129
L14A Malta 128.74 42 ⇓P PKPdf 06 30 07.5 +1.4
baz=129
S11A Rachel 128.81 48 ⇑P PKPdf 06 30 07.7 +1.4
baz=129
U10A Ash Meadows, A 128.81 50 ⇓P PKPdf 06 30 08.0 +1.6
baz=129,SNR=7.4
GSC Goldstone 128.83 51 ⇓P PKPdf 06 30 08.7 +2.3
baz=129,SNR=7.4
GSC Goldstone 128.83 51 *e*PKPdf PKPdf 06 30 09.2 +2.7
YMR Madison River 128.89 38 *e*PKPdf PKPdf 06 30 09.6 +3.4
K15A Arbon 128.90 41 ⇓P PKPdf 06 30 08.0 +1.6
baz=129,SNR=10
M14A Sheep Mountain 128.91 43 ⇓P PKPdf 06 30 07.8 +1.4
baz=129,SNR=16
F18A Big Timber 128.97 36 ⇓P PKPdf 06 30 06.9 +0.5
baz=129
I16A Newdale 128.98 39 ⇑P PKPdf 06 30 06.7 +0.2
baz=129
I16A ⇓SKPdf SKPdf 06 33 25.7 -8.3
baz=129
GCMT Greycliff 129.06 36 *e*PKPdf PKPdf 06 30 08.2 +1.7
H17A Grant Village 129.27 38 ⇑SKPdf SKPdf 06 33 27.4 -7.1
baz=129
IMW Indian Meadow 129.31 39 *e*PKPdf PKPdf 06 30 08.9 +1.8
IMW *e*PP PP 06 32 14.3 -2.3
IMW *e*SKPdf SKPdf 06 33 25.9 -8.7
N14A Grayback Hills 129.31 43 ⇑P PKPdf 06 30 08.6 +1.4
baz=129,SNR=8.2
N14A ⇑SKPdf SKPdf 06 33 25.5 -9.2
baz=129
L15A Malad City 129.31 42 ⇓P PKPdf 06 30 08.2 +1.0
baz=129,SNR=7.8
P13A Bates Ranch, G 129.34 45 ⇓P PKPdf 06 30 08.8 +1.5
baz=129,SNR=9.5
P13A ⇓SKPdf SKPdf 06 33 25.8 -9.0
baz=129
T11A Corn Creek, Al 129.34 48 ⇑P PKPdf 06 30 09.2 +1.8
baz=129,SNR=17
BGU Big Grassy Mou 129.38 43 *e*PKPdf PKPdf 06 30 09.1 +1.7
S12A Delamar Landin 129.48 48 ⇑P PKPdf 06 30 09.9 +2.3
baz=129,SNR=7.5
I17A Pilgrim Ck. 129.52 39 ⇓SKPdf SKPdf 06 33 27.8 -7.2
baz=129
M15A Larsen Ranch, 129.53 42 ⇓P PKPdf 06 30 09.4 +1.8
baz=130
Q13A Wheeler Ranch, 129.54 46 ⇓P PKPdf 06 30 09.5 +1.8
baz=130
REDW Red Top Meadow 129.63 39 *e*PKPdf PKPdf 06 30 09.3 +1.6
PFO Pinyon Flat Ob 129.64 53 ⇓P PKPdf 06 30 09.6 +1.5
baz=130
SNOW Snow King Moun 129.64 39 *e*PKPdf PKPdf 06 30 09.9 +2.1
SNOW *e*SKPdf SKPdf 06 33 26.5 -8.8
LOHW Long Hollow 129.66 39 *e*PKPdf PKPdf 06 30 09.9 +2.1
LOHW *e*SKPdf SKPdf 06 33 26.3 -9.0
RLMT Red Lodge 129.67 37 ⇓SKPdf SKPdf 06 33 26.5 -8.7
baz=130
V11A Goodsprings 129.70 50 ⇓SKPdf SKPdf 06 33 27.5 -8.1
baz=130
J17A Brown Place, J 129.72 39 ⇑P PKPdf 06 30 10.3 +2.4
baz=130,SNR=6.2
J17A ⇑SKPdf SKPdf 06 33 27.1 -8.2
baz=130
N15A Stansbury Isla 129.74 43 ⇑P PKPdf 06 30 09.7 +1.7
baz=130,SNR=5.7
DUG Dugway 129.85 44 ⇑P PKPdf 06 30 10.3 +2.0
baz=130,SNR=13
DUG Dugway 129.85 44 *e*PKIKP PKPdf 06 30 10.0 +1.7
DUG *e* 06 32 24.2
DUG Dugway 129.85 44 *e*PKPdf PKPdf 06 30 10.0 +1.7
DUG *e*PP PP 06 32 24.1 +3.8
DUG *e*SKPdf SKPdf 06 33 27.6 -8.1
BELC Belle Mtn. Jos 129.88 53 ⇑P PKPdf 06 30 10.7 +2.2
baz=130
GMRC Granite Mounta 129.89 52 ⇓P PKPdf 06 30 10.1 +1.6
baz=130
GMRC ⇑SKPdf SKPdf 06 33 27.6 -8.3
baz=130
R13A O'Grain Ranch, 129.89 47 ⇓P PKPdf 06 30 09.7 +1.3
baz=130
K17A Gardner Place, 129.90 40 ⇑SKPdf SKPdf 06 33 27.9 -7.8
baz=130
L16A Fish Haven 129.93 41 ⇑P PKPdf 06 30 09.2 +0.8
baz=130,SNR=7.7
L16A ⇑SKPdf SKPdf 06 33 28.2 -7.6
baz=130
P14A Drum Mountains 129.94 45 ⇑P PKPdf 06 30 09.7 +1.2
baz=130,SNR=12
P14A ⇓SKPdf SKPdf 06 33 27.8 -8.1
baz=130
HWUT Hardware Ranch 130.04 42 *e*PKPdf PKPdf 06 30 10.1 +1.5
Q14A Sevier Lake (B 130.05 46 ⇑P PKPdf 06 30 10.2 +1.5
baz=130,SNR=5.9
Q14A ⇑SKPdf SKPdf 06 33 28.2 -7.9
baz=130
I18A Diamond G Ranc 130.10 39 ⇑SKPdf SKPdf 06 33 28.7 -7.4
baz=130
V12A Nelson 130.18 50 ⇓P PKPdf 06 30 09.8 +0.8
baz=130
S13A Holt Ranch, En 130.21 48 ⇑P PKPdf 06 30 09.5 +0.5
baz=130,SNR=8.6
S13A ⇑SKPdf SKPdf 06 33 29.3 -7.2
baz=130
DVTC Desert V Tower 130.22 54 ⇑P PKPdf 06 30 09.9 +0.7
baz=130
J18A Kendall Valley 130.23 39 ⇑P PKPdf 06 30 09.4 +0.5
baz=130
J18A ⇑SKPdf SKPdf 06 33 29.6 -6.8
baz=130
T13A Saint George 130.40 48 ⇓P PKPdf 06 30 11.2 +1.8
baz=130
DGMT Dagmar 130.41 30 ⇑SKPdf SKPdf 06 33 29.4 -7.1
baz=130
LAO LASA Array 130.49 33 *e*PKPdf PKPdf 06 30 11.6 +2.3
LAO *e*SKPbc SKPbc 06 33 29.6 +4.7
P15A Leamington 130.50 44 ⇓SKPdf SKPdf 06 33 30.2 -6.8
baz=130
K18A Toltan Ranch, 130.51 40 ⇑SKPdf SKPdf 06 33 30.6 -6.3
baz=130
U13A Pakoon Wash 130.59 49 ⇓SKPdf SKPdf 06 33 31.1 -6.1
baz=130
Q15A Fillmore 130.68 45 ⇓SKPdf SKPdf 06 33 30.3 -7.0
baz=131
M17A Scullys Gap (B 130.70 41 ⇓P PKPdf 06 30 10.6 +0.8
baz=131
M17A ⇑SKPdf SKPdf 06 33 30.5 -6.8
baz=131
O16A Springville 130.74 43 ⇓SKPdf SKPdf 06 33 31.4 -6.0
baz=131
BW06 Boulder Array 130.75 39 ⇑P PKPdf 06 30 10.6 +0.8
baz=131
BW06 ⇑SKPdf SKPdf 06 33 30.1 -7.2
baz=131
PDAR Pinedale Array 130.75 39 PKP PKPdf 06 30 10.3 +0.4
comp=Z,1.0nm,0.6s,baz=346,slow=0.6,SNR=12
PDAR SKPbc SKPbc 06 33 30.1 +4.0
comp=Z,8.2nm,1.0s,baz=270,slow=1.5,SNR=19
PDAR SKP 06 33 59.9
comp=Z,5.5nm,1.0s,baz=273,slow=3.5,SNR=8.8

PDAR					SKKPbc		06 43 23.7	
	comp=Z,0.4nm,0.8s,baz=111,slow=6.5,SNR=3.8							
PDAR					SKKPab		06 43 29.9	
	comp=Z,0.5nm,0.8s,baz=111,slow=8.1,SNR=3.6							
PLCA	**Paso Flores**	**130.76**	**178**	PKP	PKPdf		06 30 12.8	+2.8
	comp=Z,4.7nm,1.1s,baz=177,slow=1.7,SNR=3.2							
PLCA					SKPbc	SKPbc	06 33 31.7	+5.5
	comp=Z,12nm,1.1s,baz=185,slow=5.1,SNR=7.1							
PLCA					SKP		06 33 58.9	
	comp=Z,4.7nm,1.0s,baz=198,slow=6.2,SNR=3.0							
PLCA	**Paso Flores**	**130.76**	**178**	*e*PKPdf	PKPdf		06 30 13.2	+3.2
V13A	**Grand Canyon W**	**130.79**	**50**	↑SKPdf	SKPdf		06 33 30.1	-7.5
	baz=131							
DAU	**Daniels Canyon**	**130.81**	**43**	*e*PKPdf	PKPdf		06 30 12.6	+2.5
DAU				*e*SKPbc	SKPbc		06 33 31.4	+5.0
N17A	**Moffit Pass**	**130.84**	**42**	⇑P	PKPdf		06 30 11.4	+1.3
	baz=131							
N17A				⇑SKPdf	SKPdf		06 33 31.1	-6.5
	baz=131							
L18A	**Fontenelle, Gr**	**130.88**	**41**	⇑SKPdf	SKPdf		06 33 32.1	-5.5
	baz=131							
P16A	**Fountain Green**	**130.91**	**44**	⇓SKPdf	SKPdf		06 33 32.6	-5.1
	baz=131							
T14A	**Hurricane**	**130.99**	**48**	⇑P	PKPdf		06 30 12.2	+1.7
	baz=131							
T14A				⇑SKPdf	SKPdf		06 33 32.4	-5.6
	baz=131							
MSU	**Marysvale**	**131.03**	**46**	*e*PKPdf	PKPdf		06 30 12.9	+2.3
MSU				*e*			06 33 31.3	
R15A	**Junction**	**131.09**	**46**	⇑SKPdf	SKPdf		06 33 32.5	-5.7
	baz=131							
M18A	**Lyman**	**131.11**	**41**	⇓SKPdf	SKPdf		06 33 32.7	-5.4
	baz=131							
GLA	**Glamis**	**131.11**	**53**	⇓SKPdf	SKPdf		06 33 32.6	-5.7
	baz=131							
W13A	**Hualapai Mount**	**131.14**	**51**	⇓P	PKPdf		06 30 12.3	+1.4
	baz=131							
W13A				⇓SKPdf	SKPdf		06 33 32.5	-5.8
	baz=131							
K19A	**Absolon Red Bu**	**131.17**	**39**	⇓SKPdf	SKPdf		06 33 32.2	-5.9
	baz=131							
U14A	**Mt Trumbull**	**131.17**	**49**	⇓SKPdf	SKPdf		06 33 32.4	-5.9
	baz=131							
L19A	**Farson**	**131.23**	**40**	⇓SKPdf	SKPdf		06 33 32.8	-5.4
	baz=131							
PDMCI	**Parker Dam,Lak**	**131.23**	**52**	↑SKPdf	SKPdf		06 33 33.1	-5.4
	baz=131							
S15A	**Panguitch**	**131.26**	**47**	↑SKPdf	SKPdf		06 33 33.4	-5.0
	baz=131							
O17A	**Robinson Place**	**131.26**	**43**	⇓P	PKPdf		06 30 11.2	+0.3
	baz=131							
O17A				⇓SKPdf	SKPdf		06 33 33.3	-5.1
	baz=131							
X13A	**Yucca**	**131.37**	**51**	⇑P	PKPdf		06 30 12.8	+1.5
	baz=131							
T15A	**Red Dirt Ranch**	**131.52**	**48**	↑SKPdf	SKPdf		06 33 34.2	-4.8
	baz=132							
V14A	**Boquillas Ranc**	**131.53**	**50**	↑SKPdf	SKPdf		06 33 34.3	-4.7
	baz=132							
Q16A	**Castle Valley**	**131.56**	**45**	⇓SKPdf	SKPdf		06 33 35.0	-4.0
	baz=132							
K20A	**Yellowstone Ra**	**131.57**	**39**	⇑P	PKPdf		06 30 11.3	-0.2
	baz=132							
K20A				⇑SKPdf	SKPdf		06 33 34.0	-4.9
	baz=132							
N18A	**Larsen Ranch,**	**131.59**	**42**	⇓SKPdf	SKPdf		06 33 33.8	-5.2
	baz=132							
P17A	**Butcher Ranch,**	**131.60**	**44**	↑SKPdf	SKPdf		06 33 33.2	-5.8
	baz=132							
R16A	**Teasdale**	**131.62**	**46**	⇑P	PKPdf		06 30 11.4	-0.3
	baz=132							
R16A				⇑SKPdf	SKPdf		06 33 34.1	-5.0
	baz=132							
Y13A	**Salome**	**131.64**	**52**	⇑P	PKPdf		06 30 11.8	0.0
	baz=132							
Y13A				⇑SKPdf	SKPdf		06 33 34.5	-4.8
	baz=132							
M19A	**Rock Springs**	**131.66**	**41**	⇓P	PKPdf		06 30 12.6	+0.9
	baz=132							
M19A				⇓SKPdf	SKPdf		06 33 34.0	-5.0
	baz=132							
W14A	**Seligman**	**131.71**	**50**	↑SKPdf	SKPdf		06 33 34.6	-4.8
	baz=132							
O18A	**Roosevelt**	**131.72**	**43**	↑SKPdf	SKPdf		06 33 34.6	-4.7
	baz=132							
S16A	**Weppner Ranch,**	**131.79**	**46**	↑SKPdf	SKPdf		06 33 35.3	-4.1
	baz=132							
U15A	**North Rim**	**131.82**	**48**	↑SKPdf	SKPdf		06 33 35.3	-4.2
	baz=132							
P18A	**Preston Nutter**	**131.87**	**43**	↑SKPdf	SKPdf		06 33 35.4	-4.2
	baz=132							
L20A	**Wamsutter**	**131.92**	**40**	↑SKPdf	SKPdf		06 33 35.7	-3.8
	baz=132							
SRU	**San Rafael**	**131.92**	**44**	⇑P	PKPdf		06 30 13.8	+1.6
	baz=132							
SRU				⇑SKPdf	SKPdf		06 33 35.7	-4.0
	baz=132							
SRU	**San Rafael**	**131.92**	**44**	*e*PKPdf	PKPdf		06 30 14.0	+1.8
SRU				*e*SKPbc	SKPbc		06 33 35.4	+4.9
N19A	**John Jarvie Ra**	**131.96**	**41**	↑SKPdf	SKPdf		06 33 35.3	-4.3
	baz=132							
Z13A	**Yuma Proving G**	**131.99**	**53**	⇓SKPdf	SKPdf		06 33 35.7	-4.2
	baz=132							
113A	**Mohawk Valley,**	**132.05**	**53**	⇓SKPdf	SKPdf		06 33 35.6	-4.4
	baz=132							
R17A	**Hanksville Air**	**132.11**	**45**	⇓P	PKPdf		06 30 15.0	+2.4
	baz=132							
R17A				⇑SKPdf	SKPdf		06 33 36.5	-3.5
	baz=132							
X14A	**Yava**	**132.13**	**51**	⇓P	PKPdf		06 30 14.6	+1.9
	baz=132							
X14A				⇓SKPdf	SKPdf		06 33 36.4	-3.8
	baz=132							
V15A	**Kaibab Nationa**	**132.16**	**49**	↑SKPdf	SKPdf		06 33 37.2	-3.0
	baz=132							
T16A	**Glen Canyon Da**	**132.17**	**47**	⇓SKPdf	SKPdf		06 33 37.0	-3.2
	baz=132							
Q18A	**Rafter H Ranch**	**132.19**	**44**	⇑P	PKPdf		06 30 13.2	+0.5
	baz=132							
Q18A				⇑SKPdf	SKPdf		06 33 36.9	-3.2
	baz=132							
Y14A	**Wickenburg**	**132.24**	**52**	⇓P	PKPdf		06 30 13.9	+1.0
	baz=132							
Y14A				⇓SKPdf	SKPdf		06 33 35.9	-4.5
	baz=132							
O19A	**Miners Draw (B**	**132.29**	**42**	⇓P	PKPdf		06 30 11.9	-1.0
	baz=132							
S17A	**Black Ridge (B**	**132.39**	**46**	⇓P	PKPdf		06 30 12.1	-1.1
	baz=132							
S17A				⇓SKPdf	SKPdf		06 33 37.6	-3.0
	baz=132							
L21A	**Rawlins**	**132.55**	**39**	⇓P	PKPdf		06 30 13.1	-0.2
	baz=132							
L21A				⇓SKPdf	SKPdf		06 33 37.5	-3.2
	baz=132							
N20A	**Spence Gulch,**	**132.59**	**41**	⇓P	PKPdf		06 30 13.9	+0.4
	baz=132							
N20A				⇓SKPdf	SKPdf		06 33 38.0	-2.8
	baz=132							
X15A	**Humboldt**	**132.63**	**51**	⇓SKPdf	SKPdf		06 33 37.6	-3.5
	baz=133							
T17A	**Navajo Res., N**	**132.67**	**47**	↑SKPdf	SKPdf		06 33 38.9	-2.1
	baz=133							
R18A	**Canyonlands Na**	**132.69**	**45**	⇓P	PKPdf		06 30 13.0	-0.7
	baz=133							
P19A	**Cripple Cowboy**	**132.72**	**43**	⇓SKPdf	SKPdf		06 33 38.9	-2.2
	baz=133							
M21A	**Separation Pea**	**132.75**	**40**	↑SKPdf	SKPdf		06 33 38.2	-2.9
	baz=133							
U16A	**Tuba City**	**132.80**	**48**	⇓SKPdf	SKPdf		06 33 39.2	-2.2
	baz=133							
RWWY	**Rawlins**	**132.80**	**39**	*e*PKPdf	PKPdf		06 30 12.9	-0.8
RWWY				*e*SKPbc	SKPbc		06 33 38.0	+4.5
Q19A	**Hogan Spring (**	**132.86**	**44**	↑SKPdf	SKPdf		06 33 39.1	-2.3
	baz=133							
ULM	**Lac du Bonnet**	**132.87**	**24**	PKP	PKPdf		06 30 15.6	+1.9
	comp=Z,2.1nm,0.5s,baz=356,slow=6.9,SNR=2.8							
ULM				SKPbc	SKPbc		06 33 36.4	+3.0
	comp=Z,21nm,1.1s,baz=319,slow=5.0,SNR=11							
ULM				SKP			06 34 02.2	
	comp=Z,8.0nm,1.0s,baz=298,slow=3.0,SNR=1.9							
ULM	**Lac du Bonnet**	**132.87**	**24**	PKP	PKPdf		06 30 15.6	+1.9
ULM				SKPbc	SKPbc		06 33 36.4	+3.0
ULM				SKP			06 34 02.2	
WUAZ	**Wupatki**	**132.87**	**49**	↑SKPdf	SKPdf		06 33 39.5	-2.0
	baz=133							
U17A	**Shonto**	**132.94**	**47**	↑SKPdf	SKPdf		06 33 40.1	-1.5
	baz=133							
O20A	**White River Ci**	**132.96**	**42**	↑SKPdf	SKPdf		06 33 40.1	-1.4
	baz=133							
214A	**Organ Pipe Nat**	**133.08**	**54**	⇓SKPdf	SKPdf		06 33 40.2	-1.8
	baz=133							
N21A	**Black Mountain**	**133.10**	**41**	↑SKPdf	SKPdf		06 33 39.8	-1.9
	baz=133							
X16A	**Lo Mia Camp, P**	**133.26**	**50**	⇓SKPdf	SKPdf		06 33 40.9	-1.4
	baz=133							
V17A	**Tonalea, Kykot**	**133.26**	**49**	⇓SKPdf	SKPdf		06 33 41.2	-1.0
	baz=133							
T18A	**Mexican Hat**	**133.28**	**46**	⇓SKPdf	SKPdf		06 33 40.6	-1.6
	baz=133							
RSSD	**Black Hills**	**133.28**	**35**	*e*PKIKP	PKPdf		06 30 16.0	+1.4
O21A	**Pagoda**	**133.42**	**41**	↑SKPdf	SKPdf		06 33 41.7	-0.7
	baz=133							
Y16A	**Circle Bar Ran**	**133.44**	**51**	↑SKPdf	SKPdf		06 33 42.5	-0.1
	baz=133							
Q20A	**Ridgley Place,**	**133.52**	**43**	⇓SKPdf	SKPdf		06 33 42.0	-0.6
	baz=133							
Z16A	**Peralta Trail,**	**133.68**	**52**	↑SKPdf	SKPdf		06 33 42.3	-0.8
	baz=134							
PV01	**Paradox Valley**	**133.73**	**44**	*e*PKPdf	PKPdf		06 30 17.0	+1.4
PV01				*e*SKPbc	SKPbc		06 33 42.0	+5.3
N22A	**Wattenberg Ran**	**133.76**	**40**	↑SKPdf	SKPdf		06 33 43.0	0.0
	baz=134							
SCHQ	**Schefferville**	**133.99**	**358**	PKP	PKPdf		06 30 16.2	+0.6
	comp=Z,1.8nm,0.4s,baz=317,slow=4.1,SNR=7.3							
SCHQ				SKPbc	SKPbc		06 33 40.0	+3.1
	comp=Z,14nm,1.2s,baz=14,slow=3.7,SNR=5.1							
S20A	**Disappointment**	**134.02**	**45**	⇓SKPdf	SKPdf		06 33 43.4	-0.1
	baz=134							
T19A	**Beclabito**	**134.02**	**46**	↑SKPdf	SKPdf		06 33 43.7	+0.2
	baz=134							
N23A	**Red Feather La**	**134.04**	**40**	⇓SKPdf	SKPdf		06 33 43.4	-0.1
	baz=134							
O22A	**Kremmling**	**134.05**	**41**	↑SKPdf	SKPdf		06 33 43.1	-0.4
	baz=134							
Q21A	**Lamborn Mesa,**	**134.06**	**43**	↑SKPdf	SKPdf		06 33 43.6	0.0
	baz=134							
P22A	**Eagle**	**134.21**	**42**	↑SKPdf	SKPdf		06 33 43.1	-0.7
	baz=134							
MVCO	**Mesa Verde**	**134.22**	**45**	*e*PKPdf	PKPdf		06 30 16.2	-0.4
O23A	**Lake Granby, G**	**134.43**	**40**	↑SKPdf	SKPdf		06 33 43.3	-0.9
	baz=134							
Z17A	**San Carlos Hig**	**134.44**	**51**	↑SKPdf	SKPdf		06 33 43.8	-0.6
	baz=134							
ISCO	**Idaho Springs**	**134.85**	**41**	*e*PKIKP	PKPdf		06 30 19.0	+1.3
SDCO	**Great Sand Dun**	**136.02**	**43**	*e*PKPdf	PKPdf		06 30 22.2	+2.3
LAZ	**Ladron**	**136.49**	**48**	*e*PKPdf	PKPdf		06 30 23.9	+3.0
LAZ				*e*PP	PP		06 33 01.8	-1.2
ANMO	**Albuquerque**	**136.74**	**47**	*e*PKPdf	PKPdf		06 30 22.4	+1.0
ANMO				*e*SKPbc	SKPbc		06 33 50.9	+4.7
BNM	**Barren Site**	**136.98**	**48**	*e*PKPdf	PKPdf		06 30 25.7	+3.8
W24A	**Lazy 6 Ranch,**	**137.37**	**46**	⇑P	PKPdf		06 30 24.5	+1.9
	baz=137							
ECSD	**EROS Data Cent**	**137.49**	**30**	*e*PKPdf	PKPdf		06 30 23.0	+0.6
ECSD				*e*PP	PP		06 33 06.7	-1.7
ECSD				*e*SKPbc	SKPbc		06 33 51.1	+2.9
Y24A	**Capitan**	**137.96**	**48**	⇓P	PKPdf		06 30 25.9	+2.2
	baz=138							
W25A	**X Bar L Ranch,**	**138.04**	**46**	⇓P	PKPdf		06 30 26.4	+2.6
	baz=138							
224A	**Cornudas Mount**	**138.74**	**50**	⇓P	PKPdf		06 30 18.0	-7.2
	baz=139							
Z25A	**Roswell**	**138.80**	**48**	⇑P	PKPdf		06 30 19.0	-6.3
	baz=139							
MNTX	**Cornudas Mount**	**139.01**	**51**	*e*PKPdf	PKPdf		06 30 20.0	-5.6
W27A	**Bowe Ranch, En**	**139.10**	**45**	⇑P	PKPdf		06 30 17.7	-8.0
	baz=139							
125A	**Gardner Draw,**	**139.13**	**49**	⇑P	PKPdf		06 30 18.0	-7.9
	baz=139							
325A	**Bean Ranch, Si**	**139.47**	**51**	⇓P	PKPdf		06 30 18.6	-7.9
	baz=139							
425A	**Indio Mountain**	**139.71**	**52**	⇓P	PKPdf		06 30 20.1	-6.9
	baz=140							
CFAA	**Coronel Fontan**	**139.90**	**181**	PKhKP	PKPpre		06 30 19.0	
	comp=Z,0.1nm,0.5s,baz=325,slow=3.7,SNR=3.2							
CFAA				PKP	PKPdf		06 30 27.6	+0.3
	comp=Z,0.3nm,0.6s,baz=229,slow=4.4,SNR=5.1							
CFAA				PP	PP		06 33 20.8	-1.8
	comp=Z,0.2nm,0.9s,baz=165,slow=8.3,SNR=9.0							
CFAA				SKPab			06 34 22.8	
	comp=Z,0.2nm,0.7s,baz=240,slow=3.0,SNR=2.1							
CFAA	**Coronel Fontan**	**139.90**	**181**	PKP	PKPdf		06 30 27.6	+0.3
CFAA				PP	PP		06 33 20.8	-1.8
CFAA				SKPab			06 34 22.8	
526A	**Mary Lane Ranc**	**140.72**	**52**	⇑P	PKPdf		06 30 22.1	-6.7
	baz=141							
527A	**Woodward Ranch**	**141.06**	**52**	⇑P	PKPdf		06 30 24.1	-5.3
	baz=141							
JFWS	**Jewell Farm**	**141.07**	**25**	*e*PKHKP	PKPpre		06 30 22.2	
328A	**Wristen Ranch,**	**141.11**	**50**	⇑P	PKPdf		06 30 25.2	-4.2
	baz=141							
TXAR	**Lajitas Array**	**141.36**	**53**	PKhKP	PKPpre		06 30 23.8	
	comp=Z,0.5nm,0.3s,baz=220,slow=1.8,SNR=21							
TXAR				PP	PP		06 33 32.9	-0.3
	comp=Z,0.7nm,0.8s,baz=302,slow=1.7,SNR=4.0							
TXAR				SKPab			06 34 29.3	
	comp=Z,2.9nm,1.1s,baz=276,slow=3.2,SNR=4.1							
TXAR				SKKPbc			06 42 10.0	
	comp=Z,0.7nm,1.0s,baz=72,slow=2.9,SNR=4.3							
627A	**Terlingua Ranc**	**141.53**	**53**	⇓P	PKPdf		06 30 25.3	-5.0
	baz=142							
628A	**Black Gap, Mar**	**141.91**	**53**	⇓P	PKPdf		06 30 26.3	-4.7
	baz=142							
WMOK	**Wichita Mounta**	**142.20**	**42**	*e*PKHKP	PKPpre		06 30 21.8	
CPUP	**Villa Florida**	**143.44**	**197**	PKhKP	PKPpre		06 30 32.2	
	comp=Z,3.8nm,0.7s,baz=148,slow=3.3,SNR=14							
PKME	**Peaks-Kenny Pk**	**143.59**	**1**	*e*PKPdf	PKPdf		06 30 31.9	-1.6
PKME				*e*PP	PP		06 33 44.3	-0.8
JCT	**Junction City**	**143.81**	**49**	*e*PKIKP	PKPdf		06 30 33.0	-1.3
LONY	**Lake Ozonia**	**143.88**	**7**	*e*PKPdf	PKPdf		06 30 32.5	-1.5
AAM	**Ann Arbor**	**144.07**	**19**	*e*PKIKP	PKPdf		06 30 32.8	-1.6
RCBR	**Riachuelo**	**144.22**	**247**	*e*PKPdf	PKPdf		06 30 35.8	+0.3
CCM	**Cathedral Cave**	**144.43**	**31**	*e*PKPdf	PKPdf		06 30 34.2	-0.9
CCM				*e*SKPbc	SKPbc		06 34 09.3	+2.9
SLM	**Saint Louis**	**144.49**	**30**	*e*PKIKP	PKPdf		06 30 34.5	-0.7
LBNH	**Lisbon**	**144.51**	**4**	*e*PKIKP	PKPdf		06 30 35.0	-0.1
NCB	**Newcomb**	**144.56**	**7**	*e*PKPdf	PKPdf		06 30 34.8	-0.4
FVM	**French Village**	**144.90**	**31**	*e*PKIKP	PKPdf		06 30 35.8	-0.2
ERPA	**Erie**	**145.29**	**15**	*e*PKPbc	PKPbc		06 30 37.5	+1.2
ERPA				*ep*PKPdf	pPKPdf		06 30 54.4	-6.9
OLIL	**Olney**	**145.42**	**27**	*e*PKPbc	PKPbc		06 30 37.8	+0.8
OLIL				*ep*PKPdf	pPKPdf		06 30 53.5	-8.1
MIAR	**Mount Ida**	**145.65**	**38**	*e*PKIKP	PKPdf		06 30 38.9	+1.5
SIUC	**Southern Illin**	**145.71**	**30**	*e*PKPbc	PKPbc		06 30 38.8	+0.9
SIUC				*ep*PKPdf	pPKPdf		06 30 56.0	-6.2
BLO	**Bloomington**	**145.74**	**25**	*e*PKIKP	PKPdf		06 30 38.8	+1.4
BINY	**Binghamton**	**146.05**	**10**	*e*PKPbc	PKPbc		06 30 39.6	+0.9
BINY				*ep*PKPdf	pPKPdf		06 30 56.9	-5.7
BINY				*e*PP	PP		06 33 58.9	-0.9
ACSO	**Alum Creek Sta**	**146.15**	**20**	*e*PKPbc	PKPbc		06 30 39.8	+0.7
ACSO				*ep*PKPdf	pPKPdf		06 30 57.4	-5.4
UALR	**University of**	**146.22**	**36**	*e*PKPbc	PKPbc		06 30 40.8	+1.3
UALR				*ep*PKPdf	pPKPdf		06 30 57.8	-5.3
PARMO	**Parma**	**146.26**	**31**	*e*PKPdf	PKPdf		06 30 40.1	+1.8
HBAR	**Harrisburg**	**146.62**	**34**	*e*PKPbc	PKPbc		06 30 41.7	+1.1
WCI	**Wyandotte Cave**	**146.63**	**26**	*e*PKP2	PKPab		06 30 41.4	-0.4
GNAR	**Gosnell**	**146.66**	**32**	*e*PKPbc	PKPbc		06 30 41.6	+0.9
GNAR				*ep*PKPdf	pPKPdf		06 30 59.1	-4.7
KVTX	**Kingsville**	**146.70**	**52**	*e*PKPbc	PKPbc		06 30 44.0	+2.9
NATX	**Nacogdoches**	**146.75**	**43**	*e*PKPbc	PKPbc		06 30 43.1	+2.0
GLAT	**Glass**	**146.80**	**31**	*e*PKPbc	PKPbc		06 30 42.7	+1.6
GLAT				*ep*PKPdf	pPKPdf		06 31 01.8	-2.2
UTMT	**University of**	**146.96**	**31**	*e*PKPbc	PKPbc		06 30 42.8	+1.3
HKT	**Hockley**	**147.00**	**47**	*e*PKP2	PKPab		06 30 44.3	+0.8
HALT	**Halls**	**147.05**	**32**	*e*PKPbc	PKPbc		06 30 43.5	+1.7
MET	**Memphis--Engin**	**147.33**	**33**	*e*PKPbc	PKPbc		06 30 44.4	+1.8
MCWV	**Mont Chateau**	**147.63**	**16**	*e*PKPbc	PKPbc		06 30 44.5	+1.2
MCWV				*ep*PKPdf	pPKPdf		06 31 01.8	-3.5
WVT	**Waverly**	**147.64**	**30**	*e*PKIKP	PKPdf		06 30 41.7	+1.0
WVT				*e*			06 30 44.4	
OXF	**Oxford**	**148.08**	**33**	*e*PKIKP	PKPdf		06 30 41.8	+0.4
OXF				*e*			06 30 45.3	
VBMS	**Vicksburg**	**149.10**	**38**	*e*PKPbc	PKPbc		06 30 48.7	+1.4
VBMS				*e*PKPab	PKPab		06 30 53.6	+1.8
SWET	**Sewanee**	**149.29**	**28**	*e*PKPbc	PKPbc		06 30 48.2	+0.5
SWET				*e*PKPab	PKPab		06 30 53.0	+0.5
SWET				*ep*PKPdf	pPKPdf		06 31 05.5	-2.6
ELN	**Prospectdale**	**149.60**	**19**	*e*PKPbc	PKPbc		06 30 49.4	+0.9
ELN				*e*PKPab	PKPab		06 30 54.7	+1.0
ELN				*ep*PKPdf	pPKPdf		06 31 06.2	-2.4
CBN	**Corbin**	**149.63**	**14**	*e*PKPbc	PKPbc		06 30 50.0	+1.5
CBN				*e*PKPab	PKPab		06 30 55.3	+1.6
BLA	**Blacksburg**	**149.72**	**19**	*e*PKPbc	PKPbc		06 30 49.3	+0.6
BLA				*e*PKPab	PKPab		06 30 55.4	+1.2
CPCT	**Cooper Cave**	**149.73**	**26**	*e*PKPbc	PKPbc		06 30 49.2	+0.4
TKL	**Tuckaleechee C**	**149.87**	**25**	*e*PKHKP	PKPdf		06 30 45.4	+1.1
TKL				*e*			06 30 50.3	
LRAL	**Lakeview Retre**	**150.50**	**32**	*e*PKPdf	PKPdf		06 30 45.9	+0.6
LRAL				*e*PKPbc	PKPbc		06 30 52.0	+1.3
GOGA	**Godfrey**	**151.92**	**27**	*e*PKPbc	PKPbc		06 30 55.5	+1.5
GOGA				*e*PKPab	PKPab		06 31 04.1	+0.7
BRAL	**Brewton**	**152.00**	**35**	*e*PKPdf	PKPdf		06 30 50.2	+2.5
BRAL				*e*PKPbc	PKPbc		06 30 56.3	+2.0
JSC	**Jenkinsville**	**152.08**	**23**	*e*PKIKP	PKPbc		06 30 55.9	+1.5
SIV	**San Ignacio**	**154.30**	**197**	PKP	PKPdf		06 30 53.7	+2.2
	comp=Z,4.0nm,1.0s,baz=185,slow=3.1,SNR=5.7							
SIV				PKPbc	PKPbc		06 31 01.4	+1.7
	comp=Z,3.5nm,1.0s,baz=171,slow=6.9,SNR=4.6							
SIV				PKPab	PKPab		06 31 13.0	-0.7
	comp=Z,11nm,0.9s,baz=185,slow=3.7,SNR=8.1							
LPAZ	**La Paz**	**155.14**	**181**	PKP	PKPdf		06 30 55.9	+3.3
	comp=Z,4.1nm,1.1s,baz=173,slow=0.6,SNR=10							
LPAZ				PKPbc	PKPdf		06 31 04.4	+12
	comp=Z,2.0nm,0.6s,baz=110,slow=10,SNR=9.3							
LPAZ				PKPab	PKPab		06 31 19.9	+2.5
	comp=Z,9.0nm,0.8s,baz=162,slow=1.0,SNR=24							
LPAZ	**La Paz**	**155.14**	**181**	*e*PKPdf	PKPdf		06 30 54.4	+1.8
LPAZ				*e*PKPab	PKPab		06 31 19.8	+2.5
OTAV	**Otavalo**	**167.16**	**131**	*e*PKPdf	PKPdf		06 31 06.4	+1.0
ROSC	**El Rosal**	**173.24**	**124**	PKP	PKPdf		06 31 10.2	+1.4
	comp=Z,1.8nm,0.4s,baz=303,slow=21,SNR=6.1							
ROSC	**El Rosal**	**173.24**	**124**	*e*PKPdf	PKPdf		06 31 10.4	+1.6
ROSC				*e*PKPab	PKPab		06 32 41.6	+4.5

ATH ***20*** *06:18:26.5, 38.°05N×26.°56E, h44km±10km, MD2.9/3*
CSEM ***20*** *06:18:26.9±0.2, 38.°19N×26.°71E, h13km±2km, MD2.7,*
Error ellipse: s-maj=8.0km s-min=3.5km az=64.0
ISCJB ***20*** *06:18:27.2±0.7, 38.°15N±0.°03×26.°66E±0.°08, h11km±6km,*
Error ellipse: s-maj=11.6km s-min=3.8km az=160.3
DDA ***20*** *06:18:27.3, 38.°19N×26.°75E, h7km±3km, Md2.7*
ISC 20 06:18:27.3±0.6, 38.°17N±0.°03×26.°70E±0.°07, h15km±5km, n19, σ0.°80/35, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.20**	**337**	*i* P	**Pg**	**06 18 31.4**	**-0.7**
URLA				*i* S	**Sg**	**06 18 35.3**	**+0.1**
URLA	**Izmir**	**0.20**	**337**	*i* P	**Pg**	**06 18 31.4**	**-0.6**
URLA				*i* S	**Sg**	**06 18 35.3**	**+0.1**
SMG	**Samos**	**0.48**	**166**	*e*P	**Pg**	**06 18 37.1**	**+0.3**
SMG				*e*S	**Sg**	**06 18 44.2**	**+1.0**
SMG	**Samos**	**0.48**	**166**	*e*P	**Pg**	**06 18 37.1**	**+0.3**
SMG				*e*S	**Sg**	**06 18 44.2**	**+1.0**
GCAM	**G?zelca

BRTR Keskin Array B 145.78 321 PKPbc PKPbc 07 14 46.0 +0.7
0.9nm,0.8s,baz=69,slow=4.1,SNR=4.8

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*ISCJB **20** 06:59:34.2±0.6, 6°.91N±0°.07×73°.03W±0°.08, h162km±7km, mb3.0/2, Error ellipse: s-maj=15.8km s-min=7.3km az=39.1*
*IDC **20** 06:59:36.6±5.8, 6°.71N×73°.21W, h180km±41km, mb2.7/2, mb1 3.1/3, mb1mx2.9/20, mbtmp2.9/3, Error ellipse: s-maj=91.3km s-min=24.9km az=62.0*
*FUNV **20** 06:59:38.8, 7°.09N×72°.96W, h160km, MW3.7*
ISC 20 06:59:35.1±0.6, 6°.91N±0°.07×73°.02W±0°.08, h158km±7km, n19, σ0s85/24, mb3.0/2, 1C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.18**	**36**	⇑*i*P	**Pn**	**07 00 04.0**	**+1.8**
CAPV				*e*S	**Sn**	**07 00 23.1**	**+0.1**
ROSC	**El Rosal**	**2.42**	**213**	P	**Pn**	**07 00 15.6**	**0.0**
ROSC	15nm,0.3s,baz=96,slow=20,SNR=32			S	**Sn**	**07 00 46.5**	**-0.5**
	20nm,0.3s,baz=112,slow=14,SNR=11						
VIGV	**El Vigia**	**2.52**	**40**	*e*P	**Pn**	**07 00 17.1**	**+0.1**
VIGV				*e*S	**Sn**	**07 00 46.7**	**-2.6**
SOCV	**Socops**	**2.54**	**57**	*e*P	**Pn**	**07 00 18.0**	**+0.9**
SOCV				*e*S	**Sn**	**07 00 47.9**	**-1.8**
ELOV	**Elorza**	**3.51**	**88**	*e*P	**Pn**	**07 00 30.0**	**+0.7**
VIRV	**Villa del Rosa**	**3.62**	**10**	*e*P	**Pn**	**07 00 30.5**	**-0.2**
VIRV				*e*S	**Sn**	**07 01 08.5**	**-5.5**
QARV	**Quebrada Arrib**	**4.10**	**37**	*e*P	**Pn**	**07 00 37.7**	**+0.8**
SANV	**Sanarito**	**4.30**	**53**	*e*P	**Pn**	**07 00 39.0**	**-0.5**
SANV				*e*S	**Sn**	**07 01 24.2**	**-5.6**
CURV	**Curarigua**	**4.32**	**44**	*e*P	**Pn**	**07 00 40.8**	**+1.0**
TEPV	**Terepaima**	**4.85**	**51**	*e*P	**Pn**	**07 00 47.2**	**+0.5**
SIQV	**Siquisique**	**4.89**	**40**	*e*P	**Pn**	**07 00 46.8**	**-0.4**
BAUV	**El Baul**	**5.33**	**67**	*e*P	**Pn**	**07 00 52.7**	**-0.4**
MONV	**Montecano**	**5.85**	**31**	*e*P	**Pn**	**07 00 59.8**	**0.0**
TURV	**Turiamo**	**6.21**	**55**	*e*P	**Pn**	**07 01 05.2**	**+0.5**
CAOV	**Caicara del Or**	**6.66**	**86**	*e*P	**Pn**	**07 01 11.2**	**+0.5**
CUPV	**Cepira**	**7.81**	**66**	*e*P	**Pn**	**07 01 26.1**	**+0.2**
LPAZ	**La Paz**	**23.55**	**168**	P	**P**	**07 04 30.2**	**-1.0**
	0.6nm,0.8s,mb3.2,baz=331,slow=13,SNR=4.1						
TXAR	**Lajitas Array**	**36.48**	**312**	P	**P**	**07 06 24.7**	**-0.4**
	0.1nm,0.4s,mb2.8,baz=121,slow=8.5,SNR=4.8						
ASAR	**Alice Springs**	**149.24**	**234**	PKPbc	PKPbc	07 19 03.5	-2.3
	0.2nm,0.6s,baz=114,slow=3.4,SNR=3.6						

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*MAN **20** 07:00:30, 20°.58N×121°.97E, h15km, mb4.2, ML3.0, MS2.8*
MAN INTENSITY II - BASCO BATANES.
IDC 20 07:00:30.3±2.2, 20°.22N×122°.04E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.3/21, mbtmp3.4/4, Error ellipse: s-maj=194.1km s-min=28.9km az=67.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**30.32**	**339**	P	P	07 06 44.0	+0.7
	0.2nm,0.4s,baz=133,slow=8.1,SNR=2.2						
MKAR	**Makanchi Array**	**41.78**	**319**	P	P	07 08 21.4	0.0
	0.6nm,0.8s,baz=101,slow=7.5,SNR=3.8						
ZALV	**Zalesovo Beam**	**44.01**	**329**	P	P	07 08 38.8	-0.5
	0.4nm,0.3s,baz=134,slow=4.2,SNR=2.3						
ASAR	**Alice Springs**	**45.13**	**165**	P	P	07 08 48.6	0.0
	0.4nm,0.9s,baz=349,slow=7.3,SNR=3.0						

MAN 20 07:15:00, 20°.26N×121°.90E, h1km, mb4.3, ML3.1, MS2.8, Philippine Islands region

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*IDC **20** 07:39:02.8±3.1, 41°.86N×77°.67E, h0km, mb3.1/1, mb1 3.3/4, mb1mx3.1/27, mbtmp3.3/4, ML3.1/3, Error ellipse: s-maj=43.8km s-min=13.3km az=171.0*
*NNC **20** 07:39:04.9±1.4, 42°.10N×77°.72E, h0km, mb4.0, mpv3.5, Error ellipse: s-maj=9.7km s-min=8.3km az=12.0*
*KNET **20** 07:39:05.9±0.4, 42°.12N×77°.57E, h9km±2km, ml3.5, Error ellipse: s-maj=4.3km s-min=2.2km az=7.0*
*ISCJB **20** 07:39:06.9±0.8, 42°.18N±0°.05×77°.75E±0°.05, h10km, Error ellipse: s-maj=8.0km s-min=4.8km az=156.3*
*BJI **20** 07:39:10.8, 42°.67N×77°.30E, h32km, ML3.1/5*
*NEIC **20** 07:39:14.3±2.0, 42°.49N×77°.41E, h35km, Error ellipse: s-maj=35.3km s-min=8.6km az=151.0*
ISC 20 07:39:08.9±0.7, 42°.23N±0°.05×77°.65E±0°.05, h10km, n27, σ1s28/39, 12C-14D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**1.04**	**272**	⇓P	**Pg**	**07 39 25.1**	**-3.9**
ULHL	74nm,0.1s,SNR=130			⇑S	**Sg**	**07 39 40.2**	**-2.3**
	267nm,0.2s						
KNDC	**Almaty**	**1.11**	**333**	⇑P	**Pb**	**07 39 28.4**	**-1.8**
KNDC				⇑S	**Sg**	**07 39 45.6**	**+0.9**
TKM2	**Tokmak 2**	**1.67**	**295**	⇓P	**Pn**	**07 39 36.8**	**-1.4**
	39nm,0.3s						
TKM2				⇑S	**Sn**	**07 40 00.9**	**+1.4**
	378nm,0.5s						
TKM2	**Tokmak 2**	**1.67**	**295**	⇓P	**Pn**	**07 39 36.8**	**-1.3**
	97nm,0.2s,SNR=161						
TKM2				⇑S	**Sn**	**07 40 00.9**	**+1.3**
	346nm,0.2s						
TKM2	**Tokmak 2**	**1.67**	**295**	*e*Pn	**Pn**	**07 39 36.9**	**-1.3**
TKM2				*e*Sn	**Sn**	**07 40 00.2**	**+0.6**
KZA	**Kyzart**	**1.79**	**266**	⇓P	**Pn**	**07 39 38.1**	**-1.8**
	41nm,0.2s,SNR=18						
KZA				⇓S	**Sn**	**07 40 03.0**	**+0.4**
	155nm,0.3s						
KBK	**Karagaybulak**	**2.04**	**283**	⇓P	**Pn**	**07 39 42.9**	**-0.5**
	42nm,0.2s,SNR=25						
KBK				⇓S	**Sn**	**07 40 12.0**	**+3.1**
	266nm,0.2s						
CHMS	**Chumysh**	**2.27**	**291**	⇑P	**Pn**	**07 39 46.4**	**-0.1**
	16nm,0.2s,SNR=12						
UCH	**Uchtor**	**2.33**	**271**	⇓P	**Pn**	**07 39 47.4**	**+0.2**
	17nm,0.4s,SNR=46						
UCH	**Uchtor**	**2.33**	**271**	*e*Pn	**Pn**	**07 39 47.4**	**+0.1**
UCH				Sn	**Sn**	**07 40 16.1**	**+0.3**
AAK	**Ala-Archa**	**2.37**	**281**	⇓P	**Pn**	**07 39 47.9**	**+0.1**
	29nm,0.2s,SNR=13						
AAK	**Ala-Archa**	**2.37**	**281**	Pn	**Pn**	**07 39 47.7**	**-0.1**
	17nm,0.3s,baz=105,slow=7.4,SNR=38						
AAK				Lg		07 40 20.8	
	25nm,0.3s,baz=53,slow=3.8,SNR=4.1						
AAK	**Ala-Archa**	**2.37**	**281**	Pn	**Pn**	**07 39 47.7**	**-0.1**
AAK				Lg		07 40 20.8	
EKS2	**Erkin-Say**	**2.90**	**280**	*e*Pn	**Pn**	**07 39 55.4**	**+0.3**
EKS2				*e*Sn	**Sb**	**07 40 35.7**	**-0.4**
AML	**Almayashu**	**2.94**	**269**	*e*Pn	**Pn**	**07 39 58.0**	**+2.4**
AML				*e*Sn	**Sb**	**07 40 38.2**	**+0.9**
KSH	**Kashi**	**2.99**	**206**	Pn	**Pg**	**07 40 06.9**	**-0.7**
KSH				Sn	**Sg**	**07 40 50.9**	**+6.0**
KSH				smax			
	comp=N,44nm,1.0s						
KSH				smax			
	comp=E,78nm,0.9s						
KK31	**Karatay Array**	**5.33**	**282**	Pg	**Pb**	**07 40 42.4**	**+0.2**
	comp=E,5.6nm,0.6s,baz=100,slow=16,SNR=51						
KK31				⇑Lg		07 41 52.9	
	comp=E,16nm,0.7s,baz=274,slow=35,SNR=4.1						
MK31	**Makanchi Array**	**5.65**	**34**	⇓Pn	**Pn**	**07 40 33.7**	**+0.8**
	comp=E,0.4nm,0.3s,baz=205,slow=12,SNR=11						
MK31				⇑Lg		07 42 02.2	
	comp=E,3.9nm,0.4s						
MK31	**Makanchi Array**	**5.65**	**34**	*e*Pn	**Pn**	**07 40 33.7**	**+0.8**
MKAR	**Makanchi Array**	**5.65**	**34**	Pn	**Pn**	**07 40 33.3**	**+0.4**
	comp=E,0.4nm,0.3s,baz=211,slow=16,SNR=14						
MKAR				Pg	**Pg**	**07 40 50.0**	**-7.0**
	comp=E,1.1nm,0.3s,baz=214,slow=12,SNR=9.7						
MKAR				Lg		07 41 58.5	
	comp=E,1.0nm,0.3s,baz=232,slow=27,SNR=2.9						
KURK	**Kurchatov**	**8.52**	**4**	⇑Pn	**Pn**	**07 41 15.3**	**+3.0**
	comp=E,0.7nm,0.5s						
KURK				⇑Lg		07 43 35.0	
	comp=E,10.0nm,0.7s						
VOSK	**Vostochnaya**	**11.42**	**339**	⇑Pn	**Pn**	**07 41 51.3**	**-0.7**
	comp=E,2.4nm,0.8s						
VOSK				⇓Lg		07 45 10.7	
	comp=E,8.3nm,1.4s						
BVAR	**Borovoye Array**	**11.85**	**338**	Pn	**Pn**	**07 41 56.1**	**-1.8**
	comp=E,0.2nm,0.3s,baz=129,slow=15,SNR=3.4						
BVAR				Lg		07 45 22.8	
	comp=E,0.2nm,0.3s,baz=153,slow=26,SNR=4.4						
BRVK	**Borovoye**	**11.91**	**338**	⇓Pn	**Pn**	**07 41 51.6**	**-7.0**
	comp=E,5.0nm,0.6s						
BRVK				⇓Lg		07 45 25.3	
	comp=E,9.3nm,1.1s						
ZRNK	**Zerenda**	**12.20**	**335**	⇓Pn	**Pn**	**07 42 02.1**	**-0.5**
	comp=E,1.8nm,0.6s						
ZRNK				⇑Lg		07 45 31.0	
	comp=E,7.7nm,1.4s						
ZALV	**Zalesovo Beam**	**12.66**	**20**	Pn	**Pn**	**07 42 11.1**	**+2.1**
	comp=E,0.2nm,0.3s,baz=189,slow=8.2,SNR=2.8						
SONM	**Songino Array**	**21.01**	**65**	P	**P**	**07 43 49.3**	**-3.1**
	comp=E,0.4nm,0.4s,baz=282,slow=10,SNR=3.2						

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*IDC **20** 07:59:26.6±2.0, 36°.88N×29°.15E, h0km, mb3.8/1, mb1 3.6/4, mb1mx3.3/26, mbtmp3.6/4, ML3.4/3, Error ellipse: s-maj=36.9km s-min=24.4km az=161.0*
*DDA **20** 07:59:26.2, 36°.94N×29°.15E, h7km±7km, Md3.3*
*NEIC **20** 07:59:27.0, 37°.04N×29°.13E, h6km, MD3.4(ISK), After ISK.*
*ISCJB **20** 07:59:27.5±0.5, 36°.98N±0°.03×29°.13E±0°.03, h8km±4km, Error ellipse: s-maj=4.8km s-min=3.4km az=177.7*
*CSEM **20** 07:59:27.4±0.1, 37°.01N×29°.11E, h2km, ML3.2, Error ellipse: s-maj=4.1km s-min=2.6km az=5.0*
*ISK **20** 07:59:27.4, 37°.04N×29°.12E, h5km, ML3.2*
ISC 20 07:59:27.8±0.5, 36°.97N±0°.03×29°.12E±0°.02, h6km±3km, n78, σ0s90/100, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.35**	**59**	*e*PG	**Pg**	**07 59 33.5**	**-1.1**
GLHS				*e*SG	**Sg**	**07 59 39.8**	**+0.5**
GLHS	**Glhisar (BURDU**	**0.35**	**59**	*e*Pg	**Pg**	**07 59 33.5**	**-1.1**
GLHS				*e*Sg	**Sg**	**07 59 39.8**	**+0.6**
TURN	**Turunc**	**0.43**	**257**	*i* P	**Pg**	**07 59 41.2**	**+5.2**
TURN				*i* S	**Sg**	**07 59 51.1**	**+10**
GOLH	**Golhisar**	**0.44**	**53**	*i* P	**Pg**	**07 59 34.9**	**-1.3**
GOLH				*i* S	**Sg**	**07 59 42.2**	**+0.2**
GOLH	**Golhisar**	**0.44**	**53**	*i* P	**Pg**	**07 59 34.9**	**-1.4**
GOLH				*i* S	**Sg**	**07 59 42.2**	**+0.2**
ELL	**Elmali**	**0.67**	**109**	*e*PG	**Pg**	**07 59 41.5**	**+0.8**
ELL				*e*SG	**Sg**	**07 59 50.8**	**+1.4**
ELL	**Elmali**	**0.67**	**109**	*e*Pg	**Pg**	**07 59 41.5**	**+0.8**
ELL				*e*Sg	**Sg**	**07 59 50.8**	**+1.4**
YER	**Yerkesik**	**0.69**	**284**	*e*PG	**Pg**	**07 59 41.0**	**0.0**
YER				*e*SG	**Sg**	**07 59 51.0**	**+1.0**
YER	**Yerkesik**	**0.69**	**284**	*e*Pg	**Pg**	**07 59 41.0**	**0.0**
YER				*e*Sg	**Sg**	**07 59 51.0**	**+1.1**
DNZL	**Cakiroluk**	**0.72**	**355**	*i* P	**Pg**	**07 59 40.4**	**-1.1**
DNZL				*i* S	**Sg**	**07 59 52.7**	**+1.9**
DNZL	**Cakiroluk**	**0.72**	**355**	*i* P	**Pg**	**07 59 40.4**	**-1.1**
DNZL				*i* S	**Sg**	**07 59 52.7**	**+1.8**
DENT	**Denizli**	**0.78**	**355**	*e*PG	**Pg**	**07 59 41.5**	**-1.2**
DENT	**Denizli**	**0.78**	**355**	*e*Pg	**Pg**	**07 59 41.5**	**-1.3**
AKAS	**Kas**	**0.83**	**152**	*i* P	**Pg**	**07 59 43.3**	**-0.5**
AKAS				*i* S	**Sg**	**07 59 51.3**	**-3.3**
AKAS	**Kas**	**0.83**	**152**	*i* P	**Pg**	**07 59 43.3**	**-0.5**
KSL	**Kastellorizon**	**0.90**	**155**	*e*P	**Pg**	**07 59 45.0**	**-0.1**
KORT	**Korkueli**	**0.99**	**88**	*i* P	**Pg**	**07 59 45.9**	**-0.8**
KORT				*i* S	**Sg**	**07 59 51.4**	**-8.1**
KORT	**Korkueli**	**0.99**	**88**	*i* P	**Pg**	**07 59 45.9**	**-0.8**
ARG	**Arkhangelos**	**1.10**	**227**	*e*P	**Pg**	**07 59 50.0**	**+1.2**
MLSB	**Milas**	**1.12**	**287**	*e*PN	**Pn**	**07 59 48.9**	**-1.1**
MLSB	**Milas**	**1.12**	**287**	*e*Pn	**Pn**	**07 59 48.9**	**-1.1**
AYDN	**Tasoluk**	**1.20**	**305**	*i* P	**Pg**	**07 59 50.3**	**-0.5**
AYDN				*i* S	**Sg**	**07 59 54.8**	**-12**
AYDN	**Tasoluk**	**1.20**	**305**	*i* P	**Pg**	**07 59 50.3**	**-0.5**
ANTB	**Antalya**	**1.23**	**93**	*e*PN	**Pn**	**07 59 52.0**	**+0.5**
ANTB	**Antalya**	**1.23**	**93**	*e*Pn	**Pn**	**07 59 52.0**	**+0.5**
DAT	**Datca**	**1.26**	**259**	*e*PN	**Pn**	**07 59 52.3**	**+0.4**
DAT	**Datca**	**1.26**	**259**	*e*Pn	**Pn**	**07 59 52.3**	**+0.4**
BCK	**Bucak**	**1.27**	**67**	*e*PN	**Pn**	**07 59 51.7**	**-0.4**
BCK	**Bucak**	**1.27**	**67**	*e*Pn	**Pn**	**07 59 51.7**	**-0.4**
BDRM	**Kayabasi**	**1.34**	**274**	*i* P	**Pn**	**07 59 52.8**	**-0.2**
BDRM	**Kayabasi**	**1.34**	**274**	*i* P	**Pn**	**07 59 52.8**	**-0.3**
KHL	**Karahalli**	**1.39**	**13**	*e*PN	**Pn**	**07 59 52.6**	**-1.1**
KHL	**Karahalli**	**1.39**	**13**	*e*Pn	**Pn**	**07 59 52.6**	**-1.0**
ISP	**Isparta**	**1.40**	**52**	*e*PN	**Pn**	**07 59 54.4**	**+0.5**
ISP	**Isparta**	**1.40**	**52**	*e*Pn	**Pn**	**07 59 53.4**	**-0.5**
ISP				*e*Sn	**Sn**	**08 00 14.0**	**+1.3**
ISP	**Isparta**	**1.40**	**52**	*e*Pn	**Pn**	**07 59 54.4**	**+0.5**
ISP				*e*Sn	**Sn**	**08 00 14.0**	**+1.3**
KHAL	**Karahalli**	**1.43**	**12**	*i* P	**Pn**	**07 59 52.5**	**-1.7**
KHAL	**Karahalli**	**1.43**	**12**	*i* P	**Pn**	**07 59 52.5**	**-1.7**
BODT	**Bodrum**	**1.45**	**274**	*e*PN	**Pn**	**07 59 54.9**	**+0.4**
BODT	**Bodrum**	**1.45**	**274**	*e*Pn	**Pn**	**07 59 54.9**	**+0.4**
KULA	**Kula-Manisa**	**1.58**	**347**	*e*PN	**Pn**	**07 59 55.8**	**-0.5**
KULA	**Kula-Manisa**	**1.58**	**347**	*e*Pn	**Pn**	**07 59 55.8**	**-0.5**
SUTC	**Sutluce-Ispart**	**1.58**	**71**	*e*PN	**Pn**	**07 59 56.8**	**+0.5**
SUTC	**Sutluce-Ispart**	**1.58**	**71**	*e*Pn	**Pn**	**07 59 56.8**	**+0.4**
SHUT	**Suhut-Afyon**	**1.94**	**35**	*e*PN	**Pn**	**08 00 00.7**	**-0.6**
SHUT	**Suhut-Afyon**	**1.94**	**35**	*e*Pn	**Pn**	**08 00 00.7**	**-0.6**
SMG	**Samos**	**1.96**	**293**	*e*P	**Pn**	**08 00 01.5**	**-0.1**
IZM	**Izmir**	**2.05**	**315**	*e*PN	**Pn**	**08 00 03.2**	**+0.5**
IZM	**Izmir**	**2.05**	**315**	*e*Pn	**Pn**	**08 00 03.2**	**+0.5**
KARP	**Karpathos**	**2.13**	**229**	*e*P	**Pn**	**08 00 04.5**	**+0.6**
AKS	**Akhisar**	**2.17**	**332**	*e*PN	**Pn**	**08 00 04.2**	**-0.1**
AKS	**Akhisar**	**2.17**	**332**	*e*Pn	**Pn**	**08 00 04.2**	**-0.2**
BLCB	**Balcova**	**2.17**	**311**	*e*PN	**Pn**	**08 00 05.0**	**+0.5**
BLCB	**Balcova**	**2.17**	**311**	*e*Pn	**Pn**	**08 00 05.0**	**+0.6**
ALT	**Altintas**	**2.22**	**20**	*e*PN	**Pn**	**08 00 04.8**	**-0.4**
ALT	**Altintas**	**2.22**	**20**	*e*Pn	**Pn**	**08 00 04.8**	**-0.3**
HDMB	**Hadim**	**2.70**	**89**	*e*PN	**Pn**	**08 00 12.9**	**+1.3**
HDMB	**Hadim**	**2.70**	**89**	*e*Pn	**Pn**	**08 00 12.9**	**+1.2**
KONT	**Konya--Tatoy**	**2.75**	**68**	*e*PN	**Pn**	**08 00 12.8**	**+0.3**
KONT	**Konya--Tatoy**	**2.75**	**68**	*e*Pn	**Pn**	**08 00 12.8**	**+0.3**
LADK	**Ladik-KONYA**	**2.85**	**64**	*e*PN	**Pn**	**08 00 14.3**	**+0.4**
LADK	**Ladik-KONYA**	**2.85**	**64**	*e*Pn	**Pn**	**08 00 14.3**	**+0.5**
KIZT	**Kizilcal**	**2.90**	**48**	*e*PN	**Pn**	**08 00 15.2**	**+0.8**
KIZT	**Kizilcal**	**2.90**	**48**	*e*Pn	**Pn**	**08 00 15.2**	**+0.8**
SVRH	**Sivrihisar-ESK**	**3.11**	**37**	*e*PN	**Pn**	**08 00 17.6**	**+0.2**
SVRH	**Sivrihisar-ESK**	**3.11**	**37**	*e*Pn	**Pn**	**08 00 17.6**	**+0.2**
PRK	**Paraskevi**	**3.19**	**316**	*e*P	**Pn**	**08 00 18.0**	**-0.5**
NPS	**Neapolis**	**3.31**	**240**	*e*P	**Pn**	**08 00 21.0**	**+0.8**
IKL	**Isikli**	**3.75**	**100**	*e*PN	**Pn**	**08 00 28.1**	**+2.0**
IKL	**Isikli**	**3.75**	**100**	*e*Pn	**Pn**	**08 00 28.1**	**+2.0**
BR131	**Keskin Array S**	**4.49**	**51**	*e*Pn	**Pn**	**08 00 36.9**	**+0.6**
BR131				*e*Sn	**Sn**	**08 01 29.0**	**+0.1**
BR131	**Keskin Array S**	**4.49**	**51**	*e*Pn	**Pn**	**08 00 36.9**	**+0.6**
BR131				*e*Sn	**Sn**	**08 01 29.0**	**+0.1**
BRTR	**Keskin Array B**	**4.49**	**51**	Pn	**Pn**	**08 00 36.9**	**+0.5**
	0.3nm,0.3s,baz=226,slow=14,SNR=12						
BRTR				Sn	**Sn**	**08 01 29.0**	**+0.1**
	0.3nm,0.3s,baz=243,slow=16,SNR=9.0						
BRTR	**Keskin Array B**	**4.49**	**51**	Pn	**Pn**	**08 00 36.9**	**+0.5**
BRTR				Sn	**Sn**	**08 01 29.0**	**+0.1**
BRTR	**Keskin Array B**	**4.49**	**51**	Pn	**Pn**	**08 00 36.9**	**+0.6**
BRTR				Sn	**Sn**	**08 01 29.0**	**+0.1**
MMAI	**Mount Meron Ar**	**6.49**	**126**	Pn	**Pn**	**08 01 02.8**	**-1.1**
	4.6nm,0.3s,baz=312,slow=12,SNR=12						
MMAI				Sn	**Sn**	**08 02 16.6**	**-1.7**
	0.9nm,0.3s,baz=302,slow=30,SNR=2.4						
ASF	**Jabal al Asfar**	**8.00**	**124**	Pn	**Pn**	**08 01 24.2**	**-0.4**
	0.5nm,0.3s,baz=183,slow=10.0,SNR=2.8						
TORD	**Torodi Ar. Bea**	**34.13**	**233**	P	**P**	**08 06 12.7**	**-0.8**
	0.7nm,0.5s,baz=33,slow=8.1,SNR=7.2						

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*ISCJB **20** 08:09:39.4±0.5, 38°.37N±0°.03×21°.81E±0°.03, h11km±5km, Error ellipse: s-maj=5.5km s-min=4.1km az=170.4*
*ATH **20** 08:09:39.7, 38°.37N×21°.83E, h5km, MD2.9/5*
*CSEM **20** 08:09:39.5±0.1, 38°.37N×21°.81E, h6km±1km, ML2.7/4, Error ellipse: s-maj=2.7km s-min=2.2km az=8.0*
*NEIC **20** 08:09:39.7, 38°.37N×21°.83E, h5km, MD3.9(ATH), After ATH.*
*THE **20** 08:09:39.8, 38°.36N×21°.80E, h10km, ML2.7/4, Error ellipse: s-maj=0.9km s-min=0.5km az=68.0*
ISC 20 08:09:39.9±0.5, 38°.37N±0°.03×21°.82E±0°.03, h12km±5km, n34, σ0s64/50, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	**Efpalio**	**0.09**	**47**	P	**Pg**	**08 09 42.5**	**0.0**
EFP				S	**Sg**	**08 09 44.6**	**+0.2**
EFP	**Efpalio**	**0.09**	**47**	P	**Pg**	**08 09 42.5**	**0.0**
EFP				S	**Sg**	**08 09 44.6**	**+0.2**
UPR	**University Cam**	**0.09**	**200**	P	**Pg**	**08 09 42.1**	**-0.4**
UPR				S	**Sg**	**08 09 43.8**	**-0.6**
UPR	**University Cam**	**0.09**	**200**	P	**Pg**	**08 09 42.1**	**-0.4**
UPR				S	**Sg**	**08 09 43.8**	**-0.6**
RLS	**Riolos of Patr**	**0.42**	**222**	*e*Pb	**Pg**	**08 09 47.8**	**-0.3**
RLS				*e*Sb	**Sg**	**08 09 54.3**	**+0.6**
RLS	**Riolos of Patr**	**0.42**	**222**	*e*PB	**Pg**	**08 09 47.8**	**-0.3**
RLS				*e*SB	**Sg**	**08 09 54.3**	**+0.6**
RLS	**Riolos of Patr**	**0.42**	**222**	*e*Pb	**Pg**	**08 09 47.8**	**-0.3**
RLS				*e*Sb	**Sg**	**08 09 54.3**	**+0.6**
EVR	**Evrytania**	**0.55**	**359**	*e*Pb	**Pg**	**08 09 50.4**	**-0.2**
EVR	**Evrytania**	**0.55**	**359**	*e*PB	**Pg**	**08 09 50.4**	**-0.2**
EVR	**Evrytania**	**0.55**	**359**	*e*Pb	**Pg**	**08 09 50.4**	**-0.2**
DSF	**Desfina**	**0.55**	**85**	P	**Pg**	**08 09 50.4**	**-0.3**
DSF				S	**Sg**	**08 09 59.4**	**+1.4**
DSF	**Desfina**	**0.55**	**85**	P	**Pg**	**08 09 50.4**	**-0.3**
DSF				S	**Sg**	**08 09 59.4**	**+1.4**
GUR	**Goura**	**0.59**	**136**	P	**Pg**	**08 09 51.0**	**-0.4**
GUR				S	**Sg**	**08 09 59.7**	**+0.5**
GUR	**Goura**	**0.59**	**136**	P	**Pg**	**08 09 51.0**	**-0.4**
GUR				S	**Sg**	**08 09 59.7**	**+0.5**
AGG	**Agios Georgios**	**0.77**	**31**	P	**Pg**	**08 09 54.0**	**-0.7**
AGG	**Agios Georgios**	**0.77**	**31**	P	**Pg**	**08 09 54.0**	**-0.7**
KFL	**Anninata**	**0.85**	**253**	P	**Pg**	**08 09 55.7**	**-0.7**
KFL	**Anninata**	**0.85**	**253**	P	**Pg**	**08 09 55.7**	**-0.7**
LTK	**Loutraki**	**0.96**	**111**	P	**Pg**	**08 09 58.2**	**-0.2**
LTK	**Loutraki**	**0.96**	**111**	P	**Pg**	**08 09 58.2**	**-0.2**
VLS	**Valsamata**	**0.99**	**259**	*e*Pb	**Pg**	**08 09 59.0**	**+0.1**
VLS				*e*Sb	**Sg**	**08 10 13.4**	**+1.6**
VLS	**Valsamata**	**0.99**	**259**	*e*PB	**Pg**	**08 09 59.0**	**+0.1**
VLS				*e*SB	**Sg**	**08 10 13.4**	**+1.6**
VLS	**Valsamata**	**0.99**	**259**	P	**Pg**	**08 09 57.6**	**-1.3**
VLS	**Valsamata**	**0.99**	**259**	P	**Pg**	**08 09 57.6**	**-1.3**
VLS	**Valsamata**	**0.99**	**259**	*e*Pb	**Pg**	**08 09 59.0**	**+0.1**
VLS				*e*Sb	**Sg**	**08 10 13.4**	**+1.6**
LKD2	**Lefkada island**	**1.01**	**295**	P	**Pg**	**08 09 58.5**	**-0.7**
LKD2				S	**Sg**	**08 10 13.0**	**+0.6**
LKD2	**Lefkada island**	**1.01**	**295**	P	**Pg**	**08 09 58.5**	**-0.7**
LKD2				S	**Sg**	**08 10 13.0**	**+0.6**
ITM	**Ithomi**	**1.19**	**176**	*e*Pb	**Pb**	**08 10 02.4**	**+0.1**
ITM	**Ithomi**	**1.19**	**176**	*e*PB	**Pb**	**08 10 02.4**	**+0.1**
ITM	**Ithomi**	**1.19**	**176**	P	**Pn**	**08 10 01.9**	**-0.4**
ITM	**Ithomi**	**1.19**	**176**	P	**Pn**	**08 10 01.9**	**-0.4**
ITM	**Ithomi**	**1.19**	**176**	*e*Pb	**Pb**	**08 10 02.4**	**+0.1**
THL	**Klokotos Trika**	**1.21**	**7**	*e*PB	**Pb**	**08 10 02.9**	**+0.3**
THL	**Klokotos Trika**	**1.21**	**7**	*e*Pb	**Pb**	**08 10 02.9**	**+0.3**

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*NEIC **20** 08:11:33.9±0.7, 10°.96S×164°.57E, h10km, mb4.6/3, Error ellipse: s-maj=15.9km s-min=13.7km az=127.0*
*ISCJB **20** 08:11:36.8±2.4, 11°.1S±0°.1×164°.4E±0°.1, h40km±19km, mb4.0/9, MS3.8/6, Error ellipse: s-maj=20.4km s-min=13.6km az=139.0*
*IDC **20** 08:11:40.8±5.9, 11°.00S×164°.34E, h62km±47km, mb3.7/8, mb1 3.9/10, mb1mx3.7/19, mbtmp3.8/10, ML4.0/2, MS3.7/8, Ms1 3.7/8, ms1mx3.3/26, Error ellipse: s-maj=38.9km s-min=22.1km az=116.0*
ISC 20 08:11:38.8±1.9, 11°.1S±0°.1×164°.4E±0°.1, h43km±16km, n21, σ0s89/16, mb4.0/9, MS3.8/6, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.71**	**290**	P	**Pn**	**08 12 48.1**	**+0.7**
	11nm,0.3s,baz=117,slow=4.5,S

MOS ***20*** *08:21:40.3±1.2, 4.'90N×62.'01E, h10km, mb5.4/89, Error ellipse: s-maj=7.7km s-min=3.8km az=117.5*
IDC ***20*** *08:21:41.0±0.4, 4.'91N×62.'19E, h0km, mb4.6/29, mb1 4.7/29, mb1mx4.7/30, mbtmp4.6/29, MS4.5/10, Ms1 4.5/10, ms1mx4.3/13, Error ellipse: s-maj=12.3km s-min=11.5km az=138.0*
NEIC ***20*** *08:21:42.2±0.2, 4.'87N×62.'09E, h10km, mb5.3/93, Error ellipse: s-maj=6.3km s-min=5.4km az=201.0*
GCMT ***20*** *08:21:43.8±0.2, 4.'81N×62.'13E, h12km, MW5.3, Moment Tensor Solution. s55,c82; s95,c176; Moment tensor: Scale 10^{16}Nm; M_{rr}-9.13±.14; $M_{\theta\theta}$4.98±.15; $M_{\phi\phi}$4.15±.15; $M_{r\theta}$3.65±.42; $M_{\theta\phi}$-4.40±.11; $M_{\phi r}$0.32±.43; Best double couple: $M_0$9.70000×10^{16} NP1:ϕ_s146.00000°, δ39.00000°, λ-67.00000°. NP2:ϕ_s298.00000°, δ55.00000°, λ-107.00000°. Principal axes: T 9.3000, Plg8.0000°, Azm40.0000°; N 0.8000, Plg14.0000°, Azm308.0000°; P -10.2000, Plg74.0000°, Azm159.0000°; Data Used: II IU IC G CN.*
SZGRF ***20*** *08:21:47.8, 5.'32N×61.'44E, h21km, mb5.2, MS4.1, Carlsberg Ridge*
DJA ***20*** *08:22:13, 5.'01N×61.'90E, h295km, mb4.7/28*
ISC 20 08:21:42.4±0.2, 4.'87N±0.'03×62.'09E±0.'02, h10km, (h17km±1.1km:pP-P), n532, σ1^{s}16/526, mb5.0/210, MS4.5/53, 36C-11D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase Op	ID	ISC	Time h m s	Res ISC
MSEY	**Mahe Island**	**11.55**	**215**	*e*P		**Pn**	**08 24 24.5**	**-3.0**
MSEY				pmax		pmax		
	comp=Z,109nm,1.2s							
MSEY	**Mahe Island**	**11.55**	**215**	*e*Pn		**Pn**	**08 24 24.5**	**-3.0**
	comp=Z,109nm,1.2s							
MSEY				*e*Sn		**Sn**	**08 26 23.6**	**-13**
TRD	**Trivandrum**	**15.21**	**75**	⇓*e*PKP		**Pn**	**08 25 25.0**	**+7.6**
TRD				*ex*		x	08 28 33.0	
KAD	**Karad**	**17.12**	**43**	*e*PKP		**Pn**	**08 25 43.3**	**+1.3**
KAD				AMb		AMB	08 25 47.2	
	comp=Z,94nm,1.5s							
POO	**Poona**	**17.79**	**39**	*e*PKP		**Pn**	**08 25 50.0**	**-0.3**
JMDO	**Jabal Madar**	**17.82**	**348**	Pn		**Pn**	**08 25 54.5**	**+3.8**
	SNR=6.9							
BSY	**Bisya**	**18.39**	**346**	P		**Pn**	**08 26 01.1**	**+3.5**
	SNR=18							
SMDO	**Samad**	**18.50**	**348**	P		**Pn**	**08 26 02.3**	**+3.3**
	SNR=6.8							
ARQ	**Araqi**	**19.13**	**344**	P		**Pn**	**08 26 09.0**	**+2.4**
	SNR=34							
HOQ	**Hoqain**	**19.17**	**347**	P		**Pn**	**08 26 11.1**	**+4.0**
	SNR=21							
BHJ	**Bhuj**	**19.69**	**21**	*e*PKP		**Pn**	**08 26 10.6**	**-2.7**
BHJ				AMb		AMB	08 26 26.3	
	comp=Z,121nm,1.0s							
ATD	**Arta Tunnel**	**20.15**	**290**	P		**P**	**08 26 19.5**	**+2.4**
	comp=Z,50nm,0.9s,baz=79,slow=5.7,SNR=12							
ATD				LR		LR	08 32 52.2	
	comp=Z,869nm,20.3s,MS4.1,baz=96,slow=33							
HYB	**Hyderabad**	**20.38**	**51**	*i* P		**P**	**08 26 21.0**	**+1.5**
HYB				*e*S		**S**	**08 30 06.0**	**-2.1**
HYB				LR		LR	08 36 00.0	
	comp=Z,6.8nm,18.0s							
ASHO	**Ashiyiah**	**20.54**	**344**	P		**P**	**08 26 24.1**	**+2.9**
	SNR=18							
HATD	**Hatta, Dubai**	**20.65**	**345**	P		**P**	**08 26 25.4**	**+3.0**
	SNR=30							
ASUD	**Al Ashush, Dub**	**20.69**	**342**	P		**P**	**08 26 24.5**	**+1.7**
	SNR=24							
NAZ	**Nazwa, Dubai**	**20.94**	**343**	P		**P**	**08 26 28.1**	**+2.6**
	SNR=25							
AKL	**Akola**	**21.41**	**41**	*e*PKP		**P**	**08 26 30.3**	**-0.3**
AKL				*ex*		x	08 26 36.5	
	comp=Z,147nm,1.4s							
AKL				*i* x		x	08 32 28.5	
DESE	**Dese**	**23.07**	**287**	*e*P		**P**	**08 26 53.2**	**+4.8**
BHPL	**Bhopal**	**23.51**	**38**	*e*PKP		**P**	**08 26 53.1**	**+0.2**
BHPL				AMb		AMB	08 27 03.0	
	comp=Z,119nm,1.7s,mb5.0							
VIS	**Vishakhapatnam**	**24.40**	**57**	*i* P		**P**	**08 27 00.2**	**-0.9**
AJM	**Ajmer**	**24.62**	**28**	*e*PKP		**P**	**08 27 03.3**	**+0.2**
KMBO	**Kilima Mbogo**	**25.51**	**257**	P		**P**	**08 27 14.4**	**+3.0**
	comp=Z,16nm,0.9s,mb4.6,baz=360,slow=24,SNR=25							
KMBO				LR		LR	08 36 46.3	
	comp=Z,2μm,19.7s,MS4.6,baz=90,slow=35							
KMBO	**Kilima Mbogo**	**25.51**	**257**	*e*P		**P**	**08 27 13.4**	**+2.0**
KMBO				pmax		pmax		
	comp=Z,66nm,1.3s							
KMBO	**Kilima Mbogo**	**25.51**	**257**	*e*P		**P**	**08 27 13.4**	**+2.0**
	comp=Z,66nm,1.3s,mb5.0							
KMBO	**Kilima Mbogo**	**25.51**	**257**	P		**P**	**08 27 15.1**	**+3.7**
	SNR=14							
NDI	**New Delhi**	**27.70**	**30**	*ex*		**P**	**08 27 34.0**	**+3.1**
DDI	**Dehra Dun**	**29.46**	**29**	*ex*		sP	08 27 54.0	+3.1
BOK	**Bokaro**	**29.66**	**48**	*e*PKP		**P**	**08 27 50.5**	**+2.0**
KBL	**Kabul**	**30.22**	**11**	P		**P**	**08 27 55.8**	**+2.5**
KBL				pmax		pmax		
	comp=Z,19nm,1.2s,mb4.7							
KBL	**Kabul**	**30.22**	**11**	P		**P**	**08 27 55.8**	**+2.5**
	comp=Z,19nm,1.2s,mb4.7							
SHL	**Shillong**	**35.20**	**51**	*e*PKP		**P**	**08 28 37.0**	**0.0**
SHL				*ex*		x	08 34 53.0	
KSH	**Kashi**	**36.71**	**18**	P		**P**	**08 28 48.8**	**-0.9**
KSH				pP		pP	08 28 52.3	-0.5
KSH				sP		sP	08 28 55.1	+1.0
KSH				PP		PP	08 30 11.3	-2.1
KSH				PcP		PcP	08 31 11.6	-0.7
KSH				S		**S**	**08 34 28.1**	**-5.2**
KSH				ScP		ScP	08 34 57.3	-2.1
KSH				ScS		ScS	08 39 02.5	-3.5
KSH				pmax		pmax		
	comp=Z,28nm,1.3s,mb4.9							
KSH				pmax		pmax		
	comp=Z,110nm,3.0s							
KSH				LR		LR		
	comp=N,1μm,18.0s,MS4.8							
KSH				LR		LR		
	comp=E,430nm,13.0s,MS4.8							
KSH				LR		LR		
	comp=Z,940nm,15.5s,MS4.7							
LSA	**Lhasa**	**36.93**	**45**	*e*P		**P**	**08 28 53.3**	**+1.5**
LSA				pmax		pmax		
	comp=Z,84nm,1.4s,mb5.4							
LSA	**Lhasa**	**36.93**	**45**	*e*P		**P**	**08 28 53.3**	**+1.6**
	comp=Z,84nm,1.4s,mb5.4							
MMAI	**Mount Meron Ar**	**37.46**	**322**	P		**P**	**08 28 59.5**	**+3.2**
	comp=Z,0.5nm,0.3s,mb3.9,baz=210,slow=11,SNR=3.2							
MMAI				PP		PP	08 30 23.8	+2.0
	comp=Z,1.3nm,0.5s,baz=157,slow=12,SNR=2.9							
MMAI				LR		LR	08 43 59.7	
	comp=Z,722nm,18.3s,MS4.5,baz=155,slow=36							
MNSI	**Mandailing Nat**	**37.66**	**95**	P		**P**	**08 29 07.3**	**+9.1**
	comp=Z,4μmcomp=Z,27nm,1.4s,mb4.8							
BDT	**Bhumibol Dam**	**38.17**	**68**	P		**P**	**08 29 04.0**	**+1.5**
CM31	**Chiang Mai Arr**	**38.44**	**66**	*e*P		**P**	**08 29 05.7**	**+1.0**
	comp=Z,3.3nm,0.5s,mb4.3							
CMAR	**Chiang Mai Arr**	**38.44**	**66**	P		**P**	**08 29 05.0**	**+0.3**
	comp=Z,5.5nm,0.9s,mb4.3,baz=259,slow=9.2,SNR=18							
CMAR				PP		PP	08 30 39.3	+6.7
	comp=Z,1.2nm,0.4s,baz=259,slow=9.1,SNR=3.7							
CMAR				PcP		PcP	08 31 19.3	+1.2
	comp=Z,1.2nm,0.4s,baz=248,slow=4.6,SNR=4.6							
CMAR				LR		LR	08 45 50.5	
	comp=Z,436nm,18.8s,MS4.3,baz=268,slow=38							
CMAR	**Chiang Mai Arr**	**38.44**	**66**	P		**P**	**08 29 05.0**	**+0.3**
CMAR							08 30 39.3	
CMAR							08 31 19.3	
GNI	**Garni**	**38.45**	**338**	⇑*e*P		**P**	**08 29 04.2**	**-0.2**
GNI				pmax		pmax		
	comp=Z,72nm,1.7s							
GNI	**Garni**	**38.45**	**338**	*e*P		**P**	**08 29 04.8**	**+0.3**
	comp=Z,138nm,1.6s,mb5.4							
GNI				*e*PP		PP	08 30 35.1	+2.7
GNI	**Garni**	**38.45**	**338**	P		**P**	**08 29 07.1**	**+2.7**
	SNR=13							
CHG	**Chiang Mai**	**38.53**	**66**	⇑P		**P**	**08 29 06.9**	**+1.4**
	comp=Z,31nm,1.0s,mb5.0							
CHTO	**Chiang Mai**	**38.53**	**66**	*e*P		**P**	**08 29 06.1**	**+0.6**
CHTO				pmax		pmax		
	comp=Z,46nm,1.3s,mb5.0							
CHTO	**Chiang Mai**	**38.53**	**66**	*e*P		**P**	**08 29 06.1**	**+0.6**
	comp=Z,46nm,1.3s,mb5.0							
CHTO	**Chiang Mai**	**38.53**	**66**	P		**P**	**08 29 06.1**	**+0.6**
	comp=Z,40nm,1.6s,mb4.9							
CHTO	**Chiang Mai**	**38.53**	**66**	P		**P**	**08 29 08.3**	**+2.8**
	SNR=9.9							
PPI	**Padang Panjang**	**38.63**	**97**	P		**P**	**08 29 14.8**	**+8.4**
	comp=Z,4μmcomp=Z,31nm,1.5s,mb4.8							
UCH	**Uchtor**	**38.81**	**15**	P		**P**	**08 29 10.8**	**+3.3**
	SNR=8.6							
KZA	**Kyzart**	**38.87**	**16**	P		**P**	**08 29 10.7**	**+2.8**
	SNR=36							
EKS2	**Erkin-Say**	**39.04**	**14**	P		**P**	**08 29 12.2**	**+2.8**
	SNR=30							
LSZ	**Lusaka**	**39.09**	**239**	P		**P**	**08 29 11.3**	**+1.1**
	comp=Z,1.5nm,0.3s,mb4.2,baz=64,slow=7.7,SNR=8.2							
LSZ				PcP		PcP	08 31 20.6	+0.5
	comp=Z,3.1nm,0.9s,baz=85,slow=7.0,SNR=3.1							
LSZ	**Lusaka**	**39.09**	**239**	*e*P		**P**	**08 29 10.6**	**+0.5**
LSZ				*e*			08 31 22.5	
LSZ				pmax		pmax		
	comp=Z,29nm,1.4s,mb4.8							
LSZ	**Lusaka**	**39.09**	**239**	*e*P		**P**	**08 29 10.6**	**+0.5**
	comp=Z,29nm,1.4s,mb4.8							
LSZ				*e*PcP		PcP	08 31 22.5	+2.4
LSZ	**Lusaka**	**39.09**	**239**	P		**P**	**08 29 13.2**	**+3.1**
	SNR=5.2							
AAK	**Ala-Archa**	**39.19**	**15**	P		**P**	**08 29 13.4**	**+2.8**
	comp=Z,102nm,1.4s,mb5.4,SNR=6.1							
AAK	**Ala-Archa**	**39.19**	**15**	P		**P**	**08 29 10.8**	**+0.2**
	comp=Z,1.7nm,0.4s,mb4.2,baz=211,slow=5.9,SNR=6.7							
AAK				PP		PP	08 30 47.2	+6.6
	comp=Z,1.9nm,0.3s,baz=183,slow=12,SNR=3.3							
AAK	**Ala-Archa**	**39.19**	**15**	*e i*P		**P**	**08 29 11.5**	**+0.9**
AAK	**Ala-Archa**	**39.19**	**15**	*e*P		**P**	**08 29 12.2**	**+1.6**
	comp=Z,38nm,1.4s,mb4.9							
AAK	**Ala-Archa**	**39.19**	**15**	P		**P**	**08 29 13.2**	**+2.6**
	comp=Z,113nmcomp=Z,5.9nm,1.7s,mb4.0							
AAK	**Ala-Archa**	**39.19**	**15**	P		**P**	**08 29 13.5**	**+2.9**
	SNR=16							
KBK	**Karagaybulak**	**39.33**	**15**	P		**P**	**08 29 14.7**	**+3.0**
	SNR=8.3							
CHMS	**Chumysh**	**39.60**	**15**	P		**P**	**08 29 16.5**	**+2.5**
	SNR=5.4							
SDSI	**Sungai Dareh**	**39.72**	**97**	P		**P**	**08 29 21.7**	**+6.2**
	comp=Z,28nm,1.5s,mb4.8							
TKM2	**Tokmak 2**	**39.74**	**16**	P		**P**	**08 29 18.0**	**+2.7**
	SNR=10							
USP	**Ospenovka**	**39.79**	**14**	P		**P**	**08 29 17.0**	**+1.4**
	SNR=9.0							
MAK	**Makhachkala**	**40.08**	**343**	*e*P		**P**	**08 29 18.7**	**+0.7**
MAK				*e*			08 30 50.1	
MAK				*i*			08 31 18.8	
MAK				*e*S		**S**	**08 35 24.1**	**0.0**
MAK				*e*SSS			08 38 51.0	
MAK				pmax		pmax		
	comp=Z,25nm,0.3s,mb5.4							
MAK				MLR		MLR		
	comp=Z,401nm,18.0s,MS4.3							
KIV	**Kislovodsk**	**42.52**	**339**	*e*P		**P**	**08 29 39.6**	**+1.6**
KIV				*e*			08 31 18.0	
KIV				*e*S		**S**	**08 36 01.9**	**+1.6**
KIV				pmax		pmax		
	comp=Z,17nm,1.2s,mb4.7							
KIV				MLR		MLR		
	comp=Z,171nm,16.0s,MS4.0							
KIV	**Kislovodsk**	**42.52**	**339**	P		**P**	**08 29 40.6**	**+2.5**
	SNR=7.7							
MDSI	**Maura Dua**	**43.06**	**102**	P		**P**	**08 29 44.7**	**+1.8**
	comp=Z,20nm,1.5s,mb4.6							
BR131	**Keskin Array S**	**43.17**	**328**	*e*P		**P**	**08 29 44.0**	**+0.6**
	comp=Z,3.4nm,0.8s,mb4.1							
BRTR	**Keskin Array B**	**43.17**	**328**	P		**P**	**08 29 44.0**	**+0.6**
	comp=Z,5.1nm,1.0s,mb4.2,baz=146,slow=9.0,SNR=24							
BRTR				PP		PP	08 31 28.0	+4.3
	comp=Z,2.8nm,0.9s,baz=145,slow=8.1,SNR=2.8							
BRTR				LR		LR	08 48 17.4	
	comp=Z,527nm,18.2s,MS4.5,baz=127,slow=37							
BRTR	**Keskin Array B**	**43.17**	**328**	P		**P**	**08 29 44.0**	**+0.6**
BRTR							08 31 28.0	
SOC	**Sochi**	**43.32**	**336**	*e*P		**P**	**08 29 43.7**	**-0.9**
SOC				*e*S		**S**	**08 36 08.4**	**-3.8**
SOC				MLR		MLR		
	comp=Z,248nm,13.0s,MS4.3							
KLSI		**43.64**	**102**	P		**P**	**08 29 48.3**	**+0.7**
	comp=Z,42nm,2.5s,mb4.7							
KMI	**Kunming**	**43.88**	**58**	P		**P**	**08 29 51.5**	**+2.1**
KMI				pP		pP	08 29 55.0	+2.5
KMI				sP		sP	08 29 56.8	+3.1
KMI				PP		PP	08 31 34.8	+3.2
KMI				S		**S**	**08 36 20.1**	**-0.7**
KMI				pmax		pmax		
	comp=Z,13nm,1.6s,mb4.4							
KMI				pmax		pmax		
	comp=Z,180nm,3.4s							
KMI				LR		LR		
	comp=N,640nm,16.3s,MS4.8							
KMI				LR		LR		
	comp=E,640nm,17.8s,MS4.8							
KMI				LR		LR		
	comp=Z,750nm,19.3s,MS4.6							
ABKAR	**Akbulak array**	**44.27**	**358**	*e*P		**P**	**08 29 52.8**	**+0.7**
	comp=Z,43nm,1.1s,mb5.1							
WMQ	**Urumqi**	**44.88**	**26**	P		**P**	**08 29 57.1**	**0.0**
WMQ				pP		pP	08 30 01.6	+1.4
WMQ				sP		sP	08 30 04.1	+2.6
WMQ				PP		PP	08 31 42.8	+0.8
WMQ				ScP		ScP	08 35 30.0	-1.4
WMQ				S		**S**	**08 36 33.3**	**-1.6**
WMQ				ScS		ScS	08 39 51.8	-3.1
WMQ				pmax		pmax		
	comp=Z,47nm,1.2s,mb5.2							
WMQ				pmax		pmax		
	comp=Z,290nm,4.2s							
WMQ				LR		LR		
	comp=N,800nm,24.6s,MS4.8							
WMQ				LR		LR		
	comp=E,1μm,21.5s,MS4.8							
WMQ				LR		LR		
	comp=Z,1μm,24.6s,MS4.7							
ANN	**Anapa**	**45.26**	**335**	*e*P		**P**	**08 30 00.5**	**+0.4**
ANN				*e**PP		pP	08 30 03.8	+0.6
ANN				*e*S		**S**	**08 36 43.2**	**+2.9**
ANN				*e*SS		SS	08 39 58.0	-5.5
ANN				pmax		pmax		
	comp=Z,35nm,1.4s,mb5.0							
ANN				MLR		MLR		
	comp=N,130nm,12.0s,MS4.2							
ANN				MLR		MLR		
	comp=E,93nm,12.0s,MS4.2							
ANN				MLR		MLR		
	comp=Z,237nm,12.0s,MS4.3							
MK31	**Makanchi Array**	**45.27**	**20**	*ce*P		**P**	**08 29 59.6**	**-0.6**
MK31				pmax		pmax		
	comp=Z,50nm,1.2s,mb5.2							
MK31	**Makanchi Array**	**45.27**	**20**	*e*P		**P**	**08 29 59.9**	**-0.2**
MKAR	**Makanchi Array**	**45.27**	**20**	P		**P**	**08 29 59.7**	**-0.5**
	comp=Z,15nm,1.0s,mb4.8,baz=206,slow=8.1,SNR=49							
MKAR				PcP		PcP	08 31 40.7	+0.7
	comp=Z,2.2nm,0.9s,baz=242,slow=3.1,SNR=2.6							
MKAR	**Makanchi Array**	**45.27**	**20**	P		**P**	**08 29 59.7**	**-0.5**
MKAR				PcP		PcP	08 31 40.7	+0.7
AKTK	**Aktyubinsk**	**45.54**	**356**	P		**P**	**08 30 02.5**	**+0.3**
AKTO	**Aktyubinsk**	**45.54**	**356**	P		**P**	**08 30 02.5**	**+0.3**
	comp=Z,27nm,1.2s,mb5.1,baz=170,slow=6.8,SNR=32							
LBTB	**Lobatse**	**46.26**	**228**	P		**P**	**08 30 09.3**	**+1.1**
	comp=Z,6.6nm,0.9s,mb4.6,baz=69,slow=10,SNR=8.5							
SIM	**Simferopol'**	**46.82**	**333**	P		**P**	**08 30 14.3**	**+1.9**
SIM				S		**S**	**08 37 06.0**	**+3.2**
SIM				MLR		MLR		
	comp=Z,170nm,19.5s,MS4.0							
CD2	**Chengdu**	**46.94**	**51**	P		**P**	**08 30 14.5**	**+0.9**
CD2				pP		pP	08 30 19.0	+2.3
CD2				sP		sP	08 30 21.4	+3.4
CD2				PP		PP	08 32 04.8	+0.8
CD2				S		**S**	**08 37 04.6**	**-0.3**
CD2				pmax		pmax		
	comp=Z,20nm,0.8s,mb5.1							
CD2				pmax		pmax		
	comp=Z,160nm,4.3s							
CD2				LR		LR		
	comp=N,930nm,17.8s							
CD2				LR		LR		
	comp=Z,970nm,19.0s,MS4.8							
GYA	**Guiyang**	**47.65**	**58**	⇑*i*P		**P**	**08 30 19.6**	**+0.4**
GYA				PP		PP	08 32 12.8	+1.9
GYA				S		**S**	**08 37 15.8**	**+0.5**
GYA				pmax		pmax		
	comp=Z,30nm,1.0s,mb5.3							
GYA				pmax		pmax		
	comp=Z,120nm,4.7s							
GYA				LR		LR		
	comp=N,650nm,18.9s,MS4.7							
GYA				LR		LR		
	comp=E,520nm,19.6s,MS4.7							
GYA				LR		LR		
	comp=Z,780nm,18.8s,MS4.7							
KURK	**Kurchatov**	**47.75**	**14**	P		**P**	**08 30 19.0**	**-0.6**
	comp=Z,154nm,1.1s,mb6.0,SNR=6.8							
KURK	**Kurchatov**	**47.75**	**14**	*ce*P		**P**	**08 30 19.3**	**-0.3**
KURK				pmax		pmax		
	comp=Z,22nm,1.2s,mb5.1							
KURK	**Kurchatov**	**47.75**	**14**	*e*P		**P**	**08 30 19.2**	**-0.3**
	comp=Z,34nm,1.1s,mb5.3							
KURK	**Kurchatov**	**47.75**	**14**	P		**P**	**08 30 20.1**	**+0.6**
	SNR=20							
KSM	**Kuching**	**48.26**	**92**	P		**P**	**08 30 29.1**	**+5.0**
	comp=Z,14nm,2.0s,mb4.7							
VOSK	**Vostochnaya**	**48.26**	**7**	P		**P**	**08 30 22.1**	**-1.4**
VOSK				pmax		pmax		
	comp=Z,83nm,1.3s,mb5.6							
ZRNK	**Zerenda**	**48.27**	**6**	*i* P		**P**	**08 30 23.5**	**0.0**
ZRNK				pmax		pmax		
	comp=Z,99nm,1.6s,mb5.6							
GTA	**Gaotai**	**48.41**	**39**	*e*P		**P**	**08 30 24.8**	**0.0**
GTA				pP		pP	08 30 29.1	+1.1
GTA				sP		sP	08 30 32.4	+3.2
GTA				PP		PP	08 32 17.6	0.0
GTA				S		**S**	**08 37 24.5**	**-1.0**
GTA				pmax		pmax		
	comp=Z,5.0nm,1.1s,mb4.5							
GTA				pmax		pmax		
	comp=Z,130nm,5.9s							
GTA				LR		LR		
	comp=N,940nm,20.8s,MS5.0							
GTA				LR		LR		
	comp=E,1μm,20.2s,MS5.0							
GTA				LR		LR		
	comp=Z,3μm,20.8s,MS5.2							
BVAR	**Borovoye Array**	**48.49**	**7**	P		**P**	**08 30 25.0**	**-0.2**
	comp=Z,13nm,1.2s,mb4.8,baz=191,slow=6.0,SNR=22							
BVAR				PcP		PcP	08 31 53.5	+2.3
	comp=Z,1.6nm,0.8s,baz=148,slow=0.3,SNR=3.8							
BVAR	**Borovoye Array**	**48.49**	**7**	P		**P**	**08 30 25.0**	**-0.2**
BVAR				PcP		PcP	08 31 53.5	+2.3
BRVK	**Borovoye**	**48.51**	**7**	P		**P**	**08 30 27.6**	**+2.2**
	comp=Z,78nm,1.8s,mb5.4,SNR=6.7							
BRVK	**Borovoye**	**48.51**	**7**	*ce*P		**P**	**08 30 25.9**	**+0.5**
BRVK				pmax		pmax		
	comp=Z,26nm,1.7s,mb5.0							
BRVK	**Borovoye**	**48.51**	**7**	*e*P		**P**	**08 30 26.6**	**+1.3**
	comp=Z,27nm,1.4s,mb5.1							
BRVK	**Borovoye**	**48.51**	**7**	P		**P**	**08 30 27.5**	**+2.1**
	SNR=12							
BOSA	**Boshof**	**48.62**	**225**	P		**P**	**08 30 26.8**	**+0.2**
	comp=Z,5.4nm,0.6s,mb4.7,baz=64,slow=7.8,SNR=16							
BOSA				LR		LR	08 48 45.0	
	comp=Z,698nm,18.8s,MS4.7,baz=45,slow=33							
QIZ	**Qiongzhong**	**48.62**	**69**	P		**P**	**08 30 25.8**	**-1.0**
QIZ				pP		pP	08 30 28.4	-1.6
QIZ				sP		sP	08 30 30.3	-0.9
QIZ				S		**S**	**08 37 27.5**	**-1.6**
QIZ				pmax		pmax		
	comp=Z,13nm,1.6s,mb4.7							
QIZ				pmax		pmax		
	comp=Z,87nm,4.5s							
QIZ				LR		LR		
	comp=N,380nm,16.0s,MS4.5							
QIZ				LR		LR		
	comp=E,160nm,17.6s,MS4.5							
QIZ				LR		LR		
	comp=Z,540nm,30.7s							
VRHR	**Novokhopersk**	**49.15**	**343**	*e*P		**P**	**08 30 31.3**	**+1.0**
VRHR				pmax		pmax		
	comp=N,60nm,1.0s							
VRHR				pmax		pmax		
	comp=E,50nm,1.0s							
VRHR				pmax		pmax		
	comp=Z,50nm,1.0s,mb5.5							
LZH	**Lanzhou**	**49.34**	**45**	*e*P		**P**	**08 30 31.3**	**-0.8**
LZH				pP		pP	08 30 35.3	0.0
LZH				sP		sP	08 30 38.8	+2.3
LZH				PP		PP	08 32 25.8	-0.4
LZH				*e*S		**S**	**08 37 36.3**	**-2.6**
LZH				pmax		pmax		
	comp=Z,14nm,1.0s,mb5.0							
LZH				pmax		pmax		
	comp=Z,87nm,4.9s							
LZH				LR		LR		
	comp=E,430nm,14.5s							
LZH				LR		LR		
	comp=Z,670nm,16.2s,MS4.7							
TSUM	**Tsumeb**	**49.90**	**240**	*e*P		**P**	**08 30 37.8**	**+1.2**
	comp=Z,19nm,1.3s,mb5.0							
VSR	**Storozhevoye**	**50.00**	**341**	*e*P		**P**	**08 30 36.6**	**-0.2**
VSR				pmax		pmax		
	comp=N,90nm,1.4s							
VSR				pmax		pmax		
	comp=E,40nm,1.4s							
VSR				pmax		pmax		
	comp=Z,80nm,1.4s,mb5.6							
SBUM	**Sibu**	**50.08**	**91**	P		**P**	**08 30 38.2**	**+0.1**
	comp=Z,588nmcomp=Z,31nm,1.7s,mb5.1							
KIS	**Kishinev**	**50.82**	**331**	*e*P		**P**	**08 30 42.0**	**-1.1**
KIS				*e*S		**S**	**08 38 00.0**	**+0.9**
KIS				LRM			08 55 20.0	
	comp=Z,300nm,13.0s							
VRI	**Vrincioaia**	**51.09**	**329**	⇑P		**P**	**08 30 47.2**	**+2.1**
VRI	**Vrincioaia**	**51.09**	**329**	⇑*i*P		**P**	**08 30 47.2**	**+2.1**
PLOR	**Plostina**	**51.12**	**329**	⇑P		**P**	**08 30 47.4**	**+2.0**
PLOR	**Plostina**	**51.12**	**329**	⇑*i*P		**P**	**08 30 47.4**	**+2.0**
MLR	**Muntele Rosu**	**51.25**	**328**	⇓P		**P**	**08 30 48.7**	**+2.3**
MLR	**Muntele Rosu**	**51.25**	**328**	⇓*i*P		**P**	**08 30 48.7**	**+2.3**
ENH	**Enshi**	**51.26**	**55**	*e*P		**P**	**08 30 46.3**	**-0.5**

AKASG PcP PcP 08 32 08.3 -0.8
comp=E,0.2nm,0.3s,baz=149,slow=3.0,SNR=4.1
AKASG PP PP 08 33 02.7 +0.7
comp=E,1.7nm,0.8s,baz=136,slow=7.9,SNR=4.0
AKBB Malin Array Si 53.32 335 *e*P **P 08 31 01.4 -0.3**
KIEV Kiev 53.33 335 *e*P **P 08 31 01.1 -0.6**
KIEV *e* 08 33 03.5
KIEV pmax pmax
comp=Z,38nm,1.4s,mb5.1
KIEV Kiev 53.33 335 *e*P **P 08 31 01.1 -0.6**
comp=Z,38nm,1.4s,mb5.1
KIEV *e*PP PP 08 33 03.5 +1.5
BZS Buzias 53.70 326 ⇑P **P 08 31 05.5 +1.0**
BZS Buzias 53.70 326 ⇑*i*P **P 08 31 05.5 +1.0**
DRGR 53.81 327 ⇑P **P 08 31 06.1 +0.8**
DRGR 53.81 327 ⇑*i*P **P 08 31 06.1 +0.8**
SUR Sutherland 53.93 224 *e*P **P 08 31 07.3 +0.8**
comp=Z,45nm,1.5s,mb5.2
BMR Baia Mare 53.95 329 P **P 08 31 07.4 +1.1**
OBN Obninsk 54.15 342*c i*P **P 08 31 07.7 0.0**
OBN *i* 08 32 11.5
OBN *e* 08 33 09.2
OBN *i* S **S 08 38 44.8 +0.4**
OBN *i* SS SS 08 42 28.6 +2.4
OBN pmax pmax
comp=Z,48nm,1.6s,mb5.2
SOKR Solikamsk 54.72 357*c i*P **P 08 31 17.8 +6.1**
SOKR S **S 08 38 43.6 -8.3**
SOKR SS SS 08 42 29.6 -5.4
SOKR pmax pmax
comp=Z,20nm,1.4s,mb5.0
SOKR MLR MLR
comp=Z,460nm,20.0s,MS4.5
LVV L'vov 55.08 331 *e*P **P 08 31 16.4 +1.9**
UZH Uzhgorod 55.18 329 *e*P **P 08 31 15.7 +0.4**
UZH *i* pP 08 31 17.3 -1.2
UZH *i* 08 31 21.0
WHN Wuhan 55.34 56 P **P 08 31 16.1 -0.6**
PKSM Moragy 55.73 325 ⇓P **P 08 31 19.9 +0.6**
PKSM Moragy 55.73 325 ⇓*i*P **P 08 31 19.9 +0.6**
CRVS Cervenica-Dubn 55.78 329 *e*P **P 08 31 19.8 +0.2**
CRVS pmax pmax
comp=Z,65nm,2.2s,mb5.3
CRVS Cervenica-Dubn 55.78 329 *e*P **P 08 31 19.8 +0.2**
comp=Z,65nm,2.2s,mb5.3
CRVS Cervenica-Dubn 55.78 329 *e*P **P 08 31 19.8 +0.2**
PSZ Piszkesteto 56.02 327 *e*P pP 08 31 32.5 +8.0
KECS Kecovo 56.03 328 *e*P **P 08 31 22.6 +1.2**
KECS pmax pmax
comp=Z,4.0nm,1.3s,mb4.3
KECS Kecovo 56.03 328 *e*P **P 08 31 22.6 +1.2**
comp=Z,4.4nm,1.3s,mb4.3
KECS Kecovo 56.03 328 *e*P **P 08 31 22.6 +1.2**
STHS Stebnicka Huta 56.21 329 *e*P **P 08 31 23.6 +1.0**
STHS pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
STHS Stebnicka Huta 56.21 329 *e*P **P 08 31 23.6 +1.0**
comp=Z,9.3nm,1.1s,mb4.7
STHS Stebnicka Huta 56.21 329 *e*P **P 08 31 23.6 +1.0**
MICGM Minsk 56.69 337 *e* **P 08 31 24.0 -2.0**
MNK Minsk 56.71 337 *e*P **P 08 31 24.0 -2.1**
HHC Hu-ho-hao-te 56.90 44 *e*P **P 08 31 27.9 +0.1**
HHC sP sP 08 31 33.3 +1.1
HHC PcP PcP 08 32 23.1 -0.1
HHC PP PP 08 33 35.6 +1.3
HHC ScP ScP 08 36 20.6 -2.5
HHC PcS PcS 08 36 22.4 -1.5
HHC S **S 08 39 19.8 -1.9**
HHC ScS ScS 08 41 13.0 -4.5
HHC pmax pmax
comp=Z,22nm,0.7s,mb5.3
HHC pmax pmax
comp=Z,230nm,6.5s
HHC LR LR
comp=N,830nm,17.3s,MS5.0
HHC LR LR
comp=E,700nm,17.7s,MS5.0
HHC LR LR
comp=Z,970nm,17.4s,MS5.0
VYHS Vyhne 56.93 327 *e*P **P 08 31 27.8 0.0**
VYHS pmax pmax
comp=Z,18nm,1.5s,mb4.9
VYHS Vyhne 56.93 327 *e*P **P 08 31 27.8 0.0**
comp=Z,18nm,1.5s,mb4.9
VYHS Vyhne 56.93 327 *e*P **P 08 31 27.8 0.0**
SONM Songino Array 57.13 34 P **P 08 31 29.0 -0.2**
comp=Z,14nm,1.0s,mb5.0,baz=230,slow=6.6,SNR=48
SONM LR LR 08 55 55.3
comp=Z,891nm,20.3s,MS4.9,baz=260,slow=36
KOGS Kog 57.25 324 *e*P **P 08 31 29.9 -0.2**
BOJS Bojanci 57.36 322 *e*P **P 08 31 30.5 -0.4**
TAM Tamanrasset 57.37 294 *e*P **P 08 31 32.8 +1.4**
TAM *e* 08 32 25.1
TAM pmax pmax
comp=Z,36nm,1.5s,mb5.2
TAM Tamanrasset 57.37 294 *e*P **P 08 31 32.8 +1.4**
comp=Z,36nm,1.5s,mb5.2
TAM *e*PcP PcP 08 32 25.1 -0.3
NACGM Naroch 57.42 337 *e* **P 08 31 30.0 -1.1**
OJC Ojcow 57.44 329 *e*P **P 08 31 27.8 -3.6**
ULN Ulaanbaatar 57.52 34 *e*P **P 08 31 30.6 -1.4**
ULN pmax pmax
comp=Z,14nm,1.1s,mb4.9
ULN Ulaanbaatar 57.52 34 *e*P **P 08 31 30.6 -1.3**
comp=Z,14nm,1.1s,mb4.9
ULN Ulaanbaatar 57.52 34 P **P 08 31 31.8 -0.2**
comp=Z,250nmcomp=Z,14nm,1.4s,mb4.8
ULN Ulaanbaatar 57.52 34 P **P 08 31 31.1 -0.9**
SNR=10
GROS Grobnik 57.70 324 *e*P **P 08 31 32.9 -0.4**
ZST Bratislava 57.71 326 *e*P **P 08 31 34.3 +1.0**
ZST pmax pmax
comp=Z,24nm,1.5s,mb5.0
ZST Bratislava 57.71 326 *e*P **P 08 31 34.3 +1.0**
comp=Z,24nm,1.5s,mb5.0
ZST Bratislava 57.71 326 *e*P **P 08 31 34.2 +0.9**
IDID Didziasalis 57.74 337 *e*P **P 08 31 33.1 -0.3**
IDID AMB AMB 08 31 36.5
comp=Z,12nm,1.4s,mb4.7
PDKS Podkum 57.80 323 *e*P **P 08 31 35.3 +1.3**
IIGN Ignalina 57.97 337 *e*P **P 08 31 34.8 -0.2**
IIGN AMB AMB 08 31 41.9
comp=Z,16nm,1.1s,mb5.0
TLY Talaya 57.98 29 *e*P **P 08 31 40.9 +5.8**
TLY *e*S **S 08 39 30.8 -4.7**
TLY *e*PS 08 39 52.2
TLY *e* 08 41 25.1
TLY *e*SS SS 08 43 20.6 -6.0
TLY pmax pmax
comp=Z,30nm,1.5s,mb5.1
TLY MLR MLR
comp=Z,525nm,19.0s,MS4.7
LJU Ljubljana 58.07 323 *i* P **P 08 31 36.5 +0.6**
LJU *e* 08 31 42.3
OKC Ostrava-Krasne 58.07 328 *e*P **P 08 31 35.6 -0.2**
OKC *e* 08 31 41.3
OKC MLR MLR
comp=Z,300nm,23.6s,MS4.3
OKC Ostrava-Krasne 58.07 328 *e*P **P 08 31 35.6 -0.2**
OKC *e*pP pP 08 31 41.3 +2.3
OKC AMS AMS 08 56 30.0
comp=Z,300nm,23.6s
SOKA Soboth 58.09 324 ⇑*i*P **P 08 31 36.2 +0.2**
comp=Z,18nm,1.2s,mb5.0
ARSA Arzberg 58.10 324 *i* P **P 08 31 36.5 +0.4**
comp=Z,23nm,1.5s,mb5.0,SNR=12
IZAR Zarasai 58.25 337 *e*P **P 08 31 36.7 -0.2**
IZAR AMB AMB 08 31 46.7
comp=Z,15nm,0.8s,mb5.0
CONA Conrad Observa 58.26 325 *i* P **P 08 31 37.3 +0.1**
comp=Z,39nm,1.2s,mb5.3,SNR=14
SUW Suwalki 58.28 334 *e*P **P 08 31 36.5 -0.7**
SUW Suwalki 58.28 334 *e*P **P 08 31 36.6 -0.6**
SUW pmax pmax
comp=Z,86nm,1.2s,mb5.7
SUW Suwalki 58.28 334 *e*P **P 08 31 36.6 -0.6**
comp=Z,86nm,1.2s,mb5.7
OBKA Obir 58.29 323 *i* P **P 08 31 38.0 +0.6**
comp=Z,33nm,1.2s,mb5.2,SNR=10
MORC Moravsky Berou 58.36 328 ⇑P **P 08 31 37.7 -0.1**
MORC Moravsky Berou 58.36 328 *e*P **P 08 31 37.5 -0.3**
comp=Z,31nm,1.3s,mb5.2
MORC Moravsky Berou 58.36 328 ⇑*i*P **P 08 31 37.7 -0.1**
VRAC Vranov 58.61 327 ⇑P **P 08 31 39.0 -0.6**
VRAC Vranov 58.61 327 ⇑*i*P **P 08 31 39.0 -0.6**
VSL Villasalto 58.63 314 *e*P **P 08 31 42.1 +2.2**
IRK Irkutsk 58.64 29 *e*P **P 08 31 40.8 +1.1**
IRK pmax pmax
comp=Z,33nm,1.4s,mb5.2
BNSI Bone 58.68 98 P **P 08 31 40.2 -0.5**
comp=Z,938nmcomp=Z,52nm,1.5s,mb5.3
MYKA Terra Mystica 58.90 323 ⇑*i*P **P 08 31 41.9 +0.2**
comp=Z,28nm,1.5s,mb5.1
MOA Molln 59.14 324 ⇓*i*P **P 08 31 43.0 -0.3**
comp=Z,46nm,1.2s,mb5.4,SNR=24
TREC Trest 59.21 326 *e*P **P 08 31 43.3 -0.4**
TREC *e* 08 31 49.8
TREC Trest 59.21 326 *e*P **P 08 31 43.3 -0.4**
TREC *e*pP pP 08 31 49.8 +2.9
KBA Koelnbreinsper 59.29 323 ⇑*i*P **P 08 31 44.5 +0.1**
comp=Z,14nm,1.1s,mb4.9
DPC Dobruska-Polom 59.33 328 *e*P **P 08 31 44.4 -0.2**
DPC *e* 08 31 49.9
DPC MLR MLR
comp=Z,300nm,21.9s,MS4.4
DPC Dobruska-Polom 59.33 328 *e*P **P 08 31 44.4 -0.2**
DPC *e*pP pP 08 31 49.9 +2.1
DPC AMS AMS 08 56 40.0
comp=Z,300nm,21.9s
NJ2 Nanjing 59.45 56 *e*P **P 08 31 47.3 +1.5**
NJ2 pP pP 08 31 51.9 +2.9
NJ2 sP sP 08 31 54.3 +4.1
NJ2 PP PP 08 34 00.4 +3.3
NJ2 S **S 08 39 53.5 -1.8**
NJ2 pmax pmax
comp=Z,60nm,1.1s,mb5.5
NJ2 pmax pmax
comp=Z,300nm,4.8s
NJ2 LR LR
comp=N,710nm,26.0s,MS4.8
NJ2 LR LR
comp=E,780nm,27.0s,MS4.8
NJ2 LR LR
comp=Z,920nm,23.1s,MS4.8
UPC Upice 59.59 328 *e*P **P 08 31 45.7 -0.6**
UPC *e* 08 31 52.4
UPC Upice 59.59 328 *e*P **P 08 31 45.7 -0.6**
UPC *e*pP pP 08 31 52.4 +2.9
KSP Ksiaz 59.62 328 *e*P **P 08 31 45.8 -0.8**
BJT Baijiatuau 59.81 46 *e*P **P 08 31 48.2 +0.1**
BJT pmax pmax
comp=Z,8.0nm,0.6s
BJT Baijiatuau 59.81 46 *e*P **P 08 31 48.1 +0.1**
comp=Z,8.2nm,0.6s,mb4.9
BJI Beijing 59.82 46 P **P 08 31 48.0 -0.2**
BJI S **S 08 39 58.4 -1.4**
BJI pmax pmax
comp=Z,10.0nm,1.3s,mb4.7
BJI pmax pmax
comp=Z,54nm,3.6s
BJI LR LR
comp=N,780nm,18.4s,MS5.0
BJI LR LR
comp=E,720nm,16.8s,MS5.0
BJI LR LR
comp=Z,560nm,21.9s
MRSI Marisa 59.93 92 P **P 08 31 48.7 -0.7**
comp=Z,656nmcomp=Z,31nm,1.1s,mb5.3
PGF Pioggiola 60.06 317 *e*P **P 08 31 48.2 -1.6**
comp=Z,90nm,1.3s,mb5.3
PGF Pioggiola 60.06 317 *e*P **P 08 31 48.2 -1.6**
PGF pmax pmax
comp=Z,45nm,1.3s,mb5.3
PGF Pioggiola 60.06 317 *e*P **P 08 31 48.2 -1.6**
comp=Z,45nm,1.3s,mb5.3
VSU Vasula 60.07 339 ⇑*e*P **P 08 31 48.9 -0.6**
VSU pmax pmax
comp=Z,46nm,2.5s,mb5.1
TOA0 Torodi Ar. Sit 60.09 282 *e*P **P 08 31 51.3 +0.8**
TORD Torodi Ar. Bea 60.09 282 P **P 08 31 51.1 +0.6**
comp=Z,8.3nm,1.1s,mb4.7,baz=91,slow=6.9,SNR=22
PRU Pruhonice 60.10 327 *e*P **P 08 31 49.5 -0.4**
PRU *e* 08 31 55.4
PRU MLR MLR
comp=Z,300nm,28.6s,MS4.3
PRU Pruhonice 60.10 327 *e*P **P 08 31 49.5 -0.4**
PRU *e*pP pP 08 31 55.4 +2.3
PRU AMS AMS 08 56 20.0
comp=Z,300nm,28.6s
KHC Kasperske Hory 60.19 325 *e*P **P 08 31 49.3 -1.2**
KHC *e* 08 31 55.0
KHC MLR MLR
comp=Z,300nm,23.6s,MS4.4
KHC Kasperske Hory 60.19 325 *e*P **P 08 31 49.1 -1.4**
comp=Z,20nm,1.4s,mb5.0
KHC Kasperske Hory 60.19 325 *e*P **P 08 31 49.3 -1.2**
KHC *e*pP pP 08 31 55.0 +1.3
KHC AMS AMS 08 58 20.0
comp=Z,300nm,23.6s
PVCC Panska Ves 60.37 327 *e*P **P 08 31 51.3 -0.4**
PVCC *e* 08 31 57.9
PVCC MLR MLR
comp=Z,200nm,21.5s,MS4.2
PVCC Panska Ves 60.37 327 *e*P **P 08 31 51.3 -0.4**
PVCC *e*pP pP 08 31 57.9 +3.0
PVCC AMS AMS 08 57 10.0
comp=Z,200nm,21.5s
WTTA Wattenberg 60.41 323 ⇑*i*P **P 08 31 51.5 -0.5**
comp=Z,36nm,1.2s,mb5.3,SNR=12
GKP Gorka Klasztor 60.55 331 *e*P **P 08 31 51.9 -1.0**
BRG Berggiesshubel 60.89 327 *e*P **P 08 31 54.8 -0.5**
comp=Z,26nm,1.7s,mb5.1
BRG Berggiesshubel 60.89 327 *e*P **P 08 31 54.9 -0.3**
comp=Z,25nm,1.6s,mb5.1
BRG *e* 08 32 41.1
comp=Z,8.7nm,1.5s
BRG Berggiesshubel 60.89 327 *e*P **P 08 31 54.9 -0.4**
BRG *e* 08 32 41.1
BRG pmax pmax
comp=Z,15nm,1.5s,mb4.9
SSE Sheshan 61.17 57 P **P 08 31 55.3 -2.2**
SSE S **S 08 40 17.3 -0.1**
SSE pmax pmax
comp=Z,21nm,0.7s,mb5.4
SSE pmax pmax
comp=Z,80nm,3.7s
SSE LR LR
comp=N,330nm,24.8s,MS4.4
SSE LR LR
comp=E,150nm,25.8s,MS4.4
SSE LR LR
comp=Z,460nm,37.9s
ROTZ Rotzenmuhle 61.28 326 *e*P **P 08 31 57.2 -0.7**
comp=Z,12nm,1.4s,mb4.8
NKC Novy Kostel 61.38 326 *e*P **P 08 31 58.5 -0.1**
NKC *e* 08 32 04.5
NKC Novy Kostel 61.38 326 *e*P **P 08 31 58.5 -0.1**
NKC *e*pP pP 08 32 04.5 +2.7
TANN Tannenbergstha 61.46 326 *e*P **P 08 31 58.9 -0.2**
comp=Z,23nm,1.6s,mb5.1
GUNZ Gunzen 61.51 326 *e*P **P 08 31 59.3 -0.2**
comp=Z,27nm,1.2s,mb5.2
GUNZ *e*pP pP 08 32 05.4 +2.7
WERD Werda 61.56 326 *e*P **P 08 31 59.5 -0.3**
SAOF Saorge 61.59 318 *e*P **P 08 32 00.6 +0.4**
CLL Collm 61.62 327 *e*P **P 08 32 00.1 -0.1**
comp=Z,30nm,1.4s,mb5.2
CLL Collm 61.62 327 *i* P **P 08 32 00.0 -0.2**
CLL *i* 08 32 05.8
CLL *e*S **S 08 40 32.0 +10**
CLL pmax pmax
comp=Z,30nm,1.3s,mb5.3
CLL Collm 61.62 327 *i* P **P 08 32 00.0 -0.2**
comp=Z,30nm,1.3s,mb5.3
CLL *i* (sP) sP 08 32 05.8 +1.1
CLL *e*S **S 08 40 32.0 +10**
CLL *e*SSS 08 47 24.0
AUTN L'Aution 61.68 318 *e*P **P 08 32 01.4 +0.6**
GRF Grafenberg Arr 61.80 325 *e*P **P 08 32 00.4 -1.1**
comp=Z,30nm,1.3s,mb5.3
GRF *e*pP pP 08 32 06.2 +1.5
GRF *e*L 09 01 00.6
comp=Z,139nm,21.5s
GRF Grafenberg Arr 61.80 325 *e*P **P 08 32 00.4 -1.1**
GRF *e**PP pP 08 32 06.2 +1.5
GRF pmax pmax
comp=Z,30nm,1.3s,mb5.3
GRF MLR MLR
comp=Z,100nm,21.5s,MS3.9
MVIF Mont Vial 61.83 318 *e*P **P 08 32 02.9 +1.1**
RUE Ruedersdorf 61.83 329 *e*P **P 08 32 01.3 -0.3**
comp=Z,47nm,1.0s,mb5.6
RUE Ruedersdorf 61.83 329 *e*P **P 08 32 01.4 -0.2**
comp=Z,45nm,1.0s,mb5.5
FRF La Foret Royal 62.04 317 *e*P **P 08 32 01.8 -1.4**
comp=Z,82nm,1.4s,mb5.3
FRF La Foret Royal 62.04 317 *e*P **P 08 32 01.8 -1.4**
FRF pmax pmax
comp=Z,41nm,1.4s,mb5.4
FRF La Foret Royal 62.04 317 *e*P **P 08 32 01.8 -1.4**
comp=Z,41nm,1.4s,mb5.4
MOX Moxa 62.05 326 *e*(P) **P 08 32 02.6 -0.5**
comp=Z,22nm,1.6s,mb5.0
MOX pmax pmax
comp=Z,100nm,22.0s
MOX Moxa 62.05 326 *e*P **P 08 32 02.8 -0.3**
comp=Z,79nm,2.6s,mb5.4
LMR La Mourre 62.05 317 *e*P **P 08 32 01.8 -1.5**
comp=Z,56nm,1.2s,mb5.3
LMR La Mourre 62.05 317 *e*P **P 08 32 01.8 -1.5**
LMR pmax pmax
comp=Z,28nm,1.2s,mb5.3
LMR La Mourre 62.05 317 *e*P **P 08 32 01.8 -1.5**
comp=Z,28nm,1.2s,mb5.3
MBDF Montbardon 62.40 319 *e*P **P 08 32 03.7 -1.9**
comp=Z,31nm,1.2s,mb5.0
MBDF Montbardon 62.40 319 *e*P **P 08 32 03.7 -1.9**
MBDF pmax pmax
comp=Z,15nm,1.2s,mb5.0
MBDF Montbardon 62.40 319 *e*P **P 08 32 03.7 -1.9**
comp=Z,15nm,1.2s,mb5.0
SPAK Spaichingen-Ko 62.50 323 *e*P **P 08 32 06.8 +0.6**
FINES FINESS Array B 62.53 341 P **P 08 32 05.0 -1.1**
comp=Z,3.2nm,1.0s,mb4.4,baz=104,slow=8.0,SNR=5.1
STU Stuttgart 62.55 324 *e*P **P 08 32 05.3 -1.2**
comp=Z,27nm,1.8s,mb5.1
BNI Bardonecchia 62.58 319 *e*P **P 08 32 06.5 -0.3**
BNI pmax pmax
comp=Z,25nm,1.2s,mb5.2
BNI Bardonecchia 62.58 319 *e*P **P 08 32 06.5 -0.3**
comp=Z,25nm,1.2s,mb5.2
LPG La Plagne 62.71 319 *e*P **P 08 32 05.9 -1.7**
comp=Z,106nm,1.3s,mb5.5
LPG La Plagne 62.71 319 *e*P **P 08 32 05.9 -1.7**
LPG pmax pmax
comp=Z,53nm,1.3s,mb5.5
LPG La Plagne 62.71 319 *e*P **P 08 32 05.9 -1.7**
comp=Z,53nm,1.3s,mb5.5
LPL La Plagne 62.73 319 *e*P **P 08 32 06.0 -1.7**
comp=Z,79nm,1.2s,mb5.4
LPL La Plagne 62.73 319 *e*P **P 08 32 06.0 -1.7**
LPL pmax pmax
comp=Z,39nm,1.2s,mb5.4
LPL La Plagne 62.73 319 *e*P **P 08 32 06.0 -1.7**
comp=Z,40nm,1.2s,mb5.4
BFO Black Forest 62.88 323 *e*P **P 08 32 08.5 -0.2**
comp=Z,61nm,1.3s,mb5.6
BFO *e*pP pP 08 32 14.4 +2.5
BFO Black Forest 62.88 323 *e*P **P 08 32 08.4 -0.3**
BFO pmax pmax
comp=Z,53nm,1.3s,mb5.5
BFO Black Forest 62.88 323 *e*P **P 08 32 08.4 -0.3**
comp=Z,53nm,1.3s,mb5.5
FELD Feldberg im Sc 62.88 322 *e*P **P 08 32 08.9 +0.2**
BBS Basel-Blauen 63.01 322 *e*P **P 08 32 10.0 +0.4**
ORIF Oris-en-Rattie 63.06 319 *e*P **P 08 32 08.5 -1.5**
comp=Z,28nm,1.2s,mb5.0
ORIF *e*MLR MLR
comp=Z,233nm,22.5s,MS4.0
ORIF Oris-en-Rattie 63.06 319 *e*P **P 08 32 08.5 -1.5**
ORIF pmax pmax
comp=Z,14nm,1.2s,mb5.0
ORIF Oris-en-Rattie 63.06 319 *e*P **P 08 32 08.5 -1.5**
comp=Z,14nm,1.2s,mb5.0
CLZ Clausthal 63.31 327 *e*P **P 08 32 11.6 +0.1**
comp=Z,48nm,1.3s,mb5.5
MOF Molkenrain 63.40 322 *e*P **P 08 32 12.4 +0.2**
ECH Echery 63.54 322 *e*P **P 08 32 13.1 0.0**
ECH Echery 63.54 322 *e*P **P 08 32 12.9 -0.2**
ECH pmax pmax
comp=Z,18nm,1.1s,mb5.0
ECH Echery 63.54 322 *e*P **P 08 32 12.9 -0.2**
comp=Z,18nm,1.1s,mb5.0
CDF Champ du Feu 63.55 323 *e*P **P 08 32 11.8 -1.3**
comp=Z,161nm,1.5s,mb5.5
CDF Champ du Feu 63.55 323 *e*P **P 08 32 11.8 -1.3**
CDF pmax pmax
comp=Z,81nm,1.5s,mb5.5
CDF Champ du Feu 63.55 323 *e*P **P 08 32 11.8 -1.3**
comp=Z,81nm,1.5s,mb5.5
HINF Hinteralfeld 63.56 322 *e*P **P 08 32 11.5 -1.7**
comp=Z,81nm,1.6s,mb5.2
HINF Hinteralfeld 63.56 322 *e*P **P 08 32 11.5 -1.7**
HINF pmax pmax
comp=Z,41nm,1.6s,mb5.2
HINF Hinteralfeld 63.56 322 *e*P **P 08 32 11.5 -1.7**
comp=Z,41nm,1.6s,mb5.2
CABF La Chapelle 63.56 320 *e*P **P 08 32 12.4 -0.9**
comp=Z,242nm,1.2s,mb5.8
CABF La Chapelle 63.56 320 *e*P **P 08 32 12.4 -0.9**
CABF pmax pmax
comp=Z,121nm,1.2s,mb5.8
CABF La Chapelle 63.56 320 *e*P **P 08 32 12.4 -0.9**
comp=Z,121nm,1.2s,mb5.8
TNS Taunus Mts 63.64 325 *e*P **P 08 32 13.5 -0.2**
comp=Z,57nm,1.5s,mb5.4
NRDL Niedersach Rie 63.77 328 *e*P **P 08 32 13.7 -0.8**
comp=Z,46nm,1.4s,mb5.3
VIVF Saint-Julien-I 63.84 318 *e*P **P 08 32 13.5 -1.6**
comp=Z,77nm,1.5s,mb5.2
VIVF Saint-Julien-I 63.84 318 *e*P **P 08 32 13.5 -1.6**
VIVF pmax pmax
comp=Z,38nm,1.5s,mb5.2
VIVF Saint-Julien-I 63.84 318 *e*P **P 08 32 13.5 -1.6**
comp=Z,38nm,1.5s,mb5.2
HAU Haudompre 63.95 322 *e*P **P 08 32 14.0 -1.8**
comp=Z,40nm,1.2s,mb5.0
HAU *e*MLR MLR
comp=Z,143nm,20.0s,MS3.9
HAU Haudompre 63.95 322 *e*P **P 08 32 14.0 -1.8**
HAU pmax pmax
comp=Z,20nm,1.2s,mb5.0
HAU MLR MLR
comp=Z,140nm,20.0s,MS4.1
HAU Haudompre 63.95 322 *e*P **P 08 32 14.0 -1.8**
comp=Z,20nm,1.2s,mb5.0
HAU LR LR
comp=Z,140nm,20.0s,MS4.1
SSB Saint Sauveur 64.07 319 *e*P **P 08 32 16.1 -0.6**
SSB pmax pmax
comp=Z,32nm,1.3s,mb5.2
SSB Saint Sauveur 64.07 319 *e*P **P 08 32 16.1 -0.6**
comp=Z,32nm,1.3s,mb5.2
LASF Ste Croix 64.11 317 *e*P **P 08 32 16.0 -1.0**
comp=Z,91nm,1.3s,mb5.4
KLBR Kellerberrin 64.17 128 *e*P **P 08 32 17.9 +0.3**
comp=Z,19nm,0.9s,mb5.1
RUP Ruppelstein 64.22 324 *e*P **P 08 32 17.6 +0.1**
THEF They Montfort 64.26 322 *e*P **P 08 32 16.5 -1.3**
NWAO Narrogin (SRO) 64.32 130 P **P 08 32 17.6 -0.9**
comp=Z,19nm,0.8s,mb5.2,baz=305,slow=4.9,SNR=7.7
BSEG Bad Segeberg 64.37 329 *e*P **P 08 32 17.9 -0.5**
comp=Z,46nm,1.5s,mb5.3
WLF Walferdange 64.74 323 P **P 08 32 21.1 +0.2**
comp=Z,17nm,1.2s,mb5.0
WLF Walferdange 64.74 323 *e*P **P 08 32 20.7 -0.2**
comp=Z,32nm,1.1s,mb5.3
WLF Walferdange 64.74 323 *e*P **P 08 32 21.2 +0.3**
WLF pmax pmax
comp=Z,29nm,1.1s,mb5.2
WLF Walferdange 64.74 323 *e*P **P 08 32 21.2 +0.2**
comp=Z,29nm,1.1s,mb5.2
BUG Bochum--Univer 64.84 326 *e*P **P 08 32 21.6 0.0**
comp=Z,54nm,2.0s,mb5.2
CLLI Llivia 64.91 315 P **P 08 32 23.7 +1.5**
LBL Lubilhac 64.91 318 *e*P **P 08 32 22.1 -0.1**
PLDF La Plantade 64.92 319 *e*P **P 08 32 22.1 -0.1**
MEZF Maizieres J'vi 64.94 322 *e*P **P 08 32 21.0 -1.3**
comp=Z,134nm,1.3s,mb5.5
MEZF Maizieres J'vi 64.94 322 *e*P **P 08 32 21.0 -1.3**
comp=Z,134nm,1.3s,mb5.8
MTLF Montolieu 65.00 316 *e*P **P 08 32 21.7 -1.1**
comp=Z,75nm,1.9s,mb5.1
MTLF Montolieu 65.00 316 *e*P **P 08 32 21.7 -1.1**
MTLF pmax pmax
comp=Z,38nm,1.9s,mb5.1

MTLF Montolieu 65.00 316 *eP* **P 08 32 21.7 -1.1**
comp=Z,38nm,1.9s,mb5.1
SMF Signal de Mont 65.01 320 *eP* **P 08 32 20.8 -2.0**
comp=Z,42nm,1.3s,mb5.0
SMF Signal de Mont 65.01 320 *eP* **P 08 32 20.8 -2.0**
SMF pmax pmax
comp=Z,21nm,1.3s,mb5.0
SMF Signal de Mont 65.01 320 *eP* **P 08 32 20.8 -2.0**
comp=Z,21nm,1.3s,mb5.0
MEM Membach 65.21 324 P **P 08 32 24.5 +0.5**
LOR Lormes 65.23 320 *eP* **P 08 32 22.5 -1.7**
comp=Z,71nm,1.3s,mb5.2
LOR *e*MLR MLR
comp=Z,108nm,19.0s,MS3.8
LOR Lormes 65.23 320 *eP* **P 08 32 22.5 -1.7**
LOR pmax pmax
comp=Z,35nm,1.3s,mb5.2
LOR MLR MLR
comp=Z,110nm,19.0s,MS4.1
LOR Lormes 65.23 320 *eP* **P 08 32 22.5 -1.7**
comp=Z,35nm,1.3s,mb5.2
LOR LR LR
comp=Z,110nm,19.0s,MS4.1
AGO Saint Agoulin 65.27 319 *eP* **P 08 32 24.6 +0.1**
HGN Heimansgroeve 65.32 325 *eP* **P 08 32 26.0 +1.3**
comp=Z,5.1nm,1.4s,mb4.4
WTSB Winterswijk 65.34 326 *eP* **P 08 32 27.1 +2.3**
comp=Z,32nm,1.4s,mb5.2
SSF Saint Saulge 65.38 320 *eP* **P 08 32 23.3 -1.8**
comp=Z,83nm,1.4s,mb5.3
SSF Saint Saulge 65.38 320 *eP* **P 08 32 23.3 -1.8**
SSF pmax pmax
comp=Z,41nm,1.4s,mb5.3
SSF Saint Saulge 65.38 320 *eP* **P 08 32 23.3 -1.8**
comp=Z,41nm,1.4s,mb5.3
AVF Avril sur Loir 65.38 320 *eP* **P 08 32 23.1 -2.1**
comp=Z,42nm,1.4s,mb5.0
AVF Avril sur Loir 65.38 320 *eP* **P 08 32 23.1 -2.1**
AVF pmax pmax
comp=Z,21nm,1.4s,mb5.0
AVF Avril sur Loir 65.38 320 *eP* **P 08 32 23.1 -2.1**
comp=Z,21nm,1.4s,mb5.0
CSOR Sort 65.47 315 P **P 08 32 27.1 +1.3**
comp=Z,50nm,1.6s,mb5.3
BEBN Eben Emael 65.48 324 P **P 08 32 25.7 0.0**
BCLA Clavier 65.55 324 P **P 08 32 26.4 +0.3**
comp=Z,16nm,1.7s,mb4.8
LBMI Labuha 65.57 93 P **P 08 32 27.9 +0.9**
comp=Z,999nmcomp=Z,73nm,1.3s,mb5.6
APA Apatity 65.59 348⇓ *iP* **P 08 32 25.5 -0.6**
APA pmax pmax
comp=Z,13nm,1.0s,mb4.9
APA MLR MLR
comp=Z,400nm,19.0s,MS4.6
CAF Calviac 65.61 317 *eP* **P 08 32 25.4 -1.3**
comp=Z,20nm,1.1s,mb4.7
CAF Calviac 65.61 317 *eP* **P 08 32 25.4 -1.3**
CAF pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
CAF Calviac 65.61 317 *eP* **P 08 32 25.4 -1.3**
comp=Z,9.9nm,1.1s,mb4.8
HIA Hailar 65.61 37 *eP* **P 08 32 26.4 -0.2**
HIA pmax pmax
comp=Z,48nm,1.1s
HIA Hailar 65.61 37 *eP* **P 08 32 26.4 -0.2**
comp=Z,48nm,1.1s,mb5.4
LVZ Lovozero 65.63 349 *c iP* **P 08 32 25.9 -0.4**
LVZ pmax pmax
comp=Z,29nm,1.7s,mb5.0
BGF Bois d'Agland 65.63 319 *eP* **P 08 32 25.5 -1.3**
comp=Z,68nm,1.0s,mb5.3
BGF Bois d'Agland 65.63 319 *eP* **P 08 32 25.5 -1.3**
BGF pmax pmax
comp=Z,34nm,1.0s,mb5.3
BGF Bois d'Agland 65.63 319 *eP* **P 08 32 25.5 -1.3**
comp=Z,34nm,1.0s,mb5.3
ERTA Horta de San J 65.66 313 P **P 08 32 26.8 -0.3**
comp=Z,68nm,1.3s,mb5.5
GIVF Givet 65.70 324 *eP* **P 08 32 26.0 -1.2**
comp=Z,133nm,1.5s,mb5.5
GIVF Givet 65.70 324 *eP* **P 08 32 26.0 -1.2**
GIVF pmax pmax
comp=Z,67nm,1.5s,mb5.5
GIVF Givet 65.70 324 *eP* **P 08 32 26.0 -1.2**
comp=Z,67nm,1.5s,mb5.5
SNY Shenyang 65.70 46 ⇓P **P 08 32 24.5 -2.9**
SNY S S 08 41 06.3 -7.3
SNY pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
SNY LR LR
comp=N,310nm,15.0s,MS4.8
SNY LR LR
comp=E,320nm,15.9s,MS4.8
SNY LR LR
comp=Z,340nm,15.0s,MS4.7
DOU Dourbes 65.83 323 P **P 08 32 27.4 -0.6**
comp=Z,16nm,1.9s,mb4.7
TCF Toulx Ste Croi 65.95 319 *eP* **P 08 32 27.4 -1.5**
comp=Z,49nm,1.7s,mb5.0
TCF Toulx Ste Croi 65.95 319 *eP* **P 08 32 27.4 -1.5**
TCF pmax pmax
comp=Z,24nm,1.7s,mb5.0
TCF Toulx Ste Croi 65.95 319 *eP* **P 08 32 27.4 -1.5**
comp=Z,24nm,1.7s,mb5.0
BAIF Baives 66.05 323 *eP* **P 08 32 28.3 -1.1**
comp=Z,110nm,1.4s,mb5.4
BAIF Baives 66.05 323 *eP* **P 08 32 28.3 -1.1**
BAIF pmax pmax
comp=Z,55nm,1.4s,mb5.4
BAIF Baives 66.05 323 *eP* **P 08 32 28.3 -1.1**
comp=Z,55nm,1.4s,mb5.4
RJF Les Rejaudoux 66.09 318 *eP* **P 08 32 28.7 -1.1**
comp=Z,93nm,1.5s,mb5.3
RJF *e*MLR MLR
comp=Z,153nm,21.2s,MS3.9
RJF Les Rejaudoux 66.09 318 *eP* **P 08 32 28.7 -1.1**
RJF pmax pmax
comp=Z,46nm,1.5s,mb5.3
RJF MLR MLR
comp=Z,150nm,21.3s,MS4.2
RJF Les Rejaudoux 66.09 318 *eP* **P 08 32 28.7 -1.1**
comp=Z,46nm,1.5s,mb5.3
RJF LR LR
comp=Z,150nm,21.3s,MS4.2
EPF Esparros 66.22 315 *eP* **P 08 32 28.9 -1.8**
EBIE Bielsa 66.27 315 P **P 08 32 31.6 +0.7**
comp=Z,7.2nm,0.8s,mb4.8
ECHE Chera 66.27 311 P **P 08 32 34.7 +3.6**
ECHE pmax pmax
comp=Z,19nm,0.9s,mb5.1
ECHE Chera 66.27 311 P **P 08 32 34.7 +3.7**
comp=Z,19nm,0.9s,mb5.1
ESAC San Caprasio 66.44 314 P **P 08 32 32.5 +0.4**
comp=Z,29nm,0.8s,mb5.4
KIC Kosan Boka 66.48 275 *eP* **P 08 32 32.9 0.0**
comp=Z,80nm,1.2s,mb5.6
LFF La Frestale 66.50 317 *eP* **P 08 32 31.5 -0.9**
comp=Z,80nm,1.1s,mb5.3
LFF La Frestale 66.50 317 *eP* **P 08 32 31.5 -0.9**
LFF pmax pmax
comp=Z,40nm,1.1s,mb5.4
LFF La Frestale 66.50 317 *eP* **P 08 32 31.5 -0.9**
comp=Z,40nm,1.1s,mb5.4
DBIC Dimbokro 66.58 275 P **P 08 32 34.5 +1.0**
comp=Z,9.6nm,0.8s,mb4.9,baz=53,slow=8.2,SNR=6.0
AAI Ambon 66.59 96 P **P 08 32 36.0 +2.4**
comp=Z,5μmcomp=Z,63nm,0.8s,mb5.7
FITZ Fitzroy Crossi 66.67 112 *eP* **P 08 32 34.3 +0.3**
comp=Z,19nm,1.2s,mb5.0
FITZ Fitzroy Crossi 66.67 112 P **P 08 32 34.2 +0.2**
comp=Z,11nm,1.1s,mb4.8,baz=285,slow=5.4,SNR=5.6
FITZ LR LR 08 54 30.0
comp=Z,345nm,21.3s,MS4.5,baz=295,slow=30
FITZ Fitzroy Crossi 66.67 112 P **P 08 32 35.3 +1.3**
comp=Z,40nm,1.8s,mb5.2
TIC Toumodi 66.75 275 *eP* **P 08 32 34.6 0.0**
comp=Z,77nm,1.2s,mb5.6
TIC Toumodi 66.75 275 *eP* **P 08 32 34.6 0.0**
TIC pmax pmax
comp=Z,77nm,1.2s,mb5.6
LIC Lamto 66.78 275 *eP* **P 08 32 34.8 0.0**
comp=Z,95nm,1.3s,mb5.7
LIC Lamto 66.78 275 *eP* **P 08 32 35.1 +0.3**
comp=Z,75nm,1.1s,mb5.3
LIC *e*MLR MLR
comp=Z,632nm,23.0s,MS4.5
LIC Lamto 66.78 275 *eP* **P 08 32 35.1 +0.3**
comp=Z,37nm,1.1s,mb5.3
LIC LR LR
comp=Z,320nm,23.0s,MS4.5
ETSF Etsaut 66.82 315 *eP* **P 08 32 34.0 -0.5**
comp=Z,57nm,1.2s,mb5.2
ETSF Etsaut 66.82 315 *eP* **P 08 32 34.0 -0.5**
ETSF pmax pmax
comp=Z,29nm,1.2s,mb5.2
ETSF Etsaut 66.82 315 *eP* **P 08 32 34.0 -0.5**
comp=Z,28nm,1.2s,mb5.2
EVIA Vianos 67.22 310 P **P 08 32 39.7 +2.6**
EVIA pmax pmax
comp=Z,12nm,0.8s,mb5.0
EVIA Vianos 67.22 310 P **P 08 32 39.7 +2.6**
comp=Z,12nm,0.8s,mb5.0
SJPF Ste Jean 67.35 315 *eP* **P 08 32 37.3 -0.6**
comp=Z,44nm,1.0s,mb5.1
SJPF Ste Jean 67.35 315 *eP* **P 08 32 37.3 -0.6**
SJPF pmax pmax
comp=Z,22nm,1.0s,mb5.1
SJPF Ste Jean 67.35 315 *eP* **P 08 32 37.3 -0.6**
comp=Z,22nm,1.0s,mb5.1
ETOR Torete 67.37 312 P **P 08 32 38.2 +0.1**
ETOR pmax pmax
comp=Z,11nm,0.8s,mb4.9
ETOR Torete 67.37 312 P **P 08 32 38.2 +0.2**
comp=Z,11nm,0.8s,mb5.0
EQES Quesada 67.48 309 P **P 08 32 40.2 +1.5**
comp=Z,7.1nm,0.9s,mb4.7
MFF Saint Martin d 67.60 319 *eP* **P 08 32 37.9 -1.5**
comp=Z,66nm,1.4s,mb5.2
MFF Saint Martin d 67.60 319 *eP* **P 08 32 37.9 -1.5**
MFF pmax pmax
comp=Z,33nm,1.4s,mb5.2
MFF Saint Martin d 67.60 319 *eP* **P 08 32 37.9 -1.5**
comp=Z,33nm,1.4s,mb5.2
NB2 NORSAR Subarra 67.69 336 P **P 08 32 38.5 -1.1**
comp=Z,34nm,1.7s,mb5.1,baz=120,slow=6.2
NB2 NORSAR Subarra 67.69 336 P **P 08 32 38.5 -1.1**
baz=120,slow=6.2
NB2 NORSAR Subarra 67.69 336 P **P 08 32 38.5 -1.1**
NB2 NORSAR Subarra 67.69 336 P **P 08 32 38.5 -1.1**
NOA NORSAR Array B 67.69 336 P **P 08 32 38.8 -0.9**
comp=Z,2.1nm,1.0s,mb4.1,baz=118,slow=7.0,SNR=3.6
KSRS Korea Array 67.94 52 P **P 08 32 40.0 -1.7**
comp=Z,8.1nm,0.9s,mb4.7,baz=256,slow=8.1,SNR=12
LDF La Druitiere 68.19 321 *eP* **P 08 32 41.2 -1.9**
comp=Z,37nm,1.4s,mb4.9
LDF La Druitiere 68.19 321 *eP* **P 08 32 41.2 -1.9**
LDF pmax pmax
comp=Z,18nm,1.4s,mb4.9
LDF La Druitiere 68.19 321 *eP* **P 08 32 41.2 -1.9**
comp=Z,18nm,1.4s,mb4.9
FLN La Foliniere 68.47 321 *eP* **P 08 32 42.9 -1.9**
FLN *e*MLR MLR
comp=Z,158nm,22.8s,MS3.9
FLN La Foliniere 68.47 321 *eP* **P 08 32 42.9 -1.9**
FLN LR LR
comp=Z,160nm,22.8s,MS4.2
ESDC Sonseca Array 68.54 311 P **P 08 32 45.2 -0.2**
comp=Z,6.4nm,0.7s,mb4.6,baz=88,slow=5.5,SNR=29
ESDC LR LR 09 03 20.6
comp=Z,69nm,18.3s,MS3.9,baz=330,slow=36
ESDC Sonseca Array 68.54 311 P **P 08 32 45.4 -0.1**
comp=Z,6.1nm,0.8s,mb4.6
ESLA Sonseca Array 68.54 311 *eP* **P 08 32 45.8 +0.3**
EMIJ Mijas 68.58 307 P **P 08 32 46.8 +1.0**
comp=Z,9.9nm,1.0s,mb4.7
GRR Gorron 68.60 320 *eP* **P 08 32 44.7 -0.9**
comp=Z,77nm,1.4s,mb5.1
GRR Gorron 68.60 320 *eP* **P 08 32 44.7 -0.9**
GRR pmax pmax
comp=Z,39nm,1.4s,mb5.1
GRR Gorron 68.60 320 *eP* **P 08 32 44.7 -0.9**
comp=Z,39nm,1.4s,mb5.1
EADA Adamuz 68.72 309 P **P 08 32 47.0 +0.4**
comp=Z,5.6nm,1.0s,mb4.5
KEV Kevo 68.72 348 *eP* **P 08 32 45.9 -0.1**
KEV pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
KEV Kevo 68.72 348 *eP* **P 08 32 45.9 -0.1**
comp=Z,8.7nm,0.9s,mb4.7
PAB San Pablo 68.81 311 *eP* **P 08 32 46.8 -0.3**
PAB pmax pmax
comp=Z,21nm,1.1s,mb5.0
PAB San Pablo 68.81 311 *eP* **P 08 32 46.8 -0.3**
comp=Z,21nm,1.1s,mb5.0
ARCES ARCESS Array B 68.88 347 P **P 08 32 47.4 +0.4**
comp=Z,4.3nm,0.7s,mb4.5,baz=142,slow=4.6,SNR=22
ARE0 ARCESS Array S 68.88 347 *eP* **P 08 32 48.0 +1.0**
GUD Guadarrama 68.89 312 P **P 08 32 46.9 -0.7**
KNA Kununurra 69.08 109 P **P 08 32 49.0 -0.2**
comp=Z,52nm,1.4s,mb5.3
SWI Sorong 69.33 93 P **P 08 32 51.2 +0.3**
comp=Z,30nm,1.4s,mb5.0
ECAB El Cabril 69.35 309 P **P 08 32 51.7 +1.2**
comp=Z,11nm,0.9s,mb4.8
ESPR Espera 69.49 307 P **P 08 32 52.6 +1.2**
comp=Z,8.8nm,0.9s,mb4.7
SGMF Saint Gilles 69.64 320 *eP* **P 08 32 50.3 -1.8**
comp=Z,115nm,1.5s,mb5.3
SGMF Saint Gilles 69.64 320 *eP* **P 08 32 50.3 -1.8**
SGMF pmax pmax
comp=Z,58nm,1.5s,mb5.3
SGMF Saint Gilles 69.64 320 *eP* **P 08 32 50.3 -1.8**
comp=Z,58nm,1.5s,mb5.3
QUIF Quistinic 69.94 319 *eP* **P 08 32 52.0 -2.0**
ROSF Rostrenen 70.12 320 *eP* **P 08 32 52.9 -2.2**
comp=Z,88nm,1.3s,mb5.2
ROSF Rostrenen 70.12 320 *eP* **P 08 32 52.9 -2.2**
ROSF pmax pmax
comp=Z,44nm,1.3s,mb5.2
ROSF Rostrenen 70.12 320 *eP* **P 08 32 52.9 -2.2**
comp=Z,44nm,1.3s,mb5.2
EPLA Plasencia 70.22 311 P **P 08 32 57.6 +1.8**
EPLA pmax pmax
comp=Z,11nm,1.0s,mb4.7
EPLA Plasencia 70.22 311 P **P 08 32 57.6 +1.8**
comp=Z,11nm,1.0s,mb4.7
EMIN Mina Concepcio 70.28 308 P **P 08 32 58.4 +2.2**
comp=Z,7.4nm,0.9s,mb4.6
PBAR Barrancos 70.63 309 *eP* **P 08 32 58.7 +0.3**
comp=Z,23nm,1.7s,mb4.8
MDJ Mudanjiang 70.66 44 P **P 08 32 57.0 -1.4**
MDJ pP pP 08 33 00.3 -1.4
MDJ sP sP 08 33 01.4 -1.5
MDJ S S 08 42 10.3 -2.3
MDJ ScS ScS 08 42 59.8 -2.3
MDJ pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
MDJ pmax pmax
comp=Z,46nm,4.1s
MDJ LR LR
comp=N,450nm,18.7s,MS4.8
MDJ LR LR
comp=E,420nm,23.0s,MS4.8
MDJ LR LR
comp=Z,580nm,22.4s,MS4.8
MDJ Mudanjiang 70.66 44 *eP* **P 08 32 58.7 +0.3**
comp=Z,98nm,1.5s,mb5.5
EBAD Badajoz 70.70 309 P **P 08 32 57.6 -1.3**
comp=Z,8.3nm,0.8s,mb4.7
PVAQ Vaqueiros 71.04 308 *e*LR LR 08 56 53.2
comp=Z,84nm,18.0s
PMRV Marv??o 71.10 310 *eP* **P 08 33 01.0 -0.2**
comp=Z,45nm,1.4s,mb5.2
MVO Moncorvo 71.13 312 *eP* **P 08 33 01.6 +0.3**
comp=Z,27nm,1.6s,mb4.9
PESTR Estremoz 71.16 309 *e*LR LR 08 57 07.0
comp=Z,99nm,18.0s
PBDV Barranco-do-Ve 71.18 308 *e*LR LR 08 57 05.5
comp=Z,73nm,22.0s
PCBR Castelo Branco 71.24 310 *eP* **P 08 33 02.1 +0.1**
comp=Z,21nm,1.3s,mb4.9
PBEJ Beja 71.25 308 *eP* **P 08 33 01.8 -0.3**
comp=Z,16nm,1.4s,mb4.8
CLNS Chul'man 71.30 31 *eP* **P 08 33 06.1 +4.1**
CLNS *e*PP pP 08 33 16.4 +11
CLNS *e*PPP 08 37 24.8
CLNS *e*S S 08 42 09.0 -11
CLNS *e*SS SS 08 46 58.2 +4.5
CLNS *e*SSS 08 50 02.9
CLNS pmax pmax
comp=Z,27nm,1.1s,mb5.1
CLNS pmax pmax
comp=N,7.0nm,1.3s
CLNS pmax pmax
comp=E,15nm,1.4s
CLNS smax
comp=N,173nm,12.6s
CLNS smax
comp=E,126nm,14.4s
CLNS MLR MLR
comp=N,180nm,14.0s,MS4.7
CLNS MLR MLR
comp=Z,317nm,15.0s,MS4.7
CLNS MLR MLR
comp=E,282nm,15.0s,MS4.7
PCVE Castro Verde 71.33 308 *eP* **P 08 33 02.5 -0.1**
comp=E,30nm,1.8s,mb4.9
MTE Manteigas 71.38 311 *eP* **P 08 33 01.9 -1.0**
EVO Evora 71.44 309 *eP* **P 08 33 04.9 +1.6**
comp=E,20nm,1.1s,mb4.7
EVO *e*MLR MLR
comp=Z,166nm,20.2s,MS4.0
EVO Evora 71.44 309 *eP* **P 08 33 03.4 +0.1**
comp=Z,36nm,1.8s,mb5.0
MORF Marmelete 71.76 308 *eP* **P 08 33 05.2 -0.1**
comp=Z,70nm,1.5s,mb5.4
PFVI Vila Bisbo 71.88 307 *e*LR LR 08 57 22.8
comp=Z,91nm,20.0s
KAKA Kakadu 72.03 105 *eP* **P 08 33 06.3 -1.0**
comp=Z,17nm,0.8s,mb5.0
KAKA Kakadu 72.03 105 *eP* **P 08 33 06.2 -1.1**
comp=Z,162nm,1.4s,mb5.8
KAKA Kakadu 72.03 105 P **P 08 33 06.5 -0.8**
comp=Z,292nmcomp=Z,36nm,0.9s,mb5.3
MAW Mawson 72.30 180 P **P 08 33 08.1 +0.3**
comp=Z,1.9nm,0.7s,mb4.2,baz=18,slow=6.5,SNR=9.7
MAW LR LR 09 00 53.5
comp=Z,565nm,18.4s,MS4.9,baz=357,slow=32
KLR Kul'dur 73.10 40 *eP* **P 08 33 08.7 -4.3**
BAKI Biak 74.19 93 P **P 08 33 20.3 +0.2**
comp=Z,984nmcomp=Z,75nm,1.3s,mb5.5
MIR Mirnyy 74.64 168 *eP* **P 08 33 23.0 +1.4**
MIR pmax pmax
comp=Z,42nm,1.8s,mb5.1
HABR Khabarovsk 75.10 41 *eP* **P 08 33 27.3 +2.6**
HABR 08 33 35.7
HABR 08 36 10.6
HABR *e* 08 43 35.4
HABR *e*SS SS 08 47 52.5 +0.4
HABR pmax pmax
comp=Z,59nm,1.8s,mb5.2
HABR pmax pmax
comp=E,72nm,2.5s
HABR pmax pmax
comp=N,27nm,2.7s
HABR MLR MLR
comp=Z,1μm,19.0s,MS5.1
WRAB Tennant Creek 75.11 112 P **P 08 33 24.6 -0.7**
comp=Z,236nm,0.9s,mb6.1,SNR=12
WRAB Tennant Creek 75.11 112 *eP* **P 08 33 24.7 -0.5**
WRAB Tennant Creek 75.11 112 P **P 08 33 24.8 -0.5**
comp=Z,58nm,1.5s,mb5.3
YAK Yakutsk 75.32 27 *eP* **P 08 33 23.0 -2.7**
YAK *e**PP pP 08 33 29.7 +0.7
YAK *e* 08 33 37.1
YAK *e* 08 36 12.7
YAK *e*S S 08 42 56.9 -8.2
YAK *e* 08 43 31.8
YAK *e*SSS 08 51 08.6
YAK pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
YAK smax
comp=E,74nm,12.0s
YAK smax
comp=N,18nm,8.4s
YAK MLR MLR
comp=E,372nm,20.0s,MS4.8
YAK MLR MLR
comp=N,192nm,18.0s,MS4.8
YAK MLR MLR
comp=Z,619nm,21.0s,MS4.9
SYO Syowa Base 75.34 188⇓ *eP* **P 08 33 24.6 -1.0**
ASAR Alice Springs 75.44 116 P **P 08 33 26.4 -0.8**
comp=Z,17nm,0.9s,mb5.0,baz=286,slow=5.4,SNR=56
MAJO Matsushiro 75.97 54 *eP* **P 08 33 28.9 -1.1**
MAT Matsushiro 75.97 54 P **P 08 33 28.1 -1.8**
MAT S S 08 43 06.0 -7.2
MJAR Matsushiro Arr 75.97 54 P **P 08 33 29.0 -1.0**
comp=Z,4.5nm,0.9s,mb4.4,baz=268,slow=8.2,SNR=18
YSS Yuzh-Sakhalins 80.09 43 *eP* **P 08 33 52.0 -0.6**
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.2
YSS MLR MLR
comp=Z,500nm,18.0s,MS4.9
ERM Erimo 80.13 48⇑ *eP* **P 08 33 53.9 +1.0**
ERM pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
NVL N'lazarevskaya 82.44 195 *eP* **P 08 34 11.9 +7.4**
DAG Danmarks Havn 83.17 347⇑ *iP* **P 08 34 09.2 +0.9**
comp=Z,22nm,1.2s,mb5.1
STKA Stephens Creek 83.68 123 *eP* **P 08 34 12.8 +1.0**
comp=Z,10nm,0.9s,mb5.0
STKA Stephens Creek 83.68 123 P **P 08 34 12.5 +0.7**
comp=Z,12nm,0.9s,mb5.0,baz=319,slow=5.7,SNR=9.0
SEY Seymchan 85.84 27⇓ *eP* **P 08 34 19.0 -3.1**
PMG Port Moresby 85.94 100 *ceP* **P 08 34 22.5 -1.1**
PMG pmax pmax
comp=Z,46nm,1.7s
PMG Port Moresby 85.94 100 P **P 08 34 25.6 +2.0**
comp=Z,39nm,1.3s,mb5.5
CTA Charters Tower 86.19 110 *eP* **P 08 34 24.7 0.0**
comp=Z,7.2nm,1.1s,mb4.8
CTA Charters Tower 86.19 110 P **P 08 34 25.1 +0.3**
comp=Z,9.8nm,1.0s,mb5.0,baz=293,slow=5.8,SNR=6.0
CTAO Charters Tower 86.19 110 *eP* **P 08 34 24.4 -0.3**
CTAO pmax pmax
comp=Z,33nm,1.5s,mb5.3
CTAO Charters Tower 86.19 110 *eP* **P 08 34 24.4 -0.3**
comp=Z,34nm,1.5s,mb5.3
CTAO Charters Tower 86.19 110 P **P 08 34 24.6 -0.1**
VNA1 Neumayer--Stat 88.15 198 *eP* **P 08 34 35.7 +2.6**
VNA1 *e* 08 34 41.0
SUMG Summit 88.54 343 *eP* **P 08 34 35.8 +0.8**
SUMG pmax pmax
comp=Z,34nm,1.4s
SUMG Summit 88.54 343 *eP* **P 08 34 35.8 +0.8**
comp=Z,34nm,1.4s,mb5.5
SUMG Summit 88.54 343⇑ *iP* **P 08 34 36.6 +1.6**
comp=Z,9.1nm,1.0s,mb5.1
CAN Canberra 90.27 125 *eP* **P 08 34 44.5 +0.7**
CAN pmax pmax
comp=Z,27nm,1.0s,mb5.5
CAN Canberra 90.27 125 *eP* **P 08 34 44.5 +0.6**
comp=Z,27nm,1.0s,mb5.5
BILL Bilibino 90.79 21 *eP* **P 08 34 46.3 +0.7**
BILL pmax pmax
comp=Z,30nm,2.5s,mb5.2
BILL MLR MLR
comp=Z,300nm,20.0s,MS4.7
QSPA South Pole Qui 94.83 180 P **P 08 35 03.7 -0.2**
comp=Z,0.4nm,0.8s,mb3.9,baz=260,slow=8.0,SNR=3.0
DZM Mont Dzumac 105.11 111 *e*SS SS 08 55 22.2 +14
comp=Z,87nm,29.6s
DZM *e*LR LR 09 10 40.0
comp=Z,334nm,27.4s
ILAR Eielson Array 107.31 13 PP PP 08 40 22.5 -4.0
comp=Z,3.1nm,1.1s,baz=319,slow=4.8,SNR=7.6
EDM Edmonton 122.00 357 *e*PKIKP PKPdf 08 40 36.7 -0.5
EGMT Eagleton 126.85 353 *e*PKPdf PKPdf 08 40 46.3 -0.4
NEW Newport 127.09 359 *e*PKIKP PKPdf 08 40 47.0 -0.1
LAO LASA Array 127.63 350 *e*PKPdf PKPdf 08 40 48.6 +0.4
SWMT Swartz Lake 127.73 357 *e*PKPdf PKPdf 08 40 48.3 -0.1
SLMT Seeley Lake 127.97 356 *e*PKPdf PKPdf 08 40 48.2 -0.6
CHMT Chamberlain Mo 128.28 356 *e*PKPdf PKPdf 08 40 49.0 -0.4
MSO Missoula 128.41 357 *e*PKPdf PKPdf 08 40 49.0 -0.6
BOZ Bozeman (W) 129.40 354 *e*PKIKP PKPdf 08 40 51.7 +0.1
RLMT Red Lodge 129.64 352 *e*PKPdf PKPdf 08 40 53.0 +1.0
DLMT Dillon 129.77 355 *e*PKPdf PKPdf 08 40 52.3 0.0
LPAZ La Paz 129.90 253 PKP PKPdf 08 40 55.0 +1.8
comp=Z,1.2nm,1.0s,baz=36,slow=5.3,SNR=4.5
FVM French Village 130.30 331 *e*PKIKP PKPdf 08 40 49.1 -4.5
TPAW Teton Pass 131.46 353 *e*PKPdf PKPdf 08 40 55.9 +0.3
SNOW Snow King Moun 131.46 353 *e*PKPdf PKPdf 08 40 50.3 -5.3
REDW Red Top Meadow 131.57 353 *e*PKPdf PKPdf 08 40 56.4 +0.6
PDAR Pinedale Array 131.99 352 PKP PKPdf 08 40 56.5 -0.1
comp=Z,0.9nm,0.9s,baz=67,slow=3.1,SNR=7.7
HWUT Hardware Ranch 133.39 353 *e*PKPdf PKPdf 08 40 59.0 -0.2
NVAR Mina Array Bea 136.92 0 PKP PKPdf 08 41 05.8 -0.2
comp=Z,3.8nm,1.0s,baz=348,slow=0.8,SNR=18
BNM Barren Site 139.76 345 *e*PKPdf PKPdf 08 41 10.4 -0.9

JCT	Junction City	140.81 335	*e*PKIKP	PKPdf	08 41 08.2	-5.1
MNTX	Cornudas Mount	141.73 343	*e*PKPdf	PKPdf	08 41 10.4	-4.5
TXAR	Lajitas Array	143.34 339	PKhKP	PKPpre	08 41 13.3	
	comp=Z,2.3nm,1.0s,baz=96,slow=4.4,SNR=5.2					
TXAR			PKP	PKPdf	08 41 17.2	-0.7
	comp=Z,1.7nm,0.8s,baz=72,slow=2.9,SNR=18					
TXAR			PP	PP	08 44 23.0	-4.4
	comp=Z,0.2nm,0.8s,baz=50,slow=8.4,SNR=3.3					
TXAR			SKP		08 44 50.4	
	comp=Z,0.5nm,1.1s,baz=241,slow=1.3,SNR=3.6					
TXAR	Lajitas Array	143.34 339	PKIKP	PKPpre	08 41 13.4	
TXAR					08 41 17.2	
TXAR					08 44 23.0	
TGUH	Tegucigalpa,Un	144.26 302	*e*PKPdf	PKPdf	08 41 17.8	-2.0
PPT	Papeete	146.55 115	*e*LR	LR	09 29 51.6	
	comp=Z,404nm,29.5s					

IDC 20 08:23:30.8±0.8, 4°.92N×62°.27E, h0km, mb4.1/10, mb1 4.2/10, mb1mx3.9/23, mbtmp4.1/10, MS4.3/1, Ms1 4.3/1, ms1mx3.8/11, Error ellipse: s-maj=24.2km s-min=19.8km az=2.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATD	Arta Tunnel	20.30	290	P	P	08 28 09.8	+1.3
	14nm,0.9s,baz=164,slow=18,SNR=3.6						
KMBO	Kilima Mbogo	25.70	257	P	P	08 29 04.8	+1.8
	4.0nm,0.9s,baz=180,slow=24,SNR=2.3						
BOSA	Boshof	48.78	225	P	P	08 32 16.9	-0.9
	1.8nm,0.5s,baz=357,slow=11,SNR=4.1						
ZALV	Zalesovo Beam	52.22	17	P	P	08 32 43.2	-0.2
	1.2nm,0.3s,baz=218,slow=9.1,SNR=4.7						
AKASG	Malin Array Be	53.36	334	P	P	08 32 52.1	+0.3
	0.3nm,0.4s,baz=145,slow=6.6,SNR=3.1						
SONM	Songino Array	56.99	34	P	P	08 33 19.2	+1.1
	2.2nm,1.0s,baz=212,slow=5.1,SNR=3.0						
TORD	Torodi Ar. Bea	60.26	282	P	P	08 33 41.4	-0.1
	2.6nm,1.0s,baz=86,slow=7.9,SNR=4.0						
FINES	FINESS Array B	62.55	341	LR	LR	09 02 48.8	
	comp=Z,228nm,19.4s,baz=292,slow=38						
ESDC	Sonseca Array	68.65	311	P	P	08 34 35.5	-0.7
	1.7nm,0.7s,baz=88,slow=5.5,SNR=4.9						
ARCES	ARCESS Array B	68.87	347	P	P	08 34 36.0	-0.9
	0.5nm,0.7s,baz=122,slow=8.6,SNR=2.6						
WRA	Warramunga Arr	74.95	112	P	P	08 35 14.6	+0.2
	baz=286,slow=5.3						
ASAR	Alice Springs	75.29	116	P	P	08 35 16.5	+0.2
	2.8nm,0.9s,baz=289,slow=5.3,SNR=4.8						
NVAR	Mina Array Bea	136.87	1	PKP	PKPdf	08 42 57.0	+1.0
	1.1nm,1.0s,baz=260,slow=3.5,SNR=2.9						
TXAR	Lajitas Array	143.36	339	PKP	PKPdf	08 43 06.6	-1.4
	0.2nm,0.7s,baz=104,slow=2.9,SNR=2.3						

*ISCJB **20** 08:29:13.7±0.3, 38°.42N±0°.02×21°.99E±0°.02, h1km±4km, Error ellipse: s-maj=3.2km s-min=3.0km az=171.7*
*ATH **20** 08:29:13.9, 38°.43N×21°.98E, h16km±2km, MD3.1/14, ML2.9*
*NEIC **20** 08:29:13.9, 38°.43N×21°.98E, h16km, ML2.9(ATH), After ATH.*
*THE **20** 08:29:14.2, 38°.41N×22°.00E, h1km±2km, ML3.6/7, Error ellipse: s-maj=2.2km s-min=0.6km az=232.0*
*CSEM **20** 08:29:14.0±0.1, 38°.43N×21°.98E, h2km, ML3.6/7, Error ellipse: s-maj=3.3km s-min=2.9km az=50.0*
ISC 20 08:29:14.4±0.3, 38°.42N±0°.02×21°.98E±0°.02, h5km±3km, n87, σ0°89/119, 3C, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	Efpalio	0.06	274	P	Pg	08 29 16.1	+0.3
EFP				S	Sg	08 29 17.5	+0.7
EFP	Efpalio	0.06	274	P	Pg	08 29 16.1	+0.3
EFP				S	Sg	08 29 17.5	+0.7
UPR	University Cam	0.21	228	P	Pg	08 29 18.7	+0.3
UPR	University Cam	0.21	228	P	Pg	08 29 18.7	+0.3
DSF	Desfina	0.43	91	P	Pg	08 29 22.3	-0.3
DSF				S	Sg	08 29 28.3	+0.1
DSF	Desfina	0.43	91	P	Pg	08 29 22.3	-0.3
DSF				S	Sg	08 29 28.3	+0.1
EVR	Evrytania	0.51	345	*e*Pn	Pg	08 29 23.5	-0.7
EVR				*e*Sn	Sg	08 29 31.3	+0.4
EVR	Evrytania	0.51	345	*e*PN	Pg	08 29 23.5	-0.7
EVR				*e*SN	Sg	08 29 31.3	+0.4
EVR	Evrytania	0.51	345	*e*Pn	Pg	08 29 23.5	-0.7
RLS	Riolos of Patr	0.54	228	*e*Pn	Pg	08 29 24.8	0.0
RLS				*e*Sn	Sg	08 29 33.0	+1.1
RLS	Riolos of Patr	0.54	228	*e*PN	Pg	08 29 24.8	0.0
RLS				*e*SN	Sg	08 29 33.0	+1.1
RLS	Riolos of Patr	0.54	228	*e*Pn	Pg	08 29 24.8	0.0
GUR	Goura	0.56	149	P	Pg	08 29 24.9	-0.3
GUR				S	Sg	08 29 32.9	+0.4
GUR	Goura	0.56	149	P	Pg	08 29 24.9	-0.3
GUR				S	Sg	08 29 32.9	+0.4
AGG	Agios Georgios	0.66	25	P	Pg	08 29 25.8	-1.2
AGG				S	Sg	08 29 36.0	+0.4
AGG	Agios Georgios	0.66	25	P	Pg	08 29 25.8	-1.2
AGG				S	Sg	08 29 36.0	+0.4
LKR	Lokris	0.83	74	*e*Pb	Pg	08 29 29.4	-0.9
LKR				*e*Sn	Sg	08 29 41.3	+0.2
LKR	Lokris	0.83	74	*e*PB	Pg	08 29 29.4	-0.9
LKR				*e*SN	Sg	08 29 41.3	+0.2
LKR	Lokris	0.83	74	P	Pg	08 29 29.5	-0.8
LKR				S	Sg	08 29 41.5	+0.4
LKR	Lokris	0.83	74	P	Pg	08 29 29.5	-0.8
LKR				S	Sg	08 29 41.5	+0.4
LTK	Loutraki	0.87	117	P	Pg	08 29 30.7	-0.4
LTK				S	Sg	08 29 42.9	+0.4
LTK	Loutraki	0.87	117	P	Pg	08 29 30.7	-0.4
LTK				S	Sg	08 29 42.9	+0.4
KFL	Anninata	0.99	252	P	Pg	08 29 32.6	-0.7
KFL	Anninata	0.99	252	P	Pg	08 29 32.6	-0.7
VLX	Vlachokerasia	1.10	163	P	Pg	08 29 34.2	-1.2
VLX				S	Sg	08 29 50.3	+0.7
VLX	Vlachokerasia	1.10	163	P	Pg	08 29 34.2	-1.2
VLX				S	Sg	08 29 50.3	+0.7
LKD2	Lefkada island	1.10	290	P	Pg	08 29 34.4	-1.0
LKD2	Lefkada island	1.10	290	P	Pg	08 29 34.4	-1.0
VLS	Valsamata	1.12	258	*e*Pb	Pg	08 29 34.4	-1.4
VLS				*e*Sn	Sg	08 29 51.2	+0.8
VLS	Valsamata	1.12	258	*e*PB	Pg	08 29 34.4	-1.4
VLS				*e*SN	Sg	08 29 51.2	+0.8
VLS	Valsamata	1.12	258	P	Pg	08 29 34.5	-1.3
VLS				S	Sg	08 29 51.7	+1.3
VLS	Valsamata	1.12	258	P	Pg	08 29 34.5	-1.3
VLS				*e*Sn	Sg	08 29 51.2	+0.8
VLS				S	Sg	08 29 51.7	+1.3
THL	Klokotos Trika	1.14	1	*e*PN	Pg	08 29 34.9	-1.3
THL				*e*SN	Sg	08 29 51.6	+0.6
THL	Klokotos Trika	1.14	1	*e*Pn	Pg	08 29 34.9	-1.3
THL				*e*Sn	Sg	08 29 51.6	+0.6
ITM	Ithomi	1.24	182	*e*Pn	Pn	08 29 37.1	-1.2
ITM				*e*Sn	Sn	08 29 55.6	+0.2
ITM	Ithomi	1.24	182	*e*PN	Pn	08 29 37.1	-1.2
ITM				*e*SN	Sn	08 29 55.6	+0.2
ITM	Ithomi	1.24	182	P	Pg	08 29 37.0	-1.2
ITM	Ithomi	1.24	182	P	Pg	08 29 37.0	-1.2
ITM				*e*Sn	Sn	08 29 55.6	+0.2
NEO	Neokhori	1.31	47	*e*Pn	Pn	08 29 38.7	-0.6
NEO	Neokhori	1.31	47	*e*PN	Pn	08 29 38.7	-0.6
NEO	Neokhori	1.31	47	*e*Pn	Pn	08 29 38.7	-0.6
XOR	Xorichti	1.33	45	P	Pn	08 29 38.8	-0.8
XOR				S	Sg	08 29 58.5	+1.2
XOR	Xorichti	1.33	45	P	Pn	08 29 38.8	-0.8
XOR				S	Sg	08 29 58.5	+1.2
DID	Didima	1.35	132	P	Pn	08 29 39.3	-0.5
DID	Didima	1.35	132	P	Pn	08 29 39.3	-0.5
NAIG	Nisos Aigina	1.36	119	*e*Pn	Pn	08 29 39.8	-0.2
NAIG	Nisos Aigina	1.36	119	*e*PN	Pn	08 29 39.8	-0.2
NAIG	Nisos Aigina	1.36	119	*e*Pn	Pn	08 29 39.8	-0.2
ATH	Athens Observa	1.44	108	*e*Pn	Pn	08 29 41.9	+0.8
ATH	Athens Observa	1.44	108	*e*PN	Pn	08 29 41.9	+0.8
ATH	Athens Observa	1.44	108	*e*Pn	Pn	08 29 41.9	+0.8
JAN	Janina	1.51	325	*e*Pn	Pn	08 29 42.7	+0.6
JAN	Janina	1.51	325	*e*PN	Pn	08 29 42.7	+0.6
JAN	Janina	1.51	325	*e*Pn	Pn	08 29 42.7	+0.6
PTL	Penteli	1.53	104	*e*Pn	Pn	08 29 42.6	+0.3
PTL	Penteli	1.53	104	*e*PN	Pn	08 29 42.6	+0.3
PTL	Penteli	1.53	104	*e*Pn	Pn	08 29 42.6	+0.3
PYL	PYLOS	1.54	187	P	Pn	08 29 42.2	-0.2
PYL	PYLOS	1.54	187	P	Pn	08 29 42.2	-0.2
VLY	Voula,Athens	1.54	111	*e*Pn	Pn	08 29 42.1	-0.3
VLY	Voula,Athens	1.54	111	*e*PN	Pn	08 29 42.1	-0.3
VLY	Voula,Athens	1.54	111	*e*Pn	Pn	08 29 42.1	-0.3
IGT	Igoumenitsa	1.70	311	P	Pn	08 29 45.3	+0.7
IGT	Igoumenitsa	1.70	311	P	Pn	08 29 45.3	+0.7
VLI	Veliai	1.86	156	*e*Pn	Pn	08 29 46.8	-0.1
VLI	Veliai	1.86	156	*e*PN	Pn	08 29 46.8	-0.1
VLI	Veliai	1.86	156	*e*Pn	Pn	08 29 46.8	-0.1
KZN	Kozani	1.89	355	P	Pn	08 29 48.0	+0.8
KZN	Kozani	1.89	355	P	Pn	08 29 47.5	+0.3
KZN	Kozani	1.89	355	P	Pn	08 29 47.5	+0.3
KEK	Kerkira	2.13	308	*e*Pn	Pn	08 29 52.1	+1.5
KEK	Kerkira	2.13	308	*e*PN	Pn	08 29 52.1	+1.5
KEK	Kerkira	2.13	308	P	Pn	08 29 51.5	+0.9
KEK	Kerkira	2.13	308	P	Pn	08 29 51.5	+0.9
KEK	Kerkira	2.13	308	*e*Pn	Pn	08 29 52.1	+1.5
PLG	Polygyros	2.25	30	P	Pn	08 29 54.0	+1.7
PLG	Polygyros	2.25	30	P	Pn	08 29 54.0	+1.7
FNA	Florina	2.40	349	P	Pn	08 29 54.6	+0.3
FNA	Florina	2.40	349	P	Pn	08 29 54.6	+0.3
BIA	Bitola	2.64	349	*e*Pn	Pn	08 30 00.9	+3.3
VAY	Valandovo	2.93	9	*i* Pn	Pn	08 30 00.8	-0.7
VAM	Vamos	3.50	149	P	Pn	08 30 11.6	+2.3
VAM	Vamos	3.50	149	P	Pn	08 30 11.6	+2.3
STON	Ston	5.51	325	*e*Pn	Pn	08 30 33.2	-3.8
STON				Sn	Sn	08 31 38.7	-1.9
BUD	Budapest	9.31	348⇑	*es*P		08 31 33.7	
BUD	Budapest	9.31	348⇑	*e*P	Pn	08 31 28.9	-0.2
PSZ	Piszkesteto	9.61	352⇑	*e*P	Pn	08 31 33.7	+0.4

*DDA **20** 08:41:50.2, 36°.00N×27°.97E, h29km±3km, Md2.9*
*ISK **20** 08:41:50.6, 35°.88N×27°.64E, h24km, MD3.1*
*CSEM **20** 08:41:51.0±0.4, 35°.88N×27°.66E, h20km, MD3.1, Error ellipse: s-maj=8.0km s-min=6.7km az=25.0*
ISC 20 08:41:52.0±1.0, 35°.88N±0°.04×27°.72E±0°.06, h33km±9km, n26, σ1°19/41, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.56	234	*e*P	Pb	08 42 03.5	-0.1
DAT	Datca	0.85	352	*e*Pg	Pn	08 42 07.8	0.0
DAT				*e*Sg	Sb	08 42 19.9	+0.3
DAT	Datca	0.85	352	*e*PG	Pn	08 42 07.8	0.0
DAT				*e*SG	Sb	08 42 19.9	+0.3
BDRM	Kayabasi	1.20	349	*i* P	Pn	08 42 11.4	-1.2
BDRM				*i* S	Sn	08 42 27.4	-0.3
BDRM	Kayabasi	1.20	349	*i* P	Pn	08 42 11.4	-1.2
BDRM				*i* S	Sn	08 42 27.4	-0.4
TURN	Turunc	1.22	35	*i* P	Pn	08 42 09.3	-3.5
TURN				*i* S	Sn	08 42 23.3	-4.9
TURN	Turunc	1.22	35	*i* P	Pn	08 42 09.3	-3.5
BODT	Bodrum	1.22	344	*e*PN	Pn	08 42 12.4	-0.4
BODT				*e*SN	Sn	08 42 27.8	-0.4
BODT	Bodrum	1.22	344	*e*Pn	Pn	08 42 12.4	-0.5
BODT				*e*Sn	Sn	08 42 27.8	-0.5
YER	Yerkesik	1.33	20	*e*PN	Pn	08 42 14.5	+0.2
YER				*e*SN	Sn	08 42 32.6	+1.7
YER	Yerkesik	1.33	20	*e*Pn	Pn	08 42 14.5	+0.2
YER				*e*Sn	Sn	08 42 32.6	+1.7
AKAS	Kas	1.57	76	*i* P	Pn	08 42 15.6	-2.0
AKAS				*i* S	Sn	08 42 33.1	-3.7
AKAS	Kas	1.57	76	*i* P	Pn	08 42 15.6	-2.0
AYDN	Tasoluk	1.78	4	*i* P	Pn	08 42 20.7	+0.2
AYDN				*i* S	Sn	08 42 42.6	+0.6
AYDN	Tasoluk	1.78	4	*i* P	Pn	08 42 20.7	+0.2
AYDN				*i* S	Sn	08 42 42.6	+0.6
NPS	Neapolis	1.82	251	*e*P	Sn	08 42 43.5	+0.4
XRY	Khrisi	1.94	239	*e*P	Pn	08 42 23.5	+0.9
ELL	Elmali	1.97	63	*e*PN	Pn	08 42 23.6	+0.5
ELL	Elmali	1.97	63	*e*Pn	Pn	08 42 23.6	+0.5
DNZL	Cakiroluk	2.10	30	*i* P	Pn	08 42 27.5	+2.7
DNZL				*i* S	Sn	08 42 52.7	+2.9
DNZL	Cakiroluk	2.10	30	*i* P	Pn	08 42 27.5	+2.7
DNZL				*i* S	Sn	08 42 52.7	+2.9
APE	Apeiranthos	2.13	305	*e*PN	Pn	08 42 25.5	+0.2
APE	Apeiranthos	2.13	305	*e*Pn	Pn	08 42 25.5	+0.2
DENT	Denizli	2.15	29	*e*PN	Pn	08 42 26.7	+1.2
DENT	Denizli	2.15	29	*e*Pn	Pn	08 42 26.7	+1.2
BALY	Balya	3.85	359	*i* P	Pn	08 42 47.4	-1.6
BALY				*i* S	Sn	08 43 31.2	-1.9

IDC 20 08:45:33.5±1.3, 4°.99N×62°.22E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.5/22, mbtmp3.7/6, Error ellipse: s-maj=38.1km s-min=27.6km az=150.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMBO	Kilima Mbogo	25.67	257	P	P	08 51 06.4	+1.0
	0.5nm,0.4s,baz=179,slow=24,SNR=4.1						
CMAR	Chiang Mai Arr	38.27	66	P	P	08 52 57.3	+1.4
	0.6nm,0.6s,baz=259,slow=9.1,SNR=3.0						
MKAR	Makanchi Array	45.11	19	P	P	08 53 50.8	-0.7
	0.2nm,0.2s,baz=201,slow=7.7,SNR=3.3						
ZALV	Zalesovo Beam	52.16	17	P	P	08 54 44.8	-0.9
	0.3nm,0.4s,baz=223,slow=8.1,SNR=4.1						
SONM	Songino Array	56.96	34	P	P	08 55 21.3	+0.6
	0.7nm,0.8s,baz=244,slow=6.3,SNR=3.2						
ASAR	Alice Springs	75.37	116	P	P	08 57 18.6	-0.9
	1.2nm,1.0s,baz=282,slow=4.6,SNR=5.4						

*IDC **20** 08:57:22.3±1.6, 5°.35S×126°.65E, h0km, mb3.9/2, mb1 3.8/3, mb1mx3.5/20, mbtmp3.8/3, ML3.8/1, Error ellipse: s-maj=269.4km s-min=25.8km az=65.0*
*ISCJB **20** 08:57:26.9±3.4, 5°.6S±0°.2×126°.4E±0°.2, h53km±36km, mb3.9/2, Error ellipse: s-maj=45.9km s-min=11.8km az=40.8*
*NEIC **20** 08:57:30.8±2.2, 5°.79S×126°.36E, h78km±26km, mb4.1/1, Error ellipse: s-maj=37.0km s-min=10.5km az=220.0*
ISC 20 08:57:29.5±2.7, 5°.7S±0°.2×126°.4E±0°.2, h60km±31km, n9, σ0°71/10, mb3.9/2, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	Kappang	6.69	275	*e*Pn	Pn	08 59 05.4	+0.1
KAKA	Kakadu	9.16	140	*e*Pn	Pn	08 59 39.3	+0.3
KAKA				*e*Sn	Sn	09 01 25.8	+5.0
FITZ	Fitzroy Crossi	12.38	184	Pn	Pn	09 00 22.7	-0.4
WRAB	Tennant Creek	16.13	152	*e*Pn	Pn	09 01 12.7	+0.3
	27nm,1.6s						
WRA	Warramunga Arr	16.13	152	Pn	Pn	09 01 11.0	-1.5
	baz=328,slow=13						
WRA	Warramunga Arr	16.13	152	Pn	Pn	09 01 11.0	-1.5
ASAR	Alice Springs	19.28	159	P	Pn	09 01 52.2	+1.3
	0.3nm,0.3s,baz=339,slow=12,SNR=17						
MKAR	Makanchi Array	65.21	328	P	P	09 08 04.5	0.0
	1.2nm,0.7s,mb4.0,baz=129,slow=7.5,SNR=12						
ZALV	Zalesovo Beam	68.86	335	P	P	09 08 27.3	-0.2
	1.0nm,0.9s,mb3.8,baz=120,slow=8.5,SNR=2.6						

*ISCJB **20** 09:22:37.8±0.3, 39°.47N±0°.02×20°.53E±0°.02, h10km, Error ellipse: s-maj=3.0km s-min=2.6km az=31.3*
*CSEM **20** 09:22:37.6±0.1, 39°.46N×20°.55E, h2km, ML3.5/8, Error ellipse: s-maj=3.5km s-min=2.9km az=40.0*
*THE **20** 09:22:37.7, 39°.46N×20°.56E, h0km±1km, ML3.5/8, Error ellipse: s-maj=1.9km s-min=0.7km az=264.0*
*NEIC **20** 09:22:37.8, 39°.48N×20°.62E, h7km, MD3.2(ATH), After ATH.*
*ATH **20** 09:22:37.8, 39°.48N×20°.62E, h7km±3km, MD3.2/8*
ISC 20 09:22:37.7±0.5, 39°.47N±0°.02×20°.55E±0°.02, h0km±4km, n103, σ1°01/138, 4C, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGT	Igoumenitsa	0.18	291	P	Pg	09 22 41.3	+0.1
IGT				S	Sg	09 22 44.6	+1.0
IGT	Igoumenitsa	0.18	291	P	Pg	09 22 41.3	+0.1
IGT				S	Sg	09 22 44.6	+1.0
JAN	Janina	0.30	51	*e*Pg	Pg	09 22 42.4	-1.0
JAN				*e*Sg	Sg	09 22 46.9	-0.4
JAN	Janina	0.30	51	*e*PG	Pg	09 22 42.4	-1.0
JAN				*e*SG	Sg	09 22 46.9	-0.4
JAN	Janina	0.30	51	*e*Pg	Pg	09 22 42.4	-1.0
JAN				*e*Sg	Sg	09 22 46.9	-0.4
SRN	Sarande	0.59	314	*e*PN	Pg	09 22 49.2	+0.1
SRN	Sarande	0.59	314	*e*Pn	Pg	09 22 49.2	+0.1
KEK	Kerkira	0.63	293	*e*Pb	Pg	09 22 50.1	+0.3
KEK				*e*Sb	Sg	09 23 00.8	+2.8
KEK	Kerkira	0.63	293	*e*PB	Pg	09 22 50.1	+0.3
KEK				*e*SB	Sg	09 23 00.8	+2.8
KEK	Kerkira	0.63	293	P	Pg	09 22 49.8	0.0
KEK	Kerkira	0.63	293	P	Pg	09 22 49.8	0.0
KEK	Kerkira	0.63	293	*e*Pb	Pg	09 22 50.1	+0.3
LKD2	Lefkada island	0.68	173	P	Pg	09 22 50.2	-0.6
LKD2				S	Sg	09 23 01.2	+1.6
LKD2	Lefkada island	0.68	173	P	Pg	09 22 50.2	-0.6
LKD2				S	Sg	09 23 01.2	+1.6
NEST	Nestorio	1.02	22	P	Pg	09 22 56.4	-0.8
NEST				S	Sg	09 23 12.2	+1.7
NEST	Nestorio	1.02	22	P	Pg	09 22 56.4	-0.8
NEST				S	Sg	09 23 12.2	+1.7
EVR	Evrytania	1.12	119	*e*Pb	Pg	09 22 58.3	-0.9
EVR	Evrytania	1.12	119	*e*PB	Pg	09 22 58.3	-0.9
EVR	Evrytania	1.12	119	*e*Pb	Pg	09 22 58.3	-0.9
THL	Klokotos Trika	1.13	85	*e*PN	Pg	09 22 59.0	-0.4
THL				*e*SB	Sg	09 23 13.1	-1.0
THL	Klokotos Trika	1.13	85	P	Pg	09 22 58.7	-0.7
THL				S	Sg	09 23 15.3	+1.2
THL	Klokotos Trika	1.13	85	P	Pg	09 22 58.7	-0.7
THL	Klokotos Trika	1.13	85	*e*Pn	Pg	09 22 59.0	-0.4
THL				*e*Sb	Sg	09 23 13.1	-1.0
THL				S	Sg	09 23 15.3	+1.2
KBN	Korca	1.17	9	*e*PN	Pn	09 23 01.9	+0.6
KBN	Korca	1.17	9	*e*Pn	Pn	09 23 01.9	+0.6
KZN	Kozani	1.26	48	*e*Pg	Pg	09 23 00.4	-1.4
KZN				*e*Sb	Sb	09 23 17.2	-1.8
KZN	Kozani	1.26	48	*e*PG	Pg	09 23 00.4	-1.4
KZN				*e*SB	Sb	09 23 17.2	-1.8
KZN	Kozani	1.26	48	P	Pg	09 23 00.3	-1.5
KZN				S	Sg	09 23 20.2	+2.1
KZN	Kozani	1.26	48	P	Pg	09 23 00.3	-1.5
KZN				*e*Sb	Sb	09 23 17.2	-1.8
KZN				S	Sg	09 23 20.2	+2.1
VLS	Valsamata	1.29	179	*e*Pg	Pg	09 23 02.0	-0.4
VLS				*e*Sb	Sb	09 23 21.1	+1.2
VLS	Valsamata	1.29	179	*e*PG	Pg	09 23 02.0	-0.4
VLS				*e*SB	Sb	09 23 21.1	+1.2
VLS	Valsamata	1.29	179	P	Pg	09 23 01.1	-1.3
VLS	Valsamata	1.29	179	P	Pg	09 23 01.1	-1.3
VLS	Valsamata	1.29	179	*e*Pg	Pg	09 23 02.0	-0.4
VLS				*e*Sb	Sb	09 23 21.1	+1.2
KFL	Anninata	1.37	172	P	Pg	09 23 02.4	-1.5
KFL	Anninata	1.37	172	P	Pg	09 23 02.4	-1.5
AGG	Agios Georgios	1.45	107	P	Pn	09 23 04.3	-0.8
AGG				S	Sg	09 23 24.9	+0.6
AGG	Agios Georgios	1.45	107	P	Pn	09 23 04.3	-0.8
AGG				S	Sg	09 23 24.9	+0.6
FNA	Florina	1.46	25	P	Pn	09 23 04.5	-0.8
FNA	Florina	1.46	25	P	Pn	09 23 04.5	-0.8
RLS	Riolos of Patr	1.58	153	P	Pn	09 23 08.0	+1.1
RLS	Riolos of Patr	1.58	153	P	Pn	09 23 08.0	+1.1
BIA	Bitola	1.66	21	*i* Pn	Pn	09 23 08.1	+0.1
BIA	Bitola	1.66	21	P	Pn	09 23 08.0	0.0
BIA	Bitola	1.66	21	P	Pn	09 23 08.0	0.0
DSF	Desfina	1.87	124	P	Pn	09 23 10.5	-0.4
DSF				S	Sn	09 23 35.5	+0.4
DSF	Desfina	1.87	124	P	Pn	09 23 10.5	-0.4
DSF				S	Sn	09 23 35.5	+0.4
TIR	Tirane	1.95	345	*e*Pn	Pn	09 23 12.7	+0.7
TIR	Tirane	1.95	345	P	Pn	09 23 11.8	-0.2
TIR	Tirane	1.95	345	P	Pn	09 23 11.8	-0.2
TIR	Tirane	1.95	345	*e*Pn	Pn	09 23 12.7	+0.7
KRUS	Krusevo	1.97	15	*i* Pn	Pn	09 23 13.2	+0.8
XOR	Xorichti	2.05	92	P	Pn	09 23 12.7	-0.6
XOR	Xorichti	2.05	92	P	Pn	09 23 12.7	-0.6
LKR	Lokris	2.07	112	*e*Pn	Pn	09 23 14.7	+1.0
LKR	Lokris	2.07	112	*e*PN	Pn	09 23 14.7	+1.0
LKR	Lokris	2.07	112	P	Pn	09 23 13.3	-0.4
LKR	Lokris	2.07	112	P	Pn	09 23 13.3	-0.4
LKR	Lokris	2.07	112	*e*Pn	Pn	09 23 14.7	+1.0
GUR	Goura	2.07	137	P	Pn	09 23 14.1	+0.4
GUR	Goura	2.07	137	P	Pn	09 23 14.1	+0.4
NEO	Neokhori	2.08	94	*e*Pn	Pn	09 23 14.6	+0.9
NEO	Neokhori	2.08	94	*e*PN	Pn	09 23 14.6	+0.9
NEO	Neokhori	2.08	94	*e*Pn	Pn	09 23 14.6	+0.9
HORT	Hortiatis	2.26	59	P	Pn	09 23 15.9	-0.3
HORT				S	Sn	09 23 45.6	+0.8
HORT	Hortiatis	2.26	59	P	Pn	09 23 15.9	-0.3
HORT				S	Sn	09 23 45.6	+0.8

YER					*e*Sg		**Sg**	09 24 21.4	+0.4
DENT	**Denizli**	**0.78**	**353**	*e*PG			**Pg**	09 24 11.9	-0.9
DENT	**Denizli**	**0.78**	**353**	*e*Pg			**Pg**	09 24 11.9	-0.9
AKAS	**Kas**	**0.83**	**154**	*i* P			**Pg**	09 24 12.1	-1.7
AKAS				*i* S			**Sg**	09 24 31.7	+7.1
AKAS	**Kas**	**0.83**	**154**	*i* P			**Pg**	09 24 12.1	-1.7
KORT	**Korkueli**	**0.96**	**89**	*i* P			**Pg**	09 24 16.2	0.0
KORT				*i* S			**Sg**	09 24 30.5	+1.8
KORT	**Korkueli**	**0.96**	**89**	*i* P			**Pg**	09 24 16.2	0.0
KORT				*i* S			**Sg**	09 24 30.5	+1.8
AYDN	**Tasoluk**	**1.22**	**304**	*i* P			**Pn**	09 24 19.8	-0.9
AYDN				*i* S			**Sb**	09 24 37.9	+1.4
AYDN	**Tasoluk**	**1.22**	**304**	*i* P			**Pn**	09 24 19.8	-0.8
AYDN				*i* S			**Sb**	09 24 37.9	+1.4
BCK	**Bucak**	**1.24**	**67**	*e*PN			**Pn**	09 24 20.8	-0.1
BCK	**Bucak**	**1.24**	**67**	*e*Pn			**Pn**	09 24 20.8	-0.1
DAT	**Datca**	**1.29**	**259**	*e*PN			**Pn**	09 24 22.2	+0.6
DAT	**Datca**	**1.29**	**259**	*e*Pn			**Pn**	09 24 22.2	+0.6
KHL	**Karahalli**	**1.37**	**12**	*e*PN			**Pn**	09 24 23.1	+0.4
KHL	**Karahalli**	**1.37**	**12**	*e*Pn			**Pn**	09 24 23.1	+0.4
BDRM	**Kayabasi**	**1.37**	**274**	*i* P			**Pn**	09 24 18.6	-4.1
BDRM				*i* S			**Sn**	09 24 39.3	-1.5
BDRM	**Kayabasi**	**1.37**	**274**	*i* P			**Pn**	09 24 18.6	-4.1
BDRM				*i* S			**Sn**	09 24 39.3	-1.5
KHAL	**Karahalli**	**1.41**	**11**	*i* P			**Pn**	09 24 22.6	-0.6
KHAL				*i* S			**Sn**	09 24 42.2	+0.4
KHAL	**Karahalli**	**1.41**	**11**	*i* P			**Pn**	09 24 22.6	-0.6
BODT	**Bodrum**	**1.48**	**274**	*e*PN			**Pn**	09 24 24.5	+0.3
BODT	**Bodrum**	**1.48**	**274**	*e*Pn			**Pn**	09 24 24.5	+0.3
SUTC	**Sutluce-Ispart**	**1.55**	**71**	*e*PN			**Pn**	09 24 25.5	+0.3
SUTC	**Sutluce-Ispart**	**1.55**	**71**	*e*Pn			**Pn**	09 24 25.5	+0.3
KULA	**Kula-Manisa**	**1.58**	**346**	*e*PN			**Pn**	09 24 25.8	+0.3
KULA	**Kula-Manisa**	**1.58**	**346**	*e*Pn			**Pn**	09 24 25.8	+0.2

GUC 20 09:25:16.8±0.8, 22°.58S×68°.70W, h115km±52km, ML4.1, 2C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**0.79**	**293**	⇓*i*P		09 25 43.1	+6.6
PB04				*i* S		09 26 03.3	+12
PB04				AML	AML	09 26 10.8	
	comp=E,2μm,0.6s						
CEN1	**Los Morros**	**1.60**	**240**	⇓*i*P		09 25 48.3	+3.3
CEN1				*i* S		09 26 10.6	+4.0
CEN1				AML	AML	09 26 11.9	
	comp=N,971nm,0.6s						
MECH	**Mejillones**	**1.69**	**252**	⇓*i*P		09 25 46.9	+0.7
MECH				*i* S		09 26 09.7	+1.1
MECH				AML	AML	09 26 16.0	
	comp=N,2μm,0.2s						
PB01	**Plate Boundary**	**1.70**	**334**	⇑*i*P		09 25 46.9	+0.6
PB01				*i* S		09 26 09.8	+1.0
PB01				AML	AML	09 26 12.2	
	comp=N,2μm,0.2s						
ANCH	**Antofagasta**	**1.92**	**235**	⇑*i*P		09 25 47.7	-1.2
ANCH				*i* S		09 26 12.1	-1.5
ANCH				AML	AML	09 26 14.7	
	comp=N,1μm,0.1s						
MNMC	**Miæe Miæ**	**3.54**	**346**	*i* P		09 26 09.8	-0.3
MNMC				*i* S		09 26 52.0	+0.7
MNMC				AML	AML	09 26 54.2	
	comp=N,753nm,0.3s						

IDC 20 09:31:49.8±2.1, 5°.28N×62°.07E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.5/21, mbtmp3.7/5, Error ellipse: s-maj=76.2km s-min=28.1km az=151.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo**	**25.59**	**256**	P	P	09 37 21.3	+0.3
	1.6nm,0.7s,baz=180,slow=20,SNR=4.4						
CMAR	**Chiang Mai Arr**	**38.28**	**67**	P	P	09 39 12.3	0.0
	0.3nm,0.3s,baz=262,slow=6.1,SNR=3.5						
MKAR	**Makanchi Array**	**44.89**	**20**	P	P	09 40 06.5	+0.4
	0.2nm,0.3s,baz=204,slow=7.8,SNR=4.9						
ZALV	**Zalesovo Beam**	**51.94**	**17**	P	P	09 40 59.8	-0.4
	0.4nm,0.4s,baz=224,slow=6.2,SNR=3.6						
SONM	**Songino Array**	**56.80**	**34**	P	P	09 41 35.8	-0.1
	0.3nm,0.5s,baz=234,slow=6.9,SNR=4.2						

IDC 20 09:48:22.0±6.3, 10°.82S×164°.10E, h78km±51km, mb3.6/8, mb1 3.8/10, mb1mx3.7/18, mbtmp3.7/10, ML4.0/2, MS3.6/4, Ms1 3.6/4, ms1mx3.1/28, Error ellipse: s-maj=53.0km s-min=21.3km az=115.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.31**	**288**	P	Pn	09 49 24.9	-0.3
	10nm,0.3s,baz=280,slow=4.2,SNR=2.1						
CTA	**Charters Tower**	**19.50**	**240**	P	Pn	09 52 44.5	-0.4
	0.3nm,0.3s,baz=83,slow=16,SNR=5.8						
AFI	**Afiamalu**	**23.76**	**100**	LR	LR	10 00 02.7	
	comp=Z,101nm,19.4s,baz=120,slow=30						
STKA	**Stephens Creek**	**29.52**	**221**	P	P	09 54 20.1	+1.0
	1.9nm,0.7s,baz=59,slow=5.9,SNR=2.7						
STKA				LR	LR	10 05 07.5	
	comp=Z,110nm,19.6s,baz=26,slow=34						
GUMO	**Guam**	**30.85**	**321**	LR	LR	10 05 27.1	
	comp=Z,124nm,18.6s,baz=143,slow=33						
ASAR	**Alice Springs**	**31.46**	**242**	P	P	09 54 35.3	-1.0
	0.7nm,0.5s,baz=64,slow=10.0,SNR=16						
MJAR	**Matsushiro Arr**	**53.04**	**334**	LR	LR	10 19 47.0	
	comp=Z,67nm,18.5s,baz=245,slow=36						
PETK	**Petropavlovsk-**	**63.90**	**356**	P	P	09 58 46.4	0.0
	0.7nm,0.6s,baz=161,slow=5.8,SNR=3.8						
SONM	**Songino Array**	**77.53**	**324**	P	P	10 00 09.8	+0.6
	0.3nm,0.3s,baz=134,slow=6.4,SNR=5.1						
ILAR	**Eielson Array**	**83.82**	**19**	P	P	10 00 41.6	-0.9
	0.9nm,0.7s,baz=240,slow=5.4,SNR=20						
MAW	**Mawson**	**84.33**	**202**	P	P	10 00 44.4	-0.8
	2.6nm,1.1s,baz=96,slow=0.9,SNR=4.7						
NVAR	**Mina Array Bea**	**87.11**	**50**	P	P	10 01 01.2	+1.8
	0.3nm,0.8s,baz=234,slow=12,SNR=3.2						
MKAR	**Makanchi Array**	**92.25**	**317**	P	P	10 01 24.3	+1.0
	0.3nm,0.3s,baz=98,slow=6.6,SNR=4.0						

*ISCJB **20** 09:57:52.1±0.4, 10°.69N±0°.03×62°.40W±0°.03, h94km±6km, Error ellipse: s-maj=5.5km s-min=3.6km az=137.9*
*FUNV **20** 09:57:54.2, 10°.63N×62°.32W, h81km, MW3.7*
*TRN **20** 09:57:55.5, 10°.78N×62°.31W, h78km, MD4.0*
*NEIC **20** 09:57:55.7, 10°.78N×62°.29W, h79km, MD4.0(TRN), After TRN.*

ISC 20 09:57:53.2±0.4, 10°.70N±0°.03×62°.40W±0°.03, h86km±6km, n31, σ0°.98/50, 8C-4D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.18**	**107**	⇓*i*P		**Pn**	09 58 05.9	+0.3
GUIV				*e*S		**Sn**	09 58 13.9	-1.0
TCE	**Chacachacare**	**0.63**	**90**	⇑*i*P		**Pn**	09 58 10.0	+1.2
TCE				*e*S		**Sn**	09 58 19.7	-0.6
CRUV	**Carupano**	**0.83**	**269**	⇑*i*P		**Pn**	09 58 11.8	+1.1
CRUV				*e*S		**Sn**	09 58 24.0	+0.1
ITEV	**Isla Los Testi**	**0.97**	**312**	⇓*i*P		**Pn**	09 58 13.5	+1.1
ITEV				*e*S		**Sn**	09 58 27.6	+0.8
TRN	**Trinidad (W)**	**0.98**	**93**	⇑*e*P		**Pn**	09 58 13.4	+1.0
TRN				*e*S		**Sn**	09 58 25.7	-1.0
TPP	**Pointe-a-Pierr**	**1.00**	**112**	*e*P		**Pn**	09 58 14.4	+1.7
TPP				*e*S		**Sn**	09 58 28.0	+0.7
TBH	**Brigand Hill**	**1.32**	**99**	*e*P		**Pn**	09 58 17.7	+1.1
TBH				*e*S		**Sn**	09 58 34.7	+0.5
GRGR	**Grenville**	**1.60**	**27**	*e*Pn		**Pn**	09 58 19.8	-0.3
GRGR				*e*Sn		**Sn**	09 58 39.5	-1.0
GRW	**Mount Saint Ca**	**1.62**	**26**	*e*P		**Pn**	09 58 21.8	+1.3
GRW				*e*S		**Sn**	09 58 39.8	-1.2
TPR	**Prospect**	**1.66**	**73**	*e*P		**Pn**	09 58 21.6	+0.7
TPR				*e*S		**Sn**	09 58 41.6	-0.3
GRHS	**Sauteurs**	**1.69**	**26**	*e*P		**Pn**	09 58 22.3	+1.0
GRHS				*e*S		**Sn**	09 58 41.7	-0.8
BOT	**Bacolet**	**1.71**	**74**	⇑*i*P		**Pn**	09 58 22.2	+0.6
BOT				*e*S		**Sn**	09 58 42.7	-0.4
GRSS	**Sisters**	**1.77**	**26**	⇑*i*P		**Pn**	09 58 23.8	+1.5
GRSS				*e*S		**Sn**	09 58 43.0	-1.3
ORIV	**Oritupano**	**1.90**	**212**	⇑*i*P		**Pn**	09 58 25.0	+0.9
ORIV				*e*S		**Sn**	09 58 46.2	-1.2
PCRV	**Puerto La Cruz**	**2.27**	**257**	⇑*i*P		**Pn**	09 58 29.9	+1.0
RIOV	**Rio Grande**	**2.67**	**168**	*e*P		**Pn**	09 58 33.1	-1.3
RIOV				*e*S		**Sn**	09 59 01.6	-4.3
SVB	**Belmont**	**2.79**	**23**	*e*P		**Pn**	09 58 36.4	+0.5
SVB				*e*S		**Sn**	09 59 07.9	-0.8
PRGV	**PARIAGUAN**	**2.94**	**229**	*e*P		**Pn**	09 58 38.1	+0.2
PRGV				*e*S		**Sn**	09 59 10.1	-2.2
GURV	**El Guri**	**3.00**	**193**	⇑*i*P		**Pn**	09 58 38.3	-0.4
MCLT	**Moule a Chique**	**3.31**	**25**	*e*P		**Pn**	09 58 43.4	+0.4
MCLT				*e*S		**Sn**	09 59 19.3	-2.0
SLB	**Belfond**	**3.38**	**23**	*e*P		**Pn**	09 58 45.0	+1.1
SLB				*e*S		**Sn**	09 59 22.2	-0.8
CUPV	**Cepira**	**3.40**	**260**	*e*P		**Pn**	09 58 45.5	+1.4
BIRV	**Birongo**	**3.82**	**267**	*e*P		**Pn**	09 58 50.3	+0.5
LUEV	**Luepa**	**4.91**	**169**	*e*P		**Pn**	09 59 03.4	-1.3
CAOV	**Caicara del Or**	**5.12**	**230**	*e*P		**Pn**	09 59 06.9	-0.7
TURV	**Turiamo**	**5.36**	**268**	*e*P		**Pn**	09 59 10.6	-0.1
BAUV	**El Baul**	**5.83**	**253**	⇓*e*P		**Pn**	09 59 16.7	-0.5
TEPV	**Terepaima**	**6.73**	**264**	⇓*i*P		**Pn**	09 59 29.0	-0.5
SANV	**Sanarito**	**7.13**	**261**	*e*P		**Pn**	09 59 34.5	-0.4
MONV	**Montecano**	**7.54**	**280**	*e*P		**Pn**	09 59 40.8	+0.4
SOCV	**Socops**	**8.68**	**255**	*e*P		**Pn**	09 59 54.6	-1.6

MEX 20 10:08:25.5±0.9, 14°.15N×92°.97W, h18km±115km, MD4.1, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.02**	**42**	*i* P		Pb	10 08 41.6	-3.0
THIG				*i* S		Sb	10 08 53.4	-4.3
PCIG		**1.57**	**351**	*i* P		Pn	10 08 48.4	-4.1
PCIG				*e*S		Sn	10 09 07.0	-5.4
SCX	**San Cristobal**	**2.59**	**7**	*e*P		Pn	10 09 05.5	-1.1
SCX				*i* S		Sn	10 09 36.3	-1.4
TGIG		**2.62**	**357**	*i* P		Pn	10 09 05.2	-1.8
TGIG				*e*S		Sn	10 09 34.9	-3.4
VHO	**Vista Hermosa**	**4.65**	**309**	*i* P		Pn	10 09 32.6	-2.2
VHO				*i* S		Sn	10 10 25.5	-2.9

*BJI **20** 10:15:21.8, 38°.70N×26°.40E, h5km, mB4.9/5, mb4.6/9, Ms4.7/4, Ms7 4.6/3*
*NEIC **20** 10:15:24.8, 38°.68N×26°.43E, h5km, MD3.3(ATH), ML4.0(ISK), After ISK.*
*DDA **20** 10:15:25.8, 38°.74N×26°.58E, h27km, Md3.9, Ml4.1*
*ISK **20** 10:15:25.6, 38°.74N×26°.54E, h10km, ML4.0*
*THE **20** 10:15:26.9, 38°.75N×26°.61E, h7km±1km, ML4.3/9, Error ellipse: s-maj=1.3km s-min=0.4km az=84.0*
*ATH **20** 10:15:26.5, 38°.72N×26°.48E, h24km, MD3.3/4*
*ISCJB **20** 10:15:26.0±0.3, 38°.75N±0°.01×26°.56E±0°.02, h9km±2km, mb4.0/12, MS3.2/7, Error ellipse: s-maj=2.5km s-min=2.0km az=41.5*
*CSEM **20** 10:15:27.5±0.1, 38°.72N×26°.57E, h15km, ML4.1, Error ellipse: s-maj=2.5km s-min=2.0km az=44.0*
*MOS **20** 10:15:28.1±1.2, 38°.75N×26°.55E, h33km, mb4.2/2, Error ellipse: s-maj=8.3km s-min=4.4km az=87.2*
*IDC **20** 10:15:31.6±3.9, 38°.58N×26°.90E, h33km±32km, mb3.4/5, mb1 3.5/9, mb1mx3.3/28, mbtmp3.5/9, ML3.7/4, MS3.1/7, Ms1 3.1/7, ms1mx2.9/23, Error ellipse: s-maj=28.1km s-min=19.8km az=17.0*

ISC 20 10:15:27.0±0.4, 38°.74N±0°.01×26°.58E±0°.02, h9km±2km, n357, σ1°.00/425, mb4.0/12, MS3.2/7, 21C-12D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.38**	**178**	*i* P		**Pg**	10 15 34.2	-0.1
URLA				*i* S		**Sg**	10 15 40.7	+1.2
URLA	**Izmir**	**0.38**	**178**	*i* P		**Pg**	10 15 34.2	-0.2
URLA				*i* S		**Sg**	10 15 40.7	+1.3
BLCB	**Balcova**	**0.51**	**134**	PG		**Pg**	10 15 36.6	-0.3
BLCB				*e*SG		**Sg**	10 15 44.3	+0.8
BLCB	**Balcova**	**0.51**	**134**	Pg		**Pg**	10 15 36.6	-0.2
BLCB				Sg		**Sg**	10 15 43.6	+0.1
BLCB	**Balcova**	**0.51**	**134**	P		**Pg**	10 15 36.6	-0.2
BLCB				S		**Sg**	10 15 43.6	+0.1
BLCB	**Balcova**	**0.51**	**134**	P		**Pg**	10 15 36.6	-0.2
BLCB				S		**Sg**	10 15 43.6	+0.1
BLCB				*e*Sg		**Sg**	10 15 44.3	+0.8
PRK	**Paraskevi**	**0.56**	**335**	⇓*i*Pn		**Pg**	10 15 37.8	+0.1
PRK				*e*Sn		**Sg**	10 15 45.7	+0.7
PRK	**Paraskevi**	**0.56**	**335**	⇓*i*PN		**Pg**	10 15 37.8	+0.1
PRK				*e*SN		**Sg**	10 15 45.7	+0.7
PRK	**Paraskevi**	**0.56**	**335**	P		**Pg**	10 15 37.9	+0.2
PRK				S		**Sg**	10 15 46.2	+1.2
PRK	**Paraskevi**	**0.56**	**335**	P		**Pg**	10 15 37.9	+0.2
PRK				S		**Sg**	10 15 46.2	+1.2
AYVA	**Ayvalik**	**0.57**	**9**	*i* P		**Pg**	10 15 37.5	-0.6
AYVA				*i* S		**Sg**	10 15 46.5	+1.0
AYVA	**Ayvalik**	**0.57**	**9**	*i* P		**Pg**	10 15 37.5	-0.6
AYVA				*i* S		**Sg**	10 15 46.5	+0.9
IZM	**Izmir**	**0.64**	**122**	PG		**Pg**	10 15 38.9	-0.4
IZM	**Izmir**	**0.64**	**122**	Pg		**Pg**	10 15 38.9	-0.4
IZM	**Izmir**	**0.64**	**122**	*i* Pg		**Pg**	10 15 38.9	-0.4
AKHS	**Akhisar**	**0.98**	**82**	*i* P		**Pg**	10 15 45.0	-0.7
AKHS				*i* S		**Sg**	10 15 59.0	+0.5
AKHS	**Akhisar**	**0.98**	**82**	*i* P		**Pg**	10 15 45.0	-0.7
AKHS				*i* S		**Sg**	10 15 59.0	+0.6
AKS	**Akhisar**	**0.98**	**82**	PG		**Pg**	10 15 45.3	-0.4
AKS				*e*SG		**Sg**	10 15 59.1	+0.7
AKS	**Akhisar**	**0.98**	**82**	Pn		**Pg**	10 15 45.4	-0.3
AKS	**Akhisar**	**0.98**	**82**	*i* Pg		**Pg**	10 15 45.3	-0.4
AKS				*e*Sg		**Sg**	10 15 59.1	+0.7
SMG	**Samos**	**1.05**	**169**	*e*Pn		**Pg**	10 15 46.3	-0.8
SMG				*e*Sn		**Sg**	10 16 01.3	+0.5
SMG	**Samos**	**1.05**	**169**	*e*PN		**Pg**	10 15 46.3	-0.8
SMG				*e*SN		**Sg**	10 16 01.3	+0.5
SMG	**Samos**	**1.05**	**169**	*e*Pn		**Pg**	10 15 46.3	-0.8
SMG				*e*Sn		**Sg**	10 16 01.3	+0.5
EZN	**Ezine**	**1.10**	**350**	PN		**Pg**	10 15 47.1	-0.9
EZN	**Ezine**	**1.10**	**350**	Pn		**Pg**	10 15 47.6	-0.5
EZN	**Ezine**	**1.10**	**350**	P		**Pg**	10 15 47.6	-0.5
GCAM	**G?zelcaml?**	**1.16**	**153**	*i* P		**Pb**	10 15 48.1	-1.1
GCAM	**G?zelcaml?**	**1.16**	**153**	*i* P		**Pb**	10 15 48.1	-1.1
BALY	**Balya**	**1.28**	**39**	*i* P		**Pn**	10 15 50.2	-0.9
BALY	**Balya**	**1.28**	**39**	*i* P		**Pn**	10 15 50.2	-0.9
BALB	**Balikesir**	**1.35**	**48**	PN		**Pn**	10 15 50.9	-1.2
BALB	**Balikesir**	**1.35**	**48**	Pn		**Pn**	10 15 51.0	-1.1
BALB	**Balikesir**	**1.35**	**48**	Pn		**Pn**	10 15 51.0	-1.1
AYDN	**Tasoluk**	**1.49**	**136**	*i* P		**Pn**	10 15 53.1	-0.8
AYDN	**Tasoluk**	**1.49**	**136**	*i* P		**Pn**	10 15 53.1	-0.8
GADA	**Gvkgeada**	**1.54**	**340**	*e*PN		**Pn**	10 15 54.4	-0.2
GADA				*e*SN		**Sn**	10 16 14.6	-0.1
GADA	**Gvkgeada**	**1.54**	**340**	Pn		**Pn**	10 15 53.9	-0.7
GADA				Sg		**Sg**	10 16 15.9	-0.5
GADA	**Gvkgeada**	**1.54**	**340**	*e*Pn		**Pn**	10 15 54.4	-0.2
GADA				*e*Sn		**Sn**	10 16 14.6	-0.1
GADA				Sg		**Sg**	10 16 15.9	-0.6
GONE	**Gonen-Balikesi**	**1.56**	**33**	*e*PN		**Pn**	10 15 53.7	-1.2
GONE				*e*SN		**Sn**	10 16 15.5	+0.2
GONE	**Gonen-Balikesi**	**1.56**	**33**	*e*Pn		**Pn**	10 15 53.7	-1.2
GONE				*e*Sn		**Sn**	10 16 15.5	+0.2
LIA	**Limnos Island**	**1.58**	**317**	*e*Pn		**Pn**	10 15 54.8	-0.4
LIA				*e*Sn		**Sn**	10 16 15.2	-0.6
LIA	**Limnos Island**	**1.58**	**317**	*e*PN		**Pn**	10 15 54.8	-0.4
LIA				*e*SN		**Sn**	10 16 15.2	-0.6
LIA	**Limnos Island**	**1.58**	**317**	P		**Pn**	10 15 54.6	-0.6
LIA				S		**Sn**	10 16 15.5	-0.3
LIA	**Limnos Island**	**1.58**	**317**	*e*Pn		**Pn**	10 15 54.8	-0.4
LIA				*e*Sn		**Sn**	10 16 15.2	-0.6
LIA				S		**Sn**	10 16 15.5	-0.3
LPK	**Lapseki**	**1.64**	**5**	*e*PN		**Pn**	10 15 55.4	-0.6
LPK				*e*SN		**Sn**	10 16 17.1	0.0
LPK	**Lapseki**	**1.64**	**5**	Pn		**Pn**	10 15 56.5	+0.5
LPK				Sg		**Sg**	10 16 17.5	-2.1
LPK	**Lapseki**	**1.64**	**5**	*e*Pn		**Pn**	10 15 55.4	-0.5
LPK				*e*Sn		**Sn**	10 16 17.1	0.0
LPK				Sg		**Sg**	10 16 17.5	-2.0
KULA	**Kula-Manisa**	**1.65**	**97**	*e*PN		**Pn**	10 15 55.6	-0.5
KULA	**Kula-Manisa**	**1.65**	**97**	*e*Pn		**Pn**	10 15 55.6	-0.5
GELI	**Tayfur-Gelibol**	**1.66**	**357**	*e*PN		**Pn**	10 15 55.8	-0.4
GELI	**Tayfur-Gelibol**	**1.66**	**357**	*e*Pn		**Pn**	10 15 55.8	-0.4
DEMI	**Demirci**	**1.70**	**79**	*i* P		**Pn**	10 15 55.9	-0.9
DEMI	**Demirci**	**1.70**	**79**	*i* P		**Pn**	10 15 55.9	-0.9
MLSB	**Milas**	**1.73**	**146**	*e*PN		**Pn**	10 15 56.3	-0.8
MLSB	**Milas**	**1.73**	**146**	*e*Pn		**Pn**	10 15 56.3	-0.9
KRBG	**Karabiga-Canak**	**1.74**	**18**	*e*PN		**Pn**	10 15 56.3	-1.1
KRBG	**Karabiga-Canak**	**1.74**	**18**	*e*Pn		**Pn**	10 15 56.3	-1.1
BODT	**Bodrum**	**1.77**	**161**	*e*PN		**Pn**	10 15 56.8	-1.1
BODT	**Bodrum**	**1.77**	**161**	Pn		**Pn**	10 15 57.4	-0.4
BODT	**Bodrum**	**1.77**	**161**	Pn		**Pn**	10 15 57.4	-0.4
BDRM	**Kayabasi**	**1.81**	**157**	*i* P		**Pn**	10 15 57.6	-0.7
BDRM	**Kayabasi**	**1.81**	**157**	*i* P		**Pn**	10 15 57.6	-0.7
APE	**Apeiranthos**	**1.86**	**207**	*e*PN		**Pn**	10 15 58.2	-0.8
APE	**Apeiranthos**	**1.86**	**207**	Pn		**Pn**	10 15 56.1	-3.0
APE	**Apeiranthos**	**1.86**	**207**	P		**Pn**	10 15 56.1	-3.0
APE	**Apeiranthos**	**1.86**	**207**	*e*Pn		**Pn**	10 15 58.2	-0.9
EDC	**Edincik**	**1.89**	**31**	*e*PN		**Pn**	10 15 58.3	-1.1
EDC	**Edincik**	**1.89**	**31**	Pn		**Pn**	10 16 00.5	+1.1
EDC	**Edincik**	**1.89**	**31**	*e*Pn		**Pn**	10 15 58.3	-1.1
EDC	**Edincik**	**1.89**	**31**	P		**Pn**	10 16 00.5	+1.1
BNT	**Bandirma**	**1.92**	**32**	*e*PN		**Pn**	10 15 59.4	-0.4
BNT	**Bandirma**	**1.92**	**32**	Pn		**Pn**	10 16 01.5	+1.7
ERIK	**Erikli-Kesan**	**1.93**	**359**	*e*PN		**Pn**	10 15 59.5	-0.4
ERIK	**Erikli-Kesan**	**1.93**	**359**	*e*Pn		**Pn**	10 15 59.5	-0.4
RKY	**Sarkoy-Tekirda**	**2.00**	**13**	*e*PN		**Pn**	10 16 00.1	-0.8
RKY	**Sarkoy-Tekirda**	**2.00**	**13**	Pn		**Pn**	10 16 01.5	+0.6
RKY	**Sarkoy-Tekirda**	**2.00**	**13**	Pn		**Pn**	10 16 01.5	+0.6
SART	**Tekirdag**	**2.00**	**13**	*i* P		**Pn**	10 16 00.5	-0.5
SART				*i* S		**Sn**	10 16 25.0	-1.1
SART	**Tekirdag**	**2.00**	**13**	*i* P		**Pn**	10 16 00.5	-0.4
SART				*i* S		**Sn**	10 16 25.0	-1.1
ENEZ	**Enez**	**2.02**	**351**	*e*PN		**Pn**	10 16 01.2	0.0
ENEZ	**Enez**	**2.02**	**351**	*e*Pn		**Pn**	10 16 01.2	0.0
KCTX	**Karacabey (Bur**	**2.05**	**42**	*e*PN		**Pn**	10 16 00.5	-1.2
KCTX	**Karacabey (Bur**	**2.05**	**42**	*e*Pn		**Pn**	10 16 00.5	-1.2
YER	**Yerkesik**	**2.10**	**139**	*e*PN		**Pn**	10 16 01.6	-0.7
YER	**Yerkesik**	**2.10**	**139**	Pn		**Pn**	10 16 01.7	-0.5
YER	**Yerkesik**	**2.10**	**139**	P		**Pn**	10 16 01.7	-0.6
MFT	**Murefte**	**2.11**	**15**	*e*PN		**Pn**	10 16 01.8	-0.7
MFT	**Murefte**	**2.11**	**15**	*e*Pn		**Pn**	10 16 01.8	-0.7
AOS	**Alonnisos**	**2.15**	**282**	P		**Pn**	10 16 02.6	-0.3
AOS	**Alonnisos**	**2.15**	**282**	P		**Pn**	10 16 02.6	-0.3
DAT	**Datca**	**2.16**	**158**	*e*PN		**Pn**	10 16 02.1	-1.1
DAT	**Datca**	**2.16**	**158**	*e*Pn		**Pn**	10 16 02.1	-1.0
DENT	**Denizli**	**2.17**	**116**	*e*PN		**Pn**	10 16 03.0	-0.3
DENT	**Denizli**	**2.17**	**116**	Pn		**Pn**	10 16 03.3	0.0
DENT	**Denizli**	**2.17**	**116**	*e*Pn		**Pn**	10 16 03.0	-0.3
ALN	**Alexandroupoli**	**2.19**	**349**	P		**Pn**	10 16 02.8	-0.8
ALN				S		**Sn**	10 16 30.5	-0.3
ALN	**Alexandroupoli**	**2.19**	**349**	P		**Pn**	10 16 02.8	-0.8
ALN				S		**Sn**	10 16 30.5	-0.3
DNZL	**Cakiroluk**	**2.21**	**118**	*i* P		**Pn**	10 16 04.1	+0.2
DNZL				*i* S		**Sn**	10 16 37.9	+6.6
DNZL	**Cakiroluk**	**2.21**	**118**	*i* P		**Pn**	10 16 04.1	+0.3
PTL	**Penteli**	**2.24**	**253**	P	

GPA	Golpazari	3.27	61	Pn		Pn	10 16 20.3	+1.8
GPA	Golpazari	3.27	61	*e*Pn		Pn	10 16 18.5	0.0
GPA	Golpazari	3.27	61	P		Pn	10 16 20.3	+1.8
SRS	Serrai	3.30	317	P		Pn	10 16 18.7	-0.1
SRS	Serrai	3.30	317	P		Pn	10 16 18.7	-0.1
ELL	Elmali	3.31	126	*e*PN		Pn	10 16 19.8	+0.9
ELL	Elmali	3.31	126	Pn		Pn	10 16 20.8	+1.9
ELL	Elmali	3.31	126	*e*Pn		Pn	10 16 19.8	+0.9
ELL	Elmali	3.31	126	P		Pn	10 16 20.8	+1.9
AGG	Agios Georgios	3.33	276	P		Pn	10 16 19.0	-0.2
AGG	Agios Georgios	3.33	276	P		Pn	10 16 19.0	-0.2
NVR	Nevrokopi	3.33	322	P		Pn	10 16 19.0	-0.3
NVR	Nevrokopi	3.33	322	P		Pn	10 16 19.0	-0.3
SILT	Sile	3.37	43	*e*PN		Pn	10 16 20.1	+0.4
SILT	Sile	3.37	43	Pn		Pn	10 16 21.3	+1.5
SILT	Sile	3.37	43	*e*Pn		Pn	10 16 20.1	+0.3
ESKT	Eskisehir	3.41	76	*e*PN		Pn	10 16 20.8	+0.4
ESKT	Eskisehir	3.41	76	Pn		Pn	10 16 23.3	+2.9
ESKT	Eskisehir	3.41	76	*e*Pn		Pn	10 16 20.8	+0.4
BCK	Bucak	3.42	111	*e*PN		Pn	10 16 20.8	+0.4
BCK	Bucak	3.42	111	*e*Pn		Pn	10 16 20.8	+0.4
GUR	Goura	3.42	258	P		Pn	10 16 20.7	+0.2
GUR	Goura	3.42	258	P		Pn	10 16 20.7	+0.2
SPNC	Sapanca-Adapaz	3.47	55	*e*PN		Pn	10 16 22.0	+0.9
SPNC	Sapanca-Adapaz	3.47	55	*e*Pn		Pn	10 16 22.0	+0.8
AKAS	Kas	3.47	135	*i* P		Pn	10 16 22.4	+1.2
AKAS				*i* S		Sn	10 16 55.6	-6.9
AKAS	Kas	3.47	135	*i* P		Pn	10 16 22.4	+1.2
GULT	Gulveren	3.48	60	*e*PN		Pn	10 16 22.8	+1.5
GULT	Gulveren	3.48	60	Pn		Pn	10 16 23.8	+2.5
GULT	Gulveren	3.48	60	*e*Pn		Pn	10 16 22.8	+1.5
VLI	Veliai	3.52	236	P		Pn	10 16 21.1	-0.8
VLI	Veliai	3.52	236	P		Pn	10 16 21.1	-0.8
KSL	Kastellorizon	3.52	136	*e*Pn		Pn	10 16 22.9	+1.0
KSL	Kastellorizon	3.52	136	*e*PN		Pn	10 16 22.9	+1.0
VLX	Vlachokerasia	3.58	249	P		Pn	10 16 22.9	+0.2
VLX	Vlachokerasia	3.58	249	P		Pn	10 16 22.9	+0.2
THL	Klokotos Trika	3.64	284	P		Pn	10 16 23.8	+0.3
THL	Klokotos Trika	3.64	284	P		Pn	10 16 23.8	+0.3
IDI	Anoyia	3.70	202	P		Pn	10 16 25.4	+1.1
IDI	Anoyia	3.70	202	P		Pn	10 16 25.4	+1.1
SUTC	Sutluce-Ispart	3.71	109	*e*PN		Pn	10 16 25.8	+1.3
SUTC	Sutluce-Ispart	3.71	109	*e*Pn		Pn	10 16 25.8	+1.3
SVRH	Sivrihisar-ESK	3.91	78	*e*PN		Pn	10 16 28.4	+1.1
SVRH	Sivrihisar-ESK	3.91	78	Pn		Pn	10 16 30.9	+3.7
SVRH	Sivrihisar-ESK	3.91	78	*e*Pn		Pn	10 16 28.4	+1.2
MDU	Mudurnu	3.98	63	*e*PN		Pn	10 16 29.4	+1.3
MDU	Mudurnu	3.98	63	*e*Pn		Pn	10 16 29.4	+1.3
ITM	Ithomi	3.99	248	P		Pn	10 16 30.9	+2.6
ITM	Ithomi	3.99	248	P		Pn	10 16 29.0	+0.7
ITM	Ithomi	3.99	248	P		Pn	10 16 29.0	+0.7
VAY	Valandovo	4.01	311	*e*Pn		Pn	10 16 27.9	-0.7
VAY	Valandovo	4.01	311	P		Pn	10 16 28.0	-0.6
VAY	Valandovo	4.01	311	P		Pn	10 16 28.0	-0.6
KIZT	Kizilcal	4.15	86	*e*PN		Pn	10 16 31.0	+0.5
KIZT	Kizilcal	4.15	86	Pn		Pn	10 16 32.9	+2.5
KIZT	Kizilcal	4.15	86	*e*Pn		Pn	10 16 31.0	+0.6
KONT	Konya--Tatoy	4.62	98	*e*PN		Pn	10 16 38.2	+1.3
KONT	Konya--Tatoy	4.62	98	Pn		Pn	10 16 39.5	+2.6
KONT	Konya--Tatoy	4.62	98	*e*Pn		Pn	10 16 38.2	+1.3
VTS	Vitosha	4.62	327	⇓P		Pn	10 16 37.6	+0.7
VTS	Vitosha	4.62	327	P		Pn	10 16 37.6	+0.7
VTS	Vitosha	4.62	327	⇓*i*P		Pn	10 16 37.6	+0.7
VTS	Vitosha	4.62	327	P		Pn	10 16 37.6	+0.7
KRUS	Krusevo	4.86	304	*e*Pn		Pn	10 16 40.1	-0.1
HDMB	Hadim	5.00	109	*e*PN		Pn	10 16 42.8	+0.5
HDMB	Hadim	5.00	109	Pn		Pn	10 16 44.1	+1.9
HDMB	Hadim	5.00	109	*e*Pn		Pn	10 16 42.8	+0.6
SAFT	Safranbolu	5.32	60	*e*PN		Pn	10 16 48.6	+2.1
SAFT	Safranbolu	5.32	60	Pn		Pn	10 16 50.2	+3.7
SAFT	Safranbolu	5.32	60	*e*Pn		Pn	10 16 48.6	+2.1
BARS	Barje	5.44	320	*i* Pn		Pn	10 16 48.7	+0.5
BR131	Keskin Array S	5.57	78	*e*Pn		Pn	10 16 50.6	+0.6
	3.3nm,0.5s							
BR131				*e*Pg		Pg	10 17 11.9	-1.8
BR131				*e*Sg		Sg	10 18 31.4	+5.6
BR131	Keskin Array S	5.57	78	*e*Pn		Pn	10 16 50.6	+0.6
	3.2nm,0.5s							
BRTR	Keskin Array B	5.57	78	Pn		Pn	10 16 50.6	+0.6
	0.9nm,0.3s,baz=250,slow=14,SNR=17							
BRTR				Pg		Pg	10 17 10.8	-2.9
	0.6nm,0.3s,baz=256,slow=15,SNR=36							
BRTR				Sn		Sn	10 17 50.2	-4.0
	0.4nm,0.3s,baz=251,slow=21,SNR=3.5							
BRTR				Lg			10 18 23.3	
	baz=267,slow=22,SNR=2.4							
BRTR	Keskin Array B	5.57	78	P		Pn	10 16 50.6	+0.6
BRTR							10 17 50.2	
BRTR	Keskin Array B	5.57	78	Pn		Pn	10 16 50.6	+0.6
BRTR				Pg		Pg	10 17 10.8	-2.9
BRTR				Sn		Sn	10 17 50.2	-4.0
BRTR				Lg			10 18 23.3	
BRTR	Keskin Array B	5.57	78	P		Pn	10 16 50.6	+0.6
TIRR	Tirgusor	5.88	13	*e*P		Pn	10 16 53.2	-1.0
TIRR				pmax		pmax		
	comp=Z,24nm,0.8s							
TIRR	Tirgusor	5.88	13	*e*Pn		Pn	10 16 53.2	-1.0
	comp=Z,24nm,0.8s							
TIRR	Tirgusor	5.88	13	⇑*i*P		Pn	10 16 53.4	-0.8
TIRR	Tirgusor	5.88	13	*e*P		Pn	10 16 53.2	-1.0
	comp=Z,24nm,0.8s							
BOLS	Boljevac	6.16	327	⇑*i*Pn		Pn	10 16 58.2	+0.1
CFR	Carcaliu	6.54	10	⇓P		Pn	10 17 02.1	-1.1
CFR	Carcaliu	6.54	10	⇓*i*P		Pn	10 17 02.1	-1.1
CFR	Carcaliu	6.54	10	P		Pn	10 17 02.1	-1.1
TLCR		6.65	14	⇑P		Pn	10 17 04.3	-0.5
TLCR		6.65	14	⇑*i*P		Pn	10 17 04.3	-0.5
TLCR		6.65	14	P		Pn	10 17 04.3	-0.5
MLR	Muntele Rosu	6.76	356	⇑P		Pn	10 17 07.8	+1.5
MLR	Muntele Rosu	6.76	356	⇑*i*P		Pn	10 17 07.8	+1.5
MLR	Muntele Rosu	6.76	356	P		Pn	10 17 07.8	+1.5
GRUS	Gruza	6.77	321	⇑*i*Pn		Pn	10 17 06.6	+0.1
VOIR		6.79	351	⇑P		Pn	10 17 06.3	-0.4
VOIR		6.79	351	⇑*i*P		Pn	10 17 06.3	-0.4
VOIR		6.79	351	P		Pn	10 17 06.3	-0.4
PLOR	Plostina	7.11	0	⇑P		Pn	10 17 12.6	+1.5
PLOR	Plostina	7.11	0	⇑*i*P		Pn	10 17 12.6	+1.5
PLOR	Plostina	7.11	0	P		Pn	10 17 12.6	+1.5
VRI	Vrincioaia	7.12	1	⇑P		Pn	10 17 12.6	+1.3
VRI	Vrincioaia	7.12	1	⇑*i*P		Pn	10 17 12.6	+1.3
VRI	Vrincioaia	7.12	1	P		Pn	10 17 12.6	+1.3
DOPR	Dopca	7.27	353	⇑*i*P		Pn	10 17 14.0	+0.6
DOPR	Dopca	7.27	353	⇑*i*P		Pn	10 17 14.0	+0.6
MDB	Medias	7.57	348	⇓P		Pn	10 17 19.2	+1.7
MDB	Medias	7.57	348	⇓*i*P		Pn	10 17 19.2	+1.7
MDB	Medias	7.57	348	P		Pn	10 17 19.2	+1.7
TESR		7.77	0	⇓*i*P		Pn	10 17 20.0	-0.1
TESR		7.77	0	⇓*i*P		Pn	10 17 20.0	-0.1
BZS	Buzias	7.79	333	⇑P		Pn	10 17 20.5	0.0
BZS	Buzias	7.79	333	⇑*i*P		Pn	10 17 20.5	0.0
BZS	Buzias	7.79	333	P		Pn	10 17 20.5	0.0
SEV	Sevastopol'	7.86	40	*e*P		Pn	10 17 21.0	-0.4
SEV				*e*S		Sn	10 18 46.0	-4.5
SEV				smax				
	comp=N,4.0nm,0.3s							
SEV				smax				
	comp=E,1.0nm,0.3s							
SEV	Sevastopol'	7.86	40	*e*P		Pn	10 17 21.0	-0.4
SIM	Simferopol'	8.37	40	*e*P		Pn	10 17 31.6	+3.2
SIM				*e*S		Sn	10 19 10.7	+7.6
SIM				pmax		pmax		
	comp=Z,29nm,0.4s							
SIM				smax				
	comp=E,26nm,0.8s							
SIM				smax				
	comp=N,28nm,0.9s							
KIS	Kishinev	8.41	11	*e*P		Pn	10 17 27.0	-2.0
KIS	Kishinev	8.41	11	*e*P		Pn	10 17 27.0	-2.0
DRGR		8.53	342	⇓*i*P		Px	10 17 40.8	
SUDU	Sudak	8.79	43	*e*P		Pn	10 17 34.5	+0.3
SUDU				*e*S		Sn	10 19 18.6	+5.3
SUDU				pmax		pmax		
	comp=Z,24nm,0.8s							
SUDU				smax				
	comp=E,10.0nm,0.5s							
SUDU				smax				
	comp=N,17nm,0.6s							
SUDU	Sudak	8.79	43	*e*P		Pn	10 17 34.5	+0.3
	comp=N,24nm,0.8s							
BURAR	Bucovina Array	8.92	354	⇑P		Pn	10 17 37.9	+1.9
BURAR	Bucovina Array	8.92	354	⇑*i*P		Pn	10 17 37.9	+1.9
BURAR	Bucovina Array	8.92	354	⇑P		Pn	10 17 37.9	+1.9
BUR08	Bucovina Ar. S	8.96	354	*e*Pn		Pn	10 17 37.5	+1.1
BUR08	Bucovina Ar. S	8.96	354	*e*Pn		Pn	10 17 37.5	+1.1
MMAI	Mount Meron Ar	9.16	126	Pn		Pn	10 17 37.4	-1.9
	comp=N,6.0nm,0.3s,baz=310,slow=12,SNR=14							
MMAI				Sn		Sn	10 19 11.6	-11
	comp=N,1.2nm,0.3s,baz=318,slow=24,SNR=2.4							
ASF	Jabal al Asfar	10.66	125	Pn		Pn	10 17 57.3	-2.6
	comp=N,0.1nm,0.3s,baz=350,slow=6.1,SNR=1.9							
VYHS	Vyhne	11.24	333	*e*P		Pn	10 18 09.9	+2.2
VYHS	Vyhne	11.24	333	*e*PN		Pn	10 18 09.9	+2.2
VYHS	Vyhne	11.24	333	*e*P		Pn	10 18 09.9	+2.2
AKASG	Malin Array Be	12.11	8	Pn		Pn	10 18 22.5	+2.9
	comp=N,0.6nm,0.3s,baz=192,slow=13,SNR=3.6							
AKASG	Malin Array Be	12.11	8	P		Pn	10 18 22.5	+3.0
AKASG				pmax		pmax		
	comp=Z,1.0nm,0.3s							
VRAC	Vranov	12.76	329	LR		LR	10 23 52.7	
	comp=Z,64nm,18.3s,baz=139,slow=38							
KHC	Kasperske Hory	13.96	322	*e*P		Pn	10 18 54.2	+9.3
KHC				MLR		MLR		
	comp=Z,100nm,6.6s							
KHC	Kasperske Hory	13.96	322	*e*Pn		Pn	10 18 54.2	+9.3
KHC				AMS		AMS	10 25 30.0	
	comp=Z,100nm,6.6s							
KHC	Kasperske Hory	13.96	322	*e*P		Pn	10 18 54.2	+9.3
	comp=Z,100nm,6.6s							
PRU	Pruhonice	14.14	327	AMS		AMS	10 24 50.0	
	comp=Z,200nm,13.2s							
DAVOX	Davos/Dischmat	14.64	309	LR		LR	10 25 30.0	
	comp=Z,127nm,18.0s,baz=87,slow=40							
VSR	Storozhevoye	15.30	31	*e*P		Pn	10 19 01.7	-1.3
OBN	Obninsk	17.71	19	*e*P		Pn	10 19 32.0	-1.7
OBN				pmax		pmax		
	comp=Z,10.0nm,0.8s							
OBN				MLR		MLR		
	comp=Z,100nm,16.0s							
OBN	Obninsk	17.71	19	*e*P		Pn	10 19 32.0	-1.7
	comp=Z,100nm,16.0s							
VSU	Vasula	19.74	0	⇑*e*P		Pn	10 19 56.6	-1.6
VSU				pmax		pmax		
	comp=Z,13nm,1.1s							
VSU	Vasula	19.74	0	*e*P		Pn	10 19 56.6	-1.6
	comp=Z,13nm,1.1s							
FINES	FINESS Array B	22.73	359	LR		LR	10 30 27.5	
	comp=Z,21nm,19.0s,MS2.6,baz=187,slow=39							
HFS	Hagfors	22.91	343	LR		LR	10 30 03.9	
	comp=Z,57nm,19.8s,MS3.0,baz=333,slow=38							
ESDC	Sonseca Array	23.63	282	P		P	10 20 42.7	+4.2
	comp=Z,0.3nm,0.4s,mb3.1,baz=74,slow=10,SNR=7.1							
NOA	NORSAR Array B	24.29	342	P		P	10 20 48.1	+3.7
	comp=Z,0.5nm,0.7s,mb3.1,baz=148,slow=10,SNR=3.0							
NOA				LR		LR	10 31 32.6	
	comp=Z,40nm,19.3s,MS2.9,baz=155,slow=39							
AKTK	Aktyubinsk	25.07	52	P		P	10 20 51.5	0.0
AKTO	Aktyubinsk	25.07	52	P		P	10 20 51.5	0.0
	comp=Z,0.3nm,0.5s,mb3.1,baz=258,slow=13,SNR=3.8							
AKTO				LR		LR	10 33 25.6	
	comp=Z,23nm,18.9s,MS2.7,baz=107,slow=43							
ARU	Arti	27.54	40	*d*i P		P	10 21 11.8	-2.0
ARU				*e*			10 21 55.0	
ARU				S		S	10 25 53.8	-1.0
ARU				pmax		pmax		
	comp=Z,4.0nm,1.7s,mb3.8							
ARU	Arti	27.54	40	*i* P		P	10 21 11.8	-2.0
	comp=Z,4.0nm,1.7s,mb3.8							
ARU				S		S	10 25 53.8	-1.0
ARCES	ARCESS Array B	30.86	359	LR		LR	10 34 39.4	
	comp=Z,58nm,18.6s,MS3.3,baz=283,slow=37							
MKAR	Makanchi Array	40.93	60	P		P	10 23 09.4	-0.2
	comp=Z,0.4nm,0.4s,mb3.4,baz=264,slow=5.8,SNR=5.7							
MKAR	Makanchi Array	40.93	60	P		P	10 23 09.4	-0.2
ZALV	Zalesovo Beam	41.76	49	P		P	10 23 15.6	-0.6
	comp=Z,0.6nm,0.5s,mb3.5,baz=270,slow=7.2,SNR=2.8							
ZALV	Zalesovo Beam	41.76	49	P		P	10 23 15.6	-0.7
ZALV				pmax		pmax		
	comp=Z,1.0nm,0.5s,mb3.7							
ZALV	Zalesovo Beam	41.76	49	P		P	10 23 15.6	-0.7
	comp=Z,1.0nm,0.5s,mb3.7							
WMQ	Urumqi	45.30	63	*e*P		P	10 23 46.1	+1.1
CD2	Chengdu	62.12	71	P		P	10 25 48.9	+0.5
CD2				PcP		PcP	10 26 28.9	+0.3
CD2				S		S	10 34 13.3	-0.4
CD2				SKS			10 35 38.4	
CD2				SS		SS	10 38 17.4	+1.3
CD2				pmax		pmax		
	comp=Z,10.0nm,0.5s,mb5.2							
CD2				pmax		pmax		
	comp=Z,90nm,5.9s							
CD2				LR		LR		
	comp=N,180nm,5.9s							
CD2				LR		LR		
	comp=Z,140nm,7.1s							
HHC	Hu-ho-hao-te	62.75	58	*e*P		P	10 25 50.1	-2.4
HHC				S		S	10 34 16.8	-4.6
HHC				pmax		pmax		
	comp=Z,11nm,0.7s,mb5.1							
HHC				pmax		pmax		
	comp=Z,53nm,6.7s							
KMI	Kunming	64.36	78	P		P	10 26 03.5	+0.1
KMI				pP		pP	10 26 05.4	-0.8
KMI				PP		PP	10 28 28.1	+3.4
KMI				S		S	10 34 41.3	-0.6
KMI				sS		sS	10 34 45.1	-1.4
KMI				SS		SS	10 38 52.5	+1.1
KMI				pmax		pmax		
	comp=Z,5.0nm,1.0s,mb4.5							
KMI				pmax		pmax		
	comp=Z,110nm,4.1s							
KMI				LR		LR		
	comp=N,110nm,16.1s,MS4.2							
KMI				LR		LR		
	comp=E,76nm,14.7s,MS4.2							
KMI				LR		LR		
	comp=Z,59nm,16.1s,MS3.9							
BJI	Beijing	66.20	57	P		P	10 26 11.8	-3.2
BJI				S		S	10 35 04.3	+0.3
BJI				pmax		pmax		
	comp=Z,4.0nm,0.6s,mb4.6							
BJI				pmax		pmax		
	comp=Z,87nm,4.3s							
BJI				LR		LR		
	comp=N,72nm,25.3s,MS4.0							
BJI				LR		LR		
	comp=E,86nm,24.3s,MS4.0							
GYA	Guiyang	66.62	74	*e*P		P	10 26 18.0	+0.1
GYA				pmax		pmax		
	comp=Z,10.0nm,1.0s,mb4.8							
CN2	Changchun	69.97	50	*e*P		P	10 26 37.4	-1.3
MDJ	Mudanjiang	71.91	47	P		P	10 26 48.8	-1.7
MDJ				pmax		pmax		
	comp=Z,5.0nm,1.5s,mb4.2							
MDJ				pmax		pmax		
	comp=Z,33nm,3.2s							

IGQ ***20*** *10:20:24.3,2°.15S×80°.00W,h10km±2km,Mb4.6,Ms4.4, Error ellipse: s-maj=5.9km s-min=1.3km az=107.6*
ISCJB ***20*** *10:20:25.5±0.8,2°.29S±0°.05×80°.17W±0°.05,h60km±8km, mb4.0/12,Error ellipse: s-maj=9.3km s-min=7.4km az=150.5*
NEIC ***20*** *10:20:26.8±1.3,2°.26S×80°.10W,h57km±15km,mb4.1/9, MD4.3(IGQ),Error ellipse: s-maj=15.9km s-min=8.2km az=72.0*
NEIC Felt at Guayaquil.
IDC ***20*** *10:20:27.4±3.7,2°.26S×80°.08W,h67km±41km,mb3.4/4, mb1 3.8/8,mb1mx3.7/20,mbtmp3.6/8,ML4.0/4,MS3.0/3, Ms1 3.1/3,ms1mx2.8/26,Error ellipse: s-maj=39.4km s-min=23.7km az=49.0*

ISC 20 10:20:26.6±0.7,2°.29S±0°.04×80°.14W±0°.06,h53km±8km, n67,σ0°.99/68,mb4.0/12,4C-16D,Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIS	Cerro-Chispas-	1.36	334	P	Pn	10 20 47.5	-1.9
PECV	Mancha de Ca P	1.50	3	⇓P	Pn	10 20 50.3	-0.9
RIOE	Riobamba	1.60	71	⇓P	Pn	10 20 50.8	-1.7
IGUA	Igualata	1.69	62	P	Pn	10 20 52.9	-0.9
BIL2	Estacion Bilba	1.83	63	⇑S	Sn	10 21 16.8	-0.9
BIL2	Estacion Bilba	1.83	63	⇑P	Pn	10 20 55.4	-0.3
BMAS	Trigal station	1.83	65	⇓P	Pn	10 20 54.7	-1.0
BBIL	Ulba Tungurahu	1.85	63	⇓S	Sn	10 21 17.4	-0.7
BBIL	Ulba Tungurahu	1.85	63	⇓P	Pn	10 20 55.3	-0.6
ARRY	Arrayan	1.85	65	⇓P	Pn	10 20 54.8	-1.2
JUI6	Juive	1.88	63	⇓S	Sn	10 21 19.1	+0.3
JUI6	Juive	1.88	63	⇓P	Pn	10 20 55.7	-0.6
RETU	Refugio	1.88	64	P	Pn	10 20 56.1	-0.3
RUN5	Runtun	1.92	63	P	Pn	10 20 56.6	-0.3
ULBA	Ulba	1.92	64	P	Pn	10 20 56.5	-0.4
BULB	Ulba Tungurahu	1.92	64	P	Pn	10 20 56.4	-0.5
BULB	Ulba Tungurahu	1.92	64	S	Sn	10 21 19.5	-0.5
MACE	Macas	1.94	89	⇓P	Pn	10 20 56.5	-0.7
JAMA	Jama	2.01	358	P	Pn	10 20 56.3	-1.8
PISA	Pisayambo	2.13	55	⇑P	Pn	10 21 00.3	+0.5
MAG1	Magdalena	2.23	9	P	Pn	10 20 60.0	-1.2
BMOR	Cotopaxi Volca	2.28	47	P	Pn	10 21 03.5	+1.7
CAMI	Rancho Maria	2.29	46	P	Pn	10 21 03.0	+1.0
NAS2	Nasa	2.33	46	P	Pn	10 21 04.0	+1.4
BREF	Cotopaxi Volca	2.34	47	⇓S	Sn	10 21 36.1	+5.9
BREF	Cotopaxi Volca	2.34	47	⇓P	Pn	10 21 03.9	+1.3
BTAM	Cotopaxi Volca	2.36	47	⇓P	Pn	10 21 04.0	+1.0
BVC2	Cotopaxi Volca	2.37	47	⇓P	Pn	10 21 04.1	+1.1
TAMB	Tambo	2.37	48	P	Pn	10 21 04.3	+1.2
VC1	Cotopaxi 1	2.38	47	⇓P	Pn	10 21 04.5	+1.2
COV1	Cotopaxi Volc	2.41	48	P	Pn	10 21 03.9	+0.2
JUA2	San Juan 2	2.57	37	⇑P	Pn	10 21 06.1	+0.3
TERV	Terraza Guagua	2.60	36	⇓P	Pn	10 21 07.0	+0.8
GGP	Refugio Guagua	2.60	36	P	Pn	10 21 06.2	-0.1
PINO	Pino	2.61	36	P	Pn	10 21 06.5	+0.1
YANA	Yana	2.66	36	P	Pn	10 21 07.3	+0.2
ANTI	Antisana	2.69	47	⇓P	Pn	10 21 08.9	+1.5
OTAV	Otavalo	3.02	34	P	Pn	10 21 11.8	-0.2
OTAV	Otavalo	3.02	34	*e*Pn	Pn	10 21 12.1	+0.1
OTAV				*e*Sn	Sn	10 21 46.2	-0.8
COTA	Cotacachi	3.17	35	P	Pn	10 21 14.8	+0.8
CAYA	Cayambe	3.18	43	P	Pn	10 21 15.4	+1.3
CHAR	Charly	3.29	49	P	Pn	10 21 18.6	+2.8
LAV3	Lava3-Reventad	3.32	49	P	Pn	10 21 20.1	+4.1
CONE	Cono NE Rev Vo	3.33	49	P	Pn	10 21 20.1	+3.9
ATAH	Atahualpa	5.12	160	P	Pn	10 21 42.4	+1.5
	2.2nm,0.3s,baz=0.0,slow=12,SNR=8.9						
ATAH				LR	LR	10 23 57.6	
	comp=Z,124nm,18.8s,baz=193,slow=41						
ROSC	El Rosal	9.16	39	LR	LR	10 26 27.9	
	comp=Z,115nm,20.0s,baz=284,slow=40						
NNA	Nana	10.18	161	P	Pn	10 22 50.0	-0.2
	3.1nm,0.3s,baz=345,slow=12,SNR=7.3						
NNA				S	Sn	10 24 38.5	-4.3
	8.8nm,0.3s,baz=217,slow=17,SNR=14						
NNA	Nana	10.18	161	*e*Pn	Pn	10 22 50.4	+0.3
NNA				*e*Sn	Sn	10 24 40.9	-2.0
LPAZ	La Paz	18.26	140	P	Pn	10 24 37.1	+0.8
	0.1nm,0.3s,baz=336,slow=12,SNR=5.3						
LPAZ				LR	LR	10 33 07.6	
	comp=Z,53nm,18.2s,baz=80,slow=42						
LPAZ	La Paz	18.26	140	*e*P	Pn	10 24 37.1	+0.7
	2.0nm,0.9s						
LPAZ				LR	LR	10 33 07.6	
PCRV	Puerto La Cruz	19.79	51	P	Pn	10 24 52.3	-2.4
	0.7nm,0.3s,baz=232,slow=17,SNR=5.5						
SIV	San Ignacio	23.20	127	P	P	10 25 28.6	-0.6
	1.2nm,0.7s,mb3.4,baz=305,slow=10.0,SNR=8.7						
TXAR	Lajitas Array	38.68	326	P	P	10 27 44.6	-0.8
	0.4nm,0.9s,mb3.2,baz=138,slow=8.5,SNR=4.3						
TXAR				PcP	PcP	10 29 56.0	-0.7
	0.4nm,0.7s,baz=152,slow=8.4,SNR=6.0						
ANMO	Albuquerque	44.51	329	*e*P	P	10 28 33.7	+0.6
	3.3nm,1.0s,mb4.1						
SDCO	Great Sand Dun	46.24	332	*e*P	P	10 28 47.0	+0.2
	1.5nm,0.7s,mb4.0						
PV01	Paradox Valley	48.04	330	*e*P	P	10 29 01.6	+0.8
	144nm,1.0s						
PV10	Paradox Valley	48.47	330	*e*P	P	10 29 04.2	+0.2
	23nm,0.6s						
ARUT	Antelope Range	50.40	326	*e*P	P	10 29 20.5	+1.7
	0.8nm,0.6s,mb3.9						
RSSD	Black Hills

	397nm,0.5s							
BUM	**Brajici-Budva**	**1.84**	**355**	⇑*i*Pn	**Pg**	**10 37 32.1**	**-0.9**
BUM				*e*Sn	**Sg**	**10 37 58.9**	**+1.9**
BUM	**Brajici-Budva**	**1.84**	**355**	⇑*i*Pn	**Pg**	**10 37 32.1**	**-0.9**
BUM				*e*Sn	**Sg**	**10 37 58.9**	**+1.9**
KRUS	**Krusevo**	**1.86**	**60**	*i* Pn	**Pn**	**10 37 29.0**	**-1.4**
SG1	**Sgolgore (BA)**	**1.89**	**282**	*e*Pn	**Pn**	**10 37 30.6**	**-0.2**
AMUR	**Altamura**	**1.96**	**284**	Pg	**Pn**	**10 37 31.0**	**-0.8**
	347nm,0.7s						
AMUR	**Altamura**	**1.96**	**284**	Pg	**Pn**	**10 37 31.0**	**-0.8**
	347nm,0.7s						
PDG	**Podgorica**	**1.97**	**3**	⇑*i*Pn	**Pg**	**10 37 34.0**	**-1.4**
PDG				*e*Sn	**Sg**	**10 38 01.6**	**+0.6**
TTG	**Podgorica**	**1.97**	**3**	⇑*i*Pn	**Pg**	**10 37 34.0**	**-1.4**
TTG				*e*Sn	**Sg**	**10 38 01.6**	**+0.6**
TTG	**Podgorica**	**1.97**	**3**	⇑*i*Pn	**Pg**	**10 37 34.0**	**-1.4**
TTG				*e*Sn	**Sg**	**10 38 01.6**	**+0.6**
BCI	**Bajram Curri**	**2.04**	**20**	*e*PN	**Pn**	**10 37 32.6**	**-0.2**
BCI				*i* SN	**Sn**	**10 38 00.7**	**+1.9**
BCI	**Bajram Curri**	**2.04**	**20**	*e*Pn	**Pn**	**10 37 32.6**	**-0.2**
BCI				*i* Sn	**Sn**	**10 38 00.7**	**+1.9**
KZN	**Kozani**	**2.04**	**93**	*e*P	**Pn**	**10 37 33.5**	**+0.6**
KZN	**Kozani**	**2.04**	**93**	P	**Pn**	**10 37 32.6**	**-0.3**
KZN				S	**Sn**	**10 38 00.3**	**+1.5**
KZN	**Kozani**	**2.04**	**93**	P	**Pn**	**10 37 32.6**	**-0.3**
KZN				S	**Sn**	**10 38 00.3**	**+1.5**
HCY	**Herceg Novi**	**2.04**	**347**	⇑*i*Pn	**Pg**	**10 37 34.9**	**-1.8**
HCY				*e*Sn	**Sg**	**10 38 03.4**	**+0.3**
HCY	**Herceg Novi**	**2.04**	**347**	⇑*i*Pn	**Pg**	**10 37 34.9**	**-1.8**
HCY				*e*Sn	**Sg**	**10 38 03.4**	**+0.3**
MIGL	**Miglionico**	**2.04**	**275**	Pg	**Pn**	**10 37 33.0**	**+0.1**
	1μm,0.8s						
MIGL	**Miglionico**	**2.04**	**275**	Pg	**Pn**	**10 37 33.0**	**+0.1**
	1μm,0.8s						
CRAC	**Craco**	**2.05**	**268**	Pg	**Pn**	**10 37 34.0**	**+1.0**
	630nm,0.7s						
CRAC	**Craco**	**2.05**	**268**	Pg	**Pn**	**10 37 34.0**	**+1.0**
	630nm,0.7s						
LKD2	**Lefkada island**	**2.05**	**144**	P	**Pn**	**10 37 32.2**	**-0.9**
LKD2				S	**Sn**	**10 37 58.9**	**-0.3**
LKD2	**Lefkada island**	**2.05**	**144**	P	**Pn**	**10 37 32.2**	**-0.9**
LKD2				S	**Sn**	**10 37 58.9**	**-0.3**
PVY	**Plav**	**2.23**	**17**	⇓*i*Pn	**Pn**	**10 37 36.9**	**+1.4**
PVY				*e*Sn	**Sg**	**10 38 07.8**	**-1.4**
PVY	**Plav**	**2.23**	**17**	⇓*i*Pn	**Pn**	**10 37 36.9**	**+1.4**
PVY				*e*Sn	**Sg**	**10 38 07.8**	**-1.4**
CDT	**Castel del Mon**	**2.24**	**287**	*e*Pn	**Pn**	**10 37 35.0**	**-0.7**
MRVN	**Minervino Murg**	**2.29**	**286**	Pg	**Pn**	**10 37 35.7**	**-0.7**
	148nm,0.6s						
MRVN	**Minervino Murg**	**2.29**	**286**	Pg	**Pn**	**10 37 35.7**	**-0.7**
	148nm,0.6s						
SERS	**Sersale**	**2.35**	**233**	Pg	**Pn**	**10 37 36.5**	**-0.6**
	36nm,0.5s						
SERS	**Sersale**	**2.35**	**233**	Pg	**Pn**	**10 37 36.5**	**-0.6**
	36nm,0.5s						
NKY	**Niksic**	**2.35**	**358**	⇓*i*Pn	**Pb**	**10 37 39.5**	**-1.2**
NKY				*e*Sn	**Sb**	**10 38 10.5**	**+0.4**
NKY	**Niksic**	**2.35**	**358**	⇓*i*Pn	**Pb**	**10 37 39.5**	**-1.2**
NKY				*e*Sn	**Sb**	**10 38 10.5**	**+0.4**
THL	**Klokotos Trika**	**2.40**	**111**	*e*P	**Pn**	**10 37 38.0**	**+0.1**
THL	**Klokotos Trika**	**2.40**	**111**	P	**Pn**	**10 37 38.0**	**+0.1**
THL				S	**Sn**	**10 38 08.5**	**+0.7**
THL	**Klokotos Trika**	**2.40**	**111**	P	**Pn**	**10 37 38.0**	**+0.1**
THL				S	**Sn**	**10 38 08.5**	**+0.7**
ACER	**Acerenza**	**2.43**	**279**	Pg	**Pn**	**10 37 39.2**	**+0.9**
	457nm,0.6s						
ACER	**Acerenza**	**2.43**	**279**	Pg	**Pn**	**10 37 39.2**	**+0.9**
	457nm,0.6s						
PALZ	**Palazzo San Ge**	**2.44**	**282**	Pg	**Pn**	**10 37 38.9**	**+0.4**
PALZ	**Palazzo San Ge**	**2.44**	**282**	Pg	**Pn**	**10 37 38.9**	**+0.4**
BRY	**Bratogost**	**2.47**	**350**	⇑*i*Pn	**Pn**	**10 37 40.5**	**+1.6**
BRY				*e*Sn	**Sb**	**10 38 14.2**	**+0.6**
BRY	**Bratogost**	**2.47**	**350**	⇑*i*Pn	**Pn**	**10 37 40.5**	**+1.6**
BRY				*e*Sn	**Sb**	**10 38 14.2**	**+0.6**
BEY	**Berane**	**2.48**	**13**	⇑*i*Pn	**Pn**	**10 37 40.9**	**+1.9**
BEY				*e*Sn	**Sb**	**10 38 13.8**	**0.0**
IVA	**Berane**	**2.48**	**13**	⇑*i*Pn	**Pn**	**10 37 40.9**	**+1.9**
IVA				*e*Sn	**Sb**	**10 38 13.8**	**0.0**
IVA	**Berane**	**2.48**	**13**	⇑*i*Pn	**Pn**	**10 37 40.9**	**+1.9**
IVA				*e*Sn	**Sb**	**10 38 13.8**	**0.0**
SIRI	**Monte Sirino -**	**2.50**	**265**	Pg	**Pn**	**10 37 39.5**	**+0.3**
	93nm,0.4s						
SIRI	**Monte Sirino -**	**2.50**	**265**	Pg	**Pn**	**10 37 39.5**	**+0.3**
	93nm,0.4s						
CARO	**Carolei**	**2.53**	**242**	Pg	**Pn**	**10 37 40.8**	**+1.1**
	85nm,0.6s						
CARO	**Carolei**	**2.53**	**242**	Pg	**Pn**	**10 37 40.8**	**+1.1**
	85nm,0.6s						
MCEL	**Monticello**	**2.53**	**268**	Pg	**Pn**	**10 37 40.3**	**+0.6**
	147nm,0.8s						
MCEL	**Monticello**	**2.53**	**268**	Pg	**Pn**	**10 37 40.3**	**+0.6**
	147nm,0.8s						
MTSN	**Montesano sull**	**2.58**	**267**	Pg	**Pn**	**10 37 40.9**	**+0.6**
	141nm,0.8s						
MTSN	**Montesano sull**	**2.58**	**267**	Pg	**Pn**	**10 37 40.9**	**+0.6**
	141nm,0.8s						
EVR	**Evrytania**	**2.59**	**126**	*e*P	**Pn**	**10 37 41.5**	**+1.0**
STON	**Ston**	**2.63**	**337**	*e*Pn	**Pn**	**10 37 39.6**	**-1.4**
STON				Sn	**Sn**	**10 38 10.9**	**-2.5**
STON	**Ston**	**2.63**	**337**	*e*Pn	**Pn**	**10 37 39.6**	**-1.4**
STON				Sn	**Sn**	**10 38 10.9**	**-2.5**
MS1	**Monte Sant'Ang**	**2.70**	**298**	*e*Pn	**Pn**	**10 37 41.5**	**-0.5**
VAY	**Valandovo**	**2.76**	**71**	*i* Pn	**Pn**	**10 37 42.6**	**-0.2**
AGG	**Agios Georgios**	**2.87**	**119**	P	**Pn**	**10 37 43.8**	**-0.5**
AGG	**Agios Georgios**	**2.87**	**119**	P	**Pn**	**10 37 43.8**	**-0.5**
PLE	**Pljevlja**	**2.87**	**4**	⇑*i*Pn	**Pn**	**10 37 46.0**	**+1.6**
PLE				*e*Sn	**Sn**	**10 38 23.3**	**+3.8**
PLE	**Pljevlja**	**2.87**	**4**	⇑*i*Pn	**Pn**	**10 37 46.0**	**+1.6**
PLE				*e*Sn	**Sn**	**10 38 23.3**	**+3.8**
BULG	**Bulgheria - Ca**	**2.88**	**264**	Pg	**Pn**	**10 37 44.6**	**+0.1**
	116nm,0.6s						
BULG	**Bulgheria - Ca**	**2.88**	**264**	Pg	**Pn**	**10 37 44.6**	**+0.1**
	116nm,0.6s						
PLAC	**Placanica**	**2.88**	**227**	Pg	**Pn**	**10 37 43.9**	**-0.6**
	32nm,0.6s						
PLAC	**Placanica**	**2.88**	**227**	Pg	**Pn**	**10 37 43.9**	**-0.6**
	32nm,0.6s						
CDRU	**Civita di Ruta**	**2.90**	**272**	Pg	**Pn**	**10 37 44.7**	**-0.1**
	37nm,0.6s						
CDRU	**Civita di Ruta**	**2.90**	**272**	Pg	**Pn**	**10 37 44.7**	**-0.1**
	37nm,0.6s						
CMPR	**Campora**	**2.91**	**268**	Pg	**Pn**	**10 37 45.5**	**+0.6**
	46nm,0.6s						
CMPR	**Campora**	**2.91**	**268**	Pg	**Pn**	**10 37 45.5**	**+0.6**
	46nm,0.6s						
RGNG	**Rignano Grg**	**2.93**	**296**	Pg	**Pn**	**10 37 44.3**	**-0.8**
RGNG	**Rignano Grg**	**2.93**	**296**	Pg	**Pn**	**10 37 44.3**	**-0.8**
BARS	**Barje**	**3.10**	**40**	⇑*i*Pn	**Pn**	**10 37 46.3**	**-1.2**
JOPP	**Joppolo**	**3.11**	**234**	Pg	**Pn**	**10 37 46.8**	**-0.8**
	28nm,0.4s						
JOPP	**Joppolo**	**3.11**	**234**	Pg	**Pn**	**10 37 46.8**	**-0.8**
	28nm,0.4s						
FG2	**Serracapriola**	**3.27**	**296**	Pg	**Pn**	**10 37 49.5**	**-0.3**
	78nm,0.3s						
CEL	**Celeste**	**3.33**	**230**	Pg	**Pn**	**10 37 50.1**	**-0.5**
	27nm,0.6s						
CEL	**Celeste**	**3.33**	**230**	Pg	**Pn**	**10 37 50.1**	**-0.5**
	27nm,0.6s						
SOI	**Samo**	**3.36**	**226**	Pg	**Pn**	**10 37 50.5**	**-0.6**
	33nm,0.6s						
SOI	**Samo**	**3.36**	**226**	Pg	**Pn**	**10 37 50.5**	**-0.6**
	33nm,0.6s						
SACR	**S. Croce Del S**	**3.47**	**287**	Pg	**Pn**	**10 37 53.1**	**+0.6**
SACR	**S. Croce Del S**	**3.47**	**287**	Pg	**Pn**	**10 37 53.1**	**+0.6**
MPAZ	**Palizzi**	**3.48**	**225**	Pg	**Pn**	**10 37 52.0**	**-0.7**
	34nm,0.5s						
MPAZ	**Palizzi**	**3.48**	**225**	Pg	**Pn**	**10 37 52.0**	**-0.7**
	34nm,0.5s						
BSSO	**Busso**	**3.59**	**289**	Pg	**Pn**	**10 37 54.1**	**-0.1**
	56nm,0.7s						
BSSO	**Busso**	**3.59**	**289**	Pg	**Pn**	**10 37 54.1**	**-0.1**
	56nm,0.7s						
MIDA	**Miranda**	**3.86**	**289**	Pg	**Pn**	**10 37 58.6**	**+0.7**
	32nm,0.6s						
MIDA	**Miranda**	**3.86**	**289**	Pg	**Pn**	**10 37 58.6**	**+0.7**
	32nm,0.6s						
POFI	**Posta Fibreno**	**4.27**	**289**	Pg	**Pn**	**10 38 04.5**	**+1.0**
	25nm,0.8s						
POFI	**Posta Fibreno**	**4.27**	**289**	Pg	**Pn**	**10 38 04.5**	**+1.0**
	25nm,0.8s						
VVLD	**Villa Vallelon**	**4.38**	**291**	Pg	**Pn**	**10 38 05.9**	**+0.9**
	45nm,0.8s						
VVLD	**Villa Vallelon**	**4.38**	**291**	Pg	**Pn**	**10 38 05.9**	**+0.9**
	45nm,0.8s						
TERO	**Teramo**	**4.66**	**299**	Pg	**Pn**	**10 38 09.2**	**+0.2**
	17nm,0.6s						
TERO	**Teramo**	**4.66**	**299**	Pg	**Pn**	**10 38 09.2**	**+0.2**
	17nm,0.6s						
CERT	**Cerreto**	**4.86**	**290**	Pg	**Pn**	**10 38 13.0**	**+1.4**
	37nm,0.8s						
CERT	**Cerreto**	**4.86**	**290**	Pg	**Pn**	**10 38 13.0**	**+1.4**
	37nm,0.8s						
NRCA	**Norcia**	**5.08**	**300**	Pg	**Pn**	**10 38 15.1**	**+0.4**
	11nm,0.4s						
NRCA	**Norcia**	**5.08**	**300**	Pg	**Pn**	**10 38 15.1**	**+0.4**
	11nm,0.4s						
NVLJ	**Novalja**	**5.16**	**324**	*e*Pn	**Pn**	**10 38 15.1**	**-0.6**
NVLJ				Sn	**Sn**	**10 39 12.5**	**-3.3**
FDMO	**Fiordimonte**	**5.19**	**302**	Pg	**Pn**	**10 38 16.2**	**0.0**
	54nm,1.6s						
FDMO	**Fiordimonte**	**5.19**	**302**	Pg	**Pn**	**10 38 16.2**	**0.0**
	54nm,1.6s						
CING	**Cingoli**	**5.29**	**305**	Pg	**Pn**	**10 38 17.0**	**-0.5**
CING	**Cingoli**	**5.29**	**305**	Pg	**Pn**	**10 38 17.0**	**-0.5**
ASS	**Assisi**	**5.49**	**300**	Pg	**Pn**	**10 38 21.2**	**+0.9**
	4.0nm,0.5s						
ASS	**Assisi**	**5.49**	**300**	Pg	**Pn**	**10 38 21.2**	**+0.9**
	4.0nm,0.5s						
ARVD	**Arcevia**	**5.51**	**305**	Pg	**Pn**	**10 38 20.0**	**-0.6**
ARVD	**Arcevia**	**5.51**	**305**	Pg	**Pn**	**10 38 20.0**	**-0.6**
FSSB	**Fossombrone**	**5.71**	**306**	Pg	**Pn**	**10 38 22.7**	**-0.7**
FSSB	**Fossombrone**	**5.71**	**306**	Pg	**Pn**	**10 38 22.7**	**-0.7**
PIEI	**Pieia**	**5.78**	**304**	Pg	**Pn**	**10 38 23.9**	**-0.4**
PIEI	**Pieia**	**5.78**	**304**	Pg	**Pn**	**10 38 23.9**	**-0.4**
MGAB	**Montegabbione**	**5.78**	**297**	Pn	**Pn**	**10 38 25.8**	**+1.4**
	12nm,0.4s						
MGAB	**Montegabbione**	**5.78**	**297**	Pn	**Pn**	**10 38 25.8**	**+1.4**
	12nm,0.4s						
BADI	**Badiali**	**5.96**	**303**	Pg	**Pn**	**10 38 27.9**	**+1.2**
	18μm,23.0s						
BADI	**Badiali**	**5.96**	**303**	Pg	**Pn**	**10 38 27.9**	**+1.2**
	18μm,23.0s						

CSEM ***20*** *11:02:00.8±0.1, 38°.47N×21°.96E, h12km, ML3.0/6, Error ellipse: s-maj=2.9km s-min=2.5km az=141.0*
NEIC ***20*** *11:02:00.9, 38°.49N×21°.89E, h33km, MD3.0(ATH), After ATH.*
ATH ***20*** *11:02:00.9, 38°.49N×21°.89E, h33km±2km, MD3.0/5*
ISCJB ***20*** *11:02:01.1±0.5, 38°.45N±0°.03×21°.95E±0°.03, h15km±3km, Error ellipse: s-maj=5.1km s-min=3.9km az=152.5*
THE ***20*** *11:02:01.5, 38°.45N×21°.97E, h10km, ML3.0/6, Error ellipse: s-maj=0.7km s-min=0.4km az=166.0*
ISC 20 11:02:01.1±0.4,**38°.46N**±0°.03×**21°.96E**±0°.03,**h14**km±3km,
n46,σ0**s48**/68,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	**Efpalio**	**0.06**	**229**	P	**Pg**	**11 02 03.6**	**-0.2**
EFP				S	**Sg**	**11 02 05.2**	**-0.6**
EFP	**Efpalio**	**0.06**	**229**	P	**Pg**	**11 02 03.6**	**-0.2**
EFP				S	**Sg**	**11 02 05.2**	**-0.6**
TRIZ	**Trizonia**	**0.13**	**138**	P	**Pg**	**11 02 04.6**	**-0.1**
TRIZ				S	**Sg**	**11 02 06.8**	**-0.4**
TRIZ	**Trizonia**	**0.13**	**138**	P	**Pg**	**11 02 04.6**	**-0.1**
TRIZ				S	**Sg**	**11 02 06.8**	**-0.4**
KALE	**Kalithea**	**0.16**	**117**	P	**Pg**	**11 02 05.1**	**+0.1**
KALE				S	**Sg**	**11 02 07.8**	**0.0**
KALE	**Kalithea**	**0.16**	**117**	P	**Pg**	**11 02 05.1**	**+0.1**
KALE				S	**Sg**	**11 02 07.8**	**0.0**
LAKA	**Lakka**	**0.22**	**176**	P	**Pg**	**11 02 06.1**	**+0.1**
LAKA				S	**Sg**	**11 02 09.1**	**-0.3**
LAKA	**Lakka**	**0.22**	**176**	P	**Pg**	**11 02 06.1**	**+0.1**
LAKA				S	**Sg**	**11 02 09.1**	**-0.3**
UPR	**University Cam**	**0.23**	**217**	P	**Pg**	**11 02 06.0**	**-0.1**
UPR	**University Cam**	**0.23**	**217**	P	**Pg**	**11 02 06.0**	**-0.1**
DSF	**Desfina**	**0.45**	**96**	P	**Pg**	**11 02 09.9**	**-0.1**
DSF				S	**Sg**	**11 02 16.8**	**+0.7**
DSF	**Desfina**	**0.45**	**96**	P	**Pg**	**11 02 09.9**	**-0.1**
DSF				S	**Sg**	**11 02 16.8**	**+0.7**
EVR	**Evrytania**	**0.47**	**345**	*e*Pb	**Pb**	**11 02 11.1**	**0.0**
EVR	**Evrytania**	**0.47**	**345**	*e*PB	**Pb**	**11 02 11.1**	**0.0**
EVR	**Evrytania**	**0.47**	**345**	*e*Pb	**Pb**	**11 02 11.1**	**0.0**
RLS	**Riolos of Patr**	**0.56**	**224**	*e*Pn	**Pg**	**11 02 12.8**	**+0.7**
RLS				*e*Sn	**Sg**	**11 02 20.7**	**+1.1**
RLS	**Riolos of Patr**	**0.56**	**224**	*e*PN	**Pg**	**11 02 12.8**	**+0.7**
RLS				*e*SN	**Sg**	**11 02 20.7**	**+1.1**
RLS	**Riolos of Patr**	**0.56**	**224**	*e*Pn	**Pg**	**11 02 12.8**	**+0.7**
GUR	**Goura**	**0.61**	**150**	P	**Pg**	**11 02 12.8**	**-0.2**
GUR				S	**Sg**	**11 02 21.2**	**+0.2**
GUR	**Goura**	**0.61**	**150**	P	**Pg**	**11 02 12.8**	**-0.2**
GUR				S	**Sg**	**11 02 21.2**	**+0.2**
AGG	**Agios Georgios**	**0.63**	**27**	P	**Pg**	**11 02 13.4**	**0.0**
AGG				S	**Sg**	**11 02 22.6**	**+0.8**
AGG	**Agios Georgios**	**0.63**	**27**	P	**Pg**	**11 02 13.4**	**0.0**
AGG				S	**Sg**	**11 02 22.6**	**+0.8**
LKR	**Lokris**	**0.84**	**77**	*e*Pn	**Pn**	**11 02 18.0**	**-0.4**
LKR				*e*Sn	**Sn**	**11 02 30.4**	**-0.1**
LKR	**Lokris**	**0.84**	**77**	*e*PN	**Pn**	**11 02 18.0**	**-0.4**
LKR				*e*SN	**Sn**	**11 02 30.4**	**-0.1**
LKR	**Lokris**	**0.84**	**77**	P	**Pg**	**11 02 17.1**	**-0.2**
LKR	**Lokris**	**0.84**	**77**	P	**Pg**	**11 02 17.1**	**-0.2**
LKR	**Lokris**	**0.84**	**77**	*e*Pn	**Pn**	**11 02 18.0**	**-0.4**
LKR				*e*Sn	**Sn**	**11 02 30.4**	**-0.1**
LTK	**Loutraki**	**0.91**	**119**	P	**Pb**	**11 02 18.4**	**-0.2**
LTK	**Loutraki**	**0.91**	**119**	P	**Pb**	**11 02 18.4**	**-0.2**
KFL	**Anninata**	**0.99**	**249**	P	**Pb**	**11 02 20.0**	**+0.1**
KFL	**Anninata**	**0.99**	**249**	P	**Pb**	**11 02 20.0**	**+0.1**
LKD2	**Lefkada island**	**1.07**	**288**	P	**Pb**	**11 02 21.9**	**+0.5**
LKD2	**Lefkada island**	**1.07**	**288**	P	**Pb**	**11 02 21.9**	**+0.5**
THL	**Klokotos Trika**	**1.10**	**2**	*e*PN	**Pn**	**11 02 20.9**	**-1.1**
THL	**Klokotos Trika**	**1.10**	**2**	*e*Pn	**Pn**	**11 02 20.9**	**-1.1**
VLS	**Valsamata**	**1.11**	**256**	*e*Pn	**Pn**	**11 02 21.3**	**-0.9**
VLS	**Valsamata**	**1.11**	**256**	*e*PN	**Pn**	**11 02 21.3**	**-0.9**
VLS	**Valsamata**	**1.11**	**256**	*e*Pn	**Pn**	**11 02 21.3**	**-0.9**
ITM	**Ithomi**	**1.28**	**181**	*e*Pn	**Pn**	**11 02 24.9**	**+0.4**
ITM	**Ithomi**	**1.28**	**181**	*e*PN	**Pn**	**11 02 24.9**	**+0.4**
ITM	**Ithomi**	**1.28**	**181**	P	**Pn**	**11 02 24.5**	**0.0**
ITM	**Ithomi**	**1.28**	**181**	P	**Pn**	**11 02 24.5**	**0.0**
ITM	**Ithomi**	**1.28**	**181**	*e*Pn	**Pn**	**11 02 24.9**	**+0.4**
NEO	**Neokhori**	**1.30**	**49**	*e*Pn	**Pn**	**11 02 24.6**	**-0.1**
NEO				*e*Sn	**Sn**	**11 02 42.4**	**+0.6**
NEO	**Neokhori**	**1.30**	**49**	*e*PN	**Pn**	**11 02 24.6**	**-0.1**
NEO				*e*SN	**Sn**	**11 02 42.4**	**+0.6**
NEO	**Neokhori**	**1.30**	**49**	*e*Pn	**Pn**	**11 02 24.6**	**-0.1**
NEO				*e*Sn	**Sn**	**11 02 42.4**	**+0.6**

IDC ***20*** *11:08:25.5±0.6, 35°.65N×22°.35E, h0km, mb4.1/22, mb1 4.2/29, mb1mx4.1/37, mbtmp4.1/29, ML3.8/6, MS3.8/6, Ms1 3.8/6, ms1mx3.3/34, Error ellipse: s-maj=14.3km s-min=13.1km az=27.0*
NEIC ***20*** *11:08:27.5±0.4, 35°.56N×22°.08E, h10km, mb4.3/27, Error ellipse: s-maj=7.2km s-min=4.2km az=200.0*
THE ***20*** *11:08:28.4, 35°.52N×22°.15E, h142km±2km, ML4.8/12, Error ellipse: s-maj=2.9km s-min=1.2km az=357.0*
BJI ***20*** *11:08:28.3, 35°.96N×21°.91E, h35km, mB4.9/10, mb4.5/16, Ms4.5/7, Ms7 4.2/8*
MOS ***20*** *11:08:28.2±1.2, 35°.59N×22°.10E, h33km, mb4.4/17, Error ellipse: s-maj=5.6km s-min=3.1km az=96.4*
PDG ***20*** *11:08:28.2±0.2, 35°.61N×21°.21E, h11km±11km, MD4.4/1, ML4.3/9, Error ellipse: s-maj=233.1km s-min=61.1km az=90.0*
ISCJB ***20*** *11:08:29.2±0.3, 35°.56N±0°.02×22°.09E±0°.02, h48km±3km, mb4.3/57, MS3.8/16, Error ellipse: s-maj=3.5km s-min=2.9km az=22.4*
CSEM ***20*** *11:08:30.7±0.2, 35°.55N×22°.07E, h52km±2km, mb4.3/13, Ms3.1, Error ellipse: s-maj=3.9km s-min=3.5km az=33.0*
ISC 20 11:08:30.8±0.3,**35°.54N**±0°.02×**22°.11E**±0°.02,**h44**km±3km,
h37km±1.5km:**pP-P**,**n514**,σ1**s32**/570,**mb4.3**/57,**MS3.8**/16,
37C-16D,**Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**1.05**	**45**	*e*P	**Pn**	**11 08 46.5**	**-2.6**
VLI	**Veliai**	**1.35**	**29**	*e*P	**Pn**	**11 08 52.0**	**-1.2**
KARN	**Karanos**	**1.48**	**95**	*e*P	**Pn**	**11 08 55.5**	**+0.6**
ITM	**Ithomi**	**1.64**	**355**	P	**Pn**	**11 08 57.9**	**+0.7**
ITM				S	**Sn**	**11 09 23.1**	**+6.0**
ITM	**Ithomi**	**1.64**	**355**	*e*P	**Pn**	**11 08 58.0**	**+0.8**
ITM	**Ithomi**	**1.64**	**355**	P	**Pn**	**11 08 57.9**	**+0.7**
ITM				S	**Sn**	**11 09 23.1**	**+6.0**
ITM	**Ithomi**	**1.64**	**355**	P	**Pn**	**11 08 57.9**	**+0.7**
VAM	**Vamos**	**1.71**	**94**	P	**Pn**	**11 08 58.4**	**+0.3**
VAM	**Vamos**	**1.71**	**94**	*e*P	**Pn**	**11 08 58.5**	**+0.4**
VAM	**Vamos**	**1.71**	**94**	P	**Pn**	**11 08 58.4**	**+0.3**
GVD	**Gavdhos**	**1.76**	**113**	*e*Pn	**Pn**	**11 08 58.5**	**-0.3**
GVD	**Gavdhos**	**1.76**	**113**	*e*P	**Pn**	**11 08 59.0**	**+0.2**
GVD	**Gavdhos**	**1.76**	**113**	*e*Pn	**Pn**	**11 08 58.5**	**-0.3**
VLX	**Vlachokerasia**	**1.84**	**7**	P	**Pn**	**11 09 00.9**	**+1.0**
VLX				S	**Sn**	**11 09 27.1**	**+5.2**
VLX	**Vlachokerasia**	**1.84**	**7**	P	**Pn**	**11 09 00.9**	**+1.0**
DID	**Didima**	**2.16**	**24**	P	**Pn**	**11 09 05.4**	**+1.1**
DID				S	**Sn**	**11 09 33.9**	**+4.1**
DID	**Didima**	**2.16**	**24**	P	**Pn**	**11 09 05.4**	**+1.1**
IDI	**Anoyia**	**2.28**	**96**	P	**Pn**	**11 09 06.3**	**+0.3**
IDI	**Anoyia**	**2.28**	**96**	P	**Pn**	**11 09 06.3**	**+0.3**
GUR	**Goura**	**2.40**	**4**	P	**Pn**	**11 09 08.9**	**+1.4**
GUR				S	**Sn**	**11 09 39.5**	**+3.8**
GUR	**Goura**	**2.40**	**4**	P	**Pn**	**11 09 08.9**	**+1.4**
NAIG	**Nisos Aigina**	**2.47**	**26**	*e*P	**Pn**	**11 09 11.5**	**+2.9**
RLS	**Riolos of Patr**	**2.56**	**349**	P	**Pn**	**11 09 11.4**	**+1.6**
RLS	**Riolos of Patr**	**2.56**	**349**	*e*P	**Pn**	**11 09 11.5**	**+1.7**
RLS	**Riolos of Patr**	**2.56**	**349**	P	**Pn**	**11 09 11.4**	**+1.6**
LTK	**Loutraki**	**2.57**	**15**	P	**Pn**	**11 09 11.1**	**+1.2**
LTK				S	**Sn**	**11 09 43.0**	**+3.1**
LTK	**Loutraki**	**2.57**	**15**	P	**Pn**	**11 09 11.1**	**+1.2**
VLY	**Voula,Athens**	**2.67**	**30**	P	**Pn**	**11 09 11.5**	**+0.2**
VLY	**Voula,Athens**	**2.67**	**30**	*e*P	**Pn**	**11 09 12.0**	**+0.7**
VLY	**Voula,Athens**	**2.67**	**30**	P	**Pn**	**11 09 11.5**	**+0.2**
ATH	**Athens Observa**	**2.75**	**27**	P	**Pn**	**11 09 16.9**	**+4.6**
ATH	**Athens Observa**	**2.75**	**27**	*e*P	**Pn**	**11 09 16.0**	**+3.7**
ATH	**Athens Observa**	**2.75**	**27**	P	**Pn**	**11 09 16.9**	**+4.6**
KFL	**Anninata**	**2.77**	**338**	P	**Pn**	**11 09 13.1**	**+0.4**
KFL	**Anninata**	**2.77**	**338**	P	**Pn**	**11 09 13.1**	**+0.4**
LAST	**Lasithi**	**2.78**	**97**	P	**Pn**	**11 09 13.6**	**+0.8**
LAST	**Lasithi**	**2.78**	**97**	*e*P	**Pn**	**11 09 14.0**	**+1.2**
LAST	**Lasithi**	**2.78**	**97**	P	**Pn**	**11 09 13.6**	**+0.8**
PTL	**Penteli**	**2.87**	**29**	P	**Pn**	**11 09 14.8**	**+0.8**
PTL	**Penteli**	**2.87**	**29**	*e*P	**Pn**	**11 09 14.5**	**+0.5**
PTL	**Penteli**	**2.87**	**29**	P	**Pn**	**11 09 14.8**	**+0.8**
NPS	**Neapolis**	**2.87**	**95**	P	**Pn**	**11 09 15.8**	**+1.7**
NPS	**Neapolis**	**2.87**	**95**	*e*P	**Pn**	**11 09 14.5**	**+0.4**
NPS	**Neapolis**	**2.87**	**95**	P	**Pn**	**11 09 15.8**	**+1.7**
DSF	**Desfina**	**2.88**	**6**	P	**Pn**	**11 09 14.6**	**+0.4**
DSF				S	**Sn**	**11 09 50.3**	**+2.7**
DSF	**Desfina**	**2.88**	**6**	P	**Pn**	**11 09 14.6**	**+0.4**
EFP	**Efpalio**	**2.88**	**357**	P	**Pn**	**11 09 15.0**	**+0.8**
EFP				S	**Sn**	**11 09 51.0**	**+3.3**
EFP	**Efpalio**	**2.88**	**357**	P	**Pn**	**11 09 15.0**	**+0.8**
VLS	**Valsamata**	**2.90**	**336**	P	**Pn

OUR	Ouranopolis	5.01	17	P	Pn	11 09 42.9	-0.5
IZM	Izmir	5.01	54	eP	Pn	11 09 41.8	-1.7
HORT	Hortiatis	5.11	8	P	Pn	11 09 44.2	-0.5
HORT				S	Sn	11 10 43.0	+0.6
HORT	Hortiatis	5.11	8	P	Pn	11 09 44.2	-0.5
HORT				S	Sn	11 10 43.0	+0.6
HORT	Hortiatis	5.11	8	P	Pn	11 09 44.2	-0.5
HORT				S	Sn	11 10 43.0	+0.6
KBN	Korca	5.18	349	ePN	Pn	11 09 47.1	+1.4
KBN	Korca	5.18	349	ePn	Pn	11 09 47.1	+1.4
YER	Yerkesik	5.23	70	eP	Pn	11 09 46.7	+0.3
YER	Yerkesik	5.23	70	eP	Pn	11 09 46.7	+0.3
FNA	Florina	5.27	354	P	Pn	11 09 46.4	-0.5
FNA	Florina	5.27	354	P	Pn	11 09 46.4	-0.5
FNA	Florina	5.27	354	P	Pn	11 09 46.4	-0.5
SOH	Sokhos	5.36	10	P	Pn	11 09 47.9	-0.3
SOH				S	Sn	11 10 49.9	+1.3
SOH	Sokhos	5.36	10	P	Pn	11 09 47.9	-0.3
SOH				S	Sn	11 10 49.9	+1.3
SOH	Sokhos	5.36	10	P	Pn	11 09 47.9	-0.3
SOH				S	Sn	11 10 49.9	+1.3
EZN	Ezine	5.43	37	eP	Pn	11 09 49.2	+0.1
BIA	Bitola	5.50	354	P	Pn	11 09 49.7	-0.5
BIA	Bitola	5.50	354	i Pn	Pn	11 09 49.6	-0.6
BIA	Bitola	5.50	354	P	Pn	11 09 49.7	-0.5
BIA	Bitola	5.50	354	P	Pn	11 09 49.7	-0.5
GADA	Gvkgeada	5.52	32	eP	Pn	11 09 52.6	+2.1
GADA	Gvkgeada	5.52	32	eP	Pn	11 09 52.6	+2.2
CEL	Celeste 51nm,0.6s	5.67	300	ePn	Pn	11 09 51.6	-1.0
CEL				eSn	Sn	11 10 52.5	-3.8
CEL	Celeste 51nm,0.6s	5.67	300	ePn	Pn	11 09 51.6	-0.9
SRS	Serrai	5.69	11	P	Pn	11 09 52.1	-0.6
SRS	Serrai	5.69	11	P	Pn	11 09 52.1	-0.6
SRS	Serrai	5.69	11	P	Pn	11 09 52.1	-0.6
KAVA	Kavala	5.76	18	P	Pn	11 09 53.0	-0.7
KAVA	Kavala	5.76	18	P	Pn	11 09 53.0	-0.7
VAY	Valandovo	5.78	3	P	Pn	11 09 53.2	-0.8
VAY	Valandovo	5.78	3	i Pn	Pn	11 09 53.2	-0.8
VAY	Valandovo	5.78	3	P	Pn	11 09 53.2	-0.8
VAY	Valandovo	5.78	3	P	Pn	11 09 53.2	-0.8
KRUS	Krusevo	5.86	354	i Pn	Pn	11 09 53.8	-1.2
GELI	Tayfur-Gelibol	5.95	34	eP	Pn	11 09 57.0	+0.7
NVR	Nevrokopi	5.96	13	P	Pn	11 09 58.0	+1.6
NVR	Nevrokopi	5.96	13	P	Pn	11 09 58.0	+1.6
KULA	Kula-Manisa	6.02	59	eP	Pn	11 09 56.1	-1.2
TIR	Tirane	6.06	344	eP	Pn	11 09 56.6	-1.2
TIR				pmax	pmax		
	comp=Z,96nm,0.8s						
TIR	Tirane	6.06	344	ePn	Pn	11 09 56.5	-1.2
	comp=Z,96nm,0.8s						
TIR	Tirane	6.06	344	eP	Pn	11 09 56.6	-1.2
	comp=Z,96nm,0.8s						
LPK	Lapseki	6.06	36	eP	Pn	11 09 58.9	+1.1
ENEZ	Enez	6.08	30	eP	Pn	11 09 59.6	+1.5
MMB	Musomiste	6.17	11	i P	Pn	11 09 58.3	-1.0
ALN	Alexandroupoli	6.18	29	P	Pn	11 09 58.3	-1.1
ALN	Alexandroupoli	6.18	29	P	Pn	11 09 58.3	-1.1
ALN	Alexandroupoli	6.18	29	P	Pn	11 09 58.3	-1.1
ERIK	Erikli-Kesan	6.18	33	eP	Pn	11 10 01.3	+1.8
WDD	Wield Dalam comp=Z,71nm,0.4s	6.18	275	ePn	Pn	11 09 58.7	-0.8
WDD				eSn	Sn	11 11 10.7	+1.7
WDD	Wield Dalam comp=Z,71nm,0.4s	6.18	275	ePn	Pn	11 09 58.7	-0.8
GONE	Gonen-Balikesi	6.30	43	eP	Pn	11 10 01.1	0.0
KKB	Krupnik	6.36	7	i P	Pn	11 10 08.8	+6.9
LUJL	Ujela comp=Z,122nm,0.9s,SNR=76	6.44	186	eP	Pn	11 10 03.4	+0.3
SKO	Skopje	6.44	356	ePn	Pn	11 10 01.6	-1.4
RZN	Rozhen	6.47	18	i P	Pn	11 10 03.8	+0.4
VAE	Valguarnera comp=Z,3.3nm,0.3s,baz=274,slow=2.9,SNR=13	6.50	290	Pn	Pn	11 10 04.2	+0.4
VAE				Sn	Sn	11 11 17.3	+0.7
	comp=Z,3.9nm,0.3s,baz=70,slow=12,SNR=2.1						
VAE	Valguarnera	6.50	290	Pn	Pn	11 10 04.2	+0.4
VAE				Sn	Sn	11 11 17.3	+0.7
VAE	Valguarnera	6.50	290	Pn	Pn	11 10 04.2	+0.4
VAE				Sn	Sn	11 11 17.3	+0.7
PUK	Puka	6.72	346	ePN	Pn	11 10 07.5	+0.7
PUK	Puka	6.72	346	ePn	Pn	11 10 07.5	+0.7
ULC	Ulcinj	6.79	342	⇑iPn	Pn	11 10 05.6	-2.2
ULC				eSn	Sn	11 11 19.4	-4.4
ULC	Ulcinj	6.79	342	⇑iPn	Pn	11 10 05.6	-2.2
BCI	Bajram Curri	7.00	347	ePN	Pn	11 10 09.6	-1.1
BCI	Bajram Curri	7.00	347	ePn	Pn	11 10 09.6	-1.1
VTS	Vitosha	7.09	7	⇑P	Pn	11 10 15.4	+3.5
VTS	Vitosha	7.09	7	i P	Pn	11 10 12.7	+0.8
VTS	Vitosha	7.09	7	⇑iP	Pn	11 10 15.4	+3.5
VTS	Vitosha	7.09	7	i P	Pn	11 10 12.7	+0.8
ISP	Isparta	7.13	69	eP	Pn	11 10 12.9	+0.4
ISP	Isparta	7.13	69	eP	Pn	11 10 12.9	+0.4
BUM	Brajici-Budva	7.20	341	⇓iPn	Pn	11 10 11.3	-2.1
BUM				eSn	Sn	11 11 29.2	-4.6
BUM	Brajici-Budva	7.20	341	⇓iPn	Pn	11 10 11.3	-2.1
PDG	Podgorica	7.23	343	⇑iPn	Pn	11 10 11.9	-1.9
TTG	Podgorica	7.23	343	⇑iPn	Pn	11 10 11.9	-1.9
TTG				eSn	Sn	11 11 30.4	-4.1
TTG	Podgorica	7.23	343	i P	Pn	11 10 11.9	-1.9
PVY	Plav	7.24	347	⇑iPn	Pn	11 10 13.3	-0.6
PVY				eSn	Sn	11 11 31.5	-3.3
PVY	Plav	7.24	347	⇑iPn	Pn	11 10 13.3	-0.6
BARS	Barje	7.27	358	⇑iPn	Pn	11 10 13.3	-1.1
HCY	Herceg Novi	7.45	339	⇑iPn	Pn	11 10 14.9	-1.9
HCY				eSn	Sn	11 11 34.1	-5.8
HCY	Herceg Novi	7.45	339	⇑iPn	Pn	11 10 14.9	-1.9
BEY	Berane	7.52	347	⇑iPn	Pn	11 10 17.1	-0.7
IVA	Berane	7.52	347	⇑iPn	Pn	11 10 17.1	-0.7
IVA				eSn	Sn	11 11 38.2	-3.5
IVA	Berane	7.52	347	⇑iPn	Pn	11 10 17.1	-0.7
NKY	Niksic	7.65	343	⇓iPn	Pn	11 10 17.8	-1.8
NKY				eSn	Sn	11 11 40.2	-4.8
NKY	Niksic	7.65	343	⇓iPn	Pn	11 10 17.8	-1.8
BRY	Bratogost	7.85	340	⇓iPn	Pn	11 10 19.6	-2.8
BRY				eSn	Sn	11 11 44.5	-5.4
LZLA	Zalla comp=Z,72nm,1.1s,SNR=76	7.96	210	eP	Pn	11 10 23.8	-0.2
UPM	Unac-Piva	8.04	343	⇑iPn	Pn	11 10 24.0	-1.0
UPM				eSn	Sn	11 11 49.6	-4.9
UPM	Unac-Piva	8.04	343	⇑iPn	Pn	11 10 24.0	-1.0
PLE	Pljevlja	8.06	346	⇑iPn	Pn	11 10 24.0	-1.2
PLE				eSn	Sn	11 11 50.6	-4.3
PLE	Pljevlja	8.06	346	⇑iPn	Pn	11 10 24.0	-1.2
STON	Ston	8.08	336	i Pn	Pn	11 10 19.8	-5.7
STON				Sn	Sn	11 11 46.6	-8.9
BOLS	Boljevac	8.28	359	⇑iPn	Pn	11 10 26.1	-2.1
LJFR	Jufra SNR=76	8.34	221	eP	Pn	11 10 28.4	-0.8
BBLS	Lazići	8.57	347	ePn	Pn	11 10 29.8	-2.4
LSHF	Shwairf comp=Z,12nm,0.3s,SNR=76	8.63	232	eP	Pn	11 10 31.6	-1.5
AQU	L'Aquila	9.60	318	eP	Pn	11 10 46.6	+0.2
AQU				pmax	pmax		
	comp=Z,15nm,0.8s						
AQU	L'Aquila comp=Z,15nm,0.8s	9.60	318	ePn	Pn	11 10 46.6	+0.3
AQU	L'Aquila	9.60	318	⇑iP	Pn	11 10 54.0	+7.6
AQU	L'Aquila comp=Z,15nm,0.8s	9.60	318	eP	Pn	11 10 46.6	+0.2
BR131	Keskin Array S	10.05	62	ePn	Pn	11 10 54.0	+1.6
BR131	Keskin Array S	10.05	62	ePn	Pn	11 10 54.0	+1.5
BRTR	Keskin Array B comp=Z,0.3nm,0.3s,baz=241,slow=13,SNR=44	10.05	62	Pn	Pn	11 10 53.6	+1.2
BRTR	Keskin Array B	10.05	62	P	Pn	11 10 53.7	+1.2
BZS	Buzias	10.07	358	⇓iP	Pn	11 10 49.6	-3.1
TIRR	Tirgusor	10.13	27	⇑⇑P	Pn	11 10 58.1	+4.6
TIRR	Tirgusor	10.13	27	⇑iP	Pn	11 10 58.1	+4.6
VOIR		10.13	12	⇑iP	Pn	11 10 53.2	-0.4
MLR	Muntele Rosu	10.36	15	⇑⇑P	Pn	11 11 00.4	+3.8
MLR	Muntele Rosu	10.36	15	⇑iP	Pn	11 11 00.4	+3.8
NVLJ	Novalja	10.58	331	ePn	Pn	11 10 57.6	-2.1
NVLJ				Sn	Sn	11 12 47.5	-9.2
NVLJ	Novalja	10.58	331	ePn	Pn	11 10 57.5	-2.2
PLOR	Plostina	10.86	17	⇓P	Pn	11 11 08.4	+4.9
PLOR	Plostina	10.86	17	⇓iP	Pn	11 11 08.4	+4.9
VSL	Villasalto	10.86	295	ePn	Pn	11 11 02.9	-0.7
VSL				eSn	Sn	11 13 04.7	+1.1
VSL	Villasalto	10.86	295	ePn	Pn	11 11 02.8	-0.7
VSL				eSn	Sn	11 13 04.7	+1.1
VRI	Vrincioaia	10.89	17	⇓iP	Pn	11 11 10.4	+6.5
DRGR		11.25	2	⇓P	Pn	11 11 11.3	+2.5
DRGR		11.25	2	⇓iP	Pn	11 11 11.3	+2.5
MMAI	Mount Meron Ar comp=Z,0.5nm,0.3s,baz=294,slow=11,SNR=3.0	11.28	99	Pn	Pn	11 11 05.4	-3.9
MMAI				Sn	Sn	11 13 07.8	-6.2
	comp=Z,3.5nm,0.3s,baz=294,slow=28,SNR=3.4						
BUD	Budapest	12.15	350	⇓ePn	Px	11 11 35.9	
BURAR	Bucovina Array	12.28	10	⇑⇑P	Pn	11 11 25.7	+2.7
BURAR	Bucovina Array	12.28	10	⇑iP	Pn	11 11 25.7	+2.7
EIL	Elat comp=Z,1.3nm,0.3s,baz=342,slow=17,SNR=8.1	12.30	115	Pn	Pn	11 11 20.9	-2.5
EIL				Sn	Sn	11 13 32.7	-6.3
	comp=Z,0.8nm,0.3s,baz=301,slow=19,SNR=3.9						
EIL	Elat	12.30	115	Pn	Pn	11 11 20.9	-2.5
EIL				Sn	Sn	11 13 32.7	-6.3
BUR08	Bucovina Ar. S	12.31	10	ePn	Pn	11 11 23.0	-0.3
BUR08	Bucovina Ar. S	12.31	10	ePn	Pn	11 11 23.0	-0.3
PSZ	Piszkesteto	12.48	353	⇑iP	Px	11 11 35.8	
KIS	Kishinev	12.50	22	eP	Pn	11 11 28.0	+2.1
KIS				LRM		11 16 40.0	
	comp=Z,400nm,16.0s						
ASF	Jabal al Asfar comp=Z,0.2nm,0.3s,baz=283,slow=14,SNR=2.4	12.74	101	Pn	Pn	11 11 26.9	-2.4
ASF				Sn	Sn	11 13 43.2	-6.5
	comp=Z,0.2nm,0.3s,baz=247,slow=13,SNR=1.9						
KECS	Kecovo	12.99	355	eP	Pn	11 11 31.7	-0.9
KECS	Kecovo	12.99	355	ePN	Pn	11 11 31.7	-0.9
UZH	Uzhgorod	13.08	1	eP	Pn	11 11 35.7	+1.9
UZH	Uzhgorod	13.08	1	eP	Pn	11 11 35.7	+1.9
SIM	Simferopol'	13.11	41	P	Pn	11 11 40.0	+5.7
SIM				MLR	MLR		
	comp=Z,250nm,15.4s						
VYHS	Vyhne	13.17	350	ePn	Pn	11 11 33.7	-1.3
VYHS				eSn	Sn	11 13 51.0	-8.9
VYHS	Vyhne	13.17	350	ePN	Pn	11 11 33.7	-1.3
VYHS	Vyhne	13.17	350	eP	Pn	11 11 33.7	-1.3
ZST	Bratislava	13.18	345	e	Px	11 11 56.7	
MOA	Molln	13.61	337	⇑iPn	Pn	11 11 38.4	-2.7
STHS	Stebnicka Huta	13.88	358	eP	Pn	11 11 55.3	+11
STHS	Stebnicka Huta	13.88	358	e	Pn	11 11 55.3	+11
WTTA	Wattenberg	14.09	329	⇓iPn	Pn	11 11 47.1	-0.5
WTTA	Wattenberg	14.09	329	Pn	Pn	11 11 47.1	-0.5
LVV	L'vov	14.34	5	eP	Pn	11 12 00.0	+9.0
VRAC	Vranov baz=180,slow=7.1,SNR=2.8	14.34	345	Pn	Pn	11 11 50.0	-1.1
VRAC	Vranov	14.34	345	Pn	Pn	11 11 50.0	-1.0
DAVOX	Davos/Dischmat	14.50	324	Pn	Pn	11 11 52.4	-0.8
	comp=Z,0.2nm,0.3s,baz=155,slow=19,SNR=3.1						
DAVOX				Sn	Sn	11 14 25.4	-7.2
	comp=Z,0.4nm,0.3s,baz=127,slow=20,SNR=4.3						
DAVOX	Davos/Dischmat	14.50	324	Pn	Pn	11 11 52.4	-0.8
OKC	Ostrava-Krasne	14.58	350	eP	Pn	11 12 00.1	+5.9
OKC				MLR	MLR		
	comp=Z,200nm,11.0s						
OKC	Ostrava-Krasne	14.58	350	eP	Pn	11 12 00.1	+5.9
OKC				esP	sP	11 12 07.1	-8.6
OKC				AMS	AMS	11 19 20.0	
	comp=Z,200nm,11.0s						
OKC	Ostrava-Krasne	14.58	350	eP	Pn	11 12 00.1	+5.9
	comp=Z,200nm,11.0s						
MORC	Moravsky Berou	14.61	348	⇑P	Pn	11 11 57.3	+2.7
MORC	Moravsky Berou	14.61	348	eP	Pn	11 12 01.2	+6.6
	comp=Z,2.6nm,0.6s						
MORC	Moravsky Berou	14.61	348	⇑iP	Pn	11 11 57.3	+2.7
MORC	Moravsky Berou	14.61	348	eP	Pn	11 12 01.2	+6.6
	comp=Z,2.6nm,0.6s						
OJC	Ojcow	14.77	354	eP	Pn	11 12 04.7	+8.1
MBDF	Montbardon comp=Z,23nm,0.8s	14.88	313	eP	Pn	11 11 56.8	-1.3
MBDF	Montbardon comp=Z,11nm,0.8s	14.88	313	eP	Pn	11 11 56.8	-1.3
MBDF				pmax	pmax		
MBDF	Montbardon comp=Z,11nm,0.8s	14.88	313	eP	Pn	11 11 56.8	-1.3
KHC	Kasperske Hory comp=Z,5.0nm,0.8s	14.96	338	eP	Pn	11 11 59.9	+0.7
KHC				pmax	pmax		
KHC	Kasperske Hory comp=Z,5.4nm,0.8s	14.96	338	eP	Pn	11 11 59.9	+0.7
KHC	Kasperske Hory	14.96	338	eP	Pn	11 12 04.2	+5.0
KHC				epP	pP	11 12 09.5	-4.8
KHC				AMS	AMS	11 18 40.0	
	comp=Z,400nm,17.0s						
KHC	Kasperske Hory	14.96	338	P	Pn	11 12 04.2	+5.0
LPG	La Plagne	15.32	315	eP	Pn	11 12 03.8	-0.1
LPL	La Plagne	15.34	315	eP	Pn	11 12 04.3	+0.2
DPC	Dobruska-Polom comp=Z,200nm,12.5s	15.39	346	eP	Pn	11 12 09.4	+4.7
DPC				MLR	MLR		
	comp=Z,200nm,12.5s						
DPC	Dobruska-Polom	15.39	346	eP	Pn	11 12 09.4	+4.7
DPC				AMS	AMS	11 20 40.0	
	comp=Z,200nm,12.5s						
DPC	Dobruska-Polom comp=Z,200nm,12.5s	15.39	346	eP	Pn	11 12 09.4	+4.7
PRU	Pruhonice comp=Z,300nm,12.4s	15.46	341	eP	Pn	11 12 09.0	+3.3
PRU				MLR	MLR		
PRU	Pruhonice comp=Z,300nm,12.4s	15.46	341	eP	Pn	11 12 09.0	+3.3
PRU				esP	sP	11 12 17.0	-8.5
PRU				AMS	AMS	11 18 50.0	
	comp=Z,300nm,12.4s						
PRU	Pruhonice comp=Z,300nm,12.4s	15.46	341	eP	Pn	11 12 09.0	+3.3
UPC	Upice	15.60	345	eP	Pn	11 12 15.6	+8.1
UPC	Upice	15.60	345	eP	Pn	11 12 15.6	+8.1
KIEV	Kiev	15.99	17	eP	Pn	11 12 09.1	-3.4
KIEV				pmax	pmax		
	comp=Z,22nm,1.3s						
KIEV	Kiev comp=Z,22nm,1.3s	15.99	17	eP	Pn	11 12 09.1	-3.4
AKASG	Malin Array Be comp=Z,0.8nm,0.3s,baz=208,slow=11,SNR=3.1	16.00	17	Pn	Pn	11 12 08.1	-4.6
AKASG	Malin Array Be	16.00	17	Pn	Pn	11 12 08.1	-4.6
GRF	Grafenberg Arr comp=Z,12nm,0.8s	16.23	334	eP	Pn	11 12 17.8	+2.3
GRF	Grafenberg Arr comp=Z,12nm,0.8s	16.23	334	eP	Pn	11 12 17.8	+2.3
GRF				pmax	pmax		
GRF	Grafenberg Arr comp=Z,12nm,0.8s	16.23	334	eP	Pn	11 12 17.8	+2.3
BRG	Berggiesshubel comp=Z,6.2nm,1.3s	16.42	341	eP	pP	11 12 28.1	-2.5
BRG				e		11 12 37.0	
	comp=Z,6.7nm,0.9s						
BRG	Berggiesshubel	16.42	341	eP	pP	11 12 28.1	-2.5
BRG				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BRG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HINF	Hinteralfeld comp=Z,8.5nm,0.7s	16.71	322	eP	Pn	11 12 20.5	-1.0
HINF	Hinteralfeld comp=Z,4.0nm,0.7s	16.71	322	eP	Pn	11 12 20.5	-1.0
HINF				pmax	pmax		
	comp=Z,4.3nm,0.7s						
HINF	Hinteralfeld comp=Z,4.3nm,0.7s	16.71	322	eP	Pn	11 12 20.5	-1.0
HINF	Hinteralfeld comp=Z,4.2nm,0.7s	16.71	322	eP	Pn	11 12 20.5	-1.0
MOX	Moxa comp=Z,300nm,18.0s	16.90	336	e(P)	pP	11 12 40.8	+4.9
MOX							
CDF	Champ du Feu comp=Z,10nm,0.8s	16.90	324	eP	Pn	11 12 22.6	-1.4
CDF	Champ du Feu comp=Z,5.0nm,0.8s	16.90	324	eP	Pn	11 12 22.6	-1.4
CDF				pmax	pmax		
CDF	Champ du Feu comp=Z,5.1nm,0.8s	16.90	324	eP	Pn	11 12 22.6	-1.4
CDF	Champ du Feu comp=Z,5.1nm,0.8s	16.90	324	eP	Pn	11 12 22.6	-1.4
CLL	Collm comp=Z,200nm,20.2s	17.07	340	eP	Pn	11 12 28.0	+2.0
CLL				MLR	MLR		
CLL	Collm comp=Z,200nm,20.2s	17.07	340	eP	Pn	11 12 28.0	+2.0
HAU	Haudompre comp=Z,256nm,17.5s	17.09	322	eP	Pn	11 12 23.2	-3.1
HAU				eMLR	MLR		
SMF	Signal de Mont comp=Z,11nm,0.9s	17.64	315	eP	Pn	11 12 29.2	-3.9
SMF	Signal de Mont comp=Z,5.0nm,0.9s	17.64	315	eP	Pn	11 12 29.2	-3.9
SMF				pmax	pmax		
SMF	Signal de Mont comp=Z,5.3nm,0.9s	17.64	315	eP	Pn	11 12 29.2	-3.9
KIV	Kislovodsk	17.88	56	eP	Pn	11 12 36.3	+0.2
KIV				eS	S	11 15 54.8	-4.6
KIV				pmax	pmax		
	comp=Z,13nm,1.2s						
KIV				MLR	MLR		
	comp=Z,47nm,10.0s						
KIV	Kislovodsk comp=Z,14nm,0.8s	17.88	56	eP	Pn	11 12 37.8	+1.7
KIV	Kislovodsk comp=Z,13nm,1.2s	17.88	56	eP	Pn	11 12 36.3	+0.2
LOR	Lormes	17.97	316	eP	Pn	11 12 34.2	-3.0
LOR				eMLR	MLR		
	comp=Z,203nm,19.2s						
LOR	Lormes	17.97	316	eP	Pn	11 12 34.2	-3.0
AVF	Avril sur Loir	18.00	314	eP	Pn	11 12 36.4	-1.2
AVF	Avril sur Loir	18.00	314	eP	Pn	11 12 36.4	-1.2
SSF	Saint Saulge	18.06	315	eP	Pn	11 12 35.4	-2.9
SSF	Saint Saulge	18.06	315	eP	Pn	11 12 35.4	-2.9
WLF	Walferdange comp=Z,17nm,2.5s	18.31	325	P	Pn	11 12 40.1	-1.2
WLF	Walferdange comp=Z,17nm,2.5s	18.31	325	P	Pn	11 12 40.1	-1.2
ZEI	Tsey	18.34	60	eP	Pn	11 12 49.9	+8.1
ZEI				pmax	pmax		
	comp=Z,12nm,0.5s						
RJF	Les Rejaudoux	18.42	308	eP	Pn	11 12 42.7	0.0
RJF				eMLR	MLR		
	comp=Z,150nm,20.8s						
RJF	Les Rejaudoux	18.42	308	eP	Pn	11 12 42.7	0.0
GNI	Garni	18.44	69	d iP	Pn	11 12 41.3	-1.7
GNI				pmax	pmax		
	comp=Z,19nm,1.7s						
GNI	Garni comp=Z,46nm,1.5s	18.44	69	eP	Pn	11 12 41.0	-2.0
GNI	Garni comp=Z,19nm,1.7s	18.44	69	i P	Pn	11 12 41.3	-1.7
SUW	Suwalki	18.48	2	eP	Pn	11 12 41.9	-1.5
SUW				pmax	pmax		
	comp=Z,47nm,0.9s						
SUW	Suwalki comp=Z,47nm,0.9s	18.48	2	eP	Pn	11 12 41.9	-1.5
SUW	Suwalki comp=Z,47nm,0.9s	18.48	2	eP	Pn	11 12 41.9	-1.5
GOF	Gofitskoye	18.53	53	eP	Pn	11 12 40.2	-3.8
LFF	La Frestale	18.78	306	eP	Pn	11 12 46.8	-0.2
LFF	La Frestale	18.78	306	eP	Pn	11 12 46.8	-0.2
ETSF	Etsaut comp=Z,20nm,1.0s	19.01	300	eP	Pn	11 12 50.5	+0.7
ETSF	Etsaut comp=Z,10.0nm,1.0s	19.01	300	eP	Pn	11 12 50.5	+0.7
ETSF				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ETSF	Etsaut comp=Z,10nm,1.0s	19.01	300	eP	Pn	11 12 50.5	+0.7
BCLA	Clavier comp=Z,18nm,2.4s	19.23	326	P	Pn	11 12 52.2	-0.2
BCLA	Clavier comp=Z,18nm,2.4s	19.23	326	P	Pn	11 12 52.2	-0.2
GIVF	Givet	19.23	324	eP	Pn	11 12 50.4	-2.0
GIVF	Givet	19.23	324	eP	Pn	11 12 50.4	-2.0
DOU	Dourbes comp=Z,12nm,1.5s	19.34	324	P	Pn	11 12 54.5	+0.8
MNK	Minsk	19.37	10	eP	Pn	11 12 52.0	-2.0
MNK	Minsk	19.37	10	eP	Pn	11 12 52.0	-2.0
MICGM	Minsk	19.38	10	e	Pn	11 12 52.0	-2.1
SJPF	Ste Jean comp=Z,28nm,0.8s	19.53	300	eP	Pn	11 12 56.2	+0.1
SJPF	Ste Jean comp=Z,14nm,0.8s	19.53	300	eP	Pn	11 12 56.2	+0.1
SJPF				pmax	pmax		
	comp=Z,14nm,0.8s						
SJPF	Ste Jean comp=Z,14nm,0.8s	19.53	300	eP	Pn	11 12 56.2	+0.1
NACGM	Naroch	19.63	8	e	Pn	11 12 52.0	-5.1
VORD	Divnogorie	19.78	34	eP	Pn	11 12 57.5	-1.4
VORD				pmax	pmax		
	comp=N,5.0nm,0.5s						
VORD				pmax	pmax		
	comp=E,10.0nm,0.5s						
VORD				pmax	pmax		
	comp=Z,6.0nm,0.5s						
VORD	Divnogorie	19.78	34	eP	Pn	11 12 57.5	-1.4
VSR	Storozhevoye	19.90	33	eP	Pn	11 12 57.6	-2.7
VSR				pmax	pmax		
	comp=N,7.0nm,0.4s						
VSR				pmax	pmax		
	comp=E,6.0nm,0.4s						
VSR				pmax	pmax		
	comp=Z,8.0nm,0.4s						
VSR	Storozhevoye	19.90	33	eP	Pn	11 12 57.6	-2.7
IIGN	Ignalina	20.01	7	eP	P	11 12 58.8	-0.8
IIGN				AMB	AMB	11 13 07.9	
	comp=Z,9.4nm,0.7s						
IIGN	Ignalina comp=Z,9.4nm,0.7s,SNR=40	20.01	7	eP	P	11 12 58.8	-0.8
MFF	Saint Martin d comp=Z,20nm,0.8s	20.02	310	eP	P	11 13 00.0	+0.2
MFF	Saint Martin d comp=Z,10.0nm,0.8s	20.02	310	eP	P	11 13 00.0	+0.2
MFF				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MFF	Saint Martin d comp=Z,10nm,0.8s	20.02	310	eP	P	11 13 00.0

comp=Z,200nm,15.0s,MS3.6
OBN Obninsk 21.97 23 *e*P **P 11 13 20.1 -0.6**
comp=Z,20nm,0.5s,mb4.8
OBN Obninsk 21.97 23 *e*P **P 11 13 20.1 -0.6**
comp=Z,20nm,0.5s,mb4.8
SGMF Saint Gilles 22.21 312 *e*P **P 11 13 23.1 -0.2**
comp=Z,16nm,0.7s,mb4.2
SGMF Saint Gilles 22.21 312 *e*P **P 11 13 23.1 -0.2**
SGMF pmax pmax
comp=Z,8.0nm,0.7s,mb4.3
SGMF Saint Gilles 22.21 312 *e*P **P 11 13 23.1 -0.2**
comp=Z,7.9nm,0.7s,mb4.2
SGMF Saint Gilles 22.21 312 *e*P **P 11 13 23.1 -0.2**
comp=Z,7.9nm,0.7s,mb4.2
MDT Midelt 22.26 271 P **P 11 13 25.7 +1.8**
comp=Z,2.3nm,0.7s,mb3.7,baz=74,slow=11,SNR=7.6
MDT LR LR 11 22 41.6
comp=Z,131nm,21.5s,MS3.3,baz=248,slow=38
QUIF Quistinic 22.44 311 *e*P **P 11 13 24.7 -1.1**
QUIF Quistinic 22.44 311 *e*P **P 11 13 24.7 -1.1**
ROSF Rostrenen 22.68 312 *e*P **P 11 13 27.8 -0.5**
ROSF Rostrenen 22.68 312 *e*P **P 11 13 27.8 -0.5**
VSU Vasula 23.13 6⇑ *e*P **P 11 13 30.1 -2.9**
VSU pmax pmax
comp=Z,14nm,1.7s,mb4.1
VSU Vasula 23.13 6 *e*P **P 11 13 30.1 -2.9**
comp=Z,14nm,1.7s,mb4.1
PBAR Barrancos 23.43 285 *e*P **P 11 13 38.3 +2.2**
comp=Z,24nm,1.6s,mb4.4
MVO Moncorvo 23.47 293 *e*P **P 11 13 36.9 +0.4**
comp=Z,36nm,1.6s,mb4.6
MVO Moncorvo 23.47 293 *e*P **P 11 13 36.9 +0.4**
comp=Z,36nm,1.6s,mb4.6
PMRV Marv??o 23.68 288 *e*P **P 11 13 39.6 +1.2**
comp=Z,20nm,1.6s,mb4.3
PMRV Marv??o 23.68 288 *e*P **P 11 13 39.6 +1.2**
comp=Z,20nm,1.6s,mb4.3
PESTR Estremoz 23.84 287 *e*P **P 11 13 41.9 +2.0**
EVO Evora 24.18 286 *e*P **P 11 13 45.2 +2.2**
comp=Z,27nm,1.2s,mb4.2
EVO *e*MLR MLR
comp=Z,68nm,19.2s,MS2.8
EVO Evora 24.18 286 *e*P **P 11 13 44.6 +1.6**
comp=Z,16nm,1.5s,mb4.2
PFVI Vila Bisbo 24.92 283 *e*P **P 11 13 51.0 +1.2**
HFS Hagfors 25.21 350 P **P 11 13 51.3 -0.7**
comp=Z,3.5nm,0.5s,mb4.1,baz=156,slow=11,SNR=23
HFS Hagfors 25.21 350 P **P 11 13 51.3 -0.8**
FINES FINESS Array B 26.04 4 P **P 11 13 58.5 -1.2**
comp=Z,2.6nm,0.6s,mb3.9,baz=152,slow=11,SNR=13
FINES LR LR 11 25 33.8
comp=Z,361nm,18.3s,MS3.9,baz=347,slow=40
FINES FINESS Array B 26.04 4 P **P 11 13 58.5 -1.1**
EKA Eskdalemuir Ar 26.32 327 P **P 11 14 04.0 +1.7**
comp=Z,9.8nm,0.6s,mb4.5,baz=126,slow=8.3,SNR=15
NAO01 NORSAR Array S 26.33 348 *e*P **P 11 14 04.6 +2.4**
comp=Z,2.8nm,0.5s,mb4.0
NB2 NORSAR Subarra 26.45 348 P **P 11 14 02.7 -0.6**
comp=Z,3.3nm,0.7s,mb4.0,baz=156,slow=9.3
NB2 NORSAR Subarra 26.45 348 P **P 11 14 02.7 -0.6**
comp=Z,3.3nm,0.7s,mb4.0,baz=156,slow=9.1,SNR=0.9
NOA NORSAR Array B 26.45 348 P **P 11 14 05.2 +1.9**
comp=Z,3.6nm,0.9s,mb3.9,baz=157,slow=10,SNR=7.4
NOA NORSAR Array B 26.45 348 P **P 11 14 05.2 +1.9**
KAF Kangasniemi 26.73 4 *e*P **P 11 14 05.2 -0.6**
KAF Kangasniemi 26.73 4 *e*p **P 11 14 05.2 -0.6**
KAF Kangasniemi 26.73 4 *e*P **P 11 14 05.2 -0.6**
AKTK Aktyubinsk 29.85 49 P **P 11 14 31.9 -1.9**
AKTK Aktyubinsk 29.85 49 P **P 11 14 31.9 -1.8**
AKTO Aktyubinsk 29.85 49 P **P 11 14 31.9 -1.9**
comp=Z,1.0nm,0.5s,mb3.9,baz=245,slow=12,SNR=5.4
ABKAR Akbulak array 30.77 52 *e*P **P 11 14 40.6 -1.3**
comp=Z,1.0nm,0.4s,mb4.0
ABKAR Akbulak array 30.77 52 *e*P **P 11 14 40.6 -1.3**
comp=Z,0.9nm,0.4s,mb4.0
ARU Arti 32.26 38 *d i*P **P 11 14 55.6 +0.7**
ARU *e* 11 16 04.8
ARU S **S 11 20 06.7 +1.6**
ARU SS SS 11 21 54.6 -30
ARU pmax pmax
comp=Z,10.0nm,1.7s,mb4.4
ARU MLR MLR
comp=Z,155nm,15.0s,MS3.8
ARU Arti 32.26 38 *e*P **P 11 14 55.1 +0.2**
comp=Z,9.1nm,1.1s,mb4.5
ARU Arti 32.26 38 *e*P **P 11 14 55.1 +0.2**
comp=Z,9.1nm,1.1s,mb4.5
APA Apatity 32.72 8⇑ *e*P pP 11 15 10.0 -0.6
APA MLR MLR
comp=Z,400nm,15.0s,MS4.2
SVE Sverdlovsk 33.47 38⇑ *e*P **P 11 15 15.1 +10**
SVE *e*S **S 11 20 30.0 +6.1**
SVE pmax pmax
comp=Z,18nm,0.9s,mb5.0
SVE MLR MLR
comp=Z,279nm,15.0s,MS4.1
ARCES ARCESS Array B 34.10 2 P **P 11 15 09.9 -0.9**
comp=Z,6.8nm,0.6s,mb4.7,baz=180,slow=11,SNR=63
ARCES LR LR 11 30 14.9
comp=Z,256nm,18.6s,MS4.0,baz=299,slow=38
ARCES ARCESS Array B 34.10 2 P **P 11 15 09.9 -0.9**
ARE0 ARCESS Array S 34.10 2 *e*P **P 11 15 10.0 -0.8**
ARE0 ARCESS Array S 34.10 2 *e*P **P 11 15 10.0 -0.8**
KEV Kevo 34.38 3 *e*P **P 11 15 12.7 -0.5**
KEV pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
KEV Kevo 34.38 3 *e*P **P 11 15 12.7 -0.5**
comp=Z,7.4nm,0.8s,mb4.7
KEV Kevo 34.38 3 *e*p **P 11 15 11.5 -1.7**
KEV Kevo 34.38 3 *e*P **P 11 15 12.7 -0.5**
comp=Z,7.4nm,0.8s,mb4.7
BRVK Borovoye 37.84 47⇑ *i*P **P 11 15 42.7 -0.3**
BRVK pmax pmax
comp=Z,4.0nm,1.7s,mb3.9
BRVK Borovoye 37.84 47 *i*P **P 11 15 42.7 -0.3**
comp=Z,4.0nm,1.7s,mb3.9
BVAR Borovoye Array 37.90 47 P **P 11 15 42.0 -1.5**
comp=Z,0.3nm,0.4s,mb3.4,baz=262,slow=8.6,SNR=2.5
BVAR Borovoye Array 37.90 47 P **P 11 15 42.0 -1.5**
DBIC Dimbokro 37.93 227 P **P 11 15 46.4 +2.3**
comp=Z,2.3nm,0.6s,mb4.1,baz=8.1,slow=7.1,SNR=3.2
DBIC Dimbokro 37.93 227 P **P 11 15 46.4 +2.3**
AAK Ala-Archa 40.72 64 *e*P **P 11 16 06.8 -0.4**
AAK pmax pmax
comp=Z,2.0nm,1.2s,mb3.6
AAK Ala-Archa 40.72 64 *e*P **P 11 16 06.8 -0.4**
comp=Z,2.0nm,1.2s,mb3.6
KSH Kashi 42.37 68 P **P 11 16 19.4 -1.3**
KSH pP pP 11 16 28.5 -4.2
KSH sP sP 11 16 32.6 -5.3
KSH PP PP 11 18 00.0 +0.7
KSH PcP PcP 11 18 15.9 +2.5
KSH ScP ScP 11 22 01.3 +0.8
KSH PcS PcS 11 22 05.9 +0.6
KSH S **S 11 22 34.8 -4.1**
KSH sS sS 11 22 50.6 -8.4
KSH SS SS 11 25 35.9 -13
KSH ScS ScS 11 26 17.4 -1.3
KSH pmax pmax
comp=Z,3.0nm,0.4s,mb4.3
KSH pmax pmax
comp=Z,72nm,5.5s
KSH LR LR
comp=N,250nm,13.1s,MS4.4
KSH LR LR
comp=E,160nm,10.4s,MS4.4
KSH LR LR
comp=Z,86nm,4.8s
KURK Kurchatov 42.88 51 *d i*P **P 11 16 23.6 -1.1**
KURK pmax pmax
comp=Z,4.0nm,1.0s,mb4.1
KURK Kurchatov 42.88 51 *e*P **P 11 16 23.8 -0.9**
comp=Z,10nm,1.3s,mb4.4
KURK *e* pP 11 16 34.0 -2.7
KURK Kurchatov 42.88 51 *e*P **P 11 16 23.8 -0.9**
NVS Novosibirsk 45.58 45 *e*P **P 11 16 45.4 -0.8**
NVS pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
NVS Novosibirsk 45.58 45 *e*P **P 11 16 45.4 -0.8**
comp=Z,8.0nm,0.9s,mb4.7
MK31 Makanchi Array 45.64 56 *e*P **P 11 16 46.1 -0.7**
MK31 *e* pP 11 16 58.2 -0.8
MK31 Makanchi Array 45.64 56 *e*P **P 11 16 46.1 -0.7**
MKAR Makanchi Array 45.64 56 P **P 11 16 46.2 -0.6**
comp=Z,3.6nm,0.5s,mb4.6,baz=280,slow=7.1,SNR=26
ZAA0 Zalesovo Array 46.54 46 *e*P **P 11 16 52.1 -1.7**
ZALV Zalesovo Beam 46.54 46 P **P 11 16 52.4 -1.4**
comp=Z,1.8nm,0.4s,mb4.4,baz=265,slow=9.9,SNR=8.3
ZALV LR LR 11 39 41.1
comp=Z,46nm,20.2s,MS3.4,baz=299,slow=40
WMQ Urumqi 49.96 59 *e*P **P 11 17 23.3 +3.0**
WMQ pP pP 11 17 33.3 +0.7
WMQ sP sP 11 17 37.3 -0.4
WMQ pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
WMQ pmax pmax
comp=Z,90nm,4.6s
WMQ LR LR
comp=N,77nm,23.0s
WMQ LR LR
comp=Z,59nm,10.0s
LSZ Lusaka 50.87 172 P **P 11 17 28.7 +1.3**
comp=Z,2.2nm,0.7s,mb4.2,baz=287,slow=5.9,SNR=4.5
LSZ Lusaka 50.87 172 P **P 11 17 28.7 +1.4**
LSZ pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
LSZ Lusaka 50.87 172 *e*P **P 11 17 30.4 +3.0**
comp=Z,2.1nm,0.7s,mb4.2
GKN Gorkha 52.91 80 *e*P **P 11 17 42.2 -0.5**
comp=Z,22nm,0.7s,mb5.2
DMN Daman 53.46 80 *e*P **P 11 17 46.6 0.0**
comp=Z,33nm,0.8s,mb5.3
KKN Kakani 53.52 79 *e*P **P 11 17 46.7 -0.4**
PKI Pulchoki 53.72 80 *e*P **P 11 17 48.0 -0.5**
GTA Gaotai 59.97 61 *e*P **P 11 18 32.8 +0.1**
GTA pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
SONM Songino Array 61.16 50 P **P 11 18 40.6 -0.1**
comp=Z,2.4nm,0.8s,mb4.4,baz=280,slow=9.2,SNR=12
SCHQ Schefferville 61.27 319 P **P 11 18 42.7 +1.4**
comp=Z,2.0nm,0.6s,mb4.5,baz=66,slow=3.9,SNR=3.9
SCHQ Schefferville 61.27 319 *e*P **P 11 18 41.5 +0.2**
comp=Z,2.8nm,0.7s,mb4.5
ULN Ulaanbaatar 61.56 50 *e*P **P 11 18 43.3 0.0**
ULN *e* pP 11 18 54.6 -1.3
ULN pmax pmax
comp=Z,3.0nm,0.9s,mb4.4
ULN Ulaanbaatar 61.56 50 *e*P **P 11 18 43.3 0.0**
comp=Z,3.2nm,0.9s,mb4.5
ULN *e* pP 11 18 54.6 -1.3
BOSA Boshof 63.88 177 P **P 11 19 01.0 +2.2**
comp=Z,1.7nm,0.6s,mb4.3,baz=3.1,slow=8.1,SNR=8.7
BOSA LR LR 11 50 22.8
comp=Z,118nm,20.0s,MS4.1,baz=189,slow=39
BOSA Boshof 63.88 177 P **P 11 19 01.0 +2.2**
BOSA LR LR 11 50 22.8
LZH Lanzhou 64.25 63 *e*P **P 11 19 01.5 0.0**
LZH pmax pmax
comp=Z,20nm,1.5s,mb4.9
LZH pmax pmax
comp=Z,100nm,5.0s
CD2 Chengdu 66.57 68 P **P 11 19 18.8 +2.3**
CD2 pP pP 11 19 29.1 -0.1
CD2 sP sP 11 19 33.0 -1.2
CD2 PcP PcP 11 19 48.4 +2.7
CD2 PP PP 11 21 47.3 +4.1
CD2 S S 11 28 05.0 +0.5
CD2 sS sS 11 28 22.0 -3.6
CD2 SS SS 11 32 23.4 +1.6
CD2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
CD2 pmax pmax
comp=Z,100nm,4.2s
CD2 LR LR
comp=N,160nm,6.5s
CD2 LR LR
comp=Z,120nm,6.5s
HHC Hu-ho-hao-te 67.48 55 *e*P **P 11 19 22.6 +0.4**
HHC S S 11 28 13.5 -1.7
HHC pmax pmax
comp=Z,15nm,0.7s,mb5.1
HHC pmax pmax
comp=Z,99nm,7.1s
KMI Kunming 68.61 74 P **P 11 19 30.8 +1.3**
KMI pP pP 11 19 42.1 -0.1
KMI sP sP 11 19 46.6 -0.6
KMI PP PP 11 22 04.3 +3.2
KMI S S 11 28 28.3 -0.8
KMI sS sS 11 28 46.1 -4.2
KMI SS SS 11 32 53.9 +0.3
KMI pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
KMI pmax pmax
comp=Z,68nm,4.2s
KMI LR LR
comp=N,130nm,27.8s,MS4.2
KMI LR LR
comp=E,130nm,27.0s,MS4.2
KMI LR LR
comp=Z,62nm,20.1s
CMAR Chiang Mai Arr 68.99 82 P **P 11 19 31.9 0.0**
comp=Z,1.1nm,0.7s,mb3.9,baz=303,slow=8.4,SNR=6.3
BJI Beijing 70.94 54 P **P 11 19 43.4 -0.2**
BJI S S 11 28 56.3 +0.2
BJI SS SS 11 33 29.1 +0.3
BJI pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
BJI LR LR
comp=N,87nm,24.6s,MS4.1
BJI LR LR
comp=E,110nm,24.6s,MS4.1
BJI LR LR
comp=Z,23nm,25.3s,MS3.3
GYA Guiyang 70.98 71 *e*P **P 11 19 45.3 +1.2**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
CN2 Changchun 74.75 47 *e*P **P 11 20 07.3 +1.2**
INK Inuvik 74.87 351 *e*P **P 11 20 04.6 -1.7**
INK pmax pmax
comp=Z,3.0nm,0.8s
INK Inuvik 74.87 351 *e*P **P 11 20 04.5 -1.8**
comp=Z,3.0nm,0.8s,mb4.3
MDJ Mudanjiang 76.70 44 P **P 11 20 16.6 -0.6**
MDJ pmax pmax
comp=Z,6.0nm,2.4s,mb4.1
MDJ pmax pmax
comp=Z,64nm,3.3s
ILAR Eielson Array 79.64 355 P **P 11 20 33.5 +0.4**
comp=Z,0.5nm,0.7s,mb3.5,baz=343,slow=3.2,SNR=7.0
ILAR Eielson Array 79.64 355 P **P 11 20 33.5 +0.4**
ILAR pmax pmax
comp=Z,1.0nm,0.7s
KSRS Korea Array 80.00 51 P **P 11 20 35.5 -0.1**
comp=Z,1.3nm,0.8s,mb3.9,baz=308,slow=4.0,SNR=3.7
KSRS Korea Array 80.00 51 P **P 11 20 35.5 -0.1**
KSRS pmax pmax
comp=Z,1.0nm,0.8s,mb3.8
ECSD EROS Data Cent 83.42 320 *e*P **P 11 20 55.1 +1.6**
comp=Z,4.3nm,0.7s,mb4.6
ECSD *e* pP 11 21 05.2 -1.3
PETK Petropavlovsk- 83.66 25 LR LR 12 00 01.3
comp=Z,43nm,21.7s,MS3.8,baz=152,slow=37
MJAR Matsushiro Arr 86.89 46 P **P 11 21 10.1 -1.0**
comp=Z,0.4nm,0.5s,mb3.9,baz=312,slow=4.6,SNR=3.4
WALA Waterton Lakes 87.14 333 *e*P **P 11 21 14.4 +2.4**
comp=Z,0.1nm,0.7s,mb3.1
PDAR Pinedale Array 90.44 327 P **P 11 21 30.2 +2.5**
comp=Z,0.2nm,0.6s,mb3.6,baz=63,slow=4.4,SNR=2.3
TXAR Lajitas Array 97.72 314 P **P 11 22 01.8 +0.5**
comp=Z,0.1nm,0.6s,mb3.5,baz=52,slow=3.5,SNR=2.3
TXAR Lajitas Array 97.72 314 P **P 11 22 01.8 +0.5**
ASAR Alice Springs 120.57 99 PKP PKPdf 11 27 18.8 +0.8
comp=Z,0.4nm,0.6s,baz=293,slow=1.3,SNR=7.2

*ISCJB **20** 11:29:29.3±0.5, 38°.44N±0°.03×21°.96E±0°.03, h14km±3km, Error ellipse: s-maj=5.2km s-min=4.3km az=154.7*
*CSEM **20** 11:29:29.0±0.2, 38°.46N×21°.97E, h15km, ML3.2/6, Error ellipse: s-maj=5.0km s-min=4.5km az=99.0*
*THE **20** 11:29:29.4, 38°.47N×21°.97E, h10km, ML3.2/6, Error ellipse: s-maj=0.7km s-min=0.3km az=154.0*
*ATH **20** 11:29:29.2, 38°.45N×21°.96E, h24km±1km, MD3.0/7*
*NEIC **20** 11:29:29.2, 38°.45N×21°.96E, h24km, MD3.0(ATH), After ATH.*
ISC 20 11:29:29.6±0.4, 38°.46N±0°.03×21°.98E±0°.03, h12km±3km, n39, σ0°62/64, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	**Efpalio**	**0.07**	**240**	P	**Pg**	**11 29 31.5**	**-0.5**
EFP				S	**Sg**	**11 29 33.0**	**-0.8**
EFP	**Efpalio**	**0.07**	**240**	P	**Pg**	**11 29 31.5**	**-0.5**
EFP				S	**Sg**	**11 29 33.0**	**-0.8**
TRIZ	**Trizonia**	**0.12**	**142**	P	**Pg**	**11 29 32.6**	**-0.1**
TRIZ				S	**Sg**	**11 29 34.9**	**0.0**
TRIZ	**Trizonia**	**0.12**	**142**	P	**Pg**	**11 29 32.6**	**-0.1**
TRIZ				S	**Sg**	**11 29 34.9**	**0.0**
KALE	**Kalithea**	**0.14**	**118**	P	**Pg**	**11 29 33.0**	**0.0**
KALE				S	**Sg**	**11 29 35.8**	**+0.4**
KALE	**Kalithea**	**0.14**	**118**	P	**Pg**	**11 29 33.0**	**0.0**
KALE				S	**Sg**	**11 29 35.8**	**+0.4**
LAKA	**Lakka**	**0.22**	**180**	P	**Pg**	**11 29 34.0**	**-0.2**
LAKA				S	**Sg**	**11 29 37.5**	**+0.1**
LAKA	**Lakka**	**0.22**	**180**	P	**Pg**	**11 29 34.0**	**-0.2**
LAKA				S	**Sg**	**11 29 37.5**	**+0.1**
UPR	**University Cam**	**0.23**	**221**	P	**Pg**	**11 29 34.3**	**-0.2**
UPR	**University Cam**	**0.23**	**221**	P	**Pg**	**11 29 34.3**	**-0.2**
DSF	**Desfina**	**0.43**	**96**	P	**Pg**	**11 29 37.7**	**-0.4**
DSF				S	**Sg**	**11 29 44.6**	**+0.7**
DSF	**Desfina**	**0.43**	**96**	P	**Pg**	**11 29 37.7**	**-0.4**
DSF				S	**Sg**	**11 29 44.6**	**+0.7**
EVR	**Evrytania**	**0.47**	**344**	*e*Pb	**Pg**	**11 29 39.0**	**+0.1**
EVR				*e*Sb	**Sg**	**11 29 46.6**	**+1.3**
EVR	**Evrytania**	**0.47**	**344**	*e*PB	**Pg**	**11 29 39.0**	**+0.1**
EVR				*e*SB	**Sg**	**11 29 46.6**	**+1.3**
EVR	**Evrytania**	**0.47**	**344**	*e*Pb	**Pg**	**11 29 39.0**	**+0.1**
EVR				*e*Sb	**Sg**	**11 29 46.6**	**+1.3**
RLS	**Riolos of Patr**	**0.57**	**225**	*e*Pn	**Pg**	**11 29 40.6**	**-0.1**
RLS				*e*Sn	**Sg**	**11 29 48.7**	**+0.5**
RLS	**Riolos of Patr**	**0.57**	**225**	*e*PN	**Pg**	**11 29 40.6**	**-0.1**
RLS				*e*SN	**Sg**	**11 29 48.7**	**+0.5**
RLS	**Riolos of Patr**	**0.57**	**225**	*e*Pn	**Pg**	**11 29 40.6**	**-0.1**
GUR	**Goura**	**0.60**	**151**	P	**Pg**	**11 29 40.8**	**-0.4**
GUR				S	**Sg**	**11 29 50.0**	**+1.0**
GUR	**Goura**	**0.60**	**151**	P	**Pg**	**11 29 40.8**	**-0.4**
GUR				S	**Sg**	**11 29 50.0**	**+1.0**
AGG	**Agios Georgios**	**0.62**	**26**	P	**Pg**	**11 29 41.2**	**-0.5**
AGG	**Agios Georgios**	**0.62**	**26**	P	**Pg**	**11 29 41.2**	**-0.5**
LKR	**Lokris**	**0.82**	**76**	*e*Pb	**Pb**	**11 29 45.1**	**-0.6**
LKR				*e*Sn	**Sn**	**11 29 57.8**	**-1.2**
LKR	**Lokris**	**0.82**	**76**	*e*PB	**Pb**	**11 29 45.1**	**-0.6**
LKR				*e*SN	**Sn**	**11 29 57.8**	**-1.2**
LKR	**Lokris**	**0.82**	**76**	*e*Pb	**Pb**	**11 29 45.1**	**-0.6**
LKR				*e*Sn	**Sn**	**11 29 57.8**	**-1.2**
THL	**Klokotos Trika**	**1.10**	**1**	*e*PN	**Pn**	**11 29 50.3**	**-0.5**
THL				*e*SN	**Sn**	**11 30 06.7**	**+0.8**
THL	**Klokotos Trika**	**1.10**	**1**	*e*Pn	**Pn**	**11 29 50.3**	**-0.5**
THL				*e*Sn	**Sn**	**11 30 06.7**	**+0.8**
VLS	**Valsamata**	**1.13**	**256**	*e*Pn	**Pn**	**11 29 50.0**	**-1.1**
VLS				*e*Sn	**Sn**	**11 30 07.1**	**+0.6**
VLS	**Valsamata**	**1.13**	**256**	*e*PN	**Pn**	**11 29 50.0**	**-1.1**
VLS				*e*SN	**Sn**	**11 30 07.1**	**+0.6**
VLS	**Valsamata**	**1.13**	**256**	*e*Pn	**Pn**	**11 29 50.0**	**-1.1**
VLS				*e*Sn	**Sn**	**11 30 07.1**	**+0.6**
ITM	**Ithomi**	**1.28**	**182**	*e*Pn	**Pn**	**11 29 53.0**	**-0.2**
ITM	**Ithomi**	**1.28**	**182**	*e*PN	**Pn**	**11 29 53.0**	**-0.2**
ITM	**Ithomi**	**1.28**	**182**	*e*Pn	**Pn**	**11 29 53.0**	**-0.2**
VLY	**Voula,Athens**	**1.55**	**112**	*e*Pn	**Pn**	**11 29 57.6**	**+0.6**
VLY	**Voula,Athens**	**1.55**	**112**	*e*PN	**Pn**	**11 29 57.6**	**+0.6**
VLY	**Voula,Athens**	**1.55**	**112**	*e*Pn	**Pn**	**11 29 57.6**	**+0.6**
VLI	**Veliai**	**1.90**	**156**	*e*Pn	**Pn**	**11 30 02.4**	**+0.7**
VLI	**Veliai**	**1.90**	**156**	*e*PN	**Pn**	**11 30 02.4**	**+0.7**
VLI	**Veliai**	**1.90**	**156**	*e*Pn	**Pn**	**11 30 02.4**	**+0.7**

IDC 20 11:42:10.1±3.4, 10°.69S×163°.88E, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.7/18, mbtmp3.8/4, MS3.6/1, Ms1 3.5/1, ms1mx2.3/24, Error ellipse: s-maj=160.5km s-min=31.7km az=139.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**29.47**	**221**	LR	LR	11 59 02.3	
	comp=Z,95nm,18.4s,baz=19,slow=34						
WRA	**Warramunga Arr**	**29.89**	**249**	P	P	11 48 20.0	+0.2
	1.5nm,1.0s,baz=79,slow=9.1,SNR=2.7						
ASAR	**Alice Springs**	**31.32**	**242**	P	P	11 48 32.6	+0.3
	0.7nm,0.7s,baz=69,slow=9.3,SNR=10.0						
FITZ	**Fitzroy Crossi**	**37.70**	**254**	P	P	11 49 27.1	-0.6
	1.8nm,0.8s,baz=90,slow=15,SNR=2.5						
ILAR	**Eielson Array**	**83.77**	**19**	P	P	11 54 40.9	+0.1
	0.4nm,0.7s,baz=240,slow=5.9,SNR=5.8						

*DDA **20** 11:45:44.0, 37°.93N×31°.21E, h22km±3km, Md3.1*
*CSEM **20** 11:45:44.5±0.1, 37°.93N×31°.20E, h12km, MD3.1, Error ellipse: s-maj=2.0km s-min=1.3km az=155.0*
ISK 20 11:45:43.8, 37°.89N×31°.23E, h16km, MD3.1, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUTC	**Sutluce-Ispart**	**0.45**	**204**	PG	Pg	11 45 52.9	0.0
SUTC				*e*SG	Sg	11 45 60.0	+1.0
SUTC	**Sutluce-Ispart**	**0.45**	**204**	*i* Pg	Pg	11 45 52.9	+0.1
SUTC				*e*Sg	Sg	11 46 00.0	+1.1
ISP	**Isparta**	**0.57**	**264**	*e*PG	Pg	11 45 55.2	+0.2
ISP				*e*SG	Sg	11 46 04.3	+1.7
ISP	**Isparta**	**0.57**	**264**	*e*Pg	Pg	11 45 55.2	+0.2
ISP				*e*Sg	Sg	11 46 04.3	+1.7
BCK	**Bucak**	**0.67**	**230**	*e*PG	Pg	11 45 57.4	+0.5
BCK				*e*SG	Sg	11 46 07.3	+1.6
BCK	**Bucak**	**0.67**	**230**	*e*Pg	Pg	11 45 57.4	+0.6
BCK				*e*Sg	Sg	11 46 07.3	+1.6
SHUT	**Suhut-Afyon**	**0.85**	**321**	*e*PG	Pg	11 46 00.6	+0.2
SHUT	**Suhut-Afyon**	**0.85**	**321**	*e*Pg	Pg	11 46 00.6	+0.2
KONT	**Konya--Tatoy**	**0.89**	**86**	*e*PG	Pg	11 46 02.1	+1.0
KONT				*e*SG	Sg	11 46 14.3	+1.4
KONT	**Konya--Tatoy**	**0.89**	**86**	*e*Pg	Pg	11 46 02.2	+1.1
KONT				*e*Sg	Sg	11 46 14.3	+1.4
KDHN	**Kadinhani**	**0.94**	**47**	*i* P	Pb	11 46 02.4	+0.7
KDHN				*i* S	Sb	11 46 15.2	+1.3
KDHN	**Kadinhani**	**0.94**	**47**	*i* P	Pb	11 46 02.4	+0.7
KDHN				*i* S	Sb	11 46 15.2	+1.3
LADK	**Ladik-KONYA**	**0.95**	**70**	*e*PG	Pg	11 46 03.2	+1.0
LADK				*e*SG	Sg	11 46 16.0	+1.5
LADK	**Ladik-KONYA**	**0.95**	**70**	*e*Pg	Pg	11 46 03.2	+1.1
LADK				*e*Sg	Sg	11 46 16.0	+1.4
ANTB	**Antalya**	**1.09**	**205**	*e*PN	Pn	11 46 05.0	+0.6
ANTB	**Antalya**	**1.09**	**205**	*e*Pn	Pn	11 46 05.0	+0.6
KIZT	**Kizilcal**	**1.11**	**27**	*e*PN	Pn	11 46 05.5	+0.8
KIZT	**Kizilcal**	**1.11**	**27**	*e*Pn	Pn	11 46 05.5	+0.8
KORT	**Korkueli**	**1.13**	**219**	*i* P	Pn	11 46 05.6	+0.6
KORT				*i* S	Sb	11 46 21.8	+2.5
KORT	**Korkueli**	**1.13**	**219**	*i* P	Pn	11 46 05.6	+0.7
KORT				*i* S	Sb	11 46 21.8	+2.4
HDMB	**Hadim**	**1.36**	**132**	*e*PN	Pn	11 46 09.1	+1.0
HDMB	**Hadim**	**1.36**	**132**	*e*Pn	Pn	11 46 09.1	+1.0
KHL	**Karahalli**	**1.42**	**288**	*e*PN	Pn	11 46 09.8	+0.9
KHL	**Karahalli**	**1.42**	**288**	*e*Pn	Pn	11 46 09.8	+0.9
KHAL	**Karahalli**	**1.46**	**290**	*i* P	Pn	11 46 10.4	+1.0
KHAL				*i* S	Sn	11 46 29.8	+1.6
KHAL	**Karahalli**	**1.46**	**290**	*i* P	Pn	11 46 10.6	+1.2
KHAL				*i* S	Sn	11 46 29.7	+1.6
KHAL	**Karahalli**	**1.46**	**290**	*i* P	Pn	11 46 10.6	+1.2
KHAL				*i* S	Sn	11 46 29.7	+1.6
KHAL	**Karahalli**	**1.46**	**290**	*i* P	Pn	11 46 10.4	+1.0
KHAL				*i* S	Sn	11 46 29.8	+1.7
ALT	**Altintas**	**1.46**	**323**	*e*PN	Pn	11 46 09.7	+0.2
ALT	**Altintas**	**1.46**	**323**	*e*Pn	Pn	11 46 09.7	+0.2
GOLH	**Golhisar**	**1.48**	**244**	*i* P	Pn	11 46 12.0	+2.3
GOLH				*i* S	Sn	11 46 33.8	+5.0
GOLH	**Golhisar**	**1.48**	**244**	*i* P	Pn	11 46 12.0	+2.3
GOLH				*i* S	Sn	11 46 33.8	+5.1
ELL	**Elmali**	**1.55**	**223**	*e*PN	Pn	11 46 12.3	+1.5
ELL	**Elmali**	**1.55**	**223**	*e*Pn	Pn	11 46 12.3	+1.6
SVRH	**Sivrihisar-ESK**	**1.57**	**8**	*e*PN	Pn	11 46 11.4	+0.4
SVRH	**Sivrihisar-ESK**	**1.57**	**8**	*e*Pn	Pn	11 46 11.4	+0.4
ESKT	**Eskisehir**	**1.66**	**350**	*e*PN	Pn	11 46 12.3	+0.1
ESKT	**Eskisehir**	**1.66**	**350**	*e*Pn	Pn	11 46 12.3	+0.1
DNZL	**Cakiroluk**	**1.74**	**264**	*i* P	Pn	11 46 14.9	+1.5
DNZL				*i* S	Sn	11 46 41.6	+6.4
DNZL	**Cakiroluk**	**1.74**	**264**	*i* P	Pn	11 46 11.8	-1.6
DNZL				*i* S	Sn	11 46 42.6	+7.4
DNZL	**Cakiroluk**	**1.74**	**264**	*i* P	Pn	11 46 11.8	-1.6
DNZL	**Cakiroluk**	**1.74**	**264**	*i* P	Pn	11 46 14.9	+1.5
DNZL				*i* S	Sn	11 46 41.7	+6.4
GDZ	**Gediz**	**1.82**	**312**	*i* P	Pn	11 46 15.0	+0.5
GDZ				*i* S	Sn	11 46 43.7	+6.5
GDZ	**Gediz**	**1.82**	**312**	*i* P	Pn	11 46 15.0	+0.5

SULT	**Sultanhani-AKS**	**1.83**	**80**	*e*PN	Pn	11 46 14.8	+0.3
SULT	**Sultanhani-AKS**	**1.83**	**80**	*e*Pn	Pn	11 46 14.8	+0.3
GAZI	**Gazipasa**	**1.86**	**152**	*i* P	Pn	11 46 17.0	+1.9
GAZI				*i* S	Sn	11 46 43.4	+5.2
GAZI	**Gazipasa**	**1.86**	**152**	*i* P	Pn	11 46 17.0	+2.0
GAZI				*i* S	Sn	11 46 43.4	+5.2
AKAS	**Kas**	**2.10**	**219**	*i* P	Pn	11 46 21.7	+3.4
AKAS				*i* S	Sn	11 46 50.7	+6.6
AKAS	**Kas**	**2.10**	**219**	*i* P	Pn	11 46 21.7	+3.4
AKAS				*i* S	Sn	11 46 50.7	+6.6
KULA	**Kula-Manisa**	**2.12**	**288**	*e*PN	Pn	11 46 19.4	+0.9
KULA	**Kula-Manisa**	**2.12**	**288**	*e*Pn	Pn	11 46 19.4	+0.8
IKL	**Isikli**	**2.56**	**129**	*e*PN	Pn	11 46 25.3	+0.7
IKL	**Isikli**	**2.56**	**129**	*e*Pn	Pn	11 46 25.3	+0.7
SGKT	**Sivrigoynuk**	**2.76**	**13**	*i* P	Pn	11 46 29.1	+1.8
SGKT	**Sivrigoynuk**	**2.76**	**13**	*i* P	Pn	11 46 29.1	+1.8
SGKT	**Sivrigoynuk**	**2.76**	**13**	*i* P	Pn	11 46 29.1	+1.8

*ISCJB **20** 11:59:00.1±0.6, 38°.47N±0°.04×21°.96E±0°.05, h13km±4km, Error ellipse: s-maj=6.8km s-min=5.8km az=135.9*
*CSEM **20** 11:59:00.0±0.1, 38°.48N×21°.98E, h12km, ML2.7/6, Error ellipse: s-maj=3.9km s-min=3.5km az=102.0*
*THE **20** 11:59:00.8, 38°.47N×21°.97E, h8km±1km, ML2.7/6, Error ellipse: s-maj=1.3km s-min=0.4km az=211.0*
*ATH **20** 11:59:00.0, 38°.46N×21°.97E, h30km±1km, MD2.9/5*
ISC 20 11:59:00.3±0.6, 38°.48N±0°.04×21°.97E±0°.05, h13km±5km, n26, σ0s48/38, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	**Efpalio**	**0.07**	**224**	P	**Pg**	**11 59 02.8**	**-0.2**
EFP				S	**Sg**	**11 59 04.2**	**-0.7**
EFP	**Efpalio**	**0.07**	**224**	P	**Pg**	**11 59 02.8**	**-0.2**
EFP				S	**Sg**	**11 59 04.2**	**-0.7**
TRIZ	**Trizonia**	**0.14**	**142**	P	**Pg**	**11 59 03.9**	**+0.1**
TRIZ				S	**Sg**	**11 59 05.9**	**-0.4**
TRIZ	**Trizonia**	**0.14**	**142**	P	**Pg**	**11 59 03.9**	**+0.1**
TRIZ				S	**Sg**	**11 59 05.9**	**-0.4**
KALE	**Kalithea**	**0.16**	**122**	P	**Pg**	**11 59 04.3**	**+0.1**
KALE				S	**Sg**	**11 59 06.7**	**-0.2**
KALE	**Kalithea**	**0.16**	**122**	P	**Pg**	**11 59 04.3**	**+0.1**
KALE				S	**Sg**	**11 59 06.7**	**-0.2**
LAKA	**Lakka**	**0.23**	**178**	P	**Pg**	**11 59 05.3**	**-0.1**
LAKA				S	**Sg**	**11 59 08.8**	**0.0**
LAKA	**Lakka**	**0.23**	**178**	P	**Pg**	**11 59 05.3**	**-0.1**
LAKA				S	**Sg**	**11 59 08.8**	**0.0**
UPR	**University Cam**	**0.24**	**216**	P	**Pg**	**11 59 05.7**	**+0.3**
UPR	**University Cam**	**0.24**	**216**	P	**Pg**	**11 59 05.7**	**+0.3**
DSF	**Desfina**	**0.45**	**98**	P	**Pg**	**11 59 09.0**	**-0.2**
DSF				S	**Sg**	**11 59 15.5**	**+0.3**
DSF	**Desfina**	**0.45**	**98**	P	**Pg**	**11 59 09.0**	**-0.2**
DSF				S	**Sg**	**11 59 15.5**	**+0.3**
EVR	**Evrytania**	**0.46**	**344**	*e*PB	**Pg**	**11 59 10.2**	**+0.8**
EVR	**Evrytania**	**0.46**	**344**	*e*Pb	**Pg**	**11 59 10.2**	**+0.8**
RLS	**Riolos of Patr**	**0.57**	**223**	*e*PN	**Pg**	**11 59 12.0**	**+0.5**
RLS	**Riolos of Patr**	**0.57**	**223**	*e*Pn	**Pg**	**11 59 12.0**	**+0.5**
GUR	**Goura**	**0.61**	**151**	P	**Pg**	**11 59 12.3**	**0.0**
GUR				S	**Sg**	**11 59 21.4**	**+0.9**
GUR	**Goura**	**0.61**	**151**	P	**Pg**	**11 59 12.3**	**0.0**
GUR				S	**Sg**	**11 59 21.4**	**+0.9**
AGG	**Agios Georgios**	**0.62**	**27**	P	**Pg**	**11 59 12.7**	**+0.3**
AGG	**Agios Georgios**	**0.62**	**27**	P	**Pg**	**11 59 12.7**	**+0.3**
LKR	**Lokris**	**0.83**	**78**	*e*PN	**Pn**	**11 59 16.4**	**-1.3**
LKR	**Lokris**	**0.83**	**78**	*e*Pn	**Pn**	**11 59 16.4**	**-1.3**
THL	**Klokotos Trika**	**1.09**	**2**	*e*PN	**Pn**	**11 59 21.2**	**0.0**
THL	**Klokotos Trika**	**1.09**	**2**	*e*Pn	**Pn**	**11 59 21.2**	**0.0**
VLS	**Valsamata**	**1.12**	**255**	*e*PN	**Pn**	**11 59 21.5**	**-0.2**
VLS	**Valsamata**	**1.12**	**255**	*e*Pn	**Pn**	**11 59 21.5**	**-0.2**

*IDC **20** 12:03:19.5±1.5, 51°.27N×179°.97W, h0km, mb3.7/13, mb1 3.9/14, mb1mx3.8/26, mbtmp3.7/14, ML3.5/1, MS2.7/1, Ms1 2.7/1, ms1mx2.4/24, Error ellipse: s-maj=43.7km s-min=17.4km az=0.0*
*ISCJB **20** 12:03:24.3±1.4, 51°.3N±0°.3×180°.0E±0°.1, h47km±7km, mb3.8/13, Error ellipse: s-maj=42.6km s-min=11.0km az=0.3*
*NEIC **20** 12:03:24.2, 51°.10N×179°.89E, h7km, ML3.5(AEIC), After AEIC.*
ISC 20 12:03:25.4±1.4, 51°.3N±0°.2×180°.0E±0°.1, h39km±9km, n18, σ1s04/21, mb3.8/13, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.43**	**286**	P	**Pn**	**12 03 34.2**	**-1.0**
AMKA				S	**Sn**	**12 03 41.1**	**-1.0**
ATKA	**Atka Island**	**3.75**	**73**	P	**Pn**	**12 04 22.1**	**+1.4**
ATKA				S	**Sn**	**12 05 09.0**	**+5.4**
SMY	**Shemya**	**3.91**	**294**	P	**Pn**	**12 04 25.6**	**+2.8**
SMY				S	**Sn**	**12 05 13.6**	**+6.1**
FX1	**Attu Island--F**	**4.50**	**294**	P	**Pn**	**12 04 33.5**	**+2.5**
PETK	**Petropavlovsk-**	**13.78**	**286**	Pn	**Pn**	**12 06 36.8**	**-1.1**
	0.2nm,0.3s,baz=75,slow=17,SNR=5.8						
PETK				LR	LR	12 11 49.6	
	comp=Z,29nm,20.3s,baz=300,slow=37						
ILAR	**Eielson Array**	**21.82**	**39**	P	**P**	**12 08 12.3**	**-1.5**
	0.3nm,0.7s,mb2.8,baz=257,slow=12,SNR=5.2						
YKA	**Yellowknife Ar**	**35.88**	**46**	P	**P**	**12 10 20.4**	**-0.6**
	0.6nm,0.5s,mb3.8,baz=282,slow=9.3,SNR=3.4						
SONM	**Songino Array**	**46.01**	**296**	P	**P**	**12 11 45.6**	**+1.1**
	0.5nm,0.7s,mb3.6,baz=62,slow=10,SNR=3.8						
PDAR	**Pinedale Array**	**47.08**	**71**	P	**P**	**12 11 53.0**	**0.0**
	1.4nm,0.9s,mb3.9,baz=326,slow=4.6,SNR=10						
ZALV	**Zalesovo Beam**	**53.55**	**313**	P	**P**	**12 12 41.5**	**-0.2**
	1.2nm,0.3s,mb4.3,baz=60,slow=8.5,SNR=6.3						
ARCES	**ARCESS Array B**	**58.08**	**350**	P	**P**	**12 13 13.6**	**-0.3**
	0.9nm,0.6s,mb4.0,baz=37,slow=8.2,SNR=7.9						
TXAR	**Lajitas Array**	**59.44**	**80**	P	**P**	**12 13 23.5**	**-0.5**
	0.2nm,0.9s,mb3.2,baz=288,slow=3.7,SNR=2.3						
MKAR	**Makanchi Array**	**59.50**	**308**	P	**P**	**12 13 24.2**	**+0.1**
	0.4nm,0.3s,mb3.9,baz=60,slow=7.2,SNR=8.7						
BVAR	**Borovoye Array**	**60.48**	**319**	P	**P**	**12 13 30.8**	**0.0**
	1.2nm,0.4s,mb4.3,baz=68,slow=8.2,SNR=9.2						
FINES	**FINESS Array B**	**65.73**	**347**	P	**P**	**12 14 04.7**	**-0.7**
	1.6nm,0.8s,mb4.1,baz=66,slow=7.8,SNR=3.4						
NOA	**NORSAR Array B**	**67.69**	**354**	P	**P**	**12 14 18.1**	**+0.2**
	0.6nm,0.8s,mb3.7,baz=7.2,slow=6.5,SNR=3.8						
CMAR	**Chiang Mai Arr**	**70.25**	**275**	P	**P**	**12 14 34.1**	**-0.4**
	0.7nm,0.8s,mb3.6,baz=25,slow=5.5,SNR=4.2						
BRTR	**Keskin Array B**	**84.73**	**335**	P	**P**	**12 15 56.2**	**+1.1**
	0.3nm,0.3s,mb3.9,baz=22,slow=8.1,SNR=2.4						

MAN 20 12:04:08, 13°.87N×122°.66E, h3km, mb3.9, ML2.6, MS2.3, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GQP	**Guinayangan**	**0.21**	**280**	⇓*i*P	Pg	12 04 13.3	+1.2
GQP				*i* S	Sg	12 04 17.8	+2.9
BOAC	**Boac**	**0.89**	**243**	*e*P	Pg	12 04 26.4	+1.3
POLP	**Polilio Island**	**1.10**	**321**	*e*P	Pg	12 04 29.6	+0.4
PVCP	**Virac**	**1.48**	**100**	*e*P	Pn	12 04 35.8	+0.3
BALP	**Baler**	**2.14**	**331**	*e*P	Pn	12 04 47.1	+2.5

*ATH **20** 12:20:44.9, 37°.94N×21°.44E, h28km, MD2.9/5*
*NEIC **20** 12:20:44.9, 37°.94N×21°.44E, h28km, MD3.0(ATH), After ATH.*
*CSEM **20** 12:20:45.4±0.2, 37°.90N×21°.44E, h20km, MD3.0, Error ellipse: s-maj=5.5km s-min=4.4km az=5.0*
*THE **20** 12:20:45.6, 37°.91N×21°.46E, h0km±2km, ML2.7/5, Error ellipse: s-maj=2.8km s-min=0.6km az=200.0*
ISC 20 12:20:45.4±0.8, 37°.87N±0°.04×21°.44E±0°.04, h20km±5km, n36, σ0s83/49, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.19**	**6**	*e*Pb	**Pg**	**12 20 50.2**	**-0.1**
RLS				*e*Sb	**Sg**	**12 20 54.3**	**+0.6**
RLS	**Riolos of Patr**	**0.19**	**6**	*e*PB	**Pg**	**12 20 50.2**	**-0.1**
RLS				*e*SB	**Sg**	**12 20 54.3**	**+0.6**
RLS	**Riolos of Patr**	**0.19**	**6**	*e*Pb	**Pg**	**12 20 50.2**	**-0.1**
RLS				*e*Sb	**Sg**	**12 20 54.3**	**+0.6**
LAKA	**Lakka**	**0.56**	**49**	P	**Pb**	**12 20 56.0**	**-0.6**
LAKA				S	**Sb**	**12 21 04.0**	**-0.1**
LAKA	**Lakka**	**0.56**	**49**	P	**Pb**	**12 20 56.0**	**-0.6**
LAKA				S	**Sb**	**12 21 04.0**	**-0.1**
KFL	**Anninata**	**0.57**	**295**	P	**Pb**	**12 20 57.0**	**+0.3**
KFL	**Anninata**	**0.57**	**295**	P	**Pb**	**12 20 57.0**	**+0.3**
EFP	**Efpalio**	**0.66**	**33**	P	**Pb**	**12 20 57.5**	**-0.8**
EFP	**Efpalio**	**0.66**	**33**	P	**Pb**	**12 20 57.5**	**-0.8**
TRIZ	**Trizonia**	**0.70**	**45**	P	**Pb**	**12 20 58.4**	**-0.5**
TRIZ				S	**Sb**	**12 21 07.9**	**-0.3**
TRIZ	**Trizonia**	**0.70**	**45**	P	**Pb**	**12 20 58.4**	**-0.5**
TRIZ				S	**Sb**	**12 21 07.9**	**-0.3**
GUR	**Goura**	**0.71**	**85**	P	**Pb**	**12 20 58.5**	**-0.7**
GUR	**Goura**	**0.71**	**85**	P	**Pb**	**12 20 58.5**	**-0.7**
VLS	**Valsamata**	**0.74**	**295**	*e*Pn	**Pn**	**12 20 59.4**	**-1.3**
VLS	**Valsamata**	**0.74**	**295**	*e*PN	**Pn**	**12 20 59.4**	**-1.3**
VLS	**Valsamata**	**0.74**	**295**	P	**Pb**	**12 20 59.2**	**-0.4**
VLS	**Valsamata**	**0.74**	**295**	P	**Pb**	**12 20 59.2**	**-0.4**
VLS	**Valsamata**	**0.74**	**295**	*e*Pn	**Pn**	**12 20 59.4**	**-1.3**
KALE	**Kalithea**	**0.76**	**46**	P	**Pb**	**12 20 59.3**	**-0.6**
KALE				S	**Sb**	**12 21 10.1**	**+0.3**
KALE	**Kalithea**	**0.76**	**46**	P	**Pb**	**12 20 59.3**	**-0.6**
KALE				S	**Sb**	**12 21 10.1**	**+0.3**
ITM	**Ithomi**	**0.79**	**151**	*e*Pn	**Pn**	**12 21 01.6**	**+0.2**
ITM	**Ithomi**	**0.79**	**151**	*e*PN	**Pn**	**12 21 01.6**	**+0.2**
ITM	**Ithomi**	**0.79**	**151**	P	**Pb**	**12 21 01.1**	**+0.6**
ITM	**Ithomi**	**0.79**	**151**	P	**Pb**	**12 21 01.1**	**+0.6**
ITM	**Ithomi**	**0.79**	**151**	*e*Pn	**Pn**	**12 21 01.6**	**+0.2**
DSF	**Desfina**	**1.01**	**57**	P	**Pb**	**12 21 03.6**	**-0.6**
DSF				S	**Sb**	**12 21 18.5**	**+1.4**
DSF	**Desfina**	**1.01**	**57**	P	**Pb**	**12 21 03.6**	**-0.6**
DSF				S	**Sb**	**12 21 18.5**	**+1.4**
EVR	**Evrytania**	**1.08**	**15**	*e*Pn	**Pn**	**12 21 04.7**	**-0.8**
EVR	**Evrytania**	**1.08**	**15**	*e*PN	**Pn**	**12 21 04.7**	**-0.8**
EVR	**Evrytania**	**1.08**	**15**	*e*Pn	**Pn**	**12 21 04.7**	**-0.8**
LKD2	**Lefkada island**	**1.10**	**326**	P	**Pn**	**12 21 05.7**	**-0.1**
LKD2				S	**Sb**	**12 21 21.9**	**+2.1**
LKD2	**Lefkada island**	**1.10**	**326**	P	**Pn**	**12 21 05.7**	**-0.1**
LKD2				S	**Sb**	**12 21 21.9**	**+2.1**
DID	**Didima**	**1.47**	**104**	P	**Pn**	**12 21 12.7**	**+1.9**
DID	**Didima**	**1.47**	**104**	P	**Pn**	**12 21 12.7**	**+1.9**
THL	**Klokotos Trika**	**1.75**	**15**	*e*PN	**Pn**	**12 21 14.6**	**0.0**
THL	**Klokotos Trika**	**1.75**	**15**	*e*Pn	**Pn**	**12 21 14.6**	**0.0**

*CSEM **20** 12:23:23.0±0.4, 41°.92N×15°.65E, h2km, ML3.1/6, Error ellipse: s-maj=8.1km s-min=3.3km az=19.0*
ROM 20 12:23:23.0±0.2, 41°.92N×15°.63E, h1km, Md2.6/25, Ml2.2/16, Error ellipse: s-maj=2.5km s-min=1.2km az=26.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGRT	**San Giovanni R**	**0.18**	**152**	Pg	Pg	12 23 27.3	+0.8
SGRT				Sg	Sg	12 23 30.0	+1.2
	484nm,0.4s						
SGRT	**San Giovanni R**	**0.18**	**152**	Pg	Pg	12 23 27.3	+0.8
SGRT				Sg	Sg	12 23 30.0	+1.2
	484nm,0.4s						
RGNG	**Rignano Grg**	**0.24**	**188**	Pg	Pg	12 23 27.8	+0.1
RGNG	**Rignano Grg**	**0.24**	**188**	Pg	Pg	12 23 27.8	+0.1
MSAG	**Monte S. Angel**	**0.29**	**134**	Pg	Pg	12 23 29.6	+1.0
	286nm,0.3s						
MSAG	**Monte S. Angel**	**0.29**	**134**	Pg	Pg	12 23 29.6	+1.0
	286nm,0.3s						
MS1	**Monte Sant'Ang**	**0.31**	**132**	*e*Pg	Pg	12 23 30.3	+1.3
MS1				*e*Sg	Sg	12 23 36.4	+3.3
FG2	**Serracapriola**	**0.37**	**253**	Pg	Pg	12 23 30.5	+0.5
	436nm,0.2s						
FG2	**Serracapriola**	**0.37**	**253**	Pg	Pg	12 23 30.5	+0.5
	436nm,0.2s						
CIGN	**Sant'Elia a Pi**	**0.60**	**244**	Pg	Pg	12 23 35.9	+1.4
	43nm,0.6s						
CIGN	**Sant'Elia a Pi**	**0.60**	**244**	Pg	Pg	12 23 35.9	+1.4
	43nm,0.6s						
MOCO	**Biccari - m.te**	**0.65**	**213**	Pg	Pg	12 23 36.2	+0.8
MOCO				Sg	Sg	12 23 47.0	+3.1
	40nm,0.9s						
FRES	**Fresagrandinar**	**0.72**	**275**	Pg	Pg	12 23 38.2	+1.4
FRES	**Fresagrandinar**	**0.72**	**275**	Pg	Pg	12 23 38.2	+1.4
SGTA	**Sant Agata di**	**0.81**	**194**	Pg	Pg	12 23 40.3	+1.9
	93nm,0.4s						
SGTA	**Sant Agata di**	**0.81**	**194**	Pg	Pg	12 23 40.3	+1.9
	93nm,0.4s						
BSSO	**Busso**	**0.86**	**245**	Pg	Pg	12 23 40.6	+1.1
BSSO				Sg	Sg	12 23 52.8	+2.2
	48nm,0.5s						
BSSO	**Busso**	**0.86**	**245**	Pg	Pg	12 23 40.6	+1.1
BSSO				Sg	Sg	12 23 52.8	+2.2
	48nm,0.5s						
SACR	**S. Croce Del S**	**0.86**	**234**	Pg	Pg	12 23 40.3	+0.7
	40nm,0.3s						
SACR	**S. Croce Del S**	**0.86**	**234**	Pg	Pg	12 23 40.3	+0.7
	40nm,0.3s						
PSB1	**Pescosannita**	**0.93**	**222**	Pg	Pg	12 23 41.8	+1.1
PSB1				Sg	Sg	12 23 55.1	+2.4
	29nm,0.4s						
PSB1	**Pescosannita**	**0.93**	**222**	Pg	Pg	12 23 41.8	+1.1
PSB1				Sg	Sg	12 23 55.1	+2.4
	29nm,0.4s						
MRB1	**Monte Rocchett**	**0.93**	**212**	Pg	Pg	12 23 41.8	+1.0
	88nm,0.7s						
MRB1	**Monte Rocchett**	**0.93**	**212**	Pg	Pg	12 23 41.8	+1.0
	88nm,0.7s						
CAFE	**Carife**	**0.94**	**199**	Pg	Pg	12 23 42.1	+1.2
CAFE	**Carife**	**0.94**	**199**	Pg	Pg	12 23 42.1	+1.2
MRVN	**Minervino Murg**	**0.95**	**153**	Pg	Pg	12 23 42.3	+1.0
MRVN				Sg	Sg	12 23 56.5	+2.9
	72nm,0.3s						
MRVN	**Minervino Murg**	**0.95**	**153**	Pg	Pg	12 23 42.3	+1.0
MRVN				Sg	Sg	12 23 56.5	+2.9
	72nm,0.3s						
CDT	**Castel del Mon**	**0.96**	**150**	*e*Pg	Pg	12 23 42.7	+1.2
CDT				*e*Sg	Sg	12 23 56.7	+2.8
PALZ	**Palazzo San Ge**	**1.00**	**166**	Pg	Pg	12 23 42.9	+0.7
PALZ				Sg	Sg	12 23 56.8	+1.6
	111nm,0.7s						
PALZ	**Palazzo San Ge**	**1.00**	**166**	Pg	Pg	12 23 42.9	+0.7
PALZ				Sg	Sg	12 23 56.8	+1.6
	111nm,0.7s						
SNAL	**S. Angelo Dei**	**1.04**	**198**	Pg	Pg	12 23 43.6	+0.7
SNAL				Sg	Sg	12 23 58.7	+2.3
SNAL	**S. Angelo Dei**	**1.04**	**198**	Pg	Pg	12 23 43.6	+0.7
SNAL				Sg	Sg	12 23 58.7	+2.3
ACER	**Acerenza**	**1.15**	**168**	Pg	Pg	12 23 45.9	+0.8
ACER				Sg	Sg	12 24 02.2	+2.2
	120nm,0.4s						
ACER	**Acerenza**	**1.15**	**168**	Pg	Pg	12 23 45.9	+0.8
ACER				Sg	Sg	12 24 02.2	+2.2
	120nm,0.4s						
VAGA	**Valle Agricola**	**1.16**	**245**	Pg	Pg	12 23 45.8	+0.6
	85nm,0.6s						
VAGA	**Valle Agricola**	**1.16**	**245**	Pg	Pg	12 23 45.8	+0.6
	85nm,0.6s						
MRLC	**Muro Lucano**	**1.16**	**185**	Pg	Pg	12 23 45.9	+0.6
	67nm,0.4s						
MRLC	**Muro Lucano**	**1.16**	**185**	Pg	Pg	12 23 45.9	+0.6
	67nm,0.4s						
MCRV	**Calabrutti - M**	**1.19**	**197**	Pg	Pg	12 23 45.4	-0.3
	172nm,0.7s						
MCRV	**Calabrutti - M**	**1.19**	**197**	Pg	Pg	12 23 45.4	-0.3
	172nm,0.7s						
BAI	**Bari**	**1.24**	**130**	*e*Pg	Pg	12 23 47.2	+0.5
BAI				*e*Sg	Sg	12 24 05.5	+2.7
AMUR	**Altamura**	**1.25**	**144**	Pg	Pg	12 23 46.8	-0.1
	38nm,0.2s						
AMUR	**Altamura**	**1.25**	**144**	Pg	Pg	12 23 46.8	-0.1
	38nm,0.2s						
SG1	**Sgolgore (BA)**	**1.33**	**143**	*e*Pg	Pg	12 23 48.2	-0.3
SG1				*e*Sg	Sg	12 24 07.9	+2.1
MIGL	**Miglionico**	**1.45**	**155**	Pg	Pg	12 23 49.7	-1.0
MIGL	**Miglionico**	**1.45**	**155**	Pg	Pg	12 23 49.7	-1.0
POFI	**Posta Fibreno**	**1.45**	**263**	Pg	Pg	12 23 51.1	+0.4
POFI	**Posta Fibreno**	**1.45**	**263**	Pg	Pg	12 23 51.1	+0.4
VVLD	**Villa Vallelon**	**1.50**	**269**	Pg	Pg	12 23 51.0	-0.7
VVLD	**Villa Vallelon**	**1.50**	**269**	Pg	Pg	12 23 51.0	-0.7
NOCI	**Noci**	**1.56**	**136**	Pg	Pg	12 23 51.4	-1.5
NOCI	**Noci**	**1.56**	**136**	Pg	Pg	12 23 51.4	-1.5
MTSN	**Montesano sull**	**1.65**	**177**	Pg	Pg	12 23 54.6	0.0
MTSN	**Montesano sull**	**1.65**	**177**	Pg	Pg	12 23 54.6	0.0
PE1	**Pezze di Greco**	**1.75**	**129**	*e*Pn	Pn	12 23 56.6	+2.2
PE1				*e*Sn	Sn	12 24 20.9	+3.7
STON	**Ston**	**1.81**	**57**	*e*Pn	Pn	12 23 57.3	+2.1
STON				Sn	Sn	12 24 22.7	+4.0
STON	**Ston**	**1.81**	**57**	*e*Pn	Pn	12 23 57.3	+2.1

KISR 20 12:58:42.9±0.4, 29°.02N×47°.66E, h5km, ML0.8, Eastern Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RDF	**Al-Radifah**	**0.14**	**226**	*e*P	Pg	12 58 47.1	+1.4
RDF				*e*S	Sg	12 58 49.9	+2.4
RDF				AML	AML	12 58 50.6	
	comp=Z,53nm,0.3s						
RDF	**Al-Radifah**	**0.14**	**226**	*e*P	Pg	12 58 47.0	+1.3
RDF				*e*S	Sg	12 58 49.2	+1.7
RDF				AML	AML	12 58 50.5	
	comp=Z,41nm,0.3s						
KBD	**Kabd**	**0.16**	**10**	*e*P	Pg	12 58 47.4	+1.4
KBD				*e*S	Sg	12 58 51.1	+2.9
KBD				AML	AML	12 58 52.3	
	comp=Z,23nm,0.2s						
KBD	**Kabd**	**0.16**	**10**	*e*P	Pg	12 58 47.4	+1.3
KBD				*e*S	Sg	12 58 51.0	+2.9
KBD				AML	AML	12 58 52.0	
	comp=Z,14nm,0.1s						

*IDC **20** 13:21:30.3±3.2, 15°.35N×120°.09E, h35km±29km, mb3.3/3, mb1 3.5/3, mb1mx3.1/21, mbtmp3.3/3, MS2.8/2, Ms1 2.8/2, ms1mx2.6/13, Error ellipse: s-maj=59.3km s-min=24.6km az=56.0*
*ISCJB **20** 13:21:31.5±0.6, 15°.37N±0°.04×119°.79E±0°.07, h41km±12km, mb3.5/2, MS2.7/2, Error ellipse: s-maj=10.6km s-min=6.0km az=178.5*
*MAN **20** 13:21:31, 15°.41N×119°.71E, h32km, mb4.8, ML3.7, MS3.7*
ISC 20 13:21:32.9±0.7, 15°.40N±0°.04×119°.84E±0°.07, h35km±17km, n24, σ1s32/29, mb3.5/2, MS2.7/2, 2C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCZP	**Santa Cruz**	**0.38**	**11**	*e*P	**Pn**	**13 21 41.4**	**-0.5**
SCZP				*e*S	**Sn**	**13 21 48.2**	**+0.1**
BOLP	**Bolinao**	**0.98**	**4**	*e*P	**Pn**	**13 21 49.1**	**-1.0**
BOLP				*e*S	**Sn**	**13 22 00.7**	**-2.2**
BCPH	**Baguio City Da**	**1.21**	**36**	⇑*i*P	**Pn**	**13 21 52.6**	**-0.7**
BCPH				*i* S	**Sn**	**13 22 10.4**	**+1.9**
PCPH	**Palayan**	**1.23**	**82**	⇓*e*P	**Pn**	**13 21 51.8**	**-1.7**
PCPH				*i* S	**Sn**	**13 22 06.7**	**-2.1**
TGY	**Tagaytay City**	**1.67**	**140**	Pg	**Pn**	**13 21 59.7**	**+0.1**
	217nm,0.3s,baz=324,slow=19,SNR=28						
TGY				Lg		13 22 23.6	
	328nm,0.3s,baz=247,slow=8.6,SNR=7.0						
TGY	**Tagaytay City**	**1.67**	**140**	⇓*e*P	**Pn**	**13 22 00.2**	**+0.5**
LUBP	**Lubang**	**1.70**	**166**	*e*P	**Pn**	**13 22 00.2**	**+0.2**
LUBP				*e*S	**Sn**	**13 22 14.8**	**-5.8**
BALP	**Baler**	**1.71**	**78**	*e*P	**Pn**	**13 21 59.8**	**-0.4**
BALP				*e*S	**Sn**	**13 22 12.8**	**-8.1**
POLP	**Polilio Island**	**2.14**	**108**	*e*P	**Pn**	**13 22 07.4**	**+1.4**
PGP	**Puerto Galera**	**2.17**	**150**	⇑*i*P	**Pn**	**13 22 03.5**	**-3.0**
ABRA	**Dolores**	**2.39**	**20**	*e*P	**Pn**	**13 22 10.6**	**+1.0**
CAUP	**Cauayan**	**2.45**	**51**	*e*P	**Pn**	**13 22 11.9**	**+1.5**
BOAC	**Boac**	**2.74**	**134**	*e*P	**Pn**	**13 22 16.9**	**+2.6**
APYP	**Conner**	**2.80**	**29**	*e*P	**Pn**	**13 22 19.1**	**+4.0**
PALP	**Palanan**	**2.99**	**56**	*e*P	**Sn**	**13 22 56.9**	**+4.6**
BUSP	**Coron**	**3.39**	**174**	*e*P	**Pn**	**13 22 23.0**	**-0.3**
ENPP	**El Nido**	**4.18**	**186**	*e*P	**Pn**	**13 22 33.4**	**-0.8**
PVCP	**Virac**	**4.55**	**113**	*e*P	**Pn**	**13 22 40.1**	**+0.9**
CUYO	**Cuyo Island**	**4.66**	**166**	*e*P	**Pn**	**13 22 40.5**	**-0.4**
BBP	**Basco**	**5.41**	**22**	*e*P	**Pn**	**13 22 52.5**	**+1.5**
CMAR	**Chiang Mai Arr**	**20.22**	**282**	P	**P**	**13 26 06.5**	**+1.5**
	0.7nm,0.5s,baz=100,slow=8.1,SNR=4.8						
KSRS	**Korea Array**	**23.11**	**17**	LR	LR	13 36 02.6	
	comp=Z,17nm,18.5s,MS2.5,baz=250,slow=38						
SONM	**Songino Array**	**34.20**	**344**	P	**P**	**13 28 13.7**	**-1.2**
	0.4nm,0.6s,mb3.5,baz=164,slow=9.9,SNR=2.5						
SONM				LR	LR	13 43 45.4	
	comp=Z,26nm,21.2s,MS2.9,baz=71,slow=39						
ASAR	**Alice Springs**

comp=Z,117nm,19.1s,MS3.5,baz=27,slow=36
KAKA Kakadu 28.75 263 *e*P **P 14 11 32.9 -0.9**
ASAR Alice Springs 29.46 241 P **P 14 11 39.2 -0.8**
0.4nm,0.4s,mb3.5,baz=67,slow=10,SNR=16
DAV Davao City (W) 40.11 295 LR LR 14 28 56.3
comp=Z,60nm,18.0s,MS3.5,baz=252,slow=35
TGY Tagaytay City 47.40 301 LR LR 14 31 41.1
comp=Z,3.8nm,21.4s,MS2.3,baz=348,slow=33
PPT Papeete 47.59 104 LR LR 14 31 17.1
comp=Z,154nm,20.4s,MS4.0,baz=337,slow=33
MJAR Matsushiro Arr 51.99 336 P **P 14 14 46.8 +1.8**
0.2nm,0.5s,mb3.3,baz=162,slow=8.2,SNR=3.6
ASAJ Asahikawa 57.30 344 P **P 14 15 23.2 -0.2**
3.1nm,0.9s,mb4.3,baz=187,slow=8.1,SNR=4.6
SONM Songino Array 76.13 325 P **P 14 17 22.8 -0.6**
0.7nm,1.0s,mb3.6,baz=124,slow=2.7,SNR=3.6
ILAR Eielson Array 84.51 20 P **P 14 18 07.6 -0.4**
0.2nm,0.4s,mb3.6,baz=242,slow=5.2,SNR=10.0
DIB Dawson Inlet, 84.57 33 T 15 51 17.0
SNR=3.9
NVAR Mina Array Bea 88.85 51 P **P 14 18 29.4 -0.5**
0.6nm,0.7s,mb4.0,baz=216,slow=8.8,SNR=4.6
MKAR Makanchi Array 90.63 318 P **P 14 18 39.1 +1.1**
0.2nm,0.4s,mb3.8,baz=77,slow=3.3,SNR=2.5

NIED ***20*** *14:16:00, 36°.20N×141°.90E, h26km, Mw4.3 Best double couple: M0=3.02000×10^15 NP1:φ=14.00000°, δ=60.00000°, λ=86.00000°. NP2:φ=203.00000°, δ=30.00000°, λ=98.00000°.*
BJI ***20*** *14:16:19.3, 36°.35N×142°.05E, h10km, mB4.8/29, mb4.7/41, Ms4.3/30, Ms7 4.1/29*
NEIC ***20*** *14:16:22.4±3.4, 36°.18N×141°.85E, h10km±20km, mb4.9/13, MW4.3(NIED), Error ellipse: s-maj=9.0km s-min=6.2km az=142.0*
NEIC Recorded [1 JMA] in Fukushima, Ibaraki and Tochigi.
ISCJB ***20*** *14:16:23.9±0.3, 36°.23N±0°.03×141°.92E±0°.04, h33km, mb4.5/54, MS3.8/24, Error ellipse: s-maj=4.4km s-min=4.0km az=24.7*
JMA ***20*** *14:16:23.4±0.2, 36°.21N×141°.89E, h58km±5km, M4.6*
JMA Felt I J1.
IDC ***20*** *14:16:26.0±5.0, 36°.14N×141°.77E, h33km±37km, mb4.0/19, mb1 4.2/21, mb1mx4.1/28, mbtmp4.0/21, ML4.4/2, MS3.5/11, Ms1 3.6/11, ms1mx3.2/44, Error ellipse: s-maj=17.4km s-min=14.9km az=115.0*
MOS ***20*** *14:16:26.5±0.8, 36°.58N×141°.71E, h33km, mb4.9/19, Error ellipse: s-maj=10.6km s-min=6.8km az=117.6*
SZGRF ***20*** *14:16:31.6, 38°.78N×145°.55E, h33km, mb5.2, Off east coast of Honshu, Japan*
ISC 20 14:16:26.0±0.3, 36°.20N±0°.03×141°.86E±0°.04, h35km, (h11km±9.2km:pP-P), n119, σ19 11/140, mb4.5/54, MS3.8/24, 13C-8D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.95**	**239**	⇓P	**Pn**	**14 16 41.3**	**-1.6**
CHOJ				S	**Sn**	**14 16 54.5**	**-0.7**
JHO	**Hitachi**	**1.12**	**292**	⇓P	**Pn**	**14 16 43.0**	**-2.2**
ONAJ	**Iwakimizuishiy**	**1.24**	**317**	⇓P	**Pn**	**14 16 44.9**	**-1.9**
ONAJ				S	**Sn**	**14 16 59.7**	**-2.6**
JYT	**Yasato**	**1.35**	**272**	⇓P	**Pn**	**14 16 46.3**	**-2.0**
JFK	**Kawauchi**	**1.41**	**326**	P	**Pn**	**14 16 47.6**	**-1.5**
JFK				*e*S	**Sn**	**14 17 05.6**	**-0.8**
JCN	**Nagara**	**1.56**	**240**	P	**Pn**	**14 16 51.5**	**+0.3**
BSO1	**Boso 1**	**1.71**	**205**	P	**Pn**	**14 16 51.7**	**-1.5**
BSO1				S	**Sn**	**14 17 14.7**	**+1.0**
JSB	**Shiboa**	**1.74**	**297**	P	**Pn**	**14 16 52.9**	**-0.8**
BSO3	**Boso 3**	**1.78**	**219**	P	**Pn**	**14 16 53.1**	**-1.1**
TOK	**Tokyo**	**1.78**	**254**	P	**Pn**	**14 16 53.7**	**-0.6**
JFT	**Otama**	**1.80**	**317**	⇓P	**Pn**	**14 16 53.9**	**-0.6**
JFT				*e*S	**Sn**	**14 17 17.5**	**+1.5**
JMM	**Marumori**	**1.87**	**333**	⇑P	**Pn**	**14 16 54.0**	**-1.5**
JAG	**Ashikaga**	**1.96**	**277**	P	**Pn**	**14 16 55.0**	**-1.7**
JAG				S	**Sn**	**14 17 20.7**	**+0.7**
JFY	**Yanaizu**	**2.11**	**305**	⇑P	**Pn**	**14 16 58.3**	**-0.5**
JKT	**Katashina**	**2.18**	**286**	P	**Pn**	**14 16 59.1**	**-0.6**
JIO	**Ouri**	**2.29**	**350**	⇑P	**Pn**	**14 16 59.6**	**-1.6**
MJAR	**Matsushiro Arr**	**2.97**	**278**	Pn	**Pn**	**14 17 10.3**	**-0.3**
	73nm,0.3s,baz=95,slow=15,SNR=33						
MJAR				Sn	**Sn**	**14 17 47.5**	**+2.5**
	28nm,0.3s,baz=87,slow=20,SNR=5.6						
MAJO	**Matsushiro**	**2.97**	**278**	*e*P	**Pn**	**14 17 11.0**	**+0.4**
MAT	**Matsushiro**	**2.97**	**278**	P	**Pn**	**14 17 10.6**	**0.0**
MAT				S	**Sn**	**14 17 46.4**	**+1.4**
JHJ	**Hachijo jima 2**	**3.52**	**210**	Pn	**Pn**	**14 17 16.8**	**-1.3**
	86nm,0.3s,baz=328,slow=3.2,SNR=46						
JHJ				Sn	**Sn**	**14 17 54.4**	**-4.1**
	114nm,0.3s,baz=68,slow=22,SNR=4.4						
ERM	**Erimo**	**5.89**	**9**	*e*P	**Pn**	**14 17 48.2**	**-2.5**
ERM				pmax	pmax		
	comp=Z,20nm,0.4s						
ERM	**Erimo**	**5.89**	**9**	*e*P	**Pn**	**14 17 48.2**	**-2.6**
	comp=Z,20nm,0.4s						
ASAJ	**Asahikawa**	**7.93**	**4**	Pn	**Pn**	**14 18 16.1**	**-2.5**
	comp=Z,2.4nm,0.3s,baz=222,slow=7.0,SNR=19						
ASAJ				Sn	**Sn**	**14 19 43.4**	**-3.6**
	comp=Z,0.9nm,0.3s,baz=73,slow=20,SNR=3.1						
ASAJ				LR	LR	14 22 24.2	
	comp=Z,308nm,19.2s,baz=180,slow=45						
ASAJ	**Asahikawa**	**7.93**	**4**	P	**Pn**	**14 18 16.2**	**-2.4**
ASAJ						14 19 43.4	
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,308nm,19.2s						
YUK	**Yuzh-Kuril'sk**	**8.40**	**20**	⇑*i*P	**Pn**	**14 18 21.0**	**-4.1**
YUK				*i*S	**Sn**	**14 19 50.0**	**-8.7**
YUK				pmax	pmax		
	comp=N,30nm,0.5s						
YUK				pmax	pmax		
	comp=E,20nm,0.5s						
YUK				pmax	pmax		
	comp=Z,70nm,0.5s						
YUK				smax			
	comp=N,160nm,0.6s						
YUK				smax			
	comp=E,80nm,0.6s						
YUK				MLR	MLR		
	comp=E,400nm,20.0s						
YUK				MLR	MLR		
	comp=Z,300nm,20.0s						
CBIJ	**Chichi jima**	**9.08**	**178**	Pn	**Pn**	**14 18 30.7**	**-3.8**
	comp=Z,8.3nm,0.3s,baz=276,slow=19,SNR=4.8						
CBIJ				Sn	**Sn**	**14 20 05.0**	**-11**
	comp=Z,18nm,0.3s,baz=279,slow=22,SNR=10						
KUR	**Kuril'sk**	**10.10**	**25**	*e*P	**Pn**	**14 18 56.5**	**+8.0**
KUR				*e*S	**Sn**	**14 20 31.5**	**-9.0**
YSS	**Yuzh-Sakhalins**	**10.77**	**3**	⇑*e*P	**Pn**	**14 18 56.7**	**-0.8**
KSRS	**Korea Array**	**11.24**	**281**	Pn	**Pn**	**14 19 07.3**	**+3.2**
	comp=Z,0.4nm,0.3s,baz=91,slow=14,SNR=12						
KSRS				LR	LR	14 23 18.7	
	comp=Z,189nm,20.7s,baz=349,slow=37						
MDJ	**Mudanjiang**	**12.56**	**316**	P	**Pn**	**14 19 21.0**	**-1.1**
MDJ				pP		14 19 23.9	
MDJ				sP		14 19 26.8	
MDJ				S	**Sn**	**14 21 42.3**	**+1.6**
MDJ				ScP	ScP	14 28 34.3	+4.8
MDJ				ScS	ScS	14 32 10.3	+4.7
MDJ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,78nm,5.6s						
MDJ				LR	LR		
	comp=N,240nm,21.4s						
MDJ				LR	LR		
	comp=E,140nm,21.7s						
MDJ				LR	LR		
	comp=Z,340nm,17.4s						
CN2	**Changchun**	**14.68**	**306**	*e*P	**Pn**	**14 19 50.1**	**-0.9**
CN2				*es*P	sP	14 19 56.0	-14
CN2				*e*S	**Sn**	**14 22 33.8**	**+1.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,400nm,12.0s						
CN2				LR	LR		
	comp=E,400nm,12.0s						
CN2				LR	LR		
	comp=Z,700nm,14.0s						

NJ2	**Nanjing**	**19.48**	**264**	*e*P	**Pn**	**14 20 59.1**	**+7.8**
NJ2				pP	pP	14 21 03.3	+4.2
NJ2				sP	sP	14 21 06.5	+3.0
NJ2				PP		14 21 17.8	
NJ2				S	S	14 25 33.0	+65
NJ2				sS	sS	14 25 40.5	+58
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,70nm,6.2s						
NJ2				LR	LR		
	comp=N,180nm,15.7s						
NJ2				LR	LR		
	comp=E,170nm,14.6s						
NJ2				LR	LR		
	comp=Z,140nm,12.4s						
PETK	**Petropavlovsk-**	**20.24**	**28**	P	**P**	**14 20 58.3**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=197,slow=6.8,SNR=4.8						
PETK				LR	LR	14 28 39.7	
	comp=Z,48nm,18.6s,MS2.9,baz=40,slow=36						
BJI	**Beijing**	**20.55**	**289**	P	**P**	**14 21 00.9**	**-0.5**
BJI				S	**S**	**14 24 52.8**	**+3.6**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BJI				pmax	pmax		
	comp=Z,59nm,4.1s						
BJI				LR	LR		
	comp=N,250nm,11.3s,MS3.9						
BJI				LR	LR		
	comp=E,150nm,11.1s,MS3.9						
CLNS	**Chul'man**	**23.59**	**336**	*e*P	**P**	**14 21 26.4**	**-6.9**
CLNS				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.4						
CLNS				pmax	pmax		
	comp=N,7.0nm,1.0s						
CLNS				MLR	MLR		
	comp=Z,116nm,13.0s,MS3.5						
CLNS				MLR	MLR		
	comp=N,144nm,14.0s						
WHN	**Wuhan**	**23.62**	**264**	P	**P**	**14 21 32.0**	**-1.9**
WHN				S	**S**	**14 25 52.1**	**+6.3**
WHN				LR	LR		
	comp=N,470nm,14.5s,MS4.1						
WHN				LR	LR		
	comp=E,270nm,16.6s,MS4.1						
WHN				LR	LR		
	comp=Z,460nm,17.1s,MS4.0						
HHC	**Hu-ho-hao-te**	**24.09**	**290**	*e*P	**P**	**14 21 38.4**	**+0.3**
HHC				PP		14 22 13.0	
HHC				PcP	PcP	14 25 21.9	+3.2
HHC				S	**S**	**14 25 54.1**	**+0.8**
HHC				SS		14 26 44.3	
HHC				PcS	PcS	14 29 00.3	+2.0
HHC				pmax	pmax		
	comp=Z,13nm,0.5s,mb4.6						
HHC				pmax	pmax		
	comp=Z,75nm,4.8s						
HHC				LR	LR		
	comp=N,1μm,11.5s,MS4.8						
HHC				LR	LR		
	comp=E,1μm,11.2s,MS4.8						
HHC				LR	LR		
	comp=Z,1μm,11.0s,MS4.6						
YAK	**Yakutsk**	**26.96**	**347**	*e*P	**P**	**14 22 03.3**	**-0.6**
YAK				*e**PP	pP	14 22 12.4	-1.5
YAK				*e*		14 22 48.8	
YAK				*e*PPP		14 22 55.2	
YAK				*e*SS		14 28 10.0	
YAK				pmax	pmax		
	comp=Z,25nm,0.9s,mb4.7						
YAK				pmax	pmax		
	comp=E,6.0nm,1.2s						
YAK				pmax	pmax		
	comp=N,18nm,1.2s						
YAK				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.4						
YAK				MLR	MLR		
	comp=Z,135nm,15.0s,MS3.6						
YAK				MLR	MLR		
	comp=N,126nm,15.0s						
YAK	**Yakutsk**	**26.96**	**347**	*e*P	**P**	**14 22 03.5**	**-0.4**
	comp=N,25nm,0.8s,mb4.8						
XAN	**Xi'an**	**26.96**	**275**	P	**P**	**14 22 03.5**	**-0.7**
XAN				pP	pP	14 22 12.0	-2.2
XAN				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.0						
SEY	**Seymchan**	**27.54**	**10**	⇓*e*P	**P**	**14 22 10.5**	**+1.4**
ENH	**Enshi**	**27.64**	**267**	*e*P	**P**	**14 22 09.1**	**-1.2**
	comp=Z,37nm,0.6s,mb5.2						
ULN	**Ulaanbaatar**	**28.13**	**305**	*e*P	**P**	**14 22 14.5**	**0.0**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.3						
ULN	**Ulaanbaatar**	**28.13**	**305**	*e*P	**P**	**14 22 14.5**	**0.0**
	comp=Z,5.6nm,0.7s,mb4.3						
SONM	**Songino Array**	**28.55**	**305**	P	**P**	**14 22 18.6**	**+0.3**
	comp=Z,7.3nm,0.7s,mb4.5,baz=104,slow=8.8,SNR=34						
SONM				LR	LR	14 33 52.5	
	comp=Z,106nm,19.2s,MS3.5,baz=170,slow=37						
LZH	**Lanzhou**	**30.57**	**281**	*e*P	**P**	**14 22 37.0**	**+0.7**
LZH				pP	pP	14 22 38.5	-7.9
LZH				PP	PP	14 23 37.3	-8.3
LZH				*e*S	**S**	**14 27 39.0**	**+3.1**
LZH				SS	SS	14 29 18.0	-29
LZH				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.9						
LZH				pmax	pmax		
	comp=Z,100nm,5.0s						
LZH				LR	LR		
	comp=E,660nm,15.4s						
LZH				LR	LR		
	comp=Z,880nm,16.4s,MS4.5						
TLY	**Talaya**	**31.15**	**312**	*e*P	**P**	**14 22 42.1**	**+0.9**
TLY				*e*		14 25 41.7	
TLY				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.6						
TLY				MLR	MLR		
	comp=Z,196nm,16.0s,MS3.9						
GYA	**Guiyang**	**31.45**	**262**	⇓*i*P	**P**	**14 22 46.3**	**+2.2**
GYA				PP	PP	14 23 48.9	-6.5
GYA				PcP	PcP	14 25 38.8	+1.9
GYA				S	**S**	**14 27 52.8**	**+3.1**
GYA				ScP	ScP	14 29 21.3	+4.1
GYA				SS	SS	14 29 41.8	-23
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.0						
GYA				pmax	pmax		
	comp=Z,120nm,5.0s						
GYA				LR	LR		
	comp=N,620nm,16.9s,MS4.5						
GYA				LR	LR		
	comp=E,560nm,17.6s,MS4.5						
GYA				LR	LR		
	comp=Z,710nm,15.8s,MS4.4						
CD2	**Chengdu**	**32.05**	**272**	P	**P**	**14 22 54.6**	**+5.2**
CD2				PcP	PcP	14 25 42.3	+3.9
CD2				S	**S**	**14 28 08.9**	**+10**
CD2				PcS	PcS	14 29 25.9	+2.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
CD2				pmax	pmax		
	comp=Z,80nm,4.7s						
CD2				LR	LR		
	comp=N,210nm,9.5s						
CD2				LR	LR		
	comp=Z,240nm,13.7s,MS4.0						
QIZ	**Qiongzhong**	**32.93**	**247**	P	**P**	**14 22 57.9**	**+0.7**
QIZ				S	**S**	**14 28 17.8**	**+4.9**
QIZ				pmax	pmax		
	comp=Z,12nm,2.2s,mb4.4						
QIZ				LR	LR		
	comp=Z,140nm,19.0s,MS3.7						
GTA	**Gaotai**	**33.16**	**288**	*e*P	**P**	**14 22 59.3**	**+0.3**
GTA				pP	pP	14 23 03.6	-5.5
GTA				sP	sP	14 23 06.6	-6.7
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
KMI	**Kunming**	**35.20**	**263**	P	**P**	**14 23 16.5**	**-0.4**
KMI				pP	pP	14 23 19.1	-7.9
KMI				PP	PP	14 24 38.3	+1.2
KMI				S	**S**	**14 28 52.3**	**+4.3**
KMI				SS	SS	14 31 06.8	-15
KMI				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
KMI				pmax	pmax		
	comp=Z,87nm,4.1s						

KMI				LR	LR		
	comp=N,130nm,14.3s,MS4.0						
KMI				LR	LR		
	comp=E,170nm,14.3s,MS4.0						
KMI				LR	LR		
	comp=Z,130nm,13.8s,MS3.8						
WMQ	**Urumqi**	**41.54**	**298**	P	**P**	**14 24 10.9**	**+1.0**
WMQ				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.6						
WMQ				pmax	pmax		
	comp=Z,110nm,4.8s						
WMQ				LR	LR		
	comp=N,49nm,18.6s,MS3.6						
WMQ				LR	LR		
	comp=E,48nm,16.8s,MS3.6						
WMQ				LR	LR		
	comp=Z,72nm,18.0s,MS3.6						
CMAR	**Chiang Mai Arr**	**41.65**	**257**	P	**P**	**14 24 10.8**	**-0.2**
	comp=Z,1.3nm,0.7s,mb3.6,baz=48,slow=6.2,SNR=9.2						
CMAR				LR	LR	14 42 33.4	
	comp=Z,24nm,20.8s,MS3.1,baz=25,slow=38						
LSA	**Lhasa**	**42.65**	**276**	*e*P	**P**	**14 24 21.0**	**+1.8**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
LSA	**Lhasa**	**42.65**	**276**	*e*P	**P**	**14 24 21.0**	**+1.8**
	comp=Z,5.3nm,0.6s,mb4.5						
ZALV	**Zalesovo Beam**	**42.74**	**313**	P	**P**	**14 24 19.5**	**-0.1**
	comp=Z,5.7nm,0.6s,mb4.5,baz=90,slow=6.7,SNR=30						
ZALV				PcP	PcP	14 26 10.2	-0.4
	comp=Z,1.9nm,0.7s,baz=93,slow=3.6,SNR=4.2						
NVS	**Novosibirsk**	**43.68**	**314**	*e*P	**P**	**14 24 26.5**	**-0.6**
MK31	**Makanchi Array**	**44.87**	**303**	*ce*P	**P**	**14 24 36.6**	**-0.2**
MK31				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.7						
MK31	**Makanchi Array**	**44.87**	**303**	*e*P	**P**	**14 24 36.9**	**+0.1**
MKAR	**Makanchi Array**	**44.87**	**303**	P	**P**	**14 24 37.0**	**+0.2**
	comp=Z,5.2nm,0.6s,mb4.5,baz=88,slow=9.9,SNR=34						
MKAR				LR	LR	14 44 00.4	
	comp=Z,76nm,18.3s,MS3.7,baz=261,slow=37						
KURK	**Kurchatov**	**46.73**	**309**	*c i*P	**P**	**14 24 51.0**	**-0.4**
KURK				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
KURK	**Kurchatov**	**46.73**	**309**	*e*P	**P**	**14 24 51.1**	**-0.3**
	comp=Z,10.0nm,0.6s,mb4.9						
KAKA	**Kakadu**	**49.45**	**192**	*e*P	**P**	**14 25 12.5**	**-0.2**
	comp=Z,20nm,0.6s,mb5.3						
ILAR	**Eielson Array**	**50.01**	**32**	P	**P**	**14 25 17.0**	**+0.6**
	comp=Z,1.5nm,0.7s,mb4.1,baz=267,slow=6.4,SNR=20						
TKM2	**Tokmak 2**	**50.35**	**299**	*e*P	**P**	**14 25 20.4**	**+1.1**
TKM2				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.9						
TKM2	**Tokmak 2**	**50.35**	**299**	*e*P	**P**	**14 25 20.4**	**+1.0**
	comp=Z,7.9nm,0.6s,mb4.9						
KSH	**Kashi**	**51.08**	**295**	*e*P	**P**	**14 25 28.5**	**+3.6**
KSH				*e*PP	PP	14 27 25.3	+3.8
KSH				PcS	PcS	14 30 39.8	+1.9
KSH				S	**S**	**14 32 46.0**	**+5.9**
KSH				ScS	ScS	14 35 16.6	+3.9
KSH				SS	SS	14 36 19.6	+4.4
KSH				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
KSH				pmax	pmax		
	comp=Z,65nm,6.2s						
KSH				LR	LR		
	comp=N,440nm,14.1s						
KSH				LR	LR		
	comp=E,200nm,9.7s						
KSH				LR	LR		
	comp=Z,110nm,6.8s						
VOSK	**Vostochnaya**	**51.11**	**312**	P	**P**	**14 25 24.4**	**-0.5**
VOSK				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
AAK	**Ala-Archa**	**51.21**	**299**	*ce*P	**P**	**14 25 26.1**	**+0.3**
BVAR	**Borovoye Array**	**51.40**	**313**	P	**P**	**14 25 27.5**	**+0.4**
	comp=Z,1.5nm,0.5s,mb4.2,baz=78,slow=7.7,SNR=11						
BVAR				PcP	PcP	14 26 41.8	+0.6
	comp=Z,1.6nm,0.6s,baz=73,slow=5.0,SNR=4.3						
BRVK	**Borovoye**	**51.46**	**313**	*ce*P	**P**	**14 25 27.4**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
PSI	**Prapat**	**51.69**	**240**	P	**P**	**14 25 29.0**	**-0.7**
	comp=Z,3.8nm,0.8s,mb4.4,baz=58,slow=9.2,SNR=3.6						
PSI	**Prapat**	**51.69**	**240**	P	**P**	**14 25 29.0**	**-0.7**
EKS2	**Erkin-Say**	**51.71**	**299**	P	**P**	**14 25 29.5**	**0.0**
	comp=Z,2.2nm,0.6s,mb4.3						
AML	**Almayashu**	**51.92**	**299**	*e*P	**P**	**14 25 32.6**	**+1.5**
	comp=Z,8.8nm,0.5s,mb5.0						
ZRNK	**Zerenda**	**52.24**	**313**	*i* P	**P**	**14 25 32.9**	**-0.4**
ZRNK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
KK31	**Karatay Array**	**53.86**	**301**	*ce*P	**P**	**14 25 45.3**	**-0.1**
KK31				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
INK	**Inuvik**	**54.96**	**27**	P	**P**	**14 25 54.3**	**+1.3**
	comp=Z,3.1nm,0.7s,mb4.4,baz=317,slow=5.8,SNR=7.8						
SVE	**Sverdlovsk**	**56.01**	**319**	⇑*e*P	**P**	**14 26 01.6**	**+0.8**
SVE				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
FITZ	**Fitzroy Crossi**	**56.15**	**199**	P	**P**	**14 26 02.1**	**+0.1**
	comp=Z,1.6nm,0.7s,mb4.1,baz=2.2,slow=6.6,SNR=3.9						
ARU	**Arti**	**57.22**	**319**	*d i*P	**P**	**14 26 09.6**	**+0.2**
ARU						14 28 16.1	
ARU				S	**S**	**14 34 03.7**	**+1.2**
ARU				SS	SS	14 37 51.1	-0.2
ARU				pmax	pmax		
	comp=Z,18nm,1.7s,mb4.8						
ARU	**Arti**	**57.22**	**319**	*e*P	**P**	**14 26 09.6**	**+0.2**
	comp=Z,2.7nm,0.4s,mb4.6						
AB31	**Akbulak array**	**58.76**	**311**	*ce*P	**P**	**14 26 19.8**	**-0.4**
AB31				pmax	pmax		
	comp=Z,1.0nm,0.1s,mb4.8						
ABKAR	**Akbulak array**	**58.76**	**311**	*e*P	**P**	**14 26 19.7**	**-0.5**
	comp=Z,3.2nm,0.4s,mb4.7						
ASAR	**Alice Springs**	**60.02**	**188**	P	**P**	**14 26 28.6**	**-0.5**
	comp=Z,0.8nm,0.6s,mb3.9,baz=18,slow=12,SNR=20						
APA	**Apatity**	**63.59**	**336**	⇑*e*P	**P**	**14 26 53.0**	**+0.3**
APA				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
APA				MLR	MLR		
	comp=Z,100nm,17.0s,MS4.1						
ARCES	**ARCESS Array B**	**64.90**	**340**	P	**P**	**14 27 01.9**	**+0.6**
	comp=Z,2.5nm,0.7s,mb4.3,baz=59,slow=8.5,SNR=14						
ARCES				LR	LR	15 01 53.8	
	comp=Z,42nm,18.1s,MS3.7,baz=218,slow=42						
OBN	**Obninsk**	**68.98**	**324**	*e*P	**P**	**14 27 27.3**	**-0.1**
OBN				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
OBN				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.2						
KAF	**Kangasniemi**	**69.21**	**333**	*e*P	**P**	**14 27 26.3**	**-2.4**
KAF	**Kangasniemi**	**69.21**	**333**	*ep*	**P**	**14 27 26.3**	**-2.4**
FINES	**FINESS Array B**	**69.72**	**333**	P	**P**	**14 27 32.0**	**+0.2**
	comp=Z,4.6nm,0.8s,mb4.5,baz=43,slow=6.0,SNR=14						
KIV	**Kislovodsk**	**71.73**	**311**	*e*P	**P**	**14 27 45.0**	**+0.6**
KIV				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
KIV				MLR	MLR		
	comp=Z,31nm,18.0s,MS3.6						
LRM	**Limekiln Ridge**	**74.49**	**44**	*e*P	**P**	**14 28 02.1**	**+1.4**
	comp=Z,33nm,1.1s,mb5.2						
HFS	**Hagfors**	**75.00**	**336**	LR	LR	15 03 38.5	
	comp=Z,75nm,20.8s,MS4.0,baz=283,slow=38						
NB2	**NORSAR Subarra**	**75.09**	**338**	P	**P**	**14 28 04.3**	**+0.4**
	comp=Z,1.6nm,0.6s,mb4.1,baz=40,slow=5.9						
NOA	**NORSAR Array B**	**75.09**	**338**	P	**P**	**14 28 04.4**	**+0.5**
	comp=Z,3.0nm,0.8s,mb4.3,baz=39,slow=5.7,SNR=

CLL	Collm	82.00	330	*i* P	P	14 28 42.1	0.0
	comp=Z,4.0nm,0.7s						
PRU	Pruhonice	82.38	329	*e*P	P	14 28 44.2	+0.1
PRU	Pruhonice	82.38	329	*e*P	P	14 28 44.2	+0.1
KHC	Kasperske Hory	83.44	329	*e*P	P	14 28 50.1	+0.4
KHC	Kasperske Hory	83.44	329	*e*P	P	14 28 50.1	+0.4
GRF	Grafenberg Arr	83.97	330	*e*P	P	14 28 53.0	+0.6
	comp=Z,12nm,0.8s						
GRF	Grafenberg Arr	83.97	330	*e*P	P	14 28 53.0	+0.6
GRF				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.1						
GRF	Grafenberg Arr	83.97	330	*e*P	P	14 28 53.0	+0.6
	comp=Z,12nm,0.8s,mb5.1						
TXAR	Lajitas Array	90.34	53	P	P	14 29 24.2	+0.6
	comp=Z,0.5nm,0.8s,mb3.9,baz=320,slow=1.8,SNR=7.2						
ESDC	Sonseca Array	98.20	334	LR	LR	15 19 07.6	
	comp=Z,39nm,18.9s,MS3.9,baz=320,slow=38						
LPAZ	La Paz	146.79	61	PKPbc	PKPbc	14 36 05.9	+1.2
	comp=Z,2.0nm,0.5s,baz=357,slow=3.7,SNR=11						

WEL 20 14:23:30.6±0.1, 41°.32S×174°.17E, h42km±1km, ML3.5/13, 3C-6D, Error ellipse: s-maj=1.2km s-min=1.1km az=0.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUWZ	Tuamarina	0.21	236	⇓P*	Pn	14 23 37.6	-0.6
TUWZ				S*	Sn	14 23 42.7	-0.8
SNZO	South Karori	0.40	90	P*	Pn	14 23 40.1	-0.1
SNZO				S*	Sn	14 23 47.2	+0.3
CMWZ	Cape Campbell	0.43	176	⇑P*	Pn	14 23 41.3	+0.7
CMWZ				S*	Sn	14 23 50.3	+2.6
WEL	Wellington	0.45	87	⇑P*	Pn	14 23 40.8	0.0
BSWZ	Blackbirch Sta	0.46	209	⇓P*	Pn	14 23 40.5	-0.4
BSWZ				S*	Sn	14 23 47.9	-0.2
BHW	Baring Head	0.53	100	P*	Pn	14 23 42.0	+0.1
BHW				S*	Sn	14 23 50.6	+0.8
DUWZ	D'Urville Isla	0.55	339	P*	Pn	14 23 41.4	-0.6
DUWZ				S*	Sn	14 23 49.4	-0.6
NNZ	Nelson	0.61	279	⇓PN	Pn	14 23 41.9	-0.9
CAW	Cannon Point	0.70	73	⇓P*	Pn	14 23 44.3	+0.2
KIW	Kapiti Island	0.72	51	⇑P*	Pn	14 23 44.4	+0.1
MSWZ	Moikau Station	0.82	97	P*	Pn	14 23 45.3	-0.3
PLWZ	Palliser	0.85	108	⇓PN	Pn	14 23 45.7	-0.4
OGWZ	Otaki Gorge	0.90	57	⇓PN	Pn	14 23 47.1	+0.3
PAWZ	Paruwai Farm	0.94	95	PN	Pn	14 23 46.9	-0.5
MTW	Mount Morrison	1.01	82	PN	Pn	14 23 47.8	-0.5
THZ	Tophouse	1.05	244	PN	Pn	14 23 48.4	-0.5
HOWZ	Holdsworth Sta	1.09	68	PN	Pn	14 23 49.0	-0.4
TRWZ	Traveller	1.14	95	PN	Pn	14 23 49.6	-0.5
KHZ	Kahutara	1.20	203	PN	Pn	14 23 50.8	-0.1
MRZ	Mangatainoka R	1.25	59	PN	Pn	14 23 51.2	-0.4
TMWZ	Te Maipa	1.31	82	PN	Pn	14 23 51.5	-0.9
QRZ	Quartz Range	1.34	291	PN	Pn	14 23 53.2	+0.4
TIWZ	Tintock	1.40	68	PN	Pn	14 23 52.8	-0.8
POWZ	Post Office Ro	1.52	53	PN	Pn	14 23 54.6	-0.7
DSZ	Dennistoun Nort	1.83	256	PN	Pn	14 23 60.0	+0.4
LTZ	Lake Taylor	2.04	223	PN	Pn	14 24 02.2	-0.2
PNHZ	Pukenui	2.08	48	PN	Pn	14 24 01.9	-1.0
KAHZ	Kahuranaki	2.56	54	PN	Pn	14 24 07.8	-1.7
MQZ	McQueen's Vall	2.64	205	PN	Pn	14 24 09.6	-1.0
HIZ	Hauiti	2.84	11	PN	Pn	14 24 14.9	+1.4
WVZ	Waitaha Valley	3.10	234	PN	Pn	14 24 19.3	+2.3

*IDC **20** 14:23:36.9±1.9, 9°.84N×126°.50E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.5/21, mbtmp3.7/4, Error ellipse: s-maj=207.3km s-min=29.5km az=70.0*
*ISCJB **20** 14:23:46.2±4.1, 9°.6N±0°.2×126°.2E±0°.3, h85km±37km, mb3.6/4, Error ellipse: s-maj=49.7km s-min=19.7km az=149.7*
ISC 20 14:23:47.3±3.9, 9°.6N±0°.2×126°.2E±0°.3, h80km±35km, n6, σ0°83/8, mb3.6/4, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGP	Cagayan de Oro	1.83	233	⇑*i*P	Pn	14 24 15.9	-1.1
CGP				*i* S	Sn	14 24 39.6	0.0
TBP	Tagbilaran	2.28	273	*e*P	Pn	14 24 23.9	+1.0
TBP				*e*S	Sn	14 24 50.3	+0.1
ASAR	Alice Springs	33.89	167	P	P	14 30 23.2	+0.6
	0.2nm,0.7s,mb3.1,baz=349,slow=7.1,SNR=5.2						
MKAR	Makanchi Array	52.52	323	P	P	14 32 51.8	-0.5
	0.3nm,0.5s,mb3.6,baz=118,slow=8.6,SNR=5.4						
ARCES	ARCESS Array B	84.81	340	P	P	14 36 12.7	+0.1
	0.6nm,0.6s,mb3.7,baz=72,slow=5.8,SNR=4.7						
FINES	FINESS Array B	86.45	332	P	P	14 36 20.6	-0.2
	1.2nm,0.8s,mb3.9,baz=79,slow=7.2,SNR=2.5						

*ISCJB **20** 14:34:30.0±0.5, 49°.90N±0°.04×18°.49E±0°.03, h0km, Error ellipse: s-maj=5.1km s-min=3.1km az=4.1*
*CSEM **20** 14:34:30.6±0.2, 49°.91N×18°.51E, h1km, ML2.5/7, Error ellipse: s-maj=3.5km s-min=2.1km az=10.0, Mining explosion.*
*IPEC **20** 14:34:30.7±0.2, 49°.87N×18°.58E, h2km±1km, ML1.4/4, Error ellipse: s-maj=1.8km s-min=1.1km az=165.0*
*PRU **20** 14:34:32.3, 49°.90N×18°.44E, h0km, Explosion-mine Lazy Mining explosion.*
ISC 20 14:34:30.9±0.5, 49°.90N±0°.04×18°.50E±0°.03, h0km, n21, σ1°06/35, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.23	256	*e*PG	Pg	14 34 36.6	+1.2
OKC				*e*SG	Sg	14 34 39.3	+0.9
	comp=Z,72nm,0.2s						
OKC	Ostrava-Krasne	0.23	256	*e*Pg	Pg	14 34 36.2	+0.8
	baz=82						
OKC				Sg	Sg	14 34 39.3	+0.9
	comp=Z,72nm,0.2s						
MORC	Moravsky Berou	0.63	259	*e*Pg	Pg	14 34 43.3	+0.3
	baz=81						
MORC				*e*Sg	Sg	14 34 51.9	+0.8
	comp=Z,7.4nm,0.1s,baz=81						
OJC	Ojcow	0.90	68	*e*Pg	Pg	14 34 47.1	-1.0
	baz=247						
OJC				*e*Sg	Sg	14 35 00.2	+0.5
JAVC	Velka Javorina	1.17	208	*e*Sg	Sg	14 35 11.6	+3.1
	comp=Z,1.9nm,0.2s						
NIE	Niedzica	1.27	111	*e*Pg	Pg	14 34 57.1	+1.8
NIE				*e*Sg	Sg	14 35 15.6	+3.9
VRAC	Vranov	1.37	245	*e*Pg	Pg	14 34 56.8	-0.4
	baz=66						
VRAC				*e*Sg	Sg	14 35 15.5	+0.6
	comp=Z,13nm,0.3s,baz=66						
VYHS	Vyhne	1.42	171	*e*PG	Pg	14 34 58.2	+0.1
VYHS				*e*SG	Sg	14 35 16.2	-0.3
VYHS	Vyhne	1.42	171	*e*Pg	Pg	14 34 58.2	+0.1
VYHS				*e*Sg	Sg	14 35 16.2	-0.3
DPC	Dobruska-Polom	1.47	289	*e*PG	Pg	14 34 59.0	-0.1
DPC				*e*SG	Sg	14 35 19.2	+1.0
	comp=Z,6.0nm,0.4s						
DPC	Dobruska-Polom	1.47	289	Pg	Pg	14 34 59.0	-0.1
DPC				Sg	Sg	14 35 19.2	+1.0
	comp=Z,6.0nm,0.4s						
KRUC	Moravsky	1.61	239	*e*Sg	Sg	14 35 21.4	-1.0
	comp=Z,2.8nm,0.1s,baz=60						
UPC	Upice	1.71	292	*e*PG	Pg	14 35 03.3	-0.4
UPC				*e*SG	Sg	14 35 25.4	-0.4
UPC	Upice	1.71	292	Pg	Pg	14 35 03.3	-0.4
UPC				Sg	Sg	14 35 25.4	-0.4
STHS	Stebnicka Huta	1.85	104	*e*PN	Pn	14 35 07.7	+3.9
STHS				*e*SN	Sn	14 35 33.8	+6.0
STHS	Stebnicka Huta	1.85	104	*e*Pn	Pn	14 35 07.7	+3.9
KECS	Kecovo	1.92	137	*e*PG	Pg	14 35 06.4	-1.3
KECS				*e*SG	Sg	14 35 31.3	-1.3
PRU	Pruhonice	2.56	274	*e*SG	Sg	14 35 51.2	-1.8
	comp=Z,2.6nm,0.6s						
PRU	Pruhonice	2.56	274	Sg	Sg	14 35 51.2	-1.8
	comp=Z,2.6nm,0.6s						
KHC	Kasperske Hory	3.30	258	*e*SG	Sg	14 36 15.7	-1.0
	comp=Z,4.0nm,0.5s						
KHC	Kasperske Hory	3.30	258	Sg	Sg	14 36 15.7	-1.0
	comp=Z,4.0nm,0.5s						

*IDC **20** 14:55:11.7±1.4, 32°.13N×104°.79E, h0km, mb3.3/2, mb1 3.4/4, mb1mx3.2/24, mbtmp3.3/4, ML3.0/2, MS3.2/1, Ms1 3.2/1, ms1mx2.5/16, Error ellipse: s-maj=44.2km s-min=25.5km az=60.0*
*BJI **20** 14:55:15.1, 32°.43N×104°.94E, h14km, ML3.0/8*
ISC 20 14:55:12.3±2.1, 32°.20N±0°.07×105°.01E±0°.07, h1km±12km, n8, σ0°77/10, mb3.3/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	Xi'an	3.76	60	Pg	Pb	14 56 20.9	+1.5
XAN				Sn	Sn	14 56 55.5	-0.7
XAN				Sg	Sg	14 57 12.5	-0.6
XAN				smax			
	comp=N,60nm,0.8s						
XAN				smax			
	comp=E,35nm,0.7s						
LZH	Lanzhou	3.99	346	Pg	Pg	14 56 28.3	-0.5
LZH				Sg	Sb	14 57 12.4	+0.3
LZH				smax			
	comp=N,99nm,0.7s						
LZH				smax			
	comp=E,140nm,0.7s						
LZH				LR	LR		
	comp=E,290nm,5.2s						
LZH				LR	LR		
	comp=Z,350nm,6.0s						
SONM	Songino Array	15.65	3	Pn	Pn	14 58 55.0	+1.1
	comp=Z,0.1nm,0.3s,baz=198,slow=9.1,SNR=1.9						
KSRS	Korea Array	19.51	68	P	Pn	14 59 42.3	+0.2
	comp=Z,0.1nm,0.3s,baz=252,slow=12,SNR=3.2						
MKAR	Makanchi Array	22.68	317	P	P	15 00 13.9	-1.1
	comp=Z,0.5nm,0.8s,mb3.0,baz=118,slow=7.9,SNR=5.8						
CBIJ	Chichi jima	32.60	89	LR	LR	15 16 01.9	
	comp=Z,34nm,19.0s,baz=129,slow=38						
WRA	Warramunga Arr	58.97	147	P	P	15 05 13.5	+0.1
	baz=342,slow=7.7						
ASAR	Alice Springs	62.04	150	P	P	15 05 34.1	-0.2
	comp=Z,0.2nm,0.4s,mb3.6,baz=324,slow=6.4,SNR=6.7						

WEL 20 15:13:25.8±0.5, 39°.30S×174°.83E, h182km±3km, ML3.5/8, 1D, Error ellipse: s-maj=4.4km s-min=3.8km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAZ	Wanganui	0.47	165	PN	Pn	15 13 51.1	+0.5
WAZ				SN	Sn	15 14 10.0	0.0
MOVZ	Moawhango	0.73	99	⇓PN	Pn	15 13 51.5	-0.4
MOVZ				SN	Sn	15 14 10.5	-1.4
PNHZ	Pukenui	1.23	121	PN	Pn	15 13 55.7	+0.3
PNHZ				SN	Sn	15 14 17.9	-0.4
BKZ	Black Stump Fm	1.30	85	PN	Pn	15 13 55.4	-0.7
BKZ				SN	Sn	15 14 17.7	-1.7
MCHZ	McNeill Hill	1.46	96	PN	Pn	15 13 57.9	+0.5
MRZ	Mangatainoka R	1.48	157	PN	Pn	15 13 57.7	+0.1
OGWZ	Otaki Gorge	1.54	170	PN	Pn	15 13 58.4	+0.2
NMHZ	Naumai	1.55	83	PN	Pn	15 13 58.7	+0.3
KIW	Kapiti Island	1.56	178	PN	Pn	15 13 58.4	0.0
DUWZ	D'Urville Isla	1.66	204	PN	Pn	15 13 58.7	-0.7
KAHZ	Kahuranaki	1.66	108	PN	Pn	15 13 59.8	+0.4
HOWZ	Holdsworth Sta	1.68	162	PN	Pn	15 13 59.4	-0.3
PXZ	Pawanui	1.73	116	PN	Pn	15 14 00.3	+0.1
CKHZ	Cape Kidnapper	1.78	102	PN	Pn	15 14 00.8	+0.2
CAW	Cannon Point	1.82	174	PN	Pn	15 14 00.8	-0.2
TCW	Tory Channel	1.96	192	PN	Pn	15 14 02.1	-0.4
TMWZ	Te Maipa	1.98	156	PN	Pn	15 14 04.4	+1.7
WEL	Wellington	1.99	181	PN	Pn	15 14 02.2	-0.6
SNZO	South Karori	2.01	183	PN	Pn	15 14 02.5	-0.6
URZ	Urewera	2.06	61	PN	Pn	15 14 01.3	-2.4
BHW	Baring Head	2.11	179	PN	Pn	15 14 03.4	-0.7
NNZ	Nelson	2.21	210	PN	Pn	15 14 03.8	-1.5
KNZ	Kokohu	2.23	84	PN	Pn	15 14 04.4	-1.1
TUWZ	Tuamarina	2.23	197	PN	Pn	15 14 04.8	-0.7
PLWZ	Palliser	2.29	172	PN	Pn	15 14 05.9	-0.3
MWZ	Matawai	2.32	66	PN	Pn	15 14 04.6	-1.9
QRZ	Quartz Range	2.33	228	PN	Pn	15 14 04.2	-2.4
MHGZ	Mahia Peninsul	2.40	88	PN	Pn	15 14 06.7	-0.6
PRGZ	Paritu Road	2.41	82	PN	Pn	15 14 06.5	-1.0
CNGZ	Carnagh Statio	2.76	74	PN	Pn	15 14 10.4	-1.2
KHZ	Kahutara	3.27	197	PN	Pn	15 14 16.5	-1.1
LTZ	Lake Taylor	3.98	208	PN	Pn	15 14 24.4	-2.3

*NIED **20** 15:15:00, 45°.40N×151°.40E, h17km, Mw3.7 Best double couple: M0 3.92000×10^14 NP1:φ=16.00000°, δ=50.00000°, λ=68.00000°. NP2:φ=228.00000°, δ=45.00000°, λ=114.00000°.*
*MOS **20** 15:15:21.2±1.4, 44°.99N×151°.59E, h37km, mb4.0/1, Error ellipse: s-maj=19.8km s-min=16.5km az=147.8*
*JMA **20** 15:15:22.4±0.7, 45°.38N×151°.37E, h30km, M3.9*
*IDC **20** 15:15:24.0±6.1, 44°.99N×151°.59E, h37km±35km, mb3.6/4, mb1 3.5/7, mb1mx3.3/25, mbtmp3.5/7, ML3.1/2, MS2.7/2, Ms1 2.7/2, ms1mx2.2/37, Error ellipse: s-maj=122.1km s-min=31.6km az=139.0*
*NEIC **20** 15:15:24.8±2.7, 45°.11N×151°.34E, h36km±22km, mb3.9/1, Error ellipse: s-maj=90.0km s-min=14.1km az=133.0*
*ISCJB **20** 15:15:26.0±1.5, 44°.5N±0°.1×151°.3E±0°.1, h90km±13km, mb3.6/5, Error ellipse: s-maj=18.1km s-min=13.2km az=147.1*
ISC 20 15:15:26.6±1.5, 44°.6N±0°.1×151°.4E±0°.1, h75km±14km, n34, σ1°15/40, mb3.6/5, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.57	285	PN	Pn	15 16 02.0	-3.9
KUR				*i* S	Sn	15 16 36.0	-0.1
KUR				pmax	pmax		
	comp=Z,50nm,0.3s						
KUR				smax			
	comp=N,360nm,0.6s						
KUR				smax			
	comp=E,150nm,0.6s						
NEM2	Nemuro 2	4.26	255	P	Pn	15 16 27.7	-1.2
NEM2				*e*S	Sn	15 17 15.4	-1.9
JRA	Rausu	4.55	263	P	Pn	15 16 33.1	+0.3
JNK	Nakash	4.91	260	P	Pn	15 16 37.6	-0.2
JAK	Akkeshi	5.11	254	P	Pn	15 16 39.4	-1.0
JTKR	Abashiri--Toko	5.41	266	P	Pn	15 16 44.7	+0.2
JOB	Onbets	5.73	255	P	Pn	15 16 48.7	-0.3
JMP	Maruseppu	5.79	267	P	Pn	15 16 50.1	+0.3
JCH	Churui	6.16	254	P	Pn	15 16 54.8	0.0
JKK2	Kamakawa 2	6.25	266	P	Pn	15 16 56.8	+0.8
ASAJ	Asahikawa	6.32	268	Pn	Pn	15 16 57.6	+0.7
	comp=E,0.6nm,0.3s,baz=71,slow=17,SNR=7.2						
ASAJ				LR	LR	15 19 37.5	
	comp=E,60nm,19.7s,baz=330,slow=39						
JFR	Furan	6.52	260	P	Pn	15 17 00.4	+0.7
JFR				*e*S	Sn	15 18 14.2	+1.7
JEM	Erimo	6.54	249	P	Pn	15 17 02.1	+2.0
JEM				*e*S	Sn	15 18 14.4	+1.2
ERM	Erimo	6.54	249	*e*PN	Pn	15 17 02.0	+1.9
ERM				pmax	pmax		
	comp=Z,25nm,0.7s						
ERM	Erimo	6.54	249	*e*Pn	Pn	15 17 02.0	+1.9
	comp=Z,25nm,0.7s						
JNBK	Urakawa-nobuka	6.70	253	P	Pn	15 17 01.8	-0.5
JNB	Noboribetsu	7.82	258	P	Pn	15 17 18.2	+0.7
JNB				*e*S	Sn	15 18 43.8	-0.6
JKB	Kayabe	8.04	254	P	Pn	15 17 19.6	-0.8
JKB				*e*S	Sn	15 18 46.5	-3.2
JYM2	Yakumo 2	8.41	256	P	Pn	15 17 25.2	-0.3
JANG	Nango	8.44	243	P	Pn	15 17 24.4	-1.5
JANG				*e*S	Sn	15 18 55.7	-3.8
JTH	Tanohata	8.47	240	P	Pn	15 17 25.2	-1.2
JTM	Tenmabayashi	8.51	247	*e*S	Sn	15 18 58.6	-2.7
JOSM	Okushiri--Mats	9.04	258	P	Pn	15 17 34.5	+0.3
PETK	Petropavlovsk-	9.45	24	Pn	Pn	15 17 32.5	-7.1
	comp=Z,0.1nm,0.3s,baz=183,slow=11,SNR=5.7						
MJAR	Matsushiro Arr	12.85	236	Pn	Pn	15 18 27.2	+1.0
	comp=Z,0.3nm,0.3s,baz=34,slow=12,SNR=7.2						
KSRS	Korea Array	19.05	256	LR	LR	15 26 12.8	
	comp=Z,23nm,21.3s,baz=80,slow=34						
MK31	Makanchi Array	46.86	298	*e*P	P	15 23 49.1	+0.3
MKAR	Makanchi Array	46.86	298	P	P	15 23 49.5	+0.6
	comp=Z,0.4nm,0.3s,mb3.7,baz=73,slow=8.1,SNR=8.1						
KURK	Kurchatov	47.55	305	*e*P	P	15 23 52.6	-1.5
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.8						
KURK	Kurchatov	47.55	305	*e*P	P	15 23 52.6	-1.5
	comp=Z,0.8nm,0.6s,mb3.7						
FINES	FINESS Array B	65.44	334	P	P	15 25 60.0	-0.9
	comp=Z,0.9nm,0.8s,mb3.7,baz=38,slow=7.0,SNR=5.8						
NOA	NORSAR Array B	69.84	341	P	P	15 26 28.3	-0.3
	comp=Z,0.8nm,0.7s,mb3.7,baz=29,slow=6.5,SNR=3.8						
NOA	NORSAR Array B	69.84	341	P	P	15 26 28.3	-0.3
BRTR	Keskin Array B	79.09	316	P	P	15 27 25.5	+2.9
	comp=Z,0.4nm,0.6s,mb3.5,baz=97,slow=5.9,SNR=3.5						

*IDC **20** 15:19:33.0±1.5, 6°.42S×151°.42E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.7/16, mbtmp3.8/6, MS3.1/2, Ms1 3.1/2, ms1mx2.5/19, Error ellipse: s-maj=62.1km s-min=22.8km az=112.0*
*ISCJB **20** 15:19:38.7±4.1, 6°.5S±0°.2×151°.3E±0°.3, h52km±33km, mb3.9/10, MS2.9/2, Error ellipse: s-maj=43.0km s-min=23.0km az=17.4*
*NEIC **20** 15:19:40.2±3.0, 6°.47S×151°.34E, h54km±25km, mb4.1/4, Error ellipse: s-maj=29.6km s-min=16.3km az=107.0*
ISC 20 15:19:40.2±3.9, 6°.4S±0°.2×151°.3E±0°.3, h51km±32km, n15, σ0°92/14, mb3.9/10, MS2.9/2, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	5.04	234	*e*P	Pn	15 20 53.8	+0.5
KAKA	Kakadu	19.59	250	*e*P	Pn	15 24 03.9	-2.1
GUMO	Guam	20.89	342	LR	LR	15 30 51.3	
	comp=Z,21nm,18.8s,MS2.5,baz=237,slow=32						
WRAB	Tennant Creek	21.23	229	*e*P	P	15 24 23.6	+1.6
	5.1nm,0.7s,mb4.0						
WRA	Warramunga Arr	21.24	229	P	P	15 24 21.2	-0.9
	0.8nm,0.4s,mb3.4,baz=56,slow=11,SNR=5.7						
ASAR	Alice Springs	23.93	222	P	P	15 24 49.4	-0.3
	2.4nm,0.9s,mb3.6,baz=54,slow=9.1,SNR=52						
STKA	Stephens Creek	26.88	198	P	P	15 25 17.1	+0.8
	2.2nm,0.7s,mb3.8,baz=19,slow=18,SNR=4.8						
STKA				LR	LR	15 34 56.8	
	comp=Z,86nm,19.1s,MS3.3,baz=206,slow=34						
STKA	Stephens Creek	26.88	198	*e*P	P	15 25 16.2	-0.1
STKA				LR	LR	15 34 56.8	
SONM	Songino Array	66.92	329	P	P	15 30 28.5	+1.4
	0.3nm,0.4s,mb3.7,baz=142,slow=4.5,SNR=3.4						
MK31	Makanchi Array	80.57	319	*e*P	P	15 31 47.2	0.0
MKAR	Makanchi Array	80.57	319	P	P	15 31 47.8	+0.6
	0.3nm,0.2s,mb3.6,baz=99,slow=9.1,SNR=4.0						
COLA	College	83.92	22	*e*P	P	15 32 03.6	-0.8
	1.5nm,0.7s,mb4.2						
KURK	Kurchatov	84.13	322	P	P	15 32 05.5	-0.2
	1.5nm,0.9s,mb4.1						
ILAR	Eielson Array	84.23	22	P	P	15 32 05.3	-0.6
	0.8nm,0.7s,mb4.0,baz=248,slow=5.0,SNR=13						
AML	Almayashu	85.16	313	*e*P	P	15 32 11.3	+0.2
	3.7nm,1.1s,mb4.4						

CSEM 20 15:20:35.0±0.3, 28°.12N×57°.61E, h2km, ML3.6, Error ellipse: s-maj=9.7km s-min=5.7km az=146.0, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	1.46	241	*e*Pg	Pg	15 21 03.0	0.0
KRBR	Kerman	2.00	338	*e*Pg	Pg	15 21 13.6	+0.2
ZHSF	Zahedan	3.15	61	*e*Pn	Pn	15 21 25.9	+0.3
KBD	Kabd	8.78	279	*e*P	Pn	15 22 42.8	-0.1
UMR	Umm Al-Rimmam	8.80	282	*e*P	Pn	15 22 43.8	+0.6

CASC 20 15:28:58.3±1.3, 13°.11N×90°.02W, h20km±10km, MD3.5, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOQS	Boqueron	0.95	49	*e*P	Pb	15 29 15.8	-0.3
RBDL	Robledal	1.05	18	*e*P	Pb	15 29 17.4	-0.3
LFRS	El Faro	1.06	61	*e*P	Pb	15 29 17.1	-0.9
FUG	Fuego 3	1.55	329	*e*P	Pn	15 29 23.8	-1.0
FG6		1.67	330	*e*P	Pn	15 29 26.3	0.0
FG6				*e*S	Sn	15 29 48.9	+1.8
TP2	Tecpan 2	1.92	330	*e*P	Pn	15 29 31.5	+1.7
TP2				*e*S	Sn	15 29 55.3	+1.9
CNCH	Conchagua	2.14	85	*e*P	Pn	15 29 33.2	+0.4

*ISCJB **20** 15:32:24.2±0.3, 55°.77N±0°.03×161°.23E±0°.06, h162km±1km, mb3.7/22, Error ellipse: s-maj=6.2km s-min=4.8km az=35.0*
*MOS **20** 15:32:24.1±0.9, 55°.87N×161°.05E, h160km, mb4.3/6, Error ellipse: s-maj=15.1km s-min=8.1km az=79.7*
*KRSC **20** 15:32:24.0±1.1, 55°.69N×161°.33E, h157km±36km, ML4.4*
*NEIC **20** 15:32:25.9±0.9, 55°.85N×160°.96E, h160km±9km, mb4.3/5, Error ellipse: s-maj=10.0km s-min=7.0km az=157.0*
*IDC **20** 15:32:26.3±2.2, 55°.89N×160°.89E, h161km±22km, mb3.4/19, mb1 3.6/21, mb1mx3.6/28, mbtmp3.5/21, Error ellipse: s-maj=15.6km s-min=10.2km az=155.0*
ISC 20 15:32:25.3±0.3, 55°.75N±0°.03×161°.21E±0°.07, h158km±1km, n74, σ0°99/92, mb3.7/22, 2C-1D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZLN	Zelenaya	0.35	319	*e*P	Pn	15 32 47.4	+0.5
ZLN				*e*S	Sn	15 33 04.4	+1.0
BZMR	Bezymyannaya	0.44	294	*e*P	Pn	15 32 47.6	+0.4
BZMR				*e*S	Sn	15 33 04.5	+0.5
CIRR	Tsirk	0.45	325	*e*P	Pn	15 32 47.6	+0.4
CIRR				*e*S	Sn	15 33 04.7	+0.7
KMNR	Kamenistaya	0.55	271	*e*P	Pn	15 32 48.3	+0.6
KMNR				*e*S	Sn	15 33 06.2	+1.4
KRSR	Krestovskiy	0.59	322	*e*P	Pn	15 32 47.6	-0.3
KRSR				*e*S	Sn	15 33 04.9	-0.4
KPT	Kopyto	0.60	291	*e*P	Pn	15 32 48.1	+0.1
KPT				*e*S	Sn	15 33 05.7	+0.4
KLY	Klyuchi	0.64	331	*e*P	Pn	15 32 47.8	-0.4
KLY				*i* S	Sn	15 33 05.3	-0.5
KOZR	Kozyr	0.80

YAK pmax pmax
comp=E,8.0nm,1.2s
YAK Yakutsk 17.33 304 *eP* **Pn 15 36 15.6 -1.7**
comp=E,9.5nm,0.6s
HABR Khabarovsk 17.57 256 *eP* **Pn 15 36 16.0 -4.2**
HABR *eS* **S 15 39 29.6 -3.5**
HABR MLR MLR
comp=Z,20nm,14.0s
ERM Erimo 18.09 228 *c iP* **P 15 36 25.0 +0.3**
ERM Erimo 18.09 228 *eP* **P 15 36 25.2 +0.4**
comp=Z,21nm,0.5s
TIXI Tiksi 20.98 332 *eP* **P 15 36 56.0 +0.3**
TIXI pmax pmax
comp=Z,8.0nm,0.8s
TIXI Tiksi 20.98 332 *eP* **P 15 36 56.0 +0.3**
comp=Z,8.4nm,0.8s
MAJO Matsushiro 24.76 229 *eP* **P 15 37 32.0 -0.1**
MAT Matsushiro 24.76 229 P P **15 37 32.3 +0.2**
MJAR Matsushiro Arr 24.76 229 P P **15 37 32.4 +0.3**
comp=Z,2.1nm,0.5s,mb3.9,baz=44,slow=7.3,SNR=19
KDAK Kodiak Island 25.03 66 P **P 15 37 35.3 +1.0**
comp=Z,2.9nm,0.4s,mb4.2,baz=168,slow=5.7,SNR=6.4
KDAK Kodiak Island 25.03 66 *i P* **P 15 37 36.1 +1.8**
ILAR Eielson Array 26.52 49 P **P 15 37 48.0 +0.3**
comp=Z,0.9nm,0.7s,mb3.5,baz=269,slow=8.3,SNR=10
ILAR pP pP 15 38 21.8 +1.4
comp=Z,0.6nm,0.9s,baz=263,slow=8.6,SNR=3.7
KSRS Korea Array 28.89 245 P **P 15 38 10.6 +1.6**
comp=Z,0.8nm,0.6s,mb3.6,baz=41,slow=8.0,SNR=3.3
KSRS Korea Array 28.89 245 P **P 15 38 10.6 +1.6**
KSRS pmax pmax
comp=Z,1.0nm,0.6s,mb3.7
EGAK Eagle 28.96 48 *eP* **P 15 38 08.9 -0.4**
SONM Songino Array 34.00 280 P **P 15 38 53.7 +0.1**
comp=Z,0.6nm,0.6s,mb3.5,baz=49,slow=9.7,SNR=3.0
DLBC Dease Lake 35.98 57 P **P 15 39 12.9 +2.5**
comp=Z,1.7nm,0.8s,mb3.7,baz=267,slow=13,SNR=3.4
YKA Yellowknife Ar 40.79 45 P **P 15 39 51.4 +1.0**
comp=Z,1.0nm,0.6s,mb3.6,baz=302,slow=8.5,SNR=4.0
NVS Novosibirsk 42.19 303 *eP* **P 15 40 01.2 -0.7**
KURK Kurchatov 46.92 300 *d iP* **P 15 40 38.0 -1.5**
KURK pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
KURK Kurchatov 46.92 300 *eP* **P 15 40 37.8 -1.6**
comp=Z,3.0nm,0.3s,mb4.4
MK31 Makanchi Array 47.62 294 *eP* **P 15 40 43.9 -1.1**
MKAR Makanchi Array 47.62 294 P **P 15 40 43.5 -1.5**
comp=Z,1.2nm,0.6s,mb3.7,baz=55,slow=7.3,SNR=16
MKAR Makanchi Array 47.62 294 *eP* **P 15 40 43.8 -1.2**
BVAR Borovoye Array 49.27 307 P **P 15 40 56.1 -1.4**
comp=Z,1.4nm,0.4s,mb3.9,baz=64,slow=8.9,SNR=8.6
BVAR Borovoye Array 49.27 307 *eP* **P 15 40 56.4 -1.1**
BRVK Borovoye 49.30 307 *eP* **P 15 40 55.7 -2.0**
BRVK pmax pmax
comp=Z,2.0nm,0.6s,mb3.9
BRVK Borovoye 49.30 307 *eP* **P 15 40 55.7 -2.0**
comp=Z,1.6nm,0.6s,mb3.8
ARCES ARCESS Array B 50.96 342 P **P 15 41 09.5 -0.4**
comp=Z,1.1nm,0.9s,mb3.5,baz=27,slow=10,SNR=4.6
ARU Arti 51.90 316 *c iP* **P 15 41 15.9 -1.2**
ARU 15 43 13.1
ARU S **S 15 48 28.3 +1.2**
ARU SS SS 15 52 08.2 +3.0
ARU pmax pmax
comp=Z,4.0nm,0.6s,mb4.2
NVAR Mina Array Bea 54.27 73 P **P 15 41 37.2 +2.5**
comp=Z,1.0nm,0.7s,mb3.7,baz=300,slow=7.1,SNR=9.8
NVAR Mina Array Bea 54.27 73 P **P 15 41 37.2 +2.5**
PDAR Pinedale Array 55.69 63 P **P 15 41 46.5 +1.7**
comp=Z,0.4nm,0.5s,mb3.5,baz=0.0,slow=4.4,SNR=4.1
FINES FINESS Array B 57.94 336 P **P 15 41 59.9 -0.5**
comp=Z,1.0nm,0.6s,mb3.9,baz=32,slow=7.5,SNR=9.3
CMAR Chiang Mai Arr 59.38 257 PcP PcP 15 42 57.4 +0.3
comp=Z,0.7nm,0.7s,baz=15,slow=4.4,SNR=5.4
NOA NORSAR Array B 61.16 344 P **P 15 42 22.2 -0.2**
comp=Z,0.8nm,0.9s,mb3.5,baz=18,slow=6.8,SNR=3.7
AKASG Malin Array Be 66.67 329 P **P 15 42 57.6 -0.9**
comp=Z,0.5nm,0.3s,mb3.8,baz=26,slow=6.4,SNR=3.2
TXAR Lajitas Array 69.03 69 P **P 15 43 15.0 +1.4**
comp=Z,0.7nm,0.5s,mb3.6,baz=299,slow=4.9,SNR=15
TXAR Lajitas Array 69.03 69 P **P 15 43 15.0 +1.4**
TXAR pmax pmax
comp=Z,1.0nm,0.5s
BRTR Keskin Array B 74.98 321 P **P 15 43 47.0 -1.8**
comp=Z,0.8nm,0.7s,mb3.4,baz=70,slow=3.8,SNR=6.2
WRA Warramunga Arr 78.77 206 P **P 15 44 10.4 +0.3**
comp=Z,0.8nm,1.0s,mb3.3,baz=16,slow=5.9
ASAR Alice Springs 82.45 205 P **P 15 44 30.4 +0.7**
comp=Z,0.3nm,0.4s,mb3.3,baz=16,slow=4.7,SNR=26

MAN 20 15:47:51, 13°.40N×120°.11E, h8km, mb4.9, ML3.8, MS3.9, 1C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.36**	**22**	*eP*		Pg	15 47 59.3	+1.3
PGP	**Puerto Galera**	**0.83**	**83**	⇓*eP*		Pg	15 48 06.4	-0.6
TGY	**Tagaytay City**	**1.06**	**49**	⇓*eP*		Pg	15 48 12.0	+0.5
TGY				*eS*		Sg	15 48 19.5	-5.8
BUSP	**Coron**	**1.39**	**176**	*eP*		Pn	15 48 17.0	+0.2
BOAC	**Boac**	**1.69**	**88**	*eP*		Pn	15 48 20.6	-0.2
ENPP	**El Nido**	**2.28**	**197**	*eP*		Pn	15 48 29.1	+0.1
SCZP	**Santa Cruz**	**2.37**	**355**	*eP*		Pn	15 48 29.6	-0.5
CUYO	**Cuyo Island**	**2.69**	**161**	*eP*		Pn	15 48 34.0	-0.6
BALP	**Baler**	**2.73**	**31**	*eP*		Pn	15 48 36.4	+1.3

DJA 20 15:58:59, 8°.15S×117°.86E, h60km, MLv4.0/15, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KHKI	**Kahang-Kahang**	**2.24**	**264**	P		Pn	15 59 33.7	0.0
KHKI				S		Sn	16 00 06.6	+6.3
SRBI	**Singaraja**	**2.62**	**271**	P		Pn	15 59 36.7	-2.3
SRBI				S		Sn	16 00 09.4	-0.2
WSI	**Waingapu**	**2.84**	**122**	P		Pn	15 59 41.9	-0.1
WSI				S		Sn	16 00 16.9	+1.9
NBBI	**Negara**	**3.21**	**266**	P		Pn	15 59 48.3	+1.2
NBBI				S		Sn	16 00 25.1	+0.9
BYJI	**Banyuwangi**	**3.47**	**269**	P		Pn	15 59 51.5	+0.9
BKSI	**Bulukumba**	**3.60**	**39**	P		Pn	15 59 53.3	+1.0
BKSI				S		Sn	16 00 35.2	+1.6
KMMI	**Kalianget**	**4.01**	**286**	P		Pn	15 59 59.1	+1.1
BNSI	**Bone**	**4.34**	**31**	P		Pn	16 00 04.9	+2.4
MMRI	**Maumere**	**4.36**	**97**	P		Pn	16 00 05.0	+2.3
MMRI				S		Sn	16 00 54.5	+2.2
GMJI	**Gumukmas**	**4.37**	**268**	P		Pn	16 00 03.8	+0.9
SPSI	**Sidrap Palu**	**4.57**	**25**	P		Pn	16 00 03.5	-2.2
TTSI	**Tana Toraja**	**5.43**	**21**	P		Pn	16 00 19.1	+1.6
	0.1nm14nm,1.7s							
PWJI	**Pagerwojo**	**6.00**	**271**	P		Pn	16 00 25.7	+0.5
	0.2nm38nm,2.0s							
SJI	**Sawahan**	**6.05**	**273**	P		Pn	16 00 26.9	+1.0
	0.3nm33nm,1.6s							
KDI	**Kendari**	**6.30**	**49**	P		Pn	16 00 30.5	+1.1
	0.1nm12nm,1.1s							

DJA 20 16:00:29, 0°.09S×122°.96E, h30km, MLv3.2/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.96**	**191**	P		Pn	16 00 45.3	-1.2
LUWI	**Luwuk**	**0.96**	**191**	P		Pn	16 00 45.1	-1.4
MRSI	**Marisa**	**1.17**	**299**	P		Pn	16 00 49.5	+0.2
KMSI	**Cibinong**	**1.22**	**57**	P		Pn	16 00 50.4	+0.4
APSI	**Ampana**	**1.54**	**238**	P		Pn	16 00 54.7	+0.2
APSI				S		Sn	16 01 14.8	+1.3
APSI	**Ampana**	**1.54**	**238**	P		Pn	16 00 55.2	+0.7

TRN ***20*** *16:31:33.1, 16°.34N×61°.77W, h17km, MD3.7*
TRN Felt II, Guadeloupe.
ISCJB ***20*** *16:31:35.3±0.5, 16°.30N±0°.03×61°.77W±0°.05, h8km±4km, Error ellipse: s-maj=9.1km s-min=2.8km az=152.3*
NEIC ***20*** *16:31:35.1, 16°.39N×61°.55W, h35km, MD3.7(TRN), After TRN.*
RSPR ***20*** *16:31:37.0, 16°.00N×61°.82W, h48km±28km, MD4.0/4*
ISC 20 16:31:35.8±0.4, 16°.30N±0°.03×61°.73W±0°.05, h11km±3km, n42, σ0°.75/60, 14C-10D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LZG	**Guadaloupe-1**	**0.16**	**196**	⇑*iP*		Pg	16 31 39.2	-0.3
BCG	**Bois Riant Cap**	**0.23**	**154**	⇑*iP*		Pg	16 31 40.8	+0.1
SEG	**Port Louis**	**0.24**	**64**	⇑*iP*		Pg	16 31 41.5	+0.7
SCG	**Saint Claude**	**0.27**	**170**	⇑*iP*		Pg	16 31 41.2	-0.1
PHG	**Guadaloupe-2**	**0.29**	**164**	⇑*iP*		Pg	16 31 41.7	-0.1
HMG	**Houelmont**	**0.31**	**175**	⇑*iP*		Pg	16 31 42.1	-0.1
TBG	**Guadaloupe-3**	**0.45**	**170**	⇑*iP*		Pg	16 31 44.4	-0.2
SFG	**Saint Francois**	**0.51**	**95**	⇓*iP*		Pg	16 31 45.8	-0.1
MGG	**Marie-Galante**	**0.55**	**133**	⇓*iP*		Pg	16 31 46.4	-0.1
BPA	**Boggy Peak**	**0.76**	**351**	⇓*iP*		Pg	16 31 49.6	-0.9
BPA				*eS*		Sg	16 32 00.1	-0.3
BPA	**Boggy Peak**	**0.76**	**351**	⇓*iP*		Pg	16 31 49.6	-0.9
BPA				*eS*		Sg	16 32 00.1	-0.3
DWS	**Wesley**	**0.83**	**151**	*eP*		Pg	16 31 52.9	+1.1
DWS				*eS*		Sg	16 32 03.0	+0.4
DWS	**Wesley**	**0.83**	**151**	*eP*		Pg	16 31 52.9	+1.1
DWS				*eS*		Sg	16 32 05.8	+3.1
MDN	**Morne-Daniel**	**1.02**	**162**	*eP*		Pg	16 31 55.5	-0.1
MDN				*eS*		Sg	16 32 09.2	+0.2
MDN	**Morne-Daniel**	**1.02**	**162**	*eP*		Pg	16 31 55.5	-0.1
MDN				*eS*		Sg	16 32 09.2	+0.2
DLPL	**La Plaine**	**1.06**	**154**	*eP*		Pb	16 31 55.1	-1.1
DLPL				*eS*		Sg	16 32 11.3	+1.1
DPMT	**Pointe Michel**	**1.08**	**162**	⇑*iP*		Pb	16 31 56.9	+0.3
DPMT				*eS*		Sb	16 32 10.9	+0.2
DPMT	**Pointe Michel**	**1.08**	**162**	⇑*iP*		Pb	16 31 56.9	+0.3
DPMT				*eS*		Sb	16 32 10.9	+0.2
DFBT	**Forest Bistro**	**1.11**	**161**	⇑*iP*		Pb	16 31 57.0	-0.1
DFBT				*eS*		Sb	16 32 11.1	-0.4
DFBT	**Forest Bistro**	**1.11**	**161**	⇑*iP*		Pb	16 31 57.0	-0.1
DFBT				*eS*		Sb	16 32 11.1	-0.4
DSTT	**Stowe**	**1.12**	**159**	*eP*		Pb	16 31 57.2	0.0
DSTT				*eS*		Sb	16 32 11.1	-0.7
DSTT	**Stowe**	**1.12**	**159**	*eP*		Pb	16 31 57.2	0.0
DSTT				*eS*		Sb	16 32 11.1	-0.7
DSHT	**Scott's Head**	**1.13**	**162**	*eP*		Pb	16 31 57.3	0.0
DSHT				*eS*		Sb	16 32 11.3	-0.7
DSHT	**Scott's Head**	**1.13**	**162**	*eP*		Pb	16 31 57.3	0.0
DSHT				*eS*		Sb	16 32 11.3	-0.7
ANWB	**Willy Bob**	**1.37**	**358**	*ePn*		Pn	16 31 59.2	-1.6
SKI	**Saint Kitts**	**1.41**	**317**	*eP*		Pn	16 32 01.2	-0.3
SKI				*eS*		Sn	16 32 20.2	+0.1
FDF	**Fort de France**	**1.65**	**160**	⇓*eP*		Pn	16 32 03.9	-0.8
FDF				⇓*eS*		Sn	16 32 26.0	0.0
SEUS	**St. Eustatius**	**1.69**	**315**	*eS*		Sn	16 32 27.5	+0.6
SEUS	**St. Eustatius**	**1.69**	**315**	⇑*eP*		Pn	16 32 05.1	-0.1
BIM	**Bigot**	**1.88**	**160**	*eP*		Pn	16 32 07.5	-0.4
MVM	**Montagne Vaucl**	**1.91**	**155**	*eP*		Pn	16 32 07.9	-0.4
MVM				*eS*		Sn	16 32 32.9	+0.6
SABA	**Saba**	**1.96**	**312**	⇑*eP*		Pn	16 32 11.2	+2.3
SABA	**Saba**	**1.96**	**312**	*eS*		Sn	16 32 33.5	0.0
SMRT	**St. Maarten**	**2.17**	**324**	⇓*eP*		Pn	16 32 12.3	+0.4
SMRT	**St. Maarten**	**2.17**	**324**	*eS*		Sn	16 32 41.1	+2.4
SVB	**Belmont**	**3.04**	**171**	*eP*		Pn	16 32 25.2	+1.3
SVB	**Belmont**	**3.04**	**171**	*eP*		Pn	16 32 25.2	+1.3
MTP	**Monte Pirata**	**4.07**	**297**	⇓*eP*		Pn	16 32 37.5	-0.5
HUMP	**Col San Antoni**	**4.34**	**296**	⇓*eP*		Pn	16 32 41.5	-0.3
SJG	**San Juan**	**4.59**	**294**	⇑*eP*		Pn	16 32 43.7	-1.5
SJG	**San Juan**	**4.59**	**294**	⇓*eP*		Pn	16 32 45.2	0.0
CELP	**Cerrillos**	**4.96**	**292**	⇑*iP*		Pn	16 32 49.7	-0.6

GUC ***20*** *16:44:34.9±0.6, 34°.77S×70°.24W, h16km±2km, MD4.2, ML3.9*
ISCJB ***20*** *16:44:36.4±0.7, 34°.72S±0°.03×70°.29W±0°.07, h10km, mb3.3/2, MS3.7/2, Error ellipse: s-maj=8.0km s-min=3.3km az=16.1*
IDC ***20*** *16:44:38.3±1.1, 34°.62S×70°.66W, h0km, mb3.6/3, mb1 4.0/6, mb1mx3.9/15, mbtmp3.7/6, ML3.8/3, MS3.6/3, Ms1 3.5/3, ms1mx3.0/17, Error ellipse: s-maj=33.3km s-min=15.7km az=113.0*
NEIC ***20*** *16:44:43.4±1.7, 34°.63S×70°.56W, h35km±17km, Error ellipse: s-maj=32.4km s-min=12.3km az=108.0*
ISC 20 16:44:35.8±0.6, 34°.72S±0°.02×70°.23W±0°.06, h10km, n32, σ19°13/43, mb3.3/2, MS3.7/2, 6C-4D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CACH	**El Canelo**	**0.68**	**333**	⇑*iP*		Pg	16 44 48.1	-0.9
CACH				*i S*		Sg	16 44 57.8	0.0
CHCH	**Chadas Angostu**	**0.86**	**336**	⇓*iP*		Pg	16 44 51.7	-0.8
LMEL	**Las Melosas**	**0.87**	**1**	⇑*iP*		Pg	16 44 51.8	-0.9
LMEL				*i S*		Sg	16 45 05.0	+0.9
SJCH	**San Jose de Ma**	**1.08**	**354**	*eP*		Pg	16 44 55.8	-0.9
SJCH				*i S*		Sg	16 45 11.6	+0.8
PCH	**Pirque**	**1.12**	**348**	⇓*iP*		Pb	16 44 56.2	-1.2
PCH				*i S*		Sg	16 45 12.8	+0.7
ANTU	**Antumapu**	**1.20**	**344**	*eP*		Pb	16 44 57.5	-1.2
ANTU				*i S*		Sb	16 45 14.7	+0.5
TACH	**Talagante**	**1.22**	**331**	⇓*iP*		Pb	16 44 57.7	-1.3
TACH				*i S*		Sb	16 45 15.0	+0.3
LNV	**Longovilo**	**1.24**	**308**	⇑*iP*		Pn	16 44 57.7	-1.5
LNV				*i S*		Sb	16 45 14.6	-0.9
FSR	**Penalolen**	**1.27**	**348**	*eP*		Pn	16 44 58.6	-1.0
FSR				*eS*		Sb	16 45 17.1	+1.0
SAN	**Santiago**	**1.32**	**344**	*eP*		Pn	16 44 59.5	-0.8
SAN				*i S*		Sb	16 45 18.1	+0.5
TALC	**Talca**	**1.34**	**239**	*eP*		Pn	16 44 59.0	-1.6
TALC				*i S*		Sb	16 45 16.4	-1.8
TALC				AML	AML		16 45 17.4	
	comp=E,3μm,0.1s							
CLCH	**Cerro Calan**	**1.35**	**349**	⇑*iP*		Pn	16 45 00.3	-0.5
CLCH				*i S*		Sb	16 45 19.5	+1.0
CLCH				AML	AML		16 45 21.6	
	comp=N,3μm,0.7s							
FCH	**Farellones**	**1.39**	**358**	⇑*iP*		Pn	16 45 01.3	-0.1
PEL	**Peldehue**	**1.62**	**346**	⇓*iP*		Pn	16 45 04.6	+0.2
PEL				*eS*		Sn	16 45 27.4	+2.0
PEL				AML	AML		16 45 28.7	
	comp=E,3μm,0.7s							
CCHI	**Chillan**	**2.41**	**218**	⇑*eP*		Pn	16 45 16.7	+1.4
CCHI				*eS*		Sn	16 45 47.7	+3.0
COCH	**Cobquecura**	**2.52**	**235**	*eP*		Pn	16 45 18.1	+1.3
COCH				*eS*		Sn	16 45 49.0	+1.3
CFAA	**Coronel Fontan**	**3.53**	**29**	Pn		Pn	16 45 36.3	+5.6
	comp=E,0.3nm,0.3s,baz=205,slow=14,SNR=37							
CFAA				Pg		Pg	16 45 42.7	-0.7
	comp=E,0.6nm,0.3s,baz=208,slow=17,SNR=54							
CFAA				Lg			16 46 36.0	
	comp=E,0.6nm,0.3s,baz=256,slow=19,SNR=2.6							
CFAA	**Coronel Fontan**	**3.53**	**29**	Pn		Pn	16 45 36.3	+5.6
CFAA				Pg		Pg	16 45 42.7	-0.7
CFAA				Lg			16 46 36.0	
PLCA	**Paso Flores**	**6.00**	**182**	Pn		Pn	16 46 11.3	+6.6
	comp=E,0.3nm,0.3s,baz=347,slow=14,SNR=14							
PLCA				Lg			16 47 52.5	
	comp=E,0.9nm,0.3s,baz=53,slow=21,SNR=3.0							
PLCA	**Paso Flores**	**6.00**	**182**	*ePn*		Pn	16 46 10.7	+6.0
PLCA				*i S*		Sg	16 47 52.5	
TRQA	**Tornquist**	**7.43**	**119**	*eP*		Pn	16 46 23.8	-0.6
	comp=E,13nm,0.8s							
CPUP	**Villa Florida**	**13.90**	**56**	Pn		Pn	16 48 01.4	+8.5
	comp=E,0.3nm,0.3s,baz=217,slow=8.0,SNR=5.2							
CPUP				Lg			16 52 07.2	
	comp=E,0.1nm,0.3s,baz=140,slow=20,SNR=3.2							
CPUP				LR	LR		16 52 51.8	
	comp=E,73nm,18.3s,baz=37,slow=35							
CPUP	**Villa Florida**	**13.90**	**56**	Pn		Pn	16 48 01.4	+8.5
CPUP				Lg			16 52 07.2	
CPUP				LR	LR		16 52 51.8	
LPAZ	**La Paz**	**18.45**	**6**	P		Pn	16 48 55.5	+3.8
	comp=E,0.1nm,0.3s,baz=161,slow=8.0,SNR=8.2							
USHA	**Ushuaia**	**20.15**	**177**	LR	LR		16 57 46.1	
	comp=E,215nm,18.2s,MS3.5,baz=160,slow=39							
SIV	**San Ignacio**	**20.38**	**26**	P		P	16 49 17.3	+4.5
	comp=E,4.3nm,0.9s,baz=220,slow=13,SNR=19							
TXAR	**Lajitas Array**	**71.11**	**329**	P		P	16 55 56.3	+2.0
	comp=E,0.1nm,0.6s,mb2.9,baz=175,slow=4.3,SNR=2.1							
MAW	**Mawson**	**72.06**	**163**	LR	LR		17 27 53.5	
	comp=E,70nm,19.1s,MS4.0,baz=94,slow=36							
PDAR	**Pinedale Array**	**85.09**	**332**	P		P	16 57 16.5	+4.9
	comp=E,0.2nm,0.4s,mb3.6,baz=142,slow=4.6,SNR=3.2							
BVAR	**Borovoye Array**	**146.77**	**44**	PKPbc		PKPbc	17 04 21.5	+4.0
	comp=E,0.5nm,0.5s,baz=259,slow=3.0,SNR=3.8							
ZALV	**Zalesovo Beam**	**154.00**	**35**	PKP		PKPdf	17 04 31.2	+4.2
	comp=E,0.2nm,0.3s,baz=270,slow=1.4,SNR=2.2							
ZALV				PKPbc		PKPbc	17 04 38.8	+3.8
	comp=E,0.4nm,0.2s,baz=318,slow=1.9,SNR=3.3							
MKAR	**Makanchi Array**	**156.07**	**51**	PKPab		PKPab	17 05 00.5	+2.9
	comp=E,0.2nm,0.2s,baz=48,slow=2.1,SNR=2.3							

NEIC ***20*** *17:01:30.8, 58°.34N×133°.53W, h1km, ML2.8(PGC), ML2.7(AEIC), After PGC.*
PGC 20 17:01:30.8±5.3, 58°.34N×133°.53W, h1km, ML2.8/4, 6D, 52km east of Juneau, Ak Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BESE	**Bessie Mountai**	**0.74**	**290**	P		Pg	17 01 43.9	-1.0
SKAG	**Skagway**	**1.46**	**321**	P		Pn	17 01 56.8	-1.4
SKAG				S		Sg	17 02 16.1	-1.7
SIT	**Sitka**	**1.61**	**218**	P		Pn	17 01 58.2	-2.0
SIT				S		Sn	17 02 19.8	-1.8
DLBC	**Dease Lake**	**1.85**	**85**	P		Pn	17 02 03.6	+0.1
DLBC	**Dease Lake**	**1.85**	**85**	⇑Pn		Pn	17 02 02.6	-0.9
DLBC				⇑Sg		Sg	17 02 27.1	-2.9
PLBC	**Pleasant Camp**	**1.85**	**308**	⇑Pn		Pn	17 02 03.5	-0.1
PLBC				⇓Sg		Sg	17 02 27.6	-2.5
WHY	**Whitehorse**	**2.43**	**344**	P		Pn	17 02 10.3	-1.2
WHY				S		Sn	17 02 40.6	-1.3
WHY	**Whitehorse**	**2.43**	**344**	⇑Pn		Pn	17 02 10.6	-0.9
WHY				⇓Pg		Pg	17 02 14.6	-2.6
WHY				⇓Sn		Sn	17 02 41.5	-0.3
WHY				⇓Sg		Sg	17 02 45.6	-3.1
HYT	**Haines Junctio**	**3.21**	**323**	⇑Pn		Pn	17 02 22.6	+0.3
HYT				⇓Pg		Pg	17 02 28.2	-4.0
HYT				⇑Sg		Sg	17 03 08.2	-5.6
FNBB	**Fort Nelson**	**5.53**	**80**	⇑Sg		Sg	17 04 24.1	-4.0
DAWY	**Dawson**	**6.41**	**336**	⇓Sg		Sg	17 04 51.9	-4.3

ISCJB ***20*** *17:03:47.5±0.9, 21°.1N±0°.1×38°.17E±0°.06, h10km, Error ellipse: s-maj=18.5km s-min=4.3km az=20.9*
CSEM ***20*** *17:03:48.1±0.4, 21°.13N×38°.22E, h2km, ML3.3, Error ellipse: s-maj=17.3km s-min=3.7km az=22.0*
SGS ***20*** *17:03:51.1, 20°.77N×38°.19E, h30km*
HLW ***20*** *17:03:52.6, 21°.27N×38°.03E, h14km±21km, Md3.4, Ml3.4*
ISC 20 17:03:49.0±0.9, 21°.1N±0°.1×38°.21E±0°.06, h10km, n26, σ0°.93/30, Red Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SHBS		**1.38**	**94**	P		Pn	17 04 13.4	-0.9
SHBS		**1.38**	**94**	P		Pn	17 04 13.4	-0.8
SHBS				S		Sb	17 04 30.4	-2.0
SHMS		**1.42**	**76**	P		Pn	17 04 18.2	+3.5
LBNS	**Jabal Laban**	**1.58**	**92**	P		Pn	17 04 16.5	-0.5
LBNS	**Jabal Laban**	**1.58**	**92**	P		Pn	17 04 16.5	-0.5
FDAS		**2.12**	**70**	P		Pn	17 04 25.6	+1.1
FDAS		**2.12**	**70**	P		Pn	17 04 25.5	+1.0
FDAS				S		Sn	17 04 51.3	+0.4
FRAS	**Faraa**	**2.15**	**91**	P		Pn	17 04 25.4	+0.5
FRAS	**Faraa**	**2.15**	**91**	P		Pn	17 04 25.5	+0.6
HSHL	**Bi'r Shalatayn**	**3.27**	**308**	P		Pn	17 04 39.9	-0.5
	baz=308							
HSHL				S		Sn	17 05 15.9	-3.5
	baz=308							
HSHL	**Bi'r Shalatayn**	**3.27**	**308**	P		Pn	17 04 39.9	-0.5
HSHL				S		Sn	17 05 15.9	-3.5
BLJS	**Baljurashi**	**3.38**	**109**	P		Pn	17 04 43.2	+1.4
BLJS	**Baljurashi**	**3.38**	**109**	P		Pn	17 04 43.2	+1.4
BLJS				S		Sn	17 05 21.8	-0.2
HAGS	**Hagol**	**4.41**	**318**	P		Pn	17 04 56.1	+0.2
	baz=319							
HAGS	**Hagol**	**4.41**	**318**	P		Pn	17 04 56.1	+0.2
EMRS	**Mersa Alam**	**4.97**	**322**	P		Pn	17 05 03.1	-0.5
	baz=323							
EMRS	**Mersa Alam**	**4.97**	**322**	P		Pn	17 05 03.1	-0.5
HADB		**5.35**	**323**	P		Pn	17 05 09.3	+0.3
	baz=324							
HADB		**5.35**	**323**	P		Pn	17 05 09.3	+0.4
AKRL	**Khor El Raml**	**5.68**	**298**	P		Pn	17 05 13.6	+0.2
	baz=297							
AKRL	**Khor El Raml**	**5.68**	**298**	P		Pn	17 05 13.6	+0.2
HQSR		**5.80**	**323**	P		Pn	17 05 14.8	-0.3
	baz=324							
HQSR		**5.80**	**323**	P		Pn	17 05 14.8	-0.3
HMSM	**Jabal Masmas**	**6.13**	**288**	AMP			17 07 00.0	
	comp=N,50μm,0.7s,logA/T=4.8,baz=287							
HSFG		**6.69**	**325**	P		Pn	17 05 27.8	+0.5
	baz=326							
HSFG		**6.69**	**325**	P		Pn	17 05 27.8	+0.5

DDA ***20*** *17:04:02.2, 38°.35N×39°.55E, h5km±2km, Md3.4*
ISK ***20*** *17:04:02.4, 38°.34N×39°.56E, h5km, MD3.4*
ISCJB ***20*** *17:04:03.4±0.3, 38°.33N±0°.02×39°.54E±0°.03, h10km, Error ellipse: s-maj=3.4km s-min=2.9km az=6.9*
CSEM ***20*** *17:04:03.2±0.2, 38°.35N×39°.55E, h2km, MD3.4, Error ellipse: s-maj=3.9km s-min=3.1

ANDN	**Andirin**	**2.67 254**	*i* P	**Pg**	**17 04 54.6**	**+0.2**
AGRB	**Hanur-Agry**	**2.93 64**	*e*PN	**Pn**	**17 04 51.6**	**+0.6**
AGRB	**Hanur-Agry**	**2.93 64**	*e*Pn	**Pn**	**17 04 51.6**	**+0.7**
BNN	**Bunyan**	**2.97 281**	*e*PN	**Pn**	**17 04 51.0**	**-0.4**
BNN	**Bunyan**	**2.97 281**	*e*Pn	**Pn**	**17 04 51.0**	**-0.5**
KOZT	**Kozan**	**3.09 255**	*e*PN	**Pn**	**17 04 53.2**	**+0.1**
CUKT	**Cukurca**	**3.37 108**	*e*PN	**Pn**	**17 04 58.3**	**+1.3**
CUKT	**Cukurca**	**3.37 108**	*e*Pn	**Pn**	**17 04 58.3**	**+1.3**
BCA	**Borcka**	**3.48 26**	*e*PN	**Pn**	**17 04 58.6**	**+0.2**
BCA	**Borcka**	**3.48 26**	*e*Pn	**Pn**	**17 04 58.7**	**+0.3**

IDC 20 17:07:24.3±3.3, 10°.69N×91°.67E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.4/21, mbtmp3.6/4, Error ellipse: s-maj=132.5km s-min=26.0km az=65.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.85**	**349**	P	P	17 14 34.2	0.0
	0.4nm,0.6s,baz=165,slow=7.9,SNR=4.8						
SONM	**Songino Array**	**39.05**	**16**	P	P	17 14 52.9	+0.1
	0.2nm,0.5s,baz=200,slow=12,SNR=2.8						
ZALV	**Zalesovo Beam**	**43.49**	**354**	P	P	17 15 29.2	-0.1
	0.5nm,0.6s,baz=168,slow=8.7,SNR=3.6						
ASAR	**Alice Springs**	**53.58**	**130**	P	P	17 16 47.5	0.0
	1.1nm,0.7s,baz=306,slow=6.5,SNR=12						

RSPR 20 17:20:34.0, 19°.65N×66°.39W, h45km±25km, MD3.6/3, 1C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOPR	**Arecibo Observ**	**1.34**	**195**	*e*P	Pn	17 20 54.9	-1.5
AOPR	**Arecibo Observ**	**1.34**	**195**	*e*S	Sn	17 21 11.7	-1.3
CELP	**Cerrillos**	**1.58**	**187**	*e*P	Pn	17 20 58.9	-0.6
CELP				*e*S	Sn	17 21 18.3	-0.5
HUMP	**Col San Antoni**	**1.59**	**161**	*e*P	Pn	17 20 58.6	-1.0
MTP	**Monte Pirata**	**1.74**	**153**	*e*P	Pn	17 21 01.1	-0.6
MTP	**Monte Pirata**	**1.74**	**153**	*e*S	Sn	17 21 21.4	-1.2

*IDC **20** 17:24:27.2±1.3, 14°.51N×146°.96E, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.8/24, mbtmp3.8/8, ML4.3/1, Error ellipse: s-maj=36.4km s-min=20.8km az=114.0*
*ISCJB **20** 17:24:29.7±1.0, 14°.6N±0°.1×147°.0E±0°.1, h33km, mb3.8/9, Error ellipse: s-maj=21.5km s-min=9.6km az=42.8*
*NEIC **20** 17:24:32.9±3.1, 14°.47N×146°.86E, h40km±24km, mb4.6/1, Error ellipse: s-maj=31.5km s-min=13.6km az=87.0*
ISC 20 17:24:32.0±1.0, 14°.5N±0°.1×147°.0E±0°.1, h35km, n14, σ0°73/15, mb3.8/9, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.27**	**247**	Pn	**Pn**	**17 25 06.4**	**-0.7**
	77nm,0.3s,baz=93,slow=3.6,SNR=61						
GUMO				Sn	**Sn**	**17 25 34.7**	**+0.8**
	51nm,0.3s,baz=138,slow=18,SNR=6.2						
GUMO	**Guam**	**2.27**	**247**	*e*P	**Pn**	**17 25 05.8**	**-1.2**
GUMO				Sn	**Sn**	**17 25 34.7**	**+0.8**
MJAR	**Matsushiro Arr**	**23.33**	**342**	P	**P**	**17 29 33.5**	**-3.7**
	0.2nm,0.4s,mb2.9,baz=163,slow=10,SNR=3.1						
FITZ	**Fitzroy Crossi**	**38.64**	**214**	P	**P**	**17 31 52.0**	**-0.2**
	2.3nm,0.7s,mb4.0,baz=53,slow=10,SNR=3.9						
ASAR	**Alice Springs**	**40.03**	**199**	P	**P**	**17 32 03.6**	**-0.2**
	0.6nm,1.0s,mb3.3,baz=17,slow=9.7,SNR=3.3						
SONM	**Songino Array**	**47.23**	**323**	P	**P**	**17 33 00.9**	**-0.6**
	0.4nm,0.4s,mb3.7,baz=133,slow=6.1,SNR=2.1						
ZALV	**Zalesovo Beam**	**62.13**	**324**	P	**P**	**17 34 49.0**	**-0.3**
	0.7nm,0.6s,mb4.0,baz=90,slow=9.2,SNR=4.0						
MK31	**Makanchi Array**	**62.31**	**315**	*e*P	**P**	**17 34 51.3**	**+0.5**
MKAR	**Makanchi Array**	**62.31**	**315**	P	**P**	**17 34 51.2**	**+0.5**
	1.4nm,0.4s,mb4.4,baz=91,slow=8.6,SNR=21						
MKAR	**Makanchi Array**	**62.31**	**315**	P	**P**	**17 34 51.2**	**+0.5**
KURK	**Kurchatov**	**65.26**	**319**	*e*P	**P**	**17 35 09.7**	**-0.4**
	6.7nm,1.1s,mb4.6						
ILAR	**Eielson Array**	**66.87**	**25**	P	**P**	**17 35 21.4**	**+1.3**
	0.4nm,0.9s,mb3.5,baz=250,slow=5.6,SNR=4.2						
BVAR	**Borovoye Array**	**70.53**	**321**	P	**P**	**17 35 43.2**	**0.0**
	1.8nm,0.8s,mb4.1,baz=91,slow=9.0,SNR=7.8						
DBIC	**Dimbokro**	**145.07**	**305**	PKPbc	PKPbc	17 44 06.6	+0.4
	3.7nm,0.8s,baz=79,slow=4.6,SNR=5.2						

MAN 20 17:29:20, 13°.40N×120°.15E, h16km, mb4.5, ML3.4, MS3.3, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.35**	**16**	*e*P	Pg	17 29 28.3	+1.1
PGP	**Puerto Galera**	**0.79**	**82**	*i*P	Pb	17 29 35.4	0.0
BUSP	**Coron**	**1.39**	**178**	*e*P	Pn	17 29 45.0	+0.2
ENPP	**El Nido**	**2.29**	**198**	*e*P	Pn	17 29 57.9	+0.7
CUYO	**Cuyo Island**	**2.67**	**161**	*e*P	Pn	17 30 02.8	+0.4

*IDC **20** 17:32:51.4±1.6, 45°.21N×151°.17E, h0km, mb3.8/4, mb1 3.7/6, mb1mx3.5/24, mbtmp3.6/6, ML2.8/2, Error ellipse: s-maj=49.8km s-min=26.0km az=102.0*
*MOS **20** 17:32:53.6±1.2, 45°.16N×151°.39E, h39km, mb4.0/1, Error ellipse: s-maj=20.8km s-min=17.8km az=68.5*
*NEIC **20** 17:32:54.0±4.9, 45°.18N×151°.17E, h17km±32km, mb4.3/1, Error ellipse: s-maj=24.7km s-min=11.3km az=120.0*
ISC 20 17:32:55.4±1.7, 45°.1N±0°.1×151°.5E±0°.2, h36km±14km, n14, σ1°23/15, mb3.9/5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.58**	**274**	*e*PN	**Pn**	**17 33 33.0**	**-1.7**
KUR				*e*S	**Sn**	**17 34 07.0**	**+2.2**
KUR				smax			
	comp=N,340nm,0.6s						
KUR				smax			
	comp=E,150nm,0.6s						
ASAJ	**Asahikawa**	**6.44**	**264**	Pn	**Pn**	**17 34 28.5**	**+0.9**
	comp=E,0.6nm,0.3s,baz=74,slow=15,SNR=6.5						
ASAJ	**Asahikawa**	**6.44**	**264**	PN	**Pn**	**17 34 28.5**	**+0.9**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**8.99**	**25**	Pn	**Pn**	**17 35 03.4**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=187,slow=10,SNR=2.5						
PETK	**Petropavlovsk-**	**8.99**	**25**	Pn	**Pn**	**17 35 03.4**	**+0.9**
MJAR	**Matsushiro Arr**	**13.20**	**234**	Pn	**Pn**	**17 35 58.3**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=32,slow=16,SNR=4.2						
YAK	**Yakutsk**	**21.17**	**331**	*e*P	**P**	**17 37 36.5**	**-0.7**
YAK				pmax	pmax		
	comp=Z,4.0nm,0.3s,mb4.2						
YAK	**Yakutsk**	**21.17**	**331**	*e*P	**P**	**17 37 36.5**	**-0.7**
	comp=Z,4.1nm,0.3s,mb4.2						
MK31	**Makanchi Array**	**46.72**	**298**	*e*P	**P**	**17 41 20.2**	**-0.4**
MKAR	**Makanchi Array**	**46.72**	**298**	P	**P**	**17 41 20.4**	**-0.3**
	comp=Z,0.4nm,0.2s,mb3.9,baz=72,slow=7.6,SNR=7.7						
FINES	**FINESS Array B**	**65.06**	**334**	P	**P**	**17 43 30.8**	**-0.8**
	comp=Z,1.2nm,0.8s,mb4.0,baz=35,slow=7.5,SNR=5.0						
NB2	**NORSAR Subarra**	**69.43**	**341**	P	**P**	**17 43 59.2**	**-0.1**
	comp=Z,0.6nm,0.6s,mb3.7,baz=28,slow=6.9						
NOA	**NORSAR Array B**	**69.43**	**341**	P	**P**	**17 43 59.7**	**+0.4**
	comp=Z,1.3nm,0.6s,mb4.0,baz=29,slow=6.1,SNR=4.6						
ASAR	**Alice Springs**	**70.29**	**197**	P	**P**	**17 44 06.8**	**+1.9**
	comp=Z,0.3nm,0.8s,mb3.3,baz=11,slow=6.1,SNR=3.0						

*ISCJB **20** 17:33:19.3±1.1, 30°.16N±0°.05×57°.43E±0°.04, h2km±9km, Error ellipse: s-maj=8.4km s-min=5.1km az=152.4*
*CSEM **20** 17:33:19.5±0.3, 30°.18N×57°.52E, h2km, ML3.6, Error ellipse: s-maj=8.7km s-min=5.9km az=159.0*
*THR **20** 17:33:19.7±0.3, 30°.06N×57°.48E, h14km±4km, ML3.5*
*TEH **20** 17:33:21.3, 30°.23N×57°.56E, h12km*
ISC 20 17:33:20.8±1.3, 30°.12N±0°.05×57°.48E±0°.05, h9km±9km, n28, σ1°24/43, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRBR	**Kerman**	**0.64**	**257**	*e*Pg	**Pg**	**17 33 32.0**	**-1.2**
KRBR				AML	AML	17 33 41.8	
	comp=N,4μm,0.5s						
KRBR				AML	AML	17 33 42.0	
	comp=E,2μm,0.1s						
KRBR	**Kerman**	**0.64**	**257**	*e*Pg	**Pg**	**17 33 32.0**	**-1.1**
IBAF	**Bafgh**	**2.20**	**312**	*e*Pn	**Pn**	**17 33 57.5**	**0.0**
IBAF				*e*	**Pg**	**17 34 02.5**	**-0.5**
	comp=Z,5μm,0.1s						
IBAF				*e*Sg	**Sg**	**17 34 28.5**	**-3.0**
IBAF	**Bafgh**	**2.20**	**312**	*e*Pn	**Pn**	**17 33 57.5**	**0.0**
IBAF				*e*Sg	**Sg**	**17 34 28.5**	**-3.0**
IKOO	**Kooshah**	**2.64**	**29**	*e*Pn	**Pn**	**17 34 01.7**	**-1.9**
IKOO				*e*Sg	**Sg**	**17 34 40.0**	**-5.7**
IKOO				*e*		17 34 50.1	
	comp=Z,9μm,0.1s						
IKOO	**Kooshah**	**2.64**	**29**	*e*Pn	**Pn**	**17 34 01.7**	**-1.9**
IKOO				*e*Sg	**Sg**	**17 34 40.0**	**-5.7**
IMEH	**Mehriz**	**2.77**	**298**	*e*Pn	**Pn**	**17 34 05.8**	**+0.4**
IMEH				*e*	**Sg**	**17 34 53.6**	**+3.8**
	comp=Z,2μm,0.2s						
IMEH	**Mehriz**	**2.77**	**298**	*e*Pn	**Pn**	**17 34 05.8**	**+0.4**
IBND	**Bandar-abas**	**2.79**	**197**	*e*	**Sg**	**17 34 58.2**	**+7.8**
	comp=Z,2μm,0.2s						
IBND				*e*Pn	**Pn**	**17 34 06.6**	**+1.0**
ZHSF	**Zahedan**	**2.91**	**99**	*e*Pn	**Pn**	**17 34 07.5**	**+0.2**
ZHSF	**Zahedan**	**2.91**	**99**	*e*Pn	**Pn**	**17 34 07.5**	**+0.2**
BNDS	**Bandar-Abbas**	**2.94**	**203**	*e*Pn	**Pn**	**17 34 07.4**	**-0.3**
BNDS				*e*Sg	**Sn**	**17 34 49.9**	**+6.6**
BNDS				AML	AML	17 34 56.0	
	comp=N,75nm,0.5s						
BNDS	**Bandar-Abbas**	**2.94**	**203**	*e*Pn	**Pn**	**17 34 07.4**	**-0.4**
BNDS				*e*Sg	**Sn**	**17 34 49.9**	**+6.7**
ITEG	**Tejag**	**2.97**	**21**	*e*	**Sg**	**17 34 58.8**	**+2.5**
	comp=Z,3μm,0.1s						
ITEG				*e*Pn	**Pn**	**17 34 06.3**	**-1.8**
IDAH	**Dahanechah**	**3.31**	**37**	*e*Pn	**Pn**	**17 34 11.6**	**-1.3**
IDAH				*e*	**Sg**	**17 35 10.3**	**+3.0**
	comp=Z,1μm,0.2s						
IDAH	**Dahanechah**	**3.31**	**37**	*e*Pn	**Pn**	**17 34 11.6**	**-1.3**
ICHK	**Chekchek**	**3.37**	**310**	*e*Pn	**Pn**	**17 34 14.2**	**+0.5**
ICHK				*e*	**Sg**	**17 35 14.3**	**+5.1**
	comp=Z,2μm,0.3s						
ICHK	**Chekchek**	**3.37**	**310**	*e*Pn	**Pn**	**17 34 14.2**	**+0.5**
ISAD	**Sadrabad**	**3.71**	**300**	*e*Pn	**Pn**	**17 34 18.5**	**+0.2**
ISAD				*e*	**Sg**	**17 35 20.8**	**+0.7**
	comp=Z,1μm,0.1s						
ISAD	**Sadrabad**	**3.71**	**300**	*e*Pn	**Pn**	**17 34 18.5**	**+0.2**
IPAR	**Pars**	**3.85**	**267**	*e*Sg	**Sg**	**17 35 24.5**	**0.0**
IPAR				*e*		17 35 27.2	
	comp=Z,330nm,0.4s						
IPAR	**Pars**	**3.85**	**267**	*e*Sg	**Sg**	**17 35 24.5**	**0.0**
ISRV	**Sarvestan**	**3.86**	**260**	*e*Pn	**Pn**	**17 34 21.9**	**+1.5**
ISRV				*e*		17 34 46.7	
	comp=Z,334nm,0.3s						
ISRV	**Sarvestan**	**3.86**	**260**	*e*Pn	**Pn**	**17 34 21.9**	**+1.5**
NASN	**Na'in**	**4.80**	**305**	*e*Pn	**Pn**	**17 34 34.6**	**+1.3**
NASN				*e*Sg	**Sg**	**17 35 49.7**	**-5.3**
NASN	**Na'in**	**4.80**	**305**	*e*Pn	**Pn**	**17 34 34.6**	**+1.4**
NASN				*e*Sg	**Sg**	**17 35 49.7**	**-5.2**
IZEF	**Zefreh**	**5.19**	**303**	*e*Pn	**Pn**	**17 34 38.3**	**-0.4**
IZEF	**Zefreh**	**5.19**	**303**	*e*Pn	**Pn**	**17 34 38.3**	**-0.4**

*ISCJB **20** 17:37:28.3±0.4, 39°.68N±0°.02×43°.73E±0°.04, h10km, Error ellipse: s-maj=4.3km s-min=2.6km az=30.8*
*ISK **20** 17:37:28.8, 39°.63N×43°.71E, h6km, MD3.1*
*DDA **20** 17:37:29.9, 39°.66N×43°.69E, h5km±2km, Md3.0*
*CSEM **20** 17:37:29.2±0.1, 39°.67N×43°.74E, h5km, MD3.0, Error ellipse: s-maj=2.4km s-min=2.1km az=118.0*
ISC 20 17:37:29.5±0.4, 39°.66N±0°.02×43°.71E±0°.04, h6km±6km, n31, σ1°16/52, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DYDN	**Diyadin**	**0.12**	**189**	*i* P	**Pg**	**17 37 32.3**	**+0.4**
DYDN				*i* S	**Sg**	**17 37 35.0**	**+1.4**
DYDN	**Diyadin**	**0.12**	**189**	*i* P	**Pg**	**17 37 32.3**	**+0.3**
DYDN				*i* S	**Sg**	**17 37 35.0**	**+1.4**
CLDR	**Caldiran**	**0.54**	**163**	*e*PG	**Pg**	**17 37 38.7**	**-1.2**
CLDR				*e*SG	**Sg**	**17 37 46.9**	**0.0**
CLDR	**Caldiran**	**0.54**	**163**	*e*Pg	**Pg**	**17 37 38.7**	**-1.2**
CLDR				*e*Sg	**Sg**	**17 37 46.9**	**0.0**
AGRB	**Hanur-Agry**	**0.56**	**262**	*e*PG	**Pg**	**17 37 40.4**	**0.0**
AGRB				*e*SG	**Sg**	**17 37 48.2**	**+0.6**
AGRB	**Hanur-Agry**	**0.56**	**262**	*e*Pg	**Pg**	**17 37 40.4**	**0.0**
AGRB				*e*Sg	**Sg**	**17 37 48.3**	**+0.6**
TUTA	**Tutak**	**0.74**	**250**	*i* P	**Pg**	**17 37 43.8**	**0.0**
TUTA				*i* S	**Sg**	**17 37 54.4**	**+1.0**
TUTA	**Tutak**	**0.74**	**250**	*i* P	**Pg**	**17 37 43.8**	**0.0**
TUTA				*i* S	**Sg**	**17 37 54.4**	**+1.0**
DIGO	**Kars**	**0.80**	**341**	*i* P	**Pg**	**17 37 45.0**	**+0.1**
DIGO				*i* S	**Sg**	**17 38 00.4**	**+5.2**
DIGO	**Kars**	**0.80**	**341**	*i* P	**Pg**	**17 37 45.0**	**+0.1**
GNI	**Garni**	**0.93**	**58**	*e*PG	**Pg**	**17 37 46.8**	**-0.6**
GNI				*e*SG	**Sg**	**17 38 01.8**	**+2.3**
GNI	**Garni**	**0.93**	**58**	*e*Pg	**Pg**	**17 37 46.8**	**-0.6**
GNI				*e*Sg	**Sg**	**17 38 01.8**	**+2.3**
KARS	**Kars**	**1.08**	**334**	*e*PN	**Pn**	**17 37 49.6**	**-1.7**
VANB	**Van**	**1.09**	**193**	*e*PN	**Pg**	**17 37 50.1**	**-0.4**
VANB	**Van**	**1.09**	**193**	*e*Pn	**Pg**	**17 37 50.1**	**-0.4**
TVAN	**Van**	**1.15**	**192**	*i* P	**Pg**	**17 37 52.2**	**+0.6**
TVAN				*i* S	**Sg**	**17 38 03.0**	**-3.6**
TVAN	**Van**	**1.15**	**192**	*i* P	**Pg**	**17 37 52.2**	**+0.6**
TATV	**Tatvan**	**1.61**	**225**	*i* P	**Pg**	**17 37 59.2**	**-1.1**
TATV				*i* S	**Sg**	**17 38 21.7**	**+0.5**
TATV	**Tatvan**	**1.61**	**225**	*i* P	**Pg**	**17 37 59.2**	**-1.2**
TATV				*i* S	**Sg**	**17 38 21.7**	**+0.5**
ERZM	**Erzurum**	**1.82**	**279**	*i* P	**Pg**	**17 38 04.7**	**+0.1**
ERZM				*i* S	**Sg**	**17 38 33.0**	**+4.8**
EZM	**Erzurum**	**1.83**	**278**	*e*PN	**Pn**	**17 38 02.2**	**+0.8**
DBAD	**Bademkaya**	**2.06**	**312**	*i* P	**Pg**	**17 38 08.1**	**-0.8**
DBAD				*e*S	**Sg**	**17 38 44.3**	**+8.7**
BNGL	**BINGOL**	**2.11**	**251**	*i* P	**Pg**	**17 38 07.5**	**-2.5**
BNGL				*i* S	**Sg**	**17 38 37.5**	**+0.2**
DGRG	**David-gareji**	**2.19**	**35**	P	**Pg**	**17 38 08.9**	**-2.6**
DGRG				S	**Sg**	**17 38 41.4**	**+1.5**
MTA	**Mtatsminda**	**2.19**	**22**	P	**Pn**	**17 38 08.5**	**+2.0**
MTA				S	**Sg**	**17 38 38.8**	**-1.1**
TBLG	**Delisi**	**2.21**	**20**	P	**Pg**	**17 38 10.2**	**-1.7**
TBLG				S	**Sg**	**17 38 40.1**	**-0.5**
BCA	**Borcka**	**2.39**	**319**	*e*PN	**Pn**	**17 38 09.4**	**+0.2**
BCA	**Borcka**	**2.39**	**319**	*e*Pn	**Pn**	**17 38 09.5**	**+0.3**
CUKT	**Cukurca**	**2.41**	**182**	*e*PN	**Pn**	**17 38 09.6**	**+0.1**
CUKT	**Cukurca**	**2.41**	**182**	*e*Pn	**Pn**	**17 38 09.6**	**+0.1**
KEH	**Kehvi**	**2.65**	**4**	P	**Pn**	**17 38 16.3**	**+3.4**
KEH				S	**Sg**	**17 38 55.8**	**+1.1**

*ISCJB **20** 17:51:41.2±0.9, 64°.93N±0°.04×5°.9E±0°.1, h10km, Error ellipse: s-maj=9.5km s-min=4.3km az=23.3*
*IDC **20** 17:51:41.2±3.4, 65°.01N×5°.40E, h0km, mb1 3.2/4, mb1mx3.0/27, mbtmp3.2/4, ML2.9/4, Error ellipse: s-maj=36.1km s-min=19.9km az=93.0*
*HEL **20** 17:51:42.1±0.5, 64°.94N×5°.41E, h10km, ML2.4, MD2.8(BER), ML2.3(BER)*
*CSEM **20** 17:51:42.1±0.5, 64°.95N×5°.57E, h10km, ML2.4, Error ellipse: s-maj=13.0km s-min=5.9km az=119.0*
*NAO **20** 17:51:43.0±3.5, 65°.08N×5°.86E, ML2.4*
*BER **20** 17:51:43.0±4.6, 65°.06N×5°.03E, h23km±36km, MD2.8, ML2.3, ML2.4(NAO)*
ISC 20 17:51:43.2±0.8, 64°.91N±0°.04×5°.8E±0°.1, h10km, n61, σ1°35/107, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOL	**Molde**	**2.48**	**161**	*e*P	**Pn**	**17 52 23.6**	**+0.1**
MOL				*e*S	**Sn**	**17 52 52.6**	**-1.1**
MOL				AML	AML	17 52 56.4	
	comp=Z,15nm,0.1s						
MOL	**Molde**	**2.48**	**161**	*e*P	**Pn**	**17 52 23.6**	**+0.1**
MOL				*e*S	**Sn**	**17 52 52.6**	**-1.1**
MOL				AML	AML	17 52 56.4	
	comp=Z,15nm,0.1s						
MOL	**Molde**	**2.48**	**161**	P	**Pn**	**17 52 23.6**	**+0.1**
MOL				*e*S	**Sn**	**17 52 52.7**	**-1.0**
	comp=Z,15nm,0.1s,SNR=55						
NSS	**Namsos**	**2.67**	**95**	*e*P	**Pn**	**17 52 27.0**	**+0.8**
NSS				*e*S	**Sn**	**17 53 00.8**	**+2.2**
NSS				AML	AML	17 53 01.6	
	comp=Z,32nm,0.1s						
NSS	**Namsos**	**2.67**	**95**	*e*P	**Pn**	**17 52 27.0**	**+0.8**
NSS				*e*S	**Sn**	**17 53 00.8**	**+2.2**
NSS				AML	AML	17 53 01.6	
	comp=Z,32nm,0.1s						
NSS	**Namsos**	**2.67**	**95**	P	**Pn**	**17 52 27.0**	**+0.8**
NSS				S	**Sn**	**17 53 00.7**	**+2.1**
	comp=Z,32nm,0.1s						
STOK	**Stokkvaagen**	**3.32**	**61**	*e*P	**Pn**	**17 52 36.1**	**+1.1**
STOK				*e*S	**Sn**	**17 53 13.6**	**-0.8**
STOK				AML	AML	17 53 15.7	
	comp=N,17nm,0.3s						
STOK	**Stokkvaagen**	**3.32**	**61**	*e*P	**Pn**	**17 52 36.1**	**+1.1**
STOK				*e*S	**Sn**	**17 53 13.6**	**-0.8**
STOK				AML	AML	17 53 15.7	
	comp=N,17nm,0.3s						
STOK	**Stokkvaagen**	**3.32**	**61**	P	**Pn**	**17 52 36.1**	**+1.1**
STOK				S	**Sn**	**17 53 13.6**	**-0.8**
	comp=N,17nm,0.3s						
FOO	**Floro**	**3.34**	**186**	*e*P	**Pn**	**17 52 33.7**	**-1.7**
FOO				*e*S	**Sn**	**17 53 10.0**	**-5.1**
FOO				AML	AML	17 53 11.3	
	comp=Z,14nm,0.3s						
FOO	**Floro**	**3.34**	**186**	*e*P	**Pn**	**17 52 33.7**	**-1.7**
FOO				*e*S	**Sn**	**17 53 10.0**	**-5.1**
FOO				AML	AML	17 53 11.3	
	comp=Z,14nm,0.3s						
FOO	**Floro**	**3.34**	**186**	P	**Pn**	**17 52 33.7**	**-1.7**
FOO				*e*S	**Sn**	**17 53 10.0**	**-5.1**
	comp=Z,24nm,0.4s,SNR=55						
KONS	**Konsvik**	**3.42**	**59**	*e*P	**Pn**	**17 52 37.0**	**+0.5**
KONS				*e*S	**Sn**	**17 53 15.3**	**-1.6**
KONS				AML	AML	17 53 16.6	
	comp=Z,24nm,0.4s						
KONS	**Konsvik**	**3.42**	**59**	*e*P	**Pn**	**17 52 37.0**	**+0.5**
KONS				*e*S	**Sn**	**17 53 15.3**	**-1.6**
KONS				AML	AML	17 53 16.6	
	comp=Z,24nm,0.4s						
FLOS	**Flostrand**	**3.45**	**62**	*e*P	**Pn**	**17 52 37.8**	**+1.0**
FLOS	**Flostrand**	**3.45**	**62**	*e*P	**Pn**	**17 52 37.8**	**+1.0**
HYA	**Hoyanger**	**3.76**	**177**	*e*P	**Pn**	**17 52 41.9**	**+0.7**
HYA				*e*S	**Sn**	**17 53 25.0**	**-0.5**
HYA				AML	AML	17 53 30.2	
	comp=Z,13nm,0.4s						
HYA	**Hoyanger**	**3.76**	**177**	*e*P	**Pn**	**17 52 41.9**	**+0.7**
HYA				*e*S	**Sn**	**17 53 25.0**	**-0.5**
HYA				AML	AML	17 53 30.2	
	comp=Z,13nm,0.4s						
HYA	**Hoyanger**	**3.76**	**177**	P	**Pn**	**17 52 41.8**	**+0.6**
HYA				S	**Sn**	**17 53 24.9**	**-0.6**
	comp=Z,13nm,0.4s						
MOR8	**Moi Rana**	**3.81**	**67**	*e*P	**Pn**	**17 52 45.0**	**+3.2**
MOR8				*e*S	**Sn**	**17 53 31.0**	**+4.5**
MOR8				AML	AML	17 53 35.0	
	comp=Z,35nm,0.4s						
MOR8	**Moi Rana**	**3.81**	**67**	*e*P	**Pn**	**17 52 45.0**	**+3.2**
MOR8				*e*S	**Sn**	**17 53 31.0**	**+4.5**
MOR8				AML	AML	17 53 35.0	
	comp=Z,35nm,0.4s						
MOR8	**Moi Rana**	**3.81**	**67**	*e*P	**Pn**	**17 52 45.0**	**+3.2**
	SNR=53						
MOR8				*e*S	**Sn**	**17 53 31.0**	**+4.4**
	comp=Z,9.9nm,0.7s,SNR=53						
ASK	**Askoy**	**4.45**	**184**	*e*P	**Pn**	**17 52 48.6**	**-2.1**
ASK				*e*S	**Sn**	**17 53 39.0**	**-3.4**
ASK				AML	AML	17 53 46.3	
	comp=Z,9.9nm,0.7s						
ASK	**Askoy**	**4.45**	**184**	*e*P	**Pn**	**17 52 48.6**	**-2.1**
ASK				*e*S	**Sn**	**17 53 39.0**	**-3.4**
ASK				AML	AML	17 53 46.3	
	comp=Z,9.9nm,0.7s						
NB2	**NORSAR Subarra**	**4.60**	**145**	Pn	**Pn**	**17 52 53.4**	**+0.6**
	baz=326,slow=12						
NB2				Sn	**Sn**	**17 53 47.8**	**+1.7**
	baz=332,slow=22						
NB2	**NORSAR Subarra**	**4.60**	**145**	*e*P	**Pn**	**17 52 53.4**	**+0.6**
NB2				*e*S	**Sn**	**17 53 47.8**	**+1.7**
NB2	**NORSAR Subarra**	**4.60**	**145**	P	**Pn**	**17 52 53.3**	**+0.6**
NB2				S	**Sn**	**17 53 47.8**	**+1.7**
NOA	**NORSAR Array B**	**4.60**	**145**	Pn	**Pn**	**17 52 53.6**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=325,slow=12,SNR=4.0						
NOA				Sn	**Sn**	**17 53 48.5**	**+2.4**
	comp=Z,1.2nm,0.3s,baz=324,slow=23,SNR=4.2						
KMY	**Karmoy**	**5.73**	**183**	*e*P	**Pn**	**17 53 07.3**	**-0.9**
KMY	**Karmoy**	**5.73**	**183**	*e*P	**Pn**	**17 53 07.3**	**-0.9**
KMY	**Karmoy**	**5.73**	**183**	*e*P	**Pn**	**17 53 07.3**	**-0.8**
	SNR=53						
HFS	**Hagfors**	**6.03**	**139**	Pn	**Pn**	**17 53 14.2**	**+2.0**
	baz=338,slow=11						
HFS				Sn	**Sn**	**17 54 23.1**	**+2.0**
	baz=329,slow=28						
HFS	**Hagfors**	**6.03**	**139**	Pn	**Pn**	**17 53 14.3**	**+2.1**
	comp=Z,0.6nm,0.3s,baz=326,slow=12,SNR=40						
HFS				Sn	**Sn**	**17 54 22.9**	**+1.8**

ISC 20 18:01:15.8±1.8, 36°21′N±0°.03×141°.91E±0°.08, h18km±13km, n18, σ0°75/28, mb3.4/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.99	239	P	Pb	18 01 34.3	-0.1
CHOJ				S	Sb	18 01 47.7	+0.6
JHO	Hitachi	1.15	291	P	Pn	18 01 35.7	-1.2
ONAJ	Iwakimizuishiy	1.26	315	P	Pn	18 01 37.5	-0.9
JFK	Kawauchi	1.42	324	P	Pn	18 01 40.5	-0.1
JFK				eS	Sn	18 01 58.2	-0.6
BSO1	Boso 1	1.73	206	P	Pn	18 01 45.4	+0.5
BSO1				eS	Sn	18 02 07.6	+1.1
JFT	Otama	1.81	316	P	Pn	18 01 46.5	+0.5
JFT				eS	Sn	18 02 09.2	+0.7
BSO3	Boso 3	1.81	219	P	Pn	18 01 46.1	+0.1
BSO3				eS	Sn	18 02 09.1	+0.6
JMM	Marumori	1.88	332	P	Pn	18 01 46.8	-0.1
JAG	Ashikaga	1.99	277	P	Pn	18 01 48.1	-0.4
JAG				eS	Sn	18 02 12.1	-0.9
JFY	Yanaizu	2.13	305	P	Pn	18 01 51.1	+0.7
JRY	Ryogami san	2.44	266	P	Pn	18 01 54.3	-0.4
JRY				S	Sn	18 02 23.0	-1.1
JOD2	Odawara 2	2.48	248	P	Pn	18 01 55.3	+0.1
MJAR	Matsushiro Arr	3.00	277	Pn	Pn	18 02 02.3	-0.1
	5.2nm,0.3s,baz=85,slow=9.8,SNR=139						
MJAR				Sn	Sn	18 02 38.5	+0.6
	1.2nm,0.3s,baz=101,slow=36,SNR=5.3						
MAT	Matsushiro	3.00	277	P	Pn	18 02 03.3	+0.9
MAT				S	Sn	18 02 38.6	+0.7
JHJ	Hachijo jima 2	3.55	210	Pn	Pn	18 02 09.6	-0.3
	7.8nm,0.3s,baz=3.6,slow=19,SNR=8.7						
JHJ				Sn	Sn	18 02 48.9	-2.5
	23nm,0.3s,baz=69,slow=23,SNR=6.5						
SONM	Songino Array	28.58	305	P	P	18 07 11.2	+0.7
	0.5nm,0.6s,mb3.4,baz=111,slow=8.3,SNR=4.2						
MKAR	Makanchi Array	44.89	303	P	P	18 09 29.8	+0.8
	0.3nm,0.5s,mb3.3,baz=93,slow=8.7,SNR=4.5						
ASAR	Alice Springs	60.03	188	P	P	18 11 20.7	-0.6
	0.3nm,1.0s,mb3.3,baz=7.0,slow=8.4,SNR=2.7						

MEX 20 18:19:27.9±0.4, 19°.50N×100°.34W, h5km, MD3.6, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOIG	Morelia	0.82	282	i P	Pg	18 19 41.8	-1.9
MOIG				i S	Sg	18 19 53.7	-0.6
MZVM		1.09	106	i P	Pg	18 19 46.0	-2.9
MZVM				eS	Sg	18 20 00.9	-2.2
PTVM	Pico Tres Padr	1.16	85	i P	Pg	18 19 47.0	-3.2
PTVM				eS	Sg	18 20 02.3	-2.9
PLIG	Platanillo	1.36	144	eP	Pn	18 19 49.8	-3.8
PLIG				eS	Sb	18 20 07.0	-4.5
IIO	Organos	1.53	86	i P	Pn	18 19 52.6	-3.3
IIO				i S	Sn	18 20 11.6	-4.5
MEIG	Mezcala	1.71	156	i P	Pn	18 19 55.3	-3.1
MEIG				eS	Sn	18 20 15.7	-4.9
ACX	Acapulco	2.66	170	i P	Pn	18 20 09.8	-1.6

NIED ***20*** *18:21:00, 20°.80N×121°.50E, h38km, Mw4.5 Best double couple: M0 5.57000×10^15 NP1:φ1=43.00000°, δ1=90.00000°, λ1=101.00000°. NP2:φ2=133.00000°, δ2=11.00000°, λ2=0.00000°.*
NEIC ***20*** *18:21:05.0±0.7, 21°.13N×121°.09E, h10km, mb4.2/3, Error ellipse: s-maj=16.2km s-min=9.8km az=90.0*
ISCJB ***20*** *18:21:05.5±1.4, 21°.06N±0°.05×121°.12E±0°.08, h30km±9km, mb3.9/12, MS3.3/2, Error ellipse: s-maj=12.4km s-min=7.5km az=161.5*
TAP ***20*** *18:21:05.2, 21°.11N×121°.10E, h76km±1km, ML4.2, D*
IDC ***20*** *18:21:12.7±6.3, 21°.12N×121°.06E, h75km±63km, mb3.5/10, mb1 3.7/11, mb1mx3.5/23, mbtmp3.6/11, ML4.0/1, MS3.4/2, Ms1 3.5/2, ms1mx2.7/31, Error ellipse: s-maj=21.0km s-min=16.8km az=74.0*

ISC 20 18:21:06.0±1.3, 21°.13N±0°.04×121°.05E±0°.08, h17km±7km, n53, σ1°16/58, mb3.9/11, MS3.3/2, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSEB	Hengchuen, Pin	0.78	349	P	Pg	18 21 22.7	+1.4
	baz=344						
TSEB				S	Sg	18 21 35.1	+3.6
	baz=344						
TWK1	Hengchun	0.84	344	P	Pg	18 21 22.1	-0.3
	baz=342						
TWK1				S	Sg	18 21 36.1	+2.6
	baz=342						
HEN	Hengchun	0.92	341	P	Pg	18 21 23.5	-0.4
	baz=333						
HEN				eS	Sg	18 21 38.9	+2.9
	baz=333						
LAY	Lan-yu	1.02	27	eP	Pb	18 21 23.4	-1.8
	baz=25						
TAW	Tawu	1.23	353	P	Pn	18 21 27.7	-0.8
	baz=1.0						
TAW				eS	Sb	18 21 44.9	+0.5
	baz=1.0						
EAST	Anshuo	1.26	351	eP	Pn	18 21 26.9	-2.0
	baz=359						
EAST				S	Sb	18 21 45.9	+0.6
	baz=359						
SCZT	Fangliau	1.30	342	P	Pn	18 21 29.0	-0.4
	baz=341						
SCZT				S	Sb	18 21 46.3	-0.2
	baz=341						
TWP	Hsiaoliuchiu	1.37	332	eP	Pn	18 21 30.2	-0.2
	baz=331						
ECL	Taimali	1.46	356	P	Pn	18 21 30.5	-1.2
	baz=1.0						
TTN	Taitung	1.62	3	eP	Pn	18 21 32.1	-1.7
	baz=9.0						
SSD	Sandimen	1.66	346	P	Pn	18 21 33.9	-0.5
	baz=335						
TWG	Pinlang	1.68	1	ePn	Pn	18 21 31.8	-2.9
TWG	Pinlang	1.68	1	eP	Pn	18 21 33.4	-1.3
	baz=359						
TWM1	Shoushan	1.78	341	P	Pn	18 21 36.4	+0.3
	baz=329						
SGST	Jiashian	1.99	347	eP	Pn	18 21 38.7	-0.3
	baz=337						
CHN3	Shinhua	2.04	342	eP	Pn	18 21 43.6	+4.0
	baz=332						
STYT	Tauyuan	2.04	352	P	Pn	18 21 39.6	0.0
	baz=352						
ELDTW	Lidau	2.05	359	P	Pn	18 21 39.3	-0.5
	baz=4.0						
CHN1	Nanshi	2.10	347	eP	Pn	18 21 39.3	-1.2
	baz=335						
TPUB	Ta-pu	2.20	350	eP	Pn	18 21 41.2	-0.5
TWF1	Yuli	2.22	6	P	Pn	18 21 40.9	-1.2
	baz=5.0						
YULB	Yu-li	2.26	6	eP	Pn	18 21 40.9	-1.8
EHY	Hungye	2.38	6	eP	Pn	18 21 44.2	0.0
	baz=5.0						
CHN5	Tsauling	2.48	352	P	Pn	18 21 45.5	-0.2
	baz=351						
WGK	Gukeng	2.58	350	eP	Pn	18 21 45.9	-1.2
	baz=349						
SSLB	Suanglung	2.65	358	eP	Pn	18 21 47.1	-0.8
ESL	Shilin	2.69	7	eP	Pn	18 21 48.0	-0.6
	baz=2.0						
SMLT	Sun Moon Lake	2.74	357	P	Pn	18 21 49.5	+0.3
	baz=356						
TYC	Yuchr	2.77	356	P	Pn	18 21 49.5	-0.1
	baz=356						
WHF	Hehuan Shan	3.01	4	P	Pn	18 21 54.1	+1.2
	baz=353						
NACB	Ninganchiao	3.07	9	eP	Pn	18 21 52.7	-1.1
NNS	Nan Shan	3.31	5	eP	Pn	18 21 58.5	+1.4
	baz=13						
YHNB	Yeheng	3.54	5	eP	Pn	18 22 00.8	+0.6
NSK	Sanguang	3.54	4	eP	Pn	18 22 01.2	+1.0
	baz=356						
TATO	Taipei	3.85	6	P	Pn	18 22 05.7	+1.3
KSRS	Korea Array	17.32	19	P	Pn	18 25 08.9	+1.8
	0.5nm,0.3s,baz=200,slow=11,SNR=24						
BJT	Baijiatuau	19.29	349	eP	Pn	18 25 30.8	-0.2
	9.6nm,0.5s						
CMAR	Chiang Mai Arr	20.97	267	P	P	18 25 49.6	+1.1
	2.0nm,0.8s,baz=76,slow=9.1,SNR=13						
CMAR				LR	LR	18 33 59.1	
	comp=Z,76nm,18.3s,MS3.1,baz=80,slow=36						
MAJO	Matsushiro	21.43	41	P	P	18 25 54.9	+1.6
	4.5nm,0.8s,mb3.9						
MAT	Matsushiro	21.43	41	P	P	18 25 55.1	+1.8
MJAR	Matsushiro Arr	21.43	41	P	P	18 25 55.1	+1.8
	1.8nm,0.8s,mb3.5,baz=238,slow=7.4,SNR=13						
ULN	Ulaanbaatar	28.97	340	eP	P	18 27 06.1	+1.6
	4.4nm,0.7s,mb4.3						
ASAJ	Asahikawa	29.07	33	P	P	18 27 07.5	+2.0
	3.5nm,0.6s,mb4.3,baz=273,slow=17,SNR=8.1						
SONM	Songino Array	29.15	340	P	P	18 27 05.4	-0.7
	3.1nm,0.7s,mb4.2,baz=155,slow=10,SNR=17						
MK31	Makanchi Array	40.49	319	eP	P	18 28 44.6	+0.7
MKAR	Makanchi Array	40.49	319	P	P	18 28 44.1	+0.2
	0.5nm,0.6s,mb3.4,baz=114,slow=9.6,SNR=7.9						
ZALV	Zalesovo Beam	42.76	329	P	P	18 29 03.1	+0.7
	3.1nm,0.6s,mb4.2,baz=124,slow=8.0,SNR=12						
WRAB	Tennant Creek	42.83	161	eP	P	18 29 02.4	-0.9
ASAR	Alice Springs	46.25	164	P	P	18 29 30.6	+0.1
	0.6nm,0.4s,mb3.9,baz=347,slow=6.4,SNR=22						
BVAR	Borovoye Array	49.98	322	P	P	18 30 00.4	+1.3
	0.2nm,0.3s,mb3.6,baz=52,slow=9.3,SNR=3.4						
STKA	Stephens Creek	56.26	159	P	P	18 30 45.0	-0.6
	4.2nm,1.0s,mb4.4,baz=286,slow=22,SNR=3.6						
ILAR	Eielson Array	71.98	27	P	P	18 32 26.3	-2.1
	0.2nm,0.5s,mb3.3,baz=267,slow=4.6,SNR=4.7						
NOA	NORSAR Array B	80.86	332	LR	LR	19 13 03.5	
	comp=Z,21nm,18.5s,MS3.5,baz=220,slow=38						

CASC 20 18:38:49.1±2.2, 11°.84N×88°.83W, h38km±999km, MD3.9, ML3.0, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLLM	Bellamira	1.70	20	eP	Pn	18 39 16.2	0.0
CNCH	Conchagua	1.73	34	eP	Pn	18 39 16.7	0.0
SNVI	San Vicente	1.76	360	eP	Pn	18 39 16.8	-0.3
LFRS	El Faro	1.79	353	eP	Pn	18 39 16.8	-0.7
BOQS	Boqueron	1.94	347	eP	Pn	18 39 19.6	0.0
BOQS				eS	Sn	18 39 43.8	+1.2
CAHU	Cacacuatique	2.01	17	eP	Pn	18 39 21.3	+0.7
CAHU				eS	Sn	18 39 47.4	+2.8
SBLS	San Blas	2.13	339	eP	Pn	18 39 22.3	+0.1
SNJE	San Jose	2.15	340	eP	Pn	18 39 22.6	+0.1
SNJE				eS	Sn	18 39 49.4	+1.3
CNGN	Cerro Negro	2.19	72	eP	Pn	18 39 24.5	+1.5
CNGN				eS	Sn	18 39 48.6	-0.2
COPN	Copaltepe	2.22	81	eP	Pn	18 39 23.3	-0.1
MOMN	Momotombo	2.31	76	eP	Pn	18 39 25.2	+0.6
CSAN		2.38	81	eP	Pn	18 39 25.9	+0.2
RBDL	Robledal	2.41	340	eP	Pn	18 39 26.7	+0.7
MGAN	Managua	2.55	83	AML	AML	18 40 01.4	
	comp=E,105nm,0.9s						
TICN	Ticuantepe	2.55	85	eP	Pn	18 39 29.1	+1.1
HUEN		2.65	79	eP	Pn	18 39 29.7	+0.4
TGUH	Tegucigalpa,Un	2.68	34	eP	Pn	18 39 34.8	+5.1

IDC ***20*** *19:04:53.5±2.0, 6°.72S×128°.11E, h0km, mb3.8/3, mb1 4.1/4, mb1mx3.7/17, mbtmp3.9/4, ML4.3/1, Error ellipse: s-maj=122.2km s-min=34.5km az=63.0*
ISCJB ***20*** *19:05:09.8±0.7, 7°.71S±0°.07×127°.18E±0°.05, h170km±11km, mb3.6/3, Error ellipse: s-maj=10.7km s-min=8.0km az=177.3*
DJA ***20*** *19:05:09, 7°.76S×127°.21E, h30km, mb4.8/6*

ISC 20 19:05:10.8±0.7, 7°.84S±0°.07×127°.22E±0°.05, h175km±9km, n12, σ0°87/16, mb3.6/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	Maumere	4.99	261	P	Pn	19 06 24.2	-0.4
	0.2nm50nm,1.4s						
MMRI				S	Sn	19 07 22.1	-0.3
	0.2nm50nm,1.4s						
TLE	Tual	5.90	69	P	Pn	19 06 36.3	-0.2
	0.3nm76nm,0.7s						
TLE				S	Sn	19 07 43.1	-0.8
	0.3nm76nm,0.7s						
KAKA	Kakadu	7.06	134	P	Pn	19 06 52.8	+1.1
	1.9nm6μm57nm,0.5s						
WSI	Waingapu	7.08	255	P	Pn	19 06 51.0	-0.9
	1.3nm4μm223nm,0.6s						
WSI				S	Sn	19 08 07.0	-4.7
	1.3nm4μm223nm,0.6s						
KNA	Kununurra	8.00	169	P	Pn	19 07 05.5	+1.4
	3μm51nm,0.6s						
FITZ	Fitzroy Crossi	10.31	188	P	Pn	19 07 34.8	+0.3
WRA	Warramunga Arr	13.87	151	Sn	Sn	19 10 47.4	-7.0
	2.4nm,0.3s,baz=329,slow=22,SNR=13						
ASAR	Alice Springs	16.99	159	P	Pn	19 09 02.4	+4.1
	1.0nm,0.3s,baz=339,slow=12,SNR=61						
ASAR				S	S	19 12 03.9	-1.6
	0.6nm,0.3s,baz=321,slow=21,SNR=7.7						
LUBP	Lubang	22.53	342	eP	P	19 10 05.0	+8.9
CMAR	Chiang Mai Arr	38.23	313	P	P	19 12 14.9	+0.9
	1.5nm,0.6s,mb3.8,baz=147,slow=7.5,SNR=14						
MKAR	Makanchi Array	67.45	328	P	P	19 15 48.1	+0.6
	0.3nm,0.5s,mb3.4,baz=120,slow=8.0,SNR=3.9						
ZALV	Zalesovo Beam	71.15	335	P	P	19 16 09.8	-0.3
	0.6nm,0.4s,mb3.6,baz=129,slow=5.7,SNR=2.7						

DDA ***20*** *19:12:54.5, 38°.98N×24°.79E, h6km, Ml4.0*
ISCJB ***20*** *19:12:55.5±0.7, 38°.89N±0°.01×24°.92E±0°.01, h7km±5km, mb3.5/7, Error ellipse: s-maj=2.4km s-min=1.9km az=163.7*
ISK ***20*** *19:12:55.9, 38°.89N×24°.85E, h21km, MD3.8, ML3.9*
CSEM ***20*** *19:12:56.7±0.1, 38°.86N×24°.91E, h10km, ML4.5/19, Error ellipse: s-maj=1.8km s-min=1.4km az=170.0*
ATH ***20*** *19:12:57.3, 38°.86N×24°.91E, h42km±2km, MD3.8/20, ML4.0*
NEIC ***20*** *19:12:57.0±0.2, 38°.87N×24°.88E, h10km, ML4.0(ATH), Error ellipse: s-maj=3.8km s-min=3.3km az=109.0*
THE ***20*** *19:12:57.2, 38°.87N×24°.92E, h10km±1km, ML4.5/19, Error ellipse: s-maj=1.3km s-min=0.5km az=110.0*
IDC ***20*** *19:13:02.0±5.4, 39°.11N×24°.99E, h28km±40km, mb3.4/7, mb1 3.5/8, mb1mx3.3/26, mbtmp3.5/8, ML3.6/1, MS2.7/2, Ms1 2.7/2, ms1mx2.3/31, Error ellipse: s-maj=48.6km s-min=20.6km az=7.0*

ISC 20 19:12:57.1±0.5, 38°.87N±0°.01×24°.91E±0°.01, h12km±4km, n367, σ0°88/444, mb3.5/7, 32C-17D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	SIGRI	0.81	65	P	Pg	19 13 12.6	-0.2
SIGR				S	Sg	19 13 24.6	+1.1
SIGR	SIGRI	0.81	65	P	Pg	19 13 12.6	-0.2
SIGR				S	Sg	19 13 24.6	+1.1
AOS	Alonnisos	0.86	291	P	Pg	19 13 12.6	-1.1
AOS	Alonnisos	0.86	291	P	Pg	19 13 13.1	-0.6
AOS				S	Sg	19 13 26.0	+1.0
AOS	Alonnisos	0.86	291	P	Pg	19 13 13.1	-0.6
AOS				S	Sg	19 13 26.0	+1.0
CHOS	Chios island	1.01	118	P	Pb	19 13 16.6	0.0
CHOS				S	Sg	19 13 30.9	+1.0
CHOS	Chios island	1.01	118	P	Pb	19 13 16.6	0.0
CHOS				S	Sg	19 13 30.9	+1.0
LIA	Limnos Island	1.05	11	eP	Pb	19 13 16.7	-0.6
LIA				eS	Sb	19 13 30.8	-0.2
LIA	Limnos Island	1.05	11	eP	Pb	19 13 16.7	-0.6
LIA				eS	Sb	19 13 30.8	-0.2
LIA	Limnos Island	1.05	11	P	Pb	19 13 16.7	-0.6
LIA				S	Sb	19 13 31.9	+0.9
LIA	Limnos Island	1.05	11	P	Pb	19 13 16.7	-0.6
LIA				eS	Sb	19 13 30.8	-0.2
PRK	Paraskevi	1.12	70	eP	Pb	19 13 18.0	-0.5
PRK				eS	Sb	19 13 33.6	+0.5
PRK	Paraskevi	1.12	70	eP	Pb	19 13 18.0	-0.5
PRK				eS	Sb	19 13 33.6	+0.5
PRK	Paraskevi	1.12	70	P	Pb	19 13 18.0	-0.5
PRK				S	Sb	19 13 33.6	+0.5
PRK	Paraskevi	1.12	70	P	Pb	19 13 18.0	-0.5
PRK				S	Sb	19 13 33.6	+0.5
PTL	Penteli	1.16	226	eP	Pb	19 13 17.8	-1.2
PTL	Penteli	1.16	226	eP	Pb	19 13 17.8	-1.2
PTL	Penteli	1.16	226	eP	Pb	19 13 17.8	-1.2
ATHU	Athens Univers	1.26	225	P	Pn	19 13 19.7	-0.8
ATHU				S	Sb	19 13 38.0	+1.1
ATHU	Athens Univers	1.26	225	P	Pn	19 13 19.7	-0.8
ATHU				S	Sb	19 13 38.0	+1.1
ATH	Athens Observa	1.29	227	eP	Pn	19 13 20.0	-1.0
ATH				eS	Sb	19 13 36.9	-1.0
ATH	Athens Observa	1.29	227	eP	Pn	19 13 20.0	-1.0
ATH				eS	Sb	19 13 36.9	-1.0
ATH	Athens Observa	1.29	227	eP	Pn	19 13 20.0	-1.0
ATH				eS	Sb	19 13 36.9	-1.0
VLY	Voula,Athens	1.34	221	eP	Pn	19 13 20.2	-1.4
VLY				eS	Sb	19 13 37.4	-1.8
VLY	Voula,Athens	1.34	221	eP	Pn	19 13 20.2	-1.4
VLY				eS	Sb	19 13 37.4	-1.8
VLY	Voula,Athens	1.34	221	eP	Pn	19 13 20.2	-1.4
VLY				eS	Sb	19 13 37.4	-1.8
NEO	Neokhori	1.39	289	eP	Pn	19 13 21.1	-1.1
NEO				eS	Sn	19 13 39.8	-0.6
NEO	Neokhori	1.39	289	eP	Pn	19 13 21.1	-1.1
NEO				eS	Sn	19 13 39.8	-0.6
NEO	Neokhori	1.39	289	eP	Pn	19 13 21.1	-1.1
NEO				eS	Sn	19 13 39.8	-0.6
URLA	Izmir	1.41	110	i P	Pn	19 13 22.1	-0.5
URLA				i S	Sn	19 13 44.1	+3.0
URLA	Izmir	1.41	110	i P	Pn	19 13 22.1	-0.5
URLA				i S	Sn	19 13 44.1	+3.0
PAIG	Paliouri	1.43	318	P	Pn	19 13 21.5	-1.3
PAIG	Paliouri	1.43	318	P	Pn	19 13 22.2	-0.6
PAIG				S	Sn	19 13 42.3	+0.8
PAIG	Paliouri	1.43	318	P	Pn	19 13 22.2	-0.6
PAIG				S	Sn	19 13 42.3	+0.8
XOR	Xorichti	1.43	291	P	Pn	19 13 21.4	-1.4
XOR	Xorichti	1.43	291	P	Pn	19 13 21.8	-1.0
XOR	Xorichti	1.43	291	P	Pn	19 13 21.8	-1.0
AYVA	Ayvalik	1.45	72	i P	Pn	19 13 22.9	-0.3
AYVA	Ayvalik	1.45	72	i P	Pn	19 13 22.9	-0.3
EZN	Ezine	1.46	48	ePN	Pn	19 13 21.9	-1.3
EZN				eSN	Sn	19 13 41.1	-1.1
EZN	Ezine	1.46	48	ePn	Pn	19 13 21.9	-1.3
EZN				eSn	Sn	19 13 41.1	-1.1
ATAL	Atalanti	1.49	264	P	Pn	19 13 22.5	-1.1
ATAL				S	Sn	19 13 43.5	+0.5
ATAL	Atalanti	1.49	264	P	Pn	19 13 22.5	-1.1
ATAL				S	Sn	19 13 43.5	+0.5
LKR	Lokris	1.51	262	eP	Pn	19 13 23.0	-0.9
LKR				eS	Sn	19 13 41.6	-1.9
LKR	Lokris	1.51	262	eP	Pn	19 13 23.0	-0.9
LKR				eS	Sn	19 13 41.6	-1.9
LKR	Lokris	1.51	262	P	Pn	19 13 23.1	-0.8
LKR				S	Sn	19 13 44.2	+0.7
LKR	Lokris	1.51	262	P	Pn	19 13 23.1	-0.8
LKR				eS	Sn	19 13 41.6	-1.9
GADA	Gvkgeada	1.53	30	ePN	Pn	19 13 22.8	-1.4
GADA				eSN	Sn	19 13 42.4	-1.6
GADA	Gvkgeada	1.53	30	ePn	Pn	19 13 22.8	-1.4
GADA				eSn	Sn	19 13 42.4	-1.6
NAIG	Nisos Aigina	1.57	226	eP	Pn	19 13 23.7	-1.1
NAIG	Nisos Aigina	1.57	226	eP	Pn	19 13 23.7	-1.1
NAIG	Nisos Aigina	1.57	226	eP	Pn	19 13 23.7	-1.1
OUR	Ouranopolis	1.63	334	P	Pn	19 13 24.2	-1.4
OUR	Ouranopolis	1.63	334	P	Pn	19 13 24.6	-1.0
OUR	Ouranopolis	1.63	334	P	Pn	19 13 24.6	-1.0
BLCB	Balcova	1.74	105	ePN	Pn	19 13 27.4	+0.3
BLCB				eSN	Sn	19 13 48.8	-0.3
BLCB	Balcova	1.74	105	P	Pn	19 13 27.0	-0.1
BLCB	Balcova	1.74	105	P	Pn	19 13 27.0	-0.1
BLCB	Balcova	1.74	105	ePn	Pn	19 13 27.4	+0.3
BLCB				eSn	Sn	19 13 48.8	-0.3
LTK	Loutraki	1.74	242	eP	Pn	19 13 26.2	-0.9
LTK	Loutraki	1.74	242	P	Pn	19 13 26.4	-0.7
LTK				S	Sn	19 13 49.5	+0.2
LTK	Loutraki	1.74	242	P	Pn	19 13 26.4	-0.7
LTK				S	Sn	19 13 49.5	+0.2
APE	Apeiranthos	1.86	165	ePN	Pn	19 13 28.0	-0.7
APE	Apeiranthos	1.86	165	eP	Pn	19 13 28.0	-0.7
APE				eS	Sn	19 13 51.2	-0.9
APE	Apeiranthos	1.86	165	eP	Pn	19 13 28.0	-0.7
APE				eS	Sn	19 13 51.2	-0.9
APE	Apeiranthos	1.86	165	P	Pn	19 13 28.0	-0.7
APE	Apeiranthos	1.86	165	‖ i P	Pn	19 13 28.0	-0.7
APE	Apeiranthos	1.86	165	P	Pn	19 13 28.0	-0.7
APE				eS	Sn	19 13 51.2	-0.9
PLG	Polygyros	1.88	324	eP	Pn	19 13 28.2	-0.9
PLG	Polygyros	1.88	324	eP	Pn	19 13 28.2	-0.9
PLG	Polygyros	1.88	324	P	Pn	19 13 28.3	-0.8
PLG				S	Sn	19 13 53.1	+0.3
PLG	Polygyros	1.88	324	P	Pn	19 13 28.3	-0.8
PLG				S	Sn	19 13 53.1	+0.3
DID	Didima	1.89	225	P	Pn	19 13 28.1	-1.1
DID	Didima	1.89	225	P	Pn	19 13 28.1	-1.1
IZM	Izmir	1.90	103	ePN	Pn	19 13 29.5	+0.2
KDAG	Bornova	1.90	103	i P	Pn	19 13 29.6	+0.3
KDAG				i S	Sn	19 13 57.7	+4.5
KDAG	Bornova	1.90	103	i P	Pn	19 13 29.6	+0.3
KDAG				i S	Sn	19 13 57.7	+4.5
SMG	Samos	1.91	127	eP	Pn	19 13 29.1	-0.3
SMG				eS	Sn	19 13 51.5	-1.8
SMG	Samos	1.91	127	eP	Pn	19 13 29.1	-0.3
SMG				eS	Sn	19 13 51.5	-1.8
SMG	Samos	1.91	127	eP	Pn	19 13 29.1	-0.3
SMG				eS	Sn	19 13 51.5	-1.8
DSF	Desfina	1.92	257	P	Pn	19 13 28.5	-1.1
DSF				S	Sn	19 13 54.4	+0.7
DSF	Desfina	1.92	257	P	Pn	19 13 28.5	-1.1
DSF				S	Sn	19 13 54.4	+0.7
GELI	Tayfur-Gelibol	1.95	38	ePN	Pn	19 13 29.1	-0.9
GELI	Tayfur-Gelibol	1.95	38	ePn	Pn	19 13 29.1	-0.9
AGG	Agios Georgios	2.02	275	eP	Pn	19 13 30.5	-0.4
AGG	Agios Georgios	2.02	275	eP	Pn	19 13 30.5	-0.4
AGG	Agios Georgios	2.02	275	P	Pn	19 13 30.5	-0.4
AGG				S	Sn	19 13 56.3	+0.2
AGG	Agios Georgios	2.02	275	P	Pn	19 13 30.5	-0.4
AGG				S	Sn	19 13 56.3	+0.2
LPK	Lapseki	2.08	43	ePN	Pn	19 13 30.9	-0.8
LPK	Lapseki	2.08	43	ePn	Pn	19 13 31.0	-0.7
ENEZ	Enez

THL	Klokotos Trika	2.36 288	P	Pn	19 13 35.3	-0.3
THL			S	Sn	19 14 05.2	+0.8
THL	Klokotos Trika	2.36 288	eP	Pn	19 13 35.2	-0.4
THL			S	Sn	19 14 05.2	+0.8
LAKA	Lakka	2.38 256	P	Pn	19 13 35.8	-0.1
LAKA	Lakka	2.38 256	P	Pn	19 13 35.8	-0.1
KRBG	Karabiga-Canak	2.39 50	ePN	Pn	19 13 35.6	-0.5
KRBG	Karabiga-Canak	2.39 50	ePn	Pn	19 13 35.6	-0.5
EFP	Efpalio	2.39 260	eP	Pn	19 13 36.0	-0.1
EFP	Efpalio	2.39 260	P	Pn	19 13 35.7	-0.4
EFP			S	Sn	19 14 06.1	+0.8
EFP	Efpalio	2.39 260	P	Sn	19 13 35.7	-0.4
EFP			S	Sn	19 14 06.1	+0.8
EVR	Evrytania	2.42 272	eP	Pn	19 13 36.9	+0.4
EVR	Evrytania	2.42 272	eP	Pn	19 13 36.9	+0.4
EVR	Evrytania	2.42 272	eP	Pn	19 13 36.9	+0.4
BALB	Balikesir	2.43 71	ePN	Pn	19 13 36.5	-0.1
BALB	Balikesir	2.43 71	ePn	Pn	19 13 36.5	-0.1
GONE	Gonen-Balikesi	2.45 60	ePN	Pn	19 13 36.3	-0.6
GONE	Gonen-Balikesi	2.45 60	ePn	Pn	19 13 36.3	-0.6
THR2	Thira island,	2.45 170	P	Pn	19 13 36.4	-0.5
THR2	Thira island,	2.45 170	P	Pn	19 13 36.4	-0.5
SRS	Serrai	2.47 336	P	Pn	19 13 36.5	-0.6
SRS	Serrai	2.47 336	P	Pn	19 13 36.5	-0.6
THR5	Thira Island,	2.47 172	P	Pn	19 13 36.7	-0.4
THR5	Thira Island,	2.47 172	P	Pn	19 13 36.7	-0.4
THR3	Thira Island,	2.48 171	P	Pn	19 13 36.9	-0.4
THR3	Thira Island,	2.48 171	P	Pn	19 13 36.9	-0.4
VLX	Vlachokerasia	2.49 234	eP	Pn	19 13 37.2	-0.3
VLX	Vlachokerasia	2.49 234	P	Pn	19 13 37.2	-0.3
VLX	Vlachokerasia	2.49 234	P	Pn	19 13 37.2	-0.3
UPR	University Cam	2.52 258	eP	Pn	19 13 37.9	+0.1
UPR	University Cam	2.52 258	P	Pn	19 13 38.2	+0.4
UPR	University Cam	2.52 258	eP	Pn	19 13 37.9	+0.1
RKY	Sarkoy-Tekirda	2.52 43	ePN	Pn	19 13 36.9	-0.9
RKY	Sarkoy-Tekirda	2.52 43	ePn	Pn	19 13 36.9	-1.0
NVR	Nevrokopi	2.61 342	eP	Pn	19 13 38.6	-0.5
NVR	Nevrokopi	2.61 342	eP	Pn	19 13 38.6	-0.5
NVR	Nevrokopi	2.61 342	eP	Pn	19 13 38.6	-0.5
BODT	Bodrum	2.62 133	ePN	Pn	19 13 39.1	0.0
BODT	Bodrum	2.62 133	ePn	Pn	19 13 39.1	0.0
MFT	Murefte	2.65 43	ePN	Pn	19 13 38.9	-0.7
MFT	Murefte	2.65 43	ePn	Pn	19 13 38.9	-0.7
VLI	Veliai	2.65 217	eP	Pn	19 13 38.3	-1.4
VLI	Veliai	2.65 217	eP	Pn	19 13 38.3	-1.4
VLI	Veliai	2.65 217	eP	Pn	19 13 38.3	-1.4
EDC	Edincik	2.72 56	ePN	Pn	19 13 40.4	-0.1
EDC	Edincik	2.72 56	ePn	Pn	19 13 40.4	-0.2
MLSB	Milas	2.75 124	ePN	Pn	19 13 40.7	-0.3
MLSB	Milas	2.75 124	ePn	Pn	19 13 40.7	-0.3
BNT	Bandirma	2.76 56	ePN	Pn	19 13 40.4	-0.7
KZN	Kozani	2.82 302	eP	Pn	19 13 42.2	+0.2
KZN	Kozani	2.82 302	eP	Pn	19 13 42.2	+0.2
KZN	Kozani	2.82 302	P	Pn	19 13 42.1	+0.1
KZN	Kozani	2.82 302	P	Pn	19 13 42.1	+0.1
RLS	Riolos of Patr	2.82 254	eP	Pn	19 13 42.6	+0.6
RLS	Riolos of Patr	2.82 254	eP	Pn	19 13 42.6	+0.6
RLS	Riolos of Patr	2.82 254	eP	Pn	19 13 42.6	+0.6
ITM	Ithomi	2.90 235	P	Pn	19 13 43.6	+0.6
ITM	Ithomi	2.90 235	P	Pn	19 13 43.4	+0.4
ITM	Ithomi	2.90 235	P	Pn	19 13 43.4	+0.4
TKR	Tekirdag	2.93 43	ePN	Pn	19 13 42.8	-0.7
TKR	Tekirdag	2.93 43	ePn	Pn	19 13 42.8	-0.6
KULA	Kula-Manisa	2.96 96	ePN	Pn	19 13 43.9	+0.1
KULA	Kula-Manisa	2.96 96	ePn	Pn	19 13 43.9	+0.1
DAT	Datca	3.00 134	ePN	Pn	19 13 44.5	+0.1
DAT	Datca	3.00 134	ePn	Pn	19 13 44.5	0.0
KCTX	Karacabey (Bur	3.01 61	ePN	Pn	19 13 44.1	-0.4
KCTX	Karacabey (Bur	3.01 61	ePn	Pn	19 13 44.1	-0.4
VAY	Valandovo	3.04 325	i Pn	Pn	19 13 44.0	-0.9
VAY	Valandovo	3.04 325	P	Pn	19 13 44.2	-0.8
VAY	Valandovo	3.04 325	P	Pn	19 13 44.2	-0.8
CRLT	Corlu	3.13 43	ePN	Pn	19 13 45.9	-0.3
CRLT	Corlu	3.13 43	ePn	Pn	19 13 45.9	-0.4
YER	Yerkesik	3.17 122	ePN	Pn	19 13 46.8	0.0
YER	Yerkesik	3.17 122	ePn	Pn	19 13 46.8	0.0
PYL	PYLOS	3.19 233	eP	Pn	19 13 47.6	+0.6
PYL	PYLOS	3.19 233	P	Pn	19 13 47.5	+0.5
PYL	PYLOS	3.19 233	P	Pn	19 13 47.5	+0.5
PLD	Plovdiv	3.24 357	P	Pn	19 13 48.2	+0.5
PLD	Plovdiv	3.24 357	P	Pn	19 13 48.2	+0.5
JAN	Janina	3.25 285	eP	Pn	19 13 48.3	+0.4
JAN	Janina	3.25 285	eP	Pn	19 13 48.3	+0.4
JAN	Janina	3.25 285	eP	Pn	19 13 48.3	+0.4
EDRB	Edirne	3.29 25	ePN	Pn	19 13 47.4	-1.0
EDRB	Edirne	3.29 25	ePn	Pn	19 13 47.4	-1.0
KFL	Anninata	3.32 258	P	Pn	19 13 50.2	+1.3
KFL	Anninata	3.32 258	P	Pn	19 13 50.2	+1.3
LKD2	Lefkada island	3.32 270	P	Pn	19 13 51.2	+2.3
FNA	Florina	3.33 306	P	Pn	19 13 49.5	+0.6
FNA	Florina	3.33 306	P	Pn	19 13 49.5	+0.6
FNA	Florina	3.33 306	P	Pn	19 13 49.5	+0.6
NEST	Nestorio	3.36 299	P	Pn	19 13 50.4	+1.0
NEST	Nestorio	3.36 299	P	Pn	19 13 50.4	+1.0
MDNY	Mudanya-Bursa	3.42 63	ePN	Pn	19 13 49.9	-0.2
MDNY	Mudanya-Bursa	3.42 63	ePn	Pn	19 13 49.9	-0.2
DENT	Denizli	3.43 108	ePN	Pn	19 13 50.4	+0.1
DENT	Denizli	3.43 108	ePn	Pn	19 13 50.4	+0.1
VLS	Valsamata	3.46 260	eP	Pn	19 13 51.7	+1.0
VLS	Valsamata	3.46 260	eP	Pn	19 13 51.7	+1.0
VLS	Valsamata	3.46 260	P	Pn	19 13 52.1	+1.4
VLS	Valsamata	3.46 260	eP	Pn	19 13 51.7	+1.0
SLVT	Silivri	3.46 46	ePN	Pn	19 13 50.4	-0.4
SLVT	Silivri	3.46 46	ePn	Pn	19 13 50.4	-0.4
ARMT	Armutlu	3.49 60	ePN	Pn	19 13 51.3	+0.1
ARMT	Armutlu	3.49 60	ePn	Pn	19 13 51.3	+0.2
VAM	Vamos	3.50 190	P	Pn	19 13 52.3	+1.0
VAM	Vamos	3.50 190	P	Pn	19 13 52.3	+1.0
KARN	Karanos	3.55 193	P	Pn	19 13 52.5	+0.5
KARN	Karanos	3.55 193	P	Pn	19 13 52.5	+0.5
IDI	Anoyia	3.57 180	P	Pn	19 13 52.3	0.0
IDI	Anoyia	3.57 180	P	Pn	19 13 52.3	0.0
IGT	Igoumenitsa	3.62 282	P	Pn	19 13 57.0	+4.1
IGT	Igoumenitsa	3.62 282	P	Pn	19 13 54.9	+2.0
IGT	Igoumenitsa	3.62 282	P	Pn	19 13 54.9	+2.0
CTKS	Kestanelik-??a	3.64 48	ePN	Pn	19 13 53.2	0.0
CTKS	Kestanelik-??a	3.64 48	ePn	Pn	19 13 53.2	0.0
NPS	Neapolis	3.64 171	P	Pn	19 13 57.9	+4.7
KHL	Karahalli	3.65 97	ePN	Pn	19 13 54.4	+1.0
KHL	Karahalli	3.65 97	ePn	Pn	19 13 54.4	+1.0
CTYL	Yal??k??y-??at	3.67 44	ePN	Pn	19 13 53.6	-0.1
CTYL	Yal?k??y-??at	3.67 44	ePn	Pn	19 13 53.6	-0.1
ARG	Arkhangelos	3.68 135	P	Pn	19 13 54.3	+0.6
ARG	Arkhangelos	3.68 135	P	Pn	19 13 54.3	+0.6
BGKT	Bogazkoy	3.76 51	ePN	Pn	19 13 55.0	+0.1
BGKT	Bogazkoy	3.76 51	ePn	Pn	19 13 55.0	+0.1
KRUS	Krusevo	3.76 313	⇑i Pn	Pn	19 13 55.4	+0.5
KARP	Karpathos	3.77 151	P	Pn	19 13 55.0	0.0
KARP	Karpathos	3.77 151	P	Pn	19 13 55.0	0.0
JMB	Yambol	3.81 19	P	Pn	19 13 55.4	-0.2
JMB	Yambol	3.81 19	P	Pn	19 13 55.4	-0.2
ISK	Istanbul-Kandi	3.87 54	ePN	Pn	19 13 56.1	-0.2
ISK	Istanbul-Kandi	3.87 54	ePn	Pn	19 13 56.2	-0.2
VTS	Vitosha	3.94 341	⇑P	Pn	19 13 58.1	+0.7
VTS	Vitosha	3.94 341	P	Pn	19 13 58.2	+0.8
VTS	Vitosha	3.94 341	⇑i P	Pn	19 13 58.1	+0.7
VTS	Vitosha	3.94 341	⇑P	Pn	19 13 58.1	+0.7
KLYT	Kilyos	3.97 52	ePN	Pn	19 13 57.6	-0.1
KLYT	Kilyos	3.97 52	ePN	Pn	19 13 57.6	-0.1
CAVI	Cavuskoy	4.04 69	ePN	Pn	19 13 58.9	+0.2
CAVI	Cavuskoy	4.04 69	ePn	Pn	19 13 58.9	+0.2
ADVT	Abdulvahap	4.04 66	ePN	Pn	19 13 59.0	+0.2
ADVT	Abdulvahap	4.04 66	ePn	Pn	19 13 59.0	+0.3
KEK	Kerkira	4.06 284	eP	Pn	19 13 59.9	+1.0
KEK	Kerkira	4.06 284	eP	Pn	19 13 59.9	+1.0
KEK	Kerkira	4.06 284	eP	Pn	19 13 59.9	+1.0
ALT	Altintas	4.06 86	ePN	Pn	19 13 59.3	+0.3
ALT	Altintas	4.06 86	ePn	Pn	19 13 59.3	+0.3
GVD	Gavdhos	4.07 190	eP	Pn	19 14 01.6	+2.4
GVD	Gavdhos	4.07 190	eP	Pn	19 14 01.6	+2.4
SKO	Skopje	4.08 321	⇑i Pn	Pn	19 14 00.8	+1.5
HRT	Hereke	4.15 60	ePN	Pn	19 14 00.5	+0.2
HRT	Hereke	4.15 60	ePn	Pn	19 14 00.5	+0.3
SILT	Sile	4.29 56	ePN	Pn	19 14 02.3	+0.2
SILT	Sile	4.29 56	ePn	Pn	19 14 02.3	+0.1
SHUT	Suhut-Afyon	4.42 92	ePN	Pn	19 14 04.8	+0.9
SHUT	Suhut-Afyon	4.42 92	ePn	Pn	19 14 04.8	+0.8
ELL	Elmali	4.49 117	ePN	Pn	19 14 05.5	+0.6
ELL	Elmali	4.49 117	ePn	Pn	19 14 05.5	+0.6
ISP	Isparta	4.53 102	ePN	Pn	19 14 06.0	+0.6
ISP	Isparta	4.53 102	eP	Pn	19 14 06.5	+1.0
BARS	Barje	4.59 330	⇑i Pn	Pn	19 14 06.4	+0.1
GULT	Gulveren	4.60 68	ePN	Pn	19 14 07.0	+0.6
GULT	Gulveren	4.60 68	ePn	Pn	19 14 07.1	+0.7
ESKT	Eskisehir	4.66 80	ePN	Pn	19 14 08.1	+0.8
ESKT	Eskisehir	4.66 80	ePn	Pn	19 14 08.1	+0.9
BCK	Bucak	4.69 106	ePN	Pn	19 14 08.5	+0.8
BCK	Bucak	4.69 106	ePn	Pn	19 14 08.5	+0.8
SUTC	Sutluce-Ispart	4.99 104	ePN	Pn	19 14 12.8	+1.0
SUTC	Sutluce-Ispart	4.99 104	ePn	Pn	19 14 12.8	+1.0
MDU	Mudurnu	5.12 70	ePN	Pn	19 14 14.6	+1.1
MDU	Mudurnu	5.12 70	ePn	Pn	19 14 14.6	+1.0
SVRH	Sivrihisar-ESK	5.17 81	ePN	Pn	19 14 15.3	+1.1
SVRH	Sivrihisar-ESK	5.17 81	ePn	Pn	19 14 15.4	+1.1
BOLS	Boljevac	5.43 337	⇑i Pn	Pn	19 14 17.6	-0.3
KONT	Konya--Tatoy	5.92 97	ePN	Pn	19 14 25.8	+1.2
KONT	Konya--Tatoy	5.92 97	ePn	Pn	19 14 25.8	+1.2
GRUS	Gruza	5.93 329	⇑i Pn	Pn	19 14 24.4	-0.2
TIRR	Tirgusor 7.8nm,0.6s	6.17 24	eP	Pn	19 14 27.0	-1.0
TIRR	Tirgusor 7.8nm,0.6s	6.17 24	⇓i P	Pn	19 14 27.3	-0.7
TIRR	Tirgusor 7.8nm,0.6s	6.17 24	eP	Pn	19 14 27.0	-1.0
DIVS	Divibare	6.40 326	⇑i Pn	Pn	19 14 31.7	+0.6
SAFT	Safranbolu	6.42 66	ePN	Pn	19 14 32.3	+0.9
SAFT	Safranbolu	6.42 66	ePn	Pn	19 14 32.3	+0.9
BBLS	Lazići	6.49 322	⇑i Pn	Pn	19 14 29.8	-2.5
VOIR		6.57 1	⇓P	Pn	19 14 33.2	-0.2
VOIR		6.57 1	⇓i P	Pn	19 14 33.2	-0.2
VOIR		6.57 1	⇓P	Pn	19 14 33.2	-0.2
MLR	Muntele Rosu	6.67 6	⇑P	Pn	19 14 35.7	+0.9
MLR	Muntele Rosu	6.67 6	⇑i P	Pn	19 14 35.7	+0.9
MLR	Muntele Rosu	6.67 6	⇑P	Pn	19 14 35.7	+0.9
GZR	Gura Zlata	6.71 347	⇓P	Pn	19 14 35.2	-0.2
GZR	Gura Zlata	6.71 347	⇓i P	Pn	19 14 35.2	-0.2
GZR	Gura Zlata	6.71 347	⇓P	Pn	19 14 35.2	-0.2
BR131	Keskin Array S 2.7nm,0.4s	6.82 80	eP	Pn	19 14 38.4	+1.5
BR131	Keskin Array S 2.7nm,0.4s	6.82 80	eP	Pn	19 14 38.4	+1.4
BRTR	Keskin Array B 1.2nm,0.3s,baz=259,slow=12,SNR=33	6.82 80	Pn	Pn	19 14 38.6	+1.7
BRTR			Pg	Pg	19 15 05.8	-1.9
BRTR	0.4nm,0.3s,baz=260,slow=16,SNR=9.2		Lg		19 16 36.3	
BRTR	Keskin Array B baz=252,slow=28,SNR=5.8	6.82 80	Pn	Pn	19 14 38.7	+1.7
BRTR	Keskin Array B	6.82 80	Pg	Pg	19 15 05.8	-1.9
TLCR		6.95 23	⇑P	Pn	19 14 38.6	-0.1
TLCR		6.95 23	⇑i P	Pn	19 14 38.6	-0.1
TLCR		6.95 23	⇑P	Pn	19 14 38.6	-0.1
CDT	Castel del Mon	6.99 291	ePn	Pn	19 14 40.7	+1.4
CEL	Celeste	7.09 268	eP	Pn	19 14 41.5	+0.9
CEL	Celeste	7.09 268	eP	Pn	19 14 41.5	+0.8
PLOR	Plostina	7.10 10	⇑i P	Pn	19 14 41.8	+1.1
PLOR	Plostina	7.10 10	⇑i P	Pn	19 14 41.8	+1.1
DOPR	Dopca	7.11 3	⇑i P	Pn	19 14 41.3	+0.5
DOPR	Dopca	7.11 3	⇑i P	Pn	19 14 41.3	+0.5
VRI	Vrincioaia	7.12 10	⇓P	Pn	19 14 42.2	+1.1
VRI	Vrincioaia	7.12 10	⇓i P	Pn	19 14 42.2	+1.1
VRI	Vrincioaia	7.12 10	⇓P	Pn	19 14 42.2	+1.1
DEV	Deva	7.17 349	⇓P	Pn	19 14 42.7	+1.1
DEV	Deva	7.17 349	⇓i P	Pn	19 14 42.7	+1.0
DEV	Deva	7.17 349	⇓P	Pn	19 14 42.7	+1.0
BZS	Buzias	7.17 341	⇑P	Pn	19 14 41.5	-0.2
BZS	Buzias	7.17 341	⇑i P	Pn	19 14 41.5	-0.3
BZS	Buzias	7.17 341	⇑P	Pn	19 14 41.5	-0.3
MDB	Medias	7.28 357	⇑P	Pn	19 14 44.0	+0.8
MDB	Medias	7.28 357	⇑i P	Pn	19 14 44.0	+0.8
MDB	Medias	7.28 357	⇑P	Pn	19 14 44.0	+0.8
TESR		7.75 9	⇑P	Pn	19 14 50.3	+0.7
TESR		7.75 9	⇑i P	Pn	19 14 50.3	+0.7
TESR		7.75 9	⇑P	Pn	19 14 50.3	+0.7
DRGR		8.09 349	⇓P	Pn	19 14 54.9	+0.7
DRGR		8.09 349	⇓i P	Pn	19 14 54.9	+0.7
DRGR		8.09 349	⇓P	Pn	19 14 54.9	+0.7
BURAR	Bucovina Array	8.75 1	⇑P	Pn	19 15 04.9	+1.5
BURAR	Bucovina Array	8.75 1	⇑i P	Pn	19 15 04.9	+1.6
BURAR	Bucovina Array	8.75 1	⇑P	Pn	19 15 04.9	+1.6
BUR08	Bucovina Ar. S	8.78 1	eP	Pn	19 15 04.8	+1.1
BUR08	Bucovina Ar. S	8.78 1	eP	Pn	19 15 04.8	+1.1
MMAI	Mount Meron Ar 1.6nm,0.3s,baz=308,slow=12,SNR=10	10.31 121	Pn	Pn	19 15 24.5	-0.3
MMAI			LR	LR	19 20 22.0	
EIL	Elat comp=Z,42nm,19.6s,baz=330,slow=42	12.36 135	LR	LR	19 22 37.1	
ESDC	Sonseca Array comp=Z,30nm,19.3s,baz=299,slow=46	22.33 281	P	P	19 17 56.5	+1.9
ESDC	Sonseca Array 0.4nm,0.5s,mb3.1,baz=73,slow=10,SNR=4.4	22.33 281	P	P	19 17 56.5	+1.9
ESDC	Sonseca Array	22.33 281	P	P	19 17 56.5	+1.9
HFS	Hagfors 1.3nm,0.6s,mb3.5,baz=152,slow=9.6,SNR=6.6	22.44 345	P	P	19 17 54.5	-1.0
HFS	Hagfors	22.44 345	P	P	19 17 54.5	-1.0
FINES	FINESS Array B 1.8nm,0.7s,mb3.6,baz=176,slow=5.5,SNR=5.1	22.62 1	P	P	19 17 56.8	-0.5
FINES	FINESS Array B	22.62 1	P	P	19 17 56.8	-0.6
NB2	NORSAR Subarra comp=Z,1.3nm,0.5s,mb3.6,baz=156,slow=9.3	23.78 343	P	P	19 18 09.1	-0.2
NB2	NORSAR Subarra comp=Z,1.3nm,0.5s,mb3.6,baz=156,slow=9.0,SNR=3.3	23.78 343	P	P	19 18 09.1	-0.2
NOA	NORSAR Array B comp=Z,0.8nm,0.6s,mb3.3,baz=148,slow=9.5,SNR=4.2	23.78 343	P	P	19 18 10.9	+1.6
NOA	NORSAR Array B	23.78 343	P	P	19 18 10.9	+1.6
EKA	Eskdalemuir Ar comp=Z,4.7nm,1.0s,mb4.0,baz=113,slow=9.6,SNR=5.0	24.98 320	P	P	19 18 23.1	+2.8
MKAR	Makanchi Array comp=Z,0.7nm,0.6s,mb3.5,baz=282,slow=6.1,SNR=8.3	41.99 68	P	P	19 20 48.9	+0.9
ZALV	Zalesovo Beam comp=Z,0.4nm,0.4s,mb3.5,baz=298,slow=7.8,SNR=2.6	42.66 49	P	P	19 20 53.6	+0.4

*ISCJB **20** 19:26:28.0±0.4, 38°.86N±0°.03×24°.87E±0°.03, h10km, Error ellipse: s-maj=4.2km s-min=3.0km az=162.0*
*CSEM **20** 19:26:27.5±0.1, 38°.85N×24°.86E, h2km, ML2.9/8, Error ellipse: s-maj=3.4km s-min=2.2km az=163.0*
*ATH **20** 19:26:27.7, 38°.86N×24°.89E, h4km, MD2.8/6, ML2.4*
*THE **20** 19:26:28.3, 38°.90N×24°.87E, h3km±1km, ML2.9/8, Error ellipse: s-maj=1.5km s-min=0.4km az=80.0*

ISC 20 19:26:27.9±0.5, 38°.85N±0°.03×24°.86E±0°.03, h7km±6km, n39, σ0°.79/60, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
AOS	Alonnisos	0.83	293	P	Pg	19 26 44.2	+0.4
AOS				S	Sg	19 26 55.7	+1.2
AOS	Alonnisos	0.83	293	P	Pg	19 26 44.2	+0.4
AOS				S	Sg	19 26 55.7	+1.2
SIGR	SIGRI	0.85	65	P	Pg	19 26 44.3	0.0
SIGR				S	Sg	19 26 56.0	+0.6
SIGR	SIGRI	0.85	65	P	Pg	19 26 44.3	0.0
SIGR				S	Sg	19 26 56.0	+0.6
CHOS	Chios island	1.05	116	P	Pg	19 26 48.0	0.0
CHOS				S	Sg	19 27 03.2	+1.6
CHOS	Chios island	1.05	116	P	Pg	19 26 48.0	0.0
CHOS				S	Sg	19 27 03.2	+1.6
LIA	Limnos Island	1.07	13	ePG	Pg	19 26 48.1	-0.4
LIA				eSG	Sg	19 27 02.2	-0.3
LIA	Limnos Island	1.07	13	P	Pg	19 26 47.7	-0.8
LIA				S	Sg	19 27 02.4	-0.1
LIA	Limnos Island	1.07	13	P	Pg	19 26 47.7	-0.8
LIA	Limnos Island	1.07	13	ePg	Pg	19 26 48.1	-0.4
LIA				eSg	Sg	19 27 02.2	-0.3
PTL	Penteli	1.12	225	ePG	Pg	19 26 49.0	-0.4
PTL				eSB	Sb	19 27 04.4	0.0
PTL	Penteli	1.12	225	ePg	Pg	19 26 49.0	-0.4
PTL				eSb	Sb	19 27 04.4	0.0
PRK	Paraskevi	1.17	70	ePG	Pg	19 26 49.0	-1.3
PRK				eSB	Sb	19 27 05.4	-0.4
PRK	Paraskevi	1.17	70	P	Pg	19 26 49.9	-0.4
PRK				S	Sg	19 27 06.4	+0.9
PRK	Paraskevi	1.17	70	ePg	Pg	19 26 49.0	-1.3
PRK	Paraskevi	1.17	70	P	Pg	19 26 49.9	-0.4
PRK				eSb	Sb	19 27 05.4	-0.4
PRK				S	Sg	19 27 06.4	+0.9
ATH	Athens Observa	1.26	226	ePG	Pg	19 26 51.2	-0.8
ATH	Athens Observa	1.26	226	ePg	Pg	19 26 51.2	-0.8
VLY	Voula,Athens	1.30	220	ePB	Pb	19 26 51.8	-0.9
VLY	Voula,Athens	1.30	220	ePb	Pb	19 26 51.8	-0.9
NEO	Neokhori	1.35	290	ePN	Pn	19 26 53.9	+0.7
NEO	Neokhori	1.35	290	ePn	Pn	19 26 53.9	+0.7
XOR	Xorichti	1.40	292	P	Pn	19 26 53.3	-0.5
XOR				S	Sb	19 27 12.8	+0.5
XOR	Xorichti	1.40	292	P	Pn	19 26 53.3	-0.5
XOR				S	Sb	19 27 12.8	+0.5
PAIG	Paliouri	1.41	320	P	Pn	19 26 53.3	-0.7
PAIG				S	Sb	19 27 13.5	+0.8
PAIG	Paliouri	1.41	320	P	Pn	19 26 53.3	-0.7
PAIG				S	Sb	19 27 13.5	+0.8
LKR	Lokris	1.47	263	ePB	Pb	19 26 54.8	-0.8
LKR	Lokris	1.47	263	P	Pn	19 26 54.7	-0.1
LKR	Lokris	1.47	263	P	Pn	19 26 54.7	-0.1
NAIG	Nisos Aigina	1.54	225	ePB	Pb	19 26 57.5	+0.8
NAIG	Nisos Aigina	1.54	225	ePb	Pb	19 26 57.5	+0.8
AGG	Agios Georgios	1.98	276	ePG	Pg	19 27 05.2	-0.7
AGG	Agios Georgios	1.98	276	P	Pn	19 27 02.6	+0.7
AGG	Agios Georgios	1.98	276	P	Pn	19 27 02.6	+0.7
AGG	Agios Georgios	1.98	276	ePg	Pg	19 27 05.2	-0.7
ALN	Alexandroupoli	2.24	24	ePB	Pb	19 27 06.5	-2.2
ALN	Alexandroupoli	2.24	24	ePb	Pb	19 27 06.5	-2.2
THL	Klokotos Trika	2.32	289	P	Pn	19 27 06.5	-0.1
THL				S	Sn	19 27 36.1	+0.7
THL	Klokotos Trika	2.32	289	P	Pn	19 27 06.5	-0.1
THL				S	Sn	19 27 36.1	+0.7

*NEIC **20** 19:29:18.4, 40°.11S×175°.04E, h68km, ML4.1(WEL), After WEL.*

WEL 20 19:29:18.4±0.1, 40°.11S×175°.04E, h67km±2km, ML4.1/21, 5D, Error ellipse: s-maj=0.9km s-min=0.5km az=90.0, intensity MM 4., North Island

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WAZ	Wanganui	0.35	354	⇓PN		Pn	19 29 28.8	-0.8
WAZ				SN		Sn	19 29 37.1	-0.6
WAZ	Wanganui	0.35	354	P		Pn	19 29 28.7	-0.8
WAZ				S		Sn	19 29 36.6	-1.1
POWZ	Post Office Ro	0.63	117	PN		Pn	19 29 32.0	-0.2
POWZ				SN		Sn	19 29 42.9	+0.5
MRZ	Mangatainoka R	0.69	143	⇓PN		Pn	19 29 32.5	-0.4
MRZ				SN		Sn	19 29 44.3	+0.6
MRZ	Mangatainoka R	0.69	143	P		Pn	19 29 32.4	-0.5
TSZ	Takapari Road	0.71	86	PN		Pn	19 29 33.1	-0.1
TSZ				SN		Sn	19 29 44.9	+0.9
TSZ	Takapari Road	0.71	86	P		Pn	19 29 33.1	0.0
TSZ				S		Sn	19 29 44.9	+0.9
OGWZ	Otaki Gorge	0.72	172	⇓PN		Pn	19 29 33.2	0.0
OGWZ				SN		Sn	19 29 44.3	+0.1
KIW	Kapiti Island	0.76	187	PN		Pn	19 29 33.7	0.0
KIW	Kapiti Island	0.76	187	P		Pn	19 29 33.7	0.0
MTVZ	Mangateitei	0.79	25	PN		Pn	19 29 33.5	-0.7
PKVZ	Pokaka	0.85	16	PN		Pn	19 29 33.9	-0.9
HOWZ	Holdsworth Sta	0.87	155	PN		Pn	19 29 35.0	0.0
DVHZ	Dannevirke	0.89	103	PN		Pn	19 29 34.6	-0.6
MOVZ	Moawhango	0.89	39	PN		Pn	19 29 34.6	-0.7
WNVZ	Wahianoa	0.89	29	PN		Pn	19 29 35.0	-0.3
TRVZ	Turoa	0.90	26	PN		Pn	19 29 34.9	-0.5
PNHZ	Pukenui	0.91	78	PN		Pn	19 29 35.5	-0.1
DRZ	Dome Shelter	0.93	26

BRU2	**Volcan**	**0.20 126**	⇑*i*P		Pg	19 30 18.6	+1.1
BRU2			*e*S		Sg	19 30 22.7	+2.2
TBS2		**0.23 121**	*e*P		Pg	19 30 14.5	-3.4
TBS2			*e*S		Sg	19 30 18.8	-2.5
ACR	**Cerro Adams**	**0.40 230**	⇓*i*P		Pg	19 30 21.3	+0.3
ACR			*e*S		Sg	19 30 27.2	+0.8
BAR1		**0.56 306**	*e*P		Pg	19 30 23.4	-0.5
BUS	**Buena Vista**	**1.10 306**	*e*P		Pb	19 30 33.5	-0.4
URSC	**Ursca**	**1.29 315**	*e*P		Pn	19 30 36.5	-0.3
URSC			*e*S		Sb	19 30 53.5	-0.3
QCR	**Quepos**	**1.39 292**	*e*S		Sn	19 30 54.7	-1.6
LAJ	**Bijagual**	**1.57 307**	*e*P		Pn	19 30 45.1	+4.6
LAJ			*e*S		Sn	19 31 09.3	+8.6
PRS1	**Puriscal**	**1.79 307**	*e*P		Pn	19 30 43.4	-0.2
PRS1			*e*S		Sn	19 31 05.9	-0.3
CGA2	**Cerro Gallo 2**	**1.93 305**	*e*P		Pn	19 30 46.0	+0.5
CGA2			*e*S		Sn	19 31 10.9	+1.2

MAN 20 19:43:25, 13°.88N×122°.56E, h1km, mb4.1, ML2.9, MS2.5, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GQP	**Guinayangan**	**0.11 283**		⇓*i*P	Pg	19 43 27.1	-0.1
GQP				*i*S	Sg	19 43 32.1	+3.5
BOAC	**Boac**	**0.81 239**		*e*P	Pg	19 43 40.7	+0.1
BOAC				*e*S	Sg	19 43 56.3	+5.2
POLP	**Polilio Island**	**1.03 325**		*e*P	Pg	19 43 59.4	+14
BALP	**Baler**	**2.08 333**		*e*P	Pn	19 44 01.7	+0.7

IDC 20 19:51:09.9±2.3, 7°.49S×154°.97E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.7/16, mbtmp3.8/5, Error ellipse: s-maj=79.4km s-min=32.5km az=123.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**25.84 229**		P	P	19 56 43.3	+0.1
	0.6nm,0.8s,baz=60,slow=10,SNR=7.6						
SONM	**Songino Array**	**69.73 327**		P	P	20 02 22.1	+0.4
	0.7nm,0.6s,baz=142,slow=7.5,SNR=5.2						
MKAR	**Makanchi Array**	**83.76 319**		P	P	20 03 41.5	+0.5
	0.4nm,0.3s,baz=104,slow=5.4,SNR=12						
ILAR	**Eielson Array**	**83.83 21**		P	P	20 03 41.1	+0.1
	0.6nm,0.4s,baz=246,slow=4.8,SNR=15						
ZALV	**Zalesovo Beam**	**84.57 326**		P	P	20 03 44.4	-0.6
	0.3nm,0.4s,baz=106,slow=5.9,SNR=3.3						

*IDC **20** 20:04:55.8±0.9, 41°.05S×91°.73W, h0km, mb3.8/8, mb1 4.1/8, mb1mx4.1/16, mbtmp3.9/8, MS3.5/5, Ms1 3.6/5, ms1mx3.3/18, Error ellipse: s-maj=31.9km s-min=22.2km az=100.0*

*ISCJB **20** 20:04:56.2±0.7, 41°.1S±0°.1×91°.6W±0°.2, h10km, mb3.9/10, MS3.3/4, Error ellipse: s-maj=19.0km s-min=17.5km az=175.0*

*NEIC **20** 20:04:57.7±0.7, 41°.07S×91°.64W, h10km, mb4.3/3, Error ellipse: s-maj=17.0km s-min=16.2km az=83.0*

ISC 20 20:04:57.9±0.8, 41°.1S±0°.1×91°.6W±0°.2, h10km, n18, σ1º01/16, mb3.9/10, MS3.3/4, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**15.93**	**96**	Pn	**Pn**	**20 08 46.8**	**+4.7**
	0.1nm,0.3s,baz=274,slow=9.9,SNR=6.4						
PLCA				LR	LR	20 13 27.4	
	comp=Z,310nm,19.4s,baz=66,slow=32						
PLCA	**Paso Flores**	**15.93**	**96**	*e*P	**Pn**	**20 08 48.0**	**+5.9**
PLCA				LR	LR	20 13 27.4	
USHA	**Ushuaia**	**20.60**	**140**	LR	LR	20 15 50.8	
	comp=Z,335nm,19.6s,MS3.7,baz=106,slow=32						
CFAA	**Coronel Fontan**	**21.03**	**71**	P	**P**	**20 09 42.1**	**+0.3**
	0.6nm,0.8s,mb3.0,baz=230,slow=9.5,SNR=8.9						
CFAA				LR	LR	20 15 53.3	
	comp=Z,30nm,20.2s,MS2.7,baz=279,slow=31						
TRQA	**Tornquist**	**23.00**	**92**	*e*P	**P**	**20 10 02.2**	**-0.6**
	17nm,1.3s,mb4.3						
CPUP	**Villa Florida**	**31.87**	**73**	LR	LR	20 22 02.2	
	comp=Z,96nm,21.0s,MS3.5,baz=65,slow=32						
LPAZ	**La Paz**	**31.98**	**46**	P	**P**	**20 11 25.6**	**+1.3**
	0.9nm,0.6s,mb3.8,baz=224,slow=7.6,SNR=3.9						
LPAZ				LR	LR	20 21 24.2	
	comp=Z,105nm,21.1s,MS3.5,baz=124,slow=31						
SIV	**San Ignacio**	**36.36**	**56**	P	**P**	**20 12 01.1**	**-1.2**
	1.2nm,0.7s,mb4.0,baz=232,slow=8.5,SNR=6.1						
OTAV	**Otavalo**	**42.85**	**20**	P	**P**	**20 12 57.1**	**+0.8**
	11nm,1.5s,mb4.4						
QSPA	**South Pole Qui**	**49.13**	**180**	P	**P**	**20 13 46.5**	**+1.3**
	0.9nm,0.8s,mb3.9,baz=98,slow=0.7,SNR=6.8						
QSPA	**South Pole Qui**	**49.13**	**180**	*e*P	**P**	**20 13 46.9**	**+1.8**
	1.0nm,0.5s,mb4.1						
MAW	**Mawson**	**69.91**	**170**	P	**P**	**20 16 07.5**	**-1.1**
	1.9nm,0.9s,mb4.0,baz=192,slow=5.9,SNR=6.5						
TXAR	**Lajitas Array**	**70.96**	**349**	P	**P**	**20 16 14.8**	**-0.6**
	1.1nm,0.9s,mb3.8,baz=181,slow=7.4,SNR=8.1						
TXAR	**Lajitas Array**	**70.96**	**349**	P	**P**	**20 16 14.8**	**-0.6**
PV01	**Paradox Valley**	**80.36**	**347**	*e*P	**P**	**20 17 09.8**	**+0.8**
	444nm,1.1s						
NVAR	**Mina Array Bea**	**82.82**	**339**	P	**P**	**20 17 20.1**	**-1.9**
	0.4nm,0.4s,mb3.9,baz=149,slow=6.1,SNR=3.7						
BW06	**Boulder Array**	**85.04**	**347**	*e*P	**P**	**20 17 33.5**	**+0.2**
PDAR	**Pinedale Array**	**85.04**	**347**	P	**P**	**20 17 33.6**	**+0.3**
	2.3nm,0.8s,mb4.3,baz=146,slow=6.6,SNR=19						

MAN 20 20:07:06, 14°.19N×123°.05E, h45km, mb4.3, ML3.2, MS3.0, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVCP	**Virac**	**1.22 119**		*e*P	Pn	20 07 27.4	+0.7
PVCP				*e*S	Sn	20 07 43.6	+1.5
BALP	**Baler**	**2.10 318**		*e*P	Pn	20 07 39.8	+1.0
LUBP	**Lubang**	**2.76 261**		*e*P	Pn	20 07 49.1	+1.3

*ISCJB **20** 20:37:27.9±0.4, 38°.44N±0°.01×22°.00E±0°.02, h1km±3km, mb3.6/4, MS3.0/2, Error ellipse: s-maj=2.7km s-min=2.5km az=6.9*

*IDC **20** 20:37:27.7±1.5, 38°.72N×21°.92E, h0km, mb3.7/4, mb1 3.6/5, mb1mx3.3/26, mbtmp3.6/5, ML2.9/1, MS3.0/2, Ms1 3.0/2, ms1mx2.5/37, Error ellipse: s-maj=50.5km s-min=26.0km az=135.0*

*THE **20** 20:37:28.4, 38°.41N×22°.02E, h0km±2km, ML3.6/8, Error ellipse: s-maj=2.1km s-min=0.7km az=194.0*

*CSEM **20** 20:37:28.9±0.1, 38°.43N×22°.01E, h8km, ML3.1, Error ellipse: s-maj=3.1km s-min=2.9km az=55.0*

*ATH **20** 20:37:28.5, 38°.44N×21°.99E, h12km±1km, MD3.5/21, ML3.1*

*NEIC **20** 20:37:28.5, 38°.44N×21°.99E, h12km, ML3.1(ATH), After ATH.*

ISC 20 20:37:28.7±0.3, 38°.44N±0°.01×22°.02E±0°.02, h1km±3km, n140, σ1º02/197, mb3.6/4, MS3.0/2, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	**Efpalio**	**0.09 265**		*e*PG	**Pg**	**20 37 30.7**	**+0.2**
EFP				*e*SG	**Sg**	**20 37 32.2**	**+0.6**
EFP	**Efpalio**	**0.09 265**		*e*Pg	**Pg**	**20 37 30.7**	**+0.2**
EFP				*e*Sg	**Sg**	**20 37 32.2**	**+0.6**
UPR	**University Cam**	**0.24 231**		*e*PG	**Pg**	**20 37 33.5**	**+0.2**
UPR				*e*SG	**Sg**	**20 37 36.8**	**+0.4**
UPR	**University Cam**	**0.24 231**		*e*Pg	**Pg**	**20 37 33.5**	**+0.2**
UPR				*e*Sg	**Sg**	**20 37 36.8**	**+0.4**
EVR	**Evrytania**	**0.51 341**		*e*Pb	**Pg**	**20 37 38.0**	**-0.4**
EVR				*e*Sb	**Sg**	**20 37 45.3**	**+0.3**
EVR	**Evrytania**	**0.51 341**		*e*PB	**Pg**	**20 37 38.0**	**-0.4**
EVR				*e*SB	**Sg**	**20 37 45.3**	**+0.3**
EVR	**Evrytania**	**0.51 341**		*e*Pb	**Pg**	**20 37 38.0**	**-0.4**
EVR				*e*Sb	**Sg**	**20 37 45.3**	**+0.3**
GUR	**Goura**	**0.56 153**		*e*PB	**Pg**	**20 37 39.6**	**+0.2**
GUR				*e*SB	**Sg**	**20 37 48.3**	**+1.7**
GUR	**Goura**	**0.56 153**		*e*Pb	**Pg**	**20 37 39.6**	**+0.2**
GUR				*e*Sb	**Sg**	**20 37 48.3**	**+1.7**
RLS	**Riolos of Patr**	**0.58 229**		*e*Pb	**Pg**	**20 37 39.6**	**-0.1**
RLS				*e*Sb	**Sg**	**20 37 47.7**	**+0.5**
RLS	**Riolos of Patr**	**0.58 229**		*e*PB	**Pg**	**20 37 39.6**	**-0.1**
RLS				*e*SB	**Sg**	**20 37 47.7**	**+0.5**
RLS	**Riolos of Patr**	**0.58 229**		*e*Pb	**Pg**	**20 37 39.6**	**-0.1**
RLS				*e*Sb	**Sg**	**20 37 47.7**	**+0.5**
AGG	**Agios Georgios**	**0.63 22**		*e*Pg	**Pg**	**20 37 40.5**	**-0.3**
AGG				*e*Sb	**Sg**	**20 37 50.4**	**+1.4**
AGG	**Agios Georgios**	**0.63 22**		*e*PG	**Pg**	**20 37 40.5**	**-0.3**
AGG				*e*SB	**Sg**	**20 37 50.4**	**+1.4**
AGG	**Agios Georgios**	**0.63 22**		P	**Pg**	**20 37 40.6**	**-0.2**
AGG				S	**Sg**	**20 37 50.5**	**+1.5**
AGG	**Agios Georgios**	**0.63 22**		P	**Pg**	**20 37 40.6**	**-0.2**
AGG				*e*Sb	**Sg**	**20 37 50.4**	**+1.4**
LKR	**Lokris**	**0.80 74**		*e*Pb	**Pb**	**20 37 44.0**	**-1.3**
LKR	**Lokris**	**0.80 74**		*e*PB	**Pb**	**20 37 44.0**	**-1.3**
LKR	**Lokris**	**0.80 74**		P	**Pg**	**20 37 43.7**	**-0.2**
LKR				S	**Sg**	**20 37 55.5**	**+1.2**
LKR	**Lokris**	**0.80 74**		P	**Pg**	**20 37 43.7**	**-0.2**
LKR	**Lokris**	**0.80 74**		*e*Pb	**Pb**	**20 37 44.0**	**-1.3**
LKR				S	**Sg**	**20 37 55.5**	**+1.2**
LTK	**Loutraki**	**0.85 119**		*e*PB	**Pb**	**20 37 45.8**	**-0.5**
LTK				*e*SB	**Sb**	**20 37 57.9**	**-0.3**
LTK	**Loutraki**	**0.85 119**		*e*Pb	**Pb**	**20 37 45.8**	**-0.5**
LTK				*e*Sb	**Sb**	**20 37 57.9**	**-0.3**
VLX	**Vlachokerasia**	**1.10 165**		*e*PG	**Pg**	**20 37 49.3**	**-0.5**
VLX				*e*SB	**Sb**	**20 38 05.3**	**-0.1**
VLX	**Vlachokerasia**	**1.10 165**		*e*Pg	**Pg**	**20 37 49.3**	**-0.5**
VLX				*e*Sb	**Sb**	**20 38 05.3**	**-0.1**
LKD2	**Lefkada island**	**1.13 289**		P	**Pg**	**20 37 49.0**	**-1.3**
LKD2				S	**Sg**	**20 38 06.3**	**+1.4**
LKD2	**Lefkada island**	**1.13 289**		P	**Pg**	**20 37 49.0**	**-1.3**
LKD2				S	**Sg**	**20 38 06.3**	**+1.4**
THL	**Klokotos Trika**	**1.13 360**		*e*PG	**Pg**	**20 37 49.4**	**-0.9**
THL				*e*SB	**Sb**	**20 38 05.4**	**-0.8**
THL	**Klokotos Trika**	**1.13 360**		P	**Pg**	**20 37 49.5**	**-0.8**
THL				S	**Sg**	**20 38 07.0**	**+2.1**
THL	**Klokotos Trika**	**1.13 360**		P	**Pg**	**20 37 49.5**	**-0.8**
THL				*e*Sb	**Sb**	**20 38 05.4**	**-0.8**
THL				S	**Sg**	**20 38 07.0**	**+2.1**
VLS	**Valsamata**	**1.16 258**		*e*Pb	**Pg**	**20 37 48.8**	**-2.0**
VLS				*e*Sb	**Sb**	**20 38 06.3**	**-0.7**
VLS	**Valsamata**	**1.16 258**		*e*PB	**Pg**	**20 37 48.8**	**-2.0**
VLS				*e*SB	**Sb**	**20 38 06.3**	**-0.7**
VLS	**Valsamata**	**1.16 258**		P	**Pg**	**20 37 48.8**	**-2.0**
VLS				S	**Sg**	**20 38 06.8**	**+1.0**
VLS	**Valsamata**	**1.16 258**		P	**Pg**	**20 37 48.8**	**-2.0**
VLS				*e*Sb	**Sb**	**20 38 06.3**	**-0.7**
VLS				S	**Sg**	**20 38 06.8**	**+1.0**
ITM	**Ithomi**	**1.26 183**		*e*Pn	**Pn**	**20 37 51.7**	**-1.7**
ITM	**Ithomi**	**1.26 183**		*e*PN	**Pn**	**20 37 51.7**	**-1.7**
ITM	**Ithomi**	**1.26 183**		P	**Pg**	**20 37 51.8**	**-1.0**
ITM				S	**Sg**	**20 38 09.2**	**+0.2**
ITM	**Ithomi**	**1.26 183**		P	**Pg**	**20 37 51.8**	**-1.0**
ITM				S	**Sg**	**20 38 09.2**	**+0.2**
NEO	**Neokhori**	**1.28 47**		*e*Pb	**Pb**	**20 37 53.0**	**-0.6**
NEO				*e*Sb	**Sb**	**20 38 09.9**	**-0.6**
NEO	**Neokhori**	**1.28 47**		*e*PB	**Pb**	**20 37 53.0**	**-0.6**
NEO				*e*SB	**Sb**	**20 38 09.9**	**-0.6**
NEO	**Neokhori**	**1.28 47**		*e*Pb	**Pb**	**20 37 53.0**	**-0.6**
NEO				*e*Sb	**Sb**	**20 38 09.9**	**-0.6**
XOR	**Xorichti**	**1.30 44**		P	**Pg**	**20 37 53.2**	**-0.5**
XOR	**Xorichti**	**1.30 44**		P	**Pg**	**20 37 53.3**	**-0.4**
XOR				S	**Sg**	**20 38 12.5**	**+2.0**
XOR	**Xorichti**	**1.30 44**		P	**Pg**	**20 37 53.3**	**-0.4**
XOR				S	**Sg**	**20 38 12.5**	**+2.0**
DID	**Didima**	**1.33 134**		*e*PB	**Pb**	**20 37 54.1**	**-0.4**
DID				*e*SB	**Sb**	**20 38 13.3**	**+1.2**
DID	**Didima**	**1.33 134**		*e*Pb	**Pb**	**20 37 54.1**	**-0.4**
DID				*e*Sb	**Sb**	**20 38 13.3**	**+1.2**
NAIG	**Nisos Aigina**	**1.34 120**		*e*Pb	**Pb**	**20 37 54.5**	**-0.1**
NAIG	**Nisos Aigina**	**1.34 120**		*e*PB	**Pb**	**20 37 54.5**	**-0.1**
NAIG	**Nisos Aigina**	**1.34 120**		*e*Pb	**Pb**	**20 37 54.5**	**-0.1**
ATH	**Athens Observa**	**1.41 109**		*e*Pg	**Pg**	**20 37 55.3**	**-0.5**
ATH				*e*Sb	**Sb**	**20 38 14.6**	**+0.2**
ATH	**Athens Observa**	**1.41 109**		*e*PG	**Pg**	**20 37 55.3**	**-0.5**
ATH				*e*SB	**Sb**	**20 38 14.6**	**+0.2**
ATH	**Athens Observa**	**1.41 109**		*e*Pg	**Pg**	**20 37 55.3**	**-0.5**
ATH				*e*Sb	**Sb**	**20 38 14.6**	**+0.2**
PTL	**Penteli**	**1.50 104**		*e*Pb	**Pb**	**20 37 56.8**	**-0.6**
PTL	**Penteli**	**1.50 104**		*e*PB	**Pb**	**20 37 56.8**	**-0.6**
PTL	**Penteli**	**1.50 104**		*e*Pb	**Pb**	**20 37 56.8**	**-0.6**
VLY	**Voula,Athens**	**1.51 112**		*e*Pg	**Pg**	**20 37 56.8**	**-0.9**
VLY	**Voula,Athens**	**1.51 112**		*e*PG	**Pg**	**20 37 56.8**	**-0.9**
VLY	**Voula,Athens**	**1.51 112**		*e*Pg	**Pg**	**20 37 56.8**	**-0.9**
JAN	**Janina**	**1.52 324**		*e*Pb	**Pb**	**20 37 57.3**	**-0.4**
JAN	**Janina**	**1.52 324**		*e*PB	**Pb**	**20 37 57.3**	**-0.4**
JAN	**Janina**	**1.52 324**		*e*Pb	**Pb**	**20 37 57.3**	**-0.4**
PYL	**PYLOS**	**1.55 188**		*e*PG	**Pg**	**20 37 57.0**	**-1.5**
PYL	**PYLOS**	**1.55 188**		*e*Pg	**Pg**	**20 37 57.0**	**-1.5**
AOS	**Alonnisos**	**1.63 63**		P	**Pn**	**20 37 57.4**	**-1.1**
AOS	**Alonnisos**	**1.63 63**		P	**Pn**	**20 37 57.4**	**-1.1**
AOS	**Alonnisos**	**1.63 63**		P	**Pn**	**20 37 57.4**	**-1.1**
IGT	**Igoumenitsa**	**1.71 310**		P	**Pn**	**20 38 02.6**	**+2.9**
IGT	**Igoumenitsa**	**1.71 310**		P	**Pn**	**20 37 59.9**	**+0.2**
IGT	**Igoumenitsa**	**1.71 310**		P	**Pn**	**20 37 59.9**	**+0.2**
VLI	**Veliai**	**1.86 157**		*e*Pn	**Pn**	**20 38 01.8**	**+0.1**
VLI				*e*Sn	**Sn**	**20 38 27.5**	**+1.6**
VLI	**Veliai**	**1.86 157**		*e*PN	**Pn**	**20 38 01.8**	**+0.1**
VLI				*e*SN	**Sn**	**20 38 27.5**	**+1.6**
VLI	**Veliai**	**1.86 157**		*e*Pn	**Pn**	**20 38 01.8**	**+0.1**
VLI				*e*Sn	**Sn**	**20 38 27.5**	**+1.6**
KZN	**Kozani**	**1.88 354**		*e*Pn	**Pn**	**20 38 02.1**	**+0.1**
KZN	**Kozani**	**1.88 354**		*e*PN	**Pn**	**20 38 02.1**	**+0.1**
KZN	**Kozani**	**1.88 354**		P	**Pn**	**20 38 01.9**	**-0.1**
KZN				S	**Sn**	**20 38 27.1**	**+0.8**
KZN	**Kozani**	**1.88 354**		*e*Pn	**Pn**	**20 38 02.1**	**+0.1**
KZN				S	**Sn**	**20 38 27.1**	**+0.8**
PAIG	**Paliouri**	**1.97 40**		P	**Pn**	**20 38 02.1**	**-1.1**
PAIG	**Paliouri**	**1.97 40**		P	**Pn**	**20 38 02.0**	**-1.2**
PAIG				S	**Sn**	**20 38 28.8**	**+0.3**
PAIG	**Paliouri**	**1.97 40**		P	**Pn**	**20 38 02.1**	**-1.1**
PAIG				S	**Sn**	**20 38 28.8**	**+0.3**
KEK	**Kerkira**	**2.15 307**		*e*Pn	**Pn**	**20 38 06.7**	**+1.0**
KEK	**Kerkira**	**2.15 307**		*e*PN	**Pn**	**20 38 06.7**	**+1.0**
KEK	**Kerkira**	**2.15 307**		P	**Pn**	**20 38 06.5**	**+0.8**
KEK	**Kerkira**	**2.15 307**		P	**Pn**	**20 38 06.5**	**+0.8**
PLG	**Polygyros**	**2.23 29**		*e*Pb	**Pb**	**20 38 06.3**	**-3.4**
PLG	**Polygyros**	**2.23 29**		*e*PB	**Pb**	**20 38 06.3**	**-3.4**
PLG	**Polygyros**	**2.23 29**		P	**Pn**	**20 38 06.1**	**-0.7**
PLG	**Polygyros**	**2.23 29**		P	**Pn**	**20 38 06.1**	**-0.7**
THE	**Thessaloniki**	**2.31 18**		P	**Pn**	**20 38 11.3**	**+3.4**
THE	**Thessaloniki**	**2.31 18**		P	**Pn**	**20 38 11.3**	**+3.4**
HORT	**Hortiatis**	**2.31 21**		P	**Pn**	**20 38 06.9**	**-1.1**
HORT	**Hortiatis**	**2.31 21**		P	**Pn**	**20 38 07.0**	**-1.0**
HORT				S	**Sn**	**20 38 38.0**	**+0.9**
HORT	**Hortiatis**	**2.31 21**		P	**Pn**	**20 38 07.0**	**-1.0**
HORT				S	**Sn**	**20 38 38.0**	**+0.9**
FNA	**Florina**	**2.40 348**		P	**Pn**	**20 38 09.1**	**0.0**
FNA	**Florina**	**2.40 348**		P	**Pn**	**20 38 09.3**	**+0.2**
FNA	**Florina**	**2.40 348**		P	**Pn**	**20 38 09.1**	**0.0**
OUR	**Ouranopolis**	**2.43 38**		P	**Pn**	**20 38 08.8**	**-0.7**
OUR	**Ouranopolis**	**2.43 38**		P	**Pn**	**20 38 08.7**	**-0.8**
OUR	**Ouranopolis**	**2.43 38**		P	**Pn**	**20 38 08.8**	**-0.7**
SOH	**Sokhos**	**2.59 23**		P	**Pn**	**20 38 11.8**	**0.0**
SOH	**Sokhos**	**2.59 23**		P	**Pn**	**20 38 11.8**	**0.0**
SOH				S	**Sn**	**20 38 44.6**	**+0.6**
SOH	**Sokhos**	**2.59 23**		P	**Pn**	**20 38 11.8**	**0.0**
SOH				S	**Sn**	**20 38 44.6**	**+0.6**
LIA	**Limnos Island**	**2.86 58**		P	**Pn**	**20 38 14.9**	**-0.5**
LIA	**Limnos Island**	**2.86 58**		P	**Pn**	**20 38 14.9**	**-0.5**
VAY	**Valandovo**	**2.91 8**		*i* Pn	**Pn**	**20 38 15.8**	**-0.3**
KRUS	**Krusevo**	**2.99 349**		*i* Pn	**Pn**	**20 38 17.4**	**+0.2**
APE	**Apeiranthos**	**3.10 115**		P	**Pn**	**20 38 18.8**	**+0.1**
APE	**Apeiranthos**	**3.10 115**		P	**Pn**	**20 38 18.8**	**+0.1**
NVR	**Nevrokopi**	**3.24 25**		P	**Pn**	**20 38 20.9**	**+0.3**
NVR	**Nevrokopi**	**3.24 25**		P	**Pn**	**20 38 20.9**	**+0.3**
KARN	**Karanos**	**3.39 153**		P	**Pn**	**20 38 22.0**	**-0.7**
KARN	**Karanos**	**3.39 153**		P	**Pn**	**20 38 22.0**	**-0.7**
VAM	**Vamos**	**3.49 149**		P	**Pn**	**20 38 26.0**	**+1.9**
VAM	**Vamos**	**3.49 149**		P	**Pn**	**20 38 26.0**	**+1.9**
SMG	**Samos**	**3.87 99**		P	**Pn**	**20 38 30.4**	**+1.1**
SMG	**Samos**	**3.87 99**		P	**Pn**	**20 38 30.4**	**+1.1**
IDI	**Anoyia**	**3.89 143**		P	**Pn**	**20 38 31.6**	**+1.9**
IDI	**Anoyia**	**3.89 143**		P	**Pn**	**20 38 31.6**	**+1.9**
VTS	**Vitosha**	**4.25 12**		P	**Pn**	**20 38 37.9**	**+3.4**
VTS	**Vitosha**	**4.25 12**		P	**Pn**	**20 38 37.9**	**+3.4**
SG1	**Sgolgore (BA)**	**4.77 302**		*e*Pn	**Pn**	**20 38 41.8**	**+0.1**
CEL	**Celeste**	**4.82 270**		*e*P	**Pn**	**20 38 42.9**	**+0.5**
CEL	**Celeste**	**4.82 270**		*e*P	**Pn**	**20 38 42.9**	**+0.5**
CDT	**Castel del Mon**	**5.16 303**		*e*Pn	**Pn**	**20 38 47.0**	**0.0**
CDT				*e*Sn	**Sn**	**20 39 48.7**	**+1.5**
STON	**Ston**	**5.52 325**		*i* Pn	**Pn**	**20 38 50.4**	**-1.6**
STON				Sn	**Sn**	**20 39 51.9**	**-4.1**
STON	**Ston**	**5.52 325**		*i* Pn	**Pn**	**20 38 50.3**	**-1.6**
NVLJ	**Novalja**	**8.14 321**		*e*Pn	**Pn**	**20 39 27.1**	**-0.9**
NVLJ				Sn	**Sn**	**20 40 56.6**	**-3.9**
NVLJ	**Novalja**	**8.14 321**		*e*Pn	**Pn**	**20 39 27.0**	**-0.9**
BRTR	**Keskin Array B**	**9.13 78**		Pn	**Pn**	**20 39 43.1**	**+1.6**
	0.1nm,0.3s,baz=254,slow=14,SNR=4.5						
BRTR	**Keskin Array B**	**9.13 78**		Pn	**Pn**	**20 39 43.1**	**+1.6**
FINES	**FINESS Array B**	**23.17 5**		P	**P**	**20 42 33.7**	**-2.8**
	1.9nm,0.9s,mb3.6,baz=180,slow=5.7,SNR=4.0						
FINES	**FINESS Array B**	**23.17 5**		P	**P**	**20 42 33.7**	**-2.8**
AKTO	**Aktyubinsk**	**28.08 53**		LR	LR	20 56 12.0	
	comp=Z,5.4nm,21.8s,MS2.1,baz=248,slow=40						
TORD	**Torodi Ar. Bea**	**30.99 221**		P	**P**	**20 43 48.4**	**+0.7**
	0.5nm,0.7s,mb3.6,baz=31,slow=8.8,SNR=4.2						
MK31	**Makanchi Array**	**44.16 59**		*e*P	**P**	**20 45 39.1**	**+0.3**
MK31	**Makanchi Array**	**44.16 59**		*e*P	**P**	**20 45 39.1**	**+0.3**
MKAR	**Makanchi Array**	**44.16 59**		P	**P**	**20 45 37.5**	**-1.3**
	0.3nm,0.3s,mb3.5,baz=276,slow=6.8,SNR=4.8						
MKAR	**Makanchi Array**	**44.16 59**		P	**P**	**20 45 37.5**	**-1.3**
MKAR	**Makanchi Array**	**44.16 59**		P	**P**	**20 45 37.5**	**-1.3**
ZALV	**Zalesovo Beam**	**44.64 48**		P	**P**	**20 45 39.2**	**-3.3**
	0.3nm,0.3s,mb3.6,baz=275,slow=9.5,SNR=2.3						
JTS	**JuntasAbangare**	**96.65 289**		LR	LR	21 30 57.6	
	comp=Z,42nm,18.3s,MS4.0,baz=8.1,slow=33						

*NIED **20** 20:48:00, 37°.40N×143°.00E, h14km, Mw4.5 Best double couple: M0 6.67000×10^15 NP1:φ=4.00000°, δ72.00000°, λ76.00000°. NP2:φ=222.00000°, δ23.00000°, λ126.00000°.*

*JMA **20** 20:48:06.4±0.2, 37°.41N×143°.03E, h40km, M4.8*

*ISCJB **20** 20:48:08.1±0.3, 37°.44N±0°.03×142°.88E±0°.04, h31km, mb4.5/53, MS4.0/21, Error ellipse: s-maj=5.3km s-min=3.3km az=45.0*

*MOS **20** 20:48:08.9±1.1, 37°.53N×142°.85E, h33km, mb4.9/25, Error ellipse: s-maj=10.0km s-min=6.3km az=112.9*

*IDC **20** 20:48:09.8±0.6, 37°.41N×142°.91E, h31km±3km, mb4.0/18, mb1 4.1/23, mb1mx4.0/29, mbtmp4.0/23, ML3.9/4, MS3.7/8, Ms1 3.8/8, ms1mx3.4/36, Error ellipse: s-maj=14.9km s-min=13.2km az=148.0*

*NEIC **20** 20:48:10.0±0.3, 37°.48N×142°.91E, mb4.8/20, MW4.5(NIED), Error ellipse: s-maj=8.4km s-min=5.7km az=145.0*

*BJI **20** 20:48:14.6, 37°.86N×142°.00E, h30km, mB4.7/21, mb4.7/38, Ms4.3/30, Ms7 4.2/29*

ISC 20 20:48:10.3±0.3, 37°.47N±0°.03×142°.84E±0°.04, h33km, h33km±4km: pP-P, n152, σ1º01/173, mb4.5/53, MS4.0/21, 14C-16D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**1.53 310**		⇑P	**Pn**	**20 48 34.5**	**-0.9**
JFK	**Kawauchi**	**1.57 267**		⇑P	**Pn**	**20 48 34.8**	**-1.0**
JFK				*e*S	**Sn**	**20 48 55.1**	**+0.1**
ONAJ	**Iwakimizuishiy**	**1.67 258**		⇑P	**Pn**	**20 48 36.0**	**-1.2**
ONAJ				*e*S	**Sn**	**20 48 57.8**	**+0.3**
JMM	**Marumori**	**1.67 284**		⇑P	**Pn**	**20 48 36.2**	**-1.1**
JMM				*e*S	**Sn**	**20 48 58.3**	**+0.8**
**JMK

PET eS Sn 20 56 01.5 -1.5
PET MLR MLR
comp=Z,200nm,16.0s
NJ2 Nanjing 20.41 262 eP P 20 52 49.6 +5.0
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
BJI Beijing 20.93 285 P P 20 52 48.4 -1.7
BJI S S 20 56 37.0 -4.5
BJI pmax pmax
comp=Z,12nm,0.8s
BJI pmax pmax
comp=Z,85nm,4.7s
BJI LR LR
comp=N,260nm,18.1s,MS3.8
BJI LR LR
comp=E,310nm,18.4s,MS3.8
BJI LR LR
comp=Z,120nm,20.9s,MS3.2
BJT Baijiatuau 20.93 285 eP P 20 52 48.8 -1.4
BJT pmax pmax
comp=Z,15nm,0.6s
BJT Baijiatuau 20.93 285 eP P 20 52 48.8 -1.4
comp=Z,14nm,0.6s
CLNS Chul'man 22.77 334 eP P 20 53 06.2 -3.4
CLNS pmax pmax
comp=Z,13nm,0.9s,mb4.4
CLNS pmax pmax
comp=E,5.0nm,0.8s
CLNS pmax pmax
comp=N,11nm,0.9s
CLNS MLR MLR
comp=Z,246nm,13.0s,MS3.8
CLNS MLR MLR
comp=N,348nm,16.0s
GUMO Guam 23.85 175 LR LR 21 01 53.1
comp=N,64nm,19.9s,MS3.1,baz=0.5,slow=35
HHC Hu-ho-hao-te 24.42 288 eP P 20 53 25.9 +0.2
HHC sP sP 20 53 38.9 -0.2
HHC PP 20 54 00.3
HHC PcP PcP 20 57 09.3 +5.2
HHC S S 20 57 36.9 -6.5
HHC sS sS 20 57 52.0 -6.9
HHC SS 20 58 27.9
HHC ScP ScP 21 00 43.3 +3.0
HHC PcS PcS 21 00 48.3 +4.4
HHC pmax pmax
comp=Z,11nm,0.5s,mb4.5
HHC pmax pmax
comp=Z,120nm,5.2s
HHC LR LR
comp=N,220nm,12.4s,MS4.0
HHC LR LR
comp=E,240nm,12.6s,MS4.0
HHC LR LR
comp=Z,260nm,12.3s,MS3.9
YAK Yakutsk 25.91 346 eP P 20 53 37.4 -1.6
YAK e*PP pP 20 53 46.9 -1.5
YAK e 20 54 13.6
YAK ePPP 20 54 31.6
YAK eS S 20 58 03.0 -3.7
YAK pmax pmax
comp=Z,21nm,1.0s,mb4.6
YAK pmax pmax
comp=N,8.0nm,1.1s
YAK pmax pmax
comp=E,4.0nm,1.1s
YAK pmax pmax
comp=Z,17nm,1.1s,mb4.5
YAK pmax pmax
comp=N,14nm,1.1s
YAK smax
comp=E,37nm,13.9s
YAK smax
comp=N,117nm,12.3s
YAK MLR MLR
comp=N,153nm,15.0s,MS3.7
YAK MLR MLR
comp=Z,239nm,16.0s,MS3.8
YAK MLR MLR
comp=E,75nm,13.0s,MS3.7
YAK Yakutsk 25.91 346 eP P 20 53 38.8 -0.2
comp=E,24nm,0.8s,mb4.8
SEY Seymchan 26.15 10⇑ eP P 20 53 42.3 +1.1
XAN Xi'an 27.65 273 P P 20 53 54.8 -0.2
ULN Ulaanbaatar 28.06 303 eP P 20 53 59.4 +0.9
ULN pmax pmax
comp=Z,11nm,1.1s,mb4.4
ULN Ulaanbaatar 28.06 303 eP P 20 53 59.4 +0.8
comp=Z,11nm,1.1s,mb4.4
SONM Songino Array 28.49 303 P P 20 54 03.4 +1.0
comp=Z,13nm,0.9s,mb4.6,baz=104,slow=9.4,SNR=63
SONM LR LR 21 05 45.5
comp=Z,209nm,18.6s,MS3.8,baz=80,slow=37
TLY Talaya 30.91 310 eP P 20 54 25.3 +1.5
TLY pmax pmax
comp=Z,9.0nm,1.8s,mb4.3
TLY MLR MLR
comp=Z,345nm,15.0s,MS4.1
LZH Lanzhou 31.11 279 eP P 20 54 26.5 +0.8
LZH pP pP 20 54 36.0 +0.8
LZH sP sP 20 54 39.0 -0.2
LZH PP PP 20 55 27.6 -8.6
LZH eS S 20 59 25.0 -4.2
LZH sS sS 20 59 41.5 -3.3
LZH SS SS 21 01 07.5 -35
LZH pmax pmax
comp=Z,20nm,1.0s,mb4.9
LZH pmax pmax
comp=Z,79nm,6.6s
LZH LR LR
comp=E,580nm,14.7s
LZH LR LR
comp=Z,670nm,15.8s,MS4.4
GYA Guiyang 32.41 261⇓ iP P 20 54 41.3 +4.1
GYA pP pP 20 54 51.4 +4.7
GYA sP sP 20 54 56.8 +6.1
GYA PcP PcP 20 57 30.0 +5.8
GYA S S 20 59 49.5 -0.1
GYA ScP ScP 21 01 08.8 +3.4
GYA pmax pmax
comp=Z,20nm,0.8s,mb5.0
GYA pmax pmax
comp=Z,120nm,5.0s
GYA LR LR
comp=N,590nm,16.5s,MS4.5
GYA LR LR
comp=E,510nm,17.0s,MS4.5
GYA LR LR
comp=Z,640nm,15.7s,MS4.4
MOY Mondy 32.53 309 eP P 20 54 38.2 +0.2
CD2 Chengdu 32.81 270 P P 20 54 40.8 +0.1
CD2 pP pP 20 54 50.3 +0.1
CD2 sP sP 20 54 54.3 +0.2
CD2 PP PP 20 55 49.0 -6.1
CD2 PcP PcP 20 57 27.8 +2.6
CD2 S S 20 59 51.8 -3.9
CD2 sS sS 21 00 07.6 -3.7
CD2 SS SS 21 01 48.0 -29
CD2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
CD2 pmax pmax
comp=Z,110nm,4.2s
CD2 LR LR
comp=N,620nm,13.1s
CD2 LR LR
comp=Z,520nm,13.1s,MS4.4
GTA Gaotai 33.52 287 eP P 20 54 48.0 +1.2
GTA pP pP 20 54 57.3 +1.0
GTA sP sP 20 55 01.5 +1.2
GTA PP PP 20 55 57.3 -5.6
GTA S S 21 00 01.1 -5.5
GTA sS sS 21 00 16.5 -5.8
GTA SS SS 21 02 02.1 -30
GTA pmax pmax
comp=Z,12nm,1.0s,mb4.8
GTA pmax pmax
comp=Z,77nm,7.7s
GTA LR LR
comp=N,170nm,16.3s,MS4.1
GTA LR LR
comp=E,230nm,17.8s,MS4.1
GTA LR LR
comp=Z,310nm,15.2s,MS4.1
KMI Kunming 36.15 262 P P 20 55 13.1 +3.5
KMI pP pP 20 55 23.0 +3.8

KMI sP sP 20 55 27.1 +4.0
KMI PP PP 20 56 34.8 +2.7
KMI S S 21 00 48.0 +0.7
KMI sS sS 21 01 04.0 +1.0
KMI SS SS 21 03 08.8 -17
KMI pmax pmax
comp=Z,5.0nm,1.4s,mb4.2
KMI pmax pmax
comp=Z,82nm,5.0s
KMI LR LR
comp=N,260nm,15.6s,MS4.2
KMI LR LR
comp=E,310nm,19.4s,MS4.2
KMI LR LR
comp=Z,330nm,17.5s,MS4.2
WMQ Urumqi 41.66 297 P P 20 55 57.3 +1.8
WMQ pP pP 20 56 07.1 +1.9
WMQ sP sP 20 56 11.1 +2.0
WMQ PP PP 20 57 35.8 +3.8
WMQ PcP PcP 20 57 57.4 +5.5
WMQ eS S 21 02 07.8 -2.1
WMQ SS SS 21 05 06.3 -9.3
WMQ ScS ScS 21 05 57.0 +0.9
WMQ pmax pmax
comp=Z,13nm,1.0s,mb4.5
WMQ pmax pmax
comp=Z,150nm,5.2s
WMQ LR LR
comp=N,95nm,20.0s,MS3.8
WMQ LR LR
comp=E,99nm,22.0s,MS3.8
WMQ LR LR
comp=Z,130nm,20.5s,MS3.8
ZALV Zalesovo Beam 42.46 312 P P 20 56 02.0 +0.1
comp=Z,9.9nm,0.9s,mb4.4,baz=90,slow=7.4,SNR=43
ZALV pP pP 20 56 11.8 +0.1
comp=Z,12nm,1.0s,baz=86,slow=5.9,SNR=9.2
ZALV Zalesovo Beam 42.46 312 P P 20 56 02.0 +0.1
ZALV pP pP 20 56 11.8 +0.1
CMAR Chiang Mai Arr 42.70 256 P P 20 56 04.3 0.0
comp=Z,1.2nm,1.0s,mb3.6,baz=218,slow=30,SNR=6.1
CMAR pP pP 20 56 14.1 0.0
comp=Z,1.7nm,0.8s,baz=46,slow=6.5,SNR=7.5
CMAR LR LR 21 17 07.9
comp=Z,125nm,18.1s,MS3.9,baz=57,slow=41
CMAR Chiang Mai Arr 42.70 256 P P 20 56 04.3 0.0
CMAR *PP pP 20 56 14.1 +0.1
LSA Lhasa 43.30 275 P P 20 56 10.9 +1.8
LSA Lhasa 43.30 275 eP P 20 56 11.5 +2.4
LSA pmax pmax
comp=Z,7.0nm,0.9s,mb4.4
LSA Lhasa 43.30 275 eP P 20 56 11.5 +2.4
comp=Z,7.4nm,0.9s,mb4.4
NVS Novosibirsk 43.36 313⇑ iP P 20 56 09.1 -0.1
NVS pmax pmax
comp=Z,16nm,1.1s,mb4.7
NVS pmax pmax
comp=E,12nm,1.3s
MK31 Makanchi Array 44.85 302 eP P 20 56 21.8 +0.5
MKAR Makanchi Array 44.85 302 P P 20 56 21.4 +0.1
comp=E,4.8nm,0.7s,mb4.4,baz=86,slow=9.5,SNR=42
MKAR LR LR 21 15 43.7
comp=E,67nm,18.0s,MS3.6,baz=33,slow=37
KURK Kurchatov 46.56 308c iP P 20 56 34.7 0.0
KURK pmax pmax
comp=Z,20nm,0.8s,mb5.1
KURK Kurchatov 46.56 308 eP P 20 56 34.6 0.0
comp=Z,20nm,0.8s,mb5.1
ILAR Eielson Array 48.52 33 P P 20 56 49.2 -0.5
comp=Z,1.6nm,0.8s,mb4.1,baz=268,slow=6.7,SNR=22
BVAR Borovoye Array 51.12 312 P P 20 57 09.8 +0.1
comp=Z,3.7nm,0.8s,mb4.4,baz=72,slow=7.0,SNR=23
BVAR pP pP 20 57 19.0 -0.5
comp=Z,3.7nm,0.6s,baz=83,slow=7.3,SNR=13
BRVK Borovoye 51.17 312c iP P 20 57 10.0 0.0
BRVK pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
BRVK Borovoye 51.17 312 eP P 20 57 10.5 +0.5
comp=Z,7.9nm,0.9s,mb4.6
KSH Kashi 51.26 294 P P 20 57 15.9 +5.0
KSH pP pP 20 57 25.6 +4.8
KSH sP sP 20 57 29.8 +5.1
KSH PcP PcP 20 58 31.3 +5.6
KSH PP PP 20 59 13.5 +5.7
KSH ScP ScP 21 02 24.3 +4.6
KSH PcS PcS 21 02 28.5 +5.1
KSH S S 21 04 29.3 +1.8
KSH sS sS 21 04 45.6 +1.9
KSH ScS ScS 21 07 00.3 +1.4
KSH SS SS 21 08 02.3 -0.6
KSH pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
KSH pmax pmax
comp=Z,110nm,5.1s
KSH LR LR
comp=N,230nm,9.2s
KSH LR LR
comp=E,180nm,8.2s
KSH LR LR
comp=Z,380nm,17.1s,MS4.5
AAK Ala-Archa 51.28 298 P P 20 57 11.2 +0.2
comp=Z,1.1nm,0.3s,mb4.3,baz=148,slow=7.5,SNR=3.5
AAK Ala-Archa 51.28 298 eP P 20 57 11.9 +0.9
comp=Z,4.8nm,0.8s,mb4.5
UCH Uchtor 51.40 298 eP P 20 57 13.8 +1.9
comp=Z,4.1nm,0.9s,mb4.4
EKS2 Erkin-Say 51.77 299 eP P 20 57 15.2 +0.5
comp=Z,2.9nm,0.7s,mb4.3
AML Almayashu 52.01 298 eP P 20 57 18.0 +1.5
INK Inuvik 53.48 27 P P 20 57 27.2 +0.3
comp=Z,2.7nm,0.9s,mb4.2,baz=263,slow=6.4,SNR=2.8
SVE Sverdlovsk 55.57 319⇓ eP P 20 57 42.9 +0.6
SVE e 20 59 52.3
SVE ePPP 21 00 58.3
SVE eSSS 21 11 07.2
SVE pmax pmax
comp=Z,20nm,0.8s,mb5.2
SVE MLR MLR
comp=Z,353nm,16.0s,MS4.5
ARU Arti 56.78 319c iP P 20 57 51.0 +0.1
ARU e*PP pP 20 58 00.4 -0.5
ARU e 20 59 54.8
ARU S S 21 05 39.7 -1.8
ARU SS SS 21 09 27.1 -2.1
ARU pmax pmax
comp=Z,15nm,1.7s,mb4.8
ARU MLR MLR
comp=Z,292nm,17.0s,MS4.5
ARU Arti 56.78 319 eP P 20 57 51.1 +0.1
comp=Z,12nm,0.7s,mb5.0
ARU epP pP 20 58 00.0 -0.9
WRAB Tennant Creek 57.65 189 eP P 20 57 56.5 -0.9
WRAB e pP 20 58 05.4 -2.0
WRAB pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
WRAB Tennant Creek 57.65 189 eP P 20 57 56.5 -0.9
comp=Z,8.1nm,0.7s,mb4.9
WRAB e pP 20 58 05.4 -2.0
KBL Kabul 58.32 291 eP P 20 58 02.3 +0.2
KBL pmax pmax
comp=Z,12nm,0.9s,mb4.9
KBL Kabul 58.32 291 eP P 20 58 02.3 +0.2
comp=Z,12nm,0.9s,mb4.9
ABKAR Abkulak array 58.53 310 eP P 20 58 03.1 -0.2
comp=Z,4.1nm,0.6s,mb4.6
ABKAR epP pP 20 58 11.5 -1.8
AKTK Aktyubinsk 59.23 312 P P 20 58 08.2 0.0
AKTO Aktyubinsk 59.23 312 P P 20 58 08.2 0.0
comp=Z,3.8nm,0.8s,mb4.5,baz=70,slow=11,SNR=14
HYB Hyderabad 59.35 269 iP P 20 58 10.0 +0.5
SPITS Spitsbergen Ar 60.31 349 LR LR 21 23 25.2
comp=Z,51nm,20.8s,MS3.6,baz=270,slow=35
KBS Kingsbay 60.42 350 deP P 20 58 17.3 +1.3
KBS pmax pmax
comp=Z,21nm,2.5s,mb4.7
ASAR Alice Springs 61.39 189 P P 20 58 22.2 -0.8
comp=Z,0.8nm,0.8s,mb3.9,baz=3.4,slow=6.2,SNR=7.2
ASAR pP pP 20 58 32.0 -1.1
comp=Z,2.6nm,0.7s,baz=9.5,slow=6.3,SNR=16
ARCES ARCESS Array B 63.99 340 P P 20 58 40.2 +0.3
comp=Z,1.6nm,0.8s,mb4.1,baz=60,slow=7.2,SNR=5.4
ARCES pP pP 20 58 49.5 -0.5
comp=Z,2.9nm,0.8s,baz=56,slow=7.6,SNR=4.9
ARCES ARCESS Array B 63.99 340 P P 20 58 40.2 +0.3
ARCES pP pP 20 58 49.5 -0.5

OBN Obninsk 68.42 324d iP P 20 59 08.7 +0.1
OBN i pP 20 59 17.6 -1.2
OBN pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
OBN MLR MLR
comp=Z,200nm,16.0s,MS4.4
FINES FINESS Array B 68.95 333 P P 20 59 11.7 -0.1
comp=Z,5.5nm,0.8s,mb4.5,baz=58,slow=7.9,SNR=14
FINES pP pP 20 59 21.6 -0.4
comp=Z,9.5nm,0.7s,baz=61,slow=4.5,SNR=12
ZEI Tsey 71.41 310 eP P 20 59 26.7 -0.5
ZEI pmax pmax
comp=Z,9.0nm,0.4s,mb5.0
KIV Kislovodsk 71.47 311 eP P 20 59 28.4 +0.9
KIV eS S 21 08 42.7 -1.1
KIV pmax pmax
comp=Z,23nm,0.9s,mb5.1
KIV MLR MLR
comp=Z,136nm,19.0s,MS4.2
KIV Kislovodsk 71.47 311 eP P 20 59 28.2 +0.6
comp=Z,24nm,0.8s,mb5.2
IDID Didziasalis 72.73 327 eP pP 20 59 45.1 +0.1
IIGN Ignalina 72.92 328 eP pP 20 59 46.4 +0.2
NVAR Mina Array Bea 73.82 54 P P 20 59 41.5 -0.1
comp=Z,0.4nm,0.5s,mb3.6,baz=306,slow=8.2,SNR=3.1
ANN Anapa 74.04 314 eP P 20 59 46.6 +3.8
ANN eS S 21 09 18.2 +5.2
ANN pmax pmax
comp=Z,11nm,0.9s,mb4.8
NB2 NORSAR Subarra 74.22 338 P P 20 59 43.4 -0.1
comp=Z,4.5nm,0.7s,mb4.5,baz=40,slow=6.2
NOA NORSAR Array B 74.22 338 P P 20 59 43.5 0.0
comp=Z,4.0nm,0.8s,mb4.4,baz=38,slow=5.8,SNR=11
NOA pP pP 20 59 53.5 -0.3
comp=Z,4.8nm,0.8s,baz=39,slow=5.8,SNR=8.6
NOA NORSAR Array B 74.22 338 P P 20 59 43.5 0.0
NOA pP pP 20 59 53.5 -0.3
AKASG Malin Array Be 74.64 323 P P 20 59 46.1 -0.1
comp=Z,1.6nm,0.5s,mb4.2,baz=46,slow=5.9,SNR=11
AKASG pP pP 20 59 55.5 -0.9
comp=Z,6.7nm,0.6s,baz=45,slow=6.3,SNR=8.6
AKBB Malin Array Si 74.64 323 eP P 20 59 46.0 -0.1
AKBB e*PP pP 20 59 55.4 -1.0
KIEV Kiev 74.66 323 eP P 20 59 45.9 -0.3
KIEV e*PP pP 20 59 55.3 -1.2
KIEV pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
KIEV Kiev 74.66 323 eP P 20 59 45.9 -0.3
comp=Z,4.2nm,1.0s,mb4.3
KIEV epP pP 20 59 55.3 -1.2
PDAR Pinedale Array 76.55 46 P P 20 59 57.1 -0.1
comp=Z,0.4nm,0.5s,mb3.6,baz=236,slow=2.7,SNR=4.1
PDAR pP pP 21 00 07.8 +0.3
comp=Z,0.4nm,0.6s,baz=302,slow=2.0,SNR=4.2
KWP Kalwaria Pacla 78.43 325 ⇓P P 21 00 08.4 +0.8
KWP Kalwaria Pacla 78.43 325 eP P 21 00 07.9 +0.3
comp=Z,13nm,1.0s,mb4.8
KWP epP pP 21 00 17.8 -0.1
KWP Kalwaria Pacla 78.43 325⇓ iP P 21 00 08.4 +0.8
BUR08 Bucovina Ar. S 78.66 322 eP P 21 00 09.7 +0.8
BUR08 epP pP 21 00 19.1 -0.1
BURAR Bucovina Array 78.67 322 ⇓P P 21 00 09.4 +0.5
BURAR Bucovina Array 78.67 322⇓ iP P 21 00 09.4 +0.5
TESR 78.72 321 ⇓P P 21 00 09.7 +0.4
TESR 78.72 321⇓ iP P 21 00 09.7 +0.4
VRI Vrincioaia 79.12 320 ⇓P P 21 00 13.5 +2.0
VRI Vrincioaia 79.12 320⇓ iP P 21 00 13.5 +2.0
OJC Ojcow 79.31 327 eP P 21 00 19.3 +6.9
BR131 Keskin Array S 79.41 312 P P 21 00 14.2 +1.0
comp=Z,2.6nm,0.9s,mb4.2
BR131 epP pP 21 00 23.9 +0.4
BRTR Keskin Array B 79.41 312 P P 21 00 14.1 +0.9
comp=Z,1.4nm,1.0s,mb3.9,baz=106,slow=4.4,SNR=6.6
BRTR pP pP 21 00 24.1 +0.7
comp=Z,2.5nm,1.0s,baz=77,slow=5.5,SNR=9.0
DRGR 80.46 323 ⇓P P 21 00 26.5 +7.8
DRGR 80.46 323⇓ iP P 21 00 26.5 +7.8
DPC Dobruska-Polom 80.69 329 eP P 21 00 15.7 -4.2
DPC e pP 21 00 25.8 -4.4
DPC Dobruska-Polom 80.69 329 eP P 21 00 15.7 -4.2
DPC ePCP PcP 21 00 25.8 -0.8
UPC Upice 80.69 329 eP P 21 00 27.8 +7.9
UPC e 21 00 34.7
UPC Upice 80.69 329 eP P 21 00 27.8 +7.9
UPC esP sP 21 00 34.7 +0.7
VYHS Vyhne 81.00 326 eP P 21 00 22.3 +0.7
VYHS Vyhne 81.00 326 eP P 21 00 22.3 +0.7
BRG Berggiesshubel 81.25 330 eP pP 21 00 32.9 -0.3
comp=Z,2.5nm,0.8s
BRG Berggiesshubel 81.25 330 eP pP 21 00 32.9 -0.3
BRG pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
CLL Collm 81.28 331⇓ iP P 21 00 23.3 +0.3
CLL i *PP pP 21 00 32.4 -0.9
CLL pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
PRU Pruhonice 81.70 329 eP P 21 00 26.3 +1.1
PRU e pP 21 00 36.0 +0.4
PRU Pruhonice 81.70 329 eP P 21 00 26.3 +1.1
PRU epP pP 21 00 36.0 +0.4
KHC Kasperske Hory 82.76 329 eP P 21 00 31.3 +0.5
KHC e pP 21 00 40.2 -1.0
KHC Kasperske Hory 82.76 329 eP P 21 00 31.3 +0.5
KHC epP pP 21 00 40.2 -1.0
CDF Champ du Feu 85.80 332 eP P 21 00 46.4 +0.1
comp=Z,13nm,1.1s,mb4.8
CDF Champ du Feu 85.80 332 eP P 21 00 46.4 +0.1
CDF pmax pmax
comp=Z,6.0nm,1.1s,mb4.7
CDF Champ du Feu 85.80 332 eP P 21 00 46.4 +0.1
comp=Z,6.3nm,1.1s,mb4.8
HAU Haudompre 86.48 332 eP P 21 00 49.4 -0.2
comp=Z,20nm,1.2s,mb4.9
HAU Haudompre 86.48 332 eP P 21 00 49.4 -0.2
HAU pmax pmax
comp=Z,10.0nm,1.2s,mb4.9
HAU Haudompre 86.48 332 eP P 21 00 49.4 -0.2
comp=Z,10nm,1.2s,mb4.9
LOR Lormes 88.01 333 eP P 21 00 57.1 +0.1
comp=Z,47nm,1.6s,mb5.2
LOR Lormes 88.01 333 eP P 21 00 57.1 +0.1
LOR pmax pmax
comp=Z,24nm,1.6s,mb5.2
LOR Lormes 88.01 333 eP P 21 00 57.1 +0.1
comp=Z,24nm,1.6s,mb5.2
TXAR Lajitas Array 88.95 53 P P 21 01 02.6 +0.8
comp=Z,0.3nm,0.7s,mb3.8,baz=285,slow=4.9,SNR=4.7
TCF Toulx Ste Croi 89.43 334 eP P 21 01 04.0 +0.3
LPAZ La Paz 145.49 61 PKPbc PKPbc 21 07 45.6 +0.1
comp=Z,0.8nm,0.7s,baz=19,slow=6.1,SNR=4.4
LPAZ pPKPbc pPKPbc 21 07 55.1 -1.0
comp=Z,1.6nm,0.8s,baz=4.9,slow=6.2,SNR=5.5

ISK ***20*** *21:05:10.2, 38.70N×40.34E, h19km, MD2.8*
DDA ***20*** *21:05:10.6, 38.77N×40.21E, h7km±2km, Md2.8*
CSEM ***20*** *21:05:10.2, 38.70N×40.34E, h19km, MD2.8, After ISK*
ISCJB ***20*** *21:05:12.3±0.6, 38.82N±0.04×40.28E±0.04, h20km±6km,*
Error ellipse: s-maj=7.6km s-min=5.2km az=162.4
ISC 20 21:05:12.1±0.6,**38.81N**±0.05×**40.27E**±0.04,**h17**km±5km,
n10,σ0.89/20,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BINT	**Bingol**	**0.18**	**69**	PG	**Pg**	**21 05 16.4**	**-0.3**
BINT				eSG	**Sg**	**21 05 19.7**	**-0.1**
BINT	**Bingol**	**0.18**	**69**	i Pg	**Pg**	**21 05 16.4**	**-0.3**
BINT				eSg	**Sg**	**21 05 19.7**	**-0.1**
PTK	**Pertek**	**0.69**	**277**	ePG	**Pg**	**21 05 24.9**	**-0.7**
PTK				eSG	**Sg**	**21 05 36.9**	**+2.2**
PTK	**Pertek**	**0.69**	**277**	ePg	**Pg**	**21 05 24.9**	**-0.7**
PTK				eSg	**Sg**	**21 05 36.9**	**+2.1**
BNGL	**BINGOL**	**0.70**	**78**	i P	**Pg**	**21 05 25.3**	**-0.5**
BNGL				i S	**Sg**	**21 05 36.1**	**+0.9**
SVRC	**Sivrice-ELAZID**	**0.87**	**241**	ePG	**Pg**	**21 05 26.8**	**-2.2**
SVRC				eSG	**Sg**	**21 05 40.8**	**+0.5**
SVRC	**Sivrice-ELAZID**	**0.87**	**241**	ePg	**Pg**	**21 05 26.8**	**-2.2**
SVRC				eSg	**Sg**	**21 05 40.8**	**+0.4**
BEST	**Besiri**	**1.21**	**139**	i P	**Pn**	**21 05 34.0**	**-0.3**
BEST				i S	**Sb**	**21 05 50.8**	**+1.0**
EZM	**Erzurum**	**1.39**	**37**	ePN	**Pn**	**21 05 36.1**	**-0.5**
EZM				eSN	**Sn**	**21 05 54.8**	**+0.2**
MARD	**Mardin**	**1.55**	**165**	i P	**Pn**	**21 05 39.0**	**+0.1**

MARD *i* S **Sn** **21 05 58.4 -0.2**

IDC 20 21:09:22.8±4.5, 10°.88S×164°.53E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.5/17, mbtmp3.6/4, ML3.9/1, Error ellipse: s-maj=204.1km s-min=32.9km az=135.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**19.83**	**240**	P	Pn	21 13 56.9	+0.2
	0.2nm,0.3s,baz=61,slow=13,SNR=3.6						
ASAR	**Alice Springs**	**31.80**	**242**	P	P	21 15 48.1	-1.1
	0.2nm,0.5s,baz=65,slow=10,SNR=3.0						
ILAR	**Eielson Array**	**83.74**	**19**	P	P	21 21 53.5	+0.1
	0.5nm,0.7s,baz=239,slow=5.9,SNR=7.0						
MKAR	**Makanchi Array**	**92.58**	**317**	P	P	21 22 36.5	+0.2
	0.2nm,0.5s,baz=94,slow=7.0,SNR=3.5						

*IDC **20** 21:13:34.7±0.6, 3°.82S×150°.89E, h0km, mb4.6/17, mb1 4.7/19, mb1mx4.7/21, mbtmp4.6/19, ML4.4/2, MS5.0/22, Ms1 5.0/22, ms1mx4.8/28, Error ellipse: s-maj=25.3km s-min=14.1km az=100.0*

*ISCJB **20** 21:13:35.0±1.0, 3°.75S±0°.03×150°.92E±0°.04, h10km±5km, mb5.0/93, MS5.1/48, Error ellipse: s-maj=6.2km s-min=4.8km az=8.5*

*NEIC **20** 21:13:36.3±0.2, 3°.79S×150°.90E, h10km, mb5.3/48, MS5.1/8, MW5.5, Error ellipse: s-maj=7.2km s-min=4.7km az=107.0, Moment Tensor Solution. s20 Moment tensor: Scale 10^{17}Nm; M_{rr}0.48; $M_{\theta\theta}$1.49; $M_{\phi\phi}$-1.97; $M_{r\theta}$0.21; $M_{\theta\phi}$0.63; $M_{\phi r}$0.11; Best double couple: $M_0$1.90000×10^{17} NP1:ϕ_s125.00000°, δ81.00000°, λ7.00000°. NP2: ϕ_s34.00000°, δ83.00000°, λ171.00000°. Principal axes: T 1.6500, Plg11.0000°, Azm349.0000°; N 0.4400, Plg78.0000°, Azm178.0000°; P -2.0800, Plg1.0000°, Azm80.0000°;*

*BJI **20** 21:13:36.4, 3°.54S×151°.32E, h22km, mB5.2/31, mb4.9/45, Ms5.4/42, Ms7 5.1/40*

*MOS **20** 21:13:38.1±1.1, 3°.78S×150°.88E, h33km, mb5.4/24, MS5.0/9, Error ellipse: s-maj=12.6km s-min=7.0km az=90.9*

*GCMT **20** 21:13:39.8±0.1, 3°.80S×150°.98E, h12km, MW5.5, Moment Tensor Solution. s89,c151; s22,c24; Moment tensor: Scale 10^{17}Nm; M_{rr}-0.18±.03; $M_{\theta\theta}$2.48±.03; $M_{\phi\phi}$-2.30±.03; $M_{r\theta}$-0.14±.07; $M_{\theta\phi}$0.32±.03; $M_{\phi r}$0.10±.08; Best double couple: $M_0$2.40000×10^{17} NP1:ϕ_s221.00000°, δ86.00000°, λ-180.00000°. NP2:ϕ_s131.00000°, δ90.00000°, λ-4.00000°. Principal axes: T 2.5100, Plg3.0000°, Azm176.0000°; N -0.1800, Plg86.0000°, Azm310.0000°; P -2.3300, Plg3.0000°, Azm86.0000°; Data Used: II IU IC G CN. Surface waves: sta= 98, comp=189, per= 50.*

*DJA **20** 21:13:52, 4°.06S×150°.67E, h140km, mb5.2/11*

ISC 20 21:13:39.6±1.1, 3°.80S±0°.03×150°.91E±0°.04, h30km±7km, h31km±1.9km; pP-P, n210, σ1§10/209, mb5.0/92, MS5.1/48, 11C-5D, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.70**	**214**	*c iP*	**Pn**	**21 15 16.9**	**+0.9**
PMG				pmax	pmax		
	comp=Z,539nm,2.5s						
PMG	**Port Moresby**	**6.70**	**214**	⇑ *e*Pn	**Pn**	**21 15 16.5**	**+0.5**
PMG				*e*Sn	**Sn**	**21 16 35.4**	**+4.1**
PMG	**Port Moresby**	**6.70**	**214**	P	**Pn**	**21 15 17.5**	**+1.5**
JAY	**Jayapura**	**10.26**	**277**	P	**Pn**	**21 16 09.1**	**+4.1**
SMPI	**Sarmi**	**12.31**	**278**	P	**Pn**	**21 16 35.9**	**+2.9**
COEN	**Coen**	**12.65**	**217**	*e*Pn	**Pn**	**21 16 38.3**	**+0.7**
	comp=Z,673nm,1.4s						
COEN	**Coen**	**12.65**	**217**	P	**Pn**	**21 16 43.7**	**+6.1**
	comp=Z,167nm,1.5s						
BAKI	**Biak**	**15.01**	**280**	P	**Pn**	**21 17 14.3**	**+4.5**
	comp=Z,5μmcomp=Z,170nm,2.1s						
CTA	**Charters Tower**	**16.81**	**195**	*e*P	**Pn**	**21 17 32.9**	**0.0**
	comp=Z,182nm,1.0s						
CTA	**Charters Tower**	**16.81**	**195**	Pn	**Pn**	**21 17 32.9**	**0.0**
	comp=Z,0.7nm,0.3s,baz=17,slow=12,SNR=25						
CTA				LR	LR	21 23 41.9	
	comp=Z,4μm,19.6s,baz=14,slow=36						
CTA	**Charters Tower**	**16.81**	**195**	Pn	**Pn**	**21 17 32.9**	**0.0**
CTA				LR	LR	21 23 41.9	
CTAO	**Charters Tower**	**16.81**	**195**	⇑ *e*P	**Pn**	**21 17 33.4**	**+0.5**
CTAO				S	**Sn**	**21 20 41.0**	**+2.1**
CTAO				pmax	pmax		
	comp=Z,488nm,1.2s						
CTAO	**Charters Tower**	**16.81**	**195**	⇑ *e*Pn	**Pn**	**21 17 33.4**	**+0.4**
	comp=Z,488nm,1.2s						
CTAO				S	**Sn**	**21 20 41.0**	**+2.2**
CTAO	**Charters Tower**	**16.81**	**195**	P	**Pn**	**21 17 33.2**	**+0.3**
	comp=Z,6μmcomp=Z,383nm,1.4s						
TLE	**Tual**	**18.20**	**264**	P	**Pn**	**21 17 49.5**	**-0.7**
	comp=Z,6μmcomp=Z,175nm,2.1s						
GUMO	**Guam**	**18.29**	**341**	P	**Pn**	**21 17 51.5**	**+0.3**
	comp=Z,2.0nm,0.3s,baz=179,slow=8.5,SNR=7.3						
GUMO				LR	LR	21 23 19.2	
	comp=Z,2μm,19.9s,baz=157,slow=32						
GUMO	**Guam**	**18.29**	**341**	*e*P	**Pn**	**21 17 51.8**	**+0.6**
GUMO				pmax	pmax		
	comp=Z,564nm,1.7s						
GUMO	**Guam**	**18.29**	**341**	*e*Pn	**Pn**	**21 17 51.8**	**+0.6**
	comp=Z,564nm,1.7s						
GUMO	**Guam**	**18.29**	**341**	P	**Pn**	**21 17 51.6**	**+0.4**
KAKA	**Kakadu**	**20.29**	**243**	⇓ *iP*	**P**	**21 18 11.8**	**-1.3**
	comp=Z,217nm,1.2s						
KAKA	**Kakadu**	**20.29**	**243**	*e*P	**P**	**21 18 11.6**	**-1.5**
KWAJ	**Kwajalein Atol**	**20.84**	**53**	*e*P	**P**	**21 18 20.4**	**+1.4**
EIDS	**Eidsvold**	**21.45**	**180**	*e*P	**P**	**21 18 25.2**	**-0.3**
	comp=Z,792nm,2.1s,mb5.7						
AAI	**Ambon**	**22.66**	**270**	P	**P**	**21 18 37.8**	**-0.8**
	comp=Z,3μmcomp=Z,215nm,1.6s,mb5.3						
WRAB	**Tennant Creek**	**22.75**	**224**	P	**P**	**21 18 38.0**	**-1.5**
	comp=Z,709nm,1.1s,mb6.0,SNR=22						
WRAB	**Tennant Creek**	**22.75**	**224**	*e*P	**P**	**21 18 38.0**	**-1.5**
WRAB				S	**S**	**21 22 46.1**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,180nm,1.2s,mb5.4						
WRAB	**Tennant Creek**	**22.75**	**224**	*e*P	**P**	**21 18 38.0**	**-1.5**
	comp=Z,180nm,1.2s,mb5.4						
WRAB				S	**S**	**21 22 46.1**	**-0.7**
WRAB	**Tennant Creek**	**22.75**	**224**	P	**P**	**21 18 38.5**	**-1.0**
	comp=Z,151nm,1.2s,mb5.3						
NOUC	**Port Laguerre**	**23.54**	**142**	*e*P	**P**	**21 18 47.5**	**-0.1**
DZM	**Mont Dzumac**	**23.60**	**142**	*e*P	**P**	**21 18 48.1**	**-0.1**
	comp=Z,286nm,1.4s,mb5.5						
DZM				*e*LR	LR	21 24 42.5	
	comp=Z,10μm,24.6s						
DZM	**Mont Dzumac**	**23.60**	**142**	*e*P	**P**	**21 18 47.7**	**-0.5**
DZM	**Mont Dzumac**	**23.60**	**142**	*e*P	**P**	**21 18 47.4**	**-0.8**
	comp=Z,134nm,1.3s,mb5.2						
NLAI	**Namlea**	**23.77**	**271**	P	**P**	**21 18 50.0**	**+0.2**
	comp=Z,2μmcomp=Z,121nm,1.8s,mb5.0						
TNTI	**Ternate**	**23.96**	**280**	P	**P**	**21 18 51.7**	**+0.1**
	comp=Z,3μmcomp=Z,234nm,1.6s,mb5.4						
KNA	**Kununurra**	**24.80**	**240**	P	**P**	**21 18 59.1**	**-0.1**
	comp=Z,2μmcomp=Z,178nm,1.1s,mb5.5						
ASAR	**Alice Springs**	**25.68**	**218**	P	**P**	**21 19 06.5**	**-0.6**
	comp=Z,10nm,0.9s,mb4.4,baz=52,slow=8.4,SNR=46						
ARMA	**Armidale**	**26.48**	**179**	*e*P	**P**	**21 19 14.6**	**+0.3**
ARMA	**Armidale**	**26.48**	**179**	*e*P	**P**	**21 19 13.6**	**-0.7**
	comp=Z,40nm,1.0s,mb4.9						
MNI	**Manado**	**26.57**	**281**	P	**P**	**21 19 19.9**	**+4.6**
DAV	**Davao City (W)**	**27.49**	**293**	LR	LR	21 29 33.1	
	comp=Z,2μm,19.9s,MS4.6,baz=280,slow=35						
LUWI	**Luwuk**	**28.24**	**275**	P	**P**	**21 19 36.4**	**+6.1**
FITZ	**Fitzroy Crossi**	**28.53**	**238**	*e*P	**P**	**21 19 32.5**	**-0.3**
	comp=Z,127nm,1.0s,mb5.6						
FITZ	**Fitzroy Crossi**	**28.53**	**238**	P	**P**	**21 19 30.8**	**-2.0**
	comp=Z,24nm,1.1s,mb4.8,baz=47,slow=6.1,SNR=8.3						
FITZ	**Fitzroy Crossi**	**28.53**	**238**	*e*P	**P**	**21 19 31.5**	**-1.2**
	comp=Z,95nm,1.0s,mb5.5						
FITZ				*e*PcP	PcP	21 22 43.0	-1.1
FITZ	**Fitzroy Crossi**	**28.53**	**238**	P	**P**	**21 19 35.9**	**+3.1**
STKA	**Stephens Creek**	**29.27**	**196**	*e*P	**P**	**21 19 38.6**	**-0.6**
	comp=Z,18nm,0.9s,mb4.8						
STKA	**Stephens Creek**	**29.27**	**196**	P	**P**	**21 19 38.4**	**-0.8**
	comp=Z,20nm,1.0s,mb4.8,baz=5.5,slow=13,SNR=7.2						
STKA				LR	LR	21 30 49.0	
	comp=Z,4μm,21.8s,MS5.0,baz=14,slow=35						
STKA	**Stephens Creek**	**29.27**	**196**	*e*P	**P**	**21 19 38.1**	**-1.0**
	comp=Z,7.2nm,1.0s,mb4.4						
APSI	**Ampana**	**29.37**	**275**	P	**P**	**21 19 40.0**	**-0.3**
MSVF	**Nonsavu**	**29.98**	**120**	*e*P	**P**	**21 19 46.8**	**+1.1**
	comp=Z,50nm,1.6s,mb5.0						
BKSI	**Bulukumba**	**30.72**	**266**	P	**P**	**21 19 58.5**	**+6.2**
BNSI	**Bone**	**30.72**	**268**	P	**P**	**21 19 58.9**	**+6.6**
WSI	**Waingapu**	**30.93**	**258**	P	**P**	**21 19 59.6**	**+5.4**
SPSI	**Sidrap Palu**	**31.06**	**269**	P	**P**	**21 20 01.0**	**+5.7**
PCI	**Palu**	**31.17**	**275**	P	**P**	**21 19 59.5**	**+3.2**
CNB	**Canberra Magne**	**31.39**	**182**	*e*P	**P**	**21 19 59.0**	**+1.1**
TOO	**Toolangi**	**33.97**	**188**	*e*P	**P**	**21 20 24.4**	**+3.9**
FORT	**Forrest**	**34.42**	**216**	*e*P	**P**	**21 20 23.5**	**-1.0**
	comp=Z,96nm,1.0s,mb5.7						
MBWA	**Marble Bar**	**34.86**	**238**	*e*P	**P**	**21 20 26.8**	**-1.6**
	comp=Z,44nm,1.1s,mb5.3						
AFI	**Afiamalu**	**38.16**	**108**	LR	LR	21 35 32.7	
	comp=Z,2μm,19.0s,MS5.0,baz=276,slow=34						
RAO	**Raoul Island**	**38.92**	**134**	LR	LR	21 34 42.9	
	comp=Z,1μm,20.1s,MS4.8,baz=192,slow=33						
YULB	**Yu-li**	**39.55**	**315**	*e*P	**P**	**21 21 07.6**	**-0.6**
	comp=Z,67nm,1.4s,mb5.2						
NACB	**Ninganchiao**	**39.84**	**316**	*e*P	**P**	**21 21 09.7**	**-0.8**
YHNB	**Yeheng**	**40.31**	**316**	*e*P	**P**	**21 21 14.3**	**-0.2**
	comp=Z,48nm,1.1s,mb5.1						
KSM	**Kuching**	**40.91**	**277**	*e*P	**P**	**21 21 20.5**	**+0.9**
	comp=Z,82nm,1.2s,mb5.2						
KLBR	**Kellerberrin**	**41.65**	**225**	*e*P	**P**	**21 21 21.9**	**-3.5**
	comp=Z,21nm,1.2s,mb4.6						
URZ	**Urewera**	**41.81**	**149**	LR	LR	21 36 59.4	
	comp=Z,2μm,19.8s,MS5.1,baz=214,slow=34						
MJAR	**Matsushiro Arr**	**41.85**	**345**	P	**P**	**21 21 24.5**	**-2.4**
	comp=Z,6.3nm,1.2s,mb4.1,baz=163,slow=9.6,SNR=12						
MJAR				LR	LR	21 37 18.8	
	comp=Z,4μm,18.4s,MS5.4,baz=180,slow=34						
MAJO	**Matsushiro**	**41.85**	**345**	*e*P	**P**	**21 21 24.5**	**-2.5**
MAJO				pmax	pmax		
	comp=Z,30nm,1.6s,mb4.7						
MAJO	**Matsushiro**	**41.85**	**345**	*e*P	**P**	**21 21 24.5**	**-2.4**
	comp=Z,30nm,1.6s,mb4.7						
MAT	**Matsushiro**	**41.85**	**345**	P	**P**	**21 21 24.3**	**-2.7**
MAT				S	**S**	**21 27 35.0**	**-8.0**
QZH	**Quanzhou**	**42.44**	**314**	P	**P**	**21 21 32.3**	**+0.3**
QZH				S	**S**	**21 27 52.3**	**+0.2**
QZH				pmax	pmax		
	comp=Z,60nm,0.6s,mb5.4						
QZH				LR	LR		
	comp=N,2μm,9.5s						
QZH				LR	LR		
	comp=E,6μm,16.0s						
QZH				LR	LR		
	comp=Z,5μm,21.0s,MS5.4						
RPZ	**Rata Peaks**	**43.56**	**159**	P	**P**	**21 21 40.7**	**-0.1**
	comp=Z,7.4nm,0.6s,mb4.6,baz=252,slow=3.2,SNR=4.1						
RPZ				LR	LR	21 37 01.4	
	comp=Z,5μm,21.9s,MS5.3,baz=322,slow=32						
SSE	**Sheshan**	**44.80**	**323**	P	**P**	**21 21 49.1**	**-1.8**
SSE				S	**S**	**21 28 27.1**	**+0.7**
SSE				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.9						
SSE				pmax	pmax		
	comp=Z,140nm,3.8s						
SSE				LR	LR		
	comp=N,1μm,11.8s,MS5.2						
SSE				LR	LR		
	comp=E,2μm,11.8s,MS5.2						
SSE				LR	LR		
	comp=Z,2μm,15.9s,MS5.2						
ERM	**Erimo**	**46.14**	**352**	*d iP*	**P**	**21 22 00.8**	**-0.5**
ERM				pmax	pmax		
	comp=Z,26nm,1.7s,mb4.9						
ERM	**Erimo**	**46.14**	**352**	*e*P	**P**	**21 22 01.1**	**-0.1**
	comp=Z,62nm,1.6s,mb5.3						
KSRS	**Korea Array**	**46.28**	**335**	P	**P**	**21 22 01.8**	**-0.6**
	comp=Z,2.0nm,0.9s,mb4.1,baz=146,slow=9.8,SNR=4.9						
KSRS				LR	LR	21 40 00.0	
	comp=Z,2μm,19.0s,MS5.0,baz=133,slow=34						
QIZ	**Qiongzhong**	**46.34**	**301**	P	**P**	**21 22 03.5**	**+0.3**
QIZ				pP	pP	21 22 11.5	-0.8
QIZ				S	**S**	**21 28 46.0**	**-2.9**
QIZ				sS	sS	21 29 00.9	-3.0
QIZ				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.8						
QIZ				pmax	pmax		
	comp=Z,100nm,4.1s						
QIZ				LR	LR		
	comp=N,2μm,18.0s						
QIZ				LR	LR		
	comp=Z,2μm,21.6s,MS5.1						
NJ2	**Nanjing**	**46.89**	**322**	*e*P	**P**	**21 22 08.1**	**+0.7**
NJ2				pP	pP	21 22 18.1	+1.6
NJ2				sP	sP	21 22 23.8	+3.7
NJ2				PP	PP	21 23 59.4	+1.4
NJ2				S	**S**	**21 29 00.0**	**+3.6**
NJ2				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
NJ2				pmax	pmax		
	comp=Z,260nm,4.8s						
NJ2				LR	LR		
	comp=N,2μm,19.2s,MS5.2						
NJ2				LR	LR		
	comp=E,2μm,21.2s,MS5.2						
NJ2				LR	LR		
	comp=Z,960nm,19.8s,MS4.8						
YUK	**Yuzh-Kuril'sk**	**47.83**	**355**	⇑ *iP*	**P**	**21 22 11.0**	**-3.5**
YUK				*i*		21 24 06.1	
YUK				*i* S	**S**	**21 29 18.2**	**+8.8**
YUK				pmax	pmax		
	comp=N,160nm,6.5s						
YUK				pmax	pmax		
	comp=Z,20nm,3.3s						
ASAJ	**Asahikawa**	**48.28**	**352**	LR	LR	21 41 12.3	
	comp=Z,4μm,19.4s,MS5.4,baz=346,slow=34						
WHN	**Wuhan**	**48.84**	**317**	P	**P**	**21 22 23.3**	**+0.8**
RAR	**Rarotonga**	**50.91**	**114**	LR	LR	21 40 28.0	
	comp=Z,461nm,19.3s,MS4.5,baz=136,slow=32						
KULM	**Kulim**	**51.00**	**280**	*e*P	**P**	**21 22 38.4**	**-0.9**
	comp=Z,34nm,1.3s,mb5.1						
YSS	**Yuzh-Sakhalins**	**51.05**	**353**	⇑ *e*P	**P**	**21 22 38.8**	**-0.2**
YSS				*e*S	**S**	**21 29 51.0**	**-3.4**
YSS				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.3						
YSS				MLR	MLR		
	comp=N,700nm,14.0s						
YSS				MLR	MLR		
	comp=Z,1μm,14.0s,MS5.0						
YSS	**Yuzh-Sakhalins**	**51.05**	**353**	*e*P	**P**	**21 22 38.3**	**-0.7**
MDJ	**Mudanjiang**	**51.84**	**341**	P	**P**	**21 22 44.8**	**-0.2**
MDJ				pP	pP	21 22 53.8	-0.4
MDJ				sP	sP	21 22 57.8	0.0
MDJ				PP	PP	21 24 41.8	-1.3
MDJ				ScP	ScP	21 27 51.8	-0.7
MDJ				PcS	PcS	21 27 55.4	-0.1
MDJ				S	**S**	**21 30 05.5**	**+0.1**
MDJ				sS	sS	21 30 20.8	+0.2
MDJ				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.9						
MDJ				pmax	pmax		
	comp=Z,75nm,3.5s						
MDJ				LR	LR		
	comp=N,1μm,38.9s,MS4.7						
MDJ				LR	LR		
	comp=E,760nm,38.9s,MS4.7						
MDJ				LR	LR		
	comp=Z,2μm,23.8s						
MDJ	**Mudanjiang**	**51.84**	**341**	*e*P	**P**	**21 22 44.7**	**-0.2**
	comp=Z,85nm,1.7s,mb5.4						
ENH	**Enshi**	**52.10**	**314**	*e*P	**P**	**21 22 47.4**	**+0.3**
	comp=Z,66nm,1.4s,mb5.4						
ENH				*e*PcP	PcP	21 23 57.8	-1.1
GYA	**Guiyang**	**52.29**	**308**	⇑ *iP*	**P**	**21 22 49.8**	**+1.1**
GYA				pP	pP	21 23 01.3	+3.4
GYA				sP	sP	21 23 05.8	+4.3
GYA				PcP	PcP	21 24 01.5	+1.8
GYA				PP	PP	21 24 50.0	+2.5
GYA				ScP	ScP	21 27 54.3	-0.6
GYA				S	**S**	**21 30 11.6**	**-0.6**
GYA				sS	sS	21 30 28.9	+1.5
GYA				SS	SS	21 33 47.4	-2.9
GYA				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.3						
GYA				pmax	pmax		
	comp=Z,160nm,5.2s						
GYA				LR	LR		
	comp=N,690nm,19.5s,MS4.8						
GYA				LR	LR		
	comp=E,510nm,20.0s,MS4.8						
GYA				LR	LR		
	comp=Z,740nm,19.7s,MS4.7						
CN2	**Changchun**	**52.63**	**337**	*e*P	**P**	**21 22 54.3**	**+3.5**
CN2				*e*S	**S**	**21 30 18.8**	**+2.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
CN2				pmax	pmax		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=N,3μm,17.0s,MS5.4						
CN2				LR	LR		
	comp=E,2μm,17.0s,MS5.4						
CN2				LR	LR		
	comp=Z,2μm,18.0s,MS5.3						
HABR	**Khabarovsk**	**53.87**	**347**	*e*P	**P**	**21 22 57.9**	**-2.0**
HABR				*e**PP	pP	21 23 07.5	-1.6
HABR				*e*		21 24 02.4	
HABR						21 24 59.5	
HABR				S	**S**	**21 30 32.3**	**-0.6**
HABR				*e**SS	sS	21 30 48.6	+0.4
HABR				*e*		21 32 44.2	
HABR				SS	SS	21 34 15.0	+0.5
HABR				pmax	pmax		
	comp=Z,137nm,2.1s,mb5.5						
HABR				pmax	pmax		
	comp=N,66nm,2.7s						
HABR				pmax	pmax		
	comp=E,55nm,1.9s						
HABR				MLR	MLR		
	comp=Z,816nm,21.0s,MS4.8						
BJI	**Beijing**	**54.03**	**327**	P	**P**	**21 23 01.1**	**-0.1**
BJI				S	**S**	**21 30 36.9**	**+1.5**
BJI				SS	SS	21 34 20.4	+3.1
BJI				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.5						
BJI				pmax	pmax		
	comp=Z,140nm,3.9s						
BJI				LR	LR		
	comp=N,4μm,17.6s,MS5.6						
BJI				LR	LR		
	comp=E,3μm,18.1s,MS5.6						
BJI				LR	LR		
	comp=Z,1μm,21.1s,MS5.0						
XAN	**Xi'an**	**54.60**	**317**	P	**P**	**21 23 05.8**	**+0.3**
XAN				pP	pP	21 23 12.0	-2.8
XAN				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
KMI	**Kunming**	**54.87**	**304**	P	**P**	**21 23 10.0**	**+2.4**
KMI				pP	pP	21 23 16.8	0.0
KMI				sP	sP	21 23 20.8	+0.4
KMI				PP	PP	21 25 13.5	+2.8
KMI				S	**S**	**21 30 48.9**	**+1.7**
KMI				sS	sS	21 31 00.9	-1.5
KMI				SS	SS	21 34 29.3	-1.8
KMI				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.6						
KMI				pmax	pmax		
	comp=Z,79nm,3.2s						
KMI				LR	LR		
	comp=N,960nm,19.2s,MS5.0						
KMI				LR	LR		
	comp=E,680nm,16.9s,MS5.0						
KMI				LR	LR		
	comp=Z,1μm,19.2s,MS5.0						
KLR	**Kul'dur**	**55.38**	**345**	*e*P	**P**	**21 23 07.5**	**-3.3**
KLR				*e*S	**S**	**21 30 48.5**	**-4.7**
KLR				pmax	pmax		
	comp=E,40nm,1.8s						
KLR				pmax	pmax		
	comp=Z,85nm,1.8s,mb5.5						
CM31	**Chiang Mai Arr**	**55.74**	**295**	*e*P	**P**	**21 23 13.3**	**-0.7**
CMAR	**Chiang Mai Arr**	**55.74**	**295**	P	**P**	**21 23 16.2**	**+2.2**
	comp=Z,5.6nm,0.9s,mb4.6,baz=108,slow=5.1,SNR=23						
CHTO	**Chiang Mai**	**55.85**	**296**	*e*P	**P**	**21 23 13.5**	**-1.3**
CHTO				pmax	pmax		
	comp=Z,36nm,1.4s,mb5.2						
CHTO	**Chiang Mai**	**55.85**	**296**	*e*P	**P**	**21 23 13.5**	**-1.2**
	comp=Z,36nm,1.4s,mb5.2						
CD2	**Chengdu**	**56.66**	**311**	P	**P**	**21 23 21.3**	**+1.0**
CD2				pP	pP	21 23 31.4	+1.8
CD2				sP	sP	21 23 35.3	+2.1
CD2				PcP	PcP	21 24 17.3	+0.9
CD2				PP	PP	21 25 28.9	+2.2
CD2				S	**S**	**21 31 09.8**	**-1.1**
CD2				sS	sS	21 31 26.5	+0.3
CD2				SS	SS	21 34 57.6	-1.5
CD2				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
CD2				pmax	pmax		
	comp=Z,250nm,5.3s						
CD2				LR	LR		
	comp=N,3μm,14.9s						
CD2				LR	LR		
	comp=Z,3μm,14.9s,MS5.5						
PETK	**Petropavlovsk-**	**56.99**	**5**	P	**P**	**21 23 22.3**	**+0.1**
	comp=Z,12nm,0.7s,mb5.0,baz=170,slow=7.4,SNR=25						
PETK				LR	LR	21 42 48.3	
	comp=Z,3μm,21.1s,MS5.3,baz=222,slow=31						
PETK	**Petropavlovsk-**	**56.99**	**5**	P	**P**	**21 23 22.3**	**+0.1**
PETK				LR	LR	21 42 48.3	
PET	**Petropavlovsk**	**56.99**	**6**	⇓ *iP*	**P**	**21 23 22.1**	**-0.1**
PET				*e*S	**S**	**21 31 13.9**	**-0.6**
PET				*e*SS	SS	21 35 03.0	-0.5
PET				pmax	pmax		
	comp=Z,21nm,1.4s,mb5.0						
PET				pmax	pmax		
	comp=Z,100nm,10.4s						
PET				MLR	MLR		
	comp=Z,1μm,14.0s,MS5.2						
PET				MLR	MLR		
	comp=Z,1μm,16.0s						
HHC	**Hu-ho-hao-te**	**57.14**	**325**	*e*P	**P**	**21 23 24.3**	**+0.7**
HHC				sP	sP	21 23 38.5	+2.0
HHC				PcP	PcP	21 24 18.4	+0.3
HHC				PP	PP	21 25 33.3	+2.5
HHC				ScP	ScP	21 28 14.0	-1.8
HHC				PcS	PcS	21 28 18.1	-0.8
HHC				S	**S**	**21 31 15.4**	**-1.6**
HHC				sS	sS	21 31 33.1	+0.8
HHC				ScS	ScS	21 33 08.3	-2.6
HHC				SS	SS	21 35 06.3	-0.1
HHC				pmax	pmax		
	comp=Z,13nm,0.6s,mb5.1						
HHC				pmax	pmax		
	comp=Z,210nm,6.5s						
HHC				LR	LR		
	comp=N,2μm,16.0s,MS5.4						
HHC				LR	LR		
	comp=E,1μm,16.3s,MS5.4						
HHC				LR	LR		
	comp=Z,1μm,16.3s,MS5.2						
BTO	**Baotou**	**57.88**	**324**	*e*P	**P**	**21 23 28.5**	**-0.3**
LZH	**Lanzhou**	**59.20**	**316**	⇓ *iP*	**P**	**21 23 39.8**	**+1.7**
LZH				PP	PP	21 25 52.8	+3.6
LZH				*e*S	**S**	**21 31 44.0**	**-0.1

GTA				pmax	pmax			
	comp=Z,140nm,6.2s							
GTA				LR	LR			
	comp=N,960nm,14.6s,MS5.2							
GTA				LR	LR			
	comp=E,640nm,14.0s,MS5.2							
GTA				LR	LR			
	comp=Z,850nm,14.3s,MS5.1							
CIT	**Chita**	**64.00**	**335**	*e*P	**P**	**21 24 11.4**	**+1.3**	
CIT				*e*		21 24 25.0		
CLNS	**Chul'man**	**64.03**	**344**	*e*P	**P**	**21 24 07.6**	**-2.6**	
CLNS				pmax	pmax			
	comp=Z,16nm,0.9s,mb5.0							
CLNS				pmax	pmax			
	comp=N,16nm,1.1s							
ULN	**Ulaanbaatar**	**64.16**	**329**	*e*P	**P**	**21 24 11.2**	**-0.1**	
ULN				pmax	pmax			
	comp=Z,59nm,1.7s,mb5.3							
ULN				MLR	MLR			
	comp=Z,2μm,20.0s,MS5.3							
ULN	**Ulaanbaatar**	**64.16**	**329**	*e*P	**P**	**21 24 11.2**	**-0.1**	
	comp=Z,59nm,1.7s,mb5.3							
ULN				LR	LR			
	comp=Z,2μm,20.0s,MS5.3							
SONM	**Songino Array**	**64.48**	**328**	P	**P**	**21 24 14.5**	**+1.1**	
	comp=Z,4.4nm,0.6s,mb4.6,baz=145,slow=5.6,SNR=38							
SONM				LR	LR	21 50 29.1		
	comp=Z,2μm,20.5s,MS5.2,baz=144,slow=34							
LSA	**Lhasa**	**66.12**	**305**	P	**P**	**21 24 25.5**	**+1.1**	
LSA	**Lhasa**	**66.12**	**305**	*e*P	**P**	**21 24 25.6**	**+1.2**	
LSA				pmax	pmax			
	comp=Z,41nm,1.4s,mb5.3							
LSA				MLR	MLR			
	comp=Z,973nm,21.0s,MS5.0							
LSA	**Lhasa**	**66.12**	**305**	*e*P	**P**	**21 24 25.6**	**+1.3**	
	comp=Z,41nm,1.4s,mb5.3							
LSA				LR	LR			
	comp=Z,973nm,21.0s,MS5.0							
SEY	**Seymchan**	**66.56**	**1***c*	*i*P	**P**	**21 24 26.0**	**-0.5**	
YAK	**Yakutsk**	**67.64**	**349**	*e*P	**P**	**21 24 32.6**	**-0.8**	
YAK				*e**PP	pP	21 24 37.8	-5.0	
YAK				*e*		21 25 00.8		
YAK				*e*S	S	21 33 21.6	-6.7	
YAK				*e**SS	sS	21 33 44.6	+0.7	
YAK				*e*SS	SS	21 37 46.9	-2.8	
YAK				pmax	pmax			
	comp=Z,20nm,1.1s,mb5.1							
YAK				pmax	pmax			
	comp=N,13nm,1.3s							
YAK				pmax	pmax			
	comp=E,5.0nm,1.4s							
YAK				smax				
	comp=E,120nm,11.8s							
YAK				smax				
	comp=N,178nm,11.6s							
YAK	**Yakutsk**	**67.64**	**349**	*e*P	**P**	**21 24 33.0**	**-0.3**	
YAK				LR	LR			
	comp=Z,1μm,20.0s,MS5.2							
TLY	**Talaya**	**68.28**	**331**	*e*P	**P**	**21 24 37.5**	**-0.1**	
TLY				*e*		21 24 57.4		
TLY				*e*		21 27 17.6		
TLY				*e*S	S	21 33 40.1	+3.8	
TLY				*e*PS		21 33 52.2		
TLY				*e*SS	SS	21 37 56.0	-4.0	
TLY				pmax	pmax			
	comp=Z,31nm,2.3s,mb4.9							
TLY	**Talaya**	**68.28**	**331**	*e*P	**P**	**21 24 37.0**	**-0.6**	
IRK	**Irkutsk**	**68.32**	**331**	*e*P	**P**	**21 24 38.1**	**+0.2**	
IRK				*e*		21 24 52.5		
IRK				pmax	pmax			
	comp=Z,32nm,2.0s,mb5.0							
CASY	**Casey**	**68.42**	**196**	*e*P	**P**	**21 24 37.0**	**-1.3**	
CASY	**Casey**	**68.42**	**196**	*e*P	**P**	**21 24 36.9**	**-1.3**	
	comp=Z,44nm,1.1s,mb5.4							
MOY	**Mondy**	**69.59**	**329**	*e*P	**P**	**21 24 47.1**	**+1.3**	
MOY				pmax	pmax			
	comp=Z,70nm,2.1s,mb5.2							
BILL	**Bilibino**	**72.49**	**6***c*	*i*P	**P**	**21 25 02.8**	**-0.2**	
BILL				*i*		21 25 09.4		
BILL				*e*		21 27 44.2		
BILL				pmax	pmax			
	comp=Z,43nm,2.5s,mb4.9							
BILL				MLR	MLR			
	comp=Z,800nm,18.0s,MS5.0							
BILL	**Bilibino**	**72.49**	**6**	*e*P	**P**	**21 25 03.3**	**+0.3**	
	comp=Z,26nm,1.0s,mb5.1							
WMQ	**Urumqi**	**73.73**	**318**	P	**P**	**21 25 11.8**	**+0.9**	
WMQ				pP	pP	21 25 22.0	+1.6	
WMQ				sP	sP	21 25 26.0	+2.0	
WMQ				PcP	PcP	21 25 27.8	+1.3	
WMQ				PP	PP	21 27 57.8	+2.1	
WMQ				S	S	21 34 38.3	-1.7	
WMQ				sS	sS	21 34 55.5	-0.2	
WMQ				ScS	ScS	21 35 14.8	-3.6	
WMQ				SS	SS	21 39 24.0	-0.1	
WMQ				pmax	pmax			
	comp=Z,17nm,1.4s,mb4.8							
WMQ				pmax	pmax			
	comp=Z,290nm,4.6s							
WMQ				LR	LR			
	comp=N,1μm,20.8s,MS5.2							
WMQ				LR	LR			
	comp=E,860nm,18.0s,MS5.2							
WMQ				LR	LR			
	comp=Z,810nm,24.6s							
RKT	**Rikitea**	**73.92**	**113**	*e*S	S	21 34 44.6	+1.8	
	comp=Z,237nm,27.8s							
RKT				*e*LQ		21 44 52.1		
	comp=Z,2μm,36.5s							
RKT				*e*LR	LR	21 48 03.0		
	comp=Z,1μm,22.5s,baz=278							
MIR	**Mirnyy**	**74.18**	**201**⇓	*i*P	**P**	**21 25 13.0**	**-0.1**	
MIR				pmax	pmax			
	comp=Z,67nm,1.4s,mb5.4							
MIR				MLR	MLR			
	comp=N,1μm,18.0s,MS5.3							
MIR				MLR	MLR			
	comp=E,1μm,18.0s,MS5.3							
MIR				MLR	MLR			
	comp=Z,1μm,18.0s,MS5.3							
SBA	**Scott Base**	**74.47**	**177**	*e*P	**P**	**21 25 13.7**	**-0.9**	
SBA				pmax	pmax			
	comp=Z,128nm,2.4s,mb5.4							
SBA	**Scott Base**	**74.47**	**177**	*e*P	**P**	**21 25 13.7**	**-0.9**	
	comp=Z,128nm,2.4s,mb5.4							
OHAK	**Old Harbor**	**75.54**	**28**	*e*P	**P**	**21 25 21.3**	**+0.3**	
	comp=Z,31nm,1.0s,mb5.2							
KDAK	**Kodiak Island**	**76.15**	**27**	P	**P**	**21 25 23.9**	**-0.7**	
	comp=Z,10nm,1.0s,mb4.7,baz=191,slow=5.1,SNR=4.9							
KDAK				LR	LR	21 56 49.0		
	comp=Z,1μm,20.0s,MS5.2,baz=226,slow=34							
KDAK	**Kodiak Island**	**76.15**	**27**	*e*P	**P**	**21 25 25.1**	**+0.6**	
SVW2	**Sparrevohn**	**76.66**	**24**	*e*P	**P**	**21 25 28.3**	**+0.9**	
	comp=Z,20nm,1.2s,mb4.9							
SVW2				LR	LR			
	comp=Z,1μm,20.0s,MS5.3							
MK31	**Makanchi Array**	**78.34**	**319**	*e*P	**P**	**21 25 37.7**	**+0.7**	
MKAR	**Makanchi Array**	**78.34**	**319**	P	**P**	**21 25 38.0**	**+0.9**	
	comp=Z,8.3nm,0.9s,mb4.7,baz=104,slow=7.0,SNR=57							
MKAR				LR	LR	22 02 11.2		
	comp=Z,535nm,19.1s,MS4.9,baz=223,slow=37							
PPLA	**Purkeypile**	**78.99**	**23**	*e*P	**P**	**21 25 40.1**	**-0.1**	
	comp=Z,68nm,1.6s,mb5.3							
RC01	**Rabbit Creek A**	**79.07**	**25**	*e*P	**P**	**21 25 40.5**	**-0.2**	
	comp=Z,89nm,1.5s,mb5.5							
ZALV	**Zalesovo Beam**	**79.28**	**327**	P	**P**	**21 25 41.9**	**-0.2**	
	comp=Z,7.7nm,0.8s,mb4.7,baz=108,slow=5.3,SNR=40							
ZALV				LR	LR	22 00 24.4		
	comp=Z,754nm,18.4s,MS5.1,baz=332,slow=35							
PMR	**Palmer**	**79.57**	**25**	*e*P	**P**	**21 25 43.5**	**0.0**	
TRF	**Thorofare Moun**	**80.01**	**23**	*e*P	**P**	**21 25 44.9**	**-0.9**	
	comp=Z,13nm,1.0s,mb4.8							
NVS	**Novosibirsk**	**80.47**	**327**	*e*P	**P**	**21 25 47.7**	**-0.8**	
NVS				*i*		21 26 04.4		
NVS				*e*S	S	21 35 57.3	+4.5	
NVS				pmax	pmax			
	comp=E,38nm,1.6s							
NVS				pmax	pmax			
	comp=Z,52nm,1.6s,mb5.2							
NVS				pmax	pmax			
	comp=N,17nm,1.5s							
NVS				smax				
	comp=E,196nm,3.6s							
MCK	**McKinley**	**80.68**	**23**	*e*P	**P**	**21 25 48.9**	**-0.5**	
MCK				pmax	pmax			
	comp=Z,64nm,1.2s,mb5.4							
MCK	**McKinley**	**80.68**	**23**	*e*P	**P**	**21 25 48.9**	**-0.6**	
	comp=Z,64nm,1.2s,mb5.4							
DIV	**Divide**	**80.80**	**26**	*e*P	**P**	**21 25 49.6**	**-0.5**	
	comp=Z,57nm,1.3s,mb5.3							
KSH	**Kashi**	**80.86**	**311**	*e*P	**P**	**21 25 54.8**	**+3.9**	
KSH				pP	pP	21 26 05.5	+5.0	
KSH				sP	sP	21 26 09.5	+5.4	
KSH				PP	PP	21 29 03.1	+7.5	
KSH				S	S	21 36 03.5	+6.0	
KSH				SKS		21 36 07.8		
KSH				sS	sS	21 36 19.8	+6.4	
KSH				pmax	pmax			
	comp=Z,48nm,1.7s,mb5.2							
KSH				pmax	pmax			
	comp=Z,190nm,3.8s							
KSH				LR	LR			
	comp=N,230nm,9.1s							
KSH				LR	LR			
	comp=E,530nm,14.4s							
KSH				LR	LR			
	comp=Z,940nm,15.9s,MS5.2							
BMRM	**Bremner River**	**81.25**	**26**	*e*P	**P**	**21 25 52.1**	**-0.4**	
	comp=Z,50nm,1.3s,mb5.3							
COLA	**College**	**81.64**	**22**	*e*P	**P**	**21 25 52.6**	**-1.9**	
COLA				pmax	pmax			
	comp=Z,45nm,1.5s,mb5.2							
COLA				MLR	MLR			
	comp=Z,859nm,20.0s,MS5.1							
COLA	**College**	**81.64**	**22**	*e*P	**P**	**21 25 52.6**	**-1.9**	
	comp=Z,45nm,1.5s,mb5.2							
COLA				LR	LR			
	comp=Z,859nm,20.0s,MS5.1							
KURK	**Kurchatov**	**81.83**	**322***c*	*i*P	**P**	**21 25 55.8**	**0.0**	
KURK				pmax	pmax			
	comp=Z,19nm,1.0s,mb5.0							
KURK	**Kurchatov**	**81.83**	**322**	*e*P	**P**	**21 25 56.1**	**+0.3**	
	comp=Z,65nm,1.5s,mb5.3							
COLD	**Coldfoot**	**81.95**	**20**	*e*P	**P**	**21 25 56.1**	**0.0**	
	comp=Z,22nm,1.4s,mb4.9							
ILAR	**Eielson Array**	**81.96**	**23**	P	**P**	**21 25 54.8**	**-1.4**	
	comp=Z,3.2nm,0.8s,mb4.3,baz=254,slow=5.5,SNR=34							
ILAR				LR	LR	22 01 55.6		
	comp=Z,831nm,18.6s,MS5.1,baz=262,slow=35							
UCH	**Uchtor**	**82.51**	**313**	*e*P	**P**	**21 26 00.3**	**+0.7**	
	comp=Z,46nm,1.6s,mb5.3							
FRU	**Bishkek**	**82.57**	**314**	*e*P	**P**	**21 26 00.0**	**+0.1**	
AAK	**Ala-Archa**	**82.61**	**314**⇑	*i*P	**P**	**21 26 01.5**	**+1.4**	
AAK				pmax	pmax			
	comp=Z,6.0nm,2.5s,mb4.2							
AAK	**Ala-Archa**	**82.61**	**314**	*e*P	**P**	**21 26 01.2**	**+1.1**	
	comp=Z,12nm,1.0s,mb4.9							
AML	**Almayashu**	**83.09**	**313**	*e*P	**P**	**21 26 03.9**	**+1.3**	
EKS2	**Erkin-Say**	**83.14**	**314**	*e*P	**P**	**21 26 04.1**	**+1.2**	
	comp=Z,12nm,1.0s,mb4.9							
EGAK	**Eagle**	**84.20**	**24**	*e*P	**P**	**21 26 08.4**	**+0.6**	
HYT	**Haines Junctio**	**84.43**	**28**	*e*P	**P**	**21 26 10.1**	**+1.1**	
DAWY	**Dawson**	**84.66**	**24**	*e*P	**P**	**21 26 11.2**	**+1.0**	
KBL	**Kabul**	**85.44**	**305**	P	**P**	**21 26 11.8**	**-2.9**	
KBL				pmax	pmax			
	comp=Z,6.0nm,1.2s,mb4.6							
KBL	**Kabul**	**85.44**	**305**	P	**P**	**21 26 11.8**	**-3.0**	
	comp=Z,6.1nm,1.2s,mb4.6							
MAW	**Mawson**	**85.76**	**203**	*e*P	**P**	**21 26 14.2**	**-1.4**	
	comp=Z,5.3nm,1.2s,mb4.7							
MAW	**Mawson**	**85.76**	**203**	P	**P**	**21 26 14.3**	**-1.3**	
	comp=Z,2.3nm,1.1s,mb4.3,baz=77,slow=5.2,SNR=3.6							
MAW				LR	LR	22 02 00.4		
	comp=Z,1μm,20.7s,MS5.3,baz=93,slow=34							
MAW	**Mawson**	**85.76**	**203**	*e*P	**P**	**21 26 14.0**	**-1.6**	
MAW				pmax	pmax			
	comp=Z,6.0nm,1.7s							
MAW	**Mawson**	**85.76**	**203**	*e*P	**P**	**21 26 14.0**	**-1.6**	
	comp=Z,6.4nm,1.7s,mb4.6							
QSPA	**South Pole Qui**	**86.15**	**180**	*e*P	**P**	**21 26 16.7**	**-0.6**	
	comp=Z,47nm,1.3s,mb5.6							
QSPA				LR	LR			
	comp=Z,655nm,21.0s,MS5.0							
BVAR	**Borovoye Array**	**87.32**	**323**	P	**P**	**21 26 23.2**	**-0.3**	
	comp=Z,5.4nm,0.8s,mb4.8,baz=104,slow=6.3,SNR=28							
BRVK	**Borovoye**	**87.38**	**323**	*e*P	**P**	**21 26 23.3**	**-0.5**	
BRVK				pmax	pmax			
	comp=Z,11nm,1.0s,mb5.0							
BRVK	**Borovoye**	**87.38**	**323**	*e*P	**P**	**21 26 23.3**	**-0.5**	
	comp=Z,11nm,1.0s,mb5.0							
DLBC	**Dease Lake**	**87.50**	**31**	*e*P	**P**	**21 26 25.6**	**+1.4**	
INK	**Inuvik**	**88.21**	**21**	LR	LR	21 58 56.7		
	comp=Z,316nm,21.9s,MS4.7,baz=117,slow=31							
INK	**Inuvik**	**88.21**	**21**	*e*P	**P**	**21 26 27.2**	**-0.2**	
YBH	**Yreka Blue Hor**	**89.80**	**48**	P	**P**	**21 26 36.3**	**+0.8**	
	comp=Z,1.0nm,0.3s,mb4.6,baz=284,slow=4.2,SNR=3.7							
MOD	**Modoc**	**91.61**	**48**	P	**P**	**21 26 41.8**	**-2.2**	
	comp=Z,15nm,1.4s,mb5.1							
MTUM	**Tungsten Hills**	**92.70**	**53**	*e*P	**P**	**21 26 48.8**	**-0.3**	
WVOR	**Wild Horse Val**	**92.88**	**48**	*e*P	**P**	**21 26 50.4**	**+0.6**	
WVOR				pmax	pmax			
	comp=Z,60nm,2.2s,mb5.6							
WVOR	**Wild Horse Val**	**92.88**	**48**	*e*P	**P**	**21 26 50.4**	**+0.6**	
	comp=Z,60nm,2.2s,mb5.6							
NVAR	**Mina Array Bea**	**92.96**	**52**	P	**P**	**21 26 51.6**	**+1.4**	
	comp=Z,0.2nm,0.4s,mb3.9,baz=299,slow=3.7,SNR=3.7							
ABKAR	**Akbulak array**	**93.48**	**319**	*e*P	**P**	**21 26 50.9**	**-1.5**	
	comp=Z,2.0nm,0.8s,mb4.6							
BMO	**Blue Mountains**	**93.92**	**45**	*e*P	**P**	**21 26 54.2**	**-0.4**	
BMO				pmax	pmax			
	comp=Z,8.0nm,1.5s,mb4.9							
BMO	**Blue Mountains**	**93.92**	**45**	*e*P	**P**	**21 26 54.2**	**-0.4**	
	comp=Z,7.8nm,1.5s,mb4.9							
NEW	**Newport**	**94.13**	**42**	*e*P	**P**	**21 26 56.1**	**+0.7**	
NEW				pmax	pmax			
	comp=Z,4.0nm,1.0s							
NEW				MLR	MLR			
	comp=Z,574nm,21.0s							
NEW	**Newport**	**94.13**	**42**	*e*P	**P**	**21 26 56.1**	**+0.7**	
	comp=Z,4.0nm,1.0s,mb4.8							
NEW				LR	LR			
	comp=Z,574nm,21.0s,MS5.0							
ARU	**Arti**	**94.44**	**326**	P	**P**	**21 26 55.6**	**-1.0**	
ARU	**Arti**	**94.44**	**326**	P	**P**	**21 26 55.5**	**-1.2**	
WALA	**Waterton Lakes**	**96.25**	**41**	*e*P	**P**	**21 27 05.9**	**+0.8**	
	comp=Z,0.6nm,1.5s,mb3.8							
PDAR	**Pinedale Array**	**99.57**	**47**	P		21 27 21.9		
	comp=Z,0.4nm,0.8s,baz=2.3,slow=4.5,SNR=3.3							
PDAR				LR	LR	22 11 19.5		
	comp=Z,612nm,18.5s,MS5.1,baz=264,slow=35							
ANMO	**Albuquerque**	**102.52**	**55**	PFAKE		21 27 50.0	+17	
ANMO				LR	LR			
	comp=Z,652nm,20.0s,MS5.2							
OKC	**Ostrava-Krasne**	**119.26**	**327**	AMS	AMS	22 25 20.0		
	comp=Z,900nm,17.2s							
DPC	**Dobruska-Polom**	**119.95**	**328**	AMS	AMS	22 24 10.0		
	comp=Z,800nm,20.0s							
PVCC	**Panska Ves**	**120.76**	**329**	AMS	AMS	22 25 20.0		
	comp=Z,800nm,16.5s							
TREC	**Trest**	**121.00**	**328**	AMS	AMS	22 24 50.0		
	comp=Z,1μm,18.7s							
CLL	**Collm**	**121.06**	**331**	*e*PKIKP	PKPdf	21 32 34.0	+4.7	
CLL				*e*		21 32 41.0		
CLL	**Collm**	**121.06**	**331**	*e*pPKPdf	pPKPdf	21 32 34.0	-5.4	
CLL				*e*		21 32 41.0		
CLL				*e*PSKS		21 43 48.0		
CLL				*e*SS	SS	21 50 48.0	+19	
CLL				*e*SSS		21 54 48.0		
PRU	**Pruhonice**	**121.09**	**329**	AMS	AMS	22 24 20.0		
	comp=Z,800nm,21.0s							
NKC	**Novy Kostel**	**122.01**	**330**	AMS	AMS	22 26 40.0		
	comp=Z,800nm,15.2s							
KHC	**Kasperske Hory**	**122.11**	**328**	AMS	AMS	22 25 00.0		
	comp=Z,1μm,21.7s							
DAVOX	**Davos/Dischmat**	**125.52**	**328**	PKP	PKPdf	21 32 37.7	-0.3	
	comp=Z,1.7nm,0.7s,baz=65,slow=3.4,SNR=2.8							
LPAZ	**La Paz**	**136.55**	**118**	PKhKP		21 32 57.3		
	comp=Z,0.8nm,0.8s,baz=285,slow=1.0,SNR=2.7							
LPAZ	**La Paz**	**136.55**	**118**	PKP	PKPdf	21 32 57.3	-2.4	
LPAZ				PKPdf	PKPdf	21 33 00.9	+1.1	
TORD	**Torodi Ar. Bea**	**148.20**	**289**	PKPbc	PKPbc	21 33 23.4	-0.3	
	comp=Z,16nm,1.0s,baz=106,slow=1.4,SNR=16							
DBIC	**Dimbokro**	**155.70**	**278**	PKPab	PKPab	21 33 58.3	+0.2	
	comp=Z,8.9nm,1.0s,baz=35,slow=4.1,SNR=4.4							

IDC 20 21:17:12.3±1.9,3.°68S×150.°57E,h0km,mb4.0/5, mb1 4.2/5,mb1mx3.8/16,mbtmp4.0/5,MS4.8/2,Ms1 4.9/2, ms1mx3.9/30,Error ellipse: s-maj=76.7km s-min=28.4km az=115.0,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**25.58**	**218**	P	P	21 22 43.9	+0.6
	2.0nm,0.9s,baz=55,slow=8.0,SNR=3.7						
PSI	**Prapat**	**52.02**	**276**	LR	LR	21 52 03.7	
	comp=Z,738nm,19.1s,baz=131,slow=40						
CMAR	**Chiang Mai Arr**	**55.39**	**295**	LR	LR	21 50 49.9	
	comp=Z,1μm,18.9s,baz=289,slow=36						
PETK	**Petropavlovsk-**	**56.89**	**5**	P	P	21 27 00.2	+1.4
	0.6nm,0.4s,baz=201,slow=7.3,SNR=4.3						
MKAR	**Makanchi Array**	**78.03**	**319**	P	P	21 29 12.6	-0.1
	0.7nm,0.9s,baz=95,slow=4.9,SNR=3.1						
ZALV	**Zalesovo Beam**	**79.00**	**327**	P	P	21 29 18.0	+0.1
	1.2nm,0.7s,baz=123,slow=5.3,SNR=2.4						
ILAR	**Eielson Array**	**81.97**	**23**	P	P	21 29 33.2	-0.5
	1.3nm,0.7s,baz=248,slow=4.8,SNR=7.0						
TORD	**Torodi Ar. Bea**	**147.85**	**289**	PKPbc	PKPbc	21 36 58.6	-1.8
	1.0nm,0.9s,baz=62,slow=1.2,SNR=2.9						

NIED ***20*** *21:30:00,27.°80N×140.°00E,h480km,Mw5.7 Best double couple: M0=4.02000×10^17 NP1:φs=305.00000°, δ71.00000°,λ-68.00000°. NP2:φs=74.00000°,δ28.00000°, λ-138.00000°.*

BJI ***20*** *21:30:26.7,27.°60N×139.°91E,h485km,mB5.4/41, mb5.5/64*

NEIC ***20*** *21:30:29.6±0.1,27.°77N×139.°62E,mb5.1/122,MW5.8, MW5.7(NIED),Error ellipse: s-maj=3.0km s-min=2.4km az=152.0,Moment Tensor Solution. s43 Moment tensor: Scale 10^17Nm; Mrr-1.70; Mθθ3.36; Mφφ-1.66; Mrθ2.19; Mθφ-0.97; Mφr-4.50; Best double couple: M0=5.90000×10^17 NP1:φs323.00000°,δ81.00000°,λ-61.00000°. NP2: φs68.00000°,δ30.00000°,λ-162.00000°. Principal axes: T 5.3800, Plg30.0000°, Azm29.0000°; N 0.8900, Plg28.0000°, Azm137.0000°; P -6.2600, Plg46.0000°, Azm262.0000°;*

NEIC Recorded [1 JMA] in the Chichijima-retto and Hahajima-retto.

IDC ***20*** *21:30:29.5±0.3,27.°80N×139.°74E,h483km±3km,mb4.7/29, mb1 4.8/35,mb1mx4.8/36,mbtmp4.7/35 Error ellipse: s-maj=7.2km s-min=5.0km az=87.0*

MOS ***20*** *21:30:29.8±0.9,27.°75N×139.°67E,h500km,mb5.2/62, MS4.9/12,Error ellipse: s-maj=10.0km s-min=5.9km az=98.5*

ISCJB ***20*** *21:30:29.2±0.1,27.°78N±0.°02×139.°70E±0.°02,h483km, mb5.2/220,Error ellipse: s-maj=2.1km s-min=1.7km az=152.7*

JMA ***20*** *21:30:29.8±0.2,27.°83N×140.°00E,h492km±4km,M6.4*

JMA Felt I J1.

GCMT ***20*** *21:30:31.8±0.2,27.°81N×139.°60E,h486km±1km,MW5.8, Moment Tensor Solution. s86,c175; s56,c60; Moment tensor: Scale 10^17Nm; Mrr-3.20±.09; Mθθ3.72±.13; Mφφ-0.51±.15; Mrθ3.84±.14; Mθφ-1.04±.13; Mφr-4.54±.12; Best double couple: M0=7.00000×10^17 NP1:φs79.00000°, δ22.00000°,λ-142.00000°. NP2:φs313.00000°, δ76.00000°,λ-72.00000°. Principal axes: T 6.7200, Plg29.0000°, Azm28.0000°; N 0.4800, Plg17.0000°, Azm129.0000°; P -7.2000, Plg55.0000°, Azm245.0000°;*

Data Used: II IU IC G CN.

DJA ***20*** *21:30:38,27.°86N×140.°02E,h650km,mb5.3/25*

ISC 20 21:30:30.2±0.1,27.°77N±0.°02×139.°71E±0.°02,h485km, h485km±.8km:pP-P,n1126,σ0:88/1126,mb5.2/220, 314C-248D,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.30**	**106**	P	P	**21 31 34.9**	**-0.7**
	3μm,0.3s,baz=279,slow=3.0,SNR=674						
CBIJ				S	S	**21 32 25.8**	**-2.9**
	5μm,0.3s,baz=302,slow=23,SNR=20						
CBIJ	**Chichi jima**	**2.30**	**106**	⇓P	P	**21 31 34.9**	**-0.7**
CBIJ				*e*S	S	**21 32 25.3**	**-3.4**
JHHJ	**Haha-jima-NKT**	**2.48**	**117**	⇓P	P	**21 31 36.3**	**-0.4**
JHHJ				S	S	**21 32 29.0**	**-1.5**
JHJ2	**Mitsune**	**5.32**	**1**	P	P	**21 31 59.8**	**+0.6**
JHJ2				*e*S	S	**21 33 09.1**	**-2.9**
JHJ	**Hachijo jima 2**	**5.33**	**1**	P	P	**21 31 59.6**	**+0.3**
	203nm,0.3s,baz=42,slow=22,SNR=136						
JHJ				S	S	**21 33 08.4**	**-3.7**
	642nm,0.3s,baz=104,slow=23,SNR=16						
TK01	**Tokai 1**	**6.24**	**344**	P	P	**21 32 11.4**	**+3.2**
TK01				*e*S	S	**21 33 31.4**	**+3.0**
JMY	**Miyakejima3**	**6.28**	**359**	P	P	**21 32 10.2**	**+1.7**
JKO	**Kozu shima**	**6.41**	**356**	P	P	**21 32 10.7**	**+0.9**
JWZ	**Kozaga**	**6.69**	**330**	P	P	**21 32 15.0**	**+2.4**
JWZ				*e*S	S	**21 33 37.5**	**+1.0**
JIM2	**Oshima 3**	**6.93**	**358**	P	P	**21 32 15.4**	**+0.4**
BSO1	**Boso 1**	**6.95**	**9**	P	P	**21 32 15.6**	**+0.4**
JIZS	**Izushimoda**	**6.96**	**354**	P	P	**21 32 16.0**	**+0.6**
JSG	**Sagara**	**7.00**	**350**	P	P	**21 32 17.2**	**+1.4**
JSG				*e*S	S	**21 33 42.5**	**+0.2**
JIE	**Ise**	**7.08**	**339**	P	P	**21 32 19.4**	**+2.8**
JIE				*e*S	S	**21 33 44.0**	**+0.2**
JKN2	**Miekihoku**	**7.08**	**336**	P	P	**21 32 18.8**	**+2.1**
HMMJ	**Hamamatsu 2**	**7.26**	**347**	⇑P	P	**21 32 19.8**	**+1.3**
JOD2	**Odawara 2**	**7.49**	**356**	P	P	**21 32 20.5**	**-0.3**
JOD2				*e*S	S	**21 33 47.7**	**-3.8**
JAI	**Aioi**	**7.51**	**324**	P	P	**21 32 23.7**	**+2.6**
JNY	**Yasuok**	**7.72**	**349**	⇑P	P	**21 32 24.3**	**+1.1**
JMZ	**Minamidaito 2**	**7.83**	**258**	P	P	**21 32 25.1**	**+0.6**
JTO	**Tosashimizu**	**7.83**	**312**	P	P	**21 32 27.2**	**+2.8**
JTO				*e*S	S	**21 34 01.7**	**+3.6**
JKU	**Kubokawa**	**7.95**	**316**	P	P	**21 32 28.6**	**+2.9**
JJS	**Sakaide**	**8.23**	**324**	P	P	**21 32 31.3**	**+2.7**
JRY	**Ryogami san**	**8.25**	**355**	P	P	**21 32 28.8**	**+0.1**
JRY				*e*S	S	**21 34 01.4**	**-4.6**
JET	**Tanbara**	**8.28**	**318**	P	P	**21 32 32.1**	**+

JTH	**Tanohata**	**12.27**	**8**	P	**P**	**21 33 12.2 +0.7**
JAH	**Hinai**	**12.41**	**3**	P	**P**	**21 33 14.4 +1.4**
JIW	**Iwasaki**	**12.79**	**1**	P	**P**	**21 33 18.4 +1.3**
JOT	**Ohata**	**13.62**	**4**	P	**P**	**21 33 26.4 +0.5**
KSRS	**Korea Array**	**13.84**	**317**	P	**P**	**21 33 28.2 0.0**
	1.3nm,0.3s,baz=133,slow=10,SNR=41					
KSRS				S	**S**	**21 36 00.5 +5.3**
	baz=136,slow=14,SNR=2.6					
KSRS				ScP	ScP	21 41 00.7 +0.3
	0.6nm,0.3s,baz=152,slow=1.4,SNR=14					
JIJ	**Ishigaki jima**	**14.39**	**260**	P	**P**	**21 33 35.3 +1.0**
ERM	**Erimo**	**14.49**	**10**	P	**P**	**21 33 36.8 +1.8**
	3μm,0.5s					
ERM	**Erimo**	**14.49**	**10**	*d iP*	**P**	**21 33 35.9 +0.9**
ERM	**Erimo**	**14.49**	**10**	⇓*iP*	**P**	**21 33 36.0 +0.9**
ERM				*e*S	**S**	**21 36 07.7 +0.1**
INCN	**Inchon**	**14.65**	**315**	*e*P	**P**	**21 33 41.1 +4.2**
GUMO	**Guam**	**14.91**	**160**	P	**P**	**21 33 39.9 0.0**
	69nm,0.3s,baz=180,slow=3.2,SNR=32					
GUMO				S	**S**	**21 36 19.0 +2.6**
	7.4nm,0.3s,baz=26,slow=21,SNR=12					
GUMO	**Guam**	**14.91**	**160**	P	**P**	**21 33 39.9 0.0**
GUMO				S	**S**	**21 36 19.0 +2.5**
GUMO				pmax	pmax	
	comp=Z,69nm,0.3s					
GUMO				smax		
	comp=N,7.0nm,0.3s					
GUMO	**Guam**	**14.91**	**160**	⇑*e*P	**P**	**21 33 39.5 -0.5**
GUMO				*e*S	**S**	**21 36 16.6 +0.2**
GUMO	**Guam**	**14.91**	**160**	P	**P**	**21 33 40.9 +1.0**
	comp=N,6μmcomp=N,585nm,1.2s					
YOJ	**Yonaguni jima**	**15.35**	**261**	P	**P**	**21 33 44.4 -0.1**
SSE	**Sheshan**	**16.47**	**286**	P	**P**	**21 33 54.9 -1.1**
SSE				S	**S**	**21 36 42.3 -3.5**
SSE				pmax	pmax	
	comp=Z,58nm,0.8s					
SSE				pmax	pmax	
	comp=Z,1μm,8.5s					
ASAJ	**Asahikawa**	**16.47**	**7**	P	**P**	**21 33 56.5 +0.6**
	comp=Z,20nm,0.3s,baz=224,slow=14,SNR=232					
ASAJ				S	**S**	**21 36 47.0 +1.5**
	baz=336,slow=20,SNR=5.5					
ASAJ				ScP	ScP	21 41 04.9 -0.3
	comp=Z,1.2nm,0.3s,baz=127,slow=1.4,SNR=6.7					
TATO	**Taipei**	**16.56**	**264**	*e*P	**P**	**21 33 56.0 -1.1**
	comp=Z,81nm,0.8s					
NACB	**Ninganchiao**	**16.68**	**262**	*e*P	**P**	**21 33 57.2 -1.1**
	comp=Z,126nm,0.7s					
NACB				*e*S	**S**	**21 36 46.4 -3.5**
YHNB	**Yeheng**	**16.74**	**264**	*e*P	**P**	**21 33 57.4 -1.5**
	comp=Z,216nm,0.7s					
YHNB				*e*S	**S**	**21 36 50.2 -0.8**
YUK	**Yuzh-Kuril'sk**	**16.97**	**15**	⇑*iP*	**P**	**21 34 01.2 +0.2**
YUK				*i* S	**S**	**21 36 53.3 -1.2**
YUK				pmax	pmax	
	comp=Z,2μm,8.0s					
YUK				pmax	pmax	
	comp=N,2μm,4.0s					
YUK				pmax	pmax	
	comp=E,380nm,0.4s					
YUK				smax		
	comp=E,2μm,8.0s					
YUK				smax		
	comp=N,430nm,4.0s					
YULB	**Yu-li**	**17.17**	**259**	⇓*e*P	**P**	**21 34 02.1 -1.3**
	comp=N,259nm,0.7s					
YULB				*e*S	**S**	**21 36 56.8 -1.7**
SSLB	**Suanglung**	**17.35**	**261**	⇓*e*P	**P**	**21 34 04.0 -1.3**
	comp=N,573nm,0.7s					
SSLB				*e*S	**S**	**21 37 00.6 -0.7**
TWG	**Pinlang**	**17.55**	**258**	⇓*e*P	**P**	**21 34 06.0 -1.4**
	comp=N,309nm,0.7s					
TWG				*e*S	**S**	**21 37 03.1 -1.6**
BBP	**Basco**	**17.75**	**250**	*e*P	**P**	**21 34 08.0 -1.2**
TPUB	**Ta-pu**	**17.78**	**260**	⇓*e*P	**P**	**21 34 08.1 -1.4**
	comp=N,305nm,0.8s					
TPUB				*e*S	**S**	**21 37 07.1 -1.4**
NJ2	**Nanjing**	**18.57**	**288**	*e*P	**P**	**21 34 15.8 -0.7**
NJ2				sP	sP	21 36 21.5 -0.2
NJ2				S	**S**	**21 37 15.0 -6.2**
NJ2				pmax	pmax	
	comp=Z,240nm,0.8s					
NJ2				pmax	pmax	
	comp=Z,2μm,7.5s					
MDJ	**Mudanjiang**	**18.66**	**337**	P	**P**	**21 34 17.8 +0.6**
MDJ				sP	sP	21 36 22.6 -0.1
MDJ				S	**S**	**21 37 24.3 +2.0**
MDJ				ScP	ScP	21 41 09.9 +0.1
MDJ				PcS	PcS	21 41 57.8 +0.4
MDJ				ScS	ScS	21 44 52.0 +0.7
MDJ				pmax	pmax	
	comp=Z,91nm,1.7s					
MDJ				pmax	pmax	
	comp=Z,2μm,5.2s					
MDJ	**Mudanjiang**	**18.66**	**337**	⇑*iP*	**P**	**21 34 18.2 +1.1**
	comp=Z,60nm,0.6s					
MDJ				*e*		21 36 22.7
MDJ				*e*S	**S**	**21 37 22.3 +0.1**
MDJ				*e*ScP	ScP	21 41 08.7 -1.1
DL2	**Dalian**	**18.71**	**311**	P	**P**	**21 34 17.3 -0.4**
DL2				S	**S**	**21 37 20.5 -2.8**
DL2				ScP	ScP	21 41 10.5 +0.4
DL2				ScS	ScS	21 44 47.8 -3.9
DL2				pmax	pmax	
	comp=Z,100nm,0.7s					
QZH	**Quanzhou**	**19.13**	**266**	⇓*iP*	**P**	**21 34 21.1 -0.7**
QZH				pmax	pmax	
	comp=Z,380nm,0.8s					
QZH				pmax	pmax	
	comp=Z,4μm,3.7s					
PALP	**Palanan**	**19.18**	**240**	*e*P	**P**	**21 34 24.3 +2.0**
SNY	**Shenyang**	**19.24**	**321**	⇑P	**P**	**21 34 22.8 +0.2**
SNY				sP	sP	21 36 27.0 -2.2
SNY				S	**S**	**21 37 29.1 -2.7**
SNY				ScS	ScS	21 44 51.8 -1.6
SNY				pmax	pmax	
	comp=Z,350nm,1.1s					
YSS	**Yuzh-Sakhalins**	**19.30**	**6**	⇑*iP*	**P**	**21 34 23.0 0.0**
YSS				*i* S	**S**	**21 37 30.0 -2.6**
YSS				pmax	pmax	
	comp=Z,220nm,0.8s					
YSS				pmax	pmax	
	comp=Z,4μm,9.0s					
YSS				pmax	pmax	
	comp=N,4μm,4.0s					
YSS				pmax	pmax	
	comp=E,1μm,4.0s					
YSS				smax		
	comp=N,2μm,9.0s					
YSS	**Yuzh-Sakhalins**	**19.30**	**6**	⇑*iP*	**P**	**21 34 23.2 +0.2**
	comp=N,213nm,0.8s					
YSS				*e*S	**S**	**21 37 29.7 -2.9**
APYP	**Conner**	**19.65**	**244**	*e*P	**P**	**21 34 25.4 -1.2**
CN2	**Changchun**	**19.69**	**328**	⇑P	**P**	**21 34 28.1 +1.5**
CN2				*es*P	sP	21 36 30.1 -4.0
CN2				*e*S	**S**	**21 37 38.1 -0.9**
CN2				pmax	pmax	
	comp=Z,50nm,0.6s					
CN2				pmax	pmax	
	comp=Z,200nm,6.0s					
CAUP	**Cauayan**	**19.71**	**241**	*e*P	**P**	**21 34 29.4 +2.3**
BALP	**Baler**	**20.63**	**238**	*e*P	**P**	**21 34 35.6 0.0**
CNP	**Catarman**	**20.70**	**226**	*e*P	**P**	**21 34 37.5 +1.3**
TIA	**Tai'an**	**20.89**	**299**	⇑P	**P**	**21 34 37.8 +0.2**
TIA				S	**S**	**21 37 56.3 -2.2**
HABR	**Khabarovsk**	**20.98**	**351**	*c iP*	**P**	**21 34 39.1 +0.8**
HABR				*SP	sP	21 36 51.2 +2.9
HABR				*e*S	**S**	**21 38 00.0 +0.4**
HABR				*e*		21 38 24.3
HABR				*e*		21 44 57.7
HABR				pmax	pmax	
	comp=Z,941nm,2.6s					
HABR				pmax	pmax	
	comp=N,443nm,2.2s					
HABR				pmax	pmax	
	comp=E,510nm,2.3s					
HABR				MLR	MLR	
	comp=Z,876nm,17.0s					
BCPH	**Baguio City Da**	**21.01**	**241**	⇓*e*P	**P**	**21 34 36.6 -2.4**
UGL	**Uglegorsk**	**21.35**	**4**	*e*P	**P**	**21 34 42.5 +0.9**
UGL				*i* S	**S**	**21 38 05.5 0.0**
UGL				pmax	pmax	
	comp=N,102nm,0.7s					
UGL				pmax	pmax	
	comp=E,121nm,0.7s					
UGL				pmax	pmax	
	comp=Z,202nm,0.7s,mb5.8					
UGL				pmax	pmax	
	comp=N,2μm,7.0s					
UGL				pmax	pmax	
	comp=E,1μm,7.0s					
UGL				smax		
	comp=N,2μm,8.0s					
UGL				smax		
	comp=E,2μm,8.0s					
UGL				MLR	MLR	
	comp=N,2μm,14.0s					
UGL				MLR	MLR	
	comp=E,2μm,14.0s					
BOLP	**Bolinao**	**21.53**	**242**	*e*P	**P**	**21 34 42.8 -0.9**
BOAC	**Boac**	**21.92**	**233**	*e*P	**P**	**21 34 47.7 +0.5**
TGY	**Tagaytay City**	**22.14**	**236**	P	**P**	**21 34 49.7 +0.4**
	comp=E,432nm,0.6s,mb6.1,baz=48,slow=1.9,SNR=18					
KLR	**Kul'dur**	**22.29**	**346**	*k iP*	**P**	**21 34 46.8 -3.3**
KLR				*e*S	**S**	**21 38 16.5 -3.7**
KLR				pmax	pmax	
	comp=N,62nm,1.6s					
KLR				pmax	pmax	
	comp=E,130nm,1.6s					
KLR				pmax	pmax	
	comp=Z,200nm,1.6s,mb5.4					
KLR				pmax	pmax	
	comp=Z,1μm,10.0s					
KLR				smax		
	comp=N,2μm,14.0s					
KLR				smax		
	comp=E,3μm,14.0s					
KLR				MLR	MLR	
	comp=Z,2μm,14.0s					
WHN	**Wuhan**	**22.30**	**283**	⇓P	**P**	**21 34 51.0 +0.5**
WHN				sP	sP	21 36 58.3 -4.6
WHN				S	**S**	**21 38 19.5 -1.6**
WHN				pmax	pmax	
	comp=Z,410nm,0.7s,mb6.1					
WHN				pmax	pmax	
	comp=Z,3μm,7.4s					
LUBP	**Lubang**	**22.89**	**236**	*e*P	**P**	**21 34 55.7 -0.3**
BUTP	**Butuan**	**22.95**	**218**	*e*P	**P**	**21 34 57.7 +1.2**
BJT	**Baijiatuau**	**22.96**	**308**	*e*P	**P**	**21 34 55.3 -1.0**
BJT				pmax	pmax	
	comp=Z,61nm,0.6s					
BJT	**Baijiatuau**	**22.96**	**308**	*e*P	**P**	**21 34 55.3 -1.0**
	comp=Z,61nm,0.6s,mb5.2					
BJT				*e*ScP	ScP	21 41 19.5 -1.1
BJI	**Beijing**	**22.97**	**308**	P	**P**	**21 34 55.8 -0.6**
BJI				S	**S**	**21 38 27.3 -4.0**
BJI				pmax	pmax	
	comp=Z,87nm,0.8s,mb5.2					
BJI				pmax	pmax	
	comp=Z,320nm,5.1s					
TBP	**Tagbilaran**	**23.37**	**223**	*e*P	**P**	**21 35 02.0 +1.7**
GUIM	**Jordan**	**23.45**	**227**	*e*P	**P**	**21 35 01.3 +0.3**
BUSP	**Coron**	**24.08**	**233**	*e*P	**P**	**21 35 07.9 +1.3**
BUKP	**Musuan**	**24.16**	**218**	*e*P	**P**	**21 35 07.4 +0.1**
CUYO	**Cuyo Island**	**24.32**	**230**	*e*P	**P**	**21 35 09.6 +0.8**
MATI	**Mati**	**24.32**	**214**	*e*P	**P**	**21 35 08.7 0.0**
DAV	**Davao City (W)**	**24.56**	**216**	P	**P**	**21 35 11.2 +0.3**
	comp=Z,88nm,0.3s,mb5.6,baz=233,slow=16,SNR=5.6					
TIY	**Taiyuan**	**24.91**	**300**	*e*P	**P**	**21 35 13.8 +0.1**
TIY				sP	sP	21 37 34.1 +3.1
TIY				S	**S**	**21 38 58.8 -3.2**
TIY				pmax	pmax	
	comp=Z,470nm,6.3s					
ENPP	**El Nido**	**25.18**	**233**	*e*P	**P**	**21 35 17.4 +1.1**
SKR	**Severo-Kuril's**	**26.06**	**24**	*e*P	**P**	**21 35 25.5 +1.9**
SKR				*e*S	**S**	**21 39 24.0 +4.4**
SKR				pmax	pmax	
	comp=N,110nm,1.0s					
SKR				pmax	pmax	
	comp=E,220nm,1.0s					
SKR				pmax	pmax	
	comp=Z,270nm,1.0s,mb5.6					
SKR				pmax	pmax	
	comp=N,1μm,4.0s					
SKR				pmax	pmax	
	comp=E,1μm,4.0s					
SKR				pmax	pmax	
	comp=Z,2μm,4.0s					
SKR				smax		
	comp=N,2μm,18.0s					
SKR				smax		
	comp=E,2μm,18.0s					
HIA	**Hailar**	**26.39**	**330**	*e*P	**P**	**21 35 26.7 +0.1**
HIA				*e**SP	sP	21 37 46.0 +0.4
HIA				*e*S	**S**	**21 39 23.5 -1.4**
HIA				pmax	pmax	
	comp=Z,72nm,0.8s					
HIA	**Hailar**	**26.39**	**330**	*e*P	**P**	**21 35 26.7 +0.1**
	comp=Z,72nm,0.8s,mb5.2					
HIA				*e*pP		21 36 48.4
HIA				*es*P	sP	21 37 46.0 +0.4
HIA				*e*S	**S**	**21 39 23.5 -1.4**
ENH	**Enshi**	**26.51**	**283**	⇓*e*P	**P**	**21 35 27.3 -0.6**
	comp=Z,360nm,0.8s,mb5.8					
ENH				*es*P	sP	21 37 47.6 +0.8
HHC	**Hu-ho-hao-te**	**26.53**	**307**	*e*P	**P**	**21 35 27.8 -0.1**
HHC				sP	sP	21 37 47.3 +0.4
HHC				PcP	PcP	21 38 37.3 +0.3
HHC				S	**S**	**21 39 26.3 -0.9**
HHC				ScP	ScP	21 41 31.3 +0.6
HHC				PcS	PcS	21 42 18.3 -0.3
HHC				ScS	ScS	21 45 20.5 -1.4
HHC				pmax	pmax	
	comp=Z,57nm,0.8s,mb5.0					
HHC				pmax	pmax	
	comp=Z,280nm,4.4s					
XAN	**Xi'an**	**27.08**	**291**	P	**P**	**21 35 32.8 -0.1**
XAN				pmax	pmax	
	comp=Z,26nm,0.9s,mb4.7					
BTO	**Baotou**	**27.55**	**305**	*e*P	**P**	**21 35 36.1 -0.8**
BATP	**Bataraza**	**27.99**	**232**	*e*P	**P**	**21 35 42.3 +1.1**
PEA0B	**Petropavlovsk-**	**28.61**	**23**	⇑*e*P	**P**	**21 35 46.1 +0.1**
PETK	**Petropavlovsk-**	**28.61**	**23**	P	**P**	**21 35 46.4 +0.3**
	comp=Z,24nm,0.5s,mb4.9,baz=210,slow=3.6,SNR=52					
PETK				ScP	ScP	21 41 33.8 -3.0
	comp=Z,5.3nm,0.8s,baz=151,slow=3.4,SNR=4.8					
QIZ	**Qiongzhong**	**28.70**	**259**	P	**P**	**21 35 46.3 -1.0**
QIZ				sP	sP	21 38 04.8 -1.9
QIZ				S	**S**	**21 40 01.4 -0.2**
QIZ				pmax	pmax	
	comp=Z,760nm,6.8s					
QIZ	**Qiongzhong**	**28.70**	**259**	*e*P	**P**	**21 35 47.4 +0.2**
	comp=Z,42nm,0.8s,mb4.9					
PET	**Petropavlovsk**	**28.88**	**24**	⇑*iP*	**P**	**21 35 48.6 +0.2**
PET				*e*SP		21 40 03.4
PET				*e*		21 45 28.6
PET				pmax	pmax	
	comp=Z,215nm,0.8s,mb5.6					
PET				pmax	pmax	
	comp=Z,2μm,4.6s					
PET				pmax	pmax	
	comp=Z,1μm,16.6s					
PET	**Petropavlovsk**	**28.88**	**24**	⇑*iP*	**P**	**21 35 49.0 +0.6**
	comp=Z,2μm,2.0s,mb6.1					
PET				*e*pP		21 37 07.4
PET				*e*S	**S**	**21 40 03.5 0.0**
TNTI	**Ternate**	**29.34**	**206**	P	**P**	**21 35 52.8 -0.1**
	comp=Z,4μmcomp=Z,240nm,0.9s,mb5.6					
GYA	**Guiyang**	**29.39**	**275**	⇓*iP*	**P**	**21 35 53.0 -0.3**
GYA				pP		21 37 17.0
GYA				sP	sP	21 38 14.3 +1.3
GYA				PcP	PcP	21 38 45.3 +0.9
GYA				S	**S**	**21 40 10.6 -1.7**
GYA				ScP	ScP	21 41 40.8 +0.9
GYA				PcS	PcS	21 42 27.9 -0.3
GYA				SS	SS	21 42 41.3 -7.5
GYA				ScS	ScS	21 45 34.8 -0.9
GYA				pmax	pmax	
	comp=Z,90nm,0.8s,mb5.2					
GYA				pmax	pmax	
	comp=Z,260nm,4.9s					
MNI	**Manado**	**29.80**	**211**	P	**P**	**21 35 58.1 +1.2**
	comp=Z,2μmcomp=Z,220nm,0.7s,mb5.7					
KDM	**Kudat**	**30.00**	**231**	P	**P**	**21 35 59.3 +0.6**
MYLDM	**Lahad Datu**	**30.19**	**226**	P	**P**	**21 36 03.1 +2.8**
MYLDM	**Lahad Datu**	**30.19**	**226**	P	**P**	**21 36 02.0 +1.6**
	comp=Z,3μmcomp=Z,124nm,0.9s,mb5.3					
SDKM	**Sandakan**	**30.69**	**228**	P	**P**	**21 36 05.7 +1.0**
CLNS	**Chul'man**	**30.90**	**344**	*c iP*	**P**	**21 36 06.8 +0.9**
CLNS				*e**PP		21 37 32.1
CLNS				*e*		21 38 46.4
CLNS				*e*S	**S**	**21 40 27.3 -7.5**
CLNS				pmax	pmax	
	comp=Z,64nm,0.7s,mb5.2					
CLNS				pmax	pmax	
	comp=N,51nm,0.8s					
CLNS				pmax	pmax	
	comp=E,21nm,0.6s					
CLNS				smax		
	comp=N,161nm,1.7s					
CLNS				smax		
	comp=E,50nm,2.1s					
TSM	**Tawau**	**31.27**	**226**	P	**P**	**21 36 10.4 +0.7**
LZH	**Lanzhou**	**31.41**	**294**	*e*P	**P**	**21 36 11.0 +0.4**
LZH				PP	PP	21 37 39.5 +2.7
LZH				sP	sP	21 38 31.0 +0.2
LZH				S	**S**	**21 40 45.0 +1.8**
LZH				sS	sS	21 43 15.5 -3.5
LZH				SS	SS	21 43 22.3 -5.7
LZH				pmax	pmax	
	comp=Z,130nm,1.0s,mb5.3					
LZH				pmax	pmax	
	comp=Z,630nm,5.0s					
CD2	**Chengdu**	**31.41**	**284**	P	**P**	**21 36 10.3 -0.4**
CD2				pP		21 37 36.3
CD2				PP	PP	21 37 39.8 +2.9
CD2				sP	sP	21 38 36.3 +5.4
CD2				PcP	PcP	21 38 49.1 -0.7
CD2				S	**S**	**21 40 42.4 -0.9**
CD2				sS	sS	21 43 16.8 -2.4
CD2				SS	SS	21 43 23.5 -4.7
CD2				pmax	pmax	
	comp=Z,590nm,0.6s,mb6.2					
CD2				pmax	pmax	
	comp=Z,870nm,7.1s					
MRSI	**Marisa**	**32.04**	**215**	P	**P**	**21 36 16.8 +0.5**
	comp=Z,4μmcomp=Z,288nm,0.9s,mb5.7					
ULN	**Ulaanbaatar**	**32.32**	**317**	*i P*	**P**	**21 36 18.6 +0.4**
ULN	**Ulaanbaatar**	**32.32**	**317**	⇓*e*P	**P**	**21 36 18.0 -0.3**
	comp=Z,76nm,0.8s,mb5.2					
ULN				*e*pP		21 37 45.0
ULN				*e*ScP	ScP	21 41 48.9 -0.4
ULN	**Ulaanbaatar**	**32.32**	**317**	P	**P**	**21 36 18.5 +0.3**
	comp=Z,735nmcomp=Z,103nm,0.8s,mb5.3					
ULN	**Ulaanbaatar**	**32.32**	**317**	P	**P**	**21 36 19.0 +0.8**
	SNR=33					
SONM	**Songino Array**	**32.71**	**317**	P	**P**	**21 36 21.6 +0.1**
	comp=Z,28nm,0.6s,mb4.9,baz=136,slow=9.9,SNR=161					
SONM				PcP	PcP	21 38 53.5 +0.4
	comp=Z,4.4nm,0.5s,baz=239,slow=0.2,SNR=5.8					
SONM				ScP	ScP	21 41 49.9 -0.8
	comp=Z,20nm,0.6s,baz=140,slow=3.2,SNR=29					
SONM				P3KPbc		22 07 35.1
	comp=Z,1.2nm,0.8s,baz=305,slow=4.4,SNR=7.6					
SONM	**Songino Array**	**32.71**	**317**	P	**P**	**21 36 21.6 +0.1**
SONM						21 38 53.5
SONM	**Songino Array**	**32.71**	**317**	P	**P**	**21 36 21.6 +0.1**
SONM				PcP	PcP	21 38 53.5 +0.4
SONM				ScP	ScP	21 41 49.9 -0.8
SONM				*e*		22 07 35.1
LUWI	**Luwuk**	**32.95**	**212**	P	**P**	**21 36 22.7 -1.3**
	comp=Z,2μmcomp=Z,170nm,0.8s,mb5.5					
KMI	**Kunming**	**33.12**	**274**	P	**P**	**21 36 25.6 +0.2**
KMI				pP		21 37 50.8
KMI				PP	PP	21 37 56.8 +1.5
KMI				sP	sP	21 38 46.8 +0.7
KMI				S	**S**	**21 41 09.9 +0.2**
KMI				sS	sS	21 43 42.5 -3.9
KMI				SS	SS	21 43 55.3 -6.7
KMI				pmax	pmax	
	comp=Z,100nm,0.7s,mb5.3					
KMI				pmax	pmax	
	comp=Z,980nm,6.8s					
NLAI	**Namlea**	**33.14**	**203**	P	**P**	**21 36 26.5 +0.9**
	comp=Z,1μmcomp=Z,78nm,0.8s,mb5.2					
AAI	**Ambon**	**33.19**	**201**	P	**P**	**21 36 28.1 +2.1**
	comp=Z,3μmcomp=Z,139nm,0.7s,mb5.5					
TLE	**Tual**	**33.89**	**193**	P	**P**	**21 36 33.1 +1.2**
	comp=Z,177nm,0.8s,mb5.5					
PCI	**Palu**	**34.31**	**217**	P	**P**	**21 36 35.0 -0.5**
	comp=Z,2μmcomp=Z,247nm,0.9s,mb5.7					
YAK	**Yakutsk**	**34.90**	**352**	*c iP*	**P**	**21 36 39.1 -0.7**
YAK				*e*		21 38 11.7
YAK				*e*		21 38 52.4
YAK				*e*S	**S**	**21 41 29.2 -6.4**
YAK				*e*SS	SS	21 44 37.0 +1.4
YAK				*i*		21 45 56.3
YAK				pmax	pmax	
	comp=E,10.0nm,0.8s					
YAK				pmax	pmax	
	comp=Z,124nm,0.9s,mb5.3					
YAK				pmax	pmax	
	comp=N,40nm,1.4s					
YAK				pmax	pmax	
	comp=Z,48nm,1.1s,mb4.8					
YAK				pmax	pmax	
	comp=N,217nm,2.2s					
YAK				pmax	pmax	
	comp=E,30nm,0.9s					
YAK				smax		
	comp=E,729nm,2.5s					
YAK				smax		
	comp=N,1μm,2.2s					
YAK	**Yakutsk**	**34.90**	**352**	⇑*iP*	**P**	**21 36 39.0 -0.7**
	comp=N,190nm,0.9s,mb5.5					
YAK				*e*PP	PP	21 38 12.3 -1.3
YAK				*e*S	**S**	**21 41 32.0 -3.6**
GTA	**Gaotai**	**34.94**	**300**	P	**P**	**21 36 40.4 -0.1**
GTA				pP		21 38 06.6
GTA				sP	sP	21 38 59.4 -2.5
GTA				S	**S**	**21 41 32.8 -4.0**
GTA				ScP	ScP	21 41 58.8 0.0
GTA				ScS	ScS	21 46 01.3 -2.6
GTA				pmax	pmax	
	comp=Z,100nm,0.8s,mb5.3					
GTA				pmax	pmax	
	comp=Z,490nm,9.5s					
BTM	**Bintulu**	**35.25**	**231**	P	**P**	**21 36 43.8 +0.4**
KDI	**Kendari**	**35.59**	**210**	P	**P**	**21 36 47.1 +0.9**
	comp=Z,2μmcomp=Z,101nm,0.9s,mb5.2					
SMY	**Shemya**	**35.65**	**36**	*e*P	**P**	**21 36 47.6 +1.4**
SMY				pmax	pmax	
	comp=Z,299nm,0.7s,mb5.8					
SMY				MLR	MLR	
	comp=Z,2μm,18.0s					
SMY	**Shemya**	**35.65**	**36**	*e*P	**P**	**21 36 47.6 +1.4**
	comp=Z,299nm,0.7s,mb5.8					
SMY				LR	LR	
	comp=Z,2μm,18.0s					
IRK	**Irkutsk**	**35.96**	**323**	*e*P	**P**	**21 36 49.0 +0.3**
IRK				*e*		21 38 25.2
IRK				*e*S	**S**	**21 41 52.8 +1.1**
IRK				*e*		21 46 07.7
IRK				pmax	pmax	
	comp=Z,82nm,0.9s,mb5.2					
TLY	**Talaya**	**36.03**	**321**	P	**P**	**21 36 50.8 +1.4**
	comp=Z,370nm,0.8s,mb5.9,SNR=21					
TLY	**Talaya**	**36.03**	**321**	*e*P	**P**	**21 36 50.2 +0.8**
TLY				pmax	pmax	
	comp=Z,39nm,0.7s,mb5.0					
TLY	**Talaya**	**36.03**	**321**	*e*P	**P**	**21 36 49.9 +0.5**
	comp=Z,41nm,0.7s,mb5.0					
TLY				*e*PP	PP	21 38 25.8 0.0
TLY	**Talaya**	**36.03**	**321**	P	**P**	**21 36 50.4 +1.0**
	SNR=13					
SEY	**Seymchan**	**36.13**	**10**	⇑*iP*	**P**	**21 36 50.6 +0.6**
TTSI	**Tana Toraja**	**36.13**	**215**	P	**P**	**21 37 00.6 +10**
SBUM	**Sibu**	**36.38**	**231**	P	**P**	**21 36 53.8 +1.0**
SBUM	**Sibu**	**36.38**	**231**	P	**P**	**21 36 53.5 +0.7**
	comp=Z,1μmcomp=Z,37nm,1.8s,mb4.5					
SPSI	**Sidrap Palu**	**36.95**	**214**	P	**P**	**21 36 57.1 -0.4**
	comp=Z,93nm,0.9s,mb5.2					
BNSI	**Bone**	**37.16**	**214**	P	**P**	**21 37 01.7 +2.5**
	comp=Z,3μmcomp=Z,96nm,2.4s,mb4.8					
CHRT	**Chiangrai**	**37.23**	**267**	⇑P	**P**	**21 37 00.5 +0.7**
	comp=Z,434nm,1.0s,mb5.8					
MOY	**Mondy**	**37.51**	**320**	*e*P	**P**	**21 37 01.4 -0.2**
MOY				pmax	pmax	
	comp=Z,34nm,2.7s,mb4.3					
PMG	**Port Moresby**	**37.66**	**168**	*d iP*	**P**	**21 37 02.9 -0.4**
PMG				pmax	pmax	
	comp=Z,29nm,1.0s					
PMG	**Port Moresby**	**37.66**	**168**	*e*P	**P**	**21 37 03.4 +0.2**
	comp=Z,37nm,0.9s,mb4.8					
PMG				*e*PcP	PcP	21 39 08.5 +0.2

PMG *e*ScP ScP 21 42 07.8 -1.5
PMG Port Moresby 37.66 168 P **P** **21 37 04.1 +0.8**
comp=Z,45nm,0.7s,mb5.0
AMKA Amchitka 37.90 41 *e*P **P** **21 37 06.0 +1.2**
comp=Z,107nm,0.6s,mb5.5
BKSI Bulukumba 37.95 213 P **P** **21 37 07.3 +1.6**
comp=Z,41nm,0.9s,mb4.8
KBKI Kotabaru 38.32 220 P **P** **21 37 10.1 +1.3**
comp=Z,2µmcomp=Z,90nm,1.9s,mb4.9
CHG Chiang Mai 38.34 266 ⇓P **P** **21 37 08.8 -0.1**
comp=Z,92nm,0.7s,mb5.3
CHTO Chiang Mai 38.34 266⇓*e*P **P** **21 37 08.3 -0.6**
CHTO *e**SP sP 21 39 31.6 +0.1
CHTO Chiang Mai 38.34 266⇓*e*P **P** **21 37 08.3 -0.6**
CHTO *e*sP sP 21 39 31.6 +0.1
CHTO *e*ScP ScP 21 42 10.3 -1.6
CHTO Chiang Mai 38.34 266 P **P** **21 37 08.8 -0.1**
comp=Z,2µmcomp=Z,118nm,0.8s,mb5.4
CHTO Chiang Mai 38.34 266 P **P** **21 37 09.7 +0.8**
SNR=16
KSM Kuching 38.41 232 P **P** **21 37 10.5 +1.0**
KSM Kuching 38.41 232⇓*e*P **P** **21 37 09.4 -0.1**
comp=Z,37nm,0.6s,mb5.0
KSM *e*PP PP 21 38 48.4 -3.4
KSM *e*PcP PcP 21 39 11.4 +0.7
KSM Kuching 38.41 232 P **P** **21 37 10.8 +1.3**
comp=Z,2µmcomp=Z,79nm,0.8s,mb5.2
CM31 Chiang Mai Arr 38.47 265⇓*e*P **P** **21 37 09.8 -0.2**
CM31 *e*ScP ScP 21 42 12.8 +0.3
CMAR Chiang Mai Arr 38.47 265 P **P** **21 37 09.9 0.0**
comp=Z,25nm,0.7s,mb4.7,baz=51,slow=8.2,SNR=147
CMAR PcP PcP 21 39 10.7 -0.3
comp=Z,6.7nm,0.8s,baz=52,slow=4.7,SNR=5.2
CMAR ScP ScP 21 42 12.6 +0.1
comp=Z,3.0nm,0.8s,baz=84,slow=2.2,SNR=5.3
CMAR P3KPbc 22 07 08.0
comp=Z,0.5nm,0.7s,baz=241,slow=5.5,SNR=4.2
CMAR Chiang Mai Arr 38.47 265 P **P** **21 37 10.0 0.0**
CMAR 21 39 10.7
CMAR Chiang Mai Arr 38.47 265 P **P** **21 37 09.9 0.0**
CMAR PcP PcP 21 39 10.7 -0.3
CMAR ScP ScP 21 42 12.6 +0.1
CMAR *e* 22 07 08.0
NST Nakhon Sawan 38.52 260 P **P** **21 37 06.5 -3.9**
STKI Sintang 38.63 229 P **P** **21 37 11.9 +0.6**
comp=Z,132nm,0.8s,mb5.4
BDT Bhumibol Dam 38.88 263 ⇑P **P** **21 37 13.0 -0.3**
comp=Z,29nm,0.9s,mb4.7
MMRI Maumere 39.95 208 P **P** **21 37 22.9 +1.0**
comp=Z,3µmcomp=Z,207nm,1.3s,mb5.4
KAKA Kakadu 40.85 191 *e*P **P** **21 37 28.5 -0.6**
comp=Z,102nm,0.8s,mb5.3
KAKA *e* 21 39 19.0
KAKA Kakadu 40.85 191 *e*P **P** **21 37 28.7 -0.5**
comp=Z,299nm,0.8s,mb5.8
KAKA *e*PcP PcP 21 39 18.4 -0.1
KAKA *e*ScP ScP 21 42 20.0 -1.7
KAKA S **S** **21 43 03.6 -1.3**
KTGM Kuala Trenggan 41.29 244 P **P** **21 37 34.5 +1.7**
COEN Coen 41.62 175⇓*e*P **P** **21 37 35.4 +0.3**
comp=Z,424nm,0.7s,mb6.0
COEN *e*PcP PcP 21 39 19.8 -1.3
COEN *e*S **S** **21 43 15.2 -0.7**
COEN Coen 41.62 175 P **P** **21 37 35.6 +0.4**
comp=Z,300nm,0.7s,mb5.8
HNR Honiara 41.86 149 P **P** **21 37 37.9 +0.8**
ATKA Atka Island 41.97 42 *e*P **P** **21 37 37.2 -0.4**
comp=Z,2µm,2.2s,mb6.0
LSA Lhasa 42.37 285⇓*e*P **P** **21 37 42.3 +1.2**
LSA *e* 21 39 22.0
LSA pmax pmax
comp=Z,31nm,0.4s,mb5.1
LSA Lhasa 42.37 285⇓*e*P **P** **21 37 42.3 +1.2**
comp=Z,31nm,0.4s,mb5.1
LSA *e*PcP PcP 21 39 22.0 -1.6
LSA *e*ScP ScP 21 42 27.8 +0.1
SHL Shillong 42.58 278 *e*PKP **P** **21 37 42.5 -0.3**
SHL *e*S **S** **21 43 29.0 -0.8**
SHL *e*x x 21 46 48.0
SRBI Singaraja 42.80 217 P **P** **21 37 46.7 +2.1**
MYKOM Kota Tinggi 42.93 239 P **P** **21 37 47.8 +2.2**
KGM Kluang 43.19 240 P **P** **21 37 49.4 +1.6**
KULM Kulim 43.31 246 P **P** **21 37 49.3 +0.7**
KULM Kulim 43.31 246⇓*e*P **P** **21 37 48.7 0.0**
comp=Z,71nm,0.6s,mb5.3
KULM *e*PcP PcP 21 39 26.6 -0.3
KULM *e*ScP ScP 21 42 31.8 +0.1
BILL Bilibino 43.31 14⇑*i*P **P** **21 37 48.0 +0.1**
BILL *e* 21 39 40.6
BILL *e*S **S** **21 43 39.3 +0.2**
BILL pmax pmax
comp=Z,311nm,0.8s,mb5.8
BILL Bilibino 43.31 14⇑*i*P **P** **21 37 48.0 +0.1**
comp=Z,311nm,0.8s,mb5.8
BILL *e*PP PP 21 39 40.6 +1.5
BILL *e*S **S** **21 43 39.3 +0.3**
IPM Ipoh 43.48 245 P **P** **21 37 50.9 +0.9**
FRIM Kepong 43.75 243 P **P** **21 37 53.5 +1.4**
TIXI Tiksi 44.33 355 *i* P **P** **21 37 55.2 -0.5**
TIXI *e* 21 39 49.5
TIXI *i* S **S** **21 43 51.4 -2.0**
TIXI *e**SS sS 21 46 40.0 +2.4
TIXI *e* 21 46 52.5
TIXI pmax pmax
comp=Z,57nm,0.9s,mb5.0
TIXI Tiksi 44.33 355⇑*e*P **P** **21 37 55.1 -0.7**
comp=Z,42nm,0.7s,mb5.0
TIXI *e*pP pP 21 39 23.3 -3.0
TIXI *e*PP PP 21 39 49.7 +1.4
TIXI *e*ScP ScP 21 42 31.9 -3.0
TIXI *e*S **S** **21 43 52.5 -1.0**
WMQ Urumqi 44.39 305 P **P** **21 37 56.6 0.0**
WMQ pP pP 21 39 29.3 +2.1
WMQ PcP PcP 21 39 30.6 +0.4
WMQ PP PP 21 39 49.6 +0.3
WMQ sP sP 21 40 22.6 +0.9
WMQ S **S** **21 43 54.4 -0.7**
WMQ ScS ScS 21 46 56.8 -3.7
WMQ SS SS 21 47 18.6 -5.9
WMQ pmax pmax
comp=Z,170nm,0.9s,mb5.5
WMQ pmax pmax
comp=Z,600nm,4.0s
SPIA Saint Paul Isl 45.68 36 *e*P **P** **21 38 07.4 +1.0**
comp=Z,1µm,1.8s,mb6.0
TAPN Taplejung 45.80 282 *e*P **P** **21 38 08.7 +0.9**
comp=Z,174nm,0.7s,mb5.6
PSI Prapat 46.16 245 P **P** **21 38 10.8 +0.1**
comp=Z,167nm,0.8s,mb5.5,baz=44,slow=4.1,SNR=143
PSI PcP PcP 21 39 37.1 +0.1
comp=Z,36nm,0.6s,baz=21,slow=3.4,SNR=8.3
PSI ScP ScP 21 42 43.1 -0.5
comp=Z,18nm,0.6s,baz=41,slow=4.6,SNR=9.3
PSI Prapat 46.16 245 P **P** **21 38 10.8 +0.1**
PSI 21 39 37.1
PSI Prapat 46.16 245 P **P** **21 38 10.8 +0.1**
PSI PcP PcP 21 39 37.1 +0.1
PSI ScP ScP 21 42 43.1 -0.5
ODAN Odare 46.20 282 *e*P **P** **21 38 11.4 +0.6**
comp=Z,417nm,0.8s,mb5.9
RAMN Ramite 46.86 282 *e*P **P** **21 38 16.3 +0.4**
UNV Unalaska Valle 46.88 41⇑*e*P **P** **21 38 14.9 -0.6**
comp=Z,85nm,0.5s,mb5.4
UNV PcP PcP 21 39 39.0 +0.2
JIRN Jiri 47.05 283 *e*P **P** **21 38 18.5 +1.2**
comp=Z,477nm,0.5s,mb6.2
GUN Gumba 47.26 283 *e*P **P** **21 38 20.0 +1.1**
GAMB Gambell 47.50 27 *e*P **P** **21 38 20.6 +0.5**
ZAA0 Zalesovo Array 47.53 319 *e*P **P** **21 38 19.7 -0.8**
ZAA0 *e*PcP PcP 21 39 40.1 -1.1
ZALV Zalesovo Beam 47.53 319 P **P** **21 38 19.8 -0.7**
comp=Z,60nm,0.7s,mb5.0,baz=103,slow=7.2,SNR=182
ZALV PcP PcP 21 39 40.5 -0.6
comp=Z,10nm,0.3s,baz=130,slow=4.1,SNR=12
ZALV ScP ScP 21 42 47.0 -1.6
comp=Z,15nm,0.6s,baz=119,slow=4.3,SNR=7.3
ZALV S **S** **21 44 35.2 -3.6**
comp=Z,1.3nm,0.6s,baz=108,slow=9.3,SNR=2.5
ZALV Zalesovo Beam 47.53 319 P **P** **21 38 19.8 -0.7**
ZALV 21 39 40.6
ZALV S **S** **21 44 35.2 -3.6**
FITZ Fitzroy Crossi 47.59 198 *e*P **P** **21 38 21.1 -0.3**
comp=Z,91nm,0.6s,mb5.3
FITZ *e*PCP PcP 21 39 43.0 +1.1
FITZ *e*S **S** **21 44 39.3 -1.2**
FITZ Fitzroy Crossi 47.59 198 P **P** **21 38 21.1 -0.3**
comp=Z,55nm,0.7s,mb5.0,baz=17,slow=6.7,SNR=106
FITZ PcP PcP 21 39 42.6 +0.8
comp=Z,24nm,0.8s,baz=324,slow=4.7,SNR=5.3
FITZ Fitzroy Crossi 47.59 198 *e*P **P** **21 38 21.2 -0.2**
comp=Z,74nm,0.8s,mb5.1
FITZ *e*PcP PcP 21 39 41.9 0.0
FITZ PP PP 21 40 18.6 -0.4
WRAB Tennant Creek 47.71 187 P **P** **21 38 21.0 -1.2**
comp=Z,2µm,0.6s,mb6.5
WRAB Tennant Creek 47.71 187⇓*e*P **P** **21 38 20.7 -1.5**
WRAB *e* 21 39 42.1
WRAB *e**PP pP 21 39 54.6 0.0
WRAB *e*S **S** **21 44 35.5 -6.5**
WRAB pmax pmax
comp=Z,145nm,0.7s,mb5.4
WRAB Tennant Creek 47.71 187⇓*e*P **P** **21 38 20.7 -1.5**
comp=Z,145nm,0.7s,mb5.4
WRAB *e*PcP PcP 21 39 42.0 -0.2
WRAB *e*pP pP 21 39 54.6 0.0
WRAB *e*S **S** **21 44 35.5 -6.5**
WRA Warramunga Arr 47.72 187 PcP PcP 21 39 43.0 +0.8
baz=359,slow=3.8
PKI Pulchoki 47.74 283 *e*P **P** **21 38 22.9 +0.4**
comp=Z,149nm,0.6s,mb5.5
PKI Pulchoki 47.74 283 *e*P **P** **21 38 23.5 +1.0**
PKIN Phulchoki 47.75 283 *e*P **P** **21 38 23.5 +0.9**
comp=Z,292nm,0.7s,mb5.8
KKN Kakani 47.80 283 *e*P **P** **21 38 23.5 +0.5**
JOHN Johnston Islan 47.96 92 *e*P **P** **21 38 24.5 +0.3**
comp=Z,76nm,0.6s,mb5.2
DMN Daman 48.00 283 *e*P **P** **21 38 24.9 +0.5**
comp=Z,264nm,0.5s,mb5.9
CTA Charters Tower 48.00 172 *e*P **P** **21 38 23.9 -0.5**
comp=Z,98nm,0.7s,mb5.2
CTA *e*PCP PcP 21 39 43.1 -0.2
CTA *e*S **S** **21 44 46.5 +0.5**
CTA Charters Tower 48.00 172 P **P** **21 38 24.4 +0.1**
comp=Z,110nm,0.7s,mb5.3,baz=359,slow=7.9,SNR=130
CTA PcP PcP 21 39 43.6 +0.4
comp=Z,12nm,0.6s,baz=10,slow=9.2,SNR=3.1
CTA S **S** **21 44 44.9 -1.1**
comp=Z,8.4nm,1.1s,baz=188,slow=17,SNR=3.9
CTA Charters Tower 48.00 172 P **P** **21 38 24.4 +0.1**
CTA PcP PcP 21 39 43.6 +0.4
CTA S **S** **21 44 44.9 -1.1**
CTAO Charters Tower 48.00 172 *e*P **P** **21 38 24.0 -0.4**
CTAO *e* 21 39 43.4
CTAO S **S** **21 44 43.3 -2.7**
CTAO pmax pmax
comp=Z,114nm,0.7s,mb5.3
CTAO Charters Tower 48.00 172 *e*P **P** **21 38 24.0 -0.4**
comp=Z,114nm,0.7s,mb5.3
CTAO *e*PcP PcP 21 39 43.4 +0.1
CTAO S **S** **21 44 43.3 -2.7**
GKN Gorkha 48.31 284 *e*P **P** **21 38 27.1 +0.4**
comp=Z,227nm,0.8s,mb5.6
BOK Bokaro 48.31 278 *ex* **P** **21 38 29.7 +2.9**
BOK AMb AMB 21 38 31.6
comp=Z,105nm,1.0s,mb5.1
MK31 Makanchi Array 48.34 309⇓*i*P **P** **21 38 26.5 -0.2**
MK31 *e* 21 39 43.7
MK31 *e*S **S** **21 44 50.5 +0.2**
MK31 Makanchi Array 48.34 309⇓*i*P **P** **21 38 26.4 -0.2**
MK31 *e*PcP PcP 21 39 43.7 -0.6
MK31 *e*ScP ScP 21 42 51.1 -1.1
MK31 *e*S **S** **21 44 50.5 +0.2**
MKAR Makanchi Array 48.34 309 P **P** **21 38 26.6 -0.1**
comp=Z,51nm,0.7s,mb5.0,baz=86,slow=10,SNR=428
MKAR PcP PcP 21 39 44.3 0.0
comp=Z,6.4nm,0.7s,baz=77,slow=6.4,SNR=2.1
MKAR ScP ScP 21 42 51.4 -0.9
comp=Z,8.6nm,0.6s,baz=86,slow=5.3,SNR=6.4
MKAR S **S** **21 44 49.2 -1.0**
comp=Z,2.3nm,0.7s,baz=90,slow=16,SNR=5.0
MKAR PKP2bc 22 09 39.5
comp=Z,0.2nm,0.5s,baz=284,slow=4.9,SNR=4.5
MKAR P4KPbc 22 15 58.8
comp=Z,0.3nm,0.3s,baz=77,slow=6.4,SNR=5.4
MKAR Makanchi Array 48.34 309 P **P** **21 38 26.6 -0.1**
MKAR 21 39 44.3
MKAR S **S** **21 44 49.3 -1.0**
MKAR Makanchi Array 48.34 309 P **P** **21 38 26.6 -0.1**
MKAR PcP PcP 21 39 44.3 0.0
MKAR ScP ScP 21 42 51.4 -0.9
MKAR S **S** **21 44 49.2 -1.0**
MKAR ⇑*e* 22 09 39.5
NVS Novosibirsk 48.61 320⇓*i*P **P** **21 38 28.0 -0.5**
NVS *e**PP pP 21 40 06.3 +5.0
NVS *e*S **S** **21 44 49.1 -4.5**
NVS *e**SS sS 21 47 22.2 -19
NVS pmax pmax
comp=N,29nm,1.3s
NVS pmax pmax
comp=E,80nm,1.3s
NVS pmax pmax
comp=Z,91nm,1.3s,mb5.0
NVS smax
comp=N,503nm,3.3s
NVS smax
comp=E,113nm,2.2s
TNA Tin City 49.72 26⇑*i*P **P** **21 38 37.5 +1.0**
TNA *e*pP pP 21 40 08.9 -1.0
SDPT Sand Point 50.59 40 *e*P **P** **21 38 42.7 -0.4**
comp=E,368nm,0.7s,mb5.8
SDPT LR LR
comp=Z,800nm,18.0s
KURK Kurchatov 50.94 314 P **P** **21 38 45.9 +0.1**
comp=Z,2µm,0.7s,mb6.5
KURK Kurchatov 50.94 314⇓*i*P **P** **21 38 45.3 -0.5**
KURK *e**SP sP 21 41 14.3 +1.1
KURK *e*S **S** **21 45 22.2 -3.3**
KURK pmax pmax
comp=Z,185nm,0.7s,mb5.5
KURK Kurchatov 50.94 314⇓*i*P **P** **21 38 45.3 -0.5**
comp=Z,185nm,0.7s,mb5.5
KURK *e*sP sP 21 41 14.3 +1.0
KURK *e*S **S** **21 45 22.2 -3.3**
KURK Kurchatov 50.94 314 P **P** **21 38 45.2 -0.5**
SNR=75
ASAR Alice Springs 51.44 187 P **P** **21 38 48.6 -1.2**
comp=Z,58nm,0.4s,mb5.2,baz=12,slow=7.8,SNR=811
ASAR PcP PcP 21 39 56.9 +0.9
comp=Z,29nm,0.7s,baz=6.7,slow=3.7,SNR=14
ASAR ScP ScP 21 43 04.0 -1.8
comp=Z,4.0nm,0.7s,baz=5.5,slow=4.8,SNR=3.3
ASAR S **S** **21 45 29.6 -3.2**
comp=Z,16nm,1.0s,baz=15,slow=15,SNR=16
ASAR P4KPbc 22 16 12.4
comp=Z,3.4nm,0.6s,baz=5.0,slow=4.4,SNR=49
ASAR Alice Springs 51.44 187 P **P** **21 38 48.6 -1.2**
ASAR 21 39 56.9
ASAR S **S** **21 45 29.7 -3.2**
ASAR Alice Springs 51.44 187 P **P** **21 38 48.6 -1.2**
ASAR PcP PcP 21 39 56.9 +0.9
ASAR ScP ScP 21 43 04.0 -1.8
ASAR S **S** **21 45 29.6 -3.2**
PTH Pithoragarh 51.73 287 *e*PKP **P** **21 38 53.1 +1.2**
CHGN Chignik 51.86 39 *e*P **P** **21 38 51.0 -1.4**
JOSI Joshimath 52.05 288 *e*PKP **P** **21 38 54.2 0.0**
MBWA Marble Bar 52.34 204 *e*P **P** **21 38 55.8 -0.5**
comp=Z,128nm,0.8s,mb5.3
MBWA *e*PcP PcP 21 39 58.5 -0.9
MBWA *e*pP pP 21 40 32.0 +1.0
FUNA Funafuti 52.55 128 *e*P **P** **21 38 58.5 +0.5**
ULHL Ulahol 52.81 304 P **P** **21 39 00.3 +0.8**
SNR=53
KSH Kashi 53.34 300 P **P** **21 39 07.4 +4.1**
KSH PcP PcP 21 40 06.9 +3.7
KSH pP pP 21 40 40.8 +2.4
KSH PP PP 21 41 16.3 +6.3
KSH sP sP 21 41 33.3 +1.7
KSH ScP ScP 21 43 17.8 +3.8
KSH PcS PcS 21 44 04.6 +1.7
KSH S **S** **21 46 04.6 +6.6**
KSH ScS ScS 21 48 02.6 +0.9
KSH sS sS 21 48 51.3 +2.3
KSH SS SS 21 49 53.3 +7.0
KSH pmax pmax
comp=Z,130nm,0.7s,mb5.4
KSH pmax pmax
comp=Z,490nm,5.5s
KZA Kyzart 53.56 303 P **P** **21 39 06.3 +1.5**
SNR=101
KBK Karagaybulak 53.72 304 P **P** **21 39 06.8 +0.8**
SNR=100
CHMS Chumysh 53.83 305 P **P** **21 39 06.6 -0.2**
SNR=37
SVW2 Sparrevohn 53.91 33 *e*P **P** **21 39 07.3 +0.3**
comp=Z,100nm,1.0s,mb5.1
SVW2 LR LR
comp=Z,1µm,18.0s
FRU Bishkek 53.95 304 *e*P **P** **21 39 07.0 -0.6**
FRU *i* 21 46 06.0
FRU pmax pmax
comp=Z,100nm,1.6s,mb4.9
EIDS Eidsvold 53.96 167⇓*e*P **P** **21 39 07.5 -0.3**
comp=Z,93nm,0.8s,mb5.2
EIDS *e*PcP PcP 21 40 05.5 0.0
EIDS *e*PP PP 21 41 16.4 +0.4
USP Ospenovka 53.98 305 P **P** **21 39 08.0 +0.2**
SNR=73
SDNR Sundarnagar 54.00 290 *e*PKP **P** **21 39 07.5 -0.7**
AAK Ala-Archa 54.06 304 P **P** **21 39 09.9 +1.5**
comp=Z,565nm,0.8s,mb6.0,SNR=21
AAK Ala-Archa 54.06 304 P **P** **21 39 09.8 +1.5**
SNR=5.4
AAK Ala-Archa 54.06 304 P **P** **21 39 08.6 +0.2**
comp=Z,46nm,0.6s,mb5.0,baz=110,slow=4.8,SNR=82
AAK Ala-Archa 54.06 304⇓*e*P **P** **21 39 08.9 +0.5**
AAK 21 40 05.3
AAK *e*S **S** **21 46 07.8 +0.4**
AAK pmax pmax
comp=Z,66nm,0.7s,mb5.1
AAK Ala-Archa 54.06 304⇓*e*P **P** **21 39 08.9 +0.6**
comp=Z,66nm,0.7s,mb5.1
AAK PcP PcP 21 40 05.3 -0.5
AAK *e*ScP ScP 21 43 16.4 -0.7
AAK *e*S **S** **21 46 07.8 +0.4**
AAK Ala-Archa 54.06 304 P **P** **21 39 09.0 +0.7**
SNR=19
UCH Uchtor 54.09 304 P **P** **21 39 10.1 +1.5**
SNR=276
UCH Uchtor 54.09 304⇓*i*P **P** **21 39 10.0 +1.4**
UCH *e*PcP PcP 21 40 06.0 0.0
NDI New Delhi 54.48 287 *e*PKP **P** **21 39 10.0 -1.6**
NDI *ex* x 21 46 08.0
EKS2 Erkin-Say 54.58 304 P **P** **21 39 13.0 +0.9**
SNR=10
EKS2 Erkin-Say 54.58 304⇓*e*P **P** **21 39 12.0 0.0**
comp=Z,54nm,0.8s,mb4.9
EKS2 *e*PcP PcP 21 40 07.4 -0.5
EKS2 *e*sP sP 21 41 42.0 +1.2
EKS2 *e*ScP ScP 21 43 18.6 -0.8
EKS2 S **S** **21 46 13.9 -0.3**
AML Almayashu 54.71 304 P **P** **21 39 14.9 +1.9**
SNR=27
AML Almayashu 54.71 304⇓*e*P **P** **21 39 14.5 +1.5**
comp=Z,139nm,0.8s,mb5.3
AML *e*PcP PcP 21 40 08.7 +0.3
AML *e*pP pP 21 40 49.9 +1.2
AML *e*sP sP 21 41 42.0 +0.3
OHAK Old Harbor 54.74 38 *e*P **P** **21 39 11.3 -1.6**
comp=Z,56nm,0.5s,mb5.2
OHAK LR LR
comp=Z,1µm,18.0s
KDAK Kodiak Island 55.15 37 P **P** **21 39 15.6 -0.2**
comp=Z,685nm,0.7s,mb6.2,SNR=37
KDAK Kodiak Island 55.15 37 P **P** **21 39 15.4 -0.3**
comp=Z,70nm,0.6s,mb5.2,baz=279,slow=3.5,SNR=72
KDAK S **S** **21 46 19.9 -1.3**
comp=Z,3.8nm,0.7s,baz=123,slow=22,SNR=12
KDAK Kodiak Island 55.15 37⇑*i*P **P** **21 39 15.4 -0.4**
KDAK *e* 21 40 08.1
KDAK *e**PP pP 21 40 52.2 +0.4
KDAK 21 41 21.7
KDAK *e*S **S** **21 46 19.8 -1.4**
KDAK pmax pmax
comp=Z,688nm,1.8s,mb5.7
KDAK Kodiak Island 55.15 37⇑*i*P **P** **21 39 15.4 -0.4**
comp=Z,688nm,1.8s,mb5.7
KDAK *e*PcP PcP 21 40 08.1 -1.7
KDAK *e*pP pP 21 40 52.2 +0.5
KDAK PP PP 21 41 21.7 -3.9
KDAK *e*S **S** **21 46 19.8 -1.4**
RSO Redoubt South 55.23 34 *e*P **P** **21 39 16.6 +0.4**
RSO *e*PcP PcP 21 40 10.5 +0.5
RSO *e*pP pP 21 40 53.1 +0.9
PPLA Purkeypile 55.71 31⇑*i*P **P** **21 39 20.1 +0.5**
comp=Z,324nm,1.4s,mb5.5
PPLA *e*pP pP 21 40 57.0 +1.2
PPLA *e*PP PP 21 41 29.9 -0.6
BHPL Bhopal 55.88 280 *e*PKP **P** **21 39 20.5 -0.9**
BHPL AMb AMB 21 39 22.6
comp=Z,118nm,0.5s,mb5.5
DZM Mont Dzumac 55.88 150 *e*P **P** **21 39 21.4 +0.1**
BVAR Borovoye Array 56.05 317 P **P** **21 39 22.0 -0.1**
comp=Z,132nm,0.6s,mb5.5,baz=93,slow=8.1,SNR=593
BVAR ScP ScP 21 43 24.3 -1.3
comp=Z,6.0nm,0.5s,baz=101,slow=4.8,SNR=5.7
BVAR S **S** **21 46 32.0 -1.1**
comp=Z,18nm,0.8s,baz=92,slow=13,SNR=23
BVAR PKPPKP 22 09 18.1
comp=Z,1.0nm,0.9s,baz=225,slow=3.3,SNR=3.4
BVAR Borovoye Array 56.05 317 P **P** **21 39 22.0 -0.1**
BVAR S **S** **21 46 32.0 -1.1**
BRVK Borovoye 56.11 317 P **P** **21 39 22.4 -0.2**
comp=Z,1µm,0.7s,mb6.3
BRVK Borovoye 56.11 317⇓*i*P **P** **21 39 22.4 -0.2**
BRVK *e* 21 40 13.1
BRVK *e**PP pP 21 41 00.5 +1.5
BRVK *e*S **S** **21 46 32.5 -1.4**
BRVK pmax pmax
comp=Z,136nm,0.7s,mb5.4
BRVK Borovoye 56.11 317⇓*i*P **P** **21 39 22.4 -0.2**
comp=Z,136nm,0.7s,mb5.4
BRVK *e*PcP PcP 21 40 13.1 -0.6
BRVK *e*pP pP 21 41 00.5 +1.4
BRVK *e*S **S** **21 46 32.5 -1.4**
BRVK Borovoye 56.11 317 P **P** **21 39 22.8 +0.3**
SNR=53
BPAW Bear Paw Mtn. 56.36 30⇑*i*P **P** **21 39 24.7 +0.6**
comp=Z,341nm,1.4s,mb5.5
KIP Kipapa 56.47 82 *e*P **P** **21 39 26.0 +0.4**
KIP pmax pmax
comp=Z,81nm,1.1s,mb5.0
KIP Kipapa 56.47 82 *e*P **P** **21 39 25.9 +0.4**
comp=Z,81nm,1.1s,mb5.0
HON Honolulu 56.52 82 *e*P **P** **21 39 26.1 +0.2**
TRF Thorofare Moun 56.62 30⇑*i*P **P** **21 39 25.9 0.0**
comp=Z,90nm,0.8s,mb5.2
TRF PcP PcP 21 40 15.2 -0.2
TRF *e*pP pP 21 41 02.3 -0.2
TRF *e*PP PP 21 41 39.1 +0.6
TRF *e*S **S** **21 46 38.4 -1.6**
RC01 Rabbit Creek A 56.74 33⇑*e*P **P** **21 39 25.9 -0.8**
comp=Z,70nm,0.4s,mb5.3
RC01 *e*PcP PcP 21 40 15.1 -0.9
RC01 pP pP 21 41 04.0 +0.6
RC01 *e*ScP ScP 21 43 28.6 +0.1
HYB Hyderabad 56.90 273 *i* P **P** **21 39 29.0 +0.4**
comp=Z,31nm,0.8s,mb4.7
COLD Coldfoot 57.02 26⇑*i*P **P** **21 39 29.3 +0.8**
comp=Z,73nm,0.8s,mb5.1
COLD *e*PcP PcP 21 40 17.7 +0.7
COLD *e*S **S** **21 46 45.2 +0.1**
PMR Palmer 57.05 33⇑*i*P **P** **21 39 28.0 -0.9**
PMR *e* 21 40 17.2
PMR *e**PP pP 21 41 03.9 -1.8
PMR pmax pmax
comp=Z,262nm,1.3s,mb5.4
PMR MLR MLR
comp=Z,700nm,18.0s
PMR Palmer 57.05 33⇑*i*P **P** **21 39 28.0 -0.9**
comp=Z,262nm,1.3s,mb5.4
PMR *e*PcP PcP 21 40 17.2 0.0
PMR *e*pP pP 21 41 03.9 -1.9
PMR *e*ScP ScP 21 43 25.0 -4.9
PMR LR LR
comp=Z,700nm,18.0s
AKL Akola 57.08 278 *e*PKP **P** **21 39 29.7 -0.1**
AKL *ex* x 21 39 32.1
comp=Z,194nm,0.8s
AKL *i* S **S** **21 46 47.8 +0.5**
MCK McKinley 57.24 30⇑*i*P **P** **21 39 29.8 -0.3**
MCK *e* 21 40 17.6
MCK *e**PP pP 21 41 05.7 -1.4

MCK pmax pmax
comp=Z,1µm,2.0s,mb6.0
MCK McKinley 57.24 30⇑iP P 21 39 29.8 -0.4
comp=Z,1µm,2.0s,mb6.0
MCK ePcP PcP 21 40 17.6 -0.3
MCK epP pP 21 41 05.7 -1.4
MCK eScP ScP 21 43 25.7 -5.0
COCO West Island 57.47 232 P **P 21 39 31.1 -1.4**
COLA College 57.77 29⇑iP P 21 39 33.4 -0.4
COLA e*PP pP 21 41 15.3 +4.3
COLA e 21 41 47.9
COLA e 21 43 29.6
COLA pmax pmax
comp=Z,45nm,0.6s,mb5.0
COLA College 57.77 29⇑iP P 21 39 33.4 -0.4
comp=Z,45nm,0.6s,mb5.0
COLA epP pP 21 41 15.3 +4.3
COLA ePP PP 21 41 47.9 -0.7
COLA eScP ScP 21 43 29.6 -3.4
ILAR Eielson Array 58.18 29 P **P 21 39 35.4 -1.1**
comp=Z,17nm,0.4s,mb4.7,baz=248,slow=5.7,SNR=449
ILAR pP pP 21 41 12.6 -1.3
comp=Z,3.6nm,0.7s,baz=248,slow=5.4,SNR=1.9
ILAR S **S 21 46 58.5 -1.6**
comp=Z,2.6nm,1.1s,baz=254,slow=8.3,SNR=9.2
ILAR PKPPKP 22 08 55.2
comp=Z,0.5nm,0.8s,baz=94,slow=2.8,SNR=6.2
ILAR Eielson Array 58.18 29 P **P 21 39 35.4 -1.1**
ILAR *PP pP 21 41 12.6 -1.3
ILAR S **S 21 46 58.5 -1.6**
MID Middleton Isla 58.43 35 eP **P 21 39 38.8 +0.5**
MID e*PP pP 21 41 19.4 +3.6
MSVF Nonsavu 58.53 136 eP **P 21 39 41.1 +1.5**
MSVF ePcP PcP 21 40 23.2 -0.5
MSVF ePP PP 21 41 56.9 +0.4
MSVF esP sP 21 42 10.9 +1.5
DIV Divide 58.67 33 eP **P 21 39 39.9 0.0**
comp=Z,232nm,1.4s,mb5.3
ARMA Armidale 58.98 168 eP **P 21 39 42.7 +0.4**
ARMA Armidale 58.98 168 eP **P 21 39 42.5 +0.2**
comp=Z,61nm,0.6s,mb5.1
ARMA PcP PcP 21 40 25.2 0.0
POHA Pohakuloa 59.23 83 eP **P 21 39 45.5 +1.1**
BMRM Bremner River 59.24 33⇑eP P 21 39 43.9 +0.2
comp=Z,163nm,0.6s,mb5.5
BMRM epP pP 21 41 20.5 -1.1
BMRM ePP PP 21 41 59.1 -2.5
BMRM eScP ScP 21 43 38.3 -1.3
BMRM eS **S 21 47 13.9 +0.3**
PALK Pallekele 59.27 262 P **P 21 39 45.4 +0.6**
comp=Z,346nm,0.6s,mb5.9,SNR=11
PALK Pallekele 59.27 262⇓eP P 21 39 44.7 0.0
comp=Z,36nm,0.6s,mb4.9
PALK PcP PcP 21 40 27.7 +0.8
FORT Forrest 59.28 192 eP **P 21 39 44.0 -0.4**
comp=Z,344nm,0.5s,mb5.9
FORT Forrest 59.28 192 eP **P 21 39 43.9 -0.5**
comp=Z,342nm,0.6s,mb5.9
FORT ePcP PcP 21 40 26.2 -0.3
STKA Stephens Creek 59.34 178⇓iP P 21 39 43.7 -1.1
comp=Z,63nm,0.7s,mb5.1
STKA ePCP x 21 41 02.0
STKA eS **S 21 47 12.5 -3.1**
STKA Stephens Creek 59.34 178 P **P 21 39 44.4 -0.4**
comp=Z,82nm,0.7s,mb5.2,baz=349,slow=7.0,SNR=152
STKA S **S 21 47 13.4 -2.1**
comp=Z,10nm,0.9s,baz=116,slow=19,SNR=6.0
STKA Stephens Creek 59.34 178⇓eP P 21 39 44.3 -0.5
comp=Z,15nm,0.6s,mb4.5
STKA ePcP PcP 21 40 26.5 -0.2
STKA epP pP 21 41 25.5 +2.7
MENT Mentasta 59.58 31 eP **P 21 39 46.4 +0.4**
MENT epP pP 21 41 24.5 +0.4
MENT ePP PP 21 42 04.9 +0.3
MENT eS **S 21 47 20.3 +2.5**
KBL Kabul 59.75 296⇓eP P 21 39 47.5 -0.2
KBL e 21 40 28.0
KBL eS **S 21 47 20.4 -0.5**
KBL pmax pmax
comp=Z,118nm,0.9s,mb5.3
KBL Kabul 59.75 296⇓eP P 21 39 47.5 -0.1
comp=Z,118nm,0.9s,mb5.3
KBL ePcP PcP 21 40 28.0 -0.6
KBL eS **S 21 47 20.4 -0.5**
JASL Jaisalmer 60.34 287 ePKP **P 21 39 50.7 -1.0**
EGAK Eagle 60.63 29⇑iP P 21 39 52.5 -0.5
comp=Z,61nm,0.6s,mb5.2
EGAK eScP ScP 21 43 45.2 -0.5
POO Poona 60.64 277 ePKP **P 21 39 53.1 -0.7**
POO AMb AMB 21 39 55.4
comp=Z,168nm,0.7s,mb5.6
KAD Karad 60.80 275 ePKP **P 21 39 54.3 -0.7**
KAD AMb AMB 21 39 56.1
comp=Z,122nm,0.7s,mb5.5
SVE Sverdlovsk 61.34 322⇑eP P 21 39 57.7 -0.1
SVE eS **S 21 47 38.9 -1.1**
SVE e 21 48 58.4
SVE eSS SS 21 51 45.4 -5.4
SVE eSSS 21 54 54.6
SVE pmax pmax
comp=Z,63nm,0.9s,mb5.0
DAWY Dawson 61.45 30⇑iP P 21 39 58.6 +0.2
DAWY epP pP 21 41 38.0 +0.8
DAWY ePP PP 21 42 17.3 -3.6
DAWY eScP ScP 21 43 47.9 -1.4
DAWY eS **S 21 47 37.4 -3.8**
PNL Peninsula 61.93 35⇑eP P 21 40 02.3 +0.7
comp=Z,47nm,0.8s,mb5.0
PNL epP pP 21 41 41.6 +1.0
PNL ePP PP 21 42 25.8 +0.7
RIV Riverview 62.22 169 eP **P 21 40 04.0 +0.2**
ARU Arti 62.53 322 P **P 21 40 05.4 -0.2**
comp=Z,749nm,0.5s,mb6.5,SNR=44
ARU Arti 62.53 322d iP P 21 40 04.9 -0.7
ARU 21 40 39.1
ARU e*PP pP 21 41 47.7 +2.9
ARU e 21 42 26.5
ARU eS **S 21 47 52.2 -2.5**
ARU e 21 49 03.7
ARU SS SS 21 52 06.5 -2.8
ARU pmax pmax
comp=Z,78nm,0.7s,mb5.3
ARU MLR MLR
comp=Z,1µm,20.0s
ARU Arti 62.53 322⇓eP P 21 40 04.8 -0.8
comp=Z,81nm,0.8s,mb5.3
ARU epP pP 21 41 45.8 +1.0
ARU eS **S 21 47 46.3 -8.4**
BHJ Bhuj 62.61 283 ePKP **P 21 40 06.1 -0.6**
BHJ AMb AMB 21 40 08.8
comp=Z,122nm,0.6s,mb5.6
KLBR Kellerberrin 62.63 201 eP **P 21 40 06.0 -0.5**
comp=Z,129nm,0.8s,mb5.5
AFI Afiamalu 62.66 125 eP **P 21 40 07.0 0.0**
HYT Haines Junctio 62.71 33 eP **P 21 40 07.7 +1.1**
SOKR Solikamsk 62.96 325d iP P 21 40 09.1 +0.8
SOKR pmax pmax
comp=Z,40nm,0.7s,mb5.1
SOKR MLR MLR
comp=Z,1µm,15.0s
ABKAR Akbulak array 63.04 314⇓iP P 21 40 08.3 -0.7
comp=Z,75nm,0.7s,mb5.3
ABKAR pP pP 21 41 49.1 +0.6
ABKAR eS **S 21 47 58.6 -2.5**
INK Inuvik 63.33 25 P **P 21 40 10.3 -0.2**
comp=Z,11nm,0.3s,mb4.8,baz=294,slow=6.2,SNR=88
INK S **S 21 48 01.8 -2.3**
comp=Z,3.7nm,1.1s,baz=90,slow=31,SNR=10
INK Inuvik 63.33 25⇑eP P 21 40 09.8 -0.7
INK 21 40 42.3
INK e*PP pP 21 41 51.2 +1.1
INK e 21 42 34.3
INK pmax pmax
comp=Z,303nm,2.3s
INK Inuvik 63.33 25⇑eP P 21 40 09.8 -0.7
comp=Z,303nm,2.3s,mb5.4
INK PcP PcP 21 40 42.3 -0.2
INK epP pP 21 41 51.2 +1.1
INK ePP PP 21 42 34.3 -2.9
CNB Canberra Magne 63.41 171 eP **P 21 40 12.1 +0.7**
SKAG Skagway 64.01 34⇑eP P 21 40 15.6 +0.5
comp=Z,652nm,2.2s,mb5.8
SKAG pP pP 21 41 56.5 +1.6
SKAG ePP PP 21 42 37.4 -5.9

NWAO Narrogin (SRO) 64.03 201 eP **P 21 40 15.4 -0.1**
NWAO pmax pmax
comp=Z,137nm,0.5s
NWAO Narrogin (SRO) 64.03 201 eP **P 21 40 15.4 -0.1**
comp=Z,137nm,0.5s,mb5.7
NWAO Narrogin (SRO) 64.03 201 P **P 21 40 16.2 +0.7**
SNR=5.9
SIT Sitka 64.49 37 eP **P 21 40 19.0 +0.9**
XMAS Kiritimati 65.13 101 eP **P 21 40 23.1 +0.2**
TOO Toolangi 65.23 175 eP **P 21 40 23.8 +0.9**
CRAG Craig 66.05 38 eP **P 21 40 29.1 +1.1**
CRAG ePcP PcP 21 40 53.9 -0.1
CRAG epP pP 21 42 10.2 +1.5
CRAG ePP PP 21 43 00.1 -0.9
DLBC Dease Lake 66.92 35⇑iP P 21 40 34.1 +0.8
DLBC epP pP 21 42 16.5 +2.1
DLBC esP sP 21 43 05.8 0.0
ABKT Ailbek 67.28 302 P **P 21 40 36.5 +0.5**
comp=Z,222nm,0.7s,mb5.9,SNR=20
ALE Alert 69.41 3 P **P 21 40 48.2 0.0**
comp=Z,236nm,0.6s,mb5.9,SNR=9.4
KBS Kingsbay 69.52 351⇑eP P 21 40 49.1 +0.2
KBS e*PP pP 21 42 31.8 +0.9
KBS pmax pmax
comp=Z,19nm,0.6s,mb4.8
KBS Kingsbay 69.52 351⇑eP P 21 40 49.1 +0.2
comp=Z,19nm,0.6s,mb4.8
KBS epP pP 21 42 31.8 +1.0
KBS esP sP 21 43 19.4 -2.8
MOO Moorlands 70.20 174 eP **P 21 40 54.4 +1.1**
APA Apatity 70.58 337⇓iP P 21 40 54.8 -0.5
APA i *PP pP 21 42 39.0 +1.3
APA i 21 43 42.7
APA i S S 21 49 26.0 -3.3
APA i 21 50 04.0
APA pmax pmax
comp=Z,24nm,0.8s,mb4.8
KEV Kevo 71.61 340⇑eP P 21 41 01.1 -0.3
KEV e*PP pP 21 42 44.3 +0.2
KEV eS S 21 49 39.7 -1.2
KEV pmax pmax
comp=Z,17nm,0.6s,mb4.8
KEV Kevo 71.61 340⇑eP P 21 41 01.1 -0.2
comp=Z,17nm,0.6s,mb4.8
KEV epP pP 21 42 44.3 +0.2
KEV eS S 21 49 39.7 -1.2
KEV Kevo 71.61 340 ep **P 21 41 00.5 -0.9**
RES Resolute Bay 71.91 13⇑eP P 21 41 02.9 -0.2
RES e*PP pP 21 42 49.0 +3.1
RES e 21 43 51.6
RES pmax pmax
comp=Z,50nm,1.1s,mb5.0
RES Resolute Bay 71.91 13⇑eP P 21 41 02.9 -0.2
comp=Z,50nm,1.1s,mb5.0
RES epP pP 21 42 49.0 +3.0
RES ePP PP 21 43 51.6 +1.1
WBK Wadi Bani Khal 72.00 286 P **P 21 41 06.0 +1.4**
SNR=8.2
ARCES ARCESS Array B 72.17 340 P **P 21 41 04.7 +0.1**
comp=Z,17nm,0.5s,mb4.8,baz=76,slow=8.3,SNR=189
ARCES pP pP 21 42 49.4 +1.8
comp=Z,5.5nm,0.7s,baz=62,slow=7.6,SNR=1.8
ARCES ARCESS Array B 72.17 340 P **P 21 41 04.7 +0.1**
ARCES pP pP 21 42 49.4 +1.8
ARE0 ARCESS Array S 72.17 340 eP **P 21 41 04.7 0.0**
ARE0 epP pP 21 42 48.8 +1.1
ARE0 ePP PP 21 43 52.1 -0.6
YKA Yellowknife Ar 72.59 28 P **P 21 41 06.5 -0.6**
comp=Z,36nm,0.5s,mb5.2,baz=298,slow=6.2,SNR=104
YKA pP pP 21 42 50.9 +0.6
comp=Z,3.0nm,0.6s,baz=294,slow=6.0,SNR=2.1
JMDO Jabal Madar 72.83 287 P **P 21 41 10.2 +0.8**
SNR=5.1
HOQ Hoqain 73.02 288 P **P 21 41 10.9 +0.4**
SNR=19
MAK Makhachkala 73.16 310 eP **P 21 41 10.2 -0.6**
MAK i *PP pP 21 42 57.4 +3.2
MAK i *SP sP 21 43 49.4 +4.4
MAK i 21 44 03.5
MAK ePPP 21 45 50.7
MAK eS S 21 49 54.0 -5.1
MAK pmax pmax
comp=Z,41nm,0.8s,mb5.0
MAK MLR MLR
comp=Z,2µm,23.0s
BSY Bisya 73.45 287 P **P 21 41 13.3 +0.4**
SNR=16
HATD Hatta, Dubai 73.52 290 P **P 21 41 14.0 +0.8**
SNR=11
ASHO Ashiyiah 73.64 290 P **P 21 41 15.2 +1.2**
SNR=7.3
VRHR Novokhopersk 73.67 319 eP **P 21 41 12.0 -1.6**
VRHR e*PP pP 21 42 57.9 +0.8
VRHR eS S 21 49 59.6 -4.9
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=Z,60nm,0.7s,mb5.2
VRHR pmax pmax
comp=E,3.0nm,0.3s
VRHR smax
comp=E,120nm,1.3s
VRHR smax
comp=N,30nm,0.6s
VRHR smax
comp=Z,10.0nm,0.6s
DGAR Diego Garcia 73.72 252 eP **P 21 41 14.1 -0.4**
DGAR e*PP pP 21 42 58.1 0.0
ARQ Araqi 73.78 288 P **P 21 41 15.4 +0.6**
SNR=23
NAZ Nazwa, Dubai 73.85 290 P **P 21 41 16.0 +0.9**
SNR=6.5
PGC Sidney 73.92 43 eP **P 21 41 16.2 +1.1**
comp=Z,15nm,1.8s,mb4.2
PGC epP pP 21 43 04.9 +6.2
NLWA Neilton Lookou 74.17 45⇓P P 21 41 17.6 +1.0
baz=74,SNR=34
NLWA Neilton Lookou 74.17 45⇑eP P 21 41 17.7 +1.2
NLWA epP pP 21 43 01.6 +1.4
NLWA sP sP 21 43 53.1 +2.1
NLWA ePP PP 21 44 08.7 -1.4
MCW Mount Constitu 74.29 43 P **P 21 41 18.0 +0.8**
URZ Urewera 74.44 150 P **P 21 41 16.9 -1.1**
comp=Z,33nm,0.6s,mb5.1,baz=5.8,slow=1.3,SNR=17
URZ Urewera 74.44 150 eP **P 21 41 17.4 -0.6**
comp=Z,34nm,0.6s,mb5.0
A05A Maple Falls 74.61 43⇑P P 21 41 18.8 -0.2
baz=74
E03A Lebam 74.71 45⇓P P 21 41 20.1 +0.5
baz=75
OBN Obninsk 74.71 325 P **P 21 41 18.6 -0.8**
comp=Z,273nm,0.8s,mb5.8,SNR=8.0
OBN Obninsk 74.71 325d iP P 21 41 18.5 -0.9
OBN i 21 41 33.8
OBN i *PP pP 21 43 04.9 +1.6
OBN i *SP sP 21 44 00.6 +6.6
OBN i 21 44 12.7
OBN i S S 21 50 13.5 -2.2
OBN pmax pmax
comp=Z,36nm,0.8s,mb5.0
OBN Obninsk 74.71 325 eP **P 21 41 18.5 -0.9**
comp=Z,34nm,0.8s,mb4.9
OBN epP pP 21 43 04.5 +1.2
GNW Green Mountain 74.75 44 P **P 21 41 20.6 +0.7**
CMW Cultus Mountai 74.83 43 P **P 21 41 21.1 +0.9**
DAG Danmarks Havn 74.85 355⇓iP P 21 41 19.0 -0.9
DAG i pP 21 43 02.8 -1.0
DAG Danmarks Havn 74.85 355⇓iP P 21 41 19.0 -0.9
comp=Z,47nm,1.9s,mb4.7
DAG i pP 21 43 02.8 -1.0
F03A Seaside 74.97 46⇑P P 21 41 21.1 +0.1
baz=75
VSR Storozhevoye 75.02 320 eP **P 21 41 20.5 -0.8**
VSR e*PP pP 21 43 06.9 +1.7
VSR eS S 21 50 15.2 -4.1
VSR e 21 50 43.0
VSR pmax pmax
comp=N,20nm,0.9s
VSR pmax pmax
comp=E,30nm,0.9s
VSR pmax pmax
comp=Z,50nm,0.9s,mb5.0
VSR smax
comp=N,1µm,3.7s

VSR smax
comp=E,660nm,3.7s
VSR smax
comp=Z,330nm,3.7s
JCW Jim Creek 75.04 43 P **P 21 41 22.1 +0.6**
VORD Divnogorie 75.06 320 eP **P 21 41 20.8 -0.7**
VORD e*PP pP 21 43 07.2 +1.7
VORD eS S 21 50 15.5 -4.2
VORD eS S 21 50 15.5 -4.2
VORD e 21 50 43.2
VORD pmax pmax
comp=E,4.0nm,0.6s
VORD pmax pmax
comp=Z,10.0nm,0.6s,mb4.5
VORD pmax pmax
comp=N,2.0nm,0.3s
VORD smax
comp=E,500nm,3.0s
VORD smax
comp=Z,160nm,3.0s
VORD smax
comp=N,880nm,3.0s
DGRG David-gareji 75.20 309 P **P 21 41 24.0 +1.5**
DGRG S S 21 50 17.6 -4.0
D05A Enumclaw 75.42 44⇑P P 21 41 24.4 +0.8
baz=75,SNR=11
MTA Mtatsminda 75.50 310 P **P 21 41 23.6 -0.6**
MTA S S 21 50 21.8 -3.1
TBLG Delisi 75.53 310 P **P 21 41 23.8 -0.5**
TBLG Delisi 75.53 310 P **P 21 41 23.8 -0.5**
ZEI Tsey 75.67 311 eP **P 21 41 23.9 -1.1**
ZEI pmax pmax
comp=Z,27nm,0.9s,mb4.8
F04A Amboy 75.69 46⇓P P 21 41 25.5 +0.4
baz=76
COR Corvallis 75.69 47 eP **P 21 41 26.0 +0.9**
COR e*PP pP 21 43 16.8 +7.5
LON Longmire 75.72 45 P **P 21 41 25.3 0.0**
KEBM Edson Butte 75.72 49 eP **P 21 41 27.1 +1.7**
comp=Z,730nm,2.0s,mb5.9
WRW Wenatchee Ridg 75.82 43 P **P 21 41 26.8 +1.0**
KEH Kehvi 75.83 310 P **P 21 41 24.8 -1.2**
KAF Kangasniemi 75.90 334 eP **P 21 41 24.7 -1.2**
KAF Kangasniemi 75.90 334 ep **P 21 41 24.7 -1.2**
G04A Mulino 75.96 46⇑P P 21 41 27.4 +0.8
baz=76
KIV Kislovodsk 75.97 312 P **P 21 41 27.1 +0.4**
comp=Z,225nm,0.8s,mb5.8,SNR=9.5
KIV Kislovodsk 75.97 312d iP P 21 41 26.6 -0.1
KIV e*PP pP 21 43 13.5 +2.5
KIV eS S 21 50 28.2 -1.6
KIV pmax pmax
comp=Z,33nm,0.9s,mb4.9
KIV MLR MLR
comp=Z,402nm,19.0s
KIV Kislovodsk 75.97 312 eP **P 21 41 26.4 -0.3**
KIV epP pP 21 43 12.8 +1.8
KIV esP sP 21 44 02.4 +0.7
KIV ePP PP 21 44 24.9 -0.2
KIV Kislovodsk 75.97 312 P **P 21 41 27.9 +1.2**
SNR=14
KIV P 21 41 27.9
SNR=14
SNZO South Karori 76.00 154 eP **P 21 41 25.9 -0.8**
SNZO epP pP 21 43 12.5 +1.4
ONI Oni 76.04 311 P **P 21 41 28.0 +0.8**
ONI S S 21 50 29.7 -0.8
GNI Garni 76.18 308deP **P 21 41 28.7 +0.8**
GNI pmax pmax
comp=Z,48nm,2.5s
GNI Garni 76.18 308 eP **P 21 41 29.1 +1.1**
comp=Z,22nm,0.9s,mb4.7
GNI epP pP 21 43 12.7 +0.4
ETW Entiat 76.26 43 eP **P 21 41 28.6 +0.4**
ETW epP pP 21 43 13.9 +1.3
TBM Table Mountain 76.29 44 P **P 21 41 28.8 +0.4**
FINES FINESS Array B 76.36 333 P **P 21 41 27.6 -0.9**
comp=Z,32nm,0.3s,mb5.3,baz=75,slow=4.8,SNR=343
FINES S S 21 50 30.4 -2.9
comp=Z,4.4nm,0.7s,baz=48,slow=16,SNR=8.9
FINES FINESS Array B 76.36 333 P **P 21 41 27.6 -0.9**
FINES S S 21 50 30.4 -2.9
H04A Detroit Lake 76.37 47⇓P P 21 41 28.8 -0.1
baz=76
WTV Waterville 76.45 43 P **P 21 41 29.8 +0.6**
KHZ Kahutara 76.50 155 eP **P 21 41 27.8 -1.6**
comp=Z,62nm,0.7s,mb5.2
KHZ epP pP 21 43 15.2 +1.2
KHZ esP sP 21 44 05.9 +1.6
B08A Colville Reser 76.53 42⇑P P 21 41 29.8 +0.1
baz=76
RPZ Rata Peaks 76.73 157 P **P 21 41 29.8 -0.9**
comp=Z,95nm,0.7s,mb5.4,baz=1.5,slow=3.3,SNR=34
RPZ Rata Peaks 76.73 157 P **P 21 41 29.8 -0.9**
HUMO Hull Mountain 76.76 49 eP **P 21 41 31.8 +0.7**
HUMO epP pP 21 43 19.0 +3.4
KHMM Horse Mountain 76.98 51 eP **P 21 41 34.2 +1.8**
comp=Z,293nm,1.9s,mb5.5
E07A Sunnyside 77.02 44⇓P P 21 41 32.7 +0.3
baz=77,SNR=9.8
MLZ Mavora Lakes 77.25 160 P **P 21 41 33.9 +0.4**
RSW Rattlesnake Hi 77.25 44 eP **P 21 41 34.1 +0.4**
RSW epP pP 21 43 19.9 +1.4
F07A Phinny Hill Vi 77.27 45⇑P P 21 41 34.2 +0.4
baz=77
HAWA Hanford 77.29 44 eP **P 21 41 34.0 0.0**
HAWA ePP PP 21 44 33.3 -2.7
YBH Yreka Blue Hor 77.30 50⇑eP P 21 41 34.6 +0.5
comp=Z,246nm,1.9s,mb5.4
YBH epP pP 21 43 21.3 +2.5
YBH ePP PP 21 44 39.8 +3.6
OD2 Odessa Site #2 77.34 43 eP **P 21 41 34.4 +0.2**
OD2 epP pP 21 43 19.9 +1.0
D08A Wollman Farm, 77.36 43⇑P P 21 41 34.4 +0.1
baz=77,SNR=34
C09A Chrisman Ranch 77.41 43⇑P P 21 41 34.6 0.0
baz=77
VIPM Ingram Point 77.45 46 P **P 21 41 35.5 +0.7**
E08A Dider Farm, El 77.54 44⇓P P 21 41 35.4 +0.1
baz=77,SNR=10
EDM Edmonton 77.58 36 eP **P 21 41 35.1 -0.3**
EDM e*PP pP 21 43 20.7 +0.5
EDM e 21 44 41.6
KCPM Cahto Peak 77.59 52 eP **P 21 41 37.2 +1.5**
comp=Z,54nm,1.1s,mb4.9
KCPM epP pP 21 43 25.5 +5.0
VSU Vasula 77.73 330c iP P 21 41 35.5 -0.5
VSU pmax pmax
comp=Z,22nm,0.8s,mb4.6
NEW Newport 77.88 42⇑eP P 21 41 37.3 +0.2
NEW e*PP pP 21 43 22.8 +0.8
NEW pmax pmax
comp=Z,35nm,0.7s
NEW Newport 77.88 42⇑eP P 21 41 37.3 +0.2
comp=Z,35nm,0.7s,mb4.9
NEW epP pP 21 43 22.8 +0.8
WDC Whiskeytown Da 77.92 51 eP **P 21 41 37.3 -0.2**
WDC e*PP pP 21 43 23.6 +1.2
SOC Sochi 78.07 313d iP P 21 41 37.2 -1.0
SOC e 21 41 44.2
SOC i *PP pP 21 43 27.0 +3.8
SOC e*SP sP 21 44 17.2 +3.6
SOC i S S 21 50 48.0 -4.1
SOC e 21 51 07.5
SOC pmax pmax
comp=Z,26nm,0.6s,mb4.8
K05A Summer Lake 78.07 48⇓P P 21 41 39.1 +0.8
baz=78
E09A Wood Farm, Sta 78.09 44⇑P P 21 41 38.1 -0.1
baz=78,SNR=20
G08A Pilot Rock 78.15 45⇑P P 21 41 38.8 +0.2
baz=78
HOPS Hopland 78.25 52 eP **P 21 41 40.0 +0.7**
HOPS epP pP 21 43 25.7 +1.3
LNOR Lincton Mounta 78.30 44 eP **P 21 41 39.9 +0.5**
LNOR e*PP pP 21 43 27.3 +2.8
C11A Tepee Creek (N 78.59 42⇓P P 21 41 41.1 +0.2
baz=78
KBD Kabd 78.60 297 eP **P 21 41 41.0 -0.3**
KBD AMb AMB 21 41 42.5
comp=Z,83nm,0.4s,mb5.6
MCCM Marconi Confer 78.76 53 P **P 21 41 42.8 +0.7**
RDF Al-Radifah 78.82 297 eP **P 21 41 42.5 -0.1**
RDF AMb AMB 21 41 44.0

comp=Z,273nm,0.7s,mb5.9
MOD Modoc 78.83 49 *e*P **P 21 41 42.8 +0.4**
MOD *ep*P pP 21 43 33.4 +5.8
MOD *e*PP PP 21 44 50.3 +1.5
F10A Beach Ranch, E 78.90 44 ⇊P **P 21 41 42.6 0.0**
baz=79,SNR=17
ANN Anapa 78.97 315 *e*P **P 21 41 42.4 -0.6**
ANN *e**PP pP 21 43 30.8 +2.5
ANN *e* 21 44 51.5
ANN *i* S S 21 50 58.1 -3.3
ANN *e*SS SS 21 56 17.7 -1.5
ANN *e*SSS 21 59 45.5
ANN pmax pmax
comp=Z,72nm,1.0s,mb5.2
C12B Naegeli Ranch, 79.12 42 ⇑P **P 21 41 43.7 0.0**
baz=79,SNR=7.0
A13A Flathead Natio 79.13 40 ⇊P **P 21 41 43.7 0.0**
baz=79
OHCM Honcut 79.20 51 *e*P **P 21 41 44.7 +0.3**
OHCM *ep*P pP 21 43 32.0 +2.3
WALA Waterton Lakes 79.36 40⇑*e*P **P 21 41 45.5 +0.5**
comp=Z,0.9nm,0.6s
WALA *ep*P pP 21 43 31.0 +0.6
WALA *es*P sP 21 44 27.2 +6.5
J08A Circle Bar Ran 79.36 47 ⇊P **P 21 41 45.5 +0.4**
baz=79
B13A Whitefish 79.38 41 ⇊P **P 21 41 45.6 +0.5**
baz=79,SNR=39
BHD Baghdad 79.39 302 *i* x x 21 41 49.4
BHD *ex* x 21 41 55.0
BHD *i* x x 21 50 57.0
BMO Blue Mountains 79.39 45⇑*i*P **P 21 41 45.6 +0.4**
BMO *ep*P pP 21 43 30.9 +0.3
BSMT Bassoo Peak 79.45 41 *e*P **P 21 41 46.2 +0.7**
BSMT *ep*P pP 21 43 29.3 -1.7
IZAR Zarasai 79.46 328 *e*P **P 21 41 45.1 -0.3**
IZAR AMB AMB 21 41 46.5
comp=Z,13nm,0.7s,mb4.6
IZAR *e*S S 21 51 04.6 -1.6
IDID Didziasalis 79.47 328 *e*P **P 21 41 45.3 -0.2**
IDID AMB AMB 21 41 47.3
comp=Z,13nm,0.8s,mb4.5
IDID *e*S S 21 51 02.2 -4.1
D12A Red Ives Fores 79.51 42 ⇊P **P 21 41 45.8 0.0**
baz=79
C13A Hot Springs 79.66 41 ⇑P **P 21 41 46.9 +0.3**
baz=80
A14A Double T Ranch 79.68 40 ⇊P **P 21 41 47.0 +0.3**
baz=80,SNR=44
WVOR Wild Horse Val 79.69 47⇑*i*P **P 21 41 47.2 +0.3**
E12A Beaver Dam Sad 79.70 43 ⇊P **P 21 41 47.1 +0.3**
baz=80
IIGN Ignalina 79.70 328 *e*P **P 21 41 46.5 -0.2**
IIGN AMB AMB 21 41 47.7
comp=Z,8.1nm,0.7s,mb4.4
IIGN *e*S S 21 51 04.4 -4.2
JTMT Jette 79.80 41 *e*P **P 21 41 47.9 +0.5**
JTMT *ep*P pP 21 43 34.5 +1.6
YBMT Yellow Bay 79.90 41 *e*P **P 21 41 46.4 -1.4**
YBMT *ep*P pP 21 43 35.3 +1.9
SUMG Summit 79.91 359 *e*P **P 21 41 48.1 +0.7**
SUMG *ep*P pP 21 43 34.6 +1.5
SUMG Summit 79.91 359 *i*P **P 21 41 47.1 -0.4**
comp=Z,14nm,0.6s,mb4.7
SUMG *i* pP 21 43 38.4 +5.3
SUMG *i* S S 21 51 09.5 -0.7
SUMG
comp=Z,530nm,22.0s
D13A Huson 80.02 42 ⇑P **P 21 41 48.2 -0.3**
baz=80,SNR=15
A15A Johnson Ranch, 80.06 40 ⇊P **P 21 41 48.6 -0.2**
baz=80,SNR=52
B14A Marquette Ranc 80.07 40 ⇊P **P 21 41 49.5 +0.7**
baz=80,SNR=33
SWMT Swartz Lake 80.08 41 *e*P **P 21 41 49.0 +0.1**
SWMT *ep*P pP 21 43 35.0 +0.5
C14A Swan Lake 80.10 41 ⇑P **P 21 41 49.1 +0.2**
baz=80
F12A Elk City 80.21 43 ⇑P **P 21 41 49.4 -0.2**
baz=80,SNR=113
SAO San Andreas Ge 80.40 54 *ep*P pP 21 43 37.4 +0.9
SAO *es*P sP 21 44 28.0 +1.3
WCN Washoe City 80.41 51 ⇊P **P 21 41 50.6 -0.1**
baz=80
J10A Berg Farm, Mel 80.42 46 ⇊P **P 21 41 50.6 0.0**
baz=80
MSO Missoula 80.46 42 *e*P **P 21 41 50.8 -0.1**
MSO *ep*P pP 21 43 42.1 +5.5
PAHR Pah Rah Range 80.47 50 *e*P **P 21 41 51.4 +0.4**
comp=Z,38nm,1.0s,mb4.9
PAHR *ep*P pP 21 43 38.5 +1.7
G12A Big Creek, Yel 80.48 44 ⇑P **P 21 41 50.7 -0.3**
baz=80
B15A Bradely Ranch, 80.51 40 ⇊P **P 21 41 51.0 0.0**
baz=80,SNR=85
E13A Victor 80.51 42 ⇑P **P 21 41 50.6 -0.5**
baz=80,SNR=11
SLMT Seeley Lake 80.52 41 *e*P **P 21 41 51.1 0.0**
SLMT *ep*P pP 21 43 36.2 -0.7
SLMT *es*P sP 21 44 28.5 +1.4
CMB Columbia Colle 80.56 52⇑*i*P **P 21 41 50.9 -0.6**
CMB *e**PP pP 21 43 37.0 -0.3
CMB *e* 21 45 01.6
CMB pmax pmax
comp=Z,206nm,1.9s,mb5.3
CMB Columbia Colle 80.56 52⇑*i*P **P 21 41 50.9 -0.6**
comp=Z,206nm,1.9s,mb5.3
CMB *ep*P pP 21 43 37.0 -0.3
CMB *e*PP PP 21 45 01.6 -1.5
D14A Greenough 80.59 42 ⇑P **P 21 41 51.0 -0.5**
baz=80,SNR=17
K10A MacKenzie Ranc 80.67 47 ⇑P **P 21 41 52.7 +0.7**
baz=80,SNR=57
I11A Placerville 80.69 45 ⇊P **P 21 41 51.8 -0.3**
baz=80,SNR=17
A16A West Butte Ran 80.72 39 ⇊P **P 21 41 51.5 -0.7**
baz=80,SNR=103
F13A Darby 80.76 43 ⇑P **P 21 41 51.7 -0.7**
baz=81,SNR=65
C15A Salmond Ranch, 80.76 41 ⇑P **P 21 41 52.2 -0.1**
baz=81
AKASG Malin Array Be 80.76 323 P **P 21 41 51.1 -1.2**
comp=Z,5.6nm,0.3s,mb4.5,baz=51,slow=5.1,SNR=43
AKASG *ep*P pP 21 43 41.7 +3.5
comp=Z,4.8nm,0.6s,baz=48,slow=5.8,SNR=4.2
AKASG S S 21 51 15.1 -4.5
comp=Z,3.3nm,0.9s,baz=48,slow=9.4,SNR=9.1
AKASG PKKPbc PKKPbc 22 00 25.6 -2.3
comp=Z,1.7nm,0.5s,baz=258,slow=3.3,SNR=8.4
AKASG Malin Array Be 80.76 323 P **P 21 41 51.1 -1.2**
AKASG *PP pP 21 43 41.7 +3.5
AKASG S S 21 51 15.1 -4.5
AKBB Malin Array Si 80.76 323 *e*P **P 21 41 51.1 -1.2**
AKBB *e**PP pP 21 43 39.2 +1.0
AKBB *e**SP sP 21 44 28.9 +0.5
AKBB *e* 21 45 03.7
KIEV Kiev 80.77 323 *e*P **P 21 41 51.4 -1.0**
KIEV *e**PP pP 21 43 38.3 +0.1
KIEV pmax pmax
comp=Z,23nm,0.7s,mb4.8
KIEV Kiev 80.77 323 *e*P **P 21 41 51.4 -0.9**
comp=Z,23nm,0.7s,mb4.8
KIEV *ep*P pP 21 43 38.3 +0.1
CHMT Chamberlain Mo 80.83 42 *e*P **P 21 41 52.4 -0.4**
CHMT *ep*P pP 21 43 39.0 +0.4
B16A M & M Farms, S 80.94 40 ⇑P **P 21 41 52.8 -0.5**
baz=81,SNR=55
E14A Clinton 80.94 42 ⇊P **P 21 41 53.1 -0.3**
baz=81,SNR=27
SIM Simferopol' 80.95 316d*i*P **P 21 41 53.1 -0.3**
SIM *e**PP pP 21 43 46.8 +7.4
SIM *i* S S 21 51 19.0 -2.8
SIM *e*SS SS 21 56 52.0 +3.5
SIM *e*SSS 22 00 16.0
SIM pmax pmax
comp=Z,26nm,0.8s,mb4.8
WAKR Walker 81.00 51 *e*P **P 21 41 54.4 +0.5**
MFID Camas Ranch 81.02 46 ⇊P **P 21 41 54.2 +0.4**
baz=81,SNR=74
H12A Diamond D Ranc 81.06 44 P **P 21 41 53.9 -0.1**
baz=81,SNR=60
SCO Scoresbysund 81.15 354 *i*P **P 21 41 52.8 -1.1**
SCO Scoresbysund 81.15 354 *i*P **P 21 41 52.8 -1.1**
comp=Z,10nm,0.8s,mb4.4
SCO
comp=Z,430nm,21.0s
G13A Cobalt 81.17 44 ⇊P **P 21 41 54.2 -0.3**
baz=81,SNR=69
D15A Lincoln 81.19 41 ⇑P **P 21 41 54.3 -0.3**
baz=81,SNR=15
K11A Parker Ranch, 81.21 46 ⇑P **P 21 41 54.7 -0.1**
baz=81,SNR=45
A17A Triple J Farms 81.22 39 P **P 21 41 54.8 0.0**
baz=81,SNR=60
C16A Fuhringer Ranc 81.24 40 ⇑P **P 21 41 54.2 -0.7**
baz=81,SNR=72
L10A Juniper Basin 81.27 47 ⇑P **P 21 41 55.3 +0.1**
baz=81,SNR=27
I12A Atlanta 81.27 45 ⇊P **P 21 41 54.8 -0.2**
baz=81,SNR=56
F14A Wisdom 81.32 43 ⇑P **P 21 41 55.1 -0.2**
baz=81,SNR=11
H13A Challis 81.42 44 ⇊P **P 21 41 55.3 -0.6**
baz=81
E15A Deer Lodge 81.44 42 ⇊P **P 21 41 55.6 -0.3**
baz=81,SNR=75
M10A I.L. Ranch, Tu 81.50 48 ⇊P **P 21 41 56.4 +0.1**
baz=81,SNR=28
B17A L&G Farms, Che 81.52 40 ⇑P **P 21 41 56.0 -0.2**
baz=81,SNR=165
J12A Stokes Ranch, 81.56 45 ⇊P **P 21 41 56.6 0.0**
baz=81,SNR=26
BMN Battle Mountai 81.58 49 *e*P **P 21 41 56.8 0.0**
BMN *e**PP pP 21 43 42.0 -0.9
L11A Cat Creek Ranc 81.69 47 ⇊P **P 21 41 56.8 -0.5**
baz=82,SNR=97
A18A Metzger Ranch, 81.71 39 ⇑P **P 21 41 57.1 -0.2**
baz=82,SNR=88
HRY Holter Researc 81.77 41 *e*P **P 21 41 58.0 +0.5**
HRY *ep*P pP 21 43 44.6 +0.8
NVAR Mina Array Bea 81.82 51 P **P 21 41 58.3 +0.2**
comp=Z,30nm,0.5s,mb5.1,baz=292,slow=5.7
NVAR pP pP 21 43 43.5 -0.7
comp=Z,7.2nm,0.7s,baz=285,slow=5.2,SNR=4.2
F15A Butte 81.83 42 ⇑P **P 21 41 58.0 0.0**
baz=82,SNR=88
HLID Hailey 81.83 45 ⇑P **P 21 41 58.6 +0.6**
baz=82,SNR=67
HLID Hailey 81.83 45 *e*P **P 21 41 58.7 +0.7**
I13A Wildhorse Cree 81.84 45 ⇊P **P 21 41 58.8 +0.8**
baz=82,SNR=54
LRM Limekiln Ridge 81.87 42 *e*P **P 21 41 58.6 +0.5**
LRM *ep*P pP 21 43 43.8 -0.6
C17A Wharram Farm, 81.89 40 ⇊P **P 21 41 57.5 -0.7**
baz=82,SNR=37
SUW Suwalki 81.92 328 *e*P **P 21 41 57.3 -0.9**
SUW Suwalki 81.92 328 *e*P **P 21 41 57.2 -1.0**
SUW *e**PP pP 21 43 44.7 +0.3
SUW *e**SP sP 21 44 35.6 +1.1
SUW pmax pmax
comp=Z,30nm,0.8s,mb4.9
SUW Suwalki 81.92 328 *e*P **P 21 41 57.2 -1.0**
comp=Z,30nm,0.8s,mb4.9
SUW *ep*P pP 21 43 44.7 +0.3
SUW *es*P sP 21 44 35.6 +1.1
H14A Leadore 81.94 44 ⇑P **P 21 41 58.4 -0.1**
baz=82,SNR=14
E16A East Helena 81.95 41 ⇑P **P 21 41 58.1 -0.5**
baz=82,SNR=9.7
K12A Draper Farm, C 82.00 46 ⇊P **P 21 41 58.6 -0.2**
baz=82,SNR=24
DLMT Dillon 82.02 43⇑*e*P **P 21 41 59.1 +0.1**
comp=Z,153nm,1.8s,mb5.2
DLMT *ep*P pP 21 43 46.2 +1.0
M11A Holland Ranch, 82.03 47 ⇑P **P 21 41 59.8 +0.7**
baz=82,SNR=17
B18A Beardsley Farm 82.03 39 ⇑P **P 21 41 58.2 -0.7**
baz=82,SNR=90
J13A Cove Ranch, Pi 82.07 45 ⇊P **P 21 41 59.9 +0.7**
baz=82,SNR=149
O10A Cortez Mining, 82.13 49 ⇑P **P 21 41 59.6 0.0**
baz=82,SNR=7.7
MCMT McKenzie Canyo 82.15 43 *e*P **P 21 41 60.0 +0.4**
comp=Z,4.1nm,0.6s,mb4.1
MCMT *ep*P pP 21 43 46.5 +0.6
MCMT sP sP 21 44 38.3 +2.3
NB2 NORSAR Subarra 82.16 337 P **P 21 41 57.8 -1.5**
comp=Z,27nm,0.7s,mb4.9,baz=48,slow=4.8
NB2 NORSAR Subarra 82.16 337 P **P 21 41 57.8 -1.5**
baz=48,slow=4.8
NB2 NORSAR Subarra 82.16 337 P **P 21 41 57.8 -1.5**
NB2 NORSAR Subarra 82.16 337 P **P 21 41 57.8 -1.5**
NOA NORSAR Array B 82.16 337 P **P 21 41 58.0 -1.3**
comp=Z,28nm,0.7s,mb4.9,baz=47,slow=4.9,SNR=96
NOA pP pP 21 43 48.5 +2.9
comp=Z,6.2nm,0.7s,baz=42,slow=5.3,SNR=4.0
NOA S S 21 51 27.2 -6.1
comp=Z,1.3nm,0.8s,baz=145,slow=13,SNR=3.9
NOA NORSAR Array B 82.16 337 P **P 21 41 58.0 -1.3**
NOA pP pP 21 43 48.5 +2.9
NOA S S 21 51 27.2 -6.1
MTUM Tungsten Hills 82.16 52 *e*P **P 21 42 00.7 +0.9**
MTUM *ep*P pP 21 43 51.2 +5.1
L12A House Creek Ra 82.17 46 ⇊P **P 21 42 00.7 +0.9**
baz=82,SNR=45
G15A Dillon 82.19 43 ⇊P **P 21 41 59.8 +0.1**
baz=82,SNR=18
D17A Six Diamond Ra 82.19 40 ⇑P **P 21 41 59.9 +0.1**
baz=82,SNR=69
I14A Mackay 82.25 44 ⇑P **P 21 42 01.1 +1.0**
baz=82,SNR=142
EGMT Eagleton 82.25 39 ⇑P **P 21 41 59.9 -0.1**
baz=82,SNR=46
EGMT Eagleton 82.25 39 *e*P **P 21 42 00.1 +0.1**
FFC Flin Flon 82.31 31 P **P 21 41 59.4 -0.8**
comp=Z,132nm,0.6s,mb5.6,SNR=13
FFC Flin Flon 82.31 31 *i*P **P 21 42 00.1 -0.1**
FFC Flin Flon 82.31 31⇑*e*P **P 21 41 59.3 -0.9**
FFC *ep*P pP 21 43 46.1 -0.5
N11A Elko Archery C 82.37 48 ⇑P **P 21 42 01.1 +0.3**
baz=82,SNR=6.0
F16A Kennard Place, 82.38 42 ⇑P **P 21 42 00.8 0.0**
baz=82,SNR=58
H15A Lima 82.38 43 ⇊P **P 21 42 00.7 -0.1**
baz=82,SNR=14
NAO01 NORSAR Array S 82.41 337 *e*P **P 21 41 59.3 -1.2**
comp=Z,17nm,0.7s,mb4.7
NAO01 *ep*P pP 21 43 47.1 +0.2
BOZ Bozeman (W) 82.45 42 ⇊P **P 21 42 01.4 +0.3**
baz=82,SNR=49
BOZ Bozeman (W) 82.45 42⇑*e*P **P 21 42 01.3 +0.2**
BOZ *ep*P pP 21 43 47.7 +0.2
BOZ *es*P sP 21 44 40.3 +2.7
BOZ *e*PP PP 21 45 19.5 +1.4
E17A Martinsdale 82.47 41 ⇑P **P 21 42 01.2 0.0**
baz=82,SNR=57
P10A Eureka 82.48 49 ⇊P **P 21 42 00.6 -0.8**
baz=82,SNR=6.1
K13A Stover Farm, H 82.51 46 ⇑P **P 21 42 02.1 +0.7**
baz=82,SNR=19
VES Vestal, Richgr 82.52 54 ⇑P **P 21 42 01.4 -0.3**
baz=82,SNR=16
J14A Carey 82.52 45 ⇊P **P 21 42 02.6 +1.1**
baz=82,SNR=95
G16A Moss Hill, Enn 82.57 43 ⇑P **P 21 42 02.0 +0.3**
baz=82,SNR=47
M12A Wells 82.61 47 ⇑P **P 21 42 02.3 +0.3**
baz=82,SNR=90
D18A Linhart Farms, 82.68 40 ⇑P **P 21 42 02.5 +0.3**
baz=82,SNR=36
ELK Elko 82.73 48⇑*e*P **P 21 42 03.1 +0.5**
ELK *ep*P pP 21 43 47.7 -1.5
ELK *e*PP PP 21 45 19.5 -1.1
O11A Cowboy Ranch, 82.77 48 ⇊P **P 21 42 03.1 +0.3**
baz=83,SNR=27
I15A Monteview 82.80 44 ⇊P **P 21 42 02.9 0.0**
baz=83,SNR=31
N12A Clover Valley, 82.81 48 ⇑P **P 21 42 03.3 +0.3**
baz=83,SNR=15
N12A Clover Valley, 82.81 48⇑*e*P **P 21 42 03.8 +0.8**
N12A *ep*P pP 21 43 48.6 -1.0
N12A *e*PP PP 21 45 19.0 -2.3
F17A Fitzpatrick Pl 82.88 42 ⇊P **P 21 42 03.2 -0.1**
baz=83,SNR=28
L13A Double Diamond 82.89 46 ⇊P **P 21 42 04.4 +1.0**
baz=83
Q10A Clear Creek Ra 82.92 50 ⇑P **P 21 42 03.7 0.0**
baz=83,SNR=14
FCC Fort Churchill 82.95 25⇑*e*P **P 21 42 01.9 -1.4**
FCC *e**PP pP 21 43 47.3 -2.6
FCC *e**SP sP 21 44 39.7 -0.2
FCC *e* 21 45 21.5
E18A Harlowton 82.96 41 ⇑P **P 21 42 03.2 -0.4**
baz=83,SNR=134
P11A Circle Ranch, 82.99 49 ⇑P **P 21 42 04.3 +0.3**
baz=83,SNR=11
KIS Kishinev 83.01 320 LRM 21 37 30.0
comp=Z,300nm,16.0s
KIS Kishinev 83.01 320 *e*P **P 21 42 03.0 -0.9**
KIS *ep*P pP 21 43 50.0 -0.5
KIS *i* S S 21 51 36.0 -6.4
comp=Z,400nm,2.0s
KIS *es*S sS 21 54 50.0 -2.3
KIS LRM 22 25 00.0
comp=Z,400nm,15.0s
ISA Isabella 83.04 53 ⇑P **P 21 42 03.5 -0.8**
baz=83,SNR=7.4
ISA Isabella 83.04 53 *e*P **P 21 42 03.1 -1.2**
ISA *e**PP pP 21 43 50.3 -0.6
ISA pmax pmax
comp=Z,19nm,0.9s,mb4.6
ISA Isabella 83.04 53 *e*P **P 21 42 03.1 -1.2**
comp=Z,19nm,0.9s,mb4.6
ISA *ep*P pP 21 43 50.3 -0.5
ARVC Arvin 83.04 54 ⇊P **P 21 42 03.8 -0.5**
baz=83,SNR=6.5
M13A Montello 83.12 47 ⇑P **P 21 42 05.2 +0.6**
baz=83,SNR=15
M13A Montello 83.12 47⇑*e*P **P 21 42 05.4 +0.9**
M13A *ep*P pP 21 43 52.0 +0.9
M13A *es*P sP 21 44 44.9 +3.7
K14A Jones Ranch, D 83.14 45 ⇑P **P 21 42 05.2 +0.6**
baz=83,SNR=77
J15A Blackfoot 83.15 44 ⇊P **P 21 42 05.4 +0.7**
baz=83,SNR=65
G17A Pierce Place, 83.15 42 ⇑P **P 21 42 05.1 +0.4**
baz=83,SNR=9.2
GRAC Grapevine Rang 83.16 52 ⇑P **P 21 42 05.4 +0.6**
baz=83,SNR=5.5
H16A Russell Place, 83.18 43 ⇊P **P 21 42 05.5 +0.7**
baz=83,SNR=38
S10A Tonopah Range, 83.24 51 ⇑P **P 21 42 04.7 -0.5**
baz=83,SNR=39
R10A Warm Springs 83.26 50 ⇊P **P 21 42 04.7 -0.6**
baz=83,SNR=29
N13A Wendover, West 83.35 47 ⇑P **P 21 42 05.4 -0.4**
baz=83,SNR=8.7
N13A Wendover, West 83.35 47⇑*e*P **P 21 42 06.3 +0.5**
N13A *ep*P pP 21 43 52.3 -0.1
N13A *es*P sP 21 44 42.3 -0.1
N13A *e*PP PP 21 45 25.0 -0.6
L14A Malta 83.36 46 ⇑P **P 21 42 06.2 +0.4**
baz=83,SNR=54
BLG Laguna Peak 83.36 55 ⇑P **P 21 42 05.5 -0.4**
baz=83
OSI Osito Adit 83.37 54 ⇑P **P 21 42 05.8 -0.2**
baz=83,SNR=5.1
OSI Osito Adit 83.37 54 *e*P **P 21 42 06.1 +0.1**
comp=Z,28nm,0.7s,mb4.9
OSI *ep*P pP 21 43 53.5 +0.9
YMR Madison River 83.37 43 *e*P **P 21 42 05.9 +0.1**
comp=Z,53nm,0.8s,mb5.1
YMR *ep*P pP 21 43 54.8 +2.3
YMR *es*P sP 21 44 43.6 +1.1
YMR *e*PP PP 21 45 25.9 +0.3
Q11A Duckwater 83.42 50 ⇑P **P 21 42 06.2 +0.1**
baz=83,SNR=32
F18A Big Timber 83.44 41 ⇑P **P 21 42 05.7 -0.3**
baz=83,SNR=42
K15A Arbon 83.47 45 ⇊P **P 21 42 06.8 +0.5**
baz=83,SNR=35
I16A Newdale 83.48 44 ⇊P **P 21 42 06.1 -0.3**
baz=83,SNR=33
YNR Norris Junctio 83.52 43 *e*P **P 21 42 07.0 +0.6**
GCMT Greycliff 83.53 41 *e*P **P 21 42 06.8 +0.3**
comp=Z,19nm,1.0s,mb4.6
GCMT *ep*P pP 21 43 55.6 +2.3
MPMC Manual Prospec 83.54 53 ⇑P **P 21 42 06.7 -0.1**
baz=83,SNR=44
YFT Old Faithful 83.56 43⇑*e*P **P 21 42 09.2 +2.5**
comp=Z,58nm,0.9s,mb5.1
YFT *ep*P pP 21 44 02.3 +8.8
M14A Sheep Mountain 83.57 46 ⇑P **P 21 42 06.8 0.0**
baz=83,SNR=24
P12A McGill 83.60 49 ⇊P **P 21 42 07.3 +0.3**
baz=84
LRMC Laurel Mountai 83.69 53 ⇊P **P 21 42 07.5 0.0**
baz=84,SNR=40
R11A Troy Canyon, C 83.71 50 ⇊P **P 21 42 07.7 +0.1**
baz=84,SNR=69
KONO Kongsberg 83.72 337 *e*P **P 21 42 07.1 -0.1**
KONO *e**PP pP 21 43 54.7 +0.7
J16A Bone 83.73 44 ⇊P **P 21 42 07.9 +0.3**
baz=84,SNR=37
EDW2 Edwards Air Fo 83.77 54 ⇊P **P 21 42 07.5 -0.4**
baz=84,SNR=36
LKWY Lake 83.77 43 *e*P **P 21 42 07.4 -0.3**
LKWY *e**PP pP 21 43 56.7 +2.2
LKWY pmax pmax
comp=Z,51nm,0.9s,mb5.0
LKWY Lake 83.77 43 *e*P **P 21 42 07.4 -0.3**
comp=Z,51nm,0.9s,mb5.0
LKWY *ep*P pP 21 43 56.7 +2.1
FURC Furnace Creek, 83.78 52 ⇑P **P 21 42 07.8 -0.2**
baz=84,SNR=9.6
HVU Hansel Valley 83.79 46⇑*e*P **P 21 42 08.4 +0.5**
HVU *e**PP pP 21 43 56.1 +1.4
IMW Indian Meadow 83.80 43⇑*e*P **P 21 42 09.0 +1.1**
IMW *ep*P pP 21 43 55.2 +0.5
DCID1 Drake Creek 83.82 44⇑*e*P **P 21 42 08.8 +0.8**
DCID1 *ep*P pP 21 43 55.3 +0.5
DCID1 *e*PP PP 21 45 30.0 +0.7
DECC Green Verdugo 83.83 55 ⇊P **P 21 42 07.9 -0.3**
baz=84
G18A Lazy EL Ranch, 83.85 42 ⇑P **P 21 42 07.9 -0.2**
baz=84,SNR=5.7
RRI2 Red Ridge 83.87 44⇑*e*P **P 21 42 09.3 +1.1**
RRI2 *ep*P pP 21 43 56.5 +1.4
RRI2 *es*P sP 21 44 46.9 +1.9
Q12A Willow Creek R 83.87 49 ⇑P **P 21 42 08.4 +0.1**
baz=84,SNR=12
O13A Hicks Ranch, I 83.87 48 ⇑P **P 21 42 08.6 +0.3**
baz=84,SNR=6.5
BR131 Keskin Array S 83.92 312 *e*P **P 21 42 07.9 -0.7**
BR131 pP pP 21 43 56.2 +0.8
L15A Malad City 83.92 45 ⇑P **P 21 42 08.5 0.0**
baz=84,SNR=42
BRTR Keskin Array B 83.92 312 P **P 21 42 07.8 -0.7**
comp=Z,11nm,0.7s,mb4.5,baz=94,slow=3.3,SNR=71
BRTR pP pP 21 43 58.3 +2.8
comp=Z,3.0nm,0.7s,baz=98,slow=4.4,SNR=2.7
BRTR PKKPbc PKKPbc 22 00 20.9 +0.6
comp=Z,0.8nm,0.5s,baz=220,slow=4.3,SNR=6.4
BRTR Keskin Array B 83.92 312 P **P 21 42 07.9 -0.7**
BRTR *PP pP 21 43 58.3 +2.8
S11A Rachel 83.96 51 ⇑P **P 21 42 09.1 +0.2**
baz=84,SNR=21
TPNV Topopah Spring 83.97 51 P **P 21 42 08.8 -0.1**
PASC Pasadena Art C 83.97 55 *e*P **P 21 42 08.4 -0.6**
comp=Z,53nm,0.8s,mb5.1
PASC *ep*P pP 21 43 56.2 +0.4
K16A Soda Springs 83.98 44 ⇑P **P 21 42 09.1 +0.3**
baz=84,SNR=54
N14A Grayback Hills 84.01 47 ⇊P **P 21 42 09.3 +0.3**
baz=84,SNR=26
TLCR 84.02 318 ⇊P **P 21 42 08.2 -0.7**
TLCR 84.02 318⇊*i*P **P 21 42 08.2 -0.7**
TPAW Teton Pass 84.02 44⇑*e*P **P 21 42 09.5 +0.5**
TPAW *ep*P pP 21 43 56.6 +0.7
MWC Mount Wilson 84.04 55⇑*e*P **P 21 42 09.2 -0.1**
MWC *e**PP pP 21 43 56.9 +0.7
MWC *PP sP 21 44 48.1 +2.0
BGU Big Grassy Mou 84.08 47⇑*e*P **P 21 42 09.6 +0.3**
comp=Z,16nm,0.8s,mb4.6
BGU *ep*P pP 21 43 56.4 +0.2
BGU sP sP 21 44 48.5 +2.3
BGU PP PP 21 45 29.8 -1.7
RLMT Red Lodge 84.13 42 ⇊P **P 21 42 09.0 -0.5**
baz=84,SNR=69
RLMT Red Lodge 84.13 42⇑*e*P **P 21 42 10.3 +0.7**
RLMT *ep*P pP 21 44 02.1 +5.6
RLMT *e*PP PP 21 45 32.5 +0.8
REDW Red Top Meadow 84.14 44 *e*P **P 21 42 11.0 +1.4**
REDW *ep*P pP 21 44 03.4 +6.8
SNOW Snow King Moun 84.15 44⇑*e*P **P 21 42 10.2 +0.5**

SNOW *e*pP pP 21 43 55.6 -1.0
SNOW *e*PP PP 21 45 33.2 +1.2
LOHW Long Hollow 84.16 43⇑*e*P P 21 42 10.2 +0.5
LOHW *e*pP pP 21 43 56.8 +0.2
LOHW *e*S S 21 51 53.7 -0.1
M15A Larsen Ranch, 84.17 46 ⇑P P 21 42 09.6 -0.1
baz=84,SNR=47
P13A Bates Ranch, G 84.20 48 ⇑P P 21 42 09.8 -0.2
baz=84,SNR=23
J17A Brown Place, J 84.23 44 ⇓P P 21 42 09.9 -0.1
baz=84,SNR=19
SPUT South Promonto 84.25 46⇑*e*P P 21 42 10.8 +0.6
SPUT *e*pP pP 21 43 58.8 +1.6
SPUT *e*sP sP 21 44 49.1 +2.1
SPUT *e*PP PP 21 45 31.6 -1.1
AHID Auburn Hatcher 84.32 44 *e*P P 21 42 10.1 -0.3
AHID *e*pP pP 21 43 58.4 +1.0
AHID *e*PP PP 21 45 34.9 +1.6
BFSC Mount Baldy Ra 84.32 54 ⇓P P 21 42 10.3 -0.4
baz=84,SNR=14
R12A Pony Springs, 84.39 50 ⇓P P 21 42 10.9 -0.1
baz=84,SNR=14
GSC Goldstone 84.40 53 ⇑P P 21 42 10.8 -0.3
baz=84,SNR=40
GSC Goldstone 84.40 53⇓*e*P P 21 42 11.0 0.0
GSC *e*pP pP 21 43 58.9 +0.8
N15A Stansbury Isla 84.42 47 ⇑P P 21 42 10.9 -0.1
baz=84,SNR=15
K17A Gardner Place, 84.44 44 ⇑P P 21 42 10.7 -0.4
baz=84,SNR=8.1
Q13A Wheeler Ranch, 84.46 49 ⇑P P 21 42 11.3 0.0
baz=84,SNR=17
SHOC Shoshone 84.47 52 ⇑P P 21 42 11.2 -0.2
baz=84,SNR=22
L16A Fish Haven 84.51 45 ⇓P P 21 42 11.4 -0.1
baz=84,SNR=6.2
TESR 84.52 320 ⇓P P 21 42 10.5 -0.9
TESR 84.52 320⇓*i*P P 21 42 10.5 -0.9
T11A Corn Creek, Al 84.53 51 ⇑P P 21 42 11.6 0.0
baz=84,SNR=21
I18A Diamond G Ranc 84.59 43 ⇑P P 21 42 11.6 -0.3
baz=84,SNR=6.2
S12A Delamar Landin 84.59 50 ⇑P P 21 42 12.2 +0.2
baz=84,SNR=6.8
DUG Dugway 84.60 47 ⇓P P 21 42 12.1 +0.2
baz=84,SNR=49
DUG Dugway 84.60 47 *e*pP pP 21 43 58.5 -0.5
DUG *e*PP PP 21 45 34.3 -1.3
DUG *e*S S 21 51 55.3 -3.0
HWUT Hardware Ranch 84.65 46 *e*pP pP 21 43 59.2 -0.1
HWUT *e*S S 21 51 50.8 -7.8
TIRR Tirgusor 84.66 318⇓*e*P P 21 42 10.7 -1.4
TIRR *e**PP pP 21 43 59.2 0.0
TIRR pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
TIRR Tirgusor 84.66 318⇓*e*P P 21 42 10.7 -1.5
comp=Z,5.9nm,0.8s,mb4.3
TIRR *e*pP pP 21 43 59.2 -0.1
TIRR Tirgusor 84.66 318⇑*i*P P 21 42 11.4 -0.7
BUR08 Bucovina Ar. S 84.67 322 *e*P P 21 42 11.7 -0.4
BUR08 *e*pP pP 21 43 59.2 0.0
BUR08 *e*S SKSac 21 51 46.7 -2.8
BURAR Bucovina Array 84.67 322 ⇑P P 21 42 11.7 -0.4
BURAR Bucovina Array 84.67 322⇑*i*P P 21 42 11.7 -0.4
J18A Kendall Valley 84.74 44 ⇓P P 21 42 12.3 -0.3
baz=85,SNR=32
P14A Drum Mountains 84.75 48 ⇓P P 21 42 12.6 -0.1
baz=85,SNR=34
O15A The Old Anders 84.78 47 ⇑P P 21 42 12.9 0.0
baz=85
O15A ⇑PcP PcP 21 42 14.3 -0.9
baz=85
KWP Kalwaria Pacla 84.80 324 *e*P P 21 42 12.5 -0.2
KWP Kalwaria Pacla 84.80 324 *e*P P 21 42 12.2 -0.6
comp=Z,20nm,0.8s,mb4.8
KWP *e*pP pP 21 44 00.1 +0.2
KWP Kalwaria Pacla 84.80 324⇑*i*P P 21 42 12.1 -0.6
NOQ North Oquirrh 84.81 47 *e*P P 21 42 14.1 +1.1
NOQ *e*pP pP 21 44 01.5 +1.4
L17A Cokeville 84.82 45 ⇓P P 21 42 12.7 -0.3
baz=85,SNR=11
VRI Vrincioaia 84.84 320 ⇓P P 21 42 14.2 +1.2
VRI Vrincioaia 84.84 320⇓*i*P P 21 42 14.2 +1.2
R13A O'Grain Ranch, 84.89 49 ⇓P P 21 42 13.0 -0.4
baz=85,SNR=11
PLOR Plostina 84.90 320 ⇓P P 21 42 14.7 +1.4
PLOR Plostina 84.90 320⇓*i*P P 21 42 14.6 +1.3
BSD Bornholm Skovb 84.90 332 *i* P P 21 42 11.3 -1.8
BSD *i* 21 43 28.3
BSD *i* S SKSac 21 51 46.8 -3.8
BSD Bornholm Skovb 84.90 332 *i* P P 21 42 11.3 -1.8
comp=Z,9.6nm,0.7s,mb4.5
BSD *i* 21 43 28.3
BSD *i* S SKSac 21 51 46.8 -3.8
BSD
comp=Z,730nm,19.0s
Q14A Sevier Lake (B 84.93 48 ⇑P P 21 42 13.4 -0.2
baz=85,SNR=43
TUQ Turquoise Moun 84.95 53 ⇑P P 21 42 13.8 0.0
baz=85,SNR=49
TUQ ⇑PcP PcP 21 42 15.1 -1.1
baz=85
MURC Murrieta 84.97 55 ⇓P P 21 42 13.4 -0.5
baz=85,SNR=5.8
HEC Hector,Ludlow 84.97 53 ⇑P P 21 42 13.9 0.0
baz=85,SNR=23
LAO LASA Array 84.99 39⇑*e*P P 21 42 13.7 0.0
comp=Z,37nm,1.0s,mb5.0
LAO *e*pP pP 21 43 59.3 -1.6
LAO *e*PP PP 21 45 37.5 -1.0
CTU Camp Tracy 85.02 46⇑*e*P P 21 42 14.0 0.0
CTU *e*pP pP 21 44 05.6 +4.4
DGMT Dagmar 85.03 37 ⇓P P 21 42 13.4 -0.5
baz=85
K18A Toltan Ranch, 85.04 44 ⇑P P 21 42 13.3 -0.8
baz=85,SNR=24
V11A Goodsprings 85.10 52 ⇑P P 21 42 14.1 -0.3
baz=85,SNR=34
V11A ⇓PcP PcP 21 42 15.8 -1.0
baz=85
N16A Rees Ranch, Co 85.12 46 ⇑P P 21 42 13.9 -0.5
baz=85
N16A ⇓PcP PcP 21 42 15.9 -0.8
baz=85
NLU North Lily Min 85.21 47⇑*e*P P 21 42 15.2 +0.2
NLU *e*pP pP 21 44 01.9 -0.2
NLU *e*PP PP 21 45 38.1 -2.4
JLU Jordanelle 85.26 46⇑*e*P P 21 42 15.6 +0.4
JLU *e*pP pP 21 44 02.2 -0.3
BW06 Boulder Array 85.27 44 ⇓P P 21 42 14.6 -0.5
baz=85,SNR=22
BW06 ⇑PcP PcP 21 42 16.4 -0.9
baz=85
BW06 Boulder Array 85.27 44 *e*P P 21 42 15.2 0.0
PDAR Pinedale Array 85.27 44 P P 21 42 14.8 -0.4
comp=Z,7.9nm,0.5s,mb4.6,baz=257,slow=1.5,SNR=40
PDAR pP pP 21 44 01.2 -1.2
comp=Z,1.8nm,0.6s,baz=297,slow=4.0,SNR=2.6
S13A Holt Ranch, En 85.28 50 ⇓P P 21 42 14.8 -0.5
baz=85,SNR=19
P15A Leamington 85.28 48 ⇑P P 21 42 14.8 -0.5
baz=85,SNR=10.0
P15A ⇑PcP PcP 21 42 16.5 -0.9
baz=85
M17A Scullys Gap (B 85.29 45 ⇓P P 21 42 15.1 -0.1
baz=85,SNR=35
M17A ⇓PcP PcP 21 42 16.5 -0.9
baz=85
109C Camp Elliot, M 85.39 55 ⇑P P 21 42 15.5 -0.4
baz=85
U12A Valley of Fire 85.41 51 ⇑P P 21 42 15.5 -0.4
baz=85,SNR=6.4
L18A Fontenelle, Gr 85.44 45 ⇓P P 21 42 15.7 -0.3
baz=85,SNR=11
L18A ⇓PcP PcP 21 42 17.3 -0.8
baz=85
O16A Springville 85.44 47 ⇑P P 21 42 15.6 -0.4
baz=85,SNR=7.4
O16A ⇑PcP PcP 21 42 17.4 -0.8
baz=85
ARUT Antelope Range 85.45 50 *e*P P 21 42 16.1 -0.1
ARUT pmax pmax
comp=Z,12nm,0.6s,mb4.7
ARUT Antelope Range 85.45 50 *e*P P 21 42 16.1 0.0
comp=Z,12nm,0.6s,mb4.7

MPU Maple Canyon 85.46 47⇑*e*P P 21 42 16.3 +0.2
MPU *e*pP pP 21 44 02.8 -0.7
GMRC Granite Mounta 85.47 53 ⇓P P 21 42 16.0 -0.3
baz=85,SNR=30
N17A Moffit Pass 85.47 46 ⇓PcP PcP 21 42 17.3 -1.0
baz=85
DAU Daniels Canyon 85.49 46⇑*e*P P 21 42 16.6 +0.3
DAU *e**PP pP 21 44 05.6 +2.0
DAU *e**SP sP 21 44 56.9 +3.5
DAU *e* 21 45 43.3
PFO Pinyon Flat Ob 85.50 54 ⇑P P 21 42 16.3 -0.1
baz=85,SNR=30
PFO ⇓PcP PcP 21 42 17.4 -1.1
baz=85
PFO Pinyon Flat Ob 85.50 54⇑*e*P P 21 42 16.6 +0.2
PFO *e*pP pP 21 44 04.2 +0.4
MLR Muntele Rosu 85.51 320 ⇓P P 21 42 15.5 -0.8
MLR Muntele Rosu 85.51 320⇓*i*P P 21 42 15.5 -0.8
Q15A Fillmore 85.52 48 ⇑P P 21 42 15.9 -0.5
baz=85,SNR=5.1
T13A Saint George 85.54 50 ⇓P P 21 42 16.5 -0.1
baz=85,SNR=13
T13A ⇓PcP PcP 21 42 17.6 -1.0
baz=85
V12A Nelson 85.56 52 ⇑P P 21 42 16.4 -0.3
baz=85,SNR=15
V12A ⇓PcP PcP 21 42 17.9 -0.8
baz=85
BELC Belle Mtn. Jos 85.63 54 P **P 21 42 16.9 -0.2**
baz=86,SNR=36
BELC ⇑PcP PcP 21 42 17.8 -1.3
baz=86
CCUT Cedar City 85.63 50⇑*e*P P 21 42 17.7 +0.7
comp=Z,8.4nm,1.0s,mb4.3
CCUT *e*pP pP 21 44 04.3 -0.1
CCUT *e*PP PP 21 45 44.7 +0.7
UZH Uzhgorod 85.63 324 *e*P P 21 42 14.4 -2.4
UZH *e* 21 51 56.0
UZH *i* S S 21 51 59.8 -8.0
UZH MLR MLR
comp=N,300nm,15.0s
UZH MLR MLR
comp=E,600nm,15.0s
UZH MLR MLR
comp=Z,400nm,15.0s
K19A Absolon Red Bu 85.67 43 ⇓P P 21 42 16.7 -0.4
baz=86,SNR=10
M18A Lyman 85.69 45 ⇓P P 21 42 17.1 -0.1
baz=86,SNR=13
M18A ⇑PcP PcP 21 42 18.3 -1.0
baz=86
L19A Farson 85.76 44 ⇓P P 21 42 17.3 -0.3
baz=86,SNR=14
L19A ⇑PcP PcP 21 42 18.4 -1.1
baz=86
BAR Barrett 85.81 55 *e*P P 21 42 17.9 -0.1
BAR *e*pP pP 21 44 05.9 +0.4
U13A Pakoon Wash 85.81 51 ⇓P P 21 42 17.8 -0.1
baz=86,SNR=25
U13A ⇓PcP PcP 21 42 18.8 -1.1
baz=86
MONP Monument Peak 85.89 55 ⇓P P 21 42 18.1 -0.3
baz=86,SNR=15
CRVS Cervenica-Dubn 85.89 324 *e*P P 21 42 18.2 +0.2
CRVS pmax pmax
comp=Z,19nm,1.9s,mb4.4
CRVS Cervenica-Dubn 85.89 324 *e*P P 21 42 18.2 +0.2
comp=Z,19nm,1.9s,mb4.4
CRVS Cervenica-Dubn 85.89 324 *e*P P 21 42 18.2 +0.2
OJC Ojcow 85.91 326 *e*P P 21 42 15.1 -3.0
OJC *e**PP pP 21 44 03.8 -1.7
OJC *e*S S 21 52 01.1 -9.3
OJC MLR MLR
comp=Z,1μm,17.4s
MSU Marysvale 85.91 48 *e*P P 21 42 19.2 +0.8
MSU *e**PP pP 21 44 06.6 +0.7
MSU *e* 21 45 46.8
O17A Robinson Place 85.94 46 ⇓P P 21 42 18.2 -0.3
baz=86,SNR=16
O17A ⇑PcP PcP 21 42 19.5 -0.8
baz=86
R15A Junction 86.01 49 ⇑PcP PcP 21 42 19.6 -1.1
baz=86,SNR=8.1
VOIR 86.05 320 ⇑P P 21 42 18.1 -0.8
VOIR 86.05 320⇑*i*P P 21 42 18.1 -0.8
K20A Yellowstone Ra 86.07 43 ⇓P P 21 42 18.6 -0.4
baz=86,SNR=16
T14A Hurricane 86.08 50 PcP PcP 21 42 20.2 -0.9
baz=86,SNR=9.8
V13A Grand Canyon W 86.09 51 ⇑P P 21 42 18.9 -0.3
baz=86,SNR=10
TMUT Trail Mountain 86.13 47 *e*P P 21 42 19.4 0.0
TMUT *e*pP pP 21 44 08.2 +1.3
IRM Iron Mountain 86.15 53 ⇑P P 21 42 19.6 0.0
baz=86,SNR=17
N18A Larsen Ranch, 86.19 45 ⇑P P 21 42 19.3 -0.3
baz=86,SNR=8.7
BC3 Big Chuckawall 86.19 54 ⇓P P 21 42 19.3 -0.5
baz=86,SNR=29
DVTC Desert V Tower 86.23 55 ⇑P P 21 42 19.7 -0.3
baz=86,SNR=14
DVTC ⇑PcP PcP 21 42 20.8 -1.0
baz=86
SWSC Sam W. Stewart 86.31 55 ⇓P P 21 42 19.9 -0.5
baz=86
P17A Butcher Ranch, 86.33 47 ⇑P P 21 42 19.8 -0.5
baz=86,SNR=16
P17A ⇓PcP PcP 21 42 21.1 -1.0
baz=86
U14A Mt Trumbull 86.35 51 ⇑P P 21 42 20.4 0.0
baz=86,SNR=12
U14A ⇓PcP PcP 21 42 21.1 -1.1
baz=86
Q16A Castle Valley 86.36 48 ⇑P P 21 42 20.4 -0.1
baz=86,SNR=16
Q16A ⇓PcP PcP 21 42 21.3 -0.9
baz=86
O18A Roosevelt 86.37 46 ⇑PcP PcP 21 42 21.6 -0.7
baz=86
L20A Wamsutter 86.44 44 ⇓PcP PcP 21 42 21.6 -0.9
baz=86
R16A Teasdale 86.50 48 ⇓P P 21 42 21.3 +0.2
baz=86,SNR=17
R16A ⇓PcP PcP 21 42 22.3 -0.6
baz=86
N19A John Jarvie Ra 86.55 45 ⇓PcP PcP 21 42 21.9 -1.1
baz=86,SNR=7.3
W13A Hualapai Mount 86.56 52 ⇓P P 21 42 21.1 -0.4
baz=86,SNR=7.4
P18A Preston Nutter 86.57 47 ⇓P P 21 42 21.3 -0.1
baz=86,SNR=20
P18A ⇑PcP PcP 21 42 22.2 -1.0
baz=86
T15A Red Dirt Ranch 86.58 50 PcP PcP 21 42 22.4 -0.8
baz=86,SNR=15
CSS Prodhromos 86.60 308⇓*e*P P 21 42 19.2 -2.5
comp=Z,18nm,0.8s,mb4.8
CSS *e*pP pP 21 44 10.6 +1.1
KECS Kecovo 86.66 324 *e*P P 21 42 18.3 -3.4
KECS Kecovo 86.66 324 *e*P P 21 42 18.3 -3.4
SRU San Rafael 86.67 47 ⇓PcP PcP 21 42 22.8 -0.8
baz=86,SNR=30
SRU San Rafael 86.67 47⇑*e*P P 21 42 21.8 -0.1
SRU *e*pP pP 21 44 07.4 -2.3
SRU *e*PP PP 21 45 52.8 +0.6
S16A Weppner Ranch, 86.72 49 ⇓PcP PcP 21 42 22.7 -1.2
baz=87,SNR=8.3
V14A Boquillas Ranc 86.82 51 ⇓PcP PcP 21 42 23.2 -1.1
baz=87
M20A Sweetwater, Wa 86.83 44 ⇑PcP PcP 21 42 23.6 -0.6
baz=87,SNR=7.6
X13A Yucca 86.86 52 ⇑P P 21 42 21.7 -1.2
baz=87,SNR=12
X13A ⇑PcP PcP 21 42 23.5 -1.0
baz=87
R17A Hanksville Air 86.93 48 ⇑P P 21 42 22.7 -0.4
baz=87,SNR=14
Q18A Rafter H Ranch 86.93 47 ⇓P P 21 42 22.9 -0.3
baz=87,SNR=7.3
U15A North Rim 86.95 50 ⇓PcP PcP 21 42 24.2 -0.8
baz=87,SNR=17
GLA Glamis 86.95 54 ⇓PcP PcP 21 42 24.2 -0.8
baz=87,SNR=12
GLA Glamis 86.95 54 *e*P P 21 42 24.1 +0.7
GLA *e*pP pP 21 44 11.9 +0.7
GLA *e*sP sP 21 45 02.1 +1.2

OKC Ostrava-Krasne 86.96 326 *e*P P 21 42 21.8 -1.3
OKC *e**PP pP 21 44 11.9 +1.0
OKC *e* 21 52 11.3
OKC Ostrava-Krasne 86.96 326 *e*P P 21 42 21.8 -1.3
OKC *e*pP pP 21 44 11.9 +1.0
OKC *e*SKS 21 52 11.3
OKC *e*XS sS 21 55 28.8 -3.7
ISP Isparta 86.99 311 *e*P P 21 42 23.6 +0.1
ISP *e**PP pP 21 44 11.3 0.0
W14A Seligman 87.06 52 ⇓PcP PcP 21 42 24.7 -0.7
baz=87,SNR=18
L21A Rawlins 87.06 43 ⇓PcP PcP 21 42 24.2 -1.0
baz=87,SNR=15
MSEY Mahe Island 87.06 263 *e*P P 21 42 24.0 -0.2
N20A Spence Gulch, 87.15 45 ⇑PcP PcP 21 42 24.7 -1.0
baz=87,SNR=20
RUE Ruedersdorf 87.21 330 *e*P P 21 42 24.1 0.0
RUE *e*pP pP 21 44 12.4 +0.4
M21A Separation Pea 87.27 44 ⇓PcP PcP 21 42 25.2 -1.0
baz=87,SNR=19
Y13A Salome 87.27 53 ⇑PcP PcP 21 42 25.4 -0.9
baz=87,SNR=12
MORC Moravsky Berou 87.30 327 ⇓P P 21 42 23.9 -0.8
MORC Moravsky Berou 87.30 327⇓*i*P P 21 42 23.9 -0.8
RWWY Rawlins 87.31 44 *e*P P 21 42 25.6 +0.7
RWWY *e*pP pP 21 44 14.1 +1.2
V15A Kaibab Nationa 87.36 51 ⇑PcP PcP 21 42 26.0 -0.7
baz=87,SNR=13
P19A Cripple Cowboy 87.38 46 ⇑PcP PcP 21 42 25.9 -0.8
baz=87
112A Yuma 87.40 54 ⇑PcP PcP 21 42 26.0 -0.9
baz=87
R18A Canyonlands Na 87.48 48 ⇑P P 21 42 25.0 -0.8
baz=87,SNR=19
VYHS Vyhne 87.50 325 *e*P P 21 42 24.8 -0.8
VYHS pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
VYHS Vyhne 87.50 325 *e*P P 21 42 24.8 -0.8
comp=Z,4.7nm,0.7s,mb4.3
VYHS Vyhne 87.50 325 *e*P P 21 42 24.8 -0.8
DPC Dobruska-Polom 87.50 328 *e*P P 21 42 24.9 -0.7
DPC *e**PP pP 21 44 12.8 -0.8
DPC *e* 21 52 20.1
DPC *e* 21 53 25.9
DPC *e* 21 58 18.8
DPC Dobruska-Polom 87.50 328 *e*P P 21 42 24.9 -0.7
DPC *e*pP pP 21 44 12.8 -0.8
DPC *e*S S 21 52 20.1 -5.4
DPC *e*SP SP 21 53 25.9 -4.0
DPC *e*XS sS 21 55 35.0 -2.8
DPC *e*SS SS 21 58 18.8 -4.7
UPC Upice 87.54 328 *e*P P 21 42 24.9 -0.9
UPC Upice 87.54 328 *e*P P 21 42 24.9 -0.9
O20A White River Ci 87.56 45 ⇑PcP PcP 21 42 26.5 -1.0
baz=87,SNR=7.5
Q19A Hogan Spring (87.58 47 ⇑PcP PcP 21 42 27.0 -0.6
baz=87,SNR=16
X14A Yava 87.58 52 ⇑PcP PcP 21 42 27.3 -0.5
baz=88,SNR=7.0
L22A Ellis Ranch, M 87.58 43 ⇑PcP PcP 21 42 26.9 -0.7
baz=87
T17A Navajo Res., N 87.65 49 ⇑PcP PcP 21 42 27.1 -0.9
baz=88
N21A Black Mountain 87.66 45 ⇑PcP PcP 21 42 27.2 -0.8
baz=88,SNR=10
KOLL Kolacno 87.66 325 *e*P P 21 42 26.0 -0.4
KOLL Kolacno 87.66 325 *e*P P 21 42 26.0 -0.4
Z13A Yuma Proving G 87.71 54 ⇑P P 21 42 26.1 -0.8
baz=88,SNR=23
Z13A ⇑PcP PcP 21 42 27.7 -0.7
baz=88
RSSD Black Hills 87.75 40⇑*e*P P 21 42 26.9 0.0
RSSD *e*pP pP 21 44 13.3 -1.7
Y14A Wickenburg 87.79 53 ⇑P P 21 42 27.0 -0.3
baz=88,SNR=9.5
S18A Hurst Farm, Bl 87.80 48 ⇓P P 21 42 26.9 -0.4
baz=88,SNR=13
P20A De Beque 87.83 46 ⇓PcP PcP 21 42 27.9 -0.8
baz=88
BZS Buzias 87.86 322 ⇓P P 21 42 25.9 -1.5
BZS Buzias 87.86 322⇓*i*P P 21 42 25.9 -1.5
113A Mohawk Valley, 87.86 54 ⇓P P 21 42 27.1 -0.6
baz=88,SNR=14
113A ⇓PcP PcP 21 42 28.3 -0.7
baz=88
R19A Curley Farm, L 87.95 47 ⇑P P 21 42 27.3 -0.7
baz=88
R19A ⇑PcP PcP 21 42 28.3 -1.0
baz=88,SNR=7.1
U17A Shonto 87.96 49 ⇑PcP PcP 21 42 28.9 -0.5
baz=88,SNR=13
X15A Humboldt 88.03 52 PcP PcP 21 42 29.1 -0.6
baz=88,SNR=14
PV10 Paradox Valley 88.05 47 *e*P P 21 42 29.2 +0.8
comp=Z,587nm,0.6s,mb6.5
PV10 *e*pP pP 21 44 18.0 +1.5
PV10 *e*sP sP 21 45 10.0 +3.8
ULM Lac du Bonnet 88.06 32 P **P 21 42 27.2 -1.0**
comp=Z,10.0nm,0.5s,mb4.8,baz=294,slow=4.2,SNR=10
ULM Lac du Bonnet 88.06 32⇑*e*P P 21 42 27.1 -1.1
ULM *e*pP pP 21 44 16.5 +0.1
ULM *e*PP PP 21 46 03.0 +0.3
WUAZ Wupatki 88.07 51 ⇑PcP PcP 21 42 28.7 -1.1
baz=88
WUAZ Wupatki 88.07 51⇑*e*P P 21 42 28.7 +0.1
WUAZ *e*pP pP 21 44 16.3 -0.5
VRAC Vranov 88.07 327 ⇓P P 21 42 28.0 -0.3
VRAC Vranov 88.07 327⇓*i*P P 21 42 28.0 -0.3
PV04 Paradox Valley 88.12 47⇑*e*P P 21 42 29.0 +0.2
PV04 *e*pP pP 21 44 16.9 0.0
PV04 *e*sP sP 21 45 06.5 0.0
SMOL Smolenice 88.19 326 *e*P P 21 42 29.1 +0.2
SMOL Smolenice 88.19 326 *e*P P 21 42 29.0 +0.1
T18A Mexican Hat 88.19 49 ⇓P P 21 42 28.4 -0.7
baz=88,SNR=15
W16A Flagstaff 88.19 51 ⇑PcP PcP 21 42 29.9 -0.5
baz=88,SNR=6.5
Q20A Ridgley Place, 88.20 46 PcP PcP 21 42 29.6 -0.8
baz=88,SNR=32
PVCC Panska Ves 88.20 329 *e*P P 21 42 28.2 -0.7
PVCC *e**PP pP 21 44 17.4 +0.3
PVCC Panska Ves 88.20 329 *e*P P 21 42 28.2 -0.7
PVCC *e*pP pP 21 44 17.4 +0.3
Y15A Casa Rosa Ranc 88.25 52 ⇑PcP PcP 21 42 30.0 -0.7
baz=88,SNR=5.2
BRG Berggiesshubel 88.25 329 *e*P P 21 42 27.4 -1.7
comp=Z,3.8nm,0.7s,mb4.2
BRG S PcP 21 42 28.0 -2.4
BRG *e* 21 42 47.6
comp=Z,3.5nm,0.6s
BRG SS SS 21 58 29.0 -5.2
BRG
comp=N,620nm,14.2s
BRG
comp=E,581nm,17.1s
BRG
comp=Z,815nm,17.5s
BRG Berggiesshubel 88.25 329 *e*P P 21 42 27.4 -1.7
BRG pmax pmax
comp=Z,2.0nm,0.7s,mb4.0
BRG MLR MLR
comp=N,2μm,14.2s
BRG MLR MLR
comp=E,371nm,17.1s
BRG MLR MLR
comp=Z,348nm,17.5s
N22A Wattenberg Ran 88.29 44 ⇓PcP PcP 21 42 30.3 -0.5
baz=88,SNR=9.1
S19A Harvey Farm, M 88.34 48 ⇑P **P 21 42 29.2 -0.5**
baz=88,SNR=7.1
CLL Collm 88.37 330⇓*i*P P 21 42 28.5 -1.1
CLL *e*S S 21 52 30.0 -3.5
CLL pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
CLL Collm 88.37 330⇓*i*P P 21 42 28.5 -1.1
comp=Z,5.0nm,0.6s,mb4.4
CLL *e*pP pP 21 44 18.0 +0.1
CLL *e* 21 44 30.0
CLL *e* 21 44 55.0
CLL *e*sP sP 21 45 06.0 -1.5
CLL *e* 21 47 00.0
CLL *e*sPP 21 48 32.0
CLL *e*SKSac SKSac 21 52 14.0 +2.2
CLL *e*S S 21 52 30.0 -3.5

CLL eSP SP 21 53 37.0 -2.5
CLL esS sS 21 55 42.0 -4.3
CLL esPS 21 56 52.0
CLL eSS SS 21 58 29.0 -6.9
CLL esSS 22 01 22.0
CLL eSSS 22 02 08.0
CLL e 22 04 10.0
CLL eSSSS 22 05 36.0
V17A Tonalea, Kykot 88.41 50 ⇓PcP PcP 21 42 30.5 -0.9
baz=88,SNR=23
N23A Red Feather La 88.55 44 ⇓PcP PcP 21 42 31.1 -0.8
baz=88,SNR=15
ZST Bratislava 88.56 326 eP **P 21 42 30.2 -0.4**
ZST Bratislava 88.56 326 eP **P 21 42 30.2 -0.4**
R20A Redvale 88.58 47 ⇓PcP PcP 21 42 31.3 -0.8
baz=88,SNR=10
PRU Pruhonice 88.59 328 eP **P 21 42 32.7 +2.0**
PRU e*PP pP 21 44 20.8 +1.8
PRU e 21 52 31.1
PRU e 21 53 37.0
PRU e 21 58 34.4
PRU Pruhonice 88.59 328 eP **P 21 42 32.7 +2.0**
PRU epP pP 21 44 20.8 +1.8
PRU eS S 21 52 31.1 -4.4
PRU eSP SP 21 53 37.0 -5.0
PRU eXSKS 21 55 37.8
PRU eSS SS 21 58 34.4 -4.7
U18A Rough Rock, Ch 88.59 49 ⇓PcP PcP 21 42 31.5 -0.7
baz=88,SNR=13
PHWY Pilot Hill 88.61 43⇑eP **P 21 42 31.0 +0.1**
comp=Z,15nm,1.0s,mb4.8
PHWY epP pP 21 44 20.6 +1.3
PHWY esP sP 21 45 10.1 +1.3
O22A Kremmling 88.61 45 ⇓PcP PcP 21 42 31.3 -0.9
baz=88,SNR=20
X16A Lo Mia Camp, P 88.62 51 ⇑PcP PcP 21 42 31.9 -0.5
baz=88,SNR=8.1
S20A Disappointment 88.80 47 PcP PcP 21 42 32.2 -0.8
baz=89,SNR=12
VTS Vitosha 88.82 319 ⇑P **P 21 42 31.4 -0.5**
VTS Vitosha 88.82 319⇑iP **P 21 42 31.4 -0.5**
Y16A Circle Bar Ran 88.89 52 ⇓PcP PcP 21 42 32.8 -0.8
baz=89,SNR=7.8
SMCO Snowmass 88.91 46⇑eP **P 21 42 33.6 +1.2**
SMCO epP pP 21 44 20.5 -0.3
T19A Beclabito 88.93 48 ⇓PcP PcP 21 42 32.8 -0.8
baz=89,SNR=11
V18A Ganado 88.94 50 ⇓PcP PcP 21 42 33.5 -0.3
baz=89,SNR=12
O23A Lake Granby, G 88.97 44 ⇓PcP PcP 21 42 33.2 -0.6
baz=89,SNR=7.8
214A Organ Pipe Nat 88.98 54 ⇑PcP PcP 21 42 33.4 -0.5
baz=89,SNR=8.4
115A Sonoran Desert 89.00 53 ⇑PcP PcP 21 42 33.3 -0.8
baz=89,SNR=8.3
R21A Cimarron 89.01 46 ⇓PcP PcP 21 42 33.6 -0.4
baz=89,SNR=11
MVCO Mesa Verde 89.06 48 ⇓PcP PcP 21 42 33.6 -0.6
baz=89,SNR=9.1
MVCO Mesa Verde 89.06 48 eP **P 21 42 33.2 +0.1**
MVCO epP pP 21 44 21.3 -0.2
MVCO ePP PP 21 46 09.8 -1.3
PKSM Moragy 89.08 323 ⇓P **P 21 42 32.2 -0.9**
PKSM Moragy 89.08 323 ⇓iP **P 21 42 32.2 -0.9**
X17A Forest Lakes 89.11 51 ⇑PcP PcP 21 42 33.7 -0.8
baz=89
U19A Dine' College, 89.11 49 ⇓PcP PcP 21 42 33.7 -0.8
baz=89,SNR=16
Q22A Crested Butte, 89.14 46 ⇑PcP PcP 21 42 33.8 -0.7
baz=89
Z16A Peralta Trail, 89.22 52 ⇑PcP PcP 21 42 34.6 -0.4
baz=89
CSNA Conrad Observa 89.36 326⇑iPcP PcP 21 42 34.1 -1.3
comp=Z,5.4nm,0.8s
NKC Novy Kostel 89.38 329 eP **P 21 42 34.1 -0.3**
NKC e 21 52 16.9
NKC Novy Kostel 89.38 329 eP **P 21 42 34.1 -0.3**
NKC eSKS 21 52 16.9
AGMN Agassiz Nation 89.40 33⇑eP **P 21 42 34.0 -0.5**
comp=Z,27nm,1.3s,mb4.9
AGMN epP pP 21 44 25.0 +2.1
AGMN ePP PP 21 46 15.2 +1.9
ISCO Idaho Springs 89.40 44 eP **P 21 42 35.4 +0.7**
Y17A Roosevelt 89.43 52 ⇓PcP PcP 21 42 35.4 -0.6
baz=89,SNR=6.7
116A Eloy 89.44 53 ⇑PcP PcP 21 42 35.8 -0.2
baz=89,SNR=8.1
P23A Jefferson 89.51 45 ⇑PcP PcP 21 42 35.6 -0.6
baz=89,SNR=18
U20A Newcomb 89.52 49 ⇓PcP PcP 21 42 35.4 -0.8
baz=89,SNR=14
O24A Longmont 89.54 44 ⇓PcP PcP 21 42 35.6 -0.7
baz=89
X18A Snowflake 89.59 51 ⇑PcP PcP 21 42 36.2 -0.5
baz=89,SNR=8.0
R22A Saguache, Gunn 89.60 46 ⇑PcP PcP 21 42 36.0 -0.7
baz=89,SNR=13
KHC Kasperske Hory 89.64 328 eP **P 21 42 34.5 -1.1**
KHC e*PP pP 21 44 24.0 -0.1
KHC e 21 52 17.4
KHC Kasperske Hory 89.64 328 eP **P 21 42 34.8 -0.8**
comp=Z,4.5nm,0.8s,mb4.3
KHC epP pP 21 44 26.0 +1.9
KHC Kasperske Hory 89.64 328 eP **P 21 42 34.5 -1.1**
KHC epP pP 21 44 24.0 -0.1
KHC eSKS 21 52 17.4
KHC eXS sS 21 55 51.6 -7.1
KHC ex x 21 58 45.3
W19A Sanders 89.65 50 ⇑PcP PcP 21 42 36.4 -0.5
baz=90,SNR=14
Q23A Hartsel 89.79 45 ⇑PcP PcP 21 42 36.5 -0.9
baz=90
T21A Navajo Lake 89.82 48 ⇑PcP PcP 21 42 36.9 -0.7
baz=90
S22A 4UR Ranch, Cre 89.84 47 ⇓PcP PcP 21 42 37.4 -0.2
baz=90,SNR=15
V20A Brimhall 89.88 49 ⇑PcP PcP 21 42 37.3 -0.6
baz=90,SNR=9.1
216A Three Points, 89.92 54 ⇓P **P 21 42 36.4 -0.8**
baz=90
Y18A Canyon Day Jun 89.95 51 ⇑PcP PcP 21 42 37.4 -0.8
baz=90,SNR=16
ARSA Arzberg 89.99 326⇓iPcP PcP 21 42 36.3 -1.8
comp=Z,4.2nm,0.8s
U21A Nageezi 90.06 48 ⇓P **P 21 42 36.9 -0.9**
baz=90,SNR=9.2
X19A St. Johns 90.10 51 ⇑P **P 21 42 37.8 -0.2**
baz=90,SNR=11
117A Oracle 90.12 53 ⇑P **P 21 42 38.5 +0.4**
baz=90,SNR=8.9
O25A Wiggins 90.13 43 ⇓PcP PcP 21 42 38.3 -0.6
baz=90
Q24A Divide 90.19 45 ⇓P **P 21 42 38.8 +0.4**
baz=90,SNR=8.1
T22A Edith 90.21 47 ⇑P **P 21 42 38.2 -0.3**
baz=90,SNR=36
TUC Tucson 90.23 53⇑eP **P 21 42 39.0 +0.3**
TUC e*PP pP 21 44 26.9 -0.4
TUC e 21 46 19.8
W20A Ramah 90.24 50 ⇑P **P 21 42 37.9 -0.8**
baz=90,SNR=9.3
GRF Grafenberg Arr 90.32 329 eP **P 21 42 37.9 -0.8**
comp=Z,4.0nm,0.9s,mb4.2
GRF Grafenberg Arr 90.32 329 eP pP 21 44 27.6 +0.3
comp=Z,12nm,1.7s
GRF Grafenberg Arr 90.32 329 eP **P 21 42 37.9 -0.8**
GRF pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
GRF MLR MLR
comp=Z,1μm,21.8s
GRF Grafenberg Arr 90.32 329 eP **P 21 42 37.9 -0.8**
comp=Z,4.0nm,0.9s,mb4.2
GRF LR LR
comp=Z,1μm,21.8s
Y19A Nutrioso 90.39 51 ⇑P **P 21 42 39.4 0.0**
baz=90,SNR=16
V21A Milan 90.43 49 ⇑P **P 21 42 39.5 0.0**
baz=90,SNR=7.6
217A Green Valley 90.50 53 ⇓P **P 21 42 38.9 -1.1**
baz=90,SNR=21
X20A Quemado 90.57 50 ⇑P **P 21 42 39.5 -0.7**
baz=90,SNR=21
PERS Pernice 90.61 325 iP **P 21 42 39.1 -1.1**
U22A Llaves 90.62 48 ⇓P **P 21 42 39.7 -0.7**
baz=90,SNR=9.4

118A Homack Ranch, 90.62 52 ⇑P **P 21 42 40.2 -0.3**
baz=90
SOKA Soboth 90.63 326⇑iP **P 21 42 38.8 -1.4**
comp=Z,6.4nm,0.8s,mb4.6
R24A Sanders Place, 90.65 45 ⇓P **P 21 42 40.0 -0.5**
baz=90,SNR=42
SDCO Great Sand Dun 90.69 46⇑eP **P 21 42 41.2 +0.6**
comp=Z,15nm,0.8s,mb5.0
SDCO epP pP 21 44 29.1 -0.2
SDCO ePP PP 21 46 19.8 -4.0
T23A Casias Ranch, 90.76 47 ⇓P **P 21 42 40.5 -0.5**
baz=91,SNR=7.4
Q25A Bedland, Calha 90.78 45 ⇑P **P 21 42 40.3 -0.8**
baz=91
V22A San Miguel Ran 90.85 48 ⇑P **P 21 42 41.4 -0.1**
baz=91,SNR=14
OGNE Ogallala 90.87 42 eP **P 21 42 39.0 -2.4**
comp=Z,24nm,0.6s,mb5.3
OGNE epP pP 21 44 28.4 -1.8
S24A Houchin Ranch, 90.94 46 ⇓P **P 21 42 41.6 -0.3**
baz=91,SNR=20
218A Dragoon 90.94 53 ⇑P **P 21 42 42.2 +0.2**
baz=91,SNR=16
Y20A Horse Springs, 91.01 51 ⇑P **P 21 42 42.6 +0.3**
baz=91,SNR=46
119A Ashpeak Ranch, 91.02 52 ⇓P **P 21 42 43.0 +0.6**
baz=91,SNR=15
PDKS Podkum 91.07 325 iP **P 21 42 41.0 -1.2**
U23A El Rito 91.08 47 ⇓P **P 21 42 42.5 0.0**
baz=91,SNR=31
X21A Alamocita Cree 91.11 50 ⇑P **P 21 42 42.8 0.0**
baz=91,SNR=33
318A Bisbee 91.27 53 ⇑P **P 21 42 43.4 -0.1**
baz=91,SNR=27
LJU Ljubljana 91.32 325 iP **P 21 42 42.0 -1.4**
Z20A Nine Sixteen R 91.32 51 ⇑P **P 21 42 43.5 -0.2**
baz=91,SNR=56
BOJS Bojanci 91.32 325 iP **P 21 42 42.4 -1.1**
ESK Eskdalemuir 91.36 340 eP **P 21 42 43.3 -0.1**
S25A Robets Cordova 91.42 46 ⇓P **P 21 42 43.6 -0.5**
baz=91,SNR=12
V23A Ortiz Mt. (NFS 91.43 48 ⇓P **P 21 42 44.6 +0.5**
baz=91,SNR=16
Y21A Point of Rocks 91.44 50 ⇓P **P 21 42 44.0 -0.2**
baz=91,SNR=34
219A White Tail Can 91.48 52 ⇑P **P 21 42 43.9 -0.5**
baz=91,SNR=28
LAZ Ladron 91.57 50 eP **P 21 42 45.1 +0.3**
comp=Z,3.2nm,0.5s,mb4.5
LAZ epP pP 21 44 34.0 +0.4
LAZ ePP PP 21 46 30.8 0.0
X22A Bernardo 91.60 49 ⇑P **P 21 42 44.6 -0.4**
baz=92
120A U Bar Ranch, L 91.61 52 ⇑P **P 21 42 44.6 -0.4**
baz=92,SNR=7.7
U24A Moreno Valley 91.62 47 ⇑P **P 21 42 44.8 -0.3**
baz=92,SNR=10
ANMO Albuquerque 91.71 49⇑eP **P 21 42 46.0 +0.5**
ANMO e*PP pP 21 44 33.6 -0.6
ANMO e 21 46 29.4
EYMN Ely 91.73 32 eP **P 21 42 44.7 -0.5**
comp=Z,24nm,1.3s,mb5.0
EYMN epP pP 21 44 34.4 +0.4
T25A Trinidad 91.75 46 ⇑P **P 21 42 45.0 -0.6**
baz=92,SNR=13
W23A Werner Place, 91.79 48 ⇑P **P 21 42 45.9 +0.1**
baz=92,SNR=18
319A Douglas 91.81 53 ⇑P **P 21 42 46.0 0.0**
baz=92,SNR=15
ABTA Altertsbach 91.82 327⇑iP **P 21 42 43.6 -2.1**
comp=Z,5.7nm,0.6s,mb4.7
Z21A St. Cloud Mine 91.84 51 ⇓P **P 21 42 46.2 +0.1**
baz=92,SNR=24
STU Stuttgart 91.90 330 eP **P 21 42 45.6 -0.4**
LPM Los Pinos Moun 91.97 49 eP **P 21 42 47.5 +0.8**
V24A Rampart Ranch, 92.03 48 ⇓P **P 21 42 47.9 +0.9**
baz=92,SNR=17
220A Playas Peak, P 92.05 52 ⇑P **P 21 42 47.6 +0.6**
baz=92,SNR=11
BNM Barren Site 92.06 49 eP **P 21 42 47.4 +0.3**
comp=Z,12nm,0.9s,mb4.8
BNM epP pP 21 44 35.7 -0.1
BNM ePP PP 21 46 33.3 -1.3
ECSD EROS Data Cent 92.11 37 eP **P 21 42 46.9 -0.2**
ECSD epP pP 21 44 36.5 +0.7
ECSD ePP PP 21 46 35.6 +1.0
U25A Circle Dot Ran 92.19 47 ⇑P **P 21 42 47.6 -0.1**
baz=92,SNR=18
121A Cookes Peak, D 92.20 51 ⇓P **P 21 42 48.2 +0.5**
baz=92,SNR=13
W24A Lazy 6 Ranch, 92.25 48 ⇓P **P 21 42 47.9 0.0**
baz=92,SNR=25
Z22A Elephant Butte 92.35 50 ⇓P **P 21 42 48.4 -0.1**
baz=92,SNR=19
320A Kipp Ranch, An 92.37 53 ⇑P **P 21 42 48.6 +0.1**
baz=92,SNR=5.9
V25A Rancho No Teng 92.39 47 ⇑P **P 21 42 48.8 +0.2**
baz=92,SNR=12
WLF Walferdange 92.55 332 eP **P 21 42 48.3 -0.7**
Y23A Lovelace Mesa, 92.58 49 ⇑P **P 21 42 49.0 -0.4**
baz=92,SNR=14
BFO Black Forest 92.62 330 eP **P 21 42 48.1 -1.2**
BFO e*PP pP 21 44 36.1 -2.0
BFO pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
BFO Black Forest 92.62 330 eP **P 21 42 48.1 -1.3**
comp=Z,6.3nm,0.8s,mb4.7
BFO epP pP 21 44 36.1 -2.0
U26A Atchley Ranch, 92.62 46 ⇑P **P 21 42 49.3 -0.4**
baz=92,SNR=14
W25A X Bar L Ranch, 92.87 48 ⇑P **P 21 42 50.1 -0.7**
baz=93,SNR=11
222A Williams Famil 92.92 51 ⇑P **P 21 42 50.9 -0.2**
baz=93,SNR=6.5
GVD Gavdhos 92.95 312 eP **P 21 42 50.1 -1.1**
Y24A Capitan 92.99 49 ⇓P **P 21 42 50.8 -0.6**
baz=93,SNR=5.8
CDF Champ du Feu 93.02 330 eP **P 21 42 49.6 -1.6**
comp=Z,5.6nm,0.6s,mb4.5
CDF Champ du Feu 93.02 330 eP **P 21 42 49.6 -1.6**
CDF pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
CDF Champ du Feu 93.02 330 eP **P 21 42 49.6 -1.6**
comp=Z,2.8nm,0.6s,mb4.5
BAIF Baives 93.03 333 eP **P 21 42 48.6 -2.6**
Y25A Mesa, Roswell 93.49 49 ⇑P **P 21 42 52.9 -0.8**
baz=93,SNR=9.2
HINF Hinteralfeld 93.66 330 eP **P 21 42 52.0 -2.1**
X26A CR and CF Fran 93.70 48 ⇓P **P 21 42 53.8 -0.8**
baz=94,SNR=6.6
HAU Haudompre 93.73 331 eP **P 21 42 52.5 -1.9**
Z25A Roswell 93.86 49 ⇓P **P 21 42 54.8 -0.6**
baz=94,SNR=20
W27A Bowe Ranch, En 93.87 47 ⇓P **P 21 42 54.6 -0.8**
baz=94,SNR=11
MEZF Maizieres J'vi 93.90 332 eP **P 21 42 53.2 -2.0**
224A Cornudas Mount 94.03 51 ⇑P **P 21 42 55.9 -0.3**
baz=94
DSB Dublin 94.10 340 P **P 21 42 55.2 -0.8**
COWI Conover 94.18 32 eP **P 21 42 55.9 -0.7**
125A Gardner Draw, 94.27 50 ⇑P **P 21 42 56.5 -0.8**
baz=94,SNR=6.2
MNTX Cornudas Mount 94.35 51 eP **P 21 42 57.5 -0.1**
comp=Z,12nm,1.4s,mb4.7
MNTX epP pP 21 44 45.7 -0.8
MNTX esP sP 21 45 36.6 +0.8
MNTX ePP PP 21 46 51.3 -1.0
Z26A Caprock 94.36 49 ⇓P **P 21 42 56.8 -0.8**
baz=94,SNR=14
324A Moseley Ranch, 94.43 51 ⇑P **P 21 42 56.7 -1.3**
baz=94
AQU L'Aquila 94.46 323 eP **P 21 42 56.8 -1.1**
AQU pmax pmax
comp=Z,12nm,0.8s,mb5.0
AQU L'Aquila 94.46 323 eP **P 21 42 56.8 -1.1**
comp=Z,12nm,0.8s,mb5.0
SCHQ Schefferville 94.62 15 PKKP PKKPbc 21 59 51.2 -3.8
comp=Z,2.5nm,0.7s,baz=237,slow=4.2,SNR=4.0
VLC Villacollemand 94.72 326 P **P 21 42 59.1 0.0**
GDL2 Guadalupe Moun 94.74 50 eP **P 21 43 00.1 +0.7**
GDL2 epP pP 21 44 49.3 +1.0
Z27A Tatum 94.84 48 ⇑P **P 21 42 59.1 -0.7**
baz=95
AMTX Amarillo 94.88 46 eP **P 21 43 00.5 +0.6**
AMTX epP pP 21 44 48.9 0.0
226A Malaga, Loving 95.00 50 ⇑P **P 21 43 00.0 -0.6**

baz=95
425A Indio Mountain 95.16 51 ⇓P **P 21 43 00.8 -0.5**
baz=95,SNR=9.1
SCIA State Center 95.18 37 eP **P 21 43 00.8 -0.4**
LPL La Plagne 95.46 329 eP **P 21 43 00.8 -1.5**
comp=Z,12nm,0.7s,mb4.7
LPL La Plagne 95.46 329 eP **P 21 43 00.8 -1.5**
LPL pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
LPL La Plagne 95.46 329 eP **P 21 43 00.8 -1.5**
comp=Z,5.8nm,0.7s,mb4.7
LPG La Plagne 95.46 329 eP **P 21 43 00.9 -1.5**
comp=Z,11nm,0.5s,mb4.8
LPG La Plagne 95.46 329 eP **P 21 43 00.9 -1.5**
LPG pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
LPG La Plagne 95.46 329 eP **P 21 43 00.9 -1.5**
comp=Z,5.6nm,0.5s,mb4.8
326A Caldwell Ranch 95.54 50 ⇓P **P 21 43 02.4 -0.7**
baz=95,SNR=13
BNI Bardonecchia 95.83 329 eP **P 21 43 03.5 -0.5**
SMF Signal de Mont 95.86 331 eP **P 21 43 02.3 -1.9**
comp=Z,4.9nm,0.8s,mb4.4
SMF Signal de Mont 95.86 331 eP **P 21 43 02.3 -1.9**
SMF pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
SMF Signal de Mont 95.86 331 eP **P 21 43 02.3 -1.9**
comp=Z,2.5nm,0.8s,mb4.4
CEL Celeste 95.87 319 eP **P 21 43 04.3 -0.1**
CEL epP pP 21 44 53.8 +0.4
AVF Avril sur Loir 95.96 332 eP **P 21 43 03.7 -0.9**
comp=Z,6.8nm,0.8s,mb4.5
AVF Avril sur Loir 95.96 332 eP **P 21 43 03.7 -0.9**
AVF pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
AVF Avril sur Loir 95.96 332 eP **P 21 43 03.7 -0.9**
comp=Z,3.4nm,0.8s,mb4.5
JFWS Jewell Farm 95.99 34 eP **P 21 43 03.4 -1.4**
MBDF Montbardon 96.04 328 eP **P 21 43 02.5 -2.5**
427A Hayter Ranch, 96.21 50 ⇓P **P 21 43 05.4 -0.6**
baz=96,SNR=6.9
526A Mary Lane Ranc 96.21 51 ⇑P **P 21 43 05.7 -0.3**
baz=96,SNR=11
328A Wristen Ranch, 96.29 50 ⇓P **P 21 43 05.9 -0.5**
baz=96,SNR=5.2
GRR Gorron 96.35 335 eP **P 21 43 04.6 -1.7**
CASY Casey 96.37 191 eP **P 21 43 05.2 -0.5**
CASY Casey 96.37 191 eP **P 21 43 04.9 -0.8**
comp=Z,3.7nm,0.7s,mb4.6
CASY epP pP 21 44 55.4 +0.5
CASY ePP PP 21 47 05.7 -2.1
626A Big Bend Ranch 96.48 52 ⇑P **P 21 43 06.6 -0.7**
baz=96,SNR=5.1
527A Woodward Ranch 96.49 51 ⇑P **P 21 43 06.9 -0.4**
baz=96,SNR=6.6
428A Kincaid Ranch, 96.78 50 ⇓P **P 21 43 08.5 -0.1**
baz=97,SNR=6.7
WMOK Wichita Mounta 96.81 45 eP **P 21 43 08.3 -0.4**
WMOK e*PP pP 21 44 57.4 -0.3
WMOK e 21 47 08.6
WMOK pmax pmax
comp=Z,2.0nm,0.8s,mb4.4
WMOK Wichita Mounta 96.81 45 eP **P 21 43 08.3 -0.3**
comp=Z,2.0nm,0.8s,mb4.4
WMOK epP pP 21 44 57.4 -0.3
WMOK ePP PP 21 47 08.6 -2.3
TCF Toulx Ste Croi 96.84 332 eP **P 21 43 07.4 -1.1**
TXAR Lajitas Array 96.94 52 P **P 21 43 09.3 0.0**
comp=Z,8.2nm,0.6s,mb5.2,baz=302,slow=2.2,SNR=134
TXAR pP pP 21 44 57.5 -1.0
comp=Z,2.5nm,0.6s,baz=293,slow=2.5,SNR=4.1
TXAR PKKP PKKPbc 21 59 48.0 0.0
comp=Z,0.5nm,0.6s,baz=149,slow=3.8,SNR=5.9
TXAR Lajitas Array 96.94 52 P **P 21 43 09.3 -0.1**
TXAR *PP pP 21 44 57.5 -1.0
TXAR Lajitas Array 96.94 52 P **P 21 43 09.3 0.0**
TXAR pP pP 21 44 57.5 -1.0
TXAR PKKP PKKPbc 21 59 48.0 0.0
528A Cox Ranch, San 97.05 51 ⇓P **P 21 43 09.6 -0.2**
baz=97,SNR=8.6
627A Terlingua Ranc 97.06 52 ⇑P **P 21 43 09.5 -0.5**
baz=97,SNR=18
628A Black Gap, Mar 97.39 51 ⇓P **P 21 43 10.6 -0.8**
baz=97
RJF Les Rejaudoux 97.92 332 eP **P 21 43 12.6 -0.8**
CAF Calviac 97.98 331 eP Pdif 21 43 12.4 -1.3
WDD Wield Dalam 98.30 318 Pdif Pdif 21 43 14.9 -0.1
VSL Villasalto 98.63 323 ePdif Pdif 21 43 16.4 -0.2
JCT Junction City 98.87 49 eP Pdif 21 43 17.8 +0.2
JCT pmax pmax
comp=Z,3.0nm,0.6s,mb4.8
JCT Junction City 98.87 49 ePdif Pdif 21 43 17.8 +0.2
comp=Z,3.3nm,0.6s
CCM Cathedral Cave 98.98 38 eP Pdif 21 43 18.5 +0.4
CCM e 21 45 07.6
FVM French Village 99.48 38 eP Pdif 21 43 19.0 -1.3
MIAR Mount Ida 100.12 42 ePdif Pdif 21 43 23.2 +0.1
MIAR epP pP 21 45 13.7 +0.9
WCI Wyandotte Cave 101.49 35 eP Pdif 21 43 29.0 -0.2
ESDC Sonseca Array 104.84 332 PP PP 21 47 53.3 -17
comp=Z,0.2nm,0.4s,baz=12,slow=6.4,SNR=3.4
BLA Blacksburg 105.18 32 PKiKP PKiKP 21 47 57.4 +0.2
SBA Scott Base 106.61 174 ePKiKP PKiKP 21 47 58.4 -0.2
MAW Mawson 110.54 203 PKiKP PKiKP 21 48 06.2 +0.1
comp=Z,2.0nm,0.6s,baz=106,slow=3.7,SNR=11
MAW SKP 21 50 54.3
comp=Z,1.3nm,0.7s,baz=88,slow=4.1,SNR=3.5
MAW Mawson 110.54 203 iPKiKP PKiKP 21 48 06.2 +0.1
MAW 21 50 54.3
MAW pmax pmax
comp=Z,2.0nm,0.6s
MAW Mawson 110.54 203 ePKiKP PKiKP 21 48 06.4 +0.3
LSZ Lusaka 115.79 266 ePKIKP PKPdf 21 48 17.8 +0.1
QSPA South Pole Qui 117.54 180 ePKPdf PKPdf 21 48 18.5 -0.7
QSPA ePP PP 21 49 40.5 +0.1
QSPA epPKPdf pPKPdf 21 50 15.5 +0.8
SYO Syowa Base 119.24 204⇑eP PKPdf 21 48 20.3 -2.5
LBTB Lobatse 121.55 256 ePKIKP PKPdf 21 48 28.1 -0.5
JTS JuntasAbangare 122.55 55 ePKIKP PKPdf 21 48 30.0 -0.8
BOSA Boshof 122.91 252 PKP PKPdf 21 48 31.2 +0.1
comp=Z,8.7nm,0.6s,baz=127,slow=2.6,SNR=34
BOSA PKKPab PKKPab 21 58 26.7 +1.7
comp=Z,1.2nm,0.5s,baz=267,slow=10,SNR=7.2
BOSA Boshof 122.91 252 ePKPdf PKPdf 21 48 31.2 +0.1
TSUM Tsumeb 126.64 266 ePKPdf PKPdf 21 48 39.7 +1.2
BCIP Isla Barro Col 126.97 52 ePKPdf PKPdf 21 48 38.7 -0.6
NVL N'lazarevskaya 128.14 199 ePKIKP PKPdf 21 48 39.2 -0.6
MTP Monte Pirata 128.25 31 ePKPdf PKPdf 21 48 41.5 -0.2
DBIC Dimbokro 131.58 310 PKhKP PKPpre 21 48 41.7
comp=Z,1.7nm,0.5s,baz=119,slow=4.7,SNR=5.4
DBIC PKP PKPdf 21 48 48.4 +0.4
comp=Z,5.2nm,0.6s,baz=255,slow=3.8,SNR=6.7
DBIC SKPbc SKPbc 21 51 26.8 -1.2
comp=Z,48nm,0.6s,baz=20,slow=4.3,SNR=43
DBIC Dimbokro 131.58 310 PKP PKPpre 21 48 41.7
DBIC ePKPdf PKPdf 21 48 48.3 +0.2
TIC Toumodi 131.71 310 ePKIKP PKPdf 21 48 49.0 +0.7
comp=Z,9.8nm,0.3s
TIC Toumodi 131.71 310 ePKP1 SKPbc 21 51 26.9 -1.5
comp=Z,54nm,0.7s
KIC Kosan Boka 131.72 309 ePKIKP PKPdf 21 48 48.4 +0.1
comp=Z,52nm,1.2s
KIC Kosan Boka 131.72 309 ePKP1 SKPbc 21 51 27.2 -1.3
comp=Z,115nm,0.6s
LIC Lamto 132.02 309 ePKIKP PKPdf 21 48 48.9 0.0
comp=Z,112nm,1.6s
LIC Lamto 132.02 309 ePKP1 SKPbc 21 51 28.2 -1.3
comp=Z,147nm,0.6s
SDV Santo Domingo 133.20 43 ePKPdf PKPdf 21 48 50.4 -0.7
SDV eSKP 21 51 32.6
OTAV Otavalo 134.01 59 ePKPdf PKPdf 21 48 52.4 -0.2
NNA Nana 142.39 73 ePKP PKPdf 21 49 03.3 -4.6
LPAZ La Paz 151.85 72 PKP PKPdf 21 49 24.5 +1.2
comp=Z,2.6nm,0.8s,baz=324,slow=3.0,SNR=14
LPAZ PKPbc PKPbc 21 49 31.4 +1.1
comp=Z,36nm,0.7s,baz=343,slow=3.1,SNR=115
LPAZ PKPab PKPab 21 49 42.0 +0.4
comp=Z,21nm,0.6s,baz=25,slow=7.3,SNR=13
LPAZ pPKPbc pPKPbc 21 51 23.4 -1.7
comp=Z,13nm,0.8s,baz=23,slow=4.8,SNR=4.6
LPAZ La Paz 151.85 72 PKIKP PKPdf 21 49 24.5 +1.2
LPAZ 21 49 42.1
LPAZ 21 51 23.5
LPAZ pmax pmax
comp=Z,3.0nm,0.8s

LPAZ	**La Paz**	**151.85**	**72**	*e*PKPdf	PKPdf	21 49 24.6	+1.2
LPAZ				*e*PKPbc	PKPbc	21 49 31.2	+0.9
LPAZ				*e*PKPab	PKPab	21 49 42.4	+0.8
LPAZ				*ep*PKPdf	pPKPdf	21 51 23.4	+4.1
PLCA	**Paso Flores**	**152.00**	**125**	PKP	PKPdf	21 49 23.1	+0.2
	comp=Z,2.0nm,0.9s,baz=351,slow=7.2,SNR=5.1						
PLCA				PKPbc	PKPbc	21 49 30.2	+0.3
	comp=Z,32nm,0.6s,baz=236,slow=2.8,SNR=133						
PLCA	**Paso Flores**	**152.00**	**125**	*e*PKPdf	PKPdf	21 49 23.1	+0.3
PLCA				*e*PKPbc	PKPbc	21 49 29.6	-0.4
LCO	**Las Campanas**	**153.25**	**100**	*e*PKPdf	PKPdf	21 49 25.8	+0.7
LCO				*e*PKPbc	PKPbc	21 49 33.2	+0.2
TRQA	**Tornquist**	**159.15**	**125**	*e*PKPdf	PKPdf	21 49 32.0	-0.4
TRQA				*e*PKPab	PKPab	21 50 13.6	+1.1
CPUP	**Villa Florida**	**164.75**	**89**	PKP	PKPdf	21 49 38.4	0.0
	comp=Z,9.2nm,1.0s,baz=313,slow=1.8,SNR=12						
CPUP				PKPab	PKPab	21 50 37.3	-0.3
	comp=Z,3.8nm,0.5s,baz=278,slow=3.5,SNR=12						
CPUP	**Villa Florida**	**164.75**	**89**	*e*PKPdf	PKPdf	21 49 38.2	-0.1
CPUP				*e*PKPab	PKPab	21 50 37.5	-0.1

*ISCJB **20** 21:34:43.8±0.3, 27°.89N±0°.04×140°.23E±0°.07, h505km±4km, mb4.3/28, Error ellipse: s-maj=9.7km s-min=5.3km az=170.6*
*IDC **20** 21:34:44.1±0.8, 27°.89N×140°.10E, h490km±7km, mb3.8/11, mb1 3.9/14, mb1mx3.7/24, mbtmp3.8/14, Error ellipse: s-maj=28.7km s-min=12.9km az=44.0*
*JMA **20** 21:34:44.6±0.2, 27°.96N×140°.34E, h503km±4km, M4.5*
*NEIC **20** 21:34:44.8±1.0, 27°.93N×140°.18E, h501km±11km, mb4.4/16, Error ellipse: s-maj=9.7km s-min=6.7km az=86.0*

ISC 20 21:34:44.7±0.3, 27°.92N±0°.04×140°.22E±0°.07, h499km±4km, n67, σ0°96/79, mb4.2/28, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.93**	**115**	P	**P**	**21 35 49.9**	**+0.5**
	193nm,0.3s,baz=126,slow=17,SNR=32						
CBIJ				S	**S**	**21 36 40.4**	**-1.5**
	292nm,0.3s,baz=287,slow=19,SNR=14						
CBIJ	**Chichi jima**	**1.93**	**115**	P	**P**	**21 35 49.7**	**+0.3**
CBIJ				S	**S**	**21 36 39.8**	**-2.1**
JHHJ	**Haha-jima-NKT**	**2.17**	**126**	P	**P**	**21 35 51.2**	**+0.6**
JHHJ				S	**S**	**21 36 43.3**	**-0.8**
JHJ2	**Mitsune**	**5.18**	**356**	P	**P**	**21 36 14.1**	**+1.0**
JHJ	**Hachijo jima 2**	**5.20**	**356**	P	**P**	**21 36 14.2**	**+1.0**
	3.9nm,0.3s,baz=52,slow=19,SNR=7.6						
JHJ				S	**S**	**21 37 23.9**	**-1.8**
	12nm,0.3s,baz=78,slow=20,SNR=3.0						
JWZ	**Kozaga**	**6.80**	**326**	P	**P**	**21 36 29.7**	**+1.0**
BSO3	**Boso 3**	**6.86**	**2**	S	**S**	**21 37 54.3**	**-0.8**
BSO4	**Boso 4**	**7.05**	**1**	P	**P**	**21 36 31.1**	**0.0**
BSO4				S	**S**	**21 37 58.9**	**+0.4**
JIE	**Ise**	**7.12**	**336**	P	**P**	**21 36 33.8**	**+2.0**
JIE				S	**S**	**21 38 00.0**	**+0.3**
JKN2	**Miekihoku**	**7.15**	**333**	P	**P**	**21 36 34.1**	**+1.9**
HMMJ	**Hamamatsu 2**	**7.23**	**343**	P	**P**	**21 36 34.1**	**+1.1**
JOD2	**Odawara 2**	**7.38**	**353**	P	**P**	**21 36 35.5**	**+1.0**
JOD2				S	**S**	**21 38 04.6**	**-0.1**
JNY	**Yasuok**	**7.68**	**345**	P	**P**	**21 36 38.5**	**+0.9**
JEG	**Eigenji**	**7.90**	**337**	P	**P**	**21 36 42.6**	**+2.8**
JHU	**Hanno**	**7.95**	**354**	P	**P**	**21 36 40.6**	**+0.3**
JHU				S	**S**	**21 38 14.2**	**-1.1**
JTO	**Tosashimizu**	**8.07**	**309**	P	**P**	**21 36 41.9**	**+0.2**
JRY	**Ryogami san**	**8.15**	**352**	P	**P**	**21 36 42.6**	**+0.2**
JRY				S	**S**	**21 38 18.7**	**-0.4**
JYT	**Yasato**	**8.28**	**360**	P	**P**	**21 36 44.9**	**+1.1**
JYT				S	**S**	**21 38 19.1**	**-2.5**
JAG	**Ashikaga**	**8.50**	**356**	P	**P**	**21 36 46.2**	**+0.1**
JAG				S	**S**	**21 38 23.7**	**-2.2**
JHO	**Hitachi**	**8.67**	**2**	P	**P**	**21 36 49.5**	**+1.7**
JHO				S	**S**	**21 38 28.3**	**-0.7**
MJAR	**Matsushiro Arr**	**8.76**	**349**	P	**P**	**21 36 49.5**	**+0.7**
	3.3nm,0.3s,baz=185,slow=12,SNR=6.2						
JHS	**Saijyo**	**9.30**	**321**	P	**P**	**21 36 55.6**	**+1.1**
JHS				S	**S**	**21 38 41.6**	**+0.4**
JAM	**Amami Oshima**	**9.38**	**275**	P	**P**	**21 36 54.0**	**-1.4**
JOW	**Kunigami**	**10.67**	**267**	P	**P**	**21 37 07.3**	**-1.8**
KSRS	**Korea Array**	**14.04**	**316**	P	**P**	**21 37 42.9**	**-1.7**
	0.2nm,0.3s,baz=130,slow=12,SNR=2.5						
TATO	**Taipei**	**17.03**	**264**	*e*P	**P**	**21 38 15.4**	**-0.6**
YHNB	**Yeheng**	**17.20**	**263**	P	**P**	**21 38 18.1**	**+0.3**
TWG	**Pinlang**	**18.02**	**258**	*e*P	**P**	**21 38 25.6**	**+0.2**
BJT	**Baijiatuan**	**23.23**	**307**	P	**P**	**21 39 12.3**	**0.0**
HIA	**Hailar**	**26.49**	**329**	*e*P	**P**	**21 39 41.8**	**+0.7**
	11nm,0.9s,mb4.3						
HHC	**Hu-ho-hao-te**	**26.80**	**306**	*e*P	**P**	**21 39 43.5**	**-0.5**
HHC				S	**S**	**21 43 42.8**	**-1.6**
HHC				pmax	pmax		
	comp=Z,21nm,0.5s,mb4.8						
HHC				pmax	pmax		
	comp=Z,500nm,5.0s						
QIZ	**Qiongzhong**	**29.17**	**259**	*e*P	**P**	**21 40 05.4**	**+0.4**
	comp=Z,49nm,1.5s,mb4.7						
KKM	**Kota Kinabalu**	**31.50**	**231**	*e*P	**P**	**21 40 25.6**	**+0.5**
ULN	**Ulaanbaatar**	**32.52**	**317**	*e*P	**P**	**21 40 33.8**	**+0.3**
	comp=Z,3.2nm,0.6s,mb3.9						
SONM	**Songino Array**	**32.91**	**316**	P	**P**	**21 40 36.3**	**-0.5**
	comp=Z,2.6nm,0.6s,mb3.8,baz=120,slow=7.5,SNR=4.2						
YAK	**Yakutsk**	**34.82**	**351**	*e*P	**P**	**21 40 52.3**	**-0.3**
PMG	**Port Moresby**	**37.71**	**169**	*e*P	**P**	**21 41 16.8**	**-0.3**
	comp=Z,29nm,1.1s,mb4.6						
CHTO	**Chiang Mai**	**38.80**	**266**	*e*P	**P**	**21 41 23.6**	**-2.5**
	comp=Z,5.5nm,0.8s,mb4.0						
LSA	**Lhasa**	**42.77**	**285**	*e*P	**P**	**21 41 58.3**	**+0.6**
	comp=Z,3.5nm,0.3s,mb4.3						
BILL	**Bilibino**	**43.06**	**14**	P	**P**	**21 41 57.0**	**-2.4**
ZALV	**Zalesovo Beam**	**47.72**	**319**	P	**P**	**21 42 34.8**	**-0.5**
	comp=Z,6.5nm,0.3s,mb4.4,baz=112,slow=7.0,SNR=7.1						
ZALV				PcP	PcP	21 43 53.9	-1.0
	comp=Z,1.7nm,0.4s,baz=126,slow=3.4,SNR=2.7						
FITZ	**Fitzroy Crossi**	**47.88**	**199**	*e*P	**P**	**21 42 37.3**	**+0.4**
WRAB	**Tennant Creek**	**47.91**	**187**	P	**P**	**21 42 36.7**	**-0.4**
CTAO	**Charters Tower**	**48.08**	**172**	*e*P	**P**	**21 42 38.0**	**-0.4**
	comp=Z,4.4nm,0.6s,mb4.0						
MKAR	**Makanchi Array**	**48.60**	**309**	P	**P**	**21 42 41.7**	**-0.3**
	comp=Z,2.6nm,0.3s,mb4.0,baz=89,slow=10,SNR=14						
MKAR	**Makanchi Array**	**48.60**	**309**	P	**P**	**21 42 41.7**	**-0.3**
KURK	**Kurchatov**	**51.16**	**314**	*e*P	**P**	**21 43 00.4**	**-0.3**
	comp=Z,9.2nm,0.5s,mb4.4						
UCH	**Uchtor**	**54.39**	**304**	*e*P	**P**	**21 43 24.6**	**+0.6**
	comp=Z,8.1nm,0.4s,mb4.4						
AML	**Almayashu**	**55.00**	**304**	*e*P	**P**	**21 43 28.9**	**+0.6**
	comp=Z,12nm,0.5s,mb4.5						
BVAR	**Borovoye Array**	**56.25**	**317**	P	**P**	**21 43 37.4**	**+0.5**
	comp=Z,21nm,0.4s,mb4.8,baz=96,slow=8.1,SNR=22						
BRVK	**Borovoye**	**56.31**	**317**	*e*P	**P**	**21 43 37.5**	**+0.3**
	comp=Z,12nm,0.4s,mb4.6						
STKA	**Stephens Creek**	**59.48**	**179**	*e*P	**P**	**21 43 58.9**	**0.0**
	comp=Z,6.0nm,1.5s,mb3.7						
KBL	**Kabul**	**60.09**	**296**	*e*P	**P**	**21 44 02.6**	**-0.6**
	comp=Z,6.2nm,0.6s,mb4.2						
ARU	**Arti**	**62.70**	**322**	*e*P	**P**	**21 44 19.3**	**-0.6**
	comp=Z,12nm,0.5s,mb4.7						
ARCES	**ARCESS Array B**	**72.19**	**340**	P	**P**	**21 45 18.9**	**+1.0**
	comp=Z,4.4nm,0.7s,mb4.1,baz=79,slow=8.0,SNR=5.6						
ARE0	**ARCESS Array S**	**72.19**	**340**	*e*P	**P**	**21 45 17.7**	**-0.3**
KIV	**Kislovodsk**	**76.21**	**313**	*e*P	**P**	**21 45 41.4**	**+0.2**
	comp=Z,6.9nm,0.8s,mb4.2						
FINES	**FINESS Array B**	**76.43**	**333**	P	**P**	**21 45 42.3**	**+0.2**
	comp=Z,10nm,0.3s,mb4.8,baz=72,slow=5.5,SNR=23						
AKASG	**Malin Array Be**	**80.92**	**323**	P	**P**	**21 46 06.2**	**0.0**
	comp=Z,1.4nm,0.3s,mb4.0,baz=49,slow=5.4,SNR=7.4						
NVAR	**Mina Array Bea**	**81.37**	**51**	P	**P**	**21 46 10.1**	**+1.2**
	comp=Z,1.2nm,0.6s,mb3.6,baz=279,slow=8.1,SNR=2.8						
SUW	**Suwalki**	**82.03**	**328**	*e*P	**P**	**21 46 11.4**	**-0.5**
	comp=Z,14nm,0.6s,mb4.7						
NB2	**NORSAR Subarra**	**82.19**	**338**	P	**P**	**21 46 12.7**	**+0.1**
	comp=Z,2.9nm,0.6s,mb4.0,baz=51,slow=4.6						
NOA	**NORSAR Array B**	**82.19**	**338**	P	**P**	**21 46 12.5**	**-0.1**
	comp=Z,3.8nm,0.7s,mb4.0,baz=47,slow=4.9,SNR=4.7						
BRTR	**Keskin Array B**	**84.16**	**312**	P	**P**	**21 46 22.4**	**-0.5**
	comp=Z,1.0nm,0.6s,mb3.5,baz=106,slow=4.5,SNR=2.9						
TXAR	**Lajitas Array**	**96.50**	**52**	P	**P**	**21 47 20.2**	**-0.2**
	comp=Z,1.3nm,0.7s,mb4.2,baz=309,slow=5.7,SNR=4.2						
LPAZ	**La Paz**	**151.37**	**72**	PKPbc	PKPbc	21 53 44.3	+2.1
	comp=Z,2.7nm,0.6s,baz=18,slow=3.2,SNR=2.4						
PLCA	**Paso Flores**	**151.71**	**125**	PKPbc	PKPbc	21 53 43.1	+0.9
	comp=Z,1.6nm,0.6s,baz=280,slow=6.1,SNR=3.1						

*ISCJB **20** 21:35:23.8±0.4, 39°.65N±0°.02×26°.40E±0°.03, h1km±5km,*
Error ellipse: s-maj=4.1km s-min=3.0km az=171.1
*ISK **20** 21:35:23.8, 39°.67N×26°.38E, h7km, MD3.1*
*THE **20** 21:35:24.3, 39°.63N×26°.39E, h5km±1km, ML2.6/4, Error ellipse: s-maj=2.1km s-min=0.6km az=254.0*
*DDA **20** 21:35:24.1, 39°.65N×26°.37E, h7km±4km, Md2.8*
*CSEM **20** 21:35:24.2±0.1, 39°.65N×26°.36E, h8km, MD3.1, Error ellipse: s-maj=3.6km s-min=2.5km az=88.0*

ISC 20 21:35:24.4±0.4, 39°.65N±0°.02×26°.39E±0°.03, h6km±4km, n55, σ0°66/78, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZN	**Ezine**	**0.19**	**346**	PG	**Pg**	**21 35 28.0**	**-0.1**
EZN				*e*SG	**Sg**	**21 35 31.2**	**+0.5**
EZN	**Ezine**	**0.19**	**346**	*i* Pg	**Pg**	**21 35 28.0**	**-0.1**
EZN				*e*Sg	**Sg**	**21 35 31.2**	**+0.6**
BOZC	**Bozcaada**	**0.32**	**308**	*i* P	**Pg**	**21 35 30.6**	**-0.1**
BOZC				*i* S	**Sg**	**21 35 35.0**	**+0.1**
PRK	**Paraskevi**	**0.41**	**192**	P	**Pg**	**21 35 32.2**	**-0.1**
PRK				S	**Sg**	**21 35 37.9**	**+0.3**
PRK	**Paraskevi**	**0.41**	**192**	P	**Pg**	**21 35 32.2**	**-0.1**
PRK				S	**Sg**	**21 35 37.9**	**+0.3**
AYVA	**Ayvalik**	**0.41**	**145**	*i* P	**Pg**	**21 35 32.3**	**0.0**
AYVA				*i* S	**Sg**	**21 35 38.4**	**+0.7**
AYVA	**Ayvalik**	**0.41**	**145**	*i* P	**Pg**	**21 35 32.3**	**0.0**
AYVA				*i* S	**Sg**	**21 35 38.4**	**+0.7**
SIGR	**SIGRI**	**0.60**	**224**	P	**Pg**	**21 35 35.5**	**-0.4**
SIGR	**SIGRI**	**0.60**	**224**	P	**Pg**	**21 35 35.5**	**-0.4**
GADA	**Gvkgeada**	**0.66**	**326**	*e*PG	**Pg**	**21 35 36.9**	**-0.2**
GADA				*e*SG	**Sg**	**21 35 45.8**	**+0.1**
GADA	**Gvkgeada**	**0.66**	**326**	*e*Pg	**Pg**	**21 35 36.9**	**-0.2**
GADA				*e*Sg	**Sg**	**21 35 45.8**	**+0.1**
GELI	**Tayfur-Gelibol**	**0.76**	**5**	*e*PG	**Pg**	**21 35 38.5**	**-0.4**
GELI				*e*SG	**Sg**	**21 35 50.0**	**+1.2**
GELI	**Tayfur-Gelibol**	**0.76**	**5**	*e*Pg	**Pg**	**21 35 38.5**	**-0.4**
GELI				*e*Sg	**Sg**	**21 35 50.0**	**+1.3**
LPK	**Lapseki**	**0.78**	**22**	*e*PG	**Pg**	**21 35 39.1**	**-0.3**
LPK				*e*SG	**Sg**	**21 35 49.2**	**-0.4**
LPK	**Lapseki**	**0.78**	**22**	*e*Pg	**Pg**	**21 35 39.1**	**-0.3**
LPK				*e*Sg	**Sg**	**21 35 49.2**	**-0.4**
BALY	**Balya**	**0.96**	**84**	*i* P	**Pg**	**21 35 43.3**	**+0.6**
BALY				*i* S	**Sg**	**21 35 54.5**	**-0.7**
BALY	**Balya**	**0.96**	**84**	*i* P	**Pg**	**21 35 43.3**	**+0.6**
BALY				*i* S	**Sg**	**21 35 54.5**	**-0.7**
LIA	**Limnos Island**	**0.96**	**286**	P	**Pg**	**21 35 42.4**	**-0.4**
LIA				S	**Sg**	**21 35 56.5**	**+1.2**
LIA	**Limnos Island**	**0.96**	**286**	P	**Pg**	**21 35 42.4**	**-0.4**
LIA				S	**Sg**	**21 35 56.5**	**+1.2**
KRBG	**Karabiga-Canak**	**1.02**	**43**	*e*PG	**Pg**	**21 35 43.8**	**-0.2**
KRBG	**Karabiga-Canak**	**1.02**	**43**	*e*Pg	**Pg**	**21 35 43.8**	**-0.2**
ERIK	**Erikli-Kesan**	**1.03**	**5**	*e*PG	**Pg**	**21 35 43.1**	**-1.0**
ERIK				*e*SG	**Sg**	**21 35 57.6**	**+0.1**
ERIK	**Erikli-Kesan**	**1.03**	**5**	*e*Pg	**Pg**	**21 35 43.1**	**-1.0**
ERIK				*e*Sg	**Sg**	**21 35 57.6**	**+0.1**
GONE	**Gonen-Balikesi**	**1.08**	**68**	*e*PN	**Pg**	**21 35 45.1**	**+0.1**
GONE	**Gonen-Balikesi**	**1.08**	**68**	*e*Pn	**Pg**	**21 35 45.1**	**0.0**
ENEZ	**Enez**	**1.10**	**351**	*e*PN	**Pg**	**21 35 44.2**	**-1.4**
ENEZ	**Enez**	**1.10**	**351**	*e*Pn	**Pg**	**21 35 44.2**	**-1.4**
RKY	**Sarkoy-Tekirda**	**1.21**	**30**	*e*PN	**Pn**	**21 35 46.5**	**-1.2**
RKY	**Sarkoy-Tekirda**	**1.21**	**30**	*e*Pn	**Pn**	**21 35 46.5**	**-1.2**
ALN	**Alexandroupoli**	**1.28**	**348**	P	**Pn**	**21 35 47.9**	**-0.8**
ALN				S	**Sb**	**21 36 05.9**	**+0.5**
ALN	**Alexandroupoli**	**1.28**	**348**	P	**Pn**	**21 35 47.9**	**-0.8**
ALN				S	**Sb**	**21 36 05.9**	**+0.5**
CHOS	**Chios island**	**1.28**	**192**	P	**Pn**	**21 35 46.8**	**-2.0**
CHOS				S	**Sb**	**21 36 05.9**	**+0.3**
CHOS	**Chios island**	**1.28**	**192**	P	**Pn**	**21 35 46.8**	**-2.0**
CHOS				S	**Sb**	**21 36 05.9**	**+0.3**
MFT	**Murefte**	**1.33**	**31**	*e*PN	**Pn**	**21 35 49.9**	**+0.5**
MFT	**Murefte**	**1.33**	**31**	*e*Pn	**Pn**	**21 35 49.9**	**+0.5**
EDC	**Edincik**	**1.33**	**58**	*e*PN	**Pn**	**21 35 49.4**	**0.0**
EDC	**Edincik**	**1.33**	**58**	*e*Pn	**Pn**	**21 35 49.4**	**-0.1**
BLCB	**Balcova**	**1.36**	**158**	*e*PN	**Pn**	**21 35 50.0**	**+0.2**
BLCB	**Balcova**	**1.36**	**158**	*e*Pn	**Pn**	**21 35 50.0**	**+0.2**
IZM	**Izmir**	**1.42**	**151**	*e*PN	**Pn**	**21 35 50.2**	**-0.5**
IZM	**Izmir**	**1.42**	**151**	*e*Pn	**Pn**	**21 35 50.2**	**-0.5**
KCTX	**Karacabey (Bur**	**1.64**	**67**	*e*PN	**Pn**	**21 35 53.6**	**0.0**
KCTX	**Karacabey (Bur**	**1.64**	**67**	*e*Pn	**Pn**	**21 35 53.7**	**+0.1**
KULA	**Kula-Manisa**	**2.10**	**122**	*e*PN	**Pn**	**21 36 00.5**	**+0.5**
KULA	**Kula-Manisa**	**2.10**	**122**	*e*Pn	**Pn**	**21 36 00.5**	**+0.5**
ARMT	**Armutlu**	**2.11**	**63**	*e*PN	**Pn**	**21 36 00.9**	**+0.7**
ARMT	**Armutlu**	**2.11**	**63**	*e*Pn	**Pn**	**21 36 00.9**	**+0.8**
EDRB	**Edirne**	**2.22**	**7**	*e*PN	**Pn**	**21 36 01.5**	**-0.1**
EDRB	**Edirne**	**2.22**	**7**	*e*Pn	**Pn**	**21 36 01.5**	**-0.1**
CTKS	**Kestanelik-??a**	**2.27**	**45**	*e*PN	**Pn**	**21 36 02.6**	**+0.3**
CTKS	**Kestanelik-??a**	**2.27**	**45**	*e*Pn	**Pn**	**21 36 02.6**	**+0.3**
CTYL	**Yal??k??y-??at**	**2.33**	**38**	*e*PN	**Pn**	**21 36 03.7**	**+0.5**
CTYL	**Yal??k??y-??at**	**2.33**	**38**	*e*Pn	**Pn**	**21 36 03.7**	**+0.5**
YLV	**Yalova**	**2.47**	**67**	*e*PN	**Pn**	**21 36 06.4**	**+1.3**
YLV	**Yalova**	**2.47**	**67**	*e*Pn	**Pn**	**21 36 06.4**	**+1.3**

*NEIC **20** 21:36:51.0, 58°.38N×133°.50W, h1km, ML2.9(PGC), ML2.9(AEIC), After PGC.*

PGC 20 21:36:51.0±19.0, 58°.38N×133°.50W, h1km, ML2.9/4, 3D, 54km east of Juneau, Ak Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESE	**Bessie Mountai**	**0.74**	**286**	P	Pg	21 37 06.1	+1.0
SKAG	**Skagway**	**1.44**	**320**	P	Pn	21 37 17.9	-0.2
SKAG				S	Sg	21 37 37.8	+0.8
SIT	**Sitka**	**1.65**	**217**	P	Pn	21 37 19.4	-1.6
SIT				S	Sn	21 37 42.0	-0.8
DLBC	**Dease Lake**	**1.83**	**87**	Pn	Pn	21 37 22.6	-0.9
DLBC	**Dease Lake**	**1.83**	**87**	⇓Pn	Pn	21 37 22.6	-0.9
DLBC				⇑Sg	Sg	21 37 48.2	-1.5
PLBC	**Pleasant Camp**	**1.83**	**307**	Pn	Pn	21 37 23.3	-0.2
PLBC	**Pleasant Camp**	**1.83**	**307**	⇑Pn	Pn	21 37 23.3	-0.2
PLBC				⇑Sg	Sg	21 37 47.8	-2.0
WHY	**Whitehorse**	**2.39**	**344**	Pg	Pg	21 37 33.0	-3.7
WHY	**Whitehorse**	**2.39**	**344**	⇑Pg	Pg	21 37 33.0	-3.7
WHY				⇓Sg	Sg	21 38 04.5	-3.1
HYT	**Haines Junctio**	**3.18**	**322**	Pg	Pg	21 37 46.2	-5.7
HYT				Sg	Sg	21 38 29.9	-3.2
HYT	**Haines Junctio**	**3.18**	**322**	⇑Pg	Pg	21 37 46.2	-5.7
HYT				⇓Sg	Sg	21 38 29.9	-3.2
EGAK	**Eagle**	**7.38**	**334**	*e*Pn	Pn	21 38 40.0	+0.3
	2.8nm,0.8s						

IDC 20 21:47:16.7±17.0, 27°.27N×142°.02E, h0km, mb4.0/4, mb1 4.0/4, mb1mx3.5/21, mbtmp4.0/4, Error ellipse: s-maj=488.1km s-min=126.2km az=4.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**49.26**	**319**	P	P	21 56 06.8	-0.2
	0.5nm,0.3s,baz=112,slow=6.4,SNR=2.5						
MKAR	**Makanchi Array**	**50.25**	**309**	P	P	21 56 14.6	0.0
	0.3nm,0.2s,baz=97,slow=8.6,SNR=3.2						
BVAR	**Borovoye Array**	**57.82**	**317**	P	P	21 57 09.9	+0.1
	1.3nm,0.4s,baz=94,slow=7.7,SNR=7.5						
FINES	**FINESS Array B**	**77.73**	**334**	P	P	21 59 15.2	0.0
	0.5nm,0.3s,baz=71,slow=5.6,SNR=8.4						

*ISCJB **20** 21:51:38.0±0.5, 27°.92N±0°.04×140°.6E±0°.2, h522km±8km, mb3.3/9, Error ellipse: s-maj=23.9km s-min=6.4km az=173.5*
*JMA **20** 21:51:38.6±0.3, 27°.97N×140°.67E, h517km±5km, M3.7*
*IDC **20** 21:51:39.2±1.9, 27°.87N×140°.17E, h496km±29km, mb2.9/4, mb1 2.9/5, mb1mx2.6/23, mbtmp2.8/5, Error ellipse: s-maj=88.7km s-min=19.6km az=78.0*
*NEIC **20** 21:51:39.2±1.0, 27°.95N×140°.48E, h514km±13km, mb3.5/6, Error ellipse: s-maj=21.3km s-min=10.2km az=82.0*

ISC 20 21:51:39.1±0.5, 27°.95N±0°.05×140°.6E±0°.2, h514km±8km, n35, σ0°90/43, mb3.3/9, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.66**	**120**	P	**P**	**21 52 43.8**	**-0.2**
CBIJ				S	**S**	**21 53 35.8**	**-0.8**
JHHJ	**Haha-jima-NKT**	**1.94**	**132**	P	**P**	**21 52 45.3**	**+0.1**
JHHJ				S	**S**	**21 53 38.0**	**-0.8**
JHJ	**Hachijo jima 2**	**5.20**	**353**	P	**P**	**21 53 07.9**	**-0.5**
	baz=73,slow=20						
BSO1	**Boso 1**	**6.69**	**3**	P	**P**	**21 53 24.0**	**+1.5**
BSO3	**Boso 3**	**6.83**	**360**	P	**P**	**21 53 24.9**	**+1.0**
BSO3				S	**S**	**21 54 48.8**	**-1.1**
BSO4	**Boso 4**	**7.02**	**358**	P	**P**	**21 53 28.2**	**+2.4**
JIE	**Ise**	**7.23**	**334**	P	**P**	**21 53 28.8**	**+0.9**
JKN2	**Miekihoku**	**7.28**	**331**	P	**P**	**21 53 29.5**	**+1.2**
HMMJ	**Hamamatsu 2**	**7.30**	**341**	P	**P**	**21 53 29.6**	**+1.0**
JOD2	**Odawara 2**	**7.40**	**350**	P	**P**	**21 53 30.1**	**+0.5**
JOD2				*e*S	**S**	**21 54 59.8**	**-0.5**
JNY	**Yasuok**	**7.74**	**343**	P	**P**	**21 53 34.3**	**+1.3**
JAO	**Obara**	**7.83**	**340**	P	**P**	**21 53 35.1**	**+1.2**
JHU	**Hanno**	**7.96**	**352**	P	**P**	**21 53 35.1**	**-0.1**
JHU				*e*S	**S**	**21 55 09.3**	**-1.2**
JRY	**Ryogami san**	**8.17**	**350**	P	**P**	**21 53 37.5**	**+0.1**
JYT	**Yasato**	**8.26**	**358**	P	**P**	**21 53 39.1**	**+0.8**
JYT				*e*S	**S**	**21 55 15.3**	**-0.9**
JAG	**Ashikaga**	**8.51**	**354**	P	**P**	**21 53 40.5**	**-0.3**
JAG				*e*S	**S**	**21 55 18.5**	**-2.3**
JHO	**Hitachi**	**8.64**	**360**	P	**P**	**21 53 43.6**	**+1.4**
JHO				*e*S	**S**	**21 55 22.1**	**-1.2**
MJAR	**Matsushiro Arr**	**8.80**	**347**	P	**P**	**21 53 43.6**	**-0.2**
	0.9nm,0.3s,baz=169,slow=9.7,SNR=12						
MAJO	**Matsushiro**	**8.80**	**347**	*e*P	**P**	**21 53 44.0**	**+0.1**
	4.0nm,0.4s						
MAT	**Matsushiro**	**8.80**	**347**	P	**P**	**21 53 44.1**	**+0.2**
MAT	**Matsushiro**	**8.80**	**347**	P	**P**	**21 53 44.6**	**+0.7**
TPUB	**Ta-pu**	**18.57**	**260**	P	**P**	**21 55 23.8**	**-0.3**
QIZ	**Qiongzhong**	**29.49**	**259**	P	**P**	**21 57 00.8**	**-0.5**
CHTO	**Chiang Mai**	**39.13**	**266**	*e*P	**P**	**21 58 22.0**	**-0.2**
	0.8nm,0.5s,mb3.4						
WRAB	**Tennant Creek**	**47.98**	**188**	*e*P	**P**	**21 59 30.2**	**-0.8**
	2.7nm,0.8s,mb3.8						
FITZ	**Fitzroy Crossi**	**48.01**	**199**	*e*P	**P**	**21 59 31.2**	**0.0**
	2.1nm,0.7s,mb3.8						
MKAR	**Makanchi Array**	**48.83**	**309**	P	**P**	**21 59 36.2**	**-0.9**
	0.3nm,0.2s,mb3.4,baz=100,slow=7.5,SNR=3.0						
ASAR	**Alice Springs**	**51.72**	**188**	P	**P**	**21 59 58.9**	**+0.5**
	0.2nm,0.6s,mb2.7,baz=27,slow=13,SNR=3.4						
MBWA	**Marble Bar**	**52.81**	**205**	*e*P	**P**	**22 00 05.9**	**-0.5**
UCH	**Uchtor**	**54.64**	**304**	*e*P	**P**	**22 00 19.1**	**0.0**
	0.8nm,0.7s,mb3.1						
EKS2	**Erkin-Say**	**55.12**	**304**	*e*P	**P**	**22 00 21.6**	**-0.9**
	0.6nm,0.4s,mb3.2						
AML	**Almayashu**	**55.25**	**304**	P	**P**	**22 00 23.2**	**-0.2**
BVAR	**Borovoye Array**	**56.45**	**317**	P	**P**	**22 00 32.0**	**+0.5**
	0.7nm,0.5s,mb3.2,baz=95,slow=7.6,SNR=4.8						
BRVK	**Borovoye**	**56.51**	**317**	P	**P**	**22 00 30.7**	**-1.2**
FINES	**FINESS Array B**	**76.55**	**333**	P	**P**	**22 02 37.0**	**+1.1**

LKD2				S	Sg	22 15 41.1	+0.4
LKD2	**Lefkada island**	**0.63**	**180**	P	Pg	22 15 32.0	-0.5
LKD2				S	Sg	22 15 41.1	+0.4
KEK	**Kerkira**	**0.72**	**294**	*e*Pb	Pg	22 15 34.0	-0.3
KEK				*e*Sn	Sg	22 15 46.2	+2.6
KEK	**Kerkira**	**0.72**	**294**	*e*PB	Pg	22 15 34.0	-0.3
KEK				*e*SN	Sg	22 15 46.2	+2.6
KEK	**Kerkira**	**0.72**	**294**	P	Pg	22 15 33.6	-0.7
KEK				S	Sg	22 15 44.0	+0.4
KEK	**Kerkira**	**0.72**	**294**	P	Pg	22 15 33.6	-0.7
KEK	**Kerkira**	**0.72**	**294**	*e*Pb	Pg	22 15 34.0	-0.3
KEK				S	Sg	22 15 44.0	+0.4
EVR	**Evrytania**	**1.03**	**119**	*e*Pn	Pg	22 15 39.6	-0.5
EVR	**Evrytania**	**1.03**	**119**	*e*PN	Pg	22 15 39.6	-0.5
EVR	**Evrytania**	**1.03**	**119**	*e*Pn	Pg	22 15 39.6	-0.5
NEST	**Nestorio**	**1.04**	**17**	P	Pg	22 15 39.9	-0.4
NEST	**Nestorio**	**1.04**	**17**	P	Pg	22 15 39.9	-0.4
THL	**Klokotos Trika**	**1.06**	**82**	*e*PN	Pg	22 15 40.2	-0.5
THL	**Klokotos Trika**	**1.06**	**82**	P	Pg	22 15 40.0	-0.7
THL				S	Sg	22 15 55.7	+1.2
THL	**Klokotos Trika**	**1.06**	**82**	P	Pg	22 15 40.0	-0.7
THL	**Klokotos Trika**	**1.06**	**82**	*e*Pn	Pg	22 15 40.2	-0.5
THL				S	Sg	22 15 55.7	+1.2
VLS	**Valsamata**	**1.24**	**182**	*e*Pn	Pn	22 15 44.5	0.0
VLS	**Valsamata**	**1.24**	**182**	*e*PN	Pn	22 15 44.5	0.0
VLS	**Valsamata**	**1.24**	**182**	*e*Pn	Pn	22 15 44.5	0.0
AGG	**Agios Georgios**	**1.36**	**106**	*e*Pn	Pn	22 15 45.8	-0.3
AGG	**Agios Georgios**	**1.36**	**106**	*e*PN	Pn	22 15 45.8	-0.3
AGG	**Agios Georgios**	**1.36**	**106**	P	Pn	22 15 45.1	-1.0
AGG				S	Sb	22 16 04.7	+0.6
AGG	**Agios Georgios**	**1.36**	**106**	P	Pn	22 15 45.1	-1.0
AGG	**Agios Georgios**	**1.36**	**106**	*e*Pn	Pn	22 15 45.8	-0.3
AGG				S	Sb	22 16 04.7	+0.6
FNA	**Florina**	**1.47**	**22**	P	Pn	22 15 46.9	-0.7
FNA				S	Sn	22 16 07.4	+0.2
FNA	**Florina**	**1.47**	**22**	P	Pn	22 15 46.9	-0.7
FNA				S	Sn	22 16 07.4	+0.2
NEO	**Neokhori**	**2.00**	**92**	*e*Pn	Pn	22 15 55.3	+0.5
NEO	**Neokhori**	**2.00**	**92**	*e*PN	Pn	22 15 55.3	+0.5
NEO	**Neokhori**	**2.00**	**92**	*e*Pn	Pn	22 15 55.3	+0.5

JMA 20 22:15:49.8±0.7, 45°.45N×151°.43E, h30km, M3.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**4.58**	**245**	P	Pn	22 16 56.1	-0.8
NEM2				*e*S	Sn	22 17 45.1	-3.9
JRA	**Rausu**	**4.75**	**254**	P	Pn	22 17 01.2	+2.0
JAK	**Akkeshi**	**5.42**	**245**	P	Pn	22 17 07.9	-0.7
JTKR	**Abashiri--Toko**	**5.56**	**257**	P	Pn	22 17 13.1	+2.7
JAR	**Ashorobuto**	**5.90**	**251**	P	Pn	22 17 16.6	+1.6
JMP	**Maruseppu**	**5.93**	**259**	P	Pn	22 17 18.5	+3.0
JCH	**Churui**	**6.47**	**247**	P	Pn	22 17 23.1	+0.2
JCH				*e*S	Sn	22 18 32.1	-3.5
JNBK	**Urakawa-nobuka**	**7.03**	**246**	P	Pn	22 17 29.3	-1.2
JKB	**Kayabe**	**8.34**	**248**	P	Pn	22 17 48.2	-0.3

*ISK **20** 22:19:30.8, 39°.20N×27°.68E, h16km, MD2.9*
*ISCJB **20** 22:19:31.3±0.4, 39°.20N±0°.02×27°.71E±0°.04, h14km±4km, Error ellipse: s-maj=5.3km s-min=3.4km az=11.6*
*DDA **20** 22:19:31.3, 39°.22N×27°.71E, h7km±2km, Md2.8*
*CSEM **20** 22:19:31.3±0.1, 39°.19N×27°.71E, h15km, MD2.9, Error ellipse: s-maj=2.6km s-min=1.7km az=99.0*
ISC 20 22:19:31.6±0.4, 39°.20N±0°.02×27°.71E±0°.04, h18km±4km, n34, σ0°51/54, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.33**	**166**	*i* P	Pg	22 19 38.2	-0.3
AKHS				*i* S	Sg	22 19 44.1	+0.9
AKHS	**Akhisar**	**0.33**	**166**	*i* P	Pg	22 19 38.2	-0.3
AKHS				*i* S	Sg	22 19 44.1	+0.9
AKS	**Akhisar**	**0.33**	**166**	*e*PG	Pg	22 19 38.4	-0.1
AKS				*e*SG	Sg	22 19 43.8	+0.5
AKS	**Akhisar**	**0.33**	**166**	*e*Pg	Pg	22 19 38.4	-0.1
AKS				*e*Sg	Sg	22 19 43.8	+0.6
BALB	**Balikesir**	**0.46**	**16**	*e*PG	Pg	22 19 40.9	-0.1
BALB				*e*SG	Sg	22 19 47.8	+0.4
BALB	**Balikesir**	**0.46**	**16**	*e*Pg	Pg	22 19 40.9	-0.1
BALB				*e*Sg	Sg	22 19 47.8	+0.5
BALY	**Balya**	**0.55**	**352**	*i* P	Pg	22 19 41.8	-0.7
BALY				*i* S	Sg	22 19 49.7	-0.3
BALY	**Balya**	**0.55**	**352**	*i* P	Pg	22 19 41.8	-0.8
BALY				*i* S	Sg	22 19 49.7	-0.3
DEMI	**Demirci**	**0.79**	**101**	*i* P	Pb	22 19 46.7	-0.2
DEMI				*i* S	Sb	22 19 56.6	-0.7
DEMI	**Demirci**	**0.79**	**101**	*i* P	Pb	22 19 46.7	-0.2
DEMI				*i* S	Sb	22 19 56.6	-0.7
AYVA	**Ayvalik**	**0.80**	**278**	*i* P	Pb	22 19 46.9	-0.1
AYVA				*i* S	Sb	22 19 58.1	+0.6
AYVA	**Ayvalik**	**0.80**	**278**	*i* P	Pb	22 19 46.9	-0.1
AYVA				*i* S	Sb	22 19 58.1	+0.6
GONE	**Gonen-Balikesi**	**0.85**	**359**	*e*PG	Pg	22 19 47.6	-0.6
GONE				*e*SG	Sg	22 19 59.8	+0.3
GONE	**Gonen-Balikesi**	**0.85**	**359**	*e*Pg	Pg	22 19 47.6	-0.6
GONE				*e*Sg	Sg	22 19 59.8	+0.3
KDAG	**Bornova**	**0.86**	**204**	*i* P	Pb	22 19 47.1	-1.0
KDAG				*i* S	Sb	22 19 59.2	0.0
KDAG	**Bornova**	**0.86**	**204**	*i* P	Pb	22 19 47.1	-1.0
KDAG				*i* S	Sb	22 19 59.2	-0.1
IZM	**Izmir**	**0.87**	**204**	*e*PG	Pg	22 19 47.7	-0.9
IZM				*e*SG	Sg	22 20 00.2	+0.1
IZM	**Izmir**	**0.87**	**204**	*e*Pg	Pg	22 19 47.7	-0.9
IZM				*e*Sg	Sg	22 20 00.2	+0.2
BLCB	**Balcova**	**0.96**	**213**	*e*PG	Pg	22 19 50.1	-0.2
BLCB				*e*SG	Sg	22 20 03.4	+0.4
BLCB	**Balcova**	**0.96**	**213**	*e*Pg	Pg	22 19 50.1	-0.2
BLCB				*e*Sg	Sg	22 20 03.4	+0.4
KULA	**Kula-Manisa**	**1.00**	**132**	*e*PG	Pg	22 19 51.0	-0.1
KULA	**Kula-Manisa**	**1.00**	**132**	*e*Pg	Pg	22 19 51.0	-0.1
EDC	**Edincik**	**1.16**	**6**	*e*PN	Pn	22 19 52.8	-0.1
EDC	**Edincik**	**1.16**	**6**	*e*Pn	Pn	22 19 52.8	-0.1
KCTX	**Karacabey (Bur**	**1.18**	**25**	*e*PN	Pn	22 19 53.0	-0.2
KCTX	**Karacabey (Bur**	**1.18**	**25**	*e*Pn	Pn	22 19 53.0	-0.2
EZN	**Ezine**	**1.25**	**301**	*e*PN	Pn	22 19 54.3	+0.2
EZN	**Ezine**	**1.25**	**301**	*e*Pn	Pn	22 19 54.3	+0.2
ARMT	**Armutlu**	**1.63**	**32**	*e*PN	Pn	22 19 59.7	+0.3
ARMT	**Armutlu**	**1.63**	**32**	*e*Pn	Pn	22 19 59.7	+0.3
YLV	**Yalova**	**1.87**	**42**	*e*PN	Pn	22 20 03.6	+0.9
YLV	**Yalova**	**1.87**	**42**	*e*Pn	Pn	22 20 03.6	+0.9
GULT	**Gulveren**	**2.49**	**59**	*e*PN	Pn	22 20 12.0	+0.8
GULT	**Gulveren**	**2.49**	**59**	*e*Pn	Pn	22 20 12.0	+0.8

KRSC 20 22:31:35.3±0.5, 53°.11N×160°.53E, h39km±38km, ML3.8, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.31**	**268**	*i* P	Pn	22 31 44.2	+0.7
SPN				*i* S	Sn	22 31 50.1	+0.9
NLC	**Nalytchevo**	**0.72**	**275**	*i* P	Pn	22 31 49.2	+0.3
NLC				*i* S	Sn	22 31 59.1	+0.4
AVH	**Avacha**	**1.09**	**279**	*i* P	Pn	22 31 55.2	+1.2
AVH				*i* S	Sn	22 32 09.5	+1.6
KII	**Karymskiy**	**1.13**	**326**	*e*P	Pn	22 31 55.4	+0.8
KII				*i* S	Sn	22 32 09.8	+0.9
PET	**Petropavlovsk**	**1.14**	**266**	*e*P	Pn	22 31 55.2	+0.5
PET				*i* S	Sn	22 32 09.7	+0.7
GRL	**Gorelyy**	**1.59**	**250**	*e*P	Pn	22 32 02.6	+1.7
GRL				*i* S	Sn	22 32 22.1	+1.9
MKZ	**Mys Kozlova**	**1.61**	**26**	*e*P	Pn	22 32 01.3	+0.1
MKZ				*i* S	Sn	22 32 19.9	-0.9
GNL	**Ganaly**	**1.66**	**292**	*e*P	Pn	22 32 04.0	+2.2
GNL				*i* S	Sn	22 32 24.7	+2.9
MIPR	**Malaya Ipel'ka**	**2.44**	**252**	*e*P	Pn	22 32 15.3	+2.7
KMNR	**Kamenistaya**	**2.66**	**356**	*e*P	Pn	22 32 18.5	+3.0
KMNR				*i* S	Sn	22 32 50.8	+4.3
KPT	**Kopyto**	**2.87**	**357**	P	Pn	22 32 21.6	+3.2
ZLN	**Zelenaya**	**2.92**	**3**	*e*P	Pn	22 32 21.9	+2.8
ZLN				*i* S	Sn	22 32 56.3	+3.4
KBTR	**Krutoberegovo**	**3.38**	**22**	*e*P	Pn	22 32 27.7	+2.3
KBTR				*i* S	Sn	22 33 05.1	+0.9

*IDC **20** 22:40:58.6±1.6, 37°.05N×143°.22E, h0km, mb3.8/9, mb1 3.9/12, mb1mx3.8/24, mbtmp3.9/12, ML3.6/3, Error ellipse: s-maj=34.9km s-min=22.3km az=138.0*
*NIED **20** 22:41:00, 37°.50N×142°.80E, h29km, Mw3.9 Best double couple: M0 6.95000×10^14 NP1:φs=35.00000°, δ72.00000°, λ110.00000°. NP2:φs=164.00000°, δ27.00000°, λ43.00000°.*
*NEIC **20** 22:41:00.9±0.8, 37°.24N×143°.06E, h10km, mb4.3/6, Error ellipse: s-maj=18.7km s-min=11.6km az=147.0*
*ISCJB **20** 22:41:03.8±0.5, 37°.43N±0°.03×142°.88E±0°.04, h33km, mb4.0/16, Error ellipse: s-maj=5.3km s-min=4.3km az=36.0*
*JMA **20** 22:41:04.9±0.1, 37°.47N×142°.77E, h35km, M3.8*
ISC 20 22:41:06.1±0.5, 37°.45N±0°.03×142°.81E±0°.05, h35km, n44, σ1s03/60, mb4.0/16, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**1.53**	**311**	P	Pn	22 41 30.3	-0.5
JIO				*e*S	Sn	22 41 48.8	-0.7
JFK	**Kawauchi**	**1.54**	**267**	P	Pn	22 41 30.4	-0.6
JFK				*e*S	Sn	22 41 49.5	-0.3
ONAJ	**Iwakimizuishiy**	**1.64**	**258**	P	Pn	22 41 31.8	-0.6
ONAJ				*e*S	Sn	22 41 52.0	-0.3
JMM	**Marumori**	**1.65**	**285**	P	Pn	22 41 31.8	-0.7
JMM				*e*S	Sn	22 41 51.2	-1.3
JOU	**Okura**	**1.93**	**299**	P	Pn	22 41 36.2	-0.1
JOU				*e*S	Sn	22 41 59.2	-0.1
JMK	**Ichinoseki**	**1.95**	**321**	P	Pn	22 41 36.3	-0.4
JMK				*e*S	Sn	22 41 59.3	-0.6
JFT	**Otama**	**1.97**	**273**	P	Pn	22 41 37.3	+0.4
JFT				*e*S	Sn	22 42 00.4	+0.1
JOM	**Ohasama**	**2.34**	**330**	P	Pn	22 41 41.7	-0.3
JOM				*e*S	Sn	22 42 08.6	-1.0
JYK	**Kaneyama**	**2.42**	**308**	P	Pn	22 41 43.2	+0.1
JAG	**Ashikaga**	**2.88**	**250**	P	Pn	22 41 49.8	+0.4
JAG				*e*S	Sn	22 42 22.4	-0.4
JAW	**Awa shima**	**2.99**	**291**	P	Pn	22 41 52.1	+1.2
JAW				*e*S	Sn	22 42 26.1	+0.6
BSO1	**Boso 1**	**3.16**	**209**	P	Pn	22 41 53.1	-0.2
BSO1				*e*S	Sn	22 42 29.2	-0.6
JRY	**Ryogami san**	**3.45**	**247**	P	Pn	22 41 57.8	+0.5
JRY				*e*S	Sn	22 42 35.9	-1.0
JSD	**Sado**	**3.65**	**281**	P	Pn	22 42 00.5	+0.5
JOD2	**Odawara 2**	**3.71**	**235**	P	Pn	22 42 01.3	+0.4
JOD2				*e*S	Sn	22 42 43.2	-0.2
MJAR	**Matsushiro Arr**	**3.79**	**258**	Pn	Pn	22 42 03.3	+1.4
	3.8nm,0.3s,baz=92,slow=16,SNR=28						
MJAR				Sn	Sn	22 42 50.2	+4.9
	1.2nm,0.3s,baz=344,slow=10,SNR=4.2						
MAJO	**Matsushiro**	**3.79**	**258**	*e*Pn	Pn	22 42 02.2	+0.2
MAT	**Matsushiro**	**3.79**	**258**	P	Pn	22 42 04.0	+2.0
MAT				*e*S	Sn	22 42 47.5	+2.1
JHJ	**Hachijo jima 2**	**4.98**	**211**	Pn	Pn	22 42 10.8	-7.5
	3.4nm,0.3s,baz=53,slow=20,SNR=4.1						
JHJ				Sn	Sn	22 43 09.9	-4.7
	36nm,0.3s,baz=82,slow=22,SNR=6.1						
ASAJ	**Asahikawa**	**6.66**	**359**	Pn	Pn	22 42 41.8	+0.4
	1.7nm,0.3s,baz=237,slow=5.4,SNR=6.2						
PET	**Petropavlovsk**	**19.09**	**30**	P	Pn	22 45 23.7	-2.7
BJT	**Baijiatuan**	**20.91**	**285**	*e*P	P	22 45 44.7	-0.7
HHC	**Hu-ho-hao-te**	**24.40**	**288**	*e*P	P	22 46 21.3	+0.3
HHC				S	S	22 50 37.5	-0.9
HHC				pmax	pmax		
	comp=Z,13nm,0.5s,mb4.6						
HHC				pmax	pmax		
	comp=Z,120nm,5.2s						
ULN	**Ulaanbaatar**	**28.05**	**303**	*e*P	P	22 46 52.2	-1.6
	comp=Z,4.9nm,1.5s,mb3.9						
SONM	**Songino Array**	**28.48**	**303**	P	P	22 46 59.6	+1.8
	comp=Z,0.9nm,0.8s,mb3.5,baz=104,slow=8.7,SNR=5.2						
ZALV	**Zalesovo Beam**	**42.46**	**312**	P	P	22 48 58.7	+1.3
	comp=Z,0.3nm,0.3s,mb3.4,baz=77,slow=6.7,SNR=4.6						
ZALV	**Zalesovo Beam**	**42.46**	**312**	P	P	22 48 58.7	+1.3
CHTO	**Chiang Mai**	**42.47**	**252**	P	P	22 48 56.3	-1.6
MKAR	**Makanchi Array**	**44.84**	**302**	P	P	22 49 18.2	+1.6
	comp=Z,0.4nm,0.7s,mb3.4,baz=87,slow=9.1,SNR=5.5						
KURK	**Kurchatov**	**46.55**	**308**	*e*P	P	22 49 30.4	+0.3
	comp=Z,2.3nm,0.5s,mb4.4						
KULM	**Kulim**	**49.99**	**241**	*e*P	P	22 49 55.0	-2.0
BVAR	**Borovoye Array**	**51.12**	**312**	P	P	22 50 06.3	+1.3
	comp=Z,0.5nm,0.5s,mb3.7,baz=68,slow=8.2,SNR=6.5						
AAK	**Ala-Archa**	**51.27**	**298**	*e*P	P	22 50 05.5	-0.8
	comp=Z,2.5nm,0.3s,mb4.6						
EKS2	**Erkin-Say**	**51.76**	**299**	*e*P	P	22 50 09.7	-0.4
	comp=Z,1.1nm,0.6s,mb4.0						
AML	**Almayashu**	**52.00**	**298**	*e*P	P	22 50 11.5	-0.3
	comp=Z,1.5nm,0.5s,mb4.2						
ARU	**Arti**	**56.78**	**319**	*e*P	P	22 50 47.1	+0.7
	comp=Z,1.8nm,0.5s,mb4.4						
WRAB	**Tennant Creek**	**57.63**	**189**	P	P	22 50 51.0	-1.7
ARCES	**ARCESS Array B**	**64.00**	**340**	P	P	22 51 37.2	+1.8
	comp=Z,1.3nm,0.9s,mb4.0,baz=50,slow=8.0,SNR=7.4						
FINES	**FINESS Array B**	**68.96**	**333**	P	P	22 52 08.0	+0.8
	comp=Z,0.7nm,0.4s,mb3.9,baz=33,slow=11,SNR=9.8						
FINES	**FINESS Array B**	**68.96**	**333**	P	P	22 52 08.0	+0.8
NVAR	**Mina Array Bea**	**73.85**	**54**	P	P	22 52 35.4	-1.7
	comp=Z,0.4nm,0.3s,mb3.8,baz=327,slow=6.5,SNR=2.7						
NOA	**NORSAR Array B**	**74.23**	**338**	P	P	22 52 40.8	+1.9
	comp=Z,0.4nm,0.6s,mb3.5,baz=29,slow=2.8,SNR=2.8						
AKASG	**Malin Array Be**	**74.64**	**323**	P	P	22 52 42.6	+1.0
	comp=Z,0.5nm,0.3s,mb3.9,baz=45,slow=6.9,SNR=4.0						
BRG	**Berggiesshubel**	**81.25**	**330**	*i* PKP	PKiKP	22 58 45.7	+2.4
	comp=Z,1μm,1.1s						
BRG				*i*		22 58 49.5	
	comp=Z,357nm,1.3s						
BRG				*i* pPKP		23 00 17.0	
BRG				*i*		23 09 45.7	
	comp=Z,16nm,1.2s						

CASC 20 22:46:04.4±1.7, 13°.23N×89°.92W, h28km±6km, MD3.5, 1D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.67**	**25**	*e*P	Pb	22 46 17.8	+0.2
SNJE	**San Jose**	**0.70**	**25**	*e*P	Pb	22 46 18.2	+0.1
BOQS	**Boqueron**	**0.80**	**51**	*e*P	Pb	22 46 19.7	-0.1
BOQS				*e*S	Sb	22 46 32.0	+1.8
RBDL	**Robledal**	**0.91**	**14**	*e*P	Pn	22 46 21.7	+0.3
LFRS	**El Faro**	**0.92**	**65**	*e*P	Pn	22 46 20.8	-0.7
LFRS				*e*S	Sb	22 46 33.4	-0.2
IXG	**Ixpaco**	**1.08**	**331⇓**	*e*P	Pn	22 46 23.2	-0.4
MTO2	**Montecristo 2**	**1.28**	**25**	*e*P	Pn	22 46 27.2	+0.7
NBG	**Las Nubes**	**1.41**	**343**	*e*P	Pn	22 46 29.9	+1.5
FUG	**Fuego 3**	**1.51**	**324**	*e*P	Pn	22 46 29.3	-0.3
FUG				*e*S	Sn	22 46 48.3	-0.1
FG6		**1.62**	**325**	*e*P	Pn	22 46 31.4	+0.2
FG6				*e*S	Sn	22 46 51.8	+0.6
BLLM	**Bellamira**	**1.65**	**82**	*e*P	Pn	22 46 31.8	+0.2
BLLM				*e*S	Sn	22 46 53.1	+1.3
CAHU	**Cacacuatique**	**1.75**	**72**	*e*P	Pn	22 46 33.1	+0.2
MRL	**Marmol**	**1.84**	**7**	*e*P	Pn	22 46 35.9	+1.7
TP2	**Tecpan 2**	**1.88**	**325**	*e*P	Pn	22 46 35.7	+1.0
TP2				*e*S	Sn	22 47 00.8	+3.2

*NIED **20** 23:02:00, 37°.50N×142°.80E, h20km, Mw3.9 Best double couple: M0 7.65000×10^14 NP1:φs=41.00000°, δ73.00000°, λ107.00000°. NP2:φs=175.00000°, δ23.00000°, λ46.00000°.*
*NEIC **20** 23:02:03.3±1.0, 37°.28N×142°.88E, h10km, mb4.3/4, Error ellipse: s-maj=22.6km s-min=14.0km az=125.0*
*JMA **20** 23:02:06.2±0.1, 37°.46N×142°.79E, h34km, M3.9*
*ISCJB **20** 23:02:07.0±0.9, 37°.43N±0°.03×142°.76E±0°.07, h47km±7km, mb3.9/13, Error ellipse: s-maj=9.3km s-min=5.3km az=10.2*
*IDC **20** 23:02:10.2±4.9, 37°.61N×142°.81E, h39km±32km, mb3.4/8, mb1 3.5/10, mb1mx3.4/23, mbtmp3.4/10, ML3.7/2, MS4.1/1, Ms1 4.1/1, ms1mx2.6/21, Error ellipse: s-maj=54.7km s-min=24.1km az=147.0*
ISC 20 23:02:07.8±0.9, 37°.45N±0°.03×142°.78E±0°.07, h37km±8km, n35, σ1s08/50, mb3.9/13, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**1.52**	**312**	P	Pn	23 02 31.9	-0.6
JIO				*e*S	Sn	23 02 50.5	-0.5
JFK	**Kawauchi**	**1.52**	**268**	P	Pn	23 02 32.0	-0.5
JFK				*e*S	Sn	23 02 50.9	-0.2
ONAJ	**Iwakimizuishiy**	**1.62**	**258**	P	Pn	23 02 33.3	-0.6
ONAJ				S	Sn	23 02 54.0	+0.5
JMM	**Marumori**	**1.63**	**286**	P	Pn	23 02 33.3	-0.8
JMM				*e*S	Sn	23 02 53.3	-0.6
JMK	**Ichinoseki**	**1.94**	**321**	P	Pn	23 02 37.9	-0.4
JMK				*e*S	Sn	23 03 00.3	-1.2
JOM	**Ohasama**	**2.34**	**330**	P	Pn	23 02 43.3	-0.5
JOM				*e*S	Sn	23 03 12.2	+1.0
JYK	**Kaneyama**	**2.41**	**308**	P	Pn	23 02 44.8	+0.1
JYK				*e*S	Sn	23 03 14.5	+1.5
JAG	**Ashikaga**	**2.85**	**250**	P	Pn	23 02 51.2	+0.3
JAG				*e*S	Sn	23 03 24.9	+0.9
BSO1	**Boso 1**	**3.15**	**208**	P	Pn	23 02 55.5	+0.6
BSO1				*e*S	Sn	23 03 31.6	+0.4
JRY	**Ryogami san**	**3.43**	**247**	P	Pn	23 02 59.4	+0.7
JRY				*e*S	Sn	23 03 37.6	-0.5
JSD	**Sado**	**3.63**	**281**	P	Pn	23 03 00.9	-0.6
JSD				*e*S	Sn	23 03 42.9	-0.3
JOD2	**Odawara 2**	**3.69**	**235**	P	Pn	23 03 03.0	+0.6
JOD2				*e*S	Sn	23 03 45.1	+0.5
MJAR	**Matsushiro Arr**	**3.77**	**258**	Pn	Pn	23 03 05.5	+2.0
	3.9nm,0.3s,baz=80,slow=14,SNR=26						
MJAR				Sn	Sn	23 03 52.4	+5.8
	1.6nm,0.3s,baz=223,slow=29,SNR=4.7						
MAJO	**Matsushiro**	**3.77**	**258**	*e*Pn	Pn	23 03 03.8	+0.3
MAT	**Matsushiro**	**3.77**	**258**	P	Pn	23 03 05.1	+1.6
MAT				*e*S	Sn	23 03 40.7	-5.9
JHJ	**Hachijo jima 2**	**4.96**	**210**	Sn	Sn	23 04 13.8	-2.2
	32nm,0.3s,baz=74,slow=23,SNR=5.2						
ASAJ	**Asahikawa**	**6.67**	**359**	Pn	Pn	23 03 43.9	+0.7
	1.6nm,0.3s,baz=219,slow=10,SNR=7.0						
ASAJ				Sn	Sn	23 04 55.5	-2.4
	0.7nm,0.3s,baz=102,slow=19,SNR=2.7						
TATO	**Taipei**	**21.99**	**242**	*e*P	P	23 06 57.7	-1.1
YULB	**Yu-li**	**23.15**	**239**	P	P	23 07 09.7	-1.4
HHC	**Hu-ho-hao-te**	**24.38**	**288**	*e*P	P	23 07 20.8	-1.6
HHC				S	S	23 11 34.1	-5.4
HHC				pmax	pmax		
	comp=Z,11nm,0.5s,mb4.5						
HHC				pmax	pmax		
	comp=Z,80nm,5.2s						
SONM	**Songino Array**	**28.47**	**303**	P	P	23 08 00.4	+1.2
	comp=Z,0.5nm,0.6s,mb3.3,baz=110,slow=11,SNR=3.6						
ZALV	**Zalesovo Beam**	**42.45**	**312**	P	P	23 10 00.5	+1.7
	comp=Z,0.5nm,0.6s,mb3.3,baz=106,slow=9.2,SNR=2.9						
CHTO	**Chiang Mai**	**42.45**	**256**	*e*P	P	23 09 57.6	-1.7
MKAR	**Makanchi Array**	**44.83**	**302**	P	P	23 10 19.7	+1.7
	comp=Z,0.3nm,0.5s,mb3.4,baz=95,slow=7.7,SNR=4.2						
KURK	**Kurchatov**	**46.54**	**308**	*e*P	P	23 10 30.9	-0.6
	comp=Z,1.5nm,0.5s,mb4.2						
ILAR	**Eielson Array**	**48.56**	**33**	P	P	23 10 48.0	+1.0
	comp=Z,0.2nm,0.6s,mb3.3,baz=263,slow=5.4,SNR=3.5						
BVAR	**Borovoye Array**	**51.10**	**312**	P	P	23 11 08.0	+1.5
	comp=Z,0.5nm,0.5s,mb3.7,baz=69,slow=8.2,SNR=3.6						
AAK	**Ala-Archa**	**51.26**	**298**	*e*P	P	23 11 06.6	-1.2
	comp=Z,1.9nm,0.5s,mb4.3						
AML	**Almayashu**	**51.98**	**298**	*e*P	P	23 11 12.8	-0.4
	comp=Z,1.6nm,0.4s,mb4.3						
INK	**Inuvik**	**53.52**	**27**	LR	LR	23 34 55.0	
	comp=Z,172nm,21.0s,baz=240,slow=37						
ARU	**Arti**	**56.78**	**319**	*e*P	P	23 11 46.6	-1.3
	comp=Z,1.5nm,0.4s,mb4.4						
WRAB	**Tennant Creek**	**57.62**	**189**	*e*P	P	23 11 52.4	-1.7
ARCES	**ARCESS Array B**	**64.00**	**340**	P	P	23 12 37.5	+0.5
	comp=Z,1.0nm,0.8s,mb3.9,baz=69,slow=7.9,SNR=5.6						
FINES	**FINESS Array B**	**68.96**	**333**	P	P	23 13 10.2	+1.4
	comp=Z,0.5nm,0.4s,mb3.8,baz=44,slow=8.5,SNR=9.3						
AKASG	**Malin Array Be**	**74.64**	**323**	P	P	23 13 44.4	+1.3
	comp=Z,0.5nm,0.4s,mb3.8,baz=44,slow=5.9,SNR=4.5						

*BJI **20** 23:06:32.8, 28°.77N×95°.49E, h18km, mb3.9/1, ML3.7/6, Ms3.4/1, Ms7 3.4/1*
*IDC **20** 23:06:32.4±1.6, 28°.78N×95°.83E, h0km, mb3.4/4, mb1 3.6

baz=306,slow=8.4
ASAR Alice Springs 54.10 129 P P 23 44 25.5 +1.3
comp=N,0.9nm,0.6s,mb3.9,baz=305,slow=6.9,SNR=11
ASAR PcP PcP 23 45 32.1 +3.8
comp=N,0.3nm,0.5s,baz=314,slow=3.2,SNR=6.2
KMBO Kilima Mbogo 54.45 261 P P 23 44 23.0 -4.0
STKA Stephens Creek 64.27 133 P P 23 45 37.3 +2.9
comp=N,1.6nm,0.8s,mb4.1,baz=325,slow=12,SNR=2.9

CASC 20 23:50:08.6±1.4, 8°.90N×82°.90W, h12km±10km, MD3.8, 2C-4D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.36**	**227**	↓*i*P	Pg	23 50 16.4	+0.6
ACR				*e*S	Sg	23 50 21.3	+0.6
BAR1		**0.53**	**310**	↑↑*i*P	Pg	23 50 18.6	-0.4
CNI	**Changuinola**	**0.64**	**37**	↓↓*i*P	Pg	23 50 19.6	-1.4
BUS	**Buena Vista**	**1.07**	**308**	*e*P	Pb	23 50 28.3	-0.7
URSC	**Urasca**	**1.27**	**317**	↑↑*e*P	Pn	23 50 31.2	-1.0
URSC				*e*S	Sb	23 50 49.0	+0.2
QCR	**Quepos**	**1.35**	**293**	*e*P	Pn	23 50 31.7	-1.6
QCR				*e*S	Sb	23 50 50.3	-0.8
SJS	**Escuela Geolog**	**1.53**	**312**	*e*P	Pn	23 50 35.8	0.0
SJS				*e*S	Sn	23 50 57.0	+1.2
LAJ	**Bijagual**	**1.54**	**309**	*e*P	Pn	23 50 40.1	+4.3
LAJ				*e*S	Sn	23 51 04.1	+8.3
PRS1	**Puriscal**	**1.76**	**308**	↓↓*e*P	Pn	23 50 38.3	-0.6
PRS1				*e*S	Sn	23 51 01.0	-0.2
CGA2	**Cerro Gallo 2**	**1.90**	**306**	↓↓*e*P	Pn	23 50 41.6	+0.8
CGA2				*e*S	Sn	23 51 06.2	+1.4
JCR	**Jicaral**	**2.38**	**294**	*e*P	Pn	23 50 47.8	+0.3

IDC 20 23:55:29.5±4.3, 10°.87S×164°.39E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.7/17, mbtmp3.7/4, Error ellipse: s-maj=193.2km s-min=32.7km az=139.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**19.71**	**240**	P	Pn	00 00 06.3	+4.2
	0.3nm,0.3s,baz=72,slow=14,SNR=3.7						
ASAR	**Alice Springs**	**31.68**	**242**	P	P	00 01 54.4	-0.5
	0.3nm,0.5s,baz=67,slow=9.5,SNR=3.8						
FITZ	**Fitzroy Crossi**	**38.14**	**255**	P	P	00 02 51.1	+0.3
	2.8nm,1.0s,baz=56,slow=7.3,SNR=3.3						
ILAR	**Eielson Array**	**83.77**	**19**	P	P	00 08 00.1	-0.1
	0.6nm,0.7s,baz=242,slow=5.6,SNR=10						
MKAR	**Makanchi Array**	**92.48**	**317**	P	P	00 08 43.0	+0.4
	0.2nm,0.5s,baz=90,slow=5.8,SNR=3.0						

*ISCJB **21** 00:03:11.6±0.6, 36°.57N±0°.05×70°.79E±0°.09, h177km±8km, mb3.9/2, Error ellipse: s-maj=12.6km s-min=6.7km az=33.2*
*NEIC **21** 00:03:12.9±0.7, 36°.52N×70°.78E, h181km±8km, mb3.9/4, Error ellipse: s-maj=11.6km s-min=7.6km az=145.0*
*IDC **21** 00:03:15.5±9.7, 36°.72N×70°.81E, h182km±66km, mb1 3.0/5, mb1mx2.8/26, mbtmp3.0/5, Error ellipse: s-maj=89.5km s-min=54.7km az=174.0*
ISC 21 00:03:12.7±0.6, 36°.59N±0°.05×70°.77E±0°.09, h171km±7km, n22, σ1°.04/29, mb3.9/2, 1C-1D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.48**	**215**	*e*Pn	**Pn**	**00 03 55.1**	**+0.4**
KBL				*e*Sn	**Sn**	**00 04 26.5**	**-0.6**
KSH	**Kashi**	**5.04**	**53**	*e*Pn	**Pn**	**00 04 24.5**	**-2.5**
KSH				Sn	**Sn**	**00 05 18.1**	**-7.0**
KSH				smax			
	comp=N,15nm,0.4s						
KSH				smax			
	comp=E,15nm,0.2s						
UCH	**Uchtor**	**6.33**	**26**	*e*Pn	**Pn**	**00 04 45.2**	**+1.3**
	comp=E,4.8nm,0.6s						
UCH				*e*Sn	**Sn**	**00 05 53.7**	**-1.9**
EKS2	**Erkin-Say**	**6.49**	**20**	*e*Pn	**Pn**	**00 04 47.8**	**+1.8**
EKS2				*e*Sn	**Sn**	**00 05 59.4**	**0.0**
KK31	**Karatay Array**	**6.51**	**358**	↓↓P	**Sn**	**00 04 47.6**	**+1.4**
	comp=E,1.2nm,0.3s,baz=191,slow=13,SNR=124						
KK31				↑↑S	**Sn**	**00 05 58.0**	**-1.8**
	comp=E,2.7nm,0.5s,baz=194,slow=23,SNR=12						
AAK	**Ala-Archa**	**6.69**	**24**	P	**Pn**	**00 04 50.2**	**+1.7**
	comp=E,1.8nm,0.3s,baz=192,slow=7.6,SNR=5.3						
AAK				S	**Sn**	**00 06 04.8**	**+0.8**
	comp=E,0.4nm,0.3s,baz=317,slow=19,SNR=4.6						
AAK	**Ala-Archa**	**6.69**	**24**	*e*Pn	**Pn**	**00 04 50.0**	**+1.4**
AAK				S	**Sn**	**00 06 04.8**	**+0.8**
MK31	**Makanchi Array**	**13.33**	**37**	*e*Pn	**Pn**	**00 06 15.9**	**+0.7**
MKAR	**Makanchi Array**	**13.33**	**37**	P	**Pn**	**00 06 15.8**	**+0.6**
	comp=E,0.1nm,0.3s,baz=214,slow=11,SNR=5.2						
AB31	**Akbulak array**	**14.91**	**331**	P	**Pn**	**00 06 34.4**	**-0.6**
	comp=E,1.0nm,0.7s,baz=167,slow=12,SNR=6.5						
ABKAR	**Akbulak array**	**14.91**	**331**	*e*Pn	**Pn**	**00 06 33.8**	**-1.2**
	comp=E,0.7nm,0.5s						
BVAR	**Borovoye Array**	**16.44**	**359**	P	**Pn**	**00 06 54.2**	**+0.8**
	comp=E,0.3nm,0.3s,baz=149,slow=11,SNR=6.1						
BRVK	**Borovoye**	**16.47**	**359**	P	**Pn**	**00 06 52.7**	**-1.2**
AKTK	**Aktyubinsk**	**16.61**	**330**	P	**Pn**	**00 06 55.5**	**0.0**
AKTO	**Aktyubinsk**	**16.61**	**330**	P	**Pn**	**00 06 55.5**	**0.0**
	comp=E,0.2nm,0.3s,baz=150,slow=14,SNR=6.8						
ZALV	**Zalesovo Beam**	**19.91**	**25**	P	**P**	**00 07 31.5**	**+0.6**
	comp=E,0.3nm,0.3s,baz=212,slow=10.0,SNR=7.3						
ARU	**Arti**	**21.49**	**341**	P	**P**	**00 07 48.4**	**+0.7**
KIV	**Kislovodsk**	**22.58**	**298**	*e*P	**P**	**00 07 58.9**	**+0.3**
	comp=E,3.2nm,0.8s,mb3.8						
TLY	**Talaya**	**27.72**	**47**	*e*P	**P**	**00 08 44.3**	**-0.6**
ULN	**Ulaanbaatar**	**28.88**	**56**	*e*P	**P**	**00 08 54.5**	**-0.7**
	comp=E,0.9nm,0.3s,mb4.0						
ISP	**Isparta**	**31.91**	**285**	P	**P**	**00 09 22.0**	**+0.1**
BJT	**Baijiatuau**	**35.50**	**70**	P	**P**	**00 09 52.1**	**-0.9**

*ISCJB **21** 00:20:38.8±0.4, 38°.73N±0°.02×23°.39E±0°.02, h4km±4km, Error ellipse: s-maj=3.3km s-min=2.9km az=5.5*
*CSEM **21** 00:20:38.8±0.1, 38°.72N×23°.40E, h10km, ML3.3/12, Error ellipse: s-maj=3.4km s-min=2.8km az=102.0*
*ATH **21** 00:20:38.9, 38°.73N×23°.41E, h26km±1km, ML3.3*
*NEIC **21** 00:20:38.9, 38°.73N×23°.41E, h26km, ML3.3(ATH), After ATH.*
*THE **21** 00:20:39.4, 38°.72N×23°.37E, h7km, ML3.3/12, Error ellipse: s-maj=0.5km s-min=0.3km az=294.0*
ISC 21 00:20:39.4±0.4, 38°.73N±0°.02×23°.39E±0°.03, h9km±3km, n98, σ0°.79/140, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAL	**Atalanti**	**0.29**	**263**	P	**Pg**	**00 20 44.9**	**-0.3**
ATAL				S	**Sg**	**00 20 49.0**	**-0.1**
ATAL	**Atalanti**	**0.29**	**263**	P	**Pg**	**00 20 44.9**	**-0.3**
ATAL				S	**Sg**	**00 20 49.0**	**-0.1**
LKR	**Lokris**	**0.32**	**256**	*e*Pb	**Pg**	**00 20 45.6**	**0.0**
LKR	**Lokris**	**0.32**	**256**	*e*PB	**Pg**	**00 20 45.6**	**0.0**
LKR	**Lokris**	**0.32**	**256**	P	**Pg**	**00 20 45.1**	**-0.5**
LKR				S	**Sg**	**00 20 49.7**	**-0.1**
LKR	**Lokris**	**0.32**	**256**	P	**Pg**	**00 20 45.1**	**-0.5**
LKR	**Lokris**	**0.32**	**256**	*e*Pb	**Pg**	**00 20 45.6**	**0.0**
LKR				S	**Sg**	**00 20 49.7**	**-0.1**
AOS	**Alonnisos**	**0.58**	**41**	P	**Pg**	**00 20 50.2**	**-0.5**
AOS	**Alonnisos**	**0.58**	**41**	P	**Pg**	**00 20 50.8**	**+0.1**
AOS				S	**Sg**	**00 20 59.1**	**+0.7**
AOS	**Alonnisos**	**0.58**	**41**	P	**Pg**	**00 20 50.8**	**+0.1**
AOS				S	**Sg**	**00 20 59.1**	**+0.7**
NEO	**Neokhori**	**0.59**	**347**	*e*Pn	**Pg**	**00 20 51.1**	**+0.2**
NEO				*e*Sn	**Sg**	**00 20 59.9**	**+1.3**
NEO	**Neokhori**	**0.59**	**347**	*e*PN	**Pg**	**00 20 51.1**	**+0.2**
NEO				*e*SN	**Sg**	**00 20 59.9**	**+1.3**
NEO	**Neokhori**	**0.59**	**347**	*e*Pn	**Pg**	**00 20 51.1**	**+0.2**
XOR	**Xorichti**	**0.66**	**347**	P	**Pg**	**00 20 51.7**	**-0.4**
XOR	**Xorichti**	**0.66**	**347**	P	**Pg**	**00 20 52.1**	**0.0**
XOR	**Xorichti**	**0.66**	**347**	P	**Pg**	**00 20 51.7**	**-0.4**
DSF	**Desfina**	**0.75**	**245**	P	**Pg**	**00 20 53.0**	**-0.8**
DSF				S	**Sg**	**00 21 03.8**	**+0.3**
DSF	**Desfina**	**0.75**	**245**	P	**Pg**	**00 20 53.0**	**-0.8**
DSF				S	**Sg**	**00 21 03.8**	**+0.3**
PTL	**Penteli**	**0.78**	**151**	*e*Pn	**Pg**	**00 20 54.0**	**-0.3**
PTL	**Penteli**	**0.78**	**151**	*e*PN	**Pg**	**00 20 54.0**	**-0.3**
PTL	**Penteli**	**0.78**	**151**	*e*Pn	**Pg**	**00 20 54.0**	**-0.3**
LTK	**Loutraki**	**0.78**	**205**	*e*PN	**Pg**	**00 20 53.5**	**-0.9**
LTK				*e*SN	**Sg**	**00 21 05.4**	**+0.9**
LTK	**Loutraki**	**0.78**	**205**	P	**Pg**	**00 20 53.6**	**-0.8**
LTK				S	**Sg**	**00 21 04.8**	**+0.3**
LTK	**Loutraki**	**0.78**	**205**	P	**Pg**	**00 20 53.6**	**-0.8**
LTK				S	**Sg**	**00 21 04.8**	**+0.3**
LTK				*e*Sn	**Sg**	**00 21 05.4**	**+0.9**
ATH	**Athens Observa**	**0.80**	**161**	*e*Pn	**Pg**	**00 20 54.4**	**-0.4**
ATH				*e*Sn	**Sg**	**00 21 06.3**	**+1.1**
ATH	**Athens Observa**	**0.80**	**161**	*e*PN	**Pg**	**00 20 54.4**	**-0.4**
ATH				*e*SN	**Sg**	**00 21 06.3**	**+1.1**
ATH	**Athens Observa**	**0.80**	**161**	*e*Pn	**Pg**	**00 20 54.4**	**-0.4**
ATH				*e*Sn	**Sg**	**00 21 06.3**	**+1.1**
ATHU	**Athens Univers**	**0.82**	**158**	P	**Pg**	**00 20 55.1**	**-0.1**
ATHU				S	**Sg**	**00 21 06.8**	**+0.9**
ATHU	**Athens Univers**	**0.82**	**158**	P	**Pg**	**00 20 55.1**	**-0.1**
ATHU				S	**Sg**	**00 21 06.8**	**+0.9**
AGG	**Agios Georgios**	**0.88**	**290**	*e*Pn	**Pg**	**00 20 55.8**	**-0.5**
AGG				*e*Sn	**Sg**	**00 21 08.7**	**+1.0**
AGG	**Agios Georgios**	**0.88**	**290**	*e*PN	**Pg**	**00 20 55.8**	**-0.5**
AGG				*e*SN	**Sg**	**00 21 08.7**	**+1.0**
AGG	**Agios Georgios**	**0.88**	**290**	P	**Pg**	**00 20 55.5**	**-0.8**
AGG				S	**Sg**	**00 21 08.0**	**+0.3**
AGG	**Agios Georgios**	**0.88**	**290**	P	**Pg**	**00 20 55.5**	**-0.8**
AGG	**Agios Georgios**	**0.88**	**290**	*e*Pn	**Pg**	**00 20 55.8**	**-0.5**
AGG				S	**Sg**	**00 21 08.0**	**+0.3**
AGG				*e*Sn	**Sg**	**00 21 08.7**	**+1.0**
VLY	**Voula,Athens**	**0.93**	**160**	*e*Pn	**Pg**	**00 20 56.8**	**-0.5**
VLY				*e*Sn	**Sg**	**00 21 09.9**	**+0.5**
VLY	**Voula,Athens**	**0.93**	**160**	*e*PN	**Pg**	**00 20 56.8**	**-0.5**
VLY				*e*SN	**Sg**	**00 21 09.9**	**+0.5**
VLY	**Voula,Athens**	**0.93**	**160**	*e*Pn	**Pg**	**00 20 56.8**	**-0.5**
VLY				*e*Sn	**Sg**	**00 21 09.9**	**+0.5**
NAIG	**Nisos Aigina**	**0.97**	**175**	*e*Pn	**Pg**	**00 20 57.7**	**-0.4**
NAIG	**Nisos Aigina**	**0.97**	**175**	*e*PN	**Pg**	**00 20 57.7**	**-0.4**
NAIG	**Nisos Aigina**	**0.97**	**175**	*e*Pn	**Pg**	**00 20 57.7**	**-0.4**
KALE	**Kalithea**	**1.04**	**251**	P	**Pg**	**00 20 58.4**	**-0.9**
KALE				S	**Sg**	**00 21 13.5**	**+0.7**
KALE	**Kalithea**	**1.04**	**251**	P	**Pg**	**00 20 58.4**	**-0.9**
KALE				S	**Sg**	**00 21 13.5**	**+0.7**
TRIZ	**Trizonia**	**1.09**	**251**	P	**Pg**	**00 20 59.4**	**-1.0**
TRIZ				S	**Sg**	**00 21 15.6**	**+1.0**
TRIZ	**Trizonia**	**1.09**	**251**	P	**Pg**	**00 20 59.4**	**-1.0**
TRIZ				S	**Sg**	**00 21 15.6**	**+1.0**
GUR	**Goura**	**1.14**	**226**	*e*PN	**Pg**	**00 21 01.0**	**-0.3**
GUR				*e*SN	**Sg**	**00 21 16.4**	**+0.2**
GUR	**Goura**	**1.14**	**226**	P	**Pg**	**00 21 00.5**	**-0.8**
GUR				S	**Sg**	**00 21 16.6**	**+0.4**
GUR	**Goura**	**1.14**	**226**	P	**Pg**	**00 21 00.5**	**-0.8**
GUR	**Goura**	**1.14**	**226**	*e*Pn	**Pg**	**00 21 01.0**	**-0.3**
GUR				*e*Sn	**Sg**	**00 21 16.4**	**+0.2**
EFP	**Efpalio**	**1.20**	**256**	*e*PN	**Pn**	**00 21 02.1**	**-0.2**
EFP	**Efpalio**	**1.20**	**256**	P	**Pb**	**00 21 01.3**	**-1.0**
EFP				S	**Sb**	**00 21 18.7**	**+0.8**
EFP	**Efpalio**	**1.20**	**256**	P	**Pb**	**00 21 01.3**	**-1.0**
EFP	**Efpalio**	**1.20**	**256**	*e*Pn	**Pn**	**00 21 02.1**	**-0.2**
EFP				S	**Sb**	**00 21 18.7**	**+0.8**
LAKA	**Lakka**	**1.21**	**247**	P	**Pb**	**00 21 01.7**	**-0.7**
LAKA				S	**Sb**	**00 21 18.7**	**+0.5**
LAKA	**Lakka**	**1.21**	**247**	P	**Pb**	**00 21 01.7**	**-0.7**
LAKA				S	**Sb**	**00 21 18.7**	**+0.5**
PAIG	**Paliouri**	**1.22**	**11**	P	**Pn**	**00 21 01.4**	**-1.2**
PAIG	**Paliouri**	**1.22**	**11**	P	**Pn**	**00 21 01.9**	**-0.7**
PAIG	**Paliouri**	**1.22**	**11**	P	**Pn**	**00 21 01.9**	**-0.7**
DID	**Didima**	**1.23**	**186**	*e*PN	**Pn**	**00 21 02.0**	**-0.7**
DID	**Didima**	**1.23**	**186**	P	**Pn**	**00 21 01.9**	**-0.8**
DID				S	**Sb**	**00 21 19.6**	**+1.0**
DID	**Didima**	**1.23**	**186**	*e*Pn	**Pn**	**00 21 02.0**	**-0.7**
DID				S	**Sb**	**00 21 19.6**	**+1.0**
EVR	**Evrytania**	**1.25**	**279**	*e*Pn	**Pn**	**00 21 03.5**	**+0.6**
EVR	**Evrytania**	**1.25**	**279**	*e*PN	**Pn**	**00 21 03.5**	**+0.5**
EVR	**Evrytania**	**1.25**	**279**	*e*Pn	**Pn**	**00 21 03.5**	**+0.5**
THL	**Klokotos Trika**	**1.36**	**308**	*e*PN	**Pn**	**00 21 05.1**	**+0.6**
THL				*e*SN	**Sn**	**00 21 22.9**	**+0.3**
THL	**Klokotos Trika**	**1.36**	**308**	P	**Pn**	**00 21 03.8**	**-0.7**
THL	**Klokotos Trika**	**1.36**	**308**	P	**Pn**	**00 21 03.8**	**-0.7**
THL	**Klokotos Trika**	**1.36**	**308**	*e*Pn	**Pn**	**00 21 05.1**	**+0.6**
THL				*e*Sn	**Sn**	**00 21 22.9**	**+0.3**
VLX	**Vlachokerasia**	**1.57**	**211**	*e*PN	**Pn**	**00 21 07.7**	**+0.2**
VLX	**Vlachokerasia**	**1.57**	**211**	P	**Pn**	**00 21 06.8**	**-0.7**
VLX	**Vlachokerasia**	**1.57**	**211**	P	**Pn**	**00 21 06.8**	**-0.7**
VLX	**Vlachokerasia**	**1.57**	**211**	*e*Pn	**Pn**	**00 21 07.7**	**+0.2**
PLG	**Polygyros**	**1.64**	**2**	*e*Pn	**Pn**	**00 21 07.8**	**-0.6**
PLG	**Polygyros**	**1.64**	**2**	*e*PN	**Pn**	**00 21 07.8**	**-0.6**
PLG	**Polygyros**	**1.64**	**2**	P	**Pn**	**00 21 08.0**	**-0.4**
PLG	**Polygyros**	**1.64**	**2**	P	**Pn**	**00 21 08.0**	**-0.4**
RLS	**Riolos of Patr**	**1.65**	**247**	P	**Pn**	**00 21 13.0**	**+4.5**
OUR	**Ouranopolis**	**1.67**	**16**	P	**Pn**	**00 21 08.2**	**-0.6**
OUR	**Ouranopolis**	**1.67**	**16**	P	**Pn**	**00 21 08.2**	**-0.6**
OUR	**Ouranopolis**	**1.67**	**16**	P	**Pn**	**00 21 08.2**	**-0.6**
LIA	**Limnos Island**	**1.82**	**49**	*e*Pn	**Pn**	**00 21 10.3**	**-0.5**
LIA	**Limnos Island**	**1.82**	**49**	*e*PN	**Pn**	**00 21 10.3**	**-0.5**
LIA	**Limnos Island**	**1.82**	**49**	*e*Pn	**Pn**	**00 21 10.3**	**-0.5**
ITM	**Ithomi**	**1.93**	**217**	P	**Pn**	**00 21 13.8**	**+1.4**
ITM	**Ithomi**	**1.93**	**217**	P	**Pn**	**00 21 12.1**	**-0.3**
ITM	**Ithomi**	**1.93**	**217**	P	**Pn**	**00 21 12.1**	**-0.3**
KZN	**Kozani**	**2.01**	**322**	*e*Pn	**Pn**	**00 21 13.9**	**+0.4**
KZN	**Kozani**	**2.01**	**322**	*e*PN	**Pn**	**00 21 13.9**	**+0.4**
KZN	**Kozani**	**2.01**	**322**	*e*Pn	**Pn**	**00 21 13.9**	**+0.4**
VLI	**Veliai**	**2.04**	**190**	P	**Pn**	**00 21 15.5**	**+1.6**
VLI	**Veliai**	**2.04**	**190**	P	**Pn**	**00 21 15.5**	**+1.6**
SOH	**Sokhos**	**2.09**	**359**	P	**Pn**	**00 21 14.5**	**-0.1**
SOH	**Sokhos**	**2.09**	**359**	P	**Pn**	**00 21 14.5**	**-0.1**
PYL	**PYLOS**	**2.25**	**216**	*e*PB	**Pb**	**00 21 17.8**	**-2.3**
PYL	**PYLOS**	**2.25**	**216**	P	**Pn**	**00 21 16.4**	**-0.3**
PYL	**PYLOS**	**2.25**	**216**	P	**Pn**	**00 21 16.4**	**-0.3**
PYL	**PYLOS**	**2.25**	**216**	*e*Pb	**Pb**	**00 21 17.8**	**-2.3**
NVR	**Nevrokopi**	**2.64**	**8**	P	**Pn**	**00 21 24.7**	**+2.5**
NVR	**Nevrokopi**	**2.64**	**8**	P	**Pn**	**00 21 24.7**	**+2.5**

DJA 21 00:23:32, 4°.16S×121°.47E, h30km, MLv4.6/3, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNSI	**Bone**	**1.38**	**260**	P	Pn	00 23 58.3	+3.1
BNSI				S	Sn	00 24 12.8	+0.3
SPSI	**Sidrap Palu**	**1.71**	**276**	P	Pn	00 24 01.3	+1.6
BKSI	**Bulukumba**	**1.77**	**229**	P	Pn	00 24 00.7	+0.1
APSI	**Ampana**	**3.23**	**3**	P	Pn	00 24 21.2	+0.5

*ISCJB **21** 00:24:33.6±1.5, 71°.86N±0°.04×25°.0W±0°.1, h11km±10km, mb3.8/13, Error ellipse: s-maj=7.6km s-min=5.4km az=24.8*
*IDC **21** 00:24:34.2±0.9, 71°.89N×25°.08W, h0km, mb3.6/7, mb1 3.9/12, mb1mx3.7/29, mbtmp3.8/12, ML3.4/5, MS2.8/2, Ms1 2.8/2, ms1mx2.4/28, Error ellipse: s-maj=25.1km s-min=14.7km az=4.0*
*CSEM **21** 00:24:35.9±0.1, 71°.91N×25°.03W, h15km, mb4.1/6, Error ellipse: s-maj=6.1km s-min=4.3km az=12.0*
*NEIC **21** 00:24:35.7±0.2, 71°.90N×25°.08W, h10km, mb4.1/7, Error ellipse: s-maj=6.2km s-min=4.1km az=189.0*
ISC 21 00:24:36.2±1.6, 71°.89N±0°.04×25°.0W±0°.1, h14km±10km, n71, σ0°.79/82, mb3.8/13, 2D, Eastern Kalaallit Nunaat

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCO	**Scoresbysund**	**1.72**	**144**	*i* P	**Pn**	**00 25 03.7**	**-1.9**
SCO				*i* S	**Sn**	**00 25 24.3**	**-2.9**
SCO				*i* Lg		00 25 25.1	
SCO	**Scoresbysund**	**1.72**	**144**	*i* P	**Pn**	**00 25 03.7**	**-1.9**
SCO				*i* S	**Sn**	**00 25 24.3**	**-2.9**
SCO				*i* LG		00 25 25.1	
SUMG	**Summit**	**4.19**	**286**	*e*Pn	**Pn**	**00 25 40.5**	**+1.0**
SUMG				*e*Pg	**Pg**	**00 25 55.3**	**-1.0**
SUMG				*e*Sn	**Sn**	**00 26 28.3**	**+0.1**
SUMG	**Summit**	**4.19**	**286**	*i* P	**Pn**	**00 25 41.2**	**+1.7**
SUMG				*i* S	**Sn**	**00 26 40.5**	**+12**
SUMG	**Summit**	**4.19**	**286**	*e*Pn	**Pn**	**00 25 40.5**	**+1.0**
SUMG	**Summit**	**4.19**	**286**	*i* P	**Pn**	**00 25 41.3**	**+1.8**
	SNR=49						
SUMG	**Summit**	**4.19**	**286**	*e*Pg	**Pg**	**00 25 55.3**	**-1.0**
DAG	**Danmarks Havn**	**5.20**	**16**	↓↓*i*P	**Pn**	**00 25 51.9**	**-1.4**
DAG	**Danmarks Havn**	**5.20**	**16**	↓↓*i*P	**Pn**	**00 25 51.9**	**-1.4**
	9.2nm,0.5s						
JMIC	**Jan Mayen**	**5.33**	**92**	Pn	**Pn**	**00 25 55.0**	**-0.1**
	11nm,0.3s,baz=227,slow=3.3,SNR=7.4						
JMIC				Sn	**Sn**	**00 26 56.4**	**+0.2**
	3.2nm,0.3s,baz=350,slow=19,SNR=2.7						
JMIC	**Jan Mayen**	**5.33**	**92**	Pn	**Pn**	**00 25 55.0**	**-0.1**
JMIC				Sn	**Sn**	**00 26 56.4**	**+0.2**
BORG	**Borgarnes**	**7.30**	**168**	Pn	**Pn**	**00 26 23.3**	**+1.1**
	1.5nm,0.3s,baz=330,slow=8.1,SNR=6.4						
BORG				Sn	**Sn**	**00 27 44.4**	**-0.3**
	1.4nm,0.3s,baz=290,slow=17,SNR=7.4						
BORG	**Borgarnes**	**7.30**	**168**	*e*Pn	**Pn**	**00 26 22.9**	**+0.7**
BORG				*e*Sn	**Sn**	**00 27 44.5**	**-0.1**
BORG	**Borgarnes**	**7.30**	**168**	*e*Pn	**Pn**	**00 26 22.9**	**+0.7**
BORG				*e*Sn	**Sn**	**00 27 44.5**	**-0.1**
KBS	**Kingsbay**	**11.40**	**36**	*e*Pn	**Pn**	**00 27 18.6**	**+0.3**
KBS				*e*Sn	**Sn**	**00 29 23.7**	**-1.5**
KBS	**Kingsbay**	**11.40**	**36**	*e*Pn	**Pn**	**00 27 18.6**	**+0.3**
KBS				*e*Sn	**Sn**	**00 29 23.7**	**-1.5**
SPITS	**Spitsbergen Ar**	**12.09**	**41**	Pn	**Pn**	**00 27 28.3**	**+0.7**
	baz=245,slow=12,SNR=8.5						
SPITS	**Spitsbergen Ar**	**12.09**	**41**	Pn	**Pn**	**00 27 28.3**	**+0.7**
ARCES	**ARCESS Array B**	**16.43**	**74**	Pn	**Pn**	**00 28 26.8**	**+0.9**
	0.1nm,0.3s,baz=289,slow=11,SNR=4.4						
ARCES	**ARCESS Array B**	**16.43**	**74**	Pn	**Pn**	**00 28 26.8**	**+0.9**
ARCES	**ARCESS Array B**	**16.43**	**74**	Pn	**Pn**	**00 28 26.8**	**+0.9**
KEV	**Kevo**	**16.77**	**72**	*e*Pn	**Pn**	**00 28 30.8**	**+0.7**
	2.6nm,0.7s						
KEV	**Kevo**	**16.77**	**72**	*e*Pn	**Pn**	**00 28 30.8**	**+0.7**
	2.6nm,0.7s						
KONO	**Kongsberg**	**18.37**	**114**	Pn	**Pn**	**00 28 50.4**	**+0.4**
KONO	**Kongsberg**	**18.37**	**114**	Pn	**Pn**	**00 28 50.4**	**+0.3**
ESK	**Eskdalemuir**	**19.02**	**139**	*e*P	**Pn**	**00 28 57.6**	**-0.4**
ESK	**Eskdalemuir**	**19.02**	**139**	*e*P	**Pn**	**00 28 57.6**	**-0.4**
HFS	**Hagfors**	**19.17**	**108**	P	**Pn**	**00 29 00.9**	**+1.1**
	0.1nm,0.3s,baz=308,slow=16,SNR=2.9						
HFS				LR	LR	00 35 22.2	
	comp=Z,24nm,21.8s,baz=67,slow=34						
HFS	**Hagfors**	**19.17**	**108**	P	**Pn**	**00 29 00.9**	**+1.1**
FINES	**FINESS Array B**	**21.95**	**92**	P	**P**	**00 29 29.4**	**+0.5**
	5.5nm,1.0s,mb3.9,baz=321,slow=11,SNR=9.6						
FINES	**FINESS Array B**	**21.95**	**92**	P	**P**	**00 29 29.4**	**+0.5**
SCHQ	**Schefferville**	**24.57**	**248**	LR	LR	00 39 36.3	
	comp=Z,36nm,20.5s,baz=62,slow=37						
RUE	**Ruedersdorf**	**25.75**	**118**	*e*P	**P**	**00 30 06.2**	**+0.3**
RUE	**Ruedersdorf**	**25.75**	**118**	*e*P	**P**	**00 30 06.2**	**+0.3**
PSZ	**Piszkesteto**	**31.58**	**115**	P	**P**	**00 31 05.8**	**+8.1**
ESLA	**Sonseca Array**	**33.97**	**150**	P	**P**	**00 31 18.9**	**+0.2**
ESLA	**Sonseca Array**	**33.97**	**150**	P	**P**	**00 31 19.0**	**+0.2**
ARU	**Arti**	**35.97**	**70**	*e*P	**P**	**00 31 35.9**	**+0.1**
ARU	**Arti**	**35.97**	**70**	*e*P	**P**	**00 31 35.9**	**+0.1**
ILAR	**Eielson Array**	**38.07**	**324**	P	**P**	**00 31 54.1**	**+0.6**
	0.3nm,0.7s,mb3.1,baz=32,slow=5.3,SNR=5.5						
ILAR	**Eielson Array**	**38.07**	**324**	P	**P**	**00 31 54.2**	**+0.6**
COLA	**College**	**38.15**	**325**	*e*P	**P**	**00 31 53.6**	**-0.7**
	1.4nm,0.4s,mb4.0						
COLA	**College**	**38.15**	**325**	*e*P	**P**	**00 31 53.6**	**-0.7**
	1.4nm,0.4s,mb4.0						
BRVK	**Borovoye**	**42.27**	**63**	*e*P	**P**	**00 32 29.0**	**+0.5**
	1.8nm,0.8s,mb3.8						
BRVK	**Bor

HRT	Hereke	1.02	91	ePG	Pg	00 32 43.4	-0.9	ARG			Sg	Sg	01 06 26.6	0.0	XOR Xorichti 1.41 292 P Pn 01 20 42.6 +0.1
HRT	Hereke	1.02	91	ePg	Pg	00 32 43.4	-0.9	ARG			eSn	Sg	01 06 27.7	+1.1	XOR Xorichti 1.41 292 P Pn 01 20 42.0 -0.5
SILT	Sile	1.04	73	ePG	Pg	00 32 44.3	-0.5	SMG	Samos	0.96 324	ePn	Pg	01 06 17.0	-0.4	XOR S Sn 01 21 00.0 -0.4
SILT	Sile	1.04	73	ePg	Pg	00 32 44.3	-0.5	SMG			eSn	Sg	01 06 31.4	+1.5	XOR Xorichti 1.41 292 P Pn 01 20 42.6 +0.1
ADVT	Abdulvahap	1.16	111	ePN	Pn	00 32 45.9	-1.5	SMG	Samos	0.96 324	ePN	Pg	01 06 17.0	-0.4	XOR S Sn 01 21 00.0 -0.4
ADVT	Abdulvahap	1.16	111	ePn	Pn	00 32 45.9	-1.5	SMG			eSN	Sg	01 06 31.4	+1.5	PAIG Paliouri 1.42 319 P Pn 01 20 42.4 -0.2
BALY	Balya	1.23	206	iP	Pg	00 32 47.1	-1.2	SMG	Samos	0.96 324	ePn	Pg	01 06 17.0	-0.4	PAIG Paliouri 1.42 319 P Pn 01 20 42.3 -0.3
BALY				iS	Sg	00 33 04.6	+0.4	SMG			eSn	Sg	01 06 31.4	+1.5	PAIG S Sn 01 21 00.1 -0.5
BALY	Balya	1.23	206	iP	Pg	00 32 47.1	-1.2	KARP	Karpathos	1.42 193	ePb	Pb	01 06 24.0	-1.4	PAIG Paliouri 1.42 319 P Pn 01 20 42.4 -0.2
BALY				iS	Sg	00 33 04.6	+0.4	KARP			eSn	Sn	01 06 43.0	-0.3	PAIG S Sn 01 21 00.1 -0.5
BALB	Balikesir	1.25	196	ePN	Pn	00 32 48.1	-0.7	KARP	Karpathos	1.42 193	ePB	Pb	01 06 24.0	-1.4	ATAL Atalanti 1.47 264 P Pn 01 20 43.3 0.0
BALB	Balikesir	1.25	196	ePn	Pn	00 32 48.1	-0.7	KARP			eSN	Sn	01 06 43.0	-0.3	ATAL Atalanti 1.47 264 P Pn 01 20 43.3 0.0
LPK	Lapseki	1.28	249	ePN	Pn	00 32 48.5	-0.6	KARP	Karpathos	1.42 193	ePb	Pb	01 06 24.0	-1.4	LKR Lokris 1.49 263 ePn Pn 01 20 43.3 -0.3
LPK	Lapseki	1.28	249	ePn	Pn	00 32 48.5	-0.6	KARP			eSn	Sn	01 06 43.0	-0.3	LKR Lokris 1.49 263 ePN Pn 01 20 43.2 -0.4
CAVI	Cavuskoy	1.33	119	ePN	Pn	00 32 48.7	-1.1	DNZL	Cakiroluk	1.42 57	iP	Pn	01 06 24.6	-0.1	LKR Lokris 1.49 263 P Pn 01 20 43.6 0.0
CAVI	Cavuskoy	1.33	119	ePn	Pn	00 32 48.7	-1.1	DNZL			iS	Sn	01 06 44.6	+1.3	LKR S Sn 01 21 02.5 +0.2
ERIK	Erikli-Kesan	1.39	263	ePN	Pn	00 32 49.6	-1.0	DNZL	Cakiroluk	1.42 57	iP	Pn	01 06 24.6	-0.1	LKR Lokris 1.49 263 ePn Pn 01 20 43.3 -0.3
ERIK	Erikli-Kesan	1.39	263	ePn	Pn	00 32 49.6	-1.0	DNZL			iS	Sn	01 06 44.7	+1.3	LKR Lokris 1.49 263 P Pn 01 20 43.6 0.0
GELI	Tayfur-Gelibol	1.48	253	ePN	Pn	00 32 51.1	-0.7	DENT	Denizli	1.45 55	ePN	Pn	01 06 24.7	-0.4	LKR S Sn 01 21 02.5 +0.2
GELI	Tayfur-Gelibol	1.48	253	ePn	Pn	00 32 51.2	-0.6	DENT	Denizli	1.45 55	ePn	Pn	01 06 24.7	-0.4	NAIG Nisos Aigina 1.55 225 ePn Pn 01 20 44.5 0.0
SPNC	Sapanca-Adapaz	1.52	95	ePN	Pn	00 32 52.3	-0.1	IZM	Izmir	1.48 352	ePN	Pn	01 06 25.2	-0.4	NAIG Nisos Aigina 1.55 225 ePN Pn 01 20 44.5 0.0
SPNC	Sapanca-Adapaz	1.52	95	ePn	Pn	00 32 52.3	-0.1	IZM	Izmir	1.48 352	ePn	Pn	01 06 25.2	-0.3	NAIG Nisos Aigina 1.55 225 ePn Pn 01 20 44.5 0.0
EDRB	Edirne	1.55	311	ePN	Pn	00 32 52.6	-0.3	BLCB	Balcova	1.50 345	ePN	Pn	01 06 25.6	-0.3	OUR Ouranopolis 1.63 335 P Pn 01 20 45.1 -0.4
EDRB	Edirne	1.55	311	ePn	Pn	00 32 52.6	-0.3	BLCB	Balcova	1.50 345	P	Pn	01 06 24.5	-1.4	OUR Ouranopolis 1.63 335 P Pn 01 20 45.0 -0.5
GPA	Golpazari	1.61	110	ePN	Pn	00 32 53.8	+0.1	BLCB			S	Sn	01 06 44.7	-0.8	OUR Ouranopolis 1.63 335 P Pn 01 20 45.1 -0.4
GPA	Golpazari	1.61	110	ePn	Pn	00 32 53.8	+0.1	BLCB	Balcova	1.50 345	P	Pn	01 06 24.5	-1.4	LTK Loutraki 1.72 242 ePN Pn 01 20 46.9 +0.1
ENEZ	Enez	1.65	267	ePN	Pn	00 32 54.2	0.0	BLCB	Balcova	1.50 345	ePn	Pn	01 06 25.6	-0.3	LTK Loutraki 1.72 242 P Pn 01 20 46.8 0.0
ENEZ	Enez	1.65	267	ePn	Pn	00 32 54.2	0.0	BLCB			S	Sn	01 06 44.7	-0.8	LTK S Sn 01 21 08.3 +0.2
GULT	Gulveren	1.72	103	ePN	Pn	00 32 55.4	+0.2	GLHS	Glhisar (BURDU	1.58 81	ePN	Pn	01 06 26.5	-0.5	LTK Loutraki 1.72 242 ePn Pn 01 20 46.9 +0.1
GULT	Gulveren	1.72	103	ePn	Pn	00 32 55.4	+0.2	GLHS	Glhisar (BURDU	1.58 81	ePn	Pn	01 06 26.5	-0.4	LTK S Sn 01 21 08.3 +0.2
DEMI	Demirci	1.83	170	iP	Pn	00 32 55.2	-1.5	APE	Apeiranthos	1.61 275	ePN	Pn	01 06 27.7	+0.3	APE Apeiranthos 1.86 164 ePb Pn 01 20 48.7 0.0
DEMI				iS	Sn	00 33 22.4	+2.2	APE	Apeiranthos	1.61 275	P	Pn	01 06 26.8	-0.6	APE Apeiranthos 1.86 164 ePB Pn 01 20 48.7 0.0
DEMI	Demirci	1.83	170	iP	Pn	00 32 55.2	-1.5	APE			S	Sn	01 06 48.7	-0.1	APE Apeiranthos 1.86 164 P Pn 01 20 48.7 0.0
DEMI				iS	Sn	00 33 22.4	+2.3	APE	Apeiranthos	1.61 275	P	Pn	01 06 26.8	-0.6	APE Apeiranthos 1.86 164 P Pn 01 20 48.7 0.0
EZN	Ezine	1.84	237	ePN	Pn	00 32 57.1	+0.3	APE	Apeiranthos	1.61 275	ePn	Pn	01 06 27.7	+0.3	DID Didima 1.87 224 ePN Pn 01 20 48.8 -0.1
EZN	Ezine	1.84	237	ePn	Pn	00 32 57.1	+0.3	APE			S	Sn	01 06 48.1	-0.1	DID Didima 1.87 224 P Pn 01 20 48.9 0.0
BORA	Eskisehir	1.89	120	iP	Pn	00 32 58.5	+0.9	GOLH	Golhisar	1.64 79	iP	Pn	01 06 29.6	+1.8	DID Didima 1.87 224 P Pn 01 20 48.9 0.0
BORA				iS	Sn	00 33 24.0	+2.2	GOLH			iS	Sn	01 06 51.8	+2.8	PLG Polygyros 1.88 324 ePn Pn 01 20 48.2 -0.7
BORA	Eskisehir	1.89	120	iP	Pn	00 32 58.5	+0.9	GOLH	Golhisar	1.64 79	iP	Pn	01 06 29.6	+1.8	PLG Polygyros 1.88 324 ePN Pn 01 20 48.2 -0.7
BORA				iS	Sn	00 33 24.0	+2.2	AKAS	Kas	1.80 112	iP	Pn	01 06 32.9	+2.9	PLG Polygyros 1.88 324 P Pn 01 20 48.7 -0.2
GADA	Gvkgeada	1.96	251	ePN	Pn	00 32 58.8	+0.3	AKAS			iS	Sn	01 06 58.1	+5.3	PLG Polygyros 1.88 324 ePn Pn 01 20 48.2 -0.7
GADA	Gvkgeada	1.96	251	ePn	Pn	00 32 58.8	+0.3	KULA	Kula-Manisa	1.81 29	ePN	Pn	01 06 29.9	-0.2	PLG Polygyros 1.88 324 P Pn 01 20 48.7 -0.2
GDZ	Gediz	1.97	153	iP	Pg	00 33 02.0	-0.5	KULA	Kula-Manisa	1.81 29	ePn	Pn	01 06 29.9	-0.2	DSF Desfina 1.90 257 P Pn 01 20 49.3 +0.1
GDZ				iS	Sg	00 33 26.9	-1.1	ELL	Elmali	1.91 95	ePN	Pn	01 06 32.1	+0.7	DSF S Sn 01 21 12.2 -0.3
AYVA	Ayvalik	1.98	220	iP	Pn	00 32 57.8	-1.0	ELL	Elmali	1.91 95	ePn	Pn	01 06 32.1	+0.7	DSF Desfina 1.90 257 P Pn 01 20 49.3 +0.1
AYVA				iS	Sg	00 33 29.1	+0.7	AKHS	Akhisar	1.96 6	iP	Pn	01 06 34.8	+2.7	DSF S Sn 01 21 12.2 -0.3
AYVA	Ayvalik	1.98	220	iP	Pn	00 32 57.8	-1.0	AKHS			iS	Sn	01 07 02.9	+6.3	SMG Samos 1.92 126 ePb Pn 01 20 49.9 +0.4
AKS	Akhisar	2.01	191	ePN	Pn	00 32 59.5	+0.3	AKS	Akhisar	1.96 6	ePN	Pn	01 06 32.0	-0.1	SMG Samos 1.92 126 ePB Pn 01 20 49.9 +0.4
AKS	Akhisar	2.01	191	ePn	Pn	00 32 59.5	+0.4	AKS	Akhisar	1.96 6	ePn	Pn	01 06 32.0	-0.1	SMG Samos 1.92 126 ePb Pn 01 20 49.9 +0.4
JMB	Yambol	2.08	322	iP	Pn	00 32 58.6	-1.5	KHL	Karahalli	2.10 48	ePN	Pn	01 06 34.0	0.0	AGG Agios Georgios 2.00 275 P Pb 01 20 54.8 +1.0
JMB	Yambol	2.08	322	iP	Pn	00 32 58.6	-1.5	KHL	Karahalli	2.10 48	ePn	Pn	01 06 34.1	0.0	AGG Agios Georgios 2.00 275 P Pn 01 20 50.6 0.0
MDU	Mudurnu	2.23	99	ePN	Pn	00 33 02.3	0.0	KHAL	Karahalli	2.11 47	iP	Pn	01 06 33.7	-0.5	AGG S Sn 01 21 14.7 -0.2
MDU	Mudurnu	2.23	99	ePn	Pn	00 33 02.3	0.0	KHAL			iS	Sn	01 07 09.4	+8.9	AGG Agios Georgios 2.00 275 P Pn 01 20 50.6 0.0
PRK	Paraskevi	2.24	225	ePB	Pn	00 33 01.1	-1.3	KHAL	Karahalli	2.11 47	iP	Pn	01 06 33.7	-0.5	AGG S Sn 01 21 14.7 -0.2
PRK	Paraskevi	2.24	225	ePb	Pn	00 33 01.1	-1.3	NPS	Neapolis	2.28 224	ePn	Pn	01 06 36.8	+0.2	GUR Goura 2.20 246 P Pn 01 20 53.7 +0.3
ALT	Altintas	2.26	142	ePN	Pn	00 33 02.6	0.0	NPS	Neapolis	2.28 224	ePN	Pn	01 06 36.8	+0.2	GUR S Sn 01 21 19.9 0.0
ALT	Altintas	2.26	142	ePn	Pn	00 33 02.6	0.0	NPS	Neapolis	2.28 224	ePn	Pn	01 06 36.8	+0.2	GUR Goura 2.20 246 P Pn 01 20 53.7 +0.3
KDZ	Kurdzhali	2.33	291	iP	Pn	00 33 05.0	+1.4	DEMI	Demirci	2.30 23	iP	Pn	01 06 30.8	-6.0	GUR S Sn 01 21 19.9 0.0
KDZ	Kurdzhali	2.33	291	iP	Pn	00 33 05.0	+1.4	DEMI			iS	Sn	01 07 04.0	-1.2	KALE Kalithea 2.20 259 P Pn 01 20 53.5 +0.1
KULA	Kula-Manisa	2.35	173	ePN	Pn	00 33 03.8	0.0	BCK	Bucak	2.49 77	ePN	Pn	01 06 39.7	+0.2	KALE Kalithea 2.20 259 P Pn 01 20 53.5 +0.1
KULA	Kula-Manisa	2.35	173	ePn	Pn	00 33 03.8	0.0	BCK	Bucak	2.49 77	ePn	Pn	01 06 39.7	+0.3	HORT Hortiatis 2.21 322 P Pn 01 20 54.9 +1.3
ESKT	Eskisehir	2.35	124	ePN	Pn	00 33 04.5	+0.6	ANTB	Antalya	2.50 90	ePN	Pn	01 06 39.7	+0.2	HORT Hortiatis 2.21 322 P Pn 01 20 53.5 -0.1
ESKT	Eskisehir	2.35	124	ePn	Pn	00 33 04.5	+0.7	ANTB	Antalya	2.50 90	ePn	Pn	01 06 39.7	+0.2	HORT Hortiatis 2.21 322 P Pn 01 20 53.5 -0.1
PRD	Provadia	2.45	344	iP	Pb	00 33 09.0	-0.1	PRK	Paraskevi	2.52 337	ePn	Pn	01 06 39.5	-0.3	ALN Alexandroupoli 2.22 23 P Pn 01 20 55.8 +2.1
PRD	Provadia	2.45	344	iP	Pb	00 33 09.0	-0.1	PRK	Paraskevi	2.52 337	ePN	Pn	01 06 39.5	-0.3	ALN Alexandroupoli 2.22 23 P Pn 01 20 53.4 -0.3
LIA	Limnos Island	2.58	249	ePG	Pn	00 33 06.9	-0.1	PRK	Paraskevi	2.52 337	ePn	Pn	01 06 39.5	-0.3	ALN S Sn 01 21 19.9 -0.6
IZM	Izmir	2.58	199	ePN	Pn	00 33 07.6	+0.6	ISP	Isparta	2.54 69	ePn	Pn	01 06 34.6	-5.4	ALN Alexandroupoli 2.22 23 P Pn 01 20 53.4 -0.3
IZM	Izmir	2.58	199	ePn	Pn	00 33 07.6	+0.6	IDI	Anoyia	2.70 233	ePn	Pn	01 06 40.6	-1.8	ALN S Sn 01 21 19.9 -0.6
BLCB	Balcova	2.65	202	ePN	Pn	00 33 08.5	+0.5	IDI	Anoyia	2.70 233	ePn	Pn	01 06 40.6	-1.7	TRIZ Trizonia 2.26 258 P Pn 01 20 54.5 +0.4
BLCB	Balcova	2.65	202	ePn	Pn	00 33 08.5	+0.5	BALB	Balikesir	2.72 6	ePN	Pn	01 06 42.6	+0.1	TRIZ Trizonia 2.26 258 P Pn 01 20 54.5 +0.4
KHL	Karahalli	2.69	159	ePN	Pn	00 33 09.5	+1.0	BALB	Balikesir	2.72 6	ePn	Pn	01 06 42.6	0.0	SOH Sokhos 2.29 329 ePb Pn 01 20 55.0 +0.4
KHL	Karahalli	2.69	159	ePn	Pn	00 33 09.5	+1.0	SUTC	Sutluce-Ispart	2.81 78	ePN	Pn	01 06 43.9	0.0	SOH Sokhos 2.29 329 ePB Pn 01 20 55.0 +0.4
SVRH	Sivrihisar-ESK	2.83	119	ePN	Pn	00 33 10.6	+0.2	SUTC	Sutluce-Ispart	2.81 78	ePn	Pn	01 06 43.9	0.0	SOH Sokhos 2.29 329 P Pn 01 20 54.4 -0.2
SVRH	Sivrihisar-ESK	2.83	119	ePn	Pn	00 33 10.6	+0.2	SHUT	Suhut-Afyon	2.88 55	ePN	Pn	01 06 45.2	+0.4	SOH Sokhos 2.29 329 P Pn 01 20 54.4 -0.2
RZN	Rozhen	2.84	288	iP	Pn	00 33 09.7	-1.0	SHUT	Suhut-Afyon	2.88 55	ePn	Pn	01 06 45.2	+0.4	SOH Sokhos 2.29 329 ePb Pn 01 20 55.0 +0.4
RZN	Rozhen	2.84	288	iP	Pn	00 33 09.7	-1.0	EZN	Ezine	3.04 342	ePN	Pn	01 06 47.3	+0.3	THE Thessaloniki 2.31 321 P Pn 01 20 56.7 +1.8
SHUT	Suhut-Afyon	2.87	142	ePN	Pn	00 33 11.6	+0.6	EZN	Ezine	3.04 342	ePn	Pn	01 06 47.3	+0.3	THE Thessaloniki 2.31 321 P Pn 01 20 54.9 0.0
SHUT	Suhut-Afyon	2.87	142	ePn	Pn	00 33 11.6	+0.7	GONE	Gonen-Balikesi	3.11 2	ePN	Pn	01 06 48.2	+0.2	THE Thessaloniki 2.31 321 P Pn 01 20 54.9 0.0
SZH	Strazhica	3.00	324	iP	Pn	00 33 11.5	-1.3	GONE	Gonen-Balikesi	3.11 2	ePn	Pn	01 06 48.2	+0.2	THL Klokotos Trika 2.34 288 ePB Pn 01 20 55.7 +0.4
SZH	Strazhica	3.00	324	iP	Pn	00 33 11.5	-1.3	KCTX	Karacabey (Bur	3.39 11	ePN	Pn	01 06 52.9	+1.1	THL Klokotos Trika 2.34 288 P Pn 01 20 55.3 0.0
SAFT	Safranbolu	3.33	82	ePN	Pn	00 33 17.8	+0.6	KCTX	Karacabey (Bur	3.39 11	ePn	Pn	01 06 52.9	+1.1	THL Klokotos Trika 2.34 288 P Pn 01 20 55.3 0.0
SAFT	Safranbolu	3.33	82	ePn	Pn	00 33 17.8	+0.5	ARMT	Armutlu	3.77 15	ePN	Pn	01 06 58.0	+0.9	THL Klokotos Trika 2.34 288 ePb Pn 01 20 55.7 +0.4
KIZT	Kizilcal	3.37	125	ePN	Pn	00 33 18.7	+0.8	ARMT	Armutlu	3.77 15	ePn	Pn	01 06 58.0	+0.9	LAKA Lakka 2.36 256 P Pn 01 20 55.9 +0.3
KIZT	Kizilcal	3.37	125	ePn	Pn	00 33 18.7	+0.8	CSS	Prodhromos	5.09 111	Pn	Pn	01 07 12.7	-2.5	LAKA Lakka 2.36 256 P Pn 01 20 55.9 +0.3
MMB	Musomiste	3.54	284	iP	Pb	00 33 28.0	+0.2	CSS			eS	Sn	01 08 00.7	-13	VLX Vlachokerasia 2.47 234 ePN Pn 01 20 57.6 +0.5
PLG	Polygyros	3.74	264	ePN	Pb	00 33 31.1	-0.1	CSS	Prodhromos	5.09 111	Pn	Pn	01 07 12.7	-2.5	VLX Vlachokerasia 2.47 234 P Pn 01 20 57.6 +0.5
VAY	Valandovo	4.37	278	ePn	Pg	00 33 49.9	+1.4	BR131	Keskin Array S	5.55 58	ePn	Pn	01 07 18.1	-3.3	VLX Vlachokerasia 2.47 234 P Pn 01 20 57.6 +0.5
									0.6nm,0.3s						NVR Nevrokopi 2.61 343 P Pn 01 20 59.1 +0.1
															NVR Nevrokopi 2.61 343 P Pn 01 20 59.1 +0.1
															VLI Veliai 2.63 216 P Pn 01 20 59.0 -0.4
															VLI Veliai 2.63 216 P Pn 01 20 59.0 -0.4
															ITM Ithomi 2.87 235 P Pb 01 21 08.3 -0.4
															DEMI Demirci 2.99 85 iP Pb 01 21 15.1 +4.4
															DEMI iS Sb 01 21 51.2 +4.4
															VAY Valandovo 3.03 325 ePn Pn 01 21 05.8 +1.0
															FNA Florina 3.31 307 P Pn 01 21 11.3 +2.6
															IDI Anoyia 3.56 180 ePn Pn 01 21 12.3 +0.2
															IDI eS Sb 01 22 01.6 -1.7
															IDI Anoyia 3.56 180 ePn Pn 01 21 12.4 +0.3
															TIRR Tirgusor 6.19 24 ePn Pn 01 21 46.9 -1.3
															TIRR Tirgusor 6.19 24 ePn Pn 01 21 46.9 -1.2

MEX 21 00:53:19.9±0.5,**16°08N**×**96°54W,h43**km±16km,**MD3.5, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.52	127	iP	Pn	00 53 29.3	-1.6
HUIG				iS	Sn	00 53 37.0	-1.7
VHO	Vista Hermosa	1.00	349	iP	Pn	00 53 36.1	-1.5
VHO				iS	Sn	00 53 48.8	-1.8
PNIG	Pinotepa	1.56	282	iP	Pn	00 53 44.9	-0.2
PNIG				iS	Sn	00 54 02.1	-2.0

*THE **21** 01:05:58.8,36°.93N×27°.60E,h10km±1km,ML4.1/1,Error ellipse: s-maj=1.4km s-min=0.4km az=196.0*
*ISCJB **21** 01:05:58.5±0.3,36°.94N±0°.02×27°.54E±0°.03,h11km±2km, Error ellipse: s-maj=3.6km s-min=3.0km az=177.1*
*DDA **21** 01:05:58.5,36°.98N×27°.55E,h14km±2km,Md3.3*
*ATH **21** 01:05:58.6,36°.95N×27°.63E,h35km±4km,MD3.3/4*
*CSEM **21** 01:05:58.5±0.1,36°.92N×27°.54E,h10km,MD3.3,Error ellipse: s-maj=3.1km s-min=2.8km az=104.0*
*ISK **21** 01:05:58.0,36°.94N×27°.56E,h10km,MD3.3*
*NEIC **21** 01:05:58.6,36°.95N×27°.63E,h35km,MD3.3(ATH),After ATH.*

ISC 21 01:05:59.0±0.3,**36°.93N**±0°.02×**27°.54E**±0°.03,**h11**km±2km, **n88**,σ0**°94**/128,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	Kayabasi	0.15	330	iP	Pg	01 06 02.4	-0.1
BDRM				iS	Sg	01 06 05.3	+0.4
BDRM	Kayabasi	0.15	330	iP	Pg	01 06 02.3	-0.2
BDRM				iS	Sg	01 06 05.3	+0.4
DAT	Datca	0.20	172	PG	Pg	01 06 03.0	-0.3
DAT				eSG	Sg	01 06 06.0	-0.2
DAT	Datca	0.20	172	iPg	Pg	01 06 03.0	-0.3
DAT				eSg	Sg	01 06 06.0	-0.2
BODT	Bodrum	0.23	305	PG	Pg	01 06 03.4	-0.3
BODT				eSG	Sg	01 06 07.2	+0.3
BODT	Bodrum	0.23	305	iPg	Pg	01 06 03.4	-0.3
BODT				eSg	Sg	01 06 07.2	+0.3
MLSB	Milas	0.41	27	ePG	Pg	01 06 06.4	-0.6
MLSB				eSG	Sg	01 06 12.5	0.0
MLSB	Milas	0.41	27	ePg	Pg	01 06 06.4	-0.6
MLSB				eSg	Sg	01 06 12.5	0.0
NIS1	Nisyros Isl.	0.44	222	P	Pg	01 06 08.0	+0.4
NIS1				S	Sg	01 06 15.3	+1.9
NIS1	Nisyros Isl.	0.44	222	P	Pg	01 06 08.0	+0.4
NIS1				S	Sg	01 06 15.3	+1.9
YER	Yerkesik	0.63	71	ePG	Pg	01 06 10.4	-0.8
YER				eSG	Sg	01 06 19.5	+0.1
YER	Yerkesik	0.63	71	ePg	Pg	01 06 10.4	-0.7
YER				eSg	Sg	01 06 19.5	+0.1
AYDN	Tasoluk	0.78	20	iP	Pg	01 06 13.2	-0.8
AYDN				iS	Sg	01 06 23.5	-0.6
AYDN	Tasoluk	0.78	20	iP	Pg	01 06 13.1	-0.9
AYDN				iS	Sg	01 06 23.5	-0.6
GCAM	G?zelcaml?	0.81	342	iP	Pg	01 06 14.4	-0.1
GCAM				iS	Sg	01 06 25.2	+0.2
GCAM	G?zelcaml?	0.81	342	iP	Pg	01 06 14.4	-0.1
GCAM				iS	Sg	01 06 25.2	+0.1
TURN	Turunc	0.85	94	iP	Pg	01 06 09.0	-6.4
TURN				iS	Sg	01 06 18.5	-8.0
ARG	Arkhangelos	0.85	146	ePb	Pg	01 06 14.5	-1.0
ARG				eSn	Sg	01 06 27.7	+1.1
ARG	Arkhangelos	0.85	146	ePB	Pg	01 06 14.5	-1.0
ARG				eSN	Sg	01 06 27.7	+1.1
ARG	Arkhangelos	0.85	146	P	Pg	01 06 14.3	-1.2
ARG				S	Sg	01 06 26.6	0.0
ARG	Arkhangelos	0.85	146	ePb	Pg	01 06 14.5	-1.0

*ATH **21** 01:20:16.4,38°.87N×24°.85E,h26km±1km,MD3.3/13, ML2.8*
*NEIC **21** 01:20:16.4,38°.87N×24°.85E,h26km,ML2.8(ATH),After ATH.*
*ISCJB **21** 01:20:18.1±0.4,38°.86N±0°.02×24°.88E±0°.02,h27km±4km, Error ellipse: s-maj=3.7km s-min=3.1km az=158.7*
*CSEM **21** 01:20:18.6±0.1,38°.87N×24°.90E,h30km,ML2.8,Error ellipse: s-maj=1.7km s-min=1.3km az=151.0*
*THE **21** 01:20:19.4,38°.88N×24°.88E,h31km±1km,ML3.4/13,Error ellipse: s-maj=1.4km s-min=0.3km az=146.0*

ISC 21 01:20:18.1±0.5,**38°.86N**±0°.02×**24°.88E**±0°.02,**h22**km±5km, **n115**,σ0**°64**/155,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	SIGRI	0.83	65	P	Pb	01 20 33.3	-0.6
SIGR	SIGRI	0.83	65	P	Pb	01 20 33.7	-0.2
SIGR				S	Sb	01 20 45.5	+0.8
SIGR	SIGRI	0.83	65	P	Pb	01 20 33.7	-0.2
SIGR				S	Sb	01 20 45.5	+0.8
AOS	Alonnisos	0.84	292	P	Pb	01 20 33.1	-0.9
AOS	Alonnisos	0.84	292	P	Pb	01 20 33.9	-0.1
AOS				S	Sb	01 20 46.0	+1.1
AOS	Alonnisos	0.84	292	P	Pb	01 20 33.9	-0.1
AOS				S	Sb	01 20 46.0	+1.1
CHOS	Chios island	1.03	117	ePN	Pb	01 20 37.5	+0.2
CHOS				eSN	Sn	01 20 51.8	+0.7
CHOS	Chios island	1.03	117	P	Pn	01 20 37.3	0.0
CHOS				S	Sb	01 20 50.8	+0.4
CHOS	Chios island	1.03	117	P	Pn	01 20 37.3	0.0
CHOS				S	Sb	01 20 50.8	+0.4
CHOS				eSn	Sn	01 20 51.8	+0.7
LIA	Limnos Island	1.06	13	ePn	Pb	01 20 36.7	-1.2
LIA				eSn	Sb	01 20 50.9	-0.4
LIA	Limnos Island	1.06	13	ePN	Pb	01 20 36.7	-1.2
LIA				eSN	Sb	01 20 50.9	-0.4
LIA	Limnos Island	1.06	13	P	Pn	01 20 37.1	-0.7
LIA				S	Sb	01 20 50.9	-0.4
LIA	Limnos Island	1.06	13	ePn	Pb	01 20 36.7	-1.2
LIA	Limnos Island	1.06	13	P	Pn	01 20 37.1	-0.7
LIA				S	Sb	01 20 50.9	-0.4
PTL	Penteli	1.14	225	ePn	Pb	01 20 38.1	-1.0
PTL	Penteli	1.14	225	ePN	Pb	01 20 38.1	-1.0
PTL	Penteli	1.14	225	ePn	Pb	01 20 38.1	-1.0
PRK	Paraskevi	1.15	70	ePn	Pb	01 20 38.8	-0.5
PRK				eSn	Sb	01 20 54.8	+1.1
PRK	Paraskevi	1.15	70	ePN	Pb	01 20 38.8	-0.5
PRK				eSN	Sb	01 20 54.8	+1.1
PRK	Paraskevi	1.15	70	P	Pn	01 20 38.5	-0.4
PRK				S	Sn	01 20 53.7	-0.3
PRK	Paraskevi	1.15	70	P	Pn	01 20 38.5	-0.4
PRK	Paraskevi	1.15	70	ePn	Pb	01 20 38.8	-0.5
PRK				S	Sn	01 20 53.7	-0.3
PRK				eSn	Sb	01 20 54.8	+1.1
ATHU	Athens Univers	1.24	224	P	Pn	01 20 40.3	+0.1
ATHU				S	Sn	01 20 56.5	+0.3
ATHU	Athens Univers	1.24	224	P	Pn	01 20 40.3	+0.1
ATHU				S	Sn	01 20 56.5	+0.3
ATH	Athens Observa	1.27	226	ePn	Pn	01 20 40.3	-0.3
ATH	Athens Observa	1.27	226	ePN	Pn	01 20 40.3	-0.3
VLY	Voula,Athens	1.32	221	ePn	Pn	01 20 40.9	-0.4
VLY				eSn	Sn	01 20 58.0	-0.2
VLY	Voula,Athens	1.32	221	ePN	Pn	01

BOLV				*i* S		**Sn**	**01 21 36.3**	**-0.7**
BOLV	**Bolvadin**	**1.73**	**356**	*i* P		**Pn**	**01 21 15.3**	**+0.6**
BOLV				*i* S		**Sn**	**01 21 36.3**	**-0.8**
DNZL	**Cakiroluk**	**1.79**	**293**	*i* P		**Pn**	**01 21 16.3**	**+0.8**
DNZL				*i* S		**Sn**	**01 21 39.0**	**+0.4**
DNZL	**Cakiroluk**	**1.79**	**293**	*i* P		**Pn**	**01 21 16.3**	**+0.7**
DNZL				*i* S		**Sn**	**01 21 39.0**	**+0.4**
DENT	**Denizli**	**1.83**	**295**	*e*PN		**Pn**	**01 21 16.2**	**+0.2**
DENT	**Denizli**	**1.83**	**295**	*e*Pn		**Pn**	**01 21 16.2**	**+0.2**
KHL	**Karahalli**	**1.84**	**317**	*e*PN		**Pn**	**01 21 16.1**	**0.0**
KHL	**Karahalli**	**1.84**	**317**	*e*Pn		**Pn**	**01 21 16.1**	**0.0**
KHAL	**Karahalli**	**1.89**	**317**	*i* P		**Pn**	**01 21 16.7**	**-0.1**
KHAL				*i* S		**Sn**	**01 21 40.4**	**-0.3**
KHAL	**Karahalli**	**1.89**	**317**	*i* P		**Pn**	**01 21 16.7**	**0.0**
KHAL				*i* S		**Sn**	**01 21 40.3**	**-0.4**
KIZT	**Kizilcal**	**1.98**	**17**	*e*PN		**Pn**	**01 21 17.3**	**-0.5**
KIZT	**Kizilcal**	**1.98**	**17**	*e*Pn		**Pn**	**01 21 17.3**	**-0.6**
TURN	**Turunc**	**2.02**	**267**	*i* P		**Pn**	**01 21 22.2**	**+3.8**
TURN				*i* S		**Sn**	**01 21 50.8**	**+7.1**
TURN	**Turunc**	**2.02**	**267**	*i* S		**Sn**	**01 21 50.8**	**+7.0**
TURN	**Turunc**	**2.02**	**267**	*i* P		**Pn**	**01 21 22.2**	**+3.7**
ALT	**Altintas**	**2.21**	**339**	*e*PN		**Pn**	**01 21 20.4**	**-0.4**
ALT	**Altintas**	**2.21**	**339**	*e*Pn		**Pn**	**01 21 20.5**	**-0.3**
YER	**Yerkesik**	**2.28**	**274**	*e*PN		**Pn**	**01 21 22.3**	**+0.6**
YER	**Yerkesik**	**2.28**	**274**	*e*Pn		**Pn**	**01 21 22.3**	**+0.6**
GDZ	**Gediz**	**2.46**	**329**	*i* P		**Pn**	**01 21 24.2**	**+0.1**
GDZ				*i* S		**Sn**	**01 21 52.4**	**-1.4**
GDZ	**Gediz**	**2.46**	**329**	*i* S		**Sn**	**01 21 52.4**	**-1.5**
GDZ	**Gediz**	**2.46**	**329**	*i* P		**Pn**	**01 21 24.2**	**+0.1**
SVRH	**Sivrihisar-ESK**	**2.47**	**7**	*e*PN		**Pn**	**01 21 24.0**	**-0.2**
SVRH	**Sivrihisar-ESK**	**2.47**	**7**	*e*Pn		**Pn**	**01 21 24.0**	**-0.2**
KULA	**Kula-Manisa**	**2.47**	**309**	*e*PN		**Pn**	**01 21 23.9**	**-0.3**
KULA	**Kula-Manisa**	**2.47**	**309**	*e*Pn		**Pn**	**01 21 23.9**	**-0.4**
ESKT	**Eskisehir**	**2.53**	**355**	*e*PN		**Pn**	**01 21 25.0**	**0.0**
ESKT	**Eskisehir**	**2.53**	**355**	*e*Pn		**Pn**	**01 21 25.0**	**-0.1**
AYDN	**Tasoluk**	**2.67**	**285**	*i* P		**Pn**	**01 21 26.3**	**-0.6**
AYDN				*i* S		**Sn**	**01 21 58.2**	**-0.6**
AYDN	**Tasoluk**	**2.67**	**285**	*i* P		**Pn**	**01 21 26.3**	**-0.6**
AYDN				*i* S		**Sn**	**01 21 58.2**	**-0.6**
MLSB	**Milas**	**2.69**	**277**	*e*PN		**Pn**	**01 21 27.6**	**+0.4**
MLSB	**Milas**	**2.69**	**277**	*e*Pn		**Pn**	**01 21 27.6**	**+0.4**
DAT	**Datca**	**2.85**	**266**	*e*PN		**Pn**	**01 21 29.7**	**+0.3**
DAT	**Datca**	**2.85**	**266**	*e*Pn		**Pn**	**01 21 29.7**	**+0.4**
BORA	**Eskisehir**	**2.93**	**350**	*i* P		**Pn**	**01 21 30.2**	**-0.1**
BORA				*i* S		**Sn**	**01 22 04.0**	**-0.9**
BORA	**Eskisehir**	**2.93**	**350**	*i* P		**Pn**	**01 21 30.2**	**-0.1**
BORA				*i* S		**Sn**	**01 22 04.0**	**-0.9**
GULE	**Gulek**	**2.93**	**83**	*i* P		**Pn**	**01 21 32.6**	**+2.3**
GULE				*i* S		Sn	01 22 25.6	+21
GULE	**Gulek**	**2.93**	**83**	*i* P		**Pn**	**01 21 32.7**	**+2.3**
BDRM	**Kayabasi**	**2.94**	**272**	*i* P		**Pn**	**01 21 30.9**	**+0.4**
BDRM				*i* S		**Sn**	**01 22 05.5**	**+0.2**
BDRM	**Kayabasi**	**2.94**	**272**	*i* P		**Pn**	**01 21 30.9**	**+0.4**
BDRM				*i* S		**Sn**	**01 22 05.5**	**+0.2**
BODT	**Bodrum**	**3.05**	**272**	*e*PN		**Pn**	**01 21 32.0**	**+0.1**
BODT	**Bodrum**	**3.05**	**272**	*e*Pn		**Pn**	**01 21 32.0**	**+0.1**
BRTR	**Keskin Array B**	**3.37**	**35**	P		**Pn**	**01 21 36.9**	**+0.8**
	4.5nm,0.3s,baz=218,slow=15,SNR=166							
BRTR				S		**Sn**	**01 22 15.3**	**-0.1**
	1.7nm,0.3s,baz=206,slow=26,SNR=11							
HWQ	**Hawqa**	**4.77**	**123**	*e*Pn		**Pn**	**01 21 55.6**	**+0.5**
HWQ	**Hawqa**	**4.77**	**123**	*e*Pn		**Pn**	**01 21 55.6**	**+0.5**
BHL	**Bhannes**	**4.81**	**128**	*e*Pn		**Pn**	**01 21 55.5**	**-0.2**
BHL	**Bhannes**	**4.81**	**128**	*e*Pn		**Pn**	**01 21 55.5**	**-0.2**
FKH	**Fakeheh**	**5.11**	**121**	*e*Pn		**Pn**	**01 21 58.1**	**-1.4**
FKH	**Fakeheh**	**5.11**	**121**	*e*Pn		**Pn**	**01 21 58.1**	**-1.5**
RSH		**6.39**	**160**	P		**Pn**	**01 22 16.8**	**-0.3**
AMAG	**Maghara**	**6.57**	**164**	P		**Pn**	**01 22 19.3**	**-0.2**
	baz=161							
AMAG	**Maghara**	**6.57**	**164**	P		**Pn**	**01 22 19.3**	**-0.1**
HMAT	**Matruh**	**6.77**	**211**	P		**Pn**	**01 22 20.5**	**-1.6**
	baz=211							
HMAT				S		**Sn**	**01 23 29.6**	**-8.1**
	baz=211							
HMAT	**Matruh**	**6.77**	**211**	P		**Pn**	**01 22 20.5**	**-1.6**
KOT	**Kottamia**	**7.07**	**175**	P		**Pn**	**01 22 26.7**	**+0.4**
	baz=173							
KOT	**Kottamia**	**7.07**	**175**	P		**Pn**	**01 22 26.7**	**+0.4**
SLUM		**7.35**	**223**	P		**Pn**	**01 22 28.9**	**-1.1**
	baz=224							
SLUM		**7.35**	**223**	P		**Pn**	**01 22 28.9**	**-1.2**
HSAF	**As Saff**	**7.37**	**177**	P		**Pn**	**01 22 29.4**	**-0.8**
	baz=175							
HSAF	**As Saff**	**7.37**	**177**	P		**Pn**	**01 22 29.4**	**-0.9**
GLL	**Jalalah**	**7.41**	**176**	P		**Pn**	**01 22 31.2**	**+0.3**
	baz=174							
GLL	**Jalalah**	**7.41**	**176**	P		**Pn**	**01 22 31.2**	**+0.3**
HNKL	**Nakhl**	**7.44**	**160**	P		**Pn**	**01 22 31.1**	**-0.2**
	baz=158							
HNKL	**Nakhl**	**7.44**	**160**	P		**Pn**	**01 22 31.1**	**-0.2**
EIL	**Elat**	**7.97**	**155**	P		**Pn**	**01 22 38.2**	**-0.4**
	0.5nm,0.3s,baz=4.1,slow=18,SNR=5.9							
EIL				S		**Sn**	**01 24 03.6**	**-3.5**
	2.9nm,0.3s,baz=79,slow=18,SNR=14							
AWBH		**8.85**	**193**	P		**Pn**	**01 22 48.5**	**-1.9**
	baz=192							
AWBH		**8.85**	**193**	P		**Pn**	**01 22 48.5**	**-1.9**
TR2		**8.86**	**165**	P		**Pn**	**01 22 50.1**	**-0.5**
	baz=163							
TR2		**8.86**	**165**	P		**Pn**	**01 22 50.1**	**-0.5**
SWA2		**9.07**	**213**	P		**Pn**	**01 22 51.4**	**-2.1**
	baz=213							
SWA2				AMP			01 24 00.0	
	comp=E,30µm,0.3s,logA/T=5.0,baz=213							
SWA2				S		**Sn**	**01 24 27.4**	**-6.4**
	baz=213							
SWA2		**9.07**	**213**	P		**Pn**	**01 22 51.4**	**-2.0**
AKASG	**Malin Array Be**	**13.77**	**355**	P		**Pn**	**01 24 00.2**	**+4.3**
	comp=E,0.6nm,0.3s,baz=176,slow=9.3,SNR=15							
DAVOX	**Davos/Dischmat**	**18.54**	**308**	P		**P**	**01 24 54.9**	**+1.3**
	comp=E,0.2nm,0.3s,baz=162,slow=20,SNR=2.7							
AKTK	**Aktyubinsk**	**23.47**	**47**	P		**P**	**01 25 45.8**	**+0.6**
AKTO	**Aktyubinsk**	**23.47**	**47**	P		**P**	**01 25 45.8**	**+0.6**
	comp=E,0.4nm,0.4s,mb3.1,baz=221,slow=9.3,SNR=3.2							
FINES	**FINESS Array B**	**24.68**	**354**	P		**P**	**01 25 55.7**	**-0.3**
	comp=E,1.6nm,0.5s,mb3.7,baz=152,slow=11,SNR=16							
ARCES	**ARCESS Array B**	**32.74**	**356**	P		**P**	**01 27 07.3**	**-0.3**
	comp=E,0.8nm,0.4s,mb3.9,baz=166,slow=9.3,SNR=12							
TORD	**Torodi Ar. Bea**	**35.44**	**236**	P		**P**	**01 27 32.1**	**+0.7**
	comp=E,1.1nm,0.8s,mb3.7,baz=41,slow=11,SNR=2.5							
MKAR	**Makanchi Array**	**38.72**	**59**	P		**P**	**01 27 60.0**	**+1.1**
	comp=E,0.8nm,0.6s,mb3.8,baz=280,slow=6.6,SNR=11							
MKAR	**Makanchi Array**	**38.72**	**59**	P		**P**	**01 27 60.0**	**+1.1**
ZALV	**Zalesovo Beam**	**40.23**	**48**	P		**P**	**01 28 10.3**	**-1.1**
	comp=E,0.3nm,0.3s,mb3.6,baz=243,slow=9.5,SNR=2.9							
ZALV	**Zalesovo Beam**	**40.23**	**48**	P		**P**	**01 28 10.3**	**-1.1**

*IGIL **21** 01:23:28.3, 36.°14N×10.°19W, h10km, ML2.6*
*CSEM **21** 01:23:35.5, 36.°55N×9.°82W, h11km, ML1.8, After INMG*
INMG 21 01:23:35.5±0.7, 36.°55N×9.°82W, h11km±3km, ML1.8,
Error ellipse: s-maj=5.2km s-min=3.8km az=148.0, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**0.98**	**53**	*e*P	Pg	01 23 53.4	-1.1
PFVI				*e*S	Sg	01 24 06.3	-1.0
PFVI				A		01 24 08.0	
	24nm,0.1s						
PFVI	**Vila Bisbo**	**0.98**	**53**	*e*P	Pg	01 23 53.4	-1.1
PFVI				*e*S	Sg	01 24 06.3	-1.0
	24nm,0.1s						
MORF	**Marmelete**	**1.20**	**51**	*e*P	Pn	01 23 56.4	-1.8
MORF	**Marmelete**	**1.20**	**51**	*e*P	Pn	01 23 56.4	-1.8
PTEO	**Sao Teotonio**	**1.32**	**41**	*e*P	Pn	01 23 58.2	-1.7
PTEO				*e*S	Sb	01 24 15.2	-2.1
PTEO				A		01 24 17.6	
	7.6nm,0.1s						
PTEO	**Sao Teotonio**	**1.32**	**41**	*e*P	Pn	01 23 58.2	-1.7
PTEO				*e*S	Sb	01 24 15.2	-2.1
	7.6nm,0.1s						
PBDV	**Barranco-do-Ve**	**1.66**	**65**	*e*P	Pn	01 24 02.9	-1.6
PBDV	**Barranco-do-Ve**	**1.66**	**65**	*e*P	Pn	01 24 02.9	-1.6
PCVE	**Castro Verde**	**1.79**	**52**	*e*Pn	Pn	01 24 04.8	-1.4
PCVE				*e*Sn	Sn	01 24 26.7	-2.2
PCVE	**Castro Verde**	**1.79**	**52**	*e*Pn	Pn	01 24 04.8	-1.4
PCVE				*e*Sn	Sn	01 24 26.7	-2.2
PVAQ	**Vaqueiros**	**1.89**	**62**	*e*Pn	Pn	01 24 05.9	-1.7
PVAQ	**Vaqueiros**	**1.89**	**62**	*e*Pn	Pn	01 24 05.9	-1.7
PBEJ	**Beja**	**2.14**	**46**	*e*Pn	Pn	01 24 09.0	-2.1
PBEJ	**Beja**	**2.14**	**46**	*e*Pn	Pn	01 24 09.0	-2.1
LIS	**Lisbon**	**2.23**	**14**	*e*S	Sn	01 24 40.6	+0.8
LIS				*e*S	Sn	01 24 40.7	+0.9
LIS				AML	AML	01 24 41.6	
	comp=N,28nm,0.1s						
LIS	**Lisbon**	**2.23**	**14**	*e*S	Sn	01 24 40.6	+0.8
LIS	**Lisbon**	**2.23**	**14**	S	Sn	01 24 40.6	+0.8
LIS	**Lisbon**	**2.23**	**14**	S	Sn	01 24 40.6	+0.8
LIS	**Lisbon**	**2.23**	**14**	*e*S	Sn	01 24 40.6	+0.8
MOE	**Montemor**	**2.29**	**30**	*e*Pn	Pn	01 24 12.1	-1.1
MOE	**Montemor**	**2.29**	**30**	*e*Pn	Pn	01 24 12.1	-1.1
PMAFR	**Mafra**	**2.44**	**10**	*e*Pn	Pn	01 24 13.3	-1.9
PMAFR				*e*Sn	Sn	01 24 42.0	-3.0
PMAFR	**Mafra**	**2.44**	**10**	*e*Pn	Pn	01 24 13.3	-1.9
PMAFR				*e*Sn	Sn	01 24 42.0	-3.0
EVO	**Evora**	**2.44**	**35**	*e*Pn	Pn	01 24 13.3	-2.0
EVO	**Evora**	**2.44**	**35**	*e*Pn	Pn	01 24 13.3	-2.0
PBAR	**Barrancos**	**2.74**	**53**	*e*Pn	Pn	01 24 17.6	-1.8
PBAR	**Barrancos**	**2.74**	**53**	*e*Pn	Pn	01 24 17.6	-1.8
ALMR	**Almeirim**	**2.78**	**20**	*e*P	Pn	01 24 18.1	-1.8
ALMR				*e*S	Sn	01 24 53.8	+0.4
ALMR				*e*S	Sn	01 24 53.9	+0.4
ALMR				AML	AML	01 24 55.2	
	comp=E,6.9nm,0.3s						
ALMR	**Almeirim**	**2.78**	**20**	*e*S	Sn	01 24 53.8	+0.4
ALMR	**Almeirim**	**2.78**	**20**	S	Sn	01 24 53.8	+0.4
ALMR	**Almeirim**	**2.78**	**20**	S	Sn	01 24 53.8	+0.4
ALMR	**Almeirim**	**2.78**	**20**	*e*Pn	Pn	01 24 18.1	-1.8
ALMR	**Almeirim**	**2.78**	**20**	*e*S	Sn	01 24 53.8	+0.4
PESTR	**Estremoz**	**2.91**	**37**	*e*Pn	Pn	01 24 19.8	-1.9
PESTR	**Estremoz**	**2.91**	**37**	*e*Pn	Pn	01 24 19.8	-1.9
PTOM	**Tomar**	**3.26**	**19**	*e*Pn	Pn	01 24 24.6	-1.9
PTOM	**Tomar**	**3.26**	**19**	*e*Pn	Pn	01 24 24.6	-1.9
PMRV	**Marv??o**	**3.45**	**33**	*e*Pn	Pn	01 24 27.5	-1.7
PMRV				*e*Sn	Sn	01 25 05.9	-4.1
PMRV				A		01 25 07.3	
	comp=E,1.8nm,0.1s						
PMRV	**Marv??o**	**3.45**	**33**	*e*Pn	Pn	01 24 27.5	-1.7
PMRV				*e*Sn	Sn	01 25 05.9	-4.1
	comp=E,1.8nm,0.1s						
PCBR	**Castelo Branco**	**3.77**	**29**	*e*Pn	Pn	01 24 31.8	-1.7
PCBR	**Castelo Branco**	**3.77**	**29**	*e*Pn	Pn	01 24 31.8	-1.7
MTE	**Manteigas**	**4.24**	**24**	*e*Pn	Pn	01 24 38.1	-1.8
MTE	**Manteigas**	**4.24**	**24**	*e*Pn	Pn	01 24 38.1	-1.8
PVIS	**Viseu**	**4.42**	**19**	*e*Pn	Pn	01 24 40.3	-2.2
PVIS	**Viseu**	**4.42**	**19**	*e*Pn	Pn	01 24 40.3	-2.2
PVRL	**Vila Real**	**5.00**	**18**	*e*Pn	Pn	01 24 47.9	-2.4
PVRL	**Vila Real**	**5.00**	**18**	*e*Pn	Pn	01 24 47.9	-2.4
MVO	**Moncorvo**	**5.10**	**24**	*e*Pn	Pn	01 24 49.6	-2.1
MVO	**Moncorvo**	**5.10**	**24**	*e*Pn	Pn	01 24 49.6	-2.1

*ISCJB **21** 01:35:04.5±0.2, 12.°78N±0.°05×87.°27W±0.°05, h173km±2km, mb3.9/18, Error ellipse: s-maj=11.0km s-min=2.9km az=39.8*
*CASC **21** 01:35:05.6±2.9, 11.°90N×87.°90W, h5km±7km, MD4.0, ML3.3*
*IDC **21** 01:35:05.1±1.1, 12.°78N×87.°34W, h173km±11km, mb3.5/12, mb1 3.7/16, mb1mx3.5/28, mbtmp3.5/16, Error ellipse: s-maj=22.2km s-min=8.9km az=44.0*
*NEIC **21** 01:35:05.5±0.6, 12.83N×87.31W, h170km±6km, mb4.0/7, Error ellipse: s-maj=15.0km s-min=5.8km az=224.0*
ISC 21 01:35:05.3±0.2, 12.°77N±0.°05×87.°27W±0.°05, h169km±2km, n70, σ0.°97/88, mb3.9/18, 1C-2D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TELN	**Telica**	**0.46**	**112**	*e*P	**Pn**	**01 35 28.6**	**-0.1**
LEON	**Leon**	**0.51**	**134**	*e*P	**Pn**	**01 35 28.1**	**-0.9**
CNGN	**Cerro Negro**	**0.62**	**116**	*e*P	**Pn**	**01 35 28.9**	**-0.5**
CNGN				*e*S	**Sn**	**01 35 49.6**	**+1.8**
CNCH	**Conchagua**	**0.74**	**312**	*e*P	**Pn**	**01 35 29.4**	**-0.8**
CNCH				*e*S	**Sn**	**01 35 49.6**	**+0.3**
MOMN	**Momotombo**	**0.80**	**117**	*e*P	**Pn**	**01 35 30.5**	**0.0**
COPN	**Copaltepe**	**0.89**	**132**	*e*P	**Pn**	**01 35 30.2**	**-0.9**
CSAN		**1.01**	**125**	*e*P	**Pn**	**01 35 32.1**	**0.0**
XAVN	**Gruta Xavier**	**1.11**	**124**	*e*P	**Pn**	**01 35 32.6**	**-0.2**
BLLM	**Bellamira**	**1.16**	**305**	⇑*i*P	**Pn**	**01 35 32.8**	**-0.5**
MGAN	**Managua**	**1.18**	**122**	*e*P	**Pn**	**01 35 33.1**	**-0.3**
MGAN				*e*S	**Sn**	**01 35 56.3**	**+1.4**
MGAN				AML	AML	01 35 57.9	
	comp=N,938nm,0.3s						
VSM	**San Miguel**	**1.18**	**304**	*e*P	**Pn**	**01 35 33.1**	**-0.3**
WILN	**Americas 2**	**1.22**	**120**	*e*P	**Pn**	**01 35 33.6**	**-0.2**
CRUN	**El Crucero**	**1.23**	**130**	*e*P	**Pn**	**01 35 34.3**	**+0.5**
TICN	**Ticuantepe**	**1.25**	**126**	*e*P	**Pn**	**01 35 34.1**	**+0.1**
TGUH	**Tegucigalpa,Un**	**1.27**	**360**	*e*Pn	**Pn**	**01 35 33.8**	**-0.5**
TGUH				*e*S	**Sn**	**01 35 56.6**	**-0.1**
MASN	**Masaya**	**1.34**	**126**	*e*P	**Pn**	**01 35 34.4**	**-0.5**
APON	**Apoyo**	**1.45**	**126**	*e*P	**Pn**	**01 35 36.1**	**+0.2**
SNVI	**San Vicente**	**1.74**	**299**	*e*P	**Pn**	**01 35 38.6**	**-0.2**
SNVI				*e*S	**Sn**	**01 36 04.8**	**+0.1**
LFRS	**El Faro**	**1.94**	**296**	*e*P	**Pn**	**01 35 40.5**	**-0.5**
LFRS				*e*S	**Sn**	**01 36 08.8**	**+0.2**
CONN	**Concepcion**	**2.01**	**127**	*e*P	**Pn**	**01 35 42.0**	**+0.3**
SSN	**San Juan del S**	**2.01**	**136**	*e*P	**Pn**	**01 35 41.8**	**-0.1**
SSN				*e*S	**Sn**	**01 36 09.2**	**-0.8**
SNET	**Serv Nac Est T**	**2.12**	**296**	*e*P	**Pn**	**01 35 42.5**	**-0.5**
SNET				*e*S	**Sn**	**01 36 12.3**	**+0.3**
BOQS	**Boqueron**	**2.18**	**296**	*e*P	**Pn**	**01 35 43.3**	**-0.4**
BOQS				*e*S	**Sn**	**01 36 14.6**	**+1.2**
SNJE	**San Jose**	**2.52**	**296**	*e*P	**Pn**	**01 35 47.6**	**-0.1**
SNJE				*e*S	**Sn**	**01 36 21.3**	**+0.8**
SBLS	**San Blas**	**2.53**	**295**	*e*P	**Pn**	**01 35 47.5**	**-0.2**
SBLS				*e*S	**Sn**	**01 36 21.8**	**+1.3**
RTR	**El Retiro**	**2.57**	**296**	*e*P	**Pn**	**01 35 48.3**	**0.0**
GBS3	**Finca Las Im¨¡**	**2.66**	**138**	*i* P	**Pn**	**01 35 49.8**	**+0.4**
GB1A	**Borinquen Arri**	**2.67**	**137**	*i* P	**Pn**	**01 35 49.8**	**+0.3**
LAPC	**Finca la Perla**	**2.68**	**138**	*i* P	**Pn**	**01 35 50.0**	**+0.3**
LAPC				*i* S	**Sn**	**01 36 21.5**	**-2.5**
NY14	**Universidad de**	**2.71**	**141**	*i* P	**Pn**	**01 35 50.8**	**+0.9**
GPS1	**Guardaparques**	**2.73**	**136**	*i* S	**Sn**	**01 36 23.7**	**-1.3**
LIM1	**Limonal**	**2.85**	**136**	*i* P	**Pn**	**01 35 52.2**	**+0.5**
LIM1				*i* S	**Sn**	**01 36 26.3**	**-1.4**
GUAB	**Guayabo de Bag**	**2.86**	**136**	*i* P	**Pn**	**01 35 52.1**	**+0.3**
GUAB				*i* S	**Sn**	**01 36 26.7**	**-1.2**
VCR	**Vista de Mar**	**3.08**	**148**	⇓*i*P	**Pn**	**01 35 55.4**	**+0.9**
VCR				*e*S	**Sn**	**01 36 30.6**	**-2.1**
AMAS	**Alto Masis**	**3.10**	**134**	*i* S	**Sn**	**01 36 30.8**	**-2.2**
JTS	**JuntasAbangare**	**3.35**	**137**	P	**Pn**	**01 35 58.6**	**+0.7**
	comp=N,23nm,0.3s,baz=298,slow=22,SNR=72						
JTS				S	**Sn**	**01 36 35.8**	**-3.0**
	comp=N,62nm,0.3s,baz=279,slow=19,SNR=15						
JCR	**Jicaral**	**3.59**	**144**	*e*P	**Pn**	**01 36 01.9**	**+0.9**
APG	**El Apazote**	**3.81**	**306**	P	**Pn**	**01 36 04.0**	**+0.2**
	baz=90,slow=16						
APG				S	**Sn**	**01 36 48.0**	**-1.3**
	baz=90,slow=16						
CGA2	**Cerro Gallo 2**	**3.88**	**135**	*e*P	**Pn**	**01 36 06.1**	**+1.5**
PRS1	**Puriscal**	**4.01**	**133**	*e*P	**Pn**	**01 36 08.2**	**+1.9**
LAJ	**Bijagual**	**4.23**	**133**	⇓*e*P	**Pn**	**01 36 08.1**	**-1.0**
URSC	**Urasca**	**4.50**	**130**	*e*P	**Pn**	**01 36 16.0**	**+3.4**
QCR	**Quepos**	**4.51**	**137**	*e*P	**Pn**	**01 36 13.8**	**+1.0**
BUS	**Buena Vista**	**4.70**	**133**	*e*P	**Pn**	**01 36 18.8**	**+3.6**
BAR1		**5.23**	**132**	*e*P	**Pn**	**01 36 23.9**	**+1.8**
BCIP	**Isla Barro Col**	**8.13**	**115**	*e*Pn	**Pn**	**01 37 01.2**	**+0.8**
CMIG	**Matias Romero**	**8.52**	**301**	P	**Pn**	**01 37 05.0**	**-0.5**
	comp=N,1.1nm,0.3s,baz=125,slow=11,SNR=12						
CMIG				S	**Sn**	**01 38 30.1**	**-11**
	comp=N,3.1nm,0.3s,baz=133,slow=18,SNR=11						
ROSC	**El Rosal**	**15.00**	**120**	P	**Pn**	**01 38 31.5**	**+2.5**
	comp=N,0.7nm,0.3s,baz=269,slow=7.9,SNR=5.7						
ROSC	**El Rosal**	**15.00**	**120**	*e*Pn	**Pn**	**01 38 31.3**	**+2.3**
OTAV	**Otavalo**	**15.22**	**144**	*e*Pn	**Pn**	**01 38 33.1**	**+1.4**
	comp=N,2.4nm,0.8s						
SJG	**San Juan**	**21.03**	**73**	P	**P**	**01 39 36.6**	**+0.7**
	comp=N,6.3nm,0.5s,mb4.2,baz=270,slow=7.7,SNR=3.0						
SJG	**San Juan**	**21.03**	**73**	P	**P**	**01 39 36.6**	**+0.6**
ATAH	**Atahualpa**	**21.66**	**155**	P	**P**	**01 39 41.6**	**-1.0**
	comp=N,2.9nm,0.6s,mb3.9,baz=320,slow=9.3,SNR=3.1						
PCRV	**Puerto La Cruz**	**22.33**	**94**	P	**P**	**01 39 50.6**	**+1.2**
	comp=N,11nm,0.5s,mb4.6,baz=151,slow=7.1,SNR=10						
MIAR	**Mount Ida**	**22.42**	**346**	*e*P	**P**	**01 39 49.8**	**-0.2**
	comp=N,2.5nm,0.6s,mb3.8						
TXAR	**Lajitas Array**	**22.44**	**320**	P	**P**	**01 39 50.0**	**-0.3**
	comp=N,4.6nm,0.5s,mb4.1,baz=140,slow=9.7,SNR=91						
TXAR				ScP	ScP	01 46 59.5	-1.0
	comp=N,0.2nm,0.6s,baz=143,slow=6.2,SNR=6.0						
TKL	**Tuckaleechee C**	**23.00**	**7**	P	**P**	**01 39 55.6**	**+0.3**
	comp=N,2.0nm,0.7s,mb3.6,baz=180,slow=3.0,SNR=4.5						
WMOK	**Wichita Mounta**	**24.23**	**336**	*e*P	**P**	**01 40 05.7**	**-0.8**
	comp=N,14nm,1.1s,mb4.4						
MNTX	**Cornudas Mount**	**25.14**	**321**	*e*P	**P**	**01 40 13.9**	**-1.0**
	comp=N,1.5nm,0.6s,mb3.7						
ANMO	**Albuquerque**	**28.10**	**325**	P	**P**	**01 40 41.8**	**+0.5**
	comp=N,0.6nm,0.5s,mb3.6,baz=146,slow=11,SNR=4.2						
LPAZ	**La Paz**	**34.52**	**146**	P	**P**	**01 41 38.3**	**+0.6**
	comp=N,2.7nm,0.7s,mb4.0,baz=339,slow=7.1,SNR=17						
PDAR	**Pinedale Array**	**35.57**	**331**	P	**P**	**01 41 46.1**	**-0.3**
	comp=N,0.8nm,0.6s,mb3.5,baz=123,slow=11,SNR=7.7						
HWUT	**Hardware Ranch**	**35.70**	**328**	*e*P	**P**	**01 41 47.7**	**+0.3**
	comp=N,5.9nm,1.3s,mb4.1						
REDW	**Red Top Meadow**	**36.64**	**331**	*e*P	**P**	**01 41 55.8**	**+0.3**
	comp=N,2.8nm,0.4s,mb4.2						
TPAW	**Teton Pass**	**36.78**	**331**	*e*P	**P**	**01 41 56.7**	**+0.1**
	comp=N,2.2nm,0.7s,mb3.9						
NVAR	**Mina Array Bea**	**37.58**	**318**	P	**P**	**01 42 04.3**	**+0.9**
	comp=N,0.6nm,0.6s,mb3.4,baz=137,slow=8.2,SNR=5.1						
NVAR	**Mina Array Bea**	**37.58**	**318**	P	**P**	**01 42 04.3**	**+0.9**
SCHQ	**Schefferville**	**44.92**	**17**	P	**P**	**01 43 01.6**	**-1.4**
	comp=N,1.6nm,0.5s,mb4.0,baz=225,slow=8.7,SNR=7.4						
YKA	**Yellowknife Ar**	**53.35**	**345**	P	**P**	**01 44 04.7**	**-2.2**
	comp=N,1.1nm,0.7s,mb3.7,baz=153,slow=7.2,SNR=3.1						
ILAR	**Eielson Array**	**65.80**	**336**	P	**P**	**01 45 30.0**	**-2.0**
	comp=N,0.1nm,0.4s,mb3.0,baz=107,slow=7.6,SNR=4.7						

*ISCJB **21** 02:01:24.1±2.2, 19.°0N±0.°1×145.°3E±0.°3, h167km±22km, mb3.8/8, Error ellipse: s-maj=42.3km s-min=16.6km az=174.8*
*NEIC **21** 02:01:24.9±1.6, 19.°02N×145.°26E, h160km±16km, mb4.2/1, Error ellipse: s-maj=31.8km s-min=12.0km az=89.0*
*IDC **21** 02:01:30.3±7.2, 19.°03N×

621nm,0.4s
VULT Monte Vulture 0.91 154 Pg Pg 02 15 56.6 -1.4
2µm,0.3s
VULT Monte Vulture 0.91 154 Pg Pg 02 15 56.6 -1.4
2µm,0.3s
SDI San Donato 0.96 267 Pg Pg 02 15 57.3 -1.6
160nm,0.3s
SDI San Donato 0.96 267 Pg Pg 02 15 57.3 -1.6
160nm,0.3s
MCRV Calabritti - M 0.99 176 Pg Pg 02 15 58.2 -1.3
493nm,0.2s
MCRV Calabritti - M 0.99 176 Pg Pg 02 15 58.2 -1.3
493nm,0.2s
PALZ Palazzo San Ge 1.06 141 Pg Pg 02 16 00.6 -0.2
2µm,0.7s
PALZ Palazzo San Ge 1.06 141 Pg Pg 02 16 00.6 -0.2
2µm,0.7s
MRLC Muro Lucano 1.06 163 Pg Pg 02 16 00.9 +0.1
403nm,0.5s
MRLC Muro Lucano 1.06 163 Pg Pg 02 16 00.9 +0.1
403nm,0.5s
MRVN Minervino Murg 1.10 130 Pg Pg 02 16 00.1 -1.5
187nm,0.3s
MRVN Minervino Murg 1.10 130 Pg Pg 02 16 00.1 -1.5
187nm,0.3s
MODR Mondragone 1.10 236 Pg Pg 02 16 01.6 -0.1
57nm,0.5s
MODR Mondragone 1.10 236 Pg Pg 02 16 01.6 -0.1
57nm,0.5s
VCEL Villa Celiera 1.12 304 Pg Pg 02 16 00.2 -1.7
301nm,0.3s
VCEL Villa Celiera 1.12 304 Pg Pg 02 16 00.2 -1.7
301nm,0.3s
CDT Castel del Mon 1.13 127 ePg Pg 02 16 00.8 -1.4
CDT eSg Sg 02 16 18.3 +1.5
ACER Acerenza 1.18 146 Pg Pn 02 16 02.2 -0.7
509nm,0.4s
ACER Acerenza 1.18 146 Pg Pn 02 16 02.2 -0.7
509nm,0.4s
CDRU Civita di Ruta 1.29 173 Pg Pn 02 16 04.4 -0.1
131nm,0.3s
CDRU Civita di Ruta 1.29 173 Pg Pn 02 16 04.4 -0.1
131nm,0.3s
GUAR Guarcino 1.33 272 Pg Pn 02 16 05.6 +0.6
161nm,0.3s
GUAR Guarcino 1.33 272 Pg Pn 02 16 05.6 +0.6
161nm,0.3s
GIUL Giuliano Di Ro 1.39 262 Pg Pn 02 16 06.0 +0.2
263nm,1.3s
GIUL Giuliano Di Ro 1.39 262 Pg Pn 02 16 06.0 +0.2
263nm,1.3s
AMUR Altamura 1.43 127 Pg Pn 02 16 05.8 -0.6
294nm,0.2s
AMUR Altamura 1.43 127 Pg Pn 02 16 05.8 -0.6
294nm,0.2s
CAMP Campotosto 1.46 302 Pg Pn 02 16 07.7 +0.9
30nm,0.9s
CAMP Campotosto 1.46 302 Pg Pn 02 16 07.7 +0.9
30nm,0.9s
CMPR Campora 1.46 173 Pg Pn 02 16 06.8 0.0
102nm,0.6s
CMPR Campora 1.46 173 Pg Pn 02 16 06.8 0.0
102nm,0.6s
BAI Bari 1.50 116 ePn Pn 02 16 06.4 -1.0
BAI eSn Sn 02 16 29.6 +2.6
SG1 Sgolgore (BA) 1.52 127 ePn Pn 02 16 07.0 -0.6
SG1 eSn Sn 02 16 31.1 +3.7
MIGL Miglionico 1.55 138 Pg Pn 02 16 07.7 -0.4
528nm,0.3s
MIGL Miglionico 1.55 138 Pg Pn 02 16 07.7 -0.4
528nm,0.3s
CERT Cerreto 1.58 277 Pg Pn 02 16 09.2 +0.7
261nm,0.6s
CERT Cerreto 1.58 277 Pg Pn 02 16 09.2 +0.7
261nm,0.6s
MTSN Montesano sull 1.59 161 Pg Pn 02 16 08.5 0.0
MTSN Montesano sull 1.59 161 Pg Pn 02 16 08.5 0.0
MATE Matera 1.66 132 Pg Pn 02 16 09.0 -0.5
332nm,0.4s
SIRI Monte Sirino - 1.69 159 Pg Pn 02 16 09.9 -0.1
70nm,0.3s
SIRI Monte Sirino - 1.69 159 Pg Pn 02 16 09.9 -0.1
70nm,0.3s
BULG Bulgheria - Ca 1.71 172 Pg Pn 02 16 10.1 -0.1
148nm,0.7s
BULG Bulgheria - Ca 1.71 172 Pg Pn 02 16 10.1 -0.1
148nm,0.7s
CRAC Craco 1.74 144 Pg Pn 02 16 10.3 -0.3
243nm,0.5s
NOCI Noci 1.79 123 Pg Pn 02 16 10.6 -0.7
329nm,0.2s
FDMO Fiordimonte 1.95 311 Pg Pn 02 16 14.5 +1.0
65nm,0.5s
FDMO Fiordimonte 1.95 311 Pg Pn 02 16 14.5 +1.0
65nm,0.5s
PE1 Pezze di Greco 2.01 118 ePn Pn 02 16 14.1 -0.2
TAR1 Taranto 2.08 126 ePn Pn 02 16 14.8 -0.5
CING Cingoli 2.12 320 Pg Pn 02 16 16.3 +0.3
SNTG Esanatoglia 2.17 314 Pg Pn 02 16 17.6 +1.0
30nm,0.5s
STON Ston 2.23 60 ePn Pn 02 16 16.6 -0.8
STON Sn Sn 02 16 47.1 +2.2
STON Ston 2.23 60 ePn Pn 02 16 16.5 -0.9
STON Sn Sn 02 16 47.0 +2.1
PIEI Pieia 2.58 314 Pg Pn 02 16 23.2 +1.0
19nm,0.3s
NVLJ Novalja 2.79 357 ePn Pn 02 16 25.4 +0.3
NVLJ Sn Sn 02 16 58.6 -0.2
NVLJ Novalja 2.79 357 ePn Pn 02 16 25.4 +0.3
NVLJ Sn Sn 02 16 58.6 -0.3

*ISCJB **21** 02:30:00.8±0.3, 39.°11N±0.°01×0.°60W±0.°02, h5km±2km, Error ellipse: s-maj=2.9km s-min=1.6km az=138.1*
*INMG **21** 02:30:02.8±1.5, 39.°02N×0.°51W, h1km±3km, MD3.8, ML3.6, Error ellipse: s-maj=2.6km s-min=1.8km az=111.0*
*CSEM **21** 02:30:02.3±0.1, 39.°02N×0.°51W, h5km, ML3.9/42, Error ellipse: s-maj=3.0km s-min=1.6km az=137.0*
*MDD **21** 02:30:03.2±0.2, 39.°01N×0.°43W, h0km, mbLg3.7/41, Error ellipse: s-maj=2.5km s-min=2.0km az=108.0, IV LLOCNOU D'EN FENOLLET*
MDD EMS: IV XATIVA BARXETA CANALS.
*NEIC **21** 02:30:03.5, 39.°01N×0.°43W, h0km, ML4.0(STR), ML3.6(LDG), MN3.5(MDD), After MDD.*
NEIC Felt at Canals and Xativa.
*LDG **21** 02:30:03.9±0.1, 38.°98N×0.°42W, h2km, Ml3.6/34, Error ellipse: s-maj=2.6km s-min=1.3km az=132.0*
*STR **21** 02:30:11.2±0.4, 39.°56N×0.°30W, h10km, Ml3.6, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 21 02:30:02.9±0.3, 39.°06N±0.°01×0.°56W±0.°02, h8km±2km, n453, σ1§17/777, 16C-14D, Spain

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

EBEN Beniarda 0.44 143 Pg Pg 02 30 10.1 -1.3
EBEN Lg 02 30 15.7
EBEN Beniarda 0.44 143 Pg Pg 02 30 09.7 -1.7
211nm,0.2s,SNR=1755
EBEN Lg 02 30 15.4
4µm,0.3s,SNR=5.0
EBEN Beniarda 0.44 143 Pg Pg 02 30 09.7 -1.7
211nm,0.2s,SNR=1755
EBEN Lg 02 30 15.4
4µm,0.3s,SNR=5.0
EBEN Beniarda 0.44 143 Pg Pg 02 30 09.7 -1.7
210nm,0.2s,SNR=1000
EBEN Lg 02 30 15.7
ECHE Chera 0.62 329 Pg Pg 02 30 17.2 +2.3
ECHE Lg 02 30 26.7
ECHE Chera 0.62 329 ⇑Pg Pg 02 30 17.3 +2.4
211nm,0.2s,SNR=18
ECHE Lg 02 30 26.7
272nm,0.2s,SNR=19
ECHE Chera 0.62 329 ⇑Pg Pg 02 30 17.3 +2.4
211nm,0.2s,SNR=18
ECHE Lg 02 30 26.7
272nm,0.2s,SNR=19
ECHE Chera 0.62 329 Pg Pg 02 30 17.2 +2.3
ETOB Tobarra 0.88 242 Pg Pg 02 30 21.1 +1.4
ETOB Lg 02 30 34.5
ETOB Tobarra 0.88 242 ⇑Pg Pg 02 30 21.1 +1.4
721nm,0.1s,SNR=18
ETOB Lg 02 30 35.1
2µm,0.4s,SNR=33
ETOB Tobarra 0.88 242 ⇑Pg Pg 02 30 21.1 +1.4
721nm,0.1s,SNR=18
ETOB Lg 02 30 35.1
2µm,0.4s,SNR=33
ETOB Tobarra 0.88 242 Pg Pg 02 30 21.1 +1.4
721nm,0.1s,SNR=18
ETOB Lg 02 30 34.5
EMOS Mosqueruela 1.31 3 Pg Pg 02 30 27.7 -0.3
EMOS Lg 02 30 45.2
EMOS Mosqueruela 1.31 3 Pg Pg 02 30 27.7 -0.3
45nm,0.3s,SNR=109
EMOS Lg 02 30 45.2
359nm,0.6s,SNR=7.8
EMOS Mosqueruela 1.31 3 Pg Pg 02 30 27.7 -0.3
45nm,0.3s,SNR=109
EMOS Lg 02 30 45.2
359nm,0.6s,SNR=7.8
EMOS Mosqueruela 1.31 3 Pg Pg 02 30 27.7 -0.3
45nm,0.3s,SNR=109
EMUR La Murta 1.32 204 Pg Pg 02 30 26.8 -1.5
EMUR Lg 02 30 45.5
EMUR La Murta 1.32 204 Pg Pg 02 30 26.6 -1.7
181nm,0.4s,SNR=522
EMUR Lg 02 30 45.5
558nm,0.3s,SNR=12
EMUR La Murta 1.32 204 Pg Pg 02 30 26.6 -1.7
181nm,0.4s,SNR=522
EMUR Lg 02 30 45.5
558nm,0.3s,SNR=12
EMUR La Murta 1.32 204 Pg Pg 02 30 26.8 -1.5
EIBI Ibiza 1.48 91 Pn Pn 02 30 27.3 -2.5
EIBI Sn Sn 02 30 44.4 -4.9
EIBI Ibiza 1.48 91 ⇑Pn Pn 02 30 27.3 -2.5
128nm,0.3s,SNR=18
EIBI Sn Sn 02 30 44.4 -4.9
273nm,0.3s,SNR=9.1
EIBI Ibiza 1.48 91 ⇑Pn Pn 02 30 27.3 -2.5
128nm,0.3s,SNR=18
EIBI Sn Sn 02 30 44.4 -4.9
273nm,0.3s,SNR=9.1
EIBI Ibiza 1.48 91 Pn Pn 02 30 27.3 -2.5
128nm,0.3s,SNR=18
CART Cartagena 1.51 193 ePn Pn 02 30 28.8 -1.4
CART eS Sn 02 30 48.2 -1.7
CART Cartagena 1.51 193 ePn Pn 02 30 28.8 -1.3
CART eS Sn 02 30 48.2 -1.7
EVIA Vianos 1.57 255 Pn Pn 02 30 31.6 +0.6
EVIA Lg 02 30 55.4
EVIA Vianos 1.57 255 ⇓Pn Pn 02 30 31.6 +0.6
87nm,0.1s,SNR=18
EVIA Lg 02 30 55.4
365nm,0.2s,SNR=8.5
EVIA Vianos 1.57 255 ⇓Pn Pn 02 30 31.6 +0.6
87nm,0.1s,SNR=18
EVIA Lg 02 30 55.4
365nm,0.2s,SNR=8.5
EVIA Vianos 1.57 255 Pn Pn 02 30 31.6 +0.5
87nm,0.1s,SNR=18
ERTA Horta de San J 2.02 20 Pn Pn 02 30 37.3 +0.1
ERTA Sn Sn 02 31 02.5 0.0
ERTA Horta de San J 2.02 20 ⇓Pn Pn 02 30 37.3 +0.1
20nm,0.3s,SNR=18
ERTA Sn Sn 02 31 02.5 -0.1
114nm,0.3s,SNR=5.6
ERTA Horta de San J 2.02 20 ⇓Pn Pn 02 30 37.3 +0.1
20nm,0.3s,SNR=18
ERTA Sn Sn 02 31 02.5 -0.1
114nm,0.3s,SNR=5.6
ERTA Horta de San J 2.02 20 Pn Pn 02 30 37.3 +0.1
20nm,0.3s,SNR=18
ERTA Sn Sn 02 31 02.5 0.0
114nm,0.3s,SNR=5.6
EHUE Huescar 2.02 233 Pn Pn 02 30 37.7 +0.5
EHUE Sn Sn 02 31 04.1 +1.5
EHUE Huescar 2.02 233 ⇓Pn Pn 02 30 37.9 +0.7
34nm,0.2s,SNR=18
EHUE Sn Sn 02 31 04.1 +1.5
93nm,0.2s,SNR=7.9
EHUE Lg 02 31 10.1
214nm,0.3s,SNR=7.9
EHUE Huescar 2.02 233 ⇓Pn Pn 02 30 37.9 +0.7
34nm,0.2s,SNR=18
EHUE Sn Sn 02 31 04.1 +1.5
93nm,0.2s,SNR=7.9
EHUE Lg 02 31 10.1
214nm,0.3s,SNR=7.9
EHUE Huescar 2.02 233 Pn Pn 02 30 37.7 +0.5
EHUE Sn Sn 02 31 04.1 +1.5
93nm,0.2s,SNR=7.9
ETOR Torete 2.10 327 Pg Pg 02 30 44.9 +1.7
ETOR Lg 02 31 12.3
ETOR Torete 2.10 327 Pg Pg 02 30 42.0 -1.2
153nm,0.2s,SNR=7.9
ETOR Lg 02 31 12.3
1µm,0.3s,SNR=7.9
ETOR Torete 2.10 327 Pg Pg 02 30 42.0 -1.2
153nm,0.2s,SNR=7.9
ETOR Lg 02 31 12.3
1µm,0.3s,SNR=7.9
ETOR Torete 2.10 327 Pg Pg 02 30 42.0 -1.2
153nm,0.2s,SNR=7.9
ETOR Torete 2.10 327 Pg Pg 02 30 44.9 +1.7
EQES Quesada 2.34 238 Pn Pn 02 30 42.3 +0.7
EQES Pg Pg 02 30 48.6 +0.9
EQES Lg 02 31 21.0
EQES Quesada 2.34 238 Pn Pn 02 30 42.3 +0.7
21nm,0.4s,SNR=225
EQES Pg Pg 02 30 48.1 +0.4
110nm,0.3s,SNR=7.9
EQES Lg 02 31 19.9
548nm,0.3s,SNR=8.2
EQES Quesada 2.34 238 Pn Pn 02 30 42.3 +0.7
21nm,0.4s,SNR=225
EQES Pg Pg 02 30 48.1 +0.4
110nm,0.3s,SNR=7.9
EQES Lg 02 31 19.9
548nm,0.3s,SNR=8.2
EQES Quesada 2.34 238 Pn Pn 02 30 42.3 +0.8
21nm,0.4s,SNR=225
EQES Quesada 2.34 238 Pg Pg 02 30 48.1 +0.4
110nm,0.3s,SNR=7.9
ENIJ Nijar 2.45 213 Pn Pn 02 30 43.3 +0.1
ENIJ Nijar 2.45 213 Pn Pn 02 30 43.3 +0.1
17nm,0.3s,SNR=28
ENIJ Nijar 2.45 213 Pn Pn 02 30 43.3 +0.1
17nm,0.3s,SNR=28
ENIJ Nijar 2.45 213 Pn Pn 02 30 43.3 +0.1
17nm,0.3s,SNR=28
EPOB Poblet 2.61 28 Pn Pn 02 30 45.1 -0.3
EPOB Sn Sn 02 31 15.2 -2.1
EPOB Poblet 2.61 28 Pn Pn 02 30 45.1 -0.3
5.5nm,0.1s,SNR=53
EPOB Sn Sn 02 31 15.6 -1.6
34nm,0.3s,SNR=5.0
EPOB Poblet 2.61 28 Pn Pn 02 30 45.1 -0.3
5.5nm,0.1s,SNR=53
EPOB Sn Sn 02 31 15.6 -1.6
34nm,0.3s,SNR=5.0
EPOB Poblet 2.61 28 Pn Pn 02 30 45.1 -0.3
5.5nm,0.1s,SNR=53
EPOB Sn Sn 02 31 15.6 -1.6
34nm,0.3s,SNR=5.0
ESAC San Caprasio 2.66 1 Pn Pn 02 30 46.6 +0.5
ESAC Pg Pg 02 30 51.7 -2.3
ESAC Lg 02 31 28.9
ESAC San Caprasio 2.66 1 Pn Pn 02 30 46.6 +0.5
2.0nm,0.2s,SNR=7.9
ESAC Pg Pg 02 30 52.3 -1.7
21nm,0.2s,SNR=7.9
ESAC Lg 02 31 28.9
1µm,0.4s,SNR=7.9
ESAC San Caprasio 2.66 1 Pn Pn 02 30 46.6 +0.5
2.0nm,0.2s,SNR=7.9
ESAC Pg Pg 02 30 52.3 -1.7
21nm,0.2s,SNR=7.9
ESAC Lg 02 31 28.9
1µm,0.4s,SNR=7.9
ESAC San Caprasio 2.66 1 Pn Pn 02 30 46.6 +0.6
2.0nm,0.2s,SNR=7.9
EBAN Banos Encina 2.68 252 Pn Pn 02 30 46.3 0.0
EBAN Pg Pg 02 30 54.2 -0.1
EBAN Lg 02 31 29.8
EBAN Banos Encina 2.68 252 Pn Pn 02 30 46.3 0.0
26nm,0.2s,SNR=78
EBAN Pg Pg 02 30 54.2 -0.1
175nm,0.2s,SNR=85
EBAN Lg 02 31 31.5
201nm,0.2s,SNR=7.3
EBAN Banos Encina 2.68 252 Pn Pn 02 30 46.3 0.0
26nm,0.2s,SNR=78
EBAN Pg Pg 02 30 54.2 -0.1
175nm,0.2s,SNR=85
EBAN Lg 02 31 31.5
201nm,0.2s,SNR=7.3
EBAN Banos Encina 2.68 252 Pn Pn 02 30 46.3 0.0
26nm,0.2s,SNR=78
EBAN Banos Encina 2.68 252 Pg Pg 02 30 54.2 -0.1
175nm,0.2s,SNR=85
ETOS Mallorca 2.71 74 Pn Pn 02 30 45.3 -1.3
ETOS Sn Sn 02 31 14.4 -5.1
ETOS Mallorca 2.71 74 Pn Pn 02 30 45.3 -1.3
11nm,0.1s,SNR=153
ETOS Sn Sn 02 31 15.8 -3.7
88nm,0.3s,SNR=5.0
ETOS Mallorca 2.71 74 Pn Pn 02 30 45.3 -1.3
11nm,0.1s,SNR=153
ETOS Sn Sn 02 31 15.8 -3.7
88nm,0.3s,SNR=5.0
ETOS Mallorca 2.71 74 Pn Pn 02 30 45.3 -1.4
11nm,0.1s,SNR=153
ETOS Sn Sn 02 31 15.8 -3.8
88nm,0.3s,SNR=5.0
ESLA Sonseca Array 2.71 284 ePn Pn 02 30 47.6 +0.9
ESLA eS Sg 02 31 31.6 +1.7
ESLA Sonseca Array 2.71 284 ePn Pn 02 30 47.6 +0.9
EBER Berja 2.83 221 Pn Pn 02 30 49.7 +1.3
EBER Lg 02 31 35.7
EBER Berja 2.83 221 Pn Pn 02 30 49.7 +1.3
8.7nm,0.3s,SNR=30
EBER Pg Pg 02 30 57.3 +0.1
24nm,0.2s,SNR=7.9
EBER Lg 02 31 35.7
400nm,1.0s,SNR=5.5
EBER Berja 2.83 221 Pn Pn 02 30 49.7 +1.3
8.7nm,0.3s,SNR=30
EBER Pg Pg 02 30 57.3 +0.1
24nm,0.2s,SNR=7.9
EBER Lg 02 31 35.7
400nm,1.0s,SNR=5.5
EBER Berja 2.83 221 Pn Pn 02 30 49.7 +1.3
8.7nm,0.3s,SNR=30
EQUE Quentar 2.93 232 Pn Pn 02 30 50.8 +1.1
4.6nm,0.4s,SNR=34
EQUE Pg Pg 02 30 58.4 -0.6
21nm,0.4s,SNR=7.9
EQUE Sn Sn 02 31 27.1 +2.1
25nm,0.3s,SNR=7.9
EQUE Lg 02 31 37.3
128nm,0.4s,SNR=10
EQUE Quentar 2.93 232 Pn Pn 02 30 50.8 +1.1
4.6nm,0.4s,SNR=34
EQUE Pg Pg 02 30 58.4 -0.6
21nm,0.4s,SNR=7.9
EQUE Sn Sn 02 31 27.1 +2.1
25nm,0.3s,SNR=7.9
EQUE Lg 02 31 37.3
128nm,0.4s,SNR=10
EQUE Quentar 2.93 232 Pn Pn 02 30 50.8 +1.1
4.6nm,0.4s,SNR=34
ECOG Cogollos-Vega 2.96 234 Pn Pn 02 30 51.7 +1.6
ECOG Pg Pg 02 30 59.2 -0.5
ECOG Lg 02 31 38.6
ECOG Cogollos-Vega 2.96 234 Pn Pn 02 30 51.7 +1.6
6.2nm,0.2s,SNR=7.9
ECOG Pg Pg 02 30 59.2 -0.5
33nm,0.2s,SNR=7.9
ECOG Lg 02 31 39.4
154nm,0.3s,SNR=7.9
ECOG Cogollos-Vega 2.96 234 Pn Pn 02 30 51.7 +1.6
6.2nm,0.2s,SNR=7.9
ECOG Pg Pg 02 30 59.2 -0.5
33nm,0.2s,SNR=7.9
ECOG Lg 02 31 39.4
154nm,0.3s,SNR=7.9
ECOG Cogollos-Vega 2.96 234 Pn Pn 02 30 51.7 +1.6
6.2nm,0.2s,SNR=7.9
PAB San Pablo 2.98 281 ePn Pn 02 30 51.3 +0.9
PAB eS Sg 02 31 37.9 -0.7
PAB San Pablo 2.98 281 ePn Pn 02 30 51.3 +0.9
GUD Guadarrama 3.19 301 Pn Pn 02 30 55.0 +1.8
GUD Pg Pg 02 31 04.5 +0.5
GUD Lg 02 31 46.5
GUD Guadarrama 3.19 301 Pn Pn 02 30 55.0 +1.8
6.8nm,0.2s,SNR=7.9
GUD Pg Pg 02 31 04.5 +0.5
52nm,0.3s,SNR=7.9
GUD Sn Sn 02 31 33.3 +1.9
38nm,0.3s,SNR=7.9
GUD Lg 02 31 46.5
112nm,0.3s,SNR=7.9
GUD Guadarrama 3.19 301 Pn Pn 02 30 55.0 +1.8
6.8nm,0.2s,SNR=7.9
GUD Pg Pg 02 31 04.5 +0.5
52nm,0.3s,SNR=7.9
GUD Sn Sn 02 31 33.3 +1.9
38nm,0.3s,SNR=7.9
GUD Lg 02 31 46.5
112nm,0.3s,SNR=7.9
GUD Guadarrama 3.19 301 Pn Pn 02 30 55.0 +1.7
6.8nm,0.2s,SNR=7.9
EGUA Guajares 3.25 228 Pn Pn 02 30 55.5 +1.4
EGUA Pg Pg 02 31 04.1 -1.1
EGUA Guajares 3.25 228 Pn Pn 02 30 55.5 +1.4
15nm,0.3s,SNR=7.9
EGUA Pg Pg 02 31 04.1 -1.1
94nm,0.2s,SNR=7.9
EGUA Lg 02 31 51.7
678nm,1.1s,SNR=7.9
EGUA Guajares 3.25 228 Pn Pn 02 30 55.5 +1.4
15nm,0.3s,SNR=7.9
EGUA Pg Pg 02 31 04.1 -1.1
94nm,0.2s,SNR=7.9
EGUA Lg 02 31 51.7
678nm,1.1s,SNR=7.9
EGUA Guajares 3.25 228 Pn Pn 02 30 55.5 +1.4
15nm,0.3s,SNR=7.9
EMIR Miracle 3.27 28 Pn Pn 02 30 54.9 +0.5
EMIR Sn Sn 02 31 32.3 -1.1
EMIR Lg 02 31 47.4
EMIR Miracle 3.27 28 Pn Pn 02 30 54.9 +0.5
8.8nm,0.2s,SNR=60
EMIR Sn Sn 02 31 32.3 -1.1
69nm,0.3s,SNR=5.0
EMIR Lg 02 31 47.4
127nm,0.6s,SNR=6.1
EMIR Miracle 3.27 28 Pn Pn 02 30 54.9 +0.5
8.8nm,0.2s,SNR=60
EMIR Sn Sn 02 31 32.3 -1.1
69nm,0.3s,SNR=5.0
EMIR Lg 02 31 47.4
127nm,0.6s,SNR=6.1
EMIR Miracle 3.27 28 Pn Pn 02 30 54.9 +0.6
8.8nm,0.2s,SNR=60
EMIR Sn Sn 02 31 32.3 -1.1
69nm,0.3s,SNR=5.0
EADA Adamuz 3.27 256 Pn Pn 02 30 54.1 -0.3
EADA Pg Pg 02 31 05.0 -0.5
EADA Sn Sn 02 31 32.8 -0.6
EADA Lg 02 31 48.7
EADA Adamuz 3.27 256 ⇓Pn Pn 02 30 54.1 -0.3
13nm,0.2s,SNR=18
EADA Pg Pg 02 31 05.5 -0.1
49nm,0.3s,SNR=7.9
EADA Sn Sn 02 31 34.1 +0.7
26nm,0.2s,SNR=7.9
EADA Lg 02 31 48.7
307nm,0.4s,SNR=5.2
EADA Adamuz 3.27 256 ⇓Pn Pn 02 30 54.1 -0.3
13nm,0.2s,SNR=18
EADA Pg Pg 02 31 05.5 -0.1
49nm,0.3s,SNR=7.9
EADA Sn Sn 02 31 34.1 +0.7
26nm,0.2s,SNR=7.9
EADA Lg 02 31 48.7
307nm,0.4s,SNR=5.2
EADA Adamuz 3.27 256 Pn Pn 02 30 54.1 -0.3
13nm,0.2s,SNR=18
ERON Agron 3.27 233 Pn Pn 02 30 55.7 +1.3
ERON Pg Pg 02 31 05.7 +0.1
ERON Sn Sn 02 31 34.6 +1.2
ERON Agron 3.27 233 Pn Pn 02 30 55.7 +1.3
9.0nm,0.2s,SNR=7.9
ERON Sn Sn 02 31 34.6 +1.2

18nm,0.3s,SNR=7.9
ERON Agron 3.27 233 Pn Pn 02 30 55.7 +1.3
9.0nm,0.2s,SNR=7.9
ERON Sn **Sn 02 31 34.6 +1.2**
18nm,0.3s,SNR=7.9
ERON Agron 3.27 233 Pn Pn 02 30 55.7 +1.3
9.0nm,0.2s,SNR=7.9
ERON Agron 3.27 233 Pg Pg 02 31 05.7 +0.1
ERON Sn **Sn 02 31 34.6 +1.1**
18nm,0.3s,SNR=7.9
ELOJ Sierra Loja 3.42 237 Pn Pn 02 30 57.4 +1.1
ELOJ Sn **Sn 02 31 38.4 +1.4**
ELOJ Sierra Loja 3.42 237 ⇓Pn Pn 02 30 57.4 +1.1
18nm,0.2s,SNR=18
ELOJ Sn **Sn 02 31 38.4 +1.4**
26nm,0.2s,SNR=5.0
ELOJ Sierra Loja 3.42 237 ⇓Pn Pn 02 30 57.4 +1.1
18nm,0.2s,SNR=18
ELOJ Sn **Sn 02 31 38.4 +1.4**
26nm,0.2s,SNR=5.0
ELOJ Sierra Loja 3.42 237 Pn Pn 02 30 57.4 +1.0
18nm,0.2s,SNR=18
ELOJ Sn **Sn 02 31 38.4 +1.4**
26nm,0.2s,SNR=5.0
CFON Fontmartina 3.54 39 Pn Pn 02 30 57.4 -0.7
CFON Sn **Sn 02 31 38.1 -1.9**
CFON Fontmartina 3.54 39 Pn Pn 02 30 57.4 -0.7
12nm,0.2s,SNR=34
CFON Sn **Sn 02 31 38.1 -1.9**
45nm,0.3s,SNR=5.0
CFON Fontmartina 3.54 39 Pn Pn 02 30 57.4 -0.7
12nm,0.2s,SNR=34
CFON Sn **Sn 02 31 38.1 -1.9**
45nm,0.3s,SNR=5.0
CFON Fontmartina 3.54 39 Pn Pn 02 30 57.4 -0.7
12nm,0.2s,SNR=34
CFON Sn **Sn 02 31 38.1 -2.0**
45nm,0.3s,SNR=5.0
CSOR Sort 3.56 21 Pn Pn 02 30 59.2 +0.9
CSOR Sn **Sn 02 31 40.2 -0.3**
CSOR Lg 02 31 55.9
CSOR Sort 3.56 21 Pn Pn 02 30 59.1 +0.8
8.3nm,0.2s,SNR=100
CSOR Sn **Sn 02 31 40.2 -0.3**
28nm,0.4s,SNR=5.0
CSOR Lg 02 31 55.9
82nm,0.4s,SNR=7.9
CSOR Sort 3.56 21 Pn Pn 02 30 59.1 +0.8
8.3nm,0.2s,SNR=100
CSOR Sn **Sn 02 31 40.2 -0.3**
28nm,0.4s,SNR=5.0
CSOR Lg 02 31 55.9
82nm,0.4s,SNR=7.9
CSOR Sort 3.56 21 Pn Pn 02 30 59.1 +0.8
8.3nm,0.2s,SNR=100
CSOR Sn **Sn 02 31 40.2 -0.3**
28nm,0.4s,SNR=5.0
EBIE Bielsa 3.67 8 Pn Pn 02 31 01.8 +2.0
EBIE Bielsa 3.67 8 Pn Pn 02 31 01.8 +2.0
1.8nm,0.2s,SNR=22
EBIE Sn **Sn 02 31 42.3 -0.9**
5.2nm,0.2s,SNR=7.9
EBIE Lg 02 32 02.1
48nm,0.6s,SNR=5.0
EBIE Bielsa 3.67 8 Pn Pn 02 31 01.8 +2.0
1.8nm,0.2s,SNR=22
EBIE Sn **Sn 02 31 42.3 -0.9**
5.2nm,0.2s,SNR=7.9
EBIE Lg 02 32 02.1
48nm,0.6s,SNR=5.0
EBIE Bielsa 3.67 8 Pn Pn 02 31 01.8 +2.0
1.8nm,0.2s,SNR=22
EBIE Sn **Sn 02 31 42.3 -0.9**
5.2nm,0.2s,SNR=7.9
EALB Alboran 3.68 213 Sn Sn 02 31 43.4 -0.1
7.5nm,0.3s,SNR=7.9
EALB Alboran 3.68 213 Sn Sn 02 31 43.4 -0.1
7.5nm,0.3s,SNR=7.9
EALB Alboran 3.68 213 Sn Sn 02 31 43.4 -0.2
7.5nm,0.3s,SNR=7.9
IUNC Unciti 3.76 349 Pn Pn 02 31 03.8 +2.6
8.9nm,0.2s,SNR=13
IUNC Sn **Sn 02 31 45.8 +0.2**
18nm,0.4s,SNR=5.0
IUNC Lg 02 32 05.7
95nm,0.5s,SNR=7.9
IUNC Unciti 3.76 349 Pn Pn 02 31 03.8 +2.6
8.9nm,0.2s,SNR=13
IUNC Sn **Sn 02 31 45.8 +0.2**
18nm,0.4s,SNR=5.0
IUNC Lg 02 32 05.7
95nm,0.5s,SNR=7.9
IUNC Unciti 3.76 349 Pn Pn 02 31 03.8 +2.6
8.9nm,0.2s,SNR=13
IUNC Sn **Sn 02 31 45.8 +0.2**
18nm,0.4s,SNR=5.0
EARA Aranguren 3.79 349 Pn Pn 02 31 03.6 +2.1
17nm,0.3s,SNR=7.8
EARA Lg 02 32 03.6
43nm,0.4s,SNR=5.0
EARA Aranguren 3.79 349 Pn Pn 02 31 03.6 +2.1
17nm,0.3s,SNR=7.8
EARA Lg 02 32 03.6
43nm,0.4s,SNR=5.0
EARA Aranguren 3.79 349 Pn Pn 02 31 03.6 +2.0
17nm,0.3s,SNR=7.8
RESF Ens 3.81 10 P Pn 02 31 02.0 +0.2
RESF Ens 3.81 10 P Pn 02 31 02.0 +0.2
ETSF Etsaut 3.84 360 *e*Pn Pn 02 31 03.9 +1.7
ETSF *e*Sg **Sg 02 32 06.7 +0.5**
53nm,0.4s
ETSF Etsaut 3.84 360 Pn Pn 02 31 03.9 +1.7
ETSF Lg 02 32 06.7
26nm,0.4s
ETSF Etsaut 3.84 360 Pn Pn 02 31 03.9 +1.7
ETSF Lg 02 32 06.7
26nm,0.4s
ETSF Etsaut 3.84 360 *e*Pn Pn 02 31 03.9 +1.7
ETSF *e*Sg **Sg 02 32 06.7 +0.5**
26nm,0.4s
VIEF Viey 3.85 6 P Pn 02 31 03.7 +1.4
VIEF Viey 3.85 6 P Pn 02 31 03.7 +1.4
IZUN Zunzarren 3.86 350 ⇑Pn Pn 02 31 05.1 +2.6
8.1nm,0.4s,SNR=18
IZUN Lg 02 32 08.4
36nm,0.5s,SNR=7.9
IZUN Zunzarren 3.86 350 ⇑Pn Pn 02 31 05.1 +2.6
8.1nm,0.4s,SNR=18
IZUN Lg 02 32 08.4
36nm,0.5s,SNR=7.9
IZUN Zunzarren 3.86 350 Pn Pn 02 31 05.1 +2.6
8.1nm,0.4s,SNR=18
VALF Valcebollere 3.87 30 P Pn 02 31 03.1 +0.4
VALF Valcebollere 3.87 30 P Pn 02 31 03.1 +0.4
EORO Oroz-Betelu 3.88 352 Pn Pn 02 31 04.7 +2.0
5.7nm,0.3s,SNR=7.9
EORO Sn **Sn 02 31 49.5 +1.2**
35nm,0.3s,SNR=7.9
EORO Lg 02 32 07.0
162nm,0.5s,SNR=7.9
EORO Oroz-Betelu 3.88 352 Pn Pn 02 31 04.7 +2.0
5.7nm,0.3s,SNR=7.9
EORO Sn **Sn 02 31 49.5 +1.2**
35nm,0.3s,SNR=7.9
EORO Lg 02 32 07.0
162nm,0.5s,SNR=7.9
EORO Oroz-Betelu 3.88 352 Pn Pn 02 31 04.7 +2.0
5.7nm,0.3s,SNR=7.9
EORO Sn **Sn 02 31 49.5 +1.2**
35nm,0.3s,SNR=7.9
CLLI Llivia 3.92 29 Pn Pn 02 31 04.0 +0.7
CLLI Sn **Sn 02 31 47.7 -1.9**
CLLI Llivia 3.92 29 ⇓Pn Pn 02 31 04.0 +0.7
5.6nm,0.2s,SNR=18
CLLI Sn **Sn 02 31 47.7 -1.9**
5.7nm,0.2s,SNR=5.0
CLLI Llivia 3.92 29 ⇓Pn Pn 02 31 04.0 +0.7
5.6nm,0.2s,SNR=18
CLLI Sn **Sn 02 31 47.7 -1.9**
5.7nm,0.2s,SNR=5.0
CLLI Llivia 3.92 29 Pn Pn 02 31 04.0 +0.7
5.6nm,0.2s,SNR=18
CLLI Sn **Sn 02 31 47.7 -1.8**
5.7nm,0.2s,SNR=5.0
ECAB El Cabril 3.93 257 Pn Pn 02 31 03.2 -0.3
ECAB Pg **Pg 02 31 16.5 -1.8**
ECAB Lg 02 32 08.0
19nm,0.2s,SNR=7.9
ECAB Pg **Pg 02 31 16.5 -1.8**
ECAB Lg 02 32 09.2
266nm,0.5s,SNR=5.0
ECAB El Cabril 3.93 257 Pn Pn 02 31 03.2 -0.3
2.7nm,0.1s,SNR=30
ECAB Pg **Pg 02 31 16.5 -1.8**
19nm,0.2s,SNR=7.9
ECAB Lg 02 32 09.2
266nm,0.5s,SNR=5.0
ECAB El Cabril 3.93 257 Pn Pn 02 31 03.2 -0.3
2.7nm,0.1s,SNR=30
IUSE Utxeti 3.96 349 Pn Pn 02 31 06.4 +2.5
1.7nm,0.3s,SNR=7.5
IUSE Pg **Pg 02 31 18.2 -0.5**
5.4nm,0.2s,SNR=7.9
IUSE Lg 02 32 10.9
17nm,0.5s,SNR=5.0
IUSE Utxeti 3.96 349 Pn Pn 02 31 06.4 +2.5
1.7nm,0.3s,SNR=7.5
IUSE Pg **Pg 02 31 18.2 -0.5**
5.4nm,0.2s,SNR=7.9
IUSE Lg 02 32 10.9
17nm,0.5s,SNR=5.0
IUSE Utxeti 3.96 349 Pn Pn 02 31 06.4 +2.6
1.7nm,0.3s,SNR=7.5
LARF Larrau 3.99 355 P Pn 02 31 06.1 +1.8
LARF Larrau 3.99 355 P Pn 02 31 06.1 +1.8
REYF Montagne du Re 4.01 2 P Pn 02 31 05.8 +1.2
REYF Montagne du Re 4.01 2 P Pn 02 31 05.8 +1.2
LABF Labassere 4.02 7 P Pn 02 31 06.1 +1.5
LABF Labassere 4.02 7 P Pn 02 31 06.1 +1.5
EPF Esparros 4.03 9 *e*Pn Pn 02 31 06.2 +1.4
EPF *e*Sg **Sg 02 32 12.1 -0.2**
99nm,0.6s
EPF Esparros 4.03 9 Pn Pn 02 31 06.2 +1.4
EPF Lg 02 32 12.1
50nm,0.6s
EPF Esparros 4.03 9 Pn Pn 02 31 06.2 +1.4
EPF Lg 02 32 12.1
50nm,0.6s
EPF Esparros 4.03 9 *e*Pn Pn 02 31 06.2 +1.4
EPF *e*Sg **Sg 02 32 12.1 -0.2**
50nm,0.6s
SJPF Ste Jean 4.08 353 *e*Pn Pn 02 31 07.6 +2.0
SJPF *e*Sg **Sg 02 32 15.0 +1.0**
54nm,0.5s
SJPF Ste Jean 4.08 353 Pn Pn 02 31 07.6 +2.0
SJPF Lg 02 32 15.0
27nm,0.5s
SJPF Ste Jean 4.08 353 Pn Pn 02 31 07.6 +2.0
SJPF Lg 02 32 15.0
27nm,0.5s
SJPF Ste Jean 4.08 353 *e*Pn Pn 02 31 07.6 +2.0
SJPF *e*Sg **Sg 02 32 15.0 +1.0**
27nm,0.5s
EMIJ Mijas 4.16 235 Pn Pn 02 31 07.4 +0.8
EMIJ Sn **Sn 02 31 57.9 +2.5**
EMIJ Lg 02 32 16.8
EMIJ Mijas 4.16 235 Pn Pn 02 31 07.4 +0.8
5.9nm,0.3s,SNR=23
EMIJ Sn **Sn 02 31 55.7 +0.3**
14nm,0.4s,SNR=7.9
EMIJ Lg 02 32 16.8
50nm,0.5s,SNR=5.0
EMIJ Mijas 4.16 235 Pn Pn 02 31 07.4 +0.8
5.9nm,0.3s,SNR=23
EMIJ Sn **Sn 02 31 55.7 +0.3**
14nm,0.4s,SNR=7.9
EMIJ Lg 02 32 16.8
50nm,0.5s,SNR=5.0
EMIJ Mijas 4.16 235 Pn Pn 02 31 07.4 +0.8
5.9nm,0.3s,SNR=23
EMIJ Sn **Sn 02 31 55.7 +0.3**
14nm,0.4s,SNR=7.9
ORDF Ordiarp 4.16 356 P Pn 02 31 08.2 +1.6
ORDF S **Sn 02 31 54.6 -0.8**
ORDF Ordiarp 4.16 356 P Pn 02 31 08.2 +1.6
ORDF S **Sn 02 31 54.6 -0.8**
ELIZ Elizondo 4.17 350 Pn Pn 02 31 08.9 +2.2
ELIZ Sn **Sn 02 31 57.1 +1.5**
ELIZ Lg 02 32 16.6
ELIZ Elizondo 4.17 350 Pn Pn 02 31 08.8 +2.1
15nm,0.2s,SNR=76
ELIZ Sn **Sn 02 31 57.1 +1.5**
15nm,0.4s,SNR=7.9
ELIZ Lg 02 32 17.1
33nm,0.5s,SNR=5.0
ELIZ Elizondo 4.17 350 Pn Pn 02 31 08.8 +2.1
15nm,0.2s,SNR=76
ELIZ Sn **Sn 02 31 57.1 +1.5**
15nm,0.4s,SNR=7.9
ELIZ Lg 02 32 17.1
33nm,0.5s,SNR=5.0
ELIZ Elizondo 4.17 350 Pn Pn 02 31 08.8 +2.1
15nm,0.2s,SNR=76
ELIZ Sn **Sn 02 31 57.1 +1.5**
15nm,0.4s,SNR=7.9
CARF Carcanieres 4.18 28 P Pn 02 31 07.4 +0.6
CARF S **Sn 02 31 54.3 -1.5**
CARF Carcanieres 4.18 28 P Pn 02 31 07.4 +0.6
CARF S **Sn 02 31 54.3 -1.5**
EALK Alkurruntz 4.22 351 Pn Pn 02 31 09.7 +2.2
EALK Sn **Sn 02 31 58.3 +1.5**
EALK Lg 02 32 20.1
EALK Alkurruntz 4.22 351 ⇑Pn Pn 02 31 09.7 +2.2
11nm,0.3s,SNR=18
EALK Sn **Sn 02 31 57.7 +0.8**
12nm,0.3s,SNR=7.9
EALK Lg 02 32 20.1
79nm,0.5s,SNR=5.0
EALK Alkurruntz 4.22 351 ⇑Pn Pn 02 31 09.7 +2.2
11nm,0.3s,SNR=18
EALK Sn **Sn 02 31 57.7 +0.8**
12nm,0.3s,SNR=7.9
EALK Lg 02 32 20.1
79nm,0.5s,SNR=5.0
EALK Alkurruntz 4.22 351 Pn Pn 02 31 09.7 +2.3
11nm,0.3s,SNR=18
EALK Sn **Sn 02 31 57.7 +0.8**
12nm,0.3s,SNR=7.9
OSSF Osses 4.23 353 P Pn 02 31 09.2 +1.6
OSSF Osses 4.23 353 P Pn 02 31 09.2 +1.6
EJON La Jonquera 4.28 37 Pn Pn 02 31 08.3 0.0
EJON Sn **Sn 02 31 55.5 -2.8**
EJON La Jonquera 4.28 37 Pn Pn 02 31 08.3 0.0
1.7nm,0.1s,SNR=11
EJON Sn **Sn 02 31 55.5 -2.9**
3.0nm,0.2s,SNR=5.0
EJON La Jonquera 4.28 37 Pn Pn 02 31 08.3 0.0
1.7nm,0.1s,SNR=11
EJON Sn **Sn 02 31 55.5 -2.9**
3.0nm,0.2s,SNR=5.0
EJON La Jonquera 4.28 37 Pn Pn 02 31 08.3 0.0
1.7nm,0.1s,SNR=11
EJON Sn **Sn 02 31 55.5 -2.9**
3.0nm,0.2s,SNR=5.0
EPLA Plasencia 4.38 285 Pn Pn 02 31 10.8 +1.2
EPLA Pg **Pg 02 31 26.1 -0.8**
EPLA Sn **Sn 02 32 01.0 +0.1**
EPLA Lg 02 32 23.1
EPLA Plasencia 4.38 285 Pn Pn 02 31 10.7 +1.0
2.1nm,0.1s,SNR=20
EPLA Pg **Pg 02 31 26.1 -0.8**
14nm,0.2s,SNR=7.9
EPLA Sn **Sn 02 32 01.0 +0.1**
16nm,0.3s,SNR=5.0
EPLA Lg 02 32 23.1
140nm,0.3s,SNR=11
EPLA Plasencia 4.38 285 Pn Pn 02 31 10.7 +1.0
2.1nm,0.1s,SNR=20
EPLA Pg **Pg 02 31 26.1 -0.8**
14nm,0.2s,SNR=7.9
EPLA Sn **Sn 02 32 01.0 +0.1**
16nm,0.3s,SNR=5.0
EPLA Lg 02 32 23.1
140nm,0.3s,SNR=11
EPLA Plasencia 4.38 285 Pn Pn 02 31 10.7 +1.0
2.1nm,0.1s,SNR=20
EJIF Jimena Fronter 4.68 238 Pn Pn 02 31 13.9 +0.1
3.8nm,0.4s,SNR=7.9
EJIF Sn **Sn 02 32 05.0 -3.2**
8.3nm,0.4s,SNR=7.9
EJIF Lg 02 32 35.2
20nm,0.4s,SNR=7.9
EJIF Jimena Fronter 4.68 238 Pn Pn 02 31 13.9 +0.1
3.8nm,0.4s,SNR=7.9
ELAN Lanestosa 4.70 333 Pn Pn 02 31 15.9 +1.8
ELAN Lg 02 32 35.4
ELAN Lanestosa 4.70 333 ⇓Pn Pn 02 31 15.9 +1.8
4.0nm,0.2s,SNR=18
ELAN Sn **Sn 02 32 07.9 -0.8**
12nm,0.4s,SNR=7.9
ELAN Lg 02 32 35.4
24nm,0.6s,SNR=5.0
ELAN Lanestosa 4.70 333 ⇓Pn Pn 02 31 15.9 +1.8
4.0nm,0.2s,SNR=18
ELAN Sn **Sn 02 32 07.9 -0.8**
12nm,0.4s,SNR=7.9
ELAN Lg 02 32 35.4
24nm,0.6s,SNR=5.0
ELAN Lanestosa 4.70 333 Pn Pn 02 31 15.9 +1.8
4.0nm,0.2s,SNR=18
ELAN Sn **Sn 02 32 07.9 -0.8**
12nm,0.4s,SNR=7.9
ESPR Espera 4.72 244 Pn Pn 02 31 14.8 +0.5
ESPR Sn **Sn 02 32 11.4 +2.2**
ESPR Lg 02 32 35.7
ESPR Espera 4.72 244 ⇑Pn Pn 02 31 14.7 +0.4
8.3nm,0.4s,SNR=18
ESPR Sn **Sn 02 32 09.9 +0.7**
18nm,0.3s,SNR=7.9
ESPR Lg 02 32 35.7
84nm,0.4s,SNR=5.0
ESPR Espera 4.72 244 ⇑Pn Pn 02 31 14.7 +0.4
8.3nm,0.4s,SNR=18
ESPR Sn **Sn 02 32 09.9 +0.7**
18nm,0.3s,SNR=7.9
ESPR Lg 02 32 35.7
84nm,0.4s,SNR=5.0
ESPR Espera 4.72 244 Pn Pn 02 31 14.7 +0.4
8.3nm,0.4s,SNR=18
ESPR Sn **Sn 02 32 09.9 +0.7**
18nm,0.3s,SNR=7.9
MTLF Montolieu 4.77 25 *e*Pn Pn 02 31 15.0 +0.1
MTLF *e*Sn **Sn 02 32 07.4 -2.9**
31nm,0.6s
MTLF Montolieu 4.77 25 Pn Pn 02 31 15.0 +0.1
MTLF Sn **Sn 02 32 07.4 -2.9**
15nm,0.6s
MTLF Montolieu 4.77 25 Pn Pn 02 31 15.0 +0.1
MTLF Sn **Sn 02 32 07.4 -2.9**
15nm,0.6s
MTLF Montolieu 4.77 25 *e*Pn Pn 02 31 15.0 +0.1
MTLF *e*Sn **Sn 02 32 07.4 -2.9**
15nm,0.6s
EMIN Mina Concepcio 4.97 257 P Pn 02 31 17.3 -0.5
EMIN Mina Concepcio 4.97 257 ⇑Pn Pn 02 31 17.2 -0.6
2.3nm,0.3s,SNR=18
EMIN Pg **Pg 02 31 36.1 -2.0**
7.4nm,0.4s,SNR=7.9
EMIN Sn **Sn 02 32 13.8 -1.5**
3.6nm,0.2s,SNR=7.9
EMIN Lg 02 32 39.1
87nm,0.6s,SNR=5.0
EMIN Mina Concepcio 4.97 257 ⇑Pn Pn 02 31 17.2 -0.6
2.3nm,0.3s,SNR=18
EMIN Pg **Pg 02 31 36.1 -2.0**
7.4nm,0.4s,SNR=7.9
EMIN Sn **Sn 02 32 13.8 -1.5**
3.6nm,0.2s,SNR=7.9
EMIN Lg 02 32 39.1
87nm,0.6s,SNR=5.0
EMIN Mina Concepcio 4.97 257 P Pn 02 31 17.3 -0.5
EBAD Badajoz 5.04 269 P Pn 02 31 19.3 +0.5
EBAD Lg 02 32 49.0
EBAD Badajoz 5.04 269 Pn Pn 02 31 19.1 +0.4
4.5nm,0.1s,SNR=36
EBAD Pg **Pg 02 31 38.6 -0.9**
3.8nm,0.2s,SNR=7.9
EBAD Sn **Sn 02 32 17.6 +0.4**
24nm,0.1s,SNR=7.9
EBAD Lg 02 32 42.6
94nm,0.2s,SNR=6.8
EBAD Badajoz 5.04 269 Pn Pn 02 31 19.1 +0.4
4.5nm,0.1s,SNR=36
EBAD Pg **Pg 02 31 38.6 -0.9**
3.8nm,0.2s,SNR=7.9
EBAD Sn **Sn 02 32 17.6 +0.4**
24nm,0.1s,SNR=7.9
EBAD Lg 02 32 42.6
94nm,0.2s,SNR=6.8
EBAD Badajoz 5.04 269 Pn Pn 02 31 19.1 +0.3
4.5nm,0.1s,SNR=36
EBAD Badajoz 5.04 269 Pg Pg 02 31 38.6 -0.9
3.8nm,0.2s,SNR=7.9
EBAD Sn **Sn 02 32 17.6 +0.4**
24nm,0.1s,SNR=7.9
EBAD Lg 02 32 49.0
PBAR Barrancos 5.15 262 *e*Pn Pn 02 31 19.9 -0.3
PBAR *e*Sn **Sn 02 32 19.4 -0.4**
PBAR *e*Sg **Sg 02 32 48.6 +0.3**
PBAR A 02 32 54.3
78nm,0.4s
PBAR Barrancos 5.15 262 Pn Pn 02 31 19.9 -0.3
PBAR Sn **Sn 02 32 19.4 -0.4**
PBAR Lg 02 32 48.6
78nm,0.4s
PBAR Barrancos 5.15 262 Pn Pn 02 31 19.9 -0.3
PBAR Sn **Sn 02 32 19.4 -0.4**
PBAR Lg 02 32 48.6
78nm,0.4s
PBAR Barrancos 5.15 262 *e*Pn Pn 02 31 19.9 -0.3
PBAR *e*Sn **Sn 02 32 19.4 -0.4**
PBAR *e*Sg **Sg 02 32 48.6 +0.3**
78nm,0.4s
PMRV Marv??o 5.32 276 *e*Pn Pn 02 31 23.4 +0.9
PMRV *e*Sg **Sg 02 32 51.8 -1.8**
PMRV A 02 32 57.9
86nm,0.5s
PMRV Marv??o 5.32 276 Pn Pn 02 31 23.4 +0.9
PMRV Lg 02 32 51.8
86nm,0.5s
PMRV Marv??o 5.32 276 Pn Pn 02 31 23.4 +0.9
PMRV Lg 02 32 51.8
86nm,0.5s
PMRV Marv??o 5.32 276 *e*Pn Pn 02 31 23.4 +0.9
PMRV *e*Sg **Sg 02 32 51.8 -1.8**
86nm,0.5s
MVO Moncorvo 5.39 295 *e*Pn Pn 02 31 24.0 +0.5
MVO *e*Sn **Sn 02 32 23.7 -2.0**
MVO *e*Sg **Sg 02 32 57.5 +1.6**
MVO A 02 33 02.5
78nm,0.5s
MVO Moncorvo 5.39 295 P Pn 02 31 24.1 +0.6
MVO Moncorvo 5.39 295 ⇑Pn Pn 02 31 24.1 +0.6
6.6nm,0.2s,SNR=18
MVO Sn **Sn 02 32 24.8 -0.9**
14nm,0.3s,SNR=7.9
MVO Lg 02 32 56.7
81nm,0.4s,SNR=5.0
MVO Moncorvo 5.39 295 ⇑Pn Pn 02 31 24.1 +0.6
6.6nm,0.2s,SNR=18
MVO Sn **Sn 02 32 24.8 -0.9**
14nm,0.3s,SNR=7.9
MVO Lg 02 32 56.7
81nm,0.4s,SNR=5.0
MVO Moncorvo 5.39 295 Pn Pn 02 31 24.1 +0.6
6.6nm,0.2s,SNR=18
MVO Sn **Sn 02 32 24.8 -0.9**
14nm,0.3s,SNR=7.9
MVO *e*Sg **Sg 02 32 57.5 +1.6**
78nm,0.5s
PCBR Castelo Branco 5.41 280 *e*Pn Pn 02 31 25.5 +1.7
PCBR *e*Sn **Sn 02 32 24.6 -1.7**
PCBR *e*Sg **Sg 02 32 55.1 -1.6**
PCBR A 02 33 02.2
54nm,0.4s
PCBR Castelo Branco 5.41 280 Pn Pn 02 31 25.5 +1.7
PCBR Sn **Sn 02 32 24.6 -1.7**
PCBR Lg 02 32 55.1
27nm,0.4s
PCBR Castelo Branco 5.41 280 Pn Pn 02 31 25.5 +1.7
PCBR Sn **Sn 02 32 24.6 -1.7**

PCBR			Lg			02 32 55.1
	27nm,0.4s					
PCBR	**Castelo Branco**	**5.41 280**	*e*Pn	**Pn**		**02 31 25.5 +1.7**
PESTR	**Estremoz**	**5.48 270**	*e*Pn	**Pn**		**02 31 25.3 +0.5**
PESTR			*e*Sg	**Sg**		**02 32 58.6 -0.3**
PESTR			A			02 33 04.1
	70nm,0.4s					
PESTR	**Estremoz**	**5.48 270**	Pn	**Pn**		**02 31 25.3 +0.5**
PESTR			Lg			02 32 58.6
	35nm,0.4s					
PESTR	**Estremoz**	**5.48 270**	Pn	**Pn**		**02 31 25.3 +0.5**
PESTR			Lg			02 32 58.6
	35nm,0.4s					
PESTR	**Estremoz**	**5.48 270**	*e*Pn	**Pn**		**02 31 25.3 +0.5**
PESTR			*e*Sg	**Sg**		**02 32 58.6 -0.3**
	70nm,0.4s					
EARI	**Arriondas**	**5.50 322**	Pn	**Pn**		**02 31 27.6 +2.5**
EARI	**Arriondas**	**5.50 322**	Pn	**Pn**		**02 31 26.4 +1.4**
	4.4nm,0.5s,SNR=6.5					
EARI			Sn	**Sn**		**02 32 27.4 -1.1**
	2.3nm,0.4s,SNR=5.0					
EARI			Lg			02 32 59.2
	12nm,0.4s,SNR=7.9					
EARI	**Arriondas**	**5.50 322**	Pn	**Pn**		**02 31 26.4 +1.4**
	4.4nm,0.5s,SNR=6.5					
EARI			Sn	**Sn**		**02 32 27.4 -1.1**
	2.3nm,0.4s,SNR=5.0					
EARI			Lg			02 32 59.2
	12nm,0.4s,SNR=7.9					
EARI	**Arriondas**	**5.50 322**	Pn	**Pn**		**02 31 26.4 +1.3**
	4.4nm,0.5s,SNR=6.5					
EARI			Sn	**Sn**		**02 32 27.4 -1.1**
	2.3nm,0.4s,SNR=5.0					
ECAL	**Calabor**	**5.52 303**	P	**Pn**		**02 31 25.8 +0.5**
ECAL	**Calabor**	**5.52 303**	Pn	**Pn**		**02 31 25.8 +0.5**
	6.8nm,0.2s,SNR=28					
ECAL			Sn	**Sn**		**02 32 25.8 -3.1**
	12nm,0.4s,SNR=7.9					
ECAL			Lg			02 33 00.9
	89nm,0.6s,SNR=5.0					
ECAL	**Calabor**	**5.52 303**	Pn	**Pn**		**02 31 25.8 +0.5**
	6.8nm,0.2s,SNR=28					
ECAL			Sn	**Sn**		**02 32 25.8 -3.1**
	12nm,0.4s,SNR=7.9					
ECAL			Lg			02 33 00.9
	89nm,0.6s,SNR=5.0					
ECAL	**Calabor**	**5.52 303**	Pn	**Pn**		**02 31 25.8 +0.5**
	6.8nm,0.2s,SNR=28					
MTE	**Manteigas**	**5.55 286**	*e*Pn	**Pn**		**02 31 26.4 +0.7**
MTE			*e*Sn	**Sn**		**02 32 27.4 -2.2**
MTE			*e*Sg	**Sg**		**02 33 02.6 +1.5**
MTE			A			02 33 12.2
	57nm,0.5s					
MTE	**Manteigas**	**5.55 286**	*e*Pn	**Pn**		**02 31 26.4 +0.7**
MTE			*e*S	**Sg**		**02 33 00.6 -0.5**
MTE	**Manteigas**	**5.55 286**	*e*Pn	**Pn**		**02 31 26.4 +0.7**
MTE			*e*Sg	**Sg**		**02 33 02.6 +1.5**
	57nm,0.5s					
EGRO	**El Granado**	**5.66 257**	P	**Pn**		**02 31 26.6 -0.5**
EGRO			S	**Sg**		**02 33 03.4 -1.0**
EGRO	**El Granado**	**5.66 257**	Pn	**Pn**		**02 31 26.2 -0.9**
	0.5nm,0.2s,SNR=22					
EGRO			Sn	**Sn**		**02 32 30.5 -1.7**
	6.5nm,0.3s,SNR=4.7					
EGRO			Lg			02 33 04.0
	49nm,0.4s,SNR=5.0					
EGRO	**El Granado**	**5.66 257**	Pn	**Pn**		**02 31 26.2 -1.0**
	0.5nm,0.2s,SNR=22					
EGRO	**El Granado**	**5.66 257**	P	**Pn**		**02 31 26.6 -0.6**
EGRO			Sn	**Sn**		**02 32 30.5 -1.7**
	6.5nm,0.3s,SNR=4.7					
PBEJ	**Beja**	**5.82 262**	*e*Sn	**Sn**		**02 32 35.5 -0.8**
PBEJ			*e*Sg	**Sg**		**02 33 08.5 -1.2**
PBEJ			A			02 33 16.0
	29nm,0.4s					
PBEJ	**Beja**	**5.82 262**	Sn	**Sn**		**02 32 35.5 -0.8**
PBEJ			Lg			02 33 08.5
	15nm,0.4s					
PBEJ	**Beja**	**5.82 262**	Sn	**Sn**		**02 32 35.5 -0.8**
PBEJ			Lg			02 33 08.5
	15nm,0.4s					
PBEJ	**Beja**	**5.82 262**	*e*Sn	**Sn**		**02 32 35.5 -0.8**
PBEJ			*e*Sg	**Sg**		**02 33 08.5 -1.2**
	29nm,0.4s					
EVO	**Evora**	**5.85 267**	*e*Pn	**Pn**		**02 31 31.9 +2.1**
EVO	**Evora**	**5.85 267**	*e*Pg	**Pg**		**02 31 55.4 +0.5**
EVO			*e*Sn	**Sn**		**02 32 37.6 +0.6**
EVO			*e*Sg	**Sg**		**02 33 13.5 +2.9**
	192nm,0.5s					
EVO	**Evora**	**5.85 267**	*e*Pn	**Pn**		**02 31 30.9 +1.1**
EVO			*e*Sg	**Sg**		**02 33 08.9 -1.7**
EVO			A			02 33 17.9
	64nm,0.4s					
EVO	**Evora**	**5.85 267**	Pn	**Pn**		**02 31 30.9 +1.1**
EVO			Lg			02 33 08.9
	64nm,0.4s					
EVO	**Evora**	**5.85 267**	Pn	**Pn**		**02 31 30.9 +1.1**
EVO			Lg			02 33 08.9
	64nm,0.4s					
EVO	**Evora**	**5.85 267**	*e*Pn	**Pn**		**02 31 30.9 +1.1**
PVAQ	**Vaqueiros**	**5.87 256**	*e*Pn	**Pn**		**02 31 29.3 -0.8**
PVAQ			*e*Sn	**Sn**		**02 32 36.1 -1.5**
PVAQ			*e*Sg	**Sg**		**02 33 09.6 -1.8**
PVAQ			A			02 33 19.5
	42nm,0.4s					
PVAQ	**Vaqueiros**	**5.87 256**	Pn	**Pn**		**02 31 29.3 -0.8**
PVAQ			Sn	**Sn**		**02 32 36.1 -1.5**
PVAQ			Lg			02 33 09.6
	42nm,0.4s					
PVAQ	**Vaqueiros**	**5.87 256**	Pn	**Pn**		**02 31 29.3 -0.8**
PVAQ			Sn	**Sn**		**02 32 36.1 -1.5**
PVAQ			Lg			02 33 09.6
	42nm,0.4s					
PVAQ	**Vaqueiros**	**5.87 256**	*e*Pn	**Pn**		**02 31 29.3 -0.8**
PVAQ			*e*Sn	**Sn**		**02 32 36.1 -1.5**
PVIS	**Viseu**	**5.88 289**	*e*Pn	**Pn**		**02 31 30.4 +0.2**
PVIS			*e*Sn	**Sn**		**02 32 38.0 +0.2**
PVIS			*e*Sg	**Sg**		**02 33 11.5 -0.2**
PVIS			A			02 33 16.9
	42nm,0.5s					
PVIS	**Viseu**	**5.88 289**	Pn	**Pn**		**02 31 30.4 +0.2**
PVIS			Sn	**Sn**		**02 32 38.0 +0.2**
PVIS			Lg			02 33 11.5
	21nm,0.5s					
PVIS	**Viseu**	**5.88 289**	Pn	**Pn**		**02 31 30.4 +0.2**
PVIS			Sn	**Sn**		**02 32 38.0 +0.2**
PVIS			Lg			02 33 11.5
	21nm,0.5s					
PVIS	**Viseu**	**5.88 289**	*e*Pn	**Pn**		**02 31 30.4 +0.2**
PVIS			*e*Sn	**Sn**		**02 32 38.0 +0.2**
PVIS			*e*Sg	**Sg**		**02 33 11.5 -0.2**
	42nm,0.5s					
PVRL	**Vila Real**	**5.91 294**	*e*Pn	**Pn**		**02 31 31.1 +0.4**
PVRL			*e*Sn	**Sn**		**02 32 38.3 -0.3**
PVRL			*e*Sg	**Sg**		**02 33 11.6 -1.1**
PVRL			A			02 33 22.2
	33nm,0.5s					
PVRL	**Vila Real**	**5.91 294**	Pn	**Pn**		**02 31 31.1 +0.4**
PVRL			Sn	**Sn**		**02 32 38.3 -0.3**
PVRL			Lg			02 33 11.6
	16nm,0.5s					
PVRL	**Vila Real**	**5.91 294**	Pn	**Pn**		**02 31 31.1 +0.4**
PVRL			Sn	**Sn**		**02 32 38.3 -0.3**
PVRL			Lg			02 33 11.6
	16nm,0.5s					
PVRL	**Vila Real**	**5.91 294**	*e*Pn	**Pn**		**02 31 31.1 +0.4**
PVRL			*e*Sn	**Sn**		**02 32 38.3 -0.3**
EVOP	**Sao Brissos**	**5.93 267**	*e*Pn	**Pn**		**02 31 31.9 +0.9**
EVOP	**Sao Brissos**	**5.93 267**	*e*Pg	**Pg**		**02 31 55.4 -1.1**
EVOP			*e*Sn	**Sn**		**02 32 37.6 -1.5**
EVOP			*e*Sg	**Sg**		**02 33 13.5 +0.1**
	96nm,0.5s					
LFF	**La Frestale**	**5.96 9**	*e*Pn	**Pn**		**02 31 31.7 +0.4**
LFF			*e*Sn	**Sn**		**02 32 37.0 -2.7**
	24nm,0.4s					
LFF	**La Frestale**	**5.96 9**	Pn	**Pn**		**02 31 31.7 +0.4**
LFF			Sn	**Sn**		**02 32 37.0 -2.7**
	12nm,0.4s					
LFF	**La Frestale**	**5.96 9**	Pn	**Pn**		**02 31 31.7 +0.4**
LFF			Sn	**Sn**		**02 32 37.0 -2.7**
	12nm,0.4s					
LFF	**La Frestale**	**5.96 9**	*e*Pn	**Pn**		**02 31 31.7 +0.4**
ERUA	**La Rua**	**6.01 306**	Pn	**Pn**		**02 31 33.0 +0.9**
	0.3nm,0.1s,SNR=7.9					
ERUA	**La Rua**	**6.01 306**	Pn	**Pn**		**02 31 33.0 +0.9**
	0.3nm,0.1s,SNR=7.9					
ERUA	**La Rua**	**6.01 306**	Pn	**Pn**		**02 31 33.0 +1.0**
	0.3nm,0.1s,SNR=7.9					
LASF	**Ste Croix**	**6.01 32**	*e*Pn	**Pn**		**02 31 31.7 -0.3**
LASF			*e*Sn	**Sn**		**02 32 37.3 -3.6**
	29nm,0.8s					
LASF	**Ste Croix**	**6.01 32**	Pn	**Pn**		**02 31 31.7 -0.3**
LASF			Sn	**Sn**		**02 32 37.3 -3.6**
	15nm,0.8s					
LASF	**Ste Croix**	**6.01 32**	Pn	**Pn**		**02 31 31.7 -0.3**
LASF			Sn	**Sn**		**02 32 37.3 -3.6**
	15nm,0.8s					
LASF	**Ste Croix**	**6.01 32**	*e*Pn	**Pn**		**02 31 31.7 -0.3**
PCVE	**Castro Verde**	**6.05 259**	*e*Pn	**Pn**		**02 31 32.6 0.0**
PCVE			*e*Sg	**Sg**		**02 33 15.1 -2.0**
PCVE			A			02 33 20.4
	48nm,0.4s					
PCVE	**Castro Verde**	**6.05 259**	Pn	**Pn**		**02 31 32.6 0.0**
PCVE			Lg			02 33 15.1
	48nm,0.4s					
PCVE	**Castro Verde**	**6.05 259**	Pn	**Pn**		**02 31 32.6 0.0**
PCVE			Lg			02 33 15.1
	48nm,0.4s					
PCVE	**Castro Verde**	**6.05 259**	*e*Pn	**Pn**		**02 31 32.6 0.0**
PBDV	**Barranco-do-Ve**	**6.09 255**	*e*Pn	**Pn**		**02 31 32.8 -0.3**
PBDV			*e*Sg	**Sg**		**02 33 17.6 -0.7**
PBDV			A			02 33 28.8
	27nm,0.4s					
PBDV	**Barranco-do-Ve**	**6.09 255**	Pn	**Pn**		**02 31 32.8 -0.3**
PBDV			Lg			02 33 17.6
	27nm,0.4s					
PBDV	**Barranco-do-Ve**	**6.09 255**	Pn	**Pn**		**02 31 32.8 -0.3**
PBDV			Lg			02 33 17.6
	27nm,0.4s					
PBDV	**Barranco-do-Ve**	**6.09 255**	*e*Pn	**Pn**		**02 31 32.8 -0.3**
PBDV			*e*Sg	**Sg**		**02 33 17.6 -0.7**
	27nm,0.4s					
MOE	**Montemor**	**6.11 267**	*e*Pn	**Pn**		**02 31 35.2 +1.8**
MOE			*e*Sn	**Sn**		**02 32 43.3 -0.2**
MOE			*e*Sg	**Sg**		**02 33 20.4 +1.3**
MOE	**Montemor**	**6.11 267**	*e*Pn	**Pn**		**02 31 35.2 +1.8**
MOE			*e*Sn	**Sn**		**02 32 43.3 -0.2**
MOE			*e*Sg	**Sg**		**02 33 20.4 +1.3**
PTOM	**Tomar**	**6.11 278**	*e*Pn	**Pn**		**02 31 34.2 +0.8**
PTOM			*e*Sn	**Sn**		**02 32 44.6 +1.1**
PTOM			*e*Sg	**Sg**		**02 33 17.6 -1.5**
PTOM			A			02 33 24.9
	44nm,0.9s					
PTOM	**Tomar**	**6.11 278**	Pn	**Pn**		**02 31 34.2 +0.8**
PTOM			Sn	**Sn**		**02 32 44.6 +1.1**
PTOM			Lg			02 33 17.6
	22nm,0.9s					
PTOM	**Tomar**	**6.11 278**	Pn	**Pn**		**02 31 34.2 +0.8**
PTOM			Sn	**Sn**		**02 32 44.6 +1.1**
PTOM			Lg			02 33 17.6
	22nm,0.9s					
PTOM	**Tomar**	**6.11 278**	*e*Pn	**Pn**		**02 31 34.2 +0.8**
PTOM			*e*Sn	**Sn**		**02 32 44.6 +1.1**
CAF	**Calviac**	**6.18 18**	*e*Pn	**Pn**		**02 31 34.4 0.0**
CAF			*e*Sn	**Sn**		**02 32 41.6 -3.6**
	8.5nm,0.4s					
CAF	**Calviac**	**6.18 18**	Pn	**Pn**		**02 31 34.4 0.0**
CAF			Sn	**Sn**		**02 32 41.6 -3.6**
	4.2nm,0.4s					
CAF	**Calviac**	**6.18 18**	Pn	**Pn**		**02 31 34.4 0.0**
CAF			Sn	**Sn**		**02 32 41.6 -3.6**
	4.2nm,0.4s					
CAF	**Calviac**	**6.18 18**	*e*Pn	**Pn**		**02 31 34.4 0.0**
ELOB	**Lobios**	**6.37 299**	Pn	**Pn**		**02 31 37.8 +0.8**
ELOB	**Lobios**	**6.37 299**	Pn	**Pn**		**02 31 37.4 +0.4**
	1.5nm,0.2s,SNR=26					
ELOB			Sn	**Sn**		**02 32 49.3 -0.6**
	7.5nm,0.2s,SNR=7.9					
ELOB			Lg			02 33 26.3
	72nm,0.4s,SNR=5.0					
ELOB	**Lobios**	**6.37 299**	Pn	**Pn**		**02 31 37.4 +0.4**
	1.5nm,0.2s,SNR=26					
ELOB			Sn	**Sn**		**02 32 49.3 -0.6**
	7.5nm,0.2s,SNR=7.9					
ELOB			Lg			02 33 26.3
	72nm,0.4s,SNR=5.0					
ELOB	**Lobios**	**6.37 299**	Pn	**Pn**		**02 31 37.4 +0.4**
	1.5nm,0.2s,SNR=26					
ELOB			Sn	**Sn**		**02 32 49.3 -0.6**
	7.5nm,0.2s,SNR=7.9					
RJF	**Les Rejaudoux**	**6.43 13**	*e*Pn	**Pn**		**02 31 38.0 +0.2**
RJF			*e*Sn	**Sn**		**02 32 47.9 -3.4**
	9.2nm,0.4s					
RJF	**Les Rejaudoux**	**6.43 13**	Pn	**Pn**		**02 31 38.0 +0.2**
RJF			Sn	**Sn**		**02 32 47.9 -3.4**
	4.6nm,0.4s					
RJF	**Les Rejaudoux**	**6.43 13**	Pn	**Pn**		**02 31 38.0 +0.2**
RJF			Sn	**Sn**		**02 32 47.9 -3.4**
	4.6nm,0.4s					
RJF	**Les Rejaudoux**	**6.43 13**	*e*Pn	**Pn**		**02 31 38.0 +0.2**
PTO	**Porto**	**6.51 291**	*e*Pn	**Pn**		**02 31 39.9 +1.0**
PTO			*e*Sn	**Sn**		**02 32 50.2 -3.0**
PTO			*e*Sg	**Sg**		**02 33 30.1 -1.7**
PTO			A			02 33 42.5
	25nm,0.3s					
PTO	**Porto**	**6.51 291**	Pn	**Pn**		**02 31 39.9 +1.0**
PTO			Sn	**Sn**		**02 32 50.2 -3.0**
PTO			Lg			02 33 30.1
	13nm,0.3s					
PTO	**Porto**	**6.51 291**	Pn	**Pn**		**02 31 39.9 +1.0**
PTO			Sn	**Sn**		**02 32 50.2 -3.0**
PTO			Lg			02 33 30.1
	13nm,0.3s					
PTO	**Porto**	**6.51 291**	*e*Pn	**Pn**		**02 31 39.9 +1.0**
EPON	**Pontenova**	**6.55 313**	Pn	**Pn**		**02 31 40.0 +0.6**
	0.6nm,0.2s,SNR=4.0					
EPON			Pg	**Pg**		**02 32 08.8 +0.5**
	0.6nm,0.2s,SNR=7.9					
EPON			Sn	**Sn**		**02 32 52.3 -2.0**
	6.1nm,0.3s,SNR=7.9					
EPON			Lg			02 33 32.6
	26nm,0.5s,SNR=7.9					
EPON	**Pontenova**	**6.55 313**	Pn	**Pn**		**02 31 40.0 +0.6**
	0.6nm,0.2s,SNR=4.0					
EPON			Pg	**Pg**		**02 32 08.8 +0.5**
	0.6nm,0.2s,SNR=7.9					
EPON			Sn	**Sn**		**02 32 52.3 -2.0**
	6.1nm,0.3s,SNR=7.9					
EPON			Lg			02 33 32.6
	26nm,0.5s,SNR=7.9					
EPON	**Pontenova**	**6.55 313**	Pn	**Pn**		**02 31 40.0 +0.6**
	0.6nm,0.2s,SNR=4.0					
PTEO	**Sao Teotonio**	**6.60 259**	*e*Pn	**Pn**		**02 31 39.6 -0.5**
PTEO			*e*Sg	**Sg**		**02 33 34.4 -0.2**
PTEO			A			02 33 47.4
	37nm,0.5s					
PTEO	**Sao Teotonio**	**6.60 259**	Pn	**Pn**		**02 31 39.6 -0.5**
PTEO			Lg			02 33 34.4
	19nm,0.5s					
PTEO	**Sao Teotonio**	**6.60 259**	Pn	**Pn**		**02 31 39.6 -0.5**
PTEO			Lg			02 33 34.4
	19nm,0.5s					
PTEO	**Sao Teotonio**	**6.60 259**	*e*Pn	**Pn**		**02 31 39.6 -0.5**
PTEO			*e*Sg	**Sg**		**02 33 34.4 -0.2**
	37nm,0.5s					
MORF	**Marmelete**	**6.61 257**	*e*Pn	**Pn**		**02 31 39.7 -0.6**
MORF			*e*Sn	**Sn**		**02 32 55.7 0.0**
MORF			A			02 33 45.3
	18nm,0.6s					
MORF	**Marmelete**	**6.61 257**	Pn	**Pn**		**02 31 39.7 -0.6**
MORF			Sn	**Sn**		**02 32 55.7 0.0**
	18nm,0.6s					
MORF	**Marmelete**	**6.61 257**	Pn	**Pn**		**02 31 39.7 -0.6**
MORF			Sn	**Sn**		**02 32 55.7 0.0**
	18nm,0.6s					
MORF	**Marmelete**	**6.61 257**	*e*Pn	**Pn**		**02 31 39.7 -0.6**
MORF			*e*Sn	**Sn**		**02 32 55.7 0.0**
	18nm,0.6s					
SMRF	**Simiane la Rot**	**6.73 41**	*e*Pn	**Pn**		**02 31 41.3 -0.6**
SMRF			*e*Sn	**Sn**		**02 32 54.0 -4.7**
	3.8nm,0.5s					
SMRF	**Simiane la Rot**	**6.73 41**	Pn	**Pn**		**02 31 41.3 -0.6**
SMRF			Sn	**Sn**		**02 32 54.0 -4.7**
	3.8nm,0.5s					
SMRF	**Simiane la Rot**	**6.73 41**	*e*Pn	**Pn**		**02 31 41.3 -0.6**
SMRF			Sn	**Sn**		**02 32 54.0 -4.7**
	3.8nm,0.5s					
SMRF	**Simiane la Rot**	**6.73 41**	Pn	**Pn**		**02 31 41.3 -0.6**
SMRF			Sn	**Sn**		**02 32 54.0 -4.7**
	3.8nm,0.5s					
SMRF	**Simiane la Rot**	**6.73 41**	*e*Pn	**Pn**		**02 31 41.3 -0.6**
SMRF			Sn	**Sn**		**02 32 54.0 -4.7**
	3.8nm,0.5s					
LBL	**Lubilhac**	**6.79 23**	P	**Pn**		**02 31 42.9 +0.2**
LBL	**Lubilhac**	**6.79 23**	P	**Pn**		**02 31 42.9 +0.2**
PMAFR	**Mafra**	**6.79 272**	*e*Pn	**Pn**		**02 31 43.7 +0.9**
PMAFR			*e*Sn	**Sn**		**02 32 59.7 -0.6**
PMAFR			*e*Sg	**Sg**		**02 33 38.5 -2.5**
PMAFR			A			02 33 53.8
	47nm,0.4s					
PMAFR	**Mafra**	**6.79 272**	Pn	**Pn**		**02 31 44.2 +1.4**
	4.4nm,0.4s,SNR=6.1					
PMAFR			Sn	**Sn**		**02 32 55.6 -4.7**
	24nm,0.5s,SNR=7.9					
PMAFR			Lg			02 33 42.5
	160nm,0.5s,SNR=5.0					
PMAFR	**Mafra**	**6.79 272**	Pn	**Pn**		**02 31 44.2 +1.4**
	4.4nm,0.4s,SNR=6.1					
PMAFR			Sn	**Sn**		**02 32 55.6 -4.7**
	24nm,0.5s,SNR=7.9					
PMAFR			Lg			02 33 42.5
	160nm,0.5s,SNR=5.0					
PMAFR	**Mafra**	**6.79 272**	*e*Pn	**Pn**		**02 31 43.7 +0.9**
PMAFR			*e*Sn	**Sn**		**02 32 59.7 -0.6**
PFVI	**Vila Bisbo**	**6.80 256**	*e*Pn	**Pn**		**02 31 41.9 -0.9**
PFVI			*e*Sg	**Sg**		**02 33 41.3 +0.2**
PFVI	**Vila Bisbo**	**6.80 256**	P	**Pn**		**02 31 43.0 +0.2**
PFVI	**Vila Bisbo**	**6.80 256**	Pn	**Pn**		**02 31 42.1 -0.7**
	2.9nm,0.3s,SNR=6.2					
PFVI			Sn	**Sn**		**02 32 57.8 -2.6**
	2.8nm,0.2s,SNR=7.9					
PFVI			Lg			02 33 40.9
	41nm,0.5s,SNR=7.9					
PFVI	**Vila Bisbo**	**6.80 256**	Pn	**Pn**		**02 31 42.1 -0.7**
	2.9nm,0.3s,SNR=6.2					
PFVI			Sn	**Sn**		**02 32 57.8 -2.6**
	2.8nm,0.2s,SNR=7.9					
PFVI			Lg			02 33 40.9
	41nm,0.5s,SNR=7.9					
PFVI	**Vila Bisbo**	**6.80 256**	Pn	**Pn**		**02 31 42.1 -0.7**
	2.9nm,0.3s,SNR=6.2					
PFVI	**Vila Bisbo**	**6.80 256**	P	**Pn**		**02 31 43.0 +0.2**
PFVI			*e*Sg	**Sg**		**02 33 41.3 +0.2**
LMR	**La Mourre**	**6.83 49**	*e*Pn	**Pn**		**02 31 42.5 -0.8**
LMR			*e*Sn	**Sn**		**02 32 55.6 -5.6**
	9.4nm,0.4s					
LMR	**La Mourre**	**6.83 49**	Pn	**Pn**		**02 31 42.5 -0.8**
LMR			Sn	**Sn**		**02 32 55.6 -5.6**
	4.7nm,0.4s					
LMR	**La Mourre**	**6.83 49**	Pn	**Pn**		**02 31 42.5 -0.8**
LMR			Sn	**Sn**		**02 32 55.6 -5.6**
	4.7nm,0.4s					
LMR	**La Mourre**	**6.83 49**	*e*Pn	**Pn**		**02 31 42.5 -0.8**
EZAM	**Zamans**	**6.92 299**	Lg			02 33 43.8
	23nm,0.4s,SNR=7.9					
EZAM	**Zamans**	**6.92 299**	Lg			02 33 43.8
	23nm,0.4s,SNR=7.9					
VIVF	**Saint-Julien-I**	**6.98 32**	*e*Pn	**Pn**		**02 31 44.9 -0.5**
VIVF			*e*Sn	**Sn**		**02 33 00.5 -4.4**
	5.0nm,0.6s					
VIVF	**Saint-Julien-I**	**6.98 32**	Pn	**Pn**		**02 31 44.9 -0.5**
VIVF			Sn	**Sn**		**02 33 00.5 -4.4**
	2.5nm,0.6s					
VIVF	**Saint-Julien-I**	**6.98 32**	Pn	**Pn**		**02 31 44.9 -0.5**
VIVF			Sn	**Sn**		**02 33 00.5 -4.4**
	2.5nm,0.6s					
VIVF	**Saint-Julien-I**	**6.98 32**	*e*Pn	**Pn**		**02 31 44.9 -0.5**
FRF	**La Foret Royal**	**7.05 48**	*e*Pn	**Pn**		**02 31 45.5 -0.7**
FRF			*e*Sn	**Sn**		**02 33 00.8 -5.7**
	11nm,0.6s					
FRF	**La Foret Royal**	**7.05 48**	Pn	**Pn**		**02 31 45.5 -0.7**
FRF			Sn	**Sn**		**02 33 00.8 -5.7**
	5.7nm,0.6s					
FRF	**La Foret Royal**	**7.05 48**	Pn	**Pn**		**02 31 45.5 -0.7**
FRF			Sn	**Sn**		**02 33 00.8 -5.7**
	5.7nm,0.6s					
FRF	**La Foret Royal**	**7.05 48**	*e*Pn	**Pn**		**02 31 45.5 -0.7**
STS	**Santiago**	**7.16 305**	Lg			02 33 51.9
	6.9nm,0.3s,SNR=7.9					
STS	**Santiago**	**7.16 305**	Lg			02 33 51.9
	6.9nm,0.3s,SNR=7.9					
PYM	**Petit Puy Mans**	**7.19 20**	P	**Pn**		**02 31 48.9 +0.7**
PYM	**Petit Puy Mans**	**7.19 20**	P	**Pn**		**02 31 48.9 +0.7**
AGO	**Saint Agoulin**	**7.50 20**	P	**Pn**		**02 31 52.9 +0.4**
AGO	**Saint Agoulin**	**7.50 20**	P	**Pn**		**02 31 52.9 +0.4**
TCF	**Toulx Ste Croi**	**7.51 15**	*e*Pn	**Pn**		**02 31 52.2 -0.4**
TCF			*e*Sn	**Sn**		**02 33 13.1 -4.7**
	7.9nm,0.6s					
TCF	**Toulx Ste Croi**	**7.51 15**	Pn	**Pn**		**02 31 52.2 -0.4**
TCF			Sn	**Sn**		**02 33 13.1 -4.7**
	4.0nm,0.6s					
TCF	**Toulx Ste Croi**	**7.51 15**	Pn	**Pn**		**02 31 52.2 -0.4**
TCF			Sn	**Sn**		**02 33 13.1 -4.7**
	4.0nm,0.6s					
TCF	**Toulx Ste Croi**	**7.51 15**	*e*Pn	**Pn**		**02 31 52.2 -0.4**
MFF	**Saint Martin d**	**7.55 2**	*e*Pn	**Pn**		**02 31 53.4 +0.3**
MFF			*e*Sn	**Sn**		**02 33 15.4 -3.4**
	5.7nm,0.6s					
MFF	**Saint Martin d**	**7.55 2**	Pn	**Pn**		**02 31 53.4 +0.3**
MFF			Sn	**Sn**		**02 33 15.4 -3.4**
	2.8nm,0.6s					
MFF	**Saint Martin d**	**7.55 2**	Pn	**Pn**		**02 31 53.4 +0.3**
MFF			Sn	**Sn**		**02 33 15.4 -3.4**
	2.8nm,0.6s					
MFF	**Saint Martin d**	**7.55 2**	*e*Pn	**Pn**		**02 31 53.4 +0.3**
ORIF	**Oris-en-Rattie**	**7.57 37**	*e*Pn	**Pn**		**02 31 52.8 -0.6**
ORIF			*e*Sn	**Sn**		**02 33 14.1 -5.2**
	2.3nm,0.6s					
ORIF	**Oris-en-Rattie**	**7.57 37**	Pn	**Pn**		**02 31 52.8 -0.6**
ORIF			Sn	**Sn**		**02 33 14.1 -5.2**
	1.2nm,0.6s					
ORIF	**Oris-en-Rattie**	**7.57 37**	Pn	**Pn**		**02 31 52.8 -0.6**
ORIF			Sn	**Sn**		**02 33 14.1 -5.2**
	1.2nm,0.6s					
ORIF	**Oris-en-Rattie**	**7.57 37**	*e*Pn	**Pn**		**02 31 52.8 -0.6**
SBF	**Sospel**

SMF Signal de Mont 8.24 22 Pn Pn 02 32 02.4 -0.2
SMF Sn Sn 02 33 31.1 -4.8
3.6nm,0.8s
SMF Signal de Mont 8.24 22 ePn Pn 02 32 02.4 -0.2
AVF Avril sur Loir 8.24 19 ePn Pn 02 32 02.5 -0.2
AVF eSn Sn 02 33 31.0 -4.9
16nm,1.2s
AVF Avril sur Loir 8.24 19 Pn Pn 02 32 02.5 -0.2
AVF Sn Sn 02 33 31.0 -4.9
7.9nm,1.2s
AVF Avril sur Loir 8.24 19 Pn Pn 02 32 02.5 -0.2
AVF Sn Sn 02 33 31.0 -4.9
7.9nm,1.2s
AVF Avril sur Loir 8.24 19 ePn Pn 02 32 02.5 -0.2
LPG La Plagne 8.41 38 ePn Pn 02 32 04.5 -0.5
LPG eSn Sn 02 33 34.4 -5.6
2.2nm,0.6s
LPG La Plagne 8.41 38 Pn Pn 02 32 04.5 -0.5
LPG Sn Sn 02 33 34.4 -5.6
1.1nm,0.6s
LPG La Plagne 8.41 38 Pn Pn 02 32 04.5 -0.5
LPG Sn Sn 02 33 34.4 -5.6
1.1nm,0.6s
LPG La Plagne 8.41 38 ePn Pn 02 32 04.5 -0.5
LPL La Plagne 8.42 38 ePn Pn 02 32 04.5 -0.5
LPL eSn Sn 02 33 34.4 -5.7
1.2nm,0.4s
LPL La Plagne 8.42 38 Pn Pn 02 32 04.5 -0.5
LPL Sn Sn 02 33 34.4 -5.7
0.6nm,0.4s
LPL La Plagne 8.42 38 Pn Pn 02 32 04.5 -0.5
LPL Sn Sn 02 33 34.4 -5.7
0.6nm,0.4s
LPL La Plagne 8.42 38 ePn Pn 02 32 04.5 -0.5
HYF Humbligny 8.53 15 ePn Pn 02 32 06.6 0.0
HYF eSn Sn 02 33 38.2 -4.8
HYF Humbligny 8.53 15 Pn Pn 02 32 06.6 0.0
HYF Sn Sn 02 33 38.2 -4.8
HYF Humbligny 8.53 15 Pn Pn 02 32 06.6 0.0
HYF Sn Sn 02 33 38.2 -4.8
HYF Humbligny 8.53 15 ePn Pn 02 32 06.6 0.0
SSF Saint Saulge 8.54 19 ePn Pn 02 32 06.3 -0.3
SSF eSn Sn 02 33 38.0 -5.0
4.1nm,0.7s
SSF Saint Saulge 8.54 19 Pn Pn 02 32 06.3 -0.3
SSF Sn Sn 02 33 38.0 -5.0
2.0nm,0.7s
SSF Saint Saulge 8.54 19 Pn Pn 02 32 06.3 -0.3
SSF Sn Sn 02 33 38.0 -5.0
2.0nm,0.7s
SSF Saint Saulge 8.54 19 ePn Pn 02 32 06.3 -0.3
LOR Lormes 8.82 20 ePn Pn 02 32 10.2 -0.3
LOR eSn Sn 02 33 44.8 -5.2
3.1nm,0.6s
LOR Lormes 8.82 20 Pn Pn 02 32 10.2 -0.3
LOR Sn Sn 02 33 44.8 -5.2
1.6nm,0.6s
LOR Lormes 8.82 20 Pn Pn 02 32 10.2 -0.3
LOR Sn Sn 02 33 44.8 -5.2
1.6nm,0.6s
LOR Lormes 8.82 20 ePn Pn 02 32 10.2 -0.3
CABF La Chapelle 8.99 31 ePn Pn 02 32 12.3 -0.6
CABF eSn Sn 02 33 47.8 -6.4
20nm,1.2s
CABF La Chapelle 8.99 31 Pn Pn 02 32 12.3 -0.6
CABF Sn Sn 02 33 47.8 -6.4
10nm,1.2s
CABF La Chapelle 8.99 31 Pn Pn 02 32 12.3 -0.6
CABF Sn Sn 02 33 47.8 -6.4
10nm,1.2s
CABF La Chapelle 8.99 31 ePn Pn 02 32 12.3 -0.6
QUIF Quistinic 9.06 349 ePn Pn 02 32 14.4 +0.6
QUIF eSn Sn 02 33 52.2 -3.7
4.2nm,0.5s
QUIF Quistinic 9.06 349 Pn Pn 02 32 14.4 +0.6
QUIF Sn Sn 02 33 52.2 -3.7
2.1nm,0.5s
QUIF Quistinic 9.06 349 Pn Pn 02 32 14.4 +0.6
QUIF Sn Sn 02 33 52.2 -3.7
2.1nm,0.5s
QUIF Quistinic 9.06 349 ePn Pn 02 32 14.4 +0.6
SGMF Saint Gilles 9.31 352 ePn Pn 02 32 17.8 +0.6
SGMF eSn Sn 02 33 58.0 -4.0
19nm,1.0s
SGMF Saint Gilles 9.31 352 Pn Pn 02 32 17.8 +0.6
SGMF Sn Sn 02 33 58.0 -4.0
9.6nm,1.0s
SGMF Saint Gilles 9.31 352 Pn Pn 02 32 17.8 +0.6
SGMF Sn Sn 02 33 58.0 -4.0
9.6nm,1.0s
SGMF Saint Gilles 9.31 352 ePn Pn 02 32 17.8 +0.6
GRR Gorron 9.33 359 ePn Pn 02 32 17.9 +0.3
GRR eSn Sn 02 33 58.2 -4.4
1.9nm,0.4s
GRR Gorron 9.33 359 Pn Pn 02 32 17.9 +0.3
GRR Sn Sn 02 33 58.2 -4.4
0.9nm,0.4s
GRR Gorron 9.33 359 Pn Pn 02 32 17.9 +0.3
GRR Sn Sn 02 33 58.2 -4.4
0.9nm,0.4s
ROSF Rostrenen 9.48 349 ePn Pn 02 32 20.3 +0.7
ROSF eSn Sn 02 34 02.3 -4.0
29nm,1.1s
ROSF Rostrenen 9.48 349 Pn Pn 02 32 20.3 +0.7
ROSF Sn Sn 02 34 02.3 -4.0
14nm,1.1s
ROSF Rostrenen 9.48 349 Pn Pn 02 32 20.3 +0.7
ROSF Sn Sn 02 34 02.3 -4.0
14nm,1.1s
ROSF Rostrenen 9.48 349 ePn Pn 02 32 20.3 +0.7
LDF La Druitiere 9.54 2 ePn Pn 02 32 20.4 0.0
LDF eSn Sn 02 34 02.9 -4.8
4.4nm,0.5s
LDF La Druitiere 9.54 2 ePn Pn 02 32 20.4 0.0
FLN La Foliniere 9.70 0 ePn Pn 02 32 22.8 +0.1
FLN eSn Sn 02 34 06.9 -4.8
8.6nm,0.8s
FLN La Foliniere 9.70 0 Pn Pn 02 32 22.8 +0.1
FLN Sn Sn 02 34 06.9 -4.8
4.3nm,0.8s
FLN La Foliniere 9.70 0 Pn Pn 02 32 22.8 +0.1
FLN Sn Sn 02 34 06.9 -4.8
4.3nm,0.8s
FLN La Foliniere 9.70 0 ePn Pn 02 32 22.8 +0.1

ISCJB 21 02:39:21.4±0.3, 32°.36N±0°.02×16°.19W±0°.04, h10km, Error ellipse: s-maj=4.3km s-min=2.8km az=4.2
NEIC 21 02:39:23.6, 32°.41N×16°.26W, h0km, MG4.1(MDD), After MDD.
CSEM 21 02:39:23.1±0.2, 32°.37N×16°.26W, h5km, ML2.8, Error ellipse: s-maj=8.5km s-min=3.8km az=111.0
MDD 21 02:39:26.1±0.9, 32°.51N×16°.35W, h28km±17km, mb4.2/9, Error ellipse: s-maj=13.9km s-min=4.5km az=125.0
INMG 21 02:39:28.1±1.2, 32°.53N×16°.32W, h0km±6km, ML2.8, Error ellipse: s-maj=3.6km s-min=2.7km az=76.0

ISC 21 02:39:23.5±0.3, 32°.35N±0°.02×16°.27W±0°.03, h10km, n111, σ1.07/194, 2C-4D, Madeira Islands region

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

FUL Funchal 0.60 298 iP Pg 02 39 36.4 +1.2
FUL eS Sg 02 39 42.5 -0.7
FUL A 02 39 43.6
1µm,0.2s
FUL Funchal 0.60 298 ⇓P Pg 02 39 36.4 +1.2
FUL S Sg 02 39 42.5 -0.7
603nm,0.2s
FUL Funchal 0.60 298 ⇓P Pg 02 39 36.4 +1.2
FUL S Sg 02 39 42.5 -0.7
603nm,0.2s
FUL Funchal 0.60 298 eS Sg 02 39 42.5 -0.7
1µm,0.2s
PMAR Madeira 0.66 305 iP Pg 02 39 37.1 +0.8
PMAR eS Sg 02 39 43.8 -1.2
PMAR A 02 39 45.8
2µm,0.2s
PMAR Madeira 0.66 305 ⇓P Pg 02 39 37.1 +0.8
PMAR S Sg 02 39 43.8 -1.2
847nm,0.2s
PMAR Madeira 0.66 305 ⇓P Pg 02 39 37.1 +0.8
PMAR S Sg 02 39 43.8 -1.2
847nm,0.2s
PMAR Madeira 0.66 305 eS Sg 02 39 43.8 -1.2
2µm,0.2s
PMPS Porto Santo 0.71 356 iP Pg 02 39 36.7 -0.5
PMPS eS Sg 02 39 42.7 -3.8
PMPS A 02 39 43.3
480nm,0.1s
PMPS Porto Santo 0.71 356 ⇑P Pg 02 39 36.7 -0.5
PMPS S Sg 02 39 42.7 -3.8
240nm,0.1s
PMPS Porto Santo 0.71 356 ⇑P Pg 02 39 36.7 -0.5
PMPS S Sg 02 39 42.7 -3.8
240nm,0.1s
EBAJ Bajamar 3.80 181 P Pn 02 40 23.6 +1.5
EBAJ S Sn 02 41 06.1 -0.7
EBAJ Bajamar 3.80 181 P Pn 02 40 23.6 +1.5
11nm,0.6s,SNR=7.9
EBAJ S Sn 02 41 06.1 -0.7
8.2nm,0.5s,SNR=7.9
EBAJ Bajamar 3.80 181 P Pn 02 40 23.6 +1.5
11nm,0.6s,SNR=7.9
EBAJ S Sn 02 41 06.1 -0.7
8.2nm,0.5s,SNR=7.9
EBAJ Bajamar 3.80 181 P Pn 02 40 23.6 +1.5
11nm,0.6s,SNR=7.9
EBAJ S Sn 02 41 06.1 -0.7
8.2nm,0.5s,SNR=7.9
EFAM Famara 3.98 143 P Pn 02 40 28.0 +3.3
EFAM S Sn 02 41 11.2 -0.3
EFAM Famara 3.98 143 P Pn 02 40 28.0 +3.3
6.4nm,0.7s,SNR=7.9
EFAM S Sn 02 41 11.2 -0.3
7.5nm,0.3s,SNR=7.9
EFAM Famara 3.98 143 P Pn 02 40 28.0 +3.3
6.4nm,0.7s,SNR=7.9
EFAM S Sn 02 41 11.2 -0.3
7.5nm,0.3s,SNR=7.9
EFAM Famara 3.98 143 P Pn 02 40 28.0 +3.3
6.4nm,0.7s,SNR=7.9
EFAM S Sn 02 41 11.2 -0.2
7.5nm,0.3s,SNR=7.9
CICO Icod de los Vi 4.01 186 P Pn 02 40 25.6 +0.6
2.4nm,0.8s,SNR=6.9
CICO S Sn 02 41 10.8 -1.2
0.5nm,0.2s,SNR=7.9
CICO Icod de los Vi 4.01 186 P Pn 02 40 25.6 +0.6
2.4nm,0.8s,SNR=6.9
CICO S Sn 02 41 10.8 -1.2
0.5nm,0.2s,SNR=7.9
CICO Icod de los Vi 4.01 186 P Pn 02 40 25.6 +0.6
2.4nm,0.8s,SNR=6.9
CICO S Sn 02 41 10.8 -1.2
0.5nm,0.2s,SNR=7.9
CRAJ Montana Rajada 4.08 184 P Pn 02 40 27.6 +1.6
2.8nm,0.3s,SNR=6.7
CRAJ S Sn 02 41 13.1 -0.7
15nm,0.2s,SNR=6.1
CRAJ Montana Rajada 4.08 184 P Pn 02 40 27.6 +1.6
2.8nm,0.3s,SNR=6.7
CRAJ S Sn 02 41 13.1 -0.7
15nm,0.2s,SNR=6.1
CRAJ Montana Rajada 4.08 184 P Pn 02 40 27.6 +1.6
2.8nm,0.3s,SNR=6.7
CRAJ S Sn 02 41 14.9 +1.1
15nm,0.2s,SNR=6.1
CHIO Chio 4.12 187 P Pn 02 40 27.9 +1.3
9.9nm,0.4s,SNR=7.9
CHIO S Sn 02 41 14.3 -0.6
15nm,0.2s,SNR=7.9
CHIO Chio 4.12 187 P Pn 02 40 27.9 +1.3
9.9nm,0.4s,SNR=7.9
CHIO S Sn 02 41 14.3 -0.6
15nm,0.2s,SNR=7.9
CHIO Chio 4.12 187 P Pn 02 40 27.9 +1.3
9.9nm,0.4s,SNR=7.9
CHIO S Sn 02 41 14.3 -0.6
15nm,0.2s,SNR=7.9
CCAN Las Canadas 4.12 184 P Pn 02 40 28.0 +1.4
CCAN S Sn 02 41 13.7 -1.2
CCAN Las Canadas 4.12 184 P Pn 02 40 28.0 +1.4
9.7nm,0.5s,SNR=7.9
CCAN S Sn 02 41 13.7 -1.2
5.6nm,0.4s,SNR=7.9
CCAN Las Canadas 4.12 184 P Pn 02 40 28.0 +1.4
9.7nm,0.5s,SNR=7.9
CCAN S Sn 02 41 13.7 -1.2
5.6nm,0.4s,SNR=7.9
CCAN Las Canadas 4.12 184 P Pn 02 40 28.0 +1.4
9.7nm,0.5s,SNR=7.9
CCAN S Sn 02 41 13.7 -1.2
5.6nm,0.4s,SNR=7.9
CFUE Fuerteventura 4.20 151 P Pn 02 40 30.4 +2.7
7.1nm,0.2s,SNR=7.9
CFUE S Sn 02 41 15.4 -1.4
21nm,0.2s,SNR=7.9
CFUE Fuerteventura 4.20 151 P Pn 02 40 30.4 +2.7
7.1nm,0.2s,SNR=7.9
CFUE S Sn 02 41 15.4 -1.4
21nm,0.2s,SNR=7.9
CFUE Fuerteventura 4.20 151 P Pn 02 40 30.4 +2.7
7.1nm,0.2s,SNR=7.9
CFUE S Sn 02 41 15.4 -1.5
21nm,0.2s,SNR=7.9
EGOM La Gomera 4.25 191 P Pn 02 40 29.1 +0.7
EGOM S Sn 02 41 17.2 -0.9
EGOM La Gomera 4.25 191 P Pn 02 40 29.1 +0.7
2.1nm,0.1s,SNR=9.4
EGOM S Sn 02 41 17.2 -0.9
22nm,0.2s,SNR=5.6
EGOM La Gomera 4.25 191 P Pn 02 40 29.1 +0.7
2.1nm,0.1s,SNR=9.4
EGOM S Sn 02 41 17.2 -0.9
22nm,0.2s,SNR=5.6
EGOM La Gomera 4.25 191 P Pn 02 40 29.1 +0.7
2.1nm,0.1s,SNR=9.4
EGOM S Sn 02 41 17.2 -0.9
22nm,0.2s,SNR=5.6
CFTV Fuerteventura 4.35 154 P Pn 02 40 30.7 +0.9
CFTV S Sn 02 41 19.2 -1.4
CFTV Fuerteventura 4.35 154 S Sn 02 41 19.2 -1.4
2.8nm,0.1s,SNR=7.9
CFTV Fuerteventura 4.35 154 S Sn 02 41 19.2 -1.4
2.8nm,0.1s,SNR=7.9
CFTV Fuerteventura 4.35 154 P Pn 02 40 30.7 +1.0
4.4nm,0.4s,SNR=7.9
CFTV S Sn 02 41 19.2 -1.3
2.8nm,0.1s,SNR=7.9
CHIE El Hierro 4.83 198 P Pn 02 40 37.1 +0.8
CHIE S Sn 02 41 31.2 -1.2
CHIE El Hierro 4.83 198 P Pn 02 40 38.9 +2.5
7.4nm,0.4s,SNR=7.9
CHIE S Sn 02 41 31.2 -1.2
5.5nm,0.3s,SNR=7.9
CHIE El Hierro 4.83 198 P Pn 02 40 38.9 +2.5
7.4nm,0.4s,SNR=7.9
CHIE S Sn 02 41 31.2 -1.2
5.5nm,0.3s,SNR=7.9
CHIE El Hierro 4.83 198 P Pn 02 40 37.1 +0.7
7.4nm,0.4s,SNR=7.9
CHIE S Sn 02 41 31.2 -1.2
5.5nm,0.3s,SNR=7.9
PFVI Vila Bisbo 7.76 50 eP Pn 02 41 15.9 -0.6
PFVI eS Sn 02 42 34.7 -10
PFVI A 02 42 39.0
2.5nm,0.2s
PFVI Vila Bisbo 7.76 50 P Pn 02 41 15.3 -1.2
PFVI S Sn 02 42 34.1 -10
PFVI Vila Bisbo 7.76 50 P Pn 02 41 15.3 -1.2
2.7nm,0.4s,SNR=7.9
PFVI S Sn 02 42 34.1 -10
3.0nm,0.2s,SNR=7.9
PFVI Vila Bisbo 7.76 50 P Pn 02 41 15.3 -1.2
2.7nm,0.4s,SNR=7.9
PFVI S Sn 02 42 34.1 -10
3.0nm,0.2s,SNR=7.9
PFVI Vila Bisbo 7.76 50 eP Pn 02 41 15.9 -0.6
MORF Marmelete 7.98 50 ePn Pn 02 41 20.2 +0.7
MORF eSn Sn 02 42 40.6 -9.2
MORF A 02 42 42.7
1.8nm,0.4s
MORF Marmelete 7.98 50 P Pn 02 41 20.2 +0.7
MORF S Sn 02 42 40.6 -9.2
1.8nm,0.4s
MORF Marmelete 7.98 50 P Pn 02 41 20.2 +0.7
MORF S Sn 02 42 40.6 -9.2
1.8nm,0.4s
MORF Marmelete 7.98 50 ePn Pn 02 41 20.2 +0.7
PTEO Sao Teotonio 8.07 48 ePn Pn 02 41 21.7 +0.9
PTEO eSn Sn 02 42 42.0 -10
PTEO A 02 42 48.2
2.3nm,0.4s
PTEO Sao Teotonio 8.07 48 P Pn 02 41 21.7 +0.9
PTEO S Sn 02 42 42.0 -10
1.2nm,0.4s
PTEO Sao Teotonio 8.07 48 P Pn 02 41 21.7 +0.9
PTEO S Sn 02 42 42.0 -10
1.2nm,0.4s
PTEO Sao Teotonio 8.07 48 ePn Pn 02 41 21.7 +0.9
PBDV Barranco-do-Ve 8.41 52 ePn Pn 02 41 25.8 +0.3
PBDV eSn Sn 02 42 51.3 -9.2
PBDV A 02 42 54.0
0.8nm,0.3s
PBDV Barranco-do-Ve 8.41 52 P Pn 02 41 25.8 +0.3
PBDV S Sn 02 42 51.3 -9.2
0.8nm,0.3s
PBDV Barranco-do-Ve 8.41 52 P Pn 02 41 25.8 +0.3
PBDV S Sn 02 42 51.3 -9.2
0.8nm,0.3s
PBDV Barranco-do-Ve 8.41 52 ePn Pn 02 41 25.8 +0.3
PCVE Castro Verde 8.56 50 ePn Pn 02 41 28.2 +0.7
PCVE eSn Sn 02 42 53.5 -11
PCVE A 02 42 56.2
1.8nm,0.7s
PCVE Castro Verde 8.56 50 P Pn 02 41 28.2 +0.7
PCVE S Sn 02 42 53.5 -11
1.8nm,0.7s
PCVE Castro Verde 8.56 50 P Pn 02 41 28.2 +0.7
PCVE S Sn 02 42 53.5 -11
1.8nm,0.7s
PCVE Castro Verde 8.56 50 ePn Pn 02 41 28.2 +0.7
PVAQ Vaqueiros 8.64 52 ePn Pn 02 41 28.2 -0.5
PVAQ eSn Sn 02 42 55.2 -11
PVAQ A 02 43 00.2
1.4nm,0.2s
PVAQ Vaqueiros 8.64 52 P Pn 02 41 28.2 -0.5
PVAQ S Sn 02 42 55.2 -11
1.4nm,0.2s
PVAQ Vaqueiros 8.64 52 P Pn 02 41 28.2 -0.5
PVAQ S Sn 02 42 55.2 -11
1.4nm,0.2s
PVAQ Vaqueiros 8.64 52 ePn Pn 02 41 28.2 -0.5
PMAFR Mafra 8.70 39 ePn Pn 02 41 27.3 -2.1
PMAFR eSn Sn 02 42 53.2 -14
PMAFR A 02 43 00.1
7.1nm,0.4s
PMAFR Mafra 8.70 39 P Pn 02 41 28.6 -0.8
11nm,0.6s,SNR=7.9
PMAFR S Sn 02 42 52.6 -15
8.4nm,0.3s,SNR=7.9
PMAFR Mafra 8.70 39 P Pn 02 41 28.6 -0.8
11nm,0.6s,SNR=7.9
PMAFR S Sn 02 42 52.6 -15
8.4nm,0.3s,SNR=7.9
PMAFR Mafra 8.70 39 ePn Pn 02 41 27.3 -2.1
PMAFR Mafra 8.70 39 P Pn 02 41 28.6 -0.8
11nm,0.6s,SNR=7.9
EGRO El Granado 8.87 52 P Pn 02 41 31.0 -0.8
EGRO S Sn 02 43 02.7 -9.1
EGRO El Granado 8.87 52 P Pn 02 41 31.0 -0.8
1.4nm,0.4s,SNR=7.9
EGRO S Sn 02 43 02.7 -9.1
1.4nm,0.2s,SNR=7.9
EGRO El Granado 8.87 52 P Pn 02 41 31.0 -0.8
1.4nm,0.4s,SNR=7.9
EGRO S Sn 02 43 02.7 -9.1
1.4nm,0.2s,SNR=7.9
EGRO El Granado 8.87 52 P Pn 02 41 31.0 -0.8
1.4nm,0.4s,SNR=7.9
EVO Evora 9.13 45 ePn Pn 02 41 35.9 +0.6
EVO Evora 9.13 45 P Pn 02 41 35.9 +0.6
EVO Evora 9.13 45 P Pn 02 41 35.9 +0.6
EVO Evora 9.13 45 ePn Pn 02 41 35.9 +0.6
PBAR Barrancos 9.52 50 ePn Pn 02 41 40.8 +0.1
PBAR eSn Sn 02 43 18.1 -10
PBAR A 02 43 29.2
1.3nm,0.8s
PBAR Barrancos 9.52 50 P Pn 02 41 40.8 +0.1
PBAR S Sn 02 43 18.1 -10
1.3nm,0.8s
PBAR Barrancos 9.52 50 P Pn 02 41 40.8 +0.1
PBAR S Sn 02 43 18.1 -10
1.3nm,0.8s
PBAR Barrancos 9.52 50 ePn Pn 02 41 40.8 +0.1
EMIN Mina Concepcio 9.54 53 P Pn 02 41 40.6 -0.3
EMIN S Sn 02 43 19.5 -8.7
EMIN Mina Concepcio 9.54 53 P Pn 02 41 40.6 -0.3
1.0nm,0.5s,SNR=7.9
EMIN S Sn 02 43 19.5 -8.7
0.4nm,0.3s,SNR=7.9
EMIN Mina Concepcio 9.54 53 P Pn 02 41 40.6 -0.3
1.0nm,0.5s,SNR=7.9
EMIN S Sn 02 43 19.5 -8.7
0.4nm,0.3s,SNR=7.9
EMIN Mina Concepcio 9.54 53 P Pn 02 41 40.6 -0.3
1.0nm,0.5s,SNR=7.9
ESPR Espera 9.69 59 S Sn 02 43 23.8 -8.1
1.8nm,0.2s,SNR=7.9
ESPR Espera 9.69 59 S Sn 02 43 23.8 -8.1
1.8nm,0.2s,SNR=7.9
EBAD Badajoz 9.88 47 P Pn 02 41 44.6 -1.0
EBAD S Sn 02 43 23.2 -13
EBAD Badajoz 9.88 47 P Pn 02 41 44.6 -1.0
0.5nm,0.2s,SNR=7.9
EBAD S Sn 02 43 23.2 -13
0.8nm,0.2s,SNR=7.9
EBAD Badajoz 9.88 47 P Pn 02 41 44.6 -1.0
0.5nm,0.2s,SNR=7.9
EBAD S Sn 02 43 23.2 -13
0.8nm,0.2s,SNR=7.9
EBAD Badajoz 9.88 47 P Pn 02 41 44.6 -1.0
0.5nm,0.2s,SNR=7.9
PMRV Marv??o 10.08 43 ePn Pn 02 41 47.8 -0.5
PMRV eSn Sn 02 43 27.8 -14
PMRV Marv??o 10.08 43 P Pn 02 41 47.8 -0.5
PMRV S Sn 02 43 27.8 -14
PMRV Marv??o 10.08 43 P Pn 02 41 47.8 -0.5
PMRV S Sn 02 43 27.8 -14
PMRV Marv??o 10.08 43 ePn Pn 02 41 47.8 -0.5
PCBR Castelo Branco 10.31 41 ePn Pn 02 41 50.7 -0.8
PCBR Castelo Branco 10.31 41 P Pn 02 41 50.7 -0.8
PCBR Castelo Branco 10.31 41 P Pn 02 41 50.7 -0.8
PCBR Castelo Branco 10.31 41 ePn Pn 02 41 50.7 -0.8
EADA Adamuz 11.18 55 P Pn 02 42 04.3 +1.0
0.3nm,0.3s
EADA S Sn 02 43 58.9 -9.5
EADA Adamuz 11.18 55 P Pn 02 42 04.3 +1.0
0.3nm,0.3s,SNR=7.9
EADA S Sn 02 43 58.9 -9.5
1.2nm,0.2s,SNR=7.9
EADA Adamuz 11.18 55 P Pn 02 42 04.3 +1.0
0.3nm,0.3s,SNR=7.9
EADA S Sn 02 43 58.9 -9.5
1.2nm,0.2s,SNR=7.9
EADA Adamuz 11.18 55 P Pn 02 42 04.3 +1.0
0.3nm,0.3s,SNR=7.9

CASC 21 02:40:36.6±1.1, 11°.91N×88°.32W, h20km±6km, MD3.8, ML3.1, Off coast of central America

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

CNCH Conchagua 1.43 19 eP Pn 02 41 00.9 -0.6
CNCH eS Sn 02 41 20.8 +1.0
LEON Leon 1.48 70 eP Pn 02 41 01.0 -1.1
LEON eS Sn 02 41 13.4 -7.4
VSM San Miguel 1.50 2 eP Pn 02 41 02.7 +0.2
BLLM Bellamira 1.52 3 eP Pn 02 41 02.5 -0.2
CNGN Cerro Negro 1.68 70 eP Pn 02 41 04.5 -0.4
CNGN AML AML 02 41 46.6
comp=N,108nm,0.6s
COPN Copaltepe 1.71 81 eP Pn 02 41 04.9 -0.3
SNVI San Vicente 1.76 343 eS Sn 02 41 29.3 +1.4
MOMN Momotombo 1.80 74 eP Pn 02 41 06.3 -0.3
CAHU Cacauatique 1.85 3 eP Pn 02 41 07.5 +0.3
CAHU eS Sn 02 41 32.2 +2.2
LFRS El Faro 1.85 337 eP Pn 02 41 07.3 +0.2
CSAN 1.87 82 eP Pn 02 41 07.4 -0.1
MGAN Managua 2.04 83 eP Pn 02 41 09.7 0.0
TICN Ticuantepe 2.04 86 eP Pn 02 41 10.4 +0.6
HUEN 2.14 78 eP Pn 02 41 11.1 -0.1
TGUH Tegucigalpa,Un 2.36 25 eP Pn 02 41 14.3 +0.1
TGUH AML AML 02 41 51.2

comp=E,266nm,0.5s

*IDC **21** 02:48:45.1±0.9, 6.84S×155.12E, h0km, mb4.1/12, mb1 4.3/12, mb1mx4.2/17, mbtmp4.1/12, MS3.5/4, Ms1 3.5/4, ms1mx3.2/20, Error ellipse: s-maj=35.3km s-min=18.6km az=118.0*

*ISCJB **21** 02:48:50.3±3.8, 6.8S±0.1×155.0E±0.1, h43km±32km, mb4.0/13, MS3.6/3, Error ellipse: s-maj=23.8km s-min=18.8km az=27.3*

*NEIC **21** 02:48:53.1±2.2, 6.80S×154.99E, h57km±18km, mb4.0/1, Error ellipse: s-maj=19.7km s-min=11.5km az=107.0*

ISC 21 02:48:53.0±3.1, 6.8S±0.1×155.0E±0.1, h55km±27km, n21, σ0°67/17, mb4.0/13, MS3.6/3, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.21**	**251**	*e*Pn		**Pn**		**02 50 48.4**	**-1.1**
	24nm,0.8s								
PMG				*e*S		**Sn**		**02 52 21.6**	**+0.6**
CTA	**Charters Tower**	**15.70**	**212**	Pn		**Pn**		**02 52 32.0**	**+1.3**
	0.2nm,0.3s,baz=39,slow=15,SNR=4.1								
CTA				LR		LR		02 57 10.1	
	comp=Z,79nm,19.9s,baz=319,slow=32								
WRAB	**Tennant Creek**	**23.94**	**235**	*e*P		**P**		**02 54 01.7**	**-0.5**
	3.5nm,0.7s,mb3.9								
WRA	**Warramunga Arr**	**23.95**	**235**	P		**P**		**02 54 01.7**	**-0.6**
	2.7nm,0.8s,mb3.7,baz=58,slow=9.8,SNR=9.0								
ASAR	**Alice Springs**	**26.32**	**228**	P		**P**		**02 54 23.2**	**-0.5**
	2.1nm,0.8s,mb3.7,baz=61,slow=8.7,SNR=22								
STKA	**Stephens Creek**	**27.91**	**205**	P		**P**		**02 54 37.9**	**-0.1**
	2.3nm,0.8s,mb3.9,baz=8.1,slow=7.1,SNR=3.0								
STKA				LR		LR		03 06 03.8	
	comp=Z,143nm,19.0s,MS3.6,baz=207,slow=37								
AFI	**Afiamalu**	**33.37**	**105**	LR		LR		03 05 50.5	
	comp=Z,115nm,21.6s,MS3.5,baz=119,slow=31								
PETK	**Petropavlovsk-**	**59.74**	**2**	P		**P**		**02 58 52.8**	**+0.9**
	3.4nm,0.7s,mb4.5,baz=180,slow=5.3,SNR=8.9								
CMAR	**Chiang Mai Arr**	**60.74**	**295**	P		**P**		**02 59 00.2**	**+0.7**
	1.0nm,0.4s,mb4.3,baz=121,slow=5.0,SNR=8.7								
SONM	**Songino Array**	**69.21**	**327**	P		**P**		**02 59 54.3**	**+0.4**
	0.7nm,0.8s,mb3.6,baz=124,slow=7.7,SNR=4.2								
ILAR	**Eielson Array**	**83.19**	**21**	P		**P**		**03 01 12.8**	**-0.2**
	0.6nm,0.6s,mb3.8,baz=235,slow=5.2,SNR=6.2								
MKAR	**Makanchi Array**	**83.30**	**319**	P		**P**		**03 01 14.0**	**+0.1**
	0.5nm,0.3s,mb4.1,baz=100,slow=6.7,SNR=6.6								
MKAR	**Makanchi Array**	**83.30**	**319**	P		**P**		**03 01 14.0**	**+0.1**
ZALV	**Zalesovo Beam**	**84.06**	**326**	P		**P**		**03 01 16.5**	**-1.1**
	0.6nm,0.5s,mb4.0,baz=126,slow=7.3,SNR=3.0								
MAW	**Mawson**	**84.57**	**203**	P		**P**		**03 01 20.4**	**+0.3**
	1.2nm,0.5s,mb4.3,baz=110,slow=5.3,SNR=9.6								
NVAR	**Mina Array Bea**	**91.58**	**52**	P		**P**		**03 01 54.4**	**+0.2**
	1.4nm,1.1s,mb4.2,baz=241,slow=5.0,SNR=4.7								
PDAR	**Pinedale Array**	**98.55**	**48**	P		**P**		**03 02 25.5**	**-0.4**
	0.2nm,0.4s,mb4.0,baz=248,slow=4.8,SNR=3.0								
AKTO	**Aktyubinsk**	**99.69**	**320**	LR		LR		03 52 05.0	
	comp=Z,24nm,18.1s,MS3.7,baz=297,slow=38								
AKASG	**Malin Array Be**	**117.42**	**324**	PKP		PKPdf		03 07 32.0	-0.5
	0.2nm,0.2s,baz=80,slow=0.7,SNR=2.6								
BRTR	**Keskin Array B**	**118.30**	**312**	PKP		PKPdf		03 07 34.5	-0.1
	0.4nm,0.7s,baz=256,slow=1.2,SNR=3.2								
TORD	**Torodi Ar. Bea**	**153.02**	**286**	PKPbc		PKPbc		03 08 45.5	+0.1
	2.9nm,0.7s,baz=82,slow=1.9,SNR=18								

*MOS **21** 03:08:18.3±0.8, 31.45S×69.14W, h71km, mb5.0/18, Error ellipse: s-maj=17.6km s-min=9.2km az=105.9*

*ISCJB **21** 03:08:21.0±0.5, 31.51S±0.03×69.04W±0.05, h96km±4km, mb4.7/75, Error ellipse: s-maj=7.8km s-min=4.7km az=161.1*

*NEIC **21** 03:08:23.4, 31.57S×69.40W, h120km, mb4.7/61, MD4.7(GUC), MD4.3(SJA), After GUC.*

NEIC Felt [III] at San Juan.

*IDC **21** 03:08:23.6±0.6, 31.55S×69.19W, h110km±4km, mb4.5/17, mb1 4.6/19, mb1mx4.5/22, mbtmp4.5/19, MS2.7/2, Ms1 2.8/2, ms1mx2.6/19, Error ellipse: s-maj=14.9km s-min=10.7km az=52.0*

*GUC **21** 03:08:23.4±0.8, 31.57S×69.40W, h120km, MD4.7, ML4.7*

ISC 21 03:08:22.4±0.5, 31.53S±0.03×69.08W±0.05, h94km±4km, h113km±1.6km; pP-P, n571, σ0°58/526, mb4.7/75, 181C-175D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**0.72**	**96**	P		**Pn**		**03 08 43.3**	**+3.9**
	101nm,0.3s,baz=268,slow=7.6,SNR=7814								
CFAA				S		**Sn**		**03 08 58.4**	**+6.3**
	315nm,0.3s,baz=266,slow=15,SNR=195								
CMCH	**Combarbala**	**1.69**	**282**	↓*i*P		**Pn**		**03 08 50.4**	**-0.2**
CMCH				*i* S		**Sn**		**03 09 11.5**	**-0.6**
CMCH	**Combarbala**	**1.69**	**282**	↓*i*P		**Pn**		**03 08 50.4**	**-0.2**
CMCH				*i* S		**Sn**		**03 09 11.5**	**-0.6**
CMCH					AML	AML		03 09 17.1	
	comp=N,41μm,0.7s								
OVCH	**Ovalle**	**2.04**	**296**	↑*i*P		**Pn**		**03 08 54.7**	**-0.6**
OVCH				*i* S		**Sn**		**03 09 18.9**	**-1.4**
OVCH	**Ovalle**	**2.04**	**296**	↑*i*P		**Pn**		**03 08 54.7**	**-0.6**
OVCH				*e*P				03 08 54.9	
OVCH				*i* S		**Sn**		**03 09 18.9**	**-1.4**
CHNG	**Los Chungos**	**2.09**	**260**	↑*e*P		**Pn**		**03 08 53.5**	**-2.4**
CHNG				*i* S		**Sn**		**03 09 17.1**	**-4.4**
PEL	**Peldehue**	**2.10**	**220**	↑*i*P		**Pn**		**03 08 56.1**	**+0.1**
PEL				*i* S		**Sn**		**03 09 21.1**	**-0.7**
CLCH	**Cerro Calan**	**2.23**	**213**	↓*e*P		**Pn**		**03 08 58.4**	**+0.7**
CLCH				*e*S		**Sn**		**03 09 24.0**	**-0.8**
CLCH					AML	AML		03 09 35.7	
	comp=E,5μm,0.7s								
FSR	**Penalolen**	**2.29**	**212**	P		**Pn**		**03 08 59.6**	**+1.0**
FSR	**Penalolen**	**2.29**	**212**	*e*P		**Pn**		**03 08 59.6**	**+1.0**
SJCH	**San Jose de Ma**	**2.36**	**207**	P		**Pn**		**03 09 00.7**	**+1.2**
SJCH	**San Jose de Ma**	**2.36**	**207**	*e*P		**Pn**		**03 09 00.7**	**+1.2**
ANTU	**Antumapu**	**2.42**	**213**	*e*P		**Pn**		**03 09 00.2**	**0.0**
ANTU				*e*S		**Sn**		**03 09 29.0**	**-0.2**
ANTU	**Antumapu**	**2.42**	**213**	*e*P		**Pn**		**03 09 00.2**	**0.0**
ANTU				*e*S		**Sn**		**03 09 29.0**	**-0.2**
ANTU					AML	AML		03 09 33.4	
	comp=E,2μm,0.4s								
LMEL	**Las Melosas**	**2.49**	**202**	*e*P		**Pn**		**03 09 02.3**	**+1.1**
LMEL	**Las Melosas**	**2.49**	**202**	*e*P		**Pn**		**03 09 02.3**	**+1.1**
CHCH	**Chadas Angostu**	**2.74**	**209**	↓*e*P		**Pn**		**03 09 04.9**	**+0.4**
CHCH	**Chadas Angostu**	**2.74**	**209**	↓*e*P		**Pn**		**03 09 04.9**	**+0.4**
CACH	**El Canelo**	**2.88**	**206**	*e*P		**Pn**		**03 09 07.3**	**+1.0**
CACH	**El Canelo**	**2.88**	**206**	*e*P		**Pn**		**03 09 07.3**	**+1.0**
LCO	**Las Campanas**	**2.88**	**330**	*e*Pn		**Pn**		**03 09 07.1**	**+0.7**
LCO				*e*S		**Sn**		**03 09 40.3**	**0.0**
TRQA	**Tornquist**	**8.74**	**140**	*e*Pn		**Pn**		**03 10 26.5**	**+0.6**
PLCA	**Paso Flores**	**9.26**	**187**	P		**Pn**		**03 10 31.8**	**-1.1**
	comp=E,0.2nm,0.3s,baz=357,slow=12,SNR=5.4								
PLCA	**Paso Flores**	**9.26**	**187**	*e*Pn		**Pn**		**03 10 32.2**	**-0.7**
CPUP	**Villa Florida**	**11.52**	**66**	P		**Pn**		**03 11 02.5**	**-1.2**
	comp=E,2.7nm,0.3s,baz=225,slow=12,SNR=26								
CPUP				LR		LR		03 16 17.2	
	comp=E,37nm,19.5s,baz=238,slow=41								
CPUP	**Villa Florida**	**11.52**	**66**	P		**Pn**		**03 11 02.6**	**-1.2**
CPUP				pmax		pmax			
	comp=Z,3.0nm,0.3s								
CPUP				MLR		MLR			
	comp=Z,37nm,19.5s								
CPUP	**Villa Florida**	**11.52**	**66**	Pn		**Pn**		**03 11 02.5**	**-1.3**
LPAZ	**La Paz**	**15.20**	**3**	P		**Pn**		**03 11 54.3**	**+2.3**
	comp=Z,1.0nm,0.3s,baz=182,slow=8.6,SNR=46								
LPAZ				LR		LR		03 17 19.0	
	comp=Z,34nm,21.0s,baz=138,slow=35								
LPAZ	**La Paz**	**15.20**	**3**	P		**Pn**		**03 11 54.3**	**+2.3**
LPAZ				pmax		pmax			
	comp=Z,1.0nm,0.3s								
LPAZ				MLR		MLR			
	comp=Z,34nm,21.0s								
SIV	**San Ignacio**	**17.11**	**27**	P		**Pn**		**03 12 15.9**	**+0.2**
	comp=Z,1.7nm,0.3s,baz=225,slow=10,SNR=59								
USHA	**Ushuaia**	**23.29**	**179**	P		**P**		**03 13 20.5**	**-1.1**
	comp=Z,13nm,0.6s,mb4.5,baz=343,slow=8.7,SNR=19								
PCRV	**Puerto La Cruz**	**41.69**	**7**	P		**P**		**03 16 01.5**	**-0.5**
	comp=Z,16nm,1.0s,mb4.7,baz=191,slow=5.2,SNR=2.6								
TGUH	**Tegucigalpa,Un**	**48.58**	**336**	*e*P		**P**		**03 16 56.5**	**0.0**
	comp=Z,15nm,0.7s,mb5.0								
CELP	**Cerrillos**	**49.38**	**3**	*e*P		**P**		**03 17 01.6**	**-1.0**
SJG	**San Juan**	**49.44**	**4**	pP		pP		03 17 28.3	+2.7
	comp=Z,9.2nm,0.7s,baz=255,slow=4.3,SNR=3.2								
VNA1	**Neumayer--Stat**	**50.99**	**158**	*e*P		**P**		**03 17 14.2**	**+0.1**
VNA1				*e*				03 18 27.8	
TEIG	**Tepich**	**54.66**	**338**	*e*P		**P**		**03 17 41.2**	**-0.5**
	comp=Z,12nm,0.5s,mb5.2								
QSPA	**South Pole Qui**	**58.70**	**180**	*e*P		**P**		**03 18 09.8**	**+0.2**
	comp=Z,17nm,0.8s,mb5.1								
QSPA				*e*				03 18 50.9	
HKT	**Hockley**	**66.22**	**335**	*e*P		**P**		**03 19 00.1**	**-0.1**
HKT					pmax	pmax			
	comp=Z,5.0nm,1.3s,mb4.2								
HKT	**Hockley**	**66.22**	**335**	*e*P		**P**		**03 19 00.1**	**-0.1**
	comp=Z,5.1nm,1.3s,mb4.2								
LRAL	**Lakeview Retre**	**66.42**	**344**	*e*P		**P**		**03 19 00.4**	**-1.1**
	comp=Z,46nm,2.3s,mb4.9								
JSC	**Jenkinsville**	**66.46**	**349**	*e*P		**P**		**03 19 01.3**	**-0.4**
SYO	**Syowa Base**	**67.23**	**158**	↑*e*P		**P**		**03 19 04.0**	**-2.2**
JCT	**Junction City**	**68.22**	**332**	*e*P		**P**		**03 19 12.8**	**-0.1**
JCT					pmax	pmax			
	comp=Z,22nm,0.7s,mb5.1								
JCT	**Junction City**	**68.22**	**332**	*e*P		**P**		**03 19 12.8**	**-0.1**
	comp=Z,22nm,0.7s,mb5.1								
TKL	**Tuckeechee C**	**68.25**	**347**	P		**P**		**03 19 11.6**	**-1.3**
	comp=Z,7.9nm,0.6s,mb4.7,baz=161,slow=8.2,SNR=17								
TKL	**Tuckaleechee C**	**68.25**	**347**	*e*P		**P**		**03 19 11.8**	**-1.1**
628A	**Black Gap, Mar**	**68.67**	**329**	↑P		**P**		**03 19 15.9**	**+0.2**
	baz=69,SNR=22								
627A	**Terlingua Ranc**	**68.87**	**328**	↑P		**P**		**03 19 16.7**	**-0.2**
	baz=69,SNR=7.9								
TXAR	**Lajitas Array**	**68.89**	**328**	P		**P**		**03 19 16.6**	**-0.5**
	comp=Z,5.4nm,0.6s,mb4.6,baz=154,slow=8.5,SNR=44								
TXAR	**Lajitas Array**	**68.89**	**328**	P		**P**		**03 19 16.6**	**-0.5**
TXAR					pmax	pmax			
	comp=Z,5.0nm,0.6s								
528A	**Cox Ranch, San**	**69.21**	**329**	↑P		**P**		**03 19 18.8**	**-0.2**
	baz=70,SNR=22								
626A	**Big Bend Ranch**	**69.29**	**328**	↑P		**P**		**03 19 19.8**	**+0.3**
	baz=70,SNR=23								
JSRW	**J. Sargeant Re**	**69.36**	**353**	*e*P		**P**		**03 19 19.9**	**+0.1**
527A	**Woodward Ranch**	**69.56**	**328**	↑P		**P**		**03 19 21.0**	**-0.2**
	baz=70,SNR=11								
WVT	**Waverly**	**69.57**	**344**	*e*P		**P**		**03 19 20.1**	**-1.0**
WVT					pmax	pmax			
	comp=Z,47nm,0.7s,mb5.4								
WVT	**Waverly**	**69.57**	**344**	*e*P		**P**		**03 19 20.1**	**-1.0**
	comp=Z,47nm,0.7s,mb5.4								
428A	**Kincaid Ranch,**	**69.65**	**329**	↓P		**P**		**03 19 21.5**	**-0.2**
	baz=70,SNR=14								
MIAR	**Mount Ida**	**69.66**	**339**	*e*P		**P**		**03 19 21.0**	**-0.7**
MIAR					pmax	pmax			
	comp=Z,12nm,1.1s,mb4.6								
MIAR	**Mount Ida**	**69.66**	**339**	*e*P		**P**		**03 19 21.0**	**-0.7**
	comp=Z,12nm,1.1s,mb4.6								
526A	**Mary Lane Ranc**	**69.70**	**328**	↑P		**P**		**03 19 22.3**	**+0.3**
	baz=70,SNR=19								
UTMT	**University of**	**70.02**	**343**	*e*P		**P**		**03 19 23.7**	**-0.2**
	comp=Z,154nm,1.0s,mb5.8								
427A	**Hayter Ranch,**	**70.07**	**329**	↓P		**P**		**03 19 24.0**	**-0.3**
	baz=70,SNR=11								
328A	**Wristen Ranch,**	**70.27**	**330**	↑P		**P**		**03 19 25.1**	**-0.4**
	baz=71,SNR=18								
327A	**Balmorhea Ranc**	**70.55**	**329**	↓P		**P**		**03 19 27.2**	**0.0**
	baz=71								
PARMO	**Parma**	**70.55**	**342**	*e*P		**P**		**03 19 27.1**	**0.0**
326A	**Caldwell Ranch**	**70.72**	**329**	↓P		**P**		**03 19 28.0**	**-0.2**
	baz=71,SNR=24								
425A	**Indio Mountain**	**70.72**	**328**	↓P		**P**		**03 19 27.7**	**-0.6**
	baz=71,SNR=11								
SDMD	**Soldier's Deli**	**70.95**	**354**	*e*P		**P**		**03 19 29.9**	**+0.5**
	comp=Z,14nm,0.8s,mb4.8								
227A	**Bennet, Jal**	**71.02**	**330**	↑P		**P**		**03 19 30.2**	**+0.1**
	baz=71,SNR=15								
325A	**Bean Ranch, Si**	**71.21**	**328**	↓P		**P**		**03 19 30.6**	**-0.7**
	baz=72,SNR=19								
226A	**Malaga, Loving**	**71.41**	**329**	↑P		**P**		**03 19 32.6**	**+0.2**
	baz=72,SNR=13								
SIUC	**Southern Illin**	**71.41**	**343**	*e*P		**P**		**03 19 31.6**	**-0.7**
	comp=Z,16nm,0.7s,mb5.0								
CLNB	**Carlsbad**	**71.48**	**329**	*e*P		**P**		**03 19 33.0**	**+0.2**
	comp=Z,1.8nm,0.5s,mb4.2								
MVL	**Millersville**	**71.49**	**354**	*e*P		**P**		**03 19 33.2**	**+0.5**
	comp=Z,15nm,1.1s,mb4.7								
324A	**Moseley Ranch,**	**71.50**	**328**	↓P		**P**		**03 19 31.8**	**-1.2**
	baz=72,SNR=23								
MCWV	**Mont Chateau**	**71.53**	**351**	*e*P		**P**		**03 19 32.9**	**-0.1**
WMOK	**Wichita Mounta**	**71.60**	**335**	*e*P		**P**		**03 19 32.3**	**-1.2**
WMOK					pmax	pmax			
	comp=Z,8.0nm,1.1s,mb4.5								
WMOK	**Wichita Mounta**	**71.60**	**335**	*e*P		**P**		**03 19 32.3**	**-1.2**
	comp=Z,8.1nm,1.1s,mb4.5								
LIC	**Lamto**	**71.61**	**70**	*e*P		**P**		**03 19 32.7**	**-1.4**
	comp=Z,71nm,1.3s,mb5.3								
127A	**Arkansas Junct**	**71.61**	**330**	↓P		**P**		**03 19 33.1**	**-0.5**
	baz=72,SNR=6.8								
GDL2	**Guadalupe Moun**	**71.64**	**329**	*e*P		**P**		**03 19 33.7**	**-0.1**
MNTX	**Cornudas Mount**	**71.67**	**328**	*e*P		**P**		**03 19 32.7**	**-1.3**
	comp=Z,7.7nm,0.7s,mb4.6								
225A	**Deer Hill, Car**	**71.77**	**329**	↓P		**P**		**03 19 33.9**	**-0.6**
	baz=72,SNR=5.9								
TIC	**Toumodi**	**71.86**	**70**	*e*P		**P**		**03 19 35.7**	**+0.1**
	comp=Z,153nm,1.8s,mb5.5								
TIC	**Toumodi**	**71.86**	**70**	*e*P		**P**		**03 19 35.7**	**+0.1**
TIC					pmax	pmax			
	comp=Z,153nm,1.8s,mb5.5								
126A	**Clayton Basin,**	**71.87**	**329**	↑P		**P**		**03 19 34.9**	**-0.3**
	baz=72,SNR=15								
KIC	**Kosan Boka**	**71.92**	**70**	*e*P		**P**		**03 19 35.8**	**-0.1**
	comp=Z,26nm,0.7s,mb5.1								
FVM	**French Village**	**71.97**	**342**	*e*P		**P**		**03 19 35.0**	**-0.6**
FVM					pmax	pmax			
	comp=Z,32nm,0.8s,mb5.2								
FVM	**French Village**	**71.97**	**342**	*e*P		**P**		**03 19 35.0**	**-0.7**
	comp=Z,32nm,0.8s,mb5.2								
DBIC	**Dimbokro**	**72.01**	**70**	P		**P**		**03 19 36.4**	**-0.1**
	comp=Z,15nm,0.8s,mb4.9,baz=206,slow=6.2,SNR=30								
DBIC	**Dimbokro**	**72.01**	**70**	*e*P		**P**		**03 19 36.6**	**+0.1**
DBIC					pmax	pmax			
	comp=Z,8.0nm,0.5s								
DBIC	**Dimbokro**	**72.01**	**70**	*e*P		**P**		**03 19 36.6**	**+0.2**
	comp=Z,7.6nm,0.5s,mb4.8								
224A	**Cornudas Mount**	**72.06**	**328**	↑P		**P**		**03 19 35.3**	**-0.9**
	baz=72,SNR=11								
Z27A	**Tatum**	**72.10**	**330**	↓P		**P**		**03 19 35.9**	**-0.7**
	baz=72								
OLIL	**Olney**	**72.12**	**344**	*e*P		**P**		**03 19 35.3**	**-1.2**
	comp=Z,22nm,1.1s,mb4.9								
CPRX	**Cap Rock**	**72.14**	**330**	*e*P		**P**		**03 19 36.9**	**+0.2**
	comp=Z,16nm,1.0s,mb4.8								
125A	**Gardner Draw,**	**72.16**	**329**	↓P		**P**		**03 19 36.0**	**-0.9**
	baz=72,SNR=18								
BLO	**Bloomington**	**72.19**	**346**	*e*P		**P**		**03 19 34.9**	**-2.0**
BLO					pmax	pmax			
	comp=Z,18nm,0.6s,mb5.1								
BLO	**Bloomington**	**72.19**	**346**	*e*P		**P**		**03 19 34.9**	**-2.0**
	comp=Z,18nm,0.6s,mb5.1								
CCM	**Cathedral Cave**	**72.25**	**342**	*e*P		**P**		**03 19 36.5**	**-0.8**
CCM					pmax	pmax			
	comp=Z,10.0nm,0.5s,mb4.9								
CCM	**Cathedral Cave**	**72.25**	**342**	*e*P		**P**		**03 19 36.5**	**-0.8**
	comp=Z,10nm,0.5s,mb4.9								
Z26A	**Caprock**	**72.39**	**330**	↑P		**P**		**03 19 37.9**	**-0.3**
	baz=73,SNR=46								
223A	**Chaparral, Ant**	**72.41**	**327**	↑P		**P**		**03 19 38.3**	**-0.1**
	baz=73								
MSTX	**Muleshoe**	**72.48**	**331**	↑P		**P**		**03 19 38.2**	**-0.6**
	baz=73,SNR=19								
124A	**Stringfield Ra**	**72.55**	**328**	↓P		**P**		**03 19 39.1**	**-0.1**
	baz=73,SNR=17								
ACSO	**Alum Creek Sta**	**72.56**	**349**	*e*P		**P**		**03 19 38.1**	**-0.9**
	comp=Z,31nm,0.6s,mb5.3								
Y27A	**Causey**	**72.57**	**331**	↓P		**P**		**03 19 38.6**	**-0.7**
	baz=73								
Z25A	**Roswell**	**72.72**	**329**	↑P		**P**		**03 19 40.0**	**-0.2**
	baz=73,SNR=11								
222A	**Williams Famil**	**72.81**	**327**	↓P		**P**		**03 19 41.1**	**+0.4**
	baz=73								
AMTX	**Amarillo**	**72.84**	**332**	*e*P		**P**		**03 19 40.7**	**-0.2**
	comp=Z,14nm,0.8s,mb4.8								
320A	**Kipp Ranch, An**	**72.85**	**325**	↑P		**P**		**03 19 41.3**	**+0.3**
	baz=73,SNR=6.8								
Y26A	**Elida**	**72.88**	**330**	↓P		**P**		**03 19 41.1**	**0.0**
	baz=73								
221A	**Mesquite Ranch**	**73.05**	**326**	↓P		**P**		**03 19 42.7**	**+0.5**
	baz=73								
Z24A	**Sheeppen Canyo**	**73.05**	**329**	↑P		**P**		**03 19 42.1**	**0.0**
	baz=73,SNR=27								
X27A	**F and S Farms,**	**73.20**	**331**	↓P		**P**		**03 19 43.2**	**+0.2**
	baz=74								
319A	**Douglas**	**73.25**	**325**	↑P		**P**		**03 19 43.8**	**+0.4**
	baz=74,SNR=8.4								
Y25A	**Mesa, Roswell**	**73.25**	**330**	↓P		**P**		**03 19 43.1**	**-0.3**
	baz=74								
220A	**Playas Peak, P**	**73.32**	**326**	↓P		**P**		**03 19 44.1**	**+0.3**
	baz=74,SNR=16								
Z23A	**Rita Site, Whi**	**73.38**	**328**	↓P		**P**		**03 19 44.7**	**+0.7**
	baz=74,SNR=13								
X26A	**CR and CF Fran**	**73.42**	**331**	↑P		**P**		**03 19 44.2**	**0.0**
	baz=74,SNR=12								
121A	**Cookes Peak, D**	**73.48**	**327**	↓P		**P**		**03 19 45.4**	**+0.6**
	baz=74,SNR=12								
W27A	**Bowe Ranch, En**	**73.55**	**331**	↓P		**P**		**03 19 44.6**	**-0.4**
	baz=74,SNR=14								
Y24A	**Capitan**	**73.58**	**329**	↓P		**P**		**03 19 45.2**	**-0.1**
	baz=74								
318A	**Bisbee**	**73.65**	**324**	↑P		**P**		**03 19 45.9**	**+0.2**
	baz=74,SNR=12								
Z22A	**Elephant Butte**	**73.70**	**328**	↓P		**P**		**03 19 46.6**	**+0.6**
	baz=74,SNR=10								
219A	**White Tail Can**	**73.75**	**325**	↓P		**P**		**03 19 46.8**	**+0.5**
	baz=74,SNR=12								
X25A	**Clemmons Ranch**	**73.76**	**330**	↑P		**P**		**03 19 46.0**	**-0.3**
	baz=74								
SUR	**Sutherland**	**73.81**	**118**	P		**P**		**03 19 48.1**	**+1.2**
	comp=Z,16nm,1.1s,mb4.7,baz=238,slow=5.2,SNR=11								
Y23A	**Lovelace Mesa,**	**73.86**	**329**	↓P		**P**		**03 19 47.2**	**+0.4**
	baz=74,SNR=9.1								
W26A	**Owens Ranch, T**	**73.86**	**331**	↑P		**P**		**03 19 46.9**	**0.0**
	baz=74,SNR=15								
120A	**U Bar Ranch, L**	**73.89**	**326**	↑P		**P**		**03 19 47.6**	**+0.5**
	baz=74,SNR=7.1								
TRY	**Troy**	**74.02**	**356**	*e*P		**P**		**03 19 48.3**	**+0.7**
Z21A	**St. Cloud Mine**	**74.07**	**327**	↓P		**P**		**03 19 49.0**	**+0.8**
	baz=74,SNR=5.7								
218A	**Dragoon**	**74.11**	**325**	↓P		**P**		**03 19 48.7**	**+0.3**
	baz=74								
X24A	**Lazy VL Ranch,**	**74.12**	**329**	↓P		**P**		**03 19 48.6**	**+0.2**
	baz=74,SNR=12								
HDIL	**Hopedale**	**74.13**	**344**	*e*P		**P**		**03 19 47.2**	**-1.1**
	comp=Z,19nm,0.5s,mb5.1								
W25A	**X Bar L Ranch,**	**74.26**	**330**	↓P		**P**		**03 19 48.9**	**-0.3**
	baz=75,SNR=11								
Y22A	**Socorro**	**74.27**	**328**	↑P		**P**		**03 19 49.6**	**+0.3**
	baz=75								
BNM	**Barren Site**	**74.30**	**328**	*e*P		**P**		**03 19 50.1**	**+0.6**
	comp=Z,5.2nm,0.9s,mb4.3								
217A	**Green Valley**	**74.34**	**324**	↓P		**P**		**03 19 49.8**	**+0.1**
	baz=75,SNR=8.5								
Z20A	**Nine Sixteen R**	**74.34**	**326**	↑P		**P**		**03 19 50.5**	**+0.8**
	baz=75								
119A	**Ashpeak Ranch,**	**74.40**	**326**	↓P		**P**		**03 19 50.2**	**+0.1**
	baz=75								
LPM	**Los Pinos Moun**	**74.44**	**328**	*e*P		**P**		**03 19 51.0**	**+0.7**
X23A	**Hourglass Bar**	**74.47**	**329**	↑P		**P**		**03 19 51.2**	**+0.8**
	baz=75								
118A	**Homack Ranch,**	**74.62**	**325**	↓P		**P**		**03 19 51.5**	**+0.2**
	baz=75								
Y21A	**

baz=77,SNR=8.7
W18A Petrified Fore 76.53 327 ⇓P P 03 20 02.5 +0.4
baz=77
JFWS Jewell Farm 76.59 344 eP P 03 20 01.6 -0.7
JFWS pmax pmax
comp=Z,8.0nm,0.6s,mb4.6
JFWS Jewell Farm 76.59 344 eP P 03 20 01.6 -0.8
comp=Z,7.8nm,0.6s,mb4.6
113A Mohawk Valley, 76.64 322 ⇑P P 03 20 03.1 +0.2
baz=77
S24A Houchin Ranch, 76.65 331 ⇓P P 03 20 03.8 +1.0
baz=77,SNR=19
U21A Nageezi 76.66 329 ⇑P P 03 20 03.6 +0.7
baz=77,SNR=29
V19A Window Rock 76.70 328 ⇑P P 03 20 03.7 +0.6
baz=77,SNR=11
X16A Lo Mia Camp, P 76.78 325 ⇓P P 03 20 04.2 +0.6
baz=77,SNR=14
T22A Edith 76.83 330 ⇑P P 03 20 04.9 +1.1
baz=77,SNR=16
Y15A Casa Rosa Ranc 76.84 324 ⇓P P 03 20 04.2 +0.2
baz=77,SNR=6.6
SDCO Great Sand Dun 76.86 331 eP P 03 20 04.5 +0.5
comp=Z,4.1nm,0.6s,mb4.3
SDCO e 03 20 34.0
Z13A Yuma Proving G 76.92 323 ⇑P P 03 20 04.6 +0.2
baz=77,SNR=12
W17A Winslow 76.96 326 ⇑P P 03 20 05.0 +0.4
baz=77
U20A Newcomb 77.00 328 ⇑P P 03 20 05.1 +0.3
baz=77,SNR=6.0
T21A Navajo Lake 77.08 329 ⇓P P 03 20 05.7 +0.5
baz=77
V18A Ganado 77.10 327 ⇑P P 03 20 05.8 +0.4
baz=77
R24A Sanders Place, 77.11 332 ⇓P P 03 20 06.1 +0.7
baz=77,SNR=19
Y14A Wickenburg 77.17 324 ⇑P P 03 20 05.9 +0.1
baz=78,SNR=9.5
X15A Humboldt 77.22 325 ⇓P P 03 20 06.6 +0.5
baz=78,SNR=12
U19A Dine' College, 77.25 328 ⇓P P 03 20 06.1 -0.1
baz=78,SNR=9.3
Q25A Bedland, Calha 77.35 333 ⇑P P 03 20 06.9 +0.2
baz=78
W16A Flagstaff 77.36 325 ⇓P P 03 20 07.5 +0.7
baz=78,SNR=14
S22A 4UR Ranch, Cre 77.41 330 ⇑P P 03 20 07.6 +0.5
baz=78,SNR=12
GLA Glamis 77.41 322 ⇑P P 03 20 07.4 +0.2
baz=78
V17A Tonalea, Kykot 77.44 326 ⇓P P 03 20 07.7 +0.4
baz=78,SNR=17
TSUM Tsumeb 77.46 105 P P 03 20 08.6 +0.7
comp=Z,5.8nm,0.8s,mb4.4,baz=247,slow=5.6,SNR=14
TSUM Tsumeb 77.46 105 eP P 03 20 08.4 +0.5
comp=Z,19nm,1.3s,mb4.7
Y13A Salome 77.49 323 ⇑P P 03 20 07.7 +0.1
baz=78,SNR=7.5
X14A Yava 77.53 324 ⇑P P 03 20 08.1 +0.3
baz=78,SNR=7.4
T19A Beclabito 77.61 328 ⇑P P 03 20 08.4 +0.2
baz=78,SNR=19
WUAZ Wupatki 77.63 326 ⇓P P 03 20 08.8 +0.4
baz=78,SNR=9.8
WUAZ Wupatki 77.63 326 eP P 03 20 08.6 +0.2
comp=Z,13nm,1.0s,mb4.6
U18A Rough Rock, Ch 77.66 327 ⇓P P 03 20 09.0 +0.5
baz=78,SNR=5.9
MVCO Mesa Verde 77.69 329 ⇓P P 03 20 09.0 +0.4
baz=78,SNR=11
MVCO Mesa Verde 77.69 329 eP P 03 20 09.0 +0.4
comp=Z,10nm,0.8s,mb4.6
Q24A Divide 77.75 332 ⇓P P 03 20 09.6 +0.6
baz=78,SNR=12
R22A Saguache, Gunn 77.79 330 ⇑P P 03 20 10.0 +0.8
baz=78
DVTC Desert V Tower 77.79 321 ⇓P P 03 20 09.7 +0.4
baz=78
W15A Williams 77.79 325 ⇓P P 03 20 09.9 +0.7
baz=78
P25A Willow Gulch B 77.84 333 ⇑P P 03 20 10.0 +0.6
baz=78,SNR=8.7
SWSC Sam W. Stewart 77.84 321 ⇓P P 03 20 09.8 +0.2
baz=78
U16A Tuba City 78.02 326 ⇓P P 03 20 11.0 +0.6
baz=78,SNR=8.8
X13A Yucca 78.10 324 ⇓P P 03 20 11.3 +0.3
baz=78,SNR=11
BAR Barrett 78.11 320 eP P 03 20 11.1 0.0
comp=Z,11nm,1.1s,mb4.5
MONP Monument Peak 78.14 321 ⇓P P 03 20 11.7 +0.5
baz=78
S20A Disappointment 78.14 329 ⇑P P 03 20 11.9 +0.8
baz=78,SNR=12
U17A Shonto 78.17 327 ⇑P P 03 20 11.9 +0.6
baz=78,SNR=9.2
BC3 Big Chuckawall 78.21 322 ⇓P P 03 20 11.8 +0.2
baz=78,SNR=8.6
W14A Seligman 78.22 324 ⇑P P 03 20 12.2 +0.6
baz=78,SNR=8.3
R21A Cimarron 78.24 330 ⇓P P 03 20 12.1 +0.5
baz=79,SNR=8.2
T18A Mexican Hat 78.24 328 ⇑P P 03 20 11.7 0.0
baz=79,SNR=14
V15A Kaibab Nationa 78.26 325 ⇓P P 03 20 12.5 +0.7
baz=79,SNR=14
O25A Wiggins 78.34 333 ⇑P P 03 20 13.1 +1.0
baz=79
P23A Jefferson 78.38 332 ⇑P P 03 20 13.3 +0.9
baz=79
S19A Harvey Farm, M 78.41 329 ⇓P P 03 20 12.9 +0.2
baz=79,SNR=22
IRM Iron Mountain 78.44 322 ⇓P P 03 20 13.0 +0.1
baz=79,SNR=6.3
R20A Redvale 78.45 329 ⇑P P 03 20 13.5 +0.7
baz=79,SNR=12
PV01 Paradox Valley 78.49 329 eP P 03 20 13.7 +0.7
comp=Z,1um,1.2s
W13A Hualapai Mount 78.53 324 ⇑P P 03 20 13.9 +0.5
baz=79,SNR=8.5
T17A Navajo Res., N 78.56 327 ⇑P P 03 20 14.4 +0.9
baz=79,SNR=12
V14A Boquillas Ranc 78.56 325 ⇑P P 03 20 14.2 +0.7
baz=79,SNR=10
Q21A Lamborn Mesa, 78.64 330 ⇓P P 03 20 14.4 +0.5
baz=79
ISCO Idaho Springs 78.65 332 eP P 03 20 14.4 +0.5
SMCO Snowmass 78.68 331 eP P 03 20 15.0 +0.9
SMCO e 03 20 48.9
PFO Pinyon Flat Ob 78.71 321 ⇓P P 03 20 14.9 +0.5
baz=79,SNR=5.4
PFO Pinyon Flat Ob 78.71 321 eP P 03 20 14.9 +0.6
S18A Hurst Farm, Bl 78.75 328 ⇑P P 03 20 15.1 +0.6
baz=79,SNR=22
BELC Belle Mtn. Jos 78.77 322 ⇓P P 03 20 14.8 +0.2
baz=79
U15A North Rim 78.80 326 ⇑P P 03 20 15.5 +0.7
baz=79,SNR=11
PV04 Paradox Valley 78.85 329 eP P 03 20 15.5 +0.5
T16A Glen Canyon Da 78.88 327 ⇑P P 03 20 15.6 +0.4
baz=79
R19A Curley Farm, L 78.92 329 ⇑P P 03 20 15.4 0.0
baz=79,SNR=7.6
BOSA Boshof 78.98 117 P P 03 20 16.1 -0.1
comp=Z,8.9nm,0.8s,mb4.6,baz=200,slow=5.0,SNR=15
BOSA pP pP 03 20 45.0 +4.5
comp=Z,3.7nm,0.7s,baz=289,slow=2.9,SNR=2.8
BOSA Boshof 78.98 117 P P 03 20 16.1 -0.1
BOSA *PP pP 03 20 45.0 +4.5
BOSA pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
BOSA pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
ECSD EROS Data Cent 79.03 340 eP P 03 20 14.9 -0.9
comp=Z,12nm,0.6s,mb4.9
ECSD e pP 03 20 43.9 +3.7
Q20A Ridgley Place, 79.05 330 ⇑P P 03 20 16.1 0.0
baz=79
S17A Black Ridge (B 79.08 327 ⇓P P 03 20 16.8 +0.5
baz=79
MURC Murrieta 79.10 321 ⇓P P 03 20 16.8 +0.3
baz=79
O23A Lake Granby, G 79.12 332 ⇑P P 03 20 17.1 +0.6
baz=80,SNR=12
V13A Grand Canyon W 79.17 324 ⇓P P 03 20 17.0 +0.2
baz=80,SNR=7.7
GMRC Granite Mounta 79.19 323 ⇓P P 03 20 17.2 +0.3
baz=80
U14A Mt Trumbull 79.22 325 ⇓P P 03 20 17.7 +0.6
baz=80,SNR=11
N24A Carr 79.25 333 ⇓P P 03 20 17.6 +0.5
baz=80
R18A Canyonlands Na 79.28 328 ⇑P P 03 20 17.0 -0.3
baz=80,SNR=5.7
T15A Red Dirt Ranch 79.32 326 ⇑P P 03 20 18.1 +0.5
baz=80,SNR=9.9
O22A Kremmling 79.34 332 ⇑P P 03 20 17.8 +0.2
baz=80,SNR=9.6
V12A Nelson 79.51 324 ⇑P P 03 20 18.6 -0.1
baz=80,SNR=6.5
P20A De Beque 79.55 330 ⇑P P 03 20 19.1 +0.3
baz=80,SNR=11
HEC Hector,Ludlow 79.58 322 ⇑P P 03 20 19.6 +0.6
baz=80
U13A Pakoon Wash 79.61 325 ⇑P P 03 20 19.3 +0.1
baz=80
R17A Hanksville Air 79.67 328 ⇑P P 03 20 19.4 -0.1
baz=80,SNR=14
T14A Hurricane 79.69 326 ⇓P P 03 20 19.9 +0.3
baz=80
N23A Red Feather La 79.72 332 ⇑P P 03 20 20.0 +0.4
baz=80,SNR=6.5
O21A Pagoda 79.76 331 ⇓P P 03 20 20.5 +0.6
baz=80
BFSC Mount Baldy Ra 79.83 321 ⇑P P 03 20 20.6 +0.2
baz=80
TUQ Turquoise Moun 79.83 323 ⇓P P 03 20 20.8 +0.4
baz=80
S15A Panguitch 79.84 326 ⇓P P 03 20 20.6 +0.2
baz=80
N22A Wattenberg Ran 79.84 332 ⇑P P 03 20 21.0 +0.7
baz=80,SNR=7.5
PHWY Pilot Hill 79.88 333 eP P 03 20 20.9 +0.4
comp=Z,7.7nm,0.5s,mb4.8
V11A Goodsprings 79.89 323 ⇓P P 03 20 20.9 +0.2
baz=80
U12A Valley of Fire 79.91 324 ⇓P P 03 20 21.0 +0.2
baz=80
P19A Cripple Cowboy 79.91 330 ⇓P P 03 20 21.2 +0.4
baz=80
R16A Teasdale 79.92 327 ⇑P P 03 20 20.9 +0.1
baz=80
Q18A Rafter H Ranch 79.97 329 ⇓P P 03 20 21.0 -0.1
baz=80,SNR=7.3
O20A White River Ci 80.01 331 ⇓P P 03 20 21.5 +0.2
baz=80,SNR=5.6
T13A Saint George 80.06 325 ⇑P P 03 20 21.9 +0.3
baz=80,SNR=6.4
SRU San Rafael 80.16 328 ⇓P P 03 20 21.8 -0.2
baz=80,SNR=13
SRU San Rafael 80.16 328 eP P 03 20 22.0 0.0
GSC Goldstone 80.19 322 ⇓P P 03 20 22.5 +0.2
baz=80
GSC Goldstone 80.19 322 eP P 03 20 22.6 +0.3
GSC pmax pmax
comp=Z,1.0nm,0.5s,mb3.9
GSC Goldstone 80.19 322 eP P 03 20 22.6 +0.3
comp=Z,1.1nm,0.5s,mb3.9
CCUT Cedar City 80.21 326 eP P 03 20 23.4 +1.0
comp=Z,9.1nm,0.8s,mb4.7
R15A Junction 80.22 327 ⇑P P 03 20 22.7 +0.2
baz=80
N21A Black Mountain 80.24 331 ⇑P P 03 20 23.5 +1.0
baz=81,SNR=6.2
S14A Cedar City 80.29 326 ⇓P P 03 20 23.5 +0.7
baz=81,SNR=6.7
Q16A Castle Valley 80.29 328 ⇑P P 03 20 23.0 +0.2
baz=81,SNR=11
U11A Corn Creek 80.32 324 ⇑P P 03 20 23.5 +0.5
baz=81
MSU Marysvale 80.42 327 eP P 03 20 23.9 +0.4
P18A Preston Nutter 80.45 329 ⇓P P 03 20 24.0 +0.4
baz=81,SNR=13
S13A Holt Ranch, En 80.48 325 ⇑P P 03 20 24.4 +0.6
baz=81,SNR=13
EDW2 Edwards Air Fo 80.50 321 ⇓P P 03 20 23.6 -0.4
baz=81
O19A Miners Draw (B 80.52 330 ⇑P P 03 20 23.9 -0.1
baz=81,SNR=8.3
P17A Butcher Ranch, 80.55 329 ⇓P P 03 20 23.9 -0.3
baz=81,SNR=8.5
N20A Spence Gulch, 80.61 331 ⇑P P 03 20 24.3 -0.1
baz=81
TMUT Trail Mountain 80.61 328 P P 03 20 25.0 +0.5
comp=Z,10nm,0.9s,mb4.7
LRMC Laurel Mountai 80.79 322 ⇓P P 03 20 25.7 +0.2
baz=81
U10A Ash Meadows, A 80.80 323 ⇓P P 03 20 25.8 +0.2
baz=81
O18A Roosevelt 80.88 329 ⇑P P 03 20 26.1 +0.2
baz=81
T11A Corn Creek, Al 80.88 324 ⇑P P 03 20 26.7 +0.7
baz=81
L22A Ellis Ranch, M 80.88 333 ⇓P P 03 20 26.4 +0.5
baz=81,SNR=8.3
M21A Separation Pea 80.89 332 ⇓P P 03 20 26.1 +0.2
baz=81
Q15A Fillmore 80.91 327 ⇑P P 03 20 26.2 +0.1
baz=81,SNR=5.4
S12A Delamar Landin 80.98 325 ⇑P P 03 20 27.2 +0.7
baz=81
R13A O'Grain Ranch, 81.00 326 ⇑P P 03 20 27.4 +0.7
baz=81
TORD Torodi Ar. Bea 81.01 69 P P 03 20 27.2 0.0
comp=Z,12nm,0.7s,mb4.8,baz=284,slow=6.1,SNR=131
TORD pP pP 03 20 55.0 +3.4
comp=Z,6.9nm,0.9s,baz=241,slow=3.9,SNR=5.2
TORD Torodi Ar. Bea 81.01 69 P P 03 20 27.2 0.0
TORD pP pP 03 20 55.0 +3.4
N19A John Jarvie Ra 81.04 330 ⇑P P 03 20 26.5 -0.2
baz=81,SNR=8.0
LBTB Lobatse 81.04 114 P P 03 20 27.1 -0.2
comp=Z,9.9nm,0.6s,mb4.8,baz=265,slow=5.8,SNR=29
LBTB pP pP 03 20 56.5 +4.7
comp=Z,5.9nm,0.6s,baz=253,slow=6.2,SNR=5.4
LBTB Lobatse 81.04 114 P P 03 20 27.2 -0.1
LBTB *PP pP 03 20 56.5 +4.7
LBTB pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
LBTB pmax pmax
comp=Z,6.0nm,0.6s,mb4.6
MPMC Manual Prospec 81.13 322 ⇑P P 03 20 27.2 -0.2
baz=81
O17A Robinson Place 81.14 329 ⇑P P 03 20 27.4 +0.1
baz=82,SNR=13
L21A Rawlins 81.19 332 ⇓P P 03 20 27.4 -0.1
baz=82,SNR=7.1
Q14A Sevier Lake (B 81.32 327 ⇑P P 03 20 28.5 +0.3
baz=82,SNR=9.6
P15A Leamington 81.32 328 ⇓P P 03 20 28.3 0.0
baz=82
ISA Isabella 81.35 321 ⇑P P 03 20 28.5 0.0
baz=82
ISA Isabella 81.35 321 eP P 03 20 29.2 +0.7
R12A Pony Springs, 81.43 325 ⇑P P 03 20 29.4 +0.5
baz=82,SNR=7.9
S11A Rachel 81.45 324 ⇑P P 03 20 29.6 +0.5
baz=82
O16A Springville 81.48 329 ⇑P P 03 20 29.2 +0.1
baz=82
M19A Rock Springs 81.54 331 ⇑P P 03 20 29.2 -0.1
baz=82
DAU Daniels Canyon 81.54 329 eP P 03 20 30.0 +0.6
L20A Wamsutter 81.62 332 ⇑P P 03 20 29.7 -0.1
baz=82
EYMN Ely 81.64 345 eP P 03 20 28.8 -0.9
comp=Z,4.8nm,0.6s,mb4.5
Q13A Wheeler Ranch, 81.64 326 ⇑P P 03 20 30.1 +0.1
baz=82,SNR=10
P14A Drum Mountains 81.70 327 ⇓P P 03 20 30.7 +0.4
baz=82,SNR=10
RSSD Black Hills 81.78 335 eP P 03 20 30.4 -0.2
RSSD pmax pmax
comp=Z,4.0nm,0.4s,mb4.6
RSSD Black Hills 81.78 335 eP P 03 20 30.4 -0.2
comp=Z,3.6nm,0.4s,mb4.5
JLU Jordanelle 81.78 329 eP P 03 20 30.9 +0.3
N17A Moffit Pass 81.79 329 ⇑P P 03 20 30.8 +0.1
baz=82,SNR=5.0
VES Vestal, Richgr 81.81 321 ⇑P P 03 20 30.7 -0.2
baz=82,SNR=5.5
SMMC Simmler 81.91 320 ⇑P P 03 20 32.0 +0.5
baz=82
R11A Troy Canyon, C 81.92 325 ⇑P P 03 20 31.8 +0.3
baz=82,SNR=13
DUG Dugway 82.07 328 ⇓P P 03 20 32.1 -0.1
baz=82,SNR=8.4
DUG Dugway 82.07 328 eP P 03 20 32.0 -0.2
DUG pmax pmax
comp=Z,2.0nm,0.7s,mb4.1
DUG Dugway 82.07 328 eP P 03 20 32.0 -0.2
comp=Z,2.2nm,0.7s,mb4.1
S10A Tonopah Range, 82.09 324 ⇑P P 03 20 32.3 0.0
baz=82,SNR=7.4
L19A Farson 82.12 331 ⇑P P 03 20 32.4 0.0
baz=82,SNR=11
M17A Scullys Gap (B 82.15 330 ⇑P P 03 20 31.8 -0.8
baz=82
K20A Yellowstone Ra 82.17 332 ⇓P P 03 20 32.0 -0.6
baz=82,SNR=6.6
R10A Warm Springs 82.23 324 ⇑P P 03 20 33.5 +0.4
baz=82,SNR=9.1
RCTC Rector, Farmer 82.24 321 ⇑P P 03 20 32.7 -0.5
baz=82
L18A Fontenelle, Gr 82.25 330 ⇓P P 03 20 32.6 -0.6
baz=83
Q11A Duckwater 82.34 325 ⇓P P 03 20 33.7 0.0
baz=83,SNR=6.1
P12A McGill 82.47 326 ⇑P P 03 20 34.0 -0.3
baz=83
N15A Stansbury Isla 82.49 328 ⇑P P 03 20 33.8 -0.6
baz=83,SNR=7.3
CASY Casey 82.50 180 ⇓P P 03 20 33.5 -0.7
CASY Casey 82.50 180 eP P 03 20 33.5 -0.7
comp=Z,25nm,1.3s,mb4.9
K19A Absolon Red Bu 82.51 332 ⇑P P 03 20 33.9 -0.5
baz=83
HWUT Hardware Ranch 82.65 329 eP P 03 20 34.7 -0.5
comp=Z,4.1nm,0.6s,mb4.4
BW06 Boulder Array 82.75 331 ⇑P P 03 20 34.9 -0.8
baz=83,SNR=6.6
PDAR Pinedale Array 82.75 331 P P 03 20 34.8 -0.9
comp=Z,4.2nm,0.7s,mb4.4,baz=134,slow=6.5,SNR=25
N14A Grayback Hills 82.76 328 ⇑P P 03 20 35.1 -0.7
baz=83
SPUT South Promonto 82.80 329 eP P 03 20 35.6 -0.4
comp=Z,4.2nm,0.7s,mb4.4
K18A Toltan Ranch, 82.84 331 ⇓P P 03 20 36.2 0.0
baz=83
M15A Larsen Ranch, 82.92 329 ⇓P P 03 20 35.7 -0.8
baz=83,SNR=8.9
L16A Fish Haven 82.92 330 ⇑P P 03 20 36.1 -0.5
baz=83
AGMN Agassiz Nation 83.02 342 eP P 03 20 36.0 -0.9
MLAC Mammoth Lakes 83.02 322 ⇓P P 03 20 37.7 +0.5
baz=83
O12A Currie 83.02 327 ⇓P P 03 20 36.9 -0.3
baz=83
K17A Gardner Place, 83.31 330 ⇓P P 03 20 38.1 -0.4
baz=84
J18A Kendall Valley 83.31 331 ⇑P P 03 20 38.0 -0.5
baz=84
L15A Malad City 83.33 329 ⇓P P 03 20 37.8 -0.9
baz=84,SNR=6.6
P10A Eureka 83.34 325 ⇓P P 03 20 38.9 +0.1
baz=84,SNR=5.7
NVAR Mina Array Bea 83.35 323 P P 03 20 38.9 0.0
comp=Z,3.5nm,0.7s,mb4.3,baz=154,slow=6.1,SNR=15
M14A Sheep Mountain 83.36 328 ⇓P P 03 20 38.2 -0.6
baz=84,SNR=9.2
M13A Montello 83.61 328 ⇓P P 03 20 39.6 -0.6
baz=84
M13A Montello 83.61 328 eP P 03 20 39.9 -0.3
I18A Diamond G Ranc 83.63 332 ⇓P P 03 20 40.0 -0.1
baz=84,SNR=8.9
K16A Soda Springs 83.66 330 ⇓P P 03 20 39.6 -0.7
baz=84
L14A Malta 83.73 329 ⇓P P 03 20 40.2 -0.5
baz=84
REDW Red Top Meadow 83.78 331 eP P 03 20 40.5 -0.5
comp=Z,2.0nm,0.5s,mb4.2
LOHW Long Hollow 83.88 331 eP P 03 20 41.3 -0.1
comp=Z,2.9nm,0.6s,mb4.3
TPAW Teton Pass 83.92 331 eP P 03 20 41.4 -0.3
K15A Arbon 83.94 329 ⇑P P 03 20 41.4 -0.4
baz=84
WAKR Walker 83.99 323 eP P 03 20 42.8 +0.7
M12A Wells 84.00 327 ⇓P P 03 20 41.5 -0.6
baz=84
J16A Bone 84.03 330 ⇑P P 03 20 41.5 -0.6
baz=84
L13A Double Diamond 84.09 328 ⇓P P 03 20 42.6 0.0
baz=84
K14A Jones Ranch, D 84.11 329 ⇑P P 03 20 41.8 -0.8
baz=84
CMB Columbia Colle 84.14 322 eP P 03 20 42.4 -0.5
IMW Indian Meadow 84.25 331 eP P 03 20 43.6 +0.2
comp=Z,3.5nm,0.6s,mb4.4
M11A Holland Ranch, 84.42 327 ⇓P P 03 20 44.3 0.0
baz=85,SNR=6.3
I16A Newdale 84.46 331 ⇑P P 03 20 44.1 -0.3
baz=85,SNR=5.4
J15A Blackfoot 84.48 330 ⇑P P 03 20 44.3 -0.2
baz=85,SNR=5.5
RLMT Red Lodge 84.59 333 ⇑P P 03 20 44.7 -0.3
baz=85,SNR=8.9
RLMT Red Lodge 84.59 333 eP P 03 20 44.6 -0.4
comp=Z,4.7nm,0.5s,mb4.7
K13A Stover Farm, H 84.60 328 ⇑P P 03 20 44.9 -0.2
baz=85
L12A House Creek Ra 84.62 328 ⇑P P 03 20 45.0 -0.3
baz=85
WCN Washoe City 84.75 323 ⇓P P 03 20 45.9 -0.1
baz=85
ULM Lac du Bonnet 84.82 343 P P 03 20 44.5 -1.5
comp=Z,9.0nm,0.7s,mb4.8,baz=148,slow=4.5,SNR=8.1
ULM Lac du Bonnet 84.82 343 eP P 03 20 45.0 -1.0
ULM pmax pmax
comp=Z,5.0nm,0.7s
ULM Lac du Bonnet 84.82 343 eP P 03 20 45.0 -1.1
comp=Z,5.1nm,0.7s,mb4.6
PAHR Pah Rah Range 84.86 323 eP P 03 20 47.1 +0.6
G18A Lazy EL Ranch, 84.87 333 ⇓P P 03 20 45.7 -0.7
baz=85,SNR=6.3
J14A Carey 84.89 329 ⇓P P 03 20 46.3 -0.2
baz=85
K12A Draper Farm, C 84.96 328 ⇓P P 03 20 46.8 -0.1
baz=85,SNR=9.7
L11A Cat Creek Ranc 84.98 327 ⇓P P 03 20 46.8 -0.2
baz=85,SNR=6.9
I15A Monteview 84.98 330 ⇑P P 03 20 47.0 0.0
baz=85
J13A Cove Ranch, Pi 85.23 329 ⇑P P 03 20 48.3 +0.1
baz=86,SNR=7.8
L10A Juniper Basin 85.25 327 ⇓P P 03 20 48.3 -0.1
baz=86
I14A Mackay 85.34 330 ⇑P P 03 20 49.0 +0.2
baz=86,SNR=7.6
F18A Big Timber 85.42 333 ⇑P P 03 20 48.6 -0.5
baz=86,SNR=16
HLID Hailey 85.47 329 ⇓P P 03 20 49.5 0.0
baz=86,SNR=15
HLID Hailey 85.47 329 eP P 03 20 49.6 +0.1
comp=Z,5.5nm,0.8s,mb4.5
J12A Stokes Ranch, 85.53 328 ⇑P P 03 20 49.5 -0.2
baz=86,SNR=9.9
H15A Lima 85.55 330 ⇓P P 03 20 49.9 0.0
baz=86
K11A Parker Ranch, 85.58 327 ⇑P P 03 20 49.6 -0.5
baz=86,SNR=8.2
DGMT Dagmar 85.62 337 ⇓P P 03 20 49.8 -0.3
baz=86,SNR=8.3
DGMT Dagmar 85.62 337 eP P 03 20 50.1 0.0
comp=Z,25nm,0.6s,mb5.3
I13A Wildhorse Cree 85.62 329 ⇓P P 03 20 50.4 +0.3
baz=86,SNR=14
G16A Moss Hill, Enn 85.70 331 ⇓P P 03 20 50.2 -0.3
baz=86
F17A Fitzpatrick Pl 85.79 332 ⇓P P 03 20 50.8 -0.2
baz=86
MCMT McKenzie Canyo 85.81 330 eP P 03 20 51.7 +0.6
comp=Z,6.7nm,0.8s,mb4.6
H14A Leadore 85.86 330 ⇑P P 03 20 51.5 +0.1
baz=86,SNR=9.6
G15A Dillon 85.93 331 ⇓P P 03 20 51.5 -0.1
baz=86,SNR=9.9
BOZ Bozeman (W) 85.97 332 ⇑P P 03 20 51.0 -0.9
baz=86,SNR=5.4
BOZ Bozeman (W) 85.97 332 eP P 03 20 51.1 -0.7
BOZ pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
BOZ Bozeman (W) 85.97 332 eP P 03 20 51.1 -0.8
comp=Z,1.6nm,0.9s,mb4.0

I12A	Atlanta	85.97	328	⇓P		P	03 20 51.8	-0.2
	baz=86,SNR=12							
K10A	MacKenzie Ranc	85.97	327	⇓P		P	03 20 51.1	-0.8
	baz=86							
MFID	Camas Ranch	85.99	328	⇑P		P	03 20 51.6	-0.4
	baz=86							
SCHQ	Schefferville	86.03	1	P		P	03 20 50.9	-1.1
	comp=Z,6.5nm,0.7s,mb4.7,baz=172,slow=4.0,SNR=7.8							
E18A	Harlowton	86.04	333	⇓P		P	03 20 51.8	-0.4
	baz=86,SNR=6.4							
F16A	Kennard Place,	86.08	332	⇑P		P	03 20 52.2	-0.2
	baz=86							
DLMT	Dillon	86.13	331	*e*P		P	03 20 52.9	+0.2
	comp=Z,8.2nm,1.1s,mb4.6							
H13A	Challis	86.20	329	⇓P		P	03 20 52.9	-0.1
	baz=86							
E17A	Martinsdale	86.33	333	⇓P		P	03 20 53.4	-0.2
	baz=87							
LRM	Limekiln Ridge	86.44	331	*e*P		P	03 20 54.1	-0.1
H12A	Diamond D Ranc	86.45	329	⇑P		P	03 20 53.9	-0.3
	baz=87,SNR=6.8							
F15A	Butte	86.48	331	⇑P		P	03 20 54.3	-0.1
	baz=87,SNR=12							
D18A	Linhart Farms,	86.52	334	⇓P		P	03 20 54.1	-0.5
	baz=87,SNR=5.2							
WVOR	Wild Horse Val	86.55	326	*e*P		P	03 20 54.4	-0.4
WVOR				pmax	pmax			
	comp=Z,4.0nm,1.1s,mb4.3							
WVOR	Wild Horse Val	86.55	326	*e*P		P	03 20 54.4	-0.4
	comp=Z,4.3nm,1.1s,mb4.3							
G13A	Cobalt	86.61	330	⇑P		P	03 20 54.9	-0.1
	baz=87,SNR=14							
E16A	East Helena	86.71	332	⇑P		P	03 20 55.1	-0.3
	baz=87,SNR=5.8							
F14A	Wisdom	86.82	331	⇑P		P	03 20 56.0	0.0
	baz=87							
D17A	Six Diamond Ra	86.83	333	⇑P		P	03 20 55.6	-0.4
	baz=87,SNR=24							
HRY	Holter Researc	86.92	332	*e*P		P	03 20 56.2	-0.2
MOD	Modoc	86.97	324	*e*P		P	03 20 56.7	-0.1
	comp=Z,8.6nm,0.7s,mb4.8							
E15A	Deer Lodge	87.01	331	⇑P		P	03 20 56.5	-0.4
	baz=87							
D16A	Dana Ranch, Ca	87.06	332	⇑P		P	03 20 57.0	-0.1
	baz=87,SNR=12							
G12A	Big Creek, Yel	87.11	329	⇓P		P	03 20 56.8	-0.7
	baz=87							
J08A	Circle Bar Ran	87.17	326	⇓P		P	03 20 57.8	0.0
	baz=88							
EGMT	Eagleton	87.19	334	⇑P		P	03 20 56.7	-1.0
	baz=88,SNR=9.3							
EGMT	Eagleton	87.19	334	*e*P		P	03 20 56.8	-1.0
	comp=Z,5.6nm,0.6s,mb4.7							
F13A	Darby	87.20	330	⇓P		P	03 20 57.3	-0.6
	baz=88,SNR=11							
C17A	Wharram Farm,	87.25	333	⇑P		P	03 20 57.3	-0.8
	baz=88,SNR=15							
E14A	Clinton	87.35	331	⇓P		P	03 20 58.5	0.0
	baz=88,SNR=5.6							
D15A	Lincoln	87.46	332	⇑P		P	03 20 59.0	0.0
	baz=88,SNR=7.2							
B18A	Beardsley Farm	87.51	334	⇓P		P	03 20 58.4	-0.9
	baz=88,SNR=8.1							
F12A	Elk City	87.57	330	⇑P		P	03 20 59.0	-0.7
	baz=88,SNR=8.8							
CHMT	Chamberlain Mo	87.65	331	*e*P		P	03 20 59.8	-0.3
E13A	Victor	87.66	331	⇑P		P	03 20 59.9	-0.1
	baz=88,SNR=8.4							
C16A	Fuhringer Ranc	87.77	333	⇓P		P	03 20 59.9	-0.7
	baz=88,SNR=15							
B17A	L&G Farms, Che	87.81	334	⇑P		P	03 20 59.7	-1.0
	baz=88,SNR=8.4							
K05A	Summer Lake	87.87	325	⇑P		P	03 21 01.4	+0.2
	baz=88,SNR=9.2							
D14A	Greenough	87.89	331	⇓P		P	03 21 00.7	-0.5
	baz=88,SNR=7.0							
A18A	Metzger Ranch,	87.97	334	⇓P		P	03 21 00.3	-1.2
	baz=88,SNR=6.7							
SLMT	Seeley Lake	88.02	332	*e*P		P	03 21 01.6	-0.1
C15A	Salmond Ranch,	88.09	332	⇑P		P	03 21 01.7	-0.3
	baz=88							
LSZ	Lusaka	88.16	107	P		P	03 21 04.6	+1.3
	comp=Z,3.2nm,0.7s,mb4.5,baz=192,slow=1.3,SNR=10							
LSZ	Lusaka	88.16	107	P		P	03 21 04.6	+1.3
LSZ				pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.4							
I07A	Izee	88.21	326	⇑P		P	03 21 02.7	0.0
	baz=88,SNR=9.2							
E12A	Beaver Dam Sad	88.23	330	⇓P		P	03 21 02.1	-0.7
	baz=89							
B16A	M & M Farms, S	88.25	333	⇑P		P	03 21 02.0	-0.8
	baz=89							
D13A	Huson	88.29	331	⇑P		P	03 21 02.6	-0.5
	baz=89,SNR=7.5							
A17A	Triple J Farms	88.31	334	⇓P		P	03 21 02.2	-0.9
	baz=89,SNR=20							
SWMT	Swartz Lake	88.44	331	*e*P		P	03 21 03.3	-0.4
B15A	Bradely Ranch,	88.50	333	⇑P		P	03 21 02.8	-1.2
	baz=89,SNR=8.1							
C14A	Swan Lake	88.54	332	⇑P		P	03 21 03.7	-0.5
	baz=89,SNR=6.1							
F10A	Beach Ranch, E	88.61	329	⇑P		P	03 21 03.7	-0.9
	baz=89							
D12A	Red Ives Fores	88.64	330	⇓P		P	03 21 03.9	-0.8
	baz=89							
A16A	West Butte Ran	88.65	334	⇑P		P	03 21 03.9	-0.8
	baz=89,SNR=27							
JTMT	Jette	88.74	331	*e*P		P	03 21 05.0	-0.1
C13A	Hot Springs	88.81	331	⇓P		P	03 21 04.7	-0.7
	baz=89							
B14A	Marquette Ranc	88.83	332	⇓P		P	03 21 04.7	-0.7
	baz=89							
G08A	Pilot Rock	88.87	327	⇑P		P	03 21 05.1	-0.7
	baz=89							
A15A	Johnson Ranch,	89.11	333	⇑P		P	03 21 05.6	-1.3
	baz=89							
B13A	Whitefish	89.31	332	⇑P		P	03 21 06.8	-0.9
	baz=90							
A14A	Double T Ranch	89.38	333	⇓P		P	03 21 07.0	-1.1
	baz=90,SNR=5.1							
C11A	Tepee Creek (N	89.63	330	⇓P		P	03 21 08.2	-1.1
	baz=90							
A13A	Flathead Natio	89.74	332	⇓P		P	03 21 09.3	-0.5
	baz=90,SNR=5.3							
H04A	Detroit Lake	89.95	325	⇓P		P	03 21 09.7	-1.2
	baz=90							
D08A	Wollman Farm,	90.19	328	⇓P		P	03 21 11.1	-0.8
	baz=90							
OD2	Odessa Site #2	90.35	329	*e*P		P	03 21 12.2	-0.4
FFC	Flin Flon	90.46	342	*i* P		P	03 21 12.5	-0.5
CLL	Collm	109.35	41	*e*PKP	PKiKP		03 26 42.0	+0.8
ILAR	Eielson Array	113.14	333	PKiKP	PKiKP		03 26 46.5	-1.4
	comp=Z,0.2nm,0.5s,baz=140,slow=0.9,SNR=5.9							
ILAR	Eielson Array	113.14	333	*i* PKIKP	PKiKP		03 26 46.5	-1.4
BRTR	Keskin Array B	118.44	59	PKP	PKPdf		03 26 58.1	-0.8
	comp=Z,1.1nm,0.7s,baz=270,slow=2.9,SNR=8.8							
BRTR	Keskin Array B	118.44	59	PKIKP	PKPdf		03 26 58.1	-0.8
BRTR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
AKASG	Malin Array Be	118.69	46	PKP	PKPdf		03 26 57.1	-1.9
	comp=Z,0.6nm,0.5s,baz=262,slow=2.5,SNR=5.2							
AKASG	Malin Array Be	118.69	46	PKIKP	PKPdf		03 26 57.2	-1.8
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.5s							
FINES	FINESS Array B	119.56	33	PKP	PKPdf		03 26 59.0	-1.4
	comp=Z,1.8nm,0.7s,baz=315,slow=0.2,SNR=7.9							
FINES	FINESS Array B	119.56	33	PKIKP	PKPdf		03 26 59.0	-1.4
FINES				pmax	pmax			
	comp=Z,2.0nm,0.7s							
ARCES	ARCESS Array B	120.74	24	PKP	PKPdf		03 27 01.2	-1.2
	comp=Z,0.5nm,0.4s,baz=246,slow=3.6,SNR=12							
ARCES	ARCESS Array B	120.74	24	PKIKP	PKPdf		03 27 01.2	-1.2
ARCES				pmax	pmax			
	comp=Z,1.0nm,0.4s							
ASAR	Alice Springs	120.87	205	PKP	PKPdf		03 27 01.4	-2.8
	comp=Z,0.5nm,0.7s,baz=146,slow=1.4,SNR=4.6							
OBN	Obninsk	123.94	42	*i* PKIKP	PKPdf		03 27 06.6	-2.4
OBN				*e*			03 33 56.9	
OBN				*e*PS	PS		03 38 51.8	-1.3
OBN				*e*SS	SS		03 45 33.2	-3.4
OBN				pmax	pmax			
	comp=Z,5.0nm,1.7s							
WRA	Warramunga Arr	124.10	207	PKP	PKPdf		03 27 08.2	-2.3
ARU	Arti	136.26	40	*i* PKIKP	PKPdf		03 27 32.2	-0.1
ABKAR	Akbulak array	138.19	50	*e*PKPdf	PKPdf		03 27 35.8	-0.3
TIXI	Tiksi	138.67	352	*e*PKIKP	PKPdf		03 27 34.8	-1.5
SEY	Seymchan	139.07	332	⇑*i*PKIKP	PKPdf		03 27 37.4	+0.1
BRVK	Borovoye	143.71	42	*d i* PKIKP	PKPdf		03 27 43.9	-2.0
BRVK				pmax	pmax			
	comp=Z,3.0nm,0.7s							
BRVK	Borovoye	143.71	42	*e*PKPdf	PKPdf		03 27 43.8	-2.1
BVAR	Borovoye Array	143.78	42	PKP	PKPdf		03 27 44.0	-2.0
	comp=Z,1.3nm,0.5s,baz=298,slow=3.2,SNR=6.9							
BVAR	Borovoye Array	143.78	42	PKIKP	PKPdf		03 27 44.0	-2.0
BVAR				pmax	pmax			
	comp=Z,1.0nm,0.5s							
KBL	Kabul	144.94	74	*e*PKIKP	PKPdf		03 27 47.2	-1.5
YAK	Yakutsk	147.16	344	*e*PKIKP	PKPdf		03 27 51.6	+0.1
YAK				pmax	pmax			
	comp=Z,21nm,0.8s							
YAK				pmax	pmax			
	comp=N,2.0nm,1.0s							
YAK				pmax	pmax			
	comp=E,2.0nm,1.0s							
HYB	Hyderabad	147.50	108	*i* PKP	PKPbc		03 27 55.5	-0.7
EKS2	Erkin-Say	148.59	59	P	PKPbc		03 27 58.7	+0.4
	SNR=17							
AML	Almayashu	148.60	60	P	PKPbc		03 27 59.1	+0.8
	SNR=13							
USP	Ospenovka	149.02	57	P	PKPbc		03 27 59.3	-0.1
	SNR=18							
AAK	Ala-Archa	149.12	59	*e*PKPbc	PKPbc		03 28 00.1	+0.4
AAK				*e*PKPab	PKPab		03 28 04.9	+0.7
UCH	Uchtor	149.19	59	P	PKPbc		03 28 00.7	+0.9
	SNR=18							
CHMS	Chumysh	149.25	58	P	PKPbc		03 27 59.9	-0.1
	SNR=6.8							
KURK	Kurchatov	149.38	42	*e*PKPdf	PKPdf		03 27 55.0	-0.5
KURK				*e*PKPbc	PKPbc		03 27 59.6	-0.4
KBK	Karagaybulak	149.45	58	P	PKPbc		03 28 00.8	+0.4
	SNR=5.9							
KZA	Kyzart	149.76	60	P	PKPbc		03 28 02.1	+0.9
	SNR=7.8							
TKM2	Tokmak 2	149.87	58	P	PKPbc		03 28 01.6	+0.2
	SNR=14							
ULHL	Ulahol	150.46	59	P	PKPbc		03 28 03.4	+0.5
	SNR=15							
KSH	Kashi	150.60	65	PKPbc	PKPbc		03 28 03.3	0.0
KSH				PKPab	PKPab		03 28 27.3	+17
KSH				pPKP	pPKPdf		03 28 29.3	+5.5
KSH				sPKP			03 28 40.8	
KSH				PcS			03 31 35.0	
KSH				PP	PP		03 32 03.8	+23
KSH				SKS	SKSdf		03 34 58.6	+1.6
KSH				SKKS	SKKSac		03 38 40.4	+18
KSH				SS	SS		03 51 30.0	+36
KSH				LR	LR			
	comp=N,140nm,4.8s							
KSH				LR	LR			
	comp=E,93nm,4.4s							
KSH				LR	LR			
	comp=Z,130nm,5.2s							
ZALV	Zalesovo Beam	150.81	32	PKPbc	PKPbc		03 28 02.4	-1.0
	comp=Z,32nm,0.6s,baz=304,slow=3.2,SNR=3.6							
ZALV				pPKPbc	pPKPbc		03 28 33.1	+4.0
	comp=Z,6.0nm,0.7s,baz=305,slow=3.3,SNR=4.1							
ZALV	Zalesovo Beam	150.81	32	PKIKP	PKPbc		03 28 02.4	-1.0
ZALV							03 28 33.1	
ZALV				pmax	pmax			
	comp=Z,32nm,0.6s							
ZALV				pmax	pmax			
	comp=Z,6.0nm,0.7s							
YSS	Yuzh-Sakhalins	151.18	311	*e*PKIKP	PKPbc		03 28 03.0	-1.4
ERM	Erimo	152.29	301	*d i* PKIKP	PKPbc		03 28 06.4	-0.7
MK31	Makanchi Array	153.26	47	PKPdf	PKPdf		03 28 01.4	-0.2
MK31				*e*PKPbc	PKPbc		03 28 08.1	-1.1
MK31				*e*PKPab	PKPab		03 28 19.9	-1.5
MKAR	Makanchi Array	153.26	47	PKPbc	PKPbc		03 28 08.5	-0.6
	comp=Z,4.1nm,0.7s,baz=303,slow=2.5,SNR=28							
MKAR				PKPab	PKPab		03 28 20.1	-1.3
	comp=Z,5.0nm,0.6s,baz=302,slow=4.3,SNR=18							
MKAR	Makanchi Array	153.26	47	PKIKP	PKPbc		03 28 08.5	-0.6
MKAR							03 28 20.1	
MKAR				pmax	pmax			
	comp=Z,4.0nm,0.7s							
MKAR				pmax	pmax			
	comp=Z,5.0nm,0.6s							
WMQ	Urumqi	157.98	50	*e*PKP	PKPdf		03 28 06.9	-1.1
WMQ				LR	LR			
	comp=N,79nm,23.2s							
WMQ				LR	LR			
	comp=Z,77nm,22.0s							
CMAR	Chiang Mai Arr	163.06	137	PKP	PKPdf		03 28 13.4	-0.9
	comp=Z,0.5nm,0.3s,baz=252,slow=2.0,SNR=4.3							
CMAR				PKPab	PKPab		03 29 03.6	-0.8
	comp=Z,0.5nm,0.3s,baz=248,slow=5.6,SNR=5.2							
CMAR	Chiang Mai Arr	163.06	137	PKIKP	PKPdf		03 28 13.4	-0.9
CMAR							03 29 03.6	
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
CN2	Changchun	163.23	321	*e*PKP	PKPdf		03 28 13.6	-0.1
SONM	Songino Array	163.36	11	PKP	PKPdf		03 28 13.9	+0.2
	comp=Z,0.3nm,0.4s,baz=350,slow=1.7,SNR=4.7							
SONM				PKPab	PKPab		03 29 04.7	-0.1
	comp=Z,0.7nm,0.5s,baz=318,slow=2.0,SNR=4.0							
SONM	Songino Array	163.36	11	PKIKP	PKPdf		03 28 13.9	+0.2
SONM							03 29 04.7	
SONM				pmax	pmax			
	comp=Z,1.0nm,0.5s							
KMI	Kunming	170.37	130	PKP	PKPdf		03 28 19.1	-0.6
KMI				pPKP	pPKPdf		03 28 47.8	+2.1
HHC	Hu-ho-hao-te	170.69	357	*e*PKP	PKPdf		03 28 18.4	-0.9
HHC				pPKP	pPKPdf		03 28 45.6	+0.2
HHC				PKS			03 31 50.0	
HHC				PP	PP		03 33 29.3	+2.1
HHC				SKS	SKSdf		03 35 10.9	-3.3
HHC				SKKS	SKKSac		03 40 05.1	-0.8
HHC				SS	SS		03 54 20.8	-0.6
HHC				AMB	AMB			
	comp=Z,85nm,9.3s							
HHC				LR	LR			
	comp=N,120nm,21.7s							
HHC				LR	LR			
	comp=E,120nm,20.7s							
HHC				LR	LR			
	comp=Z,130nm,21.0s							
LZH	Lanzhou	172.56	50	*e*PKP	PKPdf		03 28 18.5	-1.9
LZH				PP	PP		03 33 37.8	+0.1
LZH				SKKS	SKKSac		03 40 13.4	-2.2
LZH				*e*SS	SS		03 54 37.5	-4.4
LZH				AMB	AMB			
	comp=Z,120nm,9.2s							
LZH				LR	LR			
	comp=N,150nm,18.2s							
LZH				LR	LR			
	comp=Z,220nm,20.1s							
GYA	Guiyang	173.72	143	PKP	PKPdf		03 28 20.0	-1.2
GYA				pPKP	pPKPdf		03 28 47.6	+0.4
GYA				PKPab	PKPab		03 29 51.8	+0.5
GYA				PKS			03 31 50.6	
GYA				PP	PP		03 33 44.8	+2.0
GYA				AMB	AMB			
	comp=Z,90nm,8.4s							
CD2	Chengdu	173.83	94	PKP	PKPdf		03 28 19.6	-1.5
CD2				PKPab	PKPab		03 29 52.3	+0.3
CD2				PKS			03 31 50.4	
CD2				PP	PP		03 33 45.0	+0.3
CD2				SKS	SKSdf		03 35 11.3	-4.5
CD2				SKKS	SKKSac		03 40 20.0	-2.1
CD2				SS	SS		03 54 51.3	-4.3
CD2				AMB	AMB			
	comp=Z,80nm,4.9s							
CD2				LR	LR			
	comp=N,280nm,9.5s							
CD2				LR	LR			
	comp=Z,110nm,8.3s							

*ISCJB **21** 03:10:30.1±0.3, 10°62N±0°03×85°78W±0°03, h55km±2km, mb4.1/27, MS3.8/14, Error ellipse: s-maj=7.3km s-min=3.1km az=44.8*

*CASC **21** 03:10:30.9±1.4, 10°64N×85°83W, h29km±3km, MD3.5, ML3.9, mb4.2(NEIC)*

*NEIC **21** 03:10:32.0±0.9, 10°64N×85°68W, h65km±9km, mb4.2/18, MD4.5(HDC), Error ellipse: s-maj=16.9km s-min=7.7km az=219.0*

NEIC Felt in Guanacaste.

*IDC **21** 03:10:32.1±0.7, 10°71N×85°55W, h70km±6km, mb3.9/12, mb1 4.1/14, mb1mx3.9/25, mbtmp3.9/14, MS3.8/16, Ms1 3.8/16, ms1mx3.7/26, Error ellipse: s-maj=27.4km s-min=9.3km az=43.0*

ISC 21 03:10:31.1±0.3, 10°64N±0°03×85°75W±0°03, h51km±3km, h78km±1.4km:pP-P, n112, σ1°04/127, mb4.1/27, MS3.8/14, 1C-19D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NY14	Universidad de	0.21	86	⇓*i*P	Pn	03 10 38.6	-1.0
NY14				*i* S	Sn	03 10 45.7	+0.1
GBS3	Finca Las Im¯¡	0.32	63	⇓*i*P	Pn	03 10 39.4	-1.2
LAPC	Finca la Perla	0.34	67	⇓*i*P	Pn	03 10 39.5	-1.2
LAPC				*i* S	Sn	03 10 46.7	-0.8
GB1A	Borinquen Arri	0.39	62	⇓*i*P	Pn	03 10 40.4	-0.8
GB1A				*i* S	Sn	03 10 48.4	0.0
GPS3	Bodega del ICE	0.39	72	⇓*i*P	Pn	03 10 40.4	-0.8
GPS3				*i* S	Sn	03 10 48.5	0.0
GPS2	Hotel Rinc˜‡n	0.41	73	⇓*i*P	Pn	03 10 40.7	-0.7
GPS2				*i* S	Sn	03 10 48.7	0.0
GPS1	Guardaparques	0.41	70	⇓*i*P	Pn	03 10 40.8	-0.7
GPS1				*i* S	Sn	03 10 48.9	0.0
A490	San Lazaro	0.46	142	⇓*i*P	Pn	03 10 40.7	-1.3
A490				*i* S	Sn	03 10 49.0	-0.7
A494	Palo Verde	0.48	126	⇑*i*P	Pn	03 10 41.5	-0.8
A494				*i* S	Sn	03 10 50.8	+0.6
LIM1	Limonal	0.49	83	⇓*i*P	Pn	03 10 41.9	-0.5
LIM1				*i* S	Sn	03 10 50.8	+0.5
GUAB	Guayabo de Bag	0.51	82	⇓*i*P	Pn	03 10 42.1	-0.5
VCR	Vista de Mar	0.52	167	*i* P	Pn	03 10 41.1	-1.5
VCR				*e*S	Sn	03 10 49.3	-1.6
VCR	Vista de Mar	0.52	167	*i* P	Pn	03 10 41.1	-1.5
COLC	Colonia	0.54	87	⇓*i*P	Pn	03 10 42.5	-0.3
COLC				*i* S	Sn	03 10 52.1	+0.9
MESS	Mesas	0.55	79	⇓*i*P	Pn	03 10 42.8	-0.3
MESS				*i* S	Sn	03 10 52.5	+0.8
CUI	Cuipilapa	0.57	88	⇓*i*P	Pn	03 10 43.2	-0.1
CUI				*i* S	Sn	03 10 53.1	+1.0
SSN	San Juan del S	0.67	351	*e*P	Pn	03 10 43.2	-1.3
PTEN	Parque Tenorio	0.75	84	*i* P	Pn	03 10 46.2	+0.6
JTS	JuntasAbangare	0.85	114	P	Pn	03 10 46.9	0.0
	1µm,0.3s,baz=312,slow=20,SNR=1008						
JTS				S	Sn	03 10 59.8	+1.3
	3µm,0.3s,baz=317,slow=19,SNR=38						
JTS	JuntasAbangare	0.85	114	*e*Pn	Pn	03 10 46.7	-0.2
JTS				*e*Sn	Sn	03 10 59.2	+0.8
CONN	Concepcion	0.93	7	*e*P	Pn	03 10 48.0	0.0
JCR	Jicaral	1.00	141	⇓*i*P	Pn	03 10 48.4	-0.5
JCR				*e*S	Sn	03 10 58.3	-3.6
JCR	Jicaral	1.00	141	⇓*i*P	Pn	03 10 48.4	-0.5
JCR				*e*S	Sn	03 10 58.3	-3.6
APON	Apoyo	1.31	346	*e*P	Pn	03 10 53.2	0.0
MASN	Masaya	1.40	344	*e*P	Pn	03 10 53.5	-0.8
CGA2	Cerro Gallo 2	1.40	116	*e*P	Pn	03 10 55.8	+1.5
CGA2	Cerro Gallo 2	1.40	116	*e*P	Pn	03 10 55.8	+1.5
CRUN	El Crucero	1.45	338	*e*P	Pn	03 10 55.4	+0.4
TICN	Ticuantepe	1.47	341	*e*P	Pn	03 10 55.0	-0.2
PRS1	Puriscal	1.55	114	⇓*i*P	Pn	03 10 57.7	+1.3
PRS1	Puriscal	1.55	114	⇓*i*P	Pn	03 10 57.7	+1.3
WILN	Americas 2	1.58	344	*e*P	Pn	03 10 56.3	-0.4
WILN				*e*S	Sn	03 11 16.1	+0.1
MGAN	Managua	1.58	342	*e*P	Pn	03 10 56.4	-0.4
MGAN				*e*S	Sn	03 11 15.7	-0.3
XAVN	Gruta Xavier	1.61	339	*e*P	Pn	03 10 56.8	-0.3
CSAN		1.68	337	*e*P	Pn	03 10 57.3	-0.8
HUEN		1.74	346	*e*P	Pn	03 10 58.9	-0.1
COPN	Copaltepe	1.75	332	*e*P	Pn	03 10 58.4	-0.6
LAJ	Bijagual	1.77	115	⇓*i*P	Pn	03 10 56.0	-3.4
LAJ				*e*S	Sn	03 11 09.1	-12
LAJ	Bijagual	1.77	115	⇓*i*P	Pn	03 10 56.0	-3.4
SJS	Escuela Geolog	1.80	112	*e*P	Pn	03 11 01.8	+1.9
SJS				*e*S	Sn	03 11 21.3	-0.3
SJS	Escuela Geolog	1.80	112	*e*P	Pn	03 11 01.8	+1.9
MOMN	Momotombo	1.93	336	*e*P	Pn	03 11 01.3	-0.2
QCR	Quepos	1.97	128	*e*P	Pn	03 11 04.0	+1.9
QCR	Quepos	1.97	128	*e*P	Pn	03 11 04.0	+1.9
CNGN	Cerro Negro	2.08	333	*e*P	Pn	03 11 02.9	-0.6
URSC	Urasca	2.09	112	*e*P	Pn	03 11 06.0	+2.3
URSC	Urasca	2.09	112	*e*P	Pn	03 11 06.0	+2.3
LEON	Leon	2.10	328	*e*P	Pn	03 11 03.2	-0.6
TELN	Telica	2.23	332	*e*P	Pn	03 11 06.3	+0.6
BUS	Buena Vista	2.23	119	*e*P	Pn	03 11 07.8	+2.1
BUS	Buena Vista	2.23	119	*e*P	Pn	03 11 07.8	+2.1
BAR1		2.77	120	*e*P	Pn	03 11 15.6	+2.5
ACR	Cerro Adams	3.22	128	*e*P	Pn	03 11 21.5	+2.3
ACR	Cerro Adams	3.22	128	*e*P	Pn	03 11 21.5	+2.3
CNCH	Conchagua	3.33	322	*e*P	Pn	03 11 20.7	0.0
CNCH				*e*S	Sn	03 12 01.4	+2.4
BLLM	Bellamira	3.71	319	*e*P	Pn	03 11 25.9	0.0
TGUH	Tegucigalpa,Un	3.71	336	*e*Pn	Pn	03 11 27.0	+1.0
TGUH	Tegucigalpa,Un	3.71	336	*e*P	Pn	03 11 26.7	+0.7
CAHU	Cacacuatique	3.94	323	*e*P	Pn	03 11 29.7	+0.6
CAHU				*e*S	Sn	03 12 14.9	+0.9
SNVI	San Vicente	4.23	315	*e*P	Pn	03 11 34.6	+1.5
SNVI				*e*S	Sn	03 12 21.4	+0.2
LFRS	El Faro	4.40	313	*e*P	Pn	03 11

comp=Z,139nm,19.7s,MS3.7,baz=53,slow=37
PDAR Pinedale Array 38.16 331 P **P 03 17 44.5 -1.1**
comp=Z,0.8nm,0.6s,mb3.6,baz=131,slow=9.7,SNR=7.3
PDAR pP pP 03 18 03.7 +4.9
comp=Z,0.6nm,0.7s,baz=105,slow=11,SNR=3.1
PDAR LR LR 03 35 25.8
comp=Z,103nm,21.9s,MS3.6,baz=162,slow=39
HWUT Hardware Ranch 38.29 328 P **P 03 17 45.9 -0.7**
comp=Z,1.6nm,0.6s,mb3.9
REDW Red Top Meadow 39.22 331 P **P 03 17 54.1 -0.4**
comp=Z,2.8nm,0.7s,mb4.1
NVAR Mina Array Bea 40.16 319 P **P 03 18 03.5 +1.1**
comp=Z,2.8nm,0.6s,mb4.2,baz=128,slow=7.4,SNR=14
ULM Lac du Bonnet 40.37 350 P **P 03 18 03.2 -0.8**
comp=Z,1.4nm,0.3s,mb4.1,baz=135,slow=5.7,SNR=3.0
ULM LR LR 03 36 13.5
comp=Z,76nm,18.3s,MS3.6,baz=217,slow=38
ULM Lac du Bonnet 40.37 350 P **P 03 18 03.2 -0.8**
ULM LR LR 03 36 13.5
HLID Hailey 41.16 328 *e*P **P 03 18 11.1 +0.6**
comp=Z,2.0nm,0.6s,mb3.9
MCMT McKenzie Canyo 41.28 331 *e*P **P 03 18 12.4 +0.9**
comp=Z,2.2nm,1.2s,mb3.7
BOZ Bozeman (W) 41.31 332 *e*P **P 03 18 10.9 -0.9**
comp=Z,1.2nm,0.6s,mb3.7
WVOR Wild Horse Val 42.75 324 *e*P **P 03 18 24.2 +0.7**
comp=Z,4.2nm,0.8s,mb4.2
CPUP Villa Florida 45.97 144 LR LR 03 40 01.9
comp=Z,63nm,19.0s,MS3.6,baz=140,slow=38
SCHQ Schefferville 46.56 15 P **P 03 18 51.0 -2.7**
comp=Z,4.3nm,0.5s,mb4.7,baz=214,slow=5.6,SNR=28
SCHQ LR LR 03 39 08.2
comp=Z,146nm,18.5s,MS4.0,baz=58,slow=37
SCHQ Schefferville 46.56 15 *e*P **P 03 18 50.7 -3.0**
comp=Z,4.6nm,0.6s,mb4.6
PLCA Paso Flores 53.00 166 LR LR 03 39 44.1
comp=Z,46nm,18.7s,MS3.6,baz=61,slow=33
ILAR Eielson Array 68.34 336 P **P 03 21 24.9 -2.0**
comp=Z,0.5nm,0.6s,mb3.8,baz=123,slow=4.5,SNR=22
PPT Papeete 68.99 247 LR LR 03 43 53.2
comp=Z,147nm,20.3s,MS4.2,baz=99,slow=29
ESDC Sonseca Array 77.00 52 LR LR 03 51 37.0
comp=Z,126nm,18.8s,MS4.3,baz=165,slow=32
NOA NORSAR Array B 84.14 29 LR LR 03 54 30.2
comp=Z,68nm,21.9s,MS4.0,baz=275,slow=31
FINES FINESS Array B 90.85 26 LR LR 03 59 13.0
comp=Z,91nm,21.2s,MS4.2,baz=180,slow=32
AKASG Malin Array Be 97.03 36 LR LR 04 03 06.8
comp=Z,60nm,19.2s,MS4.1,baz=335,slow=33
ASAR Alice Springs 140.10 246 PKP PKPdf 03 29 54.5 -0.4
comp=Z,0.5nm,0.5s,baz=95,slow=1.9,SNR=5.2

KRSC 21 03:12:24.7±0.7,55°.95N×160°.96E,h161km±21km,ML3.7, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZLN	**Zelenaya**	**0.11**	**307**	*e*P	Pn	03 12 47.6	+1.5
CIRR	**Tsirk**	**0.20**	**324**	*e*P	Pn	03 12 47.7	+1.5
CIRR				*e*S	Sn	03 13 04.7	+1.9
BZMR	**Bezymyannaya**	**0.27**	**267**	*e*P	Pn	03 12 47.7	+1.3
BZMR				*e*S	Sn	03 13 04.2	+1.3
KRSR	**Krestovskiy**	**0.35**	**321**	*e*P	Pn	03 12 47.5	+0.9
KRSR				*e*S	Sn	03 13 03.7	+0.3
KLY	**Klyuchi**	**0.40**	**335**	*e*P	Pn	03 12 47.5	+0.7
KLY				*e*S	Sn	03 13 04.4	+0.6
KPT	**Kopyto**	**0.41**	**273**	*e*P	Pn	03 12 47.7	+0.8
KPT				*e*S	Sn	03 13 04.6	+0.8
KMNR	**Kamenistaya**	**0.45**	**245**	*e*P	Pn	03 12 48.3	+1.3
KMNR				*e*S	Sn	03 13 05.4	+1.4
KOZ	**Kozyrevsk**	**0.62**	**281**	*e*P	Pn	03 12 48.6	+0.8
KOZ				*e*S	Sn	03 13 06.0	+0.5
BDR	**Baidarnaya**	**0.64**	**12**	*e*P	Pn	03 12 49.2	+1.3
BDR				*e*S	Sn	03 13 07.0	+1.2
SMKR	**Semkarok**	**0.69**	**24**	*e*P	Pn	03 12 49.4	+1.2
SMKR				*e*S	Sn	03 13 06.9	+0.5
SRKR	**Sorokina**	**0.71**	**9**	*e*P	Pn	03 12 49.3	+0.9
SRKR				*e*S	Sn	03 13 08.0	+1.4
SRDR	**Sredinnyy**	**0.79**	**298**	*e*P	Pn	03 12 49.5	+0.7
SRDR				*e*S	Sn	03 13 07.2	-0.2
KBTR	**Krutoberegovo**	**1.07**	**75**	*e*P	Pn	03 12 52.1	+1.1
KBTR				*e*S	Sn	03 13 12.0	+0.8
MKZ	**Mys Kozlova**	**1.47**	**162**	*e*P	Pn	03 12 55.9	+1.2
MKZ				*e*S	Sn	03 13 18.7	+1.0
KII	**Karymskiy**	**2.11**	**205**	*e*P	Pn	03 13 03.9	+2.2
GNL	**Ganaly**	**2.86**	**219**	*e*P	Pn	03 13 12.9	+2.3
SPN	**Mys Shipunski**	**2.91**	**191**	*e*S	Sn	03 13 46.3	-1.1
NLC	**Nalytchevo**	**2.94**	**199**	P	Pn	03 13 13.0	+1.3
NLC				S	Sn	03 13 49.0	+1.0
BKI	**Bering**	**2.94**	**103**	*e*P	Pn	03 13 13.8	+2.1
BKI				*e*S	Sn	03 13 49.3	+1.2
AVH	**Avacha**	**2.98**	**207**	*e*P	Pn	03 13 14.8	+2.6

*THR **21** 03:20:24.9±0.6,35°.74N×48°.93E,h14km±7km,ML3.5*
*ISCJB **21** 03:20:26.2±0.3,35°.83N±0°.03×48°.90E±0°.03,h10km,Error ellipse: s-maj=4.1km s-min=3.4km az=11.5*
*CSEM **21** 03:20:26.1±0.2,35°.80N×48°.94E,h2km,ML3.5,Error ellipse: s-maj=7.2km s-min=5.2km az=14.0*
*TEH **21** 03:20:28.9,35°.82N×48°.89E,h20km*
ISC 21 03:20:27.3±0.9,35°.82N±0°.04×48°.89E±0°.04,h11km±8km, n75,σ0s98/92,Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZNJK	**Zanjan**	**0.86**	**349**	*e*Pg	**Pg**	**03 20 42.8**	**-1.1**
ZNJK				*e*Sg	**Sg**	**03 20 56.0**	**+0.8**
ZNJK	**Zanjan**	**0.86**	**349**	*e*Pg	**Pg**	**03 20 42.8**	**-1.1**
ZNJK				*e*Sg	**Sg**	**03 20 56.3**	**+1.1**
IRAZ	**Razeghan**	**0.94**	**116**	*e*Pg	**Pg**	**03 20 41.0**	**-4.4**
IRAZ				*e*		03 20 55.4	
comp=Z,20μm,0.1s							
IRAZ	**Razeghan**	**0.94**	**116**	*e*Pg	**Pg**	**03 20 41.0**	**-4.4**
IRAZ				*e*		03 20 55.4	
comp=Z,20μm,0.1s							
IRAZ	**Razeghan**	**0.94**	**116**	*e*Pg	**Pg**	**03 20 41.0**	**-4.4**
IMHD	**Mahdasht**	**1.45**	**95**	*e*Pn	**Pn**	**03 20 51.0**	**-2.4**
IMHD				*e*		03 21 15.2	
comp=Z,12μm,0.1s							
IMHD	**Mahdasht**	**1.45**	**95**	*e*Pn	**Pn**	**03 20 51.0**	**-2.4**
IMHD				*e*		03 21 15.2	
comp=Z,12μm,0.1s							
IMHD	**Mahdasht**	**1.45**	**95**	*e*Pn	**Pn**	**03 20 51.0**	**-2.4**
SNGE	**Sanandaj**	**1.46**	**240**	*e*Pg	**Pn**	**03 20 51.6**	**-2.0**
SNGE				*e*Sg	**Sn**	**03 21 11.3**	**-1.3**
SNGE	**Sanandaj**	**1.46**	**240**	*e*Pg	**Pn**	**03 20 51.6**	**-1.9**
SNGE				*e*Sg	**Sn**	**03 21 11.3**	**-1.3**
THKV	**Tehran--Karaj**	**1.61**	**86**	*e*Pg	**Pn**	**03 20 54.4**	**-1.3**
THKV				AML	AML	03 21 22.4	
comp=N,440nm,0.5s							
THKV				AML	AML	03 21 24.2	
comp=E,508nm,0.5s							
THKV	**Tehran--Karaj**	**1.61**	**86**	*e*Pg	**Pn**	**03 20 54.4**	**-1.3**
IR3	**Iran Long-Peri**	**1.77**	**101**	*e*Pn	**Pn**	**03 20 56.0**	**-1.8**
IR3	**Iran Long-Peri**	**1.77**	**101**	*e*Pn	**Pn**	**03 20 56.0**	**-1.8**
IR3	**Iran Long-Peri**	**1.77**	**101**	*e*Pn	**Pn**	**03 20 56.0**	**-1.8**
CHTH	**Charan**	**1.81**	**87**	*e*Pg	**Pn**	**03 20 57.4**	**-1.1**
CHTH	**Charan**	**1.81**	**87**	*e*Pn	**Pn**	**03 20 57.5**	**-1.0**
ILIN	**Lien**	**1.82**	**241**	*e*Pn	**Pn**	**03 20 57.7**	**-0.8**
ILIN				*e*		03 21 26.4	
comp=Z,5μm,0.3s							
ILIN	**Lien**	**1.82**	**241**	*e*Pn	**Pn**	**03 20 57.7**	**-0.8**
ILIN				*e*		03 21 26.4	
comp=Z,5μm,0.3s							
ILIN	**Lien**	**1.82**	**241**	*e*Pn	**Pn**	**03 20 57.7**	**-0.8**
IKOM	**Komasi**	**2.00**	**215**	*e*Pn	**Pn**	**03 21 00.6**	**-0.4**
IKOM				*e*		03 21 35.5	
comp=Z,4μm,0.3s							
IKOM	**Komasi**	**2.00**	**215**	*e*Pn	**Pn**	**03 21 00.6**	**-0.4**
IKOM				*e*		03 21 35.5	
comp=Z,4μm,0.3s							
IKOM	**Komasi**	**2.00**	**215**	*e*Pn	**Pn**	**03 21 00.6**	**-0.4**
IVIS	**Veis**	**2.12**	**233**	*e*Pn	**Pn**	**03 21 03.2**	**+0.6**
IVIS				*e*Sg	**Sg**	**03 21 35.6**	**+0.4**
IVIS				*e*		03 21 43.2	
comp=Z,2μm,0.2s							
IVIS	**Veis**	**2.12**	**233**	*e*Pn	**Pn**	**03 21 03.2**	**+0.6**
IVIS				*e*Sg	**Sg**	**03 21 35.6**	**+0.4**
IVIS				*e*		03 21 43.2	
comp=Z,2μm,0.2s							
IVIS	**Veis**	**2.12**	**233**	*e*Pn	**Pn**	**03 21 03.2**	**+0.6**
IVIS				*e*Sg	**Sg**	**03 21 35.6**	**+0.4**
ISRB	**Sarab**	**2.23**	**334**	*e*	**Pg**	**03 21 09.5**	**-0.4**
comp=Z,3μm,0.2s							
ISRB				*e*Pn	**Pn**	**03 21 04.9**	**+0.8**
ISRB				*e*Sg	**Sg**	**03 21 38.3**	**-0.6**
ISRB	**Sarab**	**2.23**	**334**	*e*	**Pg**	**03 21 09.5**	**-0.4**
comp=Z,3μm,0.2s							
ISRB				*e*Pn	**Pn**	**03 21 04.9**	**+0.8**
ISRB				*e*Sg	**Sg**	**03 21 38.3**	**-0.6**
IAFJ	**Afjeh**	**2.29**	**88**	*e*	**Pn**	**03 21 08.6**	**+3.6**
comp=Z,24nm,0.1s							
IAFJ				*e*Pn	**Pn**	**03 21 06.0**	**+1.0**
IAFJ	**Afjeh**	**2.29**	**88**	*e*	**Pn**	**03 21 08.6**	**+3.6**
comp=Z,24nm,0.1s							
IAFJ				*e*Pn	**Pn**	**03 21 06.0**	**+1.0**
IGHG	**Ghaleghazi**	**2.42**	**233**	*e*	**Pg**	**03 21 17.3**	**+3.7**
comp=Z,4μm,0.3s							
IGHG				*e*Pn	**Pn**	**03 21 07.5**	**+0.7**
IGHG	**Ghaleghazi**	**2.42**	**233**	*e*	**Pg**	**03 21 17.3**	**+3.7**
comp=Z,4μm,0.3s							
IGHG				*e*Pn	**Pn**	**03 21 07.5**	**+0.7**
DAMV	**Damavand**	**2.51**	**93**	*e*Pn	**Pn**	**03 21 07.2**	**-0.9**
DAMV				AML	AML	03 21 45.5	
comp=N,316nm,0.4s							
DAMV				AML	AML	03 21 46.8	
comp=E,239nm,0.4s							
DAMV	**Damavand**	**2.51**	**93**	*e*Pn	**Pn**	**03 21 07.2**	**-0.8**
IDMV	**Damavand**	**2.57**	**95**	*e*Sn	**Sn**	**03 21 40.3**	**+0.3**
IDMV				*e*Pn	**Pn**	**03 21 08.0**	**-0.8**
IDMV				*e*		03 21 53.8	
comp=Z,3μm,0.3s							
IDMV	**Damavand**	**2.57**	**95**	*e*Sn	**Sn**	**03 21 40.3**	**+0.3**
IDMV				*e*Pn	**Pn**	**03 21 08.0**	**-0.8**
IDMV				*e*		03 21 53.8	
comp=Z,3μm,0.3s							
IHRS	**Heris**	**2.90**	**330**	*e*Pn	**Pn**	**03 21 14.0**	**+0.7**
IHRS				*e*		03 21 23.9	
comp=Z,2μm,0.3s							
IHRS	**Heris**	**2.90**	**330**	*e*Pn	**Pn**	**03 21 14.0**	**+0.7**
IHRS				*e*		03 21 23.9	
comp=Z,2μm,0.3s							
IAZR	**Azarshahr**	**2.98**	**309**	*e*Pn	**Pn**	**03 21 15.4**	**+0.9**
IAZR				*e*		03 21 33.8	
comp=Z,2μm,0.2s							
IAZR	**Azarshahr**	**2.98**	**309**	*e*Pn	**Pn**	**03 21 15.4**	**+0.9**
IAZR				*e*		03 21 33.8	
comp=Z,2μm,0.2s							
IAZR	**Azarshahr**	**2.98**	**309**	*e*Pn	**Pn**	**03 21 15.4**	**+0.9**
ISFB	**Sefidab**	**3.11**	**117**	*e*Pn	**Pn**	**03 21 17.1**	**+0.8**
ISFB				*e*		03 22 06.5	
comp=Z,1μm,0.2s							
ISFB	**Sefidab**	**3.11**	**117**	*e*Pn	**Pn**	**03 21 17.1**	**+0.8**
ISFB				*e*		03 22 06.5	
comp=Z,1μm,0.2s							
ISFB	**Sefidab**	**3.11**	**117**	*e*Pn	**Pn**	**03 21 17.1**	**+0.8**
IFIR	**Firoozkooh**	**3.15**	**92**	*e*Pn	**Pn**	**03 21 16.6**	**-0.2**
IFIR				*e*		03 22 06.2	
comp=Z,2μm,0.2s							
IFIR	**Firoozkooh**	**3.15**	**92**	*e*Pn	**Pn**	**03 21 16.6**	**-0.2**
IFIR				*e*		03 22 06.2	
comp=Z,2μm,0.2s							
IFIR	**Firoozkooh**	**3.15**	**92**	*e*Pn	**Pn**	**03 21 16.6**	**-0.2**
IALA	**Alasht**	**3.19**	**84**	*e*Pn	**Pn**	**03 21 17.6**	**+0.3**
IALA				*e*		03 21 30.3	
comp=Z,815nm,0.1s							
IALA	**Alasht**	**3.19**	**84**	*e*Pn	**Pn**	**03 21 17.6**	**+0.3**
IALA				*e*		03 21 30.3	
comp=Z,815nm,0.1s							
IALA	**Alasht**	**3.19**	**84**	*e*Pn	**Pn**	**03 21 17.6**	**+0.3**
IKLH	**Kolahrood**	**3.34**	**138**	*e*Pn	**Pn**	**03 21 19.9**	**+0.5**
IKLH				*e*		03 21 30.5	
comp=Z,1μm,0.1s							
IKLH	**Kolahrood**	**3.34**	**138**	*e*Pn	**Pn**	**03 21 19.9**	**+0.5**
IKLH				*e*		03 21 30.5	
comp=Z,1μm,0.1s							
IKLH	**Kolahrood**	**3.34**	**138**	*e*Pn	**Pn**	**03 21 19.9**	**+0.5**
ILAS	**Lasjerd**	**3.34**	**96**	*e*Pn	**Pn**	**03 21 20.3**	**+0.9**
ILAS				*e*		03 22 12.6	
comp=Z,1μm,0.2s							
ILAS	**Lasjerd**	**3.34**	**96**	*e*Pn	**Pn**	**03 21 20.3**	**+0.9**
ILAS				*e*		03 22 12.6	
comp=Z,1μm,0.2s							
ILAS	**Lasjerd**	**3.34**	**96**	*e*Pn	**Pn**	**03 21 20.3**	**+0.9**
IPIR	**Pirpir**	**3.54**	**152**	*e*Pn	**Pn**	**03 21 22.9**	**+0.7**
IPIR				*e*		03 21 30.5	
comp=Z,1μm,0.2s							
IPIR	**Pirpir**	**3.54**	**152**	*e*Pn	**Pn**	**03 21 22.9**	**+0.7**
IPIR				*e*		03 21 30.5	
comp=Z,1μm,0.2s							
IPIR	**Pirpir**	**3.54**	**152**	*e*Pn	**Pn**	**03 21 22.9**	**+0.7**
ISHM	**Shahmirzad**	**3.58**	**89**	*e*Pn	**Pn**	**03 21 23.0**	**+0.3**
ISHM				*e*		03 21 35.3	
comp=Z,1μm,0.2s							
ISHM	**Shahmirzad**	**3.58**	**89**	*e*Pn	**Pn**	**03 21 23.0**	**+0.3**
ISHM				*e*		03 21 35.3	
comp=Z,1μm,0.2s							
ISHM	**Shahmirzad**	**3.58**	**89**	*e*Pn	**Pn**	**03 21 23.0**	**+0.3**
ISHB	**Shabestar**	**3.59**	**314**	*e*Pn	**Pn**	**03 21 23.8**	**+0.9**
ISHB				*e*		03 21 42.3	
comp=Z,478nm,0.3s							
ISHB	**Shabestar**	**3.59**	**314**	*e*Pn	**Pn**	**03 21 23.8**	**+0.9**
ISHB				*e*		03 21 42.3	
comp=Z,478nm,0.3s							
ISHB	**Shabestar**	**3.59**	**314**	*e*Pn	**Pn**	**03 21 23.8**	**+0.9**
IGLO	**Ghaloghah**	**4.05**	**79**	*e*Pn	**Pn**	**03 21 29.6**	**+0.4**
IGLO				*e*		03 22 45.8	
comp=Z,1μm,0.3s							
IGLO	**Ghaloghah**	**4.05**	**79**	*e*Pn	**Pn**	**03 21 29.6**	**+0.4**
IGLO				*e*		03 22 45.8	
comp=Z,1μm,0.3s							
IGLO	**Ghaloghah**	**4.05**	**79**	*e*Pn	**Pn**	**03 21 29.6**	**+0.4**
IZEF	**Zefreh**	**4.07**	**135**	*e*Pn	**Pn**	**03 21 30.6**	**+1.1**
IZEF				*e*		03 22 38.9	
comp=Z,388nm,0.3s							
IZEF	**Zefreh**	**4.07**	**135**	*e*Pn	**Pn**	**03 21 30.6**	**+1.1**
IZEF				*e*		03 22 38.9	
comp=Z,388nm,0.3s							
IZEF	**Zefreh**	**4.07**	**135**	*e*Pn	**Pn**	**03 21 30.6**	**+1.1**
IANJ	**Anjilo**	**4.10**	**93**	*e*Pn	**Pn**	**03 21 30.7**	**+0.8**
IANJ				*e*		03 22 37.1	
comp=Z,588nm,0.3s							
IANJ	**Anjilo**	**4.10**	**93**	*e*Pn	**Pn**	**03 21 30.7**	**+0.8**
IANJ				*e*		03 22 37.1	
comp=Z,588nm,0.3s							
IANJ	**Anjilo**	**4.10**	**93**	*e*Pn	**Pn**	**03 21 30.7**	**+0.8**
IGAR	**Gharneh**	**4.29**	**142**	*e*Pn	**Pn**	**03 21 33.5**	**+0.9**
IGAR				*e*		03 21 53.1	
comp=Z,431nm,0.3s							
IGAR	**Gharneh**	**4.29**	**142**	*e*Pn	**Pn**	**03 21 33.5**	**+0.9**
IGAR				*e*		03 21 53.1	
comp=Z,431nm,0.3s							

KRSC 21 03:28:47.4±1.2,52°.41N×161°.63E,h17km±17km,ML3.5, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLC	**Nalytchevo**	**1.58**	**300**	*e*P	Pn	03 29 15.5	+0.9
NLC				*i* S	Sn	03 29 36.0	+1.3
PET	**Petropavlovsk**	**1.91**	**290**	*e*P	Pn	03 29 20.5	+1.4
AVH	**Avacha**	**1.95**	**297**	*e*P	Pn	03 29 21.8	+2.1
KII	**Karymskiy**	**2.09**	**322**	*e*P	Pn	03 29 22.6	+1.0
MKZ	**Mys Kozlova**	**2.15**	**2**	*e*P	Pn	03 29 23.8	+1.4
MKZ				*i* S	Sn	03 29 50.1	+1.4
GNL	**Ganaly**	**2.57**	**302**	*e*P	Pn	03 29 31.0	+2.8
MIPR	**Malaya Ipel'ka**	**2.99**	**269**	*e*P	Pn	03 29 35.1	+1.1

*IDC **21** 03:37:22.3±3.3,35°.72N×71°.68E,h0km,mb3.7/5, mb1 3.7/9,mb1mx3.5/26,mbtmp3.7/9,ML3.4/4,Error ellipse: s-maj=67.2km s-min=26.5km az=136.0*
*ISCJB **21** 03:37:38.8±0.9,36°.57N±0°.07×71°.2E±0°.1,h96km±11km, mb3.5/4,Error ellipse: s-maj=21.4km s-min=6.4km az=31.4*
*NEIC **21** 03:37:38.8±1.3,36°.36N×71°.43E,h108km±12km,mb4.1/4, Error ellipse: s-maj=29.2km s-min=10.4km az=126.0*
*NNC **21** 03:37:39.9±15.0,36°.59N×70°.71E,h80km±411km,mb3.5, mpv3.8,Error ellipse: s-maj=183.7km s-min=102.9km az=62.0*
ISC 21 03:37:40.0±0.9,36°.53N±0°.07×71°.2E±0°.1,h99km±9km,n22, σ1s04/31,mb3.5/4,3C-1D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.65**	**222**	*e*Pn	**Pn**	**03 38 20.9**	**-0.2**
KBL				*e*S	**Sn**	**03 38 52.5**	**-0.1**
AML	**Almayashu**	**5.92**	**18**	*e*Pn	**Pn**	**03 39 06.0**	**+0.9**
13nm,0.5s							
AML				*e*S	**Sn**	**03 40 11.0**	**-0.5**
UCH	**Uchtor**	**6.24**	**23**	*e*Pn	**Pn**	**03 39 08.8**	**-0.7**
UCH				*e*S	**Sn**	**03 40 14.4**	**-5.0**
EKS2	**Erkin-Say**	**6.44**	**17**	*e*Pn	**Pn**	**03 39 13.1**	**+1.0**
2.7nm,0.3s							
EKS2				*e*S	**Sn**	**03 40 23.7**	**-0.5**
KK31	**Karatay Array**	**6.59**	**356**	⇑P	**Pn**	**03 39 14.7**	**+0.5**
3.3nm,0.2s,baz=178,slow=13,SNR=15							
KK31				⇑S	**Sn**	**03 40 26.2**	**-1.6**
3.6nm,0.3s,baz=178,slow=20,SNR=8.4							
AAK	**Ala-Archa**	**6.61**	**22**	Pn	**Pn**	**03 39 14.3**	**-0.1**
1.3nm,0.3s,baz=198,slow=5.9,SNR=4.5							
AAK				Sn	**Sn**	**03 40 28.8**	**+0.6**
0.5nm,0.3s,baz=168,slow=22,SNR=6.5							
AAK	**Ala-Archa**	**6.61**	**22**	*e*Pn	**Pn**	**03 39 14.4**	**0.0**
AAK				Sn	**Sn**	**03 40 28.8**	**+0.6**
TKM2	**Tokmak 2**	**7.23**	**27**	⇑P	**Pn**	**03 39 23.0**	**+0.2**
2.4nm,0.6s							
TKM2	**Tokmak 2**	**7.23**	**27**	*e*Pn	**Pn**	**03 39 23.3**	**+0.5**
2.1nm,0.3s							
MKAR	**Makanchi Array**	**13.17**	**35**	Pn	**Pn**	**03 40 37.3**	**-5.7**
0.1nm,0.3s,baz=197,slow=12,SNR=2.3							
AB31	**Akbulak array**	**15.14**	**331**	P	**Pn**	**03 41 07.3**	**-1.1**
0.3nm,0.3s,baz=160,slow=12,SNR=22							
AB31				⇓S	**S**	**03 43 47.8**	**-18**
1.0nm,0.6s,baz=153,slow=22,SNR=5.3							
ABKAR	**Akbulak array**	**15.14**	**331**	*e*Pn	**Pn**	**03 41 07.5**	**-0.8**
0.8nm,0.4s							
ABKAR				*e*S	**S**	**03 43 46.7**	**-19**
BVAR	**Borovoye Array**	**16.51**	**358**	P	**Pn**	**03 41 25.5**	**+0.1**
0.3nm,0.3s,baz=172,slow=12,SNR=4.6							
AKTK	**Aktyubinsk**	**16.84**	**330**	P	**Pn**	**03 41 31.6**	**+2.2**
AKTO	**Aktyubinsk**	**16.84**	**330**	P	**Pn**	**03 41 31.6**	**+2.2**
0.3nm,0.3s,baz=139,slow=13,SNR=8.2							
ZALV	**Zalesovo Beam**	**19.82**	**24**	P	**P**	**03 42 01.2**	**-1.3**
2.4nm,0.4s,baz=211,slow=9.6,SNR=8.2							
FINES	**FINESS Array B**	**37.56**	**326**	P	**P**	**03 44 45.0**	**+0.8**
1.5nm,0.8s,mb3.9,baz=121,slow=14,SNR=4.2							
ARCES	**ARCESS Array B**	**41.19**	**338**	P	**P**	**03 45 15.0**	**+0.7**
0.5nm,0.7s,mb3.5,baz=104,slow=8.9,SNR=6.4							
NB2	**NORSAR Subarra**	**44.46**	**323**	P	**P**	**03 45 41.2**	**+0.4**
comp=Z,0.8nm,0.5s,mb3.7,baz=94,slow=7.9							
NOA	**NORSAR Array B**	**44.46**	**323**	P	**P**	**03 45 41.3**	**+0.5**
comp=Z,1.0nm,0.8s,mb3.6,baz=85,slow=8.9,SNR=4.3							
TORD	**Torodi Ar. Bea**	**65.89**	**269**	P	**P**	**03 48 12.8**	**-2.6**
comp=Z,0.2nm,0.5s,mb3.2,baz=50,slow=6.3,SNR=5.3							
TORD	**Torodi Ar. Bea**	**65.89**	**269**	P	**P**	**03 48 12.8**	**-2.6**

*ISCJB **21** 03:43:31.3±1.0,24°.30S±0°.05×67°.1W±0°.1,h163km±19km, mb4.2/2,Error ellipse: s-maj=19.8km s-min=8.0km az=4.7*
*IDC **21** 03:43:31.6±1.8,24°.32S×66°.88W,h142km±23km,mb3.6/1, mb1 3.3/3,mb1mx3.1/15,mbtmp3.3/3,Error ellipse: s-maj=54.0km s-min=13.5km az=97.0*
*NEIC **21** 03:43:32.4±0.9,24°.27S×67°.03W,h156km±13km,Error ellipse: s-maj=20.8km s-min=10.3km az=105.0*
*GUC **21** 03:43:36.4±0.9,23°.93S×67°.57W,h200km*
ISC 21 03:43:31.9±0.9,24°.30S±0°.05×67°.1W±0°.1,h150km±18km, n16,σ1s26/24,mb4.2/2,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**3.02**	**287**	*e*P	**Pn**	**03 44 22.5**	**+3.0**
CEN1				*e*S	**Sn**	**03 44 57.5**	**+1.2**
PB04	**Plate Boundary**	**3.02**	**312**	*e*P	**Pn**	**03 44 26.7**	**+7.2**
PB04				*e*S	**Sn**	**03 45 04.6**	**+8.2**
ANCH	**Antofagasta**	**3.13**	**281**	*e*P	**Pn**	**03 44 21.5**	**+0.6**
ANCH				*e*S	**Sn**	**03 44 56.9**	**-1.9**
ANCH	**Antofagasta**	**3.13**	**281**	*e*P	**Pn**	**03 44 21.5**	**+0.6**
ANCH				*e*S	**Sn**	**03 44 56.9**	**-1.9**
HMBC	**Humberston**	**4.79**	**326**	*e*P	**Pn**	**03 44 42.0**	**-0.6**
HMBC				*e*S	**Sn**	**03 45 32.6**	**-5.0**
MNMC	**Miæe Miæ**	**5.66**	**335**	*e*P	**Pn**	**03 44 54.6**	**+0.4**
MNMC				*e*S	**Sn**	**03 45 55.8**	**-2.6**
CFAA	**Coronel Fontan**	**7.35**	**188**	P	**Pn**	**03 45 17.4**	**+0.9**
0.0nm,0.3s,baz=11,slow=10,SNR=3.7							
CFAA				S	**Sn**	**03 46 36.8**	**-1.9**
0.1nm,0.3s,baz=81,slow=19,SNR=7.3							
CFAA	**Coronel Fontan**	**7.35**	**188**	P	**Pn**	**03 45 17.4**	**+0.9**
CFAA				S	**Sn**	**03 46 36.8**	**-1.9**
LPAZ	**La Paz**	**8.04**	**353**	P	**Pn**	**03 45 27.2**	**+1.3**
1.0nm,0.3s,baz=161,slow=9.2,SNR=50							
LPAZ				S	**Sn**	**03 46 56.1**	**+0.6**
0.1nm,0.3s,baz=109,slow=13,SNR=3.5							
LPAZ	**La Paz**	**8.04**	**353**	*e*Pn	**Pn**	**03 45 26.9**	**+1.0**
LPAZ				*e*Sn	**Sn**	**03 46 54.6**	**-0

WILN			*e*S	**Sn**	**03 49 25.9**	**+0.4**
PRS1	**Puriscal**	**1.59 113**	*e*P	**Pn**	**03 49 07.6**	**+1.4**
MGAN	**Managua**	**1.59 344**	*e*P	**Pn**	**03 49 05.9**	**-0.4**
MGAN			*e*S	**Sn**	**03 49 25.3**	**-0.3**
XAVN	**Gruta Xavier**	**1.61 341**	*e*P	**Pn**	**03 49 06.8**	**+0.2**
CSAN		**1.68 338**	*e*P	**Pn**	**03 49 07.0**	**-0.5**
COPN	**Copaltepe**	**1.74 333**	*e*P	**Pn**	**03 49 07.6**	**-0.8**
COPN			*e*S	**Sn**	**03 49 31.8**	**+2.4**
HUEN		**1.75 348**	*e*P	**Pn**	**03 49 08.3**	**-0.2**
HUEN			*e*S	**Sn**	**03 49 29.5**	**-0.2**
LAJ	**Bijagual**	**1.81 114**	*e*P	**Pn**	**03 49 06.9**	**-2.4**
MOMN	**Momotombo**	**1.93 338**	*e*P	**Pn**	**03 49 10.9**	**0.0**
QCR	**Quepos**	**1.99 126**	*e*P	**Pn**	**03 49 14.1**	**+2.3**
CNGN	**Cerro Negro**	**2.07 335**	*e*P	**Pn**	**03 49 12.4**	**-0.5**
CNGN			AML	AML	03 49 47.1	
	comp=N,444nm,0.5s					
LEON	**Leon**	**2.09 329**	*e*P	**Pn**	**03 49 12.9**	**-0.3**
URSC	**Urasca**	**2.13 111**	*e*P	**Pn**	**03 49 15.9**	**+2.2**
BAR1		**2.80 119**	*e*P	**Pn**	**03 49 26.2**	**+3.3**
CNCH	**Conchagua**	**3.31 323**	*e*P	**Pn**	**03 49 31.4**	**+1.4**
TGUH	**Tegucigalpa,Un**	**3.71 337**	*e*Pn	**Pn**	**03 49 36.1**	**+0.6**
CAHU	**Cacacuatique**	**3.93 323**	*e*P	**Pn**	**03 49 40.5**	**+2.1**
LFRS	**El Faro**	**4.38 313⇑**	*e*P	**Pn**	**03 49 47.7**	**+3.1**
LFRS			*e*S	**Sn**	**03 50 39.5**	**+5.1**
BCIP	**Isla Barro Col**	**6.04 103**	Pn	**Pn**	**03 50 08.9**	**+1.4**
ATAH	**Atahualpa**	**19.11 157**	LR	LR	03 57 54.7	
	comp=N,23nm,20.3s,baz=188,slow=31					
TXAR	**Lajitas Array**	**25.02 321**	P	**P**	**03 54 00.2**	**-0.4**
	comp=N,2.2nm,0.6s,mb3.8,baz=140,slow=10,SNR=22					
NVAR	**Mina Array Bea**	**40.15 319**	P	**P**	**03 56 12.8**	**+0.3**
	comp=N,0.5nm,0.6s,mb3.4,baz=133,slow=7.9,SNR=5.6					
SCHQ	**Schefferville**	**46.59 15**	P	**P**	**03 56 60.0**	**-4.2**
	comp=N,1.3nm,0.6s,mb4.0,baz=184,slow=6.8,SNR=5.4					
ILAR	**Eielson Array**	**68.35 336**	P	**P**	**03 59 34.7**	**-2.5**
	comp=N,0.2nm,0.8s,mb3.2,baz=177,slow=6.0,SNR=4.2					

*ISCJB **21** 04:04:44.4±2.7, 15°.4S±0°.8×174°.5W±0°.5, h121km±25km, mb3.6/5, Error ellipse: s-maj=143.9km s-min=27.5km az=150.8*
*IDC **21** 04:04:46.3±2.8, 15°.51S×174°.48W, h127km±26km, mb3.4/5, mb1 3.8/6, mb1mx3.6/17, mbtmp3.5/6, Error ellipse: s-maj=100.5km s-min=21.8km az=150.0*
ISC 21 04:04:45.9±2.6, 15°.4S±0°.7×174°.5W±0°.5, h119km±23km, n7, σ1°18/7, mb3.6/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.01**	**62**	P	**Pn**	**04 05 33.8**	**+1.5**
	41nm,0.3s,baz=229,slow=9.3,SNR=37						
AFI				S	**Sn**	**04 06 06.8**	**-1.2**
	64nm,0.3s,baz=30,slow=22,SNR=15						
ASAR	**Alice Springs**	**49.11**	**252**	P	**P**	**04 13 20.9**	**-0.8**
	4.7nm,0.6s,mb4.6,baz=87,slow=8.3,SNR=46						
NVAR	**Mina Array Bea**	**75.01**	**43**	P	**P**	**04 16 15.1**	**+0.7**
	0.5nm,0.7s,mb3.3,baz=235,slow=9.9,SNR=4.4						
TXAR	**Lajitas Array**	**81.47**	**57**	P	**P**	**04 16 50.2**	**0.0**
	0.4nm,0.9s,mb3.2,baz=234,slow=5.7,SNR=4.0						
ILAR	**Eielson Array**	**82.61**	**12**	P	**P**	**04 16 55.3**	**0.0**
	0.5nm,0.5s,mb3.6,baz=225,slow=5.5,SNR=15						
PDAR	**Pinedale Array**	**82.94**	**42**	P	**P**	**04 16 57.4**	**-0.2**
	0.4nm,0.7s,mb3.3,baz=188,slow=3.6,SNR=3.8						
BRTR	**Keskin Array B**	**145.45**	**320**	PKPbc	PKPbc	04 24 10.4	+0.1
	0.7nm,0.6s,baz=50,slow=2.3,SNR=5.1						

GUC 21 04:14:27.9±0.7, 22°.94S×70°.33W, h34km±5km, MD3.6, ML2.4, 2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.20**	**213**	*e*P	Pb	04 14 33.9	-0.7
MECH				*i*S	Sb	04 14 38.9	-0.2
MECH				AML	AML	04 14 40.0	
	comp=E,1μm,0.4s						
CEN1	**Los Morros**	**0.47**	**165**	⇓*i*P	Pb	04 14 39.7	+1.6
CEN1				*e*S	Sb	04 14 49.5	+4.4
ANCH	**Antofagasta**	**0.75**	**186**	*e*P	Pn	04 14 40.5	-1.6
ANCH				*i*S	Sn	04 14 50.5	-1.7
PB04	**Plate Boundary**	**1.02**	**50**	⇓*i*P	Pn	04 14 40.5	-5.4
PB04				*i*S	Sn	04 14 50.0	-9.1
PB04				AML	AML	04 14 52.9	
	comp=N,188nm,0.5s						
PB01	**Plate Boundary**	**2.04**	**23**	*e*P	Pn	04 15 02.0	+2.1
PB01				*e*S	Sn	04 15 29.7	+5.6

*NIED **21** 04:33:00, 37°.50N×142°.80E, h11km, Mw3.6 Best double couple: M₀2.91000×10¹⁴ NP1:φ₁302.00000°, δ63.00000°, λ34.00000°. NP2:φ₂195.00000°, δ60.00000°, λ148.00000°.*
*JMA **21** 04:33:53.0±0.2, 37°.50N×142°.83E, h30km, M3.7*
*IDC **21** 04:33:59.1±4.7, 37°.36N×142°.31E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.5/22, mbtmp3.6/6, Error ellipse: s-maj=111.1km s-min=32.2km az=158.0*
ISC 21 04:33:54.8±1.4, 37°.52N±0°.06×142°.9E±0°.1, h35km, n17, σ0°63/20, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**1.51**	**309**	P	**Pn**	**04 34 18.9**	**-0.4**
JIO				*e*S	**Sn**	**04 34 37.3**	**-0.4**
JFK	**Kawauchi**	**1.58**	**265**	P	**Pn**	**04 34 19.4**	**-0.9**
JFK				S	**Sn**	**04 34 39.0**	**-0.5**
JMM	**Marumori**	**1.67**	**282**	P	**Pn**	**04 34 20.7**	**-0.8**
JMM				*e*S	**Sn**	**04 34 41.4**	**-0.2**
ONAJ	**Iwakimizuishiy**	**1.69**	**256**	P	**Pn**	**04 34 21.2**	**-0.6**
ONAJ				*e*S	**Sn**	**04 34 41.4**	**-0.8**
JMK	**Ichinoseki**	**1.92**	**319**	P	**Pn**	**04 34 24.9**	**0.0**
JMK				*e*S	**Sn**	**04 34 47.9**	**+0.1**
JOU	**Okura**	**1.92**	**297**	P	**Pn**	**04 34 25.0**	**0.0**
JOU				*e*S	**Sn**	**04 34 48.5**	**+0.6**
JFT	**Otama**	**2.00**	**271**	P	**Pn**	**04 34 26.3**	**+0.3**
JFT				*e*S	**Sn**	**04 34 51.0**	**+1.2**
JOM	**Ohasama**	**2.30**	**328**	P	**Pn**	**04 34 30.1**	**-0.1**
JYK	**Kaneyama**	**2.40**	**306**	P	**Pn**	**04 34 31.9**	**+0.3**
JAG	**Ashikaga**	**2.93**	**249**	P	**Pn**	**04 34 39.0**	**+0.1**
MJAR	**Matsushiro Arr**	**3.84**	**257**	Pn	**Pn**	**04 34 53.2**	**+1.8**
	2.4nm,0.3s,baz=82,slow=15,SNR=12						
MAT	**Matsushiro**	**3.84**	**257**	P	**Pn**	**04 34 51.8**	**+0.4**
MAT				S	**Sn**	**04 35 35.1**	**-0.2**
SONM	**Songino Array**	**28.47**	**303**	P	pP	04 39 52.5	-3.9
	0.2nm,0.4s,baz=116,slow=6.4,SNR=2.9						
ZALV	**Zalesovo Beam**	**42.44**	**312**	P	pP	04 41 54.9	-1.2
	0.5nm,0.5s,baz=76,slow=6.1,SNR=3.7						
ILAR	**Eielson Array**	**48.47**	**33**	P	pP	04 42 46.1	+2.2
	0.3nm,0.9s,baz=265,slow=5.4,SNR=4.3						
FINES	**FINESS Array B**	**68.91**	**333**	P	pP	04 45 05.1	-1.3
	3.1nm,0.9s,baz=69,slow=7.7,SNR=3.3						
NOA	**NORSAR Array B**	**74.17**	**338**	P	pP	04 45 36.5	-1.7
	1.0nm,0.8s,baz=44,slow=6.4,SNR=3.3						

*NIED **21** 04:50:00, 37°.30N×141°.70E, h41km, Mw3.8 Best double couple: M₀5.93000×10¹⁴ NP1:φ₁71.00000°, δ70.00000°, λ110.00000°. NP2:φ₂204.00000°, δ28.00000°, λ47.00000°.*
*IDC **21** 04:50:07.7±0.9, 37°.29N×141°.79E, h0km, mb3.7/9, mb1 3.9/12, mb1mx3.8/25, mbtmp3.8/12, ML3.6/3, MS2.1/1, Ms1 2.1/1, ms1mx2.0/29, Error ellipse: s-maj=22.3km s-min=18.1km az=122.0*
*ISCJB **21** 04:50:10.9±0.8, 37°.29N±0°.03×141°.81E±0°.06, h35km±8km, mb3.8/10, Error ellipse: s-maj=8.9km s-min=5.2km az=20.3*
*JMA **21** 04:50:12.3±0.1, 37°.32N×141°.72E, h43km±3km, M4.2*
JMA Felt II J1.
*NEIC **21** 04:50:13.2±0.7, 37°.35N×141°.79E, h35km, mb4.4/1, Error ellipse: s-maj=15.6km s-min=9.3km az=146.0*
NEIC Recorded [2 JMA] in Fukushima.
ISC 21 04:50:11.5±1.1, 37°.30N±0°.03×141°.75E±0°.06, h24km±7km, n29, σ0°82/39, mb3.8/10, 2C-8D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.70**	**276**	⇓P	**Pb**	**04 50 25.5**	**+0.4**
JFK				S	**Sb**	**04 50 34.5**	**+0.1**
ONAJ	**Iwakimizuishiy**	**0.79**	**256**	⇑P	**Pb**	**04 50 26.7**	**+0.2**
ONAJ				S	**Sb**	**04 50 36.5**	**-0.3**
JMM	**Marumori**	**0.95**	**307**	⇓P	**Pb**	**04 50 28.9**	**-0.4**
JMM				S	**Sb**	**04 50 40.5**	**-0.9**
JFT	**Otama**	**1.15**	**281**	⇓P	**Pn**	**04 50 32.7**	**+0.7**
JFT				S	**Sn**	**04 50 46.7**	**-0.3**
JHO	**Hitachi**	**1.17**	**234**	⇑P	**Pn**	**04 50 31.6**	**-0.7**
JHO				*e*S	**Sn**	**04 50 45.5**	**-2.0**
JIO	**Ouri**	**1.20**	**345**	⇓P	**Pn**	**04 50 32.2**	**-0.5**
JIO				S	**Sn**	**04 50 46.0**	**-2.1**
JOU	**Okura**	**1.37**	**321**	⇓P	**Pn**	**04 50 35.2**	**+0.1**
JOU				*e*S	**Sn**	**04 50 52.0**	**-0.4**
JYS	**Shirataka**	**1.62**	**305**	⇓P	**Pn**	**04 50 39.1**	**+0.5**
JYS				*e*S	**Sn**	**04 50 59.4**	**+0.7**
JFY	**Yanaizu**	**1.64**	**274**	⇓P	**Pn**	**04 50 39.4**	**+0.7**
JMK	**Ichinoseki**	**1.70**	**346**	⇓P	**Pn**	**04 50 39.8**	**+0.2**
MJAR	**Matsushiro Arr**	**2.94**	**256**	Pn	**Pn**	**04 50 57.7**	**+1.0**
	2.4nm,0.3s,baz=82,slow=15,SNR=14						
MAJO	**Matsushiro**	**2.94**	**256**	*e*Pn	**Pn**	**04 50 59.5**	**+2.9**
MAT	**Matsushiro**	**2.94**	**256**	P	**Pn**	**04 50 58.1**	**+1.4**
MAT				S	**Sn**	**04 51 32.0**	**+0.8**
JHJ	**Hachijo jima 2**	**4.47**	**202**	Pn	**Pn**	**04 51 17.1**	**-0.6**
	26nm,0.3s,baz=66,slow=23,SNR=6.8						
JHJ				Sn	**Sn**	**04 52 08.0**	**-1.0**
	25nm,0.3s,baz=66,slow=20,SNR=3.8						
ERM	**Erimo**	**4.83**	**13**	*e*Pn	**Pn**	**04 51 22.6**	**-0.1**
ASAJ	**Asahikawa**	**6.84**	**5**	Pn	**Pn**	**04 51 49.2**	**-1.0**
	1.4nm,0.3s,baz=217,slow=6.7,SNR=9.9						
ASAJ				Sn	**Sn**	**04 53 08.0**	**+0.7**
	0.9nm,0.3s,baz=204,slow=8.7,SNR=3.0						
SONM	**Songino Array**	**27.86**	**303**	P	**P**	**04 55 59.6**	**+0.5**
	0.6nm,0.4s,mb3.5,baz=102,slow=9.8,SNR=5.6						
TGY	**Tagaytay City**	**29.62**	**224**	LR	LR	05 07 53.9	
	comp=Z,3.8nm,19.0s,baz=228,slow=36						
ZALV	**Zalesovo Beam**	**41.94**	**312**	P	**P**	**04 58 00.1**	**+0.1**
	1.0nm,0.4s,mb3.8,baz=83,slow=8.5,SNR=4.0						
MKAR	**Makanchi Array**	**44.21**	**302**	P	**P**	**04 58 18.6**	**+0.2**
	0.6nm,0.3s,mb3.8,baz=85,slow=10,SNR=8.3						
KURK	**Kurchatov**	**45.98**	**308**	*e*P	**P**	**04 58 32.3**	**-0.2**
	5.1nm,1.0s,mb4.4						
ILAR	**Eielson Array**	**49.12**	**32**	P	**P**	**04 58 57.4**	**+0.7**
	1.2nm,0.7s,mb4.0,baz=269,slow=6.2,SNR=16						
BVAR	**Borovoye Array**	**50.59**	**312**	P	**P**	**04 59 07.2**	**-0.8**
	0.5nm,0.4s,mb3.8,baz=75,slow=6.1,SNR=3.8						
ASAR	**Alice Springs**	**61.09**	**188**	P	**P**	**05 00 23.3**	**-0.1**
	0.4nm,0.8s,mb3.6,baz=22,slow=8.0,SNR=4.1						
ASAR	**Alice Springs**	**61.09**	**188**	P	**P**	**05 00 23.3**	**-0.1**
AKASG	**Malin Array Be**	**74.25**	**322**	P	**P**	**05 01 46.0**	**-0.3**
	0.3nm,0.3s,mb3.8,baz=44,slow=5.3,SNR=3.2						
AKASG	**Malin Array Be**	**74.25**	**322**	P	**P**	**05 01 46.0**	**-0.3**
NVAR	**Mina Array Bea**	**74.61**	**53**	P	**P**	**05 01 48.4**	**-0.2**
	0.3nm,0.7s,mb3.4,baz=288,slow=6.2,SNR=4.4						
TXAR	**Lajitas Array**	**89.74**	**53**	P	**P**	**05 03 08.8**	**+0.9**
	0.2nm,0.6s,mb3.6,baz=309,slow=3.8,SNR=4.3						

*NIED **21** 04:52:00, 37°.30N×141°.70E, h47km, Mw3.5 Best double couple: M₀2.12000×10¹⁴ NP1:φ₁80.00000°, δ66.00000°, λ117.00000°. NP2:φ₂208.00000°, δ35.00000°, λ44.00000°.*
*JMA **21** 04:52:15.7±0.2, 37°.32N×141°.72E, h42km±3km, M3.7*
JMA Felt I J1.
ISC 21 04:52:15.6±1.8, 37°.32N±0°.06×141°.7E±0°.1, h28km±8km, n11, σ0°81/18, 2C-3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.67**	**274**	⇑P	**Pb**	**04 52 28.9**	**+0.2**
JFK				S	**Sb**	**04 52 37.8**	**+0.1**
ONAJ	**Iwakimizuishiy**	**0.76**	**254**	⇑P	**Pb**	**04 52 30.2**	**-0.1**
ONAJ				S	**Sb**	**04 52 40.0**	**-0.2**
JMM	**Marumori**	**0.91**	**307**	⇓P	**Pn**	**04 52 32.3**	**-0.3**
JMM				*e*S	**Sb**	**04 52 43.8**	**-0.8**
JFT	**Otama**	**1.11**	**281**	⇓P	**Pn**	**04 52 36.1**	**+0.8**
JFT				S	**Sn**	**04 52 50.2**	**+0.4**
JHO	**Hitachi**	**1.16**	**233**	P	**Pn**	**04 52 35.2**	**-0.8**
JHO				S	**Sn**	**04 52 48.6**	**-2.2**
JIO	**Ouri**	**1.17**	**346**	⇓P	**Pn**	**04 52 35.7**	**-0.4**
JIO				*e*S	**Sn**	**04 52 49.7**	**-1.5**
JOU	**Okura**	**1.33**	**322**	P	**Pn**	**04 52 39.1**	**+0.7**
JYS	**Shirataka**	**1.58**	**305**	P	**Pn**	**04 52 42.7**	**+0.8**
JFY	**Yanaizu**	**1.60**	**274**	P	**Pn**	**04 52 43.3**	**+1.2**
JMK	**Ichinoseki**	**1.68**	**347**	P	**Pn**	**04 52 43.5**	**+0.4**
MAT	**Matsushiro**	**2.91**	**256**	P	**Pn**	**04 53 00.6**	**+0.5**
MAT				S	**Sn**	**04 53 34.7**	**+0.5**

IDC 21 04:53:32.3±1.5, 8°.75S×160°.26E, h76km±20km, mb3.5/6, mb1 3.8/6, mb1mx3.6/17, mbtmp3.5/6, Error ellipse: s-maj=55.8km s-min=23.8km az=145.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**0.74**	**204**	P	Pn	04 53 47.9	-0.2
	356nm,0.3s,baz=98,slow=1.1,SNR=122						
HNR				S	Sn	04 54 01.3	+1.5
	4μm,0.3s,baz=22,slow=19,SNR=117						
WRA	**Warramunga Arr**	**27.42**	**243**	P	P	04 59 10.8	-0.3
	baz=68,slow=9.1						
ASAR	**Alice Springs**	**29.25**	**236**	P	P	04 59 27.1	-0.2
	0.3nm,0.3s,baz=66,slow=9.9,SNR=5.4						
SONM	**Songino Array**	**73.68**	**325**	P	P	05 04 58.7	+1.0
	1.2nm,0.7s,baz=136,slow=5.7,SNR=7.8						
ILAR	**Eielson Array**	**83.15**	**20**	P	P	05 05 48.5	-1.1
	0.6nm,0.6s,baz=248,slow=5.5,SNR=10						
MKAR	**Makanchi Array**	**88.18**	**318**	P	P	05 06 15.2	+0.3
	0.4nm,0.3s,baz=92,slow=8.7,SNR=3.4						
NVAR	**Mina Array Bea**	**88.74**	**51**	P	P	05 06 18.9	+1.2
	0.4nm,0.8s,baz=231,slow=5.7,SNR=2.8						
PDAR	**Pinedale Array**	**96.00**	**48**	P	P	05 06 51.6	+0.4
	0.3nm,0.6s,baz=213,slow=3.1,SNR=3.9						

IDC 21 04:58:18.7±2.1, 5°.90S×151°.66E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.7/15, mbtmp3.7/4, MS3.3/1, Ms1 3.3/1, ms1mx2.4/20, Error ellipse: s-maj=79.5km s-min=32.3km az=116.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**24.58**	**222**	P	P	05 03 40.9	+0.3
	2.5nm,0.9s,baz=58,slow=8.9,SNR=11						
KSRS	**Korea Array**	**48.48**	**335**	LR	LR	05 25 42.2	
	comp=Z,32nm,19.8s,baz=233,slow=34						
SONM	**Songino Array**	**66.65**	**329**	P	P	05 09 12.5	+1.3
	0.2nm,0.3s,baz=120,slow=10,SNR=2.7						
MKAR	**Makanchi Array**	**80.40**	**319**	P	P	05 10 31.4	-0.8
	0.2nm,0.3s,baz=108,slow=4.7,SNR=2.4						
ILAR	**Eielson Array**	**83.60**	**22**	P	P	05 10 48.8	+0.2
	0.6nm,0.8s,baz=258,slow=4.9,SNR=7.1						

*ISCJB **21** 05:36:27.1±0.7, 36°.44N±0°.04×25°.64E±0°.07, h13km±5km, Error ellipse: s-maj=9.3km s-min=6.7km az=6.8*
*NEIC **21** 05:36:27.3, 36°.41N×25°.44E, h9km, MD3.1(ATH), After ATH.*
*ATH **21** 05:36:27.0, 36°.40N×25°.42E, h6km, MD3.1/5*
*CSEM **21** 05:36:27.3±0.2, 36°.44N×25°.57E, h14km±2km, MD3.1, Error ellipse: s-maj=9.0km s-min=5.2km az=65.0*
*THE **21** 05:36:27.9, 36°.46N×25°.47E, h20km±2km, Error ellipse: s-maj=4.8km s-min=0.7km az=127.0*
ISC 21 05:36:27.4±0.7, 36°.45N±0°.04×25°.60E±0°.08, h17km±5km, n35, σ0°71/39, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THR2	**Thira island,**	**0.13**	**270**	P	**Pg**	**05 36 31.4**	**0.0**
THR2	**Thira island,**	**0.13**	**270**	P	**Pg**	**05 36 31.4**	**0.0**
THR1	**Thera Island**	**0.14**	**235**	P	**Pg**	**05 36 32.1**	**+0.7**
	6μm,0.1s						
THR1				S	**Sg**	**05 36 34.6**	**+0.5**
THR1	**Thera Island**	**0.14**	**235**	P	**Pg**	**05 36 32.1**	**+0.7**
	6μm,0.1s						
THR1				S	**Sg**	**05 36 34.6**	**+0.5**
THR3	**Thira Island,**	**0.16**	**256**	P	**Pg**	**05 36 31.6**	**-0.2**
THR3	**Thira Island,**	**0.16**	**256**	P	**Pg**	**05 36 31.6**	**-0.2**
THR6	**Thira Island,**	**0.18**	**241**	P	**Pg**	**05 36 31.5**	**-0.6**
THR6	**Thira Island,**	**0.18**	**241**	P	**Pg**	**05 36 31.5**	**-0.6**
THR5	**Thira Island,**	**0.20**	**261**	P	**Pg**	**05 36 32.1**	**-0.3**
THR5	**Thira Island,**	**0.20**	**261**	P	**Pg**	**05 36 32.1**	**-0.3**
APE	**Apeiranthos**	**0.62**	**355**	*e*Pg	**Pg**	**05 36 39.7**	**0.0**
APE	**Apeiranthos**	**0.62**	**355**	*e*PG	**Pg**	**05 36 39.7**	**0.0**
APE	**Apeiranthos**	**0.62**	**355**	P	**Pg**	**05 36 39.6**	**-0.1**
APE				S	**Sg**	**05 36 48.5**	**+0.4**
APE	**Apeiranthos**	**0.62**	**355**	*e*Pg	**Pg**	**05 36 39.7**	**0.0**
APE				S	**Sg**	**05 36 48.5**	**+0.4**
NPS	**Neapolis**	**1.18**	**179**	*e*Pb	**Pb**	**05 36 48.3**	**-1.1**
NPS	**Neapolis**	**1.18**	**179**	*e*PG	**Pb**	**05 36 48.3**	**-1.1**
NPS	**Neapolis**	**1.18**	**179**	*e*Pb	**Pb**	**05 36 48.3**	**-1.1**
LAST	**Lasithi**	**1.29**	**184**	*e*Pb	**Pb**	**05 36 51.5**	**+0.3**
LAST	**Lasithi**	**1.29**	**184**	*e*PB	**Pb**	**05 36 50.5**	**-0.7**
LAST	**Lasithi**	**1.29**	**184**	*e*Pb	**Pb**	**05 36 51.5**	**+0.3**
KARP	**Karpathos**	**1.55**	**125**	*e*Pg	**Pg**	**05 36 57.7**	**+0.3**
KARP	**Karpathos**	**1.55**	**125**	*e*PG	**Pg**	**05 36 57.7**	**+0.3**
KARP	**Karpathos**	**1.55**	**125**	*e*Pg	**Pg**	**05 36 57.7**	**+0.3**
SMG	**Samos**	**1.60**	**38**	*e*Pn	**Pn**	**05 37 00.2**	**+5.3**
SMG	**Samos**	**1.60**	**38**	*e*PN	**Pn**	**05 37 00.2**	**+5.3**
SMG	**Samos**	**1.60**	**38**	*e*Pn	**Pn**	**05 37 00.2**	**+5.3**
VLY	**Voula,Athens**	**2.01**	**315**	*e*Pg	**Pg**	**05 37 04.6**	**-1.5**
VLY	**Voula,Athens**	**2.01**	**315**	*e*PG	**Pg**	**05 37 03.6**	**-2.5**
VLY	**Voula,Athens**	**2.01**	**315**	*e*Pg	**Pg**	**05 37 04.6**	**-1.5**
KYTH	**Kithira**	**2.07**	**266**	*e*Pn	**Pn**	**05 37 02.4**	**+1.0**
KYTH	**Kithira**	**2.07**	**266**	*e*PN	**Pn**	**05 37 02.4**	**+1.0**
KYTH	**Kithira**	**2.07**	**266**	*e*Pn	**Pn**	**05 37 02.4**	**+1.0**
VLI	**Veliai**	**2.16**	**278**	*e*Pn	**Pn**	**05 37 03.1**	**+0.6**
VLI	**Veliai**	**2.16**	**278**	*e*PN	**Pn**	**05 37 03.1**	**+0.6**
VLI	**Veliai**	**2.16**	**278**	*e*Pn	**Pn**	**05 37 03.1**	**+0.6**

*ISK **21** 05:47:21.8, 39°.24N×34°.71E, h5km, ML2.2*
*ISCJB **21** 05:47:22.5±0.6, 39°.23N±0°.03×34°.68E±0°.07, h11km±11km, Error ellipse: s-maj=9.8km s-min=4.9km az=16.2*
*DDA **21** 05:47:23.0, 39°.06N×34°.39E, h7km±1km, Md2.9*
*CSEM **21** 05:47:22.7±0.3, 39°.25N×34°.65E, h2km, MD2.9, Error ellipse: s-maj=6.9km s-min=6.1km az=102.0*
ISC 21 05:47:23.1±0.6, 39°.24N±0°.03×34°.64E±0°.05, h4km±10km, n14, σ1°04/25, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AVNT	**Avonos**	**0.49**	**160**	*i*P	**Pg**	**05 47 32.1**	**-0.5**
AVNT				*i*S	**Sg**	**05 47 39.1**	**+0.2**
AVNT	**Avonos**	**0.49**	**160**	*i*P	**Pg**	**05 47 32.1**	**-0.5**
AVNT				*i*S	**Sg**	**05 47 39.1**	**+0.2**
YOZ	**Yozgat**	**0.66**	**53**	*e*PG	**Pg**	**05 47 34.3**	**-1.6**
YOZ				*e*SG	**Sg**	**05 47 44.7**	**+0.2**
YOZ	**Yozgat**	**0.66**	**53**	*e*Pg	**Pg**	**05 47 34.3**	**-1.5**
YOZ				*e*Sg	**Sg**	**05 47 44.7**	**+0.3**
CORM	**Corum**	**0.94**	**360**	*e*PG	**Pg**	**05 47 41.5**	**+0.4**
CORM				*e*SG	**Sg**	**05 47 54.6**	**+1.4**
CORM	**Corum**	**0.94**	**360**	*e*Pg	**Pg**	**05 47 41.5**	**+0.4**
BBAL	**Bala**	**1.21**	**285**	*i*P	**Pg**	**05 47 45.6**	**-0.8**
BBAL				*i*S	**Sg**	**05 48 00.6**	**-1.5**
BBAL	**Bala**	**1.21**	**285**	*i*P	**Pg**	**05 47 45.6**	**-0.8**
BBAL				*i*S	**Sg**	**05 48 00.6**	**-1.5**
SULT	**Sultanhani-AKS**	**1.36**	**220**	*e*PN	**Pg**	**05 47 49.7**	**+0.5**
SULT				*e*SN	**Sg**	**05 48 09.3**	**+2.4**
SULT	**Sultanhani-AKS**	**1.36**	**220**	*e*Pn	**Pg**	**05 47 49.7**	**+0.5**
SULT				*e*Sn	**Sg**	**05 48 09.3**	**+2.5**
ELDT	**Eldivan**	**1.56**	**324**	*i*P	**Pg**	**05 47 53.2**	**+0.3**
ELDT				*i*S	**Sn**	**05 48 13.0**	**+0.8**
ELDT	**Eldivan**	**1.56**	**324**	*i*P	**Pg**	**05 47 53.2**	**+0.2**
ELDT				*i*S	**Sn**	**05 48 13.0**	**+0.7**
KDHN	**Kadinhani**	**2.09**	**251**	*i*P	**Pn**	**05 47 57.8**	**-1.2**
KDHN	**Kadinhani**	**2.09**	**251**	*i*P	**Pn**	**05 47 57.8**	**-1.2**

*ISCJB **21** 05:52:22.5±1.3, 25°.8N±0°.2×105°.23E±0°.09, h10km, mb3.7/5, Error ellipse: s-maj=27.9km s-min=5.2km az=157.6*
*IDC **21** 05:52:24.1±5.5, 25°.83N×105°.09E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.5/23, mbtmp3.8/5, Error ellipse: s-maj=103.8km s-min=38.9km az=179.0*
*BJI **21** 05:52:26.0, 25°.99N×105°.20E, h9km, mb4.6/2, ML3.3/9, Ms3.4/1, Ms7 3.3/1*
ISC 21 05:52:24.3±1.4, 25°.8N±0°.2×105°.27E±0°.10, h10km, n8, σ1°03/11, mb3.7/5, Southeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GYA	**Guiyang**	**1.43**	**61**	Pg	**Pg**	**05 52 51.9**	**+0.2**
GYA				Sg	**Sg**	**05 53 09.3**	**-1.0**
GYA				smax			
	comp=N,460nm,0.6s						
GYA				smax			

JAG				S	Sn	06 17 35.3	-0.6
JFY	**Yanaizu**	**2.11**	**305**	P	**Pn**	**06 17 14.5**	**+0.5**
JKT	**Katashina**	**2.18**	**286**	P	**Pn**	**06 17 14.9**	**-0.1**
JKT				S	**Sn**	**06 17 41.6**	**+0.2**
MJAR	**Matsushiro Arr**	**2.97**	**278**	Pn	**Pn**	**06 17 26.3**	**+0.5**
	17nm,0.3s,baz=85,slow=9.8,SNR=148						
MJAR				Sn	**Sn**	**06 18 05.1**	**+4.3**
	7.0nm,0.3s,baz=86,slow=16,SNR=5.3						
MAJO	**Matsushiro**	**2.97**	**278**	*e*Pn	**Pn**	**06 17 27.1**	**+1.3**
MAT	**Matsushiro**	**2.97**	**278**	P	**Pn**	**06 17 26.9**	**+1.0**
MAT				S	**Sn**	**06 17 59.5**	**-1.4**
JHJ	**Hachijo jima 2**	**3.53**	**210**	Pn	**Pn**	**06 17 33.0**	**-0.5**
	21nm,0.3s,baz=73,slow=22,SNR=10						
JHJ				Sn	**Sn**	**06 18 11.4**	**-3.1**
	56nm,0.3s,baz=75,slow=20,SNR=10						
ERM	**Erimo**	**5.89**	**9**	*e*Pn	**Pn**	**06 18 04.7**	**-1.2**
	6.2nm,0.6s						
ERM				*e*Sn	**Sn**	**06 19 11.5**	**-1.2**
ASAJ	**Asahikawa**	**7.92**	**4**	Pn	**Pn**	**06 18 34.4**	**+0.6**
	1.1nm,0.3s,baz=210,slow=8.1,SNR=4.7						
ASAJ				Sn	**Sn**	**06 20 02.3**	**-0.4**
	0.3nm,0.3s,baz=164,slow=16,SNR=3.0						
ASAJ				LR	LR	06 22 40.8	
	comp=Z,80nm,18.6s,baz=166,slow=46						
CBIJ	**Chichi jima**	**9.09**	**178**	Pn	**Pn**	**06 18 46.1**	**-3.7**
	3.8nm,0.3s,baz=266,slow=19,SNR=2.7						
CBIJ				Sn	**Sn**	**06 20 19.9**	**-12**
	2.0nm,0.3s,baz=225,slow=7.1,SNR=2.1						
SONM	**Songino Array**	**28.55**	**305**	P	**P**	**06 22 35.1**	**+1.0**
	1.7nm,0.6s,mb3.9,baz=104,slow=10.0,SNR=9.1						
ZALV	**Zalesovo Beam**	**42.74**	**313**	P	**P**	**06 24 36.3**	**+0.9**
	0.6nm,0.4s,mb3.7,baz=94,slow=6.6,SNR=5.9						
MK31	**Makanchi Array**	**44.87**	**303**	*e*P	**P**	**06 24 53.3**	**+0.7**
MKAR	**Makanchi Array**	**44.87**	**303**	P	**P**	**06 24 53.2**	**+0.6**
	1.0nm,0.6s,mb3.8,baz=86,slow=9.5,SNR=14						
KURK	**Kurchatov**	**46.73**	**309**	*e*P	**P**	**06 25 07.3**	**+0.1**
	1.7nm,0.5s,mb4.2						
ILAR	**Eielson Array**	**50.00**	**32**	P	**P**	**06 25 33.9**	**+1.7**
	0.4nm,0.7s,mb3.6,baz=262,slow=5.4,SNR=5.7						
BVAR	**Borovoye Array**	**51.40**	**313**	P	**P**	**06 25 44.0**	**+1.1**
	0.7nm,0.6s,mb3.8,baz=85,slow=8.8,SNR=3.6						
AML	**Almayashu**	**51.92**	**299**	*e*P	**P**	**06 25 40.8**	**-6.3**
	3.1nm,0.3s,mb4.7						
ABKAR	**Akbulak array**	**58.75**	**311**	*e*P	**P**	**06 26 36.2**	**+0.1**
	0.4nm,0.4s,mb3.8						
ASAR	**Alice Springs**	**60.02**	**188**	P	**P**	**06 26 45.5**	**+0.5**
	0.3nm,0.7s,mb3.4,baz=19,slow=12,SNR=3.2						
ARCES	**ARCESS Array B**	**64.90**	**340**	P	**P**	**06 27 17.9**	**+0.8**
	1.9nm,0.9s,mb4.1,baz=44,slow=11,SNR=3.6						
NOA	**NORSAR Array B**	**75.09**	**338**	P	**P**	**06 28 20.0**	**+0.2**
	1.6nm,0.8s,mb4.0,baz=37,slow=5.4,SNR=3.8						
NOA	**NORSAR Array B**	**75.09**	**338**	P	**P**	**06 28 20.0**	**+0.2**
AKASG	**Malin Array Be**	**75.18**	**323**	P	**P**	**06 28 20.3**	**-0.3**
	0.7nm,0.4s,mb4.0,baz=47,slow=5.9,SNR=4.0						
AKASG	**Malin Array Be**	**75.18**	**323**	P	**P**	**06 28 20.3**	**-0.3**
PDAR	**Pinedale Array**	**77.99**	**46**	P	**P**	**06 28 35.4**	**-1.2**
	0.4nm,1.0s,mb3.3,baz=302,slow=2.0,SNR=2.4						
LPAZ	**La Paz**	**146.78**	**61**	PKPbc	PKPbc	06 36 20.9	+0.2
	0.4nm,0.5s,baz=14,slow=4.2,SNR=3.6						

*ISCJB **21** 06:21:28.9±0.4, 40°.09N±0°.02×32°.71E±0°.04, h10km, Error ellipse: s-maj=4.4km s-min=3.3km az=8.0*
*ISK **21** 06:21:28.2, 40°.12N×32°.68E, h5km, MD2.9*
*CSEM **21** 06:21:29.5±0.2, 40°.09N×32°.71E, h2km, MD2.9, Error ellipse: s-maj=5.3km s-min=3.5km az=83.0*
*DDA **21** 06:21:29.5, 40°.08N×32°.71E, h19km±1km, Md2.9*
ISC 21 06:21:29.3±0.5, **40°.09N**±0°.02×**32°.74E**±0°.04, **h3**km±5km, **n29**, σ1**9**05/47, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOD	**Lodumlu**	**0.20**	**174**	*e*PG	**Pg**	**06 21 33.3**	**+0.1**
LOD				*e*SG	**Sg**	**06 21 36.8**	**+1.0**
LOD	**Lodumlu**	**0.20**	**174**	*e*Pg	**Pg**	**06 21 33.3**	**+0.1**
LOD				*e*Sg	**Sg**	**06 21 36.8**	**+1.0**
BBAL	**Bala**	**0.62**	**151**	*i* P	**Pg**	**06 21 41.4**	**+0.2**
BBAL				*i* S	**Sg**	**06 21 51.4**	**+2.1**
BBAL	**Bala**	**0.62**	**151**	*i* P	**Pg**	**06 21 41.4**	**+0.2**
BBAL				*i* S	**Sg**	**06 21 51.4**	**+2.1**
SGKT	**Sivrigoynuk**	**0.71**	**313**	*i* P	**Pg**	**06 21 42.9**	**0.0**
SGKT				*i* S	**Sg**	**06 21 53.1**	**+1.1**
SGKT	**Sivrigoynuk**	**0.71**	**313**	*i* P	**Pg**	**06 21 42.8**	**-0.1**
SGKT				*i* S	**Sg**	**06 21 53.1**	**+1.1**
SVRH	**Sivrihisar-ESK**	**1.13**	**236**	*e*PN	**Pg**	**06 21 50.2**	**-0.8**
SVRH	**Sivrihisar-ESK**	**1.13**	**236**	*e*Pn	**Pg**	**06 21 50.2**	**-0.8**
SAFT	**Safranbolu**	**1.15**	**358**	*e*PN	**Pg**	**06 21 50.4**	**-0.9**
SAFT	**Safranbolu**	**1.15**	**358**	*e*Pn	**Pg**	**06 21 50.4**	**-0.9**
MDU	**Mudurnu**	**1.22**	**288**	*e*PN	**Pg**	**06 21 50.7**	**-1.9**
TOS	**Tosya**	**1.36**	**46**	*e*PN	**Pn**	**06 21 54.6**	**-0.5**
TOS				*e*SN	**Sn**	**06 22 13.7**	**+0.1**
TOS	**Tosya**	**1.36**	**46**	*e*Pn	**Pn**	**06 21 54.6**	**-0.5**
TOS				*e*Sn	**Sn**	**06 22 13.7**	**+0.1**
KIZT	**Kizilcal**	**1.38**	**209**	*e*PN	**Pn**	**06 21 55.0**	**-0.4**
KIZT				*e*SN	**Sn**	**06 22 15.0**	**+0.9**
KIZT	**Kizilcal**	**1.38**	**209**	*e*Pn	**Pn**	**06 21 55.0**	**-0.3**
KIZT				*e*Sn	**Sn**	**06 22 15.0**	**+1.0**
CORM	**Corum**	**1.46**	**86**	*e*PN	**Pn**	**06 21 56.8**	**+0.4**
CORM	**Corum**	**1.46**	**86**	*e*Pn	**Pn**	**06 21 56.8**	**+0.4**
BALT	**Daday**	**1.52**	**19**	*i* P	**Pg**	**06 21 58.2**	**-0.3**
BALT				*i* S	**Sg**	**06 22 19.9**	**+1.6**
BALT	**Daday**	**1.52**	**19**	*i* P	**Pg**	**06 21 58.2**	**-0.3**
BALT				*i* S	**Sg**	**06 22 19.9**	**+1.7**
ESKT	**Eskisehir**	**1.56**	**249**	*e*PN	**Pn**	**06 21 56.5**	**-1.3**
ESKT	**Eskisehir**	**1.56**	**249**	*i* P	**Pg**	**06 21 60.0**	**+0.8**
ESKT				*i* S	**Sg**	**06 22 22.9**	**+3.5**
ESKT	**Eskisehir**	**1.56**	**249**	*e*Pn	**Pn**	**06 21 56.5**	**-1.3**
SEYT	**Eskypehyr**	**1.56**	**249**	*i* P	**Pg**	**06 22 00.0**	**+0.8**
SEYT				*i* S	**Sg**	**06 22 22.9**	**+3.5**
KDHN	**Kadinhani**	**1.64**	**197**	*i* P	**Pg**	**06 22 00.2**	**-0.5**
KDHN				*i* S	**Sg**	**06 22 21.9**	**-0.1**
KDHN	**Kadinhani**	**1.64**	**197**	*i* P	**Pg**	**06 22 00.2**	**-0.5**
KDHN				*i* S	**Sg**	**06 22 21.9**	**0.0**
AVNT	**Avonos**	**2.10**	**128**	*i* P	**Pg**	**06 22 08.3**	**-1.2**
AVNT				*i* S	**Sg**	**06 22 34.6**	**-2.1**
AVNT	**Avonos**	**2.10**	**128**	*i* P	**Pg**	**06 22 08.4**	**-1.1**
AVNT				*i* S	**Sg**	**06 22 34.6**	**-2.1**
DIKM	**Dikmen**	**2.47**	**50**	*e*PN	**Pn**	**06 22 11.1**	**+0.8**
DIKM	**Dikmen**	**2.47**	**50**	*e*Pn	**Pn**	**06 22 11.1**	**+0.8**

DJA 21 06:45:46, 1°.67S×124°.08E, h14km, MLv4.0/4, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**1.45**	**295**	P	Pn	06 46 11.6	-0.2
LUWI				S	Sn	06 46 30.7	+0.1
KMSI	**Cibinong**	**2.23**	**357**	P	Pn	06 46 22.3	-0.3
KMSI				S	Sn	06 46 51.6	+1.6
APSI	**Ampana**	**2.54**	**287**	P	Pn	06 46 26.9	0.0
APSI				S	Sn	06 47 00.8	+3.1
MNI	**Manado**	**3.19**	**14**	P	Pn	06 46 37.2	+1.5

*ISCJB **21** 07:06:10.4±1.7, 4°.9S±0°.1×150°.9E±0°.2, h296km±15km, mb4.2/11, Error ellipse: s-maj=30.8km s-min=14.3km az=27.9*
*IDC **21** 07:06:10.6±2.0, 4°.87S×150°.94E, h284km±18km, mb3.8/7, mb1 3.9/8, mb1mx3.6/17, mbtmp3.8/8, Error ellipse: s-maj=35.6km s-min=10.9km az=119.0*
*NEIC **21** 07:06:10.9±1.7, 4°.78S×150°.86E, h285km±16km, mb4.4/4, Error ellipse: s-maj=24.6km s-min=13.6km az=119.0*
ISC 21 07:06:11.2±1.6, **4°.9S**±0°.1×**150°.9E**±0°.2, **h288**km±15km, **n24**, σ0**8**87/25, **mb4.2**/11, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.84**	**219**	*e*Pn	**Pn**	**07 07 38.1**	**-0.2**
PMG	160nm,0.8s						
COEN	**Coen**	**11.81**	**220**	*e*P	**Pn**	**07 08 55.0**	**+3.2**
COEN	**Coen**	**11.81**	**220**	Pn	**Pn**	**07 08 52.3**	**+0.5**
CTA	**Charters Tower**	**15.79**	**196**	*e*P	**Pn**	**07 09 38.5**	**-0.9**
	3.4nm,0.5s						
CTA	**Charters Tower**	**15.79**	**196**	P	**Pn**	**07 09 38.9**	**-0.5**
	0.6nm,0.3s,baz=19,slow=12,SNR=9.8						
KAKA	**Kakadu**	**19.82**	**246**	*e*P	**P**	**07 10 20.2**	**-0.9**
	47nm,0.5s						
KAKA	**Kakadu**	**19.82**	**246**	*e*P	**P**	**07 10 20.4**	**-0.7**
	137nm,0.6s						
WRAB	**Tennant Creek**	**22.00**	**226**	*e*P	**P**	**07 10 43.8**	**+1.5**
	7.3nm,0.5s,mb4.3						
WRA	**Warramunga Arr**	**22.01**	**226**	P	**P**	**07 10 43.1**	**+0.7**
	baz=49,slow=9.7						
WRA				ScP	ScP	07 17 40.8	+1.3
	baz=34,slow=2.6						
QLP	**Quilpie**	**22.52**	**196**	*e*P	**P**	**07 10 47.7**	**+0.8**
ASAR	**Alice Springs**	**24.86**	**220**	P	**P**	**07 11 08.4**	**+0.3**
	8.1nm,0.4s,mb4.5,baz=51,slow=8.7,SNR=130						
ASAR				S	**S**	**07 15 09.1**	**-0.3**
	0.5nm,0.7s,baz=40,slow=13,SNR=4.0						
ASAR				ScP	ScP	07 17 48.7	+1.6
	1.5nm,1.0s,baz=34,slow=3.6,SNR=7.7						
FITZ	**Fitzroy Crossi**	**27.97**	**240**	*e*P	**P**	**07 11 35.3**	**-0.7**
	13nm,0.4s,mb4.7						
FITZ	**Fitzroy Crossi**	**27.97**	**240**	P	**P**	**07 11 35.5**	**-0.5**
	8.0nm,0.4s,mb4.5,baz=61,slow=10,SNR=63						
FITZ	**Fitzroy Crossi**	**27.97**	**240**	*e*P	**P**	**07 11 35.8**	**-0.2**
	3.7nm,0.4s,mb4.2						
STKA	**Stephens Creek**	**28.25**	**197**	P	**P**	**07 11 37.9**	**-0.4**
	2.4nm,0.5s,mb3.9,baz=33,slow=6.2,SNR=5.6						
STKA	**Stephens Creek**	**28.25**	**197**	*e*P	**P**	**07 11 38.5**	**+0.3**
FORT	**Forrest**	**33.56**	**217**	*e*P	**P**	**07 12 24.2**	**-0.5**
	24nm,0.6s,mb4.9						
MBWA	**Marble Bar**	**34.30**	**239**	*e*P	**P**	**07 12 30.6**	**-0.5**
	3.7nm,0.3s,mb4.4						
KLBR	**Kellerberrin**	**40.89**	**225**	*e*P	**P**	**07 13 24.8**	**-1.1**
	58nm,1.6s,mb4.6						
PETK	**Petropavlovsk-**	**58.04**	**5**	P	**P**	**07 15 34.0**	**-0.2**
	4.0nm,0.5s,mb4.1,baz=166,slow=7.6,SNR=12						
SONM	**Songino Array**	**65.38**	**329**	P	**P**	**07 16 24.5**	**+1.4**
	0.5nm,0.5s,mb3.4,baz=142,slow=4.1,SNR=3.8						
ILAR	**Eielson Array**	**82.94**	**22**	P	**P**	**07 18 02.3**	**-1.4**
	1.2nm,0.6s,mb3.9,baz=251,slow=5.2,SNR=22						
NVAR	**Mina Array Bea**	**93.62**	**52**	P	**P**	**07 18 55.8**	**+0.6**
	0.6nm,0.7s,mb3.7,baz=263,slow=5.0,SNR=5.9						
TORD	**Torodi Ar. Bea**	**148.51**	**287**	PKPbc	PKPbc	07 25 24.6	-0.5
	0.8nm,0.6s,baz=87,slow=2.7,SNR=9.8						

*NIED **21** 07:26:00, 36°.20N×142°.10E, h23km, Mw4.3 Best double couple: M0 3.66000×10^15 NP1:φ=8.00000°, δ=63.00000°, λ=74.00000°. NP2:φ=219.00000°, δ=31.00000°, λ=118.00000°.*
*IDC **21** 07:26:26.9±0.6, 36°.16N×142°.08E, h0km, mb4.0/19, mb1 4.2/24, mb1mx4.1/32, mbtmp4.1/24, ML4.0/5, MS3.8/13, Ms1 3.8/13, ms1mx3.4/43, Error ellipse: s-maj=16.1km s-min=14.7km az=138.0*
*ISCJB **21** 07:26:28.4±1.2, 36°.26N±0°.03×142°.12E±0°.05, h21km±8km, mb4.2/31, MS3.8/14, Error ellipse: s-maj=6.3km s-min=4.5km az=19.1*
*JMA **21** 07:26:29.2±0.1, 36°.24N×142°.10E, h70km±4km, M4.0*
*MOS **21** 07:26:29.0±1.1, 36°.28N×142°.13E, h27km, mb4.4/19, Error ellipse: s-maj=11.3km s-min=7.7km az=106.7*
*BJI **21** 07:26:30.4, 36°.20N×142°.00E, h35km, mB4.5/8, mb4.4/15, Ms4.1/8, Ms7 3.8/6*
*NEIC **21** 07:26:32.4±1.3, 36°.18N×142°.02E, h36km±11km, mb4.6/6, MW4.3(NIED), Error ellipse: s-maj=8.9km s-min=8.4km az=181.0*
ISC 21 07:26:29.0±1.4, **36°.26N**±0°.03×**142°.06E**±0°.04, **h12**km±8km, **h32**km±8km:**pP-P**, **n93**, σ1**8**02/108, **mb4.2**/31, **MS3.8**/14, **10C-2D**, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.12**	**241**	⇑P	**Pb**	**07 26 49.8**	**-0.4**
CHOJ				S	**Sb**	**07 27 05.3**	**+0.6**
JHO	**Hitachi**	**1.25**	**287**	⇑P	**Pn**	**07 26 51.4**	**-0.8**
ONAJ	**Iwakimizuishiy**	**1.32**	**310**	⇑P	**Pn**	**07 26 52.5**	**-0.6**
JFK	**Kawauchi**	**1.46**	**320**	P	**Pn**	**07 26 54.5**	**-0.6**
JFK				S	**Sn**	**07 27 13.5**	**-0.6**
JYT	**Yasato**	**1.51**	**269**	⇑P	**Pn**	**07 26 54.9**	**-0.8**
JCN	**Nagara**	**1.72**	**242**	P	**Pn**	**07 27 00.9**	**+2.2**
BSO1	**Boso 1**	**1.82**	**209**	P	**Pn**	**07 26 59.2**	**-0.9**
BSO1				S	**Sn**	**07 27 22.7**	**-0.4**
JSB	**Shiboa**	**1.86**	**293**	⇑P	**Pn**	**07 27 01.0**	**+0.4**
JFT	**Otama**	**1.87**	**313**	⇑P	**Pn**	**07 27 01.2**	**+0.5**
JMM	**Marumori**	**1.90**	**328**	⇑P	**Pn**	**07 27 00.3**	**-0.8**
JMM				S	**Sn**	**07 27 24.3**	**-0.7**
BSO3	**Boso 3**	**1.92**	**221**	P	**Pn**	**07 27 00.6**	**-0.8**
BSO3				S	**Sn**	**07 27 23.5**	**-2.0**
JAG	**Ashikaga**	**2.11**	**275**	⇑P	**Pn**	**07 27 03.6**	**-0.4**
JAG				S	**Sn**	**07 27 29.4**	**-0.7**
JFY	**Yanaizu**	**2.21**	**302**	⇑P	**Pn**	**07 27 05.7**	**+0.3**
JIO	**Ouri**	**2.27**	**346**	P	**Pn**	**07 27 05.0**	**-1.2**
JIO				S	**Sn**	**07 27 32.0**	**-2.0**
JKT	**Katashina**	**2.32**	**284**	⇑P	**Pn**	**07 27 07.3**	**+0.4**
JKT				S	**Sn**	**07 27 35.6**	**+0.3**
MJAR	**Matsushiro Arr**	**3.12**	**276**	Pn	**Pn**	**07 27 18.6**	**+0.8**
	8.4nm,0.3s,baz=156,slow=33,SNR=82						
MJAR				Sn	**Sn**	**07 28 02.3**	**+7.3**
	6.0nm,0.3s,baz=180,slow=28,SNR=5.3						
MJAR				LR	LR	07 28 47.0	
	comp=Z,1μm,18.1s,baz=135,slow=45						
MJAR	**Matsushiro Arr**	**3.12**	**276**	P	**Pn**	**07 27 18.6**	**+0.7**
MJAR						07 28 02.3	
MJAR				pmax	pmax		
	comp=Z,8.0nm,0.3s						
MJAR				smax			
	comp=N,6.0nm,0.3s						
MJAR				MLR	MLR		
	comp=Z,1μm,18.1s						
MAJO	**Matsushiro**	**3.12**	**276**	*e*Pn	**Pn**	**07 27 19.1**	**+1.2**
MAJO				*e*Sn	**Sn**	**07 27 47.7**	**-7.3**
MAT	**Matsushiro**	**3.12**	**276**	P	**Pn**	**07 27 18.9**	**+1.0**
MAT				S	**Sn**	**07 27 55.7**	**+0.7**
JHJ	**Hachijo jima 2**	**3.65**	**212**	Pn	**Pn**	**07 27 23.8**	**-1.4**
	comp=Z,46nm,0.3s,baz=336,slow=20,SNR=12						
JHJ				Sn	**Sn**	**07 28 04.2**	**-3.9**
	comp=Z,147nm,0.3s,baz=251,slow=23,SNR=8.8						
ERM	**Erimo**	**5.81**	**8**	*e*P	**Pn**	**07 27 53.0**	**-1.9**
ERM				*e*		07 29 00.1	
ERM				pmax	pmax		
	comp=Z,31nm,0.8s						
ERM	**Erimo**	**5.81**	**8**	*e*Pn	**Pn**	**07 27 53.0**	**-1.9**
	comp=Z,31nm,0.8s						
ERM				*e*Sn	**Sn**	**07 29 00.1**	**-1.4**
ASAJ	**Asahikawa**	**7.86**	**3**	Pn	**Pn**	**07 28 21.9**	**-1.1**
	comp=Z,2.2nm,0.3s,baz=215,slow=14,SNR=7.9						
ASAJ				Sn	**Sn**	**07 29 50.2**	**-1.6**
	comp=Z,1.2nm,0.3s,baz=319,slow=20,SNR=4.1						
ASAJ				LR	LR	07 32 19.0	
	comp=Z,458nm,19.7s,baz=184,slow=44						
ASAJ	**Asahikawa**	**7.86**	**3**	P	**Pn**	**07 28 22.0**	**-1.0**
ASAJ						07 29 50.3	
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,458nm,19.7s						
YUK	**Yuzh-Kuril'sk**	**8.30**	**19**	*e*P	**Pn**	**07 28 30.9**	**+1.9**
CBIJ	**Chichi jima**	**9.13**	**179**	Pn	**Pn**	**07 28 38.1**	**-2.4**
	comp=Z,16nm,0.3s,baz=308,slow=13,SNR=15						
CBIJ				Sn	**Sn**	**07 30 12.0**	**-11**
	comp=Z,19nm,0.3s,baz=272,slow=22,SNR=6.5						
YSS	**Yuzh-Sakhalins**	**10.70**	**3**	*e*P	**Pn**	**07 29 02.0**	**+0.1**
YSS				MLR	MLR		
	comp=Z,500nm,16.0s						
YSS				MLR	MLR		
	comp=N,500nm,14.0s						
YSS				MLR	MLR		
	comp=E,500nm,15.0s						
KSRS	**Korea Array**	**11.39**	**280**	Pn	**Pn**	**07 29 13.3**	**+1.9**
	comp=E,0.2nm,0.3s,baz=94,slow=13,SNR=6.9						
KSRS				LR	LR	07 33 39.6	
	comp=E,317nm,18.8s,baz=251,slow=38						
NJ2	**Nanjing**	**19.64**	**264**	*e*P	**P**	**07 31 02.5**	**+3.6**
NJ2				PP		07 31 18.5	
NJ2				S	**Sn**	**07 34 28.0**	**-11**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,40nm,3.5s						
NJ2				LR	LR		
	comp=N,280nm,11.6s						
NJ2				LR	LR		
	comp=E,180nm,12.3s						
BJI	**Beijing**	**20.68**	**288**	P	**P**	**07 31 06.3**	**-2.4**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BJI				LR	LR		
	comp=N,200nm,15.9s,MS3.8						
BJI				LR	LR		
	comp=E,230nm,15.5s,MS3.8						
BJI				LR	LR		
	comp=Z,71nm,18.6s,MS3.1						
GUMO	**Guam**	**22.71**	**173**	LR	LR	07 37 31.5	
	comp=Z,24nm,21.4s,MS2.6,baz=313,slow=29						
WHN	**Wuhan**	**23.78**	**264**	*e*P	**P**	**07 31 50.0**	**+8.5**
YAK	**Yakutsk**	**26.94**	**347**	*e*P	**P**	**07 32 10.7**	**+0.9**
YAK				*e*PP	pP	07 32 18.9	+5.3
YAK				*e*PPP		07 33 03.8	
YAK				*e*		07 35 30.4	
YAK				*e*S	**S**	**07 36 47.5**	**+1.1**
YAK				*e*SS		07 37 51.9	
YAK				*e*		07 43 02.5	
YAK				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.3						
YAK				pmax	pmax		
	comp=N,9.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.1s						
YAK				smax			
	comp=N,43nm,12.2s						
YAK				smax			
	comp=E,22nm,13.6s						
YAK				MLR	MLR		
	comp=Z,311nm,15.0s,MS4.0						
YAK				MLR	MLR		
	comp=N,237nm,13.0s,MS4.0						
YAK				MLR	MLR		
	comp=E,88nm,14.0s,MS4.0						
ENH	**Enshi**	**27.80**	**267**	*e*P	**P**	**07 32 17.1**	**-0.7**
	comp=E,15nm,0.6s,mb4.8						
ULN	**Ulaanbaatar**	**28.22**	**305**	*e*P	**P**	**07 32 22.5**	**+1.0**
ULN				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.3						
ULN	**Ulaanbaatar**	**28.22**	**305**	*e*P	**P**	**07 32 22.4**	**+1.0**
	comp=Z,7.0nm,0.8s,mb4.3						
SONM	**Songino Array**	**28.65**	**305**	P	**P**	**07 32 26.3**	**+1.1**
	comp=Z,5.2nm,0.6s,mb4.4,baz=106,slow=9.0,SNR=35						
SONM				LR	LR	07 44 12.8	
	comp=Z,108nm,19.2s,MS3.5,baz=97,slow=37						
SONM	**Songino Array**	**28.65**	**305**	P	**P**	**07 32 26.3**	**+1.0**
SONM				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SONM				MLR	MLR		
	comp=Z,109nm,19.2s						
LZH	**Lanzhou**	**30.72**	**281**	*e*P	**P**	**07 32 43.5**	**-0.2**
LZH				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.8						
TLY	**Talaya**	**31.23**	**312**	*e*P	**P**	**07 32 48.9**	**+0.8**
TLY				*e*		07 32 58.2	
TLY				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.5						
TLY				MLR	MLR		
	comp=Z,202nm,15.0s,MS3.9						
QIZ	**Qiongzhong**	**33.09**	**247**	P	**P**	**07 33 12.4**	**+7.7**
QIZ				pP	pP	07 33 21.4	+13
QIZ				S	**S**	**07 38 28.3**	**+4.7**
QIZ				LR	LR		
	comp=N,150nm,16.4s						
QIZ				LR	LR		
	comp=Z,120nm,17.6s,MS3.7						
GTA	**Gaotai**	**33.29**	**288**	*e*P	**P**	**07 33 06.9**	**+0.6**
GTA				pP	pP	07 33 16.1	+6.0
GTA				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
CMAR	**Chiang Mai Arr**	**41.81**	**257**	P	**P**	**07 34 18.6**	**0.0**
	comp=Z,1.1nm,0.3s,mb4.0,baz=44,slow=7.4,SNR=7.0						
CMAR	**Chiang Mai Arr**	**41.81**	**257**	P	**P**	**07 34 18.6**	**0.0**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAA0	**Zalesovo Array**	**42.82**	**313**	*e*P	**P**	**07 34 26.8**	**+0.4**
ZALV	**Zalesovo Beam**	**42.82**	**313**	P	**P**	**07 34 26.8**	**+0.3**
	comp=Z,3.9nm,0.8s,mb4.2,baz=92,slow=6.8,SNR=8.0						
ZALV				LR	LR	07 53 13.5	
	comp=Z,83nm,18.2s,MS3.7,baz=66,slow=37						
ZALV	**Zalesovo Beam**	**42.82**	**313**	P	**P**	**07 34 26.8**	**+0.4**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
ZALV				MLR	MLR		
	comp=Z,83nm,18.2s,MS3.7						
MK31	**Makanchi Array**	**44.97**	**303**	*e*P	**P**	**07 34 44.3**	**+0.5**
MKAR	**Makanchi Array**	**44.97**	**303**	P	**P**	**07 34 43.8**	**0.0**
	comp=Z,5.1nm,0.7s,mb4.5,baz=88,slow=8.6,SNR=24						
MKAR				LR	LR	07 54 28.7	
	comp=Z,65nm,18.1s,MS3.6,baz=356,slow=37						
MKAR	**Makanchi Array**	**44.97**	**303**	P	**P**	**07 34 43.8**	**0.0**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MKAR				MLR	MLR		
	comp=Z,65nm,18.1s						
KURK	**Kurchatov**	**46.82**	**309**	⇓*i*P	**P**	**07 34 58.5**	**+0.2**
KURK				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.7						
KURK	**Kurchatov**	**46.82**	**309**	*e*P	**P

comp=Z,7.3nm,0.7s,mb4.7
HFS Hagfors 75.01 336 LR LR 08 13 56.3
comp=Z,96nm,19.6s,MS4.1,baz=23,slow=5.9,SNR=7.4
NVAR Mina Array Bea 75.04 53 P **P** **07 38 11.7 +1.2**
comp=Z,0.6nm,0.7s,mb3.6,baz=282,slow=5.9,SNR=7.4
NB2 NORSAR Subarra 75.10 338 P **P** **07 38 08.7 -1.7**
comp=Z,3.2nm,1.0s,mb4.2,baz=40,slow=6.2
NOA NORSAR Array B 75.10 338 P **P** **07 38 10.9 +0.5**
comp=Z,1.4nm,0.8s,mb3.9,baz=40,slow=5.9,SNR=4.3
NOA LR LR 08 14 49.7
comp=Z,63nm,18.8s,MS3.9,baz=25,slow=39
NOA NORSAR Array B 75.10 338 P **P** **07 38 10.9 +0.5**
NOA pmax pmax
comp=Z,1.0nm,0.8s
NOA MLR MLR
comp=Z,63nm,18.8s
AKASG Malin Array Be 75.23 323 P **P** **07 38 10.9 -0.4**
comp=Z,0.6nm,0.4s,mb3.9,baz=50,slow=6.6,SNR=4.1
AKASG Malin Array Be 75.23 323 P **P** **07 38 10.9 -0.4**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
PDAR Pinedale Array 77.84 46 P **P** **07 38 26.8 +0.6**
comp=Z,0.4nm,0.6s,mb3.5,baz=294,slow=3.0,SNR=6.0
BRTR Keskin Array B 79.76 312 P **P** **07 38 38.0 +1.1**
comp=Z,1.0nm,0.9s,mb3.8,baz=119,slow=4.4,SNR=5.1
BRTR Keskin Array B 79.76 312 P **P** **07 38 38.0 +1.2**
BRTR pmax pmax
comp=Z,1.0nm,0.9s
VRAC Vranov 82.06 327 LR LR 08 19 03.9
comp=Z,105nm,18.5s,MS4.2,baz=206,slow=38
TXAR Lajitas Array 90.18 53 P **P** **07 39 29.8 +0.4**
comp=Z,0.3nm,0.7s,mb3.7,baz=301,slow=3.4,SNR=5.0
LPAZ La Paz 146.63 61 PKPbc PKPbc 07 46 11.4 +0.6
comp=Z,0.8nm,0.5s,baz=359,slow=5.8,SNR=4.9

IDC 21 07:28:49.9±2.4, 55°.38N×85°.83E, h0km, mb1 3.4/2, mb1mx3.2/26, mbtmp3.4/2, ML3.4/2, Error ellipse: s-maj=20.4km s-min=6.7km az=27.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.55**	**203**	Pg	Pg	07 29 16.5	-3.1
	8.1nm,0.3s,baz=24,slow=14,SNR=90						
ZALV				Lg		07 29 40.4	
	5.1nm,0.3s,baz=24,slow=28,SNR=12						
MKAR	**Makanchi Array**	**8.88**	**196**	Pn	Pn	07 30 58.0	-1.3
	0.2nm,0.3s,baz=17,slow=12,SNR=6.4						
MKAR				Sn	Sn	07 32 38.5	-1.4
	0.1nm,0.3s,baz=19,slow=25,SNR=2.8						
MKAR				Lg		07 33 32.4	
	0.1nm,0.3s,baz=20,slow=29,SNR=2.4						
BVAR	**Borovoye Array**	**9.35**	**262**	Pn	Pn	07 31 05.7	-0.1
	0.7nm,0.3s,baz=72,slow=15,SNR=11						

*ISCJB **21** 07:55:40.4±0.6, 70°.51N±0°.04×14°.2W±0°.2, h10km, mb3.4/4, Error ellipse: s-maj=9.1km s-min=4.7km az=26.3*
*IDC **21** 07:55:41.8±1.1, 70°.74N×13°.79W, h0km, mb3.5/4, mb1 3.9/10, mb1mx3.6/30, mbtmp3.8/10, ML3.6/4, MS2.9/3, Ms1 3.0/3, ms1mx2.7/30, Error ellipse: s-maj=24.6km s-min=19.4km az=28.0*
*NEIC **21** 07:55:42.9±0.6, 70°.75N×13°.84W, h10km, Error ellipse: s-maj=11.1km s-min=8.8km az=25.0*
*CSEM **21** 07:55:43.0±0.2, 70°.58N×14°.18W, h20km, ML3.8, Error ellipse: s-maj=9.1km s-min=5.3km az=111.0*
*REY **21** 07:55:45.0, 70°.11N×13°.03W, h10km, ML3.8, ML3.1*
ISC 21 07:55:43.1±2.1, 70°.53N±0°.04×14°.2W±0°.2, h17km±15km, n36, σ0.97/44, mb3.4/4, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMIC	**Jan Mayen**	**1.93**	**74**	Pn	**Pn**	**07 56 11.9**	**-3.2**
	2.5nm,0.3s,baz=113,slow=13,SNR=7.7						
JMIC				Sn	**Sn**	**07 56 32.0**	**-7.1**
	16nm,0.3s,baz=72,slow=22,SNR=14						
ILEI	**Leirhofn**	**4.23**	**193**	P	**Pn**	**07 56 46.1**	**-0.7**
IGRI	**Grimsey**	**4.25**	**201**	P	**Pn**	**07 56 47.4**	**+0.4**
IGRI				S	**Sn**	**07 57 35.9**	**-0.3**
IGIL	**Gilhagi**	**4.55**	**191**	P	**Pn**	**07 56 50.2**	**-0.9**
IGIL				S	**Sn**	**07 57 42.4**	**-1.2**
IFLA	**Flatey**	**4.60**	**199**	P	**Pn**	**07 56 52.5**	**+0.7**
IFLA				S	**Sn**	**07 57 45.0**	**+0.3**
IHED	**Heoinshofoi**	**4.62**	**196**	P	**Pn**	**07 56 51.9**	**-0.2**
IHED				S	**Sn**	**07 57 44.7**	**-0.6**
IBRE	**Brettingsstaoi**	**4.64**	**199**	P	**Pn**	**07 56 53.0**	**+0.6**
IBRE				S	**Sn**	**07 57 45.2**	**-0.6**
IGRA	**Granastaoir**	**4.81**	**197**	P	**Pn**	**07 56 54.9**	**+0.2**
IGRA				S	**Sn**	**07 57 49.8**	**-0.1**
IHLA	**Hella**	**4.87**	**201**	P	**Pn**	**07 56 56.4**	**+0.9**
IHLA				S	**Sn**	**07 57 51.3**	**-0.1**
IGRS	**Grimsstaoir**	**4.97**	**189**	P	**Pn**	**07 56 56.4**	**-0.5**
IGRS				S	**Sn**	**07 57 53.6**	**-0.4**
ISVA	**Svartarkot**	**5.35**	**194**	P	**Pn**	**07 57 02.5**	**+0.4**
IADA	**Aoalbol**	**5.57**	**186**	P	**Pn**	**07 57 04.6**	**-0.5**
BORG	**Borgarnes**	**6.42**	**209**	Pn	**Pn**	**07 57 20.7**	**+4.0**
	5.9nm,0.3s,baz=12,slow=8.6,SNR=24						
BORG	**Borgarnes**	**6.42**	**209**	*e*Pn	**Pn**	**07 57 21.5**	**+4.8**
SUMG	**Summit**	**7.93**	**296**	*e*Pn	**Pn**	**07 57 36.9**	**-0.6**
	11nm,0.9s						
SUMG	**Summit**	**7.93**	**296**	*i* P	**Pn**	**07 57 37.0**	**-0.5**
	5.7nm,0.8s						
SUMG	**Summit**	**7.93**	**296**	*i* P	**Pn**	**07 57 37.1**	**-0.4**
	5.7nm,0.8s,SNR=28						
KBS	**Kingsbay**	**10.72**	**27**	*i* P	**Pn**	**07 58 12.3**	**-3.3**
	8.0nm,0.8s,SNR=28						
SPITS	**Spitsbergen Ar**	**11.06**	**33**	Pn	**Pn**	**07 58 18.8**	**-1.5**
	baz=233,slow=12,SNR=49						
SPITS	**Spitsbergen Ar**	**11.06**	**33**	Pn	**Pn**	**07 58 18.8**	**-1.5**
NOA	**NORSAR Array B**	**13.97**	**120**	Pn	**Pn**	**07 59 00.6**	**+0.5**
	0.1nm,0.3s,baz=300,slow=14,SNR=2.8						
NOA				LR	LR	08 03 40.8	
	comp=Z,41nm,21.2s,baz=320,slow=34						
NOA	**NORSAR Array B**	**13.97**	**120**	Pn	**Pn**	**07 59 00.6**	**+0.6**
HFS	**Hagfors**	**15.43**	**118**	Pn	**Pn**	**07 59 19.4**	**-0.3**
	0.1nm,0.3s,baz=327,slow=6.9,SNR=3.4						
HFS				LR	LR	08 03 27.5	
	comp=Z,35nm,20.7s,baz=27,slow=30						
HFS	**Hagfors**	**15.43**	**118**	Pn	**Pn**	**07 59 19.4**	**-0.3**
EKA	**Eskdalemuir Ar**	**16.01**	**157**	Pn	**Pn**	**07 59 30.1**	**+2.9**
	0.2nm,0.3s,baz=337,slow=13,SNR=5.4						
FINES	**FINESS Array B**	**18.35**	**99**	P	**Pn**	**07 59 57.1**	**+0.7**
	0.2nm,0.3s,baz=326,slow=12,SNR=7.3						
FINES	**FINESS Array B**	**18.35**	**99**	P	**Pn**	**07 59 57.1**	**+0.7**
RES	**Resolute Bay**	**22.69**	**317**	LR	LR	08 09 35.5	
	comp=Z,60nm,18.7s,baz=194,slow=37						
AKASG	**Malin Array Be**	**28.12**	**112**	P	**P**	**08 01 34.8**	**+1.1**
	0.3nm,0.3s,mb3.3,baz=339,slow=10,SNR=2.5						
AKASG	**Malin Array Be**	**28.12**	**112**	P	**P**	**08 01 34.8**	**+1.1**
ILAR	**Eielson Array**	**41.08**	**331**	P	**P**	**08 03 25.6**	**+0.3**
	0.5nm,1.0s,mb3.1,baz=19,slow=7.2,SNR=4.2						
ILAR	**Eielson Array**	**41.08**	**331**	P	**P**	**08 03 25.5**	**+0.3**
PDAR	**Pinedale Array**	**52.10**	**292**	P	**P**	**08 04 53.6**	**+1.8**
	0.3nm,0.6s,mb3.4,baz=38,slow=6.2,SNR=3.5						
PDAR	**Pinedale Array**	**52.10**	**292**	P	**P**	**08 04 53.5**	**+1.7**
TORD	**Torodi Ar. Bea**	**58.19**	**162**	P	**P**	**08 05 37.9**	**+1.9**
	0.6nm,0.8s,mb3.7,baz=7.9,slow=7.4,SNR=3.8						
TORD	**Torodi Ar. Bea**	**58.19**	**162**	P	**P**	**08 05 37.9**	**+1.9**

DJA 21 08:20:18, 7°.15S×121°.08E, h9km, MLv3.7/4, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**1.87**	**142**	P	Pn	08 20 50.8	+0.6
MMRI				S	Sn	08 21 14.1	+0.2
BKSI	**Bulukumba**	**2.05**	**332**	P	Pn	08 20 52.3	-0.4
BKSI				S	Sn	08 21 19.1	+0.7
WSI	**Waingapu**	**2.62**	**197**	P	Pn	08 21 00.8	+0.3
BNSI	**Bone**	**2.90**	**340**	S	Sn	08 21 41.7	+2.4
SPSI	**Sidrap Palu**	**3.42**	**338**	P	Pn	08 21 11.3	-0.3

IDC 21 08:23:12.7±3.4, 10°.91N×92°.17E, h0km, mb3.7/3, mb1 3.7/3, mb1mx3.4/22, mbtmp3.7/3, Error ellipse: s-maj=137.3km s-min=23.8km az=65.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.74**	**349**	P	P	08 30 21.6	0.0
	1.7nm,0.8s,baz=163,slow=8.7,SNR=12						
SONM	**Songino Array**	**38.71**	**15**	P	P	08 30 38.4	+0.1
	0.9nm,0.9s,baz=190,slow=7.2,SNR=3.7						
WRA	**Warramunga Arr**	**51.60**	**126**	P	P	08 32 21.0	-0.2
	baz=306,slow=8.7						
ASAR	**Alice Springs**	**53.34**	**130**	P	P	08 32 34.2	+0.1
	0.5nm,0.7s,baz=305,slow=6.4,SNR=4.6						

*ISCJB **21** 08:56:33.9±4.2, 23°.7S±0°.2×180°.0E±0°.1, h531km±54km, mb3.9/12, Error ellipse: s-maj=25.6km s-min=17.8km az=35.2*
*IDC **21** 08:56:33.4±2.6, 23°.73S×179°.91W, h514km±30km, mb3.4/9, mb1 3.6/10, mb1mx3.5/17, mbtmp3.4/10, Error ellipse: s-maj=23.6km s-min=17.0km az=155.0*
*NEIC **21** 08:56:34.3±3.4, 23°.75S×179°.93W, h527km±44km, mb4.0/2, Error ellipse: s-maj=31.6km s-min=14.7km az=183.0*
ISC 21 08:56:36.2±4.0, 23°.9S±0°.2×180°.0W±0°.1, h551km±53km, n20, σ0.73/19, mb3.9/12, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.50**	**189**	P	**P**	**08 59 40.3**	**0.0**
	1.6nm,0.3s,baz=125,slow=9.2,SNR=8.2						
URZ				S	**S**	**09 02 11.1**	**-0.8**
	0.5nm,0.3s,baz=268,slow=22,SNR=7.3						
RPZ	**Rata Peaks**	**21.08**	**198**	P	**P**	**09 00 42.5**	**+0.9**
	3.4nm,0.5s,mb4.2,baz=6.3,slow=9.2,SNR=4.9						
EIDS	**Eidsvold**	**26.35**	**261**	*e*P	**P**	**09 01 29.0**	**+0.2**
CTA	**Charters Tower**	**31.52**	**270**	*e*P	**P**	**09 02 14.0**	**+0.3**
	9.7nm,0.4s,mb4.7						
CTA	**Charters Tower**	**31.52**	**270**	P	**P**	**09 02 14.2**	**+0.4**
	12nm,0.4s,mb4.8,baz=92,slow=11,SNR=26						
STKA	**Stephens Creek**	**34.75**	**248**	P	**P**	**09 02 41.5**	**+0.6**
	2.4nm,0.5s,mb4.0,baz=102,slow=11,SNR=12						
STKA	**Stephens Creek**	**34.75**	**248**	*e*P	**P**	**09 02 41.9**	**+1.0**
ASAR	**Alice Springs**	**42.08**	**261**	P	**P**	**09 03 40.3**	**0.0**
	3.6nm,0.6s,mb4.1,baz=96,slow=7.4,SNR=61						
ASAR				ScP	ScP	09 08 24.8	+4.3
	1.0nm,0.7s,baz=102,slow=4.5,SNR=10						
WRAB	**Tennant Creek**	**42.44**	**266**	*e*P	**P**	**09 03 42.4**	**-0.8**
	1.9nm,0.5s,mb3.9						
WRA	**Warramunga Arr**	**42.45**	**266**	P	**P**	**09 03 42.7**	**-0.5**
	baz=102,slow=8.3						
FORT	**Forrest**	**46.34**	**250**	*e*P	**P**	**09 04 12.9**	**-0.2**
	22nm,0.6s,mb4.9						
FITZ	**Fitzroy Crossi**	**50.87**	**266**	*e*P	**P**	**09 04 47.7**	**+0.8**
	17nm,1.8s,mb4.1						
PETK	**Petropavlovsk-**	**79.14**	**346**	P	**P**	**09 07 42.9**	**-0.7**
	2.0nm,0.6s,mb3.6,baz=104,slow=6.1,SNR=2.9						
NVAR	**Mina Array Bea**	**84.74**	**44**	P	**P**	**09 08 13.0**	**+0.6**
	0.5nm,0.6s,mb3.2,baz=224,slow=8.0,SNR=5.7						
NVAR	**Mina Array Bea**	**84.74**	**44**	P	**P**	**09 08 13.0**	**+0.6**
TXAR	**Lajitas Array**	**90.41**	**58**	P	**P**	**09 08 40.1**	**+0.9**
	0.8nm,0.7s,mb3.7,baz=215,slow=6.0,SNR=13						
ILAR	**Eielson Array**	**92.05**	**14**	P	**P**	**09 08 44.1**	**-1.8**
	0.2nm,0.7s,mb3.3,baz=208,slow=5.9,SNR=3.9						
PDAR	**Pinedale Array**	**92.68**	**44**	P	**P**	**09 08 49.6**	**+0.2**
	0.5nm,0.7s,mb3.6,baz=228,slow=1.8,SNR=5.1						
AKASG	**Malin Array Be**	**145.02**	**327**	PKP	PKPdf	09 15 10.5	-0.1
	0.9nm,0.3s,baz=46,slow=4.3,SNR=4.0						
AKASG	**Malin Array Be**	**145.02**	**327**	PKP	PKPdf	09 15 10.5	-0.1

*NIED **21** 09:01:00, 37°.80N×142°.70E, h26km, Mw5.0 Best double couple: M0 3.97000×10^16 NP1:φ0 16.00000°, δ69.00000°, λ89.00000°. NP2:φ0 199.00000°, δ21.00000°, λ93.00000°.*
*BJI **21** 09:01:01.9, 37°.67N×142°.65E, h16km, mB5.0/39, mb5.1/60, Ms4.9/65, Ms7 4.9/55*
*ISCJB **21** 09:01:02.6±0.8, 37°.74N±0°.02×142°.73E±0°.02, h11km±4km, mb5.0/134, MS4.8/64, Error ellipse: s-maj=4.2km s-min=3.0km az=156.1*
*IDC **21** 09:01:02.6±0.5, 37°.77N×142°.58E, h0km, mb4.6/26, mb1 4.6/31, mb1mx4.6/35, mbtmp4.6/31, ML4.5/4, MS4.5/29, Ms1 4.5/29, ms1mx4.4/35, Error ellipse: s-maj=14.0km s-min=11.0km az=114.0*
*JMA **21** 09:01:03.0±0.2, 37°.72N×142°.84E, h28km±3km, M5.2*
JMA Felt II J1.
*MOS **21** 09:01:04.0±0.9, 38°.02N×142°.49E, h11km, mb5.2/58, MS5.0/28, Error ellipse: s-maj=7.6km s-min=4.5km az=108.8*
*NEIC **21** 09:01:04.6±0.2, 37°.82N×142°.56E, h10km, mb5.1/52, MW5.0(NIED), Error ellipse: s-maj=5.1km s-min=3.5km az=143.0*
NEIC Recorded [2 JMA] in Fukushima, Iwate and Miyagi; [1 JMA] in Akita, Aomori, Tochigi and Yamagata.
*GCMT **21** 09:01:09.3±0.3, 37°.79N×142°.91E, h38km±1km, MW5.0, Moment Tensor Solution. s32,c41; s72,c110; Moment tensor: Scale 10^16Nm; Mrr3.63±.22; Mθθ-0.62±.13; Mφφ-3.01±.13; Mrθ 1.17±.11; Mrφ-1.20±.07; Mθφ2.73±.11; Best double couple: M0 4.60000×10^16 NP1:φ0 202.00000°, δ25.00000°, λ89.00000°. NP2:φ0 23.00000°, δ65.00000°, λ90.00000°. Principal axes: T 4.7000, Plg70.0000°, Azm294.0000°; N -0.1200, Plg0.0000°, Azm203.0000°; P -4.5800, Plg20.0000°, Azm113.0000°; Data Used: II IU IC G CN.*
*SZGRF **21** 09:01:15.4, 39°.81N×143°.07E, h33km, mb5.1, MS5.1, Off east coast of Honshu, Japan*
ISC 21 09:01:05.0±0.9, 37°.76N±0°.02×142°.66E±0°.03, h15km±5km, h17km±1.8km: pP-P, n392, σ0.97/415, mb5.0/134, MS4.8/64, 41C-15D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**1.25**	**304**	⇓P	**Pn**	**09 01 27.1**	**-0.8**
JIO				*e*S	**Sb**	**09 01 44.1**	**0.0**
JFK	**Kawauchi**	**1.47**	**255**	⇑P	**Pn**	**09 01 30.3**	**-0.7**
JFK				*e*S	**Sn**	**09 01 49.8**	**-0.2**
JMM	**Marumori**	**1.48**	**275**	⇓P	**Pn**	**09 01 30.3**	**-0.9**
OFUJ	**Ofunato**	**1.53**	**330**	⇑P	**Pn**	**09 01 30.9**	**-0.9**
JMK	**Ichinoseki**	**1.64**	**317**	⇑P	**Pn**	**09 01 32.9**	**-0.5**
JMK				*e*S	**Sn**	**09 01 54.7**	**+0.5**
JOU	**Okura**	**1.69**	**292**	⇓P	**Pn**	**09 01 34.0**	**0.0**
JOU				*e*S	**Sn**	**09 01 57.1**	**+1.8**
JFT	**Otama**	**1.86**	**263**	⇓P	**Pn**	**09 01 36.6**	**+0.3**
JFT				*e*S	**Sn**	**09 02 01.2**	**+1.6**
JOM	**Ohasama**	**2.02**	**328**	⇑P	**Pn**	**09 01 38.1**	**-0.4**
JOM				*e*S	**Sn**	**09 02 03.8**	**+0.3**
JYS	**Shirataka**	**2.10**	**283**	P	**Pn**	**09 01 39.9**	**+0.2**
JYS				*e*S	**Sn**	**09 02 07.8**	**+2.3**
JYK	**Kaneyama**	**2.15**	**303**	⇑P	**Pn**	**09 01 40.5**	**+0.2**
JYK				*e*S	**Sn**	**09 02 08.6**	**+1.9**
JYA	**Atsumi**	**2.47**	**291**	⇑P	**Pn**	**09 01 45.3**	**+0.6**
JNS	**Sasagawa**	**2.65**	**272**	⇑P	**Pn**	**09 01 48.0**	**+0.8**
JNS				S	**Sn**	**09 02 23.2**	**+4.1**
JANG	**Nango**	**2.76**	**341**	P	**Pn**	**09 01 50.0**	**+1.3**
JANG				*e*S	**Sn**	**09 02 25.7**	**+4.0**
JAW	**Awa shima**	**2.78**	**286**	⇑P	**Pn**	**09 01 50.0**	**+1.0**
JAW				*e*S	**Sn**	**09 02 28.7**	**+6.4**
JAG	**Ashikaga**	**2.89**	**244**	⇑P	**Pn**	**09 01 50.3**	**-0.2**
JAG				*e*S	**Sn**	**09 02 25.9**	**+0.9**
JSD	**Sado**	**3.49**	**276**	P	**Pn**	**09 01 58.6**	**-0.2**
MJAR	**Matsushiro Arr**	**3.76**	**252**	Pn	**Pn**	**09 02 02.9**	**+0.5**
	29nm,0.3s,baz=79,slow=13,SNR=232						
MJAR				Sn	**Sn**	**09 02 54.7**	**+8.3**
	53nm,0.3s,baz=27,slow=26,SNR=5.9						
MJAR				LR	LR	09 03 43.7	
	comp=Z,9μm,20.1s,baz=70,slow=44						
MJAR	**Matsushiro Arr**	**3.76**	**252**	P	**Pn**	**09 02 02.9**	**+0.5**
MJAR						09 02 54.7	
MJAR				pmax	pmax		
	comp=Z,29nm,0.3s						
MJAR				smax			
	comp=N,53nm,0.3s						
MJAR				MLR	MLR		
	comp=Z,9μm,20.1s						
MJAR	**Matsushiro Arr**	**3.76**	**252**	Pn	**Pn**	**09 02 02.9**	**+0.5**
MJAR				Sn	**Sn**	**09 02 54.7**	**+8.2**
MJAR				LR	LR	09 03 43.7	
MAJO	**Matsushiro**	**3.76**	**253**	*e*Pn	**Pn**	**09 02 03.9**	**+1.5**
MAT	**Matsushiro**	**3.76**	**253**	P	**Pn**	**09 02 03.7**	**+1.2**
MAT				S	**Sn**	**09 02 47.7**	**+1.2**
ERM	**Erimo**	**4.27**	**5**	Pn	**Pn**	**09 02 08.2**	**-1.2**
	comp=Z,582nm,0.4s,SNR=23						
ERM	**Erimo**	**4.27**	**5**	*e*Pn	**Pn**	**09 02 08.3**	**-1.1**
SHZ3	**Shizuoka 3**	**4.49**	**235**	P	**Pn**	**09 02 14.3**	**+1.9**
JNY	**Yasuok**	**4.55**	**240**	P	**Pn**	**09 02 15.2**	**+1.9**
HMMJ	**Hamamatsu 2**	**4.93**	**235**	P	**Pn**	**09 02 20.3**	**+1.8**
JHJ	**Hachijo jima 2**	**5.19**	**208**	Pn	**Pn**	**09 02 21.9**	**-0.2**
	comp=Z,77nm,0.3s,baz=100,slow=20,SNR=20						
JHJ				Sn	**Sn**	**09 03 19.1**	**-2.6**
	comp=Z,131nm,0.3s,baz=70,slow=21,SNR=7.0						
JHJ				LR	LR	09 04 32.5	
	comp=Z,2μm,18.5s,baz=27,slow=41						
ASAJ	**Asahikawa**	**6.35**	**360**	Pn	**Pn**	**09 02 37.9**	**-0.2**
	comp=Z,8.9nm,0.3s,baz=226,slow=9.5,SNR=38						
ASAJ				Sn	**Sn**	**09 03 50.5**	**+0.3**
	comp=Z,5.8nm,0.3s,baz=165,slow=20,SNR=3.1						
ASAJ				LR	LR	09 05 47.0	
	comp=Z,6μm,20.3s,baz=188,slow=45						
ASAJ	**Asahikawa**	**6.35**	**360**	P	**Pn**	**09 02 37.9**	**-0.1**
ASAJ						09 03 50.6	
ASAJ				pmax	pmax		
	comp=Z,9.0nm,0.3s						
ASAJ				smax			
	comp=N,6.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,6μm,20.3s						
YUK	**Yuzh-Kuril'sk**	**6.72**	**20**	*i* P	**Pn**	**09 02 39.6**	**-3.5**
YUK				*i* S	**Sn**	**09 03 51.1**	**-8.2**
YUK				pmax	pmax		
	comp=Z,252nm,0.4s						
YUK				pmax	pmax		
	comp=N,96nm,0.2s						
YUK				pmax	pmax		
	comp=E,137nm,0.4s						
YUK				pmax	pmax		
	comp=Z,220nm,0.7s						
YUK				smax			
	comp=E,979nm,0.6s						
YUK				smax			
	comp=N,291nm,0.3s						
YUK				smax			
	comp=N,1μm,1.2s						
YUK				smax			
	comp=E,2μm,1.0s						
YUK				MLR	MLR		
	comp=N,3μm,15.0s						
YUK				MLR	MLR		
	comp=E,840nm,15.0s						
YUK				MLR	MLR		
	comp=Z,2μm,15.0s						
KUR	**Kuril'sk**	**8.42**	**26**	*e*P	**Pn**	**09 03 12.5**	**+6.0**
KUR				*e*S	**Sn**	**09 04 36.5**	**-4.7**
KUR				pmax	pmax		
	comp=Z,190nm,0.8s						
KUR				smax			
	comp=N,150nm,0.5s						
KUR				smax			
	comp=E,130nm,0.5s						
YSS	**Yuzh-Sakhalins**	**9.19**	**0**	⇑*e*P	**Pn**	**09 03 16.9**	**0.0**
YSS				*e*S	**Sn**	**09 04 57.0**	**-3.0**
YSS				pmax	pmax		
	comp=Z,60nm,1.0s						
YSS				smax			
	comp=N,100nm,1.2s						
YSS				MLR	MLR		
	comp=N,3μm,16.0s						
YSS				MLR	MLR		
	comp=E,2μm,16.0s						
YSS				MLR	MLR		
	comp=Z,2μm,16.0s						
YSS	**Yuzh-Sakhalins**	**9.19**	**0**	*e*Pn	**Pn**	**09 03 16.9**	**0.0**
	comp=Z,111nm,1.2s						
CBIJ	**Chichi jima**	**10.64**	**182**	Pn	**Pn**	**09 03 36.7**	**-0.2**
	comp=Z,14nm,0.3s,baz=307,slow=19,SNR=8.1						
CBIJ				Sn	**Sn**	**09 05 26.4**	**-9.5**
	comp=Z,29nm,0.3s,baz=310,slow=22,SNR=5.2						
KSRS	**Korea Array**	**11.70**	**273**	Pn	**Pn**	**09 03 54.0**	**+2.6**
	comp=Z,1.0nm,0.3s,baz=90,slow=12,SNR=36						
KSRS				LR	LR	09 08 18.6	
	comp=Z,4μm,18.2s,baz=91,slow=37						
KSRS	**Korea Array**	**11.70**	**273**	P	**Pn**	**09 03 54.0**	**+2.7**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,4μm,18.2s						
MDJ	**Mudanjiang**	**11.99**	**309**	P	**Pn**	**09 03 58.8**	**+3.6**
MDJ				S	**Sn**	**09 06 07.9**	**-0.7**
MDJ				pmax	pmax		
	comp=Z,17nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,240nm,3.3s						
MDJ				LR	LR		
	comp=N,2μm,17.0s						
MDJ				LR	LR		
	comp=E,4μm,15.8s						
MDJ				LR	LR		
	comp=Z,6μm,16.1s						
MDJ	**Mudanjiang**	**11.99**	**309**	*e*P	**Pn**	**09 04 00.7**	**+5.5**
	comp=Z,128nm,1.3s						
HABR	**Khabarovsk**	**12.06**	**335**	*e*P	**Pn**	**09 03 52.8**	**-3.4**
HABR				*e*		09 06 06.1	
HABR				MLR	MLR		
	comp=Z,3μm,16.0s						
KLR	**Kul'dur**	**13.92**	**329**	*e*P	**Pn**	**09 04 15.2**	**-6.4**
KLR				pmax	pmax		
	comp=E,64nm,1.8s						
KLR				pmax	pmax		
	comp=Z,50nm,1.8s						
KLR				MLR	MLR		
	comp=Z,5μm,13.5s						
CN2	**Changchun**	**14.36**	**300**	*e*P	**Pn**	**09 04 29.8**	**+2.1**
CN2				*es*P	sP	09 04 36.3	-4.5
CN2				*e*S	**Sn**	**09 07 08.3**	**+1.7**
CN2				pmax	pmax		
	comp=Z,20nm,1.2s						
CN2				pmax	pmax		
	comp=Z,300nm,6.0s						
CN2				LR	LR		
	comp=N,2μm,16.0s						
CN2				LR	LR		
	comp=E,4μm,16.0s						
CN2				LR	LR		
	comp=Z,4μm,16.0s						
SNY	**Shenyang**	**15.22**	**291**	⇑P	**Pn**	**09 04 39.8**	**+0.5**
SNY				pmax	pmax		
	comp=Z,12nm,0.8s						
SNY				pmax	pmax		
	comp=Z,590nm,11.8s						
SNY				LR	LR		
	comp=N,2μm,14.7s						
SNY				LR	LR		
	comp=E,6μm,16.7s						
SNY				LR	LR		
	comp=Z,7μm,16.5s						
SKR	**Severo-Kuril's**	**16.09**	**32**	P	sP	09 05 03.0	+3.1
SKR				*e*S	**Sn**	**09 07 56.0**	**+7.5**
SKR				smax			
	comp=E,1μm,10.0s						
SKR				MLR	MLR		
	comp=N,1μm,14.0s						
SKR				MLR	MLR		
	comp=E,800nm,14.0s						
SKR				MLR	MLR		
	comp=Z,1μm,14.0s

comp=N,2μm,14.0s
SSE LR LR
comp=E,2μm,14.0s
SSE LR LR
comp=Z,3μm,14.9s
HIA Hailar 20.13 312 *e*P **P 09 05 36.4 -1.9**
HIA pmax pmax
comp=Z,82nm,1.0s
HIA Hailar 20.13 312 *e*P **P 09 05 36.4 -1.9**
comp=Z,82nm,1.0s
NJ2 Nanjing 20.32 261 *e*P **P 09 05 38.6 -1.9**
NJ2 pP 09 05 42.1
NJ2 sP sP 09 05 46.1 -0.5
NJ2 PP 09 05 57.1
NJ2 S **S 09 09 19.0 -8.8**
NJ2 pmax pmax
comp=Z,30nm,1.0s
NJ2 pmax pmax
comp=Z,190nm,5.1s
NJ2 LR LR
comp=N,1μm,16.2s,MS4.7
NJ2 LR LR
comp=E,2μm,14.4s,MS4.7
NJ2 LR LR
comp=Z,4μm,16.6s,MS4.9
TIA Tai'an 20.45 273 *e*P **P 09 05 40.0 -1.8**
TIA S **S 09 09 26.4 -3.9**
TIA LR LR
comp=N,2μm,12.9s,MS4.8
TIA LR LR
comp=E,3μm,14.0s,MS4.8
BJI Beijing 20.72 285 P **P 09 05 42.4 -2.3**
BJI S **S 09 09 32.5 -3.1**
BJI pmax pmax
comp=Z,49nm,1.3s
BJI pmax pmax
comp=Z,270nm,3.7s
BJI LR LR
comp=N,990nm,16.6s
BJI LR LR
comp=E,840nm,25.4s
BJI LR LR
comp=Z,1μm,22.8s
BJT Baijiatuau 20.72 284 *e*P **P 09 05 42.0 -2.8**
BJT pmax pmax
comp=Z,76nm,0.6s
BJT Baijiatuau 20.72 284 *e*P **P 09 05 42.0 -2.9**
comp=Z,76nm,0.6s
YHNB Yeheng 22.34 240 *e*P **P 09 06 02.4 +0.2**
comp=Z,23nm,0.8s,mb4.7
CLNS Chul'man 22.45 334 *e*P **P 09 06 02.0 -1.1**
CLNS *e* 09 06 27.9
CLNS *e* 09 09 52.2
CLNS *e*S **S 09 10 09.8 +0.7**
CLNS *e*SS 09 10 44.6
CLNS pmax pmax
comp=Z,84nm,1.2s,mb5.0
CLNS pmax pmax
comp=E,33nm,1.4s
CLNS pmax pmax
comp=N,101nm,1.5s
CLNS pmax pmax
comp=E,60nm,1.2s
CLNS pmax pmax
comp=N,87nm,1.2s
CLNS pmax pmax
comp=Z,43nm,1.3s,mb4.7
CLNS smax
comp=E,193nm,13.7s
CLNS smax
comp=N,363nm,13.1s
CLNS MLR MLR
comp=E,789nm,16.0s,MS4.7
CLNS MLR MLR
comp=Z,2μm,16.0s,MS4.7
CLNS MLR MLR
comp=N,2μm,15.0s,MS4.7
SSLB Suanglung 23.20 239 *e*P **P 09 06 11.7 +0.3**
comp=N,29nm,0.8s,mb4.8
YULB Yu-li 23.24 238 *e*P **P 09 06 11.6 -0.2**
comp=N,24nm,0.8s,mb4.7
TPUB Ta-pu 23.75 239 *e*P **P 09 06 14.9 -1.9**
comp=N,119nm,1.0s,mb5.3
TWG Pinlang 23.78 237 *e*P **P 09 06 18.1 +1.0**
comp=N,90nm,1.0s,mb5.2
QZH Quanzhou 24.12 245 P **P 09 06 17.3 -3.0**
QZH S **S 09 10 36.4 -1.2**
QZH pmax pmax
comp=Z,100nm,0.9s,mb5.2
QZH LR LR
comp=N,1μm,11.2s
QZH LR LR
comp=E,790nm,9.7s
QZH LR LR
comp=Z,2μm,20.0s
GUMO Guam 24.15 175 LR LR 09 13 31.4
comp=Z,591nm,19.8s,MS4.1,baz=146,slow=31
HHC Hu-ho-hao-te 24.20 287 *e*P **P 09 06 17.8 -3.0**
HHC PP 09 06 51.9
HHC PcP PcP 09 10 01.4 +0.3
HHC S **S 09 10 31.3 -7.2**
HHC SS 09 11 22.4
HHC ScP ScP 09 13 38.0 -1.1
HHC PcS PcS 09 13 39.6 -1.2
HHC pmax pmax
comp=Z,23nm,0.6s,mb4.8
HHC pmax pmax
comp=Z,150nm,5.5s
HHC LR LR
comp=N,720nm,12.6s,MS4.9
HHC LR LR
comp=E,2μm,13.0s,MS4.9
HHC LR LR
comp=Z,3μm,12.9s,MS4.9
WHN Wuhan 24.45 261 ⇑P **P 09 06 22.0 -1.2**
WHN pP 09 06 31.1
WHN S **S 09 10 33.8 -9.0**
WHN pmax pmax
comp=Z,240nm,1.1s,mb5.5
WHN pmax pmax
comp=Z,630nm,3.2s
WHN LR LR
comp=N,3μm,18.4s,MS5.1
WHN LR LR
comp=E,5μm,14.5s,MS5.1
WHN LR LR
comp=Z,6μm,17.2s,MS5.1
CIT Chita 24.86 314 *e*P **P 09 06 27.6 +0.8**
CIT *e* 09 06 36.0
CIT pmax pmax
comp=Z,966nm,1.2s,mb6.2
YAK Yakutsk 25.59 346*c i*P **P 09 06 32.0 -1.3**
YAK *e*'PP pP 09 06 39.4 +1.6
YAK *e* 09 07 09.7
YAK *e*PPP 09 07 22.0
YAK *e* 09 10 00.9
YAK *e*S **S 09 11 00.2 -0.3**
YAK *e*SS 09 12 03.3
YAK *e*SSS 09 12 16.4
YAK *e* 09 17 35.2
YAK pmax pmax
comp=Z,90nm,1.0s,mb5.2
YAK pmax pmax
comp=N,50nm,1.3s
YAK pmax pmax
comp=E,18nm,1.3s
YAK pmax pmax
comp=Z,40nm,0.9s,mb5.0
YAK pmax pmax
comp=N,39nm,0.9s
YAK pmax pmax
comp=E,20nm,1.0s
YAK smax
comp=E,140nm,2.5s
YAK smax
comp=N,257nm,2.4s
YAK MLR MLR
comp=Z,2μm,17.0s,MS4.7
YAK MLR MLR
comp=E,806nm,16.0s,MS4.6
YAK MLR MLR
comp=N,1μm,16.0s,MS4.6
SEY Seymchan 25.89 10⇓*i*P **P 09 06 36.9 +0.9**
XAN Xi'an 27.50 273 P **P 09 06 48.8 -2.0**
XAN PP 09 07 42.4
XAN pmax pmax
comp=Z,11nm,0.8s,mb4.4
XAN pmax pmax
comp=Z,72nm,6.7s
XAN LR LR
comp=N,440nm,16.7s,MS4.2
XAN LR LR
comp=E,310nm,13.8s,MS4.2
XAN LR LR
comp=Z,450nm,14.5s,MS4.2
ULN Ulaanbaatar 27.79 303 *e*P **P 09 06 53.9 +0.7**
ULN pmax pmax
comp=Z,59nm,1.2s,mb5.1
ULN Ulaanbaatar 27.79 303 *e*P **P 09 06 53.9 +0.7**
comp=Z,59nm,1.2s,mb5.1
ULN Ulaanbaatar 27.79 303 P **P 09 06 53.3 +0.1**
SNR=32
SONM Songino Array 28.22 303 P **P 09 06 57.6 +0.5**
comp=Z,40nm,0.9s,mb5.0,baz=104,slow=8.8,SNR=168
SONM LR LR 09 18 32.0
comp=Z,2μm,18.6s,MS4.7,baz=121,slow=37
SONM Songino Array 28.22 303 P **P 09 06 57.6 +0.5**
SONM pmax pmax
comp=Z,40nm,0.9s
SONM MLR MLR
comp=Z,2μm,18.6s
ENH Enshi 28.39 265 *e*P **P 09 06 58.2 -0.5**
comp=Z,192nm,1.1s,mb5.6
GZH Guangzhou 29.06 248 P **P 09 07 02.1 -2.7**
GZH S **S 09 11 48.6 -7.2**
GZH LR LR
comp=N,2μm,15.3s,MS5.0
GZH LR LR
comp=E,2μm,17.7s,MS5.0
GZH LR LR
comp=Z,4μm,16.0s,MS5.1
IRK Irkutsk 30.36 311 *e*P **P 09 07 15.9 -0.1**
IRK pmax pmax
comp=Z,42nm,2.2s,mb4.8
TLY Talaya 30.62 310 P **P 09 07 18.3 0.0**
comp=Z,164nm,1.0s,mb5.8,SNR=15
TLY Talaya 30.62 310*c i*P **P 09 07 18.2 -0.1**
TLY *e* 09 08 20.0
TLY *e*PPP 09 08 30.2
TLY *e*S **S 09 12 23.8 +4.0**
TLY pmax pmax
comp=Z,98nm,0.9s,mb5.6
TLY MLR MLR
comp=Z,3μm,16.0s,MS5.0
TLY Talaya 30.62 310 *e*P **P 09 07 18.4 +0.1**
comp=Z,24nm,0.9s,mb5.0
TLY Talaya 30.62 310 P **P 09 07 18.7 +0.4**
SNR=19
LZH Lanzhou 30.93 279 *e*P **P 09 07 20.0 -1.2**
LZH pP pP 09 07 24.5 -1.3
LZH sP sP 09 07 27.1 -0.6
LZH PP PP 09 08 20.4 -11
LZH S **S 09 12 21.0 -4.0**
LZH pmax pmax
comp=Z,39nm,1.1s,mb5.2
LZH pmax pmax
comp=Z,150nm,5.4s
LZH LR LR
comp=E,2μm,15.3s
LZH LR LR
comp=Z,3μm,16.0s,MS5.0
GYA Guiyang 32.32 260⇑*i*P **P 09 07 32.3 -1.3**
GYA PcP PcP 09 10 21.3 -0.1
GYA S **S 09 12 47.0 +0.1**
GYA ScP ScP 09 14 05.4 +0.9
GYA SS SS 09 14 40.8 -25
GYA pmax pmax
comp=Z,60nm,0.9s,mb5.4
GYA pmax pmax
comp=Z,140nm,4.9s
GYA LR LR
comp=N,870nm,16.7s,MS4.6
GYA LR LR
comp=E,550nm,17.8s,MS4.6
GYA LR LR
comp=E,750nm,16.5s
CD2 Chengdu 32.67 270 P **P 09 07 36.9 +0.3**
CD2 pP pP 09 07 41.3 +0.2
CD2 sP sP 09 07 42.9 -0.1
CD2 PP PP 09 08 44.8 -5.6
CD2 S **S 09 12 50.8 -1.4**
CD2 sS sS 09 12 57.6 -2.2
CD2 SS SS 09 14 45.5 -27
CD2 pmax pmax
comp=Z,70nm,0.9s,mb5.6
CD2 pmax pmax
comp=Z,210nm,4.6s
CD2 LR LR
comp=N,2μm,14.3s
CD2 LR LR
comp=Z,2μm,14.3s,MS5.0
BILL Bilibino 33.05 16 *e*P **P 09 07 39.6 +0.1**
BILL pmax pmax
comp=Z,6.0nm,1.3s,mb4.4
GTA Gaotai 33.31 286 *e*P **P 09 07 41.3 -0.8**
GTA pP pP 09 07 45.8 -0.8
GTA sP sP 09 07 49.1 +0.6
GTA PP PP 09 08 54.1 -3.2
GTA PcP PcP 09 10 24.4 +0.5
GTA S **S 09 13 01.6 -0.4**
GTA SS SS 09 15 02.6 -23
GTA pmax pmax
comp=Z,33nm,1.3s,mb5.1
GTA pmax pmax
comp=Z,250nm,5.7s
GTA LR LR
comp=N,670nm,20.2s,MS4.8
GTA LR LR
comp=E,2μm,17.6s,MS4.8
GTA LR LR
comp=Z,3μm,17.5s,MS5.0
QIZ Qiongzhong 34.13 246 P **P 09 07 49.9 +0.5**
QIZ S **S 09 13 15.5 +0.4**
QIZ pmax pmax
comp=Z,13nm,1.6s,mb4.6
QIZ pmax pmax
comp=Z,88nm,7.6s
QIZ LR LR
comp=N,760nm,16.7s,MS4.5
QIZ LR LR
comp=E,340nm,20.7s,MS4.5
QIZ LR LR
comp=Z,990nm,14.5s
KMI Kunming 36.05 261 P **P 09 08 05.4 -0.5**
KMI pP pP 09 08 10.1 -0.4
KMI sP sP 09 08 11.4 -1.0
KMI PP PP 09 09 29.0 +1.1
KMI S **S 09 13 44.6 0.0**
KMI sS sS 09 13 49.4 -2.8
KMI SS SS 09 16 05.3 -17
KMI pmax pmax
comp=Z,33nm,1.0s,mb5.2
KMI pmax pmax
comp=Z,110nm,3.1s
KMI LR LR
comp=N,770nm,17.8s,MS4.9
KMI LR LR
comp=E,2μm,18.5s,MS4.9
KMI LR LR
comp=Z,2μm,19.3s,MS4.8
WMQ Urumqi 41.41 296 P **P 09 08 50.6 0.0**
WMQ pP pP 09 08 55.1 -0.2
WMQ sP sP 09 08 57.6 +0.5
WMQ PP PP 09 10 29.4 +3.2
WMQ PcP PcP 09 10 49.6 +1.1
WMQ *e*S **S 09 15 04.1 -0.8**
WMQ ScS ScS 09 18 50.0 -3.9
WMQ pmax pmax
comp=Z,61nm,0.9s,mb5.2
WMQ pmax pmax
comp=Z,410nm,4.0s
WMQ LR LR
comp=N,600nm,23.2s,MS4.7
WMQ LR LR
comp=E,1μm,22.5s,MS4.7
WMQ LR LR
comp=Z,730nm,21.6s,MS4.5
ZAA0 Zalesovo Array 42.17 312 *e*P **P 09 08 56.1 -0.6**
ZALV Zalesovo Beam 42.17 312 P **P 09 08 55.8 -0.9**
comp=Z,42nm,0.9s,mb5.1,baz=90,slow=7.4,SNR=126
ZALV LR LR 09 27 09.3
comp=Z,1μm,18.4s,MS4.9,baz=174,slow=37
ZALV Zalesovo Beam 42.17 312 P **P 09 08 55.8 -0.9**
ZALV pmax pmax
comp=Z,42nm,0.9s,mb5.1
ZALV MLR MLR
comp=Z,1μm,18.4s,MS4.9
CHTO Chiang Mai 42.43 256 *e*P **P 09 08 59.1 -0.2**
CHTO pmax pmax
comp=Z,13nm,0.9s,mb4.6
CHTO Chiang Mai 42.43 256 *e*P **P 09 08 59.1 -0.2**
comp=Z,13nm,0.9s,mb4.5
CMAR Chiang Mai Arr 42.64 256 P **P 09 09 00.2 -0.8**
comp=Z,3.0nm,0.6s,mb4.2,baz=48,slow=5.6,SNR=18
CMAR LR LR 09 27 49.7
comp=Z,522nm,19.8s,MS4.4,baz=230,slow=38
CMAR Chiang Mai Arr 42.64 256 P **P 09 09 00.2 -0.8**
CMAR pmax pmax
comp=Z,3.0nm,0.6s
CMAR MLR MLR
comp=Z,522nm,19.8s
LSA Lhasa 43.13 275 *e*P **P 09 09 06.0 +1.1**
LSA pmax pmax
comp=Z,30nm,0.9s,mb5.0
LSA Lhasa 43.13 275 *e*P **P 09 09 06.0 +1.1**
comp=Z,30nm,0.9s,mb5.0
SHL Shillong 44.41 269 *e*PKP **P 09 09 14.0 -1.2**
SHL *e*PKP 09 09 14.0
MK31 Makanchi Array 44.58 302 *i* P **P 09 09 16.2 -0.1**
MK31 pmax pmax
comp=Z,81nm,0.9s,mb5.5
MK31 Makanchi Array 44.58 302 *e*P **P 09 09 16.1 -0.2**
MKAR Makanchi Array 44.58 302 P **P 09 09 16.0 -0.3**
comp=Z,46nm,0.9s,mb5.3,baz=83,slow=9.9,SNR=87
MKAR LR LR 09 28 20.7
comp=Z,552nm,19.5s,MS4.5,baz=72,slow=37
MKAR Makanchi Array 44.58 302 P **P 09 09 16.0 -0.3**
MKAR pmax pmax
comp=Z,46nm,0.9s
MKAR MLR MLR
comp=Z,552nm,19.5s
MKAR Makanchi Array 44.58 302 P **P 09 09 16.0 -0.3**
MKAR LR LR 09 28 20.7
KDAK Kodiak Island 45.90 42 P **P 09 09 27.9 +1.3**
comp=Z,6.6nm,0.7s,mb4.7,baz=245,slow=6.1,SNR=6.2
KDAK Kodiak Island 45.90 42 P **P 09 09 27.9 +1.3**
KDAK pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
KURK Kurchatov 46.27 308 P **P 09 09 29.7 +0.1**
comp=Z,536nm,1.0s,SNR=74
KURK Kurchatov 46.27 308 *e*P **P 09 09 29.1 -0.6**
comp=Z,73nm,0.9s,mb5.6
KURK Kurchatov 46.27 308 P **P 09 09 29.4 -0.2**
SNR=48
KSM Kuching 46.77 227 *e*P **P 09 09 35.0 +1.0**
comp=Z,20nm,0.8s,mb5.1
TAPN Taplejung 46.88 274 *e*P **P 09 09 35.4 +0.6**
comp=Z,60nm,0.9s,mb5.5
ODAN Odare 47.36 274 *e*P **P 09 09 38.3 -0.2**
comp=Z,72nm,0.9s,mb5.6
KAPI Kappang 47.60 212 P **P 09 09 41.2 +0.9**
comp=Z,19nm,1.0s,mb5.1,baz=142,slow=19,SNR=3.1
KAPI LR LR 09 30 47.0
comp=Z,115nm,19.0s,MS3.9,baz=284,slow=38
JIRN Jiri 47.94 275 *e*P **P 09 09 43.2 +0.2**
comp=Z,27nm,0.4s,mb5.7
RAMN Ramite 47.94 274 *e*P **P 09 09 42.9 -0.1**
comp=Z,150nm,1.0s,mb6.0
GUN Gumba 48.07 276 *e*P **P 09 09 44.1 +0.1**
comp=Z,254nm,0.9s,mb6.2
ILAR Eielson Array 48.35 33 P **P 09 09 45.5 -0.1**
comp=Z,1.6nm,0.6s,mb4.2,baz=260,slow=6.4,SNR=25
ILAR Eielson Array 48.35 33 P **P 09 09 45.6 0.0**
ILAR pmax pmax
comp=Z,2.0nm,0.6s
PKI Pulchoki 48.60 276 *e*P **P 09 09 47.6 -0.5**
comp=Z,42nm,0.7s,mb5.5
KKN Kakani 48.60 276 *e*P **P 09 09 47.8 -0.3**
comp=Z,83nm,0.7s,mb5.9
DMN Daman 48.82 276 *e*P **P 09 09 49.1 -0.7**
comp=Z,73nm,0.9s,mb5.7
GKN Gorkha 49.01 276 *e*P **P 09 09 50.9 -0.3**
comp=Z,118nm,0.9s,mb5.9
HNR Honiara 49.65 157 LR LR 09 29 15.2
comp=Z,477nm,19.7s,MS4.5,baz=322,slow=34
MENT Mentasta 49.87 35 *e*P **P 09 10 02.0 +4.7**
TKM2 Tokmak 2 50.16 298 P **P 09 10 00.4 +0.6**
SNR=34
TKM2 Tokmak 2 50.16 298 *e*P **P 09 10 00.0 +0.2**
TKM2 pmax pmax
comp=Z,76nm,1.1s,mb5.6
TKM2 Tokmak 2 50.16 298 *e*P **P 09 09 60.0 +0.1**
comp=Z,76nm,1.1s,mb5.6
KZA Kyzart 50.67 297 P **P 09 10 05.0 +1.3**
SNR=12
KBK Karagaybulak 50.70 298 P **P 09 10 04.6 +0.7**
SNR=15
USP Ospenovka 50.82 299 P **P 09 10 05.2 +0.4**
SNR=11
BVAR Borovoye Array 50.82 312 P **P 09 10 04.1 -0.5**
comp=Z,15nm,0.8s,mb5.0,baz=79,slow=7.7,SNR=48
BVAR Borovoye Array 50.82 312 P **P 09 10 04.1 -0.5**
BVAR pmax pmax
comp=Z,15nm,0.8s
BRVK Borovoye 50.88 312 P **P 09 10 04.4 -0.6**
comp=Z,137nm,1.1s,mb5.8,SNR=11
BRVK Borovoye 50.88 312 *e*P **P 09 10 04.8 -0.2**
BRVK pmax pmax
comp=Z,19nm,0.8s,mb5.1
BRVK Borovoye 50.88 312 *e*P **P 09 10 04.8 -0.3**
comp=Z,19nm,0.8s,mb5.1
BRVK Borovoye 50.88 312 P **P 09 10 05.1 0.0**
SNR=13
KSH Kashi 51.02 294 P **P 09 10 09.9 +3.6**
KSH pP pP 09 10 14.8 +3.7
KSH sP sP 09 10 17.8 +4.9
KSH PcP PcP 09 11 25.9 +3.7
KSH PP PP 09 12 08.3 +5.6
KSH PcS PcS 09 15 21.1 +1.3
KSH S **S 09 17 27.3 +4.3**
KSH sS sS 09 17 35.6 +4.8
KSH ScS ScS 09 19 57.8 +1.3
KSH SS SS 09 21 00.4 +2.7
KSH pmax pmax
comp=Z,15nm,0.8s,mb5.0
KSH pmax pmax
comp=Z,170nm,4.7s
KSH LR LR
comp=N,2μm,12.4s,MS5.4
KSH LR LR
comp=E,2μm,15.1s,MS5.4
KSH LR LR
comp=Z,2μm,14.8s,MS5.3
AAK Ala-Archa 51.02 298 P **P 09 10 06.7 +0.4**
comp=Z,145nm,1.1s,mb5.8,SNR=5.2
AAK Ala-Archa 51.02 298 P **P 09 10 05.8 -0.5**
comp=Z,6.5nm,0.6s,mb4.8,baz=49,slow=2.9,SNR=8.5
AAK Ala-Archa 51.02 298 *e*P **P 09 10 06.0 -0.3**
AAK pmax pmax
comp=Z,22nm,0.9s,mb5.1
AAK Ala-Archa 51.02 298 *e*P **P 09 10 06.0 -0.3**
comp=Z,22nm,0.9s,mb5.1
AAK Ala-Archa 51.02 298 P **P 09 10 07.1 +0.8**
SNR=9.4
KAKA Kakadu 51.11 193 *e*P **P 09 10 09.7 +2.6**
comp=Z,44nm,0.8s,mb5.4
UCH Uchtor 51.14 298 P **P 09 10 11.8 +4.6**
SNR=19
UCH Uchtor 51.14 298 *e*P **P 09 10 07.9 +0.7**
comp=Z,14nm,0.9s,mb4.9
EKS2 Erkin-Say 51.52 298 P **P 09 10 10.5 +0.5**
SNR=14
EKS2 Erkin-Say 51.52 298 *e*P **P 09 10 09.8 -0.1**
comp=Z,11nm,0.8s,mb4.8
ZRNK Zerenda 51.65 312 *i* P **P 09 10 10.7 -0.2**
AML Almayashu 51.75 298 P **P 09 10 12.8 +1.1**
SNR=16
AML Almayashu 51.75 298 *e*P **P 09 10 12.5 +0.8**
comp=Z,43nm,0.9s,mb5.4
DDI Dehra Dun 53.12 282 *ex* **P 09 10 21.5 -0.6**
HYT Haines Junctio 53.12 37 *e*P **P 09 10 23.0 +1.3**
INK Inuvik 53.29 27 P **P 09 10 23.1 +0.3**
comp=Z,1.0nm,0.5s,mb4.0,baz=299,slow=8.3,SNR=8.9
INK Inuvik 53.29 27 P **P 09 10 23.1 +0.3**
INK pmax pmax
comp=Z,1.0nm,0.5s
INK Inuvik 53.29 27 *e*P **P 09 10 23.3 +0.5**
KK31 Karatay Array 53.62 300 *i* P **P 09 10 25.2 -0.4**

KK31 pmax pmax
comp=Z,29nm,0.8s,mb5.3
SVE Sverdlovsk 55.26 319⇑ eP P 09 10 37.9 +0.6
SVE eSS SS 09 21 56.4 -7.6
SVE pmax pmax
comp=Z,47nm,1.0s,mb5.5
SVE MLR MLR
comp=Z,3μm,16.0s,MS5.4
SOKR Solikamsk 56.37 322c iP P 09 10 42.0 -3.2
SOKR pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
ARU Arti 56.48 318c iP P 09 10 45.7 -0.3
ARU 09 12 49.4
ARU S S 09 18 37.4 +1.0
ARU SS SS 09 22 20.7 -2.4
ARU pmax pmax
comp=Z,38nm,1.7s,mb5.2
ARU MLR MLR
comp=Z,3μm,17.0s,MS5.4
ARU Arti 56.48 318 eP P 09 10 45.3 -0.7
comp=Z,34nm,1.0s,mb5.3
DLBC Dease Lake 57.44 39 P P 09 10 53.6 +0.8
comp=Z,2.4nm,0.8s,mb4.3,baz=239,slow=8.7,SNR=4.0
FITZ Fitzroy Crossi 57.83 199 P P 09 10 55.6 -0.3
comp=Z,4.4nm,0.8s,mb4.6,baz=25,slow=8.9,SNR=4.4
WRAB Tennant Creek 57.91 189 eP P 09 10 56.5 0.0
WRA Warramunga Arr 57.92 189 P P 09 10 55.5 -1.0
KBL Kabul 58.09 291 eP P 09 10 57.5 -0.2
KBL pmax pmax
comp=Z,31nm,1.0s,mb5.3
KBL Kabul 58.09 291 eP P 09 10 57.5 -0.2
comp=Z,31nm,1.0s,mb5.3
AB31 Akbulak array 58.23 310 i P P 09 10 57.8 -0.7
AB31 pmax pmax
comp=Z,5.0nm,0.4s,mb4.9
ABKAR Akbulak array 58.23 310 eP P 09 10 58.1 -0.4
comp=Z,6.8nm,0.5s,mb4.9
AKTK Aktyubinsk 58.93 312 P P 09 11 03.0 -0.4
AKTO Aktyubinsk 58.93 312 P P 09 11 03.0 -0.4
comp=Z,18nm,0.9s,mb5.1,baz=75,slow=6.3,SNR=26
AKTO Aktyubinsk 58.93 312 P P 09 11 03.0 -0.4
AKTO pmax pmax
comp=Z,18nm,1.0s,mb5.1
HYB Hyderabad 59.22 269 eP P 09 11 05.5 -0.3
HYB Hyderabad 59.22 269 i P P 09 11 05.5 -0.3
ALE Alert 59.33 4 P P 09 11 05.0 -0.7
comp=Z,78nm,1.2s,mb5.6,SNR=6.5
KBS Kingsbay 60.11 350c iP P 09 11 11.3 +0.2
KBS pmax pmax
comp=Z,12nm,1.2s,mb4.8
ASAR Alice Springs 61.65 189 P P 09 11 21.1 -1.0
comp=Z,4.3nm,0.7s,mb4.7,baz=13,slow=7.2,SNR=41
ASAR Alice Springs 61.65 189 P P 09 11 21.1 -1.0
ASAR pmax pmax
comp=Z,4.0nm,0.7s
RES Resolute Bay 61.65 15 P P 09 11 21.3 -0.3
comp=Z,6.6nm,1.0s,mb4.7,baz=290,slow=8.4,SNR=4.9
RES Resolute Bay 61.65 15 P P 09 11 21.3 -0.3
RES pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
RES Resolute Bay 61.65 15 P P 09 11 21.3 -0.3
APA Apatity 62.44 336⇑ iP P 09 11 27.0 0.0
APA pmax pmax
comp=Z,18nm,1.0s,mb5.2
APA MLR MLR
comp=Z,1μm,17.0s,MS5.0
YKA Yellowknife Ar 62.68 31 P P 09 11 28.2 -0.5
comp=Z,0.8nm,0.7s,mb4.0,baz=304,slow=7.1,SNR=4.8
YKA Yellowknife Ar 62.68 31 P P 09 11 28.2 -0.5
YKA pmax pmax
comp=Z,1.0nm,0.7s
KEV Kevo 63.12 339 eP P 09 11 29.2 -2.3
KEV pmax pmax
comp=Z,2.0nm,0.6s,mb4.4
KEV Kevo 63.12 339 ep P 09 11 29.2 -2.3
comp=Z,2.3nm,0.6s,mb4.5
DZM Mont Dzumac 63.58 155 eS S 09 20 07.8 -0.5
comp=Z,360nm,29.1s
DZM eLR LR 09 30 36.4
comp=Z,801nm,22.1s
ARCES ARCESS Array B 63.67 340 P P 09 11 35.0 -0.1
comp=Z,4.6nm,0.8s,mb4.5,baz=62,slow=8.4,SNR=15
ARCES LR LR 09 42 31.8
comp=Z,269nm,20.6s,MS4.4,baz=359,slow=39
ARCES ARCESS Array B 63.67 340 P P 09 11 35.1 0.0
ARCES pmax pmax
comp=Z,5.0nm,0.8s
ARCES MLR MLR
comp=Z,269nm,20.6s
DAG Danmarks Havn 65.14 355⇓ iP P 09 11 44.0 -0.7
DAG pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
DAG Danmarks Havn 65.14 355⇓ iP P 09 11 44.0 -0.7
comp=Z,10.0nm,0.9s,mb4.8
AFI Afiamalu 66.84 131 LR LR 09 38 00.3
comp=Z,250nm,19.1s,MS4.5,baz=137,slow=33
MOS Moscow 67.26 324 eP P 09 11 57.8 -0.8
MOS e 09 14 28.9
MOS ePPP 09 16 10.7
MOS pmax pmax
comp=Z,38nm,1.0s,mb5.4
MOS MLR MLR
comp=Z,2μm,15.0s,MS5.3
OBN Obninsk 68.11 323c iP P 09 12 03.3 -0.6
OBN e 09 12 28.3
OBN e 09 14 33.7
OBN eS S 09 20 57.0 -5.9
OBN pmax pmax
comp=Z,80nm,1.7s,mb5.5
OBN MLR MLR
comp=Z,1μm,16.0s,MS5.2
KAF Kangasniemi 68.12 333 eP P 09 12 02.2 -1.7
KAF pmax pmax
comp=Z,21nm,0.9s,mb5.2
KAF Kangasniemi 68.12 333 ep P 09 12 02.2 -1.7
comp=Z,21nm,0.9s,mb5.2
OD2 Odessa Site #2 68.49 46 eP P 09 12 10.4 +3.9
FINES FINESS Array B 68.64 333 P P 09 12 06.9 -0.2
comp=Z,23nm,0.9s,mb5.1,baz=46,slow=8.2,SNR=32
FINES LR LR 09 44 04.0
comp=Z,659nm,21.1s,MS4.8,baz=238,slow=38
FINES FINESS Array B 68.64 333 P P 09 12 06.9 -0.2
FINES pmax pmax
comp=Z,23nm,0.9s
FINES MLR MLR
comp=Z,659nm,21.1s
VSR Storozhevoye 69.04 319 eP P 09 12 09.1 -0.7
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,10.0nm,0.9s
VSR pmax pmax
comp=Z,20nm,0.9s,mb5.0
VSR MLR MLR
comp=N,2μm,18.0s,MS5.5
VSR MLR MLR
comp=E,2μm,18.0s,MS5.5
VSR MLR MLR
comp=Z,3μm,18.0s,MS5.5
VORD Divnogorie 69.11 319 eP P 09 12 09.8 -0.5
VORD pmax pmax
comp=N,20nm,0.7s
VORD pmax pmax
comp=E,9.0nm,0.7s
VORD pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
VORD MLR MLR
comp=N,950nm,18.0s,MS5.4
VORD MLR MLR
comp=E,2μm,18.0s,MS5.4
VORD MLR MLR
comp=Z,3μm,18.0s,MS5.5
STKA Stephens Creek 69.28 181 P P 09 12 12.0 +0.7
comp=Z,3.2nm,0.8s,mb4.3,baz=345,slow=11,SNR=5.3
STKA LR LR 09 38 48.5
comp=Z,271nm,21.1s,MS4.5,baz=22,slow=33
STKA Stephens Creek 69.28 181 P P 09 12 12.0 +0.6
STKA LR LR 09 38 48.5
SUMG Summit 69.96 0 eP P 09 12 14.8 -0.4
SUMG Summit 69.96 0 i P P 09 12 14.8 -0.4
comp=Z,10nm,1.0s,mb4.7
SUMG pmax pmax
comp=Z,370nm,18.0s
VSU Vasula 70.33 330c iP P 09 12 17.0 -0.6
VSU pmax pmax
comp=Z,37nm,1.0s,mb5.3

JTMT Jette 70.78 44 eP P 09 12 25.1 +4.5
SWMT Swartz Lake 71.08 44 eP P 09 12 22.6 +0.2
ZEI Tsey 71.12 310 eP P 09 12 21.2 -1.5
ZEI pmax pmax
comp=Z,12nm,0.4s,mb5.2
KIV Kislovodsk 71.18 311 P P 09 12 23.5 +0.4
comp=Z,327nm,0.9s,mb6.3,SNR=5.5
KIV Kislovodsk 71.18 311c iP P 09 12 23.6 +0.5
KIV e 09 12 44.2
KIV e 09 14 56.2
KIV eS S 09 21 39.4 -0.1
KIV eSS SS 09 26 13.9 +1.5
KIV pmax pmax
comp=Z,57nm,1.0s,mb5.5
KIV pmax pmax
comp=Z,25nm,3.1s
KIV MLR MLR
comp=Z,996nm,19.0s,MS5.1
KIV Kislovodsk 71.18 311 eP P 09 12 23.7 +0.6
comp=Z,51nm,0.9s,mb5.5
KIV Kislovodsk 71.18 311 P P 09 12 23.5 +0.4
SNR=16
SLMT Seeley Lake 71.51 44 eP P 09 12 26.3 +1.3
GNI Garni 72.07 307 i P P 09 12 28.8 +0.3
GNI pmax pmax
comp=Z,18nm,1.6s
IZAR Zarasai 72.33 328 eP P 09 12 30.2 +0.5
IZAR AMB AMB 09 12 30.4
comp=Z,9.8nm,1.0s,mb4.7
IDID Didziasalis 72.41 327 eP P 09 12 30.9 +0.6
FFC Flin Flon 72.56 33 eP P 09 12 32.1 +1.0
IIGN Ignalina 72.61 328 eP P 09 12 31.9 +0.5
IIGN AMB AMB 09 12 32.1
comp=Z,11nm,1.0s,mb4.8
CMB Columbia Colle 72.64 55 eP P 09 12 32.1 +0.1
CMB pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
CMB Columbia Colle 72.64 55 eP P 09 12 32.1 +0.2
comp=Z,4.2nm,1.0s,mb4.3
NACGM Naroch 72.67 327 e P 09 12 29.0 -2.8
LRM Limekiln Ridge 72.93 45 eP P 09 12 34.3 +0.8
comp=Z,28nm,1.0s,mb5.2
DLMT Dillon 73.13 45 eP P 09 12 36.2 +1.4
SOC Sochi 73.15 312 eP P 09 12 34.3 -0.6
SOC e*PP pP 09 12 35.4 -4.4
SOC e pP 09 12 39.3 -0.5
SOC e 09 12 48.0
SOC eS S 09 21 56.0 -6.1
SOC pmax pmax
comp=Z,31nm,0.9s,mb5.2
SOC MLR MLR
comp=Z,988nm,17.0s,MS5.2
ARQ Araqi 73.19 287 P P 09 12 35.9 +0.5
SNR=5.2
BOZ Bozeman (W) 73.50 45 eP P 09 12 37.5 +0.6
BOZ pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
BOZ Bozeman (W) 73.50 45 eP P 09 12 37.5 +0.6
comp=Z,3.2nm,0.9s,mb4.2
NVAR Mina Array Bea 73.76 54 P P 09 12 39.3 +0.7
comp=Z,1.1nm,0.8s,mb3.8,baz=288,slow=6.4,SNR=12
NB2 NORSAR Subarra 73.90 338 P P 09 12 38.5 -0.5
comp=Z,19nm,0.9s,mb5.0,baz=37,slow=5.9
NB2 NORSAR Subarra 73.90 338 P P 09 12 38.5 -0.5
baz=37,slow=5.9
NB2 NORSAR Subarra 73.90 338 P P 09 12 38.5 -0.5
NB2 NORSAR Subarra 73.90 338 P P 09 12 38.5 -0.5
NOA NORSAR Array B 73.90 338 P P 09 12 38.5 -0.5
comp=Z,15nm,0.9s,mb4.9,baz=39,slow=5.8,SNR=22
NOA LR LR 09 48 08.4
comp=Z,719nm,18.8s,MS5.0,baz=30,slow=38
NOA NORSAR Array B 73.90 338 P P 09 12 38.5 -0.5
NOA pmax pmax
comp=Z,15nm,1.0s
NOA MLR MLR
comp=Z,719nm,18.8s
NAO01 NORSAR Array S 74.15 338 eP P 09 12 39.3 -1.2
AKASG Malin Array Be 74.33 323 P P 09 12 40.9 -0.8
comp=Z,7.4nm,0.6s,mb4.8,baz=44,slow=6.1,SNR=52
AKASG LR LR 09 48 13.1
comp=Z,1μm,18.0s,MS5.3,baz=55,slow=38
AKASG Malin Array Be 74.33 323 P P 09 12 40.9 -0.8
AKASG pmax pmax
comp=Z,7.0nm,0.6s
AKASG MLR MLR
comp=Z,1μm,18.0s
AKBB Malin Array Si 74.33 323 eP P 09 12 41.2 -0.5
KIEV Kiev 74.34 323 eP P 09 12 41.0 -0.7
KIEV pmax pmax
comp=Z,33nm,1.0s,mb5.2
KIEV Kiev 74.34 323 eP P 09 12 41.0 -0.7
comp=Z,33nm,1.0s,mb5.2
GCMT Greycliff 74.50 44 eP P 09 12 47.6 +4.8
comp=Z,3.7nm,1.1s,mb4.2
SUW Suwalki 74.81 328 eP P 09 12 42.9 -1.5
SUW LMZ 09 47 56.7
comp=Z,800nm,17.6s
IMW Indian Meadow 74.96 46 eP P 09 12 47.4 +2.0
SNOW Snow King Moun 75.33 46 eP P 09 12 53.8 +6.2
SIM Simferopol' 75.50 316 eP P 09 12 49.0 +0.4
SIM eS S 09 22 26.0 -2.4
SIM pmax pmax
comp=Z,19nm,0.8s,mb5.1
SIM MLR MLR
comp=Z,730nm,17.2s,MS5.0
HWUT Hardware Ranch 76.01 48 eP P 09 12 54.4 +2.9
comp=Z,12nm,1.4s,mb4.7
DUG Dugway 76.13 50 eP P 09 12 53.2 +1.0
DUG pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
DUG Dugway 76.13 50 eP P 09 12 53.2 +1.0
comp=Z,4.2nm,1.1s,mb4.3
RAO Raoul Island 76.19 145 LR LR 09 42 33.3
comp=Z,286nm,20.8s,MS4.6,baz=62,slow=33
KBD Kabd 76.37 296 eP P 09 12 52.8 -1.0
KBD AMb AMB 09 12 54.3
comp=Z,45nm,1.2s,mb5.3
BW06 Boulder Array 76.45 46 eP P 09 12 54.4 +0.4
PDAR Pinedale Array 76.45 46 P P 09 12 54.9 +0.9
comp=Z,1.0nm,0.7s,mb3.9,baz=291,slow=3.0,SNR=11
PDAR LR LR 09 41 55.2
comp=Z,107nm,20.0s,MS4.2,baz=99,slow=32
QRN Al-Qurain 76.46 296 eP P 09 12 53.6 -0.7
QRN AMb AMB 09 12 54.8
comp=Z,96nm,1.1s,mb5.6
RDF Al-Radifah 76.61 296 eP P 09 12 54.5 -0.7
RDF AMb AMB 09 12 56.1
comp=Z,122nm,1.1s,mb5.7
NAY Al-Naaiem 76.64 297 eP P 09 12 54.0 -1.3
NAY AMb AMB 09 12 55.7
comp=Z,38nm,1.2s,mb5.2
DAU Daniels Canyon 76.93 49 eP PcP 09 13 10.5 +2.7
DAU Daniels Canyon 76.93 49 epP PcP 09 13 10.5 +2.7
LVV L'vov 77.38 324 eP P 09 12 58.9 -0.2
LVV MLR MLR
comp=E,1μm,18.0s,MS5.2
LVV MLR MLR
comp=N,500nm,19.0s,MS5.2
LVV MLR MLR
comp=Z,300nm,18.0s,MS4.7
CCUT Cedar City 77.41 52 eP PcP 09 13 08.5 -1.5
MSU Marysvale 77.55 51 eP P 09 13 01.9 +1.6
MSU pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
MSU Marysvale 77.55 51 eP P 09 13 01.9 +1.6
comp=Z,5.6nm,1.2s,mb4.4
KWP Kalwaria Pacla 78.12 325 eP P 09 13 03.5 +0.3
KWP e 09 13 20.6
KWP LMZ 09 51 09.5
comp=Z,2μm,16.0s
KWP Kalwaria Pacla 78.12 325 eP P 09 13 04.0 +0.8
KWP pmax pmax
comp=Z,71nm,1.3s,mb5.4
KWP Kalwaria Pacla 78.12 325 eP P 09 13 04.0 +0.8
comp=Z,70nm,1.3s,mb5.4
KWP Kalwaria Pacla 78.12 325⇑ iP P 09 13 03.6 +0.4
SRU San Rafael 78.19 50 eP P 09 13 05.4 +1.6
BUR08 Bucovina Ar. S 78.34 322 eP P 09 13 05.0 +0.5
ULM Lac du Bonnet 78.35 34 LR LR 09 47 10.9
comp=Z,119nm,21.4s,MS4.2,baz=17,slow=35
BURAR Bucovina Array 78.36 322⇓ P P 09 13 04.0 -0.6
BURAR Bucovina Array 78.36 322⇓ iP P 09 13 04.0 -0.6
TESR 78.41 321⇓ P P 09 13 05.1 +0.2
TESR 78.41 321⇓ iP P 09 13 05.1 +0.2
VRI Vrincioaia 78.81 320⇑ P P 09 13 08.1 +1.0

VRI Vrincioaia 78.81 320⇑ iP P 09 13 08.1 +1.0
TIRR Tirgusor 78.90 318 ⇑P P 09 13 07.3 -0.4
TIRR Tirgusor 78.90 318⇑ iP P 09 13 07.3 -0.4
STHS Stebnicka Huta 78.93 325 eP P 09 13 08.7 +1.0
STHS pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
STHS Stebnicka Huta 78.93 325 eP P 09 13 08.7 +1.0
comp=Z,8.7nm,1.1s,mb4.6
STHS Stebnicka Huta 78.93 325 eP P 09 13 08.7 +1.0
OJC Ojcow 78.99 327 eP P 09 13 05.3 -2.7
OJC e 09 13 15.0
OJC eS S 09 23 01.0 -5.1
OJC MLR MLR
comp=Z,2μm,17.3s,MS5.4
UZH Uzhgorod 79.02 324 eP P 09 13 07.0 -1.2
UZH e 09 13 16.0
UZH ePPP 09 17 58.0
UZH eS S 09 22 59.0 -7.5
UZH e 09 23 19.0
UZH ePS 09 23 48.6
UZH MLR MLR
comp=N,600nm,15.0s,MS5.3
UZH MLR MLR
comp=E,800nm,15.0s,MS5.3
UZH MLR MLR
comp=Z,480nm,15.0s,MS5.0
BR131 Keskin Array S 79.11 312 eP P 09 13 08.4 -0.5
comp=Z,6.0nm,1.0s,mb4.5
BRTR Keskin Array B 79.11 312 P P 09 13 08.5 -0.4
comp=Z,6.8nm,1.0s,mb4.5,baz=99,slow=3.9,SNR=26
BRTR LR LR 09 54 01.0
comp=Z,178nm,19.0s,MS4.4,baz=224,slow=40
CRVS Cervenica-Dubn 79.21 325 eP P 09 13 09.5 +0.3
CRVS pmax pmax
comp=Z,23nm,1.9s,mb4.8
CRVS Cervenica-Dubn 79.21 325 eP P 09 13 09.5 +0.3
comp=Z,22nm,1.9s,mb4.8
CRVS Cervenica-Dubn 79.21 325 eP P 09 13 09.5 +0.3
TRPA Tarpa 79.27 324⇑ iP P 09 13 10.2 +0.6
MLR Muntele Rosu 79.47 320 ⇑P P 09 13 11.1 +0.4
MLR Muntele Rosu 79.47 320⇑ iP P 09 13 11.1 +0.4
BSEG Bad Segeberg 79.86 334 eP P 09 13 12.7 0.0
comp=Z,42nm,1.6s,mb5.1
VOIR 79.96 321 ⇓P P 09 13 14.3 +0.9
VOIR 79.96 321⇓ iP P 09 13 14.3 +0.9
OKC Ostrava-Krasne 79.99 327 eP P 09 13 13.5 +0.1
OKC MLR MLR
comp=Z,800nm,16.1s,MS5.2
OKC Ostrava-Krasne 79.99 327 eP P 09 13 13.5 +0.1
OKC AMS AMS 09 51 20.0
comp=Z,800nm,16.1s
PV01 Paradox Valley 79.99 49 eP P 09 13 14.3 +0.6
comp=Z,893nm,1.4s
KSP Ksiaz 80.00 329 eP P 09 13 13.6 +0.1
KSP MLR MLR
comp=Z,2μm,18.1s,MS5.5
MORC Moravsky Berou 80.29 327 eP P 09 13 15.4 +0.3
comp=Z,16nm,1.1s,mb4.9
MORC Moravsky Berou 80.29 327⇑ iP P 09 13 15.4 +0.3
DPC Dobruska-Polom 80.37 328 eP P 09 13 15.7 +0.2
DPC MLR MLR
comp=Z,700nm,15.3s,MS5.1
DPC Dobruska-Polom 80.37 328 eP P 09 13 15.7 +0.2
DPC ex x 09 13 25.5
DPC AMS AMS 09 53 50.0
comp=Z,700nm,15.3s
UPC Upice 80.38 329 eP P 09 13 15.7 +0.2
UPC Upice 80.38 329 eP P 09 13 15.7 +0.2
PSZ Piszkesteto 80.64 325⇑ iP Px 09 13 32.3
VYHS Vyhne 80.69 326 eP P 09 13 17.7 +0.4
VYHS pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
VYHS Vyhne 80.69 326 eP P 09 13 17.7 +0.4
comp=Z,6.4nm,1.2s,mb4.4
VYHS Vyhne 80.69 326 eP P 09 13 17.7 +0.4
BRG Berggiesshubel 80.93 330 eP P 09 13 18.6 +0.1
comp=Z,11nm,1.2s,mb4.7
BRG Berggiesshubel 80.93 330 eP P 09 13 18.3 -0.2
comp=Z,11nm,1.2s,mb4.7
BRG Berggiesshubel 80.93 330 eP P 09 13 18.3 -0.2
BRG pmax pmax
comp=Z,2.0nm,1.2s,mb3.9
PVCC Panska Ves 80.95 329 eP P 09 13 18.7 +0.1
PVCC MLR MLR
comp=Z,1μm,16.7s,MS5.3
PVCC Panska Ves 80.95 329 eP P 09 13 18.7 +0.1
PVCC AMS AMS 09 51 40.0
comp=Z,1μm,16.7s
CLL Collm 80.96 331 eP P 09 13 18.2 -0.4
comp=Z,20nm,1.2s,mb4.9
CLL Collm 80.96 331⇑ iP P 09 13 18.1 -0.5
CLL e 09 13 25.0
CLL pmax pmax
comp=Z,22nm,1.3s,mb4.9
CLL MLR MLR
comp=Z,900nm,18.6s,MS5.2
CLL Collm 80.96 331⇑ iP P 09 13 18.1 -0.5
comp=Z,22nm,1.3s,mb4.9
CLL e 09 13 25.0
CLL LR LR
comp=Z,900nm,18.6s,MS5.2
VRAC Vranov 81.05 328 ⇓P P 09 13 19.8 +0.6
VRAC Vranov 81.05 328⇓ iP P 09 13 19.8 +0.6
GZR Gura Zlata 81.12 322 ⇑P P 09 13 19.8 +0.2
GZR Gura Zlata 81.12 322⇑ iP P 09 13 19.8 +0.2
BUD Budapest 81.36 325⇑ eP pP 09 13 31.9 +6.1
PRU Pruhonice 81.38 329 eP P 09 13 21.7 +0.8
PRU MLR MLR
comp=Z,900nm,18.8s,MS5.2
PRU Pruhonice 81.38 329 eP P 09 13 21.7 +0.8
PRU AMS AMS 09 52 10.0
comp=Z,900nm,18.8s
TREC Trest 81.53 328 AMS AMS 09 52 10.0
comp=Z,800nm,18.8s
CLZ Clausthal 81.53 332 eP P 09 13 21.4 -0.3
comp=Z,18nm,1.1s,mb4.9
EYMN Ely 81.99 33 eP P 09 13 24.4 +0.3
MOX Moxa 82.02 331 e(P) P 09 13 24.1 -0.2
MOX
comp=Z,600nm,19.0s
MOX Moxa 82.02 331 eP P 09 13 23.6 -0.7
comp=Z,15nm,1.3s,mb4.8
NKC Novy Kostel 82.02 330 eP P 09 13 24.3 0.0
NKC Novy Kostel 82.02 330 eP P 09 13 24.3 0.0
URZ Urewera 82.04 153 LR LR 09 45 37.2
comp=Z,156nm,18.7s,MS4.4,baz=144,slow=33
MMAI Mount Meron Ar 82.35 306 P P 09 13 26.6 +0.2
comp=Z,1.0nm,0.3s,mb4.2,baz=23,slow=6.5,SNR=7.0
MMAI LR LR 09 53 58.4
comp=Z,375nm,18.2s,MS4.8,baz=0.0,slow=39
KHC Kasperske Hory 82.44 329 eP P 09 13 26.3 -0.2
KHC e pP 09 13 31.0 -0.5
KHC MLR MLR
comp=Z,1μm,19.4s,MS5.2
KHC Kasperske Hory 82.44 329 eP P 09 13 26.3 -0.2
comp=Z,7.7nm,0.9s,mb4.6
KHC Kasperske Hory 82.44 329 eP P 09 13 26.3 -0.2
KHC epP pP 09 13 31.0 -0.5
KHC AMS AMS 09 52 40.0
comp=Z,1μm,19.4s
ROTZ Rotzenmuhle 82.49 330 eP P 09 13 27.3 +0.6
comp=Z,14nm,1.3s,mb4.7
WET Wettzell 82.71 329 eP P 09 13 28.5 +0.6
comp=Z,10.0nm,1.3s,mb4.7
VTS Vitosha 82.91 320 ⇑P P 09 13 30.2 +1.1
VTS Vitosha 82.91 320⇑ iP P 09 13 30.2 +1.1
GRF Grafenberg Arr 82.93 331 eP P 09 13 29.1 0.0
comp=Z,51nm,1.5s,mb5.3
GRF eS S 09 23 38.2 -9.0
GRF eL 09 53 27.7
comp=Z,755nm,18.9s
GRF Grafenberg Arr 82.93 331 eP P 09 13 29.1 0.0
GRF eS S 09 23 38.2 -9.0
GRF pmax pmax
comp=Z,51nm,1.5s,mb5.3
GRF MLR MLR
comp=Z,800nm,18.9s,MS5.1
GRF Grafenberg Arr 82.93 331 eP P 09 13 29.1 0.0
comp=Z,51nm,1.5s,mb5.3
GRF eS S 09 23 38.2 -9.0
GRF LR LR
comp=Z,800nm,18.9s,MS5.1
ANMO Albuquerque 83.36 51 eP P 09 13 35.6 +4.1
ANMO pmax pmax
comp=Z,6.0nm,1.2s

ANMO	Albuquerque	83.36	51	eP	P	09 13 35.5	+4.0
	comp=Z,6.1nm,1.2s,mb4.5						
TNS	Taunus Mts	83.55	332	eP	P	09 13 31.2	-1.0
	comp=Z,446nm,3.5s						
RJOB	Jochberg	83.86	329	eP	P	09 13 34.1	+0.2
	comp=Z,14nm,1.4s,mb4.9						
PPT	Papeete	84.08	117	eLR	LR	09 39 56.3	
	comp=Z,528nm,24.8s,baz=314						
PPT	Papeete	84.08	117	LR	LR	09 47 30.7	
	comp=Z,282nm,19.8s,MS4.7,baz=326,slow=33						
VAY	Valandovo	84.16	319	i P	P	09 13 34.9	-0.6
SCHQ	Schefferville	84.36	17	LR	LR	09 58 16.6	
	comp=Z,180nm,18.0s,MS4.5,baz=20,slow=41						
KRUS	Krusevo	84.81	320	i P	P	09 13 38.2	-0.6
WLF	Walferdange	84.84	333	eP	P	09 13 39.3	+0.5
	comp=Z,42nm,1.5s,mb5.3						
RPZ	Rata Peaks	85.09	160	LR	LR	09 50 03.4	
	comp=Z,192nm,19.5s,MS4.5,baz=159,slow=35						
BFO	Black Forest	85.15	331	eP	P	09 13 39.6	-0.8
	comp=Z,32nm,1.5s,mb5.2						
BFO	Black Forest	85.15	331	eP	P	09 13 40.1	-0.3
BFO				pmax	pmax		
	comp=Z,31nm,1.4s,mb5.2						
BFO	Black Forest	85.15	331	eP	P	09 13 40.1	-0.3
	comp=Z,31nm,1.4s,mb5.2						
BAIF	Baives	85.19	335	eP	P	09 13 42.0	+1.5
CDF	Champ du Feu	85.48	332	eP	P	09 13 41.8	-0.2
HINF	Hinteralfeld	86.13	332	eP	P	09 13 44.6	-0.7
LOR	Lormes	87.69	333	eP	P	09 13 52.5	-0.4
	comp=Z,42nm,1.3s,mb5.2						
LOR				eMLR	MLR		
	comp=Z,485nm,20.5s,MS4.6						
LOR	Lormes	87.69	333	eP	P	09 13 52.5	-0.4
LOR				pmax	pmax		
	comp=Z,21nm,1.3s,mb5.2						
LOR				MLR	MLR		
	comp=Z,490nm,20.5s,MS4.9						
LOR	Lormes	87.69	333	eP	P	09 13 52.5	-0.4
	comp=Z,21nm,1.3s,mb5.2						
LOR				LR	LR		
	comp=Z,490nm,20.5s,MS4.9						
SSF	Saint Saulge	87.99	333	eP	P	09 13 55.0	+0.7
	comp=Z,38nm,1.4s,mb5.1						
SSF	Saint Saulge	87.99	333	eP	P	09 13 55.0	+0.7
SSF				pmax	pmax		
	comp=Z,19nm,1.4s,mb5.1						
SSF	Saint Saulge	87.99	333	eP	P	09 13 55.0	+0.7
	comp=Z,19nm,1.4s,mb5.1						
TBI	Tubuai	88.05	122	eLR	LR	09 41 52.2	
	comp=Z,411nm,24.8s,baz=316						
LPG	La Plagne	88.11	331	eP	P	09 13 55.2	+0.3
SMF	Signal de Mont	88.23	333	eP	P	09 13 55.2	-0.2
	comp=Z,41nm,1.3s,mb5.2						
SMF	Signal de Mont	88.23	333	eP	P	09 13 55.2	-0.2
SMF				pmax	pmax		
	comp=Z,20nm,1.3s,mb5.2						
SMF	Signal de Mont	88.23	333	eP	P	09 13 55.2	-0.2
	comp=Z,20nm,1.3s,mb5.2						
AVF	Avril sur Loir	88.28	333	eP	P	09 13 55.5	-0.2
	comp=Z,15nm,0.9s,mb4.9						
AVF	Avril sur Loir	88.28	333	eP	P	09 13 55.5	-0.2
AVF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb5.0						
AVF	Avril sur Loir	88.28	333	eP	P	09 13 55.5	-0.2
	comp=Z,7.7nm,0.9s,mb4.9						
GRR	Gorron	88.30	337	eP	P	09 13 55.7	0.0
	comp=Z,36nm,1.1s,mb5.2						
GRR	Gorron	88.30	337	eP	P	09 13 55.7	0.0
GRR				pmax	pmax		
	comp=Z,18nm,1.1s,mb5.2						
GRR	Gorron	88.30	337	eP	P	09 13 55.7	0.0
	comp=Z,18nm,1.1s,mb5.2						
TXAR	Lajitas Array	88.89	53	P	P	09 13 59.2	+0.3
	comp=Z,0.4nm,0.6s,mb3.9,baz=305,slow=3.6,SNR=8.9						
TXAR				LR	LR	09 48 11.8	
	comp=Z,128nm,20.4s,MS4.3,baz=0.0,slow=32						
ORIF	Oris-en-Rattie	88.93	331	eP	P	09 13 58.9	+0.1
	comp=Z,23nm,1.1s,mb5.1						
ORIF				eMLR	MLR		
	comp=Z,404nm,17.8s,MS4.6						
ORIF	Oris-en-Rattie	88.93	331	eP	P	09 13 58.9	+0.1
ORIF				pmax	pmax		
	comp=Z,12nm,1.1s,mb5.1						
ORIF	Oris-en-Rattie	88.93	331	eP	P	09 13 58.9	+0.1
	comp=Z,12nm,1.1s,mb5.1						
TCF	Toulx Ste Croi	89.11	334	eP	P	09 14 00.6	+1.0
MFF	Saint Martin d	89.64	335	eP	P	09 14 02.3	+0.2
	comp=Z,11nm,0.8s,mb5.0						
MFF	Saint Martin d	89.64	335	eP	P	09 14 02.3	+0.2
MFF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb5.0						
MFF	Saint Martin d	89.64	335	eP	P	09 14 02.3	+0.2
	comp=Z,5.7nm,0.8s,mb5.0						
CCM	Cathedral Cave	89.67	40	eP	P	09 14 03.5	+1.1
CCM				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.8						
CCM	Cathedral Cave	89.67	40	eP	P	09 14 03.5	+1.0
	comp=Z,6.4nm,1.1s,mb4.9						
FRF	La Foret Royal	89.76	330	eP	P	09 14 03.1	+0.4
SMRF	Simiane la Rot	89.84	331	eP	P	09 14 03.0	-0.1
CAF	Calviac	90.34	333	eP	P	09 14 05.8	+0.4
MIAR	Mount Ida	91.11	43	eP	P	09 14 10.4	+1.2
ESDC	Sonseca Array	97.07	335	LR	LR	10 03 52.5	
	comp=Z,375nm,18.0s,MS4.9,baz=60,slow=39						
RKT	Rikitea	98.11	113	eLR	LR	09 46 31.7	
	comp=Z,471nm,24.8s,baz=312						
LPAZ	La Paz	145.47	60	PKPbc	PKPbc	09 20 44.0	+1.2
	comp=Z,1.9nm,0.6s,baz=334,slow=2.6,SNR=10						
LPAZ	La Paz	145.47	60	PKIKP	PKPbc	09 20 44.1	+1.2
LPAZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
LPAZ	La Paz	145.47	60	ePKPdf	PKPbc	09 20 44.1	+1.2

JMA 21 09:01:05.2, 38°.79N×141°.63E, h69km±1km, M1.1, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.29	6	P	Pn	09 01 16.2	0.0
OFUJ				eS	Sn	09 01 24.3	+0.1
JMK	Ichinoseki	0.36	297	P	Pn	09 01 16.6	-0.1
JMK				S	Sn	09 01 25.0	-0.1
JIO	Ouri	0.40	213	P	Pn	09 01 17.0	0.0
JIO				S	Sn	09 01 25.5	-0.1
JOM	Ohasama	0.73	339	P	Pn	09 01 20.6	+0.2
JOM				eS	Sn	09 01 31.4	-0.2
JOU	Okura	0.87	241	P	Pn	09 01 22.1	+0.1
JMM	Marumori	1.13	216	P	Pn	09 01 25.1	-0.2

CASC 21 09:02:11.7±2.2, 12°.71N×86°.93W, h0km±6km, MD3.8, ML3.2, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TELN	Telica	0.14	138	eP	Pg	09 02 16.1	+1.7
LEON	Leon	0.29	174	eP	Pg	09 02 18.0	+0.7
CNGN	Cerro Negro	0.30	133	eP	Pg	09 02 18.8	+1.2
CNGN				AML	AML	09 02 37.8	
	comp=N,3μm,0.6s						
MOMN	Momotombo	0.48	128	eP	Pg	09 02 22.6	+1.6
COPN	Copaltepe	0.62	148	eP	Pg	09 02 24.2	+0.6
CSAN		0.72	137	eP	Pg	09 02 26.8	+1.3
XAVN	Gruta Xavier	0.81	133	eP	Pg	09 02 28.0	+0.8
MGAN	Managua	0.87	130	eP	Pg	09 02 28.7	+0.3
MGAN				AML	AML	09 02 42.3	
	comp=N,887nm,0.4s						
WILN	Americas 2	0.90	127	eP	Pg	09 02 29.7	+0.6
CRUN	El Crucero	0.95	140	eP	Pg	09 02 30.4	+0.6
TICN	Ticuantepe	0.95	135	eP	Pg	09 02 30.5	+0.5
CNCH	Conchagua	1.05	303	eP	Pg	09 02 31.9	0.0
CNCH				eS	Sg	09 02 48.9	+3.5
APON	Apoyo	1.15	133	eP	Pg	09 02 34.1	+0.3
TGUH	Tegucigalpa,Un	1.38	346	eP	Pg	09 02 37.5	-0.8
TGUH				eS	Sg	09 02 55.7	-0.4
TGUH				AML	AML	09 03 03.0	
	comp=E,2μm,0.6s						
BLLM	Bellamira	1.47	300	eP	Pn	09 02 39.4	-0.1
VSM	San Miguel	1.50	299	eP	Pn	09 02 39.3	-0.6
VSM				eS	Sg	09 03 01.6	+1.8
CAHU	Cacacuatique	1.64	310	eP	Pn	09 02 42.0	+0.3
CAHU				eS	Sn	09 03 05.3	+1.7
CONN	Concepcion	1.71	132	eP	Pn	09 02 43.6	+0.8
SSN	San Juan del S	1.75	143	eP	Pn	09 02 43.1	-0.2
SNVI	San Vicente	2.07	296	eP	Pn	09 02 48.7	+1.0
LFRS	El Faro	2.27	294	eP	Pn	09 02 50.7	+0.2
LFRS				eS	Sn	09 03 22.2	+3.0

*SKO **21** 09:06:21.6, 41°.55N×20°.33E, h15km, M1.8, ML2.3*
*TIR **21** 09:06:21.5±4.3, 41°.37N×20°.60E, h0km±32km, ML3.4*
*ISCJB **21** 09:06:26.6±0.8, 41°.30N±0°.04×20°.45E±0°.06, h10km, Error ellipse: s-maj=7.6km s-min=4.5km az=138.9*
ISC 21 09:06:27.5±0.8, 41°.31N±0°.04×20°.46E±0°.06, h10km, n6, σ1§19/11, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHR	Ohrid	0.32	127	i Pg	Pg	09 06 33.0	-0.8
OHR				i Sg	Sg	09 06 39.4	+1.3
OHR				eLg		09 06 39.7	
	comp=N,172nm,0.5s						
OHR				eLg		09 06 39.9	
	comp=E,194nm,0.5s						
KRUS	Krusevo	0.60	84	i Pg	Pg	09 06 35.6	-3.4
KRUS				i Sg	Sg	09 06 47.6	+0.8
KRUS				eLg		09 06 48.0	
	comp=N,19nm,0.2s						
KRUS				eLg		09 06 48.7	
	comp=E,35nm,0.2s						
BIA	Bitola	0.71	113	i Pg	Pg	09 06 39.9	-1.3
BIA				i Sg	Sg	09 06 50.8	+0.3
BIA				eLg		09 06 51.2	
	comp=N,15nm,0.2s						
BIA				eLg		09 06 53.1	
	comp=E,41nm,0.4s						
KBN	Korca	0.72	160	i PG	Pg	09 06 39.3	-2.1
KBN				i SG	Sg	09 06 52.2	+1.3
PUK	Puka	0.85	330	i PG	Pg	09 06 43.4	-0.4
PUK				i SG	Sg	09 06 56.1	+1.2
SRN	Sarande	1.47	194	i PN	Pg	09 06 56.0	+0.4

*IDC **21** 09:08:59.8±1.0, 4°.32S×137°.92E, h0km, mb4.0/6, mb1 4.3/9, mb1mx4.1/16, mbtmp4.2/9, ML4.6/3, MS3.9/2, Ms1 3.9/2, ms1mx3.1/22, Error ellipse: s-maj=36.8km s-min=20.9km az=72.0*
*NEIC **21** 09:09:00.9±0.6, 4°.32S×137°.87E, h10km, mb4.0/2, Error ellipse: s-maj=14.7km s-min=9.4km az=73.0*
*ISCJB **21** 09:09:02.8±0.7, 4°.43S±0°.08×137°.8E±0°.1, h33km, mb4.2/8, MS4.0/2, Error ellipse: s-maj=17.2km s-min=11.3km az=172.0*
ISC 21 09:09:04.7±0.7, 4°.40S±0°.08×137°.8E±0°.1, h35km, n24, σ1§00/22, mb4.2/8, MS4.0/2, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	9.83	213	eP	Pn	09 11 23.5	-0.2
	77nm,0.5s						
KAKA	Kakadu	9.83	213	ePn	Pn	09 11 23.5	-0.2
	185nm,0.5s						
COEN	Coen	10.85	151	ePn	Pn	09 11 36.5	-1.2
	102nm,0.4s						
WRAB	Tennant Creek	15.81	192	ePn	Pn	09 12 44.4	-0.4
CTA	Charters Tower	17.61	153	eP	Pn	09 13 09.5	+2.0
	8.0nm,0.6s						
CTA	Charters Tower	17.61	153	P	Pn	09 13 08.7	+1.2
	1.5nm,0.3s,baz=329,slow=12,SNR=13						
CTAO	Charters Tower	17.61	153	ePn	Pn	09 13 07.6	+0.1
	7.8nm,0.6s						
FITZ	Fitzroy Crossi	18.11	220	eP	Pn	09 13 12.5	-1.1
	16nm,0.8s						
FITZ				eS	S	09 16 25.7	-14
FITZ	Fitzroy Crossi	18.11	220	P	Pn	09 13 12.5	-1.2
	0.6nm,0.3s,baz=48,slow=13,SNR=5.3						
FITZ	Fitzroy Crossi	18.11	220	ePn	Pn	09 13 13.1	-0.5
	5.7nm,0.6s						
ASAR	Alice Springs	19.52	191	P	Pn	09 13 29.9	-0.8
	6.9nm,0.3s,baz=11,slow=11,SNR=85						
STKA	Stephens Creek	27.56	173	P	P	09 14 49.5	+1.1
	1.7nm,0.5s,mb4.0,baz=328,slow=12,SNR=6.2						
STKA	Stephens Creek	27.56	173	P	P	09 14 49.5	+1.1
FORT	Forrest	27.81	198	eP	P	09 14 51.1	+0.4
	17nm,0.6s,mb4.9						
KLBR	Kellerberrin	32.98	213	eP	P	09 15 36.7	+0.3
	16nm,0.6s,mb5.1						
KSRS	Korea Array	42.65	348	LR	LR	09 31 38.0	
	comp=Z,54nm,19.9s,MS3.4,baz=295,slow=32						
CMAR	Chiang Mai Arr	44.56	302	P	P	09 17 14.9	+1.3
	0.4nm,0.3s,mb3.7,baz=106,slow=6.7,SNR=2.6						
RPZ	Rata Peaks	48.90	148	P	P	09 17 47.8	+0.6
	8.9nm,0.8s,mb4.9,baz=13,slow=22,SNR=5.8						
RAR	Rarotonga	62.70	112	LR	LR	09 41 16.1	
	comp=Z,306nm,20.0s,MS4.5,baz=296,slow=31						
MKAR	Makanchi Array	70.60	323	P	P	09 20 17.4	+0.9
	0.3nm,0.6s,mb3.4,baz=122,slow=8.1,SNR=3.9						
ZAA0	Zalesovo Array	72.96	330	eP	P	09 20 28.4	-2.1
MAW	Mawson	80.24	202	P	P	09 21 12.3	+0.9
	2.5nm,0.8s,mb4.2,baz=38,slow=5.5,SNR=4.7						
ILAR	Eielson Array	87.72	25	P	P	09 21 48.4	-1.2
	0.2nm,0.6s,mb3.5,baz=297,slow=4.4,SNR=4.1						
LPAZ	La Paz	147.10	129	PKPbc	PKPbc	09 28 45.9	+0.8
	0.4nm,0.5s,baz=319,slow=1.6,SNR=7.2						

WEL 21 09:45:09.3±0.5, 38°.63S×175°.77E, h176km±4km, ML3.5/11, 1C, Error ellipse: s-maj=4.2km s-min=3.4km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WNVZ	Wahianoa	0.71	191	PN	Pn	09 45 34.9	+0.2
MOVZ	Moawhango	0.78	181	PN	Pn	09 45 35.0	-0.1
BKZ	Black Stump Fm	0.78	134	PN	Pn	09 45 34.9	-0.2
BKZ				SN	Sn	09 45 54.6	-0.4
MCHZ	McNeill Hill	1.08	139	PN	Pn	09 45 38.0	+0.7
WAZ	Wanganui	1.28	208	PN	Pn	09 45 38.9	0.0
PNHZ	Pukenui	1.32	166	PN	Pn	09 45 39.3	0.0
PNHZ				eSN	Sn	09 46 02.7	+0.2
MWZ	Matawai	1.41	78	ePN	Pn	09 45 39.4	-0.8
TSZ	Takapari Road	1.43	174	↑PN	Pn	09 45 40.3	0.0
TSZ				SN	Sn	09 46 04.1	-0.3
KAHZ	Kaharanaki	1.45	144	PN	Pn	09 45 40.9	+0.5
WPHZ	Waipukurau	1.52	160	PN	Pn	09 45 41.2	+0.1
PXZ	Pawanui	1.63	149	PN	Pn	09 45 42.2	-0.1
PXZ				SN	Sn	09 46 06.4	-1.4
DVHZ	Dannevirke	1.69	170	PN	Pn	09 45 42.5	-0.4
PRHZ	Porangahau	1.77	158	PN	Pn	09 45 43.5	-0.1
MRZ	Mangatainoka R	2.03	184	PN	Pn	09 45 45.6	-0.9
MRZ				SN	Sn	09 46 14.1	-1.3
BFZ	Birch Farm	2.08	170	PN	Pn	09 45 46.4	-0.6
TIWZ	Tintock	2.14	178	PN	Pn	09 45 47.0	-0.7
OGWZ	Otaki Gorge	2.23	192	PN	Pn	09 45 48.0	-0.7
HOWZ	Holdsworth Sta	2.27	185	PN	Pn	09 45 48.0	-1.1
KIW	Kapiti Island	2.32	196	PN	Pn	09 45 48.6	-1.1
CAW	Cannon Point	2.53	192	PN	Pn	09 45 51.0	-1.1
MTW	Mount Morrison	2.53	185	PN	Pn	09 45 50.6	-1.5
SNZO	South Karori	2.80	197	PN	Pn	09 45 53.7	-1.6
TCW	Tory Channel	2.82	204	PN	Pn	09 45 54.1	-1.5
PLWZ	Palliser	2.96	188	PN	Pn	09 45 55.4	-1.9
TUWZ	Tuamarina	3.13	206	PN	Pn	09 45 57.3	-2.0
NNZ	Nelson	3.17	215	PN	Pn	09 45 57.6	-2.3
QRZ	Quartz Range	3.33	228	PN	Pn	09 45 58.6	-3.1
BSWZ	Blackbirch Sta	3.40	205	PN	Pn	09 46 00.9	-1.9
THZ	Tophouse	3.82	214	PN	Pn	09 46 05.7	-2.3
KHZ	Kahutara	4.15	204	PN	Pn	09 46 10.0	-2.1
LTZ	Lake Taylor	4.93	212	PN	Pn	09 46 19.0	-3.2
MQZ	McQueen's Vall	5.59	204	PN	Pn	09 46 27.0	-3.8

*NIED **21** 11:04:00, 33°.20N×142°.30E, h5km, Mw3.9 Best double couple: M0:6.72000×10^14 NP1:φs125.00000°, δ57.00000°, λ-101.00000°. NP2:φs325.00000°, δ35.00000°, λ-73.00000°.*
*IDC **21** 11:04:27.9±0.7, 33°.18N×142°.24E, h0km, mb3.9/16, mb1 4.0/20, mb1mx4.0/29, mbtmp3.9/20, ML3.9/4, MS3.0/1, Ms1 3.0/1, ms1mx2.4/40, Error ellipse: s-maj=17.3km s-min=16.0km az=0.0*
*ISCJB **21** 11:04:31.3±0.5, 33°.29N±0°.04×142°.27E±0°.04, h33km, mb3.9/16, Error ellipse: s-maj=6.5km s-min=4.5km az=34.5*
*NEIC **21** 11:04:31.1, 33°.22N×142°.26E, h64km, MG3.9(JMA), After JMA.*
*JMA **21** 11:04:31.1±0.3, 33°.22N×142°.26E, h64km, M3.9*
ISC 21 11:04:33.2±0.5, 33°.27N±0°.04×142°.25E±0°.04, h35km, n47, σ1§04/65, mb3.9/16, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	Boso 1	1.74	323	P	Pn	11 05 00.0	-0.8
BSO1				eS	Sn	11 05 22.3	+0.6
BSO2	Boso 2	1.93	320	eS	Sn	11 05 28.0	+1.5
JHJ2	Mitsune	2.04	266	P	Pn	11 05 04.3	-0.8
JHJ2				eS	Sn	11 05 29.7	+0.4
JHJ	Hachijo jima 2	2.07	266	Pn	Pn	11 05 04.4	-1.1
	23nm,0.3s,baz=217,slow=20,SNR=57						
JHJ				Sn	Sn	11 05 29.5	-0.5
	83nm,0.3s,baz=70,slow=22,SNR=14						
JHJ				LR	LR	11 05 33.8	
	comp=Z,357nm,21.9s,baz=146,slow=32						
BSO3	Boso 3	2.10	317	P	Pn	11 05 05.5	-0.3
BSO3				eS	Sn	11 05 32.1	+1.4
BSO4	Boso 4	2.33	318	P	Pn	11 05 09.7	+0.7
BSO4				eS	Sn	11 05 37.8	+1.3
JMY	Miyakejima3	2.42	290	eS	Sn	11 05 35.3	-3.2
KTR	Katsuura	2.46	320	eS	Sn	11 05 40.1	+0.4
JOD2	Odawara 2	3.29	308	P	Pn	11 05 21.3	-0.8
JOD2				eS	Sn	11 05 58.0	-2.0
JYN	Shimob	3.78	307	P	Pn	11 05 29.7	+0.7
JYN				eS	Sn	11 06 12.2	0.0
JRY	Ryogami san	3.89	316	P	Pn	11 05 29.9	-0.5
JRY				eS	Sn	11 06 15.1	+0.3
JAG	Ashikaga	3.90	325	P	Pn	11 05 30.5	0.0
MJAR	Matsushiro Arr	4.65	316	Pn	Pn	11 05 41.3	+0.4
	2.0nm,0.3s,baz=152,slow=13,SNR=25						
MJAR				Sn	Sn	11 06 34.1	+0.4
	2.6nm,0.3s,baz=235,slow=33,SNR=6.2						
MAJO	Matsushiro	4.66	316	ePn	Pn	11 05 41.3	+0.3
MAJO				eSn	Sn	11 06 33.2	-0.5
MAT	Matsushiro	4.66	316	P	Pn	11 05 41.7	+0.7
MAT				S	Sn	11 06 34.2	+0.5
MAT	Matsushiro	4.66	316	P	Pn	11 05 41.7	+0.7
MAT				eS	Sn	11 06 32.0	-1.7
JMM	Marumori	4.74	346	P	Pn	11 05 40.2	-1.9
JMM				eS	Sn	11 06 31.6	-4.1
JNS	Sasagawa	5.13	333	P	Pn	11 05 47.5	+0.1
JGM	Miyama	5.17	299	P	Pn	11 05 49.3	+1.3
JWZ	Kozaga	5.47	274	P	Pn	11 05 53.3	+1.1
JAW	Awa shima	5.72	336	P	Pn	11 05 55.2	-0.3
JMK	Ichinoseki	5.73	352	P	Pn	11 05 54.1	-1.6
JMK				eS	Sn	11 06 55.4	-4.8
JSD	Sado	5.76	327	P	Pn	11 05 55.5	-0.6
JSD				eS	Sn	11 07 01.9	+1.0
JYK	Kaneyama	5.84	345	P	Pn	11 05 56.7	-0.5
JYK				eS	Sn	11 06 59.5	-3.4
CBIJ	Chichi jima	6.16	181	Pn	Pn	11 05 57.4	-4.2
	19nm,0.3s,baz=77,slow=20,SNR=17						
CBIJ				Sn	Sn	11 07 02.6	-8.1
	14nm,0.3s,baz=267,slow=22,SNR=5.5						
ERM	Erimo	8.76	4	ePn	Pn	11 06 34.3	-2.9
ASAJ	Asahikawa	10.83	1	Pn	Pn	11 07 04.0	-1.6
	1.3nm,0.3s,baz=207,slow=9.5,SNR=14						
ASAJ				Sn	Sn	11 08 59.2	-6.4
	0.6nm,0.3s,baz=53,slow=30,SNR=8.2						
SONM	Songino Array	30.57	309	P	P	11 10 44.1	+0.7
	2.0nm,0.9s,mb4.0,baz=119,slow=8.6,SNR=9.2						
ZALV	Zalesovo Beam	45.01	315	P	P	11 12 45.1	+0.2
	0.4nm,0.3s,mb3.8,baz=77,slow=7.8,SNR=2.7						
ZALV				PcP	PcP	11 14 25.8	+0.2
	0.6nm,0.3s,baz=117,slow=5.0,SNR=4.4						
MK31	Makanchi Array	46.77	305	eP	P	11 12 55.4	-3.6
MKAR	Makanchi Array	46.77	305	P	P	11 12 59.6	+0.6
	2.1nm,0.7s,mb4.2,baz=86,slow=9.8,SNR=15						
KURK	Kurchatov	48.85	311	eP	P	11 13 13.7	-1.3
KDAK	Kodiak Island	49.49	40	P	P	11 13 20.1	+0.3
	6.4nm,0.7s,mb4.8,baz=202,slow=14,SNR=4.3						
ILAR	Eielson Array	52.34	31	P	P	11 13 41.5	+0.4
	0.9nm,0.8s,mb3.7,baz=267,slow=6.4,SNR=12						
WRA	Warramunga Arr	53.45	189	P	P	11 13 48.5	-1.2
	0.6nm,0.7s,mb3.6,baz=6.6,slow=7.5,SNR=5.1						
AML	Almayashu	53.65	301	P	P	11 13 47.7	-3.4
BVAR	Borovoye Array	53.65	315	P	P	11 13 51.8	+0.8
	0.4nm,0.4s,mb3.7,baz=90,slow=7.2,SNR=3.0						
ASAR	Alice Springs	57.17	189	P	P	11 14 16.7	+0.2
	0.2nm,0.8s,mb3.2,baz=315,slow=38,SNR=3.2						
INK	Inuvik	57.44	26	P	P	11 14 18.9	+1.0
	1.0nm,0.7s,mb4.0,baz=158,slow=8.4,SNR=3.8						
FINES	FINESS Array B	72.46	333	P	P	11 15 54.9	-0.8
	4.5nm,0.6s,mb4.5,baz=44,slow=38,SNR=6.5						
NVAR	Mina Array Bea	76.71	53	P	P	11 16 22.1	+1.4
	1.1nm,0.7s,mb3.9,baz=281,slow=6.0,SNR=10						
AKASG	Malin Array Be	77.70	323	P	P	11 16 26.3	+0.2
	0.2nm,0.3s,mb3.5,baz=49,slow=7.1,SNR=4.0						
NB2	NORSAR Subarra	77.92	338	P	P	11 16 27.6	+0.5
	comp=Z,1.0nm,0.8s,mb3.8,baz=41,slow=5.6						
NOA	NORSAR Array B	77.92	338	P	P	11 16 27.7	+0.6
	comp=Z,1.6nm,0.8s,mb4.0,baz=38,slow=5.4,SNR=4.6						
PDAR	Pinedale Array	79.82	45	P	P	11 16 39.0	+1.1
	comp=Z,0.6nm,0.8s,mb3.6,baz=253,slow=1.5,SNR=5.2						
BRTR	Keskin Array B	81.87	312	P	P	11 16 50.5	+1.5
	comp=Z,0.9nm,0.8s,mb3.8,baz=102,slow=3.0,SNR=5.3						
TXAR	Lajitas Array	91.86	53	P	P	11 17 38.8	+0.8
	comp=Z,0.3nm,0.6s,mb3.8,baz=296,slow=3.6,SNR=5.7						

*NIED **21** 11:30:00, 37°.10N×142°.30E, h29km, Mw5.8 Best double couple: M0:6.51000×10^17 NP1:φs21.00000°, δ67.00000°, λ87.00000°. NP2:φs208.00000°, δ23.00000°, λ97.00000°.*
*IDC **21** 11:30:25.7±0.3, 37°.18N×142°.09E, h0km, mb5.2/33, mb1 5.3/36,

ISC 21 11:30:30.7±0.1,37°21N±0°01×142°08E±0°01,h30km,
h30km±1.4km:pP-P,n1867,c0°76/1754,mb5.8/376,
MS5.8/291,557C-266D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.97**	**280**	⇓P		**Pn**		**11 30 47.6**	**-0.7**
JFK				S		**Sn**		**11 31 03.2**	**+2.0**
ONAJ	**Iwakimizuishiy**	**1.03**	**265**	⇓P		**Pn**		**11 30 48.2**	**-0.9**
JMM	**Marumori**	**1.22**	**303**	⇓P		**Pn**		**11 30 51.1**	**-0.6**
JMM				*e*S		**Sn**		**11 31 09.5**	**+2.4**
JHO	**Hitachi**	**1.35**	**244**	⇓P		**Pn**		**11 30 51.8**	**-1.7**
JIO	**Ouri**	**1.37**	**335**	⇓P		**Pn**		**11 30 52.8**	**-1.1**
JIO				S		**Sn**		**11 31 11.8**	**+0.8**
JFT	**Otama**	**1.42**	**283**	⇓P		**Pn**		**11 30 55.1**	**+0.6**
JFT				S		**Sn**		**11 31 15.8**	**+3.6**
JOU	**Okura**	**1.61**	**316**	⇓P		**Pn**		**11 30 57.3**	**+0.2**
JOU				S		**Sn**		**11 31 19.8**	**+2.9**
JSB	**Shiboa**	**1.74**	**263**	⇓P		**Pn**		**11 30 59.6**	**+0.7**
JMK	**Ichinoseki**	**1.87**	**339**	⇓P		**Pn**		**11 31 00.2**	**-0.5**
JMK				S		**Sn**		**11 31 24.3**	**+1.0**
JYS	**Shiratake**	**1.89**	**303**	⇓P		**Pn**		**11 31 01.5**	**+0.5**
JYS				S		**Sn**		**11 31 27.9**	**+4.1**
OFUJ	**Ofunato**	**1.90**	**350**	⇓P		**Pn**		**11 30 59.8**	**-1.3**
JFY	**Yanaizu**	**1.90**	**277**	⇓P		**Pn**		**11 31 01.7**	**+0.6**
JFY				*e*S		**Sn**		**11 31 28.3**	**+4.2**
JYK	**Kaneyama**	**2.18**	**322**	⇓P		**Pn**		**11 31 05.2**	**+0.2**
JAG	**Ashikaga**	**2.25**	**250**	⇓P		**Pn**		**11 31 05.5**	**-0.3**
JNS	**Sasagawa**	**2.28**	**286**	⇓P		**Pn**		**11 31 06.8**	**+0.5**
JKT	**Katashina**	**2.31**	**260**	⇓P		**Pn**		**11 31 07.4**	**+0.7**
JYA	**Atsumi**	**2.33**	**307**	⇓P		**Pn**		**11 31 07.8**	**+0.8**
JOM	**Ohasama**	**2.35**	**345**	P		**Pn**		**11 31 07.2**	**0.0**
JOM				S		**Sn**		**11 31 35.6**	**+0.6**
JHK	**Hiroka**	**2.44**	**272**	⇓P		**Pn**		**11 31 09.5**	**+0.9**
JRG	**Rokugo**	**2.46**	**333**	⇓P		**Pn**		**11 31 09.4**	**+0.6**
JAW	**Awa shima**	**2.56**	**300**	⇓P		**Pn**		**11 31 10.8**	**+0.6**
JYW	**Yuwa**	**2.76**	**328**	⇓P		**Pn**		**11 31 13.8**	**+1.0**
JTB	**Tobi-shima**	**2.81**	**316**	⇓P		**Pn**		**11 31 13.9**	**+0.3**
JRY	**Ryogami san**	**2.82**	**246**	⇓P		**Pn**		**11 31 13.3**	**-0.4**
JGK	**Kuni**	**2.83**	**258**	⇓P		**Pn**		**11 31 15.2**	**+1.3**
JKZ	**Kuzumaki**	**2.84**	**348**	⇑P		**Pn**		**11 31 13.6**	**-0.3**
JJN	**Nakama**	**3.13**	**269**	⇓P		**Pn**		**11 31 19.5**	**+1.5**
JSD	**Sado**	**3.14**	**286**	P		**Pn**		**11 31 18.3**	**+0.1**
MJAR	**Matsushiro Arr**	**3.17**	**259**	Pn		**Pn**		**11 31 19.5**	**+0.9**
	110nm,0.3s,baz=77,slow=12,SNR=767								
MJAR				Sn		**Sn**		**11 32 07.4**	**+12**
	320nm,0.3s,baz=89,slow=23,SNR=7.1								
MAJO	**Matsushiro**	**3.17**	**259**	*e*Pn		**Pn**		**11 31 20.3**	**+1.7**
MAT	**Matsushiro**	**3.17**	**259**	P		**Pn**		**11 31 20.2**	**+1.6**
MAT				S		**Sn**		**11 31 58.6**	**+3.1**
MAT	**Matsushiro**	**3.17**	**259**	P		**Pn**		**11 31 20.1**	**+1.5**
JAH	**Hinai**	**3.19**	**340**	⇑P		**Pn**		**11 31 19.2**	**+0.5**
AJI	**Ajiro2**	**3.24**	**229**	⇑P		**Pn**		**11 31 19.5**	**0.0**
JNG	**Nsakai**	**3.29**	**257**	⇓P		**Pn**		**11 31 21.5**	**+1.3**
JNT	**Takato**	**3.44**	**248**	P		**Pn**		**11 31 23.6**	**+1.3**
JIW	**Iwasaki**	**3.75**	**335**	⇑P		**Pn**		**11 31 27.0**	**+0.5**
SHZ3	**Shizuoka 3**	**3.79**	**237**	P		**Pn**		**11 31 28.5**	**+1.4**
JNY	**Yasuok**	**3.87**	**243**	⇓P		**Pn**		**11 31 30.0**	**+1.8**
JHG	**Hegura jima**	**4.15**	**280**	P		**Pn**		**11 31 32.9**	**+0.9**
HMMJ	**Hamamatsu 2**	**4.24**	**238**	⇑P		**Pn**		**11 31 34.7**	**+1.5**
JJH	**Hakui**	**4.25**	**268**	P		**Pn**		**11 31 34.9**	**+1.6**
JHJ	**Hachijo jima 2**	**4.49**	**205**	Pn		**Pn**		**11 31 35.8**	**-0.9**
	218nm,0.3s,baz=214,slow=13,SNR=93								
JHJ				Sn		**Sn**		**11 32 24.9**	**-3.1**
	450nm,0.3s,baz=48,slow=24,SNR=4.8								
ERM	**Erimo**	**4.88**	**9**	Pn		**Pn**		**11 31 40.8**	**-1.2**
	4μm,0.8s								
ERM	**Erimo**	**4.88**	**9**	*e*Pn		**Pn**		**11 31 39.5**	**-2.5**
ERM				*e*Sn		**Sn**		**11 32 37.6**	**+0.3**
JFM	**Mihama**	**5.20**	**253**	P		**Pn**		**11 31 48.9**	**+2.5**
JHE	**Heguri**	**5.78**	**246**	⇑P		**Pn**		**11 31 56.0**	**+1.6**
JKY	**Yasaka**	**5.84**	**256**	P		**Pn**		**11 31 58.1**	**+2.9**
ASAJ	**Asahikawa**	**6.92**	**3**	Pn		**Pn**		**11 32 08.0**	**-2.0**
	38nm,0.3s,baz=219,slow=13,SNR=186								
ASAJ				Sn		**Sn**		**11 33 27.6**	**0.0**
	110nm,0.3s,baz=349,slow=30,SNR=7.5								
ASAJ				LR		LR		11 35 48.9	
	comp=Z,66μm,18.4s,baz=188,slow=47								
ASAJ	**Asahikawa**	**6.92**	**3**	P		**Pn**		**11 32 08.0**	**-2.0**
ASAJ								11 33 27.6	
ASAJ				pmax		pmax			
	comp=Z,38nm,0.3s								
ASAJ				smax					
	comp=N,110nm,0.3s								
ASAJ				MLR		MLR			
	comp=Z,66μm,18.4s								
YUK	**Yuzh-Kuril'sk**	**7.40**	**22**	⇑*i*P		**Pn**		**11 32 13.0**	**-3.6**
YUK				*i* S		**Sn**		**11 33 31.7**	**-7.9**
YUK				pmax		pmax			
	comp=Z,3μm,1.4s								
YUK				pmax		pmax			
	comp=N,451nm,0.5s								
YUK				pmax		pmax			
	comp=Z,151nm,0.5s								
YUK				pmax		pmax			
	comp=E,239nm,0.2s								
YUK				smax					
	comp=N,3μm,1.0s								
YUK				smax					
	comp=N,534nm,0.5s								
YUK				smax					
	comp=E,680nm,0.5s								
YUK				smax					
	comp=N,468μm,18.0s								
YUK				smax					
	comp=E,25μm,18.0s								
YUK				smax					
	comp=Z,40μm,18.0s								
UWA2	**Uwa jima 2**	**8.70**	**246**	P		**Pn**		**11 32 36.7**	**+2.2**
KUR	**Kuril'sk**	**9.13**	**27**	*e*P		**Pn**		**11 32 36.5**	**-3.8**
KUR				*e*S		**Sn**		**11 34 14.0**	**-7.9**
KUR				pmax		pmax			
	comp=N,430nm,0.9s								
KUR				pmax		pmax			
	comp=Z,850nm,0.9s								
KUR				smax					
	comp=N,2μm,0.6s								
KUR				smax					
	comp=E,380nm,0.6s								
KUR				smax					
	comp=N,8μm,5.0s								
KUR				smax					
	comp=E,18μm,5.0s								
YSS	**Yuzh-Sakhalins**	**9.75**	**3**	⇑*i*P		**Pn**		**11 32 46.0**	**-2.9**
YSS				*i* S		**Sn**		**11 34 32.0**	**-5.3**
YSS				pmax		pmax			
	comp=N,320nm,0.9s								
YSS				pmax		pmax			
	comp=Z,330nm,0.9s								
YSS				pmax		pmax			
	comp=Z,2μm,6.0s								
YSS				smax					
	comp=N,530μm,1.1s								
YSS				smax					
	comp=E,60μm,1.1s								
YSS				MLR		MLR			
	comp=N,14μm,16.0s								
YSS				MLR		MLR			
	comp=Z,22μm,16.0s								
YSS				MLR		MLR			
	comp=E,32μm,14.0s								
YSS	**Yuzh-Sakhalins**	**9.75**	**3**	*e*Pn		**Pn**		**11 32 47.3**	**-1.6**
CBIJ	**Chichi jima**	**10.08**	**179**	Pn		**Pn**		**11 32 48.5**	**-5.0**
	comp=E,37nm,0.3s,baz=355,slow=6.9,SNR=23								
CBIJ				Sn		**Sn**		**11 34 36.9**	**-8.6**
	comp=E,119nm,0.3s,baz=279,slow=19,SNR=4.3								
CBIJ				LR		LR		11 37 06.6	
	comp=E,13μm,18.4s,baz=354,slow=40								
KSRS	**Korea Array**	**11.28**	**276**	Pn		**Pn**		**11 33 13.7**	**+3.9**
	comp=E,3.2nm,0.3s,baz=89,slow=13,SNR=231								
KSRS				LR		LR		11 37 25.1	
	comp=E,64μm,19.0s,baz=87,slow=37								
KSRS	**Korea Array**	**11.28**	**276**	P		**Pn**		**11 33 13.7**	**+3.9**
KSRS				pmax		pmax			
	comp=Z,3.0nm,0.3s								
KSRS				MLR		MLR			
	comp=Z,64μm,19.0s								
UGL	**Uglegorsk**	**11.87**	**360**	*e*P		**Pn**		**11 33 21.0**	**+3.2**
UGL				*e*				11 35 23.0	
UGL				pmax		pmax			
	comp=Z,146nm,1.0s								
UGL				MLR		MLR			
	comp=N,28μm,20.0s								
UGL				MLR		MLR			
	comp=E,83μm,20.0s								
MDJ	**Mudanjiang**	**11.99**	**312**	P		**Pn**		**11 33 20.3**	**+0.8**
MDJ				S		**Sn**		**11 35 32.8**	**+0.6**
MDJ				PcP		PcP		11 39 04.0	-0.1
MDJ				ScP		ScP		11 42 35.3	+0.5
MDJ				ScS		ScS		11 46 11.5	+1.0
MDJ				pmax		pmax			
	comp=Z,660nm,1.5s								
MDJ				pmax		pmax			
	comp=Z,7μm,9.7s								
MDJ				LR		LR			
	comp=N,25μm,19.0s								
MDJ				LR		LR			
	comp=E,33μm,17.6s								
MDJ				LR		LR			
	comp=Z,53μm,18.9s								
MDJ	**Mudanjiang**	**11.99**	**312**	*e*Pn		**Pn**		**11 33 20.3**	**+0.7**
	comp=Z,1μm,1.3s								
INCN	**Inchon**	**12.30**	**276**	*e*Pn		**Pn**		**11 33 26.7**	**+3.0**
INCN	**Inchon**	**12.30**	**276**	P		**Pn**		**11 33 27.4**	**+3.6**
	SNR=19								
HABR	**Khabarovsk**	**12.38**	**338**	*i* P		**Pn**		**11 33 21.5**	**-3.3**
HABR				*e*				11 35 37.0	
HABR				pmax		pmax			
	comp=N,217nm,1.6s								
HABR				pmax		pmax			
	comp=E,188nm,1.6s								
HABR				pmax		pmax			
	comp=Z,397nm,1.6s								
HABR				MLR		MLR			
	comp=E,16μm,14.0s								
HABR				MLR		MLR			
	comp=Z,51μm,15.0s								
HABR				MLR		MLR			
	comp=N,35μm,15.0s								
KLR	**Kul'dur**	**14.16**	**331**	*e*P		**Pn**		**11 33 41.0**	**-8.1**
KLR				pmax		pmax			
	comp=E,130nm,1.6s								
KLR				pmax		pmax			
	comp=Z,120nm,1.6s								
KLR				MLR		MLR			
	comp=Z,61μm,15.0s								
CN2	**Changchun**	**14.26**	**303**	*e*P		**Pn**		**11 33 48.6**	**-1.8**
CN2				*es*P		sP		11 34 00.5	-8.5
CN2				*e*S		**Sn**		**11 36 25.9**	**-1.5**
CN2				pmax		pmax			
	comp=Z,80nm,1.2s								
CN2				pmax		pmax			
	comp=Z,300nm,6.0s								
CN2				LR		LR			
	comp=N,16μm,16.0s								
CN2				LR		LR			
	comp=E,32μm,16.0s								
CN2				LR		LR			
	comp=Z,31μm,18.0s								
SNY	**Shenyang**	**15.00**	**294**	⇑P		**Pn**		**11 34 00.1**	**-0.4**
SNY				pmax		pmax			
	comp=Z,110nm,1.4s								
SNY				pmax		pmax			
	comp=Z,2μm,2.8s								
SNY				LR		LR			
	comp=N,21μm,12.7s								
SNY				LR		LR			
	comp=E,66μm,15.7s								
SNY				LR		LR			
	comp=Z,77μm,16.2s								
JOW	**Kunigami**	**15.60**	**232**	P		**Pn**		**11 34 07.2**	**-1.3**
DL2	**Dalian**	**16.20**	**282**	⇑*i*P		**Pn**		**11 34 16.0**	**-0.1**
DL2				S		**Sn**		**11 37 15.8**	**+1.0**
DL2				pmax		pmax			
	comp=Z,260nm,1.2s								
DL2				pmax		pmax			
	comp=Z,4μm,8.6s								
DL2				LR		LR			
	comp=N,5μm,16.8s								
DL2				LR		LR			
	comp=E,15μm,18.9s								
DL2				LR		LR			
	comp=Z,19μm,19.2s								
JAGN	**Aguni-jima**	**16.43**	**234**	P		**Pn**		**11 34 17.3**	**-1.8**
SKR	**Severo-Kuril's**	**16.80**	**32**	*e*P		**Pn**		**11 34 24.0**	**+0.4**
SKR				pmax		pmax			
	comp=N,1μm,10.0s								
SKR				pmax		pmax			
	comp=E,1μm,10.0s								
SKR				pmax		pmax			
	comp=Z,2μm,10.0s								
SKR				pmax		pmax			
	comp=N,200nm,1.2s								
SKR				pmax		pmax			
	comp=E,180nm,1.2s								
SKR				pmax		pmax			
	comp=Z,200nm,1.2s								
SKR				MLR		MLR			
	comp=N,10μm,18.0s								
SKR				MLR		MLR			
	comp=E,6μm,18.0s								
SKR				MLR		MLR			
	comp=Z,17μm,18.0s								
JKE	**Kume jima 2**	**16.91**	**234**	P		**Pn**		**11 34 23.0**	**-2.2**
SSE	**Sheshan**	**18.32**	**257**	P		**Pn**		**11 34 40.3**	**-2.3**
SSE				S		**Sn**		**11 38 05.8**	**-0.5**
SSE				pmax		pmax			
	comp=Z,280nm,1.5s								
SSE				pmax		pmax			
	comp=Z,4μm,8.7s								
SSE				LR		LR			
	comp=N,18μm,21.2s								
SSE				LR		LR			
	comp=E,18μm,21.2s								
SSE				LR		LR			
	comp=Z,28μm,20.9s								
PETK	**Petropavlovsk-**	**19.27**	**29**	P		**Pn**		**11 34 52.4**	**-1.5**
	comp=Z,0.6nm,0.3s,baz=198,slow=9.3,SNR=17								
PETK				S		**Sn**		**11 38 31.2**	**+2.2**
	comp=Z,0.2nm,0.3s,baz=190,slow=0.7,SNR=2.7								
PETK				LR		LR		11 42 57.7	
	comp=Z,11μm,18.3s,baz=215,slow=39								
PETK	**Petropavlovsk-**	**19.27**	**29**	P		**Pn**		**11 34 52.4**	**-1.5**
PETK				S		**Sn**		**11 38 31.2**	**+2.2**
PETK				pmax		pmax			
	comp=Z,1.0nm,0.3s								
PETK				MLR		MLR			
	comp=Z,11μm,18.3s								
PET	**Petropavlovsk**	**19.59**	**31**	⇑*i*P		**Pn**		**11 34 54.9**	**-2.8**
PET				*i* S		**Sn**		**11 38 28.5**	**-8.2**
PET				pmax		pmax			
	comp=Z,2μm,6.5s								
PET				pmax		pmax			
	comp=Z,2μm,10.2s								
PET				pmax		pmax			
	comp=Z,130nm,1.3s								
PET				MLR		MLR			
	comp=Z,18μm,18.0s								
PET				MLR		MLR			
	comp=Z,17μm,18.0s								
PET	**Petropavlovsk**	**19.59**	**31**	*e*P		**Pn**		**11 34 56.2**	**-1.5**
	comp=Z,910nm,1.9s								
NJ2	**Nanjing**	**19.77**	**262**	*e*P		**Pn**		**11 34 56.9**	**-3.1**
NJ2				pP		pP		11 35 03.8	-2.5
NJ2				sP		sP		11 35 09.3	-0.8
NJ2				PP				11 35 14.9	
NJ2				S		**Sn**		**11 38 31.8**	**-10**
NJ2				pmax		pmax			
	comp=Z,420nm,1.0s								
NJ2				pmax		pmax			
	comp=Z,2μm,6.6s								
NJ2				LR		LR			
	comp=N,22μm,21.0s								
NJ2				LR		LR			
	comp=E,33μm,16.5s								
NJ2				LR		LR			
	comp=Z,214μm,16.9s								
TIA	**Tai'an**	**20.02**	**275**	⇑P		**P**		**11 34 58.8**	**-2.3**
TIA				LR		LR			
	comp=N,25μm,13.2s,MS6.0								
TIA				LR		LR			
	comp=E,43μm,14.7s,MS6.0								
HIA	**Hailar**	**20.17**	**314**	*e*P		**P**		**11 35 00.2**	**-2.3**
HIA				pmax		pmax			
	comp=Z,268nm,1.2s								
HIA				MLR		MLR			
	comp=Z,47μm,19.0s								
HIA	**Hailar**	**20.17**	**314**	*e*P		**P**		**11 35 00.2**	**-2.3**
	comp=Z,268nm,1.2s								
HIA				LR		LR			
	comp=Z,47μm,19.0s,MS5.9								
BJI	**Beijing**	**20.41**	**286**	P		**P**		**11 35 02.0**	**-3.3**
BJI				S		**S**		**11 38 53.6**	**+1.2**
BJI				pmax		pmax			
	comp=Z,300nm,1.6s								
BJI				pmax		pmax			
	comp=Z,3μm,12.3s								
BJI				LR		LR			
	comp=N,19μm,13.8s,MS5.6								
BJI				LR		LR			
	comp=E,11μm,17.8s,MS5.6								
BJI				LR		LR			
	comp=Z,11μm,23.7s								
BJT	**Baijiatuau**	**20.42**	**286**	*e*P		**P**		**11 35 02.9**	**-2.5**
BJT				pmax		pmax			
	comp=Z,356nm,0.8s								
BJT				MLR		MLR			
	comp=Z,13μm,21.0s								
BJT	**Baijiatuau**	**20.42**	**286**	*e*P		**P**		**11 35 02.9**	**-2.5**
	comp=Z,356nm,0.8s								
BJT				LR		LR			
	comp=Z,13μm,21.0s,MS5.3								
TATO	**Taipei**	**21.39**	**241**	*e*P		**P**		**11 35 15.9**	**0.0**
	comp=Z,359nm,1.2s,mb5.6								
TATO				LR		LR			
	comp=Z,6μm,21.0s,MS5.0								
YHNB	**Yeheng**	**21.66**	**241**	*e*P		**P**		**11 35 16.9**	**-1.9**
	comp=Z,120nm,0.8s,mb5.4								
YHNB				*e*S		**S**		**11 39 15.5**	**-1.5**
YHNB				LR		LR			
	comp=Z,9μm,19.0s,MS5.2								
NACB	**Ninganchiao**	**21.83**	**239**	*e*P		**P**		**11 35 18.5**	**-2.1**
	comp=Z,65nm,0.8s,mb5.1								
YULB	**Yu-li**	**22.55**	**238**	*e*P		**P**		**11 35 25.4**	**-2.9**
	comp=Z,144nm,0.8s,mb5.5								
CLNS	**Chul'man**	**22.75**	**335**	*e*P		**P**		**11 35 28.6**	**-1.5**
CLNS				*e*				11 35 51.1	
CLNS				*e*				11 39 22.1	
CLNS				*e*S		**S**		**11 39 33.4**	**-3.6**
CLNS				*e*SS				11 40 09.0	
CLNS				pmax		pmax			
	comp=E,121nm,1.6s								
CLNS				pmax		pmax			
	comp=Z,349nm,1.5s,mb5.6								
CLNS				pmax		pmax			
	comp=N,504nm,1.6s								
CLNS				pmax		pmax			
	comp=E,125nm,1.5s								
CLNS				pmax		pmax			
	comp=Z,190nm,1.3s,mb5.4								
CLNS				pmax		pmax			
	comp=N,360nm,1.4s								
CLNS				smax					
	comp=N,3μm,13.2s								
CLNS				smax					
	comp=E,2μm,13.0s								
CLNS				MLR		MLR			
	comp=E,18μm,18.0s,MS5.8								
CLNS				MLR		MLR			
	comp=N,25μm,16.0s,MS5.8								
CLNS				MLR		MLR			
	comp=Z,33μm,18.0s,MS5.8								
TPUB	**Ta-pu**	**23.07**	**239**	*e*P		**P**		**11 35 30.7**	**-3.1**
	comp=Z,285nm,0.8s,mb5.8								
TWG	**Pinlang**	**23.09**	**238**	*e*P		**P**		**11 35 32.6**	**-1.5**
	comp=Z,128nm,0.6s,mb5.5								
QZH	**Quanzhou**	**23.47**	**245**	⇑*i*P		**P**		**11 35 33.6**	**-4.4**
QZH				S		**S**		**11 39 42.8**	**-6.5**
QZH				pmax		pmax			
	comp=Z,730nm,1.1s,mb6.0								
QZH				LR		LR			
	comp=N,22μm,14.2s,MS5.8								
QZH				LR		LR			
	comp=E,8μm,16.1s,MS5.8								
QZH				LR		LR			
	comp=Z,24μm,20.2s,MS5.7								
TIY	**Taiyuan**	**23.50**	**280**	*e*P		**P**		**11 35 34.6**	**-3.5**
TIY				S		**S**		**11 39 39.1**	**-11**
TIY				LR		LR			
	comp=N,7μm,14.3s,MS5.9								
TIY				LR		LR			
	comp=E,26μm,13.0s,MS5.9								
TIY				LR		LR			
	comp=Z,36μm,16.5s,MS5.9								
GUMO	**Guam**	**23.65**	**173**	P		**P**		**11 35 39.4**	**-0.2**
	comp=Z,73nm,0.9s,mb5.1,baz=305,slow=1.4,SNR=5.5								
GUMO				LR		LR		11 43 40.3	
	comp=Z,7μm,20.4s,MS5.1,baz=183,slow=34								
GUMO	**Guam**	**23.65**	**173**	*e*P		**P**		**11 35 39.8**	**+0.2**
GUMO				pmax		pmax			
	comp=Z,718nm,1.2s,mb6.0								
GUMO				MLR		MLR			
	comp=Z,9μm,21.0s,MS5.2								
GUMO	**Guam**	**23.65**	**173**	*e*P		**P**		**11 35 39.8**	**+0.1**
	comp=Z,718nm,1.2s,mb6.0								
GUMO				LR		LR			
	comp=Z,9μm,21.0s,MS5.2								
WHN	**Wuhan**	**23.91**	**262**	⇑P		**P**		**11 35 39.4**	**-2.6**
WHN				S		**S**		**11 39 51.9**	**-4.6**
WHN				pmax		pmax			
	comp=Z,4μm,1.9s,mb6.6								
WHN				LR		LR			
	comp=N,33μm,14.3s,MS6.2								
WHN				LR		LR			
	comp=E,45μm,15.2s,MS6.2								
WHN				LR		LR			
	comp=Z,63μm,15.4s,MS6.2								
HHC	**Hu-ho-hao-te**	**23.92**	**288**	*e*P		**P**		**11 35 38.3**	**-3.7**
HHC				sP		sP		11 35 51.5	-2.6
HHC				PP				11 36 12.3	
HHC				PcP		PcP		11 39 23.3	-0.6
HHC				S		**S**		**11 39 48.9**	**-7.6**
HHC				sS		sS		11 40 03.8	-6.7
HHC				SS				11 40 38.9	
HHC				PcS		PcS		11 43 01.0	-2.4
HHC				pmax		pmax			
	comp=Z,66nm,1.1s,mb5.0								
HHC				pmax		pmax			
	comp=Z,2μm,5.2s								
HHC				LR		LR			
	comp=N,17μm,12.1s,MS5.9								
HHC				LR		LR			
	comp=E,18μm,12.5s,MS5.9								
HHC				LR		LR			
	comp=Z,23μm,12.5s,MS5.8								
BBP	**Basco**	**24.20**	**232**	*e*P		**P**		**11 35 44.8**	**+0.1**
CIT	**Chita**	**24.93**	**316**	*e*P		**P**		**11 35 50.5**	**-0.5**
CIT				*e*				11 36 33.9	
CIT				*e*				11 36 41.3	
CIT				pmax		pmax			
	comp=Z,5μm,1.8s,mb6.7								
BTO	**Baotou**	**25.10**	**288**	*e*P		**P**		**11 35 49.5**	**-3.2**
BTO				S		**S**		**11 40 14.6**	**-0.9**
BTO				LR		LR			
	comp=N,7μm,14.5s,MS5.4								
BTO				LR		LR			
	comp=E,5μm,14.7s,MS5.4								
YAK	**Yakutsk**	**26.02**	**347**	*c i*P		**P**		**11 35 59.8**	**-1.0**
YAK				*e**PP		pP		11 36 08.0	-1.4
YAK				*e*				11 36 34.9	
YAK				*e*PPP				11 36 47.1	
YAK				*e*				11 39 28.8	
YAK				*e*S		**S**		**11 40 25.6**	**-4.0**
YAK				*e*SSS				11 41 34.1	
YAK				*e*				11 46 51.0	
YAK				pmax		pmax			
	comp=Z,409nm,1.1s,mb5.9								
YAK				pmax		pmax			
	comp=N,167nm,1.0s								
YAK				pmax		pmax			
	comp=E,107nm,1.1s								
YAK				pmax		pmax			
	comp=E,213nm,1.1s								
YAK				pmax		pmax			
	comp=N,256nm,1.3s								
YAK				pmax		p

comp=E,530nm,0.9s,mb6.1
YAK LR LR
CVP Callao Caves 26.36 228 *e*P **P** **11 36 03.7 -0.6**
comp=Z,14μm,21.0s,MS5.5
SEY Seymchan 26.52 11 *c i*P **P** **11 36 05.6 +0.3**
APYP Conner 26.59 229 *e*P **P** **11 36 07.0 +0.7**
PIP Pasuquin 26.62 231 ⇓*i*P **P** **11 36 03.4 -3.2**
CAUP Cauayan 26.96 227 *e*P **P** **11 36 10.5 +0.8**
XAN Xi'an 27.06 273 P **P** **11 36 09.1 -1.4**
XAN PP 11 36 57.3
XAN S **S** **11 40 40.4 -6.1**
XAN pmax pmax
comp=Z,57nm,1.5s,mb4.9
XAN pmax pmax
comp=Z,690nm,7.4s
XAN LR LR
comp=N,12μm,15.2s,MS5.6
XAN LR LR
comp=E,2μm,14.0s,MS5.6
XAN LR LR
comp=Z,6μm,14.6s,MS5.3
SMY Shemya 27.17 45 *e*P **P** **11 36 10.4 -0.9**
ULN Ulaanbaatar 27.70 304 *e*P **P** **11 36 15.9 -0.2**
ULN pmax pmax
comp=Z,333nm,1.2s,mb5.8
ULN MLR MLR
comp=Z,14μm,20.0s,MS5.5
ULN Ulaanbaatar 27.70 304 *e*P **P** **11 36 15.9 -0.2**
comp=Z,333nm,1.2s,mb5.8
ULN LR LR
comp=Z,14μm,20.0s,MS5.5
ULN Ulaanbaatar 27.70 304 P **P** **11 36 15.5 -0.6**
ULN Ulaanbaatar 27.70 304 P **P** **11 36 16.1 0.0**
SNR=227
ENH Enshi 27.88 265 *e*P **P** **11 36 17.3 -0.5**
comp=Z,676nm,0.9s,mb6.3
ENH LR LR
comp=Z,15μm,19.0s,MS5.6
BALP Baler 28.06 226 *e*P **P** **11 36 19.6 +0.1**
BCPH Baguio City Da 28.13 228 ⇓*e*P **P** **11 36 16.9 -3.3**
SONM Songino Array 28.13 304 P **P** **11 36 19.8 -0.2**
comp=Z,216nm,0.9s,mb5.8,baz=104,slow=7.3,SNR=411
SONM LR LR 11 47 55.6
comp=Z,16μm,19.2s,MS5.6,baz=101,slow=37
SONM Songino Array 28.13 304 P **P** **11 36 19.8 -0.2**
SONM pmax pmax
comp=Z,217nm,1.0s
SONM MLR MLR
comp=Z,16μm,19.3s
HKC Hong Kong Obse 28.28 246 ⇑*i*P **P** **11 36 22.0 +0.5**
GZH Guangzhou 28.42 248 P **P** **11 36 17.9 -4.9**
GZH S **S** **11 40 59.1 -9.1**
GZH LR LR
comp=N,6μm,11.6s,MS5.7
GZH LR LR
comp=E,11μm,12.9s,MS5.7
GZH LR LR
comp=Z,16μm,13.3s,MS5.8
PVCP Virac 28.44 219 *e*P **P** **11 36 23.2 +0.3**
BOLP Bolinao 28.53 229 *e*P **P** **11 36 23.4 -0.4**
CNP Catarman 29.12 217 *e*P **P** **11 36 29.3 +0.2**
TGY Tagaytay City 29.74 225 P **P** **11 36 33.9 -0.6**
comp=Z,152nm,0.3s,mb6.2,baz=233,slow=11,SNR=11
TGY Tagaytay City 29.74 225 P **P** **11 36 33.9 -0.6**
TGY pmax pmax
comp=Z,152nm,0.3s
IRK Irkutsk 30.38 312 *e*P **P** **11 36 39.7 -0.1**
IRK pmax pmax
comp=Z,443nm,2.0s,mb5.8
LUBP Lubang 30.43 226 *e*P **P** **11 36 39.1 -1.4**
LZH Lanzhou 30.56 280 ⇑P **P** **11 36 41.1 -0.5**
LZH pP pP 11 36 50.8 +0.5
LZH PP PP 11 37 41.5 -9.3
LZH PcP PcP 11 39 38.8 -1.1
LZH S **S** **11 41 39.0 -2.6**
LZH SS SS 11 43 19.5 -33
LZH ScS ScS 11 47 14.0 -2.5
LZH pmax pmax
comp=Z,590nm,1.4s,mb6.2
LZH pmax pmax
comp=Z,2μm,5.3s
LZH LR LR
comp=E,34μm,15.8s
LZH LR LR
comp=Z,41μm,16.0s,MS6.2
OTRP Odiongan 30.58 221 *e*P **P** **11 36 42.0 +0.1**
TLY Talaya 30.62 311 P **P** **11 36 42.3 +0.3**
comp=Z,1μm,1.4s,mb6.6,SNR=85
TLY Talaya 30.62 311 *c i*P **P** **11 36 41.9 -0.1**
TLY *e* 11 37 57.5
TLY *e*S **S** **11 41 44.8 +2.7**
TLY *e*SSS 11 43 51.4
TLY pmax pmax
comp=Z,463nm,1.4s,mb6.1
TLY MLR MLR
comp=Z,25μm,16.0s,MS6.0
TLY Talaya 30.62 311 *e*P **P** **11 36 42.0 0.0**
comp=Z,552nm,1.4s,mb6.2
TLY LR LR
comp=Z,25μm,19.0s,MS5.9
TLY Talaya 30.62 311 P **P** **11 36 41.9 -0.1**
SNR=260
GYA Guiyang 31.77 261 ⇑*i*P **P** **11 36 51.5 -0.9**
GYA S **S** **11 41 57.3 -3.4**
GYA ScP ScP 11 43 24.3 -0.1
GYA pmax pmax
comp=Z,350nm,1.0s,mb6.1
GYA pmax pmax
comp=Z,2μm,11.5s
GYA LR LR
comp=N,19μm,20.7s,MS5.9
GYA LR LR
comp=E,14μm,17.8s,MS5.9
GYA LR LR
comp=E,18μm,17.5s
BUSP Coron 31.86 224 *e*P **P** **11 36 52.9 -0.3**
TBP Tagbilaran 31.96 216 *e*P **P** **11 36 53.0 -1.1**
CD2 Chengdu 32.20 270 P **P** **11 36 55.0 -1.2**
CD2 pP pP 11 37 04.5 -0.3
CD2 sP sP 11 37 08.4 0.0
CD2 PP PP 11 38 02.1 -7.0
CD2 S **S** **11 42 04.0 -3.3**
CD2 sS sS 11 42 20.0 -1.6
CD2 SS SS 11 43 58.0 -28
CD2 pmax pmax
comp=Z,230nm,1.0s,mb6.0
CD2 pmax pmax
comp=Z,3μm,9.5s
CD2 LR LR
comp=N,29μm,16.1s
CD2 LR LR
comp=Z,46μm,16.1s,MS6.3
MOY Mondy 32.24 310 *e*P **P** **11 36 56.6 +0.4**
MOY pmax pmax
comp=Z,528nm,2.0s,mb6.0
GTA Gaotai 33.02 287 P **P** **11 37 02.9 -0.3**
GTA pP pP 11 37 12.3 +0.4
GTA PP PP 11 38 13.0 -5.0
GTA S **S** **11 42 20.0 +0.1**
GTA ScP ScP 11 43 28.9 +0.4
GTA ScS ScS 11 47 27.8 -0.9
GTA pmax pmax
comp=Z,100nm,1.8s,mb5.4
GTA pmax pmax
comp=Z,2μm,6.2s
GTA LR LR
comp=N,13μm,17.8s,MS5.8
GTA LR LR
comp=E,12μm,19.9s,MS5.8
GTA LR LR
comp=Z,16μm,19.3s,MS5.8
QIZ Qiongzhong 33.48 246 P **P** **11 37 08.3 +0.9**
QIZ pP pP 11 37 12.8 -3.3
QIZ PP PP 11 38 22.5 -0.9
QIZ S **S** **11 42 26.8 -0.6**
QIZ pmax pmax
comp=Z,130nm,1.4s,mb5.7
QIZ pmax pmax
comp=Z,1μm,7.9s
QIZ LR LR
comp=N,7μm,17.4s
QIZ LR LR
comp=Z,13μm,16.2s,MS5.7
DAV Davao City (W) 33.55 211 LR LR 11 50 39.1
comp=Z,6μm,18.7s,MS5.3,baz=53,slow=36
DAV Davao City (W) 33.55 211 PFAKE 11 37 20.0 +12
DAV LR LR
comp=Z,8μm,20.0s,MS5.4
DAV Davao City (W) 33.55 211 ⇑*e*P **P** **11 37 05.7 -2.3**
BILL Bilibino 33.71 16 *c i*P **P** **11 37 07.9 -1.0**
BILL *e*PP PP 11 38 14.7 -11
BILL *e*PCP PcP 11 39 42.0 -5.9
BILL pmax pmax
comp=Z,258nm,1.7s,mb5.9
BILL Bilibino 33.71 16 *e*P **P** **11 37 08.6 -0.3**
comp=Z,258nm,1.4s,mb6.0
BILL LR LR
comp=Z,8μm,19.0s,MS5.5
ATKA Atka Island 33.94 50 *e*P **P** **11 37 11.0 0.0**
comp=Z,114nm,1.1s,mb5.7
MIDW Midway 35.06 93 PFAKE 11 37 30.0 +9.0
MIDW LR LR
comp=Z,10μm,20.0s,MS5.6
TIXI Tiksi 35.19 353 *i* P **P** **11 37 20.4 -1.2**
TIXI *e* 11 38 36.2
TIXI *e*S **S** **11 42 50.5 -2.1**
TIXI pmax pmax
comp=Z,121nm,1.8s,mb5.5
TIXI MLR MLR
comp=Z,21μm,16.0s,MS6.0
TIXI MLR MLR
comp=E,4μm,19.0s,MS5.8
TIXI MLR MLR
comp=N,15μm,21.0s,MS5.8
TIXI Tiksi 35.19 353 *e*P **P** **11 37 20.5 -1.1**
comp=N,112nm,1.4s,mb5.6
TIXI LR LR
comp=Z,13μm,20.0s,MS5.7
KMI Kunming 35.51 262 P **P** **11 37 24.5 -0.4**
KMI pP pP 11 37 34.1 +0.5
KMI PP PP 11 38 43.8 -2.0
KMI S **S** **11 42 54.3 -4.3**
KMI sS sS 11 43 10.6 -2.3
KMI SS SS 11 45 10.8 -23
KMI pmax pmax
comp=Z,290nm,1.2s,mb6.1
KMI pmax pmax
comp=Z,2μm,4.6s
KMI LR LR
comp=N,8μm,19.9s,MS5.9
KMI LR LR
comp=E,19μm,18.7s,MS5.9
KMI LR LR
comp=Z,24μm,20.6s,MS5.9
SGSI Sangihe 36.66 208 P **P** **11 37 37.2 +2.4**
comp=Z,8μmcomp=Z,508nm,0.9s,mb6.4
SGSI Sangihe 36.66 208 P **P** **11 37 43.4 +8.6**
comp=Z,8μmcomp=Z,551nm,1.0s,mb6.3
KDM Kudat 37.91 224 P **P** **11 37 46.8 +1.4**
MYLDM Lahad Datu 38.48 220 P **P** **11 37 51.9 +1.7**
MYLDM Lahad Datu 38.48 220 P **P** **11 37 51.8 +1.6**
comp=Z,4μmcomp=Z,208nm,1.0s,mb5.8
MYLDM Lahad Datu 38.48 220 P **P** **11 37 52.2 +2.0**
BAKI Biak 38.60 190 P **P** **11 38 00.0 +8.8**
comp=Z,2μmcomp=Z,124nm,1.5s,mb5.4
TNTI Ternate 38.72 204 P **P** **11 37 52.8 +0.6**
comp=Z,6μmcomp=Z,277nm,1.6s,mb5.7
SDKM Sandakan 38.77 222 P **P** **11 37 53.4 +0.7**
KKM Kota Kinabalu 38.97 224 P **P** **11 37 55.7 +1.4**
KKM Kota Kinabalu 38.97 224 *e*P **P** **11 37 55.5 +1.2**
KKM *e*pP pP 11 38 04.7 +1.6
KKM LR LR
comp=Z,4μm,19.0s,MS5.2
KKM Kota Kinabalu 38.97 224 P **P** **11 37 55.8 +1.5**
comp=Z,4μmcomp=Z,173nm,1.6s,mb5.5
KKM Kota Kinabalu 38.97 224 P pP 11 38 04.8 +1.7
MNI Manado 38.98 208 P **P** **11 38 00.5 +6.1**
comp=Z,7μmcomp=Z,319nm,1.0s,mb6.0
MNI Manado 38.98 208 P **P** **11 37 59.2 +4.8**
comp=Z,277nm,1.3s,mb5.8
UBT Ubonrachathani 39.44 246 P **P** **11 38 00.0 +1.8**
TSM Tawau 39.56 220 P **P** **11 38 00.2 +1.0**
LBMI Labuha 40.00 203 P **P** **11 38 04.9 +2.0**
comp=Z,3μmcomp=Z,172nm,2.0s,mb5.4
LBMI Labuha 40.00 203 P **P** **11 38 04.9 +2.0**
comp=Z,172nm,2.0s,mb5.4
MRSI Marisa 41.01 212 P **P** **11 38 11.2 -0.1**
comp=Z,227nm,1.3s,mb5.6
WMQ Urumqi 41.24 297 P **P** **11 38 14.1 +1.2**
WMQ PP PP 11 39 52.9 +4.7
WMQ PcP PcP 11 40 13.4 +2.1
WMQ ScP ScP 11 43 59.4 +0.3
WMQ S **S** **11 44 25.3 +0.6**
WMQ SS SS 11 47 24.3 -3.9
WMQ ScS ScS 11 48 13.6 -1.1
WMQ pmax pmax
comp=Z,390nm,1.2s,mb5.9
WMQ pmax pmax
comp=Z,5μm,4.0s
WMQ LR LR
comp=N,6μm,16.5s,MS5.8
WMQ LR LR
comp=E,10μm,20.4s,MS5.8
WMQ LR LR
comp=Z,11μm,20.5s,MS5.7
CHG Chiang Mai 41.85 256 ⇑P **P** **11 38 18.3 +0.2**
CHTO Chiang Mai 41.85 256 *e*P **P** **11 38 18.1 0.0**
CHTO pmax pmax
comp=Z,137nm,1.5s,mb5.4
CHTO MLR MLR
comp=Z,11μm,19.0s,MS5.7
CHTO Chiang Mai 41.85 256 *e*P **P** **11 38 18.1 -0.1**
comp=Z,137nm,1.5s,mb5.4
CHTO LR LR
comp=Z,11μm,19.0s,MS5.7
CHTO Chiang Mai 41.85 256 P **P** **11 38 18.6 +0.5**
comp=Z,2μmcomp=Z,83nm,1.7s,mb5.1
CHTO Chiang Mai 41.85 256 P **P** **11 38 18.4 +0.2**
SNR=28
LUWI Luwuk 42.05 210 P **P** **11 38 19.6 -0.2**
comp=Z,2μmcomp=Z,194nm,1.1s,mb5.7
LUWI Luwuk 42.05 210 P **P** **11 38 18.9 -0.9**
comp=Z,194nm,1.1s,mb5.7
CM31 Chiang Mai Arr 42.05 256 *e*P **P** **11 38 20.5 +0.6**
CM31 LR LR
comp=Z,12μm,20.0s,MS5.8
CMAR Chiang Mai Arr 42.05 256 P **P** **11 38 19.8 0.0**
comp=Z,6.4nm,0.8s,mb4.3,baz=43,slow=8.3,SNR=40
CMAR LR LR 11 57 55.9
comp=Z,13μm,19.3s,MS5.8,baz=61,slow=39
CMAR Chiang Mai Arr 42.05 256 P **P** **11 38 19.8 0.0**
CMAR pmax pmax
comp=Z,6.0nm,0.8s
CMAR MLR MLR
comp=Z,13μm,19.3s
ZAA0 Zalesovo Array 42.19 312 *e*P **P** **11 38 20.1 -0.4**
ZALV Zalesovo Beam 42.19 312 P **P** **11 38 20.2 -0.4**
comp=Z,324nm,1.1s,mb5.9,baz=90,slow=7.4,SNR=451
ZALV LR LR 11 56 36.1
comp=Z,14μm,18.9s,MS5.9,baz=82,slow=37
ZALV Zalesovo Beam 42.19 312 P **P** **11 38 20.2 -0.3**
ZALV pmax pmax
comp=Z,324nm,1.1s,mb5.9
ZALV MLR MLR
comp=Z,14μm,18.9s,MS5.9
ZALV Zalesovo Beam 42.19 312 P **P** **11 38 20.2 -0.4**
ZALV LR LR 11 56 36.1
NLAI Namlea 42.58 202 P **P** **11 38 30.7 +6.6**
comp=Z,2μmcomp=Z,110nm,0.8s,mb5.6
IMP Imphal 42.67 267 *e*PKP **P** **11 38 26.0 +1.2**
IMP *ex* x 11 44 55.0
AAI Ambon 42.69 201 P **P** **11 38 29.4 +4.5**
comp=Z,4μmcomp=Z,296nm,1.1s,mb5.9
BDT Bhumibol Dam 42.72 254 ⇓P **P** **11 38 25.5 +0.3**
comp=Z,23nm,1.4s,mb4.7
LSA Lhasa 42.72 275 P **P** **11 38 26.6 +1.4**
LSA pP pP 11 38 33.6 -0.4
LSA sP sP 11 38 37.6 0.0
LSA PP PP 11 40 05.3 +0.8
LSA S **S** **11 44 49.3 +2.3**
LSA pmax pmax
comp=Z,100nm,1.2s,mb5.4
LSA LR LR
comp=N,3μm,18.1s
LSA LR LR
comp=E,9μm,23.9s
LSA LR LR
comp=Z,10μm,25.3s
LSA Lhasa 42.72 275 *e*P **P** **11 38 27.0 +1.8**
LSA pmax pmax
comp=Z,343nm,1.3s,mb5.9
LSA MLR MLR
comp=Z,9μm,22.0s,MS5.6
LSA Lhasa 42.72 275 *e*P **P** **11 38 27.0 +1.8**
comp=Z,343nm,1.3s,mb5.9
LSA LR LR
comp=Z,9μm,22.0s,MS5.6
NST Nakhon Sawan 42.80 251 P **P** **11 38 23.0 -2.9**
comp=Z,237nm,1.3s,mb5.8
BTM Bintulu 43.06 225 P **P** **11 38 29.1 +1.1**
NVS Novosibirsk 43.11 314 ⇑*e*P **P** **11 38 27.4 -0.5**
NVS pmax pmax
comp=N,144nm,1.3s
NVS pmax pmax
comp=E,571nm,1.3s
NVS pmax pmax
comp=Z,453nm,1.3s,mb6.0
PCI Palu 43.16 214 P **P** **11 38 28.8 0.0**
comp=Z,2μmcomp=Z,167nm,1.1s,mb5.7
PCI Palu 43.16 214 P **P** **11 38 27.6 -1.2**
comp=Z,167nm,1.1s,mb5.7
TLE Tual 43.50 194 P **P** **11 38 32.3 +0.8**
comp=Z,5μmcomp=Z,183nm,1.8s,mb5.5
SHL Shillong 43.94 270 ⇑*i*P **P** **11 38 34.0 -1.0**
comp=Z,16nm,1.0s,mb4.7
SHL *e*S **S** **11 45 06.5 +1.6**
SBUM Sibu 44.16 226 P **P** **11 38 37.3 +0.4**
SBUM Sibu 44.16 226 P **P** **11 38 37.4 +0.5**
comp=Z,2μmcomp=Z,76nm,1.5s,mb5.2
MK31 Makanchi Array 44.48 302 *i* P **P** **11 38 38.9 -0.2**
MK31 pmax pmax
comp=Z,366nm,1.1s,mb6.0
MK31 Makanchi Array 44.48 302 *e*P **P** **11 38 39.2 +0.1**
MKAR Makanchi Array 44.48 302 P **P** **11 38 39.1 0.0**
comp=Z,178nm,1.1s,mb5.7,baz=81,slow=8.0,SNR=333
MKAR LR LR 11 58 27.2
comp=Z,6μm,18.2s,MS5.6,baz=76,slow=38
MKAR Makanchi Array 44.48 302 P **P** **11 38 39.1 0.0**
MKAR pmax pmax
comp=Z,178nm,1.2s
MKAR MLR MLR
comp=Z,6μm,18.2s
KDI Kendari 44.78 208 P **P** **11 38 42.1 +0.3**
comp=Z,2μmcomp=Z,86nm,1.3s,mb5.4
KDI Kendari 44.78 208 P **P** **11 38 42.0 +0.2**
comp=Z,86nm,1.3s,mb5.4
NNT Nongplab 45.05 248 P **P** **11 38 45.0 +1.0**
comp=Z,1μm,1.0s,mb6.7
SVW2 Sparrevohn 45.06 37 *e*P **P** **11 38 42.7 -0.8**
comp=Z,182nm,1.9s,mb5.6
TTSI Tana Toraja 45.08 212 P **P** **11 38 43.9 -0.3**
comp=Z,54nm,1.1s,mb5.3
AGT Agartala 45.25 268 *i* x pP 11 38 53.0 -1.4
AGT *i* x x 11 39 06.0
SPSI Sidrap Palu 45.93 212 P **P** **11 38 50.2 -0.7**
comp=Z,2μmcomp=Z,117nm,1.2s,mb5.7
SPSI Sidrap Palu 45.93 212 P **P** **11 38 49.7 -1.2**
KSM Kuching 46.06 227 P **P** **11 38 52.7 +0.8**
KSM Kuching 46.06 227 *e*P **P** **11 38 52.3 +0.4**
comp=Z,46nm,0.6s,mb5.6
KSM LR LR
comp=Z,3μm,20.0s,MS5.2
KSM Kuching 46.06 227 P **P** **11 38 52.3 +0.4**
comp=Z,2μmcomp=Z,139nm,0.9s,mb5.9
BNSI Bone 46.18 211 P **P** **11 38 53.7 +0.8**
comp=Z,4μmcomp=Z,261nm,1.4s,mb6.0
KURK Kurchatov 46.25 308 P **P** **11 38 52.9 -0.1**
comp=Z,4μm,0.8s
KURK Kurchatov 46.25 308 *c i*P **P** **11 38 52.6 -0.4**
KURK *i* *PP pP 11 39 03.0 +1.1
KURK pmax pmax
comp=Z,952nm,1.7s,mb6.5
KURK MLR MLR
comp=Z,22μm,21.0s,MS6.1
KURK Kurchatov 46.25 308 *e*P **P** **11 38 52.8 -0.3**
comp=Z,704nm,1.0s,mb6.5
KURK LR LR
comp=Z,19μm,20.0s,MS6.0
KURK Kurchatov 46.25 308 P **P** **11 38 53.0 0.0**
SNR=302
OHAK Old Harbor 46.27 43 *e*P **P** **11 38 53.3 +0.2**
comp=Z,50nm,1.6s,mb5.2
RSO Redoubt South 46.44 38 *e*P **P** **11 38 53.6 -0.8**
TAPN Taplejung 46.46 274 *e*P **P** **11 38 55.6 +0.6**
comp=Z,537nm,1.1s,mb6.4
STKI Sintang 46.53 225 P **P** **11 38 56.9 +1.2**
comp=Z,117nm,1.5s,mb5.6
PMG Port Moresby 46.61 173 ⇑*e*P **P** **11 38 58.1 +1.9**
PMG pmax pmax
comp=Z,15nm,0.8s
PMG Port Moresby 46.61 173 PFAKE 11 39 10.0 +14
PMG LR LR
comp=Z,2μm,21.0s,MS5.1
PMG Port Moresby 46.61 173 P pP 11 39 11.3 +6.2
KDAK Kodiak Island 46.62 42 P **P** **11 38 55.6 -0.2**
comp=Z,436nm,0.8s,mb6.4,SNR=6.0
KDAK Kodiak Island 46.62 42 P **P** **11 38 55.5 -0.3**
comp=Z,40nm,1.0s,mb5.3,baz=282,slow=3.6,SNR=13
KDAK Kodiak Island 46.62 42 *e*P **P** **11 38 55.4 -0.4**
KDAK pmax pmax
comp=Z,66nm,0.9s,mb5.6
KDAK MLR MLR
comp=Z,8μm,20.0s,MS5.7
KDAK Kodiak Island 46.62 42 *e*P **P** **11 38 55.4 -0.4**
comp=Z,66nm,0.9s,mb5.6
KDAK LR LR
comp=Z,8μm,20.0s,MS5.7
PPLA Purkeypile 46.72 35 *e*P **P** **11 38 57.4 +0.8**
comp=Z,230nm,1.5s,mb5.9
KAPI Kappang 46.88 211 P **P** **11 38 58.3 -0.1**
comp=Z,721nm,1.4s,mb6.4,SNR=9.5
KAPI Kappang 46.88 211 P **P** **11 38 57.4 -0.9**
comp=Z,58nm,1.0s,mb5.5,baz=19,slow=2.9,SNR=14
KAPI Kappang 46.88 211 *e*P **P** **11 38 57.3 -1.1**
comp=Z,283nm,1.1s,mb6.1
KAPI LR LR
comp=Z,2μm,21.0s,MS5.1
ODAN Odare 46.93 274 *e*P **P** **11 38 59.2 +0.5**
comp=Z,496nm,1.0s,mb6.4
BKSI Bulukumba 47.01 211 P **P** **11 38 58.7 -0.7**
comp=Z,2μmcomp=Z,126nm,0.9s,mb5.8
JOHN Johnston Islan 47.13 102 PFAKE 11 39 10.0 +10
JOHN LR LR
comp=Z,10μm,20.0s,MS5.8
BPAW Bear Paw Mtn. 47.29 33 *e*P **P** **11 39 01.1 +0.1**
comp=Z,54nm,1.2s,mb5.4
RAMN Ramite 47.52 274 *e*P **P** **11 39 03.6 +0.3**
comp=Z,541nm,0.8s,mb6.6
JIRN Jiri 47.53 275 *e*P **P** **11 39 04.2 +0.8**
comp=Z,522nm,0.9s,mb6.6
TRF Thorofare Moun 47.59 34 *e*P **P** **11 39 03.5 +0.1**
comp=Z,103nm,1.5s,mb5.6
KTGM Kuala Trenggan 47.63 238 P **P** **11 39 04.8 +0.5**
GUN Gumba 47.67 276 *e*P **P** **11 39 05.0 +0.5**
comp=Z,1μm,1.1s,mb6.9
COLD Coldfoot 47.74 29 *e*P **P** **11 39 04.1 -0.3**
comp=Z,28nm,0.9s,mb5.3
RC01 Rabbit Creek A 47.90 37 *e*P **P** **11 39 05.5 -0.3**
SNG Songkhla 48.05 242 P **P** **11 39 08.0 +0.4**
comp=Z,200nm,0.8s,mb6.2
PMR Palmer 48.17 37 *e*P **P** **11 39 07.4 -0.5**
PMR pmax pmax
comp=Z,86nm,1.2s,mb5.7
PMR Palmer 48.17 37 *e*P **P** **11 39 07.4 -0.5**
comp=Z,86nm,1.2s,mb5.7
PKI Pulchoki 48.19 276 *e*P **P** **11 39 08.6 +0.1**
comp=Z,595nm,1.2s,mb6.5
PKI Pulchoki 48.19 276 *e*P **P** **11 39 08.9 +0.4**
MCK McKinley 48.20 34 *e*P **P** **11 39 07.6 -0.4**
MCK pmax pmax
comp=Z,137nm,1.7s,mb5.7
MCK McKinley 48.20 34 *e*P **P** **11 39 07.6 -0.4**
comp=Z,137nm,1.7s,mb5.7
KKN Kakani 48.20 276 *e*P **P** **11 39 08.9 +0.3**
comp=Z,784nm,1.1s,mb6.6
PKIN Phulchoki 48.20 276 *e*P **P** **11 39 08.9 +0.3**
comp=Z,182nm,0.8s,mb6.1
DMN Daman 48.42 276 *e*P **P** **11 39 10.5 +0.3**
comp=Z,783nm,1.4s,mb6.5
GKN Gorkha 48.61 277 *e*P **P** **11 39 12.0 +0.2**
comp=Z,1μm,1.1s,mb6.9
COLA College 48.65 32 *e*P **P** **11 39 11.5 0.0**
COLA pmax pmax
comp=Z,54nm,1.1s,mb5.5
COLA MLR MLR
comp=Z,3μm,20.0s,MS5.3
COLA College 48.65 32 *e*P **P** **11 39 11.5 0.0**
comp=Z,54nm,1.1s,mb5.5

COLA LR LR
comp=Z,3μm,20.0s,MS5.3
AAA Alma-Ata 48.97 299 *i* P **P 11 39 15.3 +1.0**
AAA *e*S **S 11 46 16.2 -0.3**
AAA pmax pmax
comp=Z,3μm,6.0s
AAA smax
comp=E,4μm,15.6s
AAA MLR MLR
comp=Z,34μm,18.0s,MS6.4
AAA Alma-Ata 48.97 299 *i* P **P 11 39 14.6 +0.3**
ILAR Eielson Array 49.06 32 P **P 11 39 13.8 -0.8**
comp=Z,23nm,0.8s,mb5.2,baz=261,slow=4.8,SNR=117
ILAR LR LR 12 01 41.2
comp=Z,3μm,19.0s,MS5.3,baz=274,slow=38
ILAR Eielson Array 49.06 32 P **P 11 39 13.9 -0.8**
ILAR pmax pmax
comp=Z,23nm,0.8s
ILAR MLR MLR
comp=Z,3μm,19.0s
MMRI Maumere 49.25 206 P **P 11 39 18.9 +2.3**
comp=Z,3μmcomp=Z,208nm,1.0s,mb6.1
HNR Honiara 49.33 156 LR LR 11 58 29.5
comp=Z,9μm,21.3s,MS5.8,baz=166,slow=34
HNR Honiara 49.33 156 PFAKE 11 39 30.0 +13
HNR LR LR
comp=Z,10μm,21.0s,MS5.8
KULM Kulim 49.36 240 P **P 11 39 18.1 +0.5**
KULM Kulim 49.36 240 *e*P **P 11 39 17.6 0.0**
comp=Z,145nm,1.3s,mb5.8
KULM Kulim 49.36 240 P **P 11 39 17.9 +0.3**
comp=Z,2μmcomp=Z,101nm,1.6s,mb5.6
IPM Ipoh 49.69 239 P **P 11 39 20.0 0.0**
IPM Ipoh 49.69 239 P **P 11 39 19.8 -0.3**
comp=Z,3μmcomp=Z,140nm,1.0s,mb6.0
ULHL Ulahol 49.76 297 P **P 11 39 20.9 +0.6**
SNR=12
MYKOM Kota Tinggi 49.79 234 P **P 11 39 21.4 +0.6**
MYKOM Kota Tinggi 49.79 234 P **P 11 39 21.4 +0.5**
comp=Z,2μmcomp=Z,66nm,1.9s,mb5.3
DIV Divide 49.82 37 *e*P **P 11 39 20.5 +0.1**
comp=Z,272nm,1.5s,mb6.1
KGM Kluang 49.97 235 P **P 11 39 22.8 +0.6**
TKM2 Tokmak 2 50.02 298 P **P 11 39 23.3 +1.1**
SNR=126
TKM2 Tokmak 2 50.02 298 *e*P **P 11 39 23.1 +0.8**
TKM2 pmax pmax
comp=Z,138nm,0.8s,mb6.0
TKM2 MLR MLR
comp=Z,30μm,19.0s,MS6.3
TKM2 Tokmak 2 50.02 298 *e*P **P 11 39 23.1 +0.9**
comp=Z,138nm,0.8s,mb6.0
TKM2 LR LR
comp=Z,30μm,19.0s,MS6.3
FRIM Kepong 50.18 238 P **P 11 39 24.0 +0.2**
BMRM Bremner River 50.40 37 *e*P **P 11 39 24.9 0.0**
comp=Z,92nm,1.1s,mb5.7
KAKA Kakadu 50.47 192 *e*P **P 11 39 24.5 -1.4**
comp=Z,34nm,0.6s,mb5.5
KAKA *e*S **S 11 46 38.6 +0.8**
KAKA Kakadu 50.47 192 *e*P **P 11 39 25.0 -0.8**
comp=Z,332nm,1.0s,mb6.3
KZA Kyzart 50.52 298 P **P 11 39 27.8 +1.7**
SNR=52
KBK Karagaybulak 50.55 298 P **P 11 39 27.0 +0.7**
SNR=68
CHMS Chumysh 50.59 299 P **P 11 39 26.8 +0.2**
SNR=15
MENT Mentasta 50.59 35 *e*P **P 11 39 26.8 +0.5**
USP Ospenovka 50.68 299 P **P 11 39 27.5 +0.2**
SNR=39
FRU Bishkek 50.73 299⇑*i*P **P 11 39 27.8 +0.1**
FRU pmax pmax
comp=Z,700nm,2.5s,mb6.2
FRU MLR MLR
comp=Z,17μm,20.0s,MS6.0
KSH Kashi 50.82 294 P **P 11 39 32.5 +4.1**
KSH PcP PcP 11 40 48.5 +3.6
KSH PP PP 11 41 29.8 +5.2
KSH ScP ScP 11 44 41.6 +2.6
KSH PcS PcS 11 44 44.3 +2.0
KSH S **S 11 46 47.0 +4.6**
KSH sS sS 11 47 02.8 +5.6
KSH ScS ScS 11 49 17.3 +0.3
KSH SS SS 11 50 18.8 +1.9
KSH pmax pmax
comp=Z,130nm,1.2s,mb5.7
KSH pmax pmax
comp=Z,2μm,6.2s
KSH LR LR
comp=N,21μm,15.3s,MS6.3
KSH LR LR
comp=E,14μm,16.1s,MS6.3
KSH LR LR
comp=Z,30μm,16.0s,MS6.4
BVAR Borovoye Array 50.85 312 P **P 11 39 28.3 -0.1**
comp=Z,46nm,0.9s,mb5.4,baz=79,slow=7.7,SNR=120
BVAR Borovoye Array 50.85 312 P **P 11 39 28.3 -0.1**
BVAR pmax pmax
comp=Z,46nm,0.9s
AAK Ala-Archa 50.88 298 P **P 11 39 29.0 +0.2**
comp=Z,355nm,0.7s,mb6.4,SNR=14
AAK Ala-Archa 50.88 298 P **P 11 39 28.4 -0.4**
SNR=18
AAK Ala-Archa 50.88 298 P **P 11 39 29.1 +0.3**
comp=Z,9.1nm,0.4s,mb5.1,baz=100,slow=4.6,SNR=46
AAK LR LR 12 02 28.6
comp=Z,29μm,19.2s,MS6.3,baz=72,slow=38
AAK Ala-Archa 50.88 298 *e*P **P 11 39 28.8 0.0**
AAK pmax pmax
comp=Z,226nm,1.4s,mb5.9
AAK MLR MLR
comp=Z,28μm,19.0s,MS6.3
AAK Ala-Archa 50.88 298 *e*P **P 11 39 28.8 0.0**
comp=Z,226nm,1.4s,mb5.9
AAK LR LR
comp=Z,28μm,19.0s,MS6.3
AAK Ala-Archa 50.88 298 P **P 11 39 29.3 +0.5**
SNR=35
COEN Coen 50.90 179 *e*P **P 11 39 28.3 -0.7**
comp=Z,272nm,0.9s,mb6.2
BRVK Borovoye 50.91 312 P **P 11 39 28.5 -0.3**
comp=Z,555nm,1.2s,mb6.4,SNR=42
BRVK Borovoye 50.91 312*c i*P **P 11 39 28.6 -0.2**
BRVK pmax pmax
comp=Z,170nm,1.2s,mb5.8
BRVK MLR MLR
comp=Z,23μm,21.0s,MS6.2
BRVK Borovoye 50.91 312 *e*P **P 11 39 28.9 0.0**
BRVK LR LR
comp=Z,20μm,19.0s,MS6.2
BRVK Borovoye 50.91 312 P **P 11 39 29.0 +0.2**
SNR=101
UCH Uchtor 50.99 298 P **P 11 39 30.7 +1.1**
SNR=55
UCH Uchtor 50.99 298 *e*P **P 11 39 30.4 +0.8**
comp=Z,29nm,0.8s,mb5.3
UCH LR LR
comp=Z,33μm,19.0s,MS6.4
TPI Tanjungpandan 51.02 227 P **P 11 39 30.3 +0.2**
comp=Z,2μmcomp=Z,150nm,1.1s,mb5.8
EKS2 Erkin-Say 51.37 299 P **P 11 39 32.8 +0.3**
SNR=28
EKS2 Erkin-Say 51.37 299 *e*P **P 11 39 32.7 +0.2**
comp=Z,47nm,0.8s,mb5.5
EKS2 LR LR
comp=Z,19μm,19.0s,MS6.1
PTH Pithoragarh 51.43 281 *e*PKP **P 11 39 33.2 +0.1**
PTH *ex* x 11 41 38.8
JOSI Joshimath 51.51 282 *e*PKP **P 11 39 34.3 +0.5**
EGAK Eagle 51.51 32 *e*P **P 11 39 32.7 -0.5**
comp=Z,50nm,1.1s,mb5.4
EGAK LR LR
comp=Z,4μm,21.0s,MS5.5
AML Almayashu 51.60 298 P **P 11 39 35.5 +1.3**
SNR=163
AML Almayashu 51.60 298 *e*P **P 11 39 35.2 +1.0**
comp=Z,110nm,1.3s,mb5.6
AML LR LR
comp=Z,28μm,19.0s,MS6.3
SRBI Singaraja 51.60 215 P **P 11 39 33.5 -0.9**
comp=Z,5μmcomp=Z,193nm,1.9s,mb5.7
KHKI Kahang-Kahang 51.67 214 P **P 11 39 34.7 -0.2**
comp=Z,6μmcomp=Z,500nm,1.0s,mb6.4
ZRNK Zerenda 51.68 312 *i* P **P 11 39 34.5 -0.2**
ZRNK pmax pmax
comp=Z,4.0nm,1.5s

PSI Prapat 52.34 240 LR LR 12 05 07.4
comp=Z,4μm,18.3s,MS5.5,baz=32,slow=40
DAWY Dawson 52.37 33 *e*P **P 11 39 39.5 -0.1**
BKNI Bangkinang 52.73 236 P **P 11 39 43.8 +0.9**
comp=Z,4μmcomp=Z,424nm,1.2s,mb6.3
DDI Dehra Dun 52.78 283 *e*PKP **P 11 39 41.5 -1.7**
DDI *ex* x 11 46 14.5
NGJI Ngawi 52.78 219 P **P 11 39 47.2 +4.0**
comp=Z,176nm,2.0s,mb5.6
SJI Sawahan 52.95 219 P **P 11 39 44.9 +0.5**
comp=Z,213nm,2.0s,mb5.7
SDNR Sundarnagar 53.12 284 *e*PKP **P 11 39 46.5 +0.8**
SMLA Simla 53.13 284 *i* P **P 11 39 44.9 -0.8**
PNL Peninsula 53.17 38 *e*P **P 11 39 45.2 -0.4**
comp=Z,38nm,1.1s,mb5.2
PWJI Pagerwojo 53.17 219 P **P 11 39 45.3 -0.8**
comp=Z,5μmcomp=Z,353nm,0.9s,mb6.3
TPTI 53.23 242 P **P 11 39 45.2 -1.4**
comp=Z,54nm,1.3s,mb5.3
MNSI Mandailing Nat 53.35 237 P **P 11 39 46.4 -1.1**
comp=Z,81nm,1.7s,mb5.4
SDSI Sungai Dareh 53.42 234 P **P 11 39 48.4 +0.4**
comp=Z,4μmcomp=Z,200nm,1.5s,mb5.8
KK31 Karatay Array 53.50 300 *i* P **P 11 39 48.0 -0.3**
KK31 pmax pmax
comp=Z,295nm,1.3s,mb6.1
BHK Bhakra 53.59 285 *ex* **P 11 39 45.8 -3.3**
KIP Kipapa 53.73 89 PFAKE 11 40 00.0 +10
KIP LR LR
comp=Z,2μm,20.0s,MS5.2
UGM Wanagama 53.73 220 P **P 11 39 50.0 -0.2**
comp=Z,8μmcomp=Z,457nm,1.5s,mb6.2
PPI Padang Panjang 53.73 236 P **P 11 39 49.3 -1.0**
comp=Z,2μmcomp=Z,61nm,1.1s,mb5.5
HYT Haines Junctio 53.84 37 *e*P **P 11 39 51.5 +1.0**
KKR Kurukshetra 53.90 283 *e*PKP **P 11 39 51.0 -0.5**
INK Inuvik 53.99 27 P **P 11 39 51.5 0.0**
comp=Z,35nm,0.8s,mb5.3,baz=298,slow=6.5,SNR=83
INK Inuvik 53.99 27 P **P 11 39 51.5 0.0**
INK pmax pmax
comp=Z,35nm,0.8s
INK Inuvik 53.99 27 *e*P **P 11 39 51.6 +0.1**
comp=Z,106nm,1.3s,mb5.6
BISR Bishrakh 54.04 281 *e*PKP **P 11 39 51.4 -1.0**
KNA Kununurra 54.14 196 P **P 11 39 53.8 +0.7**
comp=Z,3μmcomp=Z,357nm,0.9s,mb6.3
NDI New Delhi 54.16 281 *e*PKP **P 11 39 51.0 -2.3**
NDI *ex* x 11 47 37.0
KLSI 54.29 228 P **P 11 39 54.6 +0.3**
comp=Z,7μmcomp=Z,330nm,1.8s,mb6.0
KLI Kotabumi 54.35 228 P **P 11 39 54.1 -0.7**
comp=Z,5μmcomp=Z,286nm,1.3s,mb6.1
LEM Lembang 54.37 224 P **P 11 39 54.7 -0.2**
comp=Z,5μmcomp=Z,277nm,0.8s,mb6.2
MDSI Maura Dua 54.46 229 P **P 11 39 54.9 -0.6**
comp=Z,3μmcomp=Z,194nm,1.1s,mb6.0
VIS Vishakhapatnam 54.77 266 *e*PKP **P 11 39 58.4 +0.5**
VIS AMb AMB 11 40 00.1
comp=Z,150nm,1.2s,mb5.9
VIS *i* x x 11 47 39.7
KASI Kota Agung 55.09 228 P **P 11 40 08.6 +8.5**
SKAG Skagway 55.23 38 *e*P **P 11 40 02.0 +1.4**
comp=Z,88nm,1.8s,mb5.5
SVE Sverdlovsk 55.37 319⇓*e*P **P 11 40 02.1 +0.5**
SVE *e*PPP 11 43 28.1
SVE *e*S **S 11 47 43.2 -0.6**
SVE *e*SS SS 11 51 23.1 -4.9
SVE pmax pmax
comp=Z,453nm,1.4s,mb6.3
SVE pmax pmax
comp=Z,2μm,15.4s
SVE MLR MLR
comp=Z,29μm,16.0s,MS6.5
NGP Nagpur 56.36 272 *e*PKP **P 11 40 07.8 -1.5**
NGP *e*S **S 11 47 58.3 +0.4**
SOKR Solikamsk 56.52 323*c i*P **P 11 40 09.8 0.0**
SOKR S **S 11 48 02.6 +3.6**
SOKR pmax pmax
comp=Z,260nm,1.3s,mb6.1
POHA Pohakuloa 56.57 90 PFAKE 11 40 20.0 +9.2
POHA LR LR
comp=Z,4μm,22.0s,MS5.4
ARU Arti 56.58 319 P **P 11 40 10.8 +0.5**
comp=Z,2μm,1.0s,mb7.0,SNR=64
ARU Arti 56.58 319*c i*P **P 11 40 10.2 -0.1**
ARU *e* 11 41 04.6
ARU *e* 11 42 15.9
ARU PPP 11 43 32.5
ARU *e*S **S 11 48 00.2 +0.2**
ARU 11 49 53.0
ARU SS SS 11 51 46.4 -0.7
ARU SSS 11 54 03.2
ARU pmax pmax
comp=Z,688nm,1.7s,mb6.4
ARU MLR MLR
comp=Z,22μm,17.0s,MS6.3
ARU Arti 56.58 319 *e*P **P 11 40 10.2 -0.1**
comp=Z,394nm,1.1s,mb6.3
ARU LR LR
comp=Z,15μm,19.0s,MS6.1
BHPL Bhopal 56.59 275 *e*PKP **P 11 40 10.0 -0.8**
BHPL AMb AMB 11 40 13.5
comp=Z,174nm,1.4s,mb5.9
CTA Charters Tower 57.12 175 *e*P **P 11 40 13.4 -1.0**
comp=Z,17nm,1.8s,mb4.8
CTA *e*S **S 11 48 13.4 +5.8**
CTA Charters Tower 57.12 175 P **P 11 40 14.8 +0.3**
comp=Z,4.7nm,0.5s,mb4.8,baz=6.7,slow=7.5,SNR=8.5
CTA LR LR 12 02 55.4
comp=Z,2μm,21.0s,MS5.3,baz=350,slow=34
CTAO Charters Tower 57.12 175 *e*P **P 11 40 14.1 -0.3**
CTAO MLR MLR
comp=Z,2μm,21.0s,MS5.3
CTAO Charters Tower 57.12 175 *e*P **P 11 40 14.1 -0.3**
CTAO LR LR
comp=Z,2μm,21.0s,MS5.3
CTAO Charters Tower 57.12 175 P **P 11 40 15.4 +1.0**
comp=Z,25nm,2.0s,mb4.9
FITZ Fitzroy Crossi 57.15 199 *e*P **P 11 40 14.2 -0.5**
comp=Z,94nm,1.7s,mb5.5
FITZ *e*S **S 11 48 07.5 -0.6**
FITZ Fitzroy Crossi 57.15 199 P **P 11 40 14.6 -0.1**
comp=Z,17nm,1.1s,mb5.0,baz=36,slow=9.0,SNR=11
FITZ Fitzroy Crossi 57.15 199 *e*P **P 11 40 14.3 -0.4**
comp=Z,84nm,1.3s,mb5.6
FITZ Fitzroy Crossi 57.15 199 P **P 11 40 15.5 +0.8**
comp=Z,95nm,1.4s,mb5.6
AJM Ajmer 57.21 280 *i* P **P 11 40 14.0 -1.2**
FUNA Funafuti 57.24 135 PFAKE 11 40 30.0 +15
FUNA LR LR
comp=Z,20μm,21.0s,MS6.2
WRAB Tennant Creek 57.30 189 P **P 11 40 15.0 -0.7**
comp=Z,496nm,1.5s,mb6.3,SNR=13
WRAB Tennant Creek 57.30 189 *e*P **P 11 40 14.9 -0.8**
WRAB pmax pmax
comp=Z,89nm,1.0s,mb5.8
WRAB MLR MLR
comp=Z,6μm,22.0s,MS5.7
WRAB Tennant Creek 57.30 189 *e*P **P 11 40 14.9 -0.8**
comp=Z,88nm,1.0s,mb5.8
WRAB LR LR
comp=Z,6μm,22.0s,MS5.7
WRAB Tennant Creek 57.30 189 P **P 11 40 15.1 -0.6**
comp=Z,92nm,1.5s,mb5.6
WRA Warramunga Arr 57.31 189 P **P 11 40 14.3 -1.4**
DLBC Dease Lake 58.16 38 P **P 11 40 22.6 +1.2**
comp=Z,22nm,1.1s,mb5.1,baz=295,slow=6.7,SNR=19
DLBC Dease Lake 58.16 38 *e*P **P 11 40 22.4 +1.0**
AKL Akola 58.21 273⇑*i*P **P 11 40 21.3 -1.0**
AKL *ex* x 11 40 25.1
comp=Z,267nm,1.9s
AKL *i* x x 11 48 34.2
AB31 Akbulak array 58.24 310 *i* P **P 11 40 21.5 -0.6**
AB31 pmax pmax
comp=Z,59nm,0.6s,mb5.8
ABKAR Akbulak array 58.24 310 *e*P **P 11 40 21.6 -0.4**
comp=Z,47nm,0.6s,mb5.7
HYB Hyderabad 58.74 269 *e*P **P 11 40 26.0 0.0**
HYB *e* pP 11 40 35.0 -0.1
HYB *e*S **S 11 48 30.0 +0.7**
HYB Hyderabad 58.74 269 *e*P **P 11 40 26.0 0.0**
HYB *e*PP pP 11 40 35.0 -0.1
HYB *e*S **S 11 48 30.0 +0.7**
HYB *e* 12 08 00.0
HYB Hyderabad 58.74 269⇑*i*P **P 11 40 26.0 0.0**

comp=Z,100nm,1.0s,mb5.8
HYB *e*pP pP 11 40 35.0 -0.1
HYB *e*PcP PcP 11 41 14.0 -1.6
HYB *e*S **S 11 48 30.0 +0.7**
HYB LR LR 12 08 00.0
comp=Z,8.5nm,18.0s
AKTO Aktyubinsk 58.96 312 LR LR 12 07 02.8
comp=Z,12μm,18.9s,MS6.0,baz=62,slow=37
ALE Alert 59.91 4 P **P 11 40 33.0 -0.2**
comp=Z,658nm,1.3s,mb6.5,SNR=53
KBS Kingsbay 60.58 350⇑*i*P **P 11 40 38.1 +0.3**
KBS AMb AMB 11 40 40.5
comp=Z,209nm,2.2s,mb5.9
KBS *e*S **S 11 48 54.1 +2.7**
KBS AMS AMS 12 08 46.7
comp=Z,4μm,18.7s,MS5.6
KBS Kingsbay 60.58 350 *e*P **P 11 40 38.1 +0.2**
comp=Z,137nm,1.0s,mb6.0
KBS LR LR
comp=Z,4μm,20.0s,MS5.6
ASAR Alice Springs 61.03 189 P **P 11 40 40.6 -0.8**
comp=Z,7.5nm,0.6s,mb5.0,baz=10,slow=5.8,SNR=62
ASAR PKP2bc 12 10 04.6
comp=Z,4.5nm,1.2s,baz=180,slow=1.9,SNR=7.5
ASAR PKP2ab 12 10 17.5
comp=Z,3.6nm,1.1s,baz=174,slow=4.0,SNR=4.1
ASAR Alice Springs 61.03 189 P **P 11 40 40.7 -0.8**
ASAR pmax pmax
comp=Z,8.0nm,0.6s
ASAR pmax pmax
comp=Z,5.0nm,1.2s
ASAR pmax pmax
comp=Z,4.0nm,1.1s
ASAR Alice Springs 61.03 189 P **P 11 40 40.6 -0.8**
ASAR ⇑*e* 12 10 04.6
ASAR P'P'ab 12 10 17.5
MBWA Marble Bar 61.76 204 *e*P **P 11 40 45.7 -0.8**
comp=Z,79nm,1.1s,mb5.8
MBWA LR LR
comp=Z,2μm,20.0s,MS5.3
MBWA Marble Bar 61.76 204 P **P 11 40 46.7 +0.3**
comp=Z,75nm,1.8s,mb5.5
POO Poona 61.89 273 *e*PKP **P 11 40 47.4 -0.2**
POO AMb AMB 11 40 50.3
comp=Z,278nm,1.1s,mb6.3
LVZ Lovozero 62.17 336 P **P 11 40 48.7 0.0**
comp=Z,721nm,1.4s,mb6.6,SNR=20
LVZ Lovozero 62.17 336 PFAKE 11 41 00.0 +11
LVZ LR LR
comp=Z,13μm,19.0s,MS6.1
KAD Karad 62.29 271 *e*PKP **P 11 40 49.8 -0.5**
KAD AMb AMB 11 40 52.9
comp=Z,361nm,1.2s,mb6.4
RES Resolute Bay 62.30 15 LR LR 12 11 38.1
comp=Z,1μm,19.0s,MS5.1,baz=299,slow=40
RES Resolute Bay 62.30 15 *e*P **P 11 40 48.8 -0.7**
RES pmax pmax
comp=Z,189nm,1.2s,mb6.1
RES Resolute Bay 62.30 15 *e*P **P 11 40 48.8 -0.7**
comp=Z,189nm,1.2s,mb6.1
BJO Bjornoya 62.40 345⇑*i*P **P 11 40 49.9 -0.2**
BJO *e*S **S 11 49 18.4 +3.8**
BJO AMS AMS 12 11 32.1
comp=Z,11μm,16.6s,MS6.1
BJO1 Bjornoya 62.44 345⇑*i*P **P 11 40 49.9 -0.5**
BJO1 LR LR
comp=Z,11μm,16.6s,MS6.1
BHJ Bhuj 62.74 279 *e*PKP **P 11 40 51.8 -1.4**
BHJ AMb AMB 11 40 55.0
comp=Z,170nm,1.3s,mb6.0
APA Apatity 62.75 336⇑*i*P **P 11 40 52.4 -0.2**
APA *i* 11 43 07.0
APA *i* PPP 11 44 45.0
APA *i* S **S 11 49 17.0 -2.1**
APA *i* PS 11 50 39.0
APA *i* SS SS 11 53 24.0 +0.7
APA pmax pmax
comp=Z,230nm,1.2s,mb6.2
APA pmax pmax
comp=Z,2μm,20.0s
APA MLR MLR
comp=Z,18μm,17.0s,MS6.3
EIDS Eidsvold 62.81 171 *e*P **P 11 40 53.3 -0.2**
PALK Pallekele 62.92 258 *e*P **P 11 40 54.0 -0.5**
PALK pmax pmax
comp=Z,63nm,1.1s,mb5.7
PALK Pallekele 62.92 258 *e*P **P 11 40 54.0 -0.6**
comp=Z,64nm,1.1s,mb5.7
PALK Pallekele 62.92 258 P **P 11 40 54.6 +0.1**
NOUC Port Laguerre 63.25 155 *e*P **P 11 40 56.8 +0.4**
DZM Mont Dzumac 63.27 155 *e*P **P 11 40 57.1 +0.5**
comp=Z,220nm,1.4s,mb6.1
DZM *e*S **S 11 49 21.8 -4.8**
comp=Z,4μm,25.9s
DZM *e*LR LR 11 59 46.8
comp=Z,17μm,21.6s
DZM Mont Dzumac 63.27 155 *e*P **P 11 40 59.1 +2.5**
YKA Yellowknife Ar 63.39 30 P **P 11 40 56.2 -0.7**
comp=Z,16nm,0.9s,mb5.2,baz=298,slow=6.6,SNR=38
YKA PKP2bc 12 09 58.8
comp=Z,1.3nm,1.1s,baz=116,slow=3.2,SNR=4.0
YKA Yellowknife Ar 63.39 30 P **P 11 40 56.2 -0.7**
YKA pmax pmax
comp=Z,16nm,0.9s
YKA pmax pmax
comp=Z,1.0nm,1.1s
YKA Yellowknife Ar 63.39 30 P **P 11 40 56.2 -0.7**
YKA ⇑*e* 12 09 58.9
KEV Kevo 63.47 339 *e*P **P 11 40 56.8 -0.5**
KEV pmax pmax
comp=Z,213nm,1.3s,mb6.1
KEV MLR MLR
comp=Z,13μm,19.0s,MS6.1
KEV Kevo 63.47 339 *e*P **P 11 40 56.8 -0.5**
comp=Z,213nm,1.3s,mb6.1
KEV LR LR
comp=Z,13μm,19.0s,MS6.1
KEV Kevo 63.47 339 *e*p **P 11 40 57.1 -0.2**
comp=Z,22nm,0.9s,mb5.3
ARCES ARCESS Array B 64.02 340 P **P 11 41 00.8 -0.1**
comp=Z,70nm,1.0s,mb5.6,baz=57,slow=7.4,SNR=89
ARCES LR LR 12 11 17.6
comp=Z,7μm,21.9s,MS5.8,baz=220,slow=38
ARCES ARCESS Array B 64.02 340 P **P 11 41 00.9 -0.1**
ARCES pmax pmax
comp=Z,70nm,1.0s
ARCES MLR MLR
comp=Z,7μm,22.0s
ARE0 ARCESS Array S 64.02 340 *e*P **P 11 41 00.8 -0.1**
ABKT Ailbek 64.22 299 P **P 11 41 03.2 +0.4**
comp=Z,465nm,1.4s,mb6.3,SNR=27
MSVF Nonsavu 64.30 142 PFAKE 11 41 20.0 +17
MSVF LR LR
comp=Z,6μm,20.0s,MS5.8
KTK1 Kautokeino 64.98 340⇑*i*P **P 11 41 07.0 -0.3**
KTK1 *e*S **S 11 49 47.2 +0.5**
KTK1 *e*SS SS 11 54 01.8 +3.9
TRD Trivandrum 65.12 262⇓*ex* **P 11 41 12.0 +3.0**
XMAS Kiritimati 65.51 107 PFAKE 11 41 20.0 +8.5
XMAS LR LR
comp=Z,10μm,22.0s,MS6.0
DAG Danmarks Havn 65.65 355⇓*i*P **P 11 41 10.8 -0.7**
DAG pmax pmax
comp=Z,71nm,1.0s,mb5.7
DAG Danmarks Havn 65.65 355⇓*i*P **P 11 41 10.8 -0.7**
comp=Z,71nm,1.0s,mb5.7
TRO Tromso 65.72 341⇑*i*P **P 11 41 11.5 -0.5**
TRO AMb AMB 11 41 13.6
comp=Z,188nm,1.0s,mb6.1
TRO *e*S S 11 49 57.1 +1.3
TRO *e*SS SS 11 54 07.5 -2.0
TRO AMS AMS 12 12 39.4
comp=Z,5μm,19.7s,MS5.7
TRO Tromso 65.72 341⇑*i*P **P 11 41 11.5 -0.5**
TRO pmax pmax
comp=Z,188nm,1.0s,mb6.1
TRO MLR MLR
comp=Z,5μm,19.7s,MS5.7
TRO Tromso 65.72 341⇑*i*P **P 11 41 11.5 -0.5**
comp=Z,188nm,1.0s,mb6.1
TRO LR LR
comp=Z,5μm,19.7s,MS5.7
NLWA Neilton Lookou 66.21 48 ⇑P **P 11 41 16.1 +0.5**
baz=66
NLWA Neilton Lookou 66.21 48 *e*P **P 11 41 16.9 +1.3**
NLWA LR LR

comp=Z,2μm,22.0s,MS5.3
A05A Maple Falls 66.45 46 ⇑P P 11 41 16.7 -0.4
baz=66
GNW Green Mountain 66.74 47 eP P 11 41 18.6 -0.3
comp=Z,24nm,1.4s,mb5.0
E03A Lebam 66.81 48 ⇑P P 11 41 19.5 +0.1
baz=67
AFI Afiamalu 66.84 130 PFAKE 11 41 30.0 +10
AFI LR LR
comp=Z,3μm,20.0s,MS5.5
JCW Jim Creek 66.94 46 eP P 11 41 20.4 +0.3
B06A Marblemount 67.03 46 ⇓P P 11 41 20.3 -0.5
baz=67
F03A Seaside 67.12 49 ⇑P P 11 41 22.1 +0.7
baz=67
D05A Enumclaw 67.42 47 ⇑P P 11 41 23.7 +0.5
baz=67
MOS Moscow 67.43 324c iP P 11 41 23.2 +0.1
MOS e 11 41 53.0
MOS e 11 43 49.9
MOS ePPP 11 45 30.1
MOS i S S 11 50 17.5 +0.6
MOS e 11 51 18.1
MOS pmax pmax
comp=Z,590nm,1.5s,mb6.4
MOS pmax pmax
comp=Z,2μm,2.3s,mb6.7
MOS smax
comp=N,1μm,4.4s
MOS MLR MLR
comp=E,3μm,15.0s,MS5.9
MOS MLR MLR
comp=Z,7μm,15.0s,MS6.0
MOS MLR MLR
comp=N,4μm,15.0s,MS5.9
MOS Moscow 67.43 324⇑ iP P 11 41 22.8 -0.3
LON Longmire 67.75 48 eP P 11 41 26.0 +0.7
F04A Amboy 67.80 49 ⇑P P 11 41 25.7 0.0
baz=68
ARMA Armdale 67.86 171 eP P 11 41 25.1 -0.9
ARMA eS S 11 50 18.5 -3.9
ARMA Armdale 67.86 171 eP P 11 41 26.4 +0.4
ARMA epP pP 11 41 36.0 +0.7
STEI Steigen 67.88 341⇑ iP P 11 41 25.4 -0.4
STEI AMb AMB 11 41 26.9
comp=Z,115nm,1.4s,mb5.7
VRHR Novokhopersk 67.92 318 eP P 11 41 24.8 -1.5
VRHR eS S 11 50 18.9 -4.0
VRHR pmax pmax
comp=N,110nm,1.2s
VRHR pmax pmax
comp=E,140nm,1.2s
VRHR pmax pmax
comp=Z,290nm,1.2s,mb6.2
VRHR smax
comp=N,50nm,1.2s
VRHR smax
comp=E,50nm,1.2s
VRHR smax
comp=Z,9.0nm,1.2s
COR Corvallis 67.96 50 eP P 11 41 27.6 +0.9
COR MLR MLR
comp=Z,2μm,20.0s,MS5.3
G04A Mulino 68.14 49 ⇓P P 11 41 27.8 0.0
baz=68
ETW Entiat 68.17 46 P P 11 41 28.2 +0.3
KEBM Edson Butte 68.20 52 eP P 11 41 29.6 +1.4
KEBM epP pP 11 41 37.2 -0.2
OBN Obninsk 68.28 323 P P 11 41 27.3 -1.2
comp=Z,1μm,1.2s,mb6.8,SNR=14
OBN Obninsk 68.28 323c iP P 11 41 28.2 -0.3
OBN e*PP pP 11 41 38.5 +0.8
OBN e 11 41 51.9
OBN e 11 43 59.1
OBN i S S 11 50 25.6 -1.4
OBN pmax pmax
comp=Z,218nm,1.2s,mb6.1
OBN MLR MLR
comp=Z,10μm,21.0s,MS6.0
OBN Obninsk 68.28 323⇑ iP P 11 41 28.3 -0.2
OBN LR LR
comp=Z,10μm,21.0s,MS6.0
PUL Pulkovo 68.32 330 eP P 11 41 28.4 -0.3
PUL pmax pmax
comp=Z,339nm,1.2s,mb6.2
PUL MLR MLR
comp=Z,9μm,15.0s,MS6.1
PUL Pulkovo 68.32 330 eP P 11 41 28.5 -0.2
B08A Colville Reser 68.34 45 ⇓P P 11 41 28.8 -0.2
baz=68,SNR=11
KAF Kangasniemi 68.40 333 eP P 11 41 28.5 -0.6
KAF pmax pmax
comp=Z,66nm,0.5s,mb5.9
KAF Kangasniemi 68.40 333 ep P 11 41 28.5 -0.6
comp=Z,66nm,0.5s,mb5.9
H04A Detroit Lake 68.59 50 ⇓P P 11 41 30.6 0.0
baz=68
VFP Flag Point 68.69 49 P P 11 41 31.7 +0.4
STKA Stephens Creek 68.72 180 eP P 11 41 30.5 -0.9
comp=Z,18nm,0.9s,mb5.0
STKA eS S 11 50 21.9 -11
STKA Stephens Creek 68.72 180 P P 11 41 31.0 -0.4
comp=Z,6.6nm,0.7s,mb4.7,baz=328,slow=7.2,SNR=14
STKA LR LR 12 09 26.7
comp=Z,3μm,21.7s,MS5.4,baz=353,slow=34
STKA Stephens Creek 68.72 180 eP P 11 41 30.6 -0.8
MAK Makhachkala 68.77 308 eP P 11 41 31.3 -0.5
MAK e 11 41 51.6
MAK e 11 44 04.2
MAK eS S 11 50 32.4 -0.9
MAK e 11 51 30.7
MAK pmax pmax
comp=Z,205nm,1.7s,mb5.8
MAK pmax pmax
comp=E,171nm,1.2s
MAK pmax pmax
comp=N,198nm,1.2s
MAK pmax pmax
comp=Z,1μm,3.4s
MAK smax
comp=N,2μm,9.0s
MAK smax
comp=E,2μm,8.6s
MAK MLR MLR
comp=Z,8μm,16.0s,MS6.1
MAK MLR MLR
comp=N,6μm,15.0s,MS6.2
MAK MLR MLR
comp=E,10μm,18.0s,MS6.2
VOR Voronezh 68.85 319 eP P 11 41 30.0 -2.1
VOR pmax pmax
comp=Z,360nm,1.6s,mb6.0
EDM Edmonton 68.88 39 eP P 11 41 31.6 -0.7
FORT Forrest 68.89 193 eP P 11 41 31.8 -0.7
comp=Z,116nm,0.6s,mb6.0
FORT Forrest 68.89 193 eP P 11 41 32.0 -0.5
FINES FINESS Array B 68.91 332 P P 11 41 32.1 -0.3
comp=Z,216nm,1.0s,mb6.0,baz=56,slow=7.1,SNR=161
FINES LR LR 12 14 02.5
comp=Z,9μm,18.1s,MS6.0,baz=46,slow=38
FINES FINESS Array B 68.91 332 P P 11 41 32.1 -0.2
FINES pmax pmax
comp=Z,216nm,1.0s
FINES MLR MLR
comp=Z,9μm,18.1s
E07A Sunnyside 68.99 47 ⇑P P 11 41 32.9 -0.3
baz=69
VSR Storozhevoye 69.15 319c iP P 11 41 33.7 -0.3
VSR e 11 41 33.8
VSR e 11 44 04.6
VSR eS S 11 50 33.3 -4.3
VSR pmax pmax
comp=N,190nm,1.0s
VSR pmax pmax
comp=E,230nm,1.0s
VSR pmax pmax
comp=Z,250nm,1.0s,mb6.1
VSR pmax pmax
comp=N,340nm,1.5s
VSR pmax pmax
comp=E,470nm,1.5s
VSR pmax pmax
comp=Z,700nm,1.5s,mb6.4
VSR pmax pmax
comp=Z,380nm,2.2s,mb5.9
VSR pmax pmax
comp=N,50nm,1.1s
VSR pmax pmax
comp=E,120nm,1.1s
VSR smax
comp=N,500nm,4.7s
VSR smax
comp=E,200nm,2.3s
VSR smax
comp=Z,90nm,2.3s
VSR MLR MLR
comp=N,10μm,17.0s,MS6.4
VSR MLR MLR
comp=E,16μm,17.0s,MS6.4
VSR MLR MLR
comp=Z,27μm,17.0s,MS6.5
HUMO Hull Mountain 69.20 52 eP P 11 41 34.3 -0.2
comp=Z,20nm,1.9s,mb4.7
HUMO LR LR
comp=Z,2μm,19.0s,MS5.3
OD2 Odessa Site #2 69.21 46 P P 11 41 34.3 -0.1
VORD Divnogorie 69.22 319 eP P 11 41 34.0 -0.5
VORD e 11 44 04.2
VORD eS S 11 50 35.2 -3.2
VORD pmax pmax
comp=N,150nm,1.1s
VORD pmax pmax
comp=E,120nm,1.1s
VORD pmax pmax
comp=Z,230nm,1.1s,mb6.0
VORD pmax pmax
comp=Z,490nm,2.6s,mb6.0
VORD pmax pmax
comp=N,90nm,0.9s
VORD pmax pmax
comp=E,40nm,0.5s
VORD smax
comp=N,190nm,2.3s
VORD smax
comp=E,120nm,2.3s
VORD smax
comp=Z,60nm,2.3s
VORD MLR MLR
comp=N,5μm,17.0s,MS6.4
VORD MLR MLR
comp=E,18μm,17.0s,MS6.4
VORD MLR MLR
comp=Z,23μm,17.0s,MS6.5
BBOR Butler Butte 69.23 52 P P 11 41 35.7 +1.1
RSW Rattlesnake Hi 69.24 47 eP P 11 41 35.5 +0.9
C09A Chrisman Ranch 69.24 45 ⇓P P 11 41 34.2 -0.4
baz=69
D08A Wollman Farm, 69.27 46 ⇑P P 11 41 34.7 -0.1
baz=69,SNR=5.8
D08A ⇑S S 11 50 37.8 -1.3
baz=69
HAWA Hanford 69.27 47 eP P 11 41 35.2 +0.3
HAWA LR LR
comp=Z,1μm,22.0s,MS5.1
F07A Phinny Hill Vi 69.31 48 ⇑P P 11 41 34.8 -0.2
baz=69
F07A ⇑S S 11 50 40.2 +0.7
baz=69
VTHM Trough 69.31 49 P P 11 41 35.2 +0.1
MOR8 Moi Rana 69.39 340 iP P 11 41 33.6 -1.6
MOR8 AMb AMB 11 41 35.2
comp=Z,209nm,1.4s,mb5.9
MOR8 Moi Rana 69.39 340⇑ iP P 11 41 33.6 -1.6
comp=Z,209nm,1.4s,mb5.9
E08A Dider Farm, El 69.49 47 ⇑P P 11 41 36.0 -0.3
baz=69
E08A ⇑S S 11 50 41.8 0.0
baz=69
KONS Konsvik 69.50 341 eP P 11 41 36.1 +0.3
FLOS Flostrand 69.56 340 eP P 11 41 35.6 -0.7
KHMM Horse Mountain 69.62 54 epP pP 11 41 48.0 +1.6
VIPM Ingram Point 69.63 49 P P 11 41 37.4 +0.3
NEW Newport 69.64 44 eP P 11 41 37.3 +0.2
NEW MLR MLR
comp=Z,2μm,19.0s
STOK Stokkvaagen 69.65 340 eP P 11 41 38.0 +1.1
YBH Yreka Blue Hor 69.82 53 P P 11 41 39.6 +1.3
comp=Z,5.6nm,1.0s,mb4.4,baz=24,slow=1.3,SNR=7.2
YBH Yreka Blue Hor 69.82 53 P P 11 41 39.6 +1.3
YBH LR LR
comp=Z,2μm,22.0s,MS5.2
E09A Wood Farm, Sta 70.01 46 ⇑P P 11 41 39.5 0.0
baz=70,SNR=7.2
E09A ⇓S S 11 50 46.8 -1.0
baz=70
JMIC Jan Mayen 70.07 350⇑ iP P 11 41 40.2 +0.9
JMIC eS S 11 50 50.3 +2.6
JMIC AMS AMS 12 15 33.5
comp=Z,2μm,17.4s,MS5.4
JMIC Jan Mayen 70.07 350 LR LR 12 15 38.5
comp=Z,2μm,18.2s,MS5.4,baz=45,slow=39
A12A Yaak River Ran 70.08 43 ⇓P P 11 41 39.6 -0.1
baz=70
A12A ⇑S S 11 50 47.8 -0.7
baz=70
G08A Pilot Rock 70.20 48 ⇓P P 11 41 40.8 +0.2
baz=70,SNR=7.1
LNOR Lincton Mounta 70.28 47 eP P 11 41 41.3 +0.2
B12A Libby 70.37 44 ⇓P P 11 41 41.3 -0.3
baz=70
K05A Summer Lake 70.42 51 ⇑P P 11 41 42.7 +0.7
baz=70,SNR=18
SUMG Summit 70.51 0 eP P 11 41 42.6 +0.6
comp=Z,182nm,1.3s,mb5.8
SUMG Summit 70.51 0⇑ iP P 11 41 42.7 +0.7
comp=Z,56nm,1.0s,mb5.5
SUMG
comp=Z,5μm,19.0s
I07A Izee 70.54 49 ⇓P P 11 41 43.2 +0.5
baz=70,SNR=9.7
WDC Whiskeytown Da 70.54 54 eP P 11 41 43.2 +0.4
WDC MLR MLR
comp=Z,2μm,21.0s,MS5.2
VSU Vasula 70.58 330c iP P 11 41 42.4 -0.2
VSU pmax pmax
comp=Z,344nm,1.2s,mb6.2
VSU MLR MLR
comp=Z,15μm,22.0s,MS6.2
VSU Vasula 70.58 330⇑ iP P 11 41 42.5 -0.1
A13A Flathead Natio 70.75 43 ⇑P P 11 41 43.7 -0.2
baz=70,SNR=5.9
F10A Beach Ranch, E 70.84 47 ⇓P P 11 41 44.5 0.0
baz=71,SNR=5.9
C12B Naegeli Ranch, 70.86 44 ⇓P P 11 41 44.2 -0.4
baz=71
LTIM Timbered Crate 70.89 53 P P 11 41 45.7 +0.8
DGRG David-gareji 70.92 308 P P 11 41 45.1 +0.1
WALA Waterton Lakes 70.95 42 eP P 11 41 45.4 +0.3
B13A Whitefish 71.04 43 ⇑P P 11 41 45.7 +0.1
baz=71,SNR=15
HOPS Hopland 71.05 55 PFAKE 11 42 00.0 +14
HOPS LR LR
comp=Z,3μm,22.0s,MS5.5
ZEI Tsey 71.11 310 eP P 11 41 42.1 -4.1
ZEI pmax pmax
comp=Z,138nm,1.5s,mb5.7
ZEI MLR MLR
comp=Z,11μm,17.0s,MS6.2
ZEI MLR MLR
comp=N,2μm,14.0s,MS6.0
ZEI MLR MLR
comp=E,7μm,18.0s,MS6.0
MTA Mtatsminda 71.15 308 P P 11 41 46.2 -0.2
TBLG Delisi 71.16 308 eP P 11 41 46.7 +0.2
TBLG Delisi 71.16 308 P P 11 41 46.7 +0.2
BSMT Bassoo Peak 71.17 44 eP P 11 41 47.3 +0.8
KIV Kislovodsk 71.20 311 P P 11 41 47.2 +0.5
comp=E,2μm,1.3s,mb6.9,SNR=42
KIV Kislovodsk 71.20 311c iP P 11 41 47.2 +0.5
KIV e 11 42 07.5
KIV e 11 44 25.0
KIV eS S 11 51 01.6 -0.1
KIV eSS SS 11 55 35.7 +0.7
KIV pmax pmax
comp=Z,440nm,1.2s,mb6.3
KIV pmax pmax
comp=Z,453nm,3.4s
KIV Kislovodsk 71.20 311⇑ iP P 11 41 47.3 +0.6
KIV LR LR
comp=Z,7μm,19.0s,MS6.0
KIV Kislovodsk 71.20 311 P P 11 41 47.4 +0.7
SNR=124
MOD Modoc 71.24 51 eP P 11 41 46.9 -0.1
comp=Z,38nm,1.3s,mb5.2
MOD LR LR
comp=Z,1μm,20.0s,MS5.2
A14A Double T Ranch 71.27 42 ⇑P P 11 41 46.7 -0.3
baz=71,SNR=9.4
D12A Red Ives Fores 71.31 45 ⇑P P 11 41 46.5 -0.8
baz=71
NSS Namsos 71.31 340⇑ iP P 11 41 45.1 -1.9
NSS eS S 11 51 02.6 +0.2
NSS AMS AMS 12 18 19.7
comp=Z,8μm,14.7s,MS6.1
KEH Kehvi 71.34 309 P P 11 41 46.5 -1.1
GOR Gori 71.42 309 P P 11 41 48.9 +0.8
WBK Wadi Bani Khal 71.42 285 P P 11 41 49.5 +1.1
SNR=10
BMO Blue Mountains 71.42 48 eP P 11 41 47.9 -0.1
BMO LR LR
comp=Z,1μm,20.0s,MS5.1
ONI Oni 71.49 310 P P 11 41 49.2 +0.8
JTMT Jette 71.50 44 eP P 11 41 48.8 +0.3
J08A Circle Bar Ran 71.56 49 ⇓P P 11 41 49.0 +0.2
baz=71,SNR=17
YBMT Yellow Bay 71.59 44 eP P 11 41 49.9 +0.9
A15A Johnson Ranch, 71.63 42 ⇓P P 11 41 48.5 -0.7
baz=71,SNR=15
MCCM Marconi Confer 71.64 56 PFAKE 11 42 00.0 +11
MCCM LR LR
comp=Z,2μm,22.0s,MS5.4
BANOM Banah 71.66 289 P P 11 41 50.4 +0.6
SNR=5.1
B14A Marquette Ranc 71.70 43 ⇓P P 11 41 49.7 +0.1
baz=72,SNR=11
D13A Huson 71.78 44 ⇓P P 11 41 49.6 -0.6
baz=72,SNR=8.9
SWMT Swartz Lake 71.80 44 eP P 11 41 50.7 +0.5
SMDO Samad 71.88 285 P P 11 41 52.0 +0.8
SNR=16
OHCM Honcut 71.90 54 eP P 11 41 51.2 +0.2
WVOR Wild Horse Val 71.98 50 eP P 11 41 51.9 +0.5
WVOR pmax pmax
comp=Z,47nm,1.4s,mb5.2
WVOR MLR MLR
comp=Z,2μm,19.0s,MS5.4
WVOR Wild Horse Val 71.98 50 eP P 11 41 51.9 +0.5
comp=Z,47nm,1.4s,mb5.2
WVOR LR LR
comp=Z,2μm,19.0s,MS5.4
SCO Scoresbysund 72.00 354⇑ iP P 11 41 51.0 0.0
SCO i 11 44 26.6
SCO pmax pmax
comp=Z,24nm,1.3s,mb5.0
SCO MLR MLR
comp=Z,2μm,23.0s,MS5.3
SCO Scoresbysund 72.00 354⇑ iP P 11 41 51.0 0.0
SCO i 11 44 26.6
SCO Scoresbysund 72.00 354⇑ iP P 11 41 51.0 0.0
comp=Z,24nm,1.3s,mb5.0
SCO i 11 44 26.6
SCO
comp=Z,2μm,23.0s
GNI Garni 72.03 307 eP P 11 41 52.6 +0.8
GNI Garni 72.03 307c iP P 11 41 52.5 +0.7
GNI pmax pmax
comp=Z,137nm,1.6s
GNI MLR MLR
comp=Z,6μm,20.0s
GNI Garni 72.03 307 eP P 11 41 52.6 +0.8
comp=Z,231nm,1.3s,mb6.0
GNI LR LR
comp=Z,6μm,20.0s,MS5.8
GNI Garni 72.03 307 P P 11 41 53.2 +1.4
SNR=13
F12A Elk City 72.10 46 ⇓P P 11 41 51.8 -0.3
baz=72,SNR=28
B15A Bradely Ranch, 72.11 43 ⇓P P 11 41 51.7 -0.4
baz=72,SNR=23
KLBR Kellerberrin 72.12 202 eP P 11 41 50.7 -1.5
comp=Z,22nm,0.8s,mb5.1
HOQ Hoqain 72.16 286 P P 11 41 53.1 +0.3
SNR=16
JMDO Jabal Madar 72.22 285 P P 11 41 53.3 +0.2
SNR=11
MSO Missoula 72.22 44 eP P 11 41 52.1 -0.7
comp=Z,14nm,1.0s,mb4.8
MSO LR LR
comp=Z,1μm,20.0s,MS5.1
SLMT Seeley Lake 72.23 44 eP P 11 41 52.7 -0.1
A16A West Butte Ran 72.25 42 ⇑P P 11 41 52.2 -0.8
baz=72,SNR=7.6
E13A Victor 72.31 45 ⇓P P 11 41 52.2 -1.1
baz=72
D14A Greenough 72.32 44 ⇓P P 11 41 52.6 -0.7
baz=72,SNR=10
HATD Hatta, Dubai 72.38 288 P P 11 41 54.6 +0.4
SNR=8.5
CAN Canberra 72.44 174 PFAKE 11 42 10.0 +16
CAN LR LR
comp=Z,2μm,19.0s,MS5.5
B16A M & M Farms, S 72.52 42 ⇓P P 11 41 54.0 -0.5
baz=72
ASHO Ashiyiah 72.52 288 P P 11 41 55.3 +0.4
SNR=9.8
J10A Berg Farm, Mel 72.55 49 ⇑P P 11 41 54.3 -0.5
baz=72
IZAR Zarasai 72.55 328 eP P 11 41 55.0 +0.5
IZAR AMB AMB 11 41 55.6
comp=Z,99nm,1.3s,mb5.6
CHMT Chamberlain Mo 72.56 44 eP P 11 41 54.3 -0.5
F13A Darby 72.61 45 ⇑P P 11 41 54.2 -0.9
baz=72,SNR=15
IDID Didziasalis 72.62 327 eP P 11 41 55.4 +0.4
IDID AMB AMB 11 41 56.1
comp=Z,99nm,1.4s,mb5.6
NAZ Nazwa, Dubai 72.65 288 P P 11 41 55.7 0.0
SNR=15
MICGM Minsk 72.65 326⇑ iP P 11 41 54.0 -1.2
MNK Minsk 72.67 326⇑ iP P 11 41 54.0 -1.3
MNK eS S 11 51 16.0 -2.3
MNK pmax pmax
comp=Z,950nm,1.0s,mb6.7
MNK MLR MLR
comp=Z,24μm,14.0s,MS6.6
BSY Bisya 72.71 286 P P 11 41 56.3 +0.2
SNR=18
E14A Clinton 72.72 45 ⇑P P 11 41 55.2 -0.5
baz=72
A17A Triple J Farms 72.73 41 ⇑P P 11 41 55.2 -0.6
baz=72,SNR=9.1
DIGO Kars 72.75 308⇑ iP P 11 41 57.0 +1.0
I11A Placerville 72.75 48 ⇓P P 11 41 55.9 -0.2
baz=72
KARS Kars 72.82 308 eP P 11 41 56.9 +0.5
IIGN Ignalina 72.82 327 eP P 11 41 56.6 +0.4
IIGN AMB AMB 11 41 57.3
comp=Z,113nm,1.4s,mb5.6
K10A MacKenzie Ranc 72.86 49 ⇓P P 11 41 56.8 +0.1
baz=73,SNR=20
C16A Fuhringer Ranc 72.86 43 ⇑P P 11 41 56.4 -0.2
baz=73,SNR=18
NACGM Naroch 72.88 327 eP P 11 41 53.0 -3.5
ARQ Araqi 72.90 287 P P 11 41 57.6 +0.4
SNR=13
H12A Diamond D Ranc 73.03 47 ⇓P P 11 41 57.1 -0.6
baz=73,SNR=20
WCN Washoe City 73.03 53 ⇑P P 11 41 57.8 +0.1
baz=73,SNR=13
PAHR Pah Rah Range 73.04 53 eP P 11 41 58.6 +0.8
G13A Cobalt 73.07 46 ⇑P P 11 41 57.1 -0.8
baz=73,SNR=21
B17A L&G Farms, Che 73.07 42 ⇑P P 11 41 57.4 -0.4
baz=73,SNR=21
ASUD Al Ashush, Dub 73.10 288 P P 11 41 58.8 +0.4
SNR=6.9
MFID Camas Ranch 73.12 48 ⇑P P 11 41 58.1 -0.1
baz=73
F14A Wisdom 73.14 45 ⇑P P 11 41 57.9 -0.4
baz=73
SOC Sochi 73.18 312c iP P 11 41 58.4 -0.1
SOC e*PP pP 11 42 06.8 -1.0
SOC e 11 42 20.3
SOC e 11 44 37.2
SOC ePPP 11 46 25.7
SOC eS S 11 51 22.5 -1.9
SOC e 11 51 59.7
SOC pmax pmax

comp=Z,284nm,1.3s,mb6.0
SOC pmax pmax
comp=Z,2μm,3.4s
SOC MLR MLR
comp=Z,10μm,18.0s,MS6.1
SOC Sochi 73.18 312⇑ *i* P P 11 41 58.3 -0.2
E15A Deer Lodge 73.19 44 ⇓P P 11 41 58.0 -0.5
baz=73,SNR=15
A18A Metzger Ranch, 73.19 41 ⇑P P 11 41 58.0 -0.6
baz=73,SNR=8.5
ARTV Artvin 73.22 309 *i* P P 11 41 58.8 0.0
BCA Borcka 73.26 309 *e*P P 11 41 59.3 +0.3
FFC Flin Flon 73.27 33 P P 11 41 58.3 -0.6
comp=Z,382nm,1.1s,mb6.2,SNR=35
FFC Flin Flon 73.27 33 *i* P P 11 41 58.3 -0.6
FFC Flin Flon 73.27 33 *e*P P 11 41 58.2 -0.6
comp=Z,117nm,1.3s,mb5.7
FFC LR LR
comp=Z,2μm,22.0s,MS5.4
DAGI Agillar 73.29 309 *i* P P 11 41 59.7 +0.5
DBOC Borcka 73.29 309 *i* P P 11 41 59.5 +0.3
I12A Atlanta 73.31 47 ⇓P P 11 41 59.2 -0.1
baz=73,SNR=42
CMB Columbia Colle 73.34 55 *e*P P 11 41 59.4 -0.2
CMB pmax pmax
comp=Z,49nm,1.3s,mb5.3
CMB MLR MLR
comp=Z,2μm,21.0s,MS5.5
CMB Columbia Colle 73.34 55 *e*P P 11 41 59.4 -0.2
comp=Z,49nm,1.3s,mb5.3
CMB LR LR
comp=Z,2μm,21.0s,MS5.5
SAO San Andreas Ge 73.35 56 PFAKE 11 42 10.0 +10
SAO LR LR
comp=Z,2μm,21.0s,MS5.4
K11A Parker Ranch, 73.37 49 ⇑P P 11 41 59.6 -0.1
baz=73
H13A Challis 73.37 46 ⇑P P 11 41 59.4 -0.2
baz=73,SNR=46
D16A Dana Ranch, Ca 73.43 43 ⇑P P 11 41 59.8 -0.1
baz=73,SNR=9.9
DBAD Bademkaya 73.46 309 *i* P P 11 42 00.8 +0.6
HRY Holter Researc 73.47 44 *e*P P 11 42 00.2 0.0
AGRB Hanur-Agry 73.47 307 *e*P P 11 42 01.6 +1.3
C17A Wharram Farm, 73.49 42 ⇑P P 11 41 59.5 -0.8
baz=73,SNR=12
DDEM Demirkent 73.50 309 *i* P P 11 42 00.8 +0.3
L10A Juniper Basin 73.50 50 ⇓P P 11 42 00.7 +0.2
baz=73
NWAO Narrogin (SRO) 73.52 202 P P 11 41 60.0 -0.5
comp=Z,9.7nm,0.7s,mb4.9,baz=15,slow=5.5,SNR=5.7
NWAO Narrogin (SRO) 73.52 202 *e*P P 11 41 59.7 -0.8
NWAO pmax pmax
comp=Z,61nm,1.3s
NWAO MLR MLR
comp=Z,2μm,19.0s
NWAO Narrogin (SRO) 73.52 202 *e*P P 11 41 59.7 -0.8
comp=Z,61nm,1.3s,mb5.4
NWAO LR LR
comp=Z,2μm,19.0s,MS5.3
B18A Beardsley Farm 73.55 41 ⇓P P 11 42 00.5 -0.1
baz=73,SNR=23
FCC Fort Churchill 73.61 27 *e*P P 11 42 00.4 -0.4
F15A Butte 73.62 45 ⇓P P 11 42 01.1 0.0
baz=73,SNR=39
J12A Stokes Ranch, 73.64 48 ⇓P P 11 42 01.6 +0.3
baz=73,SNR=11
LRM Limekiln Ridge 73.65 45 *e*P P 11 42 01.5 +0.2
E16A East Helena 73.66 44 ⇓P P 11 42 01.4 +0.1
baz=73,SNR=15
TUTA Tutak 73.68 307⇑ *i*P P 11 42 02.6 +1.1
WAKR Walker 73.69 54 *e*P P 11 42 02.3 +0.6
VANB Van 73.77 306 *e*P P 11 42 03.5 +1.4
M10A I.L. Ranch, Tu 73.78 50 ⇑P P 11 42 02.6 +0.4
baz=74,SNR=11
EGMT Eagleton 73.79 42 ⇑P P 11 42 01.7 -0.4
baz=74,SNR=14
EGMT Eagleton 73.79 42 *e*P P 11 42 02.0 -0.1
EGMT LR LR
comp=Z,2μm,21.0s,MS5.4
ANN Anapa 73.80 314*c* *i*P P 11 42 01.7 -0.4
ANN *e* 11 44 45.7
ANN *e*PPP 11 46 28.6
ANN *e*S S 11 51 31.3 -0.1
ANN pmax pmax
comp=Z,349nm,1.3s,mb6.1
ANN pmax pmax
comp=Z,896nm,7.3s
ANN Anapa 73.80 314⇑ *i*P P 11 42 01.8 -0.3
D17A Six Diamond Ra 73.82 43 ⇑P P 11 42 02.0 -0.2
baz=74,SNR=21
I13A Wildhorse Cree 73.83 47 ⇑P P 11 42 02.7 +0.4
baz=74,SNR=18
DLMT Dillon 73.84 45 *e*P P 11 42 02.9 +0.5
H14A Leadore 73.85 46 ⇓P P 11 42 02.1 -0.4
baz=74
HLID Hailey 73.86 47 ⇓P P 11 42 02.8 +0.2
baz=74,SNR=17
HLID Hailey 73.86 47 *e*P P 11 42 03.0 +0.5
comp=Z,26nm,1.1s,mb5.1
HLID LR LR
comp=Z,1μm,19.0s,MS5.2
L11A Cat Creek Ranc 73.88 49 ⇑P P 11 42 03.2 +0.5
baz=74,SNR=20
BMN Battle Mountai 73.99 51 *e*P P 11 42 05.1 +1.7
BMN MLR MLR
comp=Z,2μm,19.0s,MS5.3
MCMT McKenzie Canyo 74.02 46 *e*P P 11 42 03.4 -0.1
comp=Z,4.5nm,0.9s,mb4.4
G15A Dillon 74.02 45 ⇓P P 11 42 03.2 -0.3
baz=74,SNR=33
MOL Molde 74.08 340 *e*P P 11 42 03.6 +0.1
MOL *e*S S 11 51 33.0 -1.0
MOL AMS AMS 12 17 55.9
comp=Z,7μm,22.1s,MS5.9
J13A Cove Ranch, Pi 74.10 47 ⇓P P 11 42 04.4 +0.5
baz=74
K12A Draper Farm, C 74.12 48 ⇑P P 11 42 04.1 0.0
baz=74,SNR=8.8
F16A Kennard Place, 74.14 44 ⇓P P 11 42 04.0 -0.1
baz=74,SNR=18
E17A Martinsdale 74.15 43 ⇓P P 11 42 04.3 +0.1
baz=74,SNR=20
HAKT HAKKARI 74.15 305 *i* P P 11 42 04.4 0.0
I14A Mackay 74.21 47 ⇓P P 11 42 04.9 +0.4
baz=74,SNR=24
BOZ Bozeman (W) 74.22 44 ⇑P P 11 42 04.7 +0.1
baz=74,SNR=30
BOZ Bozeman (W) 74.22 44 *e*P P 11 42 04.6 0.0
BOZ pmax pmax
comp=Z,24nm,0.9s,mb5.1
BOZ MLR MLR
comp=Z,2μm,20.0s,MS5.3
BOZ Bozeman (W) 74.22 44 *e*P P 11 42 04.6 0.0
comp=Z,24nm,0.9s,mb5.1
BOZ LR LR
comp=Z,2μm,20.0s,MS5.3
NB2 NORSAR Subarra 74.23 338 P P 11 42 04.0 -0.4
comp=Z,272nm,1.1s,mb6.1,baz=39,slow=6.2
NOA NORSAR Array B 74.23 338 P P 11 42 04.3 -0.1
comp=Z,154nm,1.1s,mb5.8,baz=39,slow=5.8,SNR=99
NOA LR LR 12 18 22.7
comp=Z,10μm,19.0s,MS6.1,baz=30,slow=39
NOA NORSAR Array B 74.23 338 P P 11 42 04.3 -0.1
NOA pmax pmax
comp=Z,155nm,1.1s
NOA MLR MLR
comp=Z,10μm,19.0s
H15A Lima 74.26 46 ⇑P P 11 42 04.4 -0.5
baz=74,SNR=7.5
N10A Dunphy 74.27 51 ⇑P P 11 42 05.1 +0.1
baz=74
D18A Linhart Farms, 74.27 42 ⇓P P 11 42 04.8 -0.1
baz=74,SNR=5.9
M11A Holland Ranch, 74.29 50 ⇓P P 11 42 05.8 +0.7
baz=74,SNR=15
ERZM Erzurum 74.30 308 *i* P P 11 42 06.1 +0.9
EZM Erzurum 74.31 308 *e*P P 11 42 07.1 +1.9
L12A House Creek Ra 74.34 49 ⇑P P 11 42 05.5 +0.1
baz=74,SNR=13
G16A Moss Hill, Enn 74.37 45 ⇓P P 11 42 05.5 0.0
baz=74,SNR=19
CUKT Cukurca 74.39 305 *e*P P 11 42 06.0 +0.3
NVAR Mina Array Bea 74.46 53 P P 11 42 06.5 +0.4
comp=Z,7.2nm,0.9s,mb4.6,baz=287,slow=5.6,SNR=50
AKASG Malin Array Be 74.49 323 P P 11 42 05.7 -0.4
comp=Z,44nm,0.4s,mb5.7,baz=45,slow=5.9,SNR=311
AKASG LR LR 12 18 22.2
comp=Z,11μm,19.5s,MS6.2,baz=45,slow=39
AKASG Malin Array Be 74.49 323 P P 11 42 05.7 -0.4
AKASG pmax pmax
comp=Z,44nm,0.4s
AKASG MLR MLR
comp=Z,11μm,19.5s
AKBB Malin Array Si 74.49 323 *e*P P 11 42 05.4 -0.7
NAO01 NORSAR Array S 74.49 338 *e*P P 11 42 05.5 -0.3
comp=Z,224nm,1.4s,mb5.9
NAO01 LR LR
comp=Z,11μm,20.0s,MS6.1
KIEV Kiev 74.50 323 *e*P P 11 42 05.4 -0.7
KIEV pmax pmax
comp=Z,474nm,1.4s,mb6.2
KIEV MLR MLR
comp=Z,12μm,22.0s,MS6.1
KIEV Kiev 74.50 323 *e*P P 11 42 05.4 -0.7
comp=Z,474nm,1.4s,mb6.2
KIEV LR LR
comp=Z,12μm,22.0s,MS6.1
O10A Cortez Mining, 74.52 51 ⇑P P 11 42 07.2 +0.7
baz=74
J14A Carey 74.53 47 ⇑P P 11 42 07.3 +0.8
baz=74,SNR=28
MLAC Mammoth Lakes 74.58 54 ⇑P P 11 42 07.4 +0.6
baz=74,SNR=8.0
F17A Fitzpatrick Pl 74.60 44 ⇓P P 11 42 06.8 0.0
baz=74,SNR=18
K13A Stover Farm, H 74.60 48 ⇑P P 11 42 07.3 +0.4
baz=74,SNR=9.2
E18A Harlowton 74.60 43 ⇑P P 11 42 07.0 +0.1
baz=74,SNR=17
KTUT Trabzon 74.66 310 *e*P P 11 42 05.6 -1.7
N11A Elko Archery C 74.69 50 ⇓P P 11 42 07.8 +0.4
baz=74
I15A Monteview 74.73 46 ⇓P P 11 42 07.9 +0.3
baz=74
M12A Wells 74.83 49 ⇓P P 11 42 08.9 +0.6
baz=75,SNR=26
G17A Pierce Place, 74.91 44 ⇑P P 11 42 08.8 +0.2
baz=75,SNR=9.4
BNGL BINGOL 74.99 308 *i* P P 11 42 09.3 +0.1
H16A Russell Place, 75.00 45 ⇓P P 11 42 09.4 +0.3
baz=75,SNR=18
L13A Double Diamond 75.02 48 ⇓P P 11 42 10.0 +0.7
baz=75,SNR=12
SUW Suwalki 75.03 328 *e*P P 11 42 08.8 -0.3
comp=Z,800nm,1.4s,mb6.5
SUW *e*PP PP 11 44 56.0 -0.6
SUW *e*S S 11 51 44.5 -0.3
SUW *es*S sS 11 52 02.1 +1.8
SUW LMZ 12 17 52.6
comp=Z,14μm,17.7s
SUW Suwalki 75.03 328⇑ *e*P P 11 42 08.8 -0.3
SUW *e* 11 44 56.0
SUW *e*S S 11 51 44.5 -0.4
SUW pmax pmax
comp=Z,800nm,1.4s,mb6.5
SUW MLR MLR
comp=Z,14μm,17.7s,MS6.3
SUW Suwalki 75.03 328 *e*P P 11 42 08.2 -0.9
comp=Z,407nm,1.1s,mb6.3
ELK Elko 75.03 50 PFAKE 11 42 20.0 +11
ELK LR LR
comp=Z,2μm,21.0s,MS5.3
RCTC Rector, Farmer 75.07 56 ⇑P P 11 42 09.2 -0.5
baz=75
N12A Clover Valley, 75.09 50 ⇑P P 11 42 10.1 +0.4
baz=75,SNR=12
N12A Clover Valley, 75.09 50 *e*P P 11 42 10.5 +0.7
comp=Z,46nm,1.2s,mb5.3
F18A Big Timber 75.12 43 ⇑P P 11 42 09.8 0.0
baz=75,SNR=21
J15A Blackfoot 75.12 47 ⇓P P 11 42 10.6 +0.7
baz=75,SNR=19
O11A Cowboy Ranch, 75.14 51 ⇑P P 11 42 10.5 +0.4
baz=75
SMMC Simmler 75.14 57 ⇑P P 11 42 10.3 +0.1
baz=75
GUMT Gumushane 75.15 310 *e*P P 11 42 11.6 +1.5
YMR Madison River 75.19 45 *e*P P 11 42 10.8 +0.5
comp=Z,69nm,1.2s,mb5.5
K14A Jones Ranch, D 75.20 48 ⇓P P 11 42 11.0 +0.7
baz=75,SNR=11
GCMT Greycliff 75.22 43 *e*P P 11 42 10.9 +0.5
comp=Z,23nm,1.0s,mb5.0
OSL Oslo 75.25 337 *e*P P 11 42 10.2 0.0
OSL AMb AMB 11 42 12.1
comp=Z,224nm,1.4s,mb5.9
OSL Oslo 75.25 337 *e*P P 11 42 10.2 0.0
comp=Z,224nm,1.4s,mb5.9
TIN Tinemaha 75.30 55 ⇓P P 11 42 11.0 0.0
baz=75
YNR Norris Junctio 75.32 45 *e*P P 11 42 11.7 +0.7
M13A Montello 75.32 49 ⇓P P 11 42 11.5 +0.4
baz=75,SNR=8.9
M13A Montello 75.32 49 *e*P P 11 42 11.1 +0.1
comp=Z,26nm,1.1s,mb5.1
TPH Tonopah 75.36 53 PFAKE 11 42 20.0 +8.7
TPH LR LR
comp=Z,2μm,22.0s,MS5.3
I16A Newdale 75.38 46 ⇓P P 11 42 12.2 +0.9
baz=75,SNR=29
YFT Old Faithful 75.39 45 *e*P P 11 42 14.7 +3.3
P11A Circle Ranch, 75.42 51 ⇑P P 11 42 12.0 +0.4
baz=75
Q10A Clear Creek Ra 75.44 52 ⇓P P 11 42 11.7 -0.1
baz=75,SNR=7.9
VES Vestal, Richgr 75.44 56 ⇓P P 11 42 11.2 -0.6
baz=75,SNR=9.8
BINT Bingol 75.46 308 *e*P P 11 42 12.0 +0.1
L14A Malta 75.47 48 ⇓P P 11 42 12.5 +0.6
baz=75,SNR=14
KELT Kelkit 75.47 309⇑ *i*P P 11 42 12.7 +0.8
K15A Arbon 75.50 47 ⇑P P 11 42 12.7 +0.7
baz=75,SNR=10
FOO Floro 75.56 340⇑ *i*P P 11 42 11.0 -1.0
FOO *e*S S 11 51 54.0 +3.5
FOO AMS AMS 12 18 59.3
comp=Z,7μm,16.1s,MS6.1
G18A Lazy EL Ranch, 75.57 44 ⇓P P 11 42 12.1 -0.3
baz=75
LKWY Lake 75.57 45 PFAKE 11 42 20.0 +7.6
LKWY LR LR
comp=Z,3μm,19.0s,MS5.6
H17A Grant Village 75.57 45 ⇓P P 11 42 14.4 +2.0
baz=75,SNR=18
SIM Simferopol' 75.58 316*c* *i*P P 11 42 12.0 -0.5
SIM *e* 11 45 04.0
SIM *e*S S 11 51 51.0 -0.3
SIM pmax pmax
comp=Z,149nm,1.1s,mb5.8
SIM MLR MLR
comp=Z,7μm,15.4s,MS6.1
N13A Wendover, West 75.60 50 ⇑P P 11 42 13.3 +0.6
baz=75
N13A Wendover, West 75.60 50 *e*P P 11 42 13.3 +0.7
comp=Z,42nm,0.9s,mb5.4
HYA Hoyanger 75.60 340⇑ *i*P P 11 42 13.2 +0.9
HYA AMb AMB 11 42 14.8
comp=Z,176nm,1.6s,mb5.7
HYA Hoyanger 75.60 340⇑ *i*P P 11 42 13.2 +0.9
comp=Z,176nm,1.6s,mb5.7
O12A Currie 75.62 50 ⇑P P 11 42 13.1 +0.3
baz=75,SNR=10
J16A Bone 75.67 46 ⇓P P 11 42 13.8 +0.8
baz=75,SNR=8.1
IMW Indian Meadow 75.67 46 *e*P P 11 42 14.1 +1.0
DCID1 Drake Creek 75.72 46 *e*P P 11 42 15.7 +2.4
M14A Sheep Mountain 75.73 49 ⇑P P 11 42 13.8 +0.4
baz=76,SNR=19
CWC Cottonwood Cre 75.76 55 ⇑P P 11 42 13.6 -0.1
baz=76,SNR=6.9
RRI2 Red Ridge 75.79 46 *e*P P 11 42 15.0 +1.3
R10A Warm Springs 75.82 53 ⇓P P 11 42 13.9 -0.1
baz=76,SNR=7.2
KONO Kongsberg 75.83 337 *e*P P 11 42 12.9 -0.7
KONO *e*S S 11 51 52.9 -0.6
KONO *e*SS SS 11 56 43.5 -1.1
KONO AMS AMS 12 18 48.8
comp=Z,10μm,14.1s,MS6.3
KONO Kongsberg 75.83 337 *e*P P 11 42 13.3 -0.3
KONO pmax pmax
comp=Z,116nm,1.4s,mb5.6
KONO MLR MLR
comp=Z,13μm,19.0s,MS6.2
KONO Kongsberg 75.83 337 *e*P P 11 42 13.3 -0.4
comp=Z,116nm,1.4s,mb5.6
KONO LR LR
comp=Z,13μm,19.0s,MS6.2
S10A Tonopah Range, 75.85 53 ⇓P P 11 42 14.4 +0.2
baz=76,SNR=24
RLMT Red Lodge 75.85 44 ⇑P P 11 42 14.5 +0.4
baz=76,SNR=11
RLMT Red Lodge 75.85 44 *e*P P 11 42 14.4 +0.4
RLMT LR LR
comp=Z,2μm,20.0s,MS5.3
I17A Pilgrim Ck. 75.87 45 ⇑P P 11 42 15.1 +0.9
baz=76,SNR=7.3
GRAC Grapevine Rang 75.89 54 ⇑P P 11 42 14.8 +0.4
baz=76
Q11A Duckwater 75.90 52 ⇓P P 11 42 14.4 0.0
baz=76,SNR=12
HVU Hansel Valley 75.90 48 *e*P P 11 42 15.3 +0.9
TPAW Teton Pass 75.92 46 *e*P P 11 42 15.4 +0.9
ISA Isabella 75.95 56 *e*P P 11 42 14.6 -0.2
K16A Soda Springs 75.95 47 ⇑P P 11 42 15.4 +0.7
baz=76,SNR=27
P12A McGill 75.99 51 ⇓P P 11 42 15.1 +0.2
baz=76,SNR=14
L15A Malad City 75.99 48 ⇓P P 11 42 15.1 +0.2
baz=76,SNR=11
RAO Raoul Island 76.01 145 PFAKE 11 42 30.0 +15
RAO LR LR
comp=Z,4μm,19.0s,MS5.8
ARVC Arvin 76.03 57 ⇑P P 11 42 15.1 -0.1
baz=76
LOHW Long Hollow 76.04 46 *e*P P 11 42 15.5 +0.4
SNOW Snow King Moun 76.05 46 *e*P P 11 42 16.2 +1.0
REDW Red Top Meadow 76.05 46 *e*P P 11 42 16.2 +1.0
J17A Brown Place, J 76.13 46 ⇓P P 11 42 16.1 +0.5
baz=76
PTK Pertek 76.14 308 *e*P P 11 42 17.0 +1.2
BSC Santa Cruz Isl 76.14 58 ⇑P P 11 42 15.9 0.0
baz=76
BHD Baghdad 76.17 301 *i* x x 11 42 12.0
BHD *ex* x 11 51 55.0
O13A Hicks Ranch, I 76.17 50 ⇑P P 11 42 16.7 +0.8
baz=76
DAC Darwin (Calif) 76.17 55 PFAKE 11 42 30.0 +14
DAC LR LR
comp=Z,2μm,20.0s,MS5.3
MARD Mardin 76.19 306⇑ *i*P P 11 42 16.6 +0.5
KBD Kabd 76.20 296 *e*P P 11 42 15.2 -1.1
KBD AMb AMB 11 42 17.2
comp=Z,189nm,1.4s,mb5.8
N14A Grayback Hills 76.22 49 ⇑P P 11 42 16.4 +0.2
baz=76,SNR=12
R11A Troy Canyon, C 76.24 52 ⇓P P 11 42 16.4 0.0
baz=76,SNR=36
DIYA Diyarbakir 76.25 307⇑ *i*P P 11 42 17.2 +0.7
BGU Big Grassy Mou 76.27 49 *e*P P 11 42 17.2 +0.7
comp=Z,16nm,1.0s,mb4.9
AHID Auburn Hatcher 76.28 47 PFAKE 11 42 30.0 +13
AHID LR LR
comp=Z,2μm,22.0s,MS5.4
QRN Al-Qurain 76.28 296 *e*P P 11 42 15.4 -1.3
QRN AMb AMB 11 42 30.3
comp=Z,416nm,1.2s,mb6.2
M15A Larsen Ranch, 76.29 48 ⇓P P 11 42 16.9 +0.3
baz=76
Q12A Willow Creek R 76.30 51 ⇓P P 11 42 16.9 +0.3
baz=76,SNR=7.6
MPMC Manual Prospec 76.37 55 ⇓P P 11 42 17.0 -0.1
baz=76,SNR=18
DGMT Dagmar 76.37 39 ⇓P P 11 42 16.4 -0.5
baz=76,SNR=8.5
DGMT Dagmar 76.37 39 *e*P P 11 42 16.4 -0.5
comp=Z,126nm,1.3s,mb5.7
DGMT LR LR
comp=Z,2μm,20.0s,MS5.4
K17A Gardner Place, 76.39 46 ⇓P P 11 42 17.3 +0.1
baz=76
I18A Diamond G Ranc 76.43 45 ⇓P P 11 42 18.2 +0.8
baz=76
ASK Askoy 76.44 340 *e*P P 11 42 16.9 -0.2
RDF Al-Radifah 76.44 296 *e*P P 11 42 16.6 -1.1
RDF AMb AMB 11 42 19.0
comp=Z,475nm,1.3s,mb6.3
KEMA Kemaliye 76.47 309⇑ *i*P P 11 42 18.4 +0.8
NAY Al-Naaiem 76.48 296 *e*P P 11 42 16.6 -1.3
NAY AMb AMB 11 42 19.3
comp=Z,233nm,1.3s,mb5.9
BER Bergen 76.48 340⇑ *i*P P 11 42 17.6 +0.3
BER *e*S S 11 52 02.0 +1.3
BER AMS AMS 12 19 23.2
comp=Z,11μm,17.2s,MS6.2
SVRC Sivrice-ELAZID 76.50 308 *e*P P 11 42 19.3 +1.4
LAO LASA Array 76.50 41 *e*P P 11 42 17.3 -0.4
comp=Z,148nm,1.5s,mb5.7
LAO LR LR
comp=Z,2μm,21.0s,MS5.4
ODD1 Odda 76.50 339⇑ *i*P P 11 42 17.8 +0.4
ODD1 AMb AMB 11 42 19.4
comp=Z,148nm,1.5s,mb5.7
ODD1 Odda 76.50 339⇑ *i*P P 11 42 17.8 +0.4
comp=Z,148nm,1.5s,mb5.7
FURC Furnace Creek, 76.53 54 ⇓P P 11 42 18.1 0.0
baz=76,SNR=11
L16A Fish Haven 76.55 47 ⇑P P 11 42 18.5 +0.5
baz=76,SNR=9.6
S11A Rachel 76.55 53 ⇓P P 11 42 18.5 +0.3
baz=76,SNR=15
P13A Bates Ranch, G 76.56 51 ⇓P P 11 42 18.4 +0.3
baz=76,SNR=8.3
LRMC Laurel Mountai 76.58 56 ⇓P P 11 42 18.5 +0.2
baz=76
N15A Stansbury Isla 76.59 49 ⇑P P 11 42 18.8 +0.5
baz=76
J18A Kendall Valley 76.62 46 ⇑P P 11 42 18.8 +0.3
baz=76,SNR=13
ELZG Elazig 76.63 308⇑ *i*P P 11 42 19.8 +1.3
ERBA Erbaa 76.67 311⇑ *i*P P 11 42 19.5 +0.7
HWUT Hardware Ranch 76.72 48 *e*P P 11 42 19.3 +0.2
comp=Z,74nm,1.3s,mb5.5
HWUT LR LR
comp=Z,2μm,22.0s,MS5.4
EDW2 Edwards Air Fo 76.73 56 ⇓P P 11 42 19.3 +0.1
baz=76,SNR=8.7
L17A Cokeville 76.82 47 ⇓P P 11 42 19.7 +0.1
baz=77
DUG Dugway 76.84 49 ⇓P P 11 42 20.0 +0.3
baz=77,SNR=13
DUG Dugway 76.84 49 *e*P P 11 42 20.0 +0.3
DUG pmax pmax
comp=Z,49nm,1.1s,mb5.3
DUG MLR MLR
comp=Z,1μm,20.0s,MS5.3
DUG Dugway 76.84 49 *e*P P 11 42 20.0 +0.2
comp=Z,49nm,1.1s,mb5.3
DUG LR LR
comp=Z,1μm,20.0s,MS5.3
Q13A Wheeler Ranch, 76.85 51 ⇓P P 11 42 20.2 +0.4
baz=77,SNR=14
KVT Kavak 76.86 312 *e*P P 11 42 20.8 +1.0
R12A Pony Springs, 76.86 52 ⇑P P 11 42 20.2 +0.3
baz=77,SNR=10
DECC Green Verdugo 76.87 57 ⇑P P 11 42 19.7 -0.3
baz=77
U10A Ash Meadows, A 76.91 54 ⇑P P 11 42 20.6 +0.4
baz=77,SNR=7.3
BLS5 Blasjo 76.96 338⇑ *i*P P 11 42 20.1 +0.1
BLS5 AMb AMB 11 42 22.1
comp=Z,133nm,1.6s,mb5.6
BLS5 Blasjo 76.96 338⇑ *i*P P 11 42 20.1 +0.1
comp=Z,133nm,1.5s,mb5.7
DIKM Dikmen 76.97 313 *e*P P 11 42 21.1 +0.7
K18A Toltan Ranch, 76.97 46 ⇓P P 11 42 20.7 +0.3
baz=77,SNR=8.0
NOQ North Oquirrh 76.98 49 *e*P P 11 42 21.4 +0.9
SVSK Karacayir 77.00 310 *e*P P 11 42 21.6 +1.0
O15A The Old Anders 77.00 49 ⇓P P 11 42 21.0 +0.4
baz=77
PASC Pasadena Art C 77.02 57 *e*P P 11 42 20.9 0.0
comp=Z,314nm,1.6s,mb6.0
TOKT Tokat 77.02 311 *e*P P 11 42 19.6 -1.1
P14A Drum Mountains 77.05 50 ⇓P P 11 42 21.3 +0.4
baz=77,SNR=20
MWC Mount Wilson 77.07 57 *e*P P 11 42 21.6 +0.5
MYA Malataya 77.08 308 *e*P P 11 42 23.2 +2.1
DARE Darende-Malaty 77.09 309 *e*P P 11 42 25.2 +4.0
KIS Kishinev 77.11 320 *i* P P 11 42 20.0 -1.1

comp=Z,800nm,1.8s,mb6.3
KIS Kishinev 77.11 320 *e*PP PP 11 45 13.0 -1.3
KIS Kishinev 77.11 320 *e*PPP 11 47 08.0
KIS *e*S S 11 52 04.0 -4.0
KIS *e*ScS ScS 11 52 21.0 -15
KIS Kishinev 77.11 320α *i*P **P 11 42 20.0 -1.1**
KIS *e* 11 42 24.0
KIS *e* pP 11 42 30.0 -0.5
KIS *e* 11 42 34.0
KIS *e* 11 45 13.0
KIS *e*PPP 11 47 08.0
KIS *e*S S 11 52 04.0 -4.0
KIS *e* 11 52 21.0
KIS *e*PS 11 52 35.0
KIS pmax pmax
comp=Z,760nm,1.8s,mb6.3
KIS pmax pmax
comp=N,260nm,1.5s
KIS pmax pmax
comp=E,360nm,1.6s
KIS pmax pmax
comp=Z,1μm,7.0s
KIS MLR MLR
comp=N,16μm,16.0s,MS6.5
KIS MLR MLR
comp=E,12μm,16.0s,MS6.5
KIS MLR MLR
comp=Z,22μm,16.0s,MS6.6
KIS MLR MLR
comp=Z,23μm,17.0s
T11A Corn Creek, Al 77.13 53 ⇑P **P 11 42 21.5 0.0**
baz=77,SNR=16
S12A Delamar Landin 77.15 53 ⇑P **P 11 42 21.8 +0.3**
baz=77
BW06 Boulder Array 77.17 46 ⇑P **P 11 42 21.0 -0.6**
baz=77,SNR=19
BW06 Boulder Array 77.17 46 PFAKE 11 42 30.0 +8.5
BW06 LR LR
comp=Z,2μm,19.0s,MS5.4
PDAR Pinedale Array 77.17 46 P **P 11 42 21.1 -0.4**
comp=Z,6.3nm,0.6s,mb4.7,baz=333,slow=0.6,SNR=36
CTU Camp Tracy 77.18 49 *e*P **P 11 42 22.4 +0.8**
WAR Warsaw 77.20 327 *e*P **P 11 42 22.0 +0.5**
WAR *e*pP pP 11 42 25.7 -5.2
WAR LMZ 12 19 19.5
comp=Z,11μm,18.0s
FMP Fort Macarthur 77.21 57 ⇓P **P 11 42 21.6 -0.3**
baz=77
N16A Rees Ranch, Co 77.24 48 ⇓P **P 11 42 22.3 +0.3**
baz=77
SHOC Shoshone 77.25 55 ⇓P **P 11 42 21.8 -0.4**
baz=77,SNR=7.3
GSC Goldstone 77.26 55 ⇑P **P 11 42 22.0 -0.2**
baz=77,SNR=8.8
GSC Goldstone 77.26 55 *e*P **P 11 42 22.6 +0.4**
Q14A Sevier Lake (B 77.29 51 ⇑P **P 11 42 22.9 +0.6**
baz=77,SNR=38
CIS Catalina Islan 77.32 58 ⇑P **P 11 42 22.3 -0.3**
baz=77
BFSC Mount Baldy Ra 77.33 57 ⇓P **P 11 42 22.1 -0.5**
baz=77
M17A Scullys Gap (B 77.33 47 ⇓P **P 11 42 22.4 -0.1**
baz=77,SNR=6.9
R13A O'Grain Ranch, 77.36 52 ⇑P **P 11 42 23.0 +0.4**
baz=77,SNR=10
URFA Urfa 77.36 307 *e*P **P 11 42 24.1 +1.3**
RRX Edison Barstow 77.39 56 ⇓P **P 11 42 22.9 0.0**
baz=77
JLU Jordanelle 77.41 48 *e*P **P 11 42 23.9 +1.0**
AKCD Akcadag 77.41 309 *i*P **P 11 42 24.2 +1.2**
L18A Fontenelle, Gr 77.42 47 ⇑P **P 11 42 23.1 +0.2**
baz=77,SNR=15
NLU North Lily Min 77.44 49 *e*P **P 11 42 24.0 +0.9**
SCI San Clemente I 77.47 58 ⇑P **P 11 42 23.7 +0.3**
baz=77
KMY Karmoy 77.48 339⇑*i*P **P 11 42 23.1 +0.2**
KMY AMb AMB 11 42 25.0
comp=Z,122nm,1.6s,mb5.6
KMY Karmoy 77.48 339⇑*i*P **P 11 42 23.1 +0.2**
comp=Z,122nm,1.6s,mb5.6
BZK Bozkurt 77.51 313 *e*P **P 11 42 24.1 +0.6**
U11A Corn Creek 77.52 54 ⇑P **P 11 42 23.8 +0.2**
baz=77
K19A Absolon Red Bu 77.54 45 ⇓P **P 11 42 22.9 -0.7**
baz=77,SNR=8.6
BSD Bornholm Skovb 77.55 332⇑*i*P **P 11 42 23.0 -0.4**
BSD *i* 11 45 15.8
BSD pmax pmax
comp=Z,130nm,1.0s,mb5.8
BSD MLR MLR
comp=Z,5μm,20.0s,MS5.8
BSD Bornholm Skovb 77.55 332⇑*i*P **P 11 42 23.0 -0.4**
BSD *i* 11 45 15.8
BSD Bornholm Skovb 77.55 332⇑*i*P **P 11 42 23.0 -0.4**
comp=Z,133nm,1.0s,mb5.8
BSD *i* 11 45 15.8
BSD
comp=Z,5μm,20.0s
BORG Borgarnes 77.55 353 LR LR 12 16 05.0
comp=Z,827nm,21.6s,MS5.0,baz=16,slow=35
BORG Borgarnes 77.55 353 PFAKE 11 42 30.0 +6.8
BORG LR LR
comp=Z,2μm,20.0s,MS5.4
P15A Leamington 77.55 50 ⇑P **P 11 42 23.9 +0.2**
baz=77,SNR=6.4
LVV L'vov 77.55 324*d*i*P* **P 11 42 23.6 +0.1**
LVV *e* 11 42 34.8
LVV *e* 11 45 20.2
LVV *e*PPP 11 47 12.6
LVV *e*S S 11 52 13.4 +0.7
LVV *e*PS 11 52 57.9
LVV *e*SS SS 11 57 15.2 +4.0
LVV MLR MLR
comp=E,8μm,16.0s,MS6.3
LVV MLR MLR
comp=N,8μm,17.0s,MS6.3
LVV MLR MLR
comp=Z,13μm,17.0s,MS6.3
N17A Moffit Pass 77.57 48 ⇓P **P 11 42 24.0 +0.2**
baz=77,SNR=9.0
STAV Stavanger 77.58 339 *e*P **P 11 42 24.2 +0.7**
STAV AMb AMB 11 42 25.4
comp=Z,146nm,1.8s,mb5.6
STAV Stavanger 77.58 339 *e*P **P 11 42 24.2 +0.7**
comp=Z,146nm,1.8s,mb5.6
IAS Iasi 77.62 321 P **P 11 42 24.2 +0.2**
IAS Iasi 77.62 321 ⇑P **P 11 42 24.6 +0.6**
IAS Iasi 77.62 321⇑*i*P **P 11 42 24.6 +0.6**
O16A Springville 77.62 49 ⇑P **P 11 42 24.4 +0.3**
baz=77,SNR=13
DAU Daniels Canyon 77.64 48 *e*P **P 11 42 24.9 +0.7**
MPU Maple Canyon 77.67 49 *e*P **P 11 42 24.4 0.0**
ATAB Bozova 77.68 308 *i*P **P 11 42 25.6 +1.1**
L19A Farson 77.70 46 ⇑P **P 11 42 24.2 -0.3**
baz=78
M18A Lyman 77.71 47 ⇓P **P 11 42 24.6 0.0**
baz=78,SNR=7.1
LEOM Leova 77.75 320 P **P 11 42 24.9 +0.2**
LEOM Leova 77.75 320⇓*i*P **P 11 42 25.1 +0.4**
TUQ Turquoise Moun 77.76 55 ⇑P **P 11 42 25.0 +0.1**
baz=78,SNR=12
T12A Moapa 77.77 53 ⇓P **P 11 42 25.0 0.0**
baz=78
S13A Holt Ranch, En 77.79 52 ⇓P **P 11 42 25.5 +0.4**
baz=78,SNR=13
BBRC Big Bear Solar 77.81 56 ⇓P **P 11 42 25.0 -0.3**
baz=78
Q15A Fillmore 77.84 50 ⇓P **P 11 42 25.5 +0.2**
baz=78,SNR=15
V11A Goodsprings 77.84 54 ⇓P **P 11 42 25.4 0.0**
baz=78
HEC Hector,Ludlow 77.86 56 ⇓P **P 11 42 25.5 0.0**
baz=78,SNR=6.1
R14A James Farms, M 77.87 51 ⇑P **P 11 42 25.2 -0.4**
baz=78
CTKT Corum 77.89 312 *i*P **P 11 42 25.7 +0.1**
P16A Fountain Green 77.90 49 ⇓P **P 11 42 25.7 0.0**
baz=78
ARUT Antelope Range 77.92 52 *e*P **P 11 42 25.8 -0.1**
ARUT pmax pmax
comp=Z,29nm,1.1s,mb5.1
ARUT Antelope Range 77.92 52 *e*P **P 11 42 25.8 -0.1**
comp=Z,29nm,1.1s,mb5.1
K20A Yellowstone Ra 77.93 45 ⇑P **P 11 42 25.2 -0.6**
baz=78,SNR=5.8
SARI SarD1z-Kayseri 77.94 309 *e*P **P 11 42 29.0 +3.1**

COP Copenhagen 78.01 334⇑*i*P **P 11 42 25.9 -0.1**
COP *i* 11 45 19.4
COP pmax pmax
comp=Z,95nm,0.9s,mb5.7
COP MLR MLR
comp=Z,4μm,17.0s,MS5.8
COP Copenhagen 78.01 334⇑*i*P **P 11 42 25.9 -0.1**
COP *i* 11 45 19.4
COP Copenhagen 78.01 334⇑*i*P **P 11 42 25.9 -0.1**
comp=Z,95nm,0.9s,mb5.7
COP *i* 11 45 19.4
COP
comp=Z,4μm,17.0s
MURC Murrieta 78.01 57 ⇑P **P 11 42 26.1 -0.4**
baz=78
GKP Gorka Klasztor 78.03 330 *e*P **P 11 42 26.3 +0.1**
GKP *e*pP pP 11 42 31.3 -4.2
GKP *e*S S 11 52 16.6 -1.1
GKP *e*SKS 11 52 35.7
GKP LMZ 12 19 22.1
comp=Z,16μm,19.2s
U12A Valley of Fire 78.06 53 ⇓P **P 11 42 26.7 +0.1**
baz=78,SNR=6.9
TOS Tosya 78.08 313 *e*P **P 11 42 28.4 +1.7**
O17A Robinson Place 78.09 48 ⇑P **P 11 42 27.2 +0.5**
baz=78,SNR=14
T13A Saint George 78.10 53 ⇓P **P 11 42 27.5 +0.7**
baz=78,SNR=12
S14A Cedar City 78.11 52 ⇓P **P 11 42 27.1 +0.2**
baz=78
CCUT Cedar City 78.12 52 *e*P **P 11 42 27.2 +0.3**
PINB Pinaraasi 78.12 310⇑*i*P **P 11 42 27.8 +0.8**
BALT Daday 78.14 313 *i*P **P 11 42 27.7 +0.8**
M19A Rock Springs 78.19 47 ⇓P **P 11 42 26.9 -0.4**
baz=78
GZT Gaziantep 78.21 308⇑*i*P **P 11 42 28.5 +1.1**
CORM Corum 78.26 312 *e*P **P 11 42 28.8 +1.1**
MSU Marysvale 78.26 50 *e*P **P 11 42 28.3 +0.6**
V12A Nelson 78.28 54 ⇓P **P 11 42 28.1 +0.2**
baz=78,SNR=9.7
KWP Kalwaria Pacla 78.30 325 *e*P **P 11 42 28.4 +0.7**
comp=Z,2μm,1.5s,mb6.7
KWP *e*pP pP 11 42 34.1 -2.9
KWP *e*PP PP 11 45 24.0 -0.2
KWP *e*S S 11 52 21.4 +0.6
KWP *e*sS sS 11 52 32.4 -3.9
KWP *e*SKS 11 52 40.5
KWP LMZ 12 22 14.1
comp=Z,10μm,16.7s
KWP Kalwaria Pacla 78.30 325⇑*e*P **P 11 42 28.4 +0.7**
KWP *e**PP pP 11 42 34.1 -3.0
KWP *e* 11 45 24.0
KWP *e*S S 11 52 21.4 +0.6
KWP *e**SS sS 11 52 32.3 -3.9
KWP *e* 11 52 40.5
KWP pmax pmax
comp=Z,2μm,1.5s,mb6.7
KWP Kalwaria Pacla 78.30 325 *e*P **P 11 42 28.1 +0.4**
comp=Z,744nm,1.2s,mb6.5
KWP LR LR
comp=Z,7μm,21.0s,MS6.0
KWP Kalwaria Pacla 78.30 325⇓*i*P **P 11 42 28.2 +0.5**
TLCR 78.31 318 ⇓P **P 11 42 28.1 +0.3**
TLCR 78.31 318⇓*i*P **P 11 42 28.1 +0.3**
GMRC Granite Mounta 78.33 55 ⇓P **P 11 42 28.0 -0.1**
baz=78,SNR=10
L20A Wamsutter 78.35 46 ⇓P **P 11 42 28.2 +0.1**
baz=78,SNR=6.6
BNN Bunyan 78.35 310 *e*P sP 11 42 44.3 +3.3
TMUT Trail Mountain 78.37 49 *e*P **P 11 42 29.4 +1.1**
R15A Junction 78.39 51 ⇑P **P 11 42 29.2 +0.8**
baz=78,SNR=8.0
LRW Lerwick 78.40 342 AMS AMS 12 21 08.1
comp=Z,3μm,14.6s,MS5.8
U13A Pakoon Wash 78.43 53 ⇑P **P 11 42 29.1 +0.4**
baz=78,SNR=25
O18A Roosevelt 78.48 48 ⇑P **P 11 42 29.3 +0.4**
baz=78
BUR08 Bucovina Ar. S 78.49 322 *e*P **P 11 42 29.1 +0.2**
109C Camp Elliot, M 78.50 57 ⇓P **P 11 42 28.6 -0.5**
baz=78
BURAR Bucovina Array 78.51 322 ⇑P **P 11 42 29.2 +0.3**
BURAR Bucovina Array 78.51 322⇑*i*P **P 11 42 29.2 +0.3**
PFO Pinyon Flat Ob 78.51 57 ⇑P **P 11 42 28.5 -0.6**
baz=78
PFO Pinyon Flat Ob 78.51 57 *e*P **P 11 42 29.7 +0.6**
PFO pmax pmax
comp=Z,62nm,1.4s,mb5.3
PFO MLR MLR
comp=Z,5μm,21.0s,MS5.8
PFO Pinyon Flat Ob 78.51 57 *e*P **P 11 42 29.7 +0.5**
comp=Z,62nm,1.4s,mb5.3
PFO LR LR
comp=Z,5μm,21.0s,MS5.8
MUD Monsted U'grnd 78.52 335⇑*i*P **P 11 42 28.8 0.0**
MUD pmax pmax
comp=Z,45nm,1.1s,mb5.3
MUD MLR MLR
comp=Z,12μm,19.0s,MS6.2
MUD Monsted U'grnd 78.52 335⇑*i*P **P 11 42 28.8 0.0**
comp=Z,45nm,1.1s,mb5.3
MUD
comp=Z,12μm,19.0s
W12A Cal Nev Ari 78.53 54 ⇑P **P 11 42 29.2 -0.1**
baz=78
KMRS Kahramanmaras 78.54 308 *e*P **P 11 42 30.2 +0.9**
P17A Butcher Ranch, 78.54 49 ⇑P **P 11 42 29.5 +0.3**
baz=78,SNR=17
TESR 78.54 320 ⇑P **P 11 42 29.1 0.0**
TESR 78.54 320⇑*i*P **P 11 42 29.1 0.0**
N19A John Jarvie Ra 78.57 47 ⇓P **P 11 42 29.1 -0.3**
baz=78,SNR=7.8
RGN Rugen 78.57 332 *e*P **P 11 42 29.2 +0.1**
comp=Z,379nm,1.0s,mb6.3
RGN Rugen 78.57 332 *e*P **P 11 42 29.7 +0.6**
comp=Z,270nm,1.2s,mb6.0
BELC Belle Mtn. Jos 78.57 56 ⇑P **P 11 42 29.0 -0.5**
baz=78
T14A Hurricane 78.59 52 ⇑P **P 11 42 30.1 +0.5**
baz=78,SNR=13
Q16A Castle Valley 78.63 50 ⇑P **P 11 42 30.1 +0.4**
baz=78,SNR=11
S15A Panguitch 78.67 51 ⇑P **P 11 42 30.6 +0.7**
baz=78,SNR=9.5
SAFT Safranbolu 78.73 314 *e*P **P 11 42 31.7 +1.4**
CDAG Cicekdag 78.76 311 *i*P **P 11 42 30.5 0.0**
V13A Grand Canyon W 78.76 54 ⇓P **P 11 42 30.8 +0.2**
baz=78,SNR=17
M20A Sweetwater, Wa 78.77 46 ⇑P **P 11 42 30.5 +0.1**
baz=78,SNR=7.7
ELDT Eldivan 78.78 313⇑*i*P **P 11 42 30.9 +0.4**
PETR 78.78 320 ⇑P **P 11 42 31.7 +1.3**
PETR 78.78 320⇑*i*P **P 11 42 31.7 +1.3**
R16A Teasdale 78.83 50 ⇓P **P 11 42 31.7 +0.9**
baz=79,SNR=38
ANDN Andirin 78.84 309 *i*P **P 11 42 31.8 +0.9**
KUZU Kuzuini 78.88 308⇑*i*P **P 11 42 31.8 +0.7**
SRU San Rafael 78.90 49 ⇓P **P 11 42 31.2 0.0**
baz=79,SNR=26
SRU San Rafael 78.90 49 *e*P **P 11 42 31.4 +0.2**
BAR Barrett 78.92 57 *e*P **P 11 42 31.4 0.0**
comp=Z,35nm,1.3s,mb5.1
L21A Rawlins 78.93 45 ⇓P **P 11 42 31.0 -0.3**
baz=79,SNR=13
U14A Mt Trumbull 78.93 53 ⇓P **P 11 42 31.8 +0.4**
baz=79,SNR=18
VRI Vrincioaia 78.94 320 ⇑P **P 11 42 31.8 +0.5**
VRI Vrincioaia 78.94 320⇑*i*P **P 11 42 31.8 +0.5**
MONP Monument Peak 78.96 57 ⇑P **P 11 42 31.5 -0.1**
baz=79,SNR=6.0
O19A Miners Draw (B 78.98 48 ⇑P **P 11 42 31.3 -0.4**
baz=79
PLOR Plostina 78.99 320 ⇓P **P 11 42 31.9 +0.3**
PLOR Plostina 78.99 320⇓*i*P **P 11 42 31.9 +0.3**
AVNT Avonos 79.00 310 *i*P **P 11 42 32.0 +0.2**
TIRR Tirgusor 79.00 318 *e*P **P 11 42 31.4 -0.3**
TIRR pmax pmax
comp=Z,119nm,1.3s,mb5.7
TIRR Tirgusor 79.00 318 *e*P **P 11 42 31.4 -0.3**
comp=Z,119nm,1.3s,mb5.7
TIRR Tirgusor 79.00 318⇓*i*P **P 11 42 31.9 +0.2**
NEE2 Needles Airpor 79.02 55 ⇓P **P 11 42 31.7 -0.2**
baz=79
IRM Iron Mountain 79.04 55 ⇑P **P 11 42 32.0 -0.1**
baz=79,SNR=11

T15A Red Dirt Ranch 79.06 52 ⇓P **P 11 42 32.5 +0.3**
baz=79,SNR=17
ULM Lac du Bonnet 79.07 34 P **P 11 42 30.8 -1.1**
comp=Z,18nm,0.9s,mb5.0,baz=311,slow=6.5,SNR=16
ULM LR LR 12 21 25.7
comp=Z,1μm,19.0s,MS5.3,baz=207,slow=39
ULM Lac du Bonnet 79.07 34 *e*P **P 11 42 30.7 -1.2**
comp=Z,94nm,1.4s,mb5.5
ULM LR LR
comp=Z,2μm,22.0s,MS5.4
S16A Weppner Ranch, 79.11 51 ⇑P **P 11 42 32.8 +0.4**
baz=79,SNR=20
STHS Stebnicka Huta 79.12 325 *e*P **P 11 42 33.0 +0.8**
STHS pmax pmax
comp=Z,101nm,1.1s,mb5.7
STHS Stebnicka Huta 79.12 325 *e*P **P 11 42 33.0 +0.8**
comp=Z,101nm,1.1s,mb5.7
STHS Stebnicka Huta 79.12 325 *e*P **P 11 42 33.0 +0.8**
BR131 Keskin Array S 79.14 312 *e*P **P 11 42 32.5 0.0**
comp=Z,90nm,1.2s,mb5.6
BR131 LR LR
comp=Z,2μm,19.0s,MS5.4
BRTR Keskin Array B 79.14 312 P **P 11 42 32.6 +0.1**
comp=Z,62nm,1.1s,mb5.5,baz=87,slow=2.6,SNR=149
BRTR PP PP 11 45 33.6 +2.2
comp=Z,16nm,1.1s,baz=75,slow=6.5,SNR=4.1
BRTR LR LR 12 22 11.5
comp=Z,3μm,18.0s,MS5.7,baz=225,slow=39
BRTR Keskin Array B 79.14 312 P **P 11 42 32.6 +0.1**
BRTR 11 45 33.7
BRTR pmax pmax
comp=Z,62nm,1.1s
BRTR pmax pmax
comp=Z,16nm,1.1s
BRTR MLR MLR
comp=Z,3μm,18.0s
Q18A Rafter H Ranch 79.14 49 ⇓P **P 11 42 32.4 -0.2**
baz=79,SNR=6.7
GRER 79.14 319 ⇑P **P 11 42 33.5 +1.1**
GRER 79.14 319⇑*i*P **P 11 42 33.5 +1.1**
N20A Spence Gulch, 79.14 47 ⇓P **P 11 42 32.9 +0.3**
baz=79,SNR=22
BC3 Big Chuckawall 79.14 56 ⇓P **P 11 42 32.5 -0.2**
baz=79,SNR=9.7
M21A Separation Pea 79.16 46 ⇓P **P 11 42 32.2 -0.4**
baz=79,SNR=6.6
OJC Ojcow 79.19 326⇑*i*P **P 11 42 30.1 -2.5**
OJC *e* 11 42 41.6
OJC *e* 11 45 27.5
OJC *e*S S 11 52 24.6 -5.7
OJC MLR MLR
comp=Z,17μm,17.5s,MS6.4
RWWY Rawlins 79.20 45 *e*P **P 11 42 33.1 +0.3**
UZH Uzhgorod 79.20 324*d*i*P* **P 11 42 32.0 -0.7**
UZH *e* 11 45 32.0
UZH *e*PPP 11 47 24.4
UZH *e*S S 11 52 26.0 -4.4
UZH *e* 11 52 44.8
UZH *e* 11 52 55.0
UZH *e*PS 11 53 12.0
UZH MLR MLR
comp=N,10μm,16.0s,MS6.5
UZH MLR MLR
comp=E,17μm,16.0s,MS6.5
UZH MLR MLR
comp=Z,13μm,16.0s,MS6.4
KOZT Kozan 79.22 309 *e*P **P 11 42 33.6 +0.6**
R17A Hanksville Air 79.22 50 ⇑P **P 11 42 33.0 0.0**
baz=79,SNR=23
W13A Hualapai Mount 79.29 54 ⇑P **P 11 42 33.5 0.0**
baz=79,SNR=10
BMR Baia Mare 79.30 323 ⇑P **P 11 42 33.5 +0.2**
BMR Baia Mare 79.30 323⇑*i*P **P 11 42 33.5 +0.2**
DVTC Desert V Tower 79.32 57 ⇓P **P 11 42 33.5 -0.1**
baz=79,SNR=5.7
RSSD Black Hills 79.35 42 *e*P **P 11 42 33.3 -0.3**
RSSD pmax pmax
comp=Z,46nm,1.4s,mb5.2
RSSD MLR MLR
comp=Z,2μm,20.0s,MS5.4
RSSD Black Hills 79.35 42 *e*P **P 11 42 33.3 -0.2**
comp=Z,46nm,1.4s,mb5.2
RSSD LR LR
comp=Z,2μm,20.0s,MS5.4
SWSC Sam W. Stewart 79.35 57 ⇓P **P 11 42 33.3 -0.5**
baz=79
CRVS Cervenica-Dubn 79.39 325 *e*P **P 11 42 34.0 +0.3**
CRVS pmax pmax
comp=Z,156nm,1.5s,mb5.7
CRVS Cervenica-Dubn 79.39 325 *e*P **P 11 42 34.0 +0.3**
comp=Z,156nm,1.5s,mb5.7
CRVS Cervenica-Dubn 79.39 325 *e*P **P 11 42 34.0 +0.3**
L22A Ellis Ranch, M 79.41 45 ⇓P **P 11 42 34.2 +0.2**
baz=79,SNR=5.7
TRPA Tarpa 79.44 324⇑*i*P **P 11 42 34.6 +0.6**
V14A Boquillas Ranc 79.46 53 ⇑P **P 11 42 34.8 +0.5**
baz=79,SNR=23
AMRR Amara 79.47 319 P **P 11 42 35.7 +1.4**
U15A North Rim 79.49 52 ⇑P **P 11 42 34.9 +0.4**
baz=79,SNR=24
P19A Cripple Cowboy 79.49 48 ⇑P **P 11 42 34.6 +0.2**
baz=79,SNR=18
SGKT Sivrigoynuk 79.52 313⇓*i*P **P 11 42 35.1 +0.5**
NIE Niedzica 79.55 326 *e*P **P 11 42 35.2 +0.7**
COBT Iskenderun 79.55 308 *i*P **P 11 42 35.7 +0.9**
DOPR Dopca 79.55 321⇓*i*P **P 11 42 36.0 +1.4**
BBAL Bala 79.56 312 *i*P **P 11 42 35.1 +0.3**
CEYT Ceyhan 79.56 309 *e*P **P 11 42 36.1 +1.2**
MLR Muntele Rosu 79.60 320 ⇑P **P 11 42 35.1 +0.2**
MLR Muntele Rosu 79.60 320⇑*i*P **P 11 42 35.1 +0.2**
O20A White River Ci 79.61 47 ⇓P **P 11 42 34.7 -0.3**
baz=79,SNR=7.6
N21A Black Mountain 79.62 46 ⇓P **P 11 42 35.0 -0.1**
baz=79,SNR=6.9
T16A Glen Canyon Da 79.63 51 ⇓P **P 11 42 34.6 -0.7**
baz=79,SNR=8.1
X13A Yucca 79.64 54 ⇓P **P 11 42 35.1 -0.2**
baz=79,SNR=15
PSN Preselentsi 79.65 318 *e*P **P 11 42 35.7 +0.5**
S17A Black Ridge (B 79.66 50 ⇑P **P 11 42 35.2 -0.2**
baz=79,SNR=24
W14A Seligman 79.74 54 ⇓P **P 11 42 36.1 +0.3**
baz=80,SNR=20
R18A Canyonlands Na 79.74 49 ⇑P **P 11 42 35.5 -0.3**
baz=80,SNR=17
YURE YUREGIR 79.75 309 *i*P **P 11 42 35.8 -0.1**
Q19A Hogan Spring (79.76 49 ⇑P **P 11 42 35.5 -0.4**
baz=80,SNR=17
RAR Rarotonga 79.83 126 PFAKE 11 42 50.0 +14
RAR LR LR
comp=Z,6μm,21.0s,MS5.9
KARA Karaisali 79.84 309 *e*P **P 11 42 37.2 +0.8**
GLA Glamis 79.93 56 ⇑P **P 11 42 36.8 -0.1**
baz=80
GLA Glamis 79.93 56 *e*P **P 11 42 37.4 +0.4**
comp=Z,71nm,1.4s,mb5.4
P20A De Beque 79.93 48 ⇓P **P 11 42 36.4 -0.4**
baz=80
V15A Kaibab Nationa 79.94 53 ⇑P **P 11 42 37.6 +0.6**
baz=80,SNR=19
YAYL Yayladag 79.95 308⇑*i*P **P 11 42 37.5 +0.5**
SULR 79.99 319 ⇑P **P 11 42 37.4 +0.4**
SULR 79.99 319⇑*i*P **P 11 42 37.4 +0.3**
GULE Gulek 79.99 309⇑*i*P **P 11 42 38.1 +0.9**
RAC Raciborz 80.00 327 *e*P **P 11 42 37.8 +0.8**
RAC MLR MLR
comp=E,8μm,17.0s,MS6.3
RAC MLR MLR
comp=Z,8μm,17.0s,MS6.1
RAC MLR MLR
comp=N,7μm,17.0s,MS6.3
RUE Ruedersdorf 80.00 331 *e*P **P 11 42 36.9 0.0**
comp=Z,221nm,1.1s,mb6.0
RUE Ruedersdorf 80.00 331 *e*P **P 11 42 36.7 -0.2**
comp=Z,241nm,1.3s,mb6.0
O21A Pagoda 80.00 47 ⇓P **P 11 42 36.8 -0.4**
baz=80
T17A Navajo Res., N 80.06 51 ⇑P **P 11 42 37.1 -0.5**
baz=80,SNR=12
MDU Mudurnu 80.08 314 *e*P **P 11 42 38.1 +0.5**
VOIR 80.09 320 ⇑P **P 11 42 38.0 +0.4**
VOIR 80.09 320⇑*i*P **P 11 42 38.0 +0.4**
Y13A Salome 80.12 55 ⇑P **P 11 42 37.8 -0.1**
baz=80,SNR=5.9
S18A Hurst Farm, Bl 80.12 50 ⇓P **P 11 42 37.7 -0.2**
baz=80,SNR=19

KECS **Kecovo** 80.14 325 *eP* P 11 42 38.4 +0.6
KECS pmax pmax
comp=Z,38nm,1.2s,mb5.2
KECS **Kecovo** 80.14 325 *eP* P 11 42 38.4 +0.6
comp=Z,38nm,1.2s,mb5.2
KECS **Kecovo** 80.14 325 *eP* P 11 42 38.4 +0.6
BSEG **Bad Segeberg** 80.15 333 *eP* P 11 42 37.7 0.0
comp=Z,190nm,1.1s,mb5.9
BSEG *e*PP PP 11 45 39.7 +0.3
BSEG *e*S S 11 52 39.6 -0.6
R19A **Curley Farm, L** 80.18 49 ⇑P P 11 42 38.5 +0.3
baz=80,SNR=18
SULT **Sultanhani-AKS** 80.18 311 *eP* P 11 42 39.3 +1.1
OKC **Ostrava-Krasne** 80.20 327⇑*iP* P 11 42 38.4 +0.3
OKC *e* 11 45 38.4
OKC *e*S S 11 52 52.2 +11
OKC MLR MLR
comp=Z,11μm,16.5s,MS6.3
OKC **Ostrava-Krasne** 80.20 327⇑*iP* P 11 42 38.4 +0.3
OKC *e*PP PP 11 45 38.4 -1.5
OKC *e*SKS 11 52 52.2
OKC AMS AMS 12 21 10.0
comp=Z,11μm,16.5s
N22A **Wattenberg Ran** 80.21 46 ⇑P P 11 42 38.6 +0.3
baz=80,SNR=9.8
KSP **Ksiaz** 80.24 329 *eP* P 11 42 38.6 +0.4
comp=Z,800nm,1.4s,mb6.5
KSP *e*PP PP 11 45 39.5 -0.7
KSP *e*S S 11 52 41.2 -0.1
KSP *e*SKS 11 52 59.8
KSP LMZ 12 21 10.5
comp=Z,19μm,17.1s
KSP **Ksiaz** 80.24 329⇑*eP* P 11 42 38.5 +0.3
KSP *e* 11 42 45.3
KSP *e* 11 45 39.0
KSP *e*S S 11 52 40.0 -1.3
KSP *e* 11 52 53.3
KSP MLR MLR
comp=Z,22μm,17.0s,MS6.6
W15A **Williams** 80.28 53 ⇑P P 11 42 39.4 +0.6
baz=80,SNR=9.1
DRGR 80.31 323 ⇑P P 11 42 38.9 +0.2
DRGR 80.31 323⇑*iP* P 11 42 38.9 +0.2
X14A **Yava** 80.32 54 ⇓P P 11 42 39.5 +0.5
baz=80,SNR=11
PV04 **Paradox Valley** 80.33 49 *eP* P 11 42 39.3 +0.3
PV04 *e*pP pP 11 42 49.2 +0.8
Q20A **Ridgley Place,** 80.33 48 ⇓P P 11 42 39.1 +0.1
baz=80,SNR=16
PRD **Provadia** 80.39 318 *eP* P 11 42 39.4 +0.2
U16A **Tuba City** 80.39 52 ⇑P P 11 42 40.0 +0.6
baz=80,SNR=40
U17A **Shonto** 80.40 51 ⇑P P 11 42 39.8 +0.4
baz=80,SNR=6.4
MERS **Mersin** 80.41 309 *eP* P 11 42 39.8 +0.4
ORE **Reay** 80.43 343 P P 11 42 39.4 +0.2
ORE **Reay** 80.43 343⇑*eP* P 11 42 39.4 +0.2
N23A **Red Feather La** 80.44 45 ⇓P P 11 42 40.0 +0.5
baz=80,SNR=18
PHWY **Pilot Hill** 80.44 45 *eP* P 11 42 39.6 +0.1
comp=Z,49nm,1.4s,mb5.2
AGMN **Agassiz Nation** 80.49 35 *eP* P 11 42 38.3 -1.4
comp=Z,68nm,1.4s,mb5.4
AGMN LR LR
comp=Z,3μm,21.0s,MS5.6
MORC **Moravsky Berou** 80.50 327 *eP* P 11 42 40.0 +0.3
comp=Z,196nm,1.1s,mb6.0
MORC **Moravsky Berou** 80.50 327⇑*iP* P 11 42 40.0 +0.3
GULT **Gulveren** 80.51 314 *eP* P 11 42 40.3 +0.4
T18A **Mexican Hat** 80.55 50 ⇓P P 11 42 39.7 -0.5
baz=80,SNR=14
SVRH **Sivrihisar-ESK** 80.56 313 *eP* P 11 42 40.3 +0.1
O22A **Kremmling** 80.57 46 ⇑P P 11 42 40.2 -0.1
baz=80,SNR=14
Y14A **Wickenburg** 80.58 55 ⇓P P 11 42 40.3 -0.1
baz=80,SNR=15
DPC **Dobruska-Polom** 80.59 328⇑*iP* P 11 42 40.9 +0.7
DPC *e* 11 45 38.2
DPC *e*S S 11 52 45.3 +0.2
DPC MLR MLR
comp=Z,8μm,14.5s,MS6.2
DPC **Dobruska-Polom** 80.59 328⇑*iP* P 11 42 40.9 +0.7
DPC *e*PP PP 11 45 38.2 -5.0
DPC *e*S S 11 52 45.3 +0.2
DPC AMS AMS 12 22 40.0
comp=Z,8μm,14.5s
UPC **Upice** 80.61 328⇑*iP* P 11 42 40.6 +0.4
UPC *e* pP 11 42 47.7 -1.9
UPC **Upice** 80.61 328⇑*iP* P 11 42 40.6 +0.4
UPC *e*pP pP 11 42 47.7 -1.9
S19A **Harvey Farm, M** 80.61 50 ⇓P P 11 42 40.3 -0.2
baz=80,SNR=24
Z13A **Yuma Proving G** 80.61 55 ⇑P P 11 42 40.6 +0.1
baz=80,SNR=19
WUAZ **Wupatki** 80.64 52 ⇓P P 11 42 41.1 +0.4
baz=80,SNR=21
WUAZ **Wupatki** 80.64 52 *eP* P 11 42 41.3 +0.6
comp=Z,65nm,1.1s,mb5.5
WUAZ LR LR
comp=Z,2μm,22.0s,MS5.3
PV01 **Paradox Valley** 80.70 49 *eP* P 11 42 40.9 -0.1
comp=Z,6μm,1.3s
KIZT **Kizilcal** 80.72 312 *eP* P 11 42 41.2 +0.1
HRT **Hereke** 80.73 315 *eP* P 11 42 41.4 +0.3
X15A **Humboldt** 80.73 54 ⇓P P 11 42 41.7 +0.5
baz=80,SNR=24
R20A **Redvale** 80.78 49 ⇓P P 11 42 41.6 +0.2
baz=80,SNR=19
KLYT **Kilyos** 80.80 315 *eP* P 11 42 41.9 +0.4
W16A **Flagstaff** 80.80 53 ⇑P P 11 42 41.9 +0.3
baz=81,SNR=7.3
113A **Mohawk Valley,** 80.80 56 ⇓P P 11 42 41.2 -0.4
baz=81,SNR=11
KDHN **Kadinhani** 80.82 312⇑*iP* P 11 42 41.4 -0.2
PSZ **Piszkesteto** 80.83 325 PFAKE 11 42 50.0 +8.5
PSZ LR LR
comp=Z,8μm,19.0s,MS6.1
Q21A **Lamborn Mesa,** 80.84 48 ⇑P P 11 42 42.0 +0.2
baz=81,SNR=12
DEV **Deva** 80.85 322 ⇑P P 11 42 42.8 +1.1
DEV **Deva** 80.85 322⇑*iP* P 11 42 42.8 +1.1
LADK **Ladik-KONYA** 80.88 311 *eP* P 11 42 42.1 +0.1
VYHS **Vyhne** 80.89 326 *eP* P 11 42 42.0 +0.2
VYHS pmax pmax
comp=Z,87nm,1.2s,mb5.6
VYHS **Vyhne** 80.89 326 *eP* P 11 42 42.0 +0.2
comp=Z,87nm,1.2s,mb5.6
VYHS **Vyhne** 80.89 326 *eP* P 11 42 42.0 +0.2
O23A **Lake Granby, G** 80.90 46 ⇑P P 11 42 42.7 +0.7
baz=81,SNR=12
BORA **Eskisehir** 80.91 314 *iP* P 11 42 41.8 -0.3
ESKT **Eskisehir** 80.91 313⇑*iP* P 11 42 41.6 -0.5
ISK **Istanbul-Kandi** 80.91 315 *eP* P 11 42 44.0 +1.9
V17A **Tonalea, Kykot** 80.94 52 ⇓P P 11 42 42.8 +0.5
baz=81,SNR=52
RSC **Scourie** 80.94 343 P P 11 42 41.9 0.0
RSC **Scourie** 80.94 343⇑*eP* P 11 42 41.9 0.0
SMCO **Snowmass** 80.97 47 *eP* P 11 42 42.6 +0.2
comp=Z,52nm,1.4s,mb5.3
Z14A **Wintersburg** 80.97 55 ⇑P P 11 42 42.0 -0.5
baz=81
BGKT **Bogazkoy** 81.00 315 *eP* P 11 42 40.1 -2.4
Y15A **Casa Rosa Ranc** 81.00 54 ⇓P P 11 42 42.9 +0.2
baz=81,SNR=18
U18A **Rough Rock, Ch** 81.00 51 ⇑P P 11 42 43.1 +0.5
baz=81,SNR=27
KOLL **Kolacno** 81.02 326 *eP* P 11 42 42.9 +0.4
KOLL **Kolacno** 81.02 326 *eP* P 11 42 42.9 +0.4
S20A **Disappointment** 81.02 49 ⇑P P 11 42 42.8 +0.1
baz=81,SNR=18
CAVI **Cavuskoy** 81.04 314 *eP* P 11 42 43.3 +0.6
KONT **Konya--Tatoy** 81.04 311 *eP* P 11 42 43.0 +0.2
CTYL **Yal??k??y-??at** 81.07 316 *eP* P 11 42 40.1 -2.8
N24A **Carr** 81.08 45 ⇑P P 11 42 43.3 +0.3
baz=81
MVH1 **Achvaich** 81.09 343 P P 11 42 42.5 -0.2
MVH1 **Achvaich** 81.09 343⇑*eP* P 11 42 42.5 -0.2
CTKS **Kestanelik-??a** 81.11 316 *eP* P 11 42 38.9 -4.2
SZH **Strazhica** 81.13 318 *eP* P 11 42 43.1 -0.1
R21A **Cimarron** 81.16 48 ⇑P P 11 42 44.0 +0.5
baz=81,SNR=17
ZIMR 81.16 319 ⇑P P 11 42 44.1 +0.8
ZIMR 81.16 319⇑*iP* P 11 42 44.1 +0.8
MCD **Coleburn Disti** 81.17 342 P P 11 42 42.2 -0.9

MCD **Coleburn Disti** 81.17 342 *eP* P 11 42 42.2 -0.9
BRG **Berggiesshubel** 81.17 330 *eP* P 11 42 43.1 -0.2
comp=Z,180nm,1.4s,mb5.8
BRG *e*PP PP 11 45 48.1 +0.1
BRG *e*S S 11 52 50.7 -0.4
BRG **Berggiesshubel** 81.17 330⇑*iP* P 11 42 43.2 -0.1
comp=Z,179nm,1.4s,mb5.8
BRG *i* 11 42 57.6
comp=Z,77nm,1.1s
BRG *i* PP PP 11 45 35.5 -12
comp=Z,47nm,1.7s
BRG S S 11 52 53.0 +1.9
BRG SS SS 11 58 12.0 +6.7
BRG
comp=N,10μm,19.0s
BRG
comp=E,8μm,18.4s
BRG
comp=Z,17μm,19.8s
BRG **Berggiesshubel** 81.17 330⇑*iP* P 11 42 43.2 -0.1
BRG S S 11 52 53.0 +1.9
BRG SS SS 11 58 12.0 +6.7
BRG pmax pmax
comp=Z,5.0nm,1.4s
BRG pmax pmax
comp=Z,107nm,1.1s,mb5.7
BRG pmax pmax
comp=Z,46nm,1.7s,mb5.1
BRG MLR MLR
comp=N,28μm,19.0s,MS6.7
BRG MLR MLR
comp=E,6μm,18.4s,MS6.7
BRG MLR MLR
comp=Z,5μm,19.8s,MS5.8
PVCC **Panska Ves** 81.19 329⇑*iP* P 11 42 43.9 +0.6
PVCC MLR MLR
comp=Z,12μm,17.2s,MS6.3
PVCC **Panska Ves** 81.19 329⇑*iP* P 11 42 43.9 +0.6
PVCC AMS AMS 12 21 20.0
comp=Z,12μm,17.2s
CLL **Collm** 81.21 330 *eP* P 11 42 42.9 -0.6
comp=Z,217nm,1.1s,mb6.0
CLL *e*PP PP 11 45 48.1 -0.2
CLL *e*S S 11 52 49.6 -1.9
CLL **Collm** 81.21 330⇑*iP* P 11 42 43.1 -0.4
CLL *e* pP 11 42 50.0 -2.9
CLL *e*S S 11 52 59.0 +7.5
CLL pmax pmax
comp=Z,219nm,1.1s,mb6.0
CLL MLR MLR
comp=Z,10μm,17.9s,MS6.2
CLL **Collm** 81.21 330⇑*iP* P 11 42 43.1 -0.4
comp=Z,219nm,1.1s,mb6.0
CLL *e* pP 11 42 50.0 -2.9
CLL *e* 11 42 56.0
CLL *e*S S 11 52 59.0 +7.5
CLL LR LR
comp=Z,10μm,17.9s,MS6.2
CLL **Collm** 81.21 330⇑*iP* P 11 42 43.1 -0.4
comp=Z,219nm,1.1s,mb6.0
CLL *e*pP pP 11 42 50.0 -2.9
CLL *e*PcP 11 42 56.0
CLL *e* 11 43 08.0
CLL *e*PP PP 11 45 50.0 +1.7
CLL *e*S S 11 52 59.0 +7.5
CLL *e*PPS 11 53 55.0
CLL *e*SS SS 11 58 05.0 -0.8
CLL *e* 11 58 59.0
CLL *e*SSS 12 01 36.0
CLL LmH 12 18 00.0
comp=N,6μm,19.6s
CLL LmH 12 18 00.0
comp=E,9μm,21.9s
GEMT **Gemlik** 81.26 315 *eP* P 11 42 41.4 -2.5
T19A **Beclabito** 81.26 50 ⇓P P 11 42 44.2 +0.2
baz=81,SNR=18
GZR **Gura Zlata** 81.26 322 ⇑P P 11 42 44.6 +0.7
GZR **Gura Zlata** 81.26 322⇑*iP* P 11 42 44.6 +0.7
VRAC **Vranov** 81.27 327 ⇑P P 11 42 44.3 +0.5
VRAC **Vranov** 81.27 327⇑*iP* P 11 42 44.3 +0.5
X16A **Lo Mia Camp, P** 81.29 53 ⇓P P 11 42 44.7 +0.5
baz=81,SNR=27
W17A **Winslow** 81.33 52 ⇓P P 11 42 44.4 0.0
baz=81
JMB **Yambol** 81.33 318 P P 11 42 46.4 +2.1
JMB **Yambol** 81.33 318 P P 11 42 46.4 +2.1
JMB **Yambol** 81.33 318 *eP* P 11 42 44.1 -0.2
IKL **Isikli** 81.33 309 *eP* P 11 42 44.2 -0.2
MVCO **Mesa Verde** 81.34 50 ⇓P P 11 42 44.6 +0.2
baz=81,SNR=23
MVCO **Mesa Verde** 81.34 50 *eP* P 11 42 44.5 +0.1
comp=E,107nm,1.4s,mb5.6
MVCO LR LR
comp=Z,1μm,21.0s,MS5.3
ISCO **Idaho Springs** 81.35 46 *eP* P 11 42 44.4 0.0
ISCO pmax pmax
comp=Z,34nm,1.3s,mb5.1
ISCO MLR MLR
comp=Z,2μm,20.0s,MS5.4
ISCO **Idaho Springs** 81.35 46 *eP* P 11 42 44.4 0.0
comp=Z,34nm,1.3s,mb5.1
ISCO LR LR
comp=Z,2μm,20.0s,MS5.4
ARMT **Armutlu** 81.36 315 *eP* P 11 42 44.5 0.0
NRDL **Niedersach Rie** 81.38 333 *eP* P 11 42 43.1 -1.2
comp=Z,136nm,1.4s,mb5.7
NRDL *e*PP PP 11 45 48.6 -1.0
NRDL *e*S S 11 52 50.5 -2.6
BOLV **Bolvadin** 81.38 312 *iP* P 11 42 44.6 +0.1
114A **Black Gap (USA** 81.40 55 ⇓P P 11 42 44.9 +0.1
baz=81
V18A **Ganado** 81.42 52 ⇓P P 11 42 45.3 +0.4
baz=81,SNR=19
O24A **Longmont** 81.45 46 ⇓P P 11 42 45.4 +0.5
baz=81
PVL **Pavlikeni** 81.48 319 *eP* P 11 42 45.4 +0.3
EREN **Erenkoy** 81.48 308 *eP* P 11 42 45.4 +0.2
U19A **Dine' College,** 81.50 51 ⇓P P 11 42 45.5 +0.2
baz=81,SNR=26
P23A **Jefferson** 81.50 47 ⇓P P 11 42 46.1 +0.9
baz=81,SNR=10
CRAR CRAIOVA 81.50 320 ⇓P P 11 42 45.3 +0.2
CRAR CRAIOVA 81.50 320⇓*iP* P 11 42 45.3 +0.2
RRR **Rubha Reidh** 81.53 343 P P 11 42 45.1 +0.1
RRR **Rubha Reidh** 81.53 343⇑*eP* P 11 42 45.1 +0.1
Z15A **Gila River Ind** 81.53 55 ⇓P P 11 42 45.4 -0.1
baz=81
N25A **Grover** 81.54 45 ⇓P P 11 42 45.4 0.0
baz=81
BUD **Budapest** 81.55 325⇑*eP* pP 11 42 57.8 +3.1
MDO **Dochfour** 81.56 342 P P 11 42 44.6 -0.6
MDO **Dochfour** 81.56 342⇑*eP* P 11 42 44.6 -0.6
PRA **Prague** 81.59 329 ⇑P P 11 42 46.0 +0.5
PRA pP pP 11 42 56.0 +1.1
PRA AMS AMS 12 22 10.0
Y16A **Circle Bar Ran** 81.60 54 ⇑P P 11 42 46.2 +0.3
baz=81,SNR=17
HDMB **Hadim** 81.60 310 *eP* P 11 42 45.6 -0.3
PRU **Pruhonice** 81.61 329⇑*iP* P 11 42 46.5 +0.9
PRU *e* pP 11 42 53.8 -1.2
PRU *e* 11 45 52.4
PRU *e*S S 11 52 54.7 -1.0
PRU MLR MLR
comp=Z,10μm,16.6s,MS6.3
PRU **Pruhonice** 81.61 329⇑*iP* P 11 42 46.5 +0.9
PRU *e*pP pP 11 42 53.8 -1.2
PRU *e*PP PP 11 45 52.4 +0.8
PRU *e*S S 11 52 54.7 -1.0
PRU AMS AMS 12 21 50.0
comp=Z,10μm,16.6s
ALT **Altintas** 81.65 313 *eP* P 11 42 47.8 +1.8
EDRB **Edirne** 81.67 317 *eP* P 11 42 46.6 +0.5
RRH **Rhenigidale** 81.67 344 P P 11 42 45.5 -0.2
RRH **Rhenigidale** 81.67 344⇑*eP* P 11 42 45.5 -0.2
BZS **Buzias** 81.68 322 ⇑P P 11 42 45.7 -0.3
BZS **Buzias** 81.68 322⇑*iP* P 11 42 45.7 -0.3
R22A **Saguache, Gunn** 81.72 48 ⇑P P 11 42 47.3 +0.9
baz=82,SNR=14
SHUT **Suhut-Afyon** 81.72 313 *eP* P 11 42 46.9 +0.5
KAC **Achnashellach** 81.73 343 P P 11 42 46.4 +0.3
KAC **Achnashellach** 81.73 343⇑*eP* P 11 42 46.4 +0.3
X17A **Forest Lakes** 81.74 53 ⇓P P 11 42 47.4 +0.8
baz=82,SNR=19
TREC **Trest** 81.75 328 *eP* P 11 42 46.7 +0.4

TREC *e* pP 11 42 54.5 -1.2
TREC *e* 11 45 54.4
TREC MLR MLR
comp=Z,8μm,16.4s,MS6.2
TREC **Trest** 81.75 328⇑*eP* P 11 42 46.7 +0.4
TREC *e*pP pP 11 42 54.5 -1.2
TREC *e*PP PP 11 45 54.4 +1.6
TREC AMS AMS 12 23 30.0
comp=Z,8μm,16.4s
URZ **Urewera** 81.75 153 P P 11 42 44.2 -2.1
comp=Z,9.9nm,0.9s,mb4.7,baz=269,slow=6.5,SNR=2.8
URZ LR LR 12 13 55.0
comp=Z,4μm,21.9s,MS5.8,baz=147,slow=32
URZ **Urewera** 81.75 153 *eP* P 11 42 44.0 -2.3
CLZ **Clausthal** 81.80 332 *eP* P 11 42 46.6 0.0
comp=Z,258nm,1.2s,mb6.0
CLZ *e*PP PP 11 45 53.8 +0.7
CLZ *e*S S 11 52 57.3 -0.2
Q23A **Hartsel** 81.82 47 ⇑P P 11 42 47.1 +0.2
baz=82
KCTX **Karacabey (Bur** 81.85 315 *eP* P 11 42 42.0 -5.0
U20A **Newcomb** 81.87 50 ⇓P P 11 42 47.4 +0.2
baz=82,SNR=6.8
W18A **Petrified Fore** 81.92 52 ⇓P P 11 42 47.9 +0.4
baz=82
214A **Organ Pipe Nat** 81.94 56 ⇓P P 11 42 47.7 0.0
baz=82
P24A **Kohler Place,** 81.95 46 ⇑P P 11 42 47.8 +0.2
baz=82
KPL **Plockton** 81.96 343 P P 11 42 47.5 +0.2
KPL AMb AMB 11 42 48.7
comp=Z,253nm,1.4s,mb5.9
KPL AMS AMS 12 27 32.9
comp=Z,2μm,14.8s
KPL **Plockton** 81.96 343⇑*eP* P 11 42 47.5 +0.2
KPL AMb AMB 11 42 48.7
comp=Z,253nm,1.4s,mb5.9
KPL AMS AMS 12 27 32.9
comp=Z,2μm,14.8s,MS5.7
V19A **Window Rock** 81.97 51 ⇑P P 11 42 48.5 +0.7
baz=82
Z16A **Peralta Trail,** 81.97 54 ⇑P P 11 42 47.7 -0.1
baz=82
GDZ **Gediz** 81.99 313⇑*iP* P 11 42 47.4 -0.4
O25A **Wiggins** 81.99 45 ⇓P P 11 42 47.7 -0.1
baz=82,SNR=6.9
S22A **4UR Ranch, Cre** 82.00 48 ⇑P P 11 42 48.5 +0.7
baz=82,SNR=27
KSB **Sheil Bridge** 82.03 343 P P 11 42 46.7 -0.9
KSB **Sheil Bridge** 82.03 343⇑*eP* P 11 42 46.7 -0.9
LFK **Lefkose** 82.05 308 *eP* P 11 42 48.2 0.0
T21A **Navajo Lake** 82.07 49 ⇑P P 11 42 48.6 +0.3
baz=82
TANN **Tannenbergstha** 82.12 330 *eP* P 11 42 48.3 0.0
comp=Z,146nm,1.7s,mb5.6
TANN *e*PP PP 11 45 55.3 -0.5
TANN *e*S S 11 53 00.8 -0.1
Y17A **Roosevelt** 82.13 54 ⇑P P 11 42 48.8 +0.2
baz=82,SNR=7.4
W19A **Sanders** 82.14 52 ⇑P P 11 42 49.0 +0.4
baz=82
WERD **Werda** 82.16 330 *eP* P 11 42 48.4 -0.1
comp=Z,143nm,1.5s,mb5.7
X18A **Snowflake** 82.16 52 ⇑P P 11 42 49.0 +0.2
baz=82,SNR=8.3
SUTC **Sutluce-Ispart** 82.17 311 *eP* P 11 42 48.7 0.0
Q24A **Divide** 82.17 47 ⇑P P 11 42 48.9 +0.1
baz=82
GAZI **Gazipasa** 82.18 310⇑*iP* P 11 42 47.5 -1.3
DIM **Dimitrovgrad** 82.18 318 *eP* P 11 42 48.7 -0.1
GUNZ **Gunzen** 82.22 330 *eP* P 11 42 48.8 0.0
comp=Z,164nm,1.5s,mb5.7
SART **Tekirdag** 82.22 316⇑*iP* P 11 42 48.9 -0.1
RKY **Sarkoy-Tekirda** 82.22 316 *eP* P 11 42 49.1 +0.1
ISP **Isparta** 82.22 312 *eP* P 11 42 48.5 -0.5
ISP **Isparta** 82.22 312 ⇑P P 11 42 48.3 -0.7
ISP LR LR
comp=Z,4μm,20.0s,MS5.8
ISP **Isparta** 82.22 312⇑*iP* P 11 42 48.3 -0.8
DURS **Dursunbey** 82.23 314⇑*iP* P 11 42 48.9 -0.2
NKC **Novy Kostel** 82.27 330⇑*iP* P 11 42 49.3 +0.2
NKC *e* 11 42 56.0
NKC MLR MLR
comp=Z,10μm,15.0s,MS6.3
NKC **Novy Kostel** 82.27 330⇑*iP* P 11 42 49.3 +0.2
NKC *e*pP pP 11 42 56.0 -2.5
NKC AMS AMS 12 22 50.0
comp=Z,10μm,15.0s
V20A **Brimhall** 82.27 51 ⇓P P 11 42 49.4 0.0
baz=82
MOX **Moxa** 82.28 331α*iP* P 11 42 48.8 -0.3
comp=Z,189nm,1.6s,mb5.8
MOX *e* 11 46 00.0
MOX
comp=Z,7μm,19.0s
MOX **Moxa** 82.28 331 *eP* P 11 42 48.9 -0.2
comp=Z,189nm,1.5s,mb5.8
MOX *e*PP PP 11 45 56.5 -0.5
MOX *e*S S 11 53 02.2 -0.3
116A **Eloy** 82.29 55 ⇓P P 11 42 49.5 +0.1
baz=82
MMAI **Mount Meron Ar** 82.30 306 P P 11 42 50.2 +0.6
comp=Z,104nm,1.1s,mb5.7,baz=40,slow=6.6,SNR=39
MMAI PP PP 11 45 59.5 +1.6
comp=Z,17nm,1.0s,baz=62,slow=7.0,SNR=3.7
MMAI LR LR 12 22 35.0
comp=Z,5μm,21.6s,MS5.9,baz=45,slow=38
KRBG **Karabiga-Canak** 82.36 316 *eP* P 11 42 50.1 +0.4
U21A **Nageezi** 82.36 50 ⇑P P 11 42 50.3 +0.5
baz=82,SNR=11
P25A **Willow Gulch B** 82.37 46 ⇓P P 11 42 49.9 +0.1
baz=82
GONE **Gonen-Balikesi** 82.37 315 *eP* P 11 42 50.1 +0.3
IBBN **Ibbenburen** 82.38 334 *eP* P 11 42 49.2 -0.4
comp=Z,199nm,1.1s,mb6.0
IBBN *e*PP PP 11 45 58.1 +0.3
CSS **Prodhromos** 82.38 308 *eP* P 11 42 48.4 -1.5
comp=Z,102nm,1.2s,mb5.6
CSS LR LR
comp=Z,3μm,20.0s,MS5.6
KAR1 **Arisaig** 82.39 343 P P 11 42 49.3 -0.2
KAR1 **Arisaig** 82.39 343⇑*eP* P 11 42 49.3 -0.2
BCK **Bucak** 82.42 312 *eP* P 11 42 49.1 -1.0
EBH **Black Hill** 82.42 341 P P 11 42 49.5 -0.2
EBH **Black Hill** 82.42 341 *eP* P 11 42 49.5 -0.2
T22A **Edith** 82.43 49 ⇑P P 11 42 50.6 +0.4
baz=82,SNR=13
DEMI **Demirci** 82.46 314 *iP* P 11 42 50.4 +0.1
KHAL **Karahalli** 82.47 313⇑*iP* P 11 42 50.0 -0.4
ESY **Stoneypath** 82.48 341 P P 11 42 49.5 -0.5
ESY **Stoneypath** 82.48 341⇑*eP* P 11 42 49.5 -0.5
S23A **Nye Farm, Mont** 82.51 48 ⇓P P 11 42 51.1 +0.5
baz=82
KDZ **Kurdzhali** 82.52 318 *eP* P 11 42 51.2 +0.6
LEF **Lefka** 82.55 309 *eP* P 11 42 49.1 -1.7
PGB **Panagyurishte** 82.56 319 *eP* P 11 42 51.1 +0.4
OGNE **Ogallala** 82.59 43 PFAKE 11 43 00.0 +9.1
OGNE LR LR
comp=Z,2μm,19.0s,MS5.5
Y18A **Canyon Day Jun** 82.59 53 ⇑P P 11 42 51.4 +0.3
baz=82,SNR=12
ERIK **Erikli-Kesan** 82.60 316 *eP* P 11 42 51.4 +0.4
BALY **Balya** 82.62 315 *iP* P 11 42 50.9 -0.2
Z17A **San Carlos Hig** 82.62 54 ⇓P P 11 42 51.2 0.0
baz=82
CONA **Conrad Observa** 82.63 327 *iP* P 11 42 51.6 +0.6
comp=Z,180nm,1.2s,mb6.0,SNR=35
EDI **Edinburgh** 82.63 341 AMS AMS 12 23 26.5
comp=Z,4μm,18.5s,MS5.8
X19A **St. Johns** 82.65 52 ⇓P P 11 42 51.9 +0.5
baz=82,SNR=24
PKSM **Moragy** 82.66 324 ⇓P P 11 42 51.0 -0.2
PKSM **Moragy** 82.66 324⇓*iP* P 11 42 51.0 -0.2
LPK **Lapseki** 82.67 316 *eP* P 11 42 51.9 +0.6
KHC **Kasperske Hory** 82.67 329⇑*iP* P 11 42 51.2 0.0
KHC *e* 11 42 58.1
KHC *e* 11 45 59.0
KHC *e*S S 11 53 05.7 -0.9
KHC MLR MLR
comp=Z,11μm,16.5s,MS6.3
KHC **Kasperske Hory** 82.67 329 *eP* P 11 42 51.1 0.0
comp=Z,141nm,1.1s,mb5.9
KHC **Kasperske Hory** 82.67 329⇑*iP* P 11 42 51.2 0.0
KHC *e*pP pP 11 42 58.1 -2.5
KHC *ex* x 11 43 15.5

KHC *e*PP PP 11 45 59.0 -1.4
KHC *e*S S 11 53 05.7 -0.9
KHC AMS AMS 12 24 50.0
comp=Z,11µm,16.5s
EAB Aberfoyle 82.68 342 P **P 11 42 51.1 0.0**
EAB Aberfoyle 82.68 342 *e*P **P 11 42 51.1 0.0**
W20A Ramah 82.69 51 ⇑P **P 11 42 51.5 0.0**
baz=82,SNR=8.1
R24A Sanders Place, 82.69 47 ⇓P **P 11 42 51.7 +0.2**
baz=82,SNR=15
ALN Alexandroupoli 82.70 317 P **P 11 42 51.5 0.0**
ALN Alexandroupoli 82.70 317 P **P 11 42 51.5 0.0**
EYMN Ely 82.71 33 *e*P **P 11 42 50.3 -1.1**
comp=Z,122nm,1.5s,mb5.7
EYMN LR LR
comp=Z,2µm,21.0s,MS5.4
EBL Broad Law 82.72 341 P **P 11 42 50.9 -0.4**
EBL Broad Law 82.72 341 *e*P **P 11 42 50.9 -0.4**
Q25A Bedland, Calha 82.73 46 ⇓P **P 11 42 51.4 -0.3**
baz=82
ROTZ Rotzenmuhle 82.74 330 *e*P **P 11 42 51.9 +0.4**
comp=Z,299nm,1.6s,mb6.1
ROTZ *e*PP PP 11 46 01.1 +0.3
ROTZ *e*S S 11 53 08.4 +1.2
ENEZ Enez 82.75 316 *e*P **P 11 42 52.3 +0.6**
EAU Auchinoon 82.77 341 P **P 11 42 51.3 -0.2**
EAU Auchinoon 82.77 341 *e*P **P 11 42 51.3 -0.2**
V21A Milan 82.78 50 ⇑P **P 11 42 52.2 +0.2**
baz=82
SDCO Great Sand Dun 82.78 48 *e*P **P 11 42 52.2 +0.2**
comp=Z,49nm,1.6s,mb5.3
216A Three Points, 82.80 55 ⇓P **P 11 42 52.2 0.0**
baz=83
GELI Tayfur-Gelibol 82.81 316 *e*P **P 11 42 52.2 +0.2**
GEC2 GERESS Array S 82.85 329 *e*P **P 11 42 52.0 -0.1**
comp=Z,132nm,1.5s,mb5.7
GEC2 *e*PP PP 11 46 00.8 -1.0
GEC2 *e*S S 11 53 09.1 +0.8
KULA Kula-Manisa 82.85 313 *e*P **P 11 42 52.4 +0.1**
KORT Korkueli 82.87 311 ⇑*i*P **P 11 42 51.4 -1.0**
RZN Rozhen 82.87 318 *e*P **P 11 42 52.9 +0.5**
U22A Llaves 82.88 49 ⇓P **P 11 42 53.2 +0.7**
baz=83
117A Oracle 82.91 54 ⇑P **P 11 42 52.8 +0.1**
baz=83,SNR=7.6
T23A Casias Ranch, 82.94 48 ⇑P **P 11 42 53.4 +0.6**
baz=83,SNR=5.3
WET Wettzell 82.95 329 *e*P **P 11 42 52.9 +0.3**
comp=Z,179nm,1.5s,mb5.9
WET *e*PP PP 11 46 02.4 -0.2
WET *e*S S 11 53 11.1 +1.7
Y19A Nutrioso 82.97 53 ⇑P **P 11 42 53.9 +0.9**
baz=83,SNR=12
WTSB Winterswijk 82.99 334⇑*e*P **P 11 42 52.3 -0.5**
comp=Z,135nm,1.5s,mb5.7
S24A Houchin Ranch, 83.02 48 ⇑P **P 11 42 53.9 +0.7**
baz=83,SNR=12
VTS Vitosha 83.03 319 ⇑P **P 11 42 53.7 +0.5**
VTS Vitosha 83.03 319 P **P 11 42 53.4 +0.2**
VTS Vitosha 83.03 319 *e*P **P 11 42 53.7 +0.5**
VTS Vitosha 83.03 319 ⇑*i*P **P 11 42 53.6 +0.4**
Z18A Geronimo 83.03 54 ⇓P **P 11 42 53.5 +0.1**
baz=83
TUC Tucson 83.05 55 *e*P **P 11 42 53.2 -0.2**
TUC pmax pmax
comp=Z,51nm,1.5s,mb5.3
TUC MLR MLR
comp=Z,3µm,22.0s,MS5.7
TUC Tucson 83.05 55 *e*P **P 11 42 53.2 -0.3**
comp=Z,51nm,1.5s,mb5.3
TUC LR LR
comp=Z,3µm,22.0s,MS5.7
PGBU Glenifferbraes 83.06 342 P **P 11 42 53.2 +0.2**
PGBU AMb AMB 11 42 54.3
comp=Z,264nm,2.1s,mb5.9
PGBU AMS AMS 12 24 45.4
comp=Z,4µm,16.1s
PGBU Glenifferbraes 83.06 342 *e*P **P 11 42 53.2 +0.2**
PGBU AMb AMB 11 42 54.3
comp=Z,264nm,2.1s,mb5.9
PGBU AMS AMS 12 24 45.4
comp=Z,4µm,16.1s,MS5.8
X20A Quemado 83.07 52 ⇓P **P 11 42 54.2 +0.7**
baz=83,SNR=23
AKHS Akhisar 83.09 314 *i*P **P 11 42 53.2 -0.4**
V22A San Miguel Ran 83.15 50 ⇑P **P 11 42 54.1 +0.2**
baz=83,SNR=12
ESK Eskdalemuir 83.17 341 P **P 11 42 53.0 -0.6**
ESK Eskdalemuir 83.17 341 *e*P **P 11 42 53.0 -0.6**
ESK Eskdalemuir 83.17 341 *i*P **P 11 42 54.4 +0.8**
ESK Eskdalemuir 83.17 341 PFAKE 11 43 00.0 +6.4
ESK LR LR
comp=Z,5µm,19.0s,MS6.0
GOLH Golhisar 83.18 312 ⇑*i*P **P 11 42 53.6 -0.5**
DNZL Cakiroluk 83.18 313 ⇑*i*P **P 11 42 54.5 +0.4**
GRF Grafenberg Arr 83.19 330 *e*P **P 11 42 54.2 +0.4**
comp=Z,393nm,1.3s,mb6.3
GRF *e*PP PP 11 46 04.5 0.0
GRF *e*S S 11 53 12.9 +1.1
GRF *e*L 12 22 52.2
comp=Z,8µm,18.5s
GRF Grafenberg Arr 83.19 330 *e*P **P 11 42 54.2 +0.4**
GRF *e* 11 46 04.5
GRF *e*S S 11 53 12.9 +1.1
GRF pmax pmax
comp=Z,393nm,1.3s,mb6.3
GRF MLR MLR
comp=Z,8µm,18.5s,MS6.1
W21A San Fidel 83.22 51 ⇓P **P 11 42 54.6 +0.3**
baz=83
BUG Bochum--Univer 83.26 333 *e*P **P 11 42 53.8 -0.4**
comp=Z,170nm,1.5s,mb5.8
BUG *e*PP PP 11 46 05.5 +0.4
BUG *e*S S 11 53 11.6 -0.8
ECK Cauldkaine Hil 83.27 341 P **P 11 42 54.0 -0.2**
ECK Cauldkaine Hil 83.27 341⇑*e*P **P 11 42 54.0 -0.2**
ARSA Arzberg 83.29 327 ⇑*i*P **P 11 42 54.7 +0.2**
comp=Z,102nm,1.4s,mb5.7,SNR=16
ELL Elmali 83.30 312 *e*P **P 11 42 54.9 +0.2**
U23A El Rito 83.31 49 ⇓P **P 11 42 55.5 +0.7**
baz=83,SNR=33
217A Green Valley 83.37 55 ⇓P **P 11 42 55.3 +0.2**
baz=83,SNR=10
MOA Molln 83.38 328 *i*P **P 11 42 55.0 +0.1**
comp=Z,123nm,1.4s,mb5.7,SNR=15
Z19A T-Link Ranch, 83.39 53 ⇓P **P 11 42 55.3 +0.1**
baz=83
ECSD EROS Data Cent 83.45 39 *e*P **P 11 42 54.0 -1.4**
comp=Z,63nm,1.2s,mb5.5
ECSD LR LR
comp=Z,3µm,22.0s,MS5.6
KAVA Kavala 83.47 318 P **P 11 42 55.6 +0.2**
S25A Robets Cordova 83.47 47 ⇓P **P 11 42 55.3 -0.3**
baz=83
MMB Musomiste 83.47 318 *e*P **P 11 42 55.8 +0.3**
Y20A Horse Springs, 83.56 52 ⇑P **P 11 42 56.6 +0.5**
baz=83,SNR=24
DIVS Divibare 83.57 322 P **P 11 42 54.8 -1.1**
X21A Alamocita Cree 83.58 51 ⇑P **P 11 42 56.7 +0.6**
baz=83,SNR=26
KOGS Kog 83.58 326 *e*P **P 11 42 55.3 -0.6**
KOGS *e*pP pP 11 43 08.9 +3.5
KOGS *e*PP PP 11 46 10.2 +2.4
KKB Krupnik 83.61 319 *e*P **P 11 42 56.6 +0.4**
SNZO South Karori 83.65 156 PFAKE 11 43 10.0 +14
SNZO LR LR
comp=Z,4µm,20.0s,MS5.8
V23A Ortiz Mt. (NFS 83.71 49 ⇓P **P 11 42 57.6 +0.8**
baz=84,SNR=17
119A Ashpeak Ranch, 83.71 53 ⇓P **P 11 42 57.0 +0.2**
baz=84,SNR=5.3
PRK Paraskevi 83.72 315 P **P 11 42 56.2 -0.6**
PRK Paraskevi 83.72 315 P **P 11 42 56.2 -0.6**
KDAG Bornova 83.73 314 *i*P **P 11 42 56.7 -0.2**
W22A Albuquerque 83.73 50 ⇑P **P 11 42 57.0 +0.1**
baz=84
IZM Izmir 83.74 314 *e*P **P 11 42 57.5 +0.7**
218A Dragoon 83.74 54 ⇓P **P 11 42 57.2 +0.2**
baz=84,SNR=5.9
U24A Moreno Valley 83.81 48 ⇓P **P 11 42 58.0 +0.7**
baz=84,SNR=12
AKAS Kas 83.83 311 *i*P **P 11 42 56.3 -1.0**
TNS Taunus Mts 83.83 332 *e*P **P 11 42 57.0 -0.1**
comp=Z,173nm,1.5s,mb6.0
TNS *e*PP PP 11 46 10.1 +0.4
TNS *e*S S 11 53 19.2 +1.0
T25A Trinidad 83.83 47 ⇑P **P 11 42 57.5 +0.1**
baz=84,SNR=16
BLCB Balcova 83.87 314 *e*P **P 11 42 57.8 +0.2**
SRS Serrai 83.88 318 P **P 11 42 57.1 -0.4**
SRS Serrai 83.88 318 P **P 11 42 57.1 -0.4**
AYDN Tasoluk 83.88 313 *i*P **P 11 42 58.3 +0.7**
GROS Grobnik 83.91 326 *e*P **P 11 42 57.2 -0.4**
GROS *e*PP PP 11 46 11.9 +1.4
GROS *e* 11 48 11.3
GROS *e*S S 11 53 15.6 -3.5
Y21A Point of Rocks 83.93 52 ⇓P **P 11 42 58.8 +0.8**
baz=84,SNR=12
Z20A Nine Sixteen R 83.94 53 ⇑P **P 11 42 58.4 +0.4**
baz=84,SNR=27
SOKA Soboth 83.95 326 ⇑*i*P **P 11 42 57.7 -0.1**
comp=Z,251nm,1.4s,mb6.2
HPK Haverah Park 83.95 339 AMS AMS 12 23 30.1
comp=Z,9µm,21.3s,MS6.1
GAL1 Galloway 83.97 341 P **P 11 42 57.6 -0.1**
GAL1 AMb AMB 11 42 58.8
comp=Z,181nm,1.5s,mb6.0
GAL1 AMS AMS 12 24 16.8
comp=Z,4µm,18.0s
GAL1 Galloway 83.97 341⇑*e*P **P 11 42 57.6 -0.1**
GAL1 AMb AMB 11 42 58.8
comp=Z,181nm,1.5s,mb6.0
GAL1 AMS AMS 12 24 16.8
comp=Z,4µm,18.0s,MS5.8
TURN Turunc 83.99 312 ⇑*i*P **P 11 42 59.5 +1.3**
YER Yerkesik 84.00 313 *e*P **P 11 42 59.1 +0.8**
LAZ Ladron 84.01 51 *e*P **P 11 42 58.7 +0.3**
comp=Z,37nm,1.5s,mb5.3
X22A Bernardo 84.02 51 ⇑P **P 11 42 59.1 +0.7**
baz=84
ANMO Albuquerque 84.06 50 *e*P **P 11 42 59.0 +0.4**
ANMO pmax pmax
comp=Z,60nm,1.3s
ANMO MLR MLR
comp=Z,1µm,21.0s
ANMO Albuquerque 84.06 50 *e*P **P 11 42 59.0 +0.3**
comp=Z,60nm,1.3s,mb5.6
ANMO LR LR
comp=Z,1µm,21.0s,MS5.3
RJOB Jochberg 84.09 328 *e*P **P 11 42 58.7 +0.2**
comp=Z,179nm,1.3s,mb6.0
RJOB *e*PP PP 11 46 12.9 +0.9
RJOB *e*S S 11 53 21.8 +0.9
W23A Werner Place, 84.11 50 ⇓P **P 11 42 59.3 +0.4**
baz=84,SNR=10
318A Bisbee 84.12 55 ⇑P **P 11 42 59.1 +0.1**
baz=84,SNR=24
URLA Izmir 84.14 314 ⇑*i*P **P 11 42 58.2 -0.8**
DOBS Dobrina 84.16 326 *i*P **P 11 42 58.3 -0.6**
MLSB Milas 84.19 313 *e*P **P 11 42 60.0 +0.7**
TOD Tromm 84.19 332⇑*e*P **P 11 42 58.8 -0.2**
SOH Sokhos 84.21 318 P **P 11 42 58.7 -0.6**
SOH Sokhos 84.21 318 P **P 11 42 58.7 -0.6**
OUR Ouranopolis 84.22 317 P **P 11 42 58.7 -0.6**
OUR Ouranopolis 84.22 317 P **P 11 42 58.7 -0.6**
GCAM G?zelcaml? 84.23 314 ⇑*i*P **P 11 42 59.4 0.0**
PPT Papeete 84.23 117 *e*PP PP 11 46 10.5 -4.1
comp=Z,194nm,26.0s
PPT *e*S S 11 53 13.6 -9.5
comp=Z,6µm,32.0s
PPT *e*LR LR 12 09 06.3
comp=Z,6µm,21.0s,baz=314
PPT Papeete 84.23 117 LR LR 12 15 24.6
comp=Z,5µm,19.8s,MS5.9,baz=269,slow=32
219A White Tail Can 84.24 54 ⇑P **P 11 42 59.6 +0.1**
baz=84,SNR=26
V24A Rampart Ranch, 84.27 49 ⇓P **P 11 43 00.5 +0.9**
baz=84,SNR=29
VAY Valandovo 84.27 319 ⇑*i*P **P 11 42 59.1 -0.4**
OBKA Obir 84.29 327 ⇑*i*P **P 11 42 59.0 -0.6**
comp=Z,39nm,1.4s,mb5.4
HGN Heimansgroeve 84.29 334⇑*e*P **P 11 42 58.6 -0.8**
comp=Z,141nm,1.0s,mb6.0
HGN Heimansgroeve 84.29 334 *e*PP PP 11 46 14.5 +1.0
HGN Heimansgroeve 84.29 334 *e*S S 11 53 25.8 +2.9
U25A Circle Dot Ran 84.33 48 ⇓P **P 11 43 00.1 +0.1**
baz=84,SNR=14
BEBN Eben Emael 84.36 334 P **P 11 42 59.6 -0.2**
comp=Z,41nm,1.6s,mb5.3
Y22D IRIS PASSCAL I 84.36 51 ⇓P **P 11 43 00.7 +0.5**
baz=84
KBA Koelnbreinsper 84.37 328 ⇑*i*P **P 11 42 59.6 -0.3**
comp=Z,103nm,1.6s,mb5.7,SNR=16
FUR Furstenfeldbru 84.38 329 *e*P **P 11 43 00.0 0.0**
comp=Z,285nm,1.2s,mb6.3
FUR *e*PP PP 11 46 14.9 +0.6
FUR *e*S S 11 53 24.8 +1.0
SKO Skopje 84.39 320 *i*P **P 11 43 01.4 +1.2**
Z21A St. Cloud Mine 84.39 52 ⇓P **P 11 43 00.8 +0.4**
baz=84,SNR=26
MEM Membach 84.40 334 P **P 11 43 00.0 0.0**
comp=Z,59nm,1.5s,mb5.5
GIM North Isle of 84.42 341 P **P 11 42 60.0 0.0**
GIM North Isle of 84.42 341⇑*e*P **P 11 42 60.0 0.0**
Y22A Socorro 84.42 51 ⇑P **P 11 43 00.5 +0.1**
baz=84,SNR=16
PLE Pljevlja 84.43 322 ⇑*i*P **P 11 43 00.9 +0.6**
PLE Pljevlja 84.43 322 ⇑*i*P **P 11 43 00.9 +0.6**
ABH Alteburg 84.44 332⇑*e*P **P 11 43 00.1 -0.1**
X23A Hourglass Bar 84.48 50 ⇓P **P 11 43 01.0 +0.3**
baz=84
PLG Polygyros 84.48 318 P **P 11 43 00.4 -0.2**
PLG Polygyros 84.48 318 P **P 11 43 00.4 -0.2**
BNM Barren Site 84.49 51 *e*P **P 11 43 00.9 +0.1**
comp=Z,32nm,1.4s,mb5.3
HORT Hortiatis 84.51 318 P **P 11 43 00.1 -0.7**
HORT Hortiatis 84.51 318 P **P 11 43 00.1 -0.7**
IVA Berane 84.52 321 ⇑*i*P **P 11 43 00.8 0.0**
IVA Berane 84.52 321 ⇑*i*P **P 11 43 00.9 +0.1**
W24A Lazy 6 Ranch, 84.53 49 ⇓P **P 11 43 01.6 +0.6**
baz=84,SNR=34
BDRM Kayabasi 84.54 313 *i*P **P 11 43 00.9 -0.1**
KBI1 Birley Grange 84.54 339 P **P 11 43 00.2 -0.5**
KBI1 Birley Grange 84.54 339⇑*e*P **P 11 43 00.2 -0.5**
V25A Rancho No Teng 84.59 49 ⇑P **P 11 43 01.6 +0.4**
baz=84,SNR=27
MYKA Terra Mystica 84.59 327 ⇑*i*P **P 11 43 00.1 -1.0**
comp=Z,88nm,1.3s,mb5.7
BODT Bodrum 84.62 313 *e*P **P 11 43 01.5 +0.1**
319A Douglas 84.63 54 ⇓P **P 11 43 01.5 0.0**
baz=84,SNR=16
LJU Ljubljana 84.66 326 *e*P **P 11 43 00.7 -0.7**
LJU *e* 11 46 18.6
LJU *e*S S 11 53 19.7 -7.0
LJU *e* 11 54 40.4
LJU Ljubljana 84.66 326 *e*P **P 11 43 00.7 -0.8**
LJU *e*PP PP 11 46 18.6 +1.9
LJU *e*S S 11 53 19.7 -7.0
LJU *e* 11 54 40.4
LJU *e*SS SS 11 59 12.2 +15
PAIG Paliouri 84.67 317 P **P 11 43 01.0 -0.6**
PAIG Paliouri 84.67 317 P **P 11 43 01.0 -0.6**
PVY Plav 84.68 321 ⇑*i*P **P 11 43 01.5 -0.1**
PVY Plav 84.68 321 ⇑*i*P **P 11 43 01.5 -0.1**
DAT Datca 84.69 313 *e*P **P 11 43 01.4 -0.4**
KTD Kalmit 84.70 332⇑*e*P **P 11 43 01.2 -0.4**
STU Stuttgart 84.72 331 *e*P **P 11 43 01.5 -0.2**
comp=Z,221nm,1.2s,mb6.2
STU *e*PP PP 11 46 18.1 +1.1
STU *e*S S 11 53 28.1 +0.9
STU Stuttgart 84.72 331 *e*P **P 11 43 01.5 -0.2**
STU pmax pmax
comp=Z,205nm,1.1s,mb6.2
STU Stuttgart 84.72 331 *e*P **P 11 43 01.5 -0.2**
comp=Z,205nm,1.1s,mb6.2
ARG Arkhangelos 84.72 312 P **P 11 43 01.9 0.0**
ARG Arkhangelos 84.72 312 P **P 11 43 01.9 0.0**
RPZ Rata Peaks 84.73 159 P **P 11 43 02.3 +0.9**
comp=Z,8.2nm,0.8s,mb4.9,baz=64,slow=14,SNR=2.8
U26A Atchley Ranch, 84.73 48 ⇓P **P 11 43 02.0 0.0**
baz=84,SNR=15
BOJS Bojanci 84.75 326 *e*P **P 11 43 01.6 -0.3**
BOJS *e*pP pP 11 43 15.4 +4.0
BOJS *e*PP PP 11 46 19.4 +2.0
UPM Unac-Piva 84.76 322 ⇑*i*P **P 11 43 01.2 -0.8**
UPM Unac-Piva 84.76 322 ⇑*i*P **P 11 43 01.2 -0.8**
RUP Ruppelstein 84.77 333⇑*e*P **P 11 43 01.6 -0.3**
220A Playas Peak, P 84.77 54 ⇑P **P 11 43 02.4 +0.1**
baz=85,SNR=23
BCLA Clavier 84.80 334 P **P 11 43 01.5 -0.5**
comp=Z,88nm,1.7s,mb5.6
BCI Bajram Curri 84.80 321 *i*P **P 11 43 02.1 -0.1**
121A Cookes Peak, D 84.83 53 ⇑P **P 11 43 02.8 +0.2**
baz=85,SNR=17
GMM Mts of Mourne 84.84 342 P **P 11 43 02.0 -0.2**
GMM Mts of Mourne 84.84 342⇑*e*P **P 11 43 02.0 -0.2**
Z22A Elephant Butte 84.88 52 ⇑P **P 11 43 02.9 +0.1**
baz=85,SNR=16
WATA Walderalm 84.91 329 ⇓*i*PcP **P 11 43 03.0 +0.3**
comp=Z,17nm,0.8s,mb5.2
KRUS Krusevo 84.93 320 ⇑*i*P **P 11 43 02.1 -0.7**
CWF Charnwood Fore 84.93 339 P **P 11 43 01.7 -1.0**
CWF AMb AMB 11 43 03.4
comp=Z,163nm,1.7s,mb5.9
CWF AMS AMS 12 24 08.5
comp=Z,6µm,20.4s
CWF Charnwood Fore 84.93 339 *e*P **P 11 43 01.7 -1.0**
CWF AMb AMB 11 43 03.4
comp=Z,163nm,1.7s,mb5.9
CWF AMS AMS 12 24 08.5
comp=Z,6µm,20.4s,MS6.0
WTTA Wattenberg 84.95 329 ⇑*i*P **P 11 43 02.7 -0.2**
comp=Z,57nm,1.1s,mb5.6,SNR=14
X24A Lazy VL Ranch, 84.95 50 ⇑P **P 11 43 03.5 +0.4**
baz=85,SNR=5.5
ABTA Abfaltersbach 84.99 328 ⇑*i*P **P 11 43 02.0 -1.1**
comp=Z,53nm,1.1s,mb5.6
Y23A Lovelace Mesa, 84.99 51 ⇓P **P 11 43 03.3 -0.1**
baz=85,SNR=9.3
NKY Niksic 85.01 322 ⇑*i*P **P 11 43 02.7 -0.5**
NKY Niksic 85.01 322 ⇑*i*P **P 11 43 02.7 -0.5**
SCHQ Schefferville 85.03 16 P **P 11 43 02.7 -0.4**
comp=Z,55nm,1.2s,mb5.5,baz=356,slow=5.5,SNR=19
SCHQ LR LR 12 23 56.4
comp=Z,3µm,19.7s,MS5.7,baz=339,slow=38
SCHQ Schefferville 85.03 16 *e*P **P 11 43 02.4 -0.7**
comp=Z,61nm,1.3s,mb5.6
SCHQ *e*pP pP 11 43 14.3 +1.8
SCHQ LR LR
comp=Z,4µm,19.0s,MS5.8
LANF Langenberg 85.08 332⇑*e*P **P 11 43 03.5 0.0**
SNF Seneffe 85.08 334 P **P 11 43 03.0 -0.4**
comp=Z,90nm,1.5s,mb5.7
MOTA Moosalm 85.10 329 ⇓*i*P **P 11 43 03.4 -0.3**
comp=Z,96nm,1.2s,mb5.8,SNR=16
W25A X Bar L Ranch, 85.10 49 ⇑P **P 11 43 04.1 +0.2**
baz=85,SNR=30
PHP Peshkopia 85.11 320 *i*P **P 11 43 02.7 -1.1**
KNDS Knezji Dol 85.12 326 *e*P **P 11 43 03.1 -0.6**
RETA Reutte 85.13 329 ⇑*i*PcP **P 11 43 03.7 -0.1**
comp=Z,180nm,1.2s,mb6.1,SNR=31
WLF Walferdange 85.13 333 P **P 11 43 04.6 +0.9**
comp=Z,133nm,2.0s,mb5.7
WLF Walferdange 85.13 333 *e*P **P 11 43 03.9 +0.2**
comp=Z,416nm,1.8s,mb6.3
WLF *e*PP PP 11 46 21.9 +1.6
WLF Walferdange 85.13 333 *e*P **P 11 43 03.7 0.0**
WLF pmax pmax
comp=Z,285nm,1.6s,mb6.2
WLF MLR MLR
comp=Z,8µm,20.0s,MS6.1
WLF Walferdange 85.13 333 *e*P **P 11 43 03.7 0.0**
comp=Z,285nm,1.6s,mb6.2
WLF LR LR
comp=Z,8µm,20.0s,MS6.1
PUK Puka 85.13 321 *i*P **P 11 43 03.4 -0.5**
320A Kipp Ranch, An 85.14 54 ⇓P **P 11 43 04.3 +0.2**
baz=85
TTG Podgorica 85.16 321 ⇑*i*P **P 11 43 03.4 -0.6**
TTG Podgorica 85.16 321 ⇑*i*P **P 11 43 03.4 -0.6**
BRY Bratogost 85.17 322 ⇑*i*P **P 11 43 02.9 -1.1**
BRY Bratogost 85.17 322 ⇑*i*P **P 11 43 02.9 -1.1**
221A Mesquite Ranch 85.18 53 ⇓P **P 11 43 04.5 +0.2**
baz=85
WME Myndd Eilian 85.18 341 P **P 11 43 02.5 -1.3**
WME Myndd Eilian 85.18 341⇑*e*P **P 11 43 02.5 -1.3**
WPM1 Penmaenmawr 85.20 340 P **P 11 43 03.8 -0.2**
WPM1 Penmaenmawr 85.20 340⇑*e*P **P 11 43 03.8 -0.2**
122A Conniff Cattle 85.22 52 ⇑P **P 11 43 04.4 -0.1**
baz=85
GIVF Givet 85.24 334 ⇑*i*P **P 11 43 03.7 -0.5**
comp=Z,378nm,1.6s,mb6.0
GIVF Givet 85.24 334 ⇑*i*P **P 11 43 03.7 -0.5**
GIVF pmax pmax
comp=Z,189nm,1.6s,mb6.0
GIVF Givet 85.24 334 ⇑*i*P **P 11 43 03.7 -0.5**
comp=Z,189nm,1.6s,mb6.0
TRI Trieste 85.26 327 PFAKE 11 43 20.0 +16
TRI LR LR
comp=Z,5µm,19.0s,MS5.9
FNA Florina 85.28 319 P **P 11 43 03.3 -1.4**
FNA Florina 85.28 319 P **P 11 43 03.3 -1.4**
WLF1 Llynfaes 85.30 341 P **P 11 43 04.0 -0.5**
WLF1 AMb AMB 11 43 05.5
comp=Z,735nm,1.6s,mb6.6
WLF1 AMS AMS 12 24 25.6
comp=Z,21µm,19.9s
WLF1 Llynfaes 85.30 341⇑*e*P **P 11 43 04.0 -0.5**
WLF1 AMb AMB 11 43 05.5
comp=Z,735nm,1.6s,mb6.6
WLF1 AMS AMS 12 24 25.6
comp=Z,21µm,19.9s,MS6.5
DOU Dourbes 85.32 334 P **P 11 43 04.7 0.0**
comp=Z,54nm,1.8s,mb5.4
Z23A Rita Site, Whi 85.33 51 ⇑P **P 11 43 04.8 -0.2**
baz=85
XOR Xorichti 85.33 317 P **P 11 43 03.6 -1.3**
XOR Xorichti 85.33 317 P **P 11 43 03.6 -1.3**
CBKS Cedar Bluff 85.34 44 *e*P **P 11 43 03.4 -1.6**
CBKS pmax pmax
comp=Z,84nm,1.2s,mb5.8
CBKS MLR MLR
comp=Z,2µm,19.0s,MS5.4
CBKS Cedar Bluff 85.34 44 *e*P **P 11 43 03.4 -1.6**
comp=Z,84nm,1.2s,mb5.8
CBKS LR LR
comp=Z,2µm,19.0s,MS5.4
OHR Ohrid 85.35 320 ⇑*i*P **P 11 43 04.0 -1.0**
Y24A Capitan 85.38 50 ⇓P **P 11 43 05.1 -0.2**
baz=85,SNR=5.9
BFO Black Forest 85.41 331 P **P 11 43 04.3 -0.9**
comp=Z,818nm,1.1s,mb6.8,SNR=41
BFO Black Forest 85.41 331 *e*P **P 11 43 04.9 -0.3**
comp=Z,230nm,1.2s,mb6.2
BFO *e*PP PP 11 46 23.9 +1.2
BFO *e*S S 11 53 34.7 +0.6
BFO Black Forest 85.41 331 *e*P **P 11 43 04.8 -0.4**
BFO pmax pmax
comp=Z,202nm,1.1s,mb6.2
BFO MLR MLR
comp=Z,6µm,20.0s,MS6.0
BFO Black Forest 85.41 331 *e*P **P 11 43 04.8 -0.4**
comp=Z,202nm,1.1s,mb6.2
BFO LR LR
comp=Z,6µm,20.0s,MS6.0
SPAK Spaichingen-Ko 85.42 331⇑*e*P **P 11 43 05.1 -0.1**
BUM Brajici-Budva 85.44 321 ⇑*i*P **P 11 43 04.9 -0.5**
BUM Brajici-Budva 85.44 321 ⇑*i*P **P 11 43 05.0 -0.4**
X25A Clemmons Ranch 85.45 50 ⇓P **P 11 43 05.8 +0.2**
baz=85
BAIF Baives 85.49 334 ⇑*i*P **P 11 43 04.9 -0.6**
comp=Z,153nm,1.2s,mb5.7
BAIF Baives 85.49 334 ⇑*i*P **P 11 43 04.9 -0.6**
BAIF pmax pmax
comp=Z,77nm,1.2s,mb5.7
BAIF Baives 85.49 334 ⇑*i*P **P 11 43 04.9 -0.6**
comp=Z,76nm,1.2s,mb5.7
ULC Ulcinj 85.51 321 ⇑*i*P **P 11 43 05.5 -0.3**
ULC Ulcinj 85.51 321 ⇑*i*P **P 11 43 05.5 -0.2**
FETA Feichten 85.52 329 *i*PcP **P 11 43 05.5 -0.2**
comp=Z,81nm,1.2s,mb5.8,SNR=22
HCY Herceg Novi 85.53 322 ⇑*i*P **P 11 43 05.5 -0.3**
HCY Herceg Novi 85.53 322 ⇑*i*P **P 11 43 05.5 -0.3**
222A Williams Famil 85.55 53 ⇓P **P 11 43 05.7 -0.5**
baz=85
YRE Yr Eifl 85.59 340 P **P 11 43 06.0 0.0**
YRE Yr Eifl 85.59 340⇑*e*P **P 11 43 06.0 0.0**
W26A Owens Ranch, T 85.61 49 ⇑P **P 11 43 06.7 +0.3**
baz=85,SNR=5.2
APE Apeiranthos 85.65 314 ⇑*i*P **P 11 43 05.3 -1.2**
DAVA Damuels 85.65 330 ⇑*i*PcP **P 11 43 06.2 -0.2**
comp=Z,158nm,1.2s,mb6.1,SNR=19
TIR Tirane 85.65 320 *e*P **P 11 43 06.6 +0.1**
TIR pmax pmax
comp=Z,122nm,1.0s,mb6.1

TIR MLR MLR
comp=Z,18µm,20.0s,MS6.5
TIR Tirane 85.65 320 *e*P **P 11 43 06.6 +0.1**
comp=Z,122nm,1.0s,mb6.1
TIR LR LR
comp=Z,18µm,20.0s,MS6.5
KBN Korca 85.71 319 *i*P **P 11 43 06.1 -0.7**
NEST Nestorio 85.72 319 P **P 11 43 06.1 -0.8**
123A Bell Site, Whi 85.73 52 ⇓P **P 11 43 07.0 0.0**
baz=86
CDF Champ du Feu 85.75 332⇑*i*P **P 11 43 06.4 -0.4**
comp=Z,359nm,1.3s,mb6.2
CDF Champ du Feu 85.75 332⇑*i*P **P 11 43 06.4 -0.4**
CDF pmax pmax
comp=Z,180nm,1.3s,mb6.1
CDF Champ du Feu 85.75 332⇑*i*P **P 11 43 06.4 -0.4**
comp=Z,180nm,1.3s,mb6.1
Z24A Sheeppen Canyo 85.82 51 ⇓P **P 11 43 07.4 -0.1**
baz=86,SNR=5.9
Y25A Mesa, Roswell 85.84 50 ⇑P **P 11 43 07.2 -0.4**
baz=86,SNR=7.5
LIBD Limburg 85.84 331⇑*e*P **P 11 43 07.2 -0.1**
DLF Lyons Farm 85.85 342⇑*i*P **P 11 43 06.4 -0.8**
DSB Dublin 85.86 342 *e*P **P 11 43 07.2 0.0**
comp=Z,228nm,1.6s,mb6.2
ATAL Atalanti 85.91 317 P **P 11 43 06.3 -1.5**
FELD Feldberg im Sc 85.91 331⇑*e*P **P 11 43 07.2 -0.4**
X26A CR and CF Fran 85.95 49 ⇑P **P 11 43 08.1 0.0**
baz=86,SNR=5.9
ECH Echery 85.96 332⇑*e*P **P 11 43 07.2 -0.6**
223A Chaparral, Ant 86.04 52 ⇑P **P 11 43 08.2 -0.4**
baz=86
W27A Bowe Ranch, En 86.04 48 ⇓P **P 11 43 08.6 +0.1**
baz=86,SNR=22
AGG Agios Georgios 86.05 317 P **P 11 43 06.4 -2.1**
AGG Agios Georgios 86.05 317 P **P 11 43 06.4 -2.1**
MCH1 Michaelchurch 86.07 339 P **P 11 43 07.2 -1.2**
MCH1 AMb AMB 11 43 08.4
comp=Z,232nm,1.7s,mb6.1
MCH1 AMS AMS 12 24 43.2
comp=Z,7µm,21.8s
MCH1 Michaelchurch 86.07 339 *e*P **P 11 43 07.2 -1.2**
MCH1 AMb AMB 11 43 08.4
comp=Z,232nm,1.7s,mb6.1
MCH1 AMS AMS 12 24 43.2
comp=Z,7µm,21.8s,MS6.0
HTR Trewern Hill 86.08 339 P **P 11 43 08.3 0.0**
HTR Trewern Hill 86.08 339⇑*e*P **P 11 43 08.3 0.0**
WOL Wolverton 86.16 338 P **P 11 43 07.3 -1.5**
WOL AMS AMS 12 26 05.9
comp=Z,7µm,17.1s
WOL Wolverton 86.16 338 *e*P **P 11 43 07.3 -1.5**
WOL AMS AMS 12 26 05.9
comp=Z,7µm,17.1s,MS6.1
124A Stringfield Ra 86.19 51 ⇓P **P 11 43 09.2 -0.1**
baz=86,SNR=11
Z25A Roswell 86.26 50 ⇓P **P 11 43 09.6 0.0**
baz=86,SNR=14
MOF Molkenrain 86.27 331⇑*e*P **P 11 43 08.9 -0.5**
X27A F and S Farms, 86.31 49 ⇑P **P 11 43 09.6 -0.3**
baz=86
HGH Gray Hill 86.34 339 P **P 11 43 08.8 -0.9**
HGH Gray Hill 86.34 339⇑*e*P **P 11 43 08.8 -0.9**
Y26A Elida 86.36 50 ⇓P **P 11 43 09.8 -0.3**
baz=86
THEF They Montfort 86.39 332⇑*e*P **P 11 43 08.9 -1.1**
HINF Hinteralfeld 86.40 332⇑*i*P **P 11 43 09.2 -0.9**
comp=Z,255nm,1.7s,mb5.9
HINF Hinteralfeld 86.40 332⇑*i*P **P 11 43 09.2 -0.9**
HINF pmax pmax
comp=Z,127nm,1.7s,mb5.9
HINF Hinteralfeld 86.40 332⇑*i*P **P 11 43 09.2 -0.9**
comp=Z,127nm,1.7s,mb5.9
HAU Haudompre 86.44 332⇑*i*P **P 11 43 09.5 -0.7**
comp=Z,217nm,1.4s,mb5.9
HAU *e*MLR MLR
comp=Z,10µm,19.2s,MS5.9
HAU Haudompre 86.44 332⇑*i*P **P 11 43 09.5 -0.7**
HAU pmax pmax
comp=Z,109nm,1.4s,mb5.9
HAU MLR MLR
comp=Z,10µm,19.3s,MS6.2
HAU Haudompre 86.44 332⇑*i*P **P 11 43 09.5 -0.7**
comp=Z,108nm,1.4s,mb5.9
HAU LR LR
comp=Z,10µm,19.3s,MS6.2
BBS Basel-Blauen 86.44 331⇑*e*P **P 11 43 09.4 -0.9**
SCIA State Center 86.48 38 *e*P **P 11 43 10.4 -0.2**
comp=Z,276nm,1.6s,mb6.2
SCIA LR LR
comp=Z,2µm,20.0s,MS5.5
MEZF Maizieres J'vi 86.50 333⇑*i*P **P 11 43 10.3 -0.2**
comp=Z,323nm,1.2s,mb6.1
MEZF Maizieres J'vi 86.50 333⇑*i*P **P 11 43 10.3 -0.2**
comp=Z,323nm,1.2s,mb6.4
224A Cornudas Mount 86.56 52 ⇓P **P 11 43 10.9 -0.3**
baz=86,SNR=14
KALE Kalithea 86.61 317 P **P 11 43 09.9 -1.3**
TRIZ Trizonia 86.66 317 P **P 11 43 09.6 -1.9**
SRN Sarande 86.66 319 *i*P **P 11 43 10.4 -1.1**
125A Gardner Draw, 86.71 51 ⇓P **P 11 43 11.7 -0.2**
baz=86,SNR=16
Z26A Caprock 86.71 50 ⇑P **P 11 43 11.3 -0.6**
baz=86,SNR=12
Y27A Causey 86.79 49 ⇓P **P 11 43 11.8 -0.5**
baz=87
LOMF Lomont 86.80 331⇑*e*P **P 11 43 11.5 -0.5**
LAKA Lakka 86.80 317 P **P 11 43 10.4 -1.8**
GUR Goura 86.82 317 P **P 11 43 10.2 -2.1**
KSU1 Kansas State U 86.83 42 PFAKE 11 43 20.0 +7.7
KSU1 LR LR
comp=Z,2µm,19.0s,MS5.6
KEK Kerkira 86.89 319 P **P 11 43 11.7 -0.9**
KEK Kerkira 86.89 319 P **P 11 43 11.7 -0.9**
MNTX Cornudas Mount 86.91 52 *e*P **P 11 43 12.5 -0.3**
comp=Z,19nm,1.3s,mb5.2
MNTX LR LR
comp=Z,1µm,22.0s,MS5.3
MSTX Muleshoe 86.97 49 ⇑P **P 11 43 12.5 -0.6**
baz=87
225A Deer Hill, Car 86.98 51 ⇑P **P 11 43 12.8 -0.4**
baz=87
AMTX Amarillo 86.99 48 *e*P **P 11 43 13.1 -0.1**
comp=Z,46nm,1.1s,mb5.6
AMTX LR LR
comp=Z,2µm,19.0s,MS5.5
LAST Lasithi 87.01 313 P **P 11 43 12.3 -1.0**
324A Moseley Ranch, 87.02 52 ⇓P **P 11 43 12.8 -0.6**
baz=87,SNR=7.0
126A Clayton Basin, 87.11 51 ⇓P **P 11 43 13.0 -0.9**
baz=87
LKD2 Lefkada island 87.11 318 P **P 11 43 12.0 -1.7**
JFWS Jewell Farm 87.13 36 *e*P **P 11 43 12.3 -1.4**
JFWS pmax pmax
comp=Z,202nm,1.9s,mb6.0
JFWS MLR MLR
comp=Z,3µm,21.0s,MS5.7
JFWS Jewell Farm 87.13 36 *e*P **P 11 43 12.3 -1.5**
comp=Z,202nm,1.9s,mb6.0
JFWS LR LR
comp=Z,3µm,21.0s,MS5.7
Z27A Tatum 87.15 50 ⇓P **P 11 43 13.3 -0.7**
baz=87,SNR=8.7
GDL2 Guadalupe Moun 87.20 51 *e*P **P 11 43 14.2 -0.1**
comp=Z,24nm,1.1s,mb5.3
325A Bean Ranch, Si 87.39 52 ⇑P **P 11 43 14.7 -0.5**
baz=87,SNR=9.9
HTL Hartland 87.39 340 AMS AMS 12 25 57.3
comp=Z,6µm,19.7s,MS6.0
226A Malaga, Loving 87.46 51 ⇑P **P 11 43 15.0 -0.6**
baz=87,SNR=6.2
CLNB Carlsbad 87.46 51 *e*P **P 11 43 15.2 -0.4**
comp=Z,4.7nm,1.1s,mb4.6
127A Arkansas Junct 87.50 50 ⇓P **P 11 43 14.8 -0.9**
baz=87
ITM Ithomi 87.59 316 P **P 11 43 13.7 -2.4**
ITM Ithomi 87.59 316 P **P 11 43 13.7 -2.4**
CABF La Chapelle 87.69 331⇑*i*P **P 11 43 15.9 -0.5**
comp=Z,181nm,1.6s,mb5.8
CABF La Chapelle 87.69 331⇑*i*P **P 11 43 15.9 -0.5**
CABF pmax pmax
comp=Z,91nm,1.6s,mb5.8
CABF La Chapelle 87.69 331⇑*i*P **P 11 43 15.9 -0.5**
comp=Z,91nm,1.6s,mb5.8
DYA Yadsworthy 87.73 339 P **P 11 43 16.1 -0.4**
DYA AMb AMB 11 43 17.0
comp=Z,131nm,1.7s,mb5.9
DYA AMS AMS 12 25 45.6
comp=Z,7µm,20.1s
DYA Yadsworthy 87.73 339 *e*P **P 11 43 16.1 -0.4**
DYA AMb AMB 11 43 17.0
comp=Z,131nm,1.7s,mb5.9
DYA AMS AMS 12 25 45.6
comp=Z,7µm,20.1s,MS6.1
425A Indio Mountain 87.77 52 ⇓P **P 11 43 16.6 -0.5**
baz=88
VLC Villacollemand 87.95 327 PFAKE 11 43 30.0 +12
VLC LR LR
comp=Z,8µm,19.0s,MS6.1
LOR Lormes 87.97 333⇑*i*P **P 11 43 17.1 -0.6**
comp=Z,356nm,1.3s,mb6.1
LOR *e*MLR MLR
comp=Z,5µm,17.2s,MS5.7
LOR Lormes 87.97 333⇑*i*P **P 11 43 17.1 -0.6**
LOR pmax pmax
comp=Z,178nm,1.3s,mb6.1
LOR MLR MLR
comp=Z,5µm,17.3s,MS6.0
LOR Lormes 87.97 333⇑*i*P **P 11 43 17.1 -0.6**
comp=Z,178nm,1.3s,mb6.1
LOR LR LR
comp=Z,5µm,17.3s,MS6.0
VAL Valentia 87.99 343⇓*i*P **P 11 43 13.8 -3.8**
VAL Valentia 87.99 343⇓*i*S S 11 54 03.0 +4.1
AQU L'Aquila 88.04 325 *e*P **P 11 43 17.5 -0.6**
AQU pmax pmax
comp=Z,138nm,1.4s,mb6.0
AQU MLR MLR
comp=Z,9µm,21.0s,MS6.2
AQU L'Aquila 88.04 325 *e*P **P 11 43 17.5 -0.6**
comp=Z,138nm,1.4s,mb6.0
AQU LR LR
comp=Z,9µm,21.0s,MS6.2
326A Caldwell Ranch 88.05 52 ⇓P **P 11 43 17.7 -0.6**
baz=88
TBI Tubuai 88.16 121 *e*PP PP 11 46 43.6 -2.7
comp=Z,235nm,32.5s
TBI *e*S S 11 53 56.4 -4.8
comp=Z,2µm,32.0s
TBI *e*LR LR 12 11 02.1
comp=Z,7µm,23.0s,baz=312
FLN La Foliniere 88.17 336⇑*i*P **P 11 43 17.9 -0.7**
comp=Z,327nm,1.4s,mb6.1
FLN *e*MLR MLR
comp=Z,18µm,19.5s,MS6.2
FLN La Foliniere 88.17 336⇑*i*P **P 11 43 17.9 -0.7**
FLN pmax pmax
comp=Z,164nm,1.4s,mb6.1
FLN MLR MLR
comp=Z,18µm,19.5s,MS6.5
FLN La Foliniere 88.17 336⇑*i*P **P 11 43 17.9 -0.7**
comp=Z,164nm,1.4s,mb6.1
FLN LR LR
comp=Z,18µm,19.5s,MS6.5
LDF La Druitiere 88.20 336⇑*i*P **P 11 43 18.2 -0.5**
comp=Z,123nm,1.4s,mb5.6
LDF La Druitiere 88.20 336⇑*i*P **P 11 43 18.2 -0.5**
LDF pmax pmax
comp=Z,62nm,1.4s,mb5.7
LDF La Druitiere 88.20 336⇑*i*P **P 11 43 18.2 -0.5**
comp=Z,62nm,1.4s,mb5.6
SSF Saint Saulge 88.28 333⇑*i*P **P 11 43 18.6 -0.5**
comp=Z,151nm,1.3s,mb5.8
SSF Saint Saulge 88.28 333⇑*i*P **P 11 43 18.6 -0.5**
SSF pmax pmax
comp=Z,75nm,1.3s,mb5.8
SSF Saint Saulge 88.28 333⇑*i*P **P 11 43 18.6 -0.5**
comp=Z,75nm,1.3s,mb5.8
CCA1 Carnmenellis 88.32 340 AMS AMS 12 28 04.0
comp=Z,7µm,16.4s,MS6.1
JSA Saint Aubin 88.33 337 P **P 11 43 18.8 -0.5**
JSA AMb AMB 11 43 19.9
comp=Z,133nm,1.7s,mb5.9
JSA AMS AMS 12 27 35.3
comp=Z,10µm,17.2s
JSA Saint Aubin 88.33 337⇑*e*P **P 11 43 18.8 -0.5**
JSA AMb AMB 11 43 19.9
comp=Z,133nm,1.7s,mb5.9
JSA AMS AMS 12 27 35.3
comp=Z,10µm,17.2s,MS6.3
LPL La Plagne 88.35 330⇑*i*P **P 11 43 19.4 -0.1**
comp=Z,126nm,1.3s,mb5.7
LPL La Plagne 88.35 330⇑*i*P **P 11 43 19.4 -0.1**
LPL pmax pmax
comp=Z,63nm,1.3s,mb5.7
LPL La Plagne 88.35 330⇑*i*P **P 11 43 19.4 -0.1**
comp=Z,63nm,1.3s,mb5.7
LPG La Plagne 88.36 330⇑*i*P **P 11 43 19.5 0.0**
comp=Z,220nm,1.6s,mb5.8
LPG La Plagne 88.36 330⇑*i*P **P 11 43 19.5 0.0**
LPG pmax pmax
comp=Z,110nm,1.6s,mb5.8
LPG La Plagne 88.36 330⇑*i*P **P 11 43 19.5 0.0**
comp=Z,110nm,1.6s,mb5.8
HYF Humbligny 88.41 334⇑*i*P **P 11 43 19.8 +0.1**
SMF Signal de Mont 88.51 333⇑*i*P **P 11 43 19.7 -0.5**
comp=Z,429nm,1.6s,mb6.2
SMF Signal de Mont 88.51 333⇑*i*P **P 11 43 19.7 -0.5**
SMF pmax pmax
comp=Z,215nm,1.6s,mb6.2
SMF Signal de Mont 88.51 333⇑*i*P **P 11 43 19.7 -0.5**
comp=Z,215nm,1.6s,mb6.2
AVF Avril sur Loir 88.56 333⇑*i*P **P 11 43 20.1 -0.4**
comp=Z,416nm,1.5s,mb6.2
AVF Avril sur Loir 88.56 333⇑*i*P **P 11 43 20.1 -0.4**
AVF pmax pmax
comp=Z,208nm,1.5s,mb6.2
AVF Avril sur Loir 88.56 333⇑*i*P **P 11 43 20.1 -0.4**
comp=Z,208nm,1.5s,mb6.2
GRR Gorron 88.62 336⇑*i*P **P 11 43 20.4 -0.3**
comp=Z,416nm,1.4s,mb6.3
GRR Gorron 88.62 336⇑*i*P **P 11 43 20.4 -0.3**
GRR pmax pmax
comp=Z,208nm,1.4s,mb6.3
GRR Gorron 88.62 336⇑*i*P **P 11 43 20.4 -0.3**
comp=Z,208nm,1.4s,mb6.3
427A Hayter Ranch, 88.72 52 ⇓P **P 11 43 21.0 -0.5**
baz=88
328A Wristen Ranch, 88.73 51 ⇑P **P 11 43 21.0 -0.6**
baz=88
BNI Bardonecchia 88.76 330 *e*P **P 11 43 21.1 -0.3**
BNI pmax pmax
comp=Z,34nm,1.0s,mb5.6
BNI MLR MLR
comp=Z,9µm,20.0s,MS6.2
BNI Bardonecchia 88.76 330 *e*P **P 11 43 21.1 -0.3**
comp=Z,34nm,1.0s,mb5.6
BNI LR LR
comp=Z,9µm,20.0s,MS6.2
WMOK Wichita Mounta 88.78 46 *e*P **P 11 43 21.0 -0.7**
WMOK *e**PP pP 11 43 30.5 -0.7
WMOK pmax pmax
comp=Z,40nm,1.4s,mb5.6
WMOK MLR MLR
comp=Z,1µm,19.0s,MS5.4
WMOK Wichita Mounta 88.78 46 *e*P **P 11 43 21.0 -0.7**
comp=Z,40nm,1.4s,mb5.6
WMOK *e*pP pP 11 43 30.5 -0.7
WMOK LR LR
comp=Z,1µm,19.0s,MS5.4
526A Mary Lane Ranc 88.83 52 ⇑P **P 11 43 21.7 -0.4**
baz=89
BGF Bois d'Agland 88.94 333⇑*i*P **P 11 43 22.0 -0.3**
comp=Z,198nm,1.6s,mb5.9
BGF Bois d'Agland 88.94 333⇑*i*P **P 11 43 22.0 -0.3**
BGF pmax pmax
comp=Z,99nm,1.6s,mb5.9
BGF Bois d'Agland 88.94 333⇑*i*P **P 11 43 22.0 -0.3**
comp=Z,99nm,1.6s,mb5.9
527A Woodward Ranch 89.08 52 ⇓P **P 11 43 22.8 -0.4**
baz=89
626A Big Bend Ranch 89.15 53 ⇑P **P 11 43 22.9 -0.7**
baz=89
PLDF La Plantade 89.16 332⇑*e*P **P 11 43 23.2 -0.1**
ORIF Oris-en-Rattie 89.18 331⇑*i*P **P 11 43 23.1 -0.3**
comp=Z,63nm,1.1s,mb5.5
ORIF *e*MLR MLR
comp=Z,9µm,21.5s,MS5.8
ORIF Oris-en-Rattie 89.18 331⇑*i*P **P 11 43 23.1 -0.3**
ORIF pmax pmax
comp=Z,32nm,1.1s,mb5.6
ORIF Oris-en-Rattie 89.18 331⇑*i*P **P 11 43 23.1 -0.3**
comp=Z,32nm,1.1s,mb5.6
428A Kincaid Ranch, 89.26 51 ⇑P **P 11 43 24.0 -0.1**
baz=89
AGO Saint Agoulin 89.27 333⇑*e*P **P 11 43 23.7 -0.1**
SGMF Saint Gilles 89.27 337⇑*i*P **P 11 43 23.6 -0.2**
comp=Z,498nm,1.8s,mb6.2
SGMF Saint Gilles 89.27 337⇑*i*P **P 11 43 23.6 -0.2**
SGMF pmax pmax
comp=Z,249nm,1.8s,mb6.2
SGMF Saint Gilles 89.27 337⇑*i*P **P 11 43 23.6 -0.2**
comp=Z,249nm,1.8s,mb6.2
SAOF Saorge 89.28 329 *e*P **P 11 43 22.6 -1.3**
AUTN L'Aution 89.33 329⇑*e*P **P 11 43 23.0 -1.1**
TOUF Mont Tournerai 89.38 329⇑*e*P **P 11 43 23.4 -1.0**
SSB Saint Sauveur 89.40 332 *e*P **P 11 43 23.3 -1.1**
SSB pmax pmax
comp=Z,39nm,1.4s,mb5.5
SSB Saint Sauveur 89.40 332 *e*P **P 11 43 23.3 -1.2**
comp=Z,39nm,1.4s,mb5.5
TCF Toulx Ste Croi 89.40 333⇑*i*P **P 11 43 24.3 -0.1**
comp=Z,234nm,1.7s,mb5.9
TCF Toulx Ste Croi 89.40 333⇑*i*P **P 11 43 24.3 -0.1**
TCF pmax pmax
comp=Z,117nm,1.7s,mb5.9
TCF Toulx Ste Croi 89.40 333⇑*i*P **P 11 43 24.3 -0.1**
comp=Z,117nm,1.7s,mb5.9
HDIL Hopedale 89.42 37 PFAKE 11 43 40.0 +15
HDIL LR LR
comp=Z,2µm,20.0s,MS5.6
ROSF Rostrenen 89.42 338⇑*i*P **P 11 43 24.4 -0.1**
comp=Z,396nm,1.6s,mb6.2
ROSF Rostrenen 89.42 338⇑*i*P **P 11 43 24.4 -0.1**
ROSF pmax pmax
comp=Z,198nm,1.6s,mb6.2
ROSF Rostrenen 89.42 338⇑*i*P **P 11 43 24.4 -0.1**
comp=Z,198nm,1.6s,mb6.2
SBF Sospel 89.43 329⇑*i*P **P 11 43 23.3 -1.3**
comp=Z,172nm,1.3s,mb5.9
SBF Sospel 89.43 329⇑*i*P **P 11 43 23.3 -1.3**
SBF pmax pmax
comp=Z,86nm,1.3s,mb5.9
SBF Sospel 89.43 329⇑*i*P **P 11 43 23.3 -1.3**
comp=Z,86nm,1.3s,mb5.9
PYM Petit Puy Mans 89.57 333⇑*e*P **P 11 43 25.1 -0.1**
528A Cox Ranch, San 89.58 52 ⇑P **P 11 43 25.3 -0.3**
baz=89
TXAR Lajitas Array 89.59 53 P **P 11 43 25.1 -0.5**
comp=Z,3.4nm,0.7s,mb4.8,baz=302,slow=2.9,SNR=39
TXAR LR LR 12 16 40.4
comp=Z,3µm,21.9s,MS5.6,baz=10.0,slow=31
BST Brest 89.69 338 *e*P **P 11 43 24.3 -1.4**
627A Terlingua Ranc 89.69 53 ⇓P **P 11 43 25.8 -0.3**
baz=90
VIVF Saint-Julien-l 89.70 331⇑*i*P **P 11 43 25.4 -0.5**
comp=Z,152nm,1.6s,mb5.8
VIVF Saint-Julien-l 89.70 331⇑*i*P **P 11 43 25.4 -0.5**
VIVF pmax pmax
comp=Z,76nm,1.6s,mb5.8
VIVF Saint-Julien-l 89.70 331⇑*i*P **P 11 43 25.4 -0.5**
comp=Z,76nm,1.6s,mb5.8
CALN Calern 89.75 329 *e*P **P 11 43 25.0 -1.1**
QUIF Quistinic 89.76 337⇑*i*P **P 11 43 25.7 -0.4**
comp=Z,167nm,1.6s,mb5.8
QUIF Quistinic 89.76 337⇑*i*P **P 11 43 25.7 -0.4**
QUIF pmax pmax
comp=Z,83nm,1.6s,mb5.8
QUIF Quistinic 89.76 337⇑*i*P **P 11 43 25.7 -0.4**
comp=Z,83nm,1.6s,mb5.8
PGF Pioggiola 89.85 327⇑*i*P **P 11 43 25.4 -1.2**
comp=Z,215nm,1.4s,mb6.0
PGF Pioggiola 89.85 327⇑*i*P **P 11 43 25.4 -1.2**
PGF pmax pmax
comp=Z,108nm,1.4s,mb6.0
PGF Pioggiola 89.85 327⇑*i*P **P 11 43 25.4 -1.2**
comp=Z,108nm,1.4s,mb6.0
LBL Lubilhac 89.92 332 *e*P **P 11 43 26.7 -0.2**
MFF Saint Martin d 89.95 335⇑*i*P **P 11 43 26.9 -0.1**
comp=Z,263nm,1.4s,mb6.1
MFF Saint Martin d 89.95 335⇑*i*P **P 11 43 26.9 -0.1**
MFF pmax pmax
comp=Z,132nm,1.4s,mb6.1
MFF Saint Martin d 89.95 335⇑*i*P **P 11 43 26.9 -0.1**
comp=Z,132nm,1.4s,mb6.1
628A Black Gap, Mar 89.98 52 ⇓P **P 11 43 26.9 -0.6**
baz=90
CEL Celeste 89.99 321 *e*P **P 11 43 26.1 -1.3**
comp=Z,70nm,0.8s,mb6.0
CEL LR LR
comp=Z,8µm,19.0s,MS6.2
FRF La Foret Royal 90.00 329⇑*i*P **P 11 43 26.0 -1.3**
comp=Z,88nm,1.3s,mb5.6
FRF La Foret Royal 90.00 329⇑*i*P **P 11 43 26.0 -1.3**
FRF pmax pmax
comp=Z,44nm,1.3s,mb5.6
FRF La Foret Royal 90.00 329⇑*i*P **P 11 43 26.0 -1.3**
comp=Z,44nm,1.3s,mb5.6
MSEY Mahe Island 90.09 264 PFAKE 11 43 40.0 +12
MSEY LR LR
comp=Z,4µm,19.0s,MS5.9
SMRF Simiane la Rot 90.09 330⇑*i*P **P 11 43 27.2 -0.5**
comp=Z,125nm,1.5s,mb5.7
SMRF Simiane la Rot 90.09 330⇑*i*P **P 11 43 27.2 -0.5**
comp=Z,125nm,1.5s,mb6.0
LMR La Mourre 90.25 329 *e*P **P 11 43 27.4 -1.0**
comp=Z,171nm,1.4s,mb5.9
LMR La Mourre 90.25 329 *e*P **P 11 43 27.4 -1.0**
LMR pmax pmax
comp=Z,85nm,1.4s,mb5.9
LMR La Mourre 90.25 329 *e*P **P 11 43 27.4 -1.0**
comp=Z,85nm,1.4s,mb5.9
CCM Cathedral Cave 90.39 39 *e*P **P 11 43 28.8 -0.4**
CCM pmax pmax
comp=Z,45nm,1.2s,mb5.7
CCM MLR MLR
comp=Z,2µm,19.0s,MS5.6
CCM Cathedral Cave 90.39 39 *e*P **P 11 43 28.8 -0.5**
comp=Z,45nm,1.2s,mb5.7
CCM LR LR
comp=Z,2µm,19.0s,MS5.6
RJF Les Rejaudoux 90.49 333⇑*i*P **P 11 43 29.4 -0.1**
comp=Z,170nm,1.4s,mb5.9
RJF *e*MLR MLR
comp=Z,5µm,18.0s,MS5.7
RJF Les Rejaudoux 90.49 333⇑*i*P **P 11 43 29.4 -0.1**
RJF pmax pmax
comp=Z,85nm,1.4s,mb5.9
RJF MLR MLR
comp=Z,5µm,18.0s,MS6.0
RJF Les Rejaudoux 90.49 333⇑*i*P **P 11 43 29.4 -0.1**
comp=Z,85nm,1.4s,mb5.9
RJF LR LR
comp=Z,5µm,18.0s,MS6.0
AAM Ann Arbor 90.56 32 PFAKE 11 43 40.0 +10
AAM LR LR
comp=Z,2µm,19.0s,MS5.6
CAF Calviac 90.62 333⇑*i*P **P 11 43 30.3 +0.2**
comp=Z,100nm,1.1s,mb5.7
CAF Calviac 90.62 333⇑*i*P **P 11 43 30.3 +0.2**
CAF pmax pmax
comp=Z,50nm,1.1s,mb5.8
CAF Calviac 90.62 333⇑*i*P **P 11 43 30.3 +0.2**
comp=Z,50nm,1.1s,mb5.8
LASF Ste Croix 90.68 331⇑*i*P **P 11 43 30.1 -0.3**
comp=Z,99nm,1.3s,mb5.7
FVM French Village 90.86 39 *e*P **P 11 43 30.8 -0.6**
FVM *e**PP pP 11 43 40.2 -0.7
FVM pmax pmax
comp=Z,5.0nm,0.8s,mb4.9
FVM French Village 90.86 39 *e*P **P 11 43 30.8 -0.6**
comp=Z,5.2nm,0.8s,mb4.9
FVM *e*pP pP 11 43 40.2 -0.7
LFF La Frestale 91.09 334⇑*i*P **P 11 43 32.4 +0.1**
comp=Z,404nm,1.6s,mb6.2
LFF La Frestale 91.09 334⇑*i*P **P 11 43 32.4 +0.1**
LFF pmax pmax
comp=Z,202nm,1.6s,mb6.2
LFF La Frestale 91.09 334⇑*i*P **P 11 43 32.4 +0.1**
comp=Z,202nm,1.6s,mb6.2
JCT Junction City 91.20 50 *e*P **P 11 43 32.2 -0.9**
JCT pmax pmax
comp=Z,17nm,0.9s,mb5.4
JCT MLR MLR
comp=Z,2µm,22.0s,MS5.5
JCT Junction City 91.20 50 *e*P **P 11 43 32.2 -0.9**
comp=Z,17nm,0.9s,mb5.4
JCT LR LR
comp=Z,2µm,22.0s,MS5.5
OLIL Olney 91.42 37 *e*P **P 11 43 33.5 -0.5**

comp=Z,28nm,0.2s,mb6.2
SIUC Southern Illin 91.67 38 *e*P **P 11 43 34.8 -0.4**
comp=Z,86nm,1.4s,mb5.9
BLO Bloomington 91.81 36 *e*P **P 11 43 35.7 -0.1**
MIAR Mount Ida 91.83 43 *e*P **P 11 43 35.1 -0.9**
MIAR *e**PP pP 11 43 44.9 -0.6
MIAR pmax pmax
comp=Z,73nm,1.4s,mb5.8
MIAR MLR MLR
comp=Z,2μm,21.0s,MS5.6
MIAR Mount Ida 91.83 43 *e*P **P 11 43 35.1 -0.9**
comp=Z,73nm,1.4s,mb5.8
MIAR *e*pP pP 11 43 44.9 -0.6
MIAR LR LR
comp=Z,2μm,21.0s,MS5.6
MTLF Montolieu 91.92 332⇑ *i*P **P 11 43 36.1 -0.1**
comp=Z,145nm,1.6s,mb5.8
MTLF Montolieu 91.92 332⇑ *i*P **P 11 43 36.1 -0.1**
MTLF pmax pmax
comp=Z,73nm,1.6s,mb5.8
MTLF Montolieu 91.92 332⇑ *i*P **P 11 43 36.1 -0.1**
comp=Z,73nm,1.6s,mb5.8
LONY Lake Ozonia 92.06 25 PFAKE 11 43 50.0 +13
LONY LR LR
comp=Z,3μm,20.0s,MS5.7
VSL Villasalto 92.15 325 PFAKE 11 43 50.0 +13
VSL LR LR
comp=Z,4μm,20.0s,MS5.8
ERPA Erie 92.22 30 *e*P **P 11 43 36.4 -1.2**
ERPA LR LR
comp=Z,3μm,19.0s,MS5.7
WDD Wield Dalam 92.53 320 PFAKE 11 43 50.0 +11
WDD LR LR
comp=Z,6μm,19.0s,MS6.1
ACSO Alum Creek Sta 92.55 33 *e*P **P 11 43 39.1 -0.1**
ACSO LR LR
comp=Z,3μm,20.0s,MS5.7
NCB Newcomb 92.75 25 *e*P **P 11 43 39.8 -0.2**
comp=Z,16nm,1.0s,mb5.4
NCB LR LR
comp=Z,3μm,21.0s,MS5.7
EPF Esparros 92.89 333⇑ *i*P **P 11 43 40.1 -0.6**
comp=Z,100nm,1.6s,mb5.7
EPF Esparros 92.89 333⇑ *i*P **P 11 43 40.1 -0.6**
EPF pmax pmax
comp=Z,50nm,1.6s,mb5.7
EPF Esparros 92.89 333⇑ *i*P **P 11 43 40.1 -0.6**
comp=Z,50nm,1.6s,mb5.7
RESF Ens 93.08 333⇑ *e*P **P 11 43 42.2 +0.6**
PKME Peaks-Kenny Pk 93.16 22 PFAKE 11 43 50.0 +8.1
PKME LR LR
comp=Z,3μm,20.0s,MS5.8
LBNH Lisbon 93.28 24 PFAKE 11 43 50.0 +7.6
LBNH LR LR
comp=Z,3μm,19.0s,MS5.7
NATX Nacogdoches 93.30 46 PFAKE 11 43 50.0 +7.2
NATX LR LR
comp=Z,3μm,19.0s,MS5.7
ETSF Etsaut 93.32 333⇑ *i*P **P 11 43 42.9 +0.2**
comp=Z,48nm,1.2s,mb5.5
ETSF Etsaut 93.32 333⇑ *i*P **P 11 43 42.9 +0.2**
ETSF pmax pmax
comp=Z,24nm,1.2s,mb5.5
ETSF Etsaut 93.32 333⇑ *i*P **P 11 43 42.9 +0.2**
comp=Z,24nm,1.2s,mb5.5
SJPF Ste Jean 93.37 334 *e*P **P 11 43 42.6 -0.3**
comp=Z,60nm,1.6s,mb5.5
SJPF Ste Jean 93.37 334 *e*P **P 11 43 42.6 -0.3**
SJPF pmax pmax
comp=Z,30nm,1.6s,mb5.5
SJPF Ste Jean 93.37 334 *e*P **P 11 43 42.6 -0.3**
comp=Z,30nm,1.6s,mb5.5
WVT Waverly 93.60 38 *e*P **P 11 43 43.1 -1.0**
WVT pmax pmax
comp=Z,34nm,1.6s,mb5.5
WVT MLR MLR
comp=Z,2μm,20.0s,MS5.7
WVT Waverly 93.60 38 *e*P **P 11 43 43.1 -1.0**
comp=Z,34nm,1.6s,mb5.5
WVT LR LR
comp=Z,2μm,20.0s,MS5.7
BINY Binghamton 93.68 27 PFAKE 11 44 00.0 +16
BINY LR LR
comp=Z,3μm,19.0s,MS5.7
HKT Hockley 93.96 47 PFAKE 11 44 00.0 +14
HKT LR LR
comp=Z,2μm,19.0s,MS5.6
OXF Oxford 94.07 40 PFAKE 11 44 00.0 +14
OXF LR LR
comp=Z,2μm,19.0s,MS5.6
MCWV Mont Chateau 94.35 31 PFAKE 11 44 00.0 +13
MCWV LR LR
comp=Z,3μm,22.0s,MS5.8
KVTX Kingsville 94.46 50 PFAKE 11 44 00.0 +12
KVTX LR LR
comp=Z,1μm,19.0s,MS5.5
VBMS Vicksburg 95.26 43 PFAKE 11 44 00.0 +8.2
VBMS LR LR
comp=Z,3μm,20.0s,MS5.7
SWET Sewanee 95.26 38 *e*P **P 11 43 50.8 -1.0**
CMAH Djebel Manchou 95.39 325 P PP 11 47 44.6 +2.5
ABSA Djebel Ababsia 95.65 325 P PP 11 47 43.4 -0.7
CKFL Kef-Lekhel 95.89 325 P PP 11 47 47.6 +1.6
TKL Tuckaleechee C 95.94 36 *e*P **P 11 43 52.7 -2.1**
ELN Prospectdale 96.01 33 *e*P **P 11 43 54.9 -0.2**
CASM Ain Smara 96.11 325 P PP 11 47 48.6 +0.9
DFRA Djebel Bou Aff 96.15 326 P PP 11 47 50.1 +2.1
BLA Blacksburg 96.17 33 PFAKE 11 44 10.0 +14
BLA LR LR
comp=Z,2μm,19.0s,MS5.7
PBRG Braganca 96.37 337 *e*P **P 11 43 56.4 -0.2**
LRAL Lakeview Retre 96.47 40 PFAKE 11 44 10.0 +13
LRAL LR LR
comp=Z,2μm,20.0s,MS5.6
CBN Corbin 96.60 30 PFAKE 11 44 10.0 +12
CBN LR LR
comp=Z,2μm,21.0s,MS5.6
MVO Moncorvo 97.04 337 *e*LQ 12 13 40.1
MVO *e*LR LR 12 23 43.6
comp=Z,7μm,22.5s
ESDC Sonseca Array 97.37 334 P **P 11 44 00.6 -0.6**
comp=Z,5.8nm,1.0s,mb5.0,baz=25,slow=3.2,SNR=9.2
ESDC LR LR 12 32 41.0
comp=Z,8μm,19.9s,MS6.2,baz=25,slow=38
ESLA Sonseca Array 97.37 334 PFAKE 11 44 10.0 +8.8
ESLA LR LR
comp=Z,51μm,20.0s,MS7.0
PAB San Pablo 97.62 334 PFAKE 11 44 10.0 +7.7
PAB LR LR
comp=Z,9μm,20.0s,MS6.3
MTE Manteigas 97.89 337 *e*P **P 11 44 02.4 -1.2**
MTE Manteigas 97.89 337 *i*PP PP 11 48 03.0 +1.9
MTE *e*LQ 12 13 54.8
MTE *e*LR LR 12 23 39.8
comp=Z,9μm,17.6s
MTE Manteigas 97.89 337 PFAKE 11 44 10.0 +6.4
MTE LR LR
comp=Z,7μm,21.0s,MS6.1
GOGA Godfrey 97.92 37 PFAKE 11 44 10.0 +6.2
GOGA LR LR
comp=Z,2μm,19.0s,MS5.7
BRAL Brewton 98.04 41 PFAKE 11 44 20.0 +16
BRAL LR LR
comp=Z,2μm,20.0s,MS5.6
RKT Rikitea 98.33 113 *e*PP PP 11 48 02.3 -3.8
comp=Z,402nm,32.8s
RKT *e*SS SS 12 02 12.1 -4.4
comp=Z,2μm,26.5s
RKT *e*LR LR 12 15 59.7
comp=Z,7μm,24.8s,baz=308
PCBR Castelo Branco 98.38 337 *i*PP PP 11 48 06.0 +1.1
PMRV Marv??o 98.73 337 *e*P **P 11 44 08.1 +0.8**
PMRV Marv??o 98.73 337 *i*PP PP 11 48 09.0 +1.4
PMRV *e*LQ 12 17 00.0
PMRV *e*LR LR 12 23 48.3
comp=Z,6μm,22.6s
CNNC Cliffs of the 98.92 32 PFAKE 11 44 20.0 +12
CNNC LR LR
comp=Z,2μm,21.0s,MS5.5
PESTR Estremoz 99.31 336 *e*P **P 11 44 09.5 -0.4**
PESTR Estremoz 99.31 336 *e*PP PP 11 48 14.4 +2.4
PESTR *e*LQ 12 14 32.0
PESTR *e*LR LR 12 24 05.0
comp=Z,7μm,12.6s
NHSC New Hope 99.71 35 PFAKE 11 44 20.0 +8.3
NHSC LR LR
comp=Z,3μm,20.0s,MS5.8
PMAFR Mafra 99.75 338 *e*LQ 12 17 13.0
PMAFR *e*LR LR 12 24 22.9
comp=Z,7μm,16.6s
PBAR Barrancos 99.76 336 *e*P Pdif 11 44 12.9 +1.0
PBAR Barrancos 99.76 336 *i*PP PP 11 48 16.7 +1.3
PBAR *e*LQ 12 16 35.7
PBAR *e*LR LR 12 25 12.4
comp=Z,9μm,18.6s
EVOP Sao Brissos 99.78 337 *e*P Pdif 11 44 12.2 +0.2
EVOP *e*PP PP 11 48 16.8 +1.2
EVOP *e*S SKSac 11 54 47.3 -1.4
EVOP *e*S SKSac 11 54 47.5 -1.2
EVOP *e*SS SS 12 02 37.3 +3.2
EVOP AMS AMS 12 34 55.6
comp=Z,7μm,19.0s,MS6.2
EVOP Sao Brissos 99.78 337 *e*P Pdif 11 44 12.1 +0.1
EVOP *e* 11 48 16.8
EVOP *e*S SKSac 11 54 47.5 -1.2
EVOP *e*SS SS 12 02 37.2 +3.2
LIS Lisbon 99.93 338 *e*P Pdif 11 44 13.6 +1.0
LIS *e*PP PP 11 48 17.9 +1.2
LIS AMS AMS 12 35 39.7
comp=N,7μm,16.8s
LIS Lisbon 99.93 338 *e*P Pdif 11 44 13.6 +0.9
LIS *e* 11 48 17.8
PCVE Castro Verde 100.58 336 *e*P Pdif 11 44 16.9 +1.4
PCVE Castro Verde 100.58 336 *i*PP PP 11 48 22.6 +1.0
PCVE *e*LQ 12 16 55.0
PCVE *e*LR LR 12 24 25.4
comp=N,7μm,30.7s
PVAQ Vaqueiros 100.68 336 *e*P Pdif 11 44 17.2 +1.2
PVAQ Vaqueiros 100.68 336 *i*PP PP 11 48 23.8 +1.4
PVAQ *e*LQ 12 16 58.0
PVAQ *e*LR LR 12 24 27.0
comp=N,7μm,23.1s
PBDV Barranco-do-Ve 100.90 336 *e*P Pdif 11 44 16.4 -0.6
PBDV Barranco-do-Ve 100.90 336 *e*PP PP 11 48 25.8 +1.8
PBDV *e*LQ 12 17 51.1
PBDV *e*LR LR 12 23 57.9
comp=N,7μm,27.7s
SFS San Fernando 101.03 334 PFAKE 11 44 30.0 +12
SFS LR LR
comp=Z,22μm,20.0s,MS6.7
MORF Marmelete 101.07 337 *e*P Pdif 11 44 18.1 +0.4
MORF Marmelete 101.07 337 *e*PP PP 11 48 27.6 +2.3
MORF *e*LQ 12 18 13.0
MORF *e*LR LR 12 26 08.7
comp=Z,7μm,18.4s
MORF Marmelete 101.07 337 *e*P Pdif 11 44 17.0 -0.7
MORF *e* 11 48 26.6
MORF *e*S SKSac 11 54 54.1 -0.9
MORF *e*SS SS 12 02 54.8 +2.9
PFVI Vila Bisbo 101.28 337 *e*P Pdif 11 44 20.2 +1.5
PFVI Vila Bisbo 101.28 337 *e*PP PP 11 48 29.2 +2.2
PFVI *e*LQ 12 17 26.3
PFVI *e*LR LR 12 22 11.9
comp=Z,5μm,13.2s
KMBO Kilima Mbogo 102.48 278 P Pdif 11 44 24.3 +0.3
comp=Z,0.7nm,0.3s,baz=182,slow=24,SNR=2.9
KMBO Kilima Mbogo 102.48 278 P Pdif 11 44 24.3 +0.3
KMBO LR LR
comp=Z,2μm,19.0s,MS5.7
PTCN Pitcairn Islan 103.08 112 PFAKE 11 44 40.0 +13
PTCN LR LR
comp=Z,4μm,22.0s,MS5.9
DWPF Disney 103.26 39 PFAKE 11 44 40.0 +13
DWPF LR LR
comp=Z,2μm,19.0s,MS5.6
DRV Dumont d'Urvil 103.56 181 SKKS SKSac 11 55 19.0 +14
DRV SS SS 12 03 21.0 -6.7
DRV L 12 20 00.0
TEIG Tepich 105.75 49 PFAKE 11 49 00.0 +8.3
TEIG LR LR
comp=Z,1μm,21.0s,MS5.4
CASY Casey 105.98 193 PFAKE 11 49 00.0 +9.4
CASY LR LR
comp=Z,1μm,20.0s,MS5.5
BBSR BB Station 106.40 23 PFAKE 11 49 00.0 +7.3
BBSR LR LR
comp=Z,2μm,22.0s,MS5.5
MBAR Mbarara 107.27 283 PFAKE 11 49 10.0 +15
MBAR LR LR
comp=Z,857nm,19.0s,MS5.3
TGUH Tegucigalpa,Un 111.06 52 PFAKE 11 49 10.0 +8.3
TGUH LR LR
comp=Z,1μm,20.0s,MS5.5
GTBY Guantanamo Bay 113.23 38 PFAKE 11 49 20.0 +14
GTBY LR LR
comp=Z,1μm,19.0s,MS5.5
MTDJ Mount Denham 113.42 41 PFAKE 11 49 20.0 +14
MTDJ LR LR
comp=Z,2μm,21.0s,MS5.6
GRTK Grand Turk 113.74 34 PFAKE 11 49 20.0 +13
GRTK LR LR
comp=Z,2μm,19.0s,MS5.8
JTS JuntasAbangare 115.39 53 PFAKE 11 49 20.0 +10
JTS LR LR
comp=Z,1μm,19.0s,MS5.5
SBA Scott Base 115.77 174 PFAKE 11 49 20.0 +11
SBA LR LR
comp=Z,900nm,20.0s,MS5.4
SDDR Presa de Saban 115.87 35 PFAKE 11 49 20.0 +9.1
SDDR LR LR
comp=Z,3μm,19.0s,MS5.9
TORD Torodi Ar. Bea 117.58 316 PKP PKPdf 11 49 12.8 -1.5
comp=Z,7.1nm,1.1s,baz=327,slow=2.9,SNR=12
TORD Torodi Ar. Bea 117.58 316 PKP PKPdf 11 49 12.8 -1.5
LSZ Lusaka 118.02 272 PFAKE 11 49 30.0 +15
LSZ LR LR
comp=Z,2μm,19.0s,MS5.8
SJG San Juan 118.88 31 PFAKE 11 49 30.0 +13
SJG LR LR
comp=Z,2μm,21.0s,MS5.6
BCIP Isla Barro Col 119.43 49 PFAKE 11 49 30.0 +12
BCIP LR LR
comp=Z,1μm,21.0s,MS5.5
PAYG Puerto Ayora 119.64 66 PFAKE 11 49 30.0 +12
PAYG LR LR
comp=Z,3μm,20.0s,MS5.9
MAW Mawson 119.92 206 *e*P PKPdf 11 49 16.0 -1.0
comp=Z,2.7nm,0.6s
MAW Mawson 119.92 206 PKP PKPdf 11 49 16.5 -0.6
comp=Z,1.4nm,0.7s,baz=47,slow=6.8,SNR=5.2
MAW Mawson 119.92 206 *e*PKPdf PKPdf 11 49 16.2 -0.9
MAW LR LR
comp=Z,1μm,21.0s,MS5.5
RPN Rapa Nui 119.99 103 PFAKE 11 49 30.0 +12
RPN LR LR
comp=Z,5μm,21.0s,MS6.1
ANWB Willy Bob 120.97 27 PFAKE 11 49 30.0 +9.3
ANWB LR LR
comp=Z,2μm,22.0s,MS5.7
SDV Santo Domingo 124.85 41 PFAKE 11 49 40.0 +12
SDV LR LR
comp=Z,641nm,19.0s,MS5.3
BBGH Gun Hill 125.94 26 PFAKE 11 49 40.0 +10
BBGH LR LR
comp=Z,3μm,21.0s,MS5.9
GRGR Grenville 126.09 29 PFAKE 11 49 40.0 +9.4
GRGR LR LR
comp=Z,1μm,22.0s,MS5.6
ROSC El Rosal 126.13 47 PKP PKPdf 11 49 31.4 +0.7
comp=Z,6.4nm,0.4s,baz=100,slow=22,SNR=6.8
DBIC Dimbokro 126.53 318 PKP PKPdf 11 49 30.3 -1.2
comp=Z,20nm,1.0s,baz=40,slow=3.1,SNR=11
DBIC Dimbokro 126.53 318 PKP PKPdf 11 49 30.3 -1.2
DBIC LR LR
comp=Z,3μm,19.0s,MS6.0
TIC Toumodi 126.64 318 *e*P PKPdf 11 49 30.7 -1.0
comp=Z,126nm,1.3s
KIC Kosan Boka 126.72 317 *e*P PKPdf 11 49 29.3 -2.5
comp=Z,86nm,1.3s
QSPA South Pole Qui 126.95 180 PFAKE 11 49 40.0 +10
QSPA LR LR
comp=Z,2μm,20.0s,MS5.7
LIC Lamto 126.99 317 *e*P PKPdf 11 49 31.3 -1.1
comp=Z,98nm,1.4s
LIC Lamto 126.99 317⇑ *i*PKIKP PKPdf 11 49 31.0 -1.4
comp=Z,44nm,1.0s
LIC *e*MLR MLR
comp=Z,4μm,21.5s,MS5.8
LIC Lamto 126.99 317⇑ *i*PKPdf PKPdf 11 49 31.0 -1.4
LIC LR LR
comp=Z,2μm,21.5s,MS5.8
BOSA Boshof 127.13 260 PKP PKPdf 11 49 31.1 -1.0
comp=Z,7.3nm,1.2s,baz=100,slow=6.3,SNR=3.0
BOSA PP PP 11 51 34.4 +2.9
comp=Z,7.3nm,1.0s,baz=48,slow=2.4,SNR=3.7
BOSA Boshof 127.13 260 PKIKP PKPdf 11 49 31.1 -1.0
BOSA 11 51 34.4
BOSA pmax pmax
comp=Z,7.0nm,1.2s
BOSA pmax pmax
comp=Z,7.0nm,1.0s
BOSA Boshof 127.13 260 PKP PKPdf 11 49 31.1 -1.0
BOSA PP PP 11 51 34.4 +2.9
BOSA LR LR
comp=Z,2μm,22.0s,MS5.7
OTAV Otavalo 127.18 55 *e*PKPdf PKPdf 11 49 33.1 +0.4
OTAV *e*pPKPdf pPKPdf 11 49 43.2 +0.7
OTAV LR LR
comp=Z,1μm,19.0s,MS5.6
SYO Syowa Base 128.60 207⇑ *e*pPKPdf pPKPdf 11 49 42.8 -0.6
TSUM Tsumeb 128.62 274 *e*PKPdf PKPdf 11 49 35.1 -0.1
TSUM LR LR
comp=Z,2μm,20.0s,MS5.8
SUR Sutherland 132.19 257 PFAKE 11 49 50.0 +8.4
SUR LR LR
comp=Z,2μm,21.0s,MS5.9
NNA Nana 137.06 64 *e*PKPdf PKPdf 11 49 51.0 -0.2
NNA LR LR
comp=Z,1μm,21.0s,MS5.7
MAIT Maitri 137.67 202 *e*PKPdif PKPdf 11 49 37.2 -13
VNA1 Neumayer--Stat 143.03 196 *e*PKPdf PKPdf 11 49 56.0 -4.4
VNA1 *e* 11 50 06.0
SHEL Horse Pasture 144.55 298 PFAKE 11 50 20.0 +15
SHEL LR LR
comp=Z,2μm,19.0s,MS6.0
LPAZ La Paz 146.15 60 PKPbc PKPbc 11 50 08.2 -0.2
comp=Z,31nm,1.0s,baz=351,slow=4.2,SNR=66
LPAZ La Paz 146.15 60 PKP2 PKPab 11 50 08.2 -0.8
LPAZ pmax pmax
comp=Z,31nm,1.0s
LPAZ La Paz 146.15 60 PFAKE 11 50 20.0 +13
LPAZ LR LR
comp=Z,4μm,20.0s,MS6.2
PMSA Palmer Station 148.34 159 PFAKE 11 50 20.0 +10
PMSA LR LR
comp=Z,2μm,19.0s,MS5.8
RCBR Riachuelo 148.71 356 PFAKE 11 50 20.0 +8.2
RCBR LR LR
comp=Z,1μm,20.0s,MS5.8
LCO Las Campanas 151.46 83 *e*PKPbc PKPbc 11 50 21.8 0.0
LCO LR LR
comp=Z,2μm,20.0s,MS5.9
USHA Ushuaia 152.75 140 PKPab PKPab 11 50 33.7 -1.1
comp=Z,7.0nm,0.9s,baz=228,slow=8.4,SNR=4.1
FCH Farellones 153.36 91⇑ *e*P PKPdf 11 50 20.2 +1.8
CFAA Coronel Fontan 154.43 86 PKP PKPdf 11 50 18.7 -1.2
comp=Z,0.2nm,0.5s,baz=284,slow=2.6,SNR=7.1
CFAA PKPbc PKPbc 11 50 28.6 +0.3
comp=Z,0.6nm,0.6s,baz=250,slow=4.1,SNR=7.4
CFAA PKPab PKPab 11 50 37.9 -4.8
comp=Z,0.7nm,0.5s,baz=275,slow=1.9,SNR=7.2
PLCA Paso Flores 154.47 108 PKP PKPdf 11 50 19.6 0.0
comp=Z,2.8nm,1.1s,baz=252,slow=6.8,SNR=2.9
PLCA PKPbc PKPbc 11 50 27.9 -0.1
comp=Z,4.7nm,1.1s,baz=253,slow=3.8,SNR=3.5
PLCA PKPab PKPab 11 50 37.9 -4.7
comp=Z,4.4nm,1.0s,baz=316,slow=1.9,SNR=7.4
PLCA Paso Flores 154.47 108 PKIKP PKPdf 11 50 19.6 -0.1
PLCA 11 50 27.9
PLCA 11 50 37.9
PLCA pmax pmax
comp=Z,3.0nm,1.1s
PLCA pmax pmax
comp=Z,5.0nm,1.1s
PLCA pmax pmax
comp=Z,4.0nm,1.0s
PLCA Paso Flores 154.47 108 *e*PKPdf PKPdf 11 50 19.9 +0.2
PLCA LR LR
comp=Z,1μm,19.0s,MS5.8
CPUP Villa Florida 160.29 62 PFAKE 11 50 40.0 +13
CPUP LR LR
comp=Z,267nm,20.0s
TRQA Tornquist 160.93 100 PFAKE 11 50 40.0 +12
TRQA LR LR
comp=Z,2μm,21.0s

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*IDC **21** 11:37:52.8±0.6, 5.39S×153.04E, h0km, mb4.6/19, mb1 4.7/20, mb1mx4.7/23, mbtmp4.6/20, ML4.3/1, Error ellipse: s-maj=23.0km s-min=15.8km az=98.0*
*ISCJB **21** 11:37:56.0±0.5, 5.40S±0.07×153.0E±0.1, h33km, mb4.6/25, Error ellipse: s-maj=15.6km s-min=7.9km az=26.5*
*NEIC **21** 11:37:56.8±3.8, 5.37S×153.06E, h27km±26km, mb4.9/7, Error ellipse: s-maj=14.7km s-min=9.2km az=90.0*
ISC 21 11:37:58.0±2.2, 5.42S±0.08×153.1E±0.1, h37km±20km, n40, σ0=91/34, mb4.6/25, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.08**	**236**	*e*Pn	**Pn**	**11 39 40.3**	**+1.1**
78nm,0.6s							
COEN	**Coen**	**12.93**	**228**	Pn	**Pn**	**11 40 58.2**	**-1.2**
CTA	**Charters Tower**	**16.02**	**204**	Pn	**Pn**	**11 41 42.0**	**+1.2**
0.7nm,0.3s,baz=29,slow=12,SNR=2.3							
CTAO	**Charters Tower**	**16.02**	**204**	Pn	**Pn**	**11 41 41.5**	**+0.8**
GUMO	**Guam**	**20.57**	**337**	P	**P**	**11 42 34.9**	**+1.1**
114nm,1.1s,baz=176,slow=9.2,SNR=6.4							
WRAB	**Tennant Creek**	**23.24**	**230**	*e*P	**P**	**11 43 01.6**	**-0.7**
ASAR	**Alice Springs**	**25.89**	**224**	P	**P**	**11 43 26.8**	**+0.2**
11nm,0.8s,mb4.4,baz=57,slow=8.8,SNR=4.6							
STKA	**Stephens Creek**	**28.44**	**201**	P	**P**	**11 43 48.4**	**-1.0**
14nm,0.9s,mb4.6,baz=7.6,slow=4.4,SNR=2.6							
FITZ	**Fitzroy Crossi**	**29.62**	**242**	P	**P**	**11 43 59.4**	**-0.7**
7.4nm,0.6s,mb4.6,baz=84,slow=7.2,SNR=6.7							
RPZ	**Rata Peaks**	**41.30**	**160**	P	**P**	**11 45 39.8**	**-0.1**
14nm,0.9s,mb4.6,baz=13,slow=5.4,SNR=3.4							
MJAR	**Matsushiro Arr**	**44.00**	**343**	P	**P**	**11 46 00.1**	**-1.8**
2.1nm,0.9s,mb3.9,baz=191,slow=33,SNR=6.8							
MJAR				PcP	PcP	11 47 49.0	+1.8
4.0nm,0.9s,baz=160,slow=3.4,SNR=7.7							
MAJO	**Matsushiro**	**44.00**	**343**	*e*P	**P**	**11 45 59.8**	**-2.2**
KSRS	**Korea Array**	**48.67**	**333**	P	**P**	**11 46 37.6**	**-1.0**
1.7nm,0.7s,mb4.2,baz=152,slow=7.1,SNR=7.4							
CMAR	**Chiang Mai Arr**	**58.39**	**295**	P	**P**	**11 47 50.9**	**+0.6**
6.2nm,0.9s,mb4.6,baz=110,slow=5.3,SNR=20							
PETK	**Petropavlovsk-**	**58.44**	**3**	P	**P**	**11 47 50.6**	**+0.7**
27nm,0.8s,mb5.4,baz=168,slow=6.6,SNR=41							
SONM	**Songino Array**	**66.99**	**328**	P	**P**	**11 48 48.0**	**+1.0**
2.6nm,0.6s,mb4.4,baz=148,slow=5.7,SNR=8.0							
TRF	**Thorofare Moun**	**80.66**	**22**	*e*P	**P**	**11 50 06.1**	**-0.6**
6.3nm,0.8s,mb4.6							
MKAR	**Makanchi Array**	**80.97**	**319**	P	**P**	**11 50 09.2**	**+0.3**
1.4nm,0.6s,mb4.1,baz=104,slow=6.0,SNR=6.7							
MCK	**McKinley**	**81.32**	**22**	*e*P	**P**	**11 50 10.0**	**-0.3**
16nm,1.0s,mb4.9							
ZAA0	**Zalesovo Array**	**81.82**	**326**	*e*P	**P**	**11 50 12.4**	**-0.7**
ZALV	**Zalesovo Beam**	**81.82**	**326**	P	**P**	**11 50 12.9**	**-0.2**
9.5nm,0.8s,mb4.8,baz=108,slow=5.1,SNR=24							
COLA	**College**	**82.32**	**22**	*e*P	**P**	**11 50 14.1**	**-1.4**
6.0nm,0.8s,mb4.6							
ILAR	**Eielson Array**	**82.62**	**22**	P	**P**	**11 50 16.2**	**-0.8**
4.4nm,0.9s,mb4.5,baz=256,slow=4.9,SNR=25							
MENT	**Mentasta**	**83.00**	**24**	*e*P	**P**	**11 50 19.1**	**0.0**
TKM2	**Tokmak 2**	**84.56**	**314**	*e*P	**P**	**11 50 28.4**	**+0.9**
13nm,1.0s,mb5.0							
EGAK	**Eagle**	**84.81**	**23**	*e*P	**P**	**11 50 28.4**	**+0.1**
4.8nm,1.0s,mb4.6							
UCH	**Uchtor**	**85.20**	**313**	*e*P	**P**	**11 50 32.4**	**+1.6**
11nm,1.0s,mb4.9							
AAK	**Ala-Archa**	**85.29**	**313**	P	**P**	**11 50 31.4**	**+0.1**
2.9nm,0.4s,mb4.7,baz=148,slow=5.2,SNR=4.2							
AML	**Almayashu**	**85.77**	**313**	*e*P	**P**	**11 50 34.4**	**+0.7**
24nm,1.2s,mb5.3							
DLBC	**Dease Lake**	**87.77**	**31**	P	**P**	**11 50 44.0**	**+1.0**
3.8nm,1.0s,mb4.6,baz=324,slow=4.0,SNR=4.4							
INK	**Inuvik**	**88.93**	**21**	P	**P**	**11 50 48.9**	**+0.7**
2.7nm,1.0s,mb4.5,baz=329,slow=7.2,SNR=2.9							
BVAR	**Borovoye Array**	**89.90**	**323**	P	**P**	**11 50 52.9**	**-0.3**
8.9nm,0.8s,mb5.2,baz=103,slow=6.2,SNR=21							
NVAR	**Mina Array Bea**	**92.24**	**52**	P	**P**	**11 51 05.4**	**+1.0**
1.0nm,0.8s,mb4.2,baz=266,slow=5.2,SNR=6.0							
YKA	**Yellowknife Ar**	**95.84**	**28**	P	**P**	**11 51 20.8**	**+0.5**
1.3nm,0.8s,mb4.4,baz=266,slow=4.6,SNR=6.1							

CFAA	**Coronel Fontan**	**126.09 136**	PKP	PKPdf	11 56 58.1	+1.1
	0.6nm,0.8s,baz=265,slow=5.2,SNR=7.2					
EKA	**Eskdalemuir Ar**	**126.70 343**	PKP	PKPdf	11 56 58.8	+1.4
	1.6nm,0.8s,baz=29,slow=1.9,SNR=3.7					
LPAZ	**La Paz**	**133.88 119**	PKP	PKPdf	11 57 14.2	+2.0
	2.5nm,0.7s,baz=239,slow=5.0,SNR=5.2					
CPUP	**Villa Florida**	**136.82 138**	PKP	PKPdf	11 57 19.8	+2.4
	0.3nm,0.3s,baz=230,slow=5.1,SNR=3.0					
MDT	**Midelt**	**145.71 325**	PKPbc	PKPbc	11 57 34.7	+1.1
	8.5nm,0.9s,baz=74,slow=4.8,SNR=16					
TORD	**Torodi Ar. Bea**	**150.76 287**	PKPbc	PKPbc	11 57 47.3	-0.2
	8.3nm,0.7s,baz=69,slow=1.9,SNR=28					

*NEIC **21** 11:39:06.4,32.°10S×72.°25W,h29km, ML3.3(GUC), After GUC.*

GUC 21 11:39:06.4±0.5,32.°10S×72.°25W,h29km±1km, MD3.8, ML3.3,12C-2D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROCH	**El Roble**	**1.36**	**130**	⇑*i* P	Pn	11 39 30.4	+1.1
ROCH				*i* S	Sn	11 39 48.5	+2.2
ROCH	**El Roble**	**1.36**	**130**	⇑*i* P	Pn	11 39 30.4	+1.1
ROCH				*i* S	Sn	11 39 48.5	+2.2
CMCH	**Combarbala**	**1.41**	**49**	*e* P	Pn	11 39 32.4	+2.4
CMCH				*i* S	Sn	11 39 51.2	+3.6
CMCH	**Combarbala**	**1.41**	**49**	*e* P	Pn	11 39 32.4	+2.4
CMCH				*i* S	Sn	11 39 51.2	+3.6
CMCH				AML	AML	11 40 00.1	
	comp=E,2μm,0.6s						
LCCH	**Las Cruces**	**1.48**	**158**	*i* P	Pn	11 39 31.9	+0.8
LCCH				*i* S	Sn	11 39 51.2	+1.7
LCCH	**Las Cruces**	**1.48**	**158**	*i* P	Pn	11 39 31.9	+0.8
LCCH				*i* S	Sn	11 39 51.2	+1.7
JACH	**Jahuel**	**1.51**	**113**	⇑*i* P	Pn	11 39 32.4	+0.9
JACH				*i* S	Sn	11 39 52.5	+2.3
JACH	**Jahuel**	**1.51**	**113**	⇑*i* P	Pn	11 39 32.4	+0.9
JACH				*i* S	Sn	11 39 52.5	+2.3
PEL	**Peldehue**	**1.68**	**129**	||*i* P	Pn	11 39 35.2	+1.4
PEL				*i* S	Sn	11 39 56.7	+2.5
PEL				AML	AML	11 40 03.0	
	comp=N,507nm,0.2s						
TACH	**Talagante**	**1.90**	**145**	*i* P	Pn	11 39 38.0	+1.2
TACH				*i* S	Sn	11 40 02.7	+3.0
TACH	**Talagante**	**1.90**	**145**	*i* P	Pn	11 39 38.0	+1.2
TACH				*i* S	Sn	11 40 02.7	+3.0
LNV	**Longovilo**	**1.98**	**159**	*i* P	Pn	11 39 39.3	+1.4
LNV				*i* S	Sn	11 40 04.2	+2.5
LNV	**Longovilo**	**1.98**	**159**	*i* P	Pn	11 39 39.3	+1.4
LNV				*i* S	Sn	11 40 04.2	+2.5
FCH	**Farellones**	**2.05**	**127**	⇑*i* P	Pn	11 39 40.8	+1.9
FCH				*i* S	Sn	11 40 07.7	+4.2
FCH	**Farellones**	**2.05**	**127**	⇑*i* P	Pn	11 39 40.8	+1.9
FCH				*i* S	Sn	11 40 07.7	+4.2
PCH	**Pirque**	**2.10**	**137**	⇑*i* P	Pn	11 39 41.2	+1.7
PCH				*i* S	Sn	11 40 07.3	+2.6
PCH	**Pirque**	**2.10**	**137**	⇑*i* P	Pn	11 39 41.2	+1.7
PCH				*i* S	Sn	11 40 07.3	+2.6
CHCH	**Chadas Angostu**	**2.26**	**144**	⇑*i* P	Pn	11 39 43.3	+1.4
CHCH				*i* S	Sn	11 40 11.0	+2.3
CHCH	**Chadas Angostu**	**2.26**	**144**	⇑*i* P	Pn	11 39 43.3	+1.4
CHCH				*i* S	Sn	11 40 11.0	+2.3
CACH	**El Canelo**	**2.44**	**146**	⇑*i* P	Pn	11 39 46.5	+2.3
CACH				*i* S	Sn	11 40 16.9	+3.9
CACH	**El Canelo**	**2.44**	**146**	⇑*i* P	Pn	11 39 46.5	+2.3
CACH				||*i* S	Sn	11 40 16.9	+3.9
LMEL	**Las Melosas**	**2.44**	**136**	*e* P	Pn	11 39 46.2	+1.9
LMEL				*i* S	Sn	11 40 16.0	+2.8
LMEL	**Las Melosas**	**2.44**	**136**	*e* P	Pn	11 39 46.2	+1.9
LMEL				*i* S	Sn	11 40 16.0	+2.8
LMEL				AML	AML	11 40 29.8	
	comp=N,96nm,0.5s						

*ISCJB **21** 11:47:59.1±0.8,6.°66N±0.°07×126.°39E±0.°07,h61km±7km, mb3.9/7, Error ellipse: s-maj=12.6km s-min=11.6km az=41.8*

*IDC **21** 11:48:01.1±3.5,6.°74N×126.°41E,h64km±27km, mb3.6/7, mb1 3.7/7, mb1mx3.4/23, mbtmp3.6/7, Error ellipse: s-maj=64.8km s-min=14.4km az=67.0*

*MAN **21** 11:48:03,6.°93N×126.°01E,h7km, mb5.1, ML4.0, MS4.2*

ISC 21 11:48:00.2±0.8,6.°63N±0.°07×126.°38E±0.°07,h51km±8km, n16,σ1°03/22,mb3.9/7,2C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.33**	**339**	*e* P	**Pn**	**11 48 09.8**	**0.0**
MATI				*e* S	**Sn**	**11 48 15.6**	**-1.0**
DAV	**Davao City (W)**	**0.90**	**299**	P	**Pn**	**11 48 17.5**	**+0.8**
	392nm,0.3s,baz=244,slow=2.9,SNR=50						
DAV				S	**Sn**	**11 48 31.2**	**+2.5**
	541nm,0.3s,baz=97,slow=23,SNR=11						
DMPH	**Davao City--Mi**	**0.97**	**297**	||*i* P	**Pn**	**11 48 12.8**	**-4.7**
DMPH				*i* S	**Sn**	**11 48 31.5**	**+1.1**
KCP	**Kidapawan**	**1.33**	**286**	⇑*e* P	**Pn**	**11 48 22.0**	**-0.3**
KCP				*i* S	**Sn**	**11 48 38.9**	**-0.1**
GSPH	**General Santos**	**1.52**	**249**	*e* P	**Pn**	**11 48 23.4**	**-1.6**
GSPH				*i* S	**Sn**	**11 48 42.3**	**-1.3**
BUKP	**Musuan**	**1.80**	**314**	*e* P	**Pn**	**11 48 28.7**	**0.0**
BUKP				*e* S	**Sn**	**11 48 43.9**	**-6.5**
CGP	**Cagayan de Oro**	**2.46**	**317**	⇑*i* P	**Pn**	**11 48 37.8**	**0.0**
PAGZ	**Pagadian**	**3.21**	**292**	*e* P	**Pn**	**11 48 48.8**	**+0.7**
PAGZ				*e* S	Sn	11 48 58.8	-26
FITZ	**Fitzroy Crossi**	**24.59**	**182**	P	**P**	**11 53 15.0**	**-0.6**
	1.4nm,0.5s,mb3.8,baz=316,slow=1.9,SNR=7.9						
WRA	**Warramunga Arr**	**27.55**	**164**	P	**P**	**11 53 44.0**	**+1.6**
	baz=345,slow=10						
ASAR	**Alice Springs**	**31.00**	**167**	P	**P**	**11 54 13.3**	**+0.4**
	0.3nm,0.4s,mb3.5,baz=342,slow=7.3,SNR=21						
NWAO	**Narrogin (SRO)**	**40.29**	**192**	P	**P**	**11 55 33.6**	**+1.1**
	2.2nm,0.5s,mb4.1,baz=49,slow=9.3,SNR=3.5						
STKA	**Stephens Creek**	**40.96**	**160**	P	**P**	**11 55 38.4**	**+0.5**
	2.3nm,0.5s,mb4.0,baz=342,slow=9.4,SNR=3.8						
MKAR	**Makanchi Array**	**54.99**	**324**	P	**P**	**11 57 24.7**	**-1.6**
	0.6nm,0.4s,mb3.9,baz=123,slow=8.3,SNR=7.3						
ZALV	**Zalesovo Beam**	**57.86**	**332**	P	**P**	**11 57 46.4**	**-0.1**
	0.4nm,0.4s,mb3.8,baz=148,slow=11,SNR=2.5						
BVAR	**Borovoye Array**	**64.72**	**326**	P	**P**	**11 58 31.5**	**-1.4**
	0.4nm,0.5s,mb3.7,baz=114,slow=6.5,SNR=2.8						

*ISCJB **21** 12:00:59.8±0.5,39.°92N±0.°03×28.°80E±0.°03,h8km±6km, Error ellipse: s-maj=5.6km s-min=3.8km az=154.0*

*DDA **21** 12:00:59.5,39.°90N×28.°84E,h7km±5km, Md3.2*

*ISK **21** 12:00:59.5,39.°93N×28.°76E,h20km, MD2.6, ML2.1*

*CSEM **21** 12:00:59.7±0.1,39.°91N×28.°82E,h12km, MD3.2, Error ellipse: s-maj=1.6km s-min=1.6km az=141.0*

ISC 21 12:01:00.3±0.5,39.°92N±0.°03×28.°79E±0.°03,h15km±5km, n34,σ1°08/54,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.40**	**217**	*i* P	**Pg**	**12 01 07.6**	**-0.8**
DURS				*i* S	**Sg**	**12 01 13.9**	**0.0**
DURS	**Dursunbey**	**0.40**	**217**	*i* P	**Pg**	**12 01 07.6**	**-0.9**
DURS				*i* S	**Sg**	**12 01 13.9**	**0.0**
KCTX	**Karacabey (Bur**	**0.48**	**316**	*e*PG	**Pg**	**12 01 09.6**	**-0.3**
KCTX				*e*SG	**Sg**	**12 01 16.2**	**-0.1**
KCTX	**Karacabey (Bur**	**0.48**	**316**	*e*Pg	**Pg**	**12 01 09.6**	**-0.3**
KCTX				*e*Sg	**Sg**	**12 01 16.2**	**-0.1**
YLV	**Yalova**	**0.78**	**34**	*e*PG	**Pg**	**12 01 14.8**	**-0.8**
YLV				*e*SG	**Sg**	**12 01 27.4**	**+1.5**
YLV	**Yalova**	**0.78**	**34**	*e*Pg	**Pg**	**12 01 14.8**	**-0.8**
YLV				*e*Sg	**Sg**	**12 01 27.4**	**+1.5**
GONE	**Gonen-Balikesi**	**0.86**	**279**	*e*PG	**Pg**	**12 01 16.6**	**-0.4**
GONE				*e*SG	**Sg**	**12 01 28.8**	**+0.5**
GONE	**Gonen-Balikesi**	**0.86**	**279**	*e*Pg	**Pg**	**12 01 16.6**	**-0.4**
GONE				*e*Sg	**Sg**	**12 01 28.8**	**+0.5**
DEMI	**Demirci**	**0.88**	**184**	*i* P	**Pg**	**12 01 16.2**	**-1.2**
DEMI				*i* S	**Sg**	**12 01 32.9**	**+4.0**
DEMI	**Demirci**	**0.88**	**184**	*i* P	**Pg**	**12 01 16.2**	**-1.2**
ADVT	**Abdulvahap**	**0.89**	**55**	*e*PG	**Pg**	**12 01 16.7**	**-0.8**
ADVT				*e*SG	**Sg**	**12 01 30.7**	**+1.5**
ADVT	**Abdulvahap**	**0.89**	**55**	*e*Pg	**Pg**	**12 01 16.7**	**-0.8**
ADVT				*e*Sg	**Sg**	**12 01 30.7**	**+1.5**
BALY	**Balya**	**0.92**	**259**	*i* P	**Pg**	**12 01 18.0**	**-0.1**
BALY				*i* S	**Sg**	**12 01 32.9**	**+2.6**
BALY	**Balya**	**0.92**	**259**	*i* P	**Pg**	**12 01 18.0**	**-0.2**
GDZ	**Gediz**	**0.99**	**147**	*i* P	**Pb**	**12 01 18.3**	**-0.8**
GDZ				*i* S	**Sb**	**12 01 31.3**	**-0.7**
BORA	**Eskisehir**	**1.28**	**91**	*i* P	**Pn**	**12 01 22.2**	**-1.5**
BORA				*i* S	**Sb**	**12 01 42.2**	**+1.8**
BORA	**Eskisehir**	**1.28**	**91**	*i* P	**Pn**	**12 01 22.2**	**-1.4**
AKHS	**Akhisar**	**1.29**	**216**	*i* P	**Pn**	**12 01 24.3**	**+0.5**
AKHS				*i* S	**Sb**	**12 01 42.5**	**+2.0**
AKHS	**Akhisar**	**1.29**	**216**	*i* P	**Pn**	**12 01 24.3**	**+0.5**
AKHS				*i* S	**Sb**	**12 01 42.5**	**+1.9**
ALT	**Altintas**	**1.34**	**130**	*e*PN	**Pn**	**12 01 23.1**	**-1.4**
ALT	**Altintas**	**1.34**	**130**	*e*Pn	**Pn**	**12 01 23.1**	**-1.4**
KULA	**Kula-Manisa**	**1.41**	**184**	*e*PN	**Pn**	**12 01 25.5**	**+0.1**
KULA	**Kula-Manisa**	**1.41**	**184**	*e*Pn	**Pn**	**12 01 25.5**	**+0.1**
GULT	**Gulveren**	**1.42**	**68**	*e*PN	**Pn**	**12 01 24.9**	**-0.6**
GULT	**Gulveren**	**1.42**	**68**	*e*Pn	**Pn**	**12 01 24.9**	**-0.6**
MFT	**Murefte**	**1.44**	**307**	*e*PN	**Pn**	**12 01 25.2**	**-0.7**
MFT	**Murefte**	**1.44**	**307**	*e*Pn	**Pn**	**12 01 25.2**	**-0.7**
RKY	**Sarkoy-Tekirda**	**1.45**	**302**	*e*PN	**Pn**	**12 01 24.5**	**-1.5**
RKY	**Sarkoy-Tekirda**	**1.45**	**302**	*e*Pn	**Pn**	**12 01 24.5**	**-1.5**
ESKT	**Eskisehir**	**1.64**	**104**	*i* P	**Pn**	**12 01 29.7**	**+1.2**
ESKT				*i* S	**Sn**	**12 01 54.0**	**+4.6**
SEYT	**Eskypehyr**	**1.64**	**104**	*i* P	**Pn**	**12 01 29.7**	**+1.1**
KHAL	**Karahalli**	**1.64**	**160**	*i* P	**Pn**	**12 01 28.6**	**0.0**
KHAL				*i* S	**Sn**	**12 01 50.7**	**+1.2**
KHAL	**Karahalli**	**1.64**	**160**	*i* P	**Pn**	**12 01 28.6**	**0.0**
KHAL				*i* S	**Sn**	**12 01 50.7**	**+1.2**

IDC 21 12:01:54.7±20.0,38.°73S×89.°26W,h0km,mb3.6/3, mb1 4.1/3,mb1mx3.8/14,mbtmp3.6/3,MS4.1/1,Ms1 4.1/1, ms1mx3.6/17,Error ellipse: s-maj=696.1km s-min=362.7km az=113.0,West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPUP	**Villa Florida**	**29.47**	**75**	LR	LR	12 17 39.7	
	comp=Z,376nm,21.0s,baz=344,slow=32						
TXAR	**Lajitas Array**	**69.03**	**347**	P	P	12 13 02.1	+0.2
	0.3nm,0.9s,baz=159,slow=5.8,SNR=2.9						
NVAR	**Mina Array Bea**	**81.29**	**337**	P	P	12 14 12.8	+0.4
	0.5nm,0.9s,baz=161,slow=5.7,SNR=3.1						
PDAR	**Pinedale Array**	**83.18**	**345**	P	P	12 14 22.7	+0.5
	0.7nm,0.8s,baz=153,slow=6.1,SNR=5.0						

*ISCJB **21** 12:13:09.0±1.3,22.°3S±0.°2×179.°7W±0.°2,h582km±16km, mb4.0/8, Error ellipse: s-maj=28.2km s-min=19.0km az=140.2*

*NEIC **21** 12:13:09.3±1.1,22.°30S×179.°56W,h579km±12km, mb4.4/4, Error ellipse: s-maj=22.3km s-min=13.8km az=139.0*

*IDC **21** 12:13:10.1±7.8,22.°32S×179.°54W,h585km±100km, mb3.2/5, mb1 3.4/6, mb1mx3.1/16, mbtmp3.2/6, Error ellipse: s-maj=75.8km s-min=26.6km az=178.0*

ISC 21 12:13:09.3±1.5,22.°4S±0.°2×179.°6W±0.°2,h573km±17km, n14,σ0°59/12,mb4.0/8,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.11**	**334**	*e* P	**P**	**12 14 41.6**	**+0.1**
	23nm,0.5s						
URZ	**Urewera**	**16.10**	**189**	P	**P**	**12 16 28.3**	**-0.2**
	0.5nm,0.3s,baz=341,slow=14,SNR=3.1						
ARMA	**Armidale**	**26.96**	**247**	*e* P	**P**	**12 18 06.6**	**+0.5**
	91nm,1.9s,mb5.1						
EIDS	**Eidsvold**	**26.98**	**258**	*e* P	**P**	**12 18 06.2**	**-0.1**
	15nm,1.5s,mb4.4						
STKA	**Stephens Creek**	**35.68**	**246**	P	**P**	**12 19 21.5**	**+1.1**
	2.9nm,0.5s,mb4.1,baz=90,slow=10,SNR=14						
ASAR	**Alice Springs**	**42.69**	**259**	P	**P**	**12 20 16.9**	**0.0**
	7.3nm,0.8s,mb4.2,baz=97,slow=7.9,SNR=95						
WRAB	**Tennant Creek**	**42.91**	**264**	*e* P	**P**	**12 20 17.7**	**-0.9**
WRA	**Warramunga Arr**	**42.92**	**264**	P	**P**	**12 20 17.9**	**-0.7**
	baz=97,slow=7.7						
MBWA	**Marble Bar**	**56.04**	**259**	*e* P	**P**	**12 21 54.4**	**-0.5**
	5.6nm,0.4s,mb4.2						
NVAR	**Mina Array Bea**	**83.38**	**44**	P	**P**	**12 24 36.6**	**-0.3**
	0.4nm,0.8s,mb3.0,baz=222,slow=6.6,SNR=3.0						
TXAR	**Lajitas Array**	**89.29**	**58**	P	**P**	**12 25 05.5**	**+0.2**
	0.2nm,0.6s,mb3.1,baz=216,slow=6.2,SNR=5.0						
CMAR	**Chiang Mai Arr**	**89.36**	**290**	P	**P**	**12 25 06.8**	**+0.9**
	1.2nm,0.8s,mb3.8,baz=126,slow=3.4,SNR=5.9						
AKASG	**Malin Array Be**	**143.88**	**329**	PKP	PKPdf	12 31 36.9	-2.8
	0.4nm,0.3s,baz=38,slow=4.2,SNR=4.8						
BRTR	**Keskin Array B**	**146.94**	**309**	PKPbc	PKPbc	12 31 47.2	-1.0
	0.4nm,0.5s,baz=57,slow=5.3,SNR=2.5						

*ISCJB **21** 12:51:14.7±0.6,15.°48N±0.°06×93.°18W±0.°05,h102km±4km, mb3.5/5, Error ellipse: s-maj=10.4km s-min=5.9km az=29.9*

*IDC **21** 12:51:15.9±1.1,15.°43N×93.°06W,h99km±7km, mb3.2/5, mb1 3.5/8, mb1mx3.4/23, mbtmp3.2/8, MS3.4/1, Ms1 3.4/1, ms1mx3.1/17, Error ellipse: s-maj=31.7km s-min=9.1km az=27.0*

*MEX **21** 12:51:16.3±0.9,15.°49N×93.°29W,h104km±8km, MD4.1*

*NEIC **21** 12:51:16.7,15.°51N×93.°23W,h103km, MD4.1(MEX), After MEX.*

ISC 21 12:51:15.8±0.6,15.°50N±0.°05×93.°17W±0.°04,h96km±4km, h99km±.5km:pP-P,n20,σ1°29/30,mb3.5/5,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.21**	**347**	*i* P	**Pn**	**12 51 29.8**	**+0.2**
PCIG				*e* S	**Sn**	**12 51 40.7**	**+0.8**
THIG		**1.05**	**124**	*i* P	**Pn**	**12 51 37.3**	**+0.7**
THIG				*e* S	**Sn**	**12 51 53.4**	**+1.2**
TGIG		**1.27**	**2**	*i* P	**Pn**	**12 51 39.3**	**+0.2**
TGIG				*i* S	**Sn**	**12 51 56.2**	**-0.5**
SCX	**San Cristobal**	**1.33**	**23**	*i* P	**Pn**	**12 51 40.8**	**+0.9**
SCX				*e* S	**Sn**	**12 51 59.4**	**+1.4**
SCX	**San Cristobal**	**1.33**	**23**	*i* P	**Pn**	**12 51 40.8**	**+0.9**
SCX				*e* S	**Sn**	**12 51 59.4**	**+1.4**
CMIG	**Matias Romero**	**2.28**	**314**	P	**Pn**	**12 51 52.8**	**+0.8**
	7.8nm,0.3s,baz=137,slow=12,SNR=235						
CMIG				S	**Sn**	**12 52 18.6**	**-1.0**
	38nm,0.3s,baz=143,slow=12,SNR=14						
CMIG				LR	LR	12 52 45.4	
	comp=Z,690nm,18.2s,baz=274,slow=37						
APG	**El Apazote**	**2.66**	**100**	P	**Pn**	**12 51 56.5**	**-0.4**
	baz=90,slow=16						
APG				S	**Sn**	**12 52 27.3**	**-1.2**
	baz=90,slow=16						
HUIG	**Huatulco**	**2.84**	**276**	*i* P	**Pn**	**12 51 58.5**	**-1.0**
HUIG				*i* S	**Sn**	**12 52 28.7**	**-4.3**
VHO	**Vista Hermosa**	**3.76**	**295**	*i* P	**Pn**	**12 52 10.0**	**-1.8**
VHO				*i* S	**Sn**	**12 52 53.2**	**-1.9**
TEIG	**Tepich**	**6.62**	**44**	*e*Pn	**Pn**	**12 52 48.8**	**-1.7**
	108nm,0.3s						
TEIG				*e*Sn	**Sn**	**12 54 02.4**	**-2.1**
JCT	**Junction City**	**16.10**	**339**	*e*Pn	**Pn**	**12 54 58.4**	**+1.8**
	14nm,0.9s						
BRAL	**Brewton**	**16.42**	**19**	*e*Pn	**Pn**	**12 54 59.8**	**-0.8**
	42nm,0.6s						
TXAR	**Lajitas Array**	**16.83**	**327**	P	**Pn**	**12 55 07.9**	**+2.4**
	0.1nm,0.3s,baz=151,slow=13,SNR=11						
GDL2	**Guadalupe Moun**	**19.50**	**330**	*e*Pn	**Pn**	**12 55 37.5**	**0.0**
	3.0nm,0.7s						
PDAR	**Pinedale Array**	**30.60**	**336**	P	**P**	**12 57 22.9**	**+2.3**
	0.2nm,0.3s,mb3.3,baz=135,slow=9.0,SNR=2.6						
NVAR	**Mina Array Bea**	**31.80**	**321**	P	**P**	**12 57 33.2**	**+2.0**
	1.0nm,0.7s,mb3.7,baz=132,slow=8.3,SNR=10						
NVAR				pP	pP	12 57 55.5	+2.5
	0.8nm,0.9s,baz=142,slow=8.5,SNR=3.4						
NVAR				sP	sP	12 58 07.6	+3.4
	0.7nm,0.8s,baz=151,slow=8.3,SNR=3.8						
NVAR	**Mina Array Bea**	**31.80**	**321**	P	**P**	**12 57 33.2**	**+2.0**
NVAR				pP	pP	12 57 55.5	+2.5
NVAR				sP	sP	12 58 07.6	+3.4
SIV	**San Ignacio**	**44.53**	**133**	P	**P**	**12 59 16.8**	**-1.4**
	0.6nm,0.6s,mb3.5,baz=284,slow=12,SNR=3.2						
SIV				pP	pP	12 59 39.8	-1.2
	0.8nm,0.6s,baz=299,slow=9.3,SNR=2.7						
YKA	**Yellowknife Ar**	**49.32**	**347**	P	**P**	**12 59 54.1**	**-0.8**
	0.3nm,0.8s,mb3.3,baz=137,slow=8.9,SNR=3.7						
YKA				pP	pP	13 00 17.2	-0.7
	0.3nm,0.6s,baz=152,slow=7.3,SNR=3.0						
ILAR	**Eielson Array**	**61.02**	**337**	P	**P**	**13 01 19.6**	**+0.7**
	0.3nm,0.6s,mb3.5,baz=132,slow=5.0,SNR=6.4						

*ISCJB **21** 13:00:48.1±1.3,19.°05N±0.°06×145.°5E±0.°2,h224km±12km, mb3.5/12, Error ellipse: s-maj=28.8km s-min=9.2km az=171.5*

*IDC **21** 13:00:49.2±2.3,19.°01N×145.°56E,h221km±23km, mb3.3/11, mb1 3.5/12, mb1mx3.4/23, mbtmp3.4/12, Error ellipse: s-maj=22.1km s-min=14.5km az=79.0*

*NEIC **21** 13:00:50.7±1.9,19.°01N×145.°53E,h236km±19km, mb4.2/1, Error ellipse: s-maj=22.1km s-min=15.1km az=84.0*

ISC 21 13:00:47.9±1.2,19.°08N±0.°06×145.°5E±0.°2,h205km±11km, n15,σ1°12/16,mb3.5/12,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.50**	**187**	P	**Pn**	**13 02 11.4**	**+2.6**
	4.3nm,0.3s,baz=341,slow=12,SNR=7.8						
GUMO				S	**Sn**	**13 03 12.0**	**-0.8**
	8.6nm,0.3s,baz=172,slow=21,SNR=3.4						
CBIJ	**Chichi jima**	**8.55**	**340**	S	**Sn**	**13 04 23.7**	**-0.7**
	6.5nm,0.3s,baz=304,slow=23,SNR=3.6						
WRAB	**Tennant Creek**	**40.29**	**196**	*e* P	**P**	**13 08 04.8**	**-0.4**
	6.1nm,0.7s,mb4.1						
SONM	**Songino Array**	**42.74**	**321**	P	**P**	**13 08 25.9**	**+1.0**
	0.4nm,0.3s,mb3.3,baz=70,slow=34,SNR=3.0						
ASAR	**Alice Springs**	**43.97**	**195**	P	**P**	**13 08 34.2**	**-0.7**
	1.9nm,0.5s,mb3.7,baz=13,slow=5.4,SNR=57						
CMAR	**Chiang Mai Arr**	**44.00**	**277**	P	**P**	**13 08 36.8**	**+1.4**
	0.9nm,0.7s,mb3.2,baz=68,slow=7.6,SNR=6.7						
STKA	**Stephens Creek**	**50.80**	**184**	P	**P**	**13 09 26.4**	**-1.0**
	0.7nm,0.3s,mb3.5,baz=359,slow=11,SNR=8.2						
ZALV	**Zalesovo Beam**	**57.61**	**322**	P	**P**	**13 10 16.2**	**-0.1**
	0.5nm,0.4s,mb3.5,baz=82,slow=9.4,SNR=2.6						
MKAR	**Makanchi Array**	**58.08**	**314**	P	**P**	**13 10 20.6**	**+1.0**
	0.7nm,0.7s,mb3.4,baz=98,slow=7.2,SNR=4.4						
ILAR	**Eielson Array**	**63.38**	**26**	P	**P**	**13 10 54.4**	**-0.7**
	0.3nm,0.7s,mb3.0,baz=252,slow=6.2,SNR=5.3						
BVAR	**Borovoye Array**	**66.08**	**320**	P	**P**	**13 11 11.9**	**-0.8**
	1.4nm,0.5s,mb3.8,baz=96,slow=8.2,SNR=7.7						
YKA	**Yellowknife Ar**	**77.73**	**28**	P	**P**	**13 12 22.1**	**+0.4**
	0.4nm,0.6s,mb3.2,baz=292,slow=5.6,SNR=4.7						
NVAR	**Mina Array Bea**	**83.04**	**52**	P	**P**	**13 12 52.2**	**+1.7**
	0.9nm,0.6s,mb3.6,baz=263,slow=5.6,SNR=8.7						
FINES	**FINESS Array B**	**86.47**	**335**	P	**P**	**13 13 05.2**	**-2.0**
	1.4nm,0.3s,mb4.1,baz=85,slow=4.1,SNR=11						
FINES	**FINESS Array B**	**86.47**	**335**	P	**P**	**13 13 05.2**	**-2.0**

*NIED **21** 13:06:00,21.°20N×121.°00E,h47km,Mw4.8 Best double couple: M0:1.62000×10^16 NP1:φ0=25.00000°,δ=66.00000°, λ=111.00000°. NP2:φ0=161.00000°,δ=31.00000°,λ=51.00000°.*

*BJI **21** 13:06:48.5,21.°15N×121.°15E,h3km,mB4.8/25,mb4.5/36, Ms4.5/36,Ms7 4.3/30*

*ISCJB **21** 13:06:49.6±1.0,21.°16N±0.°03×121.°13E±0.°03,h7km±6km, mb4.5/61,MS4.1/13, Error ellipse: s-maj=5.1km s-min=3.6km az=138.1*

*NEIC **21** 13:06:51.0±2.6,21.°22N×121.°15E,h3km±15km,mb4.8/27, Error ellipse: s-maj=6.7km s-min=6.0km az=130.0*

*IDC **21** 13:06:50.6±0.5,21.°21N×121.°16E,h0km,mb4.3/22, mb1 4.5/23,mb1mx4.4/27,mbtmp4.4/23,ML3.8/1,MS3.9/7, Ms1 4.0/7,ms1mx3.8/33, Error ellipse: s-maj=17.9km s-min=12.8km az=73.0*

*MOS **21** 13:06:52.4±0.9,21.°20N×121.°15E,h26km,mb4.9/25, Error ellipse: s-maj=10.4km s-min=6.5km az=100.9*

*JMA **21** 13:06:52.4±0.4,21.°17N×120.°99E,h106km,M4.4*

ISC 21 13:06:52.9±1.2,21.°19N±0.°03×121.°12E±0.°03,h15km±7km, h26km±5.9km:pP-P,n133,σ1°01/151,mb4.5/61,MS4.1/13, 3C-5D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**1.62**	**358**	*e*Pn	**Pn**	**13 07 17.4**	**-3.5**
TPUB	**Ta-pu**	**2.15**	**348**	*e*Pn	**Pn**	**13 07 26.8**	**-1.3**
YULB	**Yu-li**	**2.19**	**4**	*e*Pn	**Pn**	**13 07 25.4**	**-3.4**
SSLB	**Suanglung**	**2.59**	**357**	*e*Pn	**Pn**	**13 07 33.5**	**-0.8**
PIP	**Pasuquin**	**2.89**	**189**	||*i* P	**Pn**	**13 07 37.6**	**-0.8**
PIP				*e*S	**Sn**	**13 08 11.4**	**-1.6**
NACB	**Ninganchiao**	**3.00**	**8**	*e*Pn	**Pn**	**13 07 39.9**	**0.0**
YHNB	**Yeheng**	**3.47**	**4**	*e*Pn	**Pn**	**

comp=Z,70nm,1.1s
BJI Beijing 19.26 348 P **Pn** **13 11 16.8 -1.0**
BJI S **Sn** **13 14 49.5 -3.9**
BJI pmax pmax
comp=Z,45nm,1.2s
BJI pmax pmax
comp=Z,310nm,10.5s
BJI LR LR
comp=E,1μm,19.5s
BJI LR LR
comp=N,560nm,20.3s
BJI LR LR
comp=Z,280nm,17.2s
CBIJ Chichi jima 20.09 69 P **P** **13 11 25.6 -0.5**
comp=Z,68nm,0.7s,baz=310,slow=16,SNR=3.9
CBIJ LR LR 13 18 58.6
comp=Z,141nm,18.3s,MS3.4,baz=221,slow=36
SNY Shenyang 20.68 5 ⇓P **P** **13 11 34.9 +2.6**
SNY pmax pmax
comp=Z,9.0nm,0.5s
CHTO Chiang Mai 20.97 267 *e*P **P** **13 11 35.9 +0.3**
CHTO pmax pmax
comp=Z,12nm,1.0s
CHTO Chiang Mai 20.97 267 *e*P **P** **13 11 35.9 +0.2**
comp=Z,12nm,1.0s
CM31 Chiang Mai Arr 21.04 266 *e*P **P** **13 11 37.0 +0.6**
comp=Z,4.6nm,0.7s,mb3.9
CMAR Chiang Mai Arr 21.04 266 P **P** **13 11 37.0 +0.6**
comp=Z,9.4nm,0.9s,mb4.1,baz=73,slow=9.3,SNR=54
LZH Lanzhou 21.16 318 *e*P **P** **13 11 38.3 +0.7**
LZH pP 13 11 41.0
LZH sP sP 13 11 42.9 -1.0
LZH PP 13 12 01.6
LZH *e*SS 13 16 02.1
LZH pmax pmax
comp=Z,31nm,1.0s,mb4.6
LZH pmax pmax
comp=Z,220nm,6.4s
LZH LR LR
comp=E,690nm,10.0s
LZH LR LR
comp=Z,970nm,12.3s,MS4.4
HHC Hu-ho-hao-te 21.21 340 *e*P **P** **13 11 39.8 +1.8**
HHC sP sP 13 11 44.8 +0.5
HHC PP 13 12 02.9
HHC S **S** **13 15 31.6 -1.7**
HHC PcP PcP 13 15 45.3 +2.2
HHC SS 13 16 03.8
HHC ScP ScP 13 19 19.8 +0.2
HHC PcS PcS 13 19 22.3 +1.2
HHC pmax pmax
comp=Z,22nm,0.6s,mb4.7
HHC pmax pmax
comp=Z,240nm,5.2s
HHC LR LR
comp=N,960nm,12.6s,MS4.6
HHC LR LR
comp=E,1μm,12.5s,MS4.6
HHC LR LR
comp=Z,910nm,12.1s,MS4.4
MAJO Matsushiro 21.34 41 *e*P **P** **13 11 40.5 +1.0**
MAJO pmax pmax
comp=Z,17nm,0.8s,mb4.4
MAJO Matsushiro 21.34 41 *e*P **P** **13 11 40.5 +1.0**
comp=Z,17nm,0.8s,mb4.4
MAT Matsushiro 21.34 41 P **P** **13 11 40.5 +1.0**
MAT S **S** **13 15 33.8 -2.3**
MJAR Matsushiro Arr 21.34 41 P **P** **13 11 40.4 +0.9**
comp=Z,15nm,0.9s,mb4.3,baz=230,slow=8.2,SNR=44
BTO Baotou 21.53 336 *e*P **P** **13 11 38.8 -2.7**
CN2 Changchun 22.83 8 *e*P **P** **13 11 55.3 0.0**
CN2 *e*sP sP 13 12 02.0 +0.4
CN2 *e*S **S** **13 15 59.3 -5.0**
CN2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.3
CN2 LR LR
comp=N,800nm,15.0s,MS4.5
CN2 LR LR
comp=E,900nm,15.0s,MS4.5
CN2 LR LR
comp=Z,900nm,16.0s,MS4.3
GUMO Guam 23.87 105 LR LR 13 19 44.0
comp=Z,173nm,18.7s,MS3.5,baz=268,slow=32
MDJ Mudanjiang 24.39 15 P **P** **13 12 10.1 -0.4**
MDJ pP 13 12 13.1
MDJ sP sP 13 12 14.5 -2.5
MDJ PcP PcP 13 15 49.1 -0.5
MDJ S **S** **13 16 30.6 +1.0**
MDJ ScP ScP 13 19 25.4 -2.4
MDJ pmax pmax
comp=Z,35nm,1.0s,mb4.7
MDJ pmax pmax
comp=Z,150nm,3.5s
MDJ LR LR
comp=N,340nm,14.5s,MS4.4
MDJ LR LR
comp=E,940nm,15.9s,MS4.4
MDJ LR LR
comp=Z,360nm,14.8s,MS4.0
MDJ Mudanjiang 24.39 15 *e*P **P** **13 12 10.6 +0.1**
comp=Z,32nm,0.9s,mb4.8
GTA Gaotai 25.74 320 *e*P **P** **13 12 22.9 +0.1**
GTA pP pP 13 12 27.1 -0.3
GTA sP sP 13 12 30.8 +1.5
GTA S **S** **13 16 52.0 +0.8**
GTA sS sS 13 17 00.6 +1.8
GTA pmax pmax
comp=Z,2.0nm,1.3s,mb3.5
GTA pmax pmax
comp=Z,120nm,6.3s
GTA LR LR
comp=N,400nm,16.6s,MS4.1
GTA LR LR
comp=E,270nm,14.9s,MS4.1
GTA LR LR
comp=Z,410nm,14.6s,MS4.1
PSI Prapat 28.30 233 LR LR 13 24 39.7
comp=Z,305nm,18.3s,MS3.9,baz=217,slow=38
ULN Ulaanbaatar 28.93 340 *e*P **P** **13 12 51.7 +0.4**
ULN pmax pmax
comp=Z,12nm,0.9s,mb4.6
ULN Ulaanbaatar 28.93 340 *e*P **P** **13 12 51.7 +0.3**
comp=Z,12nm,0.9s,mb4.6
ASAJ Asahikawa 28.98 33 P **P** **13 12 52.8 +0.9**
comp=Z,8.7nm,0.6s,mb4.7,baz=233,slow=15,SNR=18
ASAJ Asahikawa 28.98 33 P **P** **13 12 52.8 +0.9**
ASAJ pmax pmax
comp=Z,9.0nm,0.6s
SONM Songino Array 29.11 339 P **P** **13 12 53.9 +0.9**
comp=Z,8.5nm,0.8s,mb4.5,baz=156,slow=7.9,SNR=26
HABR Khabarovsk 29.42 19 P **P** **13 12 54.3 -1.4**
HABR *PP pP 13 13 06.9 +6.5
HABR *e* 13 13 48.2
HABR S **S** **13 17 44.5 -4.6**
HABR SS SS 13 19 14.1 -40
HABR *e* 13 19 42.3
HABR *e* 13 23 30.7
HABR MLR MLR
comp=Z,204nm,17.0s,MS3.8
YSS Yuzh-Sakhalins 31.12 29⇓*e*P **P** **13 13 10.1 -0.7**
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.1
YSS Yuzh-Sakhalins 31.12 29 *e*P **P** **13 13 10.7 -0.1**
comp=Z,12nm,0.8s,mb4.8
TLY Talaya 33.34 340 *e*P **P** **13 13 30.0 -0.2**
TLY pmax pmax
comp=Z,10μm,2.9s
TLY Talaya 33.34 340 *e*P **P** **13 13 30.0 -0.2**
comp=Z,13μm,2.9s
WMQ Urumqi 35.73 317 *e*P **P** **13 13 50.8 -0.2**
WMQ pP pP 13 14 00.6 +4.9
WMQ pmax pmax
comp=Z,56nm,1.0s,mb5.5
WMQ pmax pmax
comp=Z,500nm,4.2s
FITZ Fitzroy Crossi 39.30 173 P **P** **13 14 21.6 +0.2**
comp=Z,3.6nm,1.1s,mb4.0,baz=57,slow=4.7,SNR=3.2
MK31 Makanchi Array 40.48 318 *e*P **P** **13 14 31.0 0.0**
MKAR Makanchi Array 40.48 318 P **P** **13 14 31.3 +0.3**
comp=Z,2.4nm,0.8s,mb4.0,baz=110,slow=10,SNR=18
YAK Yakutsk 41.23 6 *e*P **P** **13 14 34.6 -2.4**
YAK pmax pmax
comp=Z,21nm,1.1s,mb4.7
YAK pmax pmax
comp=N,10.0nm,1.1s
YAK pmax pmax
comp=E,4.0nm,1.2s
PALK Pallekele 41.41 257 *i*P **P** **13 14 42.7 +3.6**
PETK Petropavlovsk- 42.39 32 P **P** **13 14 46.4 -0.2**
comp=E,3.7nm,0.8s,mb4.1,baz=214,slow=5.7,SNR=5.6
KSH Kashi 42.53 306 P **P** **13 14 51.6 +3.6**
KSH pP pP 13 14 56.1 +3.4
KSH sP sP 13 14 58.6 +4.1
KSH PP PP 13 16 34.8 +8.2
KSH PcP PcP 13 16 42.0 +1.6
KSH ScP ScP 13 20 31.5 +0.7
KSH PcS PcS 13 20 33.8 +1.4
KSH S **S** **13 21 16.0 +6.2**
KSH sS sS 13 21 23.8 +6.2
KSH SS SS 13 24 21.4 +1.8
KSH ScS ScS 13 24 49.8 +0.5
KSH pmax pmax
comp=Z,140nm,4.9s
KSH LR LR
comp=N,310nm,10.1s,MS4.6
KSH LR LR
comp=E,350nm,15.0s,MS4.6
KSH LR LR
comp=Z,230nm,12.3s,MS4.3
ZAA0 Zalesovo Array 42.74 329 *e*P **P** **13 14 49.0 -0.4**
ZALV Zalesovo Beam 42.74 329 P **P** **13 14 49.3 -0.1**
comp=Z,4.0nm,0.6s,mb4.3,baz=116,slow=7.7,SNR=20
PET Petropavlovsk 42.83 33 *e*P **P** **13 14 48.6 -1.5**
PET pmax pmax
comp=Z,23nm,1.1s,mb4.8
WRAB Tennant Creek 42.87 162 *e*P **P** **13 14 49.5 -1.3**
WRAB pmax pmax
comp=Z,9.0nm,0.9s,mb4.5
WRAB Tennant Creek 42.87 162 *e*P **P** **13 14 49.5 -1.3**
comp=Z,8.6nm,0.9s,mb4.5
WRA Warramunga Arr 42.88 162 P **P** **13 14 50.5 -0.3**
comp=Z,4.4nm,0.8s,mb4.2,baz=344,slow=8.9
TKM2 Tokmak 2 43.60 311 P **P** **13 14 56.6 0.0**
TKM2 pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
TKM2 Tokmak 2 43.60 311 P **P** **13 14 56.6 0.0**
comp=Z,5.0nm,0.7s,mb4.3
NVS Novosibirsk 44.01 329 *e*P **P** **13 14 56.7 -2.9**
UCH Uchtor 44.21 309 *e*P **P** **13 15 03.3 +1.9**
UCH pmax pmax
comp=Z,9.0nm,1.3s,mb4.3
UCH Uchtor 44.21 309 *e*P **P** **13 15 03.3 +1.8**
comp=Z,8.9nm,1.3s,mb4.3
KURK Kurchatov 44.37 322 *d i*P **P** **13 15 02.1 -0.5**
KURK pmax pmax
comp=Z,8.0nm,1.2s,mb4.3
KURK Kurchatov 44.37 322 *e*P **P** **13 15 02.7 +0.1**
comp=Z,5.4nm,1.0s,mb4.2
AML Almayashu 44.78 309 *e*P **P** **13 15 05.5 -0.5**
ASAR Alice Springs 46.29 164 P **P** **13 15 18.6 +0.6**
comp=Z,1.3nm,0.8s,mb3.9,baz=346,slow=11,SNR=18
ASAR PcP PcP 13 16 52.5 -0.8
comp=Z,1.2nm,0.8s,baz=358,slow=3.1,SNR=5.8
SEY Seymchan 46.80 19 *e*P **P** **13 15 21.7 +0.1**
KBL Kabul 47.45 298 P **P** **13 15 26.3 -0.8**
KBL pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
KBL Kabul 47.45 298 P **P** **13 15 26.3 -0.8**
comp=Z,7.5nm,0.9s,mb4.6
BVAR Borovoye Array 49.97 322 P **P** **13 15 46.8 +0.6**
comp=Z,2.5nm,0.9s,mb4.3,baz=99,slow=9.2,SNR=8.6
BVAR PcP PcP 13 17 05.9 -0.3
comp=Z,1.3nm,0.7s,baz=130,slow=4.4,SNR=4.3
BRVK Borovoye 50.04 322 *e*P **P** **13 15 47.4 +0.6**
BRVK pmax pmax
comp=Z,9.0nm,1.2s,mb4.7
BRVK Borovoye 50.04 322 *e*P **P** **13 15 47.0 +0.2**
comp=Z,12nm,1.1s,mb4.8
ABKAR Akbulak array 55.51 316 *e*P **P** **13 16 26.3 -1.0**
comp=Z,2.3nm,0.7s,mb4.3
STKA Stephens Creek 56.30 159 P **P** **13 16 33.5 +0.5**
comp=Z,4.6nm,0.7s,mb4.6,baz=358,slow=7.3,SNR=10
SVE Sverdlovsk 56.43 325 *e*P **P** **13 16 34.7 +1.0**
SVE pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
ARU Arti 57.47 324 *d i*P **P** **13 16 41.1 0.0**
ARU 13 18 46.5
ARU S **S** **13 24 36.6 -1.1**
ARU SS SS 13 28 28.4 +1.2
ARU pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
ARU Arti 57.47 324 *e*P **P** **13 16 40.5 -0.6**
comp=Z,5.1nm,0.8s,mb4.6
VRHR Novokhopersk 67.28 318 *e*P **P** **13 17 45.1 -1.8**
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
VRHR pmax pmax
comp=E,2.0nm,0.3s
KIV Kislovodsk 67.44 310 *e*P **P** **13 17 48.8 +0.8**
KIV pmax pmax
comp=Z,11nm,1.2s,mb4.8
VSR Storozhevoye 68.80 318 *e*P **P** **13 17 55.3 -1.2**
VSR pmax pmax
comp=N,8.0nm,0.7s
VSR pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
VSR pmax pmax
comp=E,2.0nm,0.3s
APA Apatity 69.75 336⇓*e*P **P** **13 17 54.0 -8.0**
APA *e* pP 13 18 00.0 -6.9
APA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
APA MLR MLR
comp=Z,200nm,16.0s,MS4.5
OBN Obninsk 69.81 322 *e*P **P** **13 18 03.4 +0.8**
OBN *e*PP pP 13 18 16.8 +9.2
OBN *e* 13 20 38.6
OBN pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
RSO Redoubt South 69.92 32 *e*P **P** **13 18 03.4 +0.2**
COLD Coldfoot 70.16 24 *e*P **P** **13 18 04.4 -0.1**
comp=Z,13nm,1.1s,mb4.8
BPAW Bear Paw Mtn. 70.25 28 *e*P **P** **13 18 04.8 -0.3**
comp=Z,25nm,1.2s,mb5.0
KDAK Kodiak Island 70.38 35 *i*P **P** **13 18 05.3 -0.8**
TRF Thorofare Moun 70.65 28 *e*P **P** **13 18 07.7 +0.1**
comp=Z,10nm,0.9s,mb4.8
MCK McKinley 71.20 28 *e*P **P** **13 18 10.4 -0.5**
MCK pmax pmax
comp=Z,28nm,1.0s,mb5.2
MCK McKinley 71.20 28 *e*P **P** **13 18 10.4 -0.5**
comp=Z,28nm,1.0s,mb5.2
COLA College 71.47 27 *e*P **P** **13 18 11.6 -0.9**
COLA pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
COLA College 71.47 27 *e*P **P** **13 18 11.6 -0.9**
comp=Z,8.1nm,0.8s,mb4.7
PMR Palmer 71.48 30 *e*P **P** **13 18 11.8 -0.9**
PMR pmax pmax
comp=Z,18nm,0.8s,mb5.0
PMR Palmer 71.48 30 *e*P **P** **13 18 11.8 -0.9**
comp=Z,18nm,0.8s,mb5.0
KEV Kevo 71.72 339 *e*P **P** **13 18 14.3 +0.3**
KEV pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
KEV Kevo 71.72 339 *ep* **P** **13 18 14.3 +0.3**
comp=Z,0.9nm,0.3s,mb4.2
ILAR Eielson Array 71.89 27 P **P** **13 18 13.6 -1.5**
comp=Z,3.2nm,0.7s,mb4.3,baz=275,slow=5.2,SNR=33
ILAR LR LR 13 53 52.9
comp=Z,111nm,18.6s,MS4.2,baz=72,slow=39
ARCES ARCESS Array B 72.28 338 P **P** **13 18 16.7 -0.6**
comp=Z,3.0nm,0.8s,mb4.3,baz=60,slow=7.2,SNR=8.9
DIV Divide 73.16 30 *e*P **P** **13 18 22.1 -0.7**
comp=Z,37nm,1.2s,mb5.2
MENT Mentasta 73.67 28 *e*P **P** **13 18 25.5 -0.2**
KAF Kangasniemi 73.72 331 *e*P **P** **13 18 26.5 +0.5**
KAF Kangasniemi 73.72 331 *ep* **P** **13 18 26.5 +0.5**
comp=Z,2.5nm,0.7s,mb4.2
BMRM Bremner River 73.75 30 P **P** **13 18 23.5 -2.7**
comp=Z,17nm,0.9s,mb5.0
FINES FINESS Array B 73.99 330 P **P** **13 18 28.2 +0.6**
comp=Z,5.3nm,0.8s,mb4.5,baz=96,slow=8.4,SNR=11
EGAK Eagle 74.28 26 *e*P **P** **13 18 28.2 -1.0**
comp=Z,14nm,1.0s,mb4.8
BRTR Keskin Array B 74.91 307 P **P** **13 18 33.5 +0.2**
comp=Z,0.7nm,0.7s,mb3.7,baz=148,slow=7.2,SNR=4.9
AKASG Malin Array Be 75.06 319 P **P** **13 18 34.2 +0.2**
comp=Z,0.5nm,0.4s,mb3.8,baz=114,slow=22,SNR=4.5
DAWY Dawson 75.22 27 *e*P **P** **13 18 34.1 -0.5**
INK Inuvik 76.01 22 *e*P **P** **13 18 38.0 -1.1**
INK pmax pmax
comp=Z,25nm,1.2s
INK Inuvik 76.01 22 *e*P **P** **13 18 38.0 -1.2**
comp=Z,24nm,1.2s,mb5.0
HFS Hagfors 80.14 331 P **P** **13 19 02.9 +0.7**
comp=Z,1.2nm,0.7s,mb3.9,baz=212,slow=42,SNR=3.6
NB2 NORSAR Subarra 80.83 332 P **P** **13 19 06.3 +0.4**
comp=Z,6.9nm,1.4s,mb4.4,baz=64,slow=5.6
NOA NORSAR Array B 80.83 332 P **P** **13 19 05.9 0.0**
comp=Z,1.2nm,0.8s,mb3.9,baz=61,slow=5.4,SNR=3.8
NOA LR LR 14 00 38.4
comp=Z,253nm,18.8s,MS4.6,baz=225,slow=40
YKA Yellowknife Ar 85.74 23 P **P** **13 19 30.2 -0.9**
comp=Z,3.4nm,0.7s,mb4.7,baz=308,slow=4.9,SNR=26
JCW Jim Creek 90.91 37 *e*P **P** **13 19 56.9 +0.7**
comp=Z,7.3nm,0.8s,mb5.1
EDM Edmonton 92.23 29 *e*P **P** **13 20 02.6 +0.5**
NEW Newport 93.49 35 *e*P **P** **13 20 08.0 0.0**
NEW pmax pmax
comp=Z,3.0nm,0.7s
NEW Newport 93.49 35 *e*P **P** **13 20 08.0 0.0**
comp=Z,2.8nm,0.7s,mb4.8
NVAR Mina Array Bea 98.65 43 P **P** **13 20 32.3 +0.5**
comp=Z,0.5nm,0.7s,mb4.2,baz=296,slow=5.4,SNR=4.6

MAN 21 13:07:39,17.96N×121.07E,h18km,mb4.9,ML3.8,MS3.9, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APYP	**Conner**	**0.19**	**120**	*e*P	Pg	13 07 45.4	+1.6
ABRA	**Dolores**	**0.46**	**228**	*e*P	Pg	13 07 49.3	+1.0
CAUP	**Cauayan**	**1.24**	**144**	*e*P	Pn	13 08 02.7	+1.3
CAUP				*e*S	Sb	13 08 19.7	+2.2
BALP	**Baler**	**2.26**	**167**	*e*P	Pn	13 08 16.1	+0.7
BALP				*e*S	Sn	13 08 38.7	-4.1

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*TAP **21** 13:09:55.2,21.04N×121.21E,h25km±1km,ML3.9,D*
*IDC **21** 13:09:56.2±1.2,21.25N×121.16E,h0km,mb3.7/9,*
mb1 3.9/10,mb1mx3.7/23,mbtmp3.7/10,ML3.3/1,Error
ellipse: s-maj=28.3km s-min=25.0km az=138.0
*ISCJB **21** 13:09:57.5±0.9,21.13N±0.04×121.22E±0.06,h28km±5km,*
mb3.6/10,Error ellipse: s-maj=9.9km s-min=6.2km
az=167.0
*NEIC **21** 13:09:58.3±5.8,21.23N×121.19E,h14km±36km,mb3.8/1,*
Error ellipse: s-maj=17.6km s-min=14.9km az=135.0
ISC 21 13:09:57.7±0.9,21.17N±0.04×121.19E±0.06,h14km±5km,
n51,σ1§03/67,mb3.6/10,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**0.78**	**340**	P	**Pg**	**13 10 12.4**	**-0.5**
	baz=339						
TSEB				S	**Sg**	**13 10 25.6**	**+2.5**
	baz=339						
TWK1	**Hengchun**	**0.85**	**335**	*i* P	**Pg**	**13 10 13.1**	**-1.2**
	baz=337						
TWK1				*i* S	**Sg**	**13 10 26.9**	**+1.5**
	baz=337						
LAY	**Lan-yu**	**0.93**	**21**	P	**Pb**	**13 10 15.0**	**-0.6**
	baz=18						
LAY				S	**Sb**	**13 10 28.6**	**+0.8**
	baz=18						
HEN	**Hengchun**	**0.93**	**333**	P	**Pb**	**13 10 15.3**	**-0.4**
	baz=335						
HEN				S	**Sb**	**13 10 28.8**	**+0.9**
	baz=335						
TAW	**Tawu**	**1.22**	**347**	*e*P	**Pn**	**13 10 18.5**	**-1.8**
	baz=347						
EAST	**Anshuo**	**1.25**	**345**	*e*P	**Pn**	**13 10 18.3**	**-2.5**
	baz=346						
EAST				S	**Sb**	**13 10 36.3**	**-0.7**
	baz=346						
SCZT	**Fangliau**	**1.31**	**336**	P	**Pn**	**13 10 20.3**	**-1.3**
	baz=337						
SCZT				S	**Sb**	**13 10 38.5**	**-0.2**
	baz=337						
ECL	**Taimali**	**1.44**	**351**	*e*P	**Pn**	**13 10 21.1**	**-2.3**
	baz=351						
TTN	**Taitung**	**1.58**	**359**	*e*P	**Pn**	**13 10 24.2**	**-1.0**
	baz=358						
TWG	**Pinlang**	**1.65**	**356**	*e*P	**Pn**	**13 10 24.0**	**-2.2**
TWG	**Pinlang**	**1.65**	**356**	*e*P	**Pn**	**13 10 24.9**	**-1.3**
	baz=356						
SSD	**Sandimen**	**1.65**	**342**	*e*P	**Pn**	**13 10 25.5**	**-0.8**
	baz=342						
SSD				*e*S	**Sn**	**13 10 46.9**	**-0.4**
	baz=342						
TWM1	**Shoushan**	**1.79**	**337**	*e*P	**Pn**	**13 10 29.4**	**+1.2**
	baz=337						
SGST	**Jiashian**	**1.99**	**344**	*e*P	**Pn**	**13 10 30.0**	**-0.8**
	baz=344						
SGST				*e*S	**Sn**	**13 10 55.9**	**+0.4**
	baz=344						
ELDTW	**Lidau**	**2.02**	**355**	P	**Pn**	**13 10 29.8**	**-1.5**
	baz=355						
CHN1	**Nanshi**	**2.10**	**343**	*e*P	**Pn**	**13 10 33.0**	**+0.6**
	baz=343						
CHN1				*e*S	**Sn**	**13 10 57.9**	**-0.4**
	baz=343						
TWF1	**Yuli**	**2.18**	**3**	*e*P	**Pn**	**13 10 33.3**	**-0.1**
	baz=2.0						
TWF1				*e*S	**Sn**	**13 10 59.7**	**-0.5**
	baz=2.0						
TPUB	**Ta-pu**	**2.19**	**346**	*e*P	**Pn**	**13 10 34.8**	**+1.2**
TWK	**Hsinying**	**2.19**	**343**	*e*P	**Pn**	**13 10 35.7**	**+2.0**
	baz=343						
YULB	**Yu-li**	**2.22**	**3**	*e*P	**Pn**	**13 10 33.1**	**-0.9**
EHY	**Hungye**	**2.33**	**3**	*e*P	**Pn**	**13 10 35.4**	**-0.2**
	baz=2.0						
EHY				*e*S	**Sn**	**13 11 04.5**	**+0.5**
	baz=2.0						
CHN5	**Tsauling**	**2.46**	**349**	*e*P	**Pn**	**13 10 37.1**	**-0.3**
	baz=349						
CHN5				*e*S	**Sn**	**13 11 08.2**	**+1.0**
	baz=349						
SSLB	**Suanglung**	**2.62**	**355**	*e*P	**Pn**	**13 10 40.1**	**+0.6**
ESL	**Shilin**	**2.64**	**5**	*e*P	**Pn**	**13 10 39.9**	**0.0**
	baz=4.0						
ESL				*e*S	**Sn**	**13 11 11.7**	**0.0**
	baz=4.0						
SMLT	**Sun Moon Lake**	**2.72**	**354**	*e*P	**Pn**	**13 10 41.6**	**+0.7**
	baz=354						
SMLT				*e*S	**Sn**	**13 11 13.9**	**+0.4**
	baz=354						
WNT	**Mingjian**	**2.74**	**350**	*e*P	**Pn**	**13 10 42.9**	**+1.7**
	baz=350						
TYC	**Yuchr**	**2.74**	**354**	*e*P	**Pn**	**13 10 40.7**	**-0.5**
	baz=353						
TYC				*e*S	**Sn**	**13 11 13.9**	**-0.2**
	baz=353						
PNG	**Penghu**	**2.83**	**328**	*e*P	**Pn**	**13 10 40.4**	**-2.0**
	baz=328						
WHF	**Hehuan Shan**	**2.96**	**1**	*e*P	**Pn**	**13 10 43.4**	**-0.9**
	baz=1.0						
NACB	**Ninganchiao**	**3.02**	**7**	*e*P	**Pn**	**13 10 45.3**	**+0.3**
TWT	**Tachien**	**3.07**	**360**	*e*P	**Pn**	**13 10 46.5**	**+0.7**
	baz=359						
TWQ1	**Liyutan**	**3.19**	**353**	*e*P	**Pn**	**13 10 47.3**	**-0.1**
	baz=353						
TWQ1				*e*S	**Sn**	**13 11 25.0**	**-0.2**
	baz=353						
NNS	**Nan Shan**	**3.26**	**3**	*e*P	**Pn**	**13 10 47.8**	**-0.6**
	baz=2.0						
NSTT	**Nanjuang**	**3.45**	**357**	*e*P	**Pn**	**13 10 53.6**	**+2.6**
	baz=357						
TWC	**Suao**	**3.48**	**10**	*e*P	**Pn**	**13 10 50.7**	**-0.6**
	baz=9.0						
YHNB	**Yeheng**	**3.49**	**3**	*e*P	**Pn**	**13 10 51.7**	**+0.2**
NSK	**Sanguang**	**3.50**	**3**	*e*P	**Pn**	**13 10 50.4**	**-1.2**
	baz=2.0						
TWE	**Neicheng**	**3.56**	**7**	*e*P	**Pn**	**13 10 53.8**	**+1.2**
	baz=6.0						
TATO	**Taipei**	**3.80**	**4**	P	**Pn**	**13 10 55.6**	**-0.1**
KSRS	**Korea Array**	**17.25**	**18**	P	**Pn**	**13 13 58.6**	**+0.5**
	0.1nm,0.3s,baz=78,slow=36,SNR=3.9						
CMAR	**Chiang Mai Arr**	**21.10**	**267**	P	**P**	**13 14 42.0**	**+0.1**
	2.3nm,0.9s,mb3.5,baz=77,slow=9.2,SNR=8.9						
MJAR	**Matsushiro Arr**	**21.32**	**40**	P	**P**	**13 14 44.3**	**+0.1**
	1.8nm,0.8s,mb3.4,baz=227,slow=7.3,SNR=5.2						
MJAR	**Matsushiro Arr**	**21.32**	**40**	P	**P**	**13 14 44.3**	**+0.1**
ASAJ	**Asahikawa**	**28.97**	**33**	P	**P**	**13 15 58.0**	**+1.4**
	5.4nm,1.1s,mb4.2,baz=118,slow=19,SNR=3.1						

ULN	Ulaanbaatar	28.97	340	P	P	13 15 58.5 +1.9
	1.2nm,0.7s,mb3.7					
SONM	Songino Array	29.16	339	P	P	13 15 58.1 -0.1
	0.8nm,0.6s,mb3.7,baz=161,slow=9.5,SNR=3.8					
MKAR	Makanchi Array	40.54	318	P	P	13 17 36.8 +0.4
	0.7nm,0.7s,mb3.4,baz=106,slow=9.8,SNR=3.7					
ZALV	Zalesovo Beam	42.80	329	P	P	13 17 54.9 +0.2
	1.2nm,0.8s,mb3.7,baz=111,slow=6.3,SNR=3.9					
ASAR	Alice Springs	46.25	164	P	P	13 18 24.4 +1.7
	0.2nm,0.6s,mb3.2,baz=348,slow=7.5,SNR=2.7					
ILAR	Eielson Array	71.89	27	P	P	13 21 19.1 -0.8
	0.5nm,0.8s,mb3.5,baz=260,slow=5.4,SNR=5.0					
YKA	Yellowknife Ar	85.74	23	P	P	13 22 36.9 +0.9
	0.6nm,0.8s,mb3.9,baz=307,slow=4.9,SNR=3.6					

*TAP **21** 13:12:56.1,21.0°06N×121.0°24E,h15km±1km,ML4.0,D*
*IDC **21** 13:12:57.3±0.8,21.0°25N×121.0°24E,h0km,mb3.9/11, mb1 4.1/12,mb1mx3.9/24,mbtmp4.0/12,ML3.6/1,Error ellipse: s-maj=24.7km s-min=16.3km az=86.0*
*ISCJB **21** 13:12:59.2±0.9,21.0°16N±0.0°04×121.0°13E±0.0°04,h28km±6km, mb3.9/12,Error ellipse: s-maj=6.6km s-min=6.2km az=35.7*
*JMA **21** 13:13:01.8±0.6,20.0°95N×121.0°58E,h136km,M3.6*
*NEIC **21** 13:13:01.2±3.2,21.0°23N×121.0°22E,h26km±23km,mb4.1/1, Error ellipse: s-maj=13.5km s-min=10.0km az=87.0*

ISC 21 13:12:59.4±1.0,21.0°20N±0.0°04×121.0°09E±0.0°04,h14km±6km, n59,σ1§11/73,mb3.9/12,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSEB	Hengchuen, Pin	0.72	346	P	Pg	13 13 13.6	+0.1
	baz=336						
TSEB				eS	Sg	13 13 28.2	+5.3
TWK1	Hengchun	0.79	341	P	Pg	13 13 14.3	-0.4
	baz=335						
TWK1				i S	Sg	13 13 27.9	+2.8
HEN	Hengchun	0.87	338	P	Pg	13 13 16.1	-0.1
	baz=333						
HEN				i S	Sg	13 13 31.1	+3.4
LAY	Lan-yu	0.94	27	eP	Pb	13 13 15.9	-1.6
	baz=17						
LAY				eS	Sb	13 13 29.7	-0.3
TAW	Tawu	1.17	351	eP	Pn	13 13 19.7	-1.6
	baz=346						
EAST	Anshuo	1.20	349	eP	Pn	13 13 21.0	-0.8
	baz=344						
EAST				eS	Sb	13 13 37.9	+0.5
SCZT	Fangliau	1.25	340	P	Pn	13 13 21.4	-1.0
	baz=336						
SCZT				eS	Sb	13 13 37.8	-0.9
TWP	Hsiaoliuchiu	1.33	330	eP	Pn	13 13 25.8	+2.3
	baz=327						
ECL	Taimali	1.40	355	eP	Pn	13 13 21.5	-3.0
	baz=350						
TTN	Taitung	1.55	2	eP	Pn	13 13 24.5	-2.1
	baz=357						
SSD	Sandimen	1.60	345	eP	Pn	13 13 26.1	-1.1
	baz=341						
TWG	Pinlang	1.62	360	eP	Pn	13 13 26.3	-1.2
SGST	Jiashian	1.93	346	eP	Pn	13 13 31.8	0.0
	baz=343						
TAI1	Yung-k'ang	2.00	337	eP	Pn	13 13 32.5	-0.2
	baz=334						
TWK	Hsinying	2.13	345	eP	Pn	13 13 33.4	-1.3
	baz=342						
TPUB	Ta-pu	2.14	349	eP	Pn	13 13 31.3	-3.4
TWF1	Yuli	2.15	5	eP	Pn	13 13 32.9	-2.0
	baz=1.0						
YULB	Yu-li	2.19	5	eP	Pn	13 13 35.8	+0.4
EHY	Hungye	2.31	5	eP	Pn	13 13 36.2	-0.8
	baz=1.0						
CHY	Chiayi	2.37	345	eP	Pn	13 13 38.1	+0.3
	baz=342						
CHY				eS	Sn	13 14 07.9	+1.1
	baz=342						
CHN5	Tsauling	2.42	351	eP	Pn	13 13 38.4	-0.1
	baz=348						
CHN5				eS	Sn	13 14 08.6	+0.6
	baz=348						
WGK	Gukeng	2.52	349	eP	Pn	13 13 39.2	-0.8
	baz=346						
SSLB	Suanglung	2.58	357	eP	Pn	13 13 42.0	+1.2
ESL	Shilin	2.62	7	eP	Pn	13 13 38.9	-2.5
	baz=3.0						
SMLT	Sun Moon Lake	2.68	356	eP	Pn	13 13 42.0	-0.1
	baz=353						
TYC	Yuchr	2.70	356	eP	Pn	13 13 43.1	+0.7
	baz=353						
TYC				eS	Sn	13 14 15.4	+0.5
	baz=353						
PNG	Penghu	2.75	329	eP	Pn	13 13 41.7	-1.4
	baz=328						
WHF	Hehuan Shan	2.94	3	eP	Pn	13 13 45.8	+0.1
NACB	Ninganchiao	3.00	9	eP	Pn	13 13 47.0	+0.5
TWT	Tachien	3.04	2	eP	Pn	13 13 48.0	+0.9
	baz=358						
TWQ1	Liyutan	3.15	355	eP	Pn	13 13 48.6	0.0
	baz=352						
NSTT	Nanjuang	3.42	359	eP	Pn	13 13 51.8	-0.5
	baz=356						
YHNB	Yeheng	3.47	4	eP	Pn	13 13 52.9	-0.1
TWC	Suao	3.47	12	eP	Pn	13 13 54.2	+1.2
	baz=9.0						
NSK	Sanguang	3.47	4	eP	Pn	13 13 53.2	+0.2
	baz=1.0						
TWE	Neicheng	3.55	9	eP	Pn	13 13 55.8	+1.7
	baz=6.0						
YOJ	Yonaguni jima	3.70	28	P	Pn	13 13 58.9	+2.7
YOJ				eS	Sn	13 14 43.4	+3.7
TATO	Taipei	3.78	6	P	Pn	13 13 57.0	-0.3
TWA	Mucha	3.79	7	eP	Pn	13 13 58.2	+0.7
	baz=4.0						
HATJ	Hateruma jima	3.80	41	P	Pn	13 13 58.8	+1.3
HATJ				eS	Sn	13 14 41.9	-0.1
TWB1	Santiao Chiao	3.88	12	eP	Pn	13 13 58.1	-0.6
	baz=10.0						
IRIF	Iriomote-Funau	3.96	37	P	Pn	13 14 00.8	+1.0
IRIF				eS	Sn	13 14 47.8	+1.7
JKRS	Kuro-shima	4.06	41	P	Pn	13 14 02.2	+1.2
JIJ	Ishigaki jima	4.23	41	P	Pn	13 14 04.1	+0.7
JIJ				eS	Sn	13 14 51.2	-1.5
JTJ	Tarama	4.78	44	P	Pn	13 14 11.6	+0.6
JTJ				eS	Sn	13 15 06.0	-0.3
KSRS	Korea Array	17.25	19	P	Pn	13 16 58.1	-1.8
	0.2nm,0.3s,baz=198,slow=11,SNR=8.7						
CMAR	Chiang Mai Arr	21.01	266	P	P	13 17 44.1	+1.4
	1.2nm,0.5s,mb3.5,baz=75,slow=9.7,SNR=7.7						
MAT	Matsushiro	21.36	41	P	P	13 17 47.2	+0.9
MJAR	Matsushiro Arr	21.36	41	P	P	13 17 45.4	-0.9
	2.5nm,0.7s,mb3.6,baz=233,slow=8.1,SNR=9.8						
ULN	Ulaanbaatar	28.91	340	eP	P	13 18 59.1	+1.2
	2.4nm,0.7s,mb4.0						
ASAJ	Asahikawa	29.00	33	P	P	13 18 58.4	-0.3
	3.5nm,0.7s,mb4.2,baz=206,slow=8.6,SNR=3.4						
SONM	Songino Array	29.10	339	P	P	13 19 00.7	+1.2
	2.1nm,0.8s,mb3.9,baz=144,slow=9.0,SNR=6.7						
FITZ	Fitzroy Crossi	39.31	173	P	P	13 20 28.1	0.0
	3.4nm,1.1s,mb4.0,baz=82,slow=17,SNR=3.6						
MKAR	Makanchi Array	40.46	318	P	P	13 20 38.5	+1.0
	0.6nm,0.7s,mb3.4,baz=116,slow=11,SNR=5.1						
ZALV	Zalesovo Beam	42.72	329	P	P	13 20 55.1	-0.8
	2.2nm,0.6s,mb4.0,baz=110,slow=8.9,SNR=4.0						
ASAR	Alice Springs	46.30	164	P	P	13 21 25.2	+0.4
	0.7nm,0.7s,mb3.7,baz=344,slow=7.0,SNR=13						
STKA	Stephens Creek	56.31	159	P	P	13 22 40.0	+0.3
	1.8nm,0.6s,mb4.3,baz=348,slow=8.3,SNR=6.4						
ILAR	Eielson Array	71.90	27	P	P	13 24 20.4	-1.5
	0.8nm,0.8s,mb3.7,baz=288,slow=6.5,SNR=12						
YKA	Yellowknife Ar	85.75	23	P	P	13 25 37.9	0.0
	0.7nm,0.7s,mb4.0,baz=307,slow=4.9,SNR=8.2						

MAN 21 13:40:37,9.0°02N×122.0°57E,h28km,mb4.9,ML3.8,MS3.9, 2C-2D,Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	Sibulan	0.73	64	⇓iP	Pb	13 40 51.0	-0.2
SNPH				i S	Sb	13 41 02.2	+1.4
IPIL	Ipil	1.22	180	eP	Pn	13 40 58.1	-0.1
IPIL				eS	Sn	13 41 13.3	-0.5
PAGZ	Pagadian	1.41	145	eP	Pn	13 41 01.8	+0.9
PAGZ				eS	Sn	13 41 20.5	+2.0
TBP	Tagbilaran	1.44	62	eP	Pn	13 41 01.6	+0.4
TBP				eS	Sn	13 41 20.0	+0.9
GUIM	Jordan	1.60	1	eP	Pn	13 41 04.7	+1.3
GUIM				eS	Sn	13 41 19.8	-3.4
LLP	Lapu-Lapu	1.89	47	⇓eP	Pn	13 41 08.3	+1.0
LLP				eS	Sn	13 41 30.3	+0.1
ZMPH	Zamboanga City	2.11	194	⇑iP	Pn	13 41 10.3	-0.2
ZMPH				i S	Sn	13 41 33.2	-2.6
CGP	Cagayan de Oro	2.17	105	eP	Pn	13 41 09.3	-1.9
CGP				eS	Sn	13 41 38.3	+1.0
CUYO	Cuyo Island	2.38	320	eP	Pn	13 41 15.4	+1.2
CTBH	Cotabato--PC H	2.44	137	⇑eP	Pn	13 41 16.8	+1.9
CTBH				i S	Sn	13 41 46.6	+2.8
BUKP	Musuan	2.71	114	eP	Pn	13 41 22.2	+3.5
BUSP	Coron	3.77	322	eP	Pn	13 41 34.5	+1.1
ENPP	El Nido	3.79	305	eP	Pn	13 41 34.5	+1.0
CNP	Catarman	4.03	30	eP	Pn	13 41 38.7	+1.8
BOAC	Boac	4.47	351	eP	Pn	13 41 46.5	+3.5
CAUP	Cauayan	7.91	355	eP	Pn	13 42 35.6	+5.4

*ISCJB **21** 13:44:12.1±1.1,43.0°63N±0.0°04×75.0°38E±0.0°04,h0km±7km, Error ellipse: s-maj=7.1km s-min=5.2km az=157.9*
*NNC **21** 13:44:13.2±1.2,43.0°55N×75.0°35E,h4km±17km,mb3.4, mpv3.1,Error ellipse: s-maj=14.8km s-min=5.9km az=14.0*
*KNET **21** 13:44:15.1±0.6,43.0°47N×75.0°34E,h16km±2km,ml2.7,Error ellipse: s-maj=3.7km s-min=1.8km az=17.0*

ISC 21 13:44:13.0±0.8,43.0°62N±0.0°04×75.0°37E±0.0°04,h2km±5km, n17,σ0§82/28,18C-11D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKM2	Tokmak 2	0.71	167	⇓P	Pg	13 44 26.6	-0.1
	71nm,0.3s						
TKM2				⇑S	Sg	13 44 35.5	-0.5
	44nm,0.2s						
TKM2	Tokmak 2	0.71	167	P	Pg	13 44 26.6	-0.1
	215nm,0.1s,SNR=600						
TKM2				⇑S	Sg	13 44 35.6	-0.4
	191nm,0.1s						
USP	Ospenovka	0.72	241	P	Pg	13 44 27.3	+0.4
	78nm,0.1s,SNR=306						
USP				⇑S	Sg	13 44 36.6	+0.4
	239nm,0.2s						
CHMS	Chumysh	0.77	216	⇑P	Pg	13 44 27.7	0.0
	43nm,0.2s,SNR=39						
CHMS				⇓S	Sg	13 44 37.4	-0.2
	281nm,0.2s						
KBK	Karagaybulak	1.01	198	⇓P	Pg	13 44 32.3	0.0
	53nm,0.1s,SNR=78						
KBK				⇑S	Sg	13 44 45.6	+0.3
	286nm,0.2s						
AAK	Ala-Archa	1.17	213	⇓P	Pg	13 44 35.4	-0.1
	20nm,0.2s,SNR=14						
AAK				⇑S	Sg	13 44 49.9	-0.8
	208nm,0.2s						
KNDC	Almaty	1.23	108	⇑P	Pg	13 44 36.7	+0.1
	17nm,0.2s						
KNDC				⇑S	Sg	13 44 53.1	+0.6
	95nm,0.3s						
EKS2	Erkin-Say	1.51	231	⇑P	Pn	13 44 41.5	+0.5
	39nm,0.2s,SNR=202						
EKS2				⇓S	Sn	13 45 01.2	0.0
	86nm,0.2s						
ULHL	Ulahol	1.51	155	⇓P	Pn	13 44 41.1	0.0
	102nm,0.2s,SNR=20						
ULHL				⇑S	Sn	13 45 00.5	-0.8
	79nm,0.2s						
UCH	Uchtor	1.52	205	⇓P	Pn	13 44 41.5	+0.3
	10nm,0.1s,SNR=26						
UCH				⇓S	Sn	13 45 00.8	-0.8
	161nm,0.4s						
KZA	Kyzart	1.54	183	P	Pn	13 44 42.0	+0.6
	64nm,0.2s,SNR=218						
AML	Almayashu	1.93	220	⇑P	Pn	13 44 48.9	+2.1
	28nm,0.2s,SNR=54						
KK31	Karatay Array	3.58	263	⇓Pn	Pn	13 45 10.7	+1.2
	0.1nm,0.2s,baz=83,slow=13,SNR=23						
KK31				⇓Pg	Pg	13 45 19.0	-2.7
	1.8nm,0.3s,baz=80,slow=15,SNR=34						
KK31				⇑Lg		13 46 03.6	
	9.7nm,0.3s,baz=80,slow=28,SNR=17						
MK31	Makanchi Array	5.83	55	Pn	Pn	13 45 41.4	+1.0
	1.2nm,0.5s,baz=236,slow=11,SNR=20						
MK31				⇑Sn	Sn	13 46 46.6	-1.2
	1.1nm,0.5s,baz=230,slow=25,SNR=4.1						
MK31				⇓Lg		13 47 16.4	
	2.0nm,0.5s,baz=235,slow=26,SNR=4.2						
KURK	Kurchatov	7.44	16	⇑Lg		13 48 07.7	
	27nm,1.1s						
VOSK	Vostochnaya	9.57	344	⇑Lg		13 49 18.9	
	4.3nm,0.7s						
ZRNK	Zerenda	10.25	338	⇑Pn	Pn	13 46 40.0	-1.0
	1.4nm,0.8s						
ZRNK				⇑Sn	Sn	13 48 31.6	-4.9
	0.4nm,0.5s						
ZRNK				⇑Lg		13 49 39.8	
	4.1nm,1.1s						

MOS 21 13:58:04.0±2.4,51.0°34N×98.0°05E,h16km,mb4.4/1,2C, Error ellipse: s-maj=56.9km s-min=18.7km az=145.2, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORL	Orlik	1.62	42	⇑iPN	Pn	13 58 33.4	+1.5
ORL				e		13 58 55.8	
ORL				pmax	pmax		
	comp=Z,102nm,0.3s						
ORL				smax			
	comp=N,774nm,0.7s						
MOY	Mondy	1.87	79	⇑iPN	Pn	13 58 38.1	+2.8
MOY				e		13 59 02.9	
MOY				pmax	pmax		
	comp=Z,212nm,0.4s						
MOY				smax			
	comp=N,965nm,0.5s						
ARS	Arshan	2.79	76	ePN	Pn	13 58 54.2	+6.3
ARS				e		13 59 31.6	
ARS				pmax	pmax		
	comp=Z,85nm,0.2s						
ARS				smax			
	comp=E,841nm,0.5s						
TLY	Talaya	3.51	82	ePN	Pn	13 58 57.9	+0.1
TLY				e		13 59 06.5	
TLY				e		13 59 53.2	
TLY				pmax	pmax		
	comp=Z,29nm,0.7s						
TLY				smax			
	comp=N,213nm,1.3s						
IRK	Irkutsk	3.97	74	ePN	Pn	13 59 14.7	+11
IRK				e		14 00 06.1	
IRK				pmax	pmax		
	comp=Z,72nm,0.1s						
IRK				smax			
	comp=N,599nm,0.4s						
TRG	Tyrgan	5.32	71	ePN	Pn	13 59 24.8	+2.2
TRG				e		13 59 40.1	
TRG				e		14 00 48.5	
TRG				pmax	pmax		
	comp=Z,22nm,0.7s						
TRG				smax			
	comp=N,99nm,0.7s						
NIZ	Nizh Angarsk	8.15	53	eP	Pn	14 00 02.5	+1.0

*IDC **21** 14:03:02.6±0.9,21.0°31N×121.0°25E,h0km,mb3.7/10, mb1 3.9/11,mb1mx3.7/22,mbtmp3.7/11,ML3.3/1,MS3.3/1, Ms1 3.5/1,ms1mx2.4/28,Error ellipse: s-maj=26.3km s-min=18.2km az=71.0*
*ISCJB **21** 14:03:04.9±3.9,21.0°25N±0.0°09×121.0°2E±0.0°1,h30km±28km, mb3.7/11,Error ellipse: s-maj=19.5km s-min=15.2km az=159.3*
*NEIC **21** 14:03:05.1±4.3,21.0°28N×121.0°23E,h17km±27km,mb4.0/1, Error ellipse: s-maj=12.7km s-min=9.8km az=72.0*

ISC 21 14:03:04.8±5.8,21.0°28N±0.0°09×121.0°2E±0.0°1,h15km±37km, n21,σ0§65/21,mb3.7/11,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	Pinlang	1.54	355	eP	Pn	14 03 31.6	-0.2
TPUB	Ta-pu	2.09	345	eP	Pn	14 03 38.6	-0.8
YULB	Yu-li	2.11	2	eP	Pn	14 03 38.7	-0.9
SSLB	Suanglung	2.51	354	eP	Pn	14 03 45.2	0.0
NACB	Ninganchiao	2.90	7	eP	Pn	14 03 50.2	-0.3
YHNB	Yeheng	3.38	2	eP	Pn	14 03 59.4	+2.3
KSRS	Korea Array	17.13	18	P	Pn	14 07 04.0	+0.2
	0.1nm,0.3s,baz=194,slow=12,SNR=4.8						
CMAR	Chiang Mai Arr	21.15	266	P	P	14 07 49.8	+0.3
	0.4nm,0.5s,mb3.0,baz=76,slow=8.7,SNR=4.4						
CMAR				LR	LR	14 16 58.4	
	comp=Z,82nm,18.9s,baz=85,slow=40						
MJAR	Matsushiro Arr	21.21	41	P	P	14 07 50.4	+0.3
	2.3nm,1.0s,mb3.5,baz=232,slow=8.3,SNR=6.3						
SONM	Songino Array	29.07	339	P	P	14 09 04.6	0.0
	2.0nm,0.8s,mb3.9,baz=144,slow=9.5,SNR=7.6						
MK31	Makanchi Array	40.49	318	eP	P	14 10 43.5	+0.5
MKAR	Makanchi Array	40.49	318	P	P	14 10 42.4	-0.6
	0.9nm,0.8s,mb3.5,baz=109,slow=10,SNR=8.0						
ZAA0	Zalesovo Array	42.72	329	eP	P	14 11 01.0	-0.2
ZALV	Zalesovo Beam	42.72	329	P	P	14 11 01.1	-0.1
	3.5nm,0.8s,mb4.1,baz=116,slow=7.1,SNR=14						
WRAB	Tennant Creek	42.92	162	P	P	14 11 02.3	-0.9
	3.3nm,1.0s,mb4.0						
ASAR	Alice Springs	46.34	164	P	P	14 11 31.0	+0.5
	0.2nm,0.3s,mb3.5,baz=342,slow=6.9,SNR=15						
BVAR	Borovoye Array	49.97	322	P	P	14 11 58.9	+0.7
	0.4nm,0.4s,mb3.8,baz=97,slow=7.6,SNR=4.4						
STKA	Stephens Creek	56.34	159	P	P	14 12 45.4	+0.2
	1.4nm,0.8s,mb4.1,baz=193,slow=16,SNR=5.0						
ILAR	Eielson Array	71.77	27	P	P	14 14 25.9	-0.4
	0.6nm,0.8s,mb3.6,baz=290,slow=6.5,SNR=10						
YKA	Yellowknife Ar	85.62	23	P	P	14 15 42.4	-0.1
	0.5nm,0.6s,mb3.9,baz=306,slow=4.4,SNR=4.9						
YKA	Yellowknife Ar	85.62	23	P	P	14 15 42.4	-0.1

IDC 21 14:03:53.1±1.2,21.0°21N×121.0°15E,h0km,mb3.6/6, mb1 3.8/7,mb1mx3.6/22,mbtmp3.6/7,ML3.4/1,Error ellipse: s-maj=46.1km s-min=24.2km az=69.0,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	17.22	18	P	Pn	14 07 55.7	+0.6
	0.1nm,0.3s,baz=193,slow=8.6,SNR=3.7						
SONM	Songino Array	29.11	339	P	P	14 09 54.7	-0.7
	0.9nm,0.8s,baz=156,slow=7.9,SNR=2.8						
MKAR	Makanchi Array	40.49	318	P	P	14 11 34.0	+0.4
	0.2nm,0.4s,baz=119,slow=12,SNR=2.1						
ZALV	Zalesovo Beam	42.74	329	P	P	14 11 52.2	+0.3
	1.2nm,0.6s,baz=120,slow=8.8,SNR=4.1						
ASAR	Alice Springs	46.30	164	P	P	14 12 20.6	0.0
	0.2nm,0.3s,baz=350,slow=8.9,SNR=7.5						
ILAR	Eielson Array	71.86	27	P	P	14 15 17.9	+0.3
	0.3nm,0.7s,baz=289,slow=6.5,SNR=5.2						
YKA	Yellowknife Ar	85.71	23	P	P	14 16 33.4	-0.3
	0.5nm,0.6s,baz=304,slow=5.0,SNR=5.5						

MAN 21 14:09:12,8.0°81N×126.0°38E,h65km,mb5.1,ML4.1,MS4.2, 1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	Butuan	0.76	282	eP	Pn	14 09 29.9	+2.6
BUTP				eS	Sn	14 09 39.4	+0.8
BUKP	Musuan	1.60	235	eP	Pn	14 09 41.6	+3.5
BUKP				eS	Sn	14 09 59.7	+1.8
DMPH	Davao City--Mi	1.92	207	⇓eP	Pn	14 09 44.1	+1.6
DMPH				eS	Sn	14 10 14.9	+9.3
CNP	Catarman	4.04	336	eP	Pn	14 10 13.1	+1.7
PVCP	Virac	5.23	336	eP	Pn	14 10 31.2	+3.6
AUQP	San Andres	5.77	321	eP	Sn	14 11 32.9	-7.0

MAN 21 14:11:03,9.0°02N×122.0°62E,h29km,mb4.4,ML3.2,MS3.0, 1C,Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	Sibulan	0.69	63	⇑iP	Pb	14 11 16.9	+0.4
SNPH				i S	Sb	14 11 27.1	+1.5
IPIL	Ipil	1.23	182	eP	Pn	14 11 24.0	-0.2
IPIL				eS	Sn	14 11 39.2	-0.7
PAGZ	Pagadian	1.39	147	eP	Pn	14 11 27.7	+1.2
PAGZ				eS	Sn	14 11 45.5	+1.6
GUIM	Jordan	1.59	359	eP	Pn	14 11 30.3	+1.1
GUIM				eS	Sn	14 11 48.2	-0.6
CUYO	Cuyo Island	2.40	319	eP	Pn	14 11 41.5	+1.0

*ISCJB **21** 14:11:56.5±0.9,27.0°7N±0.0°1×139.0°7E±0.0°2,h486km±10km, mb3.2/9,Error ellipse: s-maj=29.7km s-min=15.8km az=166.8*
*IDC **21** 14:11:57.8±1.1,27.0°74N×139.0°84E,h486km±14km,mb2.9/8, mb1 3.1/11,mb1mx2.9/25,mbtmp3.0/11,Error ellipse: s-maj=24.1km s-min=15.0km az=80.0*
*NEIC **21** 14:11:57.6±1.2,27.0°73N×139.0°80E,h484km±14km,mb3.7/1, Error ellipse: s-maj=21.1km s-min=13.6km az=89.0*

ISC 21 14:11:57.8±0.9,27.0°7N±0.0°1×139.0°8E±0.0°2,h485km±10km, n13,σ0§52/13,mb3.2/9,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.23	106	P	P	14 13 02.9	+0.2
	21nm,0.3s,baz=264,slow=18,SNR=16						
JHJ	Hachijo jima 2	5.37	0	P	P	14 13 27.1	-0.1
	1.4nm,0.3s,baz=306,slow=15,SNR=3.4						
MJAR	Matsushiro Arr	8.88	352	P	P	14 14 02.9	-0.1
	0.4nm,0.3s,baz=166,slow=10,0,SNR=4.7						
MAJO	Matsushiro	8.88	352	eP	P	14 14 03.0	+0.1
ZALV	Zalesovo Beam	47.61	319	P	P	14 19 48.3	-0.3
	0.4nm,0.4s,mb3.1,baz=107,slow=7.7,SNR=2.4						
WRAB	Tennant Creek	47.68	187	eP	P	14 19 49.3	-0.2
	1.3nm,0.4s,mb3.6						
MKAR	Makanchi Array	48.42	309	P	P	14 19 54.9	+0.1
	0.4nm,0.4s,mb3.1,baz=92,slow=7.3,SNR=4.5						
ASAR	Alice Springs	51.42	187	P	P	14 20 16.9	-0.2
	0.6nm,0.4s,mb3.3,baz=3.4,slow=5.2,SNR=44						
BVAR	Borovoye Array	56.12	317	P	P	14 20 50.9	+0.7
	1.6nm,0.4s,mb3.7,baz=97,slow=7.5,SNR=9.7						
ILAR	Eielson Array	58.18	29	P	P	14 21 02.9	-1.2
	0.6nm,1.0s,mb2.9,baz=268,slow=5.4,SNR=5.1						
YKA	Yellowknife Ar	72.59	28	P	P	14 22 34.7	-0.1
	0.4nm,0.8s,mb3.0,baz=295,slow=6.8,SNR=3.2						
FINES	FINESS Array B	76.42	333	P	P	14 22 56.3	-0.1
	1.5nm,0.7s,mb3.6,baz=207,slow=33,SNR=2.8						
NVAR	Mina Array Bea	81.79	51	P	P	14 23 26.7	+1.2
	0.2nm,0.6s,mb2.9,baz=302,slow=7.4,SNR=2.8						

*NIED **21** 14:14:00,37.0°20N×142.0°40E,h32km,Mw3.7 Best double couple: M0=4.26000×10^14 NP1:φ0=354.00000°,δ54.00000°, λ67.00000°. NP2:φ0=209.00000°,δ42.00000°,λ118.00000°.*
*JMA **21** 14:14:07.8±0.2,37.0°16N×142.0°39E,h21km±4km,M4.1*
*IDC **21** 14:14:08.1±2.0,36.0°98N×142.0°64E,h0km,mb3.7/2, mb1 3.6

JYS			*e*S	**Sn**	**14 15 09.7**	**+0.7**
JFY	**Yanaizu**	**2.13 278**	P	**Pn**	**14 14 44.6**	**+0.2**
JFY			*e*S	**Sn**	**14 15 11.0**	**+1.5**
JYK	**Kaneyama**	**2.36 319**	P	**Pn**	**14 14 47.1**	**-0.5**
JYK			*e*S	**Sn**	**14 15 16.3**	**+1.0**
JAG	**Ashikaga**	**2.44 254**	P	**Pn**	**14 14 48.1**	**-0.5**
JOM	**Ohasama**	**2.46 340**	P	**Pn**	**14 14 49.1**	**+0.2**
JOM			*e*S	**Sn**	**14 15 18.7**	**+0.9**
MJAR	**Matsushiro Arr**	**3.38 261**	Pn	**Pn**	**14 15 02.6**	**+1.1**
	3.6nm,0.3s,baz=85,slow=14,SNR=27					
MJAR			Sn	**Sn**	**14 15 43.1**	**+2.7**
	2.9nm,0.3s,baz=122,slow=13,SNR=5.8					
MAT	**Matsushiro**	**3.38 261**	P	**Pn**	**14 15 02.2**	**+0.6**
MAT			S	**Sn**	**14 15 40.4**	**-0.1**
JHJ	**Hachijo jima 2**	**4.54 208**	Pn	**Pn**	**14 15 18.1**	**+0.5**
	4.6nm,0.3s,baz=64,slow=16,SNR=3.9					
ASAJ	**Asahikawa**	**6.96 1**	Pn	**Pn**	**14 15 52.1**	**+1.4**
	0.7nm,0.3s,baz=185,slow=24,SNR=10					
SONM	**Songino Array**	**28.34 304**	P	**P**	**14 20 08.0**	**+6.3**
	0.6nm,0.5s,mb3.5,baz=88,slow=8.8,SNR=4.0					
MKAR	**Makanchi Array**	**44.69 302**	P	**P**	**14 22 24.5**	**+3.8**
	0.3nm,0.5s,mb3.4,baz=88,slow=8.8,SNR=3.0					
WRA	**Warramunga Arr**	**57.29 189**	P	**P**	**14 23 56.5**	**+1.0**
	baz=6.8,slow=7.3					

NIED ***21*** *14:19:00,21.°20N×121.°10E,h47km,Mw4.9 Best double couple: M₀2.47000×10¹⁶ NP1:φ=41.00000°,δ80.00000°,λ92.00000°, NP2:φ=211.00000°,δ11.00000°,λ80.00000°.*
BJI ***21*** *14:19:26.0,21.°18N×121.°11E,h6km,mB4.7/24,mb4.5/32,ML3.8/1,Ms4.4/32,Ms7 4.3/28*
IDC ***21*** *14:19:27.0±0.7,21.°30N×121.°25E,h0km,mb4.3/17,mb1 4.4/19,mb1mx4.3/25,mbtmp4.3/19,ML4.3/2,MS3.8/10,Ms1 3.9/10,ms1mx3.5/29,Error ellipse: s-maj=18.6km s-min=16.6km az=70.0*
NEIC ***21*** *14:19:27.8±3.1,21.°26N×121.°16E,h5km±19km,mb4.6/17,Error ellipse: s-maj=9.3km s-min=7.2km az=133.0*
ISCJB ***21*** *14:19:29.1±1.2,21.°22N±0.°03×121.°15E±0.°03,h25km±8km,mb4.4/43,MS4.0/18,Error ellipse: s-maj=5.4km s-min=4.6km az=152.5*
JMA ***21*** *14:19:30.2±0.4,21.°15N×121.°13E,h84km,M4.5*
MOS ***21*** *14:19:30.3±1.0,21.°27N×121.°21E,h35km,mb4.9/19,MS4.1/4,Error ellipse: s-maj=11.8km s-min=7.3km az=99.4*

ISC 21 14:19:29.5±1.5,21.°24N±0.°03×121.°13E±0.°03,h13km±9km,h15km±.4km:pP-P,n102,σ1.°09/115,mb4.4/43,MS4.0/18,1C-4D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**1.58**	**358**	*e*Pn	**Pn**	**14 19 54.2**	**-2.9**
TPUB	**Ta-pu**	**2.11**	**347**	*e*Pn	**Pn**	**14 20 03.4**	**-1.0**
YULB	**Yu-li**	**2.15**	**4**	*e*Pn	**Pn**	**14 20 03.4**	**-1.6**
SSLB	**Suanglung**	**2.54**	**356**	*e*Pn	**Pn**	**14 20 10.2**	**-0.3**
NACB	**Ninganchiao**	**2.95**	**8**	*e*P	**Pn**	**14 20 16.9**	**+0.9**
YHNB	**Yeheng**	**3.42**	**4**	*e*Pn	**Pn**	**14 20 22.5**	**0.0**
CVP	**Callao Caves**	**3.58**	**169**	*e*P	**Pn**	**14 20 24.9**	**+0.3**
CVP				*i*S	**Sn**	**14 21 08.0**	**+1.2**
YOJ	**Yonaguni jima**	**3.65**	**28**	P	**Pn**	**14 20 26.6**	**+1.0**
YOJ				*e*S	**Sn**	**14 21 09.5**	**+1.0**
TATO	**Taipei**	**3.74**	**5**	*e*P	**Pn**	**14 20 27.0**	**+0.2**
HATJ	**Hateruma jima**	**3.74**	**41**	P	**Pn**	**14 20 27.9**	**+1.0**
IRIF	**Iriomote-Funau**	**3.91**	**37**	P	**Pn**	**14 20 30.0**	**+0.8**
JKRS	**Kuro-shima**	**4.00**	**41**	P	**Pn**	**14 20 31.2**	**+0.8**
JIJ	**Ishigaki jima**	**4.17**	**41**	P	**Pn**	**14 20 33.2**	**+0.4**
JIJ				*e*S	**Sn**	**14 21 21.8**	**+0.4**
QZH	**Quanzhou**	**4.37**	**328**	Pn	**Pn**	**14 20 33.8**	**-1.7**
QZH				Sn	**Sn**	**14 21 19.3**	**-7.0**
QZH				smax			
	comp=N,150nnm,0.8s						
QZH				smax			
	comp=E,200nnm,0.8s						
QZH				LR	LR		
	comp=N,3μm,13.1s						
QZH				LR	LR		
	comp=E,2μm,11.2s						
QZH				LR	LR		
	comp=Z,4μm,16.0s						
JTJ	**Tarama**	**4.72**	**43**	P	**Pn**	**14 20 41.3**	**+0.9**
JTJ				*e*S	**Sn**	**14 21 36.7**	**+1.6**
JMJ	**Miyako jima 2**	**5.23**	**46**	P	**Pn**	**14 20 48.3**	**+0.9**
JOGS	**Gusukube**	**5.27**	**48**	P	**Pn**	**14 20 49.1**	**+1.1**
GZH	**Guangzhou**	**7.45**	**286**	P	**Pn**	**14 21 13.0**	**-4.9**
QIZ	**Qiongzhong**	**10.83**	**260**	P	**Pn**	**14 22 03.8**	**-0.4**
QIZ				S	**Sn**	**14 24 06.8**	**+1.5**
QIZ				LR	LR		
	comp=N,1μm,15.3s						
QIZ				LR	LR		
	comp=E,210nm,17.9s						
QIZ				LR	LR		
	comp=Z,580nm,13.2s						
QIZ	**Qiongzhong**	**10.83**	**260**	P	**Pn**	**14 22 02.2**	**-2.0**
NJ2	**Nanjing**	**10.96**	**350**	*e*P	**Pn**	**14 22 08.8**	**+2.8**
NJ2				pP		14 22 12.3	
NJ2				sP		14 22 14.9	
NJ2				PP		14 22 18.3	
NJ2				S	**Sn**	**14 24 11.3**	**+2.8**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NJ2				LR	LR		
	comp=N,1μm,13.7s						
NJ2				LR	LR		
	comp=E,820nm,14.8s						
NJ2				LR	LR		
	comp=Z,5μm,13.3s						
GYA	**Guiyang**	**14.22**	**294**	P	**Pn**	**14 22 52.0**	**+1.4**
GYA				PP		14 23 02.5	
GYA				S	**Sn**	**14 25 30.8**	**+2.6**
GYA				SS		14 25 47.0	
GYA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GYA				pmax	pmax		
	comp=Z,80nm,4.5s						
GYA				LR	LR		
	comp=N,470nm,14.7s						
GYA				LR	LR		
	comp=E,350nm,15.8s						
GYA				LR	LR		
	comp=E,450nm,14.5s						
DAV	**Davao City (W)**	**14.73**	**162**	LR	LR	14 29 51.6	
	comp=E,446nm,19.1s,baz=304,slow=42						
KSRS	**Korea Array**	**17.20**	**19**	P	**Pn**	**14 23 27.9**	**-1.5**
	comp=E,0.4nm,0.3s,baz=198,slow=11,SNR=25						
KSRS				LR	LR	14 31 12.4	
	comp=E,219nm,18.5s,baz=200,slow=41						
KMI	**Kunming**	**17.34**	**286**	P	**Pn**	**14 23 32.8**	**+1.5**
KMI				pP	pP	14 23 35.3	-1.1
KMI				sP	sP	14 23 36.4	-1.7
KMI				PP		14 23 47.8	
KMI				S	**Sn**	**14 26 44.6**	**+0.3**
KMI				sS	sS	14 26 48.0	-11
KMI				SS		14 27 05.8	
KMI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KMI				pmax	pmax		
	comp=Z,54nm,4.5s						
KMI				LR	LR		
	comp=N,410nm,15.5s						
KMI				LR	LR		
	comp=E,270nm,13.3s						
KMI				LR	LR		
	comp=Z,380nm,15.1s						
CD2	**Chengdu**	**18.32**	**305**	P	**Pn**	**14 23 43.8**	**+0.5**
CD2				pP	pP	14 23 47.4	+0.3
CD2				sP	sP	14 23 50.6	+1.8
CD2				PP		14 23 59.0	
CD2				S	**Sn**	**14 27 05.3**	**-2.5**
CD2				sS	sS	14 27 12.6	-6.0
CD2				SS		14 27 28.8	
CD2				pmax	pmax		
	comp=Z,20nm,1.0s						
CD2				pmax	pmax		
	comp=Z,240nm,5.1s						
CD2				LR	LR		
	comp=N,1μm,14.9s						
CD2				LR	LR		
	comp=Z,1μm,14.9s						
BJT	**Baijiatuau**	**19.20**	**348**	*e*P	**Pn**	**14 23 53.2**	**-0.7**
BJT				pmax	pmax		
	comp=Z,56nm,1.1s						
BJT	**Baijiatuau**	**19.20**	**348**	*e*P	**Pn**	**14 23 53.2**	**-0.7**
	comp=Z,56nm,1.1s						
BJI	**Beijing**	**19.21**	**348**	P	**Pn**	**14 23 53.4**	**-0.7**
BJI				S	**Sn**	**14 27 29.3**	**0.0**
BJI				pmax	pmax		
	comp=Z,37nm,1.2s						
BJI				pmax	pmax		
	comp=Z,100nm,3.1s						
BJI				LR	LR		
	comp=N,470nm,18.1s						
BJI				LR	LR		
	comp=E,1μm,22.8s						
BJI				LR	LR		
	comp=Z,240nm,19.7s						
CBIJ	**Chichi jima**	**20.07**	**69**	P	**P**	**14 24 01.3**	**-1.3**
	comp=Z,5.1nm,0.3s,baz=324,slow=23,SNR=3.5						
CHTO	**Chiang Mai**	**20.98**	**267**	*e*P	**P**	**14 24 12.5**	**-0.1**
CHTO				pmax	pmax		
	comp=Z,29nm,1.6s						
CHTO	**Chiang Mai**	**20.98**	**267**	*e*P	**P**	**14 24 12.5**	**-0.1**
	comp=Z,29nm,1.6s						
CMAR	**Chiang Mai Arr**	**21.05**	**266**	P	**P**	**14 24 13.4**	**+0.1**
	comp=Z,5.2nm,0.8s,mb3.9,baz=74,slow=9.4,SNR=34						
CMAR				LR	LR	14 33 37.5	
	comp=Z,320nm,18.8s,MS3.7,baz=75,slow=40						
LZH	**Lanzhou**	**21.14**	**318**	*e*P	**P**	**14 24 13.9**	**-0.2**
LZH				pP		14 24 16.6	
LZH				sP	sP	14 24 21.0	+1.4
LZH				PP		14 24 37.0	
LZH				*e*S	**S**	**14 28 02.9**	**-6.1**
LZH				SS		14 28 34.8	
LZH				pmax	pmax		
	comp=Z,47nm,1.2s,mb4.7						
LZH				pmax	pmax		
	comp=Z,220nm,6.4s						
LZH				LR	LR		
	comp=E,790nm,10.0s						
LZH				LR	LR		
	comp=Z,1μm,11.5s,MS4.4						
HHC	**Hu-ho-hao-te**	**21.17**	**340**	*e*P	**P**	**14 24 15.4**	**+1.0**
HHC				sP	sP	14 24 20.6	+0.7
HHC				PP		14 24 38.8	
HHC				S	**S**	**14 28 05.8**	**-3.8**
HHC				PcP	PcP	14 28 20.8	+0.9
HHC				SS		14 28 39.3	
HHC				ScP	ScP	14 31 55.9	-0.7
HHC				PcS	PcS	14 31 57.6	-0.3
HHC				pmax	pmax		
	comp=Z,18nm,0.7s,mb4.5						
HHC				pmax	pmax		
	comp=Z,170nm,5.1s						
HHC				LR	LR		
	comp=N,890nm,11.8s,MS4.4						
HHC				LR	LR		
	comp=E,330nm,11.3s,MS4.4						
HHC				LR	LR		
	comp=Z,820nm,12.3s,MS4.3						
MAJO	**Matsushiro**	**21.30**	**41**	*e*P	**P**	**14 24 16.9**	**+1.0**
MAJO				pmax	pmax		
	comp=Z,44nm,1.4s,mb4.6						
MAJO	**Matsushiro**	**21.30**	**41**	*e*P	**P**	**14 24 16.9**	**+1.0**
	comp=Z,44nm,1.4s,mb4.6						
MAT	**Matsushiro**	**21.30**	**41**	P	**P**	**14 24 16.0**	**+0.1**
MAT				S	**S**	**14 28 08.0**	**-4.3**
MJAR	**Matsushiro Arr**	**21.30**	**41**	P	**P**	**14 24 15.6**	**-0.3**
	comp=Z,8.8nm,0.9s,mb4.1,baz=231,slow=8.4,SNR=28						
MJAR	**Matsushiro Arr**	**21.30**	**41**	P	**P**	**14 24 15.6**	**-0.3**
BTO	**Baotou**	**21.50**	**336**	*e*P	**P**	**14 24 17.9**	**0.0**
CN2	**Changchun**	**22.79**	**8**	*e*P	**P**	**14 24 32.3**	**+0.6**
CN2				*e*sP	sP	14 24 39.3	+2.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.3						
CN2				LR	LR		
	comp=N,600nm,16.0s,MS4.3						
CN2				LR	LR		
	comp=E,800nm,16.0s,MS4.3						
CN2				LR	LR		
	comp=Z,700nm,16.0s,MS4.2						
GUMO	**Guam**	**23.87**	**105**	LR	LR	14 31 37.5	
	comp=Z,133nm,21.6s,MS3.4,baz=90,slow=31						
MDJ	**Mudanjiang**	**24.34**	**15**	P	**P**	**14 24 47.0**	**+0.1**
MDJ				pP		14 24 50.0	
MDJ				sP	sP	14 24 51.3	-1.3
MDJ				PcP	PcP	14 28 24.3	-2.0
MDJ				S	**S**	**14 29 07.3**	**+1.4**
MDJ				ScP	ScP	14 32 02.9	-1.9
MDJ				pmax	pmax		
	comp=Z,23nm,1.0s,mb4.6						
MDJ				pmax	pmax		
	comp=Z,210nm,3.8s						
MDJ				LR	LR		
	comp=N,330nm,19.9s,MS4.2						
MDJ				LR	LR		
	comp=E,640nm,20.3s,MS4.2						
MDJ				LR	LR		
	comp=Z,480nm,15.6s,MS4.1						
MDJ	**Mudanjiang**	**24.34**	**15**	*e*P	**P**	**14 24 46.8**	**-0.1**
	comp=Z,14nm,1.0s,mb4.4						
PSI	**Prapat**	**28.34**	**233**	LR	LR	14 35 50.5	
	comp=Z,229nm,19.7s,MS3.8,baz=272,slow=34						
ULN	**Ulaanbaatar**	**28.89**	**340**	*e*P	**P**	**14 25 27.8**	**0.0**
ULN				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
ULN	**Ulaanbaatar**	**28.89**	**340**	*e*P	**P**	**14 25 27.8**	**-0.1**
	comp=Z,8.7nm,0.9s,mb4.5						
ASAJ	**Asahikawa**	**28.94**	**33**	P	**P**	**14 25 27.8**	**-0.6**
	comp=Z,7.3nm,0.6s,mb4.6,baz=196,slow=12,SNR=13						
ASAJ	**Asahikawa**	**28.94**	**33**	P	**P**	**14 25 27.8**	**-0.5**
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.6s						
SONM	**Songino Array**	**29.07**	**339**	P	**P**	**14 25 29.6**	**+0.1**
	comp=Z,5.9nm,0.8s,mb4.4,baz=155,slow=8.4,SNR=25						
YSS	**Yuzh-Sakhalins**	**31.08**	**29**	*e*P	**P**	**14 25 47.0**	**-0.2**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.1						
YSS				MLR	MLR		
	comp=Z,500nm,17.0s,MS4.2						
TLY	**Talaya**	**33.30**	**340**	*e*P	**P**	**14 26 07.5**	**+0.8**
TLY				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
TLY				MLR	MLR		
	comp=Z,348nm,16.0s,MS4.2						
MOY	**Mondy**	**34.18**	**338**	*e*P	**P**	**14 26 15.4**	**+1.0**
WMQ	**Urumqi**	**35.71**	**317**	*e*P	**P**	**14 26 27.8**	**+0.1**
WMQ				pP	pP	14 26 32.3	+0.6
WMQ				sP	sP	14 26 34.8	+1.4
WMQ				PP	PP	14 27 48.5	-0.3
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
WMQ				pmax	pmax		
	comp=Z,140nm,4.7s						
WMQ				LR	LR		
	comp=N,140nm,14.6s,MS4.0						
WMQ				LR	LR		
	comp=E,110nm,14.0s,MS4.0						
WMQ				LR	LR		
	comp=Z,120nm,15.0s,MS3.8						
MK31	**Makanchi Array**	**40.46**	**318**	*e*P	**P**	**14 27 07.7**	**+0.1**
MKAR	**Makanchi Array**	**40.46**	**318**	P	**P**	**14 27 08.1**	**+0.4**
	comp=Z,2.2nm,0.8s,mb3.9,baz=110,slow=10,SNR=16						
YAK	**Yakutsk**	**41.19**	**6**	*e*P	**P**	**14 27 11.2**	**-2.3**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
YAK				pmax	pmax		
	comp=N,8.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.3s						
YAK				MLR	MLR		
	comp=Z,360nm,14.0s,MS4.4						
YAK				MLR	MLR		
	comp=N,277nm,18.0s,MS4.3						
YAK				MLR	MLR		
	comp=E,152nm,15.0s,MS4.3						
PETK	**Petropavlovsk-**	**42.35**	**32**	P	**P**	**14 27 20.4**	**-2.6**
	comp=E,2.6nm,0.8s,mb3.9,baz=248,slow=3.6,SNR=4.5						
PETK				LR	LR	14 48 10.4	
	comp=E,162nm,18.9s,MS3.9,baz=313,slow=41						
KSH	**Kashi**	**42.52**	**306**	*e*P	**P**	**14 27 28.0**	**+3.3**
KSH				pP	pP	14 27 32.1	+3.3
KSH				PP	PP	14 29 10.3	+7.1
KSH				PcP	PcP	14 29 19.0	+1.8
KSH				ScP	ScP	14 33 08.5	+0.6
KSH				PcS	PcS	14 33 10.5	+1.3
KSH				S	**S**	**14 33 51.6**	**+5.0**
KSH				sS	sS	14 33 58.8	+5.4
KSH				SS	SS	14 36 55.8	-0.4
KSH				ScS	ScS	14 37 26.4	+0.2
KSH				pmax	pmax		
	comp=Z,11nm,1.4s,mb4.4						
KSH				pmax	pmax		
	comp=Z,100nm,5.0s						
KSH				LR	LR		
	comp=N,190nm,7.5s						
KSH				LR	LR		
	comp=E,98nm,7.2s						
KSH				LR	LR		
	comp=Z,260nm,14.6s,MS4.2						
ZAA0	**Zalesovo Array**	**42.71**	**329**	P	**P**	**14 27 24.9**	**-1.0**
ZALV	**Zalesovo Beam**	**42.71**	**329**	P	**P**	**14 27 25.6**	**-0.4**
	comp=Z,8.2nm,0.8s,mb4.5,baz=117,slow=7.9,SNR=32						
ZALV				LR	LR	14 45 18.7	
	comp=Z,59nm,19.5s,MS3.5,baz=255,slow=36						
PET	**Petropavlovsk**	**42.78**	**33**	*e*P	**P**	**14 27 25.5**	**-1.1**
PET				pmax	pmax		
	comp=Z,16nm,1.6s,mb4.5						
WRAB	**Tennant Creek**	**42.91**	**162**	P	**P**	**14 27 28.8**	**+0.8**
WRAB				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.5						
WRAB	**Tennant Creek**	**42.91**	**162**	P	**P**	**14 27 28.8**	**+0.8**
	comp=Z,14nm,1.3s,mb4.5						
UCH	**Uchtor**	**44.19**	**309**	*e*P	**P**	**14 27 40.0**	**+1.9**
UCH				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.3						
UCH	**Uchtor**	**44.19**	**309**	*e*P	**P**	**14 27 40.0**	**+1.9**
	comp=Z,9.2nm,1.4s,mb4.3						
KURK	**Kurchatov**	**44.34**	**322**	*c i*P	**P**	**14 27 38.9**	**-0.3**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.4						
KURK	**Kurchatov**	**44.34**	**322**	*e*P	**P**	**14 27 39.2**	**0.0**
	comp=Z,14nm,1.4s,mb4.5						
AML	**Almayashu**	**44.76**	**309**	*e*P	**P**	**14 27 43.5**	**+0.8**
AML				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.4						
AML	**Almayashu**	**44.76**	**309**	*e*P	**P**	**14 27 43.5**	**+0.8**
	comp=Z,5.5nm,1.0s,mb4.3						
ASAR	**Alice Springs**	**46.33**	**164**	P	**P**	**14 27 54.3**	**-0.9**
	comp=Z,0.9nm,0.6s,mb3.9,baz=345,slow=7.1,SNR=15						
BVAR	**Borovoye Array**	**49.94**	**322**	P	**P**	**14 28 23.2**	**+0.4**
	comp=Z,1.0nm,0.5s,mb4.1,baz=110,slow=11,SNR=5.8						
BRVK	**Borovoye**	**50.01**	**322**	*d i*P	**P**	**14 28 23.7**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.6						
ABKAR	**Akbulak array**	**55.48**	**316**	*e*P	**P**	**14 29 04.0**	**+0.1**
	comp=Z,1.6nm,0.7s,mb4.2						
STKA	**Stephens Creek**	**56.33**	**159**	P	**P**	**14 29 10.7**	**+0.5**
	comp=Z,2.3nm,0.7s,mb4.3,baz=348,slow=8.2,SNR=4.9						
SVE	**Sverdlovsk**	**56.40**	**325**	*e*P	**P**	**14 29 10.9**	**+0.5**
ARU	**Arti**	**57.44**	**324**	*d i*P	**P**	**14 29 17.2**	**-0.5**
ARU						14 31 22.1	
ARU				S	**S**	**14 37 06.8**	**-7.6**
ARU				pmax	pmax		
	comp=Z,12nm,1.7s,mb4.7						
ARU	**Arti**	**57.44**	**324**	P	**P**	**14 29 16.1**	**-1.7**
	comp=Z,3.3nm,0.6s,mb4.5						
KIV	**Kislovodsk**	**67.42**	**310**	*e*P	**P**	**14 30 21.7**	**-3.0**
KIV				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
KIV				MLR	MLR		
	comp=Z,77nm,18.0s,MS4.0						
VSR	**Storozhevoye**	**68.78**	**318**	*e*P	**P**	**14 30 32.9**	**-0.3**
VSR				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.4						
BPAW	**Bear Paw Mtn.**	**70.21**	**28**	*e*P	**P**	**14 30 41.4**	**-0.4**
	comp=Z,20nm,1.3s,mb4.9						
KDAK	**Kodiak Island**	**70.34**	**35**	P	**P**	**14 30 40.9**	**-1.7**
	comp=Z,15nm,0.8s,mb5.0,baz=275,slow=3.6,SNR=13						
KDAK	**Kodiak Island**	**70.34**	**35**	P	**P**	**14 30 40.9**	**-1.8**
KDAK				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
KDAK	**Kodiak Island**	**70.34**	**35**	*e*P	**P**	**14 30 41.7**	**-1.0**
	comp=Z,7.6nm,0.7s,mb4.7						
TRF	**Thorofare Moun**	**70.61**	**28**	*e*P	**P**	**14 30 43.9**	**-0.3**
	comp=Z,2.6nm,0.6s,mb4.3						
MCK	**McKinley**	**71.16**	**28**	*e*P	**P**	**14 30 46.9**	**-0.6**
MCK				pmax	pmax		
	comp=Z,30nm,1.3s,mb5.1						
MCK	**McKinley**	**71.16**	**28**	*e*P	**P**	**14 30 46.9**	**-0.6**
	comp=Z,30nm,1.3s,mb5.1						
COLA	**College**	**71.42**	**27**	*e*P	**P**	**14 30 47.5**	**-1.6**
COLA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
COLA	**College**	**71.42**	**27**	*e*P	**P**	**14 30 47.5**	**-1.7**
	comp=Z,3.7nm,0.8s,mb4.4						
ILAR	**Eielson Array**	**71.85**	**27**	P	**P**	**14 30 49.9**	**-1.8**
	comp=Z,1.9nm,0.7s,mb4.1,baz=275,slow=5.1,SNR=27						
ARCES	**ARCESS Array B**	**72.25**	**338**	P	**P**	**14 30 53.3**	**-0.7**
	comp=Z,2.7nm,0.8s,mb4.2,baz=65,slow=6.8,SNR=7.2						
ARCES				LR	LR	15 07 41.6	
	comp=Z,72nm,18.9s,MS4.0,baz=54,slow=40						
FINES	**FINESS Array B**	**73.96**	**330**	P	**P**	**14 31 04.6**	**+0.3**
	comp=Z,3.7nm,0.8s,mb4.4,baz=232,slow=2.2,SNR=6.7						
FINES				LR	LR	15 05 27.3	
	comp=Z,93nm,18.1s,MS4.1,baz=356,slow=37						
FINES	**FINESS Array B**	**73.96**	**330**	P	**P**	**14 31 04.5**	**+0.3**
FINES				LR	LR	15 05 27.3	
EGAK	**Eagle**	**74.23**	**26**	*e*P	**P**	**14 31 05.0**	**-0.8**
	comp=Z,7.8nm,1.2s,mb4.5						
DAWY	**Dawson**	**75.17**	**27**	*e*P	**P**	**14 31 10.5**	**-0.8**
NOA	**NORSAR Array B**	**80.80**	**332**	P	**P**	**14 31 40.6**	**-1.9**
	comp=Z,0.7nm,0.8s,mb3.6,baz=102,slow=18,SNR=3.4						
NOA				LR	LR	15 12 07.1	
	comp=Z,116nm,18.6s,MS4.3,baz=60,slow=39						
CLL	**Collm**	**84.37**	**323**	*i*P	**P**	**14 32 02.6**	**+1.2**
CLL				*i*	pP	14 32 07.1	+1.3
CLL	**Collm**	**84.37**	**323**	*i*P	**P**	**14 32 02.6**	**+1.2**
CLL				*i* pPcP	pP	14 32 07.1	+1.3
CLL				LmV		15 16 00.0	
	comp=Z,100nm,18.6s						
YKA	**Yellowknife Ar**	**85.69**	**23**	P	**P**	**14 32 06.8**	**-1.0**
	comp=Z,2.2nm,0.7s,mb4.5,baz=308,slow=5.0,SNR=17						
NVAR	**Mina Array Bea**	**98.61**	**43**	P	**P**	**14 33 08.9**	**+0.5**
	comp=Z,0.3nm,0.7s,mb4.0,baz=305,slow=5.7,SNR=3.5						
USHA	**Ushuaia**	**145.69**	**170**	PKPbc	PKPbc	14 39 08.0	+0.3
	comp=Z,7.9nm,0.9s,baz=180,slow=6.1,SNR=3.4						

MEX 21 14:45:50.1±0.8,17.°16N×95.°06W,h154km±12km,MD3.7,Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OXX	**Oaxaca**	**1.59**	**267**	*i* P	Pn	14 46 20.5	-0.4
OXX				*i* S	Sn	14 46 42.5	-2.0
VHO	**Vista Hermosa**	**1.60**	**267**	*i* P	Pn	14 46 20.1	-0.9
VHO				*i* S	Sn	14 46 43.0	-1.8
HUIG	**Huatulco**	**1.71**	**216**	*i* P	Pn	14 46 20.8	-1.4
HUIG				*i* S	Sn	14 46 45.1	-1.8
TGIG		**1.90**	**101**	*i* P	Pn	14 46 22.8	-1.5
TGIG				*i* S	Sn	14 46 48.3	-2.2
PCIG		**2.29**	**129**	*i* P	Pn	14 46 27.9	-1.0
PCIG				*i* S	Sn	14 46 56.9	-1.7
PNIG	**Pinotepa**	**3.03**	**256**	*i* P	Pn	14 46 36.2	-1.9
PNIG	

GCAM	**G?zelcaml?**	**0.76**	**135**	*i* P	**Pg**	**14 46 30.0**	**+0.2**
GCAM				*i* S	**Sg**	**14 46 40.7**	**+1.1**
GCAM	**G?zelcaml?**	**0.76**	**135**	*i* P	**Pg**	**14 46 30.0**	**+0.2**
GCAM				*i* S	**Sg**	**14 46 40.7**	**+1.1**
PRK	**Paraskevi**	**1.03**	**348**	*e*PB	**Pg**	**14 46 34.4**	**-0.8**
PRK	**Paraskevi**	**1.03**	**348**	*e*Pb	**Pg**	**14 46 34.4**	**-0.8**
AYVA	**Ayvalik**	**1.08**	**6**	*i* P	**Pg**	**14 46 35.1**	**-0.8**
AYVA				*i* S	**Sg**	**14 46 51.2**	**+1.3**
AYVA	**Ayvalik**	**1.08**	**6**	*i* P	**Pg**	**14 46 35.1**	**-0.9**
AYVA				*i* S	**Sg**	**14 46 51.2**	**+1.2**
AKHS	**Akhisar**	**1.18**	**57**	*i* P	**Pg**	**14 46 37.9**	**-0.1**
AKHS				*i* S	**Sg**	**14 46 52.9**	**-0.3**
AKHS	**Akhisar**	**1.18**	**57**	*i* P	**Pg**	**14 46 37.9**	**0.0**
AKHS				*i* S	**Sg**	**14 46 52.9**	**-0.3**
AKS	**Akhisar**	**1.18**	**56**	*e*PN	**Pn**	**14 46 38.1**	**-0.5**
AKS	**Akhisar**	**1.18**	**56**	*e*Pn	**Pn**	**14 46 38.1**	**-0.5**
AYDN	**Tasoluk**	**1.19**	**118**	*i* P	**Pg**	**14 46 37.3**	**-0.9**
AYDN				*i* S	**Sg**	**14 46 53.9**	**+0.2**
AYDN	**Tasoluk**	**1.19**	**118**	*i* P	**Pg**	**14 46 37.3**	**-0.9**
AYDN				*i* S	**Sg**	**14 46 53.9**	**+0.2**
BODT	**Bodrum**	**1.31**	**153**	*e*PN	**Pn**	**14 46 39.5**	**-1.0**
BODT	**Bodrum**	**1.31**	**153**	*e*Pn	**Pn**	**14 46 39.5**	**-1.0**
MLSB	**Milas**	**1.35**	**134**	*e*PN	**Pn**	**14 46 39.0**	**-1.9**
MLSB				*e*SN	**Sn**	**14 46 57.9**	**-1.4**
MLSB	**Milas**	**1.35**	**134**	*e*Pn	**Pn**	**14 46 39.0**	**-1.9**
MLSB				*e*Sn	**Sn**	**14 46 57.9**	**-1.4**
BDRM	**Kayabasi**	**1.36**	**149**	*i* P	**Pn**	**14 46 42.0**	**+0.8**
BDRM				*i* S	**Sb**	**14 47 00.4**	**+1.2**
BDRM	**Kayabasi**	**1.36**	**149**	*i* P	**Pn**	**14 46 42.0**	**+0.9**
BDRM				*i* S	**Sb**	**14 47 00.4**	**+1.2**
APE	**Apeiranthos**	**1.42**	**215**	*e*PN	**Pn**	**14 46 42.9**	**+1.0**
APE	**Apeiranthos**	**1.42**	**215**	*e*PB	**Pb**	**14 46 41.7**	**-0.7**
APE	**Apeiranthos**	**1.42**	**215**	*e*Pb	**Pb**	**14 46 41.7**	**-0.7**
APE	**Apeiranthos**	**1.42**	**215**	*e*Pn	**Pn**	**14 46 42.9**	**+1.0**
KULA	**Kula-Manisa**	**1.68**	**80**	*e*PN	**Pn**	**14 46 45.7**	**+0.2**
KULA	**Kula-Manisa**	**1.68**	**80**	*e*Pn	**Pn**	**14 46 45.7**	**+0.2**
BALY	**Balya**	**1.72**	**29**	*i* P	**Pn**	**14 46 45.4**	**-0.6**
BALY				*i* S	**Sn**	**14 47 07.7**	**-0.7**
BALY	**Balya**	**1.72**	**29**	*i* P	**Pn**	**14 46 45.4**	**-0.6**
BALY				*i* S	**Sn**	**14 47 07.7**	**-0.7**
BALB	**Balikesir**	**1.74**	**36**	*e*PN	**Pn**	**14 46 48.2**	**+1.9**
BALB	**Balikesir**	**1.74**	**36**	*e*Pn	**Pn**	**14 46 48.2**	**+1.8**
YER	**Yerkesik**	**1.76**	**128**	*e*PN	**Pn**	**14 46 46.4**	**-0.2**
YER	**Yerkesik**	**1.76**	**128**	*e*Pn	**Pn**	**14 46 46.4**	**-0.1**
GELI	**Tayfur-Gelibol**	**2.16**	**358**	*e*PN	**Pn**	**14 46 54.7**	**+2.6**
GELI	**Tayfur-Gelibol**	**2.16**	**358**	*e*Pn	**Pn**	**14 46 54.7**	**+2.6**
KHAL	**Karahalli**	**2.31**	**86**	*i* P	**Pn**	**14 46 58.2**	**+4.0**
KHAL				*i* S	**Sn**	**14 47 26.7**	**+3.6**
KHL	**Karahalli**	**2.34**	**87**	*e*PN	**Pn**	**14 46 54.7**	**+0.1**
KHL	**Karahalli**	**2.34**	**87**	*e*Pn	**Pn**	**14 46 54.7**	**+0.2**

NIED ***21*** *15:26:00, 33°.00N×133°.80E, h5km, Mw3.3 Best double couple: M0=1.02000×10^14 NP1:φs=141.00000°, δ72.00000°, λ=-146.00000°. NP2:φs=39.00000°, δ58.00000°, λ=-22.00000°.*
ISCJB ***21*** *15:26:15.4±1.6, 33°.0N±0°.1×133°.78E±0°.07, h29km±7km, Error ellipse: s-maj=18.6km s-min=7.5km az=161.2*
JMA ***21*** *15:26:16.3, 32°.99N×133°.77E, h30km±2km, M3.5*
JMA Felt I J1.

ISC 21 15:26:15.4±1.6, 33°.0N±0°.1×133°.77E±0°.07, h28km±8km, n7, σ0°.16/11, 5C-2D, Shikoku

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRT2	**Murotomisaki 2**	**0.53**	**35**	⇑P	**Pb**	**15 26 26.5**	**+0.2**
MRT2				S	**Sb**	**15 26 33.4**	**-0.2**
JKU	**Kubokawa**	**0.69**	**301**	⇑P	**Pb**	**15 26 29.1**	**+0.2**
JKU				S	**Sb**	**15 26 38.2**	**0.0**
JMN	**Monobe**	**0.78**	**6**	⇓P	**Pb**	**15 26 30.4**	**0.0**
JTO	**Tosashimizu**	**0.82**	**264**	⇑P	**Pb**	**15 26 31.0**	**-0.1**
UWA2	**Uwa jima 2**	**1.00**	**285**	⇑P	**Pn**	**15 26 33.6**	**0.0**
JAI	**Aioi**	**1.01**	**34**	⇑P	**Pn**	**15 26 33.5**	**-0.2**
JAI				S	**Sn**	**15 26 47.3**	**+0.2**
JET	**Tanbara**	**1.02**	**324**	⇓P	**Pn**	**15 26 33.8**	**-0.1**
JET				S	**Sn**	**15 26 47.3**	**-0.1**

ISCJB ***21*** *15:26:58.2±0.5, 3°.77N±0°.05×125°.7E±0°.1, h115km±5km, mb4.0/14, Error ellipse: s-maj=18.9km s-min=5.6km az=162.5*
NEIC ***21*** *15:26:58.9±1.1, 3°.82N×125°.62E, h103km±11km, mb4.2/3, Error ellipse: s-maj=23.8km s-min=7.2km az=73.0*
DJA ***21*** *15:26:58, 3°.92N×126°.47E, h22km, MLv4.6/6*
IDC ***21*** *15:26:58.9±2.5, 3°.82N×125°.65E, h100km±24km, mb3.6/11, mb1 3.8/12, mb1mx3.6/23, mbtmp3.7/12, Error ellipse: s-maj=39.7km s-min=11.5km az=75.0*

ISC 21 15:26:59.2±0.5, 3.77N±0°.05×125°.8E±0°.1, h108km±5km, n30, σ1°.08/36, mb4.0/14, 1C-2D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**0.26**	**251**	P	**Pn**	**15 27 15.6**	**+1.1**
GSPH	**General Santos**	**2.44**	**340**	*e*P	**Pn**	**15 27 37.2**	**-0.7**
GSPH				*e*S	**Sn**	**15 28 05.8**	**-1.7**
MNI	**Manado**	**2.49**	**202**	P	**Pn**	**15 27 43.6**	**+5.1**
DAV	**Davao City (W)**	**3.28**	**357**	P	**Pn**	**15 27 47.9**	**-1.1**
	70nm,0.3s,baz=151,slow=2.5,SNR=2.6						
DAV				S	**Sn**	**15 28 29.0**	**+1.7**
	76nm,0.3s,baz=236,slow=22,SNR=6.1						
KCP	**Kidapawan**	**3.29**	**348**	⇓*e*P	**Pn**	**15 27 49.0**	**-0.1**
KCP				*i* S	**Sn**	**15 28 28.7**	**+1.2**
DMPH	**Davao City--Mi**	**3.30**	**355**	⇑*e*P	**Pn**	**15 27 48.2**	**-1.0**
DMPH				*e*S	**Sn**	**15 28 29.1**	**+1.3**
TNTI	**Ternate**	**3.38**	**152**	P	**Pn**	**15 27 50.1**	**-0.2**
TNTI				S	**Sn**	**15 28 28.0**	**-1.7**
KMSI	**Cibinong**	**3.65**	**209**	P	**Pn**	**15 28 02.8**	**+9.0**
MRSI	**Marisa**	**5.04**	**230**	P	**Pn**	**15 28 19.5**	**+6.9**
	872nm64nm,0.5s						
IPIL	**Ipil**	**5.10**	**322**	⇓*e*P	**Pn**	**15 28 15.2**	**+1.7**
IPIL				*i* S	**Sn**	**15 29 11.2**	**0.0**
LUWI	**Luwuk**	**5.64**	**212**	P	**Pn**	**15 28 28.2**	**+7.4**
	0.3nm734nm51nm,0.8s						
NLAI	**Namlea**	**7.09**	**169**	P	**Pn**	**15 28 39.0**	**-1.4**
TGY	**Tagaytay City**	**11.32**	**335**	P	**Pn**	**15 29 36.1**	**-1.6**
	59nm,0.3s,baz=166,slow=12,SNR=3.5						
FITZ	**Fitzroy Crossi**	**21.73**	**180**	P	**P**	**15 31 41.6**	**-0.5**
	12nm,0.8s,mb4.3,baz=60,slow=8.5,SNR=17						
WRAB	**Tennant Creek**	**25.02**	**161**	*e*P	**P**	**15 32 14.3**	**+0.9**
	20nm,0.9s,mb4.5						
WRA	**Warramunga Arr**	**25.02**	**161**	P	**P**	**15 32 14.2**	**+0.7**
	baz=343,slow=10						
ASAR	**Alice Springs**	**28.40**	**164**	P	**P**	**15 32 45.5**	**+1.8**
	1.9nm,0.5s,mb3.9,baz=341,slow=7.3,SNR=53						
KSRS	**Korea Array**	**33.58**	**3**	P	**P**	**15 33 29.3**	**+0.2**
	1.2nm,0.6s,mb3.9,baz=187,slow=9.6,SNR=6.6						
STKA	**Stephens Creek**	**38.52**	**158**	P	**P**	**15 34 12.8**	**+1.6**
	2.5nm,0.6s,mb4.3,baz=342,slow=8.0,SNR=7.6						
STKA	**Stephens Creek**	**38.52**	**158**	P	**P**	**15 34 12.8**	**+1.6**
LSA	**Lhasa**	**41.70**	**312**	P	**P**	**15 34 36.8**	**-0.8**
	2.3nm,0.8s,mb4.0						
SONM	**Songino Array**	**46.96**	**342**	P	**P**	**15 35 19.5**	**+0.3**
	0.5nm,0.5s,mb3.5,baz=167,slow=7.2,SNR=3.8						
PETK	**Petropavlovsk-**	**55.76**	**23**	P	**P**	**15 36 25.0**	**+0.3**
	0.7nm,0.5s,mb3.9,baz=183,slow=6.7,SNR=4.6						
PETK	**Petropavlovsk-**	**55.76**	**23**	P	**P**	**15 36 25.0**	**+0.3**
MKAR	**Makanchi Array**	**56.98**	**326**	P	**P**	**15 36 34.2**	**+0.7**
	1.0nm,0.5s,mb4.1,baz=121,slow=7.8,SNR=11						
MKAR				PcP	PcP	15 37 28.5	+0.9
	1.2nm,0.6s,baz=119,slow=4.3,SNR=8.5						
ZALV	**Zalesovo Beam**	**60.12**	**333**	P	**P**	**15 36 53.9**	**-1.3**
	0.3nm,0.3s,mb3.8,baz=113,slow=11,SNR=2.6						
KURK	**Kurchatov**	**61.19**	**328**	*e*P	**P**	**15 37 02.5**	**0.0**
	2.4nm,1.0s,mb4.2						
BVAR	**Borovoye Array**	**66.77**	**327**	P	**P**	**15 37 37.7**	**-1.3**
	1.1nm,0.8s,mb3.8,baz=134,slow=8.5,SNR=5.0						
ILAR	**Eielson Array**	**85.48**	**25**	P	**P**	**15 39 24.2**	**-0.5**
	0.2nm,0.5s,mb3.3,baz=257,slow=5.1,SNR=3.1						
ARCES	**ARCESS Array B**	**90.08**	**340**	P	**P**	**15 39 46.1**	**-0.5**
	0.7nm,0.5s,mb4.0,baz=77,slow=6.4,SNR=5.8						

MAN 21 15:29:01, 15°.27N×120°.40E, h1km, mb4.7, ML3.6, MS3.6, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCZP	**Santa Cruz**	**0.69**	**317**	*e*P	Pg	15 29 14.5	+0.3
PCPH	**Palayan**	**0.73**	**66**	⇓*i*P	Pg	15 29 15.2	+0.1
PCPH				*e*S	Sg	15 29 25.0	+0.5
BOLP	**Bolinao**	**1.20**	**337**	*e*P	Pg	15 29 23.9	-0.1
BALP	**Baler**	**1.23**	**67**	*e*P	Pg	15 29 23.2	-1.4
LUBP	**Lubang**	**1.53**	**186**	*e*P	Pn	15 29 29.2	-0.3
POLP	**Polillo Island**	**1.58**	**110**	*e*P	Pn	15 29 30.4	+0.3
CAUP	**Cauayan**	**2.15**	**39**	*e*P	Pn	15 29 39.0	+0.9

MAN 21 15:31:22, 6°.02N×126°.12E, h135km, mb4.8, ML3.7, MS3.7, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.93**	**8**	*e*P	Pn	15 31 46.1	+1.3
MATI				*e*S	Sn	15 31 56.3	-5.7
GSPH	**General Santos**	**1.17**	**273**	*e*P	Pn	15 31 43.4	-3.5
GSPH				*e*S	Sn	15 31 59.6	-6.3
DMPH	**Davao City--Mi**	**1.22**	**330**	⇑*e*P	Pn	15 31 48.3	+0.9
DMPH				*e*S	Sn	15 32 08.3	+1.4
KCP	**Kidapawan**	**1.42**	**314**	⇓*e*P	Pn	15 31 50.3	+0.8
KCP				*i* S	Sn	15 32 13.0	+2.4
BUKP	**Musuan**	**2.12**	**330**	*e*P	Pn	15 32 00.4	+2.7
BUKP				*e*S	Sn	15 32 14.7	-11

IDC 21 15:35:10.8±1.8, 2°.81S×128°.16E, h0km, mb3.9/3, mb1 4.1/4, mb1mx3.6/20, mbtmp3.9/4, ML3.9/1, Error ellipse: s-maj=130.0km s-min=24.6km az=68.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**15.40**	**189**	Pn	Pn	15 38 48.7	-0.8
	0.4nm,0.3s,baz=5.7,slow=10,SNR=15						
ASAR	**Alice Springs**	**21.47**	**165**	P	P	15 40 02.5	+1.4
	1.9nm,0.3s,baz=335,slow=8.6,SNR=75						
STKA	**Stephens Creek**	**31.56**	**158**	P	P	15 41 34.3	-0.8
	1.5nm,0.5s,baz=324,slow=8.7,SNR=9.8						
MKAR	**Makanchi Array**	**63.74**	**327**	P	P	15 45 44.6	+0.2
	0.4nm,0.5s,baz=122,slow=8.2,SNR=7.0						

IDC ***21*** *15:47:50.0±0.5, 11°.09S×164°.64E, h0km, mb4.6/16, mb1 4.7/18, mb1mx4.7/20, mbtmp4.6/18, ML4.9/2, MS4.3/21, Ms1 4.3/21, ms1mx4.1/28, Error ellipse: s-maj=19.9km s-min=15.9km az=108.0*
NEIC ***21*** *15:47:51.8±0.3, 11°.05S×164°.59E, h10km, mb5.0/33, Error ellipse: s-maj=9.4km s-min=6.5km az=139.0*
MOS ***21*** *15:47:54.2±1.1, 10°.96S×164°.43E, h33km, mb5.2/17, Error ellipse: s-maj=11.2km s-min=10.9km az=70.7*
ISCJB ***21*** *15:47:54.9±1.2, 11°.06S±0°.05×164°.37E±0°.04, h38km±10km, mb4.8/59, MS4.3/32, Error ellipse: s-maj=8.4km s-min=6.2km az=172.7*
GCMT ***21*** *15:47:55.3±0.2, 11°.17S×164°.57E, h12km, MW5.1, Moment Tensor Solution. s62,c100; s81,c141; Moment tensor: Scale 10^16Nm; Mrr=5.50±.16; Mθθ=3.49±.12; Mφφ=2.01±.12; Mrθ=-1.57±.32; Mθφ=2.48±.08; Mφr=-1.08±.34; Best double couple: M0=5.70000×10^16 NP1:φs=233.00000°, δ35.00000°, λ=-91.00000°. NP2:φs=54.00000°, δ55.00000°, λ=-89.00000°. Principal axes: T 5.6600, Plg10.0000°, Azm143.0000°; N 0.1600, Plg1.0000°, Azm234.0000°; P -5.8300, Plg80.0000°, Azm327.0000°; Data Used: II IC G IU CN.*
BJI ***21*** *15:47:56.7, 10°.26S×163°.83E, h10km, mB5.2/23, mb4.7/31, Ms4.8/22, Ms7 4.6/23*

ISC 21 15:47:57.7±1.0, 11°.11S±0°.05×164°.43E±0°.04, h50km±9km, h42km±6.3km: pP-P, n271, σ0°.72/252, mb4.8/59, MS4.3/32, 62C-73D, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.71**	**290**	Pn	**Pn**	**15 49 05.1**	**-1.1**
	109nm,0.3s,baz=153,slow=5.3,SNR=26						
HNR				Sn	**Sn**	**15 50 02.2**	**+2.5**
	58nm,0.3s,baz=237,slow=20,SNR=8.1						
HNR				LR	LR	15 50 26.0	
	comp=Z,2μm,20.5s,baz=132,slow=32						
HNR	**Honiara**	**4.71**	**290**	*e*P	**Pn**	**15 49 05.8**	**-0.4**
DZM	**Mont Dzumac**	**11.07**	**170**	*e*Pn	**Pn**	**15 50 29.9**	**-3.5**
	23nm,0.3s						
DZM				*e*Sn	**Sn**	**15 52 30.7**	**-5.2**
	3.9nm,0.2s						
DZM				*e*LR	LR	15 53 07.3	
	6μm,23.6s						
DZM	**Mont Dzumac**	**11.07**	**170**	*e*P	Px	15 50 59.0	
DZM				*e*S	**Sn**	**15 52 26.7**	**-9.2**
PMG	**Port Moresby**	**17.07**	**274**	*e*P	**Pn**	**15 51 56.1**	**+3.0**
PMG				pmax	pmax		
	comp=Z,75nm,1.7s						
PMG	**Port Moresby**	**17.07**	**274**	P	**Pn**	**15 51 53.7**	**+0.6**
	comp=Z,71nm,1.4s						
EIDS	**Eidsvold**	**19.00**	**220**	*e*P	**Pn**	**15 52 17.0**	**+0.6**
	comp=Z,71nm,1.6s						
CTA	**Charters Tower**	**19.63**	**241**	*e*P	**Pn**	**15 52 23.3**	**-0.7**
	comp=Z,44nm,1.0s						
CTA	**Charters Tower**	**19.63**	**241**	P	**Pn**	**15 52 23.1**	**-0.9**
	comp=Z,1.5nm,0.3s,baz=67,slow=12,SNR=24						
CTAO	**Charters Tower**	**19.63**	**241**	*e*P	**Pn**	**15 52 23.9**	**-0.1**
CTAO				pmax	pmax		
	comp=Z,212nm,1.5s						
CTAO	**Charters Tower**	**19.63**	**241**	*e*P	**Pn**	**15 52 23.9**	**-0.1**
	comp=Z,212nm,1.5s						
KWAJ	**Kwajalein Atol**	**20.03**	**9**	P	**P**	**15 52 26.6**	**0.0**
COEN	**Coen**	**20.93**	**260**	*e*P	**P**	**15 52 37.2**	**+0.7**
	comp=Z,411nm,1.1s						
ARMA	**Armidale**	**22.60**	**210**	*e*P	**P**	**15 52 54.1**	**0.0**
AFI	**Afiamalu**	**23.40**	**99**	LR	LR	16 00 12.9	
	comp=Z,723nm,20.4s,MS4.1,baz=175,slow=32						
RAO	**Raoul Island**	**24.45**	**140**	LR	LR	16 01 10.4	
	comp=Z,424nm,18.8s,MS4.0,baz=225,slow=33						
URZ	**Urewera**	**29.33**	**159**	LR	LR	16 04 36.2	
	comp=Z,1μm,18.4s,MS4.6,baz=8.0,slow=34						
URZ	**Urewera**	**29.33**	**159**	*e*P	**P**	**15 53 56.6**	**+0.9**
STKA	**Stephens Creek**	**29.52**	**222**	*e*P	**P**	**15 53 57.3**	**-0.2**
	comp=Z,5.8nm,0.9s,mb4.3						
STKA	**Stephens Creek**	**29.52**	**222**	P	**P**	**15 53 57.5**	**0.0**
	comp=Z,6.7nm,0.8s,mb4.4,baz=48,slow=9.9,SNR=5.7						
STKA				PcP	PcP	15 57 02.6	+0.7
	comp=Z,7.0nm,1.1s,baz=76,slow=8.0,SNR=3.4						
STKA				LR	LR	16 06 05.4	
	comp=Z,714nm,18.3s,MS4.3,baz=152,slow=37						
WRAB	**Tennant Creek**	**30.23**	**249**	P	**P**	**15 54 03.0**	**-1.0**
	comp=Z,198nm,1.5s,mb5.6,SNR=8.6						
WRAB	**Tennant Creek**	**30.23**	**249**	*e*P	**P**	**15 54 03.7**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,86nm,1.4s,mb5.3						
WRAB	**Tennant Creek**	**30.23**	**249**	*e*P	**P**	**15 54 03.6**	**-0.3**
	comp=Z,86nm,1.4s,mb5.3						
GUMO	**Guam**	**31.28**	**321**	LR	LR	16 05 34.8	
	comp=Z,1μm,21.9s,MS4.6,baz=56,slow=34						
KAKA	**Kakadu**	**31.33**	**264**	*e*P	**P**	**15 54 11.7**	**-2.0**
	comp=Z,13nm,0.5s,mb5.0						
KAKA	**Kakadu**	**31.33**	**264**	*e*P	**P**	**15 54 11.7**	**-2.0**
	comp=Z,42nm,0.6s,mb5.5						
ASAR	**Alice Springs**	**31.61**	**243**	P	**P**	**15 54 15.1**	**-1.0**
	comp=Z,13nm,1.0s,mb4.7,baz=63,slow=10,SNR=62						
ASAR				PcP	PcP	15 57 07.9	+0.3
	comp=Z,1.1nm,0.6s,baz=65,slow=2.9,SNR=6.3						
RPZ	**Rata Peaks**	**32.99**	**171**	P	**P**	**15 54 26.6**	**-1.3**
	comp=Z,18nm,0.9s,mb5.0,baz=146,slow=7.0,SNR=4.3						
FITZ	**Fitzroy Crossi**	**38.11**	**255**	*e*P	**P**	**15 55 11.3**	**-0.9**
	comp=Z,48nm,0.7s,mb5.3						
FITZ	**Fitzroy Crossi**	**38.11**	**255**	LR	LR	16 10 32.1	
	comp=Z,215nm,22.0s,MS3.9,baz=291,slow=36						
FITZ	**Fitzroy Crossi**	**38.11**	**255**	*e*P	**P**	**15 55 11.6**	**-0.6**
	comp=Z,26nm,0.7s,mb5.1						
FORT	**Forrest**	**38.95**	**234**	*e*P	**P**	**15 55 19.5**	**+0.4**
	comp=Z,31nm,1.0s,mb5.0						
DAV	**Davao City (W)**	**42.67**	**293**	LR	LR	16 11 59.1	
	comp=Z,232nm,19.1s,MS4.1,baz=124,slow=34						
CBIJ	**Chichi jima**	**43.68**	**331**	LR	LR	16 12 55.7	
	comp=Z,417nm,20.7s,MS4.3,baz=126,slow=34						
PPT	**Papeete**	**44.94**	**104**	*e*S	**S**	**16 02 51.0**	**+7.9**
	comp=Z,216nm,27.0s						
PPT				*e*LQ		16 06 56.8	
	comp=Z,1μm,28.0s						
PPT				*e*LR	LR	16 08 53.4	
	comp=Z,495nm,22.5s,baz=270						
PPT	**Papeete**	**44.94**	**104**	LR	LR	16 11 55.4	
	comp=Z,346nm,18.6s,MS4.3,baz=274,slow=32						
TBI	**Tubuai**	**45.51**	**112**	*e*S	**S**	**16 03 04.3**	**+13**
	comp=Z,261nm,28.0s						
TBI				*e*LQ		16 07 12.0	
	comp=Z,959nm,29.2s						
TBI				*e*LR	LR	16 09 09.6	
	comp=Z,1μm,29.5s,baz=282						
KLBR	**Kellerberrin**	**47.58**	**237**	*e*P	**P**	**15 56 28.4**	**-0.3**
	comp=Z,20nm,1.1s,mb5.0						
NWAO	**Narrogin (SRO)**	**48.36**	**236**	*e*P	**P**	**15 56 35.4**	**+0.7**
NWAO				pmax	pmax		
	comp=Z,50nm,1.4s						
NWAO	**Narrogin (SRO)**	**48.36**	**236**	*e*P	**P**	**15 56 35.4**	**+0.7**
	comp=Z,50nm,1.4s,mb5.4						
MJAR	**Matsushiro Arr**	**53.44**	**334**	P	**P**	**15 57 12.2**	**-0.6**
	comp=Z,1.7nm,0.9s,mb4.0,baz=167,slow=29,SNR=5.0						
MAT	**Matsushiro**	**53.44**	**334**	P	**P**	**15 57 11.9**	**-0.8**
MAT				S	**S**	**16 04 41.0**	**-0.7**
YULB	**Yu-li**	**54.37**	**309**	*e*P	**P**	**15 57 20.3**	**+0.6**
	comp=Z,9.2nm,0.9s,mb4.7						
ASAJ	**Asahikawa**	**58.43**	**342**	P	**P**	**15 57 48.5**	**+0.2**
	comp=Z,7.5nm,0.8s,mb4.8,baz=201,slow=10,SNR=7.0						
ASAJ				LR	LR	16 18 43.6	
	comp=Z,419nm,21.6s,MS4.5,baz=156,slow=32						
RKT	**Rikitea**	**58.78**	**110**	*e*S	**S**	**16 06 00.0**	**+6.8**
	comp=Z,268nm,34.8s						
RKT				*e*LQ		16 12 43.3	
	comp=Z,323nm,27.0s						
RKT				*e*LR	LR	16 15 17.3	
	comp=Z,1μm,31.5s,baz=273						
SSE	**Sheshan**	**59.00**	**317**	P	**P**	**15 57 48.8**	**-3.7**
SSE				S	**S**	**16 05 53.0**	**-2.7**
SSE				pmax	pmax		
	comp=Z,21nm,0.7s,mb5.3						
SSE				pmax	pmax		
	comp=Z,79nm,3.2s						
SSE				LR	LR		
	comp=N,130nm,34.8s,MS4.0						
SSE				LR	LR		
	comp=E,140nm,34.2s,MS4.0						
SSE				LR	LR		
	comp=Z,240nm,33.8s,MS4.1						
KSRS	**Korea Array**	**59.20**	**327**	P	**P**	**15 57 53.9**	**0.0**
	comp=Z,0.4nm,0.5s,mb3.7,baz=133,slow=6.7,SNR=4.5						
KSRS				LR	LR	16 21 35.1	
	comp=Z,186nm,20.2s,MS4.2,baz=136,slow=34						
YSS	**Yuzh-Sakhalins**	**60.96**	**343**	*e*P	**P**	**15 58 04.0**	**-1.6**
YSS				*e*S	**S**	**16 06 19.0**	**-1.2**
YSS				*e*PS		16 06 28.0	
YSS				*e*SS	SS	16 10 22.0	+1.4
YSS				MLR	MLR		
	comp=Z,400nm,16.0s,MS4.7						
NJ2	**Nanjing**	**61.16**	**316**	*e*P	**P**	**15 58 08.8**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.2						
QIZ	**Qiongzhong**	**61.57**	**299**	P	**P**	**15 58 10.3**	**0.0**
QIZ				S	**S**	**16 06 29.3**	**+0.3**
QIZ				pmax	pmax		
	comp=Z,71nm,7.2s						
QIZ				LR	LR		
	comp=N,180nm,17.8s,MS4.3						
QIZ				LR	LR		
	comp=E,96nm,22.1s,MS4.3						
QIZ				LR	LR		
	comp=Z,270nm,22.4s,MS4.3						
MDJ	**Mudanjiang**	**63.80**	**333**	P	**P**	**15 58 25.8**	**+1.1**
MDJ				PcP	PcP	15 59 00.9	+0.7
MDJ				S	**S**	**16 06 58.4**	**+2.3**
MDJ				ScS	ScS	16 08 16.4	+2.3
MDJ				pmax	pmax		
	comp=Z,13nm,2.2s,mb4.6						
MDJ				pmax	pmax		
	comp=Z,230nm,5.0s						
MDJ				LR	LR		
	comp=N,250nm,25.1s,MS4.3						
MDJ				LR	LR		
	comp=E,150nm,27.3s,MS4.3						
MDJ				LR	LR		
	comp=Z,300nm,27.3s,MS4.3						
PET	**Petropavlovsk**	**64.06**	**356**	*e*P	**P**	**15 58 26.0**	**-0.2**
PET				*e*S	**S**	**16 07 00.1**	**+1.1**
PET				*e*PS		16 07 16.4	
PET				*e*SS	SS	16 11 12.5	+3.5
PET				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.1						
PET				pmax	pmax		
	comp=Z,100nm,20.2s						
PET	**Petropavlovsk**	**64.06**	**356**	*e*P	**P**	**15 58 25.6**	**-0.6**
	comp=Z,12nm,0.9s,mb4.9						
PETK	**Petropavlovsk-**	**64.22**	**356**	P	**P**	**15 58 26.9**	**-0.3**
	comp=Z,9.3nm,0.8s,mb4.9,baz=169,slow=2.9,SNR=26						
PETK				LR	LR	16 20 56.3	
	comp=Z,239nm,20.9s,MS4.4,baz=183,slow=31						
HABR	**Khabarovsk**	**64.76**	**339**	*e*P	**P**	**15 58 28.8**	**

comp=Z,12nm,1.0s,mb4.8
ULN Ulaanbaatar 77.59 325 *e*P **P 15 59 48.9 +0.4**
comp=Z,12nm,1.0s,mb4.8
YAK Yakutsk 77.79 344 *e*P **P 15 59 48.4 -0.9**
YAK *e**PP pP 15 59 56.6 -7.0
YAK *e* pP 15 59 59.6 -4.0
YAK *e*S S 16 09 36.2 -1.7
YAK *e**SS sS 16 09 52.6 -9.3
YAK *e* 16 10 08.0
YAK pmax pmax
comp=Z,18nm,1.0s,mb5.0
YAK pmax pmax
comp=N,5.0nm,1.1s
YAK pmax pmax
comp=E,4.0nm,1.2s
YAK smax
comp=N,52nm,3.0s
YAK smax
comp=E,30nm,3.3s
YAK MLR MLR
comp=N,105nm,14.0s
YAK Yakutsk 77.79 344 *e*P **P 15 59 48.9 -0.4**
comp=N,22nm,0.6s,mb5.3
SONM Songino Array 77.95 324 P **P 15 59 51.5 +1.0**
comp=N,2.8nm,0.8s,mb4.3,baz=137,slow=5.8,SNR=15
SONM LR LR 16 34 09.4
comp=N,261nm,20.1s,MS4.5,baz=94,slow=36
GTA Gaotai 78.17 314 *e*P **P 15 59 53.4 +1.5**
GTA pP pP 16 00 05.0 -1.2
GTA S S 16 09 44.3 +1.4
GTA pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
GTA pmax pmax
comp=Z,85nm,8.6s
GTA LR LR
comp=N,140nm,20.8s,MS4.5
GTA LR LR
comp=E,170nm,22.6s,MS4.5
GTA LR LR
comp=Z,230nm,16.4s
BILL Bilibino 78.95 1 *i* P **P 15 59 55.8 +0.2**
BILL pmax pmax
comp=Z,32nm,1.3s,mb5.1
BILL Bilibino 78.95 1 *e*P **P 15 59 55.3 -0.3**
comp=Z,8.3nm,0.4s,mb5.0
TLY Talaya 81.46 327 *e*P **P 16 00 09.3 -0.1**
TLY pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
TLY Talaya 81.46 327 *e*P **P 16 00 09.3 -0.1**
comp=Z,3.5nm,0.9s,mb4.3
TRF Thorofare Moun 81.99 19 P **P 16 00 10.3 -1.6**
comp=Z,8.5nm,1.2s,mb4.5
MCK McKinley 82.62 19 P **P 16 00 12.6 -2.6**
MCK pmax pmax
comp=Z,26nm,1.3s,mb5.1
MCK McKinley 82.62 19 P **P 16 00 12.6 -2.6**
comp=Z,26nm,1.3s,mb5.1
ILAR Eielson Array 83.98 19 P **P 16 00 21.2 -1.0**
comp=Z,3.8nm,0.8s,mb4.6,baz=214,slow=5.5,SNR=32
ILAR LR LR 16 32 40.6
comp=Z,140nm,18.9s,MS4.4,baz=289,slow=32
ILAR Eielson Array 83.98 19 P **P 16 00 21.2 -1.0**
ILAR LR LR 16 32 40.6
MAW Mawson 84.18 202 *e*P **P 16 00 23.6 +0.3**
comp=Z,11nm,1.1s,mb4.9
MAW Mawson 84.18 202 P **P 16 00 23.6 +0.3**
comp=Z,12nm,1.0s,mb5.0,baz=96,slow=6.4,SNR=17
MAW LR LR 16 36 55.0
comp=Z,92nm,18.7s,MS4.2,baz=286,slow=35
MAW Mawson 84.18 202 *e*P **P 16 00 23.6 +0.3**
MAW pmax pmax
comp=Z,8.0nm,1.4s
MAW Mawson 84.18 202 *e*P **P 16 00 23.6 +0.3**
comp=Z,8.4nm,1.4s,mb4.7
COLD Coldfoot 84.71 16 *e*P **P 16 00 26.2 +0.3**
comp=Z,4.9nm,0.8s,mb4.7
YBH Yreka Blue Hor 84.86 46 *e*P **P 16 00 26.5 -0.7**
YBH pmax pmax
comp=Z,8.0nm,1.3s
YBH Yreka Blue Hor 84.86 46 *e*P **P 16 00 26.5 -0.7**
comp=Z,7.7nm,1.3s,mb4.7
EGAK Eagle 85.88 20 *e*P **P 16 00 31.9 +0.1**
comp=Z,16nm,0.9s,mb5.2
E03A Lebam 85.94 41 ⇑P **P 16 00 32.9 +0.4**
baz=86
NLWA Neilton Lookou 86.05 40 ⇓P **P 16 00 33.5 +0.5**
baz=86
DAWY Dawson 86.08 21 *e*P **P 16 00 32.2 -0.6**
ISA Isabella 86.14 53 ⇑P **P 16 00 33.9 +0.2**
baz=86
G04A Mulino 86.19 43 ⇑P **P 16 00 34.4 +0.6**
baz=86
WCN Washoe City 86.22 49 ⇓P **P 16 00 34.0 -0.1**
baz=86
EDW2 Edwards Air Fo 86.30 54 ⇓P **P 16 00 34.6 0.0**
baz=86
BFSC Mount Baldy Ra 86.39 54 ⇑P **P 16 00 34.9 -0.1**
baz=86
K05A Summer Lake 86.46 45 ⇑P **P 16 00 35.8 +0.6**
baz=86
LRMC Laurel Mountai 86.70 53 ⇓P **P 16 00 36.7 +0.2**
baz=87
MPMC Manual Prospec 87.02 53 ⇓P **P 16 00 38.2 +0.2**
baz=87
MONP Monument Peak 87.02 56 ⇑P **P 16 00 38.0 -0.1**
baz=87,SNR=5.7
NVAR Mina Array Bea 87.05 50 P **P 16 00 37.1 -1.1**
comp=Z,4.4nm,1.0s,mb4.6,baz=236,slow=7.6,SNR=22
PFO Pinyon Flat Ob 87.18 55 ⇑P **P 16 00 39.1 +0.2**
baz=87
GSC Goldstone 87.35 53 ⇑P **P 16 00 39.8 +0.1**
baz=87
GRAC Grapevine Rang 87.37 52 ⇓P **P 16 00 39.8 +0.1**
baz=87
SWSC Sam W. Stewart 87.54 56 ⇓P **P 16 00 40.8 +0.2**
baz=88
HEC Hector,Ludlow 87.60 54 ⇓P **P 16 00 40.7 -0.2**
baz=88
I07A Izee 87.84 44 ⇑P **P 16 00 41.8 0.0**
baz=88
SHOC Shoshone 87.92 53 ⇓P **P 16 00 42.4 0.0**
baz=88
WVOR Wild Horse Val 87.96 46 *e*P **P 16 00 42.0 -0.4**
WVOR pmax pmax
comp=Z,10.0nm,1.5s,mb4.8
WVOR Wild Horse Val 87.96 46 *e*P **P 16 00 42.0 -0.5**
comp=Z,10nm,1.5s,mb4.8
BC3 Big Chuckawall 88.00 55 ⇑P **P 16 00 42.7 -0.1**
baz=88,SNR=6.5
WMQ Urumqi 88.22 315 P **P 16 00 45.4 +1.8**
WMQ PP PP 16 04 15.3 +3.8
WMQ SKS 16 11 08.0
WMQ *e*S S 16 11 24.5 0.0
WMQ pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
WMQ pmax pmax
comp=Z,93nm,4.6s
WMQ LR LR
comp=N,150nm,23.4s,MS4.6
WMQ LR LR
comp=E,220nm,23.6s,MS4.6
WMQ LR LR
comp=Z,280nm,23.8s,MS4.6
J08A Circle Bar Ran 88.34 45 ⇑P **P 16 00 43.8 -0.4**
baz=88
GLA Glamis 88.36 56 ⇓P **P 16 00 44.8 +0.3**
baz=88
GLA Glamis 88.36 56 *e*P **P 16 00 44.9 +0.4**
GLA pmax pmax
comp=Z,20nm,1.2s,mb5.2
GLA Glamis 88.36 56 *e*P **P 16 00 44.9 +0.4**
comp=Z,20nm,1.2s,mb5.2
IRM Iron Mountain 88.37 55 ⇑P **P 16 00 44.3 -0.3**
baz=88,SNR=12
R10A Warm Springs 88.53 51 ⇓P **P 16 00 45.5 +0.3**
baz=88
V11A Goodsprings 88.57 53 ⇓P **P 16 00 45.8 +0.3**
baz=89
G08A Pilot Rock 88.58 43 ⇑P **P 16 00 45.2 0.0**
baz=89
V12A Nelson 89.00 53 ⇑P **P 16 00 47.8 +0.3**
baz=89
T11A Corn Creek, Al 89.09 52 ⇓P **P 16 00 47.5 -0.4**
baz=89
113A Mohawk Valley, 89.16 57 ⇑P **P 16 00 48.2 -0.1**
baz=89
Q11A Duckwater 89.16 50 ⇑P **P 16 00 48.0 -0.2**
baz=89,SNR=12
M10A I.L. Ranch, Tu 89.21 48 ⇓P **P 16 00 48.8 +0.5**
baz=89
B08A Colville Reser 89.25 40 ⇓P **P 16 00 48.4 +0.1**
baz=89
Z13A Yuma Proving G 89.35 56 ⇓P **P 16 00 48.9 -0.3**
baz=89,SNR=9.8
L10A Juniper Basin 89.41 47 ⇓P **P 16 00 49.6 +0.4**
baz=89
U12A Valley of Fire 89.42 53 ⇑P **P 16 00 49.6 +0.2**
baz=89
S12A Delamar Landin 89.47 52 ⇓P **P 16 00 49.4 -0.2**
baz=90,SNR=5.2
O11A Cowboy Ranch, 89.49 49 ⇓P **P 16 00 50.1 +0.4**
baz=90
X13A Yucca 89.53 55 ⇓P **P 16 00 49.5 -0.6**
baz=90,SNR=6.2
BMO Blue Mountains 89.57 44 *e*P **P 16 00 49.3 -0.6**
BMO pmax pmax
comp=Z,2.0nm,1.0s,mb4.4
BMO Blue Mountains 89.57 44 *e*P **P 16 00 49.3 -0.7**
comp=Z,1.8nm,1.0s,mb4.4
W13A Hualapai Mount 89.61 54 ⇑P **P 16 00 50.5 +0.2**
baz=90
M11A Holland Ranch, 89.73 48 ⇑P **P 16 00 50.6 -0.2**
baz=90,SNR=6.5
214A Organ Pipe Nat 89.75 57 ⇓P **P 16 00 51.0 -0.1**
baz=90,SNR=7.2
R12A Pony Springs, 89.83 51 ⇑P **P 16 00 51.1 -0.2**
baz=90,SNR=12
Q12A Willow Creek R 89.83 50 ⇑P **P 16 00 51.6 +0.3**
baz=90
U13A Pakoon Wash 89.86 53 ⇓P **P 16 00 51.2 -0.3**
baz=90,SNR=5.8
114A Black Gap (USA 89.88 57 ⇓P **P 16 00 52.1 +0.5**
baz=90
P12A McGill 89.88 50 ⇓P **P 16 00 51.3 -0.3**
baz=90,SNR=5.8
K11A Parker Ranch, 89.90 46 ⇓P **P 16 00 51.2 -0.3**
baz=90,SNR=6.7
F10A Beach Ranch, E 89.94 43 ⇑P **P 16 00 51.6 0.0**
baz=90
Z14A Wintersburg 89.96 56 ⇓P **P 16 00 52.3 +0.2**
baz=90
Y14A Wickenburg 90.05 56 ⇑P **P 16 00 52.6 +0.1**
baz=90
T13A Saint George 90.05 52 ⇑P **P 16 00 52.3 -0.1**
baz=90,SNR=5.8
N12A Clover Valley, 90.13 48 ⇓P **P 16 00 52.5 -0.1**
baz=90,SNR=8.5
N12A Clover Valley, 90.13 48 *e*P **P 16 00 52.5 -0.2**
comp=Z,16nm,1.2s,mb5.2
MFID Camas Ranch 90.22 46 ⇑P **P 16 00 53.2 +0.3**
baz=90
S13A Holt Ranch, En 90.22 52 ⇓P **P 16 00 53.0 -0.1**
baz=90,SNR=7.6
I11A Placerville 90.25 45 ⇓P **P 16 00 52.7 -0.5**
baz=90,SNR=6.2
X14A Yava 90.26 55 ⇓P **P 16 00 53.4 0.0**
baz=90,SNR=5.7
W14A Seligman 90.28 54 ⇓P **P 16 00 53.3 -0.1**
baz=90,SNR=5.2
R13A O'Grain Ranch, 90.28 51 ⇑P **P 16 00 53.3 -0.1**
baz=90,SNR=7.8
V14A Boquillas Ranc 90.36 54 ⇓P **P 16 00 53.8 0.0**
baz=90,SNR=8.7
M12A Wells 90.36 48 ⇑P **P 16 00 53.4 -0.3**
baz=90,SNR=5.1
115A Sonoran Desert 90.40 57 ⇓P **P 16 00 54.1 0.0**
baz=90
Q13A Wheeler Ranch, 90.43 50 ⇓P **P 16 00 53.7 -0.4**
baz=90,SNR=6.4
L12A House Creek Ra 90.47 47 ⇑P **P 16 00 54.7 +0.5**
baz=90
U14A Mt Trumbull 90.48 53 ⇑P **P 16 00 54.2 -0.2**
baz=90,SNR=13
P13A Bates Ranch, G 90.55 50 ⇓P **P 16 00 55.2 +0.5**
baz=91
Y15A Casa Rosa Ranc 90.59 56 ⇓P **P 16 00 54.7 -0.3**
baz=91,SNR=6.0
K12A Draper Farm, C 90.67 47 ⇓P **P 16 00 54.7 -0.4**
baz=91,SNR=5.6
T14A Hurricane 90.70 52 ⇑P **P 16 00 55.2 -0.2**
baz=91,SNR=5.9
N13A Wendover, West 90.74 49 ⇑P **P 16 00 55.7 +0.2**
baz=91
N13A Wendover, West 90.74 49 *e*P **P 16 00 55.3 -0.2**
comp=Z,5.3nm,0.6s,mb5.0
X15A Humboldt 90.79 55 ⇑P **P 16 00 55.7 -0.2**
baz=91,SNR=5.4
S14A Cedar City 90.80 52 ⇑P **P 16 00 56.2 +0.3**
baz=91
116A Eloy 90.80 57 ⇓P **P 16 00 56.1 +0.1**
baz=91
216A Three Points, 90.89 58 ⇑P **P 16 00 57.1 +0.7**
baz=91
M13A Montello 90.89 48 ⇓P **P 16 00 56.6 +0.4**
baz=91
W15A Williams 90.92 54 ⇓P **P 16 00 57.4 +0.9**
baz=91
Q14A Sevier Lake (B 91.00 51 ⇓P **P 16 00 56.8 +0.1**
baz=91,SNR=19
V15A Kaibab Nationa 91.14 54 ⇓P **P 16 00 57.8 +0.3**
baz=91,SNR=7.9
E12A Beaver Dam Sad 91.16 43 ⇓P **P 16 00 57.0 -0.3**
baz=91
U15A North Rim 91.18 53 ⇓P **P 16 00 57.7 +0.1**
baz=91,SNR=9.1
H12A Diamond D Ranc 91.18 45 ⇓P **P 16 00 57.3 -0.1**
baz=91
L13A Double Diamond 91.23 47 ⇓P **P 16 00 58.2 +0.5**
baz=91
T15A Red Dirt Ranch 91.24 53 ⇓P **P 16 00 58.6 +0.7**
baz=91
HLID Hailey 91.25 46 ⇓P **P 16 00 57.7 0.0**
baz=91,SNR=8.1
HLID Hailey 91.25 46 *e*P **P 16 00 57.5 -0.2**
comp=Z,11nm,1.4s,mb5.0
K13A Steer Farm, H 91.26 47 ⇑P **P 16 00 58.3 +0.5**
baz=91
Y16A Circle Bar Ran 91.27 56 ⇓P **P 16 00 58.4 +0.2**
baz=91
SYO Syowa Base 91.35 197 ⇓*e*P **P 16 00 56.8 -1.0**
217A Green Valley 91.37 58 ⇓P **P 16 00 58.7 0.0**
baz=91
J13A Cove Ranch, Pi 91.38 46 ⇑P **P 16 00 58.2 -0.2**
baz=91,SNR=6.7
X16A Lo Mia Camp, P 91.42 55 ⇓P **P 16 00 59.0 +0.2**
baz=91
D12A Red Ives Fores 91.47 42 ⇓P **P 16 00 59.2 +0.5**
baz=92
N14A Grayback Hills 91.49 49 ⇑P **P 16 00 59.3 +0.3**
baz=92
M14A Sheep Mountain 91.53 48 ⇑P **P 16 00 58.7 -0.4**
baz=92,SNR=12
I13A Wildhorse Cree 91.54 46 ⇑P **P 16 00 59.0 -0.2**
baz=92,SNR=15
117A Oracle 91.60 57 ⇑P **P 16 01 00.4 +0.7**
baz=92
H13A Challis 91.60 45 ⇓P **P 16 00 59.0 -0.4**
baz=92,SNR=7.5
WUAZ Wupatki 91.71 54 ⇓P **P 16 01 00.7 +0.6**
baz=92
L14A Malta 91.73 48 ⇓P **P 16 00 59.8 -0.3**
baz=92,SNR=6.5
G13A Cobalt 91.74 44 ⇑P **P 16 00 59.4 -0.7**
baz=92,SNR=8.9
J14A Carey 91.83 46 ⇓P **P 16 01 00.8 +0.3**
baz=92
K14A Jones Ranch, D 91.89 47 ⇓P **P 16 01 01.1 +0.3**
baz=92
X17A Forest Lakes 91.91 56 ⇑P **P 16 01 01.8 +0.7**
baz=92
318A Bisbee 91.99 59 ⇑P **P 16 01 01.8 +0.3**
baz=92
S16A Weppner Ranch, 92.00 52 ⇓P **P 16 01 02.0 +0.6**
baz=92
I14A Mackay 92.01 46 ⇑P **P 16 01 01.5 +0.2**
baz=92,SNR=7.5
U16A Tuba City 92.03 54 ⇑P **P 16 01 02.4 +0.8**
baz=92
218A Dragoon 92.05 58 ⇑P **P 16 01 02.6 +0.8**
baz=92
D13A Huson 92.07 42 ⇑P **P 16 01 01.2 -0.3**
baz=92
E13A Victor 92.10 43 ⇑P **P 16 01 01.6 -0.1**
baz=92
V17A Tonalea, Kykot 92.19 54 ⇑P **P 16 01 02.7 +0.4**
baz=92
R16A Teasdale 92.21 52 ⇑P **P 16 01 03.2 +0.8**
baz=92
L15A Malad City 92.34 48 ⇑P **P 16 01 03.2 +0.3**
baz=92
T17A Navajo Res., N 92.47 53 ⇑P **P 16 01 04.4 +0.8**
baz=92
E14A Clinton 92.56 43 ⇑P **P 16 01 03.6 -0.2**
baz=93
Q16A Castle Valley 92.58 51 ⇓P **P 16 01 04.7 +0.6**
baz=93
J15A Blackfoot 92.61 46 ⇑P **P 16 01 04.5 +0.4**
baz=93
MCMT McKenzie Canyo 92.64 45 *e*P **P 16 01 04.1 -0.1**
comp=Z,2.3nm,1.1s,mb4.5
MK31 Makanchi Array 92.68 317 *e*P **P 16 01 04.3 0.0**
MKAR Makanchi Array 92.68 317 P **P 16 01 04.1 -0.2**
comp=Z,1.7nm,0.6s,mb4.7,baz=96,slow=6.5,SNR=14
MKAR LR LR 16 41 03.9
comp=Z,113nm,21.6s,MS4.3,baz=101,slow=34
219A White Tail Can 92.71 58 ⇑P **P 16 01 05.4 +0.5**
baz=93
H15A Lima 92.73 45 ⇓P **P 16 01 04.5 -0.1**
baz=93,SNR=7.0
R17A Hanksville Air 92.83 52 ⇓P **P 16 01 05.4 +0.2**
baz=93
CHMT Chamberlain Mo 92.83 43 *e*P **P 16 01 03.8 -1.2**
comp=Z,4.1nm,1.4s,mb4.7
ZALV Zalesovo Beam 92.85 324 P **P 16 01 03.4 -1.6**
comp=Z,3.7nm,1.1s,mb4.7,baz=86,slow=4.8,SNR=9.5
ZALV LR LR 16 41 40.5
comp=Z,140nm,20.9s,MS4.4,baz=69,slow=35
V18A Ganado 92.89 54 ⇓P **P 16 01 06.0 +0.4**
baz=93
G15A Dillon 92.96 45 ⇓P **P 16 01 06.1 +0.5**
baz=93
Y19A Nutrioso 93.10 56 ⇓P **P 16 01 06.8 +0.2**
baz=93
F15A Butte 93.11 44 ⇓P **P 16 01 06.3 0.0**
baz=93
LRM Limekiln Ridge 93.13 44 *e*P **P 16 01 04.7 -1.7**
comp=Z,15nm,0.7s,mb5.5
E15A Deer Lodge 93.13 43 ⇑P **P 16 01 06.6 +0.1**
baz=93
A14A Double T Ranch 93.19 41 ⇓P **P 16 01 07.1 +0.4**
baz=93
G16A Moss Hill, Enn 93.45 45 ⇑P **P 16 01 07.9 0.0**
baz=93
R18A Canyonlands Na 93.45 52 ⇓P **P 16 01 08.1 0.0**
baz=94
B15A Bradely Ranch, 93.60 42 ⇑P **P 16 01 07.9 -0.6**
baz=94
A15A Johnson Ranch, 93.63 41 ⇓P **P 16 01 08.5 -0.2**
baz=94
BOZ Bozeman (W) 93.66 44 ⇑P **P 16 01 09.3 +0.5**
baz=94
BOZ Bozeman (W) 93.66 44 *e*P **P 16 01 08.5 -0.4**
BOZ pmax pmax
comp=Z,3.0nm,1.1s,mb4.6
BOZ Bozeman (W) 93.66 44 *e*P **P 16 01 08.5 -0.3**
comp=Z,3.0nm,1.1s,mb4.6
H16A Russell Place, 93.72 45 ⇓P **P 16 01 09.9 +0.7**
baz=94
Y20A Horse Springs, 93.81 56 ⇓P **P 16 01 10.4 +0.5**
baz=94
X20A Quemado 93.82 56 ⇑P **P 16 01 10.5 +0.5**
baz=94
NVS Novosibirsk 93.97 325 *e*P **P 16 01 08.7 -1.3**
NVS pmax pmax
comp=Z,6.0nm,1.3s,mb4.9
NVS pmax pmax
comp=N,4.0nm,1.2s
PDAR Pinedale Array 94.55 47 P **P 16 01 10.7 -2.3**
comp=N,1.0nm,0.7s,mb4.4,baz=300,slow=3.3,SNR=3.8
PDAR LR LR 16 36 47.8
comp=N,64nm,19.2s,MS4.1,baz=159,slow=31
U21A Nageezi 94.84 54 ⇓P **P 16 01 15.0 +0.4**
baz=95
A17A Triple J Farms 94.94 41 ⇑P **P 16 01 14.5 -0.1**
baz=95
YKA Yellowknife Ar 95.62 27 P **P 16 01 15.4 -2.1**
comp=N,1.5nm,0.8s,mb4.5,baz=257,slow=4.9,SNR=10
224A Cornudas Mount 95.85 59 ⇓P **P 16 01 19.5 +0.3**
baz=96
KURK Kurchatov 95.86 320 *e*P **P 16 01 18.8 0.0**
KURK pmax pmax
comp=Z,6.0nm,1.6s,mb4.8
325A Bean Ranch, Si 96.20 59 ⇑P **P 16 01 20.6 -0.2**
baz=96
MAIT Maitri 96.22 189 *e*P **P 16 01 19.9 -0.3**
TXAR Lajitas Array 97.00 62 LR LR 16 39 49.1
comp=Z,74nm,18.4s,MS4.2,baz=30,slow=32
BVAR Borovoye Array 101.20 322 P Pdif 16 01 42.6 -0.1
comp=Z,0.5nm,0.7s,baz=129,slow=5.9,SNR=4.4
ARCES ARCESS Array B 116.06 345 PKP PKPdf 16 06 33.6 -1.0
comp=Z,1.8nm,0.7s,baz=113,slow=2.8,SNR=10
KIV Kislovodsk 120.35 315 *i* PKIKP PKPdf 16 06 47.5 +3.9
KIV pmax pmax
comp=Z,6.0nm,0.8s
KIV MLR MLR
comp=Z,127nm,20.0s,MS4.6
LPAZ La Paz 121.32 117 PKP PKPdf 16 06 47.0 +0.7
comp=Z,1.1nm,0.6s,baz=213,slow=1.7,SNR=4.8
LPAZ La Paz 121.32 117 PKP PKPdf 16 06 47.0 +0.7
ANN Anapa 123.70 317 *e*PKIKP PKPdf 16 06 42.6 -7.5
ANN pmax pmax
comp=Z,45nm,1.3s
ANN MLR MLR
comp=Z,329nm,24.0s,MS4.9
BOSA Boshof 124.18 224 PKP PKPdf 16 06 51.8 +0.3
comp=Z,2.8nm,0.6s,baz=176,slow=4.3,SNR=9.5
CPUP Villa Florida 124.94 133 PKP PKPdf 16 06 52.4 -0.7
comp=Z,2.3nm,0.7s,baz=298,slow=4.2,SNR=5.5
NB2 NORSAR Subarra 126.41 344 PKPdf PKPdf 16 06 54.3 -0.5
comp=Z,1.8nm,1.0s,baz=39,slow=1.9
NOA NORSAR Array B 126.41 344 PKP PKPdf 16 06 54.9 +0.2
comp=Z,1.5nm,0.8s,baz=38,slow=2.1,SNR=4.5
NOA NORSAR Array B 126.41 344 PKP PKPdf 16 06 54.9 +0.2
ASF Jabal al Asfar 127.48 302 PKP PKPdf 16 06 58.7 +1.0
comp=Z,0.7nm,0.4s,baz=320,slow=3.1,SNR=3.5
BRTR Keskin Array B 128.05 312 PKP PKPdf 16 06 59.0 +0.4
comp=Z,1.5nm,1.0s,baz=158,slow=4.0,SNR=5.9
MTLF Montolieu 144.36 338 *e*PKIKP PKPdf 16 07 25.8 -2.8
comp=Z,41nm,1.3s
EPF Esparros 145.31 339 *e*PKIKP PKPdf 16 07 26.5 -3.7
comp=Z,36nm,1.3s
ETSF Etsaut 145.73 340 *e*PKIKP PKPdf 16 07 30.5 -0.5
comp=Z,72nm,1.4s
SJPF Ste Jean 145.76 341 *e*PKIKP PKPdf 16 07 28.4 -2.6
comp=Z,73nm,1.5s
ESDC Sonseca Array 149.74 342 PKPbc PKPbc 16 07 44.0 +1.7
comp=Z,0.3nm,0.3s,baz=31,slow=2.3,SNR=4.0
TORD Torodi Ar. Bea 162.99 279 PKP PKPdf 16 07 55.7 +0.2
comp=Z,3.3nm,1.0s,baz=45,slow=0.4,SNR=7.8

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*IDC **21** 16:08:59.2±1.3,3.42S×151.13E, h0km, mb3.9/6, mb1 4.0/7, mb1mx3.8/17, mbtmp3.9/7, ML4.2/1, MS3.6/3, Ms1 3.6/3, ms1mx2.9/28, Error ellipse: s-maj=50.1km s-min=22.3km az=105.0*
*NEIC **21** 16:09:00.8±1.0,3.43S×151.19E, h10km, mb3.7/1, Error ellipse: s-maj=37.8km s-min=11.7km az=101.0*
*ISCJB **21** 16:09:02.1±1.1,3.5S±0.1×151.2E±0.3, h33km, mb3.8/6, MS3.8/2, Error ellipse: s-maj=39.5km s-min=12.7km az=13.7*

ISC 21 16:09:04.2±1.0,3.5S±0.1×151.2E±0.3,h35km,n14,
σ1§02/10,mb3.8/6,MS3.8/2,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby** 28nm,1.0s	**7.12**	**214**	*e*P	**Pn**	**16 10 45.9**	**-0.1**
HNR	**Honiara** comp=Z,63nm,19.9s,baz=299,slow=29	**10.50**	**125**	LR	LR	16 14 03.4	
CTA	**Charters Tower** 0.5nm,0.3s,baz=45,slow=16,SNR=4.4	**17.19**	**196**	P	**Pn**	**16 13 02.6**	**+0.8**
CTAO	**Charters Tower** 6.8nm,1.0s	**17.19**	**196**	*e*P	**Pn**	**16 13 02.2**	**+0.5**
ASAR	**Alice Springs** 2.7nm,0.9s,mb3.8,baz=53,slow=8.1,SNR=7.9	**26.11**	**218**	P	**P**	**16 14 35.5**	**+0.5**
STKA	**Stephens Creek** 2.9nm,1.0s,mb4.0,baz=49,slow=21,SNR=2.8	**29.65**	**197**	P	**P**	**16 15 05.3**	**-1.2**
CBIJ	**Chichi jima** comp=Z,79nm,20.0s,MS3.4,baz=200,slow=32	**31.63**	**345**	LR	LR	16 26 03.1	
RAO	**Raoul Island** comp=Z,423nm,20.5s,MS4.3,baz=67,slow=29	**38.92**	**134**	LR	LR	16 27 38.2	
CMAR	**Chiang Mai Arr**	**55.88**	**295**	P	**P**	**16 18 37.0**	**-1.9**

0.3nm,0.4s,mb3.6,baz=215,slow=12,SNR=4.5
PETK Petropavlovsk- 56.65 5 P **P 16 18 43.0 -0.8**
1.3nm,0.6s,mb4.1,baz=4.5,slow=9.4,SNR=3.6
MK31 Makanchi Array 78.30 319 *eP* **P 16 21 01.9 +1.2**
MKAR Makanchi Array 78.30 319 P **P 16 21 02.1 +1.4**
0.2nm,0.2s,mb3.6,baz=103,slow=6.4,SNR=4.2
ILAR Eielson Array 81.56 22 P **P 16 21 17.9 0.0**
0.5nm,0.7s,mb3.5,baz=248,slow=5.7,SNR=6.2
TORD Torodi Ar. Bea 148.38 289 PKPbc PKPbc 16 28 50.3 +2.3
1.1nm,0.7s,baz=73,slow=3.8,SNR=6.2

*ISCJB **21** 16:19:35.1±0.9,27.°45N±0.°08×140.°1E±0.°2,h362km±9km, mb3.3/7,Error ellipse: s-maj=34.0km s-min=10.3km az=166.8*
*IDC **21** 16:19:35.5±0.9,27.°34N×140.°18E,h356km±9km,mb3.0/7, mb1 3.2/7,mb1mx2.9/22,mbtmp3.0/7,Error ellipse: s-maj=27.3km s-min=19.3km az=68.0*
*JMA **21** 16:19:38.8±0.2,27.°67N×140.°76E,h363km,M3.7*
ISC 21 16:19:36.2±0.9,27.°47N±0.°09×140.°2E±0.°2,h357km±9km, n15,σ1°08/17,mb3.3/7,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.81**	**101**	P	**Pn**	**16 20 27.9**	**+0.9**
	24nm,0.3s,baz=294,slow=19,SNR=20						
CBIJ				S	**S**	**16 21 06.7**	**-1.1**
	61nm,0.3s,baz=269,slow=22,SNR=27						
CBIJ	**Chichi jima**	**1.81**	**101**	P	**Pn**	**16 20 27.8**	**+0.8**
CBIJ				*e*S	**S**	**16 21 05.7**	**-2.0**
JHHJ	**Haha-jima-NKT**	**1.96**	**115**	P	**Pn**	**16 20 29.2**	**+1.2**
JHHJ				*e*S	**S**	**16 21 09.5**	**0.0**
BSO3	**Boso 3**	**7.31**	**2**	*e*S	**S**	**16 22 45.0**	**-3.7**
BSO4	**Boso 4**	**7.50**	**1**	*e*S	**S**	**16 22 50.9**	**-1.8**
JAG	**Ashikaga**	**8.95**	**356**	P	**Pn**	**16 21 42.6**	**+1.0**
JHO	**Hitachi**	**9.12**	**2**	P	**Pn**	**16 21 45.0**	**+1.4**
SONM	**Songino Array**	**33.22**	**317**	P	**P**	**16 25 41.2**	**+0.4**
	0.3nm,0.4s,mb2.9,baz=140,slow=5.1,SNR=2.9						
ASAR	**Alice Springs**	**51.20**	**187**	P	**P**	**16 28 02.7**	**-1.7**
	0.2nm,0.8s,mb2.4,baz=358,slow=4.6,SNR=6.4						
BVAR	**Borovoye Array**	**56.57**	**317**	P	**P**	**16 28 42.5**	**-0.1**
	0.7nm,0.4s,mb3.3,baz=89,slow=7.9,SNR=4.1						
ARCES	**ARCESS Array B**	**72.60**	**340**	P	**P**	**16 30 25.1**	**+0.1**
	0.6nm,0.5s,mb3.6,baz=73,slow=8.1,SNR=6.1						
YKA	**Yellowknife Ar**	**72.65**	**28**	P	**P**	**16 30 24.9**	**-0.4**
	0.4nm,0.4s,mb3.5,baz=297,slow=6.1,SNR=2.9						
FINES	**FINESS Array B**	**76.82**	**333**	P	**P**	**16 30 48.5**	**-0.6**
	0.9nm,0.4s,mb3.9,baz=66,slow=4.1,SNR=7.7						
NVAR	**Mina Array Bea**	**81.67**	**51**	P	**P**	**16 31 16.5**	**+1.0**
	0.3nm,0.7s,mb3.2,baz=297,slow=4.0,SNR=3.2						
CPUP	**Villa Florida**	**164.32**	**90**	PKP	PKPdf	16 38 55.3	-2.5
	1.4nm,0.4s,baz=323,slow=0.5,SNR=6.3						

*NIED **21** 17:22:00,37.°20N×142.°30E,h32km,Mw4.2 Best double couple: M0=2.29000×10^15 NP1:φs=18.00000°,δ65.00000°, λ94.00000°. NP2:φs=188.00000°,δ26.00000°,λ81.00000°.*
*ISCJB **21** 17:22:54.7±1.0,37.°16N±0.°03×142.°36E±0.°04,h15km±6km, mb4.2/32,MS3.6/7,Error ellipse: s-maj=6.0km s-min=5.0km az=21.0*
*JMA **21** 17:22:56.0±0.2,37.°16N×142.°33E,h29km±4km,M4.6*
JMA Felt I J1.
*MOS **21** 17:22:57.6±1.1,37.°32N×142.°22E,h27km,mb4.5/20,Error ellipse: s-maj=10.5km s-min=6.8km az=107.6*
*NEIC **21** 17:22:59.3±2.6,37.°30N×142.°15E,h26km±18km,mb4.5/7, MW4.2(NIED),Error ellipse: s-maj=12.7km s-min=7.8km az=144.0*
NEIC Recorded [1 JMA] in Fukushima and Miyagi.
*IDC **21** 17:23:00.7±3.0,37.°21N×142.°14E,h38km±25km,mb3.8/16, mb1 4.0/20,mb1mx3.9/27,mbtmp3.9/20,ML3.9/4,MS3.4/8, Ms1 3.4/8,ms1mx3.2/34,Error ellipse: s-maj=19.0km s-min=16.9km az=125.0*
*BJI **21** 17:23:01.6,37.°50N×141.°54E,h25km,mB4.6/4,mb4.7/13, Ms4.4/1,Ms7 4.1/3*
ISC 21 17:22:55.5±1.0,37.°20N±0.°03×142.°27E±0.°04,h4km±5km, n94,σ0°95/112,mb4.2/32,MS3.6/7,2C-10D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.12**	**279**	⇓P	**Pg**	**17 23 16.7**	**-0.3**
JFK				*e*S	**Sg**	**17 23 32.2**	**+0.7**
ONAJ	**Iwakimizuishiy**	**1.18**	**265**	⇓P	**Pg**	**17 23 17.4**	**-0.6**
ONAJ				*e*S	**Sg**	**17 23 32.8**	**-0.5**
JMM	**Marumori**	**1.34**	**300**	⇓P	**Pn**	**17 23 20.1**	**-0.9**
JMM				*e*S	**Sb**	**17 23 37.4**	**-1.4**
JIO	**Ouri**	**1.44**	**330**	⇓P	**Pn**	**17 23 21.8**	**-0.6**
JIO				*e*S	**Sb**	**17 23 40.3**	**-1.4**
JFT	**Otama**	**1.57**	**282**	⇓P	**Pn**	**17 23 24.1**	**0.0**
JFT				*e*S	**Sn**	**17 23 45.3**	**+0.4**
JOU	**Okura**	**1.72**	**313**	⇓P	**Pn**	**17 23 26.2**	**0.0**
JOU				*e*S	**Sn**	**17 23 48.6**	**0.0**
JMK	**Ichinoseki**	**1.93**	**335**	⇓P	**Pn**	**17 23 29.1**	**0.0**
JMK				*e*S	**Sn**	**17 23 54.0**	**+0.2**
JYS	**Shirataka**	**2.02**	**301**	P	**Pn**	**17 23 30.9**	**+0.6**
JYS				*e*S	**Sn**	**17 23 56.5**	**+0.5**
JFY	**Yanaizu**	**2.05**	**276**	P	**Pn**	**17 23 30.9**	**+0.1**
JFY				*e*S	**Sn**	**17 23 56.5**	**-0.3**
JYK	**Kaneyama**	**2.28**	**319**	⇓P	**Pn**	**17 23 34.2**	**+0.3**
JYK				*e*S	**Sn**	**17 24 03.0**	**+0.6**
JOM	**Ohasama**	**2.39**	**342**	⇓P	**Pn**	**17 23 36.0**	**+0.6**
JOM				*e*S	**Sn**	**17 24 05.5**	**+0.3**
MJAR	**Matsushiro Arr**	**3.32**	**260**	Pn	**Pn**	**17 23 49.4**	**+1.3**
	19nm,0.3s,baz=87,slow=15,SNR=104						
MJAR				Sn	**Sn**	**17 24 24.3**	**-3.8**
	11nm,0.3s,baz=317,slow=15,SNR=5.6						
MJAR				LR	LR	17 25 19.0	
	comp=Z,631nm,19.0s,baz=95,slow=43						
MJAR	**Matsushiro Arr**	**3.32**	**260**	P	**Pn**	**17 23 49.4**	**+1.2**
MJAR						17 24 24.3	
MJAR				pmax	pmax		
	comp=Z,19nm,0.3s						
MJAR				smax			
	comp=N,11nm,0.3s						
MJAR				MLR	MLR		
	comp=Z,631nm,19.0s						
MAJO	**Matsushiro**	**3.32**	**260**	*e*P	**Pn**	**17 23 49.3**	**+1.1**
MAT	**Matsushiro**	**3.32**	**260**	P	**Pn**	**17 23 49.6**	**+1.4**
MAT				S	**Sn**	**17 24 29.0**	**+0.9**
JHJ	**Hachijo jima 2**	**4.55**	**207**	Pn	**Pn**	**17 24 05.7**	**+0.5**
	comp=Z,36nm,0.3s,baz=257,slow=22,SNR=38						
JHJ				Sn	**Sn**	**17 24 56.3**	**-2.2**
	comp=Z,49nm,0.3s,baz=245,slow=23,SNR=7.0						
ERM	**Erimo**	**4.86**	**8**	*e*P	**Pn**	**17 24 08.9**	**-0.4**
ASAJ	**Asahikawa**	**6.91**	**2**	Pn	**Pn**	**17 24 38.4**	**+0.8**
	comp=Z,2.4nm,0.3s,baz=202,slow=13,SNR=31						
ASAJ				Sn	**Sn**	**17 25 54.0**	**-2.5**
	comp=Z,1.5nm,0.3s,baz=268,slow=32,SNR=7.7						
ASAJ				LR	LR	17 28 07.5	
	comp=Z,208nm,18.9s,baz=186,slow=44						
ASAJ	**Asahikawa**	**6.91**	**2**	P	**Pn**	**17 24 38.4**	**+0.9**
ASAJ						17 25 54.1	
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				smax			
	comp=N,2.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,208nm,18.9s						
YUK	**Yuzh-Kuril'sk**	**7.35**	**21**	*e*P	**Pn**	**17 24 42.1**	**-1.5**
YUK				*i*S	**Sn**	**17 26 00.2**	**-7.2**
YUK				pmax	pmax		
	comp=Z,72nm,1.1s						
YUK				pmax	pmax		
	comp=N,33nm,0.4s						
YUK				pmax	pmax		
	comp=E,33nm,0.5s						
YUK				pmax	pmax		
	comp=Z,200nm,1.0s						
YUK				smax			
	comp=N,136nm,0.5s						
YUK				smax			
	comp=E,317nm,0.5s						
YUK				smax			
	comp=N,170nm,0.7s						
YUK				smax			
	comp=E,290nm,0.7s						
YUK				MLR	MLR		
	comp=N,220nm,15.0s						
YUK				MLR	MLR		
	comp=Z,150nm,15.0s						
YUK				MLR	MLR		
	comp=E,40nm,5.0s						
YSS	**Yuzh-Sakhalins**	**9.75**	**2**	*e*P	**Pn**	**17 25 16.5**	**+0.1**
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
CBIJ	**Chichi jima**	**10.08**	**180**	Pn	**Pn**	**17 25 18.8**	**-2.3**
	comp=Z,3.0nm,0.3s,baz=253,slow=20,SNR=5.0						
CBIJ				Sn	**Sn**	**17 27 05.7**	**-8.8**
	comp=Z,15nm,0.3s,baz=280,slow=22,SNR=9.4						
KSRS	**Korea Array**	**11.42**	**276**	Pn	**Pn**	**17 25 41.5**	**+2.1**
	comp=Z,0.3nm,0.3s,baz=89,slow=14,SNR=10						
KSRS				LR	LR	17 29 52.9	
	comp=Z,227nm,19.2s,baz=163,slow=36						
HABR	**Khabarovsk**	**12.44**	**337**	*e*P	**Pn**	**17 25 55.8**	**+2.6**
HABR				MLR	MLR		
	comp=Z,222nm,17.0s						
PETK	**Petropavlovsk-**	**19.20**	**29**	LR	LR	17 35 16.4	
	comp=Z,38nm,18.2s,baz=74,slow=38						
NJ2	**Nanjing**	**19.92**	**262**	*e*P	**Pn**	**17 27 30.1**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
BJT	**Baijiatuau**	**20.56**	**286**	P	**P**	**17 27 33.1**	**-2.0**
WHN	**Wuhan**	**24.06**	**262**	P	**P**	**17 28 12.5**	**+0.7**
WHN				LR	LR		
	comp=N,530nm,16.6s						
WHN				LR	LR		
	comp=E,310nm,9.7s						
WHN				LR	LR		
	comp=Z,310nm,21.9s						
YAK	**Yakutsk**	**26.06**	**346**	*e*P	**P**	**17 28 29.0**	**-0.7**
YAK				*e*PP	pP	17 28 40.1	+9.2
YAK				*e*		17 29 07.3	
YAK				*e*PPP		17 29 16.4	
YAK				*e*S	**S**	**17 32 55.4**	**-5.7**
YAK				*e*SSS		17 34 13.8	
YAK				*e*		17 39 26.8	
YAK				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.3						
YAK				pmax	pmax		
	comp=E,2.0nm,1.5s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,20nm,1.4s,mb4.5						
YAK				pmax	pmax		
	comp=E,6.0nm,1.5s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.4s						
YAK				smax			
	comp=N,36nm,3.3s						
YAK				smax			
	comp=E,37nm,3.0s						
YAK				MLR	MLR		
	comp=Z,86nm,15.0s,MS3.4						
YAK				MLR	MLR		
	comp=N,77nm,14.0s						
SEY	**Seymchan**	**26.50**	**10**	⇓*i*P	**P**	**17 28 35.4**	**+1.8**
ULN	**Ulaanbaatar**	**27.82**	**304**	*e*P	**P**	**17 28 46.0**	**+0.3**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
ULN	**Ulaanbaatar**	**27.82**	**304**	*e*P	**P**	**17 28 46.0**	**+0.2**
	comp=Z,1.6nm,0.6s,mb3.8						
ENH	**Enshi**	**29.02**	**265**	*e*P	**P**	**17 28 47.0**	**-0.7**
	comp=Z,11nm,0.8s,mb4.5						
SONM	**Songino Array**	**28.26**	**304**	P	**P**	**17 28 49.4**	**-0.1**
	comp=Z,5.0nm,0.8s,mb4.2,baz=100,slow=8.8,SNR=25						
SONM				LR	LR	17 40 13.5	
	comp=Z,56nm,20.1s,MS3.2,baz=194,slow=37						
SONM	**Songino Array**	**28.26**	**304**	P	**P**	**17 28 49.4**	**-0.2**
SONM				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SONM				MLR	MLR		
	comp=Z,56nm,20.1s						
TLY	**Talaya**	**30.74**	**311**	*e*P	**P**	**17 29 12.5**	**+1.0**
TLY				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
TLY				MLR	MLR		
	comp=Z,109nm,15.0s,MS3.6						
GTA	**Gaotai**	**33.16**	**287**	*e*P	**P**	**17 29 33.3**	**+0.3**
GTA				pP	pP	17 29 40.6	+6.4
GTA				sP	sP	17 29 43.8	+9.1
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.0						
CMAR	**Chiang Mai Arr**	**42.20**	**256**	P	**P**	**17 30 49.5**	**-0.1**
	comp=Z,0.3nm,0.4s,mb3.2,baz=216,slow=26,SNR=3.7						
ZAA0	**Zalesovo Array**	**42.30**	**312**	*e*P	**P**	**17 30 49.9**	**-0.2**
ZALV	**Zalesovo Beam**	**42.30**	**312**	P	**P**	**17 30 50.0**	**0.0**
	comp=Z,2.7nm,0.7s,mb4.0,baz=90,slow=7.4,SNR=15						
ZALV				LR	LR	17 49 03.7	
	comp=Z,54nm,18.1s,MS3.5,baz=59,slow=37						
ZALV	**Zalesovo Beam**	**42.30**	**312**	P	**P**	**17 30 50.0**	**0.0**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.0						
ZALV				MLR	MLR		
	comp=Z,54nm,18.1s,MS3.5						
LSA	**Lhasa**	**42.87**	**275**	*e*P	**P**	**17 30 56.4**	**+1.4**
NVS	**Novosibirsk**	**43.22**	**314**	*e*P	**P**	**17 30 55.1**	**-2.3**
NVS				pmax	pmax		
	comp=N,2.0nm,1.1s						
NVS				pmax	pmax		
	comp=E,5.0nm,1.1s						
NVS				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.2						
MK31	**Makanchi Array**	**44.61**	**302**	*e*P	**P**	**17 31 08.5**	**-0.2**
MKAR	**Makanchi Array**	**44.61**	**302**	P	**P**	**17 31 08.6**	**-0.2**
	comp=Z,1.4nm,0.5s,mb4.1,baz=87,slow=9.8,SNR=19						
MKAR	**Makanchi Array**	**44.61**	**302**	P	**P**	**17 31 08.6**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURK	**Kurchatov**	**46.36**	**308**	*e*P	**P**	**17 31 21.8**	**-0.8**
KURK				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.0						
KURK	**Kurchatov**	**46.36**	**308**	*e*P	**P**	**17 31 21.8**	**-0.8**
	comp=Z,16nm,0.8s,mb5.0						
ILAR	**Eielson Array**	**48.99**	**32**	P	**P**	**17 31 43.8**	**+1.0**
	comp=Z,1.0nm,0.7s,mb3.9,baz=269,slow=6.6,SNR=15						
ILAR	**Eielson Array**	**48.99**	**32**	P	**P**	**17 31 43.8**	**+1.1**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TKM2	**Tokmak 2**	**50.15**	**299**	*e*P	**P**	**17 31 52.3**	**+0.4**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
TKM2	**Tokmak 2**	**50.15**	**299**	*e*P	**P**	**17 31 52.3**	**+0.3**
	comp=Z,3.5nm,0.6s,mb4.6						
BVAR	**Borovoye Array**	**50.96**	**312**	P	**P**	**17 31 57.5**	**-0.5**
	comp=Z,1.0nm,0.5s,mb4.0,baz=75,slow=8.0,SNR=7.5						
BVAR	**Borovoye Array**	**50.96**	**312**	P	**P**	**17 31 57.5**	**-0.4**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRVK	**Borovoye**	**51.02**	**312**	↑*i*P	**P**	**17 31 58.3**	**0.0**
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.7s,mb4.0						
BRVK	**Borovoye**	**51.02**	**312**	*e*P	**P**	**17 31 57.8**	**-0.6**
AML	**Almayashu**	**51.73**	**298**	*e*P	**P**	**17 32 02.3**	**-1.5**
	comp=Z,4.8nm,0.8s,mb4.5						
SVE	**Sverdlovsk**	**55.47**	**319**	*e*P	**P**	**17 32 31.7**	**+0.6**
SVE				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0						
SVE				MLR	MLR		
	comp=Z,97nm,16.0s,MS4.0						
ARU	**Arti**	**56.68**	**319**	*c i*P	**P**	**17 32 39.4**	**-0.3**
ARU				*e*		17 34 41.7	
ARU				S	**S**	**17 40 26.1**	**-6.4**
ARU				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.6						
ARU	**Arti**	**56.68**	**319**	*e*P	**P**	**17 32 39.4**	**-0.4**
	comp=Z,3.6nm,0.6s,mb4.6						
ABKAR	**Akbulak array**	**58.35**	**310**	*e*P	**P**	**17 32 50.9**	**-0.7**
	comp=Z,2.6nm,0.6s,mb4.4						
AKTK	**Aktyubinsk**	**59.07**	**312**	P	**P**	**17 32 55.9**	**-0.7**
AKTO	**Aktyubinsk**	**59.07**	**312**	P	**P**	**17 32 55.9**	**-0.7**
	comp=Z,2.6nm,0.8s,mb4.3,baz=94,slow=7.1,SNR=8.6						
AKTO	**Aktyubinsk**	**59.07**	**312**	P	**P**	**17 32 55.9**	**-0.7**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
ASAR	**Alice Springs**	**61.05**	**189**	P	**P**	**17 33 10.2**	**-0.1**
	comp=Z,0.7nm,0.8s,mb3.8,baz=360,slow=5.1,SNR=9.0						
ASAR	**Alice Springs**	**61.05**	**189**	P	**P**	**17 33 10.3**	**-0.1**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**63.32**	**30**	P	**P**	**17 33 25.8**	**+0.6**
	comp=Z,0.4nm,0.6s,mb3.7,baz=78,slow=30,SNR=3.9						
YKA	**Yellowknife Ar**	**63.32**	**30**	P	**P**	**17 33 25.8**	**+0.6**
ARCES	**ARCESS Array B**	**64.08**	**340**	P	**P**	**17 33 29.6**	**-0.5**
	comp=Z,1.5nm,0.8s,mb4.1,baz=49,slow=8.4,SNR=4.0						
ARCES				LR	LR	18 04 20.7	
	comp=Z,54nm,19.4s,MS3.7,baz=35,slow=39						
ARCES	**ARCESS Array B**	**64.08**	**340**	P	**P**	**17 33 29.6**	**-0.5**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES				MLR	MLR		
	comp=Z,54nm,19.4s						
OBN	**Obninsk**	**68.37**	**323**	*e*P	**P**	**17 33 58.0**	**+0.2**
OBN				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.4						
KAF	**Kangasniemi**	**68.47**	**333**	*e*P	**P**	**17 33 57.5**	**-0.9**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
KAF	**Kangasniemi**	**68.47**	**333**	*e*p	**P**	**17 33 57.5**	**-0.9**
	comp=Z,2.9nm,0.5s,mb4.6						
FINES	**FINESS Array B**	**68.98**	**332**	P	**P**	**17 33 59.6**	**-1.9**
	comp=Z,6.1nm,0.8s,mb4.6,baz=45,slow=8.4,SNR=11						
FINES	**FINESS Array B**	**68.98**	**332**	P	**P**	**17 33 59.7**	**-1.9**
FINES				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KIV	**Kislovodsk**	**71.31**	**311**	*e*P	**P**	**17 34 17.3**	**+1.1**
KIV				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
NB2	**NORSAR Subarra**	**74.29**	**338**	P	**P**	**17 34 33.6**	**0.0**
	comp=Z,1.2nm,0.6s,mb4.0,baz=37,slow=6.2						
NOA	**NORSAR Array B**	**74.29**	**338**	P	**P**	**17 34 33.7**	**+0.1**
	comp=Z,2.7nm,0.8s,mb4.2,baz=40,slow=5.8,SNR=7.6						
NOA				LR	LR	18 09 50.6	
	comp=Z,42nm,20.8s,MS3.7,baz=315,slow=38						
NOA	**NORSAR Array B**	**74.29**	**338**	P	**P**	**17 34 33.7**	**+0.1**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NOA				MLR	MLR		
	comp=Z,42nm,20.8s						
NOA	**NORSAR Array B**	**74.29**	**338**	P	**P**	**17 34 33.7**	**+0.1**
NOA				LR	LR	18 09 50.6	
NVAR	**Mina Array Bea**	**74.34**	**54**	P	**P**	**17 34 35.3**	**+1.0**
	comp=Z,0.3nm,0.6s,mb3.4,baz=268,slow=4.5,SNR=3.7						
AKASG	**Malin Array Be**	**74.58**	**323**	P	**P**	**17 34 35.1**	**-0.3**
	comp=Z,2.8nm,0.4s,mb4.5,baz=45,slow=6.0,SNR=23						
AKASG	**Malin Array Be**	**74.58**	**323**	P	**P**	**17 34 35.1**	**-0.3**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.4s						
BUR08	**Bucovina Ar. S**	**78.59**	**322**	*e*P	**P**	**17 34 58.4**	**+0.2**
BRTR	**Keskin Array B**	**79.25**	**312**	P	**P**	**17 35 03.0**	**+1.0**
	comp=Z,0.8nm,0.7s,mb3.8,baz=101,slow=4.0,SNR=4.5						
BRTR	**Keskin Array B**	**79.25**	**312**	P	**P**	**17 35 03.0**	**+1.0**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
DPC	**Dobruska-Polom**	**80.67**	**328**	*e*P	**P**	**17 35 10.5**	**+1.0**
DPC	**Dobruska-Polom**	**80.67**	**328**	*e*P	**P**	**17 35 10.5**	**+1.0**
CLL	**Collm**	**81.29**	**331**	*e*P	**P**	**17 35 13.0**	**+0.3**
CLL				*e*		17 35 23.0	
CLL	**Collm**	**81.29**	**331**	*e*P	**P**	**17 35 13.0**	**+0.3**
CLL				*es*P	sP	17 35 23.0	+8.5
KHC	**Kasperske Hory**	**82.75**	**329**	*e*P	**P**	**17 35 20.7**	**+0.2**
KHC	**Kasperske Hory**	**82.75**	**329**	*e*P	**P**	**17 35 20.7**	**+0.2**
BFZ	**Birch Farm**	**83.53**	**155**	P	**P**	**17 35 29.6**	**+5.3**
TXAR	**Lajitas Array**	**89.48**	**53**	P	**P**	**17 35 55.0**	**+1.0**
	comp=Z,0.2nm,0.6s,mb3.6,baz=326,slow=5.8,SNR=2.7						

*NEIC **21** 17:40:30.0,61.°89N×141.°00W,h1km,ML3.4(PGC), ML2.9(AEIC),After PGC.*
PGC 21 17:40:30.1±5.0,61.°89N×141.°00W,h1km,ML3.4/3,5D, 224km Wnw of Haines Jct., Yt Southern Yukon Territory, Canada,Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCA3	**Beaver Creek A**	**1.23**	**343**	P	Pg	17 40 53.4	-0.3
MENT	**Mentasta**	**1.65**	**311**	*e*P	Pn	17 41 01.2	+1.1
BMRM	**Bremner River**	**1.96**	**243**	P	Pn	17 41 06.3	+1.9
HYT	**Haines Junctio**	**2.00**	**121**	⇑Pn	Pn	17 41 04.1	-0.8
HYT				⇑Pg	Pg	17 41 06.4	-1.9
HYT				⇑Sg	Sg	17 41 31.9	-2.2
DOT	**Dot Lake**	**2.26**	**323**	P	Pn	17 41 09.0	+0.5
DAWY	**Dawson**	**2.30**	**18**	P	Pn	17 41 09.9	+0.8
DAWY	**Dawson**	**2.30**	**18**	⇓Pn	Pn	17 41 09.3	+0.2
DAWY				⇓Sg	Sg	17 41 41.3	-2.6
PNL	**Peninsula**	**2.37**	**160**	P	Pn	17 41 11.4	+1.5
DIV	**Divide**	**2.41**	**254**	P	Pn	17 41 11.5	+0.9
EGAK	**Eagle**	**2.90**	**359**	P	Pn	17 41 18.7	+1.4
WHY	**Whitehorse**	**3.20**	**110**	P	Pn	17 41 20.6	-0.8
WHY	**Whitehorse**	**3.20**	**110**	⇓Pn	Pn	17 41 20.5	-0.9
WHY				⇑Pg	Pg	17 41 27.9	-3.4
WHY				⇓Sn	Sn	17 41 59.0	-1.1
WHY				⇓Sg	Sg	17 42 09.8	-3.0
SKAG	**Skagway**	**3.71**	**129**	*e*P	Pn	17 41 35.0	+6.7
TRF	**Thorofare Moun**	**4.56**	**294**	P	Pn	17 41 42.1	+2.0
BM3	**Burnt Mountain**	**5.76**	**346**	P	Pn	17 41 57.4	+0.8
DLBC	**Dease Lake**	**6.48**	**117**	⇑Pg	Pg	17 42 25.3	-8.7
DLBC				⇑Sg	Sg	17 43 50.5	-7.3

MAN 21 17:51:17,13.°56N×120.°66E,h9km,mb4.3,ML3.2,MS3.0, 1D,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.29**	**102**	⇓*e*P	Pg	17 51 24.6	+1.8
LUBP	**Lubang**	**0.44**	**293**	*e*P	Pg	17 51 26.8	+1.3
LUBP				*e*S	Sg	17 51 30.9	-0.4
BOAC	**Boac**	**1.16**	**95**	*e*P	Pb	17 51 40.1	+0.9
BOAC				*e*S	Sg	17 51 55.5	+1.3
BUSP	**Coron**	**1.62**	**196**	*e*P	Pn	17 51 46.7	+1.0
ENPP	**El Nido**	**2.64**	**207**	*e*P	Pn	17 52 00.4	+0.7

*ISCJB **21** 17:58:48.5±0.4,38.°86N±0.°02×22.°21E±0.°03,h3km±4km, Error ellipse: s-maj=3.9km s-min=2.7km az=33.1*
*THE **21** 17:58:48.9,38.°84N×22.°21E,h12km±1km,ML3.1/11,Error ellipse: s-maj=1.3km s-min=0.2km az=323.0*
*CSEM **21** 17:58:48.9±0.1,38.°86N×22.°23E,h7km,MD3.0,Error ellipse: s-maj=3.0km s-min=2.1km az=121.0

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAL				S	Sg	17 59 10.6	+0.7
ATAL	**Atalanti**	**0.64**	**104**	P	Pg	17 59 01.2	-0.4
ATAL				S	Sg	17 59 10.6	+0.7
LAKA	**Lakka**	**0.65**	**198**	P	Pg	17 59 00.9	-0.7
LAKA				S	Sg	17 59 10.2	+0.2
LAKA	**Lakka**	**0.65**	**198**	P	Pg	17 59 00.9	-0.7
LAKA				S	Sg	17 59 10.2	+0.2
UPR	**University Cam**	**0.67**	**211**	*e*PB	Pb	17 59 02.4	-0.6
UPR				*e*SB	Sb	17 59 12.0	-0.4
UPR	**University Cam**	**0.67**	**211**	*e*Pb	Pb	17 59 02.4	-0.6
UPR				*e*Sb	Sb	17 59 12.0	-0.4
THL	**Klokotos Trika**	**0.73**	**347**	P	Pg	17 59 02.6	-0.6
THL				S	Sg	17 59 13.5	+0.8
THL	**Klokotos Trika**	**0.73**	**347**	P	Pg	17 59 02.6	-0.6
THL				S	Sg	17 59 13.5	+0.8
NEO	**Neokhori**	**0.90**	**60**	*e*Pg	Pg	17 59 06.0	-0.4
NEO				*e*Sb	Sb	17 59 18.8	-0.2
NEO	**Neokhori**	**0.90**	**60**	*e*PG	Pg	17 59 06.0	-0.4
NEO				*e*SB	Sb	17 59 18.8	-0.2
NEO	**Neokhori**	**0.90**	**60**	*e*Pg	Pg	17 59 06.0	-0.4
NEO				*e*Sb	Sb	17 59 18.8	-0.2
XOR	**Xorichti**	**0.91**	**56**	P	Pg	17 59 06.9	+0.3
XOR	**Xorichti**	**0.91**	**56**	P	Pg	17 59 06.5	-0.1
XOR				S	Sg	17 59 19.9	+1.5
XOR	**Xorichti**	**0.91**	**56**	P	Pg	17 59 06.5	-0.1
XOR				S	Sg	17 59 19.9	+1.5
GUR	**Goura**	**0.92**	**174**	*e*PG	Pg	17 59 06.7	-0.2
GUR				*e*SB	Sb	17 59 20.4	+0.7
GUR	**Goura**	**0.92**	**174**	P	Pg	17 59 06.0	-0.9
GUR				S	Sg	17 59 19.2	+0.3
GUR	**Goura**	**0.92**	**174**	P	Pg	17 59 06.0	-0.9
GUR	**Goura**	**0.92**	**174**	*e*Pg	Pg	17 59 06.7	-0.2
GUR				S	Sg	17 59 19.2	+0.3
GUR				*e*Sb	Sb	17 59 20.4	+0.7
RLS	**Riolos of Patr**	**1.00**	**217**	*e*Pg	Pg	17 59 07.8	-0.5
RLS				*e*Sb	Sb	17 59 22.8	+1.0
RLS	**Riolos of Patr**	**1.00**	**217**	*e*PG	Pg	17 59 07.8	-0.5
RLS				*e*SB	Sb	17 59 22.8	+1.0
RLS	**Riolos of Patr**	**1.00**	**217**	*e*Pg	Pg	17 59 07.8	-0.5
RLS				*e*Sb	Sb	17 59 22.8	+1.0
LTK	**Loutraki**	**1.01**	**145**	P	Pg	17 59 07.9	-0.8
LTK	**Loutraki**	**1.01**	**145**	P	Pg	17 59 07.9	-0.8
AOS	**Alonnisos**	**1.32**	**76**	P	Pn	17 59 13.1	-0.8
AOS	**Alonnisos**	**1.32**	**76**	P	Pn	17 59 13.1	-0.8
VLS	**Valsamata**	**1.45**	**243**	*e*Pb	Pb	17 59 17.5	+1.1
VLS	**Valsamata**	**1.45**	**243**	*e*PB	Pb	17 59 17.5	+1.1
VLS	**Valsamata**	**1.45**	**243**	*e*Pb	Pb	17 59 17.5	+1.1
PAIG	**Paliouri**	**1.55**	**46**	P	Pn	17 59 16.0	-1.0
PAIG	**Paliouri**	**1.55**	**46**	P	Pn	17 59 16.0	-1.0
DID	**Didima**	**1.56**	**149**	*e*PB	Pb	17 59 19.6	+1.3
DID				*e*SB	Sb	17 59 41.1	+2.9
DID	**Didima**	**1.56**	**149**	*e*Pb	Pb	17 59 19.6	+1.3
DID				*e*Sb	Sb	17 59 41.1	+2.9
ITM	**Ithomi**	**1.69**	**188**	*e*Pg	Pg	17 59 21.1	-0.5
ITM	**Ithomi**	**1.69**	**188**	*e*PG	Pg	17 59 21.1	-0.5
ITM	**Ithomi**	**1.69**	**188**	*e*Pg	Pg	17 59 21.1	-0.5
HORT	**Hortiatis**	**1.86**	**21**	P	Pn	17 59 21.3	0.0
HORT	**Hortiatis**	**1.86**	**21**	P	Pn	17 59 21.3	0.0
VLI	**Veliai**	**2.21**	**165**	P	Pn	17 59 27.1	+1.1
VLI	**Veliai**	**2.21**	**165**	P	Pn	17 59 27.1	+1.1

*IDC **21** 18:12:23.3±0.8, 43°.42N×105°.25W, h0km, mb4.0/3, mb1 3.9/10, mb1mx3.7/30, mbtmp3.7/10, ML3.5/7, Error ellipse: s-maj=18.2km s-min=8.1km az=152.0*
*ISCJB **21** 18:12:24.0±0.4, 43°.81N±0°.03×105°.28W±0°.05, h0km, mb4.0/3, Error ellipse: s-maj=5.0km s-min=4.2km az=19.0*
*NEIC **21** 18:12:25.8±0.3, 43°.81N×105°.27W, h0km, ML3.4, Error ellipse: s-maj=4.1km s-min=3.4km az=115.0, Suspected Mining explosion.*
NEIC 55 km [35 miles] SSE of Gillette.

ISC 21 18:12:25.8±0.4, 43°.81N±0°.03×105°.26W±0°.05, h0km, n61, σ0°89/64, mb4.0/3, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.94**	**70**	*e*P	Pg	18 12 44.1	+0.3
PHWY	**Pilot Hill**	**2.52**	**183**	*e*P	Pn	18 13 07.3	-0.6
RWWY	**Rawlins**	**2.56**	**215**	*e*P	Pn	18 13 08.8	+0.2
LAO	**LASA Array**	**2.95**	**347**	*e*P	Pn	18 13 13.3	-0.6
RLMT	**Red Lodge**	**3.15**	**296**	*e*P	Pn	18 13 16.9	+0.3
PDAR	**Pinedale Array**	**3.31**	**253**	Pn	Pn	18 13 18.4	-0.3
	4.0nm,0.3s,baz=65,slow=16,SNR=42						
PDAR				Pg	Pg	18 13 27.2	-1.9
	11nm,0.3s,baz=65,slow=18,SNR=57						
PDAR				Lg		18 14 04.5	
	11nm,0.3s,baz=88,slow=34,SNR=8.7						
GCMT	**Greycliff**	**3.71**	**304**	*e*P	Pn	18 13 24.8	+0.5
OGNE	**Ogallala**	**3.73**	**139**	*e*P	Pn	18 13 25.0	+0.4
LKWY	**Lake**	**3.77**	**283**	*e*P	Pn	18 13 27.2	+2.0
LOHW	**Long Hollow**	**3.88**	**269**	*e*P	Pn	18 13 27.1	+0.5
SNOW	**Snow King Moun**	**4.00**	**267**	P	Pn	18 13 28.3	0.0
ISCO	**Idaho Springs**	**4.02**	**184**	*e*P	Pn	18 13 28.3	-0.3
REDW	**Red Top Meadow**	**4.08**	**266**	*e*P	Pn	18 13 30.4	+0.9
IMW	**Indian Meadow**	**4.11**	**273**	*e*P	Pn	18 13 31.1	+1.3
TPAW	**Teton Pass**	**4.14**	**267**	*e*P	Pn	18 13 30.8	+0.6
RRI2	**Red Ridge**	**4.42**	**266**	*e*P	Pn	18 13 33.8	-0.4
DGMT	**Dagmar**	**4.72**	**9**	*e*P	Pn	18 13 40.0	+1.9
SMCO	**Snowmass**	**4.81**	**196**	*e*P	Pb	18 13 50.9	0.0
BOZ	**Bozeman (W)**	**4.89**	**294**	*e*P	Pn	18 13 39.7	-0.8
HWUT	**Hardware Ranch**	**5.14**	**247**	*e*P	Pn	18 13 43.7	-0.3
	15nm,0.6s						
EGMT	**Eagleton**	**5.25**	**325**	*e*P	Pn	18 13 45.4	-0.1
	24nm,0.6s						
DLMT	**Dillon**	**5.46**	**289**	*e*P	Pn	18 13 50.3	+1.9
	10nm,0.8s						
HRY	**Holter Researc**	**5.47**	**304**	*e*P	Pn	18 13 48.5	+0.1
	15nm,0.4s						
LRM	**Limekiln Ridge**	**5.49**	**294**	*e*P	Pn	18 13 48.1	-0.7
	31nm,0.5s						
MCMT	**McKenzie Canyo**	**5.54**	**283**	*e*P	Pn	18 13 50.2	+0.8
	3.6nm,0.5s						
DAU	**Daniels Canyon**	**5.60**	**235**	*e*P	Pn	18 13 49.9	-0.5
	16nm,0.5s						
JLU	**Jordanelle**	**5.60**	**237**	*e*P	Pn	18 13 50.4	0.0
	14nm,0.6s						
SPUT	**South Promonto**	**5.87**	**247**	*e*P	Pn	18 13 54.5	+0.5
	9.9nm,0.6s						
HVU	**Hansel Valley**	**5.89**	**252**	*e*P	Pn	18 13 54.4	+0.1
	11nm,0.6s						
SDCO	**Great Sand Dun**	**6.07**	**182**	*e*P	Pn	18 13 57.1	+0.4
	3.6nm,0.6s						
PV04	**Paradox Valley**	**6.07**	**208**	*e*P	Pn	18 13 56.9	+0.1
MPU	**Maple Canyon**	**6.08**	**234**	*e*P	Pn	18 13 57.2	+0.3
	19nm,0.7s						
SRU	**San Rafael**	**6.14**	**222**	*e*P	Pn	18 13 56.6	-1.1
	17nm,0.5s						
PV01	**Paradox Valley**	**6.20**	**205**	*e*P	Pn	18 13 59.1	+0.5
	882nm,0.6s						
ECSD	**EROS Data Cent**	**6.26**	**88**	*e*P	Pn	18 13 59.9	+0.5
	11nm,0.4s						
TMUT	**Trail Mountain**	**6.34**	**227**	*e*P	Pn	18 14 00.7	+0.2
	14nm,0.4s						
NLU	**North Lily Min**	**6.38**	**235**	*e*P	Pn	18 14 00.1	-1.0
	5.4nm,0.7s						
CHMT	**Chamberlain Mo**	**6.42**	**302**	*e*P	Pn	18 14 01.6	0.0
	3.1nm,0.5s						
BGU	**Big Grassy Mou**	**6.43**	**246**	*e*P	Pn	18 14 01.7	0.0
	3.3nm,0.7s						
DUG	**Dugway**	**6.69**	**240**	*e*P	Pn	18 14 04.6	-0.6
	4.2nm,0.4s						
MSO	**Missoula**	**6.82**	**299**	*e*P	Pn	18 14 07.0	0.0
	1.6nm,0.4s						
MVCO	**Mesa Verde**	**7.04**	**202**	*e*P	Pn	18 14 12.1	+2.0
	4.6nm,0.5s						
YBMT	**Yellow Bay**	**7.33**	**307**	*e*P	Pn	18 14 15.1	+1.1
	4.5nm,0.5s						
JTMT	**Jette**	**7.43**	**305**	*e*P	Pn	18 14 16.4	+1.0
	3.4nm,0.5s						
MSU	**Marysvale**	**7.43**	**227**	*e*P	Pn	18 14 15.3	-0.1
	9.8nm,0.7s						
N12A	**Clover Valley,**	**7.82**	**251**	*e*P	Pn	18 14 21.7	+0.9
	5.1nm,0.6s						
ELK	**Elko**	**8.01**	**251**	Pn	Pn	18 14 21.3	-2.0
	0.3nm,0.3s,baz=70,slow=8.2,SNR=4.4						
CCUT	**Cedar City**	**8.77**	**227**	*e*P	Pn	18 14 34.4	+0.5
	3.8nm,0.7s						
ULM	**Lac du Bonnet**	**9.08**	**42**	Pn	Pn	18 14 38.4	+0.4
ULM				Pg	Pg	18 15 07.8	-12
ULM				Lg		18 17 11.3	
ULM	**Lac du Bonnet**	**9.08**	**42**	Pn	Pn	18 14 38.4	+0.4
	2.8nm,0.3s,baz=229,slow=11,SNR=9.2						
ULM				Pg	Pg	18 15 07.8	-12
	2.2nm,0.3s,baz=235,slow=16,SNR=4.3						
ULM				Lg		18 17 11.3	
	1.1nm,0.3s,baz=126,slow=20,SNR=3.0						
WUAZ	**Wupatki**	**9.53**	**212**	*e*P	Pn	18 14 43.6	-0.7
	9.2nm,0.6s						
EDM	**Edmonton**	**10.83**	**333**	P	Pn	18 14 59.7	-2.2
FFC	**Flin Flon**	**11.13**	**10**	*e*P	Pn	18 15 04.9	-1.1
	6.3nm,0.6s						
NVAR	**Mina Array Bea**	**11.21**	**246**	Pn	Pn	18 15 05.8	-1.4
	0.1nm,0.3s,baz=51,slow=12,SNR=7.4						
TXAR	**Lajitas Array**	**14.51**	**174**	Pn	Pn	18 15 46.0	-6.3
	0.1nm,0.3s,baz=352,slow=13,SNR=2.8						
TKL	**Tuckaleechee C**	**18.39**	**109**	P	Pn	18 16 36.4	-5.7
TKL	**Tuckaleechee C**	**18.39**	**109**	P	Pn	18 16 36.4	-5.7
	0.5nm,0.3s,baz=96,slow=12,SNR=6.0						
YKA	**Yellowknife Ar**	**19.49**	**347**	P	Pn	18 16 53.9	-1.4
	0.1nm,0.3s,baz=165,slow=12,SNR=4.3						
ARCES	**ARCESS Array B**	**61.34**	**18**	P	P	18 22 41.7	-1.0
	1.0nm,0.6s,mb4.1,baz=350,slow=6.6,SNR=6.7						
ZALV	**Zalesovo Beam**	**82.23**	**354**	P	P	18 24 47.6	-0.9
	0.8nm,0.6s,mb4.0,baz=12,slow=5.7,SNR=5.1						
MKAR	**Makanchi Array**	**89.53**	**355**	P	P	18 25 24.4	-0.4
	0.6nm,0.7s,mb3.9,baz=12,slow=5.0,SNR=6.5						

*IDC **21** 18:22:36.5±1.1, 38°.36N×21°.83E, h0km, mb3.6/8, mb1 3.7/10, mb1mx3.6/30, mbtmp3.6/10, ML3.5/2, MS3.0/1, Ms1 3.0/1, ms1mx2.1/33, Error ellipse: s-maj=24.1km s-min=18.9km az=138.0*
*NEIC **21** 18:22:36.7, 38°.30N×21°.86E, h13km, MD3.2(ATH), After ATH.*
*CSEM **21** 18:22:36.8±0.1, 38°.29N×21°.88E, h5km, MD3.2, Error ellipse: s-maj=3.0km s-min=2.6km az=11.0*
*ATH **21** 18:22:36.7, 38°.30N×21°.86E, h13km±1km, MD3.2/14*
*ISCJB **21** 18:22:36.6±0.3, 38°.28N±0°.02×21°.88E±0°.02, h7km±2km, mb3.6/7, Error ellipse: s-maj=3.1km s-min=2.7km az=2.3*
*THE **21** 18:22:37.1, 38°.29N×21°.90E, h3km, ML3.9/14, Error ellipse: s-maj=0.5km s-min=0.2km az=185.0*

ISC 21 18:22:37.1±0.3, 38°.29N±0°.02×21°.89E±0°.02, h6km±2km, n141, σ0°90/196, mb3.6/7, 4C-3D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.08**	**266**	*e*PG	Pg	18 22 38.8	-0.1
UPR				*e*SG	Sg	18 22 41.1	+0.9
UPR	**University Cam**	**0.08**	**266**	P	Pg	18 22 39.0	+0.1
UPR				S	Sg	18 22 40.5	+0.3
UPR	**University Cam**	**0.08**	**266**	*e*Pg	Pg	18 22 38.8	-0.1
UPR				S	Sg	18 22 40.5	+0.3
UPR				*e*Sg	Sg	18 22 41.1	+0.9
LAKA	**Lakka**	**0.09**	**125**	P	Pg	18 22 38.9	-0.2
LAKA				S	Sg	18 22 40.2	-0.2
LAKA	**Lakka**	**0.09**	**125**	P	Pg	18 22 38.9	-0.2
LAKA				S	Sg	18 22 40.2	-0.2
EFP	**Efpalio**	**0.14**	**6**	P	Pg	18 22 39.8	-0.2
EFP				S	Sg	18 22 42.3	+0.4
EFP	**Efpalio**	**0.14**	**6**	P	Pg	18 22 39.8	-0.2
EFP				S	Sg	18 22 42.3	+0.4
TRIZ	**Trizonia**	**0.16**	**62**	P	Pg	18 22 40.2	-0.2
TRIZ				S	Sg	18 22 42.8	+0.1
TRIZ	**Trizonia**	**0.16**	**62**	P	Pg	18 22 40.2	-0.2
TRIZ				S	Sg	18 22 42.8	+0.1
KALE	**Kalithea**	**0.22**	**63**	P	Pg	18 22 41.2	-0.3
KALE				S	Sg	18 22 44.5	0.0
KALE	**Kalithea**	**0.22**	**63**	P	Pg	18 22 41.2	-0.3
KALE				S	Sg	18 22 44.5	0.0
RLS	**Riolos of Patr**	**0.40**	**235**	*e*Pb	Pg	18 22 45.1	+0.2
RLS				*e*Sb	Sg	18 22 51.0	+0.8
RLS	**Riolos of Patr**	**0.40**	**235**	*e*PB	Pg	18 22 45.1	+0.2
RLS				*e*SB	Sg	18 22 51.0	+0.8
RLS	**Riolos of Patr**	**0.40**	**235**	*e*Pb	Pg	18 22 45.1	+0.2
RLS				*e*Sb	Sg	18 22 51.0	+0.8
GUR	**Goura**	**0.50**	**134**	*e*PB	Pg	18 22 46.4	-0.4
GUR				*e*SB	Sg	18 22 54.2	+0.8
GUR	**Goura**	**0.50**	**134**	P	Pg	18 22 46.5	-0.3
GUR				S	Sg	18 22 53.7	+0.3
GUR	**Goura**	**0.50**	**134**	P	Pg	18 22 46.5	-0.3
GUR				S	Sg	18 22 53.7	+0.3
GUR				*e*Sb	Sg	18 22 54.2	+0.8
DSF	**Desfina**	**0.52**	**76**	P	Pg	18 22 46.7	-0.4
DSF				S	Sg	18 22 54.2	+0.4
DSF	**Desfina**	**0.52**	**76**	P	Pg	18 22 46.7	-0.4
DSF				S	Sg	18 22 54.2	+0.4
EVR	**Evrytania**	**0.63**	**354**	*e*Pg	Pg	18 22 48.4	-0.8
EVR	**Evrytania**	**0.63**	**354**	*e*PG	Pg	18 22 48.4	-0.8
EVR	**Evrytania**	**0.63**	**354**	*e*Pg	Pg	18 22 48.4	-0.8
AGG	**Agios Georgios**	**0.81**	**25**	*e*Pb	Pb	18 22 52.3	-1.3
AGG				*e*Sb	Sb	18 23 04.1	-0.7
AGG	**Agios Georgios**	**0.81**	**25**	*e*PB	Pb	18 22 52.3	-1.3
AGG				*e*SB	Sb	18 23 04.1	-0.7
AGG	**Agios Georgios**	**0.81**	**25**	P	Pg	18 22 52.0	-0.7
AGG				S	Sg	18 23 03.6	+0.4
AGG	**Agios Georgios**	**0.81**	**25**	P	Pg	18 22 52.0	-0.7
AGG	**Agios Georgios**	**0.81**	**25**	*e*Pb	Pb	18 22 52.3	-1.3
AGG				S	Sg	18 23 03.6	+0.4
AGG				*e*Sb	Sb	18 23 04.1	-0.7
KFL	**Anninata**	**0.89**	**259**	P	Pg	18 22 54.0	-0.1
KFL	**Anninata**	**0.89**	**259**	P	Pg	18 22 54.0	-0.1
LTK	**Loutraki**	**0.89**	**107**	*e*PB	Pb	18 22 54.0	-1.0
LTK				*e*SB	Sb	18 23 07.1	0.0
LTK	**Loutraki**	**0.89**	**107**	P	Pg	18 22 53.9	-0.3
LTK				S	Sg	18 23 06.7	+0.9
LTK	**Loutraki**	**0.89**	**107**	P	Pg	18 22 53.9	-0.3
LTK				S	Sg	18 23 06.7	+0.9
LTK				*e*Sb	Sb	18 23 07.1	0.0
LKR	**Lokris**	**0.94**	**67**	*e*Pg	Pg	18 22 54.3	-0.9
LKR				*e*Sb	Sb	18 23 08.3	-0.4
LKR	**Lokris**	**0.94**	**67**	*e*PG	Pg	18 22 54.3	-0.9
LKR				*e*SB	Sb	18 23 08.3	-0.4
LKR	**Lokris**	**0.94**	**67**	P	Pg	18 22 54.5	-0.7
LKR				S	Sg	18 23 08.1	+0.6
LKR	**Lokris**	**0.94**	**67**	P	Pg	18 22 54.5	-0.7
LKR				S	Sg	18 23 08.1	+0.6
ATAL	**Atalanti**	**0.98**	**65**	P	Pg	18 22 55.1	-0.8
ATAL				S	Sg	18 23 09.2	+0.7
ATAL	**Atalanti**	**0.98**	**65**	P	Pg	18 22 55.1	-0.8
ATAL				S	Sg	18 23 09.2	+0.7
VLX	**Vlachokerasia**	**1.00**	**157**	*e*PG	Pg	18 22 55.5	-0.7
VLX	**Vlachokerasia**	**1.00**	**157**	P	Pg	18 22 55.5	-0.7
VLX	**Vlachokerasia**	**1.00**	**157**	P	Pg	18 22 55.5	-0.7
VLS	**Valsamata**	**1.03**	**264**	*e*Pn	Pn	18 22 56.5	-1.6
VLS				*e*Sb	Sb	18 23 10.2	-0.9
VLS	**Valsamata**	**1.03**	**264**	*e*PN	Pn	18 22 56.5	-1.6
VLS				*e*SB	Sb	18 23 10.2	-0.9
VLS	**Valsamata**	**1.03**	**264**	P	Pg	18 22 56.0	-0.8
VLS				S	Sg	18 23 11.4	+1.2
VLS	**Valsamata**	**1.03**	**264**	P	Pg	18 22 56.0	-0.8
VLS	**Valsamata**	**1.03**	**264**	*e*Pn	Pn	18 22 56.5	-1.6
VLS				*e*Sb	Sb	18 23 10.2	-0.9
VLS				S	Sg	18 23 11.4	+1.2
LKD2	**Lefkada island**	**1.09**	**298**	P	Pg	18 22 57.2	-0.8
LKD2				S	Sg	18 23 13.5	+1.5
LKD2	**Lefkada island**	**1.09**	**298**	P	Pg	18 22 57.2	-0.8
LKD2				S	Sg	18 23 13.5	+1.5
ITM	**Ithomi**	**1.11**	**178**	*e*Pb	Pb	18 22 57.9	-0.8
ITM	**Ithomi**	**1.11**	**178**	*e*PB	Pb	18 22 57.9	-0.8
ITM	**Ithomi**	**1.11**	**178**	P	Pg	18 22 57.8	-0.6
ITM	**Ithomi**	**1.11**	**178**	*e*Pb	Pb	18 22 57.9	-0.8
THL	**Klokotos Trika**	**1.28**	**4**	*e*PB	Pb	18 23 00.7	-0.9
THL	**Klokotos Trika**	**1.28**	**4**	P	Pn	18 23 00.8	-0.7
THL				S	Sg	18 23 19.2	+1.0
THL	**Klokotos Trika**	**1.28**	**4**	*e*Pb	Pb	18 23 00.7	-0.9
THL				S	Sg	18 23 19.2	+1.0
DID	**Didima**	**1.32**	**126**	*e*PB	Pb	18 23 02.4	0.0
DID				*e*SB	Sb	18 23 21.1	+1.5
DID	**Didima**	**1.32**	**126**	P	Pn	18 23 01.6	-0.5
DID				S	Sb	18 23 20.3	+0.7
DID	**Didima**	**1.32**	**126**	P	Pn	18 23 01.6	-0.5
DID	**Didima**	**1.32**	**126**	*e*Pb	Pb	18 23 02.4	0.0
DID				S	Sb	18 23 20.3	+0.7
DID				*e*Sb	Sb	18 23 21.1	+1.5
PYL	**PYLOS**	**1.40**	**185**	P	Pn	18 23 02.4	-0.7
PYL	**PYLOS**	**1.40**	**185**	P	Pn	18 23 02.4	-0.7
NEO	**Neokhori**	**1.46**	**45**	*e*Pg	Pg	18 23 03.8	-1.3
NEO	**Neokhori**	**1.46**	**45**	*e*PG	Pg	18 23 03.8	-1.3
NEO	**Neokhori**	**1.46**	**45**	*e*Pg	Pg	18 23 03.8	-1.3
XOR	**Xorichti**	**1.48**	**43**	P	Pn	18 23 03.6	-0.7
XOR	**Xorichti**	**1.48**	**43**	P	Pn	18 23 03.9	-0.4
XOR				S	Sn	18 23 23.9	-0.1
XOR	**Xorichti**	**1.48**	**43**	P	Pn	18 23 03.9	-0.4
XOR				S	Sn	18 23 23.9	-0.1
ATHU	**Athens Univers**	**1.53**	**102**	P	Pn	18 23 04.7	-0.3
ATHU	**Athens Univers**	**1.53**	**102**	P	Pn	18 23 04.7	-0.3
VLY	**Voula,Athens**	**1.57**	**106**	P	Pn	18 23 05.5	0.0
VLY	**Voula,Athens**	**1.57**	**106**	P	Pn	18 23 05.5	0.0
PTL	**Penteli**	**1.58**	**98**	P	Pn	18 23 06.7	+1.1
PTL	**Penteli**	**1.58**	**98**	P	Pn	18 23 06.7	+1.1
IGT	**Igoumenitsa**	**1.74**	**316**	P	Pn	18 23 07.6	-0.2
IGT	**Igoumenitsa**	**1.74**	**316**	P	Pn	18 23 07.6	-0.2
VLI	**Veliai**	**1.78**	**152**	*e*Pn	Pn	18 23 08.8	+0.4
VLI	**Veliai**	**1.78**	**152**	*e*PN	Pn	18 23 08.8	+0.4
VLI	**Veliai**	**1.78**	**152**	*e*Pn	Pn	18 23 08.8	+0.4
AOS	**Alonnisos**	**1.79**	**60**	P	Pn	18 23 07.9	-0.7
AOS	**Alonnisos**	**1.79**	**60**	P	Pn	18 23 07.7	-0.9
AOS				S	Sn	18 23 32.1	+0.5
AOS	**Alonnisos**	**1.79**	**60**	P	Pn	18 23 07.9	-0.7
AOS				S	Sn	18 23 32.1	+0.5
KZN	**Kozani**	**2.02**	**357**	P	Pn	18 23 11.3	-0.4
KZN	**Kozani**	**2.02**	**357**	P	Pn	18 23 11.3	-0.4
PAIG	**Paliouri**	**2.15**	**40**	P	Pn	18 23 12.6	-0.9
PAIG	**Paliouri**	**2.15**	**40**	P	Pn	18 23 12.9	-0.6
PAIG	**Paliouri**	**2.15**	**40**	P	Pn	18 23 12.9	-0.6
KEK	**Kerkira**	**2.16**	**312**	P	Pn	18 23 13.3	-0.4
KEK	**Kerkira**	**2.16**	**312**	P	Pn	18 23 13.3	-0.4
SRN	**Sarande**	**2.16**	**318**	*e*PN	Pn	18 23 15.4	+1.7
SRN				*i* SN	Sn	18 23 29.1	-12
SRN	**Sarande**	**2.16**	**318**	*e*Pn	Pn	18 23 15.4	+1.7
PLG	**Polygyros**	**2.41**	**30**	P	Pn	18 23 16.6	-0.4
PLG	**Polygyros**	**2.41**	**30**	P	Pn	18 23 16.4	-0.6
PLG	**Polygyros**	**2.41**	**30**	P	Pn	18 23 16.6	-0.4
KBN	**Korca**	**2.48**	**340**	*e*PN	Pn	18 23 24.0	+5.9
HORT	**Hortiatis**	**2.49**	**22**	P	Pn	18 23 18.9	+0.7
HORT	**Hortiatis**	**2.49**	**22**	P	Pn	18 23 18.0	-0.2
HORT	**Hortiatis**	**2.49**	**22**	P	Pn	18 23 18.0	-0.2
FNA	**Florina**	**2.52**	**351**	P	Pn	18 23 20.4	+1.8
FNA	**Florina**	**2.52**	**351**	P	Pn	18 23 18.8	+0.2
FNA	**Florina**	**2.52**	**351**	P	Pn	18 23 18.8	+0.2
OUR	**Ouranopolis**	**2.61**	**38**	P	Pn	18 23 19.5	-0.3
OUR	**Ouranopolis**	**2.61**	**38**	P	Pn	18 23 19.5	-0.3
OUR	**Ouranopolis**	**2.61**	**38**	P	Pn	18 23 19.5	-0.3
BIA	**Bitola**	**2.76**	**351**	*e*Pn	Pn	18 23 23.2	+1.3
SOH	**Sokhos**	**2.77**	**24**	P	Pn	18 23 23.2	+1.1
SOH	**Sokhos**	**2.77**	**24**	P	Pn	18 23 21.9	-0.2
SOH	**Sokhos**	**2.77**	**24**	P	Pn	18 23 21.9	-0.2
VAY	**Valandovo**	**3.07**	**10**	*i* Pn	Pn	18 23 26.0	-0.2
KRUS	**Krusevo**	**3.12**	**351**	*i* Pn	Pn	18 23 29.6	+2.8
SRS	**Serrai**	**3.12**	**24**	P	Pn	18 23 26.6	-0.2
SRS	**Serrai**	**3.12**	**24**	P	Pn	18 23 26.6	-0.2
APE	**Apeiranthos**	**3.14**	**112**	P	Pn	18 23 28.3	+1.2
APE	**Apeiranthos**	**3.14**	**112**	↑↑*i*P	Pn	18 23 28.1	+1.0
APE	**Apeiranthos**	**3.14**	**112**	P	Pn	18 23 28.3	+1.2
SMG	**Samos**	**3.95**	**97**	P	Pn	18 23 39.6	+1.3
SMG	**Samos**	**3.95**	**97**	P	Pn	18 23 39.6	+1.3
PUK	**Puka**	**4.05**	**338**	*e*PN	Pn	18 23 43.6	+4.0
PUK				*i* SN	Sn	18 24 33.1	+5.8
**PUK

*NEIC **21** 18:37:51.3±0.5, 10°.82S×164°.49E, mb4.9/3, Error ellipse: s-maj=17.4km s-min=9.5km az=140.0*

ISC 21 18:37:51.2±0.5, 10°.92S±0°.09×164°.56E±0°.07, h36km, h36km±.9km; pP-P, n35, σ0s.94/31, mb4.2/19, MS3.7/10, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.78**	**288**	**Pn**	**Pn**	**18 39 00.1**	**-0.5**
	57nm,0.3s,baz=158,slow=4.1,SNR=12						
HNR				Sn	**Sn**	**18 39 56.4**	**+1.6**
	19nm,0.3s,baz=195,slow=20,SNR=3.2						
CTA	**Charters Tower**	**19.84**	**240**	*eP*	**Pn**	**18 42 20.2**	**-0.6**
	14nm,0.8s						
CTA				*e*		18 42 30.4	
CTA	**Charters Tower**	**19.84**	**240**	P	**Pn**	**18 42 20.4**	**-0.5**
	0.3nm,0.3s,baz=69,slow=12,SNR=14						
CTAO	**Charters Tower**	**19.84**	**240**	*eP*	**Pn**	**18 42 20.1**	**-0.7**
	27nm,0.7s						
RAO	**Raoul Island**	**24.50**	**141**	LR	LR	18 50 26.1	
	comp=Z,141nm,19.2s,MS3.5,baz=319,slow=31						
URZ	**Urewera**	**29.45**	**160**	LR	LR	18 52 40.1	
	comp=Z,82nm,18.8s,MS3.4,baz=145,slow=30						
STKA	**Stephens Creek**	**29.74**	**222**	*eP*	**P**	**18 43 55.2**	**+0.9**
	6.8nm,1.0s,mb4.3						
STKA	**Stephens Creek**	**29.74**	**222**	P	**P**	**18 43 55.1**	**+0.8**
	3.1nm,0.8s,mb4.1,baz=50,slow=6.6,SNR=4.9						
STKA				LR	LR	18 54 04.9	
	comp=Z,144nm,19.4s,MS3.6,baz=22,slow=33						
STKA	**Stephens Creek**	**29.74**	**222**	*eP*	**P**	**18 43 54.8**	**+0.6**
STKA				LR	LR	18 54 04.9	
WRAB	**Tennant Creek**	**30.42**	**249**	*eP*	**P**	**18 44 07.0**	**+6.5**
GUMO	**Guam**	**31.22**	**321**	LR	LR	18 56 20.4	
	comp=Z,141nm,18.2s,MS3.7,baz=144,slow=36						
KAKA	**Kakadu**	**31.48**	**263**	*eP*	**P**	**18 44 08.0**	**-1.8**
ASAR	**Alice Springs**	**31.81**	**242**	P	**P**	**18 44 12.5**	**-0.1**
	1.2nm,0.9s,mb3.7,baz=71,slow=9.5,SNR=9.8						
FITZ	**Fitzroy Crossi**	**38.29**	**255**	*eP*	**P**	**18 45 06.9**	**-1.6**
	5.6nm,0.8s,mb4.3						
FITZ				*e*	pP	18 45 17.0	-1.9
FORT	**Forrest**	**39.16**	**234**	*eP*	**P**	**18 45 17.6**	**+1.9**
	20nm,0.7s,mb5.0						
PPT	**Papeete**	**44.86**	**104**	LR	LR	19 03 30.4	
	comp=Z,172nm,18.1s,MS4.0,baz=181,slow=34						
MJAR	**Matsushiro Arr**	**53.33**	**334**	P	**P**	**18 47 06.0**	**-0.8**
	0.7nm,0.7s,mb3.7,baz=123,slow=39,SNR=3.9						
MJAR				pP	pP	18 47 16.0	-1.6
	2.8nm,0.9s,baz=164,slow=8.5,SNR=7.8						
ASAJ	**Asahikawa**	**58.30**	**342**	P	**P**	**18 47 41.5**	**-0.9**
	2.0nm,0.5s,mb4.4,baz=261,slow=10,SNR=3.9						
KSRS	**Korea Array**	**59.12**	**326**	P	**P**	**18 47 48.4**	**+0.2**
	1.0nm,0.8s,mb3.9,baz=65,slow=36,SNR=3.1						
KSRS				pP	pP	18 47 58.3	-0.7
	2.0nm,0.9s,baz=136,slow=7.3,SNR=6.8						
KSRS				LR	LR	19 10 47.6	
	comp=Z,40nm,18.1s,MS3.6,baz=146,slow=34						
PETK	**Petropavlovsk-**	**64.04**	**355**	P	**P**	**18 48 21.6**	**+0.5**
	1.2nm,0.6s,mb4.1,baz=173,slow=4.5,SNR=4.4						
PETK				pP	pP	18 48 31.8	-0.2
	3.9nm,0.8s,baz=151,slow=8.0,SNR=5.6						
PETK				LR	LR	19 10 18.7	
	comp=Z,39nm,21.8s,MS3.5,baz=341,slow=30						
PETK	**Petropavlovsk-**	**64.04**	**355**	P	**P**	**18 48 21.6**	**+0.5**
PETK				pP	pP	18 48 31.8	-0.2
PETK				LR	LR	19 10 18.7	
CMAR	**Chiang Mai Arr**	**71.00**	**294**	P	**P**	**18 49 05.5**	**-0.3**
	1.2nm,1.1s,mb3.7,baz=111,slow=6.3,SNR=4.4						
CMAR				pP	pP	18 49 16.6	-0.1
	1.0nm,0.8s,baz=128,slow=4.1,SNR=4.3						
SONM	**Songino Array**	**77.88**	**324**	P	**P**	**18 49 44.9**	**-0.3**
	1.0nm,0.7s,mb3.8,baz=151,slow=6.3,SNR=5.2						
SONM				pP	pP	18 49 56.2	-0.2
	1.9nm,0.9s,baz=137,slow=5.8,SNR=6.2						
GTA	**Gaotai**	**78.14**	**314**	*eP*	**P**	**18 49 52.3**	**+5.5**
GTA				pP	pP	18 49 56.4	-1.5
GTA				sP	sP	18 49 59.8	-2.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.1						
COLA	**College**	**83.53**	**18**	*eP*	**P**	**18 50 15.1**	**+0.1**
	comp=Z,6.6nm,0.6s,mb4.9						
COLA				*e*pP	pP	18 50 25.9	-0.4
ILAR	**Eielson Array**	**83.77**	**19**	P	**P**	**18 50 16.4**	**+0.1**
	comp=Z,3.2nm,0.7s,mb4.6,baz=242,slow=5.5,SNR=37						
ILAR				pP	pP	18 50 27.4	-0.1
	comp=Z,5.9nm,1.0s,baz=232,slow=5.4,SNR=13						
ILAR				LR	LR	19 19 39.8	
	comp=Z,45nm,21.7s,MS3.8,baz=234,slow=30						
MAW	**Mawson**	**84.40**	**202**	*eP*	**P**	**18 50 20.1**	**+0.5**
	comp=Z,3.6nm,0.9s,mb4.5						
MAW	**Mawson**	**84.40**	**202**	P	**P**	**18 50 20.5**	**+0.9**
	comp=Z,3.1nm,1.0s,mb4.4,baz=49,slow=4.9,SNR=4.8						
MAW				LR	LR	19 25 41.8	
	comp=Z,65nm,20.9s,MS4.0,baz=210,slow=34						
YBH	**Yreka Blue Hor**	**84.64**	**46**	LR	LR	19 24 45.2	
	comp=Z,40nm,19.1s,MS3.8,baz=240,slow=33						
EGAK	**Eagle**	**85.67**	**20**	*eP*	**P**	**18 50 27.1**	**+1.3**
	comp=Z,30nm,1.3s,mb5.4						
EGAK				*e*pP	pP	18 50 37.3	+0.3
DAWY	**Dawson**	**85.86**	**21**	*eP*	**P**	**18 50 28.2**	**+1.4**
DAWY				*e*pP	pP	18 50 38.9	+0.8
NVAR	**Mina Array Bea**	**86.84**	**50**	P	**P**	**18 50 32.4**	**+0.1**
	comp=Z,0.4nm,0.6s,mb3.8,baz=246,slow=7.3,SNR=3.5						
NVAR				pP	pP	18 50 43.8	+0.4
	comp=Z,1.9nm,1.0s,baz=238,slow=5.8,SNR=5.8						
MKAR	**Makanchi Array**	**92.64**	**317**	P	**P**	**18 50 59.4**	**+0.2**
	comp=Z,1.1nm,0.6s,mb4.5,baz=93,slow=6.3,SNR=14						
MKAR				pP	pP	18 51 09.0	-1.6
	comp=Z,1.6nm,0.6s,baz=100,slow=4.8,SNR=12						
ZALV	**Zalesovo Beam**	**92.78**	**324**	P	**P**	**18 50 58.6**	**-1.1**
	comp=Z,0.4nm,0.3s,mb4.3,baz=124,slow=4.9,SNR=3.9						
ZALV				pP	pP	18 51 09.4	-1.6
	comp=Z,1.7nm,0.8s,baz=114,slow=6.6,SNR=4.7						
PDAR	**Pinedale Array**	**94.33**	**47**	P	**P**	**18 51 06.4**	**-0.7**
	comp=Z,0.2nm,0.4s,mb3.9,baz=337,slow=2.3,SNR=4.5						

*NEIC **21** 18:48:01.8, 31°.20S×69°.00W, h140km, mb4.0/2, MD3.9(GUC), MD3.6(SJA), After GUC.*
NEIC Felt [II] at San Juan.

GUC 21 18:48:01.8±0.9, 31°.20S×69°.00W, h140km, MD3.9, ML4.1, 4C, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**1.71**	**270**	⇑*i*P	Pn	18 48 33.5	+0.5
CMCH				*e*S	Sn	18 48 57.8	+1.1
CMCH	**Combarbala**	**1.71**	**270**	⇑*i*P	Pn	18 48 33.5	+0.5
CMCH				*e*S	Sn	18 48 57.8	+1.1
CMCH				AML	AML	18 48 59.5	
	comp=E,4μm,0.7s						
OVCH	**Ovalle**	**1.98**	**287**	*i*P	Pn	18 48 36.4	+0.3
OVCH				*e*S	Sn	18 49 02.6	+0.3
OVCH	**Ovalle**	**1.98**	**287**	*i*P	Pn	18 48 36.4	+0.3
OVCH				*e*S	Sn	18 49 02.6	+0.3
OVCH				AML	AML	18 49 05.5	
	comp=N,856nm,0.5s						
JACH	**Jahuel**	**2.00**	**222**	P	Pn	18 48 37.5	+1.2
JACH	**Jahuel**	**2.00**	**222**	*eP*	Pn	18 48 37.5	+1.2
CHNG	**Los Chungos**	**2.24**	**252**	*eP*	Pn	18 48 38.7	-0.5
CHNG				*e*S	Sn	18 49 06.8	-1.0
ROCH	**El Roble**	**2.45**	**224**	*eP*	Pn	18 48 43.0	+1.2
ROCH	**El Roble**	**2.45**	**224**	*eP*	Pn	18 48 43.0	+1.2
CLCH	**Cerro Calan**	**2.54**	**210**	*eP*	Pn	18 48 44.6	+1.7
CLCH				*e*S	Sn	18 49 16.8	+2.1
CLCH				AML	AML	18 49 20.1	
	comp=E,518nm,0.6s						
LCO	**Las Campanas**	**2.63**	**326**	*eP*	Pn	18 48 43.6	-0.6
TACH	**Talagante**	**2.94**	**213**	⇑*i*P	Pn	18 48 48.2	+0.2
TACH	**Talagante**	**2.94**	**213**	⇑*i*P	Pn	18 48 48.2	+0.2
CHCH	**Chadas Angostu**	**3.06**	**207**	P	Pn	18 48 51.0	+1.6
CHCH	**Chadas Angostu**	**3.06**	**207**	*eP*	Pn	18 48 51.0	+1.6
LNV	**Longovilo**	**3.42**	**216**	P	Pn	18 48 54.0	0.0
LNV	**Longovilo**	**3.42**	**216**	*eP*	Pn	18 48 54.0	0.0
TRQA	**Tornquist**	**8.95**	**142**	*eP*	Pn	18 50 05.8	-2.1
	comp=E,7.8nm,0.5s						
LPAZ	**La Paz**	**14.87**	**3**	*eP*	Pn	18 51 25.9	+0.8
	comp=E,2.1nm,0.9s						

*ISCJB **21** 19:04:04.5±0.6, 47°.71N±0°.08×151°.6E±0°.1, h179km±6km, mb3.7/18, Error ellipse: s-maj=16.7km s-min=6.1km az=44.9*
*IDC **21** 19:04:04.9±1.8, 47°.75N×151°.71E, h166km±16km, mb3.5/19, mb1 3.7/22, mb1mx3.6/29, mbtmp3.5/22, MS3.4/4,*

Ms1 3.4/4, ms1mx2.9/34, Error ellipse: s-maj=14.5km s-min=11.0km az=132.0
*MOS **21** 19:04:04.6±0.9, 47°.76N×151°.58E, h183km, mb3.7/10, Error ellipse: s-maj=18.4km s-min=10.2km az=63.2*
*NEIC **21** 19:04:04.4±0.9, 47°.72N×151°.62E, h163km±9km, mb4.8/2, Error ellipse: s-maj=10.5km s-min=7.0km az=128.0*

ISC 21 19:04:05.6±0.6, 47°.69N±0°.08×151°.6E±0°.1, h173km±6km, n49, σ0s.97/50, mb3.7/18, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**4.21**	**43**	*e*PN	**Pn**	**19 05 09.4**	**+0.5**
SKR				*e*S	**Sn**	**19 05 58.0**	**+0.9**
SKR				pmax	pmax		
	comp=N,30nm,0.5s						
SKR				pmax	pmax		
	comp=E,40nm,0.5s						
SKR				pmax	pmax		
	comp=Z,50nm,0.5s						
SKR				smax			
	comp=E,80nm,0.5s						
SKR				smax			
	comp=Z,40nm,0.5s						
SKR				smax			
	comp=N,80nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**5.43**	**230**	⇓*i*PN	**Pn**	**19 05 24.6**	**-0.4**
YUK				*i*S	**Sn**	**19 06 26.8**	**+0.2**
YUK				pmax	pmax		
	comp=N,43nm,0.5s						
YUK				pmax	pmax		
	comp=E,51nm,0.5s						
YUK				pmax	pmax		
	comp=Z,192nm,0.5s						
YUK				smax			
	comp=N,50nm,0.2s						
YUK				smax			
	comp=E,160nm,0.4s						
PETK	**Petropavlovsk-**	**6.67**	**33**	P	**Pn**	**19 05 39.9**	**-1.3**
	comp=E,1.7nm,0.3s,baz=205,slow=12,SNR=17						
PETK				S	**Sn**	**19 06 59.1**	**+2.9**
	baz=242,slow=21,SNR=2.0						
PETK	**Petropavlovsk-**	**6.67**	**33**	PN	**Pn**	**19 05 39.9**	**-1.2**
PETK				S	**Sn**	**19 06 59.1**	**+2.9**
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ	**Asahikawa**	**7.24**	**244**	P	**Pn**	**19 05 50.8**	**+2.1**
	comp=Z,2.8nm,0.3s,baz=75,slow=12,SNR=25						
ASAJ	**Asahikawa**	**7.24**	**244**	PN	**Pn**	**19 05 50.8**	**+2.1**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ERM	**Erimo**	**8.26**	**230**	*e*PN	**Pn**	**19 06 00.7**	**-1.5**
ERM				pmax	pmax		
	comp=Z,21nm,0.4s						
ERM	**Erimo**	**8.26**	**230**	*eP*	**Pn**	**19 06 00.7**	**-1.6**
	comp=Z,21nm,0.4s						
MJAR	**Matsushiro Arr**	**14.91**	**227**	P	**Pn**	**19 07 27.7**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=17,slow=11,SNR=2.6						
MJAR	**Matsushiro Arr**	**14.91**	**227**	P	**Pn**	**19 07 27.7**	**-0.1**
YAK	**Yakutsk**	**18.99**	**327**	*eP*	**P**	**19 08 17.4**	**+3.9**
YAK				pmax	pmax		
	comp=Z,15nm,0.9s						
YAK				pmax	pmax		
	comp=N,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.0s						
YAK	**Yakutsk**	**18.99**	**327**	*eP*	**P**	**19 08 14.2**	**+0.7**
	comp=E,27nm,0.8s						
KSRS	**Korea Array**	**20.16**	**248**	P	**P**	**19 08 27.6**	**+1.2**
	comp=E,2.6nm,0.9s,baz=44,slow=11,SNR=7.5						
KSRS	**Korea Array**	**20.16**	**248**	P	**P**	**19 08 27.6**	**+1.3**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SONM	**Songino Array**	**30.07**	**287**	P	**P**	**19 09 58.0**	**-0.3**
	comp=Z,0.3nm,0.5s,mb3.3,baz=92,slow=7.2,SNR=2.5						
ILAR	**Eielson Array**	**36.46**	**39**	P	**P**	**19 10 52.3**	**-0.9**
	comp=Z,0.5nm,0.6s,mb3.4,baz=268,slow=7.1,SNR=8.7						
ILAR	**Eielson Array**	**36.46**	**39**	P	**P**	**19 10 52.3**	**-1.0**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZALV	**Zalesovo Beam**	**41.24**	**304**	LR	LR	19 30 19.5	
	comp=Z,25nm,18.1s,baz=68,slow=38						
MKAR	**Makanchi Array**	**45.62**	**296**	P	**P**	**19 12 08.3**	**+0.1**
	comp=Z,0.4nm,0.3s,mb3.5,baz=69,slow=7.9,SNR=6.3						
MKAR				pP	pP	19 12 44.2	-2.0
	comp=Z,0.3nm,0.2s,baz=83,slow=10.0,SNR=1.2						
MKAR				PcP	PcP	19 13 44.6	+1.2
	comp=Z,0.2nm,0.2s,baz=72,slow=5.2,SNR=2.1						
MKAR				ScP	ScP	19 17 21.7	+2.1
	comp=Z,0.2nm,0.2s,baz=31,slow=3.4,SNR=3.0						
MKAR	**Makanchi Array**	**45.62**	**296**	P	**P**	**19 12 08.3**	**+0.1**
MKAR				*PP	pP	19 12 44.3	-2.0
MKAR						19 13 44.6	
KURK	**Kurchatov**	**46.00**	**302**	*eP*	**P**	**19 12 09.3**	**-1.9**
BVAR	**Borovoye Array**	**49.48**	**308**	P	**P**	**19 12 37.8**	**0.0**
	comp=Z,0.8nm,0.4s,mb3.7,baz=52,slow=7.6,SNR=7.0						
BVAR	**Borovoye Array**	**49.48**	**308**	P	**P**	**19 12 37.8**	**-0.1**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**51.62**	**254**	P	**P**	**19 12 55.4**	**+1.1**
	comp=Z,0.3nm,0.6s,mb3.1,baz=27,slow=8.1,SNR=4.6						
ARCES	**ARCESS Array B**	**56.63**	**340**	P	**P**	**19 13 29.8**	**-0.1**
	comp=Z,2.2nm,0.9s,mb4.0,baz=34,slow=8.8,SNR=4.7						
ARCES	**ARCESS Array B**	**56.63**	**340**	P	**P**	**19 13 29.8**	**0.0**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ARCES	**ARCESS Array B**	**56.63**	**340**	P	**P**	**19 13 29.8**	**-0.1**
FINES	**FINESS Array B**	**62.76**	**334**	P	**P**	**19 14 10.9**	**-0.8**
	comp=Z,2.0nm,0.4s,mb4.3,baz=32,slow=7.0,SNR=33						
FINES	**FINESS Array B**	**62.76**	**334**	P	**P**	**19 14 10.9**	**-0.8**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
NVAR	**Mina Array Bea**	**62.89**	**62**	P	**P**	**19 14 13.4**	**+0.4**
	comp=Z,0.6nm,0.4s,mb3.8,baz=297,slow=7.4,SNR=5.9						
PDAR	**Pinedale Array**	**65.01**	**53**	P	**P**	**19 14 26.9**	**+0.2**
	comp=Z,0.9nm,0.6s,mb3.8,baz=355,slow=1.6,SNR=7.2						
NOA	**NORSAR Array B**	**67.01**	**340**	P	**P**	**19 14 38.9**	**-0.3**
	comp=Z,0.7nm,0.5s,mb3.8,baz=28,slow=6.4,SNR=6.7						
NOA				LR	LR	19 47 36.9	
	comp=Z,19nm,19.7s,baz=345,slow=39						
NOA	**NORSAR Array B**	**67.01**	**340**	P	**P**	**19 14 38.9**	**-0.3**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NOA				MLR	MLR		
	comp=Z,19nm,19.7s						
HFS	**Hagfors**	**67.22**	**339**	P	**P**	**19 14 40.1**	**-0.4**
	comp=Z,1.6nm,0.3s,mb4.3,baz=57,slow=5.3,SNR=23						
HFS				LR	LR	19 49 05.7	
	comp=Z,27nm,18.2s,baz=3.9,slow=40						
HFS	**Hagfors**	**67.22**	**339**	P	**P**	**19 14 40.1**	**-0.4**
HFS				pmax	pmax		
	comp=Z,2.0nm,0.3s						
HFS				MLR	MLR		
	comp=Z,27nm,18.2s						
WRA	**Warramunga Arr**	**69.08**	**197**	P	**P**	**19 14 52.1**	**-0.5**
	comp=Z,1.0nm,0.6s,mb3.7,baz=15,slow=6.7						
WRA	**Warramunga Arr**	**69.08**	**197**	P	**P**	**19 14 52.1**	**-0.4**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	**Malin Array Be**	**70.20**	**325**	P	**P**	**19 14 58.3**	**-0.8**
	comp=Z,1.0nm,0.5s,mb3.9,baz=34,slow=6.3,SNR=3.3						
AKASG	**Malin Array Be**	**70.20**	**325**	P	**P**	**19 14 58.3**	**-0.8**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ASAR	**Alice Springs**	**72.79**	**197**	P	**P**	**19 15 15.8**	**+1.0**
	comp=Z,1.3nm,0.6s,mb3.8,baz=13,slow=6.2,SNR=49						
ASAR	**Alice Springs**	**72.79**	**197**	P	**P**	**19 15 15.8**	**+1.0**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
EKA	**Eskdalemuir Ar**	**75.19**	**345**	P	**P**	**19 15 28.5**	**+0.1**
	comp=Z,1.0nm,0.9s,mb3.5,baz=28,slow=5.6,SNR=3.6						
EKA	**Eskdalemuir Ar**	**75.19**	**345**	P	**P**	**19 15 28.5**	**+0.1**
EKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TXAR	**Lajitas Array**	**77.91**	**60**	P	**P**	**19 15 43.8**	**-0.3**
	comp=Z,0.7nm,0.4s,mb3.7,baz=292,slow=5.1,SNR=7.1						
TXAR	**Lajitas Array**	**77.91**	**60**	P	**P**	**19 15 43.8**	**-0.4**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
STKA	**Stephens Creek**	**79.71**	**189**	P	**P**	**19 15 53.8**	**+0.2**
	comp=Z,1.4nm,0.9s,mb3.6,baz=351,slow=6.5,SNR=4.1						
DAVOX	**Davos/Dischmat**	**80.16**	**334**	LR	LR	19 56 18.1	
	comp=Z,38nm,20.5s,baz=82,slow=39						
MMAI	**Mount Meron Ar**	**81.44**	**310**	P	**P**	**19 16 05.1**	**+2.0**
	comp=Z,2.1nm,0.8s,mb3.8,baz=357,slow=2.9,SNR=2.7						
PLCA	**Paso Flores**	**149.28**	**93**	*e*PKHKP	PKPdf	19 23 29.8	+1.2

*DDA **21** 19:31:31.7, 37°.00N×29°.15E, h7km±4km, Md3.1*
*ISK **21** 19:31:32.1, 37°.07N×29°.26E, h18km, MD2.8*
*CSEM **21** 19:31:32.5±0.3, 37°.09N×29°.33E, h26km±4km, MD2.8, Error ellipse: s-maj=10.8km s-min=6.7km az=38.0*

ISC 21 19:31:33.2±0.7, 37°.07N±0°.04×29°.26E±0°.05, h19km±7km, n22, σ1s25/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.21**	**66**	*e*PG	**Pg**	**19 31 37.6**	**-0.8**
GLHS	**Glhisar (BURDU**	**0.21**	**66**	*e*Pg	**Pg**	**19 31 37.6**	**-0.8**
GOLH	**Golhisar**	**0.29**	**55**	*i*P	**Pg**	**19 31 39.4**	**-0.3**
GOLH				*i*S	**Sg**	**19 31 46.4**	**+2.2**
GOLH	**Golhisar**	**0.29**	**55**	*i*P	**Pg**	**19 31 39.4**	**-0.3**
GOLH				*i*S	**Sg**	**19 31 46.3**	**+2.2**
TURN	**Turunc**	**0.56**	**250**	*i*P	**Pb**	**19 31 46.4**	**+1.9**
TURN				*i*S	**Sb**	**19 31 57.0**	**+5.0**
TURN	**Turunc**	**0.56**	**250**	*i*P	**Pb**	**19 31 46.4**	**+2.0**
TURN				*i*S	**Sb**	**19 31 57.0**	**+5.0**
ELL	**Elmali**	**0.61**	**121**	*e*PG	**Pb**	**19 31 44.3**	**-1.1**
ELL				*e*SG	**Sb**	**19 31 53.9**	**+0.3**
ELL	**Elmali**	**0.61**	**121**	*e*Pg	**Pb**	**19 31 44.3**	**-1.0**
ELL				*e*Sg	**Sb**	**19 31 53.9**	**+0.3**
DNZL	**Cakiroluk**	**0.64**	**345**	*i*P	**Pb**	**19 31 44.6**	**-1.2**
DNZL				*i*S	**Sb**	**19 31 55.0**	**+0.6**
DNZL	**Cakiroluk**	**0.64**	**345**	*i*P	**Pb**	**19 31 44.6**	**-1.2**
DNZL				*i*S	**Sb**	**19 31 55.0**	**+0.6**
YER	**Yerkesik**	**0.78**	**275**	*e*PG	**Pb**	**19 31 48.7**	**+0.5**
YER				*e*SG	**Sb**	**19 31 59.0**	**+0.6**
YER	**Yerkesik**	**0.78**	**275**	*e*Pg	**Pb**	**19 31 48.7**	**+0.5**
YER				*e*Sg	**Sb**	**19 31 59.0**	**+0.6**
AKAS	**Kas**	**0.88**	**161**	*i*P	**Pg**	**19 31 48.1**	**-2.2**
AKAS				*i*S	**Sb**	**19 32 04.2**	**+3.0**
AKAS	**Kas**	**0.88**	**161**	*i*P	**Pg**	**19 31 48.1**	**-2.3**
AKAS				*i*S	**Sb**	**19 32 04.2**	**+2.9**
MLSB	**Milas**	**1.20**	**281**	*e*PN	**Pn**	**19 31 53.9**	**-1.1**
MLSB	**Milas**	**1.20**	**281**	*e*Pn	**Pn**	**19 31 53.9**	**-1.1**
AYDN	**Tasoluk**	**1.25**	**299**	*i*P	**Pn**	**19 31 55.1**	**-0.5**
AYDN				*i*S	**Sb**	**19 32 12.5**	**+0.7**
AYDN	**Tasoluk**	**1.25**	**299**	*i*P	**Pn**	**19 31 55.1**	**-0.5**
AYDN				*i*S	**Sb**	**19 32 12.5**	**+0.7**
DAT	**Datca**	**1.39**	**256**	*e*PN	**Pn**	**19 31 57.8**	**+0.2**
DAT	**Datca**	**1.39**	**256**	*e*Pn	**Pn**	**19 31 57.8**	**+0.2**
BDRM	**Kayabasi**	**1.45**	**270**	*i*P	**Pn**	**19 31 58.7**	**+0.3**
BDRM				*i*S	**Sn**	**19 32 14.4**	**-2.6**
BDRM	**Kayabasi**	**1.45**	**270**	*i*P	**Pn**	**19 31 58.7**	**+0.3**
BDRM				*i*S	**Sn**	**19 32 14.4**	**-2.5**

*IDC **21** 19:35:07.0±1.3, 20°.93N×121°.38E, h0km, mb3.5/8, mb1 3.7/9, mb1mx3.6/22, mbtmp3.5/9, ML3.6/1, Error ellipse: s-maj=27.9km s-min=26.6km az=107.0*
*NEIC **21** 19:35:08.9±1.0, 21°.11N×121°.34E, h10km, mb3.9/1, Error ellipse: s-maj=21.0km s-min=14.0km az=99.0*
*ISCJB **21** 19:35:10.3±0.9, 21°.11N±0°.09×121°.3E±0°.1, h33km, mb3.4/8, Error ellipse: s-maj=18.3km s-min=12.2km az=11.9*

ISC 21 19:35:13.6±1.3, 21°.3N±0°.1×121°.3E±0°.1, h35km, n17, σ1s08/17, mb3.4/8, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**1.57**	**353**	*eP*	**Pn**	**19 35 35.8**	**-3.3**
TPUB	**Ta-pu**	**2.12**	**344**	*eP*	**Pn**	**19 35 45.6**	**-1.1**
YULB	**Yu-li**	**2.13**	**1**	*eP*	**Pn**	**19 35 45.1**	**-1.6**
SSLB	**Suanglung**	**2.54**	**353**	*eP*	**Pn**	**19 35 51.6**	**-0.7**
NACB	**Ninganchiao**	**2.92**	**6**	*eP*	**Pn**	**19 35 57.7**	**+0.1**
YHNB	**Yeheng**	**3.41**	**2**	*eP*	**Pn**	**19 36 04.3**	**+0.1**
KSRS	**Korea Array**	**17.15**	**18**	P	**Pn**	**19 39 10.3**	**-0.1**
	0.2nm,0.3s,baz=200,slow=11,SNR=4.3						
BJT	**Baijiatuau**	**19.21**	**348**	*eP*	**Pn**	**19 39 35.8**	**+0.2**
	5.7nm,0.8s						
CMAR	**Chiang Mai Arr**	**21.18**	**266**	P	**P**	**19 39 54.8**	**-1.3**
	1.2nm,0.8s,mb3.2,baz=77,slow=8.9,SNR=7.7						
MJAR	**Matsushiro Arr**	**21.21**	**40**	P	**P**	**19 39 56.9**	**+0.7**
	1.5nm,0.8s,mb3.4,baz=228,slow=8.0,SNR=6.0						
SONM	**Songino Array**	**29.11**	**339**	P	**P**	**19 41 12.8**	**+1.9**
	1.0nm,0.7s,mb3.7,baz=153,slow=9.1,SNR=8.0						
MKAR	**Makanchi Array**	**40.53**	**318**	P	**P**	**19 42 51.1**	**+1

AAK Lg 19 50 31.6
comp=E,1.6nm,0.3s,baz=353,slow=19,SNR=4.9
AAK LR LR 19 51 24.1
comp=E,84nm,18.4s,baz=96,slow=40
AAK Ala-Archa 5.28 46 *e*P **Pn 19 49 09.6 +0.9**
comp=E,26nm,0.3s
KZA Kyzart 5.40 54 P **Pn 19 49 11.6 +1.2**
SNR=12
KBK Karagaybulak 5.55 48 P **Pn 19 49 14.1 +1.6**
SNR=12
CHMS Chumysh 5.66 44 P **Pn 19 49 14.7 +0.7**
SNR=7.8
USP Ospenovka 5.71 41 P **Pn 19 49 14.9 +0.2**
SNR=13
TKM2 Tokmak 2 6.09 49 ⇑Pn **Pn 19 49 18.7 -1.2**
comp=E,5.2nm,0.4s
TKM2 ⇓Sn **Sn 19 50 30.1 +0.4**
comp=E,18nm,0.6s
TKM2 ⇑Lg 19 51 04.4
comp=E,26nm,0.9s
TKM2 Tokmak 2 6.09 49 P **Pn 19 49 18.9 -1.0**
SNR=7.9
TKM2 Tokmak 2 6.09 49 *e*P **Pn 19 49 18.7 -1.2**
comp=E,10nm,0.4s
AB31 Akbulak array 12.20 330 Pn **Pn 19 50 44.4 +0.8**
comp=E,1.5nm,0.3s,baz=163,slow=12,SNR=61
AB31 ⇓Sn **Sn 19 53 00.2 +0.6**
comp=E,1.9nm,0.4s,baz=154,slow=22,SNR=11
ABKAR Akbulak array 12.20 330 *e*P **Pn 19 50 44.2 +0.7**
comp=E,3.4nm,0.4s
MK31 Makanchi Array 12.22 47 *e*P **Pn 19 50 44.2 +0.4**
MKAR Makanchi Array 12.22 47 Pn **Pn 19 50 43.0 -0.7**
comp=E,0.2nm,0.3s,baz=230,slow=13,SNR=4.6
MKAR Lg 19 54 21.9
comp=E,0.1nm,0.3s,baz=243,slow=27,SNR=2.9
VOSK Vostochnaya 13.70 4 ⇓Pn **Pn 19 51 02.9 -1.0**
comp=E,1.1nm,0.6s
VOSK ⇓Sn **Sn 19 53 34.6 -1.5**
comp=E,4.2nm,1.1s
ZRNK Zerenda 13.88 359 ⇑Pn **Pn 19 51 06.0 -0.5**
comp=E,1.5nm,0.7s
ZRNK ⇓Sn **Sn 19 53 39.3 -1.3**
comp=E,3.6nm,1.0s
AKTK Aktyubinsk 13.90 328 Pn **Pn 19 51 07.9 +1.2**
AKTK Sn **Sn 19 53 41.7 +0.6**
AKTO Aktyubinsk 13.90 328 Pn **Pn 19 51 07.9 +1.2**
comp=E,0.2nm,0.3s,baz=134,slow=16,SNR=6.9
AKTO Sn **Sn 19 53 41.7 +0.6**
comp=E,0.2nm,0.3s,baz=320,slow=18,SNR=3.9
BVAR Borovoye Array 13.97 3 Pn **Pn 19 51 06.7 -1.0**
comp=E,0.2nm,0.3s,baz=168,slow=14,SNR=3.9
BVAR Sn **Sn 19 53 39.6 -3.2**
comp=E,0.3nm,0.3s,baz=184,slow=21,SNR=3.7
ZAA0 Zalesovo Array 18.23 30 *e*P **Pn 19 52 00.6 -2.2**
ZALV Zalesovo Beam 18.23 30 P **Pn 19 52 00.8 -2.0**
comp=E,0.4nm,0.3s,baz=219,slow=12,SNR=11
FINES FINESS Array B 34.62 325 P **P 19 54 39.3 +0.5**
comp=E,2.5nm,0.9s,mb4.1,baz=120,slow=11,SNR=4.0
ARCES ARCESS Array B 38.26 337 P **P 19 55 09.9 +0.1**
comp=E,1.0nm,0.7s,mb3.6,baz=123,slow=8.8,SNR=4.1
HFS Hagfors 40.24 320 P **P 19 55 26.3 -0.2**
baz=83,slow=12
NOA NORSAR Array B 41.54 321 P **P 19 55 37.6 +0.4**
comp=E,0.4nm,0.5s,mb3.3,baz=93,slow=8.8,SNR=3.4
TORD Torodi Ar. Bea 64.52 266 P **P 19 58 25.8 -1.4**
comp=E,0.8nm,0.6s,mb4.0,baz=43,slow=5.5,SNR=4.8
ILAR Eielson Array 72.66 15 P **P 19 59 15.0 -2.3**
comp=E,0.3nm,0.6s,mb3.4,baz=318,slow=6.2,SNR=4.3

NIED ***21*** *19:58:00,43.°10N×146.°10E,h47km,Mw3.7 Best double couple: M*$_0$*=2.1000×10*^{14} *NP1:*ϕ_S*=74.00000°,*δ*68.00000°,*λ*111.00000°. NP2:*ϕ_S*=208.00000°,*δ*30.00000°,*λ*48.00000°.*
ISCJB ***21*** *19:58:26.5±0.9,43.°13N±0.°07×146.°15E±0.°07,h56km±6km, mb3.6/8,Error ellipse: s-maj=13.3km s-min=6.6km az=150.1*
JMA ***21*** *19:58:27.6±0.1,43.°15N×146.°09E,h48km±1km,M3.8*
JMA Felt I J1.
MOS ***21*** *19:58:28.1±1.5,43.°16N×146.°07E,h75km,mb4.1/4,Error ellipse: s-maj=19.1km s-min=13.5km az=63.0*
IDC ***21*** *19:58:29.4±2.7,42.°96N×146.°16E,h79km±21km,mb3.4/8, mb1 3.6/11,mb1mx3.4/24,mbtmp3.4/11,MS2.5/1, Ms1 2.5/1,ms1mx2.0/33,Error ellipse: s-maj=32.2km s-min=18.6km az=2.0*
NEIC ***21*** *19:58:30.3±1.1,42.°99N×146.°15E,h86km±12km, MG3.8(JMA),Error ellipse: s-maj=24.7km s-min=10.9km az=149.0*

ISC 21 19:58:27.6±0.9,43.°16N±0.°07×146.°14E±0.°07,h50km±6km, n26,σ0°65/34,mb3.6/8,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.36**	**306**	P		**Pn**	**19 58 36.9**	**-0.3**
NEM2				*e*S		**Sn**	**19 58 43.4**	**-0.7**
JAK	**Akkeshi**	**1.07**	**262**	P		**Pn**	**19 58 45.9**	**-0.3**
JAK				*e*S		**Sn**	**19 58 59.5**	**-0.5**
JRA	**Rausu**	**1.08**	**317**	P		**Pn**	**19 58 46.4**	**+0.1**
JRA				*e*S		**Sn**	**19 59 00.3**	**+0.1**
JNK	**Nakash**	**1.12**	**293**	P		**Pn**	**19 58 46.4**	**-0.5**
JNK				*e*S		**Sn**	**19 59 00.4**	**-0.9**
JOB	**Onbets**	**1.71**	**262**	P		**Pn**	**19 58 55.0**	**+0.1**
JOB				*e*S		**Sn**	**19 59 15.8**	**+0.2**
JAR	**Ashorobuto**	**1.74**	**276**	P		**Pn**	**19 58 55.5**	**+0.2**
JAR				*e*S		**Sn**	**19 59 16.6**	**+0.3**
JTKR	**Abashiri--Toko**	**1.82**	**297**	P		**Pn**	**19 58 57.2**	**+0.8**
JTKR				*e*S		**Sn**	**19 59 18.6**	**+0.4**
KUR	**Kuril'sk**	**2.42**	**30**	PN		**Pn**	**19 59 05.0**	**+0.3**
KUR				S		**Sn**	**19 59 33.0**	**-0.1**
KUR				pmax	pmax			
comp=Z,80nm,0.4s
KUR smax
comp=N,420nm,0.5s
KUR smax
comp=E,160nm,0.5s
ERM Erimo 2.48 244 *e*PN **Pn 19 59 09.1 +3.6**
ASAJ Asahikawa 2.75 292 P **Pn 19 59 10.8 +1.7**
comp=E,4.9nm,0.3s,baz=112,slow=13,SNR=35
ASAJ S **Sn 19 59 46.8 +5.7**
comp=E,6.7nm,0.3s,baz=250,slow=29,SNR=7.9
MJAR Matsushiro Arr 8.99 225 P **Pn 20 00 34.5 -0.2**
comp=E,0.1nm,0.3s,baz=55,slow=11,SNR=3.1
MJAR LR LR 20 04 19.7
comp=E,32nm,19.4s,baz=225,slow=40
PETK Petropavlovsk- 12.58 34 P **Pn 20 01 27.4 +3.7**
baz=182,slow=8.7,SNR=3.1
SONM Songino Array 28.03 294 P **P 20 04 13.9 +0.2**
comp=E,0.5nm,0.5s,mb3.4,baz=86,slow=8.1,SNR=4.8
SONM Songino Array 28.03 294 P **P 20 04 13.9 +0.2**
SONM pmax pmax
comp=Z,1.0nm,0.5s
ZALV Zalesovo Beam 40.77 307 PcP PcP 20 08 03.4 -0.4
comp=Z,0.2nm,0.3s,baz=79,slow=3.1,SNR=3.7
ILAR Eielson Array 42.40 36 P **P 20 06 16.8 +0.1**
comp=Z,0.4nm,0.4s,mb3.4,baz=274,slow=10.0,SNR=7.9
MK31 Makanchi Array 44.21 298 *e*P **P 20 06 31.5 0.0**
MKAR Makanchi Array 44.21 298 P **P 20 06 31.3 -0.2**
comp=Z,0.4nm,0.3s,mb3.7,baz=80,slow=9.7,SNR=5.9
FINES FINESS Array B 65.07 333 P **P 20 09 01.6 -0.8**
comp=Z,1.2nm,0.6s,mb4.1,baz=47,slow=7.4,SNR=9.1
FINES FINESS Array B 65.07 333 P **P 20 09 01.6 -0.7**
FINES pmax pmax
comp=Z,1.0nm,0.6s
NOA NORSAR Array B 69.89 338 P **P 20 09 32.7 0.0**
comp=Z,0.7nm,0.8s,mb3.6,baz=51,slow=8.5,SNR=2.8
NOA NORSAR Array B 69.89 338 P **P 20 09 32.7 -0.1**
NOA pmax pmax
comp=Z,1.0nm,0.8s
PDAR Pinedale Array 70.86 49 P **P 20 09 38.1 -0.9**
comp=Z,0.3nm,0.8s,mb3.3,baz=276,slow=2.6,SNR=2.8
AKASG Malin Array Be 71.62 323 P **P 20 09 42.8 -0.7**
comp=Z,0.8nm,0.3s,mb4.1,baz=38,slow=5.9,SNR=8.4
AKASG Malin Array Be 71.62 323 P **P 20 09 42.8 -0.7**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
TXAR Lajitas Array 83.59 56 P **P 20 10 51.4 +0.8**
comp=Z,0.4nm,0.7s,mb3.7,baz=312,slow=4.4,SNR=5.6

CASC 21 20:00:22.3±1.9,8.°53N×83.°69W,h20km±12km,MD3.9, 4C-2D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.53**	**76**	⇓*i*P		Pb	20 00 32.3	-0.6
ACR				*e*S		Sb	20 00 40.5	+0.5
BAR1		**0.80**	**27**	⇑*e*P		Pb	20 00 37.5	-0.1
BAR1				*e*P			20 00 37.5	
QCR	**Quepos**	**1.01**	**332**	⇑*e*P		Pb	20 00 40.1	-1.0
BRU2	**Volcan**	**1.02**	**75**	⇓*i*P		Pb	20 00 40.9	-0.4
BRU2				*e*S		Sb	20 00 55.9	+1.7
BUS	**Buena Vista**	**1.02**	**356**	⇑*i*P		Pb	20 00 41.4	0.0
URSC	**Urasca**	**1.30**	**356**	*e*P		Pn	20 00 45.7	+0.3
URSC				*e*S		Sn	20 01 03.1	+0.9
LAJ	**Bijagual**	**1.39**	**342**	*e*P		Pn	20 00 46.4	-0.2
PRS1	**Puriscal**	**1.57**	**337**	*e*P		Pn	20 00 47.9	-1.2
CGA2	**Cerro Gallo 2**	**1.67**	**333**	*e*P		Pn	20 00 51.0	+0.7
JCR	**Jicaral**	**1.93**	**313**	*e*P		Pn	20 00 55.2	+1.3
VCR	**Vista de Mar**	**2.49**	**310**	⇑*e*P		Pn	20 01 02.3	+0.6

CSEM ***21*** *20:02:57.4±0.8,70.°69N×14.°31W,h10km,ML3.5,Error ellipse: s-maj=21.0km s-min=9.6km az=67.0*
REY ***21*** *20:02:59.7,70.°26N×12.°88W,h10km,ML3.5,ML3.2*

ISC 21 20:02:57.4±1.4,70.°70N±0.°06×14.°4W±0.°3,h10km,n13, σ0°98/24,Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SCO	**Scoresbysund**	**2.54**	**269**	*i*P		**Pn**	**20 03 39.1**	**+0.5**
SCO				*i*S		**Sn**	**20 04 03.3**	**-6.3**
ILEI	**Leirhofn**	**4.38**	**191**	P		**Pn**	**20 04 03.0**	**-0.8**
IGRI	**Grimsey**	**4.38**	**199**	P		**Pn**	**20 04 04.6**	**+0.8**
IGRI				S		**Sn**	**20 04 55.6**	**+0.8**
IGIL	**Gilhagi**	**4.70**	**190**	P		**Pn**	**20 04 07.4**	**-0.8**
IGIL				S		**Sn**	**20 05 01.3**	**-1.3**
IFLA	**Flatey**	**4.73**	**197**	P		**Pn**	**20 04 09.5**	**+0.8**
IFLA				S		**Sn**	**20 05 02.6**	**-0.9**
IHED	**Heoinshofoi**	**4.76**	**195**	P		**Pn**	**20 04 08.9**	**-0.2**
IHED				S		**Sn**	**20 05 03.1**	**-1.1**
IBRE	**Brettingsstaoi**	**4.78**	**198**	P		**Pn**	**20 04 09.8**	**+0.5**
IBRE				S		**Sn**	**20 05 05.1**	**+0.5**
ISIG	**Siglufjorour**	**4.88**	**202**	P		**Pn**	**20 04 12.4**	**+1.7**
ISIG				S		**Sn**	**20 05 08.6**	**+1.4**
IGRA	**Granastaoir**	**4.95**	**195**	P		**Pn**	**20 04 12.2**	**+0.6**
IGRA				S		**Sn**	**20 05 09.2**	**+0.5**
IHLA	**Hella**	**5.00**	**199**	P		**Pn**	**20 04 13.6**	**+1.3**
IHLA				S		**Sn**	**20 05 10.3**	**+0.2**
IGRS	**Grimsstaoir**	**5.12**	**188**	P		**Pn**	**20 04 13.3**	**-0.7**
IGRS				S		**Sn**	**20 05 11.1**	**-2.0**
IADA	**Aoalbol**	**5.72**	**185**	P		**Pn**	**20 04 21.6**	**-0.6**
SUMG	**Summit**	**7.81**	**295**	*i*P		**Pn**	**20 04 57.1**	**+6.3**
SUMG				*e*S		**Sn**	**20 06 17.8**	**-1.3**

WEL 21 20:03:00.2±0.1,39.°85S×176.°98E,h39km±1km,ML4.2/22, 14C-1D,Error ellipse: s-maj=1.7km s-min=0.9km az=90.0,North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KAHZ	**Kahuranaki**	**0.10**	**305**	⇓PN		Pn	20 03 06.3	-0.4
KAHZ				SN		Sn	20 03 11.3	+0.1
PXZ	**Pawanui**	**0.20**	**207**	⇑PN		Pn	20 03 07.8	+0.4
PXZ				SN		Sn	20 03 13.9	+1.5
CKHZ	**Cape Kidnapper**	**0.20**	**21**	⇑PN		Pn	20 03 07.3	-0.1
CKHZ				SN		Sn	20 03 12.7	+0.3
MCHZ	**McNeill Hill**	**0.46**	**332**	⇑PN		Pn	20 03 10.1	-0.3
WPHZ	**Waipukurau**	**0.47**	**243**	⇑PN		Pn	20 03 10.8	+0.3
PRHZ	**Porangahau**	**0.49**	**212**	⇑PN		Pn	20 03 11.4	+0.5
PNHZ	**Pukenui**	**0.60**	**264**	PN		Pn	20 03 12.3	0.0
NMHZ	**Naumai**	**0.76**	**350**	⇑PN		Pn	20 03 14.7	+0.2
DVHZ	**Dannevirke**	**0.77**	**234**	⇑PN		Pn	20 03 14.8	+0.2
BKZ	**Black Stump Fm**	**0.78**	**331**	⇑PN		Pn	20 03 14.5	-0.2
TSZ	**Takapari Road**	**0.81**	**255**	⇑PN		Pn	20 03 15.1	0.0
RAHZ	**Arahi**	**0.94**	**5**	⇑PN		Pn	20 03 16.9	0.0
KNZ	**Kokohu**	**0.99**	**33**	⇑PN		Pn	20 03 17.4	-0.2
MHGZ	**Mahia Peninsul**	**1.00**	**46**	PN		Pn	20 03 17.6	-0.1
BFZ	**Birch Farm**	**1.00**	**214**	⇑PN		Pn	20 03 17.8	0.0
MOVZ	**Moawhango**	**1.05**	**295**	⇑PN		Pn	20 03 18.7	+0.3
POWZ	**Post Office Ro**	**1.08**	**239**	PN		Pn	20 03 18.6	-0.2
PRGZ	**Paritu Road**	**1.16**	**37**	PN		Pn	20 03 19.8	-0.2
HATZ	**Hinemaiaia**	**1.18**	**324**	PN		Pn	20 03 20.5	+0.3
TUVZ	**Tukino**	**1.18**	**299**	*e*PN		Pn	20 03 21.3	+1.1
WNVZ	**Wahianoa**	**1.19**	**296**	PN		Pn	20 03 21.2	+0.9
OTVZ	**Oturere**	**1.23**	**304**	PN		Pn	20 03 21.3	+0.4
RITZ	**Rihia Road**	**1.23**	**315**	PN		Pn	20 03 21.4	+0.5
DRZ	**Dome Shelter**	**1.24**	**297**	PN		Pn	20 03 22.8	+1.8
TRVZ	**Turoa**	**1.24**	**296**	PN		Pn	20 03 22.2	+1.2
TIWZ	**Tintock**	**1.25**	**222**	PN		Pn	20 03 21.1	-0.1
MTVZ	**Mangateitei**	**1.26**	**291**	PN		Pn	20 03 22.3	+1.0
NGZ	**Ngauruhoe**	**1.26**	**302**	PN		Pn	20 03 22.2	+0.8
KRVZ	**Karewarewa**	**1.28**	**306**	PN		Pn	20 03 22.4	+0.8
WPVZ	**Whakapapa**	**1.28**	**300**	*e*PN		Pn	20 03 21.8	+0.2
WTVZ	**West Tongariro**	**1.30**	**304**	PN		Pn	20 03 22.7	+0.8
KATZ	**Kakaramea**	**1.33**	**311**	PN		Pn	20 03 22.8	+0.6
MRZ	**Mangatainoka R**	**1.34**	**233**	PN		Pn	20 03 22.3	-0.2
RATZ	**Rangitukua**	**1.36**	**316**	PN		Pn	20 03 23.3	+0.6
ALRZ	**Allen Road**	**1.38**	**339**	PN		Pn	20 03 22.5	-0.4
WHTZ	**Whakaora**	**1.43**	**326**	PN		Pn	20 03 23.9	+0.4
PRRZ	**Plateau Road**	**1.43**	**341**	PN		Pn	20 03 23.4	-0.2
TWVZ	**Taurewa**	**1.43**	**303**	PN		Pn	20 03 24.3	+0.8
TMWZ	**Te Maipa**	**1.51**	**213**	PN		Pn	20 03 23.6	-1.1
HOWZ	**Holdsworth Sta**	**1.53**	**226**	PN		Pn	20 03 24.4	-0.6
WAZ	**Wanganui**	**1.54**	**273**	PN		Pn	20 03 27.0	+1.8
RRRZ	**Republican Roa**	**1.55**	**346**	PN		Pn	20 03 25.1	-0.3
HRRZ	**Handcock Road**	**1.56**	**339**	PN		Pn	20 03 25.5	+0.1
MWZ	**Matawai**	**1.57**	**16**	PN		Pn	20 03 24.8	-0.8
URZ	**Urewera**	**1.59**	**4**	⇑PN		Pn	20 03 25.4	-0.5
TARZ	**Mount Tarawera**	**1.66**	**347**	PN		Pn	20 03 27.1	+0.3
CNGZ	**Carnagh Statio**	**1.66**	**35**	PN		Pn	20 03 26.5	-0.3
OGWZ	**Otaki Gorge**	**1.69**	**235**	PN		Pn	20 03 26.7	-0.5
MTWZ	**Mount Morrison**	**1.73**	**220**	PN		Pn	20 03 26.6	-1.1
OMRZ	**Omania**	**1.81**	**345**	PN		Pn	20 03 28.6	-0.2
TRWZ	**Traveller**	**1.83**	**212**	PN		Pn	20 03 27.7	-1.4
KIW	**Kapiti Island**	**1.88**	**237**	PN		Pn	20 03 29.7	-0.1
CAW	**Cannon Point**	**1.93**	**229**	PN		Pn	20 03 29.7	-0.8
PAWZ	**Paruwai Farm**	**1.93**	**217**	PN		Pn	20 03 29.4	-1.2
OPRZ	**Ohinepanea**	**2.03**	**350**	PN		Pn	20 03 31.5	-0.4
PUZ	**Puketiti**	**2.04**	**30**	PN		Pn	20 03 30.9	-1.1
MSWZ	**Moikau Station**	**2.04**	**220**	PN		Pn	20 03 30.4	-1.6
HIZ	**Hauiti**	**2.12**	**308**	PN		Pn	20 03 33.7	+0.5
PLWZ	**Palliser**	**2.16**	**217**	PN		Pn	20 03 31.9	-1.8
BHW	**Baring Head**	**2.24**	**225**	PN		Pn	20 03 33.1	-1.7
SNZO	**South Karori**	**2.27**	**229**	PN		Pn	20 03 34.0	-1.1
TCW	**Tory Channel**	**2.47**	**236**	PN		Pn	20 03 36.7	-1.2
MXZ	**Matakaoa Point**	**2.51**	**25**	PN		Pn	20 03 38.0	-0.5
DUWZ	**D'Urville Isla**	**2.52**	**247**	PN		Pn	20 03 38.2	-0.5
TUWZ	**Tuamarina**	**2.80**	**235**	PN		Pn	20 03 40.9	-1.6
NNZ	**Nelson**	**3.07**	**242**	PN		Pn	20 03 44.9	-1.2
MKAZ	**Moumakai**	**3.08**	**332**	PN		Pn	20 03 46.7	+0.3
KUZ	**Kuaotunu**	**3.25**	**342**	PN		Pn	20 03 48.8	0.0
QRZ	**Quartz Range**	**3.54**	**253**	PN		Pn	20 03 52.3	-0.3
THZ	**Tophouse**	**3.64**	**237**	PN		Pn	20 03 52.2	-1.7
KHZ	**Kahutara**	**3.65**	**224**	PN		Pn	20 03 51.6	-2.6
LTZ	**Lake Taylor**	**4.60**	**229**	PN		Pn	20 04 04.7	-2.5
MQZ	**McQueen's Vall**	**5.03**	**219**	PN		Pn	20 04 10.1	-3.0
RPZ	**Rata Peaks**	**5.88**	**227**	PN		Pn	20 04 22.6	-2.2
CTZ	**Chatham Island**	**6.16**	**131**	PN		Pn	20 04 29.7	+1.1
LBZ	**Lake Benmore**	**6.79**	**226**	PN		Pn	20 04 35.9	-1.3
ODZ	**Otahua Downs**	**6.99**	**220**	PN		Pn	20 04 37.3	-2.7
EAZ	**Earnscleugh**	**7.81**	**224**	PN		Pn	20 04 49.0	-2.2
TUZ	**Tuapeka**	**8.14**	**219**	PN		Pn	20 04 53.9	-1.9
SYZ	**Scrubby Hill**	**8.80**	**218**	PN		Pn	20 05 03.8	-1.0

IDC 21 20:12:32.8±8.7,2.°50S×135.°70E,h0km,mb3.8/3, mb1 3.9/3,mb1mx3.5/16,mbtmp3.8/3,Error ellipse: s-maj=489.0km s-min=31.4km az=81.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**21.11**	**185**	P		P	20 17 19.2	+0.1
5.1nm,0.7s,baz=5.6,slow=11,SNR=35
MKAR Makanchi Array 67.81 323 P P 20 23 32.7 +0.1
0.3nm,0.3s,baz=112,slow=8.2,SNR=4.5
ZALV Zalesovo Beam 70.27 331 P P 20 23 47.9 +0.1
0.2nm,0.4s,baz=130,slow=7.8,SNR=2.7

IDC ***21*** *20:14:39.3±0.5,23.°25S×175.°38W,h0km,mb4.7/16, mb1 4.9/17,mb1mx4.8/20,mbtmp4.7/17,ML4.0/1,MS4.4/13, Ms1 4.4/13,ms1mx4.1/23,Error ellipse: s-maj=20.0km s-min=15.3km az=149.0*
ISCJB ***21*** *20:14:43.3±0.3,23.°41S±0.°05×175.°35W±0.°06,h33km, mb5.0/66,MS4.5/26,Error ellipse: s-maj=8.9km s-min=6.3km az=38.1*
MOS ***21*** *20:14:44.4±1.0,23.°18S×175.°51W,h38km,mb5.0/14, MS4.5/8,Error ellipse: s-maj=13.4km s-min=12.4km az=3.4*
DJA ***21*** *20:14:47,23.°47S×175.°98W,h20km,mb5.2/14*
BJI ***21*** *20:14:48.9,23.°22S×174.°83W,h86km,mB5.4/22, mb5.1/34,Ms5.1/19,Ms7 4.9/18*
NEIC ***21*** *20:14:48.5±1.7,23.°36S×175.°40W,h66km±14km,mb4.8/30, Error ellipse: s-maj=10.9km s-min=8.2km az=138.0*
SZGRF ***21*** *20:14:52.5,23.°32S×174.°71W,h33km,Tonga Islands region*

ISC 21 20:14:45.2±0.3,23.°37S±0.°05×175.°35W±0.°06,h35km, (h76km±5.1km:pP-P),n213,σ1°12/123,mb5.0/66,MS4.5/26, 26C-5D,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**6.30**	**201**	Sn		**Sn**	**20 17 25.2**	**-1.1**
63nm,0.3s,baz=53,slow=20,SNR=2.7
MSVF Nonsavu 8.34 311 *e*P **Pn 20 16 47.7 +4.0**
MSVF pmax pmax
comp=Z,354nm,1.1s
MSVF Nonsavu 8.34 311 *e*P **Pn 20 16 47.7 +4.0**
comp=Z,354nm,1.1s
AFI Afiamalu 9.99 20 Pn **Pn 20 16 59.1 -7.3**
comp=Z,6.2nm,0.3s,baz=271,slow=15,SNR=5.6
AFI Sn **Sn 20 18 43.4 -14**
comp=Z,5.5nm,0.3s,baz=0.0,slow=20,SNR=3.0
AFI Afiamalu 9.99 20 Pn **Pn 20 16 59.1 -7.3**
AFI Sn **Sn 20 18 43.4 -14**
RAR Rarotonga 14.58 85 Pn **Pn 20 17 57.6 -11**
comp=Z,3.7nm,0.3s,baz=233,slow=7.7,SNR=13
RAR Sn Sn 20 20 23.4 -26
comp=Z,2.1nm,0.3s,baz=103,slow=19,SNR=4.6
RAR LR LR 20 21 44.7
comp=Z,1μm,21.2s,baz=323,slow=29
URZ Urewera 16.19 202 Pn **Pn 20 18 30.8 +0.8**
comp=Z,0.6nm,0.3s,baz=1.0,slow=6.7,SNR=7.1
URZ Sn **Sn 20 21 17.6 -11**
comp=Z,0.8nm,0.3s,baz=174,slow=18,SNR=3.4
DZM Mont Dzumac 16.85 271 *e*P **Pn 20 18 44.4 +6.0**
comp=Z,164nm,1.4s
DZM *e*LR LR 20 22 46.9
comp=Z,1μm,21.8s
TBI Tubuai 23.76 95 *e*LQ 20 24 17.3
comp=Z,976nm,27.5s
TBI *e*LR LR 20 25 23.9
comp=Z,2μm,22.0s,baz=270
PPT Papeete 24.80 81 *e*LQ 20 24 40.2
comp=Z,1μm,25.0s
PPT *e*LR LR 20 25 49.0
comp=Z,2μm,21.5s,baz=251
PPT Papeete 24.80 81 LR LR 20 27 28.0
comp=Z,1μm,20.1s,MS4.5,baz=270,slow=31
HNR Honiara 27.39 296 LR LR 20 29 49.8
comp=Z,313nm,20.6s,MS3.9,baz=316,slow=33
CTA Charters Tower 35.75 268 *e*P **P 20 21 39.9 -1.1**
comp=Z,13nm,0.8s,mb4.9
CTA Charters Tower 35.75 268 P **P 20 21 40.5 -0.4**
comp=Z,12nm,0.6s,mb5.0,baz=88,slow=11,SNR=20
CTAO Charters Tower 35.75 268 *e*P **P 20 21 40.0 -1.0**
CTAO pmax pmax
comp=Z,30nm,1.0s,mb5.2
CTAO Charters Tower 35.75 268 *e*P **P 20 21 40.0 -1.0**
comp=Z,30nm,1.0s,mb5.2
CTAO Charters Tower 35.75 268 P **P 20 21 40.8 -0.2**
comp=Z,30nm,1.3s,mb5.1
RKT Rikitea 37.02 98 *e*LR LR 20 31 30.7
comp=Z,1μm,23.2s,baz=264
PMG Port Moresby 38.42 285 *e*P **P 20 22 01.8 -1.9**
PMG pmax pmax
comp=Z,48nm,0.9s
PMG Port Moresby 38.42 285 *e*P **P 20 22 01.8 -1.9**
comp=Z,48nm,0.9s,mb5.2
PMG Port Moresby 38.42 285 P **P 20 22 02.3 -1.4**
STKA Stephens Creek 38.88 248 *e*P **P 20 22 06.4 -0.9**
comp=Z,6.4nm,1.0s,mb4.3
STKA Stephens Creek 38.88 248 P **P 20 22 06.5 -0.9**
comp=Z,8.3nm,1.0s,mb4.4,baz=72,slow=8.0,SNR=7.8
STKA LR LR 20 36 13.4
comp=Z,456nm,19.8s,MS4.3,baz=50,slow=33
STKA Stephens Creek 38.88 248 P **P 20 22 06.5 -0.8**
STKA pmax pmax
comp=Z,8.0nm,1.0s
STKA MLR MLR
comp=Z,456nm,19.8s
STKA Stephens Creek 38.88 248 *e*P **P 20 22 06.7 -0.6**
comp=Z,3.3nm,1.2s
ASAR Alice Springs 46.33 259 P **P 20 23 06.9 -1.1**
comp=Z,10nm,1.0s,mb4.7,baz=93,slow=7.9,SNR=44
ASAR S **S 20 29 54.0 +0.9**
comp=Z,0.3nm,0.9s,baz=101,slow=12,SNR=3.6
WRAB Tennant Creek 46.69 264 *e*P **P 20 23 09.5 -1.4**
WRAB pmax pmax
comp=Z,33nm,1.4s,mb5.1
WRAB Tennant Creek 46.69 264 *e*P **P 20 23 09.5 -1.4**
comp=Z,33nm,1.4s,mb5.1
WRAB Tennant Creek 46.69 264 P **P 20 23 09.2 -1.7**
comp=Z,20nm,2.0s,mb4.7
FORT Forrest 50.49 249 *e*P **P 20 23 38.1 -1.8**
comp=Z,22nm,0.9s,mb5.2
FORT Forrest 50.49 249 *e*P **P 20 23 38.4 -1.6**
comp=Z,24nm,0.8s,mb5.3
KAKA Kakadu 50.53 273 P **P 20 23 38.3 -2.1**
comp=Z,248nmcomp=Z,23nm,1.1s,mb5.0
KNA Kununurra 52.94 267 P **P 20 23 57.7 -0.7**
comp=Z,992nmcomp=Z,146nm,1.0s,mb5.9
GUMO Guam 53.51 309 LR LR 20 43 49.7
comp=Z,199nm,19.5s,MS4.2,baz=319,slow=33
FITZ Fitzroy Crossi 55.12 264 *e*P **P 20 24 09.8 -4.6**
comp=Z,25nm,1.0s,mb5.2
FITZ Fitzroy Crossi 55.12 264 *e*P **P 20 24 13.5 -0.8**
comp=Z,11nm,1.0s,mb4.8
FITZ Fitzroy Crossi 55.12 264 P **P 20 24 14.0 -0.4**
comp=Z,40nm,1.0s,mb5.4
SBA Scott Base 55.21 185 *e*P **P 20 24 16.0 +1.9**
SBA *e* 20 24 30.1
SBA pmax pmax
comp=Z,16nm,1.0s,mb5.0
SBA Scott Base 55.21 185 *e*P **P 20 24 16.0 +1.9**
comp=Z,16nm,1.0s,mb5.0
SBA *e* 20 24 30.1
KLBR Kellerberrin 59.12 246 *e*P **P 20 24 40.3 -2.1**
comp=Z,33nm,1.0s,mb5.3
MBWA Marble Bar 59.66 258 P **P 20 24 45.3 -1.1**
TNTI Ternate 60.57 285 P **P 20 24 52.0 -0.7**
comp=Z,53nm,1.1s,mb5.6
CASY Casey 62.46 206 *e*P **P 20 25 04.6 0.0**
CASY Casey 62.46 206 *e*P **P 20 25 04.6

comp=Z,418nm,18.6s,MS4.8,baz=120,slow=35
MAW Mawson 79.70 199 P **P** **20 26 49.9 +0.9**
MAW pmax pmax
comp=Z,8.0nm,1.0s
MAW MLR MLR
comp=Z,419nm,18.6s
CMB Columbia Colle 79.94 41 *e*P **P** **20 26 50.1 -0.5**
CMB pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
CMB Columbia Colle 79.94 41 *e*P **P** **20 26 50.0 -0.6**
comp=Z,7.7nm,1.0s,mb4.6
WDC Whiskeytown Da 80.35 38 *e*P **P** **20 26 52.9 +0.1**
WDC pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
WDC Whiskeytown Da 80.35 38 *e*P **P** **20 26 52.9 +0.1**
comp=Z,7.7nm,1.2s,mb4.5
KSRS Korea Array 80.65 318 P **P** **20 26 54.9 +0.4**
comp=Z,7.1nm,1.0s,mb4.6,baz=139,slow=6.1,SNR=21
KSRS LR LR 20 56 07.5
comp=Z,158nm,21.1s,MS4.3,baz=315,slow=31
KSRS Korea Array 80.65 318 P **P** **20 26 54.9 +0.4**
KSRS pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
KSRS MLR MLR
comp=Z,158nm,21.1s,MS4.3
YBH Yreka Blue Hor 81.03 37 *e*P **P** **20 26 56.0 -0.4**
YBH pmax pmax
comp=Z,11nm,1.3s
YBH Yreka Blue Hor 81.03 37 *e*P **P** **20 26 56.0 -0.4**
comp=Z,10nm,1.3s,mb4.6
NVAR Mina Array Bea 81.46 42 P **P** **20 26 58.3 -0.5**
comp=Z,5.8nm,1.0s,mb4.5,baz=220,slow=8.8,SNR=14
HUMO Hull Mountain 81.49 36 *e*P **P** **20 26 59.1 +0.3**
comp=Z,10nm,1.2s,mb4.6
MYKOM Kota Tinggi 82.27 275 P **P** **20 27 04.9 +1.3**
comp=Z,566nmcomp=Z,26nm,1.3s,mb5.0
MOD Modoc 82.49 38 *e*P **P** **20 27 03.8 -0.3**
comp=Z,3.9nm,0.5s,mb4.6
NJ2 Nanjing 83.59 309 *e*P **P** **20 27 10.8 +0.8**
NJ2 pmax pmax
comp=Z,30nm,0.9s,mb5.4
WVOR Wild Horse Val 83.78 38 *e*P **P** **20 27 10.0 -0.7**
WVOR pmax pmax
comp=Z,12nm,1.1s,mb4.9
WVOR Wild Horse Val 83.78 38 *e*P **P** **20 27 10.0 -0.7**
comp=Z,12nm,1.1s,mb4.9
ARUT Antelope Range 84.13 45 *e*P **P** **20 27 13.2 +0.6**
ARUT pmax pmax
comp=Z,8.0nm,1.1s,mb4.8
ARUT Antelope Range 84.13 45 *e*P **P** **20 27 13.2 +0.6**
comp=Z,8.3nm,1.1s,mb4.8
HABR Khabarovsk 84.14 329 *e*P **P** **20 27 10.0 -2.4**
HABR *e* 20 37 37.8
HABR *e*SS SS 20 42 56.3 -8.5
HABR *e*SSS 20 46 26.7
HABR MLR MLR
comp=Z,137nm,18.0s,MS4.4
MDJ Mudanjiang 84.27 324 P **P** **20 27 13.9 +0.8**
MDJ pP pP 20 27 33.1 +8.9
MDJ PP PP 20 30 26.9 -1.5
MDJ S S 20 37 35.0 -1.0
MDJ sS sS 20 38 08.1 +14
MDJ SS SS 20 43 07.6 +0.8
MDJ pmax pmax
comp=Z,34nm,1.3s,mb5.3
MDJ pmax pmax
comp=Z,190nm,3.7s
MDJ LR LR
comp=N,47nm,24.7s,MS4.0
MDJ LR LR
comp=E,52nm,23.2s,MS4.0
MDJ LR LR
comp=Z,88nm,25.4s,MS4.0
MDJ Mudanjiang 84.27 324 *e*P **P** **20 27 13.9 +0.8**
comp=Z,18nm,0.9s,mb5.2
SYO Syowa Base 84.47 192⇑*e*P **P** **20 27 12.6 -1.3**
MSU Marysvale 85.36 45 *e*P **P** **20 27 19.5 +0.7**
MSU pmax pmax
comp=Z,9.0nm,1.2s,mb4.8
MSU Marysvale 85.36 45 *e*P **P** **20 27 19.5 +0.7**
comp=Z,8.8nm,1.2s,mb4.8
DL2 Dalian 85.49 316 P **P** **20 27 20.3 +0.8**
DL2 pmax pmax
comp=Z,20nm,1.0s,mb5.2
PLCA Paso Flores 85.53 133 P **P** **20 27 20.1 +0.3**
comp=Z,4.0nm,0.9s,mb4.6,baz=271,slow=4.5,SNR=3.6
PLCA LR LR 20 56 52.6
comp=Z,217nm,18.2s,MS4.6,baz=239,slow=30
MNSI Mandailing Nat 85.78 273 P **P** **20 27 21.6 0.0**
comp=Z,20nm,1.4s,mb5.2
VNA1 Neumayer--Stat 85.80 176 *e*P **P** **20 27 20.3 -0.3**
IPM Ipoh 85.92 277 P **P** **20 27 23.3 +1.1**
comp=Z,33nm,1.1s,mb5.5
BMO Blue Mountains 86.06 37 *e*P **P** **20 27 19.2 -2.8**
comp=Z,8.7nm,1.6s,mb4.7
CN2 Changchun 86.06 321 *e*P **P** **20 27 23.8 +1.7**
CN2 *e*pP pP 20 27 49.5 +16
CN2 *e*S S 20 37 49.0 -4.8
CN2 pmax pmax
comp=Z,10.0nm,0.8s,mb5.1
CN2 LR LR
comp=N,500nm,18.0s,MS5.1
CN2 LR LR
comp=E,500nm,18.0s,MS5.1
CN2 LR LR
comp=Z,500nm,20.0s,MS4.9
WHN Wuhan 86.11 305⇓P **P** **20 27 24.0 +1.3**
WHN S S 20 37 51.9 -3.0
WHN pmax pmax
comp=Z,32nm,0.8s,mb5.6
WHN LR LR
comp=Z,360nm,17.0s,MS4.8
KLR Kul'dur 86.24 328 *e*P **P** **20 27 20.0 -2.9**
MNTX Cornudas Mount 86.44 53 *e*P **P** **20 27 22.9 -1.4**
comp=Z,2.8nm,1.0s,mb4.5
LAZ Ladron 86.54 50 P **P** **20 27 25.6 +0.8**
comp=Z,1.2nm,0.6s,mb4.3
TXAR Lajitas Array 86.56 56 P **P** **20 27 24.3 -0.6**
comp=Z,3.1nm,1.0s,mb4.5,baz=208,slow=6.3,SNR=14
TXAR LR LR 20 58 12.3
comp=Z,254nm,21.0s,MS4.6,baz=310,slow=30
TXAR Lajitas Array 86.56 56 P **P** **20 27 24.3 -0.6**
TXAR LR LR 20 58 12.3
BNM Barren Site 86.78 51 *e*P **P** **20 27 27.4 +1.5**
comp=Z,2.5nm,1.0s,mb4.4
OD2 Odessa Site #2 86.90 35 *e*P **P** **20 27 25.7 -0.5**
comp=Z,8.9nm,1.0s,mb5.0
PSI Prapat 87.18 274 P **P** **20 27 27.0 -1.4**
comp=Z,33nm,1.0s,mb5.5,baz=181,slow=6.5,SNR=11
PSI Prapat 87.18 274 P **P** **20 27 27.0 -1.4**
ANMO Albuquerque 87.31 50 *e*P **P** **20 27 28.7 +0.2**
ANMO *e* pP 20 27 39.1 -0.5
ANMO pmax pmax
comp=Z,1.0nm,0.6s
ANMO Albuquerque 87.31 50 *e*P **P** **20 27 28.7 +0.2**
comp=Z,1.0nm,0.6s,mb4.2
ANMO *e* pP 20 27 39.1 -0.5
GDL2 Guadalupe Moun 87.44 53 *e*P **P** **20 27 29.4 +0.2**
comp=Z,6.9nm,1.1s,mb4.8
PDAR Pinedale Array 89.39 42 P **P** **20 27 36.6 -1.5**
comp=Z,1.7nm,1.0s,mb4.3,baz=252,slow=3.0,SNR=10
PDAR LR LR 20 59 59.8
comp=Z,210nm,21.5s,MS4.5,baz=260,slow=30
BJT Baijiatuau 89.64 314 *e*P **P** **20 27 39.1 -0.3**
BJI Beijing 89.65 314 P **P** **20 27 39.9 +0.5**
BJI S S 20 38 18.6 -10
BJI pmax pmax
comp=Z,200nm,6.9s
BJI LR LR
comp=N,110nm,21.8s,MS4.4
BJI LR LR
comp=E,99nm,21.2s,MS4.4
BJI LR LR
comp=Z,91nm,23.5s,MS4.1
ENH Enshi 89.67 303 *e*P **P** **20 27 40.8 +1.1**
comp=Z,101nm,1.2s,mb6.0
SEY Seymchan 89.72 346 *e*P **P** **20 27 37.7 -1.5**
GYA Guiyang 90.19 299 P **P** **20 27 41.8 -0.5**
GYA pP pP 20 28 08.5 +15
GYA sP sP 20 28 20.0 +23
GYA PP PP 20 31 19.4 +2.9
GYA SKS 20 38 02.3
GYA S S 20 38 25.5 -8.3
GYA sS sS 20 39 11.0 +19
GYA SS SS 20 44 30.4 -3.7
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,90nm,6.0s
GYA LR LR
comp=N,470nm,20.7s,MS5.0
GYA LR LR
comp=E,350nm,21.8s,MS5.0
GYA LR LR
comp=E,450nm,22.5s
ILAR Eielson Array 90.58 12 P **P** **20 27 41.8 -1.3**
comp=E,2.4nm,1.1s,mb4.5,baz=221,slow=5.6,SNR=15
DAWY Dawson 91.55 15 *e*P **P** **20 27 47.7 0.0**
EGAK Eagle 91.75 14 *e*P **P** **20 27 48.2 -0.4**
comp=E,6.4nm,1.0s,mb4.9
XAN Xi'an 91.81 306 P **P** **20 27 50.5 +0.9**
XAN pmax pmax
comp=Z,9.0nm,1.1s,mb5.0
XAN pmax pmax
comp=Z,39nm,5.9s
XAN LR LR
comp=N,84nm,16.1s,MS4.3
XAN LR LR
comp=E,55nm,17.4s,MS4.3
XAN LR LR
comp=Z,54nm,15.7s,MS4.1
KMI Kunming 92.83 296 P **P** **20 27 55.9 +1.4**
KMI pP pP 20 28 21.6 +16
KMI sP sP 20 28 31.9 +22
KMI PP PP 20 31 39.4 +2.0
KMI S S 20 38 48.1 -10
KMI sS sS 20 39 34.8 +18
KMI SS SS 20 45 07.1 -5.0
KMI pmax pmax
comp=Z,11nm,1.3s,mb5.1
KMI pmax pmax
comp=Z,170nm,3.9s
KMI LR LR
comp=N,110nm,19.9s,MS4.5
KMI LR LR
comp=E,130nm,18.8s,MS4.5
KMI LR LR
comp=Z,120nm,17.5s,MS4.4
BDT Bhumibol Dam 92.84 287 P **P** **20 27 57.0 +2.2**
HHC Hu-ho-hao-te 93.10 313 *e*P **P** **20 27 56.3 +0.9**
HHC pP pP 20 28 15.8 +9.2
HHC sP sP 20 28 24.3 +14
HHC PP PP 20 31 42.8 +3.5
HHC SKS 20 38 21.9
HHC S S 20 38 53.4 -6.1
HHC sS sS 20 39 30.8 +13
HHC SS SS 20 45 14.8 -0.7
HHC pmax pmax
comp=Z,11nm,0.7s,mb5.4
HHC pmax pmax
comp=Z,120nm,7.2s
HHC LR LR
comp=N,170nm,18.5s,MS4.7
HHC LR LR
comp=E,140nm,18.4s,MS4.7
HHC LR LR
comp=Z,190nm,18.4s,MS4.6
CHRT Chiangrai 93.20 290⇑P **P** **20 27 58.0 +1.6**
comp=Z,132nm,1.0s
CM31 Chiang Mai Arr 93.37 289 *e*P **P** **20 27 59.7 +2.5**
comp=Z,20nm,1.0s,mb5.5
CMAR Chiang Mai Arr 93.37 289 P **P** **20 27 58.2 +1.0**
comp=Z,18nm,1.0s,mb5.4,baz=124,slow=3.1,SNR=66
CMAR LR LR 21 08 06.2
comp=Z,101nm,19.1s,MS4.3,baz=286,slow=34
CHG Chiang Mai 93.51 289⇑P **P** **20 27 59.5 +1.7**
comp=Z,22nm,1.0s,mb5.5
CHTO Chiang Mai 93.51 289 *e*P **P** **20 27 59.3 +1.5**
CHTO pmax pmax
comp=Z,23nm,1.1s,mb5.5
CHTO Chiang Mai 93.51 289 *e*P **P** **20 27 59.2 +1.4**
comp=Z,22nm,1.1s,mb5.5
CHTO Chiang Mai 93.51 289 P **P** **20 27 59.7 +1.9**
CD2 Chengdu 94.39 302 P **P** **20 28 02.1 +0.5**
CD2 pP pP 20 28 22.9 +10
CD2 sP sP 20 28 31.3 +15
CD2 PP PP 20 31 53.1 +3.5
CD2 SKS 20 38 28.8
CD2 S S 20 39 05.1 -6.2
CD2 SS SS 20 45 33.3 -1.0
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.5
CD2 pmax pmax
comp=Z,80nm,4.4s
CD2 LR LR
comp=N,260nm,10.7s
CD2 LR LR
comp=Z,250nm,16.7s
YAK Yakutsk 95.69 337 *e*P **P** **20 28 05.6 -1.2**
YAK pmax pmax
comp=Z,3.0nm,1.0s,mb4.7
LZH Lanzhou 96.45 306 *e*P **P** **20 28 10.8 -0.1**
LZH *e*PP PP 20 32 06.5 +1.1
LZH pmax pmax
comp=Z,18nm,1.2s,mb5.4
LZH pmax pmax
comp=Z,79nm,6.0s
LZH LR LR
comp=E,310nm,17.2s
LZH LR LR
comp=Z,440nm,19.8s,MS4.9
LPAZ La Paz 98.70 112 LR LR 21 05 00.6
comp=Z,158nm,18.4s,MS4.5,baz=306,slow=31
SONM Songino Array 99.52 318 P **P** **20 28 23.3 -1.1**
comp=Z,0.3nm,0.6s,mb3.9,baz=98,slow=6.0,SNR=2.9
WMQ Urumqi 110.65 310 *e*PKP PKiKP 20 33 12.6 -1.5
WMQ LR LR
comp=N,56nm,26.0s,MS4.5
WMQ LR LR
comp=E,140nm,22.0s,MS4.5
WMQ LR LR
comp=Z,160nm,22.6s,MS4.5
ZALV Zalesovo Beam 114.26 320 PKP PKiKP 20 33 19.2 -1.4
comp=Z,0.3nm,0.3s,baz=126,slow=2.0,SNR=4.1
MK31 Makanchi Array 114.94 312 *e*PKIKP PKiKP 20 33 20.7 -1.5
MKAR Makanchi Array 114.94 312 PKP PKiKP 20 33 20.7 -1.5
comp=Z,0.3nm,0.2s,baz=82,slow=2.6,SNR=5.9
MKAR Makanchi Array 114.94 312 PKP PKiKP 20 33 20.7 -1.5
KURK Kurchatov 117.76 316 *e*PKIKP PKPdf 20 33 26.0 -1.5
BVAR Borovoye Array 122.84 319 PKP PKPdf 20 33 36.2 -1.0
comp=Z,1.9nm,0.8s,baz=66,slow=3.6,SNR=11
BRVK Borovoye 122.31 319 *e*PKIKP PKPdf 20 33 35.4 -1.9
KBL Kabul 123.40 297 *e*PKIKP PKPdf 20 33 39.1 +0.2
BOSA Boshof 124.64 202 PKP PKPdf 20 33 41.6 0.0
comp=Z,4.5nm,0.9s,baz=110,slow=2.9,SNR=5.1
ARU Arti 128.95 325 *i* PKIKP PKPdf 20 33 48.2 -0.6
ARU 20 35 53.3
ARU 20 40 45.2
ARU Arti 128.95 325 *e*PKPdf PKPdf 20 33 48.8 +0.1
AKTK Aktyubinsk 130.83 317 PKP PKPdf 20 33 52.5 0.0
AKTO Aktyubinsk 130.83 317 PKP PKPdf 20 33 52.5 0.0
comp=Z,0.4nm,0.3s,baz=52,slow=7.3,SNR=3.9
OBN Obninsk 140.44 332 *e*PKIKP PKPdf 20 34 07.9 -2.4
OBN pmax pmax
comp=Z,4.0nm,1.2s
SOC Sochi 144.84 314 *i* PKIKP PKPdf 20 34 16.3 -2.1
SOC MLR MLR
comp=Z,161nm,18.0s,MS4.8
SUW Suwalki 146.37 340 *e*PKP PKPdf 20 34 21.3 +0.6
SUW Suwalki 146.37 340 *e*PKPdf PKPdf 20 34 21.8 +1.1
AKASG Malin Array Be 146.70 331 PKPbc PKPbc 20 34 21.6 -1.5
comp=Z,18nm,1.0s,baz=38,slow=3.5,SNR=27
AKBB Malin Array Si 146.70 331 *e*PKP2 PKPbc 20 34 22.1 -1.0
KIEV Kiev 146.71 331 *e*PKP2 PKPbc 20 34 22.0 -1.1
SIM Simferopol' 147.76 319*c i*PKP2 PKPbc 20 34 26.0 -0.2
SIM pmax pmax
comp=Z,23nm,0.8s
GKP Gorka Klasztor 148.65 345 *e*PKP PKPbc 20 34 28.9 +0.6
KIS Kishinev 149.47 327 *e*UNK PKPdf 20 34 25.0 -1.1
KIS Kishinev 149.47 327 *e*PKIKP PKPdf 20 34 25.0 -1.1
KIS *i* 20 34 30.0
KIS *e* 20 34 35.0
LVV L'vov 149.54 335*d i*PKP2 PKPbc 20 34 29.9 -0.7
KWP Kalwaria Pacla 150.19 336 *e*PKP PKPbc 20 34 32.5 +0.3
KWP Kalwaria Pacla 150.19 336 *e*PKPbc PKPbc 20 34 31.8 -0.4
KWP Kalwaria Pacla 150.19 336⇑*i*P PKPbc 20 34 32.9 +0.7
BR131 Keskin Array S 150.57 310 *e*PKPbc PKPbc 20 34 33.0 -0.4
BRTR Keskin Array B 150.57 310 PKPbc PKPbc 20 34 32.9 -0.6
comp=Z,7.4nm,1.0s,baz=132,slow=1.8,SNR=26
OJC Ojcow 150.70 340 *e*PKIKP PKPdf 20 34 25.8 -2.1
OJC *e* 20 34 37.0
BUR08 Bucovina Ar. S 150.74 331 *e*PKPbc PKPbc 20 34 33.9 +0.3
BURAR Bucovina Array 150.75 331⇑PKIKP PKPbc 20 34 34.0 +0.4
BURAR Bucovina Array 150.75 331⇑*i*P PKPbc 20 34 34.0 +0.4
TESR 150.89 328⇓*i*P PKPbc 20 34 35.0 +1.0
STHS Stebnicka Huta 150.90 337 *e*PKP PKPbc 20 34 34.5 +0.6
STHS Stebnicka Huta 150.90 337 *e*PKP PKPbc 20 34 34.5 +0.6
KSP Ksiaz 151.12 345 *e*PKIKP PKPbc 20 34 34.0 -0.4
UZH Uzhgorod 151.17 335*c i*PKIKP PKPbc 20 34 34.7 +0.1
UZH *i* 20 34 48.5
NIE Niedzica 151.22 339 *e*PKP PKPbc 20 34 35.1 +0.4
CRVS Cervenica-Dubn 151.26 337 *e*PKIKP PKPbc 20 34 34.2 -0.6
CRVS Cervenica-Dubn 151.26 337 *e*PKP PKPbc 20 34 34.2 -0.6
VRI Vrincioaia 151.30 327⇑PKIKP PKPbc 20 34 35.1 +0.1
VRI Vrincioaia 151.30 327⇑*i*P PKPbc 20 34 35.1 +0.1
MMAI Mount Meron Ar 151.33 296 PKPbc PKPbc 20 34 34.6 -0.8
comp=Z,20nm,1.0s,baz=58,slow=3.1,SNR=16
MMAI PKPab PKPab 20 34 44.8 +1.2
comp=Z,16nm,0.9s,baz=40,slow=1.4,SNR=3.6
CLL Collm 151.37 349 *e*PKPbc PKPbc 20 34 34.5 -0.4
CLL Collm 151.37 349 *i* PKIKP PKPbc 20 34 33.6 -1.3
CLL *e* 20 34 47.0
CLL pmax pmax
comp=Z,18nm,1.3s
CLL MLR MLR
comp=Z,200nm,20.9s,MS4.9
CLL Collm 151.37 349 *i* PKPbc PKPbc 20 34 34.4 -0.5
comp=Z,18nm,1.3s
CLL *e*pPKPdf pPKPdf 20 34 47.0 +6.6
CLL *e*pPKPbc pPKPbc 20 34 51.0 +4.6
CLL *e*pPKPab pPKPab 20 35 02.0 +7.7
CLL Lm 21 43 00.0
comp=Z,200nm,20.9s
UPC Upice 151.50 345 *e*PKIKP PKPbc 20 34 35.6 +0.3
UPC *e* 20 34 43.1
UPC Upice 151.50 345⇑*e*PKP PKPbc 20 34 35.6 +0.3
UPC *e*PKPAB PKPab 20 34 43.1 -0.6
OKC Ostrava-Krasne 151.53 342 *e*PKIKP PKPbc 20 34 35.2 -0.2
OKC *e* 20 34 43.6
OKC Ostrava-Krasne 151.53 342⇑*e*PKP PKPbc 20 34 35.2 -0.2
OKC *e*PKPAB PKPab 20 34 43.6 -0.3
DPC Dobruska-Polom 151.56 344 *e*PKIKP PKPbc 20 34 35.4 0.0
DPC *e* 20 34 43.5
DPC Dobruska-Polom 151.56 344⇑*e*PKP PKPbc 20 34 35.4 0.0
DPC *e*PKPAB PKPab 20 34 43.5 -0.5
BRG Berggiesshubel 151.61 348 *e*PKPbc PKPbc 20 34 35.4 -0.1
BRG Berggiesshubel 151.61 348 *e*PKP PKPbc 20 34 35.3 -0.2
comp=Z,18nm,1.4s
BRG
comp=N,155nm,20.3s
BRG
comp=E,63nm,16.5s
BRG
comp=Z,194nm,22.1s
BRG Berggiesshubel 151.61 348 *e*PKIKP PKPbc 20 34 35.3 -0.2
BRG pmax pmax
comp=Z,6.0nm,1.4s
BRG MLR MLR
comp=N,11µm,20.3s
BRG MLR MLR
comp=E,93nm,16.5s
BRG MLR MLR
comp=Z,38nm,22.1s
NEUB Neuenburg 151.66 351 *e*PKPbc PKPbc 20 34 35.8 +0.2
MORC Moravsky Berou 151.76 342 *e*PKIKP PKPbc 20 34 35.9 0.0
MORC Moravsky Berou 151.76 342⇑*i*P PKPbc 20 34 35.8 -0.1
PVCC Panska Ves 151.80 347 *e*PKIKP PKPbc 20 34 36.1 +0.1
PVCC *e* 20 34 44.0
PVCC Panska Ves 151.80 347⇑*e*PKP PKPbc 20 34 36.1 +0.1
PVCC *e*PKPAB PKPab 20 34 44.0 -0.9
MLR Muntele Rosu 151.96 327⇑PKIKP PKPbc 20 34 36.9 +0.4
MLR Muntele Rosu 151.96 327⇑*i*P PKPbc 20 34 36.9 +0.4
KECS Kecovo 151.96 337 *e*PKIKP PKPbc 20 34 36.6 +0.2
KECS Kecovo 151.96 337 *e*PKP PKPbc 20 34 36.5 +0.1
PLN Plauen 152.30 350 *e*PKPbc PKPbc 20 34 36.6 -0.5
PLN *e*PKPab PKPab 20 34 46.7 -0.3
WERD Werda 152.31 349 *e*PKPab PKPab 20 34 47.0 -0.1
PRU Pruhonice 152.32 346⇑*e*PKP PKPbc 20 34 37.8 +0.7
PRU *e*PKPAB PKPab 20 34 49.5 +2.4
TANN Tannenbergstha 152.32 349 *e*PKPbc PKPbc 20 34 37.2 +0.1
VOIR 152.44 328⇑PKIKP PKPbc 20 34 37.8 +0.2
VOIR 152.44 328⇑*i*P PKPbc 20 34 37.8 +0.2
VRAC Vranov 152.45 343⇑*i*P PKPab 20 34 48.5 +0.8
DRGR 152.48 333⇑PKIKP PKPbc 20 34 37.9 +0.3
DRGR 152.48 333⇑*i*P PKPbc 20 34 37.9 +0.3
VYHS Vyhne 152.51 339 *e*PKIKP PKPbc 20 34 36.7 -0.9
VYHS Vyhne 152.51 339 *e*PKP PKPbc 20 34 36.7 -0.9
CSS Prodhromos 152.51 301 *e*PKPbc PKPbc 20 34 36.9 -1.2
DEV Deva 153.10 331⇓PKIKP PKPdf 20 34 29.7 -1.9
DEV Deva 153.10 331⇓*i*P PKPdf 20 34 29.6 -2.0
GRF Grafenberg Arr 153.22 351 *e*PKPab PKPab 20 34 50.3 -0.6
BUD Budapest 153.32 338 *es*PKP/F PKPab 20 34 55.0 +3.6
KHC Kasperske Hory 153.34 347⇑*e*PKP PKPbc 20 34 39.4 0.0
KHC *e*PKPAB PKPab 20 34 51.2 -0.2
WET Wettzell 153.46 348 *e*PKPbc PKPbc 20 34 40.1 +0.4
GEC2 GENESS Array S 153.58 346 *e*PKPab PKPab 20 34 52.7 +0.2
CONA Conrad Observa 153.91 343⇑*i*PKIKP PKPbc 20 34 41.5 +0.8
comp=Z,5.9nm,1.2s

GUC 21 20:18:12.0±0.8, 21°.37S×67°.60W, h206km±30km, ML3.5, 2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**1.79**	**280**	⇓*e*P	Pn	20 18 49.5	+0.6
PB01				*e*S	Sn	20 19 19.1	+1.6
PB01				AML	AML	20 19 20.6	
comp=N,149nm,0.2s							
PB04	**Plate Boundary**	**1.97**	**243**	*e*P	Pn	20 18 58.6	+8.1
PB04				*e*S	Sn	20 19 33.2	+13
PB04				AML	AML	20 19 36.1	
comp=N,159nm,0.2s							
MACH	**Maria Elena**	**2.17**	**247**	*e*P	Pn	20 18 54.3	+1.6
MACH				*e*S	Sn	20 19 26.7	+2.3
MNMC	**Miæe Miæ**	**2.91**	**320**	⇓*e*P	Pn	20 19 01.0	+0.1
MNMC				*e*S	Sn	20 19 39.7	+0.5
CEN1	**Los Morros**	**3.13**	**230**	*e*P	Pn	20 19 08.4	+4.9
CEN1				*e*S	Sn	20 19 50.7	+6.8

ISCJB ***21*** *20:22:16.0±1.3, 6°.41N±0°.05×82°.61W±0°.04, h20km±12km, mb4.1/8, MS3.7/6, Error ellipse: s-maj=8.4km s-min=5.5km az=28.7*
IDC ***21*** *20:22:16.2±2.4, 6°.53N×82°.77W, h0km, mb4.0/5, mb1 4.4/7, mb1mx4.1/18, mbtmp4.2/7, ML5.3/1, MS3.7/11, Ms1 3.7/11, ms1mx3.5/26, Error ellipse: s-maj=58.1km s-min=26.0km az=24.0*
NEIC ***21*** *20:22:16.2±0.8, 6°.40N×82°.68W, h10km, mb4.5/2, Error ellipse: s-maj=14.2km s-min=11.3km az=46.0*
CASC ***21*** *20:22:17.8±2.8, 6°.61N×82°.61W, h4km±20km, MD4.3, mb4.5(NEIC)*

ISC 21 20:22:17.1±1.4, 6°.43N±0°.06×82°.61W±0°.04, h14km±11km, n60, σ1°.09/65, mb4.1/8, MS3.7/6, 3C-7D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**2.28**	**346**	*e*P	**Pn**	**20 22 52.9**	**-1.5**
ACR				*e*S	**Sn**	**20 23 21.3**	**-1.1**
TBS2		**2.35**	**359**	*e*P	**Pn**	**20 22 51.6**	**-3.7**
TBS2				*e*S	**Sn**	**20 23 20.5**	**-3.6**
BRU2	**Volcan**	**2.35**	**358**	*e*P	**Pn**	**20 22 54.8**	**-0.6**
BRU2				*e*S	**Sn**	**20 23 24.8**	**+0.7**
BAR1		**2.88**	**346**	⇓*e*P	**Pn**	**20 23 01.8**	**-0.8**
BUS	**Buena Vista**	**3.31**	**340**	⇑*i*P	**Pn**	**20 23 08.5**	**0.0**
QCR	**Quepos**	**3.35**	**333**	⇑*e*P	**Pn**	**20 23 07.7**	**-1.5**
QCR				*e*S	**Sn**	**20 23 48.5**	**-0.4**
URSC	**Urasca**	**3.58**	**341**	⇑*e*P	**Pn**	**20 23 12.2**	**0.0**
LAJ	**Bijagual**	**3.73**	**336**	⇓*e*P	**Pn**	**20 23 13.7**	**-0.6**
LAJ				*e*S	**Sn**	**20 23 58.3**	**+0.2**
SJS	**Escuela Geolog**	**3.77**	**338**	*e*P	**Pn**	**20 23 15.1**	**+0.1**
PINA	**Piqa, Costa Ab**	**3.77**	**42**	*e*P	**Pn**	**20 23 15.3**	**+0.3**
BCIP	**Isla Barro Col**	**3.87**	**45**	*e*P	**Pn**	**20 23 16.1**	**-0.1**
BCIP	**Isla Barro Col**	**3.87**	**45**	⇓*i*P	**Pn**	**20 23 16.3**	**+0.1**
BCIP				*e*S	**Sn**	**20 24 02.6**	**+1.1**
PRS1	**Puriscal**	**3.92**	**335**	⇓*e*P	**Pn**	**20 23 15.1**	**-1.8**
UPIG		**3.97**	**50**	⇓*i*P	**Pn**	**20 23 17.7**	**0.0**
UPIG				*e*S	**Sn**	**20 24 03.9**	**-0.2**
CGA2	**Cerro Gallo 2**	**4.01**	**333**	⇓*e*P	**Pn**	**20 23 17.8**	**-0.4**
CGA2				*e*S	**Sn**	**20 24 04.3**	**-0.8**
JCR	**Jicaral**	**4.21**	**324**	⇓*e*P	**Pn**	**20 23 19.4**	**-1.5**
JTS	**JuntasAbangare**	**4.49**	**329**	Pn	**Pn**	**20 23 23.8**	**-0.9**

150nm,0.3s,baz=131,slow=6.7,SNR=180
JTS Sn **Sn** **20 24 16.7 -0.1**
50nm,0.3s,baz=356,slow=21,SNR=8.3
JTS LR LR 20 25 11.3
comp=Z,927nm,20.8s,baz=161,slow=41
CUI Cuipilapa 4.91 329 *i* P **Pn** **20 23 30.3 -0.2**
CUI *i* S **Sn** **20 24 28.0 +0.9**
GUAB Guayabo de Bag 4.98 329 *i* P **Pn** **20 23 31.7 +0.1**
LIM1 Limonal 4.99 329 *i* P **Pn** **20 23 31.7 +0.1**
GPS2 Hotel Rinc^‡n 5.08 328 *i* P **Pn** **20 23 33.5 +0.5**
GPS2 *i* S **Sn** **20 24 32.5 +1.0**
GPS1 Guardaparques 5.10 328 *i* P **Pn** **20 23 34.1 +0.9**
LAPC Finca la Perla 5.14 327 *i* P **Pn** **20 23 34.3 +0.6**
BUEV Buena Vista 5.15 328 *i* P **Pn** **20 23 34.0 +0.1**
GB1A Borinquen Arri 5.16 328 *i* P **Pn** **20 23 35.2 +1.1**
GB1A *i* S **Sn** **20 24 34.3 +0.8**
GBS3 Finca Las Im^¡ 5.16 327 *i* P **Pn** **20 23 33.9 -0.2**
OTAV Otavalo 7.42 146 *eP* **Pn** **20 24 04.0 -1.0**
5.0nm,0.6s
ROSC El Rosal 8.38 100 Pn **Pn** **20 24 23.5 +5.2**
4.4nm,0.3s,baz=97,slow=18,SNR=5.5
ROSC LR LR 20 27 18.8
comp=Z,167nm,21.4s,baz=216,slow=35
CNCH Conchagua 8.53 323 *eP* **Pn** **20 24 22.2 +1.8**
CNCH *eS* **Sn** **20 25 54.7 -1.9**
TGUH Tegucigalpa,Un 8.86 329 P **Pn** **20 24 23.2 -1.7**
BLLM Bellamira 8.91 322 *eP* **Pn** **20 24 28.2 +2.7**
SNVI San Vicente 9.41 320 *eP* **Pn** **20 24 35.4 +3.0**
LFRS El Faro 9.56 319 *eP* **Pn** **20 24 37.7 +3.2**
BOQS Boqueron 9.79 318 *eP* **Pn** **20 24 40.6 +3.0**
APG El Apazote 11.50 318 Pn **Pn** **20 25 04.9 +4.0**
baz=90,slow=16
MTDJ Mount Denham 12.73 22 *eP* **Pn** **20 25 18.0 +0.1**
ATAH Atahualpa 14.11 163 LR LR 20 30 21.4
comp=Z,514nm,20.3s,baz=168,slow=34
CMIG Matias Romero 16.01 313 Pn **Pn** **20 26 05.7 +3.6**
2.0nm,0.3s,baz=97,slow=8.0,SNR=19
CMIG LR LR 20 31 13.2
comp=Z,194nm,20.6s,baz=317,slow=34
CMIG Matias Romero 16.01 313 Pn **Pn** **20 26 05.7 +3.6**
CMIG LR LR 20 31 13.2
SDDR Presa de Saban 16.65 40 *eP* **Pn** **20 26 11.7 +1.4**
25nm,0.9s
SJG San Juan 19.81 53 P **Pn** **20 26 48.7 -0.4**
6.6nm,0.3s,baz=235,slow=9.9,SNR=5.4
SJG LR LR 20 34 01.6
comp=Z,115nm,19.2s,baz=268,slow=36
SJG San Juan 19.81 53 P **Pn** **20 26 48.7 -0.3**
SJG LR LR 20 34 01.6
LPAZ La Paz 26.73 148 LR LR 20 39 24.7
comp=Z,276nm,20.0s,MS3.8,baz=341,slow=38
TKL Tuckaleechee C 29.11 358 LR LR 20 39 32.4
comp=Z,73nm,19.1s,MS3.3,baz=80,slow=36
TXAR Lajitas Array 30.23 321 LR LR 20 42 44.3
comp=Z,63nm,19.7s,MS3.3,baz=0.0,slow=41
CPUP Villa Florida 40.76 144 LR LR 20 47 40.3
comp=Z,69nm,20.5s,MS3.5,baz=168,slow=37
PDAR Pinedale Array 43.32 331 P **P** **20 30 19.0 +0.4**
2.0nm,1.1s,mb3.8,baz=139,slow=9.2,SNR=7.8
ULM Lac du Bonnet 45.07 348 P **P** **20 30 30.4 -2.2**
4.0nm,0.8s,mb4.3,baz=172,slow=7.2,SNR=2.9
NVAR Mina Array Bea 45.35 320 P **P** **20 30 36.2 +1.1**
1.4nm,0.7s,mb3.9,baz=136,slow=7.0,SNR=6.2
NVAR Mina Array Bea 45.35 320 P **P** **20 30 36.2 +1.1**
SCHQ Schefferville 49.91 12 P **P** **20 31 11.5 +1.4**
6.2nm,1.0s,mb4.6,baz=149,slow=1.8,SNR=4.9
SCHQ Schefferville 49.91 12 P **P** **20 31 11.5 +1.4**
BBB Bella Bella 58.91 329 LR LR 20 59 18.0
comp=Z,198nm,18.9s,MS4.3,baz=296,slow=38
YKA Yellowknife Ar 60.67 344 P **P** **20 32 26.9 -0.7**
0.5nm,0.8s,mb3.7,baz=145,slow=5.9,SNR=4.1
DLBC Dease Lake 63.37 334 LR LR 21 04 00.8
comp=Z,219nm,20.3s,MS4.3,baz=186,slow=40
INK Inuvik 70.36 342 *eP* **P** **20 33 30.3 +0.2**
6.3nm,0.9s,mb4.5
SUMG Summit 71.29 13 *eP* **P** **20 33 35.7 -0.1**
SUMG Summit 71.29 13 *i* P **P** **20 33 35.7 -0.1**
3.9nm,1.0s,mb4.3
ILAR Eielson Array 73.42 336 P **P** **20 33 48.0 -0.6**
0.8nm,0.9s,mb3.6,baz=111,slow=4.7,SNR=6.7
ASAR Alice Springs 140.96 240 PKP PKPdf 20 41 49.2 +1.4
0.6nm,0.9s,baz=158,slow=1.0,SNR=5.5

NIED ***21*** *20:31:00,36˚.20N×141˚.80E,h26km,Mw4.4 Best double couple: M0 3.95000×10^15 NP1:φs 18.00000°,δ63.00000°, λ89.00000°. NP2:φs 200.00000°,δ27.00000°,λ92.00000°.*
MOS ***21*** *20:31:49.1±1.2,36˚.23N×141˚.88E,h20km,mb4.9/28,Error ellipse: s-maj=10.7km s-min=6.5km az=114.1*
ISCJB ***21*** *20:31:50.8±1.3,36˚.18N±0˚.03×141˚.87E±0˚.04,h30km±8km, mb4.6/54,MS3.9/8,Error ellipse: s-maj=5.5km s-min=4.8km az=28.1*
BJI ***21*** *20:31:51.5,36˚.34N×141˚.72E,h29km,mB4.8/12,mb4.7/25, Ms4.3/10,Ms7 4.2/8*
JMA ***21*** *20:31:51.0±0.2,36˚.21N×141˚.84E,h62km±4km,M4.5*
JMA Felt I J1.
IDC ***21*** *20:31:53.3±0.7,36˚.15N×141˚.74E,h33km±4km,mb4.1/19, mb1 4.3/22,mb1mx4.2/27,mbtmp4.1/22,ML4.4/2,MS3.4/4, Ms1 3.4/4,ms1mx3.0/31,Error ellipse: s-maj=14.1km s-min=13.2km az=117.0*
NEIC ***21*** *20:31:54.0±1.0,36˚.13N×141˚.74E,h40km±8km,mb4.8/16, MW4.3(NIED),Error ellipse: s-maj=7.0km s-min=5.5km az=80.0*
NEIC Recorded [1 JMA] in Fukushima, Ibaraki, Saitama and Tochigi.
SZGRF ***21*** *20:31:56.7,36˚.34N×141˚.20E,h33km,mb4.7,Near east coast of eastern Honshu, Japan*
ISC 21 20:31:50.7±1.1,36˚.20N±0˚.03×141˚.84E±0˚.04,h16km±6km, h34km±.8km:pP-P,n143,σ0.9 91/159,mb4.6/54,MS3.9/8, 8C-5D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.94**	**239**	⇓P	**Pb**	**20 32 08.5**	**0.0**
CHOJ				S	**Sg**	**20 32 22.2**	**+1.1**
JHO	**Hitachi**	**1.11**	**292**	⇓P	**Pb**	**20 32 10.3**	**-1.1**
JHO				S	**Sb**	**20 32 25.5**	**-0.1**
ONAJ	**Iwakimizuishiy**	**1.23**	**317**	⇓P	**Pn**	**20 32 12.2**	**-1.0**
ONAJ				S	**Sb**	**20 32 28.6**	**-0.6**
JFK	**Kawauchi**	**1.40**	**327**	P	**Pn**	**20 32 14.9**	**-0.7**
BSO1	**Boso 1**	**1.69**	**205**	P	**Pn**	**20 32 19.1**	**-0.5**
BSO1				S	**Sn**	**20 32 41.7**	**+0.8**
BSO3	**Boso 3**	**1.77**	**218**	P	**Pn**	**20 32 20.4**	**-0.2**
JFT	**Otama**	**1.79**	**318**	⇓P	**Pn**	**20 32 21.2**	**+0.3**
JFT				S	**Sn**	**20 32 44.5**	**+1.3**
JMM	**Marumori**	**1.86**	**334**	⇑P	**Pn**	**20 32 21.4**	**-0.5**
JAG	**Ashikaga**	**1.94**	**277**	P	**Pn**	**20 32 22.2**	**-0.8**
JAG				S	**Sn**	**20 32 46.7**	**-0.4**
JFY	**Yanaizu**	**2.10**	**306**	P	**Pn**	**20 32 25.5**	**+0.4**
JRY	**Ryogami san**	**2.39**	**267**	P	**Pn**	**20 32 28.6**	**-0.5**
JRY				S	**Sn**	**20 32 56.9**	**-1.1**
JOD2	**Odawara 2**	**2.42**	**248**	P	**Pn**	**20 32 29.9**	**+0.3**
JOD2				S	**Sn**	**20 32 59.2**	**+0.2**
JNS	**Sasagawa**	**2.59**	**309**	P	**Pn**	**20 32 32.9**	**+1.0**
JMK	**Ichinoseki**	**2.79**	**350**	P	**Pn**	**20 32 34.3**	**-0.4**
MJAR	**Matsushiro Arr**	**2.95**	**278**	Pn	**Pn**	**20 32 37.3**	**+0.4**
	74nm,0.3s,baz=95,slow=8.8,SNR=724						
MJAR				Sn	**Sn**	**20 33 14.2**	**+2.2**
	34nm,0.3s,baz=90,slow=30,SNR=6.2						
MJAR	**Matsushiro Arr**	**2.95**	**278**	P	**Pn**	**20 32 37.3**	**+0.4**
MJAR						20 33 14.2	
MJAR				pmax	pmax		
	comp=Z,74nm,0.3s						
MJAR				smax			
	comp=N,34nm,0.3s						
MAJO	**Matsushiro**	**2.95**	**278**	*eP*	**Pn**	**20 32 38.0**	**+1.1**
MAJO	**Matsushiro**	**2.95**	**278**	*eP*	**Pn**	**20 32 38.0**	**+1.1**
MAT	**Matsushiro**	**2.95**	**278**	P	**Pn**	**20 32 37.9**	**+1.0**
MAT				S	**Sn**	**20 33 11.0**	**-1.0**
JHJ	**Hachijo jima 2**	**3.51**	**210**	Pn	**Pn**	**20 32 45.1**	**+0.6**
	comp=N,66nm,0.3s,baz=342,slow=19,SNR=12						
JHJ				Sn	**Sn**	**20 33 22.8**	**-2.9**
	comp=N,131nm,0.3s,baz=12,slow=24,SNR=10.0						
JHJ				LR	LR	20 33 29.8	
	comp=N,236nm,21.6s,baz=332,slow=28						
ERM	**Erimo**	**5.90**	**10**	*eP*	**Pn**	**20 33 14.7**	**-2.7**
ERM				pmax	pmax		
	comp=Z,24nm,0.6s						
ERM	**Erimo**	**5.90**	**10**	*eP*	**Pn**	**20 33 14.7**	**-2.7**
	comp=Z,24nm,0.6s						
ASAJ	**Asahikawa**	**7.93**	**4**	Pn	**Pn**	**20 33 43.9**	**-1.4**
	comp=Z,1.2nm,0.3s,baz=211,slow=12,SNR=18						
ASAJ				Sn	**Sn**	**20 35 09.7**	**-5.0**
	comp=Z,1.0nm,0.3s,baz=73,slow=19,SNR=3.2						
ASAJ	**Asahikawa**	**7.93**	**4**	P	**Pn**	**20 33 43.9**	**-1.4**
ASAJ						20 35 09.7	
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**8.41**	**20**	*eP*	**Pn**	**20 33 44.7**	**-7.1**
YUK				pmax	pmax		
	comp=N,60nm,0.3s						
YUK				pmax	pmax		
	comp=E,150nm,0.3s						
YUK				pmax	pmax		
	comp=Z,190nm,0.3s						
CBIJ	**Chichi jima**	**9.08**	**178**	Pn	**Pn**	**20 33 57.1**	**-4.0**
	comp=Z,5.4nm,0.3s,baz=299,slow=19,SNR=11						
CBIJ				Sn	**Sn**	**20 35 34.2**	**-8.8**
	comp=Z,20nm,0.3s,baz=297,slow=22,SNR=6.5						
YSS	**Yuzh-Sakhalins**	**10.77**	**3**	*eP*	**Pn**	**20 34 23.0**	**-1.1**
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
YSS	**Yuzh-Sakhalins**	**10.77**	**3**	*eP*	**Pn**	**20 34 23.3**	**-0.8**
	comp=Z,14nm,0.8s						
KSRS	**Korea Array**	**11.23**	**281**	Pn	**Pn**	**20 34 31.8**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=92,slow=13,SNR=30						
KSRS				LR	LR	20 38 45.4	
	comp=Z,285nm,19.3s,baz=352,slow=37						
HABR	**Khabarovsk**	**13.25**	**340**	*eP*	**Pn**	**20 35 00.5**	**+2.5**
HABR				MLR	MLR		
	comp=Z,233nm,15.0s						
NJ2	**Nanjing**	**19.46**	**264**	*eP*	**Pn**	**20 36 19.6**	**+1.7**
NJ2				pP	pP	20 36 26.3	+5.2
NJ2				sP	sP	20 36 31.6	+8.4
NJ2				PP		20 36 38.3	
NJ2				S	**Sn**	**20 39 41.0**	**-15**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,30nm,3.9s						
NJ2				LR	LR		
	comp=N,210nm,11.8s						
NJ2				LR	LR		
	comp=E,110nm,13.3s						
BJI	**Beijing**	**20.53**	**289**	P	**P**	**20 36 26.6**	**-1.7**
BJI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BJI				pmax	pmax		
	comp=Z,57nm,4.2s						
BJT	**Baijiatuau**	**20.53**	**288**	*eP*	**P**	**20 36 25.8**	**-2.5**
BJT				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BJT	**Baijiatuau**	**20.53**	**288**	*eP*	**P**	**20 36 25.8**	**-2.5**
	comp=Z,10.0nm,0.5s						
WHN	**Wuhan**	**23.60**	**264**	P	**P**	**20 36 59.8**	**-1.2**
WHN				S	**S**	**20 41 15.4**	**+0.9**
WHN				pmax	pmax		
	comp=Z,25nm,0.7s,mb4.8						
WHN				LR	LR		
	comp=N,720nm,17.3s,MS4.4						
WHN				LR	LR		
	comp=E,540nm,12.4s,MS4.4						
WHN				LR	LR		
	comp=Z,670nm,13.9s,MS4.3						
XAN	**Xi'an**	**26.94**	**275**	P	**P**	**20 37 30.4**	**-0.9**
XAN				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.1						
YAK	**Yakutsk**	**26.96**	**347**	*eP*	**P**	**20 37 30.6**	**-0.6**
YAK				*e*PP	pP	20 37 40.8	+4.9
YAK				*e*		20 38 18.9	
YAK				*e*PPP		20 38 28.1	
YAK				*e*S	**S**	**20 42 14.3**	**+6.8**
YAK				*e*SS		20 43 33.1	
YAK				*e*		20 48 19.8	
YAK				pmax	pmax		
	comp=Z,32nm,0.9s,mb4.8						
YAK				pmax	pmax		
	comp=N,24nm,1.2s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.3						
YAK				pmax	pmax		
	comp=N,7.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.0s						
YAK				smax			
	comp=E,20nm,2.1s						
YAK				MLR	MLR		
	comp=Z,210nm,17.0s,MS3.8						
YAK				MLR	MLR		
	comp=E,64nm,18.0s,MS3.7						
YAK				MLR	MLR		
	comp=N,160nm,14.0s,MS3.7						
YAK	**Yakutsk**	**26.96**	**347**	*eP*	**P**	**20 37 31.2**	**+0.1**
	comp=N,28nm,0.6s,mb5.0						
SEY	**Seymchan**	**27.55**	**10**	*eP*	**P**	**20 37 36.8**	**+0.4**
ENH	**Enshi**	**27.62**	**267**	*eP*	**P**	**20 37 36.5**	**-0.9**
	comp=N,41nm,0.6s,mb5.2						
ULN	**Ulaanbaatar**	**28.11**	**305**	*eP*	**P**	**20 37 41.4**	**-0.3**
ULN				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.4						
ULN	**Ulaanbaatar**	**28.11**	**305**	*eP*	**P**	**20 37 41.4**	**-0.2**
	comp=Z,7.2nm,0.7s,mb4.4						
SONM	**Songino Array**	**28.54**	**305**	P	**P**	**20 37 45.5**	**0.0**
	comp=Z,8.7nm,0.6s,mb4.6,baz=106,slow=8.4,SNR=51						
SONM				PcP	PcP	20 40 56.9	+0.3
	comp=Z,0.3nm,0.5s,baz=90,slow=4.3,SNR=3.1						
SONM				LR	LR	20 49 30.6	
	comp=Z,136nm,20.8s,MS3.5,baz=39,slow=37						
SONM	**Songino Array**	**28.54**	**305**	P	**P**	**20 37 45.5**	**0.0**
SONM						20 40 56.9	
SONM				pmax	pmax		
	comp=Z,9.0nm,0.6s						
SONM				MLR	MLR		
	comp=Z,136nm,20.8s						
TLY	**Talaya**	**31.14**	**312**	*eP*	**P**	**20 38 08.9**	**+0.5**
TLY				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.7						
TLY				MLR	MLR		
	comp=Z,235nm,16.0s,MS4.0						
TLY	**Talaya**	**31.14**	**312**	*eP*	**P**	**20 38 08.8**	**+0.4**
	comp=Z,13nm,0.9s,mb4.8						
MOY	**Mondy**	**32.74**	**311**	*eP*	**P**	**20 38 23.0**	**+0.5**
GTA	**Gaotai**	**33.15**	**288**	*eP*	**P**	**20 38 26.5**	**+0.3**
GTA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
WMQ	**Urumqi**	**41.53**	**298**	*eP*	**P**	**20 39 38.3**	**+1.1**
WMQ				pP	pP	20 39 48.3	+6.2
WMQ				sP	sP	20 39 52.3	+8.3
WMQ				pmax	pmax		
	comp=Z,23nm,0.9s,mb4.8						
WMQ				pmax	pmax		
	comp=Z,120nm,4.7s						
WMQ				LR	LR		
	comp=N,54nm,24.0s,MS3.9						
WMQ				LR	LR		
	comp=E,160nm,22.2s,MS3.9						
WMQ				LR	LR		
	comp=Z,170nm,22.2s,MS3.9						
CMAR	**Chiang Mai Arr**	**41.63**	**257**	P	**P**	**20 39 37.8**	**-0.5**
	comp=Z,1.7nm,0.8s,mb3.7,baz=48,slow=5.8,SNR=12						
CMAR	**Chiang Mai Arr**	**41.63**	**257**	P	**P**	**20 39 37.8**	**-0.5**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
LSA	**Lhasa**	**42.63**	**276**	P	**P**	**20 39 47.3**	**+0.9**
LSA	**Lhasa**	**42.63**	**276**	*eP*	**P**	**20 39 47.6**	**+1.2**
LSA				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.6						
LSA	**Lhasa**	**42.63**	**276**	*eP*	**P**	**20 39 47.6**	**+1.2**
	comp=Z,16nm,1.1s,mb4.7						
ZAA0	**Zalesovo Array**	**42.73**	**313**	*eP*	**P**	**20 39 46.8**	**-0.1**
ZALV	**Zalesovo Beam**	**42.73**	**313**	P	**P**	**20 39 47.0**	**+0.1**
	comp=Z,8.2nm,0.7s,mb4.6,baz=90,slow=6.5,SNR=40						
ZALV				PcP	PcP	20 41 37.8	-0.4
	comp=Z,2.1nm,0.6s,baz=102,slow=3.1,SNR=3.8						
ZALV	**Zalesovo Beam**	**42.73**	**313**	P	**P**	**20 39 47.0**	**+0.1**
ZALV						20 41 37.8	
ZALV				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.6						
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
NVS	**Novosibirsk**	**43.67**	**314**	*eP*	**P**	**20 39 53.8**	**-0.6**
NVS				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.6						
NVS				pmax	pmax		
	comp=N,4.0nm,0.9s						
NVS				pmax	pmax		
	comp=E,16nm,1.2s						
MK31	**Makanchi Array**	**44.86**	**303**	*eP*	**P**	**20 40 04.1**	**+0.1**
MKAR	**Makanchi Array**	**44.86**	**303**	P	**P**	**20 40 04.3**	**+0.2**
	comp=E,5.9nm,0.6s,mb4.6,baz=87,slow=9.7,SNR=47						
MKAR				pP	pP	20 40 13.9	+4.9
	comp=E,7.1nm,0.9s,baz=89,slow=9.0,SNR=6.0						
MKAR				PcP	PcP	20 41 46.0	+0.4
	comp=E,0.3nm,0.3s,baz=80,slow=1.6,SNR=1.7						
MKAR				LR	LR	20 58 30.3	
	comp=E,74nm,21.7s,MS3.6,baz=252,slow=36						
MKAR	**Makanchi Array**	**44.86**	**303**	P	**P**	**20 40 04.3**	**+0.3**
MKAR				*PP	pP	20 40 13.9	+4.9
MKAR						20 41 46.0	
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MKAR				MLR	MLR		
	comp=Z,74nm,21.7s						
TAPN	**Taplejung**	**46.35**	**275**	*eP*	**P**	**20 40 16.6**	**+0.5**
TAPN	**Taplejung**	**46.35**	**275**	*eP*	**P**	**20 40 16.6**	**+0.5**
KURK	**Kurchatov**	**46.72**	**309**	*c i*P	**P**	**20 40 18.4**	**-0.3**
KURK				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
KURK	**Kurchatov**	**46.72**	**309**	*eP*	**P**	**20 40 18.4**	**-0.3**
	comp=Z,13nm,0.5s,mb5.1						
ODAN	**Odare**	**46.81**	**275**	*eP*	**P**	**20 40 19.6**	**-0.2**
	comp=Z,18nm,0.8s,mb5.0						
ODAN	**Odare**	**46.81**	**275**	*eP*	**P**	**20 40 19.6**	**-0.2**
RAMN	**Ramite**	**47.41**	**275**	*eP*	**P**	**20 40 24.8**	**+0.4**
	comp=Z,72nm,0.9s,mb5.6						
RAMN	**Ramite**	**47.41**	**275**	*eP*	**P**	**20 40 24.8**	**+0.4**
JIRN	**Jiri**	**47.44**	**276**	*eP*	**P**	**20 40 25.5**	**+0.8**
	comp=Z,53nm,1.0s,mb5.4						
JIRN	**Jiri**	**47.44**	**276**	*eP*	**P**	**20 40 25.5**	**+0.8**
GUN	**Gumba**	**47.59**	**277**	*eP*	**P**	**20 40 25.3**	**-0.5**
GUN	**Gumba**	**47.59**	**277**	*eP*	**P**	**20 40 25.3**	**-0.5**
KKN	**Kakani**	**48.12**	**277**	*eP*	**P**	**20 40 30.0**	**+0.1**
	comp=Z,32nm,0.9s,mb5.3						
KKN	**Kakani**	**48.12**	**277**	*eP*	**P**	**20 40 30.0**	**+0.1**
KKN	**Kakani**	**48.12**	**277**	*eP*	**P**	**20 40 30.0**	**+0.1**
DMN	**Daman**	**48.34**	**277**	*eP*	**P**	**20 40 31.4**	**-0.2**
DMN	**Daman**	**48.34**	**277**	*eP*	**P**	**20 40 31.4**	**-0.2**
GKN	**Gorkha**	**48.55**	**277**	*eP*	**P**	**20 40 33.0**	**-0.2**
	comp=Z,55nm,0.9s,mb5.6						
GKN	**Gorkha**	**48.55**	**277**	*eP*	**P**	**20 40 33.0**	**-0.2**
KAKA	**Kakadu**	**49.45**	**192**	*eP*	**P**	**20 40 39.1**	**-0.9**
	comp=Z,51nm,0.9s,mb5.5						
ILAR	**Eielson Array**	**50.02**	**32**	P	**P**	**20 40 44.8**	**+0.8**
	comp=Z,1.9nm,0.7s,mb4.3,baz=264,slow=6.1,SNR=18						
ILAR	**Eielson Array**	**50.02**	**32**	P	**P**	**20 40 44.8**	**+0.9**
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AAK	**Ala-Archa**	**51.19**	**299**	*eP*	**P**	**20 40 52.3**	**-0.8**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
BVAR	**Borovoye Array**	**51.39**	**313**	P	**P**	**20 40 54.7**	**+0.3**
	comp=Z,2.9nm,0.6s,mb4.4,baz=79,slow=7.7,SNR=21						
BVAR				PcP	PcP	20 42 08.6	-0.3
	comp=Z,2.5nm,0.6s,baz=74,slow=5.4,SNR=5.5						
BVAR	**Borovoye Array**	**51.39**	**313**	P	**P**	**20 40 54.7**	**+0.3**
BVAR						20 42 08.6	
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BRVK	**Borovoye**	**51.45**	**313**	*c i*P	**P**	**20 40 54.9**	**0.0**
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
BRVK	**Borovoye**	**51.45**	**313**	*eP*	**P**	**20 40 54.7**	**-0.1**
	comp=Z,6.9nm,0.8s,mb4.6						
INK	**Inuvik**	**54.98**	**27**	P	**P**	**20 41 21.6**	**+1.0**
	comp=Z,2.7nm,0.6s,mb4.5,baz=320,slow=4.3,SNR=7.0						
INK	**Inuvik**	**54.98**	**27**	P	**P**	**20 41 21.6**	**+1.0**
INK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SVE	**Sverdlovsk**	**56.00**	**319**	⇑*eP*	**P**	**20 41 28.9**	**+0.7**
SVE				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.8						
WRAB	**Tennant Creek**	**56.27**	**188**	*eP*	**P**	**20 41 29.5**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
WRAB	**Tennant Creek**	**56.27**	**188**	*eP*	**P**	**20 41 29.5**	**-0.9**
	comp=Z,8.0nm,0.9s,mb4.8						
WRA	**Warramunga Arr**	**56.28**	**188**	P	**P**	**20 41 29.9**	**-0.6**
	baz=4.8,slow=8.2						
ARU	**Arti**	**57.22**	**319**	*d i*P	**P**	**20 41 36.7**	**-0.1**
ARU						20 43 42.5	
ARU				S	**S**	**20 49 28.8**	**-2.8**
ARU				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.9						
ARU	**Arti**	**57.22**	**319**	*eP*	**P**	**20 41 36.3**	**-0.5**
	comp=Z,6.9nm,0.7s,mb4.8						
ASAR	**Alice Springs**	**60.01**	**188**	P	**P**	**20 41 56.1**	**-0.4**
	comp=Z,0.9nm,0.7s,mb3.9,baz=11,slow=8.4,SNR=15						
ASAR	**Alice Springs**	**60.01**	**188**	P	**P**	**20 41 56.1**	**-0.4**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**60.01**	**188**	P	**P**	**20 41 56.1**	**-0.4**
	comp=Z,1.1nm,0.8s,mb4.0,baz=297,slow=6.8,SNR=3.1						
ARCES	**ARCESS Array B**	**64.90**	**340**	P	**P**	**20 42 27.8**	**-1.0**
	comp=Z,3.8nm,0.8s,mb4.5,baz=63,slow=8.5,SNR=13						
ARCES	**ARCESS Array B**	**64.90**	**340**	P	**P**	**20 42 27.8**	**-0.9**
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
STKA	**Stephens Creek**	**67.72**	**180**	P	**P**	**20 42 46.5**	**-0.6**
	comp=Z,2.0nm,0.8s,mb4.2,baz=341,slow=6.6,SNR=4.5						
OBN	**Obninsk**	**68.97**	**324**	⇑*i*P	**P**	**20 42 55.0**	**+0.1**
OBN				*e*PP	pP	20 43 03.7	+3.7
OBN				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
OBN				MLR	MLR		
	comp=Z,100nm,13.0s,MS4.2						
KAF	**Kangasniemi**	**69.21**	**333**	*eP*	**P**	**20 42 54.0**	**-2.2**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
KAF	**Kangasniemi**	**69.21**	**333**	*ep*	**P**	**20 42 54.0**	**-2.2**
	comp=Z,2.9nm,0.5s,mb4.5						
FINES	**FINESS Array B**	**69.71**	**333**	P	**P**	**20 42 59.4**	**0.0**
	comp=Z,5.2nm,0.8s,mb4.5,baz=62,slow=5.9,SNR=14						
FINES	**FINESS Array B**	**69.71**	**333**	P	**P**	**20 42 59.4**	**+0.1**
FINES				pmax	pmax		
	comp=Z,5.0nm,0.8s						
VSR	**Storozhevoye**

comp=Z,3.0nm,0.6s,baz=46,slow=6.2,SNR=5.0
AKASG Malin Array Be 75.17 323 P **P 20 43 31.9 -0.2**
AKASG *PP pP 20 43 42.1 +4.9
AKASG pmax pmax
comp=Z,6.0nm,0.6s
AKASG pmax pmax
comp=Z,3.0nm,0.6s
KIEV Kiev 75.18 323 *eP* **P 20 43 31.8 -0.3**
KIEV pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
KIEV Kiev 75.18 323 *eP* **P 20 43 31.8 -0.4**
comp=Z,5.1nm,0.8s,mb4.5
NVAR Mina Array Bea 75.22 53 P **P 20 43 33.8 +1.3**
comp=Z,0.5nm,0.5s,mb3.7,baz=302,slow=6.5,SNR=4.1
NVAR pP pP 20 43 44.4 +6.6
comp=Z,1.3nm,0.8s,baz=295,slow=5.7,SNR=4.2
PDAR Pinedale Array 78.01 46 P **P 20 43 49.6 +1.3**
comp=Z,0.8nm,0.7s,mb3.8,baz=268,slow=6.2,SNR=2.6
BUR08 Bucovina Ar. S 79.17 322 *eP* **P 20 43 55.0 +0.5**
BR131 Keskin Array S 79.66 312 *eP* **P 20 43 57.8 +0.4**
comp=Z,2.4nm,0.8s,mb4.2
BRTR Keskin Array B 79.67 312 P **P 20 43 57.6 +0.2**
comp=Z,2.1nm,0.7s,mb4.2,baz=93,slow=4.2,SNR=12
BRTR Keskin Array B 79.67 312 P **P 20 43 57.6 +0.1**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
STHS Stebnicka Huta 79.84 325 *eP* **P 20 43 59.0 +0.8**
OJC Ojcow 79.93 326 *eP* **P 20 43 56.1 -2.6**
BRG Berggiesshubel 81.95 330 *eP* **P 20 44 09.5 +0.1**
comp=Z,3.0nm,0.8s,mb4.3
CLL Collm 81.99 330 *eP* **P 20 44 09.5 -0.2**
comp=Z,6.0nm,0.7s,mb4.6
CLL Collm 81.99 330⇑*iP* **P 20 44 09.5 -0.2**
CLL pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
CLL Collm 81.99 330⇑*iP* **P 20 44 09.5 -0.2**
comp=Z,6.0nm,0.7s,mb4.6
CLL Collm 81.99 330⇑*iP* **P 20 44 09.5 -0.2**
comp=Z,6.0nm,0.7s,mb4.6
MMAI Mount Meron Ar 82.73 306 P **P 20 44 13.7 -0.2**
comp=Z,0.3nm,0.3s,mb3.8,baz=46,slow=6.2,SNR=4.4
GUNZ Gunzen 83.00 330 *eP* **P 20 44 15.1 +0.2**
comp=Z,3.0nm,0.7s,mb4.4
GEC2 GERESS Array S 83.60 328 *eP* **P 20 44 17.4 -0.7**
comp=Z,2.0nm,0.7s,mb4.4
GRF Grafenberg Arr 83.97 330 *eP* **P 20 44 20.4 +0.5**
comp=Z,13nm,1.1s,mb5.0
GRF Grafenberg Arr 83.97 330 *eP* **P 20 44 20.4 +0.5**
GRF pmax pmax
comp=Z,13nm,1.1s,mb5.0
TXAR Lajitas Array 90.36 53 P **P 20 44 52.5 +1.1**
comp=Z,0.5nm,0.7s,mb4.0,baz=306,slow=3.5,SNR=5.2
TXAR pP pP 20 45 02.6 +6.0
comp=Z,0.6nm,0.7s,baz=297,slow=3.4,SNR=5.0
TXAR Lajitas Array 90.36 53 P **P 20 44 52.5 +1.2**
TXAR *PP pP 20 45 02.6 +6.0
TXAR pmax pmax
comp=Z,1.0nm,0.7s
TXAR pmax pmax
comp=Z,1.0nm,0.7s
LPAZ La Paz 146.81 61 PKPbc PKPbc 20 51 33.3 +0.9
comp=Z,2.2nm,0.6s,baz=347,slow=2.7,SNR=13

*IDC **21** 20:39:57.6±3.3, 0°.41S×128°.38E, h0km, mb3.7/3, mb1 3.8/3, mb1mx3.4/19, mbtmp3.7/3, Error ellipse: s-maj=350.2km s-min=27.8km az=66.0*
*DJA **21** 20:40:02, 0°.54S×127°.66E, h8km, MLv3.9/4*
ISC 21 20:39:58.3±6.1, 0°.48S±0°.07×128°.1E±0°.2, h4km±41km, n6, σ0°.83/8, mb3.7/3, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.43**	**331**	P	**Pn**	**20 40 24.6**	**-0.4**
TNTI				S	**Sb**	**20 40 44.3**	**+0.2**
NLAI	**Namlea**	**2.90**	**199**	P	**Pn**	**20 40 46.1**	**+0.8**
NLAI				S	**Sn**	**20 41 20.4**	**-0.2**
MNI	**Manado**	**3.75**	**301**	P	**Pn**	**20 40 56.3**	**-0.6**
ASAR	**Alice Springs**	**23.73**	**167**	P	**P**	**20 45 12.1**	**+0.3**
	0.6nm,0.4s,mb3.4,baz=342,slow=12,SNR=10						
STKA	**Stephens Creek**	**33.74**	**159**	P	**P**	**20 46 40.1**	**-0.9**
	2.0nm,0.8s,mb4.1,baz=344,slow=7.4,SNR=5.0						
MKAR	**Makanchi Array**	**61.76**	**326**	P	**P**	**20 50 18.8**	**+0.8**
	0.2nm,0.4s,mb3.6,baz=121,slow=8.2,SNR=4.1						

*IDC **21** 21:36:14.8±1.0, 19°.03N×64°.26W, h0km, mb3.7/6, mb1 4.0/8, mb1mx3.8/25, mbtmp3.8/8, ML3.6/1, MS3.4/3, Ms1 3.4/3, ms1mx2.9/32, Error ellipse: s-maj=28.0km s-min=21.0km az=108.0*
*ISCJB **21** 21:36:18.6±0.7, 18°.96N±0°.07×64°.29W±0°.02, h41km±10km, mb3.7/6, Error ellipse: s-maj=11.5km s-min=3.8km az=5.5*
*RSPR **21** 21:36:20.8, 18°.91N×64°.31W, h14km±5km, MD3.6/14*
*NEIC **21** 21:36:20.8, 18°.91N×64°.31W, h14km, MD3.6(RSPR), After RSPR.*
NEIC Felt at East End, Tortola.
ISC 21 21:36:19.1±1.2, 18°.94N±0°.05×64°.30W±0°.02, h28km±9km, n40, σ0°.81/54, mb3.7/6, 8C-8D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STVI	**Saint Thomas**	**0.85**	**227**	‖*eP*	**Pn**	**21 36 34.3**	**-0.9**
STVI				*eS*	**Sb**	**21 36 45.5**	**-0.9**
CDVI	**St. Croix**	**1.26**	**201**	‖*eP*	**Pn**	**21 36 40.9**	**0.0**
CDVI				*eS*	**Sn**	**21 36 56.8**	**-0.1**
MTP	**Monte Pirata**	**1.45**	**235**	⇑*eP*	**Pn**	**21 36 43.2**	**-0.3**
MTP				*eS*	**Sn**	**21 37 00.8**	**-0.9**
SMRT	**St. Maarten**	**1.46**	**127**	⇑*eP*	**Pn**	**21 36 43.5**	**-0.2**
SMRT				*eS*	**Sn**	**21 37 01.4**	**-0.4**
CBYP	**Canovanas**	**1.62**	**246**	⇑*eP*	**Pn**	**21 36 45.9**	**+0.2**
CBYP				*eS*	**Sn**	**21 37 05.9**	**+0.2**
HUMP	**Col San Antoni**	**1.67**	**242**	‖*eP*	**Pn**	**21 36 46.0**	**-0.5**
HUMP				*eS*	**Sn**	**21 37 06.1**	**-0.9**
CPD	**Cerro la Pandu**	**1.77**	**240**	*e*Pn	**Pn**	**21 36 47.9**	**0.0**
SJG	**San Juan**	**1.94**	**245**	⇑*eP*	**Pn**	**21 36 49.9**	**-0.3**
SJG	**San Juan**	**1.94**	**245**	*eS*	**Sn**	**21 37 13.5**	**-0.1**
SJG	**San Juan**	**1.94**	**245**	Pn	**Pn**	**21 36 50.0**	**-0.2**
	49nm,0.3s,baz=76,slow=7.7,SNR=55						
SJG				Sn	**Sn**	**21 37 13.9**	**+0.3**
	99nm,0.3s,baz=86,slow=21,SNR=12						
SJG				LR	LR	21 37 39.6	
	comp=Z,332nm,18.8s,baz=66,slow=42						
SJG	**San Juan**	**1.94**	**245**	⇑*eP*	**Pn**	**21 36 49.9**	**-0.3**
SJG				*eS*	**Sn**	**21 37 13.5**	**-0.1**
CELP	**Cerrillos**	**2.33**	**249**	‖*eP*	**Pn**	**21 36 55.5**	**0.0**
CELP				*eS*	**Sn**	**21 37 22.0**	**-1.2**
ICM	**Isla Caja Muer**	**2.35**	**244**	‖*eP*	**Pn**	**21 36 56.9**	**+1.0**
OBIP	**Obispado Ponce**	**2.36**	**248**	‖*eP*	**Pn**	**21 36 56.6**	**+0.6**
OBIP				*eS*	**Sn**	**21 37 23.6**	**-0.5**
LRS	**Lares**	**2.50**	**255**	‖*eP*	**Pn**	**21 36 58.1**	**+0.2**
LRS				*eS*	**Sn**	**21 37 28.0**	**+0.6**
GBPR	**Guanica, Bosqu**	**2.63**	**249**	⇑*eP*	**Pn**	**21 37 00.8**	**+1.1**
AGPR	**Aguadilla, PR**	**2.70**	**260**	⇑*eP*	**Pn**	**21 37 01.4**	**+0.7**
ANWB	**Willy Bob**	**2.70**	**117**	*e*Pn	**Pn**	**21 36 59.3**	**-1.4**
ANWB				*e*Sn	**Sn**	**21 37 31.3**	**-1.2**
AGP	**Aguadilla**	**2.74**	**259**	*e*Pn	**Pn**	**21 37 00.8**	**-0.5**
LSP	**Las Mesas**	**2.75**	**254**	‖*eP*	**Pn**	**21 37 01.8**	**+0.5**
LSP				*eS*	**Sn**	**21 37 35.2**	**+1.6**
MPR	**Mayaguez**	**2.79**	**255**	*e*Pn	**Pn**	**21 37 02.2**	**+0.3**
CRPR	**Cabo Rojo, PR**	**2.82**	**251**	⇑*eP*	**Pn**	**21 37 03.2**	**+0.9**
CRPR				*eS*	**Sn**	**21 37 36.0**	**+0.6**
SEG	**Port Louis**	**3.67**	**133**	*eP*	**Pn**	**21 37 14.9**	**+0.9**
LZG	**Guadaloupe-1**	**3.68**	**139**	*eP*	**Pn**	**21 37 14.7**	**+0.5**
HMG	**Houelmont**	**3.85**	**139**	*eP*	**Pn**	**21 37 17.5**	**+1.0**
PHG	**Guadaloupe-2**	**3.86**	**138**	*eP*	**Pn**	**21 37 18.3**	**+1.7**
TBG	**Guadaloupe-3**	**3.98**	**140**	*eP*	**Pn**	**21 37 18.0**	**-0.3**
DEG	**La Desirade**	**4.05**	**130**	*eP*	**Pn**	**21 37 19.6**	**+0.4**
SDDR	**Presa de Saban**	**6.61**	**271**	*e*Pn	**Pn**	**21 37 54.9**	**+0.4**
	29nm,0.6s						
SDDR				*e*Sn	**Sn**	**21 39 08.0**	**-0.9**
GRTK	**Grand Turk**	**6.91**	**293**	*e*Pn	**Pn**	**21 37 56.5**	**-2.1**
PCRV	**Puerto La Cruz**	**8.72**	**182**	Pn	**Pn**	**21 38 22.7**	**-0.7**
	0.7nm,0.3s,baz=356,slow=6.5,SNR=4.1						
PCRV				Sn	**Sn**	**21 39 55.6**	**-5.2**
	0.8nm,0.3s,baz=324,slow=19,SNR=2.6						
ROSC	**El Rosal**	**17.08**	**216**	LR	LR	21 47 32.0	
	comp=Z,93nm,19.4s,baz=35,slow=39						
LPAZ	**La Paz**	**35.21**	**186**	P	**P**	**21 43 12.8**	**+1.7**
	0.6nm,0.5s,mb3.8,baz=18,slow=13,SNR=3.2						
LPAZ	**La Paz**	**35.21**	**186**	P	**P**	**21 43 12.8**	**+1.7**
TXAR	**Lajitas Array**	**37.23**	**294**	P	**P**	**21 43 29.0**	**+0.6**
	0.3nm,0.6s,mb3.3,baz=116,slow=10,SNR=6.8						
TXAR				PcP	PcP	21 45 47.8	-0.1
	0.2nm,0.7s,baz=159,slow=5.3,SNR=3.6						
PDAR	**Pinedale Array**	**44.85**	**312**	P	**P**	**21 44 31.1**	**+0.1**
	1.0nm,0.7s,mb3.7,baz=108,slow=9.5,SNR=7.3						
EKA	**Eskdalemuir Ar**	**58.28**	**36**	P	**P**	**21 46 10.7**	**-0.4**
	0.7nm,0.6s,mb3.9,baz=270,slow=5.7,SNR=4.2						
PLCA	**Paso Flores**	**59.65**	**186**	LR	LR	22 12 57.0	
	comp=Z,97nm,21.1s,baz=55,slow=37						
ILAR	**Eielson Array**	**69.89**	**333**	P	**P**	**21 47 26.0**	**-1.2**
	0.5nm,0.6s,mb3.6,baz=110,slow=4.5,SNR=5.4						
FINES	**FINESS Array B**	**73.74**	**30**	P	**P**	**21 47 50.3**	**-0.1**
	1.5nm,0.7s,mb4.0,baz=289,slow=5.8,SNR=4.7						

*ISCJB **21** 21:45:31.3±0.5, 27°.94N±0°.05×140°.5E±0°.1, h510km±7km, mb4.0/3, Error ellipse: s-maj=16.5km s-min=8.0km az=178.8*
*NEIC **21** 21:45:31.5±0.9, 28°.00N×140°.41E, h493km±14km, mb4.1/4, Error ellipse: s-maj=14.0km s-min=10.1km az=113.0*
*JMA **21** 21:45:32.0±0.1, 27°.97N×140°.40E, h498km, M3.5*
ISC 21 21:45:32.0±0.5, 27°.92N±0°.05×140°.5E±0°.1, h502km±7km, n25, σ0°.80/28, mb4.0/3, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.75**	**118**	P	**P**	**21 46 36.2**	**0.0**
CBIJ				*eS*	**S**	**21 47 26.2**	**-2.0**
JHHJ	**Haha-jima-NKT**	**2.01**	**129**	P	**P**	**21 46 38.1**	**+0.7**
JHHJ				*eS*	**S**	**21 47 30.8**	**+0.4**
BSO1	**Boso 1**	**6.73**	**4**	P	**P**	**21 47 16.8**	**+1.4**
BSO1				*eS*	**S**	**21 48 40.3**	**+0.2**
BSO3	**Boso 3**	**6.86**	**0**	*eS*	**S**	**21 48 41.1**	**-1.4**
JWZ	**Kozaga**	**6.92**	**325**	P	**P**	**21 47 17.5**	**+0.2**
BSO4	**Boso 4**	**7.05**	**359**	*eS*	**S**	**21 48 45.8**	**-0.2**
JIE	**Ise**	**7.20**	**335**	P	**P**	**21 47 21.1**	**+0.9**
JKN2	**Miekihoku**	**7.24**	**331**	P	**P**	**21 47 21.0**	**+0.4**
JRY	**Ryogami san**	**8.18**	**351**	P	**P**	**21 47 31.0**	**+0.9**
JWT	**Wachi**	**8.50**	**331**	P	**P**	**21 47 33.2**	**-0.3**
JAG	**Ashikaga**	**8.52**	**355**	P	**P**	**21 47 33.5**	**-0.2**
JHO	**Hitachi**	**8.66**	**1**	P	**P**	**21 47 36.6**	**+1.4**
JNG	**Nsakai**	**8.69**	**347**	P	**P**	**21 47 36.1**	**+0.6**
MAJO	**Matsushiro**	**8.80**	**348**	*eP*	**P**	**21 47 34.6**	**-2.0**
GUMO	**Guam**	**14.85**	**163**	P	**P**	**21 48 41.3**	**+0.6**
YHNB	**Yeheng**	**17.41**	**264**	*eP*	**P**	**21 49 06.5**	**-0.4**
YULB	**Yu-li**	**17.84**	**260**	*eP*	**P**	**21 49 11.2**	**+0.3**
	3.6nm,0.8s						
SSLB	**Suanglung**	**18.02**	**261**	P	**P**	**21 49 12.2**	**-0.2**
HIA	**Hailar**	**26.60**	**329**	*eP*	**P**	**21 50 28.9**	**-0.3**
	2.7nm,0.3s,mb4.2						
PET	**Petropavlovsk**	**28.48**	**23**	*eP*	**P**	**21 50 45.7**	**0.0**
QIZ	**Qiongzhong**	**29.37**	**259**	*eP*	**P**	**21 50 53.8**	**-0.1**
KULM	**Kulim**	**43.97**	**247**	P	**P**	**21 52 53.9**	**-0.5**
AAK	**Ala-Archa**	**54.52**	**304**	*eP*	**P**	**21 54 11.8**	**-0.3**
KBL	**Kabul**	**60.27**	**296**	*eP*	**P**	**21 54 51.7**	**+0.2**
	0.9nm,0.5s,mb3.5						
RES	**Resolute Bay**	**71.62**	**13**	*eP*	**P**	**21 56 00.8**	**-0.8**
	11nm,1.0s,mb4.4						

GUC 21 22:01:26.5±0.9, 23°.15S×70°.40W, h41km±5km, MD3.7, ML3.0, 1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.07**	**318**	*eP*	Pn	22 01 32.9	-0.2
MECH				*i* S	Sn	22 01 37.9	+0.1
MECH				AML	AML	22 01 38.7	
	comp=E,5μm,0.4s						
CEN1	**Los Morros**	**0.30**	**142**	*eP*	Pn	22 01 36.1	+1.2
CEN1				*i* S	Sn	22 01 43.5	+2.8
ANCH	**Antofagasta**	**0.53**	**181**	*eP*	Pn	22 01 37.5	-0.2
ANCH				*i* S	Sn	22 01 45.6	+0.1
MACH	**Maria Elena**	**1.12**	**32**	*eP*	Pn	22 01 48.5	+2.7
MACH				*e*S	Sn	22 02 04.7	+4.7
PB04	**Plate Boundary**	**1.22**	**44**	‖*eP*	Pn	22 01 43.1	-4.0
PB04				*i* S	Sn	22 01 55.2	-7.2
PB04				AML	AML	22 01 58.6	
	comp=N,567nm,0.7s						
PB01	**Plate Boundary**	**2.26**	**22**	*eP*	Pn	22 02 04.2	+2.8
PB01				*e*S	Sn	22 02 32.0	+3.9
PB01				AML	AML	22 02 40.5	
	comp=E,133nm,0.6s						

*ISCJB **21** 22:21:37.6±1.3, 17°.38S±0°.07×174°.38W±0°.07, h63km±11km, mb4.3/17, Error ellipse: s-maj=13.9km s-min=8.8km az=136.3*
*IDC **21** 22:21:40.0±3.0, 17°.44S×174°.32W, h70km±28km, mb4.0/10, mb1 4.3/12, mb1mx4.1/20, mbtmp4.1/12, MS2.7/1, Ms1 2.7/1, ms1mx2.5/21, Error ellipse: s-maj=28.5km s-min=16.3km az=138.0*
*NEIC **21** 22:21:39.8±0.6, 17°.39S×174°.35W, h70km±5km, mb4.5/7, Error ellipse: s-maj=6.2km s-min=4.2km az=138.0*
ISC 21 22:21:39.4±1.1, 17°.39S±0°.07×174°.35W±0°.07, h65km±10km, n64, σ0°.57/42, mb4.1/17, 4C-4D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.25**	**36**	P	**Pn**	**22 22 42.6**	**+0.8**
	17nm,0.3s,baz=172,slow=1.3,SNR=16						
AFI				S	**Sn**	**22 23 25.8**	**-4.3**
	47nm,0.3s,baz=47,slow=23,SNR=15						
AFI	**Afiamalu**	**4.25**	**36**	*e*Pn	**Pn**	**22 22 42.4**	**+0.6**
AFI				*e*Sn	**Sn**	**22 23 28.4**	**-1.8**
MSVF	**Nonsavu**	**7.26**	**266**	Pn	**Pn**	**22 23 23.1**	**+0.2**
	86nm,1.1s						
RAR	**Rarotonga**	**14.28**	**108**	P	**Pn**	**22 24 58.9**	**+0.6**
	1.5nm,0.3s,baz=245,slow=5.6,SNR=5.3						
RAR	**Rarotonga**	**14.28**	**108**	*e*Pn	**Pn**	**22 24 57.9**	**-0.4**
URZ	**Urewera**	**22.10**	**198**	P	**P**	**22 26 29.1**	**-0.2**
	3.9nm,0.3s,mb4.2,baz=270,slow=19,SNR=6.6						
URZ	**Urewera**	**22.10**	**198**	*eP*	**P**	**22 26 29.5**	**+0.2**
	83nm,1.9s,mb4.7						
PPT	**Papeete**	**23.63**	**94**	*e*LR	LR	22 32 19.0	
	124nm,29.8s						
PPT	**Papeete**	**23.63**	**94**	LR	LR	22 33 31.6	
	comp=Z,20nm,19.9s,baz=218,slow=30						
SNZO	**South Karori**	**25.63**	**199**	P	**P**	**22 27 03.0**	**+0.1**
CTAO	**Charters Tower**	**37.35**	**260**	*eP*	**P**	**22 28 45.6**	**-0.4**
STKA	**Stephens Creek**	**42.28**	**242**	P	**P**	**22 29 26.7**	**0.0**
	1.9nm,0.4s,mb4.2,baz=77,slow=8.4,SNR=5.6						
STKA	**Stephens Creek**	**42.28**	**242**	*eP*	**P**	**22 29 27.1**	**+0.3**
MIDW	**Midway**	**45.43**	**356**	*eP*	**P**	**22 29 51.9**	**0.0**
WRAB	**Tennant Creek**	**48.52**	**259**	*eP*	**P**	**22 30 15.8**	**-0.5**
	1.9nm,0.3s,mb4.5						
ASAR	**Alice Springs**	**48.66**	**254**	P	**P**	**22 30 16.9**	**-0.4**
	14nm,0.6s,mb5.0,baz=87,slow=8.5,SNR=118						
FITZ	**Fitzroy Crossi**	**56.93**	**259**	*eP*	**P**	**22 31 18.5**	**+0.1**
	3.1nm,0.8s,mb4.4						
SBA	**Scott Base**	**61.21**	**184**	*eP*	**P**	**22 31 46.7**	**-0.3**
MJAR	**Matsushiro Arr**	**69.88**	**321**	P	**P**	**22 32 42.9**	**-0.5**
	0.4nm,0.4s,mb3.6,baz=160,slow=6.5,SNR=4.2						
PETK	**Petropavlovsk-**	**74.24**	**343**	P	**P**	**22 33 09.8**	**+0.6**
	3.5nm,0.7s,mb4.2,baz=124,slow=8.9,SNR=7.2						
CMB	**Columbia Colle**	**74.85**	**41**	*eP*	**P**	**22 33 13.2**	**+0.2**
NVAR	**Mina Array Bea**	**76.41**	**42**	P	**P**	**22 33 22.7**	**+0.7**
	1.2nm,0.6s,mb3.8,baz=224,slow=9.3,SNR=7.3						
KSRS	**Korea Array**	**76.94**	**316**	P	**P**	**22 33 26.8**	**+1.7**
	1.5nm,0.8s,mb3.8,baz=132,slow=7.5,SNR=7.6						
KDAK	**Kodiak Island**	**77.04**	**12**	P	**P**	**22 33 23.5**	**-1.5**
RC01	**Rabbit Creek A**	**80.66**	**12**	P	**P**	**22 33 45.1**	**+0.3**
GAMB	**Gambell**	**80.93**	**1**	*eP*	**P**	**22 33 46.1**	**-0.1**
TXAR	**Lajitas Array**	**82.47**	**56**	P	**P**	**22 33 55.7**	**+0.5**
	0.5nm,0.7s,mb3.5,baz=221,slow=7.5,SNR=8.5						
TXAR	**Lajitas Array**	**82.47**	**56**	P	**P**	**22 33 55.7**	**+0.5**
PV10	**Paradox Valley**	**82.54**	**46**	*eP*	**P**	**22 33 55.8**	**+0.5**
	51nm,0.6s						
TRF	**Thorofare Moun**	**82.73**	**11**	*eP*	**P**	**22 33 55.2**	**-0.4**
PMSA	**Palmer Station**	**82.74**	**156**	P	**P**	**22 33 55.6**	**-0.4**
PV01	**Paradox Valley**	**82.74**	**46**	*eP*	**P**	**22 33 56.6**	**+0.2**
	212nm,0.5s						
ANMO	**Albuquerque**	**82.77**	**50**	*eP*	**P**	**22 33 56.5**	**-0.1**
	3.5nm,1.2s,mb4.1						
NEW	**Newport**	**82.85**	**34**	*eP*	**P**	**22 33 56.6**	**-0.1**
	2.1nm,0.7s,mb4.1						
MCK	**McKinley**	**83.23**	**11**	*eP*	**P**	**22 33 58.0**	**-0.3**
	4.5nm,0.8s,mb4.3						
PDAR	**Pinedale Array**	**84.34**	**42**	P	**P**	**22 34 04.7**	**+0.2**
	3.6nm,0.6s,mb4.4,baz=218,slow=2.7,SNR=30						
COLA	**College**	**84.47**	**11**	*eP*	**P**	**22 34 04.0**	**-0.5**
	7.0nm,0.8s,mb4.5						
ILAR	**Eielson Array**	**84.56**	**11**	P	**P**	**22 34 04.7**	**-0.3**
	0.9nm,0.5s,mb4.0,baz=225,slow=5.6,SNR=18						
DAWY	**Dawson**	**85.56**	**15**	*eP*	**P**	**22 34 10.6**	**+0.6**
MAW	**Mawson**	**85.63**	**199**	*eP*	**P**	**22 34 10.3**	**-0.3**
	0.3nm,1.0s,mb3.2						
YAK	**Yakutsk**	**90.57**	**337**	P	**P**	**22 34 33.9**	**-0.1**
ULN	**Ulaanbaatar**	**95.31**	**318**	*eP*	**P**	**22 34 56.5**	**+0.3**
TKM2	**Tokmak 2**	**116.24**	**310**	*e*PKPdf	PKPdf	22 40 15.9	+0.4
EKS2	**Erkin-Say**	**117.58**	**309**	*e*PKPdf	PKPdf	22 40 18.1	0.0
BVAR	**Borovoye Array**	**118.87**	**321**	PKP	PKPdf	22 40 19.2	-1.1
	0.5nm,0.4s,baz=106,slow=2.2,SNR=5.2						
BRVK	**Borovoye**	**118.93**	**321**	*e*PKPdf	PKPdf	22 40 19.7	-0.7
ARU	**Arti**	**124.53**	**327**	*e*PKPdf	PKPdf	22 40 29.9	-1.1
ARCES	**ARCESS Array B**	**126.43**	**351**	PKP	PKPdf	22 40 33.5	-0.8
	0.5nm,0.5s,baz=299,slow=1.2,SNR=6.7						
OBN	**Obninsk**	**135.54**	**335**	*e*PKPdf	PKPdf	22 40 51.4	-0.5
KWP	**Kalwaria Pacla**	**145.01**	**341**	*e*PKPdf	PKPdf	22 41 08.5	-0.7
CLL	**Collm**	**145.66**	**352**	*i* PKPbc	PKPbc	22 41 10.5	-0.1
	comp=Z,6.0nm,0.9s						
CLL				*i* PKiKP	PKiKP	22 41 14.9	+0.6
	comp=Z,4.0nm,0.9s						
BUR08	**Bucovina Ar. S**	**145.82**	**336**	*e*PKPdf	PKPdf	22 41 10.1	-0.6
BURAR	**Bucovina Array**	**145.84**	**336**	‖*iP*	PKPdf	22 41 12.6	+1.9
BRG	**Berggiesshubel**	**145.94**	**351**	*eP*	PKPdf	22 41 10.9	+0.1
	comp=Z,8.0nm,1.3s						
VRI	**Vrincioaia**	**146.62**	**333**	‖*iP*	PKPdf	22 41 13.8	+1.7
BR131	**Keskin Array S**	**147.07**	**318**	*e*PKPbc	PKPbc	22 41 15.0	-0.2
BRTR	**Keskin Array B**	**147.07**	**318**	PKPbc	PKPbc	22 41 15.4	+0.2
	comp=Z,1.6nm,0.7s,baz=133,slow=3.2,SNR=9.4						
MLR	**Muntele Rosu**	**147.26**	**333**	‖*iP*	PKPbc	22 41 16.1	+0.6
DRGR		**147.46**	**338**	⇑*iP*	PKPbc	22 41 16.2	+0.2
VOIR		**147.68**	**334**	‖*iP*	PKPbc	22 41 17.1	+0.4
CSNA	**Conrad Observa**	**148.41**	**347**	⇑*i*PKiKP	PKPbc	22 41 19.3	+0.8
	comp=Z,2.4nm,0.6s						
MMAI	**Mount Meron Ar**	**149.05**	**306**	PKPbc	PKPbc	22 41 21.2	+0.6
	comp=Z,1.8nm,0.7s,baz=89,slow=6.8,SNR=4.8						
SOKA	**Soboth**	**149.78**	**347**	⇑*i*PKPbc	PKPbc	22 41 21.6	-0.4
	comp=Z,6.8nm,1.1s						
WTTA	**Wattenberg**	**149.80**	**352**	⇑*i*PKiKP	PKPbc	22 41 22.5	+0.4
	comp=Z,4.7nm,0.5s						

*IDC **21** 23:22:15.5±1.6, 2°.67S×139°.34E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.6/15, mbtmp3.7/5, MS3.5/1, Ms1 3.5/1, ms1mx2.5/22, Error ellipse: s-maj=63.2km s-min=25.9km az=103.0*
*ISCJB **21** 23:22:18.3±0.5, 2°.72S±0°.05×139°.29E±0°.08, h33km, mb3.9/8, Error ellipse: s-maj=11.5km s-min=6.7km az=173.6*
*NEIC **21** 23:22:21.4±2.1, 2°.71S×139°.25E, h43km±20km, mb4.1/5, Error ellipse: s-maj=14.7km s-min=12.4km az=48.0*
ISC 21 23:22:20.6±0.5, 2°.67S±0°.05×139°.31E±0°.08, h35km, n23, σ0°.92/25, mb3.9/8, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**11.84**	**161**	*e*Pn	**Pn**	**23 25 10.4**	**+3.4**
COEN				*e*Sn	**Sn**	**23 27 18.9**	**+0.8**
KAKA	**Kakadu**	**12.07**	**214**	*e*Pn	**Pn**	**23 25 09.2**	**-1.0**
	59nm,0.8s						
KAKA				*e*Sn	**Sn**	**23 27 24.7**	**+1.0**
CTAO	**Charters Tower**	**18.59**	**159**	P	**Pn**	**23 26 34.0**	**-1.3**
FITZ	**Fitzroy Crossi**	**20.37**	**220**	P	**P**	**23 26 53.2**	**-1.1**
	2.0nm,0.7s,baz=49,slow=8.7,SNR=4.9						
FITZ				LR	LR	23 35 32.2	
	comp=Z,123nm,19.2s,baz=162,slow=39						
FITZ	**Fitzroy Crossi**	**20.37**	**220**	*eP*	**P**	**23 26 53.3**	**-1.1**
	2.8nm,0.8s						
FITZ				LR	LR	23 35 32.2	
ASAR	**Alice Springs**	**21.52**	**194**	P	**P**	**23 27 07.0**	**+0.3**
	1.4nm,0.7s,mb3.5,baz=22,slow=9.7,SNR=10						
HNR	**Honiara**	**21.58**	**109**	P	**P**	**23 27 06.0**	**-1.5**
MBWA	**Marble Bar**	**26.48**	**225**	*eP*	**P**	**23 27 52.7**	**-2.0**
YHNB	**Yeheng**	**32.28**	**328**	*eP*	**P**	**23 28 46.2**	**0.0**
KULM	**Kulim**	**39.42**	**282**	*eP*	**P**	**23 29 46.9**	**-0.7**
COCO	**West Island**	**43.11**	**255**	P	**P**	**23 30 17.8**	**0.0**
ULN	**Ulaanbaatar**	**57.69**	**335**	*eP*	**P**	**23 32 07

comp=Z,15nm,2.0s,mb4.6
KBL Kabul 58.09 291 eP P 23 38 49.9 -0.2
comp=Z,1.2nm,0.3s,mb4.4
MBWA Marble Bar 61.77 204 P P 23 39 15.0 -0.3

IDC 21 23:30:49.6±4.7, 2.71N×129.55E, h0km, mb3.7/4, mb1 3.7/4, mb1mx3.5/20, mbtmp3.7/4, Error ellipse: s-maj=418.3km s-min=26.2km az=71.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	26.56	171	P	P	23 36 29.6	+0.1
	0.3nm,0.5s,baz=357,slow=9.3,SNR=3.9						
MKAR	Makanchi Array	60.00	324	P	P	23 40 58.3	+0.2
	1.0nm,0.5s,baz=124,slow=8.3,SNR=17						
ZALV	Zalesovo Beam	62.78	332	P	P	23 41 17.0	+0.2
	0.4nm,0.6s,baz=125,slow=7.6,SNR=3.7						
BVAR	Borovoye Array	69.71	326	P	P	23 42 00.9	-0.3
	0.7nm,0.6s,baz=119,slow=5.1,SNR=6.8						

MAN 22 00:02:29, 18.59N×120.43E, h8km, mb4.5, ML3.3, MS3.2, 2C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	Pasuquin	0.32	145	⇑iP	Pg	00 02 37.0	+1.7
APYP	Conner	1.06	133	eP	Pg	00 02 49.1	-0.3
APYP				eS	Sg	00 03 05.3	+2.1
CVP	Callao Caves	1.59	123	⇑iP	Pn	00 02 58.1	+0.5
CVP				i S	Sn	00 03 20.1	+1.8
PALP	Palanan	2.44	128	eP	Pn	00 03 09.9	+0.8
BALP	Baler	3.04	159	eP	Pn	00 03 19.5	+2.1

TIR 22 00:10:05.6±0.6, 40.05N×20.52E, h0km±253km, ML3.4
ATH 22 00:10:05.0, 39.82N×20.67E, h23km±1km, ML3.2
NEIC 22 00:10:05.0, 39.82N×20.67E, h23km, ML3.2(ATH), After ATH.
ISCJB 22 00:10:06.0±0.3, 39.80N±0.02×20.59E±0.02, h24km±3km, Error ellipse: s-maj=3.4km s-min=2.9km az=20.7
THE 22 00:10:06.0, 39.83N×20.66E, h3km, ML3.8/5, Error ellipse: s-maj=0.7km s-min=0.3km az=293.0
CSEM 22 00:10:06.0±0.1, 39.81N×20.61E, h15km, ML3.2, Error ellipse: s-maj=3.3km s-min=2.8km az=28.0
ISC 22 00:10:06.1±0.3, 39.81N±0.02×20.62E±0.02, h15km±2km, n127, σ1.08/169, 7C-3D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	Janina	0.23	131	ePb	Pg	00 10 11.0	-0.3
JAN				eSb	Sg	00 10 14.3	-0.5
JAN	Janina	0.23	131	ePB	Pg	00 10 11.0	-0.3
JAN				eSB	Sg	00 10 14.3	-0.5
JAN	Janina	0.23	131	ePb	Pg	00 10 11.0	-0.3
JAN				eSb	Sg	00 10 14.3	-0.5
IGT	Igoumenitsa	0.36	219	P	Pg	00 10 12.7	-0.7
IGT	Igoumenitsa	0.36	219	P	Pg	00 10 13.1	-0.3
IGT				S	Sg	00 10 19.1	+0.8
IGT	Igoumenitsa	0.36	219	P	Pg	00 10 13.1	-0.3
IGT				S	Sg	00 10 19.1	+0.8
SRN	Sarande	0.48	278	ePG	Pg	00 10 16.0	+0.3
SRN				i SG	Sg	00 10 23.9	+1.7
SRN	Sarande	0.48	278	ePg	Pg	00 10 16.0	+0.3
SRN				i Sg	Sg	00 10 23.9	+1.7
KEK	Kerkira	0.64	261	ePn	Pg	00 10 18.2	-0.5
KEK				eSn	Sg	00 10 28.5	+1.3
KEK	Kerkira	0.64	261	ePN	Pg	00 10 18.2	-0.5
KEK				eSN	Sg	00 10 28.5	+1.3
KEK	Kerkira	0.64	261	P	Pg	00 10 18.5	-0.2
KEK				S	Sg	00 10 28.5	+1.3
KEK	Kerkira	0.64	261	ePn	Pg	00 10 18.2	-0.5
KEK	Kerkira	0.64	261	P	Pg	00 10 18.5	-0.2
KEK				S	Sg	00 10 28.5	+1.3
NEST	Nestorio	0.69	28	P	Pg	00 10 19.3	-0.2
NEST				S	Sg	00 10 28.0	-0.5
NEST	Nestorio	0.69	28	P	Pg	00 10 19.3	-0.2
NEST				S	Sg	00 10 28.0	-0.5
KBN	Korca	0.82	9	ePN	Pg	00 10 22.0	0.0
KBN	Korca	0.82	9	ePn	Pg	00 10 22.0	0.0
KZN	Kozani	1.01	60	ePn	Pg	00 10 23.7	-1.9
KZN	Kozani	1.01	60	ePN	Pg	00 10 23.7	-1.9
KZN	Kozani	1.01	60	P	Pg	00 10 24.1	-1.5
KZN				S	Sg	00 10 38.5	-0.3
KZN	Kozani	1.01	60	P	Pg	00 10 24.1	-1.5
KZN				S	Sg	00 10 38.5	-0.3
LKD2	Lefkada island	1.02	178	P	Pg	00 10 25.2	-0.7
LKD2				S	Sg	00 10 40.4	+1.2
LKD2	Lefkada island	1.02	178	P	Pg	00 10 25.2	-0.7
LKD2				S	Sg	00 10 40.4	+1.2
THL	Klokotos Trika	1.10	103	ePN	Pg	00 10 25.4	-2.0
THL				eSN	Sg	00 10 40.7	-1.1
THL	Klokotos Trika	1.10	103	P	Pg	00 10 25.9	-1.5
THL				S	Sg	00 10 41.6	-0.2
THL	Klokotos Trika	1.10	103	ePn	Pg	00 10 25.4	-2.0
THL	Klokotos Trika	1.10	103	P	Pg	00 10 25.9	-1.5
THL				eSn	Sg	00 10 40.7	-1.1
THL				S	Sg	00 10 41.6	-0.2
FNA	Florina	1.13	30	P	Pg	00 10 26.6	-1.3
FNA	Florina	1.13	30	P	Pg	00 10 26.6	-1.3
FNA				S	Sg	00 10 43.0	+0.4
FNA	Florina	1.13	30	P	Pg	00 10 26.6	-1.3
FNA				S	Sg	00 10 43.0	+0.4
EVR	Evrytania	1.28	134	ePn	Pn	00 10 28.6	-0.9
EVR	Evrytania	1.28	134	ePN	Pn	00 10 28.6	-0.9
EVR	Evrytania	1.28	134	ePn	Pn	00 10 28.6	-0.9
OHR	Ohrid	1.30	6	i Pg	Pg	00 10 30.4	-0.8
OHR				i Sg	Sg	00 10 50.0	+1.8
OHR	Ohrid	1.30	6	P	Pn	00 10 30.2	+0.4
OHR	Ohrid	1.30	6	P	Pn	00 10 30.2	+0.4
BIA	Bitola	1.32	24	⇓iPg	Pg	00 10 30.0	-1.5
BIA				i Sg	Sg	00 10 50.3	+1.6
BIA	Bitola	1.32	24	P	Pn	00 10 30.0	0.0
BIA				S	Sb	00 10 48.4	+1.1
BIA	Bitola	1.32	24	P	Pn	00 10 30.0	0.0
BIA				S	Sb	00 10 48.4	+1.1
AGG	Agios Georgios	1.54	120	ePn	Pn	00 10 33.2	+0.1
AGG	Agios Georgios	1.54	120	ePN	Pn	00 10 33.2	+0.1
AGG	Agios Georgios	1.54	120	ePn	Pn	00 10 33.2	+0.1
KRUS	Krusevo	1.63	17	i Pg	Pn	00 10 35.0	+0.7
KRUS				i Sg	Sg	00 10 57.8	-0.7
VLS	Valsamata	1.63	181	ePb	Pn	00 10 33.9	-0.4
VLS				eSn	Sn	00 10 57.0	+1.9
VLS	Valsamata	1.63	181	ePB	Pn	00 10 33.9	-0.4
VLS				eSN	Sn	00 10 57.0	+1.9
TIR	Tirane	1.64	340	Pn	Pn	00 10 32.6	-1.8
TIR				eSn	Sn	00 10 54.8	-0.5
TIR	Tirane	1.64	340	Pn	Pn	00 10 32.6	-1.8
TIR				eSn	Sn	00 10 54.8	-0.5
EFP	Efpalio	1.71	144	ePN	Pn	00 10 36.3	+1.0
EFP	Efpalio	1.71	144	ePn	Pn	00 10 36.3	+1.0
RLS	Riolos of Patr	1.87	159	ePn	Pn	00 10 37.9	+0.3
RLS	Riolos of Patr	1.87	159	ePN	Pn	00 10 37.9	+0.3
RLS	Riolos of Patr	1.87	159	ePn	Pn	00 10 37.9	+0.3
THE	Thessaloniki	1.97	65	P	Pn	00 10 40.3	+1.3
THE	Thessaloniki	1.97	65	P	Pn	00 10 40.3	+1.3
XOR	Xorichti	2.04	102	P	Pn	00 10 39.8	-0.1
XOR	Xorichti	2.04	102	P	Pn	00 10 39.8	-0.1
HORT	Hortiatis	2.05	67	P	Pn	00 10 40.8	+0.7
HORT	Hortiatis	2.05	67	P	Pn	00 10 40.8	+0.7
NEO	Neokhori	2.07	103	ePn	Pn	00 10 38.1	-2.3
NEO	Neokhori	2.07	103	ePB	Pn	00 10 39.1	-1.3
NEO	Neokhori	2.07	103	ePn	Pn	00 10 38.1	-2.3
LKR	Lokris	2.18	121	ePb	Pn	00 10 42.5	+0.6
LKR	Lokris	2.18	121	ePB	Pn	00 10 42.5	+0.6
PLG	Polygyros	2.24	75	ePn	Pn	00 10 42.0	-0.6
PLG	Polygyros	2.24	75	ePN	Pn	00 10 42.0	-0.6
PLG	Polygyros	2.24	75	ePn	Pn	00 10 42.0	-0.6
PUK	Puka	2.30	346	ePn	Pn	00 10 44.9	+1.4
PUK				i SN	Sn	00 11 14.4	+2.9
PUK	Puka	2.30	346	ePn	Pn	00 10 44.9	+1.4
PUK				i Sn	Sn	00 11 14.4	+2.9
GUR	Goura	2.31	144	ePB	Pb	00 10 44.0	-3.4
SOH	Sokhos	2.32	63	ePb	Pb	00 10 44.1	-3.5
SOH				eSn	Sn	00 11 11.6	-0.4
SOH	Sokhos	2.32	63	ePB	Pb	00 10 44.1	-3.5
SOH				eSN	Sn	00 11 11.6	-0.4
PAIG	Paliouri	2.36	86	P	Pn	00 10 43.1	-1.2
PAIG	Paliouri	2.36	86	P	Pn	00 10 43.1	-1.2
LTK	Loutraki	2.56	134	ePN	Pn	00 10 47.5	+0.5
LTK	Loutraki	2.56	134	ePn	Pn	00 10 47.5	+0.5
BCI	Bajram Curri	2.59	351	ePN	Pn	00 10 50.0	+2.6
BCI	Bajram Curri	2.59	351	ePn	Pn	00 10 50.0	+2.6
AOS	Alonnisos	2.60	103	P	Pn	00 10 47.8	+0.2
AOS	Alonnisos	2.60	103	P	Pn	00 10 47.8	+0.2
OUR	Ouranopolis	2.63	77	P	Pn	00 10 47.6	-0.4
OUR	Ouranopolis	2.63	77	P	Pn	00 10 47.6	-0.4
PE1	Pezze di Greco	2.64	293	ePn	Pn	00 10 48.2	0.0
PE1				eSn	Sn	00 11 17.7	-2.2
TAR1	Taranto	2.66	287	ePn	Pn	00 10 47.9	-0.5
VLX	Vlachokerasia	2.80	150	ePB	Pb	00 10 51.7	-4.1
ITM	Ithomi	2.82	158	ePn	Pn	00 10 51.2	+0.5
ITM	Ithomi	2.82	158	ePN	Pn	00 10 51.2	+0.5
ITM	Ithomi	2.82	158	ePn	Pn	00 10 51.2	+0.5
NVR	Nevrokopi	2.91	57	P	Pn	00 10 52.6	+0.8
NVR	Nevrokopi	2.91	57	P	Pn	00 10 52.6	+0.8
ATH	Athens Observa	3.03	126	ePn	Pn	00 10 54.4	+0.8
ATH	Athens Observa	3.03	126	ePN	Pn	00 10 54.4	+0.8
ATH	Athens Observa	3.03	126	ePn	Pn	00 10 54.4	+0.8
NAIG	Nisos Aigina	3.04	132	ePn	Pn	00 10 54.1	+0.5
NAIG	Nisos Aigina	3.04	132	ePN	Pn	00 10 54.1	+0.5
NAIG	Nisos Aigina	3.04	132	ePn	Pn	00 10 54.1	+0.5
PYL	PYLOS	3.04	163	ePN	Pn	00 10 53.2	-0.5
PYL	PYLOS	3.04	163	ePn	Pn	00 10 53.2	-0.5
DID	Didima	3.08	138	ePN	Pn	00 10 54.3	+0.1
DID	Didima	3.08	138	ePn	Pn	00 10 54.3	+0.1
PTL	Penteli	3.08	124	ePn	Pn	00 10 54.0	-0.3
PTL	Penteli	3.08	124	ePN	Pn	00 10 54.0	-0.3
PTL	Penteli	3.08	124	ePn	Pn	00 10 54.0	-0.3
BARS	Barje	3.13	16	i Pn	Pn	00 10 55.9	+0.9
BAI	Bari	3.13	296	ePn	Pn	00 10 54.5	-0.5
BAI				eSn	Sn	00 11 31.1	-1.1
VLY	Voula,Athens	3.16	127	ePn	Pn	00 10 55.8	+0.5
VLY	Voula,Athens	3.16	127	ePN	Pn	00 10 55.8	+0.5
VLY	Voula,Athens	3.16	127	ePn	Pn	00 10 55.8	+0.5
SG1	Sgolgore (BA)	3.18	290	ePn	Pn	00 10 55.3	-0.4
SG1				eSn	Sn	00 11 31.5	-1.9
VTS	Vitosha	3.39	34	⇑iP	Pn	00 11 00.9	+2.4
VTS	Vitosha	3.39	34	⇑iP	Pn	00 11 00.9	+2.4
CDT	Castel del Mon	3.55	292	ePn	Pn	00 11 00.4	-0.3
CDT				eSn	Sn	00 11 39.8	-2.6
VLI	Veliai	3.59	149	P	Pn	00 11 01.0	-0.2
VLI	Veliai	3.59	149	P	Pn	00 11 01.0	-0.2
CEL	Celeste	4.00	249	P	Pn	00 11 05.8	-1.0
CEL	Celeste	4.00	249	P	Pn	00 11 05.8	-1.0
BBLS	Lazići	4.15	348	i Pn	Pn	00 11 10.1	+1.2
ALN	Alexandroupoli	4.28	74	ePn	Pn	00 11 11.9	+1.1
ALN	Alexandroupoli	4.28	74	ePN	Pn	00 11 11.9	+1.1
ALN	Alexandroupoli	4.28	74	ePn	Pn	00 11 11.9	+1.1
DIVS	Divibare	4.31	354	i Pn	Pn	00 11 11.3	+0.2
BZS	Buzias	5.85	7	⇑iP	Pn	00 11 32.4	+0.2
BZS	Buzias	5.85	7	⇑iP	Pn	00 11 32.4	+0.2
MLR	Muntele Rosu	6.90	33	⇑iP	Pn	00 11 51.0	+4.3
OBKA	Obir	8.03	328	⇓iPn	Pn	00 12 02.7	+0.5
OBKA				⇑i Sn	Sn	00 13 28.3	-4.4
OBKA	Obir	8.03	328	Pn	Pn	00 12 02.7	+0.5
MOA	Molln	9.25	332	⇓iPn	Pn	00 12 19.8	+0.8
MOA				⇑i Sn	Sn	00 13 59.5	-3.2
MOA	Molln	9.25	332	Pn	Pn	00 12 19.8	+0.9

IDC 22 00:27:42.0±1.6, 0.66N×130.34E, h0km, mb3.9/6, mb1 3.9/6, mb1mx3.8/19, mbtmp3.9/6, MS4.5/1, Ms1 4.5/1, ms1mx2.9/26, Error ellipse: s-maj=106.0km s-min=26.6km az=77.0
NEIC 22 00:27:43.1±0.3, 0.67N×130.31E, h10km, mb4.3/11, Error ellipse: s-maj=8.3km s-min=4.8km az=83.0
ISCJB 22 00:27:44.6±0.5, 0.66N±0.06×130.3E±0.1, h33km, mb4.1/16, Error ellipse: s-maj=14.8km s-min=8.1km az=173.8
ISC 22 00:27:46.7±0.5, 0.65N±0.06×130.31E±0.10, h35km, n30, σ0.85/29, mb4.1/16, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	7.94	324	Pn	Pn	00 29 38.3	-1.4
KAPI	Kappang	11.95	242	eP	Pn	00 30 33.2	-1.6
	10nm,0.8s						
FITZ	Fitzroy Crossi	19.19	194	P	Pn	00 32 07.2	-1.5
GUMO	Guam	19.32	48	P	Pn	00 32 08.1	-2.2
WRAB	Tennant Creek	20.83	169	eP	P	00 32 24.9	-0.6
	1.4nm,0.7s						
MBWA	Marble Bar	24.01	205	eP	P	00 32 58.5	+0.1
	6.1nm,0.8s,mb4.1						
ASAR	Alice Springs	24.42	172	P	P	00 33 02.5	+0.4
	0.4nm,0.5s,mb3.1,baz=348,slow=12,SNR=4.9						
KULM	Kulim	29.97	279	P	P	00 33 52.0	-0.2
KSRS	Korea Array	36.69	357	P	P	00 34 50.5	+0.2
	1.2nm,0.6s,mb3.9,baz=178,slow=8.8,SNR=5.1						
BJT	Baijiatuau	41.25	343	eP	P	00 35 27.5	-1.0
HIA	Hailar	49.28	351	eP	P	00 36 31.7	-0.3
	5.9nm,0.4s,mb5.0						
SONM	Songino Array	51.38	340	P	P	00 36 47.9	0.0
	0.4nm,0.5s,mb3.6,baz=162,slow=7.8,SNR=4.4						
RPZ	Rata Peaks	57.20	146	LR	LR	00 59 59.6	
	comp=Z,450nm,20.2s,baz=0.0,slow=34						
MCQ	Macquarie Isla	59.81	161	eP	P	00 37 48.5	+0.1
MK31	Makanchi Array	62.12	325	eP	P	00 38 04.1	-0.1
MKAR	Makanchi Array	62.12	325	P	P	00 38 04.6	+0.4
	2.3nm,0.5s,mb4.5,baz=119,slow=8.3,SNR=20						
MKAR	Makanchi Array	62.12	325	P	P	00 38 04.6	+0.4
TKM2	Tokmak 2	64.41	318	eP	P	00 38 20.0	+0.5
	1.6nm,1.0s,mb4.0						
UCH	Uchtor	64.85	317	eP	P	00 38 23.3	+0.9
	1.4nm,0.8s,mb4.0						
ZALV	Zalesovo Beam	64.95	332	P	P	00 38 23.1	+0.3
	0.5nm,0.4s,mb3.9,baz=115,slow=6.7,SNR=5.3						
EKS2	Erkin-Say	65.53	317	eP	P	00 38 27.1	+0.4
	1.9nm,0.7s,mb4.2						
KBL	Kabul	66.23	308	P	P	00 38 31.9	+0.4
KURK	Kurchatov	66.25	327	eP	P	00 38 31.4	+0.1
	4.5nm,0.7s,mb4.6						
CASY	Casey	68.26	188	eP	P	00 38 43.7	+0.1
	2.5nm,1.0s,mb4.2						
BVAR	Borovoye Array	71.84	327	P	P	00 39 07.4	+1.5
	2.1nm,0.8s,mb4.1,baz=120,slow=5.8,SNR=9.8						
BRVK	Borovoye	71.92	327	eP	P	00 39 05.8	-0.5
	3.8nm,0.8s,mb4.4						
ABKAR	Akbulak array	76.79	321	eP	P	00 39 35.6	+0.9
	0.4nm,0.4s,mb3.7						
MAW	Mawson	82.14	201	P	P	00 40 04.6	+1.1
MCK	McKinley	85.33	26	eP	P	00 40 20.0	+0.1
	2.1nm,0.4s,mb4.6						
QSPA	South Pole Qui	90.57	180	eP	P	00 40 46.2	+1.4

NEIC 22 00:49:17.2, 37.62S×177.13E, h3km, ML3.7(WEL), After WEL.
WEL 22 00:49:17.4±0.3, 37.62S×177.13E, h5km, ML3.7/7, 2D, Error ellipse: s-maj=2.5km s-min=2.0km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	White Island	0.10	30	⇓PG	Pg	00 49 19.3	-0.2
WIZ	White Island	0.10	30	P	Pg	00 49 19.3	-0.2
OPRZ	Ohinepanea	0.51	243	⇓PG	Pg	00 49 27.0	-0.1
OPRZ				SG	Sg	00 49 34.2	+0.5
URZ	Urewera	0.64	181	P*	Pb	00 49 29.4	-1.7
URZ				S*	Sb	00 49 38.5	-1.9
URZ	Urewera	0.64	181	P	Pg	00 49 29.4	-0.3
TGRZ	Tauranga	0.70	260	P*	Pb	00 49 30.7	-1.2
LIRZ	Lichensteins R	0.70	236	P*	Pb	00 49 31.5	-0.6
LIRZ	Lichensteins R	0.70	236	P	Pg	00 49 31.5	+0.6
OMRZ	Omania	0.77	230	P*	Pb	00 49 32.5	-0.8
MWZ	Matawai	0.79	156	P*	Pb	00 49 31.9	-1.6
MWZ				S*	Sb	00 49 42.4	-2.1
MWZ	Matawai	0.79	156	P	Pg	00 49 31.9	-0.5
KARZ	Kaharoa	0.81	240	P*	Pb	00 49 32.9	-1.0
PUZ	Puketiti	1.00	117	P*	Pb	00 49 36.7	-0.5
PUZ	Puketiti	1.00	117	P	Pg	00 49 36.7	+0.1
RAHZ	Arahi	1.30	181	P*	Pb	00 49 42.0	-0.2

ISCJB 22 00:52:50.5±0.4, 37.32N±0.02×72.22E±0.05, h154km±6km, mb3.7/12, Error ellipse: s-maj=6.3km s-min=3.5km az=170.5
NEIC 22 00:52:51.2±0.6, 37.27N×72.19E, h145km±8km, mb4.6/19, Error ellipse: s-maj=8.0km s-min=4.8km az=57.0
BJI 22 00:52:52.6, 37.32N×72.21E, h137km, mB4.4/1, mb3.8/3
IDC 22 00:52:52.2±5.1, 37.36N×72.24E, h153km±35km, mb3.3/7, mb1 3.4/12, mb1mx3.2/28, mbtmp3.3/12, Error ellipse: s-maj=52.6km s-min=21.4km az=154.0
NNC 22 00:52:55.6±8.0, 37.88N×70.52E, h0km, mb4.0, mpv4.1, Error ellipse: s-maj=65.0km s-min=59.3km az=119.0
ISC 22 00:52:51.4±0.3, 37.30N±0.02×72.23E±0.05, h145km±5km, n70, σ1.20/93, mb3.7/12, 4C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	3.48	184	P	Pn	00 53 46.5	+1.8
CEP				S	Sn	00 54 29.0	+3.0
KSH	Kashi	3.68	52	P	Pn	00 53 45.3	-1.9
KSH				S	Sn	00 54 25.1	-5.5
KSH				smax			
	comp=N,640nm,0.7s						
KSH				smax			
	comp=E,340nm,0.4s						
KBL	Kabul	3.78	224	ePn	Pn	00 53 48.5	-0.1
KBL				eSn	Sn	00 54 31.8	-1.1
THW	Thamme Wali	4.51	185	P	Pn	00 53 59.3	+1.1
AML	Almayashu	4.96	13	P	Pn	00 54 04.9	+0.9
	SNR=96						
AML	Almayashu	4.96	13	ePn	Pn	00 54 04.9	+0.9
AML				eSn	Sn	00 54 54.9	-5.8
UCH	Uchtor	5.23	19	P	Pn	00 54 08.8	+1.2
	SNR=73						
UCH	Uchtor	5.23	19	ePn	Pn	00 54 08.5	+0.9
	comp=E,41nm,0.4s						
UCH				eSn	Sn	00 55 04.9	-2.2
KZA	Kyzart	5.31	25	P	Pn	00 54 10.1	+1.3
	SNR=6.3						
EKS2	Erkin-Say	5.49	12	P	Pn	00 54 12.2	+1.1
	SNR=24						
EKS2	Erkin-Say	5.49	12	ePn	Pn	00 54 12.1	+1.1
	comp=E,21nm,0.8s						
EKS2				eSn	Sn	00 55 12.5	-0.8
AAK	Ala-Archa	5.60	17	P	Pn	00 54 14.2	+1.6
	comp=E,7.8nm,0.3s,baz=186,slow=5.6,SNR=42						
AAK				S	Sn	00 55 15.4	-0.7
	comp=E,6.3nm,0.3s,baz=302,slow=23,SNR=15						
AAK	Ala-Archa	5.60	17	ePn	Pn	00 54 13.5	+0.8
	comp=E,30nm,0.5s						
AAK				eSn	Sn	00 55 10.5	-5.7
ULHL	Ulahol	5.83	31	P	Pn	00 54 16.9	+1.3
	SNR=13						
KK31	Karatay Array	5.95	348	Pn	Pn	00 54 16.4	-0.8
	comp=E,8.8nm,0.3s,baz=181,slow=14,SNR=349						
KK31				Sn	Sn	00 55 18.4	-6.0
	comp=E,94nm,0.6s,baz=176,slow=23,SNR=21						
CHMS	Chumysh	6.01	18	P	Pn	00 54 19.3	+1.2
	SNR=16						
TKM2	Tokmak 2	6.18	24	P	Pn	00 54 21.7	+1.4
	SNR=13						
TKM2	Tokmak 2	6.18	24	ePn	Pn	00 54 21.4	+1.1
	comp=E,9.8nm,0.6s						
TKM2				eSn	Sn	00 55 26.5	-3.4
USP	Ospenovka	6.21	15	P	Pn	00 54 21.0	+0.3
	SNR=11						
SDNR	Sundarnagar	6.98	145	ePKP	Pn	00 54 33.5	+2.3
SDNR				eS	Sn	00 55 48.5	-0.8
SMLA	Simla	7.38	145	i P	Pn	00 54 37.7	+1.1
SMLA				i S	Sn	00 55 55.8	-3.3
SMLA						00 55 57.9	
	comp=E,1μm,0.4s						
SMLA						00 55 58.2	
	comp=N,947nm,0.3s						
DDI	Dehra Dun	8.47	143	ePKP	Pn	00 54 50.5	-0.6
DDI				eS	Sn	00 56 23.0	-2.3
JOSI	Joshimath	9.07	136	ePKP	Pn	00 54 59.8	+0.7
JOSI				eS	Sn	00 56 35.9	-3.6
JOSI				AML	AML	00 56 40.0	
	comp=E,371nm,0.9s						
JOSI				AML	AML	00 56 41.6	
	comp=N,324nm,0.8s						
NDI	New Delhi	9.55	153	ex	x	00 56 39.0	
KHET	Khetri	9.68	161	ePKP	Pn	00 55 06.3	-0.9
KHET				eS	Sn	00 56 46.9	-7.5
SONA	Sohna	9.90	154	ePKP	Pn	00 55 09.0	-1.2
SONA				eS	Sn	00 56 51.5	-8.2
AGRA	Agra	11.14	153	ePKP	Pn	00 55 26.4	-0.1
AGRA				eS	Sn	00 57 21.1	-8.5
MK31	Makanchi Array	12.07	35	ePn	Pn	00 55 42.8	+4.3
MKAR	Makanchi Array	12.07	35	P	Pn	00 55 37.3	-1.2
	comp=N,0.1nm,0.3s,baz=249,slow=7.4,SNR=3.6						
GKN	Gorkha	13.96	128	eP	Pn	00 56 02.3	-0.6
	comp=N,55nm,0.4s						
KURK	Kurchatov	14.17	17	ePn	Pn	00 56 07.4	+2.0
	comp=N,2.9nm,0.9s						
KKN	Kakani	14.51	127	eP	Pn	00 56 09.2	-0.7
	comp=N,32nm,0.6s						
DMN	Daman	14.53	128	eP	Pn	00 56 10.0	-0.1
	comp=N,22nm,0.4s						
PKIN	Phulchoki	14.73	127	eP	Pn	00 56 12.1	-0.5
	comp=N,22nm,0.4s						
PKI	Pulchoki	14.74	127	eP	Pn	00 56 12.4	-0.4
	comp=N,33nm,0.6s						
GUN	Gumba	14.81	125	eP	Pn	00 56 14.4	+0.7
	comp=N,44nm,0.3s						
AB31	Akbulak array	14.91	327	⇑P	Pn	00 56 12.5	-2.1
	comp=N,1.7nm,0.5s,baz=131,slow=15,SNR=78						
AB31				S	Sn	00 58 40.8	-19
	comp=N,13nm,0.7s,baz=163,slow=22,SNR=25						
ABKAR	Akbulak array	14.91	327	ePn	Pn	00 56

TORD	**Torodi Ar. Bea**	**66.72**	**269**	P	**P**	**01 03 25.2**	**-1.8**
	comp=Z,0.5nm,0.6s,mb3.5,baz=46,slow=5.7,SNR=3.2						
ILAR	**Eielson Array**	**73.74**	**16**	P	**P**	**01 04 09.2**	**+0.2**
	comp=Z,0.5nm,1.0s,mb3.2,baz=319,slow=5.9,SNR=5.1						
DBIC	**Dimbokro**	**75.72**	**268**	*e*P	**P**	**01 04 23.6**	**+2.3**

IDC ***22*** *00:53:37.2±0.8, 60.°55N×151.°97W, h0km, mb3.7/8, mb1 3.9/9, mb1mx3.7/23, mbtmp3.7/9, ML3.2/1, Error ellipse: s-maj=26.2km s-min=11.2km az=98.0*
ISCJB ***22*** *00:53:43.5±0.4, 60.°19N±0.°03×151.°70W±0.°07, h85km±4km, mb3.7/8, Error ellipse: s-maj=5.4km s-min=4.8km az=11.1*
NEIC ***22*** *00:53:45.9, 60.°19N×151.°70W, h60km, ML3.8(PMR), ML3.4(AEIC), After AEIC.*
ISC 22 00:53:44.8±0.4, 60.°17N±0.°03×151.°73W±0.°07, h75km±4km, n41, σ0°75/59, mb3.7/8, Kenai Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSO	**Redoubt South**	**0.59**	**300**	*e*P	**Pn**	**00 53 58.1**	**-0.7**
RSO				S	**Sn**	**00 54 08.4**	**-0.7**
BRLK	**Bradley Lake**	**0.59**	**134**	P	**Pn**	**00 53 59.2**	**+0.3**
BRLK				S	**Sn**	**00 54 09.0**	**-0.2**
SLKM	**Skilak Lake**	**0.82**	**65**	P	**Pn**	**00 54 01.0**	**-0.4**
FIB	**Fire Island**	**1.26**	**37**	P	**Pn**	**00 54 08.0**	**+1.4**
FIB				S	**Sn**	**00 54 23.2**	**+0.1**
RC01	**Rabbit Creek A**	**1.35**	**46**	P	**Pn**	**00 54 07.7**	**-0.1**
RC01				S	**Sn**	**00 54 25.1**	**-0.1**
SKT	**Skwentna**	**1.82**	**3**	P	**Pn**	**00 54 14.2**	**+0.3**
SKT				S	**Sn**	**00 54 37.4**	**+1.2**
PMR	**Palmer**	**1.91**	**41**	*e*P	**Pn**	**00 54 14.9**	**-0.3**
PMR				*e*Sn	**Sn**	**00 54 37.5**	**-0.9**
SVW2	**Sparrevohn**	**2.11**	**298**	*e*P	**Pn**	**00 54 16.4**	**-1.5**
SML	**Sawmill**	**2.33**	**44**	P	**Pn**	**00 54 20.9**	**0.0**
KDAK	**Kodiak Island**	**2.44**	**191**	**Pn**	**Pn**	**00 54 22.6**	**+0.3**
	3.4nm,0.3s,baz=24,slow=7.1,SNR=22						
KDAK				Pg	**Pn**	**00 54 27.5**	**+5.1**
	12nm,0.3s,baz=11,slow=13,SNR=32						
KDAK				Sn	**Sn**	**00 54 57.1**	**+6.0**
	32nm,0.3s,baz=194,slow=19,SNR=12						
KDAK	**Kodiak Island**	**2.44**	**191**	P	**Pn**	**00 54 22.4**	**+0.1**
KDAK				S	**Sn**	**00 54 51.6**	**+0.4**
PPLA	**Purkeypile**	**2.74**	**356**	P	**Pn**	**00 54 27.1**	**+0.7**
PPLA				*e*Sn	**Sn**	**00 54 58.5**	**+0.1**
MID	**Middleton Isla**	**2.83**	**103**	*e*P	**Pn**	**00 54 28.5**	**+0.9**
MID				*e*Sn	**Sn**	**00 55 00.4**	**-0.1**
EYAK	**Cordova Ski Ar**	**3.00**	**80**	P	**Pn**	**00 54 28.7**	**-1.2**
OHAK	**Old Harbor**	**3.07**	**196**	P	**Pn**	**00 54 31.5**	**+0.7**
DIV	**Divide**	**3.09**	**69**	P	**Pn**	**00 54 30.5**	**-0.6**
TRF	**Thorofare Moun**	**3.36**	**11**	P	**Pn**	**00 54 34.9**	**+0.1**
TRF				*e*Sn	**Sn**	**00 55 13.1**	**-0.3**
TT01	**Tatalina**	**3.43**	**325**	P	**Pn**	**00 54 35.2**	**-0.5**
TTA	**Tatalina**	**3.44**	**325**	*e*Pn	**Pn**	**00 54 35.4**	**-0.5**
DHY	**Denali Highway**	**3.58**	**34**	P	**Pn**	**00 54 39.0**	**+1.2**
BMRM	**Bremner River**	**3.61**	**74**	P	**Pn**	**00 54 37.1**	**-1.1**
CHUM	**Lake Minchumin**	**3.73**	**356**	P	**Pn**	**00 54 40.7**	**+0.9**
MCK	**McKinley**	**3.81**	**19**	*e*Pn	**Pn**	**00 54 42.1**	**+1.2**
MCK				*e*Sn	**Sn**	**00 55 25.2**	**+0.8**
MENT	**Mentasta**	**4.73**	**51**	*e*Pn	**Pn**	**00 54 53.8**	**+0.3**
MENT				*e*Sn	**Sn**	**00 55 46.0**	**-0.9**
COLA	**College**	**5.05**	**19**	P	**Pn**	**00 54 58.2**	**+0.4**
ILAR	**Eielson Array**	**5.13**	**24**	Pg	**Pn**	**00 54 59.0**	**+0.1**
	2.7nm,0.3s,baz=212,slow=13,SNR=56						
ILAR				Sn	**Sn**	**00 55 56.8**	**0.0**
	5.0nm,0.3s,baz=215,slow=23,SNR=8.6						
IM3	**Indian Mountai**	**5.90**	**352**	P	**Pn**	**00 55 09.7**	**+0.3**
PNL	**Peninsula**	**6.22**	**89**	P	**Pn**	**00 55 14.4**	**+0.6**
PNL				*e*Sn	**Sn**	**00 56 19.4**	**-4.0**
EGAK	**Eagle**	**6.73**	**42**	*e*Pn	**Pn**	**00 55 20.9**	**+0.2**
	11nm,0.7s						
EGAK				S	**Sn**	**00 56 36.0**	**+0.2**
DAWY	**Dawson**	**6.98**	**51**	*e*Pn	**Pn**	**00 55 24.2**	**+0.1**
DAWY				Sn	**Sn**	**00 56 40.9**	**-0.9**
COLD	**Coldfoot**	**7.12**	**5**	*e*Pn	**Pn**	**00 55 26.6**	**+0.7**
	4.2nm,0.5s						
COLD				*e*Sn	**Sn**	**00 56 45.1**	**-0.1**
BM3	**Burnt Mountain**	**7.92**	**20**	P	**Pn**	**00 55 36.8**	**-0.2**
PDAR	**Pinedale Array**	**30.82**	**105**	P	**P**	**00 59 56.8**	**+3.6**
	0.4nm,0.7s,mb3.3,baz=343,slow=4.6,SNR=3.9						
TXAR	**Lajitas Array**	**44.45**	**112**	P	**P**	**01 01 51.6**	**+3.6**
	0.3nm,0.8s,mb3.0,baz=335,slow=7.9,SNR=2.2						
ARCES	**ARCESS Array B**	**50.57**	**1**	P	**P**	**01 02 33.9**	**-1.1**
	0.6nm,0.7s,mb3.8,baz=359,slow=6.2,SNR=5.7						
SONM	**Songino Array**	**55.20**	**307**	P	**P**	**01 03 10.6**	**+1.3**
	1.0nm,0.6s,mb4.0,baz=22,slow=8.3,SNR=6.1						
NOA	**NORSAR Array B**	**58.40**	**10**	P	**P**	**01 03 30.8**	**-0.9**
	0.7nm,0.8s,mb3.8,baz=347,slow=6.4,SNR=2.8						
FINES	**FINESS Array B**	**58.70**	**1**	P	**P**	**01 03 32.8**	**-1.0**
	4.3nm,1.0s,mb4.4,baz=340,slow=12,SNR=3.3						
AKASG	**Malin Array Be**	**69.48**	**359**	P	**P**	**01 04 43.8**	**-0.7**
	1.2nm,0.5s,mb4.0,baz=4.4,slow=6.2,SNR=7.3						
BRTR	**Keskin Array B**	**80.36**	**356**	P	**P**	**01 05 47.2**	**-0.2**
	0.4nm,0.5s,mb3.5,baz=20,slow=5.1,SNR=3.4						
BOSA	**Boshof**	**148.38**		**5**	PKPbc	PKPbc	01 13 22.2 +0.3
	2.6nm,1.1s,baz=11,slow=5.2,SNR=4.8						

ISCJB ***22*** *01:09:31.5±0.3, 32.°42N×0.°03×105.°16E±0.°05, h10km, mb4.0/20, Error ellipse: s-maj=5.9km s-min=4.2km az=1.1*
IDC ***22*** *01:09:31.6±0.8, 32.°47N×105.°12E, h0km, mb3.9/12, mb1 4.0/15, mb1mx3.9/27, mbtmp3.9/15, ML3.7/3, Error ellipse: s-maj=27.7km s-min=15.1km az=56.0*
NEIC ***22*** *01:09:33.9±0.5, 32.°50N×105.°06E, h10km, mb4.1/5, Error ellipse: s-maj=13.4km s-min=8.3km az=62.0*
BJI ***22*** *01:09:33.5, 32.°44N×105.°18E, h16km, mB4.4/3, mb4.3/4, ML4.0/13, Ms4.1/6, Ms7 3.8/6*
MOS ***22*** *01:09:34.5±1.1, 32.°47N×105.°12E, h33km, mb4.2/15, Error ellipse: s-maj=18.9km s-min=9.2km az=108.5*
ISC 22 01:09:33.5±0.3, 32.°44N±0.°03×105.°16E±0.°04, h10km, n56, σ1°21/69, mb4.0/20, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.94**	**218**	Pn	**Pn**	**01 10 07.1**	**+0.7**
CD2				Pg	**Pg**	**01 10 08.9**	**-1.7**
CD2				Sn	**Sn**	**01 10 32.9**	**+2.1**
CD2				Sg	**Sg**	**01 10 35.3**	**-0.4**
CD2				smax			
	comp=N,9μm,0.6s						
CD2				smax			
	comp=E,5μm,0.6s						
XAN	**Xi'an**	**3.54**	**62**	Pn	**Pn**	**01 10 30.0**	**+1.6**
XAN				Pg	**Pg**	**01 10 37.9**	**-3.3**
XAN				Sn	**Sn**	**01 11 12.8**	**+2.5**
XAN				Sg	**Sg**	**01 11 24.3**	**-2.7**
XAN				smax			
	comp=N,520nm,0.7s						
XAN				smax			
	comp=E,390nm,0.8s						
LZH	**Lanzhou**	**3.80**	**344**	Pn	**Pn**	**01 10 34.0**	**+1.9**
LZH				Pg	**Pg**	**01 10 43.5**	**-2.8**
LZH				Sn	**Sn**	**01 11 17.6**	**+0.8**
LZH				Sg	**Sg**	**01 11 30.5**	**-5.0**
LZH				smax			
	comp=N,620nm,0.9s						
LZH				smax			
	comp=E,1μm,1.0s						
LZH				LR	LR		
	comp=E,2μm,4.2s						
LZH				LR	LR		
	comp=Z,2μm,8.3s						
ENH	**Enshi**	**4.29**	**119**	*e*Pn	**Pn**	**01 10 42.5**	**+3.7**
GYA	**Guiyang**	**6.10**	**167**	Pn	**Pn**	**01 11 05.1**	**+1.4**
GYA				Sn	**Sn**	**01 12 13.3**	**-0.3**
GYA				smax			
	comp=N,160nm,0.9s						
GYA				smax			
	comp=E,150nm,0.8s						
KMI	**Kunming**	**7.59**	**197**	Pn	**Pn**	**01 11 30.6**	**+6.4**
KMI				Sn	**Sn**	**01 12 46.8**	**-3.5**
KMI				smax			
	comp=N,34nm,0.8s						
KMI				smax			
	comp=E,31nm,0.8s						
KMI				LR	LR		
	comp=N,310nm,6.8s						
KMI				LR	LR		
	comp=E,210nm,6.4s						
KMI				LR	LR		
	comp=Z,230nm,7.2s						
WHN	**Wuhan**	**8.07**	**101**	P	**Pn**	**01 11 40.0**	**+9.2**
WHN				S	**Sn**	**01 13 00.8**	**-1.3**
WHN				LR	LR		
	comp=N,720nm,4.3s						
WHN				LR	LR		
	comp=E,830nm,4.7s						
WHN				LR	LR		
	comp=Z,590nm,4.5s						
GTA	**Gaotai**	**8.20**	**330**	*e*P	**Pn**	**01 11 33.3**	**+0.8**
GTA				pP		01 11 37.0	
GTA				sP		01 11 39.4	
GTA				S	**Sn**	**01 13 07.5**	**+2.4**
GTA				sS		01 13 12.9	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,82nm,5.1s						
GTA				LR	LR		
	comp=N,360nm,10.8s						
GTA				LR	LR		
	comp=E,230nm,9.6s						
GTA				LR	LR		
	comp=Z,250nm,10.2s						
CMAR	**Chiang Mai Arr**	**15.00**	**203**	Pn	**Pn**	**01 13 07.0**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=13,slow=12,SNR=3.7						
SONM	**Songino Array**	**15.41**	**3**	Pn	**Pn**	**01 13 08.8**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=181,slow=15,SNR=3.2						
SONM				Lg		01 17 38.6	
	comp=Z,0.1nm,0.3s,baz=200,slow=24,SNR=3.0						
ULN	**Ulaanbaatar**	**15.48**	**5**	P	**Pn**	**01 13 13.8**	**+2.1**
KSRS	**Korea Array**	**19.31**	**69**	P	**Pn**	**01 13 59.5**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=266,slow=8.4,SNR=5.9						
MOY	**Mondy**	**19.46**	**352**	*e*P	**Pn**	**01 14 04.8**	**+3.5**
MK31	**Makanchi Array**	**22.60**	**316**	*e*P	**P**	**01 14 33.8**	**-0.3**
MKAR	**Makanchi Array**	**22.60**	**316**	P	**P**	**01 14 33.9**	**-0.2**
	comp=Z,1.5nm,0.6s,mb3.6,baz=110,slow=13,SNR=14						
MKAR	**Makanchi Array**	**22.60**	**316**	P	**P**	**01 14 33.9**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR	**Makanchi Array**	**22.60**	**316**	P	**P**	**01 14 33.9**	**-0.2**
ZALV	**Zalesovo Beam**	**25.94**	**332**	P	**P**	**01 15 05.4**	**-0.4**
	comp=Z,2.4nm,0.6s,mb3.9,baz=133,slow=9.4,SNR=12						
ZALV	**Zalesovo Beam**	**25.94**	**332**	P	**P**	**01 15 05.4**	**-0.4**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.8						
UCH	**Uchtor**	**26.13**	**301**	*e*P	**P**	**01 15 08.9**	**+1.3**
	comp=Z,5.3nm,1.3s,mb3.9						
KURK	**Kurchatov**	**26.75**	**321**	*e*P	**P**	**01 15 13.0**	**-0.1**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.9						
KURK	**Kurchatov**	**26.75**	**321**	*e*P	**P**	**01 15 13.0**	**-0.1**
	comp=Z,3.4nm,0.8s,mb3.9						
BVAR	**Borovoye Array**	**32.33**	**320**	P	**P**	**01 16 02.6**	**0.0**
	comp=Z,0.6nm,0.5s,mb3.7,baz=121,slow=7.4,SNR=4.7						
BVAR	**Borovoye Array**	**32.33**	**320**	P	**P**	**01 16 02.6**	**0.0**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ABKAR	**Akbulak array**	**37.48**	**310**	*e*P	**P**	**01 16 47.3**	**+0.1**
	comp=Z,0.6nm,0.5s,mb3.7						
AKTK	**Aktyubinsk**	**38.90**	**312**	P	**P**	**01 16 59.0**	**-0.1**
AKTO	**Aktyubinsk**	**38.90**	**312**	P	**P**	**01 16 59.0**	**-0.1**
	comp=Z,0.8nm,0.5s,mb3.7,baz=119,slow=6.9,SNR=2.8						
AKTO	**Aktyubinsk**	**38.90**	**312**	P	**P**	**01 16 59.0**	**-0.1**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
ARU	**Arti**	**39.95**	**321**	*e*P	**P**	**01 17 07.6**	**-0.1**
ARU				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
ARU	**Arti**	**39.95**	**321**	*e*P	**P**	**01 17 07.6**	**-0.1**
	comp=Z,3.0nm,0.6s,mb4.2						
ARCES	**ARCESS Array B**	**56.42**	**335**	P	**P**	**01 19 13.8**	**-0.9**
	comp=Z,1.2nm,0.6s,mb4.1,baz=81,slow=7.7,SNR=7.8						
ARCES	**ARCESS Array B**	**56.42**	**335**	P	**P**	**01 19 13.9**	**-0.9**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	**Keskin Array B**	**56.87**	**299**	P	**P**	**01 19 17.7**	**-0.8**
	comp=Z,0.9nm,0.7s,mb3.9,baz=103,slow=7.4,SNR=7.4						
BRTR	**Keskin Array B**	**56.87**	**299**	P	**P**	**01 19 17.7**	**-0.8**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**56.97**	**326**	P	**P**	**01 19 18.5**	**-0.3**
	comp=Z,1.2nm,0.5s,mb4.2,baz=82,slow=7.3,SNR=12						
FINES	**FINESS Array B**	**56.97**	**326**	P	**P**	**01 19 18.5**	**-0.3**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	**57.14**	**313**	P	**P**	**01 19 18.8**	**-1.3**
	comp=Z,1.0nm,0.5s,mb4.1,baz=68,slow=6.9,SNR=4.0						
AKASG	**Malin Array Be**	**57.14**	**313**	P	**P**	**01 19 18.8**	**-1.3**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SPITS	**Spitsbergen Ar**	**58.26**	**346**	P	**P**	**01 19 27.2**	**-0.5**
	comp=Z,1.7nm,0.7s,mb4.2,baz=122,slow=4.0,SNR=4.1						
SPITS	**Spitsbergen Ar**	**58.26**	**346**	P	**P**	**01 19 27.2**	**-0.5**
SPITS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SPITS	**Spitsbergen Ar**	**58.26**	**346**	P	**P**	**01 19 27.2**	**-0.5**
WRA	**Warramunga Arr**	**59.10**	**148**	P	**P**	**01 19 34.0**	**-0.2**
KWP	**Kalwaria Pacla**	**61.46**	**313**	*e*P	**P**	**01 19 49.9**	**-0.2**
KWP				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.4						
KWP	**Kalwaria Pacla**	**61.46**	**313**	*e*P	**P**	**01 19 49.9**	**-0.2**
	comp=Z,2.2nm,0.6s,mb4.5						
ASAR	**Alice Springs**	**62.18**	**150**	P	**P**	**01 19 55.1**	**0.0**
	comp=Z,0.9nm,0.6s,mb4.1,baz=323,slow=6.0,SNR=9.1						
ASAR	**Alice Springs**	**62.18**	**150**	P	**P**	**01 19 55.2**	**+0.1**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NB2	**NORSAR Subarra**	**64.02**	**327**	P	**P**	**01 20 04.9**	**-2.1**
	comp=Z,1.3nm,0.7s,mb4.1,baz=70,slow=6.5						
NOA	**NORSAR Array B**	**64.02**	**327**	P	**P**	**01 20 05.5**	**-1.5**
	comp=Z,1.0nm,0.6s,mb4.0,baz=72,slow=6.8,SNR=4.5						
NOA	**NORSAR Array B**	**64.02**	**327**	P	**P**	**01 20 05.5**	**-1.5**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	**NORSAR Array B**	**64.02**	**327**	P	**P**	**01 20 05.5**	**-1.5**
LPG	**La Plagne**	**72.99**	**313**	*e*P	**P**	**01 21 03.4**	**+0.1**
	comp=Z,12nm,0.8s,mb4.6						
LPL	**La Plagne**	**73.00**	**313**	*e*P	**P**	**01 21 03.3**	**0.0**
	comp=Z,10nm,0.8s,mb4.5						
ORIF	**Oris-en-Rattie**	**73.81**	**313**	*e*P	**P**	**01 21 07.7**	**-0.5**
AVF	**Avril sur Loir**	**74.40**	**316**	*e*P	**P**	**01 21 10.7**	**-0.8**
	comp=Z,6.1nm,0.9s,mb4.2						
YKA	**Yellowknife Ar**	**80.16**	**18**	P	**P**	**01 21 43.1**	**-0.4**
	comp=Z,1.4nm,0.8s,mb3.9,baz=346,slow=6.4,SNR=2.9						
YKA	**Yellowknife Ar**	**80.16**	**18**	P	**P**	**01 21 43.1**	**-0.4**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						

TIF ***22*** *01:10:51.3, 43.°25N×43.°05E, h10km*
MOS ***22*** *01:10:51.5±1.3, 43.°22N×42.°92E, h10km, mb3.8/1, Error ellipse: s-maj=9.9km s-min=8.2km az=22.1*
CSEM ***22*** *01:10:51.6±0.3, 43.°20N×42.°94E, h2km, mb3.8, Error ellipse: s-maj=4.6km s-min=3.3km az=52.0*
ISC 22 01:10:52.0±0.5, 43.°22N±0.°02×42.°95E±0.°04, h5km±6km, n45, σ0°88/82, 2C-3D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DIGR	**Digorskoe uzhe**	**0.56**	**124**	*i*PG	**Pg**	**01 11 01.8**	**-1.0**
DIGR				*i* S	**Sg**	**01 11 08.3**	**-1.8**
DIGR	**Digorskoe uzhe**	**0.56**	**124**	*i* Pg	**Pg**	**01 11 01.8**	**-1.0**
DIGR				*i* Sg	**Sg**	**01 11 08.3**	**-1.8**
LSNR	**Lesken**	**0.64**	**84**	*i*PG	**Pg**	**01 11 03.3**	**-1.0**
LSNR				*i* S	**Sg**	**01 11 11.5**	**-1.0**
LSNR	**Lesken**	**0.64**	**84**	*i* Pg	**Pg**	**01 11 03.3**	**-1.0**
LSNR				*i* Sg	**Sg**	**01 11 11.5**	**-1.0**
ONI	**Oni**	**0.73**	**149**	P	**Pg**	**01 11 06.1**	**+0.2**
ONI				S	**Sg**	**01 11 16.5**	**+1.2**
ONI	**Oni**	**0.73**	**149**	P	**Pg**	**01 11 06.1**	**+0.1**
ONI				S	**Sg**	**01 11 16.5**	**+1.1**
KIV	**Kislovodsk**	**0.76**	**346**	*i* PG	**Pg**	**01 11 06.5**	**-0.2**
KIV				*e*S	**Sg**	**01 11 16.9**	**+0.2**
KIV				pmax	pmax		
	comp=Z,47nm,0.3s						
KIV	**Kislovodsk**	**0.76**	**346**	*i* Pg	**Pg**	**01 11 06.5**	**-0.2**
	comp=Z,47nm,0.3s						
KIV				*e*Sg	**Sg**	**01 11 16.9**	**+0.2**
BEYR	**Belyy Ugol+**	**0.80**	**353**	*c i*PG	**Pg**	**01 11 06.9**	**-0.6**
BEYR	**Belyy Ugol+**	**0.80**	**353**	*i* Pg	**Pg**	**01 11 06.9**	**-0.6**
PYA	**Pyatigorsk**	**0.82**	**5**	*e*PG	**Pg**	**01 11 07.4**	**-0.4**
PYA				*e*S	**Sg**	**01 11 18.1**	**-0.4**
PYA	**Pyatigorsk**	**0.82**	**5**	*e*Pg	**Pg**	**01 11 07.4**	**-0.4**
PYA				*e*Sg	**Sg**	**01 11 18.1**	**-0.4**
ZEI	**Tsey**	**0.83**	**122**	*e*PG	**Pg**	**01 11 06.4**	**-1.5**
ZEI				*i* S	**Sg**	**01 11 16.8**	**-1.8**
ZEI	**Tsey**	**0.83**	**122**	*e*Pg	**Pg**	**01 11 06.4**	**-1.5**
ZEI				*i* Sg	**Sg**	**01 11 16.8**	**-1.8**
KORR	**Kora**	**0.83**	**99**	*i*PG	**Pg**	**01 11 07.2**	**-0.7**
KORR				*i* S	**Sg**	**01 11 18.5**	**-0.2**
KORR	**Kora**	**0.83**	**99**	*i* Pg	**Pg**	**01 11 07.2**	**-0.7**
KORR				*i* Sg	**Sg**	**01 11 18.5**	**-0.2**
ARNR	**Ardon**	**0.97**	**91**	*e*PG	**Pg**	**01 11 10.4**	**-0.3**
ARNR				*e*S	**Sg**	**01 11 23.6**	**+0.3**
ARNR	**Ardon**	**0.97**	**91**	*e*Pg	**Pg**	**01 11 10.4**	**-0.3**
ARNR				*e*Sg	**Sg**	**01 11 23.6**	**+0.3**
KMSR	**Komsomolskaya**	**0.99**	**81**	*e*PG	**Pg**	**01 11 11.6**	**+0.5**
KMSR				*e*S	**Sg**	**01 11 25.0**	**+1.0**
KMSR	**Komsomolskaya**	**0.99**	**81**	*e*Pg	**Pg**	**01 11 11.6**	**+0.5**
KMSR				*e*Sg	**Sg**	**01 11 25.0**	**+1.0**
PRTR	**Priterechnaya**	**1.11**	**61**	*i*PG	**Pg**	**01 11 13.8**	**+0.5**
PRTR				*e*S	**Sg**	**01 11 29.7**	**+2.0**
PRTR	**Priterechnaya**	**1.11**	**61**	*i* Pg	**Pg**	**01 11 13.8**	**+0.5**
PRTR				*e*Sg	**Sg**	**01 11 29.7**	**+2.0**
KEH	**Kehvi**	**1.16**	**141**	P	**Pn**	**01 11 13.4**	**-1.4**
KEH				S	**Sg**	**01 11 29.7**	**+0.4**
KEH	**Kehvi**	**1.16**	**141**	P	**Pn**	**01 11 13.4**	**-1.5**
KEH				S	**Sg**	**01 11 29.7**	**+0.4**
BTKR	**Batakoyurt**	**1.17**	**82**	*e*PG	**Pg**	**01 11 14.9**	**+0.4**
BTKR				*e*S	**Sg**	**01 11 30.9**	**+1.1**
BTKR	**Batakoyurt**	**1.17**	**82**	*e*Pg	**Pg**	**01 11 14.9**	**+0.4**
BTKR				*e*Sg	**Sg**	**01 11 30.9**	**+1.1**
VLKR	**Vladikavkaz**	**1.28**	**97**	*e*PG	**Pn**	**01 11 15.7**	**-0.8**
VLKR				*e*S	**Sg**	**01 11 32.8**	**-0.2**
VLKR	**Vladikavkaz**	**1.28**	**97**	*e*Pg	**Pn**	**01 11 15.7**	**-0.8**
VLKR				*e*Sg	**Sg**	**01 11 32.8**	**-0.2**
SNJR	**Sundja**	**1.37**	**95**	*e*PG	**Pn**	**01 11 17.8**	**0.0**
SNJR				*e*S	**Sb**	**01 11 35.7**	**-0.2**
SNJR	**Sundja**	**1.37**	**95**	*e*Pg	**Pn**	**01 11 17.8**	**0.0**
SNJR				*e*Sg	**Sb**	**01 11 35.7**	**-0.2**
TRKR	**Terskaya**	**1.39**	**68**	*e*PG	**Pg**	**01 11 18.5**	**-0.3**
TRKR				*e*S	**Sg**	**01 11 38.2**	**+1.4**
TRKR	**Terskaya**	**1.39**	**68**	*e*Pg	**Pg**	**01 11 18.5**	**-0.3**
TRKR				*e*Sg	**Sg**	**01 11 38.2**	**+1.4**
GOR	**Gori**	**1.50**	**145**	P	**Pg**	**01 11 22.2**	**+1.5**
GOR				S	**Sg**	**01 11 47.4**	**+7.3**
GOR	**Gori**	**1.50**	**145**	P	**Pg**	**01 11 22.2**	**+1.5**
TBLG	**Delisi**	**1.99**	**138**	*e*PN	**Pb**	**01 11 29.3**	**+0.7**
TBLG				*e*S	**Sg**	**01 11 56.0**	**+0.1**
TBLG	**Delisi**	**1.99**	**138**	P	**Pb**	**01 11 29.3**	**+0.7**
TBLG				S	**Sg**	**01 11 56.0**	**+0.1**
TBLG	**Delisi**	**1.99**	**138**	P	**Pb**	**01 11 29.3**	**+0.7**
TBLG				S	**Sg**	**01 11 56.0**	**+0.1**
MTA	**Mtatsminda**	**2.04**	**137**	P	**Pb**	**01 11 29.2**	**-0.4**
MTA				S	**Sb**	**01 11 55.2**	**0.0**
DBOC	**Borcka**	**2.10**	**207**	*i* P	**Pb**	**01 11 31.7**	**+1.2**
DBOC	**Borcka**	**2.10**	**207**	*i* P	**Pb**	**01 11 31.7**	**+1.2**
DBOC				*i* S	**Sn**	**01 11 54.5**	**+0.4**
DAGI	**Agillar**	**2.27**	**200**	*i* P	**Pb**	**01 11 33.8**	**+0.4**
SOC	**Sochi**	**2.38**	**280**	*i* PN	**Pn**	**01 11 31.4**	**-0.3**
SOC	**Sochi**	**2.38**	**280**	*i* Pn	**Pn**	**01 11 31.4**	**-0.3**
DDEM	**Demirkent**	**2.49**	**201**	*i* P	**Pb**	**01 11 37.6**	**+0.4**
DGRG	**David-gareji**	**2.52**	**134**	P	**Pg**	**01 11 39.9**	**-0.3**
DGRG				S	**Sg**	**01 12 16.2**	**+3.3**

ISCJB ***22*** *01:29:53.8±0.3, 36.°43N±0.°03×30.°24E±0.°04, h57km±6km, Error ellipse: s-maj=5.4km s-min=4.2km az=24.5*
CSEM ***22*** *01:29:54.4±0.3, 36.°47N×30.°23E, h25km±3km, MD3.2, Error ellipse: s-maj=5.1km s-min=4.1km az=118.0*
DDA ***22*** *01:29:55.7, 36.°57N×30.°17E, h31km, Md3.3*
ISK ***22*** *01:29:56.7, 36.°65N×30.°22E, h34km, MD3.3*
NEIC ***22*** *01:29:56.5, 36.°66N×30.°21E, h28km, MD3.2(ATH), ML3.1(ISK), After ISK.*
ATH ***22*** *01:29:57.9, 36.°63N×29.°67E, h27km, MD3.2/3*
HLW ***22*** *01:30:03.9, 35.°74N×30.°08E, h33km±30km, Md3.4, Ml3.2*
ISC 22 01:29:55.4±0.3, 36.°47N±0.°03×30.°23E±0.°04, h37km±17km, n114, σ0°98/132, Turkey

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

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DEMI	Demirci	2.84	335	i P	Pn	01 30 36.6	-1.5
LFK	Lefkose	2.93	113	ePN	Pn	01 30 43.6	+4.1
LFK	Lefkose	2.93	113	Pn	Pn	01 30 43.8	+4.4
LFK	Lefkose	2.93	113	ePn	Pn	01 30 43.6	+4.1
SMG	Samos	2.98	296	ePn	Pn	01 30 39.2	-0.9
SMG	Samos	2.98	296	ePN	Pn	01 30 39.2	-0.9
SMG	Samos	2.98	296	ePn	Pn	01 30 39.2	-0.9
ESKT	Eskisehir	3.09	9	ePN	Pn	01 30 41.8	+0.3
ESKT	Eskisehir	3.09	9	ePn	Pn	01 30 41.8	+0.2
BORA	Eskisehir	3.41	3	i P	Pn	01 30 45.9	-0.1
BORA	Eskisehir	3.41	3	i P	Pn	01 30 45.9	-0.1
MERS	Mersin	3.48	82	ePN	Pn	01 30 49.8	+2.9
MERS	Mersin	3.48	82	ePn	Pn	01 30 49.8	+2.9
BBAL	Bala	3.83	36	i P	Pn	01 30 52.2	+0.5
BBAL	Bala	3.83	36	i P	Pn	01 30 52.2	+0.5
NPS	Neapolis	3.94	254	ePn	Pn	01 30 51.5	-1.7
NPS	Neapolis	3.94	254	ePN	Pn	01 30 51.5	-1.7
NPS	Neapolis	3.94	254	ePn	Pn	01 30 51.5	-1.7
BR131	Keskin Array S	4.22	39	ePN	Pn	01 30 57.5	+0.4
BR131	Keskin Array S	4.22	39	ePn	Pn	01 30 57.5	+0.4
CDAG	Cicekdag	4.54	45	i P	Pn	01 31 02.1	+0.5
CDAG	Cicekdag	4.54	45	i P	Pn	01 31 02.1	+0.6
HMAT	Matruh	5.96	207	P	Pn	01 31 19.4	-1.7
	baz=210						
HMAT				S	Sn	01 32 17.2	-11
	baz=210						
HMAT	Matruh	5.96	207	P	Pn	01 31 19.4	-1.6
AMAG	Maghara	6.32	156	P	Pn	01 31 25.8	-0.2
	baz=151						
AMAG	Maghara	6.32	156	P	Pn	01 31 25.8	-0.2
SLUM		6.48	221	P	Pn	01 31 27.9	-0.3
	baz=226						
SLUM				S	Sn	01 32 32.5	-8.3
	baz=226						
SLUM		6.48	221	P	Pn	01 31 27.9	-0.3
KOT	Kottamia	6.66	168	P	Pn	01 31 30.2	-0.5
	baz=165						
KOT				AMP		01 32 00.0	
	comp=N,20μm,0.2s,logA/T=4.9,baz=165						
KOT	Kottamia	6.66	168	P	Pn	01 31 30.2	-0.4
HSAF	As Saff	6.92	170	P	Pn	01 31 33.7	-0.6
	baz=168						
HSAF	As Saff	6.92	170	P	Pn	01 31 33.7	-0.5
SUZ		6.96	161	P	Pn	01 31 34.5	-0.2
	baz=157						
SUZ		6.96	161	P	Pn	01 31 34.6	-0.2
GLL	Jalalah	6.98	169	P	Pn	01 31 34.5	-0.6
	baz=166						
GLL	Jalalah	6.98	169	P	Pn	01 31 34.5	-0.6
HNKL	Nakhl	7.24	153	P	Pn	01 31 38.8	+0.2
	baz=149						
HNKL	Nakhl	7.24	153	P	Pn	01 31 38.8	+0.2
AWBH		8.20	188	P	Pn	01 31 50.1	-1.7
	baz=188						
AWBH		8.20	188	P	Pn	01 31 50.1	-1.7
SWA2		8.24	210	P	Pn	01 31 52.1	-0.3
	baz=213						
SWA2				S	Sn	01 33 13.8	-10
	baz=213						
SWA2		8.24	210	P	Pn	01 31 52.1	-0.3
HFRF	Wahat Farafira	9.43	190	P	Pn	01 32 07.6	-1.1
	baz=191						
HFRF	Wahat Farafira	9.43	190	P	Pn	01 32 07.6	-1.1

DJA 22 02:06:42,0°.32N×122°.40E,h124km,MLv3.9/6, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MRSI	Marisa	0.48	289	P	Pn	02 07 01.9	+1.6
LUWI	Luwuk	1.40	165	P	Pn	02 07 08.2	-0.4
APSI	Ampana	1.44	212	P	Pn	02 07 09.4	+0.4
KMSI	Cibinong	1.60	81	P	Pn	02 07 12.6	+1.7
MNI	Manado	2.68	65	P	Pn	02 07 24.1	-0.2
PCI	Palu	2.84	245	P	Pn	02 07 27.1	+0.8
TTSI	Tana Toraja	4.22	218	P	Pn	02 07 45.1	+0.5

IDC 22 02:20:41.8±2.1,24°.60N×93°.68E,h0km,mb3.6/3, mb1 3.8/3,mb1mx3.4/23,mbtmp3.7/3,Error ellipse: s-maj=92.6km s-min=23.9km az=68.0
NEIC 22 02:20:48.6±0.8,24°.56N×93°.45E,h53km±10km,mb3.8/2, Error ellipse: s-maj=15.5km s-min=6.6km az=47.0
ISCJB 22 02:20:50.3±0.9,24°.52N±0°.08×93°.15E±0°.06,h97km±10km, mb3.6/5,Error ellipse: s-maj=13.5km s-min=7.9km az=28.1
ISC 22 02:20:50.0±0.8,24°.57N±0°.07×93°.31E±0°.06,h70km±10km, n27,σ1§02/41,mb3.6/5,Myanmar-India border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IMP	Imphal	0.60	69	ePG	Pn	02 20 56.0	-7.8
IMP				i SG	Sn	02 21 04.0	-10
SHL	Shillong	1.63	308	ePKP	Pn	02 21 17.0	+0.3
SHL				eS	Sn	02 21 38.0	+1.1
AGT	Agartala	2.00	250	i P	Pn	02 21 22.0	+0.3
AGT				i x	x	02 22 50.0	
LSA	Lhasa	5.46	340	Pg	Pn	02 22 06.5	-2.3
LSA				Sg	Sn	02 23 07.3	-2.9
LSA				smax			
	comp=N,40nm,0.6s						
LSA				smax			
	comp=E,60nm,0.5s						
LSA	Lhasa	5.46	340	ePn	Pn	02 22 08.5	-0.3
	comp=E,17nm,0.3s						
LSA				eS	Sn	02 23 06.3	-4.0
TAPN	Taplejung	5.75	300	ePn	Pn	02 22 13.8	+1.0
TAPN				eSn	Sn	02 23 18.5	+1.1
	comp=E,97nm,0.5s						
ODAN	Odare	5.81	294	ePn	Pn	02 22 14.3	+0.8
ODAN				eSn	Sn	02 23 19.3	+0.5
	comp=E,189nm,0.4s						
RAMN	Ramite	6.50	293	ePn	Pn	02 22 23.9	+0.9
RAMN				eSn	Sn	02 23 35.5	-0.2
	comp=E,95nm,0.3s						
BOK	Bokaro	6.83	265	ePKP	Pn	02 22 28.8	+1.3
BOK				eS	Sn	02 23 43.1	-0.6
BOK				AML	AML	02 23 49.0	
	comp=E,23nm,0.5s						
BOK				AML	AML	02 23 49.5	
	comp=N,29nm,0.3s						
JIRN	Jiri	7.10	297	ePn	Pn	02 22 32.1	+0.9
JIRN				eSn	Sn	02 23 50.1	-0.4
	comp=N,123nm,0.4s						
GUN	Gumba	7.46	298	ePn	Pn	02 22 36.7	+0.6
GUN				eSn	Sn	02 23 58.9	-0.3
	comp=N,82nm,0.4s						
PKI	Pulchoki	7.71	294	ePn	Pn	02 22 39.8	+0.3
PKI				eSn	Sn	02 24 03.8	-1.6
	comp=N,25nm,0.3s						
PKI	Pulchoki	7.71	294	ePn	Pn	02 22 40.3	+0.8
PKIN	Phulchoki	7.72	295	ePn	Pn	02 22 40.3	+0.6
KKN	Kakani	7.90	296	ePn	Pn	02 22 42.1	0.0
KKN				eSn	Sn	02 24 08.1	-1.8
	comp=N,28nm,0.3s						
DMN	Daman	7.97	294	ePn	Pn	02 22 43.2	0.0
DMN				eSn	Sn	02 24 10.6	-1.2
	comp=N,38nm,0.6s						
CMAR	Chiang Mai Arr	8.03	138	Pn	Pn	02 22 42.2	-1.7
	comp=N,0.5nm,0.3s,baz=312,slow=13,SNR=3.9						
GKN	Gorkha	8.50	296	ePn	Pn	02 22 50.1	-0.3
GKN				eSn	Sn	02 24 22.7	-2.1
	comp=N,118nm,0.4s						
BHPL	Bhopal	14.59	268	eS	Sn	02 26 44.8	-8.6
BHPL				AML	AML	02 26 50.1	
	comp=N,7.0nm,1.1s						
BHPL				AML	AML	02 26 50.8	
	comp=E,6.5nm,0.7s						
TKM2	Tokmak 2	23.41	326	eP	P	02 25 55.8	+3.1
	comp=E,3.2nm,0.8s,mb3.7						
MK31	Makanchi Array	23.87	341	eP	P	02 25 57.5	+0.7
MKAR	Makanchi Array	23.87	341	P	P	02 25 57.3	+0.5
	comp=E,0.7nm,0.4s,mb3.3,baz=147,slow=12,SNR=10						
SONM	Songino Array	25.43	21	P	P	02 26 10.5	-0.6
	comp=E,0.9nm,0.8s,mb3.3,baz=206,slow=9.9,SNR=4.0						
ABKAR	Akbulak array	35.85	322	eP	P	02 27 44.4	+1.6
	comp=E,0.7nm,0.5s,mb3.9						
WRA	Warramunga Arr	59.60	134	P	P	02 30 46.2	-0.6
	baz=325,slow=7.4						
WRAB	Tennant Creek	59.60	134	eP	P	02 30 46.3	-0.5
ASAR	Alice Springs	62.04	138	P	P	02 31 02.9	-0.4
	comp=E,0.8nm,0.6s,mb4.0,baz=331,slow=7.4,SNR=6.8						

ISCJB 22 02:31:03.8±0.4,37°.99N±0°.02×1°.62W±0°.02,h9km±2km, Error ellipse: s-maj=3.5km s-min=2.0km az=149.5
CSEM 22 02:31:04.1±0.1,37°.87N×1°.51W,h8km,ML3.5/38,Error ellipse: s-maj=3.3km s-min=1.9km az=148.0
MDD 22 02:31:04.9±0.2,37°.84N×1°.44W,h5km±2km,mbLg3.1/27, Error ellipse: s-maj=2.8km s-min=1.8km az=168.0
MDD EMS: II TOTANA.
INMG 22 02:31:04.8±1.0,37°.85N×1°.43W,h8km±1km,ML3.0,Error ellipse: s-maj=2.2km s-min=1.3km az=126.0
IGIL 22 02:31:05.1,37°.82N×1°.40W,h11km,ML3.2
NEIC 22 02:31:05.0,37°.82N×1°.40W,h11km,ML3.1(LDG), MN3.0(MDD),After MDD.
NEIC Felt at Totana.
LDG 22 02:31:05.7±0.1,37°.83N×1°.44W,h2km,Ml3.1/12,Error ellipse: s-maj=2.6km s-min=1.4km az=143.0
SFS 22 02:31:05.0,37°.81N×1°.39W,h11km,ML3.0
ISC 22 02:31:04.6±0.4,37°.90N±0°.02×1°.51W±0°.02,h12km±2km, n327,σ1§22/592,15C-15D,Spain

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EMUR	La Murta	0.22	104	⇑Pg	Pg	02 31 07.9	-1.4
EMUR				Lg		02 31 10.3	
EMUR	La Murta	0.22	104	⇑Pg	Pg	02 31 08.0	-1.4
	2μm,0.3s,SNR=18						
EMUR				Lg		02 31 10.3	
	5μm,0.3s						
EMUR	La Murta	0.22	104	⇑Pg	Pg	02 31 08.0	-1.4
	2μm,0.3s,SNR=18						
EMUR				Lg		02 31 10.3	
	5μm,0.3s						
EMUR	La Murta	0.22	104	Pg	Pg	02 31 07.9	-1.5
	2μm,0.3s,SNR=18						
EMUR				Lg		02 31 10.3	
	3μm,0.2s						
CART	Cartagena	0.51	127	ePg	Pg	02 31 12.9	-1.7
CART	Cartagena	0.51	127	Pg	Pg	02 31 12.8	-1.8
CART				Lg		02 31 17.9	
CART	Cartagena	0.51	127	Pg	Pg	02 31 12.8	-1.8
CART				Lg		02 31 17.9	
CART	Cartagena	0.51	127	ePg	Pg	02 31 12.9	-1.7
ETOB	Tobarra	0.75	358	⇑Pg	Pg	02 31 19.5	+0.5
ETOB				Lg		02 31 31.8	
ETOB	Tobarra	0.75	358	⇑Pg	Pg	02 31 19.5	+0.4
	245nm,0.2s,SNR=18						
ETOB				Lg		02 31 31.8	
	787nm,0.2s						
ETOB	Tobarra	0.75	358	⇑Pg	Pg	02 31 19.5	+0.4
	245nm,0.2s,SNR=18						
ETOB				Lg		02 31 31.8	
	787nm,0.2s						
ETOB	Tobarra	0.75	358	Pg	Pg	02 31 19.5	+0.4
	245nm,0.2s,SNR=18						
ETOB				Lg		02 31 31.8	
	550nm,0.3s						
EHUE	Huescar	0.86	265	Pg	Pg	02 31 21.9	+0.7
EHUE				Lg		02 31 35.8	
EHUE	Huescar	0.86	265	Pg	Pg	02 31 21.9	+0.7
	4.3nm,0.2s,SNR=7.9						
EHUE				Lg		02 31 35.8	
	163nm,0.3s,SNR=7.9						
EHUE	Huescar	0.86	265	Pg	Pg	02 31 21.9	+0.7
	4.3nm,0.2s,SNR=7.9						
EHUE				Lg		02 31 35.8	
	163nm,0.3s,SNR=7.9						
EHUE	Huescar	0.86	265	Pg	Pg	02 31 21.9	+0.7
	4.3nm,0.2s,SNR=7.9						
EHUE				Lg		02 31 35.8	
	163nm,0.3s,SNR=7.9						
EVIA	Vianos	1.07	314	Pg	Pg	02 31 25.7	+0.4
EVIA				Lg		02 31 42.7	
EVIA	Vianos	1.07	314	⇓Pg	Pg	02 31 25.7	+0.4
	308nm,0.3s,SNR=18						
EVIA				Lg		02 31 42.7	
	328nm,0.2s,SNR=7.9						
EVIA	Vianos	1.07	314	⇓Pg	Pg	02 31 25.7	+0.4
	308nm,0.3s,SNR=18						
EVIA				Lg		02 31 42.7	
	328nm,0.2s,SNR=7.9						
EVIA	Vianos	1.07	314	Pg	Pg	02 31 25.7	+0.4
	308nm,0.3s,SNR=556						
EVIA				Lg		02 31 42.7	
	506nm,0.4s,SNR=25						
ENIJ	Nijar	1.08	211	Pg	Pg	02 31 24.2	-1.1
ENIJ				Lg		02 31 39.4	
ENIJ	Nijar	1.08	211	Pg	Pg	02 31 24.2	-1.1
	218nm,0.4s,SNR=101						
ENIJ				Lg		02 31 39.4	
	248nm,0.4s,SNR=8.8						
ENIJ	Nijar	1.08	211	Pg	Pg	02 31 24.2	-1.1
	218nm,0.4s,SNR=101						
ENIJ				Lg		02 31 39.4	
	248nm,0.4s,SNR=8.8						
ENIJ	Nijar	1.08	211	Pg	Pg	02 31 24.2	-1.1
	218nm,0.4s,SNR=101						
ENIJ				Lg		02 31 39.4	
	103nm,0.3s,SNR=8.8						
EQES	Quesada	1.24	266	Pg	Pg	02 31 28.6	+0.2
EQES				Lg		02 31 47.1	
EQES	Quesada	1.24	266	Pg	Pg	02 31 28.6	+0.2
	164nm,0.5s,SNR=90						
EQES				Lg		02 31 47.1	
	545nm,0.3s						
EQES	Quesada	1.24	266	Pg	Pg	02 31 28.6	+0.2
	164nm,0.5s,SNR=90						
EQES				Lg		02 31 47.1	
	545nm,0.3s						
EQES	Quesada	1.24	266	Pg	Pg	02 31 28.6	+0.2
	164nm,0.5s,SNR=90						
EQES				Lg		02 31 47.1	
	362nm,0.4s						
EBEN	Beniarda	1.29	51	⇓Pg	Pg	02 31 27.1	-2.4
EBEN				Lg		02 31 44.4	
EBEN	Beniarda	1.29	51	⇓Pg	Pg	02 31 27.1	-2.4
	10.0nm,0.3s,SNR=18						
EBEN				Lg		02 31 44.4	
	57nm,0.4s,SNR=5.6						
EBEN	Beniarda	1.29	51	⇓Pg	Pg	02 31 27.1	-2.4
	10.0nm,0.3s,SNR=18						
EBEN				Lg		02 31 44.4	
	57nm,0.4s,SNR=5.6						
EBEN	Beniarda	1.29	51	Pg	Pg	02 31 27.1	-2.4
	10.0nm,0.3s,SNR=18						
EBEN				Lg		02 31 44.4	
	14nm,0.2s,SNR=5.6						
EBER	Berja	1.48	228	⇑Pg	Pg	02 31 31.7	-1.4
EBER				Lg		02 31 53.3	
EBER	Berja	1.48	228	⇑Pg	Pg	02 31 31.7	-1.4
	30nm,0.3s,SNR=18						
EBER				Lg		02 31 53.3	
	133nm,0.5s						
EBER	Berja	1.48	228	⇑Pg	Pg	02 31 31.7	-1.4
	30nm,0.3s,SNR=18						
EBER				Lg		02 31 53.3	
	133nm,0.5s						
EBER	Berja	1.48	228	Pg	Pg	02 31 31.7	-1.4
	30nm,0.3s,SNR=18						
EBER				Lg		02 31 53.3	
	75nm,0.6s						
EQUE	Quentar	1.68	246	⇑Pg	Pg	02 31 35.5	-1.3
	30nm,0.3s,SNR=18						
EQUE				Lg		02 31 58.8	
	82nm,0.4s,SNR=7.8						
EQUE	Quentar	1.68	246	⇑Pg	Pg	02 31 35.5	-1.3
	30nm,0.3s,SNR=18						
EQUE				Lg		02 31 58.8	
	82nm,0.4s,SNR=7.8						
EQUE	Quentar	1.68	246	Pg	Pg	02 31 35.5	-1.4
	30nm,0.3s,SNR=48						
EQUE				Lg		02 31 58.8	
	41nm,0.3s,SNR=7.8						
ECHE	Chera	1.74	14	Pn	Pn	02 31 34.7	+0.1
ECHE				Pg	Pg	02 31 37.0	-1.1
ECHE				Lg		02 32 00.7	
ECHE	Chera	1.74	14	⇑Pn	Pn	02 31 34.7	+0.1
	3.4nm,0.2s,SNR=18						
ECHE				Pg	Pg	02 31 38.0	-0.1
	26nm,0.3s,SNR=56						
ECHE				Lg		02 32 00.7	
	63nm,0.2s,SNR=9.0						
ECHE	Chera	1.74	14	⇑Pn	Pn	02 31 34.7	+0.1
	3.4nm,0.2s,SNR=18						
ECHE				Pg	Pg	02 31 38.0	-0.1
	26nm,0.3s,SNR=56						
ECHE				Lg		02 32 00.7	
	63nm,0.2s,SNR=9.0						
ECHE	Chera	1.74	14	Pn	Pn	02 31 34.7	+0.1
	3.4nm,0.2s,SNR=7.9						
ECHE	Chera	1.74	14	Pg	Pg	02 31 37.0	-1.1
	26nm,0.3s,SNR=56						
ECHE				Lg		02 32 00.7	
	50nm,0.2s,SNR=9.0						
ECOG	Cogollos-Vega	1.75	250	Pn	Pn	02 31 35.2	+0.6
ECOG				Pg	Pg	02 31 37.6	-0.5
ECOG				Lg		02 32 01.9	
ECOG	Cogollos-Vega	1.75	250	Pg	Pg	02 31 37.1	-1.0
	26nm,0.2s,SNR=28						
ECOG				Lg		02 32 01.9	
	72nm,0.3s,SNR=17						
ECOG	Cogollos-Vega	1.75	250	Pg	Pg	02 31 37.1	-1.0
	26nm,0.2s,SNR=28						
ECOG				Lg		02 32 01.9	
	72nm,0.3s,SNR=17						
ECOG	Cogollos-Vega	1.75	250	Pn	Pn	02 31 35.2	+0.6
	0.2nm,0.1s,SNR=7.9						
ECOG	Cogollos-Vega	1.75	250	Pg	Pg	02 31 37.6	-0.5
	26nm,0.2s,SNR=28						
ECOG				Lg		02 32 01.9	
	88nm,0.4s,SNR=17						
EBAN	Banos Encina	1.81	279	Pn	Pn	02 31 36.6	+1.0
EBAN				Pg	Pg	02 31 39.3	-0.1
EBAN				Lg		02 32 03.5	
EBAN	Banos Encina	1.81	279	⇓Pn	Pn	02 31 36.6	+1.0
	36nm,0.2s,SNR=18						
EBAN				Pg	Pg	02 31 39.3	-0.1
	46nm,0.2s,SNR=7.9						
EBAN				Lg		02 32 03.5	
	148nm,0.3s,SNR=14						
EBAN	Banos Encina	1.81	279	⇓Pn	Pn	02 31 36.6	+1.0
	36nm,0.2s,SNR=18						
EBAN				Pg	Pg	02 31 39.3	-0.1
	46nm,0.2s,SNR=7.9						
EBAN				Lg		02 32 03.5	
	148nm,0.3s,SNR=14						
EBAN	Banos Encina	1.81	279	Pn	Pn	02 31 36.6	+1.0
	36nm,0.2s,SNR=35						
EBAN	Banos Encina	1.81	279	Pg	Pg	02 31 39.3	-0.1
	46nm,0.2s,SNR=7.9						
EBAN				Lg		02 32 03.5	
	111nm,0.3s,SNR=14						
EGUA	Guajares	1.95	238	Pn	Pn	02 31 38.5	+1.1
EGUA				Sn	Sn	02 32 01.8	0.0
EGUA	Guajares	1.95	238	Pn	Pn	02 31 38.5	+1.1
	8.1nm,0.2s,SNR=7.9						
EGUA				Sn	Sn	02 32 01.8	0.0
	95nm,0.4s,SNR=7.9						
EGUA	Guajares	1.95	238	Pn	Pn	02 31 38.5	+1.1
	8.1nm,0.2s,SNR=7.9						
EGUA				Sn	Sn	02 32 01.8	0.0
	95nm,0.4s,SNR=7.9						
EGUA	Guajares	1.95	238	Pn	Pn	02 31 38.5	+1.1
	8.1nm,0.2s,SNR=7.9						
EGUA				Sn	Sn	02 32 01.8	0.0
	95nm,0.4s,SNR=7.9						
ERON	Agron	2.02	245	Pn	Pn	02 31 38.7	+0.2
	1.3nm,0.1s,SNR=7.9						
ERON				Pg	Pg	02 31 41.8	-1.6
	6.7nm,0.2s,SNR=7.9						
ERON	Agron	2.02	245	Pn	Pn	02 31 38.7	+0.2
	1.3nm,0.1s,SNR=7.9						
ERON				Pg	Pg	02 31 41.8	-1.6
	6.7nm,0.2s,SNR=7.9						
ELOJ	Sierra Loja	2.23	251	Pn	Pn	02 31 42.2	+0.9
ELOJ				Sn	Sn	02 32 10.3	+1.6
ELOJ	Sierra Loja	2.23	251	Pn	Pn	02 31 43.7	+2.4
	1.2nm,0.2s,SNR=12						
ELOJ				Sn	Sn	02 32 10.3	+1.6
	26nm,0.6s,SNR=5.9						
ELOJ	Sierra Loja	2.23	251	Pn	Pn	02 31 43.7	+2.4
	1.2nm,0.2s,SNR=12						
ELOJ				Sn	Sn	02 32 10.3	+1.6
	26nm,0.6s,SNR=5.9						
ELOJ	Sierra Loja	2.23	251	Pn	Pn	02 31 42.2	+0.9
	1.2nm,0.2s,SNR=12						
ELOJ				Sn	Sn	02 32 10.3	+1.6
	26nm,0.6s,SNR=5.9						
EALB	Alboran	2.30	212	Pn	Pn	02 31 41.8	-0.5
EALB				Sn	Sn	02 32 10.2	-0.3
EALB	Alboran	2.30	212	Pg	Pg	02 31 43.8	-4.9
	1.2nm,0.1s,SNR=4.0						
EALB				Sn	Sn	02 32 08.9	-1.6
	1.2nm,0.7s,SNR=7.9						
EALB	Alboran	2.30	212	Pg	Pg	02 31 43.8	-4.9
	1.2nm,0.1s,SNR=4.0						
EALB				Sn	Sn	02 32 08.9	-1.6
	1.2nm,0.7s,SNR=7.9						
EALB	Alboran	2.30	212	Pn	Pn	02 31 41.8	-0.5
	1.2nm,0.1s,SNR=7.9						
EALB				Sn	Sn	02 32 10.2	-0.3
	1.2nm,0.7s,SNR=7.9						
EADA	Adamuz	2.44	277	⇓Pn	Pn	02 31 44.6	+0.5
EADA				Pg	Pg	02 31 51.9	+0.6
EADA				Sn	Sn	02 32 15.7	+1.9
EADA				Lg		02 32 25.8	
EADA	Adamuz	2.44	277	⇓Pn	Pn	02 31 44.6	+0.5
	7.4nm,0.2s,SNR=18						
EADA				Pg	Pg	02 31 52.4	+1.1
	18nm,0.3s,SNR=17						
EADA				Sn	Sn	02 32 15.7	+1.9
	12nm,0.3s,SNR=5.8						
EADA				Lg		02 32 25.7	
	66nm,0.3s,SNR=20						
EADA	Adamuz	2.44	277	⇓Pn	Pn	02 31 44.6	+0.5
	7.4nm,0.2s,SNR=18						
EADA				Pg	Pg	02 31 52.4	+1.1
	18nm,0.3s,SNR=17						
EADA				Sn	Sn	02 32 15.7	+1.9
	12nm,0.3s,SNR=5.8						
EADA				Lg		02 32 25.7	
	66nm,0.3s,SNR=20						
EADA	Adamuz	2.44	277	Pn	Pn	02 31 44.6	+0.5
	3.4nm,0.2s,SNR=18						
EADA	Adamuz	2.44	277	Pg	Pg	02 31 51.9	+0.6
	18nm,0.3s,SNR=17						
EADA				Sn	Sn	02 32 15.7	+1.9
	12nm,0.3s,SNR=5.8						
EADA				Lg		02 32 25.7	
	77nm,0.4s,SNR=20						
EIBI	Ibiza	2.51	62	⇓Pn	Pn	02 31 44.2	-1.0
EIBI				Sn	Sn	02 32 12.2	-3.4
EIBI	Ibiza	2.51	62	⇓Pn	Pn	02 31 44.2	-1.0
	2.8nm,0.1s,SNR=18						
EIBI				Sn	Sn	02 32 12.2	-3.4
	19nm,0.2s,SNR=5.0						
EIBI	Ibiza	2.51	62	⇓Pn	Pn	02 31 44.2	-1.0
	2.8nm,0.1s,SNR=18						
EIBI				Sn	Sn	02 32 12.2	-3.4
	19nm,0.2s,SNR=5.0						
EIBI	Ibiza	2.51	62	Pn	Pn	02 31 44.2	-0.9
	2.8nm,0.1s,SNR=18						
EMOS	Mosqueruela	2.59	18	Pn	Pn	02 31 46.8	+0.6
EMOS				Pg	Pg	02 31 53.9	-0.4
EMOS				Sn	Sn	02 32 17.3	-0.4
EMOS				Lg		02 32 27.5	
EMOS	Mosqueruela	2.59	18	Pn	Pn	02 31 46.8	+0.6
	3.7nm,0.3s,SNR=36						
EMOS				Pg	Pg	02 31 54.1	-0.2
	31nm,0.8s,SNR=15						
EMOS				Sn	Sn	02 32 17.3	-0.4
	11nm,0.4s,SNR=7.9						
EMOS				Lg		02 32 27.5	
	38nm,0.5s,SNR=5.0						
EMOS	Mosqueruela	2.59	18	Pn	Pn	02 31 46.8	+0.6
	3.7nm,0.3s,SNR=36						
EMOS				Pg	Pg	02 31 54.1	-0.2
	31nm,0.8s,SNR=15						
EMOS				Sn	Sn	02 32 17.3	-0.4
	11nm,0.4s,SNR=7.9						
EMOS				Lg		02 32 27.5	
	38nm,0.5s,SNR=5.0						
EMOS	Mosqueruela	2.59	18	Pn	Pn	02 31 46.8	+0.5
	3.7nm,0.3s,SNR=36						
EMOS	Mosqueruela	2.59	18	Pg	Pg	02 31 53.9	-0.4
	31nm,0.8s,SNR=15						
EMOS				Sn	Sn	02 32 17.3	-0.4
	11nm,0.4s,SNR=7.9						
EMOS				Lg		02 32 27.5	
	10nm,0.2s,SNR=5.0						
ESDC	Sonseca Array	2.61	314	Pn	Pn	02 31 47.0	+0.5
ESDC				Pg	Pg	02 31 53.9	-0.7
ESDC				Lg		02 32 29.2	

ESDC Sonseca Array 2.61 314 ⇓Pn Pn 02 31 47.0 +0.5
0.9nm,0.3s,baz=126,slow=13,SNR=18
ESDC Pg Pg 02 31 53.9 -0.7
8.1nm,0.3s,baz=129,slow=17,SNR=36
ESDC Lg 02 32 29.2
16nm,0.2s,baz=134,slow=31,SNR=15
ESDC Sonseca Array 2.61 314 ⇓Pn Pn 02 31 47.0 +0.5
0.9nm,0.3s,baz=126,slow=13,SNR=18
ESDC Pg Pg 02 31 53.9 -0.7
8.1nm,0.3s,baz=129,slow=17,SNR=36
ESDC Lg 02 32 29.2
16nm,0.2s,baz=134,slow=31,SNR=15
ESDC Sonseca Array 2.61 314 Pn Pn 02 31 47.0 +0.5
0.9nm,0.3s,SNR=25
ESDC Sonseca Array 2.61 314 Pg Pg 02 31 53.9 -0.7
8.1nm,0.3s,SNR=36
ESDC Lg 02 32 29.2
16nm,0.2s,SNR=15
ESLA Sonseca Array 2.61 314 ePn Pn 02 31 46.7 +0.2
ESLA Sonseca Array 2.61 314 ePn Pn 02 31 46.7 +0.2
PAB San Pablo 2.76 307 ePn Pn 02 31 49.2 +0.6
PAB San Pablo 2.76 307 ePn Pn 02 31 49.2 +0.6
EMIJ Mijas 2.92 244 Pn Pn 02 31 51.2 +0.4
EMIJ Mijas 2.92 244 Pn Pn 02 31 51.2 +0.4
7.9nm,0.7s,SNR=8.1
EMIJ Mijas 2.92 244 Pn Pn 02 31 51.2 +0.4
7.9nm,0.7s,SNR=8.1
EMIJ Mijas 2.92 244 Pn Pn 02 31 51.2 +0.4
7.9nm,0.7s,SNR=8.1
ETOR Torete 2.95 352 Pn Pn 02 31 52.8 +1.6
ETOR Pg Pg 02 31 59.4 -1.7
ETOR Sn Sn 02 32 26.7 +0.2
ETOR Lg 02 32 40.6
ETOR Torete 2.95 352 Pn Pn 02 31 52.8 +1.6
7.9nm,0.2s,SNR=34
ETOR Pg Pg 02 32 00.3 -0.8
140nm,0.3s,SNR=101
ETOR Sn Sn 02 32 26.7 +0.2
48nm,0.4s,SNR=5.9
ETOR Lg 02 32 40.6
154nm,0.3s,SNR=5.0
ETOR Torete 2.95 352 Pn Pn 02 31 52.8 +1.6
7.9nm,0.2s,SNR=34
ETOR Pg Pg 02 32 00.3 -0.8
140nm,0.3s,SNR=101
ETOR Sn Sn 02 32 26.7 +0.2
48nm,0.4s,SNR=5.9
ETOR Lg 02 32 40.6
154nm,0.3s,SNR=5.0
ETOR Torete 2.95 352 Pn Pn 02 31 52.8 +1.6
7.9nm,0.2s,SNR=34
ETOR Torete 2.95 352 Pg Pg 02 31 59.4 -1.7
140nm,0.3s,SNR=101
ETOR Sn Sn 02 32 26.7 +0.3
48nm,0.4s,SNR=5.9
ETOR Lg 02 32 40.6
120nm,0.5s,SNR=5.0
ECAB El Cabril 3.09 274 Pn Pn 02 31 53.4 +0.3
ECAB Sn Sn 02 32 30.3 +0.4
ECAB Lg 02 32 44.9
ECAB El Cabril 3.09 274 ⇑Pn Pn 02 31 53.4 +0.3
6.8nm,0.3s,SNR=18
ECAB Sn Sn 02 32 30.3 +0.4
24nm,0.3s,SNR=10.0
ECAB Lg 02 32 44.9
98nm,0.4s,SNR=5.0
ECAB El Cabril 3.09 274 ⇑Pn Pn 02 31 53.4 +0.3
6.8nm,0.3s,SNR=18
ECAB Sn Sn 02 32 30.3 +0.4
24nm,0.3s,SNR=10.0
ECAB Lg 02 32 44.9
98nm,0.4s,SNR=5.0
ECAB El Cabril 3.09 274 Pn Pn 02 31 53.4 +0.3
6.8nm,0.3s,SNR=48
ECAB Sn Sn 02 32 30.3 +0.3
24nm,0.3s,SNR=10.0
ECAB Lg 02 32 44.8
56nm,0.4s,SNR=5.0
LIJA Lijar 3.25 253 Pg Pg 02 32 09.8 +2.8
LIJA Lg 02 32 49.0
LIJA Lijar 3.25 253 Pg Pg 02 32 09.8 +2.8
LIJA Lg 02 32 49.0
ERTA Horta de San J 3.37 24 Pn Pn 02 31 58.0 +1.0
ERTA Sn Sn 02 32 36.9 0.0
ERTA Lg 02 32 51.4
ERTA Horta de San J 3.37 24 Pn Pn 02 31 57.8 +0.8
11nm,0.5s,SNR=38
ERTA Sn Sn 02 32 36.9 0.0
30nm,1.0s,SNR=5.0
ERTA Lg 02 32 51.4
16nm,0.5s,SNR=5.0
ERTA Horta de San J 3.37 24 Pn Pn 02 31 57.8 +0.8
11nm,0.5s,SNR=38
ERTA Sn Sn 02 32 36.9 0.0
30nm,1.0s,SNR=5.0
ERTA Lg 02 32 51.4
16nm,0.5s,SNR=5.0
ERTA Horta de San J 3.37 24 Pn Pn 02 31 58.0 +1.0
11nm,0.5s,SNR=38
ERTA Sn Sn 02 32 36.9 0.0
30nm,1.0s,SNR=5.0
ERTA Lg 02 32 51.4
30nm,1.0s,SNR=5.0
GUD Guadarrama 3.42 324 Pn Pn 02 31 59.0 +1.3
GUD Pg Pg 02 32 08.2 -2.0
GUD Sn Sn 02 32 38.0 -0.1
GUD Lg 02 32 55.6
GUD Guadarrama 3.42 324 Pn Pn 02 31 59.0 +1.3
2.8nm,0.3s,SNR=7.9
GUD Pg Pg 02 32 08.6 -1.6
2.1nm,0.2s,SNR=7.9
GUD Sn Sn 02 32 38.0 -0.1
0.9nm,0.4s,SNR=7.9
GUD Lg 02 32 55.1
68nm,0.6s,SNR=7.9
GUD Guadarrama 3.42 324 Pn Pn 02 31 59.0 +1.3
2.8nm,0.3s,SNR=7.9
GUD Pg Pg 02 32 08.6 -1.6
2.1nm,0.2s,SNR=7.9
GUD Sn Sn 02 32 38.0 -0.1
0.9nm,0.4s,SNR=7.9
GUD Lg 02 32 55.1
68nm,0.6s,SNR=7.9
GUD Guadarrama 3.42 324 Pn Pn 02 31 59.0 +1.3
2.8nm,0.3s,SNR=7.9
GUD Guadarrama 3.42 324 Pg Pg 02 32 08.2 -2.0
2.1nm,0.2s,SNR=7.9
GUD Sn Sn 02 32 38.0 -0.1
0.9nm,0.4s,SNR=7.9
GUD Lg 02 32 55.6
57nm,0.2s,SNR=7.9
ESPR Espera 3.61 255 Pn Pn 02 32 01.2 +1.0
ESPR Sn Sn 02 32 42.4 -0.4
ESPR Lg 02 33 01.6
ESPR Espera 3.61 255 Pn Pn 02 32 01.2 +1.0
0.5nm,0.2s,SNR=8.2
ESPR Sn Sn 02 32 42.4 -0.4
6.3nm,0.6s,SNR=4.5
ESPR Lg 02 33 01.5
14nm,0.3s,SNR=6.2
ESPR Espera 3.61 255 Pn Pn 02 32 01.2 +1.0
0.5nm,0.2s,SNR=8.2
ESPR Sn Sn 02 32 42.4 -0.4
6.3nm,0.6s,SNR=4.5
ESPR Lg 02 33 01.5
14nm,0.3s,SNR=6.2
ESPR Espera 3.61 255 Pn Pn 02 32 01.2 +1.0
0.5nm,0.2s,SNR=8.2
ESPR Sn Sn 02 32 42.4 -0.3
6.3nm,0.6s,SNR=4.5
ESPR Lg 02 33 01.5
14nm,0.3s,SNR=6.2
ETOS Mallorca 3.86 60 Pn Pn 02 32 03.5 -0.1
ETOS Sn Sn 02 32 46.0 -2.9
ETOS Mallorca 3.86 60 Pn Pn 02 32 03.5 -0.2
7.5nm,0.3s,SNR=20
ETOS Sn Sn 02 32 46.0 -2.9
29nm,0.9s,SNR=5.0
ETOS Mallorca 3.86 60 Pn Pn 02 32 03.5 -0.2
7.5nm,0.3s,SNR=20
ETOS Sn Sn 02 32 46.0 -2.9
29nm,0.9s,SNR=5.0
ETOS Mallorca 3.86 60 Pn Pn 02 32 03.5 -0.2
7.5nm,0.3s,SNR=20
ETOS Sn Sn 02 32 46.0 -2.9
29nm,0.9s,SNR=5.0
ESAC San Caprasio 3.90 12 Pn Pn 02 32 06.0 +1.7
ESAC Pg Pg 02 32 16.2 -3.2
ESAC Sn Sn 02 32 50.1 +0.1
ESAC Lg 02 33 10.4
ESAC San Caprasio 3.90 12 Pn Pn 02 32 06.0 +1.7
17nm,0.3s,SNR=15
ESAC Pg Pg 02 32 15.6 -3.8
21nm,0.3s,SNR=4.0
ESAC Sn Sn 02 32 50.1 +0.1
62nm,0.3s,SNR=5.0
ESAC Lg 02 33 10.4
66nm,0.3s,SNR=7.8
ESAC San Caprasio 3.90 12 Pn Pn 02 32 06.0 +1.7
17nm,0.3s,SNR=15
ESAC Pg Pg 02 32 15.6 -3.8
21nm,0.3s,SNR=4.0
ESAC Sn Sn 02 32 50.1 +0.1
62nm,0.3s,SNR=5.0
ESAC Lg 02 33 10.4
66nm,0.3s,SNR=7.8
ESAC San Caprasio 3.90 12 Pn Pn 02 32 06.0 +1.7
17nm,0.3s,SNR=15
ESAC San Caprasio 3.90 12 Pg Pg 02 32 16.2 -3.2
21nm,0.3s,SNR=4.5
ESAC Sn Sn 02 32 50.1 +0.1
62nm,0.3s,SNR=5.0
ESAC Lg 02 33 10.4
27nm,0.3s,SNR=7.8
EPOB Poblet 3.99 29 Pn Pn 02 32 06.0 +0.5
EPOB Pg Pg 02 32 17.6 -3.4
EPOB Sn Sn 02 32 51.2 -0.9
EPOB Poblet 3.99 29 Pn Pn 02 32 05.5 +0.1
2.4nm,0.2s,SNR=13
EPOB Pg Pg 02 32 16.3 -4.7
3.2nm,0.3s,SNR=6.3
EPOB Sn Sn 02 32 51.2 -0.9
19nm,0.9s,SNR=5.0
EPOB Poblet 3.99 29 Pn Pn 02 32 05.5 +0.1
2.4nm,0.2s,SNR=13
EPOB Pg Pg 02 32 16.3 -4.7
3.2nm,0.3s,SNR=6.3
EPOB Sn Sn 02 32 51.2 -0.9
19nm,0.9s,SNR=5.0
EPOB Poblet 3.99 29 Pn Pn 02 32 06.0 +0.5
2.4nm,0.2s,SNR=13
EPOB Poblet 3.99 29 Pg Pg 02 32 17.5 -3.5
3.2nm,0.3s,SNR=6.3
EPOB Sn Sn 02 32 51.2 -0.9
19nm,0.9s,SNR=5.0
EMIN Mina Concepcio 4.09 270 Pn Pn 02 32 07.2 +0.4
EMIN Sn Sn 02 32 54.9 +0.4
EMIN Lg 02 33 14.4
EMIN Mina Concepcio 4.09 270 Pn Pn 02 32 06.6 -0.3
1.8nm,0.3s,SNR=22
EMIN Sn Sn 02 32 54.9 +0.4
18nm,0.4s,SNR=5.0
EMIN Lg 02 33 14.4
21nm,0.3s,SNR=5.0
EMIN Mina Concepcio 4.09 270 Pn Pn 02 32 06.6 -0.3
1.8nm,0.3s,SNR=22
EMIN Sn Sn 02 32 54.9 +0.4
18nm,0.4s,SNR=5.0
EMIN Lg 02 33 14.4
21nm,0.3s,SNR=5.0
EMIN Mina Concepcio 4.09 270 Pn Pn 02 32 07.2 +0.4
1.8nm,0.3s,SNR=22
EMIN Sn Sn 02 32 54.9 +0.4
18nm,0.4s,SNR=5.0
EMIN Lg 02 33 14.4
18nm,0.4s,SNR=5.0
EPLA Plasencia 4.17 303 Pn Pn 02 32 08.6 +0.7
EPLA Pg Pg 02 32 22.5 -1.9
EPLA Sn Sn 02 32 56.5 +0.1
EPLA Lg 02 33 16.9
EPLA Plasencia 4.17 303 Pn Pn 02 32 08.3 +0.4
2.3nm,0.3s,SNR=17
EPLA Pg Pg 02 32 23.7 -0.7
6.9nm,0.5s,SNR=7.2
EPLA Sn Sn 02 32 56.5 +0.1
7.9nm,0.3s,SNR=7.6
EPLA Lg 02 33 16.9
31nm,0.5s,SNR=5.0
EPLA Plasencia 4.17 303 Pn Pn 02 32 08.3 +0.4
2.3nm,0.3s,SNR=17
EPLA Pg Pg 02 32 23.7 -0.7
6.9nm,0.5s,SNR=7.2
EPLA Sn Sn 02 32 56.5 +0.1
7.9nm,0.3s,SNR=7.6
EPLA Lg 02 33 16.9
31nm,0.5s,SNR=5.0
EPLA Plasencia 4.17 303 Pn Pn 02 32 08.6 +0.7
2.3nm,0.3s,SNR=17
EPLA Plasencia 4.17 303 Pg Pg 02 32 22.5 -1.9
6.9nm,0.5s,SNR=7.2
EPLA Sn Sn 02 32 56.5 +0.1
7.9nm,0.3s,SNR=7.6
EPLA Lg 02 33 16.9
31nm,0.4s,SNR=5.0
PBAR Barrancos 4.37 275 ePn Pn 02 32 11.0 +0.3
PBAR eSn Sn 02 33 01.1 -0.5
PBAR eSg Sg 02 33 25.7 +0.7
PBAR A 02 33 31.5
24nm,0.5s
PBAR Barrancos 4.37 275 Pn Pn 02 32 11.0 +0.3
PBAR Sn Sn 02 33 01.1 -0.5
PBAR Lg 02 33 25.7
24nm,0.5s
PBAR Barrancos 4.37 275 Pn Pn 02 32 11.0 +0.3
PBAR Sn Sn 02 33 01.1 -0.5
PBAR Lg 02 33 25.7
24nm,0.5s
PBAR Barrancos 4.37 275 ePn Pn 02 32 11.0 +0.3
PBAR eSg Sg 02 33 25.7 +0.7
24nm,0.5s
EBAD Badajoz 4.41 283 Pn Pn 02 32 11.8 +0.5
EBAD Sn Sn 02 33 02.4 -0.1
EBAD Lg 02 33 26.6
EBAD Badajoz 4.41 283 Pn Pn 02 32 11.8 +0.5
1.5nm,0.4s,SNR=9.9
EBAD Pg Pg 02 32 27.8 -1.2
3.5nm,0.2s,SNR=7.9
EBAD Sn Sn 02 33 02.4 -0.1
3.1nm,0.3s,SNR=5.7
EBAD Lg 02 33 26.6
18nm,0.2s,SNR=5.0
EBAD Badajoz 4.41 283 Pn Pn 02 32 11.8 +0.5
1.5nm,0.4s,SNR=9.9
EBAD Pg Pg 02 32 27.8 -1.2
3.5nm,0.2s,SNR=7.9
EBAD Sn Sn 02 33 02.4 -0.1
3.1nm,0.3s,SNR=5.7
EBAD Lg 02 33 26.6
18nm,0.2s,SNR=5.0
EBAD Badajoz 4.41 283 Pn Pn 02 32 11.8 +0.6
1.5nm,0.4s,SNR=9.9
EBAD Sn Sn 02 33 02.4 -0.1
3.1nm,0.3s,SNR=5.7
EBAD Lg 02 33 26.6
18nm,0.5s,SNR=5.0
EMIR Miracle 4.64 29 Pn Pn 02 32 15.4 +1.0
EMIR Sn Sn 02 33 06.8 -1.4
EMIR Miracle 4.64 29 Pn Pn 02 32 15.4 +1.0
2.7nm,0.3s,SNR=7.9
EMIR Sn Sn 02 33 06.7 -1.5
17nm,0.9s,SNR=5.0
EMIR Miracle 4.64 29 Pn Pn 02 32 15.4 +1.0
2.7nm,0.3s,SNR=7.9
EMIR Sn Sn 02 33 06.7 -1.5
17nm,0.9s,SNR=5.0
EMIR Miracle 4.64 29 Pn Pn 02 32 15.4 +1.0
2.7nm,0.3s,SNR=7.9
EMIR Sn Sn 02 33 06.7 -1.5
17nm,0.9s,SNR=5.0
EGRO El Granado 4.75 267 Pn Pn 02 32 16.0 +0.1
EGRO Sn Sn 02 33 10.2 -0.7
EGRO El Granado 4.75 267 Pn Pn 02 32 15.4 -0.5
4.1nm,0.3s,SNR=14
EGRO Sn Sn 02 33 10.2 -0.7
1.2nm,0.4s,SNR=7.9
EGRO Lg 02 33 36.0
28nm,0.6s,SNR=7.9
EGRO El Granado 4.75 267 Pn Pn 02 32 15.4 -0.5
4.1nm,0.3s,SNR=14
EGRO Sn Sn 02 33 10.2 -0.7
1.2nm,0.4s,SNR=7.9
EGRO Lg 02 33 36.0
28nm,0.6s,SNR=7.9
EGRO El Granado 4.75 267 Pn Pn 02 32 16.0 +0.1
4.1nm,0.3s,SNR=14
EGRO Sn Sn 02 33 10.2 -0.6
1.2nm,0.4s,SNR=7.9
PMRV Marv??o 4.85 290 ePn Pn 02 32 18.3 +1.0
PMRV eSn Sn 02 33 13.3 0.0
PMRV eSg Sg 02 33 40.4 +0.2
PMRV A 02 33 50.2
26nm,0.5s
PMRV Marv??o 4.85 290 Pn Pn 02 32 18.3 +1.0
PMRV Sn Sn 02 33 13.3 0.0
PMRV Lg 02 33 40.4
26nm,0.5s
PMRV Marv??o 4.85 290 Pn Pn 02 32 18.3 +1.0
PMRV Sn Sn 02 33 13.3 0.0
PMRV Lg 02 33 40.4
26nm,0.5s
PMRV Marv??o 4.85 290 ePn Pn 02 32 18.3 +1.0
PMRV eSn Sn 02 33 13.3 0.0
PMRV eSg Sg 02 33 40.4 +0.2
26nm,0.5s
PESTR Estremoz 4.87 283 ePn Pn 02 32 18.6 +1.0
PESTR eSn Sn 02 33 14.3 +0.4
PESTR eSg Sg 02 33 43.3 +2.3
PESTR A 02 33 55.0
23nm,0.5s
PESTR Estremoz 4.87 283 Pn Pn 02 32 18.6 +1.0
PESTR Sn Sn 02 33 14.3 +0.4
PESTR Lg 02 33 43.3
23nm,0.5s
PESTR Estremoz 4.87 283 Pn Pn 02 32 18.6 +1.0
PESTR Sn Sn 02 33 14.3 +0.4
PESTR Lg 02 33 43.3
23nm,0.5s
PESTR Estremoz 4.87 283 ePn Pn 02 32 18.6 +1.0
PESTR eSn Sn 02 33 14.3 +0.4
PESTR eSg Sg 02 33 43.3 +2.3
23nm,0.5s
CSOR Sort 4.91 24 Pn Pn 02 32 19.3 +1.2
CSOR Sn Sn 02 33 13.8 -1.0
CSOR Sort 4.91 24 Pn Pn 02 32 19.3 +1.2
2.6nm,0.3s,SNR=10
CSOR Sn Sn 02 33 13.8 -1.0
6.1nm,0.5s,SNR=5.0
CSOR Lg 02 33 41.0
7.0nm,0.5s,SNR=7.9
CSOR Sort 4.91 24 Pn Pn 02 32 19.3 +1.2
2.6nm,0.3s,SNR=10
CSOR Sn Sn 02 33 13.8 -1.0
6.1nm,0.5s,SNR=5.0
CSOR Lg 02 33 41.0
7.0nm,0.5s,SNR=7.9
CSOR Sort 4.91 24 Pn Pn 02 32 19.3 +1.2
2.6nm,0.3s,SNR=10
CSOR Sn Sn 02 33 13.8 -1.0
6.1nm,0.5s,SNR=5.0
CFON Fontmartina 4.91 37 Pn Pn 02 32 18.7 +0.5
CFON Sn Sn 02 33 13.3 -1.6
CFON Fontmartina 4.91 37 Pn Pn 02 32 18.7 +0.5
4.9nm,0.7s,SNR=5.6
CFON Sn Sn 02 33 13.3 -1.6
94nm,1.9s
CFON Fontmartina 4.91 37 Pn Pn 02 32 18.7 +0.5
4.9nm,0.7s,SNR=5.6
CFON Sn Sn 02 33 13.3 -1.6
94nm,1.9s
CFON Fontmartina 4.91 37 Pn Pn 02 32 18.7 +0.6
4.9nm,0.7s,SNR=5.6
CFON Sn Sn 02 33 13.3 -1.6
94nm,1.9s
EBIE Bielsa 4.95 14 Pn Pn 02 32 20.5 +1.9
EBIE Bielsa 4.95 14 Pn Pn 02 32 20.5 +1.9
2.4nm,0.3s,SNR=12
EBIE Sn Sn 02 33 15.9 +0.2
2.2nm,0.3s,SNR=7.9
EBIE Bielsa 4.95 14 Pn Pn 02 32 20.5 +1.9
2.4nm,0.3s,SNR=12
EBIE Sn Sn 02 33 15.9 +0.2
2.2nm,0.3s,SNR=7.9
EBIE Bielsa 4.95 14 Pn Pn 02 32 20.5 +1.9
2.4nm,0.3s,SNR=12
PVAQ Vaqueiros 4.95 266 ePn Pn 02 32 18.2 -0.5
PVAQ eSn Sn 02 33 14.7 -1.1
PVAQ A 02 33 51.5
13nm,0.5s
PVAQ Vaqueiros 4.95 266 Pn Pn 02 32 18.2 -0.5
PVAQ Sn Sn 02 33 14.7 -1.1
13nm,0.5s
PVAQ Vaqueiros 4.95 266 Pn Pn 02 32 18.2 -0.5
PVAQ Sn Sn 02 33 14.7 -1.1
13nm,0.5s
PVAQ Vaqueiros 4.95 266 ePn Pn 02 32 18.2 -0.5
PVAQ eSn Sn 02 33 14.7 -1.1
13nm,0.5s
EORO Oroz-Betelu 4.99 2 Pn Pn 02 32 21.6 +2.4
2.7nm,0.2s,SNR=7.9
EORO Pg Pg 02 32 36.7 -3.5
14nm,0.7s,SNR=7.9
EORO Oroz-Betelu 4.99 2 Pn Pn 02 32 21.6 +2.4
2.7nm,0.2s,SNR=7.9
EORO Pg Pg 02 32 36.7 -3.5
14nm,0.7s,SNR=7.9
PBEJ Beja 5.02 273 ePn Pn 02 32 19.6 -0.1
PBEJ eSg Sg 02 33 45.6 -0.2
PBEJ A 02 34 01.8
14nm,0.6s
PBEJ Beja 5.02 273 Pn Pn 02 32 19.6 -0.1
PBEJ Lg 02 33 45.6
6.8nm,0.6s
PBEJ Beja 5.02 273 Pn Pn 02 32 19.6 -0.1
PBEJ Lg 02 33 45.6
6.8nm,0.6s
PBEJ Beja 5.02 273 ePn Pn 02 32 19.6 -0.1
PBEJ eSg Sg 02 33 45.6 -0.2
14nm,0.6s
PCBR Castelo Branco 5.04 294 ePn Pn 02 32 21.1 +1.1
PCBR eSn Sn 02 33 17.9 -0.2
PCBR A 02 33 57.9
17nm,0.7s
PCBR Castelo Branco 5.04 294 Pn Pn 02 32 21.1 +1.1
PCBR Sn Sn 02 33 17.9 -0.2
8.5nm,0.7s
PCBR Castelo Branco 5.04 294 Pn Pn 02 32 21.1 +1.1
PCBR Sn Sn 02 33 17.9 -0.2
8.5nm,0.7s
PCBR Castelo Branco 5.04 294 ePn Pn 02 32 21.1 +1.1
PCBR eSn Sn 02 33 17.9 -0.2
17nm,0.7s
ETSF Etsaut 5.05 8 ePn Pn 02 32 21.3 +1.3
ETSF eSn Sn 02 33 16.1 -2.1
4.8nm,0.5s
ETSF Etsaut 5.05 8 Pn Pn 02 32 21.3 +1.3
ETSF Sn Sn 02 33 16.1 -2.1
2.4nm,0.5s
ETSF Etsaut 5.05 8 Pn Pn 02 32 21.3 +1.3
ETSF Sn Sn 02 33 16.1 -2.1
2.4nm,0.5s
ETSF Etsaut 5.05 8 ePn Pn 02 32 21.3 +1.3
ETSF eSn Sn 02 33 16.1 -2.1
2.4nm,0.5s
VIEF Viey 5.12 13 P Pn 02 32 22.8 +1.8
VIEF Viey 5.12 13 P Pn 02 32 22.8 +1.8
PBDV Barranco-do-Ve 5.14 265 ePn Pn 02 32 21.4 +0.1
PBDV eSn Sn 02 33 19.7 -0.8
PBDV A 02 33 57.2
15nm,0.6s
PBDV Barranco-do-Ve 5.14 265 Pn Pn 02 32 21.4 +0.1
PBDV Sn Sn 02 33 19.7 -0.8
15nm,0.6s
PBDV Barranco-do-Ve 5.14 265 Pn Pn 02 32 21.4 +0.1
PBDV Sn Sn 02 33 19.7 -0.8
15nm,0.6s
PBDV Barranco-do-Ve 5.14 265 ePn Pn 02 32 21.4 +0.1
PBDV eSn Sn 02 33 19.7 -0.8
15nm,0.6s
EVO Evora 5.16 279 ePn Pn 02 32 23.0 +1.5
EVO Evora 5.16 279 ePg Pg 02 32 43.1 -0.3
EVO eSn Sn 02 33 21.4 +0.5
EVO eSg Sg 02 33 51.2 +1.0
51nm,0.5s
EVO Evora 5.16 279 ePn Pn 02 32 21.2 -0.3
EVO eSn Sn 02 33 21.2 +0.3
EVO A 02 34 01.7
21nm,0.7s
EVO Evora 5.16 279 Pn Pn 02 32 21.2 -0.3
EVO Sn Sn 02 33 21.2 +0.3

	21nm,0.7s					
EVO	**Evora**	**5.16 279**	Pn	**Pn**	**02 32 21.2**	**-0.3**
EVO			Sn	**Sn**	**02 33 21.2**	**+0.3**
	21nm,0.7s					
EVO	**Evora**	**5.16 279**	*e*Pn	**Pn**	**02 32 21.2**	**-0.3**
EVO			*e*Sn	**Sn**	**02 33 21.2**	**+0.3**
	21nm,0.7s					
PCVE	**Castro Verde**	**5.18 269**	*e*Pn	**Pn**	**02 32 21.7**	**-0.1**
PCVE			*e*Sn	**Sn**	**02 33 22.1**	**+0.7**
PCVE			*e*Sg	**Sg**	**02 33 49.4**	**-1.4**
PCVE			A		02 33 53.5	
	14nm,0.6s					
PCVE	**Castro Verde**	**5.18 269**	Pn	**Pn**	**02 32 21.7**	**-0.1**
PCVE			Sn	**Sn**	**02 33 22.1**	**+0.7**
PCVE			Lg		02 33 49.4	
	14nm,0.6s					
PCVE	**Castro Verde**	**5.18 269**	Pn	**Pn**	**02 32 21.7**	**-0.1**
PCVE			Sn	**Sn**	**02 33 22.1**	**+0.7**
PCVE			Lg		02 33 49.4	
	14nm,0.6s					
PCVE	**Castro Verde**	**5.18 269**	*e*Pn	**Pn**	**02 32 21.7**	**-0.1**
PCVE			*e*Sn	**Sn**	**02 33 22.1**	**+0.7**
PCVE			*e*Sg	**Sg**	**02 33 49.4**	**-1.4**
	14nm,0.6s					
SJPF	**Ste Jean**	**5.21 2**	*e*Pn	**Pn**	**02 32 24.4**	**+2.1**
SJPF			*e*Sn	**Sn**	**02 33 20.4**	**-1.9**
	7.5nm,0.6s					
SJPF	**Ste Jean**	**5.21 2**	Pn	**Pn**	**02 32 24.4**	**+2.1**
SJPF			Sn	**Sn**	**02 33 20.4**	**-1.9**
	3.8nm,0.6s					
SJPF	**Ste Jean**	**5.21 2**	Pn	**Pn**	**02 32 24.4**	**+2.1**
SJPF			Sn	**Sn**	**02 33 20.4**	**-1.9**
	3.8nm,0.6s					
SJPF	**Ste Jean**	**5.21 2**	*e*Pn	**Pn**	**02 32 24.4**	**+2.1**
SJPF			*e*Sn	**Sn**	**02 33 20.4**	**-1.9**
	3.8nm,0.6s					
REYF	**Montagne du Re**	**5.24 9**	P	**Pn**	**02 32 24.4**	**+1.8**
REYF	**Montagne du Re**	**5.24 9**	P	**Pn**	**02 32 24.4**	**+1.8**
EVOP	**Sao Brissos**	**5.25 279**	*e*Pn	**Pn**	**02 32 23.0**	**+0.3**
EVOP	**Sao Brissos**	**5.25 279**	*e*Pg	**Pg**	**02 32 43.1**	**-1.9**
EVOP			*e*Sn	**Sn**	**02 33 21.4**	**-1.7**
EVOP			*e*Sg	**Sg**	**02 33 51.2**	**-1.7**
	26nm,0.5s					
ELIZ	**Elizondo**	**5.26 360**	Pn	**Pn**	**02 32 25.0**	**+2.1**
ELIZ			Sn	**Sn**	**02 33 23.3**	**-0.2**
ELIZ	**Elizondo**	**5.26 360**	Pn	**Pn**	**02 32 25.0**	**+2.1**
	3.0nm,0.4s,SNR=7.9					
ELIZ			Sn	**Sn**	**02 33 23.3**	**-0.2**
	2.6nm,0.6s,SNR=7.9					
ELIZ	**Elizondo**	**5.26 360**	Pn	**Pn**	**02 32 25.0**	**+2.1**
	3.0nm,0.4s,SNR=7.9					
ELIZ			Sn	**Sn**	**02 33 23.3**	**-0.2**
	2.6nm,0.6s,SNR=7.9					
ELIZ	**Elizondo**	**5.26 360**	Pn	**Pn**	**02 32 25.0**	**+2.1**
	3.0nm,0.4s,SNR=7.9					
ELIZ			Sn	**Sn**	**02 33 23.3**	**-0.1**
	2.6nm,0.6s,SNR=7.9					
LABF	**Labassere**	**5.29 13**	P	**Pn**	**02 32 25.2**	**+1.9**
LABF	**Labassere**	**5.29 13**	P	**Pn**	**02 32 25.2**	**+1.9**
CLLI	**Llivia**	**5.30 29**	Pn	**Pn**	**02 32 25.3**	**+1.9**
CLLI			Sn	**Sn**	**02 33 21.0**	**-3.4**
CLLI	**Llivia**	**5.30 29**	Pn	**Pn**	**02 32 24.9**	**+1.4**
	5.2nm,0.8s,SNR=9.4					
CLLI			Sn	**Sn**	**02 33 21.0**	**-3.4**
	16nm,1.1s,SNR=5.0					
CLLI	**Llivia**	**5.30 29**	Pn	**Pn**	**02 32 24.9**	**+1.4**
	5.2nm,0.8s,SNR=9.4					
CLLI			Sn	**Sn**	**02 33 21.0**	**-3.4**
	16nm,1.1s,SNR=5.0					
CLLI	**Llivia**	**5.30 29**	Pn	**Pn**	**02 32 25.3**	**+1.9**
	5.2nm,0.8s,SNR=9.4					
CLLI			Sn	**Sn**	**02 33 21.0**	**-3.3**
	16nm,1.1s,SNR=5.0					
MESJ	**Messejana**	**5.31 271**	*e*P	**Pn**	**02 32 23.3**	**-0.3**
MESJ			*e*S	**Sn**	**02 33 21.1**	**-3.6**
MESJ	**Messejana**	**5.31 271**	P	**Pn**	**02 32 23.3**	**-0.3**
MESJ			S	**Sn**	**02 33 21.1**	**-3.5**
MESJ	**Messejana**	**5.31 271**	P	**Pn**	**02 32 23.3**	**-0.3**
MESJ			S	**Sn**	**02 33 21.1**	**-3.5**
MESJ	**Messejana**	**5.31 271**	*e*P	**Pn**	**02 32 23.3**	**-0.3**
MESJ			*e*S	**Sn**	**02 33 21.1**	**-3.5**
MTE	**Manteigas**	**5.31 300**	*e*Pn	**Pn**	**02 32 25.1**	**+1.4**
MTE			*e*Sn	**Sn**	**02 33 24.6**	**-0.1**
MTE			A		02 34 10.4	
	27nm,0.5s					
MTE	**Manteigas**	**5.31 300**	*e*Pn	**Pn**	**02 32 25.2**	**+1.6**
MTE	**Manteigas**	**5.31 300**	*e*Pn	**Pn**	**02 32 25.1**	**+1.4**
MTE			*e*Sn	**Sn**	**02 33 24.6**	**-0.1**
	27nm,0.5s					
EALK	**Alkurruntz**	**5.32 0**	Pn	**Pn**	**02 32 26.3**	**+2.6**
EALK	**Alkurruntz**	**5.32 0**	Pn	**Pn**	**02 32 26.3**	**+2.6**
	9.3nm,0.7s,SNR=6.8					
EALK			Sn	**Sn**	**02 33 24.0**	**-0.8**
	14nm,0.5s,SNR=7.9					
EALK			Lg		02 33 55.7	
	20nm,0.5s,SNR=7.9					
EALK	**Alkurruntz**	**5.32 0**	Pn	**Pn**	**02 32 26.3**	**+2.6**
	9.3nm,0.7s,SNR=6.8					
EALK			Sn	**Sn**	**02 33 24.0**	**-0.8**
	14nm,0.5s,SNR=7.9					
EALK			Lg		02 33 55.7	
	20nm,0.5s,SNR=7.9					
EALK	**Alkurruntz**	**5.32 0**	Pn	**Pn**	**02 32 26.3**	**+2.6**
	9.3nm,0.7s,SNR=6.8					
EPF	**Esparros**	**5.32 15**	*e*Pn	**Pn**	**02 32 25.3**	**+1.6**
EPF			*e*Sn	**Sn**	**02 33 23.0**	**-1.9**
	8.3nm,0.4s					
EPF	**Esparros**	**5.32 15**	Pn	**Pn**	**02 32 25.3**	**+1.6**
EPF			Sn	**Sn**	**02 33 23.0**	**-1.9**
	4.2nm,0.4s					
EPF	**Esparros**	**5.32 15**	Pn	**Pn**	**02 32 25.3**	**+1.6**
EPF			Sn	**Sn**	**02 33 23.0**	**-1.9**
	4.2nm,0.4s					
EPF	**Esparros**	**5.32 15**	*e*Pn	**Pn**	**02 32 25.3**	**+1.6**
EPF			*e*Sn	**Sn**	**02 33 23.0**	**-1.9**
	4.2nm,0.4s					
MVO	**Moncorvo**	**5.37 309**	*e*Pn	**Pn**	**02 32 25.1**	**+0.7**
MVO			*e*Sn	**Sn**	**02 33 24.8**	**-1.3**
MVO			*e*Sg	**Sg**	**02 33 57.4**	**+0.5**
MVO			A		02 34 01.6	
	16nm,0.6s					
MVO	**Moncorvo**	**5.37 309**	Pn	**Pn**	**02 32 25.1**	**+0.7**
MVO			Sn	**Sn**	**02 33 24.8**	**-1.3**
MVO	**Moncorvo**	**5.37 309**	Pn	**Pn**	**02 32 25.1**	**+0.7**
	2.6nm,0.4s,SNR=10					
MVO			Sn	**Sn**	**02 33 24.8**	**-1.3**
	2.8nm,0.3s,SNR=7.9					
MVO			Lg		02 33 56.9	
	23nm,0.4s,SNR=7.9					
MVO	**Moncorvo**	**5.37 309**	Pn	**Pn**	**02 32 25.1**	**+0.7**
	2.6nm,0.4s,SNR=10					
MVO			Sn	**Sn**	**02 33 24.8**	**-1.3**
	2.8nm,0.3s,SNR=7.9					
MVO			Lg		02 33 56.9	
	23nm,0.4s,SNR=7.9					
MVO	**Moncorvo**	**5.37 309**	Pn	**Pn**	**02 32 25.1**	**+0.7**
	2.6nm,0.4s,SNR=10					
MVO			Sn	**Sn**	**02 33 24.8**	**-1.3**
	2.8nm,0.3s,SNR=7.9					
MVO			*e*Sg	**Sg**	**02 33 57.4**	**+0.5**
	16nm,0.6s					
MOE	**Montemor**	**5.42 279**	*e*Sn	**Sn**	**02 33 26.4**	**-1.0**
MOE			*e*Sg	**Sg**	**02 33 56.1**	**-2.5**
MOE	**Montemor**	**5.42 279**	*e*Sn	**Sn**	**02 33 26.4**	**-1.0**
ELAN	**Lanestosa**	**5.53 345**	Pn	**Pn**	**02 32 28.9**	**+2.3**
ELAN			Pg	**Pg**	**02 32 47.2**	**-3.2**
ELAN	**Lanestosa**	**5.53 345**	Pn	**Pn**	**02 32 28.6**	**+2.0**
	2.3nm,0.4s,SNR=9.3					
ELAN			Lg		02 34 01.4	
	16nm,0.6s,SNR=7.9					
ELAN	**Lanestosa**	**5.53 345**	Pn	**Pn**	**02 32 28.6**	**+2.0**
	2.3nm,0.4s,SNR=9.3					
ELAN			Lg		02 34 01.4	
	16nm,0.6s,SNR=7.9					
ELAN	**Lanestosa**	**5.53 345**	Pn	**Pn**	**02 32 28.9**	**+2.3**
	2.3nm,0.4s,SNR=9.3					
PBRG	**Braganca**	**5.61 316**	*e*Pn	**Pn**	**02 32 28.9**	**+1.2**
PBRG			*e*Sn	**Sn**	**02 33 30.0**	**-1.9**
PBRG			A		02 34 13.4	
	13nm,0.5s					
PBRG	**Braganca**	**5.61 316**	Pn	**Pn**	**02 32 28.9**	**+1.2**
PBRG			Sn	**Sn**	**02 33 30.0**	**-1.9**
	6.6nm,0.5s					
PBRG	**Braganca**	**5.61 316**	Pn	**Pn**	**02 32 28.9**	**+1.2**
PBRG			Sn	**Sn**	**02 33 30.0**	**-1.9**
	6.6nm,0.5s					
PBRG	**Braganca**	**5.61 316**	*e*Pn	**Pn**	**02 32 28.9**	**+1.2**
PTOM	**Tomar**	**5.66 290**	*e*Pn	**Pn**	**02 32 29.1**	**+0.7**
PTOM			*e*Sn	**Sn**	**02 33 32.2**	**-1.1**
PTOM			A		02 34 24.3	
	22nm,0.5s					
PTOM	**Tomar**	**5.66 290**	Pn	**Pn**	**02 32 29.1**	**+0.7**
PTOM			Sn	**Sn**	**02 33 32.2**	**-1.1**
	11nm,0.5s					
PTOM	**Tomar**	**5.66 290**	Pn	**Pn**	**02 32 29.1**	**+0.7**
PTOM			Sn	**Sn**	**02 33 32.2**	**-1.1**
	11nm,0.5s					
PTOM	**Tomar**	**5.66 290**	*e*Pn	**Pn**	**02 32 29.1**	**+0.7**
PTOM			*e*Sn	**Sn**	**02 33 32.2**	**-1.1**
	22nm,0.5s					
PVIS	**Viseu**	**5.69 302**	*e*Pn	**Pn**	**02 32 30.0**	**+1.1**
PVIS			*e*Sn	**Sn**	**02 33 32.7**	**-1.4**
PVIS			*e*Sg	**Sg**	**02 34 09.0**	**+1.7**
PVIS			A		02 34 25.0	
	15nm,0.6s					
PVIS	**Viseu**	**5.69 302**	Pn	**Pn**	**02 32 30.0**	**+1.1**
PVIS			Sn	**Sn**	**02 33 32.7**	**-1.4**
PVIS			Lg		02 34 09.0	
	7.7nm,0.6s					
PVIS	**Viseu**	**5.69 302**	Pn	**Pn**	**02 32 30.0**	**+1.1**
PVIS			Sn	**Sn**	**02 33 32.7**	**-1.4**
PVIS			Lg		02 34 09.0	
	7.7nm,0.6s					
PVIS	**Viseu**	**5.69 302**	*e*Pn	**Pn**	**02 32 30.0**	**+1.1**
PVIS			*e*Sg	**Sg**	**02 34 09.0**	**+1.7**
	15nm,0.6s					
ECAL	**Calabor**	**5.70 317**	Pn	**Pn**	**02 32 30.3**	**+1.4**
ECAL			Sn	**Sn**	**02 33 31.8**	**-2.3**
ECAL			Lg		02 34 06.3	
ECAL	**Calabor**	**5.70 317**	Pn	**Pn**	**02 32 30.3**	**+1.4**
	3.8nm,0.3s,SNR=6.5					
ECAL			Sn	**Sn**	**02 33 31.8**	**-2.3**
	4.4nm,0.3s,SNR=7.9					
ECAL			Lg		02 34 06.3	
	34nm,0.4s,SNR=7.9					
ECAL	**Calabor**	**5.70 317**	Pn	**Pn**	**02 32 30.3**	**+1.4**
	3.8nm,0.3s,SNR=6.5					
ECAL			Sn	**Sn**	**02 33 31.8**	**-2.3**
	4.4nm,0.3s,SNR=7.9					
ECAL			Lg		02 34 06.3	
	34nm,0.4s,SNR=7.9					
ECAL	**Calabor**	**5.70 317**	Pn	**Pn**	**02 32 30.3**	**+1.4**
	3.8nm,0.3s,SNR=6.5					
ECAL			Lg		02 34 06.3	
	SNR=7.9					
MORF	**Marmelete**	**5.70 266**	*e*Pn	**Pn**	**02 32 28.6**	**-0.4**
MORF			*e*Sn	**Sn**	**02 33 32.3**	**-2.0**
MORF			*e*Sg	**Sg**	**02 34 05.7**	**-1.8**
MORF			A		02 34 20.0	
	5.1nm,0.8s					
MORF	**Marmelete**	**5.70 266**	Pn	**Pn**	**02 32 28.6**	**-0.4**
MORF			Sn	**Sn**	**02 33 32.3**	**-2.0**
MORF			Lg		02 34 05.7	
	5.1nm,0.8s					
MORF	**Marmelete**	**5.70 266**	Pn	**Pn**	**02 32 28.6**	**-0.4**
MORF			Sn	**Sn**	**02 33 32.3**	**-2.0**
MORF			Lg		02 34 05.7	
	5.1nm,0.8s					
MORF	**Marmelete**	**5.70 266**	*e*Pn	**Pn**	**02 32 28.6**	**-0.4**
MORF			*e*Sg	**Sg**	**02 34 05.7**	**-1.8**
	5.1nm,0.8s					
PVRL	**Vila Real**	**5.86 307**	*e*Sn	**Sn**	**02 33 36.4**	**-1.8**
PVRL			*e*Sg	**Sg**	**02 34 14.6**	**+2.0**
PVRL			A		02 34 23.7	
	11nm,0.9s					
PVRL	**Vila Real**	**5.86 307**	Sn	**Sn**	**02 33 36.4**	**-1.8**
PVRL			Lg		02 34 14.6	
	5.3nm,0.9s					
PVRL	**Vila Real**	**5.86 307**	Sn	**Sn**	**02 33 36.4**	**-1.8**
PVRL			Lg		02 34 14.6	
	5.3nm,0.9s					
PFVI	**Vila Bisbo**	**5.86 265**	*e*Pn	**Pn**	**02 32 31.5**	**+0.3**
PFVI			*e*Sn	**Sn**	**02 33 38.3**	**0.0**
PFVI			A		02 34 20.1	
	6.7nm,0.6s					
PFVI	**Vila Bisbo**	**5.86 265**	Pn	**Pn**	**02 32 31.6**	**+0.3**
PFVI			Sn	**Sn**	**02 33 36.1**	**-2.3**
PFVI	**Vila Bisbo**	**5.86 265**	Pn	**Pn**	**02 32 31.5**	**+0.3**
	3.2nm,0.3s,SNR=7.8					
PFVI			Sn	**Sn**	**02 33 36.1**	**-2.3**
	1.2nm,0.6s,SNR=7.9					
PFVI	**Vila Bisbo**	**5.86 265**	Pn	**Pn**	**02 32 31.5**	**+0.3**
	3.2nm,0.3s,SNR=7.8					
PFVI			Sn	**Sn**	**02 33 36.1**	**-2.3**
	1.2nm,0.6s,SNR=7.9					
PFVI	**Vila Bisbo**	**5.86 265**	Pn	**Pn**	**02 32 31.5**	**+0.3**
	3.2nm,0.3s,SNR=7.8					
PFVI			Sn	**Sn**	**02 33 36.1**	**-2.2**
	1.2nm,0.6s,SNR=7.9					
EARI	**Arriondas**	**6.09 334**	Pn	**Pn**	**02 32 36.2**	**+1.9**
EARI			Sn	**Sn**	**02 33 40.5**	**-3.3**
EARI	**Arriondas**	**6.09 334**	Pn	**Pn**	**02 32 36.2**	**+1.9**
	3.2nm,0.3s,SNR=7.3					
EARI			Sn	**Sn**	**02 33 40.5**	**-3.3**
	7.5nm,0.8s,SNR=7.9					
EARI			Lg		02 34 18.2	
	28nm,0.9s,SNR=7.9					
EARI	**Arriondas**	**6.09 334**	Pn	**Pn**	**02 32 36.2**	**+1.9**
	3.2nm,0.3s,SNR=7.3					
EARI			Sn	**Sn**	**02 33 40.5**	**-3.3**
	7.5nm,0.8s,SNR=7.9					
EARI			Lg		02 34 18.2	
	28nm,0.9s,SNR=7.9					
EARI	**Arriondas**	**6.09 334**	Pn	**Pn**	**02 32 36.2**	**+1.9**
	3.2nm,0.3s,SNR=7.3					
EARI			Sn	**Sn**	**02 33 40.5**	**-3.3**
	7.5nm,0.8s,SNR=7.9					
PCAB	**Cabril**	**6.30 309**	*e*Pn	**Pn**	**02 32 38.2**	**+1.0**
PCAB			*e*Sn	**Sn**	**02 33 45.9**	**-3.1**
PCAB			*e*Sg	**Sg**	**02 34 28.0**	**+1.4**
PCAB			A		02 34 47.8	
	12nm,0.9s					
PCAB	**Cabril**	**6.30 309**	Pn	**Pn**	**02 32 38.2**	**+1.0**
PCAB			Sn	**Sn**	**02 33 45.9**	**-3.1**
PCAB			Lg		02 34 28.0	
	6.2nm,0.9s					
PCAB	**Cabril**	**6.30 309**	Pn	**Pn**	**02 32 38.2**	**+1.0**
PCAB			Sn	**Sn**	**02 33 45.9**	**-3.1**
PCAB			Lg		02 34 28.0	
	6.2nm,0.9s					
PCAB	**Cabril**	**6.30 309**	*e*Pn	**Pn**	**02 32 38.2**	**+1.0**
PCAB			*e*Sg	**Sg**	**02 34 28.0**	**+1.4**
	12nm,0.9s					
ELOB	**Lobios**	**6.41 310**	Pn	**Pn**	**02 32 40.0**	**+1.3**
ELOB			Sn	**Sn**	**02 33 50.4**	**-1.4**
ELOB	**Lobios**	**6.41 310**	Pn	**Pn**	**02 32 40.0**	**+1.3**
	1.4nm,0.3s,SNR=7.9					
ELOB			Sn	**Sn**	**02 33 50.4**	**-1.4**
	0.9nm,0.4s,SNR=7.9					
ELOB			Lg		02 34 31.4	
	24nm,0.7s,SNR=7.9					
ELOB	**Lobios**	**6.41 310**	Pn	**Pn**	**02 32 40.0**	**+1.3**
	1.4nm,0.3s,SNR=7.9					
ELOB			Sn	**Sn**	**02 33 50.4**	**-1.3**
	0.9nm,0.4s,SNR=7.9					
EPON	**Pontenova**	**6.91 323**	Pn	**Pn**	**02 32 46.6**	**+1.0**
EPON			Sn	**Sn**	**02 33 58.9**	**-5.2**
EPON	**Pontenova**	**6.91 323**	Pn	**Pn**	**02 32 46.6**	**+1.0**
	1.4nm,0.3s,SNR=7.9					
EPON			Sn	**Sn**	**02 33 58.9**	**-5.2**
	5.3nm,0.9s,SNR=7.9					
EPON			Lg		02 34 44.5	
	13nm,0.7s,SNR=7.9					
EPON	**Pontenova**	**6.91 323**	Pn	**Pn**	**02 32 46.6**	**+1.0**
	1.4nm,0.3s,SNR=7.9					
EPON			Sn	**Sn**	**02 33 58.9**	**-5.2**
	5.3nm,0.9s,SNR=7.9					
EPON			Lg		02 34 44.5	
	13nm,0.7s,SNR=7.9					
EPON	**Pontenova**	**6.91 323**	Pn	**Pn**	**02 32 46.6**	**+1.0**
	1.4nm,0.3s,SNR=7.9					
EPON			Sn	**Sn**	**02 33 58.9**	**-5.2**
	5.3nm,0.9s,SNR=7.9					
LFF	**La Frestale**	**7.24 13**	*e*Pn	**Pn**	**02 32 50.9**	**+0.9**
LFF			*e*Sn	**Sn**	**02 34 08.5**	**-3.6**
	12nm,0.9s					
LFF	**La Frestale**	**7.24 13**	Pn	**Pn**	**02 32 50.9**	**+0.9**
LFF			Sn	**Sn**	**02 34 08.5**	**-3.6**
	6.2nm,0.9s					
LFF	**La Frestale**	**7.24 13**	Pn	**Pn**	**02 32 50.9**	**+0.9**
LFF			Sn	**Sn**	**02 34 08.5**	**-3.6**
	6.2nm,0.9s					
LFF	**La Frestale**	**7.24 13**	*e*Pn	**Pn**	**02 32 50.9**	**+0.9**
CAF	**Calviac**	**7.52 20**	*e*Pn	**Pn**	**02 32 54.2**	**+0.3**
CAF			*e*Sn	**Sn**	**02 34 15.0**	**-4.0**
	3.5nm,0.7s					
CAF	**Calviac**	**7.52 20**	Pn	**Pn**	**02 32 54.2**	**+0.3**
CAF			Sn	**Sn**	**02 34 15.0**	**-4.0**
	1.8nm,0.7s					
CAF	**Calviac**	**7.52 20**	Pn	**Pn**	**02 32 54.2**	**+0.3**
CAF			Sn	**Sn**	**02 34 15.0**	**-4.0**
	1.8nm,0.7s					
CAF	**Calviac**	**7.52 20**	*e*Pn	**Pn**	**02 32 54.2**	**+0.3**
RJF	**Les Rejaudoux**	**7.74 16**	*e*Pn	**Pn**	**02 32 56.9**	**-0.1**
RJF			*e*Sn	**Sn**	**02 34 20.2**	**-4.3**
	1.5nm,0.3s					
RJF	**Les Rejaudoux**	**7.74 16**	Pn	**Pn**	**02 32 56.9**	**-0.1**
RJF			Sn	**Sn**	**02 34 20.2**	**-4.3**
	0.8nm,0.3s					
RJF	**Les Rejaudoux**	**7.74 16**	Pn	**Pn**	**02 32 56.9**	**-0.1**
RJF			Sn	**Sn**	**02 34 20.2**	**-4.3**
	0.8nm,0.3s					
RJF	**Les Rejaudoux**	**7.74 16**	*e*Pn	**Pn**	**02 32 56.9**	**-0.1**
MFF	**Saint Martin d**	**8.76 6**	*e*Pn	**Pn**	**02 33 10.8**	**-0.1**
MFF			*e*Sn	**Sn**	**02 34 45.2**	**-4.3**
	1.5nm,0.6s					
MFF	**Saint Martin d**	**8.76 6**	Pn	**Pn**	**02 33 10.8**	**-0.1**
MFF			Sn	**Sn**	**02 34 45.2**	**-4.3**
	0.8nm,0.6s					
MFF	**Saint Martin d**	**8.76 6**	Pn	**Pn**	**02 33 10.8**	**-0.1**
MFF			Sn	**Sn**	**02 34 45.2**	**-4.3**
	0.8nm,0.6s					
MFF	**Saint Martin d**	**8.76 6**	*e*Pn	**Pn**	**02 33 10.8**	**-0.1**
QUIF	**Quistinic**	**10.09 354**	*e*Pn	**Pn**	**02 33 29.0**	**-0.1**
QUIF			*e*Sn	**Sn**	**02 35 17.0**	**-5.1**
	1.4nm,0.5s					
QUIF	**Quistinic**	**10.09 354**	Pn	**Pn**	**02 33 29.0**	**-0.1**
QUIF			Sn	**Sn**	**02 35 17.0**	**-5.1**
	0.7nm,0.5s					
QUIF	**Quistinic**	**10.09 354**	Pn	**Pn**	**02 33 29.0**	**-0.1**
QUIF			Sn	**Sn**	**02 35 17.0**	**-5.1**
	0.7nm,0.5s					
QUIF	**Quistinic**	**10.09 354**	*e*Pn	**Pn**	**02 33 29.0**	**-0.1**
SGMF	**Saint Gilles**	**10.38 356**	*e*Sn	**Sn**	**02 35 24.0**	**-5.3**
	1.8nm,0.5s					
SGMF	**Saint Gilles**	**10.38 356**	Sn	**Sn**	**02 35 24.0**	**-5.3**
	0.9nm,0.5s					
SGMF	**Saint Gilles**	**10.38 356**	Sn	**Sn**	**02 35 24.0**	**-5.3**
	0.9nm,0.5s					
ROSF	**Rostrenen**	**10.51 354**	*e*Pn	**Pn**	**02 33 34.9**	**0.0**
ROSF			*e*Sn	**Sn**	**02 35 27.1**	**-5.4**
	0.7nm,0.4s					
ROSF	**Rostrenen**	**10.51 354**	Pn	**Pn**	**02 33 34.9**	**0.0**
ROSF			Sn	**Sn**	**02 35 27.1**	**-5.4**
	0.3nm,0.4s					
ROSF	**Rostrenen**	**10.51 354**	Pn	**Pn**	**02 33 34.9**	**0.0**
ROSF			Sn	**Sn**	**02 35 27.1**	**-5.4**
	0.3nm,0.4s					
ROSF	**Rostrenen**	**10.51 354**	*e*Pn	**Pn**	**02 33 34.9**	**0.0**

ISCJB ***22*** *02:33:15.2±0.5, 41°.88N±0°.02×22°.93E±0°.05, h2km±6km, Error ellipse: s-maj=5.9km s-min=3.7km az=176.4*
SKO ***22*** *02:33:15.2, 41°.88N×22°.93E, h19km, M1.3, ML1.7*
CSEM ***22*** *02:33:15.7±0.1, 41°.88N×22°.95E, h5km, ML2.5/4, Error ellipse: s-maj=3.3km s-min=1.9km az=84.0*
THE ***22*** *02:33:15.9, 41°.86N×22°.96E, h3km±1km, ML2.5/4, Error ellipse: s-maj=1.2km s-min=0.5km az=268.0*
BEO ***22*** *02:33:17.1±0.4, 41°.88N×22°.91E, h1km±6km, ML1.5/4*

ISC 22 02:33:16.1±0.5, **41°.87N**±0°.02×**22°.92E**±0°.05, **h7**km±5km, **n25**, σ0°.66/48, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.61**	**206**	*i* Pg	**Pg**	**02 33 27.7**	**-0.1**
VAY				*e*Sg	**Sg**	**02 33 36.9**	**+1.1**
VAY	**Valandovo**	**0.61**	**206**	*e*Pg	**Pg**	**02 33 28.0**	**+0.2**
VAY				*i* Sg	**Sg**	**02 33 36.4**	**+0.6**
VAY				*e*Lg		02 33 36.7	
	comp=E,27nm,0.3s						
VAY				*e*Lg		02 33 36.9	
	comp=N,25nm,0.4s						
VAY	**Valandovo**	**0.61**	**206**	P	**Pg**	**02 33 27.4**	**-0.4**
VAY				S	**Sg**	**02 33 36.3**	**+0.5**
VAY	**Valandovo**	**0.61**	**206**	P	**Pg**	**02 33 27.4**	**-0.4**
VAY	**Valandovo**	**0.61**	**206**	*i* Pg	**Pg**	**02 33 27.7**	**-0.1**
VAY				S	**Sg**	**02 33 36.3**	**+0.5**
VAY				*e*Sg	**Sg**	**02 33 36.9**	**+1.1**
KNT	**Kendrikon**	**0.71**	**181**	P	**Pg**	**02 33 29.3**	**-0.4**
KNT				S	**Sg**	**02 33 39.2**	**+0.2**
KNT	**Kendrikon**	**0.71**	**181**	P	**Pg**	**02 33 29.3**	**-0.4**
KNT				S	**Sg**	**02 33 39.2**	**+0.2**
VTS	**Vitosha**	**0.75**	**16**	*e*Pg	**Pg**	**02 33 29.9**	**-0.6**
VTS				*i* Sg	**Sg**	**02 33 39.8**	**-0.4**
VTS	**Vitosha**	**0.75**	**16**	P	**Pg**	**02 33 29.8**	**-0.7**
VTS	**Vitosha**	**0.75**	**16**	*e*Pg	**Pg**	**02 33 29.9**	**-0.6**
VTS				*i* Sg	**Sg**	**02 33 39.8**	**-0.4**
SRS	**Serrai**	**0.91**	**146**	P	**Pg**	**02 33 32.7**	**-0.8**
SRS				S	**Sg**	**02 33 45.6**	**+0.3**
SRS	**Serrai**	**0.91**	**146**	P	**Pg**	**02 33 32.7**	**-0.8**
SRS				S	**Sg**	**02 33 45.6**	**+0.3**
SOH	**Sokhos**	**1.10**	**163**	P	**Pg**	**02 33 36.3**	**-0.9**
SOH				S	**Sg**	**02 33 51.9**	**+0.5**
SOH	**Sokhos**	**1.10**	**163**	P	**Pg**	**02 33 36.3**	**-0.9**
SOH				S	**Sg**	**02 33 51.9**	**+0.5**
BARS	**Barje**	**1.25**	**319**	*e*Pg	**Pg**	**02 33 39.3**	**-0.7

TEIG *e*S Sn 02 41 48.1 -5.7

ISCJB ***22*** *02:42:07.2±0.3, 45°.49N×0°.02×16°.55E±0°.02, h3km±2km, Error ellipse: s-maj=3.9km s-min=1.9km az=27.7*
BEO ***22*** *02:42:07.9±0.5, 45°.52N×16°.47E, h3km±3km, ML2.5/4*
CSEM ***22*** *02:42:08.6±0.1, 45°.45N×16°.48E, h8km, ML2.5, Error ellipse: s-maj=3.8km s-min=2.1km az=26.0*
VIE ***22*** *02:42:09.1±0.4, 45°.54N×16°.55E, h9km±1km, mb2.4/6, ML2.7/7, Error ellipse: s-maj=2.4km s-min=1.8km az=0.0*
52 km SE of Zagreb
PRU ***22*** *02:42:09.7, 45°.45N×16°.52E, h11km*
IPEC ***22*** *02:42:14.0±0.6, 45°.77N×16°.51E, h17km±3km, Error ellipse: s-maj=3.6km s-min=2.9km az=36.0*

ISC 22 02:42:08.5±0.3, 45°.48N±0°.02×16°.51E±0°.02, h6km±2km, n85, σ1°.07/152, 22C-10D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCIS	**Gornji Cirnik**	**0.73**	**302**	*i* Pg	**Pg**	**02 42 22.4**	**-0.2**
GCIS				*i* Sg	**Sg**	**02 42 32.1**	**-0.1**
GCIS							
	comp=Z,76nm,0.1s						
CRES	**Cresnjev**	**0.82**	**295**	*e*Pg	**Pg**	**02 42 23.4**	**-0.8**
CRES							
	comp=Z,271nm,0.2s						
CRES	**Cresnjev**	**0.82**	**295**	*e*Pg	**Pg**	**02 42 23.5**	**-0.8**
CRES				*i* Sg	**Sg**	**02 42 36.0**	**+1.1**
	comp=Z,271nm,0.2s						
GOLS	**Golise**	**0.82**	**311**	*i* Pg	**Pg**	**02 42 24.1**	**-0.1**
GOLS				*i* Sg	**Sg**	**02 42 35.6**	**+0.7**
GOLS							
	comp=Z,136nm,0.2s						
GOLS	**Golise**	**0.82**	**311**	*i* Pg	**Pg**	**02 42 24.1**	**-0.2**
GOLS				*i* Sg	**Sg**	**02 42 35.6**	**+0.7**
	comp=Z,136nm,0.2s						
BLY	**Banja Luka**	**0.87**	**147**	*e*Pg	**Pg**	**02 42 23.7**	**-1.5**
BLY				*i* Sg	**Sg**	**02 42 36.4**	**-0.1**
BLY	**Banja Luka**	**0.87**	**147**	*e*Pg	**Pg**	**02 42 23.7**	**-1.5**
BLY				*i* Sg	**Sg**	**02 42 36.4**	**-0.1**
CESS	**Cesta pri Krsk**	**0.89**	**304**	*i* Pg	**Pg**	**02 42 25.6**	**0.0**
CESS				*i* Sg	**Sg**	**02 42 39.0**	**+1.9**
CESS							
	comp=Z,124nm,0.2s						
CESS	**Cesta pri Krsk**	**0.89**	**304**	*i* Pg	**Pg**	**02 42 25.6**	**0.0**
CESS				*i* Sg	**Sg**	**02 42 39.0**	**+1.9**
	comp=Z,124nm,0.2s						
BOJS	**Bojanci**	**0.89**	**272**	*i* Pg	**Pg**	**02 42 23.7**	**-1.8**
BOJS							
	comp=Z,87nm,0.2s						
BOJS	**Bojanci**	**0.89**	**272**	*i* Pg	**Pg**	**02 42 23.7**	**-1.9**
	comp=Z,87nm,0.2s						
KOGS	**Kog**	**0.99**	**349**	*i* Pg	**Pg**	**02 42 28.7**	**+1.2**
KOGS				*i* Sg	**Sg**	**02 42 43.0**	**+2.7**
KOGS							
	comp=Z,111nm,0.1s						
KOGS	**Kog**	**0.99**	**349**	*i* Pg	**Pg**	**02 42 28.7**	**+1.2**
KOGS				*i* Sg	**Sg**	**02 42 43.0**	**+2.7**
	comp=Z,111nm,0.1s						
GROS	**Grobnik**	**1.21**	**325**	*i* Pg	**Pg**	**02 42 31.2**	**-0.5**
GROS							
	comp=Z,68nm,0.2s						
GROS	**Grobnik**	**1.21**	**325**	*i* Pn	**Pn**	**02 42 31.2**	**-0.8**
	comp=Z,68nm,0.2s						
PDKS	**Podkum**	**1.21**	**299**	*i* Pg	**Pg**	**02 42 30.9**	**-0.8**
PDKS	**Podkum**	**1.21**	**299**	*i* Pg	**Pg**	**02 42 30.9**	**-0.8**
VISS	**Visnje**	**1.22**	**286**	*i* Pg	**Pg**	**02 42 30.8**	**-1.1**
VISS				*i* Sg	**Sg**	**02 42 46.8**	**-0.9**
VISS							
	comp=Z,46nm,0.2s						
VISS	**Visnje**	**1.22**	**286**	*i* Pg	**Pg**	**02 42 30.8**	**-1.1**
VISS				*i* Sg	**Sg**	**02 42 46.8**	**-0.9**
	comp=Z,46nm,0.2s						
RHK3	**Tenkes**	**1.28**	**71**	*e*Pg	**Pg**	**02 42 34.4**	**+1.2**
RHK3				*e*Sn	**Sn**	**02 42 49.9**	**-0.7**
ZAVS	**Zavodnje**	**1.41**	**313**	*i* Pg	**Pn**	**02 42 34.2**	**-0.6**
ZAVS				*i* Sg	**Sg**	**02 42 54.0**	**+0.1**
VNDS	**Vrh nad Dolski**	**1.41**	**297**	*i* Pg	**Pg**	**02 42 34.8**	**-0.8**
VNDS				*i* Sg	**Sg**	**02 42 53.1**	**-0.9**
VNDS							
	comp=Z,38nm,0.2s						
CEY	**Cerknica**	**1.49**	**281**	*i* Pg	**Pn**	**02 42 34.2**	**-1.6**
CEY				*i* Sg	**Sn**	**02 42 55.1**	**-0.5**
CEY	**Cerknica**	**1.49**	**281**	*i* Pn	**Pn**	**02 42 34.2**	**-1.6**
CEY				*i* Sn	**Sn**	**02 42 55.1**	**-0.5**
PERS	**Pernice**	**1.51**	**320**	*i* Pg	**Pn**	**02 42 35.7**	**-0.5**
PERS				*i* Sg	**Sg**	**02 42 54.6**	**-2.5**
PERS							
	comp=Z,29nm,0.1s						
PERS	**Pernice**	**1.51**	**320**	*i* Pn	**Pn**	**02 42 35.7**	**-0.4**
PERS				*i* Sn	**Sn**	**02 42 54.7**	**-1.5**
	comp=Z,29nm,0.1s						
BISS	**Bistriski jare**	**1.52**	**321**	*i* Pg	**Pn**	**02 42 35.6**	**-0.7**
BISS	**Bistriski jare**	**1.52**	**321**	*i* Pn	**Pn**	**02 42 35.6**	**-0.6**
SOKA	**Soboth**	**1.58**	**320**	⇑*i*Pn	**Pn**	**02 42 36.7**	**-0.4**
SOKA				⇑*i*Pg	**Pg**	**02 42 39.2**	**+0.3**
SOKA				⇑*i*Sn	**Sn**	**02 42 58.4**	**+0.5**
SOKA				⇑*i*Sg	**Sg**	**02 43 01.1**	**+1.7**
	comp=Z,16nm,0.3s						
SOKA	**Soboth**	**1.58**	**320**	Pn	**Pn**	**02 42 36.7**	**-0.4**
PKS9	**Tamasi**	**1.66**	**47**	⇑*e*Pn	**Pn**	**02 42 38.9**	**+0.8**
PKS9	**Tamasi**	**1.66**	**47**	*e*Pg	**Pg**	**02 42 42.7**	**+2.4**
PKSM	**Moragy**	**1.66**	**63**	*e*Pn	**Pn**	**02 42 37.5**	**-0.7**
PKSM				*e*Sg	**Sg**	**02 43 01.7**	**-0.1**
PKSM	**Moragy**	**1.66**	**63**	⇑*i*P	**Pn**	**02 42 37.4**	**-0.8**
PKSM				S	**Sn**	**02 42 54.9**	**-4.8**
PKSM	**Moragy**	**1.66**	**63**	*e*Pn	**Pn**	**02 42 37.5**	**-0.7**
PKSM	**Moragy**	**1.66**	**63**	*e*Pg	**Pg**	**02 42 43.6**	**+3.3**
PKSM				S	**Sn**	**02 42 54.9**	**-4.8**
PKSM				*e*Sg	**Sg**	**02 43 01.7**	**-0.1**
CRNS	**Crni Vrh**	**1.69**	**292**	*i* Pn	**Pn**	**02 42 37.7**	**-0.8**
CRNS				*i* Sn	**Sn**	**02 43 01.5**	**+1.0**
CRNS							
	comp=Z,21nm,0.2s						
OBKA	**Obir**	**1.71**	**308**	⇓*i*Pn	**Pn**	**02 42 39.3**	**+0.4**
OBKA				⇑*i*Sn	**Sn**	**02 43 02.0**	**+0.8**
OBKA	**Obir**	**1.71**	**308**	Pn	**Pn**	**02 42 39.3**	**+0.4**
OBKA				Sn	**Sn**	**02 43 02.0**	**+0.9**
OBKA				*e*Sg	**Sg**	**02 43 02.6**	**-1.0**
	baz=118						
ARSA	**Arzberg**	**1.90**	**339**	*e*Pn	**Pn**	**02 42 40.3**	**-1.2**
ARSA				*e*Sg	**Sg**	**02 43 06.3**	**-3.3**
ARSA	**Arzberg**	**1.90**	**339**	⇓*i*Pn	**Pn**	**02 42 41.4**	**0.0**
ARSA				⇑*i*Sn	**Sn**	**02 43 06.0**	**+0.2**
ARSA	**Arzberg**	**1.90**	**339**	Pn	**Pn**	**02 42 41.4**	**-0.1**
ARSA				Sn	**Sn**	**02 43 06.0**	**+0.3**
VOY	**Vojsko**	**1.92**	**288**	*e*Pn	**Pn**	**02 42 42.5**	**+0.8**
VOY				*e*		02 42 45.0	
VOY				*e*Sn	**Sn**	**02 43 08.2**	**+2.1**
VOY	**Vojsko**	**1.92**	**288**	*e*Pn	**Pn**	**02 42 42.5**	**+0.8**
VOY				*e*Sn	**Sn**	**02 43 08.2**	**+2.1**
MYKA	**Terra Mystica**	**2.31**	**301**	⇑*i*Pn	**Pn**	**02 42 47.4**	**+0.3**
MYKA				⇑*i*Pg	**Pg**	**02 42 53.3**	**+0.6**
MYKA				⇑*i*Sn	**Sn**	**02 43 16.4**	**+0.6**
MYKA	**Terra Mystica**	**2.31**	**301**	Pn	**Pn**	**02 42 47.4**	**+0.3**
PKSG		**2.31**	**33**	⇑*e*Pn	**Pn**	**02 42 47.3**	**+0.2**
PKSG				*e*Sn	**Sn**	**02 43 15.7**	**-0.2**
FGSL	**Fruska Gora**	**2.35**	**97**	⇓*i*Pn	**Pn**	**02 42 47.2**	**-0.4**
FGSL				*e*Sg	**Sg**	**02 43 22.7**	**-1.2**
FRGS	**Fruska Gora**	**2.35**	**97**	⇓*i*Pn	**Pn**	**02 42 47.2**	**-0.4**
FRGS				*e*Sg	**Sg**	**02 43 22.7**	**-1.2**
CONA	**Conrad Observa**	**2.49**	**350**	⇓*i*Pn	**Pn**	**02 42 50.1**	**+0.5**
CONA				⇓*i*Sn	**Sn**	**02 43 19.9**	**-0.4**
CONA				⇑*i*Sg	**Sg**	**02 43 29.7**	**+1.1**
	comp=Z,6.2nm,0.4s						
CONA	**Conrad Observa**	**2.49**	**350**	Pn	**Pn**	**02 42 50.1**	**+0.5**
CONA				Sn	**Sn**	**02 43 19.9**	**-0.4**
CONA				Sg	**Sg**	**02 43 29.7**	**+1.2**
	comp=Z,6.2nm,0.4s						
BBLS	**Lazići**	**2.62**	**127**	*e*Pn	**Pn**	**02 42 51.6**	**+0.2**
BBLS				*e*Sg	**Sg**	**02 43 32.0**	**-0.6**
BBLS	**Lazići**	**2.62**	**127**	*e*Pn	**Pn**	**02 42 51.6**	**+0.2**
BBLS				*e*Sg	**Sg**	**02 43 32.0**	**-0.6**
BUD	**Budapest**	**2.65**	**40**	*e*Pn	**Sn**	**02 43 27.5**	**+3.3**
MOA	**Molln**	**2.83**	**328**	⇑*i*Pn	**Pn**	**02 42 55.2**	**+0.9**
MOA				⇑*i*Sn	**Sn**	**02 43 28.6**	**-0.1**
MOA	**Molln**	**2.83**	**328**	*e*Pn	**Pn**	**02 42 55.2**	**+0.9**
	baz=143						
MOA				Sn	**Sn**	**02 43 28.6**	**-0.1**
DIVS	**Divibare**	**2.83**	**118**	*e*Pn	**Pn**	**02 42 55.0**	**+0.7**
DIVS				*e*Sg	**Sg**	**02 43 39.6**	**0.0**
DIVS	**Divibare**	**2.83**	**118**	*e*Pn	**Pn**	**02 42 55.0**	**+0.7**
DIVS				*e*Sg	**Sg**	**02 43 39.6**	**0.0**
TRUS	**Trudelj**	**3.04**	**113**	*e*Pn	**Pn**	**02 42 57.1**	**0.0**
TRUS				*e*Sn	**Sn**	**02 43 34.4**	**+0.6**
TREB	**Trebinje**	**3.06**	**154**	*e*Pn	**Pn**	**02 42 59.0**	**+1.6**
TREB				*e*Sn	**Sn**	**02 43 34.7**	**+0.3**
TREB	**Trebinje**	**3.06**	**154**	*e*Pn	**Pn**	**02 42 59.0**	**+1.6**
TREB				*e*Sn	**Sn**	**02 43 34.7**	**+0.3**
KOLL	**Kolacno**	**3.36**	**22**	*e*PN	**Pn**	**02 43 01.8**	**+0.3**
KOLL				*e*SN	**Sn**	**02 43 39.7**	**-2.0**
PSZ	**Piszkesteto**	**3.37**	**42**	⇑*i*P	**Pg**	**02 43 19.9**	**+6.8**
VYHS	**Vyhne**	**3.41**	**27**	*e*PN	**Pn**	**02 43 02.8**	**+0.6**
VYHS				*e*SN	**Sn**	**02 43 42.3**	**-0.6**
VYHS	**Vyhne**	**3.41**	**27**	*e*Pn	**Pn**	**02 43 02.8**	**+0.6**
VYHS				*e*Sn	**Sn**	**02 43 42.3**	**-0.6**
KRUC	**Moravsky**	**3.59**	**359**	*e*Pn	**Pn**	**02 43 04.6**	**0.0**
	baz=179						
KRUC				*e*Sn	**Sn**	**02 43 45.1**	**-2.2**
	baz=179						
BZS	**Buzias**	**3.59**	**86**	⇓*i*P	**Pn**	**02 43 07.3**	**+2.6**
BZS	**Buzias**	**3.59**	**86**	⇓*i*P	**Pn**	**02 43 07.3**	**+2.6**
BZS				S	**Sn**	**02 43 47.0**	**-0.3**
VRAC	**Vranov**	**3.83**	**1**	⇑*i*P	**Pn**	**02 43 08.4**	**+0.4**
VRAC	**Vranov**	**3.83**	**1**	*e*Pn	**Pn**	**02 43 08.1**	**+0.1**
	baz=181						
VRAC	**Vranov**	**3.83**	**1**	⇑*i*P	**Pn**	**02 43 08.4**	**+0.4**
VRAC				*e*Sn	**Sn**	**02 43 50.0**	**-3.4**
KHC	**Kasperske Hory**	**4.16**	**332**	*e*PN	**Pn**	**02 43 13.5**	**+0.9**
KHC				*e*SN	**Sn**	**02 43 59.9**	**-1.6**
KHC	**Kasperske Hory**	**4.16**	**332**	Pn	**Pn**	**02 43 13.5**	**+0.9**
KHC				Sn	**Sn**	**02 43 59.9**	**-1.6**
MORC	**Moravsky Berou**	**4.36**	**9**	*e*Pn	**Pn**	**02 43 16.1**	**+0.9**
MORC				S	**Sn**	**02 44 05.9**	**-0.4**
GZR	**Gura Zlata**	**4.41**	**89**	⇑*i*P	**Pn**	**02 43 17.8**	**+1.8**
GZR	**Gura Zlata**	**4.41**	**89**	⇑*i*P	**Pn**	**02 43 17.8**	**+1.8**
GZR				S	**Sn**	**02 44 06.8**	**-0.8**
DRGR		**4.50**	**71**	⇑*i*P	**Pn**	**02 43 18.7**	**+1.4**
DRGR		**4.50**	**71**	⇑*i*P	**Pn**	**02 43 18.7**	**+1.4**
DRGR				S	**Sn**	**02 44 06.9**	**-3.0**
BARS	**Barje**	**4.65**	**123**	⇓*i*Pn	**Pn**	**02 43 19.2**	**-0.1**
BARS	**Barje**	**4.65**	**123**	⇓*i*Pn	**Pn**	**02 43 19.2**	**-0.1**
PRU	**Pruhonice**	**4.70**	**344**	*e*PN	**Pn**	**02 43 21.1**	**+1.1**
PRU				*e*SN	**Sn**	**02 44 14.4**	**-0.4**
PRU	**Pruhonice**	**4.70**	**344**	Pn	**Pn**	**02 43 21.1**	**+1.1**
PRU				Sn	**Sn**	**02 44 14.4**	**-0.4**
NKC	**Novy Kostel**	**5.49**	**332**	*e*PN	**Pn**	**02 43 31.5**	**+0.7**
NKC	**Novy Kostel**	**5.49**	**332**	Pn	**Pn**	**02 43 31.5**	**+0.7**
CLL	**Collm**	**6.28**	**339**	*e*Pn	**Pn**	**02 43 43.0**	**+1.3**
CLL				*e*Sg	**Sg**	**02 45 29.0**	**-1.1**

JMA 22 02:47:03.5±0.4, 44°.21N×148°.37E, h0km, M4.4, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**2.08**	**247**	P	Pn	02 47 40.1	+0.5
NEM2				*e*S	Sn	02 48 06.8	+0.6
JNK	**Nakash**	**2.71**	**258**	P	Pn	02 47 49.1	+0.8
JNK				*e*S	Sn	02 48 23.3	+1.5
JAR	**Ashorobuto**	**3.46**	**256**	P	Pn	02 47 59.9	+1.4
JAR				*e*S	Sn	02 48 42.8	+2.7
JCH	**Churui**	**3.98**	**248**	P	Pn	02 48 07.1	+1.4
JCH				*e*S	Sn	02 48 53.5	+0.4
JKK2	**Kamakawa 2**	**4.07**	**267**	P	Pn	02 48 07.4	+0.5
JOT	**Ohata**	**6.08**	**245**	P	Pn	02 48 34.4	-0.2
JANG	**Nango**	**6.37**	**235**	P	Pn	02 48 38.0	-0.5
JANG				*e*S	Sn	02 49 47.5	-4.4

NEIC ***22*** *03:07:52.1, 18°.22N×101°.62W, h79km, MD3.9(MEX), After MEX.*

MEX 22 03:07:52.0±1.5, 18°.24N×101°.60W, h77km±30km, MD3.9, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.64**	**169**	*e*P	Pn	03 08 06.6	-0.3
ZIIG				*e*S	Sn	03 08 15.3	-2.5
ZIIG	**Zihuatanejo**	**0.64**	**169**	*e*P	Pn	03 08 06.6	-0.3
ZIIG				*e*S	Sn	03 08 15.3	-2.5
MOIG	**Morelia**	**1.48**	**15**	*i* P	Pn	03 08 17.9	+1.0
MOIG				*i* S	Sn	03 08 37.2	+1.4
MOIG	**Morelia**	**1.48**	**15**	*i* P	Pn	03 08 17.3	+0.3
MOIG				*i* S	Sn	03 08 35.6	-0.2
MMIG	**Aquila**	**1.66**	**272**	*e*P	Pn	03 08 17.0	-2.3
MMIG				*e*S	Sn	03 08 38.8	-1.3
CAIG	**El Cayaco**	**1.73**	**133**	*e*P	Pn	03 08 20.6	+0.3
CAIG				*e*S	Sn	03 08 40.5	-1.2
CAIG	**El Cayaco**	**1.73**	**133**	*e*P	Pn	03 08 20.6	+0.3
CAIG				*e*S	Sn	03 08 40.5	-1.2
MEIG	**Mezcala**	**1.91**	**99**	*i* P	Pn	03 08 19.8	-2.7
MEIG				*i* S	Sn	03 08 43.5	-2.3
PLIG	**Platanillo**	**1.99**	**85**	*i* P	Pn	03 08 25.6	+1.8
PLIG				*i* S	Sn	03 08 46.0	-1.9
PLIG	**Platanillo**	**1.99**	**85**	*i* P	Pn	03 08 22.5	-1.2
PLIG				*i* S	Sn	03 08 45.7	-2.2
PNIG	**Pinotepa**	**3.79**	**118**	*i* P	Pn	03 08 47.4	-0.6
PNIG				*i* S	Sn	03 09 30.4	-1.1

IDC ***22*** *04:35:00.1±3.9, 35°.17N×81°.03E, h0km, mb3.5/2, mb1 3.7/5, mb1mx3.4/24, mbtmp3.5/5, ML3.6/3, Error ellipse: s-maj=125.8km s-min=25.7km az=66.0*

ISC 22 04:35:06.1±2.4, 35°.2N±0°.2×81°.0E±0°.2, h46km±28km, n7, σ0°.84/8, mb3.4/2, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**5.88**	**318**	*e*Pn	**Pn**	**04 36 31.4**	**+0.8**
KSH				Sn	**Sn**	**04 37 36.3**	**-0.3**
KSH				smax			
	comp=N,26nm,0.9s						
KSH				smax			
	comp=E,33nm,1.2s						
MKAR	**Makanchi Array**	**11.59**	**4**	Pn	**Pn**	**04 37 47.8**	**-0.9**
	comp=E,0.3nm,0.3s,baz=173,slow=13,SNR=7.9						
GTA	**Gaotai**	**15.50**	**69**	*e*P	**Pn**	**04 38 46.0**	**+4.5**
GTA				pP	pP	04 38 50.3	-5.6
GTA				sP	sP	04 38 52.8	-8.9
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ZALV	**Zalesovo Beam**	**18.90**	**7**	P	**Pn**	**04 39 24.2**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=201,slow=11,SNR=4.6						
BVAR	**Borovoye Array**	**19.32**	**340**	P	**Pn**	**04 39 28.3**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=144,slow=11,SNR=4.0						
CMAR	**Chiang Mai Arr**	**23.05**	**132**	P	**P**	**04 40 07.2**	**-0.4**
	comp=Z,0.6nm,0.4s,mb3.4,baz=310,slow=11,SNR=3.8						
ILAR	**Eielson Array**	**73.51**	**19**	P	**P**	**04 46 33.6**	**0.0**
	comp=Z,0.3nm,0.7s,mb3.3,baz=306,slow=5.1,SNR=5.0						

PGC ***22*** *04:45:30.6±9.7, 58°.30N×133°.47W, h1km, ML3.2/4, 55km east of Juneau, Ak Southeastern Alaska*

NEIC 22 04:45:29.9, 58°.34N×133°.47W, h0km, ML3.2(PGC), ML2.8(AEIC), 4D, After AEIC., Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESE	**Bessie Mountai**	**0.77**	**289**	P	Pg	04 45 44.3	-0.3
BESE				S	Sg	04 45 54.7	+0.2
SKAG	**Skagway**	**1.48**	**320**	*e*Pn	Pn	04 45 56.6	-1.1
SKAG				*e*Sg	Sg	04 46 18.6	+1.3
SIT	**Sitka**	**1.63**	**218**	*e*Pn	Pn	04 45 59.1	-0.7
SIT				*e*S	Sn	04 46 21.9	+0.5
DLBC	**Dease Lake**	**1.81**	**86**	*e*Pn	Pn	04 46 02.1	-0.2
DLBC				Sn	Sn	04 46 25.6	-0.4
DLBC				*e*Sg	Sg	04 46 29.0	+0.8
DLBC	**Dease Lake**	**1.81**	**86**	⇑P	Pn	04 46 02.2	-0.1
DLBC				⇓Pg	Pg	04 46 03.8	-0.8
DLBC				⇑Sn	Sn	04 46 25.6	-0.4
DLBC				⇓Sg	Sg	04 46 27.6	-0.5
PLBC	**Pleasant Camp**	**1.87**	**308**	Pn	Pn	04 46 03.9	+0.8
PLBC				Sg	Sg	04 46 29.4	-0.6
PLBC	**Pleasant Camp**	**1.87**	**308**	⇓Pn	Pn	04 46 03.9	+0.8
PLBC				⇑Sg	Sg	04 46 29.4	-0.6
WHY	**Whitehorse**	**2.43**	**343**	Pn	Pn	04 46 11.1	+0.3
WHY				Pg	Pg	04 46 15.1	-1.4
WHY	**Whitehorse**	**2.43**	**343**	⇑Pn	Pn	04 46 11.1	+0.3
WHY				⇑Pg	Pg	04 46 15.1	-1.4
CRAG	**Craig**	**2.89**	**176**	*e*Pn	Pn	04 46 16.6	-0.5
HYT	**Haines Junctio**	**3.23**	**322**	Pn	Pn	04 46 22.4	+0.7
HYT				Pg	Pg	04 46 29.0	-2.7
HYT				Sg	Sg	04 47 11.1	-2.4
HYT	**Haines Junctio**	**3.23**	**322**	⇓Pn	Pn	04 46 22.4	+0.7
HYT				⇑Pg	Pg	04 46 29.0	-2.7
HYT				⇑Sg	Sg	04 47 11.1	-2.4
PNL	**Peninsula**	**3.34**	**296**	*e*Pn	Pn	04 46 22.4	-0.9
PNL				*e*Pg	Pg	04 46 31.9	-1.9
DAWY	**Dawson**	**6.41**	**336**	*e*Pn	Pn	04 47 04.8	-0.6
DAWY				*e*Sg	Sg	04 48 54.9	-0.7

ISCJB ***22*** *05:20:33.4±1.9, 48°.8N±0°.2×154°.6E±0°.2, h87km±17km, mb3.4/7, Error ellipse: s-maj=39.0km s-min=11.7km az=143.1*
MOS ***22*** *05:20:34.2±0.6, 48°.91N×154°.49E, h97km, mb4.0/2, Error ellipse: s-maj=43.4km s-min=18.4km az=60.3*
IDC ***22*** *05:20:34.5±3.3, 48°.76N×154°.59E, h82km±30km, mb3.2/7, mb1 3.6/9, mb1mx3.3/25, mbtmp3.3/9, Error ellipse: s-maj=41.2km s-min=15.9km az=149.0*

ISC 22 05:20:34.9±1.6, 48°.9N±0°.2×154°.6E±0°.2, h83km±15km, n14, σ0°.53/15, mb3.4/7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.09**	**28**	*e*PN	**Pn**	**05 21 07.9**	**-0.1**
SKR				*i* S	**Sn**	**05 21 33.1**	**-0.2**
SKR				pmax	pmax		
	comp=Z,50nm,0.6s						
SKR				smax			
	comp=N,790nm,0.2s						
SKR				smax			
	comp=E,470nm,0.2s						
PETK	**Petropavlovsk-**	**4.70**	**24**	P	**Pn**	**05 21 43.2**	**0.0**
	comp=E,1.2nm,0.3s,baz=183,slow=11,SNR=5.5						
PETK	**Petropavlovsk-**	**4.70**	**24**	PN	**Pn**	**05 21 43.3**	**0.0**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**9.51**	**245**	P	**Pn**	**05 22 49.5**	**+0.7**
	comp=Z,1.1nm,0.3s,baz=70,slow=14,SNR=6.0						
ASAJ	**Asahikawa**	**9.51**	**245**	PN	**Pn**	**05 22 49.5**	**+0.7**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS	**Korea Array**	**22.40**	**249**	P	**P**	**05 25 25.6**	**-0.7**
	comp=Z,0.6nm,0.3s,mb3.4,baz=46,slow=11,SNR=4.2						
KSRS	**Korea Array**	**22.40**	**249**	P	**P**	**05 25 25.6**	**-0.7**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.6						
MKAR	**Makanchi Array**	**46.86**	**296**	P	**P**	**05 28 56.3**	**0.0**
	comp=Z,0.3nm,0.5s,mb3.3,baz=54,slow=6.2,SNR=3.5						
CMAR	**Chiang Mai Arr**	**53.81**	**256**	P	**P**	**05 29 49.5**	**+0.4**
	comp=Z,1.3nm,0.6s,mb4.1,baz=33,slow=7.1,SNR=6.0						
CMAR	**Chiang Mai Arr**	**53.81**	**256**	P	**P**	**05 29 49.5**	**+0.4**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NVAR	**Mina Array Bea**	**60.62**	**64**	P	**P**	**05 30 37.3**	**+0.5**
	comp=Z,0.2nm,0.5s,mb3.4,baz=322,slow=5.7,SNR=2.8						
PDAR	**Pinedale Array**	**62.74**	**55**	P	**P**	**05 30 51.8**	**+0.8**
	comp=Z,0.4nm,0.8s,mb3.4,baz=325,slow=4.4,SNR=3.8						
ASAR	**Alice Springs**	**74.51**	**200**	P	**P**	**05 32 03.3**	**-1.0**
	comp=Z,0.4nm,0.7s,mb3.3,baz=18,slow=6.2,SNR=3.0						
TXAR	**Lajitas Array**	**75.63**	**62**	P	**P**	**05 32 10.6**	**-0.2**
	comp=Z,0.2nm,0.4s,mb3.2,baz=293,slow=5.0,SNR=7.0						

MOS ***22*** *05:33:08.4±1.1, 54°.08N×168°.18E, h34km, mb4.4/18, Error ellipse: s-maj=11.5km s-min=9.7km az=165.2*
ISCJB ***22*** *05:33:09.2±0.5, 54°.02N±0°.05×168°.18E±0°.03, h38km±4km, mb4.2/43, MS3.8/7, Error ellipse: s-maj=7.9km s-min=3.2km az=5.3*
IDC ***22*** *05:33:10.9±6.4, 54°.27N×168°.13E, h33km±50km, mb3.9/18, mb1 4.1/19, mb1mx4.0/27, mbtmp3.9/19, ML4.2/1, MS3.2/2, Ms1 3.3/2, ms1mx2.8/24, Error ellipse: s-maj=23.6km s-min=11.9km az=165.0*
NEIC ***22*** *05:33:10.2±2.5, 54°.10N×168°.19E, h32km±19km, mb4.3/20, Error ellipse: s-maj=13.1km s-min=5.9km az=171.0*
KRSC ***22*** *05:33:10.4±1.2, 53°.86N×167°.64E, h16km±16km, ML4.7*

ISC 22 05:33:11.6±0.4, 54°.07N±0°.05×168°.18E±0°.04, h40km±4km, h42km±1.4km; pP-P, n254, σ0°.94/270, mb4.2/43, MS3.8/7, 69C-79D, Komandorsky Islands region

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

MJAR	Matsushiro Arr	27.11	242	P	P	05 38 51.4	+0.9
	comp=Z,0.7nm,0.3s,mb3.7,baz=39,slow=8.5,SNR=3.7						
MJAR	Matsushiro Arr	27.11	242	P	P	05 38 51.4	+0.8
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
EGAK	Eagle	27.13	47	eP	P	05 38 48.5	-1.9
	comp=Z,12nm,1.0s,mb4.4						
DAWY	Dawson	27.93	48	eP	P	05 38 56.7	-0.8
HYT	Haines Junctio	29.23	55	eP	P	05 39 07.7	-1.5
CN2	Changchun	29.46	267	eP	P	05 39 12.5	+1.1
CN2				eS	S	05 44 02.3	-0.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.7						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
INK	Inuvik	30.11	39	P	P	05 39 15.3	-1.6
	comp=Z,0.9nm,0.4s,mb3.9,baz=293,slow=6.8,SNR=4.8						
INK	Inuvik	30.11	39	eP	P	05 39 15.5	-1.4
INK				e*PP	pP	05 39 25.6	-2.2
INK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
INK	Inuvik	30.11	39	eP	P	05 39 15.5	-1.4
	comp=Z,2.2nm,0.6s,mb4.1						
INK				epP	pP	05 39 25.6	-2.2
KSRS	Korea Array	32.10	255	LR	LR	05 54 18.9	
	comp=Z,24nm,18.7s,MS2.9,baz=134,slow=39						
DLBC	Dease Lake	33.53	57	eP	P	05 39 47.8	+0.8
SONM	Songino Array	38.31	287	P	P	05 40 28.3	+0.3
	comp=Z,0.4nm,0.6s,mb3.3,baz=46,slow=10,SNR=2.5						
YKA	Yellowknife Ar	39.10	46	P	P	05 40 34.4	-0.1
	comp=Z,1.1nm,0.8s,mb3.6,baz=295,slow=8.3,SNR=7.2						
YKA	Yellowknife Ar	39.10	46	P	P	05 40 34.4	-0.1
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
HHC	Hu-ho-hao-te	39.43	274	eP	P	05 40 36.6	-0.9
HHC				pP	pP	05 40 46.6	-2.0
HHC				sP	sP	05 40 51.6	-1.7
HHC				PP	PP	05 42 11.9	+3.7
HHC				PcP	PcP	05 42 43.9	-0.9
HHC				ScP	ScP	05 46 28.8	-1.2
HHC				S	S	05 46 34.3	-2.0
HHC				sS	sS	05 46 53.0	-1.8
HHC				ScS	ScS	05 50 39.1	-2.9
HHC				pmax	pmax		
	comp=Z,18nm,0.6s,mb5.0						
HHC				pmax	pmax		
	comp=Z,110nm,6.4s						
HHC				LR	LR		
	comp=N,130nm,14.1s,MS4.1						
HHC				LR	LR		
	comp=E,170nm,14.4s,MS4.1						
HHC				LR	LR		
	comp=Z,88nm,14.5s,MS3.7						
B08A	Colville Reser	43.93	66	⇓P	P	05 41 13.8	-0.3
	baz=44						
EDM	Edmonton	44.25	58	eP	P	05 41 16.4	-0.3
EDM				e*PP	pP	05 41 28.7	+0.8
H04A	Detroit Lake	44.57	72	⇑P	P	05 41 20.4	+1.1
	baz=44						
WHN	Wuhan	44.88	261	eP	P	05 41 27.5	+5.5
C11A	Tepee Creek (N	45.90	65	⇑P	P	05 41 29.2	-0.6
	baz=46						
G08A	Pilot Rock	45.99	70	⇑P	P	05 41 30.1	-0.5
	baz=46						
A13A	Flathead Natio	46.21	63	⇑P	P	05 41 32.2	0.0
	baz=46						
C12B	Naegeli Ranch,	46.39	65	⇑P	P	05 41 33.5	-0.2
	baz=46						
WALA	Waterton Lakes	46.40	63	eP	P	05 41 33.7	0.0
	comp=Z,0.2nm,0.8s						
I07A	Izee	46.45	71	⇓P	P	05 41 34.4	+0.2
	baz=46						
F10A	Beach Ranch, E	46.52	68	⇓P	P	05 41 35.7	+1.0
	baz=46						
B13A	Whitefish	46.52	64	⇑P	P	05 41 34.5	-0.2
	baz=46						
K05A	Summer Lake	46.53	74	⇑P	P	05 41 36.4	+1.6
	baz=46						
BSMT	Bassoo Peak	46.67	64	eP	P	05 41 35.5	-0.4
	comp=Z,1.8nm,0.7s,mb4.1						
A14A	Double T Ranch	46.71	62	⇑P	P	05 41 35.7	-0.5
	baz=46						
C13A	Hot Springs	46.89	65	⇓P	P	05 41 37.6	0.0
	baz=47						
A15A	Johnson Ranch,	47.06	62	⇓P	P	05 41 37.8	-1.1
	baz=47						
LZH	Lanzhou	47.12	275	eP	P	05 41 31.3	-8.2
LZH				pP	pP	05 41 43.0	-7.9
LZH				sP	sP	05 41 48.3	-7.2
LZH				ePP	PP	05 43 21.3	-9.1
LZH				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.8						
LZH				pmax	pmax		
	comp=Z,49nm,6.5s						
LZH				LR	LR		
	comp=E,300nm,14.2s						
LZH				LR	LR		
	comp=Z,360nm,18.3s,MS4.4						
E12A	Beaver Dam Sad	47.14	66	⇓P	P	05 41 38.8	-0.8
	baz=47						
C14A	Swan Lake	47.28	64	⇑P	P	05 41 40.0	-0.6
	baz=47						
B15A	Bradely Ranch,	47.56	63	⇓P	P	05 41 41.3	-1.5
	baz=47						
A16A	West Butte Ran	47.67	61	⇑P	P	05 41 43.2	-0.5
	baz=47						
F12A	Elk City	47.73	67	⇑P	P	05 41 42.9	-1.2
	baz=48						
D14A	Greenough	47.83	65	⇑P	P	05 41 44.3	-0.6
	baz=48						
C15A	Salmond Ranch,	47.87	63	⇓P	P	05 41 45.0	-0.2
	baz=48						
B16A	M & M Farms, S	47.95	62	⇑P	P	05 41 44.5	-1.3
	baz=48						
A17A	Triple J Farms	48.14	61	⇓P	P	05 41 46.1	-1.2
	baz=48						
F13A	Darby	48.21	66	⇓P	P	05 41 46.8	-1.0
	baz=48						
E14A	Clinton	48.26	65	⇓P	P	05 41 47.6	-0.6
	baz=48						
C16A	Fuhringer Ranc	48.31	63	⇑P	P	05 41 47.5	-1.1
	baz=48						
G13A	Cobalt	48.70	67	⇓P	P	05 41 50.9	-0.8
	baz=48,SNR=6.5						
E15A	Deer Lodge	48.71	65	⇓P	P	05 41 50.8	-0.8
	baz=48,SNR=5.1						
K10A	MacKenzie Ranc	48.75	71	⇑P	P	05 41 52.1	0.0
	baz=49						
D16A	Dana Ranch, Ca	48.90	63	⇑P	P	05 41 52.5	-0.7
	baz=49						
MFID	Camas Ranch	48.92	70	⇓P	P	05 41 52.9	-0.5
	baz=49						
C17A	Wharram Farm,	48.93	62	⇑P	P	05 41 52.5	-0.9
	baz=49						
B18A	Beardsley Farm	48.96	61	⇓P	P	05 41 52.9	-0.7
	baz=49						
H13A	Challis	49.03	68	⇑P	P	05 41 53.7	-0.5
	baz=49						
E16A	East Helena	49.15	64	⇓P	P	05 41 53.8	-1.3
	baz=49						
F15A	Butte	49.16	65	⇓P	P	05 41 54.3	-0.8
	baz=49						
EGMT	Eagleton	49.21	61	⇓P	P	05 41 54.8	-0.7
	baz=49						
EGMT	Eagleton	49.21	61	eP	P	05 41 54.2	-1.3
	comp=Z,3.1nm,0.8s,mb4.4						
D17A	Six Diamond Ra	49.28	63	⇓P	P	05 41 55.1	-0.9
	baz=49						
J12A	Stokes Ranch,	49.43	69	⇑P	P	05 41 56.7	-0.5
	baz=49						
I13A	Wildhorse Cree	49.53	68	⇑P	P	05 41 57.9	-0.1
	baz=49						
HLID	Hailey	49.60	69	⇑P	P	05 41 58.5	-0.1
	baz=49						
G15A	Dillon	49.60	66	⇑P	P	05 41 57.5	-1.0
	baz=49						
E17A	Martinsdale	49.63	64	⇑P	P	05 41 58.7	0.0
	baz=49						
D18A	Linhart Farms,	49.71	62	⇓P	P	05 41 58.6	-0.7
	baz=50						
L11A	Cat Creek Ranc	49.78	71	⇓P	P	05 42 00.3	+0.4
	baz=50						
I14A	Mackay	49.88	68	⇓P	P	05 42 00.5	-0.2
	baz=50,SNR=6.8						
G16A	Moss Hill, Enn	49.93	65	⇓P	P	05 42 00.6	-0.4
	baz=50,SNR=5.7						
K12A	Draper Farm, C	49.94	70	⇑P	P	05 42 01.1	0.0
	baz=50						
L12A	House Creek Ra	50.20	70	⇑P	P	05 42 02.9	-0.2
	baz=50						
F18A	Big Timber	50.60	64	⇑P	P	05 42 05.8	-0.2
	baz=50						
CD2	Chengdu	50.83	270	P	P	05 42 08.3	+0.3
CD2				pP	pP	05 42 20.8	+1.4
CD2				sP	sP	05 42 26.0	+1.9
CD2				PP	PP	05 44 05.3	+1.0
CD2				S	S	05 49 18.8	-2.3
CD2				sS	sS	05 49 39.9	-0.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
CD2				pmax	pmax		
	comp=Z,70nm,5.9s						
CD2				LR	LR		
	comp=N,130nm,8.3s						
CD2				LR	LR		
	comp=Z,130nm,11.3s,MS4.2						
NVAR	Mina Array Bea	50.85	76	P	P	05 42 07.6	-0.5
	comp=Z,1.0nm,0.8s,mb3.8,baz=309,slow=5.7,SNR=7.1						
NVAR	Mina Array Bea	50.85	76	P	P	05 42 07.6	-0.5
K14A	Jones Ranch, D	50.95	69	⇑P	P	05 42 08.9	+0.1
	baz=51						
WMQ	Urumqi	51.10	293	eP	P	05 42 11.0	+1.1
WMQ				pP	pP	05 42 22.3	+1.0
WMQ				sP	sP	05 42 26.8	+0.8
WMQ				PcP	PcP	05 43 26.3	+1.2
WMQ				PP	PP	05 44 08.6	+2.1
WMQ				eS	S	05 49 24.4	-0.2
WMQ				ScS	ScS	05 51 54.4	-2.4
WMQ				SS	SS	05 52 56.5	-3.0
WMQ				pmax	pmax		
	comp=Z,120nm,5.0s						
WMQ				LR	LR		
	comp=N,90nm,24.6s,MS3.8						
WMQ				LR	LR		
	comp=E,70nm,21.8s,MS3.8						
WMQ				LR	LR		
	comp=Z,40nm,20.2s,MS3.4						
KURK	Kurchatov	51.21	305	eP	P	05 42 08.6	-2.0
KURK				e*PP	pP	05 42 19.8	-2.2
KURK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.8						
KURK	Kurchatov	51.21	305	eP	P	05 42 08.6	-2.0
	comp=Z,1.4nm,0.8s,mb3.9						
KURK				epP	pP	05 42 19.8	-2.2
L14A	Malta	51.26	69	⇑P	P	05 42 11.0	-0.1
	baz=51						
IMW	Indian Meadow	51.27	66	eP	P	05 42 11.4	+0.3
	comp=Z,3.0nm,1.1s,mb4.1						
RLMT	Red Lodge	51.35	64	⇓P	P	05 42 11.7	0.0
	baz=51						
DGMT	Dagmar	51.74	58	⇑P	P	05 42 13.4	-1.2
	baz=52						
MKAR	Makanchi Array	51.98	300	P	P	05 42 14.7	-1.7
	comp=Z,0.3nm,0.7s,mb3.4,baz=60,slow=8.5,SNR=3.5						
N14A	Grayback Hills	52.09	71	⇓P	P	05 42 16.9	-0.4
	baz=52						
L16A	Fish Haven	52.27	68	⇓P	P	05 42 18.7	+0.1
	baz=52						
GYA	Guiyang	52.41	264	eP	P	05 42 21.0	+1.1
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
R11A	Troy Canyon, C	52.45	74	⇑P	P	05 42 21.2	+1.2
	baz=52						
K18A	Toltan Ranch,	52.60	67	⇑P	P	05 42 21.5	+0.4
	baz=52,SNR=6.1						
BW06	Boulder Array	52.77	66	⇓P	P	05 42 22.0	-0.4
	baz=52						
BW06	Boulder Array	52.77	66	eP	P	05 42 22.1	-0.2
	comp=Z,2.4nm,0.9s,mb4.1						
PDAR	Pindale Array	52.77	66	P	P	05 42 22.4	+0.1
	comp=Z,1.8nm,0.9s,mb4.0,baz=323,slow=4.7,SNR=14						
P14A	Drum Mountains	53.02	72	⇑P	P	05 42 24.6	+0.5
	baz=53						
Q14A	Sevier Lake (B	53.32	72	⇑P	P	05 42 26.4	+0.1
	baz=53						
T11A	Corn Creek, Al	53.43	75	⇑P	P	05 42 27.2	-0.1
	baz=53						
BVAR	Borovoye Array	53.45	312	P	P	05 42 26.0	-1.2
	comp=Z,1.6nm,0.8s,mb4.0,baz=64,slow=6.8,SNR=6.9						
BVAR	Borovoye Array	53.45	312	P	P	05 42 26.0	-1.2
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
R13A	O'Grain Ranch,	53.49	73	⇓P	P	05 42 28.0	+0.3
	baz=53						
ARCES	ARCESS Array B	53.75	345	P	P	05 42 27.8	-1.3
	comp=Z,3.3nm,0.7s,mb4.4,baz=21,slow=10,SNR=8.0						
ARCES	ARCESS Array B	53.75	345	P	P	05 42 27.8	-1.3
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
T13A	Saint George	54.33	74	⇓P	P	05 42 34.9	+1.0
	baz=54						
P18A	Preston Nutter	54.56	70	⇑P	P	05 42 36.5	+1.0
	baz=54						
O19A	Miners Draw (B	54.71	68	⇓P	P	05 42 36.9	+0.4
	baz=54						
U13A	Pakoon Wash	54.73	75	⇑P	P	05 42 37.9	+1.2
	baz=54						
S15A	Panguitch	54.75	73	⇓P	P	05 42 38.0	+1.1
	baz=54						
M21A	Separation Pea	54.76	66	⇑P	P	05 42 36.9	+0.1
	baz=54						
SRU	San Rafael	54.77	70	⇑P	P	05 42 37.6	+0.6
	baz=55						
T14A	Hurricane	54.77	74	⇓P	P	05 42 38.0	+1.0
	baz=55						
RSSD	Black Hills	54.77	62	eP	P	05 42 36.0	-0.9
RSSD				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
RSSD	Black Hills	54.77	62	eP	P	05 42 36.0	-1.0
	comp=Z,3.6nm,0.6s,mb4.6						
N20A	Spence Gulch,	54.81	67	⇑P	P	05 42 38.2	+1.0
	baz=55						
R16A	Teasdale	54.81	72	⇓P	P	05 42 38.4	+1.1
	baz=55						
L22A	Ellis Ranch, M	54.96	65	⇓P	P	05 42 39.4	+1.1
	baz=55						
Q18A	Rafter H Ranch	54.99	70	⇓P	P	05 42 39.4	+0.8
	baz=55						
V13A	Grand Canyon W	55.12	75	⇓P	P	05 42 40.8	+1.2
	baz=55						
S16A	Weppner Ranch,	55.14	72	⇑P	P	05 42 40.4	+0.7
	baz=55						
R17A	Hanksville Air	55.15	71	⇑P	P	05 42 40.2	+0.4
	baz=55						
U14A	Mt Trumbull	55.17	74	⇓P	P	05 42 40.7	+0.8
	baz=55						
O20A	White River Ci	55.31	68	⇑P	P	05 42 41.0	+0.1
	baz=55						
Q19A	Hogan Spring (	55.58	70	⇓P	P	05 42 42.5	-0.3
	baz=55,SNR=7.4						
R18A	Canyonlands Na	55.63	71	⇓P	P	05 42 43.4	+0.2
	baz=55						
S17A	Black Ridge (B	55.65	72	⇑P	P	05 42 43.8	+0.5
	baz=55						
U15A	North Rim	55.67	74	⇑P	P	05 42 43.8	+0.3
	baz=56						
W13A	Hualapai Mount	55.71	76	⇓P	P	05 42 43.8	0.0
	baz=56						
KMI	Kunming	55.72	266	P	P	05 42 44.8	+0.8
KMI				pP	pP	05 42 56.3	+0.7
KMI				sP	sP	05 43 00.8	+0.6
KMI				PP	PP	05 44 50.9	+2.4
KMI				S	S	05 50 25.9	-1.8
KMI				sS	sS	05 50 45.3	-1.5
KMI				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
KMI				pmax	pmax		
	comp=Z,79nm,3.4s						
KMI				LR	LR		
	comp=N,110nm,17.2s,MS4.1						
KMI				LR	LR		
	comp=E,110nm,20.4s,MS4.1						
KMI				LR	LR		
	comp=Z,74nm,19.6s,MS3.8						
V14A	Boquillas Ranc	55.77	75	⇓P	P	05 42 45.1	+0.8
	baz=56						
N22A	Wattenberg Ran	55.81	66	⇓P	P	05 42 44.7	+0.3
	baz=56						
AGMN	Agassiz Nation	55.91	53	eP	P	05 42 44.6	-0.5
	comp=Z,5.5nm,0.8s,mb4.6						
N23A	Red Feather La	56.02	66	⇑P	P	05 42 46.0	+0.1
	baz=56						
S18A	Hurst Farm, Bl	56.06	71	⇓P	P	05 42 46.4	+0.1
	baz=56,SNR=5.7						
W14A	Seligman	56.09	75	⇑P	P	05 42 46.7	+0.2
	baz=56						
T17A	Navajo Res., N	56.10	72	⇓P	P	05 42 46.5	-0.1
	baz=56						
PV10	Paradox Valley	56.11	70	eP	P	05 42 48.0	+1.4
	comp=Z,42nm,0.5s						
Q20A	Ridgley Place,	56.11	69	⇑P	P	05 42 47.0	+0.4
	baz=56						
PV04	Paradox Valley	56.17	70	eP	P	05 42 47.3	+0.3
V15A	Kaibab Nationa	56.17	74	⇑P	P	05 42 47.9	+0.8
	baz=56						
O23A	Lake Granby, G	56.52	66	⇑P	P	05 42 50.2	+0.7
	baz=56						
U16A	Tuba City	56.53	73	⇓P	P	05 42 50.0	+0.3
	baz=56						
Q21A	Lamborn Mesa,	56.59	69	⇑P	P	05 42 50.4	+0.4
	baz=56						
R20A	Redvale	56.61	70	⇓P	P	05 42 50.8	+0.6
	baz=56						
Q22A	Crested Butte,	56.93	68	⇓P	P	05 42 53.7	+1.2
	baz=57						
R21A	Cimarron	56.94	69	⇓P	P	05 42 53.5	+1.0
	baz=57						
ISCO	Idaho Springs	56.97	66	eP	P	05 42 53.9	+1.2
ISCO				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
ISCO	Idaho Springs	56.97	66	eP	P	05 42 53.9	+1.1
	comp=Z,3.1nm,0.9s,mb4.3						
W16A	Flagstaff	57.05	74	⇓P	P	05 42 54.4	+1.0
	baz=57						
X15A	Humboldt	57.09	75	⇑P	P	05 42 54.5	+0.8
	baz=57						
V17A	Tonalea, Kykot	57.09	73	⇑P	P	05 42 54.5	+0.9
	baz=57,SNR=7.9						
Z13A	Yuma Proving G	57.21	77	⇓P	P	05 42 55.2	+0.7
	baz=57						
T19A	Beclabito	57.22	71	⇑P	P	05 42 54.8	+0.3
	baz=57						
Y15A	Casa Rosa Ranc	57.42	76	⇓P	P	05 42 56.2	+0.2
	baz=57						
U19A	Dine' College,	57.50	72	⇓P	P	05 42 57.0	+0.5
	baz=57						
S22A	4UR Ranch, Cre	57.78	69	⇑P	P	05 42 59.5	+1.0
	baz=58						
EYMN	Ely	58.20	51	eP	P	05 43 00.9	-0.4
	comp=Z,5.9nm,0.9s,mb4.6						
115A	Sonoran Desert	58.39	77	⇑P	P	05 43 04.0	+1.1
	baz=58						
Y17A	Roosevelt	58.46	75	⇓P	P	05 43 03.9	+0.6
	baz=58						
SDCO	Great Sand Dun	58.51	68	eP	P	05 43 02.0	-1.5
	comp=Z,2.5nm,1.3s,mb4.1						
214A	Organ Pipe Nat	58.60	78	⇓P	P	05 43 05.2	+1.0
	baz=58						
W20A	Ramah	58.74	72	⇓P	P	05 43 05.8	+0.5
	baz=58						
X19A	St. Johns	58.81	73	⇓P	P	05 43 06.5	+0.8
	baz=59						
U23A	El Rito	59.15	70	⇓P	P	05 43 08.9	+0.8
	baz=59,SNR=6.4						
Y19A	Nutrioso	59.17	74	⇓P	P	05 43 08.8	+0.6
	baz=59						
T25A	Trinidad	59.54	68	⇑P	P	05 43 10.9	+0.2
	baz=59						
V23A	Ortiz Mt. (NFS	59.58	70	⇓P	P	05 43 11.7	+0.7
	baz=59						
X21A	Alamocita Cree	59.64	72	⇓P	P	05 43 11.1	-0.3
	baz=59						
LAZ	Ladron	60.03	72	eP	P	05 43 15.5	+1.3
	comp=Z,1.0nm,1.0s,mb3.8						
U25A	Circle Dot Ran	60.08	68	⇓P	P	05 43 15.1	+0.6
	baz=60						
V24A	Rampart Ranch,	60.10	70	⇓P	P	05 43 15.3	+0.7
	baz=60						
Z20A	Nine Sixteen R	60.16	74	⇓P	P	05 43 15.9	+0.8
	baz=60						
218A	Dragoon	60.17	76	⇑P	P	05 43 15.4	+0.3
	baz=60						
W24A	Lazy 6 Ranch,	60.41	70	⇓P	P	05 43 17.2	+0.5
	baz=60						
Y22A	Socorro	60.47	72	⇑P	P	05 43 17.3	+0.1
	baz=60						
Z21A	St. Cloud Mine	60.54	73	⇑P	P	05 43 17.6	0.0
	baz=60						
219A	White Tail Can	60.61	75	⇓P	P	05 43 19.0	+0.9
	baz=60						
W25A	X Bar L Ranch,	60.92	69	⇓P	P	05 43 20.5	+0.3
	baz=61						
Y23A	Lovelace Mesa,	60.99	71	⇓P	P	05 43 20.8	+0.1
	baz=61						
FINES	FINESS Array B	60.99	340	P	P	05 43 18.1	-2.1
	comp=Z,3.2nm,0.8s,mb4.5,baz=45,slow=3.8,SNR=5.8						
FINES	FINESS Array B	60.99	340	P	P	05 43 18.1	-2.1
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
Y24A	Capitan	61.34	71	⇑P	P	05 43 23.4	+0.3
	baz=61						
Y25A	Mesa, Roswell	61.75	71	⇓P	P	05 43 25.7	-0.1
	baz=62						
X26A	CR and CF Fran	61.78	69	⇓P	P	05 43 26.2	+0.3
	baz=62						
Z25A	Roswell	62.22	71	⇓P	P	05 43 29.1	+0.1
	baz=62						
SCHQ	Schefferville	62.40	32	P	P	05 43 28.4	-1.4
	comp=Z,1.6nm,0.7s,mb4.3,baz=270,slow=9.1,SNR=3.5						
Y27A	Causey	62.63	69	⇑P	P	05 43 32.0	+0.3
	baz=62						
Z26A	Caprock	62.63	71	⇓P	P	05 43 31.9	+0.1
	baz=62						
224A	Cornudas Mount	62.66	72	⇓P	P	05 43 32.4	+0.4
	baz=62						
MSTX	Muleshoe	62.78	69	⇑P	P	05 43 32.6	-0.1
	baz=63						
CMAR	Chiang Mai Arr	63.09	264	P	P	05 43 35.1	+0.2
	comp=Z,0.9nm,0.3s,mb4.3,baz=26,slow=7.4,SNR=5.0						
CMAR	Chiang Mai Arr	63.09	264	P	P	05 43 35.1	+0.2
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
324A	Moseley Ranch,	63.16	73	⇓P	P	05 43 35.7	+0.4
	baz=63						
226A	Malaga, Loving	63.47	71	⇑P	P	05 43 37.5	+0.2
	baz=63						
325A	Bean Ranch, Si	63.50	73	⇑P	P	05 43 38.2	+0.6
	baz=63						
NB2	NORSAR Subarra	63.79	348	P	P	05 43 37.8	-1.1
	comp=Z,2.0nm,0.5s,mb4.4,baz=16,slow=6.9						
NOA	NORSAR Array B	63.79	348	P	P	05 43 38.2	-0.7
	comp=Z,2.0nm,0.5s,mb4.4,baz=17,slow=6.7,SNR=12						
NOA	NORSAR Array B	63.79	348	P	P	05 43 38.2	-0.7
NOA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
425A	Indio Mountain	63.93	73	⇓P	P	05 43 40.6	+0.2
	baz=64						
326A	Caldwell Ranch	64.10	72	⇓P	P	05 43 41.2	-0.2
	baz=64						
WMOK	Wichita Mounta	64.38	66	eP	P	05 43 43.1	-0.1
WMOK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
WMOK	Wichita Mounta	64.38	66	eP	P	05 43 43.1	-0.1
	comp=Z,3.4nm,0.8s,mb4.4						
426A	McDonald Obser	64.56	72	⇓P	P	05 43 44.1	-0.4
	baz=64						
328A	Wristen Ranch,	64.70	71	⇑P	P	05 43 45.6	+0.2
	baz=64						
427A	Hayter Ranch,	64.78	72	⇓P	P	05 43 46.1	+0.2
	baz=65						
HDIL	Hopedale	64.80	55	eP	P	05 43 44.8	-1.1
	comp=Z,14nm,0.5s,mb5.2						
526A	Mary Lane Ranc	64.99	73	⇓P	P	05 43 47.9	+0.7
	baz=65						
428A	Kincaid Ranch,	65.27	71	⇑P	P	05 43 49.7	+0.6
	baz=65				

ASAR pmax pmax
comp=Z,1.0nm,0.6s
ESDC Sonseca Array 86.39 354 P 05 45 48.9 -0.5
comp=Z,0.5nm,0.4s,mb4.1,baz=349,slow=4.7,SNR=2.8
QSPA South Pole Qui 143.82 180 PKhKP PKPpre 05 52 37.8
comp=Z,4.7nm,0.9s,baz=333,slow=1.9,SNR=16

NNC ***22*** *06:16:43.1±5.9, 38°.96N×70°.27E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=44.2km s-min=31.9km az=11.0*
ISC 22 06:16:43.6±2.2, 38°.7N±0°.1×70°.0E±0°.1, h35km, n8, σ1°12/11, 5C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**4.43**	**5**	⇑Pn	**Pn**	**06 17 50.2**	**+1.9**
	1.0nm,0.3s,baz=179,slow=13,SNR=42						
KK31				⇑Sn	**Sn**	**06 18 40.2**	**+1.6**
	2.2nm,0.3s,baz=189,slow=24,SNR=4.8						
KK31				Lg		06 18 52.4	
	5.7nm,0.5s,baz=184,slow=30,SNR=9.7						
AML	**Almayashu**	**4.43**	**38**	P	**Pn**	**06 17 48.0**	**-0.3**
	SNR=10						
UCH	**Uchtor**	**4.92**	**43**	P	**Pn**	**06 17 55.5**	**+0.5**
	SNR=31						
AAK	**Ala-Archa**	**5.20**	**39**	P	**Pn**	**06 17 59.4**	**+0.6**
	SNR=5.9						
USP	**Ospenovka**	**5.69**	**35**	P	**Pn**	**06 18 04.5**	**-1.1**
	SNR=7.0						
TKM2	**Tokmak 2**	**5.98**	**43**	⇓Pn	**Pn**	**06 18 09.1**	**-0.3**
	2.8nm,0.4s						
TKM2				⇑Sn	**Sn**	**06 19 15.4**	**-1.2**
	2.3nm,0.7s						
TKM2				⇓Lg		06 19 42.6	
	2.9nm,0.7s						
TKM2	**Tokmak 2**	**5.98**	**43**	P	**Pn**	**06 18 09.2**	**-0.2**
	SNR=7.3						
AB31	**Akbulak array**	**12.81**	**329**	⇑Pn	**Pn**	**06 19 43.3**	**+0.2**
	0.4nm,0.5s,baz=176,slow=9.4,SNR=14						
AB31				⇑Sn	**Sn**	**06 22 02.5**	**-1.9**
	1.2nm,0.6s,baz=153,slow=24,SNR=6.7						

TEH ***22*** *06:21:45.4, 27°.08N×56°.85E, h24km*
KISR ***22*** *06:21:46.2±0.7, 28°.14N×55°.87E, h0km±999km, ML3.3*
CSEM ***22*** *06:21:48.4±0.9, 26°.94N×55°.85E, h2km, ML3.7, Error ellipse: s-maj=25.2km s-min=7.0km az=46.0*
ISCJB ***22*** *06:21:48.5±1.3, 26°.92N±0°.09×55°.70E±0°.09, h10km, Error ellipse: s-maj=16.5km s-min=5.1km az=41.4*
SGS ***22*** *06:21:49.0, 27°.31N×55°.88E, h11km*
OMAN ***22*** *06:21:49.6±99.0, 27°.08N×56°.41E, h35km±12km, Error ellipse: s-maj=14.6km s-min=4.3km az=284.0*
ISC 22 06:21:49.5±1.4, 26°.92N±0°.09×55°.83E±0°.10, h10km, n18, σ0°92/26, 2C-2D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BANOM	**Banah**	**1.08**	**157**	P	**Pg**	**06 22 08.0**	**-2.2**
	SNR=339						
BANOM				S	**Sg**	**06 22 24.5**	**+0.3**
BANOM	**Banah**	**1.08**	**157**	⇓P	**Pg**	**06 22 08.0**	**-2.2**
	SNR=339						
BANOM				⇑S	**Sg**	**06 22 24.5**	**+0.3**
ASHO	**Ashiyiah**	**2.23**	**175**	P	**Pn**	**06 22 26.6**	**0.0**
	SNR=36						
ASHO	**Ashiyiah**	**2.23**	**175**	⇑P	**Pn**	**06 22 26.6**	**+0.1**
	SNR=36						
ASUD	**Al Ashush, Dub**	**2.33**	**191**	P	**Pn**	**06 22 29.7**	**+1.8**
	SNR=7.2						
ASUD	**Al Ashush, Dub**	**2.33**	**191**	⇓P	**Pn**	**06 22 29.7**	**+1.8**
	SNR=7.2						
BTHS		**5.34**	**239**	P	**Pn**	**06 23 10.4**	**+1.1**
BTHS		**5.34**	**239**	P	**Pn**	**06 23 10.4**	**+1.1**
QRN	**Al-Qurain**	**7.24**	**286**	*e*P	**Pn**	**06 23 36.1**	**+0.7**
QRN				*e*S	**Sn**	**06 24 58.1**	**+0.4**
RDF	**Al-Radifah**	**7.60**	**287**	*e*P	**Pn**	**06 23 40.3**	**+0.1**
RDF				*e*S	**Sn**	**06 25 06.8**	**+0.4**
RDF				AML	AML	06 25 08.2	
	comp=Z,4.9nm,0.3s						
RDF	**Al-Radifah**	**7.60**	**287**	*e*P	**Pn**	**06 23 40.3**	**0.0**
RDF				*e*S	**Sn**	**06 25 06.8**	**+0.4**
	comp=Z,5.0nm,0.3s						
NAY	**Al-Naaiem**	**7.94**	**289**	*e*P	**Pn**	**06 23 45.1**	**+0.2**
NAY				*e*S	**Sn**	**06 25 13.8**	**-1.1**
NAY				AML	AML	06 25 15.4	
	comp=Z,3.3nm,0.6s						
NAY	**Al-Naaiem**	**7.94**	**289**	*e*P	**Pn**	**06 23 45.1**	**+0.2**
NAY				*e*S	**Sn**	**06 25 13.8**	**-1.0**
LYLS		**9.21**	**240**	P	**Pn**	**06 24 01.9**	**-0.5**
LYLS		**9.21**	**240**	P	**Pn**	**06 24 01.9**	**-0.5**
LYLS				S	**Sn**	**06 25 45.5**	**-0.6**
ASYS		**10.25**	**276**	S	**Sn**	**06 26 05.7**	**-6.0**
ASYS		**10.25**	**276**	P	**Pn**	**06 24 15.7**	**-0.9**
ASYS		**10.25**	**276**	P	**Pn**	**06 24 15.7**	**-0.9**

IDC ***22*** *06:44:43.5±1.1, 6°.86S×128°.48E, h0km, mb4.1/6, mb1 4.4/8, mb1mx4.1/18, mbtmp4.3/8, ML4.6/2, Error ellipse: s-maj=47.2km s-min=22.0km az=69.0*
ISCJB ***22*** *06:44:59.2±1.4, 7°.57S±0°.06×128°.3E±0°.1, h177km±15km, mb3.9/6, Error ellipse: s-maj=18.2km s-min=9.7km az=9.2*
DJA ***22*** *06:45:04, 7°.86S×128°.60E, h121km, mb4.7/5*
ISC 22 06:44:59.1±1.6, 7°.53S±0°.08×128°.3E±0°.1, h155km±19km, n16, σ1°15/23, mb3.9/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**4.83**	**67**	P	**Pn**	**06 46 10.0**	**-0.3**
KAKA	**Kakadu**	**6.59**	**142**	*e*P	**Pn**	**06 46 33.4**	**-0.3**
	17nm,0.2s						
KAKA				*e*S	**Sn**	**06 47 42.0**	**-5.9**
KAKA	**Kakadu**	**6.59**	**142**	P	**Pn**	**06 46 33.6**	**-0.1**
	7μm91nm,0.6s						
KAKA				S	**Sn**	**06 47 42.4**	**-5.5**
	7μm91nm,0.6s						
KNA	**Kununurra**	**8.19**	**177**	P	**Pn**	**06 46 57.2**	**+2.3**
	4μm122nm,0.6s						
KNA				S	**Sn**	**06 48 24.1**	**-2.1**
	4μm122nm,0.6s						
FITZ	**Fitzroy Crossi**	**10.81**	**193**	*e*P	**Pn**	**06 47 30.8**	**+1.0**
	11nm,0.3s						
FITZ				*e*S	**Sn**	**06 49 25.3**	**-4.2**
FITZ	**Fitzroy Crossi**	**10.81**	**193**	Pn	**Pn**	**06 47 31.1**	**+1.4**
	2.7nm,0.3s,baz=35,slow=10,SNR=65						
FITZ				Sn	**Sn**	**06 49 25.4**	**-4.1**
	3.8nm,0.3s,baz=277,slow=19,SNR=7.8						
FITZ	**Fitzroy Crossi**	**10.81**	**193**	P	**Pn**	**06 47 31.6**	**+1.8**
	23nm,2.0s						
FITZ				S	**Sn**	**06 49 28.5**	**-1.0**
	23nm,2.0s						
WRAB	**Tennant Creek**	**13.67**	**155**	P	**Pn**	**06 48 07.0**	**+0.3**
	35nm,0.9s						
COEN	**Coen**	**15.98**	**115**	P	**Pn**	**06 48 35.4**	**0.0**
ASAR	**Alice Springs**	**16.93**	**162**	P	**Pn**	**06 48 49.4**	**+2.5**
	2.2nm,0.3s,baz=343,slow=11,SNR=113						
ASAR				S	**S**	**06 51 46.2**	**-8.9**
	1.0nm,0.3s,baz=331,slow=16,SNR=7.6						
CTA	**Charters Tower**	**21.44**	**127**	P	**P**	**06 49 35.3**	**+0.1**
	7.3nm,1.1s,mb3.9,baz=276,slow=10,SNR=3.1						
SONM	**Songino Array**	**58.41**	**343**	P	**P**	**06 54 38.8**	**+0.4**
	1.2nm,0.6s,mb3.9,baz=163,slow=7.2,SNR=6.9						
PETK	**Petropavlovsk-**	**65.37**	**19**	P	**P**	**06 55 23.8**	**-0.9**
	1.9nm,0.7s,mb4.1,baz=191,slow=6.2,SNR=5.0						
MKAR	**Makanchi Array**	**67.74**	**328**	P	**P**	**06 55 40.4**	**+0.5**
	1.3nm,0.4s,mb4.0,baz=116,slow=8.3,SNR=18						
ZALV	**Zalesovo Beam**	**71.31**	**335**	P	**P**	**06 56 00.1**	**-1.5**
	1.6nm,0.5s,mb4.0,baz=144,slow=6.5,SNR=5.5						
BVAR	**Borovoye Array**	**77.60**	**328**	P	**P**	**06 56 37.9**	**-0.1**
	0.7nm,0.4s,mb3.6,baz=127,slow=11,SNR=4.7						

NIED ***22*** *06:56:00, 37°.70N×142°.30E, h23km, Mw3.9 Best double couple: M0 7.89000×10^14 NP1:φs33.00000°, δ87.00000°, λ107.00000°. NP2:φs131.00000°, δ18.00000°, λ9.00000°.*
IDC ***22*** *06:56:54.9±1.5, 37°.73N×142°.73E, h0km, mb4.0/6, mb1 4.0/10, mb1mx3.8/24, mbtmp4.1/10, ML3.6/4, MS3.4/4, Ms1 3.4/4, ms1mx2.7/38, Error ellipse: s-maj=34.0km s-min=20.5km az=80.0*
JMA ***22*** *06:56:59.2±0.2, 37°.70N×142°.32E, h33km±3km, M4.1*
ISC 22 06:56:57.6±1.3, 37°.74N±0°.04×142°.39E±0°.06, h9km±7km, n24, σ0°96/34, mb3.9/6, MS3.7/2, 2D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**1.09**	**311**	⇓P	**Pg**	**06 57 18.5**	**0.0**
JIO				*e*S	**Sg**	**06 57 32.3**	**-0.3**
JFK	**Kawauchi**	**1.26**	**253**	P	**Pn**	**06 57 20.1**	**-1.3**
JMM	**Marumori**	**1.27**	**276**	⇓P	**Pn**	**06 57 20.5**	**-1.0**
JMM				S	**Sb**	**06 57 36.0**	**-2.1**
JOU	**Okura**	**1.50**	**295**	P	**Pn**	**06 57 24.9**	**+0.2**
JOU				*e*S	**Sn**	**06 57 43.2**	**-1.1**
JMK	**Ichinoseki**	**1.52**	**323**	P	**Pn**	**06 57 25.2**	**+0.2**
JMK				*e*S	**Sn**	**06 57 43.9**	**-1.0**
JFT	**Otama**	**1.64**	**263**	P	**Pn**	**06 57 26.7**	**0.0**
JFT				*e*S	**Sn**	**06 57 47.2**	**-0.7**
JYS	**Shiratake**	**1.90**	**285**	P	**Pn**	**06 57 31.0**	**+0.8**
JYS				*e*S	**Sn**	**06 57 55.1**	**+0.9**
JOM	**Ohasama**	**1.93**	**334**	P	**Pn**	**06 57 31.3**	**+0.6**
JOM				*e*S	**Sn**	**06 57 54.9**	**-0.2**
JYK	**Kaneyama**	**1.98**	**307**	P	**Pn**	**06 57 31.9**	**+0.5**
JFY	**Yanaizu**	**2.16**	**262**	P	**Pn**	**06 57 34.2**	**+0.5**
JFY				*e*S	**Sn**	**06 58 00.5**	**-0.1**
JYA	**Atsumi**	**2.27**	**293**	P	**Pn**	**06 57 36.5**	**+1.2**
MJAR	**Matsushiro Arr**	**3.54**	**252**	Pn	**Pn**	**06 57 53.7**	**+0.8**
	3.1nm,0.3s,baz=77,slow=15,SNR=18						
MJAR				Sn	**Sn**	**06 58 41.4**	**+6.5**
	4.7nm,0.3s,baz=3.7,slow=16,SNR=4.9						
MJAR				LR	LR	06 59 29.4	
	comp=Z,390nm,18.9s,baz=65,slow=41						
MAT	**Matsushiro**	**3.55**	**252**	P	**Pn**	**06 57 54.2**	**+1.3**
MAT				*e*S	**Sn**	**06 58 37.3**	**+2.4**
JHJ	**Hachijo jima 2**	**5.08**	**206**	Pn	**Pn**	**06 58 13.6**	**-0.3**
	18nm,0.3s,baz=253,slow=20,SNR=3.8						
JHJ				Sn	**Sn**	**06 59 07.3**	**-5.3**
	46nm,0.3s,baz=49,slow=22,SNR=5.9						
CBIJ	**Chichi jima**	**10.61**	**181**	Pn	**Pn**	**06 59 26.9**	**-2.9**
	1.9nm,0.3s,baz=288,slow=20,SNR=4.1						
CBIJ				Sn	**Sn**	**07 01 18.4**	**-11**
	2.6nm,0.3s,baz=287,slow=19,SNR=3.2						
KSRS	**Korea Array**	**11.48**	**273**	Pn	**Pn**	**06 59 45.4**	**+3.7**
	0.3nm,0.3s,baz=85,slow=14,SNR=6.3						
KSRS				LR	LR	07 04 04.3	
	comp=Z,73nm,18.3s,baz=344,slow=36						
SONM	**Songino Array**	**28.05**	**303**	P	**P**	**07 02 49.9**	**+0.9**
	3.1nm,0.6s,mb4.1,baz=100,slow=8.5,SNR=15						
ZALV	**Zalesovo Beam**	**42.02**	**312**	P	**P**	**07 04 49.3**	**+0.3**
	1.5nm,0.6s,mb3.8,baz=98,slow=6.4,SNR=7.5						
MKAR	**Makanchi Array**	**44.41**	**302**	P	**P**	**07 05 08.8**	**+0.3**
	1.3nm,0.7s,mb3.6,baz=87,slow=9.5,SNR=17						
KAPI	**Kappang**	**47.46**	**211**	LR	LR	07 23 56.8	
	comp=Z,116nm,18.3s,MS3.9,baz=120,slow=34						
ASAR	**Alice Springs**	**61.59**	**189**	P	**P**	**07 07 14.8**	**-0.6**
	0.2nm,0.5s,mb3.5,baz=9.0,slow=7.7,SNR=2.6						
FINES	**FINESS Array B**	**68.55**	**332**	P	**P**	**07 08 00.1**	**-0.2**
	1.7nm,0.7s,mb4.1,baz=64,slow=6.6,SNR=3.8						
NOA	**NORSAR Array B**	**73.83**	**338**	LR	LR	07 44 59.5	
	comp=Z,20nm,18.0s,MS3.4,baz=250,slow=39						
AKASG	**Malin Array Be**	**74.21**	**323**	P	**P**	**07 08 34.1**	**-0.5**
	1.4nm,0.6s,mb4.0,baz=43,slow=6.7,SNR=4.7						

CSEM ***22*** *06:58:38.6±1.0, 70°.65N×14°.57W, h10km, ML3.6, Error ellipse: s-maj=24.0km s-min=10.7km az=55.0*
REY ***22*** *06:58:40.0, 70°.31N×13°.06W, h10km, ML3.6, ML3.1*
ISC 22 06:58:38.9±1.7, 70°.65N±0°.08×14°.7W±0°.3, h10km, n12, σ0°85/19, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCO	**Scoresbysund**	**2.44**	**270**	*i* P	**Pn**	**06 59 18.8**	**+0.1**
SCO				*i*		06 59 27.6	
SCO				*e*S	**Sn**	**06 59 47.7**	**-0.8**
SCO	**Scoresbysund**	**2.44**	**270**	*i* P	**Pn**	**06 59 18.8**	**+0.1**
SCO				*e*S	**Sn**	**06 59 47.7**	**-0.8**
IGRI	**Grimsey**	**4.30**	**198**	P	**Pn**	**06 59 45.1**	**+0.9**
ILEI	**Leirhofn**	**4.31**	**190**	P	**Pn**	**06 59 43.6**	**-0.8**
ILEI				S	**Sn**	**07 00 33.7**	**-0.9**
IGIL	**Gilhagi**	**4.63**	**188**	P	**Pn**	**06 59 48.0**	**-0.8**
IGIL				S	**Sn**	**07 00 41.5**	**-1.0**
IHED	**Heoinshofoi**	**4.69**	**193**	P	**Pn**	**06 59 49.5**	**-0.1**
ISIG	**Siglufjorour**	**4.80**	**201**	P	**Pn**	**06 59 52.2**	**+1.1**
IGRA	**Granastaoir**	**4.87**	**194**	P	**Pn**	**06 59 53.1**	**+1.0**
IGRA				S	**Sn**	**07 00 48.7**	**+0.3**
IHLA	**Hella**	**4.92**	**198**	P	**Pn**	**06 59 54.1**	**+1.4**
IHLA				S	**Sn**	**07 00 51.1**	**+1.5**
IGRS	**Grimsstaoir**	**5.06**	**187**	P	**Pn**	**06 59 53.9**	**-0.8**
IGRS				S	**Sn**	**07 00 52.8**	**-0.3**
IREN	**Reynihlio**	**5.09**	**190**	P	**Pn**	**06 59 55.2**	**+0.1**
IADA	**Aoalbol**	**5.66**	**184**	P	**Pn**	**07 00 02.1**	**-0.9**

IDC 22 07:07:28.4±2.0, 3°.77S×151°.48E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.6/15, mbtmp3.6/3, MS3.2/3, Ms1 3.2/3, ms1mx2.9/22, Error ellipse: s-maj=86.3km s-min=31.6km az=118.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**18.45**	**339**	LR	LR	07 17 14.7	
	comp=Z,31nm,18.7s,baz=224,slow=32						
ASAR	**Alice Springs**	**26.07**	**219**	P	P	07 13 03.9	+0.1
	1.7nm,0.9s,baz=57,slow=8.4,SNR=10						
RAO	**Raoul Island**	**38.53**	**134**	LR	LR	07 26 53.2	
	comp=Z,61nm,21.1s,baz=296,slow=30						
PETK	**Petropavlovsk-**	**56.91**	**4**	LR	LR	07 38 22.3	
	comp=Z,20nm,18.6s,baz=267,slow=33						
MKAR	**Makanchi Array**	**78.68**	**319**	P	P	07 19 32.5	-0.1
	0.3nm,0.6s,baz=99,slow=9.1,SNR=3.0						
ILAR	**Eielson Array**	**81.71**	**22**	P	P	07 19 48.7	+0.3
	0.5nm,0.7s,baz=246,slow=5.5,SNR=9.2						

ISCJB ***22*** *07:19:45.1±0.9, 15°.35S±0°.09×174°.29W±0°.06, h144km±7km, mb4.4/54, Error ellipse: s-maj=17.1km s-min=5.1km az=148.1*
IDC ***22*** *07:19:45.8±1.4, 15°.35S×174°.26W, h145km±14km, mb4.2/10, mb1 4.3/11, mb1mx4.1/18, mbtmp4.2/11, MS3.4/1, Ms1 3.4/1, ms1mx2.8/18, Error ellipse: s-maj=26.3km s-min=11.8km az=133.0*
NEIC ***22*** *07:19:46.7±0.8, 15°.15S×174°.36W, h145km±7km, mb4.3/36, Error ellipse: s-maj=13.3km s-min=4.1km az=147.0*
ISC 22 07:19:46.5±0.8, 15°.35S±0°.09×174°.28W±0°.06, h143km±7km, n373, σ0°51/342, mb4.4/54, 137C-133D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.81**	**60**	P	**Pn**	**07 20 31.4**	**+0.2**
	118nm,0.3s,baz=205,slow=1.9,SNR=180						
AFI				S	**Sn**	**07 21 05.2**	**-0.5**
	181nm,0.3s,baz=51,slow=21,SNR=8.3						
AFI				LR	LR	07 21 33.2	
	comp=Z,736nm,20.0s,baz=225,slow=38						
AFI	**Afiamalu**	**2.81**	**60**	*e*Pn	**Pn**	**07 20 31.1**	**0.0**
AFI				*e*Sn	**Sn**	**07 21 05.0**	**-0.6**
MSVF	**Nonsavu**	**7.73**	**251**	*e*Pn	**Pn**	**07 21 45.4**	**+9.1**
	110nm,1.1s						
DZM	**Mont Dzumac**	**19.43**	**247**	*e*P	**P**	**07 24 07.7**	**+5.8**
	139nm,1.4s						
DZM				*e*LR	LR	07 28 24.9	
	202nm,25.2s						
DZM	**Mont Dzumac**	**19.43**	**247**	*e*P	**P**	**07 24 04.0**	**+2.1**
NOUC	**Port Laguerre**	**19.57**	**247**	*e*P	**P**	**07 24 04.9**	**+1.5**
PPT	**Papeete**	**23.79**	**99**	*e*LR	LR	07 29 49.5	
	237nm,28.2s						
URZ	**Urewera**	**24.06**	**197**	P	**P**	**07 24 47.5**	**-0.9**
	27nm,0.5s,mb5.0,baz=135,slow=18,SNR=6.0						
URZ	**Urewera**	**24.06**	**197**	*e*P	**P**	**07 24 50.3**	**+1.9**
	21nm,0.4s,mb5.0						
TBI	**Tubuai**	**24.71**	**113**	*e*LR	LR	07 30 31.8	
	170nm,37.2s						
RPZ	**Rata Peaks**	**30.92**	**201**	P	**P**	**07 25 47.0**	**-2.6**
	12nm,0.9s,mb4.6,baz=293,slow=3.7,SNR=2.4						
EIDS	**Eidsvold**	**33.88**	**247**	*e*P	**P**	**07 26 16.0**	**+0.3**
	7.9nm,0.8s,mb4.5						
ARMA	**Armidale**	**34.64**	**238**	*e*P	**P**	**07 26 22.5**	**+0.2**
CTA	**Charters Tower**	**37.83**	**257**	P	**P**	**07 26 48.4**	**-1.1**
	9.3nm,0.7s,mb4.5,baz=92,slow=12,SNR=6.0						
CTAO	**Charters Tower**	**37.83**	**257**	*e*P	**P**	**07 26 49.6**	**+0.1**
	6.4nm,0.6s,mb4.4						
CNB	**Canberra Magne**	**38.11**	**232**	*e*P	**P**	**07 26 51.5**	**-0.2**
MTSU	**Mount Surprise**	**39.69**	**260**	*e*P	**P**	**07 27 05.3**	**+0.3**
	53nm,0.6s,mb5.3						
CMSA	**Cobar Meteorol**	**39.85**	**239**	*e*P	**P**	**07 27 06.2**	**0.0**
COEN	**Coen**	**41.14**	**266**	*e*P	**P**	**07 27 18.0**	**+1.0**
COEN	**Coen**	**41.14**	**266**	*e*P	**P**	**07 27 18.3**	**+1.4**
	110nm,0.6s						
TOO	**Toolangi**	**41.84**	**230**	*e*P	**P**	**07 27 22.0**	**-0.4**
STKA	**Stephens Creek**	**43.33**	**240**	P	**P**	**07 27 33.7**	**-0.8**
	4.7nm,0.7s,mb4.2,baz=91,slow=8.1,SNR=8.4						
BBOO	**Buckleboo**	**48.11**	**240**	*e*P	**P**	**07 28 11.8**	**-0.2**
	7.6nm,0.8s,mb4.4						
WRAB	**Tennant Creek**	**49.02**	**257**	*e*P	**P**	**07 28 19.2**	**0.0**
	24nm,0.7s,mb4.9						
ASAR	**Alice Springs**	**49.32**	**252**	P	**P**	**07 28 21.6**	**+0.2**
	117nm,0.7s,baz=85,slow=8.4,SNR=534						
KAKA	**Kakadu**	**51.66**	**266**	*e*P	**P**	**07 28 38.9**	**-0.2**
	33nm,0.4s,mb5.3						
FORT	**Forrest**	**54.68**	**243**	*e*P	**P**	**07 28 59.6**	**-1.4**
	24nm,0.7s,mb5.0						
FITZ	**Fitzroy Crossi**	**57.39**	**258**	*e*P	**P**	**07 29 20.5**	**+0.1**
	16nm,1.3s,mb4.7						
MBWA	**Marble Bar**	**62.56**	**254**	*e*P	**P**	**07 29 55.5**	**-0.2**
	19nm,0.9s,mb4.9						
SBA	**Scott Base**	**63.24**	**184**	*e*P	**P**	**07 30 00.8**	**+1.7**
	9.5nm,0.8s,mb4.7						
PETK	**Petropavlovsk-**	**72.32**	**343**	P	**P**	**07 30 54.2**	**-2.1**
	4.3nm,0.8s,mb4.2,baz=128,slow=9.6,SNR=5.0						
PETK	**Petropavlovsk-**	**72.32**	**343**	P	**P**	**07 30 54.2**	**-2.1**
VES	**Vestal, Richgr**	**72.89**	**44**	⇑P	**P**	**07 30 59.5**	**-0.5**
	baz=73						
EDW2	**Edwards Air Fo**	**73.11**	**46**	⇑P	**P**	**07 31 01.2**	**-0.1**
	baz=73						
MONP	**Monument Peak**	**73.16**	**48**	⇓P	**P**	**07 31 01.8**	**+0.1**
	baz=73						
ISA	**Isabella**	**73.21**	**45**	⇑P	**P**	**07 31 01.7**	**-0.2**
	baz=73						
CMB	**Columbia Colle**	**73.29**	**42**	*e*P	**P**	**07 31 01.6**	**-0.8**
	8.0nm,0.9s,mb4.5						
PFO	**Pinyon Flat Ob**	**73.51**	**47**	⇑P	**P**	**07 31 03.4**	**-0.3**
	baz=74						
CWC	**Cottonwood Cre**	**73.90**	**44**	⇓P	**P**	**07 31 06.3**	**+0.3**
	baz=74						
YBH	**Yreka Blue Hor**	**74.07**	**38**	*e*P	**P**	**07 31 07.0**	**+0.2**
	4.4nm,0.7s,mb4.3						
MPMC	**Manual Prospec**	**74.09**	**45**	⇓P	**P**	**07 31 07.1**	**0.0**
	baz=74						
GSC	**Goldstone**	**74.16**	**46**	⇓P	**P**	**07 31 07.0**	**-0.5**
	baz=74						
GSC	**Goldstone**	**74.16**	**46**	*e*P	**P**	**07 31 06.6**	**-0.9**
	5.4nm,1.2s,mb4.2						
WAKR	**Walker**	**74.17**	**42**	*e*P	**P**	**07 31 07.6**	**+0.2**
HEC	**Hector,Ludlow**	**74.24**	**46**	⇑P	**P**	**07 31 07.8**	**-0.2**
	baz=74						
WCN	**Washoe City**	**74.42**	**41**	⇑P	**P**	**07 31 09.0**	**+0.1**
	baz=74						
GMRC	**Granite Mounta**	**74.68**	**47**	⇓P	**P**	**07 31 10.6**	**+0.1**
	baz=75						
GRAC	**Grapevine Rang**	**74.69**	**44**	⇓P	**P**	**07 31 10.6**	**+0.1**
	baz=75						
IRM	**Iron Mountain**	**74.72**	**48**	⇓P	**P**	**07 31 11.1**	**+0.3**
	baz=75						
FURC	**Furnace Creek,**	**74.74**	**45**	⇑P	**P**	**07 31 11.1**	**+0.3**
	baz=75						
SHOC	**Shoshone**	**74.84**	**46**	⇑P	**P**	**07 31 11.3**	**-0.1**
	baz=75						
TUQ	**Turquoise Moun**	**74.84**	**46**	⇑P	**P**	**07 31 11.5**	**+0.1**
	baz=75						
PAHR	**Pah Rah Range**	**74.89**	**41**	*e*P	**P**	**07 31 12.0**	**+0.4**
	6.2nm,1.0s,mb4.2						
113A	**Mohawk Valley,**	**75.02**	**49**	⇑P	**P**	**07 31 12.2**	**-0.3**
	baz=75						
U10A	**Ash Meadows, A**	**75.08**	**45**	⇑P	**P**	**07 31 13.0**	**+0.3**
	baz=75						
Z13A	**Yuma Proving G**	**75.32**	**49**	⇓P	**P**	**07 31 14.1**	**-0.1**
	baz=75						
214A	**Organ Pipe Nat**	**75.33**	**51**	⇓P	**P**	**07 31 14.2**	**-0.1**
	baz=75						
V11A	**Goodsprings**	**75.39**	**46**	⇓P	**P**	**07 31 14.6**	**0.0**
	baz=76						
MOD	**Modoc**	**75.61**	**39**	*e*P	**P**	**07 31 15.2**	**-0.5**
	8.7nm,1.0s,mb4.3						
S10A	**Tonopah Range,**	**75.70**	**44**	⇓P	**P**	**07 31 16.2**	**-0.1**
	baz=76,SNR=5.8						
V12A	**Nelson**	**75.74**	**46**	⇑P	**P**	**07 31 16.5**	**0.0**
	baz=76						
K05A	**Summer Lake**	**75.75**	**38**	⇑P	**P**	**07 31 16.9**	**+0.4**
	baz=76						
X13A	**Yucca**	**75.88**	**48**	⇓P	**P**	**07 31 17.8**	**+0.4**
	baz=76						
Z14A	**Wintersburg**	**75.91**	**49**	⇓P	**P**	**07 31 18.0**	**+0.4**
	baz=76						
W13A	**Hualapai Mount**	**76.10**	**47**	⇑P	**P**	**07 31 19.1**	**+0.5**
	baz=76						
S11A	**Rachel**	**76.12**	**44**	⇓P	**P**	**07 31 18.8**	**+0.2**
	baz=76						
H04A	**Detroit Lake**	**76.20**	**35**	⇓P	**P**	**07 31 18.9**	**0.0**
	baz=76						
T11A	**Corn Creek, Al**	**76.27**	**45**	⇓P	**P**	**07 31 19.5**	**0.0**
	baz=76,SNR=12						
U12A	**Valley of Fire**	**76.32**	**46**	⇓P	**P**	**07 31 19.8**	**0.0**
	baz=76,SNR=5.3

baz=78
Q13A Wheeler Ranch, 77.97 44 ⇑P P 07 31 28.9 -0.1
baz=78,SNR=5.8
219A White Tail Can 78.03 52 ⇓P P 07 31 29.1 -0.3
baz=78
WUAZ Wupatki 78.09 48 ⇑P P 07 31 30.0 +0.3
baz=78
T15A Red Dirt Ranch 78.11 46 ⇑P P 07 31 29.9 +0.1
baz=78,SNR=11
K10A MacKenzie Ranc 78.19 39 ⇑P P 07 31 29.9 -0.3
baz=78,SNR=7.7
Y18A Canyon Day Jun 78.25 50 ⇑P P 07 31 31.2 +0.5
baz=78
320A Kipp Ranch, An 78.29 53 ⇑P P 07 31 31.2 +0.3
baz=78
G08A Pilot Rock 78.39 36 ⇓P P 07 31 30.9 -0.2
baz=78,SNR=5.5
S15A Panguitch 78.44 46 ⇓P P 07 31 32.5 +0.9
baz=78
Q14A Sevier Lake (B 78.48 44 ⇓P P 07 31 31.9 +0.1
baz=78,SNR=6.6
220A Playas Peak, P 78.54 52 ⇓P P 07 31 32.9 +0.6
baz=79
L11A Cat Creek Ranc 78.55 40 ⇑P P 07 31 31.9 -0.2
baz=79,SNR=6.2
V17A Tonalea, Kykot 78.56 48 ⇑P P 07 31 32.3 0.0
baz=79
U16A Tuba City 78.56 47 ⇑P P 07 31 33.0 +0.7
baz=79
X18A Snowflake 78.66 49 ⇑P P 07 31 33.1 +0.3
baz=79
M12A Wells 78.67 41 ⇓P P 07 31 32.6 -0.2
baz=79,SNR=5.5
K11A Parker Ranch, 78.70 40 ⇑P P 07 31 33.2 +0.2
baz=79
T16A Glen Canyon Da 78.70 47 ⇑P P 07 31 33.4 +0.3
baz=79
R15A Junction 78.77 45 ⇑P P 07 31 33.9 +0.5
baz=79
N13A Wendover, West 78.83 42 ⇓P P 07 31 34.2 +0.6
baz=79
Y19A Nutrioso 78.91 50 ⇓P P 07 31 35.0 +0.7
baz=79
P14A Drum Mountains 78.92 44 ⇑P P 07 31 34.1 -0.1
baz=79,SNR=6.0
MSU Marysvale 78.99 45 eP P 07 31 35.5 +0.9
L12A House Creek Ra 79.00 41 ⇓P P 07 31 34.8 +0.2
baz=79
S16A Weppner Ranch, 79.00 46 ⇓P P 07 31 34.7 +0.1
baz=79
Z20A Nine Sixteen R 79.03 51 ⇑P P 07 31 35.5 +0.6
baz=79
Q15A Fillmore 79.09 44 ⇓P P 07 31 35.3 +0.1
baz=79
BMO Blue Mountains 79.10 37 eP P 07 31 34.3 -0.8
2.5nm,1.2s,mb3.7
X19A St. Johns 79.10 50 ⇓P P 07 31 35.8 +0.5
baz=79
U17A Shonto 79.11 47 ⇑P P 07 31 36.0 +0.7
baz=79
MFID Camas Ranch 79.18 39 ⇓P P 07 31 35.9 +0.4
baz=79
T17A Navajo Res., N 79.20 47 ⇑P P 07 31 36.4 +0.6
baz=79,SNR=5.7
V18A Ganado 79.22 48 ⇓P P 07 31 35.8 -0.1
baz=79
K12A Draper Farm, C 79.33 40 ⇓P P 07 31 36.9 +0.6
baz=79
W19A Sanders 79.34 49 ⇑P P 07 31 37.1 +0.5
baz=79
R16A Teasdale 79.35 45 ⇑P P 07 31 37.0 +0.5
baz=79
DUG Dugway 79.40 43 ⇓P P 07 31 36.6 -0.2
baz=80
P15A Leamington 79.44 44 ⇓P P 07 31 37.0 0.0
baz=80
D08A Wollman Farm, 79.45 35 ⇓P P 07 31 37.0 +0.1
baz=80
S17A Black Ridge (B 79.51 46 ⇓P P 07 31 37.4 0.0
baz=80
J12A Stokes Ranch, 79.54 40 ⇑P P 07 31 37.6 +0.1
baz=80
Y20A Horse Springs, 79.54 51 ⇑P P 07 31 38.4 +0.7
baz=80
L13A Double Diamond 79.64 41 ⇑P P 07 31 38.4 +0.3
baz=80
M14A Sheep Mountain 79.72 42 ⇑P P 07 31 38.2 -0.2
baz=80,SNR=8.1
X20A Quemado 79.73 50 ⇑P P 07 31 39.2 +0.5
baz=80
F10A Beach Ranch, E 79.78 36 ⇑P P 07 31 37.7 -1.0
baz=80,SNR=5.7
I12A Atlanta 79.81 39 ⇑P P 07 31 38.7 -0.3
baz=80,SNR=6.9
K13A Stover Farm, H 79.85 41 ⇓P P 07 31 39.5 +0.3
baz=80
R17A Hanksville Air 79.94 46 ⇓P P 07 31 39.6 -0.2
baz=80,SNR=5.4
W20A Ramah 79.99 49 ⇑P P 07 31 40.3 +0.2
baz=80
B08A Colville Reser 80.00 34 ⇑P P 07 31 38.8 -1.0
baz=80
U19A Dine' College, 80.01 48 ⇓P P 07 31 40.3 +0.1
baz=80
S18A Hurst Farm, Bl 80.10 47 ⇓P P 07 31 40.5 -0.1
baz=80
HLID Hailey 80.13 40 ⇑P P 07 31 40.7 +0.1
baz=80,SNR=8.9
HLID Hailey 80.13 40 eP P 07 31 40.4 -0.2
4.8nm,0.9s,mb4.1
HLID e 07 32 24.4
J13A Cove Ranch, Pi 80.19 40 ⇑P P 07 31 41.7 +0.7
baz=80
M15A Larsen Ranch, 80.28 42 ⇓P P 07 31 41.8 +0.3
baz=80
Z22A Elephant Butte 80.32 52 ⇓P P 07 31 41.8 0.0
baz=80,SNR=5.7
V20A Brimhall 80.32 49 ⇓P P 07 31 41.7 -0.1
baz=80
K14A Jones Ranch, D 80.37 41 ⇓P P 07 31 42.2 +0.3
baz=80
T19A Beclabito 80.38 48 ⇓P P 07 31 42.3 +0.1
baz=80
H12A Diamond D Ranc 80.39 39 ⇓P P 07 31 42.1 +0.1
baz=80
SRU San Rafael 80.41 45 ⇓P P 07 31 42.4 +0.2
baz=80
SRU San Rafael 80.41 45 eP P 07 31 42.0 -0.2
8.5nm,1.6s,mb4.1
I13A Wildhorse Cree 80.50 39 ⇓P P 07 31 42.9 +0.3
baz=81
R18A Canyonlands Na 80.50 46 ⇑P P 07 31 42.8 +0.1
baz=81
CN2 Changchun 80.50 320 eP P 07 31 45.5 +2.9
CN2 eS S 07 41 38.8 +1.4
CN2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
CN2 pmax pmax
comp=Z,200nm,5.0s
JLU Jordanelle 80.51 43 eP P 07 31 42.1 -0.7
comp=Z,3.6nm,1.1s,mb3.9
J14A Carey 80.56 40 ⇓P P 07 31 43.3 +0.4
baz=81,SNR=5.9
L15A Malad City 80.59 42 ⇓P P 07 31 43.2 0.0
baz=81
Y22A Socorro 80.61 51 ⇓P P 07 31 43.7 +0.3
baz=81
W21A San Fidel 80.61 50 ⇓P P 07 31 44.0 +0.6
baz=81
N16A Rees Ranch, Co 80.66 43 ⇓P P 07 31 43.8 +0.3
baz=81
Q18A Rafter H Ranch 80.67 45 ⇓P P 07 31 43.6 0.0
baz=81
324A Moseley Ranch, 80.69 54 ⇑P P 07 31 43.7 -0.2
baz=81
H13A Challis 80.76 39 ⇑P P 07 31 44.1 +0.1
baz=81
O17A Robinson Place 80.78 44 ⇓P P 07 31 44.4 +0.2
baz=81,SNR=6.5
F12A Elk City 80.80 37 ⇑P P 07 31 43.5 -0.7
baz=81,SNR=14
425A Indio Mountain 80.81 55 ⇑P P 07 31 44.0 -0.6
baz=81
K15A Arbon 80.85 41 ⇓P P 07 31 44.8 +0.3
baz=81
I14A Mackay 80.91 40 ⇑P P 07 31 45.3 +0.5
baz=81
224A Cornudas Mount 80.92 53 ⇓P P 07 31 45.3 +0.1
baz=81
E12A Beaver Dam Sad 80.98 37 ⇓P P 07 31 46.0 +0.9
baz=81
626A Big Bend Ranch 81.00 56 ⇑P P 07 31 45.4 -0.2
baz=81
G13A Cobalt 81.05 38 ⇓P P 07 31 45.5 0.0
baz=81
325A Bean Ranch, Si 81.06 54 ⇓P P 07 31 45.4 -0.5
baz=81,SNR=6.2
N17A Moffit Pass 81.08 43 ⇑P P 07 31 46.1 +0.4
baz=81
PV10 Paradox Valley 81.08 46 eP P 07 31 45.6 -0.3
comp=Z,54nm,0.8s,mb5.2
NEW Newport 81.14 35 eP P 07 31 44.6 -1.3
comp=Z,2.4nm,1.0s,mb3.8
U21A Nageezi 81.18 49 ⇑P P 07 31 46.4 0.0
baz=81,SNR=9.0
PV04 Paradox Valley 81.19 46 eP P 07 31 46.0 -0.4
Q19A Hogan Spring (81.20 46 ⇑P P 07 31 46.9 +0.4
baz=81
526A Mary Lane Ranc 81.23 56 ⇑P P 07 31 46.4 -0.5
baz=81,SNR=5.0
J15A Blackfoot 81.27 41 ⇑P P 07 31 47.0 +0.3
baz=81,SNR=8.1
TXAR Lajitas Array 81.29 56 P P 07 31 47.0 -0.1
comp=Z,1.5nm,0.8s,mb3.7,baz=212,slow=6.9,SNR=16
Y23A Lovelace Mesa, 81.29 51 ⇑P P 07 31 47.0 -0.1
baz=81
PV01 Paradox Valley 81.30 47 eP P 07 31 46.9 -0.1
comp=Z,88nm,0.7s,mb5.5
H14A Leadore 81.32 39 ⇓P P 07 31 47.2 +0.2
baz=81
F13A Darby 81.36 38 ⇑P P 07 31 46.4 -0.7
baz=81,SNR=5.0
C11A Tepee Creek (N 81.38 35 ⇓P P 07 31 47.1 -0.1
baz=82
D12A Red Ives Fores 81.45 36 ⇑P P 07 31 47.2 -0.3
baz=82
225A Deer Hill, Car 81.48 53 ⇑P P 07 31 47.7 -0.4
baz=82
V22A San Miguel Ran 81.50 49 ⇑P P 07 31 47.7 -0.4
baz=82
426A McDonald Obser 81.52 55 ⇑P P 07 31 47.9 -0.5
baz=82,SNR=8.0
T21A Navajo Lake 81.52 48 ⇓P P 07 31 48.7 +0.5
baz=82
627A Terlingua Ranc 81.56 56 ⇑P P 07 31 48.2 -0.4
baz=82,SNR=5.7
Z24A Sheeppen Canyo 81.56 52 ⇑P P 07 31 48.8 +0.3
baz=82
527A Woodward Ranch 81.65 56 ⇑P P 07 31 48.6 -0.4
baz=82,SNR=5.9
P19A Cripple Cowboy 81.71 45 ⇓P P 07 31 49.5 +0.4
baz=82
J16A Bone 81.73 41 ⇑P P 07 31 49.6 +0.5
baz=82
W23A Werner Place, 81.74 50 ⇑P P 07 31 49.7 +0.3
baz=82
MCMT McKenzie Canyo 81.75 39 eP P 07 31 49.4 +0.2
comp=Z,2.5nm,1.3s,mb3.7
Y24A Capitan 81.75 52 ⇑P P 07 31 49.4 -0.1
baz=82
E13A Victor 81.80 37 ⇑P P 07 31 48.5 -0.9
baz=82,SNR=6.0
M18A Lyman 81.82 43 ⇑P P 07 31 49.8 +0.1
baz=82
125A Gardner Draw, 81.83 53 ⇑P P 07 31 49.7 -0.2
baz=82
Q20A Ridgley Place, 81.87 46 ⇓P P 07 31 50.2 +0.3
baz=82
GDL2 Guadalupe Moun 81.87 54 eP P 07 31 50.3 +0.1
comp=Z,0.8nm,0.4s,mb3.7
K17A Gardner Place, 81.91 42 ⇓P P 07 31 50.3 +0.3
baz=82
O19A Miners Draw (B 81.92 45 ⇑P P 07 31 50.5 +0.3
baz=82
F14A Wisdom 81.95 38 ⇑P P 07 31 50.3 +0.1
baz=82
V23A Ortiz Mt. (NFS 81.96 50 ⇑P P 07 31 51.1 +0.6
baz=82,SNR=6.4
628A Black Gap, Mar 81.97 57 ⇑P P 07 31 50.9 +0.2
baz=82
T22A Edith 81.99 48 ⇑P P 07 31 50.7 +0.1
baz=82
D13A Huson 81.99 37 ⇑P P 07 31 49.8 -0.6
baz=82
226A Malaga, Loving 82.02 54 ⇓P P 07 31 50.8 -0.1
baz=82
Z25A Roswell 82.03 52 ⇓P P 07 31 50.6 -0.4
baz=82
P20A De Beque 82.05 45 ⇓P P 07 31 51.2 +0.3
baz=82
427A Hayter Ranch, 82.09 55 ⇓P P 07 31 51.3 0.0
baz=82
I16A Newdale 82.11 40 ⇑P P 07 31 51.6 +0.5
baz=82,SNR=5.0
R21A Cimarron 82.12 47 ⇑P P 07 31 51.7 +0.4
baz=82,SNR=6.6
G15A Dillon 82.14 39 ⇓P P 07 31 51.0 -0.2
baz=82,SNR=6.3
N19A John Jarvie Ra 82.16 44 ⇓P P 07 31 51.0 -0.4
baz=82
DLMT Dillon 82.18 39 eP P 07 31 51.6 +0.2
comp=Z,4.8nm,1.1s,mb4.0
E14A Clinton 82.19 38 ⇓P P 07 31 51.1 -0.4
baz=82,SNR=5.5
U23A El Rito 82.21 49 ⇑P P 07 31 52.2 +0.4
baz=82,SNR=5.7
BSMT Bassoo Peak 82.21 36 eP P 07 31 50.4 -1.1
comp=Z,3.6nm,1.1s,mb3.9
REDW Red Top Meadow 82.25 41 eP P 07 31 51.2 -0.6
comp=Z,13nm,1.6s,mb4.3
TPAW Teton Pass 82.25 41 eP P 07 31 51.3 -0.6
comp=Z,6.5nm,1.4s,mb4.1
W24A Lazy 6 Ranch, 82.31 50 ⇓P P 07 31 52.2 -0.2
baz=82,SNR=5.4
528A Cox Ranch, San 82.31 56 ⇑P P 07 31 52.1 -0.4
baz=82,SNR=5.3
126A Clayton Basin, 82.31 53 ⇑P P 07 31 52.4 0.0
baz=82
Q21A Lamborn Mesa, 82.31 46 ⇑P P 07 31 52.7 +0.4
baz=82
Y25A Mesa, Roswell 82.32 52 ⇓P P 07 31 52.2 -0.2
baz=82
J17A Brown Place, J 82.34 41 ⇓P P 07 31 52.8 +0.5
baz=82
S22A 4UR Ranch, Cre 82.36 48 ⇑P P 07 31 52.8 +0.2
baz=82,SNR=8.3
SNOW Snow King Moun 82.36 41 eP P 07 31 52.7 +0.3
comp=Z,7.0nm,1.0s,mb4.2
WHN Wuhan 82.36 304 P P 07 31 54.6 +1.9
K18A Toltan Ranch, 82.42 42 ⇓P P 07 31 52.5 -0.2
baz=82,SNR=6.2
O20A White River Ci 82.44 45 ⇓P P 07 31 53.6 +0.7
baz=82
IMW Indian Meadow 82.46 41 eP P 07 31 53.0 +0.1
comp=Z,12nm,1.4s,mb4.3
M19A Rock Springs 82.46 43 ⇓P P 07 31 53.0 0.0
baz=82
COLA College 82.47 11 eP P 07 31 51.6 -0.9
comp=Z,4.0nm,0.9s,mb4.0
F15A Butte 82.48 38 ⇓P P 07 31 52.7 -0.3
baz=82
LOHW Long Hollow 82.53 41 eP P 07 31 52.9 -0.4
comp=Z,8.4nm,1.5s,mb4.2
D14A Greenough 82.53 37 ⇑P P 07 31 52.5 -0.7
baz=83
ILAR Eielson Array 82.56 11 P P 07 31 51.5 -1.5
comp=Z,1.8nm,0.6s,mb4.0,baz=225,slow=5.8,SNR=72
X25A Clemmons Ranch 82.59 51 ⇑P P 07 31 53.6 -0.2
baz=83
G16A Moss Hill, Enn 82.59 39 ⇓P P 07 31 53.6 +0.1
baz=83
Z26A Caprock 82.60 53 ⇑P P 07 31 53.3 -0.6
baz=83,SNR=7.8
L19A Farson 82.61 43 ⇓P P 07 31 53.8 +0.1
baz=83
428A Kincaid Ranch, 82.61 55 ⇓P P 07 31 54.3 +0.3
baz=83
T23A Casias Ranch, 82.62 49 ⇑P P 07 31 54.1 +0.2
baz=83
R22A Saguache, Gunn 82.62 47 ⇑P P 07 31 54.2 +0.3
baz=83,SNR=7.1
H16A Russell Place, 82.67 40 ⇓P P 07 31 54.4 +0.4
baz=83,SNR=12
E15A Deer Lodge 82.70 38 ⇓P P 07 31 54.6 +0.5
baz=83
J18A Kendall Valley 82.71 42 ⇓P P 07 31 54.4 +0.1
baz=83
N20A Spence Gulch, 82.75 44 ⇓P P 07 31 54.2 -0.3
baz=83,SNR=5.2
Q22A Crested Butte, 82.79 47 ⇑P P 07 31 54.7 -0.1
baz=83
BW06 Boulder Array 82.79 42 ⇑P P 07 31 53.9 -0.8
baz=83,SNR=6.3
BW06 Boulder Array 82.79 42 eP P 07 31 53.8 -0.9
comp=Z,3.1nm,0.8s,mb4.1
PDAR Pinedale Array 82.79 42 P P 07 31 54.1 -0.6
comp=Z,2.7nm,0.8s,mb4.0,baz=236,slow=2.7,SNR=23
SMCO Snowmass 82.89 46 eP P 07 31 55.5 +0.3
comp=Z,4.6nm,1.0s,mb4.2
BOZ Bozeman (W) 82.91 39 ⇓P P 07 31 55.5 +0.3
baz=83
BOZ Bozeman (W) 82.91 39 eP P 07 31 55.0 -0.1
comp=Z,4.3nm,1.2s,mb4.0
H17A Grant Village 82.93 40 ⇓P P 07 31 56.0 +0.7
baz=83
F16A Kennard Place, 82.98 39 ⇑P P 07 31 55.6 +0.1
baz=83
W25A X Bar L Ranch, 83.02 51 ⇓P P 07 31 55.6 -0.5
baz=83
I18A Diamond G Ranc 83.07 41 ⇓P P 07 31 56.2 +0.1
baz=83
M20A Sweetwater, Wa 83.10 44 ⇓P P 07 31 56.6 +0.3
baz=83
V25A Rancho No Teng 83.16 50 ⇑P P 07 31 56.8 +0.1
baz=83
Z27A Tatum 83.20 53 ⇓P P 07 31 56.7 -0.3
baz=83
N21A Black Mountain 83.22 45 ⇓P P 07 31 57.3 +0.4
baz=83
L20A Wamsutter 83.23 43 ⇑P P 07 31 56.9 0.0
baz=83
K19A Absolon Red Bu 83.28 42 ⇓P P 07 31 56.4 -0.8
baz=83
G17A Pierce Place, 83.29 39 ⇑P P 07 31 57.1 -0.1
baz=83
HRY Holter Researc 83.33 38 eP P 07 31 57.2 -0.1
E16A East Helena 83.33 38 ⇑P P 07 31 57.3 0.0
baz=83
B14A Marquette Ranc 83.34 36 ⇑P P 07 31 56.6 -0.7
baz=83
WALA Waterton Lakes 83.36 35 eP P 07 31 56.5 -0.9
comp=Z,0.1nm,0.8s
C15A Salmond Ranch, 83.42 37 ⇑P P 07 31 57.4 -0.4
baz=84
Y27A Causey 83.47 52 ⇓P P 07 31 58.3 0.0
baz=84
K20A Yellowstone Ra 83.53 43 ⇑P P 07 31 57.6 -0.9
baz=84
U25A Circle Dot Ran 83.54 50 ⇑P P 07 31 58.4 -0.3
baz=84
DAWY Dawson 83.58 15 eP P 07 31 58.1 -0.1
A14A Double T Ranch 83.58 35 ⇑P P 07 31 58.2 -0.4
baz=84
O22A Kremmling 83.61 46 ⇑P P 07 31 59.1 +0.2
baz=84
F17A Fitzpatrick Pl 83.62 39 ⇑P P 07 31 58.8 -0.1
baz=84,SNR=5.2
D16A Dana Ranch, Ca 83.65 38 ⇑P P 07 31 58.7 -0.3
baz=84
M21A Separation Pea 83.70 44 ⇓P P 07 31 59.2 -0.2
baz=84,SNR=6.4
B15A Bradely Ranch, 83.72 36 ⇓P P 07 31 58.4 -0.9
baz=84
P23A Jefferson 83.76 46 ⇑P P 07 32 00.2 +0.5
baz=84
EGAK Eagle 83.77 14 eP P 07 31 58.7 -0.4
comp=Z,4.3nm,1.0s,mb4.1
E17A Martinsdale 83.78 38 ⇓P P 07 31 59.2 -0.4
baz=84
R24A Sanders Place, 83.80 48 ⇓P P 07 31 59.8 -0.2
baz=84
MSTX Muleshoe 83.80 52 ⇓P P 07 31 59.6 -0.4
baz=84
RWWY Rawlins 83.84 44 eP P 07 31 59.8 -0.3
comp=Z,8.3nm,1.2s,mb4.3
L21A Rawlins 83.86 44 ⇑P P 07 31 59.7 -0.4
baz=84
C16A Fuhringer Ranc 83.93 37 ⇑P P 07 31 59.8 -0.5
baz=84
N22A Wattenberg Ran 83.96 45 ⇓P P 07 32 00.5 -0.2
baz=84
A15A Johnson Ranch, 83.97 36 ⇓P P 07 32 00.3 -0.2
baz=84
W27A Bowe Ranch, En 84.01 51 ⇓P P 07 32 00.8 -0.2
baz=84
G18A Lazy EL Ranch, 84.01 40 ⇑P P 07 32 01.0 +0.2
baz=84
U26A Atchley Ranch, 84.03 50 ⇓P P 07 32 01.1 -0.1
baz=84
S25A Robets Cordova 84.04 49 ⇑P P 07 32 00.8 -0.4
baz=84
O23A Lake Granby, G 84.07 46 ⇓P P 07 32 01.7 +0.4
baz=84
RLMT Red Lodge 84.10 40 ⇑P P 07 32 01.7 +0.4
baz=84
RLMT Red Lodge 84.10 40 eP P 07 32 01.4 +0.1
comp=Z,6.6nm,1.3s,mb4.2
F18A Big Timber 84.20 39 ⇓P P 07 32 02.1 +0.3
baz=84
D17A Six Diamond Ra 84.22 38 ⇓P P 07 32 01.8 0.0
baz=84
N23A Red Feather La 84.35 45 ⇓P P 07 32 02.8 +0.1
baz=84
E18A Harlowton 84.40 39 ⇓P P 07 32 02.8 +0.1
baz=84
L22A Ellis Ranch, M 84.51 44 ⇑P P 07 32 03.1 -0.3
baz=85
A16A West Butte Ran 84.60 36 ⇓P P 07 32 03.2 -0.5
baz=85
B17A L&G Farms, Che 84.73 37 ⇓P P 07 32 03.9 -0.4
baz=85
A17A Triple J Farms 85.11 36 ⇑P P 07 32 05.8 -0.5
baz=85
B18A Beardsley Farm 85.37 37 ⇓P P 07 32 07.1 -0.4
baz=85
A18A Metzger Ranch, 85.59 37 ⇓P P 07 32 08.2 -0.4
baz=86
EDM Edmonton 85.89 32 eP P 07 32 08.8 -1.2
GYA Guiyang 87.27 298 eP P 07 32 17.0 -0.4
GYA sP sP 07 33 11.8 +3.3
GYA PP PP 07 35 46.3 +2.6
GYA SKS 07 42 28.8
GYA S S 07 42 43.1 -2.7
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
MAW Mawson 87.57 199 eP P 07 32 17.4 -0.7
comp=Z,6.1nm,0.8s,mb4.5
MAW Mawson 87.57 199 P P 07 32 17.8 -0.3
comp=Z,6.7nm,0.7s,mb4.6,baz=125,slow=7.4,SNR=21
HHC Hu-ho-hao-te 88.37 313 eP P 07 32 21.9 -0.4
HHC S S 07 42 52.3 -3.3
HHC pmax pmax
comp=Z,12nm,0.7s,mb4.8
HHC pmax pmax
comp=Z,66nm,7.1s
KMI Kunming 90.24 296 P P 07 32 31.5 +0.1
KMI pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
CD2 Chengdu 91.06 302 P P 07 32 35.0 -0.1
CD2 pP pP 07 33 11.0 -0.4
CD2 sP sP 07 33 26.0 -0.3
CD2 PP PP 07 36 15.0 +1.2
CD2 SKS 07 42 51.8
CD2 S S 07 43 17.3 -3.6
CD2 sS sS 07 44 20.0 -3.9
CD2 SS SS 07 49 28.0 -0.6
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
CD2 pmax pmax
comp=Z,100nm,5.9s
CMAR Chiang Mai Arr 91.79 289 P P 07 32 38.3 -0.4
comp=Z,0.8nm,0.4s,mb4.1,baz=86,slow=3.7,SNR=4.9
SYO Syowa Base 92.48 192 ⇓ eP P 07 32 38.2 -2.7
MKAR Makanchi Array 110.19 315 PKiKP PKiKP 07 37 58.6 -2.7
comp=Z,0.3nm,0.2s,baz=90,slow=1.4,SNR=2.9
ARCES ARCESS Array B 124.44 352 PKP PKPdf 07 38 26.0 -2.0
comp=Z,3.2nm,0.9s,baz=46,slow=2.6,SNR=5.8
BURAR Bucovina Array 144.00 337 ⇑ rP PKPdf 07 39 03.5 -1.5
MORC Moravsky Berou 144.34 347 ⇑ rP PKPdf 07 39 02.6 -3.0
KMBO Kilima Mbogo 144.79 245 PKP PKPdf 07 39 07.2 -0.3
comp=Z,3.6nm,0.9s,baz=180,slow=24,SNR=7.4
KECS Kecovo 144.79 343 ePKP PKPdf 07 39 04.8 -1.6
VRAC Vranov 144.98 348 ⇓ rP PKPdf 07 39 05.7 -1.0

TIRR	**Tirgusor**	**145.19**	**331**	⇑*i*P	PKPbc	07 39 06.6	-0.5
VYHS	**Vyhne**	**145.23**	**345**	*e*PKP	PKPdf	07 39 06.4	-0.7
BAIF	**Baives**	**145.36**	**2**	*e*PKP1	PKPbc	07 39 06.4	-1.0
MLR	**Muntele Rosu**	**145.46**	**335**	⇓*i*P	PKPdf	07 39 08.1	+0.5
BR131	**Keskin Array S**	**145.58**	**320**	*e*PKPdf	PKPdf	07 39 07.7	-0.3
BRTR	**Keskin Array B**	**145.58**	**320**	PKPbc	PKPbc	07 39 08.2	-0.3
	comp=Z,5.2nm,0.8s,baz=116,slow=2.7,SNR=24						
DRGR		**145.60**	**339**	⇑*i*P	PKPdf	07 39 07.2	-0.6
KHC	**Kasperske Hory**	**145.70**	**351**	*e*PKPdf	PKPdf	07 39 07.1	-0.8
VOIR		**145.87**	**335**	⇑*i*P	PKPdf	07 39 09.2	+0.9
ROSF	**Rostrenen**	**146.28**	**11**	*e*PKP1	PKPdf	07 39 08.3	-0.6
FLN	**La Foiliniere**	**146.29**	**7**	*e*PKP1	PKPbc	07 39 08.8	-1.5
	comp=Z,11nm,0.6s						
CONA	**Conrad Observa**	**146.45**	**348**	⇓*i*PKPab	PKPab	07 39 10.1	-1.9
	comp=Z,6.8nm,1.1s						
SGMF	**Saint Gilles**	**146.48**	**10**	*e*PKP1	PKPbc	07 39 09.2	-1.7
GRR	**Gorron**	**146.61**	**8**	*e*PKP1	PKPbc	07 39 09.7	-1.5
CDF	**Champ du Feu**	**147.00**	**358**	*e*PKP1	PKPbc	07 39 11.2	-1.2
	comp=Z,14nm,1.0s						
DAVA	**Damuels**	**147.97**	**355**	⇑*i*PKiKP	PKPbc	07 39 14.8	-0.2
	comp=Z,6.7nm,0.7s						
LOR	**Lormes**	**148.13**	**2**	*e*PKP1	PKPbc	07 39 14.3	-1.2
	comp=Z,7.3nm,0.6s						
SSF	**Saint Saulge**	**148.33**	**3**	*e*PKP1	PKPbc	07 39 15.0	-1.0
	comp=Z,15nm,1.1s						
AVF	**Avril sur Loir**	**148.59**	**3**	*e*PKP1	PKPbc	07 39 15.3	-1.3
	comp=Z,18nm,1.0s						
SMF	**Signal de Mont**	**148.76**	**2**	*e*PKP1	PKPbc	07 39 14.9	-2.2
BGF	**Bois d'Agland**	**148.79**	**4**	*e*PKP1	PKPbc	07 39 15.9	-1.3
CABF	**La Chapelle**	**148.83**	**360**	*e*PKP1	PKPbc	07 39 17.7	+0.4
	comp=Z,23nm,0.9s						
LPL	**La Plagne**	**149.91**	**359**	*e*PKP1	PKPbc	07 39 19.7	-0.3
LPG	**La Plagne**	**149.93**	**359**	*e*PKP1	PKPbc	07 39 19.8	-0.2

IDC 22 08:11:32.0±0.7, 26°.80S×67°.44E, h0km, mb4.1/12, mb1 4.1/12, mb1mx4.0/21, mbtmp4.1/12, MS4.1/3, Ms1 4.0/3, ms1mx3.5/27, Error ellipse: s-maj=21.0km s-min=17.7km az=140.0, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOSA	**Boshof**	**37.25**	**257**	P	P	08 18 46.2	+0.6
	4.5nm,0.7s,baz=97,slow=8.0,SNR=9.0						
BOSA				LR	LR	08 31 15.7	
	comp=Z,108nm,18.7s,baz=346,slow=32						
LSZ	**Lusaka**	**38.24**	**279**	P	P	08 18 53.8	-0.2
	1.1nm,0.4s,baz=142,slow=8.7,SNR=8.6						
SUR	**Sutherland**	**40.68**	**251**	P	P	08 19 14.8	+0.6
	6.8nm,1.0s,baz=122,slow=18,SNR=3.1						
MAW	**Mawson**	**40.92**	**183**	P	P	08 19 16.7	+1.0
	1.9nm,0.7s,baz=351,slow=6.5,SNR=6.6						
MAW				LR	LR	08 31 37.0	
	comp=Z,109nm,21.6s,baz=191,slow=29						
CMAR	**Chiang Mai Arr**	**54.39**	**38**	P	P	08 21 01.9	+1.0
	0.6nm,0.3s,baz=217,slow=7.4,SNR=3.4						
ASAR	**Alice Springs**	**59.59**	**103**	P	P	08 21 37.2	-0.6
	2.2nm,0.9s,baz=247,slow=6.5,SNR=15						
QSPA	**South Pole Qui**	**63.34**	**180**	P	P	08 22 02.3	-0.1
	1.5nm,0.8s,baz=72,slow=2.4,SNR=8.8						
BRTR	**Keskin Array B**	**73.30**	**333**	P	P	08 23 05.9	+0.8
	0.7nm,0.7s,baz=130,slow=5.8,SNR=4.4						
MKAR	**Makanchi Array**	**74.47**	**11**	P	P	08 23 11.8	0.0
	0.2nm,0.2s,baz=205,slow=6.4,SNR=2.1						
DBIC	**Dimbokro**	**77.39**	**284**	P	P	08 23 27.6	-1.7
	3.1nm,0.8s,baz=143,slow=6.3,SNR=3.6						
ZALV	**Zalesovo Beam**	**81.81**	**10**	P	P	08 23 52.2	-0.2
	0.6nm,0.5s,baz=180,slow=4.2,SNR=4.5						
SONM	**Songino Array**	**82.13**	**25**	P	P	08 23 54.7	+0.5
	0.6nm,0.7s,baz=248,slow=5.3,SNR=3.1						
URZ	**Urewera**	**87.73**	**132**	LR	LR	08 58 52.8	
	comp=Z,586nm,18.4s,baz=148,slow=32						

*IDC **22** 08:34:29.8±5.4, 24°.58S×179°.95E, h479km±59km, mb3.4/5, mb1 3.6/6, mb1mx3.3/15, mbtmp3.5/6, Error ellipse: s-maj=35.3km s-min=25.4km az=23.0*
*ISCJB **22** 08:34:30.9±4.2, 24°.5S±0°.2×179°.8E±0°.2, h513km±49km, mb4.1/7, Error ellipse: s-maj=32.6km s-min=20.3km az=146.5*

ISC 22 08:34:32.5±3.8, 24°.7S±0°.2×179°.9E±0°.2, h518km±45km, n11, σ0°.76/11, mb4.1/7, 1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**13.77**	**189**	P	**P**	**08 37 29.7**	**+0.3**
	0.7nm,0.3s,baz=169,slow=19,SNR=3.3						
URZ				S	**S**	**08 39 54.1**	**-1.0**
	0.1nm,0.3s,baz=108,slow=19,SNR=2.3						
RPZ	**Rata Peaks**	**20.34**	**199**	P	**P**	**08 38 34.0**	**+1.1**
	14nm,1.0s,baz=24,slow=10.0,SNR=3.3						
CTA	**Charters Tower**	**31.35**	**272**	⇓*i*P	**P**	**08 40 10.7**	**+0.2**
	9.7nm,0.4s,mb4.7						
STKA	**Stephens Creek**	**34.32**	**249**	*e*P	**P**	**08 40 36.3**	**+0.7**
	3.3nm,0.6s,mb4.0						
STKA	**Stephens Creek**	**34.32**	**249**	P	**P**	**08 40 36.4**	**+0.9**
	4.3nm,0.6s,mb4.2,baz=94,slow=10,SNR=22						
ASAR	**Alice Springs**	**41.78**	**261**	P	**P**	**08 41 36.3**	**-0.2**
	2.1nm,0.5s,mb3.9,baz=91,slow=6.8,SNR=42						
KAKA	**Kakadu**	**46.24**	**276**	*e*P	**P**	**08 42 09.6**	**-1.6**
	7.1nm,0.8s,mb4.2						
FITZ	**Fitzroy Crossi**	**50.64**	**266**	*e*P	**P**	**08 42 44.1**	**+0.2**
	8.2nm,0.6s,mb4.2						
MAW	**Mawson**	**77.00**	**201**	P	**P**	**08 45 31.7**	**+0.5**
	0.8nm,0.5s,mb3.4,baz=157,slow=7.7,SNR=7.3						
TXAR	**Lajitas Array**	**90.94**	**58**	P	**P**	**08 46 40.7**	**-0.4**
	1.0nm,0.8s,mb3.8,baz=218,slow=6.2,SNR=14						
BRTR	**Keskin Array B**	**147.91**	**306**	PKPbc	PKPbc	08 53 22.6	+3.4
	1.0nm,0.6s,baz=110,slow=3.0,SNR=6.0						

*ISCJB **22** 08:39:20.9±0.3, 33°.26N±0°.04×92°.15E±0°.05, h10km, mb4.1/16, Error ellipse: s-maj=7.0km s-min=4.3km az=29.9*
*IDC **22** 08:39:20.8±0.9, 33°.16N×92°.01E, h0km, mb4.1/12, mb1 4.2/15, mb1mx4.1/25, mbtmp4.1/15, ML4.3/3, MS3.2/2, Ms1 3.2/2, ms1mx2.7/29, Error ellipse: s-maj=25.2km s-min=17.4km az=34.0*
*BJI **22** 08:39:21.2, 33°.24N×92°.03E, h10km, mB4.4/2, mb4.5/10, ML3.9/2, Ms4.1/6, Ms7 3.7/5*
*MOS **22** 08:39:22.3±1.3, 33°.37N×92°.03E, h15km, mb4.2/8, Error ellipse: s-maj=13.7km s-min=8.6km az=88.3*
*NEIC **22** 08:39:22.7±0.5, 33°.26N×92°.22E, h10km, mb4.0/8, Error ellipse: s-maj=10.4km s-min=6.3km az=111.0*

ISC 22 08:39:23.4±0.3, 33°.34N±0°.03×92°.11E±0°.06, h10km, n61, σ1°.02/66, mb4.1/16, 1C, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**3.72**	**193**	Pg	**Pn**	**08 40 23.8**	**+2.9**
LSA				Sg	**Sb**	**08 41 15.3**	**+0.9**
LSA				smax			
	comp=N,140nm,1.0s						
LSA				smax			
	comp=E,200nm,1.1s						
LSA	**Lhasa**	**3.72**	**193**	*e*Pn	**Pn**	**08 40 23.8**	**+2.9**
LSA				*e*S	**Sb**	**08 41 14.9**	**+0.5**
TAPN	**Taplejung**	**7.08**	**214**	*e*P	**Pn**	**08 41 06.7**	**-0.4**
JIRN	**Jiri**	**7.62**	**224**	*e*P	**Pn**	**08 41 15.6**	**+1.1**
ODAN	**Odare**	**7.64**	**214**	*e*P	**Pn**	**08 41 12.9**	**-1.9**
SHL	**Shillong**	**7.75**	**182**	*e*PKP	**Pn**	**08 41 17.0**	**+0.7**
SHL				*e*S	**Sn**	**08 42 43.0**	**-1.1**
RAMN	**Ramite**	**7.96**	**218**	*e*P	**Pn**	**08 41 18.2**	**-0.9**
	comp=E,42nm,0.5s						
KKN	**Kakani**	**8.08**	**229**	*e*P	**Pn**	**08 41 21.2**	**+0.4**
	comp=E,21nm,0.5s						
KKN	**Kakani**	**8.08**	**229**	*e*P	**Pn**	**08 41 21.2**	**+0.4**
KKN				pmax	pmax		
	comp=Z,21nm,0.5s						
PKI	**Pulchoki**	**8.15**	**227**	*e*P	**Pn**	**08 41 22.5**	**+0.7**
PKI	**Pulchoki**	**8.15**	**227**	*e*P	**Pn**	**08 41 22.7**	**+0.9**
PKI				pmax	pmax		
	comp=Z,39nm,0.5s						
PKI	**Pulchoki**	**8.15**	**227**	*e*P	**Pn**	**08 41 22.7**	**+0.9**
	comp=Z,39nm,0.5s						
PKIN	**Phulchoki**	**8.16**	**227**	*e*P	**Pn**	**08 41 22.7**	**+0.8**
	comp=Z,39nm,0.5s						
DMN	**Daman**	**8.31**	**228**	*e*P	**Pn**	**08 41 24.9**	**+0.9**
	comp=Z,34nm,0.6s						
GKN	**Gorkha**	**8.35**	**232**	*e*P	**Pn**	**08 41 24.8**	**+0.3**
	comp=Z,46nm,0.6s						
GTA	**Gaotai**	**8.67**	**44**	⇑P	**Pn**	**08 41 31.5**	**+2.6**
GTA				pP		08 41 35.8	
GTA				sP		08 41 37.5	
GTA				S	**Sn**	**08 43 11.6**	**+4.9**
GTA				sS		08 43 17.3	
GTA				pmax	pmax		
	comp=Z,13nm,1.1s						
GTA				pmax	pmax		
	comp=Z,52nm,4.8s						
GTA				LR	LR		
	comp=N,520nm,12.0s						
GTA				LR	LR		
	comp=E,320nm,11.7s						
GTA				LR	LR		
	comp=Z,420nm,11.1s						
LZH	**Lanzhou**	**10.04**	**71**	*e*P	**Pn**	**08 41 41.5**	**-6.1**
LZH				pP		08 41 44.8	
LZH				sP		08 41 47.6	
LZH				*e*PP		08 41 49.8	
LZH				*e*S	**Sn**	**08 43 39.6**	**-0.7**
LZH				sS		08 43 44.0	
LZH				*e*SS		08 43 52.6	
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
LZH				pmax	pmax		
	comp=Z,52nm,4.1s						
LZH				LR	LR		
	comp=E,370nm,9.2s						
LZH				LR	LR		
	comp=Z,420nm,11.9s						
MK31	**Makanchi Array**	**15.38**	**334**	*e*P	**Pn**	**08 42 59.7**	**-0.6**
MKAR	**Makanchi Array**	**15.38**	**334**	Pn	**Pn**	**08 42 59.6**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=146,slow=13,SNR=9.3						
MKAR				LR	LR	08 49 13.0	
	comp=Z,50nm,18.3s,baz=173,slow=38						
CMAR	**Chiang Mai Arr**	**16.04**	**156**	Pn	**Pn**	**08 43 05.0**	**-4.1**
	comp=Z,1.0nm,0.3s,baz=330,slow=12,SNR=12						
CMAR	**Chiang Mai Arr**	**16.04**	**156**	P	**Pn**	**08 43 05.0**	**-4.1**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TKM2	**Tokmak 2**	**16.11**	**311**	*e*P	**Pn**	**08 43 16.4**	**+6.6**
TKM2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
TKM2	**Tokmak 2**	**16.11**	**311**	*e*P	**Pn**	**08 43 16.4**	**+6.6**
	comp=Z,9.8nm,1.1s						
UCH	**Uchtor**	**16.47**	**308**	*e*P	**Pn**	**08 43 18.5**	**+4.0**
	comp=Z,12nm,1.1s						
AAK	**Ala-Archa**	**16.67**	**309**	Pn	**Pn**	**08 43 22.3**	**+5.3**
	comp=Z,0.5nm,0.3s,baz=215,slow=15,SNR=9.1						
AAK				LR	LR	08 50 27.3	
	comp=Z,128nm,19.7s,baz=199,slow=40						
AAK	**Ala-Archa**	**16.67**	**309**	P	**Pn**	**08 43 22.3**	**+5.3**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AAK				MLR	MLR		
	comp=Z,129nm,19.7s						
AAK	**Ala-Archa**	**16.67**	**309**	*e*P	**Pn**	**08 43 23.0**	**+5.9**
	comp=Z,5.1nm,0.6s						
AAK				LR	LR	08 50 27.3	
SONM	**Songino Array**	**18.05**	**32**	P	**Pn**	**08 43 36.2**	**+2.1**
	comp=Z,1.4nm,0.3s,baz=212,slow=12,SNR=58						
SONM	**Songino Array**	**18.05**	**32**	P	**Pn**	**08 43 36.2**	**+2.1**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ULN	**Ulaanbaatar**	**18.37**	**33**	*e*P	**Pn**	**08 43 39.5**	**+1.4**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ULN	**Ulaanbaatar**	**18.37**	**33**	*e*P	**Pn**	**08 43 39.5**	**+1.4**
	comp=Z,5.3nm,0.6s						
KBL	**Kabul**	**19.17**	**280**	*e*P	**Pn**	**08 43 49.0**	**+1.1**
KBL				pmax	pmax		
	comp=Z,13nm,0.8s						
KBL	**Kabul**	**19.17**	**280**	*e*P	**Pn**	**08 43 49.0**	**+1.1**
	comp=Z,13nm,0.8s						
ZALV	**Zalesovo Beam**	**21.24**	**348**	P	**P**	**08 44 09.7**	**+0.4**
	comp=Z,5.2nm,0.7s,mb4.0,baz=163,slow=10,SNR=17						
ZALV	**Zalesovo Beam**	**21.24**	**348**	P	**P**	**08 44 09.7**	**+0.3**
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.0						
NVS	**Novosibirsk**	**22.38**	**346**	*e*P	**P**	**08 44 21.0**	**-0.6**
NVS				pmax	pmax		
	comp=N,11nm,1.4s						
NVS				pmax	pmax		
	comp=E,8.0nm,1.4s						
NVS				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.2						
BVAR	**Borovoye Array**	**25.08**	**328**	P	**P**	**08 44 48.1**	**+0.3**
	comp=Z,2.9nm,0.8s,mb3.9,baz=138,slow=14,SNR=5.2						
BVAR	**Borovoye Array**	**25.08**	**328**	P	**P**	**08 44 48.1**	**+0.2**
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ABKAR	**Akbulak array**	**28.65**	**313**	*e*P	**P**	**08 45 19.7**	**-0.4**
	comp=Z,1.1nm,0.8s,mb3.6						
KSRS	**Korea Array**	**29.37**	**72**	P	**P**	**08 45 27.4**	**+0.8**
	comp=Z,0.6nm,0.4s,mb3.7,baz=262,slow=8.8,SNR=3.3						
KSRS	**Korea Array**	**29.37**	**72**	P	**P**	**08 45 27.4**	**+0.8**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
BRTR	**Keskin Array B**	**46.70**	**295**	P	**P**	**08 47 51.7**	**-0.7**
	comp=Z,1.5nm,0.8s,mb4.0,baz=96,slow=9.1,SNR=8.2						
BRTR	**Keskin Array B**	**46.70**	**295**	P	**P**	**08 47 51.7**	**-0.7**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKASG	**Malin Array Be**	**48.33**	**311**	P	**P**	**08 48 03.5**	**-1.3**
	comp=Z,0.3nm,0.3s,mb3.7,baz=72,slow=7.3,SNR=2.7						
EIL	**Elat**	**48.35**	**282**	P	**P**	**08 48 04.8**	**-0.6**
	comp=Z,5.9nm,0.7s,mb4.8,baz=345,slow=6.1,SNR=5.6						
FINES	**FINESS Array B**	**49.97**	**325**	P	**P**	**08 48 16.7**	**-0.6**
	comp=Z,0.9nm,0.6s,mb4.0,baz=111,slow=8.6,SNR=3.6						
FINES	**FINESS Array B**	**49.97**	**325**	P	**P**	**08 48 16.7**	**-0.6**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ARCES	**ARCESS Array B**	**51.02**	**335**	P	**P**	**08 48 25.2**	**+0.1**
	comp=Z,1.4nm,0.7s,mb4.0,baz=76,slow=6.4,SNR=4.7						
ARCES	**ARCESS Array B**	**51.02**	**335**	P	**P**	**08 48 25.2**	**+0.1**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	**NORSAR Array B**	**57.16**	**325**	P	**P**	**08 49 09.1**	**-0.8**
	comp=Z,0.5nm,0.7s,mb3.6,baz=74,slow=5.3,SNR=3.4						
NOA	**NORSAR Array B**	**57.16**	**325**	P	**P**	**08 49 09.1**	**-0.9**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRAB	**Tennant Creek**	**66.57**	**136**	*e*P	**P**	**08 50 12.3**	**-1.5**
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
WRAB	**Tennant Creek**	**66.57**	**136**	*e*P	**P**	**08 50 12.3**	**-1.6**
	comp=Z,6.5nm,0.8s,mb4.7						
ASAR	**Alice Springs**	**69.28**	**139**	P	**P**	**08 50 29.5**	**-1.3**
	comp=Z,3.9nm,0.7s,mb4.4,baz=327,slow=5.8,SNR=11						
ASAR	**Alice Springs**	**69.28**	**139**	P	**P**	**08 50 29.5**	**-1.3**
ASAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
COLA	**College**	**71.59**	**23**	*e*P	**P**	**08 50 44.3**	**-0.2**
COLA				pmax	pmax		
	comp=Z,14nm,1.6s,mb4.6						
COLA	**College**	**71.59**	**23**	*e*P	**P**	**08 50 44.3**	**-0.2**
	comp=Z,14nm,1.6s,mb4.7						
ILAR	**Eielson Array**	**71.97**	**23**	P	**P**	**08 50 46.4**	**-0.3**
	comp=Z,1.8nm,0.9s,mb4.0,baz=290,slow=5.0,SNR=17						
ILAR	**Eielson Array**	**71.97**	**23**	P	**P**	**08 50 46.4**	**-0.3**
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KDAK	**Kodiak Island**	**74.32**	**30**	P	**P**	**08 51 00.7**	**0.0**
	comp=Z,6.9nm,0.7s,mb4.7,baz=286,slow=6.2,SNR=4.8						
KDAK	**Kodiak Island**	**74.32**	**30**	P	**P**	**08 51 00.7**	**0.0**
KDAK				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						

*SZGRF **22** 08:39:28.2, 17°.06S×175°.37W, h33km, Tonga Islands*
*ISCJB **22** 08:39:29.7±1.5, 18°.31S±0°.07×174°.93W±0.05, h86km±13km, mb4.6/58, Error ellipse: s-maj=12.3km s-min=6.0km az=156.6*
*IDC **22** 08:39:31.5±2.9, 18°.37S×174°.76W, h90km±27km, mb4.5/13, mb1 4.6/14, mb1mx4.6/18, mbtmp4.5/14, MS3.9/2, Ms1 3.9/2, ms1mx3.1/19, Error ellipse: s-maj=22.1km s-min=13.6km az=130.0*
*NEIC **22** 08:39:32.0±1.0, 18°.25S×174°.89W, h96km±9km, mb4.6/40, Error ellipse: s-maj=8.6km s-min=4.8km az=151.0*

ISC 22 08:39:31.5±1.4, 18°.29S±0°.07×174°.91W±0°.05, h87km±12km, h94km±18km; pP-P, n290, σ0°.51/246, mb4.6/58, 83C-90D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**5.29**	**35**	P	**Pn**	**08 40 48.0**	**0.0**
	32nm,0.3s,baz=182,slow=1.5,SNR=38						
AFI				S	**Sn**	**08 41 41.5**	**-6.2**
	124nm,0.3s,baz=36,slow=23,SNR=14						
AFI	**Afiamalu**	**5.29**	**35**	*e*Pn	**Pn**	**08 40 47.9**	**-0.1**
	724nm,0.6s						
AFI				*e*Sn	**Sn**	**08 41 43.3**	**-4.4**
RAR	**Rarotonga**	**14.54**	**104**	P	**Pn**	**08 42 53.6**	**+0.6**
	5.8nm,0.3s,baz=241,slow=7.6,SNR=24						
RAR				S	**Sn**	**08 45 20.3**	**-13**
	1.2nm,0.3s,baz=276,slow=19,SNR=2.2						
RAR				LR	LR	08 47 14.0	
	comp=Z,122nm,20.0s,baz=289,slow=32						
RAR	**Rarotonga**	**14.54**	**104**	*e*Pn	**Pn**	**08 42 53.9**	**+0.9**
DZM	**Mont Dzumac**	**17.91**	**255**	*e*P	**Pn**	**08 43 39.6**	**+4.7**
	31nm,0.8s						
DZM				*e*LR	LR	08 47 44.1	
	657nm,23.6s						
URZ	**Urewera**	**21.09**	**198**	P	**P**	**08 44 08.7**	**-0.1**
	11nm,0.3s,mb4.7,baz=57,slow=3.2,SNR=18						
URZ				S	**S**	**08 47 49.6**	**-9.0**
	8.0nm,0.7s,baz=260,slow=19,SNR=3.1						
URZ	**Urewera**	**21.09**	**198**	*e*P	**P**	**08 44 08.9**	**+0.1**
	24nm,0.6s,mb4.7						
PAE	**Paea**	**24.09**	**92**	*e*P	**P**	**08 44 37.6**	**-1.5**
	21nm,0.9s,mb4.5						
PPT	**Papeete**	**24.11**	**92**	*e*P	**P**	**08 44 38.0**	**-1.2**
	94nm,1.2s,mb5.0						
PPT				*e*LR	LR	08 49 58.4	
	324nm,34.5s						
PPT	**Papeete**	**24.11**	**92**	P	**P**	**08 44 38.1**	**-1.2**
	60nm,0.8s,mb5.0,baz=241,slow=6.2,SNR=9.1						
TBI	**Tubuai**	**24.30**	**106**	*e*LR	LR	08 50 29.3	
	162nm,38.0s						
TIAR	**Tiarei**	**24.33**	**92**	*e*P	**P**	**08 44 40.0**	**-1.2**
	105nm,0.9s,mb5.2						
RPZ	**Rata Peaks**	**27.98**	**202**	P	**P**	**08 45 13.3**	**-0.6**
	32nm,0.8s,mb4.9,baz=52,slow=6.1,SNR=13						
RPZ	**Rata Peaks**	**27.98**	**202**	*e*P	**P**	**08 45 14.4**	**+0.5**
	35nm,0.8s,mb5.0						
EIDS	**Eidsvold**	**32.29**	**251**	*e*P	**P**	**08 45 52.6**	**+0.4**
	6.6nm,0.7s,mb4.5						
ARMA	**Armidale**	**32.67**	**242**	*e*P	**P**	**08 45 56.0**	**+0.6**
CTA	**Charters Tower**	**36.67**	**261**	*e*P	**P**	**08 46 30.9**	**+0.8**
	17nm,0.6s,mb5.2						
CTAO	**Charters Tower**	**36.67**	**261**	*e*P	**P**	**08 46 30.7**	**+0.7**
	19nm,0.7s,mb5.1						
COEN	**Coen**	**40.44**	**270**	*e*P	**P**	**08 47 03.0**	**+1.3**
	63nm,0.8s,mb5.5						
COEN				*e*		08 47 30.1	
STKA	**Stephens Creek**	**41.39**	**242**	*e*P	**P**	**08 47 09.3**	**0.0**
	6.6nm,1.2s,mb4.3						
STKA	**Stephens Creek**	**41.39**	**242**	P	**P**	**08 47 09.4**	**+0.2**
	5.6nm,0.8s,mb4.5,baz=79,slow=9.9,SNR=16						
STKA				LR	LR	09 02 04.4	
	comp=Z,551nm,20.9s,baz=190,slow=33						
WRAB	**Tennant Creek**	**47.83**	**259**	*e*P	**P**	**08 48 00.3**	**-0.4**
	22nm,0.9s,mb5.0						
ASAR	**Alice Springs**	**47.90**	**254**	P	**P**	**08 48 01.0**	**-0.2**
	65nm,0.7s,mb5.5,baz=87,slow=8.5,SNR=398						
ASAR				PcP	PcP	08 49 27.9	-0.7
	3.2nm,0.8s,baz=104,slow=3.9,SNR=4.9						
ASAR				S	**S**	**08 54 47.2**	**-5.0**
	1.7nm,0.7s,baz=90,slow=16,SNR=4.5						
KAKA	**Kakadu**	**50.91**	**268**	*e*P	**P**	**08 48 23.4**	**-0.7**
FORT	**Forrest**	**52.86**	**245**	*e*P	**P**	**08 48 36.7**	**-1.8**
	19nm,0.9s,mb5.1						
FORT	**Forrest**	**52.86**	**245**	*e*P	**P**	**08 48 36.9**	**-1.7**
	25nm,0.9s,mb5.2						
FITZ	**Fitzroy Crossi**	**56.25**	**260**	*e*P	**P**	**08 49 02.7**	**-0.5**
	11nm,0.8s,mb5.0						
FITZ	**Fitzroy Crossi**	**56.25**	**260**	*e*P	**P**	**08 49 03.0**	**-0.3**
	6.4nm,0.7s,mb4.8						
SBA	**Scott Base**	**60.27**	**184**	*e*P	**P**	**08 49 31.8**	**+1.4**
	66nm,2.5s,mb5.2						
MBWA	**Marble Bar**	**61.21**	**255**	*e*P	**P**	**08 49 36.1**	**-1.5**
	17nm,0.9s,mb5.1						
YULB	**Yu-li**	**74.79**	**301**	*e*P	**P**	**08 51 02.5**	**-0.1**
	9.0nm,0.8s,mb4.5						
PETK	**Petropavlovsk-**	**74.94**	**343**	P	**P**	**08 51 03.0**	**+0.3**
	22nm,0.9s,mb4.9,baz=123,slow=7.4,SNR=18						
SSLB	**Suanglung**	**75.25**	**302**	*e*P	**P**	**08 51 05.0**	**-0.2**
	12nm,0.8s,mb4.7						
TPUB	**Ta-pu**	**75.29**	**301**	*e*P	**P**	**08 51 05.1**	**-0.4**
	43nm,0.6s,mb5.4						
YHNB	**Yeheng**	**75.33**	**303**	*e*P	**P**	**08 51 04.9**	**-0.8**
	19nm,0.9s,mb4.8						
VES	**Vestal, Richgr**	**75.41**	**44**	⇑P	**P**	**08 51 05.5**	**-0.4**
	baz=76						
MONP	**Monument Peak**	**75.56**	**48**	⇑P	**P**	**08 51 06.8**	**0.0**
	baz=76						
EDW2	**Edwards Air Fo**	**75.59**	**45**	⇑P	**P**	**08 51 07.2**	**+0.3**
	baz=76						
ISA	**Isabella**	**75.71**	**44**	⇓P	**P**	**08 51 07.9**	**+0.

W16A **Flagstaff** 80.17 48 ⇓P P 08 51 32.5 +0.1
baz=80
CCUT **Cedar City** 80.18 45 eP P 08 51 32.5 +0.2
1.9nm,0.8s,mb4.0
J08A **Circle Bar Ran** 80.22 38 ⇓P P 08 51 32.1 -0.3
baz=80,SNR=5.5
219A **White Tail Can** 80.30 52 ⇓P P 08 51 33.2 0.0
baz=80
X17A **Forest Lakes** 80.31 49 ⇑P P 08 51 32.8 -0.3
baz=80
M10A **I.L. Ranch, Tu** 80.31 40 ⇓P P 08 51 33.3 +0.4
baz=80
U15A **North Rim** 80.32 47 ⇓P P 08 51 33.2 +0.1
baz=80
T15A **Red Dirt Ranch** 80.57 46 ⇓P P 08 51 34.7 +0.3
baz=81
Y18A **Canyon Day Jun** 80.59 50 ⇓P P 08 51 35.1 +0.5
baz=81
O12A **Currie** 80.74 42 ⇑P P 08 51 35.7 +0.4
baz=81
NJ2 **Nanjing** 80.77 308 eP P 08 51 36.3 +0.7
NJ2 pmax pmax
comp=Z,20nm,0.5s,mb5.2
220A **Playas Peak, P** 80.81 52 ⇓P P 08 51 36.2 +0.4
baz=81
K10A **MacKenzie Ranc** 80.83 39 ⇑P P 08 51 35.7 0.0
baz=81
V17A **Tonalea, Kykot** 80.96 48 ⇑P P 08 51 36.7 +0.1
baz=81
U16A **Tuba City** 80.98 47 ⇑P P 08 51 37.1 +0.4
baz=81
Q14A **Sevier Lake (B** 81.00 44 ⇑P P 08 51 36.8 +0.1
baz=81
X18A **Snowflake** 81.02 49 ⇑P P 08 51 37.4 +0.5
baz=81
G08A **Pilot Rock** 81.10 36 ⇑P P 08 51 36.9 -0.2
baz=81,SNR=8.2
L11A **Cat Creek Ranc** 81.16 40 ⇓P P 08 51 37.7 +0.2
baz=81
Y19A **Nutrioso** 81.25 50 ⇓P P 08 51 38.9 +0.8
baz=81
Z20A **Nine Sixteen R** 81.33 51 ⇑P P 08 51 39.1 +0.5
baz=82
N13A **Wendover, West** 81.40 42 ⇑P P 08 51 39.2 +0.4
baz=82
N13A **Wendover, West** 81.40 42 eP P 08 51 39.3 +0.5
comp=Z,4.3nm,0.8s,mb4.3
X19A **St. Johns** 81.45 50 ⇓P P 08 51 39.1 0.0
baz=82
V18A **Ganado** 81.61 48 ⇓P P 08 51 40.4 +0.4
baz=82
M13A **Montello** 81.70 42 ⇑P P 08 51 40.3 -0.1
baz=82
BMO **Blue Mountains** 81.78 37 eP P 08 51 39.9 -0.7
comp=Z,2.3nm,1.1s,mb3.9
MFID **Camas Ranch** 81.82 39 ⇑P P 08 51 40.6 -0.4
baz=82
Y20A **Horse Springs,** 81.86 50 ⇓P P 08 51 41.5 +0.2
baz=82
X20A **Quemado** 82.08 50 ⇓P P 08 51 42.6 +0.2
baz=82
J12A **Stokes Ranch,** 82.17 40 ⇓P P 08 51 42.9 +0.1
baz=82
D08A **Wollman Farm,** 82.19 35 ⇓P P 08 51 42.7 0.0
baz=82
TTA **Tatalina** 82.30 9 eP P 08 51 42.6 -0.3
comp=Z,5.4nm,1.0s,mb4.3
W20A **Ramah** 82.35 49 ⇑P P 08 51 44.1 +0.2
baz=82
CN2 **Changchun** 82.38 321 eP P 08 51 45.0 +1.2
CN2 eS S 09 01 53.3 +0.4
CN2 pmax pmax
comp=Z,20nm,1.0s,mb4.9
CN2 pmax pmax
comp=Z,200nm,5.0s
U19A **Dine' College,** 82.41 48 ⇑P P 08 51 44.1 0.0
baz=82
R17A **Hanksville Air** 82.42 46 ⇓P P 08 51 44.5 +0.3
baz=83
I12A **Atlanta** 82.45 39 ⇓P P 08 51 44.2 0.0
baz=83,SNR=7.2
K13A **Stover Farm, H** 82.46 41 ⇑P P 08 51 44.3 +0.1
baz=83
F10A **Beach Ranch, E** 82.48 36 ⇑P P 08 51 43.6 -0.7
baz=83,SNR=8.3
QIZ **Qiongzhong** 82.66 293 P P 08 51 45.9 +0.1
HLID **Hailey** 82.76 40 ⇑P P 08 51 46.0 +0.2
baz=83,SNR=7.8
HLID **Hailey** 82.76 40 eP P 08 51 45.8 0.0
comp=Z,2.2nm,1.0s,mb3.9
B08A **Colville Reser** 82.77 34 ⇓P P 08 51 45.1 -0.6
baz=83
J13A **Cove Ranch, Pi** 82.81 40 ⇓P P 08 51 45.8 -0.3
baz=83,SNR=6.2
M15A **Larsen Ranch,** 82.85 42 ⇓P P 08 51 46.2 -0.1
baz=83
SRU **San Rafael** 82.90 45 ⇓P P 08 51 46.7 +0.1
baz=83
SRU **San Rafael** 82.90 45 eP P 08 51 46.8 +0.1
comp=Z,3.4nm,1.2s,mb4.0
324A **Moseley Ranch,** 82.90 54 ⇑P P 08 51 46.6 -0.2
baz=83
Y22A **Socorro** 82.91 51 ⇓P P 08 51 46.2 -0.6
baz=83
R18A **Canyonlands Na** 82.96 46 ⇓P P 08 51 46.8 -0.2
baz=83
K14A **Jones Ranch, D** 82.97 41 ⇑P P 08 51 47.2 +0.3
baz=83
425A **Indio Mountain** 83.00 55 ⇑P P 08 51 47.7 +0.4
baz=83
H12A **Diamond D Ranc** 83.04 39 ⇓P P 08 51 47.1 -0.1
baz=83,SNR=5.9
626A **Big Bend Ranch** 83.13 56 ⇓P P 08 51 48.3 +0.2
baz=83
I13A **Wildhorse Cree** 83.13 39 ⇑P P 08 51 47.8 +0.1
baz=83
224A **Cornudas Mount** 83.15 53 ⇑P P 08 51 48.3 +0.2
baz=83
Q18A **Rafter H Ranch** 83.16 45 ⇓P P 08 51 47.9 -0.1
baz=83
L15A **Malad City** 83.17 42 ⇑P P 08 51 48.1 +0.2
baz=83
J14A **Carey** 83.17 40 ⇑P P 08 51 48.5 +0.6
baz=83,SNR=7.8
N16A **Rees Ranch, Co** 83.20 43 ⇑P P 08 51 48.1 0.0
baz=83
325A **Bean Ranch, Si** 83.27 54 ⇑P P 08 51 48.9 +0.2
baz=83,SNR=6.2
O17A **Robinson Place** 83.30 44 ⇓P P 08 51 49.0 +0.3
baz=83,SNR=7.8
526A **Mary Lane Ranc** 83.38 56 ⇓P P 08 51 49.6 +0.2
baz=84
TXAR **Lajitas Array** 83.41 56 P P 08 51 50.1 +0.6
comp=Z,2.0nm,0.9s,mb3.9,baz=214,slow=8.6,SNR=19
H13A **Challis** 83.41 39 ⇓P P 08 51 49.3 +0.2
baz=84
K15A **Arbon** 83.44 41 ⇑P P 08 51 48.9 -0.5
baz=84
F12A **Elk City** 83.49 37 ⇑P P 08 51 49.4 -0.1
baz=84,SNR=15
PV10 **Paradox Valley** 83.54 46 eP P 08 51 49.5 -0.4
comp=Z,39nm,0.7s,mb5.3
I14A **Mackay** 83.54 40 ⇑P P 08 51 50.0 +0.2
baz=84
U21A **Nageezi** 83.57 48 ⇓P P 08 51 50.5 +0.3
baz=84,SNR=8.0
Q19A **Hogan Spring (** 83.67 46 ⇑P P 08 51 50.5 -0.1
baz=84
627A **Terlingua Ranc** 83.68 56 ⇑P P 08 51 51.1 +0.2
baz=84,SNR=7.2
426A **McDonald Obser** 83.69 55 ⇑P P 08 51 51.2 +0.3
baz=84,SNR=5.4
225A **Deer Hill, Car** 83.70 53 ⇑P P 08 51 51.0 0.0
baz=84
TRF **Thorofare Moun** 83.71 11 eP P 08 51 48.6 -1.6
comp=Z,9.1nm,1.1s,mb4.5
G13A **Cobalt** 83.71 38 ⇑P P 08 51 50.3 -0.4
baz=84,SNR=5.2
PV01 **Paradox Valley** 83.75 47 eP P 08 51 50.8 -0.2
comp=Z,180nm,0.9s
ANMO **Albuquerque** 83.75 50 eP P 08 51 50.9 -0.2
comp=Z,3.5nm,1.1s,mb4.1
L16A **Fish Haven** 83.78 42 ⇓P P 08 51 50.7 -0.4
baz=84
527A **Woodward Ranch** 83.79 56 ⇓P P 08 51 51.3 -0.1
baz=84,SNR=5.6
V22A **San Miguel Ran** 83.87 49 ⇑P P 08 51 51.6 -0.1
baz=84
J15A **Blackfoot** 83.88 41 ⇓P P 08 51 52.0 +0.4
baz=84,SNR=6.1
H14A **Leadore** 83.97 39 ⇓P P 08 51 52.2 +0.2
baz=84
F13A **Darby** 84.04 38 ⇓P P 08 51 52.2 -0.1
baz=84
Y24A **Capitan** 84.04 52 ⇓P P 08 51 53.1 +0.5
baz=84,SNR=5.6
125A **Gardner Draw,** 84.07 53 ⇑P P 08 51 52.6 -0.2
baz=84
W23A **Werner Place,** 84.07 50 ⇓P P 08 51 53.0 +0.3
baz=84
628A **Black Gap, Mar** 84.09 56 ⇑P P 08 51 52.9 -0.1
baz=84
GDL2 **Guadalupe Moun** 84.09 53 eP P 08 51 53.8 +0.9
K16A **Soda Springs** 84.11 41 ⇑P P 08 51 52.6 -0.1
baz=84
C11A **Tepee Creek (N** 84.11 35 ⇑P P 08 51 52.4 -0.2
baz=84
D12A **Red Ives Fores** 84.17 36 ⇓P P 08 51 52.8 -0.1
baz=84
MCK **McKinley** 84.22 11 eP P 08 51 51.7 -1.1
comp=Z,12nm,0.9s,mb4.7
226A **Malaga, Loving** 84.23 54 ⇑P P 08 51 54.2 +0.5
baz=84,SNR=5.8
427A **Hayter Ranch,** 84.25 55 ⇓P P 08 51 53.9 +0.1
baz=84,SNR=5.8
Z25A **Roswell** 84.29 52 ⇑P P 08 51 54.1 +0.2
baz=84
V23A **Ortiz Mt. (NFS** 84.31 50 ⇑P P 08 51 54.5 +0.5
baz=84
J16A **Bone** 84.33 41 ⇓P P 08 51 54.2 +0.4
baz=84
Q20A **Ridgley Place,** 84.33 46 ⇑P P 08 51 54.2 +0.3
baz=84
M18A **Lyman** 84.36 43 ⇓P P 08 51 53.9 -0.2
baz=84
T22A **Edith** 84.38 48 ⇓P P 08 51 53.7 -0.6
baz=84
AHID **Auburn Hatcher** 84.38 42 eP P 08 51 54.1 0.0
comp=Z,2.1nm,0.8s,mb4.0
MCMT **McKenzie Canyo** 84.39 39 eP P 08 51 54.0 -0.1
comp=Z,2.0nm,1.0s,mb3.9
O19A **Miners Draw (B** 84.42 44 ⇓P P 08 51 54.3 -0.1
baz=85
528A **Cox Ranch, San** 84.45 56 ⇓P P 08 51 54.2 -0.5
baz=85
E13A **Victor** 84.49 37 ⇓P P 08 51 54.3 -0.3
baz=85,SNR=5.4
K17A **Gardner Place,** 84.49 42 ⇓P P 08 51 54.5 -0.1
baz=85
P20A **De Beque** 84.53 45 ⇓P P 08 51 55.3 +0.4
baz=85
126A **Clayton Basin,** 84.55 53 ⇑P P 08 51 55.0 -0.2
baz=85
R21A **Cimarron** 84.56 47 ⇓P P 08 51 55.5 +0.3
baz=85
U23A **El Rito** 84.57 49 ⇓P P 08 51 55.7 +0.4
baz=85
Y25A **Mesa, Roswell** 84.59 52 ⇓P P 08 51 55.4 0.0
baz=85
MAW **Mawson** 84.61 199 eP P 08 51 53.0 -1.9
comp=Z,3.2nm,0.9s,mb4.2
MAW **Mawson** 84.61 199 P P 08 51 54.3 -0.6
comp=Z,3.9nm,0.9s,mb4.3,baz=103,slow=8.7,SNR=7.8
W24A **Lazy 6 Ranch,** 84.64 50 ⇑P P 08 51 55.3 -0.3
baz=85
D13A **Huson** 84.69 37 ⇑P P 08 51 55.3 -0.2
baz=85
I16A **Newdale** 84.72 41 ⇑P P 08 51 55.8 0.0
baz=85
428A **Kincaid Ranch,** 84.76 55 ⇓P P 08 51 55.9 -0.4
baz=85
S22A **4UR Ranch, Cre** 84.77 48 ⇑P P 08 51 56.0 -0.2
baz=85
G15A **Dillon** 84.79 39 ⇓P P 08 51 56.4 +0.3
baz=85,SNR=5.8
DLMT **Dillon** 84.83 39 eP P 08 51 56.8 +0.5
comp=Z,2.7nm,0.9s,mb4.2
Z26A **Caprock** 84.85 53 ⇑P P 08 51 56.4 -0.3
baz=85,SNR=7.1
REDW **Red Top Meadow** 84.85 41 eP P 08 51 57.1 +0.6
comp=Z,2.6nm,1.0s,mb4.1
DLBC **Dease Lake** 84.90 22 eP P 08 51 55.4 -0.9
J17A **Brown Place, J** 84.94 41 ⇓P P 08 51 57.3 +0.4
baz=85
328A **Wristen Ranch,** 84.94 55 ⇓P P 08 51 56.7 -0.5
baz=85
SNOW **Snow King Moun** 84.96 41 eP P 08 51 56.8 -0.2
comp=Z,2.3nm,0.8s,mb4.2
V24A **Rampart Ranch,** 84.97 50 ⇑P P 08 51 57.4 +0.1
baz=85
K18A **Toltan Ranch,** 84.99 42 ⇓P P 08 51 57.5 +0.3
baz=85
R22A **Saguache, Gunn** 85.05 47 ⇑P P 08 51 58.0 +0.5
baz=85
127A **Arkansas Junct** 85.06 53 ⇑P P 08 51 57.7 -0.1
baz=85
IMW **Indian Meadow** 85.07 41 eP P 08 51 57.7 +0.2
comp=Z,2.7nm,1.0s,mb4.1
F15A **Butte** 85.15 38 ⇓P P 08 51 57.8 -0.1
baz=85
L19A **Farson** 85.16 43 ⇑P P 08 51 57.6 -0.4
baz=85
D14A **Greenough** 85.23 37 ⇓P P 08 51 57.9 -0.4
baz=85
Y26A **Elida** 85.24 52 ⇓P P 08 51 58.4 -0.3
baz=85
N20A **Spence Gulch,** 85.26 44 ⇓P P 08 51 58.5 -0.1
baz=85
J18A **Kendall Valley** 85.29 42 ⇓P P 08 51 58.4 -0.3
baz=85
H16A **Russell Place,** 85.30 40 ⇑P P 08 51 59.1 +0.4
baz=85
BW06 **Boulder Array** 85.36 42 ⇑P P 08 51 58.6 -0.4
baz=86
PDAR **Pinedale Array** 85.36 42 P P 08 51 58.0 -1.0
comp=Z,0.8nm,0.8s,mb3.7,baz=236,slow=1.6,SNR=7.7
COLA **College** 85.45 11 eP P 08 51 57.5 -1.5
comp=Z,21nm,0.8s,mb5.1
ILAR **Eielson Array** 85.54 12 P P 08 51 58.2 -1.2
comp=Z,3.9nm,0.9s,mb4.3,baz=207,slow=5.8,SNR=31
Y27A **Causey** 85.72 52 ⇓P P 08 52 01.0 -0.1
baz=86
MSTX **Muleshoe** 86.05 52 ⇓P P 08 52 02.2 -0.5
baz=86
B14A **Marquette Ranc** 86.06 36 ⇓P P 08 52 02.0 -0.4
baz=86
M21A **Separation Pea** 86.22 44 ⇓P P 08 52 02.6 -0.7
baz=86
A14A **Double T Ranch** 86.31 35 ⇓P P 08 52 03.0 -0.6
baz=86
D16A **Dana Ranch, Ca** 86.33 38 ⇑P P 08 52 03.3 -0.4
baz=86
DAWY **Dawson** 86.56 15 eP P 08 52 04.0 -0.4
C16A **Fuhringer Ranc** 86.62 37 ⇑P P 08 52 04.6 -0.5
baz=87
A15A **Johnson Ranch,** 86.70 36 ⇑P P 08 52 05.2 -0.3
baz=87
EGAK **Eagle** 86.75 14 eP P 08 52 04.7 -0.7
comp=Z,7.9nm,0.9s,mb4.6
D17A **Six Diamond Ra** 86.90 38 ⇓P P 08 52 05.9 -0.6
baz=87
A16A **West Butte Ran** 87.31 36 ⇓P P 08 52 08.3 -0.2
baz=88
A17A **Triple J Farms** 87.82 36 ⇓P P 08 52 11.0 +0.2
baz=88
GYA **Guiyang** 88.13 299 eP P 08 52 13.0 +0.1
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
SYO **Syowa Base** 89.50 192 ⇑eX 08 52 15.3
HHC **Hu-ho-hao-te** 89.93 313 eP P 08 52 21.3 +0.3
HHC S S 09 03 03.8 -2.7
HHC pmax pmax
comp=Z,47nm,0.9s,mb5.6
HHC pmax pmax
comp=Z,380nm,7.1s
KMI **Kunming** 90.98 296 P P 08 52 26.8 +0.5
KMI pP pP 08 52 51.1 +1.5
KMI sP sP 08 53 01.8 +2.9
KMI pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
INK **Inuvik** 91.40 14 eP P 08 52 26.2 -1.0
comp=Z,4.0nm,0.9s,mb4.5
CD2 **Chengdu** 92.09 302 P P 08 52 31.6 +0.3
CD2 pP pP 08 52 57.5 +2.9
CD2 sP sP 08 53 08.0 +4.1
CD2 PP PP 08 56 14.9 +2.4
CD2 S S 09 03 22.8 -3.8
CD2 sS sS 09 04 07.9 +1.2
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.3
CD2 pmax pmax
comp=Z,110nm,6.4s
CD2 LR LR
comp=N,420nm,13.1s
CD2 LR LR
comp=Z,330nm,13.7s
CMAR **Chiang Mai Arr** 92.16 289 P P 08 52 33.3 +1.5
comp=Z,1.3nm,0.4s,mb4.5,baz=122,slow=3.6,SNR=9.7
YKA **Yellowknife Ar** 93.31 24 P P 08 52 35.4 -0.7
comp=Z,2.3nm,0.9s,mb4.5,baz=224,slow=3.9,SNR=4.1
LZH **Lanzhou** 93.77 307 eP P 08 52 38.0 -0.9
LZH pP pP 08 53 02.5 +0.2
LZH sP sP 08 53 13.0 +1.4
LZH ePP PP 08 56 27.1 +1.5
LZH pmax pmax
comp=Z,17nm,1.4s,mb5.2
LZH pmax pmax
comp=Z,54nm,8.5s
LZH LR LR
comp=E,200nm,17.6s
LZH LR LR
comp=Z,260nm,19.9s
WMQ **Urumqi** 107.68 311 eP Pdif 08 53 41.0 0.0
BSEG **Bad Segeberg** 144.19 355 ePKPbc PKPdf 08 58 54.7 -2.2
NRDL **Niedersach Rie** 145.64 355 ePKPbc PKPbc 08 58 57.9 -2.0
IBBN **Ibbenburen** 145.99 357 ePKPbc PKPbc 08 59 00.3 -0.7
CLZ **Clausthal** 146.26 354 ePKPbc PKPbc 08 59 01.4 -0.4
BUG **Bochum--Univer** 146.88 358 ePKPbc PKPbc 08 59 02.5 -1.1
MOX **Moxa** 147.30 352 eP PKPdf 08 59 04.3 +1.9
MOX e 08 59 16.8
MOX e 08 59 27.8
MOX
comp=Z,1μm,18.0s
MOX **Moxa** 147.30 352 ePKPbc PKPbc 08 59 03.9 -0.9
TANN **Tannenbergstha** 147.41 351 ePKPbc PKPbc 08 59 04.4 -0.7
ROTZ **Rotzenmuhle** 148.08 351 ePKPbc PKPbc 08 59 06.4 -0.5
ASF **Jabal al Asfar** 148.22 302 PKPbc PKPbc 08 59 07.3 -0.5
comp=Z,12nm,0.9s,baz=8.5,slow=1.0,SNR=15
GIVF **Givet** 148.26 0 ePKP1 PKPbc 08 59 06.6 -0.8
comp=Z,33nm,1.0s
GRF **Grafenberg Arr** 148.28 352 ePKPbc PKPbc 08 59 06.8 -0.7
BAIF **Baives** 148.29 1 ePKP1 PKPbc 08 59 06.7 -0.8
comp=Z,28nm,1.0s
WET **Wettzell** 148.58 350 ePKPbc PKPbc 08 59 07.6 -0.7
GEC2 **GERESS Array S** 148.73 349 ePKPbc PKPbc 08 59 07.9 -0.7
CONA **Conrad Observa** 149.16 346 ⇓iPKiKP PKPbc 08 59 09.6 -0.1
comp=Z,36nm,1.2s
FLN **La Foliniere** 149.27 7 ePKP1 PKPbc 08 59 08.8 -1.2
comp=Z,53nm,1.0s
LDF **La Druitiere** 149.47 7 ePKP1 PKPbc 08 59 09.2 -1.3
comp=Z,13nm,0.8s
GRR **Gorron** 149.59 8 ePKP1 PKPbc 08 59 09.7 -1.1
comp=Z,23nm,0.9s
MEZF **Maizieres J'vi** 149.86 0 ePKP1 PKPbc 08 59 11.0 -0.5
CDF **Champ du Feu** 149.90 357 ePKP1 PKPbc 08 59 10.7 -0.9
comp=Z,24nm,0.9s
BFO **Black Forest** 149.92 356 ePKPbc PKPbc 08 59 11.2 -0.4
BFO **Black Forest** 149.92 356 ePKPbc PKPbc 08 59 09.7 -1.9
RJOB **Jochberg** 149.96 350 ePKPbc PKPbc 08 59 11.0 -0.7
HAU **Haudompre** 150.34 358 ePKP1 PKPbc 08 59 11.7 -0.9
comp=Z,24nm,0.8s
KBA **Koelnbreinsper** 150.50 349 ⇑iPKPbc PKPbc 08 59 12.1 -0.9
comp=Z,15nm,0.9s
RETA **Reutte** 150.51 352 ⇑iPKiKP PKPbc 08 59 12.4 -0.6
comp=Z,17nm,1.4s
HINF **Hinteralfeld** 150.51 358 ePKP1 PKPbc 08 59 11.9 -1.1
comp=Z,14nm,0.7s
SOKA **Soboth** 150.52 346 ⇑iPKPab PKPab 08 59 16.3 -3.6
comp=Z,40nm,1.5s
EIL **Elat** 150.55 298 PKPbc PKPbc 08 59 13.6 -0.1
comp=Z,14nm,0.9s,baz=323,slow=5.4,SNR=8.4
EIL PKPab PKPab 08 59 21.6 +0.9
comp=Z,14nm,0.8s,baz=359,slow=2.0,SNR=12
MOTA **Moosalm** 150.60 352 ⇑iPKiKP PKPbc 08 59 12.8 -0.5
comp=Z,20nm,1.1s
WTTA **Wattenberg** 150.60 351 ⇓iPKiKP PKPbc 08 59 12.8 -0.5
comp=Z,18nm,0.7s
DAVA **Damuels** 150.81 353 ⇑iPKiKP PKPbc 08 59 13.5 -0.2
comp=Z,16nm,0.8s
ABTA **Abfaltersbach** 150.97 349 ⇑iPKPbc PKPbc 08 59 13.2 -0.9
comp=Z,14nm,0.7s
FETA **Feichten** 150.97 352 ⇓iPKiKP PKPbc 08 59 13.5 -0.6
comp=Z,14nm,0.9s
LOR **Lormes** 151.08 2 ePKP1 PKPbc 08 59 13.5 -0.9
comp=Z,17nm,0.8s
SSF **Saint Saulge** 151.27 2 ePKP1 PKPbc 08 59 14.0 -0.9
comp=Z,32nm,0.9s
MFF **Saint Martin d** 151.43 8 ePKP1 PKPbc 08 59 13.9 -1.3
comp=Z,33nm,1.1s
AVF **Avril sur Loir** 151.54 3 ePKP1 PKPbc 08 59 14.2 -1.3
comp=Z,15nm,0.9s
SMF **Signal de Mont** 151.70 2 ePKP1 PKPbc 08 59 14.6 -1.2
comp=Z,14nm,1.0s
CABF **La Chapelle** 151.74 359 ePKP1 PKPbc 08 59 15.6 -0.3
comp=Z,32nm,0.9s
TCF **Toulx Ste Croi** 151.97 4 ePKP1 PKPbc 08 59 15.2 -1.3
comp=Z,15nm,0.9s
LPG **La Plagne** 152.83 357 ePKP1 PKPbc 08 59 18.3 -0.1
RJF **Les Rejaudoux** 152.90 6 ePKP1 PKPbc 08 59 17.3 -1.3
SMRF **Simiane la Rot** 154.39 359 ePKP1 PKPbc 08 59 20.4 -1.4
comp=Z,70nm,1.3s
DBIC **Dimbokro** 164.92 139 PKP PKPdf 08 59 24.2 -2.1
comp=Z,6.2nm,1.1s,baz=162,slow=3.2,SNR=3.3

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*LDG **22** 08:45:15.3±0.6, 17°.64S×169°.03E, h10km, Error ellipse: s-maj=90.7km s-min=3.3km az=111.0*
*NOU **22** 08:45:22.7±1.5, 17°.31S×166°.48E, h30km, MD3.4, MS1.6*
ISC 22 08:45:23.1±3.5, 17°.7S±0°.2×166°.9E±0°.4, h11km±37km, n30, σ0°89/11, mb4.6/2, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
DZM	**Mont Dzumac**	4.41	185	eP		Pn	08 46 28.8	-1.3
NOUC	**Port Laguerre**	4.46	187	eP		Pn	08 46 29.9	-0.7
NOUC				AMP			08 47 29.1	
	comp=Z,26nm,17.0s							
BAYA	**Yate Dam**	4.48	180	eP		Pn	08 46 30.9	0.0
BAYA				eS		Sn	08 47 23.2	+0.1
PLUM	**Mont Dore**	4.60	183	eS		Sn	08 47 25.3	-0.8
MVNO	**Noumea**	4.61	185	eP		Pn	08 46 34.5	+1.7
MVNO				eS		Sn	08 47 26.7	+0.4
ARMA	**Armidale**	18.82	225	eP		Pn	08 49 44.4	+1.1
CTA	**Charters Tower**	19.65	260	eP		Pn	08 49 52.4	-1.1
	comp=Z,13nm,1.0s							
STKA	**Stephens Creek**	26.88	233	eP		P	08 51 04.9	+0.9
	comp=Z,14nm,0.9s,mb4.5							
FITZ	**Fitzroy Crossi**	39.18	263	eP		P	08 52 51.1	-0.3
	comp=Z,17nm,0.9s,mb4.8							
FETA	**Feichten**	144.72	331	P		PKPdf	09 04 54.4	-5.7
	comp=Z,11nm,1.0s							
CDF	**Champ du Feu**	145.10	336	ePKP1		PKPbc	09 04 54.1	-6.0
	comp=Z,57nm,1.1s							
HINF	**Hinteralfeld**	145.75	336	ePKP1		PKPbc	09 04 56.0	-6.2
	comp=Z,16nm,0.8s							
HAU	**Haudompre**	145.79	337	ePKP1		PKPbc	09 04 56.2	-6.1
	comp=Z,52nm,1.1s							
MEZF	**Maizieres J'vi**	145.85	338	ePKP1		PKPbc	09 04 56.7	-5.8
CABF	**La Chapelle**	147.03	335	ePKP1		PKPbc	09 05 00.4	-5.6
	comp=Z,93nm,1.5s							
FLN	**La Foliniere**	147.31	344	ePKP1		PKPbc	09 04 59.8	-6.9
LOR	**Lormes**	147.32	338	ePKP1		PKPbc	09 05 00.5	-6.3
	comp=Z,21nm,1.0s							
LDF	**La Druitiere**	147.37	344	ePKP1		PKPbc	09 04 59.8	-7.1
SSF	**Saint Saulge**	147.62	339	ePKP1		PKPbc	09 05 01.5	-6.1
	comp=Z,40nm,1.1s							
LPG	**La Plagne**	147.66	333	ePKP1		PKPbc	09 05 02.4	-5.4
	comp=Z,17nm,0.8s							
GRR	**Gorron**	147.75	345	ePKP1		PKPbc	09 05 00.3	-7.6
	comp=Z,54nm,1.2s							
SMF	**Signal de Mont**	147.86	338	ePKP1		PKPbc	09 05 01.2	-7.1
	comp=Z,94nm,1.5s							
AVF	**Avril sur Loir**	147.91	338	ePKP1		PKPbc	09 05 01.8	-6.6
	comp=Z,75nm,1.6s							
TCF	**Toulx Ste Croi**	148.74	339	ePKP1		PKPbc	09 05 04.3	-6.3
MFF	**Saint Martin d**	149.19	342	ePKP1		PKPbc	09 05 05.1	-6.6
	comp=Z,28nm,1.1s							
RJF	**Les Rejaudoux**	149.83	339	ePKP1		PKPbc	09 05 07.2	-6.2
CAF	**Calviac**	149.97	338	ePKP1		PKPbc	09 05 07.8	-5.9
LASF	**Ste Croix**	150.01	335	ePKP1		PKPbc	09 05 08.0	-5.9
	comp=Z,56nm,1.2s							
LFF	**La Frestale**	150.41	340	ePKP1		PKPbc	09 05 08.5	-6.3

MTLF Montolieu 151.28 336 *e*PKP1 PKPbc 09 05 10.7 -6.2

NIED ***22*** *08:46:00, 37.°70N×142.°40E, h26km, Mw5.2 Best double couple: M0 8.22000×10^16 NP1:φ=24.00000°, δ80.00000°, λ89.00000°. NP2:φ=209.00000°, δ10.00000°, λ95.00000°.*
IDC ***22*** *08:46:45.7±0.5, 37.°66N×142.°44E, h0km, mb5.0/21, mb1 5.1/26, mb1mx5.1/28, mbtmp5.1/26, ML4.7/5, MS4.9/23, Ms1 4.9/23, ms1mx4.7/28, Error ellipse: s-maj=13.7km s-min=12.2km az=117.0*
BJI ***22*** *08:46:45.2, 37.°61N×142.°19E, h6km, mB5.3/33, mb5.4/63, Ms5.3/76, Ms7 5.2/59*
NEIC ***22*** *08:46:47.9±0.1, 37.°73N×142.°31E, h10km, mb5.2/162, MW5.2(NIED), Error ellipse: s-maj=3.7km s-min=2.2km az=156.0*
NEIC Recorded [3 JMA] in Fukushima and Miyagi; [2 JMA] in Akita, Iwate, Tochigi and Yamagata; [1 JMA] in Aomori, Gumma and Ibaraki.
JMA ***22*** *08:46:48.5±0.1, 37.°69N×142.°37E, h30km±3km, M5.5*
JMA Felt III J1.
PDG ***22*** *08:46:49.4, 37.°80N×142.°30E, h30km, mb5.5/10*
ISCJB ***22*** *08:46:49.3±0.1, 37.°76N±0.°02×142.°28E±0.°01, h28km, mb5.3/269, MS5.2/74, Error ellipse: s-maj=2.9km s-min=1.6km az=169.2*
MOS ***22*** *08:46:50.0±0.8, 37.°97N×142.°26E, h28km, mb5.5/106, MS5.2/42, Error ellipse: s-maj=6.2km s-min=3.9km az=100.3*
GCMT ***22*** *08:46:51.9±0.2, 37.°77N×142.°33E, h12km, MW5.4, Moment Tensor Solution. s51,c71; s88,c144; Moment tensor: Scale 10^17Nm; Mrr0.06±.01; Mθθ-0.01±.01; Mφφ-0.05±.01; Mrθ0.51±.02; Mθφ-0.08±.01; Mφr1.25±.02; Best double couple: M0 1.40000×10^17 NP1:φ=248.00000°, δ3.00000°, λ136.00000°. NP2:φ=22.00000°, δ88.00000°, λ88.00000°. Principal axes: T 1.3300, Plg47.0000°, Azm290.0000°; N 0.0400, Plg2.0000°, Azm22.0000°; P -1.3700, Plg43.0000°, Azm114.0000°; Data Used: II IU IC G CN.*
DJA ***22*** *08:47:00, 38.°66N×142.°91E, h117km, mb5.3/28*
SZGRF ***22*** *08:47:10.2, 39.°00N×139.°56E, h33km, mb5.6, MS5.3, Near west coast of eastern Honshu, Japan*
ISC 22 08:46:51.2±0.1, 37.°76N±0.°02×142.°27E±0.°02, h30km, h30km±.8km; pP-P, n1138, σ0=69/1138, mb5.3/269, MS5.2/74, 264C-225D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**1.00**	**314**	P	**Pn**	**08 47 08.2**	**-1.0**
JIO				S	**Sn**	**08 47 22.4**	**0.0**
JMM	**Marumori**	**1.18**	**276**	P	**Pn**	**08 47 10.4**	**-1.1**
JMM				S	**Sn**	**08 47 26.1**	**-0.5**
JFK	**Kawauchi**	**1.18**	**251**	P	**Pn**	**08 47 09.8**	**-1.8**
JFK				S	**Sn**	**08 47 25.8**	**-0.8**
OFUJ	**Ofunato**	**1.40**	**340**	P	**Pn**	**08 47 13.5**	**-1.2**
JOU	**Okura**	**1.40**	**296**	P	**Pn**	**08 47 14.7**	**0.0**
JOU				S	**Sn**	**08 47 33.5**	**+1.3**
JMK	**Ichinoseki**	**1.45**	**326**	⇓P	**Pn**	**08 47 15.0**	**-0.3**
JMK				*e*S	**Sn**	**08 47 34.2**	**+0.9**
JFT	**Otama**	**1.55**	**262**	P	**Pn**	**08 47 16.5**	**-0.3**
JYS	**Shirataka**	**1.80**	**285**	⇓P	**Pn**	**08 47 20.3**	**+0.1**
JOM	**Ohasama**	**1.87**	**336**	P	**Pn**	**08 47 21.1**	**-0.1**
JYK	**Kaneyama**	**1.90**	**308**	P	**Pn**	**08 47 21.6**	**+0.1**
JFY	**Yanaizu**	**2.07**	**261**	P	**Pn**	**08 47 23.9**	**+0.1**
JYA	**Atsumi**	**2.18**	**293**	P	**Pn**	**08 47 26.0**	**+0.6**
JNS	**Sasagawa**	**2.34**	**272**	P	**Pn**	**08 47 28.3**	**+0.7**
JAW	**Awa shima**	**2.48**	**287**	P	**Pn**	**08 47 30.6**	**+1.1**
JANG	**Nango**	**2.67**	**348**	P	**Pn**	**08 47 31.8**	**-0.4**
MJAR	**Matsushiro Arr**	**3.46**	**251**	Pn	**Pn**	**08 47 43.7**	**+0.6**
	41nm,0.3s,baz=77,slow=14,SNR=192						
MJAR				Sn	**Sn**	**08 48 28.7**	**+5.6**
	67nm,0.3s,baz=142,slow=33,SNR=5.8						
MJAR				LR	LR	08 49 20.9	
	comp=Z,31μm,18.1s,baz=80,slow=44						
MJAR	**Matsushiro Arr**	**3.46**	**251**	P	**Pn**	**08 47 43.7**	**+0.7**
MJAR						08 48 28.7	
MJAR				pmax	pmax		
	comp=Z,41nm,0.3s						
MJAR				smax			
	comp=N,67nm,0.3s						
MJAR				MLR	MLR		
	comp=Z,31μm,18.1s						
MJAR	**Matsushiro Arr**	**3.46**	**251**	Pn	**Pn**	**08 47 43.7**	**+0.6**
MJAR				Sn	**Sn**	**08 48 28.7**	**+5.6**
MJAR				LR	LR	08 49 20.9	
MAJO	**Matsushiro**	**3.47**	**251**	*e*Pn	**Pn**	**08 47 43.9**	**+0.9**
MAT	**Matsushiro**	**3.47**	**251**	P	**Pn**	**08 47 44.4**	**+1.3**
MAT				S	**Sn**	**08 48 27.4**	**+4.3**
MAT	**Matsushiro**	**3.47**	**251**	P	**Pn**	**08 47 44.2**	**+1.1**
JNG	**Nsakai**	**3.60**	**249**	⇑P	**Pn**	**08 47 46.0**	**+1.1**
AJI	**Ajiro2**	**3.73**	**224**	P	**Pn**	**08 47 46.0**	**-0.7**
ERM	**Erimo**	**4.30**	**9**	Pn	**Pn**	**08 47 54.7**	**+0.1**
	comp=Z,3μm,0.6s,SNR=13						
ERM	**Erimo**	**4.30**	**9**	*e*Pn	**Pn**	**08 47 53.2**	**-1.4**
ERM				*e*Sn	**Sn**	**08 48 45.3**	**+1.6**
JHJ	**Hachijo jima 2**	**5.06**	**204**	Pn	**Pn**	**08 48 02.4**	**-2.6**
	comp=Z,174nm,0.3s,baz=236,slow=22,SNR=35						
JHJ				Sn	**Sn**	**08 48 57.6**	**-4.7**
	comp=Z,333nm,0.3s,baz=46,slow=23,SNR=8.5						
JHJ				LR	LR	08 50 22.3	
	comp=Z,6μm,18.3s,baz=226,slow=43						
JWT	**Wachi**	**6.06**	**248**	P	**Pn**	**08 48 20.3**	**+1.6**
ASAJ	**Asahikawa**	**6.36**	**2**	Pn	**Pn**	**08 48 22.1**	**-0.6**
	comp=Z,13nm,0.3s,baz=216,slow=13,SNR=58						
ASAJ				Sn	**Sn**	**08 49 33.5**	**-0.8**
	comp=Z,25nm,0.3s,baz=60,slow=20,SNR=3.3						
ASAJ				LR	LR	08 51 24.0	
	comp=Z,10μm,21.0s,baz=186,slow=43						
ASAJ	**Asahikawa**	**6.36**	**2**	P	**Pn**	**08 48 22.1**	**-0.6**
ASAJ						08 49 33.5	
ASAJ				pmax	pmax		
	comp=Z,13nm,0.3s						
ASAJ				smax			
	comp=N,25nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,10μm,21.0s						
JWZ	**Kozaga**	**6.80**	**234**	P	**Pn**	**08 48 29.3**	**+0.4**
YUK	**Yuzh-Kuril'sk**	**6.83**	**22**	*i*P	**Pn**	**08 48 25.7**	**-3.6**
YUK				*i*S	**Sn**	**08 49 38.7**	**-7.3**
YUK				pmax	pmax		
	comp=Z,920nm,1.1s						
YUK				pmax	pmax		
	comp=N,120nm,0.3s						
YUK				pmax	pmax		
	comp=E,100nm,0.3s						
YUK				pmax	pmax		
	comp=Z,50nm,0.3s						
YUK				smax			
	comp=N,2μm,0.5s						
YUK				smax			
	comp=E,4μm,0.5s						
YUK				smax			
	comp=N,6μm,0.9s						
YUK				smax			
	comp=E,1μm,0.5s						
YUK				MLR	MLR		
	comp=N,6μm,12.0s						
YUK				MLR	MLR		
	comp=E,3μm,12.0s						
YUK				MLR	MLR		
	comp=Z,5μm,12.0s						
JNM	**Ikuma**	**7.77**	**256**	P	**Pn**	**08 48 45.7**	**+3.6**
KUR	**Kuril'sk**	**8.56**	**28**	*e*P	**Pn**	**08 48 49.8**	**-3.2**
KUR				*e*S	**Sn**	**08 50 20.6**	**-8.0**
KUR				pmax	pmax		
	comp=N,170nm,0.7s						
KUR				pmax	pmax		
	comp=E,100nm,0.7s						
KUR				pmax	pmax		
	comp=Z,340nm,0.7s						
KUR				smax			
	comp=N,610nm,0.6s						
KUR				smax			
	comp=E,870nm,0.6s						
KUR				smax			
	comp=N,2μm,4.0s						
KUR				smax			
	comp=E,4μm,4.0s						
JKU	**Kubokawa**	**8.72**	**242**	P	**Pn**	**08 48 56.8**	**+1.6**
YSS	**Yuzh-Sakhalins**	**9.20**	**2**	⇑*i*P	**Pn**	**08 49 01.0**	**-0.7**
YSS				*e*S	**Sn**	**08 50 41.7**	**-2.3**
YSS				pmax	pmax		
	comp=Z,140nm,0.7s						
YSS				smax			
	comp=N,1μm,5.0s						
YSS				MLR	MLR		
	comp=N,3μm,14.0s						
YSS				MLR	MLR		
	comp=Z,4μm,14.0s						
YSS	**Yuzh-Sakhalins**	**9.20**	**2**	*e*Pn	**Pn**	**08 49 00.8**	**-0.9**
JFI	**Itaya**	**10.60**	**249**	P	**Pn**	**08 49 23.4**	**+2.5**
CBIJ	**Chichi jima**	**10.63**	**180**	Pn	**Pn**	**08 49 15.8**	**-5.6**
	comp=Z,25nm,0.3s,baz=107,slow=23,SNR=34						
CBIJ				Sn	**Sn**	**08 51 10.4**	**-9.1**
	comp=Z,59nm,0.3s,baz=103,slow=23,SNR=6.2						
UGL	**Uglegorsk**	**11.31**	**359**	P	**Pn**	**08 49 36.0**	**+5.3**
UGL				*e*		08 51 38.0	
UGL				pmax	pmax		
	comp=Z,55nm,0.6s						
UGL				MLR	MLR		
	comp=N,3μm,19.0s						
UGL				MLR	MLR		
	comp=E,12μm,19.0s						
KSRS	**Korea Array**	**11.39**	**273**	Pn	**Pn**	**08 49 36.1**	**+4.4**
	comp=E,1.7nm,0.3s,baz=88,slow=13,SNR=118						
KSRS				LR	LR	08 53 47.8	
	comp=E,9μm,18.7s,baz=86,slow=36						
KSRS	**Korea Array**	**11.39**	**273**	P	**Pn**	**08 49 36.2**	**+4.5**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,9μm,18.7s						
MDJ	**Mudanjiang**	**11.75**	**310**	P	**Pn**	**08 49 38.1**	**+1.5**
MDJ				S	**Sn**	**08 51 49.1**	**+2.5**
MDJ				PcP	PcP	08 55 25.5	+1.2
MDJ				ScP	ScP	08 58 56.8	+1.9
MDJ				PcS	PcS	08 59 01.0	+2.9
MDJ				ScS	ScS	09 02 29.8	-0.6
MDJ				pmax	pmax		
	comp=Z,170nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,650nm,4.5s						
MDJ				LR	LR		
	comp=N,6μm,12.7s						
MDJ				LR	LR		
	comp=E,6μm,14.6s						
MDJ				LR	LR		
	comp=Z,12μm,13.6s						
MDJ	**Mudanjiang**	**11.75**	**310**	*e*Pn	**Pn**	**08 49 38.0**	**+1.4**
	comp=Z,952nm,1.5s						
HABR	**Khabarovsk**	**11.93**	**336**	*ce*P	**Pn**	**08 49 38.0**	**-1.1**
HABR				*e*		08 51 50.5	
HABR				pmax	pmax		
	comp=Z,340nm,1.2s						
HABR				pmax	pmax		
	comp=E,139nm,0.9s						
HABR				pmax	pmax		
	comp=N,140nm,1.1s						
HABR				MLR	MLR		
	comp=Z,10μm,17.0s						
HABR				MLR	MLR		
	comp=N,7μm,18.0s						
HABR				MLR	MLR		
	comp=E,3μm,15.0s						
INCN	**Inchon**	**12.40**	**274**	*e*Pn	**Pn**	**08 49 48.4**	**+2.8**
INCN	**Inchon**	**12.40**	**274**	Pn	**Pn**	**08 49 49.5**	**+3.8**
SNR=17							
KLR	**Kul'dur**	**13.76**	**330**	*e*P	**Pn**	**08 49 59.4**	**-4.6**
KLR				*e*		08 52 31.5	
KLR				MLR	MLR		
	comp=Z,14μm,14.0s						
CN2	**Changchun**	**14.09**	**301**	*e*P	**Pn**	**08 50 09.3**	**+0.7**
CN2				*ep*P		08 50 14.9	
CN2				*es*P		08 50 19.0	
CN2				*e*S	**Sn**	**08 52 46.5**	**+2.6**
CN2				pmax	pmax		
	comp=Z,40nm,1.1s						
CN2				pmax	pmax		
	comp=Z,300nm,5.0s						
CN2				LR	LR		
	comp=N,7μm,13.0s						
CN2				LR	LR		
	comp=E,6μm,13.0s						
SNY	**Shenyang**	**14.93**	**292**	⇓P	**Pn**	**08 50 20.4**	**+0.4**
SNY				pmax	pmax		
	comp=Z,60nm,1.6s						
SNY				pmax	pmax		
	comp=Z,930nm,11.4s						
SNY				LR	LR		
	comp=N,5μm,14.1s						
SNY				LR	LR		
	comp=E,10μm,18.6s						
SNY				LR	LR		
	comp=Z,12μm,15.2s						
DL2	**Dalian**	**16.24**	**280**	P	**Pn**	**08 50 37.3**	**+0.3**
DL2				S	**Sn**	**08 53 37.3**	**+1.1**
DL2				pmax	pmax		
	comp=Z,150nm,0.9s						
DL2				pmax	pmax		
	comp=Z,700nm,2.7s						
DL2				LR	LR		
	comp=E,2μm,17.7s						
DL2				LR	LR		
	comp=Z,3μm,19.4s						
SKR	**Severo-Kuril's**	**16.25**	**33**	*e*P	**Pn**	**08 50 33.6**	**-3.5**
SKR				*e*S	**Sn**	**08 53 32.0**	**-4.4**
SKR				pmax	pmax		
	comp=Z,1μm,3.0s						
SKR				pmax	pmax		
	comp=E,900nm,4.0s						
SKR				pmax	pmax		
	comp=N,110nm,1.0s						
SKR				pmax	pmax		
	comp=E,120nm,1.0s						
SKR				smax			
	comp=N,50nm,0.5s						
SKR				smax			
	comp=E,40nm,0.5s						
SKR				smax			
	comp=E,1μm,14.0s						
SKR				MLR	MLR		
	comp=N,2μm,16.0s						
SKR				MLR	MLR		
	comp=Z,2μm,16.0s						
SKR				MLR	MLR		
	comp=E,1μm,14.0s						
SSE	**Sheshan**	**18.60**	**255**	⇑P	**Pn**	**08 51 05.6**	**-0.8**
SSE				S	**Sn**	**08 54 31.8**	**-1.7**
SSE				pmax	pmax		
	comp=Z,70nm,1.2s						
SSE				pmax	pmax		
	comp=Z,370nm,7.3s						
SSE				LR	LR		
	comp=N,3μm,14.7s						
SSE				LR	LR		
	comp=E,4μm,14.7s						
SSE				LR	LR		
	comp=Z,6μm,14.3s						
PETK	**Petropavlovsk-**	**18.72**	**30**	P	**Pn**	**08 51 07.4**	**-0.3**
	comp=Z,1.1nm,0.3s,baz=216,slow=7.1,SNR=23						
PETK				LR	LR	08 58 54.9	
	comp=Z,2μm,19.4s,baz=218,slow=39						
PETK	**Petropavlovsk-**	**18.72**	**30**	P	**Pn**	**08 51 07.4**	**-0.2**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK				MLR	MLR		
	comp=Z,2μm,19.4s						
PET	**Petropavlovsk**	**19.04**	**31**	*de*P	**Pn**	**08 51 10.3**	**-1.3**
PET				*e*S	**Sn**	**08 54 39.3**	**-4.5**
PET				pmax	pmax		
	comp=Z,600nm,3.6s						
PET				pmax	pmax		
	comp=Z,200nm,4.5s						
PET				pmax	pmax		
	comp=Z,66nm,0.9s						
PET				pmax	pmax		
	comp=Z,136nm,1.1s						
PET				MLR	MLR		
	comp=Z,2μm,16.0s						
PET				MLR	MLR		
	comp=Z,2μm,17.0s						
PET	**Petropavlovsk**	**19.04**	**31**	*e*P	**Pn**	**08 51 11.0**	**-0.5**
	comp=Z,169nm,1.2s						
HIA	**Hailar**	**19.90**	**312**	*e*P	**Pn**	**08 51 17.4**	**-4.4**
HIA				pmax	pmax		
	comp=Z,178nm,1.2s						
HIA	**Hailar**	**19.90**	**312**	*e*P	**Pn**	**08 51 17.4**	**-4.4**
	comp=Z,178nm,1.2s						
NJ2	**Nanjing**	**20.01**	**260**	*e*P	**P**	**08 51 20.3**	**-1.1**
NJ2				pP		08 51 27.6	
NJ2				sP	sP	08 51 32.0	-1.1
NJ2				PP		08 51 39.0	
NJ2				pmax	pmax		
	comp=Z,100nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,160nm,4.0s						
NJ2				LR	LR		
	comp=N,2μm,15.4s,MS5.0						
NJ2				LR	LR		
	comp=E,5μm,17.3s,MS5.0						
NJ2				LR	LR		
	comp=Z,4μm,14.4s,MS4.9						
TIA	**Tai'an**	**20.13**	**273**	⇑P	**P**	**08 51 20.3**	**-2.4**
TIA				S	**S**	**08 55 04.0**	**-3.3**
TIA				LR	LR		
	comp=N,3μm,14.3s,MS5.1						
TIA				LR	LR		
	comp=E,5μm,14.0s,MS5.1						
BJI	**Beijing**	**20.42**	**285**	P	**P**	**08 51 23.8**	**-2.0**
BJI				sP	sP	08 51 38.3	+0.8
BJI				S	**S**	**08 55 05.8**	**-7.0**
BJI				pmax	pmax		
	comp=Z,120nm,0.9s						
BJI				LR	LR		
	comp=N,2μm,15.4s,MS4.8						
BJI				LR	LR		
	comp=E,2μm,17.2s,MS4.8						
BJI				LR	LR		
	comp=Z,2μm,22.6s						
TATO	**Taipei**	**21.79**	**240**	*e*P	**P**	**08 51 42.7**	**+2.1**
	comp=Z,97nm,1.1s,mb5.2						
YHNB	**Yeheng**	**22.07**	**240**	*e*P	**P**	**08 51 42.0**	**-1.6**
	comp=Z,40nm,0.8s,mb4.9						
NACB	**Ninganchiao**	**22.25**	**238**	*e*P	**P**	**08 51 44.3**	**-1.3**
	comp=Z,26nm,0.7s,mb4.8						
CLNS	**Chul'man**	**22.31**	**334**	*e*P	**P**	**08 51 44.6**	**-1.3**
CLNS				*e**PP		08 51 49.5	
CLNS				*e*PPP		08 52 13.7	
CLNS				*e*		08 55 39.3	
CLNS				*e*S	**S**	**08 55 45.2**	**-4.4**
CLNS				pmax	pmax		
	comp=Z,123nm,0.9s,mb5.3						
CLNS				pmax	pmax		
	comp=N,85nm,0.9s						
CLNS				pmax	pmax		
	comp=E,22nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,90nm,1.1s,mb5.1						
CLNS				pmax	pmax		
	comp=N,75nm,0.8s						
CLNS				pmax	pmax		
	comp=E,69nm,0.8s						
CLNS				smax			
	comp=E,777nm,12.9s						
CLNS				smax			
	comp=N,673nm,13.3s						
CLNS				MLR	MLR		
	comp=E,1μm,14.0s,MS5.0						
CLNS				MLR	MLR		
	comp=Z,5μm,15.0s,MS5.1						
CLNS				MLR	MLR		
	comp=N,4μm,14.0s,MS5.0						
SSLB	**Suanglung**	**22.94**	**239**	*e*P	**P**	**08 51 54.2**	**+1.4**
	comp=N,81nm,0.9s,mb5.2						
YULB	**Yu-li**	**22.97**	**237**	*e*P	**P**	**08 51 52.3**	**-1.0**
	comp=N,64nm,1.0s,mb5.0						
TPUB	**Ta-pu**	**23.48**	**238**	*e*P	**P**	**08 51 57.4**	**-1.1**
	comp=N,97nm,0.9s,mb5.2						
TWG	**Pinlang**	**23.52**	**237**	*e*P	**P**	**08 51 58.9**	**0.0**
	comp=N,141nm,1.0s,mb5.3						
TIY	**Taiyuan**	**23.55**	**279**	*e*P	**P**	**08 51 58.3**	**-0.8**
TIY				S	**S**	**08 56 09.3**	**-1.7**
TIY				LR	LR		
	comp=N,590nm,10.6s,MS5.0						
TIY				LR	LR		
	comp=E,3μm,12.4s,MS5.0						
TIY				LR	LR		
	comp=Z,4μm,16.0s,MS5.0						
QZH	**Quanzhou**	**23.84**	**244**	P	**P**	**08 51 57.1**	**-4.7**
QZH				S	**S**	**08 56 14.0**	**-1.8**
QZH				pmax	pmax		
	comp=Z,150nm,1.0s,mb5.4						
QZH				LR	LR		
	comp=N,670nm,9.4s						
QZH				LR	LR		
	comp=E,2μm,10.5s						
QZH				LR	LR		
	comp=Z,5μm,18.0s						
HHC	**Hu-ho-hao-te**	**23.90**	**287**	⇑P	**P**	**08 51 58.8**	**-3.4**
HHC				sP	sP	08 52 12.9	-1.5
HHC				PP		08 52 32.9	
HHC				PcP	PcP	08 55 42.4	-1.9
HHC				S	**S**	**08 56 10.0**	**-6.5**
HHC				sS	sS	08 56 26.6	-4.0
HHC				SS		08 57 01.3	
HHC				ScP	ScP	08 59 17.0	-3.5
HHC				PcS	PcS	08 59 21.1	-2.7
HHC				pmax	pmax		
	comp=Z,26nm,0.8s,mb4.7						
HHC				pmax	pmax		
	comp=Z,450nm,5.0s						
HHC				LR	LR		
	comp=N,2μm,12.1s,MS5.2						
HHC				LR	LR		
	comp=E,4μm,12.1s,MS5.2						
HHC				LR	LR		
	comp=Z,5μm,12.6s,MS5.1						
WHN	**Wuhan**	**24.14**	**261**	⇓P	**P**	**08 52 04.3**	**-0.2**
GUMO	**Guam**	**24.18**	**174**	LR	LR	08 59 25.2	
	comp=Z,1μm,21.4s,MS4.4,baz=176,slow=32						
GUMO	**Guam**	**24.18**	**174**	*e*P	**P**	**08 52 09.6**	**+4.6**
GUMO				pmax	pmax		
	comp=Z,426nm,1.7s,mb5.6						
GUMO	**Guam**	**24.18**	**174**	*e*P	**P**	**08 52 09.6**	**+4.6**
	comp=Z,426nm,1.7s,mb5.6						
GUMO	**Guam**	**24.18**	**174**	P	**P**	**08 52 09.6**	**+4.6**
	comp=Z,149nm,1.6s,mb5.2						
CIT	**Chita**	**24.64**	**315**	*e*P	**P**	**08 52 07.8**	**-1.0**
CIT				*e*		08 52 13.6	
CIT				*e*		08 52 44.8	
CIT				pmax	pmax		
	comp=Z,2μm,1.3s,mb6.5						
BTO	**Baotou**	**25.09**	**287**	*e*P	**P**	**08 52 10.9**	**-2.1**
YAK	**Yakutsk**	**25.52**	**346**	*c i*P	**P**	**08 52 15.9**	**-0.8**
YAK				*e**PP	pP	08 52 25.3	0.0
YAK				*e*PPP		08 52 59.4	
YAK				*e*		08 55 44.7	
YAK				*e*S	**S**	**08 56 40.2**	**-1.8**
YAK				*e**SS	sS	08 56 57.4	+1.1
YAK				*e*SS		08 57 34.0	
YAK				*e*		09 03 10.0	
YAK				pmax	pmax		
	comp=Z,343nm,1.0s,mb5.8						
YAK				pmax	pmax		
	comp=E,60nm,1.3s						
YAK				pmax	pmax		
	comp=N,150nm,1.1s						
YAK				pmax	pmax		
	comp=Z,118nm,0.9s,mb5.4						
YAK				pmax	pmax		
	comp=N,341nm,1.5s						
YAK				pmax	pmax		
	comp=E,105nm,1.1s						
YAK				smax			
	comp=N,933nm,2.3s						
YAK				smax			
	comp=E,929nm,3.3s						
YAK				MLR	MLR		
	comp=Z,5μm,15.0s,MS5.2						
YAK				MLR	MLR		
	comp=N,4μm,15.0s,MS5.1						
YAK				MLR	MLR		
	comp=E,2μm,15.0s,MS5.1						
SEY	**Seymchan**	**25.95**	**11**	*c i*P	**P**	**08 52 21.3**	**+0.7**
SMY	**Shemya**	**26.67**	**46**	*e*P	**P**	**08 52 23.9**	**-3.4**
SMY				pmax	pmax		
	comp=Z,63nm,0.9s,mb5.2						
SMY	**Shemya**	**26.67**	**46**	*e*P	**P**	**08 52 23.9**	**-3.4**
	comp=Z,63nm,0.9s,mb5.2						
XAN	**Xi'an**	**27.19**	**272**	P	**P**	**08 52 30.9**	**-1.2**
XAN				S	**S**	**08 57 05.9**	**-3.0**
XAN				pmax	pmax		
	comp=Z,24nm,1.1s,mb4.6						
XAN				pmax	pmax		

comp=Z,100nm,4.9s
ULN Ulaanbaatar 27.52 303 *e*P **P** **08 52 35.2 +0.2**
ULN pmax pmax
comp=Z,81nm,1.0s,mb5.3
ULN Ulaanbaatar 27.52 303 *e*P **P** **08 52 35.2 +0.3**
comp=Z,81nm,1.0s,mb5.3
ULN Ulaanbaatar 27.52 303 P **P** **08 52 36.0 +1.0**
comp=Z,1μmcomp=Z,95nm,1.1s,mb5.3
ULN Ulaanbaatar 27.52 303 P **P** **08 52 35.8 +0.9**
SNR=66
SONM Songino Array 27.96 303 P **P** **08 52 39.5 +0.7**
comp=Z,107nm,0.8s,mb5.5,baz=101,slow=8.5,SNR=475
SONM LR LR 09 04 11.8
comp=Z,3μm,19.0s,MS5.0,baz=132,slow=37
SONM Songino Array 27.96 303 P **P** **08 52 39.5 +0.7**
SONM pmax pmax
comp=Z,107nm,0.8s
SONM MLR MLR
comp=Z,3μm,19.0s
ENH Enshi 28.08 264 *e*P **P** **08 52 39.5 -0.6**
comp=Z,409nm,0.9s,mb6.1
GZH Guangzhou 28.77 248 P **P** **08 52 41.5 -4.8**
GZH S **S** **08 57 24.8 -9.3**
GZH LR LR
comp=N,3μm,18.0s,MS5.2
GZH LR LR
comp=E,4μm,15.7s,MS5.2
GZH LR LR
comp=Z,8μm,16.4s,MS5.4
IRK Irkutsk 30.13 311 *e*P **P** **08 52 58.4 +0.4**
IRK *e* 08 53 12.9
IRK pmax pmax
comp=Z,89nm,1.9s,mb5.2
TLY Talaya 30.38 310 P **P** **08 53 00.2 -0.1**
comp=Z,314nm,0.9s,mb6.0,SNR=16
TLY Talaya 30.38 310 *c i*P **P** **08 53 00.3 0.0**
TLY *e*S **S** **08 58 02.2 +3.4**
TLY pmax pmax
comp=Z,79nm,1.2s,mb5.3
TLY MLR MLR
comp=Z,6μm,16.0s,MS5.3
TLY Talaya 30.38 310 *e*P **P** **08 53 00.9 +0.6**
comp=Z,66nm,1.1s,mb5.3
TLY Talaya 30.38 310 P **P** **08 53 00.7 +0.4**
SNR=33
LZH Lanzhou 30.62 279 ⇑P **P** **08 53 01.8 -0.8**
LZH pP pP 08 53 11.3 0.0
LZH sP sP 08 53 15.3 +0.4
LZH PP PP 08 54 02.3 -10
LZH S **S** **08 58 00.3 -2.7**
LZH sS sS 08 58 15.1 -2.1
LZH SS SS 08 59 42.6 -31
LZH pmax pmax
comp=Z,95nm,1.5s,mb5.4
LZH pmax pmax
comp=Z,360nm,5.2s
LZH LR LR
comp=E,2μm,15.3s
LZH LR LR
comp=Z,3μm,16.0s,MS5.0
MOY Mondy 32.00 309 *e*P **P** **08 53 15.0 +0.4**
MOY pmax pmax
comp=Z,78nm,1.9s,mb5.2
GYA Guiyang 32.02 260 ⇑*i*P **P** **08 53 14.6 -0.4**
GYA PP PP 08 54 22.9 -4.6
GYA S **S** **08 58 22.5 -2.4**
GYA ScP ScP 08 59 46.0 +0.3
GYA SS SS 09 00 17.6 -25
GYA pmax pmax
comp=Z,110nm,1.0s,mb5.6
GYA pmax pmax
comp=Z,250nm,6.5s
GYA LR LR
comp=N,870nm,17.7s,MS4.6
GYA LR LR
comp=E,650nm,18.8s,MS4.6
GYA LR LR
comp=E,750nm,17.5s
CD2 Chengdu 32.36 269 P **P** **08 53 19.0 +1.1**
CD2 PP PP 08 54 26.0 -5.2
CD2 S **S** **08 58 29.3 -0.8**
CD2 SS SS 09 00 25.0 -25
CD2 pmax pmax
comp=Z,240nm,5.3s
CD2 LR LR
comp=N,4μm,13.7s
CD2 LR LR
comp=Z,4μm,14.3s,MS5.2
GTA Gaotai 33.01 286 ⇑P **P** **08 53 23.3 -0.2**
GTA pP pP 08 53 32.9 +0.7
GTA sP sP 08 53 36.8 +1.0
GTA PP PP 08 54 34.8 -3.5
GTA PcP PcP 08 56 07.0 +0.1
GTA S **S** **08 58 39.3 -0.8**
GTA SS SS 09 00 38.8 -24
GTA ScS ScS 09 03 48.1 -1.0
GTA pmax pmax
comp=Z,53nm,1.1s,mb5.4
GTA pmax pmax
comp=Z,350nm,6.3s
GTA LR LR
comp=N,1μm,19.2s,MS5.0
GTA LR LR
comp=E,3μm,19.8s,MS5.0
GTA LR LR
comp=Z,4μm,19.8s,MS5.2
BILL Bilibino 33.14 16 *i* P **P** **08 53 24.4 +0.1**
BILL pmax pmax
comp=Z,50nm,1.7s,mb5.2
BILL Bilibino 33.14 16 *e*P **P** **08 53 24.4 +0.1**
comp=Z,66nm,1.1s,mb5.5
BILL *e* pP 08 53 32.8 -0.2
QIZ Qiongzhong 33.85 246 P **P** **08 53 31.8 +0.8**
QIZ pP pP 08 53 40.3 +0.6
QIZ S **S** **08 58 54.5 +1.1**
QIZ sS sS 08 59 03.3 -4.5
QIZ pmax pmax
comp=Z,14nm,1.3s,mb4.7
QIZ pmax pmax
comp=Z,98nm,3.2s
QIZ LR LR
comp=N,2μm,16.0s
QIZ LR LR
comp=E,610nm,21.1s
QIZ LR LR
comp=Z,2μm,18.9s,MS4.9
DAV Davao City (W) 34.10 211 LR LR 09 07 42.4
comp=Z,677nm,18.2s,MS4.4,baz=12,slow=37
TIXI Tiksi 34.66 353 *e*P **P** **08 53 36.1 -1.4**
TIXI *e*S **S** **08 59 03.1 -1.8**
TIXI pmax pmax
comp=Z,74nm,1.8s,mb5.3
TIXI MLR MLR
comp=Z,3μm,18.0s,MS5.1
TIXI Tiksi 34.66 353 *e*P **P** **08 53 37.3 -0.2**
KMI Kunming 35.75 261 ⇓P **P** **08 53 47.3 -0.1**
KMI pP pP 08 53 54.6 -1.5
KMI sP sP 08 53 57.3 -2.4
KMI PP PP 08 55 08.6 -0.2
KMI S **S** **08 59 22.1 -0.5**
KMI sS sS 08 59 33.8 -3.2
KMI ScP ScP 08 59 58.8 0.0
KMI PcS PcS 09 00 01.6 -0.8
KMI SS SS 09 01 42.3 -17
KMI ScS ScS 09 04 01.1 -2.9
KMI pmax pmax
comp=Z,69nm,1.2s,mb5.5
KMI pmax pmax
comp=Z,390nm,3.1s
KMI LR LR
comp=N,2μm,14.5s,MS5.3
KMI LR LR
comp=E,3μm,17.3s,MS5.3
KMI LR LR
comp=Z,4μm,18.8s,MS5.2
KDM Kudat 38.41 223 P **P** **08 54 09.9 -0.2**
MYLDM Lahad Datu 39.00 220 P **P** **08 54 15.8 +0.8**
BAKI Biak 39.17 190 P **P** **08 54 25.3 +8.9**
comp=Z,986nmcomp=Z,48nm,1.1s,mb5.1
TNTI Ternate 39.28 204 P pP 08 54 27.9 +1.7
comp=Z,90nm,1.2s
SDKM Sandakan 39.29 222 P **P** **08 54 17.6 +0.2**
SDKM Sandakan 39.29 222 P **P** **08 54 17.6 +0.2**
TSM Tawau 40.08 220 P **P** **08 54 25.2 +1.2**
KMSI Cibinong 40.66 209 P sP 08 54 41.5 +0.3
comp=Z,373nm,1.0s
CHRT Chiangrai 40.88 256 ⇑P **P** **08 54 30.5 -0.1**
comp=Z,408nm,1.2s,mb5.9
WMQ Urumqi 41.13 296 P **P** **08 54 34.1 +1.7**
WMQ PP PP 08 56 12.9 +5.5
WMQ PcP PcP 08 56 33.4 +2.0
WMQ ScP ScP 09 00 19.4 +0.4
WMQ S **S** **09 00 45.3 +1.8**
WMQ SS SS 09 03 44.3 -2.1
WMQ ScS ScS 09 04 33.6 -0.9
WMQ pmax pmax
comp=Z,220nm,0.9s,mb5.8
WMQ pmax pmax
comp=Z,830nm,5.2s
WMQ LR LR
comp=N,840nm,17.0s,MS4.9
WMQ LR LR
comp=E,1μm,20.7s,MS4.9
WMQ LR LR
comp=Z,2μm,21.6s,MS4.9
MRSI Marisa 41.56 212 P **P** **08 54 41.6 +5.4**
comp=Z,98nm,1.3s,mb5.3
ZALV Zalesovo Beam 41.94 312 P **P** **08 54 38.8 -0.1**
comp=Z,73nm,0.8s,mb5.3,baz=89,slow=7.2,SNR=217
ZALV PcP PcP 08 56 33.7 -0.1
comp=Z,12nm,0.7s,baz=80,slow=3.3,SNR=4.0
ZALV LR LR 09 12 50.0
comp=Z,3μm,18.1s,MS5.2,baz=86,slow=37
ZALV Zalesovo Beam 41.94 312 P **P** **08 54 38.8 -0.1**
ZALV 08 56 33.7
ZALV pmax pmax
comp=Z,73nm,0.8s,mb5.4
ZALV pmax pmax
comp=Z,12nm,0.7s,mb4.6
ZALV MLR MLR
comp=Z,3μm,18.1s,MS5.2
CHG Chiang Mai 42.13 256 ⇑P **P** **08 54 40.7 -0.2**
comp=Z,40nm,1.2s,mb4.9
CHTO Chiang Mai 42.13 256 *e*P **P** **08 54 40.8 -0.1**
CHTO pmax pmax
comp=Z,33nm,0.9s,mb5.0
CHTO Chiang Mai 42.13 256 *e*P **P** **08 54 40.8 -0.1**
comp=Z,33nm,0.9s,mb5.0
CHTO Chiang Mai 42.13 256 P **P** **08 54 41.6 +0.7**
SNR=10
CM31 Chiang Mai Arr 42.34 255 *e*P **P** **08 54 42.5 0.0**
CM31 *e* pP 08 54 49.1 -2.4
CMAR Chiang Mai Arr 42.34 255 P **P** **08 54 42.2 -0.4**
comp=Z,3.2nm,0.8s,mb4.0,baz=40,slow=6.9,SNR=14
CMAR LR LR 09 12 55.8
comp=Z,917nm,20.7s,MS4.7,baz=202,slow=37
CMAR Chiang Mai Arr 42.34 255 P **P** **08 54 42.2 -0.4**
CMAR pmax pmax
comp=Z,3.0nm,0.8s
CMAR MLR MLR
comp=Z,917nm,20.7s
LSA Lhasa 42.83 275 P **P** **08 54 47.5 +1.1**
LSA pP pP 08 54 56.5 +1.2
LSA PP PP 08 56 26.9 +0.9
LSA PcP PcP 08 56 34.9 -2.4
LSA S **S** **09 01 09.5 +0.6**
LSA ScS ScS 09 04 45.4 +0.1
LSA pmax pmax
comp=Z,30nm,1.2s,mb4.9
LSA LR LR
comp=N,7μm,22.5s,MS5.4
LSA LR LR
comp=E,1μm,26.8s,MS5.4
LSA LR LR
comp=E,2μm,27.7s
LSA Lhasa 42.83 275 *e*P **P** **08 54 47.5 +1.1**
LSA pmax pmax
comp=Z,243nm,1.4s,mb5.7
LSA Lhasa 42.83 275 *e*P **P** **08 54 47.5 +1.0**
comp=Z,243nm,1.4s,mb5.7
NVS Novosibirsk 42.84 313 ⇑*i*P **P** **08 54 46.0 -0.2**
NVS *e*S **S** **09 01 08.5 +0.1**
NVS pmax pmax
comp=N,30nm,1.2s
NVS pmax pmax
comp=E,104nm,1.2s
NVS pmax pmax
comp=Z,96nm,1.2s,mb5.4
NVS smax
comp=N,64nm,2.3s
NVS smax
comp=E,114nm,2.3s
BDT Bhumibol Dam 43.02 254 ⇑P **P** **08 54 46.5 -1.6**
NST Nakhon Sawan 43.13 251 ⇑P **P** **08 54 45.0 -4.0**
NLAI Namlea 43.15 202 P **P** **08 54 57.6 +8.4**
comp=E,42nm,1.3s,mb5.0
BTM Bintulu 43.56 225 P **P** **08 54 53.5 +1.1**
PCI Palu 43.70 214 P sP 08 55 09.5 +3.5
comp=E,86nm,1.1s
SHL Shillong 44.10 269 *e*PKP **P** **08 54 57.0 +0.2**
SHL *ex* x 09 01 35.0
MK31 Makanchi Array 44.32 302 *i* P **P** **08 54 58.3 +0.1**
MK31 pmax pmax
comp=Z,107nm,0.9s,mb5.6
MK31 Makanchi Array 44.32 302 *e*P **P** **08 54 58.5 +0.3**
MKAR Makanchi Array 44.32 302 P **P** **08 54 58.4 +0.1**
comp=Z,54nm,0.8s,mb5.4,baz=83,slow=10.0,SNR=156
MKAR LR LR 09 14 52.3
comp=Z,993nm,19.8s,MS4.7,baz=69,slow=38
MKAR Makanchi Array 44.32 302 P **P** **08 54 58.4 +0.2**
MKAR pmax pmax
comp=Z,54nm,0.8s
MKAR MLR MLR
comp=Z,993nm,19.8s
TTA Tatalina 44.44 35 *e*P **P** **08 54 59.0 +0.1**
SVW2 Sparrevohn 44.53 38 *e*P **P** **08 55 00.9 +1.2**
comp=Z,55nm,1.5s,mb5.2
SBUM Sibu 44.66 225 P **P** **08 55 01.4 +0.1**
KDI Kendari 45.34 208 P **P** **08 55 12.6 +5.9**
comp=Z,34nm,1.1s,mb5.1
OHAK Old Harbor 45.76 43 *e*P **P** **08 55 08.6 -0.9**
comp=Z,46nm,1.1s,mb5.3
RSO Redoubt South 45.91 39 *e*P **P** **08 55 11.2 +0.6**
RSO *e* pP 08 55 21.3 +1.8
KURK Kurchatov 46.03 308 P **P** **08 55 11.8 +0.1**
comp=Z,2μm,0.8s
KURK Kurchatov 46.03 308 *e*P **P** **08 55 11.1 -0.6**
KURK pmax pmax
comp=Z,200nm,0.8s,mb6.1
KURK Kurchatov 46.03 308 *e*P **P** **08 55 11.1 -0.6**
comp=Z,200nm,0.8s,mb6.1
KURK Kurchatov 46.03 308 P **P** **08 55 11.7 -0.1**
SNR=108
KDAK Kodiak Island 46.10 42 P **P** **08 55 11.9 -0.3**
comp=Z,796nm,0.9s,mb6.7,SNR=10
KDAK Kodiak Island 46.10 42 P **P** **08 55 11.4 -0.8**
comp=Z,52nm,0.8s,mb5.5,baz=291,slow=2.8,SNR=33
KDAK Kodiak Island 46.10 42 *e*P **P** **08 55 11.6 -0.6**
KDAK *e* pP 08 55 20.8 -0.3
KDAK pmax pmax
comp=Z,132nm,1.0s,mb5.8
KDAK Kodiak Island 46.10 42 *e*P **P** **08 55 11.6 -0.7**
comp=Z,132nm,1.0s,mb5.8
KDAK *e* pP 08 55 20.8 -0.3
PPLA Purkeypile 46.18 35 *e*P **P** **08 55 13.7 +0.9**
comp=Z,77nm,1.6s,mb5.4
SPSI Sidrap Palu 46.48 212 P **P** **08 55 20.8 +5.1**
comp=Z,30nm,1.1s,mb5.1
KSM Kuching 46.55 227 *e*P **P** **08 55 16.9 +0.7**
comp=Z,48nm,0.9s,mb5.4
TAPN Taplejung 46.57 274 *e*P **P** **08 55 16.8 +0.4**
comp=Z,253nm,1.2s,mb6.0
BNSI Bone 46.73 211 P **P** **08 55 25.2 +7.6**
comp=Z,2μcomp=Z,75nm,1.3s,mb5.5
STKI Sintang 47.04 224 P **P** **08 55 24.3 +4.2**
comp=Z,47nm,0.8s,mb5.5
TRF Thorofare Moun 47.05 35 *e*P **P** **08 55 20.7 +1.1**
comp=Z,21nm,1.0s,mb5.0
ODAN Odare 47.05 273 *e*P **P** **08 55 20.3 +0.2**
comp=Z,470nm,1.4s,mb6.2
PMG Port Moresby 47.14 173 *e*P **P** **08 55 21.4 +0.6**
COLD Coldfoot 47.19 29 *e*P **P** **08 55 20.8 +0.2**
comp=Z,161nm,0.4s,mb6.3
RC01 Rabbit Creek A 47.37 38 *e*P **P** **08 55 21.4 -0.6**
comp=Z,45nm,1.1s,mb5.3
KAPI Kappang 47.43 211 P **P** **08 55 23.7 +0.5**
comp=Z,34nm,1.0s,mb5.2,baz=186,slow=7.0,SNR=5.7
BKSI Bulukumba 47.56 211 P **P** **08 55 33.7 +10**
comp=Z,494nmcomp=Z,41nm,1.1s,mb5.4
JIRN Jiri 47.63 275 *e*P **P** **08 55 25.3 +0.7**
comp=Z,175nm,0.9s,mb6.1
RAMN Ramite 47.63 274 *e*P **P** **08 55 24.8 +0.2**
comp=Z,254nm,0.9s,mb6.2
PMR Palmer 47.64 37 *e*P **P** **08 55 23.8 -0.4**
PMR pmax pmax
comp=Z,24nm,1.0s,mb5.2
PMR Palmer 47.64 37 *e*P **P** **08 55 23.8 -0.4**
comp=Z,24nm,1.0s,mb5.2
MCK McKinley 47.65 34 *e*P **P** **08 55 24.4 +0.2**
MCK pmax pmax
comp=Z,17nm,1.0s,mb5.0
MCK McKinley 47.65 34 *e*P **P** **08 55 24.4 +0.2**
comp=Z,17nm,1.0s,mb5.0
GUN Gumba 47.77 275 *e*P **P** **08 55 25.8 +0.2**
comp=Z,535nm,1.1s,mb6.5
KTGM Kuala Trenggan 48.06 238 P **P** **08 55 28.9 +0.9**
KTGM Kuala Trenggan 48.06 238 P **P** **08 55 28.9 +0.9**
COLA College 48.10 33 *e*P **P** **08 55 27.6 -0.1**
COLA pmax pmax
comp=Z,19nm,0.8s,mb5.2
COLA College 48.10 33 *e*P **P** **08 55 27.6 -0.2**
comp=Z,19nm,0.8s,mb5.2
PKI Pulchoki 48.29 275 *e*P **P** **08 55 29.5 -0.2**
comp=Z,150nm,0.9s,mb6.0
PKI Pulchoki 48.29 275 *e*P **P** **08 55 30.1 +0.4**
PKI pmax pmax
comp=Z,89nm,0.7s,mb5.9
PKI Pulchoki 48.29 275 *e*P **P** **08 55 30.1 +0.4**
comp=Z,89nm,0.7s,mb5.9
KKN Kakani 48.29 276 *e*P **P** **08 55 29.9 +0.2**
comp=Z,217nm,0.7s,mb6.3
KKN Kakani 48.29 276 *e*P **P** **08 55 29.9 +0.2**
KKN pmax pmax
comp=Z,217nm,0.7s,mb6.3
PKIN Phulchoki 48.30 275 *e*P **P** **08 55 30.1 +0.3**
comp=Z,89nm,0.7s,mb5.9
DMN Daman 48.51 276 *e*P **P** **08 55 31.6 +0.2**
comp=Z,231nm,1.2s,mb6.1
ILAR Eielson Array 48.52 33 P **P** **08 55 30.3 -0.6**
comp=Z,12nm,0.8s,mb5.0,baz=266,slow=6.4,SNR=89
ILAR Eielson Array 48.52 33 P **P** **08 55 30.3 -0.6**
ILAR pmax pmax
comp=Z,13nm,0.8s
GKN Gorkha 48.70 276 *e*P **P** **08 55 32.6 -0.3**
comp=Z,472nm,1.0s,mb6.5
DIV Divide 49.29 38 *e*P **P** **08 55 37.7 +0.8**
comp=Z,40nm,1.0s,mb5.4
ULHL Ulahol 49.64 297 P **P** **08 55 40.6 +0.7**
SNR=9.9
BOK Bokaro 49.72 271 *e*PKP **P** **08 55 40.2 -0.5**
BOK AMb AMB 08 55 49.6
comp=Z,79nm,1.1s,mb5.7
KULM Kulim 49.77 240 P **P** **08 55 42.1 +0.9**
KULM Kulim 49.77 240 P **P** **08 55 40.8 -0.4**
BMRM Bremner River 49.87 38 *e*P **P** **08 55 41.3 0.0**
comp=Z,34nm,0.9s,mb5.4
TKM2 Tokmak 2 49.89 298 P **P** **08 55 42.8 +1.1**
SNR=82
TKM2 Tokmak 2 49.89 298 P **P** **08 55 42.3 +0.6**
TKM2 pmax pmax
comp=Z,116nm,0.9s,mb5.9
TKM2 Tokmak 2 49.89 298 *e*P **P** **08 55 42.6 +0.9**
comp=Z,98nm,0.7s,mb6.0
IPM Ipoh 50.10 239 P **P** **08 55 43.4 -0.2**
IPM Ipoh 50.10 239 P **P** **08 55 43.4 -0.2**
IPM Ipoh 50.10 239 P **P** **08 55 42.2 -1.5**
MYKOM Kota Tinggi 50.24 234 P **P** **08 55 49.9 +5.2**
comp=Z,20nm,1.5s,mb4.9
VOSK Vostochnaya 50.31 312 P **P** **08 55 44.0 -0.8**
VOSK pmax pmax
comp=Z,64nm,1.0s,mb5.6
KZA Kyzart 50.40 297 P **P** **08 55 47.0 +1.4**
SNR=19
KBK Karagaybulak 50.42 298 P **P** **08 55 46.6 +0.8**
SNR=54
CHMS Chumysh 50.45 298 P **P** **08 55 46.5 +0.5**
SNR=5.5
USP Ospenovka 50.55 299 P **P** **08 55 47.0 +0.3**
SNR=41
BVAR Borovoye Array 50.59 312 P **P** **08 55 47.0 +0.1**
comp=Z,15nm,0.6s,mb5.1,baz=79,slow=7.7,SNR=78
BVAR S **S** **09 03 06.7 +7.4**
comp=Z,1.7nm,0.9s,baz=71,slow=14,SNR=3.8
BVAR Borovoye Array 50.59 312 P **P** **08 55 47.0 +0.1**
BVAR S **S** **09 03 06.7 +7.4**
BVAR pmax pmax
comp=Z,15nm,0.6s
BVAR smax
comp=N,2.0nm,0.9s
BRVK Borovoye 50.65 312 P **P** **08 55 47.4 +0.1**
comp=N,263nm,1.0s,mb6.1,SNR=16
BRVK Borovoye 50.65 312 *e*P **P** **08 55 47.1 -0.2**
BRVK pmax pmax
comp=Z,41nm,0.9s,mb5.4
BRVK Borovoye 50.65 312 *e*P **P** **08 55 47.1 -0.2**
comp=Z,41nm,0.9s,mb5.4
BRVK Borovoye 50.65 312 P **P** **08 55 47.7 +0.4**
SNR=34
KSH Kashi 50.73 294 P **P** **08 55 52.3 +4.1**
KSH pP pP 08 56 02.4 +5.2
KSH PcP PcP 08 57 08.3 +3.3
KSH PP PP 08 57 49.6 +5.4
KSH ScP ScP 09 01 00.1 +1.1
KSH PcS PcS 09 01 04.4 +2.0
KSH S **S** **09 03 05.9 +4.2**
KSH sS sS 09 03 22.4 +5.9
KSH ScS ScS 09 05 37.3 +0.5
KSH SS SS 09 06 38.5 +2.5
KSH pmax pmax
comp=Z,67nm,1.0s,mb5.5
KSH pmax pmax
comp=Z,130nm,2.8s,mb5.4
KSH LR LR
comp=N,3μm,16.2s,MS5.5
KSH LR LR
comp=E,2μm,15.2s,MS5.5
KSH LR LR
comp=Z,4μm,15.7s,MS5.5
AAK Ala-Archa 50.75 298 P **P** **08 55 48.5 +0.2**
comp=Z,297nm,0.8s,mb6.3,SNR=12
AAK Ala-Archa 50.75 298 P **P** **08 55 48.6 +0.4**
SNR=22
AAK Ala-Archa 50.75 298 P **P** **08 55 48.4 +0.1**
comp=Z,26nm,0.8s,mb5.2,baz=92,slow=5.9,SNR=19
AAK LR LR 09 18 47.2
comp=Z,3μm,18.7s,MS5.3,baz=57,slow=38
AAK Ala-Archa 50.75 298 *d i*P **P** **08 55 48.2 -0.1**
AAK pmax pmax
comp=Z,36nm,1.2s,mb5.2
AAK MLR MLR
comp=Z,2μm,20.0s,MS5.1
AAK Ala-Archa 50.75 298 *e*P **P** **08 55 48.5 +0.3**
comp=Z,44nm,0.9s,mb5.4
AAK Ala-Archa 50.75 298 P **P** **08 55 48.6 +0.3**
comp=Z,143nmcomp=Z,14nm,1.0s,mb4.8
AAK Ala-Archa 50.75 298 P **P** **08 55 48.9 +0.7**
SNR=30
UCH Uchtor 50.87 298 P **P** **08 55 50.4 +1.2**
SNR=36
UCH Uchtor 50.87 298 *e*P **P** **08 55 49.9 +0.8**
comp=Z,46nm,1.0s,mb5.4
EGAK Eagle 50.96 32 *e*P **P** **08 55 49.0 -0.5**
comp=Z,27nm,1.0s,mb5.1
KAKA Kakadu 51.04 192 *e*P **P** **08 55 49.1 -1.5**
comp=Z,25nm,0.9s,mb5.2
KAKA Kakadu 51.04 192 *e*P **P** **08 55 48.8 -1.8**
comp=Z,92nm,0.9s,mb5.7
KAKA Kakadu 51.04 192 P **P** **08 55 49.4 -1.2**
EKS2 Erkin-Say 51.24 298 P **P** **08 55 52.3 +0.3**
SNR=31
EKS2 Erkin-Say 51.24 298 *e*P **P** **08 55 52.1 +0.2**
comp=Z,29nm,0.7s,mb5.3
COEN Coen 51.45 179 *e*P **P** **08 55 52.4 -1.2**
comp=Z,481nm,1.3s,mb6.3
COEN *e* pP 08 56 01.9 -0.7
AML Almayashu 51.47 298 P **P** **08 55 55.2 +1.5**
SNR=25
AML Almayashu 51.47 298 *e*P **P** **08 55 54.9 +1.2**
comp=Z,118nm,0.9s,mb5.8
PTH Pithoragarh 51.48 280 *e*PKP **P** **08 55 54.4 +0.5**
TPI Tanjungpandan 51.51 226 P pP 08 56 04.3 +1.1
comp=Z,51nm,1.2s
DAWY Dawson 51.82 33 *e*P **P** **08 55 56.5 +0.5**
PPBI Pangkal Pinang 51.92 228 P pP 08 56 08.4 +2.1
KHKI Kahang-Kahang 52.21 214 P **P** **08 56 05.1 +5.7**
comp=Z,138nm,1.0s,mb5.8
DDI Dehra Dun 52.81 282 *ex* x 08 55 57.5

DDI ex x 08 57 05.0
SDNR Sundarnagar 53.13 284 ePKP **P 08 56 05.5 -0.7**
BKNI Bangkinang 53.17 235 P **P 08 56 15.0 +8.4**
comp=Z,162nm,1.2s,mb5.8
HYT Haines Junctio 53.31 37 eP **P 08 56 08.4 +1.4**
KK31 Karatay Array 53.35 300 i P **P 08 56 07.5 -0.1**
KK31 pmax pmax
comp=Z,58nm,0.9s,mb5.5
INK Inuvik 53.43 27 eP **P 08 56 08.0 +0.2**
INK e pP 08 56 18.0 +1.2
INK pmax pmax
comp=Z,19nm,1.0s
INK Inuvik 53.43 27 eP **P 08 56 08.0 +0.2**
comp=Z,19nm,1.0s,mb5.0
INK e pP 08 56 18.0 +1.2
KIP Kipapa 53.57 90 eP **P 08 56 07.8 -1.7**
BHK Bhakra 53.59 284 ePKP **P 08 56 09.2 -0.4**
PWJI Pagerwojo 53.70 219 P **P 08 56 12.3 +1.9**
MNSI Mandailing Nat 53.78 237 P pP 08 56 21.9 +1.8
SDSI Sungai Dareh 53.87 234 P **P 08 56 15.0 +3.3**
comp=Z,2µmcomp=Z,42nm,1.4s,mb5.2
NDI New Delhi 54.21 281 ePKP **P 08 56 13.0 -1.1**
GSI Gunungsitoli 54.76 239 P **P 08 56 20.1 +1.9**
comp=Z,130nm,1.6s,mb5.7
KLSI 54.77 228 P **P 08 56 24.1 +5.8**
comp=Z,99nm,1.2s,mb5.7
KLI Kotabumi 54.84 228 P **P 08 56 27.7 +9.0**
comp=Z,6µmcomp=Z,196nm,1.0s,mb6.1
LEM Lembang 54.87 224 P **P 08 56 25.1 +6.1**
comp=Z,97nm,1.1s,mb5.8
MDSI Maura Dua 54.94 229 P **P 08 56 23.4 +4.0**
comp=Z,76nm,1.1s,mb5.6
VIS Vishakhapatnam 54.96 266 ePKP **P 08 56 19.2 -0.4**
VIS AMb AMB 08 56 23.2
comp=Z,43nm,1.0s,mb5.4
SVE Sverdlovsk 55.06 318⇓ eP **P 08 56 20.4 +0.6**
SVE e 08 58 28.5
SVE eS **S 09 03 59.1 -1.0**
SVE pmax pmax
comp=Z,130nm,0.9s,mb6.0
SVE MLR MLR
comp=Z,5µm,16.0s,MS5.7
KSI Kapahiang 55.23 231 P **P 08 56 25.3 +3.7**
comp=Z,161nm,1.0s,mb6.0
SOKR Solikamsk 56.17 322c i P **P 08 56 27.7 -0.1**
SOKR pmax pmax
comp=Z,30nm,0.9s,mb5.3
SOKR MLR MLR
comp=Z,2µm,17.0s,MS5.2
ARU Arti 56.27 318 P **P 08 56 28.3 -0.2**
comp=Z,607nm,0.8s,mb6.7,SNR=11
ARU Arti 56.27 318c i P **P 08 56 28.4 -0.1**
ARU 08 57 26.8
ARU 08 58 35.6
ARU S **S 09 04 17.2 +1.0**
ARU 09 06 10.7
ARU SS SS 09 07 59.5 -3.1
ARU pmax pmax
comp=Z,179nm,1.7s,mb5.8
ARU MLR MLR
comp=Z,5µm,17.0s,MS5.6
ARU Arti 56.27 318 eP **P 08 56 28.1 -0.4**
comp=Z,96nm,0.9s,mb5.8
NGP Nagpur 56.49 272 ePKP **P 08 56 28.8 -1.8**
NGP AMb AMB 08 56 38.1
comp=Z,97nm,1.8s,mb5.5
BHPL Bhopal 56.69 275 ePKP **P 08 56 33.7 +1.7**
BHPL AMb AMB 08 56 40.8
comp=Z,88nm,1.1s,mb5.7
AJM Ajmer 57.26 280 ePKP **P 08 56 34.9 -1.1**
AJM AMb AMB 08 56 44.7
comp=Z,84nm,1.3s,mb5.6
DLBC Dease Lake 57.63 38 eP **P 08 56 39.4 +1.3**
FITZ Fitzroy Crossi 57.73 199 eP **P 08 56 38.0 -1.2**
comp=Z,38nm,1.2s,mb5.3
FITZ Fitzroy Crossi 57.73 199 eP **P 08 56 39.0 -0.2**
comp=Z,56nm,1.3s,mb5.4
FITZ Fitzroy Crossi 57.73 199 P **P 08 56 38.6 -0.6**
KBL Kabul 57.79 291 eP **P 08 56 39.4 -0.3**
KBL pmax pmax
comp=Z,102nm,0.9s,mb5.8
KBL Kabul 57.79 291 eP **P 08 56 39.4 -0.2**
comp=Z,102nm,0.9s,mb5.9
WRAB Tennant Creek 57.87 189 P **P 08 56 38.0 -2.1**
comp=Z,465nm,0.9s,mb6.5,SNR=11
WRAB Tennant Creek 57.87 189 eP **P 08 56 38.4 -1.7**
WRAB e pP 08 56 48.2 -1.0
WRAB pmax pmax
comp=Z,72nm,0.9s,mb5.7
WRAB Tennant Creek 57.87 189 eP **P 08 56 38.4 -1.7**
comp=Z,72nm,0.9s,mb5.7
WRAB e pP 08 56 48.2 -1.1
AB31 Akbulak array 57.99 310 i P **P 08 56 40.3 -0.5**
AB31 pmax pmax
comp=Z,35nm,0.7s,mb5.5
ABKAR Akbulak array 57.99 310 eP **P 08 56 40.3 -0.5**
comp=Z,26nm,0.6s,mb5.4
ABKAR e pP 08 56 49.7 -0.3
AKL Akola 58.34 273 ePKP **P 08 56 43.4 -0.2**
AKL AMb AMB 08 56 52.9
comp=Z,75nm,1.2s,mb5.6
HYB Hyderabad 58.90 269 eP **P 08 56 47.0 -0.6**
HYB Hyderabad 58.90 269 i P **P 08 56 47.0 -0.6**
ALE Alert 59.34 4 P **P 08 56 49.0 -0.8**
comp=Z,462nm,0.9s,mb6.5,SNR=14
KBS Kingsbay 60.06 350c i P **P 08 56 55.0 +0.3**
KBS pmax pmax
comp=Z,42nm,1.7s,mb5.2
KBS MLR MLR
comp=Z,365nm,16.0s,MS4.6
KBS Kingsbay 60.06 350 eP **P 08 56 55.5 +0.8**
comp=Z,35nm,1.0s,mb5.3
ASAR Alice Springs 61.60 189 P **P 08 57 04.4 -1.4**
comp=Z,12nm,0.8s,mb5.1,baz=12,slow=6.0,SNR=52
ASAR Alice Springs 61.60 189 P **P 08 57 04.4 -1.4**
ASAR pmax pmax
comp=Z,12nm,0.8s
RES Resolute Bay 61.73 15 eP **P 08 57 04.9 -1.2**
RES e pP 08 57 14.4 -0.9
RES pmax pmax
comp=Z,60nm,0.9s,mb5.7
RES Resolute Bay 61.73 15 eP **P 08 57 04.9 -1.2**
comp=Z,60nm,0.9s,mb5.7
RES e pP 08 57 14.4 -0.8
LVZ Lovozero 61.73 336⇑ i P **P 08 57 05.6 -0.6**
LVZ pmax pmax
comp=Z,27nm,1.1s,mb5.3
LVZ MLR MLR
comp=Z,2µm,18.0s,MS5.3
LVZ Lovozero 61.73 336⇑ i P **P 08 57 05.7 -0.5**
POO Poona 62.02 272 ePKP **P 08 57 08.7 -0.2**
POO AMb AMB 08 57 17.6
comp=Z,79nm,1.3s,mb5.7
POO Poona 62.02 272⇑ i P **P 08 57 08.0 -0.9**
comp=Z,30nm,1.0s,mb5.4
POO ex x 09 00 42.0
APA Apatity 62.31 336⇓ i P **P 08 57 10.0 -0.1**
APA i pP 08 57 19.7 +0.5
APA i 08 57 49.0
APA eS **S 09 05 34.0 0.0**
APA pmax pmax
comp=Z,39nm,1.0s,mb5.5
APA MLR MLR
comp=Z,400nm,18.0s,MS4.6
MBWA Marble Bar 62.32 204 eP **P 08 57 09.8 -0.9**
comp=Z,32nm,0.8s,mb5.5
MBWA e pP 08 57 19.1 -0.8
MBWA Marble Bar 62.32 204 P **P 08 57 19.1 +8.4**
KAD Karad 62.43 271 ePKP **P 08 57 10.9 -0.7**
KAD AMb AMB 08 57 20.3
comp=Z,74nm,1.3s,mb5.7
YKA Yellowknife Ar 62.84 31 P **P 08 57 13.1 -0.6**
comp=Z,3.7nm,0.7s,mb4.7,baz=306,slow=6.8,SNR=9.9
YKA Yellowknife Ar 62.84 31 P **P 08 57 13.1 -0.6**
YKA pmax pmax
comp=Z,4.0nm,0.7s
KEV Kevo 63.01 339 eP **P 08 57 13.6 -1.1**
KEV pmax pmax
comp=Z,33nm,1.0s,mb5.4
KEV Kevo 63.01 339 eP **P 08 57 13.6 -1.1**
comp=Z,33nm,1.0s,mb5.4
KEV Kevo 63.01 339 ep **P 08 57 13.6 -1.1**
comp=Z,33nm,1.0s,mb5.4
EIDS Eidsvold 63.34 171 eP **P 08 57 16.3 -1.1**
comp=Z,39nm,1.4s,mb5.3
EIDS e pP 08 57 25.8 -0.7
ARCES ARCESS Array B 63.56 339 P **P 08 57 18.4 0.0**
comp=Z,11nm,0.8s,mb4.9,baz=54,slow=6.8,SNR=21
ARCES LR LR 09 31 21.1
comp=Z,620nm,19.8s,MS4.8,baz=224,slow=42
ARE0 ARCESS Array S 63.56 339 eP **P 08 57 18.5 +0.2**
DZM Mont Dzumac 63.71 155 eP **P 08 57 20.0 +0.1**
comp=Z,67nm,1.3s,mb5.5
DZM eS **S 09 05 49.9 -2.5**
comp=Z,787nm,29.1s
DZM eLR LR 09 16 16.6
comp=Z,3µm,21.8s
ABKT Ailbek 64.08 299 P **P 08 57 22.5 +0.2**
comp=Z,243nm,1.3s,mb6.1,SNR=7.7
DAG Danmarks Havn 65.11 355⇑ i P **P 08 57 38.3 +10**
comp=Z,14nm,0.8s,mb5.0
JOF Joensuu 65.64 332 eP **P 08 57 30.9 -1.2**
JOF pmax pmax
comp=Z,20nm,0.6s,mb5.3
JOF Joensuu 65.64 332 ep **P 08 57 30.9 -1.2**
comp=Z,20nm,0.6s,mb5.3
NLWA Neilton Lookou 65.72 48⇓ P **P 08 57 31.6 -1.2**
baz=66
A05A Maple Falls 65.95 46⇑ P **P 08 57 33.9 -0.4**
baz=66
E03A Lebam 66.33 49⇑ P **P 08 57 36.7 -0.1**
baz=66
JCW Jim Creek 66.45 47 eP **P 08 57 37.8 +0.3**
JCW e pP 08 57 46.6 -0.1
B06A Marblemount 66.54 46⇑⇑ P **P 08 57 37.9 -0.2**
baz=66
F03A Seaside 66.64 49⇑ P **P 08 57 39.8 +1.0**
baz=66
D05A Enumclaw 66.93 48⇑ P **P 08 57 41.0 +0.4**
baz=67
MOS Moscow 67.07 324 eP **P 08 57 38.8 -2.5**
MOS e pP 08 57 49.0 -1.6
MOS e 08 58 05.3
MOS e 09 00 07.5
MOS eS S 09 06 31.1 -1.9
MOS pmax pmax
comp=Z,90nm,1.4s,mb5.6
MOS pmax pmax
comp=Z,200nm,1.6s,mb5.9
MOS Moscow 67.07 324 eP **P 08 57 40.5 -0.8**
F04A Amboy 67.33 49⇓ P **P 08 57 43.1 0.0**
baz=67
VRHR Novokhopersk 67.61 318 eP **P 08 57 43.5 -1.3**
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,20nm,0.7s
VRHR pmax pmax
comp=Z,50nm,0.7s,mb5.7
G04A Mulino 67.67 50⇑ P **P 08 57 45.3 0.0**
baz=68
ETW Entiat 67.67 47 eP **P 08 57 45.8 +0.5**
B08A Colville Reser 67.84 45⇑⇑ P **P 08 57 45.8 -0.5**
baz=68,SNR=7.1
PUL Pulkovo 67.92 330 eP **P 08 57 47.0 +0.4**
PUL pmax pmax
comp=Z,88nm,1.1s,mb5.7
PUL MLR MLR
comp=Z,2µm,18.0s,MS5.4
PUL Pulkovo 67.92 330 eP **P 08 57 47.1 +0.5**
OBN Obninsk 67.92 323⇑ i P **P 08 57 46.3 -0.4**
OBN i 09 00 18.8
OBN i S S 09 06 44.0 +0.8
OBN pmax pmax
comp=Z,62nm,1.3s,mb5.5
OBN MLR MLR
comp=Z,2µm,16.0s,MS5.4
OBN Obninsk 67.92 323 eP **P 08 57 46.9 +0.2**
comp=Z,38nm,0.7s,mb5.5
OBN e pP 08 57 54.2 -1.7
KAF Kangasniemi 67.97 333 eP **P 08 57 45.9 -1.0**
KAF pmax pmax
comp=Z,41nm,0.7s,mb5.6
KAF Kangasniemi 67.97 333 eP **P 08 57 45.9 -1.0**
comp=Z,41nm,0.7s,mb5.6
KAF Kangasniemi 67.97 333 ep **P 08 57 45.9 -1.0**
comp=Z,41nm,0.7s,mb5.6,baz=48,slow=6.0
H04A Detroit Lake 68.12 50⇓ P **P 08 57 48.1 0.0**
baz=68
EDM Edmonton 68.36 39 eP **P 08 57 49.0 -0.5**
EDM e 08 57 59.8
FINES FINESS Array B 68.49 332 P **P 08 57 49.9 -0.2**
comp=Z,42nm,0.7s,mb5.6,baz=48,slow=8.5,SNR=92
FINES LR LR 09 32 51.0
comp=Z,1µm,18.4s,MS5.1,baz=44,slow=40
FINES FINESS Array B 68.49 332 P **P 08 57 49.9 -0.3**
FINES pmax pmax
comp=Z,42nm,0.7s
FINES MLR MLR
comp=Z,1µm,18.4s
FINES FINESS Array B 68.49 332 P **P 08 57 49.9 -0.2**
FINES LR LR 09 32 51.0
E07A Sunnyside 68.51 47⇑ P **P 08 57 50.7 +0.2**
baz=68
OD2 Odessa Site #2 68.72 46 eP **P 08 57 51.8 -0.1**
C09A Chrisman Ranch 68.74 46⇓ P **P 08 57 51.4 -0.6**
baz=68
D08A Wollman Farm, 68.78 46⇓ P **P 08 57 51.7 -0.5**
baz=69
F07A Phinny Hill Vi 68.82 48⇑ P **P 08 57 52.7 +0.2**
baz=69
VSR Storozhevoye 68.83 319 eP **P 08 57 51.9 -0.6**
VSR e 09 00 20.5
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,10.0nm,0.8s
VSR pmax pmax
comp=Z,40nm,0.8s,mb5.4
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,20nm,0.9s
VSR pmax pmax
comp=Z,20nm,0.9s,mb5.0
VSR MLR MLR
comp=N,3µm,19.0s,MS5.8
VSR MLR MLR
comp=E,4µm,19.0s,MS5.8
VSR MLR MLR
comp=Z,6µm,19.0s,MS5.9
VORD Divnogorie 68.91 319 eP **P 08 57 52.4 -0.6**
VORD e pP 08 58 01.0 -1.2
VORD e 09 00 27.1
VORD pmax pmax
comp=N,20nm,0.7s
VORD pmax pmax
comp=E,40nm,0.7s
VORD pmax pmax
comp=Z,30nm,0.7s,mb5.3
VORD pmax pmax
comp=Z,210nm,4.0s
VORD pmax pmax
comp=N,40nm,0.8s
VORD pmax pmax
comp=E,60nm,1.0s
VORD MLR MLR
comp=N,2µm,18.0s,MS5.7
VORD MLR MLR
comp=E,4µm,18.0s,MS5.7
VORD MLR MLR
comp=Z,5µm,18.0s,MS5.8
E08A Dider Farm, El 69.00 47⇑ P **P 08 57 53.3 -0.3**
baz=69
NEW Newport 69.13 45 eP **P 08 57 54.5 +0.1**
NEW pmax pmax
comp=Z,9.0nm,1.0s
NEW Newport 69.13 45 eP **P 08 57 54.5 +0.1**
comp=Z,9.3nm,1.0s,mb4.7
KHMM Horse Mountain 69.17 54 eP **P 08 57 56.4 +1.7**
comp=Z,25nm,1.2s,mb5.0
STKA Stephens Creek 69.28 181 eP **P 08 57 53.7 -1.6**
comp=Z,7.0nm,0.9s,mb4.6
STKA Stephens Creek 69.28 181 P **P 08 57 53.9 -1.4**
comp=Z,5.1nm,0.8s,mb4.5,baz=3.0,slow=6.9,SNR=7.9
STKA Stephens Creek 69.28 181 P **P 08 57 53.9 -1.4**
YBH Yreka Blue Hor 69.36 53 eP **P 08 57 56.4 +0.5**
YBH e pP 08 58 05.8 +0.6
YBH pmax pmax
comp=Z,20nm,1.3s
YBH Yreka Blue Hor 69.36 53 eP **P 08 57 56.4 +0.5**
comp=Z,20nm,1.3s,mb4.9
YBH e pP 08 58 05.8 +0.6
FORT Forrest 69.47 193 eP **P 08 57 55.3 -1.1**
comp=Z,36nm,0.8s,mb5.3
E09A Wood Farm, Sta 69.52 47⇑ P **P 08 57 56.9 0.0**
baz=69
A12A Yaak River Ran 69.57 43⇓ P **P 08 57 57.5 +0.4**
baz=69
G08A Pilot Rock 69.72 48⇑ P **P 08 57 57.9 -0.2**
baz=70
C11A Tepee Creek (N 69.85 45⇓ P **P 08 57 58.8 -0.1**
baz=70
B12A Libby 69.87 44⇓ P **P 08 57 58.9 0.0**
baz=70
K05A Summer Lake 69.96 51⇓ P **P 08 58 00.2 +0.6**
baz=70,SNR=15
SUMG Summit 69.96 0 eP **P 08 57 59.9 +0.8**
comp=Z,58nm,0.8s,mb5.6
SUMG Summit 69.96 0⇑ i P **P 08 57 59.8 +0.7**
comp=Z,62nm,0.9s,mb5.5
SUMG
comp=Z,570nm,19.0s
I07A Izee 70.06 49⇑ P **P 08 58 00.3 +0.2**
baz=70
WDC Whiskeytown Da 70.09 54 eP **P 08 58 00.7 +0.3**
WDC e pP 08 58 09.3 -0.4
WDC pmax pmax
comp=Z,14nm,1.1s,mb4.8
WDC Whiskeytown Da 70.09 54 eP **P 08 58 00.7 +0.3**
comp=Z,14nm,1.1s,mb4.8
WDC e pP 08 58 09.2 -0.5
VSU Vasula 70.17 330c i P **P 08 58 00.6 0.0**
VSU pmax pmax
comp=Z,84nm,1.3s,mb5.5
VSU MLR MLR
comp=Z,2µm,18.0s,MS5.5
A13A Flathead Natio 70.24 43⇓ P **P 08 58 01.2 0.0**
baz=70
F10A Beach Ranch, E 70.35 47⇓ P **P 08 58 01.8 -0.1**
baz=70
C12B Naegeli Ranch, 70.36 44⇑ P **P 08 58 01.6 -0.3**
baz=70
WALA Waterton Lakes 70.44 43 eP **P 08 58 02.5 0.0**
comp=Z,0.4nm,0.9s
WALA e 08 58 13.9
B13A Whitefish 70.54 43⇑⇑ P **P 08 58 03.2 +0.1**
baz=70,SNR=17
BSMT Bassoo Peak 70.66 44 eP **P 08 58 04.1 +0.3**
DGRG David-gareji 70.70 308 P **P 08 58 03.7 -0.5**
A14A Double T Ranch 70.75 43⇑ P **P 08 58 04.3 0.0**
baz=70,SNR=8.7
MOD Modoc 70.78 52 eP **P 08 58 04.7 +0.1**
comp=Z,16nm,1.1s,mb4.9
D12A Red Ives Fores 70.81 45⇓ P **P 08 58 04.3 -0.3**
baz=71
ZEI Tsey 70.88 310 eP **P 08 58 04.1 -1.1**
ZEI pmax pmax
comp=Z,58nm,1.3s,mb5.3
C13A Hot Springs 70.88 44⇓ P **P 08 58 05.1 0.0**
baz=71,SNR=7.7
MTA Mtatsminda 70.92 308 P **P 08 58 05.4 -0.1**
BMO Blue Mountains 70.94 48 eP **P 08 58 05.5 0.0**
comp=Z,8.1nm,1.2s,mb4.5
TBLG Delisi 70.94 308 eP **P 08 58 06.1 +0.5**
TBLG Delisi 70.94 308 P **P 08 58 06.1 +0.5**
KIV Kislovodsk 70.95 311 P **P 08 58 06.6 +1.0**
comp=Z,689nm,0.9s,mb6.6,SNR=12
KIV Kislovodsk 70.95 311 eP **P 08 58 06.0 +0.4**
KIV e 08 58 26.4
KIV ePPP 09 02 24.9
KIV eS S 09 07 20.2 +1.0
KIV pmax pmax
comp=Z,112nm,1.0s,mb5.8
KIV pmax pmax
comp=Z,81nm,4.4s
KIV MLR MLR
comp=Z,1µm,19.0s,MS5.2
KIV Kislovodsk 70.95 311 eP **P 08 58 06.1 +0.5**
comp=Z,99nm,0.9s,mb5.7
KIV Kislovodsk 70.95 311 P **P 08 58 06.5 +0.9**
SNR=57
JTMT Jette 71.00 44 eP **P 08 58 06.0 +0.1**
E12A Beaver Dam Sad 71.05 46⇓ P **P 08 58 06.2 0.0**
baz=71
YBMT Yellow Bay 71.08 44 eP **P 08 58 06.8 +0.5**
J08A Circle Bar Ran 71.08 50⇑ P **P 08 58 06.6 +0.1**
baz=71
KEH Kehvi 71.11 309 P **P 08 58 05.8 -0.8**
A15A Johnson Ranch, 71.12 42⇓ P **P 08 58 05.8 -0.7**
baz=71,SNR=12
B14A Marquette Ranc 71.19 43⇓ P **P 08 58 07.1 +0.1**
baz=71,SNR=5.4
ONI Oni 71.25 310 P **P 08 58 07.8 +0.4**
C14A Swan Lake 71.28 44⇓ P **P 08 58 07.4 -0.1**
baz=71
D13A Huson 71.28 45⇓ P **P 08 58 07.1 -0.5**
baz=71
SWMT Swartz Lake 71.29 44 eP **P 08 58 07.7 +0.1**
OHCM Honcut 71.45 54 eP **P 08 58 08.3 -0.5**
SCO Scoresbysund 71.46 354⇑ i P **P 08 57 59.8 -8.4**
SCO pmax pmax
comp=Z,62nm,0.9s,mb5.5
SCO MLR MLR
comp=Z,580nm,19.0s,MS4.9
WVOR Wild Horse Val 71.51 50 eP **P 08 58 08.7 -0.3**
WVOR pmax pmax
comp=Z,14nm,1.2s,mb4.8
WVOR Wild Horse Val 71.51 50 eP **P 08 58 08.7 -0.3**
comp=Z,14nm,1.2s,mb4.8
B15A Bradely Ranch, 71.60 43⇑ P **P 08 58 09.3 -0.2**
baz=71,SNR=16
F12A Elk City 71.61 46⇑ P **P 08 58 09.5 -0.1**
baz=71,SNR=11
MSO Missoula 71.72 45 eP **P 08 58 09.4 -0.8**
SLMT Seeley Lake 71.73 44 eP **P 08 58 10.0 -0.3**
A16A West Butte Ran 71.74 42⇑ P **P 08 58 10.0 -0.3**
baz=72
E13A Victor 71.81 45⇑ P **P 08 58 10.1 -0.7**
baz=72
D14A Greenough 71.82 44⇑ P **P 08 58 10.0 -0.8**
baz=72
GNI Garni 71.82 307c i P **P 08 58 11.2 +0.3**
GNI pmax pmax
comp=Z,39nm,1.4s
GNI MLR MLR
comp=Z,1µm,16.0s
GNI Garni 71.82 307 eP **P 08 58 12.2 +1.3**
comp=Z,88nm,1.3s,mb5.5
GNI Garni 71.82 307 P **P 08 58 12.4 +1.5**
SNR=17
SMDO Samad 71.88 285 P **P 08 58 12.8 +1.2**
SNR=5.5
B16A M & M Farms, S 72.00 42⇑ P **P 08 58 11.3 -0.6**
baz=72
J10A Berg Farm, Mel 72.07 49⇓ P **P 08 58 12.0 -0.4**
baz=72
F13A Darby 72.11 46⇑ P **P 08 58 11.8 -0.8**
baz=72
IZAR Zarasai 72.16 328 eP **P 08 58 13.1 +0.4**
IZAR AMB AMB 08 58 14.7
comp=Z,17nm,1.5s,mb4.8
A17A Triple J Farms 72.22 41⇑ P **P 08 58 12.8 -0.3**
baz=72,SNR=12
E14A Clinton 72.22 45⇓ P **P 08 58 12.6 -0.6**
baz=72
JMDO Jabal Madar 72.22 285 P **P 08 58 13.8 +0.2**
SNR=5.9
IDID Didziasalis 72.24 327 eP **P 08 58 13.4 +0.3**
IDID AMB AMB 08 58 15.0
comp=Z,23nm,0.9s,mb5.1
MICGM Minsk 72.28 326 eP **P 08 58 12.0 -1.4**
MNK Minsk 72.30 326 eP **P 08 58 12.0 -1.5**
MNK MLR MLR
comp=Z,6µm,16.0s,MS5.9
C16A Fuhringer Ranc 72.35 43⇑ P **P 08 58 13.7 -0.2**
baz=72,SNR=14
K10A MacKenzie Ranc 72.38 49⇑ P **P 08 58 14.5 +0.2**
baz=72,SNR=11
IIGN Ignalina 72.44 327 eP **P 08 58 14.6 +0.3**
IIGN AMB AMB 08 58 15.4
comp=Z,23nm,0.7s,mb5.2
NACGM Naroch 72.50 327 e **P 08 58 13.0 -1.7**
H12A Diamond D Ranc 72.54 47⇑ P **P 08 58 14.7 -0.5**
baz=72,SNR=5.9
B17A L&G Farms, Che 72.56 42⇓ P **P 08 58 14.9 -0.3**
baz=72,SNR=7.7
G13A Cobalt 72.58 46⇑ P **P 08 58 14.6 -0.8**

baz=72,SNR=6.5
WCN Washoe City 72.58 54 ⇓P P 08 58 15.5 0.0
baz=72
PAHR Pah Rah Range 72.59 53 eP P 08 58 15.9 +0.4
comp=Z,17nm,1.1s,mb4.9
MFID Camas Ranch 72.63 48 ⇑P P 08 58 15.7 0.0
baz=72,SNR=6.4
F14A Wisdom 72.64 45 ⇑P P 08 58 15.2 -0.5
baz=72
A18A Metzger Ranch, 72.68 41 ⇑P P 08 58 15.5 -0.4
baz=72,SNR=11
E15A Deer Lodge 72.69 44 ⇓P P 08 58 15.6 -0.4
baz=72,SNR=6.5
BSY Bisya 72.71 286 P P 08 58 17.1 +0.6
SNR=6.5
FFC Flin Flon 72.73 33 P P 08 58 15.4 -0.7
comp=Z,132nm,0.9s,mb5.9,SNR=9.1
FFC Flin Flon 72.73 33 eP P 08 58 15.8 -0.3
FFC pmax pmax
comp=Z,40nm,1.1s,mb5.3
FFC Flin Flon 72.73 33 eP P 08 58 15.8 -0.3
comp=Z,40nm,1.1s,mb5.3
I12A Atlanta 72.82 48 ⇓P P 08 58 16.8 -0.1
baz=73,SNR=20
H13A Challis 72.88 47 ⇓P P 08 58 17.0 -0.2
baz=73,SNR=16
K11A Parker Ranch, 72.89 49 ⇓P P 08 58 17.2 0.0
baz=73,SNR=6.6
ARQ Araqi 72.89 286 P P 08 58 18.2 +0.6
SNR=6.5
CMB Columbia Colle 72.89 55 eP P 08 58 16.8 -0.6
CMB e pP 08 58 26.3 -0.4
CMB pmax pmax
comp=Z,20nm,1.2s,mb4.9
CMB Columbia Colle 72.89 55 eP P 08 58 16.8 -0.6
comp=Z,20nm,1.2s,mb4.9
CMB e pP 08 58 26.3 -0.4
D16A Dana Ranch, Ca 72.92 43 ⇓P P 08 58 17.3 -0.1
baz=73,SNR=6.5
SOC Sochi 72.92 312 *c iP* **P 08 58 17.4 0.0**
SOC e*PP pP 08 58 25.0 -1.8
SOC e*SP sP 08 58 29.4 -0.8
SOC e 08 58 34.2
SOC e 09 00 55.5
SOC ePPP 09 02 38.9
SOC eS S 09 07 41.0 -0.9
SOC e 09 08 25.8
SOC eSS SS 09 12 25.7 +3.9
SOC pmax pmax
comp=Z,47nm,0.9s,mb5.4
SOC MLR MLR
comp=Z,2µm,18.0s,MS5.5
HRY Holter Researc 72.96 44 eP P 08 58 17.8 +0.1
L10A Juniper Basin 73.03 50 ⇑P P 08 58 18.4 +0.3
baz=73
B18A Beardsley Farm 73.04 42 ⇓P P 08 58 17.9 -0.2
baz=73,SNR=17
F15A Butte 73.12 45 ⇓P P 08 58 18.6 0.0
baz=73,SNR=22
E16A East Helena 73.15 44 ⇓P P 08 58 18.7 -0.1
baz=73,SNR=6.7
LRM Limekiln Ridge 73.15 45 eP P 08 58 18.9 +0.2
J12A Stokes Ranch, 73.16 48 ⇓P P 08 58 19.1 +0.2
baz=73,SNR=5.9
EGMT Eagleton 73.28 42 ⇓P P 08 58 19.2 -0.2
baz=73,SNR=8.6
EGMT Eagleton 73.28 42 eP P 08 58 19.3 -0.1
comp=Z,16nm,1.0s,mb4.9
EGMT e 08 58 31.6
M10A I.L. Ranch, Tu 73.31 50 ⇑P P 08 58 20.4 +0.6
baz=73,SNR=6.0
D17A Six Diamond Ra 73.31 43 ⇓P P 08 58 19.6 -0.1
baz=73,SNR=7.3
I13A Wildhorse Cree 73.34 47 ⇓P P 08 58 20.5 +0.5
baz=73,SNR=7.9
DLMT Dillon 73.35 45 eP P 08 58 20.2 +0.3
comp=Z,8.4nm,0.8s,mb4.7
H14A Leadore 73.36 46 ⇑P P 08 58 19.7 -0.3
baz=73
HLID Hailey 73.38 48 ⇑P P 08 58 20.4 +0.2
baz=73,SNR=7.5
HLID Hailey 73.38 48 eP P 08 58 20.4 +0.3
comp=Z,6.8nm,1.0s,mb4.5
L11A Cat Creek Ranc 73.41 49 ⇓P P 08 58 20.6 +0.3
baz=73,SNR=12
ANN Anapa 73.52 314 eP P 08 58 18.7 -2.3
ANN e*PP pP 08 58 27.8 -2.5
ANN e 08 58 33.5
ANN e 09 00 59.8
ANN eS S 09 07 46.9 -1.8
ANN eSS SS 09 12 26.5 -4.3
ANN pmax pmax
comp=Z,76nm,1.3s,mb5.5
ANN MLR MLR
comp=N,1µm,21.0s,MS5.3
ANN MLR MLR
comp=E,1µm,21.0s,MS5.3
ANN MLR MLR
comp=Z,1µm,21.0s,MS5.2
G15A Dillon 73.53 45 ⇑P P 08 58 20.9 -0.1
baz=73,SNR=15
MCMT McKenzie Canyo 73.53 46 eP P 08 58 19.6 -1.4
comp=Z,1.7nm,0.8s,mb4.0
J13A Cove Ranch, Pi 73.62 48 ⇑P P 08 58 21.8 +0.2
baz=73,SNR=8.9
F16A Kennard Place, 73.63 44 ⇑P P 08 58 21.5 -0.1
baz=73,SNR=9.4
K12A Draper Farm, C 73.64 49 ⇑P P 08 58 21.6 -0.1
baz=73
E17A Martinsdale 73.64 44 ⇓P P 08 58 21.9 +0.3
baz=73,SNR=9.9
BOZ Bozeman (W) 73.72 45 ⇓P P 08 58 22.2 +0.1
baz=74,SNR=14
BOZ Bozeman (W) 73.72 45 eP P 08 58 22.3 +0.2
BOZ pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
BOZ Bozeman (W) 73.72 45 eP P 08 58 22.3 +0.2
comp=Z,9.1nm,1.0s,mb4.7
I14A Mackay 73.72 47 ⇑P P 08 58 22.5 +0.4
baz=74,SNR=21
D18A Linhart Farms, 73.76 43 ⇑P P 08 58 22.4 0.0
baz=74
NB2 NORSAR Subarra 73.78 338 P P 08 58 22.1 -0.1
comp=Z,48nm,1.1s,mb5.3,baz=40,slow=6.2
NOA NORSAR Array B 73.78 338 P P 08 58 22.1 -0.1
comp=Z,20nm,0.8s,mb5.1,baz=39,slow=5.8,SNR=50
NOA LR LR 09 33 42.8
comp=Z,2µm,19.6s,MS5.3,baz=40,slow=38
NOA NORSAR Array B 73.78 338 P P 08 58 22.1 -0.1
NOA pmax pmax
comp=Z,20nm,0.9s
NOA MLR MLR
comp=Z,2µm,19.6s
L12A House Creek Ra 73.86 49 ⇓P P 08 58 23.5 +0.4
baz=74,SNR=9.6
G16A Moss Hill, Enn 73.87 45 ⇓P P 08 58 23.1 +0.1
baz=74,SNR=9.2
NAO01 NORSAR Array S 74.03 338 eP P 08 58 23.0 -0.7
comp=Z,10nm,0.7s,mb4.9
J14A Carey 74.05 47 ⇑P P 08 58 24.9 +0.8
baz=74,SNR=18
O10A Cortez Mining, 74.06 51 ⇓P P 08 58 24.6 +0.4
baz=74
E18A Harlowton 74.09 43 ⇑P P 08 58 24.5 +0.3
baz=74,SNR=9.1
F17A Fitzpatrick Pl 74.09 44 ⇑P P 08 58 24.6 +0.3
baz=74,SNR=10
K13A Stover Farm, H 74.12 48 ⇓P P 08 58 24.9 +0.4
baz=74,SNR=5.7
MLAC Mammoth Lakes 74.13 55 ⇓P P 08 58 25.0 +0.3
baz=74
AKASG Malin Array Be 74.14 323 P P 08 58 24.1 -0.4
comp=Z,32nm,0.7s,mb5.4,baz=45,slow=5.9,SNR=102
AKASG LR LR 09 32 19.2
comp=Z,927nm,19.9s,MS5.1,baz=60,slow=37
AKASG Malin Array Be 74.14 323 P P 08 58 24.1 -0.4
AKASG pmax pmax
comp=Z,32nm,0.7s
AKASG MLR MLR
comp=Z,927nm,19.9s
KIEV Kiev 74.15 323 eP P 08 58 24.1 -0.4
KIEV e pP 08 58 33.4 -0.5
KIEV pmax pmax
comp=Z,79nm,1.0s,mb5.6
KIEV Kiev 74.15 323 eP P 08 58 24.1 -0.5
comp=Z,79nm,1.0s,mb5.6
KIEV e pP 08 58 33.4 -0.5

N11A Elko Archery C 74.22 50 ⇑P P 08 58 25.4 +0.3
baz=74
I15A Monteview 74.23 46 ⇑P P 08 58 25.1 -0.1
baz=74
M12A Wells 74.36 50 ⇓P P 08 58 26.8 +0.8
baz=74,SNR=11
G17A Pierce Place, 74.41 44 ⇓P P 08 58 26.5 +0.3
baz=74,SNR=7.3
MTUM Tungsten Hills 74.47 55 eP P 08 58 27.2 +0.5
H16A Russell Place, 74.51 45 ⇑P P 08 58 27.0 +0.3
baz=74,SNR=8.4
L13A Double Diamond 74.54 49 ⇑P P 08 58 27.4 +0.5
baz=74,SNR=8.8
F18A Big Timber 74.61 44 ⇓P P 08 58 27.4 +0.1
baz=74,SNR=12
J15A Blackfoot 74.63 47 ⇓P P 08 58 28.2 +0.7
baz=74,SNR=11
RCTC Rector, Farmer 74.63 56 ⇑P P 08 58 26.9 -0.7
baz=74
SUW Suwalki 74.64 328 eP P 08 58 26.7 -0.7
SUW LMZ 09 33 45.1
comp=Z,2µm,16.8s
SUW Suwalki 74.64 328 eP P 08 58 27.5 +0.2
SUW e 08 58 34.0
SUW pmax pmax
comp=Z,44nm,0.8s,mb5.4
SUW Suwalki 74.64 328 eP P 08 58 27.4 +0.1
comp=Z,44nm,0.8s,mb5.4
SUW e 08 58 34.0
O11A Cowboy Ranch, 74.67 51 ⇓P P 08 58 27.9 +0.1
baz=74
GCMT Greycliff 74.71 44 eP P 08 58 28.3 +0.4
comp=Z,12nm,1.1s,mb4.7
SMMC Simmler 74.71 57 ⇑P P 08 58 28.0 -0.1
baz=74
K14A Jones Ranch, D 74.72 48 ⇑P P 08 58 28.5 +0.5
baz=74,SNR=8.0
M13A Montello 74.84 49 ⇓P P 08 58 29.1 +0.3
baz=75,SNR=7.5
M13A Montello 74.84 49 eP P 08 58 29.0 +0.3
comp=Z,8.3nm,1.0s,mb4.6
TIN Tinemaha 74.86 55 ⇓P P 08 58 28.7 -0.2
baz=75
I16A Newdale 74.88 46 ⇓P P 08 58 29.8 +0.9
baz=75,SNR=24
YFT Old Faithful 74.89 45 eP P 08 58 30.9 +1.9
YFT e pP 08 58 39.1 +0.8
P11A Circle Ranch, 74.95 52 ⇑P P 08 58 29.0 -0.5
baz=75
Q10A Clear Creek Ra 74.98 52 ⇓P P 08 58 29.4 -0.2
baz=75,SNR=5.3
L14A Malta 74.99 48 ⇑P P 08 58 30.3 +0.7
baz=75,SNR=10
K15A Arbon 75.01 47 ⇓P P 08 58 30.5 +0.8
baz=75,SNR=7.9
VES Vestal, Richgr 75.01 56 ⇓P P 08 58 28.8 -1.0
baz=75,SNR=6.4
G18A Lazy EL Ranch, 75.06 44 ⇓P P 08 58 29.4 -0.6
baz=75
LKWY Lake 75.07 45 eP P 08 58 31.5 +1.5
LKWY pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
LKWY Lake 75.07 45 eP P 08 58 31.5 +1.5
comp=Z,9.1nm,0.7s,mb4.8
H17A Grant Village 75.08 45 ⇓P P 08 58 32.0 +2.0
baz=75,SNR=16
N13A Wendover, West 75.12 50 ⇑P P 08 58 30.4 0.0
baz=75
N13A Wendover, West 75.12 50 eP P 08 58 30.9 +0.5
comp=Z,12nm,1.0s,mb4.8
O12A Currie 75.15 50 ⇓P P 08 58 31.0 +0.4
baz=75,SNR=14
IMW Indian Meadow 75.18 46 eP P 08 58 31.7 +1.1
comp=Z,8.2nm,0.8s,mb4.7
J16A Bone 75.18 47 ⇓P P 08 58 31.5 +0.8
baz=75,SNR=5.0
DCID1 Drake Creek 75.23 46 eP P 08 58 32.4 +1.5
comp=Z,22nm,1.0s,mb5.0
M14A Sheep Mountain 75.25 49 ⇑P P 08 58 31.7 +0.6
baz=75
SIM Simferopol' 75.29 316 *c iP* **P 08 58 31.0 -0.2**
SIM eS S 09 08 08.0 -0.5
SIM pmax pmax
comp=Z,32nm,0.6s,mb5.4
SIM MLR MLR
comp=Z,920nm,15.2s,MS5.2
RRI2 Red Ridge 75.30 46 eP P 08 58 32.6 +1.3
comp=Z,36nm,1.4s,mb5.1
RLMT Red Lodge 75.35 44 ⇑P P 08 58 31.6 0.0
baz=75
RLMT Red Lodge 75.35 44 eP P 08 58 32.2 +0.6
comp=Z,8.1nm,1.0s,mb4.6
R10A Warm Springs 75.36 53 ⇑P P 08 58 32.0 +0.2
baz=75
I17A Pilgrim Ck. 75.37 46 ⇓P P 08 58 33.1 +1.4
baz=75,SNR=5.5
S10A Tonopah Range, 75.39 53 ⇑P P 08 58 32.1 +0.1
baz=75,SNR=10
SBC Santa Barbara 75.41 58 ⇑P P 08 58 31.4 -0.7
baz=75
HVU Hansel Valley 75.42 48 eP P 08 58 32.4 +0.4
HVU pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
HVU Hansel Valley 75.42 48 eP P 08 58 32.4 +0.3
comp=Z,10nm,1.0s,mb4.7
TPAW Teton Pass 75.42 46 eP P 08 58 32.6 +0.5
comp=Z,15nm,1.2s,mb4.8
Q11A Duckwater 75.44 52 ⇓P P 08 58 32.1 -0.1
baz=75
GRAC Grapevine Rang 75.45 54 ⇓P P 08 58 32.4 +0.1
baz=75,SNR=6.4
K16A Soda Springs 75.47 47 ⇑P P 08 58 33.3 +1.0
baz=75,SNR=14
L15A Malad City 75.51 48 ⇑P P 08 58 32.8 +0.3
baz=75,SNR=5.4
ISA Isabella 75.52 56 ⇓P P 08 58 33.1 +0.4
baz=75
ISA Isabella 75.52 56 eP P 08 58 32.0 -0.7
P12A McGill 75.53 51 ⇑P P 08 58 33.1 +0.3
baz=75,SNR=5.6
LOHW Long Hollow 75.55 46 eP P 08 58 33.2 +0.4
comp=Z,10nm,1.3s,mb4.6
SNOW Snow King Moun 75.55 46 eP P 08 58 33.6 +0.8
comp=Z,7.0nm,0.8s,mb4.6
REDW Red Top Meadow 75.56 46 eP P 08 58 33.4 +0.6
comp=Z,21nm,1.4s,mb4.9
ARVC Arvin 75.60 57 ⇑P P 08 58 32.5 -0.7
baz=75
J17A Brown Place, J 75.64 46 ⇓P P 08 58 34.0 +0.7
baz=75
O13A Hicks Ranch, I 75.70 50 ⇓P P 08 58 34.2 +0.5
baz=76
BSC Santa Cruz Isl 75.72 58 ⇓P P 08 58 33.5 -0.5
baz=76
N14A Grayback Hills 75.74 49 ⇑P P 08 58 33.9 0.0
baz=76
R11A Troy Canyon, C 75.78 52 ⇑P P 08 58 34.3 +0.2
baz=76,SNR=17
AHID Auburn Hatcher 75.79 47 eP P 08 58 33.8 -0.3
comp=Z,6.0nm,0.9s,mb4.5
M15A Larsen Ranch, 75.81 48 ⇓P P 08 58 34.4 +0.1
baz=76,SNR=6.4
Q12A Willow Creek R 75.83 52 ⇑P P 08 58 34.5 0.0
baz=76
DGMT Dagmar 75.85 39 ⇑P P 08 58 33.7 -0.7
baz=76
DGMT Dagmar 75.85 39 eP P 08 58 33.6 -0.7
comp=Z,19nm,0.9s,mb5.0
K17A Gardner Place, 75.90 47 ⇓P P 08 58 34.7 -0.1
baz=76
MPMC Manual Prospec 75.92 55 ⇓P P 08 58 35.0 0.0
baz=76,SNR=8.6
OSI Osito Adit 75.97 57 ⇓P P 08 58 34.9 -0.4
baz=76
LAO LASA Array 75.98 41 eP P 08 58 35.3 +0.2
comp=Z,20nm,0.9s,mb5.0
BLG Laguna Peak 76.04 58 ⇑P P 08 58 35.4 -0.4
baz=76
L16A Fish Haven 76.06 47 ⇓P P 08 58 36.1 +0.3
baz=76,SNR=5.6
P13A Bates Ranch, G 76.09 51 ⇑P P 08 58 35.8 -0.1
baz=76
KBD Kabd 76.09 296 eP P 08 58 34.8 -1.3
KBD AMb AMB 08 58 37.5
comp=Z,70nm,1.4s,mb5.4
FURC Furnace Creek, 76.09 55 ⇓P P 08 58 35.7 -0.3
baz=76,SNR=8.8
S11A Rachel 76.10 53 ⇓P P 08 58 36.1 +0.1

baz=76,SNR=6.7
J18A Kendall Valley 76.13 46 ⇑P P 08 58 36.0 -0.1
baz=76
QRN Al-Qurain 76.18 296 eP P 08 58 35.7 -0.9
QRN AMb AMB 08 58 37.3
comp=Z,131nm,1.6s,mb5.6
HWUT Hardware Ranch 76.24 48 eP P 08 58 37.1 +0.4
comp=Z,19nm,1.2s,mb4.9
EDW2 Edwards Air Fo 76.30 57 ⇑P P 08 58 37.0 -0.2
baz=76,SNR=5.7
L17A Cokeville 76.33 47 ⇓P P 08 58 37.4 +0.1
baz=76,SNR=5.3
RDF Al-Radifah 76.34 296 eP P 08 58 36.8 -0.7
RDF AMb AMB 08 58 39.0
comp=Z,162nm,1.1s,mb5.9
DUG Dugway 76.37 50 ⇑P P 08 58 37.8 +0.3
baz=76,SNR=11
DUG Dugway 76.37 50 eP P 08 58 37.8 +0.3
DUG pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
DUG Dugway 76.37 50 eP P 08 58 37.8 +0.3
comp=Z,6.0nm,0.7s,mb4.6
NAY Al-Naaiem 76.37 296 eP P 08 58 36.6 -1.1
NAY AMb AMB 08 58 38.8
comp=Z,71nm,1.4s,mb5.4
Q13A Wheeler Ranch, 76.39 51 ⇓P P 08 58 37.9 +0.3
baz=76,SNR=8.8
R12A Pony Springs, 76.40 52 ⇑P P 08 58 37.7 0.0
baz=76,SNR=9.0
DECC Green Verdugo 76.44 57 ⇑P P 08 58 37.6 -0.5
baz=76
U10A Ash Meadows, A 76.46 54 ⇑P P 08 58 38.3 +0.2
baz=76,SNR=6.2
K18A Toltan Ranch, 76.48 46 ⇑P P 08 58 38.4 +0.3
baz=76,SNR=7.0
P14A Drum Mountains 76.58 50 ⇑P P 08 58 38.9 +0.2
baz=76,SNR=10.0
BW06 Boulder Array 76.67 46 ⇓P P 08 58 38.8 -0.4
baz=76,SNR=12
BW06 Boulder Array 76.67 46 eP P 08 58 38.6 -0.6
comp=Z,7.0nm,0.8s,mb4.6
PDAR Pinedale Array 76.67 46 P P 08 58 38.9 -0.3
comp=Z,4.0nm,0.7s,mb4.5,baz=287,slow=2.3,SNR=37
PDAR LR LR 09 32 05.8
comp=Z,256nm,20.0s,MS4.5,baz=336,slow=36
T11A Corn Creek, Al 76.68 53 ⇑P P 08 58 39.5 +0.2
baz=76,SNR=7.7
S12A Delamar Landin 76.69 53 ⇑P P 08 58 39.4 0.0
baz=76
N16A Rees Ranch, Co 76.76 48 ⇑P P 08 58 40.0 +0.3
baz=76
KIS Kishinev 76.78 320 eP P 08 58 38.0 -1.7
comp=Z,100nm,1.4s,mb5.5
KIS Kishinev 76.78 320 ePP PP 09 01 42.0 +10
KIS Kishinev 76.78 320 eP P 08 58 38.0 -1.7
KIS e pP 08 58 45.0 -4.1
KIS e 08 58 58.0
KIS ePPP 09 03 20.0
KIS eS S 09 08 22.0 -2.9
KIS ePS 09 08 52.0
KIS pmax pmax
comp=Z,108nm,1.4s,mb5.6
KIS MLR MLR
comp=N,2µm,15.0s,MS5.8
KIS MLR MLR
comp=E,3µm,15.0s,MS5.8
KIS MLR MLR
comp=Z,4µm,15.0s,MS5.9
KIS MLR MLR
comp=Z,4µm,16.0s
FMP Fort Macarthur 76.79 58 ⇓P P 08 58 39.4 -0.6
baz=77
SHOC Shoshone 76.81 55 ⇓P P 08 58 39.8 -0.3
baz=77
GSC Goldstone 76.82 56 ⇓P P 08 58 39.8 -0.4
baz=77,SNR=5.2
GSC Goldstone 76.82 56 eP P 08 58 39.1 -1.1
GSC pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
GSC Goldstone 76.82 56 eP P 08 58 39.1 -1.1
comp=Z,10.0nm,1.1s,mb4.7
Q14A Sevier Lake (B 76.83 51 ⇓P P 08 58 40.6 +0.5
baz=77,SNR=18
M17A Scullys Gap (B 76.85 48 ⇓P P 08 58 39.8 -0.3
baz=77
R13A O'Grain Ranch, 76.89 52 ⇑P P 08 58 40.8 +0.3
baz=77,SNR=7.2
CIS Catalina Islan 76.90 58 ⇑P P 08 58 40.8 +0.2
baz=77
BFSC Mount Baldy Ra 76.90 57 ⇓P P 08 58 40.3 -0.3
baz=77
L18A Fontenelle, Gr 76.93 47 ⇑P P 08 58 40.7 +0.1
baz=77,SNR=8.3
JLU Jordanelle 76.93 49 eP P 08 58 41.4 +0.7
comp=Z,11nm,1.0s,mb4.7
RRX Edison Barstow 76.95 56 ⇓P P 08 58 40.3 -0.5
baz=77
NLU North Lily Min 76.96 49 eP P 08 58 41.6 +0.8
comp=Z,5.6nm,0.6s,mb4.7
K19A Absolon Red Bu 77.04 46 ⇑P P 08 58 40.3 -0.9
baz=77,SNR=5.6
P15A Leamington 77.08 50 ⇓P P 08 58 41.8 +0.3
baz=77
N17A Moffit Pass 77.08 48 ⇓P P 08 58 41.6 +0.1
baz=77,SNR=8.8
BSD Bornholm Skovb 77.13 332 ⇑*iP* **P 08 58 41.0 -0.5**
BSD pmax pmax
comp=Z,36nm,0.9s,mb5.3
BSD MLR MLR
comp=Z,940nm,18.0s,MS5.2
BSD Bornholm Skovb 77.13 332 ⇑*iP* **P 08 58 41.0 -0.5**
comp=Z,36nm,0.9s,mb5.3
BSD
comp=Z,930nm,18.0s
O16A Springville 77.15 49 ⇑P P 08 58 42.0 +0.1
baz=77,SNR=6.0
DAU Daniels Canyon 77.17 49 eP P 08 58 43.0 +1.0
MPU Maple Canyon 77.19 49 eP P 08 58 42.7 +0.5
comp=Z,10.0nm,0.7s,mb4.8
LVV L'vov 77.19 324 eP P 08 58 42.0 0.0
LVV MLR MLR
comp=E,100nm,15.0s,MS5.0
LVV MLR MLR
comp=Z,100nm,15.0s,MS4.3
LVV MLR MLR
comp=N,600nm,16.0s,MS5.0
L19A Farson 77.21 46 ⇑P P 08 58 42.1 -0.1
baz=77,SNR=6.9
M18A Lyman 77.23 47 ⇓P P 08 58 42.1 -0.2
baz=77
T12A Moapa 77.31 53 ⇓P P 08 58 42.9 0.0
baz=77
TUQ Turquoise Moun 77.32 55 ⇓P P 08 58 42.9 -0.1
baz=77,SNR=5.7
S13A Holt Ranch, En 77.33 52 ⇑P P 08 58 43.3 +0.3
baz=77,SNR=12
Q15A Fillmore 77.37 50 ⇓P P 08 58 43.3 +0.2
baz=77,SNR=7.6
BBRC Big Bear Solar 77.37 56 ⇑P P 08 58 44.2 +0.9
baz=77
V11A Goodsprings 77.39 54 ⇓P P 08 58 43.2 -0.2
baz=77
R14A James Farms, M 77.41 51 ⇑P P 08 58 43.6 +0.2
baz=77
HEC Hector,Ludlow 77.42 56 ⇑P P 08 58 43.4 -0.1
baz=77
P16A Fountain Green 77.42 50 ⇓P P 08 58 43.6 +0.2
baz=77
LEOM Leova 77.43 320 P P 08 58 43.6 +0.3
K20A Yellowstone Ra 77.43 45 ⇓P P 08 58 42.7 -0.8
baz=77,SNR=6.8
ARUT Antelope Range 77.46 52 eP P 08 58 44.0 +0.3
ARUT pmax pmax
comp=Z,15nm,1.2s,mb4.8
ARUT Antelope Range 77.46 52 eP P 08 58 44.0 +0.3
comp=Z,15nm,1.2s,mb4.8
COP Copenhagen 77.58 334 eP P 08 58 50.9 +6.9
COP pmax pmax
comp=Z,35nm,0.9s,mb5.3
COP MLR MLR
comp=Z,820nm,18.0s,MS5.1
COP Copenhagen 77.58 334 *i P* **P 08 58 50.9 +6.9**
comp=Z,35nm,0.9s,mb5.3
COP
comp=Z,810nm,18.0s
MURC Murrieta 77.59 57 ⇓P P 08 58 43.8 -0.7
baz=77

U12A	**Valley of Fire**	**77.60**	**54**	⇑P	**P**	**08 58 44.6**	**0.0**
	baz=77						
O17A	**Robinson Place**	**77.61**	**49**	⇑P	**P**	**08 58 44.5**	**0.0**
	baz=77						
T13A	**Saint George**	**77.64**	**53**	⇓P	**P**	**08 58 45.1**	**+0.4**
	baz=77,SNR=11						
S14A	**Cedar City**	**77.65**	**52**	⇓P	**P**	**08 58 44.7**	**-0.1**
	baz=77						
CCUT	**Cedar City**	**77.66**	**52**	*e*P	**P**	**08 58 45.3**	**+0.5**
	comp=Z,16nm,1.3s,mb4.8						
M19A	**Rock Springs**	**77.70**	**47**	⇑P	**P**	**08 58 44.5**	**-0.5**
	baz=78						
N18A	**Larsen Ranch,**	**77.74**	**47**	⇓P	**P**	**08 58 44.6**	**-0.6**
	baz=78						
MSU	**Marysvale**	**77.80**	**51**	*e*P	**P**	**08 58 46.3**	**+0.7**
V12A	**Nelson**	**77.83**	**54**	⇑P	**P**	**08 58 45.9**	**0.0**
	baz=78,SNR=7.1						
L20A	**Wamsutter**	**77.85**	**46**	⇓P	**P**	**08 58 45.8**	**0.0**
	baz=78						
GMRC	**Granite Mounta**	**77.89**	**55**	⇑P	**P**	**08 58 45.8**	**-0.3**
	baz=78,SNR=7.7						
R15A	**Junction**	**77.92**	**51**	⇓P	**P**	**08 58 47.0**	**+0.7**
	baz=78,SNR=6.0						
KWP	**Kalwaria Pacla**	**77.94**	**325**	*e*P	**P**	**08 58 46.7**	**+0.6**
KWP				LMZ		09 36 50.6	
	comp=Z,2μm,16.8s						
KWP	**Kalwaria Pacla**	**77.94**	**325**	*e*P	**P**	**08 58 46.2**	**+0.1**
KWP				*e*	pP	08 58 55.5	0.0
KWP				pmax	pmax		
	comp=Z,228nm,1.3s,mb5.9						
KWP	**Kalwaria Pacla**	**77.94**	**325**	*e*P	**P**	**08 58 46.2**	**+0.1**
	comp=Z,228nm,1.3s,mb5.9						
KWP				*e*	pP	08 58 55.5	0.0
KWP	**Kalwaria Pacla**	**77.94**	**325**	⇑*i*P	**P**	**08 58 46.8**	**+0.7**
U13A	**Pakoon Wash**	**77.98**	**53**	⇓P	**P**	**08 58 47.0**	**+0.3**
	baz=78,SNR=12						
O18A	**Roosevelt**	**78.00**	**48**	⇓P	**P**	**08 58 47.2**	**+0.5**
	baz=78,SNR=8.9						
P17A	**Butcher Ranch,**	**78.06**	**49**	⇑P	**P**	**08 58 47.2**	**+0.2**
	baz=78,SNR=7.5						
PFO	**Pinyon Flat Ob**	**78.08**	**57**	⇑P	**P**	**08 58 46.6**	**-0.6**
	baz=78						
PFO	**Pinyon Flat Ob**	**78.08**	**57**	*e*P	**P**	**08 58 46.5**	**-0.7**
PFO				pmax	pmax		
	comp=Z,14nm,1.4s,mb4.7						
PFO	**Pinyon Flat Ob**	**78.08**	**57**	*e*P	**P**	**08 58 46.5**	**-0.7**
	comp=Z,14nm,1.4s,mb4.7						
109C	**Camp Elliot, M**	**78.08**	**58**	⇑P	**P**	**08 58 46.7**	**-0.6**
	baz=78						
MUD	**Monsted U'grnd**	**78.08**	**336**	*e*P	**P**	**08 58 53.5**	**+6.7**
MUD				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.1						
MUD				MLR	MLR		
	comp=Z,2μm,18.0s,MS5.5						
MUD	**Monsted U'grnd**	**78.08**	**336**	*i* P	**P**	**08 58 53.5**	**+6.7**
	comp=Z,26nm,1.0s,mb5.1						
MUD							
	comp=Z,2μm,18.0s						
W12A	**Cal Nev Ari**	**78.08**	**55**	⇑P	**P**	**08 58 47.0**	**-0.2**
	baz=78						
N19A	**John Jarvie Ra**	**78.08**	**47**	⇓P	**P**	**08 58 46.3**	**-0.8**
	baz=78						
T14A	**Hurricane**	**78.14**	**52**	⇑P	**P**	**08 58 47.6**	**+0.2**
	baz=78						
BELC	**Belle Mtn. Jos**	**78.14**	**56**	⇓P	**P**	**08 58 46.9**	**-0.7**
	baz=78						
BUR08	**Bucovina Ar. S**	**78.15**	**322**	*e*P	**P**	**08 58 47.6**	**+0.3**
Q16A	**Castle Valley**	**78.15**	**50**	⇓P	**P**	**08 58 47.9**	**+0.3**
	baz=78,SNR=8.6						
BURAR	**Bucovina Array**	**78.16**	**322**	⇑P	**P**	**08 58 47.8**	**+0.4**
BURAR	**Bucovina Array**	**78.16**	**322**	⇑*i*P	**P**	**08 58 47.8**	**+0.4**
S15A	**Panguitch**	**78.20**	**51**	⇓P	**P**	**08 58 48.6**	**+0.8**
	baz=78,SNR=5.3						
TESR		**78.21**	**320**	⇑P	**P**	**08 58 47.8**	**0.0**
TESR		**78.21**	**320**	⇑*i*P	**P**	**08 58 47.8**	**+0.1**
P18A	**Preston Nutter**	**78.26**	**49**	⇓P	**P**	**08 58 48.5**	**+0.3**
	baz=78,SNR=7.5						
M20A	**Sweetwater, Wa**	**78.27**	**46**	⇑P	**P**	**08 58 48.5**	**+0.4**
	baz=78						
V13A	**Grand Canyon W**	**78.31**	**54**	⇑P	**P**	**08 58 48.5**	**0.0**
	baz=78,SNR=11						
R16A	**Teasdale**	**78.36**	**50**	⇑P	**P**	**08 58 49.5**	**+0.8**
	baz=78,SNR=23						
SRU	**San Rafael**	**78.42**	**49**	⇓P	**P**	**08 58 49.0**	**-0.1**
	baz=78,SNR=16						
SRU	**San Rafael**	**78.42**	**49**	*e*P	**P**	**08 58 49.2**	**+0.2**
SRU				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
SRU	**San Rafael**	**78.42**	**49**	*e*P	**P**	**08 58 49.2**	**+0.2**
	comp=Z,15nm,0.9s,mb4.9						
L21A	**Rawlins**	**78.43**	**46**	⇓P	**P**	**08 58 48.7**	**-0.3**
	baz=78,SNR=12						
U14A	**Mt Trumbull**	**78.47**	**53**	⇑P	**P**	**08 58 49.5**	**+0.1**
	baz=78,SNR=7.4						
BAR	**Barrett**	**78.49**	**58**	*e*P	**P**	**08 58 49.4**	**-0.2**
	comp=Z,26nm,1.5s,mb4.9						
O19A	**Miners Draw (B**	**78.50**	**48**	⇑P	**P**	**08 58 48.9**	**-0.5**
	baz=78						
ULM	**Lac du Bonnet**	**78.52**	**34**	P	**P**	**08 58 48.1**	**-1.2**
	comp=Z,7.7nm,0.8s,mb4.7,baz=304,slow=6.1,SNR=6.8						
MONP	**Monument Peak**	**78.53**	**57**	⇓P	**P**	**08 58 49.5**	**-0.2**
	baz=78						
NEE2	**Needles Airpor**	**78.57**	**55**	⇓P	**P**	**08 58 49.4**	**-0.6**
	baz=78						
IRM	**Iron Mountain**	**78.60**	**56**	⇓P	**P**	**08 58 49.8**	**-0.3**
	baz=78,SNR=6.3						
T15A	**Red Dirt Ranch**	**78.60**	**52**	⇓P	**P**	**08 58 50.3**	**+0.2**
	baz=78,SNR=11						
VRI	**Vrincioaia**	**78.61**	**320**	⇑P	**P**	**08 58 50.7**	**+0.8**
VRI	**Vrincioaia**	**78.61**	**320**	⇑*i*P	**P**	**08 58 50.7**	**+0.8**
S16A	**Weppner Ranch,**	**78.65**	**51**	⇓P	**P**	**08 58 50.7**	**+0.4**
	baz=78,SNR=12						
N20A	**Spence Gulch,**	**78.65**	**47**	⇓P	**P**	**08 58 50.4**	**+0.2**
	baz=78,SNR=10						
Q18A	**Rafter H Ranch**	**78.66**	**49**	⇑P	**P**	**08 58 50.1**	**-0.2**
	baz=78						
M21A	**Separation Pea**	**78.67**	**46**	⇑P	**P**	**08 58 50.1**	**-0.2**
	baz=78,SNR=9.5						
TIRR	**Tirgusor**	**78.69**	**318**	*e*P	**P**	**08 58 50.2**	**-0.2**
TIRR				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.1						
TIRR	**Tirgusor**	**78.69**	**318**	*e*P	**P**	**08 58 50.2**	**-0.2**
	comp=Z,27nm,1.0s,mb5.1						
TIRR	**Tirgusor**	**78.69**	**318**	⇑*i*P	**P**	**08 58 50.5**	**+0.1**
RWWY	**Rawlins**	**78.70**	**46**	*e*P	**P**	**08 58 50.4**	**-0.1**
	comp=Z,21nm,1.2s,mb4.9						
BC3	**Big Chuckawall**	**78.71**	**56**	⇓P	**P**	**08 58 50.1**	**-0.6**
	baz=78						
R17A	**Hanksville Air**	**78.75**	**50**	⇑P	**P**	**08 58 50.9**	**0.0**
	baz=78,SNR=11						
STHS	**Stebnicka Huta**	**78.76**	**325**	*e*P	**P**	**08 58 51.9**	**+1.2**
STHS				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
STHS	**Stebnicka Huta**	**78.76**	**325**	*e*P	**P**	**08 58 51.9**	**+1.2**
	comp=Z,16nm,1.0s,mb4.9						
STHS	**Stebnicka Huta**	**78.76**	**325**	*e*P	**P**	**08 58 51.9**	**+1.2**
RSSD	**Black Hills**	**78.83**	**42**	*e*P	**P**	**08 58 50.8**	**-0.4**
RSSD				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
RSSD	**Black Hills**	**78.83**	**42**	*e*P	**P**	**08 58 50.8**	**-0.4**
	comp=Z,8.2nm,0.8s,mb4.7						
UZH	**Uzhgorod**	**78.84**	**324**	*e*P	**P**	**08 58 51.3**	**+0.2**
UZH				*e*	pP	08 58 59.3	-1.2
UZH				*e*		08 59 07.5	
UZH				*e*S	S	09 08 45.7	-1.3
UZH				*e*PS		09 09 34.7	
UZH				*e*SS	SS	09 13 51.7	+0.8
UZH				MLR	MLR		
	comp=N,1μm,18.0s,MS5.6						
UZH				MLR	MLR		
	comp=E,2μm,18.0s,MS5.6						
UZH				MLR	MLR		
	comp=Z,2μm,18.0s,MS5.4						
W13A	**Hualapai Mount**	**78.84**	**54**	⇑P	**P**	**08 58 51.1**	**-0.3**
	baz=79						
BR131	**Keskin Array S**	**78.88**	**312**	*e*P	**P**	**08 58 52.1**	**+0.6**
	comp=Z,10nm,0.8s,mb4.8						
BRTR	**Keskin Array B**	**78.88**	**312**	P	**P**	**08 58 51.8**	**+0.2**
	comp=Z,17nm,1.1s,mb4.9,baz=102,slow=4.3,SNR=44						
BRTR				PP	PP	09 01 43.8	-6.0
	comp=Z,1.9nm,0.8s,baz=61,slow=9.0,SNR=3.5						
BRTR				LR	LR	09 38 26.4	
	comp=Z,481nm,20.0s,MS4.8,baz=227,slow=39						
BRTR	**Keskin Array B**	**78.88**	**312**	P	**P**	**08 58 51.8**	**+0.3**
BRTR				pmax	pmax		
	comp=Z,17nm,1.1s						
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRTR				MLR	MLR		
	comp=Z,481nm,20.0s						
DVTC	**Desert V Tower**	**78.89**	**57**	⇓P	**P**	**08 58 51.3**	**-0.4**
	baz=79						
L22A	**Ellis Ranch, M**	**78.91**	**45**	⇑P	**P**	**08 58 51.7**	**+0.1**
	baz=79,SNR=5.8						
SWSC	**Sam W. Stewart**	**78.92**	**57**	⇑P	**P**	**08 58 51.2**	**-0.7**
	baz=79						
P19A	**Cripple Cowboy**	**79.01**	**48**	⇑P	**P**	**08 58 52.2**	**-0.1**
	baz=79,SNR=12						
V14A	**Boquillas Ranc**	**79.01**	**53**	⇑P	**P**	**08 58 52.6**	**+0.3**
	baz=79,SNR=15						
U15A	**North Rim**	**79.03**	**52**	⇑P	**P**	**08 58 53.0**	**+0.6**
	baz=79,SNR=14						
CRVS	**Cervenica-Dubn**	**79.03**	**325**	*e*P	**P**	**08 58 52.2**	**0.0**
CRVS				pmax	pmax		
	comp=Z,24nm,1.5s,mb4.9						
CRVS	**Cervenica-Dubn**	**79.03**	**325**	*e*P	**P**	**08 58 52.2**	**0.0**
	comp=Z,24nm,1.5s,mb4.9						
CRVS	**Cervenica-Dubn**	**79.03**	**325**	*e*P	**P**	**08 58 52.2**	**0.0**
TRPA	**Tarpa**	**79.08**	**324**	⇓*i*P	**P**	**08 58 53.1**	**+0.6**
O20A	**White River Ci**	**79.12**	**47**	⇓P	**P**	**08 58 52.6**	**-0.2**
	baz=79						
N21A	**Black Mountain**	**79.13**	**47**	⇑P	**P**	**08 58 52.8**	**-0.1**
	baz=79,SNR=5.8						
T16A	**Glen Canyon Da**	**79.17**	**52**	⇓P	**P**	**08 58 52.6**	**-0.6**
	baz=79						
NIE	**Niedzica**	**79.17**	**326**	*e*P	**P**	**08 58 53.8**	**+0.9**
S17A	**Black Ridge (B**	**79.19**	**51**	⇓P	**P**	**08 58 53.1**	**-0.2**
	baz=79,SNR=19						
X13A	**Yucca**	**79.19**	**55**	⇓P	**P**	**08 58 53.2**	**-0.1**
	baz=79,SNR=8.7						
R18A	**Canyonlands Na**	**79.26**	**50**	⇑P	**P**	**08 58 53.3**	**-0.3**
	baz=79,SNR=9.2						
MLR	**Muntele Rosu**	**79.27**	**320**	⇑P	**P**	**08 58 53.8**	**+0.2**
MLR	**Muntele Rosu**	**79.27**	**320**	⇑*i*P	**P**	**08 58 53.8**	**+0.2**
Q19A	**Hogan Spring (**	**79.28**	**49**	⇓P	**P**	**08 58 53.5**	**-0.2**
	baz=79,SNR=11						
W14A	**Seligman**	**79.28**	**54**	⇓P	**P**	**08 58 54.0**	**+0.2**
	baz=79,SNR=13						
P20A	**De Beque**	**79.44**	**48**	⇓P	**P**	**08 58 54.5**	**-0.1**
	baz=79						
V15A	**Kaibab Nationa**	**79.48**	**53**	⇓P	**P**	**08 58 55.2**	**+0.3**
	baz=79,SNR=10						
GLA	**Glamis**	**79.49**	**56**	⇓P	**P**	**08 58 54.9**	**-0.1**
	baz=79						
GLA	**Glamis**	**79.49**	**56**	*e*P	**P**	**08 58 55.2**	**+0.2**
O21A	**Pagoda**	**79.51**	**47**	⇑P	**P**	**08 58 55.0**	**0.0**
	baz=79						
T17A	**Navajo Res., N**	**79.59**	**51**	⇓P	**P**	**08 58 54.9**	**-0.6**
	baz=79						
S18A	**Hurst Farm, Bl**	**79.65**	**50**	⇓P	**P**	**08 58 55.6**	**-0.2**
	baz=79,SNR=16						
Y13A	**Salome**	**79.67**	**55**	⇓P	**P**	**08 58 55.9**	**-0.1**
	baz=80,SNR=5.7						
N22A	**Wattenberg Ran**	**79.71**	**46**	⇑P	**P**	**08 58 56.4**	**+0.4**
	baz=80,SNR=9.3						
BSEG	**Bad Segeberg**	**79.72**	**333**	*e*P	**P**	**08 59 01.6**	**+5.8**
VOIR		**79.76**	**320**	⇑P	**P**	**08 58 57.1**	**+0.9**
VOIR		**79.76**	**320**	⇑*i*P	**P**	**08 58 57.1**	**+0.9**
KECS	**Kecovo**	**79.78**	**325**	*e*P	**P**	**08 58 56.5**	**+0.2**
KECS				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
KECS	**Kecovo**	**79.78**	**325**	*e*P	**P**	**08 58 56.5**	**+0.2**
	comp=Z,5.4nm,1.0s,mb4.4						
KECS	**Kecovo**	**79.78**	**325**	*e*P	**P**	**08 58 56.5**	**+0.2**
PV10	**Paradox Valley**	**79.78**	**49**	*e*P	**P**	**08 58 57.0**	**+0.5**
	comp=Z,464nm,0.8s,mb6.5						
OKC	**Ostrava-Krasne**	**79.82**	**327**	*e*P	**P**	**08 58 56.7**	**+0.3**
OKC				*e**PP	pP	08 59 03.1	-2.7
OKC				*e*S	S	09 08 57.4	+0.1
OKC				MLR	MLR		
	comp=Z,2μm,16.3s,MS5.5						
OKC	**Ostrava-Krasne**	**79.82**	**327**	*e*P	**P**	**08 58 56.7**	**+0.3**
OKC				*e*pP	pP	08 59 03.1	-2.7
OKC				*e*S	S	09 08 57.4	+0.1
OKC				AMS	AMS	09 37 00.0	
	comp=Z,2μm,16.3s						
W15A	**Williams**	**79.83**	**53**	⇓P	**P**	**08 58 57.3**	**+0.5**
	baz=80,SNR=9.4						
KSP	**Ksiaz**	**79.84**	**329**	*e*P	**P**	**08 58 56.9**	**+0.3**
KSP				LMZ		09 37 04.3	
	comp=Z,3μm,18.2s						
KSP	**Ksiaz**	**79.84**	**329**	⇑*e*P	**P**	**08 58 56.8**	**+0.2**
KSP				*e**PP	pP	08 59 06.3	+0.3
KSP				*e*S	S	09 08 57.0	-0.6
KSP				MLR	MLR		
	comp=Z,4μm,17.3s,MS5.8						
PV04	**Paradox Valley**	**79.85**	**49**	*e*P	**P**	**08 58 56.8**	**-0.1**
Q20A	**Ridgley Place,**	**79.85**	**48**	⇓P	**P**	**08 58 56.8**	**-0.1**
	baz=80,SNR=8.7						
X14A	**Yava**	**79.87**	**54**	⇑P	**P**	**08 58 57.4**	**+0.4**
	baz=80,SNR=8.0						
U16A	**Tuba City**	**79.93**	**52**	⇑P	**P**	**08 58 57.9**	**+0.5**
	baz=80,SNR=21						
U17A	**Shonto**	**79.93**	**51**	⇑P	**P**	**08 58 57.6**	**+0.3**
	baz=80						
N23A	**Red Feather La**	**79.94**	**46**	⇓P	**P**	**08 58 57.8**	**+0.5**
	baz=80,SNR=12						
AGMN	**Agassiz Nation**	**79.95**	**35**	*e*P	**P**	**08 58 56.0**	**-1.2**
	comp=Z,17nm,0.9s,mb5.0						
DRGR		**79.96**	**323**	⇑P	**P**	**08 58 57.6**	**+0.3**
DRGR		**79.96**	**323**	⇑*i*P	**P**	**08 58 57.5**	**+0.2**
112A	**Yuma**	**79.97**	**57**	⇓P	**P**	**08 58 57.3**	**-0.3**
	baz=80						
O22A	**Kremmling**	**80.08**	**47**	⇓P	**P**	**08 58 58.2**	**+0.1**
	baz=80,SNR=9.7						
MORC	**Moravsky Berou**	**80.12**	**327**	*e*P	**P**	**08 58 58.5**	**+0.4**
MORC				pmax	pmax		
	comp=Z,58nm,1.2s,mb5.4						
MORC	**Moravsky Berou**	**80.12**	**327**	*e*P	**P**	**08 58 58.5**	**+0.4**
	comp=Z,58nm,1.2s,mb5.4						
MORC	**Moravsky Berou**	**80.12**	**327**	⇑*i*P	**P**	**08 58 58.3**	**+0.2**
Y14A	**Wickenburg**	**80.13**	**55**	⇓P	**P**	**08 58 58.3**	**-0.1**
	baz=80,SNR=12						
Z13A	**Yuma Proving G**	**80.17**	**56**	⇓P	**P**	**08 58 58.6**	**-0.1**
	baz=80,SNR=13						
WUAZ	**Wupatki**	**80.18**	**53**	⇓P	**P**	**08 58 59.0**	**+0.3**
	baz=80,SNR=11						
WUAZ	**Wupatki**	**80.18**	**53**	*e*P	**P**	**08 58 59.0**	**+0.3**
	comp=Z,17nm,1.1s,mb4.9						
DPC	**Dobruska-Polom**	**80.20**	**328**	*e*P	**P**	**08 58 59.2**	**+0.7**
DPC				*e**PP	pP	08 59 05.8	-2.1
DPC				*e*S	S	09 08 54.4	-7.0
DPC				MLR	MLR		
	comp=Z,2μm,16.7s,MS5.4						
DPC	**Dobruska-Polom**	**80.20**	**328**	*e*P	**P**	**08 58 59.2**	**+0.7**
DPC				*e*pP	pP	08 59 05.8	-2.1
DPC				*ex*	x	09 08 54.4	
DPC				AMS	AMS	09 37 10.0	
	comp=Z,2μm,16.7s						
UPC	**Upice**	**80.21**	**329**	*e*P	**P**	**08 58 58.8**	**+0.2**
UPC	**Upice**	**80.21**	**329**	*e*P	**P**	**08 58 58.8**	**+0.2**
PV01	**Paradox Valley**	**80.22**	**49**	*e*P	**P**	**08 58 59.0**	**+0.1**
	comp=Z,3μm,1.5s						
X15A	**Humboldt**	**80.28**	**54**	⇑P	**P**	**08 58 59.6**	**+0.3**
	baz=80,SNR=15						
R20A	**Redvale**	**80.30**	**49**	⇑P	**P**	**08 58 59.3**	**+0.1**
	baz=80,SNR=11						
W16A	**Flagstaff**	**80.35**	**53**	⇓P	**P**	**08 59 00.1**	**+0.5**
	baz=80,SNR=6.1						
Q21A	**Lamborn Mesa,**	**80.36**	**48**	⇓P	**P**	**08 58 59.7**	**+0.1**
	baz=80,SNR=6.0						
113A	**Mohawk Valley,**	**80.37**	**56**	⇓P	**P**	**08 58 59.3**	**-0.5**
	baz=80,SNR=6.4						
O23A	**Lake Granby, G**	**80.41**	**46**	⇓P	**P**	**08 59 00.4**	**+0.6**
	baz=80,SNR=12						
PSZ	**Piszkesteto**	**80.46**	**325**	⇑*i*P	sP	08 59 18.9	+6.1
V17A	**Tonalea, Kykot**	**80.48**	**52**	⇓P	**P**	**08 59 00.7**	**+0.4**
	baz=80,SNR=24						
SMCO	**Snowmass**	**80.48**	**47**	*e*P	**P**	**08 59 00.6**	**+0.4**
	comp=Z,13nm,1.1s,mb4.8						
VYHS	**Vyhne**	**80.51**	**326**	*e*P	**P**	**08 59 00.7**	**+0.5**
VYHS				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.8						
VYHS	**Vyhne**	**80.51**	**326**	*e*P	**P**	**08 59 00.7**	**+0.5**
	comp=Z,18nm,1.4s,mb4.8						
VYHS	**Vyhne**	**80.51**	**326**	*e*P	**P**	**08 59 00.7**	**+0.5**
Z14A	**Wintersburg**	**80.53**	**55**	⇑P	**P**	**08 59 00.3**	**-0.3**
	baz=80						
U18A	**Rough Rock, Ch**	**80.54**	**51**	⇓P	**P**	**08 59 00.9**	**+0.3**
	baz=80,SNR=16						
Y15A	**Casa Rosa Ranc**	**80.56**	**54**	⇓P	**P**	**08 59 00.9**	**+0.2**
	baz=80,SNR=15						
KOLL	**Kolacno**	**80.64**	**326**	*e*P	**P**	**08 59 02.0**	**+1.1**
KOLL	**Kolacno**	**80.64**	**326**	*e*P	**P**	**08 59 02.0**	**+1.1**
R21A	**Cimarron**	**80.68**	**48**	⇓P	**P**	**08 59 01.9**	**+0.6**
	baz=80,SNR=9.2						
Q22A	**Crested Butte,**	**80.73**	**48**	⇑P	**P**	**08 59 02.2**	**+0.6**
	baz=80						
BRG	**Berggiesshubel**	**80.77**	**330**	*e*PKPbc	**P**	**08 59 01.1**	**-0.5**
BRG	**Berggiesshubel**	**80.77**	**330**	*e*P	**P**	**08 59 07.0**	**+5.4**
BRG	**Berggiesshubel**	**80.77**	**330**	*e*P	**P**	**08 59 01.5**	**0.0**
	comp=Z,19nm,1.1s,mb4.9						
BRG				*i*		08 59 08.0	
	comp=Z,26nm,0.9s						
BRG				*e*PP	PP	09 02 03.0	-2.1
	comp=Z,6.8nm,1.2s						
BRG				S	S	09 09 09.0	+1.7
BRG				SS	SS	09 14 33.0	+13
BRG							
	comp=N,2μm,17.0s						
BRG							
	comp=E,1μm,18.4s						
BRG							
	comp=Z,3μm,18.1s						
BRG	**Berggiesshubel**	**80.77**	**330**	*e*P	**P**	**08 59 01.5**	**-0.1**
BRG				*i*		08 59 08.0	
BRG				*e*		09 02 03.0	
BRG				S	S	09 09 09.0	+1.7
BRG				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
BRG				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
BRG				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.2						
BRG				MLR	MLR		
	comp=N,1μm,17.0s,MS5.3						
BRG				MLR	MLR		
	comp=E,612nm,18.4s,MS5.3						
BRG				MLR	MLR		
	comp=Z,2μm,18.1s,MS5.5						
PVCC	**Panska Ves**	**80.79**	**329**	*e*P	**P**	**08 59 02.4**	**+0.7**
PVCC				MLR	MLR		
	comp=Z,3μm,18.0s,MS5.6						
PVCC	**Panska Ves**	**80.79**	**329**	*e*P	**P**	**08 59 02.4**	**+0.7**
PVCC				AMS	AMS	09 37 30.0	
	comp=Z,3μm,18.0s						
T19A	**Beclabito**	**80.79**	**50**	⇑P	**P**	**08 59 02.1**	**+0.2**
	baz=81,SNR=10						
CLL	**Collm**	**80.81**	**331**	*e*PKPbc	**P**	**08 59 01.2**	**-0.5**
CLL	**Collm**	**80.81**	**331**	*e*P	**P**	**08 59 07.1**	**+5.4**
CLL	**Collm**	**80.81**	**331**	⇑*i*P	**P**	**08 59 01.4**	**-0.3**
CLL				*e**PP	pP	08 59 07.0	-4.1
CLL				*e*S	S	09 09 04.0	-3.6
CLL				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
CLL				MLR	MLR		
	comp=Z,2μm,17.0s,MS5.6						
CLL	**Collm**	**80.81**	**331**	⇑*i*P	**P**	**08 59 01.4**	**-0.3**
	comp=Z,30nm,1.0s,mb5.2						
CLL				*e*pP	pP	08 59 07.0	-4.1
CLL				*e*S	S	09 09 04.0	-3.6
CLL				LR	LR		
	comp=Z,2μm,17.0s,MS5.6						
CLL	**Collm**	**80.81**	**331**	⇑*i*P	**P**	**08 59 01.4**	**-0.3**
	comp=Z,30nm,1.0s,mb5.2						
CLL				*e*pP	pP	08 59 07.0	-4.1
CLL				*i* sP	sP	08 59 10.7	-3.9
CLL				*e*S	S	09 09 14.0	+6.4
CLL				*e*SS	SS	09 14 30.0	+10
CLL				*e*		09 15 24.0	
X16A	**Lo Mia Camp, P**	**80.83**	**53**	⇑P	**P**	**08 59 02.7**	**+0.5**
	baz=81,SNR=15						
ISCO	**Idaho Springs**	**80.86**	**46**	*e*P	**P**	**08 59 02.7**	**+0.5**
ISCO				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
ISCO	**Idaho Springs**	**80.86**	**46**	*e*P	**P**	**08 59 02.7**	**+0.5**
	comp=Z,3.6nm,0.8s,mb4.3						
MVCO	**Mesa Verde**	**80.86**	**50**	⇓P	**P**	**08 59 02.3**	**0.0**
	baz=81,SNR=9.6						
W17A	**Winslow**	**80.87**	**53**	⇓P	**P**	**08 59 02.4**	**0.0**
	baz=81						
VRAC	**Vranov**	**80.88**	**327**	P	**P**	**08 59 03.0**	**+0.8**
VRAC	**Vranov**	**80.88**	**327**	⇓P	**P**	**08 59 02.8**	**+0.7**
VRAC	**Vranov**	**80.88**	**327**	⇓*i*P	**P**	**08 59 02.8**	**+0.6**
GZR	**Gura Zlata**	**80.92**	**322**	⇑P	**P**	**08 59 02.9**	**+0.4**
GZR	**Gura Zlata**	**80.92**	**322**	⇑*i*P	**P**	**08 59 02.9**	**+0.4**
O24A	**Longmont**	**80.95**	**46**	⇓P	**P**	**08 59 03.2**	**+0.5**
	baz=81,SNR=5.8						
V18A	**Ganado**	**80.96**	**52**	⇑P	**P**	**08 59 03.3**	**+0.4**
	baz=81,SNR=14						
114A	**Black Gap (USA**	**80.96**	**56**	⇓P	**P**	**08 59 03.1**	**+0.2**
	baz=81,SNR=11						
P23A	**Jefferson**	**81.01**	**47**	⇓P	**P**	**08 59 03.8**	**+0.8**
	baz=81						

U21A **Nageezi** 81.89 50 ⇑P P 08 59 08.1 +0.3
baz=82,SNR=7.4
MPEP **Malo Peshtene** 81.89 320 *i* P P 08 59 08.3 +0.6
T22A **Edith** 81.95 49 ⇓P P 08 59 08.7 +0.6
baz=82,SNR=13
ISP **Isparta** 81.96 312 *i* P P 08 59 08.2 +0.1
S23A **Nye Farm, Mont** 82.03 48 ⇓P P 08 59 09.0 +0.5
baz=82
Y18A **Canyon Day Jun** 82.14 53 ⇑P P 08 59 09.6 +0.4
baz=82,SNR=13
EYMN **Ely** 82.16 33 *e*P P 08 59 08.2 -0.8
comp=Z,24nm,1.0s,mb5.1
Z17A **San Carlos Hig** 82.17 54 ⇑P P 08 59 09.6 +0.3
baz=82
X19A **St. Johns** 82.19 52 ⇓P P 08 59 09.8 +0.5
baz=82,SNR=16
R24A **Sanders Place,** 82.20 47 ⇓P P 08 59 09.8 +0.5
baz=82,SNR=8.5
KDZ **Kurdzhali** 82.22 318 *e*P P 08 59 10.0 +0.6
W20A **Ramah** 82.22 51 ⇓P P 08 59 09.5 0.0
baz=82,SNR=9.2
Q25A **Bedland, Calha** 82.24 46 ⇑P P 08 59 09.4 -0.1
baz=82
KHC **Kasperske Hory** 82.28 329 *e*P P 08 59 07.6 -2.0
KHC *e**PP pP 08 59 14.7 -4.3
KHC *e*S S 09 09 23.7 +0.7
KHC MLR MLR
comp=Z,2μm,19.3s,MS5.5
KHC **Kasperske Hory** 82.28 329 *e*P P 08 59 08.1 -1.5
comp=Z,24nm,0.9s,mb5.1
KHC **Kasperske Hory** 82.28 329 *e*P P 08 59 07.6 -2.0
KHC *e*pP pP 08 59 14.7 -4.3
KHC *e*S S 09 09 23.7 +0.7
KHC AMS AMS 09 38 10.0
comp=Z,2μm,19.3s
SDCO **Great Sand Dun** 82.30 48 *e*P P 08 59 10.2 +0.3
comp=Z,6.2nm,1.1s,mb4.5
PKSM **Moragy** 82.30 324 ⇑P P 08 59 09.2 -0.5
PKSM **Moragy** 82.30 324 ⇑*i*P P 08 59 09.2 -0.5
V21A **Milan** 82.31 50 ⇓P P 08 59 10.2 +0.3
baz=82
ROTZ **Rotzenmuhle** 82.33 330 *e*P P 08 59 16.0 +6.2
UBBA **Unterbreizbach** 82.34 332 *e*P P 08 59 16.2 +6.3
216A **Three Points,** 82.36 55 ⇓P P 08 59 10.4 0.0
baz=82
U22A **Llaves** 82.41 50 ⇓P P 08 59 10.9 +0.5
baz=82,SNR=8.1
GEC2 **GERESS Array S** 82.45 329 *e*P P 08 59 16.0 +5.5
T23A **Casias Ranch,** 82.46 49 ⇑P P 08 59 11.3 +0.6
baz=82,SNR=6.0
117A **Oracle** 82.46 55 ⇓P P 08 59 10.8 0.0
baz=82,SNR=5.4
Y19A **Nutrioso** 82.52 53 ⇓P P 08 59 11.7 +0.6
baz=82,SNR=6.5
S24A **Houchin Ranch,** 82.54 48 ⇓P P 08 59 11.7 +0.5
baz=82,SNR=5.6
WET **Wettzell** 82.56 329 *e*P P 08 59 16.6 +5.6
Z18A **Geronimo** 82.58 54 ⇑P P 08 59 11.9 +0.4
baz=82
TUC **Tucson** 82.60 55 *e*P P 08 59 11.3 -0.3
TUC pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
TUC **Tucson** 82.60 55 *e*P P 08 59 11.3 -0.3
comp=Z,3.0nm,0.8s,mb4.4
X20A **Quemado** 82.61 52 ⇑P P 08 59 12.1 +0.6
baz=82,SNR=16
V22A **San Miguel Ran** 82.68 50 ⇓P P 08 59 12.2 +0.2
baz=82,SNR=8.2
ESK **Eskdalemuir** 82.70 341 *e*P P 08 59 12.3 +0.7
ESK pmax pmax
comp=Z,27nm,1.0s,mb5.2
ESK **Eskdalemuir** 82.70 341 *e*P P 08 59 12.3 +0.7
comp=Z,27nm,1.0s,mb5.2
VTS **Vitosha** 82.71 319 ⇑P P 08 59 12.5 +0.6
VTS **Vitosha** 82.71 319 *i* P P 08 59 12.0 +0.1
VTS **Vitosha** 82.71 319 ⇑*i*P P 08 59 12.5 +0.6
W21A **San Fidel** 82.76 51 ⇑P P 08 59 12.2 -0.1
baz=82
GRF **Grafenberg Arr** 82.78 330 *e*P P 08 59 18.4 +6.2
comp=Z,70nm,1.2s,mb5.6
GRF *e*L 09 39 01.6
comp=Z,1μm,19.7s
U23A **El Rito** 82.84 49 ⇑P P 08 59 13.2 +0.5
baz=83,SNR=37
118A **Homack Ranch,** 82.92 54 ⇓P P 08 59 13.3 +0.1
baz=83
ECSD **EROS Data Cent** 82.92 39 *e*P P 08 59 12.2 -0.8
comp=Z,12nm,0.8s,mb5.0
Z19A **T-Link Ranch,** 82.94 53 ⇓P P 08 59 13.6 +0.3
baz=83
S25A **Robets Cordova** 82.98 47 ⇑P P 08 59 13.4 0.0
baz=83
Y20A **Horse Springs,** 83.10 52 ⇑P P 08 59 14.7 +0.6
baz=83,SNR=17
X21A **Alamocita Cree** 83.11 51 ⇓P P 08 59 14.8 +0.6
baz=83,SNR=17
MMB **Musomiste** 83.16 318 *i* P P 08 59 14.0 -0.3
V23A **Ortiz Mt. (NFS** 83.23 50 ⇑P P 08 59 15.9 +1.1
baz=83,SNR=12
119A **Ashpeak Ranch,** 83.26 54 ⇓P P 08 59 15.0 0.0
baz=83,SNR=5.5
W22A **Albuquerque** 83.27 51 ⇑P P 08 59 15.5 +0.5
baz=83
218A **Dragoon** 83.30 55 ⇓P P 08 59 15.5 +0.3
baz=83,SNR=5.6
U24A **Moreno Valley** 83.33 49 ⇑P P 08 59 16.2 +0.9
baz=83,SNR=7.2
T25A **Trinidad** 83.35 48 ⇓P P 08 59 15.5 +0.1
baz=83,SNR=8.2
TNS **Taunus Mts** 83.41 332 *e*P P 08 59 21.6 +6.2
Y21A **Point of Rocks** 83.47 52 ⇓P P 08 59 16.9 +0.8
baz=83,SNR=12
Z20A **Nine Sixteen R** 83.48 53 ⇓P P 08 59 16.5 +0.3
baz=83,SNR=23
GROS **Grobnik** 83.53 326 *i* P P 08 59 15.7 -0.4
LAZ **Ladron** 83.54 51 *e*P P 08 59 16.6 +0.2
comp=Z,9.2nm,1.4s,mb4.7
X22A **Bernardo** 83.55 51 ⇓P P 08 59 17.0 +0.5
baz=83
ANMO **Albuquerque** 83.59 50 LR LR 09 30 38.7
comp=Z,269nm,20.8s,MS4.6,baz=115,slow=32
ANMO **Albuquerque** 83.59 50 *e*P P 08 59 17.0 +0.3
ANMO pmax pmax
comp=Z,15nm,1.1s
ANMO **Albuquerque** 83.59 50 *e*P P 08 59 17.0 +0.4
comp=Z,15nm,1.1s,mb5.0
W23A **Werner Place,** 83.64 50 ⇓P P 08 59 17.4 +0.5
baz=83,SNR=9.9
318A **Bisbee** 83.68 55 ⇑P P 08 59 17.3 +0.2
baz=84,SNR=18
219A **White Tail Can** 83.79 54 ⇑P P 08 59 17.8 +0.1
baz=84,SNR=18
V24A **Rampart Ranch,** 83.79 49 ⇓P P 08 59 18.6 +1.0
baz=84,SNR=21
U25A **Circle Dot Ran** 83.85 48 ⇓P P 08 59 18.0 +0.1
baz=84,SNR=8.8
Y22D **IRIS PASSCAL I** 83.90 51 ⇑P P 08 59 18.6 +0.4
baz=84
GCIS **Gornji Cirnik** 83.93 326 *i* P P 08 59 14.2 -4.0
Z21A **St. Cloud Mine** 83.94 52 ⇑P P 08 59 18.9 +0.4
baz=84,SNR=5.5
VAY **Valandovo** 83.95 319 ⇑*i*P P 08 59 18.1 -0.3
Y22A **Socorro** 83.96 51 ⇓P P 08 59 18.6 +0.1
baz=84,SNR=12
X23A **Hourglass Bar** 84.01 51 ⇓P P 08 59 19.1 +0.3
baz=84,SNR=7.1
BNM **Barren Site** 84.03 51 *e*P P 08 59 18.9 0.0
comp=Z,5.7nm,0.9s,mb4.7
W24A **Lazy 6 Ranch,** 84.06 50 ⇑P P 08 59 19.8 +0.7
baz=84,SNR=19
SKO **Skopje** 84.07 320 *e*P P 08 59 20.1 +1.1
PLE **Pljevlja** 84.09 322 ⇑*i*P P 08 59 20.4 +1.4
PLE **Pljevlja** 84.09 322 ⇑*i*P P 08 59 20.4 +1.4
V25A **Rancho No Teng** 84.11 49 ⇓P P 08 59 19.8 +0.5
baz=84,SNR=17
319A **Douglas** 84.18 55 ⇓P P 08 59 19.7 -0.1
baz=84,SNR=11
IVA **Berane** 84.18 321 ⇑*i*P P 08 59 19.9 +0.4
IVA **Berane** 84.18 321 ⇑*i*P P 08 59 20.0 +0.5
U26A **Atchley Ranch,** 84.25 48 ⇓P P 08 59 19.8 -0.1
baz=84,SNR=8.7
LJU **Ljubljana** 84.28 326 *i* P P 08 59 14.3 -5.7
STU **Stuttgart** 84.31 331 *e*P P 08 59 26.0 +6.0
220A **Playas Peak, P** 84.32 54 ⇓P P 08 59 20.4 0.0
baz=84,SNR=16
PVY **Plav** 84.35 321 ⇑*i*P P 08 59 19.7 -0.7
PVY **Plav** 84.35 321 ⇑*i*P P 08 59 19.8 -0.6
PPT **Papeete** 84.35 117 *e*LR LR 09 25 44.0
comp=Z,2μm,24.8s,baz=316
PPT **Papeete** 84.35 117 LR LR 09 33 22.3
comp=Z,578nm,18.0s,MS5.0,baz=307,slow=33
121A **Cookes Peak, D** 84.38 53 ⇑P P 08 59 21.2 +0.5
baz=84,SNR=15
Z22A **Elephant Butte** 84.41 52 ⇓P P 08 59 20.8 -0.1
baz=84
UPM **Unac-Piva** 84.42 322 ⇑*i*P P 08 59 19.8 -0.9
UPM **Unac-Piva** 84.42 322 ⇑*i*P P 08 59 19.8 -0.9
SCHQ **Schefferville** 84.45 16 P P 08 59 20.5 -0.1
comp=Z,5.7nm,0.8s,mb4.8,baz=343,slow=4.8,SNR=8.6
SCHQ **Schefferville** 84.45 16 P P 08 59 20.5 -0.1
X24A **Lazy VL Ranch,** 84.48 50 ⇓P P 08 59 21.4 +0.3
baz=84
Y23A **Lovelace Mesa,** 84.53 51 ⇑P P 08 59 21.5 +0.1
baz=84,SNR=15
COWI **Conover** 84.61 33 *e*P P 08 59 20.6 -1.0
comp=Z,8.5nm,0.8s,mb4.9
W25A **X Bar L Ranch,** 84.62 49 ⇑P P 08 59 22.3 +0.5
baz=84,SNR=33
NKY **Niksic** 84.67 322 ⇑*i*P P 08 59 22.4 +0.4
NKY **Niksic** 84.67 322 ⇑*i*P P 08 59 22.4 +0.5
320A **Kipp Ranch, An** 84.69 54 ⇓P P 08 59 22.3 0.0
baz=84,SNR=5.7
WLF **Walferdange** 84.70 333 *e*P P 08 59 28.9 +6.9
221A **Mesquite Ranch** 84.73 53 ⇓P P 08 59 22.4 -0.1
baz=84
122A **Conniff Cattle** 84.76 52 ⇓P P 08 59 23.0 +0.4
baz=84
GIVF **Givet** 84.81 334 *e*P P 08 59 22.3 -0.2
BRY **Bratogost** 84.82 322 *e*P P 08 59 20.2 -2.5
BRY **Bratogost** 84.82 322 *e*P P 08 59 20.2 -2.5
TTG **Podgorica** 84.82 321 ⇑*i*P P 08 59 22.8 0.0
TTG **Podgorica** 84.82 321 ⇑*i*P P 08 59 22.8 +0.1
Z23A **Rita Site, Whi** 84.86 52 ⇓P P 08 59 23.0 -0.1
baz=85
Y24A **Capitan** 84.91 51 ⇓P P 08 59 23.2 -0.1
baz=85,SNR=5.8
X25A **Clemmons Ranch** 84.97 50 ⇓P P 08 59 23.5 -0.1
baz=85
BFO **Black Forest** 85.00 331 *e*P P 08 59 29.3 +5.8
BFO **Black Forest** 85.00 331 *e*P P 08 59 22.7 -0.8
BFO pmax pmax
comp=Z,57nm,1.2s,mb5.6
BFO **Black Forest** 85.00 331 *e*P P 08 59 22.7 -0.8
comp=Z,57nm,1.2s,mb5.6
OHR **Ohrid** 85.02 320 ⇑*i*P P 08 59 22.9 -0.8
BAIF **Baives** 85.05 334 *e*P P 08 59 23.6 -0.2
222A **Williams Famil** 85.09 53 ⇑P P 08 59 24.0 -0.3
baz=85,SNR=5.4
BUM **Brajici-Budva** 85.10 322 ⇑*i*P P 08 59 24.4 +0.3
BUM **Brajici-Budva** 85.10 322 ⇑*i*P P 08 59 24.4 +0.3
W26A **Owens Ranch, T** 85.13 49 ⇑P P 08 59 24.7 +0.2
baz=85
ULC **Ulcinj** 85.18 321 ⇑*i*P P 08 59 25.4 +0.9
ULC **Ulcinj** 85.18 321 ⇑*i*P P 08 59 25.4 +0.9
HCY **Herceg Novi** 85.19 322 ⇑*i*P P 08 59 23.3 -1.3
HCY **Herceg Novi** 85.19 322 ⇑*i*P P 08 59 23.3 -1.3
DAVA **Damuels** 85.25 330 ⇑*i*sPKiKP 09 04 53.7
comp=Z,17nm,1.2s
123A **Bell Site, Whi** 85.27 52 ⇓P P 08 59 24.9 -0.2
baz=85
CDF **Champ du Feu** 85.33 332 *e*P P 08 59 25.1 -0.1
comp=Z,85nm,1.2s,mb5.5
CDF **Champ du Feu** 85.33 332 *e*P P 08 59 25.1 -0.1
CDF pmax pmax
comp=Z,42nm,1.2s,mb5.4
CDF **Champ du Feu** 85.33 332 *e*P P 08 59 25.1 -0.1
comp=Z,42nm,1.2s,mb5.5
Z24A **Sheeppen Canyo** 85.36 51 ⇑P P 08 59 25.5 -0.1
baz=85,SNR=7.5
Y25A **Mesa, Roswell** 85.36 50 ⇓P P 08 59 25.1 -0.5
baz=85,SNR=8.3
DLF **Lyons Farm** 85.37 342 *e*P P 08 59 25.4 +0.1
DLF **Lyons Farm** 85.37 342 *e*P P 08 59 25.4 +0.1
X26A **CR and CF Fran** 85.47 49 ⇑P P 08 59 26.0 -0.1
baz=85,SNR=7.1
W27A **Bowe Ranch, En** 85.56 48 ⇑P P 08 59 27.0 +0.4
baz=85,SNR=31
223A **Chaparral, Ant** 85.58 53 ⇑P P 08 59 26.7 -0.1
baz=85
124A **Stringfield Ra** 85.72 51 ⇑P P 08 59 27.3 -0.2
baz=86
Z25A **Roswell** 85.79 51 ⇓P P 08 59 27.8 0.0
baz=86,SNR=17
X27A **F and S Farms,** 85.83 49 ⇓P P 08 59 28.1 +0.1
baz=86,SNR=7.9
Y26A **Elida** 85.89 50 ⇓P P 08 59 28.1 -0.1
baz=86
SCIA **State Center** 85.95 38 *e*P P 08 59 28.5 +0.1
comp=Z,12nm,0.6s,mb5.3
SCIA *e* pP 08 59 37.8 -0.1
HINF **Hinteralfeld** 85.99 332 *e*P P 08 59 28.1 -0.3
comp=Z,46nm,1.2s,mb5.3
HINF **Hinteralfeld** 85.99 332 *e*P P 08 59 28.1 -0.3
HINF pmax pmax
comp=Z,23nm,1.2s,mb5.3
HINF **Hinteralfeld** 85.99 332 *e*P P 08 59 28.1 -0.3
comp=Z,23nm,1.2s,mb5.3
HAU **Haudompre** 86.02 332 *e*P P 08 59 28.1 -0.5
comp=Z,26nm,0.8s,mb5.2
HAU *e*MLR MLR
comp=Z,1μm,20.8s,MS5.0
HAU **Haudompre** 86.02 332 *e*P P 08 59 28.1 -0.5
HAU pmax pmax
comp=Z,13nm,0.8s,mb5.2
HAU MLR MLR
comp=Z,1μm,20.8s,MS5.3
HAU **Haudompre** 86.02 332 *e*P P 08 59 28.1 -0.5
comp=Z,13nm,0.8s,mb5.2
HAU LR LR
comp=Z,1μm,20.8s,MS5.3
224A **Cornudas Mount** 86.10 52 ⇓P P 08 59 29.1 -0.2
baz=86,SNR=12
Z26A **Caprock** 86.24 50 ⇓P P 08 59 29.6 -0.4
baz=86,SNR=15
125A **Gardner Draw,** 86.25 51 ⇓P P 08 59 29.8 -0.3
baz=86,SNR=17
Y27A **Causey** 86.32 49 ⇑P P 08 59 29.8 -0.5
baz=86,SNR=5.2
MNTX **Cornudas Mount** 86.45 52 *e*P P 08 59 30.4 -0.6
comp=Z,15nm,1.6s,mb5.0
MSTX **Muleshoe** 86.49 49 ⇓P P 08 59 30.6 -0.6
baz=86
AMTX **Amarillo** 86.50 48 *e*P P 08 59 31.2 -0.1
comp=Z,17nm,0.9s,mb5.3
225A **Deer Hill, Car** 86.52 52 ⇓P P 08 59 31.1 -0.2
baz=86
324A **Moseley Ranch,** 86.56 52 ⇑P P 08 59 31.0 -0.6
baz=86,SNR=5.8
JFWS **Jewell Farm** 86.60 36 *e*P P 08 59 30.9 -0.6
JFWS pmax pmax
comp=Z,11nm,0.8s,mb5.1
JFWS **Jewell Farm** 86.60 36 *e*P P 08 59 30.9 -0.7
comp=Z,11nm,0.8s,mb5.2
126A **Clayton Basin,** 86.65 51 ⇑P P 08 59 31.4 -0.6
baz=86
Z27A **Tatum** 86.68 50 ⇓P P 08 59 31.5 -0.6
baz=86,SNR=9.9
GDL2 **Guadalupe Moun** 86.74 51 *e*P P 08 59 32.3 -0.1
GDL2 *e* pP 08 59 42.1 +0.2
325A **Bean Ranch, Si** 86.93 52 ⇓P P 08 59 32.8 -0.6
baz=87,SNR=7.7
226A **Malaga, Loving** 87.00 51 ⇑P P 08 59 33.3 -0.4
baz=87,SNR=5.8
CABF **La Chapelle** 87.28 331 *e*P P 08 59 34.7 -0.1
comp=Z,33nm,1.1s,mb5.2
CABF **La Chapelle** 87.28 331 *e*P P 08 59 34.7 -0.1
CABF pmax pmax
comp=Z,16nm,1.1s,mb5.2
CABF **La Chapelle** 87.28 331 *e*P P 08 59 34.7 -0.1
comp=Z,16nm,1.1s,mb5.2
425A **Indio Mountain** 87.31 53 ⇑P P 08 59 34.8 -0.4
baz=87
227A **Bennet, Jal** 87.53 51 ⇑P P 08 59 35.7 -0.6
baz=87
LOR **Lormes** 87.55 333 *e*P P 08 59 35.9 -0.2
comp=Z,62nm,1.0s,mb5.5
LOR *e*MLR MLR
comp=Z,1μm,20.2s,MS5.0
LOR **Lormes** 87.55 333 *e*P P 08 59 35.9 -0.2
LOR pmax pmax
comp=Z,31nm,1.0s,mb5.5
LOR MLR MLR
comp=Z,1μm,20.3s,MS5.3
LOR **Lormes** 87.55 333 *e*P P 08 59 35.9 -0.2
comp=Z,31nm,1.0s,mb5.5
LOR LR LR
comp=Z,1μm,20.3s,MS5.3
326A **Caldwell Ranch** 87.58 52 ⇓P P 08 59 36.0 -0.6
baz=87,SNR=7.2
FLN **La Foliniere** 87.72 336 *e*P P 08 59 36.7 -0.2
FLN *e*MLR MLR
comp=Z,2μm,18.8s,MS5.3
FLN **La Foliniere** 87.72 336 *e*P P 08 59 36.7 -0.2
FLN LR LR
comp=Z,2μm,18.8s,MS5.6
LDF **La Druitiere** 87.76 336 *e*P P 08 59 36.8 -0.3
327A **Balmorhea Ranc** 87.85 51 ⇓P P 08 59 37.3 -0.5
baz=88
SSF **Saint Saulge** 87.85 333 *e*P P 08 59 37.3 -0.2
comp=Z,32nm,0.9s,mb5.2
SSF **Saint Saulge** 87.85 333 *e*P P 08 59 37.3 -0.2
SSF pmax pmax
comp=Z,16nm,0.9s,mb5.2
SSF **Saint Saulge** 87.85 333 *e*P P 08 59 37.3 -0.2
comp=Z,16nm,0.9s,mb5.2
LPL **La Plagne** 87.94 330 *e*P P 08 59 38.3 +0.3
LPG **La Plagne** 87.95 330 *e*P P 08 59 38.3 +0.3
comp=Z,28nm,0.9s,mb5.2
LPG **La Plagne** 87.95 330 *e*P P 08 59 38.3 +0.3
LPG pmax pmax
comp=Z,14nm,0.9s,mb5.2
LPG **La Plagne** 87.95 330 *e*P P 08 59 38.3 +0.3
comp=Z,14nm,0.9s,mb5.2
426A **McDonald Obser** 88.00 52 ⇓P P 08 59 38.1 -0.5
baz=88
SMF **Signal de Mont** 88.08 333 *e*P P 08 59 38.6 0.0
comp=Z,105nm,1.5s,mb5.5
SMF **Signal de Mont** 88.08 333 *e*P P 08 59 38.6 0.0
SMF pmax pmax
comp=Z,52nm,1.5s,mb5.5
SMF **Signal de Mont** 88.08 333 *e*P P 08 59 38.6 0.0
comp=Z,52nm,1.5s,mb5.5
AVF **Avril sur Loir** 88.14 333 *e*P P 08 59 38.9 0.0
comp=Z,39nm,0.8s,mb5.4
AVF **Avril sur Loir** 88.14 333 *e*P P 08 59 38.9 0.0
AVF pmax pmax
comp=Z,20nm,0.8s,mb5.4
AVF **Avril sur Loir** 88.14 333 *e*P P 08 59 38.9 0.0
comp=Z,20nm,0.8s,mb5.4
GRR **Gorron** 88.17 336 *e*P P 08 59 39.1 +0.1
comp=Z,69nm,1.1s,mb5.5
GRR **Gorron** 88.17 336 *e*P P 08 59 39.1 +0.1
GRR pmax pmax
comp=Z,34nm,1.1s,mb5.5
GRR **Gorron** 88.17 336 *e*P P 08 59 39.1 +0.1
comp=Z,34nm,1.1s,mb5.5
328A **Wristen Ranch,** 88.26 51 ⇑P P 08 59 38.9 -0.9
baz=88
427A **Hayter Ranch,** 88.26 52 ⇓P P 08 59 39.3 -0.5
baz=88
WMOK **Wichita Mounta** 88.28 46 *e*P P 08 59 39.4 -0.4
WMOK *e* 08 59 50.6
WMOK pmax pmax
comp=Z,11nm,1.0s,mb5.0
WMOK **Wichita Mounta** 88.28 46 *e*P P 08 59 39.4 -0.5
comp=Z,11nm,1.0s,mb5.0
WMOK *e* 08 59 50.6
TBI **Tubuai** 88.31 121 *e*LR LR 09 27 25.7
comp=Z,852nm,22.5s,baz=312
526A **Mary Lane Ranc** 88.37 53 ⇑P P 08 59 40.1 -0.3
baz=88
527A **Woodward Ranch** 88.62 52 ⇑P P 08 59 41.0 -0.5
baz=88
626A **Big Bend Ranch** 88.69 53 ⇓P P 08 59 41.1 -0.7
baz=88
428A **Kincaid Ranch,** 88.79 51 ⇑P P 08 59 42.1 -0.2
baz=89
SGMF **Saint Gilles** 88.82 337 *e*P P 08 59 42.1 0.0
comp=Z,34nm,0.9s,mb5.4
SGMF **Saint Gilles** 88.82 337 *e*P P 08 59 42.1 0.0
SGMF pmax pmax
comp=Z,17nm,0.9s,mb5.4
SGMF **Saint Gilles** 88.82 337 *e*P P 08 59 42.1 0.0
comp=Z,17nm,0.9s,mb5.4
HDIL **Hopedale** 88.88 37 *e*P P 08 59 42.1 -0.5
comp=Z,15nm,0.6s,mb5.5
HDIL *e* pP 08 59 49.8 -2.3
ROSF **Rostrenen** 88.96 338 *e*P P 08 59 42.9 +0.1
comp=Z,95nm,1.4s,mb5.6
ROSF **Rostrenen** 88.96 338 *e*P P 08 59 42.9 +0.1
ROSF pmax pmax
comp=Z,48nm,1.4s,mb5.6
ROSF **Rostrenen** 88.96 338 *e*P P 08 59 42.9 +0.1
comp=Z,48nm,1.4s,mb5.6
TCF **Toulx Ste Croi** 88.97 334 *e*P P 08 59 43.1 +0.3
comp=Z,47nm,1.4s,mb5.3
TCF **Toulx Ste Croi** 88.97 334 *e*P P 08 59 43.1 +0.3
TCF pmax pmax
comp=Z,23nm,1.4s,mb5.3
TCF **Toulx Ste Croi** 88.97 334 *e*P P 08 59 43.1 +0.3
comp=Z,23nm,1.4s,mb5.3
528A **Cox Ranch, San** 89.12 52 ⇓P P 08 59 43.5 -0.3
baz=89
TXAR **Lajitas Array** 89.14 53 P P 08 59 43.5 -0.4
comp=Z,5.3nm,0.8s,mb4.9,baz=294,slow=3.3,SNR=64
TXAR LR LR 09 36 47.1
comp=Z,296nm,19.6s,MS4.7,baz=110,slow=34
627A **Terlingua Ranc** 89.23 53 ⇓P P 08 59 43.9 -0.5
baz=89
QUIF **Quistinic** 89.31 338 *e*P P 08 59 44.4 0.0
MFF **Saint Martin d** 89.51 335 *e*P P 08 59 45.6 +0.2
628A **Black Gap, Mar** 89.53 52 ⇑P P 08 59 45.3 -0.5
baz=89
CEL **Celeste** 89.66 321 *e*P P 08 59 45.7 -0.5
comp=Z,46nm,1.0s,mb5.8
CCM **Cathedral Cave** 89.87 39 *e*P P 08 59 46.6 -0.6
CCM *e* pP 08 59 55.2 -1.6
CCM pmax pmax
comp=Z,22nm,1.0s,mb5.4
CCM **Cathedral Cave** 89.87 39 *e*P P 08 59 46.6 -0.7
comp=Z,22nm,1.0s,mb5.4
CCM *e* pP 08 59 55.2 -1.6
AAM **Ann Arbor** 90.01 32 *e*P P 08 59 47.9 +0.1
AAM *e* pP 08 59 58.1 +0.8
AAM pmax pmax
comp=Z,13nm,0.6s,mb5.4
AAM **Ann Arbor** 90.01 32 *e*P P 08 59 47.9 +0.1
comp=Z,13nm,0.6s,mb5.4
AAM *e* pP 08 59 58.1 +0.8
RJF **Les Rejaudoux** 90.07 333 *e*P P 08 59 48.1 +0.1
RJF *e*MLR MLR
comp=Z,915nm,19.0s,MS4.9
RJF **Les Rejaudoux** 90.07 333 *e*P P 08 59 48.1 +0.1
RJF LR LR
comp=Z,910nm,19.0s,MS5.2
CAF **Calviac** 90.20 333 *e*P P 08 59 49.1 +0.5
comp=Z,33nm,1.1s,mb5.3
CAF **Calviac** 90.20 333 *e*P P 08 59 49.1 +0.5
CAF pmax pmax
comp=Z,16nm,1.1s,mb5.3
CAF **Calviac** 90.20 333 *e*P P 08 59 49.1 +0.5
comp=Z,16nm,1.1s,mb5.3
FVM **French Village** 90.33 39 *e*P P 08 59 49.1 -0.3
FVM pmax pmax
comp=Z,15nm,1.3s,mb5.2
FVM **French Village** 90.33 39 *e*P P 08 59 49.1 -0.3
comp=Z,15nm,1.3s,mb5.2
LFF **La Frestale** 90.66 334 *e*P P 08 59 51.2 +0.5
JCT **Junction City** 90.73 50 *e*P P 08 59 50.9 -0.5
JCT *e* pP 09 00 00.0 -0.9
JCT pmax pmax
comp=Z,9.0nm,0.8s,mb5.2
JCT **Junction City** 90.73 50 *e*P P 08 59 50.9 -0.5
comp=Z,8.9nm,0.8s,mb5.2
JCT *e* pP 08 59 60.0 -0.9
OLIL **Olney** 90.88 37 *e*P P 08 59 52.0 +0.1
comp=Z,16nm,0.7s,mb5.5
OLIL *e* pP 09 00 01.3 -0.2
BLO **Bloomington** 91.28 36 *e*P P 08 59 53.3 -0.4
BLO pmax pmax
comp=Z,19nm,1.2s,mb5.3
BLO **Bloomington** 91.28 36 *e*P P 08 59 53.3 -0.4
comp=Z,20nm,1.2s,mb5.3
MIAR **Mount Ida** 91.33 43 *e*P P 08 59 53.6 -0.5
MIAR pmax pmax
comp=Z,13nm,0.8s,mb5.3
MIAR **Mount Ida** 91.33 43 *e*P P 08 59 53.6 -0.5
comp=Z,13nm,0.8s,mb5.3
LONY **Lake Ozonia** 91.49 25 *e*P P 08 59 54.1 -0.6

comp=Z,10nm,0.9s,mb5.2
LONY e pP 09 00 03.4 -0.7
PARMO Parma 91.70 39 *e*P **P 08 59 55.8 0.0**
PARMO e pP 09 00 05.4 +0.1
ACSO Alum Creek Sta 92.00 33 *e*P **P 08 59 56.9 -0.2**
comp=Z,26nm,1.0s,mb5.5
ACSO e pP 09 00 05.8 -0.8
OXF Oxford 93.55 40 *e*P **P 09 00 03.6 -0.7**
OXF pmax pmax
comp=Z,28nm,1.0s,mb5.7
OXF Oxford 93.55 40 *e*P **P 09 00 03.6 -0.7**
comp=Z,28nm,1.0s,mb5.6
SWET Sewanee 94.73 38 *e*P **P 09 00 08.4 -1.3**
SWET e pP 09 00 18.1 -1.2
TKL Tuckaleechee C 95.40 36 LR LR 09 49 58.1
comp=Z,305nm,18.1s,MS4.8,baz=293,slow=40
TKL Tuckaleechee C 95.40 36 *e*P **P 09 00 12.1 -0.7**
ELN Prospectdale 95.46 33 *e*P **P 09 00 12.3 -0.7**
ELN e pP 09 00 22.1 -0.4
BLA Blacksburg 95.62 33 *e*P **P 09 00 14.3 +0.5**
BLA e pP 09 00 22.8 -0.5
BLA pmax pmax
comp=Z,20nm,1.0s,mb5.5
BLA Blacksburg 95.62 33 *e*P **P 09 00 14.3 +0.5**
comp=Z,20nm,1.0s,mb5.5
BLA e pP 09 00 22.8 -0.5
MVO Moncorvo 96.59 337 *e*LQ 09 36 13.4
MVO *e*LR LR 09 39 44.3
comp=Z,1μm,18.0s
ESDC Sonseca Array 96.94 334 LR LR 09 49 18.6
comp=Z,1μm,18.2s,MS5.3,baz=40,slow=39
MTE Manteigas 97.44 337 *e*LQ 09 36 05.6
MTE *e*LR LR 09 39 57.3
comp=Z,2μm,18.0s
PMRV Marv??o 98.28 337 *e*LQ 09 37 27.1
PMRV *e*LR LR 09 41 04.7
comp=Z,1μm,18.0s
RKT Rikitea 98.40 113 *e*SKSac SKSac 09 10 56.3 -6.0
comp=Z,341nm,27.0s
RKT *e*LR LR 09 32 21.2
comp=Z,1μm,27.5s,baz=307
PESTR Estremoz 98.86 337 *e*LQ 09 34 05.4
PESTR *e*LR LR 09 40 53.7
comp=Z,1μm,22.0s
PMAFR Mafra 99.30 338 *e*LQ 09 36 47.2
PMAFR *e*LR LR 09 40 01.4
comp=Z,1μm,22.0s
PBAR Barrancos 99.31 336 *e*LQ 09 34 24.9
PBAR *e*LR LR 09 41 36.6
comp=Z,1μm,22.0s
PCVE Castro Verde 100.13 336 *e*LQ 09 37 49.5
PCVE *e*LR LR 09 41 17.3
comp=Z,1μm,16.0s
PVAQ Vaqueiros 100.24 336 *e*LR LR 09 42 33.9
comp=Z,2μm,20.0s
PBDV Barranco-do-Ve 100.45 336 *e*LQ 09 38 10.2
PBDV *e*LR LR 09 41 43.5
comp=Z,2μm,20.0s
MORF Marmelete 100.62 337 *e*LQ 09 38 56.9
MORF *e*LR LR 09 42 49.5
comp=Z,1μm,18.0s
PFVI Vila Bisbo 100.84 337 *e*LQ 09 38 32.3
PFVI *e*LR LR 09 39 37.4
comp=Z,676nm,18.0s
MAW Mawson 120.49 206 PKP PKPdf 09 05 37.9 -0.6
comp=Z,1.8nm,1.0s,baz=60,slow=9.3,SNR=4.2
MAW Mawson 120.49 206 PKIKP PKPdf 09 05 37.9 -0.7
MAW pmax pmax
comp=Z,2.0nm,1.0s
DBIC Dimbokro 126.22 318 PKP PKPdf 09 05 50.4 -0.9
comp=Z,3.1nm,0.6s,baz=92,slow=3.1,SNR=6.8
DBIC Dimbokro 126.22 318 PKIKP PKPdf 09 05 50.4 -0.9
DBIC pmax pmax
comp=Z,3.0nm,0.6s
DBIC Dimbokro 126.22 318 PKP PKPdf 09 05 50.4 -0.9
TIC Toumodi 126.33 318 *e*PKIKP PKPdf 09 06 00.8 +9.3
comp=Z,14nm,0.8s
KIC Kosan Boka 126.42 318 *e*PKIKP PKPdf 09 06 01.1 +9.4
comp=Z,55nm,1.4s
LIC Lamto 126.68 318 *e*PKIKP PKPdf 09 06 00.4 +8.2
comp=Z,86nm,1.5s
BOSA Boshof 127.38 260 PKP PKPdf 09 05 52.1 -0.9
comp=Z,1.8nm,0.7s,baz=135,slow=1.4,SNR=2.4
BOSA Boshof 127.38 260 PKIKP PKPdf 09 05 52.1 -0.9
BOSA pmax pmax
comp=Z,2.0nm,0.7s
MAIT Maitri 138.24 202 *e*PKPdif PKPdf 09 06 10.4 -1.7
VNA1 Neumayer--Stat 143.60 196 *e*PKPdf PKPdf 09 06 18.3 -3.5
LPAZ La Paz 145.74 60 PKPbc PKPbc 09 06 27.4 -0.2
comp=Z,20nm,0.9s,baz=333,slow=3.0,SNR=76
LPAZ La Paz 145.74 60 *e*PKPdf PKPdf 09 06 26.9 -0.2
LCO Las Campanas 151.24 82 *e*PKPbc PKPbc 09 06 41.6 -0.1
CPUP Villa Florida 159.90 61 PKPab PKPab 09 07 25.5 -1.3
comp=Z,0.6nm,0.5s,baz=288,slow=9.6,SNR=4.6
CPUP Villa Florida 159.90 61 PKP2 PKPab 09 07 25.5 -1.3
CPUP pmax pmax
comp=Z,1.0nm,0.5s

*ISCJB **22** 08:56:50.1±1.5, 32°.35N±0°.04×105°.44E±0°.05, h11km±10km, mb3.6/4, Error ellipse: s-maj=8.0km s-min=5.9km az=142.9*
*IDC **22** 08:56:51.0±1.2, 32°.44N×105°.45E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.5/21, mbtmp3.6/5, ML3.8/1, Error ellipse: s-maj=49.4km s-min=22.1km az=50.0*
*BJI **22** 08:56:52.7, 32°.60N×105°.40E, h15km, mb3.7/1, ML3.7/7, Ms3.3/3, Ms7 3.3/3*
ISC 22 08:56:50.9±1.5, 32°.37N±0°.04×105°.46E±0°.05, h6km±10km, n9, σ1§00/17, mb3.6/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.06**	**225**	Pg	**Sn**	**08 57 50.8**	**-1.3**
CD2				Sg	**Sg**	**08 57 56.8**	**-0.3**
CD2				smax			
	comp=N,3μm,0.6s						
CD2				smax			
	comp=E,1μm,0.8s						
XAN	**Xi'an**	**3.34**	**59**	Pn	**Pn**	**08 57 43.8**	**+0.2**
XAN				Pg	**Pb**	**08 57 49.3**	**-1.2**
XAN				Sn	**Sn**	**08 58 24.1**	**+0.5**
XAN				Sg	**Sb**	**08 58 30.1**	**-1.3**
LZH	**Lanzhou**	**3.94**	**341**	Pn	**Pn**	**08 57 53.1**	**+1.2**
LZH				Pg	**Pb**	**08 58 01.5**	**+0.8**
LZH				Sn	**Sn**	**08 58 37.6**	**-0.8**
LZH				Sg	**Sb**	**08 58 48.8**	**+0.2**
LZH				smax			
	comp=N,170nm,0.9s						
LZH				smax			
	comp=E,250nm,0.9s						
LZH				LR	LR		
	comp=N,350nm,6.8s						
LZH				LR	LR		
	comp=Z,370nm,8.5s						
GTA	**Gaotai**	**8.38**	**328**	*e*P	**Pn**	**08 58 51.8**	**-1.1**
GTA				pP		08 58 55.4	
GTA				S	**Sn**	**09 00 27.1**	**-0.7**
GTA				sS		09 00 32.3	
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GTA				LR	LR		
	comp=N,450nm,11.1s						
GTA				LR	LR		
	comp=E,310nm,11.1s						
GTA				LR	LR		
	comp=Z,240nm,11.7s						
KSRS	**Korea Array**	**19.09**	**68**	P	**Pn**	**09 01 15.3**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=255,slow=11,SNR=5.1						
MKAR	**Makanchi Array**	**22.83**	**316**	P	**P**	**09 01 56.9**	**+2.4**
	comp=Z,0.7nm,0.6s,mb3.3,baz=122,slow=12,SNR=2.7						
ZALV	**Zalesovo Beam**	**26.12**	**332**	P	**P**	**09 02 25.7**	**+0.3**
	comp=Z,0.8nm,0.5s,mb3.5,baz=144,slow=12,SNR=2.8						
ASAR	**Alice Springs**	**62.00**	**150**	P	**P**	**09 07 13.6**	**+1.7**
	comp=Z,0.7nm,0.7s,mb3.9,baz=334,slow=6.6,SNR=12						
NOA	**NORSAR Array B**	**64.22**	**327**	P	**P**	**09 07 25.9**	**-0.3**
	comp=Z,0.3nm,0.5s,mb3.5,baz=82,slow=8.9,SNR=2.5						

JMA 22 09:02:20.6±0.2, 37°.58N×142°.73E, h26km±5km, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**1.40**	**309**	P	Pn	09 02 45.2	+0.8
JIO				*e*S	Sn	09 03 02.5	+0.5
JFK	**Kawauchi**	**1.49**	**262**	P	Pn	09 02 46.3	+0.6
JFK				*e*S	Sn	09 03 04.5	+0.2
JMM	**Marumori**	**1.56**	**281**	P	Pn	09 02 47.1	+0.4
JMM				*e*S	Sn	09 03 06.5	+0.5
JOU	**Okura**	**1.81**	**296**	P	Pn	09 02 51.4	+1.3
JOU				*e*S	Sn	09 03 14.0	+1.8
JMK	**Ichinoseki**	**1.81**	**320**	P	Pn	09 02 51.2	+1.1
JFT	**Otama**	**1.90**	**269**	*e*S	Sn	09 03 16.2	+1.7
JOM	**Ohasama**	**2.20**	**330**	*e*S	Sn	09 03 23.5	+1.7
JYS	**Shiratake**	**2.20**	**288**	P	Pn	09 02 57.8	+2.3
JYS				*e*S	Sn	09 03 25.1	+3.2
JYK	**Kaneyama**	**2.29**	**306**	P	Pn	09 02 58.5	+1.8
JYK				*e*S	Sn	09 03 27.0	+2.9
JFY	**Yanaizu**	**2.41**	**267**	*e*S	Sn	09 03 29.5	+2.5
JRG	**Rokugo**	**2.45**	**318**	P	Pn	09 03 01.0	+2.2

*NEIC **22** 09:08:10.6, 33°.29N×35°.44E, h1km, MW2.7(GII), After GII.*
*CSEM **22** 09:08:11.6±0.2, 33°.34N×35°.46E, h2km, Mw2.7, Error ellipse: s-maj=4.3km s-min=2.5km az=119.0*
*GRAL **22** 09:08:11.9±0.3, 33°.34N×35°.45E, h0km±49km, MD3.7*
*ISCJB **22** 09:08:11.1±0.4, 33°.32N±0°.02×35°.46E±0°.03, h9km±3km, Error ellipse: s-maj=5.1km s-min=3.1km az=36.3*
*HLW **22** 09:08:12.6, 33°.57N×32°.80E, h13km±25km, Md3.3, Ml3.2*
*NSSC **22** 09:08:12, 33°.28N×35°.50E, h13km±2km*
ISC 22 09:08:11.5±0.4, 33°.33N±0°.02×35°.47E±0°.03, h7km±3km, n57, σ0§86/83, 32D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.20**	**324**	*e*P	**Pg**	**09 08 15.2**	**-0.4**
MATL	**Matarih**	**0.20**	**324**	*e*P	**Pg**	**09 08 15.2**	**-0.4**
KSDI	**Kefar Szold**	**0.20**	**130**	Pg	**Pg**	**09 08 15.8**	**+0.2**
KSDI	**Kefar Szold**	**0.20**	**130**	Pg	**Pg**	**09 08 15.8**	**+0.2**
HRI	**Mount Hermon**	**0.23**	**105**	Pg	**Pg**	**09 08 16.2**	**+0.2**
HRI	**Mount Hermon**	**0.23**	**105**	Pg	**Pg**	**09 08 16.2**	**+0.2**
RCY	**Rachaya**	**0.33**	**61**	*e*P	**Pg**	**09 08 18.3**	**+0.4**
RCY				*e*S	**Sg**	**09 08 23.2**	**+0.9**
RCY	**Rachaya**	**0.33**	**61**	*e*P	**Pg**	**09 08 18.3**	**+0.3**
RCY				*e*S	**Sg**	**09 08 23.2**	**+0.9**
HNTI	**Hanita**	**0.35**	**226**	Pg	**Pg**	**09 08 17.9**	**-0.4**
HNTI				Sg	**Sg**	**09 08 23.0**	**+0.1**
HNTI	**Hanita**	**0.35**	**226**	Pg	**Pg**	**09 08 17.9**	**-0.4**
HNTI				Sg	**Sg**	**09 08 23.0**	**+0.1**
BRBR	**Barbar**	**0.41**	**78**	⇓P	**Pg**	**09 08 19.0**	**-0.5**
BRBR				⇓S	**Sg**	**09 08 26.0**	**+1.2**
BRBR	**Barbar**	**0.41**	**78**	⇓*i*P	**Pg**	**09 08 19.6**	**+1.1**
BRBR				⇓*i*S	**Sg**	**09 08 26.2**	**+1.4**
KSHT	**Keshet**	**0.44**	**140**	Pg	**Pg**	**09 08 20.4**	**+0.3**
KSHT	**Keshet**	**0.44**	**140**	Pg	**Pg**	**09 08 20.4**	**+0.3**
BEYL	**Beirut**	**0.55**	**2**	*e*P	**Pg**	**09 08 21.6**	**-0.4**
BEYL	**Beirut**	**0.55**	**2**	*e*P	**Pg**	**09 08 21.6**	**-0.5**
BHL	**Bhannes**	**0.60**	**14**	*e*P	**Pg**	**09 08 22.4**	**-0.6**
BHL				*e*S	**Sg**	**09 08 30.4**	**-0.4**
BHL	**Bhannes**	**0.60**	**14**	*e*P	**Pg**	**09 08 22.4**	**-0.6**
BHL				*e*S	**Sg**	**09 08 30.4**	**-0.4**
QASN	**Qassioun**	**0.70**	**73**	⇓P	**Pg**	**09 08 25.0**	**0.0**
QASN				⇓S	**Sg**	**09 08 36.0**	**+1.8**
QASN	**Qassioun**	**0.70**	**73**	⇓*i*P	**Pg**	**09 08 25.6**	**+0.6**
QASN				⇓*i*S	**Sg**	**09 08 36.0**	**+1.8**
TCHB	**Talchebab**	**0.78**	**147**	⇑P	**Pg**	**09 08 26.0**	**-0.4**
TCHB				⇑S	**Sg**	**09 08 34.0**	**-2.5**
TCHB	**Talchebab**	**0.78**	**147**	⇑*i*P	**Pg**	**09 08 26.9**	**+0.5**
TCHB				⇑*i*S	**Sg**	**09 08 34.8**	**-1.7**
TOTH	**TOTAH**	**0.80**	**87**	⇓P	**Pg**	**09 08 27.0**	**+0.1**
TOTH				⇓S	**Sg**	**09 08 38.0**	**+0.7**
TOTH	**TOTAH**	**0.80**	**87**	⇓*i*P	**Pg**	**09 08 27.3**	**+0.4**
TOTH				⇓*i*S	**Sg**	**09 08 38.4**	**+1.1**
MMLI	**Mount Malkishu**	**0.89**	**183**	Pg	**Pg**	**09 08 27.6**	**-0.9**
MMLI	**Mount Malkishu**	**0.89**	**183**	Pg	**Pg**	**09 08 27.6**	**-0.9**
HWQ	**Hawqa**	**1.03**	**22**	*e*P	**Pg**	**09 08 30.7**	**-0.6**
MARH	**Ras Al Marh**	**1.09**	**50**	⇓P	**Pg**	**09 08 32.0**	**-0.5**
MARH				⇓S	**Sg**	**09 08 47.0**	**+0.3**
MARH	**Ras Al Marh**	**1.09**	**50**	⇓*i*P	**Pg**	**09 08 32.9**	**+0.4**
MARH				⇓*i*S	**Sg**	**09 08 47.6**	**+0.9**
SLTI	**Sal'it**	**1.14**	**199**	Pg	**Pg**	**09 08 32.7**	**-0.7**
SLTI	**Sal'it**	**1.14**	**199**	Pg	**Pg**	**09 08 32.7**	**-0.7**
FKH	**Fakeheh**	**1.19**	**40**	*e*P	**Pg**	**09 08 34.1**	**-0.3**
SALA	**Sala**	**1.22**	**120**	⇓P	**Pg**	**09 08 34.0**	**-1.0**
SALA				⇓S	**Sg**	**09 08 48.0**	**-2.8**
SALA	**Sala**	**1.22**	**120**	⇓*i*P	**Pg**	**09 08 34.6**	**-0.4**
SALA				⇓*i*S	**Sg**	**09 08 48.9**	**-1.9**
ZALF	**Zalf**	**1.61**	**104**	⇓P	**Pn**	**09 08 40.0**	**-0.4**
ZALF				⇓S	**Sn**	**09 08 59.0**	**-2.5**
ZALF	**Zalf**	**1.61**	**104**	⇓*i*P	**Pn**	**09 08 40.5**	**+0.1**
ZALF				⇓*i*S	**Sn**	**09 08 59.7**	**-1.8**
ROOS	**tl_alroos**	**1.73**	**60**	⇓P	**Pn**	**09 08 42.0**	**-0.1**
ROOS				⇓S	**Sn**	**09 09 03.0**	**-1.5**
ROOS	**tl_alroos**	**1.73**	**60**	⇓*i*P	**Pn**	**09 08 42.1**	**0.0**
ROOS				⇓*i*S	**Sn**	**09 09 03.6**	**-0.9**
DSI	**Dead Sea**	**1.75**	**183**	Pn	**Pn**	**09 08 42.0**	**-0.4**
DSI	**Dead Sea**	**1.75**	**183**	Pn	**Pn**	**09 08 42.0**	**-0.4**
BIDA	**Albida**	**1.83**	**22**	⇓P	**Pn**	**09 08 43.0**	**-0.4**
BIDA				⇓S	**Sn**	**09 09 06.0**	**-0.8**
BIDA	**Albida**	**1.83**	**22**	⇓*i*P	**Pn**	**09 08 44.0**	**+0.6**
BIDA				⇓*i*S	**Sn**	**09 09 06.4**	**-0.4**
YTIR	**Yattir**	**1.98**	**189**	Pn	**Pn**	**09 08 46.6**	**+1.1**
YTIR	**Yattir**	**1.98**	**189**	Pn	**Pn**	**09 08 46.6**	**+1.1**
RMNI	**Mount Ramon**	**2.79**	**193**	Pn	**Pn**	**09 08 57.2**	**+0.6**
RMNI	**Mount Ramon**	**2.79**	**193**	Pn	**Pn**	**09 08 57.2**	**+0.6**
PRNI	**Paran**	**2.99**	**188**	Pn	**Pn**	**09 08 59.9**	**+0.5**
PRNI	**Paran**	**2.99**	**188**	Pn	**Pn**	**09 08 59.9**	**+0.5**
KRMI	**Paran Flat**	**3.26**	**191**	Pn	**Pn**	**09 09 03.4**	**+0.3**
KRMI	**Paran Flat**	**3.26**	**191**	Pn	**Pn**	**09 09 03.4**	**+0.3**
HNKL	**Nakhl**	**3.62**	**201**	P	**Pn**	**09 09 08.4**	**+0.4**
	baz=164						
HNKL				S	**Sn**	**09 09 51.9**	**+0.9**
	baz=164						
HNKL				AMP		09 10 00.0	
	comp=E,80μm,0.6s,logA/T=5.1,baz=164						
HNKL	**Nakhl**	**3.62**	**201**	P	**Pn**	**09 09 08.4**	**+0.4**
HNKL				S	**Sn**	**09 09 51.8**	**+0.8**
HBST	**Basata**	**4.14**	**189**	P	**Pn**	**09 09 21.5**	**+6.2**
	baz=158						
HKAT	**Jabal Katrina**	**4.95**	**195**	P	**Pn**	**09 09 28.3**	**+2.0**
	baz=168						
HKAT	**Jabal Katrina**	**4.95**	**195**	P	**Pn**	**09 09 28.3**	**+1.9**
TR2		**5.15**	**197**	P	**Pn**	**09 09 29.4**	**+0.3**
	baz=171						
TR2		**5.15**	**197**	P	**Pn**	**09 09 29.4**	**+0.3**

*NEIC **22** 09:36:31.6, 39°.64S×174°.36E, h207km, MG4.9(WEL), After WEL.*
NEIC Felt at Marton and Wanganui.
WEL 22 09:36:31.4±0.3, 39°.63S×174°.34E, h208km±2km, ML4.9/24, 25C-19D, Error ellipse: s-maj=1.9km s-min=1.1km az=90.0, reported intensity MM 4., North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAEZ	**Rainy Point**	**0.34**	**7**	PN	Pn	09 36 58.7	-0.3
RAEZ				SN	Sn	09 37 19.6	-0.7
RAEZ	**Rainy Point**	**0.34**	**7**	P	Pn	09 36 58.7	-0.3
DFE	**Dawson Falls**	**0.35**	**329**	PN	Pn	09 36 59.0	0.0
DFE	**Dawson Falls**	**0.35**	**329**	P	Pn	09 36 59.0	0.0
NEZ	**North Egmont**	**0.40**	**333**	PN	Pn	09 36 59.0	-0.2
NEZ	**North Egmont**	**0.40**	**333**	P	Pn	09 36 59.0	-0.1
DREZ	**Durham Road**	**0.45**	**347**	PN	Pn	09 36 59.0	-0.3
DREZ				SN	Sn	09 37 20.1	-0.7
NWEZ	**Newall Road**	**0.51**	**314**	PN	Pn	09 36 59.5	0.0
NWEZ	**Newall Road**	**0.51**	**314**	P	Pn	09 36 59.5	+0.1
WAZ	**Wanganui**	**0.52**	**104**	PN	Pn	09 36 59.8	+0.4
WAZ				SN	Sn	09 37 20.4	-0.7
WAZ	**Wanganui**	**0.52**	**104**	P	Pn	09 36 59.8	+0.4
MHEZ	**Mangahewa**	**0.55**	**359**	PN	Pn	09 36 59.5	-0.1
MHEZ				SN	Sn	09 37 20.8	-0.7
VRZ	**Vera Road**	**0.60**	**33**	PN	Pn	09 36 59.2	-0.7
VRZ	**Vera Road**	**0.60**	**33**	P	Pn	09 36 59.2	-0.6
PKVZ	**Pokaka**	**0.85**	**67**	PN	Pn	09 37 00.7	-0.3
MTVZ	**Mangateitei**	**0.91**	**75**	PN	Pn	09 37 01.4	0.0
TRVZ	**Turoa**	**0.99**	**71**	PN	Pn	09 37 02.0	+0.1
TRVZ				SN	Sn	09 37 24.0	-1.5
FWVZ	**Far West T-bar**	**1.01**	**69**	⇓PN	Pn	09 37 02.1	+0.1
FWVZ	**Far West T-bar**	**1.01**	**69**	⇓P	Pn	09 37 02.1	+0.1
DRZ	**Dome Shelter**	**1.01**	**70**	PN	Pn	09 37 02.1	+0.1
DRZ	**Dome Shelter**	**1.01**	**70**	P	Pn	09 37 02.1	+0.1
TWVZ	**Taurewa**	**1.02**	**57**	⇓PN	Pn	09 37 01.7	-0.4
TWVZ	**Taurewa**	**1.02**	**57**	⇓P	Pn	09 37 01.7	-0.4
WNVZ	**Wahianoa**	**1.02**	**73**	⇓PN	Pn	09 37 02.3	+0.2
WPVZ	**Whakapapa**	**1.03**	**66**	PN	Pn	09 37 02.1	0.0
NGZ	**Ngauruhoe**	**1.08**	**66**	PN	Pn	09 37 02.5	0.0
TUVZ	**Tukino**	**1.08**	**71**	⇓PN	Pn	09 37 02.7	+0.2
TUVZ	**Tukino**	**1.08**	**71**	⇓P	Pn	09 37 02.7	+0.2
WTVZ	**West Tongariro**	**1.10**	**63**	⇓PN	Pn	09 37 02.6	0.0
WTVZ				SN	Sn	09 37 24.8	-1.9
WTVZ	**West Tongariro**	**1.10**	**63**	⇓P	Pn	09 37 02.6	0.0
WTVZ				S	Sn	09 37 24.8	-2.0
MOVZ	**Moawhango**	**1.12**	**79**	⇓PN	Pn	09 37 02.4	-0.3
MOVZ	**Moawhango**	**1.12**	**79**	⇓P	Pn	09 37 02.4	-0.3
OTVZ	**Oturere**	**1.13**	**66**	⇓PN	Pn	09 37 03.0	+0.2
KRVZ	**Karewarewa**	**1.14**	**63**	PN	Pn	09 37 02.9	-0.1
HIZ	**Hauiti**	**1.19**	**20**	⇓PN	Pn	09 37 02.4	-0.9
HIZ	**Hauiti**	**1.19**	**20**	⇓P	Pn	09 37 02.4	-0.9
DUWZ	**D'Urville Isla**	**1.21**	**195**	⇑PN	Pn	09 37 03.4	0.0
KATZ	**Kakaramea**	**1.24**	**59**	PN	Pn	09 37 03.7	+0.1
KATZ	**Kakaramea**	**1.24**	**59**	P	Pn	09 37 03.7	0.0
KIW	**Kapiti Island**	**1.31**	**161**	⇑PN	Pn	09 37 04.0	-0.1
KIW	**Kapiti Island**	**1.31**	**161**	⇑P	Pn	09 37 04.0	-0.1
TSZ	**Takapari Road**	**1.32**	**109**	PN	Pn	09 37 04.4	+0.2
TSZ	**Takapari Road**	**1.32**	**109**	P	Pn	09 37 04.4	+0.1
POWZ	**Post Office Ro**	**1.34**	**125**	⇑PN	Pn	09 37 04.4	+0.1
OGWZ	**Otaki Gorge**	**1.35**	**152**	⇑PN	Pn	09 37 04.6	+0.2
RITZ	**Rihia Road**	**1.35**	**62**	PN	Pn	09 37 04.6	+0.1
RITZ	**Rihia Road**	**1.35**	**62**	P	Pn	09 37 04.6	+0.1
RATZ	**Rangitukua**	**1.35**	**56**	PN	Pn	09 37 04.3	-0.2
RATZ	**Rangitukua**	**1.35**	**56**	P	Pn	09 37 04.3	-0.2
MRZ	**Mangatainoka R**	**1.40**	**138**	⇑PN	Pn	09 37 04.9	-0.1
MRZ	**Mangatainoka R**	**1.40**	**138**	⇑P	Pn	09 37 04.9	0.0
WATZ	**Wairara**	**1.42**	**50**	⇓PN	Pn	09 37 05.0	-0.1
WATZ	**Wairara**	**1.42**	**50**	⇓P	Pn	09 37 05.0	-0.1
PNHZ	**Pukenui**	**1.46**	**102**	⇓PN	Pn	09 37 05.6	+0.2
HATZ	**Hinemaiaia**	**1.55**	**62**	PN	Pn	09 37 05.5	-0.7
HATZ	**Hinemaiaia**	**1.55**	**62**	P	Pn	09 37 05.5	-0.7
HOWZ	**Holdsworth Sta**	**1.56**	**145**	⇑PN	Pn	09 37 06.0	-0.2
DVHZ	**Dannevirke**	**1.56**	**116**	PN	Pn	09 37 06.4	+0.1
CAW	**Cannon Point**	**1.58**	**159**	⇑PN	Pn	09 37 06.3	-0.1
CAW	**Cannon Point**	**1.58**	**159**	⇑P	Pn	09 37 06.3	-0.1
TCW	**Tory Channel**	**1.58**	**182**	⇑PN	Pn	09 37 06.5	+0.1
TCW	**Tory Channel**	**1.58**	**182**	⇑P	Pn	09 37 06.5	+0.1
WHTZ	**Whakaora**	**1.59**	**53**	PN	Pn	09 37 06.7	+0.2
WHTZ	**Whakaora**	**1.59**	**53**	P	Pn	09 37 06.7	+0.1
TIWZ	**Tintock**	**1.65**	**134**	PN	Pn	09 37 07.1	+0.1
WPHZ	**Waipukurau**	**1.68**	**106**	PN	Pn	09 37 07.7	+0.4
WEL	**Wellington**	**1.69**	**169**	PN	Pn	09 37 07.2	-0.2
SNZO	**South Karori**	**1.70**	**171**	⇑PN	Pn	09 37 07.3	-0.3
SNZO	**South Karori**	**1.70**	**171**	⇑P	Pn	09 37 07.3	-0.2
BKZ	**Black Stump Fm**	**1.73**	**75**	⇓PN	Pn	09 37 07.6	-0.3
BKZ	**Black Stump Fm**	**1.73**	**75**	⇑P	Pn	09 37 07.6	-0.3
NNZ	**Nelson**	**1.75**	**204**	⇑PN	Pn	09 37 07.8	-0.2
NNZ	**Nelson**	**1.75**	**204**	⇑P	Pn	09 37 07.8	-0.1
MTW	**Mount Morrison**	**1.77**	**150**	⇑PN	Pn	09 37 07.9	-0.3
BFZ	**Birch Farm**	**1.80**	**126**	PN	Pn	09 37 08.5	0.0
BHW	**Baring Head**	**1.82**	**167**	PN	Pn	09 37 08.3	-0.4
BHW	**Baring Head**	**1.82**	**167**	P	Pn	09 37 08.3	-0.4
TUWZ	**Tuamarina**	**1.82**	**189**	PN	Pn	09 37 08.4	-0.2
QRZ	**Quartz Range**	**1.83**	**229**	⇑PN	Pn	09 37 07.8	-0.9
QRZ	**Quartz Range**	**1.83**	**229**	⇓P	Pn	09 37 07.8	-0.9
MCHZ	**McNeill Hill**	**1.83**	**85**	⇓PN	Pn	09 37 09.6	+0.8
ALRZ	**Allen Road**	**1.89**	**56**	PN	Pn	09 37 08.5	-0.9
TMWZ	**Te Maipa**	**1.89**	**142**	⇑PN	Pn	09 37 09.3	0.0
MSWZ	**Moikau Station**	**1.91**	**159**	⇑PN	Pn	09 37 09.2	-0.4
MSWZ	**Moikau Station**	**1.91**	**159**	⇑P	Pn	09 37 09.2	-0.4
PAWZ	**Paruwai Farm**	**1.94**	**155**	⇑PN	Pn	09 37 09.5	-0.3
PAWZ	**Paruwai Farm**	**1.94**	**155**	⇑P	Pn	09 37 09.5	-0.3
PRRZ	**Plateau Road**	**1.96**	**55**	PN	Pn	09 37 09.2	-0.9
KAHZ	**Kahuranaki**	**1.97**	**96**	PN	Pn	09 37 10.7	+0.6
PXZ	**Pawanui**	**1.99**	**102**	PN	Pn	09 37 10.4	+0.1
NMHZ	**Naumai**	**1.99**	**75**	PN	Pn	09 37 10.9	+0.6
TRWZ	**Traveller**	**2.05**	**150**	PN	Pn	09 37 10.7	-0.2
PLWZ	**Palliser**	**2.06**	**160**	PN	Pn	09 37 10.5	-0.5
BSWZ	**Blackbirch Sta**	**2.11**	**189**	PN	Pn	09 37 11.5	0.0
BSWZ	**Blackbirch Sta**	**2.11**	**189**	P	Pn	09 37 11.5	0.0
CKHZ	**Cape Kidnapper**	**2.12**	**92**	PN	Pn	09 37 12.2	+0.5
CMWZ	**Cape Campbell**	**2.12**	**182**	PN	Pn	09 37 12.0	+0.4
RRRZ	**Republican Roa**	**2.13**	**54**	PN	Pn	09 37 11.0	-0.8
RAHZ	**Arahi**	**2.25**	**72**	PN	Pn	09 37 13.0	0.0
THZ	**Tophouse**	**2.39**	**207**	PN	Pn	09 37 14.1	-0.4
THZ	**Tophouse**	**2.39**	**207**	P	Pn	09 37 14.1	-0.4
URZ	**Urewera**	**2.56**	**59**	PN	Pn	09 37 14.8	-1.7
URZ	**Urewera**	**

0.2nm,0.6s,baz=198,slow=7.3,SNR=3.1
ARCES ARCESS Array B 132.00 348 PKP PKPdf 09 57 03.3 -0.2
1.1nm,0.8s,baz=66,slow=1.1,SNR=3.5
AKASG Malin Array Be 145.08 327 PKPbc PKPbc 09 57 27.8 -0.9
0.4nm,0.3s,baz=41,slow=3.9,SNR=4.9

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*NEIC **22** 09:44:38.5, 38°.96S×178°.37E, h45km, ML3.7(WEL), After WEL.*
WEL 22 09:44:38.9±0.2, 38°.92S×178°.32E, h44km±2km, ML3.7/10, 5C-3D, Error ellipse: s-maj=2.6km s-min=1.1km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRGZ	**Paritu Road**	**0.34**	**269**	↓PN	Pn	09 44 47.7	-0.3
PRGZ				SN	Sn	09 44 54.4	+0.1
MHGZ	**Mahia Peninsul**	**0.40**	**234**	↓PN	Pn	09 44 48.6	0.0
MHGZ				SN	Sn	09 44 56.2	+0.7
CNGZ	**Carnagh Statio**	**0.44**	**348**	PN	Pn	09 44 49.4	+0.3
KNZ	**Kokohu**	**0.52**	**259**	↓PN	Pn	09 44 49.6	-0.4
KNZ	**Kokohu**	**0.52**	**259**	P	Pn	09 44 49.5	-0.5
PUZ	**Puketiti**	**0.85**	**356**	↑PN	Pn	09 44 54.1	-0.3
PUZ				SN	Sn	09 45 05.0	-0.7
PUZ	**Puketiti**	**0.85**	**356**	P	Pn	09 44 54.1	-0.3
MWZ	**Matawai**	**0.85**	**313**	↑PN	Pn	09 44 54.2	-0.3
MWZ				SN	Sn	09 45 05.1	-0.7
MWZ	**Matawai**	**0.85**	**313**	P	Pn	09 44 54.2	-0.3
RAHZ	**Arahi**	**0.96**	**270**	PN	Pn	09 44 56.0	0.0
URZ	**Urewera**	**1.16**	**304**	↑PN	Pn	09 44 58.6	-0.1
URZ	**Urewera**	**1.16**	**304**	*e*Pn	Pn	09 44 58.5	-0.1
URZ				P		09 44 58.6	
URZ				*e*Sn	Sn	09 45 13.5	+0.3
NMHZ	**Naumai**	**1.20**	**261**	PN	Pn	09 44 59.2	0.0
CKHZ	**Cape Kidnapper**	**1.22**	**232**	↑PN	Pn	09 44 58.9	-0.6
MXZ	**Matakaoa Point**	**1.35**	**359**	↑PN	Pn	09 45 01.5	+0.1
MXZ	**Matakaoa Point**	**1.35**	**359**	P	Pn	09 45 01.6	+0.2
MCHZ	**McNeill Hill**	**1.37**	**247**	PN	Pn	09 45 01.6	+0.1
KAHZ	**Kahuranaki**	**1.42**	**232**	PN	Pn	09 45 01.5	-0.8
BKZ	**Black Stump Fm**	**1.45**	**260**	PN	Pn	09 45 02.5	-0.2
BKZ	**Black Stump Fm**	**1.45**	**260**	P	Pn	09 45 02.5	-0.1
PRRZ	**Plateau Road**	**1.57**	**285**	PN	Pn	09 45 04.5	+0.2
PXZ	**Pawanui**	**1.58**	**225**	PN	Pn	09 45 02.9	-1.6
HRRZ	**Handcock Road**	**1.68**	**288**	PN	Pn	09 45 06.0	+0.2
WPHZ	**Waipukurau**	**1.85**	**231**	PN	Pn	09 45 07.0	-1.2
PRHZ	**Porangahau**	**1.87**	**224**	PN	Pn	09 45 06.2	-2.3
PNHZ	**Pukenui**	**1.92**	**238**	PN	Pn	09 45 08.3	-0.8
MOVZ	**Moawhango**	**2.06**	**255**	PN	Pn	09 45 11.0	+0.1
MOVZ	**Moawhango**	**2.06**	**255**	P	Pn	09 45 11.0	0.0
TSZ	**Takapari Road**	**2.15**	**237**	PN	Pn	09 45 11.0	-1.3
TSZ	**Takapari Road**	**2.15**	**237**	P	Pn	09 45 11.0	-1.3
WNVZ	**Wahianoa**	**2.16**	**258**	PN	Pn	09 45 12.6	+0.2
WNVZ	**Wahianoa**	**2.16**	**258**	P	Pn	09 45 12.6	+0.2
DVHZ	**Dannevirke**	**2.16**	**230**	PN	Pn	09 45 10.9	-1.6
WPVZ	**Whakapapa**	**2.18**	**262**	PN	Pn	09 45 12.8	+0.1
BFZ	**Birch Farm**	**2.38**	**222**	PN	Pn	09 45 13.0	-2.4
BFZ	**Birch Farm**	**2.38**	**222**	P	Pn	09 45 13.0	-2.4
POWZ	**Post Office Ro**	**2.46**	**232**	PN	Pn	09 45 15.2	-1.4
MRZ	**Mangatainoka R**	**2.74**	**230**	PN	Pn	09 45 18.4	-1.9
MRZ	**Mangatainoka R**	**2.74**	**230**	P	Pn	09 45 18.4	-1.9
TMWZ	**Te Maipa**	**2.88**	**220**	PN	Pn	09 45 19.3	-2.9
HOWZ	**Holdsworth Sta**	**2.93**	**227**	PN	Pn	09 45 20.4	-2.5
OGWZ	**Otaki Gorge**	**3.08**	**231**	PN	Pn	09 45 23.0	-2.1
MTW	**Mount Morrison**	**3.11**	**223**	PN	Pn	09 45 22.2	-3.3
MTW	**Mount Morrison**	**3.11**	**223**	P	Pn	09 45 22.2	-3.3
TRWZ	**Traveller**	**3.19**	**218**	PN	Pn	09 45 23.2	-3.4
KIW	**Kapiti Island**	**3.26**	**232**	PN	Pn	09 45 25.5	-2.0
KIW	**Kapiti Island**	**3.26**	**232**	P	Pn	09 45 25.5	-2.1
PAWZ	**Paruwai Farm**	**3.31**	**221**	PN	Pn	09 45 24.7	-3.5
CAW	**Cannon Point**	**3.32**	**228**	PN	Pn	09 45 25.6	-2.7
CAW	**Cannon Point**	**3.32**	**228**	P	Pn	09 45 25.6	-2.7
MSWZ	**Moikau Station**	**3.43**	**222**	PN	Pn	09 45 26.1	-3.8
MSWZ	**Moikau Station**	**3.43**	**222**	P	Pn	09 45 26.1	-3.7
PLWZ	**Palliser**	**3.54**	**221**	PN	Pn	09 45 27.4	-4.0
TCW	**Tory Channel**	**3.86**	**232**	PN	Pn	09 45 32.7	-3.0
TCW	**Tory Channel**	**3.86**	**232**	P	Pn	09 45 32.7	-3.0
TUWZ	**Tuamarina**	**4.19**	**232**	PN	Pn	09 45 37.0	-3.2
KHZ	**Kahutara**	**5.04**	**225**	PN	Pn	09 45 47.7	-4.3
KHZ	**Kahutara**	**5.04**	**225**	P	Pn	09 45 47.7	-4.3
LTZ	**Lake Taylor**	**6.00**	**228**	PN	Pn	09 46 00.6	-4.4
LTZ	**Lake Taylor**	**6.00**	**228**	P	Pn	09 46 00.6	-4.4
MQZ	**McQueen's Vall**	**6.41**	**220**	PN	Pn	09 46 05.9	-4.8
MQZ	**McQueen's Vall**	**6.41**	**220**	P	Pn	09 46 05.9	-4.8
ODZ	**Otahua Downs**	**8.37**	**221**	PN	Pn	09 46 33.0	-4.7
ODZ	**Otahua Downs**	**8.37**	**221**	P	Pn	09 46 33.0	-4.6

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*IDC **22** 09:44:46.7±5.2, 21°.14N×121°.11E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.5/20, mbtmp3.7/6, ML3.3/1, Error ellipse: s-maj=102.6km s-min=36.3km az=176.0*
*TAP **22** 09:44:47.8, 21°.12N×121°.27E, h17km±1km, ML3.5, D*
*NEIC **22** 09:44:47.2±1.3, 20°.97N×121°.07E, h10km, Error ellipse: s-maj=18.8km s-min=16.0km az=133.0*
*JMA **22** 09:44:51.4±0.4, 20°.91N×121°.59E, h117km, M3.1*
ISC 22 09:44:49.9±0.9, 21°.12N±0°.04×121°.11E±0°.04, h22km±5km, n40, σ1§00/69, mb3.5/5, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**0.80**	**346**	*i* P	Pb	09 45 05.1	-0.1
TSEB	baz=333						
				i S	Sb	09 45 17.6	+2.0
TSEB	baz=333						
TWK1	**Hengchun**	**0.87**	**341**	P	Pb	09 45 05.0	-1.3
TWK1	baz=332						
				S	Sb	09 45 18.4	+0.9
TWK1	baz=332						
HEN	**Hengchun**	**0.95**	**339**	*e*P	Pb	09 45 07.3	-0.4
HEN	baz=331						
				*e*S	Sb	09 45 21.3	+1.5
HEN	baz=331						
LAY	**Lan-yu**	**1.00**	**24**	P	Pb	09 45 06.1	-2.5
LAY	baz=16						
				S	Sb	09 45 19.9	-1.4
LAY	baz=16						
EAST	**Anshuo**	**1.28**	**349**	*e*P	Pn	09 45 11.2	-1.3
EAST	baz=343						
SCZT	**Fangliau**	**1.33**	**340**	*e*P	Pn	09 45 11.0	-2.1
SCZT	baz=334						
				*e*S	Sn	09 45 28.2	-2.0
SCZT	baz=334						
ECL	**Taimali**	**1.48**	**354**	*e*P	Pn	09 45 14.2	-1.0
ECL	baz=349						
				*e*S	Sn	09 45 33.8	-0.1
ECL	baz=349						
TTN	**Taitung**	**1.63**	**1**	*e*P	Pn	09 45 16.0	-1.2
TTN	baz=356						
				*e*S	Sn	09 45 37.0	-0.6
TTN	baz=356						
SSD	**Sandimen**	**1.68**	**345**	*e*P	Pn	09 45 18.6	+0.6
SSD	baz=340						
				*e*S	Sn	09 45 38.8	0.0
SSD	baz=340						
TWG	**Pinlang**	**1.69**	**359**	*e*Pn	Pn	09 45 18.6	+0.4
TWG				*e*Sn	Sn	09 45 43.3	+4.1
TWG	**Pinlang**	**1.69**	**359**	*e*P	Pn	09 45 17.4	-0.8
TWG	baz=354						
				*e*S	Sn	09 45 38.9	-0.3
TWG	baz=354						
TWM1	**Shoushan**	**1.81**	**339**	*e*P	Pn	09 45 19.6	-0.2
TWM1	baz=335						
				*e*S	Sn	09 45 42.7	+0.6
TWM1	baz=335						
SGST	**Jiashian**	**2.02**	**346**	*e*P	Pn	09 45 24.0	+1.4
CHN1	baz=342						
CHN1	**Nanshi**	**2.13**	**345**	*e*P	Pn	09 45 24.2	+0.1
CHN1	baz=341						
				*e*S	Sn	09 45 49.8	0.0
CHN1	baz=341						
TWK	**Hsinying**	**2.21**	**345**	*e*P	Pn	09 45 26.5	+1.2
TPUB	baz=341						
TPUB	**Ta-pu**	**2.22**	**348**	*e*Pn	Pn	09 45 26.0	+0.7
TPUB				*e*Sn	Sn	09 45 57.8	+5.7
TWF1	**Yuli**	**2.23**	**4**	*e*P	Pn	09 45 24.7	-0.8
TWF1				*e*S	Sn	09 45 51.9	-0.5
YULB	**Yu-li**	**2.27**	**4**	*e*Pn	Pn	09 45 27.1	+1.0
YULB				*e*Sn	Sn	09 45 55.6	+2.2
CHN5	**Tsauling**	**2.50**	**351**	*e*P	Pn	09 45 28.0	-1.2
CHN5	baz=347						
				*e*S	Sn	09 45 58.7	-0.3
CHN5	baz=347						
SSLB	**Suanglung**	**2.66**	**357**	*e*Pn	Pn	09 45 32.1	+0.6
SSLB				*e*Sn	Sn	09 46 08.1	+5.1
ESL	**Shilin**	**2.70**	**6**	*e*P	Pn	09 45 32.0	0.0
ESL	baz=3.0						
				*e*S	Sn	09 46 02.8	-1.2
ESL	baz=3.0						
SMLT	**Sun Moon Lake**	**2.76**	**356**	*e*P	Pn	09 45 32.7	-0.1
SMLT	baz=353						
				*e*S	Sn	09 46 05.8	+0.3
SMLT	baz=353						
TYC	**Yuchr**	**2.78**	**355**	*e*P	Pn	09 45 32.2	-0.9
TYC	baz=352						
				*e*S	Sn	09 46 05.9	-0.2
TYC	baz=352						
WHF	**Hehuan Shan**	**3.02**	**3**	*e*P	Pn	09 45 36.4	0.0
WHF				*e*S	Sn	09 46 10.9	-0.9
NACB	**Ninganchiao**	**3.07**	**8**	*e*Pn	Pn	09 45 37.9	+0.8
NACB				*e*Sn	Sn	09 46 17.6	+4.4
YHNB	**Yeheng**	**3.54**	**4**	*e*Pn	Pn	09 45 44.6	+1.0
YHNB				*e*Sn	Sn	09 46 29.8	+5.0
YOJ	**Yonaguni jima**	**3.76**	**27**	P	Pn	09 45 48.9	+2.3
YOJ				*e*S	Sn	09 46 32.6	+2.4
HATJ	**Hateruma jima**	**3.84**	**40**	P	Pn	09 45 48.6	+0.9
HATJ				S	Sn	09 46 31.9	-0.3
IRIF	**Iriomote-Funau**	**4.01**	**37**	P	Pn	09 45 50.6	+0.6
IRIF				*e*S	Sn	09 46 36.4	0.0
JKRS	**Kuro-shima**	**4.10**	**40**	P	Pn	09 45 51.5	+0.3
JKRS				*e*S	Sn	09 46 38.1	-0.4
JIJ	**Ishigaki jima**	**4.27**	**40**	P	Pn	09 45 54.4	+0.8
JIJ				*e*S	Sn	09 46 43.0	+0.2
JTJ	**Tarama**	**4.82**	**43**	P	Pn	09 46 01.2	0.0
JTJ				*e*S	Sn	09 46 56.1	-0.3
KSRS	**Korea Array**	**17.32**	**18**	P	Pn	09 48 48.7	-1.5
	0.1nm,0.3s,baz=205,slow=9.9,SNR=8.7						
MJAR	**Matsushiro Arr**	**21.41**	**40**	P	**P**	09 49 37.0	+0.8
	1.1nm,0.5s,mb3.4,baz=237,slow=8.4,SNR=4.7						
MJAR	**Matsushiro Arr**	**21.41**	**40**	P	**P**	09 49 37.0	+0.8
SONM	**Songino Array**	**29.18**	**339**	P	**P**	09 50 49.8	+0.3
	1.1nm,0.8s,mb3.7,baz=158,slow=9.4,SNR=5.5						
MKAR	**Makanchi Array**	**40.53**	**318**	P	**P**	09 52 27.9	+0.6
	0.2nm,0.2s,mb3.3,baz=106,slow=9.2,SNR=2.5						
MKAR	**Makanchi Array**	**40.53**	**318**	P	**P**	09 52 27.9	+0.6
ZALV	**Zalesovo Beam**	**42.80**	**329**	P	**P**	09 52 45.3	-0.5
	0.7nm,0.4s,mb3.8,baz=145,slow=11,SNR=3.4						
ILAR	**Eielson Array**	**71.96**	**27**	P	**P**	09 56 11.3	0.0
	0.3nm,0.7s,mb3.3,baz=281,slow=5.4,SNR=4.6						

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*NEIC **22** 09:58:01.7±0.6, 12°.19N×143°.85E, h10km, mb4.1/2, Error ellipse: s-maj=19.1km s-min=12.9km az=109.0*
*ISCJB **22** 09:58:05.0±2.2, 12°.18N±0°.10×143°.9E±0°.2, h47km±20km, mb4.0/15, Error ellipse: s-maj=24.9km s-min=16.3km az=10.1*
*IDC **22** 09:58:07.0±2.5, 12°.20N×144°.02E, h52km±25km, mb3.7/13, mb1 3.9/13, mb1mx3.8/21, mbtmp3.7/13, MS3.1/2, Ms1 3.1/2, ms1mx2.6/27, Error ellipse: s-maj=27.0km s-min=14.5km az=97.0*
ISC 22 09:58:06.5±2.1, 12°.19N±0°.10×144°.0E±0°.2, h46km±20km, n22, σ0§82/24, mb4.0/15, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.65**	**32**	P	Pn	09 58 32.7	-0.3
	220nm,0.3s,baz=237,slow=0.5,SNR=214						
				S	Sn	09 58 52.7	-0.5
GUMO	1μm,0.3s,baz=0.0,slow=20,SNR=64						
GUMO	**Guam**	**1.65**	**32**	*e*Pn	Pn	09 58 32.6	-0.4
GUMO				S	Sn	09 58 52.7	-0.5
GUMO				*e*Sn	Sn	09 58 54.1	+1.0
CBIJ	**Chichi jima**	**14.93**	**354**	LR	LR	10 06 06.8	
	comp=Z,98nm,21.1s,baz=119,slow=32						
MJAR	**Matsushiro Arr**	**24.80**	**349**	P	**P**	10 03 24.7	+0.6
	0.5nm,0.4s,mb3.4,baz=176,slow=9.2,SNR=4.0						
MJAR				LR	LR	10 12 20.7	
	comp=Z,45nm,21.2s,baz=200,slow=34						
KSRS	**Korea Array**	**28.97**	**333**	P	**P**	10 04 03.1	+1.4
	1.5nm,0.8s,mb3.8,baz=140,slow=10,SNR=7.7						
ASAR	**Alice Springs**	**36.96**	**195**	P	**P**	10 05 12.0	+0.5
	0.7nm,0.5s,mb3.8,baz=20,slow=12,SNR=27						
CMAR	**Chiang Mai Arr**	**43.77**	**284**	P	**P**	10 06 06.8	-1.2
	1.3nm,0.4s,mb4.0,baz=78,slow=6.4,SNR=4.5						
STKA	**Stephens Creek**	**43.87**	**183**	P	**P**	10 06 08.5	0.0
	1.5nm,0.4s,mb4.0,baz=3.1,slow=14,SNR=11						
STKA	**Stephens Creek**	**43.87**	**183**	*e*P	**P**	10 06 08.7	+0.2
	0.6nm,0.8s,mb3.4						
SONM	**Songino Array**	**47.38**	**326**	P	**P**	10 06 36.3	+0.3
	0.7nm,0.6s,mb3.8,baz=141,slow=7.2,SNR=4.2						
MKAR	**Makanchi Array**	**61.89**	**317**	P	**P**	10 08 21.5	+0.3
	0.3nm,0.3s,mb4.0,baz=101,slow=7.5,SNR=2.2						
MKAR	**Makanchi Array**	**61.89**	**317**	P	**P**	10 08 21.5	+0.3
ZALV	**Zalesovo Beam**	**62.25**	**325**	P	**P**	10 08 24.6	+1.1
	0.4nm,0.4s,mb3.9,baz=107,slow=9.5,SNR=2.5						
ILAR	**Eielson Array**	**70.21**	**25**	P	**P**	10 09 13.6	-0.7
	0.3nm,0.4s,mb3.5,baz=253,slow=5.4,SNR=9.5						
BVAR	**Borovoye Array**	**70.48**	**322**	P	**P**	10 09 15.6	-0.6
	1.4nm,0.5s,mb4.2,baz=101,slow=8.1,SNR=6.0						
YBH	**Yreka Blue Hor**	**84.46**	**49**	P	**P**	10 10 41.1	+6.5
	1.6nm,0.7s,mb4.3,baz=280,slow=7.1,SNR=3.9						
YKA	**Yellowknife Ar**	**84.51**	**27**	P	**P**	10 10 34.8	+0.5
	0.4nm,0.5s,mb3.9,baz=285,slow=5.0,SNR=4.1						
YKA	**Yellowknife Ar**	**84.51**	**27**	P	**P**	10 10 34.8	+0.5
NEW	**Newport**	**86.86**	**41**	P	**P**	10 10 46.9	+0.6
	3.9nm,0.8s,mb4.7						
ARCES	**ARCESS Array B**	**88.14**	**342**	P	**P**	10 10 51.2	-0.8
	3.3nm,1.0s,mb4.5,baz=74,slow=7.8,SNR=4.0						
ARCES	**ARCESS Array B**	**88.14**	**342**	P	**P**	10 10 51.2	-0.9
FINES	**FINESS Array B**	**92.05**	**335**	P	**P**	10 11 08.7	-1.7
	0.9nm,0.4s,mb4.5,baz=111,slow=2.7,SNR=5.0						

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*PGC **22** 10:00:34.5±12.0, 58°.29N×133°.45W, h1km, ML3.3/4, 56km east of Juneau, Ak Southeastern Alaska*
NEIC 22 10:00:34.5, 58°.29N×133°.45W, h1km, ML3.3(PGC), **ML3.0**(AEIC), **6D, After PGC., Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESE	**Bessie Mountai**	**0.79**	**292**	P	Pg	10 00 48.3	-1.4
BESE				S	Sg	10 00 58.0	-2.0
SKAG	**Skagway**	**1.52**	**321**	P	Pn	10 01 01.0	-1.9
SKAG				S	Sn	10 01 22.7	-0.7
SIT	**Sitka**	**1.60**	**220**	*e*Pn	Pn	10 01 03.2	-0.6
SIT				*e*Sn	Sn	10 01 25.8	+0.8
DLBC	**Dease Lake**	**1.81**	**84**	P	Pn	10 01 06.2	-0.6
DLBC	**Dease Lake**	**1.81**	**84**	P	Pn	10 01 06.2	-0.6
DLBC				↓Pg	Pg	10 01 07.6	-1.6
DLBC				↓Sn	Sn	10 01 30.6	+0.3
DLBC				↓Sg	Sg	10 01 31.7	-0.9
PLBC	**Pleasant Camp**	**1.91**	**309**	↓Pn	Pn	10 01 07.9	-0.3
PLBC				↑Sg	Sg	10 01 33.6	-2.3
WHY	**Whitehorse**	**2.49**	**344**	P	Pn	10 01 14.9	-1.1
WHY	**Whitehorse**	**2.49**	**344**	↓Pn	Pn	10 01 14.6	-1.5
WHY				↑Pg	Pg	10 01 18.3	-3.8
CRAG	**Craig**	**2.83**	**176**	*e*Pn	Pn	10 01 20.8	0.0
CRAG				*e*Sg	Sg	10 02 04.9	-0.6
HYT	**Haines Junctio**	**3.27**	**323**	↓Pn	Pn	10 01 26.6	-0.3
HYT				↑Pg	Pg	10 01 33.0	-4.2
HYT				↑Sg	Sg	10 02 15.5	-4.0
PNL	**Peninsula**	**3.37**	**297**	*e*Pn	Pn	10 01 27.4	-0.8
PNL				*e*Sg	Sg	10 02 19.4	-3.4
DAWY	**Dawson**	**6.46**	**336**	*e*Pg	Pg	10 02 31.2	-7.0
DAWY				*e*Sn	Sn	10 03 21.7	-3.3
MENT	**Mentasta**	**6.87**	**317**	*e*Pn	Pn	10 02 12.7	-3.5
EGAK	**Eagle**	**7.47**	**334**	*e*Pn	Pn	10 02 25.0	+0.5
	8.6nm,0.7s						
EGAK				*e*Sn	Sn	10 03 48.2	-1.6

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*ISCJB **22** 10:02:44.5±0.6, 32°.68N±0°.05×48°.24E±0°.06, h10km, Error ellipse: s-maj=7.4km s-min=7.3km az=27.7*
*TEH **22** 10:02:47.3, 32°.77N×48°.28E, h13km*
*KISR **22** 10:02:50.9±0.8, 32°.29N×48°.01E, h34km±999km, ML2.7*
ISC 22 10:02:45.6±0.6, 32°.69N±0°.05×48°.23E±0°.05, h10km, n12, σ0§78/15, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGHG	**Ghaleghazi**	**2.15**	**320**	*e*Pn	Pn	10 03 21.9	+0.5
IGHG				*e*Sg	Sg	10 03 53.4	-1.2
IGHG				*e*		10 04 00.7	
	comp=E,2μm,0.2s						
IPIR	**Pirpir**	**2.25**	**89**	*e*Pn	Pn	10 03 23.8	+1.0
IPIR				*e*Sg	Sg	10 03 56.1	-1.7
IPIR				*e*		10 04 09.0	
	comp=E,964nm,0.3s						
ILIN	**Lien**	**2.46**	**335**	*e*Pn	Pn	10 03 26.8	+1.0
ILIN				*e*		10 03 30.6	
	comp=Z,582nm,0.1s						
IKLH	**Kolahrood**	**2.88**	**76**	*e*Pn	Pn	10 03 32.4	+0.8
IKLH				*e*		10 04 21.5	
	comp=N,478nm,0.2s						
IRAZ	**Razeghan**	**3.06**	**27**	*e*Pn	Pn	10 03 33.7	-0.2
IRAZ				*e*		10 04 18.4	
	comp=Z,575nm,0.2s						
IZEF	**Zefreh**	**3.46**	**85**	*e*Pn	Pn	10 03 40.3	+0.8
IZEF				*e*		10 03 43.6	
	comp=Z,116nm,0.0s						
NAY	**Al-Naaiem**	**3.53**	**194**	*e*P	Pn	10 03 39.7	-0.8
IVRN	**Varamin**	**3.71**	**51**	*e*Pn	Pn	10 03 42.7	-0.3
IVRN				*e*		10 04 00.9	
	comp=Z,207nm,0.2s						
RDF	**Al-Radifah**	**3.79**	**189**	*e*P	Pn	10 03 44.3	+0.2
QRN	**Al-Qurain**	**3.94**	**184**	*e*P	Pn	10 03 45.8	-0.3
QRN				*e*S	Sn	10 04 27.4	-5.0
QRN				AML	AML	10 04 33.1	
	comp=Z,13nm,0.3s						
IDMV	**Damavand**	**4.27**	**47**	*e*Pn	Pn	10 03 50.6	-0.1
IDMV				*e*		10 03 58.9	
	comp=Z,122nm,0.2s						
IFIR	**Firoozkooh**	**4.77**	**51**	*e*Pn	Pn	10 03 57.7	+0.2
IFIR				*e*		10 05 03.9	
	comp=Z,138nm,0.0s						

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*BJI **22** 10:03:41.5, 3°.82S×100°.95E, h38km, mB5.2/2, mb4.7/7*
*ISCJB **22** 10:03:42.1±0.6, 3°.55S±0°.06×100°.17E±0°.06, h27km, mb4.3/17, Error ellipse: s-maj=11.0km s-min=5.6km az=136.6*
*NEIC **22** 10:03:43.6±0.7, 3°.59S×100°.48E, mb4.5/5, Error ellipse: s-maj=29.1km s-min=10.2km az=55.0*
*IDC **22** 10:03:44.1±1.1, 3°.51S×100°.53E, h27km±4km, mb4.0/10, mb1 4.0/10, mb1mx3.9/18, mbtmp4.0/10, MS3.4/1, Ms1 3.4/1, ms1mx2.7/27, Error ellipse: s-maj=35.7km s-min=17.0km az=55.0*
*DJA **22** 10:03:46, 3°.36S×100°.40E, h30km, MLv4.2/11*
ISC 22 10:03:44.8±0.6, 3°.50S±0°.06×100°.26E±0°.06, h28km, h28km±.7km:pP-P, n40, σ1§41/36, mb4.3/17, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**1.84**	**41**	P	Pn	10 04 19.2	+4.6
KSI	**Kapahiang**	**2.33**	**94**	P	Pn	10 04 23.1	+1.8
KSI				S	Sn	10 04 50.3	+1.2
SISI	**Saibi**	**2.45**	**331**	P	Pn	10 04 24.9	+1.9
PDSI	**Padang**	**2.58**	**4**	P	Pn	10 04 24.3	-0.4
PDSI				S	Sn	10 04 55.5	+0.4
SDSI	**Sungai Dareh**	**2.80**	**25**	P	Pn	10 04 26.3	-1.5
MNAI	**Manna**	**2.82**	**108**	P	Pn	10 04 26.3	-1.8
PPI	**Padang Panjang**	**3.02**	**3**	P	Pn	10 04 31.1	+0.3
BKNI	**Bangkinang**	**3.88**	**12**	P	Px	10 04 52.8	
MDSI	**Maura Dua**	**4.03**	**104**	P	Pn	10 04 46.2	+1.5
LWLI	**Liwa**	**4.08**	**112**	P	Pn	10 04 46.3	+1.0
MNSI	**Mandailing Nat**	**4.32**	**351**	P	Pn	10 04 54.2	+5.5
KLSI		**4.61**	**105**	P	Pn	10 04 49.6	-3.1
KASI	**Kota Agung**	**4.68**	**116**	P	Pn	10 04 55.5	+1.9
CGJI	**Cibinong**	**6.23**	**120**	P	Pn	10 05 17.9	+2.9
MYKOM	**Kota Tinggi**	**6.36**	**34**	P	Pn	10 05 15.1	-1.6
	0.1nm20nm,1.5s						
PSI	**Prapat**	**6.40**	**348**	LR	LR	10 08 31.8	
	comp=Z,352nm,19.9s,baz=111,slow=45						
CMAR	**Chiang Mai Arr**	**21.85**	**357**	P	**P**	10 08 36.1	+0.8
	4.0nm,0.9s,mb3.9,baz=190,slow=9.3,SNR=6.5						
WRAB	**Tennant Creek**	**37.03**	**119**	*e*P	**P**	10 10 50.7	-1.9
	7.5nm,1.2s,mb4.4						
ASAR	**Alice Springs**	**38.18**	**125**	P	**P**	10 10 59.4	-2.8
	1.5nm,0.7s,mb3.8,baz=306,slow=8.6,SNR=7.4						
XAN	**Xi'an**	**38.22**	**12**	P	**P**	10 11 00.3	-2.0
XAN				pP	pP	10 11 09.5	-1.2
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
LZH	**Lanzhou**	**39.52**	**5**	*e*P	**P**	10 11 13.5	+0.3
LZH				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.7						
STKA	**Stephens Creek**	**47.97**	**131**	P	**P**	10 12 19.1	-2.2
	comp=Z,1.3nm,0.8s,mb4.0,baz=315,slow=13,SNR=2.1						
KSRS	**Korea Array**	**48.17**	**30**	P	**P**	10 12 20.3	-2.4
	comp=Z,4.0nm,1.0s,mb4.4,baz=218,slow=8.4,SNR=14						

EDC	**Edincik**	**0.49**	**200**	*e*PG	**Pg**	**10 04 11.4 +0.3**
EDC	**Edincik**	**0.49**	**200**	*e*Pg	**Pg**	**10 04 11.4 +0.3**
CTKS	**Kestanelik-??a**	**0.53**	**36**	*e*PG	**Pg**	**10 04 11.5 -0.4**
CTKS	**Kestanelik-??a**	**0.53**	**36**	*e*Pg	**Pg**	**10 04 11.5 -0.4**
KCTX	**Karacabey (Bur**	**0.58**	**159**	*e*PG	**Pg**	**10 04 12.6 -0.2**
KCTX	**Karacabey (Bur**	**0.58**	**159**	*e*Pg	**Pg**	**10 04 12.6 -0.2**
MFT	**Murefte**	**0.61**	**268**	*e*PG	**Pg**	**10 04 13.9 +0.5**
MFT	**Murefte**	**0.61**	**268**	*e*Pg	**Pg**	**10 04 13.9 +0.5**
ARMT	**Armutlu**	**0.64**	**112**	*e*PG	**Pg**	**10 04 13.8 -0.1**
ARMT	**Armutlu**	**0.64**	**112**	*e*Pg	**Pg**	**10 04 13.8 -0.1**
BGKT	**Bogazkoy**	**0.64**	**54**	*e*PG	**Pg**	**10 04 13.8 -0.2**
BGKT	**Bogazkoy**	**0.64**	**54**	*e*Pg	**Pg**	**10 04 13.8 -0.1**
CTYL	**Yal??k??y-??at**	**0.68**	**13**	*e*PG	**Pg**	**10 04 14.3 -0.5**
CTYL	**Yal??k??y-??at**	**0.68**	**13**	*e*Pg	**Pg**	**10 04 14.3 -0.5**
SART	**Tekirdag**	**0.70**	**261**	*i* P	**Pg**	**10 04 14.2 -0.9**
SART				*i* S	**Sg**	**10 04 24.1 0.0**
SART	**Tekirdag**	**0.70**	**261**	*i* P	**Pg**	**10 04 14.2 -0.9**
SART				*i* S	**Sg**	**10 04 24.1 -0.1**
RKY	**Sarkoy-Tekirda**	**0.70**	**260**	*e*PG	**Pg**	**10 04 14.2 -0.9**
RKY	**Sarkoy-Tekirda**	**0.70**	**260**	*e*Pg	**Pg**	**10 04 14.3 -0.8**
MDNY	**Mudanya-Bursa**	**0.75**	**126**	*e*PG	**Pg**	**10 04 16.2 +0.2**
MDNY	**Mudanya-Bursa**	**0.75**	**126**	*e*Pg	**Pg**	**10 04 16.3 +0.3**
ISK	**Istanbul-Kandi**	**0.78**	**70**	*e*PG	**Pg**	**10 04 16.0 -0.6**
ISK	**Istanbul-Kandi**	**0.78**	**70**	*e*Pg	**Pg**	**10 04 16.0 -0.6**
GONE	**Gonen-Balikesi**	**0.82**	**202**	*e*PG	**Pg**	**10 04 17.1 -0.3**
GONE	**Gonen-Balikesi**	**0.82**	**202**	*e*Pg	**Pg**	**10 04 17.1 -0.3**
KLYT	**Kilyos**	**0.85**	**58**	*e*PG	**Pg**	**10 04 17.2 -0.7**
KLYT	**Kilyos**	**0.85**	**58**	*e*Pg	**Pg**	**10 04 17.2 -0.8**
GEMT	**Gemlik**	**0.92**	**114**	*e*PG	**Pg**	**10 04 19.2 0.0**
GEMT	**Gemlik**	**0.92**	**114**	*e*Pg	**Pg**	**10 04 19.2 -0.1**
YLV	**Yalova**	**1.01**	**103**	*e*PG	**Pg**	**10 04 21.1 +0.1**
YLV	**Yalova**	**1.01**	**103**	*e*Pg	**Pg**	**10 04 21.1 +0.1**
LPK	**Lapseki**	**1.10**	**247**	*e*PN	**Pn**	**10 04 21.8 -2.3**
LPK	**Lapseki**	**1.10**	**247**	*e*Pn	**Pn**	**10 04 21.8 -2.2**
BALY	**Balya**	**1.12**	**199**	*i* P	**Pg**	**10 04 22.8 -0.4**
BALY				*i* S	**Sg**	**10 04 38.7 +0.9**
BALY	**Balya**	**1.12**	**199**	*i* P	**Pg**	**10 04 22.8 -0.4**
BALY				*i* S	**Sg**	**10 04 38.7 +0.9**
BALB	**Balikesir**	**1.18**	**188**	*e*PN	**Pn**	**10 04 24.1 -1.0**
BALB	**Balikesir**	**1.18**	**188**	*e*Pn	**Pn**	**10 04 24.1 -1.0**
HRT	**Hereke**	**1.20**	**89**	*e*PN	**Pn**	**10 04 24.0 -1.4**
HRT	**Hereke**	**1.20**	**89**	*e*Pn	**Pn**	**10 04 24.0 -1.4**
SILT	**Sile**	**1.23**	**73**	*e*PN	**Pn**	**10 04 24.5 -1.3**
SILT	**Sile**	**1.23**	**73**	*e*Pn	**Pn**	**10 04 24.5 -1.3**
ADVT	**Abdulvahap**	**1.31**	**106**	*e*PN	**Pn**	**10 04 25.9 -1.1**
ADVT	**Abdulvahap**	**1.31**	**106**	*e*Pn	**Pn**	**10 04 25.9 -1.0**
CAVI	**Cavuskoy**	**1.47**	**114**	*e*PN	**Pn**	**10 04 28.8 -0.3**
CAVI	**Cavuskoy**	**1.47**	**114**	*e*Pn	**Pn**	**10 04 28.8 -0.3**
EZN	**Ezine**	**1.67**	**235**	*e*PN	**Pn**	**10 04 31.7 -0.1**
EZN	**Ezine**	**1.67**	**235**	*e*Pn	**Pn**	**10 04 31.7 -0.1**
SPNC	**Sapanca-Adapaz**	**1.69**	**93**	*e*PN	**Pn**	**10 04 32.6 +0.5**
SPNC	**Sapanca-Adapaz**	**1.69**	**93**	*e*Pn	**Pn**	**10 04 32.6 +0.4**
GADA	**Gvkgeada**	**1.78**	**250**	*e*PN	**Pn**	**10 04 33.2 -0.2**
GADA	**Gvkgeada**	**1.78**	**250**	*e*Pn	**Pn**	**10 04 33.2 -0.2**
GULT	**Gulveren**	**1.89**	**101**	*e*PN	**Pn**	**10 04 35.2 +0.4**
GULT	**Gulveren**	**1.89**	**101**	*e*Pn	**Pn**	**10 04 35.2 +0.4**
AKS	**Akhisar**	**1.94**	**186**	*e*PN	**Pn**	**10 04 36.0 +0.5**
AKS	**Akhisar**	**1.94**	**186**	*e*Pn	**Pn**	**10 04 36.0 +0.4**
BORA	**Eskisehir**	**2.03**	**116**	*e*P	**Pn**	**10 04 38.7 +1.9**
BORA				*i* S	**Sn**	**10 05 06.5 +3.8**
BORA	**Eskisehir**	**2.03**	**116**	*e*P	**Pn**	**10 04 38.7 +1.9**
BORA				*i* S	**Sn**	**10 05 06.5 +3.8**
KULA	**Kula-Manisa**	**2.33**	**169**	*e*PN	**Pn**	**10 04 41.4 +0.4**
KULA	**Kula-Manisa**	**2.33**	**169**	*e*Pn	**Pn**	**10 04 41.4 +0.4**
ALT	**Altintas**	**2.34**	**138**	*e*PN	**Pn**	**10 04 41.4 +0.3**
ALT	**Altintas**	**2.34**	**138**	*e*Pn	**Pn**	**10 04 41.4 +0.3**
MDU	**Mudurnu**	**2.40**	**97**	*e*PN	**Pn**	**10 04 42.8 +0.8**
MDU	**Mudurnu**	**2.40**	**97**	*e*Pn	**Pn**	**10 04 42.8 +0.8**
ESKT	**Eskisehir**	**2.48**	**120**	*e*PN	**Pn**	**10 04 43.2 +0.2**
ESKT	**Eskisehir**	**2.48**	**120**	*e*Pn	**Pn**	**10 04 43.2 +0.2**
BLCB	**Balcova**	**2.55**	**199**	*e*PN	**Pn**	**10 04 45.0 +1.1**
BLCB	**Balcova**	**2.55**	**199**	*e*Pn	**Pn**	**10 04 45.1 +1.1**
SVRH	**Sivrihisar-ESK**	**2.96**	**116**	*e*PN	**Pn**	**10 04 50.1 +0.4**
SVRH	**Sivrihisar-ESK**	**2.96**	**116**	*e*Pn	**Pn**	**10 04 50.1 +0.4**
VAY	**Valandovo**	**4.20**	**279**	*e*Pn	**Pn**	**10 05 10.4 +3.7**

DDA 22 10:07:51.6, 35.88N×40.64E, h17km±2km, Md3.6, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARD	**Mardin**	**1.44**	**5**	*i* P	Pn	10 08 19.1	+2.1
MARD				*i* S	Sn	10 08 38.5	+3.1
BEST	**Besiri**	**2.07**	**14**	*i* P	Pn	10 08 28.0	+2.3
BEST				*i* S	Sn	10 08 56.9	+5.8
DIYA	**Diyarbakir**	**2.08**	**349**	*e*P	Pn	10 08 29.9	+4.1
DIYA				*i* S	Sn	10 08 56.3	+4.9
ATAB	**Bozova**	**2.46**	**311**	*e*P	Pn	10 08 33.6	+2.6
ATAB				*e*S	Sn	10 09 03.8	+3.1
HAKT	**HAKKARI**	**2.98**	**55**	*i* P	Pn	10 08 40.5	+2.3
HAKT				*i* S	Sn	10 09 15.7	+2.1
DAGI	**Agillar**	**5.29**	**11**	*i* P	Sn	10 10 09.9	-0.5
ARTV	**Artvin**	**5.40**	**10**	*i* P	Sn	10 10 09.3	-3.8
DBOC	**Borcka**	**5.52**	**8**	*i* S	Sn	10 10 08.2	-7.8

GUC 22 10:28:24.3±0.7, 22.06S×70.24W, h47km±2km, MD3.6, ML3.1, 2C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**0.73**	**106**	⇑*i*P	Pn	10 28 32.4	-5.9
PB04				*i* S	Sn	10 28 38.2	-10
PB04				AML	AML	10 28 38.5	
	comp=N,6μm,0.1s						
PB01	**Plate Boundary**	**1.23**	**35**	⇓*i*P	Pn	10 28 45.8	+0.6
PB01				*i* S	Sn	10 29 02.3	+1.6
PB01				AML	AML	10 29 05.1	
	comp=E,373nm,0.2s						
CEN1	**Los Morros**	**1.32**	**178**	*i* P	Pn	10 28 49.4	+3.0
CEN1				*i* S	Sn	10 29 09.5	+6.7
HMBC	**Humberston**	**1.81**	**11**	⇑*i*P	Pn	10 28 54.3	+1.3
HMBC				*e*S	Sn	10 29 16.9	+2.2
PSGC	**Pisagua**	**2.46**	**3**	*i* P	Pn	10 29 00.9	-1.0
PSGC				*i* S	Sn	10 29 30.0	-0.7
PSGC				AML	AML	10 29 41.9	
	comp=E,40nm,0.5s						
MNMC	**Miaee Miae**	**2.98**	**12**	*i* P	Pn	10 29 10.8	+1.7
MNMC				*i* S	Sn	10 29 46.1	+2.5
MNMC				AML	AML	10 30 07.0	
	comp=N,94nm,0.7s						

IDC 22 10:38:48.1±2.8, 23.66S×179.84E, h510km±31km, mb3.3/6, mb1 3.5/7, mb1mx3.3/16, mbtmp3.3/7, Error ellipse: s-maj=39.1km s-min=21.0km az=160.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.74**	**188**	P	P	10 41 53.5	-1.8
	1.3nm,0.3s,baz=51,slow=6.5,SNR=6.3						
CTA	**Charters Tower**	**31.32**	**270**	P	P	10 44 27.4	+1.0
	10nm,0.5s,baz=83,slow=10,SNR=21						
STKA	**Stephens Creek**	**34.67**	**248**	P	P	10 44 54.6	-0.1
	0.9nm,0.4s,baz=66,slow=10.0,SNR=2.8						
ASAR	**Alice Springs**	**41.93**	**260**	P	P	10 45 53.7	-0.2
	4.0nm,0.7s,baz=100,slow=6.9,SNR=45						
ASAR				ScP	ScP	10 50 39.2	-0.2
	1.0nm,0.8s,baz=106,slow=4.3,SNR=8.8						
KSRS	**Korea Array**	**77.96**	**320**	P	P	10 49 52.4	-0.9
	0.4nm,0.4s,baz=144,slow=8.5,SNR=4.0						
NVAR	**Mina Array Bea**	**84.68**	**44**	P	P	10 50 28.4	+0.6
	0.4nm,0.7s,baz=203,slow=11,SNR=3.7						
TXAR	**Lajitas Array**	**90.43**	**58**	P	P	10 50 56.1	+0.9
	0.6nm,0.7s,baz=218,slow=6.0,SNR=9.3						
BRTR	**Keskin Array B**	**147.31**	**307**	PKPbc	PKPbc	10 57 33.5	-0.8
	0.8nm,0.5s,baz=73,slow=4.3,SNR=4.1						

ISCJB ***22*** *10:53:00.3±3.9, 23.0S±0.2×176.6W±0.1, h36km±38km, mb4.3/10, Error ellipse: s-maj=28.7km s-min=16.7km az=157.6*
NEIC ***22*** *10:53:01.5±0.7, 23.00S×176.56W, h35km, mb4.3/3, Error ellipse: s-maj=18.9km s-min=13.1km az=165.0*
IDC ***22*** *10:53:02.9±4.9, 23.00S×176.48W, h49km±45km, mb4.1/9, mb1 4.2/11, mb1mx3.9/23, mbtmp4.2/11, ML4.1/2, Error ellipse: s-maj=28.5km s-min=20.3km az=7.0*
ISC 22 10:53:02.2±3.0, 23.1S±0.2×176.6W±0.1, h37km±31km, n17, σ0.71/17, mb4.3/10, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAR	**Rarotonga**	**15.67**	**86**	P	**Pn**	**10 56 40.7**	**+0.4**
	0.4nm,0.3s,baz=37,slow=20,SNR=5.0						
RAR				S	**Sn**	**10 59 14.4**	**-18**
	1.1nm,0.3s,baz=66,slow=20,SNR=3.6						
URZ	**Urewera**	**16.08**	**198**	P	**Pn**	**10 56 45.1**	**-0.4**
	1.5nm,0.3s,baz=54,slow=7.9,SNR=9.4						
URZ				S	**Sn**	**10 59 30.5**	**-12**
	0.6nm,0.3s,baz=150,slow=20,SNR=4.2						
RPZ	**Rata Peaks**	**22.99**	**203**	P	**P**	**10 58 03.0**	**-0.6**
	13nm,0.7s,mb4.5,baz=22,slow=18,SNR=6.6						
RPZ	**Rata Peaks**	**22.99**	**203**	P	**P**	**10 58 03.0**	**-0.6**
CTA	**Charters Tower**	**34.64**	**268**	P	**P**	**10 59 49.9**	**+1.7**
	11nm,0.5s,mb5.0,baz=104,slow=11,SNR=18						
STKA	**Stephens Creek**	**37.95**	**247**	P	**P**	**11 00 16.8**	**+0.4**
	2.1nm,0.5s,mb4.1,baz=86,slow=10.0,SNR=14						
STKA	**Stephens Creek**	**37.95**	**247**	*e*P	**P**	**11 00 16.4**	**0.0**
	0.4nm,0.6s,mb3.3						
ASAR	**Alice Springs**	**45.28**	**259**	P	**P**	**11 01 16.2**	**-0.3**
	2.0nm,0.6s,mb4.2,baz=95,slow=7.5,SNR=64						
ASAR				PcP	PcP	11 02 55.2	-0.7
	0.5nm,0.4s,baz=113,slow=4.1,SNR=7.0						
WRAB	**Tennant Creek**	**45.61**	**264**	*e*P	**P**	**11 01 18.6**	**-0.5**
	3.5nm,0.5s,mb4.5						
WRA	**Warramunga Arr**	**45.62**	**264**	P	**P**	**11 01 18.7**	**-0.5**
	2.1nm,0.3s,mb4.5,baz=90,slow=6.4,SNR=128						
FITZ	**Fitzroy Crossi**	**54.04**	**264**	P	**P**	**11 02 23.1**	**-0.2**
	1.8nm,0.4s,mb4.4,baz=73,slow=2.2,SNR=16						
FITZ	**Fitzroy Crossi**	**54.04**	**264**	*e*P	**P**	**11 02 23.2**	**-0.1**
	2.7nm,0.6s,mb4.3						
QSPA	**South Pole Qui**	**67.01**	**180**	P	**P**	**11 03 51.8**	**+1.0**
	1.8nm,0.8s,mb4.1,baz=359,slow=2.0,SNR=9.1						
MAW	**Mawson**	**79.60**	**200**	P	**P**	**11 05 05.5**	**+0.3**
	0.8nm,0.5s,mb3.9,baz=133,slow=6.7,SNR=8.5						
TXAR	**Lajitas Array**	**87.33**	**57**	P	**P**	**11 05 44.4**	**-1.1**
	0.5nm,0.8s,mb3.8,baz=209,slow=7.2,SNR=7.6						
AKASG	**Malin Array Be**	**145.90**	**330**	PKPbc	PKPbc	11 12 34.2	-3.2
	1.3nm,0.4s,baz=44,slow=4.0,SNR=5.8						
TORD	**Torodi Ar. Bea**	**169.99**	**170**	PKPab	PKPab	11 14 19.8	-1.7
	0.6nm,0.8s,baz=185,slow=5.2,SNR=2.6						

IDC 22 11:03:05.6±7.8, 24.30S×179.26W, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.6/16, mbtmp3.6/4, Error ellipse: s-maj=197.6km s-min=39.2km az=33.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**35.20**	**249**	P	P	11 10 00.8	-0.8
	2.3nm,1.0s,baz=102,slow=9.3,SNR=3.7						
ASAR	**Alice Springs**	**42.64**	**261**	P	P	11 11 03.8	-0.2
	0.3nm,0.5s,baz=90,slow=7.0,SNR=11						
WRA	**Warramunga Arr**	**43.05**	**266**	P	P	11 11 08.2	+0.8
	0.2nm,0.3s,baz=104,slow=8.0,SNR=6.0						
QSPA	**South Pole Qui**	**65.78**	**180**	P	P	11 13 52.4	+0.5
	1.0nm,0.9s,baz=30,slow=23,SNR=5.8						

ISCJB ***22*** *11:50:36.4±0.9, 58.72S±0.09×149.2E±0.7, h10km, mb4.1/7, MS4.1/12, Error ellipse: s-maj=50.0km s-min=12.2km az=173.7*
IDC ***22*** *11:50:37.1±1.7, 58.69S×148.90E, h0km, mb4.2/6, mb1 4.3/6, mb1mx4.2/13, mbtmp4.2/6, MS4.1/12, Ms1 4.1/12, ms1mx3.8/22, Error ellipse: s-maj=79.7km s-min=20.4km az=90.0*
NEIC ***22*** *11:50:38.6±0.8, 58.70S×149.03E, h10km, mb3.8/3, Error ellipse: s-maj=41.4km s-min=10.1km az=84.0*
ISC 22 11:50:38.7±0.9, 58.70S±0.09×149.0E±0.7, h10km, n20, σ0.62/9, mb4.1/7, MS4.1/12, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBA	**Scott Base**	**20.14**	**169**	*e*P	**P**	**11 55 11.8**	**-0.6**
	3.7nm,0.8s						
RPZ	**Rata Peaks**	**20.24**	**52**	LR	LR	12 01 41.8	
	comp=Z,526nm,21.7s,MS3.9,baz=212,slow=33						
STKA	**Stephens Creek**	**27.29**	**346**	P	**P**	**11 56 24.1**	**+1.1**
	3.3nm,1.0s,mb3.8,baz=190,slow=12,SNR=5.6						
STKA				LR	LR	12 04 44.8	
	comp=Z,233nm,19.8s,MS3.8,baz=2.6,slow=31						
STKA	**Stephens Creek**	**27.29**	**346**	*e*P	**P**	**11 56 24.2**	**+1.1**
	1.2nm,1.0s,mb3.4						
STKA				LR	LR	12 04 44.8	
URZ	**Urewera**	**27.31**	**54**	LR	LR	12 06 39.5	
	comp=Z,307nm,18.9s,MS3.9,baz=210,slow=35						
QSPA	**South Pole Qui**	**31.40**	**180**	P	**P**	**11 57 00.1**	**+0.9**
	1.7nm,1.0s,mb3.8,baz=343,slow=3.4,SNR=4.6						
QSPA				LR	LR	12 07 53.7	
	comp=Z,169nm,21.7s,MS3.7,baz=7.4,slow=33						
ASAR	**Alice Springs**	**36.62**	**336**	P	**P**	**11 57 45.0**	**+0.1**
	2.3nm,0.8s,mb4.1,baz=165,slow=9.9,SNR=27						
ASAR				PcP	PcP	12 00 05.8	-2.0
	0.4nm,0.8s,baz=162,slow=2.8,SNR=3.4						
MAW	**Mawson**	**36.76**	**220**	P	**P**	**11 57 45.4**	**-0.2**
	2.6nm,1.0s,mb4.0,baz=127,slow=5.1,SNR=3.9						
MAW				LR	LR	12 12 43.1	
	comp=Z,470nm,18.2s,MS4.3,baz=100,slow=36						
RAO	**Raoul Island**	**37.16**	**52**	LR	LR	12 11 15.4	
	comp=Z,294nm,18.1s,MS4.1,baz=185,slow=33						
CTA	**Charters Tower**	**38.61**	**356**	P	**P**	**11 58 01.3**	**-0.5**
	8.4nm,0.8s,mb4.5,baz=184,slow=12,SNR=4.3						
CTA				LR	LR	12 12 41.0	
	comp=Z,305nm,19.9s,MS4.1,baz=31,slow=34						
DZM	**Mont Dzumac**	**38.67**	**26**	*e*LR	LR	12 08 56.7	
	765nm,26.1s						
WRA	**Warramunga Arr**	**40.15**	**338**	P	**P**	**11 58 14.1**	**-0.5**
	3.3nm,0.7s,mb4.2						
WRAB	**Tennant Creek**	**40.16**	**338**	*e*P	**P**	**11 58 14.3**	**-0.3**
	5.5nm,0.7s,mb4.4						
PPT	**Papeete**	**60.38**	**74**	*e*LR	LR	12 19 25.9	
	103nm,22.8s						
PPT	**Papeete**	**60.38**	**74**	LR	LR	12 23 23.4	
	comp=Z,84nm,18.4s,MS3.9,baz=199,slow=32						
RKT	**Rikitea**	**63.31**	**91**	*e*T		13 09 37.3	
	5.3nm,0.3s						
BOSA	**Boshof**	**81.30**	**228**	LR	LR	12 33 40.1	
	comp=Z,136nm,18.4s,MS4.3,baz=325,slow=32						
CMAR	**Chiang Mai Arr**	**87.15**	**313**	LR	LR	12 38 49.7	
	comp=Z,220nm,21.2s,MS4.5,baz=90,slow=33						
LSZ	**Lusaka**	**92.00**	**236**	LR	LR	12 35 28.6	
	comp=Z,97nm,21.6s,MS4.2,baz=161,slow=29						
LPAZ	**La Paz**	**99.32**	**144**	LR	LR	12 42 39.8	
	comp=Z,45nm,20.5s,MS4.0,baz=314,slow=31						

IDC 22 11:50:44.1±0.9, 55.91S×27.19W, h0km, mb4.3/5, mb1 4.3/5, mb1mx4.1/12, mbtmp4.2/5, Error ellipse: s-maj=41.8km s-min=23.5km az=73.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QSPA	**South Pole Qui**	**34.35**	**180**	P	P	11 57 32.7	+0.9
	3.6nm,0.4s,baz=211,slow=3.6,SNR=72						
MAW	**Mawson**	**40.27**	**144**	P	P	11 58 22.5	+0.4
	1.1nm,0.4s,baz=252,slow=13,SNR=7.5						
LPAZ	**La Paz**	**50.29**	**305**	P	P	11 59 43.5	+1.4
	0.9nm,0.5s,baz=146,slow=3.6,SNR=5.9						
TORD	**Torodi Ar. Bea**	**72.93**	**29**	P	P	12 02 15.3	+0.3
	1.0nm,0.5s,baz=202,slow=6.1,SNR=13						
ASAR	**Alice Springs**	**99.13**	**162**	P	P	12 04 25.0	-2.1
	0.5nm,0.7s,baz=178,slow=4.1,SNR=6.2						
ILAR	**Eielson Array**	**150.02**	**312**	PKPbc	PKPbc	12 10 33.6	-1.2
	0.7nm,0.7s,baz=124,slow=1.8,SNR=9.5						

IDC 22 12:00:41.8±6.8, 16.44N×40.94E, h0km, mb3.8/4, mb1 3.8/4, mb1mx3.5/22, mbtmp3.8/4, MS3.6/1, Ms1 3.6/1, ms1mx2.6/31, Error ellipse: s-maj=285.0km s-min=26.2km az=156.0, Red Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**38.04**	**270**	P	P	12 08 02.2	-0.1
	2.2nm,0.7s,baz=85,slow=6.6,SNR=14						
MKAR	**Makanchi Array**	**45.63**	**39**	P	P	12 09 04.4	+0.4
	0.3nm,0.3s,baz=226,slow=7.8,SNR=3.6						
DBIC	**Dimbokro**	**45.81**	**263**	LR	LR	12 28 38.9	
	comp=Z,62nm,18.2s,baz=84,slow=37						
ZALV	**Zalesovo Beam**	**50.52**	**32**	P	P	12 09 41.3	-0.5
	0.6nm,0.4s,baz=258,slow=7.4,SNR=4.2						
SONM	**Songino Array**	**61.55**	**44**	P	P	12 11 00.9	+0.1
	1.0nm,1.0s,baz=270,slow=5.8,SNR=4.9						

CSEM ***22*** *12:19:11.0±0.3, 33.33N×35.38E, h2km, ML3.2, Error ellipse: s-maj=9.9km s-min=4.0km az=100.0*
GRAL 22 12:19:11.9±0.5, 33.32N×35.43E, h0km±28km, MD3.2, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.19**	**334**	*e*P	Pg	12 19 15.2	-0.3
MATL	**Matarih**	**0.19**	**334**	*e*P	Pg	12 19 15.2	-0.3
RCY	**Rachaya**	**0.36**	**63**	*e*P	Pg	12 19 18.6	-0.3
RCY				*e*S	Sg	12 19 23.7	+0.1
RCY	**Rachaya**	**0.36**	**63**	*e*P	Pg	12 19 18.6	-0.3
RCY				*e*S	Sg	12 19 23.7	+0.1
BHL	**Bhannes**	**0.61**	**18**	*e*P	Pg	12 19 22.5	-1.1
BHL				*e*S	Sg	12 19 31.0	-0.6
BHL	**Bhannes**	**0.61**	**18**	*e*P	Pg	12 19 22.5	-1.1
BHL				*e*S	Sg	12 19 31.0	-0.6
HWQ	**Hawqa**	**1.05**	**24**	*e*P	Pg	12 19 31.1	-0.9
HWQ	**Hawqa**	**1.05**	**24**	*e*P	Pg	12 19 31.1	-0.9
FKH	**Fakeheh**	**1.22**	**41**	*e*P	Pg	12 19 34.5	-0.8

IDC ***22*** *12:27:49.8±0.8, 1.26N×97.11E, h0km, mb4.4/13, mb1 4.4/15, mb1mx4.2/24, mbtmp4.4/15, ML4.3/2, MS3.7/3, Ms1 3.8/3, ms1mx3.1/28, Error ellipse: s-maj=17.5km s-min=15.9km az=49.0*
BJI ***22*** *12:27:53.3, 1.30N×97.41E, h33km, mB4.8/7, mb4.8/25, Ms4.1/7, Ms7 4.1/7*
MOS ***22*** *12:27:53.1±0.9, 1.31N×97.17E, h35km, mb4.9/23, Error ellipse: s-maj=12.9km s-min=6.6km az=96.1*
DJA ***22*** *12:27:53, 1.37N×97.05E, h18km, MLv4.6/12*
NEIC ***22*** *12:27:55.3±0.4, 1.29N×97.27E, h35km, mb4.9/16, Error ellipse: s-maj=10.2km s-min=6.4km az=50.0*
NEIC Felt [III] in Nias.
ISCJB ***22*** *12:27:55.0±0.7, 1.34N±0.04×97.21E±0.06, h49km±5km, mb4.7/53, MS3.9/11, Error ellipse: s-maj=10.2km s-min=5.4km az=149.4*
ISC 22 12:27:56.3±0.7, 1.34N±0.04×97.19E±0.06, h41km±6km, h28km±3.5km: pP-P, n118, σ0.96/121, mb4.7/53, MS3.9/11, 8C-1D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.39**	**96**	P	**Pn**	**12 28 04.3**	**-1.4**
GSI				S	**Sn**	**12 28 12.6**	**+0.3**
TPTI		**1.90**	**360**	P	**Pn**	**12 28 24.3**	**-2.0**
TPTI				S	**Sn**	**12 28 49.6**	**+0.5**
PSI	**Prapat**	**2.26**	**50**	Pn	**Pn**	**12 28 28.9**	**-2.3**
	23nm,0.3s,baz=267,slow=5.0,SNR=54						
PSI				Pg	**Pn**	**12 28 35.0**	**+3.8**
	30nm,0.3s,baz=222,slow=5.0,SNR=37						
PSI				Lg		12 29 04.0	
	18nm,0.3s,baz=319,slow=7.3,SNR=2.7						
PSI	**Prapat**	**2.26**	**50**	Pn	**Pn**	**12 28 28.9**	**-2.3**
PSI				Lg		12 29 04.0	
MNSI	**Mandailing Nat**	**2.46**	**103**	P	**Pn**	**12 28 33.0**	**0.0**
TSI	**Tuntungan**	**2.55**	**33**	P	**Pn**	**12 28 33.6**	**-1.6**
SISI	**Saibi**	**3.27**	**144**	P	**Pn**	**12 28 46.1**	**+1.0**
PPI	**Padang Panjang**	**3.68**	**119**	P	**Pn**	**12 28 51.2**	**+0.5**
PDSI	**Padang**	**3.97**	**124**	P	**Pn**	**12 28 56.6**	**+1.9**
BKNI	**Bangkinang**	**3.98**	**105**	P	**Pn**	**12 28 55.0**	**+0.1**
SDSI	**Sungai Dareh**	**4.81**	**118**	P	**Pn**	**12 29 06.8**	**+0.5**
FRIM	**Kepong**	**4.82**	**67**	P	**Pn**	**12 29 06.7**	**+0.3**
IPM	**Ipoh**	**4.94**	**51**	P	**Pn**	**12 29 08.9**	**+0.8**
IPM	**Ipoh**	**4.94**	**51**	P	**Pn**	**12 29 08.4**	**+0.3**
	0.4nm1μm82nm,0.7s						
KULM	**Kulim**	**5.23**	**41**	P	**Pn**	**12 29 12.3**	**+0.3**
KULM	**Kulim**	**5.23**	**41**	*e*Pn	**Pn**	**12 29 11.4**	**-0.6**
	70nm,0.7s						
KULM	**Kulim**	**5.23**	**41**	P	**Pn**	**12 29 11.5**	**-0.5**
	0.4nm899nm115nm,1.1s						
KGM	**Kluang**	**6.17**	**84**	P	**Pn**	**12 29 25.5**	**+0

XAN	**Xi'an**	**34.33**	**17**	P	**P**	**12 34 37.8**	**-1.3**
XAN				pP	pP	12 34 43.8	-6.6
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
XAN				pmax	pmax		
	comp=Z,11nm,7.1s						
XAN				LR	LR		
	comp=N,150nm,15.1s,MS3.9						
XAN				LR	LR		
	comp=E,70nm,15.1s,MS3.9						
XAN				LR	LR		
	comp=Z,91nm,15.4s,MS3.6						
LZH	**Lanzhou**	**35.12**	**9**	*e*P	**P**	**12 34 45.3**	**-0.6**
LZH				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.9						
GTA	**Gaotai**	**37.96**	**3**	*e*P	**P**	**12 35 10.1**	**0.0**
GTA				pP	pP	12 35 17.8	-3.7
GTA				sP	sP	12 35 21.9	-4.4
GTA				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.4						
WRAB	**Tennant Creek**	**42.13**	**122**	*e*P	**P**	**12 35 43.3**	**-1.7**
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.2						
WRAB	**Tennant Creek**	**42.13**	**122**	*e*P	**P**	**12 35 43.3**	**-1.7**
	comp=Z,3.1nm,0.5s,mb4.2						
BJI	**Beijing**	**42.21**	**22**	P	**P**	**12 35 45.8**	**+0.5**
BJI				pmax	pmax		
	comp=Z,29nm,0.6s,mb5.1						
WMQ	**Urumqi**	**43.13**	**350**	*e*P	**P**	**12 35 54.4**	**+1.7**
WMQ				pP	pP	12 36 04.4	+0.2
WMQ				sP	sP	12 36 08.4	-0.7
WMQ				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.7						
WMQ				pmax	pmax		
	comp=Z,120nm,4.9s						
WMQ				LR	LR		
	comp=N,170nm,24.4s,MS3.9						
WMQ				LR	LR		
	comp=E,120nm,24.5s,MS3.9						
WMQ				LR	LR		
	comp=Z,86nm,20.3s,MS3.6						
ASAR	**Alice Springs**	**43.49**	**127**	P	**P**	**12 35 54.9**	**-1.1**
	comp=Z,2.0nm,0.8s,mb3.9,baz=299,slow=7.6,SNR=22						
UCH	**Uchtor**	**45.51**	**336**	*e*P	**P**	**12 36 12.0**	**+0.2**
UCH				pmax	pmax		
	comp=Z,10μm,0.6s						
UCH	**Uchtor**	**45.51**	**336**	*e*P	**P**	**12 36 12.0**	**+0.2**
	comp=Z,15μm,0.6s						
TKM2	**Tokmak 2**	**45.68**	**338**	*e*P	**P**	**12 36 12.8**	**-0.3**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
TKM2	**Tokmak 2**	**45.68**	**338**	*e*P	**P**	**12 36 12.8**	**-0.4**
	comp=Z,3.8nm,0.8s,mb4.4						
KSRS	**Korea Array**	**45.74**	**35**	P	**P**	**12 36 13.2**	**-0.5**
	comp=Z,12nm,0.8s,mb4.9,baz=222,slow=9.2,SNR=59						
KSRS	**Korea Array**	**45.74**	**35**	P	**P**	**12 36 13.2**	**-0.5**
KSRS				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
AAK	**Ala-Archa**	**45.86**	**337⇑**	*e*P	**P**	**12 36 14.8**	**+0.2**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
EKS2	**Erkin-Say**	**46.17**	**336**	*e*P	**P**	**12 36 18.4**	**+1.4**
EKS2				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
EKS2	**Erkin-Say**	**46.17**	**336**	*e*P	**P**	**12 36 18.4**	**+1.4**
	comp=Z,4.3nm,0.6s,mb4.6						
SONM	**Songino Array**	**46.99**	**8**	P	**P**	**12 36 23.8**	**+0.5**
	comp=Z,8.1nm,0.7s,mb4.7,baz=189,slow=9.5,SNR=52						
SONM				PcP	PcP	12 37 55.6	+0.4
	comp=Z,1.2nm,0.5s,baz=197,slow=4.3,SNR=4.8						
SONM				LR	LR	12 58 27.7	
	comp=Z,80nm,18.8s,MS3.7,baz=68,slow=39						
SONM	**Songino Array**	**46.99**	**8**	P	**P**	**12 36 23.8**	**+0.5**
SONM						12 37 55.6	
MK31	**Makanchi Array**	**47.10**	**346**	*ce*P	**P**	**12 36 24.2**	**0.0**
MK31				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
MK31	**Makanchi Array**	**47.10**	**346**	*e*P	**P**	**12 36 24.7**	**+0.5**
MKAR	**Makanchi Array**	**47.10**	**346**	P	**P**	**12 36 24.6**	**+0.4**
	comp=Z,6.9nm,0.7s,mb4.7,baz=161,slow=8.4,SNR=49						
MKAR				LR	LR	12 59 13.5	
	comp=Z,64nm,20.1s,MS3.6,baz=267,slow=40						
ULN	**Ulaanbaatar**	**47.12**	**9**	*e*P	**P**	**12 36 24.8**	**+0.4**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						
ULN	**Ulaanbaatar**	**47.12**	**9**	*e*P	**P**	**12 36 24.8**	**+0.4**
	comp=Z,2.4nm,0.4s,mb4.5						
TLY	**Talaya**	**50.45**	**5**	*i*P	**P**	**12 36 49.9**	**+0.1**
TLY				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
MJAR	**Matsushiro Arr**	**51.59**	**42**	P	**P**	**12 36 58.6**	**-0.1**
	comp=Z,0.8nm,0.6s,mb3.8,baz=221,slow=6.8,SNR=6.1						
KURK	**Kurchatov**	**51.65**	**345**	*ce*P	**P**	**12 36 59.1**	**+0.2**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
KURK	**Kurchatov**	**51.65**	**345**	*e*P	**P**	**12 36 59.2**	**+0.4**
	comp=Z,3.0nm,0.6s,mb4.4						
ZAA0	**Zalesovo Array**	**53.41**	**351**	*e*P	**P**	**12 37 11.9**	**0.0**
ZALV	**Zalesovo Beam**	**53.41**	**351**	P	**P**	**12 37 12.1**	**+0.2**
	comp=Z,13nm,0.4s,mb5.2,baz=180,slow=6.4,SNR=80						
STKA	**Stephens Creek**	**53.46**	**132**	P	**P**	**12 37 12.9**	**+0.3**
	comp=Z,4.6nm,0.8s,mb4.4,baz=329,slow=7.8,SNR=7.3						
STKA	**Stephens Creek**	**53.46**	**132**	P	**P**	**12 37 12.9**	**+0.2**
STKA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
STKA	**Stephens Creek**	**53.46**	**132**	*e*P	**P**	**12 37 11.4**	**-1.2**
	comp=Z,1.3nm,0.9s,mb3.9						
NVS	**Novosibirsk**	**54.53**	**350**	*e*P	**P**	**12 37 19.3**	**-0.7**
NVS				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
NVS				pmax	pmax		
	comp=N,7.0nm,0.9s						
NVS				pmax	pmax		
	comp=E,4.0nm,0.9s						
VOSK	**Vostochnaya**	**55.66**	**341**	P	**P**	**12 37 27.1**	**-1.1**
VOSK				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.8						
BVAR	**Borovoye Array**	**56.11**	**341**	P	**P**	**12 37 31.0**	**-0.4**
	comp=Z,6.6nm,0.7s,mb4.8,baz=140,slow=8.7,SNR=31						
KLR	**Kul'dur**	**56.13**	**27**	*e*P	**P**	**12 37 30.1**	**-1.6**
BRVK	**Borovoye**	**56.17**	**341**	*c i*P	**P**	**12 37 31.4**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
ZRNK	**Zerenda**	**56.51**	**340**	*i*P	**P**	**12 37 33.2**	**-1.1**
ZRNK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
HABR	**Khabarovsk**	**57.14**	**29**	*e*P	**P**	**12 37 37.3**	**-1.5**
HABR				*PP	pP	12 37 47.3	-3.4
HABR						12 38 30.9	
HABR						12 39 45.5	
HABR				*e*PPP		12 41 01.8	
HABR				*e*S	**S**	**12 45 31.8**	**+0.6**
HABR				*e**SS	sS	12 45 50.0	-0.9
HABR				*e*		12 47 24.5	
HABR				*e*SS	SS	12 49 23.0	+2.3
HABR				pmax	pmax		
	comp=N,20nm,1.8s						
HABR				pmax	pmax		
	comp=Z,20nm,1.9s,mb4.8						
HABR				pmax	pmax		
	comp=E,23nm,1.7s						
HABR				MLR	MLR		
	comp=Z,108nm,20.0s,MS4.0						
AB31	**Akbulak array**	**57.38**	**332**	*ce*P	**P**	**12 37 39.9**	**-0.6**
AB31				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.9						
ABKAR	**Akbulak array**	**57.38**	**332**	*e*P	**P**	**12 37 40.3**	**-0.2**
	comp=Z,9.5nm,0.7s,mb4.9						
YSS	**Yuzh-Sakhalins**	**60.24**	**34**	*e*P	**P**	**12 38 01.3**	**+0.9**
YSS				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.1						
SVE	**Sverdlovsk**	**62.55**	**338⇑**	*e*P	**P**	**12 38 15.9**	**+0.1**
SVE				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb5.0						
ARU	**Arti**	**63.05**	**337**	*e*P	**P**	**12 38 18.6**	**-0.5**
ARU				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.6						
ARU	**Arti**	**63.05**	**337**	*e*P	**P**	**12 38 18.6**	**-0.5**
	comp=Z,6.3nm,1.1s,mb4.7						
KIV	**Kislovodsk**	**64.19**	**319**	*e*P	**P**	**12 38 25.6**	**-1.4**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
KIV				MLR	MLR		
	comp=Z,33nm,18.0s,MS3.6						
YAK	**Yakutsk**	**65.29**	**16**	*e*P	**P**	**12 38 33.0**	**-0.7**
YAK				pmax	pmax		
	comp=Z,40nm,1.5s,mb5.2						
YAK	**Yakutsk**	**65.29**	**16**	*e*P	**P**	**12 38 33.1**	**-0.6**
	comp=Z,9.1nm,0.4s,mb5.2						
BRTR	**Keskin Array B**	**69.00**	**312**	P	**P**	**12 38 57.1**	**-0.6**
	comp=Z,1.0nm,0.7s,mb3.9,baz=134,slow=8.5,SNR=5.9						
VSR	**Storozhevoye**	**69.44**	**325**	*e*P	**P**	**12 38 58.7**	**-1.6**
VSR				pmax	pmax		
	comp=N,5.0nm,0.5s						
VSR				pmax	pmax		
	comp=E,1.0nm,0.5s						
VSR				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.8						
PETK	**Petropavlovsk-**	**71.62**	**34**	P	**P**	**12 39 13.4**	**-0.1**
	comp=Z,1.8nm,0.8s,mb4.0,baz=193,slow=10,SNR=3.6						
PET	**Petropavlovsk**	**72.12**	**34**	*e*P	**P**	**12 39 16.2**	**-0.3**
PET				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
PET				MLR	MLR		
	comp=Z,100nm,19.0s,MS4.1						
SEY	**Seymchan**	**73.64**	**23⇑**	*i*P	**P**	**12 39 25.0**	**-0.3**
BUR08	**Bucovina Ar. S**	**76.92**	**319**	*e*P	**P**	**12 39 45.1**	**+0.6**
LVZ	**Lovozero**	**78.69**	**340**	*e*P	**P**	**12 39 54.1**	**+0.2**
LVZ				pmax	pmax		
	comp=Z,18nm,1.7s,mb4.7						
FINES	**FINESS Array B**	**79.86**	**332**	P	**P**	**12 39 59.9**	**-0.5**
	comp=Z,0.8nm,0.4s,mb4.0,baz=322,slow=36,SNR=3.1						
FINES	**FINESS Array B**	**79.86**	**332**	P	**P**	**12 39 59.9**	**-0.5**
BILL	**Bilibino**	**81.03**	**21**	*e*P	**P**	**12 40 08.4**	**+1.8**
BILL				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
ARCES	**ARCESS Array B**	**82.39**	**340**	P	**P**	**12 40 13.6**	**-0.2**
	comp=Z,2.4nm,0.9s,mb4.1,baz=107,slow=4.1,SNR=6.0						
ARCES				LR	LR	13 21 06.8	
	comp=Z,73nm,20.5s,MS4.0,baz=166,slow=39						
KBS	**Kingsbay**	**87.77**	**349⇑**	*i*P	**P**	**12 40 40.7**	**+0.1**
KBS				pmax	pmax		
	comp=Z,11nm,1.5s,mb4.9						
NVAR	**Mina Array Bea**	**128.68**	**36**	PKP	PKPdf	12 47 01.5	+1.9
	comp=Z,0.6nm,0.9s,baz=270,slow=1.8,SNR=4.0						
PDAR	**Pinedale Array**	**129.92**	**26**	PKP	PKPdf	12 47 02.5	+0.7
	comp=Z,0.4nm,0.6s,baz=158,slow=1.6,SNR=3.5						
TXAR	**Lajitas Array**	**143.55**	**32**	PKP	PKPdf	12 47 25.1	-2.3
	comp=Z,0.7nm,0.7s,baz=35,slow=1.2,SNR=8.6						
CPUP	**Villa Florida**	**145.10**	**222**	PKP	PKPdf	12 47 34.5	+4.3
	comp=Z,3.4nm,0.5s,baz=79,slow=3.4,SNR=11						

*IDC **22** 12:28:53.2±5.3, 43.°41N×130.°61W, h0km, mb3.1/1, mb1 3.7/4, mb1mx3.4/25, mbtmp3.4/4, ML5.0/1, MS2.9/3, Ms1 2.9/3, ms1mx2.6/11, Error ellipse: s-maj=119.0km s-min=24.7km az=39.0*

*ISCJB **22** 12:28:60.0±1.7, 44.°41N±0.°09×129.°0W±0.°2, h10km, mb3.4/2, Error ellipse: s-maj=18.9km s-min=10.9km az=155.6*

*NEIC **22** 12:29:01.3±1.8, 44.°42N×129.°11W, h10km, mb4.0/1, Error ellipse: s-maj=21.0km s-min=11.7km az=65.0*

ISC 22 12:29:01.3±1.7, 44.°42N±0.°09×129.°1W±0.°2, h10km, n30, σ1§18/28, mb3.4/2, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPOR	**Mary's Peak**	**3.99**	**87**	P	**Pn**	**12 30 00.1**	**-2.3**
COR	**Corvallis**	**4.16**	**86**	*e*Pn	**Pn**	**12 30 03.3**	**-1.5**
NLWA	**Neilton Lookou**	**4.72**	**49**	*e*Pn	**Pn**	**12 30 11.7**	**-0.8**
RVW	**Rose Valley**	**4.82**	**67**	P	**Pn**	**12 30 13.0**	**-0.9**
IRO	**Indian Ridge**	**4.95**	**92**	P	**Pn**	**12 30 14.1**	**-1.6**
OBC	**Olympics--Boni**	**5.03**	**42**	P	**Pn**	**12 30 16.4**	**-0.3**
FL2	**Flat Top 2**	**5.09**	**67**	P	**Pn**	**12 30 18.0**	**+0.4**
HDW	**Hoodsport**	**5.31**	**50**	P	**Pn**	**12 30 20.0**	**-0.6**
GNW	**Green Mountain**	**5.39**	**52**	*e*Pn	**Pn**	**12 30 21.0**	**-0.7**
	5.4nm,0.4s						
YBH	**Yreka Blue Hor**	**5.41**	**118**	Pn	**Pn**	**12 30 26.5**	**+4.5**
	0.1nm,0.3s,baz=278,slow=7.1,SNR=5.9						
YBH				LR	LR	12 32 16.9	
	comp=Z,140nm,18.1s,baz=300,slow=34						
YBH	**Yreka Blue Hor**	**5.41**	**118**	*e*Pn	**Pn**	**12 30 23.3**	**+1.3**
BLN	**Blyn Mountain**	**5.57**	**48**	P	**Pn**	**12 30 24.5**	**+0.3**
LON	**Longmire**	**5.63**	**63**	*e*Pn	**Pn**	**12 30 24.2**	**-0.8**
	11nm,0.8s						
VIPM	**Ingram Point**	**6.08**	**86**	P	**Pn**	**12 30 30.0**	**-1.2**
JCW	**Jim Creek**	**6.25**	**50**	*e*Pn	**Pn**	**12 30 33.5**	**0.0**
	26nm,0.4s						
CMW	**Cultus Mountai**	**6.28**	**48**	P	**Pn**	**12 30 34.5**	**+0.6**
BBB	**Bella Bella**	**7.80**	**5**	LR	LR	12 33 06.3	
	comp=Z,34nm,21.6s,baz=161,slow=28						
NEW	**Newport**	**9.14**	**61**	*e*Pn	**Pn**	**12 31 15.4**	**+2.2**
	4.2nm,1.0s						
NVAR	**Mina Array Bea**	**10.08**	**123**	Pn	**Pn**	**12 31 26.4**	**+0.3**
	0.1nm,0.3s,baz=295,slow=13,SNR=3.9						
BSMT	**Bassoo Peak**	**10.52**	**66**	*e*Pn	**Pn**	**12 31 34.5**	**+2.5**
	6.5nm,1.3s						
HLID	**Hailey**	**10.63**	**89**	*e*Pn	**Pn**	**12 31 36.1**	**+2.5**
	5.3nm,1.0s						
SWMT	**Swartz Lake**	**10.97**	**68**	*e*Pn	**Pn**	**12 31 40.3**	**+2.2**
	4.6nm,1.1s						
MCMT	**McKenzie Canyo**	**11.60**	**82**	*e*Pn	**Pn**	**12 31 47.4**	**+0.5**
	0.9nm,0.7s						
IMW	**Indian Meadow**	**13.07**	**86**	*e*Pn	**Pn**	**12 32 07.8**	**+0.9**
	6.2nm,1.3s						
TPAW	**Teton Pass**	**13.12**	**88**	*e*Pn	**Pn**	**12 32 08.1**	**+0.4**
	6.0nm,1.3s						
RLMT	**Red Lodge**	**14.12**	**80**	*e*Pn	**Pn**	**12 32 20.3**	**-0.9**
	5.2nm,1.1s						
PDAR	**Pinedale Array**	**14.27**	**90**	Pn	**Pn**	**12 32 35.1**	**+12**
	0.7nm,0.3s,baz=279,slow=14,SNR=12						
ILAR	**Eielson Array**	**22.68**	**340**	P	**P**	**12 34 02.5**	**0.0**
	0.5nm,1.0s,mb2.9,baz=162,slow=12,SNR=6.2						
ULM	**Lac du Bonnet**	**23.14**	**64**	LR	LR	12 43 19.9	
	comp=Z,50nm,21.4s,baz=247,slow=35						
WMOK	**Wichita Mounta**	**25.18**	**102**	*e*P	**P**	**12 34 26.5**	**-0.3**
	3.5nm,1.0s,mb3.8						

*ISCJB **22** 12:49:22.8±0.8, 24.°5N±0.°1×122.°93E±0.°03, h68km±10km, Error ellipse: s-maj=23.8km s-min=4.3km az=5.7*

*TAP **22** 12:49:23.2, 24.°41N×122.°91E, h74km±3km, ML2.8, D*

*JMA **22** 12:49:23.3±0.1, 24.°55N×122.°97E, h65km±1km, M1.9*

ISC 22 12:49:23.3±0.8, 24.°5N±0.°1×122.°93E±0.°03, h66km±10km, n11, σ0§58/21, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.07**	**79**	P	**Pn**	**12 49 32.9**	**-0.1**
YOJ				*e*S	**Sn**	**12 49 39.9**	**-0.1**
IRIF	**Iriomote-Funau**	**0.73**	**99**	P	**Pn**	**12 49 38.0**	**-0.3**
IRIF				S	**Sn**	**12 49 49.0**	**-0.4**
HATJ	**Hateruma jima**	**0.89**	**116**	P	**Pn**	**12 49 40.4**	**+0.3**
HATJ				*e*S	**Sn**	**12 49 53.5**	**+0.9**
TWC	**Suao**	**1.00**	**279**	P	**Pn**	**12 49 41.8**	**+0.2**
	baz=282						
TWC				S	**Sn**	**12 49 55.0**	**-0.1**
	baz=282						
JKRS	**Kuro-shima**	**1.00**	**102**	P	**Pn**	**12 49 41.8**	**+0.2**
JKRS				*e*S	**Sn**	**12 49 55.6**	**+0.4**
ENA	**Nanau**	**1.09**	**269**	*e*P	**Pn**	**12 49 43.5**	**+0.9**
	baz=278						
ENA				*e*S	**Sn**	**12 49 57.6**	**+0.5**
	baz=278						
JIJ	**Ishigaki jima**	**1.11**	**94**	P	**Pn**	**12 49 42.6**	**-0.3**
JIJ				S	**Sn**	**12 49 56.7**	**-0.9**
TWE	**Neicheng**	**1.18**	**284**	*e*P	**Pn**	**12 49 44.4**	**+0.5**
	baz=290						
TWE				*e*S	**Sn**	**12 49 60.0**	**+0.6**
	baz=290						
NSK	**Sanguang**	**1.45**	**279**	*e*P	**Pn**	**12 49 46.5**	**-1.0**
	baz=286						
WHF	**Hehuan Shan**	**1.55**	**259**	*e*P	**Pn**	**12 49 49.0**	**+0.2**
	baz=260						
WHF				*e*S	**Sn**	**12 50 06.5**	**-1.6**
	baz=260						
JTJ	**Tarama**	**1.62**	**83**	P	**Pn**	**12 49 50.0**	**+0.2**
JTJ				*e*S	**Sn**	**12 50 09.7**	**-0.1**

*IDC **22** 12:49:32.2±1.4, 44.°26N×129.°16W, h0km, mb3.9/8, mb1 4.0/13, mb1mx3.8/28, mbtmp3.8/13, ML3.7/5, MS3.4/9, Ms1 3.4/9, ms1mx3.2/34, Error ellipse: s-maj=37.6km s-min=13.7km az=42.0*

*ISCJB **22** 12:49:33.7±0.7, 44.°46N±0.°05×129.°04W±0.°08, h10km, mb4.0/11, MS3.4/5, Error ellipse: s-maj=9.1km s-min=5.4km az=146.9*

*NEIC **22** 12:49:35.2±0.7, 44.°44N×129.°14W, h10km, mb4.2/11, Error ellipse: s-maj=9.8km s-min=6.0km az=53.0*

ISC 22 12:49:34.9±0.7, 44.°43N±0.°05×129.°18W±0.°08, h10km, n74, σ1§18/74, mb4.0/11, MS3.4/5, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COR	**Corvallis**	**4.21**	**86**	*e*Pn	**Pn**	**12 50 36.6**	**-2.4**
NLWA	**Neilton Lookou**	**4.74**	**50**	*e*Pn	**Pn**	**12 50 45.6**	**-0.8**
OOW	**Octopus West**	**4.79**	**45**	P	**Pn**	**12 50 46.0**	**-1.0**
HUMO	**Hull Mountain**	**4.88**	**110**	*e*Pn	**Pn**	**12 50 46.5**	**-1.8**
OTR	**Olympics--Tyee**	**4.96**	**41**	P	**Pn**	**12 50 48.9**	**-0.4**
OBC	**Olympics--Boni**	**5.05**	**43**	P	**Pn**	**12 50 49.5**	**-1.1**
HDW	**Hoodsport**	**5.34**	**51**	P	**Pn**	**12 50 53.5**	**-1.0**
GNW	**Green Mountain**	**5.42**	**52**	*e*Pn	**Pn**	**12 50 54.7**	**-1.0**
	10nm,0.4s						
YBH	**Yreka Blue Hor**	**5.45**	**117**	Pn	**Pn**	**12 50 55.4**	**-0.8**
	0.1nm,0.3s,baz=312,slow=15,SNR=3.5						
YBH				Sn	**Sn**	**12 51 58.0**	**-0.8**
	0.1nm,0.3s,baz=53,slow=17,SNR=1.6						
YBH	**Yreka Blue Hor**	**5.45**	**117**	Pn	**Pn**	**12 50 55.4**	**-0.8**
YBH				*e*Pn	**Pn**	**12 50 55.9**	**-0.2**
YBH				Sn	**Sn**	**12 51 58.0**	**-0.8**
BLN	**Blyn Mountain**	**5.59**	**48**	P	**Pn**	**12 50 58.2**	**+0.1**
LON	**Longmire**	**5.67**	**63**	*e*Pn	**Pn**	**12 50 59.0**	**0.0**
VGZ	**Gonzales**	**5.67**	**43**	P	**Pn**	**12 50 57.7**	**-1.5**
PGC	**Sidney**	**5.78**	**41**	*e*Pn	**Pn**	**12 50 59.8**	**-0.8**
MCW	**Mount Constitu**	**6.10**	**44**	P	**Pn**	**12 51 04.9**	**0.0**
VIPM	**Ingram Point**	**6.12**	**86**	P	**Pn**	**12 51 03.6**	**-1.7**
JCW	**Jim Creek**	**6.27**	**51**	P	**Pn**	**12 51 07.0**	**-0.3**
CMW	**Cultus Mountai**	**6.30**	**48**	P	**Pn**	**12 51 08.2**	**+0.4**
ETW	**Entiat**	**6.93**	**60**	*e*Pn	**Pn**	**12 51 15.8**	**-0.6**
HAWA	**Hanford**	**7.07**	**71**	*e*Pn	**Pn**	**12 51 17.9**	**-0.3**
BBB	**Bella Bella**	**7.79**	**5**	Pn	**Pn**	**12 51 29.6**	**+1.4**
	0.4nm,0.3s,baz=69,slow=8.7,SNR=6.8						
BBB				LR	LR	12 53 39.9	
	comp=Z,107nm,19.4s,baz=347,slow=31						
OD2	**Odessa Site #2**	**7.88**	**64**	*e*Pn	**Pn**	**12 51 28.9**	**-0.5**
BMO	**Blue Mountains**	**8.48**	**83**	*e*Pn	**Pn**	**12 51 35.8**	**-1.8**
NEW	**Newport**	**9.17**	**61**	*e*Pn	**Pn**	**12 51 48.7**	**+1.5**
NVAR	**Mina Array Bea**	**10.13**	**123**	Pn	**Pn**	**12 51 59.6**	**-0.7**
	0.1nm,0.3s,baz=282,slow=13,SNR=6.5						
BSMT	**Bassoo Peak**	**10.55**	**66**	*e*Pn	**Pn**	**12 52 06.1**	**0.0**
HLID	**Hailey**	**10.68**	**90**	*e*Pn	**Pn**	**12 52 09.6**	**+1.8**
JTMT	**Jette**	**10.86**	**67**	*e*Pn	**Pn**	**12 52 09.9**	**-0.4**
MSO	**Missoula**	**10.94**	**72**	*e*Pn	**Pn**	**12 52 10.7**	**-0.7**
SWMT	**Swartz Lake**	**11.00**	**68**	*e*Pn	**Pn**	**12 52 13.5**	**+1.3**
SLMT	**Seeley Lake**	**11.30**	**70**	*e*Pn	**Pn**	**12 52 17.9**	**+1.6**
	24nm,1.2s						
CHMT	**Chamberlain Mo**	**11.42**	**72**	*e*Pn	**Pn**	**12 52 19.3**	**+1.4**
MCMT	**McKenzie Canyo**	**11.65**	**82**	*e*Pn	**Pn**	**12 52 23.0**	**+2.0**
	1.2nm,0.8s						
DLMT	**Dillon**	**11.80**	**80**	*e*Pn	**Pn**	**12 52 23.7**	**+0.6**
LRM	**Limekiln Ridge**	**11.90**	**77**	*e*Pn	**Pn**	**12 52 25.3**	**+0.8**
BOZ	**Bozeman (W)**	**12.47**	**78**	*e*Pn	**Pn**	**12 52 32.9**	**+0.6**
IMW	**Indian Meadow**	**13.11**	**86**	*e*Pn	**Pn**	**12 52 42.8**	**+1.8**
TPAW	**Teton Pass**	**13.17**	**88**	*e*Pn	**Pn**	**12 52 42.7**	**+0.9**
HWUT	**Hardware Ranch**	**13.19**	**96**	*e*Pn	**Pn**	**12 52 42.6**	**+0.4**
REDW	**Red Top Meadow**	**13.26**	**88**	*e*Pn	**Pn**	**12 52 44.8**	**+1.7**
LGHW	**Long Hollow**	**13.39**	**87**	*e*Pn	**Pn**	**12 52 46.5**	**+1.6**
CCUT	**Cedar City**	**13.77**	**115**	*e*Pn	**Pn**	**12 52 50.3**	**+0.2**
	35nm,1.9s						
EGMT	**Eagleton**	**13.91**	**68**	*e*Pn	**Pn**	**12 52 52.1**	**+0.1**
DLBC	**Dease Lake**	**14.03**	**358**	LR	LR	12 56 58.6	
	comp=Z,82nm,21.5s,baz=226,slow=31						
MSU	**Marysvale**	**14.04**	**109**	Pn	**Pn**	**12 52 54.2**	**+0.4**
BW06	**Boulder Array**	**14.31**	**90**	*e*Pn	**Pn**	**12 53 00.5**	**+3.0**
PDAR	**Pinedale Array**	**14.31**	**90**	Pn	**Pn**	**12 52 59.5**	**+2.0**
	0.1nm,0.3s,baz=297,slow=9.8,SNR=3.7						
PDAR				LR	LR	12 58 35.6	
	comp=Z,246nm,21.1s,baz=354,slow=38						
SRU	**San Rafael**	**14.89**	**104**	*e*Pn	**Pn**	**12 53 06.7**	**+1.3**
	17nm,1.4s						
WUAZ	**Wupatki**	**16.27**	**117**	*e*Pn	**Pn**	**12 53 25.1**	**+1.7**
	17nm,1.4s						
PV04	**Paradox Valley**	**16.34**	**105**	*e*Pn	**Pn**	**12 53 24.1**	**-0.3**
PV01	**Paradox Valley**	**16.70**	**105**	*e*Pn	**Pn**	**12 53 27.6**	**-1.2**
	1μm,1.4s						
MVCO	**Mesa Verde**	**17.21**	**108**	*e*Pn	**Pn**	**12 53 34.5**	**-0.8**
	169nm,2.7s						
SMCO	**Snowmass**	**17.35**	**100**	*e*P	**Pn**	**12 53 39.4**	**+2.4**
	16nm,1.5s						
ISCO	**Idaho Springs**	**18.06**	**97**	*e*P	**Pn**	**12 53 47.1**	**+1.3**
	4.3nm,0.8s				

BUKP	**Musuan**	**1.88**	**274**	*e*P	**Pn**	**12 50 16.2**	**-1.2**
BUKP				*e*S	**Sn**	**12 50 41.3**	**+1.0**
KCP	**Kidapawan**	**1.99**	**248**	⇑*e*P	**Pn**	**12 50 16.5**	**-2.4**
KCP				*i* S	**Sn**	**12 50 44.5**	**+1.5**
CGP	**Cagayan de Oro**	**2.34**	**288**	⇑*i*P	**Pn**	**12 50 21.5**	**-2.1**
CGP				*i* S	**Sn**	**12 50 58.5**	**+7.0**
GSPH	**General Santos**	**2.58**	**230**	⇑*e*P	**Pn**	**12 50 23.8**	**-3.1**
PAGZ	**Pagadian**	**3.54**	**272**	*e*P	**Pn**	**12 50 39.4**	**-0.4**
TBP	**Tagbilaran**	**3.61**	**303**	*e*P	**Pn**	**12 50 38.8**	**-1.9**
TBP				*e*S	**Sn**	**12 51 24.3**	**+2.0**
LLP	**Lapu-Lapu**	**3.90**	**311**	*e*P	**Pn**	**12 50 42.7**	**-2.0**
LLP				*e*S	**Sn**	**12 51 31.3**	**+2.0**
SNPH	**Sibulan**	**4.00**	**294**	⇑*e*P	**Pn**	**12 50 45.5**	**-0.5**
SNPH				*e*S	**Sn**	**12 51 35.4**	**+3.6**
OCLP	**Ormoc**	**4.01**	**325**	*e*P	**Pn**	**12 50 49.6**	**+3.4**
SGSI	**Sangihe**	**4.28**	**199**	P	**Pn**	**12 50 51.4**	**+1.5**
SGSI				S	**Sn**	**12 51 39.8**	**+1.2**
GUIM	**Jordan**	**5.17**	**304**	*e*P	**Pn**	**12 51 03.3**	**+1.3**
CNP	**Catarman**	**5.24**	**335**	*e*P	**Pn**	**12 51 07.5**	**+4.5**
PVCP	**Virac**	**6.43**	**335**	*e*P	**Pn**	**12 51 24.8**	**+5.6**
CUYO	**Cuyo Island**	**6.62**	**298**	*e*P	**Pn**	**12 51 21.6**	**-0.2**
TNTI	**Ternate**	**6.95**	**177**	P	**Pn**	**12 51 24.8**	**-1.5**
	0.4nm2μm150nm,0.9s						
KMSI	**Cibinong**	**7.72**	**203**	P	**Pn**	**12 51 39.3**	**+2.5**
	0.7nm4μm208nm,1.0s						
LBMI	**Labuha**	**8.35**	**176**	P	**Pn**	**12 51 46.5**	**+1.0**
	942nm73nm,0.9s						
MRSI	**Marisa**	**8.78**	**215**	P	**Pn**	**12 51 51.3**	**-0.1**
	836nm40nm,1.0s						
LUWI	**Luwuk**	**9.68**	**206**	P	**Pn**	**12 52 04.8**	**+1.2**
	80nm,1.2s						
LUWI				S	**Sn**	**12 53 52.0**	**+1.3**
	80nm,1.2s						
SBUM	**Sibu**	**15.58**	**251**	P	**Pn**	**12 53 26.9**	**+4.6**
KSM	**Kuching**	**17.71**	**250**	*e*P	**Pn**	**12 53 48.6**	**-0.1**
	14nm,1.1s						
GUMO	**Guam**	**18.53**	**70**	LR	LR	13 00 03.5	
	comp=Z,106nm,19.1s,baz=271,slow=33						
KAKA	**Kakadu**	**21.05**	**165**	*e*P	**P**	**12 54 23.7**	**-1.0**
	22nm,0.6s,mb4.7						
KAKA	**Kakadu**	**21.05**	**165**	*e*P	**P**	**12 54 24.2**	**-0.5**
	53nm,0.6s,mb5.0						
KNA	**Kununurra**	**23.42**	**176**	*e*P	**P**	**12 54 47.9**	**-1.3**
	135nm,1.6s,mb5.0						
CBIJ	**Chichi jima**	**24.06**	**35**	LR	LR	13 04 27.4	
	comp=Z,122nm,18.9s,baz=125,slow=36						
FITZ	**Fitzroy Crossi**	**25.72**	**183**	*e*P	**P**	**12 55 10.2**	**0.0**
	8.2nm,0.4s,mb4.5						
FITZ	**Fitzroy Crossi**	**25.72**	**183**	P	**P**	**12 55 10.1**	**0.0**
	5.9nm,0.5s,mb4.3,baz=358,slow=9.4,SNR=25						
CMAR	**Chiang Mai Arr**	**29.23**	**294**	P	**P**	**12 55 39.0**	**-2.7**
	1.1nm,0.6s,mb3.7,baz=115,slow=6.0,SNR=5.7						
CMAR				PcP	PcP	12 58 48.5	+1.4
	1.0nm,0.7s,baz=101,slow=0.9,SNR=5.5						
CMAR				LR	LR	13 08 39.7	
	comp=Z,78nm,18.1s,baz=110,slow=39						
KSRS	**Korea Array**	**29.58**	**2**	P	**P**	**12 55 44.7**	**+0.2**
	2.2nm,0.8s,mb3.8,baz=178,slow=10,SNR=14						
KSRS				LR	LR	13 08 28.7	
	comp=Z,117nm,18.4s,baz=182,slow=38						
MJAR	**Matsushiro Arr**	**30.44**	**18**	P	**P**	**12 55 52.3**	**+0.2**
	0.6nm,0.5s,mb3.5,baz=201,slow=9.7,SNR=4.9						
ASAR	**Alice Springs**	**31.95**	**168**	P	**P**	**12 56 05.5**	**-0.1**
	0.6nm,0.6s,mb3.5,baz=355,slow=8.9,SNR=11						
ASAR				PcP	PcP	12 58 55.1	+0.9
	0.9nm,0.7s,baz=339,slow=3.2,SNR=5.5						
MDJ	**Mudanjiang**	**36.80**	**3**	P	**P**	**12 56 48.3**	**+1.1**
MDJ				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.0						
MDJ				pmax	pmax		
	comp=Z,66nm,4.2s						
FORT	**Forrest**	**38.32**	**178**	*e*P	**P**	**12 56 59.7**	**-0.5**
	comp=Z,7.3nm,0.4s,mb4.9						
KLBR	**Kellerberrin**	**40.09**	**192**	*e*P	**P**	**12 57 14.9**	**-0.1**
	comp=Z,25nm,1.2s,mb4.9						
NWAO	**Narrogin (SRO)**	**41.49**	**192**	P	**P**	**12 57 25.9**	**-0.5**
	comp=Z,8.2nm,0.6s,mb4.7,baz=14,slow=9.0,SNR=7.2						
STKA	**Stephens Creek**	**41.81**	**161**	*e*P	**P**	**12 57 27.6**	**-1.5**
	comp=Z,2.5nm,0.6s,mb4.1						
STKA	**Stephens Creek**	**41.81**	**161**	P	**P**	**12 57 28.6**	**-0.4**
	comp=Z,2.1nm,0.7s,mb4.0,baz=353,slow=8.4,SNR=5.5						
SONM	**Songino Array**	**43.60**	**340**	P	**P**	**12 57 42.7**	**-0.6**
	comp=Z,0.5nm,0.6s,mb3.5,baz=153,slow=9.7,SNR=3.9						
SONM				LR	LR	13 17 36.4	
	comp=Z,106nm,18.4s,baz=246,slow=38						
PETK	**Petropavlovsk-**	**51.66**	**23**	P	**P**	**12 58 47.2**	**+1.6**
	comp=Z,3.2nm,0.8s,mb4.4,baz=194,slow=6.2,SNR=5.5						
PETK	**Petropavlovsk-**	**51.66**	**23**	P	**P**	**12 58 47.2**	**+1.6**
MK31	**Makanchi Array**	**54.43**	**324**	*e*P	**P**	**12 59 05.7**	**-0.4**
MKAR	**Makanchi Array**	**54.43**	**324**	P	**P**	**12 59 05.8**	**-0.4**
	comp=Z,5.4nm,0.7s,mb4.7,baz=125,slow=8.3,SNR=39						
MKAR				PcP	PcP	13 00 09.2	+0.3
	comp=Z,2.2nm,0.7s,baz=104,slow=5.1,SNR=4.2						
MKAR				LR	LR	13 23 41.2	
	comp=Z,86nm,18.7s,baz=238,slow=37						
ZAA0	**Zalesovo Array**	**57.15**	**332**	*e*P	**P**	**12 59 24.1**	**-1.3**
ZALV	**Zalesovo Beam**	**57.15**	**332**	P	**P**	**12 59 24.4**	**-1.0**
	comp=Z,3.6nm,0.8s,mb4.5,baz=111,slow=6.7,SNR=18						
ZALV	**Zalesovo Beam**	**57.15**	**332**	P	**P**	**12 59 24.4**	**-1.0**
UCH	**Uchtor**	**57.42**	**316**	*e*P	**P**	**12 59 28.6**	**+0.9**
	comp=Z,31μm,1.0s						
AAK	**Ala-Archa**	**57.58**	**316**	LR	LR	13 23 30.0	
	comp=Z,94nm,20.7s,baz=72,slow=35						
KURK	**Kurchatov**	**58.52**	**326**	*e*P	**P**	**12 59 34.5**	**-0.6**
	comp=Z,7.3nm,0.8s,mb4.8						
BVAR	**Borovoye Array**	**64.11**	**326**	P	**P**	**13 00 12.0**	**-0.8**
	comp=Z,2.5nm,0.6s,mb4.2,baz=111,slow=8.1,SNR=13						
ABKAR	**Akbulak array**	**69.22**	**320**	*e*P	**P**	**13 00 44.7**	**-0.7**
	comp=Z,1.7nm,0.8s,mb3.9						
KDAK	**Kodiak Island**	**78.40**	**33**	P	**P**	**13 01 40.3**	**+1.4**
	comp=Z,8.0nm,0.6s,mb4.6,baz=235,slow=5.3,SNR=7.8						
GNI	**Garni**	**79.10**	**309**	LR	LR	13 40 28.1	
	comp=Z,32nm,18.6s,baz=147,slow=38						
TRF	**Thorofare Moun**	**79.88**	**27**	*e*P	**P**	**13 01 48.2**	**+1.4**
	comp=Z,17nm,1.5s,mb4.7						
RC01	**Rabbit Creek A**	**80.03**	**29**	*e*P	**P**	**13 01 48.6**	**+0.9**
	comp=Z,4.8nm,0.6s,mb4.5						
MCK	**McKinley**	**80.49**	**27**	*e*P	**P**	**13 01 52.0**	**+1.9**
	comp=Z,8.9nm,0.8s,mb4.7						
ILAR	**Eielson Array**	**81.41**	**26**	P	**P**	**13 01 55.5**	**+0.5**
	comp=Z,1.1nm,0.7s,mb3.8,baz=239,slow=5.2,SNR=18						
EGAK	**Eagle**	**83.86**	**26**	*e*P	**P**	**13 02 09.6**	**+1.8**
	comp=Z,1.2nm,0.4s,mb4.1						
PPT	**Papeete**	**86.14**	**108**	LR	LR	13 39 07.9	
	comp=Z,98nm,18.1s,baz=273,slow=34						
ARCES	**ARCESS Array B**	**86.78**	**340**	P	**P**	**13 02 21.7**	**-0.5**
	comp=Z,3.5nm,0.8s,mb4.3,baz=78,slow=6.3,SNR=13						
ARCES	**ARCESS Array B**	**86.78**	**340**	P	**P**	**13 02 21.7**	**-0.5**
MMAI	**Mount Meron Ar**	**87.12**	**303**	P	**P**	**13 02 25.1**	**+0.4**
	comp=Z,0.7nm,0.3s,mb4.0,baz=108,slow=3.2,SNR=3.1						
BRTR	**Keskin Array B**	**87.64**	**310**	P	**P**	**13 02 26.1**	**-0.9**
	comp=Z,0.4nm,0.6s,mb3.6,baz=75,slow=6.5,SNR=3.6						
FINES	**FINESS Array B**	**88.42**	**332**	P	**P**	**13 02 29.7**	**-0.5**
	comp=Z,2.4nm,0.7s,mb4.3,baz=66,slow=4.8,SNR=5.3						
AKASG	**Malin Array Be**	**88.93**	**321**	LR	LR	13 47 15.7	
	comp=Z,64nm,19.1s,baz=300,slow=39						
NOA	**NORSAR Array B**	**95.30**	**334**	LR	LR	13 49 22.0	
	comp=Z,42nm,18.9s,baz=275,slow=38						
TXAR	**Lajitas Array**	**118.93**	**50**	PKP	PKPdf	13 08 28.6	+1.4
	comp=Z,0.1nm,0.4s,baz=194,slow=1.2,SNR=3.7						
TORD	**Torodi Ar. Bea**	**121.80**	**291**	PKP	PKPdf	13 08 32.6	-0.5
	comp=Z,1.0nm,0.6s,baz=50,slow=2.0,SNR=5.8						
CFAA	**Coronel Fontan**	**152.36**	**151**	PKPbc	PKPbc	13 09 35.1	+0.5
	comp=Z,0.2nm,0.5s,baz=157,slow=3.2,SNR=5.5						
CFAA				PKPab	PKPab	13 09 47.2	+2.5
	comp=Z,0.5nm,0.7s,baz=265,slow=5.0,SNR=6.8						

*NEIC **22** 13:11:47.7, 58°.44N×133°.50W, h0km, ML3.0(PGC), ML2.6(AEIC), After AEIC.*

PGC 22 13:11:45.9±31.0, 58°.15N×133°.53W, h1km, ML3.0/4, 7D, 54km east of Juneau, Ak Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESE	**Bessie Mountai**	**0.82**	**302**	P	Pg	13 12 00.8	-0.8
BESE				S	Sg	13 12 13.0	+0.8
SIT	**Sitka**	**1.46**	**222**	P	Pn	13 12 18.6	+5.3
SIT				S	Sg	13 12 41.2	+8.4
SKAG	**Skagway**	**1.61**	**325**	P	Pn	13 12 14.2	-1.3
SKAG				S	Sn	13 12 34.8	-2.1
DLBC	**Dease Lake**	**1.87**	**80**	P	Pn	13 12 19.8	+0.8
DLBC				S	Sn	13 12 44.6	+1.4
DLBC	**Dease Lake**	**1.87**	**80**	⇓P	Pn	13 12 17.9	-1.0
DLBC				⇓Pg	Pg	13 12 19.6	-2.1
DLBC				⇑Sg	Sg	13 12 45.2	-0.7
PLBC	**Pleasant Camp**	**1.98**	**313**	⇓Pn	Pn	13 12 20.1	-0.3
PLBC				⇑Sg	Sg	13 12 47.3	-2.0
WHY	**Whitehorse**	**2.61**	**345**	P	Pn	13 12 28.3	-0.8
WHY	**Whitehorse**	**2.61**	**345**	⇓P	Pn	13 12 29.5	+0.4
WHY				⇑Pg	Pg	13 12 32.8	-3.0
HYT	**Haines Junctio**	**3.36**	**325**	⇓Pn	Pn	13 12 39.3	-0.1
HYT				⇓Pg	Pg	13 12 46.9	-3.3
HYT				⇓Sg	Sg	13 13 29.6	-4.2

*CSEM **22** 13:17:13.0±0.7, 33°.93N×48°.80E, h2km, ML2.9, Error ellipse: s-maj=20.4km s-min=13.9km az=126.0*
*TEH **22** 13:17:17.6, 33°.81N×48°.62E, h16km*
*KISR **22** 13:17:17.2±0.7, 33°.49N×47°.87E, h34km, ML2.3*

ISC 22 13:17:16.7±1.4, 33°.83N±0°.04×48°.62E±0°.05, h12km±11km, n20, σ1§02/28, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKOM	**Komasi**	**0.98**	**291**	*e*Pg	**Pg**	**13 17 33.7**	**-1.9**
IKOM				*e*Sg	**Sg**	**13 17 49.1**	**+0.7**
IKOM				*e*		13 17 53.6	
	comp=N,8μm,0.1s						
ASAO	**Ashtian**	**1.37**	**58**	*e*Pg	**Pn**	**13 17 37.2**	**-4.5**
ASAO				*e*Sg	**Sn**	**13 17 54.3**	**-5.5**
SNGE	**Sanandaj**	**1.64**	**321**	*e*Pg	**Pn**	**13 17 44.6**	**-0.7**
SHGR	**Shooshtar-Gavs**	**1.72**	**175**	*e*Pg	**Pn**	**13 17 46.8**	**+0.3**
ILIN	**Lien**	**1.75**	**309**	*e*Pn	**Pn**	**13 17 47.8**	**+1.0**
ILIN				*e*		13 17 48.9	
	comp=Z,951nm,0.2s						
IGHG	**Ghaleghazi**	**1.77**	**287**	*e*Pn	**Pn**	**13 17 48.1**	**+1.0**
IGHG				*e*		13 17 51.5	
	comp=Z,2μm,0.1s						
IRAZ	**Razeghan**	**1.91**	**34**	*e*Pn	**Pn**	**13 17 46.7**	**-2.4**
IRAZ				*e*		13 17 50.6	
	comp=Z,1μm,0.2s						
IPIR	**Pirpir**	**2.22**	**120**	*e*Pn	**Pn**	**13 17 53.7**	**+0.3**
IPIR				*e*		13 18 27.7	
	comp=Z,608nm,0.3s						
GHVR	**GHOM**	**2.32**	**73**	*e*Pg	**Pn**	**13 17 52.2**	**-2.4**
IMHD	**Mahdasht**	**2.51**	**42**	*e*Pn	**Pn**	**13 17 57.4**	**+0.1**
IMHD				*e*Sn	**Sn**	**13 18 27.6**	**-0.2**
IKLH	**Kolahrood**	**2.53**	**101**	*e*Pn	**Pn**	**13 17 58.0**	**+0.5**
IKLH				*e*		13 18 33.8	
	comp=Z,470nm,0.2s						
IVRN	**Varamin**	**2.82**	**65**	*e*Pn	**Pn**	**13 18 02.0**	**+0.4**
IVRN				*e*Pn	**Pn**	**13 18 02.1**	**+0.5**
ISFB	**Sefidab**	**3.05**	**79**	*e*Pn	**Pn**	**13 18 05.1**	**+0.3**
IZEF	**Zefreh**	**3.24**	**106**	*e*Pn	**Pn**	**13 18 07.6**	**+0.2**
IZEF				*e*		13 19 04.5	
	comp=Z,106nm,0.2s						
IDMV	**Damavand**	**3.31**	**57**	*e*Pn	**Pn**	**13 18 10.0**	**+1.7**
ISHM	**Shahmirzad**	**4.33**	**62**	*e*Pn	**Pn**	**13 18 22.4**	**+0.1**
ISHM				*e*		13 19 38.7	
	comp=Z,216nm,0.3s						
NAY	**Al-Naaiem**	**4.71**	**195**	*e*P	**Pn**	**13 18 28.2**	**+0.6**
NAY				*e*S	**Sn**	**13 19 20.7**	**-1.5**
NAY				AML	AML	13 19 21.9	
	comp=Z,1.7nm,0.6s						
NAY	**Al-Naaiem**	**4.71**	**195**	*e*P	**Pn**	**13 18 28.2**	**+0.6**
NAY				*e*S	**Sn**	**13 19 20.7**	**-1.5**
	comp=Z,2.0nm,0.6s						
RDF	**Al-Radifah**	**4.97**	**191**	*e*P	**Pn**	**13 18 31.8**	**+0.6**
RDF				*e*S	**Sn**	**13 19 28.4**	**-0.2**
RDF				AML	AML	13 19 28.7	
	comp=Z,4.4nm,0.6s						
RDF	**Al-Radifah**	**4.97**	**191**	*e*P	**Pn**	**13 18 31.8**	**+0.6**
RDF				*e*S	**Sn**	**13 19 28.4**	**-0.2**
	comp=Z,4.0nm,0.6s						

*ISCJB **22** 13:29:25.9±0.4, 18°.57N±0°.07×68°.37W±0°.03, h136km±4km, mb3.5/5, Error ellipse: s-maj=12.3km s-min=4.0km az=13.0*
*IDC **22** 13:29:26.5±1.9, 18°.38N×68°.33W, h135km±30km, mb3.3/5, mb1 3.7/7, mb1mx3.5/22, mbtmp3.4/7, Error ellipse: s-maj=37.1km s-min=27.2km az=150.0*
*NEIC **22** 13:29:27.7, 18°.64N×68°.34W, h127km, MD4.1(RSPR), After RSPR.*
NEIC Felt [III] at Aguada, Puerto Rico.
*RSPR **22** 13:29:27.7, 18°.64N×68°.34W, h127km±2km, MD4.1/19*

ISC 22 13:29:27.1±0.4, 18°.58N±0°.07×68°.36W±0°.03, h132km±4km, n37, σ0§73/54, mb3.5/5, 10C-11D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**0.07**	**196**	⇑*e*P	**Pn**	**13 29 44.7**	**-0.2**
PCDR	**Punta Cana, DR**	**0.07**	**196**	*e*S	**Sn**	**13 29 58.0**	**-0.4**
IMO	**Isla Mona**	**0.64**	**138**	⇓*e*P	**Pn**	**13 29 46.5**	**-0.7**
IMO				*e*S	**Sn**	**13 30 02.7**	**+0.3**
DR12	**Loma Pena Alta**	**0.99**	**282**	⇑*e*P	**Pn**	**13 29 49.4**	**-0.6**
DR12				*e*S	**Sn**	**13 30 07.5**	**+0.1**
AGPR	**Aguadilla, PR**	**1.19**	**95**	⇓*e*P	**Pn**	**13 29 52.9**	**+1.0**
AGPR				*e*S	**Sn**	**13 30 11.5**	**+0.6**
LSP	**Las Mesas**	**1.28**	**108**	⇓*e*P	**Pn**	**13 29 53.3**	**+0.4**
LSP				*e*S	**Sn**	**13 30 12.3**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.32**	**116**	⇑*i*P	**Pn**	**13 29 52.9**	**-0.4**
CRPR				*e*S	**Sn**	**13 30 13.4**	**+0.2**
LRS	**Lares**	**1.47**	**101**	⇓*i*P	**Pn**	**13 29 55.6**	**+0.7**
GBPR	**Guanica, Bosqu**	**1.53**	**113**	⇓*i*P	**Pn**	**13 29 55.4**	**-0.3**
GBPR				*e*S	**Sn**	**13 30 18.1**	**+0.7**
OBIP	**Obispado Ponce**	**1.75**	**108**	⇓*e*P	**Pn**	**13 29 58.1**	**-0.1**
OBIP				*e*S	**Sn**	**13 30 22.4**	**+0.5**
CELP	**Cerrillos**	**1.77**	**106**	⇑*e*P	**Pn**	**13 29 58.1**	**-0.2**
CELP				*e*S	**Sn**	**13 30 23.9**	**+1.7**
ICM	**Isla Caja Muer**	**1.88**	**111**	⇑*i*P	**Pn**	**13 29 59.0**	**-0.7**
ICM	**Isla Caja Muer**	**1.88**	**111**	*e*S	**Sn**	**13 30 24.1**	**-0.5**
ICM	**Isla Caja Muer**	**1.88**	**111**	*e*P	**Pn**	**13 29 59.0**	**-0.7**
ICM				*e*S	**Sn**	**13 30 24.1**	**-0.5**
SJG	**San Juan**	**2.15**	**102**	⇓*e*P	**Pn**	**13 30 02.6**	**-0.4**
SJG	**San Juan**	**2.15**	**102**	*e*S	**Sn**	**13 30 30.1**	**-0.4**
SJG	**San Juan**	**2.15**	**102**	P	**Pn**	**13 30 02.7**	**-0.3**
	74nm,0.3s,baz=287,slow=8.8,SNR=46						
SJG				S	**Sn**	**13 30 29.1**	**-1.4**
	50nm,0.3s,baz=293,slow=12,SNR=4.6						
SJG	**San Juan**	**2.15**	**102**	⇓*e*P	**Pn**	**13 30 02.6**	**-0.4**
SJG				*e*S	**Sn**	**13 30 30.1**	**-0.4**
CBYP	**Canovanas**	**2.40**	**97**	⇑*e*P	**Pn**	**13 30 05.8**	**-0.2**
CBYP				*e*S	**Sn**	**13 30 36.1**	**+0.1**
HUMP	**Col San Antoni**	**2.42**	**100**	⇑*e*P	**Pn**	**13 30 05.9**	**-0.5**
HUMP				*e*S	**Sn**	**13 30 35.8**	**-0.8**
MTP	**Monte Pirata**	**2.71**	**100**	⇑*e*P	**Pn**	**13 30 09.8**	**-0.3**
MTP				*e*S	**Sn**	**13 30 44.2**	**+1.1**
SDDR	**Presa de Saban**	**2.80**	**279**	⇑*e*P	**Pn**	**13 30 11.9**	**+0.7**
SDDR				*e*S	**Sn**	**13 30 47.1**	**+1.9**
STVI	**Saint Thomas**	**3.24**	**94**	⇓*e*P	**Pn**	**13 30 16.7**	**-0.2**
STVI				*e*S	**Sn**	**13 30 54.6**	**-0.8**
CDVI	**St. Croix**	**3.52**	**103**	⇑*e*P	**Pn**	**13 30 20.7**	**+0.2**
CDVI				*e*S	**Sn**	**13 31 02.3**	**+0.5**
TBVI	**Tortola**	**3.56**	**92**	⇓*e*P	**Pn**	**13 30 20.2**	**-0.8**
TBVI				*e*S	**Sn**	**13 31 02.5**	**-0.3**
GRTK	**Grand Turk**	**3.91**	**319**	⇓*e*P	**Pn**	**13 30 24.8**	**-0.9**
GRTK				*e*S	**Sn**	**13 31 09.8**	**-1.3**
SMRT	**St. Maarten**	**5.05**	**95**	⇑*e*P	**Pn**	**13 30 41.2**	**+0.3**
ANWB	**Willy Bob**	**6.32**	**97**	*e*P	**Pn**	**13 30 58.0**	**0.0**
SDV	**Santo Domingo**	**9.89**	**193**	*e*P	**Pn**	**13 31 44.3**	**-1.7**
	16nm,0.5s						
JTS	**JuntasAbangare**	**18.05**	**245**	P	**P**	**13 33 28.8**	**+0.5**
	0.2nm,0.3s,baz=84,slow=16,SNR=4.3						
TXAR	**Lajitas Array**	**33.87**	**295**	P	**P**	**13 35 57.0**	**-0.3**
	1.1nm,0.7s,mb3.7,baz=110,slow=9.1,SNR=18						
TXAR				PcP	PcP	13 38 32.9	-0.2
	0.3nm,0.6s,baz=136,slow=5.4,SNR=3.7						
SCHQ	**Schefferville**	**36.20**	**1**	P	**P**	**13 36 19.0**	**+2.1**
	1.6nm,0.5s,mb3.9,baz=190,slow=7.8,SNR=4.6						
PDAR	**Pinedale Array**	**42.28**	**314**	P	**P**	**13 37 07.8**	**+0.3**
	0.3nm,0.7s,mb3.0,baz=110,slow=11,SNR=3.5						
NVAR	**Mina Array Bea**	**47.51**	**305**	P	**P**	**13 37 48.9**	**-0.1**
	0.5nm,0.5s,mb3.4,baz=84,slow=9.1,SNR=4.8						
ILAR	**Eielson Array**	**68.47**	**333**	P	**P**	**13 40 14.6**	**0.0**
	0.5nm,0.5s,mb3.5,baz=103,slow=4.8,SNR=12						
CN2	**Changchun**	**116.64**	**349**	*e*PKP	PKPdf	13 47 56.1	+0.3
CN2				PP	PP	13 49 08.3	+4.4
ASAR	**Alice Springs**	**158.63**	**252**	PKPab	PKPab	13 49 43.9	-1.8
	0.6nm,0.8s,baz=125,slow=3.8,SNR=4.6						

*ISCJB **22** 13:36:37.0±0.4, 32°.54N±0°.03×105°.56E±0°.04, h10km, mb3.7/4, Error ellipse: s-maj=5.4km s-min=4.2km az=37.0*
*NEIC **22** 13:36:40.5±0.8, 32°.87N×105°.89E, h10km, mb3.7/1, Error ellipse: s-maj=19.8km s-min=11.7km az=66.0*
*BJI **22** 13:36:41.7, 32°.61N×105°.33E, h16km, mB3.9/1, mb3.8/1, ML3.7/14, Ms3.5/6, Ms7 3.1/6*
*IDC **22** 13:36:42.5±2.2, 32°.97N×105°.27E, h0km, mb3.8/3, mb1 3.7/6, mb1mx3.5/26, mbtmp3.6/6, ML3.0/2, Error ellipse: s-maj=41.3km s-min=34.2km az=18.0*

ISC 22 13:36:40.1±0.4, 32°.54N±0°.03×105°.46E±0°.05, h10km, n18, σ1§52/31, mb3.7/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.18**	**222**	Pn	**Pn**	**13 37 16.3**	**-0.1**
CD2				Pg	**Pg**	**13 37 20.1**	**-1.8**
CD2				Sn	**Sn**	**13 37 44.8**	**+1.3**
CD2				Sg	**Sg**	**13 37 49.0**	**-1.2**
CD2				smax			
	comp=N,4μm,0.6s						
CD2				smax			
	comp=E,3μm,0.6s						
XAN	**Xi'an**	**3.26**	**62**	Pn	**Pn**	**13 37 34.0**	**+2.7**
XAN				Pg	**Pg**	**13 37 39.8**	**-2.8**
XAN				Sn	**Sn**	**13 38 16.4**	**+6.3**
XAN				Sg	**Sg**	**13 38 23.3**	**-1.5**
XAN				smax			
	comp=N,200nm,0.7s						
XAN				smax			
	comp=E,140nm,0.6s						
XAN				LR	LR		
	comp=N,190nm,7.4s						
XAN				LR	LR		
	comp=E,60nm,5.4s						
XAN				LR	LR		
	comp=Z,80nm,8.9s						
LZH	**Lanzhou**	**3.78**	**340**	Pn	**Pn**	**13 37 40.6**	**+2.2**
LZH				Pg	**Pg**	**13 37 50.3**	**-2.2**
LZH				Sg	**Sg**	**13 38 37.0**	**-4.5**
LZH				smax			
	comp=N,470nm,0.8s						
LZH				smax			
	comp=E,1μm,0.9s						
LZH				LR	LR		
	comp=E,590nm,4.5s						
LZH				LR	LR		
	comp=Z,750nm,9.0s						
ENH	**Enshi**	**4.12**	**122**	*e*Pn	**Pn**	**13 37 41.0**	**-2.0**
GYA	**Guiyang**	**6.15**	**170**	Pn	**Pn**	**13 38 13.1**	**+2.1**
GYA				Sn	**Sn**	**13 39 20.8**	**-0.7**
GYA				Sg	**Sg**	**13 39 48.8**	**-8.8**
GYA				smax			
	comp=N,60nm,0.8s						
GYA				smax			
	comp=E,50nm,0.8s						
KMI	**Kunming**	**7.77**	**199**	Pn	**Pb**	**13 38 56.8**	**+1.9**
KMI				Sn	**Sn**	**13 40 00.3**	**-1.0**
KMI				smax			
	comp=N,13nm,0.7s						
KMI				smax			
	comp=E,14nm,0.6s						
WHN	**Wuhan**	**7.84**	**102**	*e*P	**Pn**	**13 38 40.0**	**+5.8**
WHN				S	**Sn**	**13 40 00.6**	**-2.5**
WHN				LR	LR		
	comp=N,440nm,5.6s						
WHN				LR	LR		
	comp=E,310nm,2.2s						
WHN				LR	LR		
	comp=Z,310nm,5.2s						
GTA	**Gaotai**	**8.24**	**328**	*e*P	**Pn**	**13 38 39.4**	**-0.3**
GTA				pP		13 38 43.1	
GTA				S	**Sn**	**13 40 12.5**	**-0.3**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,25nm,4.2s						
GTA				LR	LR		
	comp=N,120nm,10.5s						
GTA				LR	LR		
	comp=E,97nm,10.5s						
GTA				LR	LR		

MKAR	Makanchi Array	54.81	324	P	P	13 56 44.5 -0.8
ZALV	Zalesovo Beam	57.68	332	P	P	13 57 04.7 -0.9
	comp=Z,0.3nm,0.4s,mb3.7,baz=204,slow=43,SNR=1.9					
ZALV	Zalesovo Beam	57.68	332	P	P	13 57 04.7 -0.9
KURK	Kurchatov	58.94	327	eP	P	13 57 13.5 -1.0
BVAR	Borovoye Array	64.53	326	P	P	13 57 51.7 -0.5
	comp=Z,0.5nm,0.4s,mb3.9,baz=145,slow=10,SNR=4.8					

NEIC ***22*** *14:03:32.5±2.5,24°.12N×121°.98E,h10km,Error ellipse: s-maj=28.6km s-min=10.8km az=87.0*
NEIC Recorded [3 TAP] in Hua-lien and I-lan; [1 TAP] in Nan-t'ou.
JMA ***22*** *14:03:34.8±0.5,24°.01N×121°.62E,h42km,M3.3*
ISCJB ***22*** *14:03:35.6±0.2,24°.21N±0°.01×121°.81E±0°.02,h10km, Error ellipse: s-maj=2.2km s-min=1.7km az=24.6*
TAP ***22*** *14:03:35.0,24°.19N×121°.78E,h10km,ML3.9,B*
ISC 22 14:03:35.9±0.2,**24°.21N**±0°.01×**121°.80E**±0°.02,**h10**km,**n72,** σ**1**§**02**/116,**7C-1D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village** baz=346	**0.12**	**331**	*i* P	**Pg**	**14 03 38.1**	**-0.7**
EHP	baz=346			*i* S	**Sg**	**14 03 40.5**	**-0.3**
NACB	**Ninganchiao**	**0.19**	**260**	*e*Pg	**Pg**	**14 03 38.8**	**-1.2**
NACB				*e*Sg	**Sg**	**14 03 41.6**	**-1.2**
ENA	**Nanau** baz=353	**0.23**	**346**	⇑*i*P	**Pg**	**14 03 40.2**	**-0.5**
ENA	baz=353			S	**Sg**	**14 03 43.8**	**0.0**
TWD	**Chiawan** baz=243	**0.23**	**236**	⇓P	**Pg**	**14 03 39.6**	**-1.0**
TWD	baz=243			S	**Sg**	**14 03 42.9**	**-0.9**
HWA	**Hwalien** baz=227	**0.29**	**218**	*e*P	**Pg**	**14 03 41.5**	**-0.3**
TWC	**Suao** baz=10.0	**0.40**	**6**	⇑*i*P	**Pg**	**14 03 43.6**	**-0.3**
TWC	baz=10.0			S	**Sg**	**14 03 49.4**	**+0.2**
ESF	**Shoufeng Towns** baz=230	**0.43**	**219**	*e*P	**Pg**	**14 03 43.9**	**-0.5**
NNS	**Nan Shan** baz=305	**0.46**	**301**	⇑*i*P	**Pg**	**14 03 44.3**	**-0.5**
NNS	baz=305			*e*S	**Sg**	**14 03 50.3**	**-0.6**
WHF	**Hehuan Shan** baz=266	**0.49**	**263**	⇑*i*P	**Pg**	**14 03 44.8**	**-0.8**
WHF	baz=266			S	**Sg**	**14 03 51.3**	**-0.8**
ESL	**Shilin** baz=231	**0.52**	**221**	P	**Pg**	**14 03 44.9**	**-1.1**
TWE	**Neicheng** baz=351	**0.53**	**346**	*i* P	**Pg**	**14 03 46.0**	**-0.2**
TWE	baz=351			S	**Sg**	**14 03 53.1**	**0.0**
TEGC	**Jichi Village** baz=207	**0.55**	**206**	*e*P	**Pg**	**14 03 45.7**	**-0.9**
ILA	**Ilan** baz=350	**0.56**	**355**	*e*P	**Pg**	**14 03 46.5**	**-0.2**
ILA	baz=350			S	**Sg**	**14 03 54.8**	**+0.6**
TWT	**Tachien** baz=277	**0.57**	**275**	P	**Pg**	**14 03 46.9**	**-0.2**
TWT	baz=277			S	**Sg**	**14 03 54.3**	**-0.3**
YHNB	**Yeheng**	**0.60**	**320**	*e*Pg	**Pg**	**14 03 46.9**	**-0.7**
YHNB				*e*Sg	**Sg**	**14 03 54.7**	**-0.8**
NSK	**Sanguang** baz=322	**0.62**	**319**	⇑*i*P	**Pg**	**14 03 47.7**	**-0.3**
NSK	baz=322			*i* S	**Sg**	**14 03 55.5**	**-0.6**
TWA	**Mucha** baz=348	**0.80**	**345**	*e*P	**Pg**	**14 03 51.0**	**-0.2**
TWA	baz=348			*e*S	**Sg**	**14 04 01.5**	**-0.1**
TWB1	**Santiao Chiao** baz=13	**0.81**	**12**	*e*P	**Pg**	**14 03 50.7**	**-1.0**
TWB1	baz=13			*e*S	**Sg**	**14 04 01.4**	**-0.9**
TATO	**Taipei**	**0.82**	**339**	*e*Pg	**Pg**	**14 03 51.4**	**-0.3**
TATO				*e*Sg	**Sg**	**14 04 02.1**	**-0.3**
EHY	**Hungye** baz=224	**0.83**	**212**	*e*P	**Pg**	**14 03 50.6**	**-1.2**
EHY	baz=224			*e*S	**Sg**	**14 04 03.5**	**+0.8**
NSTT	**Nanjuang** baz=303	**0.84**	**300**	P	**Pg**	**14 03 52.2**	**0.0**
NSTT	baz=303			S	**Sg**	**14 04 02.9**	**-0.3**
NWF	**Wu-fen Shan** baz=353	**0.86**	**359**	P	**Pg**	**14 03 52.5**	**0.0**
NWF	baz=353			S	**Sg**	**14 04 03.3**	**-0.4**
TAP1	**Taipei** baz=344	**0.87**	**343**	*e*P	**Pg**	**14 03 52.8**	**+0.2**
TAP1	baz=344			*e*S	**Sg**	**14 04 03.8**	**-0.1**
SSLB	**Suanglung**	**0.88**	**242**	*e*Pg	**Pg**	**14 03 51.6**	**-1.3**
SSLB				*e*Sg	**Sg**	**14 04 04.0**	**-0.4**
SMLT	**Sun Moon Lake** baz=251	**0.89**	**249**	⇑P	**Pg**	**14 03 52.2**	**-0.8**
SMLT	baz=251			*e*S	**Sg**	**14 04 03.8**	**-0.8**
TYC	**Yuchr** baz=254	**0.92**	**251**	*e*P	**Pg**	**14 03 52.5**	**-1.1**
YULB	**Yu-li**	**0.94**	**210**	*e*Pn	**Pn**	**14 03 52.1**	**-3.0**
YULB				*e*Sn	**Sn**	**14 04 06.7**	**-1.9**
NCU	**National Centr** baz=326	**0.94**	**324**	*e*P	**Pg**	**14 03 54.8**	**+0.7**
NCU	baz=326			*e*S	**Sg**	**14 04 08.8**	**+2.4**
TWQ1	**Liyutan** baz=281	**0.95**	**279**	*e*P	**Pg**	**14 03 54.2**	**0.0**
TWQ1	baz=281			*e*S	**Sg**	**14 04 07.1**	**+0.5**
TWS1	**Kuangyinshan** baz=341	**0.96**	**339**	*e*P	**Pg**	**14 03 54.8**	**+0.5**
TWS1	baz=341			*e*S	**Sg**	**14 04 07.2**	**+0.4**
HSN	**Hsinchu** baz=303	**0.96**	**308**	*e*P	**Pg**	**14 03 54.6**	**+0.1**
HSN	baz=303			*e*S	**Sg**	**14 04 07.9**	**+0.9**
TWF1	**Yuli** baz=223	**0.97**	**209**	*e*P	**Pg**	**14 03 52.7**	**-1.9**
NSY	**Sanyi** baz=285	**0.97**	**283**	*e*P	**Pg**	**14 03 54.7**	**0.0**
NSY	baz=285			*e*S	**Sg**	**14 04 08.9**	**+1.6**
TCU	**Taichung** baz=269	**1.03**	**267**	*e*P	**Pg**	**14 03 56.1**	**+0.4**
TCU	baz=269			*e*S	**Sg**	**14 04 10.8**	**+1.7**
WNT	**Mingjian** baz=250	**1.07**	**252**	*e*P	**Pg**	**14 03 56.7**	**+0.1**
WNT	baz=250			*e*S	**Sg**	**14 04 11.6**	**+1.0**
TWY	**Chenhua** baz=352	**1.08**	**350**	*e*P	**Pb**	**14 03 56.8**	**+0.1**
TWY	baz=352			*e*S	**Sg**	**14 04 11.2**	**+0.4**
YOJ	**Yonaguni jima**	**1.13**	**77**	P	**Pb**	**14 03 57.7**	**+0.1**
YOJ				S	**Sb**	**14 04 15.2**	**+2.9**
YOJ	**Yonaguni jima** baz=60	**1.13**	**77**	*e*P	**Pb**	**14 03 57.7**	**+0.1**
CHN5	**Tsauling** baz=243	**1.20**	**240**	⇑P	**Pb**	**14 03 58.7**	**0.0**
CHN5	baz=243			*e*S	**Sb**	**14 04 16.6**	**+2.4**
ELDTW	**Lidau** baz=203	**1.24**	**216**	*e*P	**Pn**	**14 03 57.1**	**-2.2**
WGK	**Gukeng** baz=250	**1.25**	**246**	*e*P	**Pn**	**14 03 59.5**	**+0.1**
TPUB	**Ta-pu**	**1.40**	**230**	*e*Pn	**Pn**	**14 04 01.4**	**-0.2**
STYT	**Tauyuan** baz=227	**1.42**	**223**	*e*P	**Pn**	**14 04 00.9**	**-0.8**
WTCT	**Ta-ch'eng** baz=259	**1.43**	**256**	*e*P	**Pn**	**14 04 02.2**	**+0.2**
WTCT	baz=259			*e*S	**Sn**	**14 04 21.8**	**+1.0**
CHY	**Chiayi** baz=244	**1.45**	**241**	*e*P	**Pn**	**14 04 02.7**	**+0.6**
CHY	baz=244			*e*S	**Sn**	**14 04 22.5**	**+1.3**
TWK	**Hsinying** baz=236	**1.53**	**232**	*e*P	**Pn**	**14 04 03.7**	**+0.4**
TWK	baz=236			*e*S	**Sn**	**14 04 25.6**	**+2.4**
TWG	**Pinlang** baz=191	**1.54**	**206**	*e*Pn	**Pn**	**14 03 58.3**	**-5.0**
TWG	**Pinlang** baz=191	**1.54**	**206**	*e*P	**Pn**	**14 04 00.9**	**-2.5**
CHN1	**Nanshi** baz=223	**1.55**	**229**	*e*P	**Pn**	**14 04 04.5**	**+0.9**
CHN1	baz=223			*e*S	**Sn**	**14 04 26.9**	**+3.2**
WSF	**Szhu** baz=253	**1.55**	**249**	*e*P	**Pn**	**14 04 04.6**	**+1.0**
TTN	**Taitung** baz=199	**1.57**	**203**	*e*P	**Pn**	**14 04 05.8**	**+1.9**
SGST	**Jiashian** baz=229	**1.58**	**225**	*e*P	**Pn**	**14 04 04.6**	**+0.5**
SGST	baz=229			*e*S	**Sn**	**14 04 27.4**	**+2.8**
CHN8	**Yiju** baz=245	**1.69**	**240**	*e*P	**Pn**	**14 04 04.8**	**-0.7**
CHN3	**Shinhua** baz=235	**1.73**	**230**	*e*P	**Pn**	**14 04 07.7**	**+1.6**
IRIF	**Iriomote-Funau**	**1.76**	**85**	P	**Pn**	**14 04 06.4**	**-0.1**
IRIF				S	**Sn**	**14 04 29.6**	**+0.6**
ECL	**Taimali** baz=194	**1.78**	**206**	*e*P	**Pn**	**14 04 05.0**	**-1.8**
SCLT	**Jiali** baz=240	**1.80**	**235**	*e*P	**Pn**	**14 04 06.1**	**-0.9**
SCLT	baz=240			*e*S	**Sn**	**14 04 32.9**	**+3.0**
SSD	**Sandimen** baz=234	**1.81**	**217**	*e*P	**Pn**	**14 04 07.3**	**+0.1**
SSD	baz=234			*e*S	**Sn**	**14 04 32.7**	**+2.6**
HATJ	**Hateruma jima**	**1.83**	**94**	P	**Pn**	**14 04 07.4**	**-0.1**
HATJ				S	**Sn**	**14 04 29.7**	**-1.1**
TWM1	**Shoushan** baz=227	**1.87**	**223**	*e*P	**Pn**	**14 04 10.0**	**+2.0**
JKRS	**Kuro-shima**	**2.01**	**89**	P	**Pn**	**14 04 10.5**	**+0.5**
EAST	**Anshuo** baz=196	**2.02**	**206**	*e*P	**Pn**	**14 04 08.4**	**-1.6**
TAW	**Tawu** baz=209	**2.02**	**205**	*e*P	**Pn**	**14 04 10.9**	**+0.8**
SCZT	**Fangliau** baz=199	**2.13**	**211**	*e*P	**Pn**	**14 04 12.0**	**+0.5**
JIJ	**Ishigaki jima**	**2.14**	**85**	P	**Pn**	**14 04 11.3**	**-0.4**
JIJ				S	**Sn**	**14 04 38.7**	**+0.4**
PNG	**Penghu** baz=258	**2.15**	**253**	*e*P	**Pn**	**14 04 11.8**	**-0.1**
PNG	baz=258			*e*S	**Sn**	**14 04 39.7**	**+1.0**
LAY	**Lan-yu** baz=188	**2.17**	**186**	*e*P	**Pn**	**14 04 08.8**	**-3.3**
TWK1	**Hengchun** baz=193	**2.43**	**202**	*e*P	**Pn**	**14 04 15.4**	**-0.3**
TSEB	**Hengchuen, Pin** baz=205	**2.44**	**200**	*e*P	**Pn**	**14 04 16.4**	**+0.5**
JTJ	**Tarama**	**2.68**	**80**	P	**Pn**	**14 04 19.4**	**+0.3**
JTJ				S	**Sn**	**14 04 52.8**	**+1.2**
KNM	**Kinmen** baz=278	**3.08**	**275**	*e*P	**Pn**	**14 04 24.2**	**-0.4**
JOGS	**Gusukube**	**3.33**	**80**	P	**Pn**	**14 04 30.0**	**+2.0**

ISK ***22*** *14:08:18.9,38°.23N×38°.65E,h5km,MD3.0*
ISCJB ***22*** *14:08:19.5±0.4,38°.22N±0°.03×38°.63E±0°.03,h7km±10km, Error ellipse: s-maj=4.5km s-min=3.6km az=152.6*
DDA ***22*** *14:08:19.4,38°.20N×38°.63E,h9km±1km,Md3.0*
CSEM ***22*** *14:08:19.9±0.2,38°.22N×38°.63E,h2km,MD3.0,Error ellipse: s-maj=4.8km s-min=3.9km az=156.0*
ISC 22 14:08:20.2±0.4,**38°.23N**±0°.03×**38°.63E**±0°.03,**h13**km±7km, **n30,**σ**1**§**07**/45,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MYA	**Malataya**	**0.18**	**300**	PG	**Pg**	**14 08 23.9**	**-0.5**
MYA	**Malataya**	**0.18**	**300**	*i* Pg	**Pg**	**14 08 23.9**	**-0.5**
ELZG	**Elazig**	**0.39**	**47**	*i* P	**Pg**	**14 08 27.8**	**-0.1**
ELZG				*i* S	**Sg**	**14 08 33.7**	**+0.6**
ELZG	**Elazig**	**0.39**	**47**	*i* P	**Pg**	**14 08 27.8**	**-0.1**
ELZG				*i* S	**Sg**	**14 08 33.7**	**+0.6**
SVRC	**Sivrice-ELAZID**	**0.55**	**75**	*e*PG	**Pg**	**14 08 30.3**	**-0.7**
SVRC				*e*SG	**Sg**	**14 08 39.4**	**+1.0**
SVRC	**Sivrice-ELAZID**	**0.55**	**75**	*e*Pg	**Pg**	**14 08 30.3**	**-0.7**
SVRC				*e*Sg	**Sg**	**14 08 39.4**	**+1.0**
AKCD	**Akcadag**	**0.56**	**277**	*i* P	**Pg**	**14 08 30.3**	**-0.8**
AKCD				*i* S	**Sg**	**14 08 38.9**	**+0.4**
AKCD	**Akcadag**	**0.56**	**277**	*i* P	**Pg**	**14 08 30.3**	**-0.8**
AKCD				*i* S	**Sg**	**14 08 38.9**	**+0.4**
URFA	**Urfa**	**0.81**	**169**	*e*PG	**Pg**	**14 08 34.6**	**-1.1**
URFA				*e*SG	**Sg**	**14 08 47.8**	**+1.4**
URFA	**Urfa**	**0.81**	**169**	*e*Pg	**Pg**	**14 08 34.6**	**-1.2**
ATAB	**Bozova**	**0.81**	**199**	*i* P	**Pg**	**14 08 34.6**	**-1.2**
ATAB				*i* S	**Sg**	**14 08 48.7**	**+2.3**
ATAB	**Bozova**	**0.81**	**199**	*i* P	**Pg**	**14 08 34.6**	**-1.2**
ATAB				*i* S	**Sg**	**14 08 48.7**	**+2.3**
PTK	**Pertek**	**0.89**	**42**	*e*PG	**Pg**	**14 08 36.6**	**-0.7**
PTK	**Pertek**	**0.89**	**42**	*e*Pg	**Pg**	**14 08 36.6**	**-0.8**
KEMA	**Kemaliye**	**1.04**	**354**	*i* P	**Pg**	**14 08 39.2**	**-1.0**
KEMA				*i* S	**Sg**	**14 08 55.4**	**+1.7**
KEMA	**Kemaliye**	**1.04**	**354**	*i* P	**Pg**	**14 08 39.2**	**-1.0**
KEMA				*i* S	**Sg**	**14 08 55.4**	**+1.7**
GZT	**Gaziantep**	**1.22**	**224**	*i* P	**Pg**	**14 08 43.6**	**+0.1**
GZT				*i* S	**Sg**	**14 08 59.5**	**+0.1**
DIYA	**Diyarbakir**	**1.22**	**104**	*i* P	**Pn**	**14 08 43.0**	**+0.2**
DIYA				*i* S	**Sg**	**14 09 00.8**	**+1.3**
DIYA	**Diyarbakir**	**1.22**	**104**	*i* P	**Pn**	**14 08 43.0**	**+0.2**
DIYA				*i* S	**Sg**	**14 09 00.8**	**+1.3**
GAZ	**Gaziantep**	**1.54**	**227**	*e*PN	**Pg**	**14 08 49.7**	**-0.2**
GAZ	**Gaziantep**	**1.54**	**227**	*e*Pn	**Pg**	**14 08 49.7**	**-0.1**
KMRS	**Kahramanmaras**	**1.55**	**242**	*e*PN	**Pg**	**14 08 48.7**	**-1.2**
KMRS	**Kahramanmaras**	**1.55**	**242**	*e*Pn	**Pg**	**14 08 48.7**	**-1.2**
SARI	**SarD1z-Kayseri**	**1.58**	**287**	*e*PN	**Pg**	**14 08 52.1**	**+1.6**
BINT	**Bingol**	**1.59**	**66**	*e*PN	**Pg**	**14 08 50.0**	**-0.8**
BINT	**Bingol**	**1.59**	**66**	*e*Pn	**Pg**	**14 08 50.0**	**-0.8**
EZC	**Erzincan**	**1.62**	**20**	*e*PN	**Pn**	**14 08 49.7**	**+1.3**
SVSK	**Karacayir**	**2.10**	**323**	*e*PN	**Pb**	**14 08 57.5**	**-0.6**
SVSK	**Karacayir**	**2.10**	**323**	*e*Pn	**Pb**	**14 08 57.6**	**-0.5**
BEST	**Besiri**	**2.11**	**99**	*i* P	**Pg**	**14 08 58.0**	**-2.7**
BEST				*i* S	**Sg**	**14 09 27.4**	**-0.7**

JMA ***22*** *14:11:47.5±0.4,24°.12N×121°.55E,h59km,M2.8*
NEIC ***22*** *14:11:47.5±6.4,24°.19N×121°.85E,h13km±23km,Error ellipse: s-maj=68.5km s-min=13.0km az=101.0*
ISCJB ***22*** *14:11:48.6±0.4,24°.21N±0°.02×121°.80E±0°.02,h6km±3km, Error ellipse: s-maj=3.5km s-min=2.4km az=30.1*
TAP ***22*** *14:11:48.4,24°.20N×121°.78E,h10km,ML3.5,B*
ISC 22 14:11:49.2±0.3,**24°.21N**±0°.02×**121°.79E**±0°.02,**h9**km±3km, **n55,**σ**0**§**92**/85,**5C,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village** baz=346	**0.11**	**338**	*i* P	**Pg**	**14 11 51.5**	**-0.3**
EHP	baz=346			*i* S	**Sg**	**14 11 53.9**	**+0.3**
NACB	**Ninganchiao**	**0.18**	**259**	*e*Pn	**Pg**	**14 11 52.1**	**-0.8**
NACB				*e*Sn	**Sg**	**14 11 54.8**	**-0.6**
TWD	**Chiawan** baz=242	**0.21**	**234**	*i* P	**Pg**	**14 11 52.9**	**-0.6**
TWD	baz=242			S	**Sg**	**14 11 56.3**	**-0.2**
ENA	**Nanau** baz=353	**0.22**	**349**	⇑*i*P	**Pg**	**14 11 53.5**	**-0.3**
ENA	baz=353			S	**Sg**	**14 11 56.9**	**+0.1**
HWA	**Hwalien** baz=226	**0.28**	**216**	*e*P	**Pg**	**14 11 54.9**	**0.0**
TWC	**Suao** baz=10.0	**0.40**	**8**	*i* P	**Pg**	**14 11 56.9**	**-0.2**
TWC	baz=10.0			S	**Sg**	**14 12 02.6**	**+0.2**
ESF	**Shoufeng Towns** baz=230	**0.42**	**217**	*e*P	**Pg**	**14 11 58.2**	**+0.8**
NNS	**Nan Shan** baz=304	**0.44**	**302**	⇑P	**Pg**	**14 11 57.6**	**-0.2**
NNS	baz=304			*e*S	**Sg**	**14 12 03.8**	**+0.2**
WHF	**Hehuan Shan** baz=265	**0.48**	**263**	⇑*i*P	**Pg**	**14 11 58.1**	**-0.4**
WHF	baz=265			S	**Sg**	**14 12 04.6**	**-0.2**
ESL	**Shilin** baz=230	**0.51**	**220**	*e*P	**Pg**	**14 11 58.3**	**-0.7**
TWE	**Neicheng** baz=350	**0.52**	**348**	⇑*i*P	**Pg**	**14 11 59.3**	**-0.1**
TWE	baz=350			*e*S	**Sg**	**14 12 06.4**	**+0.2**
ILA	**Ilan** baz=353	**0.56**	**356**	*e*P	**Pg**	**14 11 59.6**	**-0.4**
ILA	baz=353			*e*S	**Sg**	**14 12 08.1**	**+0.8**
TWT	**Tachien** baz=276	**0.56**	**275**	*e*P	**Pg**	**14 12 00.1**	**+0.1**
TWT	baz=276			*e*S	**Sg**	**14 12 07.5**	**+0.1**
YHNB	**Yeheng**	**0.59**	**321**	*e*Pn	**Pg**	**14 12 00.6**	**-0.1**
YHNB				*e*Sn	**Sg**	**14 12 08.1**	**-0.4**
NSK	**Sanguang** baz=322	**0.61**	**320**	⇑*i*P	**Pg**	**14 12 01.0**	**0.0**
NSK	baz=322			*e*S	**Sg**	**14 12 09.0**	**+0.1**
TWA	**Mucha** baz=348	**0.79**	**347**	*e*P	**Pg**	**14 12 04.4**	**0.0**
TWA	baz=348			*e*S	**Sg**	**14 12 14.6**	**-0.1**
TATO	**Taipei**	**0.81**	**341**	*e*Pn	**Pn**	**14 12 04.8**	**-2.0**
EHY	**Hungye** baz=224	**0.82**	**211**	*e*P	**Pg**	**14 12 04.3**	**-0.6**
EHY	baz=224			*e*S	**Sg**	**14 12 17.1**	**+1.6**
TWB1	**Santiao Chiao** baz=6.0	**0.82**	**13**	*e*P	**Pg**	**14 12 04.5**	**-0.4**
NSTT	**Nanjuang** baz=302	**0.83**	**301**	*e*P	**Pg**	**14 12 05.3**	**+0.1**
NSTT	baz=302			*e*S	**Sg**	**14 12 16.0**	**0.0**
NWF	**Wu-fen Shan** baz=353	**0.86**	**360**	*e*P	**Pg**	**14 12 05.8**	**+0.1**
NWF	baz=353			*e*S	**Sg**	**14 12 16.5**	**-0.5**
TAP1	**Taipei** baz=344	**0.86**	**344**	*e*P	**Pg**	**14 12 06.3**	**+0.5**
TAP1	baz=344			*e*S	**Sg**	**14 12 17.3**	**+0.3**
SSLB	**Suanglung**	**0.87**	**241**	*e*Pn	**Pn**	**14 12 05.0**	**-2.6**
SSLB				*e*Sn	**Sn**	**14 12 16.5**	**-3.9**
SMLT	**Sun Moon Lake** baz=250	**0.87**	**248**	*e*P	**Pg**	**14 12 05.7**	**-0.3**
SMLT	baz=250			*e*S	**Sg**	**14 12 17.7**	**+0.3**
TYC	**Yuchr** baz=253	**0.90**	**251**	*e*P	**Pg**	**14 12 05.7**	**-0.8**
YULB	**Yu-li**	**0.93**	**209**	*e*Pn	**Pn**	**14 12 06.0**	**-2.5**
NCU	**National Centr** baz=321	**0.93**	**324**	*e*P	**Pg**	**14 12 07.1**	**0.0**
TWQ1	**Liyutan** baz=282	**0.94**	**279**	*e*P	**Pg**	**14 12 08.2**	**+1.1**
HSN	**Hsinchu** baz=303	**0.95**	**309**	*e*P	**Pg**	**14 12 07.2**	**-0.3**
TWS1	**Kuangyinshan** baz=341	**0.95**	**339**	*e*P	**Pg**	**14 12 07.6**	**+0.1**
TWS1	baz=341			*e*S	**Sg**	**14 12 20.7**	**+0.8**
NSY	**Sanyi** baz=285	**0.96**	**283**	*e*P	**Pg**	**14 12 08.8**	**+1.1**
TWF1	**Yuli** baz=221	**0.96**	**208**	P	**Pg**	**14 12 07.1**	**-0.6**
TWF1	baz=221			*e*S	**Sg**	**14 12 21.2**	**+1.0**
TCU	**Taichung** baz=270	**1.01**	**267**	*e*P	**Pg**	**14 12 09.7**	**+1.0**
WNT	**Mingjian** baz=246	**1.06**	**252**	*e*P	**Pg**	**14 12 10.3**	**+0.8**
TWY	**Chenhua** baz=352	**1.08**	**351**	*e*P	**Pg**	**14 12 10.2**	**+0.3**
YOJ	**Yonaguni jima**	**1.15**	**77**	P	**Pg**	**14 12 10.9**	**-0.3**
YOJ				S	**Sg**	**14 12 28.4**	**+2.3**
YOJ	**Yonaguni jima** baz=61	**1.15**	**77**	*e*P	**Pg**	**14 12 10.4**	**-0.8**
CHN5	**Tsauling** baz=243	**1.18**	**239**	*e*P	**Pb**	**14 12 11.5**	**-0.3**
ELDTW	**Lidau** baz=218	**1.23**	**215**	*e*P	**Pn**	**14 12 10.9**	**-1.7**
TPUB	**Ta-pu**	**1.39**	**230**	*e*Pn	**Pn**	**14 12 14.7**	**-0.2**
CHY	**Chiayi** baz=245	**1.43**	**241**	*e*P	**Pn**	**14 12 13.2**	**-2.2**
TWK	**Hsinying** baz=235	**1.51**	**232**	*e*P	**Pn**	**14 12 16.1**	**-0.4**
TWK	baz=235			*e*S	**Sn**	**14 12 39.0**	**+2.7**
CHN1	**Nanshi** baz=222	**1.54**	**229**	*e*P	**Pn**	**14 12 17.0**	**+0.2**
CHN1	baz=222			*e*S	**Sn**	**14 12 40.3**	**+3.3**
SGST	**Jiashian** baz=228	**1.57**	**225**	*e*P	**Pn**	**14 12 17.1**	**-0.2**
SGST	baz=228			*e*S	**Sn**	**14 12 41.1**	**+3.3**
ECL	**Taimali** baz=194	**1.78**	**206**	*e*P	**Pn**	**14 12 19.0**	**-1.1**
IRIF	**Iriomote-Funau**	**1.78**	**86**	P	**Pn**	**14 12 19.4**	**-0.8**
IRIF				S	**Sn**	**14 12 42.8**	**-0.1**
SSD	**Sandimen** baz=232	**1.80**	**216**	*e*P	**Pn**	**14 12 20.5**	**0.0**
SSD	baz=232			*e*S	**Sn**	**14 12 46.2**	**+2.8**
HATJ	**Hateruma jima**	**1.85**	**94**	P	**Pn**	**14 12 20.6**	**-0.6**
HATJ				S	**Sn**	**14 12 45.2**	**+0.5**
TWM1	**Shoushan** baz=224	**1.86**	**223**	*e*P	**Pn**	**14 12 23.1**	**+1.8**
EAST	**Anshuo** baz=196	**2.01**	**206**	*e*P	**Pn**	**14 12 21.7**	**-1.6**
JKRS	**Kuro-shima**	**2.03**	**89**	P	**Pn**	**14 12 23.7**	**+0.1**
SCZT	**Fangliau** baz=198	**2.12**	**211**	*e*P	**Pn**	**14 12 25.1**	**+0.2**
PNG	**Penghu** baz=258	**2.14**	**253**	*e*P	**Pn**	**14 12 26.4**	**+1.3**
JIJ	**Ishigaki jima**	**2.16**	**85**	P	**Pn**	**14 12 24.6**	**-0.8**
JIJ				S	**Sn**	**14 12 52.0**	**-0.3**
JTJ	**Tarama**	**2.69**	**80**	P	**Pn**	**14 12 33.1**	**+0.4**
JTJ				S	**Sn**	**14 13 07.8**	**+2.3**

IDC ***22*** *14:24:13.5±1.8,3°.20S×101°.01E,h0km,mb4.0/8, mb1 4.0/8,mb1mx3.8/20,mbtmp4.0/8,MS3.4/3,Ms1 3.4/3, ms1mx2.8/35,Error ellipse: s-maj=70.9km s-min=18.7km az=59.0*
NEIC ***22*** *14:24:18.2±0.9,3°.35S×100°.93E,h35km,mb4.4/3,Error ellipse: s-maj=36.9km s-min=9.7km az=59.0*
NEIC Felt [II] at Ipuh, Sumatra.
ISCJB ***22*** *14:24:21.0±0.8,3°.13S±0°.06×101°.06E±0°.08,h73km±7km, mb4.1/11,Error ellipse: s-maj=15.9km s-min=4.8km az=141.9*
DJA ***22*** *14:24:21,3°.13S×101°.09E,h21km,MLv4.1/12*
ISC 22 14:24:22.4±0.8,**3°.12S**±0°.06×**101°.08E**±0°.08,**h65**km±7km, **n30,**σ**1**§**01**/34,**mb4.1**/11,**Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**1.09**	**21**	P	**Pn**	**14 24 40.0**	**-1.9**
KRJI				S	**Sn**	**14 24 55.1**	**-1.3**
KSI	**Kapahiang**	**1.60**	**109**	P	**Pn**	**14 24 47.6**	**-1.0**
KSI				S	**Sn**	**14 25 08.5**	**+0.1**
SDSI	**Sungai Dareh**	**2.20**	**9**	P	**Pn**	**14 24 56.1**	**-0.6**
MNAI	**Manna**	**2.24**	**123**	P	**Pn**	**14 24 56.1**	**-1.1**
PDSI	**Padang**	**2.28**	**344**	P	**Pn**	**14 24 57.0**	**-0.8**
PDSI				S	**Sn**	**14 25 26.3**	**+1.5**
SISI	**Saibi**	**2.67**	**312**	P	**Pn**	**14 25 04.0**	**+1.0**
RGRI	**Rengat**	**3.03**	**25**	P	**Pn**	**14 25 09.0**	**+1.1**
MDSI	**Maura Dua**	**3.38**	**114**	P	**Pn**	**14 25 12.4**	**-0.3**
MDSI				S	**Sn**	**14 25 54.4**	**+2.7**
LWLI	**Liwa**	**3.52**	**122**	P	**Pn**	**14 25 14.6**	**-0.1**
LWLI				S	**Sn**	**14 25 56.9**	**+1.8**
KLSI		**3.96**	**113**	P	**Pn**	**14 25 20.8**	**+0.1**
KLSI				S	**Sn**	**14 26 08.3**	**+2.3**
KASI	**Kota Agung**	**4.16**	**125**	P	**Pn**	**14 25 22.4**	**-1.1**
MNSI	**Mandailing Nat**	**4.17**	**339**	P	**Pn**	**14 25 29.7**	**+6.2**
MYKOM	**Kota Tinggi** 0.1nm20nm,0.6s	**5.61**	**30**	P	**Pn**	**14 25 43.6**	**+0.3**
GSI	**Gunungsitoli** 0.2nm34nm,1.5s	**5.62**	**321**	P	**Pn**	**14 25 44.2**	**+0.8**
CGJI	**Cibinong**	**5.76**	**127**	P	**Pn**	**14 25 45.1**	**-0.2**
PSI	**Prapat**	**6.26**	**340**	LR	LR	14 28 40.4	
	comp=Z,181nm,19.0s,baz=91,slow=43						

KULM	Kulim	8.37	357	*e*Pn	Pn	14 26 20.8	-0.2
CMAR	Chiang Mai Arr	21.55	354	P	P	14 29 07.2	+0.8
	0.7nm,0.4s,mb3.4,baz=184,slow=8.8,SNR=6.0						
WRAB	Tennant Creek	36.51	120	*e*P	P	14 31 19.8	-2.0
	2.3nm,0.4s,mb4.5						
ASAR	Alice Springs	37.73	126	P	P	14 31 31.2	-0.8
	0.6nm,0.4s,mb3.8,baz=299,slow=8.5,SNR=12						
KSRS	Korea Array	47.45	29	P	P	14 32 50.0	-0.6
	0.4nm,0.4s,mb3.5,baz=238,slow=9.4,SNR=3.8						
STKA	Stephens Creek	47.61	132	P	P	14 32 51.9	-0.1
	1.2nm,0.8s,mb3.8,baz=314,slow=13,SNR=3.4						
SONM	Songino Array	50.96	5	P	P	14 33 17.5	+0.4
	1.0nm,0.6s,mb4.1,baz=187,slow=9.6,SNR=6.2						
EKS2	Erkin-Say	51.83	335	*e*P	P	14 33 25.3	+1.5
	3.0nm,0.6s,mb4.5						
MK31	Makanchi Array	52.39	344	*e*P	P	14 33 27.9	-0.1
MKAR	Makanchi Array	52.39	344	P	P	14 33 28.2	+0.3
	3.6nm,0.7s,mb4.5,baz=145,slow=8.8,SNR=18						
MKAR				LR	LR	14 57 21.9	
	comp=Z,42nm,18.8s,baz=32,slow=38						
ZALV	Zalesovo Beam	58.47	349	P	P	14 34 11.1	-0.3
	5.0nm,0.5s,mb4.8,baz=167,slow=5.3,SNR=30						
ZALV				LR	LR	15 03 02.7	
	comp=Z,40nm,21.7s,baz=246,slow=40						
BVAR	Borovoye Array	61.60	339	P	P	14 34 32.7	-0.2
	1.7nm,0.8s,mb4.1,baz=265,slow=33,SNR=4.1						
ABKAR	Akbulak array	63.13	331	*e*P	P	14 34 43.1	-0.2
	2.3nm,0.8s,mb4.2						
TXAR	Lajitas Array	144.91	39	PKPbc	PKPdf	14 43 51.9	-0.9
	0.7nm,0.6s,baz=292,slow=1.1,SNR=12						

ISCJB ***22*** *14:25:48.1±0.4, 13.°84N±0.°04×120.°61E±0.°08, h186km±5km, mb3.6/8, Error ellipse: s-maj=13.5km s-min=6.4km az=165.9*
IDC ***22*** *14:25:48.3±0.9, 14.°14N×121.°25E, h186km±7km, mb3.3/7, mb1 3.4/7, mb1mx3.2/22, mbtmp3.3/7, Error ellipse: s-maj=46.8km s-min=14.2km az=62.0*
NEIC ***22*** *14:25:48.5±1.0, 14.°12N×121.°25E, h187km±9km, mb4.0/1, Error ellipse: s-maj=37.3km s-min=12.8km az=60.0*
MAN ***22*** *14:25:49, 13.°81N×120.°62E, h162km, mb4.9, ML3.9, MS4.0*
ISC 22 14:25:49.0±0.4, 13.°83N±0.°04×120.°60E±0.°08, h180km±5km, n30, σ0.87/34, mb3.6/8, 2C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	Lubang	0.36	254	*e*P	Pn	14 26 13.0	-0.3
TGY	Tagaytay City	0.42	51	P	Pn	14 26 13.7	+0.2
	1μm,0.3s,baz=244,slow=2.3,SNR=110						
TGY	Tagaytay City	0.42	51	⇑*e*P	Pn	14 26 14.0	+0.5
PGP	Puerto Galera	0.47	134	⇑*i*P	Pn	14 26 12.4	-1.3
BOAC	Boac	1.26	107	*e*P	Pn	14 26 18.4	-0.4
BOAC				*e*S	Sn	14 26 40.5	-1.3
POLP	Polilio Island	1.57	55	*e*P	Pn	14 26 21.9	+0.3
POLP				*e*S	Sn	14 26 38.0	-8.9
BUSP	Coron	1.86	192	*e*P	Pn	14 26 24.7	0.0
BUSP				*e*S	Sn	14 26 47.7	-4.6
OTRP	Odiongan	2.01	136	*e*P	Pn	14 26 25.1	-1.2
SCZP	Santa Cruz	2.04	341	*e*P	Pn	14 26 26.7	+0.1
AUQP	San Andres	2.08	104	*e*P	Pn	14 26 28.1	+1.1
BALP	Baler	2.12	26	*e*P	Pn	14 26 27.8	+0.4
BCPH	Baguio City Da	2.53	360	*i*P	Pn	14 26 32.1	0.0
BCPH				*i*S	Sn	14 27 05.0	-0.7
BOLP	Bolinao	2.62	345	*e*P	Pn	14 26 33.4	+0.3
ENPP	El Nido	2.85	204	*e*P	Pn	14 26 36.9	+1.0
CUYO	Cuyo Island	2.99	172	*e*P	Pn	14 26 37.6	-0.1
CAUP	Cauayan	3.31	21	*e*P	Pn	14 26 42.8	+1.3
PVCP	Virac	3.46	94	*e*P	Pn	14 26 43.8	+0.4
GUIM	Jordan	3.73	148	*e*P	Pn	14 26 47.6	+0.8
ABRA	Dolores	3.79	2	*e*P	Pn	14 26 46.9	-0.6
APYP	Conner	4.05	9	*e*P	Pn	14 26 51.2	+0.4
PAGZ	Pagadian	6.54	155	*e*P	Pn	14 27 24.0	+0.8
BUKP	Musuan	7.36	143	*e*P	Pn	14 27 35.7	+1.7
CMAR	Chiang Mai Arr	21.30	285	P	P	14 30 26.0	+4.3
	0.7nm,0.5s,mb3.2,baz=90,slow=8.5,SNR=5.6						
SONM	Songino Array	35.90	344	P	P	14 32 28.4	-3.3
	0.2nm,0.5s,mb3.0,baz=177,slow=5.2,SNR=3.0						
WRA	Warramunga Arr	36.18	158	P	P	14 32 33.3	-1.2
	0.7nm,0.6s,mb3.5,baz=329,slow=10,SNR=3.8						
ASAR	Alice Springs	39.48	161	P	P	14 33 01.4	-0.6
	1.2nm,0.4s,mb3.9,baz=336,slow=7.0,SNR=19						
MKAR	Makanchi Array	45.87	324	P	P	14 33 53.2	0.0
	0.7nm,0.5s,mb3.5,baz=124,slow=8.9,SNR=3.7						
STKA	Stephens Creek	49.71	156	P	P	14 34 21.9	-0.9
	0.6nm,0.4s,mb3.6,baz=348,slow=12,SNR=4.2						
KURK	Kurchatov	50.02	326	*e*P	P	14 34 26.2	+1.2
	2.6nm,0.6s,mb4.0						
ARCES	ARCESS Array B	78.93	339	P	P	14 37 31.4	-0.7
	2.7nm,0.9s,mb3.9,baz=81,slow=7.5,SNR=6.8						

ISCJB ***22*** *14:28:12.5±0.6, 20.°67S±0.°05×68.°8W±0.°1, h112km±9km, mb3.8/3, Error ellipse: s-maj=16.6km s-min=8.4km az=176.5*
GUC ***22*** *14:28:14.1±0.8, 20.°69S×69.°13W, h118km±6km, ML4.5*
IDC ***22*** *14:28:16.5±4.5, 20.°65S×68.°51W, h131km±29km, mb3.6/3, mb1 3.7/6, mb1mx3.5/16, mbtmp3.5/6, Error ellipse: s-maj=59.5km s-min=25.2km az=37.0*
NEIC ***22*** *14:28:16.1±1.9, 20.°69S×68.°51W, h124km±14km, mb3.9/1, Error ellipse: s-maj=26.1km s-min=14.0km az=67.0*
ISC 22 14:28:13.6±0.6, 20.°66S±0.°05×68.°76W±0.°10, h104km±9km, n17, σ1.08/19, mb3.8/3, 3C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	Plate Boundary	0.78	241	⇑*i*P	Pn	14 28 32.3	+0.2
PB01				*i*S	Sn	14 28 45.6	-0.4
PB01				AML	AML	14 28 46.6	
	comp=N,21μm,0.4s						
PSGC	Pisagua	1.66	309	⇑*i*P	Pn	14 28 41.5	-0.5
PSGC				*i*S	Sn	14 29 01.6	-2.1
PSGC				AML	AML	14 29 04.3	
	comp=N,3μm,0.4s						
MNMC	Miæe Miæ	1.71	332	⇑*i*P	Pn	14 28 43.6	+0.9
MNMC				*i*S	Sn	14 29 06.0	+1.1
MNMC				AML	AML	14 29 07.8	
	comp=N,10μm,0.6s						
MACH	Maria Elena	1.79	211	*e*P	Pn	14 28 44.0	+0.3
MACH				*i*S	Sn	14 29 06.0	-0.5
CEN1	Los Morros	3.03	206	⇓*e*P	Pn	14 29 02.5	+2.7
LPAZ	La Paz	4.39	8	P	Pn	14 29 22.1	+4.0
	comp=N,3.6nm,0.3s,baz=199,slow=6.1,SNR=69						
LPAZ	La Paz	4.39	8	*e*Pn	Pn	14 29 22.1	+4.0
SIV	San Ignacio	8.65	59	P	Pn	14 30 15.9	0.0
	comp=N,1.7nm,0.3s,baz=264,slow=11,SNR=27						
CPUP	Villa Florida	11.90	120	P	Pn	14 30 59.4	-0.5
	comp=N,0.6nm,0.3s,baz=288,slow=12,SNR=8.9						
CPUP	Villa Florida	11.90	120	*e*Pn	Pn	14 30 58.7	-1.2
TRQA	Tornquist	18.30	163	*e*P	P	14 32 19.9	+0.5
	comp=N,5.7nm,0.8s						
TXAR	Lajitas Array	60.03	325	P	P	14 38 10.1	+0.5
	comp=N,0.1nm,0.4s,mb3.2,baz=111,slow=7.2,SNR=3.4						
DBIC	Dimbokro	68.36	74	P	P	14 39 04.5	+0.1
	comp=N,4.1nm,0.8s,mb4.3,baz=223,slow=5.5,SNR=4.7						
TOA0	Torodi Ar. Sit	76.94	70	*e*P	P	14 39 55.4	+0.2
TORD	Torodi Ar. Bea	76.94	70	P	P	14 39 52.6	-2.5
	comp=N,1.2nm,0.5s,mb3.9,baz=254,slow=5.6,SNR=19						
ZALV	Zalesovo Beam	141.13	25	PKP	PKPdf	14 47 31.4	0.0
	comp=N,0.5nm,0.4s,baz=327,slow=2.4,SNR=2.8						
MKAR	Makanchi Array	144.87	35	PKP	PKPdf	14 47 38.9	+0.6
	comp=N,0.6nm,0.6s,baz=349,slow=2.2,SNR=7.3						

IDC ***22*** *14:43:23.2±0.6, 15.°96S×172.°73W, h0km, mb4.4/14, mb1 4.6/15, mb1mx4.5/21, mbtmp4.4/15, ML4.4/1, MS4.0/16, Ms1 4.1/16, ms1mx3.8/31, Error ellipse: s-maj=25.1km s-min=16.8km az=134.0*
ISCJB ***22*** *14:43:26.9±0.3, 15.°31S±0.°08×172.°62W±0.°06, h11km, mb4.6/52, MS4.2/21, Error ellipse: s-maj=12.4km s-min=6.7km az=156.9*
NEIC ***22*** *14:43:26.5±0.3, 15.°54S×172.°69W, h10km, mb4.7/29, Error ellipse: s-maj=16.0km s-min=9.8km az=129.0*
MOS ***22*** *14:43:28.7±0.9, 15.°24S×172.°63W, h24km, mb4.9/23, Error ellipse: s-maj=16.7km s-min=11.1km az=66.3*
ISC 22 14:43:34.5±2.2, 15.°5S±0.°1×172.°64W±0.°06, h62km±21km, h6km±5.1km: pP-P, n383, σ0.49/312, mb4.6/52, 100C-125D, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	1.78	28	Pn	Pn	14 43 55.0	-7.9
	26nm,0.3s,baz=347,slow=3.4,SNR=28						
AFI				Sn	Sn	14 44 17.2	-7.2
	190nm,0.3s,baz=233,slow=22,SNR=15						
AFI				LR	LR	14 44 56.6	
	comp=Z,1μm,20.4s,baz=202,slow=42						
AFI	Afiamalu	1.78	28	P	Pn	14 43 55.0	-7.9
AFI						14 44 17.2	
AFI				pmax	pmax		
	comp=Z,26nm,0.3s						
AFI				smax			
	comp=N,190nm,0.3s						
AFI	Afiamalu	1.78	28	*e*P	Pn	14 43 55.0	-8.0
MSVF	Nonsavu	9.20	255	*e*P	Pn	14 45 43.9	-0.6
MSVF				pmax	pmax		
	comp=Z,45nm,0.9s						
MSVF	Nonsavu	9.20	255	*e*P	Pn	14 45 43.9	-0.5
	comp=Z,45nm,0.9s						
RAR	Rarotonga	13.48	117	Pn	Pn	14 46 32.0	-11
	comp=Z,2.2nm,0.3s,baz=188,slow=9.3,SNR=7.3						
RAR				LR	LR	14 50 15.2	
	comp=Z,652nm,21.6s,baz=299,slow=31						
DZM	Mont Dzumac	20.84	249	*e*P	P	14 48 12.4	+1.1
	comp=Z,54nm,0.9s						
DZM				*e*LR	LR	14 53 19.7	
	comp=Z,1μm,24.5s						
PPT	Papeete	22.21	99	*e*LQ		14 52 39.3	
	comp=Z,488nm,26.5s						
PPT				*e*LR	LR	14 53 34.7	
	comp=Z,729nm,24.5s,baz=265						
PPT	Papeete	22.21	99	LR	LR	14 54 35.1	
	comp=Z,356nm,18.7s,baz=259,slow=30						
TBI	Tubuai	23.20	113	*e*LR	LR	14 53 54.3	
	comp=Z,808nm,26.2s,baz=287						
URZ	Urewera	24.42	200	P	P	14 48 40.7	-6.6
	comp=Z,16nm,0.8s,mb4.5,baz=102,slow=16,SNR=6.1						
URZ	Urewera	24.42	200	*e*P	P	14 48 40.7	-6.6
HNR	Honiara	27.42	279	LR	LR	14 58 45.9	
	comp=Z,777nm,18.2s,baz=282,slow=34						
RKT	Rikitea	36.27	108	*e*LR	LR	15 00 08.7	
	comp=Z,463nm,25.8s,baz=277						
CTA	Charters Tower	39.34	257	LR	LR	15 05 00.1	
	comp=Z,382nm,18.8s,baz=60,slow=33						
PMG	Port Moresby	39.67	274	*i*P	P	14 51 04.7	+3.9
PMG				pmax	pmax		
	comp=Z,35nm,1.6s						
STKA	Stephens Creek	44.63	240	P	P	14 51 33.6	-7.4
	comp=Z,10.0nm,0.9s,mb4.6,baz=80,slow=6.7,SNR=13						
STKA				LR	LR	15 08 14.5	
	comp=Z,204nm,18.7s,baz=24,slow=34						
STKA	Stephens Creek	44.63	240	*e*P	P	14 51 33.8	-7.2
	comp=Z,2.2nm,0.8s,mb4.0						
WRAB	Tennant Creek	50.53	257	P	P	14 52 22.4	-4.5
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
WRAB	Tennant Creek	50.53	257	P	P	14 52 22.4	-4.5
	comp=Z,2.3nm,0.5s,mb4.4						
ASAR	Alice Springs	50.78	252	P	P	14 52 22.7	-6.1
	comp=Z,7.8nm,0.7s,mb4.8,baz=88,slow=7.8,SNR=52						
ASAR	Alice Springs	50.78	252	P	P	14 52 22.7	-6.1
ASAR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
FORT	Forrest	56.03	243	*e*P	P	14 53 01.0	-6.2
	comp=Z,21nm,0.8s,mb5.2						
CBIJ	Chichi jima	60.94	314	LR	LR	15 15 23.9	
	comp=Z,76nm,20.8s,baz=138,slow=31						
SBA	Scott Base	63.23	185	*e*P	P	14 53 53.1	-2.8
SBA				pmax	pmax		
	comp=Z,35nm,1.6s,mb5.2						
SBA	Scott Base	63.23	185	*e*P	P	14 53 53.1	-2.8
	comp=Z,35nm,1.6s,mb5.2						
MJAR	Matsushiro Arr	69.47	319	P	P	14 54 35.6	-0.8
	comp=Z,1.7nm,1.0s,mb3.9,baz=145,slow=4.6,SNR=3.3						
MJAR	Matsushiro Arr	69.47	319	P	P	14 54 35.6	-0.8
MJAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ASAJ	Asahikawa	72.00	328	P	P	14 54 51.5	0.0
	comp=Z,4.8nm,0.8s,mb4.5,baz=248,slow=9.3,SNR=3.5						
ASAJ	Asahikawa	72.00	328	P	P	14 54 51.6	0.0
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
EDW2	Edwards Air Fo	72.09	45	⇑P	P	14 54 52.6	+0.2
	baz=72						
ISA	Isabella	72.20	44	⇑P	P	14 54 52.8	-0.2
	baz=72						
PET	Petropavlovsk	72.58	342	*i*P	P	14 54 56.2	+1.4
PET				pmax	pmax		
	comp=Z,21nm,1.8s,mb4.8						
PETK	Petropavlovsk-	72.94	342	P	P	14 54 56.6	-0.3
	comp=Z,4.5nm,0.8s,mb4.4,baz=122,slow=10,SNR=8.3						
PETK	Petropavlovsk-	72.94	342	P	P	14 54 56.6	-0.3
PETK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
MPMC	Manual Prospec	73.09	44	⇑P	P	14 54 58.4	+0.1
	baz=73						
BC3	Big Chuckawall	73.18	47	⇓P	P	14 54 58.7	-0.1
	baz=73						
HEC	Hector,Ludlow	73.20	46	⇓P	P	14 54 59.0	0.0
	baz=73						
YBH	Yreka Blue Hor	73.23	37	LR	LR	15 20 19.8	
	comp=Z,124nm,19.7s,baz=316,slow=30						
WCN	Washoe City	73.50	40	⇑P	P	14 55 01.2	+0.6
	baz=74						
GMRC	Granite Mounta	73.63	46	⇑P	P	14 55 01.5	0.0
	baz=74						
IRM	Iron Mountain	73.66	47	⇓P	P	14 55 01.9	+0.2
	baz=74						
TUQ	Turquoise Moun	73.81	45	⇑P	P	14 55 02.3	-0.2
	baz=74						
NVAR	Mina Array Bea	73.90	42	P	P	14 55 03.1	+0.1
	comp=Z,2.7nm,0.8s,mb4.2,baz=226,slow=9.6,SNR=17						
YSS	Yuzh-Sakhalins	73.92	330	*i*P	P	14 55 03.2	+0.3
YSS				pmax	pmax		
	comp=Z,26nm,1.9s,mb4.8						
OHAK	Old Harbor	74.20	11	*e*P	P	14 55 04.9	+0.6
214A	Organ Pipe Nat	74.21	50	⇑P	P	14 55 04.7	-0.2
	baz=74						
Z13A	Yuma Proving G	74.22	48	⇓P	P	14 55 04.7	-0.2
	baz=74						
S10A	Tonopah Range,	74.72	43	⇓P	P	14 55 07.9	+0.1
	baz=75						
MOD	Modoc	74.74	38	*e*P	P	14 55 07.6	-0.2
	comp=Z,4.4nm,0.9s,mb4.4						
X13A	Yucca	74.81	47	⇑P	P	14 55 08.1	-0.3
	baz=75						
KDAK	Kodiak Island	74.86	11	P	P	14 55 06.7	-1.4
	comp=Z,5.1nm,0.8s,mb4.5,baz=241,slow=7.2,SNR=3.9						
KDAK	Kodiak Island	74.86	11	P	P	14 55 06.7	-1.4
KDAK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
W13A	Hualapai Mount	75.04	47	⇓P	P	14 55 09.8	+0.1
	baz=75						
Y14A	Wickenburg	75.06	48	⇓P	P	14 55 10.2	+0.4
	baz=75						
R10A	Warm Springs	75.12	43	⇓P	P	14 55 10.0	-0.1
	baz=75						
T11A	Corn Creek, Al	75.26	44	⇓P	P	14 55 10.9	0.0
	baz=75						
V13A	Grand Canyon W	75.36	46	⇓P	P	14 55 11.7	+0.2
	baz=76						
Y15A	Casa Rosa Ranc	75.55	48	⇓P	P	14 55 12.6	-0.1
	baz=76,SNR=5.6						
217A	Green Valley	75.60	51	⇑P	P	14 55 12.7	-0.2
	baz=76						
R11A	Troy Canyon, C	75.62	43	⇑P	P	14 55 13.0	+0.1
	baz=76						
W14A	Seligman	75.66	47	⇑P	P	14 55 13.6	+0.4
	baz=76						
Q11A	Duckwater	75.85	42	⇓P	P	14 55 14.1	-0.1
	baz=76,SNR=5.5						
V14A	Boquillas Ranc	75.86	46	⇑P	P	14 55 14.6	+0.3
	baz=76						
X15A	Humboldt	75.89	48	⇑P	P	14 55 14.6	+0.1
	baz=76						
WVOR	Wild Horse Val	76.05	38	*e*P	P	14 55 15.2	-0.1
WVOR				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.4						
WVOR	Wild Horse Val	76.05	38	*e*P	P	14 55 15.2	0.0
	comp=Z,7.1nm,1.3s,mb4.4						
318A	Bisbee	76.06	51	⇑P	P	14 55 15.8	+0.2
	baz=76						
U14A	Mt Trumbull	76.21	46	⇑P	P	14 55 16.8	+0.5
	baz=76						
X16A	Lo Mia Camp, P	76.43	48	⇑P	P	14 55 17.8	+0.2
	baz=76						
Y17A	Roosevelt	76.50	49	⇑P	P	14 55 18.4	+0.4
	baz=77						
I07A	Izee	76.53	36	⇑P	P	14 55 18.5	+0.5
	baz=77						
O11A	Cowboy Ranch,	76.56	41	⇓P	P	14 55 18.5	+0.3
	baz=77						
V15A	Kaibab Nationa	76.61	47	⇑P	P	14 55 18.9	+0.3
	baz=77,SNR=5.6						
118A	Homack Ranch,	76.64	50	⇑P	P	14 55 19.3	+0.4
	baz=77						
KSRS	Korea Array	76.73	315	P	P	14 55 18.3	-0.9
	comp=Z,1.3nm,0.9s,mb3.9,baz=110,slow=6.8,SNR=5.8						
KSRS	Korea Array	76.73	315	P	P	14 55 18.3	-1.0
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.8						
M10A	I.L. Ranch, Tu	76.79	40	⇑P	P	14 55 19.8	+0.3
	baz=77						
U15A	North Rim	76.83	46	⇓P	P	14 55 20.5	+0.7
	baz=77						
219A	White Tail Can	76.87	51	⇓P	P	14 55 20.4	+0.3
	baz=77						
Q13A	Wheeler Ranch,	76.98	43	⇓P	P	14 55 20.6	0.0
	baz=77						
D05A	Enumclaw	77.12	33	⇑P	P	14 55 21.6	+0.4
	baz=77						
320A	Kipp Ranch, An	77.12	52	⇓P	P	14 55 22.0	+0.4
	baz=77						
Y18A	Canyon Day Jun	77.14	49	⇓P	P	14 55 21.9	+0.3
	baz=77						
O12A	Currie	77.22	42	⇓P	P	14 55 22.1	+0.1
	baz=77						
P13A	Bates Ranch, G	77.25	43	⇑P	P	14 55 22.0	-0.1
	baz=77						
K10A	MacKenzie Ranc	77.31	39	⇓P	P	14 55 22.8	+0.4
	baz=77						
220A	Playas Peak, P	77.38	52	⇓P	P	14 55 23.4	+0.3
	baz=77,SNR=6.6						
V17A	Tonalea, Kykot	77.48	47	⇑P	P	14 55 23.5	0.0
	baz=78						
Q14A	Sevier Lake (B	77.49	43	⇑P	P	14 55 23.3	-0.1
	baz=78,SNR=9.7						
G08A	Pilot Rock	77.58	36	⇑P	P	14 55 23.6	-0.2
	baz=78,SNR=9.0						
L11A	Cat Creek Ranc	77.64	40	⇓P	P	14 55 24.1	-0.1
	baz=78,SNR=5.7						
T16A	Glen Canyon Da	77.66	46	⇑P	P	14 55 24.9	+0.5
	baz=78						
M12A	Wells	77.74	41	⇓P	P	14 55 25.0	+0.2
	baz=78						
Y19A	Nutrioso	77.79	49	⇑P	P	14 55 25.8	+0.5
	baz=78						
K11A	Parker Ranch,	77.81	39	⇑P	P	14 55 25.1	0.0
	baz=78						
Z20A	Nine Sixteen R	77.89	51	⇑P	P	14 55 26.4	+0.5
	baz=78						
P14A	Drum Mountains	77.94	43	⇓P	P	14 55 25.9	-0.1
	baz=78						
S16A	Weppner Ranch,	77.97	45	⇓P	P	14 55 26.6	+0.4
	baz=78						
MSU	Marysvale	77.97	44	*e*P	P	14 55 27.2	+1.0
MSU				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
MSU	Marysvale	77.97	44	*e*P	P	14 55 27.1	+1.0
	comp=Z,5.5nm,0.9s,mb4.5						
X19A	St. Johns	77.99	49	⇑P	P	14 55 27.2	+0.8
	baz=78						
U17A	Shonto	78.05	47	⇓P	P	14 55 27.4	+0.7
	baz=78						
L12A	House Creek Ra	78.08	40	⇓P	P	14 55 27.2	+0.6
	baz=78						
T17A	Navajo Res., N	78.15	46	⇑P	P	14 55 27.3	+0.1
	baz=78						
M13A	Montello	78.18	41	*e*P	P	14 55 27.1	-0.2
	comp=Z,8.0nm,1.4s,mb4.5						
121A	Cookes Peak, D	78.23	51	⇓P	P	14 55 28.0	+0.3
	baz=78						
BMO	Blue Mountains	78.25	37	*e*P	P	14 55 27.2	-0.4
	comp=Z,3.6nm,1.1s,mb4.2						
R16A	Teasdale	78.33	45	⇑P	P	14 55 28.8	+0.6
	baz=78						
Y20A	Horse Springs,	78.41	50	⇓P	P	14 55 29.2	+0.5
	baz=78						
K12A	Draper Farm, C	78.42	40	⇑P	P	14 55 28.5	-0.1
	baz=78						
DUG	Dugway	78.43	43	⇑P	P	14 55 29.2	+0.5
	baz=78						
DUG	Dugway	78.43	43	*e*P	P	14 55 28.4	-0.3
DUG				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
DUG	Dugway	78.43	43	*e*P	P	14 55 28.4	-0.3
	comp=Z,5.5nm,1.1s,mb4.4						
S17A	Black Ridge (B	78.47	46	⇓P	P	14 55 29.1	+0.1
	baz=79						
U18A	Rough Rock, Ch	78.52	47	⇓P	P	14 55 29.7	+0.4
	baz=79						
X20A	Quemado	78.62	49	⇓P	P	14 55 29.6	-0.2
	baz=79						
J12A	Stokes Ranch,	78.64	39	⇑P	P	14 55 29.8	0.0
	baz=79						
Z21A	St. Cloud Mine	78.66	51	⇓P	P	14 55 30.9	+0.8
	baz=79						
D08A	Wollman Farm,	78.67	34	⇓P	P	14 55 29.7	-0.1
	baz=79						
M14A	Sheep Mountain	78.78	41	⇑P	P	14 55 30.5	0.0
	baz=79,SNR=10						
Q16A	Castle Valley	78.86	44	⇑P	P	14 55 31.3	+0.2
	baz=79						
T18A	Mexican Hat	78.87	46	⇓P	P	14 55 31.4	+0.2
	baz=79						
W20A	Ramah	78.89	49	⇑P	P	14 55 31.5	+0.1
	baz=79,SNR=5.0						
R17A	Hanksville Air	78.92	45	⇑P	P	14 55 31.6	+0.2
	baz=79,SNR=8.2						
I12A	Atlanta	78.93	38	⇓P	P	14 55 31.7	+0.4
	baz=79,SNR=6.3						
U19A	Dine' College,	78.93	47	⇓P	P	14 55 31.8	+0.2
	baz=79						
F10A	Beach

L15A Malad City 79.65 41 ⇑P P 14 55 35.5 +0.2
baz=80
Q18A Rafter H Ranch 79.65 45 ⇓P P 14 55 35.9 +0.5
baz=80
S19A Harvey Farm, M 79.67 46 ⇓P P 14 55 35.5 -0.1
baz=80
MNTX Cornudas Mount 79.69 53 *e*P **P 14 55 35.5 -0.3**
comp=Z,6.6nm,1.3s,mb4.4
224A Cornudas Mount 79.75 53 ⇑P P 14 55 36.0 -0.1
baz=80
626A Big Bend Ranch 79.77 55 ⇓P P 14 55 36.4 +0.1
baz=80,SNR=6.6
O17A Robinson Place 79.79 43 ⇓P P 14 55 36.4 +0.3
baz=80,SNR=5.9
P18A Preston Nutter 79.83 44 ⇑P P 14 55 36.5 +0.1
baz=80
325A Bean Ranch, Si 79.87 53 ⇓P P 14 55 36.4 -0.3
baz=80,SNR=10.0
H13A Challis 79.88 38 ⇓P P 14 55 36.5 +0.1
baz=80
K15A Arbon 79.92 40 ⇓P P 14 55 36.9 +0.1
baz=80
F12A Elk City 79.96 37 ⇓P P 14 55 36.8 -0.1
baz=80,SNR=15
526A Mary Lane Ranc 80.01 55 ⇓P P 14 55 37.8 +0.2
baz=80,SNR=5.7
I14A Mackay 80.02 39 ⇓P P 14 55 37.3 0.0
baz=80
TXAR Lajitas Array 80.05 56 P **P 14 55 37.8 0.0**
comp=Z,4.5nm,1.1s,mb4.3,baz=230,slow=5.9,SNR=27
TXAR LR LR 15 22 03.9
comp=Z,103nm,21.2s,baz=280,slow=29
124A Stringfield Ra 80.06 52 ⇑P P 14 55 37.9 +0.1
baz=80
U21A Nageezi 80.10 48 ⇑P P 14 55 38.2 +0.4
baz=80,SNR=6.7
Y23A Lovelace Mesa, 80.15 51 ⇑P P 14 55 38.1 -0.1
baz=80
E12A Beaver Dam Sad 80.15 36 ⇓P P 14 55 38.0 +0.1
baz=80
Q19A Hogan Spring (80.17 45 ⇑P P 14 55 38.3 +0.1
baz=80
G13A Cobalt 80.18 38 ⇑P P 14 55 38.1 0.0
baz=80,SNR=5.5
PV01 Paradox Valley 80.25 46 *e*P **P 14 55 36.8 -1.8**
comp=Z,527nm,1.2s
L16A Fish Haven 80.26 42 ⇓P P 14 55 38.7 +0.1
baz=80
225A Deer Hill, Car 80.30 53 ⇑P P 14 55 39.4 +0.4
baz=80
426A McDonald Obser 80.31 54 ⇑P P 14 55 39.2 0.0
baz=80
627A Terlingua Ranc 80.32 56 ⇓P P 14 55 39.6 +0.3
baz=80,SNR=9.8
J15A Blackfoot 80.36 40 ⇓P P 14 55 39.3 +0.2
baz=80,SNR=5.6
527A Woodward Ranch 80.43 55 ⇓P P 14 55 39.7 -0.1
baz=80,SNR=6.8
H14A Leadore 80.44 39 ⇓P P 14 55 39.4 -0.1
baz=81
M17A Scullys Gap (B 80.48 42 ⇑P P 14 55 39.7 -0.1
baz=81
F13A Darby 80.51 37 ⇑P P 14 55 39.6 -0.2
baz=81
TRF Thorofare Moun 80.58 10 *e*P **P 14 55 38.3 -1.5**
comp=Z,19nm,1.3s,mb4.9
C11A Tepee Creek (N 80.59 35 ⇓P P 14 55 40.0 -0.2
baz=81,SNR=8.7
Y24A Capitan 80.61 51 ⇓P P 14 55 40.8 +0.2
baz=81
D12A Red Ives Fores 80.64 36 ⇑P P 14 55 40.4 -0.1
baz=81
125A Gardner Draw, 80.66 52 ⇓P P 14 55 40.8 -0.2
baz=81
GDL2 Guadalupe Moun 80.69 53 *e*P **P 14 55 41.1 0.0**
comp=Z,3.2nm,0.9s,mb4.2
G14A Jackson 80.72 38 ⇓P P 14 55 41.0 0.0
baz=81
628A Black Gap, Mar 80.74 56 ⇓P P 14 55 41.4 -0.1
baz=81
NJ2 Nanjing 80.80 307 *e*P **P 14 55 42.4 +0.7**
NJ2 pmax pmax
comp=Z,20nm,0.6s,mb5.2
J16A Bone 80.80 40 ⇑P P 14 55 41.8 +0.4
baz=81
226A Malaga, Loving 80.83 53 ⇓P P 14 55 41.6 -0.3
baz=81
Q20A Ridgley Place, 80.83 45 ⇑P P 14 55 41.9 +0.2
baz=81
M18A Lyman 80.85 43 ⇑P P 14 55 41.4 -0.3
baz=81
MCMT McKenzie Canyo 80.86 39 *e*P **P 14 55 42.0 +0.2**
comp=Z,3.7nm,1.3s,mb4.2
Z25A Roswell 80.87 52 ⇓P P 14 55 42.4 +0.3
baz=81
427A Hayter Ranch, 80.88 55 ⇓P P 14 55 41.9 -0.3
baz=81,SNR=5.9
N18A Larsen Ranch, 80.88 43 ⇓P P 14 55 42.2 +0.2
baz=81
X24A Lazy VL Ranch, 80.89 50 ⇓P P 14 55 42.4 +0.2
baz=81
E13A Victor 80.96 37 ⇑P P 14 55 41.6 -0.6
baz=81
MCK McKinley 81.07 10 *e*P **P 14 55 41.8 -0.6**
MCK pmax pmax
comp=Z,16nm,1.0s,mb4.9
MCK McKinley 81.07 10 *e*P **P 14 55 41.8 -0.6**
comp=Z,16nm,1.0s,mb4.9
R21A Cimarron 81.07 46 ⇓P P 14 55 43.1 0.0
baz=81,SNR=6.0
126A Clayton Basin, 81.14 53 ⇑P P 14 55 43.3 -0.2
baz=81
Y25A Mesa, Roswell 81.16 51 ⇓P P 14 55 43.2 -0.4
baz=81
D13A Huson 81.17 36 ⇑P P 14 55 42.8 -0.5
baz=81,SNR=9.0
W24A Lazy 6 Ranch, 81.19 50 ⇓P P 14 55 43.7 0.0
baz=81
I16A Newdale 81.19 40 ⇑P P 14 55 43.8 +0.3
baz=81
G15A Dillon 81.26 38 ⇓P P 14 55 43.7 -0.2
baz=81
S22A 4UR Ranch, Cre 81.29 47 ⇓P P 14 55 44.2 0.0
baz=81,SNR=6.0
E14A Clinton 81.34 37 ⇑P P 14 55 44.1 -0.2
baz=82
428A Kincaid Ranch, 81.39 55 ⇑P P 14 55 45.0 +0.1
baz=81
BSMT Bassoo Peak 81.41 35 *e*P **P 14 55 44.1 -0.5**
comp=Z,13nm,1.3s,mb4.7
C13A Hot Springs 81.43 35 ⇓P P 14 55 44.0 -0.6
baz=82
Z26A Caprock 81.43 52 ⇓P P 14 55 44.7 -0.4
baz=82,SNR=5.6
X25A Clemmons Ranch 81.44 51 ⇓P P 14 55 44.7 -0.4
baz=82
K18A Toltan Ranch, 81.47 41 ⇑P P 14 55 45.4 +0.4
baz=82
DLBC Dease Lake 81.51 21 *e*P **P 14 55 44.8 -0.1**
328A Wristen Ranch, 81.56 54 ⇓P P 14 55 45.1 -0.7
baz=82
R22A Saguache, Gunn 81.56 47 ⇑P P 14 55 45.9 +0.2
baz=82,SNR=5.6
F15A Butte 81.62 38 ⇓P P 14 55 46.0 +0.3
baz=82
CN2 Changchun 81.62 320 *e*P **P 14 55 48.3 +2.5**
CN2 *es*P sP 14 55 55.0 -15
CN2 *e*S S 15 06 00.9 +7.6
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,14.0s
CN2 LR LR
comp=E,200nm,14.0s
CN2 LR LR
comp=Z,200nm,15.0s
L19A Farson 81.64 42 ⇑P P 14 55 45.8 -0.1
baz=82
D14A Greenough 81.70 36 ⇓P P 14 55 45.9 -0.2
baz=82
G16A Moss Hill, Enn 81.70 39 ⇓P P 14 55 46.6 +0.4
baz=82
Q22A Crested Butte, 81.75 46 ⇓P P 14 55 47.1 +0.5
baz=82
N20A Spence Gulch, 81.75 44 ⇓P P 14 55 46.8 +0.2
baz=82

CHMT Chamberlain Mo 81.75 37 *e*P **P 14 55 46.0 -0.5**
comp=Z,3.2nm,1.1s,mb4.2
H16A Russell Place, 81.77 39 ⇓P P 14 55 47.2 +0.6
baz=82,SNR=5.0
J18A Kendall Valley 81.77 41 ⇓P P 14 55 46.3 -0.3
baz=82,SNR=9.0
BW06 Boulder Array 81.84 42 ⇓P P 14 55 46.6 -0.4
baz=82,SNR=5.5
PDAR Pinedale Array 81.84 42 P **P 14 55 46.7 -0.3**
comp=Z,2.6nm,0.9s,mb4.2,baz=207,slow=3.0,SNR=17
PDAR LR LR 15 26 06.3
comp=Z,122nm,18.8s,baz=260,slow=31
E15A Deer Lodge 81.84 37 ⇓P P 14 55 46.7 -0.2
baz=82
SMCO Snowmass 81.85 46 *e*P **P 14 55 47.7 +0.6**
comp=Z,2.7nm,0.6s,mb4.3
B13A Whitefish 81.88 35 ⇓P P 14 55 46.2 -0.8
baz=82
W25A X Bar L Ranch, 81.89 50 ⇓P P 14 55 47.2 -0.2
baz=82
C14A Swan Lake 81.94 36 ⇓P P 14 55 47.1 -0.3
baz=82
BOZ Bozeman (W) 82.03 38 ⇓P P 14 55 48.0 +0.1
baz=82,SNR=6.7
BOZ Bozeman (W) 82.03 38 *e*P **P 14 55 47.8 -0.1**
BOZ pmax pmax
comp=Z,9.0nm,1.4s,mb4.5
BOZ Bozeman (W) 82.03 38 *e*P **P 14 55 47.8 -0.1**
comp=Z,8.8nm,1.4s,mb4.5
Z27A Tatum 82.03 52 ⇑P P 14 55 48.3 +0.1
baz=82
V25A Rancho No Teng 82.04 50 ⇓P P 14 55 48.4 +0.2
baz=82,SNR=5.8
X26A CR and CF Fran 82.09 51 ⇓P P 14 55 48.2 -0.3
baz=82
F16A Kennard Place, 82.10 38 ⇑P P 14 55 48.6 +0.4
baz=82
M20A Sweetwater, Wa 82.11 43 ⇑P P 14 55 49.1 +0.7
baz=82
I18A Diamond G Ranc 82.14 41 ⇓P P 14 55 48.2 -0.3
baz=82
N21A Black Mountain 82.21 44 ⇑P P 14 55 49.6 +0.7
baz=82
A13A Flathead Natio 82.22 34 ⇓P P 14 55 48.4 -0.4
baz=82
SDCO Great Sand Dun 82.23 47 *e*P **P 14 55 48.8 -0.3**
comp=Z,14nm,1.8s,mb4.6
L20A Wamsutter 82.26 43 ⇑P P 14 55 49.2 +0.1
baz=82,SNR=5.7
COLA College 82.31 10 *e*P **P 14 55 48.1 -0.8**
COLA pmax pmax
comp=Z,11nm,0.8s,mb4.8
COLA College 82.31 10 *e*P **P 14 55 48.1 -0.8**
comp=Z,11nm,0.8s,mb4.8
K19A Absolon Red Bu 82.33 42 ⇓P P 14 55 49.3 -0.2
baz=82
W26A Owens Ranch, T 82.35 51 ⇓P P 14 55 50.5 +0.6
baz=82
ILAR Eielson Array 82.39 11 P **P 14 55 48.2 -1.1**
comp=Z,2.0nm,0.8s,mb4.1,baz=218,slow=5.8,SNR=28
ILAR Eielson Array 82.39 11 P **P 14 55 48.3 -1.0**
ILAR pmax pmax
comp=Z,2.0nm,0.8s
S24A Houchin Ranch, 82.39 48 ⇑P P 14 55 49.8 -0.2
baz=82
U25A Circle Dot Ran 82.43 49 ⇓P P 14 55 50.3 +0.1
baz=82
E16A East Helena 82.47 38 ⇑P P 14 55 50.3 +0.1
baz=83
B14A Marquette Ranc 82.53 35 ⇑P P 14 55 49.9 -0.6
baz=83,SNR=7.7
K20A Yellowstone Ra 82.57 42 ⇓P P 14 55 50.5 -0.3
baz=83
O22A Kremmling 82.59 45 ⇓P P 14 55 50.9 -0.1
baz=83,SNR=8.2
C15A Salmond Ranch, 82.59 36 ⇑P P 14 55 50.5 -0.3
baz=83
MSTX Muleshoe 82.63 52 ⇓P P 14 55 51.6 +0.2
baz=83
M21A Separation Pea 82.71 43 ⇓P P 14 55 51.5 -0.1
baz=83
P23A Jefferson 82.72 46 ⇓P P 14 55 51.8 +0.1
baz=83
R24A Sanders Place, 82.72 47 ⇓P P 14 55 51.9 +0.2
baz=83
F17A Fitzpatrick Pl 82.74 38 ⇓P P 14 55 51.9 +0.3
baz=83
T25A Trinidad 82.75 48 ⇑P P 14 55 51.4 -0.5
baz=83
A14A Double T Ranch 82.79 35 ⇑P P 14 55 51.4 -0.4
baz=83,SNR=7.7
SEY Seymchan 82.79 345 ⇑*i*P **P 14 55 50.9 -0.6**
D16A Dana Ranch, Ca 82.80 37 ⇓P P 14 55 51.6 -0.3
baz=83,SNR=6.7
RWWY Rawlins 82.85 43 *e*P **P 14 55 51.5 -0.8**
comp=Z,11nm,1.3s,mb4.7
W27A Bowe Ranch, En 82.86 51 ⇓P P 14 55 52.0 -0.5
baz=83
L21A Rawlins 82.88 43 ⇓P P 14 55 52.0 -0.4
baz=83
B15A Bradely Ranch, 82.91 36 ⇑P P 14 55 51.6 -0.8
baz=83,SNR=6.2
E17A Martinsdale 82.91 38 ⇓P P 14 55 52.3 -0.2
baz=83
U26A Atchley Ranch, 82.92 49 ⇓P P 14 55 52.4 -0.3
baz=83
N22A Wattenberg Ran 82.95 44 ⇑P P 14 55 52.8 0.0
baz=83
S25A Robets Cordova 82.95 48 ⇓P P 14 55 52.3 -0.6
baz=83,SNR=5.3
Q24A Divide 83.02 47 ⇑P P 14 55 53.3 +0.1
baz=83
O23A Lake Granby, G 83.04 45 ⇑P P 14 55 53.5 +0.2
baz=83
C16A Fuhringer Ranc 83.10 36 ⇓P P 14 55 53.2 -0.2
baz=83
G18A Lazy EL Ranch, 83.11 39 ⇑P P 14 55 53.4 -0.1
baz=83
A15A Johnson Ranch, 83.17 35 ⇑P P 14 55 53.1 -0.7
baz=83,SNR=6.3
RLMT Red Lodge 83.19 40 ⇑P P 14 55 54.0 0.0
baz=83
RLMT Red Lodge 83.19 40 *e*P **P 14 55 54.1 +0.1**
comp=Z,9.1nm,1.2s,mb4.7
F18A Big Timber 83.31 39 ⇓P P 14 55 54.2 -0.4
baz=83,SNR=5.7
DAWY Dawson 83.32 14 *e*P **P 14 55 53.5 -0.7**
N23A Red Feather La 83.33 45 ⇓P P 14 55 55.0 +0.2
baz=83
D17A Six Diamond Ra 83.37 37 ⇑P P 14 55 54.6 -0.2
baz=84,SNR=12
B16A M & M Farms, S 83.44 36 ⇓P P 14 55 54.5 -0.7
baz=84
L22A Ellis Ranch, M 83.52 43 ⇓P P 14 55 55.4 -0.3
baz=84,SNR=5.1
E18A Harlowton 83.53 38 ⇑P P 14 55 55.6 0.0
baz=84,SNR=6.3
EGAK Eagle 83.53 13 *e*P **P 14 55 54.8 -0.5**
comp=Z,7.5nm,1.2s,mb4.7
C17A Wharram Farm, 83.57 37 ⇓P P 14 55 55.7 -0.2
baz=84
QIZ Qiongzhong 83.61 292 P **P 14 55 56.9 +0.2**
QIZ sP sP 14 56 01.8 -19
QIZ S S 15 06 20.3 +5.7
QIZ pmax pmax
comp=Z,21nm,1.9s,mb4.9
QIZ pmax pmax
comp=Z,59nm,3.1s
QIZ LR LR
comp=N,140nm,3.1s
QIZ LR LR
comp=E,48nm,3.2s
QIZ LR LR
comp=Z,88nm,3.3s
A16A West Butte Ran 83.79 35 ⇓P P 14 55 56.3 -0.6
baz=84,SNR=14
B17A L&G Farms, Che 83.89 36 ⇑P P 14 55 57.1 -0.4
baz=84
COLD Coldfoot 84.11 9 *e*P **P 14 55 58.3 +0.2**
comp=Z,4.1nm,0.9s,mb4.6
A17A Triple J Farms 84.29 36 ⇑P P 14 55 58.9 -0.5
baz=84,SNR=11
EGMT Eagleton 84.36 37 ⇓P P 14 55 59.5 -0.3
baz=84
B18A Beardsley Farm 84.53 37 ⇑P P 14 56 01.0 +0.3
baz=85
A18A Metzger Ranch, 84.76 36 ⇑P P 14 56 01.7 -0.2
baz=85

EDM Edmonton 85.18 31 *e*P **P 14 56 02.2 -1.6**
MAW Mawson 87.94 198 P **P 14 56 11.0 -6.2**
comp=Z,3.0nm,1.0s,mb4.5,baz=82,slow=12,SNR=4.0
MAW Mawson 87.94 198 P **P 14 56 11.0 -6.3**
MAW pmax pmax
comp=Z,3.0nm,1.0s
MAW Mawson 87.94 198 P **P 14 56 15.5 -1.7**
INK Inuvik 88.18 14 LR LR 15 28 11.6
comp=Z,57nm,20.0s,baz=230,slow=30
GYA Guiyang 88.73 298 *e*P **P 14 56 23.4 +1.7**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
PLCA Paso Flores 88.91 132 LR LR 15 27 41.7
comp=Z,136nm,18.6s,baz=228,slow=30
HHC Hu-ho-hao-te 89.62 313 *e*P **P 14 56 25.0 -0.6**
HHC PP PP 15 00 00.3 +2.0
HHC SKS 15 06 53.0
HHC S S 15 07 14.8 +2.9
HHC SS SS 15 13 16.8 +7.0
HHC pmax pmax
comp=Z,10.0nm,0.7s,mb5.2
HHC pmax pmax
comp=Z,120nm,7.0s
HHC LR LR
comp=N,160nm,18.9s
HHC LR LR
comp=E,140nm,18.9s
HHC LR LR
comp=Z,89nm,18.5s
YKA Yellowknife Ar 89.89 23 P **P 14 56 24.9 -1.4**
comp=Z,2.0nm,0.9s,mb4.4,baz=146,slow=38,SNR=3.1
YKA PP PP 14 59 59.1 -0.8
comp=Z,1.4nm,0.8s,baz=304,slow=6.9,SNR=4.1
YKA Yellowknife Ar 89.89 23 P **P 14 56 24.9 -1.4**
YKA 14 59 59.1
YKA pmax pmax
comp=Z,2.0nm,0.9s
YKA pmax pmax
comp=Z,1.0nm,0.8s
JTS JuntasAbangare 90.51 80 *e*P **P 14 56 30.2 -0.1**
KMI Kunming 91.72 295 P **P 14 56 37.9 +2.2**
KMI pP pP 14 56 40.4 -13
KMI sP sP 14 56 41.9 -18
KMI PP PP 15 00 19.0 +3.7
KMI S S 15 07 39.4 +7.5
KMI pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
KMI pmax pmax
comp=Z,110nm,3.9s
KMI LR LR
comp=N,130nm,21.5s
KMI LR LR
comp=E,83nm,20.6s
KMI LR LR
comp=Z,130nm,21.5s
CD2 Chengdu 92.48 301 P **P 14 56 40.0 +0.9**
CD2 pP pP 14 56 44.8 -12
CD2 sP sP 14 56 47.0 -16
CD2 PP PP 15 00 25.0 +3.8
CD2 SKS 15 07 11.5
CD2 S S 15 07 42.5 +4.1
CD2 sS sS 15 07 50.3 -18
CD2 SS SS 15 13 59.3 +7.8
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.4
CD2 pmax pmax
comp=Z,90nm,5.4s
CD2 LR LR
comp=N,130nm,11.3s
CD2 LR LR
comp=Z,140nm,11.3s
CMAR Chiang Mai Arr 93.33 288 LR LR 15 33 32.6
comp=Z,42nm,19.5s,baz=210,slow=32
ULM Lac du Bonnet 93.54 39 LR LR 15 32 48.8
comp=Z,134nm,18.6s,baz=328,slow=32
LZH Lanzhou 93.86 306 *e*P **P 14 56 44.5 -0.8**
LZH pP pP 14 56 47.8 -15
LZH *e*PP PP 15 00 33.6 +1.7
LZH pmax pmax
comp=Z,17nm,1.5s,mb5.2
LZH pmax pmax
comp=Z,52nm,8.9s
LZH LR LR
comp=E,200nm,18.0s
LZH LR LR
comp=Z,260nm,19.7s
ULN Ulaanbaatar 94.98 318 P **P 14 56 49.9 -0.3**
TKL Tuckaleechee C 97.96 55 LR LR 15 34 38.1
comp=Z,79nm,21.0s,baz=210,slow=31
LPAZ La Paz 99.09 110 LR LR 15 32 05.1
comp=Z,55nm,18.6s,baz=128,slow=30
WMQ Urumqi 107.47 312 *e*P Pdif 14 57 46.4 +0.4
WMQ LR LR
comp=N,87nm,20.0s
WMQ LR LR
comp=Z,46nm,20.6s
BVAR Borovoye Array 118.40 322 PKP PKPdf 15 02 13.0 -1.8
comp=Z,0.7nm,0.7s,baz=200,slow=38,SNR=5.1
BVAR Borovoye Array 118.40 322 PKIKP PKPdf 15 02 13.0 -1.8
BVAR pmax pmax
comp=Z,1.0nm,0.7s
ARCES ARCESS Array B 124.79 352 PKP PKPdf 15 02 26.6 0.0
comp=Z,2.4nm,0.9s,baz=52,slow=2.0,SNR=4.1
ARCES ARCESS Array B 124.79 352 PKIKP PKPdf 15 02 26.6 0.0
ARCES pmax pmax
comp=Z,2.0nm,0.9s
OBN Obninsk 134.48 337 *i* PKIKP PKPdf 15 02 45.4 0.0
OBN *e* 15 05 15.2
OBN *e*PS PS 15 15 41.2 +1.5
OBN pmax pmax
comp=Z,6.0nm,0.5s
OBN MLR MLR
comp=Z,100nm,18.0s
AKASG Malin Array Be 140.69 338 PKP PKPdf 15 02 56.2 -0.8
comp=Z,0.3nm,0.3s,baz=90,slow=0.2,SNR=5.3
AKASG Malin Array Be 140.69 338 PKP PKPdf 15 02 56.2 -0.8
CLL Collm 143.98 354 *e*PKPdf PKPdf 15 03 02.0 -0.8
UPC Upice 144.37 351 *e*PKIKP PKPdf 15 03 04.3 +0.7
UPC Upice 144.37 351 *e*PKP PKPdf 15 03 04.3 +0.7
DPC Dobruska-Polom 144.47 350 *e*PKIKP PKPdf 15 03 01.7 -2.0
DPC Dobruska-Polom 144.47 350 *e*PKP PKPdf 15 03 01.7 -2.0
OKC Ostrava-Krasne 144.63 348 *e*PKIKP PKPdf 15 03 02.1 -1.9
OKC Ostrava-Krasne 144.63 348 *e*PKP PKPdf 15 03 02.1 -1.9
CRVS Cervenica-Dubn 144.72 344 *e*PKIKP PKPdf 15 03 01.7 -2.5
CRVS Cervenica-Dubn 144.72 344 *e*PKP PKPdf 15 03 01.7 -2.5
UZH Uzhgorod 144.74 343 *e*PKIKP PKPdf 15 03 02.7 -1.6
UZH *i* 15 03 12.5
MORC Moravsky Berou 144.81 349 *e*PKIKP PKPdf 15 03 01.7 -2.6
PRU Pruhonice 145.10 352 *e*PKIKP PKPdf 15 03 04.2 -0.6
PRU Pruhonice 145.10 352 *e*PKP PKPdf 15 03 04.2 -0.6
NKC Novy Kostel 145.10 354 *e*PKIKP PKPdf 15 03 03.4 -1.4
NKC Novy Kostel 145.10 354 *e*PKP PKPdf 15 03 03.4 -1.4
KECS Kecovo 145.37 345 *e*PKIKP PKPdf 15 03 05.2 -0.1
KECS Kecovo 145.37 345 *e*PKP PKPdf 15 03 05.2 -0.1
GIVF Givet 145.41 3 *e*PKP1 PKPbc 15 03 04.5 -0.9
BAIF Baives 145.42 4 *e*PKP1 PKPbc 15 03 04.8 -0.6
comp=Z,33nm,1.1s
GRF Grafenberg Arr 145.74 356 *e*PKIKP PKPdf 15 03 05.8 -0.1
VYHS Vyhne 145.75 346 *e*PKIKP PKPdf 15 03 05.7 -0.3
VYHS Vyhne 145.75 346 *e*PKP PKPdf 15 03 05.7 -0.3
KHC Kasperske Hory 146.06 353 *e*PKPbc PKPbc 15 03 06.8 -0.6
KHC Kasperske Hory 146.06 353 *e*PKP PKPdf 15 03 06.9 +0.4
KMBO Kilima Mbogo 146.15 243 PKPbc PKPbc 15 03 06.8 -2.0
comp=Z,4.0nm,0.9s,baz=0.7,slow=24,SNR=7.5
KMBO Kilima Mbogo 146.15 243 PKIKP PKPbc 15 03 06.9 -1.9
KMBO pmax pmax
comp=Z,4.0nm,0.9s
KMBO Kilima Mbogo 146.15 243 *e*PKPbc PKPbc 15 03 07.9 -0.9
FLN La Foliniere 146.20 9 *e*PKP1 PKPbc 15 03 07.3 -0.5
GRR Gorron 146.50 10 *e*PKP1 PKPbc 15 03 07.8 -0.9
comp=Z,29nm,1.1s
BR131 Keskin Array S 146.68 322 *e*PKPbc PKPbc 15 03 08.8 -0.8
BRTR Keskin Array B 146.68 322 PKPbc PKPbc 15 03 08.9 -0.7
comp=Z,5.8nm,0.9s,baz=116,slow=2.9,SNR=30
BRTR Keskin Array B 146.68 322 PKP2 PKPbc 15 03 08.9 -0.7
BRTR pmax pmax
comp=Z,6.0nm,0.9s
CONA Conrad Observa 146.89 350 ⇑*i*PKPab PKPab 15 03 09.6 -1.7
comp=Z,7.4nm,1.1s
CDF Champ du Feu 147.16 0 *e*PKP1 PKPbc 15 03 09.9 -0.7
MOA Molln 147.23 351 ⇑*i*pPKPdf PKPbc 15 03 10.4 -0.4
comp=Z,6.3nm,0.9s
HAU Haudompre 147.56 1 *e*PKP1 PKPbc 15 03 10.9 -0.8
LOR Lormes 148.18 5 *e*PKP1 PKPbc 15 03 12.7 -0.7
comp=Z,10.0nm,0.9s

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MFF	**Saint Martin d** comp=2,26nm,1.3s	**148.35**	**10**	*e*PKP1	PKPbc	15 03 12.8	-1.1
SSF	**Saint Saulge** comp=2,30nm,1.3s	**148.35**	**5**	*e*PKP1	PKPbc	15 03 13.2	-0.7
AVF	**Avril sur Loir** comp=2,8.3nm,0.9s	**148.61**	**5**	*e*PKP1	PKPbc	15 03 13.5	-1.1
SMF	**Signal de Mont** comp=2,38nm,1.5s	**148.79**	**5**	*e*PKP1	PKPbc	15 03 14.1	-0.9
CABF	**La Chapelle**	**148.95**	**2**	*e*PKP1	PKPbc	15 03 15.3	-0.1
TCF	**Toulx Ste Croi**	**148.99**	**7**	*e*PKP1	PKPbc	15 03 14.7	-0.8
MMAI	**Mount Meron Ar** comp=2,3.3nm,0.6s,baz=10,slow=5.3,SNR=5.8	**149.19**	**310**	PKPbc	PKPbc	15 03 16.3	-0.2
RJF	**Les Rejaudoux**	**149.87**	**8**	*e*PKP1	PKPbc	15 03 17.0	-0.7
LPL	**La Plagne**	**150.06**	**1**	*e*PKP1	PKPbc	15 03 17.6	-0.6
LPG	**La Plagne**	**150.08**	**1**	*e*PKP1	PKPbc	15 03 17.6	-0.6
LFF	**La Frestale**	**150.11**	**9**	*e*PKP1	PKPbc	15 03 17.6	-0.7
TORD	**Torodi Ar. Bea** comp=Z,0.8nm,0.9s,baz=39,slow=4.1,SNR=3.6	**174.04**	**112**	PKP	PKPdf	15 03 34.4	-3.6
TORD				PKPab	PKPab	15 05 05.7	-3.7
	comp=Z,1.0nm,1.0s,baz=245,slow=9.7,SNR=5.1						
TORD	**Torodi Ar. Bea**	**174.04**	**112**	PKP	PKPdf	15 03 34.4	-3.6
TORD				PKPab	PKPab	15 05 05.7	-3.7

IDC ***22*** *14:45:25.7±1.3, 11°.21S×164°.48E, h0km, mb4.0/8, mb1 4.2/10, mb1mx4.1/19, mbtmp4.1/10, ML4.3/2, MS3.7/3, Ms1 3.7/3, ms1mx3.2/25, Error ellipse: s-maj=40.8km s-min=20.9km az=149.0*
ISCJB ***22*** *14:45:28.7±4.9, 11°.3S±0°.1×164°.38E±0°.10, h29km±35km, mb4.0/9, MS3.6/3, Error ellipse: s-maj=22.4km s-min=12.3km az=32.3*
NEIC ***22*** *14:45:31.4±1.5, 11°.18S×164°.41E, h36km±13km, mb4.1/1, Error ellipse: s-maj=13.9km s-min=12.2km az=211.0*
ISC 22 14:45:31.5±1.9, 11°.2S±0°.1×164°.4E±0°.1, h37km±16km, n22, σ0s54/21, mb4.0/9, MS3.6/3, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara** 58nm,0.3s,baz=139,slow=7.7,SNR=28	**4.74**	**292**	Pn	**Pn**	**14 46 40.4**	**0.0**
HNR				Sn	**Sn**	**14 47 34.4**	**+0.2**
HNR	**Honiara** 47nm,0.3s,baz=220,slow=23,SNR=5.0	**4.74**	**292**	*e*Pn	**Pn**	**14 46 40.1**	**-0.3**
HNR				Sn	**Sn**	**14 47 34.4**	**+0.2**
DZM	**Mont Dzumac**	**10.95**	**170**	*e*P	**Pn**	**14 48 05.1**	**-0.6**
DZM	**Mont Dzumac** 21nm,0.8s	**10.95**	**170**	*e*P	**Pn**	**14 48 06.6**	**+0.9**
CTA	**Charters Tower** 0.2nm,0.3s,baz=70,slow=11,SNR=3.6	**19.55**	**241**	P	**Pn**	**14 49 57.7**	**+0.1**
CTA	**Charters Tower**	**19.55**	**241**	P	**Pn**	**14 49 57.7**	**+0.1**
COEN	**Coen**	**20.89**	**260**	*e*P	**P**	**14 50 10.0**	**-0.7**
RAO	**Raoul Island** comp=Z,93nm,18.1s,MS3.3,baz=276,slow=30	**24.36**	**140**	LR	LR	14 57 24.8	
WRAB	**Tennant Creek** 2.5nm,0.8s,mb4.0	**30.17**	**250**	*e*P	**P**	**14 51 38.6**	**+0.2**
WRA	**Warramunga Arr** baz=79,slow=9.0	**30.18**	**250**	P	**P**	**14 51 38.8**	**+0.3**
GUMO	**Guam** comp=Z,134nm,18.5s,MS3.6,baz=262,slow=34	**31.37**	**321**	LR	LR	15 03 08.1	
ASAR	**Alice Springs** 1.9nm,0.9s,mb3.9,baz=65,slow=9.9,SNR=20	**31.53**	**243**	P	**P**	**14 51 50.1**	**-0.3**
FITZ	**Fitzroy Crossi** 3.5nm,0.7s,mb4.2,baz=78,slow=12,SNR=5.4	**38.06**	**255**	P	**P**	**14 52 46.3**	**-0.5**
FITZ	**Fitzroy Crossi**	**38.06**	**255**	P	**P**	**14 52 47.1**	**+0.3**
PPT	**Papeete** comp=Z,125nm,18.6s,MS3.9,baz=302,slow=32	**44.93**	**104**	LR	LR	15 09 30.4	
CMAR	**Chiang Mai Arr** 0.8nm,0.5s,mb3.9,baz=102,slow=2.4,SNR=4.5	**70.98**	**294**	P	**P**	**14 56 47.2**	**+1.3**
SONM	**Songino Array** 0.7nm,0.7s,mb3.7,baz=139,slow=3.7,SNR=3.0	**78.05**	**324**	P	**P**	**14 57 26.1**	**-0.2**
ILAR	**Eielson Array** 1.1nm,0.8s,mb4.0,baz=240,slow=6.0,SNR=6.3	**84.12**	**19**	P	**P**	**14 57 58.5**	**+0.2**
NVAR	**Mina Array Bea** 0.6nm,0.8s,mb3.9,baz=226,slow=4.9,SNR=3.6	**87.16**	**50**	P	**P**	**14 58 13.8**	**-0.2**
MKAR	**Makanchi Array** 0.3nm,0.7s,mb3.9,baz=107,slow=6.5,SNR=3.6	**92.76**	**317**	P	**P**	**14 58 39.0**	**-1.0**
ZALV	**Zalesovo Beam** 0.4nm,0.4s,mb4.2,baz=129,slow=2.0,SNR=2.8	**92.94**	**324**	P	**P**	**14 58 41.0**	**+0.3**
ZALV	**Zalesovo Beam**	**92.94**	**324**	P	**P**	**14 58 41.0**	**+0.3**

IDC ***22*** *14:58:42.9±1.4, 36°.84N×142°.87E, h0km, mb3.6/5, mb1 3.6/9, mb1mx3.5/26, mbtmp3.6/9, ML3.5/4, MS2.8/1, Ms1 2.8/1, ms1mx2.2/30, Error ellipse: s-maj=26.9km s-min=22.6km az=117.0*
NEIC ***22*** *14:58:44.3±1.1, 36°.94N×142°.90E, h10km, MG3.4(JMA), Error ellipse: s-maj=20.8km s-min=13.2km az=138.0*
ISCJB ***22*** *14:58:45.2±1.8, 36°.94N±0°.03×142°.81E±0°.07, h32km±15km, mb3.6/5, Error ellipse: s-maj=9.3km s-min=5.2km az=20.7*
JMA ***22*** *14:58:45.3±0.2, 36°.96N×142°.79E, h40km, M3.4*
ISC 22 14:58:46.2±1.8, 36°.94N±0°.03×142°.76E±0°.07, h24km±15km, n26, σ1s10/37, mb3.6/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.56**	**287**	P	**Pn**	**14 59 11.7**	**-0.8**
ONAJ	**Iwakimizuishiy**	**1.58**	**277**	P	**Pn**	**14 59 11.8**	**-0.9**
JMM	**Marumori**	**1.82**	**301**	P	**Pn**	**14 59 15.1**	**-0.9**
JMM				*e*S	**Sn**	**14 59 37.5**	**-0.8**
JMK	**Ichinoseki**	**2.35**	**329**	P	**Pn**	**14 59 22.7**	**-0.6**
JMK				*e*S	**Sn**	**14 59 50.3**	**-1.2**
BSO1	**Boso 1**	**2.70**	**213**	P	**Pn**	**14 59 27.9**	**-0.2**
BSO1				*e*S	**Sn**	**15 00 00.1**	**+0.1**
JAG	**Ashikaga**	**2.70**	**260**	P	**Pn**	**14 59 28.2**	**0.0**
JYK	**Kaneyama**	**2.74**	**317**	P	**Pn**	**14 59 28.6**	**-0.1**
JOM	**Ohasama**	**2.79**	**336**	P	**Pn**	**14 59 28.8**	**-0.5**
JOM				*e*S	**Sn**	**15 00 02.0**	**-0.1**
JAW	**Awa shima**	**3.17**	**300**	P	**Pn**	**14 59 36.0**	**+1.4**
JRY	**Ryogami san**	**3.24**	**255**	P	**Pn**	**14 59 35.7**	**+0.2**
JRY				*e*S	**Sn**	**15 00 11.8**	**-1.6**
JOD2	**Odawara 2**	**3.41**	**242**	P	**Pn**	**14 59 38.1**	**+0.2**
JOD2				S	**Sn**	**15 00 16.0**	**-1.5**
MJAR	**Matsushiro Arr** 3.4nm,0.3s,baz=68,slow=25,SNR=29	**3.67**	**265**	Pn	**Pn**	**14 59 42.5**	**+1.0**
MJAR				Sn	**Sn**	**15 00 25.7**	**+1.6**
	1.1nm,0.3s,baz=77,slow=12,SNR=4.9						
MAJO	**Matsushiro**	**3.68**	**265**	*e*P	**Pn**	**14 59 42.8**	**+1.2**
MAT	**Matsushiro**	**3.68**	**265**	P	**Pn**	**14 59 43.0**	**+1.5**
MAT				S	**Sn**	**15 00 28.6**	**+4.5**
MAT	**Matsushiro**	**3.68**	**265**	P	**Pn**	**14 59 43.0**	**+1.5**
JYN	**Shimob**	**3.70**	**248**	P	**Pn**	**14 59 43.0**	**+1.2**
JYN				S	**Sn**	**15 00 24.9**	**+0.3**
JHJ	**Hachijo jima 2** 8.1nm,0.3s,baz=85,slow=22,SNR=13	**4.52**	**214**	Pn	**Pn**	**14 59 51.6**	**-1.5**
JHJ				Sn	**Sn**	**15 00 42.6**	**-2.4**
	15nm,0.3s,baz=60,slow=23,SNR=5.5						
ERM	**Erimo**	**5.08**	**3**	*e*P	**Pn**	**14 59 58.9**	**-1.9**
ASAJ	**Asahikawa** 0.9nm,0.3s,baz=186,slow=11,SNR=12	**7.17**	**359**	Pn	**Pn**	**15 00 28.9**	**-0.7**
ASAJ				Sn	**Sn**	**15 01 50.3**	**0.0**
	0.6nm,0.3s,baz=48,slow=31,SNR=2.8						
KSRS	**Korea Array** 0.1nm,0.3s,baz=89,slow=13,SNR=9.2	**11.85**	**277**	Pn	**Pn**	**15 01 35.2**	**+1.6**
KSRS				LR	LR	15 05 52.2	
	comp=Z,41nm,18.3s,baz=230,slow=36						
SONM	**Songino Array** 1.4nm,0.7s,mb3.8,baz=100,slow=9.1,SNR=9.8	**28.73**	**304**	P	**P**	**15 04 43.8**	**+2.2**
ZALV	**Zalesovo Beam** 0.5nm,0.3s,mb3.6,baz=79,slow=7.9,SNR=3.6	**42.78**	**312**	P	**P**	**15 06 42.6**	**+1.1**
MKAR	**Makanchi Array** 0.3nm,0.2s,mb3.7,baz=99,slow=6.5,SNR=4.9	**45.08**	**302**	P	**P**	**15 07 01.3**	**+1.1**
MKAR	**Makanchi Array**	**45.08**	**302**	P	**P**	**15 07 01.3**	**+1.1**
ILAR	**Eielson Array** 0.3nm,0.7s,mb3.4,baz=253,slow=5.8,SNR=4.7	**49.00**	**32**	P	**P**	**15 07 31.4**	**+0.9**
ASAR	**Alice Springs** 0.2nm,0.7s,mb3.4,baz=4.2,slow=6.6,SNR=5.0	**60.85**	**189**	P	**P**	**15 08 56.4**	**-0.2**

CASC 22 15:01:06.4±5.1, 8°.80N×82°.41W, h10km±11km, MD3.6, 2C-1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.27**	**269**	⇑*i*P	Pg	15 01 12.0	+0.1
BRU2				*e*S	Sg	15 01 16.1	+0.5
CNI	**Changuinola**	**0.62**	**351**	*e*P	Pg	15 01 19.9	+1.4
BAR1		**0.99**	**296**	⇑*e*P	Pg	15 01 24.0	-1.5
URSC	**Urasca**	**1.69**	**307**	⇓*e*P	Pn	15 01 36.1	+0.1
URSC				*e*S	Sn	15 01 58.5	+0.7
LAJ	**Bijagual**	**1.99**	**302**	*e*P	Pn	15 01 43.9	+3.8
PRS1	**Puriscal**	**2.21**	**302**	*e*P	Pn	15 01 42.5	-0.7
PRS1				*e*S	Sn	15 02 09.9	-0.7
CGA2	**Cerro Gallo 2**	**2.36**	**301**	*e*P	Pn	15 01 45.2	0.0
CGA2				*e*S	Sn	15 02 13.9	-0.3

NEIC ***22*** *15:07:45.4±1.3, 3°.69N×95°.59E, h35km, Error ellipse: s-maj=27.4km s-min=12.7km az=223.0*
IDC ***22*** *15:07:51.5±6.8, 3°.95N×96°.10E, h79km±51km, mb3.4/4, mb1 3.5/6, mb1mx3.2/23, mbtmp3.4/6, ML3.4/2, Error ellipse: s-maj=84.1km s-min=20.0km az=59.0*
ISCJB ***22*** *15:07:53.6±2.5, 4°.1N±0°.1×96°.3E±0°.2, h112km±25km, mb3.7/4, Error ellipse: s-maj=28.9km s-min=18.1km az=167.2*
ISC 22 15:07:54.3±2.5, 4°.0N±0°.1×96°.3E±0°.2, h101km±24km, n9, σ0s69/11, mb3.7/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat** 1.7nm,0.3s,baz=306,slow=13,SNR=16	**2.93**	**115**	P	**Pn**	**15 08 38.5**	**-0.6**
PSI				S	**Sn**	**15 09 14.3**	**+0.7**
	2.6nm,0.3s,baz=286,slow=18,SNR=5.7						
KULM	**Kulim** 16nm,0.5s	**4.55**	**74**	*e*P	**Pn**	**15 09 00.5**	**-0.4**
KULM				*e*S	**Sn**	**15 09 52.1**	**-0.5**
CMAR	**Chiang Mai Arr** 0.1nm,0.3s,baz=196,slow=12,SNR=6.0	**14.57**	**10**	P	**Pn**	**15 11 17.1**	**+1.6**
MK31	**Makanchi Array**	**44.28**	**346**	*e*P	**P**	**15 15 53.2**	**-0.6**
MKAR	**Makanchi Array** 0.4nm,0.4s,mb3.5,baz=169,slow=8.3,SNR=6.4	**44.28**	**346**	P	**P**	**15 15 53.2**	**-0.5**
SONM	**Songino Array** 1.1nm,0.6s,mb3.8,baz=192,slow=9.1,SNR=6.7	**44.50**	**10**	P	**P**	**15 15 56.3**	**+0.8**
ASAR	**Alice Springs** 0.2nm,0.3s,mb3.3,baz=300,slow=7.5,SNR=12	**45.87**	**129**	P	**P**	**15 16 07.2**	**+0.5**
ZAA0	**Zalesovo Array**	**50.63**	**351**	*e*P	**P**	**15 16 42.4**	**-0.4**
ZALV	**Zalesovo Beam** 1.5nm,0.5s,mb4.3,baz=176,slow=5.9,SNR=8.4	**50.63**	**351**	P	**P**	**15 16 42.5**	**-0.4**

IDC ***22*** *15:13:59.8±10.0, 48°.07N×173°.83W, h0km, mb3.6/3, mb1 3.8/5, mb1mx3.5/26, mbtmp3.7/5, Error ellipse: s-maj=246.4km s-min=31.4km az=162.0*
ISCJB ***22*** *15:14:14.0±3.3, 50°.2N±0°.1×175°.1W±0°.1, h17km±27km, mb4.0/2, Error ellipse: s-maj=22.6km s-min=11.8km az=153.5*
NEIC ***22*** *15:14:17.8±6.3, 50°.37N×175°.27W, h16km±37km, ML3.4(AEIC), Error ellipse: s-maj=34.2km s-min=9.7km az=166.0*
ISC 22 15:14:17.0±3.9, 50°.3N±0°.1×175°.2W±0°.1, h14km±29km, n16, σ0s91/17, mb4.0/2, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**1.85**	**343**	*e*P	**Pn**	**15 14 48.7**	**+0.5**
ATKA	**Atka Island**	**1.97**	**18**	P	**Pn**	**15 14 49.9**	**-0.1**
ATKA				S	**Sn**	**15 15 14.2**	**-0.2**
AMKA	**Amchitka**	**3.65**	**289**	*e*P	**Pn**	**15 15 12.2**	**-0.8**
UNV	**Unalaska Valle**	**6.40**	**53**	P	**Pn**	**15 15 52.2**	**+1.5**
SPIA	**Saint Paul Isl**	**7.45**	**21**	P	**Pn**	**15 16 05.4**	**+0.2**
FX1	**Attu Island--F**	**7.69**	**294**	P	**Pn**	**15 16 08.3**	**-0.1**
KDAK	**Kodiak Island** 0.7nm,0.3s,baz=253,slow=8.1,SNR=4.3	**15.17**	**52**	Pn	**Pn**	**15 17 47.4**	**-3.1**
KDAK	**Kodiak Island**	**15.17**	**52**	Pn	**Pn**	**15 17 47.4**	**-3.1**
PETK	**Petropavlovsk-** 0.3nm,0.3s,baz=102,slow=16,SNR=4.8	**16.99**	**290**	P	**Pn**	**15 18 18.0**	**+4.0**
PETK	**Petropavlovsk-**	**16.99**	**290**	P	**Pn**	**15 18 18.0**	**+4.0**
ILAR	**Eielson Array** 0.5nm,0.5s,baz=217,slow=11,SNR=8.4	**20.70**	**35**	P	**P**	**15 18 56.2**	**-0.2**
ILAR	**Eielson Array**	**20.70**	**35**	P	**P**	**15 18 56.2**	**-0.2**
MKAR	**Makanchi Array** 0.3nm,0.2s,mb4.0,baz=44,slow=5.6,SNR=3.9	**62.47**	**311**	P	**P**	**15 24 39.0**	**-0.4**
MKAR	**Makanchi Array**	**62.47**	**311**	P	**P**	**15 24 39.0**	**-0.4**
BVAR	**Borovoye Array** 0.5nm,0.4s,mb4.0,baz=52,slow=5.8,SNR=4.8	**63.15**	**322**	P	**P**	**15 24 44.9**	**+1.0**
BVAR	**Borovoye Array**	**63.15**	**322**	P	**P**	**15 24 44.9**	**+1.0**

ISCJB ***22*** *15:54:14.8±0.8, 22°.24S±0°.08×179°.55W±0°.10, h593km±11km, mb4.1/17, Error ellipse: s-maj=14.4km s-min=11.2km az=16.5*
IDC ***22*** *15:54:15.8±1.9, 22°.23S×179°.53W, h592km±25km, mb3.4/10, mb1 3.7/11, mb1mx3.6/16, mbtmp3.4/11, Error ellipse: s-maj=26.1km s-min=13.5km az=156.0*
NEIC ***22*** *15:54:15.1±0.8, 22°.17S×179°.50W, h584km±9km, mb4.5/3, Error ellipse: s-maj=13.8km s-min=12.1km az=124.0*
ISC 22 15:54:15.6±0.8, 22°.21S±0°.09×179°.5W±0°.1, h587km±10km, n40, σ0s95/36, mb4.1/17, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.00**	**332**	*e*P	**P**	**15 55 47.4**	**-0.3**
RAO	**Raoul Island** 100nm,0.3s,baz=103,slow=22,SNR=7.3	**7.16**	**169**	P	**P**	**15 56 05.6**	**-0.8**
DZM	**Mont Dzumac**	**13.01**	**268**	*e*P	**P**	**15 57 05.8**	**+1.3**
DZM				*e*S		15 57 07.9	
URZ	**Urewera** 1.5nm,0.3s,baz=16,slow=11,SNR=7.2	**16.26**	**190**	P	**P**	**15 57 34.1**	**-1.6**
URZ				S	**S**	**16 00 14.8**	**-3.9**
URZ	**Urewera**	**16.26**	**190**	*e*P	**P**	**15 57 34.0**	**-1.7**
URZ				S	**S**	**16 00 14.8**	**-3.9**
ARMA	**Armidale**	**27.07**	**246**	*e*P	**P**	**15 59 14.0**	**+1.4**
ARMA	**Armidale**	**27.07**	**246**	*e*P	**P**	**15 59 13.8**	**+1.3**
CNB	**Canberra Magne**	**30.11**	**237**	*e*P	**P**	**15 59 40.1**	**+1.3**
CTA	**Charters Tower** 13nm,0.4s,mb4.9	**31.95**	**267**	*e*P	**P**	**15 59 54.8**	**0.0**
CTA	**Charters Tower**	**31.95**	**267**	P	**P**	**15 59 54.7**	**-0.1**
CTA	**Charters Tower** 17nm,0.4s,mb5.0	**31.95**	**267**	P	**P**	**15 59 54.7**	**-0.1**
CTAO	**Charters Tower**	**31.95**	**267**	*e*P	**P**	**15 59 54.6**	**-0.2**
TOO	**Toolangi**	**33.76**	**235**	*e*P	**P**	**16 00 10.5**	**+0.8**
STKA	**Stephens Creek** 7.2nm,0.6s,mb4.4	**35.79**	**246**	*e*P	**P**	**16 00 27.3**	**+0.6**
STKA	**Stephens Creek** 8.8nm,0.5s,mb4.5,baz=91,slow=9.6,SNR=68	**35.79**	**246**	P	**P**	**16 00 27.3**	**+0.6**
STKA	**Stephens Creek**	**35.79**	**246**	*e*P	**P**	**16 00 27.2**	**+0.5**
ASAR	**Alice Springs** 21nm,0.8s,mb4.7,baz=93,slow=8.6,SNR=299	**42.77**	**259**	P	**P**	**16 01 22.5**	**-0.3**
ASAR				S	**S**	**16 07 03.5**	**-1.8**
	1.0nm,0.9s,baz=93,slow=17,SNR=4.6						
WRAB	**Tennant Creek** 7.1nm,0.6s,mb4.4	**42.98**	**264**	*e*P	**P**	**16 01 24.1**	**-0.3**
KAKA	**Kakadu** 10.0nm,0.7s,mb4.5	**46.62**	**273**	*e*P	**P**	**16 01 51.3**	**-1.1**
FORT	**Forrest** 18nm,0.5s,mb4.9	**47.33**	**248**	*e*P	**P**	**16 01 56.8**	**-0.7**
FITZ	**Fitzroy Crossi** 7.5nm,0.3s,mb4.6	**51.42**	**264**	*e*P	**P**	**16 02 27.4**	**-0.3**
KLBR	**Kellerberrin** 29nm,1.4s,mb4.3	**56.06**	**246**	*e*P	**P**	**16 02 59.5**	**-0.7**
SBA	**Scott Base**	**56.09**	**183**	*e*P	**P**	**16 03 01.4**	**+1.9**
MJAR	**Matsushiro Arr** 2.3nm,0.7s,mb3.8,baz=165,slow=6.4,SNR=8.9	**70.76**	**325**	P	**P**	**16 04 32.6**	**-1.0**
KSM	**Kuching** 9.9nm,0.8s,mb4.4	**72.26**	**279**	*e*P	**P**	**16 04 42.6**	**-0.3**
KSRS	**Korea Array** 0.7nm,0.6s,mb3.3,baz=128,slow=5.8,SNR=5.2	**77.24**	**320**	P	**P**	**16 05 10.6**	**+0.4**
PETK	**Petropavlovsk-** 4.2nm,0.7s,mb4.0,baz=132,slow=7.4,SNR=14	**77.56**	**346**	P	**P**	**16 05 10.8**	**-0.7**
PETK	**Petropavlovsk-**	**77.56**	**346**	P	**P**	**16 05 10.8**	**-0.7**
NVAR	**Mina Array Bea** 1.1nm,0.8s,mb3.5,baz=222,slow=8.3,SNR=6.0	**83.23**	**44**	P	**P**	**16 05 41.4**	**+0.1**
TXAR	**Lajitas Array** 1.2nm,0.9s,mb3.7,baz=218,slow=6.0,SNR=9.7	**89.16**	**58**	P	**P**	**16 06 10.7**	**+1.0**
CMAR	**Chiang Mai Arr** 3.4nm,0.8s,mb4.2,baz=137,slow=3.4,SNR=22	**89.36**	**290**	P	**P**	**16 06 12.3**	**+1.5**
ILAR	**Eielson Array** 0.2nm,0.6s,mb3.1,baz=240,slow=7.2,SNR=2.9	**90.29**	**13**	P	**P**	**16 06 13.1**	**-0.9**
PDAR	**Pinedale Array** 0.3nm,0.4s,mb3.5,baz=250,slow=5.4,SNR=2.8	**91.17**	**44**	P	**P**	**16 06 19.1**	**+0.5**
BVAR	**Borovoye Array** 0.6nm,0.3s,baz=143,slow=2.6,SNR=5.3	**119.45**	**319**	PKP	PKPdf	16 11 57.5	-1.4
AKASG	**Malin Array Be** 2.3nm,0.3s,baz=40,slow=4.5,SNR=15	**143.77**	**329**	PKP	PKPdf	16 12 42.1	-2.3
BR131	**Keskin Array S**	**146.88**	**309**	*e*PKPbc	PKPbc	16 12 52.3	-0.7
BRTR	**Keskin Array B** 1.1nm,0.6s,baz=138,slow=5.1,SNR=8.2	**146.88**	**309**	PKPbc	PKPbc	16 12 52.4	-0.6
MMAI	**Mount Meron Ar** 1.9nm,0.4s,baz=76,slow=3.5,SNR=5.2	**147.37**	**297**	PKPbc	PKPbc	16 12 54.7	+0.2
BUR08	**Bucovina Ar. S**	**147.78**	**328**	PKPbc	PKPbc	16 12 55.5	+0.4
CLL	**Collm** comp=Z,5.0nm,1.0s	**149.36**	**345**	*i* PKPbc	PKPbc	16 12 58.3	-0.5
CLL				*e*PKPab	PKPab	16 13 06.0	0.0

NIED ***22*** *16:08:00, 37°.50N×143°.20E, h11km, Mw4.1 Best double couple: M0 1.43000×10^15 NP1:φ0=358.00000°, δ73.00000°, λ64.00000°. NP2:φ0=237.00000°, δ31.00000°, λ144.00000°.*
IDC ***22*** *16:08:39.7±0.9, 37°.43N×143°.24E, h0km, mb3.8/12, mb1 3.9/16, mb1mx3.9/26, mbtmp3.8/16, ML3.8/4, MS3.9/3, Ms1 3.9/3, ms1mx2.8/41, Error ellipse: s-maj=21.9km s-min=18.0km az=149.0*
MOS ***22*** *16:08:40.6±1.0, 37°.48N×143°.28E, h21km, mb4.4/11, Error ellipse: s-maj=12.0km s-min=8.1km az=102.4*
NEIC ***22*** *16:08:41.4±0.6, 37°.51N×143°.23E, h10km, mb4.6/2, MW4.0(NIED), Error ellipse: s-maj=14.0km s-min=9.0km az=146.0*
BJI ***22*** *16:08:42.1, 37°.95N×142°.74E, h5km, mB4.8/2, mb4.3/8, Ms3.7/1, Ms7 3.4/1*
JMA ***22*** *16:08:42.0±0.1, 37°.45N×143°.15E, h44km, M4.1*
ISCJB ***22*** *16:08:42.9±0.4, 37°.48N±0°.03×143°.12E±0°.04, h33km, mb4.0/19, MS4.0/3, Error ellipse: s-maj=5.2km s-min=3.5km az=32.6*
ISC 22 16:08:45.1±0.4, 37°.50N±0°.03×143°.06E±0°.04, h35km, (h32km±8km:pP-P), n67, σ1s05/84, mb4.0/19, MS4.0/3, 4C, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**1.66**	**306**	P	**Pn**	**16 09 10.9**	**-0.7**
JIO				S	**Sn**	**16 09 31.9**	**+0.2**
JFK	**Kawauchi**	**1.75**	**266**	P	**Pn**	**16 09 11.7**	**-1.2**
JFK				*e*S	**Sn**	**16 09 33.3**	**-0.6**
JMM	**Marumori**	**1.84**	**282**	P	**Pn**	**16 09 12.9**	**-1.2**
JMM				*e*S	**Sn**	**16 09 36.3**	**+0.1**
ONAJ	**Iwakimizuishiy**	**1.85**	**258**	P	**Pn**	**16 09 13.0**	**-1.3**
ONAJ				*e*S	**Sn**	**16 09 36.0**	**-0.4**
JMK	**Ichinoseki**	**2.05**	**316**	P	**Pn**	**16 09 16.2**	**-0.9**
JMK				*e*S	**Sn**	**16 09 41.7**	**+0.2**
JOU	**Okura**	**2.09**	**295**	P	**Pn**	**16 09 17.2**	**-0.3**
JFT	**Otama**	**2.17**	**271**	P	**Pn**	**16 09 18.5**	**-0.2**
JOM	**Ohasama**	**2.41**	**325**	P	**Pn**	**16 09 21.2**	**-0.8**
JOM				S	**Sn**	**16 09 50.8**	**+0.5**
JYK	**Kaneyama**	**2.56**	**304**	P	**Pn**	**16 09 23.8**	**-0.2**
JAG	**Ashikaga**	**3.08**	**251**	P	**Pn**	**16 09 30.8**	**-0.4**
JAG				S	**Sn**	**16 10 06.6**	**-0.3**
JANG	**Nango**	**3.12**	**338**	P	**Pn**	**16 09 30.3**	**-1.4**
JANG				*e*S	**Sn**	**16 10 06.4**	**-1.3**
JAW	**Awa shima**	**3.16**	**289**	P	**Pn**	**16 09 33.0**	**+0.7**
BSO1	**Boso 1**	**3.30**	**211**	P	**Pn**	**16 09 32.0**	**-2.3**
BSO1				*e*S	**Sn**	**16 10 10.9**	**-1.4**
JRY	**Ryogami san**	**3.65**	**247**	P	**Pn**	**16 09 38.4**	**-0.7**
JRY				*e*S	**Sn**	**16 10 20.7**	**-0.2**
JOD2	**Odawara 2**	**3.91**	**236**	P	**Pn**	**16 09 41.5**	**-1.1**
JOD2				*e*S	**Sn**	**16 10 26.9**	**-0.3**
MJAR	**Matsushiro Arr** 9.4nm,0.3s,baz=84,slow=15,SNR=78	**4.00**	**258**	Pn	**Pn**	**16 09 44.5**	**+0.6**
MJAR	**Matsushiro Arr**	**4.00**	**258**	P	**Pn**	**16 09 44.5**	**+0.7**
MJAR				pmax	pmax		
	comp=Z,9.0nm,0.3s						
MJAR	**Matsushiro Arr**	**4.00**	**258**	Pn	**Pn**	**16 09 44.5**	**+0.6**
MAJO	**Matsushiro**	**4.00**	**258**	*e*P	**Pn**	**16 09 44.6**	**+0.7**
MAT	**Matsushiro**	**4.00**	**258**	P	**Pn**	**16 09 44.6**	**+0.7**
MAT				S	**Sn**	**16 10 30.7**	**+1.2**
MAT	**Matsushiro**	**4.00**	**258**	P	**Pn**	**16 09 45.2**	**+1.3**
JOT	**Ohata**	**4.18**	**339**	P	**Pn**	**16 09 46.6**	**+0.3**
ERM	**Erimo**	**4.51**	**1**	*e*P	**Pn**	**16 09 51.0**	**+0.1**
ERM				*i* S	**Sn**	**16 10 39.5**	**-2.6**
ERM	**Erimo**	**4.51**	**1**	*e*Pn	**Pn**	**16 09 48.7**	**-2.2**
JKB	**Kayabe**	**4.66**	**341**	P	**Pn**	**16 09 52.8**	**0.0**
JKB				*e*S	**Sn**	**16 10 44.1**	**-1.5**
JHJ	**Hachijo jima 2** comp=Z,14nm,0.3s,baz=37,slow=19,SNR=32	**5.12**	**213**	Pn	**Pn**	**16 09 56.2**	**-3.1**
JHJ				Sn	**Sn**	**16 10 52.1**	**-5.1**
	comp=Z,62nm,0.3s,baz=85,slow=22,SNR=8.8						
ASAJ	**Asahikawa** comp=Z,2.6nm,0.3s,baz=208,slow=11,SNR=24	**6.62**	**357**	Pn	**Pn**	**16 10 18.8**	**-1.0**
ASAJ				Sn	**Sn**	**16 11 33.9**	**-0.1**
	comp=Z,1.8nm,0.3s,baz=188,slow=14,SNR=6.7						
ASAJ	**Asahikawa**	**6.62**	**357**	P	**Pn**	**16 10 18.8**	**-1.0**
ASAJ						16 11 33.9	
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				smax			
	comp=N,2.0nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**6.87**	**17**	*i* P	**Pn**	**16 10 19.6**	**-3.6**
YUK				*i* S	**Sn**	**16 11 33.0**	**-7.1**
YUK				pmax	pmax		

ARU			*e*			16 20 29.5
ARU			S	**S**	**16 26 20.6**	**+3.5**
ARU			SS	SS	16 30 06.3	+1.3
ARU			pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4					
ASAR	**Alice Springs**	**61.44 190**	P	**P**	**16 18 57.5**	**-0.4**
	comp=Z,0.4nm,0.8s,mb3.6,baz=3.1,slow=6.7,SNR=5.5					
FINES	**FINESS Array B**	**69.01 333**	P	**P**	**16 19 47.6**	**+1.1**
	comp=Z,1.1nm,0.7s,mb3.9,baz=40,slow=3.2,SNR=4.6					
FINES	**FINESS Array B**	**69.01 333**	P	**P**	**16 19 47.7**	**+1.1**
FINES			pmax	pmax		
	comp=Z,1.0nm,0.7s					
KIV	**Kislovodsk**	**71.59 312**	*e*P	**P**	**16 20 04.3**	**+1.6**
KIV			pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7					
NVAR	**Mina Array Bea**	**73.66 54**	P	**P**	**16 20 16.7**	**+1.7**
	comp=Z,0.1nm,0.4s,mb3.1,baz=246,slow=6.5,SNR=2.2					
NOA	**NORSAR Array B**	**74.26 338**	P	**P**	**16 20 17.7**	**-0.5**
	comp=Z,1.5nm,0.9s,mb3.9,baz=39,slow=5.8,SNR=4.2					
NOA			LR	LR	16 57 32.1	
	comp=Z,28nm,19.4s,MS3.6,baz=275,slow=39					
NOA	**NORSAR Array B**	**74.26 338**	P	**P**	**16 20 17.7**	**-0.5**
NOA			pmax	pmax		
	comp=Z,2.0nm,0.9s					
NOA			MLR	MLR		
	comp=Z,28nm,19.4s					
AKASG	**Malin Array Be**	**74.73 323**	P	**P**	**16 20 21.9**	**+0.9**
	comp=Z,0.3nm,0.3s,mb3.7,baz=50,slow=7.0,SNR=4.0					
PPT	**Papeete**	**83.67 118**	LR	LR	16 54 06.3	
	comp=Z,74nm,18.3s,MS4.1,baz=360,slow=33					
RPZ	**Rata Peaks**	**84.73 160**	LR	LR	16 54 58.1	
	comp=Z,182nm,21.9s,MS4.4,baz=22,slow=33					
TXAR	**Lajitas Array**	**88.79 53**	P	**P**	**16 21 35.0**	**-0.5**
	comp=Z,0.2nm,0.7s,mb3.6,baz=257,slow=3.2,SNR=2.5					
TXAR	**Lajitas Array**	**88.79 53**	P	**P**	**16 21 35.0**	**-0.5**

MAN 22 16:09:45,15°.24N×121°.87E,h62km,mb4.5,ML3.3,MS3.2, 1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**0.51**	**172**	*e*P	Pn	16 09 58.4	+1.1
POLP				*e*S	Sn	16 10 09.5	+3.3
BALP	**Baler**	**0.57**	**331**	*e*P	Pn	16 10 00.3	+2.4
BALP				*e*S	Sn	16 10 10.6	+3.3
GQP	**Guinayangan**	**1.44**	**157**	*e*P	Pn	16 10 09.9	+0.9
GQP				*i* S	Sn	16 10 29.4	+2.4
CAUP	**Cauayan**	**1.69**	**359**	*e*P	Pn	16 10 12.5	+0.1
PVCP	**Virac**	**2.75**	**126**	*e*P	Pn	16 10 27.7	+0.9

DDA ***22*** *16:12:53.6,37°.53N×35°.11E,h7km±3km,Md2.8*
CSEM ***22*** *16:12:53.8±0.3,37°.52N×35°.10E,h8km,ML2.3,Error ellipse: s-maj=6.6km s-min=5.3km az=118.0*
ISCJB ***22*** *16:12:54.1±0.8,37°.50N±0°.07×35°.14E±0°.06,h7km±13km, Error ellipse: s-maj=12.7km s-min=6.0km az=150.9*
ISK ***22*** *16:12:54.5,37°.42N×35°.16E,h8km,ML2.3*
ISC 22 16:12:54.3±0.8,37°.51N±0°.07×35°.13E±0°.06,h9km±12km, n13,σ1°.04/21,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARA	**Karaisali**	**0.25**	**194**	*e*PG	**Pg**	**16 12 58.6**	**-0.8**
KARA				*e*SG	**Sg**	**16 13 02.1**	**-0.7**
KARA	**Karaisali**	**0.25**	**194**	*e*Pg	**Pg**	**16 12 58.6**	**-0.8**
KARA				*e*Sg	**Sg**	**16 13 02.1**	**-0.7**
GULE	**Gulek**	**0.36**	**232**	*i* P	**Pg**	**16 13 00.5**	**-0.9**
GULE				*i* S	**Sg**	**16 13 07.3**	**+1.2**
GULE	**Gulek**	**0.36**	**232**	*i* P	**Pg**	**16 13 00.5**	**-0.9**
GULE				*i* S	**Sg**	**16 13 07.3**	**+1.2**
KOZT	**Kozan**	**0.55**	**92**	*e*PG	**Pg**	**16 13 05.1**	**+0.1**
KOZT				*e*SG	**Sg**	**16 13 13.3**	**+1.1**
KOZT	**Kozan**	**0.55**	**92**	*e*Pg	**Pg**	**16 13 05.1**	**+0.1**
KOZT				*e*Sg	**Sg**	**16 13 13.4**	**+1.2**
AVNT	**Avonos**	**1.29**	**350**	*i* P	**Pn**	**16 13 17.6**	**-0.9**
AVNT				*i* S	**Sb**	**16 13 35.7**	**+0.3**
AVNT	**Avonos**	**1.29**	**350**	*i* P	**Pn**	**16 13 17.6**	**-0.9**
AVNT				*i* S	**Sb**	**16 13 35.7**	**+0.3**
SARI	**SarD1z-Kayseri**	**1.70**	**46**	*e*PN	**Pn**	**16 13 21.1**	**-3.1**
IKL	**Isikli**	**1.72**	**223**	*e*PN	**Pn**	**16 13 24.5**	**+0.1**
IKL	**Isikli**	**1.72**	**223**	*e*Pn	**Pn**	**16 13 24.5**	**+0.1**
HDMB	**Hadim**	**2.18**	**256**	*e*PN	**Pn**	**16 13 32.3**	**+1.5**
HDMB	**Hadim**	**2.18**	**256**	*e*Pn	**Pn**	**16 13 32.3**	**+1.5**

ISCJB ***22*** *16:18:53.9±0.7,39°.00N±0°.03×34°.97E±0°.06,h5km±8km, Error ellipse: s-maj=7.6km s-min=5.1km az=6.7*
DDA ***22*** *16:18:54.6,38°.96N×34°.84E,h7km±5km,Md3.0*
ISK ***22*** *16:18:54.1,39°.01N×34°.98E,h9km,MD2.6*
CSEM ***22*** *16:18:54.0±0.2,38°.98N×35°.02E,h2km,MD3.0,Error ellipse: s-maj=4.5km s-min=3.4km az=127.0*
ISC 22 16:18:54.4±0.8,38°.98N±0°.03×34°.99E±0°.06,h9km±7km, n18,σ0°.84/30,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AVNT	**Avonos**	**0.22**	**208**	*i* P	**Pg**	**16 18 59.0**	**0.0**
AVNT				*i* S	**Sg**	**16 19 03.0**	**+1.0**
AVNT	**Avonos**	**0.22**	**208**	*i* P	**Pg**	**16 18 59.0**	**0.0**
AVNT				*i* S	**Sg**	**16 19 03.0**	**+1.0**
YOZ	**Yozgat**	**0.71**	**21**	*e*PG	**Pg**	**16 19 07.3**	**-0.8**
YOZ				*e*SG	**Sg**	**16 19 17.7**	**+0.3**
YOZ	**Yozgat**	**0.71**	**21**	*e*Pg	**Pg**	**16 19 07.3**	**-0.8**
YOZ				*e*Sg	**Sg**	**16 19 17.7**	**+0.3**
CDAG	**Cicekdag**	**0.81**	**324**	*i* P	**Pg**	**16 19 08.2**	**-1.7**
CDAG				*i* S	**Sg**	**16 19 20.4**	**-0.1**
CDAG	**Cicekdag**	**0.81**	**324**	*i* P	**Pg**	**16 19 08.2**	**-1.7**
CDAG				*i* S	**Sg**	**16 19 20.4**	**0.0**
KAMT	**Kaman**	**1.07**	**292**	*e*PG	**Pg**	**16 19 15.5**	**+0.6**
KAMT				*e*SG	**Sg**	**16 19 29.0**	**+0.2**
KAMT	**Kaman**	**1.07**	**292**	*e*Pg	**Pg**	**16 19 15.5**	**+0.6**
KAMT				*e*Sg	**Sg**	**16 19 29.0**	**+0.2**
CORM	**Corum**	**1.23**	**347**	*e*PN	**Pn**	**16 19 17.4**	**-0.4**
CORM				*e*SN	**Sn**	**16 19 35.0**	**+0.5**
CORM	**Corum**	**1.23**	**347**	*e*Pn	**Pn**	**16 19 17.4**	**-0.4**
CORM				*e*Sn	**Sn**	**16 19 35.0**	**+0.5**
SULT	**Sultanhani-AKS**	**1.39**	**237**	*e*PN	**Pg**	**16 19 20.5**	**-0.6**
SULT	**Sultanhani-AKS**	**1.39**	**237**	*e*Pn	**Pg**	**16 19 20.5**	**-0.6**
CTKT	**Corum**	**1.65**	**355**	*i* P	**Pg**	**16 19 26.0**	**-0.1**
CTKT				*i* S	**Sg**	**16 19 50.4**	**+2.9**
CTKT	**Corum**	**1.65**	**355**	*i* P	**Pg**	**16 19 26.0**	**-0.1**
SVSK	**Karacayir**	**1.82**	**58**	*e*PN	**Pn**	**16 19 26.1**	**+0.3**
SVSK	**Karacayir**	**1.82**	**58**	*e*Pn	**Pn**	**16 19 26.1**	**+0.3**
ELDT	**Eldivan**	**1.93**	**322**	*i* P	**Pg**	**16 19 30.4**	**-1.1**
ELDT				*i* S	**Sg**	**16 19 56.9**	**+0.3**
ELDT	**Eldivan**	**1.93**	**322**	*i* P	**Pg**	**16 19 30.4**	**-1.1**

ISCJB ***22*** *16:22:00.4±0.5,40°.37N±0°.03×27°.83E±0°.05,h3km±5km, Error ellipse: s-maj=5.9km s-min=5.4km az=154.2*
DDA ***22*** *16:22:00.1,40°.37N×27°.79E,h7km±2km,Md2.7*
ISK ***22*** *16:22:00.1,40°.33N×27°.84E,h6km,MD2.6*
CSEM ***22*** *16:22:00.5±0.1,40°.34N×27°.85E,h5km,MD2.6,Error ellipse: s-maj=2.3km s-min=1.5km az=173.0*
ISC 22 16:22:00.8±0.5,40°.36N±0°.03×27°.85E±0°.05,h4km±4km, n27,σ0°.49/35,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDC	**Edincik**	**0.02**	**139**	*e*PG	**Pg**	**16 22 01.3**	**-0.2**
EDC				*e*SG	**Sg**	**16 22 02.6**	**+0.5**
EDC	**Edincik**	**0.02**	**139**	*e*Pg	**Pg**	**16 22 01.3**	**-0.2**
EDC				*e*Sg	**Sg**	**16 22 02.6**	**+0.5**
BNT	**Bandirma**	**0.05**	**93**	*e*PG	**Pg**	**16 22 01.9**	**-0.1**
GONE	**Gonen-Balikesi**	**0.34**	**202**	*e*PG	**Pg**	**16 22 06.8**	**-0.4**
GONE				*e*SG	**Sg**	**16 22 11.4**	**-0.3**
GONE	**Gonen-Balikesi**	**0.34**	**202**	*e*Pg	**Pg**	**16 22 06.8**	**-0.5**
GONE				*e*Sg	**Sg**	**16 22 11.4**	**-0.2**
KCTX	**Karacabey (Bur**	**0.40**	**103**	*e*PG	**Pg**	**16 22 07.9**	**-0.5**
KCTX	**Karacabey (Bur**	**0.40**	**103**	*e*Pg	**Pg**	**16 22 07.9**	**-0.6**
MFT	**Murefte**	**0.61**	**315**	*e*PG	**Pg**	**16 22 13.4**	**+0.9**
MFT	**Murefte**	**0.61**	**315**	*e*Pg	**Pg**	**16 22 13.4**	**+0.9**
RKY	**Sarkoy-Tekirda**	**0.61**	**303**	*e*PG	**Pg**	**16 22 12.2**	**-0.2**
RKY	**Sarkoy-Tekirda**	**0.61**	**303**	*e*Pg	**Pg**	**16 22 12.3**	**-0.2**
BALY	**Balya**	**0.64**	**196**	*i* P	**Pg**	**16 22 12.3**	**-0.8**
BALY				*i* S	**Sg**	**16 22 22.2**	**+0.7**
BALY	**Balya**	**0.64**	**196**	*i* P	**Pg**	**16 22 12.3**	**-0.8**
BALY				*i* S	**Sg**	**16 22 22.2**	**+0.7**
ARMT	**Armutlu**	**0.80**	**75**	*e*PG	**Pg**	**16 22 16.2**	**+0.1**
ARMT	**Armutlu**	**0.80**	**75**	*e*Pg	**Pg**	**16 22 16.2**	**+0.1**

CTKS	**Kestanelik-??a**	**1.01**	**29**	*e*PG	**Pg**	**16 22 20.4**	**+0.3**
CTKS	**Kestanelik-??a**	**1.01**	**29**	*e*Pg	**Pg**	**16 22 20.5**	**+0.3**
GELI	**Tayfur-Gelibol**	**1.05**	**273**	*e*PG	**Pg**	**16 22 20.8**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.05**	**273**	*e*Pg	**Pg**	**16 22 20.8**	**-0.2**
ERIK	**Erikli-Kesan**	**1.06**	**287**	*e*PG	**Pg**	**16 22 21.2**	**0.0**
ERIK	**Erikli-Kesan**	**1.06**	**287**	*e*Pg	**Pg**	**16 22 21.3**	**+0.1**
YLV	**Yalova**	**1.18**	**79**	*e*PN	**Pn**	**16 22 23.5**	**-0.6**
YLV	**Yalova**	**1.18**	**79**	*e*Pn	**Pn**	**16 22 23.5**	**-0.6**
ENEZ	**Enez**	**1.35**	**287**	*e*PN	**Pn**	**16 22 26.0**	**-0.4**
ENEZ	**Enez**	**1.35**	**287**	*e*Pn	**Pn**	**16 22 26.0**	**-0.4**
DEMI	**Demirci**	**1.48**	**153**	*i* P	**Pn**	**16 22 28.7**	**+0.6**
DEMI				*i* S	**Sn**	**16 22 48.4**	**+0.6**
DEMI	**Demirci**	**1.48**	**153**	*i* P	**Pn**	**16 22 28.7**	**+0.6**
DEMI				*i* S	**Sn**	**16 22 48.4**	**+0.6**

IDC 22 16:27:40.0±5.2,10°.66S×161°.14E,h91km±35km,mb3.2/4, mb1 3.3/4,mb1mx3.2/17,mbtmp3.2/4,Error ellipse: s-maj=50.4km s-min=30.0km az=117.0,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.69**	**316**	P	Pn	16 28 08.1	-0.2
	75nm,0.3s,baz=158,slow=6.2,SNR=109						
HNR				S	Sn	16 28 29.9	+0.1
	330nm,0.3s,baz=149,slow=22,SNR=23						
ASAR	**Alice Springs**	**28.99**	**240**	P	P	16 33 32.2	+0.9
	0.1nm,0.5s,baz=64,slow=10,SNR=4.5						
SONM	**Songino Array**	**75.73**	**325**	P	P	16 39 16.4	+0.7
	0.4nm,0.6s,baz=134,slow=6.2,SNR=3.4						
ILAR	**Eielson Array**	**84.64**	**20**	P	P	16 40 02.1	-1.0
	0.3nm,0.6s,baz=238,slow=4.0,SNR=4.4						
MKAR	**Makanchi Array**	**90.17**	**318**	P	P	16 40 29.9	-0.2
	0.1nm,0.4s,baz=101,slow=7.5,SNR=3.2						

NIED ***22*** *16:28:00,37°.50N×142°.90E,h20km,Mw4.0 Best double couple: M0:1.3000×10^15 NP1:φ=7.0000°,δ72.0000°, λ83.00000°. NP2:φ=209.00000°,δ19.00000°,λ111.00000°.*
BJI ***22*** *16:28:05.2,36°.53N×142°.94E,h34km,mB4.5/2,mb4.1/4*
IDC ***22*** *16:28:05.3±0.9,37°.38N×143°.04E,h0km,mb3.7/11, mb1 3.8/16,mb1mx3.8/27,mbtmp3.8/16,ML3.7/5,MS3.0/3, Ms1 3.0/3,ms1mx2.7/37,Error ellipse: s-maj=23.2km s-min=18.5km az=102.0*
NEIC ***22*** *16:28:07.2±4.1,37°.44N×143°.05E,h13km±24km,mb4.4/3, Error ellipse: s-maj=14.1km s-min=9.6km az=130.0*
MOS ***22*** *16:28:07.6±0.7,37°.49N×142°.94E,h25km,mb4.4/8,Error ellipse: s-maj=14.2km s-min=11.1km az=114.2*
ISCJB ***22*** *16:28:08.4±1.4,37°.45N±0°.03×142°.87E±0°.05, h31km±11km,mb3.9/15,Error ellipse: s-maj=6.5km s-min=4.9km az=25.9*
JMA ***22*** *16:28:08.4±0.1,37°.46N×142°.87E,h42km,M3.9*
ISC 22 16:28:09.7±1.5,37°.49N±0°.03×142°.81E±0°.05,h25km±11km, n54,σ0°.90/69,mb3.9/15,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**1.51**	**310**	P	**Pn**	**16 28 34.6**	**-0.5**
JIO				*e*S	**Sn**	**16 28 53.4**	**-0.5**
JFK	**Kawauchi**	**1.54**	**266**	P	**Pn**	**16 28 34.9**	**-0.7**
JFK				*e*S	**Sn**	**16 28 54.1**	**-0.7**
JMM	**Marumori**	**1.65**	**284**	P	**Pn**	**16 28 36.2**	**-0.7**
JMM				*e*S	**Sn**	**16 28 56.9**	**-0.4**
ONAJ	**Iwakimizuishiy**	**1.65**	**257**	P	**Pn**	**16 28 36.2**	**-0.8**
ONAJ				S	**Sn**	**16 28 56.8**	**-0.6**
JOU	**Okura**	**1.91**	**298**	P	**Pn**	**16 28 40.6**	**0.0**
JOU				*e*S	**Sn**	**16 29 04.5**	**+0.7**
JMK	**Ichinoseki**	**1.93**	**320**	P	**Pn**	**16 28 40.5**	**-0.3**
JMK				*e*S	**Sn**	**16 29 03.9**	**-0.3**
JFT	**Otama**	**1.97**	**272**	P	**Pn**	**16 28 41.7**	**+0.3**
JFT				*e*S	**Sn**	**16 29 05.8**	**+0.6**
JOM	**Ohasama**	**2.31**	**330**	P	**Pn**	**16 28 45.8**	**-0.4**
JOM				*e*S	**Sn**	**16 29 13.6**	**-0.2**
JYK	**Kaneyama**	**2.40**	**307**	P	**Pn**	**16 28 47.5**	**+0.1**
JAG	**Ashikaga**	**2.89**	**250**	P	**Pn**	**16 28 54.2**	**+0.1**
JAG				*e*S	**Sn**	**16 29 27.7**	**-0.3**
JAW	**Awa shima**	**2.98**	**290**	P	**Pn**	**16 28 56.2**	**+0.9**
JANG	**Nango**	**3.06**	**341**	P	**Pn**	**16 28 55.2**	**-1.1**
JANG				*e*S	**Sn**	**16 29 30.0**	**-2.1**
BSO1	**Boso 1**	**3.19**	**208**	P	**Pn**	**16 28 57.3**	**-0.9**
BSO1				S	**Sn**	**16 29 33.6**	**-1.8**
JRY	**Ryogami san**	**3.46**	**246**	P	**Pn**	**16 29 02.1**	**+0.1**
JRY				*e*S	**Sn**	**16 29 41.1**	**-1.1**
JSD	**Sado**	**3.65**	**280**	P	**Pn**	**16 29 05.1**	**+0.6**
JOD2	**Odawara 2**	**3.73**	**235**	P	**Pn**	**16 29 05.7**	**0.0**
JOD2				*e*S	**Sn**	**16 29 48.6**	**-0.2**
MJAR	**Matsushiro Arr**	**3.80**	**257**	Pn	**Pn**	**16 29 07.8**	**+1.2**
	4.6nm,0.3s,baz=85,slow=15,SNR=37						
MJAR	**Matsushiro Arr**	**3.80**	**257**	P	**Pn**	**16 29 07.8**	**+1.2**
MJAR				pmax	pmax		
	comp=Z,5.0nm,0.3s						
MAJO	**Matsushiro**	**3.80**	**257**	*e*P	**Pn**	**16 29 08.4**	**+1.8**
MAT	**Matsushiro**	**3.80**	**257**	P	**Pn**	**16 29 08.3**	**+1.7**
MAT				S	**Sn**	**16 29 58.2**	**+7.7**
ERM	**Erimo**	**4.53**	**3**	*e*P	**Pn**	**16 29 15.5**	**-1.1**
JHJ	**Hachijo jima 2**	**5.01**	**210**	Pn	**Pn**	**16 29 21.9**	**-1.3**
	comp=Z,12nm,0.3s,baz=91,slow=16,SNR=17						
JHJ				Sn	**Sn**	**16 30 15.2**	**-5.1**
	comp=Z,33nm,0.3s,baz=306,slow=21,SNR=9.3						
ASAJ	**Asahikawa**	**6.63**	**359**	Pn	**Pn**	**16 29 45.5**	**+0.1**
	comp=Z,2.2nm,0.3s,baz=211,slow=12,SNR=18						
ASAJ				Sn	**Sn**	**16 30 57.0**	**-3.0**
	comp=Z,1.3nm,0.3s,baz=196,slow=15,SNR=6.2						
ASAJ				LR	LR	16 32 35.2	
	comp=Z,114nm,20.1s,baz=183,slow=40						
ASAJ	**Asahikawa**	**6.63**	**359**	P	**Pn**	**16 29 45.5**	**+0.1**
ASAJ						16 30 57.1	
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,114nm,20.1s						
CBIJ	**Chichi jima**	**10.37**	**183**	Pn	**Pn**	**16 30 31.9**	**-4.9**
	comp=Z,2.7nm,0.3s,baz=336,slow=20,SNR=5.2						
CBIJ				Sn	**Sn**	**16 32 20.1**	**-12**
	comp=Z,5.4nm,0.3s,baz=0.0,slow=20,SNR=5.0						
CBIJ				LR	LR	16 34 30.8	
	comp=Z,38nm,19.2s,baz=131,slow=38						
KSRS	**Korea Array**	**11.83**	**274**	Pn	**Pn**	**16 30 58.5**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=80,slow=13,SNR=3.3						
KSRS				LR	LR	16 35 16.5	
	comp=Z,108nm,18.5s,baz=80,slow=36						
YAK	**Yakutsk**	**25.89**	**346**	*e*P	**P**	**16 33 48.7**	**+10**
YAK				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.5						
SONM	**Songino Array**	**28.47**	**303**	P	**P**	**16 34 03.9**	**+1.4**
	comp=Z,1.1nm,0.6s,mb3.7,baz=108,slow=9.0,SNR=7.9						
SONM	**Songino Array**	**28.47**	**303**	P	**P**	**16 34 03.9**	**+1.4**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZALV	**Zalesovo Beam**	**42.44**	**312**	P	**P**	**16 36 02.9**	**+0.8**
	comp=Z,1.4nm,0.7s,mb3.7,baz=89,slow=7.7,SNR=9.7						
ZALV	**Zalesovo Beam**	**42.44**	**312**	P	**P**	**16 36 02.9**	**+0.8**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.5						
MK31	**Makanchi Array**	**44.83**	**302**	*e*P	**P**	**16 36 22.2**	**+0.8**
MKAR	**Makanchi Array**	**44.83**	**302**	P	**P**	**16 36 22.3**	**+0.9**
	comp=Z,0.6nm,0.7s,mb3.5,baz=84,slow=9.5,SNR=7.1						
MKAR	**Makanchi Array**	**44.83**	**302**	P	**P**	**16 36 22.3**	**+0.9**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**44.83**	**302**	P	**P**	**16 36 22.3**	**+0.9**
KURK	**Kurchatov**	**46.53**	**308**	*e*P	**P**	**16 36 35.1**	**+0.2**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
KURK	**Kurchatov**	**46.53**	**308**	*e*P	**P**	**16 36 35.1**	**+0.2**
	comp=Z,5.3nm,0.9s,mb4.5						
ILAR	**Eielson Array**	**48.52**	**33**	P	**P**	**16 36 50.0**	**0.0**
	comp=Z,0.2nm,0.6s,mb3.4,baz=273,slow=6.1,SNR=3.4						
BVAR	**Borovoye Array**	**51.09**	**312**	P	**P**	**16 37 10.5**	**+0.6**
	comp=Z,0.9nm,0.4s,mb4.0,baz=75,slow=9.5,SNR=4.6						
BVAR	**Borovoye Array**	**51.09**	**312**	P	**P**	**16 37 10.5**	**+0.7**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BRVK	**Borovoye**	**51.15**	**312**	P	**P**	**16 37 10.3**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
BRVK	**Borovoye**	**51.15**	**312**	P	**P**	**16 37 10.3**	**+0.1**
	comp=Z,5.0nm,0.9s,mb4.4						
ABKAR	**Akbulak array**	**58.50**	**310**	P	**P**	**16 38 03.6**	**+0.1**
	comp=Z,1.0nm,0.6s,mb4.0						
ASAR	**Alice Springs**	**61.40**	**189**	P	**P**	**16 38 23.4**	**-0.2**
	comp=Z,0.3nm,0.9s,mb3.4,baz=0.5,slow=6.3,SNR=5.6						
ARCES	**ARCESS Array B**	**63.97**	**340**	P	**P**	**16 38 41.3**	**+1.1**
	comp=Z,0.7nm,0.5s,mb3.9,baz=67,slow=6.9,SNR=3.1						
ARCES	**ARCESS Array B**	**63.97**	**340**	P	**P**	**16 38 41.3**	**+1.1**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	**FINESS Array B**	**68.93**	**333**	P	**P**	**16 39 12.8**	**+0.7**
	comp=Z,1.8nm,0.6s,mb4.2,baz=28,slow=10,SNR=4.4						
FINES	**FINESS Array B**	**68.93**	**333**	P	**P**	**16 39 12.8**	**+0.7**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NB2	**NORSAR Subarra**	**74.20**	**338**	P	pP	16 39 54.2	+2.3
	comp=Z,1.1nm,0.7s,baz=40,slow=6.2						
NOA	**NORSAR Array B**	**74.20**	**338**	P	**P**	**16 39 44.7**	**+0.9**
	comp=Z,0.4nm,0.6s,mb3.6,baz=39,slow=5.8,SNR=2.8						
NOA	**NORSAR Array B**	**74.20**	**338**	P	**P**	**16 39 44.7**	**+0.9**
AKASG	**Malin Array Be**	**74.62**	**323**	P	**P**	**16 39 47.2**	**+0.7**
	comp=Z,0.3nm,0.4s,mb3.6,baz=42,slow=7.3,SNR=2.7						
TXAR	**Lajitas Array**	**88.96**	**53**	P	**P**	**16 41 01.0**	**-1.3**
	comp=Z,0.1nm,0.5s,mb3.4,baz=340,slow=4.8,SNR=2.4						
LCO	**Las Campanas**	**150.85**	**83**	*e*PKPbc	PKPbc	16 47 58.2	-1.8

WEL 22 16:42:56.5±0.7,37°.06S×177°.11E,h164km±4km,ML3.6/13, 1C,Error ellipse: s-maj=6.8km s-min=5.9km az=0.0,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**1.20**	**180**	⇑PN	Pn	16 43 24.5	+0.4
URZ				SN	Sn	16 43 46.3	+0.8
MWZ	**Matawai**	**1.31**	**166**	PN	Pn	16 43 25.5	+0.3
MWZ				SN	Sn	16 43 47.5	+0.1
PUZ	**Puketiti**	**1.36**	**138**	PN	Pn	16 43 26.0	+0.3
PUZ				SN	Sn	16 43 47.7	-0.4
CNGZ	**Carnagh Statio**	**1.67**	**149**	PN	Pn	16 43 29.6	+0.9
RAHZ	**Arahi**	**1.85**	**181**	PN	Pn	16 43 31.6	+0.9
PRGZ	**Paritu Road**	**1.96**	**162**	PN	Pn	16 43 32.3	+0.4
KNZ	**Kokohu**	**2.01**	**167**	PN	Pn	16 43 32.4	0.0
NMHZ	**Naumai**	**2.05**	**187**	PN	Pn	16 43 34.2	+1.3
MHGZ	**Mahia Peninsul**	**2.18**	**164**	PN	Pn	16 43 34.5	+0.1
MCHZ	**McNeill Hill**	**2.40**	**188**	PN	Pn	16 43 37.0	0.0
FWVZ	**Far West T-bar**	**2.51**	**209**	PN	Pn	16 43 38.7	+0.3
CKHZ	**Cape Kidnapper**	**2.59**	**181**	PN	Pn	16 43 38.9	-0.4
KAHZ	**Kahuranaki**	**2.74**	**184**	PN	Pn	16 43 40.6	-0.5
PNHZ	**Pukenui**	**2.94**	**194**	PN	Pn	16 43 42.2	-1.3
PXZ	**Pawanui**	**2.97**	**184**	PN	Pn	16 43 42.9	-1.1
WPHZ	**Waipukurau**	**3.04**	**190**	PN	Pn	16 43 43.4	-1.4
TSZ	**Takapari Road**	**3.13**	**196**	PN	Pn	16 43 43.9	-2.0
PRHZ	**Porangahau**	**3.22**	**186**	PN	Pn	16 43 45.7	-1.4
HOWZ	**Holdsworth Sta**	**4.03**	**197**	PN	Pn	16 43 54.5	-2.8
OGWZ	**Otaki Gorge**	**4.04**	**201**	PN	Pn	16 43 55.0	-2.6
TMWZ	**Te Maipa**	**4.15**	**193**	PN	Pn	16 43 56.3	-2.7
KIW	**Kapiti Island**	**4.17**	**204**	PN	Pn	16 43 56.3	-2.8
MTW	**Mount Morrison**	**4.28**	**197**	PN	Pn	16 43 57.4	-3.2
TCW	**Tory Channel**	**4.70**	**207**	PN	Pn	16 44 02.6	-3.4
PLWZ	**Palliser**	**4.73**	**197**	PN	Pn	16 44 02.9	-3.5
TUWZ	**Tuamarina**	**5.01**	**208**	PN	Pn	16 44 06.5	-3.6
NNZ	**Nelson**	**5.06**	**214**	PN	Pn	16 44 08.1	-2.7
BSWZ	**Blackbirch Sta**	**5.28**	**207**	PN	Pn	16 44 10.2	-3.4
KHZ	**Kahutara**	**6.01**	**206**	PN	Pn	16 44 19.7	-3.7
LTZ	**Lake Taylor**	**6.82**	**212**	PN	Pn	16 44 29.6	-

VBEM	Beaver Butte	5.80	81	P		Pn	18 32 05.3	-0.2
VFP	Flag Point	5.91	78	P		Pn	18 32 06.5	-0.4
LON	Longmire	6.00	64	*e*Pn		Pn	18 32 07.0	-1.1
	14nm,0.6s							
VIPM	Ingram Point	6.48	86	P		Pn	18 32 13.6	-1.2
WDC	Whiskeytown Da	6.51	124	Pn		Pn	18 32 12.3	-2.9
JCW	Jim Creek	6.56	52	*e*Pn		Pn	18 32 16.2	+0.3
	38nm,0.4s							
TBM	Table Mountain	6.92	63	P		Pn	18 32 20.9	+0.1
ETW	Entiat	7.25	61	*e*Pn		Pn	18 32 25.1	-0.2
	11nm,0.5s							
MOD	Modoc	7.30	107	*e*Pn		Pn	18 32 27.5	+1.5
	7.5nm,1.0s							
HOPS	Hopland	7.33	135	Pn		Pn	18 32 22.8	-3.6
	11nm,0.8s							
HAWA	Hanford	7.41	71	*e*Pn		Pn	18 32 27.5	-0.1
	4.7nm,0.4s							
OD2	Odessa Site #2	8.21	65	*e*Pn		Pn	18 32 37.5	-1.0
	6.3nm,0.5s							
WVOR	Wild Horse Val	8.28	100	*e*Pn		Pn	18 32 38.6	-0.8
	4.9nm,0.9s							
BMO	Blue Mountains	8.84	83	*e*Pn		Pn	18 32 43.2	-3.9
	1.7nm,0.6s							
CMB	Columbia Colle	9.46	129	Pn		Pn	18 32 51.6	-4.1
	8.8nm,1.1s							
NVAR	Mina Array Bea	10.42	121	Pn		Pn	18 33 08.2	-0.6
	0.1nm,0.3s,baz=294,slow=13,SNR=6.1							
BSMT	Bassoo Peak	10.89	66	*e*Pn		Pn	18 33 13.3	-2.0
	13nm,1.4s							
HLID	Hailey	11.03	89	*e*Pn		Pn	18 33 17.8	+0.6
	16nm,1.0s							
JTMT	Jette	11.20	67	*e*P		Pn	18 33 11.8	-7.6
	6.0nm,1.0s							
JTMT				Pn		Pn	18 33 20.9	+1.4
MSO	Missoula	11.29	72	*e*P		Pn	18 33 21.5	+0.9
	3.8nm,0.8s							
SLMT	Seeley Lake	11.64	70	*e*P		Pn	18 33 24.8	-0.7
	12nm,0.9s							
CHMT	Chamberlain Mo	11.76	72	*e*P		Pn	18 33 28.4	+1.2
	3.5nm,0.9s							
WALA	Waterton Lakes	11.77	61	Pn		Pn	18 33 26.6	-0.6
M13A	Montello	11.78	100	*e*P		Pn	18 33 27.9	+0.5
	5.6nm,1.0s							
MCMT	McKenzie Canyo	12.00	82	*e*P		Pn	18 33 31.3	+0.9
	2.2nm,1.0s							
DLMT	Dillon	12.16	80	P		Pn	18 33 32.8	+0.3
	5.5nm,1.0s							
LRM	Limekiln Ridge	12.25	77	P		Pn	18 33 28.2	-5.7
	24nm,1.0s							
LRM				*e*P			18 33 34.7	
BOZ	Bozeman (W)	12.83	78	*e*P		Pn	18 33 41.9	+0.1
	2.5nm,0.8s							
GSC	Goldstone	13.42	128	Pn		Pn	18 33 49.4	-0.4
	4.5nm,1.0s							
IMW	Indian Meadow	13.47	86	*e*Pn		Pn	18 33 51.5	+1.1
	23nm,1.5s							
TPAW	Teton Pass	13.53	87	P		Pn	18 33 51.0	-0.3
	18nm,1.4s							
HWUT	Hardware Ranch	13.55	96	*e*P		Pn	18 33 52.4	+0.9
	32nm,1.8s							
REDW	Red Top Meadow	13.62	88	*e*Pn		Pn	18 33 53.0	+0.5
	25nm,1.5s							
LOHW	Long Hollow	13.75	87	*e*P		Pn	18 33 55.9	+1.5
	9.2nm,1.1s							
ARUT	Antelope Range	13.90	113	*e*Pn		Pn	18 33 57.2	+0.8
	27nm,1.5s							
DLBC	Dease Lake	14.05	359	LR		LR	18 38 48.8	
	comp=Z,198nm,18.9s,baz=300,slow=34							
CCUT	Cedar City	14.09	113	*e*Pn		Pn	18 33 59.7	+0.7
	23nm,1.4s							
GCMT	Greycliff	14.20	77	*e*Pn		Pn	18 34 09.3	+8.9
	21nm,0.9s							
EGMT	Eagleton	14.25	68	*e*Pn		Pn	18 34 03.4	+2.3
	32nm,1.2s							
MSU	Marysvale	14.37	108	*e*Pn		Pn	18 34 04.7	+1.9
	35nm,1.7s							
RLMT	Red Lodge	14.52	80	*e*Pn		Pn	18 34 07.9	+3.1
	18nm,0.9s							
PDAR	Pinedale Array	14.67	89	Pn		Pn	18 34 09.0	+2.1
	0.1nm,0.3s,baz=278,slow=9.0,SNR=6.0							
PDAR				LR		LR	18 39 42.5	
	comp=Z,232nm,18.7s,baz=344,slow=38							
TMUT	Trail Mountain	14.67	104	*e*Pn		Pn	18 34 08.7	+1.7
	7.1nm,0.7s							
SRU	San Rafael	15.23	104	*e*Pn		Pn	18 34 17.0	+2.6
	34nm,0.9s							
WUAZ	Wupatki	16.58	116	*e*Pn		Pn	18 34 29.2	-2.6
	12nm,1.2s							
PV04	Paradox Valley	16.68	104	*e*Pn		Pn	18 34 34.5	+1.4
PV01	Paradox Valley	17.04	104	*e*Pn		Pn	18 34 36.8	-0.8
	2μm,1.2s							
MVCO	Mesa Verde	17.54	107	*e*P		Pn	18 34 44.3	+0.5
	117nm,1.9s							
SMCO	Snowmass	17.70	99	*e*P		Pn	18 34 45.3	-0.4
	3.0nm,0.4s							
PHWY	Pilot Hill	18.01	91	*e*P		Pn	18 34 49.2	-0.3
	7.8nm,1.0s							
ISCO	Idaho Springs	18.42	96	*e*P		Pn	18 34 54.3	-0.2
	7.1nm,0.9s							
SDCO	Great Sand Dun	19.36	102	*e*P		Pn	18 35 05.6	-0.3
	12nm,1.4s							
YKA	Yellowknife Ar	20.12	21	P		P	18 35 14.8	+2.1
	2.6nm,0.9s,baz=206,slow=11,SNR=3.1							
ANMO	Albuquerque	20.16	110	LR		LR	18 43 10.0	
	comp=Z,160nm,19.5s,MS3.4,baz=120,slow=38							
ANMO	Albuquerque	20.16	110	*e*P		P	18 35 13.2	-0.2
	1.9nm,0.9s							
LENM	Lemitar	20.27	113	*e*P		P	18 35 16.6	+2.0
	6.8nm,1.0s							
BNM	Barren Site	20.51	112	*e*P		P	18 35 18.4	+1.2
	6.0nm,1.1s							
FFC	Flin Flon	20.58	50	*e*P		P	18 35 16.5	-1.3
	16nm,1.1s							
ILAR	Eielson Array	22.56	341	P		P	18 35 45.4	+6.5
	1.1nm,0.8s,mb3.3,baz=155,slow=7.9,SNR=11							
ULM	Lac du Bonnet	23.50	64	LR		LR	18 44 13.9	
	comp=Z,130nm,21.9s,MS3.4,baz=22,slow=35							
AGMN	Agassiz Nation	23.55	68	*e*P		P	18 35 46.9	-2.5
	7.2nm,0.9s,mb4.1							
ECSD	EROS Data Cent	23.68	80	*e*P		P	18 35 50.1	-0.5
	38nm,1.7s,mb4.5							
INK	Inuvik	24.04	356	LR		LR	18 45 01.3	
	comp=Z,73nm,18.9s,MS3.2,baz=129,slow=36							
TXAR	Lajitas Array	25.53	117	P		P	18 36 07.4	-0.3
	1.3nm,1.0s,mb3.4,baz=302,slow=7.7,SNR=6.3							
TXAR				LR		LR	18 46 19.9	
	comp=Z,58nm,20.9s,MS3.1,baz=5.0,slow=37							
WMOK	Wichita Mounta	25.57	102	*e*P		P	18 36 07.0	-0.9
	8.3nm,1.1s,mb4.2							
EYMN	Ely	26.49	69	*e*P		P	18 36 16.2	+0.1
	6.1nm,1.0s,mb4.1							
MIAR	Mount Ida	29.35	97	P		P	18 36 40.8	-1.0
	3.9nm,1.0s,mb4.1							
SCHQ	Schefferville	40.71	52	LR		LR	18 55 05.0	
	comp=Z,142nm,18.6s,MS3.9,baz=282,slow=36							
ARCES	ARCESS Array B	64.91	9	LR		LR	19 09 58.4	
	comp=Z,37nm,19.8s,MS3.6,baz=300,slow=36							
CN2	Changchun	69.65	312	*e*P		P	18 41 42.8	-5.3
CN2				*es*P		sP	18 41 49.0	-11
CN2				*e*S		S	18 50 47.3	-7.4
CN2				pmax		pmax		
	comp=Z,10.0nm,0.7s,mb4.8							
CN2				pmax		pmax		
	comp=Z,200nm,4.0s							
FINES	FINESS Array B	72.69	12	P		P	18 42 08.9	+2.7
	comp=Z,1.9nm,0.7s,mb4.1,baz=3.4,slow=7.0,SNR=4.0							
SONM	Songino Array	75.77	325	P		P	18 42 29.0	+4.6
	comp=Z,0.5nm,0.8s,mb3.5,baz=29,slow=3.3,SNR=3.7							
ZALV	Zalesovo Beam	77.68	340	P		P	18 42 38.9	+3.9
	comp=Z,0.8nm,0.7s,mb3.7,baz=28,slow=6.5,SNR=4.1							
HHC	Hu-ho-hao-te	78.89	317	*e*P		P	18 42 36.4	-5.5
HHC				S		S	18 52 31.1	-7.3
HHC				pmax		pmax		
	comp=Z,10.0nm,0.7s,mb4.8							
HHC				pmax		pmax		
	comp=Z,57nm,7.0s							
BVAR	Borovoye Array	81.42	348	P		P	18 42 59.1	+3.7
	comp=Z,1.2nm,0.7s,mb4.0,baz=21,slow=4.5,SNR=9.0							
LPAZ	La Paz	82.32	122	P		P	18 43 00.9	+0.4
	comp=Z,2.5nm,0.8s,mb4.2,baz=338,slow=6.3,SNR=6.6							
MKAR	Makanchi Array	84.90	339	P		P	18 43 16.6	+3.2
	comp=Z,0.2nm,0.6s,mb3.4,baz=21,slow=4.8,SNR=4.1							
WHN	Wuhan	85.31	309	P		P	18 43 12.5	-3.3
WMQ	Urumqi	86.05	334	*e*P		P	18 43 16.1	-3.2
CD2	Chengdu	90.60	316	P		P	18 43 37.0	-4.2
QIZ	Qiongzhong	96.77	305	P		P	18 44 03.8	-5.9
QIZ				sP		sP	18 44 08.5	-13
QIZ				S		S	18 55 24.1	-5.8
QIZ				LR		LR		
	comp=N,100nm,14.1s							
QIZ				LR		LR		
	comp=Z,140nm,18.1s							

IDC 22 18:30:45.2±3.3, 49°33N×152°87E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.3/23, mbtmp3.5/4, Error ellipse: s-maj=80.3km s-min=39.3km az=71.0, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	21.56	246	P	P	18 35 36.9	+0.8
	0.5nm,0.7s,baz=42,slow=9.8,SNR=3.3						
MKAR	Makanchi Array	45.66	295	P	P	18 39 06.4	-0.8
	0.7nm,0.4s,baz=67,slow=7.7,SNR=18						
BVAR	Borovoye Array	49.12	308	P	P	18 39 34.9	+0.8
	0.3nm,0.3s,baz=75,slow=6.7,SNR=5.0						
ASAR	Alice Springs	74.61	198	P	P	18 42 26.0	+0.1
	0.2nm,0.7s,baz=20,slow=6.4,SNR=3.2						

*SZGRF **22** 18:30:10.0, 23°56S×177°75W, h33km, South of Fiji Islands*
*IDC **22** 18:31:15.6±1.9, 22°09S×179°45W, h570km±22km, mb3.6/13, mb1 3.8/14, mb1mx3.8/18, mbtmp3.6/14, Error ellipse: s-maj=17.4km s-min=14.2km az=151.0*
*ISCJB **22** 18:31:15.7±0.6, 22°24S±0°06×179°52W±0°07, h590km±7km, mb4.3/53, Error ellipse: s-maj=10.3km s-min=8.1km az=27.4*
*NEIC **22** 18:31:16.0±0.6, 22°17S×179°52W, h583km±7km, mb4.4/32, Error ellipse: s-maj=10.1km s-min=6.9km az=152.0*
*BGS **22** 18:31:18.8±4.2, 22°17S×179°52W, h583km, mb4.4(NEIC)*
*MOS **22** 18:31:18.0±3.1, 21°93S×179°73W, h580km, mb4.5/12, Error ellipse: s-maj=12.8km s-min=11.7km az=105.5*
ISC 22 18:31:16.3±0.7, 22°18S±0°07×179°51W±0°07, h582km±6km, h588km±4.8km:pP-P, n236, s0s88/91, mb4.3/53, 25C-8D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.98	332	‖ *i*P	P	18 32 48.2	+0.2
MSVF				*e*S	S	18 34 03.4	+0.7
RAO	Raoul Island	7.19	169	P	P	18 33 06.3	-0.9
	88nm,0.3s,baz=91,slow=21,SNR=5.9						
DZM	Mont Dzumac	13.02	268	*e*P	P	18 34 05.4	+0.1
	25nm,0.9s						
URZ	Urewera	16.29	190	P	P	18 34 35.6	-1.3
	2.4nm,0.3s,baz=295,slow=6.6,SNR=16						
URZ				S	S	18 37 14.5	-5.8
	0.7nm,0.3s,baz=83,slow=16,SNR=5.0						
URZ	Urewera	16.29	190	*e*P	P	18 34 34.9	-1.9
URZ				*e*Sn	S	18 37 14.9	-5.5
EIDS	Eidsvold	27.07	257	*e*P	P	18 36 10.6	-3.1
	4.1nm,0.7s,mb4.2						
CTA	Charters Tower	31.96	267	P	P	18 36 56.7	+0.8
	6.1nm,0.4s,mb4.5,baz=78,slow=9.9,SNR=14						
CTA	Charts Tower	31.96	267	P	P	18 36 56.7	+0.8
CTAO	Charters Tower	31.96	267	*e*P	P	18 36 56.2	+0.3
CTAO				pmax	pmax		
	comp=Z,50nm,1.4s,mb5.0						
CTAO	Charters Tower	31.96	267	*e*P	P	18 36 56.2	+0.3
	comp=Z,50nm,1.4s,mb5.0						
PMG	Port Moresby	34.40	286	*i* P	P	18 37 16.3	-0.1
PMG				pmax	pmax		
	comp=Z,9.0nm,0.7s						
PMG	Port Moresby	34.40	286	*e*P	P	18 37 16.4	-0.1
	comp=Z,12nm,0.9s,mb4.5						
STKA	Stephens Creek	35.80	246	P	P	18 37 29.2	+1.3
	comp=Z,1.5nm,0.5s,mb3.8,baz=120,slow=11,SNR=8.8						
STKA				PcP	PcP	18 39 39.4	+0.3
	comp=Z,2.5nm,1.0s,baz=197,slow=13,SNR=3.3						
STKA	Stephens Creek	35.80	246	P	P	18 37 29.2	+1.3
STKA						18 39 39.4	
STKA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
STKA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
STKA	Stephens Creek	35.80	246	*e*P	P	18 37 28.9	+1.0
	comp=Z,0.8nm,0.9s,mb3.2						
ASAR	Alice Springs	42.78	259	P	P	18 38 24.4	+0.5
	comp=Z,1.0nm,0.3s,mb3.8,baz=93,slow=8.3,SNR=57						
ASAR				PcP	PcP	18 40 02.2	+0.4
	comp=Z,2.8nm,0.6s,baz=111,slow=3.9,SNR=12						
WRAB	Tennant Creek	42.99	264	*e*P	P	18 38 24.5	-1.1
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.2						
WRAB	Tennant Creek	42.99	264	*e*P	P	18 38 24.5	-1.1
	comp=Z,5.8nm,0.8s,mb4.2						
WRA	Warramunga Arr	43.00	264	P	P	18 38 25.5	-0.2
FITZ	Fitzroy Crossi	51.43	264	*e*P	P	18 39 29.3	+0.5
SBA	Scott Base	56.12	183	*e*P	P	18 40 03.3	+2.5
MBWA	Marble Bar	56.13	259	*e*P	P	18 40 01.3	-0.6
	comp=Z,15nm,0.7s,mb4.3						
CASY	Casey	61.85	206	*e*P	P	18 40 39.1	-0.1
	comp=Z,5.7nm,0.9s,mb3.8						
MJAR	Matsushiro Arr	70.74	325	P	P	18 41 34.0	-0.6
	comp=Z,3.0nm,0.6s,mb4.0,baz=160,slow=6.0,SNR=10						
MAJO	Matsushiro	70.74	325	*e*P	P	18 41 33.8	-0.9
MAJO				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.3						
MAJO	Matsushiro	70.74	325	*e*P	P	18 41 33.8	-0.9
	comp=Z,10.0nm,1.0s,mb4.3						
MAT	Matsushiro	70.74	325	P	P	18 41 34.2	-0.5
KSM	Kuching	72.27	279	*e*P	P	18 41 44.2	+0.1
	comp=Z,8.2nm,0.8s,mb4.3						
TWG	Pinlang	73.12	304	*e*P	P	18 41 47.0	-1.7
	comp=Z,10nm,0.5s,mb4.6						
KSRS	Korea Array	77.22	320	P	P	18 42 12.2	+0.9
	comp=Z,1.1nm,0.7s,mb3.4,baz=142,slow=6.3,SNR=6.5						
KSRS	Korea Array	77.22	320	P	P	18 42 12.2	+1.0
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.4						
PET	Petropavlovsk	77.25	347	*e*P	P	18 42 10.3	-0.7
PET				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.3						
PETK	Petropavlovsk-	77.54	346	P	P	18 42 12.3	-0.2
	comp=Z,11nm,0.7s,mb4.4,baz=126,slow=6.6,SNR=25						
PETK	Petropavlovsk-	77.54	346	P	P	18 42 12.3	-0.2
MAW	Mawson	79.51	200	P	P	18 42 24.3	+1.3
	comp=Z,2.5nm,0.6s,mb3.7,baz=129,slow=6.1,SNR=8.3						
QIZ	Qiongzhong	80.27	295	P	P	18 42 27.8	0.0
QIZ				pP	pP	18 44 29.6	-1.0
QIZ				S	S	18 51 44.5	-1.9
QIZ				pmax	pmax		
	comp=Z,16nm,2.0s,mb4.0						
QIZ				pmax	pmax		
	comp=Z,53nm,3.1s						
HABR	Khabarovsk	81.22	331	*e*P	P	18 42 32.2	+0.2
HABR				*PP	pP	18 44 35.5	+0.3
HABR				*e*		18 45 46.5	
HABR				S	S	18 51 53.1	-1.6
HABR				*e*SS	SS	18 57 23.8	-4.5
HABR				*e*SSS		19 00 58.3	
HABR				pmax	pmax		
	comp=E,13nm,1.3s						
HABR				pmax	pmax		
	comp=N,7.0nm,1.2s						
HABR				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.2						
HABR				MLR	MLR		
	comp=Z,26nm,16.0s						
CMB	Columbia Colle	81.64	43	*e*P	P	18 42 34.5	+0.1
CMB				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.2						
CMB	Columbia Colle	81.64	43	*e*P	P	18 42 34.5	0.0
	comp=Z,7.6nm,0.9s,mb4.2						
KULM	Kulim	82.62	279	*e*P	P	18 42 40.4	+0.4
	comp=Z,22nm,1.3s,mb4.5						
CN2	Changchun	82.78	323	*e*P	P	18 42 40.8	+0.8
CN2				*es*P	sP	18 45 41.0	-1.6
CN2				*e*S	S	18 52 10.6	+0.1
CN2				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.6						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
NVAR	Mina Array Bea	83.21	44	P	P	18 42 43.3	+1.0
	comp=Z,5.1nm,0.9s,mb4.1,baz=223,slow=8.6,SNR=23						
MOD	Modoc	84.00	40	*e*P	P	18 42 46.6	+0.4
	comp=Z,3.7nm,0.8s,mb4.0						
SYO	Syowa Base	84.78	193	‖ *e*P	P	18 42 48.2	-1.4
SYO	Syowa Base	84.78	193	‖ *ep*P	pP	18 44 51.6	-2.5
WVOR	Wild Horse Val	85.32	40	*e*P	P	18 42 52.7	+0.2
WVOR				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.1						
WVOR	Wild Horse Val	85.32	40	*e*P	P	18 42 52.7	+0.2
	comp=Z,3.6nm,0.8s,mb4.0						
LON	Longmire	86.10	36	*e*P	P	18 42 55.4	-0.7
LON				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.1						
LON	Longmire	86.10	36	*e*P	P	18 42 55.4	-0.8
	comp=Z,4.2nm,0.8s,mb4.1						
GYA	Guiyang	86.26	300	*e*P	P	18 42 57.3	-0.1
GYA				pP	pP	18 45 05.4	+2.8
GYA				sP	sP	18 46 01.4	+0.3
GYA				PP	PP	18 46 31.8	+2.2
GYA				SKS		18 52 27.0	
GYA				S	S	18 52 44.3	-0.6
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4						
N12A	Clover Valley,	86.65	43	P	P	18 42 59.1	+0.2
	comp=Z,7.1nm,1.0s,mb4.3						
TTA	Tatalina	86.84	11	*e*P	P	18 42 58.9	-0.3
TTA				pmax	pmax		
	comp=Z,24nm,1.6s,mb4.7						
TTA	Tatalina	86.84	11	*e*P	P	18 42 58.9	-0.4
	comp=Z,24nm,1.6s,mb4.7						
PMR	Palmer	86.97	14	*e*P	P	18 42 58.9	-1.0
PMR				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.7						
PMR	Palmer	86.97	14	*e*P	P	18 42 58.9	-1.0
	comp=Z,14nm,0.9s,mb4.7						
HAWA	Hanford	87.13	37	*e*P	P	18 43 01.0	+0.1
	comp=Z,13nm,0.9s,mb4.7						
ETW	Entiat	87.42	36	*e*P	P	18 43 02.6	+0.3
	comp=Z,14nm,0.9s,mb4.7						
BMO	Blue Mountains	87.50	39	*e*P	P	18 43 03.0	+0.2
BMO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
BMO	Blue Mountains	87.50	39	*e*P	P	18 43 03.0	+0.2
	comp=Z,1.5nm,0.6s,mb3.9						
SEY	Seymchan	87.69	348	*ce*P	P	18 43 03.0	-0.2
XAN	Xi'an	88.03	308	P	P	18 43 06.3	+0.8
XAN				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.9						
TRF	Thorofare Moun	88.38	13	*e*P	P	18 43 05.3	-1.2
	comp=Z,20nm,0.8s,mb4.9						
HLID	Hailey	88.51	41	*e*P	P	18 43 08.3	+0.8
	comp=Z,5.8nm,1.0s,mb4.4						
KMI	Kunming	88.86	298	P	P	18 43 11.0	+1.4
KMI				pP	pP	18 45 18.0	+2.3
KMI				sP	sP	18 46 15.5	+1.6
KMI				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.0						
MNTX	Cornudas Mount	88.87	55	*e*P	P	18 43 10.2	+0.7
	comp=Z,4.3nm,0.8s,mb4.3						
MCK	McKinley	88.91	13	*e*P	P	18 43 07.6	-1.3
MCK				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
MCK	McKinley	88.91	13	*e*P	P	18 43 07.6	-1.3
	comp=Z,9.2nm,1.0s,mb4.6						
TXAR	Lajitas Array	89.14	58	P	P	18 43 12.2	+1.4
	comp=Z,3.9nm,0.9s,mb4.2,baz=211,slow=6.2,SNR=30						
HWUT	Hardware Ranch	89.27	44	*e*P	P	18 43 10.5	-0.6
	comp=Z,2.0nm,0.7s,mb4.1						
CMAR	Chiang Mai Arr	89.35	290	P	P	18 43 14.0	+2.0
	comp=Z,5.0nm,0.8s,mb4.4,baz=138,slow=3.2,SNR=30						
CHTO	Chiang Mai	89.50	290	*e*P	P	18 43 13.6	+1.0
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.6						
CHTO	Chiang Mai	89.50	290	*e*P	P	18 43 13.6	+1.0
	comp=Z,7.8nm,0.8s,mb4.6						
HHC	Hu-ho-hao-te	89.52	315	*e*P	P	18 43 12.9	+0.6
HHC				S	S	18 53 13.3	-1.0
HHC				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.9						
HHC				pmax	pmax		
	comp=Z,60nm,7.6s						
ANMO	Albuquerque	89.55	52	P	P	18 43 13.1	+0.5
	comp=Z,1.0nm,0.3s,mb4.1,baz=215,slow=7.6,SNR=3.3						
ANMO	Albuquerque	89.55	52	P	P	18 43 13.1	+0.6
ANMO	Albuquerque	89.55	52	P	P	18 43 13.1	+0.5
MCMT	McKenzie Canyo	90.14	41	*e*P	P	18 43 15.3	+0.3
	comp=Z,2.4nm,1.1s,mb3.9						
COLA	College	90.14	13	P	P	18 43 13.4	-1.2
ILAR	Eielson Array	90.26	13	P	P	18 43 13.8	-1.3
	comp=Z,1.7nm,0.7s,mb4.0,baz=219,slow=5.2,SNR=20						
CD2	Chengdu	90.51	303	P	P	18 43 16.1	-1.0
CD2				pP	pP	18 45 26.8	+3.2
CD2				sP	sP	18 46 25.6	+4.0
CD2				PP	PP	18 47 05.1	+2.1
CD2				SKS		18 52 50.3	
CD2				S	S	18 53 19.5	-4.1
CD2				sS	sS	18 57 11.3	+1.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
CD2				pmax	pmax		
	comp=Z,60nm,6.5s						
IMW	Indian Meadow	90.83	42	*e*P	P	18 43 19.2	+0.9
	comp=Z,3.8nm,1.0s,mb4.3						
PDAR	Pinedale Array	91.14	44	P	P	18 43 19.9	+0.1
	comp=Z,2.0nm,0.9s,mb4.1,baz=240,slow=2.9,SNR=12						
BOZ	Bozeman (W)	91.30	41	*e*P	P	18 43 20.4	0.0
BOZ				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
BOZ	Bozeman (W)	91.30	41	*e*P	P	18 43 20.4	0.0
	comp=Z,1.4nm,0.7s,mb4.0						
DAWY	Dawson	91.46	16	*e*P	P	18 43 19.3	-1.3
SDCO	Great Sand Dun	91.51	50	*e*P	P	18 43 21.9	+0.3
	comp=Z,2.2nm,0.8s,mb4.2						
LZH	Lanzhou	92.67	308	P	P	18 43 27.0	+0.1
LZH	

EAB	Aberfoyle	145.85	5	eP	PKPdf	18 49 50.0	+1.1
ESY	Stoneypath	146.23	3	P	PKPdf	18 49 50.6	+1.0
ESY	Stoneypath	146.23	3	eP	PKPdf	18 49 50.6	+1.0
EAU	Auchinoon	146.25	4	P	PKPdf	18 49 51.3	+1.7
EAU	Auchinoon	146.25	4	eP	PKPdf	18 49 51.3	+1.7
EBL	Broad Law	146.35	4	P	PKPdf	18 49 51.5	+1.6
EBL	Broad Law	146.35	4	eP	PKPdf	18 49 51.5	+1.6
LVV	L'vov	146.76	332	ePKIKP	PKPdf	18 49 52.6	+1.9
BR131	Keskin Array S	146.87	310	ePKPbc	PKPbc	18 49 53.6	-0.5
BRTR	Keskin Array B	146.87	310	PKPbc	PKPbc	18 49 53.9	-0.3
	comp=Z,4.8nm,0.7s,baz=136,slow=4.6,SNR=31						
ECK	Cauldkaine Hil	146.93	4	P	PKPbc	18 49 52.9	-0.9
ECK	Cauldkaine Hil	146.93	4	eP	PKPbc	18 49 52.9	-0.9
GAL1	Galloway	147.13	6	P	PKPbc	18 49 53.7	-0.6
GAL1	Galloway	147.13	6	eP	PKPbc	18 49 53.7	-0.6
GCD	Castle Douglas	147.19	5	P	PKPbc	18 49 53.4	-1.1
GCD	Castle Douglas	147.19	5	eP	PKPbc	18 49 53.4	-1.1
MMAI	Mount Meron Ar	147.36	297	PKPbc	PKPbc	18 49 56.5	+0.9
	comp=Z,10nm,0.5s,baz=76,slow=7.1,SNR=34						
TLCR		147.39	321	⇑PKIKP	PKPbc	18 49 55.3	0.0
TLCR		147.39	321	⇑iP	PKPbc	18 49 55.3	0.0
BSEG	Bad Segeberg	147.43	349	ePKPbc	PKPbc	18 49 54.8	-0.3
KWP	Kalwaria Pacla	147.47	333	ePKP	PKPbc	18 49 55.5	+0.2
GMM	Mts of Mourne	147.62	7	P	PKPbc	18 49 55.2	-0.4
GMM	Mts of Mourne	147.62	7	eP	PKPbc	18 49 55.2	-0.4
BUR08	Bucovina Ar. S	147.76	328	ePKPbc	PKPbc	18 49 56.5	+0.3
TESR		147.78	325	⇓iP	PKPbc	18 49 56.0	-0.3
TIRR	Tirgusor	148.04	321	⇑PKIKP	PKPbc	18 49 57.2	+0.2
TIRR	Tirgusor	148.04	321	⇑iP	PKPbc	18 49 57.2	+0.2
VRI	Vrincioaia	148.15	324	⇑PKHKP	PKPbc	18 49 57.6	+0.4
VRI	Vrincioaia	148.15	324	⇑iP	PKPbc	18 49 57.6	+0.4
STHS	Stebnicka Huta	148.24	334	ePKHKP	PKPbc	18 49 58.0	+0.7
STHS	Stebnicka Huta	148.24	334	ePKP	PKPbc	18 49 58.0	+0.7
UZH	Uzhgorod	148.40	332	ePKHKP	PKPbc	18 49 57.0	-0.8
UZH				e		18 50 06.4	
CRVS	Cervenica-Dubn	148.55	333	ePKHKP	PKPbc	18 49 58.6	+0.5
CRVS	Cervenica-Dubn	148.55	333	ePKP	PKPbc	18 49 58.5	+0.4
NIE	Niedzica	148.61	335	ePKP	PKPbc	18 49 58.9	+0.6
WME	Myndd Eilian	148.62	6	P	PKPbc	18 49 57.1	-1.1
WME	Myndd Eilian	148.62	6	eP	PKPbc	18 49 57.1	-1.1
TRPA	Tarpa	148.67	331	⇑iP	PKPbc	18 49 58.2	-0.2
WLF1	Llynfaes	148.72	6	P	PKPbc	18 49 56.4	-2.0
WLF1	Llynfaes	148.72	6	eP	PKPbc	18 49 56.4	-2.0
YRC	Rhoscolyn	148.74	6	P	PKPbc	18 49 56.8	-1.6
YRC	Rhoscolyn	148.74	6	eP	PKPbc	18 49 56.8	-1.6
WPM1	Penmaenmawr	148.79	5	P	PKPbc	18 49 57.5	-1.1
WPM1	Penmaenmawr	148.79	5	eP	PKPbc	18 49 57.5	-1.1
KSP	Ksiaz	148.84	341	ePKP	PKPbc	18 49 59.2	+0.5
NRDL	Niedersach Rie	148.84	349	ePKPbc	PKPbc	18 49 57.4	-1.3
OKC	Ostrava-Krasne	149.08	338	ePKHKP	PKPbc	18 49 59.1	-0.3
OKC	Ostrava-Krasne	149.08	338	⇑ePKP	PKPbc	18 49 59.1	-0.3
UPC	Upice	149.22	340	ePKHKP	PKPbc	18 50 00.0	+0.3
UPC				e		18 50 07.1	
UPC	Upice	149.22	340	⇑ePKP	PKPbc	18 50 00.0	+0.3
UPC				ePKPAB	PKPab	18 50 07.1	+0.5
DPC	Dobruska-Polom	149.26	340	ePKHKP	PKPbc	18 50 00.2	+0.4
DPC	Dobruska-Polom	149.26	340	⇑ePKP	PKPbc	18 50 00.2	+0.4
KECS	Kecovo	149.28	334	ePKHKP	PKPbc	18 50 00.8	+0.9
KECS				e		18 50 07.0	
KECS	Kecovo	149.28	334	ePKP	PKPbc	18 50 00.8	+0.9
KECS				e		18 50 07.0	
VOIR		149.32	325	⇓PKHKP	PKPbc	18 50 00.1	0.0
VOIR		149.32	325	⇓iP	PKPbc	18 50 00.1	0.0
CLL	Collm	149.33	345	ePKPbc	PKPbc	18 49 59.5	-0.4
CLL				ePKPab	PKPab	18 50 06.6	-0.5
CLL	Collm	149.33	345	⇓iPKP2	PKPab	18 50 06.7	-0.4
CLL				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CLL	Collm	149.33	345	⇑iPKPbc	PKPbc	18 49 59.9	0.0
	comp=Z,30nm,0.9s						
CLL				⇓iPKPab	PKPab	18 50 06.7	-0.4
	comp=Z,10.0nm,0.7s						
MORC	Moravsky Berou	149.34	338	ePKHKP	PKPbc	18 50 00.0	0.0
CLZ	Clausthal	149.41	348	ePKPbc	PKPbc	18 49 59.9	-0.2
BRG	Berggiesshubel	149.49	343	ePKPbc	PKPbc	18 50 00.3	0.0
BRG	Berggiesshubel	149.49	343	i PKP	PKPbc	18 50 00.4	+0.1
	comp=Z,23nm,0.6s						
BRG				i		18 50 07.7	
	comp=Z,6.3nm,0.6s						
BRG							
	comp=N,147nm,19.3s						
BRG							
	comp=E,110nm,21.4s						
BRG							
	comp=Z,160nm,23.7s						
BRG	Berggiesshubel	149.49	343	i PKHKP	PKPbc	18 50 00.4	+0.1
BRG				i		18 50 07.7	
BRG				pmax	pmax		
	comp=Z,14nm,0.6s						
BRG				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BRG				MLR	MLR		
	comp=N,88nm,19.3s						
BRG				MLR	MLR		
	comp=E,66nm,21.4s						
BRG				MLR	MLR		
	comp=Z,96nm,23.7s						
PVCC	Panska Ves	149.63	342	ePKHKP	PKPbc	18 50 01.1	+0.4
PVCC	Panska Ves	149.63	342	⇑ePKP	PKPbc	18 50 01.1	+0.4
VYHS	Vyhne	149.94	335	ePKHKP	PKPbc	18 50 01.5	+0.1
VYHS				e		18 50 09.8	
VYHS	Vyhne	149.94	335	⇑ePKP	PKPbc	18 50 01.5	+0.1
VYHS				e		18 50 09.8	
KOLL	Kolacno	150.03	336	ePKHKP	PKPbc	18 50 01.9	+0.2
KOLL	Kolacno	150.03	336	⇑ePKP	PKPbc	18 50 01.9	+0.2
VRAC	Vranov	150.07	339	⇓PKIKP	PKPdf	18 49 57.4	+1.4
VRAC	Vranov	150.07	339	⇓iP	PKPdf	18 49 57.4	+1.4
MCH1	Michaelchurch	150.11	4	P	PKPbc	18 49 59.8	-1.9
MCH1	Michaelchurch	150.11	4	eP	PKPbc	18 49 59.8	-1.9
PRU	Pruhonice	150.12	342	ePKHKP	PKPbc	18 50 02.5	+0.7
PRU				e		18 50 11.2	
PRU	Pruhonice	150.12	342	⇑ePKP	PKPbc	18 50 02.5	+0.7
PRU				ePKPAB	PKPab	18 50 11.2	+0.8
MOX	Moxa	150.28	346	ePKP	PKPbc	18 50 02.0	-0.2
TANN	Tannenbergstha	150.29	344	ePKPbc	PKPbc	18 50 02.3	+0.1
BUG	Bochum--Univer	150.32	351	ePKPbc	PKPbc	18 50 01.8	-0.4
TREC	Trest	150.44	340	ePKIKP	PKPbc	18 50 02.2	-0.4
TREC	Trest	150.44	340	⇑ePKP	PKPbc	18 50 02.2	-0.4
UBBA	Unterbreizbach	150.46	348	ePKPbc	PKPbc	18 50 02.1	-0.5
NKC	Novy Kostel	150.46	344	ePKIKP	PKPbc	18 50 02.8	+0.2
NKC	Novy Kostel	150.46	344	⇑ePKP	PKPbc	18 50 02.8	+0.2
WOL	Wolverton	150.89	2	P	PKPbc	18 50 02.9	-0.6
WOL	Wolverton	150.89	2	eP	PKPbc	18 50 02.9	-0.6
ROTZ	Rotzenmuhle	150.95	344	ePKPbc	PKPbc	18 50 03.5	-0.3
KHC	Kasperske Hory	151.16	342	ePKPbc	PKPbc	18 50 04.1	-0.1
KHC				ePKPab	PKPab	18 50 14.8	0.0
KHC	Kasperske Hory	151.16	342	⇑ePKP	PKPbc	18 50 04.4	+0.1
KHC				ePKPAB	PKPab	18 50 14.6	-0.2
GRF	Grafenberg Arr	151.26	345	ePKPab	PKPab	18 50 14.8	-0.3
MEM	Membach	151.30	353	PKPbc	PKPbc	18 50 04.3	-0.2
TNS	Taunus Mts	151.32	349	ePKPbc	PKPbc	18 50 04.3	-0.3
TNS				ePKPab	PKPab	18 50 15.1	-0.3
GEC2	GERESS Array S	151.39	342	ePKPbc	PKPbc	18 50 04.5	-0.3
CONA	Conrad Observa	151.50	338	⇑iPKiKP	PKiKP	18 50 05.1	-0.2
	comp=Z,7.5nm,0.7s						
BCLA	Clavier	151.56	354	PKPbc	PKPbc	18 50 04.6	-0.5
BCLA				PKPab	PKPab	18 50 15.8	-0.6
DYA	Yadsworthy	151.59	6	P	PKPbc	18 50 03.8	-1.3
DYA	Yadsworthy	151.59	6	eP	PKPbc	18 50 03.8	-1.3
GIVF	Givet	151.92	354	ePKP1	PKPbc	18 50 05.8	-0.1
	comp=Z,12nm,0.5s						
DOU	Dourbes	151.95	354	PKPbc	PKPbc	18 50 05.8	-0.1
DOU				PKPab	PKPab	18 50 17.2	-0.9
BAIF	Baives	152.02	355	ePKP1	PKPbc	18 50 06.0	-0.1
	comp=Z,6.3nm,0.6s						
MOA	Molln	152.10	340	⇑iPKPbc	PKPbc	18 50 05.9	-0.5
	comp=Z,2.3nm,0.5s						
VTS	Vitosha	152.18	322	⇑PKIKP	PKPbc	18 50 06.7	0.0
VTS	Vitosha	152.18	322	⇑iP	PKPbc	18 50 06.7	0.0
WLF	Walferdange	152.21	352	PKPbc	PKPbc	18 50 07.2	+0.6
WLF				PKPab	PKPab	18 50 19.1	-0.1
WLF	Walferdange	152.21	352	ePKPbc	PKPbc	18 50 06.6	+0.1
WLF				ePKPab	PKPab	18 50 18.6	-0.6
STU	Stuttgart	152.57	347	ePKPbc	PKPbc	18 50 07.2	-0.2
RJOB	Jochberg	152.65	342	ePKPbc	PKPbc	18 50 07.0	-0.6
RJOB				ePKPab	PKPab	18 50 21.8	+0.6
FUR	Furstenfeldbru	152.67	344	ePKPab	PKPab	18 50 21.5	+0.3
CDF	Champ du Feu	153.27	350	ePKP1	PKPbc	18 50 08.6	-0.3
	comp=Z,6.1nm,0.6s						
FLN	La Foliniere	153.46	1	ePKP1	PKPbc	18 50 08.7	-0.6
	comp=Z,7.5nm,0.6s						
ABTA	Abfaltersbach	153.62	341	⇑iPKPbc	PKPbc	18 50 08.7	-1.0
	comp=Z,3.7nm,0.5s						
LDF	La Druitiere	153.64	1	ePKP1	PKPbc	18 50 08.9	-0.8
	comp=Z,4.4nm,0.6s						
GRR	Gorron	153.82	2	ePKP1	PKPbc	18 50 09.6	-0.5
QUIF	Quistinic	154.15	6	ePKP1	PKPbc	18 50 11.3	+0.5
	comp=Z,4.3nm,0.5s						
SSF	Saint Saulge	155.06	355	ePKP1	PKPdf	18 50 14.3	+11
	comp=Z,2.4nm,0.4s						
MFF	Saint Martin d	155.63	1	ePKP1	PKPdf	18 50 13.5	+9.4
LPG	La Plagne	156.18	349	ePKP1	PKPdf	18 50 15.6	+11
ESDC	Sonseca Array	162.15	11	PKPab	PKPab	18 51 02.2	-0.4
	comp=Z,0.6nm,0.5s,baz=344,slow=5.0,SNR=4.9						
DBIC	Dimbokro	163.74	161	PKP	PKPdf	18 50 13.5	-0.6
	comp=Z,4.3nm,1.1s,baz=230,slow=5.6,SNR=3.5						
DBIC	Dimbokro	163.74	161	PKP	PKPdf	18 50 13.5	-0.6
TORD	Torodi Ar. Bea	170.94	187	PKP	PKPdf	18 50 18.4	-0.8
	comp=Z,1.4nm,0.8s,baz=248,slow=2.3,SNR=6.4						
TORD				PKPab	PKPab	18 51 42.3	+0.4
	comp=Z,1.1nm,0.7s,baz=163,slow=3.7,SNR=5.6						

IDC 22 18:34:45.5±2.2, 15°.35S×173°.05W, h0km, mb3.7/3, mb1 4.1/3, mb1mx3.7/17, mbtmp3.7/3, Error ellipse: s-maj=115.0km s-min=26.7km az=145.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	1.89	41	Pn	Pn	18 35 17.4	-1.6
	3.7nm,0.3s,baz=225,slow=4.3,SNR=5.2						
AFI				Sn	Sn	18 35 39.9	-3.7
	18nm,0.3s,baz=232,slow=22,SNR=10.0						
ASAR	Alice Springs	50.45	252	P	P	18 43 44.5	-0.8
	1.0nm,0.6s,baz=88,slow=8.2,SNR=11						
TXAR	Lajitas Array	80.30	56	P	P	18 46 59.3	+0.6
	0.4nm,0.9s,baz=226,slow=7.3,SNR=4.0						
ILAR	Eielson Array	82.33	11	P	P	18 47 09.1	+0.5
	0.4nm,0.7s,baz=211,slow=5.1,SNR=4.3						
BRTR	Keskin Array B	146.33	321	PKPbc	PKPbc	18 54 28.9	+0.4
	0.4nm,0.5s,baz=64,slow=3.4,SNR=4.6						

*NEIC **22** 18:39:07.0, 34°.74S×70°.24W, h19km, ML3.0(GUC), After GUC.*

GUC 22 18:39:07.0±0.5, 34°.74S×70°.24W, h19km±2km, MD3.9, ML3.0, 4C-4D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CACH	El Canelo	0.69	334	⇑iP	Pb	18 39 19.8	-0.6
CACH				i S	Sb	18 39 29.6	+0.1
CACH	El Canelo	0.69	334	⇑iP	Pb	18 39 19.8	-0.6
CACH				i S	Sb	18 39 29.6	+0.1
CHCH	Chadas Angostu	0.87	337	⇓iP	Pb	18 39 23.4	-0.2
CHCH				i S	Sb	18 39 35.5	+0.7
CHCH	Chadas Angostu	0.87	337	⇓iP	Pb	18 39 23.4	-0.2
CHCH				i S	Sb	18 39 35.5	+0.7
LMEL	Las Melosas	0.89	2	⇑iP	Pb	18 39 23.6	-0.3
LMEL				i S	Sb	18 39 36.4	+1.1
LMEL	Las Melosas	0.89	2	⇑iP	Pb	18 39 23.6	-0.3
LMEL				i S	Sb	18 39 36.4	+1.1
LMEL				AML	AML	18 39 37.8	
	comp=E,743nm,0.2s						
PCH	Pirque	1.14	348	⇓iP	Pn	18 39 28.0	+0.1
PCH				i S	Sb	18 39 44.0	+1.5
PCH	Pirque	1.14	348	⇓iP	Pn	18 39 28.0	+0.1
PCH				i S	Sb	18 39 44.0	+1.5
ANTU	Antumapu	1.21	344	eP	Pn	18 39 29.1	+0.2
ANTU				eS	Sb	18 39 45.8	+1.2
ANTU	Antumapu	1.21	344	eP	Pn	18 39 29.1	+0.2
ANTU				eS	Sb	18 39 45.8	+1.2
ANTU				AML	AML	18 39 47.2	
	comp=E,454nm,0.4s						
TACH	Talagante	1.23	332	eP	Pn	18 39 29.3	+0.2
TACH				i S	Sb	18 39 46.4	+1.3
TACH	Talagante	1.23	332	eP	Pn	18 39 29.3	+0.2
TACH				i S	Sb	18 39 46.4	+1.3
LNV	Longovilo	1.24	309	eP	Pn	18 39 29.2	-0.2
LNV				i S	Sb	18 39 46.3	+0.8
LNV	Longovilo	1.24	309	eP	Pn	18 39 29.2	-0.2
LNV				i S	Sb	18 39 46.3	+0.8
CLCH	Cerro Calan	1.36	350	eP	Pn	18 39 31.7	+0.7
CLCH				eS	Sn	18 39 50.2	+1.7
CLCH				AML	AML	18 39 51.9	
	comp=N,372nm,0.5s						
FCH	Farellones	1.41	358	eP	Pn	18 39 31.3	-0.3
FCH				eS	Sn	18 39 49.5	-0.1
PEL	Peldehue	1.63	347	eP	Pn	18 39 36.3	+1.6
PEL				eS	Sn	18 39 58.5	+3.3
PEL				AML	AML	18 40 01.6	
	comp=N,448nm,0.5s						

IDC 22 18:40:46.6±14.0, 18°.91S×175°.32W, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.5/16, mbtmp3.6/2, MS3.9/2, Ms1 3.9/2, ms1mx3.2/21, Error ellipse: s-maj=704.3km s-min=44.8km az=142.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPT	Papeete	24.48	91	LR	LR	18 53 29.2	
	comp=Z,160nm,21.0s,baz=307,slow=31						
ASAR	Alice Springs	47.36	255	P	P	18 49 22.5	-0.2
	0.4nm,0.5s,baz=92,slow=8.3,SNR=7.1						
DLBC	Dease Lake	85.62	22	LR	LR	19 22 34.7	
	comp=Z,105nm,20.6s,baz=90,slow=29						
ILAR	Eielson Array	86.22	12	P	P	18 53 29.2	-0.3
	0.4nm,0.8s,baz=227,slow=6.9,SNR=4.2						
BRTR	Keskin Array B	147.55	316	PKPbc	PKPbc	19 00 33.1	0.0
	0.5nm,0.8s,baz=45,slow=2.9,SNR=3.0						

IDC 22 18:50:52.6±11.0, 11°.62N×91°.64E, h0km, mb3.7/3, mb1 3.5/4, mb1mx3.3/23, mbtmp3.5/4, ML3.2/1, Error ellipse: s-maj=205.2km s-min=60.1km az=179.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	9.80	45	Pn	Pn	18 53 15.0	+0.2
	0.1nm,0.3s,baz=236,slow=15,SNR=3.2						
MKAR	Makanchi Array	35.94	349	P	P	18 57 55.0	+0.2
	0.4nm,0.3s,baz=164,slow=8.5,SNR=7.2						
SONM	Songino Array	38.17	16	P	P	18 58 13.7	0.0
	0.8nm,0.8s,baz=199,slow=8.1,SNR=4.9						
ZALV	Zalesovo Beam	42.57	354	P	P	18 58 49.9	-0.2
	0.2nm,0.3s,baz=171,slow=9.8,SNR=3.8						

*IDC **22** 18:51:36.8±1.3, 16°.44S×177°.40W, h0km, mb4.1/6, mb1 4.4/6, mb1mx4.0/16, mbtmp4.1/6, MS4.2/16, Ms1 4.2/16, ms1mx4.0/23, Error ellipse: s-maj=97.8km s-min=21.9km az=148.0*

*ISCJB **22** 18:51:40.9±3.4, 16°.7S±0°.2×177°.4W±0°.2, h42km±28km, mb4.1/9, MS4.2/14, Error ellipse: s-maj=42.0km s-min=22.2km az=144.3*

*NEIC **22** 18:51:41.8±0.5, 16°.66S×177°.32W, h35km, mb4.5/3, Error ellipse: s-maj=29.5km s-min=11.7km az=155.0*

*GCMT **22** 18:51:42.2±0.3, 16°.91S×176°.91W, h12km, MW5.0, Moment Tensor Solution. s31,c40; s86,c128; Moment tensor: Scale 10^{16}Nm; M_{rr}=0.33±.13; $M_{\theta\theta}$=-3.72±.12; $M_{\phi\phi}$=4.06±.10; $M_{r\theta}$=0.51±.33; $M_{\theta\phi}$=1.05±.12; $M_{r\phi}$=1.22±.31; Best double couple: M_0=4.20000×10^{16} NP1:ϕ_s=53.00000°, δ73.00000°, λ2.00000°. NP2:ϕ_s=322.00000°, δ88.00000°, λ163.00000°. Principal axes: T 4.4700, Plg14.0000°, Azm276.0000°; N -0.4800, Plg73.0000°, Azm136.0000°; P -3.9900, Plg11.0000°, Azm9.0000°; Data Used: II IU G IC CN.*

ISC 22 18:51:42.7±3.1, 16°.6S±0°.2×177°.4W±0°.2, h42km±27km, n34, $_{c0}$s74/11, mb4.1/9, MS4.2/14, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.52	255	ePn	Pn	18 52 48.5	-0.1
RAO	Raoul Island	12.60	182	LR	LR	18 58 30.9	
	comp=Z,2μm,19.4s,baz=338,slow=32						
DZM	Mont Dzumac	16.21	248	eLQ		18 58 49.8	
	4μm,29.3s						
DZM				eLR	LR	18 59 33.3	
	2μm,25.7s						
RAR	Rarotonga	17.27	108	LR	LR	19 00 29.4	
	comp=Z,887nm,21.6s,baz=265,slow=31						
URZ	Urewera	22.11	192	LR	LR	19 03 40.3	
	comp=Z,2μm,20.6s,MS4.4,baz=32,slow=32						
HNR	Honiara	23.20	285	LR	LR	19 04 35.7	
	comp=Z,1μm,19.1s,MS4.3,baz=111,slow=34						
PPT	Papeete	26.58	96	eLR	LR	19 03 41.5	
	2μm,26.5s,baz=262						
PPT	Papeete	26.58	96	LR	LR	19 05 45.2	
	comp=Z,220nm,18.2s,MS3.8,baz=248,slow=32						
TBI	Tubuai	27.05	109	eLR	LR	19 03 59.5	
	2μm,27.8s,baz=282						
RPZ	Rata Peaks	28.76	198	LR	LR	19 07 52.6	
	comp=Z,2μm,22.0s,MS4.6,baz=304,slow=34						
TAOE	Nuku Hiva Isla	37.07	83	eLR	LR	19 08 28.8	
	784nm,26.4s,baz=254						
STKA	Stephens Creek	40.13	240	P	P	18 59 14.9	+0.3
	4.0nm,0.9s,mb4.2,baz=50,slow=9.6,SNR=6.1						
STKA				LR	LR	19 14 18.2	
	comp=Z,246nm,19.6s,MS4.1,baz=47,slow=34						
RKT	Rikitea	40.30	106	eLR	LR	19 10 05.0	
	1μm,27.2s,baz=275						
RKT	Rikitea	40.30	106	eLR	LR	18 59 23.3	
	385nm,30.5s						
WRAB	Tennant Creek	45.84	258	P	P	19 00 01.4	+0.3
	11nm,1.2s,mb4.7						
ASAR	Alice Springs	46.10	253	P	P	19 00 03.5	+0.4
	5.6nm,1.0s,mb4.5,baz=88,slow=8.5,SNR=31						
SBA	Scott Base	61.78	184	P	P	19 01 56.2	-0.5
	4.6nm,1.3s,mb4.5						
PETK	Petropavlovsk-	72.68	345	LR	LR	19 30 17.4	
	comp=Z,118nm,20.6s,MS4.2,baz=143,slow=32						
KSM	Kuching	73.51	277	P	P	19 03 11.4	-0.3
	3.0nm,0.9s,mb4.2						
NVAR	Mina Array Bea	77.80	44	P	P	19 03 37.4	+1.7
	0.6nm,0.9s,mb3.5,baz=221,slow=9.5,SNR=2.6						
ILAR	Eielson Array	84.40	13	P	P	19 04 09.2	-1.0
	1.0nm,0.9s,mb3.9,baz=224,slow=5.0,SNR=6.1						
TXAR	Lajitas Array	84.46	57	P	P	19 04 11.8	+0.4
	0.2nm,0.7s,mb3.4,baz=261,slow=3.6,SNR=3.6						
TXAR				LR	LR	19 35 44.3	
	comp=Z,61nm,18.8s,MS4.0,baz=150,slow=31						
TXAR	Lajitas Array	84.46	57	P	P	19 04 11.8	+0.4
TXAR				LR	LR	19 35 44.3	
MAW	Mawson	85.42	199	LR	LR	19 37 24.6	
	comp=Z,294nm,20.3s,MS4.7,baz=105,slow=32						
PDAR	Pinedale Array	85.73	43	P	P	19 04 16.4	-1.0
	0.2nm,0.3s,mb3.8,baz=204,slow=2.0,SNR=2.8						
PDAR				LR	LR	19 34 13.9	
	comp=Z,54nm,20.6s,MS3.9,baz=58,slow=30						
PLCA	Paso Flores	91.51	133	LR	LR	19 34 29.6	
	comp=Z,124nm,20.3s,MS4.3,baz=222,slow=28						
NNA	Nana	96.48	104	LR	LR	19 41 21.8	
	comp=Z,81nm,19.5s,MS4.2,baz=327,slow=31						
ATAH	Atahualpa	96.52	99	LR	LR	19 37 54.5	
	comp=Z,226nm,18.6s,MS4.7,baz=208,slow=29						
CFAA	Coronel Fontan	96.90	126	LR	LR	19 39 40.5	
	comp=Z,11nm,18.5s,MS3.4,baz=237,slow=30						
ULM	Lac du Bonnet	97.28	40	LR	LR	19 43 35.0	
	comp=Z,151nm,20.8s,MS4.5,baz=297,slow=32						
BR131	Keskin Array S	144.54	317	ePKPdf	PKPdf	19 11 15.2	+0.3
BRTR	Keskin Array B	144.54	317	PKP	PKPdf	19 11 15.4	+0.5
	2.9nm,0.9s,baz=48,slow=2.1,SNR=7.6						
MMAI	Mount Meron Ar	146.23	305	PKPbc	PKPbc	19 11 18.9	-0.2
	1.1nm,0.5s,baz=53,slow=0.7,SNR=2.1						
TORD	Torodi Ar. Bea	176.45	165	PKP	PKPdf	19 11 48.4	-0.9
	0.6nm,1.0s,baz=202,slow=2.5,SNR=2.8						

MAN 22 19:04:05, 13°.50N×120°.63E, h0km, mb4.4, ML3.3, MS3.1, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.32	90	⇓eP	Pg	19 04 11.7	+0.6
LUBP	Lubang	0.44	302	eP	Pg	19 04 14.0	+0.6
LUBP				eS	Sg	19 04 18.3	-0.8
BOAC	Boac	1.19	92	eP	Pg	19 04 28.1	+0.3
BOAC				eS	Sg	19 04 42.5	-0.6
BUSP	Coron	1.55	196	eP	Pn	19 04 33.7	-0.1

CASC 22 19:11:04.4±2.5, 8°.39N×82°.88W, h4km, MD3.6, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	Volcan	0.45	25	eP	Pg	19 11 14.2	+1.2
BRU2				eS	Sg	19 11 23.1	+4.3
TBS2		0.46	28	eP	Pg	19 11 09.2	-4.0
TBS2				eS	Sg	19 11 16

KIW	Kapiti Island	2.26	196	PN	Pn	19 14 03.5	-1.2
KIW	Kapiti Island	2.26	196	P	Pn	19 14 03.5	-1.2
TMWZ	Te Maipa	2.41	177	PN	Pn	19 14 05.3	-1.2
CAW	Cannon Point	2.47	192	PN	Pn	19 14 05.9	-1.2
CAW	Cannon Point	2.47	192	P	Pn	19 14 05.9	-1.3
MTW	Mount Morrison	2.47	184	PN	Pn	19 14 05.7	-1.5
MTW	Mount Morrison	2.47	184	P	Pn	19 14 05.7	-1.5
DUWZ	D'Urville Isla	2.53	213	PN	Pn	19 14 06.5	-1.5
WEL	Wellington	2.69	196	PN	Pn	19 14 08.5	-1.4
WEL	Wellington	2.69	196	P	Pn	19 14 08.5	-1.4
PAWZ	Paruwai Farm	2.70	185	PN	Pn	19 14 08.1	-1.8
PAWZ	Paruwai Farm	2.70	185	P	Pn	19 14 08.1	-1.8
TRWZ	Traveller	2.70	181	PN	Pn	19 14 08.5	-1.5
SNZO	South Karori	2.73	197	PN	Pn	19 14 08.6	-1.7
SNZO	South Karori	2.73	197	P	Pn	19 14 08.6	-1.7
MSWZ	Moikau Station	2.74	188	PN	Pn	19 14 08.7	-1.7
MSWZ	Moikau Station	2.74	188	P	Pn	19 14 08.7	-1.8
TCW	Tory Channel	2.76	204	PN	Pn	19 14 09.1	-1.5
TCW	Tory Channel	2.76	204	P	Pn	19 14 09.1	-1.5
BHW	Baring Head	2.79	194	PN	Pn	19 14 09.3	-1.8
BHW	Baring Head	2.79	194	P	Pn	19 14 09.3	-1.8
PLWZ	Palliser	2.90	187	PN	Pn	19 14 10.3	-2.0
TUWZ	Tuamarina	3.06	206	PN	Pn	19 14 12.4	-2.0
NNZ	Nelson	3.11	215	PN	Pn	19 14 12.8	-2.1
QRZ	Quartz Range	3.27	228	PN	Pn	19 14 14.0	-2.9
QRZ	Quartz Range	3.27	228	P	Pn	19 14 14.0	-2.9
BSWZ	Blackbirch Sta	3.34	205	PN	Pn	19 14 16.1	-1.7
BSWZ	Blackbirch Sta	3.34	205	P	Pn	19 14 16.1	-1.7
THZ	Tophouse	3.76	214	PN	Pn	19 14 21.0	-2.1
THZ	Tophouse	3.76	214	P	Pn	19 14 21.0	-2.1
KHZ	Kahutara	4.08	204	PN	Pn	19 14 25.1	-2.1
KHZ	Kahutara	4.08	204	P	Pn	19 14 25.1	-2.1
LTZ	Lake Taylor	4.86	212	PN	Pn	19 14 34.1	-3.2
LTZ	Lake Taylor	4.86	212	P	Pn	19 14 34.1	-3.2
MQZ	McQueen's Vall	5.52	204	PN	Pn	19 14 42.0	-3.9
MQZ	McQueen's Vall	5.52	204	P	Pn	19 14 42.0	-4.0
WVZ	Waitaha Valley	5.79	219	PN	Pn	19 14 46.5	-3.0
WVZ	Waitaha Valley	5.79	219	P	Pn	19 14 46.5	-3.0
LBZ	Lake Benmore	7.05	214	PN	Pn	19 15 02.2	-3.8
LBZ	Lake Benmore	7.05	214	P	Pn	19 15 02.2	-3.9
ODZ	Otahua Downs	7.40	209	PN	Pn	19 15 07.3	-3.3
ODZ	Otahua Downs	7.40	209	P	Pn	19 15 07.3	-3.3

NIED ***22*** *19:16:00, 34°.40N×140°.10E, h8km, Mw4.3 Best double couple: M₀3.37000×10¹⁵ NP1:φs89.00000°, δ87.00000°, λ-163.00000°. NP2:φs358.00000°, δ74.00000°, λ-3.00000°.*
IDC ***22*** *19:16:55.0±0.7, 34°.31N×140°.05E, h0km, mb3.7/12, mb1 3.9/15, mb1mx3.9/26, mbtmp3.8/15, ML3.9/3, MS3.6/9, Ms1 3.6/9, ms1mx3.3/34, Error ellipse: s-maj=23.1km s-min=12.8km az=87.0*
ISCJB ***22*** *19:16:58.5±0.3, 34°.35N±0°.03×140°.06E±0°.03, h33km, mb3.8/14, MS3.7/7, Error ellipse: s-maj=3.9km s-min=3.7km az=44.1*
JMA ***22*** *19:16:58.5±0.1, 34°.36N×140°.05E, h24km±1km, M4.4*
JMA Felt II J1.
NEIC ***22*** *19:17:00.5±1.7, 34°.34N×140°.02E, h37km±12km, mb4.3/2, Error ellipse: s-maj=15.6km s-min=12.9km az=171.0*
NEIC Recorded [2 JMA] on O-Shima and [1 JMA] on Hachijo-shima, Kozu-shima, Miyake-jima and Nii-jima. Also recorded [1 JMA] in Chiba and Shizuoka.

ISC 22 19:16:59.4±0.3, 34°.34N±0°.03×140°.05E±0°.03, h35km, n38, σ1§17/46, mb3.8/14, MS3.7/7, 4C-4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMY	Miyakejima3	0.52	240	⇑P	Pn	19 17 09.2	-1.1
JMY				S	Sn	19 17 17.1	-0.8
BSO3	Boso 3	0.60	39	⇑P	Pn	19 17 10.3	-1.1
BSO3				eS	Sn	19 17 18.4	-1.5
JIM2	Oshima 3	0.64	307	⇓P	Pn	19 17 10.4	-1.6
JIM2				eS	Sn	19 17 19.3	-1.6
BSO4	Boso 4	0.69	20	⇑P	Pn	19 17 12.0	-0.7
BSO2	Boso 2	0.71	54	eS	Sn	19 17 23.2	+0.5
JKO	Kozu shima	0.77	259	P	Pn	19 17 13.2	-0.6
JKO				eS	Sn	19 17 23.9	-0.3
BSO1	Boso 1	0.83	67	⇑P	Pn	19 17 12.7	-1.8
BSO1				eS	Sn	19 17 23.1	-2.4
KTJJ	Kamata 2	1.00	306	⇓P	Pn	19 17 15.7	-1.3
KTJJ				S	Sn	19 17 28.0	-1.9
JIZS	Izushimoda	1.04	292	⇓P	Pn	19 17 16.7	-0.8
JIZS				S	Sn	19 17 30.2	-0.6
JOD2	Odawara 2	1.22	320	⇓P	Pn	19 17 18.8	-1.1
JOD2				S	Sn	19 17 34.6	-0.6
JHJ	Hachijo jima 2	1.24	191	Pn	Pn	19 17 19.9	-0.3
	249nm,0.3s,baz=76,slow=19,SNR=624						
JHJ				Sn	Sn	19 17 36.5	+0.9
	2μm,0.3s,baz=90,slow=20,SNR=56						
JHJ2	Mitsune	1.24	189	P	Pn	19 17 19.9	-0.3
JHJ2				S	Sn	19 17 36.2	+0.5
MJAR	Matsushiro Arr	2.67	326	Pn	Pn	19 17 40.8	+1.0
	27nm,0.3s,baz=155,slow=12,SNR=234						
MJAR				Sn	Sn	19 18 12.9	+2.0
	50nm,0.3s,baz=147,slow=21,SNR=9.9						
MJAR				LR	LR	19 18 27.8	
	comp=Z,343nm,21.6s,baz=110,slow=35						
MAJO	Matsushiro	2.67	326	ePn	Pn	19 17 40.9	+1.0
MAJO				eSn	Sn	19 18 11.3	+0.4
MAT	Matsushiro	2.67	326	P	Pn	19 17 41.3	+1.4
MAT				S	Sn	19 18 12.4	+1.5
CBIJ	Chichi jima	7.45	165	Pn	Pn	19 18 43.5	-2.1
	9.5nm,0.3s,baz=17,slow=19,SNR=13						
ASAJ	Asahikawa	9.96	11	Pn	Pn	19 19 18.6	-1.4
	0.6nm,0.3s,baz=192,slow=12,SNR=9.5						
KSRS	Korea Array	10.32	291	Pn	Pn	19 19 29.0	+4.1
	0.1nm,0.3s,baz=104,slow=14,SNR=6.1						
KSRS				LR	LR	19 23 21.9	
	comp=Z,132nm,18.5s,baz=105,slow=37						
GUMO	Guam	21.11	167	LR	LR	19 28 37.5	
	comp=Z,110nm,21.9s,MS3.2,baz=110,slow=33						
PETK	Petropavlovsk-	22.57	28	P	P	19 21 57.0	+0.6
	0.5nm,0.3s,mb3.4,baz=235,slow=10,SNR=3.9						
SONM	Songino Array	28.48	308	LR	LR	19 34 42.9	
	comp=Z,75nm,18.2s,MS3.3,baz=263,slow=38						
ZALV	Zalesovo Beam	42.96	315	P	P	19 24 55.8	+1.0
	0.5nm,0.6s,mb3.4,baz=103,slow=4.6,SNR=3.6						
MKAR	Makanchi Array	44.66	304	P	P	19 25 09.8	+1.2
	0.3nm,0.2s,mb3.7,baz=96,slow=9.6,SNR=4.4						
MKAR				LR	LR	19 45 26.7	
	comp=Z,62nm,19.0s,MS3.5,baz=211,slow=38						
KURK	Kurchatov	46.77	310	eP	P	19 25 24.7	-0.4
	2.2nm,0.6s,mb4.3						
AAK	Ala-Archa	50.83	300	LR	LR	19 47 03.7	
	comp=Z,66nm,18.3s,MS3.7,baz=309,slow=36						
BVAR	Borovoye Array	51.60	314	P	P	19 26 02.9	+0.9
	0.5nm,0.5s,mb3.7,baz=79,slow=7.5,SNR=4.4						
ILAR	Eielson Array	52.37	31	P	P	19 26 09.2	+1.6
	1.6nm,0.8s,mb4.0,baz=269,slow=6.1,SNR=22						
ASAR	Alice Springs	57.98	187	P	P	19 26 49.2	+0.8
	0.7nm,0.5s,mb4.0,baz=18,slow=11,SNR=13						
ABKAR	Akbulak array	58.85	311	eP	P	19 26 55.0	+0.7
	2.3nm,0.8s,mb4.3						
STKA	Stephens Creek	65.88	179	LR	LR	19 52 42.3	
	comp=Z,93nm,21.1s,MS4.0,baz=25,slow=33						
ARCES	ARCESS Array B	66.13	340	LR	LR	20 01 30.9	
	comp=Z,142nm,18.7s,MS4.2,baz=248,slow=40						
FINES	FINESS Array B	70.68	332	P	P	19 28 11.7	+0.5
	1.7nm,0.9s,mb4.0,baz=46,slow=6.0,SNR=4.8						
AKASG	Malin Array Be	75.75	322	P	P	19 28 42.2	+1.0
	0.3nm,0.3s,mb3.7,baz=47,slow=7.2,SNR=4.2						
NOA	NORSAR Array B	76.24	337	P	P	19 28 44.9	+1.0
	0.6nm,0.7s,mb3.7,baz=41,slow=5.7,SNR=3.4						
NOA				LR	LR	20 07 37.4	
	comp=Z,48nm,18.6s,MS3.8,baz=10.0,slow=40						
NOA	NORSAR Array B	76.24	337	P	P	19 28 44.9	+1.0
NOA				LR	LR	20 07 37.4	
BRTR	Keskin Array B	79.80	311	P	P	19 29 05.2	+1.2
	0.2nm,0.3s,mb3.5,baz=64,slow=3.4,SNR=2.3						
PDAR	Pinedale Array	80.35	44	P	P	19 29 09.0	+2.0
	0.4nm,0.5s,mb3.6,baz=289,slow=6.0,SNR=4.1						
TXAR	Lajitas Array	92.65	52	P	P	19 30 09.1	+1.2
	0.1nm,0.4s,mb3.6,baz=268,slow=6.0,SNR=2.5						

IDC ***22*** *19:29:42.6±2.1, 24°.14S×66°.99W, h164km±19km, mb3.5/7, mb1 3.8/9, mb1mx3.7/14, mbtmp3.5/9, Error ellipse: s-maj=22.2km s-min=16.9km az=94.0*
ISCJB ***22*** *19:29:43.2±0.7, 24°.13S±0°.06×66°.98W±0°.07, h181km±8km, mb3.5/7, Error ellipse: s-maj=11.7km s-min=8.2km az=153.2*
NEIC ***22*** *19:29:43.5±0.7, 24°.06S×66°.95W, h173km±7km, mb4.9/3, Error ellipse: s-maj=10.5km s-min=8.8km az=91.0*
GUC ***22*** *19:29:45.7±0.8, 24°.09S×67°.46W, h215km±191km, ML4.6*

ISC 22 19:29:44.0±0.7, 24°.14S±0°.06×66°.97W±0°.07, h175km±8km, n24, σ1§08/26, mb3.5/7, 1C-1D, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEN1	Los Morros	3.05	283	⇓eP	Pn	19 30 34.2	+1.1
CEN1				eS	Sn	19 31 11.5	+0.3
CEN1				AML	AML	19 31 14.3	
	comp=N,734nm,0.5s						
ANCH	Antofagasta	3.18	277	eP	Pn	19 30 34.7	0.0
ANCH				eS	Sn	19 31 11.5	-2.5
ANCH	Antofagasta	3.18	277	eP	Pn	19 30 34.7	0.0
ANCH				eS	Sn	19 31 11.5	-2.5
ANCH				AML	AML	19 31 15.5	
	comp=E,1μm,0.1s						
MACH	Maria Elena	3.21	306	eP	Pn	19 30 36.7	+1.6
MACH				eS	Sn	19 31 14.9	+0.1
MECH	Mejillones	3.35	287	⇑iP	Pn	19 30 38.5	+1.6
MECH				eS	Sn	19 31 17.5	-0.4
MECH				AML	AML	19 31 25.9	
	comp=E,1μm,0.2s						
LCO	Las Campanas	5.89	214	ePn	Pn	19 31 08.5	-1.0
	comp=E,37nm,0.3s						
LCO				eSn	Sn	19 32 13.7	-3.1
CFAA	Coronel Fontan	7.53	188	P	Pn	19 31 31.5	+0.5
	comp=E,0.1nm,0.3s,baz=14,slow=12,SNR=13						
CFAA				S	Sn	19 32 51.5	-4.1
	comp=E,0.7nm,0.3s,baz=105,slow=20,SNR=16						
CPUP	Villa Florida	8.99	106	P	Pn	19 31 49.8	-0.7
	comp=E,0.6nm,0.3s,baz=258,slow=12,SNR=3.6						
SIV	San Ignacio	9.81	35	P	Pn	19 32 00.3	-0.9
	comp=E,3.1nm,0.3s,baz=253,slow=10,SNR=63						
TRQA	Tornquist	14.52	164	ePn	Pn	19 33 02.5	+1.3
PLCA	Paso Flores	16.82	189	P	Pn	19 33 31.1	+1.8
	comp=E,9.9nm,1.2s						
AGPR	Aguadilla, PR	42.34	360	P	P	19 37 20.0	-1.0
	comp=E,138nm,1.2s						
TXAR	Lajitas Array	63.80	324	P	P	19 39 56.5	-1.1
	comp=E,0.4nm,0.7s,mb3.4,baz=156,slow=6.1,SNR=5.7						
TORD	Torodi Ar. Bea	76.59	69	P	P	19 41 15.0	-0.7
	comp=E,0.6nm,0.4s,mb3.5,baz=260,slow=7.1,SNR=12						
PDAR	Pinedale Array	77.28	329	P	P	19 41 19.7	+0.8
	comp=E,0.3nm,0.5s,mb3.2,baz=126,slow=4.6,SNR=3.1						
NVAR	Mina Array Bea	78.66	321	P	P	19 41 26.9	+0.2
	comp=E,0.5nm,0.6s,mb3.3,baz=150,slow=6.3,SNR=4.6						
BOSA	Boshof	80.64	117	P	P	19 41 37.6	-0.1
	comp=E,0.7nm,0.5s,mb3.5,baz=234,slow=7.7,SNR=3.3						
MAW	Mawson	81.30	163	P	P	19 41 40.7	+0.3
	comp=E,2.1nm,0.7s,mb3.9,baz=230,slow=7.9,SNR=7.0						
YKA	Yellowknife Ar	94.26	340	P	P	19 42 42.8	0.0
	comp=E,0.3nm,0.5s,mb3.7,baz=113,slow=7.6,SNR=4.5						
ASAR	Alice Springs	128.35	205	PKP	PKPdf	19 48 30.2	-0.3
	comp=E,0.8nm,0.7s,baz=144,slow=1.8,SNR=7.6						
ASAR	Alice Springs	128.35	205	PKP	PKPdf	19 48 30.2	-0.3
ZALV	Zalesovo Beam	143.50	28	PKP	PKPdf	19 48 55.6	-1.8
	comp=E,1.1nm,0.5s,baz=283,slow=3.7,SNR=4.0						
MK31	Makanchi Array	146.61	40	P	PKPdf	19 49 02.8	-0.2
MKAR	Makanchi Array	146.61	40	PKP	PKPdf	19 49 02.0	-1.0
	comp=E,1.2nm,0.5s,baz=295,slow=2.9,SNR=6.9						
MKAR				PKPbc	PKPbc	19 49 04.6	-0.3
	comp=E,1.4nm,0.6s,baz=294,slow=3.7,SNR=6.3						

IDC ***22*** *19:37:20.3±1.1, 31°.59N×104°.22E, h0km, mb3.3/4, mb1 3.4/6, mb1mx3.3/26, mbtmp3.3/6, ML3.4/1, Error ellipse: s-maj=37.3km s-min=20.8km az=64.0*
BJI ***22*** *19:37:21.4, 31°.65N×104°.36E, h16km, ML3.8/17, Ms3.5/4, Ms7 3.2/5*
NEIC ***22*** *19:37:21.3±0.6, 31°.57N×104°.06E, h10km, mb4.4/1, Error ellipse: s-maj=15.4km s-min=10.4km az=57.0*

ISC 22 19:37:22.9±1.1, 31°.60N±0°.04×104°.10E±0°.07, h19km±7km, n17, σ1§20/26, mb3.6/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.74	203	Pg	Pg	19 37 36.6	-0.9
CD2				Sg	Sg	19 37 48.8	+1.4
CD2				smax			
	comp=N,3μm,0.7s						
CD2				smax			
	comp=E,2μm,0.6s						
XAN	Xi'an	4.74	58	Pn	Pn	19 38 31.8	-1.5
XAN				Pg	Pb	19 38 44.6	-0.7
XAN				Sn	Sn	19 39 30.0	+2.3
XAN				Sg	Sb	19 39 45.9	+4.0
XAN				smax			
	comp=N,220nm,0.7s						
XAN				smax			
	comp=E,96nm,0.6s						
XAN				LR	LR		
	comp=N,210nm,7.8s						
XAN				LR	LR		
	comp=E,370nm,5.4s						
XAN				LR	LR		
	comp=Z,42nm,9.3s						
ENH	Enshi	4.81	105	ePn	Pn	19 38 34.5	+0.1
GYA	Guiyang	5.59	156	Pn	Pn	19 38 48.9	+3.9
GYA				Sn	Sn	19 39 48.8	+0.1
GYA				Sg	Sb	19 40 13.6	+7.1
GYA				smax			
	comp=N,130nm,0.9s						
GYA				smax			
	comp=E,100nm,0.8s						
KMI	Kunming	6.56	191	Pn	Pn	19 39 00.3	+2.0
KMI				Sn	Sn	19 40 11.4	-1.2
KMI				smax			
	comp=N,14nm,0.9s						
KMI				smax			
	comp=E,19nm,1.1s						
GTA	Gaotai	8.54	337	eP	Pn	19 39 34.8	+9.3
GTA				pP		19 39 38.3	
GTA				sP		19 39 40.8	
GTA				S	Sn	19 41 13.1	+12
GTA				sS		19 41 17.9	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,73nm,5.7s						
GTA				LR	LR		
	comp=N,160nm,13.2s						
GTA				LR	LR		
	comp=E,180nm,13.2s						
GTA				LR	LR		
	comp=Z,130nm,14.4s						
WHN	Wuhan	8.86	94	eP	Pn	19 39 37.5	+7.6
WHN				S	Sn	19 41 03.0	-6.1
WHN				LR	LR		
	comp=N,630nm,7.7s						
WHN				LR	LR		
	comp=E,410nm,4.9s						
WHN				LR	LR		
	comp=Z,370nm,5.9s						
CMAR	Chiang Mai Arr	13.89	201	Pn	Pn	19 40 37.3	-1.5
	baz=6.9,slow=9.1,SNR=2.8						
SONM	Songino Array	16.31	6	Pn	Pn	19 41 09.4	-1.4
	comp=Z,0.1nm,0.3s,baz=181,slow=8.9,SNR=4.1						
KSRS	Korea Array	20.46	67	P	P	19 41 58.1	-1.2
	comp=Z,0.8nm,0.6s,baz=253,slow=9.8,SNR=5.7						
MKAR	Makanchi Array	22.61	318	P	P	19 42 24.2	+1.9
	comp=Z,0.2nm,0.3s,mb3.0,baz=126,slow=12,SNR=5.6						
ZALV	Zalesovo Beam	26.28	334	P	P	19 42 57.2	+0.4
	comp=Z,1.4nm,0.9s,mb3.5,baz=119,slow=8.8,SNR=5.3						
KBL	Kabul	29.44	285	P	P	19 43 25.1	-0.3
WRAB	Tennant Creek	58.88	146	P	P	19 47 20.4	-0.2
	comp=Z,2.5nm,0.7s,mb4.3						
WRA	Warramunga Arr	58.88	146	P	P	19 47 20.9	+0.3
	baz=340,slow=7.4						
WRA	Warramunga Arr	58.88	146	P	P	19 47 20.9	+0.3
ASAR	Alice Springs	61.91	149	P	P	19 47 41.5	+0.3
	comp=Z,0.3nm,0.5s,mb3.6,baz=328,slow=6.6,SNR=4.1						

ISCJB ***22*** *19:40:13.9±0.3, 36°.63N±0°.02×71°.07E±0°.03, h193km±3km, mb4. 1/31, Error ellipse: s-maj=4.8km s-min=3.0km az=152.7*
MOS ***22*** *19:40:15.9±1.0, 36°.69N×71°.17E, h213km, mb4.2/19, Error ellipse: s-maj=10.4km s-min=6.5km az=88.3*
BJI ***22*** *19:40:15.7, 36°.88N×71°.02E, h208km, mB4.5/18, mb4.4/24*
IDC ***22*** *19:40:15.9±2.9, 36°.54N×71°.06E, h210km±26km, mb3.7/12, mb1 3.9/17, mb1mx3.7/28, mbtmp3.7/17, Error ellipse: s-maj=17.7km s-min=11.2km az=21.0*
NEIC ***22*** *19:40:16.1±0.6, 36°.66N×71°.08E, h204km±6km, mb4.8/25, Error ellipse: s-maj=8.0km s-min=4.7km az=55.0*
NNC ***22*** *19:40:20.2±7.5, 37°.06N×70°.86E, h204km±67km, mb3.5, mpv4.7, Error ellipse: s-maj=65.6km s-min=36.3km az=9.0*
TEH ***22*** *19:41:02.0, 35°.37N×66°.30E, h18km*

ISC 22 19:40:15.3±0.3, 36°.67N±0°.02×71°.04E±0°.04, h193km±3km, h205km±1.2km: pP-P, n131, σ1§24/172, mb4.1/31, 12C-19D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.68	218	⇑ePn	Pn	19 41 03.2	+2.5
KBL				eS	Sn	19 41 37.7	+1.6
CHCP	Chirah Chowk	3.51	148	P	Pn	19 41 13.0	+2.2
CHCP				S	Sn	19 41 51.0	-3.2
THW	Thamme Wali	3.91	171	⇓P	Pn	19 41 17.4	+1.7
KSH	Kashi	4.82	52	⇓iP	Pn	19 41 23.8	-3.3
KSH				sP		19 42 02.5	
KSH				S	Sn	19 42 13.6	-10
KSH				smax			
	comp=N,340nm,0.4s						
KSH				smax			
	comp=E,450nm,0.5s						
JMU	Jammu	5.07	140	eS	Sn	19 42 25.0	-4.4
AML	Almayashu	5.83	20	P	Pn	19 41 41.6	+1.5
	SNR=105						
AML	Almayashu	5.83	20	⇓iPn	Pn	19 41 41.3	+1.3
	comp=E,210nm,0.6s						
AML				eS	Sn	19 42 45.5	-1.6
UCH	Uchtor	6.17	25	P	Pn	19 41 46.0	+1.5
	SNR=89						
UCH	Uchtor	6.17	25	⇓iPn	Pn	19 41 45.8	+1.3
	comp=E,202nm,0.6s						
UCH				eS	Sn	19 42 52.0	-3.0
KZA	Kyzart	6.31	30	P	Pn	19 41 47.0	+0.7
	SNR=30						
EKS2	Erkin-Say	6.34	19	P	Pn	19 41 48.1	+1.4
	SNR=72						
EKS2	Erkin-Say	6.34	19	⇓ePn	Pn	19 41 47.7	+0.9
	comp=E,28nm,0.4s						
EKS2				eS	Sn	19 42 47.2	-12
KK31	Karatay Array	6.44	357	P	Pn	19 41 49.5	+1.5
	comp=E,8.0nm,0.3s,baz=177,slow=13,SNR=229						
KK31				⇓S	Sn	19 42 59.0	-2.4
	comp=E,135nm,0.8s,baz=184,slow=22,SNR=6.6						
AAK	Ala-Archa	6.52	23	P	Pn	19 41 50.6	+1.5
	SNR=48						
AAK	Ala-Archa	6.52	23	P	Pn	19 41 50.6	+1.5
	comp=E,18nm,0.3s,baz=162,slow=5.4,SNR=74						
AAK				S	Sn	19 43 03.4	-0.1
	comp=E,9.9nm,0.3s,baz=11,slow=21,SNR=21						
AAK	Ala-Archa	6.52	23	⇓ePN	Pn	19 41 50.3	+1.2
AAK				pmax	pmax		
	comp=Z,60nm,0.4s						
AAK	Ala-Archa	6.52	23	⇓ePn	Pn	19 41 50.3	+1.2
	comp=Z,60nm,0.4s						
AAK				eS	Sn	19 42 60.0	-3.4
KBK	Karagaybulak	6.70	26	P	Pn	19 41 53.0	+1.6
	SNR=70						
ULHL	Ulahol	6.87	34	P	Pn	19 41 54.6	+1.0
	SNR=7.4						
BHK	Bhakra	6.88	138	eS	Sn	19 43 05.5	-6.5
CHMS	Chumysh	6.94	23	P	Pn	19 41 55.2	+0.8
	SNR=23						
USP	Ospenovka	7.10	21	P	Pn	19 41 56.9	+0.3
	SNR=18						
SDNR	Sundarnagar	7.12	135	ePKP	Pn	19 41 57.5	+0.4
SDNR				eS	Sn	19 43 12.1	-5.7
TKM2	Tokmak 2	7.16	28	⇓P	Pn	19 41 58.5	+1.1
	comp=Z,84nm,0.6s						
TKM2				⇓S	Sn	19 43 16.3	-2.1
	comp=Z,77nm,0.9s						
TKM2	Tokmak 2	7.16	28	P	Pn	19 41 58.6	+1.2
	SNR=142						
TKM2	Tokmak 2	7.16	28	⇓iPN	Pn	19 41 58.3	+0.9
TKM2				pmax	pmax		
	comp=Z,93nm,0.6s						
TKM2	Tokmak 2	7.16	28	⇓iPn	Pn	19 41 58.3	+1.0
	comp=Z,93nm,0.6s						
SMLA	Simla	7.51	136	⇓iP	Pn	19 42 02.1	-0.1
SMLA				i S	Sn	19 43 22.3	-4.7
SMLA				i S	Sn	19 43 22.9	-4.0
SMLA				⇓		19 43 24.0	
	comp=E,3μm,0.4s						
SMLA						19 43 24.8	
	comp=N,3μm,0.4s						
KLP	Kalpa	7.87	129	ePKP	Pn	19 42 07.1	+0.2
KLP				eS	Sn	19 43 31.2	-4.3
KLP				AML	AML	19 43 39.5	
	comp=N,420nm,0.7s						
KLP				AML	AML	19 43 40.2	
	comp=E,636nm,0.7s						
DDI	Dehra Dun	8.62	135	ePKP	Pn	19 42 15.0	-1.6
DDI				eS	Sn	19 43 48.0	-5.3
IMYA	Miami	8.81	271	ePn	Pn	19 42 17.4	-1.7
IMYA				e		19 44 35.6	
	comp=Z,395nm,0.3s						
JOSI	Joshimath	9.36	128	ePKP	Pn	19 42 26.5	+0.3
IMOG	Moghan	9.45	270	ePn	Pn	19 42 25.5	-1.9
IMOG				e		19 44 16.0	
	comp=Z,231nm,0.2s						
NDI	New Delhi	9.51	145	ex	Pn	19 42 25.0	-3.2
NDI				eS	Sn	19 44 06.0	-8.5
IPAY	Payeh	9.69	272	ePn	Pn	19 42 29.8	-0.7
IPAY				e		19 44 20.2	
	comp=Z,442nm,0.2s						
SONA	Sohna	9.82	147	ePKP	Pn	19 42 31.2	-1.0
IAKL	Akhelmad	9.87	273	ePn	Pn	19 42 32.7	-0.2
IAKL				eLg		19 44 16.2	
IAKL				e		19 44 28.3	
	comp=Z,341nm,0.2s						
AJM	Ajmer	10.61	162	ePKP	Pn	19 42 41.0	-1.5
AJM				i S	Sn	19 44

JIRN	**Jiri**	**15.65**	**121**	*e*P	**Pn**	**19 43 45.5**	**-0.1**
	comp=Z,142nm,0.4s						
VOSK	**Vostochnaya**	**16.05**	**360**	⇑P	**Pn**	**19 43 49.4**	**-0.8**
	comp=Z,7.9nm,0.8s						
ZRNK	**Zerenda**	**16.34**	**356**	⇓P	**Pn**	**19 43 54.1**	**+0.4**
	comp=Z,10.0nm,0.7s						
BVAR	**Borovoye Array**	**16.36**	**359**	P	**Pn**	**19 43 54.1**	**+0.2**
	comp=Z,2.6nm,0.3s,baz=163,slow=13,SNR=40						
BVAR				S	**S**	**19 46 53.9**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=152,slow=22,SNR=4.5						
BVAR	**Borovoye Array**	**16.36**	**359**	P	**Pn**	**19 43 54.1**	**+0.2**
BVAR				S	**S**	**19 46 53.9**	**-0.6**
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
RAMN	**Ramite**	**16.38**	**122**	*e*P	**Pn**	**19 43 53.6**	**-0.8**
	comp=Z,33nm,0.4s						
BRVK	**Borovoye**	**16.40**	**358**	⇑P	**Pn**	**19 43 54.4**	**0.0**
	comp=Z,5.5nm,0.5s						
BRVK	**Borovoye**	**16.40**	**358**	*e*P	**Pn**	**19 43 54.2**	**-0.2**
BRVK				*e*S	**S**	**19 46 50.3**	**-4.9**
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BRVK	**Borovoye**	**16.40**	**358**	*e*P	**Pn**	**19 43 54.2**	**-0.2**
	comp=Z,9.6nm,0.8s						
BRVK				*e*S	**S**	**19 46 50.3**	**-4.9**
AKTK	**Aktyubinsk**	**16.65**	**330**	P	**Pn**	**19 43 58.2**	**+0.8**
AKTK				S	**S**	**19 46 58.7**	**-1.7**
AKTO	**Aktyubinsk**	**16.65**	**330**	P	**Pn**	**19 43 58.2**	**+0.8**
	comp=Z,0.9nm,0.3s,baz=143,slow=9.3,SNR=12						
AKTO				S	**S**	**19 46 58.7**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=174,slow=19,SNR=5.6						
AKTO	**Aktyubinsk**	**16.65**	**330**	P	**Pn**	**19 43 58.2**	**+0.8**
AKTO				S	**S**	**19 46 58.7**	**-1.7**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TAPN	**Taplejung**	**16.90**	**119**	*e*P	**Pn**	**19 44 01.2**	**+0.6**
	comp=Z,49nm,0.4s						
ODAN	**Odare**	**16.98**	**121**	*e*P	**Pn**	**19 44 01.8**	**+0.2**
	comp=Z,41nm,0.5s						
LSA	**Lhasa**	**18.20**	**107**	⇓*i*P	**P**	**19 44 16.5**	**+2.9**
LSA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LSA	**Lhasa**	**18.20**	**107**	⇓*i*P	**P**	**19 44 16.5**	**+2.9**
	comp=Z,9.9nm,0.8s						
ZALV	**Zalesovo Beam**	**19.75**	**25**	P	**P**	**19 44 29.9**	**-0.2**
	comp=Z,3.9nm,0.3s,baz=218,slow=11,SNR=86						
ZALV				S	**S**	**19 47 58.5**	**-3.4**
	comp=Z,0.2nm,0.3s,baz=210,slow=20,SNR=3.4						
ZALV	**Zalesovo Beam**	**19.75**	**25**	P	**P**	**19 44 29.9**	**-0.2**
ZALV				S	**S**	**19 47 58.5**	**-3.3**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.3s						
NVS	**Novosibirsk**	**20.01**	**21**	⇑*i*P	**P**	**19 44 33.3**	**+0.4**
NVS				*i* S	**S**	**19 48 04.3**	**-2.7**
NVS				pmax	pmax		
	comp=Z,16nm,0.9s						
NVS				pmax	pmax		
	comp=N,14nm,0.7s						
NVS				pmax	pmax		
	comp=E,11nm,0.7s						
NVS				smax			
	comp=N,9.0nm,1.1s						
NVS				smax			
	comp=E,17nm,1.3s						
GNI	**Garni**	**20.87**	**288***c*	*i*P	**P**	**19 44 45.7**	**+3.5**
GNI				pmax	pmax		
	comp=Z,11nm,1.4s						
SVE	**Sverdlovsk**	**21.34**	**344**	*e*P	**P**	**19 44 47.7**	**+0.7**
SVE				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.2						
ARU	**Arti**	**21.48**	**341***c*	*i*P	**P**	**19 44 49.0**	**+0.5**
ARU						19 45 25.5	
ARU				S	**S**	**19 48 33.6**	**-0.1**
ARU				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.1						
ARU	**Arti**	**21.48**	**341**	*e*P	**P**	**19 44 48.8**	**+0.3**
	comp=Z,6.5nm,1.0s,mb4.1						
ZEI	**Tsey**	**21.70**	**295**	*e*P	**P**	**19 44 57.1**	**+6.2**
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.4s,mb4.7						
KIV	**Kislovodsk**	**22.74**	**297**	*e*P	**P**	**19 45 02.3**	**+1.7**
KIV				*e*PP		19 45 40.4	
KIV				*e*S	**S**	**19 49 00.3**	**+5.9**
KIV				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.9						
KIV	**Kislovodsk**	**22.74**	**297**	*e*P	**P**	**19 45 01.8**	**+1.2**
	comp=Z,5.0nm,0.7s,mb4.2						
GTA	**Gaotai**	**22.79**	**74**	⇓P	**P**	**19 45 02.6**	**+1.5**
GTA				pP		19 45 41.8	
GTA				sP	sP	19 46 06.3	+6.3
GTA				S	**S**	**19 48 55.8**	**+0.5**
GTA				SS		19 50 03.3	
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.1						
GTA				pmax	pmax		
	comp=Z,67nm,5.1s						
GTA				LR	LR		
	comp=N,58nm,15.3s						
GTA				LR	LR		
	comp=E,60nm,13.8s						
GTA				LR	LR		
	comp=Z,80nm,15.6s						
LZH	**Lanzhou**	**26.35**	**81**	⇓P	**P**	**19 45 34.0**	**+0.6**
LZH				pP	pP	19 46 14.8	+2.4
LZH				PP	PP	19 46 27.0	-10
LZH				sP	sP	19 46 38.6	+3.7
LZH				S	**S**	**19 49 49.1**	**-2.8**
LZH				sS	sS	19 51 01.5	-0.4
LZH				pmax	pmax		
	comp=Z,23nm,1.2s,mb4.7						
LZH				pmax	pmax		
	comp=Z,110nm,4.3s						
CD2	**Chengdu**	**27.71**	**92**	P	**P**	**19 45 46.3**	**+0.8**
CD2				pP	pP	19 46 27.4	+2.6
CD2				PP	PP	19 46 44.9	-7.1
CD2				sP	sP	19 46 51.3	+4.2
CD2				S	**S**	**19 50 11.8**	**-1.6**
CD2				sS	sS	19 51 24.8	+1.3
CD2				SS	SS	19 51 51.4	-27
CD2				pmax	pmax		
	comp=Z,20nm,0.7s,mb4.9						
CD2				pmax	pmax		
	comp=Z,220nm,4.5s						
SONM	**Songino Array**	**28.21**	**56**	P	**P**	**19 45 50.7**	**+0.9**
	comp=Z,4.2nm,0.8s,mb4.1,baz=262,slow=9.5,SNR=29						
SONM	**Songino Array**	**28.21**	**56**	P	**P**	**19 45 50.7**	**+0.9**
SONM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ULN	**Ulaanbaatar**	**28.66**	**56**	*e*P	**P**	**19 45 54.2**	**+0.5**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.0						
ULN	**Ulaanbaatar**	**28.66**	**56**	*e*P	**P**	**19 45 54.2**	**+0.5**
	comp=Z,2.9nm,0.8s,mb4.0						
KMI	**Kunming**	**29.41**	**104**	P	**P**	**19 46 04.3**	**+3.7**
KMI				pP	pP	19 46 45.3	+5.2
KMI				sP	sP	19 47 07.5	+5.1
KMI				S	**S**	**19 50 42.1**	**+2.0**
KMI				sS	sS	19 51 54.4	+4.0
KMI				SS	SS	19 52 32.4	-21
KMI				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.0						
KMI				pmax	pmax		
	comp=Z,72nm,5.3s						
KMI				LR	LR		
	comp=N,74nm,10.8s						
KMI				LR	LR		
	comp=E,90nm,11.6s						
KMI				LR	LR		
	comp=Z,100nm,10.1s						
BRTR	**Keskin Array B**	**29.41**	**287**	P	**P**	**19 46 01.6**	**+1.1**
	comp=Z,0.4nm,0.6s,mb3.2,baz=94,slow=9.0,SNR=3.3						
CHTO	**Chiang Mai**	**30.27**	**118**	*e*P	**P**	**19 46 08.1**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
CHTO	**Chiang Mai**	**30.27**	**118**	*e*P	**P**	**19 46 08.1**	**-0.2**
	comp=Z,2.2nm,0.6s,mb4.0						
CMAR	**Chiang Mai Arr**	**30.51**	**119**	P	**P**	**19 46 10.3**	**-0.1**
	comp=Z,2.0nm,0.6s,mb3.9,baz=301,slow=8.7,SNR=13						
CMAR	**Chiang Mai Arr**	**30.51**	**119**	P	**P**	**19 46 10.3**	**-0.1**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
PALK	**Pallekele**	**30.56**	**161**	P	**P**	**19 46 13.8**	**+3.0**
PALK				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.6						
PALK	**Pallekele**	**30.56**	**161**	P	**P**	**19 46 13.8**	**+2.9**
	comp=Z,15nm,1.0s,mb4.6						
HHC	**Hu-ho-hao-te**	**31.67**	**70**	*e*P	**P**	**19 46 21.4**	**+1.0**
HHC				pP	pP	19 47 02.6	+2.5
HHC				sP	sP	19 47 25.9	+3.6
HHC				PP	PP	19 47 34.5	-1.4
HHC				PcP	PcP	19 49 09.3	+2.0
HHC				S	**S**	**19 51 13.9**	**-1.3**
HHC				sS	sS	19 52 28.1	+2.4
HHC				ScP	ScP	19 52 30.8	-1.4
HHC				PcS	PcS	19 52 51.6	-0.4
HHC				SS	SS	19 53 21.3	-18
HHC				ScS	ScS	19 56 28.1	-2.5
HHC				pmax	pmax		
	comp=Z,14nm,0.6s,mb4.7						
HHC				pmax	pmax		
	comp=Z,42nm,6.0s						
HHC				LR	LR		
	comp=N,160nm,13.1s						
HHC				LR	LR		
	comp=E,190nm,13.2s						
HHC				LR	LR		
	comp=Z,180nm,13.3s						
GYA	**Guiyang**	**31.86**	**98**	P	**P**	**19 46 25.0**	**+2.9**
GYA				pP	pP	19 47 07.3	+5.4
GYA				sP	sP	19 47 29.0	+4.9
GYA				PP	PP	19 47 39.8	+1.7
GYA				PcP	PcP	19 49 11.4	+3.3
GYA				S	**S**	**19 51 20.4**	**+2.0**
GYA				ScP	ScP	19 52 34.0	+1.0
GYA				PcS	PcS	19 52 55.3	+2.2
GYA				ScS	ScS	19 56 31.9	0.0
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.4						
WHN	**Wuhan**	**36.35**	**87**	P	**P**	**19 47 01.0**	**+0.3**
FINES	**FINESS Array B**	**37.36**	**326**	P	**P**	**19 47 09.1**	**+0.3**
	comp=Z,0.7nm,0.3s,mb3.6,baz=117,slow=8.5,SNR=7.6						
FINES	**FINESS Array B**	**37.36**	**326**	P	**P**	**19 47 09.1**	**+0.3**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KEV	**Kevo**	**40.66**	**338**	P	**P**	**19 47 35.9**	**-0.1**
KEV				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.2						
KEV	**Kevo**	**40.66**	**338**	P	**P**	**19 47 35.9**	**-0.1**
	comp=Z,7.7nm,0.9s,mb4.1						
ARCES	**ARCESS Array B**	**41.00**	**338**	P	**P**	**19 47 39.7**	**+0.9**
	comp=Z,2.7nm,0.5s,mb3.9,baz=115,slow=8.7,SNR=22						
ARCES	**ARCESS Array B**	**41.00**	**338**	P	**P**	**19 47 39.7**	**+0.9**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ARE0	**ARCESS Array S**	**41.00**	**338**	P	**P**	**19 47 39.4**	**+0.6**
CN2	**Changchun**	**41.50**	**63**	*e*P	**P**	**19 47 45.3**	**+2.0**
CN2				*es*P	sP	19 48 51.8	+5.4
CN2				*e*S	**S**	**19 53 44.8**	**+0.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.4						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
YAK	**Yakutsk**	**43.81**	**36**	*e*P	**P**	**19 48 00.9**	**-0.7**
YAK				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.2						
NB2	**NORSAR Subarra**	**44.27**	**323**	P	**P**	**19 48 05.1**	**-0.1**
	comp=Z,2.4nm,0.6s,mb3.7,baz=96,slow=7.9						
NOA	**NORSAR Array B**	**44.27**	**323**	P	**P**	**19 48 05.3**	**+0.1**
	comp=Z,2.4nm,0.6s,mb3.7,baz=96,slow=7.8,SNR=9.7						
NOA	**NORSAR Array B**	**44.27**	**323**	P	**P**	**19 48 05.3**	**+0.1**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NOA	**NORSAR Array B**	**44.27**	**323**	P	**P**	**19 48 05.3**	**+0.1**
YHNB	**Yeheng**	**44.46**	**91**	P	**P**	**19 48 10.7**	**+3.4**
	comp=Z,7.5nm,0.7s,mb4.1						
KSRS	**Korea Array**	**44.79**	**71**	P	**P**	**19 48 08.8**	**-0.9**
	comp=Z,2.1nm,0.9s,mb3.5,baz=281,slow=7.0,SNR=7.9						
KSRS	**Korea Array**	**44.79**	**71**	P	**P**	**19 48 08.9**	**-0.8**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.5						
SEY	**Seymchan**	**54.26**	**34**	⇑*e*P	**P**	**19 49 20.8**	**0.0**
BILL	**Bilibino**	**58.44**	**26**	*i* P	**P**	**19 49 50.7**	**+0.5**
BILL				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.2						
TORD	**Torodi Ar. Bea**	**65.75**	**269**	P	**P**	**19 50 37.4**	**-2.3**
	comp=Z,1.6nm,0.5s,mb3.9,baz=52,slow=6.4,SNR=15						
TORD	**Torodi Ar. Bea**	**65.75**	**269**	P	**P**	**19 50 37.4**	**-2.3**
COLA	**College**	**74.31**	**16**	*e*P	**P**	**19 51 30.7**	**-0.2**
COLA				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.3						
COLA	**College**	**74.31**	**16**	*e*P	**P**	**19 51 30.6**	**-0.2**
	comp=Z,5.9nm,0.8s,mb4.3						
ILAR	**Eielson Array**	**74.61**	**16**	P	**P**	**19 51 31.7**	**-0.9**
	comp=Z,2.6nm,0.8s,mb3.9,baz=319,slow=4.7,SNR=28						
ILAR	**Eielson Array**	**74.61**	**16**	P	**P**	**19 51 31.7**	**-0.9**
ILAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KDAK	**Kodiak Island**	**79.03**	**22**	*i* P	**P**	**19 51 57.0**	**-0.4**
YKA	**Yellowknife Ar**	**81.08**	**3**	P	**P**	**19 52 08.0**	**-0.2**
	comp=Z,3.5nm,0.7s,mb4.1,baz=350,slow=5.3,SNR=11						
YKA	**Yellowknife Ar**	**81.08**	**3**	P	**P**	**19 52 08.0**	**-0.3**
YKA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WRA	**Warramunga Arr**	**82.05**	**122**	P	**P**	**19 52 11.7**	**-2.3**
	comp=Z,3.4nm,0.8s,mb4.0,baz=325,slow=4.9,SNR=20						
WRA	**Warramunga Arr**	**82.05**	**122**	P	**P**	**19 52 11.7**	**-2.3**
WRA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ASAR	**Alice Springs**	**84.32**	**125**	P	**P**	**19 52 23.5**	**-2.1**
	comp=Z,2.9nm,0.7s,mb4.1,baz=312,slow=5.0,SNR=38						
ASAR	**Alice Springs**	**84.32**	**125**	P	**P**	**19 52 23.5**	**-2.1**
ASAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						

BJI 22 19:43:57.4, 32°.77N×105°.67E, h14km, ML3.6/9, Ms3.3/4, Ms7 2.9/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.47**	**222**	Pn	Pn	19 44 42.1	+4.9
CD2				Pg	Pg	19 44 45.8	+1.1
CD2				Sn	Sn	19 45 08.6	+1.5
CD2				Sg	Sg	19 45 13.6	-3.1
CD2				smax			
	comp=N,1μm,0.7s						
CD2				smax			
	comp=E,740nm,0.6s						
XAN	**Xi'an**	**3.00**	**64**	Pn	Pn	19 44 46.8	+2.3
XAN				Pg	Pg	19 44 51.8	-3.1
XAN				Sn	Sn	19 45 24.3	+4.1
XAN				Sg	Sg	19 45 32.1	-1.7
XAN				smax			
	comp=N,190nm,0.4s						
XAN				smax			
	comp=E,53nm,0.5s						
LZH	**Lanzhou**	**3.64**	**336**	Pn	Pn	19 44 56.6	+3.3
LZH				Pg	Pg	19 45 05.8	-1.3
LZH				Sn	Sn	19 45 39.1	+3.2
LZH				Sg	Sg	19 45 52.0	-2.2
LZH				smax			
	comp=N,200nm,1.0s						
LZH				smax			
	comp=E,320nm,1.0s						
LZH				LR	LR		
	comp=N,550nm,6.8s						
LZH				LR	LR		
	comp=Z,560nm,9.3s						
WHN	**Wuhan**	**7.72**	**104**	*e*Pn	Pn	19 45 49.0	-0.4
WHN				Sn	Sn	19 47 15.8	-0.9
WHN				LR	LR		
	comp=N,220nm,6.1s						
WHN				LR	LR		
	comp=E,190nm,2.6s						

LJU ***22*** *19:45:54.9, 46°.79N×14°.40E, h0km, ML1.2*
CSEM ***22*** *19:45:55.1±0.1, 46°.80N×14°.41E, h10km, ML1.7/5, Error ellipse: s-maj=3.2km s-min=1.7km az=159.0*
VIE 22 19:45:55.2±0.4, 46°.78N×14°.41E, h9km±13km, mb0.9/1, ML1.3/4, 2C-6D, Error ellipse: s-maj=3.6km s-min=0.9km az=177.0 2 km WSW of Sankt Georgen am Lngsee, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OBKA	**Obir**	**0.29**	**160**	⇓*i*Pg	Pg	19 46 01.5	+0.6
	4.8nm,0.1s						
OBKA				⇓*i*Sg	Sg	19 46 05.3	+0.6
	4.5nm,0.1s						
OBKA	**Obir**	**0.29**	**160**	Pg	Pg	19 46 01.5	+0.6
	4.8nm,0.1s						
OBKA				Sg	Sg	19 46 05.3	+0.6
	4.5nm,0.1s						
SOKA	**Soboth**	**0.44**	**103**	⇑*i*Pg	Pg	19 46 04.0	+0.3
	1.0nm,0.0s						
SOKA				⇓*i*Sg	Sg	19 46 10.2	+0.6
	1.9nm,0.0s						
SOKA	**Soboth**	**0.44**	**103**	Pg	Pg	19 46 04.0	+0.2
	1.0nm,0.0s						
SOKA				Sg	Sg	19 46 10.2	+0.6
	1.9nm,0.0s						
MOZS	**Mozjanca**	**0.48**	**177**	*i* Pg	Pg	19 46 05.0	+0.5
MOZS							
	comp=Z,1.0nm,0.0s						
PERS	**Pernice**	**0.51**	**106**	*i* Pg	Pg	19 46 05.2	+0.2
PERS				*i* Sg	Sg	19 46 11.8	+0.1
PERS							
	comp=Z,2.0nm,0.0s						
PERS	**Pernice**	**0.51**	**106**	*i* Pg	Pg	19 46 05.2	+0.2
PERS				*i* Sg	Sg	19 46 11.8	+0.1
	comp=Z,2.0nm,0.0s						
GORS	**Gorjuse**	**0.54**	**212**	*i* Pg	Pg	19 46 06.0	+0.4
GORS				*i* Sg	Sg	19 46 13.2	+0.4
GORS							
	comp=Z,5.0nm,0.1s						
GORS	**Gorjuse**	**0.54**	**212**	*i* Sg	Sg	19 46 13.2	+0.4
	comp=Z,5.0nm,0.1s						
GORS	**Gorjuse**	**0.54**	**212**	*i* Pg	Pg	19 46 06.0	+0.3
ZAVS	**Zavodnje**	**0.55**	**129**	*i* Pg	Pg	19 46 06.1	+0.4
ZAVS				*i* Sg	Sg	19 46 13.2	+0.3
MYKA	**Terra Mystica**	**0.55**	**255**	⇓*i*Pg	Pg	19 46 05.8	0.0
	comp=Z,2.4nm,0.1s						
MYKA				⇓*i*Sg	Sg	19 46 13.7	+0.7
	comp=Z,3.4nm,0.1s						
MYKA	**Terra Mystica**	**0.55**	**255**	Pg	Pg	19 46 05.8	0.0
	comp=Z,2.4nm,0.1s						
MYKA				Sg	Sg	19 46 13.7	+0.7
	comp=Z,3.4nm,0.1s						
CRNS	**Crni Vrh**	**0.70**	**188**	*i* Pg	Pg	19 46 09.2	+0.5
CADS	**Cadrg**	**0.72**	**220**	*i* Pg	Pg	19 46 09.1	+0.1
CADS				*i* Sg	Sg	19 46 19.0	+0.6
CADS							
	comp=Z,4.0nm,0.1s						
CADS	**Cadrg**	**0.72**	**220**	*i* Sg	Sg	19 46 19.0	+0.6
	comp=Z,4.0nm,0.1s						
CADS	**Cadrg**	**0.72**	**220**	*i* Pg	Pg	19 46 09.1	+0.1
GROS	**Grobnik**	**0.82**	**112**	*i* Pg	Pg	19 46 10.7	-0.2
GROS	**Grobnik**	**0.82**	**112**	*i* Pg	Pg	19 46 10.7	-0.2
GROS				*i* Sg	Sg	19 46 21.3	-0.2
ARSA	**Arzberg**	**0.90**	**58**	⇑*i*Pg	Pg	19 46 12.5	+0.1
	comp=Z,0.3nm,0.1s						
ARSA				⇓*i*Sg	Sg	19 46 24.3	+0.2
	comp=Z,1.0nm,0.1s						
ARSA	**Arzberg**	**0.90**	**58**	Pg	Pg	19 46 12.5	+0.1
	comp=Z,0.3nm,0.1s						
ARSA				Sg	Sg	19 46 24.3	+0.2
	comp=Z,1.0nm,0.1s						
JAVS	**Javornik**	**0.92**	**195**	*i* Pg	Pg	19 46 13.6	+0.8
JAVS				*i* Sg	Sg	19 46 26.3	+1.7
JAVS	**Javornik**	**0.92**	**195**	*i* Pg	Pg	19 46 13.6	+0.8
JAVS				*i* Sg	Sg	19 46 26.3	+1.6
VISS	**Visnje**	**1.02**	**163**	*i* Pg	Pg	19 46 15.8	+1.0
VISS	**Visnje**	**1.02**	**163**	*i* Pg	Pg	19 46 15.8	+1.0

NIED ***22*** *20:15:00, 37°.40N×142°.40E, h29km, Mw3.7 Best double couple: M0=4.19000×10^14 NP1:φ±23.00000°, δ65.00000°, λ85.00000°. NP2:φ±214.00000°, δ25.00000°, λ100.00000°.*
IDC ***22*** *20:15:29.4±1.7, 37°.49N×142°.70E, h0km, mb3.7/4, mb1 3.6/8, mb1mx3.5/26, mbtmp3.7/8, ML3.3/4, MS2.6/1, Ms1 2.6/1, ms1mx2.3/33, Error ellipse: s-maj=34.0km s-min=21.2km az=89.0*
ISCJB ***22*** *20:15:30.2±2.0, 37°.46N±0°.05×142°.68E±0°.09, h22km±16km, mb3.9/6, Error ellipse: s-maj=12.2km s-min=7.8km az=24.9*
NEIC ***22*** *20:15:31.0±1.3, 37°.49N×142°.61E, h10km, mb4.5/2, MW3.7(NIED), Error ellipse: s-maj=22.2km s-min=18.3km az=108.0*
JMA ***22*** *20:15:32.5±0.2, 37°.42N×142°.41E, h25km±4km, M3.9*
ISC 22 20:15:34.6±2.2, 37°.48N±0°.05×142°.41E±0°.09, h31km±18km, n24, σ0°.95/31, mb3.9/6, 1C-6D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.23**	**265**	⇓P	**Pn**	**20 15 54.2**	**-1.3**
JIO	**Ouri**	**1.29**	**320**	⇓P	**Pn**	**20 15 55.9**	**-0.5**
JIO				*e*S	**Sn**	**20 16 12.9**	**+0.3**
ONAJ	**Iwakimizuishiy**	**1.34**	**254**	⇓P	**Pn**	**20 15 55.5**	**-1.6**
ONAJ				*e*S	**Sn**	**20 16 12.4**	**-1.4**
JMM	**Marumori**	**1.34**	**287**	⇓P	**Pn**	**20 15 56.1**	**-1.0**
JOU	**Okura**	**1.64**	**303**	⇓P	**Pn**	**20 16 01.2**	**0.0**
JFT	**Otama**	**1.65**	**272**	⇓P	**Pn**	**20 16 01.2**	**-0.2**
JFT				*e*S	**Sn**	**20 16 21.1**	**-0.4**
JMK	**Ichinoseki**	**1.75**	**328**	P	**Pn**	**20 16 03.0**	**+0.3**
JYS	**Shiratake**	**2.00**	**293**	P	**Pn**	**20 16 06.7**	**+0.5**
JFY	**Yanaizu**	**2.15**	**269**	P	**Pn**	**20 16 08.5**	**+0.2**
JYK	**Kaneyama**	**2.17**	**312**	P	**Pn**	**20 16 08.9**	**+0.5**
JOM	**Ohasama**	**2.18**	**337**	⇑P	**Pn**	**20 16 09.4**	**+0.8**
JAG	**Ashikaga**	**2.59**	**247**	P	**Pn**	**20 16 13.8**	**-0.5**
MJAR	**Matsushiro Arr**	**3.49**	**256**	Pn	**Pn**	**20 16 27.8**	**+1.2**
	3.6nm,0.3s,baz=73,slow=9.3,SNR=23						
MJAR				Sn	**Sn**	**20 17 12.9**	**+6.0**
	1.8nm,0.3s,baz=73,slow=10,SNR=5.0						
MAJO	**Matsushiro**	**3.49**	**256**	*e*Pn	**Pn**	**20 16 27.9**	**+1.2**
MAT	**Matsushiro**	**3.49**	**256**	P	**Pn**	**20 16 27.9**	**+1.2**
MAT				S	**Sn**	**20 17 12.4**	**+5.5**
JHJ	**Hachijo jima 2**	**4.85**	**207**	Pn	**Pn**	**20 16 44.2**	**-1.1**
	8.9nm,0.3s,baz=75,slow=22,SNR=17						
JHJ				Sn	**Sn**	**20 17 35.0**	**-5.4**
	34nm,0.3s,baz=64,slow=21,SNR=9.7						
ASAJ	**Asahikawa**	**6.63**	**1**	Pn	**Pn**	**20 17 08.8**	**-1.1**
	0.5nm,0.3s,baz=304,slow=7.3,SNR=3.7						
ASAJ				Sn	**Sn**	**20 18 22.8**	**-1.6**
	0.2nm,0.3s,baz=300,slow=20,SNR=2.3						
ASAJ				LR	LR	20 20 02.2	
	comp=Z,58nm,21.3s,baz=80,slow=41						
KSRS	**Korea Array**	**11.52**	**274**	Pn	**Pn**	**20 18 19.8**	**+3.0**
	0.1nm,0.3s,baz=89,slow=14,SNR=5.0						
ENH	**Enshi**	**28.16**	**265**	*e*P	**P**	**20 21 23.7**	**-0.4**
	12nm,0.9s,mb4.5						
SONM	**Songino Array**	**28.20**	**303**	P	**P**	**20 21 25.4**	**+1.2**
	1.2nm,0.8s,mb3.6,baz=94,slow=7.1,SNR=10						
ZALV	**Zalesovo Beam**	**42

EFP	**Efpalio**	**0.44**	**54**	*e*PB	**Pb**	**20 22 37.3**	**-0.5**
EFP				*e*SB	**Sb**	**20 22 45.0**	**+1.0**
EFP	**Efpalio**	**0.44**	**54**	P	**Pb**	**20 22 37.4**	**-0.4**
EFP				S	**Sb**	**20 22 44.2**	**+0.2**
EFP	**Efpalio**	**0.44**	**54**	P	**Pb**	**20 22 37.4**	**-0.4**
EFP				S	**Sb**	**20 22 44.2**	**+0.2**
EFP				*e*Sb	**Sb**	**20 22 45.0**	**+1.0**
KFL	**Anninata**	**0.53**	**264**	P	**Pb**	**20 22 39.2**	**-0.1**
KFL				S	**Sb**	**20 22 47.1**	**+0.7**
KFL	**Anninata**	**0.53**	**264**	P	**Pb**	**20 22 39.2**	**-0.1**
KFL				S	**Sb**	**20 22 47.1**	**+0.7**
TRIZ	**Trizonia**	**0.53**	**68**	P	**Pb**	**20 22 38.8**	**-0.5**
TRIZ				S	**Sb**	**20 22 46.5**	**+0.1**
TRIZ	**Trizonia**	**0.53**	**68**	P	**Pb**	**20 22 38.8**	**-0.5**
TRIZ				S	**Sb**	**20 22 46.5**	**+0.1**
KALE	**Kalithea**	**0.59**	**67**	P	**Pb**	**20 22 39.7**	**-0.6**
KALE				S	**Sb**	**20 22 48.7**	**+0.6**
KALE	**Kalithea**	**0.59**	**67**	P	**Pb**	**20 22 39.7**	**-0.6**
KALE				S	**Sb**	**20 22 48.7**	**+0.6**
VLS	**Valsamata**	**0.68**	**271**	*e*Pb	**Pb**	**20 22 41.1**	**-0.8**
VLS				*e*Sn	**Sn**	**20 22 52.8**	**-0.3**
VLS	**Valsamata**	**0.68**	**271**	*e*PB	**Pb**	**20 22 41.1**	**-0.8**
VLS				*e*SN	**Sn**	**20 22 52.8**	**-0.3**
VLS	**Valsamata**	**0.68**	**271**	P	**Pb**	**20 22 41.4**	**-0.5**
VLS				S	**Sb**	**20 22 51.9**	**+1.1**
VLS	**Valsamata**	**0.68**	**271**	*e*Pb	**Pb**	**20 22 41.1**	**-0.8**
VLS	**Valsamata**	**0.68**	**271**	P	**Pb**	**20 22 41.4**	**-0.5**
VLS				S	**Sb**	**20 22 51.9**	**+1.1**
VLS				*e*Sn	**Sn**	**20 22 52.8**	**-0.3**
GUR	**Goura**	**0.74**	**108**	*e*PN	**Pb**	**20 22 42.4**	**-0.5**
GUR				*e*SN	**Sn**	**20 22 53.7**	**-0.9**
GUR	**Goura**	**0.74**	**108**	P	**Pb**	**20 22 42.4**	**-0.5**
GUR				S	**Sb**	**20 22 53.6**	**+1.1**
GUR	**Goura**	**0.74**	**108**	P	**Pb**	**20 22 42.4**	**-0.5**
GUR				*e*Sn	**Sn**	**20 22 53.7**	**-0.9**
EVR	**Evrytania**	**0.80**	**20**	*e*Pb	**Pb**	**20 22 43.8**	**-0.1**
EVR				*e*Sn	**Sn**	**20 22 56.6**	**+0.5**
EVR	**Evrytania**	**0.80**	**20**	*e*PB	**Pb**	**20 22 43.8**	**-0.1**
EVR				*e*SN	**Sn**	**20 22 56.6**	**+0.5**
EVR	**Evrytania**	**0.80**	**20**	*e*Pb	**Pb**	**20 22 43.8**	**-0.1**
EVR				*e*Sn	**Sn**	**20 22 56.6**	**+0.5**
DSF	**Desfina**	**0.88**	**74**	P	**Pb**	**20 22 44.6**	**-0.7**
DSF				S	**Sb**	**20 22 57.3**	**+0.7**
DSF	**Desfina**	**0.88**	**74**	P	**Pb**	**20 22 44.6**	**-0.7**
DSF				S	**Sb**	**20 22 57.3**	**+0.7**
LKD2	**Lefkada island**	**0.88**	**315**	P	**Pb**	**20 22 44.8**	**-0.5**
LKD2				S	**Sb**	**20 22 56.8**	**+0.2**
LKD2	**Lefkada island**	**0.88**	**315**	P	**Pb**	**20 22 44.8**	**-0.5**
LKD2				S	**Sb**	**20 22 56.8**	**+0.2**
ITM	**Ithomi**	**1.05**	**159**	*e*Pn	**Pn**	**20 22 48.3**	**0.0**
ITM	**Ithomi**	**1.05**	**159**	*e*PN	**Pn**	**20 22 48.3**	**0.0**
ITM	**Ithomi**	**1.05**	**159**	P	**Pb**	**20 22 47.9**	**-0.4**
ITM	**Ithomi**	**1.05**	**159**	P	**Pb**	**20 22 47.9**	**-0.4**
ITM	**Ithomi**	**1.05**	**159**	*e*Pn	**Pn**	**20 22 48.3**	**0.0**
AGG	**Agios Georgios**	**1.10**	**39**	*e*Pb	**Pb**	**20 22 48.8**	**-0.2**
AGG	**Agios Georgios**	**1.10**	**39**	*e*PB	**Pb**	**20 22 48.8**	**-0.2**
AGG	**Agios Georgios**	**1.10**	**39**	P	**Pn**	**20 22 48.0**	**-0.9**
AGG				S	**Sb**	**20 23 02.9**	**+0.1**
AGG	**Agios Georgios**	**1.10**	**39**	P	**Pn**	**20 22 48.0**	**-0.9**
AGG	**Agios Georgios**	**1.10**	**39**	*e*Pb	**Pb**	**20 22 48.8**	**-0.2**
AGG				S	**Sb**	**20 23 02.9**	**+0.1**
DID	**Didima**	**1.56**	**114**	*e*PN	**Pn**	**20 22 57.5**	**+2.3**

GUC 22 20:24:46.9±0.6, 22°37′S×68°67′W, h120km, ML3.8, 1C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACH	**Maria Elena**	**1.02**	**279**	↑*e*P	Pn	20 25 10.5	+1.3
MACH				*i* S	Sn	20 25 27.4	+1.4
CEN1	**Los Morros**	**1.74**	**234**	↓*e*P	Pn	20 25 20.4	+3.2
CEN1				*i* S	Sn	20 25 46.4	+6.1
CEN1				AML	AML	20 25 53.5	
	comp=N,762nm,0.5s						
MECH	**Mejillones**	**1.80**	**246**	↓*i* P	Pn	20 25 20.3	+2.4
MECH				*i* S	Sn	20 25 44.5	+2.9
MECH				AML	AML	20 26 01.6	
	comp=E,867nm,0.6s						
ANCH	**Antofagasta**	**2.07**	**230**	*e*P	Pn	20 25 22.0	+0.7
ANCH				*i* S	Sn	20 25 48.5	+0.9

*ISCJB **22** 20:36:12.4±0.6, 38°.09N±0°.05×21°.56E±0°.03, h23km±6km, Error ellipse: s-maj=9.1km s-min=3.6km az=170.7*
*ATH **22** 20:36:12.4, 38°.12N×21°.52E, h20km±4km, MD2.8/4*
*THE **22** 20:36:12.6, 38°.11N×21°.56E, h18km, ML2.5/5, Error ellipse: s-maj=0.6km s-min=0.2km az=356.0*
*CSEM **22** 20:36:12.2±0.1, 38°.09N×21°.56E, h20km, MD2.8, Error ellipse: s-maj=4.1km s-min=1.6km az=171.0*
ISC 22 20:36:12.5±0.6, 38°.09N±0°.05×21°.55E±0°.03, h20km±3km, n26, σ0°.56/50, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.08**	**243**	*e*PB	**Pg**	**20 36 16.1**	**-0.1**
RLS				*e*SB	**Sg**	**20 36 19.1**	**+0.5**
RLS	**Riolos of Patr**	**0.08**	**243**	*e*Pb	**Pg**	**20 36 16.1**	**-0.1**
RLS				*e*Sb	**Sg**	**20 36 19.1**	**+0.5**
UPR	**University Cam**	**0.27**	**44**	*e*PB	**Pg**	**20 36 18.8**	**+0.2**
UPR	**University Cam**	**0.27**	**44**	P	**Pg**	**20 36 18.4**	**-0.2**
UPR				S	**Sg**	**20 36 22.6**	**-0.2**
UPR	**University Cam**	**0.27**	**44**	P	**Pg**	**20 36 18.4**	**-0.2**
UPR	**University Cam**	**0.27**	**44**	*e*Pb	**Pg**	**20 36 18.8**	**+0.2**
UPR				S	**Sg**	**20 36 22.6**	**-0.2**
LAKA	**Lakka**	**0.37**	**66**	P	**Pg**	**20 36 20.1**	**-0.2**
LAKA				S	**Sg**	**20 36 25.7**	**+0.2**
LAKA	**Lakka**	**0.37**	**66**	P	**Pg**	**20 36 20.1**	**-0.2**
LAKA				S	**Sg**	**20 36 25.7**	**+0.2**
EFP	**Efpalio**	**0.43**	**40**	*e*PB	**Pb**	**20 36 21.1**	**-0.4**
EFP	**Efpalio**	**0.43**	**40**	P	**Pg**	**20 36 21.2**	**-0.3**
EFP				S	**Sg**	**20 36 27.7**	**+0.2**
EFP	**Efpalio**	**0.43**	**40**	P	**Pg**	**20 36 21.2**	**-0.3**
EFP				S	**Sg**	**20 36 27.7**	**+0.2**
TRIZ	**Trizonia**	**0.49**	**56**	P	**Pb**	**20 36 22.1**	**-0.4**
TRIZ				S	**Sg**	**20 36 29.3**	**+0.1**
TRIZ	**Trizonia**	**0.49**	**56**	P	**Pb**	**20 36 22.1**	**-0.4**
TRIZ				S	**Sg**	**20 36 29.3**	**+0.1**
KALE	**Kalithea**	**0.55**	**57**	P	**Pb**	**20 36 23.0**	**-0.5**
KALE				S	**Sb**	**20 36 31.2**	**+0.3**
KALE	**Kalithea**	**0.55**	**57**	P	**Pb**	**20 36 23.0**	**-0.5**
KALE				S	**Sb**	**20 36 31.2**	**+0.3**
KFL	**Anninata**	**0.60**	**272**	P	**Pb**	**20 36 24.1**	**-0.3**
KFL				S	**Sb**	**20 36 33.4**	**+1.0**
KFL	**Anninata**	**0.60**	**272**	P	**Pb**	**20 36 24.1**	**-0.3**
KFL				S	**Sb**	**20 36 33.4**	**+1.0**
GUR	**Goura**	**0.64**	**104**	P	**Pb**	**20 36 24.9**	**-0.1**
GUR				S	**Sb**	**20 36 34.4**	**+0.8**
GUR	**Goura**	**0.64**	**104**	P	**Pb**	**20 36 24.9**	**-0.1**
GUR				S	**Sb**	**20 36 34.4**	**+0.8**
VLS	**Valsamata**	**0.76**	**277**	*e*PN	**Pn**	**20 36 26.6**	**-1.5**
VLS				*e*SN	**Sn**	**20 36 38.2**	**-0.9**
VLS	**Valsamata**	**0.76**	**277**	P	**Pb**	**20 36 26.7**	**-0.4**
VLS				S	**Sb**	**20 36 37.9**	**+0.8**
VLS	**Valsamata**	**0.76**	**277**	P	**Pb**	**20 36 26.7**	**-0.4**
VLS				S	**Sb**	**20 36 37.9**	**+0.8**
VLS				*e*Sn	**Sn**	**20 36 39.2**	**+0.1**
DSF	**Desfina**	**0.83**	**67**	P	**Pb**	**20 36 27.8**	**-0.4**
DSF				S	**Sb**	**20 36 39.8**	**+0.8**
DSF	**Desfina**	**0.83**	**67**	P	**Pb**	**20 36 27.8**	**-0.4**
DSF				S	**Sb**	**20 36 39.8**	**+0.8**
LKD2	**Lefkada island**	**0.99**	**315**	P	**Pb**	**20 36 30.5**	**-0.4**
LKD2				S	**Sb**	**20 36 44.4**	**+0.8**
LKD2	**Lefkada island**	**0.99**	**315**	P	**Pb**	**20 36 30.5**	**-0.4**
LKD2				S	**Sb**	**20 36 44.4**	**+0.8**

*IDC **22** 20:39:54.8±0.9, 7°.82N×126°.96E, h0km, mb4.0/11, mb1 4.1/11, mb1mx4.0/20, mbtmp4.0/11, MS3.6/4, Ms1 3.6/4, ms1mx3.1/35, Error ellipse: s-maj=43.4km s-min=18.1km az=74.0*
*MAN **22** 20:40:01, 7°.74N×126°.85E, h1km, mb5.2, ML4.2, MS4.4*
*ISCJB **22** 20:40:04.6±1.1, 7°.73N±0°.05×126°.82E±0°.10, h90km±9km, mb4.2/20, Error ellipse: s-maj=16.2km s-min=7.5km az=170.9*
*NEIC **22** 20:40:04.6±2.6, 7°.85N×126°.87E, h72km±24km, mb4.7/6, Error ellipse: s-maj=25.9km s-min=11.3km az=71.0*
ISC 22 20:40:06.2±1.0, 7°.70N±0°.05×126°.77E±0°.10, h88km±8km,

n49, σ1°.20/54, mb4.2/20, 4C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.90**	**214**	*e*P	**Pn**	**20 40 20.0**	**-4.8**
MATI				*e*S	**Sn**	**20 40 32.5**	**-6.1**
DAV	**Davao City (W)**	**1.33**	**242**	Pn	**Pn**	**20 40 29.4**	**-0.4**
	207nm,0.3s,baz=234,slow=2.0,SNR=34						
DAV	**Davao City (W)**	**1.33**	**242**	*e*Pn	**Pn**	**20 40 28.9**	**-0.9**
DMPH	**Davao City--Mi**	**1.39**	**244**	↑*e*P	**Pn**	**20 40 30.9**	**+0.3**
DMPH				*e*		20 40 52.5	
BUTP	**Butuan**	**1.70**	**318**	*e*P	**Pn**	**20 40 31.7**	**-2.8**
BUTP				*e*S	**Sn**	**20 40 58.8**	**+3.0**
BUKP	**Musuan**	**1.70**	**276**	*e*P	**Pn**	**20 40 35.0**	**+0.5**
BUKP				*e*S	**Sn**	**20 40 54.9**	**-1.0**
CGP	**Cagayan de Oro**	**2.19**	**290**	↑*i* P	**Pn**	**20 40 39.7**	**-1.2**
CGP				*i* S	**Sn**	**20 41 13.8**	**+6.4**
GSPH	**General Santos**	**2.41**	**229**	↑*i* P	**Pn**	**20 40 42.1**	**-1.7**
CTBH	**Cotabato--PC H**	**2.54**	**259**	*e*P	**Pn**	**20 40 45.0**	**-0.6**
CTBH				*i* S	**Sn**	**20 41 09.5**	**-6.4**
PAGZ	**Pagadian**	**3.36**	**273**	*e*P	**Pn**	**20 40 58.0**	**+1.4**
PAGZ				*e*S	Sn	20 41 07.3	-28
TBP	**Tagbilaran**	**3.49**	**305**	*e*P	**Pn**	**20 40 57.2**	**-1.1**
TBP				*e*S	**Sn**	**20 41 39.2**	**+0.6**
LLP	**Lapu-Lapu**	**3.80**	**313**	*e*P	**Pn**	**20 41 02.9**	**+0.4**
LLP				*e*S	**Sn**	**20 41 49.6**	**+3.5**
SNPH	**Sibulan**	**3.86**	**295**	↑*e*P	**Pn**	**20 41 03.8**	**+0.5**
SNPH				*e*S	**Sn**	**20 41 54.6**	**+7.1**
OCLP	**Ormoc**	**3.95**	**328**	*e*P	**Pn**	**20 41 07.2**	**+2.5**
GUIM	**Jordan**	**5.05**	**306**	*e*P	**Pn**	**20 41 18.8**	**-0.7**
CNP	**Catarman**	**5.21**	**337**	*e*P	**Pn**	**20 41 23.0**	**+1.3**
PVCP	**Virac**	**6.40**	**337**	*e*P	**Pn**	**20 41 37.5**	**-0.4**
KSM	**Kuching**	**17.53**	**250**	*e*Pn	**Pn**	**20 44 08.4**	**+3.4**
GUMO	**Guam**	**18.72**	**70**	LR	LR	20 51 41.6	
	comp=Z,106nm,18.3s,baz=259,slow=38						
CBIJ	**Chichi jima**	**24.21**	**35**	LR	LR	20 54 00.7	
	comp=Z,84nm,18.3s,baz=125,slow=35						
FITZ	**Fitzroy Crossi**	**25.66**	**182**	*e*P	**P**	**20 45 30.0**	**+2.1**
	11nm,1.1s,mb4.2						
FITZ	**Fitzroy Crossi**	**25.66**	**182**	P	**P**	**20 45 27.9**	**-0.1**
	3.1nm,0.7s,mb3.9,baz=28,slow=7.9,SNR=14						
FITZ	**Fitzroy Crossi**	**25.66**	**182**	*e*P	**P**	**20 45 29.3**	**+1.3**
WRAB	**Tennant Creek**	**28.45**	**165**	*e*P	**P**	**20 45 55.4**	**+2.5**
	6.6nm,0.9s,mb4.2						
CMAR	**Chiang Mai Arr**	**29.09**	**294**	P	**P**	**20 45 59.0**	**+0.3**
	0.4nm,0.3s,mb3.5,baz=105,slow=7.0,SNR=4.5						
MBWA	**Marble Bar**	**29.50**	**193**	*e*P	**P**	**20 46 00.7**	**-1.5**
	22nm,1.2s,mb4.7						
KSRS	**Korea Array**	**29.64**	**2**	P	**P**	**20 46 03.9**	**+0.6**
	0.7nm,0.5s,mb3.5,baz=182,slow=10,SNR=6.9						
ASAR	**Alice Springs**	**31.94**	**168**	P	**P**	**20 46 23.0**	**-0.7**
	0.4nm,0.3s,mb3.6,baz=344,slow=6.8,SNR=10.0						
MDJ	**Mudanjiang**	**36.86**	**3**	P	**P**	**20 47 04.9**	**-1.1**
	16nm,0.9s,mb4.9						
FORT	**Forrest**	**38.28**	**178**	*e*P	**P**	**20 47 19.7**	**+1.6**
	8.5nm,0.7s,mb4.7						
LSA	**Lhasa**	**39.95**	**308**	P	**P**	**20 47 33.7**	**+1.6**
KLBR	**Kellerberrin**	**40.01**	**192**	*e*P	**P**	**20 47 33.5**	**+1.0**
	83nm,1.8s,mb5.3						
STKA	**Stephens Creek**	**41.83**	**161**	*e*P	**P**	**20 47 55.6**	**+8.2**
	2.4nm,0.6s,mb4.1						
STKA	**Stephens Creek**	**41.83**	**161**	P	**P**	**20 47 50.9**	**+3.4**
	3.9nm,0.8s,mb4.2,baz=0.0,slow=12,SNR=3.7						
STKA	**Stephens Creek**	**41.83**	**161**	*e*P	**P**	**20 47 50.7**	**+3.3**
	1.5nm,1.0s,mb3.7						
ULN	**Ulaanbaatar**	**43.39**	**341**	P	**P**	**20 47 58.0**	**-1.9**
SONM	**Songino Array**	**43.59**	**340**	P	**P**	**20 48 00.6**	**-0.9**
	0.3nm,0.4s,mb3.4,baz=148,slow=9.4,SNR=5.3						
YAK	**Yakutsk**	**54.27**	**2**	*e*P	**P**	**20 49 23.2**	**+0.3**
	22nm,1.1s,mb5.1						
MK31	**Makanchi Array**	**54.37**	**324**	*e*P	**P**	**20 49 23.7**	**-0.2**
MKAR	**Makanchi Array**	**54.37**	**324**	P	**P**	**20 49 24.0**	**+0.1**
	2.5nm,0.7s,mb4.3,baz=123,slow=7.6,SNR=24						
MKAR				LR	LR	21 13 60.0	
	comp=Z,80nm,19.9s,baz=132,slow=38						
ZALV	**Zalesovo Beam**	**57.11**	**332**	P	**P**	**20 49 42.2**	**-1.1**
	1.2nm,0.7s,mb4.0,baz=130,slow=6.6,SNR=6.4						
UCH	**Uchtor**	**57.33**	**316**	P	**P**	**20 49 45.2**	**+0.1**
AAK	**Ala-Archa**	**57.50**	**316**	LR	LR	21 15 46.1	
	comp=Z,150nm,21.0s,baz=221,slow=37						
KURK	**Kurchatov**	**58.46**	**326**	*e*P	**P**	**20 49 50.8**	**-2.0**
	9.4nm,1.2s,mb4.7						
BVAR	**Borovoye Array**	**64.05**	**326**	P	**P**	**20 50 30.5**	**0.0**
	1.2nm,0.6s,mb3.9,baz=127,slow=7.5,SNR=9.1						
ILAR	**Eielson Array**	**81.53**	**26**	P	**P**	**20 52 13.6**	**-0.2**
	0.4nm,0.5s,mb3.5,baz=240,slow=5.2,SNR=5.4						
ARCES	**ARCESS Array B**	**86.76**	**340**	P	**P**	**20 52 40.1**	**-0.1**
	2.7nm,0.8s,mb4.2,baz=90,slow=6.3,SNR=9.0						
MMAI	**Mount Meron Ar**	**87.00**	**303**	P	**P**	**20 52 42.0**	**-0.1**
	1.8nm,0.7s,mb4.1,baz=79,slow=8.6,SNR=3.6						
FINES	**FINESS Array B**	**88.37**	**332**	P	**P**	**20 52 48.0**	**0.0**
	0.5nm,0.4s,mb3.9,baz=74,slow=5.0,SNR=8.9						

*ISCJB **22** 20:40:36.5±1.0, 36°.99N±0°.06×29°.20E±0°.06, h0km±15km, Error ellipse: s-maj=9.7km s-min=7.8km az=169.3*
*DDA **22** 20:40:36.6, 37°.00N×29°.22E, h7km±3km, Md2.5*
*ISK **22** 20:40:36.2, 37°.01N×29°.27E, h5km, MD2.7*
*CSEM **22** 20:40:37.0±0.3, 37°.01N×29°.25E, h8km, MD2.5, Error ellipse: s-maj=6.3km s-min=5.2km az=6.0*
ISC 22 20:40:37.2±1.0, 37°.00N±0°.05×29°.23E±0°.06, h7km±11km, n12, σ0°.67/20, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.27**	**54**	*e*PG	**Pg**	**20 40 41.6**	**-1.0**
GLHS				*e*SG	**Sg**	**20 40 46.2**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.27**	**54**	*e*Pg	**Pg**	**20 40 41.6**	**-0.9**
GLHS				*e*Sg	**Sg**	**20 40 46.2**	**+0.1**
GOLH	**Golhisar**	**0.36**	**48**	*i* P	**Pg**	**20 40 43.4**	**-0.8**
GOLH				*i* S	**Sg**	**20 40 49.8**	**+0.9**
GOLH	**Golhisar**	**0.36**	**48**	*i* P	**Pg**	**20 40 43.4**	**-0.8**
GOLH				*i* S	**Sg**	**20 40 49.8**	**+0.8**
ELL	**Elmali**	**0.60**	**114**	*e*PG	**Pg**	**20 40 48.5**	**-0.3**
ELL				*e*SG	**Sg**	**20 40 57.3**	**+0.6**
ELL	**Elmali**	**0.60**	**114**	*e*Pg	**Pg**	**20 40 48.5**	**-0.3**
ELL				*e*Sg	**Sg**	**20 40 57.3**	**+0.7**
DNZL	**Cakiroluk**	**0.71**	**348**	*i* P	**Pg**	**20 40 50.6**	**-0.1**
DNZL	**Cakiroluk**	**0.71**	**348**	*i* P	**Pg**	**20 40 50.7**	**-0.1**
DAT	**Datca**	**1.35**	**259**	*e*PG	**Pg**	**20 41 03.7**	**+0.6**
DAT	**Datca**	**1.35**	**259**	*e*Pg	**Pg**	**20 41 03.7**	**+0.6**
KHAL	**Karahalli**	**1.39**	**9**	*i* P	**Pn**	**20 41 02.1**	**-0.8**
KHAL				*i* S	**Sb**	**20 41 22.1**	**+0.8**
KHAL	**Karahalli**	**1.39**	**9**	*i* P	**Pn**	**20 41 02.1**	**-0.8**
KHAL				*i* S	**Sb**	**20 41 22.1**	**+0.8**

*NEIC **22** 20:49:40.8, 32°.08S×71°.73W, h24km, ML2.7(GUC), After GUC.*
GUC 22 20:49:40.8±0.9, 32°.08S×71°.73W, h24km±5km, MD3.8, ML2.7, 4C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.28**	**45**	*e*P	Pb	20 49 46.9	-0.6
CHNG				*i* S	Sb	20 49 52.2	+0.3
ROCH	**El Roble**	**1.07**	**146**	↑*i* P	Pn	20 49 59.9	-0.5
ROCH	**El Roble**	**1.07**	**146**	↑*i* P	Pn	20 49 59.9	-0.5
CMCH	**Combarbala**	**1.10**	**35**	*e*P	Pn	20 50 08.8	+0.1
CMCH				*i* S	Sb	20 50 15.1	0.0
CMCH	**Combarbala**	**1.10**	**35**	*e*P	Pn	20 50 00.8	+0.1
CMCH				*i* S	Sb	20 50 15.1	0.0
CMCH				AML	AML	20 50 18.8	
	comp=E,532nm,0.7s						
JACH	**Jahuel**	**1.13**	**122**	↑*i* P	Pn	20 50 01.0	-0.1
JACH				*i* S	Sn	20 50 16.1	+0.1
JACH	**Jahuel**	**1.13**	**122**	↑*i* P	Pn	20 50 01.0	-0.1
JACH				*i* S	Sn	20 50 16.1	+0.1
PEL	**Peldehue**	**1.38**	**140**	*e*P	Pn	20 50 05.0	+0.5
PEL				*e*S	Sn	20 50 22.9	+0.9
PEL				AML	AML	20 50 24.8	
	comp=E,193nm,0.4s						
FCH	**Farellones**	**1.74**	**136**	*e*P	Pn	20 50 08.1	-1.4
FCH				*i* S	Sn	20 50 28.2	-2.7
LMEL	**Las Melosas**	**2.18**	**144**	*e*P	Pn	20 50 17.1	+1.5
LMEL				*i* S	Sn	20 50 44.6	+2.9
LMEL	**Las Melosas**	**2.18**	**144**	*e*P	Pn	20 50 17.1	+1.5
LMEL				*i* S	Sn	20 50 44.6	+2.9
LMEL				AML	AML	20 50 55.2	
	comp=N,54nm,0.2s						

KRSC 22 20:56:24.4±0.1, 54°.09N×161°.67E, h15km±15km, ML3.5,

Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.47**	**4**	*e*P	Pg	20 56 33.9	+0.2
MKZ				*i* S	Sg	20 56 40.2	+0.2
KII	**Karymskiy**	**1.31**	**269**	*e*P	Pn	20 56 48.6	+0.5
KII				*i* S	Sb	20 57 05.6	+0.3
SPN	**Mys Shipunski**	**1.40**	**225**	*e*P	Pn	20 56 48.9	-0.4
SPN				*i* S	Sn	20 57 06.9	-0.5
NLC	**Nalytchevo**	**1.66**	**237**	*e*P	Pn	20 56 53.1	+0.2
NLC				*i* S	Sn	20 57 14.8	+0.8
KMNR	**Kamenistaya**	**1.86**	**334**	*e*P	Pn	20 56 56.4	+0.7
KMNR				*i* S	Sn	20 57 19.9	+1.0
AVH	**Avacha**	**1.93**	**246**	*e*P	Pn	20 56 58.2	+1.6
AVH				*i* S	Sn	20 57 22.3	+1.7
KPT	**Kopyto**	**2.06**	**337**	*e*P	Pn	20 56 59.8	+1.4
KPT				*i* S	Sn	20 57 25.6	+1.9
PET	**Petropavlovsk**	**2.09**	**241**	P	Pn	20 57 01.4	+2.5
PET				*i* S	Sn	20 57 27.5	+2.9
KBTR	**Krutoberegovo**	**2.22**	**17**	P	Pn	20 57 03.5	+2.9
KBTR				*i* S	Sn	20 57 30.9	+3.1
GNL	**Ganaly**	**2.24**	**261**	*e*P	Pn	20 57 02.7	+1.8
GNL				*i* S	Sn	20 57 31.7	+3.4
SRDR	**Sredinnyy**	**2.50**	**334**	P	Pn	20 57 07.0	+2.6
SRDR				*i* S	Sn	20 57 37.4	+2.8

*NEIC **22** 21:01:50.5±2.5, 24°.69N×143°.58E, h127km±21km, mb4.3/5, Error ellipse: s-maj=17.4km s-min=10.7km az=123.0*
IDC 22 21:02:06.0±6.5, 24°.77N×143°.18E, h257km±48km, mb3.2/2, mb1 3.1/4, mb1mx2.8/24, mbtmp3.2/4, Error ellipse: s-maj=229.5km s-min=74.5km az=52.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.49**	**339**	P	Pn	21 02 54.5	+0.9
	22nm,0.3s,baz=301,slow=20,SNR=42						
CBIJ				S	S	21 03 31.6	+0.3
	47nm,0.3s,baz=268,slow=22,SNR=15						
MAJO	**Matsushiro**	**12.49**	**341**	Pn	Pn	21 04 46.2	-9.1
KSRS	**Korea Array**	**18.15**	**318**	P	P	21 06 01.4	+1.6
	0.2nm,0.3s,baz=138,slow=12,SNR=9.7						
TATO	**Taipei**	**19.68**	**275**	*e*P	P	21 06 14.1	-2.2
YULB	**Yu-li**	**20.03**	**271**	*e*P	P	21 06 16.8	-3.1
ENH	**Enshi**	**30.31**	**288**	*e*P	P	21 07 53.8	0.0
	7.9nm,0.8s						
ULN	**Ulaanbaatar**	**36.64**	**318**	*e*P	P	21 08 47.6	-0.3
	1.0nm,0.2s						
KSM	**Kuching**	**39.29**	**239**	P	P	21 09 10.6	+0.1
KULM	**Kulim**	**45.15**	**252**	P	P	21 09 57.0	-0.6
WRAB	**Tennant Creek**	**45.25**	**192**	*e*P	P	21 09 54.7	-3.5
	3.8nm,1.0s						
MKAR	**Makanchi Array**	**52.66**	**311**	P	P	21 10 52.9	-1.0
	0.3nm,0.3s,baz=100,slow=6.4,SNR=5.6						
MKAR	**Makanchi Array**	**52.66**	**311**	P	P	21 10 52.9	-1.1
KURK	**Kurchatov**	**55.26**	**316**	*e*P	P	21 11 12.4	-0.2
	0.3nm,0.5s						
EKS2	**Erkin-Say**	**58.86**	**306**	P	P	21 11 38.6	+0.6
COLA	**College**	**58.94**	**28**	*e*P	P	21 11 34.9	-3.1
	9.4nm,0.6s						
BVAR	**Borovoye Array**	**60.37**	**318**	P	P	21 11 48.2	+0.3
	0.3nm,0.4s,baz=83,slow=6.8,SNR=7.2						
EGAK	**Eagle**	**61.78**	**28**	P	P	21 11 55.5	-1.8
PALK	**Pallekele**	**62.02**	**265**	*e*P	P	21 12 00.2	+0.5
	27nm,1.1s						
KBL	**Kabul**	**63.88**	**298**	*e*P	P	21 12 11.7	+0.1
INK	**Inuvik**	**64.78**	**24**	*e*P	P	21 12 17.1	+0.4

*ISCJB **22** 21:06:57.4±0.5, 46°.64N±0°.05×146°.67E±0°.08, h327km±4km, mb3.6/21, Error ellipse: s-maj=9.3km s-min=8.2km az=20.2*
*MOS **22** 21:06:57.7±0.6

SONM Songino Array 27.18 287 P **P** **21 12 13.5 +0.6**
SONM pmax pmax
comp=Z,2.0nm,0.9s
TLY Talaya 28.28 296 *e*P **P** **21 12 21.5 -1.1**
TLY pmax pmax
comp=Z,1.0nm,0.6s,mb3.2
TLY Talaya 28.28 296 *e*P **P** **21 12 21.5 -1.1**
comp=Z,1.0nm,0.6s,mb3.2
TATO Taipei 29.54 232 *e*P **P** **21 12 34.8 +0.9**
TPUB Ta-pu 31.34 231 *e*P **P** **21 12 50.5 +0.8**
comp=Z,5.1nm,0.6s,mb3.9
GUMO Guam 32.99 183 *e*P **P** **21 13 04.6 +0.6**
comp=Z,40nm,0.9s,mb4.7
GTA Gaotai 34.60 275 *e*P **P** **21 13 19.1 +1.5**
GTA pmax pmax
comp=Z,3.0nm,1.0s,mb3.5
COLA College 38.95 38 *e*P **P** **21 13 53.5 -0.2**
ILAR Eielson Array 39.38 38 P **P** **21 13 56.9 -0.2**
comp=Z,1.8nm,0.7s,mb3.4,baz=273,slow=7.8,SNR=13
ILAR Eielson Array 39.38 38 P **P** **21 13 56.9 -0.2**
ILAR pmax pmax
comp=Z,2.0nm,0.7s
MK31 Makanchi Array 43.02 295 *e*P **P** **21 14 26.2 -0.6**
MKAR Makanchi Array 43.02 295 P **P** **21 14 26.5 -0.3**
comp=Z,0.8nm,0.5s,mb3.1,baz=72,slow=8.0,SNR=11
MKAR PcP PcP 21 16 10.7 +0.2
comp=Z,0.2nm,0.2s,baz=84,slow=4.5,SNR=2.9
KURK Kurchatov 43.70 301 *e*P **P** **21 14 30.8 -1.3**
comp=Z,1.0nm,0.6s,mb3.1
LSA Lhasa 45.86 269 *e*P **P** **21 14 49.4 +0.1**
LSA pmax pmax
comp=Z,3.0nm,0.6s,mb3.6
LSA Lhasa 45.86 269 *e*P **P** **21 14 49.4 0.0**
comp=Z,2.8nm,0.6s,mb3.6
BVAR Borovoye Array 47.46 307 P **P** **21 15 00.8 -0.5**
comp=Z,0.5nm,0.5s,mb3.0,baz=60,slow=6.0,SNR=5.6
BRVK Borovoye 47.50 307 *e*P **P** **21 15 01.1 -0.5**
comp=Z,1.1nm,0.5s,mb3.3
UCH Uchtor 50.07 293 *e*P **P** **21 15 21.7 +0.6**
EKS2 Erkin-Say 50.31 294 *e*P **P** **21 15 22.0 -0.9**
comp=Z,1.2nm,0.6s,mb3.3
ARU Arti 52.04 315 *e*P **P** **21 15 34.3 -1.1**
ARU pmax pmax
comp=Z,1.0nm,0.4s,mb3.5
ARU Arti 52.04 315 *e*P **P** **21 15 34.3 -1.1**
comp=Z,1.2nm,0.4s,mb3.6
KSM Kuching 55.05 226 *e*P **P** **21 15 57.8 +0.1**
KULM Kulim 57.14 239 *e*P **P** **21 16 12.6 +0.2**
KBL Kabul 57.95 288 *e*P **P** **21 16 17.1 -0.6**
KBL pmax pmax
comp=Z,1.0nm,0.6s,mb3.3
KBL Kabul 57.95 288 *e*P **P** **21 16 17.1 -0.6**
comp=Z,1.3nm,0.6s,mb3.4
FINES FINESS Array B 62.16 332 P **P** **21 16 44.7 -1.0**
comp=Z,2.4nm,0.8s,mb3.8,baz=60,slow=5.0,SNR=7.4
FINES FINESS Array B 62.16 332 P **P** **21 16 44.7 -0.9**
FINES pmax pmax
comp=Z,2.0nm,0.8s
FINES FINESS Array B 62.16 332 P **P** **21 16 44.7 -1.0**
NVAR Mina Array Bea 66.33 59 P **P** **21 17 14.8 +1.8**
comp=Z,1.5nm,0.7s,mb3.9,baz=296,slow=6.0,SNR=4.3
PDAR Pinedale Array 68.29 50 P **P** **21 17 26.1 +1.0**
comp=Z,1.8nm,0.6s,mb4.0,baz=315,slow=1.1,SNR=8.4
PALK Pallekele 68.34 257 *e*P **P** **21 17 25.9 +0.2**
comp=Z,19nm,0.9s
ASAR Alice Springs 70.93 192 P **P** **21 17 42.3 +1.2**
comp=Z,0.4nm,0.6s,mb3.3,baz=5.3,slow=5.4,SNR=4.8
CLNB Carlsbad 78.99 54 P **P** **21 18 26.8 -0.2**
comp=Z,2.3nm,0.3s,mb4.4
TXAR Lajitas Array 81.31 56 P **P** **21 18 40.4 +1.0**
comp=Z,1.3nm,0.8s,mb3.7,baz=308,slow=3.9,SNR=13
TXAR Lajitas Array 81.31 56 P **P** **21 18 40.4 +1.0**
TXAR pmax pmax
comp=Z,1.0nm,0.8s

*IDC **22** 21:11:14.7±1.4, 31°.62N×104°.37E, h0km, mb3.4/4, mb1 3.5/5, mb1mx3.3/24, mbtmp3.4/5, Error ellipse: s-maj=42.5km s-min=23.8km az=49.0*
*BJI **22** 21:11:16.1, 31°.77N×104°.47E, h11km, ML3.7/12, Ms3.3/4, Ms7 3.3/5*
*ISCJB **22** 21:11:17.5±1.0, 31°.62N±0°.04×104°.64E±0°.05, h14km±7km, mb3.9/9, Error ellipse: s-maj=7.0km s-min=6.0km az=36.4*
*NEIC **22** 21:11:19.8±0.4, 31°.52N×104°.38E, h10km, mb4.1/7, Error ellipse: s-maj=10.4km s-min=7.7km az=72.0*
ISC 22 21:11:19.1±1.0, 31°.63N±0°.03×104°.60E±0°.05, h11km±7km, n24, σ1°.41/34, mb3.9/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.02**	**225**	Pn	**Pn**	**21 11 36.4**	**-2.9**
CD2				Pg	**Pg**	**21 11 38.8**	**+0.1**
CD2				Sg	**Sg**	**21 11 52.1**	**+0.2**
CD2				smax			
	comp=N,4μm,0.7s						
CD2				smax			
	comp=E,5μm,0.8s						
XAN	**Xi'an**	**4.36**	**55**	Pn	**Pn**	**21 12 22.9**	**-2.4**
XAN				Pg	**Pb**	**21 12 35.5**	**-0.2**
XAN				Sn	**Sn**	**21 13 15.3**	**-0.8**
XAN				Sg	**Sg**	**21 13 32.0**	**-7.1**
XAN				smax			
	comp=N,110nm,0.6s						
XAN				smax			
	comp=E,54nm,0.8s						
XAN				LR	LR		
	comp=N,150nm,7.3s						
XAN				LR	LR		
	comp=E,100nm,8.0s						
XAN				LR	LR		
	comp=Z,140nm,7.1s						
ENH	**Enshi**	**4.41**	**107**	*e*Pn	**Pn**	**21 12 28.1**	**+2.1**
ENH				Pg	**Pg**	**21 12 44.6**	**+1.0**
ENH				*e*Sn	**Sn**	**21 13 24.5**	**+7.2**
LZH	**Lanzhou**	**4.49**	**352**	Pn	**Pn**	**21 12 26.6**	**-0.5**
LZH				Sg	**Sb**	**21 13 33.1**	**+1.0**
LZH				smax			
	comp=N,120nm,1.0s						
LZH				smax			
	comp=E,160nm,0.9s						
LZH				LR	LR		
	comp=E,250nm,5.2s						
LZH				LR	LR		
	comp=Z,260nm,8.0s						
GYA	**Guiyang**	**5.46**	**160**	Pn	**Pn**	**21 12 42.4**	**+2.0**
GYA				Sn	**Sn**	**21 13 44.3**	**+1.1**
GYA				Sg	**Sg**	**21 14 11.3**	**-3.1**
GYA				smax			
	comp=N,80nm,0.8s						
GYA				smax			
	comp=E,80nm,0.8s						
WHN	**Wuhan**	**8.43**	**95**	*e*P	**Pn**	**21 13 20.6**	**-0.6**
WHN				LR	LR		
	comp=N,290nm,3.7s						
WHN				LR	LR		
	comp=E,130nm,3.6s						
WHN				LR	LR		
	comp=Z,350nm,8.2s						
CM31	**Chiang Mai Arr**	**14.07**	**203**	Pn	**Pn**	**21 14 36.7**	**-1.8**
CMAR	**Chiang Mai Arr**	**14.07**	**203**	Pn	**Pn**	**21 14 43.2**	**+4.8**
	comp=Z,0.2nm,0.3s,baz=8.6,slow=9.3,SNR=15						
SONM	**Songino Array**	**16.25**	**4**	Pn	**Pn**	**21 15 04.7**	**-2.4**
	baz=184,slow=12,SNR=2.5						
ULN	**Ulaanbaatar**	**16.32**	**6**	Pn	**Pn**	**21 15 11.1**	**+2.9**
KSRS	**Korea Array**	**20.05**	**67**	P	**P**	**21 15 51.0**	**-1.2**
	comp=Z,2.4nm,0.8s,baz=256,slow=10,SNR=14						
TLY	**Talaya**	**20.05**	**358**	*e*P	**P**	**21 15 54.3**	**+2.3**
	comp=Z,1.8nm,0.7s						
MK31	**Makanchi Array**	**22.87**	**318**	*e*P	**P**	**21 16 22.4**	**0.0**
MKAR	**Makanchi Array**	**22.87**	**318**	P	**P**	**21 16 18.4**	**-4.0**
	comp=Z,0.3nm,0.2s,mb3.3,baz=106,slow=9.2,SNR=5.2						
AAK	**Ala-Archa**	**26.27**	**303**	*e*P	**P**	**21 16 54.5**	**+0.2**
KURK	**Kurchatov**	**27.09**	**322**	*e*P	**P**	**21 17 02.1**	**+0.4**
	comp=Z,2.7nm,1.2s,mb3.6						
BVAR	**Borovoye Array**	**32.65**	**321**	P	**P**	**21 17 47.0**	**-3.9**
	comp=Z,0.2nm,0.5s,mb3.3,baz=93,slow=8.7,SNR=2.4						
BRVK	**Borovoye**	**32.72**	**321**	*e*P	**P**	**21 17 52.4**	**+0.8**
	comp=Z,0.9nm,0.7s,mb3.8						
PALK	**Pallekele**	**32.93**	**228**	*e*P	**P**	**21 17 53.1**	**-0.6**
	comp=Z,13nm,0.9s,mb4.9						
ARU	**Arti**	**40.28**	**322**	*e*P	**P**	**21 18 56.6**	**+0.7**
	comp=Z,1.6nm,0.4s,mb4.1						
CSS	**Prodhromos**	**58.49**	**294**	P	**P**	**21 21 14.8**	**-0.5**
WRAB	**Tennant Creek**	**58.67**	**147**	*e*P	**P**	**21 21 19.0**	**+2.4**
	comp=Z,2.0nm,0.8s,mb4.2						
ASAR	**Alice Springs**	**61.72**	**149**	P	**P**	**21 21 35.5**	**-2.0**
	comp=Z,0.3nm,0.5s,mb3.6,baz=330,slow=6.2,SNR=3.8						
WLF	**Walferdange**	**71.63**	**317**	*e*P	**P**	**21 22 40.7**	**+0.2**
	comp=Z,1.9nm,0.5s,mb4.3						

BJI 22 21:16:26.8, 32°.22N×104°.81E, h18km, ML3.4/8, Ms3.5/1, Ms7 3.5/1, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.58**	**215**	Pn	Pn	21 16 55.1	+1.1
CD2				Pg	Pg	21 16 56.8	-0.5
CD2				Sg	Sg	21 17 19.3	+1.3
CD2				smax			
	comp=N,1μm,0.6s						
CD2				smax			
	comp=E,1μm,0.5s						
XAN	**Xi'an**	**3.90**	**61**	Pn	Pn	21 17 33.3	+7.5
XAN				Pg	Pg	21 17 37.5	-4.0
XAN				Sn	Sn	21 18 17.3	+6.2
XAN				Sg	Sg	21 18 23.6	-8.4
XAN				smax			
	comp=N,76nm,0.5s						
XAN				smax			
	comp=E,61nm,0.7s						
LZH	**Lanzhou**	**3.94**	**349**	Pn	Pn	21 17 29.3	+3.0
LZH				Pg	Pg	21 17 38.3	-4.0
LZH				Sg	Sg	21 18 28.8	-4.5
LZH				smax			
	comp=N,76nm,1.0s						
LZH				smax			
	comp=E,79nm,0.9s						
LZH				LR	LR		
	comp=E,480nm,6.4s						
LZH				LR	LR		
	comp=Z,500nm,8.7s						

*ISCJB **22** 21:18:41.8±1.9, 30°.62N±0°.07×94°.85E±0°.07, h7km±12km, mb4.0/10, Error ellipse: s-maj=11.5km s-min=9.0km az=155.4*
*IDC **22** 21:18:43.1±2.1, 30°.67N×94°.91E, h0km, mb3.8/4, mb1 3.8/7, mb1mx3.6/26, mbtmp3.7/7, ML3.8/3, Error ellipse: s-maj=46.6km s-min=33.6km az=65.0*
*NEIC **22** 21:18:44.0±0.4, 30°.60N×94°.82E, h10km, mb3.9/11, Error ellipse: s-maj=8.3km s-min=7.6km az=33.0*
ISC 22 21:18:44.8±2.0, 30°.61N±0°.07×94°.83E±0°.06, h15km±12km, n34, σ0°.83/36, mb4.0/10, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.31**	**255**	*e*Pn	**Pn**	**21 19 34.7**	**-1.4**
LSA				*e*Pg	**Pg**	**21 19 47.9**	**-0.3**
LSA				*e*S	**Sb**	**21 20 24.1**	**+0.7**
GTA	**Gaotai**	**9.68**	**24**	*e*P	**Pn**	**21 21 06.1**	**+2.5**
GTA				pP		21 21 09.8	
GTA				sP		21 21 12.1	
GTA				S	**Sn**	**21 23 06.4**	**+14**
GTA				sS		21 23 12.4	
GTA				SS		21 23 21.8	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,60nm,4.5s						
GTA				LR	LR		
	comp=N,140nm,10.5s						
GTA				LR	LR		
	comp=E,150nm,11.7s						
GTA				LR	LR		
	comp=Z,140nm,11.7s						
ALBI	**Allahabad**	**12.66**	**249**	*ex*	x	21 22 15.0	
ALBI				*ex*	x	21 24 06.0	
CMAR	**Chiang Mai Arr**	**12.66**	**162**	Pn	**Pn**	**21 21 45.5**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=334,slow=15,SNR=4.8						
MK31	**Makanchi Array**	**18.85**	**333**	*e*P	**Pn**	**21 23 05.5**	**+0.7**
MKAR	**Makanchi Array**	**18.85**	**333**	P	**Pn**	**21 23 05.7**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=142,slow=12,SNR=9.2						
SONM	**Songino Array**	**19.36**	**24**	P	**Pn**	**21 23 09.2**	**-1.7**
	comp=Z,0.8nm,0.3s,baz=206,slow=9.9,SNR=11						
ULN	**Ulaanbaatar**	**19.62**	**25**	*e*P	**Pn**	**21 23 11.0**	**-2.9**
	comp=Z,6.4nm,1.1s						
UCH	**Uchtor**	**19.99**	**311**	*e*P	**Pn**	**21 23 18.3**	**-0.2**
	comp=Z,3.7nm,1.1s						
AAK	**Ala-Archa**	**20.20**	**312**	P	**P**	**21 23 20.4**	**+1.4**
	comp=Z,1.2nm,0.3s,baz=173,slow=8.1,SNR=3.0						
AAK	**Ala-Archa**	**20.20**	**312**	*e*P	**P**	**21 23 19.1**	**+0.1**
	comp=Z,2.3nm,0.4s						
AML	**Almayashu**	**20.48**	**310**	*e*P	**P**	**21 23 21.7**	**-0.4**
	comp=Z,2.2nm,0.7s						
EKS2	**Erkin-Say**	**20.68**	**311**	*e*P	**P**	**21 23 25.5**	**+1.4**
	comp=Z,3.0nm,0.8s						
KBL	**Kabul**	**22.06**	**287**	*e*P	**P**	**21 23 37.9**	**-1.2**
	comp=Z,6.2nm,0.9s,mb4.0						
KURK	**Kurchatov**	**23.45**	**334**	*e*P	**P**	**21 23 53.7**	**0.0**
	comp=Z,5.3nm,0.8s,mb4.0						
ZALV	**Zalesovo Beam**	**24.42**	**346**	P	**P**	**21 24 02.6**	**+0.1**
	comp=Z,3.6nm,0.7s,mb3.9,baz=165,slow=9.5,SNR=20						
NACB	**Ninganchiao**	**24.58**	**99**	P	**P**	**21 24 04.4**	**+0.1**
HIA	**Hailar**	**26.49**	**38**	*e*P	**P**	**21 24 20.9**	**-0.5**
BVAR	**Borovoye Array**	**28.61**	**329**	P	**P**	**21 24 40.9**	**+0.6**
	comp=Z,1.0nm,0.8s,mb3.6,baz=125,slow=9.3,SNR=6.5						
BRVK	**Borovoye**	**28.68**	**329**	*e*P	**P**	**21 24 41.2**	**+0.2**
	comp=Z,2.4nm,0.9s,mb3.9						
ABKAR	**Akbulak array**	**32.21**	**315**	*e*P	**P**	**21 25 12.1**	**-0.1**
	comp=Z,1.0nm,0.7s,mb3.8						
AKTK	**Aktyubinsk**	**33.81**	**316**	P	**P**	**21 25 26.0**	**-0.1**
AKTO	**Aktyubinsk**	**33.81**	**316**	P	**P**	**21 25 26.0**	**-0.1**
	comp=Z,0.4nm,0.4s,mb3.7,baz=104,slow=12,SNR=2.6						
ARU	**Arti**	**36.15**	**326**	*e*P	**P**	**21 25 45.9**	**-0.4**
	comp=Z,4.6nm,1.1s,mb4.3						
YAK	**Yakutsk**	**38.71**	**26**	*e*P	**P**	**21 26 07.8**	**0.0**
	comp=Z,16nm,0.4s,mb5.1						
KIV	**Kislovodsk**	**42.90**	**303**	*e*P	**P**	**21 26 42.7**	**0.0**
	comp=Z,1.9nm,0.6s,mb4.0						
TIRR	**Tirgusor**	**53.08**	**305**	P	**P**	**21 28 01.8**	**+0.2**
MORC	**Moravsky Berou**	**59.42**	**313**	*e*P	**P**	**21 28 47.0**	**+0.3**
STU	**Stuttgart**	**64.95**	**313**	*e*P	**P**	**21 29 22.9**	**-0.9**
WLF	**Walferdange**	**66.55**	**315**	*e*P	**P**	**21 29 33.4**	**-0.7**
VSL	**Villasalto**	**68.05**	**304**	P	**P**	**21 29 43.6**	**-0.1**
TSUM	**Tsumeb**	**89.18**	**247**	P	**P**	**21 31 40.6**	**+0.3**
SUR	**Sutherland**	**93.97**	**235**	*e*P	**P**	**21 32 02.0**	**-0.1**
COR	**Corvallis**	**97.48**	**26**	*e*P	**P**	**21 32 18.5**	**+0.4**
	comp=Z,110nm,0.6s						

*ISCJB **22** 21:19:41.7±0.2, 10°.78N±0°.03×91°.76E±0°.03, h27km, mb4.8/18, MS4.5/11, Error ellipse: s-maj=4.8km s-min=3.6km az=23.0*
*MOS **22** 21:19:42.5±0.8, 10°.80N×91°.80E, h31km, mb5.0/55, MS4.1/4, Error ellipse: s-maj=7.6km s-min=4.2km az=117.4*
*BJI **22** 21:19:42.8, 10°.61N×91°.90E, h45km, mB4.6/16, mb4.8/36, Ms5.1/13, Ms7 4.9/13*
*IDC **22** 21:19:44.0±0.4, 10°.83N×91°.82E, h26km±2km, mb4.4/28, mb1 4.5/30, mb1mx4.4/32, mbtmp4.4/30, ML4.3/2, MS3.7/1, Ms1 3.7/1, ms1mx2.8/23, Error ellipse: s-maj=12.4km s-min=8.2km az=55.0*
*NEIC **22** 21:19:44.8±0.5, 10°.79N×91°.75E, h36km±4km, mb4.8/57, Error ellipse: s-maj=4.2km s-min=2.9km az=50.0*
*SZGRF **22** 21:19:59.6, 12°.88N×90°.30E, h29km, mb4.9, Andaman Islands, India, region*
ISC 22 21:19:43.9±0.2, 10°.77N±0°.03×91°.74E±0°.03, h28km, h28km±.5km: pP-P, n346, σ0°.83/338, mb4.8/118, MS4.5/11, 18C-21D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**10.34**	**42**	*e*Pn	**Pn**	**21 22 11.4**	**+1.0**
CMAR	**Chiang Mai Arr**	**10.34**	**42**	Pn	**Pn**	**21 22 09.8**	**-0.6**
	1.1nm,0.3s,baz=238,slow=15,SNR=16						
KULM	**Kulim**	**10.37**	**121**	*e*Pn	**Pn**	**21 22 12.1**	**+1.3**
KULM				*e*Sn	**Sn**	**21 24 03.7**	**-2.5**
CHTO	**Chiang Mai**	**10.60**	**40**	*e*P	**Pn**	**21 22 15.2**	**+1.2**
PSI	**Prapat**	**10.66**	**137**	Pn	**Pn**	**21 22 16.8**	**+2.0**
	1.0nm,0.3s,baz=295,slow=17,SNR=3.2						
VIS	**Vishakhapatnam**	**10.68**	**311**	*i* P	**Pn**	**21 22 13.6**	**-1.4**
VIS				*i* S	**Sn**	**21 24 02.3**	**-11**
PALK	**Pallekele**	**11.44**	**253**	*e*Pn	**Pn**	**21 22 24.7**	**-0.8**
PALK				*e*Sn	**Sn**	**21 24 23.6**	**-8.8**
MDRS	**Chennai**	**11.47**	**283↑**	*e*PKP	Px	21 22 48.2	
MDRS				*e*S	Sx	21 24 43.3	
AGT	**Agartala**	**13.05**	**358**	*ex*	x	21 23 08.0	
BOK	**Bokaro**	**14.10**	**337**	*e*PKP	**Pn**	**21 23 00.6**	**-1.2**
BOK				AMb	AMB	21 23 18.2	
	comp=Z,77nm,1.0s						
BOK				*ex*	x	21 25 21.6	
HYB	**Hyderabad**	**14.39**	**299**	*e*P	**Pn**	**21 23 05.0**	**-0.8**
HYB	**Hyderabad**	**14.39**	**299**	*i* P	**Pn**	**21 23 05.0**	**-0.8**
HYB				*e*S	**Sn**	**21 25 43.0**	**-1.5**
ODAN	**Odare**	**16.52**	**346**	*e*P	**Pn**	**21 23 33.4**	**-0.2**
LATR	**Latur**	**16.53**	**299**	*ex*	**Pn**	**21 23 31.4**	**-2.5**
LATR				*ex*	x	21 26 23.1	
RAMN	**Ramite**	**16.80**	**344**	*e*P	**Pn**	**21 23 36.6**	**-0.6**
	comp=Z,142nm,0.4s						
TAPN	**Taplejung**	**16.92**	**348**	*e*P	**Pn**	**21 23 37.5**	**-1.2**
	comp=Z,58nm,0.5s						
AKL	**Akola**	**17.25**	**307**	*e*PKP	**Pn**	**21 23 43.6**	**+0.7**
AKL				AMb	AMB	21 23 55.7	
	comp=Z,67nm,1.0s						
JIRN	**Jiri**	**17.59**	**344**	*e*P	**Pn**	**21 23 47.2**	**+0.2**
KMI	**Kunming**	**17.68**	**35**	P	**Pn**	**21 23 49.5**	**+1.3**
KMI				pP	pP	21 23 58.6	+2.1
KMI				pmax	pmax		
	comp=Z,16nm,0.9s						
PKI	**Pulchoki**	**17.74**	**341**	*e*P	**Pn**	**21 23 48.7**	**-0.2**
DMN	**Daman**	**17.87**	**340**	*e*P	**Pn**	**21 23 50.6**	**+0.1**
	comp=Z,61nm,0.6s						
KKN	**Kakani**	**17.98**	**341**	*e*P	**Pn**	**21 23 52.1**	**+0.2**
KAD	**Karad**	**18.22**	**293**	*e*PKP	**Pn**	**21 23 55.5**	**+0.7**
KAD				AMb	AMB	21 23 58.3	
	comp=Z,34nm,2.1s						
GKN	**Gorkha**	**18.39**	**340**	*e*P	**Pn**	**21 23 56.0**	**-0.9**
	comp=Z,66nm,0.3s						
BHPL	**Bhopal**	**18.45**	**314**	*e*PKP	**Pn**	**21 23 58.3**	**+0.8**
BHPL				AMb	AMB	21 24 08.3	
	comp=Z,35nm,0.9s						
BHPL				*ex*	x	21 27 07.7	
LSA	**Lhasa**	**18.84**	**358**	*e*P	**Pn**	**21 24 03.2**	**+0.9**
POO	**Poona**	**18.93**	**296**	*e*PKP	**Pn**	**21 24 04.0**	**+0.5**
POO				*i* x	x	21 27 21.0	
QIZ	**Qiongzhong**	**19.31**	**63**	P	**Pn**	**21 24 04.3**	**-3.8**
QIZ				S	**Sn**	**21 27 38.1**	**-5.9**
QIZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
QIZ				pmax	pmax		
	comp=Z,45nm,4.5s						
QIZ				LR	LR		
	comp=N,360nm,11.5s						
QIZ				LR	LR		
	comp=E,270nm,12.5s						
QIZ				LR	LR		
	comp=Z,1μm,11.8s						
QIZ	**Qiongzhong**	**19.31**	**63**	*e*P	**Pn**	**21 24 06.7**	**-1.4**
	comp=Z,13nm,0.7s						
KSM	**Kuching**	**20.63**	**115**	*e*P	**P**	**21 24 21.1**	**-0.2**
	comp=Z,20nm,0.7s						
KSM	**Kuching**	**20.63**	**115**	P	**P**	**21 24 23.8**	**+2.5**
GYA	**Guiyang**	**21.02**	**40↓**	*i* P	**P**	**21 24 25.6**	**+0.1**
GYA				pmax	pmax		
	comp=Z,60nm,0.8s,mb5.0						
SBUM	**Sibu**	**21.95**	**111**	P	pP	21 24 43.9	+0.7
STKI	**Sintang**	**22.32**	**117**	P	**P**	**21 24 42.5**	**+3.0**
NDI	**New Delhi**	**22.41**	**325**	*e*PKP	**P**	**21 24 40.0**	**-0.3**
NDI				*ex*	x	21 28 40.0	
AJM	**Ajmer**	**22.46**	**316**	*ex*	**P**	**21 24 43.0**	**+2.2**
DDI	**Dehra Dun**	**23.25**	**329**	*e*PKP	**P**	**21 24 49.0**	**-0.1**
DDI				*ex*	x	21 29 08.0	
COCO	**West Island**	**23.37**	**167**	*e*P	**P**	**21 24 51.5**	**+1.0**
SDNR	**Sundarnagar**	**24.75**	**329**	*ex*	**P**	**21 25 06.5**	**+3.4**
ENH	**Enshi**	**25.48**	**38**	*e*P	**P**	**21 25 09.1**	**-0.6**
	comp=Z,155nm,0.9s,mb5.5						
LZH	**Lanzhou**	**27.49**	**22**	*e*P	**P**	**21 25 28.6**	**+0.8**
LZH				pmax	pmax		
	comp=Z,21nm,1.1s,mb4.6						
XAN	**Xi'an**	**27.99**	**32**	P	**P**	**21 25 31.0**	**-1.4**
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.1						
XAN				pmax	pmax		
	comp=Z,13nm,6.3s						
XAN				LR	LR		
	comp=N,400nm,9.3s						
XAN				LR	LR		
	comp=E,320nm,10.3s						
XAN				LR	LR		
	comp=Z,270nm,12.2s,MS4.0						
TGY	**Tagaytay City**	**28.70**	**80**	P	**P**	**21 25 38.3**	**-0.5**
	comp=Z,70nm,0.4s,mb5.8,baz=204,slow=20,SNR=3.2						
WHN	**Wuhan**	**28.78**	**44**	P	**P**	**21 25 38.8**	**-0.6**
GTA	**Gaotai**	**29.41**	**13**	P	**P**	**21 25 46.1**	**+1.2**
GTA				pmax	pmax		
	comp=Z,23nm,1.0s,mb4.9						
GTA				pmax	pmax		
	comp=Z,110nm,5.1s						
GTA				LR	LR		
	comp=N,3μm,11.1s,MS5.2						
GTA				LR	LR		
	comp=E,1μm,11.7s,MS5.2						
GTA				LR	LR		
	comp=Z,3μm,10.8s,MS5.2						
TWG	**Pinlang**	**30.46**	**63**	*e*P	**P**	**21 25 55.2**	**+0.8**
	comp=Z,9.4nm,0.5s,mb4.8						
YULB	**Yu-li**	**30.84**	**62**	*e*P	**P**	**21 25 58.0**	**+0.2**
	comp=Z,9.0nm,0.8s,mb4.7						
YHNB	**Yeheng**	**31.34**	**60**	*e*P	**P**	**21 26 00.7**	**-1.5**
KBL	**Kabul**	**31.44**	**322**	*e*P	**P**	**21 26 04.0**	**+1.1**
KBL				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.6						
KBL	**Kabul**	**31.44**	**322**	*e*P	**P**	**21 26 04.0**	**+1.0**
	comp=Z,9.2nm,0.9s,mb4.6						
MRSI	**Marisa**	**31.71**	**107**	P	**P**	**21 26 06.6**	**+1.1**
	comp=Z,28nm,1.0s,mb5.1						
KAPI	**Kappang**	**32.00**	**118**	P	**P**	**21 26 07.2**	**-0.8**
	comp=Z,9.9nm,0.5s,mb4.9,baz=259,slow=9.3,SNR=9.0						
BKSI	**Bulukumba**	**32.47**	**118**	P	**P**	**21 26 12.6**	**+0.4**
	comp=Z,672nmcomp=Z,82nm,1.1s,mb5.5						
NJ2	**Nanjing**	**32.78**	**46**	*e*P	**P**	**21 26 15.4**	**+0.7**
NJ2				pP	pP	21 26 21.6	-1.4
NJ2				PP	PP	21 27 26.6	-2.5
NJ2				S	**S**	**21 31 28.5**	**-1.5**
NJ2				sS	sS	21 31 42.0	-1.7
NJ2				pmax	pmax		
	comp=Z,30nm,0.6s,mb5.4						
NJ2				pmax	pmax		
	comp=Z,50nm,7.6s						
NJ2				LR	LR		
	comp=N,780nm,12.6s,MS4.9						
NJ2				LR	LR		
	comp=E,1μm,11.0s,MS4.9						
NJ2				LR	LR		
	comp=Z,2μm,12.4s,MS4.9						
HHC	**Hu-ho-hao-te**	**34.69**	**27**	*e*P	**P**	**21 26 31.9**	**+0.7**
HHC				PP	PP	21 27 50.6	+0.4
HHC				PcP	PcP	21 29 04.3	-0.6
HHC				S	**S**	**21 31 58.3**	**-1.1**
HHC				ScP	ScP	21 32 45.3	-3.1
HHC				PcS	PcS	21 32 50.3	-1.0
HHC				SS	SS	21 34 13.0	-18
HHC				ScS	ScS	21 36 47.8	-3.7
HHC				pmax	pmax		
	comp=Z,13nm,0.6s,mb5.0						
HHC

AAK Ala-Archa 35.13 338 *c iP* **P 21 26 37.0 +2.1**
AAK pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
AAK Ala-Archa 35.13 338 *eP* **P 21 26 36.0 +1.0**
comp=Z,20nm,1.1s,mb5.0
EKS2 Erkin-Say 35.42 337 P **P 21 26 39.5 +2.0**
SNR=12
EKS2 Erkin-Say 35.42 337 *eP* **P 21 26 38.4 +0.9**
EKS2 pmax pmax
comp=Z,12nm,0.8s,mb4.9
EKS2 Erkin-Say 35.42 337 *eP* **P 21 26 38.4 +0.9**
comp=Z,12nm,0.8s,mb4.9
USP Ospenovka 35.67 338 P **P 21 26 40.8 +1.2**
SNR=9.5
BJI Beijing 36.31 32 P **P 21 26 45.8 +0.6**
BJI pmax pmax
comp=Z,51nm,0.7s,mb5.6
BJI LR LR
comp=N,2μm,13.6s,MS5.3
BJI LR LR
comp=E,3μm,14.4s,MS5.3
BJI LR LR
comp=Z,2μm,19.0s,MS4.9
MK31 Makanchi Array 36.78 349 *eP* **P 21 26 49.7 +0.6**
MKAR Makanchi Array 36.78 349 P **P 21 26 49.6 +0.6**
comp=Z,8.2nm,0.6s,mb4.8,baz=168,slow=8.3,SNR=75
MKAR pP pP 21 26 57.8 +0.4
comp=Z,15nm,0.8s,baz=171,slow=9.0,SNR=17
MKAR PcP PcP 21 29 10.7 -0.2
comp=Z,1.9nm,0.6s,baz=201,slow=2.9,SNR=3.6
SONM Songino Array 38.95 16 P **P 21 27 08.1 +0.8**
comp=Z,12nm,0.8s,mb4.7,baz=199,slow=8.8,SNR=54
SONM PcP PcP 21 29 18.6 +1.0
comp=Z,2.9nm,0.8s,baz=199,slow=4.3,SNR=6.5
ULN Ulaanbaatar 39.16 16 *eP* **P 21 27 08.9 -0.2**
KURK Kurchatov 41.26 347 *eP* **P 21 27 27.0 +0.5**
KURK pmax pmax
comp=Z,14nm,1.0s,mb4.5
KURK Kurchatov 41.26 347 *eP* **P 21 27 27.0 +0.5**
comp=Z,14nm,1.0s,mb4.6
MOY Mondy 41.47 9 *eP* **P 21 27 29.3 +1.1**
TLY Talaya 41.93 11 *eP* **P 21 27 34.0 +2.1**
TLY pmax pmax
comp=Z,12nm,1.4s,mb4.3
TLY Talaya 41.93 11 *eP* **P 21 27 32.0 +0.1**
comp=Z,12nm,1.3s,mb4.4
KSRS Korea Array 41.96 45 P **P 21 27 31.8 -0.7**
comp=Z,2.3nm,0.5s,mb4.0,baz=244,slow=8.9,SNR=13
KSRS Korea Array 41.96 45 P **P 21 27 31.8 -0.6**
KSRS pmax pmax
comp=Z,2.0nm,0.5s,mb4.0
MBWA Marble Bar 41.99 139 *eP* **P 21 27 32.4 -0.5**
ZALV Zalesovo Beam 43.41 354 P **P 21 27 44.1 +0.2**
comp=Z,9.4nm,0.6s,mb4.7,baz=177,slow=10.0,SNR=53
CN2 Changchun 43.95 35 *eP* **P 21 27 48.3 -0.2**
CN2 pmax pmax
comp=Z,20nm,0.6s,mb5.0
CN2 LR LR
comp=N,1μm,11.0s,MS5.2
CN2 LR LR
comp=E,900nm,11.0s,MS5.2
CN2 LR LR
comp=Z,300nm,12.0s,MS4.4
FITZ Fitzroy Crossi 44.08 130 *eP* **P 21 27 48.4 -1.4**
comp=Z,21nm,0.6s,mb5.0
FITZ Fitzroy Crossi 44.08 130 P **P 21 27 49.4 -0.4**
comp=Z,6.9nm,0.5s,mb4.7,baz=307,slow=6.1,SNR=4.5
FITZ pP pP 21 27 58.0 -0.3
comp=Z,9.7nm,0.5s,baz=313,slow=5.9,SNR=5.0
FITZ Fitzroy Crossi 44.08 130 *eP* **P 21 27 48.8 -1.0**
comp=Z,9.4nm,0.5s,mb4.8
NVS Novosibirsk 44.47 353 *eP* **P 21 27 51.7 -0.7**
NVS pmax pmax
comp=Z,11nm,1.5s,mb4.4
NVS pmax pmax
comp=N,9.0nm,1.4s
NVS pmax pmax
comp=E,6.0nm,1.4s
HIA Hailar 44.88 26 *eP* **P 21 27 55.1 -0.7**
BVAR Borovoye Array 45.51 342 P **P 21 28 01.0 +0.3**
comp=E,1.4nm,0.5s,mb4.2,baz=156,slow=7.8,SNR=16
BVAR PcP PcP 21 29 39.6 +0.4
comp=E,1.9nm,0.8s,baz=177,slow=3.0,SNR=4.8
BRVK Borovoye 45.57 342 *d iP* **P 21 28 01.3 +0.1**
BRVK pmax pmax
comp=Z,7.0nm,1.7s,mb4.3
BRVK Borovoye 45.57 342 *eP* **P 21 28 01.6 +0.5**
comp=Z,4.4nm,0.8s,mb4.4
ABKAR Akbulak array 46.57 332 *eP* **P 21 28 09.5 +0.4**
comp=Z,9.9nm,0.7s,mb4.8
AKTK Aktyubinsk 48.28 332 P **P 21 28 22.9 +0.4**
AKTO Aktyubinsk 48.28 332 P **P 21 28 22.9 +0.4**
comp=Z,2.6nm,0.6s,mb4.5,baz=115,slow=8.5,SNR=15
MJAR Matsushiro Arr 49.07 51 P **P 21 28 28.7 -0.1**
comp=Z,1.7nm,0.8s,mb4.1,baz=242,slow=7.3,SNR=6.5
MJAR PcP PcP 21 29 52.9 +0.7
comp=Z,4.5nm,0.8s,baz=241,slow=3.2,SNR=10
NWAO Narrogin (SRO) 49.80 152 P **P 21 28 34.0 -0.3**
comp=Z,13nm,0.8s,mb5.0,baz=306,slow=7.0,SNR=5.5
NWAO pP pP 21 28 41.4 -1.4
comp=Z,5.9nm,0.6s,baz=313,slow=12,SNR=1.2
NWAO Narrogin (SRO) 49.80 152 P **P 21 28 34.0 -0.3**
NWAO *PP pP 21 28 41.4 -1.4
NWAO pmax pmax
comp=Z,13nm,0.8s
NWAO pmax pmax
comp=Z,6.0nm,0.6s
NWAO Narrogin (SRO) 49.80 152 *eP* **P 21 28 33.0 -1.3**
JAY Jayapura 50.48 102 P sP 21 28 57.7 +5.9
comp=Z,31nm,0.7s,comp=Z,8μm
GNI Garni 50.73 314 P **P 21 28 43.1 +1.8**
comp=Z,2.9nm,0.5s,mb4.4,baz=161,slow=8.0,SNR=5.6
GNI Garni 50.73 314 *ceP* **P 21 28 43.2 +1.9**
GNI pmax pmax
comp=Z,40nm,1.7s
GNI Garni 50.73 314 *eP* **P 21 28 42.1 +0.8**
comp=Z,26nm,1.3s,mb5.0
SVE Sverdlovsk 51.85 339⇓ *eP* **P 21 28 50.5 +1.1**
SVE pmax pmax
comp=Z,34nm,1.3s,mb5.1
WRA Warramunga Arr 51.87 126 P **P 21 28 49.4 -0.7**
baz=307,slow=8.3
WRAB Tennant Creek 51.87 126 *eP* **P 21 28 49.2 -0.9**
WRAB Tennant Creek 51.87 126 P sP 21 29 00.9 -1.2
comp=Z,27nm,0.7s
ARU Arti 52.31 337 *d iP* **P 21 28 52.9 0.0**
ARU *e* 21 30 53.2
ARU S **S 21 36 18.9 +2.5**
ARU SS SS 21 39 56.8 +2.6
ARU pmax pmax
comp=Z,12nm,1.2s,mb4.7
ARU Arti 52.31 337 *eP* **P 21 28 52.8 -0.1**
comp=Z,13nm,0.9s,mb4.9
ZEI Tsey 52.31 316 *eP* **P 21 29 01.5 +8.4**
ZEI pmax pmax
comp=Z,13nm,0.4s,mb5.2
ASAR Alice Springs 53.58 130 P **P 21 29 02.3 -0.4**
comp=Z,3.1nm,0.9s,mb4.2,baz=306,slow=6.8,SNR=4.2
ASAR pP pP 21 29 10.9 -0.4
comp=Z,9.4nm,0.7s,baz=308,slow=7.3,SNR=7.9
ASAR PcP PcP 21 30 09.6 +0.4
comp=Z,4.7nm,0.7s,baz=308,slow=3.6,SNR=7.2
KIV Kislovodsk 53.59 317 *eP* **P 21 29 03.3 +0.8**
KIV pmax pmax
comp=Z,18nm,0.7s,mb5.1
KIV MLR MLR
comp=Z,92nm,17.0s,MS3.9
KIV Kislovodsk 53.59 317 *eP* **P 21 29 03.4 +0.9**
ASAJ Asahikawa 54.86 43 P **P 21 29 11.1 -0.7**
comp=Z,2.7nm,0.5s,mb4.5,baz=180,slow=2.0,SNR=4.4
ASAJ Asahikawa 54.86 43 P **P 21 29 11.1 -0.7**
ASAJ pmax pmax
comp=Z,3.0nm,0.5s
SOKR Solikamsk 55.26 339 *d iP* **P 21 29 14.8 +0.5**
SOKR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
KMBO Kilima Mbogo 55.45 261 P **P 21 29 18.9 +2.4**
comp=Z,1.7nm,0.9s,mb4.1,baz=180,slow=20,SNR=3.1
KMBO pP pP 21 29 27.2 +2.0
comp=Z,2.8nm,0.9s,baz=0.8,slow=24,SNR=4.2
KMBO Kilima Mbogo 55.45 261 P **P 21 29 18.9 +2.4**
KMBO *PP pP 21 29 27.2 +2.0
KMBO pmax pmax
comp=Z,2.0nm,0.9s
KMBO pmax pmax
comp=Z,3.0nm,1.0s
KMBO Kilima Mbogo 55.45 261 *eP* **P 21 29 18.5 +1.9**

YSS Yuzh-Sakhalins 56.03 40 *i P* **P 21 29 20.8 +0.7**
YSS pmax pmax
comp=Z,25nm,1.1s,mb5.2
YSS Yuzh-Sakhalins 56.03 40 *eP* **P 21 29 20.0 -0.1**
VRHR Novokhopersk 57.22 325 *eP* **P 21 29 28.3 -0.2**
VRHR *e* pP 21 29 36.9 -0.3
VRHR pmax pmax
comp=N,8.0nm,0.8s
VRHR pmax pmax
comp=E,9.0nm,0.8s
VRHR pmax pmax
comp=Z,20nm,0.8s,mb5.2
ANN Anapa 57.41 317 *eP* **P 21 29 33.8 +3.8**
ANN *e* 21 30 26.2
ANN *e* 21 33 04.8
ANN *eS* **S 21 37 32.4 +7.2**
ANN pmax pmax
comp=Z,42nm,1.1s,mb5.4
ANN MLR MLR
comp=Z,176nm,16.0s,MS4.3
YAK Yakutsk 58.05 20 *eP* **P 21 29 33.2 -1.0**
YAK pmax pmax
comp=Z,24nm,0.9s,mb5.2
YAK pmax pmax
comp=N,10.0nm,1.6s
YAK pmax pmax
comp=E,10.0nm,1.5s
YAK Yakutsk 58.05 20 *eP* **P 21 29 34.1 0.0**
VORD Divnogorie 58.49 324 *eP* **P 21 29 37.1 -0.3**
VORD *e* pP 21 29 45.5 -0.7
VORD pmax pmax
comp=N,10.0nm,0.5s
VORD pmax pmax
comp=E,10.0nm,0.5s
VORD pmax pmax
comp=Z,8.0nm,0.5s,mb5.0
PMG Port Moresby 58.66 108 P **P 21 29 37.8 -1.4**
VSR Storozhevoye 58.67 324 *eP* **P 21 29 38.1 -0.6**
VSR *e* pP 21 29 46.5 -0.9
VSR pmax pmax
comp=N,5.0nm,0.8s
VSR pmax pmax
comp=E,6.0nm,0.8s
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
BR131 Keskin Array S 58.76 310 *eP* **P 21 29 39.0 -0.5**
BRTR Keskin Array B 58.76 310 P **P 21 29 38.9 -0.6**
comp=Z,2.7nm,0.7s,mb4.4,baz=118,slow=8.0,SNR=18
BRTR pP pP 21 29 47.4 -0.9
comp=Z,2.9nm,0.7s,baz=128,slow=7.3,SNR=11
BRTR LR LR 22 00 01.4
comp=Z,68nm,20.3s,MS3.8,baz=264,slow=41
BRTR Keskin Array B 58.76 310 P **P 21 29 38.9 -0.6**
BRTR *PP pP 21 29 47.4 -0.8
SIM Simferopol' 59.71 316 *eP* **P 21 29 46.0 0.0**
SIM pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
OBN Obninsk 61.68 328 *eP* **P 21 29 59.4 +0.2**
OBN *i* *PP pP 21 30 07.6 -0.3
OBN *eS* **S 21 38 12.7 -7.2**
OBN pmax pmax
comp=Z,26nm,1.6s,mb5.1
OBN MLR MLR
comp=Z,200nm,19.0s,MS4.3
MBAR Mbarara 61.68 263⇑ *iP* **P 21 30 01.5 +1.6**
MBAR *e*PP pP 21 30 09.2 +0.5
QLP Quilpie 63.06 127⇑ *iP* **P 21 30 09.9 +1.0**
TIRR Tirgusor 63.54 314 *eP* **P 21 30 11.6 -0.3**
TIRR Tirgusor 63.54 314⇓ *iP* pP 21 30 20.0 -0.6
STKA Stephens Creek 63.81 134 *eP* **P 21 30 14.1 +0.3**
comp=Z,5.5nm,0.5s,mb4.8
STKA Stephens Creek 63.81 134 P **P 21 30 14.4 +0.6**
comp=Z,7.6nm,0.6s,mb4.9,baz=318,slow=5.0,SNR=30
STKA pP pP 21 30 22.8 +0.2
comp=Z,8.3nm,0.6s,baz=316,slow=6.3,SNR=8.4
STKA Stephens Creek 63.81 134 P **P 21 30 14.4 +0.6**
STKA *PP pP 21 30 22.8 +0.2
STKA pmax pmax
comp=Z,8.0nm,0.6s
STKA pmax pmax
comp=Z,8.0nm,0.6s
STKA Stephens Creek 63.81 134 *eP* **P 21 30 13.7 0.0**
comp=Z,1.6nm,0.6s,mb4.2
AKASG Malin Array Be 64.42 321 P **P 21 30 16.4 -1.1**
comp=Z,3.5nm,0.6s,mb4.5,baz=87,slow=5.5,SNR=16
AKASG pP pP 21 30 25.1 -1.2
comp=Z,4.0nm,0.7s,baz=88,slow=5.0,SNR=7.3
AKASG Malin Array Be 64.42 321 P **P 21 30 16.4 -1.1**
AKASG pP pP 21 30 25.1 -1.2
VRI Vrincioaia 64.98 316⇑ P **P 21 30 22.2 +0.9**
VRI Vrincioaia 64.98 316⇑ *iP* **P 21 30 22.2 +0.9**
PLOR Plostina 65.03 316⇑ P **P 21 30 22.5 +0.9**
PLOR Plostina 65.03 316⇑ *iP* **P 21 30 22.5 +0.9**
TESR 65.16 316⇑ P **P 21 30 22.3 -0.1**
TESR 65.16 316⇑ *iP* **P 21 30 22.3 -0.1**
MLR Muntele Rosu 65.45 315⇓ P **P 21 30 24.8 +0.5**
MLR Muntele Rosu 65.45 315⇓ *iP* **P 21 30 24.8 +0.5**
BURAR Bucovina Array 66.32 317⇑ P **P 21 30 30.2 +0.3**
BURAR Bucovina Array 66.32 317⇑ *iP* **P 21 30 30.2 +0.3**
BUR08 Bucovina Ar. S 66.34 317 *eP* **P 21 30 30.3 +0.3**
TNR Turnu Rosu 66.64 315⇑ P sP 21 30 46.8 +2.7
TNR Turnu Rosu 66.64 315⇑ *iP* sP 21 30 46.8 +2.7
IDID Didziasalis 67.06 326 *eP* **P 21 30 34.3 -0.1**
IDID AMB AMB 21 30 35.5
comp=Z,6.9nm,0.9s,mb4.7
PETK Petropavlovsk- 67.08 37 P **P 21 30 34.0 -0.6**
comp=Z,1.4nm,0.5s,mb4.3,baz=290,slow=6.0,SNR=3.5
JOF Joensuu 67.23 334 *eP* **P 21 30 35.1 -0.2**
JOF Joensuu 67.23 334 *ep* **P 21 30 35.1 -0.2**
comp=Z,16nm,0.6s,mb5.2
SEY Seymchan 67.33 26 *eP* **P 21 30 35.3 -0.7**
IIGN Ignalina 67.35 326 *eP* **P 21 30 36.2 -0.1**
IIGN AMB AMB 21 30 37.4
comp=Z,7.0nm,0.7s,mb4.8
IZAR Zarasai 67.44 326 *eP* **P 21 30 36.8 -0.1**
IZAR AMB AMB 21 30 37.9
comp=Z,6.0nm,0.7s,mb4.8
DRGR 67.88 316⇓ P **P 21 30 39.9 +0.1**
DRGR 67.88 316⇓ *iP* **P 21 30 39.9 +0.1**
LSZ Lusaka 68.05 249 *eP* **P 21 30 41.9 +0.5**
LSZ pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
LSZ Lusaka 68.05 249 *eP* **P 21 30 41.9 +0.5**
comp=Z,5.3nm,1.0s,mb4.5
KWP Kalwaria Pacla 68.30 319 *eP* **P 21 30 42.7 +0.3**
BZS Buzias 68.48 315⇓ P **P 21 30 41.1 -2.5**
BZS Buzias 68.48 315⇓ *iP* **P 21 30 41.1 -2.5**
SUW Suwalki 68.78 324 *eP* **P 21 30 44.5 -0.8**
SUW Suwalki 68.78 324 *eP* **P 21 30 44.5 -0.8**
SUW pmax pmax
comp=Z,42nm,1.3s,mb5.2
SUW Suwalki 68.78 324 *eP* **P 21 30 44.5 -0.8**
comp=Z,42nm,1.3s,mb5.2
CRVS Cervenica-Dubn 69.00 318 *eP* **P 21 30 46.9 +0.1**
CRVS Cervenica-Dubn 69.00 318 *eP* **P 21 30 46.9 +0.1**
FINES FINESS Array B 69.06 332 P **P 21 30 46.8 0.0**
comp=Z,12nm,0.7s,mb4.9,baz=110,slow=6.2,SNR=29
FINES pP pP 21 30 55.3 -0.4
comp=Z,9.9nm,0.7s,baz=108,slow=6.2,SNR=8.8
KAF Kangasniemi 69.14 333 *eP* **P 21 30 46.7 -0.7**
KAF pmax pmax
comp=Z,11nm,0.8s,mb4.8
KAF Kangasniemi 69.14 333 *eP* **P 21 30 46.7 -0.7**
comp=Z,11nm,0.8s,mb4.8
KAF Kangasniemi 69.14 333 *ep* **P 21 30 46.7 -0.7**
comp=Z,11nm,0.8s,mb4.8,baz=106,slow=5.9
PKSM Moragy 70.61 315⇑ P **P 21 30 56.0 -0.7**
PKSM Moragy 70.61 315⇑ *iP* **P 21 30 56.0 -0.7**
VYHS Vyhne 70.68 318 *eP* **P 21 30 56.2 -0.9**
VYHS Vyhne 70.68 318 *eP* **P 21 30 56.2 -0.9**
OKC Ostrava-Krasne 71.26 319 *eP* **P 21 31 00.6 0.0**
OKC *e* pP 21 31 08.9 -0.6
OKC Ostrava-Krasne 71.26 319 *eP* **P 21 31 00.6 0.0**
OKC *ep*P pP 21 31 08.9 -0.6
KEV Kevo 71.33 341 *eP* **P 21 30 59.9 -0.8**
KEV pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
KEV Kevo 71.33 341 *eP* **P 21 30 59.9 -0.8**
comp=Z,7.9nm,0.8s,mb4.7
KEV Kevo 71.33 341 *ep* **P 21 30 59.9 -0.8**
comp=Z,7.9nm,0.8s,mb4.7
MORC Moravsky Berou 71.64 319⇓ P **P 21 31 02.5 -0.4**
MORC Moravsky Berou 71.64 319⇓ *iP* **P 21 31 02.5 -0.4**
ARCES ARCESS Array B 71.75 340 P **P 21 31 04.0 +0.8**

comp=Z,9.5nm,0.8s,mb4.8,baz=91,slow=6.6,SNR=27
ARCES pP pP 21 31 12.4 +0.3
comp=Z,9.8nm,1.0s,baz=54,slow=6.2,SNR=5.3
DPC Dobruska-Polom 72.47 319 *eP* **P 21 31 08.3 +0.4**
DPC *e* pP 21 31 16.6 -0.2
DPC Dobruska-Polom 72.47 319 *eP* **P 21 31 08.3 +0.4**
DPC *ep*P pP 21 31 16.6 -0.2
UPC Upice 72.69 320 *eP* **P 21 31 09.4 +0.3**
UPC *e* pP 21 31 18.0 0.0
UPC Upice 72.69 320 *eP* **P 21 31 09.4 +0.3**
UPC *ex* x 21 31 13.1
UPC *ep*P pP 21 31 18.0 0.0
PRU Pruhonice 73.60 319 *eP* **P 21 31 15.2 +0.7**
PRU *e* pP 21 31 23.8 +0.4
PRU Pruhonice 73.60 319 *eP* **P 21 31 15.2 +0.7**
PRU *ex* x 21 31 19.6
PRU *ep*P pP 21 31 23.8 +0.4
PVCC Panska Ves 73.61 320 *eP* **P 21 31 14.8 +0.2**
PVCC *e* pP 21 31 23.4 -0.1
PVCC Panska Ves 73.61 320 *eP* **P 21 31 14.8 +0.2**
PVCC *ep*P pP 21 31 23.4 -0.1
BRG Berggiesshubel 74.02 320 *eP* **P 21 31 17.2 +0.2**
comp=Z,8.0nm,0.8s,mb4.7
BRG Berggiesshubel 74.02 320 *i P* **P 21 31 17.1 +0.1**
comp=Z,8.2nm,0.8s,mb4.7
BRG *i* pP 21 31 25.8 -0.2
comp=Z,7.8nm,0.8s
BRG *e* 21 36 24.4
comp=Z,13nm,1.5s
BRG
comp=N,84nm,18.3s
BRG
comp=E,97nm,13.9s
BRG
comp=Z,172nm,22.4s
BRG Berggiesshubel 74.02 320 *i P* **P 21 31 17.1 +0.1**
BRG *i* pP 21 31 25.8 -0.1
BRG pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
BRG pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
BRG pmax pmax
comp=Z,8.0nm,1.5s,mb4.4
BRG MLR MLR
comp=N,50nm,18.3s,MS4.1
BRG MLR MLR
comp=E,58nm,13.9s,MS4.1
BRG MLR MLR
comp=Z,103nm,22.4s
GEC2 GERESS Array S 74.10 318 *eP* **P 21 31 17.4 -0.1**
comp=Z,6.0nm,0.8s,mb4.6
KHC Kasperske Hory 74.19 318 *eP* **P 21 31 17.8 -0.2**
KHC *e* pP 21 31 26.1 -0.8
KHC Kasperske Hory 74.19 318 *eP* **P 21 31 17.8 -0.2**
KHC *ep*P pP 21 31 26.1 -0.8
BILL Bilibino 74.30 22 *i P* **P 21 31 18.4 +0.1**
BILL pmax pmax
comp=Z,9.0nm,1.5s,mb4.5
RGN Rugen 74.58 324 P **P 21 31 19.8 -0.4**
CLL Collm 74.63 320 *eP* **P 21 31 20.1 -0.4**
comp=Z,6.0nm,0.9s,mb4.5
CLL Collm 74.63 320⇓ *iP* **P 21 31 20.1 -0.4**
CLL *e*PP pP 21 31 26.0 -3.5
CLL pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
CLL Collm 74.63 320⇓ *iP* **P 21 31 20.1 -0.4**
comp=Z,6.0nm,0.9s,mb4.5
CLL *ep*P pP 21 31 26.0 -3.5
CLL Collm 74.63 320⇓ *iP* **P 21 31 20.1 -0.4**
comp=Z,6.0nm,0.9s,mb4.5
CLL *ep*P pP 21 31 26.0 -3.5
CLL *i* sP sP 21 31 28.6 -4.2
CLL LmV 22 08 00.0
comp=Z,100nm,18.3s
WET Wettzell 74.65 318 *eP* **P 21 31 21.0 +0.3**
comp=Z,5.0nm,0.9s,mb4.4
ROTZ Rotzenmuhle 75.10 319 *eP* **P 21 31 23.8 +0.5**
comp=Z,10.0nm,1.1s,mb4.7
ROTZ *ep*P pP 21 31 32.1 -0.1
BOSA Boshof 75.15 237 P **P 21 31 25.2 +1.2**
comp=Z,8.8nm,0.7s,mb4.8,baz=73,slow=5.0,SNR=21
BOSA pP pP 21 31 33.8 +0.9
comp=Z,4.9nm,0.7s,baz=82,slow=7.0,SNR=4.4
BOSA Boshof 75.15 237 P **P 21 31 25.2 +1.3**
BOSA *PP pP 21 31 33.8 +0.9
BOSA pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
BOSA pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
BOSA Boshof 75.15 237 *eP* **P 21 31 25.5 +1.6**
comp=Z,7.2nm,0.6s,mb4.8
WTTA Wattenberg 75.46 316⇓ *iP* **P 21 31 24.7 -0.7**
comp=Z,6.4nm,0.7s,mb4.7
MOX Moxa 75.49 320 *e*(P) **P 21 31 25.6 +0.1**
MOX Moxa 75.49 320 *eP* **P 21 31 25.7 +0.2**
comp=Z,5.0nm,0.7s,mb4.5
GRF Grafenberg Arr 75.74 319 *eP* **P 21 31 27.5 +0.6**
comp=Z,15nm,1.2s,mb4.8
GRF *ep*P pP 21 31 35.8 -0.1
GRF Grafenberg Arr 75.74 319 *eP* **P 21 31 27.5 +0.6**
GRF *e*PP pP 21 31 35.8 -0.1
GRF pmax pmax
comp=Z,15nm,1.2s,mb4.8
GRF Grafenberg Arr 75.74 319 *eP* **P 21 31 27.5 +0.6**
comp=Z,15nm,1.2s,mb4.8
GRF *ep*P pP 21 31 35.8 -0.1
MOTA Moosalm 75.82 316⇓ *iP* **P 21 31 26.6 -0.9**
comp=Z,4.7nm,0.8s,mb4.5
RETA Reutte 76.05 316⇓ *iP* **P 21 31 28.1 -0.7**
comp=Z,5.1nm,0.6s,mb4.6
NB2 NORSAR Subarra 76.06 330 P **P 21 31 27.8 -0.7**
comp=Z,5.4nm,0.7s,mb4.6,baz=93,slow=5.9
NOA NORSAR Array B 76.06 330 P **P 21 31 27.9 -0.6**
comp=Z,4.0nm,0.7s,mb4.5,baz=94,slow=5.8,SNR=14
NOA pP pP 21 31 36.6 -0.8
comp=Z,3.4nm,0.6s,baz=94,slow=5.8,SNR=8.2
NOA NORSAR Array B 76.06 330 P **P 21 31 27.9 -0.6**
NOA pP pP 21 31 36.6 -0.8
FETA Feichten 76.08 316⇓ *iP* **P 21 31 28.5 -0.5**
comp=Z,5.2nm,0.8s,mb4.5
CLZ Clausthal 76.28 321 *eP* **P 21 31 30.1 +0.1**
comp=Z,11nm,0.7s,mb4.9
CLZ *ep*P pP 21 31 38.5 -0.4
BSEG Bad Segeberg 76.32 323 *eP* **P 21 31 30.6 +0.4**
comp=Z,11nm,0.9s,mb4.8
BSEG *ep*P pP 21 31 38.8 -0.3
VLC Villacollemand 76.39 313 *eP* **P 21 31 31.1 +0.4**
DAVA Damuels 76.66 316⇑ *iP* **P 21 31 31.3 -0.9**
comp=Z,8.4nm,0.6s,mb4.8
TNS Taunus Mts 77.52 319 *eP* **P 21 31 37.2 +0.2**
comp=Z,17nm,1.2s,mb4.8
TNS *ep*P pP 21 31 45.5 -0.5
CASY Casey 78.08 172 *eP* **P 21 31 39.3 -0.4**
CDF Champ du Feu 78.36 317 *eP* **P 21 31 41.0 -0.8**
comp=Z,8.5nm,0.8s,mb4.4
CDF Champ du Feu 78.36 317 *eP* **P 21 31 41.0 -0.8**
CDF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
CDF Champ du Feu 78.36 317 *eP* **P 21 31 41.0 -0.8**
comp=Z,4.3nm,0.8s,mb4.4
SBF Sospel 78.53 313 *eP* **P 21 31 42.7 -0.1**
HINF Hinteralfeld 78.68 317 *eP* **P 21 31 42.6 -0.9**
comp=Z,3.5nm,0.5s,mb4.2
HINF Hinteralfeld 78.68 317 *eP* **P 21 31 42.6 -0.9**
HINF pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
HINF Hinteralfeld 78.68 317 *eP* **P 21 31 42.6 -0.9**
comp=Z,1.8nm,0.5s,mb4.3
TSUM Tsumeb 78.88 248 *eP* **P 21 31 46.0 +0.9**
LPG La Plagne 78.91 314 *eP* **P 21 31 44.7 -0.1**
comp=Z,16nm,0.7s,mb4.8
LPG La Plagne 78.91 314 *eP* **P 21 31 44.7 -0.1**
LPG pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
LPG La Plagne 78.91 314 *eP* **P 21 31 44.7 -0.1**
comp=Z,8.1nm,0.7s,mb4.8
LPL La Plagne 78.92 314 *eP* **P 21 31 44.8 -0.1**
comp=Z,24nm,0.8s,mb4.9
LPL La Plagne 78.92 314 *eP* **P 21 31 44.8 -0.1**
LPL pmax pmax
comp=Z,12nm,0.8s,mb4.9
LPL La Plagne 78.92 314 *eP* **P 21 31 44.8 -0.1**
comp=Z,12nm,0.8s,mb4.9
MBDF Montbardon 78.95 314 *eP* **P 21 31 44.1 -0.9**
comp=Z,11nm,0.9s,mb4.5

MBDF	**Montbardon**	**78.95**	**314**	*e*P	**P**	**21 31 44.1**	**-0.9**
MBDF				pmax	pmax		
comp=Z,5.0nm,0.9s,mb4.4							
MBDF	**Montbardon**	**78.95**	**314**	*e*P	**P**	**21 31 44.1**	**-0.9**
comp=Z,5.4nm,0.9s,mb4.5							
BNI	**Bardonecchia**	**78.99**	**314**	*e*P	**P**	**21 31 45.4**	**+0.1**
HAU	**Haudompre**	**79.01**	**317**	*e*P	**P**	**21 31 44.6**	**-0.7**
comp=Z,12nm,0.7s,mb4.7							
HAU	**Haudompre**	**79.01**	**317**	*e*P	**P**	**21 31 44.6**	**-0.7**
HAU				pmax	pmax		
comp=Z,6.0nm,0.7s,mb4.6							
HAU	**Haudompre**	**79.01**	**317**	*e*P	**P**	**21 31 44.6**	**-0.7**
comp=Z,6.2nm,0.7s,mb4.7							
WLF	**Walferdange**	**79.03**	**319**	*e*P	**P**	**21 31 45.4**	**0.0**
WLF				pmax	pmax		
comp=Z,3.0nm,0.6s,mb4.4							
WLF	**Walferdange**	**79.03**	**319**	*e*P	**P**	**21 31 45.4**	**0.0**
comp=Z,3.5nm,0.6s,mb4.5							
FRF	**La Foret Royal**	**79.12**	**312**	*e*P	**P**	**21 31 45.5**	**-0.5**
comp=Z,32nm,1.2s,mb4.8							
FRF	**La Foret Royal**	**79.12**	**312**	*e*P	**P**	**21 31 45.5**	**-0.5**
FRF				pmax	pmax		
comp=Z,16nm,1.2s,mb4.8							
FRF	**La Foret Royal**	**79.12**	**312**	*e*P	**P**	**21 31 45.5**	**-0.5**
comp=Z,16nm,1.2s,mb4.8							
CABF	**La Chapelle**	**79.28**	**316**	*e*P	**P**	**21 31 46.7**	**-0.2**
comp=Z,29nm,1.0s,mb4.8							
CABF	**La Chapelle**	**79.28**	**316**	*e*P	**P**	**21 31 46.7**	**-0.2**
CABF				pmax	pmax		
comp=Z,14nm,1.0s,mb4.8							
CABF	**La Chapelle**	**79.28**	**316**	*e*P	**P**	**21 31 46.7**	**-0.2**
comp=Z,14nm,1.0s,mb4.9							
ORIF	**Oris-en-Rattie**	**79.56**	**314**	*e*P	**P**	**21 31 48.2**	**-0.2**
comp=Z,8.9nm,0.9s,mb4.4							
ORIF	**Oris-en-Rattie**	**79.56**	**314**	*e*P	**P**	**21 31 48.2**	**-0.2**
ORIF				pmax	pmax		
comp=Z,4.0nm,0.9s,mb4.3							
ORIF	**Oris-en-Rattie**	**79.56**	**314**	*e*P	**P**	**21 31 48.2**	**-0.2**
comp=Z,4.4nm,0.9s,mb4.4							
MEZF	**Maizieres J'vi**	**79.84**	**318**	*e*P	**P**	**21 31 49.2**	**-0.6**
GIVF	**Givet**	**79.85**	**319**	*e*P	**P**	**21 31 49.1**	**-0.8**
SMRF	**Simiane la Rot**	**79.86**	**313**	*e*P	**P**	**21 31 49.9**	**-0.2**
BAIF	**Baives**	**80.25**	**319**	*e*P	**P**	**21 31 51.7**	**-0.3**
comp=Z,19nm,1.0s,mb4.7							
BAIF	**Baives**	**80.25**	**319**	*e*P	**P**	**21 31 51.7**	**-0.3**
BAIF				pmax	pmax		
comp=Z,10.0nm,1.0s,mb4.7							
BAIF	**Baives**	**80.25**	**319**	*e*P	**P**	**21 31 51.7**	**-0.3**
comp=Z,9.7nm,1.0s,mb4.7							
VIVF	**Saint-Julien-l**	**80.42**	**314**	*e*P	**P**	**21 31 52.7**	**-0.4**
comp=Z,22nm,0.8s,mb4.8							
VIVF	**Saint-Julien-l**	**80.42**	**314**	*e*P	**P**	**21 31 52.7**	**-0.4**
VIVF				pmax	pmax		
comp=Z,11nm,0.8s,mb4.8							
VIVF	**Saint-Julien-l**	**80.42**	**314**	*e*P	**P**	**21 31 52.7**	**-0.4**
comp=Z,11nm,0.8s,mb4.8							
LOR	**Lormes**	**80.75**	**316**	*e*P	**P**	**21 31 54.1**	**-0.6**
comp=Z,22nm,0.9s,mb4.8							
LOR	**Lormes**	**80.75**	**316**	*e*P	**P**	**21 31 54.1**	**-0.6**
LOR				pmax	pmax		
comp=Z,11nm,0.9s,mb4.8							
LOR	**Lormes**	**80.75**	**316**	*e*P	**P**	**21 31 54.1**	**-0.6**
comp=Z,11nm,0.9s,mb4.8							
SMF	**Signal de Mont**	**80.82**	**316**	*e*P	**P**	**21 31 54.5**	**-0.7**
comp=Z,19nm,0.8s,mb4.8							
SMF	**Signal de Mont**	**80.82**	**316**	*e*P	**P**	**21 31 54.5**	**-0.7**
SMF				pmax	pmax		
comp=Z,10.0nm,0.8s,mb4.8							
SMF	**Signal de Mont**	**80.82**	**316**	*e*P	**P**	**21 31 54.5**	**-0.7**
comp=Z,9.6nm,0.8s,mb4.8							
MAW	**Mawson**	**80.90**	**191**	*e*P	**P**	**21 31 56.0**	**+1.0**
comp=Z,3.6nm,0.7s,mb4.4							
MAW	**Mawson**	**80.90**	**191**	P	**P**	**21 31 56.6**	**+1.6**
comp=Z,3.9nm,0.7s,mb4.5,baz=37,slow=4.9,SNR=15							
MAW				pP	pP	21 32 05.1	+1.1
comp=Z,2.5nm,0.8s,baz=323,slow=8.8,SNR=3.4							
MAW	**Mawson**	**80.90**	**191**	P	**P**	**21 31 56.6**	**+1.6**
MAW				*PP	pP	21 32 05.1	+1.1
MAW				pmax	pmax		
comp=Z,4.0nm,0.7s							
MAW				pmax	pmax		
comp=Z,3.0nm,0.8s							
MAW	**Mawson**	**80.90**	**191**	*e*P	**P**	**21 31 55.3**	**+0.3**
comp=Z,1.9nm,1.3s,mb3.9							
SSF	**Saint Saulge**	**81.01**	**316**	*e*P	**P**	**21 31 55.7**	**-0.4**
comp=Z,10nm,0.8s,mb4.5							
SSF	**Saint Saulge**	**81.01**	**316**	*e*P	**P**	**21 31 55.7**	**-0.4**
SSF				pmax	pmax		
comp=Z,5.0nm,0.8s,mb4.5							
SSF	**Saint Saulge**	**81.01**	**316**	*e*P	**P**	**21 31 55.7**	**-0.4**
comp=Z,5.3nm,0.8s,mb4.5							
LASF	**Ste Croix**	**81.09**	**313**	*e*P	**P**	**21 31 56.7**	**+0.1**
comp=Z,40nm,1.1s,mb5.0							
AVF	**Avril sur Loir**	**81.14**	**316**	*e*P	**P**	**21 31 56.2**	**-0.7**
comp=Z,13nm,0.8s,mb4.6							
AVF	**Avril sur Loir**	**81.14**	**316**	*e*P	**P**	**21 31 56.2**	**-0.7**
AVF				pmax	pmax		
comp=Z,7.0nm,0.8s,mb4.6							
AVF	**Avril sur Loir**	**81.14**	**316**	*e*P	**P**	**21 31 56.2**	**-0.7**
comp=Z,6.5nm,0.8s,mb4.6							
BGF	**Bois d'Agland**	**81.52**	**316**	*e*P	**P**	**21 31 58.8**	**0.0**
comp=Z,19nm,0.9s,mb4.7							
BGF	**Bois d'Agland**	**81.52**	**316**	*e*P	**P**	**21 31 58.8**	**0.0**
BGF				pmax	pmax		
comp=Z,10.0nm,0.9s,mb4.8							
BGF	**Bois d'Agland**	**81.52**	**316**	*e*P	**P**	**21 31 58.8**	**0.0**
comp=Z,9.6nm,0.9s,mb4.7							
HYF	**Humbligny**	**81.57**	**316**	*e*P	**P**	**21 31 59.1**	**0.0**
TCF	**Toulx Ste Croi**	**81.98**	**316**	*e*P	**P**	**21 32 01.1**	**-0.2**
comp=Z,15nm,1.0s,mb4.6							
TCF	**Toulx Ste Croi**	**81.98**	**316**	*e*P	**P**	**21 32 01.1**	**-0.2**
TCF				pmax	pmax		
comp=Z,8.0nm,1.0s,mb4.6							
TCF	**Toulx Ste Croi**	**81.98**	**316**	*e*P	**P**	**21 32 01.1**	**-0.2**
comp=Z,7.5nm,1.0s,mb4.6							
CAF	**Calviac**	**82.26**	**314**	*e*P	**P**	**21 32 02.7**	**-0.1**
comp=Z,8.8nm,0.8s,mb4.5							
CAF	**Calviac**	**82.26**	**314**	*e*P	**P**	**21 32 02.7**	**-0.1**
CAF				pmax	pmax		
comp=Z,4.0nm,0.8s,mb4.4							
CAF	**Calviac**	**82.26**	**314**	*e*P	**P**	**21 32 02.7**	**-0.1**
comp=Z,4.4nm,0.8s,mb4.4							
MTLF	**Montolieu**	**82.36**	**313**	*e*P	**P**	**21 32 03.2**	**-0.1**
comp=Z,16nm,0.8s,mb4.7							
MTLF	**Montolieu**	**82.36**	**313**	*e*P	**P**	**21 32 03.2**	**-0.1**
MTLF				pmax	pmax		
comp=Z,8.0nm,0.8s,mb4.7							
MTLF	**Montolieu**	**82.36**	**313**	*e*P	**P**	**21 32 03.2**	**-0.1**
comp=Z,8.1nm,0.8s,mb4.7							
TAM	**Tamanrasset**	**82.45**	**292**	*e*P	**P**	**21 32 04.9**	**+0.7**
TAM				pmax	pmax		
comp=Z,5.0nm,0.9s,mb4.4							
TAM	**Tamanrasset**	**82.45**	**292**	*e*P	**P**	**21 32 04.9**	**+0.7**
comp=Z,4.8nm,0.9s,mb4.4							
RJF	**Les Rejaudoux**	**82.59**	**315**	*e*P	**P**	**21 32 04.6**	**+0.1**
comp=Z,14nm,0.8s,mb4.8							
RJF	**Les Rejaudoux**	**82.59**	**315**	*e*P	**P**	**21 32 04.6**	**+0.1**
RJF				pmax	pmax		
comp=Z,7.0nm,0.8s,mb4.7							
RJF	**Les Rejaudoux**	**82.59**	**315**	*e*P	**P**	**21 32 04.6**	**+0.1**
comp=Z,7.2nm,0.8s,mb4.8							
LFF	**La Frestale**	**83.19**	**314**	*e*P	**P**	**21 32 07.8**	**+0.2**
LDF	**La Druitiere**	**83.24**	**318**	*e*P	**P**	**21 32 07.2**	**-0.6**
comp=Z,10nm,0.7s,mb4.7							
LDF	**La Druitiere**	**83.24**	**318**	*e*P	**P**	**21 32 07.2**	**-0.6**
LDF				pmax	pmax		
comp=Z,5.0nm,0.7s,mb4.7							
LDF	**La Druitiere**	**83.24**	**318**	*e*P	**P**	**21 32 07.2**	**-0.6**
comp=Z,5.2nm,0.7s,mb4.7							
FLN	**La Foliniere**	**83.45**	**318**	*e*P	**P**	**21 32 08.3**	**-0.6**
comp=Z,17nm,0.8s,mb4.8							
FLN	**La Foliniere**	**83.45**	**318**	*e*P	**P**	**21 32 08.3**	**-0.6**
FLN				pmax	pmax		
comp=Z,9.0nm,0.8s,mb4.8							
FLN	**La Foliniere**	**83.45**	**318**	*e*P	**P**	**21 32 08.3**	**-0.6**
comp=Z,8.5nm,0.8s,mb4.8							
MFF	**Saint Martin d**	**83.56**	**316**	*e*P	**P**	**21 32 09.1**	**-0.4**
comp=Z,26nm,0.8s,mb5.1							
MFF	**Saint Martin d**	**83.56**	**316**	*e*P	**P**	**21 32 09.1**	**-0.4**
MFF				pmax	pmax		
comp=Z,13nm,0.8s,mb5.1							
MFF	**Saint Martin d**	**83.56**	**316**	*e*P	**P**	**21 32 09.1**	**-0.4**
comp=Z,13nm,0.8s,mb5.1							
GRR	**Gorron**	**83.75**	**318**	*e*P	**P**	**21 32 09.9**	**-0.6**
SJPF	**Ste Jean**	**84.88**	**313**	*e*P	**P**	**21 32 16.6**	**+0.3**
SGMF	**Saint Gilles**	**84.89**	**318**	*e*P	**P**	**21 32 15.8**	**-0.5**
MCQ	**Macquarie Isla**	**85.92**	**147**	P	**P**	**21 32 20.5**	**-0.6**
ESDC	**Sonseca Array**	**87.55**	**310**	P	**P**	**21 32 29.6**	**+0.1**
comp=Z,1.0nm,0.6s,mb4.2,baz=65,slow=4.8,SNR=8.0							
ESDC				pP	pP	21 32 38.3	-0.3
comp=Z,1.2nm,0.7s,baz=60,slow=4.2,SNR=5.8							
TTA	**Tatalina**	**90.29**	**25**	*e*P	**P**	**21 32 41.2**	**-0.7**
TTA				pmax	pmax		
comp=Z,18nm,1.4s,mb5.2							
TTA	**Tatalina**	**90.29**	**25**	*e*P	**P**	**21 32 41.2**	**-0.7**
comp=Z,18nm,1.4s,mb5.2							
SUMG	**Summit**	**90.80**	**347**	*i* P	**P**	**21 32 43.2**	**-0.9**
comp=Z,5.1nm,0.9s,mb4.8							
TRF	**Thorofare Moun**	**92.36**	**23**	*e*P	**P**	**21 32 52.3**	**+0.8**
comp=Z,12nm,0.4s,mb5.6							
MCK	**McKinley**	**92.74**	**23**	*e*P	**P**	**21 32 53.0**	**-0.3**
MCK				pmax	pmax		
comp=Z,5.0nm,0.7s,mb5.0							
MCK	**McKinley**	**92.74**	**23**	*e*P	**P**	**21 32 53.0**	**-0.3**
comp=Z,5.3nm,0.7s,mb5.1							
ILAR	**Eielson Array**	**92.95**	**21**	P	**P**	**21 32 53.3**	**-0.9**
comp=Z,2.5nm,0.7s,mb4.8,baz=299,slow=4.3,SNR=35							
KDAK	**Kodiak Island**	**94.09**	**29**	P	**P**	**21 32 60.0**	**+0.4**
comp=Z,4.3nm,0.6s,mb5.0,baz=252,slow=3.0,SNR=5.0							
KDAK	**Kodiak Island**	**94.09**	**29**	P	**P**	**21 32 60.0**	**+0.4**
INK	**Inuvik**	**94.86**	**15**	P	**P**	**21 33 01.8**	**-1.2**
comp=Z,2.4nm,0.5s,mb4.9,baz=297,slow=4.5,SNR=3.8							
INK	**Inuvik**	**94.86**	**15**	P	**P**	**21 33 01.8**	**-1.2**
PDAR	**Pinedale Array**	**123.27**	**19**	PKP	PKPdf	21 38 38.5	+0.1
comp=Z,1.0nm,0.7s,baz=5.7,slow=1.5,SNR=4.8							
NVAR	**Mina Array Bea**	**123.58**	**28**	PKP	PKPdf	21 38 40.8	+1.6
comp=Z,1.9nm,0.6s,baz=332,slow=1.4,SNR=14							
NVAR				pPKP	pPKPdf	21 38 49.4	+0.9
comp=Z,0.6nm,0.6s,baz=52,slow=9.6,SNR=4.2							
NVAR	**Mina Array Bea**	**123.58**	**28**	PKP	PKPdf	21 38 40.8	+1.6
NVAR				pPKP	pPKPdf	21 38 49.4	+0.9
ECSD	**EROS Data Cent**	**125.23**	**7**	*e*PKPdf	PKPdf	21 38 40.9	-1.3
TXAR	**Lajitas Array**	**137.45**	**20**	PKP	PKPdf	21 39 06.4	+0.7
comp=Z,1.1nm,0.8s,baz=189,slow=1.7,SNR=8.5							
PLCA	**Paso Flores**	**146.31**	**205**	PKPbc	PKPbc	21 39 22.4	+0.2
comp=Z,6.1nm,0.7s,baz=199,slow=2.7,SNR=8.8							
PLCA	**Paso Flores**	**146.31**	**205**	PKP2	PKPab	21 39 22.4	-0.6
PLCA				pmax	pmax		
comp=Z,6.0nm,0.7s							
PLCA	**Paso Flores**	**146.31**	**205**	*e*PKP	PKPdf	21 39 22.2	+1.1
CPUP	**Villa Florida**	**146.96**	**238**	PKPbc	PKPbc	21 39 24.3	-0.3
comp=Z,5.0nm,0.7s,baz=77,slow=6.9,SNR=8.4							
LPAZ	**La Paz**	**159.68**	**252**	PKP	PKPdf	21 39 42.4	+1.3
comp=Z,0.8nm,0.7s,baz=296,slow=1.1,SNR=4.3							
LPAZ				PKPab	PKPab	21 40 20.9	+1.2
comp=Z,2.2nm,0.8s,baz=95,slow=4.6,SNR=6.0							

BJI ***22*** *21:26:00.8, 29°.77N×95°.20E, h7km, mB4.8/11, mb4.6/23, ML4.5/3, Ms4.6/28, Ms7 4.4/24*
IDC ***22*** *21:26:01.3±0.7, 29°.80N×95°.18E, h0km, mb4.3/13, mb1 4.3/16, mb1mx4.2/26, mbtmp4.3/16, ML4.0/3, MS4.1/14, Ms1 4.1/14, ms1mx3.9/21, Error ellipse: s-maj=23.5km s-min=13.9km az=55.0*
ISCJB ***22*** *21:26:03.7±1.1, 29°.88N±0°.04×95°.23E±0°.03, h24km±8km, mb4.5/41, MS4.2/17, Error ellipse: s-maj=6.2km s-min=4.6km az=15.2*
NEIC ***22*** *21:26:03.6±0.2, 29°.93N×95°.20E, h10km, mb4.7/20, Error ellipse: s-maj=6.5km s-min=4.3km az=224.0*
MOS ***22*** *21:26:04.9±1.2, 29°.83N×95°.25E, h33km, mb4.8/35, MS4.2/7, Error ellipse: s-maj=10.4km s-min=5.6km az=115.7*
SZGRF ***22*** *21:26:16.8, 31°.24N×94°.23E, h33km, mb5.2, Xizang*
ISC 22 21:26:05.4±1.1,**29°.91N**±0°.04×**95°.22E**±0°.03,**h21**km±8km,
n151,σ1°**15**/152,**mb4.5**/41,**MS4.2**/17,**3C-4D**,**Eastern Xizang-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.54**	**268**	Pg	**Pn**	**21 27 01.8**	**+2.6**
LSA				Sg	**Sb**	**21 27 49.8**	**-0.3**
LSA				smax			
comp=N,110nm,0.8s							
LSA				smax			
comp=E,150nm,1.0s							
LSA	**Lhasa**	**3.54**	**268**	*e*Pn	**Pn**	**21 26 60.0**	**+0.8**
KMI	**Kunming**	**8.20**	**124**	P	**Pn**	**21 28 05.1**	**+1.9**
KMI				LR	LR		
comp=N,2μm,5.4s							
KMI				LR	LR		
comp=E,2μm,5.6s							
KMI				LR	LR		
comp=Z,2μm,9.7s							
LZH	**Lanzhou**	**9.51**	**47**	*e*P	**Pn**	**21 28 24.0**	**+2.9**
LZH				pP		21 28 27.3	
LZH				sP		21 28 30.1	
LZH				PP		21 28 31.9	
LZH				*e*S	**Sn**	**21 30 11.3**	**+4.1**
LZH				sS		21 30 16.0	
LZH				SS		21 30 21.3	
LZH				pmax	pmax		
comp=Z,25nm,1.2s							
LZH				pmax	pmax		
comp=Z,110nm,4.0s							
LZH				LR	LR		
comp=E,4μm,8.9s							
LZH				LR	LR		
comp=Z,6μm,10.5s							
GTA	**Gaotai**	**10.21**	**20⇑**	*e*P	**Pn**	**21 28 34.3**	**+3.7**
GTA				pP		21 28 38.8	
GTA				sP		21 28 41.3	
GTA				S	**Sn**	**21 30 39.4**	**+15**
GTA				pmax	pmax		
comp=Z,4.0nm,1.5s							
GTA				pmax	pmax		
comp=Z,99nm,6.0s							
GTA				LR	LR		
comp=N,3μm,11.4s							
GTA				LR	LR		
comp=E,1μm,12.0s							
GTA				LR	LR		
comp=Z,3μm,11.7s							
CHTO	**Chiang Mai**	**11.55**	**162**	*e*P	**Pn**	**21 28 49.7**	**+0.5**
CM31	**Chiang Mai Arr**	**11.89**	**163**	*e*Pn	**Pn**	**21 28 54.0**	**+0.2**
comp=Z,5.5nm,0.8s							
CMAR	**Chiang Mai Arr**	**11.89**	**163**	Pn	**Pn**	**21 28 52.3**	**-1.5**
comp=Z,0.2nm,0.3s,baz=338,slow=13,SNR=17							
CMAR				LR	LR	21 34 07.9	
comp=Z,541nm,19.1s,baz=336,slow=41							
ENH	**Enshi**	**12.36**	**85**	*e*Pn	**Pn**	**21 28 58.8**	**-1.4**
comp=Z,46nm,1.0s							
WMQ	**Urumqi**	**15.13**	**339**	*e*P	**Pn**	**21 29 35.8**	**-2.0**
WMQ				LR	LR		
comp=N,510nm,18.5s							
WMQ				LR	LR		
comp=E,840nm,20.8s							
WMQ				LR	LR		
comp=Z,530nm,22.1s							
BTO	**Baotou**	**16.10**	**45**	*e*P	**Pn**	**21 29 50.9**	**+0.4**
WHN	**Wuhan**	**16.55**	**83**	⇓P	**Pn**	**21 29 55.4**	**-0.8**
WHN				pmax	pmax		
comp=Z,210nm,1.6s							
WHN				pmax	pmax		
comp=Z,500nm,4.4s							
WHN				LR	LR		
comp=N,2μm,7.7s							
WHN				LR	LR		
comp=E,3μm,9.4s							
WHN				LR	LR		
comp=Z,3μm,11.3s							
QIZ	**Qiongzhong**	**17.14**	**126**	P	**Pn**	**21 30 01.0**	**-2.7**
QIZ				sP	sP	21 30 07.8	-6.1
QIZ				S	**Sn**	**21 33 12.8**	**-1.0**
QIZ				pmax	pmax		
comp=Z,15nm,1.3s							
QIZ				pmax	pmax		
comp=Z,100nm,3.2s							
QIZ				LR	LR		
comp=N,360nm,12.0s							
QIZ				LR	LR		
comp=E,270nm,12.8s							
QIZ				LR	LR		
comp=Z,1μm,12.6s							
HHC	**Hu-ho-hao-te**	**17.20**	**46**	*e*P	**Pn**	**21 30 02.5**	**-1.8**
HHC				PP		21 30 16.9	
HHC				S	**Sn**	**21 33 11.4**	**-3.6**
HHC				SS		21 33 32.5	
HHC				PcP	PcP	21 34 47.8	+0.3
HHC				ScS	ScS	21 41 59.8	-1.1
HHC				pmax	pmax		
comp=Z,14nm,0.5s							
HHC				pmax	pmax		
comp=Z,120nm,5.0s							
HHC				LR	LR		
comp=N,2μm,12.7s							
HHC				LR	LR		
comp=E,2μm,12.0s							
HHC				LR	LR		
comp=Z,3μm,12.4s							
MK31	**Makanchi Array**	**19.63**	**333**	*e*P	**Pn**	**21 30 33.9**	**0.0**
MKAR	**Makanchi Array**	**19.63**	**333**	P	**Pn**	**21 30 31.9**	**-2.0**
comp=Z,0.6nm,0.3s,baz=146,slow=9.9,SNR=14							
MKAR				LR	LR	21 38 54.5	
comp=Z,417nm,18.4s,baz=146,slow=39							
MKAR	**Makanchi Array**	**19.63**	**333**	*ce*P	**Pn**	**21 30 33.4**	**-0.5**
MKAR				pmax	pmax		
comp=Z,5.0nm,0.6s							
SONM	**Songino Array**	**19.87**	**23**	P	**Pn**	**21 30 35.4**	**-1.3**
comp=Z,0.9nm,0.3s,baz=204,slow=11,SNR=27							
SONM				LR	LR	21 39 09.1	
comp=Z,1μm,21.9s,baz=206,slow=39							
SONM	**Songino Array**	**19.87**	**23**	P	**Pn**	**21 30 35.4**	**-1.3**
SONM				pmax	pmax		
comp=Z,1.0nm,0.3s							
SONM				MLR	MLR		
comp=Z,1μm,21.9s							
BJI	**Beijing**	**19.88**	**54**	P	**Pn**	**21 30 37.5**	**+0.5**
BJI				pmax	pmax		
comp=Z,11nm,0.9s							
ULN	**Ulaanbaatar**	**20.12**	**24**	*e*P	**P**	**21 30 37.6**	**-0.2**
ULN				pmax	pmax		
comp=Z,36nm,1.1s							
ULN	**Ulaanbaatar**	**20.12**	**24**	*e*P	**P**	**21 30 37.6**	**-0.2**
comp=Z,36nm,1.1s							
ULN	**Ulaanbaatar**	**20.12**	**24**	P	**P**	**21 30 38.9**	**+1.1**
comp=Z,438nmcomp=Z,31nm,1.1s							
UCH	**Uchtor**	**20.71**	**312**	*e*P	**P**	**21 30 42.8**	**-1.4**
comp=Z,31nm,1.3s							
AAK	**Ala-Archa**	**20.92**	**313**	P	**P**	**21 30 49.5**	**+2.9**
comp=Z,13nm,0.7s,baz=149,slow=8.3,SNR=10.0							
AAK	**Ala-Archa**	**20.92**	**313**	P	**P**	**21 30 49.5**	**+2.9**
AAK				pmax	pmax		
comp=Z,13nm,0.7s							
AAK	**Ala-Archa**	**20.92**	**313**	*e*Pn	**P**	**21 30 48.1**	**+1.5**
comp=Z,34nm,1.1s							
FRU	**Bishkek**	**20.95**	**314**	*e*P	**P**	**21 30 47.0**	**+0.2**
FRU				pmax	pmax		
comp=Z,100nm,2.0s							
AML	**Almayashu**	**21.19**	**311**	*e*P	**P**	**21 30 49.0**	**-0.5**
QZH	**Quanzhou**	**21.31**	**98**	P	**P**	**21 30 48.3**	**-2.6**
QZH				S	**S**	**21 34 37.3**	**-9.4**
QZH				LR	LR		
comp=N,3μm,14.4s,MS4.9							
QZH				LR	LR		
comp=E,800nm,12.4s,MS4.9							
QZH				LR	LR		
comp=Z,2μm,13.0s,MS4.6							
EKS2	**Erkin-Say**	**21.40**	**312**	*e*P	**P**	**21 30 51.5**	**-0.2**
MOY	**Mondy**	**22.16**	**10**	*e*P	**P**	**21 31 01.4**	**+1.7**
KBL	**Kabul**	**22.60**	**289**	*e*P	**P**	**21 31 03.8**	**-0.8**
KBL				pmax	pmax		
comp=Z,23nm,0.9s,mb4.6							
KBL	**Kabul**	**22.60**	**289**	*e*P	**P**	**21 31 03.8**	**-0.8**
comp=Z,23nm,0.9s,mb4.6							
TLY	**Talaya**	**22.64**	**14**	*e*P	**P**	**21 31 08.5**	**+3.7**
TLY				*e*SS		21 36 06.2	
TLY				pmax	pmax		
comp=Z,14nm,1.4s,mb4.2							
TLY				MLR	MLR		
comp=Z,886nm,12.0s,MS4.4							
TLY	**Talaya**	**22.64**	**14**	*e*P	**P**	**21 31 03.3**	**-1.5**
IRK	**Irkutsk**	**23.30**	**14**	*e*P	**P**	**21 31 13.4**	**+1.6**
IRK				*e*		21 31 27.5	
IRK				pmax	pmax		
comp=Z,52nm,2.5s,mb4.5							
YHNB	**Yeheng**	**23.80**	**96**	*e*P	**P**	**21 31 19.0**	**+2.1**
NACB	**Ninganchiao**	**24.15**	**97**	*e*P	**P**	**21 31 22.1**	**+2.0**
YULB	**Yu-li**	**24.16**	**99**	*e*P	**P**	**21 31 21.1**	**+0.8**
comp=Z,31nm,1.3s,mb4.6							
KURK	**Kurchatov**	**24.23**	**334**	*d* iP	**P**	**21 31 19.9**	**-0.7**
KURK				pmax	pmax		
comp=Z,40nm,0.9s,mb4.8							
KURK	**Kurchatov**	**24.23**	**334**	*e*P	**P**	**21 31 18.9**	**-1.6**
comp=Z,39nm,0.9s,mb4.8							
ZALV	**Zalesovo Beam**	**25.18**	**345**	P	**P**	**21 31 28.8**	**-0.4**
comp=Z,13nm,0.6s,mb4.6,baz=164,slow=10,SNR=39							
ZALV				LR	LR	21 43 43.3	
comp=Z,40nm,19.8s,MS2.9,baz=187,slow=42							
ZALV	**Zalesovo Beam**	**25.18**	**345**	P	**P**	**21 31 28.8**	**-0.4**
ZALV				pmax	pmax		
comp=Z,13nm,0.6s,mb4.6							
ZALV				MLR	MLR		
comp=Z,40nm,19.8s,MS2.9							
ZALV	**Zalesovo Beam**	**25.18**	**345**	P	**P**	**21 31 28.8**	**-0.4**
ZALV				LR	LR	21 43 43.2	
NVS	**Novosibirsk**	**26.37**	**344**	⇓*i* P	**P**	**21 31 39.8**	**-0.1**
NVS				*e*S	**S**	**21 36 10.8**	**-1.0**
NVS				pmax	pmax		
comp=N,82nm,1.9s							
NVS				pmax	pmax		
comp=E,40nm,1.9s							
NVS				pmax	pmax		
comp=Z,64nm,1.9s,mb4.8							
NVS				smax			
comp=N,37nm,2.5s							
NVS				smax			
comp=E,28nm,2.0s							
HIA	**Hailar**	**26.84**	**37**	P	**P**	**21 31 43.9**	**-0.3**
PSI	**Prapat**	**27.19**	**172**	P	**P**	**21 31 47.7**	**+0.1**
comp=E,5.7nm,

YAK MLR MLR
comp=Z,653nm,11.0s,MS4.7
YAK Yakutsk 39.20 25 *eP* **P 21 33 31.5 -0.2**
SOKR Solikamsk 39.35 330 *eP* **P 21 33 32.8 -0.2**
SOKR pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
ASAJ Asahikawa 39.86 56 P **P 21 33 39.1 +1.7**
comp=Z,11nm,1.0s,mb4.5,baz=278,slow=21,SNR=4.1
ASAJ Asahikawa 39.86 56 P **P 21 33 39.2 +1.8**
ASAJ pmax pmax
comp=Z,11nm,1.0s
YSS Yuzh-Sakhalins 40.27 51 *eP* **P 21 33 44.6 +3.8**
YSS pmax pmax
comp=Z,40nm,1.7s,mb4.9
YSS Yuzh-Sakhalins 40.27 51 *eP* **P 21 33 41.4 +0.6**
GOF Gofitskoye 43.34 305 *eP* **P 21 33 58.0 -8.0**
GOF pmax pmax
comp=Z,46nm,1.2s,mb5.1
KIV Kislovodsk 43.57 304 *eP* **P 21 34 07.7 -0.1**
KIV pmax pmax
comp=Z,10.0nm,1.1s,mb4.5
KIV Kislovodsk 43.57 304 *eP* **P 21 34 07.5 -0.2**
VSR Storozhevoye 46.32 314 *eP* **P 21 34 30.0 +0.4**
VSR pmax pmax
comp=N,7.0nm,0.8s
VSR pmax pmax
comp=E,8.0nm,0.8s
VSR pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
ANN Anapa 47.32 305 *eP* **P 21 34 40.6 +3.1**
ANN *e*PP pP 21 34 57.1 +13
ANN *e* 21 36 08.3
ANN *e* 21 36 30.3
ANN *e*PPP 21 37 19.7
ANN *e*S **S 21 41 30.0 0.0**
ANN pmax pmax
comp=Z,50nm,1.1s,mb5.4
ANN MLR MLR
comp=N,205nm,21.0s,MS4.2
ANN MLR MLR
comp=E,191nm,21.0s,MS4.2
ANN MLR MLR
comp=Z,224nm,21.0s,MS4.1
SEY Seymchan 48.97 31 *eP* **P 21 34 52.4 +2.5**
PETK Petropavlovsk- 50.38 44 LR LR 21 59 12.1
comp=Z,221nm,19.1s,MS4.2,baz=245,slow=39
MMAI Mount Meron Ar 50.52 290 LR LR 21 58 07.0
comp=Z,109nm,19.8s,MS3.9,baz=230,slow=38
BR131 Keskin Array S 50.62 299 *eP* **P 21 35 03.0 +0.2**
BRTR Keskin Array B 50.62 299 P **P 21 35 02.2 -0.7**
comp=Z,2.4nm,0.9s,mb4.1,baz=120,slow=6.3,SNR=9.0
BRTR Keskin Array B 50.62 299 P **P 21 35 02.2 -0.7**
BRTR pmax pmax
comp=Z,2.0nm,1.0s
AKASG Malin Array Be 52.59 313 P **P 21 35 17.4 0.0**
comp=Z,2.3nm,0.5s,mb4.3,baz=82,slow=6.4,SNR=8.1
AKASG LR LR 22 00 54.7
comp=Z,105nm,18.5s,MS3.9,baz=60,slow=40
AKASG Malin Array Be 52.59 313 P **P 21 35 17.5 0.0**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKASG MLR MLR
comp=Z,105nm,18.5s
FINES FINESS Array B 54.30 326 P **P 21 35 31.1 +1.3**
comp=Z,1.0nm,0.6s,mb3.9,baz=46,slow=5.8,SNR=5.5
FINES FINESS Array B 54.30 326 P **P 21 35 31.1 +1.3**
FINES pmax pmax
comp=Z,1.0nm,0.6s
ARCES ARCESS Array B 55.23 336 PcP PcP 21 36 36.8 -0.4
comp=Z,1.8nm,0.8s,baz=104,slow=5.1,SNR=5.3
ARCES LR LR 22 01 47.3
comp=Z,199nm,18.6s,MS4.2,baz=80,slow=39
BILL Bilibino 55.55 26 *i P* **P 21 35 40.5 +1.7**
BILL pmax pmax
comp=Z,23nm,1.7s,mb4.9
KWP Kalwaria Pacla 56.87 312 *eP* **P 21 35 55.8 +7.3**
GVD Gavdhos 59.13 295 P **P 21 36 04.6 0.0**
MORC Moravsky Berou 60.15 313 *eP* **P 21 36 10.7 -0.6**
MORC pmax pmax
comp=Z,8.0nm,1.4s,mb4.6
MORC Moravsky Berou 60.15 313 *eP* **P 21 36 10.7 -0.6**
comp=Z,8.0nm,1.4s,mb4.6
DPC Dobruska-Polom 60.79 314 *eP* **P 21 36 11.6 -4.1**
DPC *e* pP 21 36 16.8 -5.7
DPC Dobruska-Polom 60.79 314 *eP* **P 21 36 11.6 -4.1**
DPC *e*pP pP 21 36 16.8 -5.7
NB2 NORSAR Subarra 61.48 327 P **P 21 36 19.7 -0.5**
comp=Z,2.6nm,0.7s,mb4.5,baz=80,slow=6.9
NOA NORSAR Array B 61.48 327 P **P 21 36 19.9 -0.3**
comp=Z,1.6nm,0.6s,mb4.3,baz=80,slow=6.8,SNR=8.1
NOA NORSAR Array B 61.48 327 P **P 21 36 19.9 -0.3**
NOA pmax pmax
comp=Z,2.0nm,0.6s
NOA NORSAR Array B 61.48 327 P **P 21 36 19.9 -0.3**
WRAB Tennant Creek 62.25 138 *eP* **P 21 36 26.4 +0.5**
WRAB pmax pmax
comp=Z,3.0nm,0.5s,mb4.7
WRAB Tennant Creek 62.25 138 *eP* **P 21 36 26.4 +0.5**
comp=Z,3.5nm,0.5s,mb4.8
CLL Collm 62.62 316 *eP* **P 21 36 27.0 -1.0**
CLL Collm 62.62 316 *eP* **P 21 36 27.0 -1.0**
KHC Kasperske Hory 62.81 313 *eP* **P 21 36 20.2 -9.1**
KHC *e* 21 36 29.9
KHC Kasperske Hory 62.81 313 *eP* **P 21 36 29.9 +0.6**
KMBO Kilima Mbogo 63.21 252 LR LR 22 03 47.6
comp=Z,162nm,18.2s,MS4.2,baz=271,slow=36
KMBO Kilima Mbogo 63.21 252 P **P 21 36 34.2 +1.7**
GRF Grafenberg Arr 64.14 314 *eP* **P 21 36 37.0 -1.1**
comp=Z,34nm,1.9s,mb5.0
GRF Grafenberg Arr 64.14 314 *eP* **P 21 36 37.0 -1.1**
GRF pmax pmax
comp=Z,34nm,1.9s,mb5.0
AQU L'Aquila 64.88 306 P **P 21 36 43.6 +0.5**
ASAR Alice Springs 64.95 141 P **P 21 36 41.6 -2.0**
comp=Z,1.7nm,0.5s,mb4.3,baz=324,slow=6.5,SNR=14
ASAR Alice Springs 64.95 141 P **P 21 36 41.7 -1.9**
ASAR pmax pmax
comp=Z,2.0nm,0.5s
WLF Walferdange 67.28 315 *eP* **P 21 36 58.5 +0.1**
WLF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
WLF Walferdange 67.28 315 *eP* **P 21 36 58.5 +0.1**
comp=Z,10nm,0.9s,mb4.8
LPG La Plagne 68.35 311 *eP* **P 21 37 06.1 +0.9**
LPL La Plagne 68.36 311 *eP* **P 21 37 06.2 +1.0**
comp=Z,8.7nm,0.8s,mb4.5
LPL La Plagne 68.36 311 *eP* **P 21 37 06.2 +1.0**
LPL pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
LPL La Plagne 68.36 311 *eP* **P 21 37 06.2 +1.0**
comp=Z,4.3nm,0.8s,mb4.5
MBDF Montbardon 68.61 310 *eP* **P 21 37 07.4 +0.5**
comp=Z,7.3nm,0.8s,mb4.4
MBDF Montbardon 68.61 310 *eP* **P 21 37 07.4 +0.5**
MBDF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
MBDF Montbardon 68.61 310 *eP* **P 21 37 07.4 +0.5**
comp=Z,3.7nm,0.8s,mb4.4
ORIF Oris-en-Rattie 69.14 311 *eP* **P 21 37 10.2 +0.1**
LOR Lormes 69.56 313 *eP* **P 21 37 13.2 +0.5**
comp=Z,5.4nm,0.8s,mb4.2
LOR Lormes 69.56 313 *eP* **P 21 37 13.2 +0.5**
LOR pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
LOR Lormes 69.56 313 *eP* **P 21 37 13.2 +0.5**
comp=Z,2.7nm,0.8s,mb4.2
SMF Signal de Mont 69.81 313 *eP* **P 21 37 14.3 +0.1**
SSF Saint Saulge 69.86 313 *eP* **P 21 37 14.7 +0.1**
comp=Z,13nm,1.0s,mb4.5
SSF Saint Saulge 69.86 313 *eP* **P 21 37 14.7 +0.1**
SSF pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
SSF Saint Saulge 69.86 313 *eP* **P 21 37 14.7 +0.1**
comp=Z,6.3nm,1.0s,mb4.5
AVF Avril sur Loir 70.06 313 *eP* **P 21 37 16.0 +0.2**
comp=Z,20nm,1.2s,mb4.6
AVF Avril sur Loir 70.06 313 *eP* **P 21 37 16.0 +0.2**
AVF pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
AVF Avril sur Loir 70.06 313 *eP* **P 21 37 16.0 +0.2**
comp=Z,10nm,1.2s,mb4.6
BGF Bois d'Agland 70.48 313 *eP* **P 21 37 18.6 +0.3**
TCF Toulx Ste Croi 70.99 313 *eP* **P 21 37 22.1 +0.7**
comp=Z,33nm,1.4s,mb4.8
TCF Toulx Ste Croi 70.99 313 *eP* **P 21 37 22.1 +0.7**
TCF pmax pmax
comp=Z,17nm,1.4s,mb4.8
TCF Toulx Ste Croi 70.99 313 *eP* **P 21 37 22.1 +0.7**
comp=Z,16nm,1.4s,mb4.8
LDF La Druitiere 71.50 316 *eP* **P 21 37 24.2 -0.3**
CAF Calviac 71.63 312 *eP* **P 21 37 26.1 +0.8**
comp=Z,19nm,1.3s,mb4.6
CAF Calviac 71.63 312 *eP* **P 21 37 26.1 +0.8**
CAF pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
CAF Calviac 71.63 312 *eP* **P 21 37 26.1 +0.8**
comp=Z,9.4nm,1.3s,mb4.6
GRR Gorron 72.03 316 *eP* **P 21 37 27.6 -0.1**
SGMF Saint Gilles 73.11 316 *eP* **P 21 37 34.6 +0.5**
ROSF Rostrenen 73.51 317 *eP* **P 21 37 37.3 +0.8**
ILAR Eielson Array 74.09 23 P **P 21 37 38.1 -1.4**
comp=Z,0.9nm,1.0s,mb3.7,baz=291,slow=4.2,SNR=4.9
ILAR LR LR 22 13 16.2
comp=Z,190nm,18.0s,MS4.4,baz=305,slow=38
ILAR Eielson Array 74.09 23 P **P 21 37 38.2 -1.4**
ILAR pmax pmax
comp=Z,1.0nm,1.0s
ILAR MLR MLR
comp=Z,190nm,18.0s
ETSF Etsaut 74.21 311 *eP* **P 21 37 40.7 0.0**
comp=Z,8.4nm,1.0s,mb4.3
ETSF Etsaut 74.21 311 *eP* **P 21 37 40.7 0.0**
ETSF pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
ETSF Etsaut 74.21 311 *eP* **P 21 37 40.7 0.0**
comp=Z,4.2nm,1.0s,mb4.3
STKA Stephens Creek 75.58 141 P **P 21 37 47.3 -1.3**
comp=Z,2.0nm,0.8s,mb4.1,baz=346,slow=4.2,SNR=4.4
BOSA Boshof 88.56 236 LR LR 22 17 25.1
comp=Z,103nm,18.1s,MS4.3,baz=258,slow=35
SCHQ Schefferville 94.20 350 LR LR 22 25 18.8
comp=Z,65nm,19.4s,MS4.1,baz=340,slow=38
DBIC Dimbokro 95.38 281 LR LR 22 26 13.9
comp=Z,138nm,19.7s,MS4.4,baz=50,slow=38
ULM Lac du Bonnet 99.59 7 LR LR 22 27 33.6
comp=Z,116nm,18.9s,MS4.4,baz=14,slow=37

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*ISCJB **22** 21:26:36.9±0.5, 40.°11N±0.°03×28.°40E±0.°04, h0km±9km, Error ellipse: s-maj=5.6km s-min=4.4km az=23.5*
*CSEM **22** 21:26:37.5±0.1, 40.°12N×28.°39E, h8km, MD2.6, Error ellipse: s-maj=1.8km s-min=1.7km az=88.0*
*DDA **22** 21:26:37.3, 40.°10N×28.°33E, h7km±3km, Md2.7*
*ISK **22** 21:26:37.2, 40.°14N×28.°39E, h5km, MD2.6*
ISC 22 21:26:37.6±0.5, 40.°11N±0.°03×28.°39E±0.°04, h6km±8km, n25, σ0.°51/38, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
KCTX	**Karacabey (Bur**	**0.15**	**351**	*e*PG	**Pg**	**Pg**	**21 26 41.2**	**+0.5**
KCTX				*e*SG	**Sg**	**Sg**	**21 26 43.0**	**+0.2**
KCTX	**Karacabey (Bur**	**0.15**	**351**	*e*Pg	**Pg**	**Pg**	**21 26 41.2**	**+0.5**
KCTX				*e*Sg	**Sg**	**Sg**	**21 26 43.0**	**+0.2**
BNT	**Bandirma**	**0.43**	**304**	*e*PG	**Pg**	**Pg**	**21 26 46.0**	**+0.1**
BNT				*e*SG	**Sg**	**Sg**	**21 26 52.3**	**+0.7**
MDNY	**Mudanya-Bursa**	**0.46**	**56**	*e*PG	**Pg**	**Pg**	**21 26 46.2**	**-0.2**
MDNY				*e*SG	**Sg**	**Sg**	**21 26 52.9**	**+0.5**
MDNY	**Mudanya-Bursa**	**0.46**	**56**	*e*Pg	**Pg**	**Pg**	**21 26 46.2**	**-0.2**
MDNY				*e*Sg	**Sg**	**Sg**	**21 26 52.9**	**+0.5**
GONE	**Gonen-Balikesi**	**0.54**	**263**	*e*PG	**Pg**	**Pg**	**21 26 48.3**	**+0.2**
GONE	**Gonen-Balikesi**	**0.54**	**263**	*e*Pg	**Pg**	**Pg**	**21 26 48.3**	**+0.3**
ARMT	**Armutlu**	**0.58**	**39**	*e*PG	**Pg**	**Pg**	**21 26 48.7**	**0.0**
ARMT	**Armutlu**	**0.58**	**39**	*e*Pg	**Pg**	**Pg**	**21 26 48.7**	**0.0**
BALY	**Balya**	**0.70**	**238**	*i* P	**Pg**	**Pg**	**21 26 50.2**	**-0.8**
BALY				*i* S	**Sg**	**Sg**	**21 26 59.7**	**-0.3**
BALY	**Balya**	**0.70**	**238**	*i* P	**Pg**	**Pg**	**21 26 50.2**	**-0.8**
BALY				*i* S	**Sg**	**Sg**	**21 26 59.7**	**-0.4**
YLV	**Yalova**	**0.88**	**59**	*e*PG	**Pg**	**Pg**	**21 26 54.2**	**-0.3**
YLV	**Yalova**	**0.88**	**59**	*e*Pg	**Pg**	**Pg**	**21 26 54.2**	**-0.3**
ELBA	**Catalca**	**1.03**	**2**	*i* P	**Pg**	**Pg**	**21 26 57.0**	**-0.4**
ELBA				*i* S	**Sg**	**Sg**	**21 27 10.2**	**-0.6**
ELBA	**Catalca**	**1.03**	**2**	*i* P	**Pg**	**Pg**	**21 26 57.0**	**-0.4**
ELBA				*i* S	**Sg**	**Sg**	**21 27 10.2**	**-0.6**
DEMI	**Demirci**	**1.10**	**167**	*i* P	**Pg**	**Pg**	**21 26 58.7**	**0.0**
DEMI				*i* S	**Sg**	**Sg**	**21 27 13.2**	**+0.2**
DEMI	**Demirci**	**1.10**	**167**	*i* P	**Pg**	**Pg**	**21 26 58.7**	**0.0**
DEMI				*i* S	**Sg**	**Sg**	**21 27 13.2**	**+0.3**
CTKS	**Kestanelik-??a**	**1.12**	**5**	*e*PN	**Pg**	**Pg**	**21 26 58.3**	**-0.9**
CTKS	**Kestanelik-??a**	**1.12**	**5**	*e*Pn	**Pg**	**Pg**	**21 26 58.3**	**-0.9**
GDZ	**Gediz**	**1.33**	**140**	*i* P	**Pn**	**Pn**	**21 27 03.1**	**+0.4**
GDZ				*i* S	**Sn**	**Sn**	**21 27 19.9**	**-0.8**
GDZ	**Gediz**	**1.33**	**140**	*i* P	**Pn**	**Pn**	**21 27 03.1**	**+0.4**
GDZ				*i* S	**Sn**	**Sn**	**21 27 19.9**	**-0.8**
KULA	**Kula-Manisa**	**1.61**	**172**	*e*PN	**Pn**	**Pn**	**21 27 07.3**	**+0.7**
KULA	**Kula-Manisa**	**1.61**	**172**	*e*Pn	**Pn**	**Pn**	**21 27 07.3**	**+0.7**
GULT	**Gulveren**	**1.66**	**78**	*e*PN	**Pn**	**Pn**	**21 27 08.0**	**+0.7**
GULT	**Gulveren**	**1.66**	**78**	*e*Pn	**Pn**	**Pn**	**21 27 08.0**	**+0.7**

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*NEIC **22** 22:32:55.4±1.9, 10.°78N×91.°78E, h26km±14km, mb4.1/5, Error ellipse: s-maj=6.8km s-min=5.5km az=86.0*
*IDC **22** 22:32:56.4±1.5, 10.°79N×91.°82E, h29km±5km, mb3.8/7, mb1 3.9/8, mb1mx3.5/23, mbtmp3.7/8, ML3.8/1, MS3.8/1, Ms1 3.8/1, ms1mx2.7/29, Error ellipse: s-maj=60.6km s-min=14.7km az=65.0*
ISC 22 22:32:54.2±3.6, 10.°75N±0.°05×91.°79E±0.°08, h16km±23km, h31km±1.2km; pP-P, n32, σ0.°61/32, mb4.1/11, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**10.32**	**41**	*e*Pn	**Pn**	**Pn**	**22 35 21.0**	**-0.6**
CMAR	**Chiang Mai Arr**	**10.32**	**41**	Pn	**Pn**	**Pn**	**22 35 21.8**	**+0.1**
0.2nm,0.3s,baz=235,slow=15,SNR=4.1								
CHTO	**Chiang Mai**	**10.58**	**40**	*e*Pn	**Pn**	**Pn**	**22 35 26.0**	**+0.8**
PALK	**Pallekele**	**11.49**	**253**	*e*Pn	**Pn**	**Pn**	**22 35 37.6**	**-0.1**
LSA	**Lhasa**	**18.86**	**358**	*e*P	**Pn**	**Pn**	**22 37 15.5**	**+1.2**
3.9nm,0.6s								
LSA				*e*S	**Sn**	**Sn**	**22 40 45.9**	**+0.8**
QIZ	**Qiongzhong**	**19.27**	**63**	*e*P	**Pn**	**Pn**	**22 37 18.1**	**-1.2**
COCO	**West Island**	**23.34**	**167**	*e*P	**P**	**P**	**22 38 02.4**	**+0.4**
ENH	**Enshi**	**25.46**	**38**	*e*P	**P**	**P**	**22 38 21.0**	**-0.5**
14nm,0.4s,mb4.8								
KBL	**Kabul**	**31.49**	**322**	*e*P	**P**	**P**	**22 39 15.1**	**-0.2**
MK31	**Makanchi Array**	**36.81**	**349**	*e*P	**P**	**P**	**22 40 01.4**	**+0.1**
MKAR	**Makanchi Array**	**36.81**	**349**	P	**P**	**P**	**22 40 01.8**	**+0.5**
1.0nm,0.7s,mb3.8,baz=168,slow=8.3,SNR=11								
MKAR				pP		pP	22 40 10.1	+3.7
0.8nm,0.5s,baz=165,slow=8.3,SNR=8.5								
MKAR	**Makanchi Array**	**36.81**	**349**	P	**P**	**P**	**22 40 01.8**	**+0.5**
MKAR				pP		pP	22 40 10.1	+3.7
SONM	**Songino Array**	**38.95**	**16**	P	**P**	**P**	**22 40 20.2**	**+0.9**
0.6nm,0.5s,mb3.6,baz=200,slow=8.1,SNR=4.8								
SONM				PcP		PcP	22 42 30.4	+0.7
0.1nm,0.3s,baz=194,slow=5.3,SNR=2.5								
ULN	**Ulaanbaatar**	**39.16**	**16**	*e*P	**P**	**P**	**22 40 20.8**	**-0.3**
4.6nm,1.7s,mb3.9								
KURK	**Kurchatov**	**41.29**	**347**	*e*P	**P**	**P**	**22 40 38.9**	**+0.2**
1.1nm,0.4s,mb3.8								
KSRS	**Korea Array**	**41.94**	**45**	LR	LR	LR	22 57 41.3	
comp=Z,121nm,20.8s,baz=215,slow=36								
TLY	**Talaya**	**41.94**	**11**	*e*P	**P**	**P**	**22 40 43.3**	**-0.7**
MBWA	**Marble Bar**	**41.94**	**139**	*e*P	**P**	**P**	**22 40 44.8**	**+0.4**
ZALV	**Zalesovo Beam**	**43.44**	**354**	P	**P**	**P**	**22 40 56.0**	**-0.1**
0.9nm,0.5s,mb3.8,baz=172,slow=11,SNR=5.5								
ZALV				pP		pP	22 41 04.2	+3.0
0.9nm,0.4s,baz=165,slow=9.2,SNR=4.0								
FITZ	**Fitzroy Crossi**	**44.03**	**130**	P	**P**	**P**	**22 41 01.6**	**+0.3**
6.4nm,1.0s,mb4.3,baz=320,slow=15,SNR=7.3								
FITZ				pP		pP	22 41 10.1	+3.6
4.6nm,0.8s,baz=308,slow=16,SNR=2.4								
FITZ	**Fitzroy Crossi**	**44.03**	**130**	*e*P	**P**	**P**	**22 41 01.8**	**+0.4**
FITZ				pP		pP	22 41 10.1	+3.6
HIA	**Hailar**	**44.87**	**26**	*e*P	**P**	**P**	**22 41 08.0**	**+0.3**
MDJ	**Mudanjiang**	**46.82**	**37**	*e*P	**P**	**P**	**22 41 22.6**	**-0.6**
WRAB	**Tennant Creek**	**51.81**	**126**	*e*P	**P**	**P**	**22 42 02.0**	**+0.3**
2.5nm,0.5s,mb4.4								
ARU	**Arti**	**52.35**	**337**	*e*P	**P**	**P**	**22 42 04.6**	**-0.6**
ASAR	**Alice Springs**	**53.53**	**130**	P	**P**	**P**	**22 42 14.8**	**+0.4**
2.1nm,0.6s,mb4.3,baz=305,slow=6.8,SNR=18								
ASAR				pP		pP	22 42 24.6	+5.0
1.0nm,0.6s,baz=306,slow=7.2,SNR=3.8								
YSS	**Yuzh-Sakhalins**	**56.01**	**40**	P	**P**	**P**	**22 42 32.1**	**+0.1**
OBN	**Obninsk**	**61.72**	**328**	P	**P**	**P**	**22 43 10.5**	**-1.1**
STKA	**Stephens Creek**	**63.76**	**134**	P	**P**	**P**	**22 43 25.9**	**+0.4**
0.9nm,0.5s,mb4.1,baz=319,slow=8.8,SNR=3.1								
STKA	**Stephens Creek**	**63.76**	**134**	*e*P	**P**	**P**	**22 43 25.8**	**+0.3**
MCQ	**Macquarie Isla**	**85.88**	**147**	*e*P	**P**	**P**	**22 45 33.2**	**+0.2**
ILAR	**Eielson Array**	**92.95**	**22**	P	**P**	**P**	**22 46 05.0**	**-1.4**
0.3nm,0.6s,mb3.9,baz=298,slow=4.0,SNR=3.6								

IDC 22 22:36:24.9±3.3, 10.°72N×91.°68E, h0km, mb3.9/4, mb1 4.0/4, mb1mx3.5/21, mbtmp3.9/4, MS3.9/1, Ms1 3.9/1, ms1mx2.7/29, Error ellipse: s-maj=135.4km s-min=25.4km az=65.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**33.67**	**93**	LR	LR	LR	22 56 50.8	
comp=Z,198nm,18.1s,baz=242,slow=36								
MKAR	**Makanchi Array**	**36.82**	**349**	P	P	P	22 43 35.0	+0.4
1.1nm,0.8s,baz=168,slow=8.4,SNR=9.7								
SONM	**Songino Array**	**39.01**	**16**	P	P	P	22 43 53.5	+0.3
1.1nm,0.9s,baz=197,slow=8.5,SNR=5.2								
ZALV	**Zalesovo Beam**	**43.46**	**354**	P	P	P	22 44 28.9	-0.7
0.6nm,0.4s,baz=185,slow=8.7,SNR=5.4								
ASAR	**Alice Springs**	**53.59**	**130**	P	P	P	22 45 48.2	0.0
2.5nm,0.8s,baz=309,slow=7.4,SNR=16								

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*CSEM **22** 22:36:30.9±0.1, 41.°91N×2.°60E, h5km, ML4.4/42, Error ellipse: s-maj=2.5km s-min=1.5km az=139.0*
*INMG **22** 22:36:32.3±1.2, 41.°86N×2.°56E, h11km±2km, ML3.6, Error ellipse: s-maj=2.4km s-min=2.1km az=117.0*
*LDG **22** 22:36:32.8±0.1, 41.°88N×2.°59E, h4km, Md3.8/3, Ml4.3/45, Error ellipse: s-maj=1.7km s-min=1.0km az=135.0*
*MRB **22** 22:36:32.4, 41.°86N×2.°59E, h4km±12km, ML3.8/11, Error ellipse: s-maj=0.4km s-min=0.2km az=327.0*
*MDD **22** 22:36:32.3±0.2, 41.°86N×2.°61E, h6km±2km, mbLg4.0/44, Error ellipse: s-maj=2.2km s-min=1.4km az=127.0*
MDD EMS: IV INTENSIDAD MAXIMA.
*STR **22** 22:36:35.0±0.4, 42.°08N×2.°52E, h5km, Ml4.1, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*NEIC **22** 22:36:35.0, 42.°08N×2.°52E, h5km, ML4.3(LDG), ML4.1(STR), MN3.5(MDD), After STR.*
ISC 22 22:36:31.7±0.3, 41.°93N±0.°01×2.°57E±0.°01, h12km±1km, n573, σ1$23/909, 26C-17D, Spain

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CFON	**Fontmartina**	**0.20**	**210**	Pg	**Pg**	**Pg**	**22 36 35.4**	**-0.6**
CFON				Lg			22 36 38.0	
CFON	**Fontmartina**	**0.20**	**210**	Pg	**Pg**	**Pg**	**22 36 35.3**	**-0.7**
15μm,0.3s								
CFON				Lg			22 36 37.8	
32μm,0.1s,SNR=10								
CFON	**Fontmartina**	**0.20**	**210**	Pg	**Pg**	**Pg**	**22 36 35.3**	**-0.7**
15μm,0.3s								
CFON				Lg			22 36 37.8	
32μm,0.1s,SNR=10								
CFON	**Fontmartina**	**0.20**	**210**	P	**Pg**	**Pg**	**22 36 35.5**	**-0.5**
CFON				S	**Sg**	**Sg**	**22 36 37.9**	**-1.0**
32μm,0.1s								
CFON				Lg			22 36 38.0	
CCAS	**Cassa de la Se**	**0.26**	**101**	Pg	**Pg**	**Pg**	**22 36 36.9**	**-0.1**
CCAS				Lg			22 36 40.3	
5μm,0.2s								
CCAS	**Cassa de la Se**	**0.26**	**101**	Pg	**Pg**	**Pg**	**22 36 36.9**	**-0.1**
CCAS				Lg			22 36 40.3	
5μm,0.2s								
CCAS	**Cassa de la Se**	**0.26**	**101**	P	**Pg**	**Pg**	**22 36 37.0**	**0.0**
CCAS				S	**Sg**	**Sg**	**22 36 40.4**	**-0.2**
5μm,0.2s								
CBEU	**Beuda**	**0.33**	**14**	Pg	**Pg**	**Pg**	**22 36 40.0**	**+1.6**
CBEU				Lg			22 36 45.6	
10μm,0.2s								
CBEU	**Beuda**	**0.33**	**14**	Pg	**Pg**	**Pg**	**22 36 40.0**	**+1.6**
CBEU				Lg			22 36 45.6	
10μm,0.2s								
CBEU	**Beuda**	**0.33**	**14**	P	**Pg**	**Pg**	**22 36 40.1**	**+1.7**
CBEU				S	**Sg**	**Sg**	**22 36 45.6**	**+2.7**
10μm,0.2s								
CORI	**Orista**	**0.39**	**276**	Pg	**Pg**	**Pg**	**22 36 40.3**	**+0.9**
CORI				Lg			22 36 46.0	
6μm,0.3s								
CORI	**Orista**	**0.39**	**276**	Pg	**Pg**	**Pg**	**22 36 40.3**	**+0.9**
CORI				Lg			22 36 46.0	
6μm,0.3s								
CORI	**Orista**	**0.39**	**276**	P	**Pg**	**Pg**	**22 36 40.3**	**+0.9**
CORI				S	**Sg**	**Sg**	**22 36 46.0**	**+1.4**
6μm,0.3s								
CBRU	**Bruguera**	**0.46**	**321**	Pg	**Pg**	**Pg**	**22 36 42.3**	**+1.6**
CBRU				Lg			22 36 49.1	
2μm,0.3s								
CBRU	**Bruguera**	**0.46**	**321**	Pg	**Pg**	**Pg**	**22 36 42.3**	**+1.6**
CBRU				Lg			22 36 49.1	
2μm,0.3s								
CBRU	**Bruguera**	**0.46**	**321**	P	**Pg**	**Pg**	**22 36 42.3**	**+1.6**
CBRU				S	**Sg**	**Sg**	**22 36 49.2**	**+2.4**
3μm,0.3s								
EJON	**La Jonquera**	**0.57**	**25**	Pg	**Pg**	**Pg**	**22 36 44.1**	**+1.3**
EJON				Lg			22 36 52.7	
EJON	**La Jonquera**	**0.57**	**25**	⇑Pg	**Pg**	**Pg**	**22 36 44.1**	**+1.3**
22nm,0.1s,SNR=18								
EJON				Lg			22 36 52.7	
3μm,0.1s,SNR=5.0								
EJON	**La Jonquera**	**0.57**	**25**	⇑Pg	**Pg**	**Pg**	**22 36 44.1**	**+1.3**
22nm,0.1s,SNR=18								
EJON				Lg			22 36 52.7	
3μm,0.1s,SNR=5.0								
EJON	**La Jonquera**	**0.57**	**25**	Pg	**Pg**	**Pg**	**22 36 44.1**	**+1.3**
22nm,0.1s,SNR=18								
CPAL	**Palau Saverder**	**0.58**	**49**	Pg	**Pg**	**Pg**	**22 36 43.9**	**+0.8**
CPAL				Lg			22 36 52.0	
1μm,0.1s								
CPAL	**Palau Saverder**	**0.58**	**49**	Pg	**Pg**	**Pg**	**22 36 43.9**	**+0.8**
CPAL				Lg			22 36 52.0	
1μm,0.1s								
CPAL	**Palau Saverder**	**0.58**	**49**	P	**Pg**	**Pg**	**22 36 43.9**	**+0.8**
CPAL				S	**Sg**	**Sg**	**22 36 52.1**	**+1.4**
1μm,0.1s								
VALF	**Valcebollere**	**0.62**	**319**	Pg	**Pg**	**Pg**	**22 36 45.1**	**+1.3**
VALF	**Valcebollere**	**0.62**	**319**	Pg	**Pg**	**Pg**	**22 36 45.1**	**+1.3**
VALF				Lg			22 36 54.5	
VALF	**Valcebollere**	**0.62**	**319**	Pg	**Pg**	**Pg**	**22 36 45.1**	**+1.3**
VALF				Lg			22 36 54.5	
VALF	**Valcebollere**	**0.62**	**319**	Pg	**Pg**	**Pg**	**22 36 45.1**	**+1.3**
FILF	**Fillols**	**0.63**	**359**	Pg	**Pg**	**Pg**	**22 36 45.6**	**+1.7**
FILF	**Fillols**	**0.63**	**359**	Pg	**Pg**	**Pg**	**22 36 45.6**	**+1.7**
FILF				Lg			22 36 54.5	
FILF	**Fillols**	**0.63**	**359**	Pg	**

	2µm,0.3s					
LRDF	Laroque-de-Fa	1.00 359	Pg	Pg	22 36 52.2	+1.1
LRDF			Sg	Sg	22 37 03.5	-0.7
LRDF	Laroque-de-Fa	1.00 359	Pg	Pg	22 36 52.2	+1.1
LRDF			Lg		22 37 06.6	
LRDF	Laroque-de-Fa	1.00 359	Pg	Pg	22 36 52.2	+1.1
LRDF			Lg		22 37 06.6	
LRDF	Laroque-de-Fa	1.00 359	Pg	Pg	22 36 52.2	+1.1
LRDF			Sg	Sg	22 37 03.5	-0.7
LPEF	Le Peyrat	1.13 334	Pg	Pg	22 36 54.9	+1.5
LPEF			Lg		22 37 11.2	
LPEF	Le Peyrat	1.13 334	Pg	Pg	22 36 54.9	+1.5
LPEF			Lg		22 37 11.2	
CSOR	Sort	1.16 293	Pg	Pg	22 36 54.5	+0.6
CSOR			Lg		22 37 10.8	
CSOR	Sort	1.16 293	⇑Pg	Pg	22 36 54.5	+0.6
	360nm,0.2s,SNR=18					
CSOR			Lg		22 37 11.3	
	2µm,0.2s,SNR=5.0					
CSOR	Sort	1.16 293	⇑Pg	Pg	22 36 54.5	+0.6
	360nm,0.2s,SNR=18					
CSOR			Lg		22 37 11.3	
	2µm,0.2s,SNR=5.0					
CSOR	Sort	1.16 293	Pg	Pg	22 36 54.5	+0.6
	360nm,0.2s,SNR=18					
CSOR			Lg		22 37 10.8	
CSOR			S	Sb	22 37 11.2	+2.7
	3µm,0.3s					
CEST	Ésterri de Car	1.18 305	Pg	Pg	22 36 55.1	+0.7
CEST			Lg		22 37 12.0	
	2µm,0.2s					
CEST	Ésterri de Car	1.18 305	Pg	Pg	22 36 55.1	+0.7
CEST			Lg		22 37 12.0	
	2µm,0.2s					
CEST	Ésterri de Car	1.18 305	P	Pn	22 36 55.2	+1.2
CEST			S	Sb	22 37 12.1	+2.8
	2µm,0.2s					
CGAR	Garraf	1.25 240	Pg	Pg	22 36 46.7	-9.0
CGAR			Lg		22 36 57.2	
	1µm,0.4s					
CGAR	Garraf	1.25 240	Pg	Pg	22 36 46.7	-9.0
CGAR			Lg		22 36 57.2	
	1µm,0.4s					
EPOB	Poblet	1.26 243	Pg	Pg	22 36 55.3	-0.6
EPOB			Lg		22 37 11.4	
EPOB	Poblet	1.26 243	⇑Pg	Pg	22 36 55.3	-0.6
	728nm,0.3s,SNR=18					
EPOB			Lg		22 37 12.1	
	751nm,0.2s,SNR=25					
EPOB	Poblet	1.26 243	⇑Pg	Pg	22 36 55.3	-0.6
	728nm,0.3s,SNR=18					
EPOB			Lg		22 37 12.1	
	751nm,0.2s,SNR=25					
EPOB	Poblet	1.26 243	Pg	Pg	22 36 55.3	-0.6
	728nm,0.3s,SNR=18					
EPOB			Lg		22 37 11.4	
CTRE	Tremp	1.39 287	Pg	Pg	22 36 58.3	-0.1
CTRE			Lg		22 37 18.0	
	2µm,0.4s					
CTRE	Tremp	1.39 287	Pg	Pg	22 36 58.3	-0.1
CTRE			Lg		22 37 18.0	
	2µm,0.4s					
CTRE	Tremp	1.39 287	P	Pg	22 36 58.3	-0.1
CTRE			S	Sn	22 37 18.0	+2.8
	2µm,0.4s					
MTLF	Montolieu	1.43 350	*e*Pg	Pg	22 36 59.7	+0.5
MTLF			*e*Sg	Sg	22 37 19.2	+1.4
	2µm,0.3s					
MTLF	Montolieu	1.43 350	*e*Pn	Pn	22 36 58.5	+1.0
MTLF			*e*Pg	Pg	22 36 59.7	+0.5
MTLF			*e*Sg	Sg	22 37 19.2	+1.4
MTLF	Montolieu	1.43 350	Pn	Pn	22 36 58.5	+1.0
MTLF			Pg	Pg	22 36 59.7	+0.5
MTLF			Lg		22 37 19.2	
	937nm,0.3s					
MTLF	Montolieu	1.43 350	Pn	Pn	22 36 58.5	+1.0
MTLF			Pg	Pg	22 36 59.7	+0.5
MTLF			Lg		22 37 19.2	
	937nm,0.3s					
MTLF	Montolieu	1.43 350	*e*Sg	Sg	22 37 19.2	+1.4
	937nm,0.3s					
MLS	Moulis	1.50 314	Pg	Pg	22 37 01.3	+0.9
MLS			Sg	Sg	22 37 20.0	+0.1
MLS	Moulis	1.50 314	Pg	Pg	22 37 01.3	+0.9
MLS			Lg		22 37 20.0	
MLS	Moulis	1.50 314	Pg	Pg	22 37 01.3	+0.9
MLS			Lg		22 37 20.0	
MLS	Moulis	1.50 314	Pg	Pg	22 37 01.3	+0.9
MLS			Sg	Sg	22 37 20.0	+0.1
MELF	Melles	1.64 306	Pg	Pg	22 37 03.4	+0.3
MELF	Melles	1.64 306	Pg	Pg	22 37 03.4	+0.3
MELF	Melles	1.64 306	Pg	Pg	22 37 03.4	+0.3
MELF	Melles	1.64 306	Pg	Pg	22 37 03.4	+0.3
RESF	Ens	1.87 299	Pg	Pg	22 37 07.6	0.0
RESF	Ens	1.87 299	Pg	Pg	22 37 07.6	0.0
RESF	Ens	1.87 299	Pg	Pg	22 37 07.6	0.0
RESF	Ens	1.87 299	Pg	Pg	22 37 07.6	0.0
ERTA	Horta de San J	1.94 241	Pg	Pg	22 37 05.2	-3.8
ERTA			Lg		22 37 33.2	
ERTA	Horta de San J	1.94 241	Pn	Pn	22 37 05.2	+0.7
	308nm,0.4s,SNR=158					
ERTA			Pg	Pg	22 37 07.6	-1.4
	308nm,0.4s,SNR=37					
ERTA			Lg		22 37 33.0	
	1µm,0.5s,SNR=5.0					
ERTA	Horta de San J	1.94 241	Pn	Pn	22 37 05.2	+0.7
	308nm,0.4s,SNR=158					
ERTA			Pg	Pg	22 37 07.6	-1.4
	308nm,0.4s,SNR=37					
ERTA			Lg		22 37 33.0	
	1µm,0.5s,SNR=5.0					
ERTA	Horta de San J	1.94 241	Pn	Pn	22 37 05.2	+0.7
	308nm,0.4s,SNR=158					
ERTA	Horta de San J	1.94 241	Pg	Pg	22 37 07.6	-1.4
	308nm,0.4s,SNR=37					
ERTA			Lg		22 37 33.2	
EBIE	Bielsa	1.95 294	Pg	Pg	22 37 06.9	-2.2
EBIE			Lg		22 37 34.6	
EBIE	Bielsa	1.95 294	⇓Pn	Pn	22 37 06.9	+2.3
	298nm,0.5s,SNR=18					
EBIE			Pg	Pg	22 37 08.9	-0.2
	184nm,0.3s,SNR=14					
EBIE			Lg		22 37 34.6	
	2µm,0.4s,SNR=11					
EBIE	Bielsa	1.95 294	⇓Pn	Pn	22 37 06.9	+2.3
	298nm,0.5s,SNR=18					
EBIE			Pg	Pg	22 37 08.9	-0.2
	184nm,0.3s,SNR=14					
EBIE			Lg		22 37 34.6	
	2µm,0.4s,SNR=11					
EBIE	Bielsa	1.95 294	Pn	Pg	22 37 06.9	-2.2
	298nm,0.5s,SNR=18					
EPF	Esparros	1.98 304	*e*Pg	Pg	22 37 09.2	-0.5
EPF			*e*Sg	Sg	22 37 35.5	+0.1
	2µm,0.3s					
EPF	Esparros	1.98 304	*e*Pn	Pn	22 37 06.2	+1.2
EPF			*e*Pg	Pg	22 37 09.2	-0.5
EPF			*e*Sg	Sg	22 37 35.5	+0.1
EPF	Esparros	1.98 304	Pn	Pn	22 37 06.2	+1.2
EPF			Pg	Pg	22 37 09.2	-0.5
EPF			Lg		22 37 35.5	
	1µm,0.3s					
EPF	Esparros	1.98 304	Pn	Pn	22 37 06.2	+1.2
EPF			Pg	Pg	22 37 09.2	-0.5
EPF			Lg		22 37 35.5	
	1µm,0.3s					
EPF	Esparros	1.98 304	*e*Pn	Pn	22 37 06.2	+1.2
EPF	Esparros	1.98 304	*e*Pg	Pg	22 37 09.2	-0.5
EPF			*e*Sg	Sg	22 37 35.5	+0.1
	1µm,0.3s					
VIEF	Viey	2.11 298	Pn	Pn	22 37 09.4	+2.6
VIEF			Sg	Sg	22 37 39.1	-0.4
VIEF	Viey	2.11 298	Pn	Pn	22 37 09.4	+2.6
VIEF			Lg		22 37 39.1	
VIEF	Viey	2.11 298	Pn	Pn	22 37 09.4	+2.6
VIEF			Lg		22 37 39.1	
VIEF	Viey	2.11 298	Pn	Pn	22 37 09.4	+2.6
VIEF			Sg	Sg	22 37 39.1	-0.4
LABF	Labassere	2.15 302	Pn	Pn	22 37 10.5	+3.1
LABF			Sg	Sg	22 37 41.7	+0.7
LABF	Labassere	2.15 302	Pn	Pn	22 37 10.5	+3.1
LABF			Lg		22 37 41.7	
LABF	Labassere	2.15 302	Pn	Pn	22 37 10.5	+3.1
LABF			Lg		22 37 41.7	
LABF	Labassere	2.15 302	Pn	Pn	22 37 10.5	+3.1
LABF			Sg	Sg	22 37 41.7	+0.7
ETOS	Mallorca	2.17 175	Pn	Pn	22 37 05.9	-1.7
ETOS			Sn	Sn	22 37 28.6	-5.8
ETOS	Mallorca	2.17 175	Pn	Pn	22 37 05.9	-1.8
	31nm,0.3s,SNR=64					
ETOS			Sn	Sn	22 37 29.6	-4.9
	56nm,0.3s,SNR=9.9					
ETOS	Mallorca	2.17 175	Pn	Pn	22 37 05.9	-1.8
	31nm,0.3s,SNR=64					
ETOS			Sn	Sn	22 37 29.6	-4.9
	56nm,0.3s,SNR=9.9					
ETOS	Mallorca	2.17 175	Pn	Pn	22 37 05.9	-1.7
	31nm,0.3s,SNR=64					
ESAC	San Caprasio	2.28 266	Pg	Pg	22 37 10.5	-4.9
ESAC			Lg		22 37 42.8	
ESAC	San Caprasio	2.28 266	Pn	Pn	22 37 10.3	+1.2
	928nm,0.3s,SNR=79					
ESAC			Pg	Pg	22 37 13.8	-1.6
	720nm,0.3s,SNR=24					
ESAC			Lg		22 37 44.3	
	3µm,0.3s					
ESAC	San Caprasio	2.28 266	Pn	Pn	22 37 10.3	+1.2
	928nm,0.3s,SNR=79					
ESAC			Pg	Pg	22 37 13.8	-1.6
	720nm,0.3s,SNR=24					
ESAC			Lg		22 37 44.3	
	3µm,0.3s					
ESAC	San Caprasio	2.28 266	Pn	Pn	22 37 10.3	+1.2
	928nm,0.3s,SNR=79					
ESAC	San Caprasio	2.28 266	Pg	Pg	22 37 13.8	-1.6
	720nm,0.3s,SNR=24					
ESAC			Lg		22 37 42.8	
LASF	Ste Croix	2.34 23	*e*Pn	Pn	22 37 10.1	+0.1
LASF			*e*Sn	Sn	22 37 39.3	+0.6
LASF			*e*Sg	Sg	22 37 47.6	+0.7
	422nm,0.3s					
LASF	Ste Croix	2.34 23	Pn	Pn	22 37 10.1	+0.1
LASF			Sn	Sn	22 37 39.3	+0.6
LASF			Lg		22 37 47.6	
	211nm,0.3s					
LASF	Ste Croix	2.34 23	Pn	Pn	22 37 10.1	+0.1
LASF			Sn	Sn	22 37 39.3	+0.6
LASF			Lg		22 37 47.6	
	211nm,0.3s					
LASF	Ste Croix	2.34 23	*e*Pn	Pn	22 37 10.1	+0.1
LASF			*e*Sn	Sn	22 37 39.3	+0.6
LASF			*e*Sg	Sg	22 37 47.6	+0.7
	211nm,0.3s					
REYF	Montagne du Re	2.47 298	Pn	Pn	22 37 14.8	+3.1
REYF			Sg	Sg	22 37 50.5	-0.4
REYF	Montagne du Re	2.47 298	Pn	Pn	22 37 14.8	+3.1
REYF			Lg		22 37 50.5	
REYF	Montagne du Re	2.47 298	Pn	Pn	22 37 14.8	+3.1
REYF			Lg		22 37 50.5	
REYF	Montagne du Re	2.47 298	Pn	Pn	22 37 14.8	+3.1
REYF			Sg	Sg	22 37 50.5	-0.4
FDAF	Les Forges d'A	2.49 292	Pn	Pn	22 37 14.2	+2.2
FDAF			Lg		22 37 48.2	
FDAF	Les Forges d'A	2.49 292	Pn	Pn	22 37 14.2	+2.2
FDAF			Lg		22 37 48.2	
ETSF	Etsaut	2.51 294	*e*Pg	Pg	22 37 18.8	-1.0
ETSF			*e*Sg	Sg	22 37 51.2	-1.1
	1µm,0.3s					
ETSF	Etsaut	2.51 294	*e*Pn	Pn	22 37 12.6	+0.3
ETSF			*e*Pg	Pg	22 37 18.8	-1.0
ETSF			*e*Sg	Sg	22 37 51.2	-1.1
ETSF	Etsaut	2.51 294	Pn	Pn	22 37 12.6	+0.3
ETSF			Pg	Pg	22 37 18.8	-1.0
ETSF			Lg		22 37 51.2	
	582nm,0.3s					
ETSF	Etsaut	2.51 294	Pn	Pn	22 37 12.6	+0.3
ETSF			Pg	Pg	22 37 18.8	-1.0
ETSF			Lg		22 37 51.2	
	582nm,0.3s					
ETSF	Etsaut	2.51 294	*e*Pn	Pn	22 37 12.6	+0.3
ETSF	Etsaut	2.51 294	*e*Pg	Pg	22 37 18.8	-1.0
ETSF			*e*Sg	Sg	22 37 51.2	-1.1
	582nm,0.3s					
EMOS	Mosqueruela	2.78 237	Pg	Pg	22 37 16.7	-8.2
EMOS			Lg		22 38 01.5	
EMOS	Mosqueruela	2.78 237	Pn	Pn	22 37 16.7	+0.7
	32nm,0.5s,SNR=48					
EMOS			Pg	Pg	22 37 23.2	-1.8
	208nm,0.6s,SNR=37					
EMOS			Lg		22 38 01.5	
	888nm,0.9s					
EMOS	Mosqueruela	2.78 237	Pn	Pn	22 37 16.7	+0.7
	32nm,0.5s,SNR=48					
EMOS			Pg	Pg	22 37 23.2	-1.8
	208nm,0.6s,SNR=37					
EMOS			Lg		22 38 01.5	
	888nm,0.9s					
EMOS	Mosqueruela	2.78 237	Pn	Pn	22 37 16.7	+0.7
	32nm,0.5s,SNR=48					
LARF	Larrau	2.85 294	Pn	Pn	22 37 19.5	+2.5
LARF	Larrau	2.85 294	Pn	Pn	22 37 19.5	+2.5
LARF	Larrau	2.85 294	Pn	Pn	22 37 19.5	+2.5
LARF	Larrau	2.85 294	Pn	Pn	22 37 19.5	+2.5
ORDF	Ordiarp	2.89 297	Pn	Pn	22 37 20.0	+2.5
ORDF			Sg	Sg	22 38 04.1	-0.3
ORDF	Ordiarp	2.89 297	Pn	Pn	22 37 20.0	+2.5
ORDF			Lg		22 38 04.1	
ORDF	Ordiarp	2.89 297	Pn	Pn	22 37 20.0	+2.5
ORDF			Lg		22 38 04.1	
ORDF	Ordiarp	2.89 297	Pn	Pn	22 37 20.0	+2.5
ORDF			Sg	Sg	22 38 04.1	-0.3
SMRF	Simiane la Rot	3.01 46	*e*Pg	Pg	22 37 28.8	-0.5
SMRF			*e*Sn	Sn	22 37 54.9	-0.2
SMRF			*e*Sg	Sg	22 38 08.6	+0.3
	462nm,0.6s					
SMRF	Simiane la Rot	3.01 46	*e*Pn	Pn	22 37 19.6	+0.5
SMRF			*e*Pg	Pg	22 37 28.8	-0.5
SMRF			*e*Sn	Sn	22 37 54.9	-0.2
SMRF			*e*Sg	Sg	22 38 08.6	+0.3
SMRF	Simiane la Rot	3.01 46	Pn	Pn	22 37 19.6	+0.5
SMRF			Pg	Pg	22 37 28.8	-0.5
SMRF			Sn	Sn	22 37 54.9	-0.2
SMRF			Lg		22 38 08.6	
	462nm,0.6s					
SMRF	Simiane la Rot	3.01 46	Pn	Pn	22 37 19.6	+0.5
SMRF			Pg	Pg	22 37 28.8	-0.5
SMRF			Sn	Sn	22 37 54.9	-0.2
SMRF			Lg		22 38 08.6	
	462nm,0.6s					
SMRF	Simiane la Rot	3.01 46	*e*Pn	Pn	22 37 19.6	+0.5
SMRF	Simiane la Rot	3.01 46	*e*Pg	Pg	22 37 28.8	-0.5
SMRF			*e*Sn	Sn	22 37 54.9	-0.2
SMRF			*e*Sg	Sg	22 38 08.6	+0.3
	231nm,0.6s					
CAF	Calviac	3.01 353	*e*Pg	Pg	22 37 29.4	0.0
CAF			*e*Sg	Sg	22 38 08.8	+0.3
	664nm,0.3s					
CAF	Calviac	3.01 353	*e*Pn	Pn	22 37 19.7	+0.5
CAF			*e*Pg	Pg	22 37 29.4	0.0
CAF			*e*Sg	Sg	22 38 08.8	+0.3
CAF	Calviac	3.01 353	Pn	Pn	22 37 19.7	+0.5
CAF			Pg	Pg	22 37 29.4	0.0
CAF			Lg		22 38 08.8	
	332nm,0.3s					
CAF	Calviac	3.01 353	Pn	Pn	22 37 19.7	+0.5
CAF			Pg	Pg	22 37 29.4	0.0
CAF			Lg		22 38 08.8	
	332nm,0.3s					
CAF	Calviac	3.01 353	*e*Pn	Pn	22 37 19.7	+0.5
CAF	Calviac	3.01 353	*e*Pg	Pg	22 37 29.4	0.0
CAF			*e*Sg	Sg	22 38 08.8	+0.3
	332nm,0.3s					
EORO	Oroz-Betelu	3.03 290	Pn	Pn	22 37 21.4	+2.0
	4.4nm,0.1s,SNR=7.9					
EORO			Pg	Pg	22 37 28.3	-1.4
	18nm,0.2s,SNR=7.9					
EORO			Lg		22 38 09.3	
	634nm,0.3s,SNR=7.9					
EORO	Oroz-Betelu	3.03 290	Pn	Pn	22 37 21.4	+2.0
	4.4nm,0.1s,SNR=7.9					
EORO			Pg	Pg	22 37 28.3	-1.4
	18nm,0.2s,SNR=7.9					
EORO			Lg		22 38 09.3	
	634nm,0.3s,SNR=7.9					
EORO	Oroz-Betelu	3.03 290	Pn	Pn	22 37 21.5	+2.1
	4.4nm,0.1s,SNR=7.9					
IPRE	Itoiz	3.04 288	Pg	Pg	22 37 29.9	0.0
	79nm,0.3s,SNR=5.1					
IPRE			Lg		22 38 09.4	
	662nm,0.4s,SNR=12					
IPRE	Itoiz	3.04 288	Pg	Pg	22 37 29.9	0.0
	79nm,0.3s,SNR=5.1					
IPRE			Lg		22 38 09.4	
	662nm,0.4s,SNR=12					
IPRE	Itoiz	3.04 288	Pg	Pg	22 37 29.9	0.0
	79nm,0.3s,SNR=5.1					
SJPF	Ste Jean	3.04 294	*e*Pg	Pg	22 37 28.7	-1.3
SJPF			*e*Sg	Sg	22 38 08.1	-1.3
	699nm,0.3s					
SJPF	Ste Jean	3.04 294	*e*Pn	Pn	22 37 20.0	+0.4
SJPF			*e*Pg	Pg	22 37 28.7	-1.3
SJPF			*e*Sg	Sg	22 38 08.1	-1.3
SJPF	Ste Jean	3.04 294	Pn	Pn	22 37 20.0	+0.4
SJPF			Pg	Pg	22 37 28.7	-1.3
SJPF			Lg		22 38 08.1	
	350nm,0.3s					
SJPF	Ste Jean	3.04 294	Pn	Pn	22 37 20.0	+0.4
SJPF			Pg	Pg	22 37 28.7	-1.3
SJPF			Lg		22 38 08.1	
	350nm,0.3s					
SJPF	Ste Jean	3.04 294	*e*Pn	Pn	22 37 20.0	+0.4
SJPF			*e*Sg	Sg	22 38 08.1	-1.3
	350nm,0.3s					
EIBI	Ibiza	3.05 198	Pg	Pn	22 37 18.3	-1.4
EIBI			Lg		22 37 56.7	
EIBI	Ibiza	3.05 198	⇓Pn	Pn	22 37 18.3	-1.4
	24nm,0.5s,SNR=18					
EIBI			Sn	Sn	22 37 52.2	-3.9
	69nm,0.7s,SNR=4.6					
EIBI	Ibiza	3.05 198	⇓Pn	Pn	22 37 18.3	-1.4
	24nm,0.5s,SNR=18					
EIBI			Sn	Sn	22 37 52.2	-3.9
	69nm,0.7s,SNR=4.6					
EIBI	Ibiza	3.05 198	Pn	Pn	22 37 18.3	-1.4
	24nm,0.5s,SNR=18					
IZUN	Zunzarren	3.12 289	Pn	Pn	22 37 22.9	+2.2
	4.1nm,0.2s,SNR=7.9					
IZUN			Pg	Pg	22 37 30.8	-0.7
	80nm,0.5s,SNR=7.9					
IZUN			Lg		22 38 10.9	
	633nm,0.5s,SNR=7.9					
IZUN	Zunzarren	3.12 289	Pn	Pn	22 37 22.9	+2.2
	4.1nm,0.2s,SNR=7.9					
IZUN			Pg	Pg	22 37 30.8	-0.7
	80nm,0.5s,SNR=7.9					
IZUN			Lg		22 38 10.9	
	633nm,0.5s,SNR=7.9					
IZUN	Zunzarren	3.12 289	Pn	Pn	22 37 22.9	+2.2
	4.1nm,0.2s,SNR=7.9					
OSSF	Osses	3.12 296	Pn	Pn	22 37 22.8	+2.1
OSSF	Osses	3.12 296	Pn	Pn	22 37 22.8	+2.1
OSSF	Osses	3.12 296	Pn	Pn	22 37 22.8	+2.1
OSSF	Osses	3.12 296	Pn	Pn	22 37 22.8	+2.1
IUNC	Unciti	3.12 287	Pn	Pn	22 37 22.7	+1.9
	5.4nm,0.2s,SNR=15					
IUNC			Pg	Pg	22 37 31.1	-0.5
	23nm,0.2s,SNR=21					
IUNC			Lg		22 38 12.2	
	1µm,0.4s,SNR=15					
IUNC	Unciti	3.12 287	Pn	Pn	22 37 22.7	+1.9
	5.4nm,0.2s,SNR=15					
IUNC			Pg	Pg	22 37 31.1	-0.5
	23nm,0.2s,SNR=21					
IUNC			Lg		22 38 12.2	
	1µm,0.4s,SNR=15					
IUNC	Unciti	3.12 287	Pn	Pn	22 37 22.7	+1.9
	5.4nm,0.2s,SNR=15					
EARA	Aranguren	3.19 287	Pn	Pn	22 37 23.5	+1.9
	288nm,0.7s,SNR=43					
EARA			Pg	Pg	22 37 32.4	-0.4
	27nm,0.2s,SNR=12					
EARA			Lg		22 38 15.6	
	988nm,0.5s,SNR=11					
EARA	Aranguren	3.19 287	Pn	Pn	22 37 23.5	+1.9
	288nm,0.7s,SNR=43					
EARA			Pg	Pg	22 37 32.4	-0.4
	27nm,0.2s,SNR=12					
EARA			Lg		22 38 15.6	
	988nm,0.5s,SNR=11					
EARA	Aranguren	3.19 287	Pn	Pn	22 37 23.5	+1.9
	288nm,0.7s,SNR=43					
IUSE	Utxeti	3.21 290	Pn	Pn	22 37 24.1	+2.2
	1.9nm,0.1s,SNR=9.7					
IUSE			Pg	Pg	22 37 31.1	-2.1
	64nm,0.4s,SNR=14					
IUSE			Lg		22 38 15.4	
	609nm,0.4s,SNR=11					
IUSE	Utxeti	3.21 290	Pn	Pn	22 37 24.1	+2.2
	1.9nm,0.1s,SNR=9.7					
IUSE			Pg	Pg	22 37 31.1	-2.1
	64nm,0.4s,SNR=14					
IUSE			Lg		22 38 15.4	
	609nm,0.4s,SNR=11					
IUSE	Utxeti	3.21 290	Pn	Pn	22 37 24.1	+2.2
	1.9nm,0.1s,SNR=9.7					
LMR	La Mourre	3.23 63	*e*Pn	Pn	22 37 21.6	-0.6
LMR			*e*Sn	Sn	22 37 59.1	-1.4
	104nm,0.3s					
LMR	La Mourre	3.23 63	Pn	Pn	22 37 21.6	-0.6
LMR			Sn	Sn	22 37 59.1	-1.4
	52nm,0.3s					
LMR	La Mourre	3.23 63	Pn	Pn	22 37 21.6	-0.6
LMR			Sn	Sn	22 37 59.1	-1.4
	52nm,0.3s					
LMR	La Mourre	3.23 63	*e*Pn	Pn	22 37 21.6	-0.6
LMR			*e*Sn	Sn	22 37 59.1	-1.4
	52nm,0.3s					
ELIZ	Elizondo	3.27 293	Pg	Pn	22 37 25.2	+2.4
ELIZ			Lg		22 38 20.2	
ELIZ	Elizondo	3.27 293	⇓Pn	Pn	22 37 25.2	+2.4
	81nm,0.2s,SNR=18					
ELIZ			Pg	Pg	22 37 33.8	-0.5
	93nm,0.3s,SNR=13					
ELIZ			Lg		22 38 16.9	
	409nm,0.3s					
ELIZ	Elizondo	3.27 293	⇓Pn	Pn	22 37 25.2	+2.4
	81nm,0.2s,SNR=18					
ELIZ			Pg	Pg	22 37 33.8	-0.5
	93nm,0.3s,SNR=13					
ELIZ			Lg		22 38 16.9	
	409nm,0.3s					
ELIZ	Elizondo	3.27 293	Pn	Pn	22 37 25.2	+2.5
	81nm,0.2s,SNR=18					
ELIZ	Elizondo	3.27 293	Pg	Pg	22 37 33.8	-0.5
	93nm,0.3s,SNR=13					
ELIZ			Lg		22 38 20.2	
EALK	Alkurruntz	3.27 294	P	Pn	22 37 25.3	+2.5
EALK			Lg		22 38 21.9	
EALK	Alkurruntz	3.27 294	⇑Pn	Pn	22 37 25.3	+2.5
	55nm,0.3s,SNR=18					
EALK			Pg	Pg	22 37 33.4	-1.0
	160nm,0.5s,SNR=19					
EALK			Sn	Sn	22 38 03.8	+2.1
	105nm,0.4s,SNR=5.8					
EALK			Lg		22 38 16.8	
	2µm,0.4s,SNR=7.5					
EALK	Alkurruntz	3.27 294	⇑Pn	Pn	22 37 25.3	+2.5
	55nm,0.3s,SNR=18					
EALK			Pg	Pg	22 37 33.4	-1.0
	160nm,0.5s,SNR=19					
EALK			Sn	Sn	22 38 03.8	+2.1
	105nm,0.4s,SNR=5.8					
EALK			Lg		22 38 16.8	
	2µm,0.4s,SNR=7.5					
EALK	Alkurruntz	3.27 294	Pn	Pn	22 37 25.3	+2.5
	55nm,0.3s,SNR=18					
LFF	La Frestale	3.29 337	*e*Pg	Pg	22 37 34.3	-0.4
LFF			*e*Sg	Sg	22 38 18.5	+1.3
	952nm,0.4s					
LFF	La Frestale	3.29 337	*e*Pn	Pn	22 37 23.2	+0.2
LFF			*e*Pg	Pg	22 37 34.3	-0.4
LFF			*e*Sg	Sg	22 38 18.5	+1.3
LFF	La Frestale	3.29 337	Pn	Pn	22 37 23.2	+0.2
LFF			Pg

VIVF	**Saint-Julien-l**	**3.30**	**27**	*e*Pg	**Pg**	**22 37 34.0**	**-0.9**
VIVF				*e*Sg	**Sg**	**22 38 18.3**	**+0.6**
	146nm,0.2s						
VIVF	**Saint-Julien-l**	**3.30**	**27**	*e*Pn	**Pn**	**22 37 23.4**	**+0.2**
VIVF				*e*Pg	**Pg**	**22 37 34.0**	**-0.9**
VIVF				*e*Sg	**Sg**	**22 38 18.3**	**+0.6**
VIVF	**Saint-Julien-l**	**3.30**	**27**	Pn	**Pn**	**22 37 23.4**	**+0.2**
VIVF				Pg	**Pg**	**22 37 34.0**	**-0.9**
VIVF				Lg		22 38 18.3	
	73nm,0.2s						
VIVF	**Saint-Julien-l**	**3.30**	**27**	Pn	**Pn**	**22 37 23.4**	**+0.2**
VIVF				Pg	**Pg**	**22 37 34.0**	**-0.9**
VIVF				Lg		22 38 18.3	
	73nm,0.2s						
VIVF	**Saint-Julien-l**	**3.30**	**27**	*e*Pn	**Pn**	**22 37 23.4**	**+0.2**
VIVF	**Saint-Julien-l**	**3.30**	**27**	*e*Pg	**Pg**	**22 37 34.0**	**-0.9**
VIVF				*e*Sg	**Sg**	**22 38 18.3**	**+0.6**
	73nm,0.2s						
OCF	**Saint Nazaire**	**3.31**	**36**	Pn	**Pn**	**22 37 24.8**	**+1.5**
OCF	**Saint Nazaire**	**3.31**	**36**	Pn	**Pn**	**22 37 24.8**	**+1.5**
OG26	**St.-Nazaire-De**	**3.31**	**36**	Pn	**Pn**	**22 37 24.8**	**+1.5**
OG26	**St.-Nazaire-De**	**3.31**	**36**	Pn	**Pn**	**22 37 24.8**	**+1.5**
FRF	**La Foret Royal**	**3.42**	**60**	*e*Pn	**Pn**	**22 37 24.5**	**-0.3**
FRF				*e*Sn	**Sn**	**22 38 03.6**	**-1.6**
	285nm,0.5s						
FRF	**La Foret Royal**	**3.42**	**60**	Pn	**Pn**	**22 37 24.5**	**-0.3**
FRF				Sn	**Sn**	**22 38 03.6**	**-1.6**
	142nm,0.5s						
FRF	**La Foret Royal**	**3.42**	**60**	Pn	**Pn**	**22 37 24.5**	**-0.3**
FRF				Sn	**Sn**	**22 38 03.6**	**-1.6**
	142nm,0.5s						
FRF	**La Foret Royal**	**3.42**	**60**	*e*Pn	**Pn**	**22 37 24.5**	**-0.3**
FRF				*e*Sn	**Sn**	**22 38 03.6**	**-1.6**
	142nm,0.5s						
RJF	**Les Rejaudoux**	**3.46**	**348**	*e*Pg	**Pg**	**22 37 37.6**	**-0.3**
RJF				*e*Sg	**Sg**	**22 38 24.1**	**+1.4**
	226nm,0.2s						
RJF	**Les Rejaudoux**	**3.46**	**348**	*e*Pn	**Pn**	**22 37 26.0**	**+0.7**
RJF				*e*Pg	**Pg**	**22 37 37.6**	**-0.3**
RJF				*e*Sg	**Sg**	**22 38 24.1**	**+1.4**
RJF	**Les Rejaudoux**	**3.46**	**348**	Pn	**Pn**	**22 37 26.0**	**+0.7**
RJF				Pg	**Pg**	**22 37 37.6**	**-0.3**
RJF				Lg		22 38 24.1	
	113nm,0.2s						
RJF	**Les Rejaudoux**	**3.46**	**348**	Pn	**Pn**	**22 37 26.0**	**+0.7**
RJF				Pg	**Pg**	**22 37 37.6**	**-0.3**
RJF				Lg		22 38 24.1	
	113nm,0.2s						
RJF	**Les Rejaudoux**	**3.46**	**348**	*e*Pn	**Pn**	**22 37 26.0**	**+0.7**
RJF	**Les Rejaudoux**	**3.46**	**348**	*e*Pg	**Pg**	**22 37 37.6**	**-0.3**
RJF				*e*Sg	**Sg**	**22 38 24.1**	**+1.4**
	113nm,0.2s						
ECHE	**Chera**	**3.56**	**230**	P	**Pn**	**22 37 26.8**	**0.0**
ECHE	**Chera**	**3.56**	**230**	Pn	**Pn**	**22 37 26.8**	**0.0**
	25nm,0.5s,SNR=19						
ECHE				Pg	**Pg**	**22 37 37.8**	**-2.2**
	31nm,0.3s,SNR=11						
ECHE				Lg		22 38 25.9	
	121nm,0.8s,SNR=5.0						
ECHE	**Chera**	**3.56**	**230**	Pn	**Pn**	**22 37 26.8**	**0.0**
	25nm,0.5s,SNR=19						
ECHE				Pg	**Pg**	**22 37 37.8**	**-2.2**
	31nm,0.3s,SNR=11						
ECHE				Lg		22 38 25.9	
	121nm,0.8s,SNR=5.0						
ECHE	**Chera**	**3.56**	**230**	Pn	**Pn**	**22 37 26.8**	**0.0**
	25nm,0.5s,SNR=19						
SSB	**Saint Sauveur**	**3.64**	**23**	Pn	**Pn**	**22 37 29.1**	**+1.3**
SSB	**Saint Sauveur**	**3.64**	**23**	Pn	**Pn**	**22 37 29.1**	**+1.3**
ETOR	**Torete**	**3.65**	**254**	P	**Pn**	**22 37 29.5**	**+1.5**
ETOR				Lg		22 38 31.0	
ETOR	**Torete**	**3.65**	**254**	⇑Pn	**Pn**	**22 37 29.2**	**+1.2**
	45nm,0.5s,SNR=18						
ETOR				Pg	**Pg**	**22 37 38.4**	**-3.3**
	194nm,0.3s,SNR=19						
ETOR				Lg		22 38 27.9	
	424nm,0.7s,SNR=5.3						
ETOR	**Torete**	**3.65**	**254**	⇑Pn	**Pn**	**22 37 29.2**	**+1.2**
	45nm,0.5s,SNR=18						
ETOR				Pg	**Pg**	**22 37 38.4**	**-3.3**
	194nm,0.3s,SNR=19						
ETOR				Lg		22 38 27.9	
	424nm,0.7s,SNR=5.3						
ETOR	**Torete**	**3.65**	**254**	Pn	**Pn**	**22 37 29.2**	**+1.2**
	45nm,0.5s,SNR=18						
ETOR	**Torete**	**3.65**	**254**	P	**Pn**	**22 37 29.5**	**+1.5**
ETOR				Lg		22 38 31.0	
COLF	**Collangettes**	**3.67**	**12**	Pn	**Pn**	**22 37 28.5**	**+0.2**
COLF	**Collangettes**	**3.67**	**12**	Pn	**Pn**	**22 37 28.5**	**+0.2**
VERF	**Verneugheol**	**3.82**	**359**	Pn	**Pn**	**22 37 32.5**	**+2.3**
VERF	**Verneugheol**	**3.82**	**359**	Pn	**Pn**	**22 37 32.5**	**+2.3**
ORIF	**Oris-en-Rattie**	**3.84**	**38**	*e*Pn	**Pn**	**22 37 30.8**	**+0.3**
ORIF				*e*Sn	**Sn**	**22 38 15.3**	**-0.2**
	48nm,0.3s						
ORIF	**Oris-en-Rattie**	**3.84**	**38**	Pn	**Pn**	**22 37 30.8**	**+0.3**
ORIF				Sn	**Sn**	**22 38 15.3**	**-0.2**
	24nm,0.3s						
ORIF	**Oris-en-Rattie**	**3.84**	**38**	Pn	**Pn**	**22 37 30.8**	**+0.3**
ORIF				Sn	**Sn**	**22 38 15.3**	**-0.2**
	24nm,0.3s						
ORIF	**Oris-en-Rattie**	**3.84**	**38**	*e*Pn	**Pn**	**22 37 30.8**	**+0.3**
ORIF				*e*Sn	**Sn**	**22 38 15.3**	**-0.2**
	24nm,0.3s						
EBEN	**Beniarda**	**3.87**	**214**	P	**Pn**	**22 37 30.6**	**-0.4**
EBEN	**Beniarda**	**3.87**	**214**	⇑Pn	**Pn**	**22 37 30.4**	**-0.6**
	24nm,0.7s,SNR=18						
EBEN				Sn	**Sn**	**22 38 13.6**	**-2.7**
	23nm,0.8s,SNR=5.0						
EBEN	**Beniarda**	**3.87**	**214**	⇑Pn	**Pn**	**22 37 30.4**	**-0.6**
	24nm,0.7s,SNR=18						
EBEN				Sn	**Sn**	**22 38 13.6**	**-2.7**
	23nm,0.8s,SNR=5.0						
EBEN	**Beniarda**	**3.87**	**214**	P	**Pn**	**22 37 30.6**	**-0.4**
MVIF	**Mont Vial**	**3.90**	**58**	Pn	**Pn**	**22 37 31.9**	**+0.5**
MVIF	**Mont Vial**	**3.90**	**58**	Pn	**Pn**	**22 37 31.9**	**+0.5**
REVF	**Revere**	**3.96**	**61**	Pn	**Pn**	**22 37 33.7**	**+1.4**
REVF	**Revere**	**3.96**	**61**	Pn	**Pn**	**22 37 33.7**	**+1.4**
TOUF	**Mont Tournerai**	**4.01**	**57**	Pn	**Pn**	**22 37 33.5**	**+0.5**
TOUF	**Mont Tournerai**	**4.01**	**57**	Pn	**Pn**	**22 37 33.5**	**+0.5**
LUCF	**Luceram**	**4.02**	**59**	Pn	**Pn**	**22 37 33.3**	**+0.3**
LUCF	**Luceram**	**4.02**	**59**	Pn	**Pn**	**22 37 33.3**	**+0.3**
SBF	**Sospel**	**4.06**	**60**	*e*Pn	**Pn**	**22 37 33.6**	**0.0**
SBF				*e*Sn	**Sn**	**22 38 19.4**	**-1.7**
	374nm,0.6s						
SBF	**Sospel**	**4.06**	**60**	Pn	**Pn**	**22 37 33.6**	**0.0**
SBF				Sn	**Sn**	**22 38 19.4**	**-1.7**
	187nm,0.6s						
SBF	**Sospel**	**4.06**	**60**	Pn	**Pn**	**22 37 33.6**	**0.0**
SBF				Sn	**Sn**	**22 38 19.4**	**-1.7**
	187nm,0.6s						
SBF	**Sospel**	**4.06**	**60**	*e*Pn	**Pn**	**22 37 33.6**	**0.0**
SBF				*e*Sn	**Sn**	**22 38 19.4**	**-1.7**
	187nm,0.6s						
AUTN	**L'Aution**	**4.12**	**58**	Pn	**Pn**	**22 37 35.5**	**+1.1**
AUTN	**L'Aution**	**4.12**	**58**	Pn	**Pn**	**22 37 35.5**	**+1.1**
MBDF	**Montbardon**	**4.15**	**46**	*e*Pn	**Pn**	**22 37 34.6**	**-0.2**
MBDF				*e*Sn	**Sn**	**22 38 21.9**	**-1.3**
	127nm,0.6s						
MBDF	**Montbardon**	**4.15**	**46**	Pn	**Pn**	**22 37 34.6**	**-0.2**
MBDF				Sn	**Sn**	**22 38 21.9**	**-1.3**
	64nm,0.6s						
MBDF	**Montbardon**	**4.15**	**46**	Pn	**Pn**	**22 37 34.6**	**-0.2**
MBDF				Sn	**Sn**	**22 38 21.9**	**-1.3**
	64nm,0.6s						
MBDF	**Montbardon**	**4.15**	**46**	*e*Pn	**Pn**	**22 37 34.6**	**-0.2**
MBDF				*e*Sn	**Sn**	**22 38 21.9**	**-1.3**
	64nm,0.6s						
SAOF	**Saorge**	**4.20**	**59**	Pn	**Pn**	**22 37 36.9**	**+1.4**
SAOF	**Saorge**	**4.20**	**59**	Pn	**Pn**	**22 37 36.9**	**+1.4**
BNI	**Bardonecchia**	**4.32**	**42**	*e*Pn	**Pn**	**22 37 39.7**	**+2.6**
BNI				*e*Sn	**Sn**	**22 38 28.5**	**+1.1**
BNI	**Bardonecchia**	**4.32**	**42**	*e*Pn	**Pn**	**22 37 39.7**	**+2.5**
BNI				*e*Sn	**Sn**	**22 38 28.5**	**+1.1**
TCF	**Toulx Ste Croi**	**4.36**	**357**	*e*Pg	**Pg**	**22 37 54.4**	**-0.8**
TCF				*e*Sn	**Sn**	**22 38 27.6**	**-0.9**
TCF				*e*Sg	**Sg**	**22 38 52.4**	**+0.7**
	282nm,0.5s						
TCF	**Toulx Ste Croi**	**4.36**	**357**	*e*Pn	**Pn**	**22 37 38.1**	**+0.4**
TCF				*e*Pg	**Pg**	**22 37 54.4**	**-0.8**
TCF				*e*Sn	**Sn**	**22 38 27.6**	**-0.9**
TCF				*e*Sg	**Sg**	**22 38 52.4**	**+0.7**
TCF	**Toulx Ste Croi**	**4.36**	**357**	Pn	**Pn**	**22 37 38.1**	**+0.4**
TCF				Pg	**Pg**	**22 37 54.4**	**-0.8**
TCF				Sn	**Sn**	**22 38 27.6**	**-0.9**
TCF				Lg		22 38 52.4	
	141nm,0.5s						
TCF	**Toulx Ste Croi**	**4.36**	**357**	Pn	**Pn**	**22 37 38.1**	**+0.4**
TCF				Pg	**Pg**	**22 37 54.4**	**-0.8**
TCF				Sn	**Sn**	**22 38 27.6**	**-0.9**
TCF				Lg		22 38 52.4	
	141nm,0.5s						
TCF	**Toulx Ste Croi**	**4.36**	**357**	*e*Pn	**Pn**	**22 37 38.1**	**+0.4**
TCF	**Toulx Ste Croi**	**4.36**	**357**	*e*Pg	**Pg**	**22 37 54.4**	**-0.8**
TCF				*e*Sn	**Sn**	**22 38 27.6**	**-0.9**
TCF				*e*Sg	**Sg**	**22 38 52.4**	**+0.7**
	141nm,0.5s						
ETOB	**Tobarra**	**4.55**	**225**	P	**Pn**	**22 37 40.0**	**-0.3**
ETOB	**Tobarra**	**4.55**	**225**	⇑Pn	**Pn**	**22 37 40.0**	**-0.3**
	19nm,0.4s,SNR=18						
ETOB				Pg	**Pg**	**22 37 54.6**	**-4.2**
	30nm,0.6s,SNR=7.9						
ETOB				Sn	**Sn**	**22 38 29.5**	**-3.6**
	52nm,0.9s,SNR=5.0						
ETOB	**Tobarra**	**4.55**	**225**	⇑Pn	**Pn**	**22 37 40.0**	**-0.3**
	19nm,0.4s,SNR=18						
ETOB				Pg	**Pg**	**22 37 54.6**	**-4.2**
	30nm,0.6s,SNR=7.9						
ETOB				Sn	**Sn**	**22 38 29.5**	**-3.6**
	52nm,0.9s,SNR=5.0						
ETOB	**Tobarra**	**4.55**	**225**	Pn	**Pn**	**22 37 40.0**	**-0.3**
	19nm,0.4s,SNR=18						
ELAN	**Lanestosa**	**4.62**	**288**	P	**Pn**	**22 37 43.1**	**+1.9**
ELAN	**Lanestosa**	**4.62**	**288**	Pn	**Pn**	**22 37 43.1**	**+1.9**
	26nm,0.5s,SNR=54						
ELAN				Sn	**Sn**	**22 38 35.3**	**+0.5**
	32nm,0.5s,SNR=5.0						
ELAN				Lg		22 39 00.6	
	138nm,0.5s,SNR=5.0						
ELAN	**Lanestosa**	**4.62**	**288**	Pn	**Pn**	**22 37 43.1**	**+1.9**
	26nm,0.5s,SNR=54						
ELAN				Sn	**Sn**	**22 38 35.3**	**+0.5**
	32nm,0.5s,SNR=5.0						
ELAN				Lg		22 39 00.6	
	138nm,0.5s,SNR=5.0						
ELAN	**Lanestosa**	**4.62**	**288**	Pn	**Pn**	**22 37 43.1**	**+1.8**
	26nm,0.5s,SNR=54						
ELAN				Sn	**Sn**	**22 38 35.3**	**+0.5**
	32nm,0.5s,SNR=5.0						
BGF	**Bois d'Agland**	**4.63**	**2**	*e*Pg	**Pg**	**22 37 59.5**	**-0.8**
BGF				*e*Sg	**Sg**	**22 39 00.4**	**+0.2**
	367nm,0.3s						
BGF	**Bois d'Agland**	**4.63**	**2**	*e*Pn	**Pn**	**22 37 42.0**	**+0.6**
BGF				*e*Pg	**Pg**	**22 37 59.5**	**-0.8**
BGF				*e*Sg	**Sg**	**22 39 00.4**	**+0.2**
BGF	**Bois d'Agland**	**4.63**	**2**	Pn	**Pn**	**22 37 42.0**	**+0.6**
BGF				Pg	**Pg**	**22 37 59.5**	**-0.8**
BGF				Lg		22 39 00.4	
	184nm,0.3s						
BGF	**Bois d'Agland**	**4.63**	**2**	Pn	**Pn**	**22 37 42.0**	**+0.6**
BGF				Pg	**Pg**	**22 37 59.5**	**-0.8**
BGF				Lg		22 39 00.4	
	184nm,0.3s						
BGF	**Bois d'Agland**	**4.63**	**2**	*e*Pn	**Pn**	**22 37 42.0**	**+0.6**
BGF	**Bois d'Agland**	**4.63**	**2**	*e*Pg	**Pg**	**22 37 59.5**	**-0.8**
BGF				*e*Sg	**Sg**	**22 39 00.4**	**+0.2**
	184nm,0.3s						
LPG	**La Plagne**	**4.68**	**39**	*e*Pn	**Pn**	**22 37 42.2**	**+0.1**
LPG				*e*Sn	**Sn**	**22 38 35.6**	**-0.7**
	46nm,0.6s						
LPG	**La Plagne**	**4.68**	**39**	Pn	**Pn**	**22 37 42.2**	**+0.1**
LPG				Sn	**Sn**	**22 38 35.6**	**-0.7**
	23nm,0.6s						
LPG	**La Plagne**	**4.68**	**39**	Pn	**Pn**	**22 37 42.2**	**+0.1**
LPG				Sn	**Sn**	**22 38 35.6**	**-0.7**
	23nm,0.6s						
LPG	**La Plagne**	**4.68**	**39**	*e*Pn	**Pn**	**22 37 42.2**	**+0.1**
LPG				*e*Sn	**Sn**	**22 38 35.6**	**-0.7**
	23nm,0.6s						
LPL	**La Plagne**	**4.68**	**39**	*e*Pn	**Pn**	**22 37 42.3**	**+0.1**
LPL				*e*Sn	**Sn**	**22 38 35.1**	**-1.3**
	31nm,0.4s						
LPL	**La Plagne**	**4.68**	**39**	Pn	**Pn**	**22 37 42.3**	**+0.1**
LPL				Sn	**Sn**	**22 38 35.1**	**-1.3**
	16nm,0.4s						
LPL	**La Plagne**	**4.68**	**39**	Pn	**Pn**	**22 37 42.3**	**+0.1**
LPL				Sn	**Sn**	**22 38 35.1**	**-1.3**
	16nm,0.4s						
LPL	**La Plagne**	**4.68**	**39**	*e*Pn	**Pn**	**22 37 42.3**	**+0.1**
LPL				*e*Sn	**Sn**	**22 38 35.1**	**-1.3**
	15nm,0.4s						
SMF	**Signal de Mont**	**4.80**	**11**	*e*Pg	**Pg**	**22 38 02.4**	**-1.2**
SMF				*e*Sn	**Sn**	**22 38 38.7**	**-0.5**
SMF				*e*Sg	**Sg**	**22 39 06.2**	**+0.5**
	105nm,0.4s						
SMF	**Signal de Mont**	**4.80**	**11**	*e*Pn	**Pn**	**22 37 44.0**	**+0.2**
SMF				*e*Pg	**Pg**	**22 38 02.4**	**-1.2**
SMF				*e*Sn	**Sn**	**22 38 38.7**	**-0.5**
SMF				*e*Sg	**Sg**	**22 39 06.2**	**+0.5**
SMF	**Signal de Mont**	**4.80**	**11**	Pn	**Pn**	**22 37 44.0**	**+0.2**
SMF				Pg	**Pg**	**22 38 02.4**	**-1.2**
SMF				Sn	**Sn**	**22 38 38.7**	**-0.5**
SMF				Lg		22 39 06.2	
	52nm,0.4s						
SMF	**Signal de Mont**	**4.80**	**11**	Pn	**Pn**	**22 37 44.0**	**+0.2**
SMF				Pg	**Pg**	**22 38 02.4**	**-1.2**
SMF				Sn	**Sn**	**22 38 38.7**	**-0.5**
SMF				Lg		22 39 06.2	
	52nm,0.4s						
SMF	**Signal de Mont**	**4.80**	**11**	*e*Pn	**Pn**	**22 37 44.0**	**+0.2**
SMF	**Signal de Mont**	**4.80**	**11**	*e*Pg	**Pg**	**22 38 02.4**	**-1.2**
SMF				*e*Sn	**Sn**	**22 38 38.7**	**-0.5**
SMF				*e*Sg	**Sg**	**22 39 06.2**	**+0.5**
	52nm,0.4s						
PGF	**Pioggiola**	**4.81**	**81**	*e*Pn	**Pn**	**22 37 42.3**	**-1.7**
PGF				*e*Sn	**Sn**	**22 38 35.5**	**-4.1**
	101nm,0.4s						
PGF	**Pioggiola**	**4.81**	**81**	Pn	**Pn**	**22 37 42.3**	**-1.7**
PGF				Sn	**Sn**	**22 38 35.5**	**-4.1**
	50nm,0.4s						
PGF	**Pioggiola**	**4.81**	**81**	Pn	**Pn**	**22 37 42.3**	**-1.7**
PGF				Sn	**Sn**	**22 38 35.5**	**-4.1**
	50nm,0.4s						
PGF	**Pioggiola**	**4.81**	**81**	*e*Pn	**Pn**	**22 37 42.3**	**-1.7**
PGF				*e*Sn	**Sn**	**22 38 35.5**	**-4.1**
	50nm,0.4s						
AVF	**Avril sur Loir**	**4.89**	**6**	*e*Pg	**Pg**	**22 38 03.9**	**-1.4**
AVF				*e*Sg	**Sg**	**22 39 06.6**	**-2.0**
	103nm,0.7s						
AVF	**Avril sur Loir**	**4.89**	**6**	*e*Pn	**Pn**	**22 37 45.6**	**+0.6**
AVF				*e*Pg	**Pg**	**22 38 03.9**	**-1.4**
AVF				*e*Sg	**Sg**	**22 39 06.6**	**-2.0**
AVF	**Avril sur Loir**	**4.89**	**6**	Pn	**Pn**	**22 37 45.6**	**+0.6**
AVF				Pg	**Pg**	**22 38 03.9**	**-1.4**
AVF				Lg		22 39 06.6	
	52nm,0.7s						
AVF	**Avril sur Loir**	**4.89**	**6**	Pn	**Pn**	**22 37 45.6**	**+0.6**
AVF				Pg	**Pg**	**22 38 03.9**	**-1.4**
AVF				Lg		22 39 06.6	
	52nm,0.7s						
AVF	**Avril sur Loir**	**4.89**	**6**	*e*Pn	**Pn**	**22 37 45.6**	**+0.6**
AVF	**Avril sur Loir**	**4.89**	**6**	*e*Pg	**Pg**	**22 38 03.9**	**-1.4**
AVF				*e*Sg	**Sg**	**22 39 06.6**	**-2.0**
	52nm,0.7s						
EMUR	**La Murta**	**5.03**	**217**	P	**Pn**	**22 37 46.5**	**-0.4**
EMUR	**La Murta**	**5.03**	**217**	Pn	**Pn**	**22 37 46.5**	**-0.4**
	4.6nm,0.3s,SNR=14						
EMUR				Sn	**Sn**	**22 38 40.8**	**-4.1**
	9.3nm,0.5s,SNR=5.0						
EMUR	**La Murta**	**5.03**	**217**	Pn	**Pn**	**22 37 46.5**	**-0.4**
	4.6nm,0.3s,SNR=14						
EMUR				Sn	**Sn**	**22 38 40.8**	**-4.1**
	9.3nm,0.5s,SNR=5.0						
EMUR	**La Murta**	**5.03**	**217**	Pn	**Pn**	**22 37 46.5**	**-0.4**
	4.6nm,0.3s,SNR=14						
MFF	**Saint Martin d**	**5.06**	**338**	*e*Pg	**Pg**	**22 38 07.0**	**-1.5**
MFF				*e*Sg	**Sg**	**22 39 13.2**	**-0.8**
	140nm,0.4s						
MFF	**Saint Martin d**	**5.06**	**338**	*e*Pn	**Pn**	**22 37 47.6**	**+0.3**
MFF				*e*Pg	**Pg**	**22 38 07.0**	**-1.5**
MFF				*e*Sg	**Sg**	**22 39 13.2**	**-0.8**
MFF	**Saint Martin d**	**5.06**	**338**	Pn	**Pn**	**22 37 47.6**	**+0.3**
MFF				Pg	**Pg**	**22 38 07.0**	**-1.5**
MFF				Lg		22 39 13.2	
	70nm,0.4s						
MFF	**Saint Martin d**	**5.06**	**338**	Pn	**Pn**	**22 37 47.6**	**+0.3**
MFF				Pg	**Pg**	**22 38 07.0**	**-1.5**
MFF				Lg		22 39 13.2	
	70nm,0.4s						
MFF	**Saint Martin d**	**5.06**	**338**	*e*Pn	**Pn**	**22 37 47.6**	**+0.3**
MFF	**Saint Martin d**	**5.06**	**338**	*e*Pg	**Pg**	**22 38 07.0**	**-1.5**
MFF				*e*Sn	**Sn**	**22 38 40.8**	**-4.1**
	70nm,0.4s						
EVIA	**Vianos**	**5.08**	**231**	P	**Pn**	**22 37 47.9**	**+0.2**
EVIA	**Vianos**	**5.08**	**231**	Pn	**Pn**	**22 37 47.9**	**+0.2**
	12nm,0.5s,SNR=8.0						
EVIA				Pg	**Pg**	**22 38 05.0**	**-4.1**
	16nm,0.4s,SNR=5.2						
EVIA				Lg		22 39 12.9	
	76nm,0.6s,SNR=5.0						
EVIA	**Vianos**	**5.08**	**231**	Pn	**Pn**	**22 37 47.9**	**+0.2**
	12nm,0.5s,SNR=8.0						
EVIA				Pg	**Pg**	**22 38 05.0**	**-4.1**
	16nm,0.4s,SNR=5.2						
EVIA				Lg		22 39 12.9	
	76nm,0.6s,SNR=5.0						
EVIA	**Vianos**	**5.08**	**231**	Pn	**Pn**	**22 37 47.9**	**+0.2**
	12nm,0.5s,SNR=8.0						
SSF	**Saint Saulge**	**5.17**	**7**	*e*Pg	**Pg**	**22 38 09.3**	**-1.4**
SSF				*e*Sg	**Sg**	**22 39 17.4**	**-0.2**
	70nm,0.4s						
SSF	**Saint Saulge**	**5.17**	**7**	*e*Pn	**Pn**	**22 37 49.3**	**+0.4**
SSF				*e*Pg	**Pg**	**22 38 09.3**	**-1.4**
SSF				*e*Sg	**Sg**	**22 39 17.4**	**-0.2**
SSF	**Saint Saulge**	**5.17**	**7**	Pn	**Pn**	**22 37 49.3**	**+0.4**
SSF				Pg	**Pg**	**22 38 09.3**	**-1.4**
SSF				Lg		22 39 17.4	
	35nm,0.4s						
SSF	**Saint Saulge**	**5.17**	**7**	Pn	**Pn**	**22 37 49.3**	**+0.4**
SSF				Pg	**Pg**	**22 38 09.3**	**-1.4**
SSF				Lg		22 39 17.4	
	35nm,0.4s						
SSF	**Saint Saulge**	**5.17**	**7**	*e*Pn	**Pn**	**22 37 49.3**	**+0.4**
SSF	**Saint Saulge**	**5.17**	**7**	*e*Pg	**Pg**	**22 38 09.3**	**-1.4**
SSF				*e*Sg	**Sg**	**22 39 17.4**	**-0.2**
	35nm,0.4s						
GUD	**Guadarrama**	**5.23**	**258**	⇑Pn	**Pn**	**22 37 50.5**	**+0.8**
	7.0nm,0.2s,SNR=18						
GUD				Sn	**Sn**	**22 38 47.7**	**-2.1**
	SNR=7.9						
GUD	**Guadarrama**	**5.23**	**258**	⇑Pn	**Pn**	**22 37 50.5**	**+0.8**
	7.0nm,0.2s,SNR=18						
GUD				Sn	**Sn**	**22 38 47.7**	**-2.1**
	SNR=7.9						
GUD	**Guadarrama**	**5.23**	**258**	Pn	**Pn**	**22 37 50.5**	**+0.9**
	7.0nm,0.2s,SNR=18						
CABF	**La Chapelle**	**5.32**	**27**	*e*Pn	**Pn**	**22 37 51.2**	**+0.4**
CABF				*e*Sg	**Sg**	**22 39 21.8**	**-0.5**
	128nm,0.7s						
CABF	**La Chapelle**	**5.32**	**27**	Pn	**Pn**	**22 37 51.2**	**+0.4**
CABF				Lg		22 39 21.8	
	64nm,0.7s						
CABF	**La Chapelle**	**5.32**	**27**	Pn	**Pn**	**22 37 51.2**	**+0.4**
CABF				Lg		22 39 21.8	
	64nm,0.7s						
CABF	**La Chapelle**	**5.32**	**27**	*e*Pn	**Pn**	**22 37 51.2**	**+0.4**
CABF				*e*Sg	**Sg**	**22 39 21.8**	**-0.5**
	64nm,0.7s						
HYF	**Humbligny**	**5.33**	**1**	*e*Pn	**Pn**	**22 37 51.4**	**+0.3**
HYF				*e*Pg	**Pg**	**22 38 12.6**	**-1.2**
HYF				*e*Sg	**Sg**	**22 39 23.1**	**+0.2**
HYF	**Humbligny**	**5.33**	**1**	Pn	**Pn**	**22 37 51.4**	**+0.3**
HYF				Pg	**Pg**	**22 38 12.6**	**-1.2**
HYF				Lg		22 39 23.1	
HYF	**Humbligny**	**5.33**	**1**	Pn	**Pn**	**22 37 51.4**	**+0.3**
HYF				Pg	**Pg**	**22 38 12.6**	**-1.2**
HYF				Lg		22 39 23.1	
HYF	**Humbligny**	**5.33**	**1**	*e*Pn	**Pn**	**22 37 51.4**	**+0.3**
LOR	**Lormes**	**5.41**	**9**	*e*Pn	**Pn**	**22 37 52.3**	**+0.1**
	baz=192						
LOR	**Lormes**	**5.41**	**9**	*e*Pg	**Pg**	**22 38 13.6**	**-1.7**
LOR				*e*Sn	**Sn**	**22 38 53.6**	**-0.8**
LOR				*e*Sg	**Sg**	**22 39 25.3**	**-0.1**
	72nm,0.4s						
LOR	**Lormes**	**5.41**	**9**	*e*Pn	**Pn**	**22 37 52.3**	**+0.1**
LOR				*e*Pg	**Pg**	**22 38 13.6**	**-1.7**
LOR				*e*Sn	**Sn**	**22 38 53.6**	**-0.8**
LOR				*e*Sg	**Sg**	**22 39 25.3**	**-0.1**
LOR	**Lormes**	**5.41**	**9**	Pn	**Pn**	**22 37 52.3**	**+0.1**
LOR				Pg	**Pg**	**22 38 13.6**	**-1.7**
LOR				Sn	**

SFTF	**Sexfontaines**	**6.51**	**15**	Pn	**Pn**	**22 38 07.2**	**0.0**
SFTF				Lg		22 40 00.1	
	164nm,0.9s						
SFTF	**Sexfontaines**	**6.51**	**15**	*e*Pn	**Pn**	**22 38 07.2**	**0.0**
SFTF				*e*Sg	**Sg**	**22 40 00.1**	**-0.5**
	82nm,0.9s						
BBS	**Basel-Blauen**	**6.55**	**31**	Pn	**Pn**	**22 38 08.0**	**+0.1**
BBS	**Basel-Blauen**	**6.55**	**31**	Pn	**Pn**	**22 38 08.0**	**+0.1**
EBER	**Berja**	**6.57**	**222**	Pn	**Pn**	**22 38 08.3**	**+0.2**
	2.6nm,0.4s,SNR=7.0						
EBER	**Berja**	**6.57**	**222**	Pn	**Pn**	**22 38 08.3**	**+0.2**
	2.6nm,0.4s,SNR=7.0						
EBER	**Berja**	**6.57**	**222**	Pn	**Pn**	**22 38 08.3**	**+0.2**
	2.6nm,0.4s,SNR=7.0						
EQUE	**Quentar**	**6.62**	**226**	Pn	**Pn**	**22 38 09.3**	**+0.5**
	2.9nm,0.4s,SNR=12						
EQUE				Lg		22 40 03.9	
	41nm,1.1s,SNR=7.9						
EQUE	**Quentar**	**6.62**	**226**	Pn	**Pn**	**22 38 09.3**	**+0.5**
	2.9nm,0.4s,SNR=12						
EQUE				Lg		22 40 03.9	
	41nm,1.1s,SNR=7.9						
EQUE	**Quentar**	**6.62**	**226**	Pn	**Pn**	**22 38 09.3**	**+0.5**
	2.9nm,0.4s,SNR=12						
HINF	**Hinteralfeld**	**6.62**	**26**	*e*Pn	**Pn**	**22 38 08.6**	**-0.2**
HINF				*e*Sg	**Sg**	**22 40 02.3**	**-1.8**
	42nm,0.5s						
HINF	**Hinteralfeld**	**6.62**	**26**	Pn	**Pn**	**22 38 08.6**	**-0.2**
HINF				Lg		22 40 02.3	
	21nm,0.5s						
HINF	**Hinteralfeld**	**6.62**	**26**	Pn	**Pn**	**22 38 08.6**	**-0.2**
HINF				Lg		22 40 02.3	
	21nm,0.5s						
HINF	**Hinteralfeld**	**6.62**	**26**	*e*Pn	**Pn**	**22 38 08.6**	**-0.2**
HINF				*e*Sg	**Sg**	**22 40 02.3**	**-1.8**
	21nm,0.5s						
ECOG	**Cogollos-Vega**	**6.64**	**228**	Pn	**Pn**	**22 38 09.2**	**+0.2**
	1.6nm,0.3s,SNR=7.9						
ECOG	**Cogollos-Vega**	**6.64**	**228**	Pn	**Pn**	**22 38 09.2**	**+0.2**
	1.6nm,0.3s,SNR=7.9						
ECOG	**Cogollos-Vega**	**6.64**	**228**	Pn	**Pn**	**22 38 09.2**	**+0.2**
	1.6nm,0.3s,SNR=7.9						
HAU	**Haudompre**	**6.64**	**23**	*e*Pn	**Pn**	**22 38 08.9**	**-0.1**
HAU				*e*Sg	**Sg**	**22 40 03.1**	**-1.5**
	72nm,0.8s						
HAU	**Haudompre**	**6.64**	**23**	Pn	**Pn**	**22 38 08.9**	**-0.1**
HAU				Lg		22 40 03.1	
	36nm,0.8s						
HAU	**Haudompre**	**6.64**	**23**	Pn	**Pn**	**22 38 08.9**	**-0.1**
HAU				Lg		22 40 03.1	
	36nm,0.8s						
HAU	**Haudompre**	**6.64**	**23**	*e*Pn	**Pn**	**22 38 08.9**	**-0.1**
HAU				*e*Sg	**Sg**	**22 40 03.1**	**-1.5**
	36nm,0.8s						
EADA	**Adamuz**	**6.65**	**238**	P	**Pn**	**22 38 10.5**	**+1.4**
EADA	**Adamuz**	**6.65**	**238**	Pn	**Pn**	**22 38 09.3**	**+0.2**
	1.7nm,0.3s,SNR=12						
EADA				Pg	**Pg**	**22 38 32.4**	**-6.6**
	8.2nm,0.4s,SNR=7.9						
EADA				Sn	**Sn**	**22 39 20.7**	**-4.1**
	37nm,1.0s,SNR=4.0						
EADA				Lg		22 40 03.0	
	42nm,0.9s,SNR=7.9						
EADA	**Adamuz**	**6.65**	**238**	Pn	**Pn**	**22 38 09.3**	**+0.2**
	1.7nm,0.3s,SNR=12						
EADA				Pg	**Pg**	**22 38 32.4**	**-6.6**
	8.2nm,0.4s,SNR=7.9						
EADA				Sn	**Sn**	**22 39 20.7**	**-4.1**
	37nm,1.0s,SNR=4.0						
EADA				Lg		22 40 03.0	
	42nm,0.9s,SNR=7.9						
EADA	**Adamuz**	**6.65**	**238**	Pn	**Pn**	**22 38 09.3**	**+0.1**
	1.7nm,0.3s,SNR=12						
EADA	**Adamuz**	**6.65**	**238**	P	**Pn**	**22 38 10.5**	**+1.3**
THEF	**They Montfort**	**6.74**	**20**	Pn	**Pn**	**22 38 10.6**	**+0.2**
THEF	**They Montfort**	**6.74**	**20**	Pn	**Pn**	**22 38 10.6**	**+0.2**
MOF	**Molkenrain**	**6.75**	**27**	Pn	**Pn**	**22 38 10.7**	**+0.2**
MOF	**Molkenrain**	**6.75**	**27**	Pn	**Pn**	**22 38 10.7**	**+0.2**
MEZF	**Maizieres J'vi**	**6.80**	**14**	*e*Pn	**Pn**	**22 38 11.2**	**0.0**
MEZF				*e*Sg	**Sg**	**22 40 08.7**	**-1.1**
	125nm,0.7s						
MEZF	**Maizieres J'vi**	**6.80**	**14**	Pn	**Pn**	**22 38 11.2**	**0.0**
MEZF				Lg		22 40 08.7	
	125nm,0.7s						
MEZF	**Maizieres J'vi**	**6.80**	**14**	Pn	**Pn**	**22 38 11.2**	**0.0**
MEZF				Lg		22 40 08.7	
	125nm,0.7s						
MEZF	**Maizieres J'vi**	**6.80**	**14**	*e*Pn	**Pn**	**22 38 11.2**	**0.0**
MEZF				*e*Sg	**Sg**	**22 40 08.7**	**-1.1**
	63nm,0.7s						
EPLA	**Plasencia**	**6.80**	**257**	P	**Pn**	**22 38 11.3**	**0.0**
EPLA				Lg		22 40 11.8	
EPLA	**Plasencia**	**6.80**	**257**	Pn	**Pn**	**22 38 11.1**	**-0.2**
	7.8nm,0.4s,SNR=20						
EPLA				Sn	**Sn**	**22 39 25.3**	**-3.4**
	12nm,0.5s,SNR=4.1						
EPLA				Lg		22 40 10.1	
	147nm,1.0s,SNR=7.9						
EPLA	**Plasencia**	**6.80**	**257**	Pn	**Pn**	**22 38 11.1**	**-0.2**
	7.8nm,0.4s,SNR=20						
EPLA				Sn	**Sn**	**22 39 25.3**	**-3.4**
	12nm,0.5s,SNR=4.1						
EPLA				Lg		22 40 10.1	
	147nm,1.0s,SNR=7.9						
EPLA	**Plasencia**	**6.80**	**257**	Pn	**Pn**	**22 38 11.1**	**-0.2**
	7.8nm,0.4s,SNR=20						
GRR	**Gorron**	**6.89**	**341**	*e*Pg	**Pg**	**22 38 40.4**	**-3.2**
GRR				*e*Sn	**Sn**	**22 39 28.2**	**-2.6**
GRR				*e*Sg	**Sg**	**22 40 10.9**	**-1.9**
	52nm,0.4s						
GRR	**Gorron**	**6.89**	**341**	*e*Pn	**Pn**	**22 38 12.6**	**+0.1**
GRR				*e*Pg	**Pg**	**22 38 40.4**	**-3.2**
GRR				*e*Sn	**Sn**	**22 39 28.2**	**-2.6**
GRR				*e*Sg	**Sg**	**22 40 10.9**	**-1.9**
GRR	**Gorron**	**6.89**	**341**	Pn	**Pn**	**22 38 12.6**	**+0.1**
GRR				Pg	**Pg**	**22 38 40.4**	**-3.2**
GRR				Sn	**Sn**	**22 39 28.2**	**-2.6**
GRR				Lg		22 40 10.9	
	26nm,0.4s						
GRR	**Gorron**	**6.89**	**341**	Pn	**Pn**	**22 38 12.6**	**+0.1**
GRR				Pg	**Pg**	**22 38 40.4**	**-3.2**
GRR				Sn	**Sn**	**22 39 28.2**	**-2.6**
GRR				Lg		22 40 10.9	
	26nm,0.4s						
GRR	**Gorron**	**6.89**	**341**	*e*Pn	**Pn**	**22 38 12.6**	**+0.1**
GRR				*e*Sg	**Sg**	**22 40 10.9**	**-1.9**
	26nm,0.4s						
LDF	**La Druitiere**	**6.92**	**345**	*e*Pg	**Pg**	**22 38 41.6**	**-2.6**
LDF				*e*Sg	**Sg**	**22 40 12.4**	**-1.4**
	107nm,0.7s						
LDF	**La Druitiere**	**6.92**	**345**	*e*Pn	**Pn**	**22 38 13.1**	**+0.2**
LDF				*e*Pg	**Pg**	**22 38 41.6**	**-2.6**
LDF				*e*Sg	**Sg**	**22 40 12.4**	**-1.4**
LDF	**La Druitiere**	**6.92**	**345**	*e*Pn	**Pn**	**22 38 13.1**	**+0.2**
LDF	**La Druitiere**	**6.92**	**345**	*e*Pg	**Pg**	**22 38 41.6**	**-2.6**
LDF				*e*Sg	**Sg**	**22 40 12.4**	**-1.4**
	54nm,0.7s						
ECAL	**Calabor**	**6.94**	**273**	P	**Pn**	**22 38 13.9**	**+0.7**
ECAL	**Calabor**	**6.94**	**273**	Pn	**Pn**	**22 38 13.3**	**+0.1**
	2.1nm,0.2s,SNR=17						
ECAL				Sn	**Sn**	**22 39 29.0**	**-3.0**
	24nm,0.3s,SNR=7.3						
ECAL	**Calabor**	**6.94**	**273**	Pn	**Pn**	**22 38 13.3**	**+0.1**
	2.1nm,0.2s,SNR=17						
ECAL				Sn	**Sn**	**22 39 29.0**	**-3.0**
	24nm,0.3s,SNR=7.3						
ECAL	**Calabor**	**6.94**	**273**	Pn	**Pn**	**22 38 13.3**	**+0.1**
	2.1nm,0.2s,SNR=17						
PBRG	**Braganca**	**6.95**	**272**	*e*Pn	**Pn**	**22 38 14.8**	**+1.5**
PBRG				A		22 40 17.7	
	33nm,0.5s						
PBRG	**Braganca**	**6.95**	**272**	Pn	**Pn**	**22 38 14.8**	**+1.5**
PBRG	**Braganca**	**6.95**	**272**	Pn	**Pn**	**22 38 14.8**	**+1.5**
RFYF	**Reffroy**	**7.00**	**16**	*e*Pn	**Pn**	**22 38 14.4**	**+0.4**
	baz=201						
RFYF	**Reffroy**	**7.00**	**16**	*e*Pg	**Pg**	**22 38 42.7**	**-3.0**
RFYF				*e*Sn	**Sn**	**22 39 30.5**	**-3.0**
RFYF				*e*Sg	**Sg**	**22 40 12.4**	**-3.9**
	75nm,0.6s						
RFYF	**Reffroy**	**7.00**	**16**	*e*Pn	**Pn**	**22 38 14.4**	**+0.4**
RFYF				*e*Pg	**Pg**	**22 38 42.7**	**-3.0**
RFYF				*e*Sn	**Sn**	**22 39 30.5**	**-3.0**
RFYF				*e*Sg	**Sg**	**22 40 12.4**	**-3.9**
RFYF	**Reffroy**	**7.00**	**16**	*e*Pn	**Pn**	**22 38 14.4**	**+0.4**
RFYF	**Reffroy**	**7.00**	**16**	*e*Pg	**Pg**	**22 38 42.7**	**-3.0**

ELOJ	**Sierra Loja**	**7.06**	**230**	Pn	**Pn**	**22 38 15.7**	**+1.0**
	3.4nm,0.5s,SNR=7.9						
ELOJ	**Sierra Loja**	**7.06**	**230**	Pn	**Pn**	**22 38 15.7**	**+1.0**
	3.4nm,0.5s,SNR=7.9						
ELOJ	**Sierra Loja**	**7.06**	**230**	Pn	**Pn**	**22 38 15.7**	**+0.9**
	3.4nm,0.5s,SNR=7.9						
ECH	**Echery**	**7.07**	**26**	Pn	**Pn**	**22 38 15.7**	**+0.8**
ECH	**Echery**	**7.07**	**26**	Pn	**Pn**	**22 38 15.7**	**+0.8**
FELD	**Feldberg im Sc**	**7.08**	**31**	Pn	**Pn**	**22 38 15.2**	**+0.1**
FELD	**Feldberg im Sc**	**7.08**	**31**	Pn	**Pn**	**22 38 15.2**	**+0.1**
FLN	**La Foliniere**	**7.16**	**344**	*e*Pn	**Pn**	**22 38 15.9**	**-0.2**
	baz=164						
FLN				*e*Sn	**Sn**	**22 39 34.8**	**-2.5**
FLN				*e*Sg	**Sg**	**22 40 19.7**	**-1.6**
	61nm,0.5s						
FLN	**La Foliniere**	**7.16**	**344**	Pn	**Pn**	**22 38 15.9**	**-0.2**
FLN				Sn	**Sn**	**22 39 34.8**	**-2.5**
FLN				Lg		22 40 19.7	
	31nm,0.5s						
FLN	**La Foliniere**	**7.16**	**344**	Pn	**Pn**	**22 38 15.9**	**-0.2**
FLN				Sn	**Sn**	**22 39 34.8**	**-2.5**
FLN				Lg		22 40 19.7	
	31nm,0.5s						
FLN	**La Foliniere**	**7.16**	**344**	*e*Pn	**Pn**	**22 38 15.9**	**-0.2**
FLN				*e*Sg	**Sg**	**22 40 19.7**	**-1.6**
	31nm,0.5s						
QUIF	**Quistinic**	**7.23**	**328**	*e*Pn	**Pn**	**22 38 16.8**	**-0.4**
QUIF				*e*Sn	**Sn**	**22 39 36.1**	**-3.1**
QUIF				*e*Sg	**Sg**	**22 40 21.3**	**-2.4**
	57nm,0.6s						
QUIF	**Quistinic**	**7.23**	**328**	Pn	**Pn**	**22 38 16.8**	**-0.4**
QUIF				Sn	**Sn**	**22 39 36.1**	**-3.1**
QUIF				Lg		22 40 21.3	
	28nm,0.6s						
QUIF	**Quistinic**	**7.23**	**328**	Pn	**Pn**	**22 38 16.8**	**-0.4**
QUIF				Sn	**Sn**	**22 39 36.1**	**-3.1**
QUIF				Lg		22 40 21.3	
	28nm,0.6s						
QUIF	**Quistinic**	**7.23**	**328**	*e*Pn	**Pn**	**22 38 16.8**	**-0.4**
QUIF				*e*Sg	**Sg**	**22 40 21.3**	**-2.4**
	28nm,0.6s						
ECAB	**El Cabril**	**7.24**	**240**	P	**Pn**	**22 38 18.1**	**+0.8**
ECAB				Lg		22 40 25.9	
ECAB	**El Cabril**	**7.24**	**240**	Pn	**Pn**	**22 38 18.0**	**+0.7**
	14nm,1.1s,SNR=11						
ECAB				Lg		22 40 21.1	
	66nm,0.9s,SNR=7.9						
ECAB	**El Cabril**	**7.24**	**240**	Pn	**Pn**	**22 38 18.0**	**+0.7**
	14nm,1.1s,SNR=11						
ECAB				Lg		22 40 21.1	
	66nm,0.9s,SNR=7.9						
ECAB	**El Cabril**	**7.24**	**240**	Pn	**Pn**	**22 38 18.0**	**+0.7**
	14nm,1.1s,SNR=11						
MVO	**Moncorvo**	**7.24**	**267**	*e*Pn	**Pn**	**22 38 17.4**	**+0.1**
MVO				*e*Sn	**Sn**	**22 39 35.9**	**-3.5**
MVO				*e*Sg	**Sg**	**22 40 21.8**	**-2.2**
MVO				A		22 40 33.9	
	76nm,0.5s						
MVO	**Moncorvo**	**7.24**	**267**	P	**Pn**	**22 38 17.4**	**+0.1**
MVO	**Moncorvo**	**7.24**	**267**	Pn	**Pn**	**22 38 17.4**	**+0.1**
	1.7nm,0.1s,SNR=14						
MVO				Sn	**Sn**	**22 39 35.0**	**-4.4**
	76nm,0.5s,SNR=5.2						
MVO				Lg		22 40 22.0	
	108nm,1.0s,SNR=7.9						
MVO	**Moncorvo**	**7.24**	**267**	Pn	**Pn**	**22 38 17.4**	**+0.1**
	1.7nm,0.1s,SNR=14						
MVO				Sn	**Sn**	**22 39 35.0**	**-4.4**
	76nm,0.5s,SNR=5.2						
MVO				Lg		22 40 22.0	
	108nm,1.0s,SNR=7.9						
MVO	**Moncorvo**	**7.24**	**267**	Pn	**Pn**	**22 38 17.4**	**+0.1**
	1.7nm,0.1s,SNR=14						
MVO				*e*Sg	**Sg**	**22 40 21.8**	**-2.2**
	76nm,0.5s						
CDF	**Champ du Feu**	**7.28**	**26**	*e*Pn	**Pn**	**22 38 17.5**	**-0.3**
CDF				*e*Sn	**Sn**	**22 39 37.3**	**-3.1**
CDF				*e*Sg	**Sg**	**22 40 23.8**	**-1.4**
	40nm,0.8s						
CDF	**Champ du Feu**	**7.28**	**26**	Pn	**Pn**	**22 38 17.5**	**-0.3**
CDF				Sn	**Sn**	**22 39 37.3**	**-3.1**
CDF				Lg		22 40 23.8	
	20nm,0.8s						
CDF	**Champ du Feu**	**7.28**	**26**	Pn	**Pn**	**22 38 17.5**	**-0.3**
CDF				Sn	**Sn**	**22 39 37.3**	**-3.1**
CDF				Lg		22 40 23.8	
	20nm,0.8s						
CDF	**Champ du Feu**	**7.28**	**26**	*e*Pn	**Pn**	**22 38 17.5**	**-0.3**
CDF				*e*Sg	**Sg**	**22 40 23.8**	**-1.4**
	20nm,0.8s						
SGMF	**Saint Gilles**	**7.29**	**332**	*e*Pn	**Pn**	**22 38 18.1**	**+0.2**
SGMF				*e*Sg	**Sg**	**22 40 23.3**	**-2.1**
	114nm,0.8s						
SGMF	**Saint Gilles**	**7.29**	**332**	Pn	**Pn**	**22 38 18.1**	**+0.2**
SGMF				Lg		22 40 23.3	
	57nm,0.8s						
SGMF	**Saint Gilles**	**7.29**	**332**	Pn	**Pn**	**22 38 18.1**	**+0.2**
SGMF				Lg		22 40 23.3	
	57nm,0.8s						
SGMF	**Saint Gilles**	**7.29**	**332**	*e*Pn	**Pn**	**22 38 18.1**	**+0.2**
SGMF				*e*Sg	**Sg**	**22 40 23.3**	**-2.1**
	57nm,0.8s						
EPON	**Pontenova**	**7.30**	**284**	Pn	**Pn**	**22 38 18.2**	**+0.1**
	0.2nm,0.4s,SNR=7.9						
EPON				Sn	**Sn**	**22 39 37.8**	**-3.1**
	SNR=7.9						
EPON	**Pontenova**	**7.30**	**284**	Pn	**Pn**	**22 38 18.2**	**+0.1**
	0.2nm,0.4s,SNR=7.9						
EPON				Sn	**Sn**	**22 39 37.8**	**-3.1**
	SNR=7.9						
EPON	**Pontenova**	**7.30**	**284**	Pn	**Pn**	**22 38 18.2**	**+0.1**
	0.2nm,0.4s,SNR=7.9						
DAVA	**Damuels**	**7.47**	**42**	⇓*i*Pn	**Pn**	**22 38 21.4**	**+1.0**
DAVA				⇑*i*Sn	**Sn**	**22 39 42.6**	**-2.5**
DAVA	**Damuels**	**7.47**	**42**	Pn	**Pn**	**22 38 21.4**	**+1.0**
ROSF	**Rostrenen**	**7.62**	**329**	*e*Pn	**Pn**	**22 38 22.8**	**+0.4**
ROSF				*e*Sn	**Sn**	**22 39 45.5**	**-3.1**
ROSF				*e*Sg	Sn	22 40 33.6	+45
	133nm,1.0s						
ROSF	**Rostrenen**	**7.62**	**329**	Pn	**Pn**	**22 38 22.8**	**+0.4**
ROSF				Sn	**Sn**	**22 39 45.5**	**-3.1**
ROSF				Lg		22 40 33.6	
	67nm,1.0s						
ROSF	**Rostrenen**	**7.62**	**329**	Pn	**Pn**	**22 38 22.8**	**+0.4**
ROSF				Sn	**Sn**	**22 39 45.5**	**-3.1**
ROSF				Lg		22 40 33.6	
	67nm,1.0s						
ROSF	**Rostrenen**	**7.62**	**329**	*e*Pn	**Pn**	**22 38 22.8**	**+0.4**
ROSF				*e*Sg	Sn	22 40 33.6	+45
	67nm,1.0s						
PVRL	**Vila Real**	**7.74**	**269**	*e*Pn	**Pn**	**22 38 23.9**	**-0.2**
PVRL				A		22 40 56.1	
	33nm,0.6s						
PVRL	**Vila Real**	**7.74**	**269**	Pn	**Pn**	**22 38 23.9**	**-0.2**
PVRL	**Vila Real**	**7.74**	**269**	Pn	**Pn**	**22 38 23.9**	**-0.2**
FETA	**Feichten**	**7.74**	**46**	⇑*i*Pn	**Pn**	**22 38 26.1**	**+1.9**
FETA				⇓*i*Sn	**Sn**	**22 39 51.2**	**-0.4**
FETA	**Feichten**	**7.74**	**46**	Pn	**Pn**	**22 38 26.1**	**+2.0**
FETA				Sn	**Sn**	**22 39 51.2**	**-0.4**
MTE	**Manteigas**	**7.78**	**262**	*e*Pn	**Pn**	**22 38 24.7**	**0.0**
MTE				*e*Sn	**Sn**	**22 39 48.3**	**-4.4**
MTE				*e*Sg	Sn	22 40 39.6	+47
MTE				A		22 40 58.6	
	48nm,0.7s						
MTE	**Manteigas**	**7.78**	**262**	*e*Pn	**Pn**	**22 38 24.7**	**0.0**
MTE				*e*Sg	Sn	22 40 39.6	+47
	48nm,0.7s						
PCBR	**Castelo Branco**	**7.89**	**258**	*e*Pn	**Pn**	**22 38 25.5**	**-0.8**
PCBR				*e*Sn	**Sn**	**22 39 51.7**	**-3.8**
PCBR				A		22 40 54.8	
	36nm,0.6s						
PCBR	**Castelo Branco**	**7.89**	**258**	Pn	**Pn**	**22 38 25.5**	**-0.8**
PCBR				Sn	**Sn**	**22 39 51.7**	**-3.8**
	18nm,0.6s						
PCBR	**Castelo Branco**	**7.89**	**258**	Pn	**Pn**	**22 38 25.5**	**-0.8**
PCBR				Sn	**Sn**	**22 39 51.7**	**-3.8**
	18nm,0.6s						
PCBR	**Castelo Branco**	**7.89**	**258**	*e*Pn	**Pn**	**22 38 25.5**	**-0.8**
PCAB	**Cabril**	**7.92**	**272**	*e*Pn	**Pn**	**22 38 26.6**	**0.0**
PCAB				*e*Sn	**Sn**	**22 39 54.1**	**-2.0**
PCAB				A		22 40 51.8	
	35nm,0.6s						
PCAB	**Cabril**	**7.92**	**272**	Pn	**Pn**	**22 38 26.6**	**0.0**
PCAB				Sn	**Sn**	**22 39 54.1**	**-2.0**
	18nm,0.6s						

PCAB	**Cabril**	**7.92**	**272**	Pn	**Pn**	**22 38 26.6**	**0.0**
PCAB				Sn	**Sn**	**22 39 54.1**	**-2.0**
	18nm,0.6s						
ELOB	**Lobios**	**7.93**	**273**	P	**Pn**	**22 38 27.3**	**+0.5**
ELOB	**Lobios**	**7.93**	**273**	Pn	**Pn**	**22 38 27.3**	**+0.5**
	4.6nm,0.5s,SNR=18						
ELOB				Sn	**Sn**	**22 39 50.4**	**-6.0**
	6.9nm,0.6s,SNR=6.2						
ELOB	**Lobios**	**7.93**	**273**	Pn	**Pn**	**22 38 27.3**	**+0.5**
	4.6nm,0.5s,SNR=18						
ELOB				Sn	**Sn**	**22 39 50.4**	**-6.0**
	6.9nm,0.6s,SNR=6.2						
ELOB	**Lobios**	**7.93**	**273**	Pn	**Pn**	**22 38 27.3**	**+0.5**
	4.6nm,0.5s,SNR=18						
PVIS	**Viseu**	**7.97**	**265**	*e*Pn	**Pn**	**22 38 27.5**	**+0.2**
PVIS				*e*Sn	**Sn**	**22 39 53.8**	**-3.5**
PVIS				A		22 40 49.8	
	21nm,0.5s						
PVIS	**Viseu**	**7.97**	**265**	Pn	**Pn**	**22 38 27.5**	**+0.2**
PVIS				Sn	**Sn**	**22 39 53.8**	**-3.5**
	11nm,0.5s						
PVIS	**Viseu**	**7.97**	**265**	Pn	**Pn**	**22 38 27.5**	**+0.2**
PVIS				Sn	**Sn**	**22 39 53.8**	**-3.5**
	11nm,0.5s						
PVIS	**Viseu**	**7.97**	**265**	*e*Pn	**Pn**	**22 38 27.5**	**+0.2**
PMRV	**Marv??o**	**7.97**	**255**	*e*Pn	**Pn**	**22 38 26.9**	**-0.4**
PMRV				*e*Sn	**Sn**	**22 39 53.4**	**-4.0**
PMRV				A		22 40 57.0	
	33nm,0.6s						
PMRV	**Marv??o**	**7.97**	**255**	Pn	**Pn**	**22 38 26.9**	**-0.4**
PMRV				Sn	**Sn**	**22 39 53.4**	**-4.0**
	33nm,0.6s						
PMRV	**Marv??o**	**7.97**	**255**	Pn	**Pn**	**22 38 26.9**	**-0.4**
PMRV				Sn	**Sn**	**22 39 53.4**	**-4.0**
	33nm,0.6s						
PMRV	**Marv??o**	**7.97**	**255**	*e*Pn	**Pn**	**22 38 26.9**	**-0.4**
EBAD	**Badajoz**	**7.98**	**250**	P	**Pn**	**22 38 27.0**	**-0.3**
EBAD	**Badajoz**	**7.98**	**250**	Pn	**Pn**	**22 38 27.0**	**-0.4**
	2.5nm,0.4s,SNR=18						
EBAD				Sn	**Sn**	**22 39 51.9**	**-5.6**
	2.8nm,0.4s,SNR=6.8						
EBAD				Lg		22 40 47.2	
	27nm,0.6s,SNR=7.9						
EBAD	**Badajoz**	**7.98**	**250**	Pn	**Pn**	**22 38 27.0**	**-0.4**
	2.5nm,0.4s,SNR=18						
EBAD				Sn	**Sn**	**22 39 51.9**	**-5.6**
	2.8nm,0.4s,SNR=6.8						
EBAD				Lg		22 40 47.2	
	27nm,0.6s,SNR=7.9						
EBAD	**Badajoz**	**7.98**	**250**	Pn	**Pn**	**22 38 27.0**	**-0.4**
	2.5nm,0.4s,SNR=18						
MOTA	**Moosalm**	**8.14**	**45**	⇓*i*Pn	**Pn**	**22 38 31.8**	**+2.2**
MOTA				⇓*i*Sn	**Sn**	**22 39 59.3**	**-2.2**
MOTA	**Moosalm**	**8.14**	**45**	Pn	**Pn**	**22 38 31.8**	**+2.2**
BAIF	**Baives**	**8.21**	**7**	*e*Pn	**Pn**	**22 38 30.5**	**0.0**
BAIF				*e*Sg	Sn	22 40 52.6	+49
	58nm,0.9s						
BAIF	**Baives**	**8.21**	**7**	Pn	**Pn**	**22 38 30.5**	**0.0**
BAIF				Lg		22 40 52.6	
	29nm,0.9s						
BAIF	**Baives**	**8.21**	**7**	Pn	**Pn**	**22 38 30.5**	**0.0**
BAIF				Lg		22 40 52.6	
	29nm,0.9s						
BAIF	**Baives**	**8.21**	**7**	*e*Pn	**Pn**	**22 38 30.5**	**0.0**
BAIF				*e*Sg	Sn	22 40 52.6	+49
	29nm,0.9s						
EMIN	**Mina Concepcio**	**8.23**	**243**	P	**Pn**	**22 38 30.3**	**-0.6**
EMIN	**Mina Concepcio**	**8.23**	**243**	Pn	**Pn**	**22 38 30.6**	**-0.4**
	4.1nm,0.7s,SNR=7.9						
EMIN				Lg		22 40 55.2	
	40nm,1.4s,SNR=7.9						
EMIN	**Mina Concepcio**	**8.23**	**243**	Pn	**Pn**	**22 38 30.6**	**-0.4**
	4.1nm,0.7s,SNR=7.9						
EMIN				Lg		22 40 55.2	
	40nm,1.4s,SNR=7.9						
EMIN	**Mina Concepcio**	**8.23**	**243**	P	**Pn**	**22 38 30.3**	**-0.6**
EMIN	**Mina Concepcio**	**8.23**	**243**	Pn	**Pn**	**22 38 30.6**	**-0.3**
	4.1nm,0.7s,SNR=7.9						
ESPR	**Espera**	**8.25**	**235**	Pn	**Pn**	**22 38 32.0**	**+0.8**
	2.8nm,0.4s,SNR=7.9						
ESPR	**Espera**	**8.25**	**235**	Pn	**Pn**	**22 38 32.0**	**+0.8**
	2.8nm,0.4s,SNR=7.9						
ESPR	**Espera**	**8.25**	**235**	Pn	**Pn**	**22 38 32.0**	**+0.8**
	2.8nm,0.4s,SNR=7.9						
PBAR	**Barrancos**	**8.27**	**246**	*e*Pn	**Pn**	**22 38 31.6**	**+0.2**
PBAR				*e*Sn	**Sn**	**22 40 00.8**	**-3.9**
PBAR				A		22 41 05.9	
	16nm,0.5s						
PBAR	**Barrancos**	**8.27**	**246**	Pn	**Pn**	**22 38 31.6**	**+0.2**
PBAR				Sn

13nm,0.7s
PCVE Castro Verde 9.22 246 *e*Pn **Pn 22 38 43.9 -0.6**
PCVE A 22 41 43.0
9.7nm,0.8s
PCVE Castro Verde 9.22 246 Pn **Pn 22 38 43.9 -0.6**
PCVE Castro Verde 9.22 246 *e*Pn **Pn 22 38 43.9 -0.6**
PCVE Castro Verde 9.22 246 *e*Pn **Pn 22 38 43.9 -0.6**
9.7nm,0.8s
MOA Molln 10.19 51 ⇓*i*Pn **Pn 22 39 00.2 +2.6**
MOA ⇓*i*Sn **Sn 22 40 49.1 -2.6**
MOA Molln 10.19 51 Pn **Pn 22 39 00.2 +2.6**
WET Wettzell 10.21 42 Pn **Pn 22 38 58.6 +0.7**
WTSB Winterswijk 10.44 15 *e*Sn Sx 22 42 05.5
6.9nm,0.5s
KHC Kasperske Hory 10.55 43 *e*Pn **Pn 22 39 03.1 +0.5**
3.3nm,0.4s
KHC *e*Sn **Sn 22 40 53.7 -6.9**
KHC Kasperske Hory 10.55 43 *e*P **Pn 22 39 03.2 +0.6**
KHC *e*x x 22 40 53.0
KHC Kasperske Hory 10.55 43 *e*Pn **Pn 22 39 03.1 +0.5**
3.3nm,0.4s
DLF Lyons Farm 12.91 335 *e*P **Pn 22 39 35.0 +0.2**

NEIC ***22*** *22:44:03.0, 18°.86N×68°.48W, h100km, MD3.4(RSPR), After RSPR.*
RSPR 22 22:44:03.0, 18°.86N×68°.48W, h100km±4km, MD3.4/13, 8C-5D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**1.36**	**106**⇑	*e*P	Pn	22 44 26.5	-1.0
AGPR				*e*S	Sn	22 44 45.1	-1.0
LSP	**Las Mesas**	**1.49**	**117**⇑	*e*P	Pn	22 44 27.3	-1.8
LSP				*e*S	Sn	22 44 48.0	-0.9
CRPR	**Cabo Rojo, PR**	**1.55**	**123**⇓	*e*P	Pn	22 44 28.4	-1.6
CRPR				*e*S	Sn	22 44 50.0	-0.3
LRS	**Lares**	**1.65**	**110**⇓	*e*P	Pn	22 44 30.2	-0.9
LRS				*e*S	Sn	22 44 52.0	-0.6
AOPR	**Arecibo Observ**	**1.72**	**107**⇑	*e*P	Pn	22 44 30.9	-1.1
AOPR				*e*S	Sn	22 44 54.4	+0.4
GBPR	**Guanica, Bosqu**	**1.76**	**120**	*e*S	Sn	22 44 55.9	+0.9
OBIP	**Obispado Ponce**	**1.96**	**114**⇑	*e*P	Pn	22 44 35.2	+0.1
OBIP				*e*S	Sn	22 45 00.1	+0.6
CELP	**Cerrillos**	**1.97**	**113**⇑	*e*P	Pn	22 44 34.8	-0.3
CELP				*e*S	Sn	22 44 60.0	+0.2
ICM	**Isla Caja Muer**	**2.09**	**117**⇓	*e*P	Pn	22 44 38.2	+1.4
ICM				*e*S	Sn	22 45 03.6	+0.9
SJG	**San Juan**	**2.33**	**108**⇓	*e*P	Pn	22 44 40.2	+0.3
SJG				*e*S	Sn	22 45 08.2	0.0
SJG	**San Juan**	**2.33**	**108**⇑	*e*P	Pn	22 44 40.3	+0.3
SJG				*e*S	Sn	22 45 08.6	+0.3
CBYP	**Canovanas**	**2.56**	**103**⇑	*e*P	Pn	22 44 43.2	+0.3
CBYP				*e*S	Sn	22 45 13.6	0.0
HUMP	**Col San Antoni**	**2.60**	**105**⇓	*e*P	Pn	22 44 44.0	+0.6
HUMP				*e*S	Sn	22 45 14.5	0.0
SDDR	**Presa de Saban**	**2.66**	**273**	*e*Pn	Pn	22 44 52.4	+8.1
SDDR				*e*Sn	Sn	22 45 28.7	+13
MTP	**Monte Pirata**	**2.88**	**105**⇑	*e*P	Pn	22 44 47.3	+0.1
MTP				*e*S	Sn	22 45 21.2	-0.1

NIED ***22*** *22:45:00, 21°.00N×121°.20E, h17km, Mw4.2 Best double couple: M0=2.55000×10^15 NP1:φs=190.00000°, δ=88.00000°, λ=-167.00000°. NP2:φs=99.00000°, δ=77.00000°, λ=-2.00000°.*
NEIC ***22*** *22:45:42.8±0.8, 20°.70N×120°.65E, h10km, mb4.2/4, Error ellipse: s-maj=16.4km s-min=8.7km az=124.0*
BJI ***22*** *22:45:43.9, 20°.87N×121°.75E, h15km, mB4.4/1, mb4.1/7, Ms3.8/4, Ms7 3.7/4*
IDC ***22*** *22:45:47.3±0.9, 21°.02N×121°.06E, h0km, mb3.8/8, mb1 4.0/9, mb1mx3.8/22, mbtmp3.9/9, ML4.1/1, MS3.8/2, Ms1 3.8/2, ms1mx3.1/25, Error ellipse: s-maj=27.1km s-min=18.3km az=86.0*
ISCJB ***22*** *22:45:47.8±0.7, 20°.92N±0°.05×121°.08E±0°.04, h71km±6km, mb3.8/12, Error ellipse: s-maj=8.3km s-min=5.4km az=154.1*
TAP ***22*** *22:45:49.0, 21°.02N×121°.12E, h70km±1km, ML4.4, D*
JMA ***22*** *22:45:50.2±0.3, 21°.02N×121°.21E, h157km, M3.9*
ISC 22 22:45:48.4±0.7, 20°.88N±0°.05×121°.02E±0°.04, h60km±7km, n78, σ1°.904/105, mb3.9/12, MS3.7/3, 2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**1.02**	**354**	P	**Pn**	**22 46 06.2**	**-0.5**
TSEB	baz=344			*i* S	**Sn**	**22 46 20.3**	**+0.1**
TWK1	**Hengchun**	**1.07**	**349**	⇓*i*P	**Pn**	**22 46 07.6**	**+0.2**
TWK1	baz=342			S	**Sn**	**22 46 21.2**	**-0.3**
HEN	**Hengchun**	**1.15**	**347**	P	**Pn**	**22 46 08.4**	**0.0**
HEN	baz=334			S	**Sn**	**22 46 23.8**	**+0.5**
LAY	**Lan-yu**	**1.25**	**23**	P	**Pn**	**22 46 08.1**	**-1.7**
LAY	baz=21			S	**Sn**	**22 46 23.7**	**-2.0**
TAW	**Tawu**	**1.47**	**356**	*e*P	**Pn**	**22 46 12.3**	**-0.4**
EAST	**Anshuo**	**1.50**	**354**	*e*P	**Pn**	**22 46 12.2**	**-0.9**
EAST	baz=360			S	**Sn**	**22 46 31.7**	**0.0**
SCZT	**Fangliau**	**1.53**	**346**	⇓P	**Pn**	**22 46 13.2**	**-0.3**
SCZT	baz=341			*e*S	**Sn**	**22 46 30.9**	**-1.4**
TWP	**Hsiaoliuchiu**	**1.58**	**337**	*e*P	**Pn**	**22 46 13.1**	**-1.1**
ECL	**Taimali**	**1.71**	**358**	*e*P	**Pn**	**22 46 14.2**	**-1.7**
TTN	**Taitung**	**1.87**	**4**	*e*P	**Pn**	**22 46 17.9**	**-0.1**
SSD	**Sandimen**	**1.89**	**349**	*e*P	**Pn**	**22 46 17.8**	**-0.6**
TWG	**Pinlang**	**1.93**	**2**	*e*Pn	**Pn**	**22 46 18.1**	**-0.8**
TWG				*e*Sn	**Sn**	**22 46 48.5**	**+6.4**
TWG	**Pinlang**	**1.93**	**2**	*e*P	**Pn**	**22 46 18.3**	**-0.6**
TWM1	**Shoushan**	**2.01**	**344**	*e*P	**Pn**	**22 46 21.7**	**+1.7**
SGST	**Jiashian**	**2.23**	**350**	*e*P	**Pn**	**22 46 23.0**	**0.0**
STYT	**Tauyuan**	**2.28**	**354**	*e*P	**Pn**	**22 46 23.5**	**-0.2**
ELDTW	**Lidau**	**2.30**	**0**	*e*P	**Pn**	**22 46 23.4**	**-0.5**
CHN1	**Nanshi**	**2.34**	**349**	*e*P	**Pn**	**22 46 24.4**	**0.0**
TWK	**Hsinying**	**2.42**	**348**	*e*P	**Pn**	**22 46 26.5**	**+0.9**
TPUB	**Ta-pu**	**2.43**	**352**	*e*Pn	**Pn**	**22 46 25.3**	**-0.5**
TPUB				*e*Sn	**Sn**	**22 46 59.7**	**+5.3**
TWF1	**Yuli**	**2.47**	**6**	*e*P	**Pn**	**22 46 25.4**	**-0.9**
TWF1	baz=354			*e*S	**Sn**	**22 46 55.0**	**-0.4**
YULB	**Yu-li**	**2.51**	**6**	*e*Pn	**Pn**	**22 46 26.6**	**-0.3**
YULB				*e*Sn	**Sn**	**22 47 00.8**	**+4.5**
EHY	**Hungye**	**2.63**	**6**	*e*P	**Pn**	**22 46 28.7**	**+0.3**
CHY	**Chiayi**	**2.66**	**348**	*e*P	**Pn**	**22 46 28.9**	**+0.1**
CHN5	**Tsauling**	**2.72**	**353**	*e*P	**Pn**	**22 46 29.9**	**+0.2**
CHN5	baz=351			*e*S	**Sn**	**22 47 01.7**	**+0.3**
SSLB	**Suanglung**	**2.89**	**359**	*e*Pn	**Pn**	**22 46 31.7**	**-0.3**
SSLB				*e*Sn	**Sn**	**22 47 09.4**	**+3.8**
ESL	**Shilin**	**2.94**	**7**	*e*P	**Pn**	**22 46 33.0**	**+0.3**
ESL	baz=359			*e*S	**Sn**	**22 47 05.3**	**-1.6**
SMLT	**Sun Moon Lake**	**2.99**	**358**	*e*P	**Pn**	**22 46 33.9**	**+0.5**
PNG	**Penghu**	**3.00**	**333**	*e*P	**Pn**	**22 46 32.7**	**-0.8**
TYC	**Yuchr**	**3.01**	**357**	*e*P	**Pn**	**22 46 34.1**	**+0.4**
TYC	baz=355			*e*S	**Sn**	**22 47 06.5**	**-2.0**
HWA	**Hwalien**	**3.13**	**10**	*e*P	**Pn**	**22 46 32.2**	**-3.1**
TWD	**Chiawan**	**3.23**	**9**	*e*P	**Pn**	**22 46 36.6**	**0.0**
WHF	**Hehuan Shan**	**3.26**	**4**	*e*P	**Pn**	**22 46 38.1**	**+1.1**
WHF	baz=352			*e*S	**Sn**	**22 47 14.5**	**0.0**
TCU	**Taichung**	**3.27**	**355**	*e*P	**Pn**	**22 46 38.8**	**+1.7**
NACB	**Ninganchiao**	**3.32**	**9**	*e*Pn	**Pn**	**22 46 36.9**	**-1.0**
NACB				*e*Sn	**Sn**	**22 47 16.6**	**+0.5**
TWT	**Tachien**	**3.36**	**2**	*e*P	**Pn**	**22 46 38.1**	**-0.3**
TWQ1	**Liyutan**	**3.46**	**356**	*e*P	**Pn**	**22 46 41.3**	**+1.6**
NNS	**Nan Shan**	**3.56**	**5**	*e*P	**Pn**	**22 46 42.4**	**+1.2**
ENA	**Nanau**	**3.59**	**11**	*e*P	**Pn**	**22 46 42.1**	**+0.5**
NSTT	**Nanjuang**	**3.73**	**360**	*e*P	**Pn**	**22 46 43.0**	**-0.5**
YHNB	**Yeheng**	**3.79**	**5**	*e*Pn	**Pn**	**22 46 46.1**	**+1.9**
YHNB				*e*Sn	**Sn**	**22 47 28.6**	**+1.1**
TWC	**Suao**	**3.79**	**12**	*e*P	**Pn**	**22 46 45.3**	**+1.0**
TWC	baz=359			*e*S	**Sn**	**22 47 27.5**	**-0.1**
NSK	**Sanguang**	**3.79**	**5**	*e*P	**Pn**	**22 46 45.3**	**+1.0**
NSK	baz=355			*e*S	**Sn**	**22 47 26.3**	**-1.3**
TWE	**Neicheng**	**3.87**	**9**	*e*P	**Pn**	**22 46 46.4**	**+1.1**
YOJ	**Yonaguni jima**	**4.01**	**27**	P	**Pn**	**22 46 48.7**	**+1.4**
YOJ				*e*S	**Sn**	**22 47 33.8**	**+0.7**
HATJ	**Hateruma jima**	**4.08**	**39**	P	**Pn**	**22 46 49.6**	**+1.3**
HATJ				*e*S	**Sn**	**22 47 35.2**	**+0.5**
TATO	**Taipei**	**4.10**	**6**	*e*Pn	**Pn**	**22 46 46.7**	**-1.8**
TATO				*e*Sn	**Sn**	**22 47 36.4**	**+1.2**
TWB1	**Santiao Chiao**	**4.20**	**12**	*e*P	**Pn**	**22 46 51.1**	**+1.1**
NWF	**Wu-fen Shan**	**4.23**	**9**	*e*P	**Pn**	**22 46 52.0**	**+1.7**
IRIF	**Iriomote-Funau**	**4.25**	**36**	P	**Pn**	**22 46 51.7**	**+1.0**
IRIF				*e*S	**Sn**	**22 47 39.4**	**+0.4**
JKRS	**Kuro-shima**	**4.34**	**39**	P	**Pn**	**22 46 52.4**	**+0.6**
JKRS				*e*S	**Sn**	**22 47 40.7**	**-0.4**
JIJ	**Ishigaki jima**	**4.51**	**39**	P	**Pn**	**22 46 54.7**	**+0.5**
JIJ				*e*S	**Sn**	**22 47 44.0**	**-1.3**
QZH	**Quanzhou**	**4.62**	**332**	*e*Pn	**Pn**	**22 46 58.9**	**+3.2**
QZH	comp=N,930nm,11.6s			LR	LR		
QZH	comp=E,920nm,9.2s			LR	LR		
QZH	comp=Z,2μm,11.8s			LR	LR		
JTJ	**Tarama**	**5.06**	**42**	P	**Pn**	**22 47 02.6**	**+1.0**
JTJ				*e*S	**Sn**	**22 47 58.3**	**-0.4**
JMJ	**Miyako jima 2**	**5.56**	**44**	*e*S	**Sn**	**22 48 09.7**	**-1.3**
JOGS	**Gusukube**	**5.59**	**46**	*e*S	**Sn**	**22 48 11.0**	**-1.0**
QIZ	**Qiongzhong**	**10.67**	**262**	*e*Pn	**Pn**	**22 48 11.2**	**-7.3**
KSRS	**Korea Array**	**17.57**	**18**	P	**Pn**	**22 49 53.0**	**+4.0**
BJI	**Beijing**	**19.54**	**349**	P	**Pn**	**22 50 15.4**	**+2.6**
BJI				S	**S**	**22 53 56.1**	**+7.6**
BJI	comp=Z,20nm,1.3s			pmax	pmax		
BJI	comp=N,190nm,18.9s			LR	LR		
BJI	comp=E,250nm,18.6s			LR	LR		
BJI	comp=Z,110nm,24.0s			LR	LR		
CMAR	**Chiang Mai Arr**	**20.92**	**267**	P	**P**	**22 50 30.6**	**+4.4**
CMAR				LR	LR	22 57 44.9	
LZH	**Lanzhou**	**21.33**	**319**	*e*P	**P**	**22 50 35.1**	**+4.7**
LZH				pP		22 50 39.8	
LZH				sP	sP	22 50 42.3	-8.8
LZH	comp=Z,19nm,1.3s,mb4.3			pmax	pmax		
LZH	comp=N,290nm,13.0s			LR	LR		
LZH	comp=Z,350nm,17.6s,MS3.8			LR	LR		
MJAR	**Matsushiro Arr**	**21.64**	**40**	P	**P**	**22 50 38.3**	**+4.5**
KULM	**Kulim**	**25.12**	**235**	P	**P**	**22 51 05.1**	**-2.8**
KAPI	**Kappang**	**25.76**	**183**	P	**P**	**22 51 22.1**	**+8.4**
ULN	**Ulaanbaatar**	**29.19**	**341**	*e*P	**P**	**22 51 45.6**	**+1.6**
SONM	**Songino Array**	**29.37**	**340**	P	**P**	**22 51 51.0**	**+5.4**
SONM				LR	LR	23 05 15.3	
MK31	**Makanchi Array**	**40.65**	**319**	*e*P	**P**	**22 53 21.9**	**-0.7**
MKAR	**Makanchi Array**	**40.65**	**319**	P	**P**	**22 53 29.3**	**+6.7**
MKAR	**Makanchi Array**	**40.65**	**319**	P	**P**	**22 53 29.3**	**+6.7**
WRAB	**Tennant Creek**	**42.61**	**161**	*e*P	**P**	**22 53 37.4**	**-1.4**
UCH	**Uchtor**	**44.33**	**310**	P	**P**	**22 53 52.1**	**-0.5**
AML	**Almayashu**	**44.90**	**309**	*e*P	**P**	**22 53 56.4**	**-0.7**
EKS2	**Erkin-Say**	**44.96**	**310**	*e*P	**P**	**22 53 57.6**	**+0.1**
ASAR	**Alice Springs**	**46.02**	**163**	P	**P**	**22 54 13.3**	**+7.3**
KBL	**Kabul**	**47.51**	**298**	P	**P**	**22 54 16.2**	**-1.4**
BVAR	**Borovoye Array**	**50.16**	**323**	P	**P**	**22 54 44.2**	**+6.5**
ARU	**Arti**	**57.66**	**324**	*e*P	**P**	**22 55 32.9**	**+0.5**
ILAR	**Eielson Array**	**72.21**	**27**	P	**P**	**22 57 12.0**	**+5.3**

BJI ***22*** *22:46:13.7, 15°.10S×173°.00W, h10km, mB5.3/20, mb5.1/31, Ms5.0/25, Ms7 4.7/22*
NEIC ***22*** *22:46:15.8±0.2, 15°.13S×173°.03W, h10km, mb5.2/57, MS5.0/5, Error ellipse: s-maj=8.9km s-min=4.9km az=147.0*
MOS ***22*** *22:46:16.8±1.2, 14°.91S×173°.06W, h20km, mb5.3/24, MS5.0/16, Error ellipse: s-maj=11.7km s-min=7.3km az=60.4*
SZGRF ***22*** *22:46:17.7, 15°.85S×172°.84W, h33km, mb4.9, Samoa Islands region*
ISCJB ***22*** *22:46:21.2±0.2, 15°.16S±0°.06×173°.11W±0°.04, h64km, mb5.1/92, Error ellipse: s-maj=8.6km s-min=4.3km az=157.3*
IDC ***22*** *22:46:23.7±0.5, 15°.31S×173°.01W, h76km±4km, mb4.6/20, mb1 4.7/20, mb1mx4.7/23, mbtmp4.6/20, MS4.5/17, Ms1 4.5/17, ms1mx4.4/18, Error ellipse: s-maj=19.5km s-min=10.6km az=136.0*
GCMT ***22*** *22:46:24.9±0.2, 14°.79S×173°.10W, h12km, MW5.4, Moment Tensor Solution. s50,c73; s91,c143; Moment tensor: Scale 10^17Nm; Mrr=0.33±.01; Mθθ0.48±.02; Mφφ-0.15±.02; Mrθ-1.51±.03; Mθφ0.21±.01; Mφr0.23±.03; Best double couple: M0=1.60000×10^17 NP1:φs=221.00000°, δ=12.00000°, λ=-147.00000°. NP2:φs=98.00000°, δ=83.00000°, λ=-80.00000°. Principal axes: T 1.6400, Plg37.0000°, Azm179.0000°; N -0.0800, Plg10.0000°, Azm277.0000°; P -1.5600, Plg51.0000°, Azm20.0000°; Data Used: II IU IC G CN.*
ISC 22 22:46:23.0±0.2, 15°.20S±0°.06×173°.11W±0°.04, h66km, h66km±2.3km; pP-P, n838, σ0°.62/609, mb4.9/92, 204C-278D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.82**	**46**	P	**Pn**	**22 46 43.4**	**-8.7**
AFI	512nm,0.3s,baz=36,slow=1.5,SNR=268			S	**Sn**	**22 47 00.4**	**-14**
AFI	**Afiamalu**	**1.82**	**46**⇑	*e*Pn	**Pn**	**22 46 43.3**	**-8.8**
AFI				*e*Sn	**Sn**	**22 47 01.0**	**-13**
MSVF	**Nonsavu**	**8.85**	**252**	Pn	**Pn**	**22 48 34.0**	**+5.9**
MSVF	**Nonsavu**	**8.85**	**252**	*e*Pn	**Pn**	**22 48 27.0**	**-1.1**
MSVF	**Nonsavu**	**8.85**	**252**	Pn	**Pn**	**22 48 34.0**	**+5.9**
RAR	**Rarotonga**	**14.01**	**117**	P	**Pn**	**22 49 30.9**	**-7.4**
RAR				S	**Sn**	**22 51 54.5**	**-18**
RAR	baz=162,slow=19			LR	LR	22 53 38.0	
RAR	**Rarotonga**	**14.01**	**117**	*e*P	**Pn**	**22 49 31.2**	**-7.1**
RAR				pmax	pmax		
RAR	**Rarotonga**	**14.01**	**117**	*e*Pn	**Pn**	**22 49 31.2**	**-7.2**
RAR				*e*Sn	**Sn**	**22 51 59.6**	**-13**
DZM	**Mont Dzumac**	**20.53**	**247**	*e*P	**P**	**22 51 00.1**	**+4.0**
DZM				*e*LR	LR	22 55 47.5	
DZM	**Mont Dzumac**	**20.53**	**247**	*e*P	**P**	**22 51 00.6**	**+4.6**
NOUC	**Port Laguerre**	**20.66**	**248**	*e*P	**P**	**22 51 02.2**	**+4.7**
PPT	**Papeete**	**22.70**	**99**	*e*LQ		22 55 34.2	
PPT				*e*LR	LR	22 56 31.9	
PPT	**Papeete**	**22.70**	**99**	LR	LR	22 57 24.4	
XMAS	**Kiritimati**	**23.10**	**43**	*e*P	**P**	**22 51 22.8**	**-0.7**
TBI	**Tubuai**	**23.73**	**114**	*e*LQ		22 56 07.6	
TBI				*e*LR	LR	22 57 05.6	
URZ	**Urewera**	**24.54**	**199**	P	**P**	**22 51 35.7**	**-0.8**
URZ				LR	LR	23 00 29.1	
URZ	**Urewera**	**24.54**	**199**	*e*P	**P**	**22 51 36.1**	**-0.3**
RPZ	**Rata Peaks**	**31.47**	**202**	P	**P**	**22 52 36.7**	**-1.5**
TAOE	**Nuku Hiva Isla**	**32.82**	**83**	*e*LR	LR	23 01 21.4	
RKT	**Rikitea**	**36.80**	**108**	*e*LR	LR	23 03 04.5	
CTAO	**Charters Tower**	**38.96**	**257**	P	**P**	**22 53 43.9**	**+1.0**
PMG	**Port Moresby**	**39.20**	**274**	*i* P	**P**	**22 53 45.3**	**+0.3**
PMG				pmax	pmax		
PMG	**Port Moresby**	**39.20**	**274**	*e*P	**P**	**22 53 45.1**	**+0.2**
KIP	**Kipapa**	**39.29**	**23**	*e*P	**P**	**22 53 45.9**	**+0.4**
KIP				pmax	pmax		
KIP	**Kipapa**	**39.29**	**23**	*e*P	**P**	**22 53 45.9**	**+0.3**
CMSA	**Cobar Meteorol**	**40.90**	**239**	*e*P	**P**	**22 53 56.6**	**-2.2**
TOO	**Toolangi**	**42.81**	**231**	*e*P	**P**	**22 54 12.8**	**-1.6**
STKA	**Stephens Creek**	**44.38**	**240**	*e*P	**P**	**22 54 25.3**	**-1.8**
STKA	**Stephens Creek**	**44.38**	**240**	P	**P**	**22 54 25.6**	**-1.5**
STKA				LR	LR	23 10 13.2	
STKA	**Stephens Creek**	**44.38**	**240**	*e*P	**P**	**22 54 25.6**	**-1.5**
WRAB	**Tennant Creek**	**50.15**	**257**	*e*P	**P**	**22 55 10.7**	**-1.4**
WRAB				pmax	pmax		
WRAB	**Tennant Creek**	**50.15**	**257**	*e*P	**P**	**22 55 10.7**	**-1.4**
ASAR	**Alice Springs**	**50.44**	**252**	P	**P**	**22 55 12.4**	**-1.8**
ASAR				pP	pP	22 55 32.1	+1.0
ASAR				S	**S**	**23 02 22.9**	**-0.3**
GUMO	**Guam**	**50.46**	**302**	LR	LR	23 11 17.2	
GUMO	**Guam**	**50.46**	**302**	*e*P	**P**	**22 55 14.6**	**+0.2**
FORT	**Forrest**	**55.76**	**243**	*e*P	**P**	**22 55 50.9**	**-2.4**
FITZ	**Fitzroy Crossi**	**58.52**	**258**	P	**P**	**22 56 13.5**	**+0.5**
SBA	**Scott Base**	**63.48**	**185**	*e*P	**P**	**22 56 48.0**	**+2.4**
MBWA	**Marble Bar**	**63.68**	**254**	*e*P	**P**	**22 56 48.2**	**+0.3**
KDI	**Kendari**	**64.15**	**273**	P	Px	22 57 13.8	
ATKA	**Atka Island**	**67.12**	**359**	*e*P	**P**	**22 57 08.8**	**-0.5**
PCI	**Palu**	**67.64**	**275**	P	Px	22 57 37.5	
SMY	**Shemya**	**68.54**	**352**	*e*P	**P**	**22 57 18.1**	**-0.2**
MJAR	**Matsushiro Arr**	**68.96**	**320**	P	**P**	**22 57 21.6**	**+0.3**
MJAR				LR	LR	23 22 27.7	
MAJO	**Matsushiro**	**68.96**	**320**	*e*P	**P**	**22 57 22.0**	**+0.7**
MAT	**Matsushiro**	**68.96**	**320**	P	**P**	**22 57 21.4**	**+0.1**
MAT				S	S	23 06 21.0	0.0
YUK	**Yuzh-Kuril'sk**	**69.82**	**330**	P	pP	22 57 38.7	-5.5
YUK				*e*S	S	23 06 26.4	-4.3
BSC	**Santa Cruz Isl**	**70.58**	**45**	⇑P	**P**	**22 57 31.5**	**+0.2**
MYLDM	**Lahad Datu**	**70.68**	**281**	P	PcP	22 57 57.8	+4.8
CASY	**Casey**	**70.71**	**205**	*e*P	**P**	**22 57 31.5**	**0.0**
CASY	**Casey**	**70.71**	**205**	*e*P	**P**	**22 57 31.5**	**-0.1**
SCI	**San Clemente I**	**70.77**	**46**	⇓P	**P**	**22 57 32.3**	**-0.1**
SBC	**Santa Barbara**	**70.78**	**45**	⇓P	**P**	**22 57 32.6**	**+0.1**
SKR	**Severo-Kuril's**	**70.93**	**340**	*e*P	**P**	**22 57 37.0**	**+4.0**
SKR				*e*	pP	22 57 55.6	+4.8
SKR				pmax	pmax		
BLG	**Laguna Peak**	**71.04**	**45**	⇓P	**P**	**22 57 33.6**	**-0.5**
SDPT	**Sand Point**	**71.08**	**8**	*e*P	**P**	**22 57 32.6**	**-1.2**
SMMC	**Simmler**	**71.09**	**44**	⇑P	**P**	**22 57 34.3**	**0.0**
ASAJ	**Asahikawa**	**71.51**	**328**	P	**P**	**22 57 37.1**	**+0.5**
OSI	**Osito Adit**	**71.56**	**45**	⇑P	**P**	**22 57 37.2**	**+0.1**
DECC	**Green Verdugo**	**71.62**	**45**	⇓P	**P**	**22 57 37.4**	**-0.2**
109C	**Camp Elliot, M**	**71.74**	**47**	⇓P	**P**	**22 57 38.0**	**-0.3**
ARVC	**Arvin**	**71.77**	**44**	⇑P	**P**	**22 57 38.3**	**-0.2**
VES	**Vestal, Richgr**	**72.00**	**44**	⇓P	**P**	**22 57 39.2**	**-0.6**
MURC	**Murrieta**	**72.05**	**47**	⇑P	**P**	**22 57 40.0**	**-0.2**
BFSC	**Mount Baldy Ra**	**72.08**	**46**	⇓P	**P**	**22 57 40.0**	**-0.3**
PET	**Petropavlovsk**	**72.17**	**343**	*e*P	**P**	**22 57 40.1**	**-0.3**
PET				*e*S	S	23 07 02.2	+4.7
PET	comp=Z,200nm,3.2s			pmax	pmax		
PET	comp=Z,32nm,1.6s,mb4.9			pmax	pmax		
PET	comp=Z,100nm,17.6s			pmax	pmax		
RCTC	**Rector, Farmer**	**72.17**	**43**	⇑P	**P**	**22 57 39.9**	**-0.9**
EDW2	**Edwards Air Fo**	**72.20**	**45**	⇓P	**P**	**22 57 40.5**	**-0.6**
CHGN	**Chignik**	**72.28**	**9**	*e*P	**P**	**22 57 39.9**	**-1.1**
ISA	**Isabella**	**72.31**	**44**	⇓P	**P**	**22 57 41.9**	**+0.2**
ISA	**Isabella**	**72.31**	**44**	*e*P	**P**	**22 57 42.0**	**+0.3**
DVTC	**Desert V Tower**	**72.33**	**48**	⇑P	**P**	**22 57 41.7**	**-0.1**
CMB	**Columbia Colle**	**72.43**	**41**	*e*P	**P**	**22 57 42.4**	**+0.1**
CMB				*e*	pP	22 57 59.6	-0.6
PETK	**Petropavlovsk-**	**72.52**	**342**	P	**P**	**22 57 42.6**	**+0.1**
PETK				LR	LR	23 27 16.2	
PFO	**Pinyon Flat Ob**	**72.58**	**47**	⇑P	**P**	**22 57 42.9**	**-0.4**
PFO	**Pinyon Flat Ob**	**72.58**	**47**	*e*P	**P**	**22 57 43.4**	**+0.1**
BBRC	**Big Bear Solar**	**72.61**	**46**	⇓P	**P**	**22 57 43.4**	**-0.1**
WDC	**Whiskeytown Da**	**72.65**	**38**	*e*P	**P**	**22 57 43.8**	**+0.3**
SWSC	**Sam W. Stewart**	**72.70**	**48**	⇓P	**P**	**22 57 43.4**	**-0.6**
LRMC	**Laurel Mountai**	**72.74**	**45**	⇑P	**P**	**22 57 44.5**	**+0.2**
RRX	**Edison Barstow**	**72.89**	**46**	⇓P	**P**	**22 57 44.5**	**-0.6**

CWC Cottonwood Cre 73.01 44 ⇑P P 22 57 45.9 +0.1
baz=73
BELC Belle Mtn. Jos 73.11 47 ⇑P P 22 57 46.3 -0.1
baz=73
MPMC Manual Prospec 73.20 44 ⇓P P 22 57 46.9 0.0
baz=73,SNR=12
MTUM Tungsten Hills 73.21 43 eP P 22 57 47.6 +0.6
GSC Goldstone 73.25 45 ⇑P P 22 57 46.5 -0.7
baz=73,SNR=7.1
GSC Goldstone 73.25 45 eP P 22 57 47.2 0.0
TIN Tinemaha 73.26 43 ⇑P P 22 57 47.5 +0.2
baz=73
YBH Yreka Blue Hor 73.27 37 P P 22 57 47.3 +0.1
comp=Z,7.5nm,1.0s,mb4.5,baz=124,slow=0.2,SNR=9.6
YBH Yreka Blue Hor 73.27 37 eP P 22 57 48.0 +0.8
YBH e pP 22 58 05.8 +0.7
WAKR Walker 73.31 41 eP P 22 57 47.5 0.0
BC3 Big Chuckawall 73.31 47 ⇓P P 22 57 47.4 -0.3
baz=73,SNR=5.2
HEC Hector,Ludlow 73.32 46 ⇓P P 22 57 46.9 -0.7
baz=73
112A Yuma 73.36 49 ⇓P P 22 57 48.1 +0.1
baz=73
YSS Yuzh-Sakhalins 73.44 330 ⇓iP P 22 57 48.6 +0.5
YSS e pP 22 58 07.3 +1.3
YSS eS S 23 07 18.0 +5.7
YSS Yuzh-Sakhalins 73.44 330 eP P 22 57 47.6 -0.5
GLA Glamis 73.45 48 ⇓P P 22 57 48.3 -0.2
baz=74
LBCM Butte Creek Ri 73.52 38 P P 22 57 48.8 +0.1
WCN Washoe City 73.57 40 ⇓P P 22 57 49.0 -0.1
baz=74
HUMO Hull Mountain 73.68 36 eP P 22 57 49.1 -0.4
HUMO e pP 22 58 04.1 -3.4
GMRC Granite Mounta 73.76 46 ⇓P P 22 57 49.9 -0.3
baz=74,SNR=6.5
IRM Iron Mountain 73.79 47 ⇑P P 22 57 50.2 -0.2
baz=74,SNR=8.8
GRAC Grapevine Rang 73.80 44 ⇑P P 22 57 50.4 0.0
baz=74
FURC Furnace Creek, 73.85 44 ⇓P P 22 57 50.3 -0.4
baz=74
TUQ Turquoise Moun 73.93 46 ⇑P P 22 57 50.9 -0.3
baz=74
SHOC Shoshone 73.93 45 ⇑P P 22 57 51.2 0.0
baz=74
NVAR Mina Array Bea 73.99 42 P P 22 57 51.4 -0.2
comp=Z,5.5nm,0.8s,mb4.3,baz=226,slow=9.5,SNR=28
NVAR pP pP 22 58 10.1 +0.6
comp=Z,8.6nm,0.9s,baz=231,slow=8.9,SNR=8.6
NVAR Mina Array Bea 73.99 42 P P 22 57 51.4 -0.2
NVAR pP pP 22 58 10.1 +0.6
OHAK Old Harbor 74.01 11 eP P 22 57 50.6 -0.6
comp=Z,66nm,1.4s,mb5.2
PAHR Pah Rah Range 74.04 40 eP P 22 57 52.1 +0.3
113A Mohawk Valley, 74.07 49 ⇓P P 22 57 52.0 -0.2
baz=74
U10A Ash Meadows, A 74.18 45 ⇓P P 22 57 52.7 +0.1
baz=74
Z13A Yuma Proving G 74.37 49 ⇑P P 22 57 53.4 -0.4
baz=74,SNR=6.2
214A Organ Pipe Nat 74.37 50 ⇓P P 22 57 53.6 -0.3
baz=74
V11A Goodsprings 74.48 45 ⇑P P 22 57 54.4 -0.1
baz=74
NEE2 Needles Airpor 74.48 47 ⇓P P 22 57 54.6 +0.1
baz=74
Y13A Salome 74.56 48 ⇓P P 22 57 54.5 -0.4
baz=75
W12A Cal Nev Ari 74.58 46 ⇑P P 22 57 54.5 -0.6
baz=75
TWG Pinlang 74.66 299 P P 22 57 56.3 +0.6
KDAK Kodiak Island 74.67 11 P P 22 57 54.0 -1.0
comp=Z,250nm,0.8s,mb6.0,SNR=8.9
KDAK Kodiak Island 74.67 11 P P 22 57 54.7 -0.3
comp=Z,30nm,0.8s,mb5.1,baz=202,slow=3.9,SNR=23
KDAK Kodiak Island 74.67 11 eP P 22 57 54.5 -0.5
KDAK pmax pmax
comp=Z,92nm,1.4s,mb5.3
KDAK Kodiak Island 74.67 11 eP P 22 57 54.5 -0.4
comp=Z,92nm,1.4s,mb5.3
YULB Yu-li 74.71 300 eP P 22 57 55.3 -0.7
comp=Z,14nm,1.0s,mb4.6
114A Black Gap (USA 74.71 49 ⇓P P 22 57 55.3 -0.5
baz=75
NACB Ninganchiao 74.78 301 P P 22 57 56.0 -0.4
MOD Modoc 74.79 38 eP P 22 57 56.3 +0.2
MOD PcP PcP 22 58 10.0 +0.1
V12A Nelson 74.82 46 ⇓P P 22 57 56.3 -0.1
baz=75,SNR=5.4
S10A Tonopah Range, 74.82 43 ⇓P P 22 57 56.2 -0.1
baz=75,SNR=8.7
U11A Corn Creek 74.82 45 ⇑P P 22 57 56.6 +0.2
baz=75
QSPA South Pole Qui 74.85 180 eP P 22 57 57.1 +1.2
comp=Z,66nm,1.0s,mb5.3
K05A Summer Lake 74.94 37 ⇓P P 22 57 57.6 +0.7
baz=75,SNR=11
X13A Yucca 74.95 47 ⇓P P 22 57 57.1 -0.1
baz=75,SNR=8.9
Z14A Wintersburg 74.97 49 ⇑P P 22 57 57.0 -0.3
baz=75
SSLB Suanglung 75.16 300 eP P 22 57 56.7 -1.9
SSLB e pP 22 58 09.9 -6.6
115A Sonoran Desert 75.17 50 ⇓P P 22 57 58.1 -0.3
baz=75
YHNB Yeheng 75.17 301 P P 22 57 59.3 +0.7
W13A Hualapai Mount 75.17 47 ⇓P P 22 57 58.4 0.0
baz=75
Y14A Wickenburg 75.21 48 ⇓P P 22 57 58.0 -0.6
baz=75,SNR=6.4
R10A Warm Springs 75.22 43 ⇑P P 22 57 59.1 +0.5
baz=75
S11A Rachel 75.23 44 ⇓P P 22 57 58.5 -0.3
baz=75
216A Three Points, 75.40 51 ⇓P P 22 57 59.7 -0.1
baz=75
U12A Valley of Fire 75.41 45 ⇓P P 22 57 59.7 -0.1
baz=75
H04A Detroit Lake 75.43 35 ⇑P P 22 57 59.3 -0.4
baz=76
T12A Moapa 75.44 45 ⇓P P 22 58 00.1 +0.2
baz=76
Q10A Clear Creek Ra 75.45 42 ⇓P P 22 58 00.1 +0.1
baz=76
116A Eloy 75.48 50 ⇓P P 22 58 00.2 -0.1
baz=76
F03A Seaside 75.49 33 ⇑P P 22 58 00.5 +0.5
baz=76
V13A Grand Canyon W 75.49 46 ⇓P P 22 58 00.2 -0.1
baz=76
Z15A Gila River Ind 75.50 49 ⇑P P 22 58 00.5 +0.1
baz=76
X14A Yava 75.56 48 ⇓P P 22 58 00.9 +0.2
baz=76,SNR=9.2
G04A Mulino 75.60 34 ⇓P P 22 58 00.8 +0.1
baz=76
Y15A Casa Rosa Ranc 75.70 48 ⇑P P 22 58 01.4 -0.1
baz=76,SNR=16
R11A Troy Canyon, C 75.72 43 ⇓P P 22 58 01.3 -0.3
baz=76,SNR=7.2
217A Green Valley 75.77 51 ⇑P P 22 58 01.5 -0.5
baz=76,SNR=5.4
U13A Pakoon Wash 75.79 46 ⇑P P 22 58 02.4 +0.4
baz=76,SNR=12
W14A Seligman 75.79 47 ⇑P P 22 58 02.0 0.0
baz=76,SNR=10.0
S12A Delamar Landin 75.82 44 ⇑P P 22 58 02.3 +0.2
baz=76,SNR=6.2
P10A Eureka 75.84 42 ⇓P P 22 58 02.3 +0.2
baz=76
SBUM Sibu 75.88 277 P sP 22 58 26.9 -1.3
E03A Lebam 75.89 33 ⇑P P 22 58 02.8 +0.5
baz=76
STKI Sintang 75.94 274 P sP 22 58 27.2 -1.4
Q11A Duckwater 75.94 43 ⇑P P 22 58 02.7 -0.1
baz=76,SNR=12
V14A Boquillas Ranc 75.99 47 ⇑P P 22 58 03.3 +0.1
baz=76,SNR=7.5
X15A Humboldt 76.03 48 ⇓P P 22 58 03.5 +0.1
baz=76,SNR=7.7
TUC Tucson 76.05 51 eP P 22 58 03.4 -0.1
TUC e pP 22 58 22.2 +0.7
TUC pmax pmax
comp=Z,18nm,1.1s,mb4.7
TUC Tucson 76.05 51 eP P 22 58 03.4 -0.1
comp=Z,18nm,1.1s,mb4.7
TUC e pP 22 58 22.2 +0.7
Z16A Peralta Trail, 76.06 49 ⇓P P 22 58 03.8 +0.2
baz=76
WVOR Wild Horse Val 76.10 38 eP P 22 58 02.7 -0.9
WVOR e pP 22 58 17.1 -4.5
WVOR pmax pmax
comp=Z,19nm,1.2s,mb4.7
WVOR Wild Horse Val 76.10 38 eP P 22 58 02.7 -0.9
comp=Z,19nm,1.2s,mb4.7
WVOR e pP 22 58 17.1 -4.5
T13A Saint George 76.14 45 ⇑P P 22 58 03.9 -0.1
baz=76,SNR=8.0
VIPM Ingram Point 76.19 36 P P 22 58 04.1 +0.1
O10A Cortez Mining, 76.19 41 ⇓P P 22 58 04.2 +0.1
baz=76
117A Oracle 76.20 50 ⇑P P 22 58 04.3 -0.1
baz=76,SNR=9.2
KSRS Korea Array 76.21 315 P P 22 58 05.7 +1.4
comp=Z,7.0nm,1.0s,mb4.3,baz=128,slow=6.4,SNR=29
KSRS LR LR 23 26 02.2
comp=Z,174nm,20.7s,baz=138,slow=31
318A Bisbee 76.24 52 ⇓P P 22 58 04.0 -0.6
baz=76,SNR=8.8
P11A Circle Ranch, 76.27 42 ⇓P P 22 58 04.7 +0.2
baz=76
NLWA Neilton Lookou 76.28 32 ⇓P P 22 58 05.3 +0.8
baz=76
Y16A Circle Bar Ran 76.29 49 ⇓P P 22 58 05.0 +0.2
baz=76
U14A Mt Trumbull 76.34 46 ⇑P P 22 58 05.2 +0.2
baz=76,SNR=15
W15A Williams 76.36 47 ⇓P P 22 58 05.8 +0.6
baz=76
R12A Pony Springs, 76.36 44 ⇓P P 22 58 05.1 0.0
baz=76
N10A Dunphy 76.43 41 ⇓P P 22 58 05.9 +0.4
baz=76
218A Dragoon 76.44 51 ⇓P P 22 58 06.2 +0.4
baz=76
S13A Holt Ranch, En 76.47 45 ⇓P P 22 58 06.0 +0.2
baz=76,SNR=9.3
I07A Izee 76.57 37 ⇑P P 22 58 06.4 +0.2
baz=77,SNR=14
X16A Lo Mia Camp, P 76.57 48 ⇑P P 22 58 06.7 +0.2
baz=77,SNR=11
Q12A Willow Creek R 76.59 43 ⇑P P 22 58 06.6 +0.1
baz=77
G06A Carlson Farm, 76.63 35 ⇑P P 22 58 06.4 -0.2
baz=77
O11A Cowboy Ranch, 76.64 42 ⇓P P 22 58 07.0 +0.3
baz=77
Y17A Roosevelt 76.66 49 ⇑P P 22 58 07.0 +0.1
baz=77,SNR=5.1
R13A O'Grain Ranch, 76.71 44 ⇓P P 22 58 07.5 +0.3
baz=77
T14A Hurricane 76.73 45 ⇓P P 22 58 07.6 +0.3
baz=77
V15A Kaibab Nationa 76.74 47 ⇑P P 22 58 08.1 +0.8
baz=77
J08A Circle Bar Ran 76.74 38 ⇑P P 22 58 06.8 -0.3
baz=77,SNR=13
Z17A San Carlos Hig 76.74 50 ⇑P P 22 58 07.6 +0.2
baz=77
319A Douglas 76.75 52 ⇓P P 22 58 07.4 -0.1
baz=77,SNR=5.6
CCUT Cedar City 76.79 45 eP P 22 58 08.3 +0.7
CCUT ePcP PcP 22 58 19.5 +0.9
118A Homack Ranch, 76.81 51 ⇓P P 22 58 08.0 +0.2
baz=77
W16A Flagstaff 76.84 48 ⇑P P 22 58 08.4 +0.5
baz=77
M10A I.L. Ranch, Tu 76.86 40 ⇑P P 22 58 07.8 0.0
baz=77,SNR=6.9
LON Longmire 76.94 33 eP P 22 58 07.7 -0.5
U15A North Rim 76.96 46 ⇓P P 22 58 09.0 +0.4
baz=77,SNR=14
Z18A Geronimo 76.97 50 ⇓P P 22 58 09.0 +0.3
baz=77
N11A Elko Archery C 76.97 41 ⇑P P 22 58 08.8 +0.3
baz=77
X17A Forest Lakes 77.00 49 ⇓P P 22 58 09.8 +1.0
baz=77
S14A Cedar City 77.03 45 ⇓P P 22 58 09.5 +0.6
baz=77
219A White Tail Can 77.05 52 ⇓P P 22 58 09.4 +0.3
baz=77
WPW White Pass 77.05 34 P P 22 58 08.9 +0.1
Q13A Wheeler Ranch, 77.08 43 ⇑P P 22 58 08.9 -0.3
baz=77,SNR=5.5
D05A Enumclaw 77.12 33 ⇓P P 22 58 09.8 +0.5
baz=77
WUAZ Wupatki 77.16 47 ⇑P P 22 58 10.3 +0.6
baz=77
WUAZ Wupatki 77.16 47 eP P 22 58 09.3 -0.3
comp=Z,31nm,1.6s,mb4.8
T15A Red Dirt Ranch 77.19 46 ⇑P P 22 58 10.2 +0.3
baz=77,SNR=8.0
L10A Juniper Basin 77.21 40 ⇓P P 22 58 09.9 +0.1
baz=77
M11A Holland Ranch, 77.28 40 ⇓P P 22 58 10.3 +0.1
baz=77,SNR=5.2
Y18A Canyon Day Jun 77.29 50 ⇑P P 22 58 10.9 +0.4
baz=77
320A Kipp Ranch, An 77.31 52 ⇑P P 22 58 11.4 +0.7
baz=77
O12A Currie 77.31 42 ⇓P P 22 58 10.3 -0.1
baz=77,SNR=5.6
SVW2 Sparrevohn 77.31 9 eP P 22 58 09.3 -0.7
comp=Z,24nm,1.0s,mb4.9
P13A Bates Ranch, G 77.35 43 ⇑P P 22 58 10.9 +0.3
baz=77
K10A MacKenzie Ranc 77.36 39 ⇓P P 22 58 10.4 -0.3
baz=77,SNR=15
119A Ashpeak Ranch, 77.37 51 ⇓P P 22 58 11.1 +0.2
baz=77,SNR=5.8
R14A James Farms, M 77.41 44 ⇑P P 22 58 11.7 +0.7
baz=77
W17A Winslow 77.42 48 ⇑P P 22 58 11.9 +0.7
baz=77
F07A Phinny Hill Vi 77.43 35 ⇓P P 22 58 11.1 +0.1
baz=78
N12A Clover Valley, 77.43 41 eP P 22 58 10.6 -0.6
comp=Z,13nm,1.2s,mb4.5
KSM Kuching 77.44 275 eP P 22 58 12.6 +0.8
comp=Z,37nm,1.0s,mb5.1
KSM e pP 22 58 34.6 +4.7
KSM Kuching 77.44 275 P sP 22 58 34.7 -2.4
S15A Panguitch 77.54 45 ⇓P P 22 58 12.8 +1.1
baz=78
220A Playas Peak, P 77.56 52 ⇓P P 22 58 12.5 +0.5
baz=78,SNR=6.9
Q14A Sevier Lake (B 77.59 44 ⇑P P 22 58 12.3 +0.2
baz=78,SNR=22
G08A Pilot Rock 77.61 36 ⇓P P 22 58 11.7 -0.3
baz=78,SNR=15
V17A Tonalea, Kykot 77.62 48 ⇓P P 22 58 12.4 +0.1
baz=78,SNR=14
U16A Tuba City 77.64 47 ⇓P P 22 58 12.7 +0.4
baz=78,SNR=9.5
Z19A T-Link Ranch, 77.64 50 ⇓P P 22 58 13.0 +0.5
baz=78
L11A Cat Creek Ranc 77.70 40 ⇑P P 22 58 12.6 0.0
baz=78,SNR=15
X18A Snowflake 77.71 49 ⇓P P 22 58 12.9 +0.1
baz=78,SNR=5.1
MIR Mirnyy 77.72 204 eP P 22 58 13.0 +0.6
MIR pmax pmax
comp=Z,43nm,1.4s,mb5.0
O13A Hicks Ranch, I 77.73 42 ⇑P P 22 58 13.0 +0.3
baz=78
T16A Glen Canyon Da 77.78 46 ⇓P P 22 58 14.1 +0.9
baz=78
J10A Berg Farm, Mel 77.80 38 ⇑P P 22 58 12.8 -0.2
baz=78
JCW Jim Creek 77.80 32 eP P 22 58 12.4 -0.5
M12A Wells 77.82 41 ⇑P P 22 58 13.1 -0.2
baz=78,SNR=8.2
R15A Junction 77.87 45 ⇑P P 22 58 14.0 +0.4
baz=78
K11A Parker Ranch, 77.87 39 ⇓P P 22 58 13.2 -0.3
baz=78,SNR=9.8
E07A Sunnyside 77.88 34 ⇑P P 22 58 13.8 +0.4
baz=78
RSW Rattlesnake Hi 77.92 35 eP P 22 58 14.3 +0.6
RSW e pP 22 58 31.0 -0.8
HAWA Hanford 77.95 35 eP P 22 58 13.6 -0.2
comp=Z,25nm,1.1s,mb4.8
HAWA e pP 22 58 31.1 -0.8
Y19A Nutrioso 77.95 50 ⇑P P 22 58 15.0 +0.8
baz=78,SNR=12
N13A Wendover, West 77.97 42 ⇓P P 22 58 13.8 -0.3
baz=78,SNR=5.5
N13A Wendover, West 77.97 42 eP P 22 58 14.2 +0.1
comp=Z,42nm,1.3s,mb5.0
P14A Drum Mountains 78.04 43 ⇓P P 22 58 14.7 +0.1
baz=78,SNR=24
Z20A Nine Sixteen R 78.06 51 ⇓P P 22 58 15.2 +0.4
baz=78,SNR=11
MSU Marysvale 78.09 44 eP P 22 58 15.6 +0.8
S16A Weppner Ranch, 78.09 45 ⇓P P 22 58 15.0 +0.2
baz=78,SNR=6.2
X19A St. Johns 78.14 49 ⇓P P 22 58 15.7 +0.4
baz=78
L12A House Creek Ra 78.15 40 ⇓P P 22 58 15.3 +0.2
baz=78,SNR=7.6
221A Mesquite Ranch 78.18 52 ⇓P P 22 58 15.8 +0.4
baz=78
U17A Shonto 78.19 47 ⇓P P 22 58 15.8 +0.4
baz=78,SNR=6.3
Q15A Fillmore 78.20 44 ⇓P P 22 58 15.6 +0.2
baz=78
B06A Marblemount 78.23 32 ⇑P P 22 58 15.4 0.0
baz=78
A05A Maple Falls 78.23 32 ⇓P P 22 58 15.0 -0.3
baz=78
M13A Montello 78.26 41 ⇑P P 22 58 15.5 -0.2
baz=78,SNR=12
M13A Montello 78.26 41 eP P 22 58 15.3 -0.4
comp=Z,34nm,1.5s,mb4.9
ETW Entiat 78.26 33 P P 22 58 15.6 0.0
E08A Dider Farm, El 78.27 35 ⇓P P 22 58 15.5 -0.2
baz=78,SNR=5.2
V18A Ganado 78.28 48 ⇓P P 22 58 16.1 +0.1
baz=78,SNR=7.6
BMO Blue Mountains 78.30 37 eP P 22 58 15.4 -0.4
BMO e pP 22 58 33.0 -0.8
HABR Khabarovsk 78.31 328 eP P 22 58 14.4 -1.4
HABR eS S 23 08 03.4 -2.4
HABR eSS SS 23 13 07.9 -2.2
HABR eSSS 23 16 32.3
HABR pmax pmax
comp=Z,97nm,2.0s,mb5.2
HABR pmax pmax
comp=E,80nm,1.7s
HABR pmax pmax
comp=N,21nm,1.0s
HABR MLR MLR
comp=Z,93nm,18.0s
LNOR Lincton Mounta 78.33 36 eP P 22 58 15.9 -0.1
W19A Sanders 78.39 49 ⇓P P 22 58 17.3 +0.7
baz=78
121A Cookes Peak, D 78.40 52 ⇓P P 22 58 16.8 +0.1
baz=78,SNR=7.4
R16A Teasdale 78.44 45 ⇑P P 22 58 17.6 +0.8
baz=78
K12A Draper Farm, C 78.49 40 ⇓P P 22 58 16.9 0.0
baz=78,SNR=7.0
DUG Dugway 78.52 43 ⇓P P 22 58 16.9 -0.2
baz=79,SNR=13
DUG Dugway 78.52 43 eP P 22 58 16.9 -0.3
DUG pmax pmax
comp=Z,22nm,1.3s,mb4.8
DUG Dugway 78.52 43 eP P 22 58 16.9 -0.2
comp=Z,22nm,1.3s,mb4.8
P15A Leamington 78.56 44 ⇓P P 22 58 17.5 +0.1
baz=79,SNR=5.0
Y20A Horse Springs, 78.58 50 ⇓P P 22 58 18.4 +0.8
baz=79,SNR=13
N14A Grayback Hills 78.62 42 ⇓P P 22 58 17.3 -0.4
baz=79,SNR=13
U18A Rough Rock, Ch 78.66 47 ⇓P P 22 58 18.2 +0.1
baz=79,SNR=6.0
D08A Wollman Farm, 78.69 34 ⇑P P 22 58 17.6 -0.3
baz=79,SNR=8.0
J12A Stokes Ranch, 78.71 39 ⇓P P 22 58 18.1 0.0
baz=79,SNR=12
222A Williams Famil 78.73 52 ⇑P P 22 58 19.0 +0.5
baz=79
BGU Big Grassy Mou 78.76 42 eP P 22 58 17.9 -0.5
comp=Z,31nm,1.7s,mb4.9
X20A Quemado 78.78 49 ⇑P P 22 58 19.1 +0.4
baz=79
E09A Wood Farm, Sta 78.79 35 ⇓P P 22 58 17.7 -0.8
baz=79,SNR=5.8
L13A Double Diamond 78.79 41 ⇓P P 22 58 18.8 +0.2
baz=79
O15A The Old Anders 78.79 43 ⇓P P 22 58 18.9 +0.2
baz=79
Z21A St. Cloud Mine 78.83 51 ⇓P P 22 58 19.6 +0.5
baz=79,SNR=17
M14A Sheep Mountain 78.86 41 ⇓P P 22 58 18.8 -0.2
baz=79,SNR=41
PMR Palmer 78.87 11 eP P 22 58 18.1 -0.5
PMR pmax pmax
comp=Z,54nm,1.1s,mb5.3
PMR Palmer 78.87 11 eP P 22 58 18.1 -0.5
comp=Z,54nm,1.1s,mb5.3
NLU North Lily Min 78.89 43 eP P 22 58 18.9 -0.3
Q16A Castle Valley 78.97 45 ⇑P P 22 58 20.5 +0.8
baz=79
I12A Atlanta 78.98 39 ⇑P P 22 58 19.7 +0.1
baz=79,SNR=23
F10A Beach Ranch, E 78.99 36 ⇓P P 22 58 19.2 -0.4
baz=79,SNR=11
T18A Mexican Hat 79.00 47 ⇑P P 22 58 20.4 +0.5
baz=79,SNR=41
K13A Stover Farm, H 79.00 40 ⇑P P 22 58 19.8 +0.1
baz=79
OD2 Odessa Site #2 79.00 34 eP P 22 58 19.8 +0.1
TTA Tatalina 79.01 8 eP P 22 58 19.9 +0.6
MDJ Mudanjiang 79.03 322 P P 22 58 21.5 +1.6
MDJ PP PP 23 01 20.9 +0.9
MDJ S S 23 08 16.8 +3.1
MDJ pmax pmax
comp=Z,9.0nm,0.9s,mb4.6
MDJ pmax pmax
comp=Z,110nm,4.3s
MDJ LR LR
comp=N,260nm,20.2s
MDJ LR LR
comp=E,370nm,22.5s
MDJ LR LR
comp=Z,550nm,20.2s
R17A Hanksville Air 79.04 45 ⇑P P 22 58 19.7 -0.3
baz=79,SNR=13
W20A Ramah 79.04 49 ⇑P P 22 58 20.7 +0.6
baz=79,SNR=14
122A Conniff Cattle 79.07 52 ⇓P P 22 58 21.1 +0.7
baz=79
U19A Dine' College, 79.07 48 ⇓P P 22 58 20.4 +0.1
baz=79,SNR=7.1
N15A Stansbury Isla 79.07 42 ⇓P P 22 58 20.1 -0.1
baz=79
TMUT Trail Mountain 79.13 44 eP P 22 58 20.7 +0.1
comp=Z,14nm,0.9s,mb4.8
TMUT PcP PcP 22 58 29.1 +0.3
DIV Divide 79.14 13 eP P 22 58 19.7 -0.4
comp=Z,91nm,1.1s,mb5.5
DIV e pP 22 58 36.8 -1.3
Y21A Point of Rocks 79.14 50 ⇑P P 22 58 21.4 +0.7
baz=79,SNR=5.2
S18A Hurst Farm, Bl 79.18 46 ⇑P P 22 58 21.1 +0.3
baz=79
223A Chaparral, Ant 79.21 53 ⇓P P 22 58 21.2 +0.1
baz=79
L14A Malta 79.21 41 ⇑P P 22 58 20.6 -0.3
baz=79,SNR=6.4
MPU Maple Canyon 79.21 43 eP P 22 58 22.4 +1.4
BMRM Bremner River 79.25 14 eP P 22 58 20.0 -0.7
comp=Z,116nm,1.2s,mb5.6
BMRM e pP 22 58 34.6 -4.2
B08A Colville Reser 79.26 33 ⇑P P 22 58 20.0 -1.0
baz=79,SNR=8.7
X21A Alamocita Cree 79.26 50 ⇑P P 22 58 21.8 +0.4
baz=79,SNR=7.0
HLID Hailey 79.29 39 ⇑P P 22 58 21.4 +0.1
baz=79,SNR=21
HLID Hailey 79.29 39 eP P 22 58 21.3 0.0
comp=Z,60nm,1.7s,mb5.2
SPUT South Promonto 79.33 42 eP P 22 58 21.7 +0.1
Z22A Elephant Butte 79.34 51 ⇓P P 22 58 22.3 +0.5
baz=79,SNR=12
J13A Cove Ranch, Pi 79.35 39 ⇑P P 22 58 21.8 +0.2
baz=79,SNR=21
HVU Hansel Valley 79.37 41 eP P 22 58 22.4 +0.6

V20A	Brimhall	79.37	48	⇓P	P	22 58 21.9	0.0
	baz=79						
O16A	Springville	79.39	43	⇑P	P	22 58 22.3	+0.4
	baz=79						
M15A	Larsen Ranch,	79.42	42	⇑P	P	22 58 21.8	-0.2
	baz=79,SNR=14						
T19A	Beclabito	79.45	47	⇓P	P	22 58 22.8	+0.5
	baz=80,SNR=11						
CTU	Camp Tracy	79.47	43	P	P	22 58 19.8	-2.6
C09A	Chrisman Ranch	79.49	34	⇑P	P	22 58 21.7	-0.5
	baz=80						
SRU	San Rafael	79.50	45	⇑P	P	22 58 22.5	-0.1
	baz=80,SNR=9.9						
SRU	San Rafael	79.50	45	eP	P	22 58 23.2	+0.6
K14A	Jones Ranch, D	79.52	41	⇓P	P	22 58 22.6	+0.1
	baz=80,SNR=7.8						
P17A	Butcher Ranch,	79.54	44	⇑P	P	22 58 22.9	+0.2
	baz=80,SNR=5.3						
H12A	Diamond D Ranc	79.57	38	⇑P	P	22 58 22.0	-0.8
	baz=80,SNR=13						
R18A	Canyonlands Na	79.58	46	⇓P	P	22 58 22.9	-0.1
	baz=80,SNR=17						
U20A	Newcomb	79.60	48	⇓P	P	22 58 23.4	+0.2
	baz=80						
123A	Bell Site, Whi	79.60	52	⇓P	P	22 58 23.8	+0.5
	baz=80						
JLU	Jordanelle	79.63	43	eP	P	22 58 23.3	+0.1
Y22A	Socorro	79.64	51	⇑P	P	22 58 23.6	+0.1
	baz=80,SNR=6.4						
DAU	Daniels Canyon	79.66	43	eP	P	22 58 24.3	+0.9
W21A	San Fidel	79.66	49	⇑P	P	22 58 24.2	+0.7
	baz=80						
I13A	Wildhorse Cree	79.67	39	⇑P	P	22 58 23.5	+0.2
	baz=80,SNR=8.4						
324A	Moseley Ranch,	79.70	53	⇑P	P	22 58 23.8	0.0
	baz=80,SNR=7.4						
LAZ	Ladron	79.72	50	eP	P	22 58 24.6	+0.8
	comp=Z,21nm,1.8s,mb4.7						
J14A	Carey	79.72	40	⇑P	P	22 58 24.1	+0.4
	baz=80,SNR=12						
Y22D	IRIS PASSCAL I	79.73	51	⇑P	P	22 58 24.6	+0.6
	baz=80						
L15A	Malad City	79.73	41	⇓P	P	22 58 23.4	-0.3
	baz=80,SNR=7.8						
Q18A	Rafter H Ranch	79.77	45	⇑P	P	22 58 23.8	-0.2
	baz=80,SNR=6.8						
N16A	Rees Ranch, Co	79.78	43	⇑P	P	22 58 24.1	+0.1
	baz=80						
S19A	Harvey Farm, M	79.80	46	⇑P	P	22 58 24.9	+0.6
	baz=80						
425A	Indio Mountain	79.81	54	⇑P	P	22 58 24.4	-0.1
	baz=80,SNR=16						
X22A	Bernardo	79.86	50	⇓P	P	22 58 25.0	+0.4
	baz=80						
MNTX	Cornudas Mount	79.88	53	eP	P	22 58 24.6	-0.2
	comp=Z,11nm,1.2s,mb4.6						
MNTX				ePcP	PcP	22 58 32.2	0.0
O17A	Robinson Place	79.89	44	⇓P	P	22 58 24.8	+0.1
	baz=80,SNR=16						
Z23A	Rita Site, Whi	79.90	52	⇑P	P	22 58 25.2	+0.4
	baz=80						
H13A	Challis	79.94	38	⇓P	P	22 58 24.5	-0.3
	baz=80,SNR=18						
P18A	Preston Nutter	79.94	44	⇑P	P	22 58 25.4	+0.4
	baz=80,SNR=8.5						
R19A	Curley Farm, L	79.98	46	⇑P	P	22 58 25.4	+0.3
	baz=80						
V21A	Milan	79.98	49	⇓P	P	22 58 25.7	+0.4
	baz=80,SNR=5.8						
626A	Big Bend Ranch	79.98	56	⇑P	P	22 58 25.5	+0.1
	baz=80						
BNM	Barren Site	79.98	51	eP	P	22 58 26.0	+0.7
	comp=Z,10nm,1.1s,mb4.6						
K15A	Arbon	80.00	41	⇓P	P	22 58 25.6	+0.4
	baz=80						
F12A	Elk City	80.00	37	⇑P	P	22 58 24.6	-0.5
	baz=80,SNR=40						
MVCO	Mesa Verde	80.00	47	⇓P	P	22 58 25.6	+0.2
	baz=80						
LPM	Los Pinos Moun	80.05	50	eP	P	22 58 26.4	+0.8
HWUT	Hardware Ranch	80.06	42	eP	P	22 58 24.1	-1.4
	comp=Z,3.6nm,0.9s,mb4.2						
325A	Bean Ranch, Si	80.06	54	⇓P	P	22 58 25.4	-0.4
	baz=80,SNR=15						
I14A	Mackay	80.08	39	⇑P	P	22 58 25.9	+0.3
	baz=80						
N17A	Moffit Pass	80.20	43	⇓P	P	22 58 26.0	-0.3
	baz=80,SNR=6.4						
W22A	Albuquerque	80.21	50	⇓P	P	22 58 27.3	+0.8
	baz=80						
526A	Mary Lane Ranc	80.22	55	⇓P	P	22 58 26.6	-0.1
	baz=80,SNR=10						
U21A	Nageezi	80.24	48	⇓P	P	22 58 27.1	+0.5
	baz=80,SNR=12						
124A	Stringfield Ra	80.25	52	⇑P	P	22 58 27.0	+0.2
	baz=80,SNR=6.8						
NJ2	Nanjing	80.26	307	eP	P	22 58 29.4	+2.6
NJ2				PP	PP	23 01 34.4	+3.9
NJ2				S	S	23 08 28.3	+1.0
NJ2				pmax	pmax		
	comp=Z,120nm,0.9s,mb5.7						
NJ2				pmax	pmax		
	comp=Z,350nm,8.6s						
NJ2				LR	LR		
	comp=N,230nm,22.3s						
NJ2				LR	LR		
	comp=E,2μm,21.1s						
NJ2				LR	LR		
	comp=Z,1μm,22.6s						
TXAR	Lajitas Array	80.27	56	P	P	22 58 27.5	+0.6
	comp=Z,8.6nm,1.1s,mb4.5,baz=227,slow=5.0,SNR=22						
TXAR				pP	pP	22 58 46.1	+1.0
	comp=Z,7.4nm,1.1s,baz=237,slow=6.9,SNR=4.8						
TXAR				LR	LR	23 27 51.6	
	comp=Z,278nm,18.9s,baz=95,slow=31						
Q19A	Hogan Spring (	80.29	45	⇓P	P	22 58 27.0	+0.2
	baz=80,SNR=5.5						
Y23A	Lovelace Mesa,	80.32	51	⇑P	P	22 58 27.2	+0.1
	baz=80,SNR=7.6						
L16A	Fish Haven	80.35	42	⇑P	P	22 58 27.1	0.0
	baz=80						
TRF	Thorofare Moun	80.38	10	eP	P	22 58 25.6	-1.1
	comp=Z,50nm,0.9s,mb5.3						
NEW	Newport	80.38	34	P	P	22 58 23.2	-3.9
NEW				pmax	pmax		
	comp=Z,10.0nm,1.3s						
NEW	Newport	80.38	34	P	P	22 58 23.2	-3.9
	comp=Z,9.7nm,1.3s,mb4.5						
O18A	Roosevelt	80.42	44	⇓P	P	22 58 27.4	0.0
	baz=80						
ANMO	Albuquerque	80.46	50	eP	P	22 58 28.2	+0.4
225A	Deer Hill, Car	80.49	53	⇓P	P	22 58 28.2	+0.2
	baz=80,SNR=7.2						
H14A	Leadore	80.50	39	⇓P	P	22 58 28.0	+0.2
	baz=80,SNR=12						
KLR	Kul'dur	80.50	327	eP	P	22 58 25.0	-2.7
KLR				MLR	MLR		
	comp=Z,900nm,13.0s						
X23A	Hourglass Bar	80.50	50	⇓P	P	22 58 28.5	+0.4
	baz=80						
426A	McDonald Obser	80.52	55	⇓P	P	22 58 28.3	0.0
	baz=80,SNR=17						
627A	Terlingua Ranc	80.54	56	⇑P	P	22 58 28.5	+0.1
	baz=81,SNR=17						
R20A	Redvale	80.54	46	⇓P	P	22 58 28.4	+0.3
	baz=81,SNR=5.4						
V22A	San Miguel Ran	80.55	49	⇓P	P	22 58 28.9	+0.6
	baz=81						
F13A	Darby	80.56	37	⇑P	P	22 58 27.6	-0.5
	baz=81,SNR=11						
M17A	Scullys Gap (B	80.57	42	⇓P	P	22 58 28.2	-0.1
	baz=81						
Z24A	Sheeppen Canyo	80.58	52	⇓P	P	22 58 28.5	0.0
	baz=81,SNR=6.2						
T21A	Navajo Lake	80.59	48	⇓P	P	22 58 28.7	+0.2
	baz=81						
527A	Woodward Ranch	80.64	55	⇑P	P	22 58 28.7	-0.2
	baz=81,SNR=11						
K16A	Soda Springs	80.67	41	⇑P	P	22 58 29.1	+0.4
	baz=81,SNR=5.7						
I15A	Monteview	80.71	40	⇓P	P	22 58 29.5	+0.6
	baz=81						
L17A	Cokeville	80.75	42	⇑P	P	22 58 28.6	-0.6
	baz=81						
W23A	Werner Place,	80.78	50	⇑P	P	22 58 29.8	+0.3
	baz=81,SNR=6.7						
Y24A	Capitan	80.78	51	⇓P	P	22 58 29.7	+0.1
	baz=81,SNR=16						
P19A	Cripple Cowboy	80.80	45	⇑P	P	22 58 29.6	0.0
	baz=81,SNR=6.2						
326A	Caldwell Ranch	80.82	54	⇑P	P	22 58 29.6	-0.2
	baz=81						
125A	Gardner Draw,	80.84	53	⇑P	P	22 58 30.0	+0.1
	baz=81,SNR=6.0						
MCK	McKinley	80.87	11	eP	P	22 58 28.8	-0.5
MCK				pmax	pmax		
	comp=Z,10μm,0.6s						
MCK	McKinley	80.87	11	eP	P	22 58 28.8	-0.5
	comp=Z,10μm,0.6s						
GDL2	Guadalupe Moun	80.88	53	eP	P	22 58 31.0	+0.9
GDL2				e	pP	22 58 48.4	+0.1
J16A	Bone	80.88	41	⇓P	P	22 58 30.0	+0.2
	baz=81,SNR=7.3						
MCMT	McKenzie Canyo	80.92	39	eP	P	22 58 30.6	+0.6
	comp=Z,6.7nm,1.1s,mb4.4						
HYT	Haines Junctio	80.94	17	eP	P	22 58 30.1	+0.3
M18A	Lyman	80.94	43	⇑P	P	22 58 30.2	0.0
	baz=81,SNR=6.1						
628A	Black Gap, Mar	80.95	56	⇑P	P	22 58 30.3	-0.3
	baz=81,SNR=12						
Q20A	Ridgley Place,	80.95	46	⇓P	P	22 58 30.5	+0.1
	baz=81,SNR=7.5						
C12B	Naegeli Ranch,	80.97	35	⇓P	P	22 58 30.0	-0.2
	baz=81						
N18A	Larsen Ranch,	80.98	43	⇓P	P	22 58 30.6	+0.1
	baz=81						
E13A	Vicor	81.00	37	⇑P	P	22 58 29.6	-0.9
	baz=81,SNR=17						
V23A	Ortiz Mt. (NFS	81.01	49	⇑P	P	22 58 31.4	+0.7
	baz=81,SNR=8.1						
226A	Malaga, Loving	81.02	53	⇑P	P	22 58 31.6	+0.7
	baz=81,SNR=7.9						
O19A	Miners Draw (B	81.02	44	⇑P	P	22 58 30.5	-0.2
	baz=81,SNR=6.1						
T22A	Edith	81.05	48	⇑P	P	22 58 31.4	+0.5
	baz=81,SNR=5.1						
K17A	Gardner Place,	81.05	41	⇑P	P	22 58 30.9	+0.1
	baz=81						
X24A	Lazy VL Ranch,	81.05	51	⇓P	P	22 58 31.0	0.0
	baz=81						
Z25A	Roswell	81.05	52	⇑P	P	22 58 31.3	+0.2
	baz=81,SNR=7.6						
427A	Hayter Ranch,	81.08	55	⇓P	P	22 58 31.4	+0.2
	baz=81,SNR=11						
RRI2	Red Ridge	81.10	41	eP	P	22 58 31.4	+0.3
CN2	Changchun	81.11	320	eP	P	22 58 34.8	+3.7
CN2				eS	S	23 08 37.8	+2.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,300nm,20.0s						
CN2				LR	LR		
	comp=E,200nm,20.0s						
CN2				LR	LR		
	comp=Z,200nm,19.0s						
F14A	Wisdom	81.14	38	⇓P	P	22 58 30.8	-0.4
	baz=81						
P20A	De Beque	81.14	45	⇓P	P	22 58 31.4	0.0
	baz=81						
D13A	Huson	81.20	36	⇓P	P	22 58 30.4	-1.1
	baz=81,SNR=27						
R21A	Cimarron	81.20	46	⇑P	P	22 58 32.0	+0.2
	baz=81,SNR=6.7						
L18A	Fontenelle, Gr	81.21	42	⇓P	P	22 58 31.8	+0.1
	baz=81						
327A	Balmorhea Ranc	81.22	54	⇑P	P	22 58 32.0	0.0
	baz=81						
U23A	El Rito	81.26	49	⇓P	P	22 58 32.1	+0.1
	baz=81,SNR=7.3						
I16A	Newdale	81.26	40	⇑P	P	22 58 32.3	+0.4
	baz=81,SNR=10						
N19A	John Jarvie Ra	81.27	44	⇑P	P	22 58 31.7	-0.3
	baz=81						
528A	Cox Ranch, San	81.30	56	⇓P	P	22 58 32.4	0.0
	baz=81,SNR=11						
G15A	Dillon	81.32	39	⇑P	P	22 58 32.1	0.0
	baz=81,SNR=16						
126A	Clayton Basin,	81.33	53	⇑P	P	22 58 31.8	-0.7
	baz=81,SNR=5.1						
B12A	Libby	81.34	35	⇓P	P	22 58 32.1	-0.1
	baz=81						
Y25A	Mesa, Roswell	81.34	51	⇓P	P	22 58 32.5	0.0
	baz=81,SNR=8.7						
W24A	Lazy 6 Ranch,	81.35	50	⇓P	P	22 58 32.2	-0.3
	baz=81,SNR=11						
MSO	Missoula	81.35	37	eP	P	22 58 31.1	-1.2
	comp=Z,28nm,1.4s,mb4.9						
E14A	Clinton	81.39	37	⇓P	P	22 58 32.1	-0.4
	baz=81						
Q21A	Lamborn Mesa,	81.40	46	⇑P	P	22 58 33.0	+0.3
	baz=81,SNR=6.7						
REDW	Red Top Meadow	81.40	41	eP	P	22 58 32.5	-0.2
TPAW	Teton Pass	81.40	41	eP	P	22 58 32.6	0.0
DLBC	Dease Lake	81.41	21	eP	P	22 58 32.3	0.0
S22A	4UR Ranch, Cre	81.43	47	⇑P	P	22 58 33.3	+0.3
	baz=82,SNR=21						
BSMT	Bassoo Peak	81.44	35	eP	P	22 58 32.6	-0.1
C13A	Hot Springs	81.46	36	⇓P	P	22 58 31.8	-1.1
	baz=82,SNR=14						
J17A	Brown Place, J	81.49	41	⇓P	P	22 58 33.2	+0.1
	baz=82						
O20A	White River Ci	81.54	45	⇓P	P	22 58 33.8	+0.3
	baz=82						
K18A	Toltan Ranch,	81.55	42	⇑P	P	22 58 33.5	0.0
	baz=82,SNR=7.3						
A12A	Yaak River Ran	81.57	34	⇑P	P	22 58 33.3	-0.1
	baz=82						
M19A	Rock Springs	81.58	43	⇑P	P	22 58 33.6	0.0
	baz=82						
428A	Kincaid Ranch,	81.60	55	⇓P	P	22 58 34.0	0.0
	baz=82,SNR=9.2						
Z26A	Caprock	81.61	52	⇓P	P	22 58 33.8	-0.2
	baz=82,SNR=13						
IMW	Indian Meadow	81.61	40	eP	P	22 58 34.2	+0.5
X25A	Clemmons Ranch	81.61	51	⇓P	P	22 58 33.7	-0.2
	baz=82						
227A	Bennet, Jal	81.63	54	⇑P	P	22 58 34.1	-0.1
	baz=82						
JTMT	Jette	81.66	36	eP	P	22 58 33.2	-0.7
V24A	Rampart Ranch,	81.67	50	⇓P	P	22 58 34.4	+0.2
	baz=82,SNR=7.0						
F15A	Butte	81.67	38	⇓P	P	22 58 33.6	-0.4
	baz=82,SNR=9.8						
T23A	Casias Ranch,	81.68	48	⇑P	P	22 58 35.0	+0.7
	baz=82						
LOHW	Long Hollow	81.68	41	eP	P	22 58 33.9	-0.2
SWMT	Swartz Lake	81.69	36	eP	P	22 58 32.9	-1.2
R22A	Saguache, Gunn	81.70	47	⇑P	P	22 58 34.9	+0.6
	baz=82,SNR=11						
L19A	Farson	81.73	42	⇑P	P	22 58 34.5	+0.1
	baz=82,SNR=5.6						
D14A	Greenough	81.74	37	⇑P	P	22 58 33.0	-1.4
	baz=82,SNR=18						
328A	Wristen Ranch,	81.76	54	⇓P	P	22 58 33.5	-1.3
	baz=82,SNR=5.8						
G16A	Moss Hill, Enn	81.76	39	⇓P	P	22 58 34.7	+0.2
	baz=82						
H16A	Russell Place,	81.83	39	⇑P	P	22 58 35.7	+0.8
	baz=82,SNR=10.0						
127A	Arkansas Junct	81.85	53	⇓P	P	22 58 35.1	-0.2
	baz=82						
J18A	Kendall Valley	81.85	41	⇑P	P	22 58 34.7	-0.4
	baz=82,SNR=16						
I17A	Pilgrim Ck.	81.85	40	⇑P	P	22 58 35.9	+0.9
	baz=82						
N20A	Spence Gulch,	81.86	44	⇑P	P	22 58 35.3	+0.2
	baz=82,SNR=12						
Q22A	Crested Butte,	81.87	46	⇑P	P	22 58 35.7	+0.5
	baz=82,SNR=12						
YBMT	Yellow Bay	81.88	36	eP	P	22 58 34.4	-0.6
E15A	Deer Lodge	81.89	37	⇑P	P	22 58 34.6	-0.5
	baz=82,SNR=9.2						
B13A	Whitefish	81.90	35	⇓P	P	22 58 34.1	-1.1
	baz=82,SNR=5.9						
BW06	Boulder Array	81.93	42	⇑P	P	22 58 35.1	-0.4
	baz=82,SNR=12						
PDAR	Pinedale Array	81.93	42	P	P	22 58 35.0	-0.4
	comp=Z,2.4nm,0.7s,mb4.1,baz=211,slow=2.6,SNR=28						
PDAR				LR	LR	23 30 09.1	
	comp=Z,445nm,18.7s,baz=243,slow=32						
U24A	Moreno Valley	81.96	49	⇑P	P	22 58 36.4	+0.7
	baz=82						
YMR	Madison River	81.99	40	eP	P	22 58 35.2	-0.5
	comp=Z,10nm,0.6s,mb4.8						
Y26A	Elida	82.00	52	⇑P	P	22 58 35.9	-0.1
	baz=82						
S23A	Nye Farm, Mont	82.00	48	⇓P	P	22 58 36.1	+0.2
	baz=82						
W25A	X Bar L Ranch,	82.05	50	⇑P	P	22 58 35.9	-0.4
	baz=82,SNR=7.9						
BOZ	Bozeman (W)	82.08	38	⇓P	P	22 58 36.0	-0.2
	baz=82,SNR=18						
BOZ	Bozeman (W)	82.08	38	eP	P	22 58 35.5	-0.7
BOZ				pmax	pmax		
	comp=Z,37nm,1.5s,mb5.0						
BOZ	Bozeman (W)	82.08	38	eP	P	22 58 35.5	-0.7
	comp=Z,37nm,1.5s,mb5.0						
H17A	Grant Village	82.09	40	⇑P	P	22 58 37.7	+1.4
	baz=82						
O21A	Pagoda	82.10	45	⇓P	P	22 58 36.3	-0.1
	baz=82						
COLA	College	82.11	11	eP	P	22 58 35.0	-0.9
COLA				pmax	pmax		
	comp=Z,119nm,0.9s,mb5.7						
COLA	College	82.11	11	eP	P	22 58 35.0	-0.9
	comp=Z,119nm,0.9s,mb5.7						
F16A	Kennard Place,	82.16	38	⇑P	P	22 58 36.5	0.0
	baz=82						
ILAR	Eielson Array	82.19	11	P	P	22 58 35.5	-0.8
	comp=Z,17nm,0.9s,mb4.8,baz=209,slow=5.7,SNR=109						
ILAR				LR	LR	23 28 16.3	
	comp=Z,312nm,21.1s,baz=220,slow=30						
V25A	Rancho No Teng	82.20	50	⇓P	P	22 58 36.9	-0.1
	baz=82,SNR=14						
M20A	Sweetwater, Wa	82.21	43	⇓P	P	22 58 37.2	+0.2
	baz=82						
Z27A	Tatum	82.22	53	⇑P	P	22 58 37.1	0.0
	baz=82						
I18A	Diamond G Ranc	82.22	41	⇓P	P	22 58 36.7	-0.2
	baz=82,SNR=7.2						
X26A	CR and CF Fran	82.26	51	⇓P	P	22 58 37.1	-0.3
	baz=82						
N21A	Black Mountain	82.32	44	⇑P	P	22 58 38.1	+0.5
	baz=82,SNR=17						
L20A	Wamsutter	82.36	43	⇓P	P	22 58 37.9	+0.2
	baz=82,SNR=12						
SDCO	Great Sand Dun	82.37	48	eP	P	22 58 37.6	-0.3
	comp=Z,12nm,1.2s,mb4.6						
SDCO				ePcP	PcP	22 58 43.9	+0.9
SEY	Seymchan	82.39	345	⇓P	P	22 58 37.2	-0.2
K19A	Absolon Red Bu	82.42	42	⇑P	P	22 58 37.3	-0.6
	baz=82,SNR=9.6						
G17A	Pierce Place,	82.46	39	⇑P	P	22 58 38.7	+0.6
	baz=82,SNR=5.2						
Y27A	Causey	82.48	52	⇓P	P	22 58 37.8	-0.8
	baz=82,SNR=7.5						
E16A	East Helena	82.52	38	⇑P	P	22 58 38.3	-0.2
	baz=82						
W26A	Owens Ranch, T	82.52	51	⇑P	P	22 58 38.5	-0.3
	baz=82						
S24A	Houchin Ranch,	82.53	48	⇑P	P	22 58 39.0	+0.3
	baz=83,SNR=16						
U25A	Circle Dot Ran	82.59	49	⇓P	P	22 58 38.7	-0.3
	baz=83,SNR=10.0						
WALA	Waterton Lakes	82.59	35	eP	P	22 58 38.3	-0.4
Q23A	Hartsel	82.64	47	⇓P	P	22 58 39.1	-0.1
	baz=83						
K20A	Yellowstone Ra	82.66	42	⇓P	P	22 58 38.2	-1.0
	baz=83,SNR=12						
O22A	Kremmling	82.71	45	⇑P	P	22 58 39.6	0.0
	baz=83,SNR=21						
F17A	Fitzpatrick Pl	82.80	39	⇑P	P	22 58 40.3	+0.4
	baz=83,SNR=18						
A14A	Double T Ranch	82.81	35	⇑P	P	22 58 39.5	-0.3
	baz=83,SNR=20						
M21A	Separation Pea	82.81	44	⇑P	P	22 58 40.1	+0.1
	baz=83,SNR=18						
MSTX	Muleshoe	82.81	52	⇓P	P	22 58 39.9	-0.4
	baz=83,SNR=6.4						
X27A	F and S Farms,	82.84	51	⇑P	P	22 58 40.1	-0.3
	baz=83						
P23A	Jefferson	82.85	46	⇑P	P	22 58 41.0	+0.7
	baz=83,SNR=6.6						
D16A	Dana Ranch, Ca	82.85	37	⇑P	P	22 58 39.8	-0.3
	baz=83,SNR=22						
R24A	Sanders Place,	82.86	47	⇑P	P	22 58 40.6	+0.2
	baz=83,SNR=17						
T25A	Trinidad	82.90	49	⇑P	P	22 58 40.7	0.0
	baz=83,SNR=5.5						
B15A	Bradely Ranch,	82.94	36	⇓P	P	22 58 39.2	-1.4
	baz=83,SNR=13						
RWWY	Rawlins	82.95	44	eP	P	22 58 40.8	0.0
E17A	Martinsdale	82.96	38	⇑P	P	22 58 40.4	-0.3
	baz=83,SNR=8.8						
L21A	Rawlins	82.97	43	⇓P	P	22 58 40.4	-0.6
	baz=83,SNR=12						
W27A	Bowe Ranch, En	83.03	51	⇓P	P	22 58 40.5	-0.9
	baz=83,SNR=14						
N22A	Wattenberg Ran	83.06	45	⇑P	P	22 58 41.8	+0.4
	baz=83,SNR=7.7						
U26A	Atchley Ranch,	83.07	50	⇓P	P	22 58 41.3	-0.2
	baz=83,SNR=18						
QIZ	Qiongzhong	83.09	292	P	P	22 58 43.0	+1.0
QIZ				S	S	23 09 07.5	+11
QIZ				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.3						
QIZ				pmax	pmax		
	comp=Z,45nm,3.0s						
QIZ				LR	LR		
	comp=N,140nm,20.4s						
QIZ				LR	LR		
	comp=Z,280nm,25.8s						
S25A	Robets Cordova	83.10	48	⇓P	P	22 58 41.8	+0.2
	baz=83,SNR=20						
C16A	Fuhringer Ranc	83.13	37	⇑P	P	22 58 40.8	-0.8
	baz=83,SNR=23						
Q24A	Divide	83.15	47	⇓P	P	22 58 42.4	+0.5
	baz=83,SNR=20						
DAWY	Dawson	83.16	14	eP	P	22 58 41.5	+0.1
O23A	Lake Granby, G	83.16	45	⇓P	P	22 58 42.2	+0.3
	baz=83,SNR=6.6						
G18A	Lazy EL Ranch,	83.17	40	⇑P	P	22 58 41.9	0.0
	baz=83,SNR=19						
ISCO	Idaho Springs	83.19	46	eP	P	22 58 42.1	0.0
ISCO				pmax	pmax		
	comp=Z,64nm,2.0s,mb5.1						
ISCO	Idaho Springs	83.19	46	eP	P	22 58 42.1	0.0
	comp=Z,64nm,2.0s,mb5.1						
A15A	Johnson Ranch,	83.20	35	⇑P	P	22 58 41.1	-0.7
	baz=83,SNR=22						
WHN	Wuhan	83.21	304	P	P	22 58 40.3	-2.1
RLMT	Red Lodge	83.26	40	⇑P	P	22 58 42.7	+0.4
	baz=83,SNR=13						
RLMT	Red Lodge	83.26	40	eP	P	22 58 42.9	+0.5
EGAK	Eagle	83.36	13	eP	P	22 58 41.4	-1.0
	comp=Z,51nm,1.4s

baz=84,SNR=21
BILL Bilibino 84.34 352 *e*P **P 22 58 47.5 +0.2**
BILL pmax pmax
comp=Z,43nm,1.7s,mb5.0
BILL Bilibino 84.34 352 *e*P **P 22 58 46.9 -0.4**
comp=Z,18nm,0.4s,mb5.2
O25A Wiggins 84.36 46 ⇑P **P 22 58 48.1 +0.1**
baz=84
EGMT Eagleton 84.40 37 ⇓P **P 22 58 47.6 -0.4**
baz=84,SNR=13
EGMT Eagleton 84.40 37 *e*P **P 22 58 47.3 -0.8**
comp=Z,34nm,1.2s,mb5.0
B18A Beardsley Farm 84.57 37 ⇓P **P 22 58 48.5 -0.4**
baz=85,SNR=11
N25A Grover 84.68 45 ⇑P **P 22 58 49.7 +0.1**
baz=85
A18A Metzger Ranch, 84.80 36 ⇓P **P 22 58 49.5 -0.5**
baz=85,SNR=5.7
BJI Beijing 85.53 313 P **P 22 58 55.1 +1.2**
BJI S S 23 09 24.3 +3.8
BJI SS SS 23 14 59.3 +1.5
BJI pmax pmax
comp=Z,14nm,1.3s,mb4.7
BJI LR LR
comp=N,160nm,26.4s
BJI LR LR
comp=E,130nm,29.8s
BJI LR LR
comp=Z,210nm,25.8s
LAO LASA Array 85.87 39 *e*P **P 22 58 55.5 +0.1**
comp=Z,114nm,1.4s,mb5.6
RSSD Black Hills 86.12 42 *e*P **P 22 58 55.6 -1.1**
RSSD pmax pmax
comp=Z,21nm,1.1s,mb5.0
RSSD Black Hills 86.12 42 *e*P **P 22 58 55.6 -1.1**
comp=Z,21nm,1.1s,mb5.0
WMOK Wichita Mounta 86.16 53 *e*P **P 22 58 56.0 -1.2**
WMOK pmax pmax
comp=Z,11nm,1.3s,mb4.6
WMOK Wichita Mounta 86.16 53 *e*P **P 22 58 56.0 -1.1**
comp=Z,11nm,1.3s,mb4.6
HKT Hockley 86.84 58 *e*P **P 22 59 00.7 +0.1**
HKT pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
HKT Hockley 86.84 58 *e*P **P 22 59 00.7 +0.1**
comp=Z,4.9nm,0.5s,mb4.7
COCO West Island 86.92 258 P **P 22 59 02.1 +0.8**
DGMT Dagmar 87.90 38 ⇓P **P 22 59 05.1 -0.2**
baz=88,SNR=7.8
DGMT Dagmar 87.90 38 *e*P **P 22 59 04.9 -0.3**
comp=Z,66nm,1.1s,mb5.6
INK Inuvik 88.00 14 P **P 22 59 03.6 -1.7**
comp=Z,17nm,0.9s,mb5.1,baz=219,slow=3.0,SNR=10
INK Inuvik 88.00 14 *e*P **P 22 59 03.9 -1.4**
MAW Mawson 88.07 199 ⇑*i*P **P 22 59 06.7 +0.9**
comp=Z,12nm,0.8s,mb5.0
MAW Mawson 88.07 199 P **P 22 59 05.7 -0.1**
comp=Z,21nm,1.0s,mb5.1,baz=129,slow=6.1,SNR=32
MAW LR LR 23 34 38.6
comp=Z,706nm,21.6s,baz=294,slow=33
MAW Mawson 88.07 199 *e*P **P 22 59 06.6 +0.8**
MAW pmax pmax
comp=Z,8.0nm,1.1s
MAW Mawson 88.07 199 *e*P **P 22 59 06.6 +0.7**
comp=Z,7.9nm,1.1s,mb4.7
GYA Guiyang 88.19 298 ⇑*i*P **P 22 59 09.8 +2.6**
GYA PP PP 23 02 38.9 +3.6
GYA SKS 23 09 30.0
GYA S S 23 09 45.3 -1.4
GYA SS SS 23 15 39.8 +2.5
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,120nm,5.3s
GYA LR LR
comp=N,570nm,19.7s
GYA LR LR
comp=E,450nm,20.8s
GYA LR LR
comp=E,550nm,19.5s
XAN Xi'an 88.74 306 P **P 22 59 11.4 +1.8**
XAN PP PP 23 02 43.3 +3.8
XAN S S 23 09 54.3 +2.7
XAN pmax pmax
comp=Z,4.0nm,1.5s,mb4.2
XAN pmax pmax
comp=Z,88nm,15.0s
XAN LR LR
comp=N,120nm,21.0s
XAN LR LR
comp=E,58nm,22.5s
XAN LR LR
comp=Z,54nm,24.4s
YAK Yakutsk 89.03 337 *e*P **P 22 59 08.0 -2.3**
YAK pmax pmax
comp=Z,18nm,0.9s,mb5.1
YAK pmax pmax
comp=N,3.0nm,1.3s
YAK pmax pmax
comp=E,5.0nm,1.4s
YAK Yakutsk 89.03 337 *e*P **P 22 59 08.9 -1.4**
HHC Hu-ho-hao-te 89.09 313 *e*P **P 22 59 12.8 +1.7**
HHC PP PP 23 02 45.9 +3.8
HHC SKS 23 09 34.8
HHC S S 23 09 54.4 -0.2
HHC SS SS 23 15 52.6 +2.8
HHC pmax pmax
comp=Z,19nm,0.7s,mb5.2
HHC pmax pmax
comp=Z,120nm,7.2s
HHC LR LR
comp=N,210nm,17.4s
HHC LR LR
comp=E,210nm,17.2s
HHC LR LR
comp=Z,200nm,17.1s
PLCA Paso Flores 89.44 132 LR LR 23 30 17.2
comp=Z,325nm,20.8s,baz=256,slow=30
YKA Yellowknife Ar 89.80 23 P **P 22 59 13.2 -0.6**
comp=Z,9.7nm,0.9s,mb4.9,baz=240,slow=4.6,SNR=21
YKA Yellowknife Ar 89.80 23 P **P 22 59 13.2 -0.6**
KMI Kunming 91.19 296 P **P 22 59 23.3 +2.1**
KMI PP PP 23 03 02.0 +2.8
KMI S S 23 10 12.9 -1.7
KMI SS SS 23 16 23.4 +2.6
KMI pmax pmax
comp=Z,6.0nm,1.1s,mb4.6
KMI pmax pmax
comp=Z,58nm,3.1s
KMI LR LR
comp=N,51nm,20.6s
KMI LR LR
comp=E,140nm,21.2s
KMI LR LR
comp=Z,240nm,23.9s
FFC Flin Flon 91.78 33 *i*P **P 22 59 23.2 0.0**
CD2 Chengdu 91.94 301 P **P 22 59 26.5 +1.9**
CD2 PP PP 23 03 09.1 +4.1
CD2 SKS 23 09 52.4
CD2 S S 23 10 20.8 -0.4
CD2 SS SS 23 16 33.9 +2.4
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.3
CD2 pmax pmax
comp=Z,190nm,8.8s
CD2 LR LR
comp=N,260nm,17.2s
CD2 LR LR
comp=Z,250nm,20.2s
CMAR Chiang Mai Arr 92.81 288 P **P 22 59 30.6 +1.7**
comp=Z,2.9nm,1.0s,mb4.6,baz=100,slow=3.5,SNR=11
CMAR pP pP 22 59 51.6 +4.3
comp=Z,5.4nm,1.1s,baz=96,slow=2.3,SNR=5.7
CMAR LR LR 23 35 02.3
comp=Z,141nm,21.1s,baz=296,slow=31
SYO Syowa Base 92.85 191 ⇓*e*X **P 22 59 25.4 -2.7**
SYO Syowa Base 92.85 191 ⇓*e*X pP 22 59 41.2 -5.3
CHTO Chiang Mai 92.90 289 *e*P **P 22 59 29.3 0.0**
AGMN Agassiz Nation 92.96 41 *e*P **P 22 59 27.1 -1.7**
comp=Z,22nm,1.3s,mb5.3
LZH Lanzhou 93.33 306 *e*P **P 22 59 32.5 +1.6**
LZH PP PP 23 03 19.4 +3.6
LZH SKS 23 09 59.6
LZH *e*S S 23 10 31.8 -1.5
LZH pmax pmax
comp=Z,20nm,1.5s,mb5.2
LZH pmax pmax
comp=Z,110nm,9.0s
LZH LR LR
comp=E,280nm,18.0s
LZH LR LR
comp=Z,360nm,19.8s
OXF Oxford 93.41 55 *e*P **P 22 59 30.7 -0.6**
OXF pmax pmax
comp=Z,64nm,1.3s,mb5.8
OXF Oxford 93.41 55 *e*P **P 22 59 30.7 -0.5**
comp=Z,64nm,1.3s,mb5.8
FVM French Village 93.58 52 *e*P **P 22 59 31.2 -0.8**
FVM pmax pmax
comp=Z,16nm,1.1s,mb5.3
FVM French Village 93.58 52 *e*P **P 22 59 31.1 -0.8**
comp=Z,16nm,1.1s,mb5.3
ULM Lac du Bonnet 93.60 39 P **P 22 59 30.6 -1.2**
comp=Z,11nm,1.0s,mb5.1,baz=232,slow=4.8,SNR=6.6
ULM LR LR 23 36 21.4
comp=Z,549nm,19.6s,baz=57,slow=32
ULN Ulaanbaatar 94.46 318 *e*P **P 22 59 36.3 +0.5**
ULN pmax pmax
comp=Z,4.0nm,1.1s,mb4.7
ULN Ulaanbaatar 94.46 318 *e*P **P 22 59 36.3 +0.5**
comp=Z,3.9nm,1.1s,mb4.7
SONM Songino Array 94.88 318 P **P 22 59 37.8 +0.1**
comp=Z,1.3nm,1.0s,mb4.3,baz=111,slow=3.3,SNR=6.2
SONM LR LR 23 36 37.0
comp=Z,366nm,21.7s,baz=176,slow=32
JFWS Jewell Farm 95.08 47 *e*P **P 22 59 37.4 -1.4**
JFWS pmax pmax
comp=Z,8.0nm,0.8s,mb5.2
JFWS Jewell Farm 95.08 47 *e*P **P 22 59 37.4 -1.4**
comp=Z,8.3nm,0.8s,mb5.2
COWI Conover 96.69 44 *e*P **P 22 59 44.4 -1.6**
comp=Z,34nm,1.4s,mb5.6
GTA Gaotai 97.27 309 ⇑*e*P **P 22 59 50.4 +1.6**
GTA PP PP 23 03 50.4 +4.1
GTA SKS 23 10 20.8
GTA S S 23 11 06.3 -1.0
GTA SS SS 23 17 48.1 +1.2
GTA pmax pmax
comp=Z,4.0nm,1.6s,mb4.6
GTA pmax pmax
comp=Z,91nm,5.7s
GTA LR LR
comp=N,83nm,21.0s
GTA LR LR
comp=E,160nm,21.0s
GTA LR LR
comp=Z,300nm,21.9s
LPAZ La Paz 99.62 110 LR LR 23 35 15.3
comp=Z,99nm,18.3s,baz=68,slow=30
MKAR Makanchi Array 110.88 315 PKiKP PKiKP 23 04 48.0 -0.6
comp=Z,0.4nm,0.6s,baz=64,slow=2.8,SNR=3.8
MKAR Makanchi Array 110.88 315 PKPdf PKiKP 23 04 48.0 -0.6
BVAR Borovoye Array 117.89 322 PKP PKPdf 23 05 01.7 -0.1
comp=Z,0.7nm,0.8s,baz=172,slow=2.2,SNR=4.3
BVAR pPKP pPKPdf 23 05 22.3 +1.4
comp=Z,3.0nm,0.9s,baz=22,slow=1.6,SNR=8.5
KBL Kabul 121.28 301 *e*PKIKP PKPdf 23 05 09.6 +0.7
ARU Arti 123.31 329 *i*PKIKP PKPdf 23 05 12.0 -0.1
ARU 23 06 56.6
ARU 23 12 06.2
ARU Arti 123.31 329 *e*PKPdf PKPdf 23 05 10.6 -1.5
ARCES ARCESS Array B 124.45 352 PKP PKPdf 23 05 14.5 +0.6
comp=Z,4.4nm,1.0s,baz=11,slow=0.9,SNR=5.3
ABKAR Akbulak array 125.24 320 PKPdf PKPdf 23 05 15.9 -0.1
OBN Obninsk 134.04 337 *i*PKIKP PKPdf 23 05 32.7 +0.1
OBN *e* 23 08 05.9
OBN pmax pmax
comp=Z,10.0nm,0.8s
OBN MLR MLR
comp=Z,300nm,21.0s
KIV Kislovodsk 138.22 321 *i*PKIKP PKPdf 23 05 38.8 -1.9
KIV pmax pmax
comp=Z,4.0nm,1.0s
KIV MLR MLR
comp=Z,236nm,22.0s
KIV Kislovodsk 138.22 321 *e*PKPdf PKPdf 23 05 40.6 -0.1
KIEV Kiev 140.27 338 *e*PKIKP PKPdf 23 05 42.8 -1.4
LSZ Lusaka 143.12 216 *e*PKHKP PKPdf 23 05 47.8 -2.6
CLL Collm 143.64 354 *e*PKPbc PKPdf 23 05 47.9 -2.3
CLL Collm 143.64 354 *i*PKIKP PKPdf 23 05 47.5 -2.7
CLL pmax pmax
comp=Z,6.0nm,0.7s
CLL MLR MLR
comp=Z,200nm,19.5s
CLL Collm 143.64 354 *i*PKP PKPdf 23 05 47.5 -2.7
CLL *i* 23 06 06.3
CLL LR LR
comp=Z,200nm,19.5s
SCER sogukcermik 143.93 319 *i*P PKPdf 23 05 48.3 -2.8
BRG Berggiesshubel 143.96 352 *e*PKP PKPdf 23 05 48.0 -2.8
comp=Z,4.2nm,1.0s
BRG *e* 23 06 11.1
comp=Z,8.2nm,1.2s
BRG *e* 23 09 40.6
comp=Z,7.7nm,1.5s
BRG
comp=N,177nm,25.6s
BRG
comp=E,152nm,20.1s
BRG
comp=Z,307nm,24.7s
BRG Berggiesshubel 143.96 352 *e*PKIKP PKPdf 23 05 48.0 -2.8
BRG pmax pmax
comp=Z,3.0nm,1.0s
BRG pmax pmax
comp=Z,5.0nm,1.2s
BRG pmax pmax
comp=Z,5.0nm,1.5s
BRG MLR MLR
comp=N,106nm,25.6s
BRG MLR MLR
comp=E,91nm,20.1s
BRG MLR MLR
comp=Z,184nm,24.7s
UPC Upice 144.01 350 ⇓*i*PKIKP PKPdf 23 05 49.2 -1.7
UPC Upice 144.01 350 ⇓*i*PKP PKPdf 23 05 49.2 -1.7
DPC Dobruska-Polom 144.11 350 *e*PKIKP PKPdf 23 05 49.8 -1.3
DPC MLR MLR
comp=Z,300nm,20.3s
DPC Dobruska-Polom 144.11 350 *e*PKP PKPdf 23 05 49.8 -1.3
DPC *ex* x 23 06 03.9
DPC AMS AMS 00 05 10.0
comp=Z,300nm,20.3s
NIE Niedzica 144.15 345 *e*PKP PKPdf 23 05 50.1 -1.1
PVCC Panska Ves 144.21 352 *e*PKIKP PKPdf 23 05 50.1 -1.1
PVCC *e* 23 05 55.7
PVCC MLR MLR
comp=Z,300nm,16.6s
PVCC Panska Ves 144.21 352 ⇓*e*PKP PKPdf 23 05 50.1 -1.1
PVCC *e*pPKP pPKPdf 23 05 55.7 -15
PVCC *ex* x 23 06 10.4
PVCC AMS AMS 00 08 20.0
comp=Z,300nm,16.6s
OKC Ostrava-Krasne 144.25 348 *e*PKIKP PKPdf 23 05 49.7 -1.6
OKC MLR MLR
comp=Z,300nm,20.2s
OKC Ostrava-Krasne 144.25 348 ⇓*e*PKP PKPdf 23 05 49.7 -1.6
OKC AMS AMS 00 04 40.0
comp=Z,300nm,20.2s
BUR08 Bucovina Ar. S 144.26 339 *e*PKPdf PKPdf 23 05 49.9 -1.5
BURAR Bucovina Array 144.28 339 ⇑PKIKP PKPdf 23 05 50.3 -1.1
BURAR Bucovina Array 144.28 339 ⇑*i*P PKPdf 23 05 50.3 -1.1
UZH Uzhgorod 144.33 342 *e*PKIKP PKPdf 23 05 49.5 -2.0
UZH *e* 23 05 58.3
MORC Moravsky Berou 144.43 348 PKIKP PKPdf 23 05 51.1 -0.5
MORC Moravsky Berou 144.43 348 ⇑P PKPdf 23 05 50.5 -1.1
MORC Moravsky Berou 144.43 348 ⇑*i*P PKPdf 23 05 50.5 -1.1
MOX Moxa 144.44 355 *e*PKP PKPdf 23 05 50.7 -0.9
comp=Z,24nm,1.6s
MOX *e* 23 06 06.0
MOX
comp=Z,200nm,19.0s
MOX Moxa 144.44 355 *e*PKPbc PKPdf 23 05 50.4 -1.2
HGN Heimansgroeve 144.51 1 *e*PKP PKPdf 23 05 50.1 -1.7
comp=Z,30nm,1.9s
TANN Tannenbergstha 144.58 354 *e*PKPbc PKPdf 23 05 50.3 -1.6
MEM Membach 144.67 1 PKP PKPdf 23 05 51.1 -0.9
TESR 144.68 336 ⇓P PKPdf 23 05 50.9 -1.3
TESR 144.68 336 ⇓*i*P PKPdf 23 05 50.9 -1.3
TRPA Tarpa 144.71 342 ⇑*i*P PKPdf 23 05 51.1 -1.1
SNF Seneffe 144.72 3 PKP PKPdf 23 05 51.4 -0.7
SNF APKP 23 06 12.0
PRU Pruhonice 144.75 351 *e*PKIKP PKPdf 23 05 52.3 +0.1
PRU MLR MLR
comp=Z,300nm,19.9s
PRU Pruhonice 144.75 351 ⇓*e*PKP PKPdf 23 05 52.3 +0.1
PRU *ex* x 23 06 05.6
PRU AMS AMS 00 08 20.0
comp=Z,300nm,19.9s
NKC Novy Kostel 144.76 354 *e*PKIKP PKPdf 23 05 51.5 -0.7
NKC Novy Kostel 144.76 354 ⇓*e*PKP PKPdf 23 05 51.5 -0.7
BMR Baia Mare 144.81 340 ⇓PKIKP PKPdf 23 05 52.1 -0.3
BMR Baia Mare 144.81 340 ⇓*i*P PKPdf 23 05 52.1 -0.3
BCLA Clavier 144.84 2 PKP PKPdf 23 05 51.5 -0.8
CTKT Corum 144.92 322 *i*P PKPdf 23 05 53.1 +0.3
GZT Gaziantep 144.99 315 *i*P PKPdf 23 05 52.8 -0.2
TNS Taunus Mts 145.04 358 *e*PKPbc PKPbc 23 05 52.3 +0.1
PINB Pinarbasi 145.06 318 *i*P PKPbc 23 05 52.5 -0.1
VRAC Vranov 145.06 349 PKIKP PKPdf 23 05 53.0 +0.2
VRAC Vranov 145.06 349 ⇓P PKPbc 23 05 52.4 +0.2
VRAC Vranov 145.06 349 ⇓*i*P PKPbc 23 05 52.4 +0.1
DOU Dourbes 145.14 3 PKP PKPdf 23 05 52.2 -0.6
GIVF Givet 145.15 2 ⇓*i*PKP1 PKPbc 23 05 52.4 -0.1
comp=Z,34nm,0.9s
BAIF Baives 145.16 3 ⇓*i*PKP1 PKPbc 23 05 52.7 +0.2
comp=Z,61nm,0.9s
BALT Daday 145.16 324 *i*P PKPbc 23 05 54.1 +1.3
VRI Vrincioaia 145.18 335 ⇓PKIKP PKPdf 23 05 53.1 0.0
VRI Vrincioaia 145.18 335 ⇓*i*P PKPbc 23 05 53.1 +0.4
PLOR Plostina 145.22 336 ⇓PKIKP PKPdf 23 05 53.5 +0.4
PLOR Plostina 145.22 336 ⇓*i*P PKPbc 23 05 53.5 +0.6
ROTZ Rotzenmuhle 145.25 354 *e*PKPbc PKPbc 23 05 53.2 +0.4
TREC Trest 145.27 350 ⇓*i*PKIKP PKPdf 23 05 52.8 -0.3
TREC MLR MLR
comp=Z,400nm,19.3s
TREC Trest 145.27 350 ⇓*i*PKP PKPdf 23 05 52.8 -0.3
TREC AMS AMS 00 08 20.0
comp=Z,400nm,19.3s
ABH Alteburg 145.40 359 PKP PKPdf 23 05 53.6 +0.3
GRF Grafenberg Arr 145.41 355 *e*L 00 03 47.1
comp=Z,235nm,21.2s
GRF Grafenberg Arr 145.41 355 *e*PKIKP PKPdf 23 05 53.5 +0.2
GRF MLR MLR
comp=Z,200nm,21.2s
GRER 145.47 335 ⇑P PKPdf 23 05 55.4 +1.8
GRER 145.47 335 ⇑*i*P PKPdf 23 05 55.4 +1.8
TIRR Tirgusor 145.59 332 ⇑PKIKP PKPdf 23 05 54.4 +0.6
TIRR Tirgusor 145.59 332 ⇑*i*P PKPdf 23 05 54.4 +0.6
RUP Ruppelstein 145.59 360 PKP PKPdf 23 05 54.2 +0.6
DOPR Dopca 145.62 337 ⇑*i*P PKPdf 23 05 55.7 +1.9
WLF Walferdange 145.62 1 PKP PKPdf 23 05 54.6 +0.9
WLF Walferdange 145.62 1 *e*PKPbc PKPbc 23 05 54.4 +0.4
WLF Walferdange 145.62 1 *e*PKPdf PKPdf 23 05 54.0 +0.4
KUZU Kuzuini 145.62 314 *i*P PKPdf 23 05 53.1 -1.0
PSZ Piszkesteto 145.64 344 ⇓P pPKPdf 23 06 14.5 +1.6
PSZ Piszkesteto 145.64 344 ⇓*i*P pPKPdf 23 06 14.5 +1.6
TOD Tromm 145.65 358 PKP PKPdf 23 05 54.5 +0.8
ANDN Andirin 145.70 316 *i*P PKPdf 23 05 48.3 -5.9
KHC Kasperske Hory 145.72 352 ⇓*i*PKIKP PKPdf 23 05 54.8 +0.9
KHC *e* 23 06 06.0
KHC MLR MLR
comp=Z,300nm,23.5s
KHC Kasperske Hory 145.72 352 *e*PKP PKPdf 23 05 53.9 0.0
KHC Kasperske Hory 145.72 352 ⇓*i*PKP PKPdf 23 05 54.8 +0.9
KHC *ex* x 23 06 06.0
KHC AMS AMS 00 05 20.0
comp=Z,300nm,23.5s
CDAG Ucekdag 145.79 321 *i*P PKPdf 23 05 53.5 -0.8
WET Wettzell 145.79 353 *e*PKPbc PKPbc 23 05 54.8 +0.2
MLR Muntele Rosu 145.80 336 ⇓PKIKP PKPdf 23 05 55.6 +1.5
MLR Muntele Rosu 145.80 336 ⇓*i*P PKPdf 23 05 55.6 +1.5
DRGR 145.84 341 PKIKP PKPdf 23 05 55.1 +0.9
DRGR 145.84 341 ⇑P PKPdf 23 05 54.8 +0.7
DRGR 145.84 341 ⇑*i*P PKPdf 23 05 54.8 +0.6
KMBO Kilima Mbogo 145.87 244 PKPbc PKPbc 23 05 57.3 +1.4
comp=Z,10nm,1.0s,baz=180,slow=24,SNR=13
KMBO pPKPbc pPKPbc 23 06 19.4 +4.5
comp=Z,9.4nm,1.0s,baz=179,slow=24,SNR=6.4
KMBO Kilima Mbogo 145.87 244 *e*PKPdf PKPdf 23 05 56.4 +1.2
ROSF Rostrenen 145.91 12 ⇓*i*PKP1 PKPbc 23 05 54.3 -0.6
comp=Z,74nm,1.2s
AMRR Amara 145.94 334 P PKPab 23 05 56.6 +0.9
GEC2 GERESS Array S 145.98 352 *e*PKPbc PKPbc 23 05 55.1 0.0
FLN La Foliniere 145.98 9 ⇓*i*PKP1 PKPbc 23 05 54.7 -0.5
comp=Z,123nm,1.2s
FLN *e*MLR MLR
comp=Z,539nm,22.0s
FLN La Foliniere 145.98 9 ⇓*i*PKP PKPdf 23 05 54.7 +0.4
FLN LR LR
comp=Z,540nm,22.0s
AVNT Avonos 145.99 319 *i*P PKPdf 23 05 55.3 +0.6
SGMF Saint Gilles 146.13 11 ⇓*i*PKP1 PKPbc 23 05 55.1 -0.5
comp=Z,153nm,1.4s
BR131 Keskin Array S 146.17 321 *e*PKP PKPdf 23 05 56.5 +1.6
BRTR Keskin Array B 146.17 321 PKPbc PKPbc 23 05 56.9 +0.8
comp=Z,30nm,1.0s,baz=115,slow=1.8,SNR=90
BRTR pPKPbc pPKPbc 23 06 17.6 +2.7
comp=Z,22nm,0.9s,baz=98,slow=2.1,SNR=6.2
VOIR 146.19 337 ⇑PKP2 PKPab 23 05 57.2 +0.6
VOIR 146.19 337 ⇑*i*P PKPab 23 05 57.2 +0.6
LDF La Druitiere 146.20 8 ⇓*i*PKP1 PKPbc 23 05 55.2 -0.6
comp=Z,18nm,0.9s
BUD Budapest 146.27 345 ⇓*es*PKP 23 06 14.5
GRR Gorron 146.29 9 ⇓*i*PKP1 PKPbc 23 05 55.8 -0.3
comp=Z,88nm,1.3s
LANF Langenberg 146.30 359 PKP PKPdf 23 05 56.4 +1.5
QUIF Quistinic 146.33 12 ⇓*i*PKP1 PKPbc 23 05 55.6 -0.6
comp=Z,55nm,1.1s
SULR 146.34 335 ⇓P PKPdf 23 05 57.0 +2.0
SULR 146.34 335 ⇓*i*P PKPdf 23 05 57.0 +1.9
STU Stuttgart 146.46 357 *e*PKPbc PKPbc 23 05 56.6 0.0
STU Stuttgart 146.46 357 *e*PKPdf PKPdf 23 05 55.9 +0.7
CONA Conrad Observa 146.53 349 *i*PKPab PKPab 23 05 57.4 -0.4
comp=Z,21nm,0.9s,SNR=15
SGKT Sivrigoynuk 146.55 324 *i*P PKPdf 23 05 57.4 +1.8
YAYL Yayladag 146.67 314 *i*P PKPbc 23 05 58.3 +0.7
MEZF Maizieres J'vi 146.75 2 ⇓*i*PKP1 PKPbc 23 05 57.6 +0.2
comp=Z,21nm,0.9s
MOA Molln 146.87 351 ⇓*i*PKPab PKPab 23 05 58.2 -1.0
comp=Z,30nm,1.1s,SNR=13
CDF Champ du Feu 146.88 360 ⇓*i*PKP1 PKPbc 23 05 58.0 +0.2
comp=Z,84nm,1.2s
GULE Gulek 146.90 317 *i*P PKPdf 23 05 58.3 +2.1
FUR Furstenfeldbru 146.93 355 *e*PKPbc PKPbc 23 05 58.0 +0.1
BFO Black Forest 146.94 358 *e*PKPbc PKPbc 23 05 57.9 -0.1
BFO Black Forest 146.94 358 *e*PKPdf PKPdf 23 05 57.3 +1.3
THEF They Montfort 147.06 1 PKP PKPbc 23 05 58.7 +0.4
ECH Echery 147.07 360 PKP PKPbc 23 05 58.3 0.0
SPAK Spaichingen-Ko 147.15 358 PKP PKPbc 23 05 59.0 +0.4
RJOB Jochberg 147.19 353 *e*PKPbc PKPbc 23 05 58.8 +0.1
BZS Buzias 147.24 341 ⇓PKP2 PKPbc 23 05 59.0 +0.1
BZS Buzias 147.24 341 ⇓*i*P PKPbc 23 05 59.0 +0.1
ARSA Arzberg 147.24 349 ⇓*i*pPKPdf PKPbc 23 05 59.1 +0.2
comp=Z,24nm,1.6s,SNR=8.8
HAU Haudompre 147.28 1 ⇓*i*PKP1 PKPbc 23 05 59.1 +0.2
comp=Z,131nm,1.3s
HAU *e*MLR MLR
comp=Z,232nm,22.0s
HAU Haudompre 147.28 1 ⇓*i*PKP PKPbc 23 05 59.1 +0.2
HAU LR LR
comp=Z,230nm,22.0s
FELD Feldberg im Sc 147.40 359 PKP PKPbc 23 05 59.2 -0.1
MOF Molkenrain 147.44 360 PKP PKPbc 23 05 59.4 0.0
HINF Hinteralfeld 147.47 0 ⇓*i*PKP1 PKPbc 23 05 59.2 -0.3
comp=Z,57nm,1.3s
PKSM Moragy 147.55 345 ⇓PKP2 PKPbc 23 05 59.4 -0.3
PKSM Moragy 147.55 345 ⇓*i*P PKPbc 23 05 59.4 -0.3
RETA Reutte 147.64 355 ⇓*i*pPKPdf PKPbc 23 06 00.3 +0.3
comp=Z,25nm,1.3s,SNR=8.3
WATA Walderalm 147.72 354 ⇓*i*pPKPdf PKPbc 23 06 00.1 -0.1
comp=Z,9.9nm,0.9s
MOTA Moosalm 147.75 355 ⇑*i*PKPbc PKPbc 23 05 58.8 -1.4
comp=Z,18nm,0.9s,SNR=10
WTTA Wattenberg 147.78 354 ⇓*i*pPKPdf PKPbc 23 06 00.6 +0.2
comp=Z,16nm,0.7s,SNR=8.9
HYF Humbligny 147.83 5 *e*PKP1 PKPbc 23 06 00.7 +0.3
KOGS Kog 147.87 348 *i*PKPbc PKPbc 23 06 00.5 -0.1
SOKA Soboth 147.88 349 ⇓*i*PKPdf PKPdf 23 05 58.1 +0.5
comp=Z,24nm,1.2s
DAVA Damuels 147.91 356 ⇓*i*pPKPdf PKPbc 23 06 01.0 +0.4
comp=Z,34nm,1.3s,SNR=7.8
PERS Pernice 147.91 349 *e*PKPbc PKPbc 23 06 00.5 -0.2
BORA Eskisehir 147.92 325 *i*P PKPdf 23 05 53.2 -4.7
LOR Lormes 147.92 4 ⇓*i*PKP1 PKPbc 23 06 00.9 +0.2

	comp=Z,29nm,0.9s							
LOR					eMLR	MLR		
	comp=Z,439nm,20.8s							
LOR	**Lormes**	**147.92**	**4**	↓↓	iPKP	PKPbc	23 06 00.9	+0.2
LOR					LR	LR		
	comp=Z,440nm,20.8s							
LOMF	**Lomont**	**147.94**	**0**		PKP	PKPbc	23 06 00.9	+0.2
ESKT	**Eskisehir**	**147.94**	**324**		iP	PKPbc	23 06 01.3	+0.2
SSF	**Saint Saulge**	**148.10**	**4**	↓↓	iPKP1	PKPbc	23 06 01.4	+0.2
	comp=Z,51nm,1.1s							
FETA	**Feichten**	**148.11**	**355**	↓↓	iSPKPdf	PKPbc	23 06 01.7	+0.5
	comp=Z,21nm,1.1s							
MFF	**Saint Martin d**	**148.14**	**9**	↓↓	iPKP1	PKPbc	23 06 00.9	-0.4
	comp=Z,63nm,1.2s							
MYKA	**Terra Mystica**	**148.16**	**351**	↓↓	iPKPbc	PKPbc	23 06 00.6	-0.7
	comp=Z,25nm,1.6s							
ABTA	**Abfaltersbach**	**148.19**	**353**	↓↓	iPKPdf	PKPbc	23 06 01.1	-0.4
	comp=Z,21nm,1.0s,SNR=12							
AVF	**Avril sur Loir**	**148.36**	**5**	↓↓	iPKP1	PKPbc	23 06 01.6	-0.3
	comp=Z,43nm,1.2s							
ERMK	**Ermenek**	**148.49**	**318**		iP	PKPbc	23 06 02.4	-0.2
SMF	**Signal de Mont**	**148.54**	**4**	↓↓	iPKP1	PKPbc	23 06 02.3	0.0
	comp=Z,87nm,1.3s							
BGF	**Bois d'Agland**	**148.55**	**5**	↓↓	iPKP1	PKPbc	23 06 02.4	0.0
	comp=Z,72nm,1.3s							
GCIS	**Gornji Cirnik**	**148.55**	**348**		iPKPbc	PKPbc	23 06 02.5	+0.1
LJU	**Ljubljana**	**148.59**	**350**		iPKPbc	PKPbc	23 06 02.5	+0.1
MMAI	**Mount Meron Ar**	**148.65**	**310**		PKPbc	PKPbc	23 06 04.0	+1.0
	comp=Z,17nm,1.0s,baz=67,slow=7.3,SNR=13							
MMAI					pPKPbc	pPKPbc	23 06 25.9	+3.7
	comp=Z,47nm,1.1s,baz=14,slow=4.3,SNR=8.7							
CABF	**La Chapelle**	**148.67**	**1**	↓↓	iPKP1	PKPbc	23 06 03.5	+0.8
	comp=Z,72nm,1.1s							
TCF	**Toulx Ste Croi**	**148.76**	**6**	↓↓	iPKP1	PKPbc	23 06 02.6	-0.3
	comp=Z,84nm,1.5s							
GDZ	**Gediz**	**149.01**	**324**		iP	PKPbc	23 06 03.9	+0.1
GAZI	**Gazipasa**	**149.12**	**317**		iP	PKPdf	23 05 58.6	-1.3
CSS	**Prodhromos**	**149.16**	**314**		ePKPdf	PKPdf	23 06 00.4	+0.3
VTS	**Vitosha**	**149.30**	**336**	↓↓	PKP2	PKPbc	23 06 04.7	+0.3
VTS	**Vitosha**	**149.30**	**336**	↓↓	iP	PKPbc	23 06 04.7	+0.3
BALY	**Balya**	**149.55**	**327**		iP	PKPbc	23 06 04.4	-0.8
RJF	**Les Rejaudoux**	**149.65**	**8**		ePKP1	PKPbc	23 06 05.5	+0.3
	comp=Z,24nm,1.0s							
RJF					eMLR	MLR		
	comp=Z,487nm,22.2s							
RJF	**Les Rejaudoux**	**149.65**	**8**		ePKP	PKPbc	23 06 05.5	+0.3
RJF					LR	LR		
	comp=Z,490nm,22.3s							
LPL	**La Plagne**	**149.78**	**0**	↓↓	iPKP1	PKPbc	23 06 06.8	+1.3
	comp=Z,32nm,1.2s							
LPG	**La Plagne**	**149.79**	**0**	↓↓	iPKP1	PKPbc	23 06 07.0	+1.5
	comp=Z,33nm,1.0s							
KORT	**Korkueli**	**149.90**	**321**		iP	PKPbc	23 06 05.8	-0.2
LFF	**La Frestale**	**149.90**	**9**	↓↓	iPKP1	PKPbc	23 06 05.8	0.0
	comp=Z,115nm,1.3s							
CAF	**Calviac**	**150.09**	**7**	↓↓	iPKP1	PKPbc	23 06 06.4	+0.2
	comp=Z,37nm,1.2s							
DNZL	**Cakiroluk**	**150.22**	**323**		iP	PKPbc	23 06 07.7	+0.8
BNI	**Bardonecchia**	**150.24**	**0**		ePKP2	PKPbc	23 06 06.8	+0.2
ORIF	**Oris-en-Rattie**	**150.36**	**1**		ePKP1	PKPbc	23 06 07.7	+0.8
	comp=Z,101nm,1.7s							
ORIF					eMLR	MLR		
	comp=Z,216nm,21.0s							
VIVF	**Saint-Julien-l**	**150.38**	**3**		ePKP1	PKPbc	23 06 07.5	+0.6
	comp=Z,19nm,0.9s							
MBDF	**Montbardon**	**150.56**	**0**	↓↓	iPKP1	PKPbc	23 06 08.1	+0.7
	comp=Z,44nm,1.3s							
PCAB	**Cabril**	**150.60**	**23**		ePKP	PKPbc	23 06 08.0	+0.4
PCAB					iP		23 06 28.1	
VAY	**Valandovo**	**150.63**	**335**		ePKP	PKPbc	23 06 05.8	-1.9
KDAG	**Bornova**	**150.72**	**326**		iP	PKPdf	23 05 59.9	-2.5
AYDN	**Tasoluk**	**150.91**	**324**		iP	PKPbc	23 06 07.6	-0.9
PCBR	**Braganca**	**150.99**	**21**		ePKP	PKPbc	23 06 08.5	0.0
PBRG					eP		23 06 16.3	
PBRG					iP		23 06 29.0	
PVRL	**Vila Real**	**151.09**	**23**		ePKP	PKPbc	23 06 09.4	+0.6
PVRL					eP		23 06 16.9	
LASF	**Ste Croix**	**151.10**	**5**		ePKP1	PKPbc	23 06 09.2	+0.5
	comp=Z,63nm,1.5s							
KRUS	**Krusevo**	**151.10**	**337**		ePKP	PKPbc	23 06 06.7	-2.0
SMRF	**Simiane la Rot**	**151.29**	**2**		ePKP1	PKPbc	23 06 10.0	+0.9
	comp=Z,48nm,1.2s							
SJPF	**Ste Jean**	**151.32**	**12**		ePKP1	PKPbc	23 06 09.2	0.0
	comp=Z,31nm,1.3s							
MVO	**Moncorvo**	**151.44**	**22**		ePKP	PKPbc	23 06 10.1	+0.5
MVO					eP		23 06 18.5	
MVO					iP		23 06 30.7	
OHR	**Ohrid**	**151.49**	**338**		ePKP	PKPbc	23 06 09.5	-0.2
BDRM	**Kayabasi**	**151.57**	**324**		iP	PKPdf	23 06 05.7	+1.9
ETSF	**Etsaut**	**151.66**	**12**		ePKP1	PKPbc	23 06 10.5	+0.5
MTLF	**Montolieu**	**151.67**	**7**		ePKP1	PKPbc	23 06 10.0	0.0
	comp=Z,37nm,1.4s							
EPF	**Esparros**	**151.70**	**10**		ePKP1	PKPbc	23 06 10.4	+0.3
FRF	**La Foret Royal**	**151.73**	**0**		ePKP1	PKPbc	23 06 10.2	+0.1
MTE	**Manteigas**	**151.91**	**24**		ePKP	PKPdf	23 06 07.0	+2.8
MTE					iP		23 06 31.4	
LMR	**La Mourre**	**151.96**	**1**		ePKP1	PKPbc	23 06 11.8	+1.1
PTOM	**Tomar**	**152.22**	**26**		ePKP	PKPbc	23 06 11.6	+0.2
PTOM					eP		23 06 21.4	
PTOM					iP		23 06 32.0	
PCBR	**Castelo Branco**	**152.42**	**24**		ePKP	PKPbc	23 06 12.0	+0.2
PCBR					eP		23 06 23.3	
PCBR					iP		23 06 32.1	
PMRV	**Marv??o**	**152.80**	**25**		ePKP	PKPbc	23 06 11.9	-0.8
PMRV					eP		23 06 23.5	
PMRV					iP		23 06 33.3	
PESTR	**Estremoz**	**153.20**	**26**		eP	PKPab	23 06 24.8	-0.6
EVO	**Evora**	**153.30**	**27**		ePKP2	PKPab	23 06 25.5	-0.3
	comp=Z,23nm,0.9s							
EVO					eMLR	MLR		
	comp=Z,450nm,22.5s							
PBEJ	**Beja**	**153.78**	**27**		eP	PKPbc	23 06 19.3	+4.4
PBEJ					iP		23 06 35.4	
ESDC	**Sonseca Array**	**153.83**	**19**		PKPbc	PKPbc	23 06 15.6	+0.7
	comp=Z,2.0nm,1.0s,baz=348,slow=3.6,SNR=5.7							
ESDC					PKPab	PKPab	23 06 28.2	+0.2
	comp=Z,9.9nm,1.0s,baz=322,slow=3.8,SNR=22							
ESDC	**Sonseca Array**	**153.83**	**19**		PKPbc	PKPbc	23 06 15.6	+0.7
ESDC					PKPab	PKPab	23 06 28.2	+0.2
MORF	**Marmelete**	**154.01**	**29**		eP	PKPab	23 06 28.8	-0.1
PCVE	**Castro Verde**	**154.03**	**28**		eP	PKPab	23 06 28.8	-0.2
PVAQ	**Vaqueiros**	**154.36**	**28**		eP	PKPab	23 06 30.7	+0.3

KRSC 22 23:32:47.4±0.9, 53°.22N×160°.29E, h49km±31km, ML3.9, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.20**	**233**	*e*P	Pn	23 32 55.7	+0.1
SPN				*i* S	Sn	23 33 01.7	+0.3
NLC	**Nalytchevo**	**0.57**	**265**	*e*P	Pn	23 32 59.1	-0.3
NLC				*i* S	Sn	23 33 07.8	-0.2
AVH	**Avacha**	**0.93**	**273**	*e*P	Pn	23 33 04.2	+0.1
AVH				*i* S	Sn	23 33 16.7	+0.2
KII	**Karymskiy**	**0.96**	**329**	*e*P	Pn	23 33 04.9	+0.4
KII				*i* S	Sn	23 33 17.7	+0.6
PET	**Petropavlovsk**	**1.01**	**259**	*e*P	Pn	23 33 04.6	-0.5
PET				*i* S	Sn	23 33 17.3	-0.9
GRL	**Gorelyy**	**1.50**	**244**	*e*P	Pn	23 33 12.2	+0.4
GRL				*i* S	Sn	23 33 30.8	+0.6
MKZ	**Mys Kozlova**	**1.59**	**32**	*e*P	Pn	23 33 12.9	-0.1
MKZ				*i* S	Sn	23 33 31.9	-0.4
MIPR	**Malaya Ipel'ka**	**2.35**	**248**	*e*P	Pn	23 33 24.4	+1.0
KMNR	**Kamenistaya**	**2.54**	**359**	P	Pn	23 33 27.1	+1.0
ZLN	**Zelenaya**	**2.82**	**6**	*e*P	Pn	23 33 31.9	+2.0
SRDR	**Sredinnyy**	**3.12**	**354**	*e*P	Pn	23 33 35.6	+1.6
KBTR	**Krutoberegovo**	**3.33**	**25**	*e*P	Pn	23 33 38.1	+1.2
KBTR				*i* S	Sn	23 34 15.2	0.0
SMKR	**Semkarok**	**3.44**	**11**	*e*P	Pn	23 33 40.6	+2.3
SMKR				*i* S	Sn	23 34 20.4	+2.6
SRKR	**Sorokina**	**3.48**	**8**	*e*P	Pn	23 33 41.4	+2.5
BKI	**Bering**	**3.88**	**57**	*e*P	Pn	23 33 44.8	+0.3
BKI				*i* S	Sn	23 34 25.5	-3.2

*IDC **22** 23:43:55.0±1.2, 3°.01S×100°.78E, h0km, mb4.0/11, mb1 4.1/11, mb1mx3.9/19, mbtmp4.0/11, MS3.8/2, Ms1 3.8/2, ms1mx3.0/36, Error ellipse: s-maj=47.2km s-min=18.6km az=56.0*

*NEIC **22** 23:44:00.0±0.3, 2°.95S×100°.90E, h35km, mb4.2/9, Error ellipse: s-maj=10.5km s-min=5.3km az=66.0*

*ISCJB **22** 23:44:02.6±0.6, 2°.90S±0°.05×100°.95E±0°.05, h75km±5km, mb4.0/19, Error ellipse: s-maj=10.9km s-min=4.8km az=141.5*

*DJA **22** 23:44:04, 2°.87S×101°.00E, h40km, MLv4.0/11*

ISC 22 23:44:03.7±0.6, 2°.89S±0°.05×100°.96E±0°.05, h66km±5km, n45, σ0°85/48, mb4.0/19, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**0.94**	**32**	P	**Pn**	**23 44 19.8**	**-1.5**
KRJI				S	**Sn**	**23 44 33.9**	**-0.4**
KSI	**Kapahiang**	**1.80**	**115**	P	**Pn**	**23 44 31.5**	**-1.1**
KSI				S	**Sn**	**23 44 54.3**	**-0.2**
SDSI	**Sungai Dareh**	**2.00**	**14**	P	**Pn**	**23 44 35.2**	**-0.1**
SDSI				S	**Sn**	**23 45 00.8**	**+1.4**
PDSI	**Padang**	**2.03**	**346**	P	**Pn**	**23 44 35.3**	**-0.4**
PDSI				S	**Sn**	**23 44 59.4**	**-0.6**
SISI	**Saibi**	**2.43**	**310**	P	**Pn**	**23 44 41.6**	**+0.5**
SISI				S	**Sn**	**23 45 09.8**	**+0.1**
MNAI	**Manna**	**2.47**	**126**	P	**Pn**	**23 44 42.4**	**+0.7**
MNAI				S	**Sn**	**23 45 12.5**	**+1.6**
PPI	**Padang Panjang**	**2.48**	**347**	P	**Pn**	**23 44 42.3**	**+0.4**
MDSI	**Maura Dua**	**3.58**	**116**	P	**Pn**	**23 44 57.3**	**+0.4**
KLSI		**4.17**	**116**	P	**Pn**	**23 45 05.3**	**+0.4**
GSI	**Gunungsitoli**	**5.36**	**321**	P	**Pn**	**23 45 23.2**	**+1.9**
	0.3nm47nm,1.9s						
MYKOM	**Kota Tinggi**	**5.48**	**32**	P	**Pn**	**23 45 22.7**	**-0.1**
PSI	**Prapat**	**6.01**	**340**	LR	LR	23 47 43.2	
	comp=Z,411nm,18.0s,baz=338,slow=38						
KULM	**Kulim**	**8.13**	**358**	*e*Pn	**Pn**	**23 45 56.5**	**-2.6**
CMAR	**Chiang Mai Arr**	**21.30**	**355**	P	**P**	**23 48 43.7**	**-1.5**
	0.8nm,0.4s,mb3.4,baz=184,slow=9.4,SNR=5.4						
QIZ	**Qiongzhong**	**23.47**	**22**	P	**P**	**23 49 07.4**	**-0.2**
DAV	**Davao City (W)**	**26.49**	**68**	*e*P	**P**	**23 49 35.3**	**+0.1**
FITZ	**Fitzroy Crossi**	**28.53**	**124**	*e*P	**P**	**23 49 53.8**	**+0.5**
	6.8nm,0.9s,mb4.3						
NWAO	**Narrogin (SRO)**	**33.55**	**155**	P	**P**	**23 50 35.9**	**-1.5**
LSA	**Lhasa**	**33.74**	**345**	*e*P	**P**	**23 50 39.3**	**+0.3**
	2.3nm,0.4s,mb4.4						
YHNB	**Yeheng**	**33.82**	**35**	P	**P**	**23 50 39.2**	**-0.6**
ASAR	**Alice Springs**	**37.96**	**126**	P	**P**	**23 51 14.6**	**-0.7**
	0.9nm,0.8s,mb3.7,baz=303,slow=8.2,SNR=7.4						
KSRS	**Korea Array**	**47.31**	**29**	P	**P**	**23 52 32.5**	**+1.7**
	0.7nm,0.6s,mb3.6,baz=212,slow=8.6,SNR=2.9						
STKA	**Stephens Creek**	**47.85**	**132**	P	**P**	**23 52 35.5**	**+0.3**
	1.1nm,0.5s,mb4.0,baz=293,slow=12,SNR=2.7						
STKA	**Stephens Creek**	**47.85**	**132**	*e*P	**P**	**23 52 34.4**	**-0.8**
	1.1nm,0.9s,mb3.7						
SONM	**Songino Array**	**50.74**	**5**	P	**P**	**23 52 57.7**	**+0.9**
	2.7nm,0.8s,mb4.3,baz=184,slow=8.8,SNR=12						
ULN	**Ulaanbaatar**	**50.83**	**5**	*e*P	**P**	**23 52 58.4**	**+0.9**
	1.8nm,0.8s,mb4.2						
UCH	**Uchtor**	**50.90**	**335**	*e*P	**P**	**23 52 58.9**	**+0.7**
	0.6nm,0.6s,mb3.8						
AAK	**Ala-Archa**	**51.24**	**335**	P	**P**	**23 53 00.1**	**-0.6**
EKS2	**Erkin-Say**	**51.57**	**335**	*e*P	**P**	**23 53 03.4**	**+0.2**
	2.9nm,0.7s,mb4.4						
MK31	**Makanchi Array**	**52.14**	**344**	*e*P	**P**	**23 53 07.1**	**-0.3**
MKAR	**Makanchi Array**	**52.14**	**344**	P	**P**	**23 53 08.0**	**+0.7**
	2.0nm,0.5s,mb4.4,baz=149,slow=8.0,SNR=21						
MKAR	**Makanchi Array**	**52.14**	**344**	P	**P**	**23 53 08.0**	**+0.7**
KURK	**Kurchatov**	**56.73**	**343**	*e*P	**P**	**23 53 40.4**	**-0.2**
	1.1nm,0.6s,mb4.1						
ZALV	**Zalesovo Beam**	**58.22**	**349**	P	**P**	**23 53 50.6**	**-0.4**
	6.3nm,0.7s,mb4.7,baz=176,slow=5.9,SNR=32						
BVAR	**Borovoye Array**	**61.34**	**340**	P	**P**	**23 54 12.2**	**-0.3**
	1.0nm,0.6s,mb4.1,baz=146,slow=11,SNR=6.8						
BRVK	**Borovoye**	**61.41**	**339**	*e*P	**P**	**23 54 12.3**	**-0.6**
	1.1nm,0.5s,mb4.1						
ABKAR	**Akbulak array**	**62.88**	**331**	*e*P	**P**	**23 54 22.5**	**-0.3**
	1.3nm,0.5s,mb4.1						
CASY	**Casey**	**63.63**	**176**	P	**P**	**23 54 26.6**	**-0.9**
GNI	**Garni**	**66.83**	**316**	P	**P**	**23 54 48.3**	**-0.4**
MAW	**Mawson**	**69.67**	**195**	P	**P**	**23 55 05.3**	**-0.6**
BRTR	**Keskin Array B**	**74.62**	**312**	P	**P**	**23 55 36.9**	**+0.7**
	0.3nm,0.7s,mb3.2,baz=153,slow=9.3,SNR=3.9						
FINES	**FINESS Array B**	**85.34**	**332**	P	**P**	**23 56 34.2**	**+0.8**
	2.6nm,1.0s,mb4.1,baz=169,slow=1.9,SNR=3.4						
ARCES	**ARCESS Array B**	**87.63**	**340**	P	**P**	**23 56 45.2**	**+0.8**
	2.1nm,1.0s,mb4.1,baz=95,slow=7.3,SNR=3.4						
HFS	**Hagfors**	**91.12**	**330**	LR	LR	00 40 12.6	
	comp=Z,80nm,19.1s,baz=183,slow=37						
TXAR	**Lajitas Array**	**144.81**	**39**	PKPbc	PKPdf	00 03 33.6	-0.3
	0.7nm,0.5s,baz=267,slow=0.7,SNR=16						

*IDC **23** 00:54:54.3±1.9, 3°.40S×149°.23E, h0km, mb4.2/7, mb1 4.4/7, mb1mx4. 1/16, mbtmp4.2/7, MS3.5/5, Ms1 3.5/5, ms1mx3.1/20, Error ellipse: s-maj=57.3km s-min=24.4km az=112.0*

*ISCJB **23** 00:55:01.8±3.0, 3°.57S±0°.10×149°.2E±0°.2, h78km±27km, mb4.0/10, Error ellipse: s-maj=32.8km s-min=16.3km az=5.5*

*NEIC **23** 00:55:04.2±2.0, 3°.59S×149°.23E, h86km±18km, mb4.4/4, Error ellipse: s-maj=21.8km s-min=11.5km az=96.0*

ISC 23 00:55:03.9±2.5, 3°.59S±0°.10×149°.2E±0°.2, h82km±22km, n22, σ0°76/19, mb4.0/10, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.13**	**200**	*e*Pn	**Pn**	**00 56 32.2**	**+0.3**
PMG				Sn	**Sn**	**00 57 40.2**	**-0.4**
WRAB	**Tennant Creek**	**21.78**	**221**	*e*P	**P**	**00 59 49.1**	**-0.1**
	13nm,0.8s,mb4.3						
ASAR	**Alice Springs**	**24.85**	**215**	P	**P**	**01 00 19.6**	**+0.8**
	4.4nm,0.8s,mb4.0,baz=46,slow=7.5,SNR=30						
FITZ	**Fitzroy Crossi**	**27.23**	**236**	P	**P**	**01 00 42.0**	**+1.6**
	14nm,1.0s,mb4.4,baz=51,slow=10,SNR=9.8						
FITZ				LR	LR	01 12 51.6	
	comp=Z,152nm,21.1s,baz=32,slow=39						
FITZ	**Fitzroy Crossi**	**27.23**	**236**	*e*P	**P**	**01 00 40.8**	**+0.4**
	11nm,0.9s,mb4.4						
FITZ				LR	LR	01 12 51.6	
CBIJ	**Chichi jima**	**31.26**	**348**	LR	LR	01 13 18.3	
	comp=Z,44nm,19.0s,baz=135,slow=36						
MBWA	**Marble Bar**	**33.58**	**236**	P	**P**	**01 01 36.3**	**-0.1**
YHNB	**Yeheng**	**39.02**	**318**	*e*P	**P**	**01 02 23.3**	**+0.7**
MJAR	**Matsushiro Arr**	**41.23**	**346**	LR	LR	01 19 21.9	
	comp=Z,64nm,18.5s,baz=180,slow=36						
URZ	**Urewera**	**42.87**	**147**	LR	LR	01 16 58.5	
	comp=Z,64nm,21.8s,baz=182,slow=31						
KSRS	**Korea Array**	**45.39**	**336**	LR	LR	01 20 27.2	
	comp=Z,60nm,18.7s,baz=103,slow=34						
YSS	**Yuzh-Sakhalins**	**50.66**	**354**	P	**P**	**01 03 53.3**	**-1.4**
CMAR	**Chiang Mai Arr**	**54.15**	**296**	P	**P**	**01 04 20.5**	**-0.6**
	0.8nm,0.4s,mb4.1,baz=106,slow=5.7,SNR=5.4						
CHTO	**Chiang Mai**	**54.26**	**296**	*e*P	**P**	**01 04 20.3**	**-1.6**
ULN	**Ulaanbaatar**	**63.13**	**330**	*e*P	**P**	**01 05 23.6**	**+0.7**
SONM	**Songino Array**	**63.44**	**329**	P	**P**	**01 05 25.1**	**+0.1**
	1.4nm,0.9s,mb3.9,baz=144,slow=5.8,SNR=5.1						
CASY	**Casey**	**68.16**	**196**	*e*P	**P**	**01 05 54.1**	**-0.9**
	6.4nm,0.7s,mb4.6						
MKAR	**Makanchi Array**	**77.09**	**320**	P	**P**	**01 06 49.5**	**+1.2**
	0.5nm,0.4s,mb3.6,baz=104,slow=5.1,SNR=5.6						
ZALV	**Zalesovo Beam**	**78.19**	**327**	P	**P**	**01 06 54.0**	**-0.3**
	0.4nm,0.3s,mb3.6,baz=108,slow=9.3,SNR=4.1						
KURK	**Kurchatov**	**80.64**	**323**	*e*P	**P**	**01 07 07.5**	**-0.2**
	1.2nm,0.8s,mb3.8						
ILAR	**Eielson Array**	**82.41**	**23**	P	**P**	**01 07 17.4**	**+0.7**
	0.8nm,1.0s,mb3.5,baz=242,slow=1.9,SNR=5.0						
QSPA	**South Pole Qui**	**86.36**	**180**	*e*P	**P**	**01 07 36.4**	**-0.1**

MEX 23 00:57:03.3±0.5, 14°.74N×93°.82W, h15km, MD4.1, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.12**	**31**	*i* P	Pb	00 57 20.0	-4.4
PCIG				*e*S	Sb	00 57 34.5	-4.3
THIG		**1.52**	**84**	*e*P	Pn	00 57 26.7	-3.2
THIG				*i* S	Sn	00 57 44.3	-5.1
TGIG		**2.13**	**18**	*e*P	Pn	00 57 35.7	-2.7
TGIG				*i* S	Sn	00 58 00.9	-3.7
SCX	**San Cristobal**	**2.29**	**30**	*i* P	Pn	00 57 37.7	-2.9
SCX				*i* S	Sn	00 58 04.8	-3.7

*ISCJB **23** 01:09:26.3±0.9, 62°.4N±0°.1×26°.5W±0°.3, h10km, mb3.9/11, MS3.0/5, Error ellipse: s-maj=20.6km s-min=11.0km az=140.4*

*CSEM **23** 01:09:27.8, 62°.34N×26°.35W, h10km, mb4.2/9, After NEIC*

*IDC **23** 01:09:27.5±2.2, 62°.59N×26°.52W, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.3/26, mbtmp3.6/3, MS3.1/6, Ms1 3.1/6, ms1mx2.9/29, Error ellipse: s-maj=107.2km s-min=31.4km az=4.0*

*NEIC **23** 01:09:27.8±0.9, 62°.34N×26°.35W, h10km, mb4.2/9, Error ellipse: s-maj=21.3km s-min=10.8km az=50.0*

ISC 23 01:09:28.2±0.9, 62.4N±0°.1×26.4W±0°.3, h10km, n38, σ1°29/32, mb3.9/11, MS3.0/5, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**3.28**	**41**	*e*Pn	**Pn**	**01 10 18.6**	**-1.0**
BORG	**Borgarnes**	**3.28**	**41**	*e*Pn	**Pn**	**01 10 18.6**	**-1.0**
SUMG	**Summit**	**11.22**	**341**	*e*Pn	**Pn**	**01 12 08.4**	**0.0**
SUMG	**Summit**	**11.22**	**341**	*e*Pn	**Pn**	**01 12 08.4**	**0.0**
NOA	**NORSAR Array B**	**17.70**	**77**	LR	LR	01 19 35.1	
	comp=Z,46nm,20.4s,baz=285,slow=34						
BAIF	**Baives**	**20.74**	**112**	*e*P	**P**	**01 14 10.0**	**+1.3**
	29nm,1.4s						
BAIF	**Baives**	**20.74**	**112**	*e*P	**P**	**01 14 10.0**	**+1.3**
	14nm,1.4s						
BAIF	**Baives**	**20.74**	**112**	*e*P	**P**	**01 14 10.0**	**+1.3**
	14nm,1.4s						
GIVF	**Givet**	**20.98**	**111**	*e*P	**P**	**01 14 14.3**	**+3.1**
ARCES	**ARCESS Array B**	**21.66**	**49**	LR	LR	01 20 55.8	
	comp=Z,42nm,22.0s,MS2.8,baz=11,slow=32						
SCHQ	**Schefferville**	**22.07**	**269**	LR	LR	01 22 32.7	
	comp=Z,18nm,19.2s,MS2.5,baz=228,slow=36						
LOR	**Lormes**	**22.75**	**118**	*e*P	**P**	**01 14 29.3**	**-0.8**
	19nm,1.3s,mb4.1						
LOR	**Lormes**	**22.75**	**118**	*e*P	**P**	**01 14 29.3**	**-0.8**
	9.6nm,1.3s,mb4.1						
LOR	**Lormes**	**22.75**	**118**	*e*P	**P**	**01 14 29.3**	**-0.8**
	9.6nm,1.3s,mb4.1						
SSF	**Saint Saulge**	**22.77**	**118**	*e*P	**P**	**01 14 29.2**	**-1.1**
	13nm,1.2s,mb3.9						
SSF	**Saint Saulge**	**22.77**	**118**	*e*P	**P**	**01 14 29.2**	**-1.1**
	6.4nm,1.2s,mb3.9						
SSF	**Saint Saulge**	**22.77**	**118**	*e*P	**P**	**01 14 29.2**	**-1.1**
	6.4nm,1.2s,mb3.9						
TCF	**Toulx Ste Croi**	**22.87**	**121**	*e*P	**P**	**01 14 35.8**	**+4.4**
	28nm,1.4s,mb4.2						
TCF	**Toulx Ste Croi**	**22.87**	**121**	*e*P	**P**	**01 14 35.8**	**+4.4**
	14nm,1.4s,mb4.2						
BGF	**Bois d'Agland**	**22.91**	**120**	*e*P	**P**	**01 14 30.2**	**-1.6**
	24nm,1.2s,mb4.2						
BGF	**Bois d'Agland**	**22.91**	**120**	*e*P	**P**	**01 14 30.2**	**-1.6**
	12nm,1.2s,mb4.2						
BGF	**Bois d'Agland**	**22.91**	**120**	*e*P	**P**	**01 14 30.2**	**-1.6**
	12nm,1.2s,mb4.2						
AVF	**Avril sur Loir**	**22.92**	**119**	*e*P	**P**	**01 14 30.7**	**-1.3**
	18nm,1.3s,mb4.0						
AVF	**Avril sur Loir**	**22.92**	**119**	*e*P	**P**	**01 14 30.7**	**-1.3**
	8.9nm,1.3s,mb4.0						
AVF	**Avril sur Loir**	**22.92**	**119**	*e*P	**P**	**01 14 30.7**	**-1.3**
	8.9nm,1.3s,mb4.0						
HAU	**Haudompre**	**23.22**	**113**	*e*P	**P**	**01 14 37.9**	**+2.8**
	23nm,1.2s,mb4.2						
HAU	**Haudompre**	**23.22**	**113**	*e*P	**P**	**01 14 37.9**	**+2.8**
	11nm,1.2s,mb4.2						
SMF	**Signal de Mont**	**23.24**	**119**	*e*P	**P**	**01 14 34.7**	**-0.6**
	16nm,1.1s,mb4.1						
SMF	**Signal de Mont**	**23.24**	**119**	*e*P	**P**	**01 14 34.7**	**-0.6**
	8.0nm,1.1s,mb4.1						
SMF	**Signal de M

MAJO Matsushiro 3.95 257 *eP* **Pn 01 50 48.1 +1.9**
MAT Matsushiro 3.95 257 P **Pn 01 50 47.4 +1.2**
MAT *eS* **Sn 01 51 31.7 -0.3**
ERM Erimo 4.51 2 *e*Pn **Pn 01 50 51.4 -2.5**
ERM *e*Sn **Sn 01 51 46.1 +0.2**
JHJ Hachijo jima 2 5.10 212 Pn **Pn 01 51 03.0 +0.9**
comp=Z,38nm,0.3s,baz=69,slow=23,SNR=6.9
JHJ Sn **Sn 01 51 56.3 -4.2**
comp=Z,95nm,0.3s,baz=84,slow=23,SNR=8.2
ASAJ Asahikawa 6.61 358 Pn **Pn 01 51 22.6 -0.1**
comp=Z,1.6nm,0.3s,baz=214,slow=11,SNR=5.5
ASAJ Sn **Sn 01 52 32.1 -5.6**
comp=Z,1.5nm,0.3s,baz=249,slow=30,SNR=4.0
ASAJ Asahikawa 6.61 358 P **Pn 01 51 22.7 -0.1**
ASAJ 01 52 32.1
ASAJ pmax pmax
comp=Z,2.0nm,0.3s
ASAJ smax
comp=N,2.0nm,0.3s
YUK Yuzh-Kuril'sk 6.88 18 *e*P **Pn 01 51 24.4 -2.0**
YUK *i* S **Sn 01 52 36.2 -8.0**
YUK pmax pmax
comp=N,50nm,0.6s
YUK pmax pmax
comp=E,70nm,0.6s
YUK pmax pmax
comp=Z,120nm,0.6s
YUK smax
comp=N,130nm,0.6s
YUK smax
comp=E,260nm,0.6s
YUK MLR MLR
comp=E,260nm,12.0s
YUK MLR MLR
comp=Z,230nm,12.0s
YSS Yuzh-Sakhalins 9.45 359 *e*P Px 01 52 14.3
YSS MLR MLR
comp=E,400nm,15.0s
YSS MLR MLR
comp=Z,300nm,15.0s
CBIJ Chichi jima 10.40 184 Pn **Pn 01 52 12.4 -2.4**
comp=Z,4.0nm,0.3s,baz=269,slow=24,SNR=7.5
CBIJ Sn **Sn 01 53 57.7 -13**
comp=Z,16nm,0.3s,baz=301,slow=23,SNR=8.7
CBIJ LR LR 01 55 33.3
comp=Z,67nm,20.4s,baz=0.9,slow=33
KSRS Korea Array 11.97 274 Pn **Pn 01 52 39.2 +2.9**
comp=Z,0.3nm,0.3s,baz=89,slow=14,SNR=7.1
KSRS LR LR 01 56 49.0
comp=Z,173nm,18.9s,baz=171,slow=35
MDJ Mudanjiang 12.35 309 P Px 01 52 54.3
MDJ pmax pmax
comp=Z,10.0nm,1.2s
MDJ pmax pmax
comp=Z,64nm,5.3s
MDJ LR LR
comp=E,230nm,14.2s
MDJ LR LR
comp=Z,290nm,13.5s
PETK Petropavlovsk- 18.66 29 P **Pn 01 54 03.4 -0.3**
comp=Z,0.3nm,0.3s,baz=192,slow=12,SNR=3.0
TPUB Ta-pu 23.84 240 *e*P **P 01 54 58.2 -0.7**
comp=Z,17nm,0.9s,mb4.5
XAN Xi'an 27.77 273 P **P 01 55 33.6 -0.7**
XAN pP pP 01 55 45.3 +5.8
XAN pmax pmax
comp=Z,2.0nm,0.9s,mb3.8
XAN pmax pmax
comp=Z,11nm,6.3s
ULN Ulaanbaatar 28.14 303 *e*P **P 01 55 38.2 +0.7**
ULN pmax pmax
comp=Z,3.0nm,0.7s,mb4.0
ULN Ulaanbaatar 28.14 303 *e*P **P 01 55 38.2 +0.7**
comp=Z,3.1nm,0.7s,mb4.0
SONM Songino Array 28.58 303 P **P 01 55 42.4 +1.0**
comp=Z,4.3nm,0.9s,mb4.2,baz=104,slow=9.9,SNR=20
SONM pP pP 01 55 51.3 +4.7
comp=Z,4.0nm,0.9s,baz=101,slow=7.7,SNR=7.3
SONM Songino Array 28.58 303 P **P 01 55 42.4 +1.0**
SONM *PP pP 01 55 51.3 +4.7
SONM pmax pmax
comp=Z,4.0nm,0.9s
SONM pmax pmax
comp=Z,4.0nm,0.9s
GTA Gaotai 33.63 287 *e*P **P 01 56 27.4 +1.4**
GTA pP pP 01 56 39.5 +8.3
GTA pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
ZALV Zalesovo Beam 42.53 312 P **P 01 57 41.1 +0.3**
comp=Z,3.0nm,0.6s,mb4.2,baz=90,slow=7.4,SNR=16
ZALV pP pP 01 57 50.5 +4.4
comp=Z,2.3nm,0.6s,baz=90,slow=7.4,SNR=4.4
ZALV PcP PcP 01 59 33.1 0.0
comp=Z,0.9nm,0.4s,baz=64,slow=3.4,SNR=3.9
ZALV Zalesovo Beam 42.53 312 P **P 01 57 41.1 +0.3**
ZALV *PP pP 01 57 50.5 +4.4
ZALV 01 59 33.1
ZALV pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
ZALV pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
MK31 Makanchi Array 44.94 302 *e*P **P 01 58 00.4 +0.2**
MKAR Makanchi Array 44.94 302 P **P 01 58 00.7 +0.5**
comp=Z,2.1nm,0.6s,mb4.1,baz=86,slow=10,SNR=13
MKAR pP pP 01 58 10.1 +4.5
comp=Z,3.4nm,0.7s,baz=87,slow=9.2,SNR=7.2
MKAR Makanchi Array 44.94 302 P **P 01 58 00.7 +0.5**
MKAR *PP pP 01 58 10.1 +4.5
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MKAR pmax pmax
comp=Z,3.0nm,0.7s
KURK Kurchatov 46.63 308 *e*P **P 01 58 13.4 -0.2**
KURK pmax pmax
comp=Z,15nm,0.8s,mb5.0
KURK Kurchatov 46.63 308 *e*P **P 01 58 13.4 -0.2**
comp=Z,15nm,0.8s,mb5.0
ILAR Eielson Array 48.42 33 P **P 01 58 27.4 +0.1**
comp=Z,0.5nm,0.7s,mb3.7,baz=275,slow=5.6,SNR=5.2
ILAR pP pP 01 58 36.8 +4.1
comp=Z,0.6nm,0.7s,baz=250,slow=6.3,SNR=4.9
ILAR Eielson Array 48.42 33 P **P 01 58 27.4 +0.1**
ILAR *PP pP 01 58 36.8 +4.1
ILAR pmax pmax
comp=Z,1.0nm,0.7s
ILAR pmax pmax
comp=Z,1.0nm,0.7s
TKM2 Tokmak 2 50.51 299 *e*P **P 01 58 44.9 +1.3**
TKM2 pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
TKM2 Tokmak 2 50.51 299 *e*P **P 01 58 44.9 +1.3**
comp=Z,3.6nm,0.5s,mb4.6
BVAR Borovoye Array 51.19 312 P **P 01 58 48.7 +0.2**
comp=Z,2.2nm,0.6s,mb4.3,baz=72,slow=9.5,SNR=13
BVAR pP pP 01 58 57.9 +4.0
comp=Z,1.6nm,0.5s,baz=60,slow=9.0,SNR=5.4
BVAR Borovoye Array 51.19 312 P **P 01 58 48.7 +0.2**
BVAR *PP pP 01 58 57.9 +4.0
BVAR pmax pmax
comp=Z,2.0nm,0.6s
BVAR pmax pmax
comp=Z,2.0nm,0.5s
BRVK Borovoye 51.24 312 *e*P **P 01 58 49.2 +0.3**
BRVK pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
BRVK Borovoye 51.24 312 *e*P **P 01 58 49.2 +0.3**
comp=Z,3.9nm,0.8s,mb4.4
UCH Uchtor 51.49 298 *e*P **P 01 58 53.1 +2.2**
comp=Z,4.5nm,1.2s,mb4.3
AML Almayashu 52.10 298 *e*P **P 01 58 56.9 +1.4**
comp=Z,5.4nm,0.9s,mb4.5
ARU Arti 56.84 319 *e*P **P 01 59 29.6 -0.1**
ARU pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
ARU Arti 56.84 319 *e*P **P 01 59 29.6 -0.1**
comp=Z,2.8nm,0.5s,mb4.5
ABKAR Akbulak array 58.60 310 *e*P **P 01 59 41.7 -0.4**
comp=Z,1.7nm,0.6s,mb4.2
ASAR Alice Springs 61.44 189 P **P 02 00 01.6 -0.2**
comp=Z,0.4nm,0.5s,mb3.9,baz=2.6,slow=6.3,SNR=5.5
ARCES ARCESS Array B 64.00 340 P **P 02 00 18.6 +0.2**
comp=Z,3.8nm,0.9s,mb4.4,baz=39,slow=7.8,SNR=4.0
ARCES pP pP 02 00 27.2 +3.2
comp=Z,2.8nm,1.0s,baz=56,slow=3.1,SNR=1.5
ARCES ARCESS Array B 64.00 340 P **P 02 00 18.6 +0.2**
ARCES *PP pP 02 00 27.2 +3.3
ARCES pmax pmax
comp=Z,4.0nm,0.9s
ARCES pmax pmax
comp=Z,3.0nm,1.0s
KAF Kangasniemi 68.46 333 *e*P **P 02 00 46.4 -0.7**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
KAF Kangasniemi 68.46 333 *e*p **P 02 00 46.4 -0.7**
comp=Z,0.9nm,0.4s,mb4.2
FINES FINESS Array B 68.98 333 P **P 02 00 50.5 +0.2**
comp=Z,3.6nm,0.7s,mb4.4,baz=24,slow=10,SNR=11
FINES pP pP 02 00 59.6 +3.7
comp=Z,1.9nm,0.6s,baz=31,slow=12,SNR=3.5
FINES FINESS Array B 68.98 333 P **P 02 00 50.5 +0.1**
FINES *PP pP 02 00 59.6 +3.6
FINES pmax pmax
comp=Z,4.0nm,0.7s
FINES pmax pmax
comp=Z,2.0nm,0.6s
KIV Kislovodsk 71.54 311 *e*P **P 02 01 07.7 +1.3**
KIV pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
KIV Kislovodsk 71.54 311 *e*P **P 02 01 07.7 +1.3**
comp=Z,10nm,1.0s,mb4.7
NVAR Mina Array Bea 73.70 54 P **P 02 01 17.5 -1.8**
comp=Z,0.2nm,0.3s,mb3.6,baz=348,slow=6.5,SNR=2.6
NB2 NORSAR Subarra 74.23 338 P **P 02 01 22.1 +0.1**
comp=Z,1.3nm,0.7s,mb4.0,baz=38,slow=5.9
NOA NORSAR Array B 74.23 338 P **P 02 01 22.2 +0.2**
comp=Z,2.1nm,0.8s,mb4.1,baz=38,slow=5.8,SNR=8.0
NOA pP pP 02 01 30.9 +3.2
comp=Z,0.9nm,0.6s,baz=39,slow=5.9,SNR=3.0
NOA LR LR 02 37 07.1
comp=Z,58nm,18.4s,baz=295,slow=38
NOA NORSAR Array B 74.23 338 P **P 02 01 22.2 +0.2**
NOA *PP pP 02 01 30.9 +3.3
NOA pmax pmax
comp=Z,2.0nm,0.8s
NOA pmax pmax
comp=Z,1.0nm,0.6s
NOA MLR MLR
comp=Z,58nm,18.4s
AKASG Malin Array Be 74.69 323 P **P 02 01 24.7 -0.1**
comp=Z,1.8nm,0.4s,mb4.3,baz=44,slow=6.0,SNR=11
AKASG pP pP 02 01 33.8 +3.3
comp=Z,1.0nm,0.4s,baz=45,slow=5.6,SNR=5.2
AKASG Malin Array Be 74.69 323 P **P 02 01 24.7 -0.1**
AKASG *PP pP 02 01 33.8 +3.3
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKASG pmax pmax
comp=Z,1.0nm,0.4s
KIEV Kiev 74.70 323 *e*P **P 02 01 24.7 -0.2**
KIEV pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
KIEV Kiev 74.70 323 *e*P **P 02 01 24.6 -0.3**
comp=Z,3.1nm,0.7s,mb4.3
PDAR Pinedale Array 76.44 46 P **P 02 01 35.3 +0.3**
comp=Z,0.4nm,0.6s,mb3.5,baz=24,slow=6.9,SNR=3.1
KWP Kalwaria Pacla 78.47 325 *e*P **P 02 01 46.7 +0.4**
BRTR Keskin Array B 79.47 312 P **P 02 01 52.5 +0.5**
comp=Z,0.9nm,1.0s,mb3.7,baz=106,slow=4.5,SNR=6.4
BRTR pP pP 02 02 02.1 +4.4
comp=Z,0.9nm,1.0s,baz=345,slow=4.3,SNR=3.1
BRTR Keskin Array B 79.47 312 P **P 02 01 52.5 +0.5**
BRTR *PP pP 02 02 02.1 +4.5
BRTR pmax pmax
comp=Z,1.0nm,1.0s
BRTR pmax pmax
comp=Z,1.0nm,1.0s
MMAI Mount Meron Ar 82.71 306 P **P 02 02 10.6 +1.3**
comp=Z,5.6nm,0.9s,mb4.6,baz=330,slow=4.9,SNR=3.9
TXAR Lajitas Array 88.84 53 P **P 02 02 40.4 +0.6**
comp=Z,0.2nm,0.6s,mb3.6,baz=247,slow=1.9,SNR=3.1

IDC ***23*** *01:58:40.3±1.2, 15°.78S×172°.84W, h0km, mb4.0/7, mb1 4.3/7, mb1mx4.1/18, mbtmp4.0/7, MS3.9/2, Ms1 3.9/2, ms1mx3.3/23, Error ellipse: s-maj=65.3km s-min=22.2km az=145.0*

ISCJB ***23*** *01:58:43.2±1.1, 15°.9S±0°.3×172°.9W±0°.3, h33km, mb4.1/10, MS3.8/2, Error ellipse: s-maj=53.2km s-min=18.4km az=142.1*

NEIC ***23*** *01:58:45.5±0.8, 15°.80S×172°.87W, h35km, mb4.4/3, Error ellipse: s-maj=41.8km s-min=14.7km az=140.0*

ISC 23 01:58:45.2±1.1, 15°.9S±0°.3×172°.9W±0°.3, h35km, n21, σ0°51/14, mb4.1/10, MS3.8/2, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.23**	**29**	Pn		**Pn**		**01 59 11.5**	**-8.1**
	18nm,0.3s,baz=20,slow=15,SNR=18								
AFI				Sn		**Sn**		**01 59 34.2**	**-12**
	54nm,0.3s,baz=201,slow=22,SNR=6.4								
AFI	**Afiamalu**	**2.23**	**29**	Pn		**Pn**		**01 59 11.5**	**-8.1**
AFI				Sn		**Sn**		**01 59 34.2**	**-12**
DZM	**Mont Dzumac**	**20.48**	**249**	eLR		LR		02 08 36.5	
	230nm,23.6s								
PPT	**Papeete**	**22.39**	**98**	eLR		LR		02 08 40.2	
	91nm,24.0s,baz=272								
PPT	**Papeete**	**22.39**	**98**	LR		LR		02 09 51.6	
	comp=Z,134nm,18.8s,MS3.4,baz=262,slow=30								
TBI	**Tubuai**	**23.27**	**112**	eLR		LR		02 09 23.6	
	131nm,23.8s								
RPZ	**Rata Peaks**	**30.93**	**203**	LR		LR		02 16 41.2	
	comp=Z,420nm,18.4s,MS4.1,baz=70,slow=35								
STKA	**Stephens Creek**	**44.23**	**240**	P		**P**		**02 06 51.6**	**+0.3**
	2.6nm,0.7s,mb4.1,baz=68,slow=10,SNR=2.9								
ASAR	**Alice Springs**	**50.44**	**252**	P		**P**		**02 07 39.2**	**-0.5**
	2.4nm,0.6s,mb4.4,baz=84,slow=8.3,SNR=14								
PETK	**Petropavlovsk-**	**73.23**	**342**	P		**P**		**02 10 13.1**	**+0.7**
	1.2nm,0.4s,mb4.1,baz=128,slow=9.6,SNR=3.6								
NVAR	**Mina Array Bea**	**74.35**	**42**	P		**P**		**02 10 18.9**	**-0.4**
	0.5nm,0.3s,mb3.9,baz=226,slow=8.0,SNR=6.1								
TTA	**Tatalina**	**79.65**	**8**	*e*P		**P**		**02 10 49.2**	**+0.6**
	3.6nm,1.0s,mb4.3								
TXAR	**Lajitas Array**	**80.47**	**56**	P		**P**		**02 10 54.5**	**+0.7**
	1.1nm,1.0s,mb3.8,baz=216,slow=5.9,SNR=8.0								
MCK	**McKinley**	**81.49**	**11**	*e*P		**P**		**02 10 57.9**	**-0.5**
	4.6nm,1.0s,mb4.4								
PDAR	**Pinedale Array**	**82.29**	**42**	P		**P**		**02 11 03.0**	**-0.1**
	1.0nm,0.9s,mb3.8,baz=241,slow=2.7,SNR=6.2								
COLA	**College**	**82.73**	**10**	*e*P		**P**		**02 11 04.6**	**-0.3**
	2.3nm,0.6s,mb4.4								
ILAR	**Eielson Array**	**82.81**	**11**	P		**P**		**02 11 04.7**	**-0.6**
	1.1nm,0.8s,mb4.0,baz=227,slow=6.3,SNR=19								
KMBO	**Kilima Mbogo**	**145.77**	**243**	PKPbc		PKPbc		02 18 23.9	+2.3
	0.9nm,0.8s,baz=0.2,slow=24,SNR=3.9								
BR131	**Keskin Array S**	**146.83**	**321**	*e*PKPbc		PKPbc		02 18 25.1	+1.1
BRTR	**Keskin Array B**	**146.83**	**321**	PKPbc		PKPbc		02 18 25.2	+1.2
	2.6nm,0.9s,baz=87,slow=1.9,SNR=16								
MMAI	**Mount Meron Ar**	**149.25**	**309**	PKPbc		PKPbc		02 18 32.4	+1.8
	3.9nm,0.7s,baz=37,slow=7.4,SNR=5.0								

ISCJB ***23*** *02:18:14.7±0.5, 30°.88S±0°.04×177°.54W±0°.10, h33km, mb4.8/19, MS4.4/8, Error ellipse: s-maj=13.1km s-min=4.3km az=21.2*

MOS ***23*** *02:18:16.7±1.1, 30°.27S×177°.72W, h37km, mb5.0/5, Error ellipse: s-maj=18.0km s-min=14.9km az=80.2*

IDC ***23*** *02:18:18.4±0.5, 30°.30S×177°.71W, h42km±4km, mb4.2/8, mb1 4.3/9, mb1mx4.2/16, mbtmp4.2/9, ML4.5/1, MS4.0/7, Ms1 4.0/7, ms1mx3.7/20, Error ellipse: s-maj=19.9km s-min=7.4km az=84.0*

NEIC ***23*** *02:18:19.5±1.2, 30°.22S×177°.69W, h53km±9km, mb5.0/12, Error ellipse: s-maj=13.1km s-min=8.9km az=135.0*

ISC 23 02:18:16.9±0.5, 30.78S±0.04×177.53W±0.09, h35km, (h45km±2.0km: pP-P), n124, σ1.960/69, mb4.8/19, MS4.4/8, 1C, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.56**	**347**	P		**Pn**		**02 18 35.4**	**-6.8**
	1μm,0.3s,baz=122,slow=5.6,SNR=67								
RAO				S		**Sn**		**02 18 50.5**	**-11**
	3μm,0.3s,baz=92,slow=23,SNR=10								
RAO				LR		LR		02 19 09.6	
	comp=Z,4μm,18.6s,baz=184,slow=48								
RAO	**Raoul Island**	**1.56**	**347**	P		**Pn**		**02 18 35.4**	**-6.8**
RAO				S		**Sn**		**02 18 50.5**	**-11**
PUZ	**Puketiti**	**8.06**	**204**	PN		**Pn**		**02 20 07.8**	**-3.6**
PUZ				SN		**Sn**		**02 21 42.8**	**+1.5**
MWZ	**Matawai**	**8.56**	**207**	PN		**Pn**		**02 20 16.0**	**-2.3**
OUZ	**Omahuta**	**8.67**	**237**	*e*Pn		**Pn**		**02 20 27.2**	**+7.4**
	35nm,0.5s								
URZ	**Urewera**	**8.67**	**209**	P		**Pn**		**02 20 17.7**	**-2.1**
	1.2nm,0.3s,baz=8.5,slow=20,SNR=12								
URZ				S		**Sn**		**02 21 58.5**	**+2.2**
	24nm,0.3s,baz=189,slow=18,SNR=13								
URZ	**Urewera**	**8.67**	**209**	*e*PN		**Pn**		**02 20 17.6**	**-2.2**
URZ				SN		**Sn**		**02 21 56.1**	**-0.1**
PRGZ	**Paritu Road**	**8.95**	**204**	SN		**Sn**		**02 22 05.0**	**+1.7**
KNZ	**Kokohu**	**9.11**	**204**	PN		**Pn**		**02 20 23.1**	**-2.8**
KNZ				SN		**Sn**		**02 22 08.0**	**+0.8**
MHGZ	**Mahia Peninsul**	**9.15**	**203**	SN		**Sn**		**02 22 08.2**	**+0.1**
CKHZ	**Cape Kidnapper**	**9.89**	**205**	SN		**Sn**		**02 22 25.6**	**-0.7**
KAHZ	**Kahuranaki**	**10.09**	**205**	*e*PN		**Pn**		**02 20 34.2**	**-5.0**
WPHZ	**Waipukurau**	**10.48**	**206**	SN		**Sn**		**02 22 39.4**	**-1.4**
DVHZ	**Dannevirke**	**10.79**	**207**	SN		**Sn**		**02 22 45.5**	**-2.9**
MRZ	**Mangatainoka R**	**11.33**	**208**	SN		**Sn**		**02 22 57.0**	**-4.6**
TCW	**Tory Channel**	**12.34**	**210**	SN		**Sn**		**02 23 20.8**	**-5.4**
KHZ	**Kahutara**	**13.64**	**209**	SN		**Sn**		**02 23 49.7**	**-8.2**
LTZ	**Lake Taylor**	**14.49**	**211**	*e*P		**Pn**		**02 21 41.9**	**+2.6**
LTZ	**Lake Taylor**	**14.49**	**211**	*e*PN		**Pn**		**02 21 38.7**	**-0.5**
LTZ				SN		**Sn**		**02 24 08.6**	**-10**
MQZ	**McQueen's Vall**	**15.07**	**208**	SN		**Sn**		**02 24 22.5**	**-10**
RPZ	**Rata Peaks**	**15.77**	**212**	P		**Pn**		**02 21 58.3**	**+2.1**
	4.8nm,0.3s,baz=12,slow=2.8,SNR=15								
RPZ				S		**Sn**		**02 24 38.2**	**-12**
	1.3nm,0.3s,baz=260,slow=15,SNR=2.3								
RPZ				LR		LR		02 28 19.8	
	comp=Z,276nm,18.9s,baz=356,slow=37								
RPZ	**Rata Peaks**	**15.77**	**212**	*e*Pn		**Pn**		**02 21 58.3**	**+2.1**
RPZ				S		**Sn**		**02 24 38.2**	**-12**
DZM	**Mont Dzumac**	**16.76**	**297**	*e*P		**Pn**		**02 22 13.4**	**+4.4**
	66nm,1.1s								
DZM				*e*LR		LR		02 26 05.6	
	812nm,23.9s								
DZM	**Mont Dzumac**	**16.76**	**297**	*e*P		**Pn**		**02 22 12.5**	**+3.5**
AFI	**Afiamalu**	**17.61**	**19**	S		Sx		02 25 10.9	
	0.7nm,0.3s,baz=342,slow=20,SNR=1.9								
RAR	**Rarotonga**	**18.57**	**63**	P		**Pn**		**02 22 29.6**	**-1.7**
	1.4nm,0.3s,baz=262,slow=7.1,SNR=3.0								
TBI	**Tubuai**	**26.02**	**80**	*e*LQ				02 28 50.9	
	279nm,24.8s								
TBI				*e*LR		LR		02 30 19.2	
	370nm,27.2s,baz=238								
ARMA	**Armidale**	**26.51**	**263**	*e*P		**P**		**02 23 53.4**	**+2.2**
CNB	**Canberra Magne**	**28.04**	**252**	*e*P		**P**		**02 24 08.0**	**+3.2**
EIDS	**Eidsvold**	**28.16**	**273**	*e*P		**P**		**02 24 06.6**	**+0.5**
	12nm,0.6s,mb4.7								
PPT	**Papeete**	**28.60**	**69**	*e*LQ				02 29 45.6	
	305nm,27.2s								
PPT				*e*LR		LR		02 31 24.7	
	329nm,25.8s,baz=236								
PPT	**Papeete**	**28.60**	**69**	LR		LR		02 32 49.9	
	comp=Z,100nm,19.7s,MS3.4,baz=226,slow=30								
TOO	**Toolangi**	**31.19**	**247**	*e*P		**P**		**02 24 34.7**	**+2.0**
CTA	**Charters Tower**	**34.26**	**279**	*e*P		**P**		**02 25 00.6**	**+0.8**
	19nm,1.0s,mb5.0								
CTAO	**Charters Tower**	**34.26**	**279**	*e*P		**P**		**02 25 00.4**	**+0.6**
CTAO				pmax		pmax			
	comp=Z,20nm,0.9s,mb5.0								
CTAO	**Charters Tower**	**34.26**	**279**	*e*P		**P**		**02 25 00.4**	**+0.6**
	comp=Z,20nm,0.9s,mb5.1								
STKA	**Stephens Creek**	**34.79**	**257**	*e*P		**P**		**02 25 06.1**	**+1.9**
	comp=Z,21nm,0.5s,mb5.3								
STKA	**Stephens Creek**	**34.79**	**257**	P		**P**		**02 25 06.1**	**+1.9**
	comp=Z,28nm,0.5s,mb5.4,baz=99,slow=10,SNR=77								
STKA				LR		LR		02 38 05.0	
	comp=Z,199nm,20.7s,MS3.8,baz=24,slow=34								
RKT	**Rikitea**	**38.51**	**89**	*e*LR		LR		02 35 55.4	
	comp=Z,270nm,28.8s,baz=262								
COEN	**Coen**	**39.77**	**286**	*e*P		**P**		**02 25 46.4**	**-0.2**
	comp=Z,86nm,0.9s,mb5.5								
TAOE	**Nuku Hiva Isla**	**41.09**	**66**	*e*LR		LR		02 37 10.0	
	comp=Z,241nm,28.1s								
ASAR	**Alice Springs**	**43.50**	**267**	P		**P**		**02 26 15.8**	**-1.3**
	comp=Z,4.0nm,0.6s,mb4.4,baz=105,slow=7.6,SNR=42								
ASAR				ScP		ScP		02 31 54.1	+0.6
	comp=Z,0.7nm,0.8s,baz=116,slow=4.2,SNR=3.9								
ASAR				pScP				02 32 06.3	
	comp=Z,0.9nm,0.7s,baz=119,slow=4.9,SNR=4.7								
WRAB	**Tennant Creek**	**44.52**	**272**	*e*P		**P**		**02 26 23.7**	**-1.6**
WRAB				pmax		pmax			
	comp=Z,13nm,0.5s,mb5.0								
WRAB	**Tennant Creek**	**44.52**	**272**	*e*P		**P**		**02 26 23.7**	**-1.6**
	comp=Z,13nm,0.5s,mb5.0								
FORT	**Forrest**	**46.34**	**255**	*e*P		**P**		**02 26 39.0**	**-0.6**
	comp=Z,18nm,0.6s,mb5.2								
FORT	**Forrest**	**46.34**	**255**	*e*P		**P**		**02 26 39.1**	**-0.5**
	comp=Z,21nm,0.6s,mb5.2								
SBA	**Scott Base**	**47.69**	**184**	*e*P		**P**		**02 26 55.7**	**+6.2**
SBA				pmax		pmax			
	comp=Z,5.0nm,0.8s,mb4.6								
SBA	**Scott Base**	**47.69**	**184**	*e*P		**P**		**02 26 55.7**	**+6.3**
	comp=Z,4.5nm,0.8s,mb4.5								
FITZ	**Fitzroy Crossi**	**52.77**	**270**	*e*P		**P**		**02 27 27.1**	**-1.6**
	comp=Z,15nm,0.7s,mb5.0								
FITZ	**Fitzroy Crossi**	**52.77**	**270**	*e*P		**P**		**02 27 27.4**	**-1.4**
	comp=Z,5.5nm,0.7s,mb4.6								
CASY	**Casey**	**54.99**	**208**	*e*P		**P**		**02 27 45.8**	**+1.5**
CASY	**Casey**	**54.99**	**208**	*e*P		**P**		**02 27 45.9**	**+1.6**
	comp=Z,29nm,0.7s,mb5.4								
QSPA	**South Pole Qui**	**59.33**	**180**	*e*P		**P**		**02 28 19.5**	**+4.7**
	comp=Z,20nm,0.7s,mb5.3								
MAW	**Mawson**	**72.09**	**200**	*e*P		**P**		**02 29 39.7**	**+2.5**
	comp=Z,3.9nm,0.8s,mb4.4								
MAW	**Mawson**	**72.09**	**200**	P		**P**		**02 29 40.0**	**+2.8**
	comp=Z,4.0nm,0.7s,mb4.5,baz=125,slow=8.3,SNR=16								
MAW				LR		LR		03 01 17.0	
	comp=Z,136nm,18.9s,MS4.2,baz=201,slow=36								
MAIT	**Maitri**	**78.51**	**183**	*e*P		**P**		**02 30 16.8**	**+2.8**
MAIT				*e*				02 30 22.9	
PLCA	**Paso Flores**	**81.95**	**133**	LR		LR		02 58 05.9	
	comp=Z,115nm,18.8s,MS4.3,baz=70,slow=29								
ADK	**Adak**	**82.31**	**1**	*e*P		**P**		**02 30 32.9**	**-1.5**
ADK				pmax		pmax			
	comp=Z,38nm,1.1s,mb5.2								
ADK	**Adak**	**82.31**	**1**	*e*P		**P**		**02 30 32.9**	**-1.5**
	comp=Z,38nm,1.1s,mb5.2								
KSRS	**Korea Array**	**84.90**	**319**	P		**P**		**02 30 46.6**	**-1.5**
	comp=Z,0.6nm,0.3s,mb4.2,baz=153,slow=6.1,SNR=3.4								
KSRS				pP		pP		02 31 01.0	+1.9
	comp=Z,1.1nm,0.8s,baz=162,slow=6.0,SNR=2.7								
PETK	**Petropavlovsk-**	**86.28**	**345**	P		**P**		**02 30 52.9**	**-1.6**
	comp=Z,8.1nm,0.7s,mb5.1,baz=123,slow=6.3,SNR=16								
PETK				LR		LR		03 01 27.8	
	comp=Z,41nm,21.0s,MS3.8,baz=206,slow=30								
NVAR	**Mina Array Bea**	**88.24**	**42**	P		**P**		**02 31 04.6**	**+0.2**
	comp=Z,1.2nm,0.8s,mb4.2,baz=219,slow=7.2,SNR=6.8								
NVAR				pP		pP		02 31 17.3	+1.8
	comp=Z,2.1nm,0.9s,baz=225,slow=9.0,SNR=4.9								
TUC	**Tucson**	**89.03**	**51**	*e*P		**P**		**02 31 10.3**	**+2.0**
TUC				*e*PP		pP		02 31 22.7	+3.3
TUC				pmax		pmax			
	comp=Z,4.0nm,1.4s,mb4.6								
TUC	**Tucson**	**89.03**	**51**	*e*P		**P**		**02 31 10.2**	**+2.0**
	comp=Z,4.1nm,1.4s,mb4.6								
TUC				*e*pP		pP		02 31 22.7	+3.3
TXAR	**Lajitas Array**	**92.25**	**57**	P		**P**		**02 31 24.4**	**+1.1**
	comp=Z,0.1nm,0.4s,baz=223,slow=12,SNR=3.0								
TXAR				pP		pP		02 31 37.0	+2.5
	comp=Z,0.5nm,0.9s,baz=248,slow=4.8,SNR=3.7								
CMIG	**Matias Romero**	**92.48**	**72**	LR		LR		03 03 21.2	
	comp=Z,1μm,21.3s,MS5.4,baz=253,slow=29								
ANMO	**Albuquerque**	**93.50**	**51**	LR		LR		03 03 20.7	
	comp=Z,1μm,21.2s,MS5.3,baz=300,slow=29							

KBL	Kabul	124.75 293	*e*PKIKP	PKPdf	02 37 13.1	+0.2	
BVAR	Borovoye Array	126.96 316	PKP	PKPdf	02 37 15.6	-0.9	
	comp=Z,3.4nm,0.5s,baz=90,slow=1.5,SNR=22						
BVAR			pPKP	pPKPdf	02 37 28.9	+0.9	
	comp=Z,5.1nm,0.7s,baz=132,slow=2.2,SNR=8.1						
BRVK	Borovoye	127.03 316	*e*PKIKP	PKPdf	02 37 15.9	-0.8	
LSZ	Lusaka	127.95 212	*e*PKIKP	PKPdf	02 37 21.3	+1.6	
ABKAR	Akbulak array	133.47 310	*e*PKPdf	PKPdf	02 37 28.1	-0.9	
ARU	Arti	133.65 320	*e*PKIKP	PKPdf	02 37 28.9	-0.2	
ARU	Arti	133.65 320	*e*PKPdf	PKPdf	02 37 28.9	-0.3	
KMBO	Kilima Mbogo	134.17 233	PKP	PKPdf	02 37 34.1	+2.6	
	comp=Z,0.6nm,0.5s,baz=180,slow=24,SNR=3.5						
AKTK	Aktyubinsk	134.66 312	PKP	PKPdf	02 37 31.1	-0.2	
AKTO	Aktyubinsk	134.66 312	PKP	PKPdf	02 37 31.1	-0.2	
	comp=Z,2.7nm,0.6s,baz=143,slow=3.7,SNR=10						
ARCES	ARCESS Array B	139.05 348	PKhKP	PKPpre	02 37 29.4		
	comp=Z,1.6nm,0.8s,baz=327,slow=10,SNR=7.5						
ARCES			PKP	PKPdf	02 37 37.9	-0.9	
	comp=Z,1.3nm,0.4s,baz=94,slow=1.6,SNR=7.8						
JOF	Joensuu	142.92 339	*e*PKHKP	PKPpre	02 37 40.0		
JOF	Joensuu	142.92 339	*e*pkp	PKPpre	02 37 40.0		
GNI	Garni	144.61 297	PKP	PKPdf	02 37 50.2	+0.5	
	comp=Z,4.5nm,0.5s,baz=338,slow=5.4,SNR=3.1						
KAF	Kangasniemi	145.05 341	*e*PKIKP	PKPdf	02 37 46.2	-3.5	
KAF	Kangasniemi	145.05 341	*e*pkp	PKPdf	02 37 46.2	-3.5	
ZEI	Tsey	145.06 302	*i* PKIKP	PKPdf	02 37 48.7	-1.6	
ZEI			pmax	pmax			
	comp=Z,12nm,0.5s						
FINES	FINESS Array B	145.65 340	PKPbc	PKPbc	02 37 49.3	-1.8	
	comp=Z,39nm,0.7s,baz=58,slow=3.6,SNR=187						
OBN	Obninsk	145.72 325⇑	*i*PKIKP	PKPdf	02 37 49.9	-1.2	
OBN			pmax	pmax			
	comp=Z,32nm,0.9s						
OBN	Obninsk	145.72 325	*e*PKPdf	PKPdf	02 37 50.2	-0.8	
KIV	Kislovodsk	145.78 304	*e*PKIKP	PKPdf	02 37 51.4	-0.1	
KIV	Kislovodsk	145.78 304	*e*PKPdf	PKPdf	02 37 51.4	-0.2	
NB2	NORSAR Subarra	149.19 352	PKP	PKPbc	02 37 59.8	-1.1	
	comp=Z,5.8nm,0.5s,baz=13,slow=2.6						
NOA	NORSAR Array B	149.19 352	PKPbc	PKPbc	02 37 59.8	-1.1	
	comp=Z,4.9nm,0.7s,baz=18,slow=4.4,SNR=31						
NOA			pPKPbc	pPKPbc	02 38 13.3	+1.1	
	comp=Z,5.1nm,0.7s,baz=15,slow=4.3,SNR=7.5						
NAO01	NORSAR Array S	149.42 352	*e*PKPbc	PKPbc	02 38 00.0	-1.5	
IZAR	Zarasai	149.92 333	*e*P	PKPbc	02 37 59.8	-3.1	
IZAR			AMB	AMB	02 38 03.3		
	comp=Z,6.4nm,1.4s						
IDID	Didziasalis	150.04 332	*e*P	PKPbc	02 38 00.4	-2.8	
IDID			AMB	AMB	02 38 03.5		
	comp=Z,4.1nm,1.1s						
IIGN	Ignalina	150.22 332	*e*P	PKPbc	02 38 01.1	-2.5	
IIGN			AMB	AMB	02 38 04.0		
	comp=Z,8.0nm,1.0s						
AKASG	Malin Array Be	151.85 323	PKPbc	PKPbc	02 38 06.5	-1.1	
	comp=Z,15nm,0.6s,baz=49,slow=2.9,SNR=54						
AKASG			pPKPbc	pPKPbc	02 38 20.0	+1.0	
	comp=Z,9.8nm,0.7s,baz=49,slow=2.7,SNR=11						
AKBB	Malin Array Si	151.85 323	*e*PKIKP	PKPbc	02 38 06.3	-1.3	
KIEV	Kiev	151.87 323	*e*PKIKP	PKPbc	02 38 06.3	-1.3	
MMAI	Mount Meron Ar	152.02 283	PKPbc	PKPbc	02 38 08.9	+0.4	
	comp=Z,8.8nm,0.5s,baz=82,slow=6.3,SNR=26						
BR131	Keskin Array S	153.14 298	*e*PKPbc	PKPbc	02 38 09.9	-0.9	
BRTR	Keskin Array B	153.14 298	PKPbc	PKPbc	02 38 09.8	-1.0	
	comp=Z,3.1nm,0.4s,baz=143,slow=5.0,SNR=26						
BRTR			pPKPbc	pPKPbc	02 38 23.3	+1.0	
	comp=Z,3.2nm,0.8s,baz=113,slow=3.2,SNR=6.1						
BRTR	Keskin Array B	153.14 298	PKPbc	PKPbc	02 38 09.8	-1.0	
BRTR			pPKPbc	pPKPbc	02 38 23.3	+1.0	
CSS	Prodhromos	153.81 287	*e*PKPdf	PKPdf	02 38 04.6	+0.1	
CSS			*e*PKPbc	PKPbc	02 38 10.4	-2.0	
LIC	Lamto	154.57 162	*e*PKP1	PKPab	02 38 32.0	+2.9	
	comp=Z,76nm,1.8s						
KIC	Kosan Boka	154.78 163	*e*PKP1	PKPab	02 38 31.7	+1.7	
	comp=Z,58nm,1.4s						
TIC	Toumodi	154.98 162	*e*PKP1	PKPab	02 38 31.0	+0.2	
	comp=Z,23nm,0.9s						
DBIC	Dimbokro	155.04 163	PKPab	PKPab	02 38 32.9	+1.8	
	comp=Z,6.4nm,1.1s,baz=107,slow=9.2,SNR=4.4						
EKA	Eskdalemuir Ar	155.14 8	PKPab	PKPab	02 38 29.2	-1.2	
	comp=Z,1.4nm,0.7s,baz=343,slow=2.7,SNR=4.3						
KWP	Kalwaria Pacla	155.78 327	*e*PKP2	PKPab	02 38 31.6	-1.8	
BRG	Berggiesshubel	158.19 340	*i* P	PKPab	02 38 33.4	-10	
	comp=Z,4.8nm,1.2s						
BRG	Berggiesshubel	158.19 340	*i* PKP2	PKPab	02 38 33.4	-10	
BRG			pmax	pmax			
	comp=Z,3.0nm,1.2s						
DAVOX	Davos/Dischmat	163.03 342	PKPab	PKPab	02 39 04.1	-0.8	
	comp=Z,3.9nm,0.6s,baz=352,slow=2.8,SNR=11						

IDC 23 02:28:38.1±2.6, 22°.81S×179°.20E, h0km, mb3.8/5, mb1 4.2/5, mb1mx4.0/15, mbtmp3.8/5, Error ellipse: s-maj=167.1km s-min=33.5km az=157.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	41.50	260	P	P	02 36 27.1	-0.1
	0.8nm,0.8s,baz=78,slow=8.6,SNR=5.0						
NVAR	Mina Array Bea	84.48	44	P	P	02 41 12.5	-0.4
	2.1nm,1.2s,baz=209,slow=9.2,SNR=3.6						
TXAR	Lajitas Array	90.48	58	P	P	02 41 42.7	+0.7
	0.1nm,0.4s,baz=221,slow=7.3,SNR=4.9						
ILAR	Eielson Array	91.14	14	P	P	02 41 45.0	+0.7
	0.3nm,0.6s,baz=218,slow=5.3,SNR=4.9						
PDAR	Pinedale Array	92.42	44	P	P	02 41 50.6	-0.1
	0.6nm,0.7s,baz=297,slow=2.8,SNR=4.4						

IDC 23 03:03:22.0±2.0, 15°.27S×173°.09W, h0km, mb3.5/4, mb1 3.9/4, mb1mx3.7/17, mbtmp3.5/4, Error ellipse: s-maj=111.6km s-min=25.2km az=147.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	1.85	43	Pn	Pn	03 03 53.0	-2.1
	8.2nm,0.3s,baz=156,slow=19,SNR=7.4						
AFI				Sn	Sn	03 04 15.6	-3.6
	23nm,0.3s,baz=245,slow=23,SNR=9.9						
ASAR	Alice Springs	50.44	252	P	P	03 12 20.4	-1.3
	1.0nm,0.7s,baz=90,slow=7.9,SNR=8.8						
TXAR	Lajitas Array	80.29	56	P	P	03 15 36.0	+0.8
	0.2nm,0.9s,baz=234,slow=8.8,SNR=4.2						
PDAR	Pinedale Array	81.97	42	P	P	03 15 44.2	+0.4
	0.2nm,0.4s,baz=205,slow=4.0,SNR=2.4						
ILAR	Eielson Array	82.26	11	P	P	03 15 45.0	+0.1
	0.3nm,0.7s,baz=226,slow=6.1,SNR=7.8						
BRTR	Keskin Array B	146.25	321	PKPbc	PKPbc	03 23 06.5	+1.8
	0.7nm,0.8s,baz=66,slow=4.5,SNR=4.0						

*ISCJB **23** 03:15:26.6±0.6, 43°.06N±0°.03×47°.79E±0°.04, h10km, Error ellipse: s-maj=4.4km s-min=3.2km az=138.4*
*MOS **23** 03:15:28.4±1.1, 42°.99N×47°.68E, h11km, mb4.4/1, Error ellipse: s-maj=8.5km s-min=6.4km az=11.9*
MOS Felt (III) at Makhachkala.
*CSEM **23** 03:15:28.4±0.4, 43°.02N×47°.72E, h2km, mb4.4, Error ellipse: s-maj=7.4km s-min=5.2km az=53.0*

ISC 23 03:15:27.9±0.5, 43°.05N±0°.03×47°.73E±0°.03, h10km, n65, σ1§43/115, 1C-3D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAK	Makhachkala	0.19	241	*e*PG	Pg	03 15 31.0	-0.8
MAK				pmax	pmax		
	comp=Z,6μm,0.1s						
MAK	Makhachkala	0.19	241	*e*Pg	Pg	03 15 31.0	-0.8
	comp=Z,6μm,0.1s						
MNSR	Manas	0.35	181	⇓*i*PG	Pg	03 15 35.2	+0.4
MNSR				*i* S	Sg	03 15 40.0	+0.6
MNSR				pmax	pmax		
	comp=Z,823nm,0.3s						
MNSR	Manas	0.35	181	*i* Pg	Pg	03 15 35.2	+0.4
	comp=Z,823nm,0.3s						
MNSR				*i* Sg	Sg	03 15 40.0	+0.6
SGKR	Sergokala	0.59	185	PG	Pg	03 15 38.0	-1.4
SGKR				S	Sg	03 15 46.0	-1.2
SGKR	Sergokala	0.59	185	Pg	Pg	03 15 38.0	-1.4
SGKR				Sg	Sg	03 15 46.0	-1.2
DBC	Dubki	0.66	267	PG	Pg	03 15 39.7	-0.9
DBC				S	Sg	03 15 49.2	0.0
DBC	Dubki	0.66	267	Pg	Pg	03 15 39.7	-0.9
DBC				Sg	Sg	03 15 49.2	0.0
UNCR	Uncukul	0.76	244	PG	Pg	03 15 41.5	-1.1
UNCR				S	Sg	03 15 52.0	-0.6
UNCR	Uncukul	0.76	244	Pg	Pg	03 15 41.5	-1.1
UNCR				Sg	Sg	03 15 52.0	-0.6
DLMR	Dylym	0.80	272	PG	Pg	03 15 41.0	-2.4
DLMR				S	Sg	03 15 53.0	-0.9
DLMR	Dylym	0.80	272	Pg	Pg	03 15 41.0	-2.4
DLMR				Sg	Sg	03 15 53.0	-0.9
GNBR	Gunib	0.87	221	PG	Pg	03 15 44.4	-0.2
GNBR				S	Sg	03 15 57.8	+1.9
GNBR	Gunib	0.87	221	Pg	Pg	03 15 44.4	-0.2
GNBR				Sg	Sg	03 15 57.8	+1.9
XNZR	Khunzakh	0.91	236	PG	Pg	03 15 49.0	+3.6
XNZR				S	Sg	03 16 03.0	+5.8
XNZR	Khunzakh	0.91	236	Pg	Pg	03 15 49.0	+3.6
XNZR				Sg	Sg	03 16 03.0	+5.8
KSMR	Kasumkent	1.48	168	PG	Pg	03 15 56.0	-0.2
KSMR				S	Sg	03 16 16.0	+0.6
KSMR	Kasumkent	1.48	168	Pg	Pg	03 15 56.0	-0.2
KSMR				Sg	Sg	03 16 16.0	+0.6
SNJR	Sundja	2.14	271	*e*PN	Pb	03 16 05.6	-1.0
SNJR				*e*S	Sb	03 16 33.9	+0.7
SNJR	Sundja	2.14	271	*e*Pn	Pb	03 16 05.6	-1.0
SNJR				*e*Sb	Sb	03 16 33.9	+0.7
VLKR	Vladikavkaz	2.23	271	*e*PN	Pb	03 16 06.9	-1.4
VLKR				*e*S	Sb	03 16 36.1	+0.1
VLKR	Vladikavkaz	2.23	271	*e*Pn	Pb	03 16 06.9	-1.4
VLKR				*e*Sn	Sb	03 16 36.1	+0.1
TRKR	Terskaya	2.28	288	*e*PN	Pb	03 16 09.6	+0.4
TRKR				*e*S	Sb	03 16 40.7	+3.3
TRKR	Terskaya	2.28	288	*e*Pn	Pb	03 16 09.6	+0.4
TRKR				*e*Sb	Sb	03 16 40.7	+3.3
BTKR	Batakoyurt	2.35	279	*e*PN	Pb	03 16 09.4	-0.9
BTKR				*e*S	Sb	03 16 40.3	+1.0
BTKR	Batakoyurt	2.35	279	*e*Pn	Pb	03 16 09.4	-0.9
BTKR				*e*Sn	Sb	03 16 40.3	+1.0
DGRG	David-gareji	2.37	228	P	Pg	03 16 10.7	-2.6
ARNR	Ardon	2.53	274	*e*PN	Pb	03 16 11.1	-2.2
ARNR				*e*S	Sb	03 16 43.6	-0.9
ARNR	Ardon	2.53	274	*e*Pn	Pb	03 16 11.1	-2.2
ARNR				*e*Sn	Sb	03 16 43.6	-0.9
LACR	Lac	2.53	266⇑	*i*PN	Pn	03 16 10.0	+1.0
LACR				*e*S	Sn	03 16 41.9	+2.1
LACR	Lac	2.53	266	*i* Pn	Pn	03 16 10.0	+1.0
LACR				*e*Sn	Sn	03 16 41.9	+2.1
KMSR	Komsomolskaya	2.53	278	*e*PN	Pb	03 16 11.6	-1.8
KMSR				*e*S	Sb	03 16 44.5	0.0
KMSR	Komsomolskaya	2.53	278	*e*Pn	Pb	03 16 11.6	-1.8
KMSR				*e*Sn	Sb	03 16 44.5	0.0
MTA	Mtatsminda	2.56	239	P	Pb	03 16 11.9	-2.0
MTA				S	Sb	03 16 48.4	+2.9
TBLG	Delisi	2.58	240	PN	Pb	03 16 12.0	-2.2
TBLG				S	Sb	03 16 46.5	+0.6
TBLG	Delisi	2.58	240	P	Pb	03 16 12.0	-2.1
TBLG				S	Sb	03 16 46.5	+0.6
TBLG	Delisi	2.58	240	Pn	Pb	03 16 12.0	-2.2
TBLG				Sn	Sb	03 16 46.5	+0.6
PRTR	Priterechnaya	2.61	287	*e*PN	Pb	03 16 13.6	-1.1
PRTR				*e*S	Sb	03 16 47.8	+1.1
PRTR	Priterechnaya	2.61	287	*e*Pn	Pb	03 16 13.6	-1.1
PRTR				*e*Sn	Sb	03 16 47.8	+1.1
KORR	Kora	2.68	272	*e*PN	Pn	03 16 12.8	+1.7
KORR				*e*S	Sb	03 16 46.7	-2.2
KORR	Kora	2.68	272	*e*Pn	Pn	03 16 12.8	+1.7
KORR				*e*Sn	Sb	03 16 46.7	-2.2
ZEI	Tsey	2.83	266	*e*PN	Pn	03 16 14.1	+1.0
ZEI				*e*S	Sn	03 16 48.5	+1.4
ZEI	Tsey	2.83	266	*e*Pn	Pn	03 16 14.1	+1.0
ZEI				*e*Sn	Sn	03 16 48.5	+1.4
LSNR	Lesken	2.87	276	*e*PN	Pn	03 16 15.8	+2.1
LSNR				*e*S	Sb	03 16 52.0	-2.3
LSNR	Lesken	2.87	276	*e*Pn	Pn	03 16 15.8	+2.1
LSNR				*e*Sn	Sb	03 16 52.0	-2.3
KEH	Kehvi	2.89	256	P	Pn	03 16 16.0	+2.0
KEH				S	Sb	03 16 54.8	-0.2
DIGR	Digorskoe uzhe	3.05	269	*e*PN	Pn	03 16 17.2	+1.1
DIGR				*e*S	Sn	03 16 54.4	+1.8
DIGR	Digorskoe uzhe	3.05	269	*e*Pn	Pn	03 16 17.2	+1.1
DIGR				*e*Sn	Sn	03 16 54.4	+1.8
ONI	Oni	3.18	263	P	Pb	03 16 22.5	-1.9
ONI				S	Sb	03 17 05.1	+2.0
PYA	Pyatigorsk	3.53	288	*i* PN	Pn	03 16 23.9	+1.1
PYA	Pyatigorsk	3.53	288	*i* Pn	Pn	03 16 23.9	+1.1
GNI	Garni	3.66	219	*e*PN	Pn	03 16 25.8	+1.2
GNI	Garni	3.66	219	*e*Pn	Pn	03 16 25.8	+1.2
BEYR	Belyy Ugol+	3.70	287	*i* PN	Pn	03 16 25.5	+0.5
BEYR	Belyy Ugol+	3.70	287	*i* Pn	Pn	03 16 25.5	+0.5
KIV	Kislovodsk	3.78	286	*e*PN	Pn	03 16 27.2	+1.1
KIV	Kislovodsk	3.78	286	*e*Pn	Pn	03 16 27.2	+1.1
GOF	Gofitskoye	3.93	302	*e*PN	Pn	03 16 20.8	-7.5
GOF				*i* S	Sn	03 17 12.7	-1.7
GOF				pmax	pmax		
	comp=Z,30nm,1.0s						
GOF				smax			
	comp=E,150nm,0.8s						
GOF	Gofitskoye	3.93	302	*e*Pn	Pn	03 16 20.8	-7.5
	comp=E,30nm,1.0s						
GOF				*i* Sn	Sn	03 17 12.7	-1.7
ANN	Anapa	7.63	287	*e*P	Pn	03 17 15.6	-3.5
ANN				pmax	pmax		
	comp=Z,34nm,1.0s						
ANN	Anapa	7.63	287	*e*P	Pn	03 17 15.6	-3.5
	comp=Z,34nm,1.0s						
AB31	Akbulak array	10.50	50	⇓Pn	Pn	03 18 00.5	+2.2
	comp=Z,0.4nm,0.3s,baz=232,slow=10,SNR=26						
AB31				⇓Sn	Sn	03 19 54.5	-1.3
	comp=Z,0.9nm,0.5s,baz=236,slow=26,SNR=6.8						
AB31	Akbulak array	10.50	50	Pn	Pn	03 18 00.5	+2.2
	comp=Z,0.4nm,0.3s,baz=232,SNR=26						
AB31				Sn	Sn	03 19 54.5	-1.3
	comp=Z,0.9nm,0.5s,SNR=6.8						
OBN	Obninsk	14.09	333	*i* P	Pn	03 18 49.5	+2.2
OBN				pmax	pmax		
	comp=Z,1.0nm,0.8s						
OBN	Obninsk	14.09	333	*i* P	Pn	03 18 49.5	+2.2
	comp=Z,1.0nm,0.8s						

*ROM **23** 03:22:25.0±0.1, 44°.89N×11°.19E, h2km, Md3.3/36, Ml3.2/27, Error ellipse: s-maj=1.5km s-min=1.2km az=67.0*
*ISCJB **23** 03:22:25.1±0.2, 44°.93N±0°.01×11°.12E±0°.01, h14km±1km, Error ellipse: s-maj=2.1km s-min=1.5km az=140.2*
*NEIC **23** 03:22:25.0, 44°.89N×11°.20E, h2km, ML3.8(SZGRF), ML3.4(STR), ML3.4(LDG), ML3.1(ROM), After ROM.*
NEIC Felt [IV] at Medolla, Mirandola and San Felice sul Panaro; [III] at Finale Emilia. Also felt at Bologna.
*CSEM **23** 03:22:25.1±0.1, 44°.90N×11°.18E, h5km, ML3.5/14, Error ellipse: s-maj=2.1km s-min=1.7km az=126.0*
*VIE **23** 03:22:26.2±0.3, 44°.87N×11°.27E, h11km±1km, mb3.1/16, ML3.4/18, Error ellipse: s-maj=2.1km s-min=1.5km az=172.0 41 km N of Bologna*
*SZGRF **23** 03:22:26.3, 44°.75N×11°.23E, h10km, mb3.5, Northern Italy*
*LDG **23** 03:22:27.7±0.1, 44°.85N×11°.19E, h10km, Ml3.4/29*
*PRU **23** 03:22:28.0, 45°.02N×11°.43E, h0km*
*STR **23** 03:22:28.8±0.5, 44°.94N×10°.82E, h10km, Ml3.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 23 03:22:26.2±0.2, 44°.90N±0°.01×11°.14E±0°.01, h15km±1km, n281, σ1§15/439, 21C-26D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAVA	Ravarino	0.14	187	⇓*i*Pg	Pg	03 22 28.0	-2.0
RAVA				Sg	Sg	03 22 31.2	-1.3
	101μm,0.2s						
RAVA	Ravarino	0.14	187	⇓*i*Pg	Pg	03 22 28.0	-2.0
RAVA				Sg	Sg	03 22 31.2	-1.3
	101μm,0.2s						
NOVE	Novellara	0.32	252	Pg	Pg	03 22 32.1	-0.8
NOVE				Sg	Sg	03 22 38.5	+1.2
NOVE	Novellara	0.32	252	Pg	Pg	03 22 32.1	-0.8
NOVE				Sg	Sg	03 22 38.5	+1.2
FIU	Minerbio Fiu	0.36	136	Pg	Pg	03 22 31.9	-1.7
FIU				Sg	Sg	03 22 37.6	-0.9
	2μm,0.4s						
FIU	Minerbio Fiu	0.36	136	Pg	Pg	03 22 31.9	-1.7
FIU				Sg	Sg	03 22 37.6	-0.9
	2μm,0.4s						
ZCCA	Zocca	0.56	192	Pg	Pg	03 22 37.2	-0.1
ZCCA				Sg	Sg	03 22 45.7	+0.9
ZCCA	Zocca	0.56	192	Pg	Pg	03 22 37.2	-0.1
ZCCA				Sg	Sg	03 22 45.7	+0.9
CMPO	Campotto Po	0.57	124	Pg	Pg	03 22 37.0	-0.4
CMPO				Sg	Sg	03 22 45.7	+0.7
	2μm,0.8s						
CMPO	Campotto Po	0.57	124	Pg	Pg	03 22 37.0	-0.4
MTRZ	Monterenzio	0.57	156	Pg	Pg	03 22 38.9	+1.4
MTRZ				Sg	Sg	03 22 47.3	+2.2
	4μm,0.7s						
TEOL	Teolo	0.59	39	⇓*e*Pg	Pg	03 22 37.7	-0.1
TEOL				*e*Sg	Sg	03 22 47.6	+1.9
TEOL	Teolo	0.59	39	*e*Pg	Pg	03 22 37.7	-0.2
TEOL				*e*Sg	Sg	03 22 47.6	+1.9
PRMA	PARMA	0.61	257	Pg	Pg	03 22 39.2	+1.1
	391nm,0.3s						
PRMA	PARMA	0.61	257	Pg	Pg	03 22 39.2	+1.1
	391nm,0.3s						
ADRI	Adria, Italy	0.64	77⇑	*i*Pg	Pg	03 22 38.8	+0.2
ADRI				*i* Sg	Sg	03 22 49.3	+2.2
ADRI	Adria, Italy	0.64	77	*i* Pg	Pg	03 22 38.8	+0.1
ADRI				*i* Sg	Sg	03 22 49.3	+2.2
ERBM	Eremo	0.71	228	Pg	Pg	03 22 40.1	+0.1
ERBM				Sg	Sg	03 22 51.9	+2.5
	2μm,1.5s						
ERBM	Eremo	0.71	228	Pg	Pg	03 22 40.1	+0.1
FNVD	Fontana Vidola	0.73	181	Pg	Pg	03 22 39.0	-1.5
FNVD				Sg	Sg	03 22 50.6	+0.5
	864nm,0.8s						
FNVD	Fontana Vidola	0.73	181	Pg	Pg	03 22 39.0	-1.5
FNVD				Sg	Sg	03 22 50.6	+0.5
	864nm,0.8s						
SALO	Salr	0.84	329	Pg	Pg	03 22 42.9	+0.3
	2μm,0.3s						
SALO	Salr	0.84	329	Pg	Pg	03 22 42.9	+0.3
	2μm,0.3s						
SEI	Scarperia	0.86	170	Pg	Pg	03 22 42.5	-0.4
	1μm,0.4s						
SEI	Scarperia	0.86	170	Pg	Pg	03 22 42.5	-0.4
	1μm,0.4s						
VLC	Villacollemand	0.92	216	*e*Pg	Pg	03 22 44.0	+0.1
VLC				*e*Sg	Sg	03 22 58.6	+2.6
VLC	Villacollemand	0.92	216	Pg	Pg	03 22 43.3	-0.7
	641nm,0.9s						
VLC	Villacollemand	0.92	216	Pg	Pg	03 22 43.3	-0.7
	641nm,0.9s						
VLC				*e*Sg	Sg	03 22 58.6	+2.6
BDI	Bagni Di Lucca	0.92	205	Pg	Pg	03 22 42.7	-1.4
	701nm,0.4s						
BDI	Bagni Di Lucca	0.92	205	Pg	Pg	03 22 42.7	-1.4
	701nm,0.4s						
VMG	Vicchio	0.98	163	Pg	Pg	03 22 44.4	-0.8
	452nm,0.3s						
VMG	Vicchio	0.98	163	Pg	Pg	03 22 44.4	-0.8
	452nm,0.3s						
CGRP	Cima Grappa	1.08	25	⇓*i*Pg	Pg	03 22 46.6	-0.5
CGRP				*i* Sg	Sg	03 23 02.9	+1.6
CGRP	Cima Grappa	1.08	25	*i* Pg	Pg	03 22 46.6	-0.6
CGRP				*i* Sg	Sg	03 23 02.9	+1.6
MAIM	Mastiano	1.09	206	Pg	Pg	03 22 46.3	-1.0
MAIM				Sg	Sg	03 23 03.4	+1.9
	622nm,0.5s						
MAIM	Mastiano	1.09	206	Pg	Pg	03 22 46.3	-1.0
SFI	Santa Sofia	1.12	153	Pg	Pg	03 22 46.4	-1.3
	401nm,0.4s						
CRMI	Carmignano	1.12	186	Pg	Pg	03 22 46.4	-1.4
CRMI				Sg	Sg	03 23 02.9	+0.6
	604nm,0.5s						
CRMI	Carmignano	1.12	186	Pg	Pg	03 22 46.4	-1.4
CRMI				Sg	Sg	03 23 02.9	+0.6
	604nm,0.5s						
MTLO	Montello	1.13	36	⇓*i*Pg	Pg	03 22 47.5	-0.6
MTLO	Montello	1.13	36	*i* Pg	Pg	03 22 47.5	-0.6
ASQU	Asqua	1.20	157	Pg	Pn	03 22 48.0	-0.4
ASQU				Sg	Sg	03 23 05.9	+1.0
	449nm,0.5s						
ASQU	Asqua	1.20	157	Pg	Pn	03 22 48.0	-0.4
CTI	Castel Tesino	1.20	17	Pg	Pg	03 22 48.4	-1.0
	518nm,6.8s						
CTI	Castel Tesino	1.20	17	Pg	Pg	03 22 48.4	-1.0
	518nm,6.8s						
BOB	Bobbio (Coli)	1.21	264	Pg	Pg	03 22 49.3	-0.3
	493nm,0.9s						
BOB	Bobbio (Coli)	1.21	264	Pg	Pg	03 22 49.3	-0.3
	493nm,0.9s						
MABI	Malga Bissina	1.24	339	Pg	Pg	03 22 49.2	-0.9
	237nm,0.4s						
MABI	Malga Bissina	1.24	339	Pg	Pg	03 22 49.2	-0.9
	237nm,0.4s						
SC2M	Scurtabo	1.25	247	Pg	Pg	03 22 49.8	-0.5
	1μm,0.5s						
SC2M	Scurtabo	1.25	247	Pg	Pg	03 22 49.8	-0.5
	1μm,0.5s						
PII	Pisa	1.26	201	Pg	Pn	03 22 48.4	-0.9
	200nm,0.2s						

BUA	Buia	1.92	46	i Pn	Pn	03 22 58.0	-0.3
BUA				i Sn	Sn	03 23 23.3	+1.2
BAD	Bernadia	1.99	47	⇓i Pn	Pn	03 22 58.8	-0.5
BAD	Bernadia	1.99	47	i Pn	Pn	03 22 58.8	-0.5
COLI	Coloredo	2.00	51	⇓i Pn	Pn	03 22 59.0	-0.4
COLI				i Sn	Sn	03 23 24.7	+0.6
COLI	Coloredo	2.00	51	i Pn	Pn	03 22 59.0	-0.4
COLI				i Sn	Sn	03 23 24.7	+0.6
FUSE	Fusea	2.00	40	ePn	Pn	03 22 59.8	+0.3
FUSE	Fusea	2.00	40	ePn	Pn	03 22 59.8	+0.4
GMNA	Gemona 329nm,0.6s	2.01	46	Pg	Pn	03 22 58.4	-1.2
TRI	Trieste	2.02	65	ePn	Pn	03 22 57.9	-1.9
TRI				eSn	Sn	03 23 23.2	-1.5
TRI	Trieste	2.02	65	Pg	Pn	03 22 58.9	-0.8
TRI	Trieste	2.02	65	ePn	Pn	03 22 57.8	-1.9
TRI				eSn	Sn	03 23 23.2	-1.4
VINO	Villanova	2.02	47	⇓ePn	Pn	03 22 59.1	-0.6
VINO				eSn	Sn	03 23 25.4	+0.6
VINO	Villanova	2.02	47	ePn	Pn	03 22 59.1	-0.7
VINO				eSn	Sn	03 23 25.4	+0.6
SABO	M.te Sabotino	2.04	57	⇓ePn	Pn	03 22 59.9	-0.1
SABO				eSn	Sn	03 23 26.0	+0.9
SABO	M.te Sabotino	2.04	57	ePn	Pn	03 22 59.9	-0.1
SABO				eSn	Sn	03 23 26.0	+0.8
FVI	Forni Avoltri 130nm,0.4s	2.05	33	Pg	Pn	03 23 00.6	+0.5
DAVOX	Davos/Dischmat	2.08	335	Pg	Pn	03 23 02.7	+2.2
ABTA	Abfaltersbach SNR=28	2.08	27	ePn	Pn	03 23 01.6	+1.0
ABTA				⇑iSg	Sg	03 23 35.3	+2.2
ABTA	Abfaltersbach 87nm,0.5s	2.08	27	Pn	Pn	03 23 01.6	+1.0
ABTA				Sg	Sg	03 23 35.3	+2.2
ZOU	Zoufplan	2.10	37	ePn	Pn	03 23 01.5	+0.7
ZOU	Zoufplan	2.10	37	ePn	Pn	03 23 01.5	+0.7
SKDS	Skadanscina	2.13	71	i Pn	Pn	03 23 00.3	-1.0
SKDS				i Sn	Sn	03 23 25.4	-2.0
SKDS	comp=Z,54nm,0.2s						
FETA	Feichten SNR=117	2.14	352	⇓ePn	Pn	03 23 02.9	+1.5
FETA				⇑iSn	Sn	03 23 31.1	+3.4
FETA	Feichten SNR=117	2.14	352	Pn	Pn	03 23 02.9	+1.5
FETA				Sn	Sn	03 23 31.1	+3.4
PTCC	Patocco-Chiusa comp=Z,138nm,0.6s	2.16	45	Pg	Pn	03 23 01.4	-0.3
PLRO	Paularo	2.17	40	ePn	Pn	03 23 02.1	+0.3
PLRO	Paularo	2.17	40	ePn	Pn	03 23 02.1	+0.4
DRE	Drenchia	2.17	53	⇓i Pn	Pn	03 23 01.3	-0.5
DRE				i Sn	Sn	03 23 28.3	-0.1
DRE	Drenchia	2.17	53	i Pn	Pn	03 23 01.3	-0.5
DRE				i Sn	Sn	03 23 28.3	-0.1
VOY	Vojsko	2.24	59	⇑ePn	Pn	03 23 02.2	-0.6
VOY				e		03 23 05.9	
VOY				eSn	Sn	03 23 29.7	-0.5
VOY	Vojsko	2.24	59	⇑ePn	Pn	03 23 02.2	-0.6
VOY				eSn	Sn	03 23 29.7	-0.5
CADS	Cadrg	2.25	53	i Pn	Pn	03 23 02.5	-0.4
CADS	Cadrg	2.25	53	i Pn	Pn	03 23 02.5	-0.4
LSR	Lussari	2.30	46	⇑ePn	Pn	03 23 03.5	-0.1
LSR	Lussari	2.30	46	ePn	Pn	03 23 03.5	0.0
FDMO	Fiordimonte	2.33	142	Pg	Pn	03 23 04.2	+0.2
ACOM	Acomizza, Ital	2.34	44	ePn	Pn	03 23 03.8	-0.3
ACOM	Acomizza, Ital	2.34	44	ePn	Pn	03 23 03.8	-0.3
WTTA	Wattenberg	2.39	8	ePn	Pn	03 23 06.5	+1.7
WTTA	Wattenberg SNR=31	2.39	8	⇓ePn	Pn	03 23 06.7	+1.9
WTTA				⇑iSn	Sn	03 23 36.0	+2.2
WTTA	Wattenberg SNR=31	2.39	8	Pn	Pn	03 23 06.7	+1.9
WTTA				Sn	Sn	03 23 36.0	+2.2
MOTA	Moosalm SNR=54	2.44	359	⇓ePn	Pn	03 23 06.9	+1.4
MOTA				⇓iSn	Sn	03 23 37.5	+2.3
MOTA	Moosalm SNR=54	2.44	359	Pn	Pn	03 23 06.9	+1.3
MOTA				Sn	Sn	03 23 37.5	+2.3
WATA	Walderalm SNR=35	2.46	7	⇑ePn	Pn	03 23 07.6	+1.9
WATA	Walderalm SNR=35	2.46	7	Pn	Pn	03 23 07.6	+1.9
MYKA	Terra Mystica	2.46	44	⇓i Pn	Pn	03 23 06.0	+0.2
MYKA				⇑iSn	Sn	03 23 37.3	+1.8
MYKA	Terra Mystica	2.46	44	Pn	Pn	03 23 06.0	+0.2
MYKA				Sn	Sn	03 23 37.3	+1.8
DAVA	Damuels	2.54	340	ePn	Pn	03 23 09.5	+2.6
DAVA				eSn	Sn	03 23 41.1	+3.5
DAVA	Damuels SNR=50	2.54	340	ePn	Pn	03 23 09.6	+2.6
DAVA				⇑iSn	Sn	03 23 41.3	+3.7
DAVA	Damuels SNR=50	2.54	340	Pn	Pn	03 23 09.6	+2.7
DAVA				Sn	Sn	03 23 41.3	+3.7
RETA	Reutte SNR=16	2.60	354	ePn	Pn	03 23 10.2	+2.5
RETA				⇓iSn	Sn	03 23 42.3	+3.2
RETA	Reutte SNR=16	2.60	354	Pn	Pn	03 23 10.2	+2.5
RETA				Sn	Sn	03 23 42.3	+3.3
LJU	Ljubljana	2.64	63	ePn	Pn	03 23 09.0	+0.7
LJU				e		03 23 14.5	
LJU				eSn	Sn	03 23 40.0	0.0
KBA	Koelnbreinsper	2.67	34	ePg	Pg	03 23 15.8	-1.5
KBA	Koelnbreinsper SNR=9.3	2.67	34	⇑ePg	Pg	03 23 16.6	-0.7
KBA				⇓iSg	Sg	03 23 53.4	+1.5
KBA	Koelnbreinsper SNR=9.3 comp=Z,54nm,0.5s	2.67	34	Pg	Pg	03 23 16.6	-0.7
KBA				Sg	Sg	03 23 53.4	+1.6
NVLJ	Novalja comp=Z,54nm,0.5s	2.68	96	ePn	Pn	03 23 07.9	-0.9
NVLJ				Sn	Sn	03 23 38.2	-2.7
NVLJ	Novalja	2.68	96	ePn	Pn	03 23 07.9	-0.9
NVLJ				Sn	Sn	03 23 38.2	-2.7
SAOF	Saorge	2.73	252	Pn	Pn	03 23 09.2	-0.2
SAOF				Sg	Sn	03 23 43.0	+0.9
SAOF	Saorge	2.73	252	Pn	Pn	03 23 09.2	-0.2
AUTN	L'Aution	2.81	253	Pn	Pn	03 23 11.0	+0.4
AUTN	L'Aution	2.81	253	Pn	Pn	03 23 11.0	+0.4
PGF	Pioggiola	2.82	214	ePn	Pn	03 23 09.9	-0.8
PGF				eSn	Sn	03 23 43.3	-1.1
PGF	Pioggiola comp=Z,74nm,0.5s	2.82	214	ePn	Pn	03 23 09.9	-0.8
PGF				eSn	Sn	03 23 43.3	-1.1
SBF	Sospel comp=Z,37nm,0.5s	2.85	250	ePn	Pn	03 23 10.9	-0.3
SBF				eSn	Sn	03 23 44.7	-0.5
SBF	Sospel comp=Z,79nm,0.3s	2.85	250	ePn	Pn	03 23 10.9	-0.3
SBF				eSn	Sn	03 23 44.7	-0.5
OBKA	Obir comp=Z,39nm,0.3s	2.88	55	ePn	Pn	03 23 12.0	+0.5
OBKA				eSn	Sn	03 23 45.9	+0.1
OBKA	Obir SNR=8.6	2.88	55	⇓ePn	Pn	03 23 11.9	+0.4
OBKA				⇑iSn	Sn	03 23 45.8	0.0
OBKA	Obir SNR=8.6	2.88	55	Pn	Pn	03 23 11.9	+0.4
OBKA				Sn	Sn	03 23 45.8	0.0
LUCF	Luceram	2.90	251	Pn	Pn	03 23 12.0	+0.2
LUCF				Sg	Sn	03 23 47.5	+1.1
LUCF	Luceram	2.90	251	Pn	Pn	03 23 12.0	+0.2
TOUF	Mont Tournerai	2.93	254	Pn	Pn	03 23 12.8	+0.6
TOUF				Sg	Sn	03 23 48.8	+1.8
TOUF	Mont Tournerai	2.93	254	Pn	Pn	03 23 12.8	+0.6
PDKS	Podkum	2.95	65	i Pn	Pn	03 23 12.5	0.0
PDKS	Podkum	2.95	65	i Pn	Pn	03 23 12.5	0.0
BOJS	Bojanci comp=Z,13nm,0.2s	2.97	77	i Pn	Pn	03 23 12.7	0.0
BOJS							
BOJS	Bojanci	2.97	77	i Pn	Pn	03 23 12.7	0.0
AQU	L'Aquila	3.03	146	ePn	Pn	03 23 14.8	+1.2
AQU	L'Aquila	3.03	146	ePn	Pn	03 23 14.8	+1.2
MVIF	Mont Vial	3.03	252	Pn	Pn	03 23 14.4	+0.8
MVIF				Sg	Sn	03 23 50.4	+0.8
MVIF	Mont Vial	3.03	252	Pn	Pn	03 23 14.4	+0.8
RJOB	Jochberg	3.06	21	ePn	Pn	03 23 15.9	+1.9
MBDF	Montbardon	3.12	268	ePn	Pn	03 23 14.1	-0.7
MBDF				eSn	Sn	03 23 51.6	-0.1
MBDF	Montbardon comp=Z,29nm,0.5s	3.12	268	ePn	Pn	03 23 14.1	-0.7
MBDF				eSn	Sn	03 23 51.6	-0.1
LPG	La Plagne comp=Z,15nm,0.5s	3.16	282	ePn	Pn	03 23 16.1	+0.7
LPG				eSn	Sn	03 23 53.0	+0.2
LPG	La Plagne comp=Z,41nm,0.7s	3.16	282	ePn	Pn	03 23 16.1	+0.7
LPG				eSn	Sn	03 23 53.0	+0.2
BNI	Bardonecchia comp=Z,21nm,0.7s	3.17	274	ePn	Pn	03 23 17.8	+2.3
BNI				eSn	Sn	03 23 56.1	+3.0
BNI	Bardonecchia	3.17	274	ePn	Pn	03 23 17.8	+2.2
BNI				eSn	Sn	03 23 56.1	+3.0
LPL	La Plagne comp=Z,36nm,0.5s	3.18	283	ePn	Pn	03 23 16.6	+1.0
LPL				eSn	Sn	03 23 53.4	+0.2
LPL	La Plagne comp=Z,18nm,0.5s	3.18	283	ePn	Pn	03 23 16.6	+1.0
LPL				eSn	Sn	03 23 53.4	+0.2
SOKA	Soboth	3.25	55	⇑i Pn	Pn	03 23 17.0	+0.4
SOKA				⇑iSn	Sn	03 23 55.1	+0.1
SOKA	Soboth	3.25	55	Pn	Pn	03 23 17.0	+0.4
SOKA				Sn	Sn	03 23 55.1	+0.1
FUR	Furstenfeldbru	3.27	2	ePg	Pg	03 23 28.1	-0.7
PERS	Pernice	3.28	57	i Pn	Pn	03 23 17.4	+0.4
PERS				eSn	Sn	03 23 55.2	-0.5
PERS	Pernice	3.28	57	i Pn	Pn	03 23 17.4	+0.4
PERS				eSn	Sn	03 23 55.2	-0.5
FRF	La Foret Royal	3.50	249	ePn	Pn	03 23 19.7	-0.3
FRF				eSn	Sn	03 24 00.2	-0.9
FRF	La Foret Royal comp=Z,39nm,0.3s	3.50	249	ePn	Pn	03 23 19.7	-0.3
FRF				eSn	Sn	03 24 00.2	-0.9
SPAK	Spaichingen-Ko comp=Z,20nm,0.3s	3.59	334	Pn	Pn	03 23 23.3	+2.0
SPAK	Spaichingen-Ko	3.59	334	Pn	Pn	03 23 23.3	+2.0
MOA	Molln	3.66	35	ePn	Pn	03 23 22.9	+0.7
MOA	Molln SNR=13	3.66	35	⇓i Pn	Pn	03 23 22.8	+0.6
MOA	Molln SNR=13	3.66	35	Pn	Pn	03 23 22.8	+0.6
FELD	Feldberg im Sc	3.69	325	Pn	Pn	03 23 23.5	+0.9
FELD	Feldberg im Sc	3.69	325	Pn	Pn	03 23 23.5	+0.9
LMR	La Mourre	3.69	246	ePn	Pn	03 23 22.0	-0.6
LMR				eSn	Sn	03 24 04.5	-1.3
LMR	La Mourre comp=Z,42nm,0.3s	3.69	246	ePn	Pn	03 23 22.0	-0.6
LMR				eSn	Sn	03 24 04.5	-1.3
ORIF	Oris-en-Rattie comp=Z,21nm,0.3s	3.74	272	ePn	Pn	03 23 24.0	+0.6
ORIF				eSn	Sn	03 24 06.3	-0.8
ORIF	Oris-en-Rattie comp=Z,32nm,0.6s	3.74	272	ePn	Pn	03 23 24.0	+0.6
ORIF				eSn	Sn	03 24 06.3	-0.8
ARSA	Arzberg comp=Z,16nm,0.6s	3.85	51	ePn	Pn	03 23 24.5	-0.4
ARSA	Arzberg	3.85	51	⇑i Pn	Pn	03 23 24.1	-0.7
ARSA				⇑iSn	Sn	03 24 07.5	-2.3
ARSA	Arzberg	3.85	51	Pn	Pn	03 23 24.1	-0.8
ARSA				Sn	Sn	03 24 07.5	-2.3
CABF	La Chapelle	3.93	298	ePn	Pn	03 23 27.1	+1.1
CABF				eSn	Sn	03 24 11.5	-0.3
CABF	La Chapelle comp=Z,48nm,0.9s	3.93	298	ePn	Pn	03 23 27.1	+1.1
CABF				eSn	Sn	03 24 11.5	-0.3
BFO	Black Forest comp=Z,24nm,0.9s	3.94	332	ePn	Pn	03 23 26.7	+0.6
BFO				eSn	Sn	03 24 12.1	+0.1
BFO	Black Forest	3.94	332	ePn	Pn	03 23 26.5	+0.4
BFO				ePg	Pg	03 23 41.9	+0.2
BFO	Black Forest	3.94	332	ePn	Pn	03 23 26.5	+0.4
BFO	Black Forest	3.94	332	ePg	Pg	03 23 41.9	+0.2
MOF	Molkenrain	4.05	318	Pn	Pn	03 23 28.3	+0.7
MOF	Molkenrain	4.05	318	Pn	Pn	03 23 28.3	+0.7
SMRF	Simiane la Rot	4.09	259	ePn	Pn	03 23 28.6	+0.4
SMRF				eSn	Sn	03 24 14.6	-1.2
SMRF	Simiane la Rot comp=Z,18nm,0.6s	4.09	259	ePn	Pn	03 23 28.6	+0.4
SMRF				eSn	Sn	03 24 14.6	-1.2
STU	Stuttgart comp=Z,9.1nm,0.6s	4.10	342	ePg	Pg	03 23 45.1	+0.4
STU	Stuttgart	4.10	342	ePn	Pn	03 23 29.8	+1.5
STU				ePg	Pg	03 23 43.7	-1.0
STU				eSn	Sn	03 24 18.4	+2.5
STU	Stuttgart	4.10	342	ePn	Pn	03 23 29.8	+1.5
HINF	Hinteralfeld comp=Z,40nm,0.5s	4.16	316	ePn	Pn	03 23 29.5	+0.3
HINF				eSn	Sn	03 24 17.0	-0.5
HINF	Hinteralfeld comp=Z,20nm,0.5s	4.16	316	ePn	Pn	03 23 29.5	+0.3
HINF				eSn	Sn	03 24 17.0	-0.5
ECH	Echery	4.31	322	Pn	Pn	03 23 31.5	+0.4
ECH	Echery	4.31	322	Pn	Pn	03 23 31.5	+0.4
GEC2	GERESS Array S comp=Z,7.3nm,0.3s	4.32	23	ePn	Pn	03 23 31.4	+0.1
GEC2				eSn	Sn	03 24 20.5	-0.9
CDF	Champ du Feu comp=Z,15nm,0.3s	4.41	324	ePn	Pn	03 23 32.9	+0.4
CDF				eSn	Sn	03 24 22.8	-0.8
CDF	Champ du Feu comp=Z,7.3nm,0.3s	4.41	324	ePn	Pn	03 23 32.9	+0.4
CDF				eSn	Sn	03 24 22.8	-0.8
WET	Wettzell comp=Z,20nm,0.5s	4.41	15	ePn	Pn	03 23 32.8	+0.3
WET				eSn	Sn	03 24 23.2	-0.4
CONA	Conrad Observa comp=Z,7.3nm,0.3s	4.45	45	⇓i Pn	Pn	03 23 33.3	+0.2
CONA				⇑i Pg	Pg	03 23 50.3	-1.2
CONA				⇑iSn	Sn	03 24 24.4	-0.3
CONA	Conrad Observa comp=Z,7.3nm,0.3s	4.45	45	Pn	Pn	03 23 33.3	+0.2
HAU	Haudompre comp=Z,31nm,0.2s	4.54	315	ePn	Pn	03 23 34.8	+0.4
HAU				eSn	Sn	03 24 25.9	-1.0
HAU	Haudompre comp=Z,15nm,0.2s	4.54	315	ePn	Pn	03 23 34.8	+0.4
HAU				eSn	Sn	03 24 25.9	-1.0
KHC	Kasperske Hory comp=Z,19nm,0.6s	4.55	21	ePn	Pn	03 23 34.2	-0.2
KHC				ePg	Pg	03 23 50.2	-3.1
KHC				eSn	Sn	03 24 25.1	-1.9
KHC	Kasperske Hory comp=Z,19nm,0.6s	4.55	21	ePN	Pn	03 23 34.6	+0.1
KHC				eSN	Sn	03 24 25.5	-1.5
KHC				eSG	Sg	03 24 47.6	-4.6
KHC	Kasperske Hory comp=Z,19nm,0.6s	4.55	21	ePn	Pn	03 23 34.2	-0.3
KHC	Kasperske Hory	4.55	21	ePg	Pg	03 23 50.2	-3.1
KHC				Sn	Sn	03 24 25.5	-1.5
KHC				Sg	Sg	03 24 47.6	-4.6
VIVF	Saint-Julien-l comp=Z,8.0nm,0.4s	4.60	272	ePn	Pn	03 23 34.9	-0.3
VIVF				eSn	Sn	03 24 26.9	-1.4
VIVF	Saint-Julien-l comp=Z,4.0nm,0.4s	4.60	272	ePn	Pn	03 23 34.9	-0.3
VIVF				eSn	Sn	03 24 26.9	-1.4
LANF	Langenberg comp=Z,4.2nm,0.4s	4.68	332	Pn	Pn	03 23 36.7	+0.5
LANF	Langenberg	4.68	332	Pn	Pn	03 23 36.7	+0.5
GRF	Grafenberg Arr comp=Z,2.1nm,0.4s	4.79	1	ePg	Pg	03 23 56.4	-1.6
GRF				eSn	Sn	03 24 31.6	-1.5
GRF	Grafenberg Arr comp=Z,4.2nm,0.4s	4.79	1	ePg	Pg	03 23 56.4	-1.6
GRF				eSn	Sn	03 24 31.6	-1.5
THEF	They Montfort comp=Z,6.3nm,0.4s	4.87	315	Pn	Pn	03 23 39.8	+0.9
THEF	They Montfort	4.87	315	Pn	Pn	03 23 39.8	+0.9
STON	Ston comp=Z,15nm,0.4s	5.15	111	ePn	Pn	03 23 41.9	-0.9
STON				Sn	Sn	03 24 37.8	-4.2
STON	Ston	5.15	111	ePn	Pn	03 23 41.9	-0.9
LASF	Ste Croix comp=Z,4.2nm,0.4s	5.28	264	ePn	Pn	03 23 44.4	-0.1
LASF				eSn	Sn	03 24 42.8	-2.2
LASF	Ste Croix comp=Z,2.1nm,0.4s	5.28	264	ePn	Pn	03 23 44.4	-0.1
LASF				eSn	Sn	03 24 42.8	-2.2
TREC	Trest comp=Z,6.3nm,0.4s	5.30	32	ePN	Pn	03 23 44.6	-0.2
TREC	Trest	5.30	32	Pn	Pn	03 23 44.6	-0.2
SFTF	Sexfontaines comp=Z,13nm,0.4s	5.35	310	ePn	Pn	03 23 46.2	+0.7
SFTF				eSn	Sn	03 24 45.2	-1.6
SFTF	Sexfontaines comp=Z,6.3nm,0.4s	5.35	310	ePn	Pn	03 23 46.2	+0.7
SFTF				eSn	Sn	03 24 45.2	-1.6
SMF	Signal de Mont comp=Z,15nm,0.4s	5.40	291	ePn	Pn	03 23 46.5	+0.4
SMF				eSn	Sn	03 24 46.2	-1.8
SMF	Signal de Mont	5.40	291	ePn	Pn	03 23 46.5	+0.4
NKC	Novy Kostel	5.41	9	ePN	Pn	03 23 47.2	+0.9
NKC	Novy Kostel comp=Z,10nm,0.4s	5.41	9	Pn	Pn	03 23 47.2	+0.9
MEZF	Maizieres J'vi	5.53	313	ePn	Pn	03 23 48.6	+0.7
MEZF				eSn	Sn	03 24 49.2	-1.9
MEZF	Maizieres J'vi comp=Z,14nm,0.4s	5.53	313	ePn	Pn	03 23 48.6	+0.7
PRU	Pruhonice	5.59	23	ePN	Pn	03 23 49.4	+0.7
PRU				eSN	Sn	03 24 50.3	-2.3
PRU				eSG	Sg	03 25 17.6	-7.9
PRU	Pruhonice comp=Z,16nm,1.0s	5.59	23	Pn	Pn	03 23 49.4	+0.7
LOR	Lormes	5.59	298	ePn	Pn	03 23 49.5	+0.7
LOR				eSn	Sn	03 24 50.8	-2.0
LOR	Lormes comp=Z,14nm,0.4s	5.59	298	ePn	Pn	03 23 49.5	+0.7
SSF	Saint Saulge	5.75	295	ePn	Pn	03 23 51.0	+0.1
SSF				eSn	Sn	03 24 54.2	-2.3
SSF	Saint Saulge comp=Z,3.2nm,0.3s	5.75	295	ePn	Pn	03 23 51.0	+0.1
MOX	Moxa	5.76	3	ePN	Pn	03 23 51.8	+0.8
MOX				i PG	Pg	03 24 16.5	+0.1
MOX				i SN	Sn	03 24 55.6	-1.2
MOX				eSG	Sg	03 25 19.7	-11
AVF	Avril sur Loir	5.76	292	ePn	Pn	03 23 51.3	+0.2
AVF				eSn	Sn	03 24 54.7	-2.2
AVF	Avril sur Loir comp=Z,5.4nm,0.6s	5.76	292	ePn	Pn	03 23 51.3	+0.2
WLF	Walferdange	5.85	326	ePn	Pn	03 23 54.3	+2.0
WLF	Walferdange	5.85	326	ePn	Pn	03 23 54.3	+2.0
BGF	Bois d'Agland	6.04	289	ePn	Pn	03 23 55.2	+0.2
BGF				eSn	Sn	03 25 01.5	-2.3
BGF	Bois d'Agland comp=Z,28nm,0.5s	6.04	289	ePn	Pn	03 23 55.2	+0.2
BRG	Berggiesshubel	6.27	16	PN	Pn	03 23 59.3	+1.3
BRG				PG	Pg	03 24 23.1	-3.0
BRG				SG	Sg	03 25 45.3	-1.9
BRG	Berggiesshubel comp=Z,5.8nm,1.6s	6.27	16	PN	Pn	03 23 59.3	+1.3
HYF	Humbligny	6.37	295	ePn	Pn	03 24 00.0	+0.5
HYF				eSn	Sn	03 25 09.4	-2.5
HYF	Humbligny	6.37	295	ePn	Pn	03 24 00.0	+0.5
VYHS	Vyhne	6.39	53	ePn	Pn	03 23 59.2	-0.6
VYHS				eSg	Sn	03 25 03.4	-9.1
VYHS	Vyhne	6.39	53	ePN	Pn	03 23 59.2	-0.6
VYHS				eSN	Sn	03 25 03.4	-9.1
VYHS	Vyhne	6.39	53	ePn	Pn	03 23 59.2	-0.6
TCF	Toulx Ste Croi	6.42	286	ePn	Pn	03 24 00.9	+0.7
TCF				eSn	Sn	03 25 10.5	-2.6
TCF	Toulx Ste Croi comp=Z,3.3nm,0.3s	6.42	286	ePn	Pn	03 24 00.9	+0.7
CAF	Calviac	6.45	273	ePn	Pn	03 24 01.3	+0.7
CAF				eSn	Sn	03 25 11.0	-2.8
CAF	Calviac comp=Z,5.1nm,0.7s	6.45	273	ePn	Pn	03 24 01.3	+0.7
CLL	Collm	6.53	10	i Pg	Pg	03 24 32.9	+1.7
CLL				eSg	Sg	03 25 57.0	+1.3
CLL	Collm comp=Z,13nm,0.8s	6.53	10	i Pg	Pg	03 24 32.9	+1.7
GIVF	Givet	6.74	323	ePn	Pn	03 24 05.1	+0.6
GIVF				eSn	Sn	03 25 18.2	-2.7
GIVF	Givet comp=Z,3.5nm,0.2s	6.74	323	ePn	Pn	03 24 05.1	+0.6

*ISCJB **23** 03:33:11.7±0.6, 48°.11N±0°.03×11°.69E±0°.05, h10km, Error ellipse: s-maj=6.0km s-min=3.1km az=35.5*
*VIE **23** 03:33:12.9±0.1, 48°.06N×11°.69E, h8km±2km, ML2.0/7, Error ellipse: s-maj=1.3km s-min=0.9km az=134.0 13 km SE of Munich*
*CSEM **23** 03:33:13.0±0.2, 48°.08N×11°.67E, h2km, ML2.6/8, Error ellipse: s-maj=4.6km s-min=2.1km az=127.0*
*PRU **23** 03:33:14.3, 48°.11N×11°.65E, h1km*
ISC 23 03:33:13.4±0.6, 48°.08N±0°.03×11°.68E±0°.05, h10km, n21, σ0s75/31, 9C-1D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WATA	Walderalm	0.75	185	⇑iPg	Pg	03 33 27.0	-0.8
WATA				⇑iSg	Sg	03 33 37.5	-0.1
WATA	Walderalm 3.9nm,0.1s	0.75	185	Pg	Pg	03 33 27.0	-0.8
WATA				Sg	Sg	03 33 37.5	-0.1
WTTA	Wattenberg 0.7nm,0.1s	0.82	182	⇑iPg	Pg	03 33 29.0	-0.1
WTTA	Wattenberg 0.7nm,0.1s	0.82	182	Pg	Pg	03 33 29.0	-0.1
MOTA	Moosalm 1.5nm,0.1s	0.83	208	⇓iPg	Pg	03 33 28.7	-0.7
MOTA				⇑iSg	Sg	03 33 40.2	0.0
MOTA	Moosalm 9.3nm,0.1s	0.83	208	Pg	Pg	03 33 28.7	-0.7
MOTA				Sg	Sg	03 33 40.2	0.0
WET	Wettzell	1.33	36	Pn	Pn	03 33 39.2	+1.3
ABTA	Abfaltersbach 2.6nm,0.2s	1.45	157	⇑iSg	Sg	03 33 60.0	0.0
ABTA	Abfaltersbach 2.6nm,0.2s	1.45	157	Sg	Sg	03 34 00.0	+0.1
DAVA	Damuels 1.7nm,0.1s	1.45	237	⇑iPg	Pg	03 33 40.6	-0.6
DAVA				⇑iSg	Sg	03 34 01.0	+0.9
DAVA	Damuels 7.4nm,0.3s	1.45	237	Pg	Pg	03 33 40.6	-0.6
DAVA				Sg	Sg	03 34 01.0	+1.0
KHC	Kasperske Hory 1.7nm,0.1s	1.64	49	ePN	Pn	03 33 43.7	+1.5
KHC				ePG	Pg	03 33 44.8	0.0
KHC				eSG	Sg	03 34 06.3	+0.2
KHC	Kasperske Hory comp=Z,11nm,0.3s	1.64	49	Pn	Pn	03 33 43.7	+1.5
MOA

JOM	**Ohasama**	**0.57**	**35**	⇓P		**Pg**		**03 54 35.3**	**-0.2**
JOM				S		**Sg**		**03 54 43.2**	**+0.2**
JOU	**Okura**	**0.66 194**		⇑P		**Pg**		**03 54 36.8**	**-0.3**
JOU				S		**Sg**		**03 54 45.5**	**-0.2**
JIO	**Ouri**	**0.67 146**		⇓P		**Pg**		**03 54 36.7**	**-0.6**
JIO				S		**Sg**		**03 54 45.5**	**-0.4**
JYA	**Atsumi**	**0.99 246**		⇑P		**Pg**		**03 54 43.1**	**-0.4**
JYS	**Shiratake**	**1.00 219**		⇑P		**Pg**		**03 54 43.1**	**-0.6**
JYS				S		**Sg**		**03 54 57.1**	**+0.3**
MJAR	**Matsushiro Arr**	**3.24 221**		Pn		**Pn**		**03 55 17.2**	**+1.8**
	1.9nm,0.3s,baz=292,slow=15,SNR=17								
MJAR				Pg		**Pg**		**03 55 22.8**	**-3.7**
	2.9nm,0.3s,baz=24,slow=14,SNR=27								
MJAR				Lg				03 56 06.8	
	1.4nm,0.3s,baz=20,slow=28,SNR=3.7								
MJAR	**Matsushiro Arr**	**3.24 221**		Pn		**Pn**		**03 55 17.2**	**+1.8**
MJAR				Pg		**Pg**		**03 55 22.8**	**-3.7**
MJAR				Lg				03 56 06.8	
MAJO	**Matsushiro**	**3.24 221**		*e*Pn		**Pn**		**03 55 17.0**	**+1.5**
MAT	**Matsushiro**	**3.24 221**		P		**Pn**		**03 55 16.8**	**+1.4**
MAT				S		**Sn**		**03 55 53.1**	**-1.0**
ERM	**Erimo**	**3.48**	**29**	*e*Pn		**Pn**		**03 55 18.3**	**-0.4**
ASAJ	**Asahikawa**	**5.27**	**14**	Pn		**Pn**		**03 55 45.4**	**+2.1**
	1.7nm,0.3s,baz=192,slow=1.4,SNR=9.4								
ASAJ				Sn		**Sn**		**03 56 48.2**	**+4.1**
	0.6nm,0.3s,baz=348,slow=19,SNR=2.1								
JHJ	**Hachijo jima 2**	**5.94 189**		Pn		**Pn**		**03 55 53.7**	**+1.2**
	8.2nm,0.3s,baz=319,slow=19,SNR=4.1								
JHJ				Sn		**Sn**		**03 57 01.9**	**+1.2**
	11nm,0.3s,baz=114,slow=19,SNR=4.9								
KSRS	**Korea Array**	**10.30 265**		Pn		**Pn**		**03 56 56.2**	**+3.8**
	1.0nm,0.3s,baz=79,slow=14,SNR=22								
KSRS				Sn		**Sn**		**03 58 53.2**	**+5.2**
	0.6nm,0.3s,baz=74,slow=24,SNR=14								
KSRS				LR		LR		04 00 14.0	
	comp=Z,62nm,21.3s,baz=346,slow=34								
PETK	**Petropavlovsk-**	**18.25**	**34**	P		**Pn**		**03 58 42.5**	**+4.8**
	0.5nm,0.3s,baz=222,slow=15,SNR=3.3								
PETK				LR		LR		04 05 54.2	
	comp=Z,20nm,18.5s,baz=276,slow=38								
ZALV	**Zalesovo Beam**	**40.29 311**		P		**P**		**04 02 00.4**	**-1.2**
	0.9nm,0.3s,mb4.0,baz=79,slow=7.6,SNR=5.4								
CMAR	**Chiang Mai Arr**	**41.63 253**		LR		LR		04 19 21.1	
	comp=Z,24nm,18.2s,MS3.1,baz=200,slow=36								
MK31	**Makanchi Array**	**42.73 300**		*e*P		**P**		**04 02 21.1**	**-0.7**
MKAR	**Makanchi Array**	**42.73 300**		P		**P**		**04 02 21.4**	**-0.3**
	1.3nm,0.6s,mb3.8,baz=87,slow=9.7,SNR=15								
MKAR	**Makanchi Array**	**42.73 300**		P		**P**		**04 02 21.4**	**-0.3**
KURK	**Kurchatov**	**44.40 306**		*e*P		**P**		**04 02 34.5**	**-0.6**
MCK	**McKinley**	**47.25**	**35**	*e*P		**P**		**04 02 57.7**	**+0.3**
ILAR	**Eielson Array**	**48.07**	**33**	P		**P**		**04 03 04.2**	**+0.4**
	1.3nm,0.7s,mb4.0,baz=270,slow=6.3,SNR=18								
TKM2	**Tokmak 2**	**48.34 297**		*e*P		**P**		**04 03 06.8**	**+0.6**
	6.5nm,1.2s,mb4.5								
BVAR	**Borovoye Array**	**48.95 311**		P		**P**		**04 03 10.2**	**-0.5**
	0.9nm,0.5s,mb4.0,baz=71,slow=8.9,SNR=4.8								
ABKAR	**Akbulak array**	**56.36 309**		*e*P		**P**		**04 04 05.0**	**-0.6**
	3.4nm,0.8s,mb4.4								
ARCES	**ARCESS Array B**	**62.01 339**		P		**P**		**04 04 44.1**	**-0.3**
	1.9nm,0.8s,mb4.3,baz=51,slow=8.5,SNR=3.8								
ASAR	**Alice Springs**	**62.68 187**		P		**P**		**04 04 49.0**	**-0.4**
	0.8nm,0.7s,mb4.0,baz=7.8,slow=4.5,SNR=9.3								
FINES	**FINESS Array B**	**66.88 332**		P		**P**		**04 05 15.9**	**-0.6**
	2.0nm,0.6s,mb4.3,baz=45,slow=9.2,SNR=4.2								
STKA	**Stephens Creek**	**70.52 179**		LR		LR		04 34 57.1	
	comp=Z,148nm,20.6s,MS4.2,baz=204,slow=34								
NB2	**NORSAR Subarra**	**72.21 337**		P		**P**		**04 05 48.8**	**-0.5**
	comp=Z,1.1nm,0.6s,mb4.0,baz=39,slow=6.2								
NOA	**NORSAR Array B**	**72.21 337**		P		**P**		**04 05 48.9**	**-0.5**
	comp=Z,2.0nm,0.8s,mb4.1,baz=39,slow=6.1,SNR=7.0								
AKASG	**Malin Array Be**	**72.48 322**		P		**P**		**04 05 50.5**	**-0.7**
	comp=Z,0.4nm,0.4s,mb3.7,baz=47,slow=5.2,SNR=7.1								
AKBB	**Malin Array Si**	**72.48 322**		*e*P		**P**		**04 05 50.5**	**-0.6**
KIEV	**Kiev**	**72.50 322**		*e*P		**P**		**04 05 50.8**	**-0.4**
	comp=Z,3.6nm,0.8s,mb4.3								
BOZ	**Bozeman (W)**	**73.60**	**44**	*e*P		**P**		**04 05 56.7**	**-1.2**
	comp=Z,1.1nm,0.8s,mb3.8								
NVAR	**Mina Array Bea**	**74.15**	**53**	P		**P**		**04 06 01.5**	**+0.2**
	comp=Z,0.6nm,0.7s,mb3.6,baz=275,slow=8.8,SNR=5.0								
DUG	**Dugway**	**76.39**	**49**	*e*P		**P**		**04 06 14.1**	**0.0**
	comp=Z,1.7nm,0.8s,mb4.0								
BUR08	**Bucovina Ar. S**	**76.50 321**		*e*P		**P**		**04 06 14.8**	**+0.3**
PDAR	**Pinedale Array**	**76.59**	**46**	P		**P**		**04 06 15.9**	**+0.8**
	comp=Z,0.6nm,0.8s,mb3.6,baz=352,slow=3.0,SNR=4.9								
BRTR	**Keskin Array B**	**77.23 311**		P		**P**		**04 06 19.1**	**+0.3**
	comp=Z,0.5nm,0.5s,mb3.7,baz=107,slow=4.3,SNR=5.5								
KHC	**Kasperske Hory**	**80.65 328**		*e*P		**P**		**04 06 37.3**	**-0.1**
	comp=Z,1.6nm,0.7s,mb4.1								
TXAR	**Lajitas Array**	**89.25**	**52**	LR		LR		04 46 25.2	
	comp=Z,36nm,20.0s,MS3.8,baz=185,slow=35								
LPAZ	**La Paz**	**146.01**	**56**	PKPbc		PKPbc		04 14 05.5	+0.6
	comp=Z,1.4nm,0.8s,baz=13,slow=5.8,SNR=6.5								

*NEIC **23** 04:32:12.5, 58°.34N×133°.44W, h0km, ML3.2(PGC), ML2.8(AEIC), After AEIC.*

PGC 23 04:32:12.7±12.0, 58°.26N×133°.49W, h1km, ML3.2/4, 1C-3D, 54km east of Juneau, Ak Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESE	**Bessie Mountai**	**0.79**	**295**	P	Pg	04 32 27.4	-0.4
SKAG	**Skagway**	**1.54**	**322**	P	Pn	04 32 39.6	-1.7
SKAG				S	Sn	04 32 59.9	-2.0
SIT	**Sitka**	**1.56**	**220**	P	Pn	04 32 41.8	+0.3
SIT				S	Sn	04 33 04.2	+2.0
DLBC	**Dease Lake**	**1.83**	**83**	P	Pn	04 32 44.7	-0.6
DLBC				S	Sn	04 33 11.1	+2.1
DLBC	**Dease Lake**	**1.83**	**83**	⇑P	Pn	04 32 44.8	-0.5
DLBC				⇑Pg	Pg	04 32 46.4	-1.4
DLBC				⇓Sn	Sn	04 33 09.4	+0.3
DLBC				⇓Sg	Sg	04 33 11.0	-0.5
PLBC	**Pleasant Camp**	**1.92 310**		⇓Pn	Pn	04 32 46.7	+0.2
PLBC				⇑Sg	Sg	04 33 12.1	-2.2
WHY	**Whitehorse**	**2.52 344**		P	Pn	04 32 53.5	-1.1
WHY	**Whitehorse**	**2.52 344**		Pn	Pn	04 32 53.2	-1.4
CRAG	**Craig**	**2.80 176**		*e*Pn	Pn	04 32 58.9	+0.4
CRAG				*e*Pg	Pg	04 33 05.6	-0.7
CRAG				*e*Sg	Sg	04 33 42.0	-0.6
HYT	**Haines Junctio**	**3.29 323**		⇑Pn	Pn	04 33 05.4	+0.1
HYT				Pg	Pg	04 33 11.8	-3.9
HYT				Sg	Sg	04 33 54.0	-4.3
HYT	**Haines Junctio**	**3.29 323**		⇑Pn	Pn	04 33 05.4	+0.1
HYT				⇑Pg	Pg	04 33 11.8	-3.9
HYT				⇑Sg	Sg	04 33 54.0	-4.3

IDC 23 04:59:21.9±3.9, 26°.41N×141°.43E, h74km±21km, mb3.5/5, mb1 3.9/5, mb1mx3.4/22, mbtmp3.5/5, Error ellipse: s-maj=58.2km s-min=46.9km az=145.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**0.96**	**45**	P	Pn	04 59 40.9	+0.8
	130nm,0.3s,baz=270,slow=19,SNR=152						
CBIJ				S	Sn	04 59 54.1	+0.5
	374nm,0.3s,baz=307,slow=20,SNR=88						
ILAR	**Eielson Array**	**58.64**	**28**	P	P	05 09 11.5	+0.5
	1.1nm,0.8s,baz=257,slow=5.7,SNR=16						
YKA	**Yellowknife Ar**	**73.06**	**28**	P	P	05 10 44.2	+0.6
	1.1nm,0.8s,baz=293,slow=6.0,SNR=5.5						
YKA				pP	pP	05 11 07.9	+4.6
	0.8nm,0.6s,baz=294,slow=6.0,SNR=5.0						
FINES	**FINESS Array B**	**78.26 334**		P	P	05 11 12.9	-0.4
	0.5nm,0.4s,baz=66,slow=4.8,SNR=4.3						
NVAR	**Mina Array Bea**	**81.47**	**51**	P	P	05 11 32.2	+1.0
	0.4nm,0.6s,baz=287,slow=5.4,SNR=3.7						
NVAR	**Mina Array Bea**	**81.47**	**51**	P	P	05 11 32.2	+1.0
PDAR	**Pinedale Array**	**85.18**	**44**	P	P	05 11 49.1	-1.0
	0.4nm,0.6s,baz=327,slow=2.5,SNR=4.3						
LPAZ	**La Paz**	**150.75**	**76**	PKPbc	PKPbc	05 19 06.5	+0.2
	1.4nm,0.6s,baz=312,slow=3.8,SNR=10						

*ISCJB **23** 05:04:30.5±0.7, 42°.2S±0°.2×18°.4W±0°.1, h10km, mb4.2/9, MS3.6/6, Error ellipse: s-maj=25.6km s-min=14.0km az=172.2*

*IDC **23** 05:04:30.8±1.0, 42°.19S×18°.41W, h0km, mb4.2/7, mb1 4.3/7, mb1mx4.0/13, mbtmp4.2/7, MS3.6/6, Ms1 3.6/6, ms1mx3.5/15, Error ellipse: s-maj=33.4km s-min=20.6km az=4.0*

*NEIC **23** 05:04:32.1±0.5, 42°.18S×18°.43W, h10km, mb4.5/2, Error ellipse: s-maj=19.7km s-min=10.7km az=172.0*

ISC 23 05:04:32.4±0.7, 42°.2S±0°.2×18°.4W±0°.1, h10km, n13, σ0s46/11, mb4.2/9, MS3.6/6, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRQA	**Tornquist**	**33.29 262**		*e*P	**P**	**05 11 09.2**	**-0.8**
	6.4nm,0.6s,mb4.7						
CPUP	**Villa Florida**	**35.48 284**		P	**P**	**05 11 29.4**	**+0.3**
	2.5nm,0.6s,mb4.3,baz=98,slow=9.5,SNR=7.2						
CPUP				LR	LR	05 24 45.2	
	comp=Z,78nm,19.2s,MS3.5,baz=298,slow=34						
CPUP	**Villa Florida**	**35.48 284**		P	**P**	**05 11 29.4**	**+0.3**
CPUP				LR	LR	05 24 45.2	
BOSA	**Boshof**	**37.69**	**83**	P	**P**	**05 11 48.1**	**+0.2**
	2.0nm,0.8s,mb3.9,baz=251,slow=12,SNR=3.0						
BOSA				LR	LR	05 23 39.7	
	comp=Z,58nm,21.5s,MS3.4,baz=102,slow=30						
TSUM	**Tsumeb**	**38.10**	**64**	P	**P**	**05 11 51.3**	**-0.1**
	1.4nm,0.7s,mb3.8,baz=260,slow=6.1,SNR=3.4						
PLCA	**Paso Flores**	**38.59 254**		P	**P**	**05 11 55.0**	**-0.4**
	3.9nm,1.0s,mb4.1,baz=135,slow=5.3,SNR=3.7						
PLCA				LR	LR	05 26 14.8	
	comp=Z,158nm,19.1s,MS3.9,baz=262,slow=34						
PLCA	**Paso Flores**	**38.59 254**		P	**P**	**05 11 55.0**	**-0.4**
PLCA				LR	LR	05 26 14.8	
SIV	**San Ignacio**	**44.84 292**		P	**P**	**05 12 47.3**	**+0.5**
	2.3nm,0.9s,mb4.0,baz=126,slow=8.2,SNR=9.8						
QSPA	**South Pole Qui**	**48.09 180**		P	**P**	**05 13 11.8**	**+0.3**
	8.6nm,1.0s,mb4.7,baz=213,slow=2.4,SNR=24						
QSPA				LR	LR	05 30 06.7	
	comp=Z,104nm,21.1s,MS3.8,baz=226,slow=32						
LPAZ	**La Paz**	**49.59 286**		P	**P**	**05 13 24.3**	**+0.5**
	0.8nm,0.9s,mb3.8,baz=172,slow=7.1,SNR=3.8						
LPAZ				LR	LR	05 33 57.4	
	comp=Z,73nm,19.8s,MS3.7,baz=265,slow=36						
DBIC	**Dimbokro**	**50.16**	**18**	LR	LR	05 29 29.7	
	comp=Z,61nm,21.5s,MS3.6,baz=147,slow=30						
TAM	**Tamanrasset**	**68.32**	**24**	P	**P**	**05 15 33.1**	**-0.5**
	2.1nm,0.8s,mb4.2						
ILAR	**Eielson Array**	**143.36 326**		PKP	PKPdf	05 24 03.1	-2.7
	0.7nm,1.0s,baz=98,slow=2.1,SNR=5.6						

*NEIC **23** 05:06:36.0, 58°.28N×133°.52W, h1km, ML3.2(PGC), ML2.8(AEIC), After PGC.*

NEIC Felt at Juneau.

PGC 23 05:06:36.2±6.6, 58°.28N×133°.52W, h1km, ML3.2/4, 6D, 52km east of Juneau, Ak Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESE	**Bessie Mountai**	**0.77 294**		P	Pg	05 06 49.7	-1.1
SKAG	**Skagway**	**1.51 322**		P	Pn	05 07 01.0	-3.3
SKAG				S	Sb	05 07 21.1	-3.5
SIT	**Sitka**	**1.57 219**		P	Pn	05 07 04.5	-0.6
SIT				S	Sn	05 07 26.9	+1.0
DLBC	**Dease Lake**	**1.84**	**84**	P	Pn	05 07 07.7	-1.2
DLBC				S	Sn	05 07 34.0	+1.2
DLBC	**Dease Lake**	**1.84**	**84**	⇑P	Pn	05 07 07.9	-1.0
DLBC				⇑Pg	Pg	05 07 09.4	-2.1
DLBC				⇑Sn	Sn	05 07 31.4	-1.4
DLBC				⇓Sg	Sg	05 07 33.5	-1.9
PLBC	**Pleasant Camp**	**1.89 310**		⇑Pn	Pn	05 07 09.5	-0.1
PLBC				⇑Sg	Sg	05 07 33.9	-3.0
WHY	**Whitehorse**	**2.49 344**		P	Pn	05 07 14.8	-2.9
WHY	**Whitehorse**	**2.49 344**		⇓Pn	Pn	05 07 16.0	-1.8
WHY				⇓Pg	Pg	05 07 20.9	-2.9
HYT	**Haines Junctio**	**3.26 323**		⇓Pn	Pn	05 07 28.3	-0.1
HYT				⇓Pg	Pg	05 07 34.6	-4.0
HYT				⇓Sg	Sg	05 08 16.4	-4.4
PNL	**Peninsula**	**3.35 297**		P	Pn	05 07 26.5	-3.1

*ISCJB **23** 05:07:27.5±0.3, 41°.27N±0°.03×140°.51E±0°.05, h138km±2km, mb4.1/23, Error ellipse: s-maj=6.5km s-min=4.9km az=29.2*

*MOS **23** 05:07:27.9±1.1, 41°.28N×140°.46E, h144km, mb4.0/13, Error ellipse: s-maj=14.1km s-min=9.3km az=70.6*

*IDC **23** 05:07:28.7±1.4, 41°.31N×140°.46E, h134km±12km, mb3.6/14, mb1 3.8/17, mb1mx3.7/25, mbtmp3.5/17, Error ellipse: s-maj=16.7km s-min=10.9km az=140.0*

*JMA **23** 05:07:29.0±0.1, 41°.27N×140°.50E, h131km±1km, M3.3*

*NEIC **23** 05:07:29.0, 41°.27N×140°.50E, h131km, MG3.3(JMA), After JMA.*

ISC 23 05:07:28.7±0.3, 41°.27N±0°.03×140°.52E±0°.05, h134km±2km, n67, σ0s68/83, mb4.1/23, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSI2	**Shiura 2**	**0.23 202**		P	**Pn**	**05 07 47.1**	**0.0**
JSI2				S	**Sn**	**05 08 00.8**	**-0.1**
JSR	**Shiriuchi**	**0.27 343**		P	**Pn**	**05 07 47.1**	**-0.1**
JSR				S	**Sn**	**05 08 00.6**	**-0.7**
JOT	**Ohata**	**0.41**	**74**	P	**Pn**	**05 07 47.9**	**+0.2**
JOT				*e*S	**Sn**	**05 08 02.3**	**+0.2**
JTM	**Tenmabayashi**	**0.63 139**		P	**Pn**	**05 07 49.1**	**+0.1**
JTM				S	**Sn**	**05 08 04.4**	**+0.1**
JKB	**Kayabe**	**0.73**	**32**	P	**Pn**	**05 07 49.9**	**+0.2**
JKB				*e*S	**Sn**	**05 08 06.1**	**+0.5**
JIW	**Iwasaki**	**0.78 210**		P	**Pn**	**05 07 50.2**	**+0.1**
JIW				*e*S	**Sn**	**05 08 06.1**	**-0.1**
JYM2	**Yakumo 2**	**0.86 352**		P	**Pn**	**05 07 50.9**	**+0.2**
JYM2				S	**Sn**	**05 08 07.5**	**+0.1**
JOSM	**Okushiri--Mats**	**1.13 316**		P	**Pn**	**05 07 53.0**	**-0.1**
JOSM				*e*S	**Sn**	**05 08 11.2**	**-0.6**
JANG	**Nango**	**1.17 139**		P	**Pn**	**05 07 53.2**	**-0.3**
JANG				*e*S	**Sn**	**05 08 12.0**	**-0.4**
JEW	**Eniwo**	**1.72**	**23**	P	**Pn**	**05 08 00.3**	**+0.8**
JEW				*e*S	**Sn**	**05 08 24.3**	**+1.2**
JOM	**Ohasama**	**1.89 162**		P	**Pn**	**05 08 01.4**	**-0.1**
JOM				*e*S	**Sn**	**05 08 26.5**	**-0.1**
JNBK	**Urakawa-nobuka**	**1.95**	**58**	P	**Pn**	**05 08 02.6**	**+0.4**
JNBK				*e*S	**Sn**	**05 08 28.6**	**+0.6**
JSK	**Shakotan**	**2.08 359**		P	**Pn**	**05 08 04.5**	**+0.7**
ERM	**Erimo**	**2.11**	**68**	*e*Pn	**Pn**	**05 08 04.3**	**+0.1**
ERM				*e*Sn	**Sn**	**05 08 29.8**	**-1.6**
ASAJ	**Asahikawa**	**3.23**	**28**	P	**Pn**	**05 08 18.6**	**+0.3**
	8.4nm,0.3s,baz=227,slow=13,SNR=20						
ASAJ				S	**Sn**	**05 08 56.2**	**-0.6**
	5.8nm,0.3s,baz=151,slow=32,SNR=7.5						
ASAJ	**Asahikawa**	**3.23**	**28**	P	**Pn**	**05 08 18.7**	**+0.3**
ASAJ				S	**Sn**	**05 08 56.2**	**-0.6**
ASAJ				pmax	pmax		
	comp=Z,8.0nm,0.3s						
ASAJ				smax			
	comp=N,6.0nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**4.81**	**53**	*e*P	**Pn**	**05 08 40.6**	**+1.4**
YUK				*i* S	**Sn**	**05 09 31.6**	**-2.5**
YUK				pmax	pmax		
	comp=N,70nm,0.2s						
YUK				pmax	pmax		
	comp=Z,250nm,0.2s						
YUK				smax			
	comp=N,90nm,0.5s						
YUK				smax			
	comp=E,470nm,0.5s						
YUK				smax			
	comp=N,2μm,1.5s						
YUK				smax			
	comp=E,800nm,1.5s						
MAJO	**Matsushiro**	**5.05 202**		*e*P	**Pn**	**05 08 41.0**	**-1.5**
MJAR	**Matsushiro Arr**	**5.05 202**		P	**Pn**	**05 08 44.3**	**+1.8**
	comp=E,1.1nm,0.3s,baz=16,slow=13,SNR=5.8						
MJAR	**Matsushiro Arr**	**5.05 202**		P	**Pn**	**05 08 44.3**	**+1.8**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	**Matsushiro Arr**	**5.05 202**		P	**Pn**	**05 08 44.3**	**+1.8**
YSS	**Yuzh-Sakhalins**	**5.91**	**15**	*e*P	**Pn**	**05 08 53.1**	**-0.8**
KSRS	**Korea Array**	**10.47 253**		P	**Pn**	**05 09 55.8**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=71,slow=13,SNR=6.3						
SONM	**Songino Array**	**25.05 297**		P	**P**	**05 12 40.2**	**0.0**
	comp=Z,0.7nm,0.4s,mb3.5,baz=82,slow=12,SNR=2.9						
SONM	**Songino Array**	**25.05 297**		P	**P**	**05 12 40.2**	**0.0**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**38.64 309**		P	**P**	**05 14 38.0**	**-0.7**
	comp=Z,3.2nm,0.6s,mb4.2,baz=87,slow=8.1,SNR=11						
ZALV	**Zalesovo Beam**	**38.64 309**		P	**P**	**05 14 38.0**	**-0.7**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.1						
ZALV	**Zalesovo Beam**	**38.64 309**		P	**P**	**05 14 38.0**	**-0.7**
MK31	**Makanchi Array**	**41.40 298**		*e*P	**P**	**05 15 01.1**	**-0.4**
MKAR	**Makanchi Array**	**41.40 298**		P	**P**	**05 15 00.9**	**-0.6**
	comp=Z,3.0nm,0.6s,mb4.1,baz=82,slow=9.8,SNR=26						
MKAR	**Makanchi Array**	**41.40 298**		P	**P**	**05 15 00.9**	**-0.6**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**42.10 250**		P	**P**	**05 15 07.8**	**+0.3**
	comp=Z,0.7nm,0.4s,mb3.7,baz=42,slow=7.6,SNR=4.4						
CMAR	**Chiang Mai Arr**	**42.10 250**		P	**P**	**05 15 07.8**	**+0.3**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KURK	**Kurchatov**	**42.87 304**		*e*P	**P**	**05 15 12.6**	**-0.8**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.3						
KURK	**Kurchatov**	**42.87 304**		*e*P	**P**	**05 15 12.6**	**-0.7**
	comp=Z,5.0nm,0.6s,mb4.3						
TAPN	**Taplejung**	**45.13 269**		*e*P	**P**	**05 15 32.4**	**+0.7**
JIRN	**Jiri**	**46.11 271**		*e*P	**P**	**05 15 40.1**	**+0.7**
	comp=Z,9.9nm,0.2s,mb5.0						
RAMN	**Ramite**	**46.17 270**		*e*P	**P**	**05 15 40.1**	**+0.2**
GUN	**Gumba**	**46.21 271**		*e*P	**P**	**05 15 40.6**	**+0.4**
ILAR	**Eielson Array**	**46.35**	**34**	P	**P**	**05 15 41.0**	**+0.3**
	comp=Z,1.2nm,0.7s,mb3.6,baz=272,slow=6.0,SNR=13						
ILAR	**Eielson Array**	**46.35**	**34**	P	**P**	**05 15 41.0**	**+0.3**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KKN	**Kakani**	**46.73 271**		*e*P	**P**	**05 15 44.5**	**+0.3**
	comp=Z,14nm,0.4s,mb4.9						
PKI	**Pulchoki**	**46.74 271**		*e*P	**P**	**05 15 44.2**	**-0.2**
	comp=Z,5.4nm,0.3s,mb4.7						
DMN	**Daman**	**46.95 271**		*e*P	**P**	**05 15 46.3**	**+0.3**
	comp=Z,5.6nm,0.3s,mb4.7						
GKN	**Gorkha**	**47.10 272**		*e*P	**P**	**05 15 47.0**	**-0.1**
	comp=Z,13nm,0.5s,mb4.8						
TKM2	**Tokmak 2**	**47.12 295**		*e*P	**P**	**05 15 46.9**	**-0.1**
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.2						
TKM2	**Tokmak 2**	**47.12 295**		*e*P	**P**	**05 15 46.9**	**-0.2**
	comp=Z,5.2nm,0.8s,mb4.2						
BVAR	**Borovoye Array**	**47.28 309**		P	**P**	**05 15 47.7**	**-0.5**
	comp=Z,1.4nm,0.5s,mb3.9,baz=85,slow=6.4,SNR=4.6						
BVAR	**Borovoye Array**	**47.28 309**		P	**P**	**05 15 47.7**	**-0.5**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ABKAR	**Akbulak array**	**54.74 308**		*e*P	**P**	**05 16 43.3**	**-0.6**
	comp=Z,2.4nm,0.4s,mb4.3						
ARCES	**ARCESS Array B**	**59.80 338**		P	**P**	**05 17 18.4**	**-0.7**
	comp=Z,6.8nm,1.2s,mb4.3,baz=22,slow=5.0,SNR=4.1						
ARCES	**ARCESS Array B**	**59.80 338**		P	**P**	**05 17 18.4**	**-0.8**
ARCES				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ARCES	**ARCESS Array B**	**59.80 338**		P	**P**	**05 17 18.4**	**-0.7**
YKA	**Yellowknife Ar**	**60.52**	**31**	P	**P**	**05 17 24.4**	**+0.3**
	comp=Z,0.5nm,0.5s,mb3.6,baz=299,slow=6.7,SNR=6.9						
YKA	**Yellowknife Ar**	**60.52**	**31**	P	**P**	**05 17 24.4**	**+0.3**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRA	**Warramunga Arr**	**61.16 187**		P	**P**	**05 17 27.9**	**-1.1**
	baz=6.1,slow=7.1						
FINES	**FINESS Array B**	**64.77 331**		P	**P**	**05 17 51.6**	**-0.7**
	comp=Z,1.1nm,0.4s,mb4.0,baz=32,slow=9.0,SNR=5.3						
FINES	**FINESS Array B**	**64.77 331**		P	**P**	**05 17 51.6**	**-0.7**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NB2	**NORSAR Subarra**	**70.03 336**		P	**P**	**05 18 24.7**	**-0.7**
	comp=Z,0.6nm,0.5s,mb3.6,baz=40,slow=6.5						
NOA	**NORSAR Array B**	**70.03 336**		P	**P**	**05 18 25.0**	**-0.4**
	comp=Z,0.7nm,0.6s,mb3.6,baz=40,slow=6.2,SNR=4.1						
NOA	**NORSAR Array B**	**70.03 336**		P	**P**	**05 18 25.0**	**-0.4**
NOA				pmax	pmax		
	comp=Z,

ASAR S **S** **05 28 43.3 -2.8**
5.0nm,0.8s,baz=89,slow=15,SNR=23
KAKA Kakadu 47.88 269 *e*P **P** **05 23 08.4 -0.3**
20nm,0.4s,mb5.0
KAKA Kakadu 47.88 269 *e*P **P** **05 23 07.8 -0.9**
44nm,0.6s,mb5.2
GUMO Guam 48.13 308 P **P** **05 23 11.2 +0.8**
78nm,0.7s,mb5.3,baz=172,slow=11,SNR=7.6
FORT Forrest 50.27 245 *e*P **P** **05 23 25.0 -1.0**
9.0nm,0.4s,mb4.5
FITZ Fitzroy Crossi 53.32 261 *e*P **P** **05 23 48.0 -0.2**
4.1nm,0.4s,mb4.1
FITZ Fitzroy Crossi 53.32 261 P **P** **05 23 47.7 -0.5**
2.5nm,0.5s,mb3.8,baz=104,slow=7.9,SNR=12
MBWA Marble Bar 58.36 256 P **P** **05 24 16.5 -6.5**
CBIJ Chichi jima 59.06 318 P **P** **05 24 27.4 -0.1**
28nm,0.6s,mb4.7,baz=196,slow=16,SNR=4.1
SBA Scott Base 60.41 184 *e*P **P** **05 24 36.2 +0.5**
10nm,0.8s,mb4.2
MJAR Matsushiro Arr 68.11 323 P **P** **05 25 24.9 -0.2**
8.6nm,0.6s,mb4.5,baz=154,slow=5.8,SNR=17
MAJO Matsushiro 68.11 323 *e*P **P** **05 25 25.0 0.0**
28nm,1.2s,mb4.7
MAT Matsushiro 68.11 323 P **P** **05 25 24.9 -0.1**
QSPA South Pole Qui 72.12 180 P **P** **05 25 47.7 -0.4**
20nm,0.7s,mb4.7,baz=23,slow=1.0,SNR=132
SSLB Suanglung 72.50 303 *e*P **P** **05 25 49.9 -1.4**
TPUB Ta-pu 72.53 302 *e*P **P** **05 25 50.1 -1.3**
37nm,0.7s,mb4.9
KSM Kuching 72.99 277 *e*P **P** **05 25 54.7 +0.4**
22nm,0.8s,mb4.7
PETK Petropavlovsk- 73.78 345 P **P** **05 25 58.0 +0.1**
14nm,0.7s,mb4.5,baz=123,slow=8.1,SNR=24
PETK Petropavlovsk- 73.78 345 P **P** **05 25 58.0 +0.1**
KSRS Korea Array 74.92 318 P **P** **05 26 05.7 +1.0**
1.7nm,0.5s,mb3.8,baz=130,slow=6.6,SNR=10.0
KDAK Kodiak Island 78.36 14 P **P** **05 26 22.7 -0.3**
3.9nm,0.7s,mb3.9,baz=168,slow=14,SNR=4.2
KDAK Kodiak Island 78.36 14 P **P** **05 26 22.7 -0.3**
MDJ Mudanjiang 78.38 325 *e*P **P** **05 26 23.9 +0.5**
NVAR Mina Array Bea 79.23 44 P **P** **05 26 28.8 +0.6**
1.5nm,0.8s,mb3.4,baz=227,slow=10.0,SNR=9.3
TUC Tucson 81.48 52 *e*P **P** **05 26 41.2 +1.2**
4.6nm,1.0s,mb3.9
TTA Tatalina 82.45 10 *e*P **P** **05 26 44.1 0.0**
MAW Mawson 83.94 200 P **P** **05 26 50.4 -1.2**
3.5nm,0.5s,mb4.2,baz=121,slow=4.4,SNR=32
MCK McKinley 84.50 13 *e*P **P** **05 26 53.6 -0.7**
6.2nm,0.8s,mb4.2
TXAR Lajitas Array 85.76 58 P **P** **05 27 02.2 +1.0**
4.6nm,0.8s,mb4.2,baz=219,slow=6.0,SNR=60
TXAR Lajitas Array 85.76 58 P **P** **05 27 02.2 +1.0**
ILAR Eielson Array 85.85 13 P **P** **05 26 59.5 -1.2**
1.6nm,0.4s,mb4.0,baz=221,slow=5.1,SNR=59
XAN Xi'an 86.52 307 P **P** **05 27 05.8 +1.1**
XAN pmax pmax
comp=Z,3.0nm,1.0s,mb3.9
PDAR Pinedale Array 87.17 43 P **P** **05 27 07.5 +0.1**
comp=Z,0.7nm,0.7s,mb3.4,baz=236,slow=2.7,SNR=7.8
CMAR Chiang Mai Arr 89.18 290 P **P** **05 27 18.6 +1.1**
comp=Z,2.9nm,0.8s,mb4.2,baz=120,slow=2.8,SNR=12
SYO Syowa Base 89.20 193⇓ *e*P **P** **05 27 12.6 -4.0**
PLCA Paso Flores 91.09 134 *e*P **P** **05 27 27.6 +1.7**
comp=Z,12nm,0.8s,mb4.9
INK Inuvik 91.83 15 P **P** **05 27 27.6 -0.9**
comp=Z,1.1nm,0.4s,mb4.2,baz=191,slow=9.4,SNR=4.0
YKA Yellowknife Ar 94.23 25 P **P** **05 27 38.8 -0.8**
comp=Z,0.2nm,0.4s,mb3.6,baz=230,slow=4.8,SNR=6.6
ARCES ARCESS Array B 126.39 350 PKP PKPdf 05 33 17.9 -1.5
comp=Z,2.8nm,1.1s,baz=48,slow=1.8,SNR=5.3
ARCES ARCESS Array B 126.39 350 PKP PKPdf 05 33 17.9 -1.5
AKASG Malin Array Be 140.72 333 SKPab 05 36 43.0
comp=Z,0.2nm,0.2s,baz=36,slow=4.6,SNR=4.2
BUR08 Bucovina Ar. S 144.76 332 *e*PKPdf PKPdf 05 33 54.8 +0.9
BR131 Keskin Array S 145.01 315 *e*PKPdf PKPdf 05 33 54.9 +0.3
BRTR Keskin Array B 145.01 315 PKPbc PKPbc 05 33 54.7 -0.7
comp=Z,2.7nm,0.4s,baz=134,slow=5.3,SNR=15
BRTR SKPbc SKPbc 05 36 40.3 -1.3
comp=Z,0.6nm,0.7s,baz=100,slow=1.6,SNR=3.5
NIE Niedzica 145.26 339 *e*PX PKPbc 05 33 55.8 0.0
CLL Collm 145.56 348 *e*PKPbc PKPbc 05 33 55.9 -0.7
CLL Collm 145.56 348⇓ *i*PKPbc PKPbc 05 33 55.6 -1.0
comp=Z,9.0nm,0.7s
BRG Berggiesshubel 145.76 346 *e*PKPbc PKPbc 05 33 56.7 -0.5
BRG Berggiesshubel 145.76 346 *i* P PKPdf 05 33 56.7 +1.2
comp=Z,5.3nm,0.8s
MMAI Mount Meron Ar 146.41 303 PKPbc PKPbc 05 33 59.4 -0.2
comp=Z,5.7nm,0.6s,baz=61,slow=6.8,SNR=4.9
WERD Werda 146.51 348 *e*PKPbc PKPbc 05 33 58.6 -0.7
GUNZ Gunzen 146.59 348 *e*PKPbc PKPbc 05 33 58.9 -0.6
KHC Kasperske Hory 147.48 346 *e*PKPbc PKPbc 05 34 01.5 -0.4
GEC2 GERESS Array S 147.72 345 *e*PKPbc PKPbc 05 34 01.7 -0.8

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*NEIC **23** 05:35:02.2, 18°.92N×68°.05W, h90km, MD3.5(RSPR), After RSPR.*
RSPR 23 05:35:02.2, 18°.92N×68°.05W, h90km±3km, MD3.5/11, 9C-5D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.99**	**117**⇑	*e*P	Pn	05 35 19.9	-1.9
AGPR				*e*S	Sn	05 35 35.3	-1.2
LSP	**Las Mesas**	**1.17**	**129**⇓	*e*P	Pn	05 35 23.1	-0.8
LSP				*e*S	Sn	05 35 40.4	+0.2
CRPR	**Cabo Rojo, PR**	**1.27**	**135**⇑	*e*P	Pn	05 35 24.5	-0.6
CRPR				*e*S	Sn	05 35 41.9	-0.4
LRS	**Lares**	**1.30**	**118**⇑	*e*P	Pn	05 35 24.0	-1.4
LRS				*e*S	Sn	05 35 42.5	-0.5
AOPR	**Arecibo Observ**	**1.35**	**115**⇑	*e*P	Pn	05 35 24.6	-1.4
AOPR				*e*S	Sn	05 35 43.8	-0.3
GBPR	**Guanica, Bosqu**	**1.45**	**130**⇓	*e*P	Pn	05 35 27.4	0.0
OBIP	**Obispado Ponce**	**1.62**	**122**⇑	*e*P	Pn	05 35 29.3	-0.1
OBIP				*e*S	Sn	05 35 50.5	+0.3
CELP	**Cerrillos**	**1.62**	**121**⇓	*e*P	Pn	05 35 29.7	+0.2
CELP				*e*S	Sn	05 35 50.6	+0.3
SJG	**San Juan**	**1.97**	**114**⇑	*e*P	Pn	05 35 33.1	-0.8
SJG				*e*S	Sn	05 35 57.4	-0.8
SJG	**San Juan**	**1.97**	**114**⇑	*e*P	Pn	05 35 33.1	-0.9
SJG				*e*S	Sn	05 35 57.9	-0.3
CBYP	**Canovanas**	**2.17**	**107**⇓	*i*P	Pn	05 35 36.3	-0.4
HUMP	**Col San Antoni**	**2.22**	**110**⇑	*e*P	Pn	05 35 37.0	-0.3
HUMP				*e*S	Sn	05 36 04.1	-0.1
MTP	**Monte Pirata**	**2.50**	**109**⇓	*e*P	Pn	05 35 40.5	-0.6
MTP				*e*S	Sn	05 36 11.5	+0.6
STVI	**Saint Thomas**	**2.98**	**100**⇑	*e*P	Pn	05 35 47.6	+0.1
STVI				*e*S	Sn	05 36 23.5	+1.0

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*NNC **23** 05:42:04.6±4.4, 53°.95N×86°.69E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=37.1km s-min=23.9km az=65.0*
*IDC **23** 05:42:05.9±2.8, 54°.15N×86°.46E, h0km, mb1 3.3/2, mb1mx3.2/25, mbtmp3.3/2, ML3.0/2, Error ellipse: s-maj=23.0km s-min=13.0km az=50.0*
ISC 23 05:42:05.2±2.2, 54°.27N±0°.09×86°.6E±0°.2, h10km, n7, σ1$06/12, 7C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.11**	**254**	Pg	**Pg**	**05 42 23.4**	**-3.1**
	2.4nm,0.3s,baz=74,slow=18,SNR=62						
ZALV				Lg		05 42 39.9	
	4.1nm,0.3s,baz=79,slow=29,SNR=19						
KURK	**Kurchatov**	**6.04**	**237**	⇓Pn	**Pn**	**05 43 34.8**	**+0.3**
	5.1nm,0.7s						
KURK				⇑Sn	**Sn**	**05 44 45.8**	**+2.1**
	2.4nm,0.6s						
KURK				⇑Lg		05 45 12.6	
	12nm,0.9s						
MK31	**Makanchi Array**	**7.98**	**202**	⇓Pn	**Pn**	**05 44 01.5**	**+0.5**
	0.4nm,0.4s,baz=28,slow=11,SNR=12						
MK31				⇑Sn	**Sn**	**05 45 30.9**	**-0.4**
	0.6nm,0.5s,baz=24,slow=24,SNR=6.7						
MK31				⇑Lg		05 46 07.3	
	7.0nm,0.9s,baz=29,slow=31,SNR=5.0						
MKAR	**Makanchi Array**	**7.98**	**202**	Pn	**Pn**	**05 44 01.4**	**+0.4**
	0.1nm,0.3s,baz=15,slow=14,SNR=8.4						
MKAR				Sn	**Sn**	**05 45 30.6**	**-0.7**
	0.5nm,0.3s,baz=20,slow=25,SNR=7.3						
MKAR				Lg		05 46 14.9	
	baz=18,slow=30,SNR=3.3						
VOSK	**Vostochnaya**	**9.45**	**267**	⇑Pn	**Pn**	**05 44 20.2**	**-1.0**
	1.9nm,0.6s						
BVAR	**Borovoye Array**	**9.72**	**269**	Pn	**Pn**	**05 44 26.4**	**+1.5**
	0.3nm,0.3s,baz=76,slow=12,SNR=5.7						
BVAR				Sn	**Sn**	**05 46 08.4**	**-5.6**
	0.4nm,0.3s,baz=71,slow=24,SNR=7.5						
ZRNK	**Zerenda**	**10.55**	**270**	⇑Pn	**Pn**	**05 44 35.8**	**-0.4**
	1.0nm,0.6s						
ZRNK				⇑Sn	**Sn**	**05 46 34.3**	**0.0**
	2.5nm,0.8s						

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*NEIC **23** 05:54:56.2, 10°.62N×85°.97W, h32km, mb4.4/36, MD4.8(HDC), After HDC.*
NEIC Felt in Guanacaste.
*IDC **23** 05:54:57.9±1.3, 11°.00N×85°.47W, h35km±10km, mb4.0/12, mb1 4.2/15, mb1mx4.1/23, mbtmp4.0/15, ML3.6/2, MS3.7/12, Ms1 3.7/12, ms1mx3.6/22, Error ellipse: s-maj=25.8km s-min=10.3km az=59.0*
*ISCJB **23** 05:54:58.1±0.3, 10°.66N±0°.03×85°.81W±0°.03, h55km±2km, mb4.3/46, MS3.7/10, Error ellipse: s-maj=7.2km s-min=2.8km az=138.3*
*CASC **23** 05:54:58.6±1.7, 10°.65N×85°.86W, h26km±4km, MD3.7, ML4.1, mb4.4(NEIC)*
ISC 23 05:54:59.2±0.3, 10°.68N±0°.03×85°.79W±0°.03, h49km±2km, n132, σ1$01/142, mb4.3/46, MS3.7/10, 5C-2D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NY14	**Universidad de**	**0.25**	**96**	*i* P	**Pn**	**05 55 06.7**	**-1.1**
NY14				*i* S	**Sn**	**05 55 13.9**	**0.0**
LAPC	**Finca la Perla**	**0.36**	**75**	*i* P	**Pn**	**05 55 07.6**	**-1.2**
GPS3	**Bodega del ICE**	**0.42**	**79**	*i* P	**Pn**	**05 55 08.6**	**-0.9**
GPS3				*i* S	**Sn**	**05 55 16.9**	**+0.1**
GPS2	**Hotel Rinc^‡n**	**0.43**	**80**	*i* P	**Pn**	**05 55 08.7**	**-0.9**
GPS2				*i* S	**Sn**	**05 55 17.1**	**0.0**
GPS1	**Guardaparques**	**0.44**	**77**	*i* P	**Pn**	**05 55 08.8**	**-0.9**
GPS1				*i* S	**Sn**	**05 55 17.1**	**-0.2**
A490	**San Lazaro**	**0.52**	**141**⇓	*i*P	**Pn**	**05 55 08.8**	**-1.8**
A490				*i* S	**Sn**	**05 55 17.6**	**-1.1**
LIM1	**Limonal**	**0.53**	**87**	*i* P	**Pn**	**05 55 10.2**	**-0.5**
LIM1				*i* S	**Sn**	**05 55 18.8**	**-0.2**
A494	**Palo Verde**	**0.54**	**127**⇑	*i*P	**Pn**	**05 55 09.6**	**-1.3**
A494				*i* S	**Sn**	**05 55 19.0**	**-0.2**
GUAB	**Guayabo de Bag**	**0.55**	**87**	*i* P	**Pn**	**05 55 10.4**	**-0.6**
GUAB				*i* S	**Sn**	**05 55 19.4**	**0.0**
VCR	**Vista de Mar**	**0.57**	**164**⇑	*i*P	**Pn**	**05 55 09.2**	**-2.1**
VCR				*e*S	**Sn**	**05 55 18.1**	**-1.7**
COLC	**Colonia**	**0.57**	**91**	*i* P	**Pn**	**05 55 10.8**	**-0.5**
MESS	**Mesas**	**0.59**	**84**⇓	*i*P	**Pn**	**05 55 10.9**	**-0.6**
MESS				*i* S	**Sn**	**05 55 20.8**	**+0.6**
CUI	**Cuipilapa**	**0.61**	**92**	*i* P	**Pn**	**05 55 11.4**	**-0.4**
CUI				*i* S	**Sn**	**05 55 21.2**	**+0.3**
SSN	**San Juan del S**	**0.63**	**354**	*e*P	**Pn**	**05 55 11.3**	**-0.7**
SSN				*e*S	**Sn**	**05 55 20.1**	**-1.0**
AMAS	**Alto Masis**	**0.78**	**95**	*i* P	**Pn**	**05 55 11.1**	**-2.9**
AMAS				*i* S	**Sn**	**05 55 22.8**	**-2.0**
PTEN	**Parque Tenorio**	**0.79**	**87**	*i* P	**Pn**	**05 55 14.5**	**+0.5**
CONN	**Concepcion**	**0.90**	**10**⇑	*e*P	**Pn**	**05 55 16.1**	**+0.6**
JTS	**JuntasAbangare**	**0.91**	**115**	Pg	**Pn**	**05 55 14.9**	**-0.8**
	2μm,0.3s,baz=316,slow=9.9,SNR=146						
JTS				Lg		05 55 28.2	
	3μm,0.3s,baz=273,slow=17,SNR=22						
JTS	**JuntasAbangare**	**0.91**	**115**	*e*Pn	**Pn**	**05 55 15.1**	**-0.6**
JTS				*e*Sn	**Sn**	**05 55 28.7**	**+1.0**
JCR	**Jicaral**	**1.05**	**141**	*e*P	**Pn**	**05 55 16.4**	**-1.2**
CASO	**Castillo**	**1.06**	**103**	*i* P	**Pn**	**05 55 18.7**	**+0.9**
APON	**Apoyo**	**1.26**	**348**	*e*P	**Pn**	**05 55 21.3**	**+0.8**
MASN	**Masaya**	**1.35**	**345**⇑	*e*P	**Pn**	**05 55 21.8**	**+0.1**
MASN				AML	AML	05 55 49.3	
	comp=Z,3μm,0.6s						
CRUN	**El Crucero**	**1.39**	**339**	*e*P	**Pn**	**05 55 23.6**	**+1.3**
TICN	**Ticuantepe**	**1.42**	**342**	*e*P	**Pn**	**05 55 23.1**	**+0.5**
CGA2	**Cerro Gallo 2**	**1.46**	**117**	*e*P	**Pn**	**05 55 24.1**	**+1.0**
WILN	**Americas 2**	**1.53**	**345**	*e*P	**Pn**	**05 55 24.3**	**+0.2**
MGAN	**Managua**	**1.53**	**343**	*e*P	**Pn**	**05 55 24.4**	**+0.2**
MGAN				*e*S	**Sn**	**05 55 43.9**	**+1.0**
MGAN				AML	AML	05 55 47.5	
	comp=N,4μm,0.7s						
XAVN	**Gruta Xavier**	**1.56**	**340**	*e*P	**Pn**	**05 55 25.1**	**+0.6**
PRS1	**Puriscal**	**1.61**	**115**	*e*P	**Pn**	**05 55 25.8**	**+0.6**
CSAN		**1.62**	**338**	*e*P	**Pn**	**05 55 25.6**	**+0.2**
COPN	**Copaltepe**	**1.69**	**332**	*e*P	**Pn**	**05 55 26.2**	**-0.1**
COPN				AML	AML	05 56 03.5	
	comp=Z,4μm,0.5s						
HUEN		**1.69**	**347**	*e*P	**Pn**	**05 55 26.8**	**+0.4**
HUEN				*e*S	**Sn**	**05 55 47.8**	**+0.8**
HUEN				AML	AML	05 55 51.5	
	comp=Z,1μm,0.8s						
BOAB	**BOACO BROADBAN**	**.77**	**4**	*e*P	**Pn**	**05 55 27.7**	**+0.3**
LAJ	**Bijagual**	**1.83**	**116**	*e*P	**Pn**	**05 55 24.0**	**-4.2**
SJS	**Escuela Geolog**	**1.86**	**113**	*e*P	**Pn**	**05 55 31.2**	**+2.6**
SJS				*e*S	**Sn**	**05 55 57.5**	**+6.7**
MOMN	**Momotombo**	**1.87**	**337**	*e*P	**Pn**	**05 55 29.5**	**+0.7**
CNGN	**Cerro Negro**	**2.02**	**334**	*e*P	**Pn**	**05 55 30.4**	**-0.5**
CNGN				*e*S	**Sn**	**05 55 55.1**	**+0.1**
QCR	**Quepos**	**2.02**	**128**	*e*P	**Pn**	**05 55 32.2**	**+1.3**
LEON	**Leon**	**2.04**	**328**	*e*P	**Pn**	**05 55 31.2**	**0.0**
URSC	**Urasca**	**2.15**	**113**	*e*P	**Pn**	**05 55 34.0**	**+1.4**
TELN	**Telica**	**2.17**	**332**	*e*P	**Pn**	**05 55 34.0**	**+1.0**
BUS	**Buena Vista**	**2.29**	**119**	*e*P	**Pn**	**05 55 36.7**	**+2.2**
CRIN	**San Cristobal**	**2.36**	**329**	*e*P	**Pn**	**05 55 35.8**	**+0.2**
CRIN				AML	AML	05 56 18.4	
	comp=Z,2μm,0.7s						
BAR1		**2.82**	**120**	*e*P	**Pn**	**05 55 43.4**	**+1.5**
CNCH	**Conchagua**	**3.27**	**322**	*e*P	**Pn**	**05 55 48.5**	**+0.5**
CNCH				*e*S	**Sn**	**05 56 26.4**	**+0.7**
ACR	**Cerro Adams**	**3.27**	**128**	*e*P	**Pn**	**05 55 50.2**	**+2.2**
CNI	**Changuinola**	**3.46**	**111**⇑	*e*P	**Pn**	**05 55 52.5**	**+1.9**
BRU2	**Volcan**	**3.58**	**121**	*e*P	**Pn**	**05 55 54.2**	**+2.0**
TBS2		**3.61**	**121**	*e*P	**Pn**	**05 55 54.9**	**+2.2**
BLLM	**Bellamira**	**3.65**	**319**	*e*P	**Pn**	**05 55 53.6**	**+0.4**
BLLM				*e*S	**Sn**	**05 56 35.1**	**+0.1**
VSM	**San Miguel**	**3.66**	**319**	*e*P	**Pn**	**05 55 53.8**	**+0.4**
VSM				*e*S	**Sn**	**05 56 36.4**	**+1.1**
TGUH	**Tegucigalpa,Un**	**3.66**	**337**	*e*Pn	**Pn**	**05 55 54.7**	**+1.4**
TGUH	**Tegucigalpa,Un**	**3.66**	**337**	*e*P	**Pn**	**05 55 54.4**	**+1.0**
LFRS	**El Faro**	**4.34**	**313**	*e*P	**Pn**	**05 56 02.9**	**+0.2**
LFRS				*e*S	**Sn**	**05 56 51.9**	**-0.2**
BCIP	**Isla Barro Col**	**6.05**	**104**	*e*Pn	**Pn**	**05 56 27.1**	**+0.9**
	comp=Z,52nm,0.7s						
CMIG	**Matias Romero**	**10.89**	**307**	Pn	**Pn**	**05 57 33.0**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=113,slow=11,SNR=19						
CMIG				Sn	**Sn**	**05 59 31.4**	**-1.6**
	baz=49,slow=20,SNR=3.1						
CMIG				LR	LR	06 02 02.1	
	comp=Z,338nm,21.9s,baz=122,slow=39						
SDDR	**Presa de Saban**	**16.26**	**58**	*e*Pn	**Pn**	**05 58 52.0**	**+7.6**
	comp=Z,234nm,2.5s						
ATAH	**Atahualpa**	**19.16**	**157**	P	**Pn**	**05 59 21.6**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=312,slow=14,SNR=3.1						
ATAH				LR	LR	06 05 48.0	
	comp=Z,352nm,21.0s,baz=152,slow=34						
CELP	**Cerrillos**	**20.00**	**66**	*e*Pn	pP	05 59 39.9	+0.7
SJG	**San Juan**	**20.39**	**67**	P	**P**	**05 59 28.3**	**-3.8**
	comp=Z,0.3nm,0.3s,baz=256,slow=9.8,SNR=2.2						
SJG				LR	LR	06 07 14.0	
	comp=Z,70nm,20.4s,MS3.0,baz=270,slow=37						
SJG	**San Juan**	**20.39**	**67**	*e*P	**P**	**05 59 36.7**	**+4.5**
SJG				LR	LR	06 07 14.0	
PCRV	**Puerto La Cruz**	**20.81**	**89**	P	**P**	**05 59 33.4**	**-3.3**
	comp=Z,3.7nm,0.4s,baz=248,slow=5.4,SNR=1.9						
LRAL	**Lakeview Retre**	**22.28**	**357**	*e*P	**P**	**05 59 53.0**	**+0.7**
	comp=Z,16nm,1.1s,mb4.4						
GOGA	**Godfrey**	**22.73**	**5**	*e*P	**P**	**05 59 57.1**	**+0.1**
	comp=Z,25nm,1.3s,mb4.5						
JCT	**Junction City**	**23.63**	**329**	*e*P	**P**	**06 00 05.3**	**-0.7**
	comp=Z,7.4nm,0.9s,mb4.1						
JSC	**Jenkinsville**	**23.86**	**9**	*e*P	**P**	**06 00 08.4**	**+0.3**
SWET	**Sewanee**	**24.43**	**360**	*e*P	**P**	**06 00 12.6**	**-0.7**
CPCT	**Cooper Cave**	**24.69**	**2**	*e*P	**P**	**06 00 16.3**	**+0.7**
UALR	**University of**	**24.73**	**347**	*e*P	**P**	**06 00 15.4**	**-0.6**
	comp=Z,21nm,0.9s,mb4.7						
MIAR	**Mount Ida**	**24.80**	**345**	*e*P	**P**	**06 00 15.3**	**-1.3**
	comp=Z,14nm,0.8s,mb4.5						
TKL	**Tuckaleechee C**	**24.94**	**4**	P	**P**	**06 00 18.1**	**+0.3**
	comp=Z,9.8nm,0.7s,mb4.5,baz=189,slow=12,SNR=14						
TKL				LR	LR	06 09 39.8	
	comp=Z,145nm,20.4s,MS3.5,baz=262,slow=36						
TKL	**Tuckaleechee C**	**24.94**	**4**	*e*P	**P**	**06 00 18.3**	**+0.4**
TXAR	**Lajitas Array**	**24.97**	**321**	P	**P**	**06 00 18.3**	**0.0**
	comp=Z,15nm,0.7s,mb4.6,baz=137,slow=4.1,SNR=69						
TXAR				PcP	PcP	06 03 53.6	+0.9
	comp=Z,1.0nm,0.9s,baz=163,slow=5.2,SNR=3.9						
TXAR				ScP	ScP	06 07 30.4	+2.5
	comp=Z,0.7nm,0.9s,baz=145,slow=5.4,SNR=6.4						
TXAR	**Lajitas Array**	**24.97**	**321**	P	**P**	**06 00 18.3**	**0.0**
TXAR				PcP	PcP	06 03 53.5	+0.9
TXAR				ScP	ScP	06 07 30.4	+2.5
WVT	**Waverly**	**25.41**	**356**	*e*P	**P**	**06 00 21.1**	**-1.1**
	comp=Z,8.9nm,1.1s,mb4.2						
PARMO	**Parma**	**26.12**	**353**	*e*P	**P**	**06 00 28.9**	**+0.3**
WMOK	**Wichita Mounta**	**26.73**	**336**	*e*P	**P**	**06 00 35.5**	**+1.3**
	comp=Z,16nm,1.1s,mb4.5						
ELN	**Prospectdale**	**26.82**	**9**	*e*P	**P**	**06 00 34.9**	**-0.1**
GDL2	**Guadalupe Moun**	**27.44**	**324**	*e*P	**P**	**06 00 40.5**	**-0.1**
WCI	**Wyandotte Cave**	**27.44**	**359**	*e*P	**P**	**06 00 39.7**	**-0.8**
	comp=Z,12nm,0.8s,mb4.5						
MNTX	**Cornudas Mount**	**27.68**	**322**	*e*P	**P**	**06 00 43.8**	**+1.1**
	comp=Z,1.7nm,0.7s,mb3.8						
CCM	**Cathedral Cave**	**27.70**	**351**	*e*P	**P**	**06 00 41.4**	**-1.4**
	comp=Z,6.0nm,0.8s,mb4.3						
OLIL	**Olney**	**28.02**	**356**	*e*P	**P**	**06 00 44.5**	**-1.1**
	comp=Z,11nm,0.8s,mb4.5						
AMTX	**Amarillo**	**28.12**	**331**	*e*P	**P**	**06 00 46.4**	**-0.2**
	comp=Z,4.9nm,0.7s,mb4.2						
ACSO	**Alum Creek Sta**	**29.54**	**4**	*e*P	**P**	**06 00 58.4**	**-0.8**
	comp=Z,15nm,0.6s,mb4.9						
HDIL	**Hopedale**	**29.92**	**355**	*e*P	**P**	**06 01 01.0**	**-1.5**
	comp=Z,20nm,0.8s,mb4.9						
LPAZ	**La Paz**	**31.98**	**147**	P	**P**	**06 01 21.9**	**+1.0**
	comp=Z,0.8nm,0.8s,mb3.6,baz=335,slow=12,SNR=5.4						
LPAZ				PcP	PcP	06 04 11.7	+1.5
	comp=Z,1.3nm,0.9s,baz=290,slow=6.2,SNR=3.2						
LPAZ				LR	LR	06 15 03.8	
	comp=Z,136nm,20.1s,MS3.6,baz=279,slow=38						
SDCO	**Great Sand Dun**	**32.25**	**330**	*e*P	**P**	**06 01 22.9**	**-0.1**
	comp=Z,45nm,3.0s						
JFWS	**Jewell Farm**	**32.35**	**354**	*e*P	**P**	**06 01 24.8**	**+0.9**
	comp=Z,9.7nm,0.6s,mb4.8						
SMCO	**Snowmass**	**34.09**	**330**	*e*P	**P**	**06 01 40.7**	**+1.6**
	comp=Z,7.4nm,1.4s,mb4.4						
ECSD	**EROS Data Cent**	**34.25**	**346**	*e*P	**P**	**06 01 37.0**	**-3.4**
	comp=Z,4.9nm,1.2s,mb4.3						
SRU	**San Rafael**	**35.89**	**326**	*e*P	**P**	**06 01 54.8**	**+0.1**
	comp=Z,6.0nm,1.1s,mb4.4						
SIV	**San Ignacio**	**36.06**	**137**	P	**P**	**06 01 56.8**	**+0.5**
	comp=Z,3.2nm,0.8s,mb4.3,baz=308,slow=9.9,SNR=16						
SIV				PcP	PcP	06 04 21.6	-0.2
	comp=Z,0.9nm,0.5s,baz=260,slow=7.6,SNR=5.9						
MSU	**Marysvale**	**36.40**	**324**	*e*P	**P**	**06 01 58.9**	**-0.1**
	comp=Z,1.9nm,1.0s,mb4.0						
ARUT	**Antelope Range**	**36.67**	**322**	*e*P	**P**	**06 02 02.0**	**+0.7**
	comp=Z,2.8nm,0.8s,mb4.1						
PDAR	**Pinedale Array**	**38.10**	**331**	P	**P**	**06 02 12.6**	**-0.7**
	comp=Z,0.8nm,0.7s,mb3.6,baz=138,slow=6.9,SNR=8.9						
PDAR				PcP	PcP	06 04 27.9	+0.2
	comp=Z,0.5nm,0.7s,baz=123,slow=4.4,SNR=3.8						
PDAR				ScP	ScP	06 08 13.3	+1.9
	comp=Z,1.8nm,1.1s,baz=120,slow=5.3,SNR=7.7						
HWUT	**Hardware Ranch**	**38.23**	**328**	*e*P	**P**	**06 02 14.6**	**+0.1**
	comp=Z,4.8nm,0.8s,mb4.3						
N13A	**Wendover, West**	**39.13**	**325**	*e*P	**P**	**06 02 22.2**	**+0.1**
	comp=Z,24nm,1.1s,mb4.8						
REDW	**Red Top Meadow**	**39.17**	**331**	*e*P	**P**	**06 02 22.0**	**-0.3**
	comp=Z,9.2nm,1.1s,mb4.4						
SNOW	**Snow King Moun**	**39.20**	**331**	*e*P	**P**	**06 02 22.5**	**-0.1**
	comp=Z,8.7nm,1.1s,mb4.4						
LOHW	**Long Hollow**	**39.24**	**331**	*e*P	**P**	**06 02 22.1**	**-0.7**
TPAW	**Teton Pass**	**39.31**	**331**	*e*P	**P**	**06 02 23.7**	**+0.2**
	comp=Z,9.7nm,1.4s,mb4.3						
M13A	**Montello**	**39.45**	**326**	*e*P	**P**	**06 02 24.7**	**0.0**
	comp=Z,5.8nm,1.2s,mb4.2						
N12A	**Clover Valley,**	**39.60**	**324**	*e*P	**P**	**06 02 26.4**	**+0.5**
	comp=Z,9.0nm,1.1s,mb4.4						
IMW

DJA 23 06:32:21, 1°44S×129°57E, h10km, MLv4.0/4, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SWI	**Sorong**	**1.78**	**71**	P	Pn	06 32 52.1	+0.2
SWI				S	Sn	06 33 14.7	+0.1
LBMI	**Labuha**	**2.22**	**291**	P	Pn	06 32 57.2	-0.7
LBMI				S	Sn	06 33 26.6	+1.3
AAI	**Ambon**	**2.62**	**212**	P	Pn	06 33 08.3	+4.9
KMSI	**Cibinong**	**5.94**	**290**	P	Pn	06 33 49.5	+0.5
SGSI	**Sangihe**	**6.50**	**322**	P	Pn	06 33 56.2	-0.6
	4μm65nm,0.7s						
LUWI	**Luwuk**	**6.81**	**273**	P	Pn	06 34 00.5	-0.5

*IDC **23** 06:48:22.6±0.8, 11°.83N×86°.65W, h0km, mb3.8/7, mb1 4.0/9, mb1mx3.9/21, mbtmp3.8/9, ML3.5/1, MS3.5/1, Ms1 3.5/1, ms1mx2.8/24, Error ellipse: s-maj=51.8km s-min=10.9km az=48.0*
*ISCJB **23** 06:48:27.3±0.5, 11°.44N±0°.04×86°.97W±0°.05, h53km±5km, mb3.9/15, Error ellipse: s-maj=9.7km s-min=3.6km az=139.7*
*CASC **23** 06:48:27.6±3.0, 11°.48N×86°.96W, h28km±10km, MD4.2, ML3.4, mb4.2(NEIC)*
*NEIC **23** 06:48:28.8±1.2, 11°.43N×86°.90W, h56km±11km, mb4.2/7, Error ellipse: s-maj=24.9km s-min=9.7km az=224.0*

ISC 23 06:48:28.4±0.5, 11°.48N±0°.04×86°.93W±0°.04, h47km±5km, n67, σ1°22/76, mb3.9/15, 3C-2D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.78**	**25⇑**	*e*P	**Pn**	**06 48 42.7**	**-0.4**
CSAN		**0.86**	**35⇑**	*e*P	**Pn**	**06 48 43.6**	**-0.7**
TICN	**Ticuantepe**	**0.88**	**51**	*e*P	**Pn**	**06 48 44.0**	**-0.5**
XAVN	**Gruta Xavier**	**0.89**	**41**	*e*P	**Pn**	**06 48 44.2**	**-0.4**
LEON	**Leon**	**0.94**	**2**	*e*P	**Pn**	**06 48 44.7**	**-0.5**
MGAN	**Managua**	**0.94**	**45**	*e*P	**Pn**	**06 48 44.7**	**-0.6**
MGAN				*e*S	**Sn**	**06 49 00.1**	**+2.4**
MGAN				AML	AML	06 49 04.3	
	comp=N,2μm,0.5s						
APON	**Apoyo**	**0.95**	**62⇓**	*e*P	**Pn**	**06 48 45.1**	**-0.4**
APON				AML	AML	06 49 15.2	
	comp=Z,257nm,0.4s						
WILN	**Americas 2**	**1.00**	**47**	*e*P	**Pn**	**06 48 45.6**	**-0.5**
MOMN	**Momotombo**	**1.00**	**22⇓**	*e*P	**Pn**	**06 48 46.2**	**+0.1**
CNGN	**Cerro Negro**	**1.04**	**13**	*e*P	**Pn**	**06 48 46.1**	**-0.6**
CNGN				*e*S	**Sn**	**06 49 02.2**	**+2.1**
CNGN				AML	AML	06 49 06.4	
	comp=Z,1μm,0.4s						
SSN	**San Juan del S**	**1.07**	**99**	*e*P	**Pn**	**06 48 46.0**	**-1.0**
SSN				*e*S	**Sn**	**06 49 01.6**	**+0.8**
TELN	**Telica**	**1.13**	**5**	*e*P	**Pn**	**06 48 48.2**	**+0.4**
HUEN		**1.13**	**41**	*e*P	**Pn**	**06 48 47.7**	**-0.3**
CRIN	**San Cristobal**	**1.22**	**355**	*e*P	**Pn**	**06 48 49.0**	**-0.1**
CRIN				AML	AML	06 49 11.1	
	comp=Z,3μm,0.3s						
CONN	**Concepcion**	**1.28**	**86⇑**	*e*P	**Pn**	**06 48 49.2**	**-0.7**
CONN				AML	AML	06 49 18.4	
	comp=Z,215nm,0.6s						
BOAB	**BOACO BROADBAN**	**.57**	**52**	*e*P	**Pn**	**06 48 53.1**	**-0.8**
NY14	**Universidad de**	**1.60**	**121**	*i*P	**Pn**	**06 48 52.5**	**-1.7**
NY14				*i*S	**Sn**	**06 49 17.6**	**+3.9**
LAPC	**Finca la Perla**	**1.63**	**115**	*i*P	**Pn**	**06 48 53.4**	**-1.2**
BUEV	**Buena Vista**	**1.64**	**114**	*i*P	**Pn**	**06 48 53.9**	**-0.9**
GPS3	**Bodega del ICE**	**1.69**	**115**	*i*P	**Pn**	**06 48 54.7**	**-0.9**
LIM1	**Limonal**	**1.82**	**115**	*i*P	**Pn**	**06 48 56.5**	**-0.7**
VCR	**Vista de Mar**	**1.85**	**136**	*e*P	**Pn**	**06 49 01.8**	**+4.1**
A490	**San Lazaro**	**1.88**	**129**	*i*P	**Pn**	**06 48 55.7**	**-2.4**
A494	**Palo Verde**	**1.92**	**126**	*i*P	**Pn**	**06 48 59.0**	**+0.4**
CUI	**Cuipilapa**	**1.92**	**115**	*i*P	**Pn**	**06 48 57.7**	**-0.9**
CNCH	**Conchagua**	**2.00**	**334**	*e*P	**Pn**	**06 48 59.0**	**-0.8**
CNCH				*e*S	**Sn**	**06 49 24.9**	**+1.4**
JTS	**JuntasAbangare**	**2.27**	**121**	Pn	**Pn**	**06 49 02.6**	**-0.9**
	comp=Z,14nm,0.3s,baz=318,slow=18,SNR=46						
JTS				Pg	**Pn**	**06 49 04.7**	**+1.2**
	comp=Z,14nm,0.3s,baz=311,slow=15,SNR=46						
JTS				Lg		06 49 34.9	
	comp=Z,24nm,0.3s,baz=302,slow=18,SNR=14						
JTS	**JuntasAbangare**	**2.27**	**121**	Pn	**Pn**	**06 49 02.6**	**-0.9**
JTS				Lg		06 49 34.9	
BLLM	**Bellamira**	**2.34**	**327**	*e*P	**Pn**	**06 49 04.4**	**0.0**
BLLM				*e*S	**Sn**	**06 49 32.0**	**+0.1**
VSM	**San Miguel**	**2.34**	**326**	*e*P	**Pn**	**06 49 04.4**	**0.0**
JCR	**Jicaral**	**2.41**	**132**	*e*P	**Pn**	**06 49 09.1**	**+3.7**
JCR				*e*S	**Sn**	**06 49 46.2**	**+13**
TGUH	**Tegucigalpa,Un**	**2.59**	**353**	*e*Pn	**Pn**	**06 49 08.5**	**+0.6**
TGUH	**Tegucigalpa,Un**	**2.59**	**353**	*e*P	**Pn**	**06 49 08.7**	**+0.8**
TGUH				*e*S	**Sn**	**06 49 36.6**	**-1.5**
CAHU	**Cacacuatique**	**2.60**	**331**	*e*P	**Pn**	**06 49 09.3**	**+1.2**
CGA2	**Cerro Gallo 2**	**2.82**	**121**	*e*P	**Pn**	**06 49 13.4**	**+2.3**
PRS1	**Puriscal**	**2.97**	**120**	*e*P	**Pn**	**06 49 15.2**	**+2.1**
LFRS	**El Faro**	**2.98**	**316**	*e*P	**Pn**	**06 49 12.7**	**-0.5**
LFRS				*e*S	**Sn**	**06 49 48.4**	**+0.6**
LAJ	**Bijagual**	**3.19**	**120**	*e*P	**Pn**	**06 49 13.9**	**-2.3**
QCR	**Quepos**	**3.40**	**127**	*e*P	**Pn**	**06 49 20.6**	**+1.7**
URSC	**Urasca**	**3.50**	**117**	*e*P	**Pn**	**06 49 22.8**	**+2.4**
BUS	**Buena Vista**	**3.66**	**121**	*e*P	**Pn**	**06 49 25.7**	**+3.2**
BAR1		**4.20**	**122**	*e*P	**Pn**	**06 49 32.7**	**+2.8**
APG	**El Apazote**	**4.91**	**316**	Pn	**Pn**	**06 49 38.9**	**-0.9**
	baz=90,slow=16						
BCIP	**Isla Barro Col**	**7.35**	**108**	*e*Pn	**Pn**	**06 50 13.3**	**+0.2**
CMIG	**Matias Romero**	**9.52**	**307**	Pn	**Pn**	**06 50 44.0**	**+1.0**
	comp=Z,1.0nm,0.3s,baz=127,slow=9.1,SNR=28						
CMIG				Sn	**Sn**	**06 52 25.7**	**-2.9**
	comp=Z,0.2nm,0.3s,baz=90,slow=20,SNR=2.0						
CMIG	**Matias Romero**	**9.52**	**307**	Pn	**Pn**	**06 50 44.0**	**+1.0**
CMIG				Sn	**Sn**	**06 52 25.7**	**-2.9**
ATAH	**Atahualpa**	**20.34**	**155**	LR	LR	06 59 51.6	
	comp=Z,122nm,19.6s,baz=192,slow=34						
LRAL	**Lakeview Retre**	**21.46**	**360**	*e*P	**P**	**06 53 15.9**	**+3.0**
TXAR	**Lajitas Array**	**23.65**	**321**	P	**P**	**06 53 35.9**	**+0.3**
	comp=Z,2.1nm,0.7s,mb3.6,baz=145,slow=9.1,SNR=43						
TXAR				PcP	PcP	06 57 21.7	+2.4
	comp=Z,0.9nm,0.9s,baz=157,slow=5.4,SNR=4.6						
MIAR	**Mount Ida**	**23.75**	**346**	*e*P	**P**	**06 53 35.9**	**-0.5**
	comp=Z,6.0nm,0.7s,mb4.1						
TKL	**Tuckaleechee C**	**24.25**	**6**	P	**P**	**06 53 42.3**	**+1.3**
	comp=Z,2.0nm,0.5s,mb3.8,baz=178,slow=9.1,SNR=6.0						
WMOK	**Wichita Mounta**	**25.55**	**337**	*e*P	**P**	**06 53 53.6**	**+0.7**
	comp=Z,15nm,1.0s,mb4.5						
SDCO	**Great Sand Dun**	**31.01**	**331**	*e*P	**P**	**06 54 42.9**	**+1.4**
	comp=Z,1.3nm,0.7s,mb3.9						
SRU	**San Rafael**	**34.60**	**327**	*e*P	**P**	**06 55 12.7**	**-0.3**
	comp=Z,2.3nm,0.6s,mb4.3						
PDAR	**Pinedale Array**	**36.87**	**332**	P	**P**	**06 55 31.9**	**-0.5**
	comp=Z,0.9nm,0.5s,mb3.8,baz=130,slow=11,SNR=9.0						
SIV	**San Ignacio**	**37.41**	**136**	P	**P**	**06 55 37.2**	**0.0**
	comp=Z,5.0nm,0.6s,mb4.5,baz=312,slow=8.6,SNR=45						
AGMN	**Agassiz Nation**	**37.46**	**350**	*e*P	**P**	**06 55 34.8**	**-2.5**
	comp=Z,2.9nm,0.6s,mb4.3						
REDW	**Red Top Meadow**	**37.93**	**331**	*e*P	**P**	**06 55 42.1**	**+0.8**
	comp=Z,2.9nm,0.6s,mb4.2						
SNOW	**Snow King Moun**	**37.96**	**331**	*e*P	**P**	**06 55 42.8**	**+1.3**
TPAW	**Teton Pass**	**38.07**	**331**	*e*P	**P**	**06 55 43.4**	**+0.9**
NVAR	**Mina Array Bea**	**38.77**	**319**	P	**P**	**06 55 48.5**	**+0.1**
	comp=Z,0.2nm,0.7s,mb3.0,baz=125,slow=7.8,SNR=2.3						
NVAR				PcP	PcP	06 58 00.9	+1.7
	comp=Z,1.3nm,0.6s,baz=134,slow=4.1,SNR=11						
MCMT	**McKenzie Canyo**	**39.98**	**331**	*e*P	**P**	**06 55 59.1**	**+0.7**
	comp=Z,0.5nm,0.6s,mb3.4						
SCHQ	**Schefferville**	**46.06**	**16**	P	**P**	**06 56 45.4**	**-2.1**
	comp=Z,1.0nm,0.5s,mb4.0,baz=224,slow=9.6,SNR=6.1						
YKA	**Yellowknife Ar**	**54.68**	**345**	P	**P**	**06 57 50.8**	**-1.6**
	comp=Z,0.9nm,0.7s,mb3.9,baz=141,slow=7.0,SNR=6.6						
YKA				PcP	PcP	06 58 54.4	-0.3
	comp=Z,0.5nm,0.6s,baz=148,slow=4.1,SNR=6.3						
ILAR	**Eielson Array**	**67.11**	**336**	P	**P**	**06 59 15.2**	**-1.6**
	comp=Z,0.4nm,0.6s,mb3.6,baz=147,slow=4.6,SNR=12						
KSRS	**Korea Array**	**121.36**	**328**	PKP	PKPdf	07 07 16.8	-0.2
	comp=Z,1.2nm,0.5s,baz=15,slow=2.1,SNR=7.4						
CMAR	**Chiang Mai Arr**	**149.70**	**349**	PKPbc	PKPbc	07 08 14.2	+0.2
	comp=Z,0.7nm,0.3s,baz=0.0,slow=3.8,SNR=4.9						

*IDC **23** 06:50:44.8±1.0, 11°.88N×86°.56W, h0km, mb3.6/4, mb1 3.9/6, mb1mx3.7/21, mbtmp3.6/6, ML3.3/2, Error ellipse: s-maj=63.6km s-min=12.0km az=47.0*
*CASC **23** 06:50:47.0±3.3, 11°.49N×87°.00W, h1km±14km, MD3.9, mb3.9(NEIC)*
*ISCJB **23** 06:50:49.0±0.8, 11°.42N±0°.07×86°.97W±0°.07, h57km±10km, mb3.6/6, Error ellipse: s-maj=14.3km s-min=5.5km az=43.6*
*NEIC **23** 06:50:49.7±1.2, 11°.82N×86°.63W, h38km±14km, mb3.9/2, Error ellipse: s-maj=35.5km s-min=9.5km az=45.0*

ISC 23 06:50:49.9±0.8, 11°.41N±0°.06×86°.95W±0°.05, h49km±11km, n21, σ1°12/28, mb3.6/6, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSN	**San Juan del S**	**1.08**	**96**	*e*P	**Pn**	**06 51 07.3**	**-1.5**
SSN				*e*S	**Sn**	**06 51 23.8**	**+1.1**
CNGN	**Cerro Negro**	**1.11**	**13**	*e*P	**Pn**	**06 51 08.0**	**-1.1**
CNGN				*e*S	**Sn**	**06 51 23.1**	**-0.3**
HUEN		**1.20**	**40**	*e*P	**Pn**	**06 51 09.0**	**-1.3**
HUEN				*e*S	**Sn**	**06 51 26.3**	**+0.8**
CNCH	**Conchagua**	**2.04**	**335**	*e*P	**Pn**	**06 51 21.0**	**-0.9**
JTS	**JuntasAbangare**	**2.26**	**119**	Pn	**Pn**	**06 51 23.6**	**-1.3**
	9.6nm,0.3s,baz=313,slow=19,SNR=6.5						
JTS				Pg	**Pn**	**06 51 26.0**	**+1.2**
	10.0nm,0.3s,baz=314,slow=18,SNR=16						
JTS				Lg		06 51 56.0	
	21nm,0.3s,baz=231,slow=20,SNR=4.3						
BLLM	**Bellamira**	**2.38**	**328**	*e*P	**Pn**	**06 51 26.2**	**-0.3**
BLLM				*e*S	**Sn**	**06 51 55.3**	**+0.8**
JCR	**Jicaral**	**2.38**	**130**	*e*P	**Pn**	**06 51 31.1**	**+4.6**
JCR				*e*S	**Sn**	**06 52 03.2**	**+8.6**
TGUH	**Tegucigalpa,Un**	**2.65**	**353**	*e*Pn	**Pn**	**06 51 24.2**	**-6.0**
CGA2	**Cerro Gallo 2**	**2.81**	**119**	*e*P	**Pn**	**06 51 32.1**	**-0.3**
PRS1	**Puriscal**	**2.96**	**118**	*e*P	**Pn**	**06 51 36.3**	**+1.9**
LFRS	**El Faro**	**3.01**	**317**	*e*P	**Pn**	**06 51 35.3**	**+0.1**
LFRS				*e*S	**Sn**	**06 52 10.4**	**+0.4**
LAJ	**Bijagual**	**3.18**	**119**	*e*P	**Pn**	**06 51 34.3**	**-3.2**
BUS	**Buena Vista**	**3.64**	**120**	*e*P	**Pn**	**06 51 46.0**	**+2.1**
BCIP	**Isla Barro Col**	**7.35**	**107**	*e*Pn	**Pn**	**06 52 33.6**	**-1.2**
CMIG	**Matias Romero**	**9.54**	**307**	Pn	**Pn**	**06 53 05.4**	**+0.7**
	0.2nm,0.3s,baz=119,slow=10,SNR=3.3						
TXAR	**Lajitas Array**	**23.68**	**321**	P	**P**	**06 55 57.6**	**+0.3**
	0.7nm,0.8s,mb3.1,baz=145,slow=9.4,SNR=6.4						
TXAR				PcP	PcP	06 59 43.2	+2.5
	0.2nm,0.8s,baz=130,slow=4.9,SNR=2.9						
WMOK	**Wichita Mounta**	**25.60**	**337**	P	**P**	**06 56 14.5**	**-0.2**
	2.4nm,0.9s,mb3.7						
PDAR	**Pinedale Array**	**36.91**	**332**	P	**P**	**06 57 52.3**	**-1.7**
	0.3nm,0.5s,mb3.4,baz=130,slow=8.4,SNR=3.7						
HWUT	**Hardware Ranch**	**37.01**	**329**	*e*P	**P**	**06 57 53.6**	**-1.3**
	2.7nm,1.0s,mb4.0						
SIV	**San Ignacio**	**37.38**	**136**	P	**P**	**06 57 59.0**	**+0.7**
	1.6nm,0.5s,mb4.1,baz=306,slow=9.5,SNR=10						
NVAR	**Mina Array Bea**	**38.80**	**319**	P	**P**	**06 58 11.3**	**+1.2**
	0.6nm,0.8s,mb3.4,baz=115,slow=6.1,SNR=3.1						
NVAR				PcP	PcP	07 00 22.8	+2.1
	0.5nm,0.7s,baz=142,slow=4.6,SNR=3.9						

CASC 23 06:53:47.7±2.3, 8°.93N×82°.85W, h14km±11km, MD3.6, 1C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.21**	**131⇑**	*i*P	Pg	06 53 53.3	+0.8
BRU2				*e*S	Sg	06 53 57.4	+1.6
TBS2		**0.24**	**125**	*e*P	Pg	06 53 54.0	+1.0
TBS2				*e*S	Sg	06 53 58.2	+1.8
ACR	**Cerro Adams**	**0.42**	**228⇓**	*e*P	Pg	06 53 55.9	-0.2
ACR				*e*S	Sg	06 54 02.3	+0.6
BAR1		**0.55**	**304**	*e*P	Pg	06 53 58.1	-0.4
BAR1				*e*S	Sg	06 54 04.6	-1.2
CNI	**Changuinola**	**0.58**	**35⇓**	*i*P	Pg	06 53 59.2	0.0
CNI				*e*S	Sg	06 54 03.3	-3.7
BUS	**Buena Vista**	**1.09**	**305**	*e*P	Pb	06 54 08.0	-0.3
BUS				*e*S	Sb	06 54 24.9	+2.6
URSC	**Urasca**	**1.28**	**315⇓**	*e*P	Pn	06 54 11.1	0.0
URSC				*e*S	Sb	06 54 27.9	0.0
QCR	**Quepos**	**1.38**	**291**	*e*P	Pn	06 54 12.9	+0.3
QCR				*e*S	Sn	06 54 29.0	-1.6
PRS1	**Puriscal**	**1.78**	**306**	*e*P	Pn	06 54 18.3	+0.3
CGA2	**Cerro Gallo 2**	**1.92**	**304**	*e*P	Pn	06 54 20.1	+0.2
CGA2				*e*S	Sn	06 54 45.5	+1.7

*NEIC **23** 06:56:41.3±4.1, 24°.77N×122°.49E, h10km, MG3.1(JMA), Error ellipse: s-maj=41.3km s-min=13.7km az=53.0*
*ISCJB **23** 06:56:47.1±0.5, 24°.74N±0°.03×121°.91E±0°.02, h74km±4km, Error ellipse: s-maj=5.1km s-min=3.3km az=165.2*
*TAP **23** 06:56:47.5, 24°.73N×121°.88E, h70km, ML3.9, A*
*JMA **23** 06:56:47.4±0.2, 24°.65N×121°.91E, h75km, M3.1*

ISC 23 06:56:47.6±0.5, 24°.74N±0°.03×121°.91E±0°.02, h72km±4km, n51, σ0°72/87, 1C-11D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.14**	**203⇓**	*i*P	**Pn**	**06 56 58.5**	**+0.2**
	baz=187						
TWC				S	**Sn**	**06 57 06.3**	**+0.3**
	baz=187						
ILA	**Ilan**	**0.15**	**279**	*i*P	**Pn**	**06 56 58.7**	**+0.4**
	baz=296						
ILA				S	**Sn**	**06 57 06.6**	**+0.6**
	baz=296						
TWE	**Neicheng**	**0.22**	**265⇓**	*i*P	**Pn**	**06 56 58.9**	**+0.4**
	baz=266						
TWE				*e*S	**Sn**	**06 57 07.1**	**+0.5**
	baz=266						
TWB1	**Santiao Chiao**	**0.27**	**15⇓**	*i*P	**Pn**	**06 56 58.9**	**+0.1**
	baz=26						
TWB1				*i*S	**Sn**	**06 57 06.7**	**-0.3**
	baz=26						
NWF	**Wu-fen Shan**	**0.35**	**340⇓**	*i*P	**Pn**	**06 56 59.6**	**+0.2**
	baz=350						
NWF				S	**Sn**	**06 57 07.7**	**-0.2**
	baz=350						
ENA	**Nanau**	**0.35**	**207⇓**	*i*P	**Pn**	**06 56 59.7**	**+0.3**
	baz=201						
ENA				*e*S	**Sn**	**06 57 08.8**	**+0.9**
	baz=201						
TWA	**Mucha**	**0.38**	**308⇓**	*i*P	**Pn**	**06 56 59.6**	**+0.1**
	baz=318						
TWA				S	**Sn**	**06 57 08.2**	**-0.1**
	baz=318						
TATO	**Taipei**	**0.45**	**301**	*e*Pn	**Pn**	**06 56 59.9**	**-0.3**
TATO				*e*Sn	**Sn**	**06 57 08.5**	**-0.8**
TAP1	**Taipei**	**0.46**	**310**	*e*P	**Pn**	**06 57 00.1**	**-0.1**
	baz=319						
TAP1				*e*S	**Sn**	**06 57 09.4**	**-0.1**
	baz=319						
YHNB	**Yeheng**	**0.49**	**262**	*e*Pn	**Pn**	**06 57 00.3**	**-0.2**
YHNB				*e*Sn	**Sn**	**06 57 08.0**	**-2.1**
NSK	**Sanguang**	**0.51**	**263⇓**	*i*P	**Pn**	**06 57 00.7**	**0.0**
	baz=263						
NSK				S	**Sn**	**06 57 09.8**	**-0.5**
	baz=263						
TWS1	**Kuangyinshan**	**0.57**	**309⇓**	*i*P	**Pn**	**06 57 01.7**	**+0.4**
	baz=320						
TWS1				S	**Sn**	**06 57 11.8**	**+0.4**
	baz=320						
NNS	**Nan Shan**	**0.58**	**239**	*i*P	**Pn**	**06 57 01.7**	**+0.4**
	baz=244						
NNS				*e*S	**Sn**	**06 57 11.9**	**+0.5**
	baz=244						
TWY	**Chenhua**	**0.60**	**332**	*e*P	**Pn**	**06 57 01.8**	**+0.1**
	baz=343						
TWY				*e*S	**Sn**	**06 57 11.9**	**0.0**
	baz=343						
NACB	**Ninganchiao**	**0.64**	**207**	*e*Pn	**Pn**	**06 57 01.3**	**-0.7**
NACB				*e*Sn	**Sn**	**06 57 10.7**	**-1.9**
NCU	**National Centr**	**0.70**	**289**	⇑P	**Pn**	**06 57 02.8**	**+0.2**
	baz=282						
NCU				S	**Sn**	**06 57 14.0**	**+0.3**
	baz=282						
TWD	**Chiawan**	**0.72**	**204**	P	**Pn**	**06 57 02.4**	**-0.5**
	baz=210						
TWD				*e*S	**Sn**	**06 57 13.4**	**-0.8**
	baz=210						
HWA	**Hwalien**	**0.81**	**200**	*e*P	**Pn**	**06 57 03.7**	**-0.3**
	baz=209						
TWT	**Tachien**	**0.83**	**234⇓**	*i*P	**Pn**	**06 57 05.2**	**+1.0**
	baz=233						
TWT				*e*S	**Sn**	**06 57 17.1**	**+0.7**
	baz=233						
NSTT	**Nanjuang**	**0.84**	**263**	P	**Pn**	**06 57 04.1**	**-0.2**
	baz=263						
NSTT				S	**Sn**	**06 57 16.1**	**-0.4**
	baz=263						
WHF	**Hehuan Shan**	**0.84**	**225**	⇓P	**Pn**	**06 57 04.7**	**+0.4**
	baz=217						
WHF				*e*S	**Sn**	**06 57 17.2**	**+0.6**
	baz=217						
HSN	**Hsinchu**	**0.86**	**274**	*e*P	**Pn**	**06 57 03.9**	**-0.6**
	baz=277						
HSN				*e*S	**Sn**	**06 57 16.4**	**-0.6**
	baz=277						
ESL	**Shilin**	**1.02**	**205**	*e*P	**Pn**	**06 57 04.7**	**-1.8**
	baz=203						
YOJ	**Yonaguni jima**	**1.04**	**105**	P	**Pn**	**06 57 06.5**	**-0.2**
YOJ				*e*S	**Sn**	**06 57 20.6**	**-0.3**
YOJ	**Yonaguni jima**	**1.04**	**105**	*e*P	**Pn**	**06 57 06.3**	**-0.4**
	baz=97						
YOJ				*e*S	**Sn**	**06 57 20.5**	**-0.4**
	baz=97						
NSY	**Sanyi**	**1.10**	**253**	P	**Pn**	**06 57 07.7**	**+0.3**
	baz=262						
NSY				S	**Sn**	**06 57 22.4**	**+0.2**
	baz=262						
TWQ1	**Liyutan**	**1.11**	**249**	*e*P	**Pn**	**06 57 07.8**	**+0.2**
	baz=249						
TWQ1				S	**Sn**	**06 57 22.6**	**+0.1**
	baz=249						
SMLT	**Sun Moon Lake**	**1.26**	**227**	*e*P	**Pn**	**06 57 10.1**	**+0.6**
	baz=235						
SMLT				*e*S	**Sn**	**06 57 28.2**	**+2.3**
	baz=235						
TCU	**Taichung**	**1.27**	**243**	*e*P	**Pn**	**06 57 10.2**	**+0.5**
	baz=242						
TYC	**Yuchr**	**1.27**	**229**	*e*P	**Pn**	**06 57 10.1**	**+0.4**
	baz=236						
TYC				*e*S	**Sn**	**06 57 26.7**	**+0.5**
	baz=236						
SSLB	**Suanglung**	**1.29**	**223**	*e*Pn	**Pn**	**06 57 10.7**	**+0.8**
SSLB				*e*Sn	**Sn**	**06 57 26.8**	**+0.1**
EHY	**Hungye**	**1.34**	**204**	*e*P	**Pn**	**06 57 09.1**	**-1.6**
	baz=201						
YULB	**Yu-li**	**1.46**	**203**	*e*Pn	**Pn**	**06 57 12.1**	**0.0**
YULB				*e*Sn	**Sn**	**06 57 30.2**	**-0.3**
TWF1	**Yuli**	**1.49**	**202**	*e*P	**Pn**	**06 57 11.3**	**-1.2**
	baz=204						
IRIF	**Iriomote-Funau**	**1.70**	**103**	P	**Pn**	**06 57 15.1**	**-0.3**
IRIF				*e*S	**Sn**	**06 57 36.2**	**-0.2**
ELDTW	**Lidau**	**1.75**	**208**	*e*P	**Pn**	**06 57 15.9**	**-0.1**
	baz=199						
CHN4	**Tsaushan**	**1.84**	**221**	*e*P	**Pn**	**06 57 18.4**	**+1.3**
	baz=219						
CHY	**Chiayi**	**1.84**	**228**	*e*P	**Pn**	**06 57 17.8**	**+0.6**
	baz=226						
TPUB	**Ta-pu**	**1.85**	**220**	*e*Pn	**Pn**	**06 57 18.0**	**+0.6**
TPUB				*e*Sn	**Sn**	**06 57 40.3**	**+0.4**
HATJ	**Hateruma jima**	**1.86**	**111**	P	**Pn**	**06 57 17.2**	**-0.2**
HATJ				*e*S	**Sn**	**06 57 39.8**	**-0.2**
STYT	**Tauyuan**	**1.90**	**214**	*e*P	**Pn**	**06 57 18.4**	**+0.5**
	baz=212						
TWK	**Hsinying**	**1.96**	**222**	*e*P	**Pn**	**06 57 19.7**	**+0.9**
	baz=219						
JKRS	**Kuro-shima**	**1.98**	**104**	P	**Pn**	**06 57 19.2**	**+0.2**
JKRS				*e*S	**Sn**	**06 57 43.3**	**+0.4**
SGST	**Jiashian**	**2.05**	**217**	*e*P	**Pn**	**06 57 19.9**	**-0.1**
	baz=225						
TWG	**Pinlang**	**2.06**	**202**	*e*Pn	**Pn**	**06 57 20.2**	**+0.1**
JIJ	**Ishigaki jima**	**2.07**	**100**	P	**Pn**	**06 57 20.0**	**-0.2**
JIJ				*e*S	**Sn**	**06 57 44.7**	**-0.3**
PNG	**Penghu**	**2.45**	**242**	*e*P	**Pn**	**06 57 23.5**	**-1.9**
	baz=241						
JTJ	**Tarama**	**2.54**	**92**	P	**Pn**	**06 57 27.7**	**+1.1**
JTJ				*e*S	**Sn**	**06 57 57.5**	**+1.0**
LAY	**Lan-yu**	**2.71**	**187**	*e*P	**Pn**	**06 57 26.8**	**-2.2**
	baz=184						
QZH	**Quanzhou**	**3.02**	**274⇓**	*i*Pn	**Pn**	**06 57 32.1**	**-1.1**
QZH				Sn	**Sn**	**06 58 04.4**	**-3.9**
QZH				smax			
	comp=N,140nm,0.8s						
QZH				smax			
	comp=E,70nm,0.6s						
KNM	**Kinmen**	**3.18**	**265**	*e*P	**Pn**	**06 57 35.4**	**0.0**
	baz=264						

*DDA **23** 07:52:36.6, 37°.71N×43°.87E, h6km±2km, Md3.1*
*ISK **23** 07:52:36.6, 37°.70N×43°.61E, h5km, MD3.2*
*ISCJB **23** 07:52:37.0±0.8, 37°.73N±0°.03×43°.77E±0°.08, h1km±11km, Error ellipse: s-maj=10.4km s-min=4.5km az=4.5*
*CSEM **23** 07:52:37.9±0.4, 37°.70N×43°.63E, h2km, MD3.2, Error ellipse: s-maj=27.5km s-min=6.7km az=83.0*

ISC 23 07:52:37.0±0.9, 37°.70N±0°.03×43°.86E±0°.09, h11km±8km, n18, σ0°87/27, Turkey

| Code | Station Name |

SEYT				*i* S	Sg	08 03 15.1	+0.1
ADVT	**Abdulvahap**	**1.29**	**8**	*e*PN	Pn	08 03 04.2	-0.1
ADVT	**Abdulvahap**	**1.29**	**8**	*e*Pn	Pn	08 03 04.2	-0.2
GPA	**Golpazari**	**1.29**	**28**	*e*PN	Pn	08 03 04.5	+0.2
GPA	**Golpazari**	**1.29**	**28**	*e*Pn	Pn	08 03 04.5	+0.1
GEMT	**Gemlik**	**1.30**	**349**	*e*PN	Pn	08 03 05.4	+0.8
GEMT	**Gemlik**	**1.30**	**349**	*e*Pn	Pn	08 03 05.4	+0.8
MDNY	**Mudanya-Bursa**	**1.31**	**338**	*e*PN	Pn	08 03 05.1	+0.5
MDNY	**Mudanya-Bursa**	**1.31**	**338**	*e*Pn	Pn	08 03 05.1	+0.5
AKHS	**Akhisar**	**1.35**	**259**	*i* P	Pn	08 03 04.8	-0.4
AKHS				*i* S	Sg	08 03 24.2	+1.0
AKHS	**Akhisar**	**1.35**	**259**	*i* P	Pn	08 03 04.8	-0.4
AKHS				*i* S	Sg	08 03 24.2	+1.0
AKS	**Akhisar**	**1.35**	**259**	*e*PN	Pn	08 03 04.3	-1.0
AKS	**Akhisar**	**1.35**	**259**	*e*Pn	Pn	08 03 04.3	-0.9
BALB	**Balikesir**	**1.36**	**291**	*e*PN	Pn	08 03 05.4	+0.1
BALB	**Balikesir**	**1.36**	**291**	*e*Pn	Pn	08 03 05.4	+0.1
YLV	**Yalova**	**1.41**	**356**	*e*PN	Pn	08 03 06.3	+0.2
YLV	**Yalova**	**1.41**	**356**	*e*Pn	Pn	08 03 06.3	+0.2
KCTX	**Karacabey (Bur**	**1.42**	**322**	*e*PN	Pn	08 03 05.5	-0.7
KCTX	**Karacabey (Bur**	**1.42**	**322**	*e*Pn	Pn	08 03 05.6	-0.6
GULT	**Gulveren**	**1.49**	**31**	*e*PN	Pn	08 03 06.9	-0.2
GULT	**Gulveren**	**1.49**	**31**	*e*Pn	Pn	08 03 06.9	-0.2
ARMT	**Armutlu**	**1.50**	**341**	*e*PN	Pn	08 03 07.4	+0.2
ARMT	**Armutlu**	**1.50**	**341**	*e*Pn	Pn	08 03 07.4	+0.2
BALY	**Balya**	**1.58**	**292**	*i* P	Pn	08 03 08.4	0.0
BALY				*i* S	Sn	08 03 29.0	-0.2
BALY	**Balya**	**1.58**	**292**	*i* P	Pn	08 03 08.4	+0.1
BALY				*i* S	Sn	08 03 29.0	-0.1
SVRH	**Sivrihisar-ESK**	**1.59**	**79**	*e*PN	Pn	08 03 08.5	+0.1
SVRH	**Sivrihisar-ESK**	**1.59**	**79**	*e*Pn	Pn	08 03 08.5	+0.1
HRT	**Hereke**	**1.67**	**4**	*e*PN	Pn	08 03 09.1	-0.5
HRT	**Hereke**	**1.67**	**4**	*e*Pn	Pn	08 03 09.1	-0.5
GONE	**Gonen-Balikesi**	**1.67**	**303**	*e*PN	Pn	08 03 09.2	-0.4
GONE	**Gonen-Balikesi**	**1.67**	**303**	*e*Pn	Pn	08 03 09.2	-0.4
MDU	**Mudurnu**	**1.85**	**44**	*e*PN	Pn	08 03 12.1	0.0
MDU	**Mudurnu**	**1.85**	**44**	*e*Pn	Pn	08 03 12.1	0.0
KIZT	**Kizilcal**	**1.86**	**98**	*e*PN	Pn	08 03 12.3	0.0
KIZT	**Kizilcal**	**1.86**	**98**	*e*Pn	Pn	08 03 12.3	0.0
ISK	**Istanbul-Kandi**	**1.94**	**350**	*e*PN	Pn	08 03 14.1	+0.8
ISK	**Istanbul-Kandi**	**1.94**	**350**	*e*Pn	Pn	08 03 14.1	+0.8
KLYT	**Kilyos**	**2.13**	**350**	*e*PN	Pn	08 03 16.4	+0.6
KLYT	**Kilyos**	**2.13**	**350**	*e*Pn	Pn	08 03 16.4	+0.5
CTKS	**Kestanelik-??a**	**2.22**	**340**	*e*PN	Pn	08 03 17.7	+0.5
CTKS	**Kestanelik-??a**	**2.22**	**340**	*e*Pn	Pn	08 03 17.7	+0.6
ERIK	**Erikli-Kesan**	**2.76**	**304**	*e*PN	Pn	08 03 26.1	+1.5
ERIK	**Erikli-Kesan**	**2.76**	**304**	*e*Pn	Pn	08 03 26.1	+1.5

ISCJB ***23*** *08:12:37.9±0.3, 67°.21S±0°.05×112°.5E±0°.1, h10km, mb5.0/37, MS4.9/21, Error ellipse: s-maj=8.4km s-min=7.4km az=20.9*

IDC ***23*** *08:12:38.5±0.5, 67°.22S×112°.66E, h0km, mb4.7/12, mb1 4.7/12, mb1mx4.7/14, mbtmp4.7/12, MS4.9/14, Ms1 4.9/14, ms1mx4.9/17, Error ellipse: s-maj=21.7km s-min=16.6km az=149.0*

GCMT ***23*** *08:12:40.3±0.2, 67°.38S×112°.12E, h12km, MW5.3, Moment Tensor Solution. s36,c45; s81,c135; Moment tensor: Scale 10^{17}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{\phi r}$0.00; Best double couple: M_0=1.20000×10^{17} NP1:ϕ_s=350.00000°, δ=23.00000°, λ=140.00000°. NP2:ϕ_s=118.00000°, δ=75.00000°, λ=72.00000°. Principal axes: T 1.2000, Plg=56.0000°, Azm=4.0000°; N -0.0200, Plg=18.0000°, Azm=123.0000°; P -1.1900, Plg=28.0000°, Azm=222.0000°; Data Used: II IU IC CN G.*

NEIC ***23*** *08:12:40.8±0.2, 67°.14S×112°.23E, h10km, mb5.1/12 Error ellipse: s-maj=11.6km s-min=9.9km az=143.0*

ISC 23 08:12:39.8±0.3, 67°.20S±0°.05×112°.3E±0°.1, h10km, (h14km±1.4km:pP-P), n354, σ1=20/68, mb5.0/37, MS4.9/21, 92C-83D, Antarctica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CASY	**Casey**	**1.16**	**322**	*e*Pn	Pn	08 13 01.5	-0.6
CASY				*e*Sn	Sn	08 13 18.3	+0.3
SBA	**Scott Base**	**18.55**	**147**	*e*P	Pn	08 16 50.1	-6.2
8.5nm,0.6s							
MAW	**Mawson**	**18.61**	**246**	P	Pn	08 16 53.1	-4.0
1.5nm,0.3s,baz=115,slow=14,SNR=54							
MAW				S	Sn	08 20 09.5	-15
2.3nm,0.3s,baz=179,slow=24,SNR=7.1							
MAW				Lg		08 22 18.0	
0.4nm,0.3s,baz=188,slow=14,SNR=1.9							
MAW				LR	LR	08 23 12.7	
comp=Z,2μm,19.3s,baz=203,slow=34							
MAW	**Mawson**	**18.61**	**246**	*e*Pn	Pn	08 16 54.0	-3.1
1.5nm,1.0s							
MAW				*e*Sn	Sn	08 20 09.0	-16
QSPA	**South Pole Qui**	**22.88**	**180**	P	P	08 17 42.7	-0.2
14nm,0.7s,mb4.5,baz=341,slow=4.0,SNR=50							
QSPA				S	S	08 21 41.1	-11
22nm,0.9s,baz=186,slow=18,SNR=2.4							
QSPA				Lg		08 24 29.5	
58nm,1.1s,baz=341,slow=23,SNR=3.6							
QSPA				LR	LR	08 27 13.2	
comp=Z,6μm,19.1s,MS5.1,baz=328,slow=38							
QSPA	**South Pole Qui**	**22.88**	**180**	P	P	08 17 42.7	-0.2
QSPA				S	S	08 21 41.1	-11
QSPA				Lg		08 24 29.5	
QSPA				LR	LR	08 27 13.2	
SYO	**Syowa Base**	**25.74**	**232**	*e*X	P	08 18 07.4	-2.5
MAIT	**Maitri**	**32.30**	**218**	*e*P	P	08 19 07.3	-0.9
MAIT				*e*		08 19 44.0	
TOO	**Toolangi**	**35.08**	**49**	*e*P	P	08 19 33.6	+0.9
KLBR	**Kellerberrin**	**35.79**	**8**	*e*P	P	08 19 37.7	-1.1
21nm,0.6s,mb5.2							
VNA1	**Neumayer--Stat**	**36.66**	**209**	*e*P	P	08 19 45.2	-0.7
VNA1				*e*	pP	08 19 48.5	-0.5
VNA1				*e*	pP	08 19 50.0	+1.0
FORT	**Forrest**	**37.65**	**22**	*e*P	P	08 19 54.8	+0.1
18nm,0.6s,mb5.0							
CAN	**Canberra**	**38.22**	**52**	*e*P	P	08 20 00.3	+0.8
30nm,0.8s,mb5.1							
CNB	**Canberra Magne**	**38.34**	**53**	*e*P	P	08 20 01.1	+0.7
RPZ	**Rata Peaks**	**38.66**	**83**	P	P	08 20 06.5	+3.4
35nm,1.0s,mb5.0,baz=14,slow=20,SNR=4.2							
RPZ				LR	LR	08 34 15.2	
comp=Z,1μm,18.9s,MS4.7,baz=207,slow=34							
STKA	**Stephens Creek**	**39.36**	**41**	*e*P	P	08 20 09.2	+0.2
28nm,0.6s,mb5.2							
STKA	**Stephens Creek**	**39.36**	**41**	P	P	08 20 07.8	-1.2
42nm,0.8s,mb5.2,baz=180,slow=5.8,SNR=52							
STKA				LR	LR	08 33 48.3	
comp=Z,3μm,19.3s,MS5.1,baz=198,slow=32							
STKA	**Stephens Creek**	**39.36**	**41**	*e*P	P	08 20 09.1	+0.1
7.7nm,0.7s,mb4.5							
RIV	**Riverview**	**40.27**	**54**	*e*P	P	08 20 25.4	+8.8
ARMA	**Armidale**	**43.58**	**53**	*e*P	P	08 20 46.9	+3.2
ASAR	**Alice Springs**	**45.59**	**28**	P	P	08 20 59.3	-0.4
28nm,0.7s,mb5.3,baz=197,slow=7.0,SNR=226							
URZ	**Urewera**	**45.69**	**85**	P	P	08 21 00.1	-0.3
29nm,1.0s,mb5.2,baz=208,slow=8.0,SNR=6.1							
URZ				LR	LR	08 39 13.3	
comp=Z,2μm,18.1s,MS5.0,baz=220,slow=35							
MBWA	**Marble Bar**	**46.27**	**10**	*e*P	P	08 21 04.1	-1.0
21nm,0.8s,mb5.1							
WRAB	**Tennant Creek**	**49.31**	**28**	P	P	08 21 28.0	-0.7
278nm,0.8s,SNR=17							
WRAB	**Tennant Creek**	**49.31**	**28**	*e*P	P	08 21 27.8	-0.9
39nm,0.8s,mb5.5							
FITZ	**Fitzroy Crossi**	**49.83**	**17**	*e*P	P	08 21 32.7	+0.1
26nm,1.1s,mb5.2							
FITZ	**Fitzroy Crossi**	**49.83**	**17**	*e*P	P	08 21 32.2	-0.4
42nm,1.4s,mb5.3							
CTA	**Charters Tower**	**51.81**	**42**	*e*P	P	08 21 45.1	-2.5
14nm,1.5s,mb4.7							
RAO	**Raoul Island**	**55.57**	**84**	LR	LR	08 43 00.8	
comp=Z,467nm,18.3s,MS4.6,baz=231,slow=33							
KAKA	**Kakadu**	**56.05**	**24**	*e*P	P	08 22 18.0	-0.6
8.7nm,0.5s,mb5.0							
KAKA	**Kakadu**	**56.05**	**24**	*e*P	P	08 22 17.9	-0.7
79nm,1.0s,mb5.7							
KAKA	**Kakadu**	**56.05**	**24**	P	P	08 22 15.3	-3.3
36nm,0.9s,mb5.4							
DZM	**Mont Dzumac**	**56.23**	**65**	*e*P	P	08 22 21.8	+1.9
91nm,1.3s,mb5.7							
DZM				*e*LR	LR	08 38 42.1	
1μm,22.6s							
DZM	**Mont Dzumac**	**56.23**	**65**	*e*P	P	08 22 20.0	+0.1
22nm,0.8s,mb5.2							
COEN	**Coen**	**56.94**	**36**	*e*P	P	08 22 24.9	0.0
619nm,2.2s							
USHA	**Ushuaia**	**58.29**	**179**	LR	LR	08 48 16.3	
comp=Z,1μm,18.9s,MS5.1,baz=113,slow=37							
SUR	**Sutherland**	**61.17**	**255**	P	P	08 22 55.3	+1.2
7.9nm,0.7s,mb4.9,baz=135,slow=7.8,SNR=8.4							
PMG	**Port Moresby**	**62.28**	**40**	*e*P	P	08 23 02.3	+0.5
87nm,1.4s,mb5.7							
PMG	**Port Moresby**	**62.28**	**40**	P	P	08 23 00.6	-1.2
41nm,1.8s,mb5.3							
KLSI		**62.62**	**351**	P	P	08 23 02.5	-1.5
49nm,1.6s,mb5.4							
BOSA	**Boshof**	**62.85**	**261**	P	P	08 23 07.1	+1.6
2.1nm,0.6s,mb4.4,baz=149,slow=10,SNR=6.1							
BOSA				LR	LR	08 45 58.5	
comp=Z,1μm,19.2s,MS5.1,baz=157,slow=32							
MDSI	**Maura Dua**	**62.86**	**351**	P	P	08 23 04.8	-0.8
29nm,1.4s,mb5.2							
MNAI	**Manna**	**63.06**	**350**	P	P	08 23 03.2	-3.8
221nm,1.3s,mb6.1							
SPSI	**Sidrap Palu**	**63.33**	**8**	P	P	08 23 08.0	-0.8
58nm,0.8s,mb5.8							
OPO	**Ambohidratompo**	**63.45**	**286**	P	P	08 23 10.8	+1.3
2.3nm,0.7s,mb4.4,baz=170,slow=6.1,SNR=4.3							
KDI	**Kendari**	**63.53**	**12**	P	P	08 23 08.9	-1.2
26nm,1.4s,mb5.1							
LBTB	**Lobatse**	**65.95**	**263**	P	P	08 23 26.6	+0.7
2.9nm,0.8s,mb4.4,baz=169,slow=0.5,SNR=2.9							
SBUM	**Sibu**	**69.50**	**360**	P	P	08 23 48.2	0.0
14nm,1.4s,mb4.7							
TBI	**Tubuai**	**71.84**	**107**	*e*S	S	08 33 25.0	+2.2
261nm,26.5s							
TBI				*e*LQ		08 43 10.0	
566nm,35.8s							
TBI				*e*LR	LR	08 46 02.2	
494nm,24.0s							
IPM	**Ipoh**	**71.96**	**348**	P	P	08 24 03.4	+0.2
29nm,0.9s,mb5.2							
PLCA	**Paso Flores**	**72.38**	**178**	P	P	08 24 05.5	0.0
3.0nm,0.8s,mb4.3,baz=245,slow=5.5,SNR=3.0							
PLCA				LR	LR	08 55 19.3	
comp=Z,1μm,19.0s,MS5.2,baz=185,slow=35							
PLCA	**Paso Flores**	**72.38**	**178**	P	P	08 24 05.5	0.0
PLCA				LR	LR	08 55 19.3	
LSZ	**Lusaka**	**73.76**	**269**	*e*P	P	08 24 17.3	+3.4
24nm,1.4s,mb4.9							
TSUM	**Tsumeb**	**74.29**	**258**	*e*P	P	08 24 18.7	+1.7
10nm,1.1s,mb4.7							
PPT	**Papeete**	**77.07**	**104**	*e*S	S	08 34 23.4	+1.9
359nm,26.0s							
PPT				*e*LQ		08 45 05.2	
765nm,31.8s							
PPT				*e*LR	LR	08 48 27.8	
651nm,22.5s							
PPT	**Papeete**	**77.07**	**104**	LR	LR	08 51 49.0	
comp=Z,495nm,18.4s,MS4.9,baz=206,slow=31							
RKT	**Rikitea**	**77.23**	**119**	*e*S	S	08 34 27.3	+4.1
249nm,26.2s							
RKT				*e*LQ		08 45 24.1	
358nm,29.8s							
RKT				*e*LR	LR	08 48 38.2	
384nm,25.5s							
KMBO	**Kilima Mbogo**	**83.20**	**283**	P	P	08 25 07.9	+1.9
4.4nm,0.9s,mb4.5,baz=180,slow=23,SNR=7.6							
KMBO				LR	LR	09 01 00.5	
comp=Z,258nm,18.7s,MS4.6,baz=89,slow=35							
KMBO	**Kilima Mbogo**	**83.20**	**283**	*e*P	P	08 25 10.0	+4.0
9.7nm,1.0s,mb4.8							
CMAR	**Chiang Mai Arr**	**85.98**	**347**	P	P	08 25 19.9	+0.1
0.9nm,0.4s,mb4.4,baz=204,slow=5.6,SNR=6.9							
CMAR				LR	LR	09 01 41.5	
comp=Z,427nm,18.2s,MS4.9,baz=308,slow=34							
QIZ	**Qiongzhong**	**85.99**	**358**	P	P	08 25 22.4	+2.6
QIZ				sP	sP	08 25 27.3	+2.9
QIZ				S	S	08 35 56.3	+2.9
QIZ				pmax	pmax		
comp=Z,8.0nm,0.9s,mb5.0							
QIZ				pmax	pmax		
comp=Z,59nm,3.4s							
QIZ				LR	LR		
comp=N,170nm,24.4s,MS4.5							
QIZ				LR	LR		
comp=E,98nm,20.6s,MS4.5							
QIZ				LR	LR		
comp=Z,280nm,16.8s,MS4.7							
CHTO	**Chiang Mai**	**86.33**	**347**	P	P	08 25 13.1	-8.4
CPUP	**Villa Florida**	**86.43**	**189**	P	P	08 25 21.4	-0.8
comp=Z,0.3nm,0.3s,mb4.0,baz=159,slow=7.2,SNR=3.1							
CPUP				LR	LR	09 05 52.6	
comp=Z,871nm,18.9s,MS5.2,baz=161,slow=37							
CPUP	**Villa Florida**	**86.43**	**189**	P	P	08 25 21.4	-0.8
CPUP				LR	LR	09 05 52.6	
TAOE	**Nuku Hiva Isla**	**88.58**	**110**	*e*LR	LR	08 53 42.5	
comp=Z,234nm,22.5s							
QZH	**Quanzhou**	**91.98**	**6⇑**	*i*P	P	08 25 49.1	+1.0
QZH				S	S	08 36 51.6	+2.2
KMI	**Kunming**	**92.32**	**351**	P	P	08 25 53.1	+3.5
KMI				pP	pP	08 25 57.0	+4.0
KMI				sP	sP	08 25 58.3	+4.1
KMI				PP	PP	08 29 36.6	+5.9
KMI				S	S	08 36 54.3	+1.9
KMI				SS	SS	08 43 08.3	+4.6
KMI				pmax	pmax		
comp=Z,9.0nm,0.9s,mb5.1							
KMI				pmax	pmax		
comp=Z,74nm,4.2s							
KMI				LR	LR		
comp=N,320nm,20.4s,MS4.8							
KMI				LR	LR		
comp=E,120nm,23.1s,MS4.8							
KMI				LR	LR		
comp=Z,290nm,19.0s,MS4.8							
GYA	**Guiyang**	**93.46**	**355**	P	P	08 25 58.8	+3.9
GYA				PP	PP	08 29 45.6	+5.9
GYA				SKS		08 36 31.3	
GYA				S	S	08 37 05.3	+2.8
GYA				SS	SS	08 43 24.3	+4.2
GYA				pmax	pmax		
comp=Z,30nm,1.0s,mb5.7							
GYA				pmax	pmax		
comp=Z,160nm,6.4s							
GYA				LR	LR		
comp=N,870nm,20.7s,MS5.3							
GYA				LR	LR		
comp=E,750nm,22.8s,MS5.3							
GYA				LR	LR		
comp=E,950nm,21.5s							
LPAZ	**La Paz**	**96.75**	**180**	LR	LR	09 12 53.7	
comp=E,522nm,19.3s,MS5.0,baz=171,slow=37							
CD2	**Chengdu**	**98.02**	**353**	P	P	08 26 19.8	+4.2
CD2				pP	pP	08 26 24.5	+5.6
CD2				sP	sP	08 26 26.8	+6.7
CD2				PP	PP	08 30 21.6	+6.6
CD2				SKS		08 36 55.8	
CD2				S	S	08 37 42.9	+1.1
CD2				sS	sS	08 37 50.5	+3.2
CD2				SS	SS	08 44 28.3	+3.7
CD2				pmax	pmax		
comp=Z,10.0nm,0.6s,mb5.5							
CD2				pmax	pmax		
comp=Z,140nm,4.8s							
CD2				LR	LR		
comp=N,390nm,18.4s							
CD2				LR	LR		
comp=Z,290nm,18.4s,MS4.8							
NJ2	**Nanjing**	**99.06**	**6**	*e*P	P	08 26 21.0	+0.8
NJ2				pmax	pmax		
comp=Z,10.0nm,0.6s,mb5.5							
HHC	**Hu-ho-hao-te**	**107.72**	**359**	Pdif	Pdif	08 27 00.5	+1.0
HHC				PP	PP	08 31 31.8	+4.2
HHC				SS	SS	08 46 41.0	+2.6
HHC				AMB	AMB		
comp=Z,97nm,9.0s							
HHC				LR	LR		
comp=N,170nm,19.0s,MS4.8							
HHC				LR	LR		
comp=E,160nm,19.4s,MS4.8							
HHC				LR	LR		
comp=Z,170nm,19.1s,MS4.6							
CN2	**Changchun**	**111.12**	**10**	*e*PKP	PKiKP	08 31 12.0	-0.3
CN2				PP	PP	08 31 55.3	+3.1
CN2				SS	SS	08 47 21.3	-2.8
CN2				LR	LR		
comp=N,200nm,12.0s,MS5.1							
CN2				LR	LR		
comp=E,200nm,12.0s,MS5.1							
CN2				LR	LR		
comp=Z,200nm,16.0s,MS4.8							
MDJ	**Mudanjiang**	**112.26**	**13**	Pdif	Pdif	08 27 21.1	+1.4
MDJ				PP	PP	08 32 02.8	+2.4
MDJ				AMB	AMB		
comp=Z,67nm,8.8s							
MDJ				LR	LR		
comp=Z,120nm,38.5s,MS4.2							
WMQ	**Urumqi**	**112.27**	**341**	*e*PKP	PKiKP	08 31 17.5	+3.1
WMQ				LR	LR		
comp=N,140nm,21.0s							
WMQ				LR	LR		
comp=Z,140nm,21.0s,MS4.5							
MKAR	**Makanchi Array**	**115.93**	**338**	PKP	PKPdf	08 31 22.0	+0.7
comp=Z,0.4nm,0.5s,baz=264,slow=2.8,SNR=3.7							
BRTR	**Keskin Array B**	**121.81**	**297**	PKP	PKPdf	08 31 33.9	+1.0
comp=Z,0.7nm,0.8s,baz=155,slow=6.5,SNR=4.3							
ZALV	**Zalesovo Beam**	**122.58**	**341**	PKP	PKPdf	08 31 33.8	-0.1
comp=Z,0.6nm,0.4s,baz=297,slow=1.3,SNR=3.5							
BVAR	**Borovoye Array**	**123.97**	**331**	PKP	PKPdf	08 31 37.2	+0.6
comp=Z,1.1nm,0.6s,baz=156,slow=8.0,SNR=5.1							
PETK	**Petropavlovsk-**	**124.73**	**31**	PKP	PKPdf	08 31 39.1	+1.1
comp=Z,1.2nm,0.7s,baz=174,slow=4.5,SNR=3.8							
MORC	**Moravsky Berou**	**136.23**	**291**	*e*PKPdf	PKPdf	08 32 00.4	+0.5
TXAR	**Lajitas Array**	**136.41**	**132**	PKhKP	PKPpre	08 31 53.3	
comp=Z,0.4nm,0.8s,baz=204,slow=2.6,SNR=3.4							
TUC	**Tucson**	**136.96**	**122**	*e*PKPdf	PKPdf	08 32 04.3	+2.4
KHC	**Kasperske Hory**	**137.16**	**287**	*e*PKPdf	PKPdf	08 32 03.6	+2.0
MNTX	**Cornudas Mount**	**138.11**	**129**	*e*PKPdf	PKPdf	08 32 05.8	+1.7
NVAR	**Mina Array Bea**	**139.84**	**110**	PKhKP	PKPpre	08 32 02.3	
comp=Z,1.1nm,0.8s,baz=199,slow=6.5,SNR=4.7							
NVAR				PP	PP	08 34 56.4	-7.2
comp=Z,2.1nm,1.0s,baz=200,slow=5.5,SNR=4.9							
S12A	**Delamar Landin**	**140.36**	**114**	⇓P	PKPdf	08 32 04.3	-3.6
baz=140							
R11A	**Troy Canyon, C**	**140.76**	**113**	⇑P	PKPdf	08 32 04.9	-3.8
baz=141							
R12A	**Pony Springs,**	**141.09**	**114**	⇑P	PKPdf	08 32 06.7	-2.5
baz=141							
X26A	**CR and CF Fran**	**141.24**	**129**	⇑P	PKPdf	08 32 05.1	-4.5
baz=142							
V22A	**San Miguel Ran**	**141.53**	**124**	⇑P	PKPdf	08 32 06.2	-3.9
baz=142							
V23A	**Ortiz Mt. (NFS**	**141.60**	**125**	⇓P	PKPdf	08 32 07.4	-2.9
baz=142							
Q12A	**Willow Creek R**	**141.64**	**113**	⇓P	PKPdf	08 32 07.1	-3.1
baz=142							
T18A	**Mexican Hat**	**141.66**	**120**	⇓P	PKPdf	08 32 06.3	-4.0
baz=142							
U21A	**Nageezi**	**141.75**	**123**	⇓P	PKPdf	08 32 06.9	-3.6
baz=142							
Q13A	**Wheeler Ranch,**	**141.86**	**114**	⇓P	PKPdf	08 32 06.7	-3.9
baz=142							
V24A	**Rampart Ranch,**	**141.88**	**127**	⇑P	PKPdf	08 32 07.2	-3.5
baz=142							
P12A	**McGill**	**142.00**	**113**	⇓P	PKPdf	08 32 08.5	-2.4
baz=142							
MSU	**Marysvale**	**142.11**	**116**	*e*PKPdf	PKPdf	08 32 08.2	-2.8
U23A	**El Rito**	**142.14**	**125**	⇓P	PKPdf	08 32 06.9	-4.3
baz=142							
V25A	**Rancho No Teng**	**142.18**	**127**	⇓P	PKPdf	08 32 07.2	-4.1
baz=142							
Q15A	**Fillmore**	**142.48**	**116**	⇑P	PKPdf	08 32 07.7	-4.0
baz=143							
T22A	**Edith**	**142.54**	**124**	⇑P	PKPdf	08 32 08.5	-3.4
baz=143							
K05A	**Summer Lake**	**142.62**	**104**	⇑P	PKPdf	08 32 08.4	-3.5
baz=143							
FINES	**FINESS Array B**	**142.69**	**308**	PKP	PKPdf	08 32 13.3	+2.0
comp=Z,2.0nm,0.9s,baz=329,slow=1.6,SNR=4.2							
P14A	**Drum Mountains**	**142.76**	**115**	⇓P	PKPdf	08 32 08.7	-3.5
baz=143							
S20A	**Disappointment**	**142.80**	**121**	⇓P	PKPdf	08 32 09.1	-3.3
baz=143							
Q16A	**Castle Valley**	**142.82**	**117**	⇓P	PKPdf	08 32 09.6	-2.8
baz=143							
T23A	**Caslas Ranch,**	**142.84**	**125**	⇓P	PKPdf	08 32 09.1	-3.3
baz=143							
WMOK	**Wichita Mounta**	**142.87**	**135**	*e*PKPdf	PKPdf	08 32 09.4	-3.1
U26A	**Atchley Ranch,**	**142.97**	**128**	⇑P	PKPdf	08 32 09.8	-2.9
baz=143							
R20A	**Redvale**	**143.12**	**121**	⇓P	PKPdf	08 32 10.0	-2.9
baz=143							
WVOR	**Wild Horse Val**	**143.22**	**106**	*e*PKPdf	PKPdf	08 32 13.1	+0.2
SRU	**San Rafael**	**143.22**	**118**	⇑P	PKPdf	08 32 10.3	-2.8
baz=143							
S22A	**4UR Ranch, Cre**	**143.23**	**123**	⇑P	PKPdf	08 32 10.8	-2.3
baz=143							
T25A	**Trinidad**	**143.44**	**127**	⇓P	PKPdf	08 32 11.2	-2.3
baz=144							
Q19A	**Hogan Spring (**	**143.51**	**120**	⇑P	PKPdf	08 32 11.4	-2.1
baz=144							
R21A	**Cimarron**	**143.56**	**122**	⇑P	PKPdf	08 32 11.4	-2.3
baz=144							
S24A	**Houchin Ranch,**	**143.65**	**125**	⇓P	PKPdf	08 32 11.7	-2.1
baz=144							
SDCO	**Great Sand Dun**	**143.66**	**125**	*e*PKPdf	PKPdf	08 32 12.7	-1.1
R22A	**Saguache, Gunn**

G06A	Carlson Farm,	144.85 102	⇓P	PKPdf	08 32 14.8	-0.9
	baz=145,SNR=14					
L14A	Malta	144.85 113	⇓P	PKPdf	08 32 14.6	-1.2
	baz=145,SNR=25					
Q24A	Divide	144.88 124	⇑P	PKPdf	08 32 16.1	+0.2
	baz=145,SNR=8.2					
O20A	White River Ci	144.92 120	⇑P	PKPdf	08 32 15.5	-0.4
	baz=145,SNR=9.1					
OXF	Oxford	144.92 148	ePKPbc	PKPdf	08 32 15.9	-0.3
GOGA	Godfrey	144.93 157	ePKPbc	PKPdf	08 32 15.3	-0.9
P23A	Jefferson	145.03 123	⇑P	PKPbc	08 32 16.1	+0.5
	baz=145,SNR=21					
HWUT	Hardware Ranch	145.07 115	ePKPbc	PKPbc	08 32 16.8	+1.2
K13A	Stover Farm, H	145.08 111	⇑P	PKPbc	08 32 15.9	+0.3
	baz=145,SNR=17					
Q25A	Bedland, Calha	145.12 126	⇑P	PKPbc	08 32 15.3	-0.6
	baz=145,SNR=6.6					
L15A	Malad City	145.13 114	⇓P	PKPbc	08 32 15.4	-0.5
	baz=145,SNR=19					
N18A	Larsen Ranch,	145.18 118	⇓P	PKPbc	08 32 15.6	-0.4
	baz=145					
J12A	Stokes Ranch,	145.23 109	⇓P	PKPbc	08 32 15.8	-0.4
	baz=145,SNR=34					
O21A	Pagoda	145.25 121	⇑P	PKPbc	08 32 16.0	-0.3
	baz=145					
M17A	Scullys Gap (B	145.27 116	⇓P	PKPbc	08 32 15.9	-0.5
	baz=145,SNR=11					
N19A	John Jarvie Ra	145.28 118	⇑P	PKPbc	08 32 16.2	-0.2
	baz=146					
K14A	Jones Ranch, D	145.32 112	⇑P	PKPbc	08 32 16.2	-0.2
	baz=146,SNR=20					
NLWA	Neilton Lookou	145.40 96	⇑P	PKPdf	08 32 16.6	+0.1
	baz=146					
NLWA	Neilton Lookou	145.40 96	ePKPbc	PKPbc	08 32 18.0	+1.5
M18A	Lyman	145.44 117	⇑P	PKPdf	08 32 16.7	-0.2
	baz=146,SNR=15					
P24A	Kohler Place,	145.46 124	⇓P	PKPdf	08 32 17.1	+0.2
	baz=146					
L16A	Fish Haven	145.48 115	⇑P	PKPdf	08 32 16.6	-0.3
	baz=146,SNR=10.0					
ISCO	Idaho Springs	145.49 123	ePKPdf	PKPdf	08 32 17.0	+0.1
TTA	Tatalina	145.50 54	ePKPbc	PKPbc	08 32 16.6	+0.2
O22A	Kremmling	145.51 122	⇑P	PKPdf	08 32 17.1	+0.1
	baz=146,SNR=52					
G08A	Pilot Rock	145.53 103	⇑P	PKPdf	08 32 16.8	0.0
	baz=146,SNR=21					
N20A	Spence Gulch,	145.53 119	⇓P	PKPdf	08 32 16.6	-0.4
	baz=146,SNR=22					
LON	Longmire	145.66 99	ePKPdf	PKPdf	08 32 17.2	+0.2
K15A	Arbon	145.68 113	⇓P	PKPdf	08 32 17.2	0.0
	baz=146,SNR=13					
I12A	Atlanta	145.69 109	⇑P	PKPdf	08 32 16.9	-0.2
	baz=146,SNR=9.4					
P25A	Willow Gulch B	145.69 125	⇑P	PKPdf	08 32 17.6	+0.3
	baz=146,SNR=5.9					
J13A	Cove Ranch, Pi	145.70 110	⇑P	PKPdf	08 32 17.5	+0.4
	baz=146,SNR=23					
N21A	Black Mountain	145.72 120	⇑P	PKPdf	08 32 17.3	0.0
	baz=146,SNR=24					
HLID	Hailey	145.75 110	⇑P	PKPdf	08 32 17.6	+0.4
	baz=146,SNR=22					
HLID	Hailey	145.75 110	ePKPdf	PKPdf	08 32 18.3	+1.0
L17A	Cokeville	145.75 115	⇑P	PKPdf	08 32 17.3	0.0
	baz=146,SNR=9.8					
O23A	Lake Granby, G	145.76 123	⇓P	PKPdf	08 32 18.0	+0.6
	baz=146,SNR=22					
BMO	Blue Mountains	145.78 106	ePKPdf	PKPdf	08 32 17.3	+0.1
M19A	Rock Springs	145.83 118	⇓P	PKPdf	08 32 18.2	+0.7
	baz=146					
J14A	Carey	145.87 111	⇑P	PKPdf	08 32 18.1	+0.6
	baz=146,SNR=31					
L18A	Fontenelle, Gr	145.89 116	⇑P	PKPdf	08 32 18.0	+0.5
	baz=146,SNR=16					
GNW	Green Mountain	145.94 97	ePKPdf	PKPdf	08 32 18.4	+1.0
D05A	Enumclaw	145.96 98	⇑P	PKPdf	08 32 18.3	+0.8
	baz=146					
JSC	Jenkinsville	146.10 160	ePKPdf	PKPdf	08 32 19.4	+1.2
N22A	Wattenberg Ran	146.11 122	⇓P	PKPdf	08 32 18.8	+0.8
	baz=146,SNR=20					
K16A	Soda Springs	146.14 114	⇑P	PKPdf	08 32 18.7	+0.7
	baz=146,SNR=13					
M20A	Sweetwater, Wa	146.15 119	⇓P	PKPdf	08 32 19.0	+1.0
	baz=146,SNR=32					
I13A	Wildhorse Cree	146.17 110	⇑P	PKPdf	08 32 19.1	+1.1
	baz=146					
RC01	Rabbit Creek A	146.21 60	ePKPdf	PKPdf	08 32 18.2	+0.7
RSW	Rattlesnake Hi	146.22 102	ePKPdf	PKPdf	08 32 19.5	+1.5
E07A	Sunnyside	146.25 101	⇑P	PKPdf	08 32 19.4	+1.4
	baz=146					
O25A	Wiggins	146.25 125	⇓P	PKPdf	08 32 19.2	+1.0
	baz=146					
AHID	Auburn Hatcher	146.26 114	ePKPdf	PKPdf	08 32 20.1	+1.9
LNOR	Lincton Mounta	146.28 104	ePKPdf	PKPdf	08 32 19.2	+1.2
SWET	Sewanee	146.28 153	ePKPdf	PKPdf	08 32 18.9	+0.4
L19A	Farson	146.28 117	⇓P	PKPdf	08 32 18.9	+0.7
	baz=146,SNR=21					
K17A	Gardner Place,	146.31 115	⇓P	PKPdf	08 32 19.2	+1.0
	baz=146,SNR=11					
J15A	Blackfoot	146.33 112	⇓P	PKPdf	08 32 19.5	+1.3
	baz=146					
N23A	Red Feather La	146.37 122	⇑P	PKPdf	08 32 19.7	+1.3
	baz=147,SNR=14					
CBKS	Cedar Bluff	146.40 131	ePKPbc	PKPbc	08 32 21.4	+1.5
I14A	Mackay	146.42 111	⇑P	PKPdf	08 32 19.6	+1.2
	baz=147,SNR=15					
H12A	Diamond D Ranc	146.44 108	⇑P	PKPdf	08 32 19.4	+1.0
	baz=147,SNR=14					
E08A	Dider Farm, El	146.50 102	⇓P	PKPdf	08 32 19.7	+1.3
	baz=147					
J16A	Bone	146.52 113	⇓P	PKPdf	08 32 19.4	+0.9
	baz=147,SNR=7.9					
K18A	Toltan Ranch,	146.52 116	⇑P	PKPdf	08 32 19.8	+1.2
	baz=147,SNR=19					
M21A	Separation Pea	146.53 120	⇑P	PKPdf	08 32 20.1	+1.5
	baz=147,SNR=17					
L20A	Wamsutter	146.55 118	⇑P	PKPdf	08 32 20.1	+1.5
	baz=147,SNR=15					
N24A	Carr	146.65 123	⇑P	PKPdf	08 32 20.4	+1.5
	baz=147					
RWWY	Rawlins	146.65 120	ePKPdf	PKPbc	08 32 21.0	+0.5
H13A	Challis	146.67 109	⇓P	PKPdf	08 32 19.9	+1.1
	baz=147,SNR=15					
RRI2	Red Ridge	146.69 114	ePKPdf	PKPdf	08 32 20.5	+1.6
PPLA	Purkeypile	146.69 56	ePKPdf	PKPdf	08 32 20.8	+2.6
CPCT	Cooper Cave	146.75 154	ePKPdf	PKPdf	08 32 20.0	+0.8
F10A	Beach Ranch, E	146.76 105	⇓P	PKPdf	08 32 20.5	+1.6
	baz=147,SNR=6.5					
PMR	Palmer	146.78 60	ePKPdf	PKPdf	08 32 20.0	+1.6
BW06	Boulder Array	146.80 116	⇑P	PKPdf	08 32 20.5	+1.5
	baz=147,SNR=23					
BW06	Boulder Array	146.80 116	eP	PKPdf	08 32 21.0	+1.9
PDAR	Pinedale Array	146.80 116	PKPbc	PKPbc	08 32 20.9	0.0
	comp=Z,6.6nm,0.7s,baz=166,slow=4.3,SNR=30					
JCW	Jim Creek	146.80 97	ePKPdf	PKPdf	08 32 20.4	+1.5
WVT	Waverly	146.81 149	ePKPdf	PKPdf	08 32 19.6	+0.3
I15A	Monteview	146.83 112	⇑P	PKPdf	08 32 21.0	+1.9
	baz=147,SNR=7.9					
L21A	Rawlins	146.85 119	⇑P	PKPdf	08 32 20.5	+1.3
	baz=147,SNR=16					
E09A	Wood Farm, Sta	146.87 103	⇑P	PKPdf	08 32 20.2	+1.2
	baz=147					
REDW	Red Top Meadow	146.87 114	ePKPdf	PKPdf	08 32 21.2	+2.0
J17A	Brown Place, J	146.92 114	⇑P	PKPdf	08 32 21.1	+1.9
	baz=147					
ETW	Entiat	146.94 100	ePKPdf	PKPdf	08 32 20.8	+1.7
DCID1	Drake Creek	146.95 114	ePKPdf	PKPbc	08 32 22.2	+0.9
D08A	Wollman Farm,	147.02 102	⇑P	PKPdf	08 32 20.6	+1.3
	baz=147,SNR=9.3					
J18A	Kendall Valley	147.03 115	⇑P	PKPdf	08 32 21.3	+1.9
	baz=147,SNR=17					
H14A	Leadore	147.04 110	⇓P	PKPdf	08 32 20.8	+1.4
	baz=147					
I16A	Newdale	147.09 113	⇓P	PKPdf	08 32 21.2	+1.7
	baz=147,SNR=8.6					
K19A	Absolon Red Bu	147.10 117	⇓P	PKPdf	08 32 21.2	+1.6
	baz=147,SNR=36					
G13A	Cobalt	147.13 109	⇑P	PKPdf	08 32 21.0	+1.5
	baz=147,SNR=18					
LOHW	Long Hollow	147.17 114	ePKPbc	PKPab	08 32 24.1	+0.5
NAO01	NORSAR Array S	147.22 298	ePKPbc	PKPbc	08 32 23.5	+2.0
L22A	Ellis Ranch, M	147.22 121	⇑P	PKPdf	08 32 21.9	+2.1
	baz=147					
B06A	Marblemount	147.24 97	⇓P	PKPdf	08 32 20.9	+1.3
	baz=147					
NB2	NORSAR Subarra	147.25 298	PKP	PKPdf	08 32 21.8	+2.6
	comp=Z,3.9nm,0.8s,baz=134,slow=4.1					
NOA	NORSAR Array B	147.25 298	PKPbc	PKPbc	08 32 22.8	+1.2
	comp=Z,2.5nm,0.7s,baz=123,slow=3.3,SNR=7.1					
IMW	Indian Meadow	147.30 114	ePKPdf	PKPbc	08 32 22.8	+0.5
H15A	Lima	147.31 111	⇓P	PKPdf	08 32 20.7	+0.9
	baz=148,SNR=22					
F12A	Elk City	147.32 107	⇓P	PKPdf	08 32 21.2	+1.4
	baz=147					
OD2	Odessa Site #2	147.38 102	ePKPdf	PKPbc	08 32 22.7	+0.4
A05A	Maple Falls	147.40 96	⇓P	PKPdf	08 32 21.9	+2.0
	baz=148					
MCMT	McKenzie Canyo	147.41 110	ePKPdf	PKPbc	08 32 22.9	+0.4
I17A	Pilgrim Ck.	147.45 114	⇓P	PKPdf	08 32 21.9	+1.8
	baz=148					
I18A	Diamond G Ranc	147.53 115	⇓P	PKPdf	08 32 21.7	+1.5
	baz=148,SNR=8.2					
KSU1	Kansas State U	147.56 135	ePKPdf	PKPbc	08 32 23.3	+0.2
DIV	Divide	147.59 62	ePKPbc	PKPbc	08 32 24.6	+2.1
OGNE	Ogallala	147.67 127	ePKPdf	PKPbc	08 32 23.2	-0.2
F13A	Darby	147.69 108	⇑P	PKPdf	08 32 22.4	+2.0
	baz=148,SNR=15					
TRF	Thorofare Moun	147.70 57	eP	PKPdf	08 32 22.4	+2.5
G15A	Dillon	147.84 111	⇑P	PKPdf	08 32 22.5	+1.7
	baz=148,SNR=15					
C09A	Chrisman Ranch	147.89 102	⇑P	PKPdf	08 32 22.6	+1.9
	baz=148					
H16A	Russell Place,	147.89 112	⇑P	PKPdf	08 32 22.8	+2.0
	baz=148,SNR=12					
CCM	Cathedral Cave	147.92 144	ePKPdf	PKPdf	08 32 23.2	+2.1
B08A	Colville Reser	147.94 100	⇑P	PKPdf	08 32 22.6	+1.8
	baz=148					
YMR	Madison River	147.96 113	ePKPbc	PKPab	08 32 27.2	+0.5
G16A	Moss Hill, Enn	148.14 111	⇓P	PKPdf	08 32 23.2	+2.0
	baz=148					
E13A	Victor	148.29 107	⇑P	PKPdf	08 32 23.4	+2.0
	baz=148,SNR=5.3					
MCK	McKinley	148.33 57	ePKPdf	PKPdf	08 32 22.8	+1.9
D12A	Red Ives Fores	148.37 105	⇓P	PKPdf	08 32 23.7	+2.1
	baz=148,SNR=5.7					
F15A	Butte	148.41 110	⇑P	PKPdf	08 32 23.9	+2.2
	baz=149,SNR=11					
LRM	Limekiln Ridge	148.41 110	ePKPdf	PKPbc	08 32 25.8	+0.6
E14A	Clinton	148.53 108	⇑P	PKPdf	08 32 24.2	+2.4
	baz=149,SNR=7.9					
BOZ	Bozeman (W)	148.56 111	⇓P	PKPdf	08 32 24.0	+2.1
	baz=149,SNR=8.1					
BOZ	Bozeman (W)	148.56 111	ePKPdf	PKPdf	08 32 25.0	+3.1
F16A	Kennard Place,	148.68 111	⇓P	PKPdf	08 32 24.0	+1.9
	baz=149					
ARCES	ARCESS Array B	148.70 317	PKPbc	PKPbc	08 32 25.4	+0.2
	comp=Z,4.1nm,0.8s,baz=132,slow=3.6,SNR=8.5					
NEW	Newport	148.71 102	ePKPdf	PKPdf	08 32 24.5	+2.4
MSO	Missoula	148.71 107	ePKPdf	PKPbc	08 32 25.5	-0.5
D13A	Huson	148.74 106	⇑P	PKPdf	08 32 23.6	+1.5
	baz=149					
E15A	Deer Lodge	148.85 109	⇑P	PKPdf	08 32 24.5	+2.1
	baz=149					
RLMT	Red Lodge	148.96 114	⇑P	PKPdf	08 32 24.7	+2.1
	baz=149					
RLMT	Red Lodge	148.96 114	ePKPbc	PKPbc	08 32 27.4	+0.8
G18A	Lazy EL Ranch,	149.02 114	⇓P	PKPdf	08 32 24.9	+2.3
	baz=149					
CHMT	Chamberlain Mo	149.04 108	P	PKPbc	08 32 27.4	+0.7
CHMT			ePKPbc	PKPbc	08 32 28.1	+1.3
ELN	Prospectdale	149.07 159	ePKPdf	PKPdf	08 32 25.4	+2.4
D14A	Greenough	149.09 107	⇑P	PKPdf	08 32 24.7	+2.1
	baz=149,SNR=16					
F17A	Fitzpatrick Pl	149.13 112	⇑P	PKPdf	08 32 25.4	+2.5
	baz=149,SNR=23					
WCI	Wyandotte Cave	149.14 151	ePKPdf	PKPdf	08 32 25.4	+2.3
C13A	Hot Springs	149.19 106	⇓P	PKPdf	08 32 24.7	+1.9
	baz=149					
SLMT	Seeley Lake	149.22 107	ePKPdf	PKPbc	08 32 26.6	-0.6
BSMT	Bassoo Peak	149.25 105	ePKPdf	PKPdf	08 32 25.5	+2.6
SWMT	Swartz Lake	149.26 106	ePKPdf	PKPdf	08 32 26.2	+3.3
OLIL	Olney	149.27 148	ePKPdf	PKPdf	08 32 24.5	+1.3
E16A	East Helena	149.30 110	⇑P	PKPdf	08 32 24.9	+1.9
	baz=149					
JTMT	Jette	149.35 106	ePKPdf	PKPdf	08 32 26.7	+3.6
GCMT	Greycliff	149.39 113	ePKPdf	PKPdf	08 32 26.7	+3.5
HRY	Holter Researc	149.39 110	ePKPbc	PKPbc	08 32 29.4	+1.8
COLA	College	149.45 56	ePKPdf	PKPdf	08 32 25.4	+2.7
F18A	Big Timber	149.47 113	⇓P	PKPdf	08 32 25.5	+2.2
	baz=150,SNR=7.9					
E17A	Martinsdale	149.54 111	⇑P	PKPdf	08 32 25.6	+2.2
	baz=150,SNR=7.0					
MENT	Mentasta	149.54 61	ePKPdf	PKPdf	08 32 25.2	+2.3
YBMT	Yellow Bay	149.55 106	ePKPbc	PKPbc	08 32 28.9	+0.9
C14A	Swan Lake	149.57 106	⇓P	PKPdf	08 32 25.5	+2.1
	baz=150					
ILAR	Eielson Array	149.70 57	PKPbc	PKPbc	08 32 27.1	-0.7
	comp=Z,7.4nm,0.7s,baz=267,slow=3.7,SNR=54					
D16A	Dana Ranch, Ca	149.77 110	⇓P	PKPdf	08 32 25.5	+1.8
	baz=150					
B13A	Whitefish	149.80 105	⇑P	PKPdf	08 32 26.1	+2.3
	baz=150,SNR=20					
RSSD	Black Hills	149.88 122	ePKPdf	PKPbc	08 32 28.1	-0.8
E18A	Harlowton	149.97 112	⇑P	PKPdf	08 32 26.4	+2.3
	baz=150,SNR=7.3					
C15A	Salmond Ranch,	150.00 108	⇓P	PKPdf	08 32 26.3	+2.2
	baz=150,SNR=7.5					
BLO	Bloomington	150.01 150	ePKPdf	PKPbc	08 32 28.2	-1.2
SKAG	Skagway	150.17 72	ePKPdf	PKPdf	08 32 26.7	+2.7
D17A	Six Diamond Ra	150.19 111	⇓P	PKPdf	08 32 26.6	+2.2
	baz=150					
COLD	Coldfoot	150.23 51	ePKPbc	PKPbc	08 32 29.1	+0.1
B14A	Marquette Ranc	150.24 106	⇓P	PKPdf	08 32 26.8	+2.3
	baz=150					
A13A	Flathead Natio	150.28 104	⇑P	PKPdf	08 32 26.6	+2.0
	baz=150					
C16A	Fuhringer Ranc	150.34 109	⇑P	PKPdf	08 32 27.1	+2.5
	baz=150,SNR=12					
B15A	Bradely Ranch,	150.47 107	⇑P	PKPdf	08 32 27.8	+2.9
	baz=151,SNR=19					
D18A	Linhart Farms,	150.54 112	⇑P	PKPdf	08 32 27.1	+2.1
	baz=151,SNR=13					
C17A	Wharram Farm,	150.56 110	⇑P	PKPdf	08 32 27.2	+2.2
	baz=151,SNR=18					
A14A	Double T Ranch	150.69 105	⇑P	PKPdf	08 32 27.4	+2.3
	baz=151,SNR=7.2					
HDIL	Hopedale	150.75 145	ePKPdf	PKPdf	08 32 28.5	+3.0
A15A	Johnson Ranch,	150.95 106	⇑P	PKPdf	08 32 27.9	+2.3
	baz=151,SNR=9.6					
SCIA	State Center	151.09 138	ePKPbc	PKPbc	08 32 32.4	+0.6
B17A	L&G Farms, Che	151.10 109	⇓P	PKPdf	08 32 28.3	+2.5
	baz=151,SNR=5.2					
EGMT	Eagleton	151.26 111	⇑P	PKPdf	08 32 28.0	+1.9
	baz=151					
EGMT	Eagleton	151.26 111	ePKPbc	PKPbc	08 32 32.1	+0.1
A16A	West Butte Ran	151.35 108	⇓P	PKPdf	08 32 27.5	+1.3
	baz=152					
LAO	LASA Array	151.38 116	ePKPbc	PKPbc	08 32 34.5	+2.1
B18A	Beardsley Farm	151.56 110	⇑P	PKPdf	08 32 27.7	+1.2
	baz=152					
EGAK	Eagle	151.60 60	ePKPbc	PKPbc	08 32 32.2	-0.1
ACSO	Alum Creek Sta	151.68 155	ePKPbc	PKPbc	08 32 33.6	+0.3
A17A	Triple J Farms	151.68 109	⇑P	PKPdf	08 32 28.1	+1.5
	baz=152,SNR=6.8					
DAWY	Dawson	151.75 62	ePKPbc	PKPbc	08 32 33.0	+0.3
ECSD	EROS Data Cent	151.84 132	ePKPdf	PKPbc	08 32 31.6	-2.0
A18A	Metzger Ranch,	151.97 110	⇓P	PKPdf	08 32 29.3	+2.2
	baz=152					
JFWS	Jewell Farm	152.77 142	ePKPbc	PKPbc	08 32 34.8	-0.9
EDM	Edmonton	154.11 100	ePKPdf	PKPdf	08 32 30.8	+0.7
BINY	Binghamton	154.54 166	ePKPbc	PKPbc	08 32 40.6	+1.1
ULM	Lac du Bonnet	157.91 126	PKPab	PKPab	08 33 08.5	+0.1
	comp=Z,2.7nm,0.6s,baz=207,slow=2.0,SNR=3.4					
YKA	Yellowknife Ar	159.93 81	PKP	PKPdf	08 32 37.9	+0.7
	comp=Z,0.7nm,0.7s,baz=236,slow=1.4,SNR=4.6					
YKA			PKPab	PKPab	08 33 16.3	-0.6
	comp=Z,1.7nm,0.8s,baz=242,slow=3.9,SNR=9.3					

CSEM ***23*** *08:17:24.9, 66°.27N×16°.83W, h9km, ML3.5, After REY*

REY 23 08:17:24.9, 66°.27N×16°.83W, h9km, ML3.5, ML3.7, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILEI	Leirhofn	0.19	45	P	Pg	08 17 28.8	-0.1
ILEI				S	Sg	08 17 31.9	+0.3
IHED	Heoinshofoi	0.28	226	P	Pg	08 17 30.1	-0.3
IHED				S	Sg	08 17 34.2	+0.1
IGIL	Gilhagi	0.28	135	P	Pg	08 17 30.1	-0.3
IGIL				S	Sg	08 17 34.1	0.0
IFLA	Flatey	0.43	255	P	Pg	08 17 33.1	-0.1
IFLA				S	Sg	08 17 39.5	+0.6
IBRE	Brettingsstaoi	0.47	252	P	Pg	08 17 33.5	-0.4
IBRE				S	Sg	08 17 40.2	+0.2
IGRA	Granastaoir	0.47	221	P	Pg	08 17 33.4	-0.6
IGRA				S	Sg	08 17 39.7	-0.5
IGRI	Grimsey	0.55	300	P	Pg	08 17 34.6	-0.9
IGRI				S	Sg	08 17 42.2	-0.5
IREN	Reynihlio	0.63	183	P	Pg	08 17 35.9	-1.1
IREN				S	Sg	08 17 44.6	-0.6
IGRS	Grimsstaoir	0.70	155	P	Pg	08 17 37.2	-1.2
IGRS				S	Sg	08 17 46.8	-0.7
IHLA	Hella	0.72	243	P	Pg	08 17 37.3	-1.4
IHLA				S	Sg	08 17 46.8	-1.2
ISIG	Siglufjorour	0.86	261	P	Pg	08 17 39.0	-2.4
ISIG				S	Sg	08 17 50.7	-1.8
ISVA	Svartarkot	0.96	191	P	Pg	08 17 41.4	-1.8
ISVA				S	Sg	08 17 54.2	-1.4
IMKO	Mokollar	1.32	171	P	Pn	08 17 46.9	-2.4
IMKO				S	Sb	08 18 05.3	-1.3
IHRN	Hraun	1.35	265	P	Pn	08 17 46.2	-3.6
IHRN				S	Sb	08 18 03.0	-4.5
IADA	Aoalbol	1.36	157	P	Pn	08 17 47.5	-2.5
IADA				S	Sb	08 18 06.1	-1.8
IHVA	Hvannstoosfjol	1.38	163	P	Pn	08 17 48.0	-2.3
IHVA				S	Sb	08 18 07.3	-1.2
IBRU	Bruarjokull	1.48	168	P	Pn	08 17 49.5	-2.1
IBRU				S	Sn	08 18 09.8	-1.2
IGLU	Glumsstadir	1.49	150	P	Pn	08 17 49.7	-2.0
IGLU				S	Sn	08 18 09.3	-1.8
IKRE	Kreppuhraun	1.51	173	P	Pn	08 17 50.0	-2.0
IVSH	V-Sauoahnukur	1.54	162	P	Pn	08 17 50.9	-1.5
IVSH				S	Sn	08 18 11.2	-1.3
IHVE	Hveravellir	1.81	220	P	Pn	08 17 54.7	-1.5
IHVE				S	Sn	08 18 18.6	-0.6
IGRF	Grimsfjall	1.88	186	P	Pn	08 17 55.7	-1.4
IVAT	Vatnsfell	2.27	204	P	Pn	08 18 01.3	-1.2
IKAL	Kalfafell	2.36	189	P	Pn	08 18 03.1	-0.6
IFAG	Fagurholsmyri	2.41	178	P	Pn	08 18 03.8	-0.6
IASB	`sbjarnarst	2.42	233	P	Pn	08 18 03.4	-1.1
IASB				S	Sn	08 18 35.9	+1.7
IGYG	Gygjarholskot	2.46	217	P	Pn	08 18 04.2	-0.8
ISNB	Snabyli	2.66	198	P	Pn	08 18 07.5	-0.3
IMID	Miomork	2.93	208	P	Pn	08 18 11.1	-0.4

IDC ***23*** *08:32:23.3±1.8, 17°.74S×178°.62W, h542km±20km, mb3.6/9, mb1 3.9/10, mb1mx3.7/17, mbtmp3.7/10, Error ellipse: s-maj=23.7km s-min=12.7km az=135.0*

NEIC ***23*** *08:32:24.5±0.7, 17°.74S×178°.60W, h561km±8km, mb4.4/6, Error ellipse: s-maj=21.3km s-min=9.4km az=149.0*

ISCJB ***23*** *08:32:25.3±1.2, 17°.7S±0°.1×178°.8W±0°.1, h581km±13km, mb4.2/19, Error ellipse: s-maj=26.6km s-min=11.7km az=139.8*

ISC 23 08:32:24.9±0.9, 17°.7S±0°.1×178°.7W±0°.1, h564km±10km, n33, σ0s78/32, mb4.2/19, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.15	269	eP	P	08 33 43.3	+1.4
AFI	Afiamalu	7.63	61	P	P	08 34 17.1	-2.4
	20nm,0.3s,baz=88,slow=5.0,SNR=24						
AFI	Afiamalu	7.63	61	P	P	08 34 17.1	-2.4
DZM	Mont Dzumac	14.67	250	eP	P	08 35 30.2	-0.6
ARMA	Armidale	29.83	239	eP	P	08 37 47.7	+0.5
CTA	Charters Tower	33.25	260	eP	P	08 38 16.2	-0.2
	4.3nm,0.4s,mb4.3						
CNB	Canberra Magne	33.35	232	eP	P	08 38 17.5	+0.4
PMG	Port Moresby	34.20	279	eP	P	08 38 25.5	+1.0
	17nm,0.8s,mb4.6						
TOO	Toolangi	37.10	230	eP	P	08 38 48.3	+0.1
STKA	Stephens Creek	38.52	241	eP	P	08 39 00.1	+0.4
	14nm,0.6s,mb4.7						
STKA	Stephens Creek	38.52	241	P	P	08 39 00.2	+0.5
	17nm,0.5s,mb4.9,baz=93,slow=9.6,SNR=80						
WRAB	Tennant Creek	44.43	259	eP	P	08 39 45.6	-1.0
	8.2nm,0.8s,mb4.3						
ASAR	Alice Springs	44.62	254	P	P	08 39 47.8	-0.2
	77nm,0.5s,baz=89,slow=8.2,SNR=1280						
ASAR				ScP	ScP	08 44 20.3	+2.8
	0.5nm,0.7s,baz=100,slow=4.9,SNR=3.9						
KAKA	Kakadu	47.36	269	eP	P	08 40 08.7	-0.2
	9.5nm,0.3s,mb4.8						
KAKA	Kakadu	47.36	269	eP	P	08 40 08.7	-0.2
	32nm,0.5s,mb5.1						
FORT	Forrest	49.88	244	eP	P	08 40 26.2	-1.1
	16nm,0.5s,mb4.7						
FITZ	Fitzroy Crossi	52.83	260	eP	P	08 40 49.0	+0.2
	8.1nm,0.9s,mb4.0						
KLBR

YKA	Yellowknife Ar	19.84	20	P	Pn	08 56 05.1	-1.4
	0.1nm,0.3s,baz=208,slow=11,SNR=3.9						
ILAR	Eielson Array	22.59	340	P	P	08 56 34.6	0.0
	0.6nm,0.9s,mb3.0,baz=153,slow=7.4,SNR=6.9						
TXAR	Lajitas Array	25.18	118	P	P	08 57 00.9	+1.0
	0.3nm,0.8s,mb2.9,baz=289,slow=3.8,SNR=3.9						
SADO	Sadowa	35.03	72	LR	LR	09 12 15.3	
	comp=Z,52nm,20.0s,MS3.3,baz=324,slow=36						
TKL	Tuckaleechee C	35.35	89	LR	LR	09 13 40.2	
	comp=Z,83nm,18.3s,MS3.5,baz=107,slow=38						

*NEIC **23** 09:13:49.9,58.35N×133.44W,h1km,ML2.8(PGC), ML2.6(AEIC),After PGC.*

PGC 23 09:13:49.9±12.0,58.35N×133.44W,h1km,ML2.8/4,4D, 57km east of Juneau, Ak Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESE	Bessie Mountai	0.78	288	P	Pg	09 14 03.7	-1.1
BESE				S	Sg	09 14 13.5	-1.3
SKAG	Skagway	1.48	320	P	Pn	09 14 16.7	-0.9
SKAG				S	Sg	09 14 36.1	-1.3
SIT	Sitka	1.64	219	ePn	Pn	09 14 17.9	-2.0
SIT				eSn	Sn	09 14 40.4	-1.2
DLBC	Dease Lake	1.80	86	P	Pn	09 14 22.8	+0.7
DLBC	Dease Lake	1.80	86	⇓P	Pn	09 14 21.3	-0.7
DLBC				⇑Pg	Pg	09 14 22.7	-1.7
DLBC				⇓Sn	Sn	09 14 44.5	-1.0
DLBC				⇑Sg	Sg	09 14 46.3	-1.4
PLBC	Pleasant Camp	1.88	307	⇓Pn	Pn	09 14 22.9	-0.2
PLBC				⇑Sg	Sg	09 14 47.2	-3.0
WHY	Whitehorse	2.43	343	P	Pn	09 14 30.2	-0.4
WHY	Whitehorse	2.43	343	⇓Pn	Pn	09 14 30.0	-0.6
HYT	Haines Junctio	3.23	322	⇑Pn	Pn	09 14 41.8	+0.1
HYT				⇑Pg	Pg	09 14 47.8	-4.0
HYT				⇑Sg	Sg	09 15 29.6	-3.9

*SZGRF **23** 09:13:28.9,17.94S×177.98W,h33km,Fiji Islands region*
*IDC **23** 09:14:19.2±3.8,17.86S×178.03W,h472km±43km, mb3.6/11,mb1 3.8/11,mb1mx3.7/16,mbtmp3.6/11,Error ellipse: s-maj=19.8km s-min=19.0km az=55.0*
*BJI **23** 09:14:24.6,18.00S×178.20W,h547km,mB4.7/5,mb4.5/6*
*ISCJB **23** 09:14:25.3±1.1,18.0S±0.1×178.3W±0.1,h557km±13km, mb4.1/22,Error ellipse: s-maj=20.1km s-min=13.3km az=36.4*
*NEIC **23** 09:14:25.8±1.0,17.99S×178.22W,h548km±10km,mb4.5/6, Error ellipse: s-maj=17.2km s-min=13.4km az=116.0*

ISC 23 09:14:26.0±1.2,18.0S±0.1×178.2W±0.1,h552km±12km, n88,σ0.89/31,mb4.1/22,4C-4D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.57	273	ePn	P	09 15 45.3	+0.3
URZ	Urewera	20.63	191	P	P	09 18 25.4	-2.1
	20nm,0.5s,baz=167,slow=23,SNR=19						
URZ	Urewera	20.63	191	eP	P	09 18 26.2	-1.3
	13nm,0.5s						
RPZ	Rata Peaks	27.22	197	P	P	09 19 25.5	-0.5
	7.0nm,0.5s,mb4.6,baz=237,slow=23,SNR=5.8						
ARMA	Armidale	30.08	240	eP	P	09 19 52.1	+1.1
CNB	Canberra Magne	33.54	233	eP	P	09 20 21.7	+1.2
CTA	Charters Tower	33.63	261	eP	P	09 20 20.8	-0.6
	20nm,2.0s,mb4.3						
TOO	Toolangi	37.28	231	eP	P	09 20 52.8	+1.4
STKA	Stephens Creek	38.77	241	eP	P	09 21 04.6	+1.0
	9.6nm,0.6s,mb4.5						
STKA	Stephens Creek	38.77	241	P	P	09 21 04.6	+1.0
	9.6nm,0.5s,mb4.6,baz=93,slow=9.1,SNR=38						
WRAB	Tennant Creek	44.80	260	eP	P	09 21 50.1	-1.2
	22nm,1.4s,mb4.5						
ASAR	Alice Springs	44.96	254	P	P	09 21 52.4	-0.2
	75nm,0.5s,baz=89,slow=8.0,SNR=1548						
KAKA	Kakadu	47.78	269	eP	P	09 22 13.0	-0.9
	12nm,0.4s,mb4.8						
GUMO	Guam	48.06	308	P	P	09 22 15.3	-0.7
	23nm,0.6s,mb4.9,baz=160,slow=9.7,SNR=7.0						
FORT	Forrest	50.16	245	eP	P	09 22 30.9	-0.4
	15nm,0.5s,mb4.7						
FITZ	Fitzroy Crossi	53.21	261	eP	P	09 22 53.3	-0.2
	7.8nm,1.1s,mb4.0						
KLBR	Kellerberrin	58.98	244	eP	P	09 23 32.7	-0.4
	48nm,1.3s,mb4.6						
MJAR	Matsushiro Arr	68.07	323	P	Pn	09 24 30.4	-0.5
	4.5nm,0.8s,mb4.0,baz=161,slow=6.0,SNR=13						
TPUB	Ta-pu	72.45	302	eP	P	09 24 56.0	-1.2
	17nm,0.7s,mb4.6						
KSM	Kuching	72.88	277	eP	P	09 24 59.7	-0.2
	12nm,0.8s,mb4.4						
PETK	Petropavlovsk-	73.78	345	P	P	09 25 03.8	-0.3
	2.6nm,0.7s,mb3.8,baz=137,slow=8.5,SNR=8.5						
MDJ	Mudanjiang	78.34	325	P	P	09 25 30.6	+1.2
MDJ				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.2						
MDJ	Mudanjiang	78.34	325	eP	P	09 25 30.5	+1.1
	comp=Z,6.3nm,0.6s,mb4.1						
NVAR	Mina Array Bea	79.33	44	P	P	09 25 35.0	+0.2
	comp=Z,0.8nm,0.8s,mb3.1,baz=219,slow=9.5,SNR=6.9						
TRF	Thorofare Moun	84.03	12	eP	P	09 25 57.5	-0.7
	comp=Z,3.6nm,0.6s,mb4.1						
TRF				ePcP	PcP	09 26 00.6	-0.2
TXAR	Lajitas Array	85.86	58	P	P	09 26 07.7	-0.3
	comp=Z,0.4nm,0.7s,mb3.2,baz=219,slow=6.3,SNR=7.3						
ILAR	Eielson Array	85.90	13	P	P	09 26 06.5	-0.8
	comp=Z,0.6nm,0.4s,mb3.6,baz=224,slow=5.2,SNR=23						
XAN	Xi'an	86.45	307	P	P	09 26 11.3	+0.7
XAN				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.1						
XAN				pmax	pmax		
	comp=Z,16nm,9.4s						
PDAR	Pinedale Array	87.26	43	P	P	09 26 15.8	+1.6
	comp=Z,0.4nm,0.6s,mb3.2,baz=252,slow=2.3,SNR=4.3						
CMAR	Chiang Mai Arr	89.09	290	P	P	09 26 24.9	+1.7
	comp=Z,3.2nm,0.8s,mb4.2,baz=106,slow=2.6,SNR=11						
SONM	Songino Array	93.72	319	P	P	09 26 44.3	+0.4
	comp=Z,0.4nm,0.5s,mb3.8,baz=141,slow=7.4,SNR=3.2						
MKAR	Makanchi Array	109.31	314	PKiKP	PKiKP	09 31 52.5	-1.1
	comp=Z,0.7nm,0.4s,baz=247,slow=0.5,SNR=7.6						
BVAR	Borovoye Array	117.01	321	PKP	PKPdf	09 32 08.2	+0.1
	comp=Z,1.2nm,0.4s,baz=259,slow=1.5,SNR=7.4						
ABKAR	Akbulak array	124.11	318	ePKPdf	PKPdf	09 32 21.9	0.0
ARCES	ARCESS Array B	126.41	350	PKP	PKPdf	09 32 27.1	+1.4
	comp=Z,3.8nm,0.9s,baz=343,slow=1.6,SNR=4.5						
FINES	FINESS Array B	133.30	344	PKP	PKPdf	09 32 38.5	-0.5
	comp=Z,15nm,0.9s,baz=197,slow=26,SNR=13						
FINES	FINESS Array B	133.30	344	PKP	PKPdf	09 32 38.5	-0.5
AKASG	Malin Array Be	140.70	332	PKhKP	PKPpre	09 32 29.1	
	comp=Z,0.3nm,0.3s,baz=186,slow=7.7,SNR=3.6						
AKASG				PKP	PKPdf	09 32 54.1	+1.2
	comp=Z,1.0nm,0.5s,baz=45,slow=3.3,SNR=5.8						
AKASG	Malin Array Be	140.70	332	PKP	PKPdf	09 32 54.1	+1.2
BSEG	Bad Segeberg	143.50	352	ePKPbc	PKPdf	09 32 57.3	-0.5
BUR08	Bucovina Ar. S	144.74	332	ePKPdf	PKPdf	09 33 01.8	+1.6
BURAR	Bucovina Array	144.76	332	⇑iP	PKPdf	09 33 02.1	+1.9
TESR		144.91	330	⇑iP	PKPdf	09 33 01.8	+1.3
NRDL	Niedersach Rie	144.93	351	ePKPbc	PKPdf	09 33 00.5	+0.2
BR131	Keskin Array S	144.96	315	ePKPdf	PKPdf	09 33 02.0	+1.2
BRTR	Keskin Array B	144.96	315	PKPbc	PKPdf	09 33 02.0	+1.3
	comp=Z,7.6nm,0.8s,baz=127,slow=3.2,SNR=37						
IBBN	Ibbenburen	145.41	354	ePKPbc	PKPbc	09 33 03.5	+1.1
TIRR	Tirgusor	145.43	326	⇓iP	PKPab	09 33 05.6	+1.6
TRPA	Tarpa	145.48	335	⇑iP	PKPbc	09 33 03.6	+0.9
CLZ	Clausthal	145.53	351	ePKPbc	PKPbc	09 33 03.6	+0.9
CLL	Collm	145.56	348	ePKPbc	PKPbc	09 33 03.2	+0.3
CLL	Collm	145.56	348	⇓iPKP	PKPdf	09 33 03.2	+1.8
CLL				i		09 33 10.3	
CLL	Collm	145.56	348	⇓iPKP	PKPdf	09 33 03.2	+1.8
	comp=Z,10.0nm,0.8s						
CLL				i		09 33 10.3	
UPC	Upice	145.60	344	ePKP	PKPbc	09 33 04.0	+1.0
DPC	Dobruska-Polom	145.66	343	ePKP	PKPbc	09 33 04.2	+1.0
BRG	Berggiesshubel	145.77	346	ePKPbc	PKPbc	09 33 04.1	+0.6
BRG	Berggiesshubel	145.77	346	iP	PKPbc	09 33 04.1	+0.6
	comp=Z,7.7nm,0.9s						
PVCC	Panska Ves	145.95	345	ePKP	PKPbc	09 33 05.3	+1.3
KECS	Kecovo	145.97	338	ePKP	PKPdf	09 33 03.4	+1.2
BUG	Bochum--Univer	146.32	354	ePKPbc	PKPbc	09 33 05.9	+0.9
MMAI	Mount Meron Ar	146.34	303	PKPbc	PKPbc	09 33 06.9	+1.3
	comp=Z,9.3nm,0.5s,baz=70,slow=5.4,SNR=11						
PRU	Pruhonice	146.45	345	ePKP	PKPbc	09 33 06.7	+1.3
DRGR		146.48	334	⇑iP	PKPbc	09 33 06.5	+0.9
TANN	Tannenbergstha	146.52	348	ePKPbc	PKPbc	09 33 06.4	+0.8
VRAC	Vranov	146.53	342	PKPbc	PKPbc	09 33 06.5	+0.8
	comp=Z,1.7nm,0.3s,baz=30,slow=2.9,SNR=3.4						
VYHS	Vyhne	146.54	339	ePKP	PKPbc	09 33 06.9	+1.2
ROTZ	Rotzenmuhle	147.19	348	ePKPbc	PKPbc	09 33 08.7	+1.3
TNS	Taunus Mts	147.38	352	ePKPbc	PKPbc	09 33 08.5	+0.6
GRF	Grafenberg Arr	147.45	349	ePKPbc	PKPbc	09 33 08.9	+0.8
KHC	Kasperske Hory	147.48	346	ePKPbc	PKPbc	09 33 09.2	+1.0
KHC				ePKPab	PKPab	09 33 12.8	+0.7
KHC	Kasperske Hory	147.48	346	ePKP	PKPbc	09 33 09.2	+1.0
GEC2	GERESS Array S	147.72	345	ePKPbc	PKPbc	09 33 09.5	+0.7
GIVF	Givet	147.85	356	ePKP1	PKPbc	09 33 09.9	+0.8
BAIF	Baives	147.93	357	ePKP1	PKPbc	09 33 10.1	+0.8
WLF	Walferdange	148.19	355	ePKPbc	PKPbc	09 33 11.3	+1.4
RJOB	Jochberg	148.97	346	ePKPbc	PKPbc	09 33 12.8	+0.9
BFO	Black Forest	149.25	351	ePKPbc	PKPbc	09 33 13.4	+0.8
CDF	Champ du Feu	149.31	353	ePKP1	PKPbc	09 33 13.4	+0.7
VTS	Vitosha	149.44	328	⇓iP	PKPbc	09 33 14.1	+0.9
SGMF	Saint Gilles	149.58	6	ePKP1	PKPbc	09 33 13.7	+0.3
HAU	Haudompre	149.81	354	ePKP1	PKPbc	09 33 14.5	+0.6
	comp=Z,6.0nm,0.5s						
HINF	Hinterfeld	149.94	353	ePKP1	PKPbc	09 33 15.3	+1.1
	comp=Z,5.5nm,0.6s						
DAVOX	Davos/Dischmat	150.50	349	PKPbc	PKPbc	09 33 17.0	+1.4
	comp=Z,12nm,0.9s,baz=180,slow=3.8,SNR=8.6						
LOR	Lormes	150.73	357	ePKP1	PKPbc	09 33 16.8	+0.7
	comp=Z,8.1nm,0.6s						
SSF	Saint Saulge	150.95	358	ePKP1	PKPbc	09 33 17.3	+0.7
	comp=Z,7.9nm,0.7s						
CABF	La Chapelle	151.22	354	ePKP1	PKPbc	09 33 17.6	+0.4
AVF	Avril sur Loir	151.23	358	ePKP1	PKPbc	09 33 17.6	+0.4
	comp=Z,4.8nm,0.8s						
TCF	Toulx Ste Croi	151.76	359	ePKP1	PKPbc	09 33 19.7	+1.3
	comp=Z,4.3nm,0.5s						

*CRAAG **23** 09:23:29.9,36.98N×3.69E,Ml3.1*
*NEIC **23** 09:23:29.8±2.5,36.86N×3.87E,h10km,MG4.3(MDD), Error ellipse: s-maj=29.4km s-min=11.7km az=167.0*
*MDD **23** 09:23:32.2±0.5,37.03N×3.71E,h0km,mb4.1/9,Error ellipse: s-maj=6.5km s-min=5.0km az=31.0*
MDD EMS: IV INTENSIDAD MAXIMA-CRAAG.
*ISCJB **23** 09:23:32.2±0.4,37.22N±0.03×3.65E±0.03,h10km,Error ellipse: s-maj=4.2km s-min=3.8km az=40.6*
*CSEM **23** 09:23:34.1±0.3,37.19N×3.70E,h10km,ML3.1,Error ellipse: s-maj=8.1km s-min=6.4km az=45.0*
*LDG **23** 09:23:36.3±0.2,37.23N×3.41E,h20km,Ml3.2/12,Error ellipse: s-maj=4.1km s-min=2.2km az=162.0*

ISC 23 09:23:33.7±0.4,37.16N±0.03×3.63E±0.03,h10km,n167, σ1.38/247,3C-3D,Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABA	Alger-Bouzeraa	0.60	233	P	Pg	09 23 42.7	-2.6
ABA	Alger-Bouzeraa	0.60	233	P	Pg	09 23 42.7	-2.6
ABA	Alger-Bouzeraa	0.60	233	P	Pg	09 23 42.7	-2.6
AKF	Akfadou	0.92	125	P	Pg	09 23 45.9	-5.4
AKF	Akfadou	0.92	125	P	Pg	09 23 45.9	-5.4
AKF	Akfadou	0.92	125	P	Pg	09 23 45.9	-5.4
ADJB	Djebel Djouab	1.01	189	P	Pg	09 23 46.1	-7.1
ADJB	Djebel Djouab	1.01	189	P	Pg	09 23 46.1	-7.1
ADJB	Djebel Djouab	1.01	189	P	Pg	09 23 46.1	-7.1
EMHD	Djebel Mahouad	1.10	210	P	Pb	09 23 48.0	-6.8
EMHD	Djebel Mahouad	1.10	210	P	Pb	09 23 48.0	-6.8
EMHD	Djebel Mahouad	1.10	210	P	Pb	09 23 48.0	-6.8
AKET	Djebel Ketaf	1.13	170	P	Pb	09 23 48.5	-6.8
AKET	Djebel Ketaf	1.13	170	P	Pb	09 23 48.5	-6.8
AKET	Djebel Ketaf	1.13	170	P	Pb	09 23 48.5	-6.8
SET	Setif	1.71	124	P	Pn	09 24 02.0	-1.5
SET	Setif	1.71	124	P	Pn	09 24 02.0	-1.5
SET	Setif	1.71	124	P	Pn	09 24 02.0	-1.5
SET	Setif	1.71	124	P	Pn	09 24 02.0	-1.5
CKHR	Kef el Ahmar	1.90	127	P	Pn	09 24 07.0	+1.0
CKHR	Kef el Ahmar	1.90	127	P	Pn	09 24 07.0	+1.0
CKHR	Kef el Ahmar	1.90	127	P	Pn	09 24 07.0	+1.0
CKHR	Kef el Ahmar	1.90	127	P	Pn	09 24 07.0	+1.0
EBNR	Beni Rached	1.90	243	P	Pn	09 24 06.3	+0.2
EBNR	Beni Rached	1.90	243	P	Pn	09 24 06.3	+0.2
DFRA	Djebel Bou Aff	1.90	108	P	Pn	09 24 04.9	-1.2
DFRA	Djebel Bou Aff	1.90	108	P	Pn	09 24 04.9	-1.2
DFRA	Djebel Bou Aff	1.90	108	P	Pn	09 24 04.9	-1.2
DFRA	Djebel Bou Aff	1.90	108	P	Pn	09 24 04.9	-1.2
ECHA	Ech Chlef	2.08	242	P	Pn	09 24 10.0	+1.4
ECHA	Ech Chlef	2.08	242	P	Pn	09 24 10.0	+1.4
ECHF	Ech Chlef	2.10	242	P	Pn	09 24 10.0	+1.1
ECHF	Ech Chlef	2.10	242	P	Pn	09 24 10.0	+1.1
EANR	'Ain N'Sour	2.37	240	P	Pn	09 24 14.3	+1.7
EANR	'Ain N'Sour	2.37	240	P	Pn	09 24 14.3	+1.7
EANR	'Ain N'Sour	2.37	240	P	Pn	09 24 14.3	+1.7
EANR	'Ain N'Sour	2.37	240	P	Pn	09 24 14.3	+1.7
CASM	Ain Smara	2.46	111	P	Pn	09 24 16.0	+2.1
CASM	Ain Smara	2.46	111	P	Pn	09 24 16.0	+2.1
CASM	Ain Smara	2.46	111	P	Pn	09 24 16.0	+2.1
CASM	Ain Smara	2.46	111	P	Pn	09 24 16.0	+2.1
CTEI	Djebel Teioual	2.48	115	P	Pn	09 24 15.9	+1.7
CTEI	Djebel Teioual	2.48	115	P	Pn	09 24 15.9	+1.7
CTEI	Djebel Teioual	2.48	115	P	Pn	09 24 15.9	+1.7
CTEI	Djebel Teioual	2.48	115	P	Pn	09 24 15.9	+1.7
ETRT	Tiaret	2.58	228	P	Pn	09 24 11.7	-3.8
ETRT	Tiaret	2.58	228	P	Pn	09 24 11.7	-3.8
ETRT	Tiaret	2.58	228	P	Pn	09 24 11.7	-3.8
EIBI	Ibiza	2.59	317	P	Pn	09 24 16.5	+0.8
EIBI				S	Sn	09 24 47.5	+0.2
EIBI	Ibiza	2.59	317	P	Pn	09 24 16.5	+0.8
	8.1nm,0.2s,SNR=14						
EIBI				S	Sn	09 24 47.5	+0.2
	9.4nm,0.2s,SNR=5.8						
EIBI	Ibiza	2.59	317	P	Pn	09 24 16.5	+0.8
	8.1nm,0.2s,SNR=14						
EIBI				S	Sn	09 24 47.5	+0.2
	9.4nm,0.2s,SNR=5.8						
EIBI	Ibiza	2.59	317	P	Pn	09 24 16.5	+0.8
	8.1nm,0.2s,SNR=14						
EIBI				S	Sn	09 24 47.5	+0.2
	9.4nm,0.2s,SNR=5.8						
ETOS	Mallorca	2.68	346	P	Pn	09 24 17.7	+0.8
ETOS				S	Sn	09 24 49.5	+0.1
ETOS	Mallorca	2.68	346	P	Pn	09 24 17.7	+0.8
	14nm,0.2s,SNR=41						
ETOS				S	Sn	09 24 49.5	+0.1
	12nm,0.3s,SNR=4.9						
ETOS	Mallorca	2.68	346	P	Pn	09 24 17.7	+0.8
	14nm,0.2s,SNR=41						
ETOS				S	Sn	09 24 49.5	+0.1
	12nm,0.3s,SNR=4.9						
ETOS	Mallorca	2.68	346	P	Pn	09 24 17.7	+0.8
	14nm,0.2s,SNR=41						
ETOS				S	Sn	09 24 49.5	+0.1
	12nm,0.3s,SNR=4.9						
CMAH	Djebel Manchou	3.08	99	P	Pn	09 24 18.2	-4.2
CMAH	Djebel Manchou	3.08	99	P	Pn	09 24 18.2	-4.2
CMAH	Djebel Manchou	3.08	99	P	Pn	09 24 18.2	-4.2
EBEN	Beniarda	3.42	298	P	Pn	09 24 30.3	+3.3
	0.9nm,0.2s,SNR=7.9						
EBEN				S	Sn	09 25 05.3	-2.2
	1.1nm,0.2s,SNR=7.9						
EBEN	Beniarda	3.42	298	P	Pn	09 24 30.3	+3.3
	0.9nm,0.2s,SNR=7.9						
EBEN				S	Sn	09 25 05.3	-2.2
	1.1nm,0.2s,SNR=7.9						
ECHE	Chera	4.35	305	P	Pn	09 24 41.2	+1.3
ECHE	Chera	4.35	305	P	Pn	09 24 41.2	+1.3
	8.4nm,0.4s,SNR=7.7						
ECHE				S	Sn	09 25 31.4	+0.8
	1.6nm,0.3s,SNR=7.9						
ECHE	Chera	4.35	305	P	Pn	09 24 41.2	+1.3
	8.4nm,0.4s,SNR=7.7						
ECHE				S	Sn	09 25 31.4	+0.8
	1.6nm,0.3s,SNR=7.9						
ECHE	Chera	4.35	305	P	Pn	09 24 41.2	+1.3
	8.4nm,0.4s,SNR=7.7						
ETOB	Tobarra	4.36	291	P	Pn	09 24 40.5	+0.5
ETOB				S	Sn	09 25 29.5	-1.2
ETOB	Tobarra	4.36	291	P	Pn	09 24 40.6	+0.6
	1.0nm,0.2s,SNR=7.5						
ETOB				S	Sn	09 25 29.5	-1.2
	8.5nm,0.4s,SNR=7.9						
ETOB	Tobarra	4.36	291	P	Pn	09 24 40.6	+0.6
	1.0nm,0.2s,SNR=7.5						
ETOB				S	Sn	09 25 29.5	-1.2
	8.5nm,0.4s,SNR=7.9						
ETOB	Tobarra	4.36	291	P	Pn	09 24 40.6	+0.6
	1.0nm,0.2s,SNR=7.5						
ETOB				S	Sn	09 25 29.5	-1.2
	8.5nm,0.4s,SNR=7.9						
EMOS	Mosqueruela	4.53	316	P	Pn	09 24 43.3	+1.0
EMOS				S	Sn	09 25 34.5	-0.5
EMOS	Mosqueruela	4.53	316	P	Pn	09 24 43.3	+1.0
	0.7nm,0.1s,SNR=8.4						
EMOS				S	Sn	09 25 34.5	-0.5
	6.8nm,0.4s,SNR=7.9						
EMOS	Mosqueruela	4.53	316	P	Pn	09 24 43.3	+1.0
	0.7nm,0.1s,SNR=8.4						
EMOS				S	Sn	09 25 34.5	-0.5
	6.8nm,0.4s,SNR=7.9						
EMOS	Mosqueruela	4.53	316	P	Pn	09 24 43.3	+1.0
	0.7nm,0.1s,SNR=8.4						
EMOS				S	Sn	09 25 34.5	-0.5
	6.8nm,0.4s,SNR=7.9						
ERTA	Horta de San J	4.58	327	P	Pn	09 24 43.6	+0.7
	1.4nm,0.3s,SNR=7.9						
ERTA				S	Sn	09 25 35.8	-0.3
	1.8nm,0.2s,SNR=7.9						
ERTA	Horta de San J	4.58	327	P	Pn	09 24 43.6	+0.7
	1.4nm,0.3s,SNR=7.9						
ERTA				S	Sn	09 25 35.8	-0.3
	1.8nm,0.2s,SNR=7.9						
EPOB	Poblet	4.63	335	P	Pn	09 24 45.0	+1.3
EPOB				S	Sn	09 25 36.0	-1.4
EPOB	Poblet	4.63	335	P	Pn	09 24 45.0	+1.3
	3.5nm,0.2s,SNR=11						
EPOB				S	Sn	09 25 36.1	-1.4
	1.7nm,0.3s,SNR=7.2						
EPOB	Poblet	4.63	335	P	Pn	09 24 45.0	+1.3
	3.5nm,0.2s,SNR=11						
EPOB				S	Sn	09 25 36.1	-1.4
	1.7nm,0.3s,SNR=7.2						
EPOB	Poblet	4.63	335	P	Pn	09 24 45.0	+1.3
	3.5nm,0.2s,SNR=11						
EPOB				S	Sn	09 25 36.1	-1.4
	1.7nm,0.3s,SNR=7.2						
CFON	Fontmartina	4.69	349	⇑P	Pn	09 24 45.5	+1.1
CFON	Fontmartina	4.69	349	⇑P	Pn	09 24 45.5	+1.1
	17nm,0.2s,SNR=18						
CFON				S	Sn	09 25 39.4	+0.5
	3.3nm,0.2s,SNR=7.9						
CFON	Fontmartina	4.69	349	⇑P	Pn	09 24 45.5	+1.1
	17nm,0.2s,SNR=18						
CFON				S	Sn	09 25 39.4	+0.5
	3.3nm,0.2s,SNR=7.9						
CFON	Fontmartina	4.69	349	P	Pn	09 24 45.5	+1.1
	17nm,0.2s,SNR=18						
EHUE	Huescar	5.00	279	P	Pn	09 24 50.3	+1.7
	0.4nm,0.2s,SNR=7.9						
EHUE				S	Sn	09 25 45.5	-1.0
	0.7nm,0.2s,SNR=7.9						
EHUE	Huescar	5.00	279	P	Pn	09 24 50.3	+1.7
	0.4nm,0.2s,SNR=7.9						
EHUE				S	Sn	09 25 45.5	-1.0
	0.7nm,0.2s,SNR=7.9						
EMIR	Miracle	5.02	342	⇓P	Pn	09 24 51.5	+2.5
EMIR	Miracle	5.02	342	⇓P	Pn	09 24 51.5	+2.5
	8.0nm,0.1s,SNR=18						
EMIR				S	Sn	09 25 47.0	0.0
	2.7nm,0.2s,SNR=7.9						
EMIR	Miracle	5.02	342	⇓P	Pn	09 24 51.5	+2.5
	8.0nm,0.1s,SNR=18						
EMIR				S	Sn	09 25 47.0	0.0
	2.7nm,0.2s,SNR=7.9						
EMIR	Miracle	5.02	342	P	Pn	09 24 51.5	+2.5
	8.0nm,0.1s,SNR=18						
EVIA	Vianos	5.07	289	P	Pn	09 24 49.1	-0.6
	1.8nm,0.4s,SNR=7.9						
EVIA				S	Sn	09 25 47.1	-1.3
	1.3nm,0.3s,SNR=7.9						
EVIA	Vianos	5.07	289	P	Pn	09 24 49.1	-0.6
	1.8nm,0.4s,SNR=7.9						
EVIA				S	Sn	09 25 47.1	-1.3
	1.3nm,0.3s,SNR=7.9						
EBER	Berja	5.23	269	S	Sn	09 25 50.5	-1.6
	2.3nm,0.3s,SNR=7.9						
EBER	Berja	5.23	269	S	Sn	09 25 50.5	-1.6
	2.3nm,0.3s,SNR=7.9						
EBER	Berja	5.23	269	S	Sn	09 25 50.5	-1.6
	2.3nm,0.3s,SNR=7.9						
EJON	La Jonquera	5.31	354	P	Pn	09 24 54.7	+1.7
EJON	La Jonquera	5.31	354	P	Pn	09 24 54.7	+1.7
	19nm,0.2s,SNR=20						
EJON				S	Sn	09 25 53.5	-0.7
	2.1nm,0.4s,SNR=7.9						
EJON	La Jonquera	5.31	354	P	Pn	09 24 54.7	+1.7
	19nm,0.2s,SNR=20						
EJON				S	Sn	09 25 53.5	-0.7
	2.1nm,0.4s,SNR=7.9						
EJON	La Jonquera	5.31	354	P	Pn	09 24 54.7	+1.7
	19nm,0.2s,SNR=20						
CLLI	Llivia	5.46	347	P	Pn	09 24 57.5	+2.4
CLLI	Llivia	5.46	347	P	Pn	09 24 57.5	+2.4
	3.6nm,0.3s,SNR=5.5						
CLLI	Llivia	5.46	347	P	Pn	09 24 57.5	+2.4
	3.6nm,0.3s,SNR=5.5						
CLLI	Llivia	5.46	347	P	Pn	09 24 57.5	+2.4
	3.6nm,0.3s,SNR=5.5						
CSOR	Sort	5.55	340	P	Pn	09 24 59.1	+2.8
CSOR	Sort	5.55	340	P	Pn	09 24 59.1	+2.8
	2.6nm,0.1s,SNR=12						
CSOR				S	Sn	09 26 01.2	+1.0
	1.7nm,0.2s,SNR=7.9						
CSOR	Sort	5.55	340	P	Pn	09 24 59.1	+2.8
	2.6nm,0.1s,SNR=12						
CSOR				S	Sn	09 26 01.2	+1.0
	1.7nm,0.2s,SNR=7.9						
EBIE	Bielsa	6.13	335	P	Pn	09 25 06.0	+1.7
EBIE	Bielsa	6.13	335	P	Pn	09 25 06.0	+1.7
	1.9nm,0.3s,SNR=9.3						
EBIE				S	Sn	09 26 11.1	-3.4
	0.7nm,0.4s,SNR=7.9						
EBIE	Bielsa	6.13	335	P	Pn	09 25 06.0	+1.7
	1.9nm,0.3s,SNR=9.3						
EBIE				S	Sn	09 26 11.1	-3.4
	0.7nm,0.4s,SNR=7.9						
EBIE	Bielsa	6.13	335	P	Pn	09 25 06.0	+1.7
	1.9nm,0.3s,SNR=9.3						
MTLF	Montolieu	6.27	350	ePn	Pn	09 25 04.2	-1.9
MTLF	Montolieu	6.27	350	eP	Pn	09 25 08.4	+2.3
MTLF				eSn	Sn	09 26 09.7	-8.1
	1.4nm,0.3s						
MTLF	Montolieu	6.27	350	eP	Pn	09 25 08.4	+2.3
MTLF				eSn	Sn	09 26 09.7	-8.1
MTLF	Montolieu	6.27	350	P	Pn	09 25 04.2	-1.9
MTLF				S	Sn	09 26 09.7	-8.1
	0.7nm,0.3s						
MTLF	Montolieu	6.27	350	P	Pn	09 25 04.2	-1.9
MTLF				S	Sn	09 26 09.7	-8.1
	0.7nm,0.3s						
MTLF	Montolieu	6.27	350	ePn	Pn	09 25 04.2	-1.9
MTLF	Montolieu	6.27	350	eP	Pn	09 25 08.4	+2.3
EPF	Esparros	6.38	338	eP	Pn	09 25 09.8	+2.1
EPF				eSn	Sn	09 26 11.9	-8.7
	3.6nm,0.4s						
EPF	Esparros	6.38	338	ePn	Pn	09 25 05.2	-2.5
EPF				eSn	Sn	09 26 11.9	-8.7
EPF	Esparros	6.38	338	P	Pn	09 25 05.2	-2.5
EPF				S	Sn	09 26 11.9	-8.7
	1.8nm,0.4s						
EPF	Esparros	6.38	338	P	Pn	09 25 05.2	-2.5
EPF				S	Sn	09 26 11.9	-8.7
	1.8nm,0.4s						
EPF	Esparros	6.38	338	eP	Pn	09 25 09.8	+2.1
LMR	La Mourre	6.55	19	ePn	Pn	09 25 09.1	-0.8
LMR				eSn	Sn	09 26 18.7	-5.9
	2.2nm,0.3s						
LMR	La Mourre	6.55	19	P	Pn	09 25 09.1	-0.8
LMR				S	Sn	09 26 18.7	-5.9
	1.1nm,0.3s						
LMR	La Mourre	6.55	19	P	Pn	09 25 09.1	-0.8
LMR				S	Sn	09 26 18.7	-5.9
	1.1nm,0.3s						
LMR	La Mourre	6.55	19	ePn	Pn	09 25 09.1	-0.8
ETSF	Etsaut	6.57	332	eP	Pn	09 25 12.3	+2.0
ETSF				eSn	Sn	09 26 15.9	-9.3
	1.6nm,0.4s						
ETSF	Etsaut	6.57	332	ePn	Pn	09 25 07.5	-2.8
ETSF				eSn	Sn	09 26 15.9	-9.3
ETSF	Etsaut	6.57	332	P	Pn	09 25 07.5	-2.8
ETSF				S	Sn	09 26 15.9	-9.3
	0.8nm,0.4s						
ETSF	Etsaut	6.57	332	P	Pn	09 25 07.5	-2.8
ETSF				S	Sn	09 26 15.9	-9.3
	0.8nm,0.4s						

ETSF	**Etsaut**	**6.57**	**332**	*e*P	**Pn**	**09 25 12.3**	**+2.0**
PAB	**San Pablo**	**6.71**	**293**	*e*Pn	**Pn**	**09 25 12.7**	**+0.5**
PAB	**San Pablo**	**6.71**	**293**	*e*Pn	**Pn**	**09 25 12.7**	**+0.5**
PGF	**Pioggiola**	**6.78**	**36**	*e*Pn	**Pn**	**09 25 12.8**	**-0.4**
PGF				*e*Sn	**Sn**	**09 26 25.6**	**-4.8**
	8.9nm,0.5s						
PGF	**Pioggiola**	**6.78**	**36**	P	**Pn**	**09 25 12.8**	**-0.4**
PGF				S	**Sn**	**09 26 25.6**	**-4.8**
	4.4nm,0.5s						
PGF	**Pioggiola**	**6.78**	**36**	P	**Pn**	**09 25 12.8**	**-0.4**
PGF				S	**Sn**	**09 26 25.6**	**-4.8**
	4.4nm,0.5s						
PGF	**Pioggiola**	**6.78**	**36**	*e*Pn	**Pn**	**09 25 12.8**	**-0.4**
PGF				*e*Sn	**Sn**	**09 26 25.6**	**-4.8**
	4.4nm,0.5s						
FRF	**La Foret Royal**	**6.79**	**19**	*e*Pn	**Pn**	**09 25 12.7**	**-0.6**
FRF				*e*Sn	**Sn**	**09 26 24.6**	**-6.1**
	5.3nm,0.4s						
FRF	**La Foret Royal**	**6.79**	**19**	P	**Pn**	**09 25 12.7**	**-0.6**
FRF				S	**Sn**	**09 26 24.6**	**-6.1**
	2.7nm,0.4s						
FRF	**La Foret Royal**	**6.79**	**19**	P	**Pn**	**09 25 12.7**	**-0.6**
FRF				S	**Sn**	**09 26 24.6**	**-6.1**
	2.7nm,0.4s						
FRF	**La Foret Royal**	**6.79**	**19**	*e*Pn	**Pn**	**09 25 12.7**	**-0.6**
LASF	**Ste Croix**	**6.91**	**1**	*e*Pn	**Pn**	**09 25 13.5**	**-1.4**
LASF				*e*Sn	**Sn**	**09 26 25.8**	**-7.8**
	4.6nm,0.5s						
LASF	**Ste Croix**	**6.91**	**1**	P	**Pn**	**09 25 13.5**	**-1.4**
LASF				S	**Sn**	**09 26 25.8**	**-7.8**
	2.3nm,0.5s						
LASF	**Ste Croix**	**6.91**	**1**	P	**Pn**	**09 25 13.5**	**-1.4**
LASF				S	**Sn**	**09 26 25.8**	**-7.8**
	2.3nm,0.5s						
LASF	**Ste Croix**	**6.91**	**1**	*e*Pn	**Pn**	**09 25 13.5**	**-1.4**
SMRF	**Simiane la Rot**	**6.97**	**12**	*e*Pn	**Pn**	**09 25 14.6**	**-1.1**
SMRF				*e*Sn	**Sn**	**09 26 28.1**	**-6.8**
	2.0nm,0.4s						
SMRF	**Simiane la Rot**	**6.97**	**12**	P	**Pn**	**09 25 14.6**	**-1.1**
SMRF				S	**Sn**	**09 26 28.1**	**-6.8**
	2.0nm,0.4s						
SMRF	**Simiane la Rot**	**6.97**	**12**	P	**Pn**	**09 25 14.6**	**-1.1**
SMRF				S	**Sn**	**09 26 28.1**	**-6.8**
	2.0nm,0.4s						
SMRF	**Simiane la Rot**	**6.97**	**12**	*e*Pn	**Pn**	**09 25 14.6**	**-1.1**
SBF	**Sospel**	**7.29**	**22**	*e*Pn	**Pn**	**09 25 19.6**	**-0.6**
SBF				*e*Sn	**Sn**	**09 26 36.7**	**-6.3**
	5.5nm,0.3s						
SBF	**Sospel**	**7.29**	**22**	P	**Pn**	**09 25 19.6**	**-0.6**
SBF				S	**Sn**	**09 26 36.7**	**-6.3**
	2.8nm,0.3s						
SBF	**Sospel**	**7.29**	**22**	P	**Pn**	**09 25 19.6**	**-0.6**
SBF				S	**Sn**	**09 26 36.7**	**-6.3**
	2.8nm,0.3s						
SBF	**Sospel**	**7.29**	**22**	*e*Pn	**Pn**	**09 25 19.6**	**-0.6**
VIVF	**Saint-Julien-l**	**7.73**	**6**	*e*Pn	**Pn**	**09 25 24.7**	**-1.5**
VIVF				*e*Sn	**Sn**	**09 26 45.7**	**-8.0**
	2.9nm,0.5s						
VIVF	**Saint-Julien-l**	**7.73**	**6**	P	**Pn**	**09 25 24.7**	**-1.5**
VIVF				S	**Sn**	**09 26 45.7**	**-8.0**
	1.4nm,0.5s						
VIVF	**Saint-Julien-l**	**7.73**	**6**	P	**Pn**	**09 25 24.7**	**-1.5**
VIVF				S	**Sn**	**09 26 45.7**	**-8.0**
	1.4nm,0.5s						
VIVF	**Saint-Julien-l**	**7.73**	**6**	*e*Pn	**Pn**	**09 25 24.7**	**-1.5**
MBDF	**Montbardon**	**7.92**	**16**	*e*Pn	**Pn**	**09 25 28.0**	**-0.8**
MBDF				*e*Sn	**Sn**	**09 26 51.6**	**-6.9**
	1.2nm,0.3s						
MBDF	**Montbardon**	**7.92**	**16**	P	**Pn**	**09 25 28.0**	**-0.8**
MBDF				S	**Sn**	**09 26 51.6**	**-6.9**
	0.6nm,0.3s						
MBDF	**Montbardon**	**7.92**	**16**	P	**Pn**	**09 25 28.0**	**-0.8**
MBDF				S	**Sn**	**09 26 51.6**	**-6.9**
	0.6nm,0.3s						
MBDF	**Montbardon**	**7.92**	**16**	*e*Pn	**Pn**	**09 25 28.0**	**-0.8**
ORIF	**Oris-en-Rattie**	**7.93**	**12**	*e*Pn	**Pn**	**09 25 27.9**	**-1.1**
ORIF				*e*Sn	**Sn**	**09 26 51.3**	**-7.4**
	2.0nm,0.4s						
ORIF	**Oris-en-Rattie**	**7.93**	**12**	P	**Pn**	**09 25 27.9**	**-1.1**
ORIF				S	**Sn**	**09 26 51.3**	**-7.4**
	1.0nm,0.4s						
ORIF	**Oris-en-Rattie**	**7.93**	**12**	P	**Pn**	**09 25 27.9**	**-1.1**
ORIF				S	**Sn**	**09 26 51.3**	**-7.4**
	1.0nm,0.4s						
ORIF	**Oris-en-Rattie**	**7.93**	**12**	*e*Pn	**Pn**	**09 25 27.9**	**-1.1**
BGF	**Bois d'Agland**	**9.41**	**357**	*e*P	**Pn**	**09 25 51.8**	**+2.6**
BGF	**Bois d'Agland**	**9.41**	**357**	P	**Pn**	**09 25 51.8**	**+2.6**
BGF	**Bois d'Agland**	**9.41**	**357**	P	**Pn**	**09 25 51.8**	**+2.6**

CSEM ***23*** *09:29:59.9, 39°.85N×28°.75E, h2km, ML1.6, After ISK*
ISK 23 09:29:59.9, 39°.85N×28°.75E, h2km, ML1.6, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCTX	**Karacabey (Bur**	**0.51**	**325**	*e*PG	Pg	09 30 11.3	+1.5
KCTX				*e*PG	Pg	09 30 11.3	+1.5
KCTX				*e*SG	Sg	09 30 19.1	+2.6
KCTX				*e*SG	Sg	09 30 19.1	+2.6
KCTX	**Karacabey (Bur**	**0.51**	**325**	*e*Pg	Pg	09 30 11.3	+1.5
KCTX				*e*Sg	Sg	09 30 19.1	+2.7
ARMT	**Armutlu**	**0.72**	**7**	*e*PG	Pg	09 30 14.4	+0.7
ARMT				*e*PG	Pg	09 30 14.4	+0.7
ARMT				*e*SG	Sg	09 30 25.4	+2.2
ARMT				*e*SG	Sg	09 30 25.4	+2.2
ARMT	**Armutlu**	**0.72**	**7**	*e*Pg	Pg	09 30 14.4	+0.6
ARMT				*e*Sg	Sg	09 30 25.4	+2.2
YLV	**Yalova**	**0.86**	**34**	*e*PG	Pg	09 30 17.5	+1.0
YLV	**Yalova**	**0.86**	**34**	*e*PG	Pg	09 30 17.5	+1.0
YLV				*e*SG	Sg	09 30 30.3	+2.6
YLV	**Yalova**	**0.86**	**34**	*e*Pg	Pg	09 30 17.5	+1.0
ADVT	**Abdulvahap**	**0.96**	**52**	*e*PG	Pg	09 30 18.6	+0.3
ADVT	**Abdulvahap**	**0.96**	**52**	*e*PG	Pg	09 30 18.6	+0.3
ADVT	**Abdulvahap**	**0.96**	**52**	*e*Pg	Pg	09 30 18.6	+0.3
ALT	**Altintas**	**1.32**	**126**	*e*PN	Pn	09 30 25.8	+0.5
ALT	**Altintas**	**1.32**	**126**	*e*PN	Pn	09 30 25.8	+0.5
ALT	**Altintas**	**1.32**	**126**	*e*Pn	Pn	09 30 25.8	+0.5

ISCJB ***23*** *09:46:57.6±0.9, 67°.24S±0°.09×112°.4E±0°.2, h10km, mb3.8/4, Error ellipse: s-maj=17.0km s-min=8.3km az=139.0*
IDC ***23*** *09:46:58.9±1.2, 67°.02S×112°.05E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.8/12, mbtmp3.8/5, ML3.3/1, MS4.1/1, Ms1 4.1/1, ms1mx3.0/20, Error ellipse: s-maj=56.2km s-min=22.8km az=117.0*
NEIC ***23*** *09:46:59.9±0.8, 67°.17S×112°.47E, h10km, mb3.6/1, Error ellipse: s-maj=17.5km s-min=12.8km az=66.0*
ISC 23 09:46:59.9±0.8, 67°.18S±0°.08×112°.4E±0°.2, h10km, n9, σ1§16/8, mb3.8/4, Antarctica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CASY	**Casey**	**1.18**	**319**	*e*Pg	**Pg**	**09 47 22.1**	**-0.4**
CASY				*e*Sg	**Sg**	**09 47 37.9**	**0.0**
SBA	**Scott Base**	**18.54**	**147**	P	**Pn**	**09 51 14.1**	**-2.2**
	5.5nm,1.3s						
MAW	**Mawson**	**18.66**	**246**	P	**Pn**	**09 51 17.5**	**-0.2**
	0.1nm,0.3s,baz=86,slow=11,SNR=3.7						
QSPA	**South Pole Qui**	**22.89**	**180**	P	**P**	**09 52 05.6**	**+2.5**
	4.0nm,0.7s,mb3.9,baz=306,slow=4.6,SNR=9.6						
STKA	**Stephens Creek**	**39.32**	**41**	P	**P**	**09 54 29.9**	**+1.2**
	2.5nm,1.0s,mb3.9,baz=162,slow=9.6,SNR=3.9						
ASAR	**Alice Springs**	**45.55**	**28**	P	**P**	**09 55 19.2**	**-0.2**
	0.7nm,0.5s,mb3.8,baz=194,slow=6.9,SNR=14						
WRA	**Warramunga Arr**	**49.26**	**28**	P	**P**	**09 55 48.2**	**-0.2**
	0.4nm,0.6s,mb3.6,baz=197,slow=7.3,SNR=4.4						
CTA	**Charters Tower**	**51.76**	**42**	LR	LR	10 14 35.9	
	comp=Z,182nm,19.2s,baz=55,slow=32						
ILAR	**Eielson Array**	**149.65**	**56**	PKPbc	PKPbc	10 06 47.7	-0.1
	0.2nm,0.8s,baz=318,slow=1.2,SNR=3.1						

BJI ***23*** *09:55:07.4, 3°.90N×126°.21E, h104km, mB4.9/27, mb5.0/48*
ISCJB ***23*** *09:55:08.3±0.3, 3°.91N±0°.02×126°.17E±0°.03, h108km±3km, mb4.9/87, Error ellipse: s-maj=5.2km s-min=2.9km az=168.7*
NEIC ***23*** *09:55:08.9±0.2, 3°.92N×126°.08E, mb5.1/36, Error ellipse: s-maj=8.9km s-min=5.3km az=70.0*
NEIC Felt [III] in Sangihe-Talaud.
IDC ***23*** *09:55:08.6±0.5, 3°.94N×126°.03E, h98km±4km, mb4.4/23, mb1 4.5/25, mb1mx4.4/28, mbtmp4.4/25, MS3.8/7, Ms1 3.9/7, ms1mx3.4/34, Error ellipse: s-maj=15.5km s-min=6.9km az=79.0*
MOS ***23*** *09:55:08.3±1.1, 3°.92N×126°.06E, h113km, mb5.0/22, Error ellipse: s-maj=14.5km s-min=6.8km az=112.5*
GCMT ***23*** *09:55:10.1±0.3, 3°.99N×126°.20E, h92km±3km, MW5.1, Moment Tensor Solution. s31,c34; s58,c86; Moment tensor: Scale 10^{16}Nm; M_{rr}1.09±.20; $M_{\theta\theta}$4.79±.19; $M_{\phi\phi}$-5.88±.25; $M_{r\theta}$1.22±.12; $M_{\theta\phi}$-3.15±.25; $M_{\phi r}$2.29±.19; Best double couple: $M_0$6.60000×10^{16} NP1:ϕ_s149.00000°, δ73.00000°, λ-6.00000°. NP2:ϕ_s241.00000°, δ84.00000°, λ-163.00000°. Principal axes: T 5.7300, Plg8.0000°, Azm14.0000°; N 1.7600, Plg72.0000°, Azm259.0000°; P -7.4900, Plg16.0000°, Azm106.0000°; Data Used: II IC G IU CN.*
DJA ***23*** *09:55:11, 3°.80N×126°.19E, h102km, mb5.1/41*
ISC 23 09:55:09.6±0.3, 3°.91N±0°.02×126°.16E±0°.03, h106km±2km, h112km±4.0km: pP-P, n228, σ1§27/242, mb4.9/86, 8C-5D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**0.67**	**251**	P	**Pn**	**09 55 26.5**	**-0.8**
GSPH	**General Santos**	**2.48**	**331**	⇓*e*P	**Pn**	**09 55 47.5**	**-1.1**
GSPH				*i* S	**Sn**	**09 56 15.3**	**-3.3**
MNI	**Manado**	**2.78**	**208**	P	**Pn**	**09 55 52.4**	**-0.2**
MATI	**Mati**	**3.02**	**2**	*e*P	**Pn**	**09 55 54.8**	**-1.0**
DAV	**Davao City (W)**	**3.20**	**350**	P	**Pn**	**09 55 58.2**	**+0.1**
	240nm,0.3s,baz=61,slow=4.1,SNR=6.7						
DAV				S	**Sn**	**09 56 34.8**	**-0.8**
	379nm,0.3s,baz=292,slow=22,SNR=5.9						
DAV	**Davao City (W)**	**3.20**	**350**	*e*Pn	**Pn**	**09 55 58.4**	**+0.2**
DMPH	**Davao City--Mi**	**3.22**	**348**	⇑*e*P	**Pn**	**09 55 59.0**	**+0.5**
DMPH				*e*S	**Sn**	**09 56 36.0**	**-0.2**
KCP	**Kidapawan**	**3.26**	**341**	⇓*e*P	**Pn**	**09 55 59.8**	**+0.8**
KCP				*i* S	**Sn**	**09 56 40.6**	**+3.5**
TNTI	**Ternate**	**3.34**	**159**	P	**Pn**	**09 55 58.5**	**-1.6**
CTBH	**Cotabato--PC H**	**3.80**	**330**	*e*P	**Pn**	**09 56 06.0**	**-0.3**
CTBH				*i* S	**Sn**	**09 56 49.1**	**-1.1**
BUKP	**Musuan**	**4.09**	**345**	*e*P	**Pn**	**09 56 11.2**	**+1.0**
LBMI	**Labuha**	**4.71**	**163**	P	**Pn**	**09 56 17.6**	**-0.9**
CGP	**Cagayan de Oro**	**4.75**	**342**	*e*P	**Pn**	**09 56 18.9**	**-0.1**
CGP				*i* S	**Sn**	**09 57 12.9**	**-0.1**
PAGZ	**Pagadian**	**4.79**	**325**	*e*P	**Pn**	**09 56 19.2**	**-0.4**
BUTP	**Butuan**	**5.06**	**354**	*e*P	**Pn**	**09 56 24.4**	**+1.2**
ZMPH	**Zamboanga City**	**5.08**	**307**	⇓*i*P	**Pn**	**09 56 22.5**	**-1.0**
ZMPH				*i* S	**Sn**	**09 57 16.5**	**-4.4**
IPIL	**Ipil**	**5.25**	**317**	*e*P	**Pn**	**09 56 25.6**	**-0.2**
SCPH	**Surigao**	**5.88**	**354**	⇓*e*P	**Pn**	**09 56 33.6**	**-0.7**
LUWI	**Luwuk**	**5.97**	**215**	P	**Pn**	**09 56 37.9**	**+2.3**
	7.1nm2μm,0.7s						
TBP	**Tagbilaran**	**6.18**	**338**	*e*P	**Pn**	**09 56 38.6**	**+0.2**
SWI	**Sorong**	**6.96**	**133**	P	**Pn**	**09 56 48.0**	**-1.0**
	1.1nm4μm207nm,0.5s						
NLAI	**Namlea**	**7.16**	**172**	P	**Pn**	**09 56 49.4**	**-2.3**
	12nm2μm,0.6s						
GUIM	**Jordan**	**7.56**	**332**	*e*P	**Pn**	**09 56 56.8**	**-0.3**
MYLDM	**Lahad Datu**	**7.74**	**280**	P	**Pn**	**09 57 02.7**	**+3.1**
MYLDM	**Lahad Datu**	**7.74**	**280**	P	**Pn**	**09 57 02.1**	**+2.5**
	1.5nm6μm444nm,1.4s						
AAI	**Ambon**	**7.81**	**165**	P	**Pn**	**09 56 59.3**	**-1.3**
	2.2nm7μm492nm,0.6s						
PCI	**Palu**	**7.92**	**233**	P	**Pn**	**09 57 03.0**	**+0.9**
	1.0nm2μm132nm,0.7s						
TSM	**Tawau**	**8.27**	**273**	P	**Pn**	**09 57 08.0**	**+1.1**
KDI	**Kendari**	**8.57**	**204**	P	**Pn**	**09 57 08.9**	**-2.1**
	3μm215nm,0.5s						
CUYO	**Cuyo Island**	**8.58**	**324**	*e*P	**Pn**	**09 57 13.3**	**+2.4**
CNP	**Catarman**	**8.68**	**350**	*e*P	**Pn**	**09 57 13.6**	**+1.2**
SDKM	**Sandakan**	**9.10**	**281**	P	**Pn**	**09 57 19.9**	**+1.8**
TTSI	**Tana Toraja**	**9.37**	**223**	P	**Pn**	**09 57 23.2**	**+1.4**
	2μm142nm,0.8s						
KDM	**Kudat**	**9.75**	**288**	P	**Pn**	**09 57 33.4**	**+6.4**
PVCP	**Virac**	**9.83**	**349**	*e*P	**Pn**	**09 57 29.0**	**+1.0**
SPSI	**Sidrap Palu**	**10.09**	**219**	P	**Pn**	**09 57 27.8**	**-3.8**
	63nm,0.7s						
KKM	**Kota Kinabalu**	**10.13**	**283**	*e*Pn	**Pn**	**09 57 32.5**	**+0.3**
KKM	**Kota Kinabalu**	**10.13**	**283**	P	**Pn**	**09 57 34.9**	**+2.7**
	3μm163nm,0.6s						
BNSI	**Bone**	**10.23**	**216**	P	**Pn**	**09 57 32.9**	**-0.6**
	1μm22nm,0.7s						
KAPI	**Kappang**	**10.93**	**216**	P	**Pn**	**09 57 42.2**	**-0.8**
	1.0nm,0.3s,baz=4.0,slow=4.3,SNR=3.5						
BKSI	**Bulukumba**	**10.97**	**213**	P	**Pn**	**09 57 42.7**	**-0.8**
	33nm,1.3s						
BAKI	**Biak**	**11.16**	**117**	P	**Pn**	**09 57 47.0**	**+1.0**
	5μm440nm,1.0s						
TLE	**Tual**	**11.53**	**145**	P	**Pn**	**09 57 51.6**	**+0.6**
	191nm,1.0s						
MMRI	**Maumere**	**13.06**	**197**	P	**Pn**	**09 58 06.6**	**-4.6**
BTM	**Bintulu**	**13.07**	**267**	P	**Pn**	**09 58 14.3**	**+2.9**
CAUP	**Cauayan**	**13.64**	**342**	*e*P	**Pn**	**09 58 18.6**	**-0.1**
BOLP	**Bolinao**	**13.83**	**334**	*e*P	**Pn**	**09 58 23.7**	**+2.5**
SMPI	**Sarmi**	**13.84**	**115**	P	**Pn**	**09 58 21.9**	**+0.5**
SBUM	**Sibu**	**13.99**	**264**	P	**Pn**	**09 58 26.2**	**+2.8**
SBUM	**Sibu**	**13.99**	**264**	P	**Pn**	**09 58 25.5**	**+2.2**
	1μm49nm,0.9s						
JAY	**Jayapura**	**15.88**	**113**	P	**Pn**	**09 58 49.2**	**+2.0**
	69nm,1.7s						
KSM	**Kuching**	**16.02**	**262**	P	**Pn**	**09 58 53.1**	**+4.2**
KSM	**Kuching**	**16.02**	**262**	*e*Pn	**Pn**	**09 58 48.5**	**-0.4**
	52nm,1.0s						
KSM	**Kuching**	**16.02**	**262**	P	**Pn**	**09 58 52.5**	**+3.6**
	777nm51nm,1.1s						
KHKI	**Kahang-Kahang**	**16.10**	**221**	P	**Pn**	**09 58 52.1**	**+2.1**
	71nm,1.1s						
KMMI	**Kalianget**	**16.32**	**228**	P	**Pn**	**09 58 53.0**	**+0.2**
	81nm,0.9s						
IGBI	**Denpasar**	**16.74**	**221**	P	**Pn**	**09 59 00.7**	**+2.8**
	332nm,0.7s						
GMJI	**Gumukmas**	**17.53**	**226**	P	**Pn**	**09 59 07.9**	**+0.5**
	67nm,1.2s						
KAKA	**Kakadu**	**17.65**	**159**	*e*P	**Pn**	**09 59 05.9**	**-3.0**
	39nm,0.6s						
KAKA	**Kakadu**	**17.65**	**159**	*e*P	**Pn**	**09 59 06.0**	**-2.9**
	134nm,0.6s						
KAKA	**Kakadu**	**17.65**	**159**	P	**Pn**	**09 59 05.4**	**-3.5**
	916nm127nm,0.6s						
SJI	**Sawahan**	**18.44**	**231**	P	**P**	**09 59 15.6**	**-1.4**
	48nm,0.7s						
PWJI	**Pagerwojo**	**18.59**	**230**	P	**P**	**09 59 17.3**	**-1.3**
	52nm,1.4s						
PCJI	**Pacitan**	**19.18**	**231**	P	**P**	**09 59 24.6**	**-0.5**
	101nm,1.4s						
TWG	**Pinlang**	**19.44**	**346**	*e*Pn	**Pn**	**09 59 24.3**	**-5.8**
	148nm,0.5s						
TPI	**Tanjungpandan**	**19.64**	**251**	P	**P**	**09 59 31.7**	**+1.5**
	50nm,1.3s						
KNA	**Kununurra**	**19.70**	**173**	P	**P**	**09 59 31.2**	**+0.5**
	3μm239nm,0.8s						
YULB	**Yu-li**	**19.93**	**347**	*e*Pn	**Pn**	**09 59 29.2**	**-6.6**
	92nm,0.6s						
TPUB	**Ta-pu**	**20.01**	**345**	*e*Pn	**P**	**09 59 30.9**	**-3.1**
	143nm,0.8s						
SSLB	**Suanglung**	**20.39**	**346**	*e*P	**P**	**09 59 35.1**	**-3.1**
	155nm,0.6s						
GUMO	**Guam**	**20.83**	**61**	LR	LR	10 06 26.7	
	comp=Z,155nm,20.3s,baz=253,slow=32						
YHNB	**Yeheng**	**21.15**	**348**	*e*P	**P**	**09 59 44.0**	**-2.3**
	51nm,0.6s,mb5.0						
FITZ	**Fitzroy Crossi**	**21.87**	**181**	*e*P	**P**	**09 59 52.3**	**-1.7**
	34nm,0.6s,mb4.8						
FITZ				*e*S	**S**	**10 03 47.1**	**-2.5**
FITZ	**Fitzroy Crossi**	**21.87**	**181**	P	**P**	**09 59 52.9**	**-1.1**
	17nm,0.5s,mb4.6,baz=4.2,slow=8.5,SNR=36						
FITZ	**Fitzroy Crossi**	**21.87**	**181**	*e*P	**P**	**09 59 52.5**	**-1.6**
FITZ	**Fitzroy Crossi**	**21.87**	**181**	P	**P**	**09 59 53.2**	**-0.8**
	81nm,0.8s,mb5.1						
QIZ	**Qiongzhong**	**21.91**	**315**	P	**P**	**09 59 55.1**	**+0.7**
QIZ				pP		10 00 17.8	
QIZ				S	**S**	**10 03 48.9**	**-1.3**
QIZ				pmax	pmax		
	comp=Z,26nm,2.0s,mb4.2						
QIZ				LR	LR		
	comp=N,800nm,16.5s						
QIZ				LR	LR		
	comp=E,290nm,19.2s						
QIZ				LR	LR		
	comp=Z,330nm,19.2s						
QZH	**Quanzhou**	**22.15**	**342**	⇑*i*P	**P**	**09 59 55.5**	**-1.4**
QZH				S	**S**	**10 03 47.0**	**-7.0**
QZH				sS	sS	10 04 24.0	-5.1
QZH				pmax	pmax		
	comp=Z,100nm,0.8s,mb5.2						
MYKOM	**Kota Tinggi**	**22.38**	**265**	P	pP	10 00 22.1	+2.3
MYKOM	**Kota Tinggi**	**22.38**	**265**	P	**P**	**09 59 59.0**	**-0.5**
	comp=Z,1μmcomp=Z,50nm,1.2s,mb4.7						
CGJI	**Cibinong**	**22.95**	**243**	P	**P**	**10 00 03.1**	**-2.0**
	comp=Z,72nm,1.4s,mb4.8						
KLSI	**Jambi**	**23.05**	**248**	P	**P**	**10 00 05.6**	**-0.4**
	comp=Z,81nm,1.2s,mb4.9						
MDSI	**Maura Dua**	**23.49**	**249**	P	**P**	**10 00 11.6**	**+1.5**
	comp=Z,32nm,1.5s,mb4.4						
COEN	**Coen**	**24.49**	**137**	*e*P	**P**	**10 00 19.2**	**0.0**
COEN	**Coen**	**24.49**	**137**	P	**P**	**10 00 19.0**	**-0.2**
	comp=Z,190nm,0.9s,mb5.4						
FRIM	**Kepong**	**24.50**	**269**	P	pP	10 00 43.1	+0.7
PMG	**Port Moresby**	**24.76**	**122**	*e*P	**P**	**10 00 21.6**	**0.0**
PMG				pmax	pmax		
	comp=Z,271nm,1.6s						
PMG	**Port Moresby**	**24.76**	**122**	*e*P	**P**	**10 00 21.6**	**0.0**
	comp=Z,271nm,1.6s,mb5.4						
PMG	**Port Moresby**	**24.76**	**122**	P	**P**	**10 00 21.9**	**+0.3**
	comp=Z,2μmcomp=Z,116nm,1.6s,mb5.1						
WRAB	**Tennant Creek**	**25.02**	**162**	P	**P**	**10 00 23.0**	**-0.9**
	comp=Z,826nm,0.7s,SNR=53						
WRAB	**Tennant Creek**	**25.02**	**162**	*e*P	**P**	**10 00 23.1**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,102nm,0.8s,mb5.3						
WRAB	**Tennant Creek**	**25.02**	**162**	*e*P	**P**	**10 00 23.1**	**-0.8**
	comp=Z,102nm,0.8s,mb5.3						
WRAB	**Tennant Creek**	**25.02**	**162**	P	**P**	**10 00 23.5**	**-0.4**
	comp=Z,142nm,0.8s,mb5.4						
WRA	**Warramunga Arr**	**25.02**	**162**	P	**P**	**10 00 24.1**	**+0.1**
	comp=Z,68nm,0.6s,mb5.2						
IPM	**Ipoh**	**25.07**	**272**	P	**P**	**10 00 26.8**	**+2.3**
	comp=Z,62nm,1.2s,mb4.9						
MBWA	**Marble Bar**	**25.69**	**194**	*e*P	**P**	**10 00 30.1**	**+0.1**
	comp=Z,57nm,1.2s,mb4.9						
MBWA	**Marble Bar**	**25.69**	**194**	P	**P**	**10 00 30.4**	**+0.4**
	comp=Z,49nm,1.0s,mb4.9						
PSI	**Prapat**	**27.21**	**269**	pP	pP	10 01 06.9	-0.2
	comp=Z,9.4nm,0.8s,baz=124,slow=7.1,SNR=2.2						
CBIJ	**Chichi jima**	**27.68**	**32**	P	**P**	**10 00 46.2**	**-1.6**
	comp=Z,114nm,0.4s,mb5.7,baz=246,slow=4.3,SNR=38						
CBIJ				LR	LR	10 10 37.3	
	comp=Z,161nm,18.7s,baz=260,slow=34						
ASAR	**Alice Springs**	**28.43**	**165**	P	**P**	**10 00 54.1**	**-0.3**
	comp=Z,13nm,0.5s,mb4.7,baz=345,slow=7.5,SNR=286						
ASAR				pP	pP	10 01 18.4	+0.6
	comp=Z,5.6nm,0.6s,baz=357,slow=15,SNR=2.8						
ASAR				S	**S**	**10 05 35.8**	**+1.8**
	comp=Z,1.9nm,0.8s,baz=358,slow=25,SNR=4.4						
ASAR				ScP	ScP	10 07 36.5	+0.5
	comp=Z,1.9nm,0.7s,baz=355,slow=2.0,SNR=4.5						
ASAR	**Alice Springs**	**28.43**	**165**	P	**P**	**10 00 54.1**	**-0.3**
ASAR				*PP	pP	10 01 18.5	+0.6
ASAR				S	**S**	**10 05 35.8**	**+1.8**
WHN	**Wuhan**	**28.75**	**338**	P	**P**	**10 00 57.5**	**+0.3**
WHN				pmax	pmax		
	comp=Z,79nm,1.4s,mb5.2						
WHN				LR	LR		
	comp=N,300nm,9.2s						
WHN				LR	LR		
	comp=E,630nm,11.1s						
WHN				LR	LR		
	comp=Z,820nm,28.9s						
NJ2	**Nanjing**	**28.83**	**347**	*e*P	**P**	**10 00 59.0**	**+1.1**
NJ2				pP	pP	10 01 25.8	+4.4
NJ2				PP	PP	10 01 57.1	-7.9
NJ2				S	**S**	**10 05 39.0**	**-1.2**
NJ2				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.8						
NJ2				pmax	pmax		
	comp=Z,140nm,5.0s						
NJ2				LR	LR		
	comp=N,230nm,22.4s						
NJ2				LR	LR		
	comp=E,570nm,25.7s						
NJ2				LR	LR		
	comp=Z,140nm,23.0s						
GYA	**Guiyang**	**29.18**	**322**	P	**P**	**10 01 02.6**	**+1.5**
GYA				pP	pP	10 01 29.4	+4.8
GYA				PP	PP	10 02 03.3	-5.7
GYA				PcP	PcP	10 04 06.8	+0.6
GYA				S	**S**	**10 05 45.4**	**-0.5**
GYA				SS	SS	10 07 26.0	-28
GYA				ScP

CD2 LR LR
comp=Z,240nm,14.9s
MJAR Matsushiro Arr 34.32 17 P **P** **10 01 44.7 -1.4**
comp=Z,12nm,1.0s,mb4.7,baz=200,slow=9.5,SNR=29
MJAR pP pP 10 02 09.0 -0.8
comp=Z,1.6nm,0.6s,baz=149,slow=15,SNR=3.3
MJAR LR LR 10 14 56.6
comp=Z,126nm,19.0s,baz=210,slow=35
MJAR Matsushiro Arr 34.32 17 P **P** **10 01 44.7 -1.3**
MJAR *PP pP 10 02 09.0 -0.8
MAJO Matsushiro 34.32 17 *eP* **P** **10 01 44.9 -1.1**
MAJO pmax pmax
comp=Z,23nm,0.8s,mb5.1
MAJO Matsushiro 34.32 17 *eP* **P** **10 01 44.9 -1.1**
comp=Z,23nm,0.8s,mb5.0
MAT Matsushiro 34.32 17 P **P** **10 01 44.5 -1.5**
MAT S **S** **10 07 10.0 +4.3**
FORT Forrest 34.54 177 *eP* **P** **10 01 47.6 -0.4**
comp=Z,20nm,0.5s,mb5.2
KLBR Kellerberrin 36.20 192 *eP* **P** **10 02 01.0 -1.2**
comp=Z,141nm,1.9s,mb5.6
BJI Beijing 37.09 347 P **P** **10 02 09.0 -0.6**
BJI S **S** **10 07 50.8 +2.9**
BJI pmax pmax
comp=Z,80nm,0.8s,mb5.7
BJI LR LR
comp=N,94nm,20.2s
BJI LR LR
comp=E,270nm,22.5s
BJI LR LR
comp=Z,93nm,19.7s
NWAO Narrogin (SRO) 37.59 192 P **P** **10 02 13.9 -0.1**
comp=Z,4.4nm,0.3s,mb4.8,baz=36,slow=18,SNR=14
SNY Shenyang 37.83 357 ⇑P **P** **10 02 16.3 +0.5**
SNY pmax pmax
comp=Z,130nm,0.6s,mb5.9
SNY LR LR
comp=N,230nm,18.3s
SNY LR LR
comp=E,79nm,16.8s
SNY LR LR
comp=Z,180nm,16.8s
EIDS Eidsvold 37.84 142 *eP* **P** **10 02 16.3 +0.1**
comp=Z,38nm,0.7s,mb5.3
LZH Lanzhou 38.06 330 *eP* **P** **10 02 18.3 +0.3**
LZH pP pP 10 02 46.5 +4.5
LZH PP PP 10 03 52.5 +5.4
LZH S **S** **10 08 02.1 -0.8**
LZH SS SS 10 10 47.5 -7.0
LZH pmax pmax
comp=Z,26nm,1.1s,mb5.0
LZH pmax pmax
comp=Z,100nm,5.0s
LZH LR LR
comp=E,630nm,15.8s
LZH LR LR
comp=Z,900nm,17.5s
STKA Stephens Creek 38.50 159 *eP* **P** **10 02 21.8 +0.2**
comp=Z,20nm,0.6s,mb5.1
STKA Stephens Creek 38.50 159 P **P** **10 02 21.9 +0.3**
comp=Z,20nm,0.6s,mb5.1,baz=332,slow=8.0,SNR=88
STKA Stephens Creek 38.50 159 *eP* **P** **10 02 21.9 +0.3**
comp=Z,5.6nm,0.8s,mb4.5
HHC Hu-ho-hao-te 39.06 342 *eP* **P** **10 02 28.3 +2.1**
HHC PP PP 10 04 05.1 +7.3
HHC PcP PcP 10 04 35.4 +1.2
HHC ScP ScP 10 08 11.1 -2.0
HHC S **S** **10 08 18.4 +0.8**
HHC PcS PcS 10 08 25.0 +1.2
HHC SS SS 10 11 10.9 -3.3
HHC ScS ScS 10 12 21.9 -2.6
HHC pmax pmax
comp=Z,17nm,0.6s,mb5.0
HHC pmax pmax
comp=Z,83nm,6.3s
HHC LR LR
comp=N,400nm,14.6s
HHC LR LR
comp=E,420nm,14.7s
HHC LR LR
comp=Z,430nm,14.7s
CN2 Changchun 39.73 359 *eP* **P** **10 02 31.6 -0.1**
CN2 *ep*P pP 10 02 54.3 -1.7
CN2 *es*P sP 10 03 05.9 -2.2
CN2 *e*S **S** **10 08 28.4 +0.7**
CN2 pmax pmax
comp=Z,30nm,0.6s,mb5.3
CN2 LR LR
comp=N,200nm,10.0s
CN2 LR LR
comp=E,200nm,10.0s
CN2 LR LR
comp=Z,200nm,18.0s
MDJ Mudanjiang 40.66 4 P **P** **10 02 40.8 +1.5**
MDJ PP PP 10 04 17.0 +1.9
MDJ S **S** **10 08 43.6 +2.2**
MDJ pmax pmax
comp=Z,50nm,1.1s,mb5.3
MDJ pmax pmax
comp=Z,82nm,5.9s
MDJ LR LR
comp=N,110nm,27.8s
MDJ LR LR
comp=E,130nm,32.3s
MDJ LR LR
comp=Z,140nm,35.9s
MDJ Mudanjiang 40.66 4 *eP* **P** **10 02 40.1 +0.8**
comp=Z,33nm,0.8s,mb5.2
LSA Lhasa 41.90 312 *eP* **P** **10 02 50.9 +1.1**
LSA *e**PP pP 10 03 15.4 +1.2
LSA pmax pmax
comp=Z,14nm,0.6s,mb4.9
LSA Lhasa 41.90 312 *eP* **P** **10 02 50.9 +1.1**
comp=Z,14nm,0.6s,mb4.9
LSA *ep*P pP 10 03 15.4 +1.2
ARMA Armidale 41.93 146 *eP* **P** **10 02 50.9 +0.9**
ARMA Armidale 41.93 146 *eP* **P** **10 02 51.4 +1.4**
comp=Z,54nm,0.8s,mb5.3
ASAJ Asahikawa 42.59 18 P **P** **10 02 56.1 +0.9**
comp=Z,7.8nm,0.5s,mb4.7,baz=229,slow=10.0,SNR=7.1
GTA Gaotai 42.66 330 *eP* **P** **10 02 55.3 -0.4**
GTA pP pP 10 03 23.4 +3.2
GTA PP PP 10 04 39.3 +2.5
GTA PcP PcP 10 04 46.1 +0.2
GTA S **S** **10 09 09.8 -1.3**
GTA SS SS 10 12 17.8 -7.7
GTA pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
GTA pmax pmax
comp=Z,58nm,5.4s
GTA LR LR
comp=N,390nm,21.6s
GTA LR LR
comp=E,300nm,23.1s
GTA LR LR
comp=Z,260nm,18.3s
CAN Canberra 44.52 153 *eP* **P** **10 03 12.1 +1.3**
CAN *e**PP pP 10 03 41.3 +5.9
CAN pmax pmax
comp=Z,20nm,0.7s,mb5.0
CAN Canberra 44.52 153 *eP* **P** **10 03 12.1 +1.4**
comp=Z,20nm,0.7s,mb5.0
CAN *ep*P pP 10 03 41.3 +5.9
CNB Canberra Magne 44.68 153 *eP* **P** **10 03 13.4 +1.4**
TOO Toolangi 45.01 158 *eP* **P** **10 03 16.0 +1.4**
HABR Khabarovsk 45.05 8 *eP* **P** **10 03 13.7 -1.1**
HABR *e* 10 04 51.7
HABR *e* 10 04 59.4
HABR *e*PPP 10 05 40.7
HABR *e*S **S** **10 09 46.5 +0.8**
HABR *e*SSS 10 14 04.5
HABR pmax pmax
comp=Z,44nm,1.6s,mb4.9
HABR pmax pmax
comp=E,23nm,1.5s
HABR pmax pmax
comp=N,31nm,1.8s
YSS Yuzh-Sakhalins 45.23 16 *eP* **P** **10 03 20.0 +3.8**
KLR Kul'dur 45.41 5 *eP* **P** **10 03 13.6 -4.0**
HIA Hailar 45.52 354 *eP* **P** **10 03 18.7 +0.2**
HIA pmax pmax
comp=Z,68nm,1.2s
HIA Hailar 45.52 354 *eP* **P** **10 03 18.7 +0.2**
comp=Z,68nm,1.2s,mb5.2
ULN Ulaanbaatar 46.78 342 *eP* **P** **10 03 27.6 -0.7**
ULN pmax pmax
comp=Z,8.0nm,0.6s,mb4.6
ULN Ulaanbaatar 46.78 342 *eP* **P** **10 03 27.6 -0.7**
comp=Z,7.5nm,0.6s,mb4.6
ULN *e* 10 03 40.0
ULN Ulaanbaatar 46.78 342 P **P** **10 03 27.6 -0.7**
SONM Songino Array 46.95 342 P **P** **10 03 28.8 -0.9**
comp=Z,6.4nm,0.5s,mb4.6,baz=158,slow=8.5,SNR=19
SONM LR LR 10 23 31.8
comp=Z,180nm,21.7s,baz=335,slow=36
DZM Mont Dzumac 47.10 125 *eP* **P** **10 03 32.3 +1.0**
DZM Mont Dzumac 47.10 125 *eP* **P** **10 03 33.0 +1.8**
comp=Z,69nm,1.1s,mb5.3
TLY Talaya 51.19 342 *eP* **P** **10 04 02.5 +0.6**
TLY pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
MOY Mondy 52.02 340 *eP* **P** **10 04 09.0 +0.9**
WMQ Urumqi 52.26 325 *eP* **P** **10 04 11.8 +1.8**
WMQ pP pP 10 04 40.0 +4.7
WMQ pmax pmax
comp=Z,17nm,0.8s,mb5.1
WMQ pmax pmax
comp=Z,120nm,5.4s
WMQ LR LR
comp=N,750nm,23.4s
WMQ LR LR
comp=E,340nm,20.0s
WMQ LR LR
comp=Z,230nm,20.0s
CLNS Chul'man 52.79 359 *eP* **P** **10 04 14.3 +0.6**
CLNS pmax pmax
comp=Z,19nm,1.0s,mb5.1
CLNS pmax pmax
comp=E,5.0nm,0.7s
CLNS pmax pmax
comp=N,12nm,0.8s
PETK Petropavlovsk- 55.48 23 P **P** **10 04 34.5 +1.2**
comp=N,4.4nm,0.5s,mb4.7,baz=188,slow=4.0,SNR=30
PETK pP pP 10 04 56.0 -2.9
comp=N,5.0nm,0.6s,baz=151,slow=3.4,SNR=6.6
PET Petropavlovsk 55.79 23 *eP* **P** **10 04 43.0 +7.5**
PET *e* 10 12 24.3
PET MLR MLR
comp=Z,100nm,20.0s
MK31 Makanchi Array 57.09 325 *eP* **P** **10 04 43.8 -1.1**
MKAR Makanchi Array 57.09 325 P **P** **10 04 43.7 -1.2**
comp=Z,4.4nm,0.4s,mb4.8,baz=121,slow=8.1,SNR=35
MKAR pP pP 10 05 07.0 -3.5
comp=Z,3.8nm,0.5s,baz=123,slow=9.0,SNR=4.0
MKAR ScP ScP 10 09 28.4 -0.3
comp=Z,2.2nm,0.6s,baz=120,slow=4.2,SNR=8.3
MKAR Makanchi Array 57.09 325 P **P** **10 04 43.7 -1.2**
MKAR *PP pP 10 05 07.1 -3.5
MKAR Makanchi Array 57.09 325 P **P** **10 04 43.7 -1.2**
MKAR pP pP 10 05 07.0 -3.5
MKAR ScP ScP 10 09 28.4 -0.3
KSH Kashi 57.52 315 *eP* **P** **10 04 49.6 +1.6**
KSH pP pP 10 05 19.3 +5.5
KSH PcP PcP 10 05 41.3 +0.9
KSH PP PP 10 07 00.9 +4.1
KSH ScP ScP 10 09 27.9 -2.9
KSH PcS PcS 10 09 41.4 -0.2
KSH S **S** **10 12 35.8 -1.8**
KSH ScS ScS 10 14 23.8 -3.7
KSH SS SS 10 16 26.4 -2.7
KSH pmax pmax
comp=Z,6.0nm,1.5s,mb4.4
KSH pmax pmax
comp=Z,84nm,5.4s
KSH LR LR
comp=N,130nm,6.5s
KSH LR LR
comp=E,97nm,5.1s
KSH LR LR
comp=Z,140nm,6.8s
YAK Yakutsk 58.05 2 *eP* **P** **10 04 50.2 -1.1**
YAK *e**PP pP 10 05 15.3 -1.8
YAK *e* 10 05 37.5
YAK *e* 10 06 59.3
YAK *e*S **S** **10 12 44.8 +1.1**
YAK *e* 10 14 32.6
YAK *e*SS SS 10 16 35.4 -1.3
YAK pmax pmax
comp=Z,31nm,1.0s,mb5.3
YAK pmax pmax
comp=N,16nm,1.4s
YAK pmax pmax
comp=E,2.0nm,1.0s
YAK pmax pmax
comp=E,5.0nm,0.4s
YAK pmax pmax
comp=Z,9.0nm,0.4s,mb5.2
YAK pmax pmax
comp=N,3.0nm,0.4s
YAK smax
comp=E,114nm,2.3s
YAK smax
comp=N,113nm,2.2s
YAK MLR MLR
comp=Z,112nm,23.0s
YAK MLR MLR
comp=N,87nm,23.0s
YAK Yakutsk 58.05 2 *eP* **P** **10 04 52.4 +1.1**
comp=N,21nm,0.5s,mb5.4
UCH Uchtor 59.66 318 *eP* **P** **10 05 03.3 +0.5**
comp=N,33μm,0.8s
AAK Ala-Archa 59.84 318 *i P* **P** **10 05 03.9 -0.2**
AML Almayashu 60.17 317 *eP* **P** **10 05 06.7 +0.3**
comp=N,7.4nm,0.6s,mb4.9
ZALV Zalesovo Beam 60.17 333 P **P** **10 05 04.0 -2.1**
comp=N,2.1nm,0.4s,mb4.5,baz=126,slow=5.3,SNR=8.5
ZALV Zalesovo Beam 60.17 333 P **P** **10 05 04.0 -2.2**
EKS2 Erkin-Say 60.34 318 *eP* **P** **10 05 08.3 +0.9**
comp=N,4.2nm,0.6s,mb4.7
KBL Kabul 60.96 308 *eP* **P** **10 05 11.9 0.0**
KBL pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
KBL Kabul 60.96 308 *eP* **P** **10 05 11.9 0.0**
comp=Z,4.5nm,0.6s,mb4.7
KURK Kurchatov 61.29 328 P **P** **10 05 12.2 -1.5**
comp=Z,95nm,0.6s,mb6.0,SNR=11
KURK Kurchatov 61.29 328 *ceP* **P** **10 05 13.2 -0.5**
KURK pmax pmax
comp=Z,20nm,1.2s,mb5.0
KURK Kurchatov 61.29 328 *eP* **P** **10 05 12.2 -1.5**
comp=Z,10nm,0.6s,mb5.0
SEY Seymchan 61.99 13 *ceP* **P** **10 05 20.7 +2.5**
URZ Urewera 63.06 137 P **P** **10 05 27.1 +1.3**
comp=Z,9.3nm,0.6s,mb4.9,baz=137,slow=17,SNR=4.9
VOSK Vostochnaya 66.41 327 P **P** **10 05 45.2 -2.1**
VOSK pmax pmax
comp=Z,7.0nm,0.7s,mb4.6
BVAR Borovoye Array 66.86 327 P **P** **10 05 48.5 -1.7**
comp=Z,5.4nm,0.7s,mb4.5,baz=142,slow=10.0,SNR=21
BRVK Borovoye 66.94 327 *eP* **P** **10 05 49.6 -1.0**
BRVK pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
BRVK Borovoye 66.94 327 *eP* **P** **10 05 49.6 -1.1**
comp=Z,9.7nm,0.8s,mb4.7
ZRNK Zerenda 67.58 327 *i P* **P** **10 05 53.1 -1.6**
TIXI Tiksi 67.67 1 *eP* **P** **10 05 55.2 +0.2**
TIXI pmax pmax
comp=Z,50nm,1.6s,mb5.1
ABKAR Akbulak array 71.65 321 *eP* **P** **10 06 18.2 -1.6**
comp=Z,3.3nm,0.6s,mb4.3
SVE Sverdlovsk 73.51 329⇑ *eP* **P** **10 06 29.5 -1.2**
SVE pmax pmax
comp=Z,17nm,1.0s,mb4.7
ARU Arti 74.48 328 *c i P* **P** **10 06 34.9 -1.4**
ARU *e* 10 09 19.9
ARU S S 10 16 02.8 +0.1
ARU SS SS 10 20 43.6 -7.8
ARU pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
ARU Arti 74.48 328 *eP* **P** **10 06 34.5 -1.8**
comp=Z,7.1nm,0.7s,mb4.5
SVW2 Sparrevohn 80.92 29 *eP* **P** **10 07 14.1 +2.1**
comp=Z,16nm,1.4s,mb4.7
TTA Tatalina 81.00 27 *eP* **P** **10 07 13.5 +1.1**
KDAK Kodiak Island 82.05 32 P **P** **10 07 19.2 +1.2**
comp=Z,5.7nm,0.7s,mb4.5,baz=257,slow=4.3,SNR=6.9
TRF Thorofare Moun 83.64 27 *eP* **P** **10 07 27.2 +1.1**
comp=Z,7.4nm,1.0s,mb4.5
COLD Coldfoot 83.95 23 *eP* **P** **10 07 29.2 +1.5**
comp=Z,17nm,0.8s,mb4.9
MCK McKinley 84.26 26 *eP* **P** **10 07 30.2 +0.9**
MCK pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
MCK McKinley 84.26 26 *eP* **P** **10 07 30.2 +0.9**
comp=Z,6.5nm,0.7s,mb4.6
ILAR Eielson Array 85.19 25 P **P** **10 07 33.2 -0.7**
comp=Z,1.3nm,0.7s,mb4.0,baz=246,slow=5.2,SNR=23
ILAR pP pP 10 07 58.8 -2.6
comp=Z,1.0nm,0.5s,baz=266,slow=4.7,SNR=3.8
OBN Obninsk 86.59 325 *eP* **P** **10 07 40.1 -0.9**
OBN pmax pmax
comp=Z,11nm,1.2s,mb4.7
MMAI Mount Meron Ar 88.53 303 P **P** **10 07 50.0 -0.8**
comp=Z,0.8nm,0.3s,mb4.3,baz=315,slow=57,SNR=2.9
JOF Joensuu 88.76 333 *eP* **P** **10 07 49.5 -1.7**
JOF pmax pmax
comp=Z,19nm,0.5s,mb5.4
JOF Joensuu 88.76 333 *ep* **P** **10 07 49.5 -1.7**
comp=Z,19nm,0.5s,mb5.4
KMBO Kilima Mbogo 88.98 269 *eP* **P** **10 07 52.6 -0.7**
KMBO pmax pmax
comp=Z,84nm,0.8s
KMBO Kilima Mbogo 88.98 269 *eP* **P** **10 07 52.6 -0.8**
comp=Z,84nm,0.8s,mb5.8
BRTR Keskin Array B 89.47 310 P **P** **10 07 53.9 -1.2**
comp=Z,0.7nm,0.6s,mb3.9,baz=123,slow=4.6,SNR=3.8
ARCES ARCESS Array B 90.09 340 P **P** **10 07 56.2 -1.1**
comp=Z,5.5nm,0.6s,mb4.9,baz=88,slow=6.8,SNR=31
ARCES ARCESS Array B 90.09 340 P **P** **10 07 56.2 -1.1**
KAF Kangasniemi 91.18 332 *eP* **P** **10 08 00.6 -1.9**
KAF pmax pmax
comp=Z,3.0nm,0.5s,mb4.7
KAF Kangasniemi 91.18 332 *eP* **P** **10 08 00.6 -1.9**
comp=Z,2.9nm,0.5s,mb4.7
KAF Kangasniemi 91.18 332 *ep* **P** **10 08 00.6 -1.9**
comp=Z,2.9nm,0.5s,mb4.7
AKASG Malin Array Be 91.40 321 P **P** **10 08 02.4 -1.4**
comp=Z,0.8nm,0.5s,mb4.1,baz=69,slow=4.9,SNR=5.5
FINES FINESS Array B 91.41 332 P **P** **10 08 02.2 -1.4**
comp=Z,3.4nm,0.5s,mb4.7,baz=56,slow=4.9,SNR=9.3
FINES FINESS Array B 91.41 332 P **P** **10 08 02.2 -1.4**
BUR08 Bucovina Ar. S 94.50 318 *eP* **P** **10 08 17.2 -0.9**
NB2 NORSAR Subarra 98.38 334 P **P** **10 08 33.4 -2.0**
comp=Z,1.6nm,0.6s,mb4.7,baz=66,slow=4.6
NOA NORSAR Array B 98.38 334 P **P** **10 08 33.6 -1.7**
comp=Z,2.4nm,0.7s,mb4.8,baz=67,slow=4.6,SNR=9.9
NOA LR LR 10 58 16.1
comp=Z,74nm,18.4s,baz=90,slow=38
YKA Yellowknife Ar 99.57 24 P Pdif 10 08 41.2 +0.3
comp=Z,0.9nm,0.7s,baz=294,slow=3.6,SNR=5.3
YKA Yellowknife Ar 99.57 24 P Pdif 10 08 41.2 +0.3
BNM Barren Site 117.56 48 *e*PKPdf PKPdf 10 13 42.0 -1.7
TXAR Lajitas Array 121.94 52 PKP PKPdf 10 13 53.3 +1.0
comp=Z,0.2nm,0.7s,baz=182,slow=0.9,SNR=5.3
TXAR pPKP pPKPdf 10 14 18.8 -2.4
comp=Z,0.4nm,0.7s,baz=130,slow=1.4,SNR=2.3
TORD Torodi Ar. Bea 122.32 288 PKP PKPdf 10 13 52.8 -0.5
comp=Z,0.3nm,0.5s,baz=68,slow=0.8,SNR=4.5
TORD pPKP pPKPdf 10 14 18.7 -3.6
comp=Z,0.8nm,0.7s,baz=94,slow=1.0,SNR=2.8
CPUP Villa Florida 157.45 172 PKPab PKPab 10 15 27.3 +1.4
comp=Z,1.5nm,0.5s,baz=96,slow=2.3,SNR=7.6
LPAZ La Paz 161.33 132 PKPab PKPab 10 15 45.9 +2.7
comp=Z,0.5nm,0.7s,baz=206,slow=8.0,SNR=4.3

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*ISCJB **23** 09:57:11.5±0.8, 36°.94N±0°.04×29°.17E±0°.05, h1km±8km,*
Error ellipse: s-maj=7.0km s-min=5.8km az=135.7
*ISK **23** 09:57:11.5, 36°.97N×29°.19E, h11km, MD2.9*
*CSEM **23** 09:57:11.6±0.2, 36°.94N×29°.20E, h5km, MD2.9, Error*
ellipse: s-maj=3.8km s-min=2.6km az=7.0
*DDA **23** 09:57:12.5, 36°.99N×29°.25E, h7km±2km, MD2.8*
ISC 23 09:57:12.1±0.8, **36°.95N**±0°.04×**29°.18E**±0°.05, **h5**km±7km,
n22, σ0°**78**/33, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.33**	**52**	*e*PG	**Pg**	**09 57 17.8**	**-0.7**
GLHS				*e*SG	**Sg**	**09 57 23.1**	**+0.3**
GLHS	**Glhisar (BURDU**	**0.33**	**52**	*e*Pg	**Pg**	**09 57 17.8**	**-0.7**
GLHS				*e*Sg	**Sg**	**09 57 23.2**	**+0.4**
GOLH	**Golhisar**	**0.42**	**47**	*i* P	**Pg**	**09 57 19.6**	**-0.7**
GOLH				*i* S	**Sg**	**09 57 25.0**	**-0.7**
GOLH	**Golhisar**	**0.42**	**47**	*i* P	**Pg**	**09 57 19.6**	**-0.6**
GOLH				*i* S	**Sg**	**09 57 25.0**	**-0.7**
ELL	**Elmali**	**0.62**	**109**	*e*PG	**Pg**	**09 57 23.1**	**-0.9**
ELL				*e*SG	**Sg**	**09 57 33.7**	**+1.6**
ELL	**Elmali**	**0.62**	**109**	*e*Pg	**Pg**	**09 57 23.2**	**-0.9**
ELL				*e*Sg	**Sg**	**09 57 33.7**	**+1.5**
YER	**Yerkesik**	**0.74**	**285**	*e*PG	**Pg**	**09 57 26.5**	**+0.2**
YER	**Yerkesik**	**0.74**	**285**	*e*Pg	**Pg**	**09 57 26.5**	**+0.2**
DNZL	**Cakiroluk**	**0.74**	**352**	*i* P	**Pg**	**09 57 26.1**	**-0.3**
DNZL				*i* S	**Sg**	**09 57 37.0**	**+0.9**
DNZL	**Cakiroluk**	**0.74**	**352**	*i* P	**Pg**	**09 57 26.1**	**-0.3**
DNZL				*i* S	**Sg**	**09 57 37.0**	**+0.9**
AKAS	**Kas**	**0.80**	**154**	*i* P	**Pg**	**09 57 28.2**	**+0.8**
AKAS				*i* S	**Sg**	**09 57 43.4**	**+5.7**
AKAS	**Kas**	**0.80**	**154**	*i* P	**Pg**	**09 57 28.2**	**+0.8**
DENT	**Denizli**	**0.81**	**352**	*e*PG	**Pg**	**09 57 27.4**	**-0.3**
DENT	**Denizli**	**0.81**	**352**	*e*Pg	**Pg**	**09 57 27.4**	**-0.3**
MLSB	**Milas**	**1.17**	**288**	*e*PN	**Pn**	**09 57 34.6**	**-0.5**
MLSB	**Milas**	**1.17**	**288**	*e*Pn	**Pn**	**09 57 34.6**	**-0.5**
KHAL	**Karahalli**	**1.44**	**10**	*e*P	**Pn**	**09 57 39.0**	**+0.2**
KHAL				*i* S	**Sb**	**09 57 59.4**	**+1.4**
KHAL	**Karahalli**	**1.44**	**10**	*e*P	**Pn**	**09 57 39.0**	**+0.2**
KHAL				*i* S	**Sb**	**09 57 59.4**	**+1.4**
SUTC	**Sutluce-Ispart**	**1.55**	**70**	*e*PN	**Pn**	**09 57 39.1**	**-1.2**
SUTC	**Sutluce-Ispart**	**1.55**	**70**	*e*Pn	**Pn**	**09 57 39.2**	**-1.1**
HDMB	**Hadim**	**2.65**	**89**	*e*PN	**Pn**	**09 57 55.5**	**0.0**
HDMB	**Hadim**	**2.65**	**89**	*e*Pn	**Pn**	**09 57 55.5**	**0.0**

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*CSEM **23** 10:09:59.9±0.6, 38°.71N×44°.70E, h2km, ML3.0, Error*
ellipse: s-maj=12.5km s-min=9.1km az=96.0
*ISK **23** 10:10:00.3, 38°.77N×44°.60E, h5km, ML3.0*
*DDA **23** 10:10:05.2, 38°.57N×44°.35E, h9km, Md3.3*
ISC 23 10:09:59.9±1.2, **38°.68N**±0°.04×**44°.73E**±0°.07, **h4**km±10km,
n21, σ1°**00**/35, **Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLDR	**Caldiran**	**0.78**	**306**	*e*PG	**Pg**	**10 10 13.3**	**-1.5**
CLDR				*e*SG	**Sg**	**10 10 23.9**	**-1.1**
CLDR	**Caldiran**	**0.78**	**306**	*e*Pg	**Pg**	**10 10 13.3**	**-1.6**
CLDR				*e*Sg	**Sg**	**10 10 23.9**	**-1.1**
TVAN	**Van**	**1.04**	**262**	*i* P	**Pg**	**10 10 20.2**	**+0.3**
TVAN				*i* S	**Sg**	**10 10 35.6**	**+2.1**
TVAN	**Van**	**1.04**	**262**	*i* P	**Pg**	**10 10 20.2**	**+0.3**
TVAN				*i* S	**Sg**	**10 10 35.6**	**+2.1**
VANB	**Van**	**1.05**	**266**	*e*PG	**Pg**	**10 10 19.8**	**-0.2**
VANB				*e*SG	**Sg**	**10 10 34.4**	**+0.8**
VANB	**Van**	**1.05**	**266**	*e*Pg	**Pg**	**10 10 19.8**	**-0.2**
VANB				*e*Sg	**Sg**	**10 10 34.4**	**+0.8**
VANT	**Van**	**1.17**	**258**	*e*PN	**Pn**	**10 10 23.2**	**+0.1**
HAKT	**HAKKARI**	**1.38**	**216**	*i* P	**Pn**	**10 10 24.6**	**-1.4**
HAKT				*i* S	**Sb**	**10 10 45.0**	**+0.8**
HAKT	**HAKKARI**	**1.38**	**216**	*i* P	**Pn**	**10 10 24.5**	**-1.4**
HAKT				*i* S	**Sb**	**10 10 45.0**	**+0.8**
GNI	**Garni**	**1.47**	**1**	*e*PN	**Pg**	**10 10 28.3**	**+0.3**
GNI	**Garni**	**1.47**	**1**	*e*Pn	**Pg**	**10 10 28.3**	**+0.3**
AGRB	**Hanur-Agry**	**1.62**	**304**	*e*PN	**Pg**	**10 10 29.2**	**-1.7**
AGRB	**Hanur-Agry**	**1.62**	**304**	*e*Pn	**Pg**	**10 10 29.2**	**-1.7**
TUTA	**Tutak**	**1.65**	**296**	*i* P	**Pn**	**10 10 29.5**	**-0.2**
TUTA				*i* S	**Sg**	**10 10 53.1**	**+0.1**
TUTA	**Tutak**	**1.65**	**296**	*i* P	**Pn**	**10 10 29.5**	**-0.2**
TUTA				*i* S	**Sg**	**10 10 53.1**	**+0.1**
CUKT	**Cukurca**	**1.68**	**212**	*e*PN	**Pg**	**10 10 31.9**	**-0.3**
CUKT	**Cukurca**	**1.68**	**212**	*e*Pn	**Pg**	**10 10 31.9**	**-0.2**
DIGO	**Kars**	**2.02**	**329**	*i* P	**Pg**	**10 10 39.1**	**+0.5**
DIGO				*i* S	**Sg**	**10 11 10.9**	**+6.1**
DIGO	**Kars**	**2.02**	**329**	*i* P	**Pg**	**10 10 39.1**	**+0.5**
DIGO				*i* S	**Sg**	**10 11 10.9**	**+6.1**
DGRG	**David-gareji**	**2.81**	**10**	P	**Pg**	**10 10 53.4**	**-0.4**
DGRG				S	**Sg**	**10 11 32.5**	**+2.3**
BEST	**Besiri**	**2.83**	**255**	*i* P	**Pn**	**10 10 46.5**	**+0.6**
BEST				*i* S	**Sg**	**10 11 30.5**	**-0.3**

NNC 23 10:24:09.9±4.1, **53°.20N**×**87°.47E**, **h0**km, **mb3.5, mpv3.0,**
6C-2D, Error ellipse: s-maj=32.6km s-min=22.2km
az=62.0, Southwestern Siberia

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

KURK	**Kurchatov**	6.01	249	⇑Pn	Pn	10 25 41.3 +1.3
	2.4nm,0.9s					
KURK				⇑Sn	Sn	10 26 50.9 +1.4
	2.4nm,0.5s					
KURK				⇓Lg		10 27 21.7
	8.9nm,0.8s					
MK31	**Makanchi Array**	7.23	210	⇑Pn	Pn	10 25 59.8 +3.0
	0.2nm,0.3s,baz=26,slow=12,SNR=26					
MK31				⇑Sn	Sn	10 27 25.9 +6.4
	1.0nm,0.6s,baz=32,slow=22					
MK31				⇓Lg		10 27 57.1
	1.9nm,0.7s,baz=26,slow=23,SNR=3.5					
VOSK	**Vostochnaya**	9.97	274	⇑Pn	Pn	10 26 33.3 -0.9
	1.4nm,0.7s					
VOSK				⇑Sn	Sn	10 28 24.6 -2.0
	1.5nm,0.5s					

MEX 23 10:24:43.2±0.3, 15°.75N×96°.40W, h24km±5km, MD4.1, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	0.28	86	*e*P	Pb	10 24 48.5	-1.3
HUIG				*i* S	Sb	10 24 53.1	-1.2
VHO	**Vista Hermosa**	1.36	346	*e*P	Pn	10 25 04.0	-2.6
VHO				*e*S	Sn	10 25 20.4	-3.4
OXX	**Oaxaca**	1.36	347	*i* P	Pn	10 25 04.3	-2.4
OXX				*i* S	Sn	10 25 20.8	-3.2
PNIG	**Pinotepa**	1.79	291	*e*P	Pn	10 25 10.2	-2.3
PNIG				*i* S	Sn	10 25 31.2	-3.3
TPIG	**Tehuac#an**	2.81	341	*e*P	Pn	10 25 24.4	-2.3
TPIG				*i* S	Sn	10 25 57.3	-2.5
PCIG		3.06	90	*i* P	Pn	10 25 28.0	-2.1
PCIG				*i* S	Sn	10 26 03.1	-2.8
TGIG		3.31	71	*e*P	Pn	10 25 32.6	-0.8
TGIG				*i* S	Sn	10 26 09.9	-2.1
ACX	**Acapulco**	3.51	289	*i* P	Pn	10 25 33.8	-2.4

*JMA **23** 10:29:55.8±0.3, 34°.51N×128°.06E, h0km, M3.5*
*ISCJB **23** 10:29:56.4±0.6, 34°.50N±0°.02×128°.06E±0°.02, h4km±4km, Error ellipse: s-maj=3.4km s-min=2.8km az=175.9*
*KMA **23** 10:29:57.0, 34°.51N×128°.05E, ML3.1*
ISC 23 10:29:56.6±0.5, 34°.50N±0°.02×128°.06E±0°.02, h2km±3km, n48, σ0°.68/73, South Korea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSNAH	**Namhae**	0.34	341	P	**Pg**	**10 30 04.5**	**+1.5**
KSTOY	**TONGYEONG**	0.46	42	P	**Pg**	**10 30 06.6**	**+1.1**
KSTOY				S	**Sg**	**10 30 13.0**	**+1.6**
KSNAJ	**Naju**	0.54	348	P	**Sg**	**10 30 18.5**	**+4.6**
KSHAD	**HADONG**	0.63	337	P	**Pg**	**10 30 09.4**	**+0.7**
KSKOH	**Goheung**	0.66	280	P	**Pg**	**10 30 09.9**	**+0.7**
KSJIN	**Jinju**	0.66	358	P	**Pg**	**10 30 09.9**	**+0.7**
KSJIN				S	**Sg**	**10 30 18.9**	**+1.0**
KSYSU	**YEOSU**	0.71	328	P	**Pg**	**10 30 10.9**	**+0.6**
KSMAS	**Masan**	0.79	32	P	**Pg**	**10 30 12.2**	**+0.4**
KSSCH	**SUNCHEON**	0.88	310	P	**Pg**	**10 30 13.7**	**+0.2**
KSSCH				S	**Sg**	**10 30 25.6**	**+0.7**
KSSAC	**SANCHEONG**	0.92	350	P	**Pg**	**10 30 14.4**	**+0.2**
KSJAH	**Jangheung**	0.96	281	P	**Pg**	**10 30 15.0**	**0.0**
KSJAH				S	**Sg**	**10 30 27.8**	**+0.4**
KSBSA	**Busan_acc**	1.00	53	P	**Pg**	**10 30 15.7**	**-0.1**
KSBSA				S	**Sg**	**10 30 28.9**	**+0.1**
KSNAW	**Namwon**	1.08	327	P	**Pg**	**10 30 17.3**	**0.0**
KSCHR	**CHANGNYEONG**	1.10	19	P	**Pg**	**10 30 17.5**	**-0.2**
KSKWJ	**Gwangju**	1.10	307	P	**Pg**	**10 30 17.5**	**-0.2**
KSKWJ				S	**Sg**	**10 30 32.1**	**+0.1**
JTU	**Tsushima**	1.10	88	P	**Pg**	**10 30 17.2**	**-0.5**
JTU				S	**Sg**	**10 30 32.0**	**-0.1**
KSKCH	**Geochang**	1.12	354	P	**Pg**	**10 30 17.5**	**-0.5**
KSKCH				S	**Sg**	**10 30 32.7**	**+0.2**
KSMOK	**Mokpo**	1.12	284	P	**Pg**	**10 30 17.7**	**-0.4**
KSWAN	**Wando**	1.13	265	P	**Pg**	**10 30 17.8**	**-0.5**
KSWAN				S	**Sg**	**10 30 32.6**	**-0.3**
KSBUS	**Busan**	1.14	49	P	**Pg**	**10 30 18.1**	**-0.3**
KSBUS				S	**Sg**	**10 30 33.3**	**0.0**
KSGWJ	**Gwangju-acc**	1.18	305	P	**Pg**	**10 30 18.8**	**-0.3**
KSGWJ				S	**Sg**	**10 30 34.6**	**+0.3**
KSHAN	**Haenam**	1.23	274	S	**Sg**	**10 30 36.1**	**-0.1**
KSJAS	**Jangsu**	1.24	339	P	**Pg**	**10 30 19.8**	**-0.5**
KSIMS	**Imsil**	1.27	330	P	**Pg**	**10 30 20.7**	**-0.3**
KSIMS				S	**Sg**	**10 30 37.7**	**+0.1**
KSJEU	**Jeongeup**	1.36	317	P	**Pn**	**10 30 21.8**	**-0.7**
KSJEU				S	**Sg**	**10 30 39.9**	**-0.4**
KSDAG	**Daegu**	1.44	28	P	**Pn**	**10 30 23.0**	**-0.6**
KSDAG				S	**Sb**	**10 30 42.4**	**-0.5**
KSJDO	**Jindo**	1.44	269	P	**Pn**	**10 30 22.8**	**-0.9**
KSDAU	**Deagu-acc**	1.46	18	P	**Pn**	**10 30 23.5**	**-0.4**
KSUSN	**Ulsan**	1.48	36	P	**Pn**	**10 30 23.9**	**-0.3**
JII	**Iki**	1.55	116	P	**Pn**	**10 30 23.9**	**-1.3**
JII				S	**Sn**	**10 30 45.0**	**-0.8**
KSJEO	**Jeonju**	1.57	337	P	**Pn**	**10 30 25.7**	**+0.3**
KSJEO				S	**Sn**	**10 30 46.3**	**0.0**
KSYOC	**YEONGCHEON**	1.64	26	P	**Pn**	**10 30 26.6**	**+0.2**
KSYOC				S	**Sn**	**10 30 48.7**	**+0.6**
KSJJU	**Jeju**	1.65	230	P	**Pn**	**10 30 26.6**	**+0.1**
KSJJU				S	**Sn**	**10 30 48.3**	**+0.1**
KSKMS	**Keumsan**	1.67	344	P	**Pn**	**10 30 27.2**	**+0.5**
KSCPR	**CHUPUNGNYEONG**	1.72	358	P	**Pn**	**10 30 27.8**	**+0.3**
KSCPR				S	**Sn**	**10 30 51.1**	**+1.1**
KSSGP	**Seogwipo**	1.79	227	P	**Pn**	**10 30 28.9**	**+0.4**
KSSGP				S	**Sn**	**10 30 52.3**	**+0.5**
KSGUS	**GUNSAN**	1.86	326	P	**Pn**	**10 30 30.2**	**+0.9**
KSGUS				S	**Sg**	**10 30 54.9**	**-1.4**
JFU	**Fukue jima 2**	1.93	162	P	**Pn**	**10 30 30.1**	**-0.2**
JFU				*e*S	**Sn**	**10 30 55.1**	**0.0**
KSTEJ	**Daejeon**	1.95	343	S	**Sg**	**10 30 58.3**	**-0.9**
KSPHA	**Pohang**	2.00	32	P	**Pn**	**10 30 31.2**	**-0.1**
KSPHA				S	**Sg**	**10 30 59.4**	**-1.5**
KSBON	**Boeun**	2.01	354	P	**Pn**	**10 30 31.7**	**+0.2**
KSADO	**Andong**	2.04	21	P	**Pn**	**10 30 32.9**	**+1.0**
KSADO				S	**Sg**	**10 31 00.6**	**-1.6**
JUR	**Ureshino**	2.11	131	P	**Pn**	**10 30 33.8**	**+1.0**
JUR				*e*S	**Sn**	**10 31 00.7**	**+1.2**
KSMGY	**Mungyeong**	2.15	360	P	**Pn**	**10 30 32.8**	**-0.6**
KSHUK	**Heuksando**	2.16	276	P	**Pn**	**10 30 32.2**	**-1.3**
KSCHJ	**Chungju**	2.37	358	P	**Pn**	**10 30 35.9**	**-0.5**
KSCEA	**Cheonan**	2.41	344	P	**Pn**	**10 30 36.4**	**-0.6**
KSULJ	**Uljin**	2.46	26	P	**Pn**	**10 30 37.2**	**-0.4**

IDC 23 10:41:36.1±1.7, 15°.27S×173°.18W, h0km, mb3.7/5, mb1 4.0/5, mb1mx3.9/16, mbtmp3.7/5, MS3.2/1, Ms1 3.2/1, ms1mx2.9/19, Error ellipse: s-maj=115.8km s-min=20.0km az=144.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	1.91	45	Pn	Pn	10 42 07.8	-2.1
	8.3nm,0.3s,baz=5.7,slow=22,SNR=21						
AFI				Sn	Sn	10 42 29.2	-5.5
	24nm,0.3s,baz=54,slow=16,SNR=8.7						
RAR	**Rarotonga**	14.03	117	LR	LR	10 48 36.3	
	comp=Z,110nm,20.7s,baz=69,slow=30						
PPT	**Papeete**	22.75	99	*e*LR	LR	10 51 50.4	
	66nm,23.2s						
TBI	**Tubuai**	23.75	113	*e*LR	LR	10 52 06.8	
	91nm,26.8s						
STKA	**Stephens Creek**	44.29	240	P	P	10 49 47.3	-0.5
	0.8nm,0.5s,baz=60,slow=8.1,SNR=2.4						
ASAR	**Alice Springs**	50.36	252	P	P	10 50 35.0	-0.2
	0.8nm,0.5s,baz=89,slow=7.5,SNR=19						
NVAR	**Mina Array Bea**	74.08	42	P	P	10 53 15.5	+1.4
	0.4nm,0.7s,baz=222,slow=13,SNR=3.9						
TXAR	**Lajitas Array**	80.36	56	P	P	10 53 50.2	+0.6
	0.5nm,1.0s,baz=160,slow=2.9,SNR=3.6						
ILAR	**Eielson Array**	82.27	11	P	P	10 53 59.4	+0.5
	0.4nm,0.7s,baz=222,slow=6.5,SNR=5.4						

*NIED **23** 10:42:00, 29°.80N×141°.80E, h56km, Mw4.2 Best double couple: M₀2.15000×10¹⁵ NP1:φ₀159.00000°, δ52.00000°, λ68.00000°. NP2:φ₀12.00000°, δ43.00000°, λ116.00000°.*
*ISCJB **23** 10:42:50.6±0.5, 29°.59N±0°.03×140°.97E±0°.06, h56km±5km, mb4.3/30, Error ellipse: s-maj=9.0km s-min=4.6km az=167.5*
*MOS **23** 10:42:50.4±1.0, 29°.64N×140°.90E, h56km, mb4.9/14, Error ellipse: s-maj=16.1km s-min=8.3km az=101.1*

*JMA **23** 10:42:51.0±0.1, 29°.77N×141°.83E, h47km, M4.6*
*IDC **23** 10:42:54.5±0.7, 29°.62N×140°.94E, h77km±5km, mb3.9/18, mb1 4.1/20, mb1mx4.0/25, mbtmp3.9/20, Error ellipse: s-maj=15.4km s-min=14.2km az=62.0*
*NEIC **23** 10:42:55.0±1.5, 29°.70N×140°.95E, h78km±12km, mb4.4/10, Error ellipse: s-maj=11.8km s-min=7.2km az=143.0*
ISC 23 10:42:52.4±0.5, 29°.57N±0°.03×140°.98E±0°.06, h58km±4km, h80km±1.6km: pP-P, n98, σ1°.13/107, mb4.3/30, 2C-1D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	2.68	156	P	**Pn**	**10 43 33.2**	**0.0**
	57nm,0.3s,baz=343,slow=7.2,SNR=47						
CBIJ				S	**Sn**	**10 44 02.5**	**-1.9**
	298nm,0.3s,baz=309,slow=23,SNR=20						
CBIJ	**Chichi jima**	2.68	156	P	**Pn**	**10 43 33.2**	**0.0**
CBIJ				*e*S	**Sn**	**10 44 03.4**	**-1.1**
JHHJ	**Haha-jima-NKT**	3.11	160	P	**Pn**	**10 43 39.6**	**+0.5**
JHHJ				S	**Sn**	**10 44 13.2**	**-1.8**
JHJ2	**Mitsune**	3.67	345	P	**Pn**	**10 43 47.8**	**+1.2**
JHJ2				S	**Sn**	**10 44 28.0**	**-0.6**
JHJ	**Hachijo jima 2**	3.68	344	P	**Pn**	**10 43 47.5**	**+0.6**
	7.8nm,0.3s,baz=130,slow=17,SNR=20						
JHJ				S	**Sn**	**10 44 25.9**	**-3.1**
	68nm,0.3s,baz=121,slow=22,SNR=9.8						
JKO	**Kozu shima**	4.86	342	P	**Pn**	**10 44 06.6**	**+3.6**
BSO1	**Boso 1**	5.07	360	P	**Pn**	**10 44 05.1**	**-0.7**
BSO1				*e*S	**Sn**	**10 45 01.2**	**-1.8**
BSO3	**Boso 3**	5.23	356	P	**Pn**	**10 44 07.2**	**-0.8**
BSO3				S	**Sn**	**10 45 01.5**	**-5.5**
BSO4	**Boso 4**	5.43	354	P	**Pn**	**10 44 13.4**	**+2.6**
BSO4				*e*S	**Sn**	**10 45 12.6**	**+0.7**
JOD2	**Odawara 2**	5.90	345	P	**Pn**	**10 44 18.2**	**+1.0**
HMMJ	**Hamamatsu 2**	5.95	333	P	**Pn**	**10 44 21.8**	**+3.9**
JNY	**Yasuok**	6.34	336	P	**Pn**	**10 44 28.2**	**+4.9**
JHU	**Hanno**	6.42	348	P	**Pn**	**10 44 26.2**	**+1.8**
JAO	**Obara**	6.49	332	P	**Pn**	**10 44 30.9**	**+5.6**
JRY	**Ryogami san**	6.66	345	P	**Pn**	**10 44 28.7**	**+1.1**
JYT	**Yasato**	6.67	355	P	**Pn**	**10 44 29.1**	**+1.3**
JAG	**Ashikaga**	6.96	350	P	**Pn**	**10 44 31.0**	**-0.6**
JHO	**Hitachi**	7.03	357	P	**Pn**	**10 44 31.0**	**-1.7**
MJAR	**Matsushiro Arr**	7.33	342	P	**Pn**	**10 44 37.5**	**+0.7**
	1.6nm,0.3s,baz=162,slow=12,SNR=11						
MJAR				S	**Sn**	**10 45 54.5**	**-4.0**
	baz=12,slow=38,SNR=2.3						
MJAR	**Matsushiro Arr**	7.33	342	P	**Pn**	**10 44 37.5**	**+0.7**
MJAR				S	**Sn**	**10 45 54.6**	**-3.9**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MAJO	**Matsushiro**	7.33	342	*e*P	**Pn**	**10 44 36.7**	**-0.1**
MAT	**Matsushiro**	7.33	342	P	**Pn**	**10 44 39.4**	**+2.6**
MAT				*e*S	**Sn**	**10 45 55.8**	**-2.8**
ERM	**Erimo**	12.54	7	*e*P	**Pn**	**10 45 47.2**	**-0.8**
ASAJ	**Asahikawa**	14.58	5	P	**Pn**	**10 46 12.3**	**-2.9**
	comp=Z,0.3nm,0.3s,baz=295,slow=15,SNR=3.6						
YULB	**Yu-li**	18.65	255	*e*P	**Pn**	**10 47 06.8**	**+0.4**
	comp=Z,14nm,0.6s						
SSLB	**Suanglung**	18.79	257	*e*P	**Pn**	**10 47 08.2**	**+0.1**
	comp=Z,19nm,0.7s						
TWG	**Pinlang**	19.08	254	*e*P	**Pn**	**10 47 13.5**	**+1.9**
	comp=Z,16nm,0.6s						
TPUB	**Ta-pu**	19.25	256	*e*P	**Pn**	**10 47 16.1**	**+2.5**
	comp=Z,20nm,0.8s						
SONM	**Songino Array**	32.22	314	P	**P**	**10 49 14.2**	**-0.8**
	comp=Z,0.9nm,0.7s,mb3.7,baz=116,slow=7.4,SNR=4.1						
SONM				PcP	PcP	10 52 02.9	+0.6
	comp=Z,1.0nm,0.6s,baz=88,slow=2.3,SNR=5.5						
SONM	**Songino Array**	32.22	314	P	**P**	**10 49 14.2**	**-0.7**
SONM						10 52 02.9	
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CHTO	**Chiang Mai**	39.62	264	*e*P	**P**	**10 50 18.9**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.7						
CHTO	**Chiang Mai**	39.62	264	*e*P	**P**	**10 50 18.9**	**+0.3**
	comp=Z,12nm,0.7s,mb4.7						
CMAR	**Chiang Mai Arr**	39.77	264	P	**P**	**10 50 20.7**	**+0.9**
	comp=Z,4.7nm,0.8s,mb4.3,baz=60,slow=6.4,SNR=15						
CMAR	**Chiang Mai Arr**	39.77	264	P	**P**	**10 50 20.7**	**+0.9**
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ZALV	**Zalesovo Beam**	46.94	318	P	**P**	**10 51 16.6**	**-0.6**
	comp=Z,1.0nm,0.6s,mb4.0,baz=60,slow=8.8,SNR=4.2						
ZALV				PcP	PcP	10 52 48.5	-0.3
	comp=Z,2.5nm,0.6s,baz=135,slow=3.5,SNR=9.2						
ZALV	**Zalesovo Beam**	46.94	318	P	**P**	**10 51 16.6**	**-0.5**
ZALV						10 52 48.5	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
MK31	**Makanchi Array**	48.10	308	*e*P	**P**	**10 51 25.8**	**-0.5**
MKAR	**Makanchi Array**	48.10	308	P	**P**	**10 51 25.3**	**-1.0**
	comp=Z,1.0nm,0.4s,mb4.2,baz=91,slow=10.0,SNR=12						
MKAR				PcP	PcP	10 52 53.2	+0.1
	comp=Z,2.2nm,0.7s,baz=77,slow=5.2,SNR=11						
MKAR	**Makanchi Array**	48.10	308	P	**P**	**10 51 25.3**	**-1.0**
MKAR						10 52 53.2	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	**Makanchi Array**	48.10	308	P	**P**	**10 51 25.3**	**-1.0**
MKAR				PcP	PcP	10 52 53.2	+0.1
KDAK	**Kodiak Island**	53.05	38	*i* P	**P**	**10 52 05.3**	**+2.0**
ASAR	**Alice Springs**	53.37	188	P	**P**	**10 52 05.0**	**-1.1**
	comp=Z,0.6nm,0.5s,mb3.8,baz=358,slow=4.9,SNR=15						
ASAR				PcP	PcP	10 53 13.6	+0.9
	comp=Z,0.8nm,0.8s,baz=11,slow=6.3,SNR=3.1						
ASAR	**Alice Springs**	53.37	188	P	**P**	**10 52 05.0**	**-1.0**
ASAR						10 53 13.6	
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ASAR	**Alice Springs**	53.37	188	P	**P**	**10 52 05.0**	**-1.1**
ASAR				PcP	PcP	10 53 13.6	+0.8
BVAR	**Borovoye Array**	55.52	316	P	**P**	**10 52 20.8**	**-0.6**
	comp=Z,4.6nm,0.6s,mb4.7,baz=90,slow=8.9,SNR=15						
BVAR				PcP	PcP	10 53 19.8	-1.0
	comp=Z,1.5nm,0.6s,baz=94,slow=4.3,SNR=4.0						
BVAR	**Borovoye Array**	55.52	316	P	**P**	**10 52 20.8**	**-0.6**
BVAR						10 53 19.8	
BVAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ILAR	**Eielson Array**	56.07	29	P	**P**	**10 52 24.1**	**-1.1**
	comp=Z,0.7nm,0.8s,mb3.8,baz=277,slow=5.9,SNR=10						
ILAR				pP	pP	10 52 42.8	+2.2
	comp=Z,0.6nm,0.6s,baz=276,slow=6.7,SNR=4.0						
ILAR	**Eielson Array**	56.07	29	P	**P**	**10 52 24.1**	**-1.1**
ILAR				*PP	pP	10 52 42.8	+2.2
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
EGAK	**Eagle**	58.53	29	*e*P	**P**	**10 52 40.6**	**-1.9**
STKA	**Stephens Creek**	61.11	179	P	**P**	**10 52 59.9**	**-0.6**
	comp=Z,4.1nm,1.0s,mb4.5,baz=358,slow=15,SNR=4.3						
INK	**Inuvik**	61.24	25	P	**P**	**10 53 01.1**	**+0.1**
	comp=Z,0.9nm,0.5s,mb4.2,baz=356,slow=16,SNR=5.9						
INK	**Inuvik**	61.24	25	P	**P**	**10 53 01.1**	**+0.1**
INK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARU	**Arti**	61.83	321	*d i* P	**P**	**10 53 04.4**	**-0.8**
ARU						10 55 18.4	
ARU				S	**S**	**11 01 29.6**	**+5.5**
ARU				pmax	pmax		
	comp=Z,19nm,0.7s,mb5.3						
ARU	**Arti**	61.83	321	*e*P	**P**	**10 53 04.4**	**-0.8**
	comp=Z,17nm,0.6s,mb5.4						
KEV	**Kevo**	70.30	340	*e*P	**P**	**10 53 58.7**	**-0.6**
KEV				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
KEV	**Kevo**	70.30	340	*e*P	**P**	**10 53 58.7**	**-0.6**
	comp=Z,5.0nm,0.7s,mb4.5						
KEV	**Kevo**	70.30	340	*e*p	**P**	**10 53 58.7**	**-0.6**
	comp=Z,5.0nm,0.7s,mb4.5						
YKA	**Yellowknife Ar**	70.48	28	P	**P**	**10 53 59.8**	**-0.6**
	comp=Z,1.3nm,0.7s,mb4.0,baz=300,slow=6.4,SNR=8.1						
YKA	**Yellowknife Ar**	70.48	28	P	**P**	**10 53 59.8**	**-0.7**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES	**ARCESS Array B**	70.86	340	P	**P**	**10 54 01.8**	**-1.0**
	comp=Z,2.9nm,0.6s,mb4.4,baz=69,slow=6.9,SNR=9.4						
ARCES	**ARCESS Array B**	70.86	340	P	**P**	**10 54 01.8**	**-0.9**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
JOF	**Joensuu**	72.40	333	*e*P	**P**	**10 54 11.1**	**-1.0**
JOF				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.9						
JOF	**Joensuu**	72.40	333	*e*p	**P**	**10 54 11.1**	**-1.0**
	comp=Z,7.7nm,0.5s,mb4.9						
JCW	**Jim Creek**	72.97	44	*e*P	**P**	**10 54 17.0**	**+1.3**
OBN	**Obninsk**	73.90	325	*e*P	**P**	**10 54 20.4**	**-0.7**
OBN				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
VSR	**Storozhevoye**	74.36	320	*e*P	**P**	**10 54 23.5**	**-0.3**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
VSR				pmax	pmax		
	comp=N,3.0nm,0.4s						
VSR				pmax	pmax		
	comp=E,10.0nm,0.9s						
KAF	**Kangasniemi**	74.79	334	*e*P	**P**	**10 54 24.9**	**-1.2**
KAF				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.9						
KAF	**Kangasniemi**	74.79	334	*e*p	**P**	**10 54 24.9**	**-1.2**
	comp=Z,7.5nm,0.5s,mb4.9						
FINES	**FINESS Array B**	75.27	333	P	**P**	**10 54 28.6**	**-0.3**
	comp=Z,5.9nm,0.4s,mb4.8,baz=61,slow=5.2,SNR=32						
FINES				pP	pP	10 54 48.9	+4.0
	comp=Z,3.4nm,0.7s,baz=59,slow=3.7,SNR=3.0						
FINES	**FINESS Array B**	75.27	333	P	**P**	**10 54 28.6**	**-0.2**
FINES				*PP	pP	10 54 48.9	+4.0
FINES				pmax	pmax		
	comp=Z,6.0nm,0.4s						
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NEW	**Newport**	75.80	42	*e*P	**P**	**10 54 32.7**	**+0.5**
WALA	**Waterton Lakes**	77.27	41	*e*P	**P**	**10 54 41.5**	**+1.1**
	comp=Z,0.2nm,0.6s,mb3.2						
BMO	**Blue Mountains**	77.33	46	*e*P	**P**	**10 54 41.5**	**+0.6**
	comp=Z,1.5nm,0.6s,mb4.1						
SWMT	**Swartz Lake**	78.00	42	*e*P	**P**	**10 54 45.4**	**+0.8**
NAY	**Al-Naaiem**	79.11	297	*e*P	**P**	**10 54 49.2**	**-1.8**
NAY				AMb	AMB	10 54 51.3	
	comp=Z,7.4nm,0.7s,mb4.7						
HRY	**Holter Researc**	79.68	42	*e*P	**P**	**10 54 54.2**	**+0.4**
	comp=Z,1.6nm,0.5s,mb4.2						
HLID	**Hailey**	79.78	46	*e*P	**P**	**10 54 55.6**	**+1.2**
LRM	**Limekiln Ridge**	79.79	43	*e*P	**P**	**10 54 55.5**	**+1.1**
LRM				*e*pP	pP	10 55 17.6	+7.1
NVAR	**Mina Array Bea**	79.82	52	P	**P**	**10 54 55.5**	**+0.8**
	comp=Z,2.2nm,0.6s,mb4.2,baz=285,slow=6.1,SNR=21						
NVAR				pP	pP	10 55 15.5	+4.6
	comp=Z,1.6nm,0.7s,baz=292,slow=6.1,SNR=6.7						
DLMT	**Dillon**	79.95	43	*e*P	**P**	**10 54 55.9**	**+0.7**
	comp=Z,1.6nm,0.8s,mb4.0						
AKASG	**Malin Array Be**	80.00	323	P	**P**	**10 54 54.5**	**-0.9**
	comp=Z,1.8nm,0.5s,mb4.2,baz=49,slow=6.6,SNR=9.9						
AKASG	**Malin Array Be**	80.00	323	*c e*P	**P**	**10 54 54.5**	**-0.9**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FFC	**Flin Flon**	80.20	32	*i* P	**P**	**10 54 57.3**	**+0.9**
NB2	**NORSAR Subarra**	80.93	338	P	**P**	**10 54 59.5**	**-0.7**
	comp=Z,2.2nm,0.6s,mb4.3,baz=43,slow=5.3						
NOA	**NORSAR Array B**	80.93	338	P	**P**	**10 54 59.8**	**-0.4**
	comp=Z,3.7nm,0.8s,mb4.4,baz=42,slow=5.3,SNR=15						
NOA	**NORSAR Array B**	80.93	338	P	**P**	**10 54 59.8**	**-0.4**
NOA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PDAR	**Pinedale Array**	83.20	44	P	**P**	**10 55 12.8**	**+0.4**
	comp=Z,0.5nm,0.8s,mb3.6,baz=316,slow=2.5,SNR=2.9						
PDAR				pP	pP	10 55 33.6	+4.9
	comp=Z,0.5nm,0.6s,baz=11,slow=3.0,SNR=3.5						
BR131	**Keskin Array S**	83.56	312	*e*P	**P**	**10 55 14.6**	**+0.2**
BRTR	**Keskin Array B**	83.56	312	P	**P**	**10 55 14.3**	**-0.1**
	comp=Z,7.2nm,0.8s,mb4.8,baz=93,slow=3.8,SNR=34						
BRTR				pP	pP	10 55 35.8	+5.1
	comp=Z,2.5nm,0.8s,baz=94,slow=4.5,SNR=3.6						
BRTR	**Keskin Array B**	83.56	312	*c e*P	**P**	**10 55 14.3**	**-0.1**
BRTR				pmax	pmax		
	comp=Z,7.0nm,0.8s					

comp=Z,4.7nm,0.7s,mb4.0,baz=213,slow=18,SNR=6.3
KMI Kunming 22.88 275 P **P** **10 54 08.1 +2.7**
KMI pmax pmax
comp=Z,24nm,1.3s,mb4.5
LZH Lanzhou 23.40 303 *e*P **P** **10 54 10.0 -0.8**
LZH pP 10 54 14.8
LZH sP sP 10 54 17.1 -3.3
LZH pmax pmax
comp=Z,19nm,1.3s,mb4.4
LZH LR LR
comp=N,310nm,13.3s
LZH LR LR
comp=Z,360nm,17.4s,MS3.9
GTA Gaotai 27.60 308 *e*P **P** **10 54 50.1 +1.2**
GTA pP pP 10 54 59.6 +3.7
GTA sP sP 10 55 03.6 +4.8
GTA pmax pmax
comp=Z,8.0nm,1.0s,mb4.3
GTA pmax pmax
comp=Z,54nm,6.0s
GTA LR LR
comp=N,150nm,20.4s,MS3.7
GTA LR LR
comp=E,140nm,19.2s,MS3.7
GTA LR LR
comp=Z,110nm,18.6s,MS3.5
CMAR Chiang Mai Arr 27.78 262 P **P** **10 54 53.4 +2.6**
comp=Z,0.4nm,0.3s,mb3.5,baz=61,slow=8.1,SNR=5.1
SONM Songino Array 28.32 328 P **P** **10 54 55.2 0.0**
comp=Z,1.0nm,0.6s,mb3.6,baz=142,slow=9.6,SNR=4.0
SONM LR LR 11 06 15.4
comp=Z,109nm,21.6s,MS3.4,baz=336,slow=36
PETK Petropavlovsk- 35.67 31 P **P** **10 56 02.3 +2.7**
comp=Z,2.2nm,0.9s,mb4.1,baz=196,slow=4.0,SNR=4.6
MKAR Makanchi Array 42.09 313 P **P** **10 56 54.5 +1.0**
comp=Z,2.9nm,0.5s,mb4.1,baz=100,slow=10,SNR=11
ZALV Zalesovo Beam 42.95 324 P **P** **10 57 00.9 +0.5**
comp=Z,0.9nm,0.4s,mb3.8,baz=110,slow=9.4,SNR=4.6
ZALV LR LR 11 14 53.6
comp=Z,49nm,20.4s,MS3.4,baz=167,slow=36
ASAR Alice Springs 48.91 173 P **P** **10 57 47.5 -0.2**
comp=Z,2.7nm,0.8s,mb4.3,baz=359,slow=8.4,SNR=24
BVAR Borovoye Array 50.92 319 P **P** **10 58 03.7 +1.0**
comp=Z,1.0nm,0.6s,mb3.9,baz=108,slow=8.0,SNR=5.1
ABKAR Akbulak array 57.21 314 *e*P **P** **10 58 50.2 +1.6**
comp=Z,3.5nm,0.8s,mb4.4
STKA Stephens Creek 58.22 166 P **P** **10 58 55.4 -0.4**
comp=Z,3.0nm,0.8s,mb4.4,baz=326,slow=6.3,SNR=5.5
STKA Stephens Creek 58.22 166 P **P** **10 58 55.4 -0.4**
ILAR Eielson Array 65.43 28 P **P** **10 59 43.4 -0.7**
comp=Z,0.3nm,0.8s,mb3.4,baz=268,slow=6.3,SNR=6.4
FINES FINESS Array B 73.66 331 P **P** **11 00 34.4 -0.5**
comp=Z,0.8nm,0.4s,mb4.0,baz=40,slow=3.2,SNR=4.2
BR131 Keskin Array S 77.52 308 *e*P pP 11 01 02.1 -2.8
comp=Z,2.2nm,0.9s
BRTR Keskin Array B 77.52 308 P **P** **11 00 58.2 +0.8**
comp=Z,2.2nm,0.9s,mb4.1,baz=84,slow=5.1,SNR=9.8
YKA Yellowknife Ar 79.54 25 P **P** **11 01 09.0 +0.9**
comp=Z,1.0nm,0.9s,mb3.8,baz=301,slow=5.5,SNR=4.8
NB2 NORSAR Subarra 80.15 334 P **P** **11 01 11.8 +0.4**
comp=Z,6.1nm,1.2s,mb4.4,baz=55,slow=5.3
NOA NORSAR Array B 80.15 334 P **P** **11 01 11.8 +0.4**
comp=Z,2.9nm,1.0s,mb4.2,baz=51,slow=5.4,SNR=3.8
NOA LR LR 11 40 32.3
comp=Z,43nm,18.6s,MS3.8,baz=330,slow=39
NOA NORSAR Array B 80.15 334 P **P** **11 01 11.8 +0.3**
NOA LR LR 11 40 32.3
NVAR Mina Array Bea 91.35 46 P **P** **11 02 09.3 +1.8**
comp=Z,0.2nm,0.4s,mb3.8,baz=285,slow=4.5,SNR=4.3

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*CSEM **23** 11:07:43.8±0.2, 36°.93N×29°.25E, h2km, MD2.8, Error ellipse: s-maj=5.6km s-min=3.6km az=11.0*
*ISCJB **23** 11:07:44.1±0.8, 36°.94N±0°.05×29°.26E±0°.05, h10km, Error ellipse: s-maj=7.7km s-min=4.9km az=18.3*
*DDA **23** 11:07:46.0, 37°.06N×29°.20E, h7km±3km, Md2.8*
ISC 23 11:07:44.1±0.9, 36°.93N±0°.06×29°.22E±0°.05, h1km±19km, n12, σ0°.53/20, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.41**	**42**	*i* P	**Pg**	**11 07 51.3**	**-0.7**
GOLH				*i* S	**Sg**	**11 07 58.0**	**+0.7**
GOLH	**Golhisar**	**0.41**	**42**	*i* P	**Pg**	**11 07 51.3**	**-0.7**
GOLH				*i* S	**Sg**	**11 07 58.0**	**+0.7**
ELL	**Elmali**	**0.58**	**108**	*e*PG	**Pg**	**11 07 54.3**	**-1.0**
ELL				*e*SG	**Sg**	**11 08 03.5**	**+0.7**
ELL	**Elmali**	**0.58**	**108**	*e*Pg	**Pg**	**11 07 54.3**	**-1.0**
ELL				*e*Sg	**Sg**	**11 08 03.5**	**+0.7**
DNZL	**Cakiroluk**	**0.77**	**350**	*i* P	**Pg**	**11 07 59.0**	**+0.1**
DNZL				*i* S	**Sg**	**11 08 08.3**	**-0.5**
DNZL	**Cakiroluk**	**0.77**	**350**	*i* P	**Pg**	**11 07 59.0**	**+0.1**
DNZL				*i* S	**Sg**	**11 08 08.4**	**-0.4**
YER	**Yerkesik**	**0.78**	**285**	*e*PG	**Pg**	**11 07 59.2**	**+0.2**
YER	**Yerkesik**	**0.78**	**285**	*e*Pg	**Pg**	**11 07 59.2**	**+0.2**
AYDN	**Tasoluk**	**1.29**	**305**	*i* P	**Pg**	**11 08 09.2**	**+0.4**
AYDN				*i* S	**Sg**	**11 08 25.7**	**+0.1**
AYDN	**Tasoluk**	**1.29**	**305**	*i* P	**Pg**	**11 08 09.2**	**+0.3**
AYDN				*i* S	**Sg**	**11 08 25.7**	**+0.1**
DAT	**Datca**	**1.33**	**262**	*e*PN	**Pn**	**11 08 09.8**	**0.0**
DAT	**Datca**	**1.33**	**262**	*e*Pn	**Pn**	**11 08 09.8**	**0.0**

MAN 23 11:21:56, 16°.85N×120°.67E, h8km, mb4.3, ML3.1, MS2.9, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCPH	**Baguio City Da**	**0.48**	**190**	⇑*i*P	Pg	11 22 05.8	+0.6
BCPH				*i* S	Sg	11 22 12.0	+0.5
ABRA	**Dolores**	**0.79**	**3**	*e*P	Pg	11 22 11.8	+0.5
ABRA				*e*S	Sg	11 22 22.4	+0.9
BOLP	**Bolinao**	**0.86**	**237**	*e*P	Pg	11 22 13.4	+0.8
CAUP	**Cauayan**	**1.11**	**85**	*e*P	Pg	11 22 17.9	+0.5
APYP	**Conner**	**1.14**	**29**	*e*P	Pg	11 22 17.8	-0.2
APYP				*e*S	Sg	11 22 30.0	-2.9
SCZP	**Santa Cruz**	**1.29**	**214**	*e*P	Pn	11 22 20.0	-0.4
BALP	**Baler**	**1.41**	**142**	*e*P	Pn	11 22 21.0	-1.0
BALP				*e*S	Sb	11 22 35.6	-5.1
PALP	**Palanan**	**1.69**	**83**	*e*P	Pn	11 22 29.2	+3.3
PALP				*e*S	Sn	11 22 44.7	-3.0
POLP	**Polilio Island**	**2.44**	**150**	*e*P	Pn	11 22 37.4	+1.2
LUBP	**Lubang**	**3.13**	**188**	*e*P	Pn	11 22 48.7	+3.1

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*MOS **23** 12:01:01.0±1.8, 0°.15N×123°.32E, h42km, mb5.0/16, Error ellipse: s-maj=17.3km s-min=7.7km az=117.0*
*IDC **23** 12:01:11.7±3.9, 0°.04N×123°.31E, h131km±36km, mb3.9/13, mb1 4.1/14, mb1mx4.0/22, mbtmp4.0/14, Error ellipse: s-maj=24.3km s-min=10.8km az=70.0*
*ISCJB **23** 12:01:13.3±0.4, 0°.02S±0°.04×123°.39E±0°.04, h158km±4km, mb4.6/52, Error ellipse: s-maj=6.8km s-min=5.6km az=154.0*
*DJA **23** 12:01:14, 0°.03S×123°.32E, h129km, MLv4.8/12*
*NEIC **23** 12:01:15.9±1.3, 0°.01N×123°.49E, h174km±13km, mb4.8/29, Error ellipse: s-maj=10.8km s-min=5.6km az=59.0*
NEIC Felt [III] at Gorontalo.
ISC 23 12:01:14.2±0.4, 0°.03S±0°.04×123°.41E±0°.04, h152km±4km, n125, σ1°.21/119, mb4.6/52, 4C, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.83**	**44**	P	**Pn**	**12 01 37.5**	**-0.4**
LUWI	**Luwuk**	**1.19**	**212**	P	**Pn**	**12 01 37.6**	**-3.3**
APSI	**Ampana**	**1.96**	**243**	P	**Pn**	**12 01 46.5**	**-2.6**
MNI	**Manado**	**2.05**	**44**	P	**Pn**	**12 01 50.7**	**+0.6**
PCI	**Palu**	**3.67**	**256**	P	**Pn**	**12 02 08.7**	**-1.6**
KDI	**Kendari**	**3.98**	**191**	P	**Pn**	**12 02 13.9**	**-0.5**
TNTI	**Ternate**	**4.04**	**79**	P	**Pn**	**12 02 19.5**	**+4.4**
LBMI	**Labuha**	**4.14**	**98**	P	**Pn**	**12 02 16.8**	**+0.4**
SGSI	**Sangihe**	**4.25**	**30**	P	**Pn**	**12 02 19.0**	**+1.1**
TTSI	**Tana Toraja**	**4.67**	**230**	P	**Pn**	**12 02 22.0**	**-1.4**
NLAI	**Namlea**	**4.88**	**131**	P	**Pn**	**12 02 25.7**	**-0.4**
SPSI	**Sidrap Palu**	**5.34**	**223**	P	**Pn**	**12 02 31.9**	**-0.3**
	0.5nm1μm95nm,0.5s						
BNSI	**Bone**	**5.45**	**217**	P	**Pn**	**12 02 34.7**	**+1.0**
	0.5nm1μm94nm,0.7s						
AAI	**Ambon**	**6.01**	**127**	P	**Pn**	**12 02 46.0**	**+4.9**
TSM	**Tawau**	**7.00**	**308**	P	**Pn**	**12 02 54.1**	**-0.2**
MYLDM	**Lahad Datu**	**7.12**	**317**	P	**Pn**	**12 02 59.2**	**+3.1**
SDKM	**Sandakan**	**8.38**	**312**	P	**Pn**	**12 03 15.1**	**+2.4**
KKM	**Kota Kinabalu**	**9.38**	**310**	P	**Pn**	**12 03 29.5**	**+3.5**
KKM	**Kota Kinabalu**	**9.38**	**310**	*e*Pn	**Pn**	**12 03 27.6**	**+1.5**
KDM	**Kudat**	**9.52**	**317**	P	**Pn**	**12 03 33.2**	**+5.3**
BTM	**Bintulu**	**10.80**	**287**	P	**Pn**	**12 03 41.5**	**-3.5**
SBUM	**Sibu**	**11.45**	**282**	P	Px	12 04 04.7	
KSM	**Kuching**	**13.18**	**277**	P	**Pn**	**12 04 21.7**	**+5.9**
KSM	**Kuching**	**13.18**	**277**	*e*Pn	**Pn**	**12 04 18.8**	**+3.0**
KSM	**Kuching**	**13.18**	**277**	P	**Pn**	**12 04 21.7**	**+5.9**
KAKA	**Kakadu**	**15.46**	**145**	*e*P	**Pn**	**12 04 44.5**	**+0.1**
	65nm,0.6s						
KAKA	**Kakadu**	**15.46**	**145**	*e*P	**Pn**	**12 04 44.5**	**+0.2**
	188nm,0.6s						
KNA	**Kununurra**	**16.50**	**162**	P	**Pn**	**12 04 59.0**	**+2.0**
	892nm118nm,0.9s						
FITZ	**Fitzroy Crossi**	**18.09**	**173**	*e*P	**P**	**12 05 14.5**	**0.0**
	32nm,1.0s						
FITZ	**Fitzroy Crossi**	**18.09**	**173**	P	**P**	**12 05 14.6**	**+0.1**
	2.6nm,0.3s,baz=358,slow=7.2,SNR=42						
FITZ	**Fitzroy Crossi**	**18.09**	**173**	*e*P	**P**	**12 05 14.4**	**0.0**
	24nm,0.9s						
FITZ	**Fitzroy Crossi**	**18.09**	**173**	P	**P**	**12 05 16.1**	**+1.6**
	62nm,1.4s						
MYKOM	**Kota Tinggi**	**19.64**	**275**	P	**P**	**12 05 31.3**	**0.0**
KTGM	**Kuala Trenggan**	**20.93**	**285**	P	**P**	**12 05 45.6**	**+0.4**
MBWA	**Marble Bar**	**21.31**	**189**	*e*P	**P**	**12 05 48.6**	**-0.5**
	10nm,1.1s,mb4.1						
FRIM	**Kepong**	**22.01**	**279**	P	**P**	**12 05 58.4**	**+1.8**
WRAB	**Tennant Creek**	**22.50**	**152**	*e*P	**P**	**12 06 00.8**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.4						
WRAB	**Tennant Creek**	**22.50**	**152**	*e*P	**P**	**12 06 00.8**	**-0.5**
	comp=Z,12nm,0.7s,mb4.4						
WRAB	**Tennant Creek**	**22.50**	**152**	P	**P**	**12 06 01.4**	**+0.1**
	comp=Z,23nm,0.7s,mb4.7						
WRA	**Warramunga Arr**	**22.50**	**152**	P	**P**	**12 06 00.8**	**-0.5**
	baz=330,slow=10						
IPM	**Ipoh**	**22.80**	**282**	P	**P**	**12 06 04.2**	**0.0**
IPM	**Ipoh**	**22.80**	**282**	P	**P**	**12 06 04.6**	**+0.4**
	comp=Z,24nm,0.8s,mb4.7						
TWG	**Pinlang**	**22.82**	**354**	*e*P	**P**	**12 06 03.9**	**-0.3**
	comp=Z,12nm,0.5s,mb4.6						
PPI	**Padang Panjang**	**23.01**	**269**	P	**P**	**12 06 06.3**	**+0.2**
	comp=Z,53nm,1.0s,mb4.9						
QIZ	**Qiongzhong**	**23.15**	**326**	*e*P	**P**	**12 06 08.2**	**+1.0**
	comp=Z,22nm,0.7s,mb4.7						
KULM	**Kulim**	**23.33**	**283**	P	**P**	**12 06 09.3**	**+0.3**
KULM	**Kulim**	**23.33**	**283**	*e*P	**P**	**12 06 09.2**	**+0.2**
	comp=Z,28nm,1.0s,mb4.7						
KULM	**Kulim**	**23.33**	**283**	P	**P**	**12 06 09.5**	**+0.5**
	comp=Z,29nm,0.9s,mb4.7						
TPUB	**Ta-pu**	**23.34**	**354**	P	**P**	**12 06 08.0**	**-1.0**
	comp=Z,49nm,0.8s,mb5.0						
SSLB	**Suanglung**	**23.79**	**354**	*e*P	**P**	**12 06 11.4**	**-1.6**
	comp=Z,21nm,0.7s,mb4.8						
PMG	**Port Moresby**	**25.41**	**112**	*e*P	**P**	**12 06 30.7**	**+2.8**
PMG				pmax	pmax		
	comp=Z,15nm,1.2s						
ASAR	**Alice Springs**	**25.61**	**157**	P	**P**	**12 06 29.7**	**+0.1**
	comp=Z,1.2nm,0.4s,mb3.9,baz=335,slow=9.3,SNR=25						
ASAR				pP	pP	12 06 59.4	-1.9
	comp=Z,2.8nm,0.8s,baz=344,slow=13,SNR=6.4						
ASAR				PcP	PcP	12 09 56.8	+0.2
	comp=Z,1.9nm,0.5s,baz=341,slow=2.2,SNR=15						
CMAR	**Chiang Mai Arr**	**30.25**	**309**	P	**P**	**12 07 11.3**	**+0.4**
	comp=Z,3.7nm,0.7s,mb4.2,baz=131,slow=6.9,SNR=23						
CMAR				PcP	PcP	12 10 08.1	0.0
	comp=Z,1.7nm,0.7s,baz=159,slow=1.7,SNR=8.8						
CHTO	**Chiang Mai**	**30.45**	**309**	*e*P	**P**	**12 07 13.4**	**+0.7**
CHTO				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.6						
CHTO	**Chiang Mai**	**30.45**	**309**	*e*P	**P**	**12 07 13.4**	**+0.7**
	comp=Z,11nm,0.9s,mb4.6						
CHTO	**Chiang Mai**	**30.45**	**309**	P	**P**	**12 07 14.5**	**+1.8**
FORT	**Forrest**	**30.90**	**172**	*e*P	**P**	**12 07 16.5**	**0.0**
	comp=Z,13nm,0.6s,mb4.8						
WHN	**Wuhan**	**31.60**	**345**	P	**P**	**12 07 31.5**	**+8.9**
NJ2	**Nanjing**	**32.19**	**353**	*e*P	**P**	**12 07 25.5**	**-2.3**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.7						
STKA	**Stephens Creek**	**36.05**	**153**	*e*P	**P**	**12 08 01.6**	**+0.5**
	comp=Z,4.7nm,0.9s,mb4.1						
STKA	**Stephens Creek**	**36.05**	**153**	P	**P**	**12 08 01.7**	**+0.6**
	comp=Z,6.9nm,1.0s,mb4.3,baz=316,slow=9.3,SNR=7.7						
STKA				PcP	PcP	12 10 24.3	+0.2
	comp=Z,2.3nm,0.5s,baz=343,slow=6.3,SNR=6.9						
XAN	**Xi'an**	**36.51**	**340**	P	**P**	**12 08 05.4**	**+0.4**
XAN				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.0						
XAN				pmax	pmax		
	comp=Z,13nm,7.6s						
MAJO	**Matsushiro**	**38.89**	**19**	*e*P	**P**	**12 08 24.1**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,15nm,0.7s,mb4.7						
MAJO	**Matsushiro**	**38.89**	**19**	*e*P	**P**	**12 08 24.1**	**-0.8**
	comp=Z,14nm,0.7s,mb4.7						
MAT	**Matsushiro**	**38.89**	**19**	P	**P**	**12 08 23.6**	**-1.3**
MJAR	**Matsushiro Arr**	**38.89**	**19**	P	**P**	**12 08 24.1**	**-0.9**
	comp=Z,11nm,0.7s,mb4.6,baz=192,slow=9.4,SNR=58						
ARMA	**Armidale**	**40.41**	**141**	*e*P	**P**	**12 08 39.9**	**+2.3**
HHC	**Hu-ho-hao-te**	**42.08**	**347**	*e*P	**P**	**12 08 53.5**	**+2.4**
HHC				S	**S**	**12 14 59.9**	**+0.9**
HHC				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.7						
HHC				pmax	pmax		
	comp=Z,59nm,6.2s						
LSA	**Lhasa**	**42.65**	**317**	*e*P	**P**	**12 08 57.6**	**+1.8**
LSA				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
LSA	**Lhasa**	**42.65**	**317**	*e*P	**P**	**12 08 57.6**	**+1.8**
	comp=Z,8.9nm,0.8s,mb4.5						
ODAN	**Odare**	**43.75**	**311**	*e*P	**P**	**12 09 05.6**	**+0.9**
	comp=Z,34nm,0.7s,mb5.1						
TAPN	**Taplejung**	**43.77**	**311**	*e*P	**P**	**12 09 05.0**	**+0.1**
	comp=Z,43nm,0.9s,mb5.1						
RAMN	**Ramite**	**44.40**	**310**	*e*P	**P**	**12 09 10.9**	**+1.0**
	comp=Z,65nm,0.7s,mb5.4						
MDJ	**Mudanjiang**	**44.79**	**6**	P	**P**	**12 09 12.0**	**-0.7**
MDJ				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.6						
MDJ				pmax	pmax		
	comp=Z,59nm,5.7s						
MDJ	**Mudanjiang**	**44.79**	**6**	*e*P	**P**	**12 09 12.9**	**+0.3**
	comp=Z,8.9nm,0.7s,mb4.5						
GTA	**Gaotai**	**44.79**	**334**	*e*P	**P**	**12 09 14.0**	**+1.2**
GTA				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.6						
JIRN	**Jiri**	**45.08**	**311**	*e*P	**P**	**12 09 16.3**	**+1.0**
	comp=Z,50nm,0.7s,mb5.3						
GUN	**Gumba**	**45.44**	**311**	*e*P	**P**	**12 09 18.8**	**+0.7**
	comp=Z,66nm,0.5s,mb5.5						
PKI	**Pulchoki**	**45.63**	**310**	*e*P	**P**	**12 09 20.0**	**+0.4**
	comp=Z,30nm,0.7s,mb5.0						
PKI	**Pulchoki**	**45.63**	**310**	*e*P	**P**	**12 09 20.4**	**+0.8**
PKI				pmax	pmax		
	comp=Z,25nm,0.6s,mb5.0						
PKI	**Pulchoki**	**45.63**	**310**	*e*P	**P**	**12 09 20.4**	**+0.8**
	comp=Z,25nm,0.6s,mb5.0						
PKIN	**Phulchoki**	**45.64**	**310**	*e*P	**P**	**12 09 20.4**	**+0.7**
	comp=Z,25nm,0.6s,mb5.0						
KKN	**Kakani**	**45.84**	**310**	*e*P	**P**	**12 09 21.6**	**+0.4**
	comp=Z,25nm,0.7s,mb5.0						
KKN	**Kakani**	**45.84**	**310**	*e*P	**P**	**12 09 21.6**	**+0.4**
KKN				pmax	pmax		
	comp=Z,25nm,0.7s,mb5.0						
DMN	**Daman**	**45.88**	**310**	*e*P	**P**	**12 09 22.2**	**+0.6**
	comp=Z,31nm,0.8s,mb5.0						
GKN	**Gorkha**	**46.43**	**310**	*e*P	**P**	**12 09 26.3**	**+0.4**
	comp=Z,37nm,0.7s,mb5.1						
YSS	**Yuzh-Sakhalins**	**49.76**	**17**	*e*P	**P**	**12 09 51.0**	**-0.1**
ULN	**Ulaanbaatar**	**49.78**	**346**	*e*P	**P**	**12 09 51.5**	**+0.3**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.4						
ULN	**Ulaanbaatar**	**49.78**	**346**	*e*P	**P**	**12 09 51.5**	**+0.3**
	comp=Z,6.3nm,0.6s,mb4.4						
SONM	**Songino Array**	**49.91**	**345**	P	**P**	**12 09 51.3**	**-1.0**
	comp=Z,6.0nm,0.7s,mb4.3,baz=161,slow=8.8,SNR=36						
TLY	**Talaya**	**54.16**	**345**	*e*P	**P**	**12 10 20.0**	**-3.5**
TLY				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.4						
TLY	**Talaya**	**54.16**	**345**	*e*P	**P**	**12 10 20.4**	**-3.2**
	comp=Z,6.1nm,0.7s,mb4.4						
MOY	**Mondy**	**54.87**	**343**	*e*P	**P**	**12 10 29.6**	**+0.9**
MK31	**Makanchi Array**	**58.85**	**328**	*e*P	**P**	**12 10 55.3**	**-1.5**
MKAR	**Makanchi Array**	**58.85**	**328**	P	**P**	**12 10 55.8**	**-1.1**
	comp=Z,1.5nm,0.5s,mb4.1,baz=122,slow=8.8,SNR=18						
MKAR				PcP	PcP	12 11 43.1	-1.5
	comp=Z,1.4nm,0.5s,baz=127,slow=5.0,SNR=6.1						
MKAR	**Makanchi Array**	**58.85**	**328**	*e*P	**P**	**12 10 56.0**	**-0.8**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
PETK	**Petropavlovsk-**	**60.15**	**23**	P	**P**	**12 11 06.5**	**+0.9**
	comp=Z,5.2nm,0.7s,mb4.5,baz=199,slow=3.9,SNR=18						
TKM2	**Tokmak 2**	**60.46**	**321**	*e*P	**P**	**12 11 07.3**	**-0.6**
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.3						
TKM2	**Tokmak 2**	**60.46**	**321**	*e*P	**P**	**12 11 07.3**	**-0.7**
	comp=Z,1.7nm,0.4s,mb4.2						
AAK	**Ala-Archa**	**61.01**	**321**	*e*P	**P**	**12 11 11.4**	**-0.2**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.8						
KBL	**Kabul**	**61.27**	**310**	*e*P	**P**	**12 11 13.9**	**+0.3**
KBL				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.9						
KBL	**Kabul**	**61.27**	**310**	*e*P	**P**	**12 11 13.9**	**+0.3**
	comp=Z,11nm,0.6s,mb4.9						
YAK	**Yakutsk**	**62.08**	**3**	*e*P	**P**	**12 11 16.2**	**-2.2**
YAK				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.9						
YAK				pmax	pmax		
	comp=E,1.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,4.0nm,0.9s						
YAK	**Yakutsk**	**62.08**	**3**	*e*P	**P**	**12 11 17.1**	**-1.3**
	comp=N,27nm,0.8s,mb5.1						
ZALV	**Zalesovo Beam**	**62.51**	**335**	P	**P**	**12 11 19.6**	**-1.8**
	comp=N,1.4nm,0.4s,mb4.1,baz=127,slow=5.2,SNR=7.2						
KURK	**Kurchatov**	**63.20**	**330**	P	**P**	**12 11 25.1**	**-1.0**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.5						
KURK	**Kurchatov**	**63.20**	**330**	P	**P**	**12 11 25.1**	**-1.0**
	comp=Z,4.7nm,0.6s,mb4.5						
SEY	**Seymchan**	**66.44**	**14**	*e*P	**P**	**12 11 48.0**	**+1.2**
BVAR	**Borovoye Array**	**68.72**	**329**	P	**P**	**12 11 59.3**	**-2.0**
	comp=Z,0.8nm,0.5s,mb3.7,baz=134,slow=11,SNR=5.2						
ARU	**Arti**	**76.36**	**329**	*e*P	**P**	**12 12 43.9**	**-2.5**
ARU				S	S	12 22 24.9	+6.1
ARU				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
SDPT	**Sand Point**	**82.14**	**34**	*e*P	**P**	**12 13 18.1**	**+0.3**
	comp=Z,28nm,0.6s,mb5.1						
VORD	**Divnogorie**	**86.30**	**321**	*e*P	**P**	**12 13 36.6**	**-2.3**
VORD				pmax	pmax		
	comp=N,7.0nm,0.6s						
VORD				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
VORD				pmax	pmax		
	comp=E,3.0nm,0.3s						
VSR	**Storozhevoye**	**86.40**	**321**	*e*P	**P**	**12 13 36.9**	**-2.5**
VSR				pmax	pmax		
	comp=N,5.0nm,0.6s						
VSR				pmax	pmax		
	comp=E,6.0nm,0.6s						
VSR				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.6						
KDAK	**Kodiak Island**	**86.82**	**32**	P	**P**	**12 13 41.9**	**+0.6**
	comp=Z,2.5nm,0.5s,mb4.3,baz=250,slow=7.7,SNR=3.7						
KDAK	**Kodiak Island**	**86.82**	**32**	P	**P**	**12 13 41.9**	**+0.6**
BRTR	**Keskin Array B**	**89.84**	**310**	P	**P**	**12 13 54.5**	**-1.5**
	comp=Z,0.6nm,0.7s,mb3.6,baz=108,slow=6.6,SNR=3.4						
ILAR	**Eielson Array**	**89.90**	**25**	P	**P**	**12 13 53.7**	**-2.0**
	comp=Z,0.4nm,0.6s,mb3.6,baz=244,slow=5.5,SNR=14						
QSPA	**South Pole Qui**	**89.91**	**180**	P	**P**	**12 13 55.9**	**+0.5**
	comp=Z,0.7nm,0.4s,mb3.9,baz=329,slow=9.3,SNR=3.3						
GVD	**Gavdhos**	**97.67**	**305**	*e*P	**P**	**12 14 39.8**	**+7.7**
	comp=Z,264nm,0.7s						
NVAR	**Mina Array Bea**	**111.87**	**48**	PKiKP	PKiKP	12 19 32.1	+0.5
	comp=Z,0.6nm,0.7s,baz=258,slow=2.6,SNR=4.6						
PDAR	**Pinedale Array**	**116.35**	**41**	PKP	PKPdf	12 19 39.5	-0.6
	comp=Z,0.4nm,0.5s,baz=165,slow=1.4,SNR=3.6						
SCHQ	**Schefferville**	**124.73**	**7**	PKP	PKPdf	12 19 55.8	0.0
	comp=Z,1.0nm,0.4s,baz=338,slow=5.4,SNR=4.0						
TXAR	**Lajitas Array**	**126.51**	**53**	PKP	PKPdf	12 20 00.6	+0.7
	comp=Z,0.4nm,0.7s,baz=199,slow=1.9,SNR=5.6						
CPUP	**Villa Florida**	**153.79**	**179**	PKPbc	PKPbc	12 20 56.6	+0.5
	comp=Z,1.0nm,0.5s,baz=266,slow=5.8,SNR=3.9						
LPAZ	**La Paz**	**160.19**	**145**	PKPab	PKPab	12 21 40.1	+2.8
	comp=Z,0.4nm,0.4s,baz=243,slow=2.3,SNR=3.5						

IDC 23 12:16:08.2±9.7, 22°.24S×177°.02W, h268km±90km, mb3.1/3, mb1 3.4/4, mb1mx3.1/17, mbtmp3.3/4, Error ellipse: s-maj=41.0km s-min=26.5km az=73.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**16.75**	**196**	P	P	12 19 45.6	-0.4
	0.5nm,0.3s,baz=342,slow=20,SNR=2.6						
URZ				S	S	12 22 47.4	+0.4
	0.4nm,0.3s,baz=114,slow=18,SNR=3.0						
**ASAR

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKZ	**Black Stump Fm**	**0.90**	**140**	PN	Pn	12 28 16.0	+0.5
BKZ				SN	Sn	12 28 32.9	+0.2
MOVZ	**Moawhango**	**0.93**	**180**	PN	Pn	12 28 16.0	+0.2
MOVZ				SN	Sn	12 28 33.2	0.0
NMHZ	**Naumai**	**1.03**	**127**	*e*PN	Pn	12 28 17.9	+1.3
URZ	**Urewera**	**1.09**	**79**	PN	Pn	12 28 17.1	-0.1
URZ				SN	Sn	12 28 36.0	+0.2
MWZ	**Matawai**	**1.41**	**85**	PN	Pn	12 28 20.3	-0.1
MWZ				SN	Sn	12 28 41.1	-0.2
PNHZ	**Pukenui**	**1.48**	**166**	PN	Pn	12 28 21.1	-0.1
CKHZ	**Cape Kidnapper**	**1.57**	**139**	*e*PN	Pn	12 28 22.8	+0.6
TSZ	**Takapari Road**	**1.59**	**174**	↑↑PN	Pn	12 28 22.1	-0.3
TSZ				SN	Sn	12 28 43.3	-1.7
KNZ	**Kokohu**	**1.60**	**110**	PN	Pn	12 28 22.7	+0.1
KNZ				SN	Sn	12 28 44.7	-0.4
PRGZ	**Paritu Road**	**1.73**	**106**	PN	Pn	12 28 24.1	+0.1
PXZ	**Pawanui**	**1.77**	**151**	PN	Pn	12 28 24.4	-0.2
MHGZ	**Mahia Peninsul**	**1.81**	**112**	PN	Pn	12 28 25.2	+0.2
DVHZ	**Dannevirke**	**1.85**	**170**	PN	Pn	12 28 24.5	-0.9
PUZ	**Puketiti**	**2.02**	**79**	PN	Pn	12 28 26.7	-0.7
MRZ	**Mangatainoka R**	**2.18**	**183**	PN	Pn	12 28 27.8	-1.6
MRZ				SN	Sn	12 28 54.0	-3.5
BFZ	**Birch Farm**	**2.23**	**170**	PN	Pn	12 28 28.7	-1.3
OGWZ	**Otaki Gorge**	**2.38**	**191**	PN	Pn	12 28 30.2	-1.6
HOWZ	**Holdsworth Sta**	**2.42**	**184**	PN	Pn	12 28 30.4	-2.0
CAW	**Cannon Point**	**2.68**	**191**	PN	Pn	12 28 33.3	-2.3
MTW	**Mount Morrison**	**2.68**	**184**	PN	Pn	12 28 33.1	-2.6
TRWZ	**Traveller**	**2.92**	**181**	PN	Pn	12 28 36.3	-2.3
PLWZ	**Palliser**	**3.11**	**187**	PN	Pn	12 28 38.0	-3.1
KHZ	**Kahutara**	**4.28**	**202**	PN	Pn	12 28 52.6	-3.8

IDC 23 12:32:52.6±1.9, 7°.24S×144°.86E, h0km, mb3.8/4, mb1 4.2/5, mb1mx3.8/14, mbtmp3.9/5, ML4.0/1, Error ellipse: s-maj=56.1km s-min=29.6km az=120.0, Near south coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**19.43**	**212**	P	Pn	12 37 21.9	+0.1
	0.5nm,0.3s,baz=42,slow=8.6,SNR=90						
FITZ	**Fitzroy Crossi**	**21.62**	**238**	P	P	12 37 42.9	-1.6
	3.6nm,0.7s,baz=86,slow=13,SNR=5.5						
CMAR	**Chiang Mai Arr**	**52.00**	**300**	P	P	12 42 04.2	+0.1
	1.4nm,0.8s,baz=122,slow=5.6,SNR=6.9						
MKAR	**Makanchi Array**	**77.11**	**321**	P	P	12 44 48.5	+0.5
	0.8nm,0.8s,baz=108,slow=8.2,SNR=4.5						
ILAR	**Eielson Array**	**87.45**	**23**	P	P	12 45 41.6	-0.1
	0.4nm,0.7s,baz=248,slow=4.8,SNR=6.8						

*ISCJB **23** 12:36:49.7±0.7, 66°.57N±0°.04×17°.71W±0°.06, h14km±3km, mb3.5/3, Error ellipse: s-maj=6.2km s-min=4.3km az=6.8*
*CSEM **23** 12:36:50.4, 66°.58N×17°.70W, h15km, ML3.7, After REY*
*REY **23** 12:36:50.4, 66°.58N×17°.70W, h15km, ML3.7, ML3.9*
*IDC **23** 12:36:50.9±1.3, 66°.39N×17°.58W, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.4/26, mbtmp3.6/4, ML3.6/1, MS3.1/3, Ms1 3.1/3, ms1mx2.7/34, Error ellipse: s-maj=33.9km s-min=23.8km az=122.0*
ISC 23 12:36:50.5±0.7, 66°.52N±0°.03×17°.68W±0°.06, h4km±3km, n26, σ1°.05/40, mb3.5/3, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGRI	**Grimsey**	**0.13**	**278**	P	**Pg**	**12 36 53.8**	**+0.7**
IGRI				S	**Sg**	**12 36 56.2**	**+1.4**
IFLA	**Flatey**	**0.37**	**190**	P	**Pg**	**12 36 58.5**	**+0.9**
IFLA				S	**Sg**	**12 37 04.8**	**+2.4**
IBRE	**Brettingsstaoi**	**0.41**	**193**	P	**Pg**	**12 36 59.1**	**+0.7**
IBRE				S	**Sg**	**12 37 05.7**	**+2.0**
IHED	**Heoinshofoi**	**0.47**	**161**	P	**Pg**	**12 36 59.7**	**+0.3**
IHED				S	**Sg**	**12 37 06.8**	**+1.3**
ILEI	**Leirhofn**	**0.49**	**103**	P	**Pg**	**12 36 59.7**	**-0.2**
ILEI				S	**Sg**	**12 37 07.0**	**+0.7**
IGRA	**Granastaoir**	**0.61**	**176**	P	**Pg**	**12 37 02.1**	**0.0**
IGRA				S	**Sg**	**12 37 10.9**	**+0.9**
ISIG	**Siglufjorour**	**0.63**	**232**	P	**Pg**	**12 37 01.9**	**-0.7**
ISIG				S	**Sg**	**12 37 10.4**	**-0.4**
IHLA	**Hella**	**0.65**	**206**	P	**Pg**	**12 37 02.6**	**-0.3**
IHLA				S	**Sg**	**12 37 11.8**	**+0.5**
IGIL	**Gilhagi**	**0.70**	**129**	P	**Pg**	**12 37 03.1**	**-0.8**
IGIL				S	**Sg**	**12 37 13.1**	**+0.2**
IKVO	**Krokottuvotn**	**0.88**	**158**	P	**Pg**	**12 37 06.2**	**-1.0**
IKVO				S	**Sg**	**12 37 19.1**	**+0.5**
IREN	**Reynihlio**	**0.94**	**160**	P	**Pg**	**12 37 07.2**	**-1.2**
IREN				S	**Sg**	**12 37 20.1**	**-0.4**
IHRN	**Hraun**	**1.07**	**248**	P	**Pg**	**12 37 08.1**	**-2.8**
IHRN				S	**Sg**	**12 37 21.7**	**-3.0**
IGRS	**Grimsstaoir**	**1.09**	**144**	P	**Pg**	**12 37 09.6**	**-1.8**
IGRS				S	**Sg**	**12 37 24.9**	**-0.6**
ISVA	**Svartarkot**	**1.21**	**171**	P	**Pg**	**12 37 11.6**	**-1.9**
ISVA				S	**Sg**	**12 37 28.2**	**-0.9**
IADA	**Aoalbol**	**1.74**	**149**	S	**Sn**	**12 37 43.6**	**-0.4**
IBRU	**Bruarjokull**	**1.83**	**158**	S	**Sn**	**12 37 46.7**	**+0.7**
IHVE	**Hveravellir**	**1.83**	**206**	P	**Pn**	**12 37 21.8**	**-0.8**
IHVE				S	**Sn**	**12 37 45.7**	**-0.5**
IGLU	**Glumsstadir**	**1.89**	**144**	S	**Sn**	**12 37 48.0**	**+0.5**
IASB	**`sbjarnarst**	**2.34**	**222**	P	**Pn**	**12 37 28.7**	**-0.8**
IASB				S	**Sn**	**12 37 58.8**	**+0.2**
BORG	**Borgarnes**	**2.34**	**222**	Pn	**Pn**	**12 37 28.9**	**-0.6**
	17nm,0.3s,baz=50,slow=8.7,SNR=32						
BORG				Sn	**Sn**	**12 37 58.5**	**-0.1**
	15nm,0.3s,baz=213,slow=23,SNR=22						
NOA	**NORSAR Array B**	**13.81**	**100**	LR	LR	12 45 45.1	
	comp=Z,36nm,18.4s,baz=315,slow=39						
HFS	**Hagfors**	**15.33**	**100**	LR	LR	12 45 16.7	
	comp=Z,84nm,19.9s,baz=319,slow=33						
FINES	**FINESS Array B**	**19.51**	**84**	LR	LR	12 47 35.4	
	comp=Z,114nm,19.4s,baz=180,slow=33						
ILAR	**Eielson Array**	**44.00**	**331**	P	**P**	**12 45 00.7**	**+2.5**
	0.3nm,0.6s,mb3.2,baz=19,slow=7.2,SNR=5.4						
MKAR	**Makanchi Array**	**51.83**	**59**	P	**P**	**12 45 59.6**	**+0.6**
	0.6nm,0.9s,mb3.5,baz=306,slow=4.3,SNR=4.1						
TORD	**Torodi Ar. Bea**	**54.88**	**157**	P	**P**	**12 46 22.3**	**+0.5**
	0.7nm,0.8s,mb3.8,baz=336,slow=8.2,SNR=3.4						

*ISCJB **23** 12:36:51.8±0.6, 15°.23N±0°.07×93°.36W±0°.05, h72km±6km, mb3.7/5, Error ellipse: s-maj=13.1km s-min=5.4km az=30.1*
*MEX **23** 12:36:53.1±0.5, 15°.19N×93°.31W, h75km±6km, MD4.1*
*NEIC **23** 12:36:53.0, 15°.19N×93°.32W, h74km, mb3.6/1, MD4.1(MEX), After MEX.*
*IDC **23** 12:36:55.2±3.3, 15°.58N×93°.03W, h77km±22km, mb3.4/5, mb1 3.7/8, mb1mx3.5/23, mbtmp3.4/8, Error ellipse: s-maj=105.8km s-min=23.3km az=27.0*
*CASC **23** 12:36:55.0±1.5, 15°.39N×92°.96W, h130km±53km, MD4.0, mb3.6(NEIC)*
ISC 23 12:36:52.8±0.6, 15°.23N±0°.07×93°.36W±0°.05, h66km±7km, n21, σ1°.12/29, mb3.7/5, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.49**	**16**	*e*P	**Pn**	**12 37 05.1**	**0.0**
PCIG				*e*S	**Sn**	**12 37 14.7**	**+0.6**
THIG		**1.10**	**107**	*e*P	**Pn**	**12 37 11.2**	**-1.3**
THIG				*e*S	**Sn**	**12 37 25.2**	**-1.8**
TGIG		**1.55**	**8**	*e*P	**Pn**	**12 37 18.1**	**-0.3**
TGIG				*i*S	**Sn**	**12 37 37.2**	**-0.4**
TP2	**Tecpan 2**	**2.30**	**101**	*e*P	**Pn**	**12 37 29.3**	**+0.8**
CMIG	**Matias Romero**	**2.36**	**322**	P	**Pn**	**12 37 30.3**	**+1.0**
	4.9nm,0.3s,baz=133,slow=11,SNR=50						
CMIG	**Matias Romero**	**2.36**	**322**	*e*P	**Pn**	**12 37 29.6**	**+0.3**
CMIG				*i*S	**Sn**	**12 37 56.5**	**-0.6**
CMIG	**Matias Romero**	**2.36**	**322**	*e*P	**Pn**	**12 37 29.8**	**+0.5**
CMIG				*i*S	**Sn**	**12 37 56.5**	**-0.6**
FG6		**2.48**	**105**	*e*P	**Pn**	**12 37 33.4**	**+2.5**
FG6				*e*S	**Sn**	**12 38 01.4**	**+1.2**
FUG	**Fuego 3**	**2.55**	**108**	*e*P	**Pn**	**12 37 31.9**	**0.0**
HUIG	**Huatulco**	**2.71**	**282**	*e*P	**Pn**	**12 37 33.2**	**-0.8**
HUIG				*i*S	**Sn**	**12 38 05.7**	**+0.1**
HUIG	**Huatulco**	**2.71**	**282**	*e*P	**Pn**	**12 37 33.2**	**-0.8**
HUIG				*i*S	**Sn**	**12 38 05.7**	**+0.1**
APG	**El Apazote**	**2.80**	**94**	P	**Pn**	**12 37 35.1**	**-0.2**
	6.5nm,0.3s,baz=0.1,slow=24,SNR=23						
MRL	**Marmol**	**3.54**	**92**	*e*P	**Pn**	**12 37 44.9**	**-0.5**
TXAR	**Lajitas Array**	**16.95**	**328**	P	**Pn**	**12 40 47.9**	**+2.2**
	0.0nm,0.3s,baz=148,slow=12,SNR=10						
TXAR	**Lajitas Array**	**16.95**	**328**	P	**Pn**	**12 40 47.9**	**+2.2**
MIAR	**Mount Ida**	**19.23**	**359**	*e*Pn	**Pn**	**12 41 07.3**	**-5.9**
	2.8nm,0.8s						
ANMO	**Albuquerque**	**22.90**	**331**	P	**P**	**12 41 51.7**	**+0.7**
	1.1nm,0.7s,mb3.3,baz=174,slow=15,SNR=3.6						
NVAR	**Mina Array Bea**	**31.89**	**321**	P	**P**	**12 43 14.6**	**+2.7**
	0.8nm,0.7s,mb3.6,baz=128,slow=9.1,SNR=7.2						
NVAR				pP	pP	12 43 32.6	+4.7
	0.4nm,0.7s,baz=136,slow=8.7,SNR=3.2						
YKA	**Yellowknife Ar**	**49.53**	**347**	P	**P**	**12 45 34.9**	**-1.8**
	0.6nm,0.6s,mb3.7,baz=156,slow=7.1,SNR=4.4						
INK	**Inuvik**	**58.89**	**344**	P	**P**	**12 46 43.8**	**-0.8**
	2.3nm,0.7s,mb4.3,baz=133,slow=10,SNR=5.0						
ILAR	**Eielson Array**	**61.20**	**337**	P	**P**	**12 46 59.5**	**-0.9**
	0.3nm,0.5s,mb3.6,baz=144,slow=4.5,SNR=9.0						
ILAR				pP	pP	12 47 19.0	+1.3
	0.2nm,0.8s,baz=134,slow=7.6,SNR=3.0						

*CSEM **23** 12:41:15.7±0.1, 44°.23N×7°.07E, h16km, ML2.5/18, Error ellipse: s-maj=1.7km s-min=1.1km az=76.0*
*LDG **23** 12:41:16.2±0.0, 44°.23N×7°.07E, h4km, Md2.4/3, Ml2.5/10, Error ellipse: s-maj=1.1km s-min=0.6km az=60.0*
*NEIC **23** 12:41:16.3, 44°.23N×7°.08E, h5km, ML2.5(LDG), ML2.4(STR), After STR.*
*ISCJB **23** 12:41:16.1±0.3, 44°.21N±0°.02×7°.08E±0°.03, h21km±4km, Error ellipse: s-maj=4.2km s-min=2.6km az=167.0*
*STR **23** 12:41:16.3±0.3, 44°.23N×7°.08E, h5km, Ml2.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*ROM **23** 12:41:17.0±0.4, 44°.25N×7°.15E, h11km±1km, Md2.4/6, Ml2.0/6, Error ellipse: s-maj=6.2km s-min=2.0km az=61.0*
ISC 23 12:41:15.9±0.3, 44°.22N±0°.01×7°.05E±0°.03, h16km±3km, n52, σ0°.56/102, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STV	**Sant Anna di V**	**0.20**	**82**	Pg	**Pg**	**12 41 20.5**	**-0.1**
STV				Sg	**Sg**	**12 41 23.1**	**-0.7**
	434nm,0.2s						
STV	**Sant Anna di V**	**0.20**	**82**	Pg	**Pg**	**12 41 20.5**	**-0.1**
STV				Sg	**Sg**	**12 41 23.1**	**-0.7**
	434nm,0.2s						
TOUF	**Mont Tournerai**	**0.25**	**145**	Pg	**Pg**	**12 41 21.3**	**-0.1**
TOUF				Sg	**Sg**	**12 41 25.2**	**+0.1**
TOUF	**Mont Tournerai**	**0.25**	**145**	Pg	**Pg**	**12 41 21.3**	**-0.1**
TOUF				Sg	**Sg**	**12 41 25.2**	**+0.1**
PZZ	**Stroppo**	**0.29**	**9**	Pg	**Pg**	**12 41 22.5**	**+0.3**
PZZ				Sg	**Sg**	**12 41 26.6**	**+0.2**
	234nm,0.2s						
PZZ	**Stroppo**	**0.29**	**9**	Pg	**Pg**	**12 41 22.5**	**+0.3**
PZZ				Sg	**Sg**	**12 41 26.6**	**+0.2**
	234nm,0.2s						
DOI	**San Damiano**	**0.32**	**26**	Pg	**Pg**	**12 41 22.8**	**+0.2**
DOI				Sg	**Sg**	**12 41 27.1**	**0.0**
	199nm,0.2s						
DOI	**San Damiano**	**0.32**	**26**	Pg	**Pg**	**12 41 22.8**	**+0.2**
DOI				Sg	**Sg**	**12 41 27.1**	**0.0**
	199nm,0.2s						
MVIF	**Mont Vial**	**0.33**	**167**	Pg	**Pg**	**12 41 22.9**	**+0.1**
MVIF				Sg	**Sg**	**12 41 27.9**	**+0.5**
MVIF	**Mont Vial**	**0.33**	**167**	Pg	**Pg**	**12 41 22.9**	**+0.1**
MVIF				Sg	**Sg**	**12 41 27.9**	**+0.5**
AUTN	**L'Aution**	**0.35**	**129**	Pg	**Pg**	**12 41 23.4**	**+0.2**
AUTN				Sg	**Sg**	**12 41 27.8**	**-0.2**
AUTN	**L'Aution**	**0.35**	**129**	Pg	**Pg**	**12 41 23.4**	**+0.2**
AUTN				Sg	**Sg**	**12 41 27.8**	**-0.2**
LUCF	**Luceram**	**0.39**	**147**	Pg	**Pg**	**12 41 23.9**	**0.0**
LUCF				Sg	**Sg**	**12 41 29.6**	**+0.4**
LUCF	**Luceram**	**0.39**	**147**	Pg	**Pg**	**12 41 23.9**	**0.0**
LUCF				Sg	**Sg**	**12 41 29.6**	**+0.4**
SAOF	**Saorge**	**0.43**	**122**	Pg	**Pg**	**12 41 24.4**	**-0.2**
SAOF				Sg	**Sg**	**12 41 30.0**	**-0.4**
SAOF	**Saorge**	**0.43**	**122**	Pg	**Pg**	**12 41 24.4**	**-0.2**
SAOF				Sg	**Sg**	**12 41 30.0**	**-0.4**
SBF	**Sospel**	**0.45**	**142**	*e*Pg	**Pg**	**12 41 24.9**	**-0.1**
SBF				*e*Sg	**Sg**	**12 41 30.6**	**-0.4**
	134nm,0.4s						
SBF	**Sospel**	**0.45**	**142**	*e*Pg	**Pg**	**12 41 24.9**	**-0.1**
SBF				*e*Sg	**Sg**	**12 41 30.6**	**-0.4**
	67nm,0.4s						
CALN	**Calern**	**0.48**	**194**	Pg	**Pg**	**12 41 25.9**	**+0.4**
CALN				Sg	**Sg**	**12 41 32.4**	**+0.4**
CALN	**Calern**	**0.48**	**194**	Pg	**Pg**	**12 41 25.9**	**+0.4**
CALN				Sg	**Sg**	**12 41 32.4**	**+0.4**
REVF	**Revere**	**0.53**	**154**	Pg	**Pg**	**12 41 26.8**	**+0.4**
REVF				Sg	**Sg**	**12 41 34.3**	**+0.8**
REVF	**Revere**	**0.53**	**154**	Pg	**Pg**	**12 41 26.8**	**+0.4**
REVF				Sg	**Sg**	**12 41 34.3**	**+0.8**
MBDF	**Montbardon**	**0.55**	**339**	*e*Pg	**Pg**	**12 41 26.7**	**0.0**
MBDF				*e*Sg	**Sg**	**12 41 33.9**	**-0.2**
	26nm,0.2s						
MBDF	**Montbardon**	**0.55**	**339**	*e*Pg	**Pg**	**12 41 26.7**	**0.0**
MBDF				*e*Sg	**Sg**	**12 41 33.9**	**-0.2**
	13nm,0.2s						
IMI	**Imperia**	**0.68**	**117**	Pg	**Pg**	**12 41 29.0**	**-0.2**
IMI				Sg	**Sg**	**12 41 38.3**	**0.0**
	70nm,0.2s						
IMI	**Imperia**	**0.68**	**117**	Pg	**Pg**	**12 41 29.0**	**-0.2**
IMI				Sg	**Sg**	**12 41 38.3**	**0.0**
	70nm,0.2s						
FRF	**La Foret Royal**	**0.72**	**204**	*e*Pg	**Pg**	**12 41 29.9**	**-0.1**
FRF				*e*Sg	**Sg**	**12 41 39.4**	**-0.1**
	48nm,0.2s						
FRF	**La Foret Royal**	**0.72**	**204**	*e*Pg	**Pg**	**12 41 29.9**	**-0.1**
FRF				*e*Sg	**Sg**	**12 41 39.4**	**-0.1**
	24nm,0.2s						
RSP	**Reno Superiore**	**0.94**	**9**	Pg	**Pg**	**12 41 34.3**	**+0.1**
	16nm,0.2s						
RSP	**Reno Superiore**	**0.94**	**9**	Pg	**Pg**	**12 41 34.3**	**+0.1**
	16nm,0.2s						
LMR	**La Mourre**	**0.97**	**204**	*e*Pg	**Pg**	**12 41 34.4**	**-0.3**
LMR				*e*Sg	**Sg**	**12 41 46.5**	**-0.8**
	75nm,0.2s						
LMR	**La Mourre**	**0.97**	**204**	*e*Pg	**Pg**	**12 41 34.4**	**-0.3**
LMR				*e*Sg	**Sg**	**12 41 46.5**	**-0.8**
	38nm,0.2s						
ORIF	**Oris-en-Rattie**	**1.09**	**310**	*e*Pg	**Pg**	**12 41 36.8**	**-0.2**
ORIF				*e*Sg	**Sg**	**12 41 51.0**	**-0.3**
	11nm,0.2s						
ORIF	**Oris-en-Rattie**	**1.09**	**310**	*e*Pg	**Pg**	**12 41 36.8**	**-0.2**
ORIF				*e*Sg	**Sg**	**12 41 51.0**	**-0.3**
	5.5nm,0.2s						
SMRF	**Simiane la Rot**	**1.09**	**258**	*e*Pg	**Pn**	**12 41 37.9**	**+1.3**
SMRF				*e*Sg	**Sg**	**12 41 51.1**	**-0.2**
	35nm,0.5s						
SMRF	**Simiane la Rot**	**1.09**	**258**	*e*Pg	**Pn**	**12 41 37.9**	**+1.3**
SMRF				*e*Sg	**Sg**	**12 41 51.1**	**-0.2**
	18nm,0.5s						
LSD	**Lago del Serru**	**1.24**	**3**	Pg	**Pn**	**12 41 39.7**	**+1.0**
LSD				Sg	**Sg**	**12 41 55.8**	**-0.3**
	13nm,0.3s						
LSD	**Lago del Serru**	**1.24**	**3**	Pg	**Pn**	**12 41 39.7**	**+1.0**
LSD				Sg	**Sg**	**12 41 55.8**	**-0.3**
	13nm,0.3s						
LPG	**La Plagne**	**1.30**	**351**	*e*Pg	**Pn**	**12 41 40.6**	**+1.2**
LPG				*e*Sg	**Sg**	**12 41 57.3**	**-0.5**
	7.3nm,0.3s						
LPG	**La Plagne**	**1.30**	**351**	*e*Pg	**Pn**	**12 41 40.6**	**+1.2**
LPG				*e*Sg	**Sg**	**12 41 57.3**	**-0.5**
	3.7nm,0.3s						
LPL	**La Plagne**	**1.32**	**350**	*e*Pg	**Pn**	**12 41 40.9**	**+1.2**
LPL				*e*Sg	**Sg**	**12 41 57.9**	**-0.6**
	5.0nm,0.2s						
LPL	**La Plagne**	**1.32**	**350**	*e*Pg	**Pn**	**12 41 40.9**	**+1.2**
LPL				*e*Sg	**Sg**	**12 41 57.9**	**-0.6**
	2.5nm,0.2s						
VIVF	**Saint-Julien-l**	**1.82**	**291**	*e*Pn	**Pn**	**12 41 47.6**	**+1.0**
VIVF				*e*Sn	**Sn**	**12 42 09.3**	**+0.1**
	5.5nm,0.3s						
VIVF	**Saint-Julien-l**	**1.82**	**291**	*e*Pn	**Pn**	**12 41 47.6**	**+1.0**
VIVF				*e*Sn	**Sn**	**12 42 09.3**	**+0.1**
	2.8nm,0.3s						
PGF	**Pioggiola**	**2.19**	**139**	*e*Pn	**Pn**	**12 41 51.6**	**-0.1**
PGF				*e*Sn	**Sn**	**12 42 17.0**	**-1.5**
	6.1nm,0.2s						
PGF	**Pioggiola**	**2.19**	**139**	*e*Pn	**Pn**	**12 41 51.6**	**-0.1**
PGF				*e*Sn	**Sn**	**12 42 17.0**	**-1.5**
	3.0nm,0.2s						
LASF	**Ste Croix**	**2.30**	**268**	*e*Pn	**Pn**	**12 41 53.4**	**+0.1**
LASF				*e*Sn	**Sn**	**12 42 20.8**	**-0.5**
	1.7nm,0.2s						
LASF	**Ste Croix**	**2.30**	**268**	*e*Pn	**Pn**	**12 41 53.4**	**+0.1**
LASF				*e*Sn	**Sn**	**12 42 20.8**	**-0.5**
	0.9nm,0.2s						
CABF	**La Chapelle**	**2.49**	**344**	*e*Pn	**Pn**	**12 41 55.9**	**+0.1**
CABF				*e*Sn	**Sn**	**12 42 24.9**	**-0.9**
	1.8nm,0.3s						
CABF	**La Chapelle**	**2.49**	**344**	*e*Pn	**Pn**	**12 41 55.9**	**+0.1**
CABF				*e*Sn	**Sn**	**12 42 24.9**	**-0.9**
	0.9nm,0.3s						
MTLF	**Montolieu**	**3.61**	**258**	*e*Pn	**Pn**	**12 42 11.2**	**0.0**
MTLF				*e*Sn	**Sn**	**12 42 52.1**	**-1.4**
	1.2nm,0.3s						
MTLF	**Montolieu**	**3.61**	**258**	*e*Pn	**Pn**	**12 42 11.2**	**0.0**
MTLF				*e*Sn	**Sn**	**12 42 52.1**	**-1.4**
	0.6nm,0.3s						

*ISCJB **23** 12:41:15.8±0.7, 31°.75S±0°.09×179°.3W±0°.3, h258km±12km, mb3.9/6, Error ellipse: s-maj=37.3km s-min=6.3km az=20.5*
*NEIC **23** 12:41:17.4±0.7, 31°.79S×179°.20W, h264km±9km, Error ellipse: s-maj=24.5km s-min=8.1km az=115.0*
*IDC **23** 12:41:19.8±1.1, 31°.19S×179°.60W, h260km±10km, mb3.8/6, mb1 3.8/8, mb1mx3.6/18, mbtmp3.8/8, Error ellipse: s-maj=20.7km s-min=15.6km az=135.0*
ISC 23 12:41:17.4±0.8, 31°.9S±0°.1×179°.2W±0°.3, h267km±15km, n27, σ1°.09/27, mb3.9/6, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.83**	**23**	P	**Pn**	**12 42 08.8**	**-0.5**
	33nm,0.3s,baz=313,slow=24,SNR=1.5						
RAO				S	**S**	**12 42 44.3**	**-6.1**
	121nm,0.3s,baz=138,slow=22,SNR=5.6						
PUZ	**Puketiti**	**6.53**	**198**	P	**Pn**	**12 42 53.5**	**+1.1**
PUZ	**Puketiti**	**6.53**	**198**	PN	**Pn**	**12 42 53.5**	**+1.1**
MWZ	**Matawai**	**6.99**	**202**	PN	**Pn**	**12 42 59.0**	**+1.0**
URZ	**Urewera**	**7.06**	**205**	P	**Pn**	**12 42 59.7**	**+0.8**
	2.5nm,0.3s,baz=27,slow=4.0,SNR=16						
URZ				S	**S**	**12 44 25.3**	**+4.7**
	17nm,0.3s,baz=106,slow=23,SNR=12						
URZ	**Urewera**	**7.06**	**205**	PN	**Pn**	**12 42 59.3**	**+0.4**
URZ				SN	**S**	**12 44 19.4**	**-1.3**
BFZ	**Birch Farm**	**9.53**	**202**	SN	**S**	**12 45 15.2**	**-2.1**
MRZ	**Mangatainoka R**	**9.74**	**204**	*e*P	**Pn**	**12 43 31.3**	**-1.0**
MRZ	**Mangatainoka R**	**9.74**	**204**	*e*PN	**Pn**	**12 43 31.3**	**-1.1**
SNZO	**South Karori**	**10.62**	**206**	*e*Pn	**Pn**	**12 43 45.2**	**+1.8**
TUWZ	**Tuamarina**	**11.02**	**208**	PN	**Pn**	**12 43 48.7**	**+0.3**
TUWZ				SN	**S**	**12 45 47.1**	**-4.5**
NNZ	**Nelson**	**11.08**	**211**	SN	**S**	**12 45 51.6**	**-1.3**
KHZ	**Kahutara**	**12.02**	**207**	*e*Pn	**Pn**	**12 44 02.3**	**+1.7**
KHZ	**Kahutara**	**12.02**	**207**	*e*PN	**Pn**	**12 44 01.5**	**+0.8**
RPZ	**Rata Peaks**	**14.11**	**210**	P	**Pn**	**12 44 26.2**	**+0.1**
	0.5nm,0.3s,baz=311,slow=22,SNR=2.8						
RPZ				S	**S**	**12 46 56.7**	**-5.2**
	1.4nm,0.3s,baz=72,slow=17,SNR=8.3						
AFI	**Afiamalu**	**19.12**	**22**	P	**P**	**12 45 19.8**	**-1.3**
	2.4nm,0.3s,baz=284,slow=18,SNR=4.5						
CTA	**Charters Tower**	**33.09**	**282**	P	**P**	**12 47 27.9**	**-0.6**
	1.9nm,0.3s,mb4.0,baz=104,slow=10,SNR=5.3						
STKA	**Stephens Creek**	**33.19**	**259**	P	**P**	**12 47 31.1**	**+1.8**
	3.0nm,0.7s,mb4.0,baz=96,slow=9.8,SNR=5.8						
ASAR	**Alice Springs**	**42.05**	**269**	P	**P**	**12 48 42.8**	**-0.5**
	5.0nm,0.6s,mb3.9,baz=106,slow=7.4,SNR=103						
ASAR				pP	pP	12 49 39.9	+1.5
	0.5nm,0.7s,baz=105,slow=8.1,SNR=1.9						
FITZ	**Fitzroy Crossi**	**51.37**	**272**	P	**P**	**12 49 55.3**	**0.0**
	0.9nm,0.4s,mb3.4,baz=103,slow=7.9,SNR=5.9						
QSPA	**South Pole Qui**	**58.24**	**180**	P	**P**	**12 50 51.7**	**+8.3**
	3.5nm,0.5s,mb4.0,baz=13,slow=0.4,SNR=48						
PETK	**Petropavlovsk-**	**86.99**	**346**	P	**P**	**12 53 32.0**	**0.0**
	1.0nm,0.6s,mb3.8,baz=118,slow=7.5,SNR=5.7						
FINES	**FINESS Array B**	**146.16**	**338**	PKPbc	PKPbc	13 00 25.7	+0.3
	4.5nm,0.4s,baz=47,slow=4.2,SNR=30						
NB2	**NORSAR Subarra**	**150.04**	**350**	PKP	PKPbc	13 00 36.2

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGRI	**Grimsey**	**0.13**	**249**	P	Pg	13 10 04.8	-0.1
IGRI				S	Sg	13 10 07.3	-0.1
IFLA	**Flatey**	**0.43**	**188**	P	Pg	13 10 09.5	-0.5
IFLA				S	Sg	13 10 15.8	0.0
IBRE	**Brettingsstaoi**	**0.48**	**190**	P	Pg	13 10 10.1	-0.7
IBRE				S	Sg	13 10 16.9	-0.2
ILEI	**Leirhofn**	**0.52**	**110**	P	Pg	13 10 10.8	-0.8
ILEI				S	Sg	13 10 18.0	-0.5
IHED	**Heoinshofoi**	**0.53**	**163**	P	Pg	13 10 10.8	-1.1
IHED				S	Sg	13 10 18.1	-0.9
ISIG	**Siglufjorour**	**0.67**	**227**	P	Pg	13 10 13.1	-1.4
ISIG				S	Sg	13 10 21.5	-1.8
IGRA	**Granastaoir**	**0.68**	**176**	P	Pg	13 10 13.3	-1.2
IGRA				S	Sg	13 10 22.2	-1.2
IHLA	**Hella**	**0.71**	**204**	P	Pg	13 10 13.7	-1.4
IHLA				S	Sg	13 10 23.1	-1.3
IGIL	**Gilhagi**	**0.75**	**133**	P	Pg	13 10 14.2	-1.7
IGIL				S	Sg	13 10 24.2	-1.5
IKVO	**Krokottuvotn**	**0.94**	**159**	P	Pb	13 10 17.4	-2.0
IKVO				S	Sb	13 10 29.6	-2.1
IREN	**Reynihlio**	**1.00**	**161**	P	Pb	13 10 18.3	-2.1
IREN				S	Sb	13 10 31.4	-2.0
IHRN	**Hraun**	**1.09**	**245**	P	Pb	13 10 19.2	-2.8
IHRN				S	Sb	13 10 32.8	-3.2
IGRS	**Grimsstaoir**	**1.15**	**145**	P	Pb	13 10 20.9	-2.1
IGRS				S	Sb	13 10 36.1	-1.6
ISVA	**Svartarkot**	**1.27**	**172**	P	Pn	13 10 22.8	-1.8
ISVA				S	Sb	13 10 39.2	-2.0
IMKO	**Mokollar**	**1.71**	**160**	P	Pn	13 10 30.0	-0.7
IMKO				S	Sn	13 10 52.4	+0.1
IADA	**Aoalbol**	**1.80**	**150**	P	Pn	13 10 31.6	-0.4
IADA				S	Sn	13 10 54.3	-0.3
IHVA	**Hvannstoosfjol**	**1.81**	**154**	P	Pn	13 10 31.9	-0.1
IHVA				S	Sn	13 10 54.5	-0.1
IHVE	**Hveravellir**	**1.89**	**205**	P	Pn	13 10 32.8	-0.4
IHVE				S	Sn	13 10 56.7	-0.1
IKRE	**Kreppuhraun**	**1.89**	**163**	P	Pn	13 10 32.7	-0.5
IKRE				S	Sn	13 10 57.0	+0.2
IGLU	**Glumsstadir**	**1.94**	**145**	P	Pn	13 10 33.8	-0.1
IGLU				S	Sn	13 10 58.1	+0.1
IVSH	**V-Sauoahnukur**	**1.97**	**155**	P	Pn	13 10 34.4	+0.2
IVSH				S	Sn	13 10 58.1	-0.5
ISKR	**Skrokkalda**	**2.06**	**188**	P	Pn	13 10 35.0	-0.5
ISKR				S	Sn	13 11 01.2	+0.3
IASB	**`sbjarnarst**	**2.38**	**221**	P	Pn	13 10 40.0	+0.1
IASB				S	Sn	13 11 10.0	+1.2

*ISCJB **23** 13:14:06.2±1.4, 17.°4S±0.°3×179.°1W±0.°2, h578km±15km, mb3.5/8, Error ellipse: s-maj=59.2km s-min=19.1km az=147.3*
*NEIC **23** 13:14:06.6±1.1, 17.°49S×178.°98W, h572km±11km, mb3.5/1, Error ellipse: s-maj=43.2km s-min=13.9km az=147.0*
*IDC **23** 13:14:13.7±11.0, 17.°50S×179.°14W, h659km±146km, mb3.0/7, mb1 3.3/7, mb1mx3.1/15, mbtmp3.0/7, Error ellipse: s-maj=71.5km s-min=31.3km az=121.0*
ISC 23 13:14:06.8±1.4, 17.°5S±0.°3×179.°0W±0.°2, h573km±14km, n11, σ0°64/11, mb3.5/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.83**	**265**	*eP*		**13 15 22.6**	**-0.1**
STKA	**Stephens Creek**	**38.34**	**241**	P		**13 20 40.3**	**+0.7**
2.1nm,0.6s,mb3.9,baz=86,slow=7.5,SNR=7.3							
WRAB	**Tennant Creek**	**44.16**	**259**	*eP*		**13 21 24.6**	**-1.2**
WRA	**Warramunga Arr**	**44.16**	**259**	P		**13 21 26.5**	**+0.6**
baz=97,slow=7.2							
ASAR	**Alice Springs**	**44.37**	**254**	P		**13 21 27.9**	**+0.5**
7.5nm,0.6s,mb4.4,baz=89,slow=8.0,SNR=173							
NVAR	**Mina Array Bea**	**79.52**	**44**	P		**13 25 15.1**	**+0.3**
0.6nm,0.7s,mb3.1,baz=221,slow=8.1,SNR=4.9							
MAW	**Mawson**	**84.05**	**200**	P		**13 25 36.6**	**-0.8**
1.9nm,1.0s,mb3.6,baz=101,slow=5.2,SNR=2.5							
ILAR	**Eielson Array**	**85.62**	**13**	P		**13 25 44.1**	**-0.7**
0.3nm,0.5s,mb3.2,baz=217,slow=4.7,SNR=5.5							
TXAR	**Lajitas Array**	**86.25**	**58**	P		**13 25 49.5**	**+0.8**
0.6nm,0.8s,mb3.3,baz=208,slow=7.6,SNR=6.9							
BW06	**Boulder Array**	**87.44**	**44**	*eP*		**13 25 53.5**	**-0.4**
0.5nm,0.5s,mb3.5							
PDAR	**Pinedale Array**	**87.44**	**44**	P		**13 25 54.1**	**+0.2**
0.3nm,0.5s,mb3.3,baz=224,slow=3.8,SNR=3.3							

*ISCJB **23** 13:14:30.6±0.3, 23.°10N±0.°02×121.°52E±0.°02, h22km±3km, Error ellipse: s-maj=3.3km s-min=2.6km az=20.0*
*TAP **23** 13:14:31.0, 23.°13N×121.°43E, h22km, ML3.2, C*
*JMA **23** 13:14:32.4±0.5, 23.°35N×121.°48E, h103km*
ISC 23 13:14:30.8±0.4, 23.°10N±0.°02×121.°49E±0.°02, h19km±2km, n49, σ0°72/92, 4C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWF1	**Yuli**	**0.31**	**325**	⇑*iP*	**Pg**	**13 14 37.6**	**0.0**
TWF1	baz=340			*i* S	**Sg**	**13 14 42.6**	**+0.4**
EHY	**Hungye**	**0.43**	**339**	*i* P	**Pg**	**13 14 39.1**	**-0.7**
EHY	baz=331			S	**Sg**	**13 14 45.8**	**0.0**
ELDTW	**Lidau**	**0.45**	**282**	⇑*iP*	**Pg**	**13 14 39.1**	**-0.9**
ELDTW	baz=279			*i* S	**Sg**	**13 14 44.4**	**-1.8**
TTN	**Taitung**	**0.47**	**223**	*eP*	**Pg**	**13 14 41.5**	**+1.2**
TTN	baz=207			*eS*	**Sg**	**13 14 48.5**	**+1.7**
TWG	**Pinlang**	**0.48**	**234**	*eP*	**Pg**	**13 14 40.7**	**+0.2**
TWG	baz=237			*i* S	**Sg**	**13 14 47.0**	**+0.1**
STYT	**Tauyuan**	**0.68**	**275**	⇑P	**Pb**	**13 14 43.1**	**-0.9**
STYT	baz=273			*eS*	**Sb**	**13 14 51.4**	**-1.6**
ECL	**Taimali**	**0.70**	**225**	*eP*	**Pb**	**13 14 43.5**	**-0.9**
ECL	baz=227			*eS*	**Sb**	**13 14 52.8**	**-0.9**
ESL	**Shilin**	**0.71**	**356**	*eP*	**Pb**	**13 14 43.6**	**-1.0**
ESL	baz=351			*eS*	**Sb**	**13 14 54.9**	**+0.9**
WTP	**Ta-pu**	**0.82**	**280**	*i* P	**Pb**	**13 14 46.2**	**-0.3**
WTP	baz=279			*eS*	**Sb**	**13 14 57.2**	**+0.1**
SGST	**Jiashian**	**0.84**	**269**	P	**Pb**	**13 14 46.4**	**-0.3**
SGST	baz=266			S	**Sb**	**13 14 58.2**	**+0.6**
CHN4	**Tsaushan**	**0.86**	**287**	P	**Pb**	**13 14 46.9**	**-0.2**
CHN4	baz=292			S	**Sb**	**13 14 58.5**	**+0.2**
HWA	**Hwalien**	**0.88**	**7**	*eP*	**Pb**	**13 14 47.6**	**+0.1**
HWA	baz=359			*eS*	**Sb**	**13 15 00.1**	**+1.3**
CHN5	**Tsauling**	**0.90**	**304**	⇑*iP*	**Pb**	**13 14 47.5**	**-0.2**
CHN5	baz=305			S	**Sb**	**13 14 59.9**	**+0.6**
EAST	**Anshuo**	**0.93**	**220**	*eP*	**Pb**	**13 14 47.2**	**-1.0**
TWK	**Hsinying**	**0.94**	**280**	P	**Pb**	**13 14 48.1**	**-0.3**
TWK	baz=279			S	**Sb**	**13 15 00.6**	**+0.1**
SMLT	**Sun Moon Lake**	**0.95**	**325**	*eP*	**Pb**	**13 14 47.7**	**-0.9**
SMLT	baz=334			*eS*	**Sb**	**13 15 00.1**	**-0.8**
TWD	**Chiawan**	**0.98**	**6**	*eP*	**Pb**	**13 14 49.3**	**+0.1**
TWD	baz=357			*eS*	**Sb**	**13 15 02.1**	**+0.4**
TYC	**Yuchr**	**0.99**	**324**	*eP*	**Pb**	**13 14 49.0**	**-0.3**
TYC	baz=338			*eS*	**Sb**	**13 15 01.6**	**-0.4**

TWM1	**Shoushan**	**1.02**	**255**	*eP*	**Pb**	**13 14 50.3**	**+0.4**
TWM1	baz=252						
WGK	**Gukeng**	**1.03**	**305**	*eP*	**Pb**	**13 14 50.0**	**0.0**
WGK	baz=306			*eS*	**Sb**	**13 15 03.8**	**+0.5**
CHN3	**Shinhua**	**1.04**	**269**	*eP*	**Pb**	**13 14 51.5**	**+1.4**
CHN3	baz=267						
LAY	**Lan-yu**	**1.06**	**177**	P	**Pb**	**13 14 50.0**	**-0.5**
LAY	baz=162			*eS*	**Sb**	**13 15 04.7**	**+0.8**
CHY	**Chiayi**	**1.06**	**292**	*eP*	**Pb**	**13 14 50.3**	**-0.2**
CHY	baz=292			*eS*	**Sb**	**13 15 04.3**	**+0.3**
WHF	**Hehuan Shan**	**1.06**	**349**	*eP*	**Pb**	**13 14 49.7**	**-0.8**
WHF	baz=5.0			*eS*	**Sb**	**13 15 02.7**	**-1.4**
WNT	**Mingjian**	**1.07**	**316**	*eP*	**Pb**	**13 14 50.7**	**0.0**
WNT	baz=319			*eS*	**Sb**	**13 15 04.8**	**+0.4**
SCZT	**Fangliau**	**1.08**	**228**	*eP*	**Pb**	**13 14 50.8**	**-0.1**
SCZT	baz=219			*eS*	**Sb**	**13 15 04.4**	**-0.2**
TAI1	**Yung-k'ang**	**1.17**	**267**	*eP*	**Pn**	**13 14 51.9**	**-0.1**
TAI1	baz=274			*eS*	**Sb**	**13 15 07.7**	**+0.6**
TWT	**Tachien**	**1.19**	**346**	*eP*	**Pn**	**13 14 52.1**	**-0.2**
CHN8	baz=348						
CHN8	**Yiju**	**1.20**	**282**	*eP*	**Pn**	**13 14 51.4**	**-1.2**
CHN8	baz=281			*eS*	**Sb**	**13 15 09.1**	**+1.0**
TCU	**Taichung**	**1.28**	**325**	*eP*	**Pn**	**13 14 53.7**	**0.0**
TCU	baz=328			*eS*	**Sn**	**13 15 10.5**	**+0.1**
WSF	**Szhu**	**1.28**	**295**	*eP*	**Pn**	**13 14 54.7**	**+1.0**
WSF	baz=295			*eS*	**Sn**	**13 15 10.3**	**-0.1**
HEN	**Hengchun**	**1.29**	**213**	*eP*	**Pn**	**13 14 53.9**	**+0.1**
TWK1	baz=210						
TWK1	**Hengchun**	**1.31**	**209**	*eP*	**Pn**	**13 14 53.7**	**-0.4**
TWK1	baz=194			*eS*	**Sn**	**13 15 11.1**	**0.0**
NNS	**Nan Shan**	**1.34**	**355**	*eP*	**Pn**	**13 14 55.9**	**+1.5**
ENA	baz=13						
ENA	**Nanau**	**1.34**	**10**	*eP*	**Pn**	**13 14 55.1**	**+0.6**
ENA	baz=1.0			*eS*	**Sn**	**13 15 12.0**	**+0.2**
TWQ1	**Liyutan**	**1.41**	**332**	*eP*	**Pn**	**13 14 55.9**	**+0.5**
TWQ1	baz=336			*eS*	**Sn**	**13 15 13.6**	**+0.2**
NSY	**Sanyi**	**1.47**	**333**	*eP*	**Pn**	**13 14 57.3**	**+1.0**
NSY	baz=337			*eS*	**Sn**	**13 15 15.7**	**+0.6**
TWC	**Suao**	**1.54**	**12**	*eP*	**Pn**	**13 14 57.0**	**-0.2**
TWC	baz=4.0			*eS*	**Sn**	**13 15 17.4**	**+0.7**
NSK	**Sanguang**	**1.57**	**356**	*eP*	**Pn**	**13 14 58.1**	**+0.4**
NSK	baz=13			*eS*	**Sn**	**13 15 15.9**	**-1.6**
NSTT	**Nanjuang**	**1.59**	**344**	*eP*	**Pn**	**13 14 57.8**	**-0.1**
NSTT	baz=348			*eS*	**Sn**	**13 15 17.7**	**-0.3**
TWE	**Neicheng**	**1.62**	**6**	*eP*	**Pn**	**13 14 59.3**	**+1.0**
TWE	baz=11			*eS*	**Sn**	**13 15 19.1**	**+0.3**
YOJ	**Yonaguni jima**	**1.94**	**45**	P	**Pn**	**13 15 02.6**	**-0.2**
YOJ				S	**Sn**	**13 15 26.5**	**-0.1**
TWB1	**Santiao Chiao**	**1.95**	**13**	*eP*	**Pn**	**13 15 03.2**	**+0.3**
TWB1	baz=6.0			*eS*	**Sn**	**13 15 27.1**	**+0.2**
HATJ	**Hateruma jima**	**2.33**	**65**	P	**Pn**	**13 15 09.0**	**+1.0**
HATJ				*eS*	**Sn**	**13 15 35.1**	**-1.0**
IRIF	**Iriomote-Funau**	**2.39**	**59**	P	**Pn**	**13 15 09.3**	**+0.4**
IRIF				*eS*	**Sn**	**13 15 37.6**	**-0.1**
JKRS	**Kuro-shima**	**2.57**	**63**	P	**Pn**	**13 15 11.8**	**+0.4**
JKRS				S	**Sn**	**13 15 41.6**	**-0.6**
JIJ	**Ishigaki jima**	**2.74**	**62**	P	**Pn**	**13 15 13.6**	**-0.1**
JIJ				S	**Sn**	**13 15 44.3**	**-1.9**
JTJ	**Tarama**	**3.31**	**62**	P	**Pn**	**13 15 21.7**	**+0.1**
JTJ				S	**Sn**	**13 15 59.6**	**-0.9**
JOGS	**Gusukube**	**3.94**	**64**	P	**Pn**	**13 15 31.3**	**+1.0**
JOGS				*eS*	**Sn**	**13 16 16.9**	**+0.8**

*CSEM **23** 13:15:38.1, 66.°59N×17.°72W, h14km, ML3.5, After REY*
REY 23 13:15:38.1, 66.°59N×17.°72W, h14km, ML3.5, ML3.6, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGRI	**Grimsey**	**0.13**	**249**	P	Pg	13 15 41.4	-0.1
IGRI				S	Sg	13 15 43.7	-0.3
IFLA	**Flatey**	**0.43**	**187**	P	Pg	13 15 46.4	-0.3
IFLA				S	Sg	13 15 52.4	-0.1
IBRE	**Brettingsstaoi**	**0.47**	**190**	P	Pg	13 15 46.8	-0.6
IBRE				S	Sg	13 15 53.4	-0.3
ILEI	**Leirhofn**	**0.52**	**110**	P	Pg	13 15 47.5	-0.9
ILEI				S	Sg	13 15 54.6	-0.8
IHED	**Heoinshofoi**	**0.53**	**162**	P	Pg	13 15 47.5	-1.1
IHED				S	Sg	13 15 54.5	-1.2
ISIG	**Siglufjorour**	**0.67**	**227**	P	Pg	13 15 49.6	-1.4
ISIG				S	Sg	13 15 58.0	-1.8
IGRA	**Granastaoir**	**0.67**	**175**	P	Pg	13 15 49.9	-1.3
IGRA				S	Sg	13 15 58.7	-1.4
IHLA	**Hella**	**0.70**	**203**	P	Pg	13 15 50.4	-1.3
IHLA				S	Sg	13 15 59.6	-1.3
IGIL	**Gilhagi**	**0.75**	**132**	P	Pg	13 15 50.9	-1.8
IGIL				S	Sg	13 16 00.8	-1.8
IKVO	**Krokottuvotn**	**0.94**	**158**	P	Pb	13 15 54.1	-2.0
IKVO				S	Sb	13 16 06.5	-1.9
IREN	**Reynihlio**	**1.00**	**160**	P	Pb	13 15 55.1	-2.0
IREN				S	Sb	13 16 07.9	-2.2
IHRN	**Hraun**	**1.08**	**245**	P	Pb	13 15 55.8	-2.7
IHRN				S	Sb	13 16 09.3	-3.2
IGRS	**Grimsstaoir**	**1.15**	**145**	P	Pn	13 15 57.6	-2.1
IGRS				S	Sb	13 16 12.5	-2.0
ISVA	**Svartarkot**	**1.27**	**171**	P	Pn	13 15 59.5	-1.8
ISVA				S	Sb	13 16 15.9	-1.9
IMKO	**Mokollar**	**1.71**	**160**	P	Pn	13 16 06.3	-1.1
IMKO				S	Sn	13 16 28.6	-0.4
IADA	**Aoalbol**	**1.81**	**150**	P	Pn	13 16 08.0	-0.7
IADA				S	Sn	13 16 30.6	-0.7
IHVA	**Hvannstoosfjol**	**1.81**	**154**	P	Pn	13 16 08.2	-0.5
IHVE	**Hveravellir**	**1.89**	**205**	P	Pn	13 16 09.4	-0.4
IHVE				S	Sn	13 16 33.1	-0.2
IBRU	**Bruarjokull**	**1.89**	**158**	P	Pn	13 16 09.6	-0.2
IKRE	**Kreppuhraun**	**1.89**	**162**	P	Pn	13 16 09.4	-0.5
IGLU	**Glumsstadir**	**1.94**	**145**	P	Pn	13 16 10.0	-0.6
ISKR	**Skrokkalda**	**2.06**	**188**	P	Pn	13 16 11.4	-0.7
IASB	**`sbjarnarst**	**2.38**	**221**	P	Pn	13 16 16.3	-0.2
IASB				S	Sn	13 16 46.3	+1.0

*IDC **23** 13:24:17.1±1.7, 14.°55S×177.°57W, h0km, mb4.1/5, mb1 4.5/5, mb1mx4.2/15, mbtmp4.1/5, MS4.3/11, Ms1 4.3/11, ms1mx4.1/29, Error ellipse: s-maj=115.1km s-min=27.1km az=151.0*
*NEIC **23** 13:24:17.2±1.0, 15.°39S×177.°07W, h10km, mb4.7/10, Error ellipse: s-maj=53.1km s-min=15.2km az=163.0*
*GCMT **23** 13:24:20.2±0.3, 14.°68S×177.°06W, h14km±1km, MW5.0, Moment Tensor Solution. s32,c39; s76,c109; Moment tensor: Scale 10¹⁶Nm; M_{rr}0.13±.12; $M_{\theta\theta}$-0.78±.12; $M_{\phi\phi}$0.65±.11; $M_{r\theta}$-0.69±.26; $M_{\theta\phi}$3.33±.12; $M_{r\phi}$0.58±.27; Best double couple: $M_0$3.50000×10¹⁶ NP1:ϕ_s83.00000°, δ80.00000°, λ-9.00000°. NP2:ϕ_s175.00000°, δ81.00000°, λ-170.00000°. Principal axes: T 3.3400, Plg0.0000°, Azm309.0000°; N 0.3500, Plg77.0000°, Azm217.0000°; P -3.6800, Plg13.0000°, Azm39.0000°; Data Used: II IU IC CN G.*
*ISCJB **23** 13:24:20.7±1.3, 14.°7S±0.°6×177.°6W±0.°3, h33km, mb4.4/15, MS4.3/9 Error ellipse: s-maj=92.5km s-min=22.5km az=151.7*
ISC 23 13:24:22.5±1.3, 14.°7S±0.°6×177.°6W±0.°3, h35km, n36, σ0°44/17, mb4.4/15, MS4.3/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.66**	**83**	Pn	**Pn**	**13 25 35.4**	**-8.7**
6.4nm,0.3s,baz=108,slow=23,SNR=11							
AFI				LR	LR	13 27 10.2	
comp=Z,2μm,19.2s,baz=256,slow=31							
DZM	**Mont Dzumac**	**16.85**	**242**	*e*LR	LR	13 32 30.7	
2μm,23.6s							
RAR	**Rarotonga**	**18.11**	**114**	LR	LR	13 33 27.6	
comp=Z,1μm,19.2s,baz=314,slow=30							
URZ	**Urewera**	**23.93**	**190**	LR	LR	13 37 17.1	
comp=Z,958nm,19.0s,MS4.3,baz=27,slow=32							
PPT	**Papeete**	**27.02**	**100**	*e*LQ		13 35 21.5	
1μm,28.2s							
PPT				*e*LR	LR	13 36 38.1	
631nm,26.2s							
PPT	**Papeete**	**27.02**	**100**	LR	LR	13 37 31.6	
comp=Z,275nm,19.5s,MS3.8,baz=269,slow=29							
TBI	**Tubuai**	**27.88**	**112**	*e*LQ		13 35 50.7	
965nm,27.8s							
TBI				*e*LR	LR	13 37 11.8	
1μm,26.2s,baz=293							
TAOE	**Nuku Hiva Isla**	**37.05**	**85**	*e*LR	LR	13 41 05.8	
478nm,26.2s							
STKA	**Stephens Creek**	**40.95**	**238**	LR	LR	13 47 36.5	
comp=Z,767nm,18.1s,MS4.6,baz=46,slow=34							
RKT	**Rikitea**	**41.03**	**108**	*e*LR	LR	13 43 14.0	
552nm,23.8s,baz=277							
ASAR	**Alice Springs**	**46.52**	**251**	P	**P**	**13 32 46.8**	**0.0**
3.6nm,1.0s,mb4.3,baz=84,slow=8.5,SNR=30							
RPN	**Rapa Nui**	**64.26**	**113**	LR	LR	13 55 03.0	
comp=Z,215nm,21.1s,MS4.3,baz=297,slow=29							
QSPA	**South Pole Qui**	**75.33**	**180**	LR	LR	14 04 38.5	
comp=Z,122nm,18.9s,MS4.2,baz=61,slow=32							
NVAR	**Mina Array Bea**	**76.56**	**44**	P	**P**	**13 36 09.4**	**0.0**
1.6nm,1.0s,mb3.9,baz=215,slow=8.9,SNR=5.3							
NVAR	**Mina Array Bea**	**76.56**	**44**	P	**P**	**13 36 09.4**	**0.0**
DIB	**Dawson Inlet,**	**77.90**	**26**	T		15 01 47.0	
SNR=7.6							
DLBC	**Dease Lake**	**82.58**	**23**	LR	LR	14 06 45.3	
comp=Z,455nm,19.4s,MS4.8,baz=296,slow=31							
ILAR	**Eielson Array**	**82.60**	**13**	P	**P**	**13 36 41.1**	**-0.4**
1.0nm,1.0s,mb3.8,baz=232,slow=4.9,SNR=8.9							
BNM	**Barren Site**	**83.04**	**52**	*e*P	**P**	**13 36 44.6**	**0.0**
1.8nm,0.9s,mb4.1							
MNTX	**Cornudas Mount**	**83.07**	**55**	*e*P	**P**	**13 36 44.2**	**-0.6**
3.7nm,1.1s,mb4.3							
MCMT	**McKenzie Canyo**	**83.28**	**40**	*e*P	**P**	**13 36 46.4**	**+0.9**
2.3nm,1.1s,mb4.1							
TXAR	**Lajitas Array**	**83.60**	**58**	P	**P**	**13 36 47.7**	**+0.2**
3.1nm,1.0s,mb4.4,baz=226,slow=6.1,SNR=14							
DLMT	**Dillon**	**83.69**	**40**	*e*P	**P**	**13 36 47.5**	**-0.1**
13nm,1.3s,mb4.9							
TPAW	**Teton Pass**	**83.88**	**42**	*e*P	**P**	**13 36 48.6**	**-0.1**
3.8nm,0.8s,mb4.6							
LRM	**Limekiln Ridge**	**84.00**	**40**	*e*P	**P**	**13 36 48.5**	**-0.7**
41nm,1.6s,mb5.3							
IMW	**Indian Meadow**	**84.07**	**42**	*e*P	**P**	**13 36 49.8**	**+0.2**
5.7nm,1.0s,mb4.7							
PDAR	**Pinedale Array**	**84.47**	**43**	P	**P**	**13 36 51.3**	**-0.4**
2.0nm,0.9s,mb4.2,baz=234,slow=2.9,SNR=13							
SMCO	**Snowmass**	**84.76**	**47**	*e*P	**P**	**13 36 53.1**	**-0.1**
4.7nm,1.0s,mb4.6							
HRY	**Holter Researc**	**84.80**	**39**	*e*P	**P**	**13 36 53.1**	**-0.1**
5.1nm,1.0s,mb4.6							
RLMT	**Red Lodge**	**85.68**	**41**	*e*P	**P**	**13 36 58.6**	**+0.9**
8.5nm,1.2s,mb4.8							
INK	**Inuvik**	**88.60**	**15**	LR	LR	14 12 08.1	
comp=Z,106nm,19.1s,MS4.3,baz=239,slow=32							
JTS	**JuntasAbangare**	**95.05**	**81**	LR	LR	14 09 28.5	
comp=Z,65nm,19.5s,MS4.1,baz=281,slow=28							
ATAH	**Atahualpa**	**97.00**	**99**	LR	LR	14 12 31.4	
comp=Z,126nm,19.1s,MS4.4,baz=7.8,slow=30							
BRTR	**Keskin Array B**	**143.03**	**318**	PKP	PKPdf	13 43 52.1	-0.8
0.9nm,1.0s,baz=60,slow=3.5,SNR=4.4							
GRF	**Grafenberg Arr**	**144.38**	**350**	*e*PKP	PKPdf	13 43 55.0	+0.1
MMAI	**Mount Meron Ar**	**144.98**	**307**	PKP	PKPdf	13 43 57.3	+0.8
13nm,1.0s,baz=46,slow=4.2,SNR=6.1							

IDC 23 13:43:56.0±2.0, 14.°64S×177.°31W, h0km, mb3.8/4, mb1 4.2/4, mb1mx3.9/15, mbtmp3.8/4, MS3.4/1, Ms1 3.4/1, ms1mx2.8/32, Error ellipse: s-maj=130.9km s-min=32.6km az=151.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.42**	**83**	LR	LR	13 46 47.2	
comp=Z,306nm,18.2s,baz=261,slow=32							
PPT	**Papeete**	**26.80**	**100**	*e*LQ		13 55 00.4	
330nm,27.2s							
PPT				*e*LR	LR	13 56 16.3	
161nm,26.8s							
TBI	**Tubuai**	**27.68**	**112**	*e*LQ		13 55 28.0	
274nm,27.2s							
TBI				*e*LR	LR	13 56 47.5	
342nm,26.5s,baz=287							
TAOE	**Nuku Hiva Isla**	**36.80**	**85**	*e*LR	LR	14 00 46.5	
98nm,24.1s							
RKT	**Rikitea**	**40.82**	**108**	*e*LR	LR	14 02 35.7	
224nm,28.8s							
ASAR	**Alice Springs**	**46.76**	**251**	P	P	13 52 27.4	-0.1
1.2nm,1.1s,baz=84,slow=8.5,SNR=6.3							
ILAR	**Eielson Array**	**82.49**	**13**	P	P	13 56 20.4	+0.4
0.5nm,0.9s,baz=208,slow=6.0,SNR=4.3							
TXAR	**Lajitas Array**	**83.36**	**58**	P	P	13 56 26.2	+0.8
0.5nm,0.7s,baz=249,slow=4.7,SNR=6.4							
PDAR	**Pinedale Array**	**84.27**	**43**	P	P	13 56 29.1	-0.6
0.7nm,0.8s,baz=236,slow=1.0,SNR=4.8							

IDC 23 13:48:57.8±2.0, 14.°47S×177.°45W, h0km, mb3.7/4, mb1 4.0/4, mb1mx3.8/15, mbtmp3.7/4, Error ellipse: s-maj=124.7km s-min=33.3km az=149.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPT	**Papeete**	**26.96**	**100**	*e*LQ		14 00 01.7	
325nm,29.5s							
PPT				*e*LR	LR	14 01 16.5	
137nm,28.2s							
TBI	**Tubuai**	**27.87**	**113**	*e*LR	LR	14 01 37.1	
308nm,26.0s							
RKT	**Rikitea**	**41.00**	**109**	*e*LR	LR	14 07 44.8	
188nm,28.8s							
ASAR	**Alice Springs**	**46.69**	**251**	P	P	13 57 28.6	-0.1
0.9nm,0.8s,baz=80,slow=8.7,SNR=5.4							
ILAR	**Eielson Array**	**82.35**	**13**	P	P	14 01 21.3	+0.3
0.4nm,0.9s,baz=218,slow=6.7,SNR=3.4							
TXAR	**Lajitas Array**	**83.38**	**58**	P	P	14 01 27.7	+0.4
0.8nm,1.1s,baz=240,slow=7.9,SNR=4.1							
PDAR	**Pinedale Array**	**84.23**	**43**	P	P	14 01 31.4	+0.1
0.8nm,0.9s,baz=204,slow=3.3,SNR=5.7							

*IDC **23** 13:53:55.9±1.7, 14.°36S×177.°70W, h0km, mb4.1/6, mb1 4.4/6, mb1mx4.1/16, mbtmp4.1/6, MS4.4/19, Ms1 4.4/19, ms1mx4.2/31, Error ellipse: s-maj=114.6km s-min=27.4km az=151.0*
*NEIC

CN IC II.
ISC 23 13:53:59.1±1.4, 15°.9S±0°.6×176°.8W±0°.3, h35km, n34, σ1°.08/11, mb4.1/9, MS4.4/18, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.25**	**69**	Pn	**Pn**	**13 55 13.9**	**-1.2**
	1.8nm,0.3s,baz=250,slow=23,SNR=3.3						
DZM	**Mont Dzumac**	**16.98**	**246**	eLQ		14 01 10.1	
	4μm,30.6s						
DZM				eLR	LR	14 01 57.1	
	2μm,25.6s						
RAR	**Rarotonga**	**17.02**	**111**	LR	LR	14 03 07.0	
	comp=Z,2μm,20.2s,baz=304,slow=30						
URZ	**Urewera**	**22.95**	**192**	LR	LR	14 06 55.4	
	comp=Z,1μm,19.3s,MS4.3,baz=277,slow=32						
HNR	**Honiara**	**23.54**	**283**	LR	LR	14 06 48.9	
	comp=Z,753nm,18.9s,MS4.2,baz=110,slow=34						
PPT	**Papeete**	**26.14**	**98**	eLQ		14 05 00.9	
	2μm,28.0s						
PPT				eLR	LR	14 06 17.1	
	1μm,26.8s,baz=262						
PPT	**Papeete**	**26.14**	**98**	LR	LR	14 08 16.0	
	comp=Z,90nm,19.4s,MS3.3,baz=269,slow=32						
TBI	**Tubuai**	**26.80**	**110**	eLQ		14 05 27.9	
	1μm,28.0s						
TBI				eLR	LR	14 06 34.3	
	2μm,26.8s,baz=287						
TAOE	**Nuku Hiva Isla**	**36.45**	**83**	eLR	LR	14 10 44.8	
	673nm,26.1s,baz=251						
RKT	**Rikitea**	**40.00**	**107**	eLR	LR	14 12 38.8	
	1μm,25.8s,baz=277						
STKA	**Stephens Creek**	**40.96**	**239**	LR	LR	14 17 05.8	
	comp=Z,891nm,18.6s,MS4.7,baz=64,slow=34						
ASAR	**Alice Springs**	**46.83**	**252**	P	**P**	**14 02 25.2**	**-0.7**
	2.9nm,0.8s,mb4.2,baz=84,slow=8.0,SNR=14						
CBIJ	**Chichi jima**	**58.36**	**317**	LR	LR	14 23 31.3	
	comp=Z,349nm,19.5s,MS4.5,baz=176,slow=31						
DAV	**Davao City (W)**	**61.40**	**287**	LR	LR	14 29 58.2	
	comp=Z,234nm,18.1s,MS4.4,baz=66,slow=36						
MJAR	**Matsushiro Arr**	**67.21**	**322**	LR	LR	14 28 46.0	
	comp=Z,130nm,19.9s,MS4.2,baz=160,slow=32						
ASAJ	**Asahikawa**	**70.24**	**330**	LR	LR	14 28 48.5	
	comp=Z,348nm,21.7s,MS4.6,baz=163,slow=30						
PETK	**Petropavlovsk-**	**72.11**	**344**	LR	LR	14 33 21.0	
	comp=Z,197nm,19.0s,MS4.4,baz=336,slow=34						
KDAK	**Kodiak Island**	**76.06**	**13**	LR	LR	14 30 45.3	
	comp=Z,290nm,21.8s,MS4.5,baz=213,slow=30						
NVAR	**Mina Array Bea**	**76.90**	**43**	P	**P**	**14 05 47.4**	**-0.4**
	2.5nm,1.0s,mb4.1,baz=238,slow=10,SNR=6.2						
HLID	**Hailey**	**82.09**	**41**	P	**P**	**14 06 15.9**	**-0.1**
	0.8nm,0.6s,mb3.8						
ILAR	**Eielson Array**	**83.56**	**12**	P	**P**	**14 06 19.2**	**-3.9**
	1.3nm,1.0s,mb4.0,baz=210,slow=5.2,SNR=8.6						
ILAR				LR	LR	14 38 53.8	
	comp=Z,143nm,18.6s,MS4.4,baz=121,slow=33						
TXAR	**Lajitas Array**	**83.62**	**57**	P	**P**	**14 06 26.0**	**+1.8**
	1.2nm,1.0s,mb4.0,baz=193,slow=2.8,SNR=6.1						
TXAR				LR	LR	14 36 00.5	
	comp=Z,358nm,19.2s,MS4.8,baz=115,slow=30						
ANMO	**Albuquerque**	**83.64**	**51**	P	**P**	**14 06 27.2**	**+3.1**
	2.1nm,1.0s,mb4.2,baz=209,slow=4.6,SNR=3.6						
MCMT	**McKenzie Canyo**	**83.70**	**40**	P	**P**	**14 06 24.6**	**+0.4**
	1.5nm,1.1s,mb4.0						
TPAW	**Teton Pass**	**84.25**	**42**	eP	**P**	**14 06 27.9**	**+0.8**
	3.0nm,0.8s,mb4.5						
BW06	**Boulder Array**	**84.82**	**43**	eP	**P**	**14 06 29.7**	**-0.3**
PDAR	**Pinedale Array**	**84.83**	**43**	P	**P**	**14 06 29.3**	**-0.7**
	2.3nm,0.8s,mb4.3,baz=232,slow=3.0,SNR=8.9						
PDAR				LR	LR	14 40 30.0	
	comp=Z,197nm,18.1s,MS4.5,baz=258,slow=33						
MAW	**Mawson**	**86.29**	**199**	LR	LR	14 39 41.4	
	comp=Z,256nm,20.0s,MS4.6,baz=101,slow=31						
CMAR	**Chiang Mai Arr**	**89.64**	**289**	LR	LR	14 42 59.9	
	comp=Z,181nm,18.2s,MS4.5,baz=296,slow=33						
PLCA	**Paso Flores**	**91.63**	**133**	LR	LR	14 37 56.6	
	comp=Z,185nm,20.3s,MS4.5,baz=154,slow=28						
SONM	**Songino Array**	**93.00**	**319**	LR	LR	14 42 58.6	
	comp=Z,118nm,20.1s,MS4.3,baz=296,slow=32						
ULM	**Lac du Bonnet**	**96.37**	**40**	LR	LR	14 44 08.4	
	comp=Z,306nm,20.2s,MS4.8,baz=261,slow=32						
BR131	**Keskin Array S**	**144.35**	**318**	ePKPdf	PKPdf	14 13 31.4	-0.4
BRTR	**Keskin Array B**	**144.35**	**318**	PKP	PKPdf	14 13 31.6	-0.2
	0.4nm,0.8s,baz=116,slow=3.4,SNR=3.7						

*ISCJB **23** 13:56:48.3±0.5, 32°.23S±0°.04×179°.7W±0°.1, h156km±7km, mb4.5/12, Error ellipse: s-maj=17.3km s-min=4.6km az=19.1*
*IDC **23** 13:56:52.9±1.4, 31°.95S×179°.48W, h188km±14km, mb4.1/7, mb1 4.2/8, mb1mx4.0/16, mbtmp4.1/8, MS3.8/2, Ms1 3.9/2, ms1mx3.3/23, Error ellipse: s-maj=18.8km s-min=16.2km az=128.0*
*NEIC **23** 13:56:53.9±1.1, 31°.89S×179°.50W, h197km±10km, mb4.4/6, Error ellipse: s-maj=15.9km s-min=11.7km az=130.0*
ISC 23 13:56:49.2±0.5, 32°.27S±0°.05×179°.6W±0°.1, h154km±7km, n90, σ1°.73/93, mb4.5/12, C, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.34**	**26**	P	**Pn**	**13 57 41.6**	**+0.6**
	105nm,0.3s,baz=72,slow=21,SNR=8.8						
RAO				LR	LR	13 58 20.5	
	comp=Z,369nm,18.1s,baz=2.1,slow=29						
RAO				S	**Sn**	**13 58 20.5**	**-0.7**
	258nm,0.3s,baz=107,slow=22,SNR=9.1						
MXZ	**Matakaoa Point**	**5.55**	**197**	SN	**Sn**	**13 59 17.9**	**+4.9**
PUZ	**Puketiti**	**6.05**	**196**	P	**Pn**	**13 58 19.2**	**+2.8**
PUZ				S	**Sn**	**13 59 24.8**	**0.0**
PUZ	**Puketiti**	**6.05**	**196**	PN	**Pn**	**13 58 19.2**	**+2.7**
PUZ				SN	**Sn**	**13 59 24.8**	**-0.1**
OUZ	**Omahuta**	**6.37**	**241**	Pn	**Pn**	**13 58 29.9**	**+9.1**
CNGZ	**Carnagh Statio**	**6.45**	**195**	PN	**Pn**	**13 58 24.4**	**+2.6**
MWZ	**Matawai**	**6.49**	**200**	eP	**Pn**	**13 58 24.8**	**+2.5**
MWZ	**Matawai**	**6.49**	**200**	ePN	**Pn**	**13 58 24.8**	**+2.6**
URZ	**Urewera**	**6.55**	**203**	P	**Pn**	**13 58 26.6**	**+3.5**
	2.2nm,0.3s,baz=323,slow=8.8,SNR=26						
URZ				S	**Sn**	**13 59 40.8**	**+4.0**
	40nm,0.3s,baz=113,slow=4.0,SNR=5.8						
URZ	**Urewera**	**6.55**	**203**	eP	**Pn**	**13 58 25.4**	**+2.3**
URZ	**Urewera**	**6.55**	**203**	ePN	**Pn**	**13 58 25.4**	**+2.2**
PRGZ	**Paritu Road**	**6.95**	**196**	SN	**Sn**	**13 59 50.1**	**+3.8**
KNZ	**Kokohu**	**7.09**	**197**	eP	**Pn**	**13 58 31.6**	**+1.3**
KNZ	**Kokohu**	**7.09**	**197**	ePN	**Pn**	**13 58 31.6**	**+1.3**
MHGZ	**Mahia Peninsul**	**7.16**	**196**	SN	**Sn**	**13 59 55.4**	**+4.0**
NMHZ	**Naumai**	**7.41**	**202**	ePN	**Pn**	**13 58 36.5**	**+1.9**
NMHZ				SN	**Sn**	**13 59 59.9**	**+2.5**
BKZ	**Black Stump Fm**	**7.58**	**204**	eP	**Pn**	**13 58 38.5**	**+1.7**
BKZ				S	**Sn**	**14 00 03.5**	**+2.1**
BKZ	**Black Stump Fm**	**7.58**	**204**	ePN	**Pn**	**13 58 38.5**	**+1.7**
BKZ				SN	**Sn**	**14 00 03.5**	**+2.1**
MCHZ	**McNeill Hill**	**7.76**	**202**	SN	**Sn**	**14 00 08.6**	**+2.8**
CKHZ	**Cape Kidnapper**	**7.85**	**199**	SN	**Sn**	**14 00 09.1**	**+1.2**
PNHZ	**Pukenui**	**8.35**	**203**	ePN	**Pn**	**13 58 46.4**	**-0.7**
PNHZ				SN	**Sn**	**14 00 21.0**	**+1.1**
WPHZ	**Waipukurau**	**8.41**	**201**	SN	**Sn**	**14 00 22.1**	**+0.7**
DVHZ	**Dannevirke**	**8.71**	**202**	ePN	**Pn**	**13 58 50.9**	**-0.9**
POWZ	**Post Office Ro**	**8.92**	**203**	ePN	**Pn**	**13 58 54.2**	**-0.5**
POWZ				SN	**Sn**	**14 00 34.6**	**+0.9**
BFZ	**Birch Farm**	**9.03**	**200**	eP	**Pn**	**13 58 57.3**	**+1.2**
BFZ	**Birch Farm**	**9.03**	**200**	ePN	**Pn**	**13 58 57.3**	**+1.1**
MRZ	**Mangatainoka R**	**9.22**	**203**	eP	**Pn**	**13 58 57.0**	**-1.7**
MRZ	**Mangatainoka R**	**9.22**	**203**	ePN	**Pn**	**13 58 57.0**	**-1.7**
OGWZ	**Otaki Gorge**	**9.51**	**205**	ePN	**Pn**	**13 59 00.8**	**-1.7**
TMWZ	**Te Maipa**	**9.53**	**201**	SN	**Sn**	**14 00 45.4**	**-3.0**
CAW	**Cannon Point**	**9.80**	**204**	ePN	**Pn**	**13 59 03.5**	**-2.8**
PAWZ	**Paruwai Farm**	**9.92**	**202**	SN	**Sn**	**14 00 55.2**	**-2.6**
MSWZ	**Moikau Station**	**10.01**	**203**	SN	**Sn**	**14 00 57.2**	**-2.7**
PLWZ	**Palliser**	**10.15**	**202**	ePN	**Pn**	**13 59 08.0**	**-2.9**
TCW	**Tory Channel**	**10.18**	**207**	eP	**Pn**	**13 59 08.8**	**-2.5**
TCW	**Tory Channel**	**10.18**	**207**	ePN	**Pn**	**13 59 08.8**	**-2.5**
TUWZ	**Tuamarina**	**10.49**	**208**	ePN	**Pn**	**13 59 12.5**	**-3.0**
NNZ	**Nelson**	**10.55**	**210**	eP	**Pn**	**13 59 13.9**	**-2.3**
NNZ	**Nelson**	**10.55**	**210**	ePN	**Pn**	**13 59 13.9**	**-2.3**
QRZ	**Quartz Range**	**10.62**	**214**	eP	**Pn**	**13 59 14.6**	**-2.5**
QRZ				S	**Sn**	**14 01 13.2**	**-1.4**
QRZ	**Quartz Range**	**10.62**	**214**	ePN	**Pn**	**13 59 14.6**	**-2.5**
QRZ				SN	**Sn**	**14 01 13.2**	**-1.4**
THZ	**Tophouse**	**11.20**	**210**	P	**Pn**	**13 59 21.5**	**-3.2**
THZ	**Tophouse**	**11.20**	**210**	PN	**Pn**	**13 59 21.5**	**-3.2**
KHZ	**Kahutara**	**11.50**	**206**	eP	**Pn**	**13 59 29.4**	**+0.8**
KHZ	**Kahutara**	**11.50**	**206**	PN	**Pn**	**13 59 25.7**	**-2.9**
DSZ	**Denniston Nort**	**11.68**	**213**	eP	**Pn**	**13 59 29.1**	**-1.9**
DSZ	**Denniston Nort**	**11.68**	**213**	ePN	**Pn**	**13 59 29.1**	**-1.9**
LTZ	**Lake Taylor**	**12.30**	**209**	eP	**Pn**	**13 59 36.0**	**-3.1**
LTZ	**Lake Taylor**	**12.30**	**209**	ePN	**Pn**	**13 59 36.0**	**-3.1**
WVZ	**Waitaha Valley**	**13.21**	**212**	eP	**Pn**	**13 59 48.1**	**-2.6**
WVZ	**Waitaha Valley**	**13.21**	**212**	ePN	**Pn**	**13 59 48.1**	**-2.7**
RPZ	**Rata Peaks**	**13.58**	**210**	P	**Pn**	**13 59 54.3**	**-1.2**
	1.2nm,0.3s,baz=316,slow=14,SNR=1.5						
RPZ				S	**Sn**	**14 02 17.2**	**-8.6**
	4.0nm,0.3s,baz=8.3,slow=16,SNR=18						
RPZ	**Rata Peaks**	**13.58**	**210**	ePn	**Pn**	**13 59 54.6**	**-0.8**
RPZ				S	**Sn**	**14 02 17.2**	**-8.6**
RPZ	**Rata Peaks**	**13.58**	**210**	SN	**Sn**	**14 02 16.4**	**-9.3**
MSVF	**Nonsavu**	**14.62**	**351**	eP	**Pn**	**14 00 09.3**	**+0.5**
	19nm,0.8s						
ODZ	**Otahua Downs**	**14.84**	**208**	eP	**Pn**	**14 00 09.3**	**-1.9**
ODZ	**Otahua Downs**	**14.84**	**208**	ePN	**Pn**	**14 00 09.3**	**-1.9**
ODZ				SN	**Sn**	**14 02 46.4**	**-9.5**
CNB	**Canberra Magne**	**25.90**	**255**	eP	**P**	**14 02 10.7**	**+3.9**
EIDS	**Eidsvold**	**26.52**	**277**	eP	**P**	**14 02 14.1**	**+1.6**
TOO	**Toolangi**	**28.98**	**250**	eP	**P**	**14 02 38.5**	**+4.2**
STKA	**Stephens Creek**	**32.75**	**260**	eP	**P**	**14 03 10.2**	**+2.8**
	5.4nm,0.6s,mb4.5						
STKA	**Stephens Creek**	**32.75**	**260**	P	**P**	**14 03 10.3**	**+2.9**
	2.6nm,0.3s,mb4.4,baz=98,slow=8.8,SNR=8.8						
STKA	**Stephens Creek**	**32.75**	**260**	P	**P**	**14 03 09.9**	**+2.5**
	1.2nm,0.6s,mb3.8						
CTA	**Charters Tower**	**32.80**	**283**	eP	**P**	**14 03 10.0**	**+2.0**
	14nm,1.6s,mb4.4						
CTA	**Charters Tower**	**32.80**	**283**	P	**P**	**14 03 09.9**	**+2.0**
	8.2nm,0.7s,mb4.5,baz=102,slow=11,SNR=8.7						
CTAO	**Charters Tower**	**32.80**	**283**	eP	**P**	**14 03 09.7**	**+1.7**
	6.6nm,0.6s,mb4.5						
ASAR	**Alice Springs**	**41.67**	**270**	P	**P**	**14 04 23.4**	**+0.8**
	12nm,0.4s,mb4.9,baz=105,slow=7.7,SNR=68						
WRAB	**Tennant Creek**	**42.82**	**275**	eP	**P**	**14 04 32.4**	**+0.4**
	26nm,0.5s,mb5.1						
FORT	**Forrest**	**44.26**	**257**	eP	**P**	**14 04 43.9**	**+0.5**
	11nm,0.6s,mb4.7						
SBA	**Scott Base**	**46.08**	**184**	eP	**P**	**14 05 02.0**	**+4.9**
	2.9nm,0.8s,mb4.0						
KAKA	**Kakadu**	**47.94**	**283**	eP	**P**	**14 05 12.0**	**-0.3**
	14nm,0.7s,mb4.7						
KAKA	**Kakadu**	**47.94**	**283**	eP	**P**	**14 05 11.4**	**-0.9**
	23nm,0.6s,mb5.0						
KLBR	**Kellerberrin**	**52.45**	**253**	eP	**P**	**14 05 46.0**	**-0.1**
	6.2nm,0.4s,mb4.6						
QSPA	**South Pole Qui**	**57.85**	**180**	P	**P**	**14 06 27.7**	**+3.6**
	23nm,0.8s,mb5.1,baz=14,slow=1.4,SNR=87						
MAW	**Mawson**	**70.08**	**201**	P	**P**	**14 07 44.8**	**+0.8**
	1.7nm,0.3s,mb4.2,baz=136,slow=9.7,SNR=20						
SYO	**Syowa Base**	**74.98**	**194**	eP	**P**	**14 08 11.6**	**-1.4**
VNA1	**Neumayer--Stat**	**77.19**	**177**	e	**P**	**14 08 27.6**	**+2.1**
PETK	**Petropavlovsk-**	**87.28**	**347**	P	**P**	**14 09 16.6**	**-1.3**
	0.9nm,0.7s,mb3.7,baz=123,slow=6.0,SNR=2.2						
NVAR	**Mina Array Bea**	**90.55**	**44**	P	**P**	**14 09 33.5**	**-0.1**
	0.8nm,0.7s,mb3.9,baz=218,slow=7.5,SNR=6.9						
LPAZ	**La Paz**	**98.63**	**115**	LR	LR	14 43 31.6	
	comp=Z,156nm,21.0s,baz=304,slow=28						
JOF	**Joensuu**	**143.61**	**337**	ep	PKPdf	14 15 59.4	-5.4
	1.8nm,0.8s						
FINES	**FINESS Array B**	**146.38**	**338**	PKPbc	PKPbc	14 16 08.8	-2.4
	2.2nm,0.4s,baz=44,slow=4.2,SNR=19						
NB2	**NORSAR Subarra**	**150.35**	**349**	PKP	PKPdf	14 16 19.5	+3.4
	comp=Z,0.8nm,0.7s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**150.35**	**349**	PKPbc	PKPbc	14 16 19.4	-2.0
	comp=Z,1.4nm,0.6s,baz=16,slow=4.2,SNR=6.0						
MMAI	**Mount Meron Ar**	**150.58**	**281**	PKPbc	PKPbc	14 16 23.0	+0.1
	comp=Z,0.8nm,0.3s,baz=98,slow=2.9,SNR=2.4						
AKASG	**Malin Array Be**	**151.88**	**319**	PKPbc	PKPbc	14 16 23.9	-1.4
	comp=Z,0.4nm,0.3s,baz=66,slow=0.9,SNR=1.2						
BRTR	**Keskin Array B**	**152.19**	**295**	PKPbc	PKPbc	14 16 25.4	-1.0
	comp=Z,0.5nm,0.5s,baz=132,slow=2.1,SNR=3.8						
DBIC	**Dimbokro**	**154.07**	**168**	PKPbc	PKPbc	14 16 32.5	+1.2
	comp=Z,1.7nm,0.4s,baz=144,slow=4.5,SNR=7.6						
DBIC	**Dimbokro**	**154.07**	**168**	ePKPbc	PKPbc	14 16 32.3	+1.1
TORD	**Torodi Ar. Bea**	**160.93**	**184**	PKPab	PKPab	14 17 15.3	+0.6
	comp=Z,0.4nm,0.4s,baz=209,slow=3.3,SNR=4.1						

*ISCJB **23** 14:10:53.1±0.8, 18°.88N±0°.04×145°.4E±0°.1, h245km±8km, mb3.8/20, Error ellipse: s-maj=19.6km s-min=5.6km az=175.5*
*IDC **23** 14:10:54.3±0.8, 18°.85N×145°.42E, h244km±8km, mb3.5/16, mb1 3.7/19, mb1mx3.6/28, mbtmp3.6/19, Error ellipse: s-maj=17.8km s-min=8.8km az=86.0*
*NEIC **23** 14:10:54.5±0.3, 18°.88N×145°.41E, mb4.4/4, Error ellipse: s-maj=13.1km s-min=5.8km az=88.0*
ISC 23 14:10:53.7±0.8, 18°.88N±0°.04×145°.4E±0°.1, h234km±8km, h247km±3.0km: pP-P, n58, σ0°.86/57, mb3.8/20, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.29**	**186**	P	**Pn**	**14 12 13.1**	**+0.5**
	19nm,0.3s,baz=143,slow=5.5,SNR=20						
GUMO				S	**S**	**14 13 14.1**	**-1.3**
	39nm,0.3s,baz=24,slow=19,SNR=7.7						
GUMO	**Guam**	**5.29**	**186**	ePn	**Pn**	**14 12 12.9**	**+0.3**
GUMO				eS	**S**	**14 13 16.5**	**+1.1**
CBIJ	**Chichi jima**	**8.70**	**341**	P	**Pn**	**14 12 53.2**	**-2.5**
	4.7nm,0.3s,baz=166,slow=24,SNR=12						
CBIJ				S	**S**	**14 14 31.5**	**-2.6**
	3.9nm,0.3s,baz=283,slow=21,SNR=2.0						
JHJ	**Hachijo jima 2**	**15.05**	**342**	P	**Pn**	**14 14 15.9**	**+0.9**
	3.4nm,0.3s,baz=61,slow=21,SNR=6.6						
JOD2	**Odawara 2**	**17.25**	**342**	P	**P**	**14 14 39.4**	**+0.3**
JIE	**Ise**	**17.28**	**335**	P	**P**	**14 14 39.4**	**0.0**
JRY	**Ryogami san**	**18.01**	**343**	P	**P**	**14 14 47.7**	**+0.4**
JMN	**Monobe**	**18.02**	**327**	P	**P**	**14 14 49.5**	**+2.1**
JGF	**Kuroka**	**18.11**	**338**	P	**P**	**14 14 49.3**	**+0.9**
JWT	**Wachi**	**18.59**	**334**	P	**P**	**14 14 53.7**	**+0.2**
MJAR	**Matsushiro Arr**	**18.70**	**342**	P	**P**	**14 14 54.4**	**-0.3**
	0.6nm,0.3s,baz=172,slow=11,SNR=12						
MJAR	**Matsushiro Arr**	**18.70**	**342**	P	**P**	**14 14 54.4**	**-0.3**
MAJO	**Matsushiro**	**18.70**	**342**	eP	**P**	**14 14 54.3**	**-0.4**
	11nm,0.7s						
MAT	**Matsushiro**	**18.70**	**342**	P	**P**	**14 14 54.7**	**0.0**
MAT	**Matsushiro**	**18.70**	**342**	P	**P**	**14 14 54.4**	**-0.3**
JAD	**Aida**	**18.85**	**330**	P	**P**	**14 14 56.5**	**+0.1**
JMM	**Marumori**	**19.34**	**349**	P	**P**	**14 15 07.0**	**+5.4**
JSD	**Sado**	**20.08**	**343**	P	**P**	**14 15 10.1**	**+0.6**
JYA	**Atsumi**	**20.26**	**347**	P	**P**	**14 15 11.9**	**+0.6**
JTM	**Tenmabayashi**	**22.15**	**351**	P	**P**	**14 15 30.9**	**+0.7**
JOT	**Ohata**	**22.73**	**351**	P	**P**	**14 15 35.9**	**+0.4**
JEM	**Erimo**	**23.14**	**356**	P	**P**	**14 15 38.7**	**-0.5**
JSH	**Shimam**	**24.12**	**350**	P	**P**	**14 15 48.2**	**+0.1**
JMP	**Maruseppu**	**25.11**	**357**	P	**P**	**14 15 57.8**	**+0.8**
ASAJ	**Asahikawa**	**25.27**	**355**	P	**P**	**14 15 59.6**	**+1.2**
	5.1nm,0.6s,mb4.3,baz=203,slow=13,SNR=12						
COEN	**Coen**	**32.70**	**184**	eP	**P**	**14 17 04.0**	**-0.4**
KAKA	**Kakadu**	**33.89**	**203**	eP	**P**	**14 17 14.3**	**-0.4**
PETK	**Petropavlovsk-**	**35.47**	**13**	P	**P**	**14 17 29.0**	**+1.2**
	1.1nm,0.7s,mb3.5,baz=165,slow=6.0,SNR=2.9						
CTA	**Charters Tower**	**38.74**	**179**	eP	**P**	**14 17 53.8**	**-1.7**
	12nm,1.3s,mb4.3						
CTA	**Charters Tower**	**38.74**	**179**	P	**P**	**14 17 55.3**	**-0.2**
	9.9nm,1.0s,mb4.3,baz=96,slow=8.6,SNR=6.0						
CTAO	**Charters Tower**	**38.74**	**179**	eP	**P**	**14 17 55.2**	**-0.3**
WRAB	**Tennant Creek**	**40.07**	**196**	eP	**P**	**14 18 06.8**	**+0.3**
	17nm,0.6s,mb4.7						
FITZ	**Fitzroy Crossi**	**41.57**	**209**	eP	**P**	**14 18 19.2**	**+0.4**
	15nm,0.8s,mb4.5						
SONM	**Songino Array**	**42.83**	**321**	P	**P**	**14 18 28.2**	**-0.4**
	0.7nm,0.5s,mb3.3,baz=141,slow=9.9,SNR=7.0						
SONM				pP	pP	14 19 21.1	+3.3
	0.4nm,0.5s,baz=120,slow=6.0,SNR=2.8						
ASAR	**Alice Springs**	**43.75**	**195**	P	**P**	**14 18 36.4**	**+0.1**
	3.6nm,0.7s,mb3.8,baz=15,slow=6.3,SNR=66						
CMAR	**Chiang Mai Arr**	**43.92**	**277**	P	**P**	**14 18 39.4**	**+1.6**
	1.0nm,0.9s,mb3.2,baz=73,slow=6.9,SNR=4.2						
DZM	**Mont Dzumac**	**45.61**	**152**	eLR	LR	14 17 52.5	
	807nm,22.2s						
MBWA	**Marble Bar**	**47.07**	**214**	eP	**P**	**14 19 02.5**	**+0.3**
	18nm,1.2s,mb4.3						
STKA	**Stephens Creek**	**50.60**	**184**	eP	**P**	**14 19 28.0**	**-0.8**
	3.5nm,1.2s,mb3.7						
STKA	**Stephens Creek**	**50.60**	**184**	P	**P**	**14 19 28.2**	**-0.6**
	3.1nm,0.7s,mb3.9,baz=349,slow=10,SNR=4.5						
TOO	**Toolangi**	**56.15**	**180**	eP	**P**	**14 20 09.3**	**+0.3**
ZALV	**Zalesovo Beam**	**57.70**	**322**	P	**P**	**14 20 19.1**	**-0.7**
	0.4nm,0.4s,mb3.4,baz=141,slow=5.5,SNR=2.2						
ZALV				pP	pP	14 21 13.6	+1.5
	0.5nm,0.5s,baz=141,slow=7.6,SNR=1.8						
MK31	**Makanchi Array**	**58.14**	**314**	eP	**P**	**14 20 22.8**	**-0.1**
MKAR	**Makanchi Array**	**58.14**	**314**	P	**P**	**14 20 22.9**	**0.0**
	1.1nm,0.6s,mb3.7,baz=88,slow=9.1,SNR=13						
MKAR				pP	pP	14 21 17.3	+2.1
	0.6nm,0.7s,baz=82,slow=8.8,SNR=3.4						
MKAR	**Makanchi Array**	**58.14**	**314**	P	**P**	**14 20 22.9**	**0.0**
MKAR				pP	pP	14 21 17.3	+2.1
ILAR	**Eielson Array**	**63.61**	**26**	P	**P**	**14 20 58.0**	**-1.3**
	0.5nm,0.6s,mb3.3,baz=261,slow=4.5,SNR=11						
BVAR	**Borovoye Array**	**66.16**	**320**	P	**P**	**14 21 15.4**	**-0.6**
	2.5nm,0.5s,mb4.1,baz=96,slow=7.1,SNR=14						
BRVK	**Borovoye**	**66.22**	**320**	P	**P**	**14 21 15.5**	**-0.9**
	3.1nm,0.7s,mb4.0						
INK	**Inuvik**	**69.32**	**23**	P	**P**	**14 21 35.2**	**-0.2**
	1.9nm,0.9s,mb3.7,baz=283,slow=6.4,SNR=3.5						
INK	**Inuvik**	**69.32**	**23**	P	**P**	**14 21 35.2**	**-0.2**
AKTK	**Aktyubinsk**	**74.05**	**318**	P	**P**	**14 22 03.2**	**-0.6**
AKTO	**Aktyubinsk**	**74.05**	**318**	P	**P**	**14 22 03.2**	**-0.6**
	0.9nm,0.6s,mb3.6,baz=79,slow=10,SNR=4.9						
TBI	**Tubuai**	**76.16**	**121**	eLR	LR	14 22 29.8	
	298nm,25.0s,baz=280						
YKA	**Yellowknife Ar**	**77.96**	**28**	P	**P**	**14 22 25.3**	**-0.4**
	0.6nm,0.5s,mb3.5,baz=288,slow=6.4,SNR=4.2						
NVAR	**Mina Array Bea**	**83.25**	**52**	P	**P**	**14 22 55.0**	**+0.8**
	1.5nm,0.7s,mb3.9,baz=268,slow=5.2,SNR=13						
FINES	**FINESS Array B**	**86.61**	**335**	P	**P**	**14 23 08.4**	**-1.9**
	3.8nm,1.1s,mb4.1,baz=72,slow=6.2,SNR=4.0						
TORD	**Torodi Ar. Bea**	**132.13**	**309**	SKPbc	SKPbc	14 32 43.4	-1.3
	0.7nm,0.6s,baz=26,slow=2.6,SNR=3.8						
LPAZ	**La Paz**	**147.95**	**91**	PKPbc	PKPbc	14 30 12.8	+0.6
	0.5nm,0.5s,baz=238,slow=7.8,SNR=3.1						

*DDA **23** 14:17:07.9, 39°.62N×30°.51E, h7km±2km, Md2.6*
*ISCJB **23** 14:17:08.8±0.5, 39°.61N±0°.04×30°.50E±0°.05, h10km, Error ellipse: s-maj=6.7km s-min=4.0km az=140.8*
*ISK **23** 14:17:08.4, 39°.56N×30°.47E, h8km, MD2.5*
*CSEM **23** 14:17:08.9±0.1, 39°.58N×30°.45E, h2km, MD2.6, Error ellipse: s-maj=4.1km s-min=2.6km az=54.0*
ISC 23 14:17:09.0±0.6, 39°.59N±0°.03×30°.46E±0°.05, h3km±16km, n22, σ0°.74/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORA	**Eskisehir**	**0.29**	**359**	*i* P	**Pg**	**14 17 13.4**	**-1.1**
BORA				*i* S	**Sg**	**14 17 18.2**	**

comp=Z,1μm,1.0s
DZM Mont Dzumac 3.99 189 *e*P **Pn 14 30 37.4 0.0**
BAYA Yate Dam 4.02 183 *e*P **Pn 14 30 38.1 +0.2**
BAYA *e*S **Sn 14 31 24.4 +0.4**
NOUC Port Laguerre 4.04 191 *e*P **Pn 14 30 38.1 0.0**
NOUC *e*S **Sn 14 31 25.0 +0.5**
NOUC AMP 14 31 26.1
comp=Z,52nm,6.8s
CTA Charters Tower 19.84 261 *e*P **Pn 14 34 08.9 +0.3**
comp=Z,8.3nm,0.9s
CTA Charters Tower 19.84 261 P **Pn 14 34 08.6 0.0**
comp=Z,0.6nm,0.3s,baz=82,slow=10,SNR=11
CTA Charters Tower 19.84 261 P **Pn 14 34 08.6 0.0**
CTAO Charters Tower 19.84 261 *e*P **Pn 14 34 08.9 +0.3**
comp=Z,8.5nm,0.7s
STKA Stephens Creek 26.82 234 *e*P **P 14 35 16.8 +0.7**
comp=Z,8.7nm,0.8s,mb4.3
STKA Stephens Creek 26.82 234 P **P 14 35 16.7 +0.6**
comp=Z,9.6nm,0.8s,mb4.4,baz=62,slow=6.8,SNR=16
STKA Stephens Creek 26.82 234 *e*P **P 14 35 16.6 +0.5**
comp=Z,2.5nm,0.9s,mb3.7
ASAR Alice Springs 31.50 254 P **P 14 35 56.9 -0.9**
comp=Z,3.2nm,0.5s,mb4.4,baz=84,slow=8.1,SNR=62
FITZ Fitzroy Crossi 39.39 263 *e*P **P 14 37 05.4 -0.2**
comp=Z,26nm,0.9s,mb5.0
TBI Tubuai 40.80 105 *e*LR LR 14 37 55.8
comp=Z,228nm,24.8s
PPT Papeete 41.13 96 *e*LR LR 14 37 34.4
comp=Z,144nm,24.5s
RKT Rikitea 54.11 106 *e*LR LR 14 39 01.9
comp=Z,306nm,27.5s,baz=279
CMAR Chiang Mai Arr 76.24 295 P **P 14 41 25.4 +1.0**
comp=Z,1.4nm,0.6s,mb4.0,baz=133,slow=4.5,SNR=9.3
SONM Songino Array 85.14 324 P **P 14 42 11.5 0.0**
comp=Z,0.3nm,0.6s,mb3.6,baz=147,slow=6.0,SNR=2.5
NVAR Mina Array Bea 89.56 49 P **P 14 42 33.6 +0.6**
comp=Z,1.5nm,0.8s,mb4.3,baz=231,slow=7.3,SNR=9.5
ILAR Eielson Array 89.77 18 P **P 14 42 31.5 -1.8**
comp=Z,0.6nm,0.6s,mb4.1,baz=236,slow=5.1,SNR=10
WVOR Wild Horse Val 90.93 45 *e*P **P 14 42 39.8 +0.4**
comp=Z,1.9nm,1.1s,mb4.3

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*ISCJB **23** 14:37:38.3±2.6, 15.°0S±0.°2×174.°0W±0.°2, h80km±22km, mb3.8/9, Error ellipse: s-maj=50.7km s-min=16.9km az=42.1.*
*IDC **23** 14:37:40.0±3.0, 15.°10S×173.°94W, h81km±27km, mb3.8/7, mb1 4.1/8, mb1mx3.8/18, mbtmp3.8/8, Error ellipse: s-maj=45.1km s-min=17.6km az=133.0*
*NEIC **23** 14:37:40.1±1.7, 15.°10S×173.°93W, h83km±15km, mb3.9/2, Error ellipse: s-maj=32.0km s-min=12.0km az=129.0*
ISC 23 14:37:39.5±2.4, 15.°1S±0.°2×173.°9W±0.°3, h76km±21km, n13, σ0§59/14, mb3.8/9, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.38**	**61**	P		**Pn**	**14 38 17.6**	**+1.3**
	205nm,0.3s,baz=70,slow=1.3,SNR=245							
AFI				S		**Sn**	**14 38 43.6**	**-1.0**
	153nm,0.3s,baz=70,slow=21,SNR=10.0							
AFI	**Afiamalu**	**2.38**	**61**	*e*Pn		**Pn**	**14 38 17.5**	**+1.1**
AFI				*e*Sn		**Sn**	**14 38 43.5**	**-1.1**
URZ	**Urewera**	**24.41**	**197**	P		**P**	**14 42 51.0**	**+0.2**
	3.4nm,0.3s,mb4.1,baz=196,slow=21,SNR=7.4							
URZ	**Urewera**	**24.41**	**197**	*e*P		**P**	**14 42 50.8**	**0.0**
ASAR	**Alice Springs**	**49.74**	**252**	P		**P**	**14 46 23.9**	**-0.5**
	1.4nm,0.3s,mb4.3,baz=89,slow=7.5,SNR=42							
NVAR	**Mina Array Bea**	**74.43**	**42**	P		**P**	**14 49 10.2**	**+0.8**
	2.2nm,0.8s,mb4.0,baz=229,slow=9.9,SNR=16							
HLID	**Hailey**	**79.70**	**40**	*e*P		**P**	**14 49 39.0**	**+0.1**
	0.7nm,0.5s,mb3.8							
TXAR	**Lajitas Array**	**80.85**	**56**	P		**P**	**14 49 45.8**	**+0.4**
	0.8nm,0.8s,mb3.6,baz=290,slow=7.8,SNR=4.9							
ILAR	**Eielson Array**	**82.23**	**11**	P		**P**	**14 49 51.5**	**-0.4**
	0.3nm,0.6s,mb3.3,baz=236,slow=6.3,SNR=7.4							
BW06	**Boulder Array**	**82.36**	**42**	*e*P		**P**	**14 49 53.0**	**-0.1**
	1.3nm,0.8s,mb3.8							
PDAR	**Pinedale Array**	**82.36**	**42**	P		**P**	**14 49 53.0**	**-0.1**
	0.9nm,0.8s,mb3.7,baz=230,slow=2.2,SNR=7.7							
MAW	**Mawson**	**87.93**	**199**	P		**P**	**14 50 20.1**	**-0.4**
	1.0nm,0.6s,mb4.0,baz=141,slow=8.1,SNR=5.4							
BRTR	**Keskin Array B**	**145.60**	**321**	PKPbc		PKPbc	14 57 10.8	+1.3
	0.8nm,0.6s,baz=83,slow=6.0,SNR=3.7							

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*ISCJB **23** 14:38:47.7±0.6, 25.°14N±0.°03×122.°41E±0.°02, h4km±4km, mb3.8/15, MS3.6/5, Error ellipse: s-maj=4.8km s-min=3.2km az=157.1*
*IDC **23** 14:38:48.2±1.1, 25.°00N×121.°86E, h0km, mb3.8/9, mb1 3.9/9, mb1mx3.8/21, mbtmp3.8/9, MS3.6/5, Ms1 3.7/5, ms1mx3.2/32, Error ellipse: s-maj=33.3km s-min=24.2km az=67.0*
*TAP **23** 14:38:49.1, 25.°15N×122.°30E, h15km, ML4.2, C*
*BJI **23** 14:38:53.6, 25.°26N×122.°12E, h16km, mB4.4/4, mb4.2/7, ML4.3/5, Ms4.2/4, Ms7 3.9/4*
*JMA **23** 14:38:54.5±0.1, 24.°94N×122.°77E, h30km, M2.9*
*NEIC **23** 14:38:56.1±0.8, 24.°84N×121.°61E, h56km±7km, mb4.2/3, Error ellipse: s-maj=20.2km s-min=10.9km az=79.0*
ISC 23 14:38:48.2±0.5, 25.°11N±0.°03×122.°41E±0.°02, h1km±3km, n94, σ1§21/116, mb3.9/15, MS3.6/5, 10C-3D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.39**	**255**	⇑*i*P		**Pg**	**14 38 56.1**	**+0.3**
	baz=243							
TWB1				*i* S		**Sg**	**14 39 00.9**	**0.0**
	baz=243							
NWF	**Wu-fen Shan**	**0.57**	**266**	⇑*i*P		**Pg**	**14 38 59.3**	**+0.2**
	baz=269							
NWF				*e*S		**Sg**	**14 39 07.3**	**+0.8**
	baz=269							
ILA	**Ilan**	**0.69**	**240**	*e*P		**Pg**	**14 39 02.1**	**+0.6**
	baz=219							
ILA				*e*S		**Sg**	**14 39 11.1**	**+0.7**
	baz=219							
TWC	**Suao**	**0.71**	**225**	⇓*i*P		**Pg**	**14 39 02.2**	**+0.3**
	baz=206							
TWC				*e*S		**Sg**	**14 39 11.6**	**+0.5**
	baz=206							
TWY	**Chenhua**	**0.75**	**283**	⇑*i*P		**Pg**	**14 39 02.6**	**0.0**
	baz=276							
TWY				*i* S		**Sg**	**14 39 12.8**	**+0.4**
	baz=276							
TWA	**Mucha**	**0.76**	**260**	⇑*i*P		**Pg**	**14 39 03.1**	**+0.3**
	baz=244							
TWA				S		**Sg**	**14 39 12.9**	**+0.3**
	baz=244							
TWE	**Neicheng**	**0.78**	**240**	⇑*i*P		**Pg**	**14 39 03.1**	**0.0**
	baz=222							
TWE				S		**Sg**	**14 39 12.3**	**-0.9**
	baz=222							
TAP1	**Taipei**	**0.81**	**265**	⇑*i*P		**Pg**	**14 39 04.1**	**+0.4**
	baz=261							
TAP1				S		**Sg**	**14 39 14.3**	**+0.2**
	baz=261							
TATO	**Taipei**	**0.84**	**261**	*e*P		**Pg**	**14 39 04.3**	**-0.2**
YOJ	**Yonaguni jima**	**0.85**	**140**	P		**Pg**	**14 39 05.0**	**+0.5**
YOJ				S		**Sg**	**14 39 12.4**	**-3.1**
YOJ	**Yonaguni jima**	**0.85**	**140**	*e*P		**Pg**	**14 39 05.2**	**+0.7**
	baz=137							
TWS1	**Kuangyinshan**	**0.90**	**269**	⇑*i*P		**Pg**	**14 39 05.5**	**+0.1**
	baz=266							
TWS1				S		**Sg**	**14 39 16.8**	**-0.3**
	baz=266							
ENA	**Nanau**	**0.91**	**222**	⇓P		**Pg**	**14 39 05.6**	**-0.1**
	baz=205							
ENA				*e*S		**Sg**	**14 39 18.0**	**+0.4**
	baz=205							
YHNB	**Yeheng**	**1.03**	**245**	*e*P		**Pg**	**14 39 07.3**	**-0.8**
NSK	**Sanguang**	**1.05**	**246**	⇑*i*P		**Pg**	**14 39 07.7**	**-0.7**
	baz=240							
NCU	**National Centr**	**1.12**	**263**	*e*P		**Pg**	**14 39 09.4**	**-0.3**
	baz=258							
NNS	**Nan Shan**	**1.15**	**235**	*e*P		**Pg**	**14 39 09.8**	**-0.6**
	baz=224							
NACB	**Ninganchiao**	**1.19**	**219**	*e*P		**Pg**	**14 39 09.3**	**-1.8**
TWD	**Chiawan**	**1.27**	**216**	*e*P		**Pg**	**14 39 11.4**	**-1.1**
	baz=204							
TWD				*e*S		**Sg**	**14 39 28.1**	**-0.8**
	baz=204							
HSN	**Hsinchu**	**1.34**	**257**	*e*P		**Pn**	**14 39 11.8**	**-2.3**
	baz=253							
HWA	**Hwalien**	**1.35**	**213**	*e*P		**Pn**	**14 39 14.6**	**+0.4**
	baz=208							
NSTT	**Nanjuang**	**1.36**	**250**	⇑P		**Pn**	**14 39 12.4**	**-2.0**
	baz=245							
TWT	**Tachien**	**1.41**	**233**	*e*P		**Pn**	**14 39 14.1**	**-0.9**
	baz=220							
WHF	**Hehuan Shan**	**1.42**	**227**	⇓P		**Pn**	**14 39 14.1**	**-1.0**
	baz=223							
IRIF	**Iriomote-Funau**	**1.43**	**122**	P		**Pn**	**14 39 13.3**	**-2.0**
IRIF				*e*S		**Sb**	**14 39 28.5**	**-5.9**
ESL	**Shilin**	**1.57**	**215**	*e*P		**Pn**	**14 39 16.3**	**-0.9**
	baz=212							
ESL				*e*S		**Sn**	**14 39 38.6**	**+0.5**
	baz=212							
NSY	**Sanyi**	**1.65**	**245**	*e*P		**Pn**	**14 39 17.7**	**-0.6**
	baz=242							
NSY				*e*S		**Sn**	**14 39 39.9**	**-0.2**
	baz=242							
HATJ	**Hateruma jima**	**1.65**	**129**	P		**Pn**	**14 39 17.2**	**-1.1**
HATJ				*e*S		**Sn**	**14 39 32.8**	**-7.4**
TWQ1	**Liyutan**	**1.67**	**243**	*e*P		**Pn**	**14 39 19.7**	**+1.1**
	baz=252							
JKRS	**Kuro-shima**	**1.70**	**121**	P		**Pn**	**14 39 17.6**	**-1.4**
JKRS				*e*S		**Sn**	**14 39 33.5**	**-7.8**
JIJ	**Ishigaki jima**	**1.75**	**115**	P		**Pn**	**14 39 17.9**	**-1.7**
JIJ				*e*S		**Sn**	**14 39 34.8**	**-7.7**
SMLT	**Sun Moon Lake**	**1.84**	**229**	*e*P		**Pn**	**14 39 21.3**	**+0.4**
	baz=213							
TCU	**Taichung**	**1.84**	**239**	*e*P		**Pn**	**14 39 21.5**	**+0.5**
	baz=249							
TYC	**Yuchr**	**1.85**	**230**	*e*P		**Pn**	**14 39 21.2**	**+0.1**
	baz=235							
TYC				*e*S		**Sn**	**14 39 46.5**	**+1.2**
	baz=235							
SSLB	**Suanglung**	**1.87**	**225**	*e*P		**Pn**	**14 39 20.8**	**-0.5**
EHY	**Hungye**	**1.88**	**212**	*e*P		**Pn**	**14 39 20.9**	**-0.6**
	baz=211							
EHY				*e*S		**Sn**	**14 39 45.4**	**-0.5**
	baz=211							
YULB	**Yu-li**	**1.99**	**211**	*e*P		**Pn**	**14 39 20.8**	**-2.2**
WNT	**Mingjian**	**1.99**	**232**	*e*P		**Pn**	**14 39 24.4**	**+1.3**
	baz=243							
TWF1	**Yuli**	**2.02**	**210**	*e*P		**Pn**	**14 39 22.3**	**-1.1**
	baz=207							
JTJ	**Tarama**	**2.14**	**102**	P		**Pn**	**14 39 24.5**	**-0.5**
CHN5	**Tsauling**	**2.18**	**227**	*e*P		**Pn**	**14 39 26.6**	**+0.9**
	baz=222							
WGK	**Gukeng**	**2.20**	**230**	*e*P		**Pn**	**14 39 28.1**	**+2.2**
	baz=241							
ELDTW	**Lidau**	**2.30**	**214**	*e*P		**Pn**	**14 39 27.8**	**+0.6**
	baz=198							
CHN4	**Tsaushan**	**2.41**	**224**	*e*P		**Pn**	**14 39 30.9**	**+2.0**
	baz=220							
CHY	**Chiayi**	**2.42**	**229**	*e*P		**Pn**	**14 39 27.6**	**-1.3**
	baz=239							
TPUB	**Ta-pu**	**2.43**	**222**	*e*P		**Pn**	**14 39 29.9**	**+0.8**
STYT	**Tauyuan**	**2.46**	**218**	*e*P		**Pn**	**14 39 30.4**	**+1.0**
	baz=201							
WTP	**Ta-pu**	**2.48**	**222**	*e*P		**Pn**	**14 39 30.2**	**+0.5**
	baz=204							
TWK	**Hsinying**	**2.54**	**224**	*e*P		**Pn**	**14 39 32.6**	**+2.1**
	baz=220							
TWG	**Pinlang**	**2.59**	**208**	P		**Pn**	**14 39 27.5**	**-3.8**
SGST	**Jiashian**	**2.62**	**220**	*e*P		**Pn**	**14 39 32.5**	**+0.9**
	baz=204							
JMJ	**Miyako jima 2**	**2.64**	**96**	P		**Pn**	**14 39 32.2**	**+0.3**
CHN8	**Yiju**	**2.67**	**229**	*e*P		**Pn**	**14 39 32.7**	**+0.4**
	baz=238							
JOGS	**Gusukube**	**2.75**	**97**	P		**Pn**	**14 39 32.8**	**-0.6**
JOGS				*e*S		**Sn**	**14 40 02.4**	**-4.8**
CHN3	**Shinhua**	**2.75**	**223**	*e*P		**Pn**	**14 39 36.6**	**+3.1**
	baz=220							
ECL	**Taimali**	**2.83**	**208**	*e*P		**Pn**	**14 39 34.6**	**-0.1**
	baz=195							
TAI1	**Yung-k'ang**	**2.87**	**224**	*e*P		**Pn**	**14 39 36.8**	**+1.7**
	baz=220							
TWM1	**Shoushan**	**2.91**	**219**	*e*P		**Pn**	**14 39 39.2**	**+3.5**
	baz=216							
EAST	**Anshuo**	**3.07**	**208**	*e*P		**Pn**	**14 39 38.5**	**+0.7**
	baz=195							
LAY	**Lan-yu**	**3.16**	**195**	*e*P		**Pn**	**14 39 37.9**	**-1.2**
	baz=194							
SCZT	**Fangliau**	**3.18**	**211**	*e*P		**Pn**	**14 39 41.3**	**+1.9**
	baz=198							
HEN	**Hengchun**	**3.45**	**207**	*e*P		**Pn**	**14 39 44.9**	**+1.8**
	baz=193							
QZH	**Quanzhou**	**3.46**	**268**	*e*Pn		**Pn**	**14 39 41.0**	**-2.3**
QZH				Sn		**Sn**	**14 40 19.3**	**-5.7**
QZH				smax				
	comp=N,780nm,0.8s							
QZH				smax				
	comp=E,620nm,0.9s							
TWK1	**Hengchun**	**3.48**	**205**	*e*P		**Pn**	**14 39 43.3**	**-0.2**
	baz=193							
TSEB	**Hengchuen, Pin**	**3.48**	**204**	*e*P		**Pn**	**14 39 44.1**	**+0.5**
	baz=193							
KNM	**Kinmen**	**3.68**	**260**	*e*P		**Pn**	**14 39 44.9**	**-1.3**
	baz=253							
JKE	**Kume jima 2**	**4.13**	**72**	P		**Pn**	**14 39 54.5**	**+2.1**
JAGN	**Aguni-jima**	**4.60**	**70**	P		**Pn**	**14 40 00.8**	**+1.9**
JIH	**Iheya**	**5.35**	**68**	P		**Pn**	**14 40 10.8**	**+1.5**
JOW	**Kunigami**	**5.55**	**71**	P		**Pn**	**14 40 13.3**	**+1.3**
JTK	**Tokunoshima**	**6.44**	**64**	P		**Pn**	**14 40 25.3**	**+1.1**
WHN	**Wuhan**	**8.95**	**309**	⇑P		**Pn**	**14 40 49.4**	**-9.3**
WHN				S		**Sn**	**14 42 23.3**	**-17**
WHN				LR	LR			
	comp=N,2μm,4.1s							
WHN				LR	LR			
	comp=E,2μm,2.9s							
WHN				LR	LR			
	comp=Z,2μm,4.2s							
KSRS	**Korea Array**	**13.17**	**20**	Pn		**Pn**	**14 42 01.2**	**+4.8**
	baz=206,slow=14							
MJAR	**Matsushiro Arr**	**17.69**	**46**	P		**Pn**	**14 43 07.2**	**+11**
	baz=242,slow=13,SNR=5.6							
CBIJ	**Chichi jima**	**17.87**	**79**	LR		LR	14 50 48.0	
	comp=Z,134nm,18.2s,baz=116,slow=39							
CMAR	**Chiang Mai Arr**	**22.75**	**258**	P		**P**	**14 43 53.8**	**+1.7**
	comp=Z,0.6nm,0.4s,mb3.5,baz=67,slow=7.6,SNR=5.6							
CMAR				LR		LR	14 53 40.2	
	comp=Z,170nm,18.6s,MS3.5,baz=175,slow=40							
GTA	**Gaotai**	**23.75**	**312**	*e*P		**P**	**14 44 04.1**	**+2.0**
GTA				pP			14 44 14.0	
GTA				S		**S**	**14 48 04.4**	**-14**
GTA				sS		sS	14 48 19.4	+0.7
GTA				pmax		pmax		
	comp=Z,3.0nm,1.5s,mb3.6							
GTA				pmax		pmax		
	comp=Z,63nm,5.7s							
GTA				LR		LR		
	comp=N,440nm,17.1s,MS4.1							
GTA				LR		LR		
	comp=E,270nm,17.7s,MS4.1							
GTA				LR		LR		
	comp=Z,220nm,16.8s,MS3.7							
ASAJ	**Asahikawa**	**25.09**	**36**	P		**P**	**14 44 16.9**	**+2.6**
	comp=Z,4.9nm,0.7s,mb4.4,baz=211,slow=6.4,SNR=5.4							
ASAJ				LR		LR	14 54 42.4	
	comp=Z,172nm,18.9s,MS3.6,baz=291,slow=38							
SONM	**Songino Array**	**25.98**	**335**	P		**P**	**14 44 21.5**	**-0.8**
	comp=Z,0.8nm,0.9s,mb3.3,baz=140,slow=9.7,SNR=5.1							
SONM				LR		LR	14 56 06.4	
	comp=Z,77nm,21.6s,MS3.2,baz=239,slow=40							
MK31	**Makanchi Array**	**38.47**	**315**	P		**P**	**14 46 09.5**	**-2.1**
MKAR	**Makanchi Array**	**38.47**	**315**	P		**P**	**14 46 09.7**	**-1.9**
	comp=Z,0.3nm,0.4s,mb3.4,baz=97,slow=12,SNR=1.8							
ZALV	**Zalesovo Beam**	**40.09**	**326**	P		**P**	**14 46 22.0**	**-3.0**
	comp=Z,0.5nm,0.4s,mb3.5,baz=128,slow=9.5,SNR=2.0							
TKM2	**Tokmak 2**	**42.09**	**307**	P		**P**	**14 46 40.5**	**-1.2**
	comp=Z,3.1nm,1.1s,mb4.0							
WRAB	**Tennant Creek**	**46.26**	**164**	*e*P		**P**	**14 47 14.9**	**-0.4**
	comp=Z,9.0nm,0.8s,mb4.8							
BVAR	**Borovoye Array**	**47.67**	**320**	P		**P**	**14 47 23.9**	**-2.1**
	comp=Z,0.8nm,0.7s,mb4.0,baz=87,slow=9.4,SNR=4.4							
ASAR	**Alice Springs**	**49.75**	**166**	P		**P**	**14 47 42.2**	**-0.1**
	comp=Z,1.0nm,0.8s,mb3.8,baz=328,slow=5.7,SNR=7.9							
HNR	**Honiara**	**50.17**	**128**	LR		LR	15 06 36.3	
	comp=Z,123nm,20.0s,MS3.9,baz=114,slow=33							
ABKAR	**Akbulak array**	**53.60**	**314**	P		**P**	**14 48 13.6**	**+2.7**
	comp=Z,1.6nm,0.7s,mb4.2							
AKASG	**Malin Array Be**	**72.92**	**318**	P		**P**	**14 50 18.3**	**-0.8**
	comp=Z,1.6nm,0.7s,mb4.3,baz=61,slow=6.0,SNR=4.2							
AKASG	**Malin Array Be**	**72.92**	**318**	P		**P**	**14 50 18.3**	**-0.8**
BRTR	**Keskin Array B**	**73.52**	**306**	P		**P**	**14 50 21.8**	**-1.0**
	comp=Z,0.9nm,0.8s,mb3.9,baz=112,slow=9.8,SNR=3.5							
NB2	**NORSAR Subarra**	**77.93**	**332**	P		**P**	**14 50 50.2**	**+2.6**
	comp=Z,2.4nm,0.7s,mb4.4,baz=58,slow=5.6							
NOA	**NORSAR Array B**	**77.93**	**332**	P		**P**	**14 50 50.0**	**+2.4**
	comp=Z,2.0nm,0.7s,mb4.3,baz=58,slow=5.5,SNR=11							
YKA	**Yellowknife Ar**	**81.69**	**23**	P		**P**	**14 51 11.1**	**+3.2**
	comp=Z,1.4nm,0.9s,mb4.1,baz=312,slow=5.9,SNR=2.5							

TAP 23 14:40:40.2, 25.°15N×122.°32E, h18km, ML3.7, 7C, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.33**	**244**	⇑*i*P		Pg	14 40 47.6	+0.2
	baz=243							
TWB1				*i* S		Sg	14 40 52.5	+0.3
	baz=243							
NWF	**Wu-fen Shan**	**0.49**	**260**	⇑*i*P		Pg	14 40 50.8	+0.6
	baz=260							
NWF				*e*S		Sg	14 40 59.2	+2.3
	baz=260							
ILA	**Ilan**	**0.65**	**233**	*e*P		Pb	14 40 53.6	+0.7
	baz=223							
TWY	**Chenhua**	**0.66**	**281**	⇑*i*P		Pb	14 40 54.1	+0.9
	baz=280							
TWY				S		Sb	14 41 03.8	+1.8
	baz=280							
TWA	**Mucha**	**0.69**	**256**	⇑*i*P		Pb	14 40 54.5	+0.8
	baz=255							
TWA				*e*S		Sb	14 41 04.4	+1.6
	baz=255							
TWC	**Suao**	**0.69**	**218**	*i* P		Pb	14 40 53.8	+0.1
	baz=209							
TWC				S		Sb	14 41 02.9	0.0
	baz=209							
TAP1	**Taipei**	**0.73**	**261**	P		Pb	14 40 55.3	+1.0
	baz=260							
TWE	**Neicheng**	**0.73**	**234**	⇑*i*P		Pb	14 40 54.5	+0.1
	baz=223							
TWE				S		Sb	14 41 03.7	-0.3
	baz=223							
TWS1	**Kuangyinshan**	**0.82**	**266**	⇑P		Pb	14 40 57.1	+1.2
	baz=266							
TWS1				*e*S		Sb	14 41 09.2	+2.7
	baz=266							
ENA	**Nanau**	**0.89**	**216**	⇑P		Pb	14 40 57.2	+0.1
	baz=208							
ENA				*e*S		Sb	14 41 08.7	0.0
	baz=208							
NSK	**Sanguang**	**0.99**	**242**	P		Pb	14 40 59.1	+0.3
	baz=241							
NSK				*e*S		Sb	14 41 10.8	-0.8
	baz=241							
NCU	**National Centr**	**1.04**	**260**	*e*P		Pb	14 41 00.3	+0.6
	baz=258							
NNS	**Nan Shan**	**1.11**	**231**	*e*P		Pn	14 41 00.9	0.0
	baz=240							
TWD	**Chiawan**	**1.25**	**212**	*e*P		Pn	14 41 03.1	+0.3
	baz=205							
TWD				*e*S		Sb	14 41 20.0	+0.9
	baz=205							
NSTT	**Nanjuang**	**1.30**	**247**	*e*P		Pn	14 41 03.7	+0.2
	baz=245							
TWT	**Tachien**	**1.37**	**229**	*e*P		Pn	14 41 06.2	+1.8
	baz=221							
WHF	**Hehuan Shan**	**1.39**	**224**	*e*P		Pn	14 41 06.7	+2.1
	baz=213							
WHF				*e*S		Sn	14 41 23.1	+0.6
	baz=213							
ESL	**Shilin**	**1.56**	**211**	*e*P		Pn	14 41 08.3	+1.3
	baz=210							
NSY	**Sanyi**	**1.59**	**243**	*e*P		Pn	14 41 09.5	+2.1
	baz=254							
SMLT	**Sun Moon Lake**	**1.81**	**226**	*e*P		Pn	14 41 15.1	+4.7
	baz=214							
TYC	**Yuchr**	**1.82**	**227**	*e*P		Pn	14 41 13.5	+2.9
	baz=215							
EHY	**Hungye**	**1.88**	**209**	*e*P		Pn	14 41 12.3	+1.0
	baz=208							
CHN5	**Tsauling**	**2.15**	**224**	*e*P		Pn	14 41 18.0	+2.8
	baz=238							

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*NEIC **23** 14:52:23.8±1.0, 15.°05S×177.°19W, h10km, mb4.0/1, Error ellipse: s-maj=57.5km s-min=16.2km az=166.0*
IDC 23 14:52:22.9±2.0, 14.°66S×177.°45W, h0km, mb3.8/4, mb1 4.2/4, mb1mx3.9/15, mbtmp3.8/4, MS3.7/4, Ms1 3.7/4, ms1mx3.3/19, Error ellipse: s-maj=130.2km s-min=30.8km az=150.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.55**	**83**	P		Pn	14 53 42.9	-4.0
	2.3nm,0.3s,baz=356,slow=20,SNR=4.4							
AFI	**Afiamalu**	**5.55**	**83**	*e*Pn		Pn	14 53 43.3	-3.6
RAR	**Rarotonga**	**18.04**	**114**	LR		LR	15 01 10.4	
	comp=Z,248nm,19.4s,baz=206,slow=29							
URZ	**Urewera**	**24.00**	**191**	LR		LR	15 04 53.4	
	comp=Z,168nm,21.7s,baz=160,slow=31							
PPT	**Papeete**	**26.93**	**100**	*e*LQ			15 03 27.3	
	220nm,27.8s							
PPT				*e*LR		LR	15 04 41.0	
	270nm,26.5s,baz=282							
PPT	**Papeete**	**26.93**	**100**	LR		LR	15 04 47.3	
	comp=Z,79nm,21.7s,baz=7.6,slow=28							
TBI	**Tubuai**	**27.80**	**112**	*e*LR		LR	15 05 14.8	
	396nm,25.8s,baz=289							
STKA	**Stephens Creek**	**41.06**	**238**	LR		LR	15 15 34.6	
	comp=Z,188nm,18.9s,baz=297,slow=34							
ASAR	**Alice Springs**	**46.63**	**251**	P		P	15 00 53.2	-0.1
	1.8nm,0.8s,baz=85,slow=7.2,SNR=11							
DIB	**Dawson Inlet,**	**77.81**	**26**	T			16 29 57.6	
ILAR	**Eielson Array**	**82.53**	**13**	P		P	15 04 47.4	+0.2
	0.5nm,0.8s,baz=238,slow=6.3,SNR=4.9							
MNTX	**Cornudas Mount**	**82.96**	**55**	*e*P		P	15 04 50.3	+0.1
	1.1nm,0.9s							
TXAR	**Lajitas Array**	**83.49**	**58**	P		P	15 04 53.6	+0.7

IDC 23 15:08:53.3±2.1, 47°.89N×153°.50E, h0km, mb3.7/7, mb1 3.7/7, mb1mx3.5/22, mbtmp3.7/7, Error ellipse: s-maj=64.0km s-min=32.3km az=73.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**31.22**	**288**	P	P	15 15 14.2	+0.1
	0.2nm,0.6s,baz=72,slow=9.3,SNR=2.9						
ZALV	**Zalesovo Beam**	**42.17**	**305**	P	P	15 16 47.3	+0.1
	0.7nm,0.5s,baz=55,slow=5.5,SNR=3.0						
MKAR	**Makanchi Array**	**46.66**	**297**	P	P	15 17 22.9	-0.3
	0.3nm,0.2s,baz=72,slow=7.6,SNR=2.0						
BVAR	**Borovoye Array**	**50.35**	**309**	P	P	15 17 51.7	+0.2
	0.6nm,0.4s,baz=68,slow=5.5,SNR=5.5						
FINES	**FINESS Array B**	**63.13**	**335**	P	P	15 19 22.4	+0.2
	0.4nm,0.4s,baz=49,slow=4.2,SNR=4.4						
AKASG	**Malin Array Be**	**70.75**	**326**	P	P	15 20 10.6	-0.2
	0.4nm,0.4s,baz=33,slow=6.8,SNR=3.0						
ASAR	**Alice Springs**	**73.37**	**199**	P	P	15 20 26.9	+0.2
	0.2nm,0.6s,baz=8.1,slow=5.5,SNR=5.4						

*ISCJB **23** 15:09:18.7±1.2, 46°.6N±0°.1×152°.5E±0°.2, h47km±11km, mb3.7/11, Error ellipse: s-maj=26.3km s-min=8.2km az=140.5*
*MOS **23** 15:09:20.3±1.8, 46°.68N×152°.58E, h65km, mb4.2/5, Error ellipse: s-maj=19.0km s-min=13.9km az=46.5*
*NEIC **23** 15:09:20.9±0.8, 46°.72N×152°.41E, Error ellipse: s-maj=20.9km s-min=12.9km az=139.0*
*IDC **23** 15:09:21.5±3.3, 46°.74N×152°.48E, h52km±28km, mb3.5/11, mb1 3.6/13, mb1mx3.5/23, mbtmp3.5/13, ML3.5/2, Error ellipse: s-maj=29.0km s-min=19.6km az=136.0*

ISC 23 15:09:21.2±1.1, 46°.6N±0°.1×152°.5E±0°.2, h53km±9km, n42, σ1§11/47, mb3.7/11, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.49**	**248**	*e*PN	**Pn**	**15 10 14.8**	**+1.9**
KUR				*e*S	**Sn**	**15 10 58.0**	**+5.0**
KUR	comp=Z,80nm,0.5s			pmax	pmax		
KUR	comp=N,310nm,0.9s			smax			
KUR	comp=E,430nm,0.9s			smax			
YUK	**Yuzh-Kuril'sk**	**5.32**	**243**	*e*PN	**Pn**	**15 10 39.3**	**+1.3**
YUK	comp=N,80nm,0.5s			pmax	pmax		
YUK	comp=Z,80nm,0.5s			pmax	pmax		
YUK	comp=E,40nm,0.2s			pmax	pmax		
NEM2	**Nemuro 2**	**5.77**	**238**	P	**Pn**	**15 10 43.6**	**-0.6**
NEM2				*e*S	**Sn**	**15 11 48.6**	**-0.4**
JRA	**Rausu**	**5.83**	**245**	P	**Pn**	**15 10 45.8**	**+0.8**
JNK	**Nakash**	**6.26**	**244**	*e*S	**Sn**	**15 12 02.5**	**+1.4**
JTKR	**Abashiri--Toko**	**6.59**	**249**	P	**Pn**	**15 10 56.4**	**+1.0**
JAK	**Akkeshi**	**6.61**	**239**	P	**Pn**	**15 10 54.5**	**-1.1**
JAK				*e*S	**Sn**	**15 12 08.8**	**-0.7**
YSS	**Yuzh-Sakhalins**	**6.67**	**276**	PN	**Pn**	**15 11 03.4**	**+6.9**
JMP	**Maruseppu**	**6.93**	**251**	P	**Pn**	**15 11 00.8**	**+0.8**
JAR	**Ashorobuto**	**7.00**	**245**	P	**Pn**	**15 11 01.4**	**+0.3**
JAR				*e*S	**Sn**	**15 12 22.4**	**+3.1**
JOB	**Onbets**	**7.18**	**242**	P	**Pn**	**15 11 03.2**	**-0.2**
PETK	**Petropavlovsk-**	**7.32**	**26**	P	**Pn**	**15 11 05.0**	**-0.3**
	comp=E,0.2nm,0.3s,baz=184,slow=12,SNR=5.1						
ASAJ	**Asahikawa**	**7.38**	**254**	P	**Pn**	**15 11 06.7**	**+0.4**
	comp=E,1.2nm,0.3s,baz=77,slow=14,SNR=17						
ASAJ	**Asahikawa**	**7.38**	**254**	PN	**Pn**	**15 11 06.7**	**+0.4**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**7.38**	**254**	P	**Pn**	**15 11 06.9**	**+0.6**
JKK2	**Kamakawa 2**	**7.38**	**252**	P	**Pn**	**15 11 06.6**	**+0.3**
JCH	**Churui**	**7.63**	**242**	P	**Pn**	**15 11 08.3**	**-1.3**
JCH				*e*S	**Sn**	**15 12 33.0**	**-1.6**
JFR	**Furan**	**7.81**	**247**	P	**Pn**	**15 11 12.9**	**+0.8**
JNBK	**Urakawa-nobuka**	**8.19**	**241**	P	**Pn**	**15 11 15.4**	**-1.9**
JNBK				*e*S	**Sn**	**15 12 45.7**	**-2.6**
JKB	**Kayabe**	**9.46**	**244**	P	**Pn**	**15 11 31.6**	**-3.2**
JANG	**Nango**	**10.11**	**236**	*e*S	**Sn**	**15 13 27.9**	**-7.5**
JTH	**Tanohata**	**10.21**	**233**	*e*S	**Sn**	**15 13 29.0**	**-8.9**
ILAR	**Eielson Array**	**36.93**	**38**	P	**P**	**15 16 24.3**	**-0.2**
	comp=Z,0.1nm,0.5s,mb2.9,baz=244,slow=3.9,SNR=4.0						
ILAR				pP	pP	15 16 36.9	-1.2
	comp=Z,1.1nm,1.2s,baz=265,slow=8.1,SNR=3.1						
ILAR	**Eielson Array**	**36.93**	**38**	P	**P**	**15 16 24.3**	**-0.2**
ILAR				*PP	pP	15 16 36.9	-1.2
ILAR	comp=Z,1.0nm,1.2s			pmax	pmax		
ZALV	**Zalesovo Beam**	**42.31**	**306**	P	**P**	**15 17 08.2**	**-1.2**
	comp=Z,0.5nm,0.4s,mb3.5,baz=90,slow=5.8,SNR=2.3						
ZALV	**Zalesovo Beam**	**42.31**	**306**	P	**P**	**15 17 08.2**	**-1.2**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
MKAR	**Makanchi Array**	**46.59**	**297**	P	**P**	**15 17 43.2**	**-0.5**
	comp=Z,0.3nm,0.3s,mb3.8,baz=81,slow=7.2,SNR=1.2						
MKAR				PcP	PcP	15 19 17.4	+0.5
	comp=Z,0.2nm,0.2s,baz=79,slow=3.1,SNR=3.1						
BVAR	**Borovoye Array**	**50.59**	**309**	PcP	PcP	15 19 30.9	-0.3
	comp=Z,0.9nm,0.8s,baz=108,slow=4.8,SNR=3.9						
CMAR	**Chiang Mai Arr**	**51.90**	**256**	P	**P**	**15 18 26.4**	**+1.9**
	comp=Z,0.9nm,0.8s,mb3.8,baz=34,slow=8.2,SNR=5.9						
CMAR	**Chiang Mai Arr**	**51.90**	**256**	P	**P**	**15 18 26.4**	**+1.9**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FINES	**FINESS Array B**	**63.96**	**334**	P	**P**	**15 19 47.6**	**-0.7**
	comp=Z,1.1nm,0.5s,mb4.1,baz=27,slow=8.8,SNR=2.3						
FINES	**FINESS Array B**	**63.96**	**334**	P	**P**	**15 19 47.6**	**-0.7**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NB2	**NORSAR Subarra**	**68.19**	**341**	P	**P**	**15 20 15.1**	**-0.4**
	comp=Z,0.8nm,0.5s,mb4.0,baz=28,slow=6.2						
NOA	**NORSAR Array B**	**68.19**	**341**	P	**P**	**15 20 15.2**	**-0.3**
	comp=Z,1.6nm,0.8s,mb4.1,baz=29,slow=6.4,SNR=5.8						
NOA	**NORSAR Array B**	**68.19**	**341**	P	**P**	**15 20 15.2**	**-0.3**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKASG	**Malin Array Be**	**71.39**	**326**	P	**P**	**15 20 34.8**	**-0.5**
	comp=Z,1.1nm,0.4s,mb4.1,baz=32,slow=6.1,SNR=3.7						
AKASG	**Malin Array Be**	**71.39**	**326**	P	**P**	**15 20 34.8**	**-0.5**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ASAR	**Alice Springs**	**71.95**	**198**	P	**P**	**15 20 39.5**	**+0.6**
	comp=Z,0.3nm,0.6s,mb3.4,baz=14,slow=4.8,SNR=6.8						
TXAR	**Lajitas Array**	**77.95**	**60**	P	**P**	**15 21 13.4**	**-0.3**
	comp=Z,0.2nm,0.5s,mb3.3,baz=2.9,slow=7.2,SNR=2.6						
TXAR				pP	pP	15 21 27.2	-1.4
	comp=Z,0.5nm,0.5s,baz=303,slow=4.7,SNR=5.9						
TXAR	**Lajitas Array**	**77.95**	**60**	P	**P**	**15 21 13.4**	**-0.3**
TXAR				*PP	pP	15 21 27.2	-1.4
TXAR	comp=Z,1.0nm,0.5s			pmax	pmax		
BRTR	**Keskin Array B**	**78.17**	**316**	P	**P**	**15 21 15.2**	**+0.6**
	comp=Z,0.3nm,0.4s,mb3.5,baz=57,slow=4.6,SNR=2.9						
MMAI	**Mount Meron Ar**	**82.55**	**311**	P	**P**	**15 21 39.5**	**+1.2**
	comp=Z,1.4nm,0.5s,mb4.3,baz=37,slow=7.6,SNR=2.1						

*ISCJB **23** 15:10:11.4±0.6, 50°.13N±0°.03×18°.39E±0°.03, h0km, Error ellipse: s-maj=4.7km s-min=2.8km az=14.3*
*IPEC **23** 15:10:12.0±0.2, 50°.09N×18°.53E, h1km±2km, ML2.0/4, Error ellipse: s-maj=2.1km s-min=1.1km az=161.0*
*PRU **23** 15:10:13.9, 50°.07N×18°.40E, h0km*
*CSEM **23** 15:10:13.0±0.3, 50°.11N×18°.38E, h1km, ML2.7/8, Error ellipse: s-maj=5.4km s-min=2.9km az=15.0*
*WAR **23** 15:10:13.6, 50°.06N×18°.43E*

ISC 23 15:10:13.3±0.6, 50°.10N±0°.03×18°.38E±0°.03, h0km, n28, σ1§16/48, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.12**	**261**	*e*Pg	**Pg**	**15 10 17.3**	**+1.7**
RAC				*e*Sg	**Sg**	**15 10 20.4**	**+3.2**
OKC	**Ostrava-Krasne**	**0.30**	**210**	*e*PG	**Pg**	**15 10 19.6**	**+0.5**
OKC				*e*SG	**Sg**	**15 10 23.8**	**+0.8**
	comp=Z,141nm,0.6s						
OKC	**Ostrava-Krasne**	**0.30**	**210**	*e*Pg	**Pg**	**15 10 19.3**	**+0.2**
	baz=44						
OKC				Sg	**Sg**	**15 10 23.8**	**+0.8**
	comp=Z,141nm,0.6s						
MORC	**Moravsky Berou**	**0.63**	**239**	*e*Pg	**Pg**	**15 10 25.7**	**+0.3**
	baz=63						
MORC				*e*Sg	**Sg**	**15 10 34.3**	**+0.7**
	comp=Z,28nm,0.2s,baz=63						
OJC	**Ojcow**	**0.92**	**82**	*e*Pg	**Pg**	**15 10 27.6**	**-3.3**
	baz=262						
LIKS	**Likavka**	**1.15**	**156**	*e*SG	**Sg**	**15 10 52.6**	**+2.3**
LIKS	**Likavka**	**1.15**	**156**	*e*Sg	**Sg**	**15 10 52.6**	**+2.3**
JAVC	**Velka Javorina**	**1.33**	**201**	*e*Pg	**Pg**	**15 10 39.0**	**+0.3**
JAVC				*e*Sg	**Sg**	**15 10 57.4**	**+1.5**
	comp=Z,17nm,0.5s						
DPC	**Dobruska-Polom**	**1.35**	**281**	*e*PG	**Pg**	**15 10 38.5**	**-0.6**
DPC				*e*SG	**Sg**	**15 10 56.8**	**+0.3**
	comp=Z,26nm,0.8s						
DPC	**Dobruska-Polom**	**1.35**	**281**	Pg	**Pg**	**15 10 38.5**	**-0.6**
DPC				Sg	**Sg**	**15 10 56.8**	**+0.3**
	comp=Z,26nm,0.8s						
VRAC	**Vranov**	**1.41**	**236**	*e*Pg	**Pg**	**15 10 39.3**	**-0.9**
VRAC				*e*Sg	**Sg**	**15 10 58.1**	**-0.3**
	comp=Z,12nm,0.2s,baz=57						
NIE	**Niedzica**	**1.43**	**118**	*e*Pg	**Pg**	**15 10 40.4**	**-0.2**
NIE				*e*Sg	**Sg**	**15 11 00.2**	**+1.1**
NIE	**Niedzica**	**1.43**	**118**	*e*Pg	**Pg**	**15 10 40.4**	**-0.2**
NIE				*e*Sg	**Sg**	**15 11 00.2**	**+1.1**
KOLL	**Kolacno**	**1.52**	**179**	*e*PG	**Pg**	**15 10 42.2**	**-0.3**
KOLL				*e*SG	**Sg**	**15 11 01.1**	**-1.1**
KOLL	**Kolacno**	**1.52**	**179**	*e*Pg	**Pg**	**15 10 42.2**	**-0.3**
KOLL				*e*Sg	**Sg**	**15 11 01.1**	**-1.1**
UPC	**Upice**	**1.57**	**286**	*e*PG	**Pg**	**15 10 42.5**	**-0.9**
UPC	**Upice**	**1.57**	**286**	Pg	**Pg**	**15 10 42.5**	**-0.9**
VYHS	**Vyhne**	**1.64**	**169**	*e*PG	**Pg**	**15 10 42.9**	**-1.7**
VYHS				*e*SG	**Sg**	**15 11 04.3**	**-1.5**
VYHS	**Vyhne**	**1.64**	**169**	*e*Pg	**Pg**	**15 10 42.9**	**-1.7**
VYHS				*e*Sg	**Sg**	**15 11 04.3**	**-1.5**
KRUC	**Moravsky**	**1.66**	**232**	*e*Pn	**Pn**	**15 10 43.3**	**-0.3**
	baz=53						
KRUC				*e*Sg	**Sg**	**15 11 06.0**	**-0.6**
	comp=Z,18nm,0.4s,baz=53						
STHS	**Stebnicka Huta**	**1.98**	**109**	*e*PG	**Pg**	**15 10 51.1**	**-0.1**
STHS				*e*SG	**Sg**	**15 11 18.1**	**+1.3**
STHS	**Stebnicka Huta**	**1.98**	**109**	*e*Pg	**Pg**	**15 10 51.1**	**-0.1**
STHS				*e*Sg	**Sg**	**15 11 18.1**	**+1.3**
KECS	**Kecovo**	**2.13**	**139**	*e*PN	**Pn**	**15 10 48.8**	**-1.2**
KECS				*e*SN	**Sn**	**15 11 07.5**	**-10**
PRU	**Pruhonice**	**2.48**	**269**	*e*SG	**Sg**	**15 11 32.2**	**-0.6**
	comp=Z,9.4nm,0.6s						
PRU	**Pruhonice**	**2.48**	**269**	Sg	**Sg**	**15 11 32.2**	**-0.6**
	comp=Z,9.4nm,0.6s						
KHC	**Kasperske Hory**	**3.27**	**255**	*e*PG	**Pg**	**15 11 16.0**	**+0.1**
KHC				*e*SG	**Sg**	**15 11 56.3**	**-2.0**
	comp=Z,7.3nm,0.6s						
KHC	**Kasperske Hory**	**3.27**	**255**	Pg	**Pg**	**15 11 16.0**	**+0.1**
KHC				Sg	**Sg**	**15 11 56.3**	**-2.0**
	comp=Z,7.3nm,0.6s						
CLL	**Collm**	**3.63**	**292**	*e*Sg	**Sg**	**15 12 12.0**	**+2.3**

*ISCJB **23** 15:13:49.5±0.7, 37°.68N±0°.03×20°.76E±0°.04, h10km, Error ellipse: s-maj=5.4km s-min=3.2km az=149.3*
*CSEM **23** 15:13:49.0±0.4, 37°.65N×20°.79E, h1km±1km, ML3.4/5, Error ellipse: s-maj=7.0km s-min=3.7km az=55.0*
*ATH **23** 15:13:49.0, 37°.66N×20°.70E, h16km±1km, MD3.3/9*
*NEIC **23** 15:13:49.0, 37°.66N×20°.70E, h16km, MD3.3(ATH), After ATH.*
*THE **23** 15:13:50.0, 37°.70N×20°.82E, h1km±1km, ML3.4/5, Error ellipse: s-maj=1.7km s-min=0.3km az=213.0*

ISC 23 15:13:49.6±0.8, 37°.66N±0°.03×20°.76E±0°.05, h2km±6km, n66, σ0§91/91, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KFL	**Anninata**	**0.45**	**3**	P	**Pg**	**15 13 58.0**	**-0.2**
KFL				S	**Sg**	**15 14 04.2**	**+0.1**
KFL	**Anninata**	**0.45**	**3**	P	**Pg**	**15 13 58.0**	**-0.2**
KFL				S	**Sg**	**15 14 04.2**	**+0.1**
VLS	**Valsamata**	**0.53**	**345**	*e*Pn	**Pg**	**15 13 59.3**	**-0.5**
VLS				*e*Sn	**Sg**	**15 14 07.6**	**+0.8**
VLS	**Valsamata**	**0.53**	**345**	*e*PN	**Pg**	**15 13 59.3**	**-0.5**
VLS				*e*SN	**Sg**	**15 14 07.6**	**+0.8**
VLS	**Valsamata**	**0.53**	**345**	P	**Pg**	**15 13 59.5**	**-0.3**
VLS				S	**Sg**	**15 14 07.2**	**+0.4**
VLS	**Valsamata**	**0.53**	**345**	P	**Pg**	**15 13 59.5**	**-0.3**
VLS				S	**Sg**	**15 14 07.2**	**+0.4**
RLS	**Riolos of Patr**	**0.69**	**54**	*e*Pb	**Pg**	**15 14 02.5**	**-0.2**
RLS				*e*Sn	**Sg**	**15 14 12.9**	**+1.3**
RLS	**Riolos of Patr**	**0.69**	**54**	*e*PB	**Pg**	**15 14 02.5**	**-0.2**
RLS				*e*SN	**Sg**	**15 14 12.9**	**+1.3**
RLS	**Riolos of Patr**	**0.69**	**54**	*e*Pb	**Pg**	**15 14 02.5**	**-0.2**
UPR	**University Cam**	**1.02**	**52**	*e*PN	**Pg**	**15 14 09.5**	**+0.3**
UPR				*e*SN	**Sg**	**15 14 24.1**	**+1.6**
UPR	**University Cam**	**1.02**	**52**	*e*Pn	**Pg**	**15 14 09.5**	**+0.3**
UPR				*e*Sn	**Sg**	**15 14 24.1**	**+1.6**
ITM	**Ithomi**	**1.04**	**117**	*e*Pn	**Pg**	**15 14 09.7**	**+0.1**
ITM				*e*Sn	**Sg**	**15 14 24.9**	**+1.7**
ITM	**Ithomi**	**1.04**	**117**	*e*PN	**Pg**	**15 14 09.7**	**+0.1**
ITM				*e*SN	**Sg**	**15 14 24.9**	**+1.7**
ITM	**Ithomi**	**1.04**	**117**	P	**Pg**	**15 14 09.1**	**-0.5**
ITM	**Ithomi**	**1.04**	**117**	P	**Pg**	**15 14 09.1**	**-0.5**
ITM	**Ithomi**	**1.04**	**117**	*e*Pn	**Pg**	**15 14 09.7**	**+0.1**
ITM				*e*Sn	**Sg**	**15 14 24.9**	**+1.7**
PYL	**PYLOS**	**1.09**	**134**	*e*PN	**Pg**	**15 14 10.4**	**-0.2**
PYL				*e*SN	**Sg**	**15 14 25.2**	**+0.5**
PYL	**PYLOS**	**1.09**	**134**	P	**Pg**	**15 14 10.3**	**-0.3**
PYL	**PYLOS**	**1.09**	**134**	*e*Pn	**Pg**	**15 14 10.4**	**-0.2**
PYL				*e*Sn	**Sg**	**15 14 25.2**	**+0.5**
LAKA	**Lakka**	**1.12**	**59**	P	**Pg**	**15 14 09.9**	**-1.2**
LAKA				S	**Sg**	**15 14 25.3**	**-0.4**
LAKA	**Lakka**	**1.12**	**59**	P	**Pg**	**15 14 09.9**	**-1.2**
LAKA				S	**Sg**	**15 14 25.3**	**-0.4**
LKD2	**Lefkada island**	**1.13**	**356**	P	**Pg**	**15 14 10.7**	**-0.6**
LKD2				S	**Sg**	**15 14 26.8**	**+0.9**
LKD2	**Lefkada island**	**1.13**	**356**	P	**Pg**	**15 14 10.7**	**-0.6**
LKD2				S	**Sg**	**15 14 26.8**	**+0.9**
EFP	**Efpalio**	**1.19**	**49**	*e*PN	**Pg**	**15 14 12.1**	**-0.2**
EFP	**Efpalio**	**1.19**	**49**	P	**Pg**	**15 14 11.1**	**-1.2**
EFP				S	**Sg**	**15 14 27.3**	**-0.4**
EFP	**Efpalio**	**1.19**	**49**	P	**Pg**	**15 14 11.1**	**-1.2**
EFP	**Efpalio**	**1.19**	**49**	*e*Pn	**Pg**	**15 14 12.1**	**-0.2**
EFP				S	**Sg**	**15 14 27.3**	**-0.4**
TRIZ	**Trizonia**	**1.25**	**55**	P	**Pg**	**15 14 12.3**	**-1.3**
TRIZ				S	**Sg**	**15 14 29.6**	**-0.3**
TRIZ	**Trizonia**	**1.25**	**55**	P	**Pg**	**15 14 12.3**	**-1.3**
TRIZ				S	**Sg**	**15 14 29.6**	**-0.3**
GUR	**Goura**	**1.28**	**77**	*e*PN	**Pn**	**15 14 13.3**	**-1.2**
GUR	**Goura**	**1.28**	**77**	P	**Pg**	**15 14 12.9**	**-1.3**
GUR				S	**Sg**	**15 14 30.8**	**0.0**
GUR	**Goura**	**1.28**	**77**	P	**Pg**	**15 14 12.9**	**-1.3**
GUR	**Goura**	**1.28**	**77**	*e*Pn	**Pn**	**15 14 13.3**	**-1.2**
GUR				S	**Sg**	**15 14 30.8**	**0.0**
KALE	**Kalithea**	**1.31**	**56**	P	**Pn**	**15 14 13.3**	**-1.6**
KALE	**Kalithea**	**1.31**	**56**	P	**Pn**	**15 14 13.3**	**-1.6**
VLX	**Vlachokerasia**	**1.32**	**102**	*e*PN	**Pn**	**15 14 15.5**	**+0.5**
VLX	**Vlachokerasia**	**1.32**	**102**	P	**Pn**	**15 14 13.8**	**-1.2**
VLX	**Vlachokerasia**	**1.32**	**102**	P	**Pn**	**15 14 13.8**	**-1.2**
VLX	**Vlachokerasia**	**1.32**	**102**	*e*Pn	**Pn**	**15 14 15.5**	**+0.5**
EVR	**Evrytania**	**1.50**	**33**	*e*Pn	**Pn**	**15 14 17.4**	**-0.1**
EVR	**Evrytania**	**1.50**	**33**	*e*PN	**Pn**	**15 14 17.4**	**-0.1**
EVR	**Evrytania**	**1.50**	**33**	*e*Pn	**Pn**	**15 14 17.4**	**-0.1**
LTK	**Loutraki**	**1.78**	**78**	*e*PN	**Pn**	**15 14 22.2**	**+0.8**
LTK	**Loutraki**	**1.78**	**78**	*e*Pn	**Pn**	**15 14 22.2**	**+0.8**
AGG	**Agios Georgios**	**1.84**	**42**	P	**Pg**	**15 14 25.7**	**+0.9**
AGG	**Agios Georgios**	**1.84**	**42**	P	**Pg**	**15 14 25.7**	**+0.9**
IGT	**Igoumenitsa**	**1.90**	**350**	P	**Pg**	**15 14 26.9**	**+0.9**
IGT	**Igoumenitsa**	**1.90**	**350**	P	**Pg**	**15 14 26.9**	**+0.9**
DID	**Didima**	**1.97**	**94**	*e*PB	**Pn**	**15 14 23.5**	**-0.5**
DID	**Didima**	**1.97**	**94**	*e*Pb	**Pn**	**15 14 23.5**	**-0.5**
VLI	**Veliai**	**1.98**	**118**	*e*Pn	**Pn**	**15 14 25.0**	**+1.0**
VLI	**Veliai**	**1.98**	**118**	*e*PN	**Pn**	**15 14 25.0**	**+1.0**
VLI	**Veliai**	**1.98**	**118**	*e*Pn	**Pn**	**15 14 25.0**	**+1.0**
LKR	**Lokris**	**2.02**	**60**	*e*Pn	**Pn**	**15 14 25.0**	**+0.3**
LKR	**Lokris**	**2.02**	**60**	*e*PN	**Pn**	**15 14 25.0**	**+0.3**
LKR	**Lokris**	**2.02**	**60**	*e*Pn	**Pn**	**15 14 25.0**	**+0.3**
THL	**Klokotos Trika**	**2.14**	**27**	*e*PN	**Pn**	**15 14 27.2**	**+0.9**
THL	**Klokotos Trika**	**2.14**	**27**	*e*Pn	**Pn**	**15 14 27.2**	**+0.9**
KEK	**Kerkira**	**2.18**	**340**	*e*Pn	**Pn**	**15 14 26.5**	**-0.4**
KEK	**Kerkira**	**2.18**	**340**	*e*PN	**Pn**	**15 14 26.5**	**-0.4**
KEK	**Kerkira**	**2.18**	**340**	*e*Pn	**Pn**	**15 14 26.5**	**-0.4**
KYTH	**Kithira**	**2.28**	**126**	*e*Pn	**Pn**	**15 14 29.4**	**+1.2**
KYTH	**Kithira**	**2.28**	**126**	*e*PN	**Pn**	**15 14 29.4**	**+1.2**
KYTH	**Kithira**	**2.28**	**126**	*e*Pn	**Pn**	**15 14 29.4**	**+1.2**
VLY	**Voula,Athens**	**2.41**	**85**	P	**Pg**	**15 14 33.6**	**-2.2**
VLY	**Voula,Athens**	**2.41**	**85**	P	**Pg**	**15 14 33.6**	**-2.2**

*DDA **23** 15:16:07.9, 40°.10N×35°.65E, h6km±2km, Md3.1*
*ISK **23** 15:16:08.7, 40°.05N×35°.54E, h5km, MD2.6*
*ISCJB **23** 15:16:09.2±1.0, 40°.10N±0°.04×35°.59E±0°.06, h10km, Error ellipse: s-maj=7.0km s-min=5.5km az=149.1*
*CSEM **23** 15:16:09.2±0.4, 40°.08N×35°.59E, h2km, MD3.1, Error ellipse: s-maj=8.3km s-min=7.0km az=65.0*

ISC 23 15:16:09.8±1.0, 40°.09N±0°.04×35°.60E±0°.06, h3km±13km, n12, σ0§86/21, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOZ	**Yozgat**	**0.49**	**206**	*e*PG	**Pg**	**15 16 18.7**	**-0.6**
YOZ				*e*SG	**Sg**	**15 16 25.8**	**+0.2**
YOZ	**Yozgat**	**0.49**	**206**	*e*Pg	**Pg**	**15 16 18.7**	**-0.5**
YOZ				*e*Sg	**Sg**	**15 16 25.8**	**+0.2**
CORM	**Corum**	**0.75**	**277**	*e*PG	**Pg**	**15 16 22.8**	**-1.4**
CORM				*e*SG	**Sg**	**15 16 34.5**	**+0.7**
CORM	**Corum**	**0.75**	**277**	*e*Pg	**Pg**	**15 16 22.8**	**-1.3**
CTKT	**Corum**	**0.82**	**311**	*i* P	**Pg**	**15 16 25.8**	**+0.3**
CTKT				*i* S	**Sg**	**15 16 36.4**	**+0.3**
CTKT	**Corum**	**0.82**	**311**	*i* P	**Pg**	**15 16 25.8**	**+0.3**
CTKT				*i* S	**Sg**	**15 16 36.4**	**+0.3**
CDAG	**Cicekdag**	**1.05**	**244**	*i* P	**Pg**	**15 16 28.4**	**-1.5**
CDAG				*i* S	**Sg**	**15 16 44.6**	**+1.1**
CDAG	**Cicekdag**	**1.05**	**244**	*i* P	**Pg**	**15 16 28.4**	**-1.5**
CDAG				*i* S	**Sg**	**15 16 44.6**	**+1.1**
SVSK	**Karacayir**	**1.09**	**98**	*e*PN	**Pg**	**15 16 31.5**	**+0.8**
SVSK	**Karacayir**	**1.09**	**98**	*e*Pn	**Pg**	**15 16 31.5**	**+0.9**
AVNT	**Avonos**	**1.43**	**204**	*i* P	**Pn**	**15 16 35.7**	**-0.8**
AVNT				*i* S	**Sb**	**15 16 56.3**	**+0.7**
AVNT	**Avonos**	**1.43**	**204**	*i* P	**Pn**	**15 16 35.7**	**-0.8**
AVNT				*i* S	**Sb**	**15 16 56.3**	**+0.8**

*NIED **23** 15:26:00, 39°.70N×141°.70E, h104km, Mw6.8 Best double couple: M0 1.72000×10^19 NP1:φs179.00000°, δ71.00000°, λ-93.00000°. NP2:φs7.00000°, δ19.00000°, λ-82.00000°.*
*BGS **23** 15:26:05.4±1.5, 38°.84N×142°.57E, h33km, mb6.4, MS6.1*
*BJI **23** 15:26:17.2, 39°.70N×141°.46E, h107km, mB7.0/43, mb6.5/58*
*MOS **23** 15:26:17.8±0.9, 39°.83N×141°.53E, h101km, mb6.6/146, MS6.4/47, Error ellipse: s-maj=5.8km s-min=3.3km az=105.6*
MOS Felt (IV) at Malokuril'skoe; (III) at Yuzhno-Kuril'sk.
*NEIC **23** 15:26:19.9±0.1, 39°.80N×141°.46E, h108km, mb6.6/280, ME7.0, MW6.8, MW6.8, MW6.8(NIED), Error ellipse: s-maj=2.9km s-min=2.3km az=170.0 Broadband fault plane solution: P waves. NP1:φs235.00000°, δ70.00000°, λ-90.00000°. NP2:φs55.00000°, δ20.00000°, λ-90.00000°. Principal axes: T Plg25.0000°, Azm325.0000°; N Plg0.0000°, Azm0.0000°; P Plg58.0000°, Azm107.0000°; Moment Tensor Solution. s184 Moment tensor: Scale 10^19 Nm; Mrr-1.09; Mθθ0.47; Mφφ0.62; Mrθ-0.27; Mφθ0.06; Mφr1.72; Best double couple: M0 2.00000×10^19 NP1: φs173.00000°, δ77.00000°, λ-92.00000°. NP2:φs3.00000°, δ13.00000°, λ-79.00000°. Principal axes: T 1.6900, Plg31.0000°, Azm264.0000°; N 0.4900, Plg2.0000°, Azm173.0000°; P -2.1800, Plg57.0000°, Azm79.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
*NEIC One person killed, about 200 injured, 90 buildings damaged, landslides occurred, roads closed, train service and power disrupted in northern Honshu. Felt [VII] at Misawa; [IV] at Ayase and Tsukuba; [III] at Narita, Ome, Tokyo, Yokohama and Yokosuka. Also felt [III] at Sapporo, Hokkaido. Felt widely in southwestern Hokkaido and in Honshu as far south as the Tokyo area. Recorded [6U JMA] in Iwate; [6L JMA] in Aomori; [5U JMA] in Miyagi; [4 JMA] in Akita, Fukushima, Ibaraki and Yamagata; [3 JMA] in Chiba

ONAJ	Iwakimizuishiy	2.75	192	⇑P	Pn	15 27 00.8 -2.7
JSD	Sado	3.08	236	⇓P	Pn	15 27 07.3 -0.5
JSB	Shiboa	3.08	204	⇑P	Pn	15 27 06.8 -1.1
JIZZ	Izumozaki	3.14	225	⇓P	Pn	15 27 09.0 +0.3
JHK	Hiroka	3.20	218	⇓P	Pn	15 27 08.9 -0.6
JHO	Hitachi	3.26	193	⇑P	Pn	15 27 07.0 -3.3
JKT	Katashina	3.50	211	⇑P	Pn	15 27 13.1 -0.4
JAG	Ashikaga	3.73	206	⇑P	Pn	15 27 14.8 -1.7
JJN	Nakama	3.75	225	⇓P	Pn	15 27 17.0 +0.2
JGK	Kuni	3.94	216	⇑P	Pn	15 27 19.1 -0.2
JSZ	Suzu	4.00	235	⇓P	Pn	15 27 19.7 -0.4
JHG	Hegura jima	4.07	243	⇓P	Pn	15 27 21.2 +0.1
MAJO	Matsushiro	4.16	220	*e*Pn	Pn	15 27 21.9 -0.3
MAT	Matsushiro	4.16	220	P	Pn	15 27 21.8 -0.4
MAT				S	Sn	15 28 13.0 +3.1
MAT	Matsushiro	4.16	220	P	Pn	15 27 21.9 -0.3
MJAR	Matsushiro Arr	4.16	220	P	Pn	15 27 21.9 -0.4
	2μm,0.3s,baz=28,slow=14,SNR=2059					
MJAR				P3KPbc		16 05 42.7
	0.2nm,0.3s,baz=245,slow=2.3,SNR=6.1					
JRY	Ryogami san	4.30	209	⇑P	Pn	15 27 22.0 -2.1
JNG	Nsakai	4.32	219	⇑P	Pn	15 27 24.4 0.0
ASAJ	Asahikawa	4.39	10	P	Pn	15 27 23.6 -1.7
	633nm,0.3s,baz=218,slow=11,SNR=2389					
ASAJ				S	Sn	15 28 15.0 -0.5
	1μm,0.3s,baz=89,slow=23,SNR=3.9					
ASAJ	Asahikawa	4.39	10	P	Pn	15 27 23.6 -1.7
ASAJ				S	Sn	15 28 15.0 -0.5
ASAJ				pmax	pmax	
	comp=Z,633nm,0.3s					
ASAJ	Asahikawa	4.39	10	P	Pn	15 27 23.0 -2.3
JTT	Ttatey	4.57	227	⇓P	Pn	15 27 28.1 +0.3
JJH	Hakui	4.69	234	⇓P	Pn	15 27 29.4 +0.1
JGN	Niukaw	4.86	224	⇓P	Pn	15 27 31.9 +0.2
YUK	Yuzh-Kuril'sk	5.34	36	*c i*P	Pn	15 27 35.0 -3.1
YUK				*i* S	Sn	15 28 33.5 -4.9
YUK				pmax	pmax	
	comp=Z,5247μm,2.3s					
YUK				pmax	pmax	
	comp=Z,63μm,0.5s					
YUK				pmax	pmax	
	comp=N,34μm,0.2s					
YUK				pmax	pmax	
	comp=E,30μm,0.6s					
YUK				MLR	MLR	
	comp=N,367μm,15.0s					
YUK				MLR	MLR	
	comp=E,209μm,15.0s					
YUK				MLR	MLR	
	comp=Z,264μm,15.0s					
JKG	Kaga	5.38	231	⇓P	Pn	15 27 38.9 +0.2
JGM	Miyama	5.57	224	⇓P	Pn	15 27 41.2 -0.1
JKO	Kozu shima	5.91	199	⇑P	Pn	15 27 42.5 -3.4
JWT	Wachi	6.62	229	P	Pn	15 27 55.9 +0.5
JHJ	Hachijo jima 2	6.80	192	P	Pn	15 27 53.4 -4.6
	comp=Z,4μm,0.3s,baz=302,slow=0.4,SNR=292					
JHJ				S	Sn	15 29 07.4 -6.6
	comp=Z,13μm,0.3s,baz=51,slow=21,SNR=12					
JHJ				LR	LR	15 30 47.3
	comp=Z,150μm,20.5s,baz=41,slow=39					
KUR	Kuril'sk	7.18	39	P	Pn	15 28 00.5 -2.5
KUR				*e*S	Sn	15 29 20.0 -3.0
KUR				pmax	pmax	
	comp=N,454μm,4.0s					
KUR				pmax	pmax	
	comp=E,177μm,4.0s					
KUR				pmax	pmax	
	comp=Z,182μm,4.0s					
KUR				smax		
	comp=N,770μm,2.0s					
KUR				smax		
	comp=E,350μm,2.0s					
YSS	Yuzh-Sakhalins	7.21	7	⇑*i*P	Pn	15 28 01.7 -1.7
YSS				*i* S	Sn	15 29 22.0 -1.7
YSS				pmax	pmax	
	comp=Z,2μm,1.1s					
YSS				pmax	pmax	
	comp=Z,91μm,6.0s					
YSS				pmax	pmax	
	comp=N,87μm,4.0s					
YSS				pmax	pmax	
	comp=E,20μm,4.0s					
YSS				smax		
	comp=E,107μm,8.0s					
YSS				MLR	MLR	
	comp=N,135μm,13.0s					
YSS				MLR	MLR	
	comp=Z,162μm,13.0s					
YSS	Yuzh-Sakhalins	7.21	7	*e*Pn	Pn	15 28 01.9 -1.5
	comp=Z,19μm,0.9s					
JAJ2	Tsuna	7.53	227	P	Pn	15 28 07.4 -0.4
JAD	Aida	7.59	233	P	Pn	15 28 08.9 +0.3
VLA	Vladivostok	7.94	298	*c i*P	Pn	15 28 14.6 +1.3
JJS	Sakaide	8.11	231	P	Pn	15 28 15.3 -0.4
JGT	Gotsu	8.71	240	P	Pn	15 28 24.2 +0.4
MRT2	Murotomisaki 2	8.71	225	⇑P	Pn	15 28 22.2 -1.6
JET	Tanbara	9.05	231	P	Pn	15 28 27.9 -0.6
JHM	Kurahashi	9.13	235	P	Pn	15 28 28.9 -0.6
JHIK	Hikimi	9.27	238	⇑P	Pn	15 28 32.2 +0.8
UGL	Uglegorsk	9.29	2	α *i*P	Pn	15 28 29.0 -2.6
UGL				S	Sn	15 30 12.0 -2.0
UGL				pmax	pmax	
	comp=N,2μm,1.0s					
UGL				pmax	pmax	
	comp=E,6μm,1.0s					
UGL				pmax	pmax	
	comp=Z,7μm,1.0s					
UGL				smax		
	comp=E,3μm,0.8s					
UGL				smax		
	comp=N,3μm,1.1s					
UGL				smax		
	comp=Z,2μm,1.0s					
JKU	Kubokawa	9.38	229	⇑P	Pn	15 28 32.1 -0.8
HABR	Khabarovsk	9.83	334	*c i*P	Pn	15 28 37.4 -1.5
HABR				*e*S	Sn	15 30 26.5 -0.7
HABR				pmax	pmax	
	comp=N,642nm,1.2s					
HABR				pmax	pmax	
	comp=E,795nm,1.5s					
HABR				pmax	pmax	
	comp=Z,1μm,0.7s					
HABR				MLR	MLR	
	comp=Z,187μm,14.0s					
HABR				MLR	MLR	
	comp=N,108μm,13.0s					
HABR				MLR	MLR	
	comp=E,145μm,15.0s					
MDJ	Mudanjiang	10.06	302	P	Pn	15 28 42.5 +0.5
MDJ				S	Sn	15 30 36.3 +3.5
MDJ				PcP	PcP	15 34 39.6 -2.0
MDJ				PcS	PcS	15 38 13.8 -1.1
MDJ				ScS	ScS	15 41 39.3 +1.4
MDJ				pmax	pmax	
	comp=Z,2μm,1.2s					
MDJ				pmax	pmax	
	comp=Z,112μm,12.3s					
MDJ				LR	LR	
	comp=N,302μm,18.7s					
MDJ				LR	LR	
	comp=Z,384μm,25.1s					
MDJ	Mudanjiang	10.06	302	*e*P	Pn	15 28 42.6 +0.6
	comp=Z,7μm,1.1s					
JNU	Nakatsue	10.84	235	P	Pn	15 28 51.6 -0.9
KLR	Kul'dur	11.71	327	⇓*i*P	Pn	15 28 57.6 -6.4
INCN	Inchon	11.86	263	*e*P	Pn	15 29 06.0 0.0
	comp=Z,2μm,1.0s					
CN2	Changchun	12.63	294	⇑P	Pn	15 29 15.1 -1.1
CN2				*es*P		15 29 48.6
CN2				*e*S	Sn	15 31 41.6 +6.6
CN2				LR	LR	
	comp=Z,13μm,11.0s					
CBIJ	Chichi jima	12.68	177	P	Pn	15 29 10.2 -6.8
	comp=Z,415nm,0.3s,baz=355,slow=4.8,SNR=177					
CBIJ				S	Sn	15 31 21.3 -15
	comp=Z,350nm,0.3s,baz=232,slow=23,SNR=5.4					
SNY	Shenyang	13.73	284	⇑P	Pn	15 29 30.0 -0.5
SNY				S	Sn	15 32 06.4 +4.7
SNY				pmax	pmax	
	comp=Z,1μm,2.2s					
SNY				LR	LR	
	comp=N,136μm,11.7s					
SNY				LR	LR	
	comp=E,127μm,14.4s					
SNY				LR	LR	
	comp=Z,177μm,15.3s					
SKR	Severo-Kuril's	14.95	38	*d i*P	Pn	15 29 42.0 -4.0
SKR				*i* S	Sn	15 32 24.0 -7.1
SKR				pmax	pmax	
	comp=N,1μm,1.0s					
SKR				pmax	pmax	
	comp=E,2μm,1.0s					
SKR				pmax	pmax	
	comp=Z,3μm,1.0s					
SKR				pmax	pmax	
	comp=N,22μm,4.0s					
SKR				pmax	pmax	
	comp=E,22μm,4.0s					
SKR				pmax	pmax	
	comp=Z,44μm,4.0s					
SKR				smax		
	comp=N,240nm,0.6s					
SKR				smax		
	comp=E,1μm,0.8s					
SKR				smax		
	comp=N,40μm,10.0s					
SKR				smax		
	comp=E,118μm,10.0s					
SKR				MLR	MLR	
	comp=N,73μm,18.0s					
SKR				MLR	MLR	
	comp=Z,111μm,18.0s					
SKR				MLR	MLR	
	comp=E,63μm,12.0s					
DL2	Dalian	15.40	273	P	Pn	15 29 51.1 -0.7
DL2				S	S	15 32 39.9 -10
DL2				pmax	pmax	
	comp=Z,1μm,0.9s					
DL2				pmax	pmax	
	comp=Z,72μm,7.2s					
PETK	Petropavlovsk-	17.32	34	P	Pn	15 30 10.2 -5.0
	comp=Z,2.8nm,0.3s,baz=185,slow=8.8,SNR=44					
PETK				S	S	15 33 24.7 -3.4
	comp=Z,4.3nm,0.3s,baz=87,slow=4.6,SNR=3.4					
PETK				LR	LR	15 38 20.1
	comp=Z,41μm,18.1s,baz=221,slow=42					
PETK				PKiKP	PKiKP	15 42 44.7 +1.9
	comp=Z,0.2nm,0.3s,baz=100,slow=3.2,SNR=4.9					
PETK				P3KP		16 05 38.2
	comp=Z,0.4nm,0.3s,baz=95,slow=9.8,SNR=4.3					
PETK	Petropavlovsk-	17.32	34	P	Pn	15 30 10.2 -5.0
PETK				S	S	15 33 24.7 -3.4
PETK				LR	LR	15 38 20.1
PET	Petropavlovsk	17.68	36	*de*P	Pn	15 30 15.8 -3.8
PET				*i* S	S	15 33 37.8 +1.4
PET				pmax	pmax	
	comp=Z,52μm,5.0s					
PET				pmax	pmax	
	comp=Z,1μm,1.3s					
PET				pmax	pmax	
	comp=Z,38μm,7.9s					
PET				smax		
	comp=E,187μm,13.5s					
PET				smax		
	comp=E,179μm,14.4s					
PET				MLR	MLR	
	comp=Z,70μm,18.0s					
PET				MLR	MLR	
	comp=Z,62μm,16.0s					
PET	Petropavlovsk	17.68	36	*e*P	Pn	15 30 15.6 -4.0
	comp=Z,1μm,1.1s					
HIA	Hailar	18.12	309	*e*P	P	15 30 21.2 -2.5
HIA				pmax	pmax	
	comp=Z,2μm,0.8s					
HIA	Hailar	18.12	309	*e*P	P	15 30 21.2 -2.5
	comp=Z,2μm,0.8s					
SSE	Sheshan	18.66	249	⇑P	P	15 30 28.0 -1.8
SSE				pP		15 30 41.6
SSE				S	S	15 33 51.4 -5.0
SSE				sS	sS	15 34 15.3 -15
SSE				pmax	pmax	
	comp=Z,42μm,12.0s					
SSE				LR	LR	
	comp=N,84μm,13.3s					
SSE				LR	LR	
	comp=E,99μm,13.4s					
SSE				LR	LR	
	comp=Z,110μm,13.6s					
BJI	Beijing	19.41	279	P	P	15 30 35.8 -2.1
BJI				pP		15 30 57.1
BJI				sP	sP	15 31 12.3 -0.7
BJI				S	S	15 34 07.5 -3.8
BJI				pmax	pmax	
	comp=Z,5μm,0.7s					
BJI				pmax	pmax	
	comp=Z,47μm,7.3s					
BJI				LR	LR	
	comp=N,191μm,24.0s					
BJI				LR	LR	
	comp=E,78μm,30.4s					
BJI				LR	LR	
	comp=Z,207μm,36.7s					
TIA	Tai'an	19.52	267	⇑P	P	15 30 37.0 -2.1
TIA				S	S	15 34 09.0 -4.5
TIA				LR	LR	
	comp=N,241μm,11.1s					
TIA				LR	LR	
	comp=E,206μm,11.9s					
NJ2	Nanjing	19.87	254	*e*P	P	15 30 41.0 -1.9
NJ2				S	S	15 34 19.5 -0.9
NJ2				pmax	pmax	
	comp=Z,2μm,0.8s					
NJ2				pmax	pmax	
	comp=Z,44μm,10.3s					
NJ2				LR	LR	
	comp=N,100μm,11.4s					
NJ2				LR	LR	
	comp=E,52μm,11.8s					
NJ2				LR	LR	
	comp=Z,100μm,11.1s					
JOGS	Gusukube	20.20	227	P	P	15 30 46.0 -0.5
JMJ	Miyako jima 2	20.22	227	P	P	15 30 48.1 +1.4
CLNS	Chul'man	20.22	333	*e*P	P	15 30 45.9 -0.6
CLNS				*e*S	S	15 34 26.2 -0.7
CLNS				*e*		15 35 02.1
CLNS				pmax	pmax	
	comp=N,2μm,1.4s					
CLNS				pmax	pmax	
	comp=Z,3μm,1.3s					
CLNS				pmax	pmax	
	comp=E,1μm,1.1s					
CLNS				smax		
	comp=E,16μm,7.9s					
CLNS				smax		
	comp=N,42μm,10.0s					
CLNS				MLR	MLR	
	comp=E,34μm,12.0s					
CLNS				MLR	MLR	
	comp=N,90μm,13.0s					
CLNS				MLR	MLR	
	comp=Z,109μm,16.0s					
TATO	Taipei	22.38	235	*e*P	P	15 31 07.0 -2.7
	comp=Z,3μm,0.9s,mb6.5					
TATO	Taipei	22.38	235	P	P	15 31 07.8 -1.9
	SNR=61					
YHNB	Yeheng	22.67	234	*e*P	P	15 31 08.4 -4.3
	comp=Z,2μm,0.8s,mb6.4					
TIY	Taiyuan	22.72	274	*e*P	P	15 31 09.8 -3.3
TIY				sP	sP	15 31 45.9 -2.9
TIY				S	S	15 35 15.8 +2.9
TIY				LR	LR	
	comp=N,76μm,11.1s					
TIY				LR	LR	
	comp=E,81μm,12.6s					
TIY				LR	LR	
	comp=Z,82μm,12.7s					
HHC	Hu-ho-hao-te	22.80	282	⇑*i*P	P	15 31 10.3 -3.5
HHC				pP		15 31 34.3
HHC				PP		15 31 44.8
HHC				sP	sP	15 31 47.3 -2.4
HHC				PcP	PcP	15 35 00.5 -0.6
HHC				S	S	15 35 07.0 -7.1
HHC				sS	sS	15 35 46.5 -7.0
HHC				SS		15 35 58.5
HHC				ScP	ScP	15 38 26.6 -1.8
HHC				PcS	PcS	15 38 38.5 -1.6
HHC				pmax	pmax	
	comp=Z,250nm,1.2s,mb5.4					
HHC				pmax	pmax	
	comp=Z,34μm,5.4s					
HHC				LR	LR	
	comp=N,66μm,12.4s					
HHC				LR	LR	
	comp=E,91μm,12.5s					
HHC				LR	LR	
	comp=Z,98μm,12.5s					
CIT	Chita	22.81	312	*e*P	P	15 31 14.4 +0.6
CIT				*e*		15 31 31.3
CIT				*e*S	S	15 35 09.6 -4.4
CIT				pmax	pmax	
	comp=Z,15μm,2.1s,mb7.0					
NACB	Ninganchiao	22.89	233	*e*P	P	15 31 08.9 -5.9
	comp=Z,518nm,0.6s,mb6.0					
YAK	Yakutsk	23.40	346	*i* P	P	15 31 17.4 -1.7
YAK				*e*		15 31 50.2
YAK				*e*S	S	15 35 21.6 -1.8
YAK				*e*		15 42 10.4
YAK				pmax	pmax	
	comp=E,782nm,0.9s					
YAK				pmax	pmax	
	comp=N,2μm,1.0s					
YAK				pmax	pmax	
	comp=Z,7μm,1.0s,mb6.9					
YAK				pmax	pmax	
	comp=Z,10μm,2.3s,mb6.8					
YAK				pmax	pmax	
	comp=N,12μm,2.3s					
YAK				pmax	pmax	
	comp=E,4μm,2.2s					
YAK				smax		
	comp=E,24μm,1.3s					
YAK				smax		
	comp=N,71μm,2.0s					
YAK				MLR	MLR	
	comp=N,70μm,13.0s					
YAK				MLR	MLR	
	comp=Z,84μm,13.0s					
YAK				MLR	MLR	
	comp=E,21μm,14.0s					
YAK	Yakutsk	23.40	346	*e*P	P	15 31 16.4 -2.6
	comp=E,7μm,0.8s,mb7.0					
YAK				*e*S	S	15 35 23.1 -0.3
SSLB	Suanglung	23.57	234	*e*P	P	15 31 16.5 -4.5
	comp=E,953nm,0.8s,mb6.2					
YULB	Yu-li	23.65	232	*e*P	P	15 31 16.3 -5.4
	comp=E,940nm,0.8s,mb6.2					
WHN	Wuhan	23.96	256	⇑P	P	15 31 21.8 -2.7
WHN				sP	sP	15 32 01.9 -0.1
WHN				S	S	15 35 28.4 -4.6
WHN				LR	LR	
	comp=N,156μm,12.3s					
WHN				LR	LR	
	comp=E,68μm,14.3s					
WHN				LR	LR	
	comp=Z,214μm,15.4s					
BTO	Baotou	24.00	282	*e*P	P	15 31 22.0 -2.7
BTO				S	S	15 35 28.5 -4.9
BTO				LR	LR	
	comp=N,62μm,17.1s					
BTO				LR	LR	
	comp=E,35μm,15.9s					
SEY	Seymchan	24.08	12	*ce*P	P	15 31 25.3 +0.1
TPUB	Ta-pu	24.13	233	*e*P	P	15 31 22.4 -3.7
	comp=E,4μm,1.2s,mb6.6					
TWG	Pinlang	24.22	232	*e*P	P	15 31 23.5 -3.4
	comp=E,4μm,1.0s,mb6.7					
QZH	Quanzhou	24.27	239	⇑*i*P	P	15 31 26.6 -0.8
QZH				pP		15 31 49.8
QZH				S	S	15 35 40.8 +2.8
QZH				pmax	pmax	
	comp=Z,6μm,1.4s,mb6.7					
QZH				pmax	pmax	
	comp=Z,93μm,7.2s					
QZH				LR	LR	
	comp=N,102μm,14.8s					
QZH				LR	LR	
	comp=E,126μm,15.4s					
QZH				LR	LR	
	comp=Z,422μm,34.9s					
SMY	Shemya	25.74	49	*e*P	P	15 31 41.4 +1.0
SMY				pmax	pmax	
	comp=Z,10μm,2.2s,mb6.9					
SMY	Shemya	25.74	49	*e*P	P	15 31 41.4 +1.0
	comp=Z,11μm,2.2s,mb6.9					
ULN	Ulaanbaatar	25.96	300	*e*P	P	15 31 41.8 -0.6
ULN				pmax	pmax	
	comp=Z,816nm,0.9s,mb6.2					
ULN	Ulaanbaatar	25.96	300	*e*P	P	15 31 41.8 -0.7
	comp=Z,816nm,0.9s,mb6.2					
ULN	Ulaanbaatar	25.96	300	P	P	15 31 42.5 +0.1
	comp=Z,1μm,1.6s,mb6.0					
ULN	Ulaanbaatar	25.96	300	P	P	15 31 41.8 -0.6
	SNR=648					
GUMO	Guam	26.27	173	P	P	15 31 44.5 -1.1
	comp=Z,91nm,0.5s,mb5.5,baz=180,slow=6.0,SNR=8.0					
GUMO				S	S	15 36 13.0 +3.3
	comp=Z,104nm,1.0s,baz=44,slow=21,SNR=1.9					
GUMO				LR	LR	15 40 59.1
	comp=Z,31μm,20.7s,baz=179,slow=34					
GUMO	Guam	26.27	173	P	P	15 31 44.5 -1.0
GUMO				S	S	15 36 13.0 +3.2
GUMO				pmax	pmax	
	comp=Z,91nm,0.5s,mb5.5					
GUMO				smax		
	comp=N,104nm,1.0s					
GUMO				MLR	MLR	
	comp=Z,31μm,20.7s					
GUMO	Guam	26.27	173	*e*P	P	15 31 42.7 -2.8
	comp=Z,4μm,1.3s,mb6.7					
GUMO	Guam	26.27	173	P	P	15 31 48.1 +2.6
	comp=Z,2μm,1.4s,mb6.4					
SONM	Songino Array	26.39	299	P	P	15 31 45.9 -0.5
	comp=Z,123nm,0.5s,mb5.6,baz=102,slow=6.0,SNR=311					
SONM				S	S	15 36 13.8 +2.5
	comp=Z,23nm,1.0s,baz=157,slow=31,SNR=1.8					
SONM				ScP	ScP	15 38 41.2 +2.9
	comp=Z,98nm,1.1s,baz=111,slow=2.0,SNR=6.1					
SONM				LR	LR	15 42 36.7
	comp=Z,86μm,19.2s,baz=92,slow=37					
SONM				P3KPbc		16 04 30.8
	comp=Z,10nm,1.0s,baz=253,slow=3.6,SNR=23					
SONM	Songino Array	26.39	299	P	P	15 31 45.9 -0.5
SONM				S	S	15 36 13.8 +2.5
SONM				ScP	ScP	15 38 41.2 +2.9
SONM				LR	LR	15 42 36.7
SONM				*e*		16 04 30.8
XAN	Xi'an	26.58	268	P	P	15 31 46.8 -1.4
XAN				pP	pP	15 32 10.6 -2.2
XAN				sP	sP	15 32 24.3 -1.6
XAN				S	S	15 36 11.3 -3.2
XAN				sS	sS	15 36 52.8 -4.8
XAN				pmax	pmax	
	comp=Z,230nm,1.3s,mb5.5					
XAN				pmax	pmax	
	comp=Z,8μm,10.4s					
XAN				LR	LR	
	comp=N,68μm,13.1s					
XAN				LR	LR	
	comp=E,32μm,12.6s					
XAN				LR	LR	
	comp=Z,29μm,12.5s					
ENH	Enshi	27.76	260	*e*P	P	15 31 57.3 -1.4
	comp=Z,1.0nm,0.2s					
CVP	Callao Caves	27.85	223	‖*e*P	P	15 32 00.6 +1.0
PIP	Pasuquin	27.99	226	‖*e*P	P	15 32 00.5 -0.4
APYP	Conner	28.03	225	*e*P	P	15 32 02.5 +1.3
PALP	Palanan	28.07	222	*e*P	P	15 32 03.8 +2.2
IRK	Irkutsk	28.36	308	⇑*i*P	P	15 32 03.5 -0.4
IRK				*e*S	S	15 36 45.8 +3.6
IRK				pmax	pmax	
	comp=Z,2μm,2.3s,mb6.3					
CAUP	Cauayan	28.48	223	*e*P	P	15 32 06.0 +0.8
ABRA	Dolores	28.49	225	*e*P	P	15 32 08.5 +3.2
AMKA	Amchitka	28.56	53	*e*P	P	15 32 06.5 +0.8
	comp=Z,435nm,0.8s,mb6.1					
TLY	Talaya	28.64	307	P	P	15 32 06.9 +0.5
	comp=Z,3μm,1.0s,mb6.9					
TLY	Talaya	28.64	307	⇑*i*P	P	15 32 06.4 0.0
TLY				*e*S	S	15 36 48.3 +1.7
TLY				pmax	pmax	
	comp=Z,1μm,1.7s,mb6.3					
TLY				MLR	MLR	
	comp=Z,75μm,15.0s					
TLY	Talaya	28.64	307	*e*P	P	15 32 06.3 -0.1
	comp=Z,510nm,0.9s,mb6.2					
TLY	Talaya	28.64	307	P	P	15 32 06.7 +0.3
	SNR=727					

HKC Hong Kong Obse 29.02 241⇑iP P 15 32 12.0 +2.0
HKC iS S 15 36 56.0 +2.9
GZH Guangzhou 29.06 243 P P 15 32 05.8 -4.6
GZH S S 15 36 44.3 -9.4
GZH LR LR
comp=N,70µm,13.2s
GZH LR LR
comp=E,113µm,12.8s
GZH LR LR
comp=Z,197µm,12.9s
BCPH Baguio City Da 29.60 224⇓eP P 15 32 14.8 -0.3
BCPH iS PP 15 33 56.1 +32
BALP Baler 29.61 222 eP P 15 32 15.3 0.0
LZH Lanzhou 29.78 275 ⇑P P 15 32 16.3 -0.3
LZH pP pP 15 32 40.5 -1.0
LZH sP sP 15 32 53.9 -0.7
LZH PP PP 15 33 17.5 -8.4
LZH S S 15 37 03.3 -1.5
LZH sS sS 15 37 46.3 -1.8
LZH SS SS 15 38 47.0 -29
LZH pmax pmax
comp=Z,2µm,1.3s,mb6.6
LZH pmax pmax
comp=Z,14µm,6.4s
LZH LR LR
comp=E,88µm,10.8s
LZH LR LR
comp=Z,98µm,12.0s
BOLP Bolinao 29.96 225 eP P 15 32 19.9 +1.6
PCPH Palayan 30.01 222⇑eP P 15 32 17.8 -1.0
PVCP Virac 30.23 215 eP P 15 32 21.6 +0.9
MOY Mondy 30.28 307 eP P 15 32 20.8 0.0
MOY pmax pmax
comp=Z,3µm,3.3s
POLP Polilio Island 30.29 220 eP P 15 32 23.4 +2.1
SCZP Santa Cruz 30.46 224 eP P 15 32 22.0 -0.8
CNP Catarman 30.98 213 eP P 15 32 27.9 +0.6
AUQP San Andres 31.15 217 eP P 15 32 30.4 +1.5
BILL Bilibino 31.37 18c iP P 15 32 30.5 +0.3
BILL i*PP pP 15 32 54.6 -0.5
BILL i 15 33 07.0
BILL i 15 33 36.1
BILL i 15 35 23.5
BILL iS S 15 37 33.6 +4.7
BILL iSS SS 15 39 45.4 -2.1
BILL pmax pmax
comp=Z,1µm,1.6s,mb6.3
BILL pmax pmax
comp=Z,11µm,4.4s
BILL Bilibino 31.37 18 eP P 15 32 30.7 +0.5
comp=Z,2µm,1.3s,mb6.7
BOAC Boac 31.43 219 eP P 15 32 33.7 +2.5
CD2 Chengdu 31.84 266 P P 15 32 33.6 -1.2
CD2 pP pP 15 32 58.1 -1.7
CD2 sP sP 15 33 11.4 -1.4
CD2 PP PP 15 33 43.0 -5.8
CD2 S S 15 37 33.8 -3.3
CD2 SS SS 15 39 31.5 -27
CD2 pmax pmax
comp=Z,2µm,0.9s,mb6.8
CD2 pmax pmax
comp=Z,17µm,9.5s
CD2 LR LR
comp=N,153µm,13.1s
CD2 LR LR
comp=Z,179µm,12.5s
GYA Guiyang 31.85 256⇑iP P 15 32 33.8 -1.2
GYA pP pP 15 33 00.8 +0.9
GYA sP sP 15 33 13.3 +0.4
GYA PP PP 15 33 43.8 -5.2
GYA PcP PcP 15 35 23.9 +0.8
GYA S S 15 37 37.3 0.0
GYA sS sS 15 38 20.0 -0.7
GYA ScP ScP 15 38 55.8 -0.2
GYA PcS PcS 15 39 08.4 +0.4
GYA SS SS 15 39 36.4 -22
GYA pmax pmax
comp=Z,3µm,0.9s,mb7.0
GYA pmax pmax
comp=Z,15µm,8.4s
GYA LR LR
comp=N,42µm,13.9s
GYA LR LR
comp=E,66µm,13.6s
GYA LR LR
comp=Z,76µm,15.5s
GTA Gaotai 31.91 283 ⇑P P 15 32 34.8 -0.6
GTA pP pP 15 32 59.5 -0.8
GTA sP sP 15 33 12.8 -0.5
GTA PP PP 15 33 46.3 -3.1
GTA PcP PcP 15 35 25.8 +2.7
GTA S S 15 37 37.4 -0.6
GTA sS sS 15 38 20.3 -1.1
GTA ScP ScP 15 38 58.3 +2.3
GTA SS SS 15 39 37.3 -22
GTA ScS ScS 15 42 54.8 +0.2
GTA pmax pmax
comp=Z,94nm,1.0s,mb5.5
GTA pmax pmax
comp=Z,18µm,8.7s
GTA LR LR
comp=N,157µm,20.1s
GTA LR LR
comp=E,86µm,18.6s
GTA LR LR
comp=Z,125µm,17.7s
LUBP Lubang 31.99 222 eP P 15 32 36.1 0.0
OTRP Odiongan 32.29 218 eP P 15 32 41.3 +2.5
OCLP Ormoc 32.31 212 eP P 15 32 41.9 +2.9
TIXI Tiksi 32.56 353 eP P 15 32 39.3 -1.3
TIXI e*SP sP 15 33 16.1 -2.6
TIXI e 15 33 49.8
TIXI eS S 15 37 41.7 -5.7
TIXI pmax pmax
comp=N,200nm,1.0s
TIXI pmax pmax
comp=Z,503nm,1.0s,mb6.3
TIXI pmax pmax
comp=E,125nm,0.9s
TIXI pmax pmax
comp=Z,3µm,9.1s
TIXI smax
comp=E,14µm,13.8s
TIXI smax
comp=N,29µm,16.7s
TIXI MLR MLR
comp=N,36µm,13.0s
TIXI MLR MLR
comp=Z,66µm,15.0s
TIXI MLR MLR
comp=E,11µm,12.0s
TIXI Tiksi 32.56 353 eP P 15 32 38.8 -1.9
comp=E,338nm,0.6s,mb6.3
RCP Roxas 32.66 216⇓eP P 15 32 42.8 +0.7
SCPH Surigao 33.12 210 eP P 15 32 44.5 -1.5
LLP Lapu-Lapu 33.24 213 eP P 15 32 46.4 -0.8
BUSP Coron 33.48 220 eP P 15 32 48.9 -0.3
GUIM Jordan 33.56 215 eP P 15 32 52.1 +2.2
BUTP Butuan 33.81 209 eP P 15 32 52.2 +0.1
TBP Tagbilaran 33.85 212 eP P 15 32 53.1 +0.7
CUYO Cuyo Island 34.08 218 eP P 15 32 54.9 +0.5
QIZ Qiongzhong 34.21 242 P P 15 32 54.8 -0.7
QIZ pP pP 15 33 17.8 -2.8
QIZ S S 15 38 09.1 -4.7
QIZ pmax pmax
comp=Z,260nm,2.0s,mb5.7
QIZ pmax pmax
comp=Z,16µm,13.3s
QIZ LR LR
comp=N,48µm,10.5s
QIZ LR LR
comp=E,21µm,13.7s
QIZ LR LR
comp=Z,81µm,12.6s
QIZ Qiongzhong 34.21 242 eP P 15 32 56.4 +0.9
comp=Z,512nm,1.0s,mb6.3
SNPH Sibulan 34.42 213⇑eP P 15 33 00.6 +3.2
ENPP El Nido 34.55 221 eP P 15 32 59.2 +0.7
CGP Cagayan de Oro 34.64 210 eP P 15 32 57.8 -1.4
CGP iS sP 15 33 33.7 -3.7
BUKP Musuan 35.03 209 eP P 15 33 02.7 +0.2
MATI Mati 35.46 207 eP P 15 33 05.3 -0.9
KMI Kunming 35.53 258 ⇑P P 15 33 06.6 -0.3
KMI pP pP 15 33 32.8 +0.7
KMI sP sP 15 33 46.3 +1.3
KMI PP PP 15 34 29.3 -0.4
KMI PcP PcP 15 35 35.6 +2.0
KMI S S 15 38 30.6 -3.5
KMI ScP ScP 15 39 09.5 +0.5
KMI sS sS 15 39 15.8 -2.2
KMI PcS PcS 15 39 21.4 +0.4
KMI SS SS 15 40 54.1 -19
KMI ScS ScS 15 43 12.4 -1.7
KMI pmax pmax
comp=Z,2µm,1.1s,mb6.9
KMI pmax pmax
comp=Z,24µm,5.8s
KMI LR LR
comp=N,51µm,12.2s
KMI LR LR
comp=E,50µm,15.9s
KMI LR LR
comp=Z,65µm,12.8s
DAV Davao City (W) 35.58 208 eP P 15 33 06.8 -0.5
comp=Z,869nm,0.8s,mb6.7
DAV Davao City (W) 35.58 208⇑eP P 15 33 05.3 -2.0
DAV Davao City (W) 35.58 208 P P 15 33 09.8 +2.5
comp=Z,810nm,1.0s,mb6.6
DAV Davao City (W) 35.58 208 P P 15 33 07.8 +0.5
SNR=11
DMPH Davao City--Mi 35.60 208⇑eP P 15 33 06.6 -0.9
MIDW Midway 35.71 96 eP P 15 33 08.1 -0.2
comp=Z,3µm,1.4s,mb7.0
MIDW epP pP 15 33 32.2 -1.4
PAGZ Pagadian 35.71 212 eP P 15 33 07.8 -0.6
KCP Kidapawan 35.82 209⇓eP P 15 33 09.6 +0.3
KCP iS sP 15 33 50.3 +2.8
CTBH Cotabato--PC H 35.94 210⇑eP P 15 33 10.8 +0.4
CTBH iS pP 15 33 26.5 -9.1
NIKO Nikolski 35.96 52 eP P 15 33 08.9 -1.3
comp=Z,480nm,0.9s,mb6.4
IPIL Ipil 36.10 213 eP P 15 33 10.7 -1.0
GAMB Gambell 36.35 33 eP P 15 33 11.1 -2.2
GSPH General Santos 36.72 208⇑eP P 15 33 17.0 0.0
ZMPH Zamboanga City 37.07 213⇓iP P 15 33 19.6 -0.3
UNV Unalaska Valle 37.38 50 eP P 15 33 20.3 -1.9
comp=Z,108nm,0.8s,mb5.8
UNV epP pP 15 33 45.8 -1.8
BATP Bataraza 37.43 221 eP P 15 33 24.5 +1.5
AKUT Akutan 37.81 50 eP P 15 33 24.6 -1.2
comp=Z,624nm,1.8s,mb6.1
TNA Tin City 38.44 31 eP P 15 33 31.4 +0.5
comp=Z,2µm,1.1s,mb6.8
KWAJ Kwajalein Atol 38.68 136 eP P 15 33 34.0 +0.5
comp=Z,2µm,1.6s,mb6.8
SGSI Sangihe 38.75 206 P P 15 33 34.3 +0.2
comp=Z,3µm,1.3s,mb6.9
WMQ Urumqi 39.72 294 P P 15 33 42.9 +1.0
WMQ pP pP 15 34 08.3 +0.8
WMQ sP sP 15 34 21.3 +0.9
WMQ PP PP 15 35 19.9 +4.7
WMQ PcP PcP 15 35 48.3 +2.1
WMQ ScP ScP 15 39 24.9 +0.4
WMQ S S 15 39 37.9 +0.9
WMQ sS sS 15 40 22.0 +0.6
WMQ SS SS 15 42 31.8 -5.0
WMQ ScS ScS 15 43 36.9 -0.4
WMQ pmax pmax
comp=Z,2µm,1.0s,mb6.9
WMQ pmax pmax
comp=Z,35µm,4.2s
WMQ LR LR
comp=N,26µm,16.0s
WMQ LR LR
comp=E,26µm,19.0s
WMQ LR LR
comp=Z,26µm,17.0s
UBT Ubonrachathani 40.13 243 ⇑PN P 15 33 46.8 +1.2
comp=Z,556nm,0.9s,mb6.4
ZAA0 Zalesovo Array 40.15 310 eP P 15 33 44.6 -0.7
ZALV Zalesovo Beam 40.15 310 P P 15 33 44.7 -0.6
comp=Z,746nm,0.5s,mb6.8,baz=87,slow=6.1,SNR=423
ZALV ScP ScP 15 39 27.0 +1.0
comp=Z,188nm,1.0s,baz=90,slow=4.4,SNR=7.4
ZALV S S 15 39 44.2 +1.0
comp=Z,19nm,0.8s,baz=120,slow=3.0,SNR=2.5
ZALV LR LR 15 51 13.9
comp=Z,61µm,18.4s,baz=90,slow=37
ZALV P3KPbc 16 03 31.8
comp=Z,2.4nm,0.8s,baz=258,slow=3.9,SNR=6.6
ZALV P4KPbc 16 12 02.4
comp=Z,1.0nm,0.6s,baz=66,slow=3.7,SNR=4.2
ZALV Zalesovo Beam 40.15 310 P P 15 33 44.7 -0.6
ZALV ScP ScP 15 39 27.0 +1.0
ZALV S S 15 39 44.2 +1.0
ZALV LR LR 15 51 13.9
ZALV e 16 03 31.8
MYLDM Lahad Datu 40.23 217 P P 15 33 49.6 +3.3
comp=Z,3µm,1.2s,mb6.9
CHRT Chiangrai 40.83 253 ⇑P P 15 33 51.5 +0.2
comp=Z,3µm,0.6s,mb7.4
SDPT Sand Point 40.86 48 eP P 15 33 49.9 -1.2
comp=Z,469nm,0.6s,mb6.5
TNTI Ternate 40.92 202 P P 15 33 53.2 +1.1
comp=Z,1µm,1.9s,mb6.5
NVS Novosibirsk 41.02 311⇑iP P 15 33 52.2 -0.3
NVS i*PP pP 15 34 19.0 +0.8
NVS iS S 15 39 58.0 +1.9
NVS i 15 43 42.4
NVS pmax pmax
comp=N,888nm,2.2s
NVS pmax pmax
comp=E,3µm,2.2s
NVS pmax pmax
comp=Z,3µm,2.2s,mb6.8
NVS smax
comp=N,3µm,3.3s
NVS smax
comp=E,4µm,2.5s
MNI Manado 41.08 206 P P 15 33 53.9 +0.6
MNI Manado 41.08 206 P P 15 33 54.3 +1.0
comp=E,2µm,1.1s,mb6.9
BAKI Biak 41.09 188 P P 15 33 53.7 +0.3
BAKI Biak 41.09 188 P P 15 33 54.1 +0.7
comp=E,957nm,2.3s,mb6.2
SMPI Sarmi 41.66 184 P P 15 33 59.6 +1.5
comp=E,1µm,2.3s,mb6.2
CHGN Chignik 41.97 46 eP P 15 34 01.3 +1.1
comp=E,0.7nm,0.7s
LSA Lhasa 42.10 272 P P 15 34 02.9 +1.3
LSA S S 15 40 06.9 -5.7
LSA pmax pmax
comp=Z,740nm,2.4s,mb6.0
LSA LR LR
comp=N,19µm,23.0s
LSA LR LR
comp=E,41µm,24.1s
LSA LR LR
comp=Z,38µm,14.6s
LSA Lhasa 42.10 272 eP P 15 34 02.6 +1.0
comp=Z,217nm,3.2s
CHG Chiang Mai 42.10 253 ⇑P P 15 34 01.5 -0.2
comp=Z,1µm,0.9s,mb6.6
CHTO Chiang Mai 42.10 253 eP P 15 34 01.4 -0.3
CHTO e*PP pP 15 34 25.1 -2.5
CHTO pmax pmax
comp=Z,999nm,0.9s,mb6.5
CHTO Chiang Mai 42.10 253 eP P 15 34 01.4 -0.3
comp=Z,999nm,0.9s,mb6.5
CHTO epP pP 15 34 25.1 -2.5
CHTO Chiang Mai 42.10 253 P P 15 34 02.8 +1.1
comp=Z,1µm,0.9s,mb6.7
CHTO Chiang Mai 42.10 253 P P 15 34 02.0 +0.3
SNR=270
JAY Jayapura 42.11 181 P P 15 34 02.4 +0.7
JAY Jayapura 42.11 181 P P 15 34 02.8 +1.1
comp=Z,343nm,1.9s,mb5.8
CMAR Chiang Mai Arr 42.33 252 P P 15 34 03.4 -0.2
comp=Z,142nm,0.7s,mb5.8,baz=46,slow=6.9,SNR=206
CMAR ScP ScP 15 39 35.8 +0.7
comp=Z,68nm,1.0s,baz=8.6,slow=5.1,SNR=5.0
CMAR S S 15 40 18.4 +2.2
comp=Z,5.7nm,1.0s,baz=334,slow=13,SNR=2.0
CMAR P3KPbc 16 03 25.3
comp=Z,1.2nm,0.4s,baz=234,slow=5.0,SNR=6.8
CMAR Chiang Mai Arr 42.33 252 P P 15 34 03.4 -0.1
CMAR S S 15 40 18.4 +2.2
CMAR pmax pmax
comp=Z,142nm,0.7s
CMAR smax
comp=N,6.0nm,1.0s
CMAR Chiang Mai Arr 42.33 252 P P 15 34 03.4 -0.2
CMAR ScP ScP 15 39 35.9 +0.7
CMAR S S 15 40 18.4 +2.2
CMAR e 16 03 25.3
IMP Imphal 42.41 264 iP P 15 34 02.0 -2.2
IMP ex x 15 40 14.0
MK31 Makanchi Array 42.76 300 iP P 15 34 06.2 -0.5
MK31 pmax pmax
comp=Z,1µm,0.8s,mb6.7
MK31 Makanchi Array 42.76 300 eP P 15 34 06.4 -0.3
MKAR Makanchi Array 42.76 300 P P 15 34 06.5 -0.2
comp=Z,686nm,0.8s,mb6.4,baz=82,slow=9.1,SNR=536
MKAR ScP ScP 15 39 38.2 +1.7
comp=Z,115nm,1.1s,baz=64,slow=5.5,SNR=4.6
MKAR S S 15 40 24.0 +2.0
comp=Z,20nm,0.8s,baz=351,slow=40,SNR=3.1
MKAR LR LR 15 52 43.8
comp=Z,52µm,21.0s,baz=82,slow=37
MKAR P3KPbc 16 03 23.2
comp=Z,2.9nm,0.9s,baz=256,slow=4.9,SNR=8.3
MKAR Makanchi Array 42.76 300 P P 15 34 06.5 -0.2
MKAR S S 15 40 24.0 +2.0
MKAR pmax pmax
comp=Z,687nm,0.8s
MKAR smax
comp=N,20nm,0.8s
MKAR MLR MLR
comp=Z,52µm,21.0s
MKAR Makanchi Array 42.76 300 P P 15 34 06.5 -0.2
MKAR ScP ScP 15 39 38.2 +1.7
MKAR S S 15 40 24.0 +2.0
MKAR LR LR 15 52 43.8
MKAR e 16 03 23.2
MRSI Marisa 43.01 209 P P 15 34 09.1 +0.1
comp=Z,4µm,1.1s,mb7.0
BDT Bhumibol Dam 43.06 251 P P 15 34 09.0 -0.4
comp=Z,189nm,0.9s,mb5.8
TTA Tatalina 43.14 36 eP P 15 34 09.6 +0.1
NST Nakhon Sawan 43.27 248 ⇑P P 15 34 11.1 0.0
comp=Z,962nm,0.8s,mb6.6
SVW2 Sparrevohn 43.31 39 eP P 15 34 11.6 +0.7
comp=Z,1µm,1.3s,mb6.5
SHL Shillong 43.58 266 iP P 15 34 13.0 -0.5
SHL iSCP ScP 15 39 42.0 +1.8
SHL iS S 15 40 34.0 -0.3
SHL ix x 15 43 59.0
LUWI Luwuk 44.11 207 P P 15 34 17.8 0.0
comp=Z,1µm,1.4s,mb6.5
KURK Kurchatov 44.33 306 P P 15 34 18.7 -0.5
comp=Z,13µm,0.6s,mb7.8
KURK Kurchatov 44.33 306 eP P 15 34 18.7 -0.5
KURK e*PP pP 15 34 44.9 -0.3
KURK pmax pmax
comp=Z,3µm,0.9s,mb7.0
KURK Kurchatov 44.33 306 eP P 15 34 18.7 -0.5
comp=Z,3µm,0.9s,mb7.0
KURK epP pP 15 34 44.9 -0.4
KURK Kurchatov 44.33 306 P P 15 34 19.0 -0.2
SNR=865
APSI Ampana 44.40 209 P P 15 34 23.1 +3.0
comp=Z,8µm,1.1s,mb7.3
OHAK Old Harbor 44.71 45 eP P 15 34 21.8 -0.4
comp=Z,2µm,0.8s,mb6.8
RSO Redoubt South 44.72 40 eP P 15 34 22.0 -0.2
NLAI Namlea 44.82 201 P P 15 34 26.6 +3.1
comp=Z,582nm,2.1s,mb6.0
PPLA Purkeypile 44.89 36 eP P 15 34 24.5 +1.0
comp=Z,386nm,0.5s,mb6.4
AGT Agartala 44.96 265 ix P 15 34 21.0 -3.6
AGT ix x 15 35 59.0
AAI Ambon 44.97 199 P P 15 34 26.7 +2.1
comp=Z,2µm,1.6s,mb6.5
KDAK Kodiak Island 45.03 44 P P 15 34 24.0 -0.7
comp=Z,11µm,0.7s,mb7.7
KDAK Kodiak Island 45.03 44 iP P 15 34 23.6 -1.1
KDAK Kodiak Island 45.03 44 eP P 15 34 23.6 -1.0
comp=Z,1µm,0.7s,mb6.7
PCI Palu 45.09 211 P P 15 34 26.4 +0.7
comp=Z,1µm,1.2s,mb6.5
GTK Gangtok 45.19 271 ex P 15 34 28.5 +2.1
GTK ex x 15 34 35.0
NNT Nongplab 45.65 245 P P 15 34 31.5 +1.4
SLGI Shiliguri 45.66 270 ex P 15 34 32.5 +2.4
SBUM Sibu 45.70 223 P P 15 34 31.1 +0.7
SBUM Sibu 45.70 223 P P 15 34 31.7 +1.3
comp=Z,462nm,1.3s,mb6.0
COLD Coldfoot 45.72 30 eP P 15 34 30.4 +0.4
comp=Z,407nm,0.7s,mb6.3
TRF Thorofare Moun 45.73 36 eP P 15 34 30.1 0.0
comp=Z,228nm,1.6s,mb5.7
TAPN Taplejung 45.88 271 eP P 15 34 31.4 -0.4
TLE Tual 45.92 192 P P 15 34 34.6 +2.4
comp=Z,1µm,1.1s,mb6.6
RC01 Rabbit Creek A 46.15 39 eP P 15 34 32.7 -0.8
comp=Z,1µm,1.1s,mb6.6
MCK McKinley 46.32 35 eP P 15 34 34.5 -0.2
MCK pmax pmax
comp=Z,457nm,0.4s,mb6.6
MCK McKinley 46.32 35 eP P 15 34 34.5 -0.3
comp=Z,457nm,0.4s,mb6.6
ODAN Odare 46.37 271 eP P 15 34 35.0 -0.7
PMR Palmer 46.39 38 eP P 15 34 35.1 -0.2
PMR pmax pmax
comp=Z,3µm,2.0s,mb6.7
PMR Palmer 46.39 38 eP P 15 34 35.1 -0.2
comp=Z,3µm,2.0s,mb6.7
COLA College 46.73 34 eP P 15 34 38.1 +0.2
COLA pmax pmax
comp=Z,1µm,0.9s,mb6.7
COLA College 46.73 34 eP P 15 34 38.1 +0.2
comp=Z,1µm,0.9s,mb6.7
KDI Kendari 46.88 206 P P 15 34 42.6 +3.0
comp=Z,475nm,1.6s,mb6.0
JIRN Jiri 46.90 273 eP P 15 34 39.4 -0.3
comp=Z,2µm,0.9s,mb6.9
JIRN Jiri 46.90 273 eP P 15 34 39.5 -0.2
comp=Z,7µm,0.9s,mb7.4
JIRN Jiri 46.90 273 eP P 15 34 39.5 -0.2
comp=Z,7µm,0.9s,mb7.4
RAMN Ramite 46.94 272 eP P 15 34 39.2 -0.8
GUN Gumba 47.01 273 eP P 15 34 40.5 -0.1
comp=Z,16µm,0.7s,mb7.8
GUN Gumba 47.01 273 eP P 15 34 40.6 0.0
GUN Gumba 47.01 273 eP P 15 34 40.6 0.0
TTSI Tana Toraja 47.05 210 P P 15 34 41.9 +0.9
comp=Z,250nm,2.0s,mb5.6
ILAR Eielson Array 47.15 34 P P 15 34 40.4 -0.8
comp=Z,166nm,0.7s,mb5.9,baz=267,slow=5.3,SNR=159
ILAR S S 15 41 25.6 +1.0
comp=Z,5.9nm,1.1s,baz=294,slow=4.5,SNR=2.4
ILAR PKiKP PKiKP 15 43 03.4 0.0
comp=Z,4.8nm,0.7s,baz=303,slow=3.2,SNR=4.6
ILAR P3KPbc 16 03 06.0
comp=Z,0.9nm,0.8s,baz=125,slow=2.7,SNR=5.6
ILAR P4KPbc 16 12 23.4
comp=Z,1.9nm,0.7s,baz=271,slow=3.9,SNR=23
ILAR Eielson Array 47.15 34 P P 15 34 40.4 -0.7
ILAR S S 15 41 25.6 +0.9
ILAR pmax pmax
comp=Z,166nm,0.7s
ILAR smax
comp=N,6.0nm,1.1s
ILAR Eielson Array 47.15 34 P P 15 34 40.4 -0.8
ILAR S S 15 41 25.6 +1.0
AAA Alma-Ata 47.37 296 iP P 15 34 43.6 +0.4
AAA iS S 15 41 27.6 -0.9
AAA pmax pmax
comp=Z,21µm,8.0s
AAA smax
comp=E,67µm,15.7s
AAA MLR MLR
comp=Z,47µm,15.0s
KKN Kakani 47.53 273 eP P 15 34 43.7 -1.0
KSM Kuching 47.53 225 eP P 15 34 45.2 +0.4
comp=Z,552nm,0.8s,mb6.4
KSM Kuching 47.53 225 P P 15 34 45.1 +0.3
comp=Z,790nm,1.3s,mb6.4
PKI Pulchoki 47.54 273 eP P 15 34 44.0 -0.7
PKI Pulchoki 47.54 273 eP P 15 34 44.1 -0.6
PKI pmax pmax
comp=Z,4µm,0.7s,mb7.3
PKI Pulchoki 47.54 273 eP P 15 34 44.1 -0.6
comp=Z,4µm,0.7s,mb7.3
PKIN Phulchoki 47.55 273 eP P 15 34 44.1 -0.7

comp=Z,4μm,0.7s,mb7.3
DMN Daman 47.76 273 *e*P **P 15 34 45.5 -0.9**
SPSI Sidrap Palu 47.92 210 P **P 15 34 47.0 -0.7**
comp=Z,400nm,1.3s,mb6.1
GKN Gorkha 47.92 274 *e*P **P 15 34 46.6 -1.1**
CAL Calcutta 47.94 265⇑ *i*P **P 15 34 49.2 +1.4**
CAL *ex* x 15 41 40.3
PAX Paxson 47.95 36 *e*P **P 15 34 48.6 +1.2**
PAX pmax pmax
comp=Z,324nm,1.0s,mb6.1
PAX Paxson 47.95 36 *e*P **P 15 34 48.6 +1.2**
comp=Z,324nm,1.0s,mb6.1
MID Middleton Isla 48.04 41 *e*P **P 15 34 52.1 +4.0**
MID pmax pmax
comp=Z,2μm,1.0s,mb6.8
MID Middleton Isla 48.04 41 *e*P **P 15 34 52.1 +4.0**
comp=Z,2μm,1.0s,mb6.8
DIV Divide 48.06 39 *e*P **P 15 34 48.6 +0.4**
comp=Z,2μm,1.3s,mb6.9
STKI Sintang 48.10 222 P **P 15 34 49.8 +0.7**
comp=Z,502nm,1.3s,mb6.2
JOHN Johnston Islan 48.16 104 *e*P **P 15 34 48.8 -0.8**
comp=Z,3μm,1.3s,mb6.9
BNSI Bone 48.19 209 P **P 15 34 50.2 +0.4**
comp=Z,1μm,1.7s,mb6.4
ULHL Ulahol 48.21 295 P **P 15 34 49.8 +0.1**
SNR=21
TKM2 Tokmak 2 48.42 296 P **P 15 34 52.0 +0.7**
SNR=378
TKM2 Tokmak 2 48.42 296 *e*P **P 15 34 51.8 +0.5**
TKM2 pmax pmax
comp=Z,881nm,0.9s,mb6.6
TKM2 Tokmak 2 48.42 296 *e*P **P 15 34 51.8 +0.4**
comp=Z,881nm,0.9s,mb6.6
DANN Dangsing 48.42 275 *e*P **P 15 34 50.3 -1.2**
comp=Z,27nm,0.6s,mb5.2
VOSK Vostochnaya 48.52 310 P **P 15 34 51.6 -0.3**
VOSK pmax pmax
comp=Z,1μm,1.0s,mb6.8
BMRM Bremner River 48.64 39 *e*P **P 15 34 52.8 0.0**
comp=Z,9μm,0.5s,mb8.0
MENT Mentasta 48.74 36 *e*P **P 15 34 54.5 +1.0**
KBKI Kotabaru 48.79 215 P **P 15 34 54.6 +0.2**
comp=Z,556nm,2.8s,mb6.0
BVAR Borovoye Array 48.80 311 P **P 15 34 53.7 -0.3**
comp=Z,324nm,0.5s,mb6.5,baz=78,slow=8.2,SNR=217
BVAR PcP PcP 15 36 19.2 +2.2
comp=Z,240nm,0.7s,baz=83,slow=2.8,SNR=4.1
BVAR S **S 15 41 50.5 +2.2**
comp=Z,94nm,0.9s,baz=67,slow=11,SNR=7.3
BVAR LR LR 15 56 32.9
comp=Z,1μm,18.1s,baz=69,slow=37
BVAR P4KPbc 16 12 33.2
comp=Z,7.7nm,1.0s,baz=90,slow=3.7,SNR=20
BVAR Borovoye Array 48.80 311 P **P 15 34 53.7 -0.3**
BVAR PcP PcP 15 36 19.2 +2.2
BVAR S **S 15 41 50.5 +2.2**
BVAR LR LR 15 56 32.9
BRVK Borovoye 48.85 311 P **P 15 34 54.2 -0.2**
comp=Z,4μm,1.4s,mb7.1
BRVK Borovoye 48.85 311 *e*P **P 15 34 53.9 -0.5**
BRVK *e*S **S 15 41 48.0 -1.0**
BRVK pmax pmax
comp=Z,533nm,0.8s,mb6.5
BRVK Borovoye 48.85 311 *e*P **P 15 34 53.9 -0.5**
comp=Z,533nm,0.8s,mb6.5
BRVK *e*S **S 15 41 48.0 -1.1**
BRVK Borovoye 48.85 311 P **P 15 34 54.4 0.0**
SNR=327
SNG Songkhla 48.92 239 P **P 15 34 56.0 +0.6**
comp=Z,2μm,1.1s,mb6.9
KZA Kyzart 48.96 295 P **P 15 34 56.5 +1.1**
SNR=177
KBK Karagaybulak 48.96 296 P **P 15 34 55.9 +0.4**
SNR=139
CHMS Chumysh 48.98 297 P **P 15 34 55.5 -0.1**
SNR=58
BKSI Bulukumba 49.03 209 P **P 15 34 56.2 0.0**
comp=Z,417nm,1.0s,mb6.3
USP Ospenovka 49.06 297 P **P 15 34 56.1 -0.1**
SNR=159
FRU Bishkek 49.13 297⇑ *e*P **P 15 34 56.5 -0.2**
FRU *e* 15 36 56.0
FRU *i* S **S 15 41 57.5 +4.3**
FRU *e* 15 42 40.0
FRU *i* SS SS 15 45 27.0 +1.6
FRU pmax pmax
comp=Z,3μm,2.2s,mb6.9
PMG Port Moresby 49.23 173 *e*P **P 15 34 57.2 -0.5**
PMG pmax pmax
comp=Z,390nm,1.0s
PMG Port Moresby 49.23 173 *e*P **P 15 34 57.2 -0.5**
comp=Z,390nm,1.0s,mb6.3
PMG Port Moresby 49.23 173 P **P 15 34 57.0 -0.7**
comp=Z,235nm,1.7s,mb5.8
AAK Ala-Archa 49.28 296 P **P 15 34 57.1 -0.8**
comp=Z,4μm,1.0s,mb7.2
AAK Ala-Archa 49.28 296 P **P 15 34 58.1 +0.2**
SNR=9.2
AAK Ala-Archa 49.28 296 *e*P **P 15 34 57.6 -0.3**
AAK *e**PP pP 15 35 23.8 -0.6
AAK *e*S **S 15 41 56.4 +1.0**
AAK pmax pmax
comp=Z,377nm,0.7s,mb6.4
AAK Ala-Archa 49.28 296 *e*P **P 15 34 57.6 -0.3**
comp=Z,377nm,0.7s,mb6.4
AAK *e*pP pP 15 35 23.8 -0.6
AAK *e*S **S 15 41 56.4 +1.1**
AAK Ala-Archa 49.28 296 P **P 15 34 57.5 -0.4**
comp=Z,6μmcomp=Z,139nm,0.9s,mb5.9
AAK Ala-Archa 49.28 296 P **P 15 34 58.2 +0.3**
SNR=287
KSH Kashi 49.39 292 P **P 15 35 02.6 +3.9**
KSH pP pP 15 35 28.6 +3.3
KSH sP sP 15 35 41.1 +3.2
KSH PP PP 15 36 59.1 +5.5
KSH ScP ScP 15 40 06.4 +2.2
KSH PcS PcS 15 40 18.4 +2.3
KSH S **S 15 42 01.8 +4.9**
KSH sS sS 15 42 47.0 +4.4
KSH ScS ScS 15 44 39.9 +0.8
KSH SS SS 15 45 32.5 +2.8
KSH pmax pmax
comp=Z,710nm,1.6s,mb6.3
KSH pmax pmax
comp=Z,13μm,7.2s
KSH LR LR
comp=N,33μm,11.5s
KSH LR LR
comp=E,26μm,13.6s
KSH LR LR
comp=Z,41μm,23.6s
UCH Uchtor 49.41 296 P **P 15 34 59.6 +0.7**
SNR=112
EGAK Eagle 49.58 33 *e*P **P 15 34 59.3 -0.5**
comp=Z,89μm,1.6s
ZRNK Zerenda 49.63 311 *i* P **P 15 35 00.3 0.0**
ZRNK pmax pmax
comp=Z,925nm,0.8s,mb6.8
EKS2 Erkin-Say 49.77 297 P **P 15 35 02.3 +0.7**
SNR=17
EKS2 Erkin-Say 49.77 297 *e*P **P 15 35 01.4 -0.2**
comp=Z,342nm,0.7s,mb6.4
EKS2 *e*pP pP 15 35 27.3 -0.8
EKS2 sP sP 15 35 38.1 -2.7
AML Almayashu 50.02 296 P **P 15 35 04.3 +0.8**
SNR=257
KULM Kulim 50.30 238 P **P 15 35 06.8 +0.9**
KULM Kulim 50.30 238 *e*P **P 15 35 06.6 +0.6**
comp=Z,842nm,0.8s,mb6.7
KULM *e*pP pP 15 35 31.4 -1.2
KULM Kulim 50.30 238 P **P 15 35 06.2 +0.3**
comp=Z,1μm,1.0s,mb6.8
PBKI Pangkalan Bun 50.38 220 P **P 15 35 07.4 +1.0**
comp=Z,756nm,1.0s,mb6.6
DAWY Dawson 50.46 34 *e*P **P 15 35 07.6 +1.1**
PTH Pithoragarh 50.55 278 *e*PKP **P 15 35 08.3 +0.6**
JOSI Joshimath 50.57 280 *e*PKP **P 15 35 08.1 +0.2**
JOSI AMb AMB 15 35 17.6
comp=Z,39μm,0.7s
IPM Ipoh 50.67 237 P **P 15 35 08.9 +0.2**
IPM Ipoh 50.67 237 P **P 15 35 08.2 -0.5**
comp=Z,814nm,1.0s,mb6.7
MYKOM Kota Tinggi 50.99 232 P **P 15 35 12.2 +1.2**
MYKOM Kota Tinggi 50.99 232 P **P 15 35 11.7 +0.6**
comp=Z,557nm,1.4s,mb6.4

KLP Kalpa 51.10 282 *e*PKP **P 15 35 13.0 +1.2**
KLP AMb AMB 15 35 18.8
comp=Z,8μm,1.1s,mb7.7
KGM Kluang 51.13 233 P **P 15 35 13.4 +1.3**
FRIM Kepong 51.24 235 P **P 15 35 13.8 +0.9**
MMRI Maumere 51.38 205 P **P 15 35 14.3 +0.4**
comp=Z,1μm,1.7s,mb6.8
PNL Peninsula 51.45 40 *e*P **P 15 35 14.6 +0.7**
comp=Z,1μm,1.3s,mb6.8
ALBI Allahabad 51.47 273 *ex* **P 15 35 12.0 -2.6**
DDI Dehra Dun 51.83 280⇑ *i*P **P 15 35 16.4 -0.8**
DDI *e*S **S 15 42 32.0 +1.2**
KK31 Karatay Array 51.84 298 *i* P **P 15 35 16.2 -0.9**
KK31 pmax pmax
comp=Z,721nm,0.8s,mb6.8
HNR Honiara 51.88 157 S **S 15 42 31.7 0.0**
comp=Z,49nm,0.7s,baz=234,slow=12,SNR=1.7
HNR LR LR 15 55 48.2
comp=Z,17μm,19.7s,baz=331,slow=34
HNR Honiara 51.88 157 *e*P **P 15 35 16.6 -1.0**
HNR pmax pmax
comp=Z,1μm,0.8s,mb6.9
HNR Honiara 51.88 157 *e*P **P 15 35 16.6 -1.0**
comp=Z,1μm,0.8s,mb6.9
INK Inuvik 51.91 28 *e*P **P 15 35 17.8 +0.6**
INK pmax pmax
comp=Z,750nm,1.4s
INK Inuvik 51.91 28 *e*P **P 15 35 17.8 +0.5**
comp=Z,750nm,1.4s,mb6.5
SDNR Sundarnagar 52.09 282 *e*PKP **P 15 35 19.9 +0.8**
SDNR *e*S **S 15 42 33.5 -0.9**
SMLA Simla 52.11 282 *i* P **P 15 35 19.1 -0.2**
DLH Dalhousie 52.35 284 *e*PKP **P 15 35 20.0 -1.0**
DLH *ex* x 15 35 52.0
TPI Tanjungpandan 52.51 225 P **P 15 35 22.8 +0.5**
comp=Z,549nm,1.1s,mb6.5
BHK Bhakra 52.54 282 *e*PKP **P 15 35 18.9 -3.6**
BHK *e*S **S 15 42 38.5 -2.1**
THN Thein Dam 52.59 284 *e*PKP **P 15 35 21.3 -1.5**
THN *e*S **S 15 42 42.7 +1.5**
KAKA Kakadu 52.91 191 *e*P **P 15 35 24.0 -1.2**
comp=Z,401nm,0.6s,mb6.6
KAKA *e*pP pP 15 35 49.1 -3.0
KAKA Kakadu 52.91 191 *e*P **P 15 35 24.0 -1.2**
comp=Z,37μm,2.4s,mb8.0
KAKA Kakadu 52.91 191 P **P 15 35 24.8 -0.4**
comp=Z,1μm,1.2s,mb6.7
KKR Kurukshetra 52.94 281 *e*PKP **P 15 35 25.4 +0.1**
KKR AMb AMB 15 35 31.4
comp=Z,3μm,1.6s,mb7.0
WSI Waingapu 53.00 207 P **P 15 35 26.1 +0.2**
comp=Z,1μm,1.1s,mb6.8
JMU Jammu 53.07 285 *ex* **P 15 35 30.0 +3.7**
KMMI Kalianget 53.10 215 P **P 15 35 27.7 +1.0**
comp=Z,638nm,1.2s,mb6.5
SVE Sverdlovsk 53.15 317⇓ *e*P **P 15 35 26.8 +0.3**
SVE *e* 15 37 29.1
SVE *e*S **S 15 42 45.0 -3.1**
SVE *e* 15 45 03.7
SVE pmax pmax
comp=Z,2μm,1.0s,mb7.2
SVE pmax pmax
comp=Z,8μm,9.3s
SVE MLR MLR
comp=Z,69μm,17.0s
BISR Bishrakh 53.15 279 *e*PKP **P 15 35 26.8 -0.2**
BISR AMb AMB 15 35 34.0
comp=Z,3μm,0.8s,mb7.4
NDI New Delhi 53.26 279 *ex* **P 15 35 25.0 -2.8**
NDI *e*S **S 15 42 49.0 -1.5**
PSI Prapat 53.30 237 LR LR 16 01 43.0
comp=Z,16μm,18.9s,baz=115,slow=40
AYAN Aya Nagar 53.43 279 *e*PKP **P 15 35 28.9 -0.2**
AGRA Agra 53.44 277 *e*PKP **P 15 35 28.9 -0.2**
AGRA AMb AMB 15 35 33.4
comp=Z,1μm,1.5s,mb6.7
SRBI Singaraja 53.49 213 P **P 15 35 29.9 +0.4**
comp=Z,834nm,2.2s,mb6.4
SKAG Skagway 53.49 39 *e*P **P 15 35 30.7 +1.7**
comp=Z,996nm,1.4s,mb6.7
COEN Coen 53.50 178 *e*P **P 15 35 28.8 -0.7**
COEN *e*pP pP 15 35 54.2 -2.2
COEN Coen 53.50 178 P **P 15 35 29.2 -0.3**
comp=Z,2μm,0.8s,mb7.2
KHKI Kahang-Kahang 53.58 212 P **P 15 35 29.4 -0.7**
comp=Z,2μm,1.1s,mb7.0
SONA Sohna 53.58 279 *e*PKP **P 15 35 29.9 -0.2**
RGRI Rengat 53.60 232 P **P 15 35 33.9 +3.6**
comp=Z,3μm,1.1s,mb7.2
BKNI Bangkinang 53.86 233 P **P 15 35 32.6 +0.4**
comp=Z,4μm,1.1s,mb7.4
BYJI Banyuwangi 53.97 214 P **P 15 35 36.1 +3.1**
comp=Z,2μm,1.1s,mb6.9
NBBI Negara 54.00 214 P **P 15 35 38.0 +4.8**
comp=Z,1μm,1.1s,mb6.9
TPTI 54.10 239 P **P 15 35 32.4 -1.6**
comp=Z,7μmcomp=Z,180nm,0.8s,mb6.1
IGBI Denpasar 54.18 213 P **P 15 35 34.6 +0.1**
comp=Z,835nm,1.1s,mb6.7
KIP Kipapa 54.19 91 P **P 15 35 33.8 -0.8**
KIP pmax pmax
comp=Z,1μm,0.9s,mb6.9
KIP Kipapa 54.19 91 P **P 15 35 33.8 -0.8**
comp=Z,1μm,0.9s,mb6.9
SOKR Solikamsk 54.20 321 *c i*P **P 15 35 33.8 -0.4**
SOKR *PP pP 15 36 00.9 -0.2
SOKR 15 37 39.3
SOKR PPP 15 38 55.0
SOKR S **S 15 43 03.4 +1.1**
SOKR *SS sS 15 43 47.9 -0.7
SOKR pmax pmax
comp=Z,790nm,0.9s,mb6.7
SOKR MLR MLR
comp=Z,10μm,11.0s
PMBI Palembang 54.24 227 P **P 15 35 38.1 +3.1**
comp=Z,1μm,1.0s,mb6.9
SIT Sitka 54.27 42 *e*P **P 15 35 36.8 +2.1**
SIT pmax pmax
comp=Z,2μm,1.5s,mb6.9
SIT Sitka 54.27 42 *e*P **P 15 35 36.8 +2.1**
comp=Z,2μm,1.5s,mb6.9
ARU Arti 54.36 317 P **P 15 35 35.5 +0.2**
comp=Z,11μm,1.3s,mb7.7
ARU Arti 54.36 317 *c i*P **P 15 35 35.0 -0.3**
ARU *e**SP pP 15 36 03.3 +1.0
ARU *e* 15 36 38.5
ARU *e* 15 37 36.6
ARU *e*PPP 15 38 52.9
ARU *e*S **S 15 43 07.1 +2.7**
ARU *e**SS sS 15 43 47.7 -3.1
ARU *e* 15 45 09.9
ARU *e*SSS 15 48 54.1
ARU pmax pmax
comp=Z,2μm,1.0s,mb7.1
ARU pmax pmax
comp=Z,2μm,7.9s
ARU MLR MLR
comp=Z,55μm,18.0s
ARU Arti 54.36 317 *e*P **P 15 35 34.9 -0.4**
comp=Z,3μm,1.2s,mb7.2
ARU *e*pP pP 15 36 01.6 -0.7
MNSI Mandailing Nat 54.41 235 P **P 15 35 36.5 +0.3**
comp=Z,397nm,1.0s,mb6.4
GMJI Gumukmas 54.42 215 P **P 15 35 36.3 0.0**
comp=Z,343nm,1.7s,mb6.1
NGJI Ngawi 54.53 218 P **P 15 35 38.6 +1.6**
comp=Z,884nm,1.0s,mb6.7
VIS Vishakhapatnam 54.54 264 *e*PKP **P 15 35 37.5 +0.4**
VIS *i* P 15 35 38.3
VIS AMb AMB 15 35 42.0
comp=Z,986nm,1.1s,mb6.8
VIS *e*S **S 15 43 07.7 -0.1**
VIS *i* S **S 15 43 09.9 +2.1**
SDSI Sungai Dareh 54.61 232 P **P 15 35 37.7 0.0**
comp=Z,3μm,1.1s,mb7.2
KHET Khetri 54.64 279 *e*PKP **P 15 35 37.8 -0.1**
SJI Sawahan 54.71 217 P **P 15 35 37.5 -0.8**
comp=Z,716nm,1.2s,mb6.6
SMRI Semarang 54.74 219 P **P 15 35 38.9 +0.4**
comp=Z,948nm,1.1s,mb6.7
KRKI Karangkates 54.76 216 P **P 15 35 37.5 -1.2**
comp=Z,2μm,1.1s,mb7.1
PPI Padang Panjang 54.87 233 P **P 15 35 40.1 +0.6**
comp=Z,429nm,1.1s,mb6.4
PWJI Pagerwojo 54.94 217 P **P 15 35 38.3 -1.7**
comp=Z,1μm,1.7s,mb6.6
PDSI Padang 55.18 233 P **P 15 35 41.7 -0.1**
comp=Z,908nm,1.1s,mb6.7
GSI Gunungsitoli 55.31 238 P **P 15 35 43.0 +0.3**
comp=Z,3μm,1.1s,mb7.1
PCJI Pacitan 55.38 217 P **P 15 35 46.7 +3.5**
comp=Z,582nm,1.9s,mb6.3
UGM Wanagama 55.45 218 P **P 15 35 43.6 0.0**
comp=Z,1μm,1.3s,mb6.8
YOGI Yogyakarta 55.47 219 P **P 15 35 44.9 +1.1**
comp=Z,2μm,1.3s,mb7.0
KRJI Kerinci 55.50 231 P **P 15 35 47.2 +3.1**
comp=Z,4μm,1.2s,mb7.4
KLSI 55.71 226 P **P 15 35 45.4 -0.2**
comp=Z,2μm,1.4s,mb7.0
KLI Kotabumi 55.78 226 P **P 15 35 45.5 -0.6**
comp=Z,2μm,1.1s,mb7.0
MDSI Maura Dua 55.85 227 P **P 15 35 45.8 -0.8**
comp=Z,1μm,1.1s,mb6.8
TNG Tangerang 55.91 223 P **P 15 35 50.2 +3.2**
comp=Z,2μm,1.3s,mb7.0
BHPL Bhopal 55.95 273 *e*PKP **P 15 35 46.6 -0.6**
BHPL AMb AMB 15 35 51.5
comp=Z,1μm,1.5s,mb6.7
LEM Lembang 55.95 222 P **P 15 35 47.2 -0.1**
comp=Z,1μm,1.1s,mb6.8
CRAG Craig 55.98 43 *e*P **P 15 35 49.2 +2.2**
comp=Z,2μm,1.5s,mb6.8
BLSI Bandar Lampung 55.99 225 P **P 15 35 47.4 -0.1**
comp=Z,1μm,1.1s,mb6.8
CBJI Citeko 56.01 223 P **P 15 35 48.4 +0.7**
comp=Z,883nm,0.9s,mb6.8
KSI Kapahiang 56.08 229 P **P 15 35 47.7 -0.5**
comp=Z,856nm,1.0s,mb6.7
RBSI Rajabasa 56.12 224 P **P 15 35 51.6 +3.2**
comp=Z,741nm,1.1s,mb6.6
SBJI Serang 56.14 224 P **P 15 35 49.6 +1.0**
comp=Z,549nm,1.2s,mb6.5
AB31 Akbulak array 56.24 309 *i* P **P 15 35 48.4 -0.5**
AB31 pmax pmax
comp=Z,418nm,0.4s,mb6.8
AJM Ajmer 56.35 278 *i* P **P 15 35 49.0 -1.1**
SISI Saibi 56.36 234 P **P 15 35 51.4 +1.2**
comp=Z,1μm,1.1s,mb6.9
LWLI Liwa 56.36 227 P **P 15 35 50.0 -0.2**
comp=Z,883nm,0.9s,mb6.8
MNAI Manna 56.45 228 P **P 15 35 53.0 +2.2**
comp=Z,920nm,1.3s,mb6.7
KNA Kununurra 56.52 195 P **P 15 35 51.4 +0.2**
comp=Z,2μm,1.1s,mb7.0
KASI Kota Agung 56.53 226 P **P 15 35 50.0 -1.4**
comp=Z,646nm,1.1s,mb6.6
SKJI Sukabumi 56.66 223 P **P 15 35 52.5 +0.2**
comp=Z,717nm,1.1s,mb6.6
ALE Alert 57.35 4 P **P 15 35 58.0 +1.6**
comp=Z,4μm,1.1s,mb7.3,SNR=80
AKL Akola 57.67 271⇑ *i*P **P 15 35 59.8 +0.3**
AKL AMb AMB 15 36 04.9
comp=Z,3μm,1.9s,mb6.9
AKL *i* x x 15 43 49.8
KBS Kingsbay 57.95 350 *e*P **P 15 36 00.8 +0.2**
KBS *e*S **S 15 43 52.7 +1.3**
KBS Kingsbay 57.95 350 *ce*P **P 15 36 01.5 +0.9**
KBS pmax pmax
comp=Z,1μm,1.2s,mb6.8
KBS Kingsbay 57.95 350 *e*P **P 15 36 01.3 +0.7**
comp=Z,984nm,1.1s,mb6.8
HYB Hyderabad 58.39 267 *e*P **P 15 36 04.0 -0.5**
HYB *e**PP pP 15 36 32.0 +0.2
HYB *e*S **S 15 43 58.0 -0.6**
HYB pmax pmax
comp=Z,800nm,1.0s,mb6.7
HYB Hyderabad 58.39 267 *e*P **P 15 36 04.0 -0.5**
comp=Z,800nm,1.0s,mb6.7
HYB *e*pP pP 15 36 32.0 +0.2
HYB *e*S **S 15 43 58.0 -0.6**
HYB *e* 15 51 32.0
HYB *e* 16 05 52.0
HYB Hyderabad 58.39 267 *i* P **P 15 36 04.0 -0.5**
comp=Z,400nm,1.0s,mb6.4
HYB *e*pP pP 15 36 32.0 +0.2
HYB *e*PcP PcP 15 36 55.0 +0.9
HYB *e*PP PP 15 38 16.0 +1.2
HYB *e*PPP 15 39 40.0
HYB *e*S **S 15 43 58.0 -0.6**
HYB *e*SS 15 44 04.0
HYB LR LR 15 51 32.0
comp=Z,19nm,18.0s
JASL Jaisalmer 58.96 281 *e*PKP **P 15 36 08.2 -0.1**
LATR Latur 59.34 269 *e*PKP **P 15 36 10.2 -0.9**
FUNA Funafuti 59.40 135 *e*P **P 15 36 11.3 -0.1**
comp=Z,3μm,2.0s,mb7.0
FITZ Fitzroy Crossi 59.47 198 *e*P **P 15 36 10.7 -1.0**
comp=Z,660nm,1.2s,mb6.5
FITZ *e*pP pP 15 36 38.6 -0.5
FITZ *e*sP sP 15 36 51.5 0.0
FITZ *e*S **S 15 44 11.0 -1.3**
FITZ *e*pS 15 44 56.7
FITZ *e*PKPPKP 16 05 17.0
FITZ Fitzroy Crossi 59.47 198 S **S 15 44 11.9 -0.4**
comp=Z,29nm,1.2s,baz=252,slow=23,SNR=5.8
FITZ PKP2bc 16 05 52.5
comp=Z,8.1nm,0.8s,baz=215,slow=3.9,SNR=5.9
FITZ Fitzroy Crossi 59.47 198 *e*P **P 15 36 11.7 -0.1**
FITZ Fitzroy Crossi 59.47 198 P **P 15 36 11.8 +0.1**
comp=Z,824nm,2.2s,mb6.4
LVZ Lovozero 59.63 335 P **P 15 36 12.3 0.0**
comp=Z,2μm,1.1s,mb7.2,SNR=15
LVZ Lovozero 59.63 335 *c i*P **P 15 36 12.1 -0.2**
LVZ pmax pmax
comp=Z,845nm,1.6s,mb6.5
MDRS Chennai 59.72 262⇑ *i*P pP 15 36 35.9 -5.2
MDRS *ex* x 15 36 37.6
MDRS AMb AMB 15 36 41.7
MDRS ⇓ *i*S Sx 15 44 40.9
CTA Charters Tower 59.73 175 *e*P **P 15 36 12.1 -1.4**
comp=Z,124nm,1.1s,mb5.8
CTA *e*pP pP 15 36 38.8 -2.2
CTA Charters Tower 59.73 175 P **P 15 36 13.0 -0.6**
comp=Z,78nm,0.6s,mb5.9,baz=355,slow=7.2,SNR=55
CTA S **S 15 44 15.9 +0.3**
comp=Z,12nm,1.1s,baz=120,slow=6.9,SNR=2.0
CTA Charters Tower 59.73 175 P **P 15 36 13.0 -0.5**
CTA S **S 15 44 15.9 +0.3**
CTA pmax pmax
comp=Z,78nm,0.6s
CTA smax
comp=N,12nm,1.1s
CTAO Charters Tower 59.73 175 *e*P **P 15 36 12.6 -0.9**
CTAO *e**PP pP 15 36 38.9 -2.1
CTAO pmax pmax
comp=Z,758nm,1.4s,mb6.5
CTAO Charters Tower 59.73 175 *e*P **P 15 36 12.6 -0.9**
comp=Z,758nm,1.4s,mb6.5
CTAO *e*pP pP 15 36 38.9 -2.0
CTAO Charters Tower 59.73 175 P **P 15 36 13.1 -0.4**
comp=Z,292nm,2.0s,mb6.0
BJO Bjornoya 59.78 345 *e*P **P 15 36 13.3 +0.1**
BJO *e*S **S 15 44 15.6 +0.5**
BJO AMS AMS 16 05 30.5
comp=Z,25μm,14.8s
WRAB Tennant Creek 59.79 188 P **P 15 36 13.3 -0.6**
comp=Z,4μm,0.8s,mb7.5,SNR=57
WRAB Tennant Creek 59.79 188 *e*P **P 15 36 11.6 -2.3**
WRAB pmax pmax
comp=Z,1μm,0.9s,mb6.9
WRAB Tennant Creek 59.79 188 *e*P **P 15 36 11.6 -2.3**
comp=Z,1μm,0.9s,mb6.9
WRAB Tennant Creek 59.79 188 P **P 15 36 13.3 -0.6**
comp=Z,2μm,1.1s,mb7.0
BJO1 Bjornoya 59.82 345 *e*P **P 15 36 13.3 -0.2**
BJO1 LR LR
comp=Z,25μm,14.8s
RES Resolute Bay 59.92 15 LR LR 16 06 10.0
comp=Z,15μm,18.2s,baz=30,slow=40
RES Resolute Bay 59.92 15 *e*P **P 15 36 14.8 +0.6**
RES pmax pmax
comp=Z,2μm,0.9s,mb7.0
RES Resolute Bay 59.92 15 *e*P **P 15 36 14.8 +0.6**
comp=Z,2μm,0.9s,mb7.0
APA Apatity 60.21 335⇑ *i*P **P 15 36 16.3 +0.1**
APA *i* *PP pP 15 36 42.0 -1.7
APA *i* 15 36 55.0
APA *i* PPP 15 39 57.0
APA *i* S **S 15 44 12.0 -8.7**
APA *i* PS 15 44 50.0

APA *i* 15 45 49.0
APA *i* SS SS 15 48 14.0 -4.9
APA pmax pmax
comp=Z,7μm,3.0s
APA pmax pmax
comp=Z,660nm,1.0s,mb6.6
APA MLR MLR
comp=Z,30μm,16.0s
QUE Quetta 60.22 286 *e*P **P 15 36 17.0 +0.1**
QUE *e*S **S 15 44 26.0 +4.0**
BHV Bhavnagar 60.83 275 *e*PKP **P 15 36 19.5 -1.7**
KEV Kevo 60.89 339 *e*P **P 15 36 20.4 -0.5**
KEV pmax pmax
comp=Z,249nm,0.8s,mb6.3
KEV Kevo 60.89 339 *e*P **P 15 36 20.4 -0.5**
comp=Z,249nm,0.8s,mb6.3
KEV Kevo 60.89 339 *e*p **P 15 36 20.4 -0.5**
comp=Z,249nm,0.8s,mb6.3
POO Poona 61.36 271 *e*PKP **P 15 36 24.6 -0.1**
POO AMb AMB 15 36 29.5
YKA Yellowknife Ar 61.40 31 P **P 15 36 23.5 -0.8**
comp=Z,92nm,0.5s,mb6.1,baz=300,slow=6.1,SNR=124
YKA S **S 15 44 36.7 +0.7**
comp=Z,4.9nm,0.9s,baz=181,slow=25,SNR=2.5
YKA PKP2bc 16 05 41.0
comp=Z,14nm,0.9s,baz=142,slow=2.3,SNR=6.6
YKA P4KPbc 16 13 30.3
comp=Z,0.6nm,0.7s,baz=313,slow=5.0,SNR=4.0
YKA Yellowknife Ar 61.40 31 P **P 15 36 23.5 -0.9**
YKA S **S 15 44 36.7 +0.7**
YKA pmax pmax
comp=Z,92nm,0.5s
YKA smax
comp=N,5.0nm,0.9s
YKA Yellowknife Ar 61.40 31 P **P 15 36 23.6 -0.8**
YKA S **S 15 44 36.7 +0.7**
YKA ⇑*e* 16 05 41.0
ARCES ARCESS Array B 61.44 339 P **P 15 36 24.3 -0.3**
comp=N,259nm,0.9s,mb6.3,baz=53,slow=7.5,SNR=85
ARCES S **S 15 44 38.2 +1.8**
comp=N,21nm,1.0s,baz=179,slow=5.7,SNR=3.3
ARCES PKP2bc 16 05 42.6
comp=N,11nm,0.9s,baz=298,slow=2.6,SNR=6.9
ARCES LR LR 16 07 29.0
comp=N,22μm,18.5s,baz=226,slow=40
ARCES ARCESS Array B 61.44 339 P **P 15 36 24.3 -0.3**
ARCES S **S 15 44 38.2 +1.8**
ARCES pmax pmax
comp=Z,259nm,0.9s
ARCES smax
comp=N,21nm,1.0s
ARCES MLR MLR
comp=Z,22μm,18.5s
ARCES ARCESS Array B 61.44 339 P **P 15 36 24.3 -0.3**
ARCES S **S 15 44 38.2 +1.8**
ARCES ⇑*e* 16 05 42.6
ARCES LR LR 16 07 29.1
ARE0 ARCESS Array S 61.45 339 *e*P **P 15 36 23.9 -0.7**
ARE0 *e*pP pP 15 36 50.3 -1.8
KAD Karad 61.81 270 *e*PKP **P 15 36 27.6 -0.2**
KAD AMb AMB 15 36 32.4
BHJ Bhuj 61.90 278 *e*PKP **P 15 36 29.0 +0.6**
BHJ AMb AMB 15 36 32.0
comp=Z,637nm,1.6s,mb6.4
KTK1 Kautokeino 62.40 339⇑*i*P **P 15 36 31.4 +0.4**
KTK1 *e*S **S 15 44 49.7 +1.2**
KTK1 *e*SS SS 15 48 55.7 +2.6
VAN Vannovskaya 62.58 298⇓*i*P **P 15 36 32.5 -0.2**
VAN S **S 15 44 54.8 +3.2**
ABKT Ailbek 62.58 298 P **P 15 36 32.0 -0.7**
comp=Z,3μm,0.8s,mb7.3
DAG Danmarks Havn 63.03 355⇓*e*P **P 15 36 34.2 -0.9**
DAG pmax pmax
comp=Z,730nm,0.9s,mb6.6
DAG MLR MLR
comp=N,31μm,17.0s
DAG MLR MLR
comp=Z,24μm,17.0s
DAG Danmarks Havn 63.03 355⇓*i*P **P 15 36 34.2 -0.9**
comp=Z,730nm,0.9s,mb6.6
DAG
comp=Z,24μm,17.0s
PALK Pallekele 63.06 256 P **P 15 36 36.2 0.0**
comp=Z,2μm,1.5s,mb6.8,SNR=16
PALK Pallekele 63.06 256 *e*P **P 15 36 36.2 0.0**
PALK *e**PP pP 15 37 02.3 -1.6
PALK pmax pmax
comp=Z,413nm,1.0s,mb6.3
PALK Pallekele 63.06 256 *e*P **P 15 36 36.2 0.0**
comp=Z,413nm,1.0s,mb6.3
PALK *e*pP pP 15 37 02.3 -1.5
PALK Pallekele 63.06 256 P **P 15 36 36.6 +0.4**
comp=Z,10μmcomp=Z,219nm,2.1s,mb5.7
PALK Pallekele 63.06 256 P **P 15 36 37.0 +0.9**
SNR=16
TRO Tromso 63.13 341⇑*i*P **P 15 36 35.7 -0.1**
TRO *e*S **S 15 44 56.7 -0.9**
TRO AMS AMS 16 08 07.0
comp=Z,20μm,18.1s
GOA Goa 63.17 268⇑*e*PKP **P 15 36 36.5 -0.4**
ASAR Alice Springs 63.53 188 P **P 15 36 37.2 -1.7**
comp=Z,244nm,0.5s,mb6.3,baz=6.9,slow=5.9,SNR=599
ASAR S **S 15 45 04.4 +1.0**
comp=Z,15nm,1.1s,baz=346,slow=4.1,SNR=4.8
ASAR PKP2bc 16 05 37.2
comp=Z,7.8nm,0.8s,baz=177,slow=2.5,SNR=11
ASAR P4KPbc 16 13 37.5
comp=Z,2.1nm,0.8s,baz=11,slow=4.4,SNR=11
ASAR Alice Springs 63.53 188 P **P 15 36 37.2 -1.7**
ASAR S **S 15 45 04.4 +1.0**
ASAR ⇑*e* 16 05 37.2
JOF Joensuu 63.57 331 *e*P **P 15 36 38.0 -0.8**
JOF pmax pmax
comp=Z,639nm,0.9s,mb6.5
JOF Joensuu 63.57 331 *e*p **P 15 36 38.0 -0.8**
comp=Z,639nm,0.9s,mb6.5
MBWA Marble Bar 63.95 203 *e*P **P 15 36 40.8 -1.0**
comp=Z,4μm,1.8s,mb6.9
MBWA Marble Bar 63.95 203 P **P 15 36 41.7 -0.1**
comp=Z,535nm,2.3s,mb6.0
MBWA Marble Bar 63.95 203 P **P 15 36 42.9 +1.2**
SNR=22
PGC Sidney 64.39 47 *e*P **P 15 36 44.2 -0.2**
comp=Z,39nm,1.0s,mb5.2
MCW Mount Constitu 64.73 47 P **P 15 36 47.9 +1.3**
NLWA Neilton Lookou 64.82 48⇑P **P 15 36 47.1 -0.1**
baz=65,SNR=234
NLWA ⇓S **S 15 45 23.0 +3.9**
baz=65
NLWA Neilton Lookou 64.82 48 *e*P **P 15 36 47.7 +0.5**
comp=Z,2μm,1.2s,mb6.8
A05A Maple Falls 64.97 46⇓P **P 15 36 48.0 -0.2**
baz=65,SNR=123
A05A ⇓S **S 15 45 21.7 +0.8**
baz=65
MOS Moscow 65.09 323*c i*P **P 15 36 48.9 +0.1**
MOS *e**PP pP 15 37 14.9 -1.7
MOS *e* 15 39 13.6
MOS *e*PPP 15 40 46.7
MOS *i* S S 15 45 24.7 +2.7
MOS *e*SS SS 15 49 31.8 -3.6
MOS pmax pmax
comp=Z,8μm,3.2s
MOS pmax pmax
comp=N,3μm,2.8s
MOS pmax pmax
comp=E,3μm,3.1s
MOS pmax pmax
comp=Z,2μm,1.1s,mb6.8
MOS MLR MLR
comp=Z,32μm,12.0s
MOS MLR MLR
comp=E,23μm,12.0s
STEI Steigen 65.29 340 *e*P **P 15 36 49.0 -0.9**
STEI AML AML 15 36 55.6
comp=Z,92nm,0.7s
GNW Green Mountain 65.33 48 P **P 15 36 50.8 +0.3**
EIDS Eidsvold 65.44 170 *e*P **P 15 36 50.8 -0.5**
EIDS *e*pP pP 15 37 18.2 -1.0
EIDS *e*sP sP 15 37 29.9 -1.6
E03A Lebam 65.45 49⇑P **P 15 36 51.6 +0.3**
baz=65,SNR=204
E03A ⇑S S 15 45 30.0 +3.2
baz=65
JCW Jim Creek 65.49 47 *e*P **P 15 36 51.5 -0.1**
comp=Z,973nm,0.9s,mb6.6
B06A Marblemount 65.57 46⇑P **P 15 36 51.8 -0.2**
baz=65,SNR=107
B06A ⇑S S 15 45 28.1 0.0
baz=65
LOF Lofoten 65.57 341 *e*P **P 15 36 43.1 -8.6**
VRHR Novokhopersk 65.70 317 *e*P **P 15 36 51.4 -1.5**
VRHR *e**SP pP 15 37 19.5 -1.2
VRHR *e* 15 39 16.2
VRHR *e*S S 15 45 27.7 -2.0
VRHR pmax pmax
comp=N,200nm,0.6s
VRHR pmax pmax
comp=E,490nm,0.6s
VRHR pmax pmax
comp=Z,740nm,0.6s,mb6.7
VRHR pmax pmax
comp=Z,810nm,1.6s,mb6.3
VRHR pmax pmax
comp=N,160nm,0.5s
VRHR pmax pmax
comp=E,480nm,0.8s
VRHR smax
comp=N,430nm,1.2s
VRHR smax
comp=E,940nm,1.2s
VRHR smax
comp=Z,160nm,1.2s
NOUC Port Laguerre 65.79 155 *e*P **P 15 36 53.9 +0.3**
DZM Mont Dzumac 65.81 155 *e*P **P 15 36 55.3 +1.5**
DZM *e*S S 15 45 27.9 -3.5
comp=Z,53μm,28.1s
DZM *e*LQ 15 53 32.1
comp=Z,95μm,31.6s
DZM *e*LR LR 15 56 37.8
comp=Z,80μm,34.3s
DZM Mont Dzumac 65.81 155 *e*P **P 15 36 54.4 +0.6**
PUL Pulkovo 65.86 329*ce*P **P 15 36 54.5 +0.8**
PUL pmax pmax
comp=Z,2μm,1.0s,mb6.9
KAF Kangasniemi 65.89 332 *e*P **P 15 36 53.1 -0.8**
KAF pmax pmax
comp=Z,323nm,0.7s,mb6.3
KAF Kangasniemi 65.89 332 *e*P **P 15 36 53.1 -0.8**
comp=Z,323nm,0.7s,mb6.3
KAF Kangasniemi 65.89 332 *e*p **P 15 36 53.1 -0.8**
comp=Z,323nm,0.7s,mb6.3
OBN Obninsk 65.94 323 P **P 15 36 53.3 -1.0**
comp=Z,7μm,1.4s,mb7.3,SNR=68
OBN Obninsk 65.94 323*c i*P **P 15 36 53.6 -0.7**
OBN *i**PP pP 15 37 21.1 -1.1
OBN *i* 15 37 31.1
OBN *e* 15 39 18.4
OBN *i* S S 15 45 33.2 +0.8
OBN *i* SS SS 15 49 50.3 +1.7
OBN pmax pmax
comp=Z,2μm,1.2s,mb6.8
OBN MLR MLR
comp=Z,38μm,14.0s
OBN Obninsk 65.94 323 *e*P **P 15 36 53.5 -0.8**
comp=Z,2μm,1.3s,mb6.8
D05A Enumclaw 66.01 48⇓P **P 15 36 55.2 +0.3**
baz=66
D05A ⇑S S 15 45 35.7 +2.2
baz=66
HEBO Mount Hebo 66.05 50 *e*P **P 15 36 56.0 +0.8**
comp=Z,1μm,0.9s,mb6.8
COCO West Island 66.30 229 P **P 15 36 58.1 +1.0**
comp=Z,8μm,0.9s,mb7.5,SNR=6.1
COCO West Island 66.30 229 *e*P **P 15 36 57.5 +0.4**
COCO pmax pmax
comp=Z,2μm,1.2s,mb6.8
COCO West Island 66.30 229 *e*P **P 15 36 57.5 +0.4**
comp=Z,2μm,1.2s,mb6.8
COCO West Island 66.30 229 P **P 15 37 00.4 +3.3**
comp=Z,2μm,1.2s,mb6.7
COCO West Island 66.30 229 P **P 15 36 58.7 +1.6**
SNR=12
TDL Tradedollar La 66.33 49 P **P 15 36 57.5 +0.5**
LON Longmire 66.35 48 P **P 15 36 57.1 0.0**
FINES FINESS Array B 66.41 332 P **P 15 36 56.4 -0.8**
comp=Z,1μm,0.9s,mb6.7,baz=56,slow=4.8,SNR=192
FINES S S 15 45 38.5 +0.5
comp=Z,23nm,1.0s,baz=149,slow=4.0,SNR=3.0
FINES LR LR 16 08 25.7
comp=Z,23μm,18.2s,baz=57,slow=38
FINES FINESS Array B 66.41 332 P **P 15 36 56.4 -0.8**
FINES S S 15 45 38.5 +0.5
FINES smax
comp=N,23nm,1.0s
FINES MLR MLR
comp=Z,23μm,18.2s
F04A Amboy 66.45 49⇓P **P 15 36 57.8 +0.1**
baz=66,SNR=267
WPW White Pass 66.53 48 P **P 15 36 58.9 +0.6**
MSVF Nonsavu 66.62 142 P **P 15 37 00.0 +1.0**
comp=Z,3μm,1.4s,mb7.0,SNR=40
MSVF Nonsavu 66.62 142 *e*P **P 15 36 59.8 +0.7**
comp=Z,480nm,0.9s,mb6.3
COR Corvallis 66.67 51 *e*P **P 15 36 58.2 -0.9**
COR pmax pmax
comp=Z,2μm,0.9s,mb7.0
COR Corvallis 66.67 51 *e*P **P 15 36 58.2 -1.0**
comp=Z,2μm,0.9s,mb7.0
XMAS Kiritimati 66.72 108 *e*P **P 15 37 00.1 +0.2**
comp=Z,3μm,1.3s,mb7.0
MOR8 Moi Rana 66.80 339 *e*P **P 15 36 57.9 -1.7**
MOR8 AMb AMB 15 37 01.8
comp=Z,891nm,0.9s,mb6.6
MOR8 *e*pP pP 15 37 19.8 -7.8
MOR8 Moi Rana 66.80 339 *e*P **P 15 36 57.9 -1.7**
comp=Z,891nm,0.9s,mb6.6
G04A Mulino 66.81 50⇑P **P 15 37 00.4 +0.4**
baz=67,SNR=109
MAK Makhachkala 66.83 307 *e*P **P 15 37 00.5 +0.3**
MAK *i**PP pP 15 37 27.3 -0.8
MAK *i**SP sP 15 37 40.9 +0.4
MAK *e* 15 39 28.7
MAK *e*PPP 15 41 06.7
MAK *e*S S 15 45 43.6 0.0
MAK *e*SS SS 15 50 00.5 -2.5
MAK pmax pmax
comp=Z,1μm,2.5s,mb6.2
MAK pmax pmax
comp=Z,7μm,4.6s
MAK pmax pmax
comp=N,646nm,2.4s
MAK pmax pmax
comp=E,1μm,2.7s
MAK smax
comp=E,44μm,10.4s
MAK smax
comp=N,31μm,12.9s
MAK MLR MLR
comp=E,43μm,11.0s
MAK MLR MLR
comp=Z,41μm,15.0s
MAK MLR MLR
comp=N,34μm,12.0s
B08A Colville Reser 66.85 46⇓P **P 15 37 00.0 -0.2**
baz=67,SNR=394
WTV Waterville 66.88 47 P **P 15 37 00.3 -0.1**
KONS Konsvik 66.91 340 *e*P **P 15 37 00.7 +0.4**
VSR Storozhevoye 66.91 318 *e*P **P 15 36 59.9 -0.7**
VSR *e**SP pP 15 37 28.1 -0.4
VSR *e* 15 39 26.2
VSR *e*PPP 15 41 03.5
VSR *e*S S 15 45 45.9 +1.6
VSR *e*SS SS 15 49 59.9 -4.0
VSR pmax pmax
comp=N,1μm,2.0s
VSR pmax pmax
comp=E,1μm,2.0s
VSR pmax pmax
comp=Z,3μm,2.0s,mb6.8
VSR pmax pmax
comp=N,250nm,0.8s
VSR pmax pmax
comp=E,230nm,0.8s
VSR pmax pmax
comp=Z,720nm,0.8s,mb6.5
VSR smax
comp=N,13μm,5.8s
VSR smax
comp=E,16μm,5.8s
VSR smax
comp=Z,6μm,5.8s
VSR MLR MLR
comp=N,19μm,17.0s
VSR MLR MLR
comp=E,48μm,17.0s
VSR MLR MLR
comp=Z,67μm,17.0s
VSR Storozhevoye 66.91 318⇑*i*P **P 15 37 00.1 -0.5**
FLOS Flostrand 66.97 340 *e*P **P 15 37 01.1 +0.4**
VORD Divnogorie 66.99 318 *e*P **P 15 37 00.5 -0.6**
VORD *e**SP pP 15 37 28.7 -0.3
VORD *e* 15 39 28.5
VORD *e*S S 15 45 44.2 -1.1
VORD *e*SS SS 15 50 01.3 -3.8
VORD pmax pmax
comp=N,200nm,0.8s
VORD pmax pmax
comp=E,310nm,0.8s
VORD pmax pmax
comp=Z,530nm,0.8s,mb6.4
VORD pmax pmax
comp=Z,3μm,4.3s
VORD smax
comp=N,10μm,5.1s
VORD smax
comp=Z,5μm,5.1s
VORD smax
comp=E,5μm,2.5s
VORD MLR MLR
comp=N,20μm,19.0s
VORD MLR MLR
comp=E,44μm,19.0s
VORD MLR MLR
comp=Z,56μm,19.0s
STOK Stokkvaagen 67.06 340 *e*P **P 15 37 02.5 +1.2**
STOK *e*S S 15 45 47.9 +2.2
EDM Edmonton 67.15 39 *e*P **P 15 37 01.6 -0.4**
H04A Detroit Lake 67.28 50⇓P **P 15 37 03.1 +0.2**
baz=67,SNR=523
VFP Flag Point 67.34 49 P **P 15 37 03.8 +0.4**
JNW Jan Mayen West 67.39 350⇑*i*P **P 15 37 07.8 +4.5**
JMIC Jan Mayen 67.44 350 *e*P **P 15 37 05.5 +1.9**
JMIC *e*S S 15 45 52.5 +2.3
JMIC *e*SS SS 15 50 12.8 +1.6
E07A Sunnyside 67.57 48⇑P **P 15 37 05.0 +0.1**
baz=67,SNR=94
OD2 Odessa Site #2 67.74 46 *e*P **P 15 37 05.4 -0.5**
comp=Z,770nm,1.0s,mb6.5
C09A Chrisman Ranch 67.75 46⇑P **P 15 37 05.8 -0.2**
baz=68,SNR=408
D08A Wollman Farm, 67.82 47⇑P **P 15 37 06.1 -0.2**
baz=68,SNR=376
RSW Rattlesnake Hi 67.82 48 *e*P **P 15 37 06.8 +0.4**
comp=Z,3μm,1.6s,mb6.9
HAWA Hanford 67.85 48 *e*P **P 15 37 06.8 +0.2**
comp=Z,2μm,1.4s,mb6.7
G06A Carlson Farm, 67.88 49⇑P **P 15 37 06.9 +0.1**
baz=68,SNR=386
F07A Phinny Hill Vi 67.91 48⇓P **P 15 37 07.2 +0.2**
baz=68,SNR=164
SUMG Summit 67.93 360 *e*P **P 15 37 07.7 +1.0**
comp=Z,1μm,1.0s,mb6.7
SUMG Summit 67.93 360 *i*P **P 15 37 08.1 +1.5**
comp=Z,1μm,1.0s,mb6.6
SUMG *i* 15 37 47.4
SUMG *e*S S 15 45 53.9 -2.0
SUMG *i* 15 46 42.5
SUMG
comp=Z,15μm,19.0s
HUMO Hull Mountain 67.97 52 *e*P **P 15 37 07.8 +0.4**
comp=Z,2μm,0.8s,mb7.0
E08A Dider Farm, El 68.06 47⇓P **P 15 37 07.8 -0.2**
baz=68,SNR=171
NEW Newport 68.11 45 *e*P **P 15 37 08.1 -0.1**
NEW pmax pmax
comp=Z,672nm,1.0s
NEW Newport 68.11 45 *e*P **P 15 37 08.1 -0.1**
comp=Z,672nm,1.0s,mb6.4
VSU Vasula 68.12 329*c i*P **P 15 37 08.3 +0.3**
VSU pmax pmax
comp=Z,1μm,1.0s,mb6.8
GOF Gofitskoye 68.33 311 *e*P **P 15 37 18.4 +8.8**
GOF pmax pmax
comp=Z,2μm,1.0s,mb6.9
A12A Yaak River Ran 68.51 44⇑P **P 15 37 10.8 +0.2**
baz=68,SNR=192
E09A Wood Farm, Sta 68.57 47⇑P **P 15 37 11.0 -0.1**
baz=68,SNR=241
YBH Yreka Blue Hor 68.62 53 LR LR 16 06 51.4
comp=Z,7μm,18.1s,baz=204,slow=36
YBH Yreka Blue Hor 68.62 53 *e*P **P 15 37 12.4 +1.0**
YBH pmax pmax
comp=Z,2μm,1.5s
YBH Yreka Blue Hor 68.62 53 *e*P **P 15 37 12.4 +0.9**
comp=Z,2μm,1.5s,mb6.7
NSS Namsos 68.73 339⇑*i*P **P 15 37 09.9 -1.8**
NSS *e*S S 15 46 06.8 +1.3
NSS *e* 15 50 22.2
G08A Pilot Rock 68.81 48⇑P **P 15 37 12.7 +0.1**
baz=69,SNR=135
B12A Libby 68.82 44⇑P **P 15 37 12.7 +0.1**
baz=69,SNR=26
C11A Tepee Creek (N 68.84 45⇓P **P 15 37 12.8 +0.1**
baz=69,SNR=1000
LNOR Lincton Mounta 68.86 47 *e*P **P 15 37 13.2 +0.3**
LNOR pmax pmax
comp=Z,2μm,1.8s,mb6.6
LNOR Lincton Mounta 68.86 47 *e*P **P 15 37 13.2 +0.3**
comp=Z,2μm,1.8s,mb6.6
AFI Afiamalu 68.86 131 *e*P **P 15 37 13.2 0.0**
AFI pmax pmax
comp=Z,2μm,1.6s,mb6.6
AFI Afiamalu 68.86 131 *e*P **P 15 37 13.2 0.0**
comp=Z,2μm,1.6s,mb6.6
DGRG David-gareji 68.99 307 P **P 15 37 14.2 +0.4**
DGRG S S 15 46 11.0 +1.6
HMDM Hanimaadhoo 69.06 261 P **P 15 37 18.4 +3.8**
comp=Z,1μm,1.7s,mb6.4
ZEI Tsey 69.13 309 *e*P **P 15 37 10.4 -4.2**
ZEI *e**PP pP 15 37 37.8 -4.9
ZEI *e*S S 15 46 09.6 -1.4
ZEI *e**SS sS 15 46 57.3 -1.9
ZEI *e*SS SS 15 50 39.9 +1.4
ZEI pmax pmax
comp=Z,606nm,1.4s,mb6.2
ZEI pmax pmax
comp=N,435nm,1.5s
ZEI pmax pmax
comp=E,532nm,1.2s
ZEI smax
comp=E,325nm,4.3s
ZEI smax
comp=N,533nm,5.1s
K05A Summer Lake 69.16 51⇓P **P 15 37 15.2 +0.4**
baz=69,SNR=718
KIV Kislovodsk 69.17 310 P **P 15 37 15.9 +1.1**
comp=N,13μm,1.0s,mb7.7
KIV Kislovodsk 69.17 310 *e*P **P 15 37 15.1 +0.3**
KIV *e**SP pP 15 37 44.8 +1.9
KIV *e* 15 39 51.8
KIV *e*PPP 15 41 29.0
KIV *e*S S 15 46 13.6 +2.2
KIV *e*SS SS 15 50 42.1 +3.1
KIV pmax pmax
comp=Z,2μm,3.4s
KIV pmax pmax
comp=Z,3μm,1.1s,mb7.0
KIV MLR MLR
comp=Z,21μm,18.0s
KIV Kislovodsk 69.17 310 *e*P **P 15 37 14.9 +0.1**
comp=Z,3μm,1.0s,mb7.0
KIV Kislovodsk 69.17 310 P **P 15 37 15.3 +0.5**
SNR=752
A13A Flathead Natio 69.17 43⇑P **P 15 37 14.7 -0.1**
baz=69,SNR=370
I07A Izee 69.20 50⇑P **P 15 37 15.2 +0.2**
baz=69,SNR=443
MTA Mtatsminda 69.20 307 P **P 15 37 14.8 -0.2**
MTA S S 15 46 12.7 +0.8
TBLG Delisi 69.22 307 *e*P **P 15 37 15.1 0.0**
TBLG Delisi 69.22 307 P **P 15 37 15.1 0.0**
TBLG S S 15 46 15.3 +3.2
C12B Naegeli Ranch, 69.34 45⇑P **P 15 37 15.6 -0.2**
baz=69,SNR=115
WALA Waterton Lakes 69.36 43 *e*P **P 15 37 15.8 -0.1**
comp=Z,5.9nm,0.5s

KEH **Kehvi** 69.37 308 P P 15 37 14.6 -1.5
KEH S S 15 46 15.2 +1.4
SCO **Scoresbysund** 69.38 354⇓*i*P P 15 37 18.8 +3.2
SCO *i* 15 37 56.0
SCO *i*S S 15 46 16.0 +3.0
SCO *i* 15 47 02.0
SCO pmax pmax
comp=Z,260nm,1.0s,mb6.0
SCO MLR MLR
comp=Z,6μm,17.0s
SCO **Scoresbysund** 69.38 354⇓*i*P P 15 37 18.8 +3.2
comp=Z,255nm,1.0s,mb6.0
SCO *i* 15 37 56.0
SCO *i*S S 15 46 16.0 +3.0
SCO *i* 15 47 02.0
SCO
comp=Z,6μm,17.0s
WDC **Whiskeytown Da** 69.38 54 *e*P P 15 37 16.2 0.0
WDC pmax pmax
comp=Z,2μm,1.5s,mb6.7
WDC **Whiskeytown Da** 69.38 54 *e*P P 15 37 16.2 0.0
comp=Z,2μm,1.5s,mb6.7
F10A **Beach Ranch, E** 69.40 47 ⇓P P 15 37 16.0 -0.2
baz=69,SNR=235
GOR **Gori** 69.45 308 P P 15 37 17.0 +0.4
GOR S S 15 46 18.8 +4.0
B13A **Whitefish** 69.48 44 ⇑P P 15 37 16.9 +0.3
baz=69,SNR=783
ONI **Oni** 69.50 309 P P 15 37 17.4 +0.5
ONI S S 15 46 19.7 +4.4
A14A **Double T Ranch** 69.67 43 ⇑P P 15 37 17.6 -0.2
baz=69,SNR=600
D12A **Red Ives Fores** 69.80 45 ⇑P P 15 37 18.3 -0.3
baz=70
C13A **Hot Springs** 69.84 44 ⇓P P 15 37 18.9 0.0
baz=70,SNR=600
HOPS **Hopland** 69.96 56 *e*P P 15 37 20.0 +0.2
comp=Z,2μm,1.6s,mb6.7
MOD **Modoc** 69.99 52 *e*P P 15 37 20.0 +0.1
comp=Z,903nm,1.2s,mb6.5
BMO **Blue Mountains** 70.02 48 *e*P P 15 37 19.8 -0.2
comp=Z,4μm,1.3s,mb7.1
A15A **Johnson Ranch,** 70.02 42 ⇓P P 15 37 19.4 -0.6
baz=70,SNR=865
E12A **Beaver Dam Sad** 70.06 46 ⇓P P 15 37 20.2 0.0
baz=70,SNR=1000
B14A **Marquette Ranc** 70.12 43 ⇓P P 15 37 20.6 +0.1
baz=70,SNR=699
IZAR **Zarasai** 70.12 327 *e*P P 15 37 20.4 -0.1
IZAR AMB AMB 15 37 24.9
comp=Z,332nm,1.0s,mb6.1
GNI **Garni** 70.13 306*ce*P P 15 37 21.9 +1.1
GNI pmax pmax
comp=Z,1μm,2.5s
GNI **Garni** 70.13 306 *e*P P 15 37 21.2 +0.4
comp=Z,1μm,1.3s,mb6.6
GNI **Garni** 70.13 306 P P 15 37 21.9 +1.1
SNR=104
IDID **Didziasalis** 70.21 327 *e*P P 15 37 20.9 0.0
IDID AMB AMB 15 37 25.5
comp=Z,485nm,1.1s,mb6.2
J08A **Circle Bar Ran** 70.23 50 ⇑P P 15 37 21.7 +0.4
baz=70,SNR=210
C14A **Swan Lake** 70.23 44 ⇑P P 15 37 21.4 +0.1
baz=70,SNR=833
D13A **Huson** 70.26 45 ⇑P P 15 37 21.2 -0.2
baz=70,SNR=638
MICGM **Minsk** 70.26 325⇓*i*P P 15 37 20.0 -1.3
MNK **Minsk** 70.28 325*c i*P P 15 37 20.0 -1.4
MNK *e**PP pP 15 37 46.0 -3.6
MNK *e* 15 40 02.0
MNK *e*S S 15 46 23.0 -1.0
MNK *e**SS sS 15 46 54.0 -18
MNK *e* 15 47 12.0
MNK pmax pmax
comp=Z,2μm,1.0s,mb6.8
MNK pmax pmax
comp=Z,22μm,2.0s,mb7.6
MNK pmax pmax
comp=E,1μm,1.0s
MNK pmax pmax
comp=N,2μm,1.0s
MNK smax
comp=E,12μm,1.2s
MNK smax
comp=N,3μm,1.2s
MNK smax
comp=E,100μm,4.0s
MNK smax
comp=N,28μm,4.0s
WBK **Wadi Bani Khal** 70.35 283 P P 15 37 23.2 +0.8
SNR=67
IIGN **Ignalina** 70.40 327 *e*P P 15 37 22.2 0.0
IIGN AMB AMB 15 37 26.8
comp=Z,603nm,1.1s,mb6.3
BANOM **Banah** 70.41 288 P P 15 37 23.3 +0.5
SNR=14
NACGM **Naroch** 70.47 326 *e*P P 15 37 20.0 -2.6
ARMA **Armidale** 70.49 171 *e*P P 15 37 21.9 -0.9
ARMA *e*pP pP 15 37 50.9 -0.2
ARMA *e*S S 15 46 27.2 +0.4
ARMA *e*SCS ScS 15 47 16.6 +1.3
ARMA **Armidale** 70.49 171 *e*P P 15 37 22.3 -0.5
B15A **Bradely Ranch,** 70.52 43 ⇓P P 15 37 22.9 -0.1
baz=70,SNR=1000
MCCM **Marconi Confer** 70.57 56 *e*P P 15 37 24.5 +1.0
comp=Z,1μm,0.9s,mb6.7
A16A **West Butte Ran** 70.63 42 ⇑P P 15 37 23.0 -0.6
baz=70,SNR=463
F12A **Elk City** 70.63 46 ⇓P P 15 37 23.7 0.0
baz=70,SNR=1000
WVOR **Wild Horse Val** 70.68 51 *e*P P 15 37 24.2 +0.1
WVOR pmax pmax
comp=Z,2μm,1.8s,mb6.7
WVOR **Wild Horse Val** 70.68 51 *e*P P 15 37 24.1 +0.1
comp=Z,2μm,1.8s,mb6.7
SLMT **Seeley Lake** 70.69 44 *e*P P 15 37 23.8 -0.3
comp=Z,131nm,0.4s,mb6.1
MSO **Missoula** 70.70 45 *e*P P 15 37 23.6 -0.6
comp=Z,844nm,1.3s,mb6.4
MSO *e*pP pP 15 37 54.7 +2.3
SMDO **Samad** 70.78 284 P P 15 37 25.9 +0.9
SNR=60
D14A **Greenough** 70.78 44 ⇓P P 15 37 24.1 -0.5
baz=70,SNR=809
E13A **Victor** 70.80 45 ⇑P P 15 37 24.0 -0.7
baz=71,SNR=116
KARS **Kars** 70.88 307 *e*P P 15 37 24.3 -1.0
B16A **M & M Farms, S** 70.91 42 ⇓P P 15 37 24.9 -0.5
baz=71,SNR=460
CHMT **Chamberlain Mo** 71.02 44 *e*P P 15 37 25.2 -0.8
comp=Z,818nm,1.0s,mb6.5
HOQ **Hoqain** 71.02 285 P P 15 37 26.7 +0.2
SNR=77
A17A **Triple J Farms** 71.09 42 ⇓P P 15 37 26.0 -0.4
baz=71,SNR=172
SOC **Sochi** 71.12 311*c i*P P 15 37 27.0 +0.3
SOC *e**PP pP 15 37 46.6 -8.4
SOC *e**SP sP 15 37 55.8 -11
SOC *e* 15 40 03.1
SOC *e*PPP 15 41 47.8
SOC *i*S S 15 46 35.1 +1.0
SOC *e**SS sS 15 47 11.0 -12
SOC *i* 15 47 20.2
SOC *e*SS SS 15 51 05.9 -3.0
SOC pmax pmax
comp=Z,5μm,3.0s
SOC pmax pmax
comp=Z,517nm,0.6s,mb6.5
SOC MLR MLR
comp=Z,27μm,20.0s
SOC **Sochi** 71.12 311 *i*P P 15 37 26.2 -0.5
F13A **Darby** 71.13 46 ⇑P P 15 37 26.1 -0.6
baz=71,SNR=304
JMDO **Jabal Madar** 71.14 284 P P 15 37 27.4 +0.2
SNR=48
HATD **Hatta, Dubai** 71.17 287 P P 15 37 27.8 +0.5
SNR=44
J10A **Berg Farm, Mel** 71.18 49 ⇓P P 15 37 26.6 -0.5
baz=71
E14A **Clinton** 71.20 45 ⇑P P 15 37 26.6 -0.5
baz=71,SNR=194
ARTV **Artvin** 71.25 308⇑*i*P P 15 37 28.1 +0.5
C16A **Fuhringer Ranc** 71.27 43 ⇓P P 15 37 27.3 -0.3
baz=71,SNR=833
BCA **Borcka** 71.28 309 *e*P P 15 37 22.5 -5.2

DBOC **Borcka** 71.31 308⇑*i*P P 15 37 27.9 0.0
ASHO **Ashiyiah** 71.31 287 P P 15 37 28.6 +0.4
SNR=55
STKA **Stephens Creek** 71.31 180 *e*P P 15 37 27.0 -0.8
comp=Z,118nm,0.9s,mb5.7
STKA *e*pP pP 15 37 56.8 +0.7
STKA *e*S S 15 46 33.6 -2.6
STKA *e*SKS 15 48 14.0
STKA *e*PKPPKP 16 05 17.9
STKA **Stephens Creek** 71.31 180 P P 15 37 27.6 -0.2
comp=Z,91nm,0.7s,mb5.7,baz=349,slow=6.9,SNR=100
STKA S S 15 46 37.6 +1.4
comp=Z,6.2nm,1.0s,baz=65,slow=14,SNR=1.9
STKA LR LR 16 06 02.0
comp=Z,14μm,20.9s,baz=1.3,slow=33
STKA **Stephens Creek** 71.31 180 *e*P P 15 37 26.8 -0.9
comp=Z,40nm,0.8s,mb5.3
FORT **Forrest** 71.32 192 *e*P P 15 37 27.3 -0.5
comp=Z,465nm,0.7s,mb6.4
FORT *e* pP 15 37 55.1 -1.0
FORT *e*S S 15 46 34.3 -2.1
FORT *e*SKS 15 47 22.4
FORT **Forrest** 71.32 192 *e*P P 15 37 27.6 -0.3
comp=Z,1μm,0.9s,mb6.7
DAGI **Agillar** 71.32 308⇑*i*P P 15 37 28.4 +0.5
FFC **Flin Flon** 71.36 33 P P 15 37 28.1 +0.2
comp=Z,3μm,1.6s,mb6.8,SNR=56
FFC **Flin Flon** 71.36 33 *e*P P 15 37 27.0 -0.9
FFC *e**PP pP 15 37 57.1 +0.9
FFC *e**SP sP 15 38 07.4 -1.0
FFC *e* 15 40 05.8
FFC pmax pmax
comp=Z,1μm,1.0s,mb6.6
FFC **Flin Flon** 71.36 33 *e*P P 15 37 27.0 -0.9
comp=Z,1μm,1.0s,mb6.6
FFC *e*pP pP 15 37 57.1 +0.9
FFC *e*sP sP 15 38 07.4 -1.0
FFC *e*PP PP 15 40 05.8 -1.2
NAZ **Nazwa, Dubai** 71.42 287 P P 15 37 29.0 +0.2
SNR=46
B17A **L&G Farms, Che** 71.45 42 ⇑P P 15 37 28.2 -0.4
baz=71,SNR=296
MOL **Molde** 71.50 339 *e*P P 15 37 29.2 +0.5
MOL AMb AMB 15 38 11.6
comp=Z,779nm,2.1s,mb6.2
MOL *e*S S 15 46 38.8 +1.0
MOL AMS AMS 16 07 28.9
comp=Z,18μm,40.4s
MOL **Molde** 71.50 339 *e*P P 15 37 29.2 +0.5
comp=Z,779nm,2.1s,mb6.2
MOL LR LR
comp=Z,18μm,40.4s
FCC **Fort Churchill** 71.51 27 *e*P P 15 37 28.5 -0.3
comp=Z,56nm,1.1s,mb5.3
K10A **MacKenzie Ranc** 71.52 49 ⇓P P 15 37 28.6 -0.5
baz=71,SNR=872
DDEM **Demirkent** 71.53 308⇑*i*P P 15 37 29.6 +0.3
A18A **Metzger Ranch,** 71.54 41 ⇓P P 15 37 28.6 -0.5
baz=71,SNR=237
AGRB **Hanur-Agry** 71.55 306 *e*P P 15 37 30.4 +1.0
H12A **Diamond D Ranc** 71.59 47 ⇑P P 15 37 29.1 -0.5
baz=71,SNR=672
BSY **Bisya** 71.60 285 P P 15 37 30.4 +0.5
SNR=67
HFA0 **Hagfors New Ar** 71.60 335 P P 15 37 28.0 -1.3
G13A **Cobalt** 71.61 46 ⇑P P 15 37 28.9 -0.8
baz=71,SNR=484
F14A **Wisdom** 71.64 45 ⇑P P 15 37 29.2 -0.6
baz=71
E15A **Deer Lodge** 71.66 45 ⇑P P 15 37 29.6 -0.3
baz=71,SNR=672
NB2 **NORSAR Subarra** 71.67 337 P P 15 37 29.3 -0.4
comp=Z,1μm,1.1s,mb6.6,baz=39,slow=6.2
NB2 **NORSAR Subarra** 71.67 337 P P 15 37 30.3 +0.6
NOA **NORSAR Array B** 71.67 337 P P 15 37 29.0 -0.7
comp=Z,631nm,1.0s,mb6.4,baz=38,slow=5.9,SNR=229
NOA S S 15 46 41.2 +1.3
comp=Z,5.1nm,0.9s,baz=82,slow=8.4,SNR=2.7
NOA LR LR 16 12 09.4
comp=Z,18μm,18.1s,baz=35,slow=38
NOA **NORSAR Array B** 71.67 337 P P 15 37 29.0 -0.7
NOA S S 15 46 41.2 +1.3
NOA pmax pmax
comp=Z,631nm,1.0s
NOA smax
comp=N,5.0nm,0.9s
NOA MLR MLR
comp=Z,18μm,18.1s
NOA **NORSAR Array B** 71.67 337 P P 15 37 29.0 -0.7
NOA S S 15 46 41.2 +1.3
NOA LR LR 16 12 09.4
ANN **Anapa** 71.68 313 *e*P P 15 37 28.7 -1.4
ANN *i* *PP pP 15 37 57.2 -1.1
ANN *i* PPP 15 41 55.1
ANN *i*S S 15 46 39.6 -0.9
ANN *i* 15 47 21.7
ANN *e*SS SS 15 51 18.5 +1.1
ANN pmax pmax
comp=N,1μm,8.6s
ANN pmax pmax
comp=E,955nm,8.6s
ANN pmax pmax
comp=Z,3μm,8.6s
ANN pmax pmax
comp=N,244nm,1.4s
ANN pmax pmax
comp=E,156nm,1.4s
ANN pmax pmax
comp=Z,949nm,1.4s,mb6.4
ANN smax
comp=N,6μm,9.6s
ANN smax
comp=Z,10μm,9.6s
ANN smax
comp=E,35μm,9.5s
ANN MLR MLR
comp=Z,17μm,19.0s
MFID **Camas Ranch** 71.73 48 ⇓P P 15 37 30.4 0.0
baz=72
ARQ **Araqi** 71.75 285 P P 15 37 30.9 0.0
SNR=90
TUTA **Tutak** 71.77 306⇑*i*P P 15 37 31.4 +0.7
D16A **Dana Ranch, Ca** 71.86 44 ⇓P P 15 37 30.9 -0.2
baz=72,SNR=404
WCN **Washoe City** 71.86 54 ⇓P P 15 37 31.3 0.0
baz=72,SNR=182
PZAR **Pazar-Rize** 71.87 309 *e*P P 15 37 31.5 +0.2
ASUD **Al Ashush, Dub** 71.88 287 P P 15 37 32.0 +0.4
SNR=41
VANB **Van** 71.89 305 *e*P P 15 37 33.0 +1.5
C17A **Wharram Farm,** 71.89 43 ⇑P P 15 37 30.6 -0.6
baz=72,SNR=281
I12A **Atlanta** 71.90 48 ⇑P P 15 37 31.3 -0.1
baz=72,SNR=462
HRY **Holter Researc** 71.91 44 *e*P P 15 37 31.4 0.0
comp=Z,1μm,1.0s,mb6.7
B18A **Beardsley Farm** 71.92 42 ⇑P P 15 37 31.1 -0.3
baz=72,SNR=545
TVAN **Van** 71.92 305 *e*P P 15 37 33.3 +1.7
H13A **Challis** 71.92 47 ⇓P P 15 37 31.2 -0.3
baz=72,SNR=900
NAO01 **NORSAR Array S** 71.93 337 *e*P P 15 37 30.4 -0.8
comp=Z,24nm,0.6s,mb5.2
K11A **Parker Ranch,** 72.01 49 ⇓P P 15 37 32.1 0.0
baz=72,SNR=478
F15A **Butte** 72.10 45 ⇑P P 15 37 32.6 0.0
baz=72,SNR=1000
E16A **East Helena** 72.11 44 ⇑P P 15 37 32.5 -0.1
baz=72,SNR=714
LRM **Limekiln Ridge** 72.14 45 *e*P P 15 37 32.7 0.0
comp=Z,1μm,1.0s,mb6.7
EGMT **Eagleton** 72.16 42 ⇓P P 15 37 32.6 -0.3
baz=72,SNR=351
EGMT **Eagleton** 72.16 42 *e*P P 15 37 32.4 -0.5
comp=Z,4μm,1.5s,mb7.0
AKASG **Malin Array Be** 72.17 322 P P 15 37 31.9 -0.9
comp=Z,138nm,0.7s,mb5.9,baz=45,slow=6.4,SNR=52
AKASG S S 15 46 48.4 +2.5
comp=Z,32nm,1.1s,baz=44,slow=12,SNR=10
AKASG PKP2bc 16 05 10.9
comp=Z,3.2nm,0.8s,baz=246,slow=3.1,SNR=10.0
AKASG PKPPKP 16 05 18.8
comp=Z,3.7nm,0.9s,baz=241,slow=3.3,SNR=5.7
AKASG LR LR 16 10 37.4
comp=Z,9μm,20.2s,baz=55,slow=37
AKASG **Malin Array Be** 72.17 322 P P 15 37 31.9 -0.9

AKASG S S 15 46 48.4 +2.5
AKASG ⇑*e* 16 05 10.9
AKASG P'P' 16 05 18.8
AKASG LR LR 16 10 37.4
AKBB **Malin Array Si** 72.17 322 *e*P P 15 37 31.6 -1.3
KIEV **Kiev** 72.18 322 *e*P P 15 37 31.8 -1.1
KIEV pmax pmax
comp=Z,793nm,0.9s,mb6.5
KIEV **Kiev** 72.18 322 *e*P P 15 37 31.8 -1.2
comp=Z,793nm,0.9s,mb6.5
L10A **Juniper Basin** 72.18 50 ⇑P P 15 37 33.3 +0.2
baz=72,SNR=119
CMB **Columbia Colle** 72.22 55 *e*P P 15 37 33.3 -0.1
CMB pmax pmax
comp=Z,4μm,1.6s,mb7.0
CMB **Columbia Colle** 72.22 55 *e*P P 15 37 33.2 -0.2
comp=Z,4μm,1.6s,mb7.0
D17A **Six Diamond Ra** 72.24 43 ⇓P P 15 37 33.0 -0.4
baz=72,SNR=375
J12A **Stokes Ranch,** 72.26 48 ⇑P P 15 37 33.6 +0.1
baz=72,SNR=424
HAKT **HAKKARI** 72.31 304⇑*i*P P 15 37 33.4 -0.5
SAO **San Andreas Ge** 72.31 57 *e*P P 15 37 34.4 +0.4
SAO pmax pmax
comp=Z,751nm,1.3s,mb6.4
SAO **San Andreas Ge** 72.31 57 *e*P P 15 37 34.4 +0.4
comp=Z,751nm,1.3s,mb6.4
DLMT **Dillon** 72.35 45 *e*P P 15 37 33.9 -0.1
comp=Z,98nm,0.5s,mb5.9
ERZM **Erzurum** 72.36 307 *i*P P 15 37 34.4 +0.2
EZM **Erzurum** 72.36 307 *e*P P 15 37 36.2 +2.0
H14A **Leadore** 72.39 46 ⇑P P 15 37 33.8 -0.5
baz=72,SNR=312
I13A **Wildhorse Cree** 72.40 47 ⇑P P 15 37 34.7 +0.3
baz=72,SNR=803
HLID **Hailey** 72.45 48 ⇑P P 15 37 34.9 +0.2
baz=72,SNR=644
HLID **Hailey** 72.45 48 *e*P P 15 37 34.9 +0.2
comp=Z,4μm,1.0s,mb7.2
M10A **I.L. Ranch, Tu** 72.48 50 ⇓P P 15 37 35.5 +0.6
baz=72,SNR=722
G15A **Dillon** 72.53 45 ⇓P P 15 37 35.0 -0.1
baz=72,SNR=1000
L11A **Cat Creek Ranc** 72.54 49 ⇑P P 15 37 35.7 +0.4
baz=72,SNR=1000
MCMT **McKenzie Canyo** 72.54 46 *e*P P 15 37 34.7 -0.5
comp=Z,818nm,1.0s,mb6.5
CUKT **Cukurca** 72.56 304 *e*P P 15 37 35.4 -0.1
E17A **Martinsdale** 72.59 44 ⇓P P 15 37 35.7 +0.3
baz=72,SNR=585
F16A **Kennard Place,** 72.61 45 ⇓P P 15 37 35.6 0.0
baz=72,SNR=722
SUW **Suwalki** 72.61 327 *e*P P 15 37 34.5 -0.9
SUW *e*pP pP 15 38 04.3 +0.5
SUW *e*sP sP 15 38 13.9 -2.1
SUW *e*S S 15 46 53.5 +2.7
SUW *e*sS sS 15 47 36.3 -3.2
SUW LMZ 16 09 54.1
comp=Z,22μm,26.0s
SUW **Suwalki** 72.61 327 *e*P P 15 37 34.4 -1.0
comp=Z,1μm,1.1s,mb6.7
TATV **Tatvan** 72.64 306⇑*i*P P 15 37 37.0 +1.1
KTUT **Trabzon** 72.67 309 *e*P P 15 37 36.8 +0.8
D18A **Linhart Farms,** 72.67 43 ⇑P P 15 37 35.9 0.0
baz=72,SNR=134
BOZ **Bozeman (W)** 72.69 45 ⇑P P 15 37 36.2 +0.2
baz=72,SNR=1000
BOZ **Bozeman (W)** 72.69 45 *e*P P 15 37 36.2 +0.1
comp=Z,6.3nm,0.9s
J13A **Cove Ranch, Pi** 72.69 48 ⇑P P 15 37 36.6 +0.4
baz=72,SNR=785
MACK **Trabzon** 72.69 309⇑*i*P P 15 37 35.7 -0.5
OSL **Oslo** 72.69 336 *e*P P 15 37 36.0 +0.1
OSL AMb AMB 15 37 39.7
comp=Z,1μm,1.3s,mb6.5
OSL **Oslo** 72.69 336 *e*P P 15 37 36.0 +0.1
comp=Z,1μm,1.3s,mb6.5
BMN **Battle Mountai** 72.73 52 *e*P P 15 37 36.6 +0.2
BMN pmax pmax
comp=Z,1μm,1.3s,mb6.6
BMN **Battle Mountai** 72.73 52 *e*P P 15 37 36.6 +0.1
comp=Z,1μm,1.3s,mb6.6
K12A **Draper Farm, C** 72.75 49 ⇑P P 15 37 36.6 +0.2
baz=72,SNR=396
I14A **Mackay** 72.77 47 ⇓P P 15 37 37.0 +0.4
baz=72,SNR=789
H15A **Lima** 72.79 46 ⇓P P 15 37 36.3 -0.4
baz=72,SNR=164
KOPT **Kop Dagi** 72.82 308⇑*i*P P 15 37 38.2 +1.3
G16A **Moss Hill, Enn** 72.86 45 ⇑P P 15 37 37.0 -0.1
baz=73,SNR=206
FOO **Floro** 72.97 340⇑*i*P P 15 37 37.0 -0.4
FOO *e*S S 15 46 55.8 +1.1
FOO AMS AMS 16 08 12.4
comp=Z,14μm,25.1s
M11A **Holland Ranch,** 72.97 50 ⇓P P 15 37 38.3 +0.5
baz=73,SNR=522
L12A **House Creek Ra** 72.99 49 ⇑P P 15 37 38.1 +0.3
baz=73,SNR=614
N10A **Dunphy** 72.99 51 ⇓P P 15 37 38.4 +0.5
baz=73
HYA **Hoyanger** 73.02 339 *e*P P 15 37 38.9 +1.2
HYA AMb AMB 15 37 42.8
comp=Z,714nm,1.3s,mb6.3
HYA **Hoyanger** 73.02 339 *e*P P 15 37 38.9 +1.2
comp=Z,714nm,1.3s,mb6.3
E18A **Harlowton** 73.02 43 ⇑P P 15 37 38.4 +0.4
baz=73,SNR=476
F17A **Fitzpatrick Pl** 73.05 44 ⇓P P 15 37 38.3 +0.1
baz=73,SNR=589
BNGL **BINGOL** 73.07 307⇑*i*P P 15 37 39.1 +0.7
J14A **Carey** 73.11 47 ⇑P P 15 37 39.1 +0.5
baz=73
SFJD **Kangerlussuaq** 73.13 5 LR LR 16 14 19.0
comp=Z,10μm,19.2s,baz=330,slow=39
K13A **Stover Farm, H** 73.21 48 ⇑P P 15 37 39.6 +0.4
baz=73,SNR=193
O10A **Cortez Mining,** 73.25 51 ⇑P P 15 37 40.1 +0.6
baz=73,SNR=106
I15A **Monteview** 73.27 46 ⇑P P 15 37 39.7 +0.2
baz=73
KONO **Kongsberg** 73.27 337⇑*i*P P 15 37 39.6 +0.4
KONO *e*S S 15 46 58.6 +0.5
KONO **Kongsberg** 73.27 337 *e*P P 15 37 38.6 -0.6
KONO pmax pmax
comp=Z,1μm,2.7s,mb6.3
KONO **Kongsberg** 73.27 337 *e*P P 15 37 38.6 -0.6
comp=Z,1μm,2.7s,mb6.3
NVAR **Mina Array Bea** 73.29 54 P P 15 37 40.0 +0.2
comp=Z,139nm,0.9s,mb5.8,baz=292,slow=4.0,SNR=147
NVAR PKP2ab 16 05 01.6
comp=Z,2.1nm,1.0s,baz=161,slow=2.1,SNR=3.6
NVAR PKPPKP 16 05 15.9
comp=Z,1.4nm,0.7s,baz=147,slow=2.4,SNR=3.5
ESPY **Espiye-Giresun** 73.33 310 *e*P P 15 37 40.3 +0.3
G17A **Pierce Place,** 73.38 45 ⇑P P 15 37 40.5 +0.4
baz=73,SNR=288
N11A **Elko Archery C** 73.39 51 ⇓P P 15 37 40.6 +0.3
baz=73
SIM **Simferopol'** 73.42 315*ce*P P 15 37 40.0 -0.4
SIM *e**PP pP 15 38 08.0 -0.8
SIM PPP 15 42 18.0
SIM *i*S S 15 47 00.0 -0.3
SIM *i* 15 47 42.0
SIM pmax pmax
comp=Z,564nm,0.8s,mb6.5
SIM MLR MLR
comp=Z,19μm,15.8s
MLAC **Mammoth Lakes** 73.45 55 ⇓P P 15 37 41.1 +0.5
baz=73
KELT **Kelkit** 73.49 309⇑*i*P P 15 37 41.5 +0.6
SUE **Sulen** 73.50 340 *e*P P 15 37 41.7 +1.2
SUE AMb AMB 15 37 44.4
comp=Z,554nm,1.4s,mb6.2
SUE **Sulen** 73.50 340 *e*P P 15 37 41.7 +1.2
comp=Z,554nm,1.4s,mb6.2
M12A **Wells** 73.50 50 ⇓P P 15 37 41.6 +0.7
baz=73,SNR=705
H16A **Russell Place,** 73.50 45 ⇓P P 15 37 41.1 +0.3
baz=73,SNR=288
GRSN **GIRESUNGRSN** 73.60 310⇑*i*P P 15 37 40.8 -0.7
L13A **Double Diamond** 73.64 49 ⇑P P 15 37 42.5 +0.7
baz=73,SNR=317
GCMT **Greycliff** 73.65 44 *e*P P 15 37 42.0 +0.3
comp=Z,562nm,0.9s,mb6.3
EZC **Erzincan** 73.68 308 *e*P P 15 37 42.8 +0.8

J15A	**Blackfoot**	73.68	47	⇓P		P	15 37 42.7 +0.8
	baz=73,SNR=624						
YMR	**Madison River**	73.68	45	*e*P		P	15 37 42.5 +0.6
	comp=Z,1μm,0.9s,mb6.6						
P10A	**Eureka**	73.69	52	⇑P		P	15 37 42.6 +0.5
	baz=74,SNR=460						
ELK	**Elko**	73.73	50	*e*P		P	15 37 42.5 +0.2
ELK				pmax		pmax	
	comp=Z,2μm,1.7s						
ELK	**Elko**	73.73	50	*e*P		P	15 37 42.5 +0.3
	comp=Z,2μm,1.7s,mb6.6						
N12A	**Clover Valley,**	73.78	50	⇑P		P	15 37 43.1 +0.6
	baz=74,SNR=575						
N12A	**Clover Valley,**	73.78	50	*e*P		P	15 37 43.1 +0.6
	comp=Z,1μm,1.2s,mb6.5						
K14A	**Jones Ranch, D**	73.80	48	⇓P		P	15 37 43.2 +0.6
	baz=74,SNR=526						
RIV	**Riverview**	73.80	172	*e*P		P	15 37 45.8 +3.3
RIV				*ep*P		pP	15 38 14.0 +3.1
RIV				*e*S		sS	15 47 55.5 +2.1
YNR	**Norris Junctio**	73.81	45	*e*P		P	15 37 44.1 +1.5
	comp=Z,1μm,1.3s,mb6.5						
ASK	**Askoy**	73.86	339	*e*P		P	15 37 41.7 -0.9
O11A	**Cowboy Ranch,**	73.86	51	⇓P		P	15 37 43.5 +0.5
	baz=74,SNR=442						
YFT	**Old Faithful**	73.89	45	*e*P		P	15 37 45.2 +2.0
	comp=Z,2μm,1.0s,mb6.7						
I16A	**Newdale**	73.90	46	⇑P		P	15 37 44.0 +0.8
	baz=74,SNR=809						
BER	**Bergen**	73.90	339	*e*P		P	15 37 42.7 -0.2
BER				*e*S		S	15 47 04.0 -1.3
ODD1	**Odda**	73.93	338	*e*P		P	15 37 43.4 +0.3
ODD1				AML		AML	15 37 47.8
	comp=Z,266nm,1.1s						
M13A	**Montello**	73.97	49	⇑P		P	15 37 44.1 +0.4
	baz=74,SNR=106						
M13A	**Montello**	73.97	49	*e*P		P	15 37 44.0 +0.3
	comp=Z,671nm,1.0s,mb6.3						
RCTC	**Rector, Farmer**	74.00	56	⇑P		P	15 37 44.7 +0.8
	baz=74,SNR=27						
G18A	**Lazy EL Ranch,**	74.02	44	⇑P		P	15 37 44.5 +0.6
	baz=74,SNR=60						
LKWY	**Lake**	74.06	45	*e*P		P	15 37 46.8 +2.7
LKWY				pmax		pmax	
	comp=Z,908nm,1.0s,mb6.5						
LKWY	**Lake**	74.06	45	*e*P		P	15 37 46.8 +2.7
	comp=Z,908nm,1.0s,mb6.5						
H17A	**Grant Village**	74.07	45	⇓P		P	15 37 44.8 +0.7
	baz=74,SNR=564						
K15A	**Arbon**	74.08	47	⇑P		P	15 37 45.1 +0.8
	baz=74,SNR=317						
SUSE	**Susehri**	74.08	309	⇑*i*P		P	15 37 43.8 -0.6
L14A	**Malta**	74.09	48	⇓P		P	15 37 44.9 +0.6
	baz=74,SNR=554						
SMMC	**Simmler**	74.12	57	⇓P		P	15 37 45.0 +0.4
	baz=74,SNR=116						
P11A	**Circle Ranch,**	74.16	52	⇑P		P	15 37 45.3 +0.5
	baz=74,SNR=191						
TIN	**Tinemaha**	74.18	55	⇓P		P	15 37 45.0 0.0
	baz=74						
PTK	**Pertek**	74.19	308	*e*P		P	15 37 45.9 +0.9
IMW	**Indian Meadow**	74.19	46	*e*P		P	15 37 45.8 +0.9
	comp=Z,992nm,0.8s,mb6.6						
J16A	**Bone**	74.22	47	⇓P		P	15 37 45.6 +0.5
	baz=74,SNR=556						
Q10A	**Clear Creek Ra**	74.22	53	⇓P		P	15 37 45.3 +0.1
	baz=74,SNR=941						
DCID1	**Drake Creek**	74.25	46	*e*P		P	15 37 46.2 +1.0
	comp=Z,1μm,0.9s,mb6.6						
N13A	**Wendover, West**	74.27	50	⇓P		P	15 37 45.7 +0.3
	baz=74						
N13A	**Wendover, West**	74.27	50	*e*P		P	15 37 45.6 +0.2
	comp=Z,2μm,1.2s,mb6.6						
RLMT	**Red Lodge**	74.30	44	⇓P		P	15 37 45.9 +0.4
	baz=74,SNR=357						
RLMT	**Red Lodge**	74.30	44	*e*P		P	15 37 46.4 +0.9
	comp=Z,753nm,0.9s,mb6.4						
MARD	**Mardin**	74.31	306	⇑*i*P		P	15 37 45.7 +0.1
O12A	**Currie**	74.32	51	⇓P		P	15 37 46.1 +0.3
	baz=74,SNR=301						
RRI2	**Red Ridge**	74.33	46	*e*P		P	15 37 46.5 +0.7
	comp=Z,3μm,1.4s,mb6.8						
DIYA	**Diyarbakir**	74.34	306	⇑*i*P		P	15 37 46.3 +0.5
M14A	**Sheep Mountain**	74.36	49	⇑P		P	15 37 46.4 +0.4
	baz=74,SNR=574						
KLBR	**Kellerberrin**	74.37	201	*e*P		P	15 37 45.7 -0.1
	comp=Z,246nm,0.9s,mb5.9						
KLBR				*ep*P		pP	15 38 13.0 -1.3
KLBR				*es*P		sP	15 38 31.9 +5.5
I17A	**Pilgrim Ck.**	74.38	46	⇑P		P	15 37 46.2 +0.2
	baz=74,SNR=500						
VES	**Vestal, Richgr**	74.38	56	⇑P		P	15 37 45.6 -0.6
	baz=74,SNR=238						
BLS5	**Blasjo**	74.39	338	*e*P		P	15 37 46.1 +0.3
BLS5				AMb		AMB	15 37 49.9
	comp=Z,599nm,1.5s,mb6.1						
BLS5	**Blasjo**	74.39	338	*e*P		P	15 37 46.1 +0.3
	comp=Z,599nm,1.5s,mb6.1						
TPAW	**Teton Pass**	74.45	46	*e*P		P	15 37 46.8 +0.5
	comp=Z,3.6nm,0.9s						
BHD	**Baghdad**	74.45	300	*i* x		x	15 37 42.0
BHD				*i* x		x	15 38 06.0
BHD				*i* x		x	15 47 06.0
BHD				*e*x		x	15 47 36.0
BHD				*e*x		x	15 47 51.0
KEMA	**Kemaliye**	74.50	308	⇑*i*P		P	15 37 47.3 +0.5
HVU	**Hansel Valley**	74.52	48	*e*P		P	15 37 46.9 +0.1
HVU				pmax		pmax	
	comp=Z,1μm,0.9s,mb6.7						
HVU	**Hansel Valley**	74.52	48	*e*P		P	15 37 46.9 +0.1
	comp=Z,1μm,0.9s,mb6.7						
K16A	**Soda Springs**	74.52	47	⇓P		P	15 37 46.4 -0.4
	baz=74,SNR=349						
SVRC	**Sivrice-ELAZID**	74.56	307	*e*P		P	15 37 49.2 +2.0
LOHW	**Long Hollow**	74.56	46	*e*P		P	15 37 47.3 +0.2
	comp=Z,412nm,0.5s,mb6.4						
SNOW	**Snow King Moun**	74.57	46	*e*P		P	15 37 47.8 +0.7
	comp=Z,459nm,0.8s,mb6.3						
REDW	**Red Top Meadow**	74.59	46	*e*P		P	15 37 47.7 +0.5
	comp=Z,2μm,1.4s,mb6.6						
L15A	**Malad City**	74.59	48	⇓P		P	15 37 47.3 0.0
	baz=74,SNR=314						
R10A	**Warm Springs**	74.62	53	⇑P		P	15 37 47.7 +0.2
	baz=74,SNR=309						
ERBA	**Erbaa**	74.64	310	⇑*i*P		P	15 37 48.0 +0.4
DGMT	**Dagmar**	74.65	39	⇑P		P	15 37 47.0 -0.5
	baz=74,SNR=125						
DGMT	**Dagmar**	74.65	39	*e*P		P	15 37 46.6 -0.8
	comp=Z,1μm,1.2s,mb6.5						
CWC	**Cottonwood Cre**	74.65	55	⇑P		P	15 37 47.4 -0.3
	baz=74						
J17A	**Brown Place, J**	74.66	46	⇑P		P	15 37 47.8 +0.2
	baz=74,SNR=86						
Q11A	**Duckwater**	74.67	52	⇓P		P	15 37 47.9 +0.2
	baz=74,SNR=492						
KBD	**Kabd**	74.67	295	*e*P		P	15 37 46.7 -1.2
KBD				AMb		AMB	15 37 50.5
	comp=Z,562nm,1.1s,mb6.2						
ELZG	**Elazig**	74.68	307	⇑*i*P		P	15 37 48.8 +1.0
P12A	**McGill**	74.72	51	⇓P		P	15 37 48.3 +0.2
	baz=74,SNR=508						
GRAC	**Grapevine Rang**	74.75	55	⇑P		P	15 37 48.6 +0.4
	baz=74,SNR=1000						
QRN	**Al-Qurain**	74.77	295	*e*P		P	15 37 47.1 -1.4
QRN				AMb		AMB	15 37 51.9
	comp=Z,1μm,0.6s,mb6.8						
WAR	**Warsaw**	74.78	327	*e*P		P	15 37 49.4 +1.2
WAR				*ep*P		pP	15 38 18.4 +1.7
WAR				*e*S		S	15 47 20.8 +5.4
WAR				*e*SKS			15 47 47.3
WAR				*es*S		sS	15 48 03.1 -1.2
WAR				LMZ			16 13 15.6
	comp=Z,30μm,18.0s						
WAR	**Warsaw**	74.78	327	*e*P		P	15 37 49.4 +1.2
WAR				*e**PP		pP	15 38 18.4 +1.8
WAR				*e*S		S	15 47 20.8 +5.5
WAR				*e*			15 47 47.3
WAR				MLR		MLR	
	comp=Z,30μm,18.0s						
WAR	**Warsaw**	74.78	327	P		P	15 37 52.2 +4.0
KVT	**Kavak**	74.80	311	*e*P		P	15 37 48.2 -0.3
SBC	**Santa Barbara**	74.83	58	⇓P		P	15 37 48.5 -0.3
	baz=75						
AHID	**Auburn Hatcher**	74.83	47	*e*P		P	15 37 48.7 +0.1
	comp=Z,629nm,0.9s,mb6.3						
KIS	**Kishinev**	74.85	319	⇑*i*P		P	15 37 47.0 -1.6
	comp=Z,4μm,10.0s						
KIS	**Kishinev**	74.85	319	*i* PcP		PcP	15 37 58.0 -4.1
KIS				*i* pP		pP	15 38 16.0 -1.1
KIS	**Kishinev**	74.85	319	*i* PP		PP	15 41 03.0 +26
	comp=Z,7μm,8.0s						
KIS	**Kishinev**	74.85	319α	*i*P		P	15 37 47.0 -1.6
KIS				*i*			15 37 58.0
KIS				*i* *PP		pP	15 38 16.0 -1.1
KIS				*i* PPP			15 42 24.0
KIS				*i* S		S	15 47 16.0 -0.2
KIS				*i* *SS		sS	15 47 44.0 -21
KIS				*i* PS			15 48 04.0
KIS				*i* SS		SS	15 52 02.0 -3.5
KIS				pmax		pmax	
	comp=N,160nm,3.0s						
KIS				pmax		pmax	
	comp=E,2μm,3.0s						
KIS				pmax		pmax	
	comp=Z,5μm,3.0s						
KIS				pmax		pmax	
	comp=Z,6μm,6.0s						
KIS				pmax		pmax	
	comp=N,2μm,3.0s						
KIS				pmax		pmax	
	comp=E,2μm,3.0s						
KIS				pmax		pmax	
	comp=Z,4μm,10.0s						
KIS				smax			
	comp=N,16μm,10.0s						
KIS				smax			
	comp=E,28μm,14.0s						
KIS				MLR		MLR	
	comp=N,30μm,18.0s						
KIS				MLR		MLR	
	comp=Z,42μm,18.0s						
KIS				MLR		MLR	
	comp=E,11μm,17.0s						
KIS				MLR		MLR	
	comp=Z,42μm,18.0s						
KIS	**Kishinev**	74.85	319	P		P	15 37 48.4 -0.2
KIS	**Kishinev**	74.85	319	⇑*i*P		P	15 37 50.4 +1.8
LAO	**LASA Array**	74.85	41	*e*P		P	15 37 48.9 +0.2
	comp=Z,3μm,1.4s,mb6.8						
O13A	**Hicks Ranch, I**	74.86	50	⇑P		P	15 37 49.0 +0.2
	baz=75,SNR=135						
N14A	**Grayback Hills**	74.87	49	⇑P		P	15 37 49.1 +0.2
	baz=75,SNR=326						
ISA	**Isabella**	74.88	56	⇓P		P	15 37 48.5 -0.6
	baz=75,SNR=414						
DIKM	**Dikmen**	74.90	312	*e*P		P	15 37 49.5 +0.4
M15A	**Larsen Ranch,**	74.91	48	⇓P		P	15 37 49.3 +0.2
	baz=75,SNR=145						
KMY	**Karmoy**	74.91	338	*e*P		P	15 37 48.8 0.0
KMY				AMb		AMB	15 37 52.7
	comp=Z,505nm,1.2s,mb6.1						
KMY	**Karmoy**	74.91	338	*e*P		P	15 37 48.8 0.0
	comp=Z,505nm,1.3s,mb6.1						
BGU	**Big Grassy Mou**	74.91	49	*e*P		P	15 37 49.4 +0.3
	comp=Z,2μm,1.7s,mb6.5						
RDF	**Al-Radifah**	74.92	295	*e*P		P	15 37 48.2 -1.1
RDF				AMb		AMB	15 37 52.1
	comp=Z,2μm,1.3s,mb6.6						
BORG	**Borgarnes**	74.92	352	P		P	15 37 52.0 +3.3
	comp=Z,4μm,0.8s,mb7.2,SNR=30						
I18A	**Diamond G Ranc**	74.94	45	⇓P		P	15 37 48.8 -0.4
	baz=75						
SCER	**sogukcermik**	74.94	309	⇑*i*P		P	15 37 50.0 +0.7
K17A	**Gardner Place,**	74.94	47	⇑P		P	15 37 49.1 -0.1
	baz=75						
ARVC	**Arvin**	74.98	57	⇑P		P	15 37 49.5 -0.1
	baz=75,SNR=70						
SVSK	**Karacayir**	74.98	310	*e*P		P	15 37 50.4 +0.8
SPUT	**South Promonto**	75.00	49	*e*P		P	15 37 49.7 +0.1
	comp=Z,1μm,1.3s,mb6.4						
STAV	**Stavanger**	75.01	338	*e*P		P	15 37 49.2 -0.2
STAV				AMb		AMB	15 37 53.0
	comp=Z,476nm,1.6s,mb6.0						
STAV	**Stavanger**	75.01	338	*e*P		P	15 37 49.2 -0.2
	comp=Z,476nm,1.6s,mb6.0						
R11A	**Troy Canyon, C**	75.02	52	⇑P		P	15 37 50.0 +0.2
	baz=75,SNR=1000						
TOKA	**Tokat**	75.03	310	⇑*i*P		P	15 37 50.1 +0.3
Q12A	**Willow Creek R**	75.04	52	⇓P		P	15 37 50.0 +0.1
	baz=75,SNR=312						
BSD	**Bornholm Skovb**	75.05	331	⇑*i*P		P	15 37 49.7 +0.1
BSD				*i*		pP	15 38 18.6 +0.5
BSD				*i* S		S	15 47 17.7 -0.5
BSD				*i*			15 48 03.4
BSD				pmax		pmax	
	comp=Z,800nm,1.0s,mb6.4						
BSD				MLR		MLR	
	comp=Z,14μm,18.0s						
BSD	**Bornholm Skovb**	75.05	331	P		P	15 37 49.1 -0.5
BSD	**Bornholm Skovb**	75.05	331	⇑*i*P		P	15 37 49.7 +0.1
	comp=Z,802nm,1.0s,mb6.4						
BSD				*i*		pP	15 38 18.6 +0.5
BSD				*i* S		S	15 47 17.7 -0.5
BSD				*i*			15 48 03.4
BSD							
	comp=Z,14μm,18.0s						
CNB	**Canberra Magne**	75.09	173	*e*P		P	15 37 50.1 +0.2
CNB				*ep*P		pP	15 38 19.4 +0.9
CNB				*e*S		S	15 47 21.3 +2.5
CNB				*e*			15 48 02.6
DARE	**Darende-Malaty**	75.11	308	*e*P		P	15 37 55.0 +4.7
L16A	**Fish Haven**	75.13	47	⇓P		P	15 37 50.7 +0.3
	baz=75,SNR=200						
J18A	**Kendall Valley**	75.14	46	⇓P		P	15 37 50.7 +0.3
	baz=75,SNR=174						
BSC	**Santa Cruz Isl**	75.16	58	⇑P		P	15 37 50.7 +0.1
	baz=75						
LVV	**L'vov**	75.20	324	*i* P		P	15 37 51.0 +0.4
LVV				*i* PPP			15 42 26.4
LVV				*i* S		S	15 47 18.6 -1.4
LVV				*i* PS			15 47 48.6
LVV				pmax		pmax	
	comp=Z,3μm,2.0s,mb6.7						
LVV				MLR		MLR	
	comp=N,21μm,13.0s						
LVV				MLR		MLR	
	comp=E,20μm,13.0s						
LVV				MLR		MLR	
	comp=Z,26μm,13.0s						
N15A	**Stansbury Isla**	75.23	49	⇑P		P	15 37 51.1 +0.2
	baz=75						
MPMC	**Manual Prospec**	75.26	55	⇑P		P	15 37 51.3 0.0
	baz=75,SNR=516						
P13A	**Bates Ranch, G**	75.27	51	⇑P		P	15 37 51.3 +0.1
	baz=75,SNR=556						
HWUT	**Hardware Ranch**	75.32	48	*e*P		P	15 37 51.6 +0.2
	comp=Z,7.5nm,0.9s						
HWUT				*ep*P		pP	15 38 20.0 +0.1
SOFL	**Sornfelli, Far**	75.33	345	P		P	15 37 51.7 +0.6
SOFL				AMb		AMB	15 37 55.4
	comp=Z,1μm,1.5s,mb6.4						
SOFL				AMS		AMS	16 19 21.8
	comp=Z,9μm,18.6s						
SOFL	**Sornfelli, Far**	75.33	345	⇑*e*P		P	15 37 51.7 +0.6
SOFL				AMb		AMB	15 37 55.4
	comp=Z,1μm,1.5s,mb6.4						
SOFL				AMS		AMS	16 19 21.8
	comp=Z,9μm,18.6s						
IAS	**Iasi**	75.34	320	⇓*i*P		P	15 37 52.3 +0.8
S11A	**Rachel**	75.36	53	⇓P		P	15 37 51.9 +0.1
	baz=75						
OSI	**Osito Adit**	75.37	57	⇑P		P	15 37 51.7 -0.1
	baz=75						
OSI	**Osito Adit**	75.37	57	*e*P		P	15 37 52.2 +0.3
	comp=Z,1μm,1.0s,mb6.6						
L17A	**Cokeville**	75.39	47	⇓P		P	15 37 51.9 0.0
	baz=75,SNR=252						
FURC	**Furnace Creek,**	75.41	55	⇑P		P	15 37 51.9 -0.1
	baz=75,SNR=602						
BZK	**Bozkurt**	75.41	313	*e*P		P	15 37 53.0 +1.0
URFA	**Urfa**	75.44	307	*e*P		P	15 37 53.2 +1.0
AKCD	**Akcadag**	75.46	308	⇑*i*P		P	15 37 52.8 +0.5
BLG	**Laguna Peak**	75.46	58	⇑P		P	15 37 52.0 -0.4
	baz=75,SNR=64						
LEOM	**Leova**	75.49	319	⇑P		P	15 37 54.5 +2.2
LEOM	**Leova**	75.49	319	⇑*i*P		P	15 37 54.5 +2.2
COP	**Copenhagen**	75.50	333	⇑*i*P		P	15 37 52.7 +0.5
COP				*i*		pP	15 38 21.9 +1.2
COP				*i* S		S	15 47 23.9 +0.8
COP				*e*			15 48 10.0
COP				pmax		pmax	
	comp=Z,630nm,0.9s,mb6.3						
COP				MLR		MLR	
	comp=Z,12μm,18.0s						
COP	**Copenhagen**	75.50	333	⇑*i*P		P	15 37 52.7 +0.5
	comp=Z,630nm,0.9s,mb6.3						
COP				*i*		pP	15 38 21.9 +1.2
COP				*i* S		S	15 47 23.9 +0.8
COP				*e*			15 48 10.0
COP							
	comp=Z,12μm,18.0s						
LRMC	**Laurel Mountai**	75.50	56	⇓P		P	15 37 52.3 -0.3
	baz=75,SNR=511						
DUG	**Dugway**	75.51	50	⇑P		P	15 37 52.9 +0.4
	baz=75,SNR=456						
DUG	**Dugway**	75.51	50	*e*P		P	15 37 52.6 +0.1
DUG				*e**PP		pP	15 38 21.6 +0.5
DUG				pmax		pmax	
	comp=Z,1μm,1.1s,mb6.5						
DUG	**Dugway**	75.51	50	*e*P		P	15 37 52.6 +0.1
	comp=Z,1μm,1.1s,mb6.5						
DUG				*ep*P		pP	15 38 21.6 +0.5
K18A	**Toltan Ranch,**	75.51	46	⇑P		P	15 37 52.9 +0.4
	baz=75,SNR=323						
GKP	**Gorka Klasztor**	75.57	329	*e*P		P	15 37 52.2 -0.5
GKP				*e*PcP		PcP	15 37 56.0 -9.1
GKP				*ep*P		pP	15 38 22.7 +1.5
GKP				*e*S		S	15 47 24.8 +0.8
GKP				*es*S		sS	15 48 10.7 -2.4
GKP				LMZ			16 14 09.6
	comp=Z,44μm,17.2s						
GKP	**Gorka Klasztor**	75.57	329	P		P	15 37 53.8 +1.1
Q13A	**Wheeler Ranch,**	75.58	51	⇑P		P	15 37 53.2 +0.2
	baz=75,SNR=786						
NOQ	**North Oquirrh**	75.62	49	*e*P		P	15 37 53.4 +0.3
	comp=Z,7μm,1.7s,mb7.1						
R12A	**Pony Springs,**	75.63	52	⇓P		P	15 37 53.5 +0.3
	baz=75,SNR=753						
O15A	**The Old Anders**	75.65	49	⇑P		P	15 37 53.7 +0.3
	baz=75,SNR=122						
EDW2	**Edwards Air Fo**	75.68	57	⇓P		P	15 37 53.4 -0.2
	baz=76,SNR=807						
BW06	**Boulder Array**	75.69	46	⇑P		P	15 37 53.2 -0.3
	baz=75,SNR=886						
BW06	**Boulder Array**	75.69	46	*e*P		P	15 37 53.2 -0.3
	comp=Z,2μm,0.8s,mb6.9						
PDAR	**Pinedale Array**	75.69	46	P		P	15 37 53.2 -0.3
	comp=Z,306nm,0.6s,mb6.2,baz=268,slow=1.1,SNR=159						
PDAR				S		S	15 47 27.4 +1.7
	comp=Z,2.6nm,1.1s,baz=119,slow=1.9,SNR=2.9						
PDAR				PKKPbc		PKKPbc	15 57 11.3 +2.0
	comp=Z,2.7nm,0.9s,baz=124,slow=3.5,SNR=6.6						
PDAR				PKPPKP			16 05 09.3
	comp=Z,2.2nm,0.8s,baz=132,slow=2.2,SNR=5.3						
P14A	**Drum Mountains**	75.75	50	⇑P		P	15 37 54.2 +0.3
	baz=76,SNR=562						
ATAB	**Bozova**	75.75	307	⇑*i*P		P	15 37 54.8 +0.8
NWAO	**Narrogin (SRO)**	75.77	201	*e*P		P	15 37 54.2 +0.3
NWAO				pmax		pmax	
	comp=Z,2μm,1.6s						
NWAO	**Narrogin (SRO)**	75.77	201	*e*P		P	15 37 54.2 +0.4
	comp=Z,2μm,1.6s,mb6.6						
NWAO	**Narrogin (SRO)**	75.77	201	P		P	15 37 55.4 +1.5
	SNR=7.1						
U10A	**Ash Meadows, A**	75.77	54	⇓P		P	15 37 54.4 +0.3
	baz=76,SNR=493						
WAL1	**Walls**	75.80	342	P		P	15 37 54.7 +0.8
WAL1	**Walls**	75.80	342	⇑*e*P		P	15 37 54.7 +0.8
LRW	**Lerwick**	75.80	342	P		P	15 37 54.4 +0.5
LRW				AMb		AMB	15 37 57.5
	comp=Z,427nm,1.9s,mb5.9						
LRW							15 47 22.8
LRW				AMS		AMS	16 05 39.3
	comp=Z,14μm,27.3s						
LRW	**Lerwick**	75.80	342	⇑*e*P		P	15 37 54.4 +0.5
LRW				AMb		AMB	15 37 57.5
	comp=Z,427nm,1.9s,mb5.9						
LRW				*e*			15 47 22.8
LRW				AMS		AMS	16 05 39.3
	comp=Z,14μm,27.3s						
CTU	**Camp Tracy**	75.81	49	*e*P		P	15 37 54.8 +0.6
	comp=Z,2μm,1.7s,mb6.6						
CTKT	**Corum**	75.83	311	⇑*i*P		P	15 37 54.6 +0.3
DECC	**Green Verdugo**	75.85	57	⇑P		P	15 37 54.1 -0.5
	baz=76						
N16A	**Rees Ranch, Co**	75.86	48	⇑P		P	15 37 54.8 +0.2
	baz=76						
M17A	**Scullys Gap (B**	75.92	48	⇑P		P	15 37 54.7 -0.1
	baz=76,SNR=231						
SAN1	**Sandwick**	75.92	342	P		P	15 37 55.1 +0.6
SAN1	**Sandwick**	75.92	342	⇑*e*P		P	15 37 55.1 +0.6
KWP	**Kalwaria Pacla**	75.93	324	*e*P		P	15 37 55.0 +0.2
KWP				*ep*P		pP	15 38 25.1 +1.8
KWP				*es*P		sP	15 38 35.4 -0.1
KWP				*e*S		S	15 47 31.9 +3.7
KWP				*es*S		sS	15 48 16.5 -0.7
KWP				LMZ			16 07 06.7
	comp=Z,24μm,33.0s						
KWP	**Kalwaria Pacla**	75.93	324	*e*P		P	15 37 55.0 +0.2
KWP				*e**PP		pP	15 38 25.1 +1.8
KWP				*e**SP		sP	15 38 35.4 -0.1
KWP				*e*S		S	15 47 31.9 +3.8
KWP				*e**SS		sS	15 48 16.5 -0.7
KWP	**Kalwaria Pacla**	75.93	324	*e*P		P	15 37 55.1 +0.3
	comp=Z,2μm,1.1s,mb6.8						
KWP	**Kalwaria Pacla**	75.93	324	⇓*i*P		P	15 37 55.7 +0.9
S12A	**Delamar Landin**	75.94	53	⇑P		P	15 37 55.5 +0.5
	baz=76,SNR=475						
SARI	**SarD1z-Kayseri**	75.95	309	*e*P		P	15 37 57.9 +2.8
L18A	**Fontenelle, Gr**	75.98	47	⇓P		P	15 37 55.3 +0.1
	baz=76,SNR=121						
MUD	**Monsted U'grnd**	75.98	335	⇑*i*P		P	15 37 55.6 +0.7
MUD				*i*		pP	15 38 24.6 +1.1
MUD				*i* S		S	15 47 30.0 +1.6
MUD				*i*			15 48 15.5
MUD				pmax		pmax	
	comp=Z,290nm,1.0s,mb6.0						
MUD				MLR		MLR	
	comp=Z,15μm,18.0s						
MUD	**Monsted U'grnd**	75.98	335	⇑*i*P		P	15 37 55.6 +0.7
	comp=Z,291nm,1.0s,mb6.0						
MUD				*i*		pP	15 38 24.6 +1.1
MUD				*i* S		S	15 47 30.0 +1.6
MUD				*i*			15 48 15.5
MUD							
	comp

TESR		76.27 320	⇑P	P	15 37 58.0	+1.3
TESR		76.27 320	⇑*i*P	P	15 37 58.0	+1.3
GZT	Gaziantep	76.27 307	⇑*i*P	P	15 37 57.7	+0.8
DAU	Daniels Canyon	76.27 49	*e*P	P	15 37 57.4	+0.5
DAU			pmax	pmax		
	comp=Z,209nm,0.7s,mb6.0					
DAU	Daniels Canyon	76.27 49	*e*P	P	15 37 57.4	+0.5
	comp=Z,209nm,0.7s,mb6.0					
M18A	Lyman	76.29 47	⇓P	P	15 37 56.2	-0.7
	baz=76,SNR=197					
BFSC	Mount Baldy Ra	76.29 57	⇑P	P	15 37 56.8	-0.3
	baz=76,SNR=311					
RRX	Edison Barstow	76.31 56	⇑P	P	15 37 57.0	-0.3
	baz=76					
MPU	Maple Canyon	76.31 49	*e*P	P	15 37 57.4	+0.3
	comp=Z,1μm,1.0s,mb6.5					
CIS	Catalina Islan	76.33 58	⇑P	P	15 37 56.7	-0.7
	baz=76,SNR=110					
U11A	Corn Creek	76.36 54	⇑P	P	15 37 56.8	-0.7
	baz=76					
CFR	Carcaliu	76.43 318	⇓P	P	15 37 59.4	+1.7
CFR	Carcaliu	76.43 318	P	P	15 37 57.7	0.0
CFR	Carcaliu	76.43 318	⇓*i*P	P	15 37 59.3	+1.6
K20A	Yellowstone Ra	76.44 45	⇑P	P	15 37 56.9	-0.9
	baz=76,SNR=228					
SCI	San Clemente I	76.50 58	⇓P	P	15 37 58.5	+0.2
	baz=76					
PETR		76.52 319	⇓P	P	15 37 59.8	+1.6
PETR		76.52 319	⇓*i*P	P	15 37 59.8	+1.6
Q15A	Fillmore	76.53 50	⇑P	P	15 37 58.6	+0.2
	baz=76,SNR=166					
S13A	Holt Ranch, En	76.56 52	⇑P	P	15 37 58.0	-0.5
	baz=76,SNR=776					
P16A	Fountain Green	76.56 49	⇑P	P	15 37 58.2	-0.3
	baz=76					
T12A	Moapa	76.58 53	⇓P	P	15 37 58.9	+0.2
	baz=76					
KMRS	Kahramanmaras	76.58 308	*e*P	P	15 37 59.4	+0.7
R14A	James Farms, M	76.60 51	⇑P	P	15 37 58.9	+0.1
	baz=76					
GAZ	Gaziantep	76.61 307	*e*P	P	15 38 00.6	+1.8
SAFT	Safranbolu	76.63 313	*e*P	P	15 38 00.2	+1.3
TUQ	Turquoise Moun	76.65 55	⇑P	P	15 37 59.1	0.0
	baz=76,SNR=864					
VRI	Vrincioaia	76.67 319	⇓*i*P	P	15 37 59.5	+0.5
ARUT	Antelope Range	76.68 52	*e*P	P	15 37 59.5	+0.2
	comp=Z,143nm,1.8s,mb5.4					
V11A	Goodsprings	76.70 54	⇑P	P	15 37 59.2	-0.2
	baz=76					
O17A	Robinson Place	76.72 49	⇓P	P	15 37 59.7	+0.4
	baz=76,SNR=236					
CDAG	Cicekdag	76.72 311	⇑*i*P	P	15 37 59.4	0.0
PLOR	Plostina	76.72 319	P	P	15 38 00.0	+0.7
PLOR	Plostina	76.72 319	⇓*i*P	P	15 38 00.7	+1.4
STHS	Stebnicka Huta	76.75 325	*e*P	P	15 38 00.5	+1.1
STHS			pmax	pmax		
	comp=Z,345nm,0.9s,mb6.1					
STHS	Stebnicka Huta	76.75 325	*e*P	P	15 38 00.5	+1.1
	comp=Z,345nm,0.9s,mb6.1					
STHS			*e*PP	pP	15 38 28.0	0.0
STHS	Stebnicka Huta	76.75 325	*e*P	P	15 38 00.5	+1.1
STHS			*e*pP	pP	15 38 28.0	0.0
M19A	Rock Springs	76.75 47	⇑P	P	15 37 59.2	-0.4
	baz=76					
BBRC	Big Bear Solar	76.75 56	⇑P	P	15 37 59.3	-0.4
	baz=76					
HEC	Hector,Ludlow	76.77 56	⇓P	P	15 37 59.6	-0.2
	baz=77,SNR=876					
TIRR	Tirgusor	76.78 317	*e*P	P	15 37 59.2	-0.5
TIRR			pmax	pmax		
	comp=Z,1μm,1.6s,mb6.3					
TIRR	Tirgusor	76.78 317	*e*P	P	15 37 59.1	-0.5
	comp=Z,1μm,1.6s,mb6.3					
TIRR	Tirgusor	76.78 317	⇓*i*P	P	15 38 00.7	+1.0
N18A	Larsen Ranch,	76.81 47	⇓P	P	15 37 59.5	-0.4
	baz=77,SNR=220					
UZH	Uzhgorod	76.84 324	*e*P	P	15 38 00.1	+0.2
UZH			*e*		15 38 23.3	
UZH			*e*		15 38 36.3	
UZH			*e*		15 40 57.5	
UZH			*e*		15 42 47.7	
UZH			*e*S	S	15 47 35.9	-2.2
UZH			*e*PS		15 47 59.9	
S14A	Cedar City	76.86 52	⇓P	P	15 38 00.2	-0.1
	baz=77,SNR=155					
L20A	Wamsutter	76.87 46	⇓P	P	15 38 00.2	0.0
	baz=77,SNR=172					
ANDN	Andirin	76.87 308	⇑*i*P	P	15 38 00.9	+0.6
U12A	Valley of Fire	76.88 53	⇑P	P	15 38 00.5	+0.2
	baz=77,SNR=125					
CCUT	Cedar City	76.88 52	*e*P	P	15 38 00.5	+0.1
	comp=Z,602nm,0.9s,mb6.3					
GRER		76.89 319	P	P	15 38 02.0	+1.8
GRER		76.89 319	⇓*i*P	P	15 38 02.0	+1.7
T13A	Saint George	76.89 53	⇓P	P	15 38 00.3	-0.1
	baz=77,SNR=723					
KUZU	Kuzuini	76.94 307	⇑*i*P	P	15 38 01.3	+0.5
MSU	Marysvale	76.97 51	*e*P	P	15 38 01.5	+0.6
MSU			pmax	pmax		
	comp=Z,4μm,1.9s,mb6.8					
MSU	Marysvale	76.97 51	*e*P	P	15 38 01.5	+0.7
	comp=Z,4μm,1.9s,mb6.8					
BMR	Baia Mare	76.97 322	⇑P	P	15 38 01.9	+1.2
BMR	Baia Mare	76.97 322	P	P	15 38 01.7	+1.0
BMR	Baia Mare	76.97 322	⇑*i*P	P	15 38 01.9	+1.2
RBK	Rabkut	76.98 282	P	P	15 38 00.4	-0.8
	SNR=14					
AVNT	Avonos	76.99 310	⇑*i*P	P	15 38 01.1	+0.1
MURC	Murrieta	76.99 57	⇑P	P	15 38 01.0	0.0
	baz=77,SNR=119					
TMUT	Trail Mountain	77.03 49	*e*P	P	15 38 01.6	+0.4
	comp=Z,5μm,1.7s,mb6.9					
TOO	Toolangi	77.08 177	*e*P	P	15 38 00.9	-0.2
TOO			*e*pP	pP	15 38 30.8	+1.0
TOO			*e*S	S	15 47 41.5	+1.0
TOO			*e*PKPPKP		16 05 13.9	
CVD	Cernavoda	77.08 318	⇑P	P	15 38 02.9	+1.5
CVD	Cernavoda	77.08 318	⇑*i*P	P	15 38 02.9	+1.5
BR131	Keskin Array S	77.08 311	*e*P	P	15 38 01.1	-0.4
	comp=Z,73nm,0.5s,mb5.7					
BRTR	Keskin Array B	77.08 311	P	P	15 38 01.1	-0.3
	comp=Z,99nm,0.5s,mb5.8,baz=80,slow=3.0,SNR=146					
BRTR			PKKPbc	PKKPbc	15 57 07.8	+1.6
	comp=Z,6.9nm,0.8s,baz=196,slow=2.3,SNR=13					
BRTR			PKPPKP		16 05 06.7	
	comp=Z,3.8nm,0.9s,baz=172,slow=3.3,SNR=5.8					
BRTR			LR	LR	16 17 13.8	
	comp=Z,14μm,19.3s,baz=43,slow=40					
O18A	Roosevelt	77.09 48	⇑P	P	15 38 01.7	+0.2
	baz=77,SNR=75					
TRPA	Tarpa	77.09 323	⇓*i*P	P	15 38 02.1	+0.8
R15A	Junction	77.11 51	⇓P	P	15 38 01.8	+0.1
	baz=77,SNR=164					
V12A	Nelson	77.13 54	⇓P	P	15 38 01.8	0.0
	baz=77,SNR=502					
N19A	John Jarvie Ra	77.15 47	⇑P	P	15 38 01.6	-0.2
	baz=77,SNR=89					
NIE	Niedzica	77.16 325	*e*P	P	15 38 02.6	+0.9
NIE			*e*		15 38 06.0	
NIE			*e*pP	pP	15 38 31.3	+1.0
NIE	Niedzica	77.16 325	*e*P	P	15 38 02.6	+0.9
NIE			*e*		15 38 06.0	
NIE			*e**PP	pP	15 38 31.3	+1.0
ULM	Lac du Bonnet	77.17 34	P	P	15 38 01.1	-0.6
	comp=Z,266nm,0.8s,mb6.0,baz=319,slow=6.6,SNR=52					
ULM			S	S	15 47 39.5	-2.1
	comp=Z,3.6nm,0.4s,baz=264,slow=20,SNR=1.8					
ULM	Lac du Bonnet	77.17 34	*e*P	P	15 37 59.5	-2.2
	comp=Z,703nm,1.2s,mb6.3					
P17A	Butcher Ranch,	77.19 49	⇑P	P	15 38 02.2	+0.1
	baz=77,SNR=375					
PGOR	Pogoanele	77.21 318	⇓*i*P	P	15 38 03.8	+1.7
GMRC	Granite Mounta	77.23 55	⇑P	P	15 38 02.2	-0.1
	baz=77,SNR=622					
AMRR	Amara	77.24 318	P	P	15 38 03.7	+1.4
AMRR	Amara	77.24 318	⇑*i*P	P	15 38 04.2	+2.0
U13A	Pakoon Wash	77.24 53	⇓P	P	15 38 02.8	+0.4
	baz=77,SNR=1000					
KOZT	Kozan	77.25 308	*e*P	P	15 38 02.9	+0.4
DOPR	Dopca	77.27 320	⇓*i*P	P	15 38 04.3	+1.9
KAMT	Kaman	77.27 311	*e*P	P	15 38 03.4	+0.8
KDZE	Karadeniz Ereo	77.28 313	*e*P	P	15 38 00.0	-2.5
ISR	Istrita	77.29 319	⇓P	P	15 38 03.5	+1.0
ISR	Istrita	77.29 319	⇓*i*P	P	15 38 03.5	+1.0
Q16A	Castle Valley	77.30 50	⇓P	P	15 38 03.0	+0.3
	baz=77,SNR=322					
M20A	Sweetwater, Wa	77.30 46	⇓P	P	15 38 02.9	+0.2
	baz=77,SNR=286					
MLR	Muntele Rosu	77.33 319	⇑P	P	15 38 04.6	+1.9
MLR	Muntele Rosu	77.33 319	⇑*i*P	P	15 38 04.6	+1.9
T14A	Hurricane	77.37 52	⇓P	P	15 38 03.3	+0.3
	baz=77,SNR=135					
P18A	Preston Nutter	77.37 49	⇓P	P	15 38 03.4	+0.3
	baz=77,SNR=721					
W12A	Cal Nev Ari	77.39 55	⇓P	P	15 38 03.1	-0.2
	baz=77,SNR=81					
S15A	Panguitch	77.40 51	⇑P	P	15 38 03.6	+0.3
	baz=77,SNR=102					
SGKT	Sivrigoynuk	77.43 313	⇑*i*P	P	15 38 04.0	+0.6
L21A	Rawlins	77.44 45	⇓P	P	15 38 03.0	-0.4
	baz=77,SNR=620					
PSN	Preselentsi	77.44 317	*i*P	P	15 38 04.7	+1.3
PFO	Pinyon Flat Ob	77.46 57	P	P	15 38 04.0	+0.3
	comp=Z,3μm,0.9s,mb7.1,SNR=67					
PFO	Pinyon Flat Ob	77.46 57	⇑P	P	15 38 03.4	-0.3
	baz=77,SNR=286					
PFO	Pinyon Flat Ob	77.46 57	*e*P	P	15 38 03.3	-0.4
PFO			pmax	pmax		
	comp=Z,1μm,1.3s,mb6.4					
PFO	Pinyon Flat Ob	77.46 57	*e*P	P	15 38 03.3	-0.4
	comp=Z,1μm,1.3s,mb6.4					
LOD	Lodumlu	77.48 312	*e*P	P	15 38 03.5	-0.1
109C	Camp Elliot, M	77.50 58	⇑P	P	15 38 03.2	-0.7
	baz=77,SNR=29					
BBAL	Bala	77.50 311	⇑*i*P	P	15 38 03.9	+0.1
BELC	Belle Mtn. Jos	77.51 56	⇓P	P	15 38 03.4	-0.5
	baz=77,SNR=505					
RUE	Ruedersdorf	77.52 330	*e*P	P	15 38 03.6	-0.1
	comp=Z,1μm,1.1s,mb6.5					
RUE	Ruedersdorf	77.52 330	*e*P	P	15 38 03.3	-0.3
	comp=Z,902nm,1.0s,mb6.5					
RUE			*e*pP	pP	15 38 30.1	-2.3
R16A	Teasdale	77.53 50	⇑P	P	15 38 03.3	-0.7
	baz=77,SNR=640					
SRU	San Rafael	77.55 49	⇓P	P	15 38 04.0	-0.1
	baz=77,SNR=691					
SRU	San Rafael	77.55 49	*e*P	P	15 38 04.1	0.0
	comp=Z,28nm,0.7s,mb5.1					
SRU			*e*pP	pP	15 38 34.3	+1.5
O19A	Miners Draw (B	77.57 48	⇑P	P	15 38 03.7	-0.5
	baz=77,SNR=121					
RAC	Raciborz	77.58 327	*e*P	P	15 38 04.8	+0.8
RAC			*e**PP	pP	15 38 33.3	+0.6
RAC			*e*S	S	15 47 45.1	-0.9
RAC			*e**SS	sS	15 48 35.3	0.0
RAC			MLR	MLR		
	comp=N,20μm,14.0s					
RAC			MLR	MLR		
	comp=Z,23μm,18.0s					
RAC			MLR	MLR		
	comp=E,20μm,16.0s					
V13A	Grand Canyon W	77.59 54	⇓P	P	15 38 04.6	+0.3
	baz=77					
CEYT	Ceyhan	77.60 308	*e*P	P	15 38 06.2	+1.7
COBT	Iskenderun	77.61 307	*i*P	P	15 38 04.6	+0.1
BSEG	Bad Segeberg	77.63 333	*e*P	P	15 38 04.2	-0.1
	comp=Z,1μm,1.1s,mb6.6					
BSEG			*e*S	S	15 47 48.4	+1.9
MDB	Medias	77.64 321	⇑*i*P	P	15 38 08.0	+3.5
M21A	Separation Pea	77.68 46	⇑P	P	15 38 04.3	-0.5
	baz=77,SNR=361					
N20A	Spence Gulch,	77.70 47	⇑P	P	15 38 05.0	+0.2
	baz=78,SNR=778					
RWWY	Rawlins	77.71 46	*e*P	P	15 38 04.6	-0.3
	comp=Z,2μm,1.3s,mb6.8					
U14A	Mt Trumbull	77.72 53	⇓P	P	15 38 05.4	+0.3
	baz=78,SNR=952					
RSSD	Black Hills	77.73 42	*e*P	P	15 38 04.4	-0.6
RSSD			pmax	pmax		
	comp=Z,4μm,1.8s,mb6.8					
RSSD	Black Hills	77.73 42	*e*P	P	15 38 04.4	-0.6
	comp=Z,4μm,1.8s,mb6.8					
SULR		77.74 319	P	P	15 38 05.7	+0.6
SULR		77.74 319	⇓*i*P	P	15 38 06.2	+1.2
ABTO	Aybut	77.76 282	P	P	15 38 04.7	-0.8
	SNR=23					
KECS	Kecovo	77.77 324	*e*P	P	15 38 05.6	+0.5
KECS			pmax	pmax		
	comp=Z,101nm,1.0s,mb5.5					
KECS	Kecovo	77.77 324	*e*P	P	15 38 05.6	+0.5
	comp=Z,101nm,1.0s,mb5.5					
KECS			*e*PP	pP	15 38 34.4	+0.6
KECS			*e*S	S	15 47 48.4	+0.3
KECS			*e*		15 57 06.2	
KECS	Kecovo	77.77 324	*e*P	P	15 38 05.6	+0.5
KECS			*e*pP	pP	15 38 34.4	+0.6
KECS			*e*S	S	15 47 48.4	+0.3
KECS			*e*PP	PKKPbc	15 57 06.2	+1.2
OKC	Ostrava-Krasne	77.79 326	⇑*i*P	P	15 38 04.5	-0.7
OKC			*e**PP	pP	15 38 32.4	-1.4
OKC			*e*S	S	15 47 47.3	-0.9
OKC			*e*		15 48 36.3	
OKC			MLR	MLR		
	comp=Z,25μm,15.8s					
OKC	Ostrava-Krasne	77.79 326	P	P	15 38 05.5	+0.3
OKC	Ostrava-Krasne	77.79 326	⇑*i*P	P	15 38 04.5	-0.7
OKC			*e*pP	pP	15 38 32.4	-1.4
OKC			*e*S	S	15 47 47.3	-0.9
OKC			*e*XS	sS	15 48 36.3	-1.2
OKC			*e*PKPPKP		16 05 02.7	
OKC			AMS	AMS	16 15 30.0	
	comp=Z,25μm,15.8s					
Q18A	Rafter H Ranch	77.79 49	⇓P	P	15 38 05.2	-0.2
	baz=78,SNR=150					
YURE	YUREGIR	77.79 308	⇑*i*P	P	15 38 06.8	+1.4
KSP	Ksiaz	77.80 328	*e*P	P	15 38 05.3	+0.1
KSP			*e*PcP	PcP	15 38 08.9	-5.9
KSP			*e*pP	pP	15 38 35.5	+1.6
KSP			*e*S	S	15 47 53.7	+5.4
KSP			*e*sS	sS	15 48 36.1	-1.5
KSP			LMZ		16 13 57.0	
	comp=Z,38μm,21.9s					
KSP	Ksiaz	77.80 328	⇑*e*P	P	15 38 05.1	-0.1
KSP			*e**PP	pP	15 38 30.0	-3.9
KSP			*e*		15 40 58.2	
KSP			*e*S	S	15 47 44.2	-4.1
KSP			*e**SS	sS	15 48 33.9	-3.7
KSP	Ksiaz	77.80 328	P	P	15 38 05.7	+0.5
VOIR		77.81 320	⇑P	P	15 38 06.2	+0.8
VOIR		77.81 320	P	P	15 38 05.7	+0.2
VOIR		77.81 320	⇓*i*P	P	15 38 06.2	+0.8
ORE	Reay	77.83 342	P	P	15 38 05.6	+0.4
ORE	Reay	77.83 342	⇑*e*P	P	15 38 05.6	+0.4
S16A	Weppner Ranch,	77.83 51	⇑P	P	15 38 05.8	+0.1
	baz=78,SNR=858					
KARA	Karaisali	77.86 308	*e*P	P	15 38 06.3	+0.5
NEE2	Needles Airpor	77.89 55	⇓P	P	15 38 05.4	-0.6
	baz=78					
L22A	Ellis Ranch, M	77.90 45	⇑P	P	15 38 05.9	-0.1
	baz=78,SNR=206					
R17A	Hanksville Air	77.90 50	⇓P	P	15 38 05.8	-0.2
	baz=78,SNR=802					
HENT	Hendek	77.91 313	*e*P	P	15 38 05.5	-0.6
BAR	Barrett	77.91 58	*e*P	P	15 38 05.8	-0.4
	comp=Z,660nm,1.1s,mb6.3					
MONP	Monument Peak	77.94 57	⇓P	P	15 38 06.0	-0.4
	baz=78,SNR=314					
IRM	Iron Mountain	77.95 56	⇓P	P	15 38 06.2	-0.2
	baz=78,SNR=970					
LIKS	Likavka	77.96 325	*e*P	P	15 38 08.1	+1.9
LIKS			pmax	pmax		
	comp=Z,572nm,1.0s,mb6.3					
LIKS	Likavka	77.96 325	*e*P	P	15 38 08.1	+1.9
	comp=Z,572nm,1.0s,mb6.3					
LIKS	Likavka	77.96 325	*e*P	P	15 38 08.1	+1.9
MDU	Mudurnu	77.98 313	*e*P	P	15 38 06.7	+0.2
DRGR		77.98 322	P	P	15 38 06.6	+0.3
DRGR		77.98 322	⇓*i*P	P	15 38 06.6	+0.3
GULE	Gulek	78.01 309	⇑*i*P	P	15 38 06.8	+0.1
YAYL	Yayladag	78.02 307	⇑*i*P	P	15 38 06.9	+0.2
BC3	Big Chuckawall	78.08 56	⇓P	P	15 38 06.7	-0.4
	baz=78,SNR=791					
MORC	Moravsky Berou	78.09 327	*e*P	P	15 38 06.9	0.0
	comp=Z,58nm,1.0s,mb5.3					
MORC			*e*pP	pP	15 38 33.9	-1.6
MORC	Moravsky Berou	78.09 327	⇑*i*P	P	15 38 07.0	+0.1
P19A	Cripple Cowboy	78.10 48	⇓P	P	15 38 07.0	-0.1
	baz=78,SNR=715					
KRTS	Karatas	78.11 308	*e*P	P	15 38 09.2	+2.0
W13A	Hualapai Mount	78.14 54	⇑P	P	15 38 07.3	-0.1
	baz=78,SNR=566					
SULT	Sultanhani-AKS	78.16 310	*e*P	P	15 38 09.0	+1.5
DPC	Dobruska-Polom	78.16 328	⇑*i*P	P	15 38 07.6	+0.4
DPC			*e**PP	pP	15 38 36.0	+0.1
DPC			*e*S	S	15 47 50.3	-2.0
DPC			*e*		15 48 40.2	
DPC	Dobruska-Polom	78.16 328	P	P	15 38 07.5	+0.3
DPC	Dobruska-Polom	78.16 328	⇑*i*P	P	15 38 07.6	+0.4
DPC			*e*pP	pP	15 38 36.0	+0.1
DPC			*e*S	S	15 47 50.3	-2.0
DPC			*e*XS	sS	15 48 40.2	-1.4
DPC			*e*x	x	16 04 58.1	
DPC			AMS	AMS	16 18 40.0	
	comp=Z,30μm,11.8s					
N21A	Black Mountain	78.17 46	⇑P	P	15 38 07.3	-0.2
	baz=78,SNR=135					
UPC	Upice	78.17 328	⇑*i*P	P	15 38 07.3	0.0
UPC			*e**PP	pP	15 38 34.2	-1.8
UPC	Upice	78.17 328	⇑*i*P	P	15 38 07.3	0.0
UPC			*e*pP	pP	15 38 34.2	-1.8
O20A	White River Ci	78.18 47	⇑P	P	15 38 07.2	-0.3
	baz=78,SNR=118					
PRD	Provadia	78.18 317	*i*P	P	15 38 08.3	+0.8
U15A	North Rim	78.26 52	⇑P	P	15 38 08.0	-0.1
	baz=78,SNR=1000					
HLG	Helgoland	78.27 334	*e*P	P	15 38 07.6	-0.1
	comp=Z,1μm,1.1s,mb6.5					
V14A	Boquillas Ranc	78.28 53	⇓P	P	15 38 07.8	-0.4
	baz=78					
DVTC	Desert V Tower	78.30 57	⇓P	P	15 38 08.0	-0.3
	baz=78,SNR=161					
SWSC	Sam W. Stewart	78.31 57	⇓P	P	15 38 07.8	-0.6
	baz=78,SNR=119					
RSC	Scourie	78.33 343	P	P	15 38 08.2	+0.2
RSC	Scourie	78.33 343	⇑*e*P	P	15 38 08.2	+0.2
S17A	Black Ridge (B	78.36 51	⇓P	P	15 38 08.4	-0.2
	baz=78,SNR=397					
T16A	Glen Canyon Da	78.37 51	⇓P	P	15 38 08.1	-0.5
	baz=78					
Q19A	Hogan Spring (	78.39 49	⇓P	P	15 38 08.4	-0.4
	baz=78,SNR=172					
GULT	Gulveren	78.39 313	*e*P	P	15 38 09.6	+0.9
R18A	Canyonlands Na	78.40 49	⇓P	P	15 38 08.5	-0.3
	baz=78,SNR=728					
MERS	Mersin	78.44 308	*e*P	P	15 38 10.0	+0.9
PSZ	Piszkesteto	78.46 324	⇓*i*P	pP	15 38 32.1	-5.5
MVH1	Achvaich	78.49 342	P	P	15 38 09.1	+0.2
MVH1	Achvaich	78.49 342	⇑*e*P	P	15 38 09.1	+0.2
SVRH	Sivrihisar-ESK	78.49 312	*e*P	P	15 38 10.0	+0.8
VYHS	Vyhne	78.50 325	*e*P	P	15 38 10.4	+1.3
VYHS			pmax	pmax		
	comp=Z,295nm,1.2s,mb5.9					
VYHS	Vyhne	78.50 325	*e*P	P	15 38 10.4	+1.3
	comp=Z,295nm,1.2s,mb5.9					
VYHS			*e*PP	pP	15 38 37.5	-0.3
VYHS			*e*S	S	15 47 52.3	-3.6
VYHS			*e*		15 57 05.9	
VYHS	Vyhne	78.50 325	*e*P	P	15 38 10.4	+1.3
VYHS			*e*pP	pP	15 38 37.5	-0.3
VYHS			*e*S	S	15 47 52.2	-3.7
VYHS			*e*PP	PKKPbc	15 57 05.9	+2.5
X13A	Yucca	78.50 55	⇓P	P	15 38 09.3	-0.1
	baz=78,SNR=1000					
DEV	Deva	78.55 321	⇑P	P	15 38 11.0	+1.6
DEV	Deva	78.55 321	⇑*i*P	P	15 38 11.0	+1.6
O21A	Pagoda	78.56 47	⇑P	P	15 38 09.6	0.0
	baz=78,SNR=88					
W14A	Seligman	78.57 54	⇑P	P	15 38 10.1	+0.3
	baz=78,SNR=636					
MCD	Coleburn Disti	78.57 342	P	P	15 38 08.6	-0.7
MCD	Coleburn Disti	78.57 342	⇑*e*P	P	15 38 08.6	-0.7
HRT	Hereke	78.60 314	*e*P	P	15 38 10.6	+0.8
KOLL	Kolacno	78.62 325	*e*P	P	15 38 10.7	+0.9
KOLL			*e*	pP	15 38 39.1	+0.6
KOLL	Kolacno	78.62 325	*e*P	P	15 38 10.7	+0.9
KOLL			*e*pP	pP	15 38 39.1	+0.6
AGMN	Agassiz Nation	78.63 35	*e*P	P	15 38 08.4	-1.5
	comp=Z,7μm,1.2s,mb7.3					
KLYT	Kilyos	78.65 315	*e*P	P	15 38 10.9	+0.8
KIZT	Kizilcal	78.66 311	*e*P	P	15 38 10.9	+0.7
BRG	Berggiesshubel	78.72 329	*e*P	P	15 38 10.0	-0.3
	comp=Z,553nm,1.1s,mb6.3					
BRG			*e*S	S	15 47 59.9	+1.7
BRG	Berggiesshubel	78.72 329	*i*P	P	15 38 10.1	-0.2
	comp=Z,249nm,1.6s,mb5.8					
BRG			*i*		15 38 13.6	
	comp=Z,551nm,1.1s					
BRG			*e*pP	pP	15 38 40.1	+1.1
	comp=Z,733nm,1.2s					
BRG			*e*sP	sP	15 38 50.9	-0.3
	comp=Z,710nm,1.4s					
BRG			*e*PP	PP	15 41 11.4	+2.3
	comp=Z,150nm,1.1s					
BRG			S	S	15 48 01.0	+2.8
BRG			SS		16 00 14.0	
BRG			*e*PKPPKP		16 04 46.0	
	comp=Z,4.2nm,0.9s					
BRG	Berggiesshubel	78.72 329	*i*P	P	15 38 10.1	-0.2
BRG			*i*		15 38 13.6	
BRG			*e**PP	pP	15 38 40.1	+1.1
BRG			*e**SP	sP	15 38 50.9	-0.2
BRG			*e*		15 41 11.4	
BRG			S	S	15 48 01.0	+2.8
BRG			pmax	pmax		
	comp=Z,149nm,1.6s,mb5.6					
BRG			pmax	pmax		
	comp=Z,90nm,1.1s,mb5.5					
BRG			MLR	MLR		
	comp=N,14μm,17.0s					
BRG			MLR	MLR		
	comp=E,9μm,15.4s					
BRG			MLR	MLR		
	comp=Z,17μm,15.4s					
N22A	Wattenberg Ran	78.73 46	⇑P	P	15 38 10.8	+0.3
	baz=78,SNR=426					
V15A	Kaibab Nationa	78.73 53	⇓P	P	15 38 11.0	+0.4
	baz=78					
PVCC	Panska Ves	78.74 329	⇑*i*P	P	15 38 10.5	+0.1
PVCC			*e**PP	pP	15 38 39.4	+0.3
PVCC			*e*S	S	15 47 57.8	-0.6
PVCC			*e*		15 48 46.0	
PVCC			MLR	MLR		
	comp=Z,39μm,15.4s					
PVCC	Panska Ves	78.74 329	P	P	15 38 10.8	+0.4
PVCC	Panska Ves	78.74 329	⇑*i*P	P

comp=Z,16nm,1.0s
CLL e 15 57 30.0
CLL e 16 04 50.0
CLL ePKPPKPdf 16 05 10.0
CLL ep3PKPbc 16 25 40.0
ISK Istanbul-Kandi 78.77 315 eP P 15 38 11.4 +0.6
T17A Navajo Res., N 78.78 51 ⇓P P 15 38 10.6 -0.4
baz=79,SNR=218
BORA Eskisehir 78.80 313⇑iP P 15 38 10.5 -0.4
S18A Hurst Farm, Bl 78.81 50 ⇓P P 15 38 10.8 -0.2
baz=79,SNR=871
ESKT Eskisehir 78.82 312 eP P 15 38 13.2 +2.2
ESKT Eskisehir 78.82 312⇑iP P 15 38 10.0 -1.1
ADVT Abdulvahap 78.83 314 eP P 15 38 11.9 +0.8
LADK Ladik-KONYA 78.84 311 eP P 15 38 12.0 +0.8
R19A Curley Farm, L 78.84 49 ⇑P P 15 38 11.0 -0.1
baz=79,SNR=252
BGKT Bogazkoy 78.84 315 eP P 15 38 12.0 +0.9
VRAC Vranov 78.85 327 LR LR 16 16 19.4
comp=Z,32µm,18.4s,baz=288,slow=38
VRAC Vranov 78.85 327 P P 15 38 11.6 +0.5
VRAC Vranov 78.85 327⇓iP P 15 38 11.6 +0.6
GLA Glamis 78.87 56 ⇓P P 15 38 11.3 -0.2
baz=79,SNR=445
GLA Glamis 78.87 56 eP P 15 38 11.4 0.0
GLA pmax pmax
comp=Z,1µm,0.9s,mb6.7
GLA Glamis 78.87 56 eP P 15 38 11.4 0.0
comp=Z,1µm,0.9s,mb6.7
NRDL Niedersach Rie 78.87 332 eP P 15 38 09.7 -1.4
comp=Z,571nm,1.3s,mb6.2
NRDL eS S 15 47 59.8 0.0
SZH Strazhica 78.90 318 iP P 15 38 11.9 +0.5
CTYL Yal??k??y-??at 78.91 315 eP P 15 38 09.0 -2.5
ZIMR 78.92 318 ⇓P P 15 38 12.5 +1.0
ZIMR 78.92 318⇓iP P 15 38 12.4 +0.9
RRR Rubha Reidh 78.92 343 P P 15 38 11.7 +0.4
RRR Rubha Reidh 78.92 343⇑eP P 15 38 11.7 +0.4
CAVI Cavuskoy 78.92 314 eP P 15 38 11.7 +0.1
PHWY Pilot Hill 78.93 45 eP P 15 38 11.4 -0.2
comp=Z,3µm,1.7s,mb6.8
YLV Yalova 78.94 314 eP P 15 38 11.5 -0.2
N23A Red Feather La 78.95 46 ⇓P P 15 38 12.1 +0.3
baz=79,SNR=499
Q20A Ridgley Place, 78.95 48 ⇑P P 15 38 11.6 -0.2
baz=79,SNR=317
CTKS Kestanelik-??a 78.95 315 eP P 15 38 12.5 +0.8
DGAR Diego Garcia 78.96 251 eP P 15 38 11.3 -0.8
DGAR pmax pmax
comp=Z,1µm,1.1s,mb6.7
DGAR Diego Garcia 78.96 251 eP P 15 38 11.3 -0.8
comp=Z,1µm,1.1s,mb6.7
MDO Dochfour 78.96 342 P P 15 38 11.4 -0.1
MDO Dochfour 78.96 342⇑eP P 15 38 11.4 -0.1
FKH Fakeheh 79.00 305 eP P 15 38 12.5 +0.3
KONT Konya--Tatoy 79.01 310 eP P 15 38 12.9 +0.8
Y13A Salome 79.01 55 ⇑P P 15 38 12.2 0.0
baz=79,SNR=179
ELBA Catalca 79.06 315⇑iP P 15 38 11.9 -0.4
RRH Rhenigidale 79.06 343 P P 15 38 12.2 +0.2
RRH Rhenigidale 79.06 343⇑eP P 15 38 12.2 +0.2
W15A Williams 79.09 53 ⇓P P 15 38 12.3 -0.3
baz=79,SNR=279
O22A Kremmling 79.12 46 ⇓P P 15 38 12.7 0.0
baz=79,SNR=469
SLVT Silivri 79.12 315 eP P 15 38 14.0 +1.4
JMB Yambol 79.12 317 P P 15 38 13.5 +0.8
JMB Yambol 79.12 317 P P 15 38 13.5 +0.8
JMB Yambol 79.12 317 iP P 15 38 14.4 +1.7
GEMT Gemlik 79.13 314 eP P 15 38 13.4 +0.7
KAC Achnashellach 79.13 342 P P 15 38 11.8 -0.7
KAC Achnashellach 79.13 342⇑eP P 15 38 11.8 -0.7
U17A Shonto 79.13 51 ⇓P P 15 38 13.1 +0.3
baz=79,SNR=290
PRA Prague 79.15 328 ⇑P P 15 38 13.0 +0.3
PRA pP pP 15 38 42.0 +0.6
PRA sP sP 15 38 53.0 -0.5
PRA S S 15 48 00.0 -2.8
PRA SS SS 15 53 14.0 +4.0
PRA AMS AMS 16 16 30.0
U16A Tuba City 79.15 52 ⇓P P 15 38 13.1 +0.1
baz=79,SNR=996
PRU Pruhonice 79.17 328⇑iP P 15 38 13.3 +0.5
PRU e*PP pP 15 38 40.6 -0.9
PRU eS S 15 48 02.5 -0.5
PRU e 15 48 51.6
PRU MLR MLR
comp=Z,26µm,13.9s
PRU Pruhonice 79.17 328⇑iP P 15 38 13.3 +0.5
PRU epP pP 15 38 40.6 -0.9
PRU eS S 15 48 02.5 -0.5
PRU eXS sS 15 48 51.6 -0.8
PRU ePKKP PKKPbc 15 57 03.0 +1.0
PRU AMS AMS 16 17 30.0
comp=Z,26µm,13.9s
X14A Yava 79.17 54 ⇑P P 15 38 13.5 +0.4
baz=79,SNR=907
BUD Budapest 79.17 324⇑epP pP 15 38 32.5 -9.1
ARMT Armutlu 79.22 314 eP P 15 38 13.8 +0.6
CRAR CRAIOVA 79.23 320 P P 15 38 14.3 +1.1
CRAR CRAIOVA 79.23 320⇑iP P 15 38 17.1 +3.9
PVL Pavlikeni 79.25 318 iP P 15 38 14.5 +1.2
T18A Mexican Hat 79.25 50 ⇑P P 15 38 12.9 -0.5
baz=79,SNR=1000
HWQ Hawqa 79.26 306 eP P 15 38 14.0 +0.4
S19A Harvey Farm, M 79.27 50 ⇑P P 15 38 13.4 -0.2
baz=79
CLZ Clausthal 79.31 332 eP P 15 38 13.6 +0.1
comp=Z,1µm,1.3s,mb6.7
CLZ eS S 15 48 05.6 +1.2
BOLV Bolvadin 79.31 312⇑iP P 15 38 13.5 -0.2
TREC Trest 79.32 327⇑iP P 15 38 13.5 -0.1
TREC e*PP pP 15 38 41.3 -1.1
TREC eS S 15 48 05.4 +0.8
TREC e 15 48 52.9
TREC MLR MLR
comp=Z,29µm,15.8s
TREC Trest 79.32 327⇑iP P 15 38 13.5 -0.1
TREC epP pP 15 38 41.3 -1.1
TREC eS S 15 48 05.4 +0.8
TREC eXS sS 15 48 52.9 -1.2
TREC AMS AMS 16 16 10.0
comp=Z,29µm,15.8s
BZS Buzias 79.36 322 ⇓P P 15 38 13.8 -0.1
BZS Buzias 79.36 322 P P 15 38 14.1 +0.2
BZS Buzias 79.36 322⇓iP P 15 38 13.8 -0.1
112A Yuma 79.36 57 ⇓P P 15 38 13.9 -0.2
baz=79,SNR=7.8
KPL Plockton 79.36 343 P P 15 38 14.1 +0.4
KPL AMb AMB 15 38 17.7
comp=Z,1µm,1.2s,mb6.7
KPL AMS AMS 16 04 27.1
comp=Z,9µm,59.0s
KPL Plockton 79.36 343⇑eP P 15 38 14.1 +0.4
KPL AMb AMB 15 38 17.7
comp=Z,1µm,1.2s,mb6.7
KPL AMS AMS 16 04 27.1
comp=Z,9µm,59.0s
IKL Isikli 79.36 308 eP P 15 38 13.5 -0.6
R20A Redvale 79.42 49 ⇑P P 15 38 14.5 +0.1
baz=79,SNR=276
WUAZ Wupatki 79.42 52 ⇑P P 15 38 14.8 +0.4
baz=79,SNR=495
WUAZ Wupatki 79.42 52 eP P 15 38 14.8 +0.3
comp=Z,1µm,0.9s,mb6.7
KSB Sheil Bridge 79.42 342 P P 15 38 13.9 -0.1
KSB Sheil Bridge 79.42 342⇑eP P 15 38 13.9 -0.1
O23A Lake Granby, G 79.43 46 ⇑P P 15 38 15.0 +0.6
baz=79,SNR=266
Q21A Lamborn Mesa, 79.44 48 ⇓P P 15 38 14.6 +0.1
baz=79,SNR=124
CRLT Corlu 79.44 315 eP P 15 38 13.0 -1.4
Y14A Wickenburg 79.45 55 ⇑P P 15 38 14.4 -0.1
baz=79,SNR=665
TIM Timisoara 79.46 322 P P 15 38 15.9 +1.5
TIM Timisoara 79.46 322⇓iP P 15 38 17.9 +3.5
EDRB Edirne 79.47 316 eP P 15 38 15.7 +1.1
Z13A Yuma Proving G 79.52 56 ⇑P P 15 38 15.0 0.0
baz=79,SNR=1000
EREN Erenkoy 79.54 308 eP P 15 38 15.7 +0.7
SMCO Snowmass 79.55 47 eP P 15 38 15.1 +0.1
comp=Z,7µm,1.1s,mb7.4
ALT Altintas 79.56 313 eP P 15 38 16.1 +1.0
ALT Altintas 79.56 313⇑iP P 15 38 11.4 -3.7
X15A Humboldt 79.57 54 ⇓P P 15 38 15.7 +0.4
baz=79,SNR=869
N24A Carr 79.58 45 ⇓P P 15 38 15.3 +0.1
baz=79
HDMB Hadim 79.59 310 eP P 15 38 15.9 +0.6
W16A Flagstaff 79.60 53 ⇑P P 15 38 15.7 +0.3
baz=79,SNR=318
DJES Djerdap 79.62 321 P P 15 38 14.8 -0.5
SHUT Suhut-Afyon 79.65 312 eP P 15 38 16.8 +1.2
TKR Tekirdag 79.65 315 eP P 15 38 08.1 -7.4
TANN Tannenbergstha 79.66 330 eP P 15 38 15.3 -0.1
comp=Z,640nm,1.7s,mb6.2
TANN eS S 15 48 10.2 +2.1
S20A Disappointment 79.67 49 ⇑P P 15 38 15.7 0.0
baz=79,SNR=428
ELO Logie Almond 79.68 341 P P 15 38 14.7 -0.7
ELO Logie Almond 79.68 341⇑eP P 15 38 14.7 -0.7
BHL Bhannes 79.69 306 eP P 15 38 16.1 +0.2
WERD Werda 79.69 330 eP P 15 38 15.4 -0.2
comp=Z,560nm,1.3s,mb6.2
V17A Tonalea, Kykot 79.70 52 ⇓P P 15 38 15.4 -0.6
baz=80
KCTX Karacabey (Bur 79.71 314 eP P 15 38 16.8 +0.9
113A Mohawk Valley, 79.73 56 ⇓P P 15 38 15.8 -0.3
baz=80,SNR=572
U18A Rough Rock, Ch 79.73 51 ⇑P P 15 38 16.3 +0.2
baz=80,SNR=428
GUNZ Gunzen 79.75 330 eP P 15 38 15.8 -0.1
comp=Z,630nm,1.2s,mb6.3
R21A Cimarron 79.77 48 ⇓P P 15 38 16.6 +0.3
baz=80,SNR=554
KAR1 Arisaig 79.78 342 P P 15 38 15.7 -0.3
KAR1 Arisaig 79.78 342⇑eP P 15 38 15.7 -0.3
MOX Moxa 79.80 330 eP P 15 38 15.9 -0.3
comp=Z,652nm,1.2s,mb6.3
MOX ePP PP 15 41 16.1 -2.0
MOX eS S 15 48 11.2 +1.6
NKC Novy Kostel 79.81 330⇑iP P 15 38 15.8 -0.4
NKC e*PP pP 15 38 44.3 -0.7
NKC eS S 15 48 07.4 -2.3
NKC e 15 48 56.8
NKC MLR MLR
comp=Z,22µm,14.3s
NKC Novy Kostel 79.81 330⇑iP P 15 38 15.8 -0.4
NKC epP pP 15 38 44.3 -0.7
NKC eS S 15 48 07.4 -2.3
NKC eXS sS 15 48 56.8 -2.4
NKC ePKKP PKKPbc 15 57 02.6 +2.0
NKC AMS AMS 16 16 50.0
comp=Z,22µm,14.3s
WIT Witteveen 79.81 334 eP P 15 38 17.1 +0.9
comp=Z,5µm,1.3s,mb7.2
WIT Witteveen 79.81 334 epP pP 15 38 44.8 -0.1
WIT Witteveen 79.81 334 esP sP 15 38 57.6 +0.5
EBH Black Hill 79.83 341 P **P 15 38 15.6 -0.6**
EBH Black Hill 79.83 341⇑eP P 15 38 15.6 -0.6
IBBN Ibbenburen 79.86 333 eP P 15 38 16.0 -0.4
comp=Z,1µm,1.2s,mb6.6
IBBN eS S 15 48 10.3 +0.1
Y15A Casa Rosa Ranc 79.86 54 ⇑P P 15 38 17.0 +0.2
baz=80,SNR=839
RCY Rachaya 79.86 305 eP P 15 38 17.1 +0.3
Z14A Wintersburg 79.86 55 ⇓P P 15 38 16.5 -0.3
baz=80,SNR=218
BNT Bandirma 79.88 315 eP P 15 38 15.5 -1.4
ISCO Idaho Springs 79.89 46 eP P 15 38 17.1 +0.2
ISCO pmax pmax
comp=Z,1µm,0.6s,mb6.9
ISCO Idaho Springs 79.89 46 eP P 15 38 17.1 +0.2
comp=Z,1µm,0.6s,mb6.9
GDZ Gediz 79.89 313⇑iP P 15 38 16.6 -0.2
ESY Stoneypath 79.89 340 P P 15 38 16.6 0.0
ESY Stoneypath 79.89 340⇑eP P 15 38 16.6 0.0
EDC Edincik 79.92 315 eP P 15 38 18.1 +1.1
MFT Murefte 79.93 315 eP P 15 38 17.5 +0.4
T19A Beclabito 79.96 50 ⇓P P 15 38 17.4 +0.1
baz=80,SNR=662
O24A Longmont 79.96 46 ⇓P P 15 38 17.6 +0.4
baz=80
PHNC Paralimni 79.97 307 P P 15 38 20.7 +3.3
comp=Z,8.0nm,1.0s
MVCO Mesa Verde 80.01 50 ⇓P P 15 38 17.7 +0.1
baz=80,SNR=380
MVCO Mesa Verde 80.01 50 eP P 15 38 17.7 +0.1
comp=Z,2µm,1.4s,mb6.8
N25A Grover 80.02 45 ⇓P P 15 38 17.7 +0.2
baz=80
ASF Jabal al Asfar 80.03 304 PKKPbc PKKPbc 15 57 03.4 +3.7
comp=Z,5.5nm,0.8s,baz=61,slow=1.4,SNR=7.1
EDI Edinburgh 80.04 341 P P 15 38 17.3 -0.1
EDI AMb AMB 15 38 20.8
comp=Z,390nm,2.9s,mb5.7
EDI AMS AMS 16 08 47.0
comp=Z,12µm,25.9s
EDI Edinburgh 80.04 341⇑eP P 15 38 17.3 -0.1
EDI AMb AMB 15 38 20.8
comp=Z,390nm,2.9s,mb5.7
EDI AMS AMS 16 08 47.0
comp=Z,12µm,25.9s
SART Tekirdag 80.05 315⇑iP P 15 38 17.6 -0.1
P23A Jefferson 80.06 47 ⇓P P 15 38 18.5 +0.8
baz=80
RKY Sarkoy-Tekirda 80.06 315 eP P 15 38 18.8 +1.0
HRI Mount Hermon 80.06 305 P P 15 38 18.3 +0.4
EAB Aberfoyle 80.09 341 P P 15 38 17.3 -0.3
EAB Aberfoyle 80.09 341⇑eP P 15 38 17.3 -0.3
LFK Lefkose 80.09 308 eP P 15 38 18.6 +0.6
X16A Lo Mia Camp, P 80.11 53 ⇑P P 15 38 18.7 +0.6
baz=80,SNR=640
W17A Winslow 80.11 52 ⇓P P 15 38 18.5 +0.3
baz=80
SUTC Sutluce-Ispart 80.12 311 eP P 15 38 17.8 -0.3
EBL Broad Law 80.13 341 P **P 15 38 17.7 -0.1**
EBL Broad Law 80.13 341⇑eP P 15 38 17.7 -0.1
KSDI Kefar Szold 80.15 305 Pn **P 15 38 18.5 +0.1**
KSDI Kefar Szold 80.15 305 eP P 15 38 19.5 +1.1
ISP Isparta 80.16 311 eP P 15 38 17.9 -0.5
ISP Isparta 80.16 311 ⇓P P 15 38 20.7 +2.3
ISP Isparta 80.16 311 P **P 15 38 17.6 -0.8**
ISP ⇓P 15 38 20.7
ISP Isparta 80.16 311 P **P 15 38 17.6 -0.8**
ISP Isparta 80.16 311⇓iP P 15 38 20.7 +2.3
V18A Ganado 80.17 52 ⇑P P 15 38 19.0 +0.5
baz=80
EAU Auchinoon 80.17 341 P **P 15 38 17.6 -0.4**
EAU Auchinoon 80.17 341⇑eP P 15 38 17.6 -0.4
GAZI Gazipasa 80.18 309⇑iP P 15 38 16.6 -2.0
KSHT Keshet 80.20 305 Pn **P 15 38 19.6 +1.0**
KRBG Karabiga-Canak 80.20 315 eP P 15 38 19.5 +1.0
U19A Dine' College, 80.21 51 ⇑P P 15 38 19.0 +0.4
baz=80,SNR=820
CONA Conrad Observa 80.22 326 iP P 15 38 19.1 +0.6
comp=Z,529nm,1.1s,mb6.3,SNR=321
GONE Gonen-Balikesi 80.23 315 eP P 15 38 19.4 +0.7
KHC Kasperske Hory 80.23 328⇑iP P 15 38 18.5 0.0
KHC e*PP pP 15 38 44.5 -2.8
KHC eS S 15 48 15.6 +1.4
KHC e 15 48 57.7
KHC Kasperske Hory 80.23 328 eP P 15 38 18.2 -0.3
comp=Z,664nm,1.0s,mb6.4
KHC Kasperske Hory 80.23 328⇑iP P 15 38 18.5 0.0
KHC epP pP 15 38 44.5 -2.8
KHC eS S 15 48 15.6 +1.4
KHC eXS sS 15 48 57.7 -6.1
KHC ePKKP PKKPbc 15 57 00.7 +1.0
KHC ePKPPKP 16 05 01.1
KHC AMS AMS 16 18 20.0
comp=Z,27µm,12.3s
UBBA Unterbreizbach 80.27 331 eP P 15 38 18.1 -0.6
comp=Z,533nm,1.5s,mb6.2
UBBA eS S 15 48 15.8 +1.3
ROTZ Rotzenmuhle 80.27 329 eP P 15 38 19.1 +0.4
comp=Z,979nm,1.4s,mb6.4
ROTZ eS S 15 48 17.7 +3.1
114A Black Gap (USA 80.30 55 ⇑P P 15 38 19.3 +0.1
baz=80,SNR=497
PKSM Moragy 80.30 324 P P 15 38 18.5 -0.4
PKSM Moragy 80.30 324⇓iP P 15 38 18.5 -0.5
OUZ Omahuta 80.31 154 eP P 15 38 19.0 +0.1
comp=Z,1µm,1.7s,mb6.5
KDZ Kurdzhali 80.32 317 iP P 15 38 20.4 +1.3
PGB Panagyurishte 80.32 318 iP P 15 38 20.2 +1.1
R22A Saguache, Gunn 80.33 48 ⇓P P 15 38 19.1 -0.1
baz=80,SNR=356
DEMI Demirci 80.35 313⇑iP P 15 38 18.9 -0.5
MAMC Mammari 80.35 308 P P 15 38 19.5 0.0
PLD Plovdiv 80.36 318 P P 15 38 19.0 -0.4
PLD Plovdiv 80.36 318 P P 15 38 19.0 -0.4
PLD Plovdiv 80.36 318 iP P 15 38 20.2 +0.8
BCK Bucak 80.37 311 eP P 15 38 16.3 -3.2
KHAL Karahalli 80.38 312⇑iP P 15 38 18.6 -0.9
Q23A Hartsel 80.38 47 ⇑P P 15 38 19.7 +0.2
baz=80
BALB Balikesir 80.40 314 eP P 15 38 20.4 +0.8
Z15A Gila River Ind 80.41 55 ⇑P P 15 38 19.6 -0.1
baz=80,SNR=7.8
GEC2 GERESS Array S 80.41 328 eP P 15 38 19.1 -0.4
comp=Z,450nm,1.4s,mb6.1
GEC2 eS S 15 48 18.6 +2.6
CSS Prodhromos 80.42 308 P P 15 38 19.6 -0.2
ERIK Erikli-Kesan 80.43 316 eP P 15 38 20.8 +1.0
MMAI Mount Meron Ar 80.43 305 P P 15 38 20.1 +0.2
comp=Z,190nm,0.7s,mb6.0,baz=39,slow=6.7,SNR=44
MMAI S S 15 48 18.8 +2.0
comp=Z,6.5nm,1.0s,baz=312,slow=54,SNR=3.0
MMAI PKKPbc PKKPbc 15 57 02.3 +3.4
comp=Z,13nm,0.8s,baz=357,slow=1.7,SNR=8.8
MMAI LR LR 16 17 57.9
comp=Z,12µm,19.6s,baz=55,slow=38
Y16A Circle Bar Ran 80.44 54 ⇑P P 15 38 20.2 +0.3
baz=80,SNR=372
PGBU Glenifferbraes 80.46 341 P **P 15 38 20.2 +0.6**
PGBU AMb AMB 15 38 23.6
comp=Z,1µm,1.3s,mb6.6
PGBU 15 48 09.8
PGBU AMS AMS 16 08 39.2
comp=Z,12µm,28.3s
PGBU Glenifferbraes 80.46 341⇑eP P 15 38 20.2 +0.6
PGBU AMb AMB 15 38 23.6
comp=Z,1µm,1.3s,mb6.6
PGBU e 15 48 09.8
PGBU AMS AMS 16 08 39.2
comp=Z,12µm,28.3s
WTSB Winterswijk 80.47 334 eP P 15 38 19.4 -0.3
comp=Z,826nm,1.2s,mb6.4
WTSB Winterswijk 80.47 334 epP pP 15 38 49.4 +0.8
WTSB Winterswijk 80.47 334 esP sP 15 39 00.3 -0.4
P24A Kohler Place, 80.47 46 ⇓P P 15 38 20.2 +0.2
baz=80
BALY Balya 80.48 314⇑iP P 15 38 19.4 -0.7
O25A Wiggins 80.49 45 ⇑P P 15 38 19.9 -0.2
baz=80
LPK Lapseki 80.50 315 eP P 15 38 21.3 +1.2
WET Wettzell 80.50 329 eP P 15 38 20.2 +0.2
comp=Z,882nm,1.4s,mb6.4
WET eS S 15 48 20.0 +3.0
ALN Alexandroupoli 80.52 316 P **P 15 38 19.5 -0.7**
ALN Alexandroupoli 80.52 316 eP P 15 38 20.5 +0.3
ALN Alexandroupoli 80.52 316 P **P 15 38 19.5 -0.7**
HNTI Hanita 80.53 305 Pn **P 15 38 20.5 +0.1**
SVIS Svilajnac 80.55 321 P **P 15 38 20.4 +0.1**
X17A Forest Lakes 80.55 53 ⇑P P 15 38 21.3 +0.8
baz=80,SNR=277
U20A Newcomb 80.56 50 ⇓P P 15 38 20.6 +0.1
baz=80
ENEZ Enez 80.57 316 eP P 15 38 21.5 +1.0
ESK Eskdalemuir 80.58 340 P **P 15 38 21.8 +1.5**
comp=Z,1µm,1.1s,mb6.6,SNR=27
ESK Eskdalemuir 80.58 340 P **P 15 38 20.4 +0.1**
ESK AMb AMB 15 38 24.0
comp=Z,385nm,1.7s,mb6.0
ESK 15 48 11.2
ESK AMS AMS 16 09 03.6
comp=Z,12µm,29.7s
ESK Eskdalemuir 80.58 340⇑eP P 15 38 20.4 +0.1
ESK AMb AMB 15 38 24.0
comp=Z,385nm,1.7s,mb6.0
ESK e 15 48 11.2
ESK AMS AMS 16 09 03.6
comp=Z,12µm,29.7s
ESK Eskdalemuir 80.58 340 eP P 15 38 19.4 -0.9
ESK pmax pmax
comp=Z,390nm,1.1s,mb6.2
ESK Eskdalemuir 80.58 340 eP P 15 38 19.4 -0.9
comp=Z,390nm,1.1s,mb6.2
LEF Lefka 80.59 308 eP P 15 38 20.9 +0.2
S22A 4UR Ranch, Cre 80.61 48 ⇑P P 15 38 21.2 +0.4
baz=80,SNR=528
GELI Tayfur-Gelibol 80.64 315 eP P 15 38 21.7 +0.8
W18A Petrified Fore 80.68 52 ⇓P P 15 38 21.5 +0.3
baz=80
ECK Cauldkaine Hil 80.68 340 P **P 15 38 20.3 -0.5**
ECK Cauldkaine Hil 80.68 340⇑eP P 15 38 20.3 -0.5
V19A Window Rock 80.70 51 ⇑P P 15 38 21.8 +0.6
baz=80
ANTB Antalya 80.72 311 eP P 15 38 19.5 -1.8
GRF Grafenberg Arr 80.72 330 eP P 15 38 21.4 +0.3
comp=Z,2µm,1.2s,mb6.9
GRF epP pP 15 38 50.6 +0.6
GRF esP sP 15 39 01.4 -0.7
GRF ePP PP 15 41 32.6 +6.9
GRF eS S 15 48 21.6 +2.3
GRF esS sS 15 49 07.9 -1.0
GRF ePKKPbc PKKPbc 15 56 59.5 +0.9
GRF ePKPPKPdf 16 05 54.7
GRF epP'P'df 16 05 29.9
GRF Grafenberg Arr 80.72 330 eP P 15 38 21.4 +0.3
GRF e*PP pP 15 38 50.6 +0.6
GRF e*SP sP 15 39 01.4 -0.7
GRF e 15 41 32.6
GRF eS S 15 48 21.6 +2.3
GRF e*SS sS 15 49 07.9 -1.0
GRF 15 56 59.5
GRF pmax pmax
comp=Z,2µm,1.2s,mb6.9
GRF Grafenberg Arr 80.72 330 eP P 15 38 21.4 +0.3
comp=Z,2µm,1.2s,mb6.9
GRF epP pP 15 38 50.6 +0.6
GRF esP sP 15 39 01.4 -0.7
GRF ePP PP 15 41 32.6 +6.9
GRF eS S 15 48 21.6 +2.3
GRF esS sS 15 49 07.9 -1.0
GRF PKKPbc PKKPbc 15 56 59.5 +0.9
T21A Navajo Lake 80.72 49 ⇑P P 15 38 21.7 +0.3
baz=80,SNR=133
Q24A Divide 80.72 46 ⇑P P 15 38 21.4 0.0
baz=80,SNR=182
XAL Allendale 80.73 340 P **P 15 38 21.3 +0.3**
XAL Allendale 80.73 340⇑eP P 15 38 21.3 +0.3
ALFC Alevga 80.74 308 P **P 15 38 20.6 -0.9**
comp=Z,6.9nm,1.0s
BUG Bochum--Univer 80.75 333 eP P 15 38 20.6 -0.6
comp=Z,972nm,1.3s,mb6.5
BUG eS S 15 48 20.7 +1.2
115A Sonoran Desert 80.75 55 ⇓P P 15 38 21.7 0.0
baz=80
KULA Kula-Manisa 80.75 313 eP P 15 38 22.3 +0.8
VTS Vitosha 80.78 319 P **P 15 38 21.6 0.0**
VTS Vitosha 80.78 319 P **P 15 38 21.6 0.0**
VTS Vitosha 80.78 319 iP P 15 38 22.7 +1.1
VTS Vitosha 80.78 319⇓iP P 15 38 22.5 +0.9
EYMN Ely 80.78 33 eP P 15 38 19.9 -1.6
comp=Z,4µm,1.6s,mb7.0
EYMN epP pP 15 38 51.6 +1.3
EYMN esP sP 15 39 00.8 -1.6
MMLI Mount Malkishu 80.80 305 Pn **P 15 38 22.8 +0.9**
KORT Korkueli 80.82 311⇑iP P 15 38 21.2 -0.7
Z16A Peralta Trail, 80.83 54 ⇑P P 15 38 22.1 +0.1
baz=81,SNR=132
214A Organ Pipe Nat 80.87 56 ⇑P P 15 38 22.2 0.0
baz=81,SNR=218
P25A Willow Gulch B 80.89 46 ⇓P P 15 38 22.0 -0.2
baz=81,SNR=251
ARSA Arzberg 80.89 326 P **P 15 38 22.5 +0.4**
ARSA Arzberg 80.89 326⇑iP P 15 38 22.2 +0.1
comp=Z,188nm,1.0s,mb5.9,SNR=74
Y17A Roosevelt 80.95 54 ⇓P P 15 38 22.8 +0.1
baz=81,SNR=603
MOA Molln 80.96 327 P **P 15 38 23.0 +0.6**
MOA Molln 80.96 327⇑iP P 15 38 22.5 0.0
comp=Z,456nm,1.4s,mb6.1,SNR=102
AKHS Akhisar 80.97 314⇑iP P 15 38 22.1 -0.6
AKS Akhisar 80.97 314 eP P 15 38 23.8 +1.1
V20A Brimhall 80.98 51 ⇑P P 15 38 23.0 +0.2
baz=81
OGNE Ogallala 81.02 43 eP P 15 38 22.2 -0.7
comp=Z,4µm,1.4s,mb7.0
U21A Nageezi 81.04 50 ⇑P P 15 38 23.2 +0.2

baz=81,SNR=388
GRUS Gruza 81.07 321 P P 15 38 22.6 -0.5
T22A Edith 81.08 49 ⇑P P 15 38 23.8 +0.5
baz=81,SNR=537
PPCY Paphos 81.08 308 P P 15 38 23.1 -0.2
GADA Gvkgeada 81.10 316 *eP* **P 15 38 23.8 +0.5**
DNZL Cakiroluk 81.10 312⇑ *P* **P 15 38 23.3 -0.1**
S23A Nye Farm, Mont 81.12 48 ⇑P P 15 38 23.4 -0.1
baz=81,SNR=10
GOLH Golhisar 81.12 311⇑ *P* **P 15 38 22.7 -0.8**
116A Eloy 81.17 55 ⇑P P 15 38 23.6 -0.3
baz=81,SNR=272
SLTI Sal'it 81.17 305 Pn **P 15 38 24.2 +0.3**
KOGS Kog 81.19 325 *i P* **P 15 38 23.8 +0.1**
KOGS *epP* pP 15 38 53.4 +0.8
GLHS Glhisar (BURDU 81.21 311 *eP* **P 15 38 24.5 +0.6**
MMB Musomiste 81.24 318 *i P* **P 15 38 25.3 +1.2**
ELL Elmali 81.25 311 *eP* **P 15 38 24.8 +0.6**
DIVS Divibare 81.26 322 P **P 15 38 23.5 -0.6**
KAVA Kavala 81.26 317 P **P 15 38 24.2 0.0**
R24A Sanders Place, 81.26 47 ⇓P P 15 38 24.3 +0.1
baz=81,SNR=354
Q25A Bedland, Calha 81.26 46 ⇑P P 15 38 23.7 -0.5
baz=81
TNS Taunus Mts 81.33 332 *eP* **P 15 38 24.0 -0.3**
comp=Z,1μm,1.3s,mb6.6
TNS *eS* S 15 48 27.3 +1.7
NVR Nevrokopi 81.34 318 *eP* **P 15 38 25.0 +0.4**
HPK Haverah Park 81.37 339 P **P 15 38 25.1 +0.6**
HPK AMb AMB 15 38 28.4
comp=Z,737nm,1.6s,mb6.3
HPK 15 48 15.4
HPK AMS AMS 16 09 44.5
comp=Z,14μm,28.3s
HPK Haverah Park 81.37 339⇑ *eP* **P 15 38 25.1 +0.6**
HPK AMb AMB 15 38 28.4
comp=Z,737nm,1.6s,mb6.3
HPK *e* 15 48 15.4
HPK AMS AMS 16 09 44.5
comp=Z,14μm,28.3s
GAL1 Galloway 81.37 341 P **P 15 38 24.6 +0.1**
GAL1 AMb AMB 15 38 28.0
comp=Z,701nm,1.2s,mb6.3
GAL1 15 48 20.5
GAL1 AMS AMS 16 10 34.3
comp=Z,10μm,25.8s
GAL1 Galloway 81.37 341⇑ *eP* **P 15 38 24.6 +0.1**
GAL1 AMb AMB 15 38 28.0
comp=Z,701nm,1.2s,mb6.3
GAL1 *e* 15 48 20.5
GAL1 AMS AMS 16 10 34.3
comp=Z,10μm,25.8s
KKB Krupnik 81.37 318 *i P* **P 15 38 24.8 +0.1**
SDCO Great Sand Dun 81.37 48 *eP* **P 15 38 24.4 -0.5**
comp=Z,413nm,0.8s,mb6.3
DSI Dead Sea 81.40 304 Pn **P 15 38 25.6 +0.5**
Y18A Canyon Day Jun 81.40 53 ⇓P P 15 38 25.5 +0.5
baz=81,SNR=705
X19A St. Johns 81.42 52 ⇑P P 15 38 25.7 +0.5
baz=81,SNR=1000
W20A Ramah 81.42 51 ⇑P P 15 38 25.3 +0.1
baz=81,SNR=495
Z17A San Carlos Hig 81.45 54 ⇑P P 15 38 25.6 +0.3
baz=81,SNR=165
V21A Milan 81.47 50 ⇓P P 15 38 25.6 +0.2
baz=81,SNR=269
ABA1 Baconsthorpe 81.51 337 P **P 15 38 24.8 -0.4**
ABA1 Baconsthorpe 81.51 337⇑ *eP* **P 15 38 24.8 -0.4**
U22A Llaves 81.54 49 ⇑P P 15 38 26.4 +0.7
baz=81,SNR=510
PERS Pernice 81.54 326 *i P* **P 15 38 25.2 -0.4**
PERS *epP* pP 15 38 55.7 +1.3
PERS *eS* S 15 48 27.6 -0.3
PERS *e* 15 49 15.4
SOKA Soboth 81.55 326⇑ *P* **P 15 38 25.4 -0.1**
comp=Z,698nm,0.9s,mb6.5
T23A Casias Ranch, 81.56 48 ⇑P P 15 38 26.4 +0.5
baz=81,SNR=246
PRK Paraskevi 81.56 315 P **P 15 38 24.8 -1.0**
PRK Paraskevi 81.56 315 *eP* **P 15 38 26.0 +0.2**
PRK Paraskevi 81.56 315 *eP* **P 15 38 25.0 -0.8**
PRK Paraskevi 81.56 315 P **P 15 38 24.8 -1.0**
KDAG Bornova 81.61 314⇑ *P* **P 15 38 26.0 -0.1**
S24A Houchin Ranch, 81.61 47 ⇓P P 15 38 26.6 +0.5
baz=81,SNR=315
SIND Sindeldorf 81.61 331 P **P 15 38 26.1 +0.2**
RJOB Jochberg 81.65 328 *eP* **P 15 38 26.3 +0.2**
comp=Z,723nm,1.0s,mb6.5
RJOB *eS* S 15 48 33.0 +4.0
SRS Serrai 81.65 318 P **P 15 38 25.0 -1.2**
SRS Serrai 81.65 318 P **P 15 38 25.0 -1.2**
LIA Limnos Island 81.69 316 P **P 15 38 25.8 -0.7**
LIA Limnos Island 81.69 316 *eP* **P 15 38 26.0 -0.5**
LIA Limnos Island 81.69 316 *eP* **P 15 38 26.5 0.0**
LIA Limnos Island 81.69 316 P **P 15 38 25.8 -0.7**
216A Three Points, 81.70 55 ⇓P P 15 38 26.9 +0.2
baz=82,SNR=118
TOD Tromm 81.71 331 *eP* **P 15 38 26.8 +0.5**
ECSD EROS Data Cent 81.71 38 *eP* **P 15 38 25.4 -1.0**
comp=Z,252nm,0.9s,mb6.0
BBLS Lazići 81.71 322 P **P 15 38 27.0 +0.5**
AEU East Anglia Un 81.72 337 P **P 15 38 26.4 0.0**
AEU East Anglia Un 81.72 337⇑ *eP* **P 15 38 26.4 0.0**
RAR Rarotonga 81.73 126 *eP* **P 15 38 26.7 -0.1**
RAR pmax pmax
comp=Z,1μm,1.8s
RAR Rarotonga 81.73 126 *eP* **P 15 38 26.7 0.0**
comp=Z,1μm,1.8s,mb6.4
BLCB Balcova 81.75 314 *eP* **P 15 38 27.5 +0.7**
Y19A Nutrioso 81.76 52 ⇑P P 15 38 27.3 +0.4
baz=82,SNR=460
117A Oracle 81.77 54 ⇓P P 15 38 27.1 +0.1
baz=82,SNR=336
HGN Heimansgroeve 81.78 333 *eP* **P 15 38 26.3 -0.4**
comp=Z,699nm,1.3s,mb6.3
HGN Heimansgroeve 81.78 333 *epP* pP 15 38 55.9 +0.3
HGN Heimansgroeve 81.78 333 *esP* sP 15 39 07.0 -0.7
HGN Heimansgroeve 81.78 333 *eS* S 15 48 32.2 +2.0
AKAS Kas 81.79 311⇑ *P* **P 15 38 26.6 -0.4**
AYDN Tasoluk 81.79 313⇑ *P* **P 15 38 27.2 +0.2**
X20A Quemado 81.82 52 ⇓P P 15 38 28.0 +0.7
baz=82
V22A San Miguel Ran 81.83 50 ⇓P P 15 38 27.6 +0.3
baz=82,SNR=324
BEBN Eben Emael 81.84 333 P **P 15 38 26.9 -0.1**
comp=Z,212nm,1.1s,mb5.9
KSL Kastellorizon 81.86 311 *eP* **P 15 38 27.0 -0.4**
Z18A Geronimo 81.86 54 ⇓P P 15 38 28.0 +0.5
baz=82
MEM Membach 81.88 333 P **P 15 38 26.9 -0.3**
comp=Z,395nm,1.3s,mb6.1
OBKA Obir 81.89 326 P **P 15 38 27.3 0.0**
OBKA Obir 81.89 326⇑ *P* **P 15 38 26.9 -0.5**
comp=Z,248nm,0.8s,mb6.1,SNR=82
SISC Sisak 81.89 324 P **P 15 38 28.2 +0.8**
TUC Tucson 81.92 55 *eP* **P 15 38 27.5 -0.3**
TUC pmax pmax
comp=Z,1μm,1.5s,mb6.6
TUC Tucson 81.92 55 *eP* **P 15 38 27.5 -0.3**
comp=Z,1μm,1.5s,mb6.6
TURN Turunc 81.92 312⇑ *P* **P 15 38 29.9 +2.1**
FUR Furstenfeldbru 81.92 329 *eP* **P 15 38 27.8 +0.3**
comp=Z,818nm,1.0s,mb6.5
FUR *eS* S 15 48 34.5 +2.7
YER Yerkesik 81.92 312 *eP* **P 15 38 29.1 +1.4**
W21A San Fidel 81.94 51 ⇓P P 15 38 28.1 +0.3
baz=82
ABH Altenburg 81.94 332 *eP* **P 15 38 28.1 +0.5**
KBA Koelnbreinsper 81.95 327⇑ *P* **P 15 38 27.5 -0.2**
comp=Z,684nm,0.9s,mb6.5,SNR=100
U23A El Rito 81.96 49 ⇑P P 15 38 28.5 +0.5
baz=82,SNR=527
KBI1 Birley Grange 81.97 339 P **P 15 38 27.3 -0.3**
KBI1 Birley Grange 81.97 339⇑ *eP* **P 15 38 27.3 -0.3**
KNT Kendrikon 81.98 318 P **P 15 38 27.7 -0.2**
KNT Kendrikon 81.98 318 P **P 15 38 27.7 -0.2**
SOH Sokhos 81.99 317 P **P 15 38 26.6 -1.4**
SOH Sokhos 81.99 317 *eP* **P 15 38 28.0 0.0**
SOH Sokhos 81.99 317 P **P 15 38 26.6 -1.4**
HDH Heidenheim-Cha 82.01 330 P **P 15 38 28.2 +0.3**
URLA Izmir 82.01 314⇑ *P* **P 15 38 27.5 -0.7**
OUR Ouranopolis 82.02 317 P **P 15 38 27.9 -0.3**
OUR Ouranopolis 82.02 317 P **P 15 38 27.9 -0.3**
MOO Moorlands 82.02 176 *eP* **P 15 38 28.4 +0.7**

MOO *epP* pP 15 38 58.5 +1.8
MOO *eS* S 15 48 30.6 -1.7
CRES Cresnjev 82.03 325 P **P 15 38 28.0 -0.1**
VAY Valandovo 82.03 318 P **P 15 38 27.6 -0.6**
VAY Valandovo 82.03 318⇑ *P* **P 15 38 28.2 0.0**
VAY Valandovo 82.03 318 P **P 15 38 27.6 -0.6**
S25A Robets Cordova 82.04 47 ⇑P P 15 38 29.0 +0.7
baz=82,SNR=157
MLSB Milas 82.10 313 *eP* **P 15 38 29.9 +1.3**
PLE Pljevlja 82.12 321⇓ *P* **P 15 38 29.3 +0.7**
GCAM G?zelcaml? 82.12 313⇑ *P* **P 15 38 28.5 -0.3**
SKO Skopje 82.13 319 P **P 15 38 30.1 +1.4**
SKO Skopje 82.13 319⇑ *P* **P 15 38 30.1 +1.4**
SKO Skopje 82.13 319 P **P 15 38 30.1 +1.4**
MYKA Terra Mystica 82.18 327⇑ *P* **P 15 38 28.0 -0.9**
comp=Z,390nm,0.9s,mb6.2
Z19A T-Link Ranch, 82.20 53 ⇓P P 15 38 29.6 +0.3
baz=82,SNR=93
ZFRI Zfri 82.20 303 Pn **P 15 38 29.5 +0.2**
118A Homack Ranch, 82.21 54 ⇓P P 15 38 29.3 0.0
baz=82,SNR=693
KTD Kalmit 82.21 331 *eP* **P 15 38 29.8 +0.8**
IVA Berane 82.22 321⇓ *P* **P 15 38 29.1 -0.1**
IVA Berane 82.22 321⇓ *P* **P 15 38 29.1 0.0**
STU Stuttgart 82.24 330 *eP* **P 15 38 29.4 +0.2**
comp=Z,968nm,1.0s,mb6.6
STU *eS* S 15 48 36.6 +1.6
STU Stuttgart 82.24 330 *eP* **P 15 38 29.5 +0.3**
STU pmax pmax
comp=Z,855nm,0.9s,mb6.6
STU Stuttgart 82.24 330 *eP* **P 15 38 29.5 +0.3**
comp=Z,855nm,0.9s,mb6.6
GMM Mts of Mourne 82.25 341 P **P 15 38 28.6 -0.5**
GMM Mts of Mourne 82.25 341⇑ *eP* **P 15 38 28.6 -0.5**
217A Green Valley 82.26 55 ⇓P P 15 38 29.6 0.0
baz=82,SNR=490
LJU Ljubljana 82.26 326 *eP* **P 15 38 28.6 -0.7**
LJU *e*PP pP 15 38 58.5 +0.2
LJU *eS* S 15 48 32.9 -2.4
LJU *e* 15 49 24.7
LJU Ljubljana 82.26 326 *eP* **P 15 38 28.6 -0.7**
LJU *epP* pP 15 38 58.5 +0.2
LJU *e* 15 44 08.4
LJU *eS* S 15 48 32.9 -2.4
LJU *e* 15 49 21.9
LJU *e* 15 49 24.7
RUP Ruppelstein 82.27 332 *eP* **P 15 38 29.8 +0.5**
PLG Polygyros 82.27 317 P **P 15 38 28.7 -0.8**
PLG Polygyros 82.27 317 *eP* **P 15 38 29.0 -0.5**
PLG Polygyros 82.27 317 *eP* **P 15 38 28.5 -1.0**
PLG Polygyros 82.27 317 P **P 15 38 28.7 -0.8**
BCLA Clavier 82.28 333 P **P 15 38 28.9 -0.4**
HORT Hortiatis 82.29 317 P **P 15 38 28.4 -1.2**
HORT Hortiatis 82.29 317 P **P 15 38 28.4 -1.2**
CHOS Chios island 82.29 314 *eP* **P 15 38 30.5 +0.9**
CHOS Chios island 82.29 314 P **P 15 38 29.7 +0.1**
STNC Stoke 82.30 339 P **P 15 38 30.0 +0.6**
STNC 15 48 29.7
STNC Stoke 82.30 339⇑ *eP* **P 15 38 30.0 +0.6**
STNC *e* 15 48 29.7
X21A Alamocita Cree 82.31 51 ⇑P P 15 38 30.5 +0.6
baz=82,SNR=935
Y20A Horse Springs, 82.33 52 ⇓P P 15 38 30.7 +0.8
baz=82,SNR=921
THE Thessaloniki 82.33 318 P **P 15 38 29.0 -0.8**
THE Thessaloniki 82.33 318 P **P 15 38 29.0 -0.8**
SMG Samos 82.34 313 *eP* **P 15 38 29.5 -0.4**
SMG Samos 82.34 313 *eP* **P 15 38 29.5 -0.4**
CWF Charnwood Fore 82.36 338 P **P 15 38 29.9 +0.2**
CWF AMb AMB 15 38 33.1
comp=Z,671nm,1.3s,mb6.3
CWF AMS AMS 16 12 22.3
comp=Z,10μm,21.2s
CWF Charnwood Fore 82.36 338⇑ *eP* **P 15 38 29.9 +0.2**
CWF AMb AMB 15 38 33.1
comp=Z,671nm,1.3s,mb6.3
CWF AMS AMS 16 12 22.3
comp=Z,10μm,21.2s
V23A Ortiz Mt. (NFS 82.37 49 ⇑P P 15 38 30.5 +0.4
baz=82,SNR=176
PVY Plav 82.39 321⇓ *P* **P 15 38 29.0 -1.1**
PVY Plav 82.39 321⇓ *P* **P 15 38 29.0 -1.1**
T25A Trinidad 82.42 47 ⇓P P 15 38 30.4 +0.1
baz=82,SNR=276
U24A Moreno Valley 82.43 48 ⇓P P 15 38 31.0 +0.6
baz=82
W22A Albuquerque 82.43 50 ⇓P P 15 38 31.2 +0.7
baz=82,SNR=46
RMNI Mount Ramon 82.44 304 Pn **P 15 38 30.8 +0.3**
BUCH Bad Urach 82.45 330 P **P 15 38 30.5 +0.3**
PRNI Paran 82.45 303 P **P 15 38 30.8 +0.2**
UPM Unac-Piva 82.45 322⇓ *P* **P 15 38 30.0 -0.3**
UPM Unac-Piva 82.45 322⇓ *P* **P 15 38 30.1 -0.3**
BDRM Kayabasi 82.45 313⇑ *P* **P 15 38 29.8 -0.7**
CADS Cadrg 82.45 326 *eP* **P 15 38 28.6 -1.7**
CADS *epP* pP 15 38 59.1 -0.1
CADS *e* 15 44 09.8
CADS *eS* S 15 48 34.2 -3.0
CADS *e* 15 49 27.2
CADS *e* 15 53 51.9
CADS *e* 15 56 55.8
CADS *e* 15 59 10.6
KZIT Kziot 82.47 304 Pn **P 15 38 30.2 -0.5**
PAIG Paliouri 82.47 317 P **P 15 38 30.6 +0.1**
PAIG Paliouri 82.47 317 P **P 15 38 30.6 +0.1**
WATA Walderalm 82.47 328⇑ *P* **P 15 38 30.8 +0.4**
comp=Z,328nm,1.1s,mb6.1,SNR=30
LBG Lerchenberg 82.48 331 P **P 15 38 30.5 +0.1**
WTTA Wattenberg 82.50 328 *i P* **P 15 38 30.4 -0.1**
comp=Z,412nm,1.1s,mb6.2,SNR=70
BCI Bajram Curri 82.52 320 *ePN* **P 15 38 31.2 +0.5**
BODT Bodrum 82.53 313 *eP* **P 15 38 31.5 +0.6**
119A Ashpeak Ranch, 82.53 53 ⇓P P 15 38 31.0 0.0
baz=82,SNR=300
VOY Vojsko 82.54 326 *eP* **P 15 38 30.2 -0.6**
VOY *epP* pP 15 38 59.6 -0.1
SNF Seneffe 82.56 334 P **P 15 38 30.4 -0.4**
comp=Z,421nm,1.9s,mb6.0
ABTA Abfaltersbach 82.56 327⇑ *P* **P 15 38 29.5 -1.4**
comp=Z,380nm,1.1s,mb6.1,SNR=69
LANF Langenberg 82.59 331 *eP* **P 15 38 31.5 +0.5**
WME Myndd Eilian 82.59 340 P **P 15 38 30.7 -0.2**
WME Myndd Eilian 82.59 340⇑ *eP* **P 15 38 30.7 -0.2**
218A Dragoon 82.61 54 ⇓P P 15 38 31.7 +0.3
baz=82,SNR=301
DAT Datca 82.61 312 *eP* **P 15 38 31.4 +0.1**
WPM1 Penmaenmawr 82.61 340 P **P 15 38 31.4 +0.5**
WPM1 Penmaenmawr 82.61 340⇑ *eP* **P 15 38 31.4 +0.5**
WLF Walferdange 82.62 333 P **P 15 38 31.7 +0.6**
comp=Z,520nm,2.4s,mb5.9
WLF Walferdange 82.62 333 *eP* **P 15 38 31.2 +0.1**
comp=Z,2μm,2.1s,mb6.5
WLF *eS* S 15 48 42.2 +3.4
WLF Walferdange 82.62 333 *eP* **P 15 38 29.1 -2.0**
WLF pmax pmax
comp=Z,355nm,1.0s,mb6.2
WLF Walferdange 82.62 333 *eP* **P 15 38 29.1 -2.0**
comp=Z,355nm,1.0s,mb6.2
HRFI Mount Harif 82.64 303 Pn **P 15 38 30.8 -0.8**
MOTA Moosalm 82.66 329⇓ *P* **P 15 38 31.2 -0.1**
comp=Z,792nm,1.1s,mb6.5,SNR=282
ARG Arkhangelos 82.66 312 P **P 15 38 32.1 +0.5**
ARG Arkhangelos 82.66 312 *eP* **P 15 38 32.0 +0.4**
ARG Arkhangelos 82.66 312 P **P 15 38 32.1 +0.5**
SCHQ Schefferville 82.67 16 P **P 15 38 31.0 -0.3**
comp=Z,214nm,0.8s,mb6.0,baz=355,slow=5.9,SNR=102
SCHQ S S 15 48 40.1 +1.0
comp=Z,9.2nm,1.0s,baz=325,slow=10.0,SNR=4.5
SCHQ PKKPbc PKKPbc 15 56 53.5 -0.9
comp=Z,12nm,0.9s,baz=213,slow=2.1,SNR=8.4
SCHQ PKPPKP 16 05 03.3
comp=Z,24nm,0.9s,baz=156,slow=2.9,SNR=10
SCHQ LR LR 16 18 38.2
comp=Z,12μm,18.1s,baz=330,slow=38
KRUS Krusevo 82.67 319⇑ *P* **P 15 38 31.4 -0.1**
RETA Reutte 82.68 329 *i P* **P 15 38 31.4 0.0**
comp=Z,1μm,1.3s,mb6.6,SNR=355
Y21A Point of Rocks 82.68 52 ⇓P P 15 38 32.4 +0.7
baz=82,SNR=477
NKY Niksic 82.70 321⇓ *P* **P 15 38 31.8 +0.1**
WLF1 Llynfaes 82.71 340 P **P 15 38 32.0 +0.4**
WLF1 AMb AMB 15 38 35.1
comp=Z,2μm,1.5s,mb6.6

WLF1 AMS AMS 16 10 01.1
comp=Z,42μm,37.6s
WLF1 Llynfaes 82.71 340⇑ *eP* **P 15 38 32.0 +0.4**
WLF1 AMb AMB 15 38 35.1
comp=Z,2μm,1.5s,mb6.6
WLF1 AMS AMS 16 10 01.1
comp=Z,42μm,37.6s
GIVF Givet 82.72 334 *eP* **P 15 38 29.9 -1.7**
comp=Z,715nm,1.2s,mb6.1
GIVF Givet 82.72 334 *eP* **P 15 38 29.9 -1.7**
GIVF pmax pmax
comp=Z,358nm,1.2s,mb6.1
GIVF Givet 82.72 334 *eP* **P 15 38 29.9 -1.7**
comp=Z,358nm,1.2s,mb6.1
LAZ Ladron 82.73 51 *eP* **P 15 38 32.4 +0.4**
comp=Z,749nm,1.4s,mb6.3
Z20A Nine Sixteen R 82.74 53 ⇑P P 15 38 32.4 +0.4
baz=82,SNR=1000
X22A Bernardo 82.74 51 ⇑P P 15 38 32.6 +0.6
baz=82
MUKL Al Mukalla 82.75 283 *eP* **P 15 38 32.9 +0.6**
ANMO Albuquerque 82.76 50 LR LR 16 11 18.6
comp=Z,5μm,19.9s,baz=130,slow=33
KRMI Paran Flat 82.78 303 Pn **P 15 38 31.8 -0.5**
YLL Llanberis 82.79 340 P **P 15 38 31.0 -0.9**
YLL Llanberis 82.79 340⇑ *eP* **P 15 38 31.0 -0.9**
W23A Werner Place, 82.80 50 ⇑P P 15 38 32.8 +0.5
baz=83,SNR=253
YRC Rhoscolyn 82.80 340 P **P 15 38 30.8 -1.2**
YRC Rhoscolyn 82.80 340⇑ *eP* **P 15 38 30.8 -1.2**
DOU Dourbes 82.80 334 P **P 15 38 32.0 0.0**
comp=Z,250nm,2.0s,mb5.7
PUK Puka 82.84 320 *ePN* **P 15 38 33.0 +0.6**
GUT Gutenstein 82.85 330 P **P 15 38 32.3 0.0**
BRY Bratogost 82.85 322⇓ *P* **P 15 38 31.1 -1.3**
BRY Bratogost 82.85 322⇓ *P* **P 15 38 31.2 -1.3**
TRI Trieste 82.85 326 *eP* **P 15 38 30.6 -1.8**
TRI pmax pmax
comp=Z,531nm,1.0s,mb6.3
TRI Trieste 82.85 326 *eP* **P 15 38 30.6 -1.8**
comp=Z,531nm,1.0s,mb6.3
TTG Podgorica 82.86 321⇓ *P* **P 15 38 32.0 -0.5**
TTG Podgorica 82.86 321⇓ *P* **P 15 38 32.0 -0.5**
AOS Alonnisos 82.91 316 P **P 15 38 32.6 -0.2**
AOS Alonnisos 82.91 316 P **P 15 38 32.6 -0.2**
V24A Rampart Ranch, 82.92 49 ⇑P P 15 38 33.6 +0.7
baz=83,SNR=373
BFO Black Forest 82.93 331 P **P 15 38 33.6 +0.8**
comp=Z,3μm,1.2s,mb7.0
BFO Black Forest 82.93 331 *eP* **P 15 38 32.4 -0.4**
comp=Z,2μm,1.5s,mb6.6
BFO *eS* S 15 48 43.5 +1.5
BFO Black Forest 82.93 331 *eP* **P 15 38 31.9 -0.9**
BFO *e*PP pP 15 38 59.2 -2.5
BFO pmax pmax
comp=Z,2μm,1.5s,mb6.6
BFO Black Forest 82.93 331 *eP* **P 15 38 31.9 -0.8**
comp=Z,2μm,1.5s,mb6.6
BFO *epP* pP 15 38 59.2 -2.6
EIL Elat 82.94 303 Pn **P 15 38 32.5 -0.6**
EIL Elat 82.94 303 *eP* pP 15 38 59.0 -3.1
U25A Circle Dot Ran 82.94 48 ⇑P P 15 38 32.9 -0.1
baz=83,SNR=298
SPAK Spaichingen-Ko 82.95 330 *eP* **P 15 38 33.5 +0.7**
BAIF Baives 82.96 334 *eP* **P 15 38 31.2 -1.7**
comp=Z,782nm,1.3s,mb6.1
BAIF Baives 82.96 334 *eP* **P 15 38 31.2 -1.7**
BAIF pmax pmax
comp=Z,391nm,1.3s,mb6.1
BAIF Baives 82.96 334 *eP* **P 15 38 31.2 -1.7**
comp=Z,391nm,1.3s,mb6.1
LENM Lemitar 83.00 51 *eP* **P 15 38 33.6 +0.3**
comp=Z,3μm,2.1s,mb6.7
HLM1 Long Mynd 83.00 339 P **P 15 38 33.2 +0.2**
HLM1 Long Mynd 83.00 339⇑ *eP* **P 15 38 33.2 +0.2**
ELSH Elham, Standar 83.03 336 P **P 15 38 33.2 0.0**
ELSH AMb AMB 15 38 36.5
comp=Z,787nm,1.1s,mb6.5
ELSH Elham, Standar 83.03 336⇑ *eP* **P 15 38 33.2 0.0**
ELSH AMb AMB 15 38 36.5
comp=Z,787nm,1.1s,mb6.5
FNA Florina 83.04 319 P **P 15 38 33.0 -0.4**
FNA Florina 83.04 319 P **P 15 38 33.0 -0.4**
FETA Feichten 83.07 329 *i P* **P 15 38 33.4 -0.1**
comp=Z,675nm,1.2s,mb6.4,SNR=264
219A White Tail Can 83.08 54 ⇓P P 15 38 33.8 0.0
baz=83
OHR Ohrid 83.09 319⇑ *P* **P 15 38 33.3 -0.4**
Y22D IRIS PASSCAL I 83.09 51 ⇓P P 15 38 34.2 +0.3
baz=83
120A U Bar Ranch, L 83.10 53 ⇑P P 15 38 34.1 +0.2
baz=83
BUM Brajici-Budva 83.14 321 *eP* **P 15 38 33.6 -0.3**
BUM Brajici-Budva 83.14 321 *eP* **P 15 38 33.7 -0.3**
XOR Xorichti 83.14 317 P **P 15 38 33.2 -0.8**
XOR Xorichti 83.14 317 P **P 15 38 33.2 -0.8**
Y22A Socorro 83.16 51 ⇓P P 15 38 34.5 +0.3
baz=83,SNR=271
NEO Neokhori 83.16 317 *eP* **P 15 38 33.5 -0.6**
NEO Neokhori 83.16 317 *eP* **P 15 38 33.5 -0.6**
Z21A St. Cloud Mine 83.16 52 ⇓P P 15 38 34.8 +0.5
baz=83,SNR=604
X23A Hourglass Bar 83.17 50 ⇓P P 15 38 34.3 +0.1
baz=83
KZN Kozani 83.19 318 P **P 15 38 32.7 -1.5**
KZN Kozani 83.19 318 *eP* **P 15 38 34.0 -0.2**
KZN Kozani 83.19 318 P **P 15 38 32.7 -1.5**
DAVA Damuels 83.19 329 P **P 15 38 34.3 +0.2**
DAVA Damuels 83.19 329⇑ *P* **P 15 38 34.0 -0.1**
comp=Z,1μm,1.0s,mb6.6,SNR=199
W24A Lazy 6 Ranch, 83.20 49 ⇑P P 15 38 35.1 +0.8
baz=83,SNR=875
BNM Barren Site 83.21 51 *eP* **P 15 38 34.5 0.0**
comp=Z,470nm,0.9s,mb6.3
BNM *epP* pP 15 39 04.7 +1.2
MENF Mencas 83.21 335 *eP* **P 15 38 34.2 +0.1**
V25A Rancho No Teng 83.22 48 ⇑P P 15 38 34.6 +0.2
baz=83,SNR=406
HCY Herceg Novi 83.22 321⇓ *P* **P 15 38 33.1 -1.2**
HCY Herceg Novi 83.22 321⇓ *P* **P 15 38 33.2 -1.2**
ULC Ulcinj 83.22 321⇓ *P* **P 15 38 34.7 +0.3**
ULC Ulcinj 83.22 321⇓ *P* **P 15 38 34.7 +0.4**
SISB Singen-Schiene 83.22 330 P **P 15 38 35.1 +0.9**
COWI Conover 83.23 33 *eP* **P 15 38 32.6 -1.7**
comp=Z,1μm,1.2s,mb6.7
DLF Lyons Farm 83.25 341 *eP* **P 15 38 34.5 +0.2**
DSB Dublin 83.26 341 *eP* **P 15 38 33.5 -0.8**
comp=Z,512nm,1.3s,mb6.2
CDF Champ du Feu 83.26 331 *eP* **P 15 38 33.1 -1.3**
comp=Z,1μm,1.1s,mb6.2
CDF Champ du Feu 83.26 331 *eP* **P 15 38 33.1 -1.3**
CDF pmax pmax
comp=Z,501nm,1.1s,mb6.3
CDF Champ du Feu 83.26 331 *eP* **P 15 38 33.1 -1.3**
comp=Z,501nm,1.1s,mb6.3
NVLJ Novalja 83.27 325 P **P 15 38 33.8 -0.8**
STEIN Stein am Rhein 83.27 330⇑ *eP* **P 15 38 34.7 +0.2**
STON Ston 83.28 322 P **P 15 38 34.0 -0.6**
APPI Appiano 83.30 328 P **P 15 38 33.5 -1.2**
U26A Atchley Ranch, 83.32 48 ⇑P P 15 38 35.1 +0.1
baz=83,SNR=160
SLE Schleitheim 83.34 330⇑ *eP* **P 15 38 35.2 +0.4**
WEIN Weingarten 83.34 330⇑ *eP* **P 15 38 34.9 0.0**
LIBD Limburg 83.36 331 *eP* **P 15 38 35.6 +0.7**
TRULL Truellikon 83.36 330⇑ *eP* **P 15 38 35.3 +0.3**
TIR Tirane 83.38 320 P **P 15 38 33.4 -1.8**
TIR Tirane 83.38 320 P **P 15 38 33.4 -1.8**
KIZ Kirchzarten 83.40 331 P **P 15 38 34.8 -0.3**
FELD Feldberg im Sc 83.43 331 *eP* **P 15 38 35.6 +0.3**
KBN Korca 83.46 319 *ePN* **P 15 38 36.0 +0.4**
WILA Wila 83.47 330⇑ *eP* **P 15 38 35.6 +0.1**
ECH Echery 83.47 331 *eP* **P 15 38 35.4 -0.1**
FLACH Flaach 83.47 330⇑ *eP* **P 15 38 35.9 +0.4**
NEST Nestorio 83.48 319 P **P 15 38 35.0 -0.7**
319A Douglas 83.49 54 ⇓P P 15 38 35.9 -0.1
baz=83,SNR=393
MCH1 Michaelchurch 83.50 339 P **P 15 38 36.0 +0.4**
MCH1 AMb AMB 15 38 39.2
comp=Z,636nm,2.2s,mb6.1
MCH1 AMS AMS 16 12 55.9
comp=Z,15μm,26.3s
MCH1 Michaelchurch 83.50 339⇑ *eP* **P 15 38 36.0 +0.4**
MCH1 AMb AMB 15 38 39.2
comp=Z,636nm,2.2s,mb6.1

MCH1 AMS AMS 16 12 55.9
comp=Z,15µm,26.3s
HTR Trewern Hill 83.50 339 P P 15 38 34.9 -0.7
HTR Trewern Hill 83.50 339⇑ eP P 15 38 34.9 -0.7
APE Apeiranthos 83.53 314 ⇓P P 15 38 36.7 +0.7
APE Apeiranthos 83.53 314 P P 15 38 34.2 -1.8
APE Apeiranthos 83.53 314 eP P 15 38 34.5 -1.5
APE Apeiranthos 83.53 314 P P 15 38 34.2 -1.8
APE Apeiranthos 83.53 314 ⇓iP P 15 38 36.7 +0.7
FUORN Ofenpass-Fuorn 83.58 329⇑ eP P 15 38 36.0 -0.1
PLONS Plons/SG 83.58 329⇑ eP P 15 38 36.3 +0.2
SWN1 Swindon 83.59 338 P P 15 38 36.6 +0.6
SWN1 AMb AMB 15 38 39.9
comp=Z,1µm,1.3s,mb6.6
SWN1 AMS AMS 16 14 11.3
comp=Z,11µm,31.4s
SWN1 Swindon 83.59 338⇑ eP P 15 38 36.6 +0.6
SWN1 AMb AMB 15 38 39.9
comp=Z,1µm,1.3s,mb6.6
SWN1 AMS AMS 16 14 11.3
comp=Z,11µm,31.4s
WOL Wolverton 83.60 338 P P 15 38 36.2 +0.1
WOL AMb AMB 15 38 39.4
comp=Z,703nm,1.3s,mb6.3
WOL AMS AMS 16 15 13.9
comp=Z,13µm,27.5s
WOL Wolverton 83.60 338⇑ eP P 15 38 36.2 +0.1
WOL AMb AMB 15 38 39.4
comp=Z,703nm,1.3s,mb6.3
WOL AMS AMS 16 15 13.9
comp=Z,13µm,27.5s
220A Playas Peak, P 83.60 54 ⇑P P 15 38 36.5 0.0
baz=83,SNR=581
DAVOX Davos/Dischmat 83.60 329⇑ eP P 15 38 36.4 +0.2
DAVOX Davos/Dischmat 83.60 329 PKKPbc PKKPbc 15 56 55.2 +3.2
comp=Z,16nm,0.9s,baz=128,slow=4.8,SNR=8.3
DAVOX PKPPKP 16 04 56.5
comp=Z,8.6nm,0.9s,baz=235,slow=5.5,SNR=3.6
DAVOX LR LR 16 19 34.5
comp=Z,29µm,18.2s,baz=39,slow=38
THL Klokotos Trika 83.61 317 eP P 15 38 35.5 -0.9
THL Klokotos Trika 83.61 317 eP P 15 38 35.5 -0.9
THL Klokotos Trika 83.61 317 P P 15 38 34.3 -2.1
121A Cookes Peak, D 83.63 53 ⇓P P 15 38 37.0 +0.4
baz=83,SNR=517
Z22A Elephant Butte 83.63 52 ⇓P P 15 38 36.6 0.0
baz=83,SNR=699
ZUR Degenried 83.63 330⇑ eP P 15 38 36.5 +0.2
X24A Lazy VL Ranch, 83.63 50 ⇑P P 15 38 37.0 +0.4
baz=83,SNR=343
BRMO Bormio 83.65 328 P P 15 38 36.8 +0.3
SULZ Cheisacher 83.68 330⇑ eP P 15 38 36.6 0.0
KARP Karpathos 83.68 312 eP P 15 38 36.5 -0.4
Y23A Lovelace Mesa, 83.71 51 ⇑P P 15 38 37.2 +0.2
baz=84,SNR=1000
HIZ Hauiti 83.71 154 pP pP 15 39 06.7 +1.0
ATAL Atalanti 83.72 316 P P 15 38 35.6 -1.4
PTL Penteli 83.73 315 eP P 15 38 36.0 -1.1
PTL Penteli 83.73 315 eP P 15 38 36.0 -1.1
W25A X Bar L Ranch, 83.74 49 ⇑P P 15 38 37.4 +0.2
baz=84,SNR=711
LKR Lokris 83.76 316 P P 15 38 35.0 -2.2
LKR Lokris 83.76 316 eP P 15 38 35.5 -1.7
LKR Lokris 83.76 316 eP P 15 38 35.0 -2.2
LKR Lokris 83.76 316 P P 15 38 35.0 -2.2
HGH Gray Hill 83.76 339 P P 15 38 36.3 -0.7
HGH Gray Hill 83.76 339⇑ eP P 15 38 36.3 -0.7
MOF Molkenrain 83.78 331 eP P 15 38 37.2 +0.1
CBKS Cedar Bluff 83.78 44 eP P 15 38 36.0 -1.3
CBKS pmax pmax
comp=Z,2µm,1.2s,mb6.7
CBKS Cedar Bluff 83.78 44 eP P 15 38 36.0 -1.3
comp=Z,2µm,1.2s,mb6.7
ATHU Athens Univers 83.84 315 P P 15 38 36.9 -0.7
AGG Agios Georgios 83.84 317 P P 15 38 35.6 -2.0
AGG Agios Georgios 83.84 317 eP P 15 38 36.0 -1.6
AGG Agios Georgios 83.84 317 P P 15 38 35.6 -2.0
BERNI Berninapass 83.84 329⇑ eP P 15 38 37.7 +0.2
ATH Athens Observa 83.87 315 P P 15 38 36.9 -0.9
ATH Athens Observa 83.87 315 eP P 15 38 36.5 -1.3
THEF They Montfort 83.89 332 eP P 15 38 37.8 +0.2
LLS Linth-Limmern 83.89 329⇑ eP P 15 38 37.8 +0.1
HINF Hinteralfeld 83.91 331 eP P 15 38 36.0 -1.8
comp=Z,1µm,1.5s,mb6.2
HINF Hinteralfeld 83.91 331 eP P 15 38 36.0 -1.8
HINF pmax pmax
comp=Z,515nm,1.5s,mb6.1
HINF Hinteralfeld 83.91 331 eP P 15 38 36.0 -1.8
comp=Z,515nm,1.5s,mb6.1
VLY Voula,Athens 83.92 315 eP P 15 38 36.0 -2.0
VLY Voula,Athens 83.92 315 eP P 15 38 36.5 -1.5
MABI Malga Bissina 83.94 328 P P 15 38 36.8 -1.1
MUO Muotathal 83.94 330⇑ eP P 15 38 38.0 +0.1
HAU Haudompre 83.94 332 eP P 15 38 36.2 -1.7
comp=Z,818nm,1.2s,mb6.1
HAU eMLR MLR
comp=Z,14µm,18.8s
HAU Haudompre 83.94 332 eP P 15 38 36.2 -1.7
HAU pmax pmax
comp=Z,409nm,1.2s,mb6.1
HAU MLR MLR
comp=Z,14µm,18.8s
HAU Haudompre 83.94 332 eP P 15 38 36.2 -1.7
comp=Z,409nm,1.2s,mb6.1
HAU LR LR
comp=Z,14µm,18.8s
BBS Basel-Blauen 83.96 331 eP P 15 38 38.5 +0.5
320A Kipp Ranch, An 83.99 54 ⇓P P 15 38 38.5 +0.1
baz=84,SNR=256
122A Conniff Cattle 83.99 52 ⇓P P 15 38 38.6 +0.1
baz=84
221A Mesquite Ranch 83.99 53 ⇑P P 15 38 38.4 -0.1
baz=84
MEZF Maizieres J'vi 83.99 333 eP P 15 38 37.0 -1.2
comp=Z,3µm,1.3s,mb6.6,baz=21
MEZF Maizieres J'vi 83.99 333 eP P 15 38 37.0 -1.2
comp=Z,3µm,1.3s,mb6.9
BALST Balsthal 84.00 330⇑ eP P 15 38 38.5 +0.3
VDL Val di Lei 84.02 329⇑ eP P 15 38 38.0 -0.3
THR1 Thera Island 84.06 313 P P 15 38 41.2 +2.4
Z23A Rita Site, Whi 84.07 51 ⇑P P 15 38 38.8 -0.1
baz=84,SNR=243
THR3 Thira Island, 84.07 313 P P 15 38 40.7 +1.9
THR3 Thira Island, 84.07 313 P P 15 38 40.7 +1.9
Y24A Capitan 84.08 50 ⇓P P 15 38 38.7 -0.2
baz=84,SNR=304
BNALP Bannalp 84.10 330⇑ eP P 15 38 38.8 0.0
X25A Clemmons Ranch 84.11 49 ⇑P P 15 38 39.1 +0.1
baz=84
BOURR Bourrignon 84.12 331⇑ eP P 15 38 39.2 +0.3
JAN Janina 84.14 318 eP P 15 38 39.5 +0.4
JAN Janina 84.14 318 eP P 15 38 39.5 +0.4
DSF Desfina 84.19 316 P P 15 38 36.4 -3.0
EVR Evrytania 84.20 317 eP P 15 38 41.5 +2.1
EVR Evrytania 84.20 317 eP P 15 38 40.0 +0.6
W26A Owens Ranch, T 84.23 48 ⇓P P 15 38 39.8 +0.2
baz=84,SNR=122
LTK Loutraki 84.24 316 eP P 15 38 35.0 -4.6
LTK Loutraki 84.24 316 P P 15 38 35.6 -4.0
URZ Urewera 84.26 153 P P 15 38 38.4 -1.0
comp=Z,136nm,0.8s,mb5.9
URZ Urewera 84.26 153 eP P 15 38 38.1 -1.3
comp=Z,245nm,0.9s,mb6.0
URZ Urewera 84.26 153 PN **P 15 38 37.3 -2.1**
HASLI Hasliberg/Brie 84.30 330⇑ eP P 15 38 39.7 -0.1
LOMF Lomont 84.31 331 eP P 15 38 40.2 +0.4
222A Williams Famil 84.34 53 ⇑P P 15 38 40.1 -0.2
baz=84,SNR=412
FUSIO Fusio 84.35 329⇑ eP P 15 38 40.6 +0.6
comp=Z,1µm,1.0s,mb6.7
KALE Kalithea 84.41 317 P P 15 38 38.4 -2.1
SRN Sarande 84.41 319 ePN **P 15 38 40.0 -0.5**
TRIZ Trizonia 84.46 317 P P 15 38 38.9 -1.9
DID Didima 84.47 315 eP P 15 38 38.5 -2.3
DID Didima 84.47 315 eP P 15 38 38.5 -2.3
DID Didima 84.47 315 P P 15 38 37.4 -3.4
123A Bell Site, Whi 84.48 52 ⇓P P 15 38 40.9 -0.1
baz=84
IGT Igoumenitsa 84.50 318 P P 15 38 39.2 -1.7
IGT Igoumenitsa 84.50 318 P P 15 38 39.2 -1.7
EFP Efpalio 84.51 317 eP P 15 38 40.0 -1.0
EFP Efpalio 84.51 317 eP P 15 38 40.5 -0.5
EFP Efpalio 84.51 317 P P 15 38 40.0 -1.0
Y25A Mesa, Roswell 84.52 50 ⇓P P 15 38 40.8 -0.3
baz=84,SNR=408
ZKR Zakros 84.53 312 eP P 15 38 41.0 -0.2
Z24A Sheeppen Canyo 84.54 51 ⇓P P 15 38 41.1 -0.1
baz=84,SNR=269
WIMIS Wimmis 84.58 330⇑ eP P 15 38 41.1 -0.1
X26A CR and CF Fran 84.59 49 ⇓P P 15 38 41.5 0.0
baz=84,SNR=822
LAKA Lakka 84.61 317 P P 15 38 39.0 -2.5
AOI Ancona 84.63 325 P P 15 38 41.8 +0.3
GUR Goura 84.64 316 eP P 15 38 40.0 -1.6
GUR Goura 84.64 316 eP P 15 38 40.5 -1.1
GUR Goura 84.64 316 P P 15 38 38.7 -2.9
MUGIO Muggio 84.64 329⇑ eP P 15 38 41.1 -0.4
comp=Z,2µm,1.3s,mb6.8
KEK Kerkira 84.64 319 P P 15 38 39.8 -1.8
KEK Kerkira 84.64 319 eP P 15 38 39.5 -2.1
KEK Kerkira 84.64 319 P P 15 38 39.8 -1.8
W27A Bowe Ranch, En 84.66 48 ⇑P P 15 38 41.7 -0.1
baz=84,SNR=443
FIU Minerbio Fiu 84.68 327 P P 15 38 43.1 +1.4
SCIA State Center 84.72 38 eP P 15 38 41.2 -0.8
comp=Z,3µm,1.3s,mb7.1
TORNY Torny/Romont 84.74 331⇑ eP P 15 38 42.4 +0.4
NPS Neapolis 84.77 312 eP P 15 38 41.0 -1.4
NPS Neapolis 84.77 312 eP P 15 38 41.5 -0.9
BRANT Les Verrieres 84.79 331⇑ eP P 15 38 42.6 +0.4
HTL Hartland 84.81 339 P P 15 38 42.8 +0.6
HTL AMb AMB 15 38 46.1
comp=Z,855nm,1.4s,mb6.5
HTL 15 48 54.6
HTL AMS AMS 16 11 01.5
comp=Z,12µm,37.8s
HTL Hartland 84.81 339⇑ eP P 15 38 42.8 +0.6
HTL AMb AMB 15 38 46.1
comp=Z,855nm,1.4s,mb6.5
HTL e 15 48 54.6
HTL AMS AMS 16 11 01.5
comp=Z,12µm,37.8s
223A Chaparral, Ant 84.82 52 ⇓P P 15 38 42.5 -0.2
baz=85
FSSB Fossombrone 84.88 325 P P 15 38 42.8 +0.1
LKD2 Lefkada island 84.89 318 P P 15 38 42.7 -0.2
LAST Lasithi 84.92 312 P P 15 38 42.4 -0.7
LAST Lasithi 84.92 312 eP P 15 38 43.5 +0.4
LAST Lasithi 84.92 312 P P 15 38 42.4 -0.7
124A Stringfield Ra 84.92 51 ⇓P P 15 38 42.9 -0.3
baz=85,SNR=420
X27A F and S Farms, 84.94 48 ⇑P P 15 38 43.2 0.0
baz=85
CING Cingoli 84.95 325 P P 15 38 43.4 +0.3
SENIN Lac Senin/Sane 84.96 330⇑ iP P 15 38 43.6 +0.5
comp=Z,1µm,1.5s,mb6.6
Z25A Roswell 84.96 50 ⇓P P 15 38 43.4 0.0
baz=85
MMK Mattmark 84.96 330⇑ iP P 15 38 43.5 +0.4
comp=Z,1µm,1.1s,mb6.7
RLS Riolos of Patr 85.01 317 eP P 15 38 43.5 0.0
MSAG Monte S. Angel 85.02 322 P P 15 38 43.6 +0.1
Y26A Elida 85.03 49 ⇑P P 15 38 43.4 -0.3
baz=85,SNR=776
VLX Vlachokerasia 85.03 316 eP P 15 38 42.5 -1.1
VLX Vlachokerasia 85.03 316 eP P 15 38 42.5 -1.1
SGRT San Giovanni R 85.06 322 P P 15 38 43.8 +0.1
QRZ Quartz Range 85.08 157 PN **P 15 38 43.6 +0.2**
QRZ pP pP 15 39 18.0 +5.4
OFFI Offida 85.08 324 P P 15 38 45.2 +1.4
AIGLE Aigle 85.11 330⇑ eP P 15 38 43.8 0.0
GRYON Gryon 85.12 330⇑ eP P 15 38 43.9 0.0
DIX Grande Dixence 85.15 330⇑ eP P 15 38 44.6 +0.6
SNTG Esanatoglia 85.16 325 P P 15 38 44.0 -0.1
DYA Yadsworthy 85.16 339 P P 15 38 42.9 -1.1
DYA AMb AMB 15 38 47.4
comp=Z,872nm,1.5s,mb6.5
DYA 15 48 58.7
DYA AMS AMS 16 21 39.6
comp=Z,16µm,15.2s
DYA Yadsworthy 85.16 339 eP P 15 38 42.9 -1.1
DYA AMb AMB 15 38 47.4
comp=Z,872nm,1.5s,mb6.5
DYA e 15 48 58.7
DYA AMS AMS 16 21 39.6
comp=Z,16µm,15.2s
IDI Anoyia 85.16 313 eP P 15 38 45.5 +1.2
KSU1 Kansas State U 85.20 42 eP P 15 38 43.5 -0.9
comp=Z,595nm,0.8s,mb6.6
RGNG Rignano Grg 85.20 322 P P 15 38 43.7 -0.7
VMG Vicchio 85.20 326 P P 15 38 43.1 -1.2
GIMEL St. Georges / 85.20 331⇑ eP P 15 38 44.6 +0.3
SEI Scarperia 85.20 326 P P 15 38 45.7 +1.4
CABF La Chapelle 85.21 331 eP P 15 38 42.9 -1.4
comp=Z,993nm,1.3s,mb6.3
CABF La Chapelle 85.21 331 eP P 15 38 42.9 -1.4
CABF pmax pmax
comp=Z,496nm,1.3s,mb6.3
CABF La Chapelle 85.21 331 eP P 15 38 42.9 -1.4
comp=Z,496nm,1.3s,mb6.3
VLI Veliai 85.21 315 eP P 15 38 42.5 -2.0
VLI Veliai 85.21 315 eP P 15 38 42.5 -2.0
FNVD Fontana Vidola 85.21 327 P P 15 38 45.5 +1.1
PMOR Pomariorio Ree 85.22 114 eP P 15 38 46.0 +1.2
comp=Z,2µm,1.5s,mb6.7
SALAN Lac Salanfe 85.26 330⇑ eP P 15 38 44.8 +0.2
JFWS Jewell Farm 85.29 35 eP P 15 38 43.5 -1.3
JFWS pmax pmax
comp=Z,593nm,1.1s,mb6.4
JFWS Jewell Farm 85.29 35 eP P 15 38 43.5 -1.3
comp=Z,593nm,1.1s,mb6.4
CDCA Citt' di Caste 85.31 326 P P 15 38 45.6 +0.7
EMV Vieux Emosson 85.36 330⇑ eP P 15 38 45.4 +0.3
TERO Teramo 85.36 324 P P 15 38 45.6 +0.4
CESI CESI - Serrava 85.37 325 P P 15 38 46.0 +0.8
VAL Valentia 85.38 343⇓ iP P 15 38 46.7 +1.6
VAL ePP PP 15 42 04.6 +0.9
VAL Valentia 85.38 343⇑ iS S 15 49 07.9 +1.6
VLS Valsamata 85.38 317 P P 15 38 43.0 -2.4
VLS Valsamata 85.38 317 eP P 15 38 45.0 -0.4
VLS Valsamata 85.38 317 P P 15 38 43.0 -2.4
Z26A Caprock 85.40 50 ⇑P P 15 38 45.3 -0.2
baz=85,SNR=718
SIVA Sivas 85.40 313 eP P 15 38 45.5 0.0
NRCA Norcia 85.42 325 P P 15 38 45.5 +0.1
ITM Ithomi 85.42 316 P P 15 38 42.5 -3.0
ITM Ithomi 85.42 316 eP P 15 38 45.0 -0.5
ITM Ithomi 85.42 316 eP P 15 38 44.5 -1.0
ITM Ithomi 85.42 316 P P 15 38 42.5 -3.0
125A Gardner Draw, 85.43 51 ⇓P P 15 38 45.3 -0.4
baz=85,SNR=688
Y27A Causey 85.44 49 ⇓P P 15 38 45.2 -0.5
baz=85,SNR=222
LOR Lormes 85.46 333 eP P 15 38 44.0 -1.6
comp=Z,3µm,1.2s,mb6.8,baz=35
LOR eMLR MLR
comp=Z,15µm,19.5s
LOR Lormes 85.46 333 eP P 15 38 44.0 -1.6
LOR pmax pmax
comp=Z,1µm,1.2s,mb6.8
LOR MLR MLR
comp=Z,15µm,19.5s
LOR Lormes 85.46 333 eP P 15 38 44.0 -1.6
comp=Z,1µm,1.2s,mb6.8
LOR LR LR
comp=Z,15µm,19.5s
VAM Vamos 85.47 313 eP P 15 38 46.5 +0.7
KYTH Kithira 85.48 315 eP P 15 38 46.0 +0.1
VLC Villacollemand 85.53 327 eP P 15 38 45.2 -0.8
comp=Z,609nm,1.0s,mb6.5
CIGN Sant'Elia a Pi 85.53 323 P P 15 38 47.6 +1.6
AMTX Amarillo 85.57 47 eP P 15 38 46.6 +0.2
comp=Z,1µm,1.1s,mb6.7
MSTX Muleshoe 85.61 49 ⇑P P 15 38 46.0 -0.6
baz=85,SNR=199
FLN La Foliniere 85.62 336 eP P 15 38 44.6 -1.7
comp=Z,2µm,1.3s,mb6.5,baz=33
FLN eMLR MLR
comp=Z,22µm,20.0s
FLN La Foliniere 85.62 336 eP P 15 38 44.6 -1.7
FLN pmax pmax
comp=Z,835nm,1.3s,mb6.5
FLN MLR MLR
comp=Z,22µm,20.0s
FLN La Foliniere 85.62 336 eP P 15 38 44.6 -1.7
comp=Z,836nm,1.3s,mb6.5
FLN LR LR
comp=Z,22µm,20.0s
KARN Karanos 85.63 313 eP P 15 38 40.0 -6.6
KARN Karanos 85.63 313 eP P 15 38 46.5 -0.1
CPRX Cap Rock 85.64 50 eP P 15 38 49.6 +2.9
comp=Z,455nm,1.1s,mb6.3
FG5 Orsara di Pugl 85.65 322 P P 15 38 47.4 +0.8
LDF La Druitiere 85.66 336 eP P 15 38 44.8 -1.7
comp=Z,245nm,0.7s,mb6.0
LDF La Druitiere 85.66 336 eP P 15 38 44.8 -1.7
LDF pmax pmax
comp=Z,123nm,0.7s,mb5.9
LDF La Druitiere 85.66 336 eP P 15 38 44.8 -1.7
comp=Z,123nm,0.7s,mb5.9
BDHA Al Bayda' 85.66 284⇑ eP P 15 38 47.9 +0.8
AQU L'Aquila 85.67 324 eP P 15 38 47.0 +0.3
comp=Z,702nm,1.0s,mb6.5
AQU L'Aquila 85.67 324⇑ iP P 15 38 47.0 +0.3
MNTX Cornudas Mount 85.67 52 eP P 15 38 46.7 -0.2
comp=Z,338nm,0.8s,mb6.3
INTR Introdacqua 85.71 324 P P 15 38 46.8 -0.1
225A Deer Hill, Car 85.72 51 ⇓P P 15 38 47.0 -0.2
baz=86,SNR=177
ACER Acerenza 85.72 322 P P 15 38 46.3 -0.7
PYL PYLOS 85.73 316 eP P 15 38 45.5 -1.6
PYL PYLOS 85.73 316 eP P 15 38 46.0 -1.1
PYL PYLOS 85.73 316 P P 15 38 45.9 -1.2
CCA1 Carnmenellis 85.74 339 P P 15 38 47.1 +0.2
CCA1 AMb AMB 15 38 50.4
comp=Z,834nm,1.4s,mb6.5
CCA1 AMS AMS 16 11 42.9
comp=Z,11µm,36.9s
CCA1 Carnmenellis 85.74 339⇑ eP P 15 38 47.1 +0.2
CCA1 AMb AMB 15 38 50.4
comp=Z,834nm,1.4s,mb6.5
CCA1 AMS AMS 16 11 42.9
comp=Z,11µm,36.9s
JSA Saint Aubin 85.76 337 P P 15 38 47.2 +0.2
JSA AMb AMB 15 38 50.5
comp=Z,913nm,1.2s,mb6.6
JSA AMS AMS 16 16 41.3
comp=Z,12µm,28.2s
JSA Saint Aubin 85.76 337⇑ eP P 15 38 47.2 +0.2
JSA AMb AMB 15 38 50.5
comp=Z,913nm,1.2s,mb6.6
JSA AMS AMS 16 16 41.3
comp=Z,12µm,28.2s
SSF Saint Saulge 85.77 333 eP P 15 38 45.5 -1.6
comp=Z,1µm,1.1s,mb6.5
SSF Saint Saulge 85.77 333 eP P 15 38 45.5 -1.6
SSF pmax pmax
comp=Z,686nm,1.1s,mb6.5
SSF Saint Saulge 85.77 333 eP P 15 38 45.5 -1.6
comp=Z,686nm,1.1s,mb6.5
324A Moseley Reach, 85.79 52 ⇑P P 15 38 46.8 -0.7
baz=86
PPT Papeete 85.81 117 eP P 15 38 49.0 +1.4
comp=Z,362nm,1.2s,mb6.2
PPT epP pP 15 39 16.9 +0.1
comp=Z,1µm,2.3s
PPT Papeete 85.81 117 ePP PP 15 42 05.6 -3.3
comp=Z,5µm,24.2s
PPT eS S 15 49 10.8 -0.6
comp=Z,58µm,27.8s
PPT eSS SS 15 54 41.4 -10
comp=Z,16µm,25.5s
PPT eLQ 16 01 33.8
comp=Z,41µm,30.0s
PPT eLR LR 16 05 41.5
comp=Z,112µm,32.0s,baz=316
PPT Papeete 85.81 117 P P 15 38 48.5 +0.8
comp=Z,317nm,1.1s,mb6.2,baz=349,slow=2.4,SNR=17
PPT LR LR 16 11 18.6
comp=Z,19µm,20.7s,baz=310,slow=32
PPT Papeete 85.81 117 P P 15 38 48.5 +0.8
PPT LR LR 16 11 18.6
Z27A Tatum 85.82 49 ⇓P P 15 38 47.1 -0.5
baz=86,SNR=845
126A Clayton Basin, 85.82 50 ⇓P P 15 38 47.0 -0.6
baz=86,SNR=131
RNI2 Rionero Sannit 85.84 323 P P 15 38 48.2 +0.6
MIDA Miranda 85.84 323 P P 15 38 48.0 +0.4
FIAM Fiamignano 85.86 324 P P 15 38 48.0 +0.3
PTRP Pietrapertosa 85.87 321 P P 15 38 48.6 +0.9
PAE Paea 85.87 117 eP P 15 38 48.8 +0.9
comp=Z,63nm,1.2s,mb5.4
PAE Paea 85.87 117 eP P 15 38 48.8 +0.9
PAE pmax pmax
comp=Z,63nm,1.2s,mb5.4
LPL La Plagne 85.88 330 eP P 15 38 46.4 -1.3
comp=Z,1µm,1.0s,mb6.4
LPL La Plagne 85.88 330 eP P 15 38 46.4 -1.3
LPL pmax pmax
comp=Z,556nm,1.0s,mb6.5
LPL La Plagne 85.88 330 eP P 15 38 46.4 -1.3
comp=Z,556nm,1.0s,mb6.4
LPG La Plagne 85.89 330 eP P 15 38 46.7 -1.0
comp=Z,1µm,1.1s,mb6.5
LPG La Plagne 85.89 330 eP P 15 38 46.7 -1.0
LPG pmax pmax
comp=Z,725nm,1.1s,mb6.5
LPG La Plagne 85.89 330 eP P 15 38 46.7 -1.0
comp=Z,725nm,1.1s,mb6.5
HYF Humbligny 85.89 333 eP P 15 38 46.6 -1.1
MRZ Mangatainoka R 85.89 155 PN **P 15 38 46.5 -1.0**
MRB1 Monte Rocchett 85.91 323 P P 15 38 48.2 +0.3
PSB1 Pescosannita 85.91 323 P P 15 38 47.9 0.0
GDL2 Guadalupe Moun 85.93 51 eP P 15 38 47.8 -0.4
comp=Z,5µm,1.9s,mb7.1
GVD Gavdhos 85.94 313 eP P 15 38 48.0 -0.2
MRLC Muro Lucano 85.96 322 P P 15 38 48.1 -0.1
TIAR Tiarei 85.96 117 eP P 15 38 49.7 +1.3
comp=Z,626nm,1.0s,mb6.5
LBOS 85.96 285 eP P 15 38 49.5 +0.9
LBOS AMb AMB 15 38 50.4
comp=Z,854nm,1.2s,mb6.6
SGG Gregorio Mates 85.99 323 P P 15 38 49.5 +1.2
SMF Signal de Mont 86.00 332 eP P 15 38 46.8 -1.4
comp=Z,3µm,1.3s,mb6.7
SMF Signal de Mont 86.00 332 eP P 15 38 46.8 -1.4
SMF pmax pmax
comp=Z,1µm,1.3s,mb6.8
SMF Signal de Mont 86.00 332 eP P 15 38 46.8 -1.4
comp=Z,1µm,1.3s,mb6.8
AVF Avril sur Loir 86.05 333 eP P 15 38 47.0 -1.5
comp=Z,3µm,1.1s,mb6.8
AVF Avril sur Loir 86.05 333 eP P 15 38 47.0 -1.5
AVF pmax pmax
comp=Z,2µm,1.1s,mb6.8
AVF Avril sur Loir 86.05 333 eP P 15 38 47.0 -1.5
comp=Z,2µm,1.1s,mb6.8
GRR Gorron 86.07 336 eP P 15 38 47.2 -1.3
comp=Z,2µm,1.2s,mb6.6
GRR Gorron 86.07 336 eP P 15 38 47.2 -1.3
GRR pmax pmax
comp=Z,1µm,1.2s,mb6.6
GRR Gorron 86.07 336 eP P 15 38 47.2 -1.3
comp=Z,1µm,1.2s,mb6.6
325A Bean Ranch, Si 86.15 52 ⇓P P 15 38 48.8 -0.5
baz=86
DHBB Dhamar BB 86.16 286 eP P 15 38 50.5 +0.9
DHBB AMb AMB 15 38 52.2
comp=Z,6µm,2.0s,mb7.2
LATE Laterza 86.17 325 P P 15 38 48.7 -0.5
CLNB Carlsbad 86.17 51 eP P 15 38 49.3 -0.1
comp=Z,692nm,1.7s,mb6.3
CERT Cerreto 86.18 324 P P 15 38 48.8 -0.4
226A Malaga, Loving 86.19 51 ⇓P P 15 38 49.0 -0.4
baz=86,SNR=219
127A Arkansas Junct 86.19 50 ⇑P P 15 38 48.9 -0.6
baz=86
SNZO South Karori 86.19 156 eP P 15 38 48.3 -0.7
comp=Z,663nm,1.4s,mb6.4
QLNO Quiliano 86.23 328 P P 15 38 48.5 -0.9
RFI Roccamonfina 86.24 323 P P 15 38 50.4 +0.9
BNI Bardonecchia 86.29 330 eP P 15 38 49.1 -0.6
BNI pmax pmax
comp=Z,406nm,0.9s,mb6.3
BNI Bardonecchia 86.29 330 eP P 15 38 49.1 -0.6
comp=Z,406nm,0.9s,mb6.3
GDM Grand'Maison 86.38 330 eP P 15 38 50.6 +0.5
BGF Bois d'Agland 86.43 333 eP P 15 38 49.0 -1.3
comp=Z,901nm,1.2s,mb6.3
BGF Bois d'Agland 86.43 333 eP P 15 38 49.0 -1.3
BGF pmax pmax
comp=Z,450nm,1.3s,mb6.2
BGF Bois d'Agland 86.43 333 eP P 15 38 49.0 -1.3
comp=Z,450nm,1.3s,mb6.2

MBDF Montbardon 86.53 330 *eP* **P 15 38 48.8 -2.1**
comp=Z,251nm,0.7s,mb5.9
MBDF Montbardon 86.53 330 *eP* **P 15 38 48.8 -2.1**
MBDF pmax pmax
comp=Z,125nm,0.7s,mb6.0
MBDF Montbardon 86.53 330 *eP* **P 15 38 48.8 -2.1**
comp=Z,125nm,0.7s,mb6.0
TOLF Tolfa 86.53 325 P **P 15 38 50.6 -0.3**
425A Indio Mountain 86.55 52 ⇑P **P 15 38 50.9 -0.3**
baz=86
WVZ Waitaha Valley 86.63 159 PN **P 15 38 51.3 +0.3**
227A Bennet, Jal 86.70 50 ⇑P **P 15 38 51.4 -0.6**
baz=86
ORIF Oris-en-Rattie 86.71 330 *eP* **P 15 38 50.2 -1.6**
comp=Z,348nm,1.1s,mb5.9
ORIF *e*MLR MLR
comp=Z,20µm,22.8s
ORIF Oris-en-Rattie 86.71 330 *eP* **P 15 38 50.2 -1.6**
ORIF pmax pmax
comp=Z,174nm,1.1s,mb5.9
ORIF Oris-en-Rattie 86.71 330 *eP* **P 15 38 50.2 -1.6**
comp=Z,174nm,1.1s,mb5.9
SGMF Saint Gilles 86.71 337 *eP* **P 15 38 50.5 -1.2**
comp=Z,1µm,1.2s,mb6.5
SGMF Saint Gilles 86.71 337 *eP* **P 15 38 50.5 -1.2**
SGMF pmax pmax
comp=Z,704nm,1.2s,mb6.5
SGMF Saint Gilles 86.71 337 *eP* **P 15 38 50.5 -1.2**
comp=Z,704nm,1.2s,mb6.5
SURF Saint Ours 86.72 329 *eP* **P 15 38 52.4 +0.6**
IMI Imperia 86.76 328 P **P 15 38 51.0 -1.0**
TAOE Nuku Hiva Isla 86.78 104 *e*PP PP 15 42 13.9 -2.8
comp=Z,7µm,24.3s
TAOE *e*S S 15 49 15.2 -5.8
comp=Z,23µm,25.0s
TAOE *e*LR LR 16 06 00.3
comp=Z,118µm,35.9s,baz=320
TAOE Nuku Hiva Isla 86.78 104 *e*P **P 15 38 53.3 +0.8**
comp=Z,674nm,1.1s,mb6.5
TAOE *e*PP PP 15 42 13.9 -2.8
TAOE *e*S S 15 49 15.2 -5.8
326A Caldwell Ranch 86.79 51 ⇑P **P 15 38 51.7 -0.7**
baz=87
SAOF Saorge 86.83 329 *eP* **P 15 38 52.0 -0.4**
KHZ Kahutara 86.84 157 *eP* **P 15 38 51.9 -0.2**
comp=Z,990nm,1.9s,mb6.4
KHZ Kahutara 86.84 157 PN **P 15 38 52.0 -0.1**
ROSF Rostrenen 86.85 337 *eP* **P 15 38 51.2 -1.2**
comp=Z,2µm,1.2s,mb6.6
ROSF Rostrenen 86.85 337 *eP* **P 15 38 51.2 -1.2**
ROSF pmax pmax
comp=Z,941nm,1.2s,mb6.6
ROSF Rostrenen 86.85 337 *eP* **P 15 38 51.2 -1.2**
comp=Z,941nm,1.2s,mb6.6
UDYN Al 'Udayn 86.86 285 *eP* **P 15 38 53.6 +0.7**
AUTN L'Aution 86.88 329 *eP* **P 15 38 52.8 +0.2**
TCF Toulx Ste Croi 86.89 333 *eP* **P 15 38 51.3 -1.3**
comp=Z,1µm,1.3s,mb6.4
TCF Toulx Ste Croi 86.89 333 *eP* **P 15 38 51.3 -1.3**
TCF pmax pmax
comp=Z,681nm,1.3s,mb6.4
TCF Toulx Ste Croi 86.89 333 *eP* **P 15 38 51.3 -1.3**
comp=Z,681nm,1.3s,mb6.4
SSB Saint Sauveur 86.91 331 *eP* **P 15 38 53.0 +0.3**
TOUF Mont Tournerai 86.93 329 *eP* **P 15 38 52.7 -0.1**
SBF Sospel 86.98 329 *eP* **P 15 38 50.6 -2.5**
comp=Z,251nm,0.7s,mb6.0
SBF Sospel 86.98 329 *eP* **P 15 38 50.6 -2.5**
SBF pmax pmax
comp=Z,126nm,0.7s,mb6.0
SBF Sospel 86.98 329 *eP* **P 15 38 50.6 -2.5**
comp=Z,126nm,0.7s,mb6.0
LUCF Luceram 87.00 329 *eP* **P 15 38 52.8 -0.4**
327A Balmorhea Ranc 87.04 51 ⇓P **P 15 38 52.9 -0.7**
baz=87
MEH Mehetia 87.06 116 *eP* **P 15 38 55.1 +1.4**
comp=Z,819nm,1.3s,mb6.5
MEH *e*pP pP 15 39 23.1 +0.1
comp=Z,501nm,1.2s
MVIF Mont Vial 87.07 329 *eP* **P 15 38 53.2 -0.3**
REVF Revere 87.11 329 *eP* **P 15 38 53.2 -0.5**
BST Brest 87.12 338 *eP* **P 15 38 54.4 +0.8**
QUIF Quistinic 87.20 337 *eP* **P 15 38 52.6 -1.4**
comp=Z,1µm,1.5s,mb6.2
QUIF Quistinic 87.20 337 *eP* **P 15 38 52.6 -1.4**
QUIF pmax pmax
comp=Z,530nm,1.5s,mb6.2
QUIF Quistinic 87.20 337 *eP* **P 15 38 52.6 -1.4**
comp=Z,530nm,1.5s,mb6.2
426A McDonald Obser 87.22 52 ⇓P **P 15 38 53.9 -0.6**
baz=87
OCF Saint Nazaire 87.22 330 *eP* **P 15 38 54.8 +0.6**
OG26 St.-Nazaire-De 87.22 330 *eP* **P 15 38 54.8 +0.6**
VIVF Saint-Julien-l 87.22 331 *eP* **P 15 38 52.6 -1.6**
comp=Z,1µm,1.3s,mb6.3
VIVF Saint-Julien-l 87.22 331 *eP* **P 15 38 52.6 -1.6**
VIVF pmax pmax
comp=Z,584nm,1.3s,mb6.3
VIVF Saint-Julien-l 87.22 331 *eP* **P 15 38 52.6 -1.6**
comp=Z,584nm,1.3s,mb6.3
VERF Verneugheol 87.25 333 *eP* **P 15 38 55.7 +1.3**
WMOK Wichita Mounta 87.30 46 *eP* **P 15 38 54.5 -0.3**
WMOK *e*PP pP 15 39 23.5 -0.6
WMOK pmax pmax
comp=Z,896nm,1.3s,mb6.5
WMOK Wichita Mounta 87.30 46 *eP* **P 15 38 54.5 -0.4**
comp=Z,896nm,1.3s,mb6.5
WMOK *e*pP pP 15 39 23.5 -0.5
RPZ Rata Peaks 87.31 159 P **P 15 38 54.8 +0.6**
comp=Z,84nm,0.7s,mb5.8,baz=344,slow=3.0,SNR=19
RPZ Rata Peaks 87.31 159 *eP* **P 15 38 56.8 +2.5**
comp=Z,233nm,1.1s,mb6.0
MSZ Milford Sound 87.39 161 PN **P 15 38 55.2 +0.5**
MFF Saint Martin d 87.41 335 *eP* **P 15 38 54.0 -1.1**
comp=Z,2µm,1.2s,mb6.6
MFF Saint Martin d 87.41 335 *eP* **P 15 38 54.0 -1.1**
MFF pmax pmax
comp=Z,1µm,1.2s,mb6.6
MFF Saint Martin d 87.41 335 *eP* **P 15 38 54.0 -1.1**
comp=Z,1µm,1.2s,mb6.6
PGF Pioggiola 87.43 327 *eP* **P 15 38 52.9 -2.4**
comp=Z,188nm,0.9s,mb5.7
PGF Pioggiola 87.43 327 *eP* **P 15 38 52.9 -2.4**
PGF pmax pmax
comp=Z,94nm,0.9s,mb5.7
PGF Pioggiola 87.43 327 *eP* **P 15 38 52.9 -2.4**
comp=Z,94nm,0.9s,mb5.7
328A Wristen Ranch, 87.44 50 ⇑P **P 15 38 54.8 -0.7**
baz=87
427A Hayter Ranch, 87.47 51 ⇑P **P 15 38 55.1 -0.5**
baz=87
FRNF Fournols 87.54 332 *eP* **P 15 38 56.8 +1.1**
FRF La Foret Royal 87.55 329 *eP* **P 15 38 53.3 -2.5**
comp=Z,167nm,0.9s,mb5.7
FRF La Foret Royal 87.55 329 *eP* **P 15 38 53.3 -2.5**
FRF pmax pmax
comp=Z,84nm,0.9s,mb5.8
FRF La Foret Royal 87.55 329 *eP* **P 15 38 53.3 -2.5**
comp=Z,84nm,0.9s,mb5.8
HDIL Hopedale 87.60 36 *eP* **P 15 38 55.2 -1.0**
comp=Z,2µm,1.1s,mb7.1
526A Mary Lane Ranc 87.61 52 ⇓P **P 15 38 55.9 -0.4**
baz=87
SMRF Simiane la Rot 87.62 330 *eP* **P 15 38 54.6 -1.6**
comp=Z,254nm,1.3s,mb5.8
SMRF Simiane la Rot 87.62 330 *eP* **P 15 38 54.6 -1.6**
comp=Z,254nm,1.3s,mb6.1
LBZ Lake Benmore 87.70 160 PN **P 15 38 57.0 +0.9**
LBZ pP pP 15 39 27.1 +1.7
CEL Celeste 87.71 320 *eP* **P 15 38 55.8 -0.9**
comp=Z,230nm,0.9s,mb6.2
LMR La Mourre 87.80 329 *eP* **P 15 38 54.7 -2.3**
comp=Z,216nm,0.8s,mb5.9
LMR La Mourre 87.80 329 *eP* **P 15 38 54.7 -2.3**
LMR pmax pmax
comp=Z,108nm,0.8s,mb5.9
LMR La Mourre 87.80 329 *eP* **P 15 38 54.7 -2.3**
comp=Z,108nm,0.8s,mb5.9
527A Woodward Ranch 87.84 52 ⇓P **P 15 38 56.9 -0.6**
baz=88
626A Big Bend Ranch 87.94 53 ⇑P **P 15 38 57.6 -0.3**
baz=88
RJF Les Rejaudoux 87.98 333 *eP* **P 15 38 56.7 -1.1**
comp=Z,577nm,1.0s,mb6.3
RJF *e*MLR MLR
comp=Z,17µm,19.5s
RJF Les Rejaudoux 87.98 333 *eP* **P 15 38 56.7 -1.1**
RJF pmax pmax
comp=Z,289nm,1.0s,mb6.3
RJF MLR MLR
comp=Z,17µm,19.5s
RJF Les Rejaudoux 87.98 333 *eP* **P 15 38 56.7 -1.1**
comp=Z,288nm,1.0s,mb6.3
RJF LR LR
comp=Z,17µm,19.5s
428A Kincaid Ranch, 87.98 51 ⇑P **P 15 38 57.8 -0.3**
baz=88
CAF Calviac 88.11 332 *eP* **P 15 38 57.7 -0.8**
comp=Z,820nm,1.2s,mb6.3
CAF Calviac 88.11 332 *eP* **P 15 38 57.7 -0.8**
CAF pmax pmax
comp=Z,410nm,1.2s,mb6.3
CAF Calviac 88.11 332 *eP* **P 15 38 57.7 -0.8**
comp=Z,410nm,1.2s,mb6.3
LASF Ste Croix 88.19 331 *eP* **P 15 38 57.5 -1.4**
comp=Z,587nm,1.3s,mb6.1
EAZ Earnscleugh 88.25 161 PN **P 15 38 58.1 -0.7**
528A Cox Ranch, San 88.33 51 ⇓P **P 15 38 59.4 -0.4**
baz=88
TXAR Lajitas Array 88.39 52 P **P 15 38 59.5 -0.6**
comp=Z,138nm,0.7s,mb6.1,baz=286,slow=2.0,SNR=105
TXAR PKKP PKKPbc 15 56 26.5 -14
comp=Z,3.0nm,1.0s,baz=202,slow=0.7,SNR=3.4
TXAR LR LR 16 12 29.7
comp=Z,9µm,21.3s,baz=5.0,slow=31
ODZ Otahua Downs 88.43 160 *eP* **P 15 39 00.9 +1.3**
comp=Z,4µm,1.7s,mb7.2
627A Terlingua Ranc 88.47 52 ⇓P **P 15 38 60.0 -0.5**
baz=88
LFF La Frestale 88.57 333 *eP* **P 15 38 59.7 -0.9**
comp=Z,667nm,0.9s,mb6.3
LFF La Frestale 88.57 333 *eP* **P 15 38 59.7 -0.9**
LFF pmax pmax
comp=Z,334nm,0.9s,mb6.4
LFF La Frestale 88.57 333 *eP* **P 15 38 59.7 -0.9**
comp=Z,334nm,0.9s,mb6.4
AAM Ann Arbor 88.60 32 *eP* **P 15 39 01.5 +0.7**
AAM *e**PP pP 15 39 29.6 -0.5
AAM pmax pmax
comp=Z,542nm,0.9s,mb6.6
AAM Ann Arbor 88.60 32 *eP* **P 15 39 01.5 +0.7**
comp=Z,542nm,0.9s,mb6.6
AAM *e*pP pP 15 39 29.6 -0.5
CCM Cathedral Cave 88.67 39 *eP* **P 15 39 00.3 -0.9**
CCM pmax pmax
comp=Z,2µm,1.1s,mb7.0
CCM Cathedral Cave 88.67 39 *eP* **P 15 39 00.3 -1.0**
comp=Z,2µm,1.1s,mb7.0
SLM Saint Louis 88.70 38 *eP* **P 15 39 01.9 +0.6**
SLM pmax pmax
comp=Z,1µm,0.8s,mb6.9
SLM Saint Louis 88.70 38 *eP* **P 15 39 01.9 +0.5**
comp=Z,1µm,0.8s,mb6.9
628A Black Gap, Mar 88.75 52 ⇑P **P 15 39 01.1 -0.6**
baz=88
SSY Sortino 88.98 320 P **P 15 39 02.9 +0.2**
DGI Dorgali Grotta 89.00 325 P **P 15 39 02.7 0.0**
TUZ Tuapeka 89.01 161 PN **P 15 39 02.6 +0.3**
TUZ pP pP 15 39 34.3 +2.6
HAVL Avola 89.10 320 P **P 15 39 04.6 +1.3**
FVM French Village 89.12 38 *eP* **P 15 39 02.5 -0.9**
FVM pmax pmax
comp=Z,1µm,1.1s,mb6.8
FVM French Village 89.12 38 *eP* **P 15 39 02.5 -0.9**
comp=Z,1µm,1.1s,mb6.8
HMDC Modica 89.28 320 P **P 15 39 05.5 +1.4**
MTLF Montolieu 89.43 332 *eP* **P 15 39 03.4 -1.3**
comp=Z,292nm,1.0s,mb6.0
MTLF Montolieu 89.43 332 *eP* **P 15 39 03.4 -1.3**
MTLF pmax pmax
comp=Z,146nm,1.0s,mb6.0
MTLF Montolieu 89.43 332 *eP* **P 15 39 03.4 -1.3**
comp=Z,146nm,1.0s,mb6.0
OLIL Olney 89.62 37 *eP* **P 15 39 05.9 +0.3**
comp=Z,2µm,1.1s,mb7.1
LRDF Laroque-de-Fa 89.66 331 *eP* **P 15 39 06.5 +0.7**
VSL Villasalto 89.77 325 P **P 15 39 06.4 0.0**
comp=Z,175nm,1.0s,mb6.1
JCT Junction City 89.86 49 *eP* **P 15 39 06.2 -0.8**
JCT pmax pmax
comp=Z,883nm,0.8s,mb6.9
JCT Junction City 89.86 49 *eP* **P 15 39 06.2 -0.8**
comp=Z,883nm,0.8s,mb6.9
TBI Tubuai 89.88 121 *eP* **P 15 39 08.5 +1.6**
comp=Z,940nm,1.5s,mb6.7
TBI *e*pP pP 15 39 36.6 +0.3
comp=Z,527nm,1.2s
LONY Lake Ozonia 89.91 25 *eP* **P 15 39 06.6 -0.3**
comp=Z,845nm,1.0s,mb6.8
SIUC Southern Illin 89.92 38 *eP* **P 15 39 06.6 -0.5**
comp=Z,2µm,1.0s,mb7.2
BLO Bloomington 89.97 35 *eP* **P 15 39 06.4 -0.9**
BLO *e**PP pP 15 39 36.9 +0.2
BLO *e**SP sP 15 39 47.8 -0.8
BLO pmax pmax
comp=Z,2µm,1.4s,mb7.0
BLO Bloomington 89.97 35 *eP* **P 15 39 06.3 -1.0**
comp=Z,2µm,1.4s,mb7.0
BLO *e*pP pP 15 39 36.9 +0.3
BLO *e*sP sP 15 39 47.8 -0.8
FILF Fillols 89.98 331 *eP* **P 15 39 07.5 +0.2**
CARF Carcanieres 90.01 331 *eP* **P 15 39 07.7 +0.3**
MLS Moulis 90.17 332 *eP* **P 15 39 08.7 +0.6**
ERPA Erie 90.20 30 *eP* **P 15 39 08.8 +0.5**
comp=Z,2µm,1.0s,mb7.1
MIAR Mount Ida 90.24 43 *eP* **P 15 39 07.8 -0.9**
MIAR pmax pmax
comp=Z,27nm,0.6s,mb5.5
MIAR Mount Ida 90.24 43 *eP* **P 15 39 07.8 -0.9**
comp=Z,27nm,0.6s,mb5.5
WDD Wield Dalam 90.26 320 *eP* **P 15 39 10.2 +1.5**
comp=Z,301nm,1.1s,mb6.3
VALF Valcebollere 90.32 331 *eP* **P 15 39 11.2 +2.4**
MELF Melles 90.37 332 *eP* **P 15 39 09.4 +0.3**
EPF Esparros 90.38 333 *eP* **P 15 39 07.3 -1.8**
comp=Z,182nm,1.0s,mb5.8
EPF Esparros 90.38 333 *eP* **P 15 39 07.3 -1.8**
EPF pmax pmax
comp=Z,91nm,1.0s,mb5.9
EPF Esparros 90.38 333 *eP* **P 15 39 07.3 -1.8**
comp=Z,91nm,1.0s,mb5.9
PARMO Parma 90.50 39 *eP* **P 15 39 10.8 +1.0**
RESF Ens 90.57 333 *eP* **P 15 39 11.6 +1.6**
NCB Newcomb 90.61 25 *eP* **P 15 39 08.5 -1.6**
comp=Z,649nm,1.0s,mb6.7
ACSO Alum Creek Sta 90.61 32 *eP* **P 15 39 09.7 -0.6**
comp=Z,1µm,1.0s,mb7.0
VIEF Viey 90.62 333 *eP* **P 15 39 11.6 +1.4**
ORDF Ordiarp 90.66 334 *eP* **P 15 39 12.2 +1.8**
UALR University of 90.70 42 *eP* **P 15 39 10.1 -0.7**
comp=Z,2µm,1.8s,mb6.9
OSSF Osses 90.74 334 *eP* **P 15 39 10.7 -0.1**
ETSF Etsaut 90.81 333 *eP* **P 15 39 10.4 -0.7**
comp=Z,282nm,0.9s,mb6.1
ETSF Etsaut 90.81 333 *eP* **P 15 39 10.4 -0.7**
ETSF pmax pmax
comp=Z,141nm,0.9s,mb6.1
ETSF Etsaut 90.81 333 *eP* **P 15 39 10.4 -0.7**
comp=Z,141nm,0.9s,mb6.1
LARF Larrau 90.83 333 *eP* **P 15 39 12.1 +0.9**
WCI Wyandotte Cave 90.85 36 *eP* **P 15 39 10.5 -0.9**
WCI pmax pmax
comp=Z,891nm,1.1s,mb6.8
WCI Wyandotte Cave 90.85 36 *eP* **P 15 39 10.5 -0.9**
comp=Z,891nm,1.1s,mb6.8
SJPF Ste Jean 90.85 334 *eP* **P 15 39 10.3 -1.0**
comp=Z,246nm,1.2s,mb5.9
SJPF Ste Jean 90.85 334 *eP* **P 15 39 10.3 -1.0**
SJPF pmax pmax
comp=Z,123nm,1.2s,mb5.9
SJPF Ste Jean 90.85 334 *eP* **P 15 39 10.3 -1.0**
comp=Z,123nm,1.2s,mb5.9
PKME Peaks-Kenny Pk 90.92 21 *eP* **P 15 39 11.3 -0.3**
comp=Z,845nm,1.0s,mb6.8
PKME *e*pP pP 15 39 39.4 -1.5
PKME *e*sP sP 15 39 50.3 -2.6
GNAR Gosnell 90.93 39 *eP* **P 15 39 11.9 +0.1**
comp=Z,14µm,1.4s,mb7.9
HBAR Harrisburg 90.94 40 *eP* **P 15 39 12.0 +0.2**
HBAR *e*pP pP 15 39 40.8 -0.5
HBAR *e*sP sP 15 39 51.9 -1.4
GLAT Glass 91.04 39 *eP* **P 15 39 13.0 +0.7**
LBNH Lisbon 91.09 23 *eP* **P 15 39 11.7 -0.7**
LBNH pmax pmax
comp=Z,1µm,1.6s,mb6.8
LBNH Lisbon 91.09 23 *eP* **P 15 39 11.7 -0.7**
comp=Z,1µm,1.6s,mb6.8
UTMT University of 91.19 38 *eP* **P 15 39 13.5 +0.5**
comp=Z,656nm,0.9s,mb6.8
HALT Halls 91.30 39 *eP* **P 15 39 14.2 +0.6**
BINY Binghamton 91.58 27 *eP* **P 15 39 14.1 -0.6**
comp=Z,815nm,1.0s,mb6.9
NATX Nacogdoches 91.81 45 *eP* **P 15 39 16.3 +0.3**
comp=Z,3µm,2.0s,mb7.2
WVT Waverly 91.85 38 *eP* **P 15 39 15.4 -0.7**
WVT pmax pmax
comp=Z,239nm,0.9s,mb6.4
WVT Waverly 91.85 38 *eP* **P 15 39 15.4 -0.7**
comp=Z,239nm,0.9s,mb6.4
DESE Dese 91.91 286 *eP* **P 15 39 16.3 -0.4**
DESE *e*S SKSac 15 49 27.9 -12
MCWV Mont Chateau 92.37 31 *eP* **P 15 39 19.0 +0.6**
comp=Z,1µm,1.6s,mb7.0
OXF Oxford 92.39 40 *eP* **P 15 39 17.8 -0.8**
OXF pmax pmax
comp=Z,2µm,1.1s,mb7.2
OXF Oxford 92.39 40 *eP* **P 15 39 17.8 -0.8**
comp=Z,2µm,1.1s,mb7.2
HKT Hockley 92.54 47 *eP* **P 15 39 18.8 -0.6**
HKT pmax pmax
comp=Z,2µm,2.1s,mb7.0
HKT Hockley 92.54 47 *eP* **P 15 39 18.8 -0.6**
comp=Z,2µm,2.1s,mb7.0
CMAH Djebel Manchou 93.01 325 P **P 15 39 20.8 -0.6**
CAEH 'Ain El Ouahch 93.13 325 P **P 15 39 22.2 +0.2**
ABSA Djebel Ababsia 93.28 324 P **P 15 39 22.4 -0.2**
SWET Sewanee 93.48 37 *eP* **P 15 39 23.5 -0.2**
CKFL Kef-Lekhel 93.51 325 P **P 15 39 23.0 -0.7**
VBMS Vicksburg 93.65 42 *eP* **P 15 39 25.0 +0.5**
comp=Z,1µm,1.6s,mb6.9
CASM Ain Smara 93.73 325 P **P 15 39 24.0 -0.7**
DFRA Djebel Bou Aff 93.76 326 P **P 15 39 26.8 +1.9**
PBRG Braganca 93.81 337 *eP* **P 15 39 24.5 -0.5**
comp=Z,629nm,2.0s,mb6.6
PBRG *e*pP pP 15 39 54.9 +0.5
CTEI Djebel Teioual 93.93 325 P **P 15 39 26.3 +0.7**
CPCT Cooper Cave 93.94 36 *eP* **P 15 39 23.8 -1.9**
ELN Prospectdale 94.08 33 *eP* **P 15 39 25.9 -0.4**
TKL Tuckaleechee C 94.10 35 *eP* **P 15 39 25.6 -0.9**
BLA Blacksburg 94.23 32 *eP* **P 15 39 26.1 -0.9**
comp=Z,3µm,1.1s,mb7.5
AKF Akfadou 94.25 327 P **P 15 39 29.2 +2.1**
SET Setif 94.25 326 P **P 15 39 29.0 +1.9**
PCAB Cabril 94.28 338 *eP* **P 15 39 27.7 +0.6**
comp=Z,580nm,1.8s,mb6.6
PCAB *e*pP pP 15 39 57.1 +0.5
CKHR Kef el Ahmar 94.36 326 P **P 15 39 27.3 -0.3**
MVO Moncorvo 94.48 337 *eP* **P 15 39 28.1 0.0**
comp=Z,576nm,2.3s,mb6.5
MVO *e*pP pP 15 39 56.5 -1.0
MVO Moncorvo 94.48 337 *e*PP PP 15 43 19.6 +3.6
MVO *e*SKSac SKSac 15 49 52.2 -0.6
MVO *e*P 15 50 27.7
MVO *e*LR LR 16 11 46.2
comp=Z,12µm,22.0s
PVRL Vila Real 94.59 337 *eP* **P 15 39 28.7 +0.1**
comp=Z,599nm,2.0s,mb6.7
PVRL *e*pP pP 15 39 58.7 +0.7
ABA Alger-Bouzarea 94.74 328 P **P 15 39 33.0 +3.6**
LRAL Lakeview Retre 94.76 39 P **P 15 39 28.0 -1.5**
comp=Z,43nm,0.8s,mb5.9
ESDC Sonseca Array 94.84 334 P **P 15 39 29.1 -0.7**
comp=Z,36nm,0.7s,mb5.9,baz=21,slow=3.9,SNR=62
ESDC PKKPbc PKKPbc 15 56 25.7 +1.2
comp=Z,3.7nm,0.8s,baz=224,slow=1.8,SNR=5.3
ESDC LR LR 16 27 37.5
comp=Z,14µm,18.6s,baz=30,slow=39
ESDC Sonseca Array 94.84 334 P **P 15 39 29.1 -0.7**
ESDC PKKPbc PKKPbc 15 56 25.7 +1.2
ESDC LR LR 16 27 37.5
ESLA Sonseca Array 94.84 334 *eP* **P 15 39 30.7 +0.9**
comp=Z,140nm,1.6s,mb6.1
ATAF Djebel Tarf 95.01 326 P **P 15 39 23.0 -7.6**
AKET Djebel Ketaf 95.03 327 P **P 15 39 24.6 -6.1**
PAB San Pablo 95.09 334 *eP* **P 15 39 30.5 -0.4**
PAB pmax pmax
comp=Z,89nm,1.1s,mb6.1
PAB San Pablo 95.09 334 *eP* **P 15 39 30.5 -0.4**
comp=Z,89nm,1.1s,mb6.1
ADJB Djebel Djouab 95.12 327 P **P 15 39 32.8 +1.7**
PVIS Viseu 95.15 337 *eP* **P 15 39 32.0 +0.8**
comp=Z,453nm,2.1s,mb6.5
PVIS *e*pP pP 15 40 01.2 +0.6
PVIS Viseu 95.15 337 *e*PP PP 15 43 24.7 +3.5
EMHD Djebel Mahouad 95.29 327 P **P 15 39 33.0 +1.1**
MTE Manteigas 95.34 337 *eP* **P 15 39 32.1 +0.1**
comp=Z,474nm,1.9s,mb6.6
MTE *e*pP pP 15 40 01.8 +0.4
MTE Manteigas 95.34 337 *e*PP PP 15 43 26.3 +3.6
MTE *e*SKSac SKSac 15 49 59.0 +1.6
MTE *e*P 15 50 37.4
MTE *e*LR LR 16 12 10.0
comp=Z,12µm,16.7s
MTE Manteigas 95.34 337 *eP* **P 15 39 31.7 -0.3**
comp=Z,964nm,1.8s,mb6.9
EBNR Beni Rached 95.79 329 P **P 15 39 35.5 +1.3**
PCBR Castelo Branco 95.83 336 *eP* **P 15 39 34.6 +0.3**
comp=Z,261nm,2.2s,mb6.3
PCBR *e*pP pP 15 40 04.2 +0.5
PCBR Castelo Branco 95.83 336 *e*PP PP 15 43 29.0 +2.5
ECHA Ech Chlef 95.98 329 P **P 15 39 36.0 +1.0**
GOGA Godfrey 96.12 36 *eP* **P 15 39 34.6 -1.1**
GOGA pmax pmax
comp=Z,388nm,1.3s,mb6.7
GOGA Godfrey 96.12 36 *eP* **P 15 39 34.6 -1.1**
comp=Z,388nm,1.3s,mb6.7
PMRV Marv??o 96.18 336 *eP* **P 15 39 35.7 -0.2**
comp=Z,349nm,1.4s,mb6.6
PMRV *e*pP pP 15 40 04.7 -0.6
PMRV Marv??o 96.18 336 *e*PP PP 15 43 34.5 +5.3
PMRV *e*SKSac SKSac 15 50 03.6 +1.7
PMRV *e*P 15 50 41.7
PMRV *e*LR LR 16 12 17.6
comp=Z,12µm,19.6s
EANR 'Ain N'Sour 96.26 329 P **P 15 39 37.3 +1.0**
PTOM Tomar 96.32 337 *eP* **P 15 39 36.8 +0.3**
comp=Z,236nm,1.3s,mb6.5
PTOM *e*pP pP 15 40 07.0 +1.1
PTOM Tomar 96.32 337 *e*PP PP 15 43 29.3 -0.9
JSC Jenkinsville 96.37 34 *eP* **P 15 39 36.9 +0.1**
BRAL Brewton 96.37 40 *eP* **P 15 39 37.8 +0.8**
comp=Z,94nm,0.4s,mb6.6
PESTR Estremoz 96.75 336 *eP* **P 15 39 38.4 -0.1**
comp=Z,252nm,1.7s,mb6.4
PESTR *e*pP pP 15 40 07.6 -0.3
PESTR Estremoz 96.75 336 *e*PP PP 15 43 34.7 +1.1
PESTR *e*SKSac SKSac 15 50 06.3 +1.4
PESTR *e*P 15 50 46.6
PESTR *e*LR LR 16 12 51.9
comp=Z,11µm,17.2s
PMAFR Mafra 97.19 337 *eP* **P 15 39 41.5 +1.1**
comp=Z,360nm,1.6s,mb6.5
PMAFR *e*pP pP 15 40 10.1 +0.2
PMAFR Mafra 97.19 337 *e*PP PP 15 43 40.1 +3.2
PMAFR *e*SKSac SKSac 15 50 08.0 +0.9
PMAFR *e*P 15 50 52.6
PMAFR *e*LR LR 16 13 00.0
comp=Z,9µm,16.7s
EVO Evora 97.19 336 *eP* **P 15 39 39.0 -1.5**
comp=Z,187nm,1.6s,mb6.0
EVO *e*MLR MLR
comp=Z,14µm,20.8s
EVO Evora 97.19 336 *eP* **P 15 39 40.6 +0.1**
comp=Z,254nm,2.5s,mb6.2
EVO *e*pP pP 15 40 10.1 +0.2
EVO Evora 97.19 336 *e*PP PP 15 43 39.8 +2.8
PBAR Barrancos 97.22 336 *eP* **P 15 39 40.4 -0.2**
comp=Z,290nm,1.6s,mb6.5
PBAR *e*pP pP 15 40 09.2 -0.8
PBAR Barrancos 97.22 336 *e*PP PP 15 43 40.3 +3.1
PBAR *e*SKSac SKSac 15 50 08.8 +1.5
PBAR *e*P 15 50 53.6
PBAR *e*LR LR 16 13 03.3
comp=Z,16µm,19.5s
EVOP Sao Brissos 97.23 336 *eP* **P 15 39 39.2 -1.4**
EVOP *e*PP PP 15 43 37.4 +0.1

EVOP			*e*S	SKSac	15 50 07.7	+0.4
EVOP			*e*S	SKSac	15 50 07.8	+0.4
EVOP			*e*SS	SS	15 57 35.1	+2.4
EVOP			AMS	AMS	16 20 55.9	
	comp=E,12μm,22.2s					
EVOP	**Sao Brissos**	**97.23 336**	*e*P	**P**	**15 39 39.1**	**-1.5**
EVOP			*e*		15 43 37.4	
EVOP			*e*S	SKSac	15 50 07.7	+0.3
EVOP			*e*SS	SS	15 57 35.0	+2.3
LIS	**Lisbon**	**97.37 337**	*e*P	**P**	**15 39 40.7**	**-0.5**
LIS			*e*PP	PP	15 43 38.5	+0.2
LIS			*e*S	SKSac	15 50 05.8	-2.2
LIS			AMS	AMS	16 21 23.6	
	comp=E,18μm,25.8s					
LIS	**Lisbon**	**97.37 337**	*e*P	**P**	**15 39 40.7**	**-0.5**
LIS			*e*		15 43 38.5	
LIS			*e*S	SKSac	15 50 05.8	-2.3
PBEJ	**Beja**	**97.61 336**	*e*P	**P**	**15 39 42.6**	**+0.2**
PBEJ			*e*pP	pP	15 40 12.4	+0.6
PBEJ	**Beja**	**97.61 336**	*e*PP	PP	15 43 42.6	+2.4
MESJ	**Messejana**	**97.89 336**	*e*P	**P**	**15 39 42.3**	**-1.3**
MESJ			*e*PP	PP	15 43 43.0	+0.7
MESJ			*e*S	SKSac	15 50 09.1	-1.7
MESJ			*e*S	SKSac	15 50 09.5	-1.2
MESJ			*e*SS	SS	15 57 44.3	+2.3
MESJ			*e*SS	SS	15 57 44.5	+2.5
MESJ			AMS	AMS	16 21 12.1	
	comp=E,11μm,24.0s					
MESJ	**Messejana**	**97.89 336**	*e*P	**P**	**15 39 42.3**	**-1.3**
MESJ			*e*		15 43 43.0	
MESJ			*e*S	SKSac	15 50 09.0	-1.8
MESJ			*e*SS	SS	15 57 44.4	+2.4
PCVE	**Castro Verde**	**98.03 336**	*e*P	**P**	**15 39 45.3**	**+1.1**
	comp=E,215nm,1.4s,mb6.5					
PCVE			*e*pP	pP	15 40 13.9	+0.2
PCVE	**Castro Verde**	**98.03 336**	*e*PP	PP	15 43 45.9	+2.5
PCVE			*e*SKSac	SKSac	15 50 13.3	+1.8
PCVE			*e*P		15 50 59.2	
PCVE			*e*LR	LR	16 13 30.5	
	comp=E,13μm,20.0s					
PVAQ	**Vaqueiros**	**98.14 336**	*e*P	**P**	**15 39 45.7**	**+1.0**
	comp=E,203nm,1.7s,mb6.4					
PVAQ			*e*pP	pP	15 40 14.4	+0.2
PVAQ	**Vaqueiros**	**98.14 336**	*e*PP	PP	15 43 45.7	+1.5
PVAQ			*e*SKSac	SKSac	15 50 13.3	+1.3
PVAQ			*e*P		15 50 59.7	
PVAQ			*e*LR	LR	16 13 25.9	
	comp=E,17μm,19.8s					
PTEO	**Sao Teotonio**	**98.32 336**	*e*P	**P**	**15 39 46.1**	**+0.6**
	comp=E,445nm,1.5s,mb6.8					
PTEO			*e*pP	pP	15 40 16.5	+1.5
PBDV	**Barranco-do-Ve**	**98.35 336**	*e*P	**P**	**15 39 47.1**	**+1.4**
PBDV			*e*pP	pP	15 40 14.6	-0.6
PBDV			*e*SKSac	SKSac	15 50 14.7	+1.6
PBDV			*e*P		15 51 04.0	
PBDV			*e*LR	LR	16 13 30.3	
	comp=E,14μm,19.8s					
MORF	**Marmelete**	**98.52 336**	*e*P	**P**	**15 39 46.0**	**-0.4**
	comp=E,241nm,1.8s,mb6.4					
MORF			*e*pP	pP	15 40 16.2	+0.3
MORF	**Marmelete**	**98.52 336**	*e*PP	PP	15 43 51.5	+4.4
MORF			*e*P		15 51 02.3	
MORF			*e*LR	LR	16 14 58.0	
	comp=E,10μm,18.5s					
MORF	**Marmelete**	**98.52 336**	*e*P	**P**	**15 39 45.7**	**-0.7**
MORF			*e*S	SKSac	15 50 13.3	-0.6
PFVI	**Vila Bisbo**	**98.73 336**	*e*P	**P**	**15 39 48.3**	**+0.9**
PFVI			*e*pP	pP	15 40 16.8	-0.1
PFVI	**Vila Bisbo**	**98.73 336**	*e*PP	PP	15 43 51.5	+2.7
PFVI			*e*SKSac	SKSac	15 50 15.7	+0.7
PFVI			*e*P		15 51 06.4	
PFVI			*e*LR	LR	16 13 54.1	
	comp=E,11μm,20.8s					
RKT	**Rikitea**	**99.72 112**	*e*PP	PP	15 43 57.4	-0.5
	comp=E,6μm,26.5s					
RKT			*e*SKSac	SKSac	15 50 22.0	+2.0
	comp=E,6μm,27.2s					
RKT	**Rikitea**	**99.72 112**	*e*PS	PS	15 52 57.4	-0.9
	comp=E,12μm,33.0s					
RKT			*e*SS	SS	15 58 05.4	-5.1
	comp=E,8μm,24.2s					
RKT			*e*LQ		16 08 15.4	
	comp=E,12μm,28.8s					
RKT			*e*LR	LR	16 11 58.5	
	comp=E,58μm,34.8s,baz=304					
KMBO	**Kilima Mbogo**	**101.66 278**	P	Pdif	15 40 00.7	+0.3
	comp=E,39nm,0.9s,baz=182,slow=24,SNR=26					
KMBO			PKKP	PKKPbc	15 56 09.9	+4.6
	comp=E,17nm,0.8s,baz=359,slow=24,SNR=21					
KMBO	**Kilima Mbogo**	**101.66 278**	Pdiff	Pdif	15 40 01.5	+1.1
	SNR=8.1					
DRV	**Dumont d'Urvil**	**106.14 181**	Pdif	Pdif	15 40 24.0	+3.7
DRV	**Dumont d'Urvil**	**106.14 181**	PP	PP	15 44 50.0	+5.0
DRV			SKKS	SKSac	15 50 55.0	+7.1
DRV			SP	SP	15 53 50.0	-0.1
DRV			SS	SS	15 59 39.0	+1.6
MIR	**Mirnyy**	**112.33 199**	⇓*i*PKIKP	PKiKP	15 44 43.6	+1.6
MIR			*i*		15 45 14.0	
MIR			pmax	pmax		
	comp=Z,62nm,1.6s					
MIR			pmax	pmax		
	comp=Z,558nm,10.0s					
JTS	**JuntasAbangare**	**114.16 51**	PKKPab	PKKPab	15 55 37.5	+1.0
	comp=Z,6.7nm,0.6s,baz=356,slow=7.1,SNR=5.0					
JTS			PKKP	PKKPbc	15 55 49.0	+23
	comp=Z,20nm,1.0s,baz=323,slow=13,SNR=4.4					
TOA0	**Torodi Ar. Sit**	**115.42 316**	PKPdif	PKPdif	15 44 49.8	+0.2
TORD	**Torodi Ar. Bea**	**115.42 316**	Pdiff	Pdif	15 41 07.7	+6.1
	comp=Z,1.8nm,1.0s,baz=32,slow=5.2,SNR=4.6					
TORD			PKP	PKPdf	15 44 49.0	-0.6
	comp=Z,20nm,1.1s,baz=15,slow=4.0,SNR=3.8					
CBYP	**Canovanas**	**116.84 29**	*e*PKPdf	PKPdf	15 44 53.3	+1.0
SJG	**San Juan**	**116.88 30**	*e*PKIKP	PKPdf	15 44 51.5	-0.8
ICM	**Isla Caja Muer**	**116.93 30**	*e*PKPdf	PKPdf	15 44 53.8	+1.3
MTP	**Monte Pirata**	**117.12 29**	*e*PKPdf	PKPdf	15 44 52.9	+0.1
LSZ	**Lusaka**	**117.46 273**	*e*PKIKP	PKPdf	15 44 54.1	+0.7
BCIP	**Isla Barro Col**	**118.05 48**	*e*PKPdf	PKPdf	15 44 55.7	+1.0
SBA	**Scott Base**	**118.39 174**	*e*PKIKP	PKPdf	15 44 53.9	+0.5
MAW	**Mawson**	**122.05 206**	*e*P	PKPdf	15 45 00.9	+0.3
	comp=Z,102nm,0.8s					
MAW			*e*pP		15 45 31.4	
MAW	**Mawson**	**122.05 206**	PKP	PKPdf	15 44 59.2	-1.5
	comp=Z,141nm,0.9s,baz=356,slow=1.6,SNR=64					
MAW			PKKPbc	PKKPbc	15 55 00.6	+1.4
	comp=Z,17nm,0.8s,baz=234,slow=4.7,SNR=19					
MAW			SKKP		15 59 03.4	
	comp=Z,11nm,1.1s,baz=255,slow=9.7,SNR=3.5					
MAW	**Mawson**	**122.05 206**	*e*PKPdf	PKPdf	15 45 00.1	-0.6
SDV	**Santo Domingo**	**123.15 39**	*e*PKPdf	PKPdf	15 45 05.0	+0.5
DBIC	**Dimbokro**	**124.30 318**	PKP	PKPdf	15 45 06.1	-0.6
	comp=Z,46nm,0.8s,baz=17,slow=2.2,SNR=27					
DBIC			PP	PP	15 46 50.6	-1.9
	comp=Z,68nm,1.0s,baz=354,slow=5.4,SNR=3.6					
DBIC			PKKPab	PKKPab	15 54 52.4	-0.3
	comp=Z,19nm,0.8s,baz=181,slow=4.5,SNR=8.8					
DBIC	**Dimbokro**	**124.30 318**	PKIKP	PKPdf	15 45 06.1	-0.6
DBIC					15 46 50.6	
DBIC			pmax	pmax		
	comp=Z,46nm,0.8s					
DBIC			pmax	pmax		
	comp=Z,68nm,1.0s					
DBIC	**Dimbokro**	**124.30 318**	*e*PKPdf	PKPdf	15 45 06.6	-0.1
TIC	**Toumodi**	**124.41 318**	*e*PKIKP	PKPdf	15 45 07.2	+0.3
	comp=Z,454nm,1.4s					
KIC	**Kosan Boka**	**124.51 318**	*e*PKIKP	PKPdf	15 45 07.5	+0.4
	comp=Z,266nm,1.1s					
LIC	**Lamto**	**124.77 318**	*e*PKIKP	PKPdf	15 45 07.9	+0.3
	comp=Z,493nm,1.4s					
LIC	**Lamto**	**124.77 318**	⇑*i*PKIKP	PKPdf	15 45 08.1	+0.5
	comp=Z,280nm,1.2s,baz=31					
LIC			*e*MLR	MLR		
	comp=Z,8μm,23.0s					
LIC	**Lamto**	**124.77 318**	⇑*i*PKPdf	PKPdf	15 45 08.1	+0.5
LIC			LR	LR		
	comp=Z,4μm,23.0s					
LBTB	**Lobatse**	**124.99 265**	PKP	PKPdf	15 45 08.7	+1.1
	comp=Z,188nm,0.8s,baz=102,slow=1.6,SNR=80					
LBTB			PP	PP	15 47 00.9	+2.9
	comp=Z,68nm,1.0s,baz=104,slow=5.7,SNR=3.6					
LBTB			PKKPab		15 54 49.3	
	comp=Z,13nm,0.7s,baz=250,slow=3.9,SNR=17					
LBTB	**Lobatse**	**124.99 265**	PKIKP	PKPdf	15 45 08.7	+1.1
LBTB					15 47 01.0	
LBTB			pmax	pmax		
	comp=Z,188nm,0.8s					
LBTB			pmax	pmax		
	comp=Z,68nm,1.0s					
LBTB	**Lobatse**	**124.99 265**	*e*PKPdf	PKPdf	15 45 08.6	+0.9
OTAV	**Otavalo**	**126.02 53**	*e*PKPdf	PKPdf	15 45 10.8	+0.8
BOSA	**Boshof**	**127.10 261**	PKP	PKPdf	15 45 12.1	+0.6
	comp=Z,76nm,0.8s,baz=91,slow=1.4,SNR=41					
BOSA			PKKPab		15 54 41.9	
	comp=Z,4.4nm,0.7s,baz=246,slow=8.2,SNR=8.6					
BOSA	**Boshof**	**127.10 261**	*e*PKPdf	PKPdf	15 45 12.1	+0.5
TSUM	**Tsumeb**	**127.93 276**	PKP	PKPdf	15 45 15.2	+1.8
	comp=Z,53nm,0.9s,baz=72,slow=2.6,SNR=43					
TSUM	**Tsumeb**	**127.93 276**	PKPdf	PKPdf	15 45 14.3	+0.9
QSPA	**South Pole Qui**	**129.53 180**	PKP	PKPdf	15 45 15.9	+1.3
	comp=Z,36nm,0.5s,baz=330,slow=1.0,SNR=29					
SYO	**Syowa Base**	**130.69 208**	⇓*i*PKPdf	PKPdf	15 45 16.6	-0.5
SUR	**Sutherland**	**132.26 259**	PKhKP	PKPpre	15 45 15.1	
	comp=Z,12nm,0.8s,baz=62,slow=2.2,SNR=8.4					
SUR			PKP	PKPdf	15 45 22.4	+1.1
	comp=Z,28nm,0.8s,baz=142,slow=0.6,SNR=5.1					
SUR			SKPab		15 48 41.5	
	comp=Z,141nm,1.1s,baz=104,slow=2.7,SNR=7.0					
SUR	**Sutherland**	**132.26 259**	PKP	PKPpre	15 45 15.1	
SUR			PKP	PKPdf	15 45 22.4	+1.1
SUR			SKPab		15 48 41.5	
NVL	**N'lazarevskaya**	**139.86 203**	*e*PKHKP	PKPpre	15 45 26.3	
NVL			MLR	MLR		
	comp=Z,3μm,16.0s					
MAIT	**Maitri**	**139.88 203**	*e*PKPdif	PKPpre	15 45 27.2	
SHEL	**Horse Pasture**	**142.89 300**	PKIKP	PKPdf	15 45 38.7	-2.5
LPAZ	**La Paz**	**145.17 56**	PKPbc	PKPbc	15 45 44.3	-0.8
	comp=Z,228nm,0.5s,baz=343,slow=3.4,SNR=80					
LPAZ	**La Paz**	**145.17 56**	PKIKP	PKPdf	15 45 44.3	-0.9
LPAZ			pmax	pmax		
	comp=Z,228nm,0.5s					
VNA1	**Neumayer--Stat**	**145.38 197**	*e*	PKPdf	15 45 46.3	+2.4
VNA1			*e*		15 46 14.0	
MECH	**Mejillones**	**148.28 68**	*e*P	PKPbc	15 45 53.2	-0.6
CEN1	**Los Morros**	**148.64 68**	*e*P	PKPdf	15 45 51.8	+0.9
PMSA	**Palmer Station**	**150.91 158**	PKP	PKPdf	15 45 51.8	-1.3
	comp=Z,24nm,0.7s,baz=322,slow=14,SNR=6.2					
PMSA			PKPbc	PKPbc	15 45 58.9	0.0
	comp=Z,216nm,0.9s,baz=192,slow=1.1,SNR=17					
PMSA	**Palmer Station**	**150.91 158**	PKP	PKPdf	15 45 51.8	-1.3
PMSA			*e*PKPbc	PKPbc	15 45 59.0	0.0
LCO	**Las Campanas**	**151.48 78**	*e*PKPdf	PKPdf	15 45 56.7	+1.6
LCO			*e*PKPbc	PKPbc	15 46 02.4	+1.0
CMCH	**Combarbala**	**152.29 82**	*e*P	PKPdf	15 45 56.7	+0.4
CMCH	**Combarbala**	**152.29 82**	*e*P	PKPdf	15 45 56.7	+0.4
PEL	**Peldehue**	**153.38 86**	*e*P	PKPdf	15 45 55.8	-2.0
CCHI	**Chillan**	**153.51 94**	*e*P	PKPbc	15 46 07.9	+2.3
CCHI	**Chillan**	**153.51 94**	*e*P	PKPbc	15 46 07.9	+2.3
CLCH	**Cerro Calan**	**153.59 86**	⇓*e*P	PKPdf	15 45 58.3	+0.2
FCH	**Farellones**	**153.75 86**	⇓*e*P	PKPdf	15 45 59.9	+1.6
LMEL	**Las Melosas**	**154.02 87**	*e*P	PKPdf	15 45 58.9	+0.2
LMEL	**Las Melosas**	**154.02 87**	*e*P	PKPdf	15 45 58.9	+0.2
CFAA	**Coronel Fontan**	**154.59 81**	PKP	PKPdf	15 46 00.7	+1.1
	comp=Z,5.0nm,0.9s					
CFAA			PKPbc	PKPbc	15 46 08.8	+0.6
PLCA	**Paso Flores**	**155.59 103**	PKP	PKPdf	15 46 01.6	+1.0
	comp=Z,28nm,0.9s,baz=283,slow=2.9,SNR=14					
PLCA	**Paso Flores**	**155.59 103**	PKIKP	PKPdf	15 46 01.6	+0.9
PLCA			pmax	pmax		
	comp=Z,28nm,0.9s					
PLCA	**Paso Flores**	**155.59 103**	*e*PKPdf	PKPdf	15 46 00.6	-0.1
CPUP	**Villa Florida**	**159.34 55**	PKP	PKPdf	15 46 07.2	+1.4
	comp=Z,26nm,0.8s,baz=338,slow=1.0,SNR=28					
CPUP			PKPab	PKPab	15 46 42.1	-1.7
	comp=Z,35nm,1.0s,baz=297,slow=2.8,SNR=6.7					
CPUP			PKKP		15 54 16.6	
	comp=Z,8.0nm,0.8s,baz=82,slow=3.1,SNR=3.2					
CPUP	**Villa Florida**	**159.34 55**	PKIKP	PKPdf	15 46 07.2	+1.4
CPUP					15 46 42.1	
CPUP					15 54 16.6	
CPUP			pmax	pmax		
	comp=Z,26nm,0.8s					
CPUP			pmax	pmax		
	comp=Z,35nm,1.0s					
TRQA	**Tornquist**	**161.66 92**	*e*PKPdf	PKPdf	15 46 05.8	-2.1
CAM4	**Nova Friburgo**	**162.27 12**	⇓*i*P	PKPdf	15 46 10.0	+1.0
CAM4			*i*		15 46 11.2	
CAM4			*i*		15 46 13.7	
CAM4			*i*		15 46 15.1	
CAM4			*i*		15 46 18.8	
CAM4			*i*		15 46 41.4	
CAM4			*i*		15 46 50.0	
CAM4			*i*		15 46 57.6	
CAM4			*i*		15 47 02.8	
CAM4			*i*		15 47 13.1	
CAM4			*i*		15 47 13.3	
CAM4			*i*		15 47 25.6	
LPA	**La Plata**	**163.80 79**	PKIKP	PKPdf	15 46 09.0	-1.2
LPA	**La Plata**	**163.80 79**	*de*PKP	PKPab	15 47 02.0	-1.3
LPA			*e*PP	PP	15 50 50.0	+0.4
LPA			*e*PP		15 53 17.0	

ISCJB ***23*** *15:33:24.8±0.4, 37°.84N±0°.02×21°.41E±0°.03, h10km, Error ellipse: s-maj=3.5km s-min=2.9km az=27.0*
THE ***23*** *15:33:24.7, 37°.85N×21°.43E, h1km, ML3.2/9, Error ellipse: s-maj=0.9km s-min=0.2km az=200.0*
CSEM ***23*** *15:33:24.8±0.1, 37°.84N×21°.41E, h18km, MD3.1, Error ellipse: s-maj=2.9km s-min=2.7km az=54.0*
ATH ***23*** *15:33:25.2, 37°.84N×21°.41E, h15km±2km, MD3.1/15*
NEIC ***23*** *15:33:25.2, 37°.84N×21°.41E, h15km, MD3.1(ATH), After ATH.*

ISC 23 15:33:25.2±0.5, 37°.83N±0°.02×21°.42E±0°.03, h4km±5km, n65, σ0.9/91/103, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.23**	**9**	*e*Pb	**Pg**	**15 33 30.1**	**+0.5**
RLS				*e*Sb	**Sg**	**15 33 34.1**	**+1.5**
RLS	**Riolos of Patr**	**0.23**	**9**	*e*PB	**Pg**	**15 33 30.1**	**+0.5**
RLS				*e*SB	**Sg**	**15 33 34.1**	**+1.5**
RLS	**Riolos of Patr**	**0.23**	**9**	*e*Pb	**Pg**	**15 33 30.1**	**+0.5**
RLS				*e*Sb	**Sg**	**15 33 34.1**	**+1.5**
UPR	**University Cam**	**0.54**	**33**	*e*PN	**Pg**	**15 33 35.6**	**+0.2**
UPR				*e*SN	**Sg**	**15 33 43.7**	**+1.3**
UPR	**University Cam**	**0.54**	**33**	*e*Pn	**Pg**	**15 33 35.6**	**+0.2**
KFL	**Anninata**	**0.57**	**299**	P	**Pg**	**15 33 35.6**	**-0.5**
KFL				S	**Sg**	**15 33 43.9**	**+0.3**
KFL	**Anninata**	**0.57**	**299**	P	**Pg**	**15 33 35.6**	**-0.5**
KFL				S	**Sg**	**15 33 43.9**	**+0.3**
LAKA	**Lakka**	**0.60**	**47**	P	**Pg**	**15 33 36.0**	**-0.7**
LAKA				S	**Sg**	**15 33 44.2**	**-0.2**
LAKA	**Lakka**	**0.60**	**47**	P	**Pg**	**15 33 36.0**	**-0.7**
LAKA				S	**Sg**	**15 33 44.2**	**-0.2**
EFP	**Efpalio**	**0.71**	**33**	*e*PB	**Pg**	**15 33 37.9**	**-0.8**
EFP				*e*SN	**Sg**	**15 33 49.2**	**+1.3**
EFP	**Efpalio**	**0.71**	**33**	P	**Pg**	**15 33 37.9**	**-0.8**
EFP				S	**Sg**	**15 33 47.8**	**-0.1**
EFP	**Efpalio**	**0.71**	**33**	P	**Pg**	**15 33 37.9**	**-0.8**
EFP				S	**Sg**	**15 33 47.8**	**-0.1**
EFP				*e*Sn	**Sg**	**15 33 49.2**	**+1.3**
GUR	**Goura**	**0.74**	**82**	*e*PB	**Pg**	**15 33 38.6**	**-0.7**
GUR				*e*SN	**Sg**	**15 33 49.8**	**+1.0**
GUR	**Goura**	**0.74**	**82**	P	**Pg**	**15 33 38.4**	**-0.9**
GUR				S	**Sg**	**15 33 49.1**	**+0.3**
GUR	**Goura**	**0.74**	**82**	P	**Pg**	**15 33 38.4**	**-0.9**
GUR				S	**Sg**	**15 33 49.1**	**+0.3**
GUR				*e*Sn	**Sg**	**15 33 49.8**	**+1.0**
TRIZ	**Trizonia**	**0.74**	**44**	P	**Pg**	**15 33 38.5**	**-0.9**
TRIZ				S	**Sg**	**15 33 48.9**	**-0.1**
TRIZ	**Trizonia**	**0.74**	**44**	P	**Pg**	**15 33 38.5**	**-0.9**
TRIZ				S	**Sg**	**15 33 48.9**	**-0.1**
VLS	**Valsamata**	**0.74**	**298**	*e*Pb	**Pg**	**15 33 38.6**	**-0.8**
VLS				*e*Sn	**Sg**	**15 33 50.5**	**+1.5**
VLS	**Valsamata**	**0.74**	**298**	*e*PB	**Pg**	**15 33 38.6**	**-0.8**
VLS				*e*SN	**Sg**	**15 33 50.5**	**+1.5**
VLS	**Valsamata**	**0.74**	**298**	P	**Pg**	**15 33 38.7**	**-0.7**
VLS				S	**Sg**	**15 33 49.6**	**+0.6**
VLS	**Valsamata**	**0.74**	**298**	P	**Pg**	**15 33 38.7**	**-0.7**
VLS				S	**Sg**	**15 33 49.6**	**+0.6**
VLS				*e*Sn	**Sg**	**15 33 50.5**	**+1.5**
ITM	**Ithomi**	**0.77**	**148**	*e*Pn	**Pg**	**15 33 40.6**	**+0.8**
ITM				*e*Sn	**Sg**	**15 33 51.1**	**+1.3**
ITM	**Ithomi**	**0.77**	**148**	*e*PN	**Pg**	**15 33 40.6**	**+0.8**
ITM				*e*SN	**Sg**	**15 33 51.1**	**+1.3**
ITM	**Ithomi**	**0.77**	**148**	P	**Pg**	**15 33 39.5**	**-0.3**
ITM	**Ithomi**	**0.77**	**148**	P	**Pg**	**15 33 39.5**	**-0.3**
ITM	**Ithomi**	**0.77**	**148**	P	**Pg**	**15 33 40.6**	**+0.8**
ITM				*e*Sn	**Sg**	**15 33 51.1**	**+1.3**
KALE	**Kalithea**	**0.80**	**45**	P	**Pg**	**15 33 39.4**	**-1.0**
KALE				S	**Sg**	**15 33 51.0**	**+0.3**
KALE	**Kalithea**	**0.80**	**45**	P	**Pg**	**15 33 39.4**	**-1.0**
KALE				S	**Sg**	**15 33 51.0**	**+0.3**
VLX	**Vlachokerasia**	**0.89**	**121**	*e*PN	**Pg**	**15 33 43.4**	**+1.2**
VLX	**Vlachokerasia**	**0.89**	**121**	P	**Pg**	**15 33 41.5**	**-0.7**
VLX	**Vlachokerasia**	**0.89**	**121**	P	**Pg**	**15 33 41.5**	**-0.7**
VLX	**Vlachokerasia**	**0.89**	**121**	*e*Pn	**Pg**	**15 33 43.4**	**+1.2**
PYL	**PYLOS**	**0.97**	**165**	*e*PN	**Pg**	**15 33 43.7**	**0.0**
PYL	**PYLOS**	**0.97**	**165**	P	**Pg**	**15 33 43.1**	**-0.6**
PYL	**PYLOS**	**0.97**	**165**	P	**Pg**	**15 33 43.1**	**-0.6**
PYL	**PYLOS**	**0.97**	**165**	*e*Pn	**Pg**	**15 33 43.7**	**0.0**
DSF	**Desfina**	**1.05**	**56**	P	**Pg**	**15 33 43.9**	**-1.3**
DSF				S	**Sg**	**15 33 59.3**	**+0.5**
DSF	**Desfina**	**1.05**	**56**	P	**Pg**	**15 33 43.9**	**-1.3**
DSF				S	**Sg**	**15 33 59.3**	**+0.5**
EVR	**Evrytania**	**1.12**	**16**	*e*Pn	**Pg**	**15 33 45.8**	**-0.9**
EVR	**Evrytania**	**1.12**	**16**	*e*PN	**Pg**	**15 33 45.8**	**-0.9**
EVR	**Evrytania**	**1.12**	**16**	*e*Pn	**Pg**	**15 33 45.8**	**-0.9**
LKD2	**Lefkada island**	**1.13**	**328**	P	**Pg**	**15 33 45.4**	**-1.4**
LKD2				S	**Sg**	**15 34 02.2**	**+0.8**
LKD2	**Lefkada island**	**1.13**	**328**	P	**Pg**	**15 33 45.4**	**-1.4**
LKD2				S	**Sg**	**15 34 02.2**	**+0.8**
LTK	**Loutraki**	**1.24**	**81**	*e*PN	**Pn**	**15 33 48.2**	**-1.0**
LTK	**Loutraki**	**1.24**	**81**	P	**Pg**	**15 33 47.7**	**-1.2**
LTK				S	**Sg**	**15 34 05.4**	**+0.5**
LTK	**Loutraki**	**1.24**	**81**	P	**Pg**	**15 33 47.7**	**-1.2**
LTK	**Loutraki**	**1.24**	**81**	*e*Pn	**Pn**	**15 33 48.2**	**-1.0**
LTK				S	**Sg**	**15 34 05.4**	**+0.5**
AGG	**Agios Georgios**	**1.39**	**31**	P	**Pn**	**15 33 49.8**	**-1.5**
AGG				S	**Sb**	**15 34 09.8**	**+0.1**
AGG	**Agios Georgios**	**1.39**	**31**	P	**Pn**	**15 33 49.8**	**-1.5**
AGG				S	**Sb**	**15 34 09.8**	**+0.1**
DID	**Didima**	**1.48**	**102**	*e*PN	**Pn**	**15 33 53.0**	**+0.5**
DID	**Didima**	**1.48**	**102**	P	**Pn**	**15 33 51.6**	**-0.9**
DID				S	**Sn**	**15 34 12.6**	**+0.3**
DID	**Didima**	**1.48**	**102**	P	**Pn**	**15 33 51.6**	**-0.9**
DID				S	**Sn**	**15 34 12.6**	**+0.3**
LKR	**Lokris**	**1.49**	**56**	*e*Pn	**Pn**	**15 33 52.9**	**+0.2**
LKR	**Lokris**	**1.49**	**56**	*e*PN	**Pn**	**15 33 52.9**	**+0.2**
LKR	**Lokris**	**1.49**	**56**	P	**Pn**	**15 33 51.3**	**-1.4**
LKR	**Lokris**	**1.49**	**56**	P	**Pn**	**15 33 51.3**	**-1.4**
ATAL	**Atalanti**	**1.52**	**55**	P	**Pn**	**15 33 52.1**	**-1.1**
ATAL	**Atalanti**	**1.52**	**55**	P	**Pn**	**15 33 52.1**	**-1.1**
VLI	**Veliai**	**1.64**	**132**	*e*Pn	**Pn**	**15 33 56.1**	**+1.3**
VLI	**Veliai**	**1.64**	**132**	*e*PN	**Pn**	**15 33 56.1**	**+1.3**
THL	**Klokotos Trika**	**1.79**	**15**	*e*PN	**Pn**	**15 33 58.3**	**+1.2**
VLY	**Voula,Athens**	**1.88**	**89**	*e*Pn	**Pn**	**15 33 59.3**	**+1.3**
VLY	**Voula,Athens**	**1.88**	**89**	*e*PN	**Pn**	**15 33 59.3**	**+1.3**
NEO	**Neokhori**	**2.04**	**43**	*e*Pn	**Pn**	**15 34 01.3**	**+1.0**
NEO	**Neokhori**	**2.04**	**43**	*e*PN	**Pn**	**15 34 01.3**	**+1.0**

NEIC ***23*** *15:41:54.9±8.5, 23°.96N×122°.37E, h14km±29km, Error ellipse: s-maj=70.8km s-min=13.4km az=96.0*
ISCJB ***23*** *15:41:55.1±0.5, 23°.96N±0°.02×122°.34E±0°.02, h4km±3km, Error ellipse: s-maj=3.2km s-min=2.3km az=166.5*
TAP ***23*** *15:41:57.0, 24°.04N×122°.31E, h24km, ML4.0, C*
JMA ***23*** *15:41:56.7±0.3, 24°.07N×122°.29E, h28km, M3.6*

ISC 23 15:41:55.3±0.4, 23°.96N±0°.02×122°.34E±0°.02, h4km±3km, n62, σ0.9/90/101, 4C-5D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien** baz=250	**0.67**	**271**	P	**Pg**	**15 42 09.8**	**+1.7**
TWD	**Chiawan** baz=273	**0.69**	**280**	⇓*i*P	**Pg**	**15 42 09.6**	**+1.1**
TWD				S	**Sg**	**15 42 19.0**	**+1.6**
NACB	**Ninganchiao**	**0.71**	**287**	*e*P	**Pg**	**15 42 09.5**	**+0.6**
ENA	**Nanau** baz=316	**0.71**	**311**	⇑*i*P	**Pg**	**15 42 09.5**	**+0.5**
ENA				*e*S	**Sg**	**15 42 18.4**	**+0.2**
TWC	**Suao** baz=323	**0.78**	**326**	⇑*i*P	**P

NSY				*e*S		**Sn**	**15 42 43.0 -0.3**
	baz=272						
WNT	**Mingjian**	**1.51 267**	*e*P			**Pn**	**15 42 23.9 +0.7**
	baz=264						
WNT				*e*S		**Sn**	**15 42 43.1 -0.3**
	baz=264						
TCU	**Taichung**	**1.53 277**	*e*P			**Pn**	**15 42 24.1 +0.7**
	baz=273						
TCU				*e*S		**Sn**	**15 42 44.3 +0.5**
	baz=273						
JKRS	**Kuro-shima**	**1.55 80**	P			**Pn**	**15 42 23.5 -0.3**
JKRS				*e*S		**Sn**	**15 42 44.5 +0.1**
CHN5	**Tsauling**	**1.56 257**	*e*P			**Pn**	**15 42 24.4 +0.5**
	baz=243						
CHN5				*e*S		**Sn**	**15 42 43.9 -0.6**
	baz=243						
TTN	**Taitung**	**1.62 222**	*e*P			**Pn**	**15 42 23.4 -1.3**
	baz=220						
TWG	**Pinlang**	**1.62 226**	*e*P			**Pn**	**15 42 22.9 -1.8**
TWG	**Pinlang**	**1.62 226**	*e*P			**Pn**	**15 42 23.5 -1.2**
	baz=236						
TWG				*e*S		**Sn**	**15 42 42.9 -3.2**
	baz=236						
WGK	**Gukeng**	**1.65 261**	*e*P			**Pn**	**15 42 25.7 +0.7**
	baz=258						
WGK				*e*S		**Sn**	**15 42 47.0 +0.4**
	baz=258						
TPUB	**Ta-pu**	**1.70 247**	*e*P			**Pn**	**15 42 26.1 +0.4**
JIJ	**Ishigaki jima**	**1.70 76**	P			**Pn**	**15 42 25.2 -0.6**
JIJ				*e*S		**Sn**	**15 42 47.7 -0.3**
CHN4	**Tsaushan**	**1.71 249**	*e*P			**Pn**	**15 42 27.6 +1.7**
	baz=247						
CHN4				*e*S		**Sn**	**15 42 48.9 +0.7**
	baz=247						
WTP	**Ta-pu**	**1.73 246**	*e*P			**Pn**	**15 42 26.9 +0.6**
	baz=244						
WTP				*e*S		**Sn**	**15 42 49.5 +0.7**
	baz=244						
CHY	**Chiayi**	**1.81 256**	*e*P			**Pn**	**15 42 28.8 +1.5**
	baz=253						
CHN1	**Nanshi**	**1.83 245**	*e*P			**Pn**	**15 42 28.6 +1.0**
	baz=243						
CHN1				*e*S		**Sn**	**15 42 52.5 +1.4**
	baz=243						
TWK	**Hsinying**	**1.83 248**	*e*P			**Pn**	**15 42 28.7 +1.1**
	baz=246						
TWK				*e*S		**Sn**	**15 42 52.2 +1.0**
	baz=246						
SGST	**Jiashian**	**1.83 242**	*e*P			**Pn**	**15 42 28.4 +0.8**
	baz=230						
SGST				*e*S		**Sn**	**15 42 52.3 +1.1**
	baz=230						
ECL	**Taimali**	**1.86 223**	*e*P			**Pn**	**15 42 26.2 -1.7**
	baz=232						
WTCT	**Ta-ch'eng**	**1.88 267**	*e*P			**Pn**	**15 42 28.7 +0.4**
	baz=264						
WTCT				*e*S		**Sn**	**15 42 53.1 +0.6**
	baz=264						
LAY	**Lan-yu**	**2.05 201**	*e*P			**Pn**	**15 42 28.5 -2.0**
	baz=200						
EAST	**Anshuo**	**2.08 221**	*e*P			**Pn**	**15 42 29.7 -1.3**
	baz=220						
TWM1	**Shoushan**	**2.09 238**	*e*P			**Pn**	**15 42 33.3 +2.1**
	baz=235						
SCZT	**Fangliau**	**2.23 225**	*e*P			**Pn**	**15 42 34.4 +1.2**
	baz=217						
JTJ	**Tarama**	**2.26 72**	P			**Pn**	**15 42 32.9 -0.6**
TWP	**Hsiaoliuchiu**	**2.43 229**	*e*P			**Pn**	**15 42 38.6 +2.9**
	baz=228						
HEN	**Hengchun**	**2.44 217**	*e*P			**Pn**	**15 42 37.4 +1.4**
	baz=216						
TSEB	**Hengchuen, Pin**	**2.44 213**	*e*P			**Pn**	**15 42 36.1 +0.1**
	baz=215						
TSEB				*e*S		**Sn**	**15 43 04.9 -1.4**
	baz=215						
TWK1	**Hengchun**	**2.46 215**	P			**Pn**	**15 42 35.6 -0.6**
	baz=216						
TWK1				*e*S		**Sn**	**15 43 05.0 -1.6**
	baz=216						
PNG	**Penghu**	**2.58 262**	*e*P			**Pn**	**15 42 37.4 -0.5**
	baz=259						
PNG				*e*S		**Sn**	**15 43 07.6 -2.0**
	baz=259						
JOGS	**Gusukube**	**2.91 74**	P			**Pn**	**15 42 43.0 +0.6**
JOGS				*e*S		**Sn**	**15 43 18.6 +0.7**

*ISCJB **23** 16:03:35.8±0.7, 19°.54S±0°.05×68°.71W±0°.07, h10km, mb4.2/3, Error ellipse: s-maj=9.6km s-min=7.0km az=174.3*
*IDC **23** 16:03:36.5±1.2, 19°.86S×68°.31W, h0km, mb4.3/3, mb1 4.5/3, mb1mx4.1/13, mbtmp4.3/3, ML2.6/2, Error ellipse: s-maj=45.6km s-min=19.9km az=87.0*
*GUC **23** 16:03:37.0±0.9, 19°.70S×68°.84W, h10km, ML4.2*
*NEIC **23** 16:03:41.8±1.2, 19°.92S×68°.31W, h36km±12km, Error ellipse: s-maj=30.0km s-min=11.8km az=88.0*
ISC 23 16:03:37.3±0.7, 19°.54S±0°.05×68°.78W±0°.07, h10km, n15, σ1§25/21, mb4.2/3, 2C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNMC	**Miæe Miæ**	**0.88**	**298**	⇑*i*P		**Pg**	**16 03 53.0 -1.2**
MNMC				*i* S		**Sg**	**16 04 05.8 +0.2**
MNMC				AML		AML	16 04 08.7
	comp=N,9μm,0.4s						
HMBC	**Humberston**	**1.28**	**235**	⇑*e*P		**Pn**	**16 03 56.2 -5.1**
HMBC				*i* S		**Sb**	**16 04 11.7 -6.3**
HMBC				AML		AML	16 04 14.6
	comp=N,7μm,0.6s						
PB01	**Plate Boundary**	**1.64**	**204**	⇓*e*P		**Pn**	**16 04 01.9 -4.3**
PB01				*e*S		**Sn**	**16 04 21.1 -6.2**
PB04	**Plate Boundary**	**2.79**	**194**	⇓*i*P		**Pn**	**16 04 25.0 +3.0**
PB04				*e*S		**Sn**	**16 05 01.1 +5.3**
PB04				AML		AML	16 05 13.2
	comp=N,2μm,0.7s						
MACH	**Maria Elena**	**2.79**	**199**	*e*P		**Pn**	**16 04 21.8 -0.4**
MACH				*e*S		**Sn**	**16 04 55.8 -0.1**
LPAZ	**La Paz**	**3.29**	**11**	Pn		**Pn**	**16 04 35.5 +6.5**
	comp=N,0.5nm,0.3s,baz=178,slow=6.7,SNR=13						
LPAZ				Pg		**Pg**	**16 04 40.9 +0.4**
	comp=N,2.7nm,0.3s,baz=180,slow=9.4,SNR=44						
LPAZ				Lg			16 05 29.9
	baz=356,slow=5.6,SNR=1.3						
LPAZ	**La Paz**	**3.29**	**11**	*e*Pn		**Pn**	**16 04 35.9 +6.9**
LPAZ				Pg		**Pg**	**16 04 40.9 +0.4**
LPAZ				Lg			16 05 29.9
CEN1	**Los Morros**	**4.05**	**199**	*e*P		**Pn**	**16 04 40.4 +1.0**
CFAA	**Coronel Fontan**	**12.02**	**178**	Pn		**Pn**	**16 06 25.4 -3.4**
	comp=N,0.0nm,0.3s,baz=350,slow=14,SNR=2.5						
PDAR	**Pinedale Array**	**72.49**	**330**	P		**P**	**16 15 08.5 +4.4**
	comp=N,0.5nm,0.7s,mb3.6,baz=112,slow=7.3,SNR=3.7						
TOA0	**Torodi Ar. Sit**	**76.59**	**71**	*e*P		**P**	**16 15 28.0 -0.6**
TORD	**Torodi Ar. Bea**	**76.59**	**71**	P		**P**	**16 15 27.6 -0.9**
	comp=N,5.1nm,0.7s,mb4.6,baz=254,slow=5.7,SNR=22						
YKA	**Yellowknife Ar**	**89.39**	**341**	P		**P**	**16 16 36.0 +2.2**
	comp=N,2.3nm,0.7s,mb4.6,baz=132,slow=4.8,SNR=9.3						
YKA	**Yellowknife Ar**	**89.39**	**341**	P		**P**	**16 16 36.0 +2.2**
SONM	**Songino Array**	**151.51**	**7**	PKPbc		PKPbc	16 23 33.1 +1.5
	comp=N,0.6nm,0.7s,baz=357,slow=1.4,SNR=5.3						

*ISCJB **23** 16:09:42.6±2.3, 0°.39N±0°.10×96°.7E±0°.1, h44km±21km, mb3.8/3, Error ellipse: s-maj=23.8km s-min=11.9km az=147.5*
*IDC **23** 16:09:42.9±15.0, 1°.15N×98°.09E, h0km, mb3.8/3, mb1 3.8/3, mb1mx3.5/21, mbtmp3.8/3, Error ellipse: s-maj=810.2km s-min=28.3km az=57.0*
*DJA **23** 16:09:44, 0°.54N×96°.90E, h109km, MLv3.6/3*
ISC 23 16:09:43.2±3.9, 0°.39N±0°.08×96°.67E±0°.09, h30km±31km, n7, σ1§07/11, mb3.8/3, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.28**	**45**	P		**Pn**	**16 10 04.8 -0.3**
GSI				S		**Sn**	**16 10 23.0 +1.8**
TPTI		**2.90**	**10**	P		**Pn**	**16 10 26.5 -0.8**
TPTI				S		**Sn**	**16 10 59.8 -1.3**
MNSI	**Mandailing Nat**	**2.94**	**82**	P		**Pn**	**16 10 27.7 -0.1**
MNSI				S		**Sn**	**16 11 01.6 -0.5**
PDSI	**Padang**	**4.00**	**109**	P		**Pn**	**16 10 43.9 +1.4**
PDSI				S		**Sn**	**16 11 24.3 -4.2**
ASAR	**Alice Springs**	**43.34**	**126**	P		**P**	**16 17 41.6 -1.3**
	0.4nm,0.8s,mb3.2,baz=303,slow=8.4,SNR=3.4						
MKAR	**Makanchi Array**	**47.90**	**347**	P		**P**	**16 18 19.9 +1.3**
	0.5nm,0.6s,mb3.7,baz=162,slow=7.8,SNR=4.1						
ZALV	**Zalesovo Beam**	**54.27**	**351**	P		**P**	**16 19 06.7 +0.4**
	1.5nm,0.3s,mb4.4,baz=172,slow=6.9,SNR=8.7						

*MOS **23** 16:16:42.8±1.2, 51°.59N×15°.88E, h10km, mb4.4/19, Error ellipse: s-maj=5.2km s-min=3.4km az=68.0*
*IPEC **23** 16:16:42.9±0.4, 51°.63N×16°.21E, h0km±2km, ML4.0/4, Error ellipse: s-maj=2.4km s-min=1.7km az=17.0*
*ISCJB **23** 16:16:42.2±0.2, 51°.50N±0°.01×15°.99E±0°.02, h0km, mb4.3/29, Error ellipse: s-maj=1.9km s-min=1.7km az=163.4*
*LDG **23** 16:16:43.3±0.1, 51°.53N×16°.29E, h1km, Ml4.5/38, Error ellipse: s-maj=2.7km s-min=1.7km az=167.0, Suspected Mining induced.*
*CSEM **23** 16:16:43.7±0.1, 51°.57N×16°.03E, h1km, mb4.3/13, ML4.7/17, Error ellipse: s-maj=2.5km s-min=2.0km az=166.0*
*IDC **23** 16:16:44.5±0.5, 51°.53N×16°.02E, h0km, mb4.1/18, mb1 4.2/27, mb1mx4.1/35, mbtmp4.1/27, ML3.8/7, Error ellipse: s-maj=9.1km s-min=6.6km az=81.0*
*BGR **23** 16:16:44.8±0.5, 51°.52N×16°.16E, h1km, ML4.3, Error ellipse: s-maj=6.7km s-min=2.2km az=22.0*
*NEIC **23** 16:16:44.5±0.2, 51°.53N×15°.97E, h5km, mb4.6/7, ML5.1(SZGRF), ML4.6(STR), Error ellipse: s-maj=3.8km s-min=2.6km az=169.0*
*PRU **23** 16:16:45.5, 51°.51N×16°.09E, h0km, M4.6*
*WAR **23** 16:16:45.5, 51°.55N×16°.10E, ML3.6, Mining Induced*
*VIE **23** 16:16:47.6±0.6, 51°.29N×15°.96E, h1km±2km, mb3.6/14, ML3.8/15, Error ellipse: s-maj=3.5km s-min=2.1km az=3.0 76 km WNW of Wroclaw Suspected Mining induced.*
*STR **23** 16:16:52.9±0.7, 51°.26N×15°.16E, h2km, Ml4.6, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 23 16:16:43.6±0.2, 51°.57N±0°.01×16°.05E±0°.02, h0km, n419, σ1§25/562, mb4.3/29, 34C-25D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.74**	**168**	*e*Pg		**Pg**	**16 16 58.7 +0.9**
KSP				*e*Sg		**Sg**	**16 17 08.7 +1.4**
KSP	**Ksiaz**	**0.74**	**168**	*e*Pg		**Pg**	**16 16 58.6 +0.8**
KSP				*e*Sg		**Sg**	**16 17 08.7 +1.4**
KSP	**Ksiaz**	**0.74**	**168**	⇓*i*P		**Pg**	**16 16 58.7 +0.9**
KSP				*e*			16 17 08.4
KSP	**Ksiaz**	**0.74**	**168**	*i* Pg		**Pg**	**16 16 58.7 +0.9**
KSP				*e*Sg		**Sg**	**16 17 08.4 +1.0**
KSP				*e*L			16 17 12.6
KSP	**Ksiaz**	**0.74**	**168**	*e*Pg		**Pg**	**16 16 58.5 +0.7**
	baz=356						
KSP				*e*Sg		**Sg**	**16 17 07.7 +0.3**
	baz=356						
KSP				*e*S		**Sg**	**16 17 08.4 +1.0**
UPC	**Upice**	**1.06**	**181**	*e*P		**Pg**	**16 17 04.7 +0.8**
UPC	**Upice**	**1.06**	**181**	*e*PG		**Pg**	**16 17 04.7 +0.8**
UPC	**Upice**	**1.06**	**181**	Pg		**Pg**	**16 17 04.7 +0.8**
DPC	**Dobruska-Polom**	**1.23**	**172**	*e*Pg		**Pg**	**16 17 07.4 +0.3**
DPC				*e*Sg		**Sg**	**16 17 23.7 +0.7**
DPC	**Dobruska-Polom**	**1.23**	**172**	*e*P		**Pn**	**16 17 07.4 -0.6**
DPC				*e*		**Sn**	**16 17 22.4 -2.9**
DPC				smax			
	comp=N,785nm,0.4s						
DPC	**Dobruska-Polom**	**1.23**	**172**	*e*PG		**Pn**	**16 17 07.4 -0.6**
DPC				*e*SG		**Sn**	**16 17 22.4 -2.9**
	comp=Z,785nm,0.4s						
DPC	**Dobruska-Polom**	**1.23**	**172**	Pg		**Pn**	**16 17 07.4 -0.6**
DPC				*e*S		**Sn**	**16 17 22.4 -2.9**
DPC				Sg		**Sg**	**16 17 23.7 +0.6**
PVCC	**Panska Ves**	**1.40**	**223**	*e*P		**Pg**	**16 17 10.9 +0.5**
PVCC				*e*		**Sn**	**16 17 30.5 +1.1**
PVCC				smax			
	comp=N,4μm,0.3s						
PVCC	**Panska Ves**	**1.40**	**223**	*e*PG		**Pg**	**16 17 10.9 +0.5**
PVCC				*e*SG		**Sn**	**16 17 30.5 +1.1**
	comp=Z,4μm,0.3s						
PVCC	**Panska Ves**	**1.40**	**223**	*e*Pn		**Pg**	**16 17 10.9 +0.5**
	baz=43						
PVCC				*e*Sg		**Sg**	**16 17 30.4 +1.9**
	baz=43						
BRG	**Berggiesshubel**	**1.50**	**243**	*e*Pn		**Pn**	**16 17 13.3 +1.6**
BRG				*e*Sg		**Sg**	**16 17 33.9 +2.2**
BRG	**Berggiesshubel**	**1.50**	**243**	PN		**Pn**	**16 17 11.7 0.0**
BRG				PG		**Pg**	**16 17 14.0 +1.7**
BRG				SG		**Sg**	**16 17 34.0 +2.4**
	comp=Z,2μm,0.4s						
BRG	**Berggiesshubel**	**1.50**	**243**	P		**Pn**	**16 17 11.7 0.0**
BRG							16 17 34.0
BRG				smax			
	comp=N,1μm,0.4s						
BRG	**Berggiesshubel**	**1.50**	**243**	P		**Pn**	**16 17 11.7 0.0**
BRG	**Berggiesshubel**	**1.50**	**243**	Pn		**Pn**	**16 17 13.3 +1.6**
BRG				Sg		**Sg**	**16 17 33.9 +2.3**
RUE	**Ruedersdorf**	**1.68**	**304**	*e*Pn		**Pn**	**16 17 14.3 +0.2**
RUE				*e*S		**Sn**	**16 17 39.6 +3.3**
RUE	**Ruedersdorf**	**1.68**	**304**	*e*Pn		**Pn**	**16 17 14.3 +0.2**
RUE				*e*S		**Sn**	**16 17 39.6 +3.3**
PRU	**Pruhonice**	**1.85**	**212**	*e*P		**Pn**	**16 17 17.4 +0.9**
PRU				*e*			16 17 42.6
PRU				smax			
	comp=N,988nm,0.6s						
PRU	**Pruhonice**	**1.85**	**212**	*e*PN		**Pn**	**16 17 17.4 +0.9**
PRU				*e*PG		**Pg**	**16 17 19.6 +0.6**
PRU				*e*SG		**Sg**	**16 17 42.6 -0.3**
	comp=Z,988nm,0.6s						
PRU	**Pruhonice**	**1.85**	**212**	Pn		**Pn**	**16 17 17.4 +0.9**
GKP	**Gorka Klasztor**	**1.85**	**23**	*e*Pn		**Pn**	**16 17 17.9 +1.3**
GKP				*e*Pg		**Pg**	**16 17 24.2 +5.1**
GKP				*e*Sn		**Sn**	**16 17 46.7 +6.0**
GKP				*e*Sg		**Sg**	**16 17 51.6 +8.4**
GKP	**Gorka Klasztor**	**1.85**	**23**	*e*P		**Pn**	**16 17 18.0 +1.4**
GKP				*e*			16 17 46.7
GKP	**Gorka Klasztor**	**1.85**	**23**	*e*P		**Pn**	**16 17 18.0 +1.4**
CLL	**Collm**	**1.93**	**263**	*e*Pn		**Pn**	**16 17 17.7 +0.1**
CLL				*i* Pg		**Pg**	**16 17 20.9 +0.4**
CLL				*e*Sg		**Sg**	**16 17 47.0 +1.6**
CLL	**Collm**	**1.93**	**263**	*e*Pn		**Pn**	**16 17 18.0 +0.4**
CLL				*i* Pg		**Pg**	**16 17 20.9 +0.4**
CLL				*i* Sg		**Sg**	**16 17 46.9 +1.5**
CLL	**Collm**	**1.93**	**263**	*e*Pn		**Pn**	**16 17 18.0 +0.4**
CLL				*i* Pg		**Pg**	**16 17 20.9 +0.4**
CLL				*i*			16 17 24.8
CLL				*i* Sg		**Sg**	**16 17 46.9 +1.5**
	comp=Z,900nm,0.7s						
CLL	**Collm**	**1.93**	**263**	*e*P		**Pn**	**16 17 18.0 +0.4**
RAC	**Raciborz**	**2.01**	**137**	*e*P		**Pg**	**16 17 21.4 -0.8**
RAC				*e*		**Sg**	**16 17 47.4 -0.8**
RAC	**Raciborz**	**2.01**	**137**	*e*P		**Pg**	**16 17 21.4 -0.8**
RAC				*e*S		**Sg**	**16 17 47.4 -0.8**
MORC	**Moravsky Berou**	**2.03**	**152**	*e*Pn		**Pn**	**16 17 18.4 -0.5**
MORC				*e*Sg		**Sg**	**16 17 47.5 -1.2**
MORC	**Moravsky Berou**	**2.03**	**152**	*e*Pn		**Pn**	**16 17 18.6 -0.4**
MORC				*e*Sg		**Sg**	**16 17 46.9 -1.8**
MORC	**Moravsky Berou**	**2.03**	**152**	⇑*i*P		**Pn**	**16 17 19.1 +0.1**
MORC	**Moravsky Berou**	**2.03**	**152**	S		**Sn**	**16 17 48.5 +3.5**
MORC	**Moravsky Berou**	**2.03**	**152**	*e*P		**Pn**	**16 17 18.6 -0.4**
MORC				*e*S		**Sn**	**16 17 46.9 +1.9**
MORC				Sg		**Sg**	**16 17 47.5 -1.2**
OKC	**Ostrava-Krasne**	**2.19**	**142**	*e*Pn		**Pn**	**16 17 19.9 -1.2**
OKC				*e*Sg		**Sg**	**16 17 51.7 -2.0**
OKC	**Ostrava-Krasne**	**2.19**	**142**	*e*P		**Pn**	**16 17 20.1 -1.0**
OKC				*e*			16 17 51.6
OKC				smax			
	comp=N,875nm,0.6s						
OKC	**Ostrava-Krasne**	**2.19**	**142**	*e*PN		**Pn**	**16 17 20.1 -1.0**
OKC				*e*PG		**Pg**	**16 17 24.7 -0.8**
OKC				*e*SG		**Sg**	**16 17 51.6 -2.2**
	comp=Z,874nm,0.6s						
OKC	**Ostrava-Krasne**	**2.19**	**142**	Pn		**Pn**	**16 17 19.9 -1.2**
OKC	**Ostrava-Krasne**	**2.19**	**142**	*e*P		**Pn**	**16 17 20.1 -1.0**
VRAC	**Vranov**	**2.29**	**171**	Pn		**Pn**	**16 17 22.8 +0.3**
	comp=Z,32nm,0.3s,baz=342,slow=13,SNR=67						
VRAC				Lg			16 17 55.3
	comp=Z,88nm,0.3s,baz=102,slow=17,SNR=12						
VRAC	**Vranov**	**2.29**	**171**	⇓P		**Pn**	**16 17 23.8 +1.3**
VRAC				S		**Sn**	**16 17 56.0 +4.6**
VRAC	**Vranov**	**2.29**	**171**	⇓*i*P		**Pn**	**16 17 23.8 +1.3**
VRAC	**Vranov**	**2.29**	**171**	S		**Sn**	**16 17 56.0 +4.6**
VRAC	**Vranov**	**2.29**	**171**	*e*Pn		**Pn**	**16 17 22.6 +0.1**
VRAC	**Vranov**	**2.29**	**171**	P		**Pn**	**16 17 23.8 +1.3**
VRAC				*e*Sg		**Sg**	**16 17 56.1 -0.9**
	comp=Z,644nm,0.8s,baz=354						
TREC	**Trest**	**2.30**	**189**	*e*P		**Pg**	**16 17 27.0 -0.7**
TREC	**Trest**	**2.30**	**189**	*e*PG		**Pg**	**16 17 27.0 -0.7**
TREC	**Trest**	**2.30**	**189**	*e*P		**Pg**	**16 17 27.0 -0.7**
KRUC	**Moravsky**	**2.52**	**175**	*e*Pn		**Pn**	**16 17 25.9 +0.2**
	baz=357						
KRUC				*e*Sg		**Sg**	**16 18 03.1 -1.3**
	comp=Z,620nm,0.9s,baz=357						
TANN	**Tannenbergstha**	**2.54**	**244**	*e*Pn		**Pn**	**16 17 27.0 +0.9**
TANN				*e*Sg		**Sg**	**16 18 06.6 +1.4**
TANN	**Tannenbergstha**	**2.54**	**244**	Pn		**Pn**	**16 17 27.0 +0.9**
TANN				Sg		**Sg**	**16 18 06.6 +1.3**
WERD	**Werda**	**2.62**	**246**	*e*Pn		**Pn**	**16 17 27.9 +0.8**
WERD	**Werda**	**2.62**	**246**	Pn		**Pn**	**16 17 27.9 +0.8**
NKC	**Novy Kostel**	**2.64**	**241**	*e*P		**Pn**	**16 17 28.3 +0.9**
NKC	**Novy Kostel**	**2.64**	**241**	*e*PN		**Pn**	**16 17 28.3 +0.9**
NKC				*e*SG		**Sg**	**16 18 09.7 +1.2**
	comp=Z,2μm,0.6s						
NKC	**Novy Kostel**	**2.64**	**241**	*e*P		**Pn**	**16 17 28.3 +0.9**
NKC				Sg		**Sg**	**16 18 09.7 +1.2**
	comp=Z,2μm,0.6s						
OJC	**Ojcow**	**2.73**	**118**	*e*Sg		**Sg**	**16 18 08.1 -3.2**
JAVC	**Velka Javorina**	**2.90**	**158**	*e*Pn		**Pn**	**16 17 31.9 +0.9**
JAVC				*e*Sg		**Sg**	**16 18 16.9 +0.1**
	comp=Z,849nm,1.1s						
KHC	**Kasperske Hory**	**2.91**	**214**	*e*P		**Pn**	**16 17 31.5 +0.4**
KHC				*e*			16 18 06.9
KHC				smax			
	comp=N,349nm,0.6s						
KHC	**Kasperske Hory**	**2.91**	**214**	*e*Pn		**Pn**	**16 17 31.4 +0.3**
KHC	**Kasperske Hory**	**2.91**	**214**	*e*PN		**Pn**	**16 17 31.5 +0.4**
KHC				*e*PG		**Pg**	**16 17 38.0 -1.3**
KHC				*e*SN		**Sn**	**16 18 06.9 +0.2**
KHC				*e*SG		**Sg**	**16 18 16.5 -0.5**
	comp=Z,349nm,0.6s						
KHC	**Kasperske Hory**	**2.91**	**214**	*e*Pn		**Pn**	**16 17 31.4 +0.3**
KHC	**Kasperske Hory**	**2.91**	**214**	*e*P		**Pn**	**16 17 31.5 +0.4**
MOX	**Moxa**	**2.94**	**253**	*i* PN		**Pn**	**16 17 32.2 +0.6**
MOX				*i* PG		**Pg**	**16 17 40.5 +0.5**
MOX				*i* SG		**Sg**	**16 18 20.4 +2.3**
	comp=Z,2μm,0.6s						
MOX	**Moxa**	**2.94**	**253**	*e*Pn		**Pn**	**16 17 32.2 +0.6**
MOX				*i* Pg		**Pg**	**16 17 40.5 +0.5**
MOX				*e*Sg		**Sg**	**16 18 20.7 +2.6**
MOX	**Moxa**	**2.94**	**253**	Pn		**Pn**	**16 17 32.2 +0.6**
ROTZ	**Rotzenmuhle**	**3.04**	**235**	*e*Pn		**Pn**	**16 17 33.6 +0.8**
ROTZ	**Rotzenmuhle**	**3.04**	**235**	Pn		**Pn**	**16 17 33.6 +0.7**
GEC2	**GERESS Array S**	**3.11**	**210**	*e*Pn		**Pn**	**16 17 34.5 +0.6**
GEC2	**GERESS Array S**	**3.11**	**210**	Pn		**Pn**	**16 17 34.5 +0.6**
WET	**Wettzell**	**3.16**	**221**	*e*Pn		**Pn**	**16 17 35.2 +0.6**
WET	**Wettzell**	**3.16**	**221**	Pn		**Pn**	**16 17 35.2 +0.6**
LIKS	**Likavka**	**3.19**	**141**	*e*Pn		**Pn**	**16 17 35.7 +0.7**
LIKS				*e*Pg		**Pg**	**16 17 46.7 +2.0**
LIKS	**Likavka**	**3.19**	**141**	*e*PN		**Pn**	**16 17 35.7 +0.7**
LIKS				*e*PG		**Pg**	**16 17 46.7 +2.0**
LIKS	**Likavka**	**3.19**	**141**	*e*P		**Pn**	**16 17 35.7 +0.7**
KOLL	**Kolacno**	**3.35**	**152**	*e*Pn		**Pn**	**16 17 37.4 +0.2**
KOLL				*e*Pg		**Pg**	**16 17 47.5 -0.3**
KOLL				*e*Sn		**Sg**	**16 18 27.9 -3.4**
KOLL	**Kolacno**	**3.35**	**152**	*e*PN		**Pn**	**16 17 37.4 +0.2**
KOLL				*e*PG		**Pg**	**16 17 47.5 -0.3**
KOLL				*e*SG		**Sg**	**16 18 27.9 -3.4**
KOLL	**Kolacno**	**3.35**	**152**	*e*P		**Pn**	**16 17 37.4 +0.2**
RGN	**Rugen**	**3.41**	**332**	P		**Pn**	**16 17 38.3 +0.4**
RGN	**Rugen**	**3.41**	**332**	P		**Pn**	**16 17 38.3 +0.3**
NIE	**Niedzica**	**3.47**	**127**	*e*P		**Pg**	**16 17 49.0 -1.0**
NIE				*e*S		**Sg**	**16 18 33.6 -1.4**
CLZ	**Clausthal**	**3.54**	**277**	*e*Pn		**Pn**	**16 17 41.4 +1.6**
CLZ	**Clausthal**	**3.54**	**277**	Pn		**Pn**	**16 17 41.4 +1.6**
VYHS	**Vyhne**	**3.56**	**149**	*e*Pn		**Pn**	**16 17 39.8 -0.3**
VYHS				*e*Pg		**Pg**	**16 17 52.9 +1.1**
VYHS	**Vyhne**	**3.56**	**149**	*e*PN		**Pn**	**16 17 39.8 -0.3**
VYHS				*e*PG		**Pg**	**16 17 52.9 +1.1**
VYHS	**Vyhne**	**3.56**	**149**	*e*P		**Pn**	**16 17 39.8 -0.3**
GRA1	**Grafenberg Arr**	**3.60**	**240**	Pn		**Pn**	**16 17 41.7 +1.1**
GRA1				Sg		**Sg**	**16 18 41.0 +1.7**
GRF	**Grafenberg Arr**	**3.60**	**240**	*e*Pn		**Pn**	**16 17 41.7 +1.1**
GRF				*e*Sg		**Sg**	**16 18 41.0 +1.8**
GRF	**Grafenberg Arr**	**3.60**	**240**	*e*Pn		**Pn**	**16 17 41.7 +1.1**
GRF				*e*Sg		**Sg**	**16 18 41.0 +1.7**
GRF	**Grafenberg Arr**	**3.60**	**240**	*e*P		**Pn**	**16 17 41.7 +1.1**
GRF				*e*Sg		**Sg**	**16 18 41.0 +1.7**
BSD	**Bornholm Skovb**	**3.62**	**350**	*i* P		**Pn**	**16 17 38.9 -1.9**
BSD				*i* S		**Sn**	**16 18 21.5 -2.7**
BSD	**Bornholm Skovb**	**3.62**	**350**	*i* P		**Pn**	**16 17 38.9 -1.9**
BSD				*i* S		**Sn**	**16 18 21.5 -2.7**
BSD	**Bornholm Skovb**	**3.62**	**350**	*i* P		**Pn**	**16 17 38.9 -1.9**
BSD				*i*

UZH MLR MLR
comp=N,200nm,0.9s
UZH MLR MLR
comp=E,300nm,0.9s
UZH MLR MLR
comp=Z,130nm,0.9s
UZH Uzhgorod 4.98 124 *e*P **Pn 16 18 04.1 +4.6**
TOD Tromm 5.02 250 P **Pn 16 18 00.1 +0.1**
TOD S **Sn 16 18 55.8 -2.9**
TOD Tromm 5.02 250 P **Pn 16 18 00.1 +0.1**
TOD S **Sn 16 18 55.8 -2.9**
TOD Tromm 5.02 250 P **Pn 16 18 00.1 +0.1**
TOD S **Sn 16 18 55.8 -2.9**
KOGS Kog 5.12 178 *i* Pn **Pn 16 18 02.8 +1.3**
KOGS Kog 5.12 178 *i* Pn **Pn 16 18 02.8 +1.3**
WATA Walderalm 5.14 216⇑*i*Pn **Pn 16 18 02.4 +0.7**
SNR=25
WATA ⇑*i*Sg **Sg 16 19 28.8 +0.1**
comp=Z,137nm,0.5s
WATA Walderalm 5.14 216 Pn **Pn 16 18 02.4 +0.6**
SNR=25
WATA Sg **Sg 16 19 28.8 +0.1**
comp=Z,137nm,0.5s
OBKA Obir 5.16 192⇑*e*Pn **Pn 16 18 03.0 +1.0**
SNR=9.6
OBKA ⇓*i*Sg **Sg 16 19 29.3 +0.1**
comp=Z,250nm,0.8s
OBKA Obir 5.16 192 Pn **Pn 16 18 03.0 +1.0**
SNR=9.6
OBKA Sg **Sg 16 19 29.3 +0.1**
comp=Z,250nm,0.8s
WTTA Wattenberg 5.18 215⇓*i*Pn **Pn 16 18 03.2 +0.9**
SNR=25
WTTA ⇑*i*Sg **Sg 16 19 28.6 -1.4**
comp=Z,202nm,0.6s
WTTA Wattenberg 5.18 215 Pn **Pn 16 18 03.2 +0.9**
SNR=25
WTTA Sg **Sg 16 19 28.6 -1.3**
comp=Z,202nm,0.6s
MYKA Terra Mystica 5.19 199⇑*i*Pn **Pn 16 18 03.3 +0.9**
MYKA ⇓*i*Sn **Sn 16 19 00.3 -2.6**
MYKA ⇑*i*Sg **Sg 16 19 28.6 -1.5**
comp=Z,279nm,0.9s
MYKA Terra Mystica 5.19 199 Pn **Pn 16 18 03.3 +0.9**
MYKA Sn **Sn 16 19 00.3 -2.6**
MYKA Sg **Sg 16 19 28.6 -1.6**
comp=Z,279nm,0.9s
PKS9 Tamasi 5.19 163⇑*e*P **Pn 16 18 04.0 +1.5**
STU Stuttgart 5.22 240 *e*P **Pn 16 18 02.5 -0.3**
STU pmax pmax
comp=Z,86nm,0.6s
STU Stuttgart 5.22 240 *e*Pn **Pn 16 18 02.5 -0.3**
comp=Z,86nm,0.6s
STU Stuttgart 5.22 240 *e*P **Pn 16 18 02.5 -0.3**
comp=Z,86nm,0.6s
PKSN Nyarlorinc 5.30 150⇓*e*P **Pn 16 18 04.9 +1.0**
MOTA Moosalm 5.32 219⇑*i*Pn **Pn 16 18 04.8 +0.7**
SNR=26
MOTA ⇓*i*Sg **Sg 16 19 35.2 +0.9**
comp=Z,228nm,0.8s
MOTA Moosalm 5.32 219 Pn **Pn 16 18 04.8 +0.6**
SNR=26
MOTA Sg **Sg 16 19 35.2 +0.9**
comp=Z,228nm,0.8s
RETA Reutte 5.34 222⇑*i*Pn **Pn 16 18 05.2 +0.7**
SNR=15
RETA ⇑*i*Sg **Sg 16 19 35.9 +0.8**
comp=Z,180nm,0.6s
RETA Reutte 5.34 222 Pn **Pn 16 18 05.2 +0.7**
SNR=15
RETA Sg **Sg 16 19 35.9 +0.8**
comp=Z,180nm,0.6s
ABTA Abfaltersbach 5.35 207⇑*i*Pn **Pn 16 18 06.2 +1.5**
SNR=24
ABTA ⇑*i*Sg **Sg 16 19 34.5 -0.9**
comp=Z,312nm,0.9s
ABTA Abfaltersbach 5.35 207 Pn **Pn 16 18 06.2 +1.5**
SNR=24
ABTA Sg **Sg 16 19 34.5 -0.9**
comp=Z,312nm,0.9s
LVV L'vov 5.37 106 *e*P **Pn 16 18 04.0 -0.8**
LVV *e*S **Sn 16 19 05.4 -1.9**
LVV MLR MLR
comp=Z,270nm,2.0s
LVV L'vov 5.37 106 *e*P **Pn 16 18 04.0 -0.8**
comp=Z,270nm,2.0s
LVV *e*S **Sn 16 19 05.4 -1.9**
TRPA Tarpa 5.43 127⇓*i*P **Pn 16 18 06.0 +0.3**
PDKS Podkum 5.55 188 *i* Pn **Pn 16 18 08.8 +1.4**
LJU Ljubljana 5.62 191 *e*Pn **Pn 16 18 09.6 +1.3**
LJU *e* 16 19 43.2
LJU *e*Sn **Sg 16 19 46.0 +2.0**
PKSM Moragy 5.62 161⇑P **Pn 16 18 09.8 +1.4**
PKSM Moragy 5.62 161⇑P **Pn 16 18 09.8 +1.4**
PKSM Moragy 5.62 161⇑*e*P **Pn 16 18 09.7 +1.3**
ABH Alteburg 5.66 256 P **Pn 16 18 10.3 +1.4**
ABH Alteburg 5.66 256 P **Pn 16 18 10.3 +1.4**
VOY Vojsko 5.72 195 *e*Pn **Pn 16 18 10.2 +0.5**
VOY *e* 16 18 19.5
VOY *e* 16 18 32.7
VOY *e*Sn **Sg 16 19 49.2 +2.0**
VOY Vojsko 5.72 195 *e*Pn **Pn 16 18 10.2 +0.5**
FETA Feichten 5.73 219⇓*i*Pn **Pn 16 18 11.0 +1.2**
SNR=17
FETA Feichten 5.73 219 Pn **Pn 16 18 11.0 +1.2**
SNR=17
WTSB Winterswijk 5.76 278 *e*Pn **Pn 16 18 11.5 +1.2**
WTSB Winterswijk 5.76 278 *e*Pn **Pb 16 18 23.4 -1.5**
WTSB Winterswijk 5.76 278 *e*Sn **Sg 16 19 55.0 +6.5**
WTSB Winterswijk 5.76 278 *e*Pn **Pn 16 18 11.5 +1.3**
SPAK Spaichingen-Ko 5.84 236 P **Pn 16 18 11.8 +0.4**
SPAK Spaichingen-Ko 5.84 236 P **Pn 16 18 11.8 +0.4**
RHK3 Tenkes 5.87 165 *e*P **Pn 16 18 12.7 +1.0**
DAVA Damuels 5.88 226⇓*i*Pn **Pn 16 18 12.3 +0.5**
DAVA ⇑*i*Sg **Sg 16 19 55.1 +2.9**
comp=Z,193nm,0.7s
DAVA Damuels 5.88 226 Pn **Pn 16 18 12.3 +0.4**
DAVA Sg **Sg 16 19 55.1 +2.8**
comp=Z,193nm,0.7s
LANF Langenberg 5.89 247 P **Pn 16 18 12.0 0.0**
LANF S **Sn 16 19 17.9 -2.2**
LANF Langenberg 5.89 247 P **Pn 16 18 12.0 0.0**
BFO Black Forest 5.94 240 *e*P **Pn 16 18 11.7 -1.1**
BFO pmax pmax
comp=Z,1.0nm,1.1s
BFO Black Forest 5.94 240 *e*P **Pn 16 18 11.7 -1.1**
comp=Z,0.6nm,1.1s
BFO Black Forest 5.94 240 *e*P **Pn 16 18 11.7 -1.1**
comp=Z,0.6nm,1.1s
RUP Ruppelstein 6.02 255 P **Pn 16 18 14.6 +0.8**
RUP Ruppelstein 6.02 255 P **Pn 16 18 14.6 +0.8**
RUP Ruppelstein 6.02 255 P **Pn 16 18 14.6 +0.8**
BOJS Bojanci 6.09 185 *e*Pn **Pn 16 18 16.0 +1.2**
BOJS Bojanci 6.09 185 *e*Pn **Pn 16 18 16.0 +1.2**
SKDS Skadanscina 6.17 193 *e*Pn **Pn 16 18 17.6 +1.6**
DAVOX Davos/Dischmat 6.27 223 Pn **Pn 16 18 18.5 +1.3**
comp=Z,3.8nm,0.3s,baz=26,slow=12,SNR=22
DAVOX Lg 16 20 03.9
comp=Z,6.0nm,0.3s,baz=170,slow=23,SNR=8.6
DAVOX Davos/Dischmat 6.27 223 P **Pn 16 18 18.5 +1.3**
MUD Monsted U'grnd 6.36 323 *e*P **Pn 16 18 23.2 +4.8**
MUD *e*S **Sn 16 19 40.3 +8.7**
MUD *e*S **Sb 16 19 45.8 -5.6**
MUD Monsted U'grnd 6.36 323 *i* P **Pn 16 18 23.2 +4.8**
MUD *e*S **Sn 16 19 40.3 +8.7**
MUD *e*S **Sb 16 19 45.8 -5.6**
FELD Feldberg im Sc 6.39 238 P **Pn 16 18 17.8 -1.1**
FELD Feldberg im Sc 6.39 238 P **Pn 16 18 17.8 -1.1**
MEM Membach 6.40 265 PN **Pn 16 18 19.9 +0.8**
HGN Heimansgroeve 6.42 267 *e*Sn Sx 16 20 07.5
DRGR 6.47 135⇓P **Pn 16 18 19.9 -0.1**
DRGR 6.47 135⇓*i*P **Pn 16 18 19.9 -0.1**
DRGR 6.47 135 P **Pn 16 18 19.9 -0.1**
CDF Champ du Feu 6.48 244 *e*Pg **Pg 16 18 49.0 +1.3**
CDF *e*Sg **Sg 16 20 10.2 -1.4**
comp=Z,419nm,0.9s
CDF Champ du Feu 6.48 244 *e*Pn **Pn 16 18 19.4 -0.7**
CDF *e*Pg **Pg 16 18 49.0 +1.3**
CDF *e*Sg **Sg 16 20 10.2 -1.4**
CDF Champ du Feu 6.48 244 *e*Pn **Pn 16 18 19.4 -0.7**
WLF Walferdange 6.58 257 PN **Pn 16 18 22.4 +0.9**
WLF Walferdange 6.58 257 *e*P **Pn 16 18 21.2 -0.3**
WLF pmax pmax
comp=Z,22nm,0.8s
WLF Walferdange 6.58 257 *e*Pn **Pn 16 18 21.2 -0.3**
comp=Z,22nm,0.8s
WLF Walferdange 6.58 257 *e*P **Pn 16 18 21.2 -0.3**
comp=Z,22nm,0.8s
ECH Echery 6.65 243 P **Pn 16 18 21.6 -0.9**
ECH Echery 6.65 243 P **Pn 16 18 21.6 -0.9**
ECH Echery 6.65 243 P **Pn 16 18 21.6 -0.9**
ECH Echery 6.65 243 P **Pn 16 18 21.6 -0.9**
MOF Molkenrain 6.87 241 P **Pn 16 18 25.5 0.0**
MOF Molkenrain 6.87 241 P **Pn 16 18 25.5 0.0**
BCLA Clavier 6.88 265 PN **Pn 16 18 26.9 +1.3**
BZS Buzias 7.00 146⇓P **Pn 16 18 28.3 +1.0**
BZS Buzias 7.00 146⇓*i*P **Pn 16 18 28.3 +1.0**
BZS Buzias 7.00 146 P **Pn 16 18 28.3 +1.0**
HINF Hinteralfeld 7.05 241 *e*Pn **Pn 16 18 27.1 -0.8**
HINF *e*Sg **Sg 16 20 27.8 -2.0**
comp=Z,539nm,1.4s
HINF Hinteralfeld 7.05 241 *e*Pn **Pn 16 18 27.1 -0.8**
BUR08 Bucovina Ar. S 7.12 120 *e*Pn **Pn 16 18 28.8 -0.2**
BUR08 Bucovina Ar. S 7.12 120 *e*Pn **Pn 16 18 28.8 -0.2**
BURAR Bucovina Array 7.15 120⇑P **Pn 16 18 29.4 +0.1**
BURAR Bucovina Array 7.15 120⇑*i*P **Pn 16 18 29.4 +0.1**
BURAR Bucovina Array 7.15 120⇑P **Pn 16 18 29.4 +0.1**
IIGN Ignalina 7.16 54 *e*P **Pg 16 18 59.1 -1.6**
IIGN Ignalina 7.16 54 *e*P **Pg 16 18 59.1 -1.5**
ISAL Salakas 7.21 52 *e*P **Pg 16 18 59.5 -2.2**
ISAL Salakas 7.21 52 *e*P **Pg 16 18 59.5 -2.2**
HAU Haudompre 7.22 244 *e*Pn **Pn 16 18 29.5 -0.8**
HAU *e*Sg **Sg 16 20 32.7 -2.7**
comp=Z,225nm,0.8s
HAU Haudompre 7.22 244 *e*Pn **Pn 16 18 29.5 -0.8**
NACGM Naroch 7.25 58 *e* **Pn 16 18 31.0 +0.3**
GIVF Givet 7.26 263 *e*Pn **Pn 16 18 30.1 -0.7**
GIVF *e*Sg **Sg 16 20 35.4 -1.2**
comp=Z,186nm,1.1s
GIVF Givet 7.26 263 *e*Pn **Pn 16 18 30.1 -0.7**
THEF They Montfort 7.31 247 P **Pn 16 18 31.0 -0.5**
THEF They Montfort 7.31 247 P **Pn 16 18 31.0 -0.5**
IZAR Zarasai 7.36 51 *e*P **Pg 16 19 03.3 -1.2**
DOU Dourbes 7.40 263 PN **Pn 16 18 34.0 +1.2**
IDID Didziasalis 7.40 55 *e*P **Pg 16 19 03.8 -1.5**
IDID Didziasalis 7.40 55 *e*P **Pg 16 19 03.8 -1.5**
RFYF Reffroy 7.41 251 *e*Pn **Pn 16 18 32.2 -0.7**
RFYF *e*Sg **Sg 16 20 39.1 -2.3**
comp=Z,39nm,0.3s
RFYF Reffroy 7.41 251 *e*Pn **Pn 16 18 32.2 -0.7**
SNF Seneffe 7.50 266 PN **Pn 16 18 35.7 +1.7**
BAIF Baives 7.65 263 *e*Pn **Pn 16 18 35.6 -0.6**
BAIF *e*Sg **Sg 16 20 47.4 -1.8**
comp=Z,235nm,1.2s
BAIF Baives 7.65 263 *e*Pn **Pn 16 18 35.6 -0.6**
MEZF Maizieres J'vi 7.72 251 *e*Pn **Pn 16 18 41.7 +4.6**
MEZF *e*Sg **Sg 16 20 49.6 -1.7**
comp=Z,440nm,1.4s
SFTF Sexfontaines 7.87 249 *e*Pn **Pn 16 18 38.7 -0.5**
SFTF *e*Sg **Sg 16 20 53.8 -2.3**
comp=Z,308nm,1.3s
SFTF Sexfontaines 7.87 249 *e*Pn **Pn 16 18 38.7 -0.5**
CABF La Chapelle 8.20 237 *e*Pg **Pg 16 19 19.9 -0.8**
CABF *e*Sg **Sg 16 21 03.9 -3.0**
comp=Z,203nm,0.9s
CABF La Chapelle 8.20 237 *e*Pn **Pn 16 18 42.9 -0.9**
CABF *e*Pg **Pg 16 19 19.9 -0.8**
CABF *e*Sg **Sg 16 21 03.9 -3.0**
CABF La Chapelle 8.20 237 *e*Pn **Pn 16 18 42.9 -0.9**
KIEV Kiev 8.32 91 *e*P **Pn 16 18 43.6 -1.8**
KIEV pmax pmax
comp=Z,42nm,0.7s
KIEV Kiev 8.32 91 *e*Pn **Pn 16 18 43.6 -1.8**
comp=Z,42nm,0.7s
KIEV Kiev 8.32 91 *e*Pn **Pn 16 18 43.6 -1.8**
comp=Z,42nm,0.7s
AKASG Malin Array Be 8.33 91 Pn **Pn 16 18 43.6 -2.0**
comp=Z,6.6nm,0.3s,baz=280,slow=12,SNR=22
AKASG Sn **Sn 16 20 14.5 -5.7**
comp=Z,4.1nm,0.3s,baz=270,slow=23,SNR=5.4
AKASG Lg 16 21 12.3
comp=Z,1.3nm,0.3s,baz=280,slow=26,SNR=4.6
AKASG Malin Array Be 8.33 91 P **Pn 16 18 43.6 -2.0**
AKASG 16 20 14.5
AKASG pmax pmax
comp=Z,7.0nm,0.3s
AKASG smax
comp=N,4.0nm,0.3s
AKASG Malin Array Be 8.33 91 Pn **Pn 16 18 43.6 -2.0**
VOIR 8.56 132⇑*i*P **Pn 16 18 49.7 +1.0**
LPL La Plagne 8.65 229 *e*Pn **Pn 16 18 48.7 -1.2**
LPL *e*Sg **Sg 16 21 17.0 -4.1**
comp=N,89nm,1.1s
LPL La Plagne 8.65 229 *e*Pn **Pn 16 18 48.7 -1.2**
LPG La Plagne 8.65 229 *e*Pn **Pn 16 18 48.6 -1.3**
LPG *e*Sg **Sg 16 21 16.9 -4.4**
comp=N,227nm,1.2s
LPG La Plagne 8.65 229 *e*Pn **Pn 16 18 48.6 -1.3**
HFS Hagfors 8.69 352 Pn **Pn 16 18 49.3 -1.1**
comp=N,0.4nm,0.3s,baz=160,slow=14,SNR=16
HFS Sn **Sn 16 20 24.5 -4.4**
comp=N,1.0nm,0.3s,baz=166,slow=26,SNR=3.6
HFS Lg 16 21 23.8
comp=N,1.3nm,0.3s,baz=179,slow=30,SNR=5.9
HFS Hagfors 8.69 352 Pn **Pn 16 18 49.3 -1.1**
MLR Muntele Rosu 8.94 129 Pg Px 16 19 15.9
comp=N,0.6nm,0.3s,baz=185,slow=2.9,SNR=6.3
LOR Lormes 9.03 246 *e*Pn **Pn 16 18 54.0 -1.2**
LOR *e*Sg **Sg 16 21 29.9 -3.6**
comp=N,71nm,0.8s
LOR Lormes 9.03 246 *e*Pn **Pn 16 18 54.0 -1.2**
MBDF Montbardon 9.23 226 *e*Pn **Pn 16 18 56.5 -1.4**
MBDF *e*Sg Sn 16 21 35.0 +53
comp=N,180nm,1.6s
MBDF Montbardon 9.23 226 *e*Pn **Pn 16 18 56.5 -1.4**
VSU Vasula 9.23 37 *e*P **Pn 16 18 57.4 -0.4**
VSU Vasula 9.23 37 *e*P **Pn 16 18 57.4 -0.4**
SSF Saint Saulge 9.35 246 *e*Pn **Pn 16 18 58.3 -1.2**
SSF *e*Sg Sn 16 21 39.6 +54
comp=N,51nm,0.9s
SSF Saint Saulge 9.35 246 *e*Pn **Pn 16 18 58.3 -1.2**
SMF Signal de Mont 9.40 243 *e*Pg Px 16 19 42.5
SMF *e*Sg Sx 16 21 41.2
comp=N,104nm,0.8s
SMF Signal de Mont 9.40 243 *e*Pn **Pn 16 18 59.2 -0.9**
SMF *e*Pg Pn 16 19 42.5 +42
SMF *e*Sg Sn 16 21 41.2 +55
SMF Signal de Mont 9.40 243 *e*Pn **Pn 16 18 59.2 -0.9**
SAOF Saorge 9.49 220 P **Pn 16 19 01.9 +0.4**
SAOF Saorge 9.49 220 P **Pn 16 19 01.9 +0.4**
ORIF Oris-en-Rattie 9.50 230 *e*Pn **Pn 16 19 00.0 -1.5**
ORIF *e*Sg Sn 16 21 43.6 +55
comp=N,188nm,1.4s
ORIF Oris-en-Rattie 9.50 230 *e*Pn **Pn 16 19 00.0 -1.5**
AUTN L'Aution 9.54 221 P **Pn 16 19 03.2 +1.1**
AUTN L'Aution 9.54 221 P **Pn 16 19 03.2 +1.1**
AVF Avril sur Loir 9.59 245 *e*Pg Px 16 19 44.3
AVF *e*Sg Sx 16 21 46.7
comp=N,42nm,0.8s
AVF Avril sur Loir 9.59 245 *e*Pn **Pn 16 19 01.5 -1.2**
AVF *e*Pg Pn 16 19 44.3 +42
AVF *e*Sg Sn 16 21 46.7 +56
AVF Avril sur Loir 9.59 245 *e*Pn **Pn 16 19 01.5 -1.2**
SBF Sospel 9.64 220 *e*Pn **Pn 16 19 01.8 -1.7**
SBF *e*Sn **Sn 16 20 45.2 -7.3**
comp=N,7.0nm,0.4s
SBF Sospel 9.64 220 *e*Pn **Pn 16 19 01.8 -1.7**
LUCF Luceram 9.65 221 P **Pn 16 19 04.2 +0.5**
LUCF Luceram 9.65 221 P **Pn 16 19 04.2 +0.5**
HYF Humbligny 9.74 249 *e*Pn **Pn 16 19 04.0 -0.8**
HYF *e*Sg Sn 16 21 52.1 +57
HYF Humbligny 9.74 249 *e*Pn **Pn 16 19 04.0 -0.8**
NOA NORSAR Array B 9.87 346 Pn **Pn 16 19 04.6 -1.9**
comp=N,0.6nm,0.3s,baz=164,slow=12,SNR=8.7
NOA Sn **Sn 16 20 48.6 -9.3**
comp=N,0.4nm,0.3s,baz=5.9,slow=16,SNR=2.6
NOA Lg 16 21 59.2
comp=N,1.1nm,0.3s,baz=259,slow=18,SNR=4.2
CALN Calern 9.96 222 P **Pn 16 19 08.6 +0.8**
CALN Calern 9.96 222 P **Pn 16 19 08.6 +0.8**
BGF Bois d'Agland 10.01 245 *e*Pn **Pn 16 19 07.3 -1.2**
BGF *e*Sg Sn 16 22 00.7 +59
comp=N,130nm,1.1s
BGF Bois d'Agland 10.01 245 *e*Pn **Pn 16 19 07.3 -1.2**
VIVF Saint-Julien-l 10.13 233 *e*Pn **Pn 16 19 08.9 -1.3**
VIVF *e*Sg Sn 16 22 03.3 +59
comp=N,111nm,1.3s
VIVF Saint-Julien-l 10.13 233 *e*Pn **Pn 16 19 08.9 -1.3**
FRF La Foret Royal 10.22 222 *e*Pn **Pn 16 19 10.3 -1.1**
FRF *e*Sn **Sn 16 20 58.8 -7.7**
comp=N,2.8nm,0.6s
FRF La Foret Royal 10.22 222 *e*Pn **Pn 16 19 10.3 -1.1**
SMRF Simiane la Rot 10.35 227 *e*Pn **Pn 16 19 11.4 -1.9**
SMRF *e*Sn **Sn 16 21 02.5 -7.4**
comp=N,77nm,1.5s
LMR La Mourre 10.46 222 *e*Pn **Pn 16 19 13.0 -1.7**
LMR *e*Sn **Sn 16 21 04.4 -8.1**
comp=N,16nm,0.8s
LMR La Mourre 10.46 222 *e*Pn **Pn 16 19 13.0 -1.7**
TCF Toulx Ste Croi 10.52 245 *e*Pn **Pn 16 19 14.6 -0.9**
TCF *e*Sg Sn 16 22 16.3 +62
comp=N,106nm,1.3s
TCF Toulx Ste Croi 10.52 245 *e*Pn **Pn 16 19 14.6 -0.9**
LDF La Druitiere 10.81 260 *e*Pn **Pn 16 19 18.5 -1.0**
LDF *e*Sg Sn 16 22 25.9 +65
comp=N,19nm,0.8s
LDF La Druitiere 10.81 260 *e*Pn **Pn 16 19 18.5 -1.0**
FLN La Foliniere 10.97 262 *e*Pn **Pn 16 19 20.8 -0.9**
FLN *e*Sg Sn 16 22 30.8 +66
comp=N,5.4nm,0.4s
FLN La Foliniere 10.97 262 *e*Pn **Pn 16 19 20.8 -0.9**
LASF Ste Croix 11.10 232 *e*Pn **Pn 16 19 21.8 -1.6**
LASF *e*Sg Sn 16 22 34.0 +66
comp=N,112nm,1.5s
LASF Ste Croix 11.10 232 *e*Pn **Pn 16 19 21.8 -1.6**
FINES FINESS Array B 11.33 25 Pn **Pn 16 19 24.4 -2.1**
comp=N,1.1nm,0.3s,baz=190,slow=9.8,SNR=18
FINES Sn **Sn 16 21 23.2 -10**
comp=N,1.2nm,0.3s,baz=206,slow=21,SNR=4.8
FINES Lg 16 22 49.6
comp=N,1.0nm,0.3s,baz=209,slow=23,SNR=5.9
RJF Les Rejaudoux 11.50 243 *e*Pn **Pn 16 19 27.6 -1.3**
RJF *e*Sg Sn 16 22 46.9 +69
comp=N,45nm,1.0s
RJF Les Rejaudoux 11.50 243 *e*Pn **Pn 16 19 27.6 -1.3**
MFF Saint Martin d 11.72 251 *e*Pn **Pn 16 19 31.3 -0.6**
MFF *e*Sg 16 22 53.7
comp=N,69nm,1.2s
MFF Saint Martin d 11.72 251 *e*Pn **Pn 16 19 31.3 -0.6**
KAF Kangasniemi 11.95 24 *e*P **Pn 16 19 31.8 -3.2**
KAF pmax pmax
comp=Z,5.0nm,0.6s
KAF Kangasniemi 11.95 24 *e*P **Pn 16 19 31.8 -3.2**
comp=Z,4.6nm,0.6s
KAF Kangasniemi 11.95 24 *e*p **Pn 16 19 31.8 -3.2**
comp=Z,4.6nm,0.6s
EKA Eskdalemuir Ar 12.05 296 Pn **Pn 16 19 33.1 -3.3**
comp=Z,0.9nm,0.3s,baz=102,slow=13,SNR=28
EKA Sn **Sn 16 21 43.1 -8.2**
comp=Z,0.6nm,0.3s,baz=98,slow=26,SNR=4.8
EKA Eskdalemuir Ar 12.05 296 P **Pn 16 19 33.1 -3.3**
EKA 16 21 43.1
EKA pmax pmax
comp=Z,1.0nm,0.3s
EKA smax
comp=N,1.0nm,0.3s
LFF La Frestale 12.16 243 *e*Pn **Pn 16 19 36.6 -1.3**
LFF *e*Sg 16 23 07.0
comp=N,55nm,0.9s
LFF La Frestale 12.16 243 *e*Pn **Pn 16 19 36.6 -1.3**
SGMF Saint Gilles 12.44 262 *e*Pn **Pn 16 19 41.0 -0.8**
SGMF *e*Sn **Sn 16 21 53.7 -7.3**
comp=N,2.7nm,0.4s
SGMF Saint Gilles 12.44 262 *e*Pn **Pn 16 19 41.0 -0.8**
MTLF Montolieu 12.45 234 *e*Sg Sx 16 23 15.7
comp=N,60nm,1.5s
OBN Obninsk 12.75 66 *e*P **Pn 16 19 40.1 -5.9**
OBN pmax pmax
comp=Z,10.0nm,1.0s
ROSF Rostrenen 12.85 263 *e*Pn **Pn 16 19 46.1 -1.3**
ROSF *e*Sn **Sn 16 22 03.6 -7.4**
comp=Z,9.5nm,0.7s
ROSF Rostrenen 12.85 263 *e*Pn **Pn 16 19 46.1 -1.3**
QUIF Quistinic 12.95 261 *e*Pn **Pn 16 19 47.7 -1.0**
QUIF *e*Sn **Sn 16 22 05.7 -7.7**
comp=Z,39nm,1.1s
QUIF Quistinic 12.95 261 *e*Pn **Pn 16 19 47.7 -1.0**
JOF Joensuu 14.01 30 *e*P **Pn 16 19 58.4 -4.7**
JOF pmax pmax
comp=Z,4.0nm,0.5s
JOF Joensuu 14.01 30 *e*p **Pn 16 19 58.4 -4.7**
comp=Z,4.0nm,0.5s
VSR Storozhevoye 14.43 82 *e*P **Pn 16 20 14.4 +5.5**
VSR pmax pmax
comp=N,6.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,0.6s
VSR Storozhevoye 14.43 82 *e*P **Pn 16 20 14.4 +5.5**
VORD Divnogorie 14.55 83 *e*P **Pn 16 20 16.8 +6.2**
VORD pmax pmax
comp=N,7.0nm,0.5s
VORD pmax pmax
comp=E,10.0nm,0.5s
VORD pmax pmax
comp=Z,10.0nm,0.5s
VORD Divnogorie 14.55 83 *e*P **Pn 16 20 16.8 +6.2**
VRHR Novokhopersk 15.97 82 *e*P **Pn 16 20 23.4 -6.0**
VRHR pmax pmax
comp=N,8.0nm,0.8s
VRHR pmax pmax
comp=E,40nm,0.8s
VRHR pmax pmax
comp=Z,20nm,0.8s
BRTR Keskin Array B 17.02 127 Pn **Pn 16 20 44.4 +1.6**
comp=Z,0.1nm,0.3s,baz=317,slow=7.1,SNR=5.1
BRTR Keskin Array B 17.02 127 P **Pn 16 20 44.4 +1.6**
ESDC Sonseca Array 18.30 237 Pn **Pn 16 20 57.1 -1.6**
comp=Z,0.6nm,0.3s,baz=57,slow=12,SNR=4.5
ESDC Sonseca Array 18.30 237 Pn **Pn 16 20 57.1 -1.6**
ARCES ARCESS Array B 18.57 10 Pn **Pn 16 20 58.1 -3.7**
comp=Z,0.5nm,0.3s,baz=185,slow=12,SNR=14
ARCES ARCESS Array B 18.57 10 P **Pn 16 20 58.1 -3.8**
ARCES pmax pmax
comp=Z,1.0nm,0.3s
KEV Kevo 18.96 12 *e*P **Pn 16 21 02.9 -3.7**
KEV pmax pmax
comp=Z,8.0nm,0.6s
KEV Kevo 18.96 12 *e*P **Pn 16 21 02.9 -3.7**
comp=Z,7.6nm,0.6s
KEV Kevo 18.96 12 *e*p **Pn 16 21 02.9 -3.7**
comp=Z,7.6nm,0.6s
KIV Kislovodsk 19.38 103 *e*P **Pn 16 21 10.1 -1.7**
KIV pmax pmax
comp=Z,7.0nm,0.9s
KIV Kislovodsk 19.38 103 *e*P **Pn 16 21 10.1 -1.7**
comp=Z,7.0nm,0.9s
ZEI Tsey 20.77 104 *e*P **P 16 21 26.5 +0.6**
ZEI pmax pmax
comp=Z,11nm,0.4s
ZEI Tsey 20.77 104 *e*P **P 16 21 26.5 +0.6**
comp=Z,11nm,0.4s
MDT Midelt 24.05 227 P **P 16 22 01.5 +1.2**
comp=Z,1.5nm,0.8s,mb3.6,baz=317,slow=21,SNR=2.4
MDT Midelt 24.05 227 P **P 16 22 01.5 +1.2**
ASF Jabal al Asfar 24.68 134 P **P 16 22 06.5 +0.5**
comp=Z,0.8nm,0.3s,mb3.9,baz=190,slow=11,SNR=3.8
ASF Jabal al Asfar 24.68 134 P **P 16 22 06.5 +0.5**
ASF pmax pmax
comp=Z,1.0nm,0.3s
ARU Arti 25.14 62*d i*P **P 16 22 09.8 -0.2**
ARU *e* 16 22 43.8
ARU S **S 16 26 35.3 -0.3**
ARU SS 16 27 26.3
ARU pmax pmax
comp=Z,18nm,1.7s,mb4.5
ARU Arti 25.14 62 *e*Pn **P 16 22 09.5 -0.5**
comp=Z,6.8nm,0.7s,mb4.5
ARU Arti 25.14 62 *e*Pn **P 16 22 09.5 -0.5**
comp=Z,6.8nm,0.7s,mb4.5
ARU Arti 25.14 62 *i* P **P 16 22 09.8 -0.2**
comp=Z,18nm,1.7s,mb4.5
ARU S **S 16 26 35.3 -0.3**
AKTK Aktyubinsk 26.18 76 P **P 16 22 19.6 +0.1**
AKTK Aktyubinsk 26.18 76 P **P 16 22 19.6 +0.2**
comp=Z,5.0nm,0.7s,mb4.2
AKTO Aktyubinsk 26.18 76 P **P 16 22 19.6 +0.1**
comp=Z,5.0nm,0.7s,mb4.3,baz=285,slow=9.4,SNR=28
AKTO Aktyubinsk 26.18 76 P **P 16 22 19.6 +0.2**
AKTO pmax pmax
comp=Z,5.0nm,0.7s,mb4.2

SVE	**Sverdlovsk**	**26.23**	**61**	*e*P	**P**	**16 22 20.0 +0.1**
SVE				pmax	pmax	
comp=Z,11nm,0.9s,mb4.5						
SVE	**Sverdlovsk**	**26.23**	**61**	*e*P	**P**	**16 22 20.0 +0.1**
comp=Z,11nm,0.9s,mb4.5						
SPITS	**Spitsbergen Ar**	**26.72**	**0**	P	**P**	**16 22 25.4 +1.2**
comp=Z,1.7nm,0.5s,mb4.0,baz=191,slow=16,SNR=6.4						
SPITS	**Spitsbergen Ar**	**26.72**	**0**	P	**P**	**16 22 25.4 +1.3**
SPITS				pmax	pmax	
comp=Z,2.0nm,0.5s						
SPITS	**Spitsbergen Ar**	**26.72**	**0**	P	**P**	**16 22 25.4 +1.3**
comp=Z,2.0nm,0.5s,mb4.1						
BRVK	**Borovoye**	**32.53**	**66**	*e*P	**P**	**16 23 17.3 +1.5**
BRVK				pmax	pmax	
comp=Z,12nm,1.7s,mb4.5						
BRVK	**Borovoye**	**32.53**	**66**	*e*P	**P**	**16 23 17.3 +1.5**
comp=Z,12nm,1.7s,mb4.5						
BVAR	**Borovoye Array**	**32.60**	**66**	P	**P**	**16 23 17.6 +1.1**
comp=Z,2.5nm,0.6s,mb4.3,baz=289,slow=7.3,SNR=18						
BVAR	**Borovoye Array**	**32.60**	**66**	P	**P**	**16 23 17.6 +1.2**
BVAR				pmax	pmax	
comp=Z,3.0nm,0.6s						
BVAR	**Borovoye Array**	**32.60**	**66**	P	**P**	**16 23 17.6 +1.2**
comp=Z,3.0nm,0.6s,mb4.4						
KURK	**Kurchatov**	**38.20**	**66**	*ce*P	**P**	**16 24 05.3 +0.7**
KURK				*e*		16 25 37.2
KURK				pmax	pmax	
comp=Z,8.0nm,1.7s,mb4.2						
KURK	**Kurchatov**	**38.20**	**66**	*e*P	**P**	**16 24 05.3 +0.7**
comp=Z,8.0nm,1.7s,mb4.2						
AAK	**Ala-Archa**	**39.80**	**79**	P	**P**	**16 24 19.3 +1.2**
comp=Z,3.0nm,0.6s,mb4.1,baz=286,slow=4.8,SNR=8.2						
AAK	**Ala-Archa**	**39.80**	**79**	*e*P	**P**	**16 24 20.4 +2.3**
AAK				pmax	pmax	
comp=Z,4.0nm,1.0s,mb4.0						
AAK	**Ala-Archa**	**39.80**	**79**	P	**P**	**16 24 19.3 +1.2**
TORD	**Torodi Ar. Bea**	**40.04**	**202**	P	**P**	**16 24 20.8 +0.5**
comp=Z,2.5nm,0.9s,mb3.9,baz=7.9,slow=7.7,SNR=8.5						
ZAA0	**Zalesovo Array**	**40.20**	**59**	*e*Pn	**P**	**16 24 21.9 +0.6**
ZAA0	**Zalesovo Array**	**40.20**	**59**	*e*Pn	**P**	**16 24 21.9 +0.6**
ZALV	**Zalesovo Beam**	**40.20**	**59**	P	**P**	**16 24 21.4 +0.1**
comp=Z,1.2nm,0.7s,mb3.7,baz=294,slow=8.0,SNR=6.3						
ZALV	**Zalesovo Beam**	**40.20**	**59**	P	**P**	**16 24 21.4 +0.1**
ZALV				pmax	pmax	
comp=Z,1.0nm,0.7s,mb3.5						
MKAR	**Makanchi Array**	**42.23**	**69**	P	**P**	**16 24 38.8 +0.7**
comp=Z,1.3nm,0.7s,mb3.8,baz=299,slow=6.2,SNR=8.2						
MKAR	**Makanchi Array**	**42.23**	**69**	*ce*P	**P**	**16 24 39.0 +0.9**
MKAR				pmax	pmax	
comp=Z,1.0nm,0.7s						
SCHQ	**Schefferville**	**47.00**	**308**	P	**P**	**16 25 15.8 -0.3**
comp=Z,3.8nm,0.8s,mb4.6,baz=66,slow=5.4,SNR=5.9						
SCHQ	**Schefferville**	**47.00**	**308**	P	**P**	**16 25 15.8 -0.3**
TLY	**Talaya**	**51.12**	**53**	*e*P	**P**	**16 25 49.4 +1.7**
TLY				pmax	pmax	
comp=Z,6.0nm,1.5s,mb4.3						
TLY	**Talaya**	**51.12**	**53**	*e*P	**P**	**16 25 49.4 +1.7**
comp=Z,6.0nm,1.5s,mb4.3						
SONM	**Songino Array**	**54.91**	**55**	P	**P**	**16 26 17.1 +1.4**
comp=Z,1.8nm,0.7s,mb4.2,baz=289,slow=8.4,SNR=13						
SONM	**Songino Array**	**54.91**	**55**	P	**P**	**16 26 17.1 +1.4**
SONM				pmax	pmax	
comp=Z,2.0nm,0.7s						
SONM	**Songino Array**	**54.91**	**55**	P	**P**	**16 26 17.1 +1.4**
comp=Z,2.0nm,0.7s,mb4.3						
YAK	**Yakutsk**	**55.18**	**32**	*e*P	**P**	**16 26 16.9 -0.5**
YAK				pmax	pmax	
comp=Z,13nm,0.7s,mb5.1						
YAK	**Yakutsk**	**55.18**	**32**	*e*P	**P**	**16 26 16.4 -1.0**
comp=Z,14nm,0.7s,mb5.1						
YAK	**Yakutsk**	**55.18**	**32**	*e*P	**P**	**16 26 16.9 -0.5**
comp=Z,13nm,0.7s,mb5.1						
YKA	**Yellowknife Ar**	**59.79**	**336**	P	**P**	**16 26 50.9 +1.0**
comp=Z,2.8nm,0.7s,mb4.4,baz=29,slow=6.7,SNR=10						
YKA	**Yellowknife Ar**	**59.79**	**336**	P	**P**	**16 26 50.9 +1.0**
YKA				pmax	pmax	
comp=Z,3.0nm,0.7s						
YKA	**Yellowknife Ar**	**59.79**	**336**	P	**P**	**16 26 50.9 +1.0**
YKA	**Yellowknife Ar**	**59.79**	**336**	P	**P**	**16 26 50.9 +1.0**
comp=Z,3.0nm,0.7s,mb4.4						
FFC	**Flin Flon**	**62.21**	**325**	*i* P	**P**	**16 27 08.8 +2.4**
FFC	**Flin Flon**	**62.21**	**325**	*i* P	**P**	**16 27 08.8 +2.4**
ILAR	**Eielson Array**	**63.25**	**352**	P	**P**	**16 27 14.8 +1.6**
comp=Z,0.4nm,0.6s,mb3.7,baz=350,slow=5.9,SNR=7.0						
ILAR	**Eielson Array**	**63.25**	**352**	P	**P**	**16 27 14.8 +1.6**
CHTO	**Chiang Mai**	**71.12**	**83**	*e*P	**P**	**16 28 04.3 +0.4**
CHTO				pmax	pmax	
comp=Z,6.0nm,1.1s,mb4.6						
CHTO	**Chiang Mai**	**71.12**	**83**	*e*P	**P**	**16 28 04.3 +0.4**
comp=Z,5.8nm,1.1s,mb4.6						
CMAR	**Chiang Mai Arr**	**71.39**	**84**	P	**P**	**16 28 06.1 +0.6**
comp=Z,1.5nm,0.7s,mb4.2,baz=307,slow=7.1,SNR=12						
CMAR	**Chiang Mai Arr**	**71.39**	**84**	P	**P**	**16 28 06.1 +0.6**
CMAR				pmax	pmax	
comp=Z,2.0nm,0.7s						
YSS	**Yuzh-Sakhalins**	**71.72**	**35**	*e*P	**P**	**16 28 06.0 -1.1**
YSS				pmax	pmax	
comp=Z,40nm,1.2s,mb5.4						
YSS	**Yuzh-Sakhalins**	**71.72**	**35**	P	**P**	**16 28 05.4 -1.7**
comp=Z,38nm,1.3s,mb5.4						
SWMT	**Swartz Lake**	**72.42**	**327**	*e*P	**P**	**16 28 12.1 +0.8**
comp=Z,3.2nm,0.5s,mb4.7						
PDAR	**Pinedale Array**	**74.87**	**322**	P	**P**	**16 28 27.1 +1.3**
comp=Z,1.5nm,0.6s,mb4.2,baz=47,slow=5.6,SNR=15						
ISCO	**Idaho Springs**	**75.78**	**317**	*e*P	**P**	**16 28 32.9 +1.9**
HLID	**Hailey**	**75.99**	**325**	*e*P	**P**	**16 28 34.0 +1.8**
comp=Z,3.7nm,0.8s,mb4.6						
BOSA	**Boshof**	**80.24**	**172**	P	**P**	**16 28 57.8 +2.1**
comp=Z,3.5nm,1.0s,mb4.2,baz=195,slow=3.1,SNR=4.8						
BOSA	**Boshof**	**80.24**	**172**	P	**P**	**16 28 57.8 +2.1**
BOSA				pmax	pmax	
comp=Z,4.0nm,1.0s,mb4.3						
NVAR	**Mina Array Bea**	**81.90**	**325**	P	**P**	**16 29 06.9 +2.2**
comp=Z,0.6nm,0.7s,mb3.9,baz=46,slow=3.1,SNR=4.6						
TXAR	**Lajitas Array**	**83.65**	**310**	P	**P**	**16 29 16.0 +2.0**
comp=Z,0.9nm,0.8s,mb4.1,baz=39,slow=4.8,SNR=7.6						
TXAR	**Lajitas Array**	**83.65**	**310**	P	**P**	**16 29 16.0 +2.1**
TXAR				pmax	pmax	
comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**125.40**	**84**	PKP	PKPdf	16 35 46.2 0.0
comp=Z,0.5nm,0.6s,baz=357,slow=1.7,SNR=9.7						
ASAR	**Alice Springs**	**125.40**	**84**	PKIKP	PKPdf	16 35 46.3 0.0
ASAR				pmax	pmax	
comp=Z,1.0nm,0.6s						

*ISK **23** 16:28:39.2, 37°.53N×35°.67E, h2km, MD3.3*
*DDA **23** 16:28:39.8, 37°.53N×35°.68E, h7km±3km, Md3.2*
*ISCJB **23** 16:28:40.1±0.5, 37°.52N±0°.03×35°.69E±0°.03, h5km±5km, Error ellipse: s-maj=4.3km s-min=3.7km az=176.1*
*CSEM **23** 16:28:40.0±0.1, 37°.51N×35°.67E, h2km, MD3.3, Error ellipse: s-maj=3.4km s-min=3.1km az=41.0*
ISC 23 16:28:40.8±0.5, 37°.51N±0°.03×35°.69E±0°.03, h8km±4km, n49, σ0992/67, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.12**	**104**	PG	**Pg**	**16 28 42.7**	**-0.7**
KOZT				*e*SG	**Sg**	**16 28 45.3**	**0.0**
CEYT	**Ceyhan**	**0.50**	**174**	PG	**Pg**	**16 28 50.2**	**-0.2**
CEYT				*e*SG	**Sg**	**16 28 58.4**	**+1.4**
CEYT	**Ceyhan**	**0.50**	**174**	*i* Pg	**Pg**	**16 28 50.3**	**-0.2**
CEYT				*e*Sg	**Sg**	**16 28 58.4**	**+1.4**
ANDN	**Andirin**	**0.53**	**82**	*i* P	**Pg**	**16 28 50.1**	**-0.9**
ANDN				*i* S	**Sg**	**16 28 58.6**	**+0.6**
ANDN	**Andirin**	**0.53**	**82**	*i* P	**Pg**	**16 28 50.2**	**-0.9**
ANDN				*i* S	**Sg**	**16 28 58.6**	**+0.6**
KARA	**Karaisali**	**0.56**	**244**	*e*PG	**Pg**	**16 28 50.9**	**-0.7**
KARA	**Karaisali**	**0.56**	**244**	*e*Pg	**Pg**	**16 28 50.9**	**-0.7**
YURE	**YUREGIR**	**0.68**	**184**	*i* P	**Pg**	**16 28 53.8**	**-0.1**
YURE				*i* S	**Sg**	**16 29 05.6**	**+2.8**
YURE	**YUREGIR**	**0.68**	**184**	*i* P	**Pg**	**16 28 53.8**	**-0.2**
YURE				*i* S	**Sg**	**16 29 05.6**	**+2.8**
GULE	**Gulek**	**0.76**	**253**	*i* P	**Pg**	**16 28 54.4**	**-1.0**
GULE				*i* S	**Sg**	**16 29 07.1**	**+1.8**
GULE	**Gulek**	**0.76**	**253**	*i* P	**Pg**	**16 28 54.4**	**-1.0**
GULE				*i* S	**Sg**	**16 29 07.1**	**+1.9**
KRTS	**Karatas**	**0.97**	**195**	*e*PG	**Pg**	**16 28 58.2**	**-1.2**
KRTS	**Karatas**	**0.97**	**195**	*e*Pg	**Pg**	**16 28 58.2**	**-1.2**
COBT	**Iskenderun**	**1.09**	**155**	*i* P	**Pg**	**16 29 01.2**	**-0.5**
COBT				*i* S	**Sg**	**16 29 16.1**	**+0.3**
COBT	**Iskenderun**	**1.09**	**155**	*i* P	**Pg**	**16 29 01.2**	**-0.5**
COBT				*i* S	**Sg**	**16 29 16.1**	**+0.3**
MERS	**Mersin**	**1.13**	**236**	*e*PN	**Pg**	**16 29 01.4**	**-1.0**
MERS	**Mersin**	**1.13**	**236**	*e*Pn	**Pg**	**16 29 01.4**	**-1.0**
GAZ	**Gaziantep**	**1.26**	**105**	*e*PN	**Pn**	**16 29 03.8**	**-0.9**
GAZ	**Gaziantep**	**1.26**	**105**	*e*Pn	**Pn**	**16 29 03.8**	**-0.9**
KUZU	**Kuzuini**	**1.33**	**123**	*i* P	**Pn**	**16 29 04.6**	**-1.0**
KUZU				*i* S	**Sb**	**16 29 22.5**	**-0.7**
KUZU	**Kuzuini**	**1.33**	**123**	*i* P	**Pn**	**16 29 04.6**	**-1.1**
KUZU				*i* S	**Sb**	**16 29 22.5**	**-0.7**
SARI	**SarD1z-Kayseri**	**1.42**	**34**	*e*PG	**Pn**	**16 28 59.7**	**-7.1**
AVNT	**Avonos**	**1.43**	**333**	*i* P	**Pn**	**16 29 06.0**	**-1.0**
AVNT				*i* S	**Sn**	**16 29 26.0**	**+0.1**
AVNT	**Avonos**	**1.43**	**333**	*i* P	**Pn**	**16 29 06.0**	**-1.0**
AVNT				*i* S	**Sn**	**16 29 26.0**	**+0.1**
GZT	**Gaziantep**	**1.50**	**95**	*i* P	**Pn**	**16 29 06.6**	**-1.4**
YAYL	**Yayladag**	**1.51**	**167**	*i* P	**Pn**	**16 29 06.7**	**-1.4**
YAYL				*i* S	**Sn**	**16 29 28.7**	**+0.7**
YAYL	**Yayladag**	**1.51**	**167**	*i* P	**Pn**	**16 29 06.7**	**-1.4**
YAYL				*i* S	**Sn**	**16 29 28.7**	**+0.8**
SULT	**Sultanhani-AKS**	**1.85**	**293**	*e*PN	**Pn**	**16 29 12.5**	**-0.3**
SULT	**Sultanhani-AKS**	**1.85**	**293**	*e*Pn	**Pn**	**16 29 12.5**	**-0.3**
AKCD	**Akcadag**	**1.94**	**65**	*i* P	**Pn**	**16 29 14.1**	**+0.1**
AKCD				*i* S	**Sg**	**16 29 44.0**	**+1.0**
AKCD	**Akcadag**	**1.94**	**65**	*i* P	**Pn**	**16 29 14.1**	**+0.1**
IKL	**Isikli**	**2.04**	**232**	*e*PN	**Pn**	**16 29 16.1**	**+0.6**
IKL	**Isikli**	**2.04**	**232**	*e*Pn	**Pn**	**16 29 16.1**	**+0.6**
YOZ	**Yozgat**	**2.15**	**352**	*e*PN	**Pn**	**16 29 16.7**	**-0.1**
YOZ	**Yozgat**	**2.15**	**352**	*e*Pn	**Pn**	**16 29 16.7**	**-0.2**
KAMT	**Kaman**	**2.42**	**321**	*e*PN	**Pn**	**16 29 21.2**	**+0.6**
KAMT	**Kaman**	**2.42**	**321**	*e*Pn	**Pn**	**16 29 21.2**	**+0.6**
URFA	**Urfa**	**2.50**	**91**	*e*PN	**Pn**	**16 29 22.8**	**+1.1**
URFA	**Urfa**	**2.50**	**91**	*e*Pn	**Pn**	**16 29 22.8**	**+1.1**
SVSK	**Karacayir**	**2.62**	**23**	*e*PN	**Pn**	**16 29 23.9**	**+0.6**
SVSK	**Karacayir**	**2.62**	**23**	*e*Pn	**Pn**	**16 29 23.9**	**+0.6**
KONT	**Konya--Tatoy**	**2.67**	**280**	*e*PN	**Pn**	**16 29 24.3**	**+0.2**
KONT	**Konya--Tatoy**	**2.67**	**280**	*e*Pn	**Pn**	**16 29 24.3**	**+0.2**
CORM	**Corum**	**2.79**	**343**	*e*PN	**Pn**	**16 29 26.4**	**+0.6**
CORM	**Corum**	**2.79**	**343**	*e*Pn	**Pn**	**16 29 26.4**	**+0.7**
SVRC	**Sivrice-ELAZID**	**2.99**	**72**	*e*PN	**Pn**	**16 29 29.8**	**+1.3**
SVRC	**Sivrice-ELAZID**	**2.99**	**72**	*e*Pn	**Pn**	**16 29 29.8**	**+1.3**
PTK	**Pertek**	**3.23**	**64**	*e*PN	**Pn**	**16 29 32.5**	**+0.7**
PTK	**Pertek**	**3.23**	**64**	*e*Pn	**Pn**	**16 29 32.5**	**+0.7**

*ISCJB **23** 16:44:00.1±0.8, 34°.81N±0°.06×28°.1E±0°.1, h35km, Error ellipse: s-maj=12.6km s-min=7.8km az=155.6*
*HLW **23** 16:44:04.8, 34°.64N×28°.17E, h35km±50km, Md3.1*
*ATH **23** 16:44:06.6, 36°.14N×27°.09E, h10km, MD3.2/3*
ISC 23 16:44:01.6±0.8, 34°.86N±0°.06×28°.0E±0°.1, h35km, n10, σ1903/12, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.98**	**315**	*e*PB	**Pn**	**16 44 18.0**	**-0.8**
ARG	**Arkhangelos**	**1.36**	**4**	*e*PB	**Pn**	**16 44 22.6**	**-1.4**
NPS	**Neapolis**	**2.01**	**282**	*e*PB	**Pn**	**16 44 34.2**	**+1.2**
HMAT	**Matruh**	**3.83**	**192**	P	**Pn**	**16 44 58.9**	**+0.9**
baz=195							
HMAT				S	**Sn**	**16 45 39.3**	**-2.5**
baz=195							
SLUM		**4.10**	**216**	P	**Pn**	**16 45 03.0**	**+1.3**
baz=220							
KOT	**Kottamia**	**5.88**	**146**	P	**Pn**	**16 45 26.1**	**0.0**
baz=145							
HHAG	**Hagoal**	**5.99**	**144**	P	**Pn**	**16 45 28.1**	**+0.4**
baz=143							
HSAF	**As Saff**	**6.02**	**149**	P	**Pn**	**16 45 28.6**	**+0.4**
baz=149							
HFRF	**Wahat Farafira**	**7.69**	**178**	P	**Pn**	**16 45 50.8**	**-0.2**
baz=179							
HFRF				S	**Sn**	**16 47 11.9**	**-5.0**
baz=179							
HDHB	**Dhahab**	**8.30**	**136**	P	**Pn**	**16 45 59.9**	**+0.4**
baz=135							

KRSC 23 16:44:10.5±0.7, 55°.95N×164°.58E, h11km±11km, ML3.9, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**1.02**	**285**	*i* P	Pg	16 44 28.5	-1.6
KBTR				*i* S	Sg	16 44 41.5	-1.9
BKI	**Bering**	**1.09**	**133**	*i* P	Pb	16 44 29.3	-2.0
BKI				*i* S	Sb	16 44 43.1	-2.4
SRKR	**Sorokina**	**2.03**	**292**	*e*P	Pn	16 44 44.5	0.0
SRKR				*i* S	Sn	16 45 09.4	-0.4
ZLN	**Zelenaya**	**2.12**	**273**	*e*P	Pn	16 44 47.0	+1.2
ZLN				*i* S	Sn	16 45 13.3	+1.1
MKZ	**Mys Kozlova**	**2.15**	**231**	*e*P	Pn	16 44 46.5	+0.3
MKZ				*i* S	Sn	16 45 12.2	-0.6
BZGR	**Bezymyannyi-Gr**	**2.19**	**271**	P	Pn	16 44 47.9	+1.2
BZGR				*i* S	Sn	16 45 15.5	+1.8
KLY	**Klyuchi**	**2.23**	**281**	*i* P	Pn	16 44 46.1	-1.2
KLY				*i* S	Sn	16 45 12.7	-2.1
KRSR	**Krestovskiy**	**2.27**	**278**	P	Pn	16 44 48.1	+0.3
KRSR				*i* S	Sn	16 45 16.2	+0.5
KPT	**Kopyto**	**2.45**	**272**	*e*P	Pn	16 44 51.2	+0.9
KPT				*i* S	Sn	16 45 21.6	+1.4
KMNR	**Kamenistaya**	**2.46**	**267**	*e*P	Pn	16 44 52.3	+1.9
KMNR				*e*S	Sn	16 45 23.4	+3.0
KOZ	**Kozyrevsk**	**2.65**	**274**	*e*P	Pn	16 44 54.7	+1.7
KOZ				*i* S	Sn	16 45 26.7	+1.6
SRDR	**Sredinnyy**	**2.75**	**280**	*e*P	Pn	16 44 55.5	+1.1
SRDR				*i* S	Sn	16 45 28.0	+0.5
AVH	**Avacha**	**4.33**	**234**	*e*P	Pn	16 45 18.2	+2.0
AVH				*i* S	Sn	16 46 08.4	+1.8
GNL	**Ganaly**	**4.45**	**242**	*e*P	Pn	16 45 20.2	+2.3
GNL				*e*S	Sn	16 46 11.4	+1.8
PET	**Petropavlovsk**	**4.53**	**232**	P	Pn	16 45 20.4	+1.5
PET				*i* S	Sn	16 46 11.6	+0.1
MIPR	**Malaya Ipel'ka**	**5.89**	**235**	P	Pn	16 45 39.8	+2.2

*IDC **23** 16:48:19.0±4.9, 5°.60S×148°.29E, h130km±37km, mb3.6/5, mb1 3.8/5, mb1mx3.4/17, mbtmp3.6/5, Error ellipse: s-maj=69.1km s-min=17.4km az=109.0*
*ISCJB **23** 16:48:20.6±2.9, 5°.5S±0°.2×148°.0E±0°.3, h147km±32km, mb3.8/5, Error ellipse: s-maj=55.4km s-min=28.7km az=28.7*
*NEIC **23** 16:48:22.2±2.3, 5°.60S×148°.08E, h156km±25km, mb3.9/1, Error ellipse: s-maj=48.7km s-min=21.6km az=118.0*
ISC 23 16:48:20.7±2.0, 5°.4S±0°.1×148°.0E±0°.3, h131km±19km, n12, σ0992/12, mb3.8/5, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.01**	**191**	*e*Pn	**Pn**	**16 49 20.5**	**-0.2**
COEN	**Coen**	**9.68**	**209**	Pn	**Pn**	**16 50 38.0**	**+1.2**
KAKA	**Kakadu**	**16.93**	**244**	P	**Pn**	**16 52 09.6**	**-0.2**
WRAB	**Tennant Creek**	**19.56**	**221**	*e*P	**P**	**16 52 37.7**	**-0.7**
2.6nm,0.5s							
ASAR	**Alice Springs**	**22.61**	**215**	P	**P**	**16 53 10.1**	**-0.6**
4.2nm,0.5s,mb4.2,baz=49,slow=8.7,SNR=186							
ASAR				PcP	PcP	16 56 57.5	-1.7
0.2nm,0.4s,baz=2.4,slow=2.2,SNR=5.5							
ASAR				S	**S**	**16 57 09.6**	**+1.0**
0.7nm,0.8s,baz=40,slow=23,SNR=4.3							
FITZ	**Fitzroy Crossi**	**25.16**	**238**	P	**P**	**16 53 34.0**	**0.0**
3.4nm,0.3s,mb4.3,baz=57,slow=9.0,SNR=28							
FITZ	**Fitzroy Crossi**	**25.16**	**238**	*e*P	**P**	**16 53 33.3**	**-0.8**
SONM	**Songino Array**	**64.39**	**330**	P	**P**	**16 58 44.4**	**+1.8**
0.4nm,0.5s,mb3.5,baz=156,slow=7.6,SNR=2.6							
MKAR	**Makanchi Array**	**77.67**	**320**	P	**P**	**17 00 03.0**	**+0.2**
0.4nm,0.3s,mb3.6,baz=97,slow=8.0,SNR=5.5							
ZALV	**Zalesovo Beam**	**79.05**	**328**	P	**P**	**17 00 08.8**	**-1.4**
0.4nm,0.4s,mb3.4,baz=97,slow=3.5,SNR=3.6							
ZALV	**Zalesovo Beam**	**79.05**	**328**	P	**P**	**17 00 08.8**	**-1.4**
TORD	**Torodi Ar. Bea**	**145.86**	**285**	PKPbc	PKPbc	17 07 44.6	-1.1
0.3nm,0.4s,baz=63,slow=2.9,SNR=6.3							

*NEIC **23** 17:02:00.0, 34°.75S×70°.27W, h17km, ML3.1(GUC), After GUC.*
GUC 23 17:02:00.0±0.7, 34°.75S×70°.27W, h17km±4km, MD3.6, ML3.1, 4C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CACH	**El Canelo**	**0.69**	**337**	*i* P	Pg	17 02 13.0	-0.6
CACH				*i* S	Sg	17 02 22.5	-0.2
CACH	**El Canelo**	**0.69**	**337**	*i* P	Pg	17 02 13.0	-0.6
CACH				*i* S	Sg	17 02 22.5	-0.2
CHCH	**Chadas Angostu**	**0.88**	**339**	*i* P	Pb	17 02 16.6	-0.2
CHCH	**Chadas Angostu**	**0.88**	**339**	*i* P	Pb	17 02 16.6	-0.2
LMEL	**Las Melosas**	**0.91**	**3**	*i* P	Pb	17 02 16.8	-0.5
LMEL				*i* S	Sb	17 02 29.7	+0.8
LMEL	**Las Melosas**	**0.91**	**3**	*i* P	Pb	17 02 16.8	-0.5
LMEL				*i* S	Sb	17 02 29.7	+0.8
LNV	**Longovilo**	**1.23**	**310**	*i* P	Pn	17 02 22.1	-0.3
LNV				*i* S	Sb	17 02 39.3	+0.8
LNV	**Longovilo**	**1.23**	**310**	*i* P	Pn	17 02 22.1	-0.3
LNV				*i* S	Sb	17 02 39.3	+0.8
CLCH	**Cerro Calan**	**1.37**	**351**	*e*P	Pn	17 02 25.1	+0.8
CLCH				*i* S	Sn	17 02 44.1	+2.0
CLCH				AML	AML	17 02 47.4	
comp=N,388nm,0.5s							
FCH	**Farellones**	**1.42**	**359**	*e*P	Pn	17 02 28.3	+3.3
FCH				*i* S	Sn	17 02 45.9	+2.6
PEL	**Peldehue**	**1.64**	**348**	*e*P	Pn	17 02 29.5	+1.4
PEL				*i* S	Sn	17 02 51.8	+3.0
PEL				AML	AML	17 02 53.5	
comp=E,525nm,0.3s							

*ISK **23** 17:09:31.2, 35°.48N×27°.47E, h17km, MD3.4*
*DDA **23** 17:09:31.7, 35°.55N×27°.43E, h22km±2km, Md3.3*
*NEIC **23** 17:09:33.7, 35°.56N×27°.45E, h38km, MD3.4(ISK), MD3.1(ATH), After ATH.*
*IDC **23** 17:09:33.6±5.9, 35°.40N×27°.52E, h35km±57km, mb3.5/3, mb1 3.5/6, mb1mx3.2/25, mbtmp3.5/6, ML3.3/3, MS4.5/1, Ms1 4.5/1, ms1mx3.5/33, Error ellipse: s-maj=36.7km s-min=24.5km az=124.0*
*ATH **23** 17:09:33.8, 35°.56N×27°.44E, h38km±2km, MD3.1/7*
*ISCJB **23** 17:09:33.8±0.5, 35°.51N±0°.04×27°.47E±0°.04, h47km±6km, mb3.5/3, Error ellipse: s-maj=7.3km s-min=4.6km az=156.9*
*CSEM **23** 17:09:34.6±0.3, 35°.52N×27°.48E, h36km±3km, MD3.1, Error ellipse: s-maj=6.8km s-min=3.9km az=159.0*
*THE **23** 17:09:36.4, 35°.60N×27°.41E, h30km±10km, ML4.1/1, Error ellipse: s-maj=10.9km s-min=0.6km az=160.0*
ISC 23 17:09:34.4±0.5, 35°.48N±0°.04×27°.49E±0°.04, h36km±8km, n83, σ1911/114, mb3.5/3, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.28**	**285**	*e*Pb	**Pn**	**17 09 41.3**	**-0.8**
KARP				*e*Sb	**Sn**	**17 09 46.8**	**-0.6**
KARP	**Karpathos**	**0.28**	**285**	*e*PB	**Pn**	**17 09 41.3**	**-0.8**
KARP				*e*SB	**Sn**	**17 09 46.8**	**-0.6**
KARP	**Karpathos**	**0.28**	**285**	*e*Pb	**Pn**	**17 09 41.3**	**-0.8**
KARP				*e*Sb	**Sn**	**17 09 46.8**	**-0.6**
ARG	**Arkhangelos**	**0.90**	**35**	*e*Pn	**Pn**	**17 09 51.1**	**+0.5**
ARG				*e*Sn	**Sn**	**17 10 03.3**	**+0.9**
ARG	**Arkhangelos**	**0.90**	**35**	*e*PN	**Pn**	**17 09 51.1**	**+0.5**
ARG				*e*SN	**Sn**	**17 10 03.3**	**+0.9**
ARG	**Arkhangelos**	**0.90**	**35**	P	**Pn**	**17 09 51.1**	**+0.5**
ARG				S	**Sn**	**17 10 02.4**	**0.0**
ARG	**Arkhangelos**	**0.90**	**35**	P	**Pn**	**17 09 51.1**	**+0.5**
ARG				S	**Sn**	**17 10 02.4**	**0.0**
ARG				*e*Sn	**Sn**	**17 10 03.3**	**+0.9**
ZKR	**Zakros**	**1.10**	**251**	P	**Pn**	**17 09 54.2**	**+0.9**
ZKR	**Zakros**	**1.10**	**251**	P	**Pn**	**17 09 54.2**	**+0.9**
NIS1	**Nisyros Isl.**	**1.15**	**348**	P	**Pn**	**17 09 53.6**	**-0.4**
NIS1				S	**Sn**	**17 10 06.9**	**-1.6**
NIS1	**Nisyros Isl.**	**1.15**	**348**	P	**Pn**	**17 09 53.6**	**-0.4**
NIS1				S	**Sn**	**17 10 06.9**	**-1.6**
DAT	**Datca**	**1.25**	**3**	*e*PN	**Pn**	**17 09 54.6**	**-0.8**
DAT				*e*SN	**Sn**	**17 10 11.2**	**+0.2**
DAT	**Datca**	**1.25**	**3**	*e*Pn	**Pn**	**17 09 54.6**	**-0.8**
DAT				*e*Sn	**Sn**	**17 10 11.2**	**+0.2**
NPS	**Neapolis**	**1.

HFS	**Hagfors**	**26.24**	**344**	P	**P**	**17 15 05.2**	**-0.5**
AKTO	**Aktyubinsk**	**26.65**	**46**	LR	LR	17 27 09.5	
comp=Z,932nm,18.7s,baz=196,slow=40							
TORD	**Torodi Ar. Bea**	**32.17**	**233**	P	**P**	**17 15 58.4**	**-0.5**
0.3nm,0.3s,mb3.5,baz=36,slow=8.7,SNR=4.3							
MKAR	**Makanchi Array**	**42.01**	**57**	P	**P**	**17 17 21.5**	**-0.5**
0.3nm,0.4s,mb3.2,baz=278,slow=5.4,SNR=3.2							
MKAR	**Makanchi Array**	**42.01**	**57**	P	**P**	**17 17 21.5**	**-0.5**

GUC 23 17:16:13.0±0.7, 21.°61S×68.°60W, h148km±10km, ML3.6, 3C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**1.00**	**304**	⇑*iP*	Pn	17 16 38.1	+0.5
PB01				*i* S	Sn	17 16 57.0	+0.8
PB01				AML	AML	17 16 57.9	
comp=N,858nm,0.4s							
PB04	**Plate Boundary**	**1.05**	**232**	*e*P	Pn	17 16 44.7	+6.7
PB04				*e*S	Sn	17 17 07.5	+10
PB04				AML	AML	17 17 08.7	
comp=E,324nm,0.1s							
MACH	**Maria Elena**	**1.23**	**241**	*e*P	Pn	17 16 40.3	+0.7
MACH				*e*S	Sn	17 17 00.7	+0.8
TOCH	**Tocopilla**	**1.57**	**252**	*e*P	Pn	17 16 43.9	+0.8
TOCH				*e*S	Sn	17 17 06.8	+0.7
TOCH				AML	AML	17 17 07.4	
comp=E,1μm,0.2s							
HMBC	**Humberston**	**1.79**	**317**	⇑*e*P	Pn	17 16 46.3	+0.7
HMBC				*i* S	Sn	17 17 12.1	+1.5
CEN1	**Los Morros**	**2.31**	**220**	⇑*i*P	Pn	17 16 55.4	+3.7
CEN1				*i* S	Sn	17 17 24.7	+3.2
MNMC	**Miæe Miæ**	**2.64**	**339**	*e*P	Pn	17 16 57.1	+1.4
MNMC				*e*S	Sn	17 17 30.8	+2.1

*ISCJB **23** 17:24:45.8±4.1, 6.°1N±0.°2×94.°6E±0.°4, h106km±32km, mb3.7/6, Error ellipse: s-maj=65.5km s-min=14.2km az=153.3*
*NEIC **23** 17:24:45.7±3.2, 6.°02N×94.°47E, h90km±23km, mb4.2/1, Error ellipse: s-maj=52.3km s-min=11.2km az=67.0*
*IDC **23** 17:24:46.1±5.6, 6.°11N×94.°64E, h88km±44km, mb3.4/5, mb1 3.5/7, mb1mx3.3/24, mbtmp3.4/7, Error ellipse: s-maj=84.9km s-min=18.0km az=62.0*
ISC 23 17:24:47.1±3.9, 6.°1N±0.°2×94.°6E±0.°4, h100km±29km, n9, σ0°43/11, mb3.7/6, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**5.41**	**127**	P	**Pn**	**17 26 05.6**	**+0.2**
6.0nm,0.3s,baz=323,slow=11,SNR=23							
PSI				S	**Sn**	**17 27 06.0**	**-0.4**
0.9nm,0.3s,baz=322,slow=23,SNR=2.7							
PSI	**Prapat**	**5.41**	**127**	P	**Pn**	**17 26 05.6**	**+0.2**
PSI				S	**Sn**	**17 27 06.0**	**-0.4**
CMAR	**Chiang Mai Arr**	**13.03**	**19**	P	**Pn**	**17 27 48.8**	**+0.4**
0.2nm,0.3s,baz=208,slow=13,SNR=4.8							
MKAR	**Makanchi Array**	**41.93**	**347**	P	**P**	**17 32 28.2**	**+0.4**
0.3nm,0.6s,mb3.2,baz=162,slow=10,SNR=4.8							
SONM	**Songino Array**	**42.82**	**12**	P	**P**	**17 32 34.5**	**-0.5**
0.7nm,0.6s,mb3.6,baz=189,slow=8.5,SNR=6.5							
WRAB	**Tennant Creek**	**46.88**	**124**	*e*P	**P**	**17 33 07.7**	**+0.1**
2.3nm,0.6s,mb4.1							
ZALV	**Zalesovo Beam**	**48.39**	**352**	P	**P**	**17 33 18.8**	**0.0**
0.3nm,0.3s,mb3.6,baz=152,slow=9.9,SNR=4.2							
ASAR	**Alice Springs**	**48.44**	**129**	P	**P**	**17 33 20.2**	**+0.6**
1.4nm,0.7s,mb3.9,baz=302,slow=8.0,SNR=29							
BVAR	**Borovoye Array**	**50.83**	**341**	P	**P**	**17 33 36.5**	**-0.8**
0.3nm,0.4s,mb3.7,baz=108,slow=8.1,SNR=4.0							

*ISCJB **23** 17:29:45.0±1.3, 13.°41N±0.°09×91.°41W±0.°07, h40km±13km, mb4.0/5, Error ellipse: s-maj=18.0km s-min=6.2km az=33.2*
*IDC **23** 17:29:44.6±1.9, 14.°50N×90.°64W, h0km, mb3.9/2, mb1 4.1/5, mb1mx3.8/21, mbtmp3.7/5, ML3.4/3, Error ellipse: s-maj=111.9km s-min=17.2km az=37.0*
*CASC **23** 17:29:45.9±1.8, 13.°49N×91.°34W, h30km±23km, MD3.9, mb4.0(NEIC)*
*NEIC **23** 17:29:46.4±1.0, 14.°34N×90.°78W, h10km, mb4.0/3, Error ellipse: s-maj=23.9km s-min=9.2km az=208.0*
ISC 23 17:29:47.2±1.2, 13.°53N±0.°09×91.°34W±0.°07, h37km±13km, n30, σ0°87/35, mb4.0/5, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.83**	**340**	*e*P	**Pn**	**17 30 02.3**	**-0.2**
FUG	**Fuego 3**	**1.03**	**28**	*e*P	**Pn**	**17 30 05.1**	**-0.1**
IXG	**Ixpaco**	**1.07**	**53**	*e*P	**Pn**	**17 30 04.8**	**-1.0**
FG6		**1.12**	**24**	*e*P	**Pn**	**17 30 06.7**	**+0.3**
PCG	**Pacaya**	**1.12**	**40**	*e*P	**Pn**	**17 30 06.5**	**+0.1**
TP2	**Tecpan 2**	**1.28**	**14**	*e*P	**Pn**	**17 30 09.1**	**+0.3**
NBG	**Las Nubes**	**1.43**	**42**	*e*P	**Pn**	**17 30 11.4**	**+0.8**
RTR	**El Retiro**	**1.69**	**77**	*e*P	**Pn**	**17 30 13.5**	**-0.7**
SBLS	**San Blas**	**1.70**	**79**	*e*P	**Pn**	**17 30 13.5**	**-0.9**
RBDL	**Robledal**	**1.71**	**70**	*e*P	**Pn**	**17 30 13.5**	**-1.0**
RBDL				*e*S	**Sn**	**17 30 35.1**	**-0.1**
SNJE	**San Jose**	**1.72**	**79**	*e*P	**Pn**	**17 30 13.8**	**-1.0**
BOQS	**Boqueron**	**2.02**	**84**	*e*P	**Pn**	**17 30 18.2**	**-0.6**
BOQS				*e*S	**Sn**	**17 30 44.9**	**+2.1**
MRL	**Marmol**	**2.21**	**46**	*e*P	**Pn**	**17 30 22.9**	**+1.4**
LFRS	**El Faro**	**2.22**	**87**	*e*P	**Pn**	**17 30 21.8**	**+0.3**
LBRS	**Las Brisas**	**2.25**	**84**	*e*P	**Pn**	**17 30 21.4**	**-0.5**
SNVI	**San Vicente**	**2.44**	**88**	*e*P	**Pn**	**17 30 24.6**	**+0.1**
CAHU	**Cacacuatique**	**3.05**	**85**	*e*P	**Pn**	**17 30 32.2**	**-0.8**
CNCH	**Conchagua**	**3.42**	**94**	*e*P	**Pn**	**17 30 37.7**	**-0.5**
TGUH	**Tegucigalpa,Un**	**3.99**	**82**	*e*Pg	**Pn**	**17 30 51.8**	**+5.9**
CMIG	**Matias Romero**	**4.92**	**316**	Pn	**Pn**	**17 30 57.8**	**-0.9**
0.4nm,0.3s,baz=101,slow=11,SNR=4.0							
CMIG				Pg	**Pn**	**17 31 12.1**	**+13**
3.2nm,0.3s,baz=140,slow=8.7,SNR=1							
CMIG				Sn	**Sn**	**17 31 55.4**	**+0.9**
2.2nm,0.3s,baz=169,slow=20,SNR=3.5							
JTS	**JuntasAbangare**	**7.03**	**117**	Pn	**Pn**	**17 31 29.6**	**+1.8**
0.7nm,0.3s,baz=308,slow=23,SNR=4.1							
JTS				Sn	**Sn**	**17 32 47.2**	**+0.6**
1.1nm,0.3s,baz=269,slow=18,SNR=2.5							
JTS				Lg		17 33 25.0	
0.6nm,0.3s,baz=174,slow=9.4,SNR=9.0							
JTS	**JuntasAbangare**	**7.03**	**117**	Pn	**Pn**	**17 31 29.6**	**+1.8**
JTS				Sn	**Sn**	**17 32 47.1**	**+0.6**
JTS				Lg		17 33 25.0	
TEIG	**Tepich**	**7.28**	**23**	P	**Pn**	**17 31 19.3**	**-12**
52nm,0.6s							
TXAR	**Lajitas Array**	**19.44**	**326**	Pn	**Pn**	**17 34 11.4**	**-0.6**
0.1nm,0.3s,baz=152,slow=11,SNR=22							
MNTX	**Cornudas Mount**	**22.20**	**327**	*e*P	**P**	**17 34 40.6**	**+0.2**
5.0nm,0.8s,mb4.0							
BNM	**Barren Site**	**24.77**	**329**	*e*P	**P**	**17 35 05.8**	**+0.2**
8.5nm,1.4s,mb4.1							
NVAR	**Mina Array Bea**	**34.44**	**321**	P	**P**	**17 36 33.0**	**+1.7**
1.8nm,0.8s,mb4.1,baz=133,slow=8.1,SNR=10							
MCMT	**McKenzie Canyo**	**36.17**	**334**	*e*P	**P**	**17 36 45.8**	**-0.4**
1.3nm,0.8s,mb3.9							
ILAR	**Eielson Array**	**63.52**	**337**	P	**P**	**17 40 12.1**	**-1.4**
0.9nm,0.9s,mb3.8,baz=110,slow=6.5,SNR=7.4							
CMAR	**Chiang Mai Arr**	**146.64**	**342**	PKPbc	PKPbc	17 49 25.3	-0.5
1.8nm,0.9s,baz=347,slow=3.8,SNR=9.8							

*IDC **23** 17:30:16.1±0.9, 32.°49N×105.°30E, h0km, mb4.2/15, mb1 4.2/17, mb1mx4.0/29, mbtmp4.1/17, ML3.3/2, Error ellipse: s-maj=37.3km s-min=16.4km az=59.0*
*ISCJB **23** 17:30:17.0±1.2, 32.°45N±0.°03×105.°15E±0.°04, h15km±9km, mb4.3/36, Error ellipse: s-maj=6.7km s-min=5.0km az=33.2*
*MOS **23** 17:30:18.5±0.7, 32.°47N×105.°08E, h23km, mb4.4/21, Error ellipse: s-maj=10.9km s-min=7.3km az=125.0*
*BJI **23** 17:30:18.0, 32.°47N×105.°28E, h16km, mB5.1/4, mb4.5/9, ML4.1/17, Ms4.0/7, Ms7 3.9/6*
*NEIC **23** 17:30:19.3±2.4, 32.°46N×105.°07E, h16km±15km, mb4.5/23, Error ellipse: s-maj=6.8km s-min=6.3km az=126.0*
*SZGRF **23** 17:30:53.2, 37.°26N×103.°01E, h33km, mb4.8, Gansu, China*
ISC 23 17:30:17.8±0.9, 32.°51N±0.°03×105.°13E±0.°04, h4km±6km, n114, σ0°94/128, mb4.3/36, 9C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.97**	**217**	Pn	**Pn**	**17 30 53.3**	**+1.4**
CD2				Pg	**Pg**	**17 30 56.6**	**+1.0**
CD2				Sn	**Sn**	**17 31 20.0**	**+3.0**
CD2				Sg	**Sg**	**17 31 23.4**	**+2.2**
CD2				smax			
comp=N,11μm,0.9s							
CD2				smax			
comp=E,5μm,0.7s							
XAN	**Xi'an**	**3.53**	**63**	Pn	**Pn**	**17 31 13.3**	**0.0**
XAN				Pg	**Pb**	**17 31 19.8**	**-0.9**
XAN				Sn	**Sn**	**17 31 57.4**	**+2.0**
XAN				Sg	**Sg**	**17 32 06.1**	**-5.0**
XAN				smax			
comp=N,810nm,0.8s							
XAN				smax			
comp=E,440nm,0.8s							
LZH	**Lanzhou**	**3.73**	**344**	Pn	**Pn**	**17 31 18.8**	**+2.8**
LZH				Pg	**Pg**	**17 31 28.3**	**-0.8**
LZH				Sg	**Sg**	**17 32 15.3**	**-2.1**
LZH				smax			
comp=N,620nm,1.0s							
LZH				smax			
comp=E,700nm,1.0s							
LZH				LR	LR		
comp=E,2μm,7.4s							
LZH				LR	LR		
comp=Z,2μm,8.3s							
ENH	**Enshi**	**4.34**	**120**	*e*P	**Pn**	**17 31 26.6**	**+2.1**
GYA	**Guiyang**	**6.17**	**167**	Pn	**Pn**	**17 31 50.1**	**+0.4**
GYA				Sn	**Sn**	**17 32 55.8**	**-4.9**
GYA				Sg	**Sg**	**17 33 27.9**	**-8.2**
GYA				smax			
comp=N,180nm,0.8s							
GYA				smax			
comp=E,110nm,0.7s							
KMI	**Kunming**	**7.65**	**196**	Pn	**Pn**	**17 32 08.9**	**-1.0**
KMI				Sn	**Sn**	**17 33 36.6**	**-0.4**
KMI				smax			
comp=N,29nm,1.2s							
KMI				smax			
comp=E,26nm,1.5s							
WHN	**Wuhan**	**8.11**	**102**	P	**Pn**	**17 32 15.5**	**-0.8**
WHN				sP		17 32 24.8	
WHN				S	**Sn**	**17 33 40.5**	**-8.0**
WHN				LR	LR		
comp=N,1μm,4.4s							
WHN				LR	LR		
comp=E,1μm,3.0s							
GTA	**Gaotai**	**8.12**	**330**	P	**Pn**	**17 32 16.8**	**+0.4**
GTA				S	**Sn**	**17 33 51.9**	**+3.3**
GTA				pmax	pmax		
comp=Z,6.0nm,1.0s							
GTA				pmax	pmax		
comp=Z,550nm,5.4s							
GTA				LR	LR		
comp=N,540nm,11.7s							
GTA				LR	LR		
comp=E,860nm,11.4s							
GTA				LR	LR		
comp=Z,870nm,12.3s							
BTO	**Baotou**	**8.99**	**25**	*e*P	**Pn**	**17 32 29.4**	**+1.1**
HHC	**Hu-ho-hao-te**	**9.80**	**30**	*e*P	**Pn**	**17 32 39.3**	**0.0**
HHC				S	**Sn**	**17 34 30.5**	**+0.8**
HHC				pmax	pmax		
comp=Z,14nm,0.5s							
HHC				pmax	pmax		
comp=Z,240nm,4.7s							
LSA	**Lhasa**	**12.30**	**261**	*e*P	**Pn**	**17 33 13.4**	**-0.2**
LSA				pmax	pmax		
comp=Z,11nm,1.1s							
LSA	**Lhasa**	**12.30**	**261**	*e*P	**Pn**	**17 33 13.4**	**-0.2**
comp=Z,11nm,1.1s							
CMAR	**Chiang Mai Arr**	**15.06**	**203**	Pn	**Pn**	**17 33 51.5**	**+0.1**
comp=Z,0.0nm,0.3s,baz=14,slow=12,SNR=9.9							
SONM	**Songino Array**	**15.34**	**3**	Pn	**Pn**	**17 33 55.3**	**+0.4**
comp=Z,0.1nm,0.3s,baz=181,slow=13,SNR=8.2							
ULN	**Ulaanbaatar**	**15.41**	**5**	*e*P	**Pn**	**17 33 55.5**	**-0.3**
ULN				pmax	pmax		
comp=Z,6.0nm,1.1s							
ULN	**Ulaanbaatar**	**15.41**	**5**	*e*P	**Pn**	**17 33 55.5**	**-0.3**
comp=Z,5.9nm,1.1s							
TAPN	**Taplejung**	**15.94**	**256**	*e*P	**Pn**	**17 34 03.0**	**+0.1**
comp=Z,54nm,1.1s							
ODAN	**Odare**	**16.40**	**255**	*e*P	**Pn**	**17 34 08.1**	**-0.7**
comp=Z,22nm,0.6s							
RAMN	**Ramite**	**17.01**	**256**	*e*P	**Pn**	**17 34 15.5**	**-1.0**
comp=Z,37nm,0.9s							
JIRN	**Jiri**	**17.08**	**259**	*e*P	**Pn**	**17 34 16.8**	**-0.6**
comp=Z,11nm,0.5s							
GUN	**Gumba**	**17.25**	**260**	*e*P	**Pn**	**17 34 19.1**	**-0.4**
comp=Z,30nm,0.7s							
PKI	**Pulchoki**	**17.76**	**259**	*e*P	**Pn**	**17 34 25.4**	**-0.5**
comp=Z,54nm,1.1s							
PKI	**Pulchoki**	**17.76**	**259**	*e*P	**Pn**	**17 34 25.4**	**-0.5**
PKI				pmax	pmax		
comp=Z,54nm,1.1s							
KKN	**Kakani**	**17.79**	**260**	*e*P	**Pn**	**17 34 25.3**	**-1.0**
comp=Z,31nm,0.9s							
KKN	**Kakani**	**17.79**	**260**	*e*P	**Pn**	**17 34 25.3**	**-1.0**
KKN				pmax	pmax		
comp=Z,31nm,0.9s							
DMN	**Daman**	**18.00**	**259**	*e*P	**Pn**	**17 34 28.1**	**-0.7**
comp=Z,64nm,1.0s							
GKN	**Gorkha**	**18.25**	**261**	*e*P	**Pn**	**17 34 30.7**	**-1.3**
comp=Z,53nm,1.0s							
KSRS	**Korea Array**	**19.31**	**69**	P	**Pn**	**17 34 45.0**	**+0.3**
comp=Z,0.3nm,0.3s,baz=250,slow=10,SNR=12							
CN2	**Changchun**	**19.50**	**49**	*e*P	**Pn**	**17 34 42.1**	**-4.9**
MK31	**Makanchi Array**	**22.53**	**316**	*e*P	**P**	**17 35 18.8**	**+0.3**
MKAR	**Makanchi Array**	**22.53**	**316**	P	**P**	**17 35 19.2**	**+0.8**
comp=Z,3.8nm,0.8s,mb3.9,baz=116,slow=11,SNR=23							
MKAR	**Makanchi Array**	**22.53**	**316**	P	**P**	**17 35 19.2**	**+0.7**
MKAR				pmax	pmax		
comp=Z,4.0nm,0.8s							
TKM2	**Tokmak 2**	**25.45**	**303**	*e*P	**P**	**17 35 47.4**	**+0.8**
TKM2				pmax	pmax		
comp=Z,4.0nm,0.7s,mb4.1							
TKM2	**Tokmak 2**	**25.45**	**303**	*e*P	**P**	**17 35 47.4**	**+0.8**
comp=Z,3.5nm,0.7s,mb4.0							
ZAA0	**Zalesovo Array**	**25.87**	**332**	*e*P	**P**	**17 35 49.4**	**-0.9**
ZALV	**Zalesovo Beam**	**25.87**	**332**	P	**P**	**17 35 50.1**	**-0.1**
comp=Z,1.9nm,0.7s,mb3.7,baz=127,slow=9.8,SNR=9.1							
ZALV	**Zalesovo Beam**	**25.87**	**332**	P	**P**	**17 35 50.1**	**-0.1**
ZALV				pmax	pmax		
comp=Z,2.0nm,0.7s,mb3.8							
KLR	**Kul'dur**	**25.97**	**42**	*e*P	**P**	**17 35 52.2**	**+1.0**
UCH	**Uchtor**	**26.07**	**301**	*e*P	**P**	**17 35 54.2**	**+2.0**
comp=Z,9.8nm,1.2s,mb4.2							
AAK	**Ala-Archa**	**26.17**	**302**	P	**P**	**17 35 54.7**	**+1.6**
comp=Z,1.4nm,0.3s,mb4.0,baz=285,slow=5.9,SNR=3.4							
AAK	**Ala-Archa**	**26.17**	**302**	P	**P**	**17 35 54.7**	**+1.6**
AAK				pmax	pmax		
comp=Z,1.0nm,0.3s,mb3.8							
KURK	**Kurchatov**	**26.68**	**321**	*e*P	**P**	**17 35 56.2**	**-1.4**
KURK				pmax	pmax		
comp=Z,4.0nm,0.8s,mb4.0							
KURK	**Kurchatov**	**26.68**	**321**	*e*P	**P**	**17 35 56.2**	**-1.4**
comp=Z,3.6nm,0.8s,mb4.0							
BVAR	**Borovoye Array**	**32.26**	**320**	P	**P**	**17 36 48.0**	**+0.9**
comp=Z,0.8nm,0.6s,mb3.7,baz=123,slow=5.3,SNR=5.6							
BVAR				PcP	PcP	17 39 34.0	-1.3
comp=Z,0.5nm,0.5s,baz=94,slow=4.5,SNR=4.1							
BVAR	**Borovoye Array**	**32.26**	**320**	P	**P**	**17 36 48.0**	**+0.9**
BVAR						17 39 34.0	
BVAR				pmax	pmax		
comp=Z,1.0nm,0.6s							
ABKAR	**Akbulak array**	**37.41**	**310**	*e*P	**P**	**17 37 32.5**	**+0.8**
comp=Z,2.4nm,0.8s,mb4.1							
AKTK	**Aktyubinsk**	**38.84**	**312**	P	**P**	**17 37 43.1**	**-0.6**
AKTO	**Aktyubinsk**	**38.84**	**312**	P	**P**	**17 37 43.1**	**-0.6**
comp=Z,1.0nm,0.6s,mb3.7,baz=113,slow=11,SNR=3.2							
AKTO	**Aktyubinsk**	**38.84**	**312**	P	**P**	**17 37 43.1**	**-0.6**
AKTO				pmax	pmax		
comp=Z,1.0nm,0.6s,mb3.7							
ARU	**Arti**	**39.87**	**321**	P	**P**	**17 37 52.5**	**+0.3**
ARU	**Arti**	**39.87**	**321**	*e*P	**P**	**17 37 52.5**	**+0.2**
comp=Z,6.6nm,1.0s,mb4.3							
NAY	**Al-Naaiem**	**49.27**	**282**	*e*P	**P**	**17 39 07.2**	**-0.5**
NAY				AMb	AMB	17 39 08.0	
comp=Z,12nm,0.7s,mb5.0							
ARCES	**ARCESS Array B**	**56.34**	**335**	P	**P**	**17 39 59.1**	**-0.2**
comp=Z,5.2nm,0.8s,mb4.6,baz=90,slow=7.3,SNR=11							
ARCES	**ARCESS Array B**	**56.34**	**335**	P	**P**	**17 39 59.2**	**-0.2**
ARCES				pmax	pmax		
comp=Z,5.0nm,0.8s							
ASF	**Jabal al Asfar**	**56.69**	**290**	P	**P**	**17 40 03.3**	**+0.8**
comp=Z,1.0nm,0.5s,mb4.1,baz=312,slow=11,SNR=3.5							
ASF	**Jabal al Asfar**	**56.69**	**290**	P	**P**	**17 40 03.3**	**+0.9**
ASF				pmax	pmax		
comp=Z,1.0nm,0.5s							
BR131	**Keskin Array S**	**56.81**	**299**	*e*P	**P**	**17 40 02.6**	**-0.6**
BRTR	**Keskin Array B**	**56.81**	**299**	P	**P**	**17 40 03.4**	**+0.1**
comp=Z,1.3nm,0.7s,mb4.1,baz=104,slow=5.2,SNR=7.8							
BRTR	**Keskin Array B**	**56.81**	**299**	P	**P**	**17 40 03.4**	**+0.2**
BRTR				pmax	pmax		
comp=Z,1.0nm,0.7s							
FINES	**FINESS Array B**	**56.90**	**326**	P	**P**	**17 40 03.2**	**-0.2**
comp=Z,2.2nm,0.7s,mb4.3,baz=91,slow=11,SNR=6.4							
FINES	**FINESS Array B**	**56.90**	**326**	P	**P**	**17 40 03.2**	**-0.2**
FINES				pmax	pmax		
comp=Z,2.0nm,0.7s							
FINES	**FINESS Array B**	**56.90**	**326**	P	**P**	**17 40 03.2**	**-0.2**
AKASG	**Malin Array Be**	**57.07**	**313**	P	**P**	**17 40 04.2**	**-0.6**
comp=Z,1.3nm,0.5s,mb4.3,baz=69,slow=6.5,SNR=7.3							
AKASG	**Malin Array Be**	**57.07**	**313**	P	**P**	**17 40 04.2**	**-0.6**
AKASG				pmax	pmax		
comp=Z,1.0nm,0.5s							
ASAR	**Alice Springs**	**62.25**	**150**	P	**P**	**17 40 40.3**	**-0.5**
comp=Z,0.4nm,0.4s,mb3.9,baz=332,slow=6.4,SNR=12							
KECS	**Kecovo**	**63.14**	**312**	*e*P	**P**	**17 40 49.8**	**+3.3**
KECS	**Kecovo**	**63.14**	**312**	*e*P	**P**	**17 40 49.8**	**+3.3**
NB2	**NORSAR Subarra**	**63.95**	**327**	P	**P**	**17 40 50.3**	**-1.3**
comp=Z,1.2nm,0.7s,mb4.0,baz=70,slow=6.9							
NOA	**NORSAR Array B**	**63.95**	**327**	P	**P**	**17 40 50.4**	**-1.3**
comp=Z,1.9nm,0.8s,mb4.2,baz=71,slow=6.5,SNR=7.4							
NOA	**NORSAR Array B**	**63.95**	**327**	P	**P**	**17 40 50.4**	**-1.2**
NOA				pmax	pmax		
comp=Z,2.0nm,0.8s							
VYHS	**Vyhne**	**64.17**	**312**	*e*P	**P**	**17 40 52.8**	**-0.5**
VYHS	**Vyhne**	**64.17**	**312**	*e*P	**P**	**17 40 52.8**	**-0.5**
BRG	**Berggiesshubel**	**66.25**	**316**	*e*P	**P**	**17 41 07.0**	**+0.2**
comp=Z,6.0nm,1.2s,mb4.5							
BRG	**Berggiesshubel**	**66.25**	**316**	*e*(P)	**P**	**17 41 06.5**	**-0.2**
comp=Z,6.2nm,1.2s,mb4.5							
BRG	**Berggiesshubel**	**66.25**	**316**	*e*P	**P**	**17 41 06.6**	**-0.2**
BRG				pmax	pmax		
comp=Z,4.0nm,1.2s,mb4.3							
CLL	**Collm**	**66.63**	**317**	*e*P	**P**	**17 41 08.0**	**-1.2**
BSEG	**Bad Segeberg**	**67.08**	**320**	*e*P	**P**	**17 41 12.5**	**+0.5**
comp=Z,8.0nm,0.8s,mb4.8							
ROTZ	**Rotzenmuhle**	**67.71**	**316**	*e*P	**P**	**17 41 16.5**	**+0.4**
comp=Z,3.0nm,0.7s,mb4.4							
CLZ	**Clausthal**	**67.91**	**318**	*e*P	**P**	**17 41 17.6**	**+0.3**
comp=Z,6.0nm,0.9s,mb4.6							
GRF	**Grafenberg Arr**	**68.33**	**316**	*e*P	**P**	**17 41 20.7**	**+0.7**
comp=Z,5.0nm,0.7s,mb4.7							
GRF	**Grafenberg Arr**	**68.33**	**316**	*e*P	**P**	**17 41 20.7**	**+0.7**
GRF				pmax	pmax		
comp=Z,5.0nm,0.7s,mb4.7							
GRF	**Grafenberg Arr**	**68.33**	**316**	*e*P	**P**	**17 41 20.7**	**+0.7**
comp=Z,5.0nm,0.7s,mb4.7							
DAVOX	**Davos/Dischmat**	**70.40**	**313**	P	**P**	**17 41 32.3**	**-0.5**
comp=Z,2.3nm,0.6s,mb4.3,baz=343,slow=9.9,SNR=3.2							
CDF	**Champ du Feu**	**71.22**	**316**	*e*P	**P**	**17 41 37.5**	**-0.3**
comp=Z,5.4nm,0.8s,mb4.2							
CDF	**Champ du Feu**	**71.22**	**316**	*e*P	**P**	**17 41 37.5**	**-0.3**
CDF				pmax	pmax		
comp=Z,3.0nm,0.8s,mb4.3							
CDF	**Champ du Feu**	**71.22**	**316**	*e*P	**P**	**17 41 37.5**	**-0.3**
comp=Z,2.7nm,0.8s,mb4.2							
KMBO	**Kilima Mbogo**	**72.08**	**257**	P	**P**	**17 41 42.9**	**-0.6**
comp=Z,2.0nm,0.8s,mb4.1,baz=180,slow=24,SNR=4.1							
KMBO	**Kilima Mbogo**	**72.08**	**257**	P	**P**	**17 41 42.9**	**-0.6**
KMBO				pmax	pmax		
comp=Z,2.0nm,0.8s							
BAIF	**Baives**	**72.20**	**318**	*e*P	**P**	**17 41 43.5**	**-0.2**
STKA	**Stephens Creek**	**72.72**	**148**	P	**P**	**17 41 44.2**	**-2.6**
comp=Z,1.7nm,0.9s,mb4.0,baz=330,slow=8.1,SNR=2.9							
LPG	**La Plagne**	**72.92**	**313**	⇑*i*P	**P**	**17 41 48.5**	**+0.4**
comp=Z,1.3nm,0.7s,mb4.7							
LPG	**La Plagne**	**72.92**	**313**	⇑*i*P	**P**	**17 41 48.5**	**+0.4**
LPG				pmax	pmax		
comp=Z,6.0nm,0.7s,mb4.6							
LPG	**La Plagne**	**72.92**	**313**	⇑*i*P	**P**	**17 41 48.5**	**+0.4**
comp=Z,6.4nm,0.7s,mb4.7							
LPL	**La Plagne**	**72.93**	**313**	⇑*i*P	**P**	**17 41 48.4**	**+0.3**
comp=Z,22nm,1.0s,mb4.8							
LPL	**La Plagne**	**72.93**	**313**	⇑*i*P	**P**	**17 41 48.4**	**+0.3**
LPL				pmax	pmax		
comp=Z,11nm,1.0s,mb4.7							
LPL	**La Plagne**	**72.93**	**313**	⇑*i*P	**P**	**17 41 48.4**	**+0.3**
comp=Z,11nm,1.0s,mb4.8							
MBDF	**Montbardon**	**73.29**	**313**	*e*P	**P**	**17 41 49.9**	**-0.3**
comp=Z,7.8nm,0.8s,mb4.4							
ORIF	**Oris-en-Rattie**	**73.75**	**313**	⇑*i*P	**P**	**17 41 52.8**	**-0.1**
comp=Z,9.2nm,0.8s,

APSI	Ampana	2.54	168	P	Pn	18 02 56.9	+0.6
APSI				S	Sn	18 03 27.2	+1.2
PCI	Palu	2.78	207	P	Pn	18 02 57.3	-2.3
PCI				S	Sn	18 03 33.2	+1.2
KMSI	Cibinong	3.04	109	P	Pn	18 03 11.6	+8.5
LUWI	Luwuk	3.09	148	P	Pn	18 03 06.1	+2.2
MNI	Manado	3.73	92	P	Pn	18 03 12.3	-0.3
MYLDM	Lahad Datu	4.42	324	P	Pn	18 03 19.9	-2.2
TTSI	Tana Toraja	4.78	196	P	Pn	18 03 26.4	-0.5
ZMPH	Zamboanga City	5.42	10	||P	Pn	18 03 35.7	-0.1
ZMPH				*i* S	Sn	18 04 35.6	-1.2
SPSI	Sidrap Palu	5.67	194	P	Pn	18 03 40.2	+1.0
	1um82nm,0.8s						
KDI	Kendari	5.71	165	P	Pn	18 03 41.9	+2.2
	0.2nm52nm,1.0s						
BNSI	Bone	6.03	190	P	Pn	18 03 48.0	+3.9
	0.4nm100nm,0.8s						
IPIL	Ipil	6.33	13	*e*P	Pn	18 03 48.6	+0.4
PAGZ	Pagadian	6.62	20	*e*P	Pn	18 03 53.1	+0.9
BKSI	Bulukumba	6.93	188	P	Pn	18 03 57.1	+0.7
	0.1nm37nm,1.0s						
SBUM	Sibu	8.93	276	P	Pn	18 04 16.7	-7.1
	15nm,0.9s						
KAKA	Kakadu	18.11	142	P	Pn	18 06 24.0	-0.9
	31nm,0.8s						
KNA	Kununurra	18.81	157	P	Pn	18 06 31.5	-1.7
	56nm,1.0s						
FITZ	Fitzroy Crossi	20.06	167	P	P	18 06 43.6	-2.1
	0.3nm,0.3s,baz=7.6,slow=7.2,SNR=9.7						
FITZ	Fitzroy Crossi	20.06	167	*e*P	P	18 06 43.5	-2.3
FITZ	Fitzroy Crossi	20.06	167	P	P	18 06 43.5	-2.2
	33nm,3.2s						
KULM	Kulim	20.75	281	P	P	18 06 50.2	-3.1
	21nm,1.1s						
PSI	Prapat	22.20	274	P	P	18 07 06.0	-2.9
	15nm,0.9s,mb4.4,baz=86,slow=5.3,SNR=8.3						
GSI	Gunungsitoli	23.53	270	P	P	18 07 18.1	-4.2
WRAB	Tennant Creek	25.02	149	*e*P	P	18 07 33.7	-2.1
CMAR	Chiang Mai Arr	27.46	309	P	P	18 07 57.5	-0.4
	2.6nm,0.8s,mb3.8,baz=127,slow=6.5,SNR=17						
CHTO	Chiang Mai	27.66	310	*e*P	P	18 07 59.2	-0.4
	4.3nm,0.9s,mb4.1						
ASAR	Alice Springs	28.01	154	P	P	18 08 01.6	-1.1
	0.8nm,0.5s,mb3.6,baz=344,slow=14,SNR=14						
ASAR				PcP	PcP	18 11 17.0	+0.5
	0.6nm,1.0s,baz=347,slow=2.2,SNR=4.1						
KSRS	Korea Array	36.24	9	P	P	18 09 19.3	+4.7
	0.8nm,0.7s,mb3.8,baz=188,slow=12,SNR=3.5						
MJAR	Matsushiro Arr	38.21	23	P	P	18 09 33.6	+2.3
	1.0nm,0.4s,mb3.9,baz=183,slow=7.3,SNR=3.2						
STKA	Stephens Creek	38.53	151	P	P	18 09 33.4	-0.6
	4.8nm,0.8s,mb4.3,baz=313,slow=7.6,SNR=5.2						
LSA	Lhasa	39.91	317	*e*P	P	18 09 47.7	+2.2
	1.3nm,0.8s,mb3.7						
ODAN	Odare	40.97	311	*e*P	P	18 09 54.9	+0.6
	29nm,0.9s,mb4.9						
TAPN	Taplejung	40.99	312	*e*P	P	18 09 55.2	+0.7
	22nm,0.7s,mb4.9						
RAMN	Ramite	41.61	310	*e*P	P	18 10 00.5	+0.9
	28nm,0.9s,mb4.9						
JIRN	Jiri	42.30	311	*e*P	P	18 10 06.0	+0.8
	17nm,0.6s,mb4.9						
GUN	Gumba	42.66	311	*e*P	P	18 10 08.9	+0.7
	41nm,0.8s,mb5.2						
KKN	Kakani	43.05	311	*e*P	P	18 10 11.6	+0.3
	20nm,1.0s,mb4.8						
DMN	Daman	43.09	310	*e*P	P	18 10 11.4	-0.3
	21nm,1.0s,mb4.8						
GKN	Gorkha	43.65	310	*e*P	P	18 10 15.5	-0.6
	29nm,0.9s,mb5.0						
SONM	Songino Array	47.80	347	P	P	18 10 51.6	+3.1
	0.4nm,0.6s,mb3.6,baz=134,slow=6.2,SNR=2.1						
MKAR	Makanchi Array	56.29	329	P	P	18 11 53.0	+1.4
	0.4nm,0.5s,mb3.7,baz=130,slow=9.4,SNR=9.0						
MKAR	Makanchi Array	56.29	329	P	P	18 11 53.0	+1.4
KBL	Kabul	58.48	310	*e*P	P	18 12 07.5	+0.1
	5.0nm,0.9s,mb4.5						
ABKAR	Akbulak array	70.33	322	*e*P	P	18 13 24.6	+0.1
	1.2nm,0.7s,mb3.9						
BRTR	Keskin Array B	87.05	310	P	P	18 14 56.1	-0.4
	1.3nm,0.8s,mb4.2,baz=124,slow=6.1,SNR=7.3						

*BJI **23** 18:04:35.2, 40.°60N×142.°73E, h62km, mB5.0/3, mb4.2/4*
*MOS **23** 18:04:43.9±1.2, 41.°64N×142.°18E, h77km, mb4.3/9, Error ellipse: s-maj=14.7km s-min=8.9km az=75.3*
*JMA **23** 18:04:43.6±0.1, 41.°57N×142.°06E, h64km±3km, M3.6 Broadband fault plane solution: P waves. NP1: φ≈155.00000°, δ13.00000°, λ50.00000°. NP2: φ≈16.00000°, δ80.00000°, λ98.00000°. Principal axes: T Plg54.0000°, Azm296.0000°; N Plg8.0000°, Azm195.0000°; P Plg35.0000°, Azm99.0000°;*
JMA Felt I J1.
*ISCJB **23** 18:04:43.3±0.3, 41.°58N±0.°03×142.°07E±0.°05, h67km±4km, mb3.8/13 Error ellipse: s-maj=7.0km s-min=3.6km az=38.1*
*NEIC **23** 18:04:44.5±0.8, 41.°62N×142.°10E, h63km±9km, mb4.3/1, Error ellipse: s-maj=14.1km s-min=8.2km az=145.0*
NEIC Recorded [1 JMA] in Aomori, Honshu.
*IDC **23** 18:04:46.4±0.8, 41.°68N×142.°11E, h77km±6km, mb3.7/12, mb1 3.8/15, mb1mx3.7/27, mbtmp3.6/15, Error ellipse: s-maj=17.0km s-min=9.2km az=110.0*

ISC 23 18:04:44.3±0.3, 41.°58N±0.°03×142.°06E±0.°05, h59km±4km, h75km±1.9km; pP-P, n58, σ0.°79/72, mb3.9/13, 3C-10D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOT	Ohata	0.79	256	||P	Pn	18 04 59.1	-0.4
JOT				*e*S	Sn	18 05 10.0	-0.7
JKB	Kayabe	0.83	292	||P	Pn	18 04 59.4	-0.6
JNBK	Urakawa-nobuka	0.87	36	⇑P	Pn	18 04 59.7	-0.8
JNBK				*e*S	Sn	18 05 12.1	-0.4
ERM	Erimo	0.92	62	*e*P	Pn	18 05 00.8	-0.5
JEM	Erimo	0.93	62	⇑P	Pn	18 05 00.9	-0.4
JEM				S	Sn	18 05 13.9	+0.1
JTM	Tenmabayashi	1.09	224	||P	Pn	18 05 03.4	-0.1
JTM				*e*S	Sn	18 05 17.6	-0.1
JNB	Noboribetsu	1.17	320	||P	Pn	18 05 03.8	-0.7
JBT2	Biratori 2	1.22	10	||P	Pn	18 05 05.2	+0.1
JSR	Shiriuchi	1.24	268	||P	Pn	18 05 05.1	-0.3
JANG	Nango	1.28	199	P	Pn	18 05 05.4	-0.5
JANG				*e*S	Sn	18 05 21.5	-0.6
JEW	Eniwo	1.34	340	||P	Pn	18 05 06.7	0.0
JEW				*e*S	Sn	18 05 24.1	+0.6
JCH	Churui	1.41	43	||P	Pn	18 05 08.2	+0.5
JCH				*e*S	Sn	18 05 26.9	+1.6
JFR	Furan	1.63	14	P	Pn	18 05 10.5	-0.1
JOSM	Okushiri--Mats	2.00	285	||P	Pn	18 05 15.0	-0.6
JSK	Shakotan	2.12	327	P	Pn	18 05 17.4	0.0
JAR	Ashorobuto	2.13	36	||P	Pn	18 05 17.2	-0.2
JAR				*e*S	Sn	18 05 43.0	+0.3
ASAJ	Asahikawa	2.56	9	P	Pn	18 05 24.1	+0.8
	9.5nm,0.3s,baz=229,slow=14,SNR=51						
ASAJ				S	Sn	18 05 54.6	+1.3
	10nm,0.3s,baz=315,slow=30,SNR=11						
ASAJ	Asahikawa	2.56	9	P	Pn	18 05 24.1	+0.8
ASAJ				S	Sn	18 05 54.6	+1.3
ASAJ				pmax	pmax		
	comp=Z,10.0nm,0.3s						
ASAJ				smax			
	comp=N,10.0nm,0.3s						
YUK	Yuzh-Kuril'sk	3.72	47	⇑*i*P	Pn	18 05 39.0	-0.1
YUK				*i* S	Sn	18 06 19.0	-2.6
YUK				pmax	pmax		
	comp=Z,310nm,1.1s						
YUK				pmax	pmax		
	comp=N,130nm,0.5s						
YUK				pmax	pmax		
	comp=Z,230nm,0.5s						
YUK				pmax	pmax		
	comp=E,100nm,0.2s						
YUK				smax			
	comp=N,570nm,0.6s						
YUK				smax			
	comp=E,860nm,0.6s						
YUK				smax			
	comp=N,780nm,0.5s						
YUK				smax			
	comp=E,1μm,0.5s						
YSS	Yuzh-Sakhalins	5.39	5	*e*P	Pn	18 06 04.0	+1.9
KUR	Kuril'sk	5.58	47	P	Pn	18 06 04.0	-0.7
KUR				*e*S	Sn	18 07 03.0	-4.4
KUR				pmax	pmax		
	comp=Z,190nm,1.0s						
KUR				smax			
	comp=N,90nm,0.8s						
KUR				smax			
	comp=E,130μm,0.8s						
MAJO	Matsushiro	5.86	212	*e*P	Pn	18 06 09.9	+1.4
MAJO				pmax	pmax		
	comp=Z,11nm,0.6s						
MAJO	Matsushiro	5.86	212	*e*P	Pn	18 06 09.9	+1.4
	comp=Z,11nm,0.6s						
MAT	Matsushiro	5.86	212	P	Pn	18 06 10.7	+2.2
MAT				*e*S	Sn	18 07 17.7	+3.4
MJAR	Matsushiro Arr	5.86	212	P	Pn	18 06 13.0	+4.5
	comp=Z,0.7nm,0.3s,baz=19,slow=16,SNR=10						
MJAR				S	Sn	18 07 23.1	+8.9
	baz=74,slow=32,SNR=2.4						
MJAR	Matsushiro Arr	5.86	212	P	Pn	18 06 13.0	+4.5
MJAR				S	Sn	18 07 23.1	+8.8
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
JHJ	Hachijo jima 2	8.64	193	P	Pn	18 06 47.2	+0.6
	comp=Z,5.3nm,0.3s,baz=68,slow=22,SNR=5.3						
KLR	Kul'dur	10.53	320	*e*P	Pn	18 07 12.0	-0.3
KSRS	Korea Array	11.67	254	P	Pn	18 07 32.5	+4.5
	comp=Z,0.6nm,0.3s,baz=65,slow=14,SNR=8.1						
KSRS	Korea Array	11.67	254	P	Pn	18 07 32.5	+4.5
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM	Songino Array	25.94	296	P	P	18 10 11.3	+0.4
	comp=Z,1.6nm,0.9s,mb3.6,baz=94,slow=8.4,SNR=11						
SONM	Songino Array	25.94	296	P	P	18 10 11.3	+0.4
SONM				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ZALV	Zalesovo Beam	39.35	308	P	P	18 12 07.2	-0.3
	comp=Z,2.2nm,0.8s,mb3.9,baz=79,slow=7.7,SNR=8.3						
ZALV	Zalesovo Beam	39.35	308	P	P	18 12 07.2	-0.4
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.9						
ZALV	Zalesovo Beam	39.35	308	P	P	18 12 07.2	-0.4
MKAR	Makanchi Array	42.28	298	P	P	18 12 31.7	-0.1
	comp=Z,4.5nm,1.1s,mb4.0,baz=93,slow=7.7,SNR=5.8						
MKAR	Makanchi Array	42.28	298	P	P	18 12 31.7	0.0
MKAR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MKAR	Makanchi Array	42.28	298	P	P	18 12 31.7	-0.1
LSA	Lhasa	42.48	271	*e*P	P	18 12 34.2	+0.6
LSA				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.2						
LSA	Lhasa	42.48	271	*e*P	P	18 12 34.2	+0.5
	comp=Z,8.6nm,1.4s,mb4.2						
ILAR	Eielson Array	45.43	35	P	P	18 12 56.9	+0.2
	comp=Z,3.5nm,1.0s,mb4.2,baz=270,slow=6.3,SNR=27						
ILAR				pP	pP	18 13 14.7	+2.8
	comp=Z,1.6nm,0.9s,baz=278,slow=7.0,SNR=4.3						
ILAR	Eielson Array	45.43	35	P	P	18 12 56.9	+0.2
ILAR				*PP	pP	18 13 14.7	+2.8
ILAR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ILAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BVAR	Borovoye Array	47.98	309	P	P	18 13 17.0	+0.2
	comp=Z,1.6nm,0.4s,mb4.5,baz=74,slow=9.5,SNR=12						
BVAR	Borovoye Array	47.98	309	P	P	18 13 17.0	+0.2
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
INK	Inuvik	50.14	29	P	P	18 13 33.1	0.0
	comp=Z,2.9nm,0.8s,mb4.4,baz=321,slow=6.5,SNR=3.4						
INK	Inuvik	50.14	29	P	P	18 13 33.1	0.0
INK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FINES	FINESS Array B	65.05	332	P	P	18 15 17.5	-0.4
	comp=Z,1.5nm,0.5s,mb4.3,baz=38,slow=9.3,SNR=8.0						
FINES				pP	pP	18 15 36.1	+2.3
	comp=Z,2.2nm,0.6s,baz=54,slow=9.7,SNR=4.6						
FINES	FINESS Array B	65.05	332	P	P	18 15 17.5	-0.4
FINES				*PP	pP	18 15 36.1	+2.3
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES	FINESS Array B	65.05	332	P	P	18 15 17.5	-0.4
FINES				pP	pP	18 15 36.1	+2.3
ASAR	Alice Springs	65.36	188	P	P	18 15 19.8	-0.5
	comp=Z,0.3nm,0.6s,mb3.5,baz=7.1,slow=7.1,SNR=6.0						
NB2	NORSAR Subarra	70.20	337	P	P	18 15 49.6	-0.8
	comp=Z,1.9nm,0.9s,mb4.0,baz=36,slow=6.5						
NOA	NORSAR Array B	70.20	337	P	P	18 15 49.5	-0.8
	comp=Z,0.8nm,0.9s,mb3.6,baz=38,slow=7.9,SNR=3.6						
NOA	NORSAR Array B	70.20	337	P	P	18 15 49.6	-0.8
NOA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NOA	NORSAR Array B	70.20	337	P	P	18 15 49.5	-0.8
AKASG	Malin Array Be	71.03	322	P	P	18 15 54.6	-0.9
	comp=Z,0.3nm,0.3s,mb3.7,baz=44,slow=6.4,SNR=4.5						
NVAR	Mina Array Bea	71.90	55	P	P	18 16 01.0	-0.1
	comp=Z,0.4nm,0.4s,mb3.7,baz=339,slow=4.8,SNR=1.7						
NVAR				pP	pP	18 16 21.6	+4.3
	comp=Z,1.3nm,0.7s,baz=289,slow=6.0,SNR=3.4						
PDAR	Pinedale Array	74.15	47	P	P	18 16 14.5	+0.2
	comp=Z,0.4nm,0.8s,mb3.4,baz=325,slow=2.5,SNR=2.6						
PDAR				pP	pP	18 16 34.4	+3.8
	comp=Z,0.7nm,0.7s,baz=358,slow=4.5,SNR=3.8						
TXAR	Lajitas Array	86.96	53	pP	pP	18 17 44.4	+4.7
	comp=Z,0.4nm,0.6s,baz=304,slow=2.3,SNR=3.5						

*IDC **23** 18:12:41.6±2.0, 1.°24N×97.°04E, h0km, mb3.5/3, mb1 3.4/4, mb1mx3.3/22, mbtmp3.4/4, ML2.6/1, MS3.1/1, Ms1 3.1/1, ms1mx2.3/26, Error ellipse: s-maj=53.1km s-min=29.0km az=56.0*
*DJA **23** 18:12:42, 1.°14N×97.°02E, h24km, MLv3.6/3*
*ISCJB **23** 18:12:44.1±1.4, 1.°2N±0.°1×97.°05E±0.°09, h33km, mb3.4/3, Error ellipse: s-maj=20.1km s-min=11.3km az=20.9*

ISC 23 18:12:46.4±3.0, 1.°3N±0.°2×97.°2E±0.°2, h34km±15km, n7, σ1.°19/8, mb3.4/3, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.42	88	P	Pb	18 12 54.7	-1.2
GSI				S	Sb	18 13 03.8	+1.3
TPTI		1.96	1	P	Pn	18 13 16.9	-0.3
PSI	Prapat	2.32	50	Pn	Pn	18 13 21.9	-0.3
	1.6nm,0.3s,baz=315,slow=16,SNR=5.0						
PSI				LR	LR	18 14 15.9	
	comp=Z,392nm,19.4s,baz=208,slow=40						
MNSI	Mandailing Nat	2.47	101	P	Pn	18 13 23.2	-1.1
ASAR	Alice Springs	43.48	127	P	P	18 20 47.4	+0.7
	0.3nm,0.9s,mb3.0,baz=299,slow=7.0,SNR=2.6						
MKAR	Makanchi Array	47.15	346	P	P	18 21 15.9	+0.6
	0.4nm,0.7s,mb3.5,baz=142,slow=6.1,SNR=4.8						
ZALV	Zalesovo Beam	53.46	351	P	P	18 22 03.4	+0.3
	0.4nm,0.4s,mb3.7,baz=181,slow=7.2,SNR=4.1						

IDC 23 18:16:20.1±1.7, 30.°22S×177.°39W, h0km, mb3.6/2, mb1 3.7/2, mb1mx3.5/15, mbtmp3.6/2, MS3.7/1, Ms1 3.7/1, ms1mx3.3/19, Error ellipse: s-maj=42.9km s-min=23.9km az=84.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.07	334	Pn	Pn	18 16 43.1	+0.8
	319nm,0.3s,baz=91,slow=11,SNR=46						
RAO				Sn	Sn	18 16 57.4	-0.4
	709nm,0.3s,baz=14,slow=23,SNR=24						
URZ	Urewera	9.22	208	Sn	Sn	18 20 11.4	-7.4
	0.9nm,0.3s,baz=246,slow=23,SNR=8.1						
URZ				LR	LR	18 21 37.5	
	comp=Z,454nm,19.4s,baz=114,slow=34						
STKA	Stephens Creek	35.04	257	P	P	18 23 15.1	+0.5
	0.8nm,0.4s,baz=113,slow=13,SNR=2.7						
ASAR	Alice Springs	43.65	266	P	P	18 24 25.9	-0.7
	0.2nm,0.4s,baz=105,slow=7.0,SNR=11						
FINES	FINESS Array B	145.16	340	PKPbc	PKPbc	18 35 57.7	-0.7
	0.7nm,0.4s,baz=46,slow=5.5,SNR=6.0						
AKASG	Malin Array Be	151.47	323	PKPbc	PKPbc	18 36 14.7	-0.9
	0.3nm,0.4s,baz=47,slow=1.0,SNR=3.0						
MMAI	Mount Meron Ar	152.00	284	PKPbc	PKPbc	18 36 17.8	+0.4
	0.9nm,0.4s,baz=76,slow=6.4,SNR=3.4						

DJA 23 18:22:57, 0.°55S×122.°64E, h12km, MLv3.6/7, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	Luwuk	0.51	165	P	Pg	18 23 06.2	-0.7
APSI	Ampana	1.05	250	P	Pb	18 23 17.2	0.0
MRSI	Marisa	1.24	326	P	Pn	18 23 18.1	-2.0
KMSI	Cibinong	1.75	50	P	Pn	18 23 25.7	-1.4
PCI	Palu	2.83	263	P	Pn	18 23 43.9	+1.9
MNI	Manado	2.96	48	P	Pn	18 23 46.4	+2.6
TTSI	Tana Toraja	3.75	229	P	Pn	18 23 54.3	-0.5
SPSI	Sidrap Palu	4.44	220	P	Pn	18 24 03.2	-1.0
NLAI	Namlea	5.20	121	P	Pn	18 24 15.5	+0.9

CASC 23 18:32:09.3±2.4, 8.°50N×82.°93W, h5km±8km, MD4.3, ML3.3, 9C-2D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	Cerro Adams	0.28	303	⇑*i*P	Pg	18 32 16.8	+2.1
BRU2	Volcan	0.38	39	⇑*i*P	Pg	18 32 17.8	+1.2
BRU2				*e*S	Sg	18 32 23.8	+2.3
TBS2		0.40	43	⇑*e*P	Pg	18 32 20.4	+3.4
TBS2				*e*S	Sg	18 32 28.5	+6.3
BRU	Baru	0.48	50	⇑*i*P	Pg	18 32 14.2	-4.3
DVD	David	0.48	97	*e*p	Pg	18 32 19.6	+1.0
BAR1		0.83	333	||*i*P	Pg	18 32 25.3	+0.1
CNI	Changuinola	1.00	24	⇑*i*P	Pg	18 32 27.4	-1.1
BUS	Buena Vista	1.33	322	⇑*i*P	Pn	18 32 33.4	-1.2
QCR	Quepos	1.53	307	*e*P	Pn	18 32 35.4	-1.9
QCR				*e*S	Sn	18 32 58.0	+0.4
URSC	Urasca	1.57	328	⇑*e*P	Pn	18 32 36.8	-1.0
LAJ	Bijagual	1.79	319	⇑*e*P	Pn	18 32 42.8	+1.9
LAJ				*e*S	Sn	18 33 11.2	+7.0
SJS	Escuela Geolog	1.81	322	*e*P	Pn	18 32 41.3	+0.1
PRS1	Puriscal	2.01	317	||*e*P	Pn	18 32 42.7	-1.2
CGA2	Cerro Gallo 2	2.14	315	*e*P	Pn	18 32 45.1	-0.6
JTS	JuntasAbangare	2.67	312	*e*P	Pn	18 32 52.2	-0.9
JTS				*e*S	Sn	18 33 25.9	+0.1
VCR	Vista de Mar	3.12	301	⇑*e*P	Pn	18 32 58.2	-1.0
GPS3	Bodega del ICE	3.28	313	*i* P	Pn	18 33 01.0	-0.4
LAPC	Finca la Perla	3.34	313	*i* P	Pn	18 33 03.4	+1.2
LAPC				*i* S	Sn	18 33 43.1	+0.8
BUEV	Buena Vista	3.34	313	*i* P	Pn	18 33 03.4	+1.1
GB1A	Borinquen Arri	3.35	314	*i* P	Pn	18 33 03.1	+0.8
UPIG		3.39	81	*e*P	Pn	18 33 03.7	+0.7
UPIG				*e*S	Sn	18 33 45.7	+2.0
CONN	Concepcion	4.04	319	*e*P	Pn	18 33 13.0	+1.1
CSAN		5.02	317	*e*P	Pn	18 33 26.4	+1.1
COPN	Copaltepe	5.13	316	*e*P	Pn	18 33 27.4	+0.5
CRIN	San Cristobal	5.81	316	*e*P	Pn	18 33 36.4	+0.1

*CSEM **23** 18:34:20.9±0.2, 66.°59N×17.°68W, h12km, ML3.7, Error ellipse: s-maj=3.9km s-min=3.2km az=17.0*
*ISCJB **23** 18:34:21.7±0.6, 66.°56N±0.°03×17.°69W±0.°06, h13km±3km, mb3.6/6, Error ellipse: s-maj=4.7km s-min=4.1km az=0.7*
*IDC **23** 18:34:22.9±1.0, 66.°34N×17.°56W, h0km, mb3.8/6, mb1 3.9/8, mb1mx3.6/27, mbtmp3.7/8, ML3.3/2, MS3.6/2, Ms1 3.6/2, ms1mx3.1/33, Error ellipse: s-maj=28.9km s-min=17.9km az=171.0*
*REY **23** 18:34:22.6, 66.°57N×17.°67W, h9km, ML3.7, ML4.0*

ISC 23 18:34:22.2±0.6, 66.°53N±0.°03×17.°67W±0.°06, h7km±3km, n34, σ1.°09/57, mb3.6/6, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGRI	Grimsey	0.14	275	P	Pg	18 34 25.7	+0.5
IGRI				S	Sg	18 34 28.0	+0.9
IFLA	Flatey	0.38	191	P	Pg	18 34 30.5	+0.9
IFLA				S	Sg	18 34 36.7	+2.2
IBRE	Brettingsstaoi	0.42	194	P	Pg	18 34 31.0	+0.6
IBRE				S	Sg	18 34 37.6	+1.7
IHED	Heoinshofoi	0.47	162	P	Pg	18 34 31.6	+0.2
IHED				S	Sg	18 34 38.8	+1.2
ILEI	Leirhofn	0.49	104	P	Pg	18 34 31.7	+0.1
ILEI				S	Sg	18 34 38.8	+0.8
IGRA	Granastaoir	0.62	177	P	Pg	18 34 34.2	+0.1
IGRA				S	Sg	18 34 43.1	+1.0
ISIG	Siglufjorour	0.64	232	P	Pg	18 34 34.0	-0.6
ISIG				S	Sg	18 34 42.6	-0.4
IHLA	Hella	0.66	207	P	Pg	18 34 34.7	-0.2
IHLA				S	Sg	18 34 43.8	+0.4
IGIL	Gilhagi	0.70	130	P	Pg	18 34 35.1	-0.6
IGIL				S	Sg	18 34 45.0	+0.3
IKVO	Krokottuvotn	0.88	158	P	Pg	18 34 38.3	-0.8
IKVO				S	Sg	18 34 50.5	0.0
IREN	Reynihlio	0.94	160	P	Pg	18 34 39.3	-0.9
IREN				S	Sg	18 34 52.0	-0.4
IHRN	Hraun	1.08	248	P	Pg	18 34 40.1	-2.8
IHRN				S	Sg	18 34 53.7	-3.2
IGRS	Grimsstaoir	1.09	144	P	Pg	18 34 41.7	-1.5
IGRS				S	Sg	18 34 56.7	-0.7
ISVA	Svartarkot	1.21	172	P	Pb	18 34 43.7	-1.7
ISVA				S	Sg	18 35 00.0	-1.1
IMKO	Mokollar	1.65	160	P	Pn	18 34 50.2	-1.3
IMKO				S	Sn	18 35 13.0	0.0
IADA	Aoalbol	1.75	149	P	Pn	18 34 52.1	-0.7
IADA				S	Sn	18 35 15.0	-0.2
IHVA	Hvannstoosfjol	1.75	154	P	Pn	18 34 51.7	-1.1
IKRE	Kreppuhraun	1.83	163	P	Pn	18 34 53.1	-0.9
IKRE				S	Sn	18 35 17.6	+0.2
IHVE	Hveravellir	1.84	206	S	Sn	18 35 17.6	-0.1
IGLU	Glumsstadir	1.89	144	P	Pn	18 34 53.3	-1.4
IVSH	V-Sauoahnukur	1.91	154	P	Pn	18 34 54.0	-1.0
IVSH				S	Sn	18 35 19.5	+0.3
ISKR

SZGRF **23** *18:35:11.8, 65°.76N×17°.67W, h33km, mb4.3, Iceland*
ISC 23 18:35:02.0±0.4, 66°.45N±0°.02×17°.69W±0°.04, h2km±2km, n277, σ1s06/300, mb4.2/61, MS4.2/3, 1C-4D, Iceland region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
IGRI	**Grimsey**	**0.16**	**306**	P	**Pg**	**18 35 04.1**	**-1.0**
IGRI				S	**Sg**	**18 35 06.6**	**-0.5**
IFLA	**Flatey**	**0.30**	**193**	P	**Pg**	**18 35 09.1**	**+1.4**
IFLA				S	**Sg**	**18 35 15.1**	**+3.6**
IBRE	**Brettingsstaoi**	**0.34**	**195**	P	**Pg**	**18 35 09.6**	**+1.1**
IBRE				S	**Sg**	**18 35 15.9**	**+3.0**
IHED	**Heoinshofoi**	**0.40**	**157**	P	**Pg**	**18 35 10.3**	**+0.6**
IHED				S	**Sg**	**18 35 17.3**	**+2.5**
ILEI	**Leirhofn**	**0.48**	**95**	P	**Pg**	**18 35 10.4**	**-0.9**
ILEI				S	**Sg**	**18 35 17.5**	**0.0**
IGRA	**Granastaoir**	**0.54**	**175**	P	**Pg**	**18 35 12.8**	**+0.6**
IGRA				S	**Sg**	**18 35 21.3**	**+2.1**
IHLA	**Hella**	**0.58**	**209**	P	**Pg**	**18 35 13.2**	**+0.1**
IHLA				S	**Sg**	**18 35 22.1**	**+1.5**
ISIG	**Siglufjorour**	**0.59**	**238**	P	**Pg**	**18 35 12.5**	**-0.8**
ISIG				S	**Sg**	**18 35 20.8**	**-0.1**
IGIL	**Gilhagi**	**0.66**	**124**	P	**Pg**	**18 35 13.7**	**-0.9**
IGIL				S	**Sg**	**18 35 23.5**	**+0.4**
IKVO	**Krokottuvotn**	**0.81**	**156**	P	**Pg**	**18 35 16.9**	**-0.6**
IKVO				S	**Sg**	**18 35 28.7**	**+0.8**
IREN	**Reynihlio**	**0.87**	**158**	P	**Pg**	**18 35 17.8**	**-0.8**
IREN				S	**Sg**	**18 35 30.7**	**+0.9**
IGRS	**Grimsstaoir**	**1.04**	**141**	P	**Pg**	**18 35 20.4**	**-1.4**
IGRS				S	**Sg**	**18 35 35.2**	**0.0**
IHRN	**Hraun**	**1.04**	**252**	P	**Pg**	**18 35 18.9**	**-3.0**
IHRN				S	**Sg**	**18 35 32.3**	**-3.1**
ISVA	**Svartarkot**	**1.13**	**171**	P	**Pg**	**18 35 22.2**	**-1.4**
ISVA				S	**Sg**	**18 35 38.6**	**+0.3**
IMKO	**Mokollar**	**1.58**	**159**	P	**Pn**	**18 35 29.6**	**-1.4**
IMKO				S	**Sn**	**18 35 51.2**	**-0.7**
IHVA	**Hvannstoosfjol**	**1.68**	**153**	P	**Pn**	**18 35 31.0**	**-1.3**
IADA	**Aoalbol**	**1.68**	**148**	P	**Pn**	**18 35 30.9**	**-1.5**
IADA				S	**Sn**	**18 35 53.5**	**-0.9**
IBRU	**Bruarjokull**	**1.76**	**157**	P	**Pn**	**18 35 32.8**	**-0.6**
IBRU				S	**Sn**	**18 35 56.1**	**-0.2**
IKRE	**Kreppuhraun**	**1.76**	**161**	P	**Pn**	**18 35 32.4**	**-1.0**
IKRE				S	**Sn**	**18 35 56.4**	**+0.1**
IHVE	**Hveravellir**	**1.77**	**207**	P	**Pn**	**18 35 32.2**	**-1.3**
IHVE				S	**Sn**	**18 35 55.7**	**-0.9**
IGLU	**Glumsstadir**	**1.83**	**143**	P	**Pn**	**18 35 33.2**	**-1.2**
IGLU				S	**Sn**	**18 35 57.8**	**-0.2**
ISKR	**Skrokkalda**	**1.92**	**189**	S	**Sn**	**18 36 00.1**	**-0.2**
IASB	**`sbjarnarst**	**2.28**	**223**	P	**Pn**	**18 35 39.3**	**-1.3**
IASB				S	**Sn**	**18 36 08.7**	**-0.5**
BORG	**Borgarnes**	**2.28**	**223**	Pn	**Pn**	**18 35 39.7**	**-0.9**
	78nm,0.3s,baz=58,slow=15,SNR=13						
BORG				Sn	**Sn**	**18 36 09.1**	**-0.1**
	106nm,0.3s,baz=30,slow=22,SNR=18						
BORG	**Borgarnes**	**2.28**	**223**	P	**Pn**	**18 35 39.7**	**-0.9**
BORG						18 36 09.1	
BORG				pmax	pmax		
	comp=Z,78nm,0.3s						
BORG				smax			
	comp=N,106nm,0.3s						
BORG	**Borgarnes**	**2.28**	**223**	P	**Pn**	**18 35 39.7**	**-0.9**
	comp=N,78nm,0.3s						
BORG				Sn	**Sn**	**18 36 09.1**	**-0.1**
IGYG	**Gygjarholskot**	**2.42**	**207**	P	**Pn**	**18 35 42.3**	**-0.2**
SUMG	**Summit**	**9.47**	**320**	*e*P	**Pn**	**18 37 18.2**	**-1.0**
SUMG	**Summit**	**9.47**	**320**	*e*P	**Pn**	**18 37 18.2**	**-1.0**
EKA	**Eskdalemuir Ar**	**13.15**	**141**	Pn	**Pn**	**18 38 09.0**	**-0.6**
	comp=N,0.0nm,0.3s,baz=245,slow=34,SNR=2.4						
EKA	**Eskdalemuir Ar**	**13.15**	**141**	P	**Pn**	**18 38 09.0**	**-0.6**
ESK	**Eskdalemuir**	**13.16**	**141**	P	**Pn**	**18 38 08.1**	**-1.5**
ESK	**Eskdalemuir**	**13.16**	**141**	P	**Pn**	**18 38 08.1**	**-1.5**
NOA	**NORSAR Array B**	**13.80**	**99**	Pn	**Pn**	**18 38 18.9**	**+0.6**
	comp=N,0.1nm,0.3s,baz=305,slow=12,SNR=2.8						
NOA	**NORSAR Array B**	**13.80**	**99**	P	**Pn**	**18 38 18.9**	**+0.6**
KBS	**Kingsbay**	**14.99**	**22**	*e*P	**Pn**	**18 38 36.4**	**+1.9**
SPITS	**Spitsbergen Ar**	**15.27**	**26**	Pn	**Pn**	**18 38 40.0**	**+1.7**
	baz=236,slow=12,SNR=14						
SPITS	**Spitsbergen Ar**	**15.27**	**26**	P	**Pn**	**18 38 40.0**	**+1.8**
HFS	**Hagfors**	**15.32**	**99**	Pn	**Pn**	**18 38 38.3**	**-0.6**
	comp=N,0.1nm,0.3s,baz=178,slow=4.0,SNR=2.1						
HFS	**Hagfors**	**15.32**	**99**	Pn	**Pn**	**18 38 38.3**	**-0.7**
ARCES	**ARCESS Array B**	**16.21**	**60**	Pn	**Pn**	**18 38 50.2**	**-0.2**
	comp=N,0.2nm,0.3s,baz=264,slow=8.4,SNR=6.1						
ARCES	**ARCESS Array B**	**16.21**	**60**	P	**Pn**	**18 38 50.3**	**-0.2**
KAF	**Kangasniemi**	**19.25**	**82**	*e*P	**Pn**	**18 39 25.5**	**-2.6**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KAF	**Kangasniemi**	**19.25**	**82**	*e*P	**Pn**	**18 39 25.5**	**-2.6**
	comp=Z,3.1nm,0.7s						
KAF	**Kangasniemi**	**19.25**	**82**	*e*p	**Pn**	**18 39 25.5**	**-2.6**
	comp=Z,3.1nm,0.7s						
KAF	**Kangasniemi**	**19.25**	**82**	*e*P	**Pn**	**18 39 25.5**	**-2.6**
	comp=Z,3.1nm,0.7s						
FINES	**FINESS Array B**	**19.52**	**84**	P	**Pn**	**18 39 31.2**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=320,slow=8.5,SNR=7.8						
FINES				LR	LR	18 46 32.7	
	comp=Z,459nm,20.3s,baz=321,slow=35						
FINES	**FINESS Array B**	**19.52**	**84**	P	**Pn**	**18 39 31.2**	**-0.2**
APA	**Apatity**	**19.53**	**63**	*e*P	**Pn**	**18 39 29.0**	**-2.5**
APA				pmax	pmax		
	comp=Z,18nm,1.0s						
APA				MLR	MLR		
	comp=Z,600nm,19.0s						
APA	**Apatity**	**19.53**	**63**	*e*P	**Pn**	**18 39 29.0**	**-2.5**
	comp=Z,600nm,19.0s						
ROSF	**Rostrenen**	**19.66**	**150**	*e*P	**Pn**	**18 39 31.9**	**-1.2**
	comp=Z,22nm,0.9s						
ROSF	**Rostrenen**	**19.66**	**150**	*e*P	**Pn**	**18 39 31.9**	**-1.2**
ROSF				pmax	pmax		
	comp=Z,11nm,0.9s						
ROSF	**Rostrenen**	**19.66**	**150**	*e*P	**Pn**	**18 39 31.9**	**-1.2**
	comp=Z,11nm,0.9s						
ROSF	**Rostrenen**	**19.66**	**150**	*e*P	**Pn**	**18 39 31.9**	**-1.2**
	comp=Z,11nm,0.9s						
FLN	**La Foliniere**	**19.85**	**145**	*e*P	**Pn**	**18 39 34.2**	**-1.2**
FLN	**La Foliniere**	**19.85**	**145**	*e*P	**Pn**	**18 39 34.2**	**-1.2**
BAIF	**Baives**	**19.88**	**135**	*e*P	**Pn**	**18 39 34.0**	**-1.7**
	comp=Z,13nm,0.8s						
BAIF	**Baives**	**19.88**	**135**	*e*P	**Pn**	**18 39 34.0**	**-1.7**
BAIF				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BAIF	**Baives**	**19.88**	**135**	*e*P	**Pn**	**18 39 34.0**	**-1.7**
	comp=Z,6.4nm,0.8s						
BAIF	**Baives**	**19.88**	**135**	*e*P	**Pn**	**18 39 34.0**	**-1.7**
	comp=Z,6.4nm,0.8s						
SGMF	**Saint Gilles**	**19.88**	**149**	*e*P	**Pn**	**18 39 35.4**	**-0.3**
SGMF	**Saint Gilles**	**19.88**	**149**	*e*P	**Pn**	**18 39 35.4**	**-0.3**
QUIF	**Quistinic**	**20.08**	**151**	*e*P	**P**	**18 39 37.1**	**+0.7**
	comp=Z,20nm,1.0s						
QUIF	**Quistinic**	**20.08**	**151**	*e*P	**P**	**18 39 37.1**	**+0.7**
QUIF				pmax	pmax		
	comp=Z,10.0nm,1.0s						
QUIF	**Quistinic**	**20.08**	**151**	*e*P	**P**	**18 39 37.1**	**+0.7**
	comp=Z,10nm,1.0s						
QUIF	**Quistinic**	**20.08**	**151**	*e*P	**P**	**18 39 37.1**	**+0.7**
	comp=Z,10nm,1.0s						
LDF	**La Druitiere**	**20.09**	**144**	*e*P	**P**	**18 39 36.4**	**-0.1**
	comp=Z,8.5nm,0.7s						
LDF	**La Druitiere**	**20.09**	**144**	*e*P	**P**	**18 39 36.4**	**-0.1**
LDF				pmax	pmax		
	comp=Z,4.0nm,0.7s						
LDF	**La Druitiere**	**20.09**	**144**	*e*P	**P**	**18 39 36.4**	**-0.1**
	comp=Z,4.3nm,0.7s						
LDF	**La Druitiere**	**20.09**	**144**	*e*P	**P**	**18 39 36.4**	**-0.1**
	comp=Z,4.2nm,0.7s						
GRR	**Gorron**	**20.12**	**146**	*e*P	**P**	**18 39 36.7**	**-0.1**
	comp=Z,12nm,0.8s						
GRR	**Gorron**	**20.12**	**146**	*e*P	**P**	**18 39 36.7**	**-0.1**
GRR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GRR	**Gorron**	**20.12**	**146**	*e*P	**P**	**18 39 36.7**	**-0.1**
	comp=Z,6.2nm,0.8s						
GRR	**Gorron**	**20.12**	**146**	*e*P	**P**	**18 39 36.7**	**-0.1**
	comp=Z,6.2nm,0.8s						
JOF	**Joensuu**	**20.80**	**77**	*e*P	**P**	**18 39 42.0**	**-2.1**
JOF				pmax	pmax		
	comp=Z,15nm,0.7s						
JOF	**Joensuu**	**20.80**	**77**	*e*p	**P**	**18 39 42.0**	**-2.1**
	comp=Z,14nm,0.7s						
JOF	**Joensuu**	**20.80**	**77**	*e*P	**P**	**18 39 42.0**	**-2.1**
	comp=Z,15nm,0.7s						
MEZF	**Maizieres J'vi**	**21.52**	**136**	*e*P	**P**	**18 39 53.1**	**+1.2**
MEZF	**Maizieres J'vi**	**21.52**	**136**	*e*P	**P**	**18 39 53.1**	**+1.2**
CLL	**Collm**	**21.61**	**120**	⇓*i*P	**P**	**18 39 52.7**	**-0.1**
CLL				*i*		18 39 57.4	
CLL				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.2						
CLL	**Collm**	**21.61**	**120**	⇓*i*P	**P**	**18 39 52.7**	**-0.1**
	comp=Z,11nm,1.1s,mb4.2						
CLL				*i*		18 39 57.4	
CLL	**Collm**	**21.61**	**120**	⇓*i*P	**P**	**18 39 52.7**	**-0.1**
	comp=Z,11nm,1.1s,mb4.2						
CLL				*i*	sP	18 39 57.4	+3.8
CLL	**Collm**	**21.61**	**120**	⇓*i*P	**P**	**18 39 52.7**	**-0.1**
MOX	**Moxa**	**21.68**	**123**	*e*(P)	**P**	**18 39 53.7**	**0.0**
MFF	**Saint Martin d**	**21.96**	**146**	*e*P	**P**	**18 39 56.6**	**-0.1**
	comp=Z,33nm,1.1s,mb4.4						
MFF	**Saint Martin d**	**21.96**	**146**	*e*P	**P**	**18 39 56.6**	**-0.1**
MFF				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.4						
MFF	**Saint Martin d**	**21.96**	**146**	*e*P	**P**	**18 39 56.6**	**-0.1**
	comp=Z,16nm,1.1s,mb4.4						
MFF	**Saint Martin d**	**21.96**	**146**	*e*P	**P**	**18 39 56.6**	**-0.1**
	comp=Z,16nm,1.1s,mb4.4						
CDF	**Champ du Feu**	**22.25**	**132**	*e*P	**P**	**18 40 00.6**	**+0.9**
CDF	**Champ du Feu**	**22.25**	**132**	*e*P	**P**	**18 40 00.6**	**+0.9**
BRG	**Berggiesshubel**	**22.30**	**119**	*e*P	**P**	**18 40 00.1**	**-0.2**
	comp=Z,12nm,1.4s,mb4.1						
BRG	**Berggiesshubel**	**22.30**	**119**	*e*(P)	Px	18 40 23.8	
	comp=Z,9.5nm,1.2s						
BRG	**Berggiesshubel**	**22.30**	**119**	*e*P	**P**	**18 40 00.1**	**-0.1**
BRG				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb3.9						
BRG	**Berggiesshubel**	**22.30**	**119**	*e*P	**P**	**18 40 00.1**	**-0.1**
	comp=Z,7.0nm,1.4s,mb3.9						
NKC	**Novy Kostel**	**22.32**	**122**	*e*P	**P**	**18 40 03.0**	**+2.5**
NKC				*e*		18 40 10.6	
NKC	**Novy Kostel**	**22.32**	**122**	*e*P	**P**	**18 40 03.0**	**+2.5**
NKC				*ex*	x	18 40 10.6	
LOR	**Lormes**	**22.32**	**139**	*e*P	**P**	**18 40 00.0**	**-0.5**
	comp=Z,41nm,1.3s,mb4.4						
LOR	**Lormes**	**22.32**	**139**	*e*P	**P**	**18 40 00.0**	**-0.5**
LOR				pmax	pmax		
	comp=Z,21nm,1.3s,mb4.4						
LOR	**Lormes**	**22.32**	**139**	*e*P	**P**	**18 40 00.0**	**-0.5**
	comp=Z,21nm,1.3s,mb4.4						
LOR	**Lormes**	**22.32**	**139**	*e*P	**P**	**18 40 00.0**	**-0.5**
	comp=Z,21nm,1.3s,mb4.4						
HAU	**Haudompre**	**22.34**	**134**	*e*P	**P**	**18 40 01.3**	**+0.6**
HAU	**Haudompre**	**22.34**	**134**	*e*P	**P**	**18 40 01.3**	**+0.6**
GRF	**Grafenberg Arr**	**22.37**	**124**	*e*P	**P**	**18 40 02.6**	**+1.6**
	comp=Z,18nm,1.4s,mb4.3						
GRF	**Grafenberg Arr**	**22.37**	**124**	*e*P	**P**	**18 40 02.6**	**+1.6**
GRF				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.3						
GRF	**Grafenberg Arr**	**22.37**	**124**	*e*P	**P**	**18 40 02.6**	**+1.6**
	comp=Z,18nm,1.4s,mb4.3						
SSF	**Saint Saulge**	**22.42**	**140**	*e*P	**P**	**18 40 01.5**	**-0.1**
	comp=Z,49nm,1.3s,mb4.5						
SSF	**Saint Saulge**	**22.42**	**140**	*e*P	**P**	**18 40 01.5**	**-0.1**
SSF				pmax	pmax		
	comp=Z,24nm,1.3s,mb4.5						
SSF	**Saint Saulge**	**22.42**	**140**	*e*P	**P**	**18 40 01.5**	**-0.1**
	comp=Z,24nm,1.3s,mb4.5						
SSF	**Saint Saulge**	**22.42**	**140**	*e*P	**P**	**18 40 01.5**	**-0.1**
	comp=Z,24nm,1.3s,mb4.5						
AVF	**Avril sur Loir**	**22.63**	**140**	*e*P	**P**	**18 40 03.7**	**-0.1**
	comp=Z,13nm,0.8s,mb4.1						
AVF	**Avril sur Loir**	**22.63**	**140**	*e*P	**P**	**18 40 03.7**	**-0.1**
AVF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.1						
AVF	**Avril sur Loir**	**22.63**	**140**	*e*P	**P**	**18 40 03.7**	**-0.1**
	comp=Z,6.7nm,0.8s,mb4.1						
AVF	**Avril sur Loir**	**22.63**	**140**	*e*P	**P**	**18 40 03.7**	**-0.1**
	comp=Z,6.7nm,0.8s,mb4.1						
HINF	**Hinteralfeld**	**22.66**	**133**	*e*P	**P**	**18 40 04.5**	**+0.4**
	comp=Z,5.5nm,0.8s,mb3.8						
HINF	**Hinteralfeld**	**22.66**	**133**	*e*P	**P**	**18 40 04.5**	**+0.4**
HINF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.8						
HINF	**Hinteralfeld**	**22.66**	**133**	*e*P	**P**	**18 40 04.5**	**+0.4**
	comp=Z,2.8nm,0.8s,mb3.7						
HINF	**Hinteralfeld**	**22.66**	**133**	*e*P	**P**	**18 40 04.5**	**+0.4**
	comp=Z,2.8nm,0.8s,mb3.8						
BGF	**Bois d'Agland**	**22.72**	**141**	*e*P	**P**	**18 40 04.5**	**-0.2**
BGF	**Bois d'Agland**	**22.72**	**141**	*e*P	**P**	**18 40 04.5**	**-0.2**
PVCC	**Panska Ves**	**22.80**	**118**	*e*P	**P**	**18 40 09.1**	**+3.5**
PVCC	**Panska Ves**	**22.80**	**118**	*e*P	**P**	**18 40 09.1**	**+3.5**
TCF	**Toulx Ste Croi**	**22.81**	**142**	*e*P	**P**	**18 40 05.3**	**-0.4**
	comp=Z,16nm,1.1s,mb4.1						
TCF	**Toulx Ste Croi**	**22.81**	**142**	*e*P	**P**	**18 40 05.3**	**-0.4**
TCF				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.1						
TCF	**Toulx Ste Croi**	**22.81**	**142**	*e*P	**P**	**18 40 05.3**	**-0.4**
	comp=Z,8.3nm,1.1s,mb4.1						
TCF	**Toulx Ste Croi**	**22.81**	**142**	*e*P	**P**	**18 40 05.3**	**-0.4**
	comp=Z,8.2nm,1.1s,mb4.1						
SMF	**Signal de Mont**	**22.89**	**139**	*e*P	**P**	**18 40 06.6**	**0.0**
	comp=Z,36nm,1.0s,mb4.4						
SMF	**Signal de Mont**	**22.89**	**139**	*e*P	**P**	**18 40 06.6**	**0.0**
SMF				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.5						
SMF	**Signal de Mont**	**22.89**	**139**	*e*P	**P**	**18 40 06.6**	**0.0**
	comp=Z,18nm,1.0s,mb4.5						
SMF	**Signal de Mont**	**22.89**	**139**	*e*P	**P**	**18 40 06.6**	**0.0**
	comp=Z,18nm,1.0s,mb4.4						
PRU	**Pruhonice**	**23.25**	**119**	*e*P	**P**	**18 40 13.5**	**+3.2**
PRU	**Pruhonice**	**23.25**	**119**	*e*P	**P**	**18 40 13.5**	**+3.2**
CABF	**La Chapelle**	**23.53**	**136**	*e*P	**P**	**18 40 12.9**	**-0.4**
CABF	**La Chapelle**	**23.53**	**136**	*e*P	**P**	**18 40 12.9**	**-0.4**
RJF	**Les Rejaudoux**	**23.57**	**145**	*e*P	**P**	**18 40 12.7**	**-1.0**
	comp=Z,31nm,1.1s,mb4.3						
RJF	**Les Rejaudoux**	**23.57**	**145**	*e*P	**P**	**18 40 12.7**	**-1.0**
RJF				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.3						
RJF	**Les Rejaudoux**	**23.57**	**145**	*e*P	**P**	**18 40 12.7**	**-1.0**
	comp=Z,15nm,1.1s,mb4.3						
RJF	**Les Rejaudoux**	**23.57**	**145**	*e*P	**P**	**18 40 12.7**	**-1.0**
	comp=Z,15nm,1.1s,mb4.3						
DPC	**Dobruska-Polom**	**23.58**	**116**	*e*P	**P**	**18 40 13.6**	**-0.2**
DPC	**Dobruska-Polom**	**23.58**	**116**	*e*P	**P**	**18 40 13.6**	**-0.2**
DPC				*ex*	x	18 40 29.1	
DPC	**Dobruska-Polom**	**23.58**	**116**	*e*P	**P**	**18 40 13.6**	**-0.2**
KHC	**Kasperske Hory**	**23.64**	**122**	*e*P	**P**	**18 40 15.4**	**+1.0**
KHC				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.1						
KHC	**Kasperske Hory**	**23.64**	**122**	*e*P	**P**	**18 40 15.4**	**+1.0**
	comp=Z,11nm,1.3s,mb4.1						
KHC	**Kasperske Hory**	**23.64**	**122**	*e*P	**P**	**18 40 15.2**	**+0.8**
KHC	**Kasperske Hory**	**23.64**	**122**	P	**P**	**18 40 15.2**	**+0.8**
CAF	**Calviac**	**24.06**	**144**	*e*P	**P**	**18 40 18.0**	**-0.2**
	comp=Z,7.6nm,0.8s,mb3.9						
CAF	**Calviac**	**24.06**	**144**	*e*P	**P**	**18 40 18.0**	**-0.2**
CAF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb3.9						
CAF	**Calviac**	**24.06**	**144**	*e*P	**P**	**18 40 18.0**	**-0.2**
	comp=Z,3.8nm,0.8s,mb3.9						
CAF	**Calviac**	**24.06**	**144**	*e*P	**P**	**18 40 18.0**	**-0.2**
	comp=Z,3.8nm,0.8s,mb3.9						
MORC	**Moravsky Berou**	**24.50**	**116**	*e*P	**P**	**18 40 22.4**	**+0.2**
MORC				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb3.9						
MORC	**Moravsky Berou**	**24.50**	**116**	*e*P	**P**	**18 40 22.4**	**+0.2**
	comp=Z,4.7nm,0.9s,mb3.9						
MORC	**Moravsky Berou**	**24.50**	**116**	*e*P	**P**	**18 40 22.4**	**+0.2**
	comp=Z,5.0nm,0.9s,mb3.9						
LPL	**La Plagne**	**24.71**	**136**	*e*P	**P**	**18 40 24.8**	**+0.6**
	comp=Z,7.8nm,0.7s,mb4.0						
LPL	**La Plagne**	**24.71**	**136**	*e*P	**P**	**18 40 24.8**	**+0.6**
LPL				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.1						
LPL	**La Plagne**	**24.71**	**136**	*e*P	**P**	**18 40 24.8**	**+0.6**
	comp=Z,3.9nm,0.7s,mb4.0						
LPL	**La Plagne**	**24.71**	**136**	*e*P	**P**	**18 40 24.8**	**+0.6**
	comp=Z,3.9nm,0.7s,mb4.0						
LPG	**La Plagne**	**24.74**	**136**	*e*P	**P**	**18 40 25.1**	**+0.7**
	comp=Z,8.8nm,0.8s,mb4.0						
LPG	**La Plagne**	**24.74**	**136**	*e*P	**P**	**18 40 25.1**	**+0.7**
LPG				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.0						
LPG	**La Plagne**	**24.74**	**136**	*e*P	**P**	**18 40 25.1**	**+0.7**
	comp=Z,4.4nm,0.8s,mb4.0						
LPG	**La Plagne**	**24.74**	**136**	*e*P	**P**	**18 40 25.1**	**+0.7**
	comp=Z,4.4nm,0.8s,mb4.0						
ORIF	**Oris-en-Rattie**	**25.03**	**138**	*e*P	**P**	**18 40 27.9**	**+0.8**
	comp=Z,17nm,1.1s,mb4.2						
ORIF	**Oris-en-Rattie**	**25.03**	**138**	*e*P	**P**	**18 40 27.9**	**+0.8**
ORIF				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.2						
ORIF	**Oris-en-Rattie**	**25.03**	**138**	*e*P	**P**	**18 40 27.9**	**+0.8**
	comp=Z,8.4nm,1.1s,mb4.2						
ORIF	**Oris-en-Rattie**	**25.03**	**138**	*e*P	**P**	**18 40 27.9**	**+0.8**
	comp=Z,8.4nm,1.1s,mb4.2						
SJPF	**Ste Jean**	**25.07**	**151**	*e*P	**P**	**18 40 27.2**	**-0.2**
SJPF	**Ste Jean**	**25.07**	**151**	*e*P	**P**	**18 40 27.2**	**-0.2**
LASF	**Ste Croix**	**25.29**	**142**	*e*P	**P**	**18 40 29.9**	**+0.5**
	comp=Z,31nm,1.2s,mb4.4						
LASF	**Ste Croix**	**25.29**	**142**	*e*P	**P**	**18 40 29.9**	**+0.5**
	comp=Z,15nm,1.2s,mb4.4						
ETSF	**Etsaut**	**25.41**	**150**	*e*P	**P**	**18 40 31.0**	**+0.5**
	comp=Z,7.1nm,0.8s,mb3.9						
ETSF	**Etsaut**	**25.41**	**150**	*e*P	**P**	**18 40 31.0**	**+0.5**
ETSF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.0						
ETSF	**Etsaut**	**25.41**	**150**	*e*P	**P**	**18 40 31.0**	**+0.5**
	comp=Z,3.5nm,0.8s,mb3.9						
ETSF	**Etsaut**	**25.41**	**150**	*e*P	**P**	**18 40 31.0**	**+0.5**
	comp=Z,3.5nm,0.8s,mb3.9						
MBDF	**Montbardon**	**25.45**	**137**	*e*P	**P**	**18 40 31.9**	**+1.0**
	comp=Z,10nm,0.8s,mb4.1						
MBDF	**Montbardon**	**25.45**	**137**	*e*P	**P**	**18 40 31.9**	**+1.0**
MBDF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.1						
MBDF	**Montbardon**	**25.45**	**137**	*e*P	**P**	**18 40 31.9**	**+1.0**
	comp=Z,5.1nm,0.8s,mb4.1						
MBDF	**Montbardon**	**25.45**	**137**	*e*P	**P**	**18 40 31.9**	**+1.0**
	comp=Z,5.1nm,0.8s,mb4.1						
MTLF	**Montolieu**	**25.59**	**145**	*e*P	**P**	**18 40 32.2**	**0.0**
MTLF	**Montolieu**	**25.59**	**145**	*e*P	**P**	**18 40 32.2**	**0.0**
SCHQ	**Schefferville**	**25.98**	**268**	P	**P**	**18 40 33.7**	**-1.9**
	comp=Z,3.8nm,0.7s,mb4.0,baz=21,slow=0.8,SNR=5.1						
SCHQ	**Schefferville**	**25.98**	**268**	P	**P**	**18 40 33.7**	**-1.9**
SCHQ	**Schefferville**	**25.98**	**268**	P	**P**	**18 40 33.7**	**-1.9**
VYHS	**Vyhne**	**26.03**	**116**	*e*P	**P**	**18 40 36.7**	**+0.6**
VYHS				pmax	pmax		
	comp=Z,16nm,2.1s,mb4.2						
VYHS	**Vyhne**	**26.03**	**116**	*e*P	**P**	**18 40 36.7**	**+0.6**
	comp=Z,16nm,2.1s,mb4.2						
VYHS	**Vyhne**	**26.03**	**116**	*e*P	**P**	**18 40 36.7**	**+0.6**
VYHS	**Vyhne**	**26.03**	**116**	*e*P	**P**	**18 40 36.7**	**+0.6**
	comp=Z,16nm,2.1s,mb4.2						
STHS	**Stebnicka Huta**	**26.16**	**111**	*e*P	**P**	**18 40 38.9**	**+1.7**
STHS				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
STHS	**Stebnicka Huta**	**26.16**	**111**	*e*P	**P**	**18 40 38.9**	**+1.7**
	comp=Z,3.5nm,0.9s,mb3.9						
STHS	**Stebnicka Huta**	**26.16**	**111**	*e*P	**P**	**18 40 38.9**	**+1.7**
STHS	**Stebnicka Huta**	**26.16**	**111**	*e*P	**P**	**18 40 38.9**	**+1.7**
	comp=Z,3.5nm,0.9s,mb3.9						
FRF	**La Foret Royal**	**26.50**	**138**	*e*P	**P**	**18 40 41.9**	**+1.5**
	comp=Z,26nm,1.4s,mb4.3						
FRF	**La Foret Royal**	**26.50**	**138**	*e*P	**P**	**18 40 41.9**	**+1.5**
FRF				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.3						
FRF	**La Foret Royal**	**26.50**	**138**	*e*P	**P**	**18 40 41.9**	**+1

TORD	**Torodi Ar. Bea**	**54.82**	**157**	P	**P**	**18 44 31.1**	**-2.1**
	comp=Z,3.0nm,1.1s,mb4.2,baz=341,slow=8.3,SNR=8.5						
PV01	**Paradox Valley**	**56.07**	**288**	*e*P	**P**	**18 44 44.2**	**+2.2**
	comp=Z,586nm,1.0s						
PV01	**Paradox Valley**	**56.07**	**288**	*e*P	**P**	**18 44 44.2**	**+2.2**
	comp=Z,586nm,1.0s						
WMQ	**Urumqi**	**56.31**	**57**	*e*P	**P**	**18 44 45.5**	**+1.8**
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
WMQ				pmax	pmax		
	comp=Z,78nm,4.6s						
MOD	**Modoc**	**57.06**	**300**	*e*P	**P**	**18 44 51.1**	**+2.1**
	comp=Z,5.3nm,1.1s,mb4.5						
MOD	**Modoc**	**57.06**	**300**	*e*P	**P**	**18 44 51.2**	**+2.2**
	comp=Z,5.3nm,1.1s,mb4.5						
MSU	**Marysvale**	**57.10**	**291**	*e*P	**P**	**18 44 50.5**	**+1.1**
MSU				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
MSU	**Marysvale**	**57.10**	**291**	*e*P	**P**	**18 44 50.5**	**+1.2**
	comp=Z,5.9nm,1.1s,mb4.5						
MSU	**Marysvale**	**57.10**	**291**	*e*P	**P**	**18 44 50.5**	**+1.1**
	comp=Z,6.0nm,1.1s,mb4.5						
SONM	**Songino Array**	**58.34**	**41**	P	**P**	**18 44 58.0**	**+0.1**
	comp=Z,0.4nm,0.8s,mb3.5,baz=297,slow=6.5,SNR=3.9						
SONM	**Songino Array**	**58.34**	**41**	P	**P**	**18 44 58.0**	**+0.1**
NVAR	**Mina Array Bea**	**59.42**	**296**	P	**P**	**18 45 06.5**	**+0.9**
	comp=Z,1.9nm,0.9s,mb4.1,baz=43,slow=5.9,SNR=5.9						
NVAR	**Mina Array Bea**	**59.42**	**296**	P	**P**	**18 45 06.5**	**+0.9**
NVAR	**Mina Array Bea**	**59.42**	**296**	P	**P**	**18 45 06.5**	**+0.9**
MNTX	**Cornudas Mount**	**60.49**	**282**	*e*P	**P**	**18 45 12.8**	**-0.3**
	comp=Z,4.3nm,1.3s,mb4.3						
MNTX	**Cornudas Mount**	**60.49**	**282**	*e*P	**P**	**18 45 12.8**	**-0.2**
	comp=Z,4.3nm,1.3s,mb4.3						
TXAR	**Lajitas Array**	**61.91**	**279**	P	**P**	**18 45 22.2**	**-0.5**
	comp=Z,2.4nm,0.9s,mb4.3,baz=64,slow=3.5,SNR=11						
TXAR	**Lajitas Array**	**61.91**	**279**	P	**P**	**18 45 22.2**	**-0.5**
TXAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TXAR	**Lajitas Array**	**61.91**	**279**	P	**P**	**18 45 22.2**	**-0.5**
TXAR	**Lajitas Array**	**61.91**	**279**	P	**P**	**18 45 22.2**	**-0.5**
	comp=Z,2.0nm,1.0s,mb4.2						
GTA	**Gaotai**	**64.20**	**50**	*e*P	**P**	**18 45 38.4**	**+0.7**
GTA				pP		18 45 42.9	
GTA				sP	sP	18 45 45.4	+6.8
GTA				S	**S**	**18 54 15.3**	**-0.2**
GTA				sS	sS	18 54 22.4	+5.9
GTA				pmax	pmax		
	comp=Z,2.0nm,1.6s,mb3.9						
GTA				pmax	pmax		
	comp=Z,100nm,5.4s						
GTA				LR	LR		
	comp=N,180nm,18.9s,MS4.4						
GTA				LR	LR		
	comp=E,150nm,19.5s,MS4.4						
GTA				LR	LR		
	comp=Z,220nm,18.3s,MS4.4						
HHC	**Hu-ho-hao-te**	**66.19**	**40**	*e*P	**P**	**18 45 50.8**	**+0.2**
HHC				S	S	18 54 36.1	-3.8
HHC				pmax	pmax		
	comp=Z,13nm,0.7s,mb5.1						
HHC				pmax	pmax		
	comp=Z,69nm,6.8s						
MDJ	**Mudanjiang**	**66.45**	**25**	P	**P**	**18 45 48.5**	**-3.8**
MDJ				S	S	18 54 35.1	-7.9
MDJ				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb4.1						
MDJ				pmax	pmax		
	comp=Z,250nm,12.1s						
MDJ				LR	LR		
	comp=N,410nm,57.3s,MS4.3						
MDJ				LR	LR		
	comp=E,420nm,57.3s,MS4.3						
MDJ				LR	LR		
	comp=Z,380nm,77.6s						
CN2	**Changchun**	**66.50**	**28**	*e*P	**P**	**18 45 53.4**	**+0.8**
CD2	**Chengdu**	**73.27**	**50**	P	**P**	**18 46 34.8**	**+0.4**
CD2				pP		18 46 39.5	
CD2				sP	sP	18 46 41.8	+6.6
CD2				PP	PP	18 49 19.5	+2.5
CD2				S	S	18 56 00.6	-2.8
CD2				sS	sS	18 56 07.9	+3.5
CD2				SKS		18 56 35.3	
CD2				SS	SS	19 00 43.1	-0.8
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
CD2				pmax	pmax		
	comp=Z,360nm,7.7s						
CD2				LR	LR		
	comp=N,390nm,10.1s						
CD2				LR	LR		
	comp=Z,390nm,17.8s						
NJ2	**Nanjing**	**76.35**	**37**	*e*P	**P**	**18 46 55.5**	**+3.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
GYA	**Guiyang**	**78.31**	**49**	*e*P	**P**	**18 47 03.4**	**+0.1**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
KMI	**Kunming**	**78.34**	**53**	P	**P**	**18 47 04.4**	**+0.9**
KMI				pP		18 47 07.4	
KMI				sP	sP	18 47 08.8	+4.5
KMI				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
KMI				LR	LR		
	comp=Z,190nm,55.1s,MS4.0						
CMAR	**Chiang Mai Arr**	**83.27**	**59**	P	**P**	**18 47 29.1**	**-0.8**
	comp=Z,0.4nm,0.7s,mb3.5,baz=337,slow=9.1,SNR=3.8						
CMAR	**Chiang Mai Arr**	**83.27**	**59**	P	**P**	**18 47 29.1**	**-0.8**

WEL 23 18:40:56.3±0.8, 37°.07S×177°.35E, h157km±4km, ML3.6/5, Error ellipse: s-maj=9.0km s-min=8.6km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**1.20**	**189**	PN	Pn	18 41 23.6	+0.1
URZ				SN	Sn	18 41 44.1	-0.2
MWZ	**Matawai**	**1.27**	**174**	PN	Pn	18 41 24.2	+0.2
MWZ				SN	Sn	18 41 45.9	+0.5
CNGZ	**Carnagh Statio**	**1.56**	**154**	PN	Pn	18 41 27.0	0.0
KNZ	**Kokohu**	**1.96**	**173**	PN	Pn	18 41 31.3	0.0
NMHZ	**Naumai**	**2.07**	**192**	*e*PN	Pn	18 41 34.5	+1.9
PNHZ	**Pukenui**	**2.98**	**197**	PN	Pn	18 41 44.0	+0.4
MRZ	**Mangatainoka R**	**3.84**	**201**	PN	Pn	18 41 54.5	-0.1
TCW	**Tory Channel**	**4.77**	**209**	SN	Sn	18 43 01.0	-0.8
TUWZ	**Tuamarina**	**5.09**	**210**	SN	Sn	18 43 07.8	-1.5

*CSEM **23** 18:53:58.6, 66°.56N×17°.67W, h10km, ML3.4, After REY*
REY 23 18:53:58.6, 66°.56N×17°.67W, h10km, ML3.4, ML3.6, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGRI	**Grimsey**	**0.14**	**264**	P	Pg	18 54 01.6	-0.1
IGRI				S	Sg	18 54 04.0	+0.2
IFLA	**Flatey**	**0.40**	**190**	P	Pg	18 54 06.4	-0.1
IFLA				S	Sg	18 54 12.4	+0.6
IBRE	**Brettingsstaoi**	**0.45**	**193**	P	Pg	18 54 06.9	-0.4
IBRE				S	Sg	18 54 13.3	+0.2
ILEI	**Leirhofn**	**0.50**	**107**	P	Pg	18 54 07.6	-0.6
ILEI				S	Sg	18 54 14.7	-0.1
IHED	**Heoinshofoi**	**0.50**	**163**	P	Pg	18 54 07.4	-0.9
IHED				S	Sg	18 54 14.3	-0.5
IGRA	**Granastaoir**	**0.64**	**177**	P	Pg	18 54 09.9	-1.1
IGRA				S	Sg	18 54 18.4	-1.0
ISIG	**Siglufjorour**	**0.66**	**230**	S	Sg	18 54 18.3	-1.6
IHLA	**Hella**	**0.68**	**206**	P	Pg	18 54 10.4	-1.3
IHLA				S	Sg	18 54 19.2	-1.4
IGIL	**Gilhagi**	**0.72**	**131**	P	Pg	18 54 11.0	-1.4
IGIL				S	Sg	18 54 20.7	-1.1
IKVO	**Krokottuvotn**	**0.91**	**159**	P	Pg	18 54 14.0	-2.0
IKVO				S	Sg	18 54 25.9	-1.8
IREN	**Reynihlio**	**0.96**	**161**	P	Pg	18 54 15.0	-2.1
IREN				S	Sg	18 54 27.7	-1.9
IGRS	**Grimsstaoir**	**1.12**	**145**	P	Pb	18 54 17.5	-2.4
IGRS				S	Sb	18 54 32.0	-2.5
ISVA	**Svartarkot**	**1.24**	**172**	P	Pn	18 54 19.5	-2.4
ISVA				S	Sb	18 54 35.6	-2.3
IMKO	**Mokollar**	**1.68**	**160**	P	Pn	18 54 26.3	-1.6
IADA	**Aoalbol**	**1.77**	**150**	P	Pn	18 54 28.1	-1.1
IADA				S	Sn	18 54 50.5	-1.2
IHVA	**Hvannstoosfjol**	**1.77**	**154**	P	Pn	18 54 28.1	-1.1
IHVE	**Hveravellir**	**1.87**	**206**	P	Pn	18 54 29.2	-1.3

*CSEM **23** 19:10:30.6±0.4, 37°.61N×35°.65E, h15km, ML1.6, Error ellipse: s-maj=9.7km s-min=6.7km az=159.0*
*ISCJB **23** 19:10:31.0±1.1, 37°.59N±0°.08×35°.67E±0°.07, h10km±11km, Error ellipse: s-maj=15.4km s-min=7.0km az=152.9*
*ISK **23** 19:10:31.7, 37°.48N×35°.66E, h5km, ML1.6*
*DDA **23** 19:10:32.3, 37°.52N×35°.70E, h7km±3km, Md2.7*
ISC 23 19:10:31.2±0.9, 37°.59N±0°.08×35°.66E±0°.08, h15km±10km, n11, σ1°.00/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.17**	**128**	*e*PG	**Pg**	**19 10 35.1**	**-0.3**
KOZT				*e*SG	**Sg**	**19 10 37.2**	**-1.0**
ANDN	**Andirin**	**0.55**	**91**	*i* P	**Pg**	**19 10 42.4**	**+0.5**
ANDN				*i* S	**Sg**	**19 10 50.8**	**+1.5**
ANDN	**Andirin**	**0.55**	**91**	*i* P	**Pg**	**19 10 42.4**	**+0.4**
ANDN				*i* S	**Sg**	**19 10 50.8**	**+1.5**
KARA	**Karaisali**	**0.58**	**236**	*e*PG	**Pg**	**19 10 43.0**	**+0.4**
KARA	**Karaisali**	**0.58**	**236**	*e*Pg	**Pg**	**19 10 43.0**	**+0.4**
CEYT	**Ceyhan**	**0.58**	**173**	*e*PG	**Pg**	**19 10 42.2**	**-0.4**
CEYT				*e*SG	**Sg**	**19 10 50.1**	**-0.3**
CEYT	**Ceyhan**	**0.58**	**173**	*e*Pg	**Pg**	**19 10 42.2**	**-0.4**
CEYT				*e*Sg	**Sg**	**19 10 50.1**	**-0.2**
GULE	**Gulek**	**0.76**	**247**	*i* P	**Pb**	**19 10 45.7**	**-0.4**
GULE				*i* S	**Sb**	**19 10 59.3**	**+3.0**
GULE	**Gulek**	**0.76**	**247**	*i* P	**Pb**	**19 10 45.7**	**-0.5**
GULE				*i* S	**Sb**	**19 10 59.3**	**+3.0**
SARI	**SarD1z-Kayseri**	**1.36**	**37**	*e*PN	**Pn**	**19 10 54.2**	**-1.4**
SARI	**SarD1z-Kayseri**	**1.36**	**37**	*e*Pn	**Pn**	**19 10 54.3**	**-1.4**

*NEIC **23** 19:14:35.6±1.0, 7°.13N×92°.27E, h35km, Error ellipse: s-maj=28.4km s-min=10.8km az=61.0*
IDC 23 19:14:31.1±1.6, 7°.17N×92°.31E, h0km, mb3.8/7, mb1 3.9/9, mb1mx3.7/24, mbtmp3.8/9, ML3.6/2, Error ellipse: s-maj=64.0km s-min=16.6km az=62.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**7.88**	**123**	Pn	Pn	19 16 27.5	+0.3
	0.5nm,0.3s,baz=333,slow=14,SNR=7.1						
CMAR	**Chiang Mai Arr**	**12.95**	**29**	Pn	Pn	19 17 38.5	+2.0
	0.1nm,0.3s,baz=230,slow=15,SNR=18						
UCH	**Uchtor**	**38.31**	**339**	*e*P	P	19 21 52.1	-1.4
MKAR	**Makanchi Array**	**40.41**	**349**	P	P	19 22 11.3	+0.3
	0.4nm,0.3s,baz=172,slow=8.6,SNR=7.7						
MKAR	**Makanchi Array**	**40.41**	**349**	P	P	19 22 11.3	+0.3
FITZ	**Fitzroy Crossi**	**41.38**	**128**	P	P	19 22 18.7	-0.7
	4.7nm,0.9s,baz=300,slow=7.6,SNR=4.0						
SONM	**Songino Array**	**42.26**	**14**	P	P	19 22 25.6	-0.7
	0.3nm,0.6s,baz=207,slow=4.8,SNR=3.0						
SONM				PcP	PcP	19 24 21.0	+0.8
	0.5nm,1.0s,baz=186,slow=2.6,SNR=2.9						
ZALV	**Zalesovo Beam**	**47.04**	**354**	P	P	19 23 03.8	-0.5
	0.3nm,0.4s,baz=165,slow=6.0,SNR=2.6						
BVAR	**Borovoye Array**	**49.09**	**343**	P	P	19 23 19.8	-0.3
	0.4nm,0.7s,baz=147,slow=8.6,SNR=3.0						
ASAR	**Alice Springs**	**50.88**	**128**	P	P	19 23 34.1	-0.1
	1.5nm,0.8s,baz=300,slow=7.4,SNR=12						
STKA	**Stephens Creek**	**60.95**	**132**	P	P	19 24 47.0	+0.7
	1.8nm,0.7s,baz=330,slow=9.8,SNR=5.9						

*BGS **23** 19:54:26.6±1.4, 31°.77N×106°.52E, h10km, mb5.5, MS5.3*
*BJI **23** 19:54:42.9, 32°.72N×105°.63E, h10km, mB5.8/25, mb5.6/35, ML5.6/19, Ms5.7/66, Ms7 5.5/47*
*IDC **23** 19:54:43.4±0.4, 32°.78N×105°.60E, h0km, mb5.4/30, mb1 5.4/33, mb1mx5.4/33, mbtmp5.4/33, ML4.8/3, MS5.0/24, Ms1 5.0/24, ms1mx4.8/38, Error ellipse: s-maj=13.2km s-min=8.9km az=47.0*
*ISCJB **23** 19:54:43.8±0.1, 32°.83N±0°.01×105°.54E±0°.02, h10km, mb5.6/374, MS5.2/182, Error ellipse: s-maj=2.1km s-min=1.8km az=39.0*
*NEIC **23** 19:54:44.2±0.1, 32°.75N×105°.50E, h4km, mb5.8/230, ME5.7, MS5.2/117, MW5.5, Error ellipse: s-maj=3.1km s-min=2.4km az=192.0, Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*
NEIC Casualties and damage are included with the event on July 24 at 07:09 UTC. Felt [IV] at Baoji and Hanzhong; [III] at Xi'an. Felt at Ankang, Chengdu, Deyang, Guangyuan, Leshan, Mianyang and Nanchong.
*MOS **23** 19:54:45.2±0.8, 32°.78N×105°.60E, h23km, mb5.9/138, MS5.1/75, Error ellipse: s-maj=5.8km s-min=3.3km az=120.9*
*TEH **23** 19:54:45.0, 32°.78N×105°.55E, h10km*
*GCMT **23** 19:54:47.2±0.2, 32°.71N×105°.61E, h12km, MW5.5, Moment Tensor Solution. s34,c38; s7,c7; Moment tensor: Scale 10^{17}Nm; M_{rr}1.90±.04; $M_{\theta\theta}$-0.12±.03; $M_{\phi\phi}$-1.79±.03; $M_{r\theta}$0.70±.15; $M_{\theta\phi}$0.18±.03; $M_{\phi r}$-0.17±.11; Best double couple: $M_0$2.00000×10^{17} NP1:ϕ_s10.00000°, δ44.00000°, λ115.00000°. NP2:ϕ_s157.00000°, δ51.00000°, λ68.00000°. Principal axes: T 2.1200, Plg73.0000°, Azm5.0000°; N -0.3000, Plg17.0000°, Azm171.0000°; P -1.8300, Plg4.0000°, Azm262.0000°; Data Used: II IU G IC CN. Surface waves: sta= 85, comp=171, per= 50.*
*SZGRF **23** 19:54:47.9, 32°.60N×105°.87E, h33km, mb6.0, MS5.4, Sichuan, China*
*DJA **23** 19:54:49, 32°.76N×105°.32E, h19km, Mw5.9/31*
ISC 23 19:54:45.0±0.5, 32°.83N±0°.01×105°.54E±0°.02, h6km±3km, h30km±2.6km: pP-P, n1215, σ1°.02/1186, mb5.6/374, MS5.2/182, 224C-31D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.44**	**219**	Pn	**Pn**	**19 55 25.0**	**-0.4**
CD2				Pg	**Pg**	**19 55 30.5**	**-1.3**
CD2				Sn	**Sn**	**19 55 57.0**	**+1.4**
CD2				Sg	**Sg**	**19 56 01.3**	**-2.2**
CD2				smax			
	comp=N,364μm,0.8s						
CD2				smax			
	comp=E,177μm,0.9s						
XAN	**Xi'an**	**3.07**	**66**	Pn	**Pn**	**19 55 35.0**	**+1.0**
XAN				Pg	**Pg**	**19 55 41.0**	**-2.8**
XAN				Sn	**Sn**	**19 56 13.6**	**+2.6**
XAN				Sg	**Sg**	**19 56 21.8**	**-1.8**
XAN				smax			
	comp=N,32μm,0.8s						
XAN				smax			
	comp=E,11μm,0.9s						
XAN				LR	LR		
	comp=N,74μm,6.1s						
XAN				LR	LR		
	comp=E,35μm,7.0s						
XAN				LR	LR		
	comp=Z,40μm,7.0s						
LZH	**Lanzhou**	**3.54**	**337**	Pn	**Pn**	**19 55 43.3**	**+2.9**
LZH				Pg	**Pg**	**19 55 52.6**	**-0.2**
LZH				Sn	**Sn**	**19 56 26.1**	**+3.5**
LZH				Sg	**Sg**	**19 56 38.8**	**+0.1**
LZH				LR	LR		
	comp=E,178μm,4.6s						
LZH				LR	LR		
	comp=Z,185μm,8.6s						
GYA	**Guiyang**	**6.42**	**171⇑**	*i*Pn	**Pn**	**19 56 19.3**	**-0.8**
GYA				Sn	**Sn**	**19 57 30.5**	**-3.2**
GYA				Sg	**Sb**	**19 57 58.1**	**+3.9**
GYA				smax			
	comp=N,5μm,0.9s						
GYA				smax			
	comp=E,5μm,0.8s						
GYA				LR	LR		
	comp=N,35μm,5.0s						
GYA				LR	LR		
	comp=E,38μm,5.6s						
GYA				LR	LR		
	comp=Z,28μm,5.9s						
TIY	**Taiyuan**	**7.45**	**47**	*e*Pn	**Pn**	**19 56 33.8**	**-0.3**
TIY				Sg	**Sg**	**19 58 34.0**	**-10**
TIY				smax			
	comp=N,7μm,0.9s						
TIY				smax			
	comp=E,5μm,0.9s						
WHN	**Wuhan**	**7.84**	**105**	Pn	**Pn**	**19 56 38.3**	**-1.3**
WHN				Sn	**Sn**	**19 58 06.5**	**-2.2**
WHN				LR	LR		
	comp=N,45μm,2.9s						
WHN				LR	LR		
	comp=E,96μm,5.3s						
WHN				LR	LR		
	comp=Z,72μm,5.4s						
GTA	**Gaotai**	**8.04**	**326**	⇑P	**Pn**	**19 56 42.1**	**-0.1**
GTA				pP		19 56 46.9	
GTA				sP		19 56 49.1	
GTA				S	**Sn**	**19 58 13.6**	**+0.2**
GTA				pmax	pmax		
	comp=Z,460nm,0.9s						
GTA				pmax	pmax		
	comp=Z,750nm,5.7s						
GTA				LR	LR		
	comp=N,38μm,11.1s						
GTA				LR	LR		
	comp=E,48μm,11.7s						
GTA				LR	LR		
	comp=Z,24μm,12.3s						
KMI	**Kunming**	**8.06**	**198**	P	**Pn**	**19 56 41.1**	**-1.5**
KMI				S	**Sn**	**19 58 11.8**	**-2.3**
KMI				smax			
	comp=N,1μm,1.6s						
KMI				smax			
	comp=E,1μm,1.6s						
KMI				LR	LR		
	comp=N,27μm,7.1s						
KMI				LR	LR		
	comp=E,42μm,7.9s						
KMI				LR	LR		
	comp=Z,18μm,7.3s						
BTO	**Baotou**	**8.55**	**24**	*e*P	**Pn**	**19 56 48.4**	**-0.9**
BTO				LR	LR		
	comp=N,19μm,10.4s						
BTO				LR	LR		
	comp=E,5μm,5.7s						
HHC	**Hu-ho-hao-te**	**9.34**	**29⇓**	*i*P	**Pn**	**19 56 59.4**	**-0.7**
HHC				S	**Sn**	**19 58 45.1**	**-0.4**
HHC				PcS	PcS	20 06 50.5	-2.4
HHC				pmax	pmax		
	comp=Z,120nm,0.9s						
HHC				pmax	pmax		
	comp=Z,1μm,4.9s						
HHC				LR	LR		
	comp=N,36μm,8.4s						
HHC				LR	LR		
	comp=E,36μm,8.2s						
HHC				LR	LR		
	comp=Z,22μm,8.2s						
TIA	**Tai'an**	**10.13**	**67**	*e*P	**Pn**	**19 57 12.0**	**+1.1**
TIA				LR	LR		
	comp=N,17μm,14.3s						
TIA				LR	LR		
	comp=E,25μm,13.4s						
BJI	**Beijing**	**11.18**	**47**	P	**Pn**	**19 57 25.3**	**0.0**
BJI				pmax	pmax		
	comp=Z,110nm,0.6s						
BJI				pmax	pmax		
	comp=Z,680nm,4.0s						
NJ2	**Nanjing**	**11.27**	**90**	*e*P	**Pn**	**19 57 24.6**	**-2.0**
NJ2				pP		19 57 28.3	
NJ2				sP		19 57 31.0	
NJ2				PP		19 57 35.1	
NJ2				S	**Sn**	**19 59 35.8**	**+2.9**
NJ2				sS		19 59 43.8	
NJ2				pmax	pmax		
	comp=Z,200nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,2μm,4.0s						
NJ2				LR	LR		
	comp=N,12μm,10.3s						
NJ2				LR	LR		
	comp=E,31μm,13.3s						
NJ2				LR	LR		
	comp=Z,34μm,12.9s						
GZH	**Guangzhou**	**11.90**	**143**	P	**Pn**	**19 57 28.4**	**-6.8**
GZH				S	**Sn**	**19 59 33.3**	**-15**
GZH				LR	LR		
	comp=N,14μm,7.1s						
GZH				LR	LR		
	comp=E,18μm,4.8s						
LSA	**Lhasa**	**12.70**	**260**	P	**Pn**	**19 57 48.0**	**+1.8**
LSA				S	**Sn**	**20 00 05.0**	**-3.0**
LSA				pmax	pmax		
	comp=Z,30nm,1.5s						
LSA				LR	LR		
	comp=E,14μm,12.1s						
LSA				LR	LR		
	comp=Z,19μm,11.5s						
IMP	**Imphal**	**12.95**	**235**	*e*PKP	**Pn**	**19 57 46.0**	**-3.6**
IMP				*ex*	x	20 00 14.0	
HKC	**Hong Kong Obse**	**12.97**	**142**	P	**Pn**	**19 57 50.0**	**+0.1**
SSE	**Sheshan**	**13.39**	**93**	⇓P	**Pn**	**19 57 55.4**	**-0.2**
SSE				pP		19 57 59.0	
SSE				S	**Sn**	**20 00 20.1**	**-4.7**
SSE				pmax	pmax		
	comp=Z,50nm,0.8s						
SSE				pmax	pmax		
	comp=Z,650nm,9.0s						
SSE				LR	LR		
	comp=N,10μm,13.5s						
SSE				LR	LR		
	comp=E,20μm,13.5s						
SSE				LR	LR		
	comp=Z,31μm,14.3s						
QZH	**Quanzhou**	**13.86**	**121⇓**	*i*P	**Pn**	**19 58 00.3**	**-1.7**
QZH				S	**Sn**	**20 00 36.5**	**+0.2**
QZH				LR	LR		
	comp=N,46μm,9.8s						
QZH				LR	LR		
	comp=E,37μm,11.8s						
QZH				LR	LR		
	comp=Z,44μm,12.9s						
CHRT	**Chiangrai**	**13.90**	**203**	P	**Pn**	**19 58 00.0**	**-2.5**
	comp=Z,553nm,0.9s						
SHL	**Shillong**	**13.95**	**242**	*e*PKP	**Pn**	**19 58 02.0**	**-1.2**
SHL				*i* x	x	20 02 13.0	
QIZ	**Qiongzhong**	**14.27**	**163**	P	**Pn**	**19 58 05.8**	**-1.8**
QIZ				S	**Sn**	**20 00 46.3**	**-0.1**
QIZ				pmax	pmax		
	comp=Z,75nm,0.9s						
QIZ				pmax	pmax		
	comp=Z,370nm,4.3s						
QIZ				LR	LR		
	comp=N,15μm,7.1s						
QIZ				LR	LR		
	comp=E,6μm,7.1s						
QIZ				LR	LR		
	comp=Z,13μm,12.2s						
DL2	**Dalian**	**14.38**	**61**	P	**Pn**	**19 58 09.6**	**+0.7**
DL2				S	**Sn**	**20 00 52.4**	**+3.7**
DL2				pmax	pmax		
	comp=Z,180nm,1.0s						
DL2				pmax	pmax		
	comp=Z,2μm,4.9s						
DL2				LR	LR		
	comp=N,6μm,16.0s						
DL2				LR	LR		
	comp=E,9μm,15.8s						
DL2				LR	LR		
	comp=Z,13μm,14.9s						
SONM	**Songino Array**	**15.00**	**2**	Pn	**Pn**	**19 58 16.7**	**-0.7**
	comp=Z,3.2nm,0.3s,baz=185,slow=12,SNR=171						
SONM				Lg		20 02 39.5	
	comp=Z,0.6nm,0.3s,baz=183,slow=24,SNR=4.2						
SONM				LR	LR	20 04 53.6	
	comp=Z,5μm,21.7s,baz=181,slow=40						
SONM				P3KPbc		20 33 53.6	
	comp=Z,0.0nm,0.3s,baz=332,slow=1.9,SNR=2.3						
SONM	**Songino Array**	**15.00**	**2**	Pn	**Pn**	**19 58 16.7**	**-0.7**
SONM				Lg		20 02 39.5	
SONM				LR	LR	20 04 53.6	
ULN	**Ulaanbaatar**	**15.06**	**4**	*e*P	**Pn**	**19 58 17.2**	**-1.0**
ULN				pmax	pmax		
	comp=Z,305nm,1.0s						
ULN	**Ulaanbaatar**	**15.06**	**4**	*e*Pn	**Pn**	**19 58 17.2**	**-1.1**
	comp=Z,305nm,1.0s						
ULN	**Ulaanbaatar**	**15.06**	**4**	P	**Pn**	**19 58 20.2**	**+2.0**
	comp=Z,4μmcomp=Z,344nm,1.1s						
ULN	**Ulaanbaatar**	**15.06**	**4**	Pn	**Pn**	**19 58 17.5**	**-0.8**
	SNR=257						
CHG	**Chiang Mai**	**15.16**	**205**	⇓P	**Pn**	**19 58 19.6**	**-0.1**
	comp=Z,122nm,1.0s						
CHTO	**Chiang Mai**	**15.16**	**205**	*e*P	**Pn**	**19 58 18.4**	**-1.3**
CHTO				pmax	pmax		
	comp=Z,95nm,0.9s						

CHTO	**Chiang Mai**	**15.16 205**	*e*Pn	**Pn**	**19 58 18.4**	**-1.3**
	comp=Z,95nm,0.9s					
CHTO	**Chiang Mai**	**15.16 205**	P	**Pn**	**19 58 19.1**	**-0.6**
	comp=Z,2μmcomp=Z,140nm,1.1s					
CHTO	**Chiang Mai**	**15.16 205**	Pn	**Pn**	**19 58 19.9**	**+0.2**
	SNR=32					
AGT	**Agartala**	**15.41 238**	*i* x	x	19 58 16.0	
AGT			*i* x	x	19 58 52.0	
CM31	**Chiang Mai Arr**	**15.49 204**	*e*Pn	**Pn**	**19 58 22.6**	**-1.5**
CMAR	**Chiang Mai Arr**	**15.49 204**	Pn	**Pn**	**19 58 22.9**	**-1.2**
	comp=Z,0.7nm,0.3s,baz=15,slow=11,SNR=70					
CMAR			Lg		20 03 01.7	
	comp=Z,0.0nm,0.3s,baz=6.7,slow=16,SNR=2.8					
CMAR			PcP	PcP	20 03 27.8	+0.5
	comp=Z,1.1nm,0.3s,baz=302,slow=1.5,SNR=20					
CMAR			LR	LR	20 05 05.3	
	comp=Z,7μm,21.4s,baz=16,slow=40					
CMAR			ScP	ScP	20 07 01.4	-0.6
	comp=Z,0.1nm,0.3s,baz=328,slow=2.4,SNR=13					
CMAR			PKiKP	PKiKP	20 11 21.1	-0.8
	comp=Z,0.1nm,0.3s,baz=277,slow=1.2,SNR=7.3					
CMAR	**Chiang Mai Arr**	**15.49 204**	Pn	**Pn**	**19 58 22.9**	**-1.2**
CMAR			Lg		20 03 01.7	
CMAR			PcP	PcP	20 03 27.8	+0.5
CMAR			LR	LR	20 05 05.3	
CMAR			ScP	ScP	20 07 01.4	-0.6
GTK	**Gangtok**	**15.64 254**	*e*PKP	**Pn**	**19 58 25.0**	**-0.9**
TATO	**Taipei**	**15.99 115**	*e*P	**Pn**	**19 58 30.4**	**-0.1**
	comp=Z,2μm,2.3s					
TATO	**Taipei**	**15.99 115**	Pn	**Pn**	**19 58 37.6**	**+7.0**
	SNR=8.0					
YHNB	**Yeheng**	**16.08 116**	*e*Pn	**Pn**	**19 58 31.8**	**+0.1**
	comp=Z,227nm,0.8s					
SSLB	**Suanglung**	**16.27 120**	*e*P	**Pn**	**19 58 33.1**	**-1.0**
	comp=Z,216nm,0.8s					
TPUB	**Ta-pu**	**16.34 122**	*e*P	**Pn**	**19 58 34.5**	**-0.4**
	comp=Z,127nm,0.9s					
TAPN	**Taplejung**	**16.37 255**	*e*P	**Pn**	**19 58 33.4**	**-2.0**
	comp=Z,3μm,1.5s					
NACB	**Ninganchiao**	**16.52 117**	*e*P	**Pn**	**19 58 38.9**	**+1.5**
	comp=Z,180nm,1.0s					
YULB	**Yu-li**	**16.76 120**	*e*P	**Pn**	**19 58 40.7**	**+0.3**
	comp=Z,97nm,0.9s					
ODAN	**Odare**	**16.83 254**	*e*P	**Pn**	**19 58 38.4**	**-2.8**
	comp=Z,1μm,1.0s					
SNY	**Shenyang**	**16.90 53**	⇑P	**Pn**	**19 58 42.1**	**+0.1**
SNY			S	**Sn**	**20 01 53.3**	**+3.3**
SNY			pmax	pmax		
	comp=Z,4μm,2.8s					
SNY			LR	LR		
	comp=N,4μm,20.4s					
SNY			LR	LR		
	comp=E,12μm,17.1s					
SNY			LR	LR		
	comp=Z,14μm,14.7s					
TWG	**Pinlang**	**16.95 122**	*e*P	**Pn**	**19 58 43.0**	**+0.2**
	comp=Z,337nm,1.3s					
RAMN	**Ramite**	**17.43 255**	*e*P	**Pn**	**19 58 45.5**	**-3.3**
	comp=Z,716nm,0.8s					
JIRN	**Jiri**	**17.49 258**	*e*P	**Pn**	**19 58 48.0**	**-1.5**
	comp=Z,219nm,0.6s					
UBT	**Ubonrachathani**	**17.51 182**	P	**Pn**	**19 58 49.9**	**+0.1**
GUN	**Gumba**	**17.66 259**	*e*P	**Pn**	**19 58 49.9**	**-1.7**
	comp=Z,3μm,1.4s					
WMQ	**Urumqi**	**17.75 313**	P	**Pn**	**19 58 53.9**	**+1.2**
WMQ			pP	pP	19 58 57.5	+2.3
WMQ			sP	sP	19 59 00.9	+4.9
WMQ			PP		19 59 08.8	
WMQ			S	**Sn**	**20 02 09.9**	**-0.8**
WMQ			sS	sS	20 02 15.6	-5.0
WMQ			PcP	PcP	20 03 31.8	+1.5
WMQ			pmax	pmax		
	comp=Z,200nm,1.3s					
WMQ			pmax	pmax		
	comp=Z,1μm,4.3s					
WMQ			LR	LR		
	comp=N,28μm,12.8s					
WMQ			LR	LR		
	comp=E,16μm,14.8s					
WMQ			LR	LR		
	comp=Z,15μm,13.4s					
NST	**Nakhon Sawan**	**17.77 197**	P	**Pn**	**19 58 53.0**	**-0.1**
INCN	**Inchon**	**17.85 69**	*e*P	**Pn**	**19 58 54.9**	**+0.9**
	comp=Z,214nm,1.0s					
INCN	**Inchon**	**17.85 69**	Pn	**Pn**	**19 58 56.0**	**+2.1**
	SNR=15					
PKI	**Pulchoki**	**18.17 259**	*e*P	**Pn**	**19 58 55.5**	**-2.4**
	comp=Z,987nm,1.1s					
PKI	**Pulchoki**	**18.17 259**	*e*P	**Pn**	**19 58 55.5**	**-2.4**
PKI			pmax	pmax		
	comp=Z,987nm,1.1s					
PKIN	**Phulchoki**	**18.18 259**	*e*P	**Pn**	**19 58 55.1**	**-2.9**
	comp=Z,467nm,0.6s					
KKN	**Kakani**	**18.20 259**	*e*P	**Pn**	**19 58 55.9**	**-2.3**
	comp=Z,517nm,0.8s					
KKN	**Kakani**	**18.20 259**	*e*P	**Pn**	**19 58 55.9**	**-2.3**
KKN			pmax	pmax		
	comp=Z,517nm,0.8s					
CAL	**Calcutta**	**18.35 240**	⇑*i*P	**Pn**	**19 58 58.0**	**-2.1**
CAL			*e*S	**Sn**	**20 02 17.5**	**-7.8**
DMN	**Daman**	**18.41 259**	*e*P	**Pn**	**19 58 57.8**	**-3.0**
	comp=Z,997nm,1.2s					
GKN	**Gorkha**	**18.66 261**	*e*P	**Pn**	**19 59 00.8**	**-3.0**
	comp=Z,590nm,0.8s					
KSRS	**Korea Array**	**18.86 70**	P	**Pn**	**19 59 06.0**	**-0.2**
	comp=Z,8.3nm,0.3s,baz=258,slow=11,SNR=212					
KSRS			Lg		20 04 29.1	
	comp=Z,0.1nm,0.3s,baz=241,slow=28,SNR=3.0					
KSRS			LR	LR	20 06 54.2	
	comp=Z,7μm,21.0s,baz=266,slow=39					
TLY	**Talaya**	**18.89 356**	Pn	**Pn**	**19 59 07.4**	**+0.9**
	comp=Z,396nm,1.1s,SNR=20					
TLY	**Talaya**	**18.89 356**	*c* *i*P	**Pn**	**19 59 06.1**	**-0.4**
TLY			*e*S	**Sn**	**20 02 35.9**	**-2.1**
TLY			pmax	pmax		
	comp=Z,98nm,1.1s					
TLY			MLR	MLR		
	comp=Z,5μm,14.0s					
TLY	**Talaya**	**18.89 356**	*e*Pn	**Pn**	**19 59 07.2**	**+0.7**
	comp=Z,116nm,1.2s					
TLY	**Talaya**	**18.89 356**	P	**Pn**	**19 59 07.0**	**+0.5**
	SNR=65					
CN2	**Changchun**	**19.03 49**	⇑P	**Pn**	**19 59 08.6**	**+0.4**
CN2			*e*pP	pP	19 59 12.3	+3.1
CN2			*e*sP	sP	19 59 15.6	+5.6
CN2			*e*S	**Sn**	**20 02 36.9**	**-4.6**
CN2			pmax	pmax		
	comp=Z,30nm,1.0s					
CN2			pmax	pmax		
	comp=Z,200nm,3.0s					
CN2			LR	LR		
	comp=N,8μm,10.0s					
CN2			LR	LR		
	comp=E,8μm,10.0s					
MOY	**Mondy**	**19.12 351**	*e*P	**Pn**	**19 59 10.1**	**+0.9**
MOY			pmax	pmax		
	comp=Z,599nm,3.0s					
IRK	**Irkutsk**	**19.42 358**	‖*i*P	**Pn**	**19 59 13.6**	**+0.7**
IRK			pmax	pmax		
	comp=Z,913nm,1.8s					
HIA	**Hailar**	**19.55 29**	*e*P	**Pn**	**19 59 14.0**	**-0.4**
HIA			pmax	pmax		
	comp=Z,810nm,1.4s					
HIA	**Hailar**	**19.55 29**	*e*P	**Pn**	**19 59 14.0**	**-0.4**
	comp=Z,810nm,1.4s					
PIP	**Pasuquin**	**19.80 133**	‖*e*P	**Pn**	**19 59 17.7**	**0.0**
CIT	**Chita**	**20.05 15**	*e*P	**P**	**19 59 20.2**	**+1.6**
CIT			*e*		19 59 33.0	
CIT			*e*		19 59 53.0	
CIT			*e*		20 03 36.0	
CIT			pmax	pmax		
	comp=Z,676nm,2.8s					
ABRA	**Dolores**	**20.38 134**	*e*P	**P**	**19 59 28.8**	**+6.3**
APYP	**Conner**	**20.54 133**	*e*P	**P**	**19 59 25.4**	**+1.2**
BOLP	**Bolinao**	**20.91 138**	*e*P	**P**	**19 59 30.1**	**+1.9**
CAUP	**Cauayan**	**21.59 133**	*e*P	**P**	**19 59 37.2**	**+1.6**
PALP	**Palanan**	**21.88 132**	*e*P	**P**	**19 59 40.3**	**+1.7**
PTH	**Pithoragarh**	**21.90 268**	*e*PKP	**P**	**19 59 39.0**	**+0.2**
ALBI	**Allahabad**	**22.03 256**	*e*PKP	**P**	**19 59 39.5**	**-0.7**
MDJ	**Mudanjiang**	**22.06 51**	P	**P**	**19 59 41.1**	**+0.7**
MDJ			pP		19 59 44.4	
MDJ			S	**S**	**20 03 44.3**	**+0.3**
MDJ			pmax	pmax		
	comp=Z,300nm,2.2s,mb5.3					
MDJ			pmax	pmax		
	comp=Z,2μm,4.5s					
MDJ			LR	LR		
	comp=N,4μm,17.6s,MS5.0					
MDJ			LR	LR		
	comp=E,4μm,17.1s,MS5.0					
MDJ			LR	LR		
	comp=Z,6μm,17.6s,MS5.0					
MDJ	**Mudanjiang**	**22.06 51**	*e*P	**P**	**19 59 40.8**	**+0.4**
	comp=Z,2μm,2.0s,mb6.1					
BALP	**Baler**	**22.38 136**	*e*P	**P**	**19 59 44.6**	**+0.7**
MK31	**Makanchi Array**	**22.55 315**	*i*P	**P**	**19 59 46.0**	**+0.4**
MK31			pmax	pmax		
	comp=Z,171nm,0.8s,mb5.5					
MK31	**Makanchi Array**	**22.55 315**	*e*P	**P**	**19 59 46.0**	**+0.3**
MKAR	**Makanchi Array**	**22.55 315**	P	**P**	**19 59 46.2**	**+0.6**
	comp=Z,135nm,0.9s,mb5.4,baz=114,slow=11,SNR=223					
MKAR			LR	LR	20 09 32.8	
	comp=Z,5μm,18.2s,MS5.0,baz=112,slow=39					
MKAR			P3KPbc		20 33 23.1	
	comp=Z,0.3nm,0.2s,baz=304,slow=2.8,SNR=5.5					
VLA	**Vladivostok**	**23.09 56**	*i*P	**P**	**19 59 53.0**	**+1.7**
LUBP	**Lubang**	**23.27 141**	*e*P	**P**	**19 59 54.0**	**+0.6**
TGY	**Tagaytay City**	**23.33 139**	LR	LR	20 09 00.3	
	comp=Z,11nm,21.3s,slow=37					
POLP	**Polillo Island**	**23.39 137**	*e*P	**P**	**19 59 55.5**	**+0.8**
DDI	**Dehra Dun**	**23.53 271**	*e*PKP	**P**	**19 59 54.6**	**-1.5**
DDI			*e*x	x	20 04 12.0	
SDNR	**Sundarnagar**	**24.20 275**	*e*PKP	**P**	**20 00 04.5**	**+2.2**
SDNR			*e*S	**S**	**20 04 25.5**	**+4.5**
BOAC	**Boac**	**24.36 139**	*e*P	**P**	**20 00 03.9**	**+0.1**
NDI	**New Delhi**	**24.66 268**	*e*PKP	**P**	**20 00 04.0**	**-2.5**
NDI			*e*x	x	20 04 38.0	
BHK	**Bhakra**	**24.68 275**	*e*PKP	**P**	**20 00 05.0**	**-1.6**
BHK			*e*x	x	20 00 41.7	
AAA	**Alma-Ata**	**24.71 303**	*i*P	**P**	**20 00 09.0**	**+2.2**
AAA			*i*S	**S**	**20 04 27.3**	**-1.6**
AAA			pmax	pmax		
	comp=Z,3μm,5.3s					
AAA			smax			
	comp=N,7μm,16.1s					
AAA			MLR	MLR		
	comp=Z,6μm,23.0s,MS5.0					
KSH	**Kashi**	**24.72 294**	P	**P**	**20 00 11.9**	**+5.0**
KSH			pP		20 00 16.6	
KSH			sP	sP	20 00 18.8	+9.3
KSH			PP		20 00 49.8	
KSH			PcP	PcP	20 03 47.0	+3.2
KSH			S	**S**	**20 04 34.1**	**+4.9**
KSH			sS	sS	20 04 41.3	+9.1
KSH			SS		20 05 34.9	
KSH			ScP	ScP	20 07 24.6	+1.4
KSH			PcS	PcS	20 07 25.6	+1.8
KSH			ScS	ScS	20 11 11.9	+0.8
KSH			pmax	pmax		
	comp=Z,130nm,0.8s,mb5.5					
KSH			pmax	pmax		
	comp=Z,1μm,4.7s					
KSH			LR	LR		
	comp=N,5μm,9.9s					
KSH			LR	LR		
	comp=E,3μm,12.9s					
KSH			LR	LR		
	comp=Z,9μm,13.3s,MS5.5					
SONA	**Sohna**	**24.90 267**	*e*PKP	**P**	**20 00 08.6**	**0.0**
AUQP	**San Andres**	**24.94 137**	*e*P	**P**	**20 00 15.4**	**+6.3**
ULHL	**Ulahol**	**24.96 301**	P	**P**	**20 00 10.0**	**+0.9**
	SNR=32					
ENPP	**El Nido**	**25.02 146**	*e*P	**P**	**20 00 10.4**	**+0.6**
VIS	**Vishakhapatnam**	**25.02 238**	*e*PKP	**P**	**20 00 09.2**	**-0.6**
VIS			*i*S	**S**	**20 04 32.6**	**-1.7**
THN	**Thein Dam**	**25.09 277**	*e*PKP	**P**	**20 00 09.0**	**-1.4**
KLR	**Kul'dur**	**25.49 42**	‖*i*P	**P**	**20 00 10.3**	**-3.5**
KLR			*e*S	**S**	**20 04 33.0**	**-8.3**
KLR			pmax	pmax		
	comp=N,130nm,1.0s					
KLR			pmax	pmax		
	comp=E,300nm,1.0s					
KLR			pmax	pmax		
	comp=Z,320nm,1.0s,mb5.8					
KLR			pmax	pmax		
	comp=E,2μm,8.0s					
KLR			pmax	pmax		
	comp=Z,3μm,8.0s					
KLR			smax			
	comp=N,6μm,9.0s					
KLR			smax			
	comp=E,8μm,9.0s					
TKM2	**Tokmak 2**	**25.58 302**	P	**P**	**20 00 15.8**	**+1.1**
	SNR=143					
TKM2	**Tokmak 2**	**25.58 302**	*e*P	**P**	**20 00 15.6**	**+0.9**
TKM2			pmax	pmax		
	comp=Z,69nm,0.8s,mb5.2					
TKM2	**Tokmak 2**	**25.58 302**	*e*P	**P**	**20 00 15.6**	**+0.9**
	comp=Z,69nm,0.8s,mb5.2					
PVCP	**Virac**	**25.59 134**	*e*P	**P**	**20 00 18.8**	**+3.8**
KZA	**Kyzart**	**25.65 300**	P	**P**	**20 00 18.9**	**+3.6**
	SNR=14					
ZAA0	**Zalesovo Array**	**25.75 331**	*e*P	**P**	**20 00 16.0**	**-0.2**
ZALV	**Zalesovo Beam**	**25.75 331**	P	**P**	**20 00 16.2**	**+0.1**
	comp=Z,62nm,0.9s,mb5.1,baz=131,slow=10,SNR=72					
ZALV			LR	LR	20 10 53.9	
	comp=Z,2μm,20.1s,MS4.7,baz=141,slow=38					
ZALV	**Zalesovo Beam**	**25.75 331**	P	**P**	**20 00 16.2**	**+0.1**
ZALV			pmax	pmax		
	comp=Z,62nm,0.9s,mb5.1					
ZALV			MLR	MLR		
	comp=Z,2μm,20.1s,MS4.7					
KBK	**Karagaybulak**	**25.99 301**	P	**P**	**20 00 19.9**	**+1.4**
	SNR=118					
CHMS	**Chumysh**	**26.20 302**	P	**P**	**20 00 25.1**	**+4.8**
	SNR=22					
UCH	**Uchtor**	**26.22 300**	P	**P**	**20 00 22.7**	**+2.2**
	SNR=60					
UCH	**Uchtor**	**26.22 300**	*e*P	**P**	**20 00 22.3**	**+1.8**
FRU	**Bishkek**	**26.26 301**	⇑*e*P	**P**	**20 00 22.0**	**+1.1**
FRU			pmax	pmax		
	comp=Z,340nm,2.2s,mb5.5					
AAK	**Ala-Archa**	**26.31 301**	P	**P**	**20 00 22.5**	**+1.2**
	comp=Z,241nm,1.1s,mb5.6,SNR=20					
AAK	**Ala-Archa**	**26.31 301**	P	**P**	**20 00 22.6**	**+1.3**
	SNR=16					
AAK	**Ala-Archa**	**26.31 301**	P	**P**	**20 00 23.2**	**+1.9**
	comp=Z,17nm,0.7s,mb4.7,baz=119,slow=6.9,SNR=28					
AAK			LR	LR	20 12 48.3	
	comp=Z,8μm,19.4s,MS5.2,baz=81,slow=41					
AAK	**Ala-Archa**	**26.31 301**	P	**P**	**20 00 23.2**	**+1.9**
AAK			pmax	pmax		
	comp=Z,17nm,0.7s,mb4.7					
AAK			MLR	MLR		
	comp=Z,8μm,19.4s,MS5.2					
AAK	**Ala-Archa**	**26.31 301**	*e*P	**P**	**20 00 22.7**	**+1.4**
	comp=Z,136nm,1.3s,mb5.3					
AAK			LR	LR		
	comp=Z,8μm,20.0s,MS5.2					
AAK	**Ala-Archa**	**26.31 301**	P	**P**	**20 00 21.9**	**+0.6**
	comp=Z,298nmcomp=Z,21nm,1.4s,mb4.5					
AAK	**Ala-Archa**	**26.31 301**	P	**P**	**20 00 23.5**	**+2.2**
	SNR=35					
USP	**Ospenovka**	**26.44 302**	P	**P**	**20 00 23.6**	**+1.1**
	SNR=82					
BATP	**Bataraza**	**26.47 152**	*e*P	**P**	**20 00 22.4**	**-0.5**
BHPL	**Bhopal**	**26.53 256**	*e*PKP	**P**	**20 00 23.7**	**+0.3**
KURK	**Kurchatov**	**26.66 320**	P	**P**	**20 00 24.9**	**+0.6**
	comp=Z,758nm,1.0s,mb6.2,SNR=31					
KURK	**Kurchatov**	**26.66 320**	*e*P	**P**	**20 00 24.7**	**+0.3**
KURK			pmax	pmax		
	comp=Z,133nm,1.0s,mb5.4					
KURK			MLR	MLR		
	comp=Z,6μm,19.0s,MS5.2					
KURK	**Kurchatov**	**26.66 320**	*e*P	**P**	**20 00 24.7**	**+0.4**
	comp=Z,133nm,1.0s,mb5.4					
KURK			LR	LR		
	comp=Z,6μm,19.0s,MS5.2					
KURK	**Kurchatov**	**26.66 320**	P	**P**	**20 00 25.0**	**+0.6**
	SNR=79					
AML	**Almayashu**	**26.80 299**	P	**P**	**20 00 27.7**	**+2.0**
	SNR=123					
AML	**Almayashu**	**26.80 299**	PFAKE		20 00 40.0	+14
AML			LR	LR		
	comp=Z,5μm,20.0s,MS5.0					
EKS2	**Erkin-Say**	**26.83 301**	P	**P**	**20 00 27.4**	**+1.3**
	SNR=61					
EKS2	**Erkin-Say**	**26.83 301**	*e*P	**P**	**20 00 27.1**	**+1.1**
	comp=Z,41nm,0.8s,mb5.0					
EKS2			LR	LR		
	comp=Z,8μm,20.0s,MS5.3					
NVS	**Novosibirsk**	**27.04 331**	*e*P	**P**	**20 00 27.3**	**-0.5**
NVS			*e*S	**S**	**20 05 07.0**	**+1.3**
NVS			pmax	pmax		
	comp=Z,302nm,2.1s,mb5.5					
NVS			pmax	pmax		
	comp=N,300nm,2.4s					
NVS			pmax	pmax		
	comp=E,227nm,2.0s					
NVS			smax			
	comp=E,298nm,2.7s					
MAJO	**Matsushiro**	**27.04 73**	*e*P	**P**	**20 00 26.6**	**-1.4**
MAT	**Matsushiro**	**27.04 73**	P	**P**	**20 00 25.3**	**-2.7**
MAT			S	**S**	**20 05 00.0**	**-6.1**
MJAR	**Matsushiro Arr**	**27.04 73**	P	**P**	**20 00 26.8**	**-1.2**
	comp=E,34nm,0.9s,mb4.9,baz=277,slow=9.9,SNR=62					
MJAR			LR	LR	20 12 29.9	
	comp=E,3μm,18.3s,MS4.9,baz=270,slow=39					
MJAR	**Matsushiro Arr**	**27.04 73**	P	**P**	**20 00 26.8**	**-1.2**
MJAR			pmax	pmax		
	comp=Z,34nm,0.9s					
MJAR			MLR	MLR		
	comp=Z,3μm,18.3s					
HABR	**Khabarovsk**	**27.08 46**	*c* *i*P	**P**	**20 00 28.2**	**0.0**
HABR			*e**PP	pP	20 00 37.3	+7.3
HABR			*e*PPP		20 01 19.9	
HABR			*e*		20 03 48.4	
HABR			*e*S	**S**	**20 05 04.0**	**-2.5**
HABR			*e*SS		20 06 14.8	
HABR			*e*		20 11 17.2	
HABR			pmax	pmax		
	comp=Z,424nm,2.2s,mb5.6					
HABR			pmax	pmax		
	comp=N,73nm,2.3s					
HABR			pmax	pmax		
	comp=E,254nm,1.8s					
HABR			MLR	MLR		
	comp=N,3μm,11.0s,MS5.5					
HABR			MLR	MLR		
	comp=Z,7μm,10.0s,MS5.5					
HABR			MLR	MLR		
	comp=E,7μm,10.0s,MS5.5					
KTGM	**Kuala Trenggan**	**27.45 185**	P	**P**	**20 00 32.2**	**+0.4**
CLNS	**Chul'man**	**27.46 23**	*e*P	**P**	**20 00 32.7**	**+1.2**
CLNS			*e**PP	pP	20 00 41.6	+8.3
CLNS			*e*		20 01 16.8	
CLNS			*e*		20 03 51.3	
CLNS			*e*S	**S**	**20 05 10.1**	**-2.1**
CLNS			pmax	pmax		
	comp=Z,79nm,0.9s,mb5.2					
CLNS			pmax	pmax		
	comp=E,44nm,1.1s					
CLNS			pmax	pmax		
	comp=N,52nm,0.9s					
CLNS			pmax	pmax		
	comp=Z,29nm,1.2s,mb4.7					
CLNS			pmax	pmax		
	comp=N,21nm,0.9s					
CLNS			pmax	pmax		
	comp=E,29nm,1.2s					
CLNS			smax			
	comp=N,573nm,14.7s					
CLNS			smax			
	comp=E,758nm,15.7s					
CLNS			MLR	MLR		
	comp=E,4μm,12.0s,MS5.4					
CLNS			MLR	MLR		
	comp=N,4μm,12.0s,MS5.4					
CLNS			MLR	MLR		
	comp=Z,6μm,12.0s,MS5.4					
AJM	**Ajmer**	**27.53 265**	*i*P	**P**	**20 00 32.0**	**-0.5**
KULM	**Kulim**	**27.78 191**	P	**P**	**20 00 34.7**	**-0.1**
KULM	**Kulim**	**27.78 191**	*e*P	**P**	**20 00 33.4**	**-1.3**
	comp=Z,58nm,1.1s,mb5.1					
KULM			LR	LR		
	comp=Z,1μm,19.0s,MS4.6					
KULM	**Kulim**	**27.78 191**	P	**P**	**20 00 33.1**	**-1.6**
	comp=Z,54nm,1.2s,mb5.1					
KDM	**Kudat**	**27.84 155**	P	**P**	**20 00 36.6**	**+1.3**
AKL	**Akola**	**28.10 252**	*i*P	**P**	**20 00 38.1**	**+0.5**
AKL			*i*x	x	20 05 38.0	
LLP	**Lapu-Lapu**	**28.11 139**	*e*P	**P**	**20 00 35.8**	**-1.9**
IPM	**Ipoh**	**28.52 189**	P	**P**	**20 00 40.8**	**-0.5**
IPM	**Ipoh**	**28.52 189**	P	**P**	**20 00 38.9**	**-2.4**
	comp=Z,53nm,1.0s,mb5.2					
TBP	**Tagbilaran**	**28.57 140**	*e*P	**P**	**20 00 41.3**	**-0.5**
JHJ	**Hachijo jima 2**	**28.65 80**	P	**P**	**20 00 46.0**	**+3.5**
	comp=Z,68nm,0.8s,mb5.5,baz=215,slow=12,SNR=5.0					
JHJ			LR	LR	20 13 00.2	
	comp=Z,3μm,19.6s,MS5.0,baz=121,slow=38					
HYB	**Hyderabad**	**28.74 244**	*e*P	**P**	**20 00 43.5**	**+0.1**
HYB			*e*		20 00 52.0	
HYB			*e*S	**S**	**20 05 30.0**	**-3.2**
HYB			pmax	pmax		
	comp=Z,120nm,1.0s,mb5.6					
HYB	**Hyderabad**	**28.74 244**	*e*P	**P**	**20 00 43.5**	**+0.1**
	comp=Z,120nm,1.0s,mb5.6					
HYB			*e*		20 00 52.0	
HYB			*e*S	**S**	**20 05 30.0**	**-3.2**
HYB	**Hyderabad**	**28.74 244**	*i*P	**P**	**20 00 43.5**	**+0.1**
	comp=Z,60nm,1.0s,mb5.3					
HYB			*e*S	**S**	**20 05 30.0**	**-3.2**
SDKM	**Sandakan**	**29.15 156**	P	**P**	**20 00 47.6**	**+0.7**
KK31	**Karatay Array**	**29.27 301**	*i*P	**P**	**20 00 48.3**	**+0.4**
KK31			pmax	pmax		
	comp=Z,49nm,0.9s,mb5.2					
KK31	**Karatay Array**	**29.27 301**	*i*P	**P**	**20 00 48.4**	**+0.5**
FRIM	**Kepong**	**29.67 188**	P	**P**	**20 00 52.0**	**+0.4**
LATR	**Latur**	**29.70 248**	*e*PKP	**P**	**20 00 52.6**	**+0.8**
TSI	**Tuntungan**	**29.90 194**	P	**P**	**20 00 54.7**	**+1.1**
MYLDM	**Lahad Datu**	**30.05 154**	P	**P**	**20 00 56.3**	**+1.3**
MYLDM	**Lahad Datu**	**30.05 154**	P	**P**	**20 00 55.8**	**+0.9**
	comp=Z,2μmcomp=Z,143nm,1.3s,mb5.5					
BTM	**Bintulu**	**30.31 165**	P	**P**	**20 00 58.0**	**+0.7**
KBL	**Kabul**	**30.32 283**	*e*P	**P**	**20 00 59.1**	**+1.9**
TPTI		**30.44 197**	P	**P**	**20 00 55.6**	**-2.8**
	comp=Z,682nmcomp=Z,52nm,1.0s,mb5.2					
PSI	**Prapat**	**30.51 193**	P	**P**	**20 00 59.0**	**0.0**
	comp=Z,108nm,0.9s,mb5.7,baz=351,slow=5.9,SNR=40					
PSI			PcP	PcP	20 03 57.1	-1.1
	comp=Z,26nm,0.8s,baz=318,slow=3.9,SNR=5.7					
PSI			ScP	ScP	20 07 38.9	-2.4
	comp=Z,14nm,0.8s,baz=301,slow=1.9,SNR=7.5					
PSI	**Prapat**	**30.51 193**	P	**P**	**20 00 59.1**	**+0.1**
PSI					20 03 57.1	
PSI					20 07 38.9	
PSI			pmax	pmax		
	comp=Z,108nm,0.9s,mb5.7					
TSM	**Tawau**	**30.64 155**	P	**P**	**20 01 00.4**	**+0.2**
KGM	**Kluang**	**30.72 184**	P	**P**	**20 01 01.1**	**+0.2**
SBUM	**Sibu**	**30.86 167**	P	**P**	**20 01 03.5**	**+1.4**
SBUM	**Sibu**	**30.86 167**	P	**P**	**20 01 02.3**	**+0.2**
	comp=Z,1μmcomp=Z,77nm,1.1s,mb5.4					
ASAJ	**Asahikawa**	**30.88 58**	P	**P**	**20 01 01.6**	**-0.4**
	comp=Z,36nm,0.7s,mb5.3,baz=262,slow=12,SNR=41					
ASAJ			LR	LR	20 13 19.0	
	comp=Z,3μm,21.3s,MS4.9,baz=258,slow=36					
ASAJ	**Asahikawa**	**30.88 58**	P	**P**	**20 01 01.7**	**-0.3**
ASAJ			pmax	pmax		
	comp=Z,36nm,0.7s					
ASAJ			MLR	MLR		
	comp=Z,3μm,21.3s					
MYKOM	**Kota Tinggi**	**30.92 183**	P	**P**	**20 01 03.6**	**+1.0**
MYKOM	**Kota Tinggi**	**30.92 183**	P	**P**	**20 01 02.5**	**-0.1**
	comp=Z,865nmcomp=

comp=E,1μm,4.0s
YSS pmax pmax
comp=Z,1μm,4.0s
YSS MLR MLR
comp=Z,6μm,17.0s,MS5.3
YSS MLR MLR
comp=N,6μm,16.0s
YSS Yuzh-Sakhalins 31.52 52 *e*P **P 20 01 07.5 -0.2**
DAV Davao City (W) 31.68 140 P **P 20 01 10.0 +0.7**
comp=N,146nm,0.4s,mb6.1,baz=44,slow=5.8,SNR=6.2
DAV Davao City (W) 31.68 140 *e*P **P 20 01 10.5 +1.2**
DAV LR LR
comp=Z,5μm,20.0s,MS5.2
DAV Davao City (W) 31.68 140⇑ *e*P **P 20 01 08.4 -0.9**
DAV Davao City (W) 31.68 140 P **P 20 01 10.4 +1.1**
SNR=6.6
POO Poona 31.77 251 *e*PKP **P 20 01 10.5 +0.3**
POO AMb AMB 20 01 13.0
comp=Z,94nm,0.8s,mb5.7
CBIJ Chichi jima 32.14 90 P **P 20 01 09.3 -4.0**
comp=Z,38nm,0.6s,mb5.4,baz=288,slow=19,SNR=8.0
KAD Karad 32.19 249 *e*PKP **P 20 01 13.6 -0.2**
KAD AMb AMB 20 01 16.4
comp=Z,81nm,0.8s,mb5.6
BVAR Borovoye Array 32.24 319 P **P 20 01 14.3 +0.4**
comp=Z,27nm,0.8s,mb5.1,baz=114,slow=9.0,SNR=6.7
BVAR PcP PcP 20 04 02.6 +0.4
comp=Z,9.0nm,0.6s,baz=142,slow=2.4,SNR=5.9
BVAR ScP ScP 20 07 43.7 -2.7
comp=Z,4.8nm,0.8s,baz=114,slow=3.6,SNR=4.3
GSI Gunungsitoli 32.24 195 P **P 20 01 13.1 -1.2**
comp=Z,174nm,1.1s,mb5.8
BRVK Borovoye 32.31 319 P **P 20 01 15.1 +0.6**
comp=Z,344nm,0.8s,mb6.2,SNR=36
BRVK Borovoye 32.31 319 *i* P **P 20 01 14.9 +0.4**
BRVK pmax pmax
comp=Z,91nm,0.9s,mb5.6
BRVK Borovoye 32.31 319 *e*P **P 20 01 15.2 +0.6**
BRVK LR LR
comp=Z,5μm,21.0s,MS5.2
BRVK Borovoye 32.31 319 P **P 20 01 15.5 +1.0**
SNR=28
MNSI Mandailing Nat 32.35 191 P **P 20 01 13.9 -1.4**
comp=Z,41nm,0.7s,mb5.3
BKNI Bangkinang 32.61 188 P **P 20 01 19.4 +1.9**
comp=Z,2μmcomp=Z,175nm,1.2s,mb5.8
QUE Quetta 32.89 276 *e*P **P 20 01 22.0 +2.1**
QUE *e*S **S 20 06 39.0 +1.0**
BHJ Bhuj 32.95 262 *e*PKP **P 20 01 18.9 -1.6**
BHJ AMb AMB 20 01 24.1
comp=Z,139nm,1.3s,mb5.7
ZRNK Zerenda 32.98 319 *i* P **P 20 01 20.2 -0.2**
ZRNK pmax pmax
comp=Z,69nm,1.1s,mb5.5
YAK Yakutsk 33.06 21*c i*P **P 20 01 20.9 -0.1**
YAK *e**PP pP 20 01 26.9 +4.1
YAK *e*PPP 20 02 38.5
YAK *e* 20 04 04.3
YAK *e*S **S 20 06 38.9 -1.1**
YAK *e**SS sS 20 06 49.0 +6.0
YAK pmax pmax
comp=Z,206nm,0.9s,mb6.1
YAK pmax pmax
comp=N,70nm,1.5s
YAK pmax pmax
comp=E,90nm,1.7s
YAK smax
comp=N,212nm,3.3s
YAK smax
comp=E,140nm,2.3s
YAK MLR MLR
comp=Z,4μm,12.0s,MS5.3
YAK MLR MLR
comp=N,3μm,12.0s,MS5.3
YAK MLR MLR
comp=E,2μm,10.0s,MS5.3
YAK Yakutsk 33.06 21 *e*P **P 20 01 21.1 +0.1**
STKI Sintang 33.06 169 P **P 20 01 22.7 +1.2**
comp=E,3μmcomp=E,55nm,2.0s,mb5.1
RGRI Rengat 33.14 186 P **P 20 01 23.2 +1.1**
comp=E,134nm,0.5s,mb6.1
YUK Yuzh-Kuril'sk 33.20 58⇑ *i*P **P 20 01 21.6 -0.8**
YUK *i* 20 02 36.9
YUK *i* PPP 20 02 55.7
YUK *e* 20 04 05.8
YUK *i* S **S 20 06 49.3 +6.8**
YUK *i* SS SS 20 08 42.2 -23
YUK *i* SSS 20 09 05.5
YUK pmax pmax
comp=Z,1μm,2.1s,mb6.5
YUK pmax pmax
comp=N,400nm,2.1s
YUK pmax pmax
comp=Z,700nm,2.1s,mb6.2
YUK pmax pmax
comp=E,200nm,1.0s
YUK smax
comp=N,1μm,3.3s
YUK smax
comp=E,500nm,3.3s
YUK MLR MLR
comp=N,2μm,18.0s,MS5.1
YUK MLR MLR
comp=E,2μm,18.0s,MS5.1
YUK MLR MLR
comp=Z,2μm,18.0s,MS5.0
PPI Padang Panjang 33.46 189 P **P 20 01 26.6 +1.7**
comp=Z,26nm,1.3s,mb5.0
SDSI Sungai Dareh 33.80 187 P **P 20 01 27.8 -0.1**
comp=Z,1μmcomp=Z,91nm,1.3s,mb5.6
PDSI Padang 33.90 189 P **P 20 01 28.3 -0.5**
comp=Z,51nm,1.1s,mb5.4
PALK Pallekele 34.33 228 *e*P **P 20 01 32.7 +0.2**
PALK pmax pmax
comp=Z,80nm,0.9s,mb5.7
PALK Pallekele 34.33 228 *e*P **P 20 01 32.7 +0.2**
comp=Z,80nm,0.9s,mb5.7
PALK Pallekele 34.33 228 P **P 20 01 34.5 +2.0**
comp=Z,56nm,1.1s,mb5.4
TPI Tanjungpandan 35.45 176 P **P 20 01 45.3 +3.2**
comp=Z,848nmcomp=Z,66nm,1.2s,mb5.5
MRSI Marisa 35.69 151 P **P 20 01 44.7 +0.4**
MNI Manado 36.11 146 P **P 20 01 51.3 +3.5**
comp=Z,4μmcomp=Z,111nm,2.3s,mb5.4
PCI Palu 36.16 155 P **P 20 01 50.3 +2.0**
comp=Z,2μmcomp=Z,88nm,2.0s,mb5.3
KSI Kapahiang 36.39 185 P **P 20 01 56.8 +6.6**
comp=Z,104nm,0.9s,mb5.8
KMSI Cibinong 36.48 148 P **P 20 01 53.9 +2.9**
MDSI Maura Dua 37.13 182 P **P 20 01 56.6 +0.1**
comp=Z,61nm,1.4s,mb5.2
KBKI Kotabaru 37.31 162 P **P 20 01 58.5 +0.4**
comp=Z,109nm,1.0s,mb5.6
IMYA Miami 37.32 288 *e*P **P 20 01 58.8 +0.8**
KLSI 37.32 181 P **P 20 01 58.5 +0.4**
comp=Z,4μmcomp=Z,159nm,1.8s,mb5.5
LUWI Luwuk 37.41 151 P **P 20 02 04.8 +5.9**
comp=Z,2μmcomp=Z,158nm,1.1s,mb5.8
AB31 Akbulak array 37.48 310 *i* P **P 20 01 59.7 +0.5**
AB31 pmax pmax
comp=Z,82nm,0.9s,mb5.6
ABKAR Akbulak array 37.48 310 *e*P **P 20 01 59.5 +0.3**
comp=Z,60nm,0.8s,mb5.5
KLI Kotabumi 37.49 181 P **P 20 02 03.3 +3.7**
comp=Z,176nm,1.2s,mb5.8
LWLI Liwa 37.66 182 P **P 20 02 09.9 +8.9**
TNTI Ternate 37.93 143 P **P 20 02 04.2 +0.9**
comp=Z,3μmcomp=Z,126nm,1.3s,mb5.5
IMOG Moghan 37.96 288 *e*P **P 20 02 05.9 +2.5**
TTSI Tana Toraja 38.16 157 P **P 20 02 05.7 +0.5**
comp=Z,121nm,1.4s,mb5.4
IDAH Dahanechah 38.17 283 *e*P **P 20 02 06.8 +1.6**
IEMG Emamgholi 38.32 290 *e*P **P 20 02 08.1 +1.6**
RBSI Rajabasa 38.46 180 P **P 20 02 09.4 +1.7**
comp=Z,133nm,0.9s,mb5.7
IKRD Kardeh 38.52 289 *e*P **P 20 02 03.3 -4.8**
ABKT Ailbek 38.67 291 P **P 20 02 11.4 +2.0**
comp=Z,524nm,0.8s,mb6.3,SNR=54
SVE Sverdlovsk 38.87 322⇓ *e*P **P 20 02 11.6 +0.8**
SVE *e*S **S 20 08 02.0 -7.0**
SVE *e* 20 10 58.7
SVE pmax pmax
comp=Z,181nm,1.2s,mb5.7
SVE MLR MLR
comp=Z,1μm,12.0s,MS4.9
AKTK Aktyubinsk 38.89 311 P **P 20 02 11.6 +0.6**
AKTO Aktyubinsk 38.89 311 P **P 20 02 11.6 +0.6**
comp=Z,31nm,0.7s,mb5.1,baz=92,slow=7.6,SNR=68
AKTO Aktyubinsk 38.89 311 P **P 20 02 11.6 +0.6**
AKTO pmax pmax
comp=Z,31nm,0.7s,mb5.2
IKOO Kooshah 38.95 282 *e*P **P 20 02 13.2 +1.4**
LEM Lembang 39.48 177 P **P 20 02 19.7 +3.4**
comp=Z,2μmcomp=Z,129nm,0.9s,mb5.7
BNSI Bone 39.52 157 P **P 20 02 17.3 +0.6**
comp=Z,1μmcomp=Z,59nm,1.5s,mb5.1
ARU Arti 39.85 321 P **P 20 02 19.7 +0.7**
comp=Z,966nm,0.9s,mb6.5,SNR=90
ARU Arti 39.85 321*c i*P **P 20 02 19.4 +0.4**
ARU *e* 20 03 53.7
ARU *e*PPP 20 04 15.1
ARU *e* 20 04 23.2
ARU S **S 20 08 22.9 -0.8**
ARU SS SS 20 11 18.9 -0.6
ARU 20 12 19.7
ARU pmax pmax
comp=Z,321nm,1.7s,mb5.8
ARU Arti 39.85 321 *e*P **P 20 02 19.2 +0.3**
comp=Z,200nm,1.0s,mb5.8
ARU LR LR
comp=Z,2μm,21.0s,MS5.0
SMRI Semarang 39.93 172 P **P 20 02 23.5 +3.5**
comp=Z,186nm,1.9s,mb5.5
NGJI Ngawi 40.37 171 P **P 20 02 27.0 +3.3**
comp=Z,146nm,1.1s,mb5.6
BKSI Bulukumba 40.39 157 P **P 20 02 24.3 +0.4**
comp=Z,1μmcomp=Z,66nm,0.9s,mb5.4
GUMO Guam 40.60 109 P **P 20 02 25.0 -0.7**
comp=Z,59nm,0.6s,mb5.4,baz=185,slow=14,SNR=9.2
GUMO Guam 40.60 109 P **P 20 02 25.0 -0.7**
GUMO LR LR
comp=Z,2μm,19.0s,MS5.1
SJI Sawahan 40.77 171 P **P 20 02 28.5 +1.5**
comp=Z,3μmcomp=Z,187nm,1.4s,mb5.5
TIXI Tiksi 40.83 11*c i*P **P 20 02 26.5 -0.4**
TIXI *e* 20 04 00.7
TIXI *e*S **S 20 08 35.0 -3.0**
TIXI *e*SS SS 20 11 38.0 -0.7
TIXI *e* 20 12 28.5
TIXI pmax pmax
comp=Z,267nm,1.2s,mb5.8
TIXI pmax pmax
comp=Z,105nm,2.5s,mb5.0
TIXI pmax pmax
comp=E,81nm,1.6s
TIXI pmax pmax
comp=N,83nm,1.1s
TIXI MLR MLR
comp=Z,5μm,17.0s,MS5.5
TIXI Tiksi 40.83 11 *e*P **P 20 02 26.2 -0.7**
comp=Z,194nm,0.9s,mb5.7
SKR Severo-Kuril's 40.85 49 *e*P **P 20 02 26.0 -1.3**
SKR *e* 20 04 04.0
SKR pmax pmax
comp=N,800nm,2.0s
SKR pmax pmax
comp=E,800nm,2.0s
SKR pmax pmax
comp=Z,1μm,2.0s,mb6.1
SKR pmax pmax
comp=N,90nm,1.0s
SKR pmax pmax
comp=E,90nm,1.0s
SKR pmax pmax
comp=Z,110nm,1.0s,mb5.4
SKR MLR MLR
comp=N,2μm,20.0s,MS5.2
SKR MLR MLR
comp=E,2μm,20.0s,MS5.2
SKR MLR MLR
comp=Z,5μm,20.0s,MS5.4
PWJI Pagerwojo 41.06 171 P **P 20 02 30.4 +1.0**
comp=Z,145nm,0.9s,mb5.6
NLAI Namlea 41.27 146 P **P 20 02 32.5 +1.3**
comp=Z,1μmcomp=Z,68nm,1.0s,mb5.2
KRKI Karangkates 41.29 170 P **P 20 02 33.2 +1.9**
comp=Z,9μmcomp=Z,328nm,1.3s,mb5.8
SOKR Solikamsk 41.67 325*c i*P **P 20 02 34.6 +0.6**
SOKR S **S 20 08 51.3 +0.6**
SOKR pmax pmax
comp=Z,200nm,1.0s,mb5.7
SOKR MLR MLR
comp=Z,1μm,15.0s,MS5.0
SRBI Singaraja 41.72 166 P **P 20 02 36.4 +1.6**
comp=Z,2μmcomp=Z,98nm,1.8s,mb5.1
IBAF Bafgh 41.98 282 *e*P **P 20 02 38.7 +1.8**
SEY Seymchan 41.99 30*c e*P **P 20 02 37.3 +0.8**
KHKI Kahang-Kahang 42.07 165 P **P 20 02 38.8 +1.1**
comp=Z,3μmcomp=Z,179nm,1.4s,mb5.5
PETK Petropavlovsk- 42.11 45 P **P 20 02 37.4 -0.2**
comp=Z,116nm,0.8s,mb5.5,baz=249,slow=1.7,SNR=141
PETK LR LR 20 21 49.0
comp=Z,4μm,19.8s,MS5.3,baz=253,slow=39
PETK Petropavlovsk- 42.11 45 P **P 20 02 37.4 -0.2**
PETK pmax pmax
comp=Z,116nm,0.8s,mb5.6
PETK MLR MLR
comp=Z,4μm,19.8s,MS5.3
IGLO Ghaloghah 42.28 290 *e*P **P 20 02 36.8 -2.5**
PET Petropavlovsk 42.67 45⇑ *e*P **P 20 02 40.7 -1.5**
PET *e* 20 04 23.1
PET *e*S **S 20 09 02.5 -3.2**
PET *e*SS SS 20 12 08.2 -7.4
PET pmax pmax
comp=Z,1μm,2.4s,mb6.2
PET pmax pmax
comp=Z,400nm,3.8s
PET pmax pmax
comp=Z,267nm,1.1s,mb5.9
PET pmax pmax
comp=Z,61nm,3.0s
PET pmax pmax
comp=Z,1μm,3.4s
PET pmax pmax
comp=Z,600nm,5.7s
PET MLR MLR
comp=Z,6μm,16.0s,MS5.5
PET MLR MLR
comp=Z,5μm,16.0s
PET Petropavlovsk 42.67 45 *e*P **P 20 02 42.1 0.0**
comp=Z,227nm,1.0s,mb5.9
SMDO Samad 42.77 269 P **P 20 02 45.5 +2.1**
SNR=6.2
IMEH Mehriz 42.82 282 *e*P **P 20 02 43.7 -0.1**
ILAS Lasjerd 43.20 289 *e*P **P 20 02 48.2 +1.5**
IFIR Firoozkooh 43.30 289 *e*P **P 20 02 50.0 +2.4**
BSY Bisya 43.61 269 P **P 20 02 52.1 +1.8**
SNR=11
HATD Hatta, Dubai 43.70 273 P **P 20 02 54.9 +4.0**
SNR=5.4
ASHO Ashiyiah 43.81 273 P **P 20 02 54.3 +2.5**
SNR=10
IDMV Damavand 43.89 289 *e*P **P 20 02 53.0 +0.6**
ARQ Araqi 43.95 271 P **P 20 02 55.4 +2.4**
SNR=8.5
NAZ Nazwa, Dubai 44.03 273 P **P 20 02 56.3 +2.7**
SNR=8.7
MMRI Maumere 44.20 156 P **P 20 02 54.4 -0.5**
comp=Z,3μmcomp=Z,259nm,1.4s,mb5.8
ASUD Al Ashush, Dub 44.45 273 P **P 20 02 59.4 +2.5**
SNR=9.8
BAKI Biak 44.47 133 P **P 20 02 57.0 -0.1**
comp=Z,5μmcomp=Z,224nm,1.2s,mb5.8
IGAR Gharneh 44.65 285 *e*P **P 20 02 59.3 +0.8**
IR3 Iran Long-Peri 44.72 289 *e*P **P 20 03 00.1 +1.1**
IKLH Kolahrood 44.79 286 *e*P **P 20 03 00.9 +1.3**
IMHD Mahdasht 44.95 290 *e*P **P 20 03 01.9 +1.1**
MAK Makhachkala 46.09 300 *e*P **P 20 03 08.2 -1.5**
MAK *e* 20 04 55.7
MAK *e*PPP 20 05 39.0
MAK *i* S **S 20 09 50.9 -4.8**
MAK *e* 20 13 01.5
MAK *e*SSS 20 14 09.4
MAK pmax pmax
comp=Z,110nm,1.5s,mb5.6
MAK MLR MLR
comp=Z,4μm,17.0s,MS5.4
SMPI Sarmi 46.70 131 P **P 20 03 14.7 -0.2**
comp=Z,2μmcomp=Z,132nm,1.0s,mb5.8
IHRS Heris 47.22 294 *e*P **P 20 03 19.2 +0.5**
IBST Bostanabad 47.47 293 *e*P **P 20 03 21.6 +1.0**
DGRG David-gareji 47.88 298 P **P 20 03 25.7 +1.9**
DGRG S **S 20 10 23.7 +2.3**
ILIN Lien 48.08 290 *e*P **P 20 03 26.5 +1.1**
IAZR Azarshahr 48.18 293 *e*P **P 20 03 27.2 +1.1**
MTA Mtatsminda 48.27 299 P **P 20 03 27.8 +1.0**
MTA S **S 20 10 25.8 -1.1**
TBLG Delisi 48.30 299 *e*P **P 20 03 28.2 +1.2**
TBLG *e*S **S 20 10 29.6 +2.3**
TBLG Delisi 48.30 299 P **P 20 03 28.2 +1.2**
TBLG S **S 20 10 29.6 +2.2**
JAY Jayapura 48.38 130 P **P 20 03 33.7 +5.8**
IGHG Ghaleghazi 48.55 289 *e*P **P 20 03 29.7 +0.7**
GNI Garni 48.60 297 *e*P **P 20 03 30.2 +0.9**
GNI Garni 48.60 297 *e*P **P 20 03 30.6 +1.3**
GNI pmax pmax
comp=Z,269nm,1.6s
GNI MLR MLR
comp=Z,2μm,22.0s
GNI Garni 48.60 297 *e*P **P 20 03 30.6 +1.2**
comp=Z,269nm,1.6s,mb6.0
GNI LR LR
comp=Z,2μm,22.0s,MS5.0
GNI Garni 48.60 297 P **P 20 03 32.2 +2.9**
SNR=10
GOR Gori 48.72 299 P **P 20 03 32.1 +1.9**
ZEI Tsey 48.74 300 *e*P **P 20 03 29.8 -0.6**
ZEI pmax pmax
comp=Z,27nm,0.8s,mb5.3
ZEI pmax pmax
comp=N,25nm,0.6s
ZEI pmax pmax
comp=E,49nm,0.8s
KEH Kehvi 48.79 300 P **P 20 03 31.1 +0.3**
ONI Oni 49.09 300 P **P 20 03 34.5 +1.4**
ONI S **S 20 10 25.2 -13**
BILL Bilibino 49.10 26 *e*P **P 20 03 32.9 +0.2**
BILL *e* 20 04 55.0
BILL *i* 20 05 32.4
BILL pmax pmax
comp=Z,343nm,1.6s,mb6.1
BILL MLR MLR
comp=Z,5μm,16.0s,MS5.6
QRN Al-Qurain 49.16 281 *e*P **P 20 03 34.0 +0.3**
QRN AMb AMB 20 03 39.0
comp=Z,162nm,0.8s,mb6.1
KBD Kabd 49.20 282 *e*P **P 20 03 34.1 +0.1**
KBD AMb AMB 20 03 39.1
comp=Z,111nm,1.0s,mb5.8
VRHR Novokhopersk 49.30 312 *e*P **P 20 03 34.2 -0.3**
VRHR *e*S **S 20 10 37.9 -3.1**
VRHR pmax pmax
comp=E,40nm,0.8s
VRHR pmax pmax
comp=Z,190nm,0.8s,mb6.2
VRHR pmax pmax
comp=N,4.0nm,0.4s
VRHR smax
comp=N,190nm,1.5s
VRHR smax
comp=E,70nm,1.5s
VRHR smax
comp=Z,20nm,1.5s
RDF Al-Radifah 49.40 282 *e*P **P 20 03 35.8 +0.2**
RDF AMb AMB 20 03 41.3
comp=Z,360nm,1.0s,mb6.4
KIV Kislovodsk 49.41 302 P **P 20 03 36.9 +1.4**
comp=Z,540nm,1.0s,mb6.5,SNR=26
KIV Kislovodsk 49.41 302*c i*P **P 20 03 36.5 +1.0**
KIV *e* 20 04 56.6
KIV *e* 20 05 28.2
KIV *e*S **S 20 10 41.6 -1.3**
KIV *e*SS SS 20 14 15.5 +1.2
KIV pmax pmax
comp=Z,104nm,3.8s
KIV pmax pmax
comp=Z,81nm,0.9s,mb5.8
KIV MLR MLR
comp=Z,2μm,16.0s,MS5.2
KIV Kislovodsk 49.41 302 *e*P **P 20 03 35.9 +0.4**
comp=Z,72nm,0.8s,mb5.8
KIV LR LR
comp=Z,3μm,19.0s,MS5.3
KIV Kislovodsk 49.41 302 P **P 20 03 36.6 +1.1**
SNR=50
CLDR Caldiran 49.43 296 *e*P **P 20 03 37.1 +1.3**
NAY Al-Naaiem 49.54 282 *e*P **P 20 03 36.4 -0.3**
NAY AMb AMB 20 03 41.7
comp=Z,301nm,1.0s,mb6.3
KARS Kars 49.74 298 *e*P **P 20 03 38.7 +0.6**
VANB Van 49.96 295 *e*P **P 20 03 40.6 +0.9**
AGRB Hanur-Agry 50.03 297 *e*P **P 20 03 38.9 -1.4**
CUKT Cukurca 50.12 293 *e*P **P 20 03 41.2 +0.3**
ARTV Artvin 50.48 299⇑ *i*P **P 20 03 45.1 +1.5**
DAGI Agillar 50.51 299⇑ *i*P **P 20 03 45.3 +1.4**
BHD Baghdad 50.59 288 *e*x x 20 03 39.0
BHD *e*x x 20 10 52.0
DBOC Borcka 50.64 299⇑ *i*P **P 20 03 45.8 +1.0**
DDEM Demirkent 50.67 298⇑ *i*P **P 20 03 46.4 +1.2**
VORD Divnogorie 50.77 312 *e*P **P 20 03 45.3 -0.4**
VORD pmax pmax
comp=N,20nm,1.1s
VORD pmax pmax
comp=E,90nm,1.1s
VORD pmax pmax
comp=Z,60nm,1.1s,mb5.4
VORD MLR MLR
comp=N,2μm,23.0s,MS5.1
VORD MLR MLR
comp=E,2μm,23.0s,MS5.1
VORD MLR MLR
comp=Z,2μm,23.0s,MS5.2
VSR Storozhevoye 50.83 312 *e*P **P 20 03 45.8 -0.3**
VSR *e*S **S 20 10 57.6 -4.8**
VSR pmax pmax
comp=N,30nm,0.9s
VSR pmax pmax
comp=E,160nm,0.9s
VSR pmax pmax
comp=Z,170nm,0.9s,mb6.0
VSR smax
comp=N,340nm,2.6s
VSR smax
comp=E,240nm,2.6s
VSR smax
comp=Z,170nm,2.6s
VSR MLR MLR
comp=N,490nm,14.0s,MS4.9
VSR MLR MLR
comp=E,630nm,14.0s,MS4.9
VSR MLR MLR
comp=Z,1μm,14.0s,MS5.2
ERZM Erzurum 51.18 297⇑ *i*P **P 20 03 51.5 +2.6**
MOS Moscow 51.39 318 *e*P **P 20 03 47.4 -2.9**
MOS *e* 20 05 01.0
MOS *e* 20 05 45.3
MOS *e*PPP 20 06 45.7
MOS *e*S **S 20 11 06.6 -3.5**
MOS *e* 20 11 30.9
MOS *e*SS SS 20 14 46.7 +1.3
MOS pmax pmax
comp=Z,500nm,1.0s,mb6.4
MOS pmax pmax
comp=Z,334nm,0.9s,mb6.3
MOS MLR MLR
comp=Z,1μm,12.0s,MS5.2
SOC Sochi 51.60 302*c i*P **P 20 03 51.6 -0.4**
SOC *e**PP pP 20 03 59.8 +5.9
SOC *e**SP sP 20 04 03.3 +8.7
SOC *e*S **S 20 11 13.1 -0.1**
SOC *e**SS sS 20 11 25.4 +9.1
SOC *e* 20 13 34.2
SOC *e*SS SS 20 14 48.1 -1.0
SOC *e*SSS 20 16 22.4
SOC pmax pmax
comp=Z,293nm,1.8s,mb5.9
SOC pmax pmax
comp=Z,69nm,0.9s,mb5.6
SOC MLR MLR
comp=Z,3μm,16.0s,MS5.4
BEST Besiri 51.75 295⇑ *i*P **P 20 03 54.6 +1.4**
SMY Shemya 52.01 46 *e*P **P 20 03 55.6 +0.6**
comp=Z,789nm,0.8s,mb6.7
OBN Obninsk 52.04 317 P **P 20 03 55.3 +0.2**
comp=Z,634nm,0.6s,mb6.7,SNR=7.4
OBN Obninsk 52.04 317 *e*P **P 20 03 55.1 0.0**
OBN *i* 20 05 54.2

OBN *i* S **S** **20 11 20.1 +1.2**
OBN pmax pmax
comp=Z,251nm,1.6s,mb5.9
OBN MLR MLR
comp=Z,3µm,17.0s,MS5.3
OBN Obninsk 52.04 317 *e*P **P** **20 03 55.0 -0.1**
comp=Z,210nm,1.3s,mb5.9
OBN LR LR
comp=Z,3µm,19.0s,MS5.4
KAKA Kakadu 52.07 146 *e*P **P** **20 03 54.1 -1.7**
comp=Z,38nm,0.8s,mb5.4
KAKA Kakadu 52.07 146 *e*P **P** **20 03 52.4 -3.4**
comp=Z,142nm,0.9s,mb5.9
GUMT Gumushane 52.45 298 *e*P **P** **20 03 59.8 +1.4**
DIYA Diyarbakir 52.62 295⇑*i*P **P** **20 04 00.8 +1.1**
KELT Kelkit 52.70 298⇓*i*P **P** **20 04 01.8 +1.6**
EZC Erzincan 52.72 298 *e*P **P** **20 04 01.7 +1.2**
LVZ Lovozero 52.86 333 PFAKE 20 04 10.0 +8.9
LVZ LR LR
comp=Z,2µm,19.0s,MS5.2
ESPY Espiye-Giresun 52.90 299 *e*P **P** **20 04 00.8 -1.0**
PTK Pertek 52.91 297 *e*P **P** **20 04 03.3 +1.4**
ANN Anapa 52.96 304*c i*P **P** **20 04 01.0 -1.1**
ANN *i* *PP pP 20 04 11.6 +7.6
ANN *i* S **S** **20 11 28.4 -3.5**
ANN pmax pmax
comp=Z,144nm,0.8s,mb6.0
ANN MLR MLR
comp=Z,2µm,19.0s,MS5.2
SVRC Sivrice-ELAZID 53.11 296 *e*P **P** **20 04 03.9 +0.5**
APA Apatity 53.32 333⇑*i*P **P** **20 04 05.2 +0.8**
APA *i* S **S** **20 11 32.0 -4.2**
APA pmax pmax
comp=Z,77nm,1.3s,mb5.5
APA MLR MLR
comp=Z,3µm,13.0s,MS5.5
KEMA Kemaliye 53.49 297⇑*i*P **P** **20 04 07.0 +0.8**
FITZ Fitzroy Crossi 54.17 156 *e*P **P** **20 04 10.0 -1.2**
comp=Z,34nm,0.9s,mb5.3
FITZ Fitzroy Crossi 54.17 156 *e*P **P** **20 04 09.7 -1.4**
comp=Z,22nm,0.9s,mb5.1
AKCD Akcadag 54.18 296 *i* P **P** **20 04 12.1 +0.9**
JOF Joensuu 54.24 327 *e*P **P** **20 04 10.0 -1.2**
JOF pmax pmax
comp=Z,144nm,0.8s,mb6.0
JOF Joensuu 54.24 327 *e*p **P** **20 04 10.0 -1.2**
comp=Z,144nm,0.8s,mb6.0
SVSK Karacayir 54.43 298 *e*P **P** **20 04 14.3 +1.3**
GZT Gaziantep 54.72 295⇑*i*P **P** **20 04 16.2 +1.0**
KVT Kavak 54.82 300 *e*P **P** **20 04 15.7 -0.1**
PUL Pulkovo 54.97 323 *e*P **P** **20 04 17.8 +1.2**
PUL pmax pmax
comp=Z,326nm,0.7s,mb6.5
PUL Pulkovo 54.97 323 *e*P **P** **20 04 17.9 +1.3**
SARI SarD1z-Kayseri 55.00 297 *e*P **P** **20 04 17.5 +0.3**
GAZ Gaziantep 55.05 295 *e*P **P** **20 04 17.9 +0.4**
KMRS Kahramanmaras 55.18 296 *e*P **P** **20 04 15.1 -3.4**
PINB Pinarbasi 55.22 297⇑*i*P **P** **20 04 19.5 +0.8**
SIM Simferopol' 55.23 305*c e*P **P** **20 04 18.4 -0.3**
SIM *e*PPP 20 07 43.0
SIM *i* S **S** **20 12 02.0 -0.5**
SIM *e* 20 14 08.0
SIM pmax pmax
comp=Z,180nm,0.8s,mb6.2
SIM MLR MLR
comp=Z,1µm,18.9s,MS5.0
MBWA Marble Bar 55.37 164 *e*P **P** **20 04 18.7 -1.2**
comp=Z,53nm,1.1s,mb5.5
AMKA Amchitka 55.39 47 *e*P **P** **20 04 19.3 -0.4**
comp=Z,261nm,1.0s,mb6.2
ANDN Andirin 55.58 296⇑*i*P **P** **20 04 21.6 +0.2**
KEV Kevo 55.66 336 *e*P **P** **20 04 20.4 -1.0**
KEV pmax pmax
comp=Z,41nm,0.8s,mb5.5
KEV Kevo 55.66 336 *e*P **P** **20 04 20.4 -1.0**
comp=Z,41nm,0.8s,mb5.5
KEV Kevo 55.66 336 *e*p **P** **20 04 20.4 -1.0**
comp=Z,41nm,0.8s,mb5.5
KOZT Kozan 56.01 296 *e*P **P** **20 04 25.4 +0.9**
ARCES ARCESS Array B 56.20 335 P **P** **20 04 25.0 -0.3**
comp=Z,38nm,0.8s,mb5.5,baz=90,slow=7.3,SNR=52
ARCES PcP PcP 20 05 23.6 +0.7
comp=Z,24nm,0.8s,baz=57,slow=4.5,SNR=6.4
ARCES LR LR 20 31 04.4
comp=Z,2µm,19.0s,MS5.2,baz=269,slow=39
ARCES ARCESS Array B 56.20 335 P **P** **20 04 25.0 -0.3**
ARCES 20 05 23.6
ARCES pmax pmax
comp=Z,38nm,0.8s
ARCES MLR MLR
comp=Z,2µm,19.0s
CEYT Ceyhan 56.21 295 *e*P **P** **20 04 27.8 +1.9**
AVNT Avonos 56.35 298⇓*i*P **P** **20 04 27.1 +0.3**
YURE YUREGIR 56.35 295⇑*i*P **P** **20 04 26.1 -0.9**
ILGA Ilgaz 56.52 301⇑*i*P **P** **20 04 28.6 +0.6**
KAF Kangasniemi 56.62 326 *e*P **P** **20 04 28.0 -0.4**
KAF pmax pmax
comp=Z,65nm,0.6s,mb5.8
KAF Kangasniemi 56.62 326 *e*P **P** **20 04 28.0 -0.4**
comp=Z,65nm,0.6s,mb5.8
KAF Kangasniemi 56.62 326 *e*p **P** **20 04 28.0 -0.4**
comp=Z,65nm,0.6s,mb5.8
KARA Karaisali 56.66 296 *e*P **P** **20 04 28.6 -0.5**
FINES FINESS Array B 56.83 326 P **P** **20 04 29.6 -0.2**
comp=Z,123nm,0.6s,mb6.1,baz=88,slow=6.5,SNR=304
FINES FINESS Array B 56.83 326 P **P** **20 04 29.6 -0.3**
FINES pmax pmax
comp=Z,123nm,0.6s
GULE Gulek 56.86 296⇑*i*P **P** **20 04 31.2 +0.7**
HWQ Hawqa 56.94 292 *e*P **P** **20 04 31.4 +0.3**
BR131 Keskin Array S 56.97 299 *e*P **P** **20 04 31.2 0.0**
comp=Z,16nm,0.6s,mb5.2
BR131 LR LR
comp=Z,902nm,20.0s,MS4.9
BRTR Keskin Array B 56.97 299 P **P** **20 04 31.1 -0.2**
comp=Z,30nm,0.8s,mb5.4,baz=97,slow=6.6,SNR=125
BRTR LR LR 20 34 17.8
comp=Z,935nm,20.3s,MS4.9,baz=300,slow=42
BRTR Keskin Array B 56.97 299*c e*P **P** **20 04 31.1 -0.1**
BRTR pmax pmax
comp=Z,30nm,0.8s
MICGM Minsk 57.10 317⇓*e*P **P** **20 04 31.0 -0.9**
AKASG Malin Array Be 57.11 313 P **P** **20 04 31.6 -0.5**
comp=Z,75nm,0.6s,mb5.9,baz=69,slow=6.5,SNR=139
AKASG S **S** **20 12 26.4 -1.0**
comp=Z,0.5nm,0.5s,baz=99,slow=18,SNR=7.0
AKASG LR LR 20 30 01.8
comp=Z,2µm,19.3s,MS5.2,baz=85,slow=37
AKASG Malin Array Be 57.11 313*c i*P **P** **20 04 31.6 -0.4**
AKASG pmax pmax
comp=Z,75nm,0.6s
AKASG Malin Array Be 57.11 313 P **P** **20 04 31.6 -0.5**
AKASG S **S** **20 12 26.4 -1.0**
AKASG LR LR 20 30 01.8
AKBB Malin Array Si 57.11 313 *e*P **P** **20 04 31.2 -0.8**
KIEV Kiev 57.12 313 *e*P **P** **20 04 31.3 -0.8**
KIEV pmax pmax
comp=Z,67nm,0.8s,mb5.7
KIEV MLR MLR
comp=Z,2µm,19.0s,MS5.2
KIEV Kiev 57.12 313 *e*P **P** **20 04 31.3 -0.8**
comp=Z,67nm,0.8s,mb5.7
KIEV LR LR
comp=Z,2µm,19.0s,MS5.2
MNK Minsk 57.13 317*de*P **P** **20 04 31.0 -1.1**
MNK *e*S **S** **20 12 20.0 -7.5**
MNK *e*PS 20 12 42.0
MNK pmax pmax
comp=Z,340nm,1.5s,mb6.2
MNK pmax pmax
comp=Z,2µm,2.0s,mb6.9
MNK pmax pmax
comp=E,270nm,1.5s
MNK pmax pmax
comp=N,80nm,1.5s
MNK MLR MLR
comp=E,3µm,14.0s
MNK MLR MLR
comp=Z,5µm,14.0s,MS5.8
BHL Bhannes 57.30 292 *e*P **P** **20 04 33.9 +0.3**
RCY Rachaya 57.31 291 *e*P **P** **20 04 34.0 +0.2**
IDID Didziasalis 57.58 318 *e*P **P** **20 04 35.7 +0.4**
IDID AMB AMB 20 04 37.9
comp=Z,51nm,1.0s,mb5.5
NACGM Naroch 57.64 318 *e*P **P** **20 04 33.0 -2.7**

PMG Port Moresby 57.76 129 *e*P **P** **20 04 35.4 -1.6**
PMG pmax pmax
comp=Z,38nm,0.9s
PMG Port Moresby 57.76 129 *e*P **P** **20 04 35.4 -1.6**
comp=Z,38nm,0.9s,mb5.4
IZAR Zarasai 57.76 319 *e*P **P** **20 04 36.9 +0.3**
IZAR AMB AMB 20 04 39.3
comp=Z,42nm,1.2s,mb5.3
MMAI Mount Meron Ar 57.80 291 P **P** **20 04 38.1 +0.9**
comp=Z,16nm,0.8s,mb5.1,baz=46,slow=7.2,SNR=22
IIGN Ignalina 57.86 318 *e*P **P** **20 04 37.7 +0.4**
IIGN AMB AMB 20 04 39.0
comp=Z,51nm,0.9s,mb5.6
GAMB Gambell 57.96 31 *e*P **P** **20 04 37.1 -0.7**
comp=Z,131nm,1.0s,mb5.9
KIS Kishinev 58.29 308⇓*i*P **P** **20 04 40.0 -0.4**
comp=Z,500nm,2.0s,mb6.2
KIS *e*S **S** **20 12 40.0 -2.9**
KIS LRM 20 31 24.0
comp=Z,2µm,20.0s
KIS Kishinev 58.29 308κ *i*P **P** **20 04 40.0 -0.4**
KIS *e* 20 06 48.0
KIS *e* 20 08 10.0
KIS MLR MLR
comp=Z,2µm,20.0s,MS5.2
KIS MLR MLR
comp=Z,2µm,20.0s
KBS Kingsbay 58.73 347*ce*P **P** **20 04 43.7 +0.7**
KBS pmax pmax
comp=Z,89nm,2.5s,mb5.3
KBS Kingsbay 58.73 347⇑*e*P **P** **20 04 43.7 +0.7**
KBS LR LR
comp=Z,957nm,19.0s,MS4.9
CSS Prodhromos 58.73 294 PFAKE 20 04 50.0 +6.3
CSS LR LR
comp=Z,844nm,20.0s,MS4.9
TLCR 58.79 306⇑*i*P **P** **20 04 43.8 -0.1**
COEN Coen 58.80 136 *e*P **P** **20 04 42.8 -1.4**
LEOM Leova 58.81 308 P **P** **20 04 44.1 +0.1**
LEOM Leova 58.81 308⇑*i*P **P** **20 04 43.4 -0.6**
IAS Iasi 59.06 309 P **P** **20 04 45.6 -0.2**
TNA Tin City 59.21 29 *e*P **P** **20 04 46.0 -0.5**
comp=Z,134nm,1.0s,mb5.9
BORA Eskisehir 59.25 300⇑*i*P **P** **20 04 47.5 +0.3**
CFR Carcaliu 59.25 307 *i* P **P** **20 04 47.7 +0.6**
CFR Carcaliu 59.25 307⇑*i*P **P** **20 04 47.5 +0.4**
WRAB Tennant Creek 59.25 148 P **P** **20 04 46.2 -1.1**
comp=Z,828nm,0.7s,mb6.9,SNR=26
WRAB Tennant Creek 59.25 148 *e*P **P** **20 04 45.3 -2.0**
WRAB pmax pmax
comp=Z,88nm,0.7s,mb5.9
WRAB Tennant Creek 59.25 148 *e*P **P** **20 04 45.3 -2.0**
comp=Z,54nm,0.7s,mb5.7
WRA Warramunga Arr 59.26 148 P **P** **20 04 46.2 -1.1**
comp=Z,52nm,0.8s,mb5.6,baz=342,slow=7.4
WRA Warramunga Arr 59.26 148 P **P** **20 04 46.2 -1.1**
WRA pmax pmax
comp=Z,52nm,0.8s
WRA Warramunga Arr 59.26 148 P **P** **20 04 46.2 -1.1**
BOLV Bolvadin 59.27 299⇑*i*P **P** **20 04 47.2 -0.1**
TIRR Tirgusor 59.28 306 *e*P **P** **20 04 47.0 -0.3**
TIRR pmax pmax
comp=Z,54nm,0.8s,mb5.6
TIRR Tirgusor 59.28 306 *e*P **P** **20 04 47.0 -0.3**
comp=Z,54nm,0.8s,mb5.6
TIRR Tirgusor 59.28 306⇑*i*P **P** **20 04 47.0 -0.3**
PSN Preselentsi 59.67 305 *i* P **P** **20 04 50.3 +0.3**
PETR 59.70 307⇑*i*P **P** **20 04 50.0 -0.2**
TESR 59.85 308⇑*i*P **P** **20 04 51.1 -0.2**
ISP Isparta 59.88 298 *e*P **P** **20 04 51.3 -0.3**
ISP pmax pmax
comp=Z,173nm,0.9s,mb6.1
ISP MLR MLR
comp=Z,912nm,21.0s,MS4.9
ISP Isparta 59.88 298 *e*P **P** **20 04 51.2 -0.4**
comp=Z,173nm,0.9s,mb6.1
ISP LR LR
comp=Z,912nm,21.0s,MS4.9
ISP Isparta 59.88 298 P **P** **20 04 50.9 -0.7**
ISP Isparta 59.88 298⇑*i*P **P** **20 04 51.0 -0.6**
SUW Suwalki 59.89 317 *e*P **P** **20 04 50.8 -0.6**
SUW LMZ 20 31 38.3
comp=Z,2µm,21.1s
SUW Suwalki 59.89 317 *e*P **P** **20 04 50.5 -0.9**
SUW pmax pmax
comp=Z,145nm,0.9s,mb6.0
SUW Suwalki 59.89 317 *e*P **P** **20 04 50.5 -1.0**
comp=Z,145nm,0.9s,mb6.0
AMRR Amara 59.97 306 P **P** **20 04 53.4 +1.4**
AMRR Amara 59.97 306⇓*i*P **P** **20 04 53.3 +1.2**
GRER 59.98 307 P **P** **20 04 54.4 +2.3**
GRER 59.98 307⇑*i*P **P** **20 04 54.5 +2.4**
VRI Vrincioaia 59.99 308 P **P** **20 04 53.1 +0.9**
VRI Vrincioaia 59.99 308⇑*i*P **P** **20 04 53.0 +0.8**
PLOR Plostina 60.05 308 P **P** **20 04 53.3 +0.7**
PLOR Plostina 60.05 308⇓*i*P **P** **20 04 53.8 +1.2**
STEI Steigen 60.14 334 *e*P **P** **20 04 52.0 -0.9**
GDZ Gediz 60.22 300⇑*i*P **P** **20 04 53.3 -0.6**
KORT Korkueli 60.29 297⇑*i*P **P** **20 04 54.1 -0.3**
MSEY Mahe Island 60.33 242 PFAKE 20 05 00.0 +5.1
MSEY LR LR
comp=Z,1µm,21.0s,MS5.0
ISR Istrita 60.35 307⇑*i*P **P** **20 04 55.8 +1.1**
PRD Provadia 60.36 305 *i* P **P** **20 04 54.9 +0.1**
KHAL Karahalli 60.46 299⇑*i*P **P** **20 04 54.4 -1.1**
BURAR Bucovina Array 60.46 310⇑*i*P **P** **20 04 55.7 +0.3**
BUR08 Bucovina Ar. S 60.46 310 *e*P **P** **20 04 55.3 -0.1**
LVV L'vov 60.56 313 *e*P **P** **20 04 54.9 -1.1**
LVV *e* 20 07 09.2
LVV *e*S **S** **20 13 09.0 -3.2**
LVV MLR MLR
comp=N,500nm,14.0s,MS5.0
LVV MLR MLR
comp=E,700nm,14.0s,MS5.0
LVV MLR MLR
comp=Z,800nm,14.0s,MS5.0
MLR Muntele Rosu 60.63 307 P **P** **20 04 57.9 +1.3**
MLR Muntele Rosu 60.63 307⇓*i*P **P** **20 04 57.5 +0.9**
SULR 60.68 306 P **P** **20 04 58.4 +1.4**
SULR 60.68 306⇓*i*P **P** **20 04 56.6 -0.3**
DEMI Demirci 60.80 300 *i* P **P** **20 04 57.3 -0.5**
MOR8 Moi Rana 60.89 332 *e*P **P** **20 04 56.1 -1.9**
SNX Sinaia 60.96 307⇑*i*P **P** **20 04 55.5 -3.4**
JMB Yambol 61.17 304 P **P** **20 05 01.1 +0.8**
JMB Yambol 61.17 304 P **P** **20 05 01.1 +0.8**
VOIR 61.25 308 P **P** **20 05 02.0 +1.2**
VOIR 61.25 308⇑*i*P **P** **20 05 01.4 +0.6**
FLOS Flostrand 61.27 333 *e*P **P** **20 05 01.0 +0.5**
KONS Konsvik 61.32 333 *e*P **P** **20 05 01.7 +0.8**
BALY Balya 61.35 301⇓*i*P **P** **20 05 01.9 +0.2**
KWP Kalwaria Pacla 61.43 313 *e*P **P** **20 05 02.5 +0.5**
KWP LMZ 20 32 43.5
comp=Z,1µm,22.0s
KWP Kalwaria Pacla 61.43 313 *e*P **P** **20 05 01.8 -0.2**
KWP pmax pmax
comp=Z,424nm,1.0s,mb6.5
KWP MLR MLR
comp=Z,2µm,21.0s,MS5.2
KWP Kalwaria Pacla 61.43 313 *e*P **P** **20 05 01.8 -0.2**
comp=Z,424nm,1.0s,mb6.5
KWP LR LR
comp=Z,2µm,21.0s,MS5.2
KWP Kalwaria Pacla 61.43 313⇑*i*P **P** **20 05 02.6 +0.6**
BMR Baia Mare 61.55 310 P **P** **20 05 03.7 +0.9**
BMR Baia Mare 61.55 310⇑*i*P **P** **20 05 03.5 +0.7**
WAR Warsaw 61.65 316 *e*P **P** **20 05 04.6 +1.3**
WAR Warsaw 61.65 316 *e*P **P** **20 05 04.6 +1.2**
TURN Turunc 61.65 297⇑*i*P **P** **20 05 05.6 +1.9**
PVL Pavlikeni 61.78 305 *i* P **P** **20 05 06.2 +1.7**
AYDN Tasoluk 61.90 298⇑*i*P **P** **20 05 05.2 -0.2**
UZH Uzhgorod 62.01 312 *e*P **P** **20 05 06.5 +0.6**
UZH *e* 20 05 12.5
UZH *e* 20 05 41.9
UZH *e*PPP 20 08 49.2
UZH *e*S **S** **20 13 27.9 -2.8**
UZH MLR MLR
comp=N,1µm,20.0s,MS5.2
UZH MLR MLR
comp=E,950nm,20.0s,MS5.2
UZH MLR MLR
comp=Z,650nm,20.0s,MS4.8
TRPA Tarpa 62.01 311⇓*i*P **P** **20 05 06.0 +0.1**
DRGR 62.34 310 P **P** **20 05 08.9 +0.7**
DRGR 62.34 310⇑*i*P **P** **20 05 08.7 +0.5**

ASAR Alice Springs 62.36 151 P **P** **20 05 07.3 -1.0**
comp=Z,40nm,0.8s,mb5.6,baz=335,slow=6.2,SNR=281
ASAR S **S** **20 13 34.2 -1.2**
comp=Z,4.3nm,1.1s,baz=329,slow=12,SNR=8.9
ASAR Alice Springs 62.36 151 P **P** **20 05 07.4 -1.0**
ASAR S **S** **20 13 34.2 -1.2**
ASAR pmax pmax
comp=Z,40nm,0.8s
ASAR smax
comp=N,4.0nm,1.1s
STHS Stebnicka Huta 62.41 313 *e*P **P** **20 05 09.0 +0.5**
STHS pmax pmax
comp=Z,39nm,0.9s,mb5.5
STHS Stebnicka Huta 62.41 313 *e*P **P** **20 05 09.0 +0.5**
comp=Z,38nm,0.9s,mb5.5
STHS Stebnicka Huta 62.41 313 *e*P **P** **20 05 09.0 +0.5**
BDRM Kayabasi 62.44 298⇑*i*P **P** **20 05 08.9 -0.1**
CRAR CRAIOVA 62.45 307 P **P** **20 05 09.5 +0.6**
DEV Deva 62.52 309⇑**P** **P** **20 05 09.5 +0.1**
DEV Deva 62.52 309⇑*i*P **P** **20 05 09.5 +0.1**
URLA Izmir 62.59 300⇑*i*P **P** **20 05 09.1 -0.9**
PLD Plovdiv 62.60 304 P **P** **20 05 09.6 -0.4**
PLD Plovdiv 62.60 304 P **P** **20 05 09.6 -0.4**
PLD Plovdiv 62.60 304 *i* P **P** **20 05 09.9 -0.1**
RZN Rozhen 62.74 304 *i* P **P** **20 05 10.3 -0.6**
CHOS Chios island 62.98 300 P **P** **20 05 12.0 -0.5**
NIE Niedzica 62.98 313 *e*P **P** **20 05 13.7 +1.3**
UNV Unalaska Valle 63.10 42 *e*P **P** **20 05 11.8 -1.3**
comp=Z,49nm,0.9s,mb5.6
KECS Kecovo 63.19 312 *e*P **P** **20 05 14.2 +0.4**
KECS pmax pmax
comp=Z,23nm,1.3s,mb5.2
KECS Kecovo 63.19 312 *e*P **P** **20 05 14.2 +0.4**
comp=Z,23nm,1.3s,mb5.2
KECS Kecovo 63.19 312 *e*P **P** **20 05 14.2 +0.4**
AKUT Akutan 63.41 41 *e*P **P** **20 05 15.3 +0.2**
comp=Z,178nm,1.4s,mb6.0
BZS Buzias 63.46 309 P **P** **20 05 15.9 +0.3**
BZS Buzias 63.46 309⇑*i*P **P** **20 05 15.4 -0.2**
VTS Vitosha 63.47 305⇑**P** **P** **20 05 15.9 +0.2**
VTS Vitosha 63.47 305 P **P** **20 05 14.7 -1.0**
VTS Vitosha 63.47 305 *i* P **P** **20 05 15.5 -0.2**
VTS Vitosha 63.47 305⇑*i*P **P** **20 05 15.9 +0.2**
MMB Musomiste 63.47 304 *i* P **P** **20 05 13.5 -2.2**
GKP Gorka Klasztor 63.49 318 *e*P **P** **20 05 15.8 +0.1**
GKP LMZ 20 33 57.5
comp=Z,4µm,19.3s
SRS Serrai 63.74 303 P **P** **20 05 15.8 -1.7**
SRS Serrai 63.74 303 P **P** **20 05 15.8 -1.7**
PSZ Piszkesteto 63.76 312 PFAKE 20 05 30.0 +12
PSZ LR LR
comp=Z,2µm,19.0s,MS5.2
PSZ Piszkesteto 63.76 312⇓*i*P **P** **20 05 12.4 -5.1**
KKB Krupnik 63.82 304 *i* P **P** **20 05 18.1 +0.1**
APE Apeiranthos 63.86 299⇑**P** **P** **20 05 17.4 -1.0**
APE Apeiranthos 63.86 299⇑*i*P **P** **20 05 17.4 -1.0**
NB2 NORSAR Subarra 63.87 327 P **P** **20 05 17.0 -1.0**
comp=Z,109nm,0.8s,mb5.9,baz=72,slow=6.9
NOA NORSAR Array B 63.87 327 P **P** **20 05 17.0 -1.0**
comp=Z,82nm,0.8s,mb5.8,baz=70,slow=6.6,SNR=256
NOA LR LR 20 35 01.6
comp=Z,2µm,18.9s,MS5.2,baz=85,slow=38
NOA NORSAR Array B 63.87 327 P **P** **20 05 17.0 -1.0**
NOA pmax pmax
comp=Z,82nm,0.8s
NOA MLR MLR
comp=Z,2µm,18.9s
NOA NORSAR Array B 63.87 327 P **P** **20 05 17.0 -1.0**
NOA LR LR 20 35 01.6
RAC Raciborz 64.04 314 *e*P **P** **20 05 19.6 +0.2**
NAO01 NORSAR Array S 64.09 327 *e*P **P** **20 05 18.2 -1.3**
comp=Z,65nm,0.9s,mb5.7
PLG Polygyros 64.11 303 P **P** **20 05 19.6 -0.4**
PLG Polygyros 64.11 303 P **P** **20 05 19.6 -0.4**
BSD Bornholm Skovb 64.13 320⇑*i*P **P** **20 05 19.0 -0.9**
BSD pmax pmax
comp=Z,60nm,0.8s,mb5.7
BSD MLR MLR
comp=Z,2µm,19.0s,MS5.3
BSD Bornholm Skovb 64.13 320⇑*i*P **P** **20 05 19.0 -0.9**
comp=Z,60nm,0.8s,mb5.7
BSD Bornholm Skovb 64.13 320⇑*i*P **P** **20 05 19.0 -0.9**
comp=Z,60nm,0.8s,mb5.7
BSD
comp=Z,2µm,19.0s
OKC Ostrava-Krasne 64.16 314 *e*P **P** **20 05 20.4 +0.3**
OKC *e*S **S** **20 13 57.7 +0.2**
OKC MLR MLR
comp=Z,1µm,16.6s,MS5.1
OKC Ostrava-Krasne 64.16 314⇑*e*P **P** **20 05 20.4 +0.3**
OKC *e*S **S** **20 13 57.7 +0.2**
OKC AMS AMS 20 33 50.0
comp=Z,1µm,16.6s
VYHS Vyhne 64.21 312 *e*P **P** **20 05 20.7 +0.2**
VYHS pmax pmax
comp=Z,66nm,1.2s,mb5.5
VYHS Vyhne 64.21 312 *e*P **P** **20 05 20.7 +0.2**
comp=Z,66nm,1.2s,mb5.5
VYHS Vyhne 64.21 312 *e*P **P** **20 05 20.7 +0.2**
VAY Valandovo 64.38 304⇑*i*P **P** **20 05 20.5 -1.2**
OSL Oslo 64.50 326 *e*P **P** **20 05 22.0 -0.2**
OSL AMb AMB 20 05 23.6
comp=Z,180nm,0.9s,mb6.1
OSL Oslo 64.50 326 *e*P **P** **20 05 22.0 -0.2**
comp=Z,180nm,0.9s,mb6.1
MORC Moravsky Berou 64.54 314 *e*P **P** **20 05 22.3 -0.4**
MORC pmax pmax
comp=Z,76nm,0.9s,mb5.7
MORC Moravsky Berou 64.54 314 *e*P **P** **20 05 22.3 -0.3**
comp=Z,76nm,0.9s,mb5.7
MORC Moravsky Berou 64.54 314⇑*i*P **P** **20 05 22.8 +0.1**
KSP Ksiaz 64.90 316 *e*P **P** **20 05 25.4 +0.4**
KSP LMZ 20 34 58.5
comp=Z,3µm,18.7s
KSP Ksiaz 64.90 316⇑*e*P **P** **20 05 25.3 +0.3**
KSP *e*S **S** **20 14 04.0 -2.6**
KSP LR LR
comp=Z,4µm,18.7s,MS5.6
SKO Skopje 64.91 305 *i* P **P** **20 05 25.6 +0.4**
TTA Tatalina 64.96 30 *e*P **P** **20 05 24.9 -0.3**
DPC Dobruska-Polom 65.06 315⇑*i*P **P** **20 05 26.7 +0.7**
DPC *e*S S 20 14 08.6 -0.1
DPC MLR MLR
comp=Z,2µm,17.0s,MS5.3
DPC Dobruska-Polom 65.06 315⇑*i*P **P** **20 05 26.7 +0.7**
DPC *e*S S 20 14 08.6 -0.1
DPC AMS AMS 20 33 50.0
comp=Z,2µm,17.0s
DIVS Divibare 65.09 308 P **P** **20 05 26.1 -0.2**
KLBR Kellerberrin 65.10 169 *e*P **P** **20 05 26.0 -0.4**
comp=Z,33nm,0.8s,mb5.4
KONO Kongsberg 65.13 326 *e*P **P** **20 05 25.3 -1.0**
KONO pmax pmax
comp=Z,86nm,1.0s,mb5.7
KONO Kongsberg 65.13 326 *e*P **P** **20 05 25.3 -1.0**
comp=Z,86nm,1.0s,mb5.7
PKSM Moragy 65.18 310 P **P** **20 05 27.1 +0.2**
PKSM Moragy 65.18 310⇑*i*P **P** **20 05 26.7 -0.2**
MIDW Midway 65.18 71 PFAKE 20 05 40.0 +13
MIDW LR LR
comp=Z,1µm,21.0s,MS5.0
UPC Upice 65.19 315 *e*P **P** **20 05 27.1 +0.2**
UPC Upice 65.19 315⇑*e*P **P** **20 05 27.1 +0.2**
RGN Rugen 65.20 320 *e*P **P** **20 05 27.2 +0.3**
comp=Z,131nm,1.0s,mb5.9
COP Copenhagen 65.24 321⇑*i*P **P** **20 05 27.0 -0.1**
COP *e*S S 20 14 03.0 -7.7
COP pmax pmax
comp=Z,79nm,0.8s,mb5.8
COP MLR MLR
comp=Z,410nm,18.0s,MS4.7
COP Copenhagen 65.24 321⇑*i*P **P** **20 05 27.0 -0.1**
comp=Z,79nm,0.8s,mb5.8
COP *e*S S 20 14 03.0 -7.7
COP LR LR
comp=Z,410nm,18.0s,MS4.7
COP Copenhagen 65.24 321⇑*i*P **P** **20 05 27.0 -0.1**
comp=Z,79nm,0.8s,mb5.8
COP *e*S S 20 14 03.0 -7.7
COP
comp=Z,410nm,18.0s
KRUS Krusevo 65.28 304 *e*P **P** **20 05 25.9 -1.7**
VRAC Vranov 65.29 314 P **P** **20 05 28.2 +0.7**
VRAC Vranov 65.29 314⇓*i*P **P** **20 05 28.0 +0.5**

KZN **Kozani** 65.32 303 P P 20 05 26.4 -1.5
KZN **Kozani** 65.32 303 P P 20 05 26.4 -1.5
BIA **Bitola** 65.36 304 *e*P P 20 05 26.9 -1.2
COLD **Coldfoot** 65.40 25 *e*P P 20 05 27.6 -0.3
comp=Z,426nm,1.6s,mb6.2
DAG **Danmarks Havn** 65.41 348⇑*i*P P 20 05 28.0 +0.1
DAG pmax pmax
comp=Z,80nm,1.6s,mb5.5
DAG **Danmarks Havn** 65.41 348⇑*i*P P 20 05 28.0 +0.1
comp=Z,80nm,1.6s,mb5.5
DAG **Danmarks Havn** 65.41 348⇑*i*P P 20 05 28.0 +0.1
comp=Z,80nm,1.6s,mb5.5
AGG **Agios Georgios** 65.43 302 P P 20 05 26.9 -1.7
AGG **Agios Georgios** 65.43 302 P P 20 05 26.9 -1.7
CTA **Charters Tower** 65.44 138 *e*P P 20 05 28.7 -0.1
comp=Z,13nm,1.2s,mb4.8
CTA **Charters Tower** 65.44 138 LR LR 20 32 56.1
comp=Z,1µm,20.8s,MS5.0,baz=360,slow=35
CTAO **Charters Tower** 65.44 138 *e*P P 20 05 27.4 -1.4
CTAO MLR MLR
comp=Z,1µm,21.0s,MS5.2
IVA **Berane** 65.62 306⇑*i*P P 20 05 29.5 -0.3
IVA **Berane** 65.62 306⇑*i*P P 20 05 29.5 -0.3
PVY **Plav** 65.68 306⇑*i*P P 20 05 30.2 0.0
PVY **Plav** 65.68 306⇑*i*P P 20 05 30.2 +0.1
OHR **Ohrid** 65.69 304 *i*P P 20 05 29.2 -1.0
BCI **Bajram Curri** 65.70 306 *e*PN P 20 05 32.0 +1.7
PLE **Pljevlja** 65.78 307⇑*i*P P 20 05 32.1 +1.3
PLE **Pljevlja** 65.78 307⇑*i*P P 20 05 32.1 +1.3
SDPT **Sand Point** 65.83 39 *e*P P 20 05 29.0 -1.9
comp=Z,47nm,0.5s,mb5.8
SVW2 **Sparrevohn** 65.89 32 *e*P P 20 05 31.8 +0.6
comp=Z,282nm,1.7s,mb6.0
KBN **Korca** 65.89 304 *e*PN P 20 05 31.7 +0.1
PUK **Puka** 65.95 306 *e*PN P 20 05 31.4 -0.5
TREC **Trest** 65.97 314 *e*P P 20 05 32.6 +0.7
TREC *e*S S 20 14 20.6 +0.8
TREC MLR MLR
comp=Z,1µm,15.2s,MS5.2
TREC **Trest** 65.97 314⇑*e*P P 20 05 32.6 +0.7
TREC *e*S S 20 14 20.6 +0.8
TREC AMS AMS 20 34 40.0
comp=Z,1µm,15.2s
PVCC **Panska Ves** 66.03 316 *e*P P 20 05 32.7 +0.4
PVCC *e*S S 20 14 20.9 +0.4
PVCC MLR MLR
comp=Z,2µm,17.2s,MS5.3
PVCC **Panska Ves** 66.03 316⇑*e*P P 20 05 32.7 +0.4
PVCC *e*S S 20 14 20.9 +0.4
PVCC AMS AMS 20 35 30.0
comp=Z,2µm,17.2s
HYA **Hoyanger** 66.07 328 *e*P P 20 05 33.0 +0.6
UPM **Unac-Piva** 66.16 307⇓*i*P P 20 05 33.7 +0.4
TTG **Podgorica** 66.23 306⇓*i*P P 20 05 33.9 +0.2
TTG **Podgorica** 66.23 306⇓*i*P P 20 05 33.9 +0.2
TIR **Tirane** 66.24 305 *e*P P 20 05 34.3 +0.5
TIR pmax pmax
comp=Z,74nm,0.8s,mb5.8
TIR **Tirane** 66.24 305 *e*P P 20 05 34.3 +0.5
comp=Z,74nm,0.8s,mb5.8
NKY **Niksic** 66.25 307⇓*i*P P 20 05 33.1 -0.8
PRU **Pruhonice** 66.26 315⇑*i*P P 20 05 34.5 +0.7
PRU *e*S S 20 14 17.0 -6.3
PRU MLR MLR
comp=Z,1µm,16.8s,MS5.2
PRU **Pruhonice** 66.26 315⇑*i*P P 20 05 34.5 +0.7
PRU *e*S S 20 14 17.0 -6.3
PRU AMS AMS 20 34 40.0
comp=Z,1µm,16.8s
BRG **Berggiesshubel** 66.26 316 *e*P P 20 05 33.6 -0.2
comp=Z,80nm,1.2s,mb5.6
BRG **Berggiesshubel** 66.26 316 *i*P P 20 05 33.8 0.0
comp=Z,80nm,1.2s,mb5.6
BRG *e* 20 05 40.6
comp=Z,20nm,0.9s
BRG *e* 20 06 16.6
comp=Z,29nm,1.3s
BRG
comp=N,1µm,17.5s
BRG
comp=E,1µm,17.2s
BRG
comp=Z,2µm,18.5s
BRG **Berggiesshubel** 66.26 316 *i*P P 20 05 33.8 0.0
comp=Z,48nm,1.2s,mb5.4
BRG *e* 20 05 40.6
BRG *e* 20 06 16.6
BRG LR LR
comp=Z,1µm,18.5s,MS5.2
CONA **Conrad Observa** 66.27 313 *i*sP P 20 05 34.4 +0.5
comp=Z,380nm,2.7s,mb6.0,SNR=27
PRA **Prague** 66.29 315 ⇑P P 20 05 34.0 0.0
NWAO **Narrogin (SRO)** 66.33 169 *e*P P 20 05 33.2 -1.0
NWAO pmax pmax
comp=Z,73nm,1.1s
NWAO **Narrogin (SRO)** 66.33 169 *e*P P 20 05 33.2 -1.0
comp=Z,73nm,1.1s,mb5.6
ODD1 **Odda** 66.40 327 *e*P P 20 05 34.1 -0.4
ULC **Ulcinj** 66.42 306⇑*i*P P 20 05 34.7 -0.3
BPAW **Bear Paw Mtn.** 66.51 28 *e*P P 20 05 35.0 -0.1
comp=Z,220nm,1.3s,mb6.0
CHGN **Chignik** 66.51 37 *e*P P 20 05 33.9 -1.4
BRY **Bratogost** 66.53 307⇑*i*P P 20 05 36.1 +0.5
BRY **Bratogost** 66.53 307⇑*i*P P 20 05 36.2 +0.6
BUM **Brajici-Budva** 66.53 306⇑*i*P P 20 05 35.5 -0.1
BUM **Brajici-Budva** 66.53 306⇑*i*P P 20 05 35.6 0.0
PPLA **Purkeypile** 66.57 29 *e*P P 20 05 35.6 +0.1
comp=Z,578nm,1.3s,mb6.5
KOGS **Kog** 66.61 311 *e*P P 20 05 35.8 -0.3
MUD **Monsted U'grnd** 66.62 323 *i*P P 20 05 35.9 0.0
MUD pmax pmax
comp=Z,76nm,0.9s,mb5.7
MUD MLR MLR
comp=Z,980nm,19.0s,MS5.0
MUD **Monsted U'grnd** 66.62 323 *i*P P 20 05 35.9 0.0
comp=Z,76nm,0.9s,mb5.7
MUD **Monsted U'grnd** 66.62 323 *i*P P 20 05 35.9 0.0
comp=Z,76nm,0.9s,mb5.7
MUD
comp=Z,980nm,19.0s
CLL **Collm** 66.64 317 *e*P P 20 05 35.7 -0.5
comp=Z,82nm,1.1s,mb5.7
CLL **Collm** 66.64 317⇑*i*P P 20 05 35.9 -0.3
CLL *e* 20 05 42.0
CLL pmax pmax
comp=Z,82nm,1.1s,mb5.7
CLL MLR MLR
comp=Z,2µm,19.4s,MS5.3
CLL **Collm** 66.64 317⇑*i*P P 20 05 35.9 -0.3
comp=Z,82nm,1.1s,mb5.7
CLL *e* 20 06 18.0
CLL *e*S S 20 14 24.0 -3.8
CLL *e*SS SS 20 18 57.0 +13
CLL LmV 20 35 00.0
comp=N,1µm,19.3s
CLL LmV 20 35 00.0
comp=E,1µm,19.8s
CLL LmV 20 35 00.0
comp=Z,2µm,19.4s
BLS5 **Blasjo** 66.69 327 *e*P P 20 05 36.0 -0.4
BLS5 AMb AMB 20 05 38.1
comp=Z,76nm,1.2s,mb5.6
BLS5 **Blasjo** 66.69 327 *e*P P 20 05 36.0 -0.4
comp=Z,76nm,1.2s,mb5.6
HNR **Honiara** 66.69 119 LR LR 20 35 23.3
comp=Z,690nm,19.4s,MS4.9,baz=298,slow=37
HNR **Honiara** 66.69 119 PFAKE 20 05 50.0 +13
HNR LR LR
comp=Z,919nm,20.0s,MS5.0
HCY **Herceg Novi** 66.74 306⇑*i*P P 20 05 36.9 -0.1
HCY **Herceg Novi** 66.74 306⇑*i*P P 20 05 36.9 -0.1
ARSA **Arzberg** 66.75 312⇑*i*pP P 20 05 37.0 0.0
comp=Z,124nm,1.8s,mb5.7
FORT **Forrest** 66.75 159 *e*P P 20 05 36.5 -0.5
comp=Z,72nm,0.7s,mb5.8
FORT **Forrest** 66.75 159 *e*P P 20 05 36.1 -0.9
comp=Z,86nm,0.8s,mb5.8
ASK **Askoy** 66.81 328 *e*P P 20 05 36.0 -1.1
BSEG **Bad Segeberg** 67.06 320 *e*P P 20 05 39.2 +0.4
comp=Z,172nm,1.0s,mb6.0
TRF **Thorofare Moun** 67.08 28 *e*P P 20 05 38.6 -0.2
comp=Z,50nm,0.8s,mb5.6
KHC **Kasperske Hory** 67.18 315⇑*i*P P 20 05 39.6 -0.1
KHC *e*S S 20 14 34.3 -0.2
KHC MLR MLR
comp=Z,1µm,15.3s,MS5.3
KHC **Kasperske Hory** 67.18 315 *e*P P 20 05 39.6 0.0
comp=Z,96nm,1.6s,mb5.6
KHC **Kasperske Hory** 67.18 315⇑*i*P P 20 05 39.6 -0.1
KHC *e*S S 20 14 34.3 -0.2
KHC AMS AMS 20 35 30.0
comp=Z,1µm,15.3s
GEC2 **GERESS Array S** 67.22 314 *e*P P 20 05 40.0 +0.1
comp=Z,76nm,1.2s,mb5.6
STAV **Stavanger** 67.25 326 *e*P P 20 05 39.7 -0.3
STAV AMb AMB 20 05 41.1
comp=Z,55nm,2.0s,mb5.2
STAV **Stavanger** 67.25 326 *e*P P 20 05 39.7 -0.3
comp=Z,55nm,2.0s,mb5.2
PERS **Pernice** 67.25 312 *e*P P 20 05 40.1 -0.1
MOA **Molln** 67.28 313 *i*sP P 20 05 40.8 +0.4
comp=Z,201nm,1.7s,mb5.9,SNR=18
SOKA **Soboth** 67.29 312⇑*i*sP P 20 05 40.5 +0.1
comp=Z,206nm,2.1s,mb5.8
TANN **Tannenbergstha** 67.31 316 *e*P P 20 05 40.4 -0.1
comp=Z,67nm,1.1s,mb5.6
KMY **Karmoy** 67.34 327 *e*P P 20 05 38.4 -2.1
COLA **College** 67.34 26 *e*P P 20 05 40.0 -0.4
COLA pmax pmax
comp=Z,314nm,1.2s,mb6.2
COLA MLR MLR
comp=Z,2µm,19.0s,MS5.3
COLA **College** 67.34 26 *e*P P 20 05 40.0 -0.4
comp=Z,314nm,1.2s,mb6.2
COLA LR LR
comp=Z,2µm,19.0s,MS5.3
NKC **Novy Kostel** 67.39 316 *e*P P 20 05 41.0 0.0
NKC MLR MLR
comp=Z,2µm,16.6s,MS5.4
NKC **Novy Kostel** 67.39 316⇑*e*P P 20 05 41.0 0.0
NKC AMS AMS 20 36 10.0
comp=Z,2µm,16.6s
RSO **Redoubt South** 67.42 32 *e*P P 20 05 41.0 0.0
comp=Z,233nm,0.8s,mb6.3
MCK **McKinley** 67.48 28 *e*P P 20 05 40.8 -0.5
MCK pmax pmax
comp=Z,34nm,0.7s,mb5.5
MCK **McKinley** 67.48 28 *e*P P 20 05 40.8 -0.5
comp=Z,34nm,0.7s,mb5.5
WET **Wettzell** 67.59 315 *e*P P 20 05 42.4 +0.1
comp=Z,83nm,1.4s,mb5.6
BOJS **Bojanci** 67.63 310 *e*P P 20 05 42.9 +0.3
OBKA **Obir** 67.66 312⇓*i*pP P 20 05 42.5 -0.3
comp=Z,366nm,3.7s,SNR=11
MOX **Moxa** 67.71 317 *e*P P 20 05 44.0 +1.0
comp=Z,148nm,2.0s,mb5.7
MOX *e* 20 06 02.8
MOX
comp=Z,2µm,19.0s
MOX **Moxa** 67.71 317 *e*P P 20 05 42.8 -0.2
comp=Z,79nm,1.4s,mb5.5
ROTZ **Rotzenmuhle** 67.73 316 *e*P P 20 05 43.5 +0.4
comp=Z,112nm,1.1s,mb5.8
ILAR **Eielson Array** 67.75 26 P P 20 05 41.6 -1.4
comp=Z,58nm,1.2s,mb5.5,baz=279,slow=5.4,SNR=121
ILAR PKPPKP 20 34 03.2
comp=Z,1.0nm,0.8s,baz=133,slow=2.6,SNR=10
ILAR LR LR 20 37 36.8
comp=Z,3µm,19.2s,MS5.5,baz=87,slow=38
NRDL **Niedersach Rie** 67.78 319 *e*P P 20 05 42.7 -0.7
comp=Z,159nm,1.1s,mb6.0
LJU **Ljubljana** 67.87 311 *e*P P 20 05 44.6 +0.5
CLZ **Clausthal** 67.91 318 *e*P P 20 05 44.5 +0.3
comp=Z,148nm,1.0s,mb6.0
KBA **Konlbreinsper** 68.17 313⇑*i*sP P 20 05 46.2 +0.2
comp=Z,373nm,2.6s,mb6.0,SNR=12
KNDS **Knezji Dol** 68.18 311 *e*P P 20 05 45.9 -0.1
MYKA **Terra Mystica** 68.18 312⇑*i*pP P 20 05 45.6 -0.4
comp=Z,196nm,2.6s,mb5.7
RJOB **Jochberg** 68.23 313 *e*P P 20 05 46.7 +0.4
comp=Z,241nm,2.1s,mb5.9
VOY **Vojsko** 68.27 311 *e*P P 20 05 45.8 -0.8
VOY *e* pP 20 05 47.1 -1.5
CADS **Cadrg** 68.29 312 *e*P P 20 05 46.0 -0.7
GRF **Grafenberg Arr** 68.34 316 *e*P P 20 05 47.3 +0.3
comp=Z,171nm,1.1s,mb6.0
GRF *e*L 20 37 17.2
comp=Z,2µm,18.5s
GRF **Grafenberg Arr** 68.34 316 *e*P P 20 05 47.3 +0.3
GRF pmax pmax
comp=Z,171nm,1.1s,mb6.0
GRF MLR MLR
comp=Z,2µm,18.5s,MS5.4
RC01 **Rabbit Creek A** 68.43 30 *e*P P 20 05 46.3 -1.0
comp=Z,139nm,1.2s,mb5.9
PMR **Palmer** 68.44 30 *e*P P 20 05 46.7 -0.7
PMR pmax pmax
comp=Z,260nm,1.5s,mb6.0
PMR **Palmer** 68.44 30 *e*P P 20 05 46.7 -0.7
comp=Z,260nm,1.5s,mb6.0
TRI **Trieste** 68.49 311 *e*P P 20 05 47.5 -0.5
TRI pmax pmax
comp=Z,72nm,0.9s,mb5.7
TRI **Trieste** 68.49 311 *e*P P 20 05 47.5 -0.5
comp=Z,72nm,0.9s,mb5.7
UBBA **Unterbreizbach** 68.56 317 *e*P P 20 05 48.1 -0.2
comp=Z,208nm,2.2s,mb5.7
OHAK **Old Harbor** 68.65 35 *e*P P 20 05 49.3 +0.5
comp=Z,574nm,1.8s,mb6.2
KDAK **Kodiak Island** 68.73 34 P P 20 05 49.0 -0.2
comp=Z,862nm,0.9s,mb6.7,SNR=24
KDAK **Kodiak Island** 68.73 34 *e*P P 20 05 48.7 -0.5
KDAK pmax pmax
comp=Z,307nm,1.4s,mb6.0
KDAK MLR MLR
comp=Z,2µm,19.0s,MS5.4
KDAK **Kodiak Island** 68.73 34 *e*P P 20 05 48.7 -0.5
comp=Z,307nm,1.4s,mb6.0
KDAK LR LR
comp=Z,2µm,19.0s,MS5.4
ABTA **Abfaltersbach** 68.83 313⇑*i*P P 20 05 49.0 -1.1
comp=Z,126nm,1.9s,mb5.5,SNR=15
FUR **Furstenfeldbru** 68.97 314 *e*P P 20 05 51.4 +0.5
comp=Z,237nm,1.1s,mb6.0
SEW **Seward** 69.04 31 *e*P P 20 05 50.0 -1.1
comp=Z,114nm,1.1s,mb5.7
WTTA **Wattenberg** 69.15 313 *i*pP P 20 05 52.0 -0.1
comp=Z,442nm,2.4s,mb6.0,SNR=40
WATA **Walderalm** 69.15 313⇑*i*pP P 20 05 51.9 -0.2
comp=Z,116nm,1.6s,mb5.6,SNR=12
IBBN **Ibbenburen** 69.16 319 *e*P P 20 05 52.0 0.0
comp=Z,100nm,1.1s,mb5.7
MOTA **Moosalm** 69.44 314⇓*i*pP P 20 05 53.4 -0.4
comp=Z,53nm,1.1s,mb5.4,SNR=35
WIT **Witteveen** 69.52 320 *e*P P 20 05 55.1 +0.9
RETA **Reutte** 69.58 314⇑*i*pP P 20 05 54.5 -0.2
comp=Z,291nm,2.5s,mb5.8,SNR=9.2
TNS **Taunus Mts** 69.71 317 *e*P P 20 05 55.4 -0.1
comp=Z,64nm,1.1s,mb5.5
LRW **Lerwick** 69.76 329 P P 20 05 55.3 -0.4
LRW AMb AMB 20 05 57.1
comp=Z,84nm,1.4s,mb5.5
LRW AMS AMS 20 38 27.0
comp=Z,2µm,14.9s
LRW **Lerwick** 69.76 329 *e*P P 20 05 55.3 -0.4
LRW AMb AMB 20 05 57.1
comp=Z,84nm,1.4s,mb5.5
LRW AMS AMS 20 38 27.0
comp=Z,2µm,14.9s,MS5.4
TOD **Tromm** 69.79 316 *e*P P 20 05 55.9 -0.1
FETA **Feichten** 69.81 313 *i*pP P 20 05 56.1 -0.1
comp=Z,484nm,3.6s,SNR=36
BUG **Bochum-Univer** 69.82 319 *e*P P 20 05 56.1 0.0
comp=Z,104nm,1.1s,mb5.7
EGAK **Eagle** 69.83 25 *e*P P 20 05 55.3 -0.6
comp=Z,175nm,1.8s,mb5.7
EGAK LR LR
comp=Z,2µm,19.0s,MS5.4
WTSB **Winterswijk** 69.84 319 *e*P P 20 05 56.4 +0.1
comp=Z,168nm,2.0s,mb5.6
WAL1 **Walls** 69.89 330 P P 20 05 55.7 -0.7
WAL1 **Walls** 69.89 330 *e*P P 20 05 55.7 -0.7
MENT **Mentasta** 69.91 27 *e*P P 20 05 56.2 -0.3
STU **Stuttgart** 69.94 316 *e*P P 20 05 56.6 -0.3
comp=Z,81nm,1.1s,mb5.6
STU **Stuttgart** 69.94 316 *e*P P 20 05 57.7 +0.8
STU pmax pmax
comp=Z,30nm,0.8s,mb5.3
STU **Stuttgart** 69.94 316 *e*P P 20 05 57.7 +0.8
comp=Z,30nm,0.8s,mb5.3
DIV **Divide** 70.07 29 *e*P P 20 05 57.2 -0.3
comp=Z,251nm,1.5s,mb5.9
INK **Inuvik** 70.12 20 *e*P P 20 05 57.2 -0.5
INK pmax pmax
comp=Z,118nm,1.0s
INK **Inuvik** 70.12 20 *e*P P 20 05 57.2 -0.5
comp=Z,118nm,1.0s,mb5.8
AQU **L'Aquila** 70.19 308 *e*P P 20 05 58.7 +0.1
AQU pmax pmax
comp=Z,106nm,1.0s,mb5.7
AQU MLR MLR
comp=Z,1µm,22.0s,MS5.1
AQU **L'Aquila** 70.19 308 *e*P P 20 05 58.7 +0.1
comp=Z,106nm,1.0s,mb5.7
AQU LR LR
comp=Z,1µm,22.0s,MS5.1
AQU **L'Aquila** 70.19 308⇓*i*P P 20 05 59.0 +0.4
DAVA **Damuels** 70.21 314⇑*i*pP P 20 05 58.4 -0.2
comp=Z,266nm,2.9s,mb5.7,SNR=8.3
CEL **Celeste** 70.32 303 *e*P P 20 05 59.1 -0.3
comp=Z,118nm,1.0s,mb5.8
CEL LR LR
comp=Z,478nm,20.0s,MS4.7
SCO **Scoresbysund** 70.37 344 *e*P P 20 06 00.1 +0.9
SCO pmax pmax
comp=Z,24nm,0.9s,mb5.1
SCO MLR MLR
comp=Z,890nm,19.0s,MS5.0
SCO **Scoresbysund** 70.37 344 *e*P P 20 06 00.1 +0.9
comp=Z,24nm,0.9s,mb5.1
SCO LR LR
comp=Z,890nm,19.0s,MS5.0
SCO **Scoresbysund** 70.37 344 *i*P P 20 06 00.1 +0.9
comp=Z,24nm,0.9s,mb5.1
SCO
comp=Z,890nm,19.0s
SPAK **Spaichingen-Ko** 70.49 315 *e*P P 20 06 00.3 0.0
BMRM **Bremner River** 70.64 29 *e*P P 20 06 00.7 -0.2
comp=Z,596nm,1.6s,mb6.3
BFO **Black Forest** 70.65 315 P P 20 06 00.4 -0.9
comp=Z,174nm,1.1s,mb5.9,SNR=7.6
BFO **Black Forest** 70.65 315 *e*P P 20 06 00.8 -0.5
comp=Z,77nm,1.3s,mb5.5
BFO **Black Forest** 70.65 315 *e*P P 20 06 00.8 -0.5
BFO pmax pmax
comp=Z,114nm,1.6s,mb5.5
BFO MLR MLR
comp=Z,1µm,19.0s,MS5.2
BFO **Black Forest** 70.65 315 *e*P P 20 06 00.8 -0.5
comp=Z,114nm,1.6s,mb5.5
BFO LR LR
comp=Z,1µm,19.0s,MS5.2
LANF **Langenberg** 70.66 316 *e*P P 20 06 00.8 -0.5
RUP **Ruppelstein** 70.75 317 *e*P P 20 06 02.2 +0.3
DAWY **Dawson** 70.87 25 *e*P P 20 06 01.6 -0.7
HGN **Heimansgroeve** 70.88 318 *e*P P 20 06 02.7 +0.1
comp=Z,94nm,2.3s,mb5.3
MEM **Membach** 70.92 318 P P 20 06 02.5 -0.4
BEBN **Eben Emael** 71.01 319 P P 20 06 04.5 +1.1
FELD **Feldberg im Sc** 71.06 315 *e*P P 20 06 03.5 -0.3
CDF **Champ du Feu** 71.23 316⇑*i*P P 20 06 04.5 -0.3
comp=Z,159nm,1.2s,mb5.5
CDF **Champ du Feu** 71.23 316⇑*i*P P 20 06 04.5 -0.3
CDF pmax pmax
comp=Z,79nm,1.2s,mb5.5
CDF **Champ du Feu** 71.23 316⇑*i*P P 20 06 04.5 -0.3
comp=Z,79nm,1.2s,mb5.5
WLF **Walferdange** 71.29 317 P P 20 06 04.8 -0.3
comp=Z,107nm,1.3s,mb5.6
WLF **Walferdange** 71.29 317 *e*P P 20 06 05.6 +0.5
comp=Z,184nm,1.1s,mb5.9
WLF **Walferdange** 71.29 317 *e*P P 20 06 05.1 0.0
WLF pmax pmax
comp=Z,155nm,1.0s,mb5.9
WLF **Walferdange** 71.29 317 *e*P P 20 06 05.1 0.0
comp=Z,155nm,1.0s,mb5.9
VLC **Villacollemand** 71.33 311 *e*P P 20 06 06.0 +0.5
comp=Z,88nm,1.0s,mb5.6
ECH **Echery** 71.40 316 *e*P P 20 06 05.6 -0.2
ECH **Echery** 71.40 316 PFAKE 20 06 20.0 +14
ECH LR LR
comp=Z,980nm,20.0s,MS5.1
BCLA **Clavier** 71.40 318 P P 20 06 05.8 0.0
comp=Z,45nm,1.7s,mb5.1
BBS **Basel-Blauen** 71.55 315 *e*P P 20 06 06.4 -0.3
MOF **Molkenrain** 71.59 315 *e*P P 20 06 06.6 -0.4
HINF **Hinteralfeld** 71.77 315⇑*i*P P 20 06 07.4 -0.7
comp=Z,110nm,1.2s,mb5.4
HINF **Hinteralfeld** 71.77 315⇑*i*P P 20 06 07.4 -0.7
HINF pmax pmax
comp=Z,55nm,1.2s,mb5.4
HINF **Hinteralfeld** 71.77 315⇑*i*P P 20 06 07.4 -0.7
comp=Z,55nm,1.2s,mb5.4
GIVF **Givet** 71.82 318 *e*P P 20 06 08.2 -0.2
comp=Z,146nm,1.1s,mb5.5
GIVF **Givet** 71.82 318 *e*P P 20 06 08.2 -0.2
GIVF pmax pmax
comp=Z,73nm,1.1s,mb5.5
GIVF **Givet** 71.82 318 *e*P P 20 06 08.2 -0.2
comp=Z,73nm,1.1s,mb5.5
RES **Resolute Bay** 71.91 6 *e*P P 20 06 08.4 -0.1
RES pmax pmax
comp=Z,162nm,1.4s,mb5.8
RES **Resolute Bay** 71.91 6 *e*P P 20 06 08.4 -0.1
comp=Z,162nm,1.4s,mb5.8
SNF **Seneffe** 71.92 319 P P 20 06 09.2 +0.3
DOU **Dourbes** 71.95 318 P P 20 06 09.6 +0.4
HAU **Haudompre** 71.97 316 *e*P P 20 06 08.6 -0.7
comp=Z,97nm,1.3s,mb5.3
HAU *e*MLR MLR
comp=Z,2µm,19.0s,MS5.1
HAU **Haudompre** 71.97 316 *e*P P 20 06 08.6 -0.7
HAU pmax pmax
comp=Z,49nm,1.3s,mb5.3
HAU MLR MLR
comp=Z,2µm,19.0s,MS5.4
HAU **Haudompre** 71.97 316 *e*P P 20 06 08.6 -0.7
comp=Z,48nm,1.3s,mb5.3
HAU LR LR
comp=Z,2µm,19.0s,MS5.4
SUMG **Summit** 71.98 349 *e*P P 20 06 09.3 +0.3
comp=Z,470nm,1.9s,mb6.1
SUMG **Summit** 71.98 349 *i*P P 20 06 09.6 +0.7
comp=Z,30nm,1.0s,mb5.2
SUMG *e*S S 20 15 21.0 -9.4
SUMG
comp=Z,720nm,20.0s
LOMF **Lomont** 72.01 315 *e*P P 20 06 09.3 -0.2
MCD **Coleburn Disti** 72.03 328 P P 20 06 09.1 -0.4
MCD **Coleburn Disti** 72.03 328⇑*e*P P 20 06 09.1 -0.4
MME1 **Meikle Cairn** 72.05 327 P P 20 06 08.8 -0.7
MME1 **Meikle Cairn** 72.05 327⇑*e*P P 20 06 08.8 -0.7
THEF **They Montfort** 72.08 316 *e*P P 20 06 09.9 0.0
BAIF **Baives** 72.19 318⇑*i*P P 20 06 10.5 0.0
comp=Z,137nm,1.2s,mb5.5
BAIF **Baives** 72.19 318⇑*i*P P 20 06 10.5 0.0
BAIF pmax pmax
comp=Z,69nm,1.2s,mb5.5
BAIF **Baives** 72.19 318⇑*i*P P 20 06 10.5 0.0
comp=Z,69nm,1.2s,mb5.5
MVH1 **Achvaich** 72.26 328 P P 20 06 10.2 -0.6
MVH1 **Achvaich** 72.26 328⇑*e*P P 20 06 10.2 -0.6
EIDS **Eidsvold** 72.33 137 *e*P P 20 06 12.7 +1.2
comp=Z,78nm,1.4s,mb5.4
RSC **Scourie** 72.46 329 P P 20 06 10.8 -1.2
RSC **Scourie** 72.46 329⇑*e*P P 20 06 10.8 -1.2
MEZF **Maizieres J'vi** 72.49 317 *e*P P 20 06 12.1 -0.2
comp=Z,88nm,1.0s,mb5.3
MEZF **Maizieres J'vi** 72.49 317 *e*P P 20 06 12.1 -0.2
comp=Z,88nm,1.0s,mb5.6
KMBO **Kilima Mbogo** 72.49 257 P P 20 06 13.8 +0.9
comp=Z,62nm,0.8s,mb5.6,baz=178,slow=23,SNR=90
KMBO **Kilima Mbogo** 72.49 257 P P 20 06 13.8 +0.9
KMBO pmax pmax
comp=Z,62nm,0.8s
KMBO **Kilima Mbogo** 72.49 257 *e*P P 20 06 13.5 +0.5
comp=Z,72nm,0.9s,mb5.6
KMBO **Kilima Mbogo** 72.49 257 P P 20 06 14.8 +1.9
SNR=18
MDO **Dochfour** 72.61 328 P P 20 06 12.1 -0.8
MDO **Dochfour** 72.61 328⇑*e*P P 20 06 12.1 -0.8
ESY **Stoneypath** 72.65 326 P P 20 06 12.3 -0.9
ESY **Stoneypath** 72.65 326⇑*e*P P 20 06 12.3 -0.9
STKA **Stephens Creek** 72.81 148 *e*P P 20 06 13.2 -1.1
comp=Z,19nm,0.9s,mb5.0
STKA **Stephens Creek** 72.81 148 P P 20 06 12.9 -1.4
comp=Z,19nm,0.8s,mb5.1,baz=330,slow=6.6,SNR=28
STKA LR LR 20 39 56.5

comp=Z,473nm,20.7s,MS4.8,baz=147,slow=37
STKA Stephens Creek 72.81 148 *e*P **P 20 06 12.9 -1.4**
comp=Z,5.1nm,0.9s,mb4.5
CABF La Chapelle 72.81 315 *e*P **P 20 06 14.0 -0.3**
comp=Z,122nm,1.1s,mb5.4
CABF La Chapelle 72.81 315 *e*P **P 20 06 14.0 -0.3**
CABF pmax pmax
comp=Z,61nm,1.1s,mb5.4
CABF La Chapelle 72.81 315 *e*P **P 20 06 14.0 -0.3**
comp=Z,61nm,1.1s,mb5.4
EBH Black Hill 72.89 326 P **P 20 06 13.7 -0.9**
EBH Black Hill 72.89 326 *e*P **P 20 06 13.7 -0.9**
EDI Edinburgh 72.92 326 P **P 20 06 13.9 -0.9**
EDI AMb AMB 20 06 16.2
comp=Z,92nm,1.9s,mb5.4
EDI AMS AMS 20 41 30.4
comp=Z,884nm,16.6s
EDI Edinburgh 72.92 326 *e*P **P 20 06 13.9 -0.9**
EDI AMb AMB 20 06 16.2
comp=Z,92nm,1.9s,mb5.4
EDI AMS AMS 20 41 30.4
comp=Z,884nm,16.6s,MS5.1
EBL Broad Law 72.93 326 P **P 20 06 14.1 -0.7**
EBL Broad Law 72.93 326⇑ *e*P **P 20 06 14.1 -0.7**
LPG La Plagne 72.96 313⇑ *i*P **P 20 06 15.7 +0.5**
comp=Z,329nm,1.0s,mb5.9
LPG La Plagne 72.96 313⇑ *i*P **P 20 06 15.7 +0.5**
LPG pmax pmax
comp=Z,165nm,1.0s,mb5.9
LPG La Plagne 72.96 313⇑ *i*P **P 20 06 15.7 +0.5**
comp=Z,164nm,1.0s,mb5.9
LPL La Plagne 72.96 313⇑ *i*P **P 20 06 15.7 +0.5**
comp=Z,277nm,1.1s,mb5.8
LPL La Plagne 72.96 313⇑ *i*P **P 20 06 15.7 +0.5**
LPL pmax pmax
comp=Z,138nm,1.1s,mb5.8
LPL La Plagne 72.96 313⇑ *i*P **P 20 06 15.7 +0.5**
comp=Z,138nm,1.1s,mb5.8
PGF Pioggiola 72.99 310⇑ *i*P **P 20 06 15.6 +0.2**
comp=Z,258nm,1.1s,mb5.8
PGF Pioggiola 72.99 310⇑ *i*P **P 20 06 15.6 +0.2**
PGF pmax pmax
comp=Z,129nm,1.1s,mb5.8
PGF Pioggiola 72.99 310⇑ *i*P **P 20 06 15.6 +0.2**
comp=Z,129nm,1.1s,mb5.8
KAC Achnashellach 73.00 328 P **P 20 06 14.2 -1.1**
KAC Achnashellach 73.00 328⇑ *e*P **P 20 06 14.2 -1.1**
RRR Rubha Reidh 73.02 329 P **P 20 06 14.4 -0.9**
RRR Rubha Reidh 73.02 329⇑ *e*P **P 20 06 14.4 -0.9**
MENF Mencas 73.07 320 *e*P **P 20 06 15.8 0.0**
EAU Auchinoon 73.08 326 P **P 20 06 15.2 -0.5**
EAU Auchinoon 73.08 326⇑ *e*P **P 20 06 15.2 -0.5**
SAOF Saorge 73.21 312 *e*P **P 20 06 16.7 0.0**
BNI Bardonecchia 73.23 313 *e*P **P 20 06 16.4 -0.4**
BNI pmax pmax
comp=Z,38nm,0.9s,mb5.3
BNI MLR MLR
comp=Z,1μm,19.0s,MS5.2
BNI Bardonecchia 73.23 313 *e*P **P 20 06 16.4 -0.4**
comp=Z,38nm,0.9s,mb5.3
BNI LR LR
comp=Z,1μm,19.0s,MS5.2
HPK Haverah Park 73.24 324 AMS AMS 20 42 22.4
comp=Z,1μm,16.0s,MS5.2
KPL Plockton 73.25 328 P **P 20 06 14.9 -1.8**
KPL AMb AMB 20 06 18.4
comp=Z,98nm,2.0s,mb5.4
KPL AMS AMS 20 40 50.4
comp=Z,2μm,16.4s
KPL Plockton 73.25 328 *e*P **P 20 06 14.9 -1.8**
KPL AMb AMB 20 06 18.4
comp=Z,98nm,2.0s,mb5.4
KPL AMS AMS 20 40 50.4
comp=Z,2μm,16.4s,MS5.4
ESK Eskdalemuir 73.26 326 *e*P **P 20 06 16.0 -0.8**
ESK pmax pmax
comp=Z,115nm,1.6s,mb5.6
ESK MLR MLR
comp=Z,939nm,19.0s,MS5.1
ESK Eskdalemuir 73.26 326 *e*P **P 20 06 16.0 -0.8**
comp=Z,115nm,1.6s,mb5.6
ESK LR LR
comp=Z,939nm,19.0s,MS5.1
AUTN L'Aution 73.28 312 *e*P **P 20 06 17.3 +0.1**
AUTN L'Aution 73.28 312 *e*P **P 20 06 18.8 +1.6**
ECK Cauldkaine Hil 73.30 325 P **P 20 06 16.3 -0.8**
ECK Cauldkaine Hil 73.30 325⇑ *e*P **P 20 06 16.3 -0.8**
EAB Aberfoyle 73.31 327 P **P 20 06 16.5 -0.6**
EAB Aberfoyle 73.31 327 *e*P **P 20 06 16.5 -0.6**
ELSH Elham, Standar 73.32 320 P **P 20 06 16.8 -0.4**
ELSH AMb AMB 20 06 18.9
comp=Z,128nm,2.3s,mb5.4
ELSH Elham, Standar 73.32 320 *e*P **P 20 06 16.8 -0.4**
ELSH AMb AMB 20 06 18.9
comp=Z,128nm,2.3s,mb5.4
MBDF Montbardon 73.33 313⇑ *i*P **P 20 06 18.5 +1.1**
comp=Z,84nm,0.9s,mb5.4
MBDF Montbardon 73.33 313⇑ *i*P **P 20 06 18.5 +1.1**
MBDF pmax pmax
comp=Z,42nm,0.9s,mb5.4
MBDF Montbardon 73.33 313⇑ *i*P **P 20 06 18.5 +1.1**
comp=Z,42nm,0.9s,mb5.4
SBF Sospel 73.34 312⇑ *i*P **P 20 06 17.1 -0.4**
comp=Z,252nm,1.0s,mb5.8
SBF Sospel 73.34 312⇑ *i*P **P 20 06 17.1 -0.4**
SBF pmax pmax
comp=Z,126nm,1.0s,mb5.8
SBF Sospel 73.34 312⇑ *i*P **P 20 06 17.1 -0.4**
comp=Z,126nm,1.0s,mb5.8
RRH Rhenigidale 73.36 329 P **P 20 06 15.8 -1.5**
RRH Rhenigidale 73.36 329⇑ *e*P **P 20 06 15.8 -1.5**
LUCF Luceram 73.38 312 *e*P **P 20 06 17.5 -0.3**
TOUF Mont Tournerai 73.39 312 *e*P **P 20 06 17.7 -0.1**
REVF Revere 73.44 312 *e*P **P 20 06 17.8 -0.3**
MVIF Mont Vial 73.50 312 *e*P **P 20 06 17.8 -0.7**
PNL Peninsula 73.51 29 *e*P **P 20 06 18.5 +0.3**
comp=Z,114nm,0.9s,mb5.8
KAR1 Arisaig 73.57 328 P **P 20 06 18.4 -0.2**
KAR1 Arisaig 73.57 328⇑ *e*P **P 20 06 18.4 -0.2**
KBI1 Birley Grange 73.57 323 P **P 20 06 17.9 -0.8**
KBI1 Birley Grange 73.57 323⇑ *e*P **P 20 06 17.9 -0.8**
PGBU Glenifferbraes 73.58 326 P **P 20 06 18.2 -0.5**
PGBU AMb AMB 20 06 20.4
comp=Z,161nm,1.8s,mb5.7
PGBU Glenifferbraes 73.58 326 *e*P **P 20 06 18.2 -0.5**
PGBU AMb AMB 20 06 20.4
comp=Z,161nm,1.8s,mb5.7
KSK Scoval 73.64 329 P **P 20 06 17.9 -1.1**
KSK Scoval 73.64 329⇑ *e*P **P 20 06 17.9 -1.1**
CALN Calern 73.74 312 *e*P **P 20 06 19.6 -0.3**
CWF Charnwood Fore 73.74 323 AMS AMS 20 40 39.5
comp=Z,1μm,15.4s,MS5.3
ORIF Oris-en-Rattie 73.78 313⇑ *i*P **P 20 06 20.0 -0.1**
comp=Z,190nm,1.1s,mb5.7
ORIF *e*MLR MLR
comp=Z,1μm,19.8s,MS5.0
ORIF Oris-en-Rattie 73.78 313⇑ *i*P **P 20 06 20.0 -0.1**
ORIF pmax pmax
comp=Z,95nm,1.1s,mb5.6
ORIF Oris-en-Rattie 73.78 313⇑ *i*P **P 20 06 20.0 -0.1**
comp=Z,95nm,1.1s,mb5.6
LOR Lormes 73.80 316⇑ *i*P **P 20 06 19.1 -1.1**
comp=Z,104nm,1.4s,mb5.3
LOR *e*MLR MLR
comp=Z,1μm,20.2s,MS4.9
LOR Lormes 73.80 316⇑ *i*P **P 20 06 19.1 -1.1**
LOR pmax pmax
comp=Z,52nm,1.4s,mb5.3
LOR MLR MLR
comp=Z,1μm,20.3s,MS5.2
LOR Lormes 73.80 316⇑ *i*P **P 20 06 19.1 -1.1**
comp=Z,52nm,1.4s,mb5.3
LOR LR LR
comp=Z,1μm,20.3s,MS5.2
GCD Castle Douglas 73.87 325 P **P 20 06 19.6 -0.7**
GCD Castle Douglas 73.87 325⇑ *e*P **P 20 06 19.6 -0.7**
FRF La Foret Royal 73.99 312 *e*P **P 20 06 20.7 -0.6**
comp=Z,95nm,1.2s,mb5.3
FRF La Foret Royal 73.99 312 *e*P **P 20 06 20.7 -0.6**
FRF pmax pmax
comp=Z,48nm,1.2s,mb5.3
FRF La Foret Royal 73.99 312 *e*P **P 20 06 20.7 -0.6**
comp=Z,48nm,1.2s,mb5.3
STNC Stoke 74.00 323 P **P 20 06 19.8 -1.5**
STNC Stoke 74.00 323 *e*P **P 20 06 19.8 -1.5**

SSF Saint Saulge 74.11 316⇑ *i*P **P 20 06 21.2 -0.8**
comp=Z,85nm,1.3s,mb5.2
SSF Saint Saulge 74.11 316⇑ *i*P **P 20 06 21.2 -0.8**
SSF pmax pmax
comp=Z,42nm,1.3s,mb5.2
SSF Saint Saulge 74.11 316⇑ *i*P **P 20 06 21.2 -0.8**
comp=Z,42nm,1.3s,mb5.2
SMF Signal de Mont 74.13 315⇑ *i*P **P 20 06 21.5 -0.6**
comp=Z,228nm,1.2s,mb5.7
SMF Signal de Mont 74.13 315⇑ *i*P **P 20 06 21.5 -0.6**
SMF pmax pmax
comp=Z,114nm,1.2s,mb5.7
SMF Signal de Mont 74.13 315⇑ *i*P **P 20 06 21.5 -0.6**
comp=Z,114nm,1.2s,mb5.7
LMR La Mourre 74.19 312⇑ *i*P **P 20 06 22.0 -0.5**
comp=Z,221nm,1.3s,mb5.6
LMR La Mourre 74.19 312⇑ *i*P **P 20 06 22.0 -0.5**
LMR pmax pmax
comp=Z,111nm,1.3s,mb5.6
LMR La Mourre 74.19 312⇑ *i*P **P 20 06 22.0 -0.5**
comp=Z,111nm,1.3s,mb5.6
GAL1 Galloway 74.23 326 P **P 20 06 20.8 -1.8**
GAL1 AMb AMB 20 06 24.1
comp=Z,93nm,2.1s,mb5.3
GAL1 AMS AMS 20 42 30.4
comp=Z,728nm,12.7s
GAL1 Galloway 74.23 326 *e*P **P 20 06 20.8 -1.8**
GAL1 AMb AMB 20 06 24.1
comp=Z,93nm,2.1s,mb5.3
GAL1 AMS AMS 20 42 30.4
comp=Z,728nm,12.7s,MS5.2
OCF Saint Nazaire 74.31 313 *e*P **P 20 06 23.5 +0.3**
OG26 St.-Nazaire-De 74.31 313 *e*P **P 20 06 23.5 +0.3**
AVF Avril sur Loir 74.34 316⇑ *i*P **P 20 06 22.8 -0.5**
comp=Z,210nm,1.3s,mb5.6
AVF Avril sur Loir 74.34 316⇑ *i*P **P 20 06 22.8 -0.5**
AVF pmax pmax
comp=Z,105nm,1.3s,mb5.6
AVF Avril sur Loir 74.34 316⇑ *i*P **P 20 06 22.8 -0.5**
comp=Z,105nm,1.3s,mb5.6
SSB Saint Sauveur 74.42 314 *e*P **P 20 06 24.2 +0.4**
SMRF Simiane la Rot 74.45 312 *e*P **P 20 06 23.7 -0.3**
comp=Z,107nm,1.4s,mb5.3
SMRF Simiane la Rot 74.45 312 *e*P **P 20 06 23.7 -0.3**
comp=Z,107nm,1.4s,mb5.6
HYF Humbligny 74.51 316 *e*P **P 20 06 24.2 -0.1**
VIVF Saint-Julien-l 74.55 314⇑ *i*P **P 20 06 24.1 -0.5**
comp=Z,112nm,1.2s,mb5.4
VIVF Saint-Julien-l 74.55 314⇑ *i*P **P 20 06 24.1 -0.5**
VIVF pmax pmax
comp=Z,56nm,1.2s,mb5.4
VIVF Saint-Julien-l 74.55 314⇑ *i*P **P 20 06 24.1 -0.5**
comp=Z,56nm,1.2s,mb5.4
SWN1 Swindon 74.67 322 P **P 20 06 24.8 -0.3**
SWN1 AMb AMB 20 06 26.5
comp=Z,110nm,1.6s,mb5.5
SWN1 AMS AMS 20 40 58.3
comp=Z,1μm,18.4s
SWN1 Swindon 74.67 322 *e*P **P 20 06 24.8 -0.3**
SWN1 AMb AMB 20 06 26.5
comp=Z,110nm,1.6s,mb5.5
SWN1 AMS AMS 20 40 58.3
comp=Z,1μm,18.4s,MS5.2
WPM1 Penmaenmawr 74.76 324 P **P 20 06 24.5 -1.1**
WPM1 Penmaenmawr 74.76 324⇑ *e*P **P 20 06 24.5 -1.1**
BGF Bois d'Agland 74.76 316 *e*P **P 20 06 25.1 -0.7**
comp=Z,119nm,1.6s,mb5.3
BGF Bois d'Agland 74.76 316 *e*P **P 20 06 25.1 -0.7**
BGF pmax pmax
comp=Z,60nm,1.6s,mb5.3
BGF Bois d'Agland 74.76 316 *e*P **P 20 06 25.1 -0.7**
comp=Z,60nm,1.6s,mb5.3
WME Myndd Eilian 74.88 324 P **P 20 06 25.1 -1.2**
WME Myndd Eilian 74.88 324⇑ *e*P **P 20 06 25.1 -1.2**
YLL Llanberis 74.96 324 P **P 20 06 25.2 -1.5**
YLL Llanberis 74.96 324⇑ *e*P **P 20 06 25.2 -1.5**
WLF1 Llynfaes 74.98 324 P **P 20 06 26.2 -0.7**
WLF1 AMb AMB 20 06 28.5
comp=Z,248nm,1.7s,mb5.8
WLF1 AMS AMS 20 42 17.2
comp=Z,2μm,15.0s
WLF1 Llynfaes 74.98 324⇑ *e*P **P 20 06 26.2 -0.7**
WLF1 AMb AMB 20 06 28.5
comp=Z,248nm,1.7s,mb5.8
WLF1 AMS AMS 20 42 17.2
comp=Z,2μm,15.0s,MS5.6
MCH1 Michaelchurch 75.02 323 P **P 20 06 26.2 -0.9**
MCH1 AMb AMB 20 06 28.4
comp=Z,77nm,2.3s,mb5.2
MCH1 AMS AMS 20 42 15.1
comp=Z,1μm,17.6s
MCH1 Michaelchurch 75.02 323⇑ *e*P **P 20 06 26.2 -0.9**
MCH1 AMb AMB 20 06 28.4
comp=Z,77nm,2.3s,mb5.2
MCH1 AMS AMS 20 42 15.1
comp=Z,1μm,17.6s,MS5.2
YRC Rhoscolyn 75.09 324 P **P 20 06 26.2 -1.3**
YRC Rhoscolyn 75.09 324⇑ *e*P **P 20 06 26.2 -1.3**
HTR Trewern Hill 75.11 323 P **P 20 06 27.0 -0.7**
HTR Trewern Hill 75.11 323⇑ *e*P **P 20 06 27.0 -0.7**
GMM Mts of Mourne 75.18 326 P **P 20 06 26.6 -1.4**
GMM Mts of Mourne 75.18 326⇑ *e*P **P 20 06 26.6 -1.4**
SKAG Skagway 75.25 27 *e*P **P 20 06 28.8 +0.5**
comp=Z,164nm,0.7s,mb6.1
TCF Toulx Ste Croi 75.28 316⇑ *i*P **P 20 06 28.5 -0.3**
comp=Z,173nm,1.3s,mb5.5
TCF Toulx Ste Croi 75.28 316⇑ *i*P **P 20 06 28.5 -0.3**
TCF pmax pmax
comp=Z,86nm,1.3s,mb5.5
TCF Toulx Ste Croi 75.28 316⇑ *i*P **P 20 06 28.5 -0.3**
comp=Z,86nm,1.3s,mb5.5
LDF La Druitiere 75.37 319⇑ *i*P **P 20 06 28.6 -0.6**
comp=Z,42nm,1.1s,mb5.0
LDF La Druitiere 75.37 319⇑ *i*P **P 20 06 28.6 -0.6**
LDF pmax pmax
comp=Z,21nm,1.1s,mb5.0
LDF La Druitiere 75.37 319⇑ *i*P **P 20 06 28.6 -0.6**
comp=Z,21nm,1.1s,mb5.0
LASF Ste Croix 75.46 313⇑ *i*P **P 20 06 29.7 -0.1**
comp=Z,133nm,1.2s,mb5.5
FLN La Foliniere 75.48 319 *e*P **P 20 06 29.4 -0.5**
comp=Z,145nm,1.3s,mb5.5
FLN *e*MLR MLR
comp=Z,3μm,19.5s,MS5.2
FLN La Foliniere 75.48 319 *e*P **P 20 06 29.4 -0.5**
FLN pmax pmax
comp=Z,72nm,1.3s,mb5.4
FLN MLR MLR
comp=Z,3μm,19.5s,MS5.5
FLN La Foliniere 75.48 319 *e*P **P 20 06 29.4 -0.5**
comp=Z,72nm,1.3s,mb5.5
FLN LR LR
comp=Z,3μm,19.5s,MS5.5
GRR Gorron 75.89 319⇑ *i*P **P 20 06 31.7 -0.5**
comp=Z,144nm,1.2s,mb5.5
GRR Gorron 75.89 319⇑ *i*P **P 20 06 31.7 -0.5**
GRR pmax pmax
comp=Z,72nm,1.2s,mb5.5
GRR Gorron 75.89 319⇑ *i*P **P 20 06 31.7 -0.5**
comp=Z,72nm,1.2s,mb5.5
ABPO Ambohimpanom 75.90 236 *e*P **P 20 06 32.5 -0.1**
ABPO pmax pmax
comp=Z,26nm,0.9s,mb5.2
ABPO MLR MLR
comp=Z,701nm,20.0s,MS5.0
ABPO Ambohimpanom 75.90 236 *e*P **P 20 06 32.5 -0.1**
comp=Z,26nm,0.9s,mb5.2
ABPO LR LR
comp=Z,701nm,20.0s,MS5.0
DSB Dublin 75.97 325 *e*P **P 20 06 32.3 -0.3**
comp=Z,16nm,0.8s,mb5.0
DLF Lyons Farm 76.02 325 *e*P **P 20 06 31.6 -1.3**
CAF Calviac 76.09 315⇑ *i*P **P 20 06 33.5 0.0**
comp=Z,73nm,1.2s,mb5.2
CAF Calviac 76.09 315⇑ *i*P **P 20 06 33.5 0.0**
CAF pmax pmax
comp=Z,37nm,1.2s,mb5.2
CAF Calviac 76.09 315⇑ *i*P **P 20 06 33.5 0.0**
comp=Z,36nm,1.2s,mb5.2
JSA Saint Aubin 76.17 320 AMS AMS 20 42 31.4
comp=Z,2μm,18.1s,MS5.4
RJF Les Rejaudoux 76.22 315⇑ *i*P **P 20 06 34.3 +0.2**
comp=Z,162nm,1.4s,mb5.5
RJF *e*MLR MLR
comp=Z,1μm,18.5s,MS5.0
RJF Les Rejaudoux 76.22 315⇑ *i*P **P 20 06 34.3 +0.2**

RJF pmax pmax
comp=Z,81nm,1.4s,mb5.5
RJF MLR MLR
comp=Z,1μm,18.5s,MS5.3
RJF Les Rejaudoux 76.22 315⇑ *i*P **P 20 06 34.3 +0.2**
comp=Z,81nm,1.4s,mb5.5
RJF LR LR
comp=Z,1μm,18.5s,MS5.3
HTL Hartland 76.35 322 AMS AMS 20 42 57.4
comp=Z,1μm,17.1s,MS5.3
DYA Yadsworthy 76.39 322 AMS AMS 20 43 02.2
comp=Z,2μm,16.0s,MS5.4
MFF Saint Martin d 76.48 317⇑ *i*P **P 20 06 35.5 -0.1**
comp=Z,202nm,1.2s,mb5.6
MFF Saint Martin d 76.48 317⇑ *i*P **P 20 06 35.5 -0.1**
MFF pmax pmax
comp=Z,101nm,1.2s,mb5.6
MFF Saint Martin d 76.48 317⇑ *i*P **P 20 06 35.5 -0.1**
comp=Z,101nm,1.2s,mb5.6
ARMA Armidale 76.55 140 *e*P **P 20 06 38.3 +2.3**
SIT Sitka 76.82 29 *e*P **P 20 06 39.5 +2.2**
SIT pmax pmax
comp=Z,357nm,2.2s,mb5.9
SIT Sitka 76.82 29 *e*P **P 20 06 39.5 +2.2**
comp=Z,357nm,2.2s,mb5.9
MTLF Montolieu 76.86 313⇑ *i*P **P 20 06 37.5 -0.3**
comp=Z,52nm,1.2s,mb5.0
MTLF Montolieu 76.86 313⇑ *i*P **P 20 06 37.5 -0.3**
MTLF pmax pmax
comp=Z,26nm,1.2s,mb5.0
MTLF Montolieu 76.86 313⇑ *i*P **P 20 06 37.5 -0.3**
comp=Z,26nm,1.2s,mb5.0
LRDF Laroque-de-Fa 76.88 313 *e*P **P 20 06 38.0 +0.1**
LFF La Frestale 76.88 315⇑ *i*P **P 20 06 37.9 0.0**
comp=Z,119nm,1.3s,mb5.4
LFF La Frestale 76.88 315⇑ *i*P **P 20 06 37.9 0.0**
LFF pmax pmax
comp=Z,60nm,1.3s,mb5.4
LFF La Frestale 76.88 315⇑ *i*P **P 20 06 37.9 0.0**
comp=Z,60nm,1.3s,mb5.4
SGMF Saint Gilles 76.91 319⇑ *i*P **P 20 06 38.0 0.0**
EJON La Jonquera 76.92 312 P **P 20 06 35.8 -2.4**
comp=Z,179nm,2.4s,mb5.6
JOHN Johnston Islan 76.95 78 PFAKE 20 06 50.0 +11
JOHN LR LR
comp=Z,945nm,20.0s,MS5.1
CMAH Djebel Manchou 77.01 305 P **P 20 06 38.9 +0.1**
FILF Fillols 77.06 312 *e*P **P 20 06 39.0 0.0**
ABSA Djebel Ababsia 77.15 305 P **P 20 06 39.7 +0.1**
CCA1 Carnmenellis 77.21 322 AMS AMS 20 43 28.0
comp=Z,2μm,15.7s,MS5.4
ROSF Rostrenen 77.25 320⇑ *i*P **P 20 06 39.9 0.0**
comp=Z,74nm,1.1s,mb5.2
ROSF Rostrenen 77.25 320⇑ *i*P **P 20 06 39.9 0.0**
ROSF pmax pmax
comp=Z,37nm,1.1s,mb5.2
ROSF Rostrenen 77.25 320⇑ *i*P **P 20 06 39.9 0.0**
comp=Z,37nm,1.1s,mb5.2
CARF Carcanieres 77.26 313 *e*P **P 20 06 39.9 -0.2**
CAEH 'Ain El Ouahch 77.32 306 P **P 20 06 40.7 +0.2**
QUIF Quistinic 77.44 319⇑ *i*P **P 20 06 40.7 -0.3**
comp=Z,74nm,1.1s,mb5.2
QUIF Quistinic 77.44 319⇑ *i*P **P 20 06 40.7 -0.3**
QUIF pmax pmax
comp=Z,37nm,1.1s,mb5.2
QUIF Quistinic 77.44 319⇑ *i*P **P 20 06 40.7 -0.3**
comp=Z,37nm,1.1s,mb5.2
CLLI Llivia 77.47 313 P **P 20 06 40.7 -0.6**
VALF Valcebollere 77.49 312 *e*P **P 20 06 41.8 +0.4**
CFON Fontmartina 77.58 312 P **P 20 06 41.1 -0.8**
comp=Z,208nm,1.3s,mb5.9
CKFL Kef-Lekhel 77.61 305 P **P 20 06 42.7 +0.5**
MLS Moulis 77.75 313 *e*P **P 20 06 42.5 -0.3**
CASM Ain Smara 77.84 305 P **P 20 06 44.4 +0.9**
CSOR Sort 78.05 313 P **P 20 06 43.8 -0.8**
comp=Z,143nm,2.4s,mb5.5
EMIR Miracle 78.06 312 P **P 20 06 44.6 0.0**
comp=Z,486nm,2.8s,mb5.9
DFRA Djebel Bou Aff 78.11 306 P **P 20 06 46.2 +1.2**
EPF Esparros 78.17 314 *e*P **P 20 06 44.4 -0.8**
comp=Z,41nm,1.2s,mb4.9
EPF Esparros 78.17 314 *e*P **P 20 06 44.4 -0.8**
EPF pmax pmax
comp=Z,20nm,1.2s,mb4.9
EPF Esparros 78.17 314 *e*P **P 20 06 44.4 -0.8**
comp=Z,20nm,1.2s,mb4.9
RESF Ens 78.30 314 *e*P **P 20 06 46.3 +0.4**
ETOS Mallorca 78.42 310 P **P 20 06 47.2 +0.6**
comp=Z,251nm,2.5s,mb5.7
VIEF Viey 78.45 314 *e*P **P 20 06 47.3 +0.6**
SET Setif 78.62 306 P **P 20 06 51.0 +3.2**
EPOB Poblet 78.65 312 P **P 20 06 46.8 -1.0**
comp=Z,206nm,1.8s,mb5.8
ETSF Etsaut 78.79 314⇑ *i*P **P 20 06 48.9 +0.3**
comp=Z,57nm,1.0s,mb5.1
ETSF Etsaut 78.79 314⇑ *i*P **P 20 06 48.9 +0.3**
ETSF pmax pmax
comp=Z,28nm,1.0s,mb5.2
ETSF Etsaut 78.79 314⇑ *i*P **P 20 06 48.9 +0.3**
comp=Z,28nm,1.0s,mb5.2
CRAG Craig 78.80 30 *e*P **P 20 06 48.7 +0.3**
comp=Z,85nm,1.3s,mb5.5
SJPF Ste Jean 79.07 314 *e*P **P 20 06 50.8 +0.7**
comp=Z,59nm,1.1s,mb5.1
SJPF Ste Jean 79.07 314 *e*P **P 20 06 50.8 +0.7**
SJPF pmax pmax
comp=Z,30nm,1.1s,mb5.1
SJPF Ste Jean 79.07 314 *e*P **P 20 06 50.8 +0.7**
comp=Z,30nm,1.1s,mb5.1
EALK Alkurruntz 79.18 315 P **P 20 06 51.4 +0.7**
comp=Z,231nm,2.1s,mb5.7
CNB Canberra Magne 79.26 145 *e*P **P 20 06 50.6 -0.4**
TOO Toolangi 79.32 149 *e*P **P 20 06 49.6 -1.7**
ERTA Horta de San J 79.34 312 P **P 20 06 51.7 +0.1**
comp=Z,218nm,2.3s,mb5.7
ESAC San Caprasio 79.41 313 P **P 20 06 50.7 -1.3**
comp=Z,234nm,1.9s,mb5.8
YKA Yellowknife Ar 79.69 18 P **P 20 06 52.5 -0.5**
comp=Z,23nm,0.8s,mb5.2,baz=330,slow=5.1,SNR=34
YKA PKKPbc PKKPbc 20 25 38.0 -2.6
comp=Z,3.4nm,0.7s,baz=149,slow=2.2,SNR=8.1
YKA Yellowknife Ar 79.69 18 P **P 20 06 52.5 -0.6**
YKA pmax pmax
comp=Z,23nm,0.8s
YKA Yellowknife Ar 79.69 18 P **P 20 06 52.5 -0.5**
YKA PKKPbc PKKPbc 20 25 38.0 -2.6
DZM Mont Dzumac 79.73 125 *e*LR LR 20 31 47.5
comp=Z,2μm,22.9s
ECRI Cripan 80.14 315 P **P 20 06 57.1 +1.2**
ECRI pmax pmax
comp=Z,13nm,0.8s,mb4.9
ECRI Cripan 80.14 315 P **P 20 06 57.1 +1.2**
comp=Z,13nm,0.8s,mb4.9
EMOS Mosqueruela 80.18 312 P **P 20 06 56.6 +0.4**
comp=Z,198nm,1.5s,mb5.8
ELAN Lanestosa 80.32 315 P **P 20 06 55.8 -1.1**
comp=Z,609nm,2.6s,mb6.1
ETOR Torete 80.90 313 P **P 20 07 00.1 0.0**
ETOR pmax pmax
comp=Z,12nm,1.2s,mb4.7
ETOR Torete 80.90 313 P **P 20 07 00.1 0.0**
comp=Z,12nm,1.2s,mb4.7
FUNA Funafuti 81.09 106 PFAKE 20 07 10.0 +8.6
FUNA LR LR
comp=Z,4μm,19.0s,MS5.8
ETOB Tobarra 81.85 311 P **P 20 07 04.0 -1.2**
comp=Z,348nm,2.5s,mb5.8
EMUR La Murta 82.12 310 P **P 20 07 05.9 -0.7**
comp=Z,187nm,1.9s,mb5.7
GUD Guadarrama 82.29 314 P **P 20 07 05.3 -2.1**
GUD pmax pmax
comp=Z,306nm,2.9s,mb5.7
GUD Guadarrama 82.29 314 P **P 20 07 05.3 -2.2**
comp=Z,306nm,2.9s,mb5.7
EVIA Vianos 82.46 311 P **P 20 07 08.4 +0.1**
EVIA pmax pmax
comp=Z,208nm,2.2s,mb5.7
EVIA Vianos 82.46 311 P **P 20 07 08.4 +0.1**
comp=Z,208nm,2.2s,mb5.7
ESDC Sonseca Array 82.76 313 P **P 20 07 10.0 +0.1**
comp=Z,3.6nm,0.6s,mb4.6,baz=44,slow=5.0,SNR=17
ESDC LR LR 20 45 18.7
comp=Z,463nm,18.3s,MS4.9,baz=45,slow=37
ESDC Sonseca Array 82.76 313 P **P 20 07 07.9 -2.0**
comp=Z,73nm,2.1s,mb5.3
ESLA Sonseca Array 82.76 313 *e*P **P 20 07 09.3 -0.5**

comp=Z,35nm,1.8s,mb5.1
ESLA LR LR
comp=Z,3µm,21.0s,MS5.7
EHUE Huescar 83.00 311 P **P** **20 07 08.8 -2.4**
EHUE pmax pmax
comp=Z,154nm,2.1s,mb5.7
EHUE Huescar 83.00 311 P **P** **20 07 08.8 -2.3**
comp=Z,154nm,2.1s,mb5.7
PAB San Pablo 83.07 313 *e*P **P** **20 07 10.7 -0.8**
PAB pmax pmax
comp=Z,11nm,1.0s,mb4.8
PAB San Pablo 83.07 313 *e*P **P** **20 07 10.7 -0.8**
comp=Z,11nm,1.0s,mb4.9
EQES Quesada 83.31 311 P **P** **20 07 11.2 -1.5**
comp=Z,332nm,3.0s
EBAN Banos Encina 83.55 312 P **P** **20 07 13.0 -1.0**
EBAN pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
EBAN Banos Encina 83.55 312 P **P** **20 07 13.0 -1.0**
comp=Z,9.9nm,0.8s,mb5.0
MVO Moncorvo 83.70 315 *e*P **P** **20 07 14.7 0.0**
MVO comp=Z,55nm,2.4s,mb5.3 *e*LR LR 20 41 44.9
comp=Z,787nm,18.0s
MVO Moncorvo 83.70 315 P **P** **20 07 14.3 -0.4**
EPLA Plasencia 83.81 314 P **P** **20 07 13.0 -2.3**
EPLA pmax pmax
comp=Z,230nm,1.8s,mb6.0
EPLA Plasencia 83.81 314 P **P** **20 07 13.0 -2.3**
comp=Z,230nm,1.8s,mb6.0
ELOB Lobios 83.86 316 P **P** **20 07 15.7 +0.1**
comp=Z,175nm,1.9s,mb5.9
ECOG Cogollos-Vega 83.94 311 P **P** **20 07 14.5 -1.5**
ECOG pmax pmax
comp=Z,93nm,1.7s,mb5.6
ECOG Cogollos-Vega 83.94 311 P **P** **20 07 14.5 -1.5**
comp=Z,93nm,1.7s,mb5.6
PVRL Vila Real 84.03 316 *e*P **P** **20 07 17.7 +1.3**
comp=Z,44nm,2.2s,mb5.2
EADA Adamuz 84.05 312 P **P** **20 07 13.8 -2.8**
comp=Z,120nm,1.5s,mb5.8
ERON Agron 84.25 311 P **P** **20 07 15.9 -1.7**
comp=Z,14nm,1.2s,mb5.0
ELOJ Sierra Loja 84.39 311 P **P** **20 07 17.0 -1.3**
ELOJ pmax pmax
comp=Z,8.0nm,1.0s,mb4.8
ELOJ Sierra Loja 84.39 311 P **P** **20 07 17.0 -1.3**
comp=Z,8.0nm,1.0s,mb4.8
MTE Manteigas 84.48 315 *e*P **P** **20 07 19.2 +0.5**
MTE comp=Z,86nm,2.1s,mb5.5 *e*LR LR 20 41 50.0
comp=Z,530nm,20.0s
MTE Manteigas 84.48 315 *e*P **P** **20 07 19.4 +0.6**
comp=Z,456nm,2.4s,mb6.2
MTE LR LR
comp=Z,677nm,19.0s,MS5.0
PVIS Viseu 84.49 316 *e*P **P** **20 07 19.4 +0.6**
comp=Z,60nm,1.9s,mb5.4
ECAB El Cabril 84.63 312 P **P** **20 07 17.1 -2.4**
comp=Z,183nm,2.0s,mb5.9
PCBR Castelo Branco 84.79 315 *e*P **P** **20 07 21.6 +1.3**
comp=Z,40nm,2.0s,mb5.2
PMRV Marv??o 85.00 314 *e*P **P** **20 07 21.9 +0.6**
comp=Z,62nm,2.0s,mb5.4
PMRV *e*LR LR 20 42 14.8
comp=Z,761nm,18.0s
EMIJ Mijas 85.14 311 P **P** **20 07 20.1 -2.0**
comp=Z,24nm,0.9s,mb5.3
EBAD Badajoz 85.19 314 P **P** **20 07 22.4 +0.1**
comp=Z,42nm,1.6s,mb5.3
PESTR Estremoz 85.47 314 *e*LR LR 20 43 06.8
comp=Z,539nm,18.0s
PTOM Tomar 85.49 315 *e*P **P** **20 07 25.3 +1.5**
comp=Z,69nm,2.0s,mb5.4
MSVF Nonsavu 85.53 114 P **P** **20 07 26.0 +1.8**
comp=Z,301nm,1.0s,mb6.5,SNR=5.2
MSVF Nonsavu 85.53 114 *e*P **P** **20 07 25.7 +1.5**
comp=Z,48nm,0.9s,mb5.7
MSVF LR LR
comp=Z,540nm,19.0s,MS5.0
MSVF Nonsavu 85.53 114 P **P** **20 07 26.0 +1.8**
comp=Z,301nm,1.0s,mb6.5,SNR=5.2
PBAR Barrancos 85.57 313 *e*P **P** **20 07 24.4 +0.2**
comp=Z,73nm,2.0s,mb5.6
PBAR *e*LR LR 20 42 41.3
comp=Z,516nm,18.0s
EMIN Mina Concepcio 85.60 313 P **P** **20 07 22.0 -2.4**
comp=Z,176nm,1.7s,mb6.0
ESPR Espera 85.64 312 P **P** **20 07 24.6 0.0**
comp=Z,333nm,2.3s,mb6.2
EJIF Jimena Fronter 85.66 311 P **P** **20 07 24.3 -0.4**
EJIF pmax pmax
comp=Z,76nm,1.6s,mb5.7
EJIF Jimena Fronter 85.66 311 P **P** **20 07 24.3 -0.4**
comp=Z,76nm,1.6s,mb5.7
EVO Evora 85.94 314 *e*P **P** **20 07 26.2 +0.1**
comp=Z,52nm,1.2s,mb5.3
EVO *e*MLR MLR
comp=Z,755nm,22.5s,MS4.7
EVO Evora 85.94 314 *e*P **P** **20 07 26.4 +0.3**
comp=Z,67nm,1.9s,mb5.5
PBEJ Beja 86.17 313 *e*P **P** **20 07 28.5 +1.3**
comp=Z,44nm,2.1s,mb5.3
PMAFR Mafra 86.43 315 *e*P **P** **20 07 29.5 +1.0**
comp=Z,68nm,1.6s,mb5.6
PMAFR *e*LR LR 20 42 52.6
comp=Z,488nm,18.0s
PVAQ Vaqueiros 86.47 313 *e*P **P** **20 07 29.9 +1.2**
comp=Z,63nm,1.7s,mb5.6
PVAQ *e*LR LR 20 43 24.5
comp=Z,584nm,18.0s
PCVE Castro Verde 86.53 313 *e*P **P** **20 07 30.1 +1.1**
comp=Z,68nm,1.9s,mb5.6
PCVE *e*LR LR 20 43 42.7
comp=Z,558nm,20.0s
PBDV Barranco-do-Ve 86.70 313 *e*LR LR 20 43 36.3
comp=Z,560nm,18.0s
PTEO Sao Teotonio 87.00 313 *e*P **P** **20 07 31.3 0.0**
comp=Z,152nm,2.1s,mb5.9
MORF Marmelete 87.11 313 *e*LR LR 20 43 41.6
comp=Z,651nm,20.0s
FCC Fort Churchill 87.29 10 *e*P **P** **20 07 31.6 -0.6**
comp=Z,7.4nm,1.5s,mb4.7
PFVI Vila Bisbo 87.33 313 *e*LR LR 20 43 56.6
comp=Z,473nm,20.0s
PGC Sidney 87.85 30 *e*P **P** **20 07 36.0 +0.8**
EDM Edmonton 87.88 22 *e*P **P** **20 07 35.0 -0.2**
LSZ Lusaka 87.90 250 *e*P **P** **20 07 35.3 -0.6**
LSZ pmax pmax
comp=Z,87nm,1.3s,mb5.8
LSZ Lusaka 87.90 250 *e*P **P** **20 07 35.3 -0.5**
comp=Z,22nm,1.3s,mb5.2
LSZ Lusaka 87.90 250 P **P** **20 07 36.6 +0.8**
SNR=16
NLWA Neilton Lookou 88.64 31 *e*P **P** **20 07 39.8 +0.9**
comp=Z,215nm,1.8s,mb6.2
RPW Rockport 88.81 29 *e*P **P** **20 07 40.2 +0.5**
comp=Z,32nm,1.1s,mb5.6
JCW Jim Creek 88.84 30 *e*P **P** **20 07 39.9 0.0**
comp=Z,232nm,1.6s,mb6.3
NLW Nelson Butte 89.59 29 P **P** **20 07 44.3 +1.0**
FFC Flin Flon 89.64 16 P **P** **20 07 42.6 -0.8**
comp=Z,317nm,0.8s,mb6.7,SNR=8.2
FFC Flin Flon 89.64 16 *e*P **P** **20 07 42.5 -0.9**
FFC pmax pmax
comp=Z,71nm,1.1s,mb5.9
FFC MLR MLR
comp=Z,725nm,20.0s,MS5.1
FFC Flin Flon 89.64 16 *e*P **P** **20 07 42.5 -1.0**
comp=Z,71nm,1.1s,mb5.9
FFC LR LR
comp=Z,725nm,20.0s,MS5.1
ETW Entiat 89.97 29 *e*P **P** **20 07 45.3 +0.2**
comp=Z,147nm,1.4s,mb6.1
LON Longmire 90.03 30 *e*P **P** **20 07 45.6 +0.2**
LON pmax pmax
comp=Z,124nm,1.9s,mb5.9
LON Longmire 90.03 30 *e*P **P** **20 07 45.6 +0.2**
comp=Z,124nm,1.9s,mb5.9
WTV Waterville 90.05 29 P **P** **20 07 46.1 +0.6**
WPW White Pass 90.18 30 P **P** **20 07 48.2 +2.1**
MTMW Mount Mitchell 90.42 31 P **P** **20 07 48.4 +1.1**
NEW Newport 90.70 27 *e*P **P** **20 07 48.9 +0.3**
NEW pmax pmax
comp=Z,129nm,1.6s
NEW Newport 90.70 27 *e*P **P** **20 07 48.9 +0.3**
comp=Z,130nm,1.6s,mb6.0

OD2 Odessa Site #2 90.79 28 *e*P **P** **20 07 48.8 -0.2**
comp=Z,125nm,1.5s,mb6.0
COR Corvallis 91.06 33 *e*P **P** **20 07 51.8 +1.5**
COR pmax pmax
comp=Z,76nm,0.9s,mb6.0
COR MLR MLR
comp=Z,636nm,20.0s,MS5.0
COR Corvallis 91.06 33 *e*P **P** **20 07 51.8 +1.5**
comp=Z,76nm,0.9s,mb6.0
COR LR LR
comp=Z,636nm,20.0s,MS5.0
WALA Waterton Lakes 91.22 25 *e*P **P** **20 07 51.2 +0.3**
comp=Z,3.9nm,1.6s,mb4.5
WALA *e*PP PP 20 11 28.6 +1.6
RSW Rattlesnake Hi 91.24 29 *e*P **P** **20 07 52.2 +1.1**
comp=Z,55nm,1.0s,mb5.8
HAWA Hanford 91.27 29 *e*P **P** **20 07 51.9 +0.7**
comp=Z,137nm,1.5s,mb6.1
HAWA LR LR
comp=Z,551nm,20.0s,MS5.0
VFP Flag Point 91.30 31 P **P** **20 07 52.4 +1.0**
AFI Afiamalu 91.42 106 PFAKE 20 08 00.0 +7.7
AFI LR LR
comp=Z,892nm,19.0s,MS5.2
BSMT Bassoo Peak 91.92 26 *e*P **P** **20 07 55.1 +0.9**
comp=Z,43nm,1.3s,mb5.6
BSMT *e*PP PP 20 11 34.0 +1.4
JTMT Jette 92.19 26 *e*P **P** **20 07 56.1 +0.6**
comp=Z,55nm,1.6s,mb5.6
JTMT *e*PP PP 20 11 34.5 -0.2
YBMT Yellow Bay 92.19 25 *e*P **P** **20 07 56.3 +0.8**
comp=Z,52nm,1.3s,mb5.7
YBMT *e*PP PP 20 11 35.1 +0.4
LNOR Lincton Mounta 92.20 29 *e*P **P** **20 07 56.6 +1.1**
LNOR pmax pmax
comp=Z,14nm,0.9s,mb5.3
LNOR Lincton Mounta 92.20 29 *e*P **P** **20 07 56.6 +1.0**
comp=Z,14nm,0.9s,mb5.3
SCHQ Schefferville 92.45 356 P **P** **20 07 55.9 -0.6**
comp=Z,22nm,0.8s,mb5.5,baz=24,slow=4.7,SNR=26
SWMT Swartz Lake 92.50 26 *e*P **P** **20 07 58.3 +1.4**
comp=Z,59nm,1.5s,mb5.7
HUMO Hull Mountain 92.75 34 *e*P **P** **20 07 59.1 +0.9**
comp=Z,73nm,1.4s,mb5.9
HUMO LR LR
comp=Z,800nm,22.0s,MS5.1
SLMT Seeley Lake 92.90 25 *e*P **P** **20 07 58.8 0.0**
comp=Z,150nm,1.7s,mb6.2
MSO Missoula 93.09 26 *e*P **P** **20 07 59.5 -0.1**
comp=Z,72nm,1.8s,mb5.8
MSO LR LR
comp=Z,849nm,22.0s,MS5.2
CHMT Chamberlain Mo 93.27 25 *e*P **P** **20 07 59.9 -0.5**
comp=Z,12nm,1.1s,mb5.2
BMO Blue Mountains 93.43 29 *e*P **P** **20 08 01.0 -0.2**
comp=Z,28nm,1.5s,mb5.5
BMO LR LR
comp=Z,768nm,22.0s,MS5.1
EGMT Eagleton 93.52 23 *e*P **P** **20 08 01.9 +0.3**
comp=Z,23nm,0.9s,mb5.6
EGMT LR LR
comp=Z,817nm,19.0s,MS5.2
YBH Yreka Blue Hor 93.54 34 *e*P **P** **20 08 02.3 +0.5**
YBH pmax pmax
comp=Z,20nm,1.5s
YBH Yreka Blue Hor 93.54 34 *e*P **P** **20 08 02.3 +0.4**
comp=Z,20nm,1.5s,mb5.3
HRY Holter Researc 93.95 25 *e*P **P** **20 08 03.9 +0.3**
comp=Z,20nm,0.9s,mb5.6
TOA0 Torodi Ar. Sit 94.27 288 *e*P **P** **20 08 05.1 -0.5**
TORD Torodi Ar. Bea 94.27 288 P **P** **20 08 04.9 -0.7**
comp=Z,4.7nm,0.8s,mb5.0,baz=55,slow=3.2,SNR=24
LRM Limekiln Ridge 94.49 26 *e*P **P** **20 08 06.5 +0.4**
comp=Z,248nm,1.8s,mb6.3
LRM *e*PP PP 20 11 51.0 -1.7
MOD Modoc 94.52 32 *e*P **P** **20 08 07.4 +1.1**
comp=Z,34nm,1.5s,mb5.5
MOD LR LR
comp=Z,401nm,20.0s,MS4.9
DGMT Dagmar 94.81 19 *e*P **P** **20 08 07.4 -0.1**
comp=Z,49nm,1.0s,mb5.9
DGMT LR LR
comp=Z,1µm,20.0s,MS5.3
DLMT Dillon 94.83 26 *e*P **P** **20 08 07.6 0.0**
comp=Z,10nm,0.9s,mb5.2
DLMT *e*PP PP 20 11 55.9 +0.6
WVOR Wild Horse Val 94.83 31 *e*P **P** **20 08 08.3 +0.6**
WVOR *e* 20 11 55.6
WVOR pmax pmax
comp=Z,81nm,1.9s,mb5.8
WVOR Wild Horse Val 94.83 31 *e*P **P** **20 08 08.3 +0.5**
comp=Z,80nm,1.9s,mb5.8
WVOR *e*PP PP 20 11 55.6 +0.1
BOZ Bozeman (W) 94.94 25 *e*P **P** **20 08 08.4 +0.3**
BOZ *e* 20 11 52.0
BOZ pmax pmax
comp=Z,9.0nm,1.2s,mb5.1
BOZ MLR MLR
comp=Z,898nm,22.0s,MS5.2
BOZ Bozeman (W) 94.94 25 *e*P **P** **20 08 08.4 +0.2**
comp=Z,8.9nm,1.2s,mb5.1
BOZ *e*PP PP 20 11 52.0 -4.1
BOZ LR LR
comp=Z,898nm,22.0s,MS5.2
ULM Lac du Bonnet 95.14 14 P **P** **20 08 08.3 -0.7**
comp=Z,11nm,0.9s,mb5.3,baz=331,slow=5.9,SNR=6.1
ULM LR LR 20 53 44.1
comp=Z,875nm,21.7s,MS5.2,baz=78,slow=37
ULM Lac du Bonnet 95.14 14 *e*P **P** **20 08 08.3 -0.7**
comp=Z,30nm,1.4s,mb5.5
MCMT McKenzie Canyo 95.19 26 *e*P **P** **20 08 09.5 +0.2**
comp=Z,10nm,1.2s,mb5.1
HOPS Hopland 95.49 36 PFAKE 20 08 20.0 +9.2
HOPS LR LR
comp=Z,930nm,21.0s,MS5.2
HLID Hailey 95.66 28 *e*P **P** **20 08 12.2 +0.7**
comp=Z,62nm,1.6s,mb5.8
HLID *e*PP PP 20 12 01.6 -0.3
LAO LASA Array 95.82 21 PFAKE 20 08 20.0 +7.8
LAO LR LR
comp=Z,1µm,19.0s,MS5.3
RLMT Red Lodge 96.22 24 *e*P **P** **20 08 14.7 +0.7**
comp=Z,43nm,1.8s,mb5.6
RLMT *e*PP PP 20 12 05.5 -0.5
MCCM Marconi Confer 96.24 36 PFAKE 20 08 20.0 +5.8
MCCM LR LR
comp=Z,701nm,19.0s,MS5.2
LKWY Lake 96.31 25 PFAKE 20 08 20.0 +5.6
LKWY LR LR
comp=Z,2µm,19.0s,MS5.6
IMW Indian Meadow 96.69 26 *e*P **P** **20 08 16.2 +0.1**
RPZ Rata Peaks 96.81 138 LR LR 20 58 30.6
comp=Z,544nm,18.1s,MS5.1,baz=298,slow=40
AGMN Agassiz Nation 97.00 14 *e*P **P** **20 08 17.8 +0.4**
comp=Z,58nm,1.7s,mb5.7
AGMN LR LR
comp=Z,841nm,22.0s,MS5.2
LOHW Long Hollow 97.06 26 *e*P **P** **20 08 19.9 +2.1**
URZ Urewera 97.07 131 LR LR 20 47 06.7
comp=Z,480nm,20.2s,MS5.0,baz=319,slow=32
BMN Battle Mountai 97.08 31 PFAKE 20 08 30.0 +12
BMN LR LR
comp=Z,656nm,20.0s,MS5.1
CMB Columbia Colle 97.55 35 PFAKE 20 08 30.0 +10
CMB LR LR
comp=Z,595nm,21.0s,MS5.0
BOSA Boshof 97.60 241 P **P** **20 08 19.2 -1.2**
comp=Z,5.2nm,0.8s,mb5.1,baz=54,slow=4.9,SNR=6.8
BOSA LR LR 20 49 03.1
comp=Z,520nm,21.0s,MS5.0,baz=47,slow=33
BOSA Boshof 97.60 241 P **P** **20 08 19.2 -1.2**
BOSA pmax pmax
comp=Z,5.0nm,0.8s,mb5.1
BOSA MLR MLR
comp=Z,520nm,21.0s,MS5.0
M13A Montello 97.61 29 *e*P **P** **20 08 21.2 +0.8**
comp=Z,23nm,1.5s,mb5.5
AHID Auburn Hatcher 97.61 26 PFAKE 20 08 30.0 +10
AHID LR LR
comp=Z,844nm,19.0s,MS5.2
N12A Clover Valley, 97.67 30 *e*P **P** **20 08 19.9 -0.7**
comp=Z,34nm,1.6s,mb5.6
N13A Wendover, West 98.02 29 P **P** **20 08 22.9 +0.7**
comp=Z,12nm,0.9s,mb5.4
EYMN Ely 98.15 11 *e*P **P** **20 08 21.6 -1.1**
comp=Z,27nm,1.4s,mb5.6
EYMN LR LR

comp=Z,923nm,19.0s,MS5.3
BW06 Boulder Array 98.18 25 PFAKE 20 08 30.0 +7.1
BW06 LR LR
comp=Z,864nm,22.0s,MS5.2
PDAR Pinedale Array 98.18 25 P **P** **20 08 22.7 -0.2**
comp=Z,1.0nm,0.7s,mb4.5,baz=45,slow=3.7,SNR=8.1
PDAR PP PP 20 12 18.6 -2.6
comp=Z,5.8nm,1.1s,baz=318,slow=6.0,SNR=6.2
PDAR PKKPbc PKKPbc 20 24 53.5 -1.4
comp=Z,0.8nm,0.8s,baz=139,slow=4.9,SNR=3.7
PDAR LR LR 20 56 04.4
comp=Z,655nm,19.5s,MS5.1,baz=233,slow=38
NVAR Mina Array Bea 98.22 33 P **P** **20 08 24.4 +1.3**
comp=Z,1.3nm,0.8s,mb4.5,baz=280,slow=3.3,SNR=9.0
NVAR PP PP 20 12 20.1 -1.6
comp=Z,2.6nm,0.9s,baz=317,slow=5.7,SNR=7.3
NVAR PKKPbc PKKPbc 20 24 54.9 +0.2
comp=Z,1.8nm,0.8s,baz=141,slow=3.8,SNR=9.6
HWUT Hardware Ranch 98.43 27 PFAKE 20 08 30.0 +5.9
HWUT LR LR
comp=Z,1µm,19.0s,MS5.4
RSSD Black Hills 98.80 21 *e*P **P** **20 08 26.5 +0.8**
RSSD pmax pmax
comp=Z,17nm,0.9s,mb5.6
RSSD Black Hills 98.80 21 *e*P **P** **20 08 26.5 +0.8**
comp=Z,17nm,0.9s,mb5.6
CASY Casey 98.86 178 PFAKE 20 08 30.0 +4.9
CASY LR LR
comp=Z,527nm,21.0s,MS5.0
DUG Dugway 99.14 29 PFAKE 20 08 40.0 +13
DUG LR LR
comp=Z,602nm,20.0s,MS5.1
DAC Darwin (Calif) 100.29 34 PFAKE 20 08 40.0 +7.7
DAC LR LR
comp=Z,546nm,22.0s,MS5.0
COWI Conover 100.32 10 PFAKE 20 08 40.0 +7.6
COWI LR LR
comp=Z,1µm,20.0s,MS5.3
PHWY Pilot Hill 100.89 23 *e*Pdif Pdif 20 08 36.1 +1.1
comp=Z,7.3nm,1.0s
ECSD EROS Data Cent 101.16 16 PFAKE 20 08 50.0 +14
ECSD LR LR
comp=Z,1µm,19.0s,MS5.5
ISCO Idaho Springs 102.19 24 PFAKE 20 08 50.0 +9.3
ISCO LR LR
comp=Z,1µm,19.0s,MS5.4
PFO Pinyon Flat Ob 103.00 35 PFAKE 20 08 50.0 +5.7
PFO LR LR
comp=Z,686nm,22.0s,MS5.1
JFWS Jewell Farm 103.25 12 PFAKE 20 09 00.0 +15
JFWS LR LR
comp=Z,627nm,20.0s,MS5.1
DBIC Dimbokro 103.25 287 PP PP 20 12 59.3 -1.8
comp=Z,4.5nm,0.8s,baz=7.1,slow=4.4,SNR=4.0
DBIC Dimbokro 103.25 287 PFAKE 20 09 00.0 +15
DBIC LR LR
comp=Z,763nm,19.0s,MS5.2
LBNH Lisbon 103.27 358 PFAKE 20 09 00.0 +14
LBNH LR LR
comp=Z,797nm,20.0s,MS5.2
NCB Newcomb 103.57 360 PFAKE 20 09 00.0 +13
NCB LR LR
comp=Z,625nm,21.0s,MS5.1
AAM Ann Arbor 104.76 7 PFAKE 20 09 00.0 +7.8
AAM LR LR
comp=Z,701nm,22.0s,MS5.2
CBKS Cedar Bluff 104.95 20 PFAKE 20 13 20.0 +12
CBKS LR LR
comp=Z,841nm,21.0s,MS5.3
MAW Mawson 105.14 196 PKiKP PKiKP 20 13 07.5 +0.2
comp=Z,1.6nm,0.7s,baz=109,slow=3.1,SNR=4.0
MAW PKKPbc PKKPbc 20 24 33.8 -2.1
comp=Z,2.3nm,0.7s,baz=211,slow=6.8,SNR=9.3
ERPA Erie 105.25 4 PFAKE 20 13 20.0 +12
ERPA LR LR
comp=Z,829nm,20.0s,MS5.3
BINY Binghamton 105.33 1 PFAKE 20 13 20.0 +11
BINY LR LR
comp=Z,1µm,19.0s,MS5.5
HDIL Hopedale 105.70 12 PFAKE 20 13 20.0 +11
HDIL LR LR
comp=Z,861nm,21.0s,MS5.3
ACSO Alum Creek Sta 106.88 7 PFAKE 20 13 20.0 +8.4
ACSO LR LR
comp=Z,543nm,19.0s,MS5.1
MCWV Mont Chateau 107.70 4 PFAKE 20 13 20.0 +6.9
MCWV LR LR
comp=Z,1µm,20.0s,MS5.5
CCM Cathedral Cave 107.77 14 PFAKE 20 13 20.0 +6.7
CCM LR LR
comp=Z,675nm,20.0s,MS5.2
AMTX Amarillo 107.96 23 PFAKE 20 13 20.0 +6.3
AMTX LR LR
comp=Z,758nm,19.0s,MS5.3
CBN Corbin 109.28 2 PFAKE 20 13 30.0 +14
CBN LR LR
comp=Z,856nm,20.0s,MS5.3
MNTX Cornudas Mount 109.48 28 *e*PKiKP PKiKP 20 13 14.1 -2.6
MNTX LR LR
comp=Z,605nm,21.0s,MS5.1
BLA Blacksburg 110.10 5 PFAKE 20 13 30.0 +12
BLA LR LR
comp=Z,769nm,20.0s,MS5.3
OXF Oxford 111.56 13 PFAKE 20 13 30.0 +9.5
OXF LR LR
comp=Z,684nm,21.0s,MS5.2
PPT Papeete 111.60 97 *e*LR LR 20 46 26.5
comp=Z,1µm,23.0s,baz=298
CNNC Cliffs of the 112.21 3 PFAKE 20 13 30.0 +8.3
CNNC LR LR
comp=Z,1µm,19.0s,MS5.5
TXAR Lajitas Array 112.25 27 Pdiff Pdif 20 09 31.1 +5.6
comp=Z,0.1nm,0.6s,baz=18,slow=3.2,SNR=3.2
TXAR PKiKP PKiKP 20 13 21.2 -0.8
comp=Z,1.1nm,0.7s,baz=221,slow=1.0,SNR=9.0
TXAR PP PP 20 14 03.8 -1.8
comp=Z,12nm,1.3s,baz=336,slow=8.6,SNR=10
TXAR PKKPbc PKKPbc 20 24 11.9 -0.2
comp=Z,2.9nm,0.8s,baz=159,slow=6.3,SNR=18
TXAR PKKPab PKKPab 20 24 21.0 -2.9
comp=Z,1.8nm,0.9s,baz=155,slow=6.4,SNR=4.7
TXAR Lajitas Array 112.25 27 *i* PKiKP PKiKP 20 13 21.2 -0.8
TXAR 20 14 03.8
TXAR pmax pmax
comp=Z,1.0nm,0.7s
TXAR pmax pmax
comp=Z,12nm,1.3s
TXAR Lajitas Array 112.25 27 PKPdf PKiKP 20 13 21.2 -0.8
TXAR PP PP 20 14 03.8 -1.8
TXAR PKKPbc PKKPbc 20 24 11.9 -0.1
TXAR PKKPab PKKPab 20 24 21.0 -2.9
SYO Syowa Base 112.31 201⇓*e*PKiKP PKiKP 20 13 18.9 -1.8
JCT Junction City 112.62 24 *e*PKiKP PKiKP 20 13 22.5 -0.1
JCT MLR MLR
comp=Z,840nm,20.0s,MS5.3
NATX Nacogdoches 112.98 19 PFAKE 20 13 30.0 +6.7
NATX LR LR
comp=Z,1µm,19.0s,MS5.5
LRAL Lakeview Retre 113.43 11 PFAKE 20 13 30.0 +5.9
LRAL LR LR
comp=Z,899nm,19.0s,MS5.4
GOGA Godfrey 113.57 8 PFAKE 20 13 30.0 +5.6
GOGA LR LR
comp=Z,700nm,21.0s,MS5.2
NHSC New Hope 114.19 5 PFAKE 20 13 40.0 +14
NHSC LR LR
comp=Z,602nm,20.0s,MS5.2
HKT Hockley 114.36 20 PFAKE 20 13 40.0 +14
HKT LR LR
comp=Z,717nm,22.0s,MS5.2
BBSR BB Station 114.50 351 PFAKE 20 13 40.0 +14
BBSR LR LR
comp=Z,346nm,20.0s,MS5.0
TAOE Nuku Hiva Isla 115.15 84 *e*LR LR 20 48 03.9
comp=Z,1µm,26.0s
BRAL Brewton 115.40 12 PFAKE 20 13 40.0 +12
BRAL LR LR
comp=Z,985nm,22.0s,MS5.4
SBA Scott Base 116.19 168 *e*PKiKP PKPdf 20 13 27.3 -0.7
DWPF Disney 119.03 7 PFAKE 20 13 40.0 +5.0
DWPF LR LR
comp=Z,658nm,20.0s,MS5.3
NVL N'lazarevskaya 121.81 203 *e*PKIKP PKPdf 20 13 37.0 -1.9
NVL pmax pmax
comp=Z,34nm,0.6s
GRTK Grand Turk 125.87 356 PFAKE 20 14 00.0 +12

GRTK LR LR
comp=Z,567nm,20.0s,MS5.2
RKT Rikitea 126.31 96 eLR LR 20 53 13.2
comp=Z,1μm,35.5s,baz=287
GTBY Guantanamo Bay 127.54 1 PFAKE 20 14 00.0 +8.5
GTBY LR LR
comp=Z,816nm,21.0s,MS5.4
ANWB Willy Bob 128.35 345 PFAKE 20 14 00.0 +6.9
ANWB LR LR
comp=Z,296nm,19.0s,MS5.0
FDF Fort de France 131.03 343 PFAKE 20 14 10.0 +12
FDF LR LR
comp=Z,319nm,20.0s,MS5.0
TGUH Tegucigalpa,Un 131.80 17 eP PKPdf 20 13 59.3 -0.4
GRGR Grenville 133.65 343 PFAKE 20 14 10.0 +6.8
GRGR LR LR
comp=Z,409nm,19.0s,MS5.2
JTS JuntasAbangare 135.97 15 PFAKE 20 14 20.0 +12
JTS LR LR
comp=Z,565nm,19.0s,MS5.3
BCIP Isla Barro Col 137.93 8 PFAKE 20 14 20.0 +8.8
BCIP LR LR
comp=Z,539nm,21.0s,MS5.3
OTAV Otavalo 146.90 7 ePKPdf PKPdf 20 14 29.2 +2.0
PMSA Palmer Station 147.39 188 PKPbc PKPbc 20 14 26.3 -2.5
comp=Z,17nm,0.6s,baz=207,slow=4.5,SNR=3.8
NNA Nana 159.14 7 PFAKE 20 14 50.0 +5.3
NNA LR LR
comp=Z,318nm,21.0s,MS5.1
LPAZ La Paz 162.56 339 PKP PKPdf 20 14 48.9 +0.6
comp=Z,6.7nm,0.9s,baz=30,slow=3.6,SNR=20
LPAZ PKPab PKPab 20 15 36.8 +0.7
comp=Z,3.5nm,0.8s,baz=27,slow=8.8,SNR=3.7
LPAZ La Paz 162.56 339 ePKPdf PKPdf 20 14 48.5 +0.2
CPUP Villa Florida 163.76 289 PKP PKPdf 20 14 48.7 -0.5
comp=Z,1.6nm,0.7s,baz=356,slow=5.2,SNR=4.7
CPUP PKPab PKPab 20 15 40.1 -1.4
comp=Z,5.5nm,1.0s,baz=74,slow=7.7,SNR=3.6
CPUP Villa Florida 163.76 289 PKIKP PKPdf 20 14 48.7 -0.5
CPUP 20 15 40.1
CPUP pmax pmax
comp=Z,2.0nm,0.7s
CPUP pmax pmax
comp=Z,6.0nm,1.0s
TRQA Tornquist 168.57 239 ePKPdf PKPdf 20 14 50.8 -1.8
PLCA Paso Flores 171.51 201 PKP PKPdf 20 14 55.0 +0.8
comp=Z,6.2nm,0.9s,baz=139,slow=2.7,SNR=7.5
PLCA Paso Flores 171.51 201 PKP PKPdf 20 14 55.0 +0.8
PLCA LR LR
comp=Z,750nm,19.0s
CFAA Coronel Fontan 174.59 281 PKP PKPdf 20 14 55.7 -0.1
comp=Z,1.0nm,0.9s,baz=295,slow=3.2,SNR=12
CFAA PKPab PKPab 20 16 29.2 -0.1
comp=Z,0.3nm,0.4s,baz=169,slow=5.2,SNR=3.1
CFAA Coronel Fontan 174.59 281 PKP PKPdf 20 14 55.7 -0.1
CFAA PKPab PKPab 20 16 29.2 -0.1
LCO Las Campanas 175.01 319 ePKPdf PKPdf 20 14 56.3 +0.3

ISCJB 23 20:14:21.8±0.7, 36°.07N±0°.04×0°.63W±0°.04, h10km, Error ellipse: s-maj=5.7km s-min=4.8km az=160.7
MDD 23 20:14:22.3±0.5, 35°.94N×0°.70W, h0km, mb3.6/8, mbLg2.3/12, Error ellipse: s-maj=7.3km s-min=4.4km az=57.0
CSEM 23 20:14:22.3±0.2, 35°.98N×0°.66W, h10km, ML2.3, Error ellipse: s-maj=5.3km s-min=4.5km az=76.0
ISC 23 20:14:22.7±0.7, 36°.05N±0°.04×0°.64W±0°.04, h10km, n68, σ1°.13/106, Western Mediterranean Sea

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
USTO Oran 0.32 167 P Pg 20 14 28.0 -1.1
USTO Oran 0.32 167 P Pg 20 14 28.0 -1.1
USTO Oran 0.32 167 P Pg 20 14 28.0 -1.1
ODZI Dziouia 0.90 213 P Pg 20 14 35.0 -5.0
ODZI Dziouia 0.90 213 P Pg 20 14 35.0 -5.0
ODZI Dziouia 0.90 213 P Pg 20 14 35.0 -5.0
ENIJ Nijar 1.56 307 P Pn 20 14 50.1 -0.5
2.8nm,0.1s,SNR=7.9
ENIJ S Sn 20 15 09.7 -1.2
10nm,0.2s,SNR=7.9
ENIJ T 20 16 08.1
SNR=7.9
ENIJ Nijar 1.56 307 P Pn 20 14 50.1 -0.5
2.8nm,0.1s,SNR=7.9
ENIJ S Sn 20 15 09.7 -1.2
10nm,0.2s,SNR=7.9
ENIJ T 20 16 08.1
SNR=7.9
ENIJ Nijar 1.56 307 P Pn 20 14 50.1 -0.5
2.8nm,0.1s,SNR=7.9
ENIJ S Sn 20 15 09.7 -1.2
10nm,0.2s,SNR=7.9
EMUR La Murta 1.85 345 P Pn 20 14 54.5 0.0
1.6nm,0.2s,SNR=16
EMUR S Sn 20 15 15.4 -2.6
6.6nm,0.2s,SNR=5.8
EMUR T 20 16 32.4
EMUR La Murta 1.85 345 P Pn 20 14 54.5 0.0
1.6nm,0.2s,SNR=16
EMUR S Sn 20 15 15.4 -2.6
6.6nm,0.2s,SNR=5.8
EMUR T 20 16 32.4
EMUR La Murta 1.85 345 P Pn 20 14 54.5 -0.1
1.6nm,0.2s,SNR=16
EBER Berja 2.00 296 P Pn 20 14 56.0 -0.5
1.2nm,0.1s,SNR=11
EBER S Sn 20 15 21.8 +0.1
3.0nm,0.2s
EBER T 20 16 17.1
SNR=7.9
EBER Berja 2.00 296 P Pn 20 14 56.0 -0.5
1.2nm,0.1s,SNR=11
EBER S Sn 20 15 21.8 +0.1
3.0nm,0.2s
EBER T 20 16 17.1
SNR=7.9
EBER Berja 2.00 296 P Pn 20 14 56.0 -0.6
1.2nm,0.1s,SNR=11
EBER S Sn 20 15 21.8 +0.1
3.0nm,0.2s
EHUE Huescar 2.36 319 P Pn 20 15 03.2 +1.7
1.0nm,0.1s,SNR=7.9
EHUE S Sn 20 15 31.9 +1.4
1.0nm,0.3s,SNR=7.9
EHUE Huescar 2.36 319 P Pn 20 15 03.2 +1.7
1.0nm,0.1s,SNR=7.9
EHUE S Sn 20 15 31.9 +1.4
1.0nm,0.3s,SNR=7.9
EGUA Guajares 2.48 289 P Pn 20 15 03.2 -0.1
2.4nm,0.2s,SNR=7.9
EGUA S Sn 20 15 32.6 -1.0
3.1nm,0.2s,SNR=7.9
EGUA Guajares 2.48 289 P Pn 20 15 03.2 -0.1
2.4nm,0.2s,SNR=7.9
EGUA S Sn 20 15 32.6 -1.0
3.1nm,0.2s,SNR=7.9
EGUA Guajares 2.48 289 P Pn 20 15 03.2 0.0
2.4nm,0.2s,SNR=7.9
EGUA S Sn 20 15 32.6 -1.0
3.1nm,0.2s,SNR=7.9
EQUE Quentar 2.53 298 P Pn 20 15 03.8 0.0
0.6nm,0.2s,SNR=7.9
EQUE Quentar 2.53 298 P Pn 20 15 03.8 0.0
0.6nm,0.2s,SNR=7.9
EQUE Quentar 2.53 298 P Pn 20 15 03.8 -0.1
0.6nm,0.2s,SNR=7.9
EQES Quesada 2.62 313 P Pn 20 15 07.1 +2.0
1.5nm,0.1s,SNR=22
EQES S Sn 20 15 38.4 +1.5
5.2nm,0.1s
EQES Quesada 2.62 313 P Pn 20 15 07.1 +2.0
1.5nm,0.1s,SNR=22
EQES S Sn 20 15 38.4 +1.5
5.2nm,0.1s
EQES Quesada 2.62 313 P Pn 20 15 07.1 +2.0
1.5nm,0.1s,SNR=22
EQES S Sn 20 15 38.4 +1.5
5.2nm,0.1s
EBEN Beniarda 2.67 7 P Pn 20 15 05.9 +0.1
0.7nm,0.1s,SNR=10
EBEN S Sn 20 15 36.1 -2.1
1.4nm,0.2s
EBEN Beniarda 2.67 7 P Pn 20 15 05.9 +0.1
0.7nm,0.1s,SNR=10
EBEN S Sn 20 15 36.1 -2.1
1.4nm,0.2s
EBEN Beniarda 2.67 7 P Pn 20 15 05.9 +0.1
0.7nm,0.1s,SNR=10
ETOB Tobarra 2.69 345 P Pn 20 15 07.4 +1.3
1.1nm,0.1s,SNR=15
ETOB S Sn 20 15 38.8 +0.1
7.8nm,0.2s,SNR=8.1
ETOB Tobarra 2.69 345 P Pn 20 15 07.4 +1.3
1.1nm,0.1s,SNR=15
ETOB S Sn 20 15 38.8 +0.1
7.8nm,0.2s,SNR=8.1
ETOB Tobarra 2.69 345 P Pn 20 15 07.4 +1.3
1.1nm,0.1s,SNR=15
ETOB S Sn 20 15 38.8 +0.1
7.8nm,0.2s,SNR=8.1
EVIA Vianos 2.98 331 P Pn 20 15 11.2 +1.1
2.0nm,0.1s,SNR=7.9
EVIA S Sn 20 15 46.3 +0.5
7.5nm,0.2s,SNR=6.4
EVIA Vianos 2.98 331 P Pn 20 15 11.2 +1.1
2.0nm,0.1s,SNR=7.9
EVIA S Sn 20 15 46.3 +0.5
7.5nm,0.2s,SNR=6.4
EVIA Vianos 2.98 331 P Pn 20 15 11.2 +1.1
2.0nm,0.1s,SNR=7.9
EVIA S Sn 20 15 46.3 +0.4
7.5nm,0.2s,SNR=6.4
EBAN Banos Encina 3.28 311 S Sn 20 15 53.5 +0.2
1.4nm,0.2s,SNR=7.9
EBAN Banos Encina 3.28 311 S Sn 20 15 53.5 +0.2
1.4nm,0.2s,SNR=7.9
EBAN Banos Encina 3.28 311 S Sn 20 15 53.5 +0.2
1.4nm,0.2s,SNR=7.9
EIBI Ibiza 3.37 27 P Pn 20 15 15.1 -0.3
3.0nm,0.1s,SNR=12
EIBI S Sn 20 15 53.0 -2.4
1.4nm,0.1s,SNR=7.9
EIBI Ibiza 3.37 27 P Pn 20 15 15.1 -0.3
3.0nm,0.1s,SNR=12
EIBI S Sn 20 15 53.0 -2.4
1.4nm,0.1s,SNR=7.9
EIBI Ibiza 3.37 27 P Pn 20 15 15.1 -0.2
3.0nm,0.1s,SNR=12
EMIJ Mijas 3.38 280 P Pn 20 15 12.4 -3.1
SNR=7.9
EMIJ S Sn 20 15 54.0 -1.6
0.5nm,0.2s,SNR=7.9
EMIJ Mijas 3.38 280 P Pn 20 15 12.4 -3.1
SNR=7.9
EMIJ S Sn 20 15 54.0 -1.6
0.5nm,0.2s,SNR=7.9
EMIJ Mijas 3.38 280 P Pn 20 15 12.4 -3.1
SNR=7.9
EMIJ S Sn 20 15 54.0 -1.6
0.5nm,0.2s,SNR=7.9
ECHE Chera 3.55 356 S Sn 20 15 59.0 -0.8
1.0nm,0.2s,SNR=7.9
ECHE Chera 3.55 356 S Sn 20 15 59.0 -0.8
1.0nm,0.2s,SNR=7.9
ECHE Chera 3.55 356 S Sn 20 15 59.0 -0.8
1.0nm,0.2s,SNR=7.9
EADA Adamuz 3.79 305 P Pn 20 15 22.1 +0.9
0.1nm,0.1s,SNR=7.9
EADA S Sn 20 16 05.2 -0.7
1.4nm,0.2s,SNR=7.9
EADA Adamuz 3.79 305 P Pn 20 15 22.1 +0.9
0.1nm,0.1s,SNR=7.9
EADA S Sn 20 16 05.2 -0.7
1.4nm,0.2s,SNR=7.9
EADA Adamuz 3.79 305 P Pn 20 15 22.1 +0.9
0.1nm,0.1s,SNR=7.9
EADA S Sn 20 16 05.2 -0.6
1.4nm,0.2s,SNR=7.9
EMOS Mosqueruela 4.31 2 P Pn 20 15 30.2 +1.9
1.3nm,0.1s,SNR=14
EMOS S Sn 20 16 18.2 -0.4
2.2nm,0.2s
EMOS Mosqueruela 4.31 2 P Pn 20 15 30.2 +1.9
1.3nm,0.1s,SNR=14
EMOS S Sn 20 16 18.2 -0.4
2.2nm,0.2s
EMOS Mosqueruela 4.31 2 P Pn 20 15 30.2 +1.9
1.3nm,0.1s,SNR=14
EMOS S Sn 20 16 18.2 -0.5
2.2nm,0.2s
ESDC Sonseca Array 4.47 325 P Pn 20 15 31.4 +0.8
1.7nm,0.2s,baz=143,slow=13,SNR=4.1
ESDC S Sn 20 16 22.1 -0.6
1.1nm,0.1s,baz=137,slow=23,SNR=16
ESDC Sonseca Array 4.47 325 P Pn 20 15 31.4 +0.8
1.7nm,0.2s,baz=143,slow=13,SNR=4.1
ESDC S Sn 20 16 22.1 -0.6
1.1nm,0.1s,baz=137,slow=23,SNR=16
ESDC Sonseca Array 4.47 325 P Pn 20 15 31.4 +0.8
1.7nm,0.2s,baz=143,slow=13,SNR=4.1
ESDC S Sn 20 16 22.1 -0.6
1.1nm,0.1s,slow=23,SNR=16
ETOS Mallorca 4.61 35 P Pn 20 15 33.1 +0.6
0.5nm,0.1s,SNR=7.9
ETOS Mallorca 4.61 35 P Pn 20 15 33.1 +0.6
0.5nm,0.1s,SNR=7.9
ETOS Mallorca 4.61 35 P Pn 20 15 33.1 +0.7
0.5nm,0.1s,SNR=7.9
EMIN Mina Concepcio 5.13 291 P Pn 20 15 39.9 +0.3
0.1nm,0.1s,SNR=7.9
EMIN Mina Concepcio 5.13 291 P Pn 20 15 39.9 +0.3
0.1nm,0.1s,SNR=7.9
EMIN Mina Concepcio 5.13 291 P Pn 20 15 39.9 +0.3
0.1nm,0.1s,SNR=7.9
EPOB Poblet 5.47 14 P Pn 20 15 45.2 +1.0
0.3nm,0.1s,SNR=7.9
EPOB Poblet 5.47 14 P Pn 20 15 45.2 +1.0
0.3nm,0.1s,SNR=7.9
EPOB Poblet 5.47 14 P Pn 20 15 45.2 +1.0
0.3nm,0.1s,SNR=7.9
EBAD Badajoz 5.75 300 P Pn 20 15 48.1 +0.1
0.2nm,0.1s
EBAD Badajoz 5.75 300 P Pn 20 15 48.1 +0.1
0.2nm,0.1s
EBAD Badajoz 5.75 300 P Pn 20 15 48.1 0.0
0.2nm,0.1s

ISCJB 23 20:28:29.6±2.7, 21°.4S±0°.3×170°.2E±0°.2, h89km±21km, mb3.9/8, Error ellipse: s-maj=46.7km s-min=21.2km az=155.0
NOU 23 20:28:29.3±0.7, 24°.10S×169°.81E, h10km, MD3.0, ML3.7
IDC 23 20:28:29.6±1.1, 21°.34S×170°.25E, h79km±7km, mb3.8/8, mb1 4.0/8, mb1mx3.8/15, mbtmp3.8/8, Error ellipse: s-maj=47.6km s-min=18.2km az=152.0
ISC 23 20:28:30.7±2.6, 21°.35S±0°.3×170°.2E±0°.2, h86km±20km, h79km±2.0km: pP-P, n23, σ0°.62/13, mb3.9/8, Southeast of Loyalty Islands

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
BAYA Yate Dam 3.16 254 eS Sn 20 29 53.8 -1.2
DZM Mont Dzumac 3.54 257 eP Pn 20 29 23.3 -0.1
DZM eS Sn 20 30 04.0 -0.2
DZM AMP 20 30 09.3
comp=Z,7μm,5.0s
NOUC Port Laguerre 3.67 257 eP Pn 20 29 26.2 +1.0
NOUC eS Sn 20 30 07.8 +0.4
NOUC AMP 20 30 09.9
comp=Z,360nm,0.0s
URZ Urewera 17.93 162 pP pP 20 32 46.0 -4.3
comp=Z,0.7nm,0.3s,baz=0.0,slow=8.1,SNR=4.1
CTA Charters Tower 22.40 269 P P 20 33 22.6 +0.5
comp=Z,7.0nm,0.7s,mb4.1,baz=94,slow=14,SNR=4.4
STKA Stephens Creek 27.55 242 P P 20 34 10.6 +1.1
comp=Z,1.9nm,0.8s,mb3.7,baz=98,slow=14,SNR=3.3
ASAR Alice Springs 33.53 259 P P 20 35 02.5 +0.2
comp=Z,1.1nm,0.6s,mb3.9,baz=85,slow=7.6,SNR=18
ASAR pP pP 20 35 20.0 -2.2
comp=Z,2.2nm,0.8s,baz=84,slow=8.9,SNR=5.5
FITZ Fitzroy Crossi 41.94 266 P P 20 36 13.0 -0.2
comp=Z,2.4nm,0.7s,mb4.0,baz=117,slow=9.0,SNR=3.4
FITZ pP pP 20 36 32.5 -1.1
comp=Z,4.6nm,0.7s,baz=135,slow=10.0,SNR=3.0
NWAO Narrogin (SRO) 48.07 244 P P 20 37 01.2 -0.5
comp=Z,10nm,0.8s,mb4.7,baz=106,slow=7.4,SNR=3.7
MAW Mawson 76.85 202 P P 20 40 12.7 -0.2
comp=Z,2.2nm,0.7s,mb4.0,baz=135,slow=8.6,SNR=3.6
CMAR Chiang Mai Arr 80.14 294 pP pP 20 40 51.2 -3.1
comp=Z,0.5nm,0.4s,baz=134,slow=5.2,SNR=2.0
NVAR Mina Array Bea 89.52 48 P P 20 41 17.7 -0.8
comp=Z,0.2nm,0.5s,mb3.5,baz=243,slow=7.9,SNR=3.9
NVAR pP pP 20 41 39.1 -2.3
comp=Z,0.1nm,0.3s,baz=224,slow=6.3,SNR=2.8
ILAR Eielson Array 91.94 17 P P 20 41 29.1 +0.1
comp=Z,0.3nm,0.8s,mb3.6,baz=234,slow=5.5,SNR=3.2
ARCES ARCESS Array B 127.28 345 PKP PKPdf 20 47 23.7 -0.8
comp=Z,1.0nm,0.4s,baz=45,slow=2.7,SNR=14
FINES FINESS Array B 132.82 337 SKPbc SKPbc 20 50 55.2 +0.1
comp=Z,2.3nm,0.9s,baz=127,slow=5.0,SNR=4.3
DPC Dobruska-Polom 144.45 331 ePKP PKPdf 20 48 00.8 +4.0
DPC ex x 20 48 07.4
UPC Upice 144.47 331 ePKP PKPdf 20 47 59.6 +2.8
PRU Pruhonice 145.50 332 ePKP PKPdf 20 47 58.0 -0.6
PRU ex x 20 48 03.9
EKA Eskdalemuir Ar 145.66 353 PKPbc PKPbc 20 47 58.4 -0.8
comp=Z,4.9nm,0.7s,baz=352,slow=2.8,SNR=22
EKA pPKPbc pPKPbc 20 48 21.2 -1.6
comp=Z,0.8nm,0.5s,baz=356,slow=2.7,SNR=2.2
NKC Novy Kostel 146.21 334 ex x 20 47 53.0
KHC Kasperske Hory 146.56 332 eP PKPdf 20 48 01.9 +1.4
comp=Z,4.1nm,0.7s
KHC Kasperske Hory 146.56 332 ePKP PKPdf 20 48 01.7 +1.2
KHC ex PKPbc 20 48 07.6 +5.5
KHC Kasperske Hory 146.56 332 eP PKPdf 20 48 01.9 +1.4
comp=Z,4.1nm,0.7s

ISK 23 20:29:39.6, 35°.87N×27°.76E, h22km, MD3.2
ATH 23 20:29:40.0, 35°.90N×27°.83E, h51km±2km, MD3.0/4
NEIC 23 20:29:40.0, 35°.90N×27°.83E, h51km, MD3.0(ATH), MD3.0(ISK), After ATH.
ISCJB 23 20:29:40.1±0.9, 35°.85N±0°.05×27°.91E±0°.06, h55km±11km, Error ellipse: s-maj=9.4km s-min=6.7km az=142.8
DDA 23 20:29:41.0, 36°.11N×28°.07E, h7km±1km, Md3.1
CSEM 23 20:29:41.0±0.3, 35°.89N×27°.87E, h40km, MD3.0, Error ellipse: s-maj=8.1km s-min=5.8km az=141.0
ISC 23 20:29:40.6±0.9, 35°.85N±0°.05×27°.91E±0°.06, h52km±12km, n33, σ0°.74/49, Dodecanese Islands

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
ARG Arkhangelos 0.41 26 eP Pn 20 29 50.9 -0.1
ARG eS Sn 20 29 58.8 +0.3
ARG Arkhangelos 0.41 26 eP Pn 20 29 50.9 -0.1
ARG eS Sn 20 29 58.8 +0.3
ARG Arkhangelos 0.41 26 eP Pn 20 29 50.9 -0.1
ARG eS Sn 20 29 58.8 +0.3
KARP Karpathos 0.68 244 eP Pn 20 29 53.9 -0.2
KARP eS Sn 20 30 03.9 0.0
KARP Karpathos 0.68 244 eP Pn 20 29 53.9 -0.2
KARP eS Sn 20 30 03.9 0.0
KARP Karpathos 0.68 244 eP Pn 20 29 53.9 -0.2
KARP eS Sn 20 30 03.9 0.0
DAT Datca 0.92 343 ePG Pn 20 29 57.2 -0.1
DAT eSG Sn 20 30 09.6 +0.1
DAT Datca 0.92 343 ePg Pn 20 29 57.2 -0.1
DAT eSg Sn 20 30 09.6 0.0
TURN Turunc 1.17 29 iP Pn 20 29 58.9 -1.8
TURN iS Sn 20 30 13.3 -2.2
TURN Turunc 1.17 29 iP Pn 20 29 58.9 -1.8
TURN iS Sn 20 30 13.3 -2.2
BDRM Kayabasi 1.27 343 iP Pn 20 30 01.8 -0.2
BDRM iS Sn 20 30 18.7 +0.7
BDRM Kayabasi 1.27 343 iP Pn 20 30 01.8 -0.2
BDRM iS Sn 20 30 18.7 +0.7
BODT Bodrum 1.30 339 ePN Pn 20 30 02.1 -0.4
BODT Bodrum 1.30 339 ePn Pn 20 30 02.1 -0.4
YER Yerkesik 1.32 13 ePN Pn 20 30 03.5 +0.8
YER Yerkesik 1.32 13 ePn Pn 20 30 03.5 +0.8
AKAS Kas 1.43 74 iP Pn 20 30 04.8 +0.6
AKAS iS Sn 20 30 22.7 +0.8
AKAS Kas 1.43 74 iP Pn 20 30 04.8 +0.6
AKAS iS Sn 20 30 22.7 +0.8
MLSB Milas 1.45 356 ePN Pn 20 30 04.3 -0.2
MLSB Milas 1.45 356 ePn Pn 20 30 04.3 -0.2
AYDN Tasoluk 1.81 359 iP Pn 20 30 09.7 +0.3
AYDN iS Sn 20 30 32.3 +1.2
AYDN Tasoluk 1.81 359 iP Pn 20 30 09.7 +0.3
AYDN iS Sn 20 30 32.3 +1.1
NPS Neapolis 1.96 253 eP Pn 20 30 11.7 +0.3
NPS Neapolis 1.96 253 eP Pn 20 30 11.7 +0.3
NPS Neapolis 1.96 253 eP Pn 20 30 11.7 +0.3
SMG Samos 2.05 336 eP Pn 20 30 12.3 -0.3
SMG Samos 2.05 336 eP Pn 20 30 12.3 -0.3
SMG Samos 2.05 336 eP Pn 20 30 12.3 -0.3
APE Apeiranthos 2.27 303 ePN Pn 20 30 15.4 -0.2
APE Apeiranthos 2.27 303 eP Pn 20 30 15.7 +0.1
APE Apeiranthos 2.27 303 eP Pn 20 30 15.7 +0.1
APE Apeiranthos 2.27 303 ePn Pn 20 30 15.4 -0.2
APE Apeiranthos 2.27 303 eP Pn 20 30 15.7 +0.1

IDC 23 20:32:07.7±1.5, 3°.47S×145°.57E, h0km, mb3.9/7, mb1 4.1/7, mb1mx3.9/15, mbtmp3.9/7, Error ellipse: s-maj=55.5km s-min=21.2km az=101.0
ISCJB 23 20:32:10.3±0.9, 3°.62S±0°.10×145°.8E±0°.2, h33km, mb3.8/7, Error ellipse: s-maj=29.6km s-min=13.9km az=0.1
NEIC 23 20:32:12.3±1.0, 3°.60S×145°.78E, h35km, mb4.6/1, Error ellipse: s-maj=32.2km s-min=14.6km az=90.0
ISC 23 20:32:12.2±0.9, 3°.65S±0°.10×145°.8E±0°.2, h35km, n9, σ0°.95/9, mb3.8/7, Near north coast of New Guinea

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
PMG Port Moresby 5.88 166 eP Pn 20 33 36.3 -0.5
18nm,0.6s
WRAB Tennant Creek 19.64 214 eP Pn 20 36 39.0 -0.6
34nm,1.1s
ASAR Alice Springs 22.96 209 P P 20 37 14.0 +0.4
4.7nm,0.9s,mb3.9,baz=40,slow=9.8,SNR=17
FITZ Fitzroy Crossi 24.38 232 P P 20 37 27.0 -0.3
11nm,0.9s,mb4.3,baz=52,slow=7.3,SNR=14
STKA Stephens Creek 28.35 187 P P 20 38 06.1 +3.2
1.7nm,0.7s,mb3.8,baz=8.1,slow=7.1,SNR=3.1
SONM Songino Array 61.77 331 P P 20 42 25.7 -1.5
0.6nm,1.0s,mb3.7,baz=145,slow=5.3,SNR=3.0
MKAR Makanchi Array 74.91 320 P P 20 43 50.0 +0.5
0.2nm,0.2s,mb3.6,baz=142,slow=4.9,SNR=3.6
ZALV Zalesovo Beam 76.38 328 P P 20 43 58.9 +1.1
0.5nm,0.5s,mb3.7,baz=124,slow=2.6,SNR=3.4
ILAR Eielson Array 83.83 23 P P 20 44 37.5 -0.2
0.4nm,0.7s,mb3.6,baz=232,slow=5.1,SNR=4.6

IDC 23 20:32:17.8±0.9, 19°.72S×174°.97W, h0km, mb4.3/7, mb1 4.4/10, mb1mx4.2/22, mbtmp4.4/10, ML4.6/2, Error ellipse: s-maj=30.1km s-min=20.3km az=129.0
NEIC 23 20:32:21.7±3.9, 19°.76S×174°.90W, h28km±30km, mb4.4/1, Error ellipse: s-maj=16.1km s-min=11.4km az=131.0
ISC 23 20:32:18.8±7.4, 19°.8S±0°.1×174°.9W±0°.1, h7km±49km, n16, σ0°.81/17, mb4.2/8, Tonga Islands

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
AFI Afiamalu 6.60 28 Pn Pn 20 33 57.0 +0.7
11nm,0.3s,baz=35,slow=2.7,SNR=6.1
AFI Sn Sn 20 35 03.8 -8.1
6.7nm,0.3s,baz=90,slow=20,SNR=3.6
AFI Afiamalu 6.60 28 Pn Pn 20 33 57.0 +0.7
AFI Sn Sn 20 35 03.8 -8.0
RAR Rarotonga 14.28 98 Pn Pn 20 35 40.3 -1.1
2.0nm,0.3s,baz=170,slow=7.3,SNR=8.1
RAR Sn Sn 20 38 05.3 -15
2.4nm,0.3s,baz=111,slow=17,SNR=3.4
URZ Urewera 19.64 199 P Pn 20 36 49.6 +0.2
2.6nm,0.3s,baz=48,slow=3.6,SNR=9.0
URZ S Sn 20 40 20.2 -10
0.5nm,0.3s,baz=112,slow=18,SNR=3.2
RPZ Rata Peaks 26.57 203 P P 20 37 59.3 +1.8
14nm,0.7s,mb4.6,baz=17,slow=20,SNR=3.9
CTA Charters Tower 36.43 263 P P 20 39 24.8 +0.4
5.3nm,0.8s,mb4.5,baz=83,slow=11,SNR=3.5
CTAO Charters Tower 36.43 263 eP P 20 39 24.4 0.0
ASAR Alice Springs 47.48 256 P P 20 40 54.4 -0.3
2.2nm,0.7s,mb4.2,baz=88,slow=8.6,SNR=16
ASAR PcP PcP 20 42 24.3 -0.8
0.9nm,0.9s,baz=100,slow=3.0,SNR=4.9
WRAB Tennant Creek 47.54 261 eP P 20 40 54.4 -0.9
2.3nm,0.6s,mb4.4
FITZ Fitzroy Crossi 55.98 261 P P 20 41 57.7 -0.6
1.6nm,0.8s,mb4.1,baz=96,slow=3.7,SNR=4.6
MJAR Matsushiro Arr 71.41 322 P P 20 43 39.4 -0.4
1.7nm,0.7s,mb4.1,baz=143,slow=6.3,SNR=5.8

NVAR Mina Array Bea 78.57 42 P **P 20 44 21.9 +0.8**
0.6nm,0.8s,mb3.6,baz=219,slow=9.2,SNR=4.0
MAW Mawson 83.17 199 P **P 20 44 45.2 -0.2**
2.8nm,0.9s,mb4.3,baz=167,slow=7.7,SNR=6.2
ARCES ARCESS Array B 128.73 351 PKP PKPdf 20 51 24.5 -1.8
5.0nm,1.0s,baz=28,slow=5.5,SNR=5.0
FINES FINESS Array B 135.87 346 PKP PKPdf 20 51 40.0 0.0
1.0nm,0.8s,baz=357,slow=5.6,SNR=3.0
MMAI Mount Meron Ar 149.93 302 PKPbc PKPbc 20 52 10.4 0.0
1.6nm,0.6s,baz=90,slow=1.9,SNR=3.1

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*IDC **23** 20:38:02.8±1.0, 21°.18N×121°.08E, h0km, mb3.5/7, mb1 3.8/7, mb1mx3.6/22, mbtmp3.6/7, Error ellipse: s-maj=39.6km s-min=19.7km az=71.0*
*ISCJB **23** 20:38:03.9±2.3, 21°.25N±0°.07×121°.08E±0°.07, h19km±18km, mb3.5/7, Error ellipse: s-maj=14.4km s-min=7.4km az=137.1*
*JMA **23** 20:38:05.0±0.5, 21°.24N×120°.98E, h73km, M4.2*
*NEIC **23** 20:38:07.4±0.9, 21°.31N×120°.96E, h35km, MG4.2(JMA), Error ellipse: s-maj=30.6km s-min=11.7km az=84.0*
ISC 23 20:38:04.4±2.5, 21°.28N±0°.07×121°.04E±0°.08, h11km±17km, n20, σ0°.98/26, mb3.5/7, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**1.53**	**1**	*eP*	**Pn**	**20 38 29.8**	**-2.1**
TPUB	**Ta-pu**	**2.05**	**349**	*eP*	**Pn**	**20 38 37.9**	**-1.0**
YULB	**Yu-li**	**2.12**	**6**	*eP*	**Pn**	**20 38 36.9**	**-2.9**
SSLB	**Suanglung**	**2.50**	**358**	*eP*	**Pn**	**20 38 45.3**	**+0.2**
NACB	**Ninganchiao**	**2.93**	**10**	*eP*	**Pn**	**20 38 51.2**	**+0.2**
YHNB	**Yeheng**	**3.39**	**5**	*eP*	**Pn**	**20 38 57.0**	**-0.4**
YOJ	**Yonaguni jima**	**3.65**	**30**	P	**Pn**	**20 39 01.0**	**0.0**
YOJ				*eS*	**Sn**	**20 39 45.1**	**+1.0**
HATJ	**Hateruma jima**	**3.76**	**42**	P	**Pn**	**20 39 02.8**	**+0.3**
HATJ				S	**Sn**	**20 39 47.0**	**+0.2**
IRIF	**Iriomote-Funau**	**3.93**	**39**	P	**Pn**	**20 39 05.1**	**+0.4**
IRIF				*eS*	**Sn**	**20 39 50.6**	**-0.2**
JKRS	**Kuro-shima**	**4.02**	**42**	P	**Pn**	**20 39 06.5**	**+0.4**
JKRS				*eS*	**Sn**	**20 39 54.2**	**+1.0**
JIJ	**Ishigaki jima**	**4.20**	**42**	P	**Pn**	**20 39 09.1**	**+0.6**
JIJ				S	**Sn**	**20 39 55.8**	**-1.7**
JTJ	**Tarama**	**4.75**	**45**	P	**Pn**	**20 39 16.9**	**+0.8**
JTJ				S	**Sn**	**20 40 10.3**	**-0.9**
JOGS	**Gusukube**	**5.31**	**48**	*eS*	**Sn**	**20 40 24.7**	**-0.3**
MJAR	**Matsushiro Arr**	**21.33**	**41**	P	**P**	**20 42 53.3**	**+1.8**
0.8nm,0.5s,mb3.3,baz=243,slow=5.3,SNR=4.8							
SONM	**Songino Array**	**29.00**	**339**	P	**P**	**20 44 04.6**	**+0.4**
0.5nm,0.7s,mb3.4,baz=156,slow=11,SNR=4.9							
MKAR	**Makanchi Array**	**40.37**	**318**	P	**P**	**20 45 44.0**	**+1.8**
0.2nm,0.2s,mb3.4,baz=105,slow=9.3,SNR=2.7							
ZALV	**Zalesovo Beam**	**42.63**	**329**	P	**P**	**20 46 00.9**	**+0.3**
0.6nm,0.5s,mb3.6,baz=111,slow=6.9,SNR=4.4							
WRA	**Warramunga Arr**	**42.98**	**161**	P	**P**	**20 46 02.5**	**-1.4**
0.8nm,0.7s,mb3.6,baz=345,slow=9.2,SNR=4.9							
ASAR	**Alice Springs**	**46.40**	**164**	P	**P**	**20 46 30.9**	**-0.2**
0.7nm,0.8s,mb3.6,baz=343,slow=7.2,SNR=4.9							
ILAR	**Eielson Array**	**71.85**	**27**	P	**P**	**20 49 27.1**	**0.0**
0.4nm,0.8s,mb3.4,baz=268,slow=7.1,SNR=4.7							

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*ISCJB **23** 20:42:48.8±0.4, 66°.54N±0°.02×17°.64W±0°.05, h7km±2km, mb4.1/56, MS3.9/8, Error ellipse: s-maj=3.3km s-min=3.1km az=33.3*
*IDC **23** 20:42:49.4±0.6, 66°.43N×17°.68W, h0km, mb4.0/17, mb1 4.1/20, mb1mx4.0/30, mbtmp4.0/20, ML3.6/3, MS3.9/10, Ms1 3.9/10, ms1mx3.6/32, Error ellipse: s-maj=20.3km s-min=11.2km az=2.0*
*REY **23** 20:42:49.5, 66°.58N×17°.67W, h14km, ML4.6, ML4.2*
*CSEM **23** 20:42:49.7±0.1, 66°.48N×17°.66W, h5km, mb4.3/31, Ms3.6, Error ellipse: s-maj=3.7km s-min=3.4km az=49.0*
*NEIC **23** 20:42:51.1±0.3, 66°.47N×17°.69W, h10km, mb4.2/38, Error ellipse: s-maj=7.8km s-min=4.5km az=214.0*
*SZGRF **23** 20:42:53.0, 67°.15N×16°.80W, h16km, mb4.2, Iceland region*
ISC 23 20:42:49.5±0.5, 66°.51N±0°.02×17°.63W±0°.05, h2km±2km, n211, σ1°.04/229, mb4.1/56, MS3.9/8, 3C, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGRI	**Grimsey**	**0.15**	**281**	P	**Pg**	**20 42 52.9**	**+0.4**
IGRI				S	**Sg**	**20 42 55.3**	**+0.8**
IFLA	**Flatey**	**0.36**	**194**	P	**Pg**	**20 42 57.7**	**+1.2**
IFLA				S	**Sg**	**20 43 03.6**	**+2.4**
IBRE	**Brettingsstaoi**	**0.41**	**196**	P	**Pg**	**20 42 58.1**	**+0.8**
IBRE				S	**Sg**	**20 43 04.6**	**+2.0**
IHED	**Heoinshofoi**	**0.45**	**163**	P	**Pg**	**20 42 58.8**	**+0.6**
IHED				S	**Sg**	**20 43 05.3**	**+1.2**
ILEI	**Leirhofn**	**0.47**	**103**	P	**Pg**	**20 42 58.7**	**+0.2**
ILEI				S	**Sg**	**20 43 05.6**	**+1.0**
IGRA	**Granastaoir**	**0.60**	**178**	P	**Pg**	**20 43 00.9**	**-0.1**
IGRA				S	**Sg**	**20 43 09.8**	**+1.1**
ISIG	**Siglufjorour**	**0.65**	**234**	P	**Pg**	**20 43 01.2**	**-0.7**
ISIG				S	**Sg**	**20 43 09.5**	**-0.7**
IHLA	**Hella**	**0.65**	**209**	P	**Pg**	**20 43 01.7**	**-0.2**
IHLA				S	**Sg**	**20 43 10.7**	**+0.4**
IGIL	**Gilhagi**	**0.68**	**130**	P	**Pg**	**20 43 01.5**	**-1.0**
IGIL				S	**Sg**	**20 43 12.2**	**+0.9**
IKVO	**Krokottuvotn**	**0.86**	**159**	P	**Pg**	**20 43 05.3**	**-0.7**
IKVO				S	**Sg**	**20 43 16.9**	**-0.2**
IREN	**Reynihlio**	**0.92**	**161**	P	**Pg**	**20 43 06.2**	**-0.9**
IREN				S	**Sg**	**20 43 18.9**	**-0.1**
IGRS	**Grimsstaonr**	**1.07**	**144**	P	**Pg**	**20 43 08.5**	**-1.6**
IGRS				S	**Sg**	**20 43 23.6**	**-0.3**
ISVA	**Svartarkot**	**1.19**	**172**	P	**Pg**	**20 43 10.8**	**-1.5**
ISVA				S	**Sg**	**20 43 27.1**	**-0.7**
IMKO	**Mokollar**	**1.63**	**160**	S	**Sn**	**20 43 40.1**	**-0.7**
IADA	**Aoalbol**	**1.73**	**150**	P	**Pn**	**20 43 19.2**	**-1.3**
IHVA	**Hvannstoosfjol**	**1.73**	**154**	P	**Pn**	**20 43 19.2**	**-1.3**
IBRU	**Bruarjokull**	**1.81**	**159**	P	**Pn**	**20 43 21.0**	**-0.7**
IBRU				S	**Sn**	**20 43 45.3**	**+0.1**
IKRE	**Kreppuhraun**	**1.81**	**163**	P	**Pn**	**20 43 19.8**	**-1.9**
IKRE				S	**Sn**	**20 43 45.3**	**0.0**
IHVE	**Hveravellir**	**1.83**	**207**	P	**Pn**	**20 43 20.7**	**-1.3**
IHVE				S	**Sn**	**20 43 45.0**	**-0.8**
IGLU	**Glumsstadir**	**1.86**	**145**	P	**Pn**	**20 43 21.6**	**-0.8**
IGLU				S	**Sn**	**20 43 46.9**	**+0.4**
IVSH	**V-Sauoahnukur**	**1.89**	**154**	P	**Pn**	**20 43 22.2**	**-0.5**
IVSH				S	**Sn**	**20 43 47.4**	**+0.3**
ISKR	**Skrokkalda**	**1.99**	**189**	S	**Sn**	**20 43 50.3**	**+0.7**
IGRF	**Grimsfjall**	**2.12**	**176**	P	**Pn**	**20 43 24.8**	**-1.2**
IASB	**`sbjarnarst**	**2.34**	**223**	P	**Pn**	**20 43 27.5**	**-1.5**
IASB				S	**Sn**	**20 43 57.8**	**-0.5**
BORG	**Borgarnes**	**2.34**	**223**	Pn	**Pn**	**20 43 27.6**	**-1.4**
56nm,0.3s,baz=46,slow=9.4,SNR=124							
BORG				Sn	**Sn**	**20 43 57.9**	**-0.5**
60nm,0.3s,baz=197,slow=19,SNR=13							
BORG	**Borgarnes**	**2.34**	**223**	Pn	**Pn**	**20 43 27.6**	**-1.4**
BORG				Sn	**Sn**	**20 43 57.9**	**-0.4**
IVAT	**Vatnsfell**	**2.40**	**194**	P	**Pn**	**20 43 28.7**	**-1.1**
IVAT				S	**Sn**	**20 44 03.1**	**+3.4**
IKAL	**Kalfafell**	**2.58**	**181**	S	**Sn**	**20 44 07.5**	**+3.4**
IFAG	**Fagurholsmyri**	**2.68**	**171**	S	**Sn**	**20 44 10.8**	**+4.1**
IHAU	**Haukadalur**	**2.74**	**202**	S	**Sn**	**20 44 14.2**	**+6.2**
IKUD	**Kuludalsa**	**2.83**	**221**	P	**Pn**	**20 43 34.4**	**-1.3**
IKUD				S	**Sn**	**20 44 11.6**	**+1.3**
ISOL	**Solvholt**	**2.95**	**210**	P	**Pn**	**20 43 36.3**	**-1.0**
SCO	**Scoresbysund**	**4.29**	**340**	*i* P	**Pn**	**20 43 52.4**	**-3.4**
54nm,0.8s							
JMIC	**Jan Mayen**	**5.58**	**32**	LR	LR	20 45 52.8	
comp=Z,619nm,20.3s,baz=51,slow=32							
SUMG	**Summit**	**9.44**	**319**	*i* P	**Pn**	**20 45 03.2**	**-3.1**
SFJD	**Kangerlussuaq**	**12.95**	**287**	LR	LR	20 50 15.2	
comp=Z,816nm,21.4s,baz=61,slow=34							
EKA	**Eskdalemuir Ar**	**13.19**	**141**	Pn	**Pn**	**20 46 01.7**	**+4.1**
0.1nm,0.3s,baz=334,slow=9.5,SNR=4.1							
NOA	**NORSAR Array B**	**13.79**	**100**	Pn	**Pn**	**20 46 06.0**	**+0.3**
0.2nm,0.3s,baz=312,slow=12,SNR=5.1							
NOA				LR	LR	20 50 54.9	
comp=Z,284nm,20.6s,baz=300,slow=35							
NOA	**NORSAR Array B**	**13.79**	**100**	Pn	**Pn**	**20 46 06.0**	**+0.3**
SPITS	**Spitsbergen Ar**	**15.21**	**26**	Pn	**Pn**	**20 46 31.1**	**+6.2**
baz=230,slow=13,SNR=9.5							
HFS	**Hagfors**	**15.31**	**100**	Pn	**Pn**	**20 46 32.1**	**+5.8**
0.2nm,0.3s,baz=317,slow=8.1,SNR=9.8							
HFS				LR	LR	20 52 12.9	
comp=Z,287nm,18.2s,baz=138,slow=37							
MUD	**Monsted U'grnd**	**16.14**	**116**	*i* P	**Pn**	**20 46 41.6**	**+4.5**
10nm,1.0s							
ARCES	**ARCESS Array B**	**16.16**	**60**	Pn	**Pn**	**20 46 41.9**	**+4.6**
0.1nm,0.3s,baz=276,slow=8.1,SNR=3.7							
ARCES				LR	LR	20 52 13.0	
comp=Z,58nm,20.8s,baz=184,slow=35							
KAF	**Kangasniemi**	**19.22**	**82**	*eP*	**Pn**	**20 47 17.4**	**+2.1**
3.0nm,0.6s							
KAF	**Kangasniemi**	**19.22**	**82**	*ep*	**Pn**	**20 47 17.4**	**+2.1**
3.0nm,0.6s							
KAF	**Kangasniemi**	**19.22**	**82**	*eP*	**Pn**	**20 47 17.4**	**+2.1**
3.0nm,0.6s							
FINES	**FINESS Array B**	**19.49**	**84**	P	**Pn**	**20 47 17.9**	**-0.7**
0.2nm,0.3s,baz=308,slow=6.8,SNR=9.8							
FINES				LR	LR	20 54 09.8	
comp=Z,633nm,18.2s,baz=350,slow=35							
FINES	**FINESS Array B**	**19.49**	**84**	P	**Pn**	**20 47 17.9**	**-0.7**
BUG	**Bochum--Univer**	**19.60**	**128**	*eP*	**Pn**	**20 47 20.2**	**+0.2**
comp=Z,13nm,1.1s							
NRDL	**Niedersach Rie**	**19.63**	**122**	*eP*	**Pn**	**20 47 19.3**	**-1.1**
comp=Z,21nm,1.8s							
ROSF	**Rostrenen**	**19.70**	**151**	*eP*	**Pn**	**20 47 22.6**	**+1.4**
FLN	**La Foliniere**	**19.89**	**145**	*eP*	**Pn**	**20 47 24.2**	**+0.7**
comp=Z,9.8nm,0.6s							
FLN				*e*MLR	MLR		
comp=Z,492nm,19.8s							
FLN	**La Foliniere**	**19.89**	**145**	*eP*	**Pn**	**20 47 24.2**	**+0.7**
comp=Z,4.9nm,0.6s							
FLN	**La Foliniere**	**19.89**	**145**	*eP*	**Pn**	**20 47 24.2**	**+0.7**
comp=Z,4.9nm,0.6s							
BAIF	**Baives**	**19.90**	**135**	*eP*	**Pn**	**20 47 18.1**	**-5.5**
comp=Z,17nm,0.9s							
BAIF	**Baives**	**19.90**	**135**	*eP*	**Pn**	**20 47 18.1**	**-5.5**
comp=Z,8.6nm,0.9s							
SGMF	**Saint Gilles**	**19.92**	**149**	*eP*	**Pn**	**20 47 22.9**	**-0.9**
comp=Z,22nm,0.9s							
SGMF	**Saint Gilles**	**19.92**	**149**	*eP*	**Pn**	**20 47 22.9**	**-0.9**
comp=Z,11nm,0.9s							
SGMF	**Saint Gilles**	**19.92**	**149**	*eP*	**Pn**	**20 47 22.9**	**-0.9**
comp=Z,11nm,0.9s							
QUIF	**Quistinic**	**20.12**	**151**	*eP*	**P**	**20 47 24.6**	**+0.2**
comp=Z,17nm,0.8s							
QUIF	**Quistinic**	**20.12**	**151**	*eP*	**P**	**20 47 24.6**	**+0.2**
comp=Z,8.6nm,0.8s							
QUIF	**Quistinic**	**20.12**	**151**	*eP*	**P**	**20 47 24.6**	**+0.2**
comp=Z,8.6nm,0.8s							
LDF	**La Druitiere**	**20.13**	**145**	*eP*	**P**	**20 47 24.7**	**+0.2**
comp=Z,7.9nm,0.7s							
LDF	**La Druitiere**	**20.13**	**145**	*eP*	**P**	**20 47 24.7**	**+0.2**
comp=Z,4.0nm,0.7s							
LDF	**La Druitiere**	**20.13**	**145**	*eP*	**P**	**20 47 24.7**	**+0.2**
comp=Z,4.0nm,0.7s							
GRR	**Gorron**	**20.16**	**146**	*eP*	**P**	**20 47 25.8**	**+1.0**
GRR	**Gorron**	**20.16**	**146**	*eP*	**P**	**20 47 25.8**	**+1.0**
CLZ	**Clausthal**	**20.27**	**123**	*eP*	**P**	**20 47 26.3**	**+0.3**
comp=Z,15nm,1.2s							
JOF	**Joensuu**	**20.76**	**77**	*eP*	**P**	**20 47 29.1**	**-2.1**
JOF	**Joensuu**	**20.76**	**77**	*ep*	**P**	**20 47 29.1**	**-2.1**
comp=Z,14nm,0.7s							
TNS	**Taunus Mts**	**21.03**	**128**	*eP*	**P**	**20 47 35.1**	**+0.9**
comp=Z,23nm,1.0s,mb4.5							
FRB	**Frobisher Bay**	**21.10**	**286**	P	**P**	**20 47 34.0**	**-0.9**
comp=Z,7.0nm,0.7s,mb4.1,baz=53,slow=13,SNR=2.9							
FRB				LR	LR	20 56 41.8	
comp=Z,976nm,18.0s,MS4.2,baz=126,slow=39							
FRB	**Frobisher Bay**	**21.10**	**286**	P	**P**	**20 47 34.0**	**-0.9**
MEZF	**Maizieres J'vi**	**21.55**	**136**	*eP*	**P**	**20 47 38.5**	**-1.3**
MEZF	**Maizieres J'vi**	**21.55**	**136**	*eP*	**P**	**20 47 38.5**	**-1.3**
CLL	**Collm**	**21.62**	**120**	*eP*	**P**	**20 47 40.2**	**-0.3**
comp=Z,11nm,1.1s,mb4.2							
CLL	**Collm**	**21.62**	**120**	*i* P	**P**	**20 47 40.1**	**-0.4**
comp=Z,11nm,1.1s,mb4.2							
CLL				*i*		20 47 44.4	
CLL	**Collm**	**21.62**	**120**	*i* P	**P**	**20 47 40.1**	**-0.4**
comp=Z,11nm,1.1s,mb4.2							
CLL				*i* sP	sP	20 47 44.4	+3.2
CLL				*e*		20 48 15.0	
CLL	**Collm**	**21.62**	**120**	*i* P	**P**	**20 47 40.1**	**-0.4**
MOX	**Moxa**	**21.70**	**123**	*e*(P)	**P**	**20 47 41.3**	**-0.1**
comp=Z,22nm,1.5s,mb4.4							
MOX	**Moxa**	**21.70**	**123**	*eP*	**P**	**20 47 41.2**	**-0.2**
comp=Z,8.0nm,1.0s,mb4.1							
MFF	**Saint Martin d**	**22.01**	**146**	*eP*	**P**	**20 47 44.5**	**-0.2**
comp=Z,39nm,1.2s,mb4.4							
MFF	**Saint Martin d**	**22.01**	**146**	*eP*	**P**	**20 47 44.5**	**-0.2**
comp=Z,20nm,1.2s,mb4.4							
MFF	**Saint Martin d**	**22.01**	**146**	*eP*	**P**	**20 47 44.5**	**-0.2**
comp=Z,20nm,1.2s,mb4.4							
TANN	**Tannenbergstha**	**22.18**	**122**	*eP*	**P**	**20 47 46.8**	**+0.2**
comp=Z,5.0nm,1.1s,mb3.9							
BRG	**Berggiesshubel**	**22.31**	**119**	*eP*	**P**	**20 47 48.0**	**+0.1**
comp=Z,7.0nm,1.0s,mb4.0							
BRG	**Berggiesshubel**	**22.31**	**119**	*i* P	**P**	**20 47 48.1**	**+0.2**
comp=Z,6.7nm,1.0s,mb4.0							
LOR	**Lormes**	**22.36**	**139**	*eP*	**P**	**20 47 47.8**	**-0.6**
comp=Z,40nm,1.2s,mb4.4							
LOR				*e*MLR	MLR		
comp=Z,458nm,21.0s,MS3.6							
LOR	**Lormes**	**22.36**	**139**	*eP*	**P**	**20 47 47.8**	**-0.6**
comp=Z,20nm,1.2s,mb4.4							
LOR				LR	LR		
comp=Z,460nm,21.0s,MS3.9							
LOR	**Lormes**	**22.36**	**139**	*eP*	**P**	**20 47 47.8**	**-0.6**
comp=Z,20nm,1.2s,mb4.4							
HAU	**Haudompre**	**22.37**	**134**	*eP*	**P**	**20 47 48.1**	**-0.5**
comp=Z,29nm,1.1s,mb4.3							
HAU				*e*MLR	MLR		
comp=Z,339nm,22.5s,MS3.4							
HAU	**Haudompre**	**22.37**	**134**	*eP*	**P**	**20 47 48.1**	**-0.5**
comp=Z,15nm,1.1s,mb4.3							
HAU				LR	LR		
comp=Z,340nm,22.5s,MS3.7							
HAU	**Haudompre**	**22.37**	**134**	*eP*	**P**	**20 47 48.1**	**-0.5**
comp=Z,15nm,1.1s,mb4.3							
GRF	**Grafenberg Arr**	**22.39**	**125**	*eP*	**P**	**20 47 51.2**	**+2.5**
comp=Z,22nm,1.5s,mb4.4							
GRF				*e*pP		20 47 55.0	
GRF	**Grafenberg Arr**	**22.39**	**125**	*eP*	**P**	**20 47 51.2**	**+2.5**
comp=Z,22nm,1.5s,mb4.4							
ECH	**Echery**	**22.41**	**133**	*eP*	**P**	**20 47 49.8**	**+0.8**
SSF	**Saint Saulge**	**22.45**	**140**	*eP*	**P**	**20 47 49.1**	**-0.4**
comp=Z,34nm,1.1s,mb4.4							
SSF	**Saint Saulge**	**22.45**	**140**	*eP*	**P**	**20 47 49.1**	**-0.4**
comp=Z,17nm,1.1s,mb4.4							
SSF	**Saint Saulge**	**22.45**	**140**	*eP*	**P**	**20 47 49.1**	**-0.4**
comp=Z,17nm,1.1s,mb4.4							
ROTZ	**Rotzenmuhle**	**22.65**	**123**	*eP*	**P**	**20 47 53.1**	**+1.6**
comp=Z,8.0nm,1.4s,mb4.0							
BFO	**Black Forest**	**22.66**	**131**	P	**P**	**20 47 51.5**	**-0.2**
BFO	**Black Forest**	**22.66**	**131**	P	**P**	**20 47 51.5**	**-0.2**
AVF	**Avril sur Loir**	**22.67**	**140**	*eP*	**P**	**20 47 48.8**	**-2.9**
comp=Z,20nm,0.9s,mb4.2							
AVF	**Avril sur Loir**	**22.67**	**140**	*eP*	**P**	**20 47 48.8**	**-2.9**
comp=Z,9.9nm,0.9s,mb4.2							
AVF	**Avril sur Loir**	**22.67**	**140**	*eP*	**P**	**20 47 48.8**	**-2.9**
comp=Z,9.9nm,0.9s,mb4.2							
HINF	**Hinteralfeld**	**22.68**	**134**	*eP*	**P**	**20 47 52.7**	**+0.8**
comp=Z,19nm,1.1s,mb4.1							
HINF	**Hinteralfeld**	**22.68**	**134**	*eP*	**P**	**20 47 52.7**	**+0.8**
comp=Z,9.4nm,1.1s,mb4.1							
HINF	**Hinteralfeld**	**22.68**	**134**	*eP*	**P**	**20 47 52.7**	**+0.8**
comp=Z,9.4nm,1.1s,mb4.1							
BGF	**Bois d'Agland**	**22.75**	**141**	*eP*	**P**	**20 47 52.0**	**-0.7**
comp=Z,46nm,1.3s,mb4.5							
BGF	**Bois d'Agland**	**22.75**	**141**	*eP*	**P**	**20 47 52.0**	**-0.7**
comp=Z,23nm,1.3s,mb4.5							
BGF	**Bois d'Agland**	**22.75**	**141**	*eP*	**P**	**20 47 52.0**	**-0.7**
comp=Z,23nm,1.3s,mb4.5							
TCF	**Toulx Ste Croi**	**22.85**	**143**	*eP*	**P**	**20 47 52.3**	**-1.4**
comp=Z,26nm,1.3s,mb4.2							
TCF	**Toulx Ste Croi**	**22.85**	**143**	*eP*	**P**	**20 47 52.3**	**-1.4**
comp=Z,13nm,1.3s,mb4.2							
TCF	**Toulx Ste Croi**	**22.85**	**143**	*eP*	**P**	**20 47 52.3**	**-1.4**
comp=Z,13nm,1.3s,mb4.2							
SMF	**Signal de Mont**	**22.93**	**140**	*eP*	**P**	**20 47 54.1**	**-0.4**
comp=Z,58nm,1.2s,mb4.6							
SMF	**Signal de Mont**	**22.93**	**140**	*eP*	**P**	**20 47 54.1**	**-0.4**
comp=Z,29nm,1.2s,mb4.6							
SMF	**Signal de Mont**	**22.93**	**140**	*eP*	**P**	**20 47 54.1**	**-0.4**
comp=Z,29nm,1.2s,mb4.6							
SUW	**Suwalki**	**23.27**	**103**	*eP*	**P**	**20 47 57.7**	**-0.4**
comp=Z,34nm,1.1s,mb4.7							
SUW	**Suwalki**	**23.27**	**103**	*eP*	**P**	**20 47 57.7**	**-0.4**
comp=Z,34nm,1.1s,mb4.7							
WET	**Wettzell**	**23.41**	**123**	*eP*	**P**	**20 48 00.2**	**+0.6**
comp=Z,60nm,3.2s							
RJF	**Les Rejaudoux**	**23.61**	**145**	*eP*	**P**	**20 48 01.3**	**-0.4**
comp=Z,13nm,0.8s,mb4.1							
RJF				*e*MLR	MLR		
comp=Z,432nm,18.2s,MS3.6							
RJF	**Les Rejaudoux**	**23.61**	**145**	*eP*	**P**	**20 48 01.3**	**-0.4**
comp=Z,6.7nm,0.8s,mb4.1							
RJF				LR	LR		
comp=Z,430nm,18.3s,MS4.0							
RJF	**Les Rejaudoux**	**23.61**	**145**	*eP*	**P**	**20 48 01.3**	**-0.4**
comp=Z,6.7nm,0.8s,mb4.1							
LFF	**La Frestale**	**23.78**	**146**	*eP*	**P**	**20 48 03.3**	**+0.1**
comp=Z,9.3nm,0.7s,mb4.0							
LFF	**La Frestale**	**23.78**	**146**	*eP*	**P**	**20 48 03.3**	**+0.1**
comp=Z,4.7nm,0.7s,mb4.0							
LFF	**La Frestale**	**23.78**	**146**	*eP*	**P**	**20 48 03.3**	**+0.1**
comp=Z,4.7nm,0.7s,mb4.0							
GEC2	**GERESS Array S**	**23.94**	**122**	*eP*	**P**	**20 48 02.4**	**-2.3**
comp=Z,4.0nm,0.8s,mb3.9							
DAVA	**Damuels**	**24.07**	**130**	⇑*i*sP	sP	20 48 10.5	+4.0
comp=Z,3.6nm,0.6s							
CAF	**Calviac**	**24.10**	**144**	*eP*	**P**	**20 48 06.6**	**+0.5**
comp=Z,19nm,1.1s,mb4.2							
CAF	**Calviac**	**24.10**	**144**	*eP*	**P**	**20 48 06.6**	**+0.5**
comp=Z,9.5nm,1.1s,mb4.1							
CAF	**Calviac**	**24.10**	**144**	*eP*	**P**	**20 48 06.6**	**+0.5**
comp=Z,9.5nm,1.1s,mb4.1							
SSB	**Saint Sauveur**	**24.38**	**140**	*eP*	**P**	**20 48 08.4**	**-0.3**
comp=Z,3.9nm,0.8s,mb3.9							
SSB	**Saint Sauveur**	**24.38**	**140**	*eP*	**P**	**20 48 08.4**	**-0.3**
comp=Z,3.9nm,0.8s,mb3.9							
MORC	**Moravsky Berou**	**24.50**	**116**	*eP*	**P**	**20 48 09.8**	**0.0**
comp=Z,6.3nm,1.1s,mb4.1							
MORC	**Moravsky Berou**	**24.50**	**116**	*eP*	**P**	**20 48 09.8**	**0.0**
comp=Z,6.3nm,1.1s,mb4.1							
DAVOX	**Davos/Dischmat**	**24.52**	**130**	P	**P**	**20 48 10.5**	**+0.5**
comp=Z,8.7nm,0.7s,mb4.4,baz=324,slow=8.7,SNR=9.7							
DAVOX				LR	LR	20 57 38.4	
comp=Z,359nm,20.7s,MS3.9,baz=179,slow=36							
DAVOX	**Davos/Dischmat**	**24.52**	**130**	P	**P**	**20 48 10.5**	**+0.5**
VRAC	**Vranov**	**24.55**	**118**	P	**P**	**20 48 11.1**	**+0.8**
comp=Z,1.9nm,0.7s,mb3.7,baz=328,slow=15,SNR=3.7							
VRAC	**Vranov**	**24.55**	**118**	P	**P**	**20 48 11.1**	**+0.8**
FETA	**Feichten**	**24.57**	**129**	⇑*i*P	**P**	**20 48 09.5**	**-0.9**
comp=Z,9.1nm,1.2s,mb4.2							
WTTA	**Wattenberg**	**24.64**	**127**	⇑*i*P	**P**	**20 48 08.2**	**-2.9**
comp=Z,3.8nm,0.6s,mb4.1							
LPL	**La Plagne**	**24.75**	**136**	*eP*	**P**	**20 48 13.1**	**+1.1**
comp=Z,13nm,1.0s,mb4.1							
LPL	**La Plagne**	**24.75**	**136**	*eP*	**P**	**20 48 13.1**	**+1.1**
comp=Z,6.4nm,1.0s,mb4.1							
LPL	**La Plagne**	**24.75**	**136**	*eP*	**P**	**20 48 13.1**	**+1.1**
comp=Z,6.4nm,1.0s,mb4.1							
LPG	**La Plagne**	**24.77**	**136**	*eP*	**P**	**20 48 13.2**	**+1.0**
comp=Z,5.8nm,0.6s,mb4.0							
LPG	**La Plagne**	**24.77**	**136**	*eP*	**P**	**20 48 13.2**	**+1.0**
comp=Z,2.9nm,0.6s,mb4.0							
LPG	**La Plagne**	**24.77**	**136**	*eP*	**P**	**20 48 13.2**	**+1.0**
comp=Z,2.9nm,0.6s,mb4.0							
LPG	**La Plagne**	**24.77**	**136**	*eP*	**P**	**20 48 13.2**	**+1.0**
comp=Z,2.9nm,0.6s,mb4.0							
ORIF	**Oris-en-Rattie**	**25.06**	**138**	*eP*	**P**	**20 48 15.9**	**+1.0**
comp=Z,8.6nm,0.6s,mb4.

*NEIC **23** 20:45:03.7, 58°.31N×133°.47W, h1km, ML3.1(PGC), ML2.7(AEIC), After PGC.*

PGC 23 20:45:03.7±21.0, 58°.31N×133°.47W, h1km, ML3.1/4, 2C-4D, 55km east of Juneau, Ak Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESE	**Bessie Mountai**	**0.78**	**291**	P	Pg	20 45 16.4	-2.1
SKAG	**Skagway**	**1.50**	**321**	P	Pn	20 45 30.3	-1.4
SIT	**Sitka**	**1.60**	**219**	P	Pn	20 45 31.6	-1.5
SIT				S	Sn	20 45 55.5	+1.1
DLBC	**Dease Lake**	**1.82**	**85**	P	Pn	20 45 37.1	+1.1
DLBC				S	Sn	20 46 02.7	+3.0
DLBC	**Dease Lake**	**1.82**	**85**	⇓P	Pn	20 45 35.1	-0.9
DLBC				⇑Pg	Pg	20 45 36.7	-1.8
DLBC				⇓Sn	Sn	20 45 58.5	-1.1
DLBC				⇓Sg	Sg	20 46 00.4	-1.7
PLBC	**Pleasant Camp**	**1.89**	**309**	⇑Pn	Pn	20 45 36.2	-0.8
PLBC	**Pleasant Camp**	**1.89**	**309**	⇑Pn	Pn	20 45 36.2	-0.8
PLBC				⇓Sg	Sg	20 46 01.9	-2.4
WHY	**Whitehorse**	**2.46**	**344**	P	Pn	20 45 43.4	-1.5
WHY				S	Sn	20 46 16.9	+1.4
WHY	**Whitehorse**	**2.46**	**344**	⇑Pn	Pn	20 45 43.4	-1.5
HYT	**Haines Junctio**	**3.25**	**323**	⇑Pn	Pn	20 45 55.7	0.0
HYT	**Haines Junctio**	**3.25**	**323**	⇑Pn	Pn	20 45 55.7	0.0
HYT				⇑Pg	Pg	20 46 01.8	-4.1
HYT				⇑Sg	Sg	20 46 43.8	-4.2
PNL	**Peninsula**	**3.35**	**296**	P	Pn	20 45 58.1	+1.0

*NEIC **23** 20:47:06.5±2.3, 21°.88S×175°.63W, h35km, mb4.1/3, Error ellipse: s-maj=98.3km s-min=26.8km az=149.0*

IDC 23 20:47:02.3±3.0, 21°.65S×175°.79W, h0km, mb4.2/4, mb1 4.4/4, mb1mx3.8/18, mbtmp4.2/4, Error ellipse: s-maj=155.9km s-min=41.0km az=152.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**35.44**	**265**	P	P	20 54 01.3	+0.7
	1.9nm,0.2s,baz=111,slow=12,SNR=8.8						
CTA	**Charters Tower**	**35.44**	**265**	P	P	20 54 01.3	+0.7
CTAO	**Charters Tower**	**35.44**	**265**	*e*P	P	20 54 01.8	+1.2
	4.1nm,0.6s						
STKA	**Stephens Creek**	**39.17**	**246**	P	P	20 54 32.4	+0.2
	2.4nm,0.6s,baz=88,slow=9.7,SNR=7.0						
STKA	**Stephens Creek**	**39.17**	**246**	*e*P	P	20 54 32.1	0.0
	0.6nm,0.7s						
ASAR	**Alice Springs**	**46.27**	**257**	P	P	20 55 29.4	-0.4
	1.8nm,0.6s,baz=98,slow=7.6,SNR=26						
WRAB	**Tennant Creek**	**46.48**	**263**	*e*P	P	20 55 30.5	-1.1
	0.9nm,0.4s						
WRA	**Warramunga Arr**	**46.49**	**263**	P	P	20 55 31.0	-0.7
	0.8nm,0.3s,baz=91,slow=8.2,SNR=43						
AKASG	**Malin Array Be**	**145.00**	**332**	PKP	PKPdf	21 06 40.3	-1.1
	0.2nm,0.3s,baz=39,slow=4.2,SNR=6.2						
BRTR	**Keskin Array B**	**149.13**	**312**	PKPbc	PKPbc	21 06 52.2	-0.6
	0.3nm,0.4s,baz=15,slow=7.8,SNR=2.6						
MMAI	**Mount Meron Ar**	**150.17**	**299**	PKPbc	PKPbc	21 06 56.2	+0.6
	1.2nm,0.5s,baz=0.0,slow=5.8,SNR=3.7						

*ISCJB **23** 21:08:40.1±0.3, 43°.78N±0°.04×138°.97E±0°.07, h259km±5km, mb3.6/17, Error ellipse: s-maj=9.0km s-min=5.7km az=30.3*
*JMA **23** 21:08:40.6±0.3, 43°.81N×138°.93E, h256km±3km, M3.4*
*IDC **23** 21:08:40.7±0.9, 43°.76N×138°.93E, h246km±14km, mb3.3/10, mb1 3.4/13, mb1mx3.3/26, mbtmp3.4/13, Error ellipse: s-maj=23.0km s-min=14.7km az=150.0*
*MOS **23** 21:08:40.0±0.8, 43°.87N×138°.93E, h256km, mb3.7/11, Error ellipse: s-maj=14.8km s-min=9.6km az=111.1*
*NEIC **23** 21:08:40.9±0.5, 43°.85N×138°.87E, h245km±7km, mb3.8/5, Error ellipse: s-maj=8.9km s-min=6.5km az=136.0*

ISC 23 21:08:41.0±0.3, 43°.76N±0°.04×138°.98E±0°.07, h253km±5km, n67, σ0°.79/82, mb3.7/17, 1D, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK	**Shakotan**	**1.16**	**110**	P	Pn	21 09 17.4	+0.1
JSH	**Shimam**	**1.36**	**145**	P	Pn	21 09 18.8	+0.1
JSH				*e*S	S	21 09 48.6	+0.3
JOSM	**Okushiri--Mats**	**1.72**	**168**	P	Pn	21 09 22.0	+0.6
JOSM				*e*S	S	21 09 53.7	+0.5
JYG	**Yagishiri**	**1.88**	**69**	P	Pn	21 09 22.4	-0.2
JHR	**Hokuryu**	**1.99**	**90**	P	Pn	21 09 24.2	+0.6
JEW	**Eniwo**	**2.02**	**116**	P	Pn	21 09 24.8	+0.8
JKB	**Kayabe**	**2.41**	**140**	P	Pn	21 09 27.8	+0.2
JWK2	**Keihoku**	**2.60**	**52**	P	Pn	21 09 30.2	+0.8
ASAJ	**Asahikawa**	**2.64**	**81**	P	Pn	21 09 30.1	+0.3
	8.4nm,0.3s,baz=271,slow=8.7,SNR=81						
ASAJ				S	S	21 10 08.1	-0.3
	baz=87,slow=18,SNR=2.5						
ASAJ	**Asahikawa**	**2.64**	**81**	P	Pn	21 09 30.1	+0.3
ASAJ				S	S	21 10 08.1	-0.3
ASAJ				pmax	pmax		
	comp=Z,8.0nm,0.3s						
JFR	**Furan**	**2.70**	**102**	P	Pn	21 09 30.9	+0.4
JKK2	**Kamakawa 2**	**2.73**	**86**	P	Pn	21 09 31.3	+0.5
JKK2				*e*S	S	21 10 10.7	+0.6
JOT	**Ohata**	**2.83**	**147**	P	Pn	21 09 31.7	-0.2
JNBK	**Urakawa-nobuka**	**3.14**	**117**	P	Pn	21 09 35.1	-0.1
JNBK				*e*S	S	21 10 17.3	-0.8
JCH	**Churui**	**3.40**	**108**	P	Pn	21 09 37.1	-1.0
JCH				*e*S	S	21 10 19.7	-3.6
JAR	**Ashorobuto**	**3.51**	**96**	P	Pn	21 09 39.8	+0.5
JAR				*e*S	S	21 10 26.2	+0.7
ERM	**Erimo**	**3.53**	**118**	*e*P	Pn	21 09 40.0	+0.5
ERM				*e*S	S	21 10 25.6	-0.4
JTKR	**Abashiri--Toko**	**3.57**	**85**	P	Pn	21 09 40.3	+0.4
JTKR				*e*S	S	21 10 27.0	+0.3
JANG	**Nango**	**3.88**	**150**	P	Pn	21 09 43.0	-0.5
JANG				*e*S	S	21 10 30.0	-3.2
YSS	**Yuzh-Sakhalins**	**4.15**	**39**	⇓*i*P	Pn	21 09 46.0	-0.6
YSS				pmax	pmax		
	comp=Z,60nm,1.0s						
YSS	**Yuzh-Sakhalins**	**4.15**	**39**	*e*Pn	Pn	21 09 46.5	-0.1
YSS				S	S	21 10 37.7	-1.1
NEM2	**Nemuro 2**	**4.93**	**92**	P	Pn	21 09 54.2	-1.8
NEM2				*e*S	S	21 10 50.4	-5.4
JMK	**Ichinoseki**	**5.09**	**160**	P	Pn	21 09 58.3	+0.2
MAJO	**Matsushiro**	**7.24**	**185**	*e*P	Pn	21 10 25.5	+0.8
MAJO				S	S	21 11 47.3	-0.8
MAT	**Matsushiro**	**7.24**	**185**	P	Pn	21 10 25.1	+0.4
MJAR	**Matsushiro Arr**	**7.24**	**185**	P	Pn	21 10 25.5	+0.8
	comp=Z,2.2nm,0.3s,baz=4.0,slow=14,SNR=17						
MJAR	**Matsushiro Arr**	**7.24**	**185**	P	Pn	21 10 25.5	+0.8
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
JHJ	**Hachijo jima 2**	**10.65**	**176**	P	Pn	21 11 05.9	-1.8
	comp=Z,6.3nm,0.3s,baz=24,slow=20,SNR=8.4						
JHJ				S	S	21 12 59.3	-7.7
	comp=Z,3.2nm,0.3s,baz=66,slow=19,SNR=4.2						
INCN	**Inchon**	**11.28**	**240**	*e*Pn	Pn	21 11 14.8	-0.7
HIA	**Hailar**	**14.33**	**299**	P	Pn	21 11 51.8	-1.0
YAK	**Yakutsk**	**19.10**	**347**	P	P	21 12 43.6	-1.2
SONM	**Songino Array**	**22.98**	**292**	P	P	21 13 23.7	+0.3
	comp=Z,0.8nm,0.5s,mb3.5,baz=82,slow=8.8,SNR=16						
SONM	**Songino Array**	**22.98**	**292**	P	P	21 13 23.7	+0.3
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV	**Zalesovo Beam**	**36.23**	**306**	P	P	21 15 19.5	-0.2
	comp=Z,4.0nm,0.5s,mb4.2,baz=91,slow=9.0,SNR=19						
ZALV	**Zalesovo Beam**	**36.23**	**306**	P	P	21 15 19.5	-0.1
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.2						
MKAR	**Makanchi Array**	**39.27**	**295**	P	P	21 15 45.8	+0.7
	comp=Z,1.0nm,0.4s,mb3.7,baz=84,slow=10.0,SNR=10						
MKAR	**Makanchi Array**	**39.27**	**295**	P	P	21 15 45.8	+0.7
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
LSA	**Lhasa**	**40.27**	**266**	P	P	21 15 54.2	+0.6
KURK	**Kurchatov**	**40.55**	**302**	*e*P	P	21 15 55.8	+0.2
KURK				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.2						
KURK	**Kurchatov**	**40.55**	**302**	*e*P	P	21 15 55.8	+0.3
	comp=Z,8.9nm,0.8s,mb4.2						
MCK	**McKinley**	**44.24**	**37**	*e*P	P	21 16 25.1	+0.1
BVAR	**Borovoye Array**	**44.84**	**307**	P	P	21 16 30.4	+0.6
	comp=Z,1.4nm,0.4s,mb3.6,baz=84,slow=9.8,SNR=10						
BVAR	**Borovoye Array**	**44.84**	**307**	P	P	21 16 30.4	+0.5
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BRVK	**Borovoye**	**44.90**	**307**	*e*P	P	21 16 28.2	-2.1
ILAR	**Eielson Array**	**44.96**	**36**	P	P	21 16 31.4	+0.8
	comp=Z,0.4nm,0.7s,mb2.9,baz=267,slow=7.2,SNR=4.5						
TKM2	**Tokmak 2**	**45.08**	**292**	*e*P	P	21 16 32.5	+0.6
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.1						
TKM2	**Tokmak 2**	**45.08**	**292**	*e*P	P	21 16 32.5	+0.6
	comp=Z,3.1nm,0.3s,mb4.1						
UCH	**Uchtor**	**46.09**	**292**	*e*P	P	21 16 39.9	+0.1
EKS2	**Erkin-Say**	**46.41**	**292**	*e*P	P	21 16 43.3	+1.0
	comp=Z,1.4nm,0.6s,mb3.5						
ABKAR	**Akbulak array**	**52.34**	**306**	*e*P	P	21 17 26.5	-0.3
	comp=Z,1.8nm,0.6s,mb3.7						
KBL	**Kabul**	**53.55**	**285**	*e*P	P	21 17 35.8	0.0
KBL				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.5						
KBL	**Kabul**	**53.55**	**285**	*e*P	P	21 17 35.8	0.0
	comp=Z,1.4nm,0.7s,mb3.6						
ARCES	**ARCESS Array B**	**57.06**	**337**	P	P	21 18 00.6	+0.3
	comp=Z,1.3nm,0.7s,mb3.7,baz=27,slow=8.3,SNR=3.0						
ARCES	**ARCESS Array B**	**57.06**	**337**	P	P	21 18 00.6	+0.3
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
JOF	**Joensuu**	**59.19**	**329**	*e*P	P	21 18 14.0	-1.0
JOF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
JOF	**Joensuu**	**59.19**	**329**	*e*p	P	21 18 14.0	-1.0
	comp=Z,1.5nm,0.6s,mb3.8						
KAF	**Kangasniemi**	**61.51**	**330**	*e*P	P	21 18 29.8	-0.9
KAF				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.6						
KAF	**Kangasniemi**	**61.51**	**330**	*e*p	P	21 18 29.8	-0.9
	comp=Z,1.0nm,0.6s,mb3.6						
FINES	**FINESS Array B**	**62.03**	**330**	P	P	21 18 34.3	+0.1
	comp=Z,1.5nm,0.6s,mb3.8,baz=75,slow=7.6,SNR=13						
FINES	**FINESS Array B**	**62.03**	**330**	P	P	21 18 34.3	+0.1
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
PALK	**Pallekele**	**62.31**	**252**	P	P	21 18 37.6	+0.9
NB2	**NORSAR Subarra**	**67.28**	**335**	P	P	21 19 08.2	+0.2
	comp=Z,0.5nm,0.4s,mb3.5,baz=37,slow=6.5						
NOA	**NORSAR Array B**	**67.28**	**335**	P	P	21 19 07.5	-0.4
	comp=Z,0.7nm,0.7s,mb3.4,baz=41,slow=6.4,SNR=3.8						
NOA	**NORSAR Array B**	**67.28**	**335**	P	P	21 19 07.5	-0.5
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**67.90**	**320**	P	P	21 19 11.3	-0.7
	comp=Z,0.7nm,0.4s,mb3.6,baz=44,slow=5.9,SNR=4.8						
AKASG	**Malin Array Be**	**67.90**	**320**	P	P	21 19 11.4	-0.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
PDAR	**Pinedale Array**	**74.27**	**45**	P	P	21 19 52.1	+1.9
	comp=Z,0.3nm,0.6s,mb3.1,baz=277,slow=5.1,SNR=3.7						

*ISCJB **23** 21:11:49.9±0.5, 40°.54N±0°.02×41°.60E±0°.07, h12km±7km, Error ellipse: s-maj=9.0km s-min=3.7km az=12.4*
*DDA **23** 21:11:49.5, 40°.58N×41°.42E, h7km±2km, Md2.9*
*ISK **23** 21:11:49.1, 40°.56N×41°.57E, h10km, ML2.7*
*CSEM **23** 21:11:49.7±0.1, 40°.52N×41°.59E, h12km, MD2.9, Error ellipse: s-maj=2.2km s-min=1.5km az=111.0*

ISC 23 21:11:50.4±0.5, 40°.54N±0°.03×41°.61E±0°.07, h15km±6km, n23, σ0°.71/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDEM	**Demirkent**	**0.37**	**17**	*i*P	Pg	21 11 57.8	-0.2
DDEM				*i*S	Sg	21 12 04.1	+1.0
DDEM	**Demirkent**	**0.37**	**17**	*i*P	Pg	21 11 57.8	-0.2
DDEM				*i*S	Sg	21 12 04.1	+1.0
DBAD	**Bademkaya**	**0.49**	**8**	*i*P	Pg	21 11 59.9	-0.2
DBAD				*i*S	Sg	21 12 07.2	+0.6
DBAD	**Bademkaya**	**0.49**	**8**	*i*P	Pg	21 11 59.9	-0.2
DBAD				*i*S	Sg	21 12 07.2	+0.6
DAGI	**Agillar**	**0.59**	**23**	*i*P	Pg	21 12 01.8	-0.2
DAGI				*i*S	Sg	21 12 10.7	+0.9
ERZM	**Erzurum**	**0.66**	**196**	*i*P	Pg	21 12 02.4	-0.9
ERZM				*i*S	Sg	21 12 12.9	+0.9
ERZM	**Erzurum**	**0.66**	**196**	*i*P	Pg	21 12 02.4	-0.9
ERZM				*i*S	Sg	21 12 12.9	+0.9
EZM	**Erzurum**	**0.66**	**196**	PG	Pg	21 12 02.4	-0.9
EZM				*e*SG	Sg	21 12 12.3	+0.3
ARTV	**Artvin**	**0.69**	**21**	*i*P	Pg	21 12 03.5	-0.5
ARTV				*i*S	Sg	21 12 13.6	+0.5
ARTV	**Artvin**	**0.69**	**21**	*i*P	Pg	21 12 03.5	-0.5
ARTV				*i*S	Sg	21 12 13.6	+0.5
BCA	**Borcka**	**0.91**	**1**	*e*PG	Pg	21 12 07.0	-1.1
BCA				*e*SG	Sg	21 12 19.3	-0.7
BCA	**Borcka**	**0.91**	**1**	*e*Pg	Pg	21 12 07.0	-1.0
BCA				*e*Sg	Sg	21 12 19.3	-0.6
KARS	**Kars**	**1.13**	**85**	*e*PN	Pg	21 12 11.7	-0.4
AGRB	**Hanur-Agry**	**1.43**	**132**	*e*PN	Pn	21 12 16.0	+0.1
AGRB	**Hanur-Agry**	**1.43**	**132**	*e*Pn	Pn	21 12 16.0	+0.1
MACK	**Trabzon**	**1.45**	**287**	*i*P	Pn	21 12 16.1	0.0
MACK				*i*S	Sn	21 12 34.0	-0.9
MACK	**Trabzon**	**1.45**	**287**	*i*P	Pn	21 12 16.1	0.0
MACK				*i*S	Sn	21 12 34.0	-0.9
KTUT	**Trabzon**	**1.47**	**288**	*e*PN	Pn	21 12 15.7	-0.6
KTUT	**Trabzon**	**1.47**	**288**	*e*Pn	Pn	21 12 15.7	-0.6
GUMT	**Gumushane**	**1.62**	**268**	*e*PN	Pn	21 12 18.3	-0.2
GUMT	**Gumushane**	**1.62**	**268**	*e*Pn	Pn	21 12 18.3	-0.2
KELT	**Kelkit**	**1.84**	**259**	*i*P	Pn	21 12 22.8	+1.4
KELT				*i*S	Sn	21 12 45.5	+1.1
KELT	**Kelkit**	**1.84**	**259**	*i*P	Pn	21 12 22.8	+1.4
KELT				*i*S	Sn	21 12 45.5	+1.1

IDC 23 21:30:11.6±6.5, 29°.24S×179°.64W, h0km, mb3.8/2, mb1 3.9/2, mb1mx3.7/13, mbtmp3.8/2, Error ellipse: s-maj=355.6km s-min=85.7km az=158.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**33.37**	**256**	P	P	21 36 51.5	-0.2
	2.1nm,0.8s,baz=80,slow=11,SNR=2.9						
ASAR	**Alice Springs**	**41.76**	**266**	P	P	21 38 02.9	+0.1
	0.4nm,0.6s,baz=101,slow=7.4,SNR=5.5						
FINES	**FINESS Array B**	**143.57**	**339**	PKP	PKPdf	21 49 47.1	-0.6
	0.6nm,0.3s,baz=38,slow=3.7,SNR=10						

*ATH **23** 21:53:55.4, 36°.21N×21°.42E, h27km±3km, MD3.3/10*
*NEIC **23** 21:53:55.4, 36°.21N×21°.42E, h27km, MD3.3(ATH), After ATH.*
*THE **23** 21:53:56.5, 36°.52N×20°.97E, h16km±2km, ML3.6/1, Error ellipse: s-maj=6.8km s-min=1.2km az=144.0*
*CSEM **23** 21:53:57.0±1.0, 36°.23N×21°.45E, h19km, MD3.3, Error ellipse: s-maj=22.5km s-min=11.3km az=56.0*

ISC 23 21:53:55.3±1.9, 36°.2N±0°.1×21°.2E±0°.1, h21km±18km, n31, σ0°.98/39, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.79**	**30**	*e*PN	Pn	21 54 10.1	-1.2
PYL				*e*SN	Sn	21 54 20.8	-1.7
PYL	**PYLOS**	**0.79**	**30**	P	Pb	21 54 10.2	-0.2
PYL	**PYLOS**	**0.79**	**30**	P	Pb	21 54 10.2	-0.2
PYL				*e*Sn	Sn	21 54 20.8	-1.7
ITM	**Ithomi**	**1.11**	**29**	*e*Pn	Pn	21 54 15.4	-0.3
ITM				*e*Sn	Sn	21 54 31.1	+0.7
ITM	**Ithomi**	**1.11**	**29**	*e*PN	Pn	21 54 15.4	-0.3
ITM				*e*SN	Sn	21 54 31.1	+0.7
ITM	**Ithomi**	**1.11**	**29**	P	Pn	21 54 15.0	-0.7
ITM	**Ithomi**	**1.11**	**29**	P	Pn	21 54 15.0	-0.7
ITM	**Ithomi**	**1.11**	**29**	*e*Pn	Pn	21 54 15.4	-0.3
ITM				*e*Sn	Sn	21 54 31.1	+0.7
KYTH	**Kithira**	**1.45**	**87**	*e*Pn	Pn	21 54 20.4	+0.1
KYTH	**Kithira**	**1.45**	**87**	*e*PN	Pn	21 54 20.4	+0.1
KYTH	**Kithira**	**1.45**	**87**	*e*Pn	Pn	21 54 20.4	+0.1
VLI	**Veliai**	**1.46**	**69**	*e*Pn	Pn	21 54 20.2	-0.2
VLI	**Veliai**	**1.46**	**69**	*e*PN	Pn	21 54 20.2	-0.2
VLI	**Veliai**	**1.46**	**69**	*e*Pn	Pn	21 54 20.2	-0.2
VLX	**Vlachokerasia**	**1.47**	**38**	*e*PN	Pn	21 54 21.6	+1.0
VLX	**Vlachokerasia**	**1.47**	**38**	P	Pn	21 54 20.8	+0.2
VLX				S	Sn	21 54 39.7	+0.4
VLX	**Vlachokerasia**	**1.47**	**38**	P	Pn	21 54 20.8	+0.2
VLX	**Vlachokerasia**	**1.47**	**38**	*e*Pn	Pn	21 54 21.6	+1.0
VLX				S	Sn	21 54 39.7	+0.4
RLS	**Riolos of Patr**	**1.85**	**5**	*e*Pn	Pn	21 54 28.3	+2.5
RLS	**Riolos of Patr**	**1.85**	**5**	*e*PN	Pn	21 54 28.3	+2.5
RLS	**Riolos of Patr**	**1.85**	**5**	*e*Pn	Pn	21 54 28.3	+2.5
GUR	**Goura**	**1.93**	**27**	*e*PN	Pn	21 54 28.4	+1.5
GUR	**Goura**	**1.93**	**27**	*e*Pn	Pn	21 54 28.4	+1.5
DID	**Didima**	**2.06**	**50**	*e*PN	Pn	21 54 27.9	-0.7
DID	**Didima**	**2.06**	**50**	*e*Pn	Pn	21 54 27.9	-0.7
LTK	**Loutraki**	**2.27**	**37**	*e*PN	Pn	21 54 31.6	0.0
LTK	**Loutraki**	**2.27**	**37**	*e*Pn	Pn	21 54 31.6	0.0
LKR	**Lokris**	**2.81**	**29**	*e*Pn	Pn	21 54 39.5	+0.5
LKR	**Lokris**	**2.81**	**29**	*e*PN	Pn	21 54 39.5	+0.5
LKR	**Lokris**	**2.81**	**29**	*e*Pn	Pn	21 54 39.5	+0.5
STON	**Ston**	**7.19**	**339**	*e*Pn	Pn	21 55 37.9	-1.2
STON				Sn	Sn	21 56 53.1	-7.1

*CSEM **23** 22:04:03.2±0.8, 36°.30N×21°.32E, h15km, ML3.2/4, Error ellipse: s-maj=17.1km s-min=8.7km az=54.0*
*ATH **23** 22:04:04.7, 36°.30N×21°.54E, h28km±1km, MD3.6/8*
*ISCJB **23** 22:04:05.3±1.2, 36°.40N±0°.05×21°.60E±0°.09, h10km, Error ellipse: s-maj=11.0km s-min=6.7km az=152.1*
*NEIC **23** 22:04:07.7, 36°.30N×21°.54E, h29km, MD3.6(ATH), After ATH.*
*THE **23** 22:04:09.2, 36°.49N×21°.83E, h13km, ML3.2/4, Error ellipse: s-maj=1.6km s-min=0.7km az=229.0*

ISC 23 22:04:05.6±1.4, 36°.36N±0°.05×21°.52E±0°.10, h20km±7km, n48, σ1°.25/62, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.56**	**18**	*e*PN	Pg	22 04 17.5	+0.6
PYL				*e*SN	Sg	22 04 26.0	+1.5
PYL	**PYLOS**	**0.56**	**18**	P	Pg	22 04 17.1	+0.2
PYL	**PYLOS**	**0.56**	**18**	P	Pg	22 04 17.1	+0.2
PYL	**PYLOS**	**0.56**	**18**	*e*Pn	Pg	22 04 17.5	+0.6
ITM	**Ithomi**	**0.88**	**22**	*e*Pn	Pb	22 04 22.4	+0.2
ITM				*e*Sn	Sn	22 04 36.2	+1.1
ITM	**Ithomi**	**0.88**	**22**	*e*PN	Pb	22 04 22.4	+0.2
ITM				*e*SN	Sn	22 04 36.2	+1.1
ITM	**Ithomi**	**0.88**	**22**	P	Pb	22 04 22.4	+0.2
ITM	**Ithomi**	**0.88**	**22**	P	Pb	22 04 22.4	+0.2
ITM				*e*Sn	Sn	22 04 36.2	+1.1
VLI	**Veliai**	**1.20**	**72**	*e*Pn	Pn	22 04 27.5	+0.3
VLI				*e*Sn	Sn	22 04 43.9	+1.0
VLI	**Veliai**	**1.20**	**72**	*e*PN	Pn	22 04 27.5	+0.3
VLI				*e*SN	Sn	22 04 43.9	+1.0
VLI	**Veliai**	**1.20**	**72**	*e*Pn	Pn	22 04 27.5	+0.3
VLI				*e*Sn	Sn	22 04 43.9	+1.0
VLX	**Vlachokerasia**	**1.22**	**34**	*e*PN	Pn	22 04 29.0	+1.5
VLX	**Vlachokerasia**	**1.22**	**34**	P	Pn	22 04 27.5	0.0
VLX				S	Sb	22 04 41.5	-1.8
VLX	**Vlachokerasia**	**1.22**	**34**	P	Pn	22 04 27.5	0.0
VLX	**Vlachokerasia**	**1.22**	**34**	*e*Pn	Pn	22 04 29.0	+1.5
KYTH	**Kithira**	**1.23**	**93**	*e*Pn	Pn	22 04 27.6	0.0
KYTH	**Kithira**	**1.23**	**93**	*e*PN	Pn	22 04 27.6	0.0
KYTH	**Kithira**	**1.23**	**93**	*e*Pn	Pn	22 04 27.6	0.0
RLS	**Riolos of Patr**	**1.69**	**359**	*e*Pb	Pb	22 04 35.1	-1.0
RLS	**Riolos of Patr**	**1.69**	**359**	*e*PB	Pb	22 04 35.1	-1.0
RLS	**Riolos of Patr**	**1.69**	**359**	*e*Pb	Pb	22 04 35.1	-1.0
GUR	**Goura**	**1.70**	**22**	*e*PB	Pn	22 04 35.0	+0.8
GUR	**Goura**	**1.70**	**22**	P	Pn	22 04 35.0	+0.8
GUR				S	Sn	22 04 55.2	-0.2
GUR	**Goura**	**1.70**	**22**	P	Pn	22 04 35.0	+0.8
GUR				S	Sn	22 04 55.2	-0.2
DID	**Didima**	**1.79**	**50**	*e*PB	Pb	22 04 35.2	-2.5
DID	**Didima**	**1.79**	**50**	P	Pn	22 04 35.3	-0.1
DID				S	Sn	22 04 55.3	-2.2
DID	**Didima**	**1.79**	**50**	P	Pn	22 04 35.3	-0.1
LAKA	**Lakka**	**1.91**	**11**	P	Pn	22 04 38.3	+1.3
LAKA				S	Sn	22 05 01.4	+0.9
LAKA	**Lakka**	**1.91**	**11**	P	Pn	22 04 38.3	+1.3
LAKA				S	Sn	22 05 01.4	+0.9
VLS	**Valsamata**	**1.96**	**338**	P	Pn	22 04 45.2	+7.5
EFP	**Efpalio**	**2.08**	**8**	*e*PB	Pb	22 04 41.0	-1.7
EFP	**Efpalio**	**2.08**	**8**	*e*Pb	Pb	22 04 41.0	-1.7
VLY	**Voula,Athens**	**2.35**	**50**	*e*Pn	Pn	22 04 43.9	+0.8
VLY	**Voula,Athens**	**2.35**	**50**	*e*PN	Pn	22 04 43.9	+0.8
VLY	**Voula,Athens**	**2.35**	**50

baz=218,slow=22
ARA0 ARCESS Array S 2.95 35 *e*P **Pn 22 05 37.1 +0.8**
ARA0 *e*S **Sn 22 06 12.4 0.0**
ARA0 ARCESS Array S 2.95 35 Pn **Pn 22 05 37.2 +0.8**
baz=210,slow=14,SNR=50
ARA0 S **Sn 22 06 12.4 0.0**
ARCES ARCESS Array B 2.95 35 Pn **Pn 22 05 37.1 +0.8**
comp=Z,0.7nm,0.3s,baz=217,slow=12,SNR=32
ARCES Sn **Sn 22 06 13.7 +1.3**
comp=Z,1.8nm,0.3s,baz=218,slow=22,SNR=7.1
UMAU Umeaa 3.34 180 *e*P **Pn 22 05 42.5 +0.7**
UMAU Umeaa 3.34 180 P **Pn 22 05 42.5 +0.7**
BREU Bredtraesk 3.44 195 *e*P **Pn 22 05 43.9 +0.6**
BREU Bredtraesk 3.44 195 P **Pn 22 05 43.8 +0.6**
HUSU Husum 3.93 189 *e*P **Pn 22 05 50.9 +1.0**
HUSU Husum 3.93 189 P **Pn 22 05 50.9 +1.0**
NSS Namsos 4.46 237 *e*Sg **Sg 22 07 07.6 -4.0**
NSS Namsos 4.46 237 *e*SG **Sg 22 07 07.6 -4.0**
NOD Norderasen 4.49 215 *e*P **Pn 22 05 58.0 +0.4**
FIA0 FINESS Array S 6.25 155 Pn **Pn 22 06 21.9 +0.2**
baz=347,slow=16
FIA0 Sn **Sn 22 07 30.9 -2.9**
baz=346,slow=28
FIA0 Lg 22 08 02.3
baz=341,slow=37
FIA0 FINESS Array S 6.25 155 *e*P **Pn 22 06 21.9 +0.2**
FIA0 *e*S **Sn 22 07 30.9 -2.9**
FIA0 *e*SG **Sg 22 08 02.3 -6.6**
FINES FINESS Array B 6.25 155 Pn **Pn 22 06 21.9 +0.1**
comp=Z,0.2nm,0.3s,baz=347,slow=13,SNR=8.4
FINES Sn **Sn 22 07 30.4 -3.3**
comp=Z,0.3nm,0.3s,baz=340,slow=22,SNR=7.4
FINES Lg 22 08 00.5
comp=Z,0.5nm,0.3s,baz=343,slow=28,SNR=6.8
NB2 NORSAR Subarra 7.43 218 Pn **Pn 22 06 37.8 -0.2**
baz=27,slow=14
NB2 Sn **Sn 22 07 58.4 -4.5**
NB2 NORSAR Subarra 7.43 218 *e*P **Pn 22 06 37.8 -0.2**
NB2 *e*S **Sn 22 07 58.4 -4.5**
NB2 NORSAR Subarra 7.43 218 P **Pn 22 06 37.7 -0.3**
NB2 S **Sn 22 07 58.3 -4.6**
NOA NORSAR Array B 7.43 218 Pn **Pn 22 06 38.1 +0.1**
comp=Z,0.1nm,0.3s,baz=31,slow=12,SNR=3.7
NOA Sn **Sn 22 07 59.9 -2.9**
comp=Z,0.2nm,0.3s,baz=32,slow=22,SNR=3.3
HFS Hagfors 7.74 207 Pn **Pn 22 06 41.5 -0.7**
baz=24,slow=12
HFS Sn **Sn 22 08 06.0 -4.4**
baz=20,slow=28
HFS Hagfors 7.74 207 Pn **Pn 22 06 41.0 -1.2**
comp=Z,0.2nm,0.3s,baz=25,slow=13,SNR=10
HFS Sn **Sn 22 08 06.4 -4.0**
comp=Z,0.2nm,0.3s,baz=22,slow=24,SNR=7.6
HFS Lg 22 08 52.7
comp=Z,0.2nm,0.3s,baz=17,slow=30,SNR=3.8
HFS Hagfors 7.74 207 *e*P **Pn 22 06 41.5 -0.7**
HFS *e*S **Sn 22 08 06.0 -4.4**
HFS Hagfors 7.74 207 P **Pn 22 06 41.5 -0.7**
HFS Sn **Sn 22 08 06.0 -4.4**
baz=20,slow=25,SNR=50

NIED ***23*** *22:10:00, 37.°60N×143.°00E, h17km, Mw3.7 Best double couple: M0=3.77000×10^14 NP1:φs=10.00000°, δ67.00000°, λ89.00000°. NP2:φs=194.00000°, δ23.00000°, λ93.00000°.*
IDC ***23*** *22:10:50.1±3.9, 37.°61N×143.°23E, h0km, mb3.8/5, mb1 3.7/8, mb1mx3.6/25, mbtmp3.8/8, ML3.5/3, MS3.0/1, Ms1 3.0/1, ms1mx2.5/23, Error ellipse: s-maj=76.8km s-min=29.9km az=113.0*
ISCJB ***23*** *22:10:51.9±1.0, 37.°61N±0.°04×143.°19E±0.°08, h41km±8km, mb4.1/12, Error ellipse: s-maj=10.4km s-min=5.9km az=11.3*
NEIC ***23*** *22:10:51.7±1.0, 37.°44N×143.°46E, h35km, mb4.6/6, MW3.7(NIED), Error ellipse: s-maj=18.8km s-min=12.0km az=114.0*
JMA ***23*** *22:10:52.9±0.2, 37.°57N×143.°05E, h45km, M3.6*
ISC 23 22:10:54.0±0.9, 37.°61N±0.°04×143.°12E±0.°08, h38km±8km, n35, σ1°30/43, mb4.1/12, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**1.63**	**302**	P	**Pn**	**22 11 19.8**	**-0.4**
JIO				*e*S	**Sn**	**22 11 39.3**	**-0.7**
JFK	**Kawauchi**	**1.80**	**263**	*e*S	**Sn**	**22 11 42.5**	**-1.7**
JMM	**Marumori**	**1.86**	**279**	P	**Pn**	**22 11 22.4**	**-1.0**
JMM				*e*S	**Sn**	**22 11 43.8**	**-1.8**
JMK	**Ichinoseki**	**2.01**	**312**	P	**Pn**	**22 11 25.1**	**-0.3**
JMK				*e*S	**Sn**	**22 11 48.9**	**-0.3**
JOM	**Ohasama**	**2.35**	**323**	P	**Pn**	**22 11 30.1**	**+0.1**
JOM				*e*S	**Sn**	**22 11 57.9**	**+0.3**
JYK	**Kaneyama**	**2.54**	**302**	P	**Pn**	**22 11 33.0**	**+0.4**
JANG	**Nango**	**3.03**	**336**	P	**Pn**	**22 11 39.0**	**-0.4**
JANG				*e*S	**Sn**	**22 12 13.8**	**-0.6**
JAG	**Ashikaga**	**3.16**	**249**	P	**Pn**	**22 11 41.1**	**-0.1**
JAW	**Awa shima**	**3.17**	**287**	P	**Pn**	**22 11 42.2**	**+0.9**
BSO1	**Boso 1**	**3.42**	**211**	P	**Pn**	**22 11 43.7**	**-1.1**
JRY	**Ryogami san**	**3.74**	**246**	P	**Pn**	**22 11 49.2**	**0.0**
JOD2	**Odawara 2**	**4.00**	**235**	P	**Pn**	**22 11 52.5**	**-0.3**
MJAR	**Matsushiro Arr**	**4.07**	**256**	Pn	**Pn**	**22 11 54.9**	**+1.2**
2.5nm,0.3s,baz=83,slow=15,SNR=21							
MAJO	**Matsushiro**	**4.07**	**256**	*e*Pn	**Pn**	**22 11 55.3**	**+1.6**
MAJO				*e*Sn	**Sn**	**22 12 35.1**	**-5.0**
MAT	**Matsushiro**	**4.07**	**256**	P	**Pn**	**22 11 54.9**	**+1.2**
MAT				*e*S	**Sn**	**22 12 42.7**	**+2.6**
JHJ	**Hachijo jima 2**	**5.24**	**212**	Pn	**Pn**	**22 12 11.0**	**+1.2**
10nm,0.3s,baz=56,slow=18,SNR=5.2							
JHJ				Sn	**Sn**	**22 13 03.7**	**-5.3**
22nm,0.3s,baz=70,slow=23,SNR=8.7							
ASAJ	**Asahikawa**	**6.51**	**357**	Pn	**Pn**	**22 12 29.2**	**+2.0**
0.6nm,0.3s,baz=210,slow=16,SNR=4.3							
ASAJ				Sn	**Sn**	**22 13 39.4**	**-0.8**
0.6nm,0.3s,baz=308,slow=17,SNR=2.3							
YSS	**Yuzh-Sakhalins**	**9.34**	**358**	Pn	**Pn**	**22 13 05.3**	**-0.7**
CBIJ	**Chichi jima**	**10.51**	**185**	LR	LR	22 15 51.2	
comp=Z,96nm,21.9s,baz=144,slow=29							
MDJ	**Mudanjiang**	**12.36**	**309**	*e*Pn	**Pn**	**22 13 48.0**	**+0.7**
TATO	**Taipei**	**22.30**	**242**	*e*P	**P**	**22 15 46.6**	**-1.5**
100nm,1.6s,mb5.0							
TPUB	**Ta-pu**	**23.98**	**240**	*e*P	**P**	**22 16 04.6**	**-0.4**
5.6nm,0.4s,mb4.3							
YAK	**Yakutsk**	**25.83**	**345**	P	**P**	**22 16 18.9**	**-2.5**
SONM	**Songino Array**	**28.61**	**303**	P	**P**	**22 16 48.8**	**+2.4**
0.8nm,0.9s,mb3.5,baz=111,slow=8.3,SNR=5.8							
ZALV	**Zalesovo Beam**	**42.54**	**312**	P	**P**	**22 18 47.5**	**+1.9**
0.5nm,0.4s,mb3.6,baz=98,slow=5.9,SNR=3.6							
MKAR	**Makanchi Array**	**44.97**	**302**	P	**P**	**22 19 07.5**	**+2.3**
0.4nm,0.2s,mb3.8,baz=81,slow=10.0,SNR=5.4							
KURK	**Kurchatov**	**46.65**	**308**	*e*P	**P**	**22 19 19.9**	**+1.4**
1.5nm,0.6s,mb4.1							
KULM	**Kulim**	**50.28**	**241**	*e*P	**P**	**22 19 45.7**	**-1.1**
3.8nm,0.8s,mb4.5							
TKM2	**Tokmak 2**	**50.55**	**298**	*e*P	**P**	**22 19 48.1**	**-0.4**
BVAR	**Borovoye Array**	**51.19**	**312**	P	**P**	**22 19 54.9**	**+1.7**
0.6nm,0.6s,mb3.7,baz=111,slow=12,SNR=4.2							
WRAB	**Tennant Creek**	**57.83**	**190**	*e*P	**P**	**22 20 39.3**	**-2.2**
12nm,1.2s,mb4.8							
PALK	**Pallekele**	**63.82**	**258**	*e*P	**P**	**22 21 20.6**	**-2.0**
8.0nm,0.8s,mb4.8							
FINES	**FINESS Array B**	**68.94**	**333**	P	**P**	**22 21 56.4**	**+1.8**
1.3nm,0.7s,mb4.0,baz=43,slow=3.6,SNR=4.6							
FINES	**FINESS Array B**	**68.94**	**333**	P	**P**	**22 21 56.4**	**+1.8**
FCC	**Fort Churchill**	**72.88**	**27**	*e*P	**P**	**22 22 16.7**	**-1.9**
0.2nm,0.9s,mb3.0							

ISCJB ***23*** *22:27:39.9±0.4, 24.°14N±0.°01×121.°79E±0.°03, h5km±2km, Error ellipse: s-maj=4.1km s-min=2.1km az=16.4*
TAP ***23*** *22:27:40.2, 24.°16N×121.°74E, h12km, ML3.9, B*
NEIC ***23*** *22:27:40.1±1.6, 24.°13N×121.°75E, h10km, Error ellipse: s-maj=21.3km s-min=6.8km az=93.0*
ISC 23 22:27:40.1±0.4, 24.°13N±0.°01×121.°80E±0.°03, h3km±3km, n57, σ0°81/94, 13C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.19**	**344**	P	**Pg**	**22 27 44.0**	**+0.3**
baz=3.0							
EHP				S	**Sg**	**22 27 47.0**	**+0.7**
baz=3.0							
TWD	**Chiawan**	**0.19**	**256**	⇑*i*P	**Pg**	**22 27 43.9**	**+0.2**
baz=247							
TWD				*i* S	**Sg**	**22 27 46.6**	**+0.4**
baz=247							
NACB	**Ninganchiao**	**0.19**	**284**	*e*P	**Pg**	**22 27 43.3**	**-0.5**
NACB				*e*S	**Sg**	**22 27 46.0**	**-0.3**
HWA	**Hwalien**	**0.23**	**230**	P	**Pg**	**22 27 45.6**	**+1.0**
baz=225							
ENA	**Nanau**	**0.30**	**350**	⇑*i*P	**Pg**	**22 27 46.1**	**+0.1**
baz=1.0							
ENA				*i* S	**Sg**	**22 27 50.2**	**+0.3**
baz=1.0							
ESF	**Shoufeng Towns**	**0.37**	**226**	*e*P	**Pg**	**22 27 47.2**	**+0.1**
baz=227							
ESL	**Shilin**	**0.46**	**227**	⇑*i*P	**Pg**	**22 27 49.1**	**+0.2**
baz=227							
ESL				*e*S	**Sg**	**22 27 56.3**	**+1.5**
baz=227							
TEGC	**Jichi Village**	**0.48**	**210**	*e*P	**Pg**	**22 27 49.5**	**+0.2**
baz=196							
TEGC				*e*S	**Sg**	**22 27 59.3**	**+3.8**
baz=196							
TWC	**Suao**	**0.48**	**6**	*i* P	**Pg**	**22 27 49.5**	**+0.2**
baz=6.0							
TWC				S	**Sg**	**22 27 56.3**	**+0.7**
baz=6.0							
WHF	**Hehuan Shan**	**0.49**	**272**	⇑*i*P	**Pg**	**22 27 49.0**	**-0.4**
baz=270							
WHF				S	**Sg**	**22 27 55.1**	**-0.6**
baz=270							
NNS	**Nan Shan**	**0.50**	**309**	⇑*i*P	**Pg**	**22 27 49.2**	**-0.4**
baz=310							
NNS				S	**Sg**	**22 27 55.3**	**-0.8**
baz=310							
TWT	**Tachien**	**0.58**	**283**	⇑*i*P	**Pg**	**22 27 51.3**	**+0.1**
baz=281							
TWT				*i* S	**Sg**	**22 27 58.5**	**-0.3**
baz=281							
TWE	**Neicheng**	**0.60**	**349**	⇑*i*P	**Pg**	**22 27 51.7**	**0.0**
baz=353							
TWE				S	**Sg**	**22 27 59.6**	**+0.1**
baz=353							
ILA	**Ilan**	**0.64**	**356**	P	**Pg**	**22 27 52.5**	**+0.2**
baz=1.0							
ILA				*e*S	**Sg**	**22 28 01.6**	**+1.1**
baz=1.0							
YHNB	**Yeheng**	**0.66**	**325**	*e*P	**Pg**	**22 27 52.1**	**-0.6**
YHNB				*e*S	**Sg**	**22 27 59.9**	**-1.5**
NSK	**Sanguang**	**0.68**	**324**	⇑*i*P	**Pg**	**22 27 52.7**	**-0.3**
baz=326							
NSK				S	**Sg**	**22 28 01.2**	**-0.6**
baz=326							
EHY	**Hungye**	**0.76**	**215**	*e*P	**Pg**	**22 27 53.9**	**-0.7**
baz=222							
EHY				*e*S	**Sg**	**22 28 04.5**	**+0.1**
baz=222							
SSLB	**Suanglung**	**0.84**	**246**	*e*P	**Pg**	**22 27 55.8**	**-0.4**
SSLB				*e*S	**Sg**	**22 28 05.4**	**-1.8**
SMLT	**Sun Moon Lake**	**0.86**	**254**	⇑*i*P	**Pg**	**22 27 56.2**	**-0.3**
baz=252							
SMLT				*e*S	**Sg**	**22 28 06.5**	**-1.1**
baz=252							
YULB	**Yu-li**	**0.86**	**212**	*e*P	**Pg**	**22 27 55.5**	**-1.1**
YULB				*e*S	**Sg**	**22 28 09.1**	**+1.3**
TWA	**Mucha**	**0.87**	**347**	*e*P	**Pg**	**22 27 56.7**	**0.0**
baz=350							
NSTT	**Nanjuang**	**0.88**	**305**	⇑*i*P	**Pg**	**22 27 56.6**	**-0.4**
baz=305							
NSTT				*e*S	**Sg**	**22 28 07.5**	**-1.0**
baz=305							
TYC	**Yuchr**	**0.89**	**256**	⇑*i*P	**Pg**	**22 27 56.6**	**-0.5**
baz=254							
TYC				S	**Sg**	**22 28 07.7**	**-1.0**
baz=254							
TATO	**Taipei**	**0.89**	**342**	*e*P	**Pg**	**22 27 57.0**	**-0.2**
TATO				*e*S	**Sg**	**22 28 07.9**	**-0.8**
TWB1	**Santiao Chiao**	**0.89**	**11**	*e*P	**Pg**	**22 27 57.0**	**-0.3**
baz=7.0							
TWB1				*e*S	**Sg**	**22 28 08.8**	**0.0**
baz=7.0							
TWF1	**Yuli**	**0.90**	**211**	*e*P	**Pg**	**22 27 55.9**	**-1.4**
baz=221							
NWF	**Wu-fen Shan**	**0.94**	**359**	*e*P	**Pg**	**22 27 58.5**	**+0.4**
baz=348							
TAP1	**Taipei**	**0.94**	**345**	P	**Pg**	**22 27 58.4**	**+0.3**
baz=345							
TAP1				*e*S	**Sg**	**22 28 09.9**	**-0.4**
baz=345							
TWQ1	**Liyutan**	**0.96**	**283**	*e*P	**Pg**	**22 27 59.0**	**+0.5**
baz=284							
NSY	**Sanyi**	**0.99**	**287**	*e*P	**Pg**	**22 27 59.3**	**+0.3**
baz=287							
NCU	**National Centr**	**1.01**	**327**	*e*P	**Pg**	**22 27 59.5**	**+0.1**
baz=328							
NCU				*e*S	**Sg**	**22 28 13.6**	**+1.1**
baz=328							
HSN	**Hsinchu**	**1.01**	**312**	*e*P	**Pg**	**22 27 59.8**	**+0.4**
baz=315							
HSN				*e*S	**Sg**	**22 28 13.5**	**+0.9**
baz=315							
TCU	**Taichung**	**1.02**	**271**	P	**Pg**	**22 28 00.4**	**+0.6**
baz=271							
TCU				*e*S	**Sg**	**22 28 14.5**	**+1.4**
baz=271							
TWS1	**Kuangyinshan**	**1.03**	**340**	*e*P	**Pg**	**22 28 00.1**	**+0.3**
baz=349							
TWS1				*e*S	**Sg**	**22 28 13.7**	**+0.5**
baz=349							
WNT	**Mingjian**	**1.05**	**257**	⇑P	**Pg**	**22 28 00.7**	**+0.6**
baz=253							
WNT				*e*S	**Sg**	**22 28 15.5**	**+1.7**
baz=253							
YOJ	**Yonaguni jima**	**1.16**	**73**	*e*P	**Pg**	**22 28 02.5**	**+0.3**
baz=62							
TWY	**Chenhua**	**1.16**	**351**	*e*P	**Pg**	**22 28 01.3**	**-0.9**
baz=352							
ELDTW	**Lidau**	**1.18**	**218**	*e*P	**Pg**	**22 28 01.6**	**-1.0**
baz=205							
ELDTW				*e*S	**Sg**	**22 28 19.5**	**+1.6**
baz=205							
WGK	**Gukeng**	**1.21**	**249**	*e*P	**Pg**	**22 28 02.9**	**-0.4**
baz=249							
WGK				*e*S	**Sg**	**22 28 20.2**	**+1.1**
baz=249							
CHN4	**Tsaushan**	**1.35**	**235**	*e*P	**Pn**	**22 28 05.7**	**-0.1**
baz=236							
CHN4				*e*S	**Sg**	**22 28 23.8**	**+0.4**
baz=236							
TPUB	**Ta-pu**	**1.35**	**233**	*e*P	**Pn**	**22 28 05.2**	**-0.5**
TPUB				*e*S	**Sg**	**22 28 21.1**	**-2.3**
STYT	**Tauyuan**	**1.35**	**225**	*e*P	**Pn**	**22 28 04.4**	**-1.5**
baz=226							
CHY	**Chiayi**	**1.41**	**244**	*e*P	**Pn**	**22 28 06.4**	**-0.2**
baz=245							
CHY				*e*S	**Sb**	**22 28 26.2**	**+0.9**
baz=245							
TWG	**Pinlang**	**1.46**	**207**	*e*Pn	**Pn**	**22 28 06.7**	**-0.7**
TWG				*e*Sn	**Sn**	**22 28 25.1**	**-1.9**
TWK	**Hsinying**	**1.48**	**235**	*e*P	**Pn**	**22 28 07.3**	**-0.2**
baz=235							
TWK				*e*S	**Sn**	**22 28 27.8**	**+0.4**
baz=235							
CHN1	**Nanshi**	**1.50**	**231**	⇑*i*P	**Pn**	**22 28 08.0**	**+0.2**
baz=232							
CHN1				*e*S	**Sn**	**22 28 28.8**	**+1.0**
baz=232							
WSF	**Szhu**	**1.52**	**252**	*e*P	**Pn**	**22 28 08.9**	**+0.7**
baz=253							
SGST	**Jiashian**	**1.52**	**227**	*e*P	**Pn**	**22 28 08.5**	**+0.3**
baz=229							
SGST				*e*S	**Sn**	**22 28 30.1**	**+1.6**
baz=229							
ECL	**Taimali**	**1.71**	**207**	*e*P	**Pn**	**22 28 09.4**	**-1.4**
baz=194							
TWM1	**Shoushan**	**1.81**	**224**	*e*P	**Pn**	**22 28 12.1**	**0.0**
baz=225							
EAST	**Anshuo**	**1.94**	**207**	*e*P	**Pn**	**22 28 13.8**	**-0.2**
baz=196							
SCZT	**Fangliau**	**2.06**	**212**	*e*P	**Pn**	**22 28 15.0**	**-0.5**
baz=197							
PNG	**Penghu**	**2.13**	**255**	*e*P	**Pn**	**22 28 15.1**	**-1.4**
baz=258							
HEN	**Hengchun**	**2.33**	**205**	*e*P	**Pn**	**22 28 20.1**	**+0.9**
baz=197							
TWK1	**Hengchun**	**2.36**	**203**	*e*P	**Pn**	**22 28 19.9**	**+0.2**
baz=195							
TSEB	**Hengchuen, Pin**	**2.37**	**201**	*e*P	**Pn**	**22 28 20.6**	**+0.9**
baz=193							
KNM	**Kinmen**	**3.08**	**276**	*e*P	**Pn**	**22 28 30.8**	**+1.1**
baz=276							

ISCJB ***23*** *22:43:29.4±0.4, 24.°14N±0.°02×121.°79E±0.°02, h6km±2km, Error ellipse: s-maj=3.2km s-min=2.2km az=37.9*
TAP ***23*** *22:43:29.6, 24.°16N×121.°74E, h12km, ML3.5, B*
JMA ***23*** *22:43:29.1±0.4, 24.°17N×121.°58E, h56km, M2.6*
NEIC ***23*** *22:43:30.0±1.5, 24.°16N×121.°70E, h10km, Error ellipse: s-maj=20.5km s-min=6.2km az=94.0*
ISC 23 22:43:29.7±0.3, 24.°14N±0.°02×121.°78E±0.°02, h8km±3km, n56, σ0°83/91, 9C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.17**	**281**	*e*P	**Pg**	**22 43 32.8**	**-0.5**
NACB				*e*S	**Sg**	**22 43 35.6**	**0.0**
EHP	**Heping Village**	**0.17**	**349**	P	**Pg**	**22 43 33.4**	**+0.1**
baz=2.0							
EHP				S	**Sg**	**22 43 36.3**	**+0.6**
baz=2.0							
TWD	**Chiawan**	**0.18**	**250**	⇑*i*P	**Pg**	**22 43 33.4**	**0.0**
baz=248							
TWD				*i* S	**Sg**	**22 43 36.2**	**+0.4**
baz=248							
HWA	**Hwalien**	**0.23**	**224**	P	**Pg**	**22 43 34.7**	**+0.5**
baz=226							
ENA	**Nanau**	**0.29**	**353**	⇑*i*P	**Pg**	**22 43 35.5**	**+0.1**
baz=1.0							
ENA				*i* S	**Sg**	**22 43 39.6**	**+0.3**
baz=1.0							
ESF	**Shoufeng Towns**	**0.36**	**223**	*e*P	**Pg**	**22 43 37.8**	**+1.0**
baz=227							
ESL	**Shilin**	**0.45**	**224**	⇑*i*P	**Pg**	**22 43 38.5**	**0.0**
baz=228							
ESL				S	**Sg**	**22 43 45.3**	**+0.8**
baz=228							
WHF	**Hehuan Shan**	**0.47**	**271**	⇑*i*P	**Pg**	**22 43 38.5**	**-0.3**
baz=270							
WHF				*i* S	**Sg**	**22 43 45.0**	**0.0**
baz=270							
TWC	**Suao**	**0.47**	**8**	⇑*i*P	**Pg**	**22 43 39.0**	**+0.2**
baz=6.0							
TWC				*i* S	**Sg**	**22 43 45.8**	**+0.8**
baz=6.0							
NNS	**Nan Shan**	**0.47**	**309**	⇑*i*P	**Pg**	**22 43 38.7**	**-0.3**
baz=311							
TWT	**Tachien**	**0.56**	**282**	*i* P	**Pg**	**22 43 40.6**	**0.0**
baz=281							
TWT				S	**Sg**	**22 43 48.1**	**+0.3**
baz=281							
TWE	**Neicheng**	**0.59**	**350**	⇑*i*P	**Pg**	**22 43 41.1**	**+0.1**
baz=353							
TWE				*i* S	**Sg**	**22 43 49.1**	**+0.4**
baz=353							
ILA	**Ilan**	**0.62**	**358**	*e*P	**Pg**	**22 43 41.5**	**-0.3**
baz=351							
YHNB	**Yeheng**	**0.64**	**325**	*e*P	**Pg**	**22 43 41.4**	**-0.7**
YHNB				*e*S	**Sg**	**22 43 50.4**	**-0.1**
NSK	**Sanguang**	**0.66**	**324**	⇑*i*P	**Pg**	**22 43 42.1**	**-0.3**
baz=326							
NSK				*i* S	**Sg**	**22 43 50.8**	**-0.1**
baz=326							
EHY	**Hungye**	**0.76**	**213**	*e*P	**Pg**	**22 43 43.6**	**-0.7**
baz=212							
SSLB	**Suanglung**	**0.83**	**245**	*e*P	**Pg**	**22 43 45.1**	**-0.6**
SSLB				*e*S	**Sg**	**22 43 54.0**	**-2.6**
SMLT	**Sun Moon Lake**	**0.84**	**252**	⇑*i*P	**Pg**	**22 43 45.7**	**-0.3**
baz=252							
SMLT				*e*S	**Sg**	**22 43 56.8**	**-0.2**
baz=252							
TWA	**Mucha**	**0.85**	**348**	*e*P	**Pg**	**22 43 45.7**	**-0.4**
baz=350							
NSTT	**Nanjuang**	**0.86**	**305**	P	**Pg**	**22 43 45.9**	**-0.4**
baz=305							
NSTT				*e*S	**Sg**	**22 43 56.5**	**-0.9**
baz=305							
YULB	**Yu-li**	**0.87**	**211**	*e*P	**Pg**	**22 43 46.4**	**0.0**
YULB				*e*S	**Sg**	**22 43 59.6**	**+2.0**
TATO	**Taipei**	**0.87**	**342**	*e*P	**Pg**	**22 43 46.4**	**-0.2**
TATO				*e*S	**Sg**	**22 43 56.1**	**-1.7**
TYC	**Yuchr**	**0.87**	**254**	*i* P	**Pg**	**22 43 45.9**	**-0.6**
baz=254							
TYC				S	**Sg**	**22 43 57.0**	**-0.9**
baz=254							
TWB1	**Santiao Chiao**	**0.88**	**13**	*e*P	**Pg**	**22 43 46.5**	**-0.2**
baz=7.0							
TWB1				*e*S	**Sg**	**22 43 58.1**	**-0.2**
baz=7.0							
TWF1	**Yuli**	**0.90**	**209**	*e*P	**Pg**	**22 43 45.7**	**-1.3**
baz=221							
TAP1	**Taipei**	**0.92**	**346**	*e*P	**Pg**	**22 43 45.3**	**-2.2**
baz=345							
TAP1				*e*S	**Sg**	**22 43 59.5**	**0.0**
baz=345							
NWF	**Wu-fen Shan**	**0.93**	**0**	*e*P	**Pg**	**22 43 47.5**	**0.0**
baz=348							
TWQ1	**Liyutan**	**0.94**	**283**	*e*P	**Pg**	**22 43 48.2**	**+0.4**
baz=293							
TWQ1				*e*S	**Sg**	**22 44 00.8**	**+0.8**
baz=293							
NSY	**Sanyi**	**0.97**	**287**	*e*P	**Pg**	**22 43 48.5**	**+0.2**
baz=287							
NCU	**National Centr**	**0.98**	**327**	*e*P	**Pg**	**22 43 49.5**	**+0.8**
baz=328							
HSN	**Hsinchu**	**0.99**	**312**	*e*P	**Pg**	**22 43 49.1**	**+0.4**
baz=315							
HSN				*e*S	**Sg**	**22 44 04.0**	**+2.5**
baz=315							
TCU	**Taichung**	**1.01**	**271**	*e*P	**Pg**	**22 43 49.2**	**+0.1**
baz=271							
TCU				*e*S	**Sg**	**22 44 04.2**	**+2.1**
baz=271							
TWS1	**Kuangyinshan**	**1.01**	**341**	*e*P	**Pg**	**22 43 49.2**	**0.0**
baz=349							
TWS1				*e*S	**Sg**	**22 44 03.6**	**+1.4**
baz=349							
TWY	**Chenhua**	**1.14**	**352**	*e*P	**Pg**	**22 43 51.1**	**-0.6**
baz=338							
CHN5	**Tsauling**	**1.14**	**242**	*e*P	**Pg**	**22 43 51.4**	**-0.3**
baz=243							
YOJ	**Yonaguni jima**	**1.17**	**74**	P	**Pb**	**22 43 51.9**	**-0.3**
YOJ				*e*S	**Sg**	**22 44 09.0**	**+1.6**
YOJ	**Yonaguni jima**	**1.17**	**74**	*e*P	**Pb**	**22 43 51.1**	**-1.2**
baz=82							
YOJ				*e*S	**Sg**	**22 44 08.2**	**+0.8**
baz=82							
ELDTW	**Lidau**	**1.18**	**216**	*e*P	**Pb**	**22 43 50.9**	**-1.4**
baz=206							
ELDTW				*e*S	**Sg**	**22 44 08.6**	**+1.0**
baz=206							
WGK	**Gukeng**	**1.20**	**248**	*e*P	**Pb**	**22 43 52.5**	**-0.2**
baz=249							
WGK				*e*S	**Sb**	**22 44 10.1**	**+1.6**
baz=249							
CHN4	**Tsaushan**	**1.34**	**234**	*e*P	**Pn**	**22 43 54.8**	**0.0**
baz=235							
CHN4				*e*S	**Sb**	**22 44 13.6**	**+1.1**
baz=235							
TPUB	**Ta-pu**	**1.34**	**232**	*e*P	**Pn**	**22 43 54.3**	**-0.5**
TPUB				*e*S	**Sb**	**22 44 13.2**

JIJ	**Ishigaki jima**	**2.17**	**84**	P	**Pn**	**22 44 05.7**	**-0.5**
JIJ				*e*S	**Sn**	**22 44 32.9**	**-0.4**
JTJ	**Tarama**	**2.71**	**79**	P	**Pn**	**22 44 14.2**	**+0.5**
JTJ				*e*S	**Sn**	**22 44 48.1**	**+1.4**

*CSEM **23** 22:56:35.4, 38°.39N×26°.98W, h6km, ML2.5, After PDA*
PDA 23 22:56:35.4±1.4, 38°.39N×26°.98W, h6km±10km, MD3.5, ML2.5, Error ellipse: s-maj=6.1km s-min=5.6km az=38.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADH	**Angra Heroismo**	**0.33**	**323**	*i* P	Pg	22 56 41.0	-0.8
ADH				*e*S	Sg	22 56 46.0	-0.2
ADH				A		22 56 46.4	
	336nm,0.1s						
PID	**Ribeirinha**	**0.90**	**274**	*e*P	Pg	22 56 49.7	-2.9
PID	**Ribeirinha**	**0.90**	**274**	*e*P	Pg	22 56 49.7	-2.9
PMAN	**Manadas**	**0.90**	**286**	*e*P	Pg	22 56 49.7	-3.0
PMAN				*e*S	Sg	22 57 00.3	-4.2
PMAN				A		22 57 02.5	
	73nm,0.1s						
PMAN	**Manadas**	**0.90**	**286**	*e*P	Pg	22 56 49.7	-3.0
PMAN				*e*S	Sg	22 57 00.3	-4.2
ROSA	**Rosais**	**1.04**	**289**	*e*P	Pg	22 56 51.4	-4.0
ROSA				*e*S	Sg	22 57 03.9	-5.0
ROSA	**Rosais**	**1.04**	**289**	*e*P	Pg	22 56 51.4	-4.0
ROSA				*e*S	Sg	22 57 03.9	-5.0
PSET	**Sete Cidades**	**1.14**	**119**	*e*P	Pg	22 56 53.5	-3.8
PSET				*e*S	Sg	22 57 06.6	-5.5
PSET				A		22 57 08.1	
	6.2nm,0.3s						
PSET	**Sete Cidades**	**1.14**	**119**	*e*P	Pg	22 56 53.5	-3.8
PSET				*e*S	Sg	22 57 06.6	-5.5
PCAN	**Candelaria**	**1.19**	**274**	*e*P	Pg	22 56 53.7	-4.4
PCAN				*e*S	Sg	22 57 07.9	-5.6
PCAN				A		22 57 09.9	
	24nm,0.2s						
PCAN	**Candelaria**	**1.19**	**274**	*e*P	Pg	22 56 53.7	-4.4
PCAN				*e*S	Sg	22 57 07.9	-5.6
GRON	**Grota Negra**	**1.30**	**118**	*e*P	Sg	22 57 14.6	-2.6
HOR	**Horta**	**1.30**	**277**	*e*P	Pn	22 57 10.0	+10
CALA	**Caldeira**	**1.36**	**279**	*e*P	Pn	22 56 57.0	-4.0
CALA				*e*S	Sb	22 57 12.2	-6.9
CALA	**Caldeira**	**1.36**	**279**	*e*P	Pn	22 56 57.0	-4.0
CALA				*e*S	Sb	22 57 12.2	-6.9
PCED	**Cedros**	**1.37**	**281**	*e*P	Pn	22 56 55.8	-5.3
PCED				*e*S	Sb	22 57 11.5	-7.8
PCED				A		22 57 13.1	
	31nm,0.2s						
PCED	**Cedros**	**1.37**	**281**	*e*P	Pn	22 56 55.8	-5.3
PCED				*e*S	Sb	22 57 11.5	-7.8
BART	**Pico Bartolome**	**1.56**	**113**	*e*P	Sn	22 57 14.3	-10
PSMA	**Santa Maria**	**2.02**	**133**	*e*S	Sn	22 57 27.4	-8.3
PSMN	**Pico do Norte,**	**2.06**	**132**	*e*S	Sn	22 57 28.4	-8.0
PSMN	**Pico do Norte,**	**2.06**	**132**	*e*S	Sn	22 57 28.4	-8.0

*ISCJB **23** 22:59:52.3±0.7, 37°.87N±0°.04×21°.55E±0°.03, h9km±5km, Error ellipse: s-maj=6.2km s-min=4.2km az=179.5*
*CSEM **23** 22:59:52.3±0.2, 37°.87N×21°.55E, h15km, MD2.8, Error ellipse: s-maj=3.5km s-min=2.7km az=179.0*
*THE **23** 22:59:52.9, 37°.88N×21°.57E, h11km±4km, ML2.9/7, Error ellipse: s-maj=4.2km s-min=0.3km az=15.0*
*ATH **23** 22:59:52.8, 37°.94N×21°.53E, h22km, MD2.8/5*
ISC 23 22:59:52.7±0.7, 37°.88N±0°.04×21°.56E±0°.03, h17km±5km, n32, σ0°.76/52, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.44**	**24**	*e*PB	**Pb**	**23 00 01.8**	**-0.3**
UPR	**University Cam**	**0.44**	**24**	P	**Pg**	**23 00 01.6**	**-0.2**
UPR				S	**Sg**	**23 00 08.0**	**+0.2**
UPR	**University Cam**	**0.44**	**24**	P	**Pg**	**23 00 01.6**	**-0.2**
UPR	**University Cam**	**0.44**	**24**	*e*Pb	**Pb**	**23 00 01.8**	**-0.3**
UPR				S	**Sg**	**23 00 08.0**	**+0.2**
LAKA	**Lakka**	**0.49**	**42**	P	**Pg**	**23 00 02.1**	**-0.5**
LAKA				S	**Sg**	**23 00 09.3**	**0.0**
LAKA	**Lakka**	**0.49**	**42**	P	**Pg**	**23 00 02.1**	**-0.5**
LAKA				S	**Sg**	**23 00 09.3**	**0.0**
EFP	**Efpalio**	**0.61**	**27**	*e*PN	**Pn**	**23 00 04.1**	**-2.5**
EFP	**Efpalio**	**0.61**	**27**	P	**Pg**	**23 00 04.3**	**-0.6**
EFP				S	**Sg**	**23 00 13.4**	**+0.3**
EFP	**Efpalio**	**0.61**	**27**	*e*Pn	**Pn**	**23 00 04.1**	**-2.5**
EFP	**Efpalio**	**0.61**	**27**	P	**Pg**	**23 00 04.3**	**-0.6**
EFP				S	**Sg**	**23 00 13.4**	**+0.3**
GUR	**Goura**	**0.62**	**84**	*e*PB	**Pb**	**23 00 04.9**	**-0.2**
GUR	**Goura**	**0.62**	**84**	P	**Pg**	**23 00 04.6**	**-0.4**
GUR				S	**Sg**	**23 00 13.7**	**+0.3**
GUR	**Goura**	**0.62**	**84**	P	**Pg**	**23 00 04.6**	**-0.4**
GUR	**Goura**	**0.62**	**84**	*e*Pb	**Pb**	**23 00 04.9**	**-0.2**
GUR				S	**Sg**	**23 00 13.7**	**+0.3**
TRIZ	**Trizonia**	**0.63**	**40**	P	**Pg**	**23 00 04.8**	**-0.4**
TRIZ				S	**Sg**	**23 00 14.2**	**+0.5**
TRIZ	**Trizonia**	**0.63**	**40**	P	**Pg**	**23 00 04.8**	**-0.4**
TRIZ				S	**Sg**	**23 00 14.2**	**+0.5**
KFL	**Anninata**	**0.65**	**291**	P	**Pg**	**23 00 05.5**	**0.0**
KFL				S	**Sg**	**23 00 15.2**	**+1.0**
KFL	**Anninata**	**0.65**	**291**	P	**Pg**	**23 00 05.5**	**0.0**
KFL				S	**Sg**	**23 00 15.2**	**+1.0**
KALE	**Kalithea**	**0.69**	**42**	P	**Pg**	**23 00 05.8**	**-0.5**
KALE				S	**Sg**	**23 00 15.9**	**+0.5**
KALE	**Kalithea**	**0.69**	**42**	P	**Pg**	**23 00 05.8**	**-0.5**
KALE				S	**Sg**	**23 00 15.9**	**+0.5**
ITM	**Ithomi**	**0.76**	**157**	*e*PN	**Pn**	**23 00 09.1**	**+0.5**
ITM	**Ithomi**	**0.76**	**157**	*e*Pn	**Pn**	**23 00 09.1**	**+0.5**
VLS	**Valsamata**	**0.82**	**292**	*e*PN	**Pn**	**23 00 07.9**	**-1.6**
VLS	**Valsamata**	**0.82**	**292**	P	**Pb**	**23 00 08.4**	**-0.1**
VLS				S	**Sb**	**23 00 20.5**	**+1.2**
VLS	**Valsamata**	**0.82**	**292**	*e*Pn	**Pn**	**23 00 07.9**	**-1.6**
VLS	**Valsamata**	**0.82**	**292**	P	**Pb**	**23 00 08.4**	**-0.1**
VLS				S	**Sb**	**23 00 20.5**	**+1.2**
VLX	**Vlachokerasia**	**0.83**	**128**	P	**Pb**	**23 00 08.1**	**-0.5**
VLX				S	**Sb**	**23 00 20.4**	**+1.0**
VLX	**Vlachokerasia**	**0.83**	**128**	P	**Pb**	**23 00 08.1**	**-0.5**
VLX				S	**Sb**	**23 00 20.4**	**+1.0**
DSF	**Desfina**	**0.93**	**55**	P	**Pb**	**23 00 10.3**	**-0.1**
DSF				S	**Sb**	**23 00 23.9**	**+1.4**
DSF	**Desfina**	**0.93**	**55**	P	**Pb**	**23 00 10.3**	**-0.1**
DSF				S	**Sb**	**23 00 23.9**	**+1.4**
EVR	**Evrytania**	**1.06**	**11**	*e*PN	**Pn**	**23 00 12.8**	**+0.1**
EVR	**Evrytania**	**1.06**	**11**	*e*Pn	**Pn**	**23 00 12.8**	**+0.1**

*NIED **23** 23:04:00, 21°.30N×120°.90E, h8km, Mw4.7 Best double couple: M0 1.38000×10^16 NP1:φs 302.00000°, δ59.00000°, λ-72.00000°. NP2:φs 90.00000°, δ35.00000°, λ-117.00000°.*
*BJI **23** 23:04:34.1, 21°.29N×121°.02E, h7km, mB4.8/29, mb4.6/44, ML4.1/2, Ms4.7/50, Ms7 4.5/45*
*IDC **23** 23:04:34.4±0.5, 21°.33N×121°.23E, h0km, mb4.5/25, mb1 4.5/25, mb1mx4.5/29, mbtmp4.5/25, MS4.2/18, Ms1 4.2/18, ms1mx4.0/33, Error ellipse: s-maj=17.5km s-min=13.2km az=67.0*
*ISCJB **23** 23:04:35.2±1.1, 21°.24N±0°.02×121°.09E±0°.03, h15km±8km, mb4.7/85, MS4.3/33, Error ellipse: s-maj=4.2km s-min=3.2km az=32.9*
*NEIC **23** 23:04:35.9±0.2, 21°.27N×121°.15E, h10km, mb4.9/31, Error ellipse: s-maj=4.5km s-min=3.6km az=99.0*
*JMA **23** 23:04:36.5±0.5, 21°.31N×120°.88E, h11km, M4.4*
*MOS **23** 23:04:40.2±0.8, 21°.30N×121°.14E, h57km, mb5.1/27, MS4.4/7, Error ellipse: s-maj=9.5km s-min=6.0km az=104.3*
*DJA **23** 23:04:45, 21°.39N×121°.21E, h94km, mb5.0/22*
*SZGRF **23** 23:04:57.5, 22°.67N×122°.04E, h33km, mb4.7, Taiwan region*
ISC 23 23:04:37.3±0.8, 21°.28N±0°.02×121°.07E±0°.02, h16km±5km, h16km±.2km: pP-P, n203, σ1°.07/223, mb4.7/85, MS4.3/33, 5C-2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**1.53**	**360**	*e*Pn	**Pn**	**23 05 01.8**	**-2.2**
TWG				*e*Sn	**Sn**	**23 05 29.2**	**+5.6**
TPUB	**Ta-pu**	**2.05**	**349**	*e*Pn	**Pn**	**23 05 10.2**	**-1.0**
TPUB				*e*Pg	**Pg**	**23 05 16.8**	**+0.1**
TPUB				*e*Sn	**Sn**	**23 05 34.8**	**-1.6**
YULB	**Yu-li**	**2.11**	**6**	*e*Pn	**Pn**	**23 05 08.3**	**-3.6**
YULB				*e*Sn	**Sn**	**23 05 35.5**	**-2.4**
SSLB	**Suanglung**	**2.50**	**357**	*e*Pn	**Pn**	**23 05 16.8**	**-0.5**
SSLB				*e*Pg	**Pg**	**23 05 25.1**	**-0.2**
SSLB				*e*Sg	**Sg**	**23 05 58.1**	**+0.5**
NACB	**Ninganchiao**	**2.92**	**9**	*e*Pn	**Pn**	**23 05 23.0**	**-0.1**
NACB				*e*Sn	**Sn**	**23 06 00.9**	**+3.1**
YHNB	**Yeheng**	**3.38**	**5**	*e*Pn	**Pn**	**23 05 28.8**	**-0.7**
YHNB				*e*Sn	**Sn**	**23 06 10.6**	**+1.3**
YOJ	**Yonaguni jima**	**3.63**	**29**	P	**Pn**	**23 05 32.7**	**-0.2**
YOJ				*e*S	**Sn**	**23 06 16.4**	**+0.9**
TATO	**Taipei**	**3.70**	**6**	*e*Pn	**Pn**	**23 05 33.8**	**+0.1**
TATO				*e*Sn	**Sn**	**23 06 17.4**	**+0.4**
HATJ	**Hateruma jima**	**3.74**	**42**	P	**Pn**	**23 05 34.8**	**+0.4**
HATJ				S	**Sn**	**23 06 19.2**	**+1.1**
IRIF	**Iriomote-Funau**	**3.90**	**38**	P	**Pn**	**23 05 37.1**	**+0.5**
JKRS	**Kuro-shima**	**4.00**	**42**	P	**Pn**	**23 05 38.4**	**+0.5**
JKRS				S	**Sn**	**23 06 26.0**	**+1.5**
JIJ	**Ishigaki jima**	**4.17**	**42**	P	**Pn**	**23 05 39.9**	**-0.4**
JIJ				S	**Sn**	**23 06 27.5**	**-1.3**
QZH	**Quanzhou**	**4.30**	**328**	Pn	**Pn**	**23 05 40.1**	**-2.0**
QZH				Sn	**Sn**	**23 06 26.8**	**-5.1**
QZH				smax			
	comp=N,460nm,0.4s						
QZH				smax			
	comp=E,450nm,0.7s						
QZH				LR	LR		
	comp=N,7μm,10.6s						
QZH				LR	LR		
	comp=E,10μm,16.9s						
QZH				LR	LR		
	comp=Z,8μm,16.4s						
JTJ	**Tarama**	**4.73**	**44**	P	**Pn**	**23 05 49.0**	**+1.0**
JTJ				S	**Sn**	**23 06 43.9**	**+1.4**
JMJ	**Miyako jima 2**	**5.24**	**47**	P	**Pn**	**23 05 54.6**	**-0.4**
JMJ				*e*S	**Sn**	**23 06 55.9**	**+0.8**
JOGS	**Gusukube**	**5.28**	**48**	P	**Pn**	**23 05 56.2**	**+0.6**
JOGS				S	**Sn**	**23 06 56.8**	**+0.7**
TGY	**Tagaytay City**	**7.14**	**181**	Pn	**Pn**	**23 06 25.9**	**+4.7**
	comp=Z,34nm,0.3s,baz=300,slow=8.1,SNR=2.6						
GZH	**Guangzhou**	**7.39**	**286**	Pn	**Pn**	**23 06 19.8**	**-4.7**
GZH				LR	LR		
	comp=N,3μm,14.0s						
GZH				LR	LR		
	comp=E,2μm,12.9s						
GZH				LR	LR		
	comp=Z,4μm,13.4s						
QIZ	**Qiongzhong**	**10.78**	**260**	P	**Pn**	**23 07 11.8**	**+0.7**
QIZ				S	**Sn**	**23 09 12.3**	**+0.7**
QIZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
QIZ				LR	LR		
	comp=N,2μm,12.9s						
QIZ				LR	LR		
	comp=E,260nm,15.2s						
QIZ				LR	LR		
	comp=Z,2μm,14.0s						
QIZ	**Qiongzhong**	**10.78**	**260**	*e*Pn	**Pn**	**23 07 09.9**	**-1.2**
NJ2	**Nanjing**	**10.91**	**350**	*e*P	**Pn**	**23 07 15.9**	**+3.1**
NJ2				pP		23 07 19.1	
NJ2				sP		23 07 22.1	
NJ2				PP		23 07 24.3	
NJ2				S	**Sn**	**23 09 20.3**	**+5.8**
NJ2				sS		23 09 26.5	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				LR	LR		
	comp=N,3μm,13.6s						
NJ2				LR	LR		
	comp=E,2μm,12.2s						
NJ2				LR	LR		
	comp=Z,3μm,16.7s						
ENH	**Enshi**	**13.74**	**313**	*e*Pn	**Pn**	**23 07 52.3**	**+0.8**
GYA	**Guiyang**	**14.15**	**294**	⇑*i*P	**Pn**	**23 07 55.4**	**-1.7**
GYA				PP		23 08 10.5	
GYA				S	**Sn**	**23 10 37.4**	**+3.5**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,130nm,4.2s						
GYA				LR	LR		
	comp=N,3μm,13.0s						
GYA				LR	LR		
	comp=E,3μm,15.1s						
GYA				LR	LR		
	comp=Z,4μm,12.0s						
DAV	**Davao City (W)**	**14.78**	**162**	LR	LR	23 14 59.4	
	comp=Z,1μm,18.6s,baz=318,slow=42						
TIA	**Tai'an**	**15.27**	**348**	*e*P	**Pn**	**23 08 14.6**	**+2.4**
TIA				LR	LR		
	comp=N,800nm,9.0s						
TIA				LR	LR		
	comp=E,740nm,11.0s						
MYLDM	**Lahad Datu**	**16.20**	**189**	P	**Pn**	**23 08 29.7**	**+5.3**
	comp=E,1μmcomp=E,85nm,1.4s						
XAN	**Xi'an**	**16.64**	**322**	P	**Pn**	**23 08 28.8**	**-1.0**
XAN				pP	pP	23 08 32.5	-4.3
XAN				pmax	pmax		
	comp=Z,4.0nm,1.5s						
XAN				LR	LR		
	comp=N,1μm,12.8s						
XAN				LR	LR		
	comp=E,370nm,13.2s						
XAN				LR	LR		
	comp=Z,620nm,12.8s						
KSRS	**Korea Array**	**17.18**	**19**	P	**Pn**	**23 08 37.0**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=199,slow=12,SNR=19						
KSRS	**Korea Array**	**17.18**	**19**	P	**Pn**	**23 08 37.1**	**+0.5**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KMI	**Kunming**	**17.28**	**286**	P	**Pn**	**23 08 40.3**	**+2.3**
KMI				sP	sP	23 08 44.0	-2.1
KMI				PP		23 08 54.3	
KMI				S	**Sn**	**23 11 52.6**	**+2.6**
KMI				SS		23 12 13.6	
KMI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KMI				pmax	pmax		
	comp=Z,48nm,3.4s						
KMI				LR	LR		
	comp=N,870nm,10.8s						
KMI				LR	LR		
	comp=E,1μm,15.0s						
KMI				LR	LR		
	comp=Z,760nm,13.0s						
CD2	**Chengdu**	**18.25**	**305**	P	**Pn**	**23 08 49.1**	**-0.9**
CD2				pP	pP	23 08 52.8	-1.9
CD2				sP	sP	23 08 55.8	-1.0
CD2				PP		23 09 04.8	
CD2				S	**Sn**	**23 12 11.6**	**-1.8**
CD2				sS	sS	23 12 17.3	-8.4
CD2				SS		23 12 35.1	
CD2				pmax	pmax		
	comp=Z,30nm,0.9s						
CD2				pmax	pmax		
	comp=Z,250nm,4.2s						
CD2				LR	LR		
	comp=N,2μm,9.5s						
CD2				LR	LR		
	comp=Z,2μm,13.7s						
BJI	**Beijing**	**19.16**	**348**	P	**Pn**	**23 09 00.8**	**-0.1**
BJI				S	**Sn**	**23 12 33.8**	**-1.5**
BJI				pmax	pmax		
	comp=Z,51nm,1.1s						
BJI				pmax	pmax		
	comp=Z,240nm,3.9s						
BJI				LR	LR		
	comp=N,1μm,19.8s						
BJI				LR	LR		
	comp=E,2μm,19.8s						
BJI				LR	LR		
	comp=Z,770nm,20.2s						
MNI	**Manado**	**20.06**	**169**	P	**P**	**23 09 10.7**	**+0.7**
	comp=Z,3μmcomp=Z,186nm,1.1s						
CBIJ	**Chichi jima**	**20.10**	**69**	P	**P**	**23 09 11.4**	**+1.0**
	comp=Z,4.2nm,0.3s,baz=308,slow=22,SNR=4.5						
JHJ	**Hachijo jima 2**	**20.36**	**51**	P	**P**	**23 09 11.0**	**-2.1**
	comp=Z,55nm,0.8s,baz=228,slow=15,SNR=1.7						
JHJ				LR	LR	23 16 52.5	
	comp=Z,390nm,20.1s,MS3.8,baz=282,slow=36						
SNY	**Shenyang**	**20.59**	**5**	⇓P	**P**	**23 09 16.3**	**+0.7**
SNY				S	**S**	**23 13 00.3**	**-5.0**
SNY				pmax	pmax		
	comp=Z,160nm,9.9s						
SNY				LR	LR		
	comp=N,630nm,16.2s,MS4.3						
SNY				LR	LR		
	comp=E,700nm,13.2s,MS4.3						
SNY				LR	LR		
	comp=Z,1μm,13.5s,MS4.3						
SBUM	**Sibu**	**20.61**	**206**	P	**P**	**23 09 25.2**	**+9.2**
MRSI	**Marisa**	**20.70**	**178**	P	**P**	**23 09 20.2**	**+3.3**
	comp=Z,1μmcomp=Z,108nm,0.9s						
CHTO	**Chiang Mai**	**20.93**	**267**	*e*P	**P**	**23 09 20.4**	**+0.9**
CHTO				pmax	pmax		
	comp=Z,37nm,1.4s						
CHTO	**Chiang Mai**	**20.93**	**267**	*e*P	**P**	**23 09 20.4**	**+0.9**
	comp=Z,37nm,1.4s						
CHTO	**Chiang Mai**	**20.93**	**267**	P	**P**	**23 09 20.9**	**+1.4**
	comp=Z,22nm,1.4s						
CM31	**Chiang Mai Arr**	**21.00**	**266**	*e*P	**P**	**23 09 21.2**	**+1.0**
	comp=Z,14nm,0.3s,mb4.8						
CMAR	**Chiang Mai Arr**	**21.00**	**266**	P	**P**	**23 09 21.1**	**+0.9**
	comp=Z,8.5nm,0.8s,mb4.1,baz=74,slow=9.2,SNR=36						
CMAR				PcP	PcP	23 13 27.3	0.0
	comp=Z,0.9nm,0.3s,baz=17,slow=0,9,SNR=5.5						
LZH	**Lanzhou**	**21.07**	**318**	⇑P	**P**	**23 09 21.8**	**+1.0**
LZH				pP		23 09 25.8	
LZH				sP	sP	23 09 28.6	+1.0
LZH				PP		23 09 45.3	
LZH				S	**S**	**23 13 12.0**	**-2.9**
LZH				sS	sS	23 13 18.6	-3.7
LZH				SS		23 13 45.5	
LZH				pmax	pmax		
	comp=Z,68nm,1.3s,mb4.8						
LZH				pmax	pmax		
	comp=Z,200nm,4.6s						
LZH				LR	LR		
	comp=N,2μm,12.7s						
LZH				LR	LR		
	comp=Z,2μm,13.0s,MS4.7						
HHC	**Hu-ho-hao-te**	**21.11**	**340**	*e*P	**P**	**23 09 22.3**	**+1.1**
HHC				sP	sP	23 09 27.6	-0.4
HHC				PP		23 09 45.3	
HHC				sS	sS	23 13 17.0	-6.0
HHC				PcP	PcP	23 13 27.5	+0.4
HHC				SS		23 13 46.3	
HHC				ScP	ScP	23 17 03.4	0.0
HHC				PcS	PcS	23 17 04.6	-0.5
HHC				pmax	pmax		
	comp=Z,22nm,0.9s,mb4.5						
HHC				pmax	pmax		
	comp=Z,100nm,5.2s						
HHC				LR	LR		
	comp=N,1μm,12.8s,MS4.9						
HHC				LR	LR		
	comp=E,3μm,12.6s,MS4.9						
HHC				LR	LR		
	comp=Z,1μm,12.3s,MS4.5						
TNTI	**Ternate**	**21.29**	**162**	P	**P**	**23 09 23.4**	**+0.1**
	comp=Z,93nm,0.9s,mb5.1						
MAJO	**Matsushiro**	**21.31**	**41**	*e*P	**P**	**23 09 22.7**	**-0.7**
MAJO				pmax	pmax		
	comp=Z,24nm,0.9s,mb4.5						
MAJO	**Matsushiro**	**21.31**	**41**	*e*P	**P**	**23 09 22.7**	**-0.7**
	comp=Z,24nm,0.9s,mb4.5						
MAT	**Matsushiro**	**21.31**	**41**	P	**P**	**23 09 24.1**	**+0.7**
MAT				S	**S**	**23 13 28.0**	**+8.5**
MJAR	**Matsushiro Arr**	**21.31**	**41**	P	**P**	**23 09 24.3**	**+1.0**
	comp=Z,12nm,0.8s,mb4.3,baz=232,slow=8.7,SNR=44						
BTO	**Baotou**	**21.43**	**336**	*e*P	**P**	**23 09 25.3**	**+0.6**
PCI	**Palu**	**22.08**	**183**	P	**P**	**23 09 35.6**	**+3.8**
	comp=Z,838nmcomp=Z,74nm,1.2s,mb5.0						
LUWI	**Luwuk**	**22.25**	**176**	P	**P**	**23 09 33.8**	**+0.2**
	comp=Z,3μmcomp=Z,332nm,1.3s,mb5.6						
KSM	**Kuching**	**22.31**	**209**	*e*P	**P**	**23 09 32.9**	**-1.4**
	comp=Z,37nm,1.3s,mb4.7						
LBMI	**Labuha**	**22.67**	**163**	P	**P**	**23 09 36.7**	**-1.4**
	comp=Z,1μmcomp=Z,79nm,1.1s,mb5.1						
CN2	**Changchun**	**22.75**	**8**	*e*P	**P**	**23 09 37.8**	**-0.9**
CN2				*es*P	sP	23 09 44.0	-1.5
CN2				*e*S	**S**	**23 13 41.8**	**-5.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.5						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,1μm,16.0s,MS4.6						
CN2				LR	LR		
	comp=E,1μm,16.0s,MS4.6						
CN2				LR	LR		
	comp=Z,200nm,19.0s,MS3.6						
TTSI	**Tana Toraja**	**24.21**	**183**	P	**P**	**23 09 56.8**	**+3.5**
	comp=Z,75nm,1.2s,mb5.0						
MDJ	**Mudanjiang**	**24.32**	**15**	P	**P**	**23 09 54.5**	**+0.4**
MDJ				pP		23 09 57.3	
MDJ				S	**S**	**23 14 17.3**	**+4.8**
MDJ				pmax	pmax		
	comp=Z,43nm,0.9s,mb4.9						
MDJ				pmax	pmax		
	comp=Z,42nm,4.4s						
MDJ				LR	LR		
	comp=N,400nm,30.9s,MS4.1						
MDJ				LR	LR		
	comp=E,920nm,26.7s,MS4.1						
MDJ				LR	LR		
	comp=Z,270nm,28.1s,MS3.6						
MDJ	**Mudanjiang**	**24.32**	**15**	*e*P	**P**	**23 09 53.5**	**-0.5**
NLAI	**Namlea**	**25.07**	**166**	P	**P**	**23 10 02.2**	**+1.0**
	comp=Z,3μmcomp=Z,119nm,0.9s,mb5.4						
SPSI	**Sidrap Palu**	**25.12**	**183**	P	**P**	**23 10 03.8**	**+2.1**
	comp=Z,515nmcomp=Z,42nm,1.0s,mb4.9						
KDI	**Kendari**	**25.13**	**176**	P	**P**	**23 10 04.2**	**+2.5**
	comp=Z,57nm,1.1s,mb5.0						
KULM	**Kulim**	**25.39**	**234**	*e*P	**P**	**23 10 02.7**	**-1.5**
BNSI	**Bone**	**25.54**	**182**	P	**P**	**23 10 08.0**	**+2.6**
	comp=Z,908nmcomp=Z,60nm,1.4s,mb5.0						
MYKOM	**Kota Tinggi**	**25.63**	**223**	P	**P**	**23 10 04.3**	**-2.0**
	comp=Z,20nm,1.1s,mb4.5						
GTA	**Gaotai**	**25.64**	**320**	P	**P**	**23 10 07.3**	**+1.1**
GTA				pP	pP	23 10 11.5	+0.3
GTA				sP	sP	23 10 14.3	+1.1
GTA				S	**S**	**23 14 36.4**	**+2.5**
GTA				sS	sS	23 14 43.9	+1.8
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.0						
GTA				pmax	pmax		
	comp=Z,84nm,6.0s						
GTA				LR	LR		
	comp=N,800nm,16.2s,MS4.4						
GTA				LR	LR		
	comp=E,580nm,16.2s,MS4.4						
GTA				LR	LR		
	comp=Z,1μm,14.7s,MS4.5						
IPM	**Ipoh**	**25.65**	**232**	P	**P**	**23 10 06.2**	**-0.3**
	comp=Z,26nm,0.8s,mb4.8						
LSA	**Lhasa**	**28.22**	**293**	*e*P	**P**	**23 10 30.3**	**+0.8**
PSI	**Prapat**	**28.32**	**233**	P	**P**	**23 10 33.0**	**+2.4**
	comp=Z,2.3nm,0.3s,mb4.3,baz=68,slow=10,SNR=3.0						
PSI				LR	LR	23 20 15.4	
	comp=Z,306nm,21.0s,MS3.9,baz=162,slow=33						
PSI	**Prapat**	**28.32**	**233**	P	**P**	**23 10 33.0**	**+2.4**
PSI				LR	LR	23 20 15.3	
ULN	**Ulaanbaatar**	**28.83**	**340**	*e*P	**P**	**23 10 35.2**	**+0.5**
ULN				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5					

YSS MLR MLR
comp=Z,400nm,16.0s,MS4.2
TLY Talaya 33.24 340 *e*P **P 23 11 08.0 -5.5**
TLY *e* 23 12 19.9
TLY *e* 23 18 36.2
TLY pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
TLY MLR MLR
comp=Z,612nm,15.0s,MS4.4
TLY Talaya 33.24 340 *e*P **P 23 11 14.3 +0.8**
comp=Z,5.3nm,0.8s,mb4.5
KAKA Kakadu 35.58 161 *e*P **P 23 11 32.5 -1.7**
KAKA Kakadu 35.58 161 P **P 23 11 34.4 +0.3**
comp=Z,390nmcomp=Z,36nm,0.6s,mb5.5
WMQ Urumqi 35.64 317 *e*P **P 23 11 35.8 +1.3**
WMQ pP pP 23 11 40.3 +0.8
WMQ sP sP 23 11 42.8 +1.3
WMQ PP PP 23 12 57.1 +1.7
WMQ pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
WMQ pmax pmax
comp=Z,120nm,4.2s
WMQ LR LR
comp=N,320nm,16.0s,MS4.3
WMQ LR LR
comp=E,260nm,16.0s,MS4.3
WMQ LR LR
comp=Z,250nm,18.1s,MS4.0
FITZ Fitzroy Crossi 39.39 173 *e*P **P 23 12 05.7 -0.7**
PMG Port Moresby 39.83 137 *e*P **P 23 12 10.3 +0.1**
PMG pmax pmax
comp=Z,36nm,1.7s
PMG Port Moresby 39.83 137 *e*P **P 23 12 09.3 -0.8**
comp=Z,16nm,0.8s,mb4.8
PMG Port Moresby 39.83 137 P **P 23 12 10.5 +0.3**
comp=Z,24nm,1.2s,mb4.8
MK31 Makanchi Array 40.39 318 *e*P **P 23 12 15.0 +0.5**
MKAR Makanchi Array 40.39 318 P **P 23 12 15.0 +0.5**
comp=Z,3.6nm,0.8s,mb4.2,baz=113,slow=10,SNR=30
MKAR LR LR 23 30 50.3
comp=Z,458nm,18.6s,MS4.4,baz=114,slow=39
YAK Yakutsk 41.15 6 *e*P **P 23 12 19.5 -1.0**
YAK pmax pmax
comp=Z,17nm,0.8s,mb4.7
YAK pmax pmax
comp=N,10.0nm,1.2s
YAK MLR MLR
comp=E,282nm,15.0s,MS4.4
YAK MLR MLR
comp=Z,701nm,17.0s,MS4.6
YAK MLR MLR
comp=N,348nm,16.0s,MS4.4
YAK Yakutsk 41.15 6 *e*P **P 23 12 19.9 -0.7**
MBWA Marble Bar 42.20 182 *e*P **P 23 12 28.3 -1.3**
PETK Petropavlovsk- 42.34 32 P **P 23 12 29.5 -0.9**
comp=N,2.8nm,0.7s,mb4.0,baz=192,slow=5.5,SNR=6.7
PETK LR LR 23 33 09.4
comp=N,208nm,18.4s,MS4.0,baz=243,slow=41
KSH Kashi 42.45 306 P **P 23 12 35.3 +3.8**
KSH pP pP 23 12 39.6 +3.0
KSH sP sP 23 12 42.3 +3.7
KSH PP PP 23 14 17.0 +7.1
KSH PcP PcP 23 14 26.4 +2.0
KSH ScP ScP 23 18 16.1 +1.5
KSH PcS PcS 23 18 17.6 +1.4
KSH S **S 23 18 58.4 +5.7**
KSH sS sS 23 19 05.8 +4.7
KSH SS SS 23 22 03.5 +1.5
KSH ScS ScS 23 22 33.3 +0.5
KSH pmax pmax
comp=Z,6.0nm,1.0s,mb4.2
KSH pmax pmax
comp=Z,77nm,3.1s
KSH LR LR
comp=N,310nm,12.0s,MS4.5
KSH LR LR
comp=E,200nm,10.1s,MS4.5
KSH LR LR
comp=Z,420nm,11.6s,MS4.6
ZALV Zalesovo Beam 42.64 329 P **P 23 12 32.8 0.0**
comp=Z,11nm,0.8s,mb4.7,baz=115,slow=7.6,SNR=56
ZALV LR LR 23 30 55.3
comp=Z,148nm,20.7s,MS3.9,baz=207,slow=37
PET Petropavlovsk 42.77 33 *e*P **P 23 12 31.8 -2.1**
WRAB Tennant Creek 42.97 162 *e*P **P 23 12 34.1 -1.7**
WRAB pmax pmax
comp=Z,22nm,1.0s,mb4.8
WRAB Tennant Creek 42.97 162 *e*P **P 23 12 34.1 -1.8**
comp=Z,22nm,1.0s,mb4.8
NVS Novosibirsk 43.91 329 *e*P **P 23 12 41.5 -1.6**
NVS pmax pmax
comp=Z,30nm,1.6s,mb4.8
NVS pmax pmax
comp=N,26nm,1.8s
NVS pmax pmax
comp=E,29nm,1.7s
UCH Uchtor 44.12 309 *e*P **P 23 12 46.2 +1.2**
AAK Ala-Archa 44.23 310 LR LR 23 34 16.2
comp=E,536nm,18.0s,MS4.5,baz=80,slow=40
KURK Kurchatov 44.28 322 *e*P **P 23 12 45.7 -0.4**
KURK *e* 23 14 29.6
EKS2 Erkin-Say 44.75 310 *e*P **P 23 12 50.1 +0.1**
ASAR Alice Springs 46.39 164 P **P 23 13 02.4 -0.7**
comp=E,2.5nm,0.6s,mb4.3,baz=351,slow=8.5,SNR=23
ASAR PcP PcP 23 14 37.5 -0.5
comp=E,2.4nm,0.8s,baz=344,slow=3.9,SNR=3.6
ASAR ScP ScP 23 18 30.8 0.0
comp=E,0.8nm,0.9s,baz=318,slow=1.7,SNR=4.4
ASAR Alice Springs 46.39 164 P **P 23 13 02.4 -0.7**
ASAR 23 14 37.5
KBL Kabul 47.37 298 *e*P **P 23 13 11.2 +0.5**
KBL pmax pmax
comp=Z,17nm,1.1s,mb4.9
KBL Kabul 47.37 298 *e*P **P 23 13 11.2 +0.4**
comp=Z,17nm,1.1s,mb4.9
CTA Charters Tower 47.93 147 P **P 23 13 14.9 -0.2**
comp=Z,8.8nm,0.8s,mb4.8,baz=344,slow=7.8,SNR=5.9
CTA LR LR 23 30 52.4
comp=Z,127nm,21.8s,MS3.9,baz=46,slow=33
CTAO Charters Tower 47.93 147 *e*P **P 23 13 14.1 -1.0**
CTAO pmax pmax
comp=Z,42nm,1.1s,mb5.4
CTAO Charters Tower 47.93 147 *e*P **P 23 13 14.1 -1.1**
comp=Z,42nm,1.1s,mb5.4
BVAR Borovoye Array 49.87 322 P **P 23 13 30.0 +0.2**
comp=Z,2.9nm,0.8s,mb4.3,baz=111,slow=8.6,SNR=19
BVAR PcP PcP 23 14 48.6 -1.5
comp=Z,1.0nm,0.7s,baz=106,slow=3.6,SNR=2.2
BVAR ScP ScP 23 18 46.0 +0.8
comp=Z,0.2nm,0.3s,baz=131,slow=4.4,SNR=3.1
BVAR Borovoye Array 49.87 322 P **P 23 13 30.0 +0.3**
BVAR 23 14 48.6
BRVK Borovoye 49.94 322 *e*P **P 23 13 30.5 +0.2**
BRVK *e* 23 14 50.3
BILL Bilibino 54.44 19 *e*P **P 23 14 02.5 -1.0**
BILL *e*PCP PcP 23 15 12.5 +5.6
BILL pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
BILL MLR MLR
comp=Z,200nm,17.0s,MS4.2
BILL Bilibino 54.44 19 P **P 23 14 02.5 -1.0**
ABKAR Akbulak array 55.42 316 *e*P **P 23 14 10.9 +0.1**
comp=Z,1.7nm,0.6s,mb4.2
SVE Sverdlovsk 56.33 325 *e*P **P 23 14 17.9 +0.6**
SVE pmax pmax
comp=Z,23nm,1.2s,mb5.1
SVE MLR MLR
comp=Z,396nm,15.0s,MS4.6
STKA Stephens Creek 56.39 159 P **P 23 14 17.8 -0.1**
comp=Z,5.5nm,0.5s,mb4.9,baz=350,slow=7.3,SNR=16
STKA Stephens Creek 56.39 159 *e*P **P 23 14 17.9 0.0**
STKA pmax pmax
comp=Z,5.0nm,1.4s
STKA Stephens Creek 56.39 159 *e*P **P 23 14 17.9 0.0**
comp=Z,4.7nm,1.4s,mb4.3
AKTK Aktyubinsk 56.80 317 P **P 23 14 21.1 +0.4**
AKTK LR LR 23 39 24.7
AKTO Aktyubinsk 56.80 317 P **P 23 14 21.1 +0.4**
comp=Z,1.5nm,0.8s,mb4.1,baz=98,slow=7.3,SNR=6.0
AKTO LR LR 23 39 24.7
comp=Z,396nm,21.4s,MS4.5,baz=102,slow=37
ARU Arti 57.37 324 *d i*P **P 23 14 24.2 -0.4**
ARU pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
ARU Arti 57.37 324 *e*P **P 23 14 24.4 -0.2**
comp=Z,19nm,1.2s,mb5.0
NIKO Nikolski 61.34 40 *e*P **P 23 14 51.2 -0.9**
GNI Garni 66.38 306 P **P 23 15 26.2 +0.6**
comp=Z,0.6nm,0.5s,mb3.9,baz=117,slow=2.3,SNR=2.0
ZEI Tsey 66.64 309 *e*P **P 23 15 25.3 -1.9**
ZEI pmax pmax
comp=Z,12nm,0.5s,mb5.2
KIV Kislovodsk 67.35 310 *e*P **P 23 15 36.7 +5.0**
KIV pmax pmax
comp=Z,17nm,1.1s,mb5.0
KIV MLR MLR
comp=Z,197nm,19.0s,MS4.3
KIV Kislovodsk 67.35 310 *e*P **P 23 15 32.1 +0.4**
comp=Z,12nm,0.8s,mb5.0
TTA Tatalina 68.07 29 *e*P **P 23 15 36.0 +0.1**
SVW2 Sparrevohn 68.41 31 *e*P **P 23 15 39.0 +0.9**
comp=Z,11nm,0.8s,mb4.9
APA Apatity 69.65 336 *e*P **P 23 15 47.6 +2.0**
APA pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
APA MLR MLR
comp=Z,500nm,18.0s,MS4.8
OBN Obninsk 69.72 322 *e*P **P 23 15 45.2 -1.1**
OBN *e* 23 16 08.8
OBN pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
OBN MLR MLR
comp=Z,200nm,16.0s,MS4.5
OBN Obninsk 69.72 322 *e*P **P 23 15 46.2 -0.1**
PPLA Purkeypile 69.81 29 *e*P **P 23 15 46.9 +0.2**
comp=Z,10nm,0.7s,mb4.9
OHAK Old Harbor 70.04 35 *e*P **P 23 15 47.8 -0.4**
comp=Z,8.1nm,0.4s,mb5.0
COLD Coldfoot 70.10 24 *e*P **P 23 15 48.2 -0.2**
comp=Z,8.1nm,1.1s,mb4.6
BPAW Bear Paw Mtn. 70.19 28 *e*P **P 23 15 48.5 -0.5**
comp=Z,19nm,1.2s,mb4.9
KDAK Kodiak Island 70.33 35 P **P 23 15 49.1 -0.9**
comp=Z,22nm,0.7s,mb5.2,baz=264,slow=4.4,SNR=22
KDAK Kodiak Island 70.33 35 *e*P **P 23 15 49.4 -0.6**
KDAK *e* 23 16 11.2
KDAK pmax pmax
comp=Z,22nm,0.7s,mb5.2
KDAK Kodiak Island 70.33 35 *e*P **P 23 15 49.4 -0.5**
comp=Z,22nm,0.7s,mb5.2
KDAK *e*PcP PcP 23 16 11.2 -0.4
TRF Thorofare Moun 70.59 28 *e*P **P 23 15 51.1 -0.3**
comp=Z,4.9nm,0.6s,mb4.6
MCK McKinley 71.14 28 *e*P **P 23 15 54.1 -0.7**
MCK *e* 23 16 16.7
MCK pmax pmax
comp=Z,20nm,0.8s,mb5.1
MCK McKinley 71.14 28 *e*P **P 23 15 54.1 -0.7**
comp=Z,20nm,0.8s,mb5.1
MCK *e*PcP PcP 23 16 16.6 +1.8
JOF Joensuu 71.18 331 *e*P **P 23 15 54.3 -0.8**
JOF Joensuu 71.18 331 *e*p **P 23 15 54.3 -0.8**
comp=Z,5.5nm,0.7s,mb4.6
COLA College 71.41 27 *e*P **P 23 15 55.4 -1.0**
COLA pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
COLA College 71.41 27 *e*P **P 23 15 55.4 -1.0**
comp=Z,6.9nm,0.7s,mb4.7
PMR Palmer 71.43 30 *e*P **P 23 15 55.7 -0.9**
PMR pmax pmax
comp=Z,16nm,0.7s,mb5.1
PMR Palmer 71.43 30 *e*P **P 23 15 55.7 -0.9**
comp=Z,16nm,0.7s,mb5.0
KEV Kevo 71.62 339 *e*P **P 23 15 57.5 -0.1**
KEV pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
KEV Kevo 71.62 339 *e*P **P 23 15 57.5 -0.1**
comp=Z,4.2nm,0.5s,mb4.6
KEV Kevo 71.62 339 *e*p **P 23 15 57.5 -0.1**
comp=Z,4.2nm,0.5s,mb4.6
ILAR Eielson Array 71.83 27 P **P 23 15 57.2 -1.7**
comp=Z,3.1nm,0.7s,mb4.3,baz=270,slow=5.1,SNR=34
ILAR LR LR 23 52 55.5
comp=Z,125nm,18.3s,MS4.2,baz=303,slow=40
ARCES ARCESS Array B 72.19 338 P **P 23 16 00.2 -0.8**
comp=Z,4.8nm,0.8s,mb4.5,baz=74,slow=10,SNR=6.6
ARCES ARCESS Array B 72.19 338 P **P 23 16 00.2 -0.8**
SPITS Spitsbergen Ar 72.29 348 P **P 23 16 01.8 +0.3**
comp=Z,7.6nm,0.7s,mb4.7,baz=72,slow=8.0,SNR=6.9
SPITS Spitsbergen Ar 72.29 348 P **P 23 16 01.8 +0.3**
DIV Divide 73.11 30 *e*P **P 23 16 06.2 -0.4**
KAF Kangasniemi 73.62 331 *e*P **P 23 16 08.6 -1.0**
KAF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
KAF Kangasniemi 73.62 331 *e*P **P 23 16 08.6 -1.0**
comp=Z,3.4nm,0.8s,mb4.3
KAF Kangasniemi 73.62 331 *e*p **P 23 16 08.6 -1.0**
comp=Z,3.4nm,0.8s,mb4.3
BMRM Bremner River 73.70 30 *e*P **P 23 16 09.5 -0.6**
comp=Z,16nm,0.8s,mb5.0
FINES FINESS Array B 73.89 330 P **P 23 16 11.7 +0.4**
comp=Z,6.7nm,0.8s,mb4.6,baz=86,slow=7.8,SNR=18
FINES LR LR 23 50 13.8
comp=Z,276nm,21.4s,MS4.5,baz=169,slow=37
EGAK Eagle 74.22 26 *e*P **P 23 16 12.7 -0.4**
comp=Z,14nm,1.0s,mb4.8
BRTR Keskin Array B 74.82 307 P **P 23 16 16.8 -0.3**
comp=Z,1.1nm,0.9s,mb3.8,baz=96,slow=2.5,SNR=5.8
BRTR LR LR 23 55 42.8
comp=Z,85nm,18.9s,MS4.1,baz=184,slow=41
BRTR Keskin Array B 74.82 307 *c e*P **P 23 16 16.7 -0.4**
BRTR pmax pmax
comp=Z,1.0nm,0.9s
AKASG Malin Array Be 74.97 319 P **P 23 16 17.2 -0.5**
comp=Z,1.7nm,0.6s,mb4.2,baz=64,slow=5.6,SNR=4.3
AKASG LR LR 23 52 50.3
comp=Z,188nm,19.5s,MS4.4,baz=70,slow=39
DAWY Dawson 75.16 27 *e*P **P 23 16 18.3 -0.3**
MMAI Mount Meron Ar 75.24 300 LR LR 23 52 59.4
comp=Z,110nm,20.9s,MS4.1,baz=335,slow=39
INK Inuvik 75.94 22 P **P 23 16 22.0 -1.0**
comp=Z,9.5nm,0.8s,mb4.8,baz=294,slow=5.5,SNR=9.1
HYT Haines Junctio 77.05 30 *e*P **P 23 16 30.5 +1.1**
SIT Sitka 79.49 33 *e*P **P 23 16 42.0 -1.0**
HFS Hagfors 80.04 331 P **P 23 16 45.3 -0.6**
comp=Z,1.2nm,0.4s,mb4.2,baz=132,slow=6.2,SNR=8.0
NB2 NORSAR Subarra 80.73 332 P **P 23 16 49.5 -0.1**
comp=Z,9.6nm,1.2s,mb4.6,baz=58,slow=5.9
NOA NORSAR Array B 80.73 332 P **P 23 16 49.4 -0.2**
comp=Z,0.7nm,0.7s,mb3.7,baz=63,slow=5.4,SNR=4.7
NOA LR LR 23 53 32.9
comp=Z,237nm,21.7s,MS4.5,baz=65,slow=36
DLBC Dease Lake 81.49 30 LR LR 23 56 05.5
comp=Z,103nm,18.4s,MS4.2,baz=227,slow=38
RES Resolute Bay 81.53 9 P **P 23 16 52.5 -1.1**
MORC Moravsky Berou 82.34 321 *e*P **P 23 16 58.0 -0.3**
BRG Berggiesshubel 83.97 322 *e*P **P 23 17 12.8 +6.1**
comp=Z,3.7nm,1.0s,mb4.5
BRG Berggiesshubel 83.97 322 *e*P **P 23 17 12.8 +6.1**
BRG pmax pmax
comp=Z,2.0nm,1.0s,mb4.2
CLL Collm 84.30 323 *i* (sP) sP 23 17 14.7 -1.1
comp=Z,4.0nm,0.7s
CLL LmH 23 53 00.0
comp=N,300nm,20.0s
CLL LmH 23 53 00.0
comp=E,300nm,20.1s
CLL LmV 00 01 00.0
comp=Z,300nm,18.5s
YKA Yellowknife Ar 85.67 23 P **P 23 17 14.6 -0.4**
comp=Z,2.9nm,0.6s,mb4.7,baz=308,slow=4.8,SNR=9.4
CASY Casey 87.65 184 *e*P **P 23 17 24.7 +0.3**
comp=Z,8.4nm,1.3s,mb4.8
LPG La Plagne 90.78 320 *e*P **P 23 17 40.2 +0.4**
LPL La Plagne 90.78 320 *e*P **P 23 17 40.1 +0.3**
comp=Z,7.7nm,1.0s,mb4.7
LPL La Plagne 90.78 320 *e*P **P 23 17 40.1 +0.3**
LPL pmax pmax
comp=Z,4.0nm,1.0s,mb4.7
LPL La Plagne 90.78 320 *e*P **P 23 17 40.1 +0.3**
comp=Z,3.8nm,1.0s,mb4.7
JCW Jim Creek 90.87 37 *e*P **P 23 17 41.2 +1.1**
SMF Signal de Mont 91.86 322 *e*P **P 23 17 44.3 -0.5**
comp=Z,8.0nm,0.8s,mb4.8
SMF Signal de Mont 91.86 322 *e*P **P 23 17 44.3 -0.5**
SMF pmax pmax
comp=Z,4.0nm,0.8s,mb4.8
SMF Signal de Mont 91.86 322 *e*P **P 23 17 44.3 -0.5**
comp=Z,4.0nm,0.8s,mb4.8
AVF Avril sur Loir 92.06 323 *e*P **P 23 17 45.5 -0.2**
FRB Frobisher Bay 94.92 4 LR LR 00 06 17.0
comp=Z,111nm,18.2s,MS4.4,baz=355,slow=39
NVAR Mina Array Bea 98.61 43 P **P 23 18 15.8 0.0**
comp=Z,0.5nm,0.6s,mb4.2,baz=312,slow=5.5,SNR=4.5
MTUM Tungsten Hills 99.07 44 *e*P **P 23 18 18.4 +0.5**
PHWY Pilot Hill 104.25 34 *e*Pdif Pdif 23 18 40.3 -0.2
GDL2 Guadalupe Moun 111.31 40 *e*Pdif Pdif 23 19 15.6 +3.6
LPAZ La Paz 169.97 62 PKP PKPdf 23 24 45.7 +0.6
comp=Z,0.5nm,0.7s,baz=326,slow=3.6,SNR=2.5
LPAZ La Paz 169.97 62 PKP PKPdf 23 24 45.7 +0.6

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*ISCJB **23** 23:07:50.6±4.5, 11°.25S±0°.07×164°.47E±0°.06, h13km±28km, mb4.3/20, MS3.7/4, Error ellipse: s-maj=12.0km s-min=9.7km az=17.0*
*IDC **23** 23:07:50.2±0.8, 11°.26S×164°.58E, h0km, mb4.3/14, mb1 4.4/16, mb1mx4.4/20, mbtmp4.3/16, ML4.7/2, MS3.7/5, Ms1 3.7/5, ms1mx3.3/29, Error ellipse: s-maj=26.5km s-min=18.5km az=144.0*
*NEIC **23** 23:07:51.6±0.3, 11°.22S×164°.55E, h10km, mb4.7/8, Error ellipse: s-maj=8.1km s-min=6.6km az=143.0*
ISC 23 23:07:51.3±5.3, 11°.25S±0°.07×164°.51E±0°.07, h7km±32km, n55, σ0°85/52, mb4.3/20, MS3.7/4, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.84**	**291**	Pn	**Pn**	**23 09 04.4**	**-0.2**
	164nm,0.3s,baz=150,slow=7.2,SNR=21						
HNR				Sn	**Sn**	**23 09 57.9**	**-3.1**
	129nm,0.3s,baz=189,slow=21,SNR=7.5						
HNR				LR	LR	23 10 53.2	
	comp=Z,788nm,21.4s,baz=125,slow=37						
HNR	**Honiara**	**4.84**	**291**	*e*Pn	**Pn**	**23 09 04.3**	**-0.3**
HNR				*e*Sn	**Sn**	**23 10 00.6**	**-0.4**
HNR				LR	LR	23 10 53.2	
PMG	**Port Moresby**	**17.17**	**275**	*e*Pn	**Pn**	**23 11 52.2**	**+0.3**
	4.2nm,0.5s						
EIDS	**Eidsvold**	**18.94**	**220**	P	**Pn**	**23 12 13.4**	**-0.2**
CTA	**Charters Tower**	**19.64**	**241**	P	**Pn**	**23 12 22.6**	**+0.6**
	0.5nm,0.3s,baz=50,slow=12,SNR=7.8						
CTAO	**Charters Tower**	**19.64**	**241**	*e*P	**Pn**	**23 12 20.8**	**-1.2**
	21nm,0.9s						
AFI	**Afiamalu**	**23.29**	**99**	LR	LR	23 20 39.6	
	comp=Z,82nm,19.3s,MS3.2,baz=248,slow=33						
URZ	**Urewera**	**29.16**	**159**	LR	LR	23 23 57.8	
	comp=Z,199nm,21.6s,MS3.7,baz=273,slow=33						
STKA	**Stephens Creek**	**29.47**	**222**	P	**P**	**23 13 56.9**	**+0.9**
	4.4nm,0.9s,mb4.2,baz=29,slow=10,SNR=5.3						
STKA	**Stephens Creek**	**29.47**	**222**	*e*P	**P**	**23 13 56.8**	**+0.9**
	0.4nm,0.6s,mb3.3						
WRAB	**Tennant Creek**	**30.27**	**250**	*e*P	**P**	**23 14 03.1**	**-0.1**
	15nm,1.1s,mb4.6						
SNZO	**South Karori**	**31.25**	**165**	*e*P	**P**	**23 14 10.7**	**-0.9**
GUMO	**Guam**	**31.44**	**321**	LR	LR	23 25 33.4	
	comp=Z,289nm,20.5s,MS3.9,baz=153,slow=34						
ASAR	**Alice Springs**	**31.62**	**243**	P	**P**	**23 14 14.2**	**-0.9**
	4.1nm,0.9s,mb4.3,baz=77,slow=9.7,SNR=10						
FITZ	**Fitzroy Crossi**	**38.16**	**255**	*e*P	**P**	**23 15 10.3**	**-1.3**
NWAO	**Narrogin (SRO)**	**48.35**	**236**	*e*P	**P**	**23 16 33.9**	**+0.1**
MJAR	**Matsushiro Arr**	**53.60**	**334**	P	**P**	**23 17 14.5**	**+1.2**
	0.9nm,0.5s,mb4.0,baz=163,slow=5.2,SNR=6.0						
YULB	**Yu-li**	**54.52**	**309**	*e*P	**P**	**23 17 19.7**	**-0.5**
NACB	**Ninganchiao**	**54.74**	**310**	*e*P	**P**	**23 17 21.7**	**-0.1**
SSLB	**Suanglung**	**55.01**	**310**	P	**P**	**23 17 22.2**	**-1.4**
YHNB	**Yeheng**	**55.19**	**311**	*e*P	**P**	**23 17 27.2**	**+2.2**
KSM	**Kuching**	**55.34**	**280**	P	**P**	**23 17 26.9**	**+0.6**
ASAJ	**Asahikawa**	**58.59**	**342**	P	**P**	**23 17 50.0**	**+1.2**
	5.5nm,0.3s,mb5.0,baz=186,slow=10,SNR=4.5						
KSRS	**Korea Array**	**59.37**	**327**	P	**P**	**23 17 55.2**	**+0.9**
	0.8nm,0.4s,mb4.1,baz=139,slow=7.7,SNR=5.3						
PETK	**Petropavlovsk-**	**64.36**	**355**	P	**P**	**23 18 27.3**	**-0.3**
	3.2nm,0.8s,mb4.4,baz=152,slow=6.7,SNR=6.4						
KULM	**Kulim**	**65.63**	**281**	*e*P	**P**	**23 18 37.1**	**+0.4**
SBA	**Scott Base**	**66.60**	**179**	*e*P	**P**	**23 18 41.8**	**-0.1**
	3.6nm,0.9s,mb4.4						
ENH	**Enshi**	**67.09**	**310**	*e*P	**P**	**23 18 46.1**	**+0.4**
CMAR	**Chiang Mai Arr**	**71.09**	**294**	P	**P**	**23 19 12.0**	**+1.3**
	0.6nm,0.3s,mb4.0,baz=116,slow=4.1,SNR=3.2						
GAMB	**Gambell**	**76.99**	**11**	P	**P**	**23 19 43.6**	**-0.7**
ULN	**Ulaanbaatar**	**77.76**	**324**	*e*P	**P**	**23 19 48.8**	**-0.2**
	4.1nm,0.8s,mb4.4						
SONM	**Songino Array**	**78.12**	**324**	P	**P**	**23 19 51.1**	**+0.1**
	1.6nm,0.8s,mb4.0,baz=139,slow=5.9,SNR=7.7						
QSPA	**South Pole Qui**	**78.75**	**180**	*e*P	**P**	**23 19 55.3**	**+1.2**
	15nm,1.1s,mb4.8						
QSPA				*e*PP	PP	23 22 49.8	-2.1
RC01	**Rabbit Creek A**	**80.61**	**21**	*e*P	**P**	**23 20 03.8**	**-0.4**
LSA	**Lhasa**	**81.44**	**303**	P	**P**	**23 20 09.7**	**+0.3**
RPN	**Rapa Nui**	**81.57**	**116**	P	**P**	**23 20 09.6**	**-0.7**
TLY	**Talaya**	**81.62**	**327**	*e*P	**P**	**23 20 11.5**	**+1.6**
TRF	**Thorofare Moun**	**82.10**	**19**	*e*P	**P**	**23 20 11.6**	**-0.5**
COLA	**College**	**83.86**	**18**	*e*P	**P**	**23 20 20.1**	**-1.1**
	3.2nm,0.5s,mb4.7						
MAW	**Mawson**	**84.08**	**202**	*e*P	**P**	**23 20 24.0**	**+1.5**
ILAR	**Eielson Array**	**84.09**	**19**	P	**P**	**23 20 21.9**	**-0.5**
	1.4nm,0.8s,mb4.2,baz=239,slow=5.5,SNR=13						
YBH	**Yreka Blue Hor**	**84.90**	**46**	P	**P**	**23 20 26.6**	**-0.5**
	1.7nm,0.7s,mb4.3,baz=224,slow=3.6,SNR=4.3						
NVAR	**Mina Array Bea**	**87.08**	**50**	P	**P**	**23 20 37.8**	**-0.1**
	1.6nm,0.8s,mb4.3,baz=242,slow=7.4,SNR=9.6						
N12A	**Clover Valley,**	**90.16**	**48**	*e*P	**P**	**23 20 52.0**	**-0.5**
	11nm,1.4s,mb5.0						
MK31	**Makanchi Array**	**92.84**	**317**	*e*P	**P**	**23 21 04.7**	**-0.1**
MKAR	**Makanchi Array**	**92.84**	**317**	P	**P**	**23 21 04.1**	**-0.7**
	0.3nm,0.3s,mb4.2,baz=93,slow=6.4,SNR=7.2						
ZALV	**Zalesovo Beam**	**93.02**	**324**	LR	LR	00 01 38.2	
	comp=Z,42nm,18.9s,MS3.9,baz=250,slow=35						
PDAR	**Pinedale Array**	**94.58**	**47**	P	**P**	**23 21 13.7**	**+0.8**
	0.6nm,0.9s,mb4.0,baz=240,slow=1.8,SNR=4.2						
ANMO	**Albuquerque**	**95.56**	**56**	P	**P**	**23 21 17.5**	**0.0**
KURK	**Kurchatov**	**96.02**	**320**	*e*P	**P**	**23 21 19.1**	**-0.2**
TKM2	**Tokmak 2**	**96.77**	**312**	P	**P**	**23 21 22.4**	**-0.4**
TXAR	**Lajitas Array**	**96.99**	**62**	P	**P**	**23 21 24.6**	**+0.5**
	0.5nm,0.8s,mb4.0,baz=69,slow=4.2,SNR=4.4						
AML	**Almayashu**	**98.05**	**311**	P	**P**	**23 21 29.2**	**+0.5**
EKS2	**Erkin-Say**	**98.06**	**312**	P	**P**	**23 21 26.6**	**-2.0**
LPAZ	**La Paz**	**121.17**	**117**	PKP	PKPdf	23 26 47.2	+1.3
	0.8nm,0.6s,baz=252,slow=3.2,SNR=3.2						

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*NEIC **23** 23:36:30.2, 19°.36N×64°.31W, h91km, MD3.5(RSPR), After RSPR.*
RSPR 23 23:36:30.2, 19°.36N×64°.31W, h91km±28km, MD3.5/4, 4C-1D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STVI	**Saint Thomas**	**1.17**	**212**	*e*P	Pn	23 36 52.0	0.0
STVI				*e*S	Sn	23 37 07.8	-0.6
MTP	**Monte Pirata**	**1.72**	**224**	*e*P	Pn	23 36 58.9	0.0
MTP				*e*S	Sn	23 37 20.6	0.0
CBYP	**Canovanas**	**1.82**	**234**	*e*P	Pn	23 36 58.7	-1.4
HUMP	**Col San Antoni**	**1.90**	**231**	*e*P	Pn	23 36 60.0	-1.1
CRPR	**Cabo Rojo, PR**	**2.98**	**244**	*e*P	Pn	23 37 15.9	+0.5

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*ISCJB **23** 23:42:44.0±0.4, 32°.72N±0°.03×105°.52E±0°.05, h10km, mb3.4/6, Error ellipse: s-maj=5.9km s-min=4.4km az=171.8*
*IDC **23** 23:42:44.4±1.2, 32°.75N×105°.48E, h0km, mb3.5/5, mb1 3.6/6, mb1mx3.4/23, mbtmp3.5/6, ML3.6/1, Error ellipse: s-maj=51.4km s-min=23.1km az=58.0*
*BJI **23** 23:42:45.0, 32°.81N×105°.56E, h9km, mb3.6/1, ML3.7/14, Ms3.4/7, Ms7 3.1/7*
*NEIC **23** 23:42:46.2±0.5, 32°.81N×105°.45E, h10km, mb3.7/1, Error ellipse: s-maj=13.9km s-min=9.0km az=73.0*
ISC 23 23:42:45.6±0.4, 32°.74N±0°.03×105°.60E±0°.04, h10km, n17, σ1°28/31, mb3.4/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.41**	**221**	Pn	**Pn**	**23 43 26.3**	**+1.2**
CD2				Pg	**Pg**	**23 43 31.8**	**0.0**
CD2				Sg	**Sg**	**23 44 00.8**	**-2.1**
CD2				smax			
	comp=N,1μm,0.7s						
CD2				smax			
	comp=E,950nm,0.8s						
XAN	**Xi'an**	**3.07**	**64**	Pn	**Pn**	**23 43 35.5**	**+1.4**
XAN				Pg	**Pg**	**23 43 42.0**	**-2.4**
XAN				Sn	**Sn**	**23 44 13.3**	**+2.4**
XAN				Sg	**Sg**	**23 44 21.8**	**-2.3**
XAN				smax			

comp=N,310nm,0.7s
XAN smax
comp=E,140nm,0.7s
XAN LR LR
comp=N,340nm,7.4s
XAN LR LR
comp=E,80nm,6.7s
XAN LR LR
comp=Z,94nm,4.5s
LZH Lanzhou 3.64 337 Pn **Pn 23 43 43.5 +1.5**
LZH Pg **Pg 23 43 52.8 -2.6**
LZH Sn **Sn 23 44 25.4 +0.4**
LZH Sg **Sb 23 44 38.3 +4.0**
LZH smax
comp=N,360nm,1.0s
LZH smax
comp=E,760nm,1.0s
LZH LR LR
comp=E,1μm,5.2s
LZH LR LR
comp=Z,1μm,6.5s
ENH Enshi 4.13 126 *e*Pn **Pn 23 43 52.3 +3.5**
ENH *e*Pg **Pg 23 44 03.0 -1.8**
ENH *e*Sn **Sn 23 44 37.3 +0.1**
GYA Guiyang 6.33 171 Pn **Pn 23 44 20.0 +1.0**
GYA Pg **Pb 23 44 40.4 +4.5**
GYA Sn **Sn 23 45 31.5 +0.2**
GYA Sg **Sb 23 45 57.3 +5.7**
GYA smax
comp=N,50nm,0.8s
GYA smax
comp=E,50nm,0.8s
GTA Gaotai 8.14 327 *e*P **Pn 23 44 43.5 -0.3**
GTA pP 23 44 47.3
GTA sP 23 44 49.5
GTA S **Sn 23 46 16.5 +0.7**
GTA sS 23 46 21.0
GTA pmax pmax
comp=Z,4.0nm,1.1s
GTA LR LR
comp=N,110nm,8.1s
GTA LR LR
comp=E,140nm,8.7s
GTA LR LR
comp=Z,62nm,9.6s
SONM Songino Array 15.09 2 Pn **Pn 23 46 17.6 -1.2**
comp=Z,0.3nm,0.3s,baz=185,slow=11,SNR=3.4
CHTO Chiang Mai 15.10 205 *e*Pn **Pn 23 46 19.4 +0.3**
ULN Ulaanbaatar 15.15 4 Pn **Pn 23 46 19.8 +0.2**
MKAR Makanchi Array 22.65 315 P **P 23 47 47.4 +0.6**
comp=Z,0.2nm,0.6s,mb2.8,baz=112,slow=10,SNR=3.1
ZALV Zalesovo Beam 25.85 331 P **P 23 48 16.9 -0.3**
comp=Z,0.2nm,0.4s,mb3.0,baz=120,slow=10,SNR=2.5
KURK Kurchatov 26.75 320 *e*P **P 23 48 24.2 -1.1**
comp=Z,1.5nm,0.9s,mb3.5
KBL Kabul 30.39 284 P **P 23 48 58.7 +0.8**
FINES FINESS Array B 56.93 326 P **P 23 52 29.8 -0.9**
comp=Z,1.3nm,0.5s,mb4.2,baz=89,slow=7.5,SNR=11
ASAR Alice Springs 62.26 151 P **P 23 53 08.6 +0.8**
comp=Z,0.3nm,0.7s,mb3.6,baz=338,slow=7.1,SNR=3.8
ILAR Eielson Array 67.81 26 P **P 23 53 44.5 +1.1**
comp=Z,0.1nm,0.4s,mb3.2,baz=282,slow=6.1,SNR=3.0
VSL Villasalto 74.32 307 *e*P **P 23 54 22.1 -1.2**

IDC 24 00:28:03.6±2.7, 17°.41S×66°.46W, h613km±12km, mb2.7/2, mb1 3.1/3, mb1mx2.8/14, mbtmp2.8/3, Error ellipse: s-maj=105.6km s-min=25.6km az=75.0, Central Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**1.95**	**305**	P	P	00 29 19.6	+0.6
	1.1nm,0.3s,baz=207,slow=5.8,SNR=15						
LPAZ				S	S	00 30 22.0	+1.8
	baz=15,slow=23,SNR=1.9						
ATAH	**Atahualpa**	**15.49**	**310**	P	P	00 31 16.2	+0.3
	0.6nm,0.3s,baz=167,slow=19,SNR=3.4						
PLCA	**Paso Flores**	**23.50**	**188**	P	P	00 32 28.0	+0.2
	1.5nm,0.7s,baz=303,slow=17,SNR=3.1						
TXAR	**Lajitas Array**	**58.73**	**322**	P	P	00 37 04.6	+0.3
	0.5nm,0.8s,baz=138,slow=10.0,SNR=4.8						
ZALV	**Zalesovo Beam**	**137.29**	**25**	PKhKP	PKPpre	00 46 12.8	
	2.7nm,0.6s,baz=307,slow=2.8,SNR=15						
ZALV				PKP	PKPdf	00 46 17.0	-1.2
	4.2nm,0.8s,baz=315,slow=2.8,SNR=3.6						
MKAR	**Makanchi Array**	**140.98**	**34**	PKP	PKPdf	00 46 25.4	+0.2
	1.8nm,0.8s,baz=310,slow=1.9,SNR=13						

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*ISCJB **24** 00:36:45.1±1.5, 47°.7N±0°.1×151°.1E±0°.2, h56km±14km, mb3.8/8, Error ellipse: s-maj=24.2km s-min=9.2km az=135.8*
*IDC **24** 00:36:47.9±3.0, 47°.77N×151°.05E, h63km±25km, mb3.3/5, mb1 3.6/7, mb1mx3.3/24, mbtmp3.4/7, ML3.5/2, Error ellipse: s-maj=39.4km s-min=18.9km az=151.0*
*NEIC **24** 00:36:47.3±1.4, 47°.73N×151°.09E, h60km±13km, mb3.9/3, Error ellipse: s-maj=17.1km s-min=9.6km az=138.0*
ISC 24 00:36:47.5±1.2, 47°.7N±0°.1×151°.1E±0°.2, h61km±12km, n18, σ0°80/19, mb3.8/8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**6.87**	**35**	P	**Pn**	**00 38 24.9**	**-0.6**
	0.2nm,0.3s,baz=175,slow=12,SNR=6.9						
PETK				S	**Sn**	**00 39 42.8**	**+0.6**
	0.4nm,0.3s,baz=47,slow=20,SNR=4.0						
ASAJ	**Asahikawa**	**6.92**	**242**	P	**Pn**	**00 38 26.0**	**-0.1**
	1.9nm,0.3s,baz=9.0,slow=19,SNR=4.0						
MAJO	**Matsushiro**	**14.65**	**225**	*e*Pn	**Pn**	**00 40 11.7**	**+0.4**
INCN	**Inchon**	**20.61**	**249**	*e*P	**P**	**00 41 21.0**	**-0.6**
	42nm,1.5s						
ULN	**Ulaanbaatar**	**29.29**	**287**	*e*P	**P**	**00 42 43.6**	**-0.3**
	0.8nm,0.4s,mb3.8						
MKAR	**Makanchi Array**	**45.28**	**296**	P	**P**	**00 45 00.3**	**+1.4**
	0.2nm,0.4s,mb3.3,baz=63,slow=6.3,SNR=3.7						
LSA	**Lhasa**	**48.86**	**271**	*e*P	**P**	**00 45 27.9**	**+0.9**
	2.6nm,0.3s,mb4.7						
UCH	**Uchtor**	**52.40**	**294**	P	**P**	**00 45 54.5**	**+1.1**
	0.4nm,0.3s,mb3.8						
KBL	**Kabul**	**60.44**	**290**	P	**P**	**00 46 50.1**	**-0.6**
FINES	**FINESS Array B**	**62.59**	**334**	P	**P**	**00 47 03.7**	**-1.0**
	0.7nm,0.4s,mb4.1,baz=35,slow=7.0,SNR=9.4						
FINES	**FINESS Array B**	**62.59**	**334**	P	**P**	**00 47 03.7**	**-1.0**
PDAR	**Pinedale Array**	**65.30**	**53**	P	**P**	**00 47 22.3**	**-0.5**
	0.3nm,0.6s,mb3.5,baz=19,slow=5.7,SNR=2.4						
NB2	**NORSAR Subarra**	**66.88**	**340**	P	**P**	**00 47 31.0**	**-1.7**
	comp=Z,0.5nm,0.6s,mb3.7,baz=28,slow=6.5						
NOA	**NORSAR Array B**	**66.88**	**340**	P	**P**	**00 47 31.4**	**-1.2**
	comp=Z,0.6nm,0.6s,mb3.8,baz=28,slow=6.5,SNR=4.7						
NOA	**NORSAR Array B**	**66.88**	**340**	P	**P**	**00 47 31.4**	**-1.2**
MBWA	**Marble Bar**	**74.10**	**210**	P	**P**	**00 48 16.6**	**-0.4**
TXAR	**Lajitas Array**	**78.22**	**59**	P	**P**	**00 48 41.8**	**+1.2**
	comp=Z,0.1nm,0.4s,mb3.1,baz=305,slow=4.6,SNR=5.3						
STKA	**Stephens Creek**	**79.66**	**188**	P	**P**	**00 48 48.1**	**0.0**

CSEM 24 00:37:20.9±0.2, 27°.29N×55°.91E, h2km, ML3.9, Error ellipse: s-maj=7.2km s-min=2.0km az=171.0, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.26**	**64**	*e*Pg	Pg	00 37 26.1	+0.2
KRBR	**Kerman**	**2.79**	**15**	*e*Pn	Pn	00 38 07.0	+0.4
ZHSF	**Zahedan**	**4.87**	**60**	*e*Pn	Pn	00 38 35.4	+0.2
NASN	**Na'in**	**6.12**	**335**	*e*Pn	Pn	00 38 52.7	+0.4
RDF	**Al-Radifah**	**7.56**	**284**	*e*P	Pn	00 39 12.4	+0.2
NAY	**Al-Naaiem**	**7.89**	**286**	*e*P	Pn	00 39 16.4	-0.3
MIB	**Mutribah**	**7.94**	**290**	*e*P	Pn	00 39 17.3	-0.1

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*ISCJB **24** 00:42:02.5±0.7, 53°.86N±0°.04×160°.69E±0°.08, h104km±8km, Error ellipse: s-maj=9.4km s-min=3.9km az=32.3*
*MOS **24** 00:42:02.1±0.4, 53°.86N×160°.57E, h112km, mb4.2/1, Error ellipse: s-maj=36.5km s-min=13.0km az=80.2*
*KRSC **24** 00:42:02.9±0.6, 53°.89N×160°.66E, h86km±76km, ML4.0*
ISC 24 00:42:03.4±0.7, 53°.86N±0°.04×160°.68E±0°.08, h101km±9km, n27, σ0°64/41, 1C, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KII	**Karymskiy**	**0.74**	**284**	*e*P	**Pn**	**00 42 21.3**	**0.0**
KII				*i* S	**Sn**	**00 42 34.5**	**-0.2**
MKZ	**Mys Kozlova**	**0.93**	**41**	*e*P	**Pn**	**00 42 23.6**	**+0.5**
MKZ				*i* S	**Sn**	**00 42 37.9**	**0.0**
NLC	**Nalytchevo**	**1.05**	**229**	*e*P	**Pn**	**00 42 24.2**	**-0.2**
NLC				*i* S	**Sn**	**00 42 40.1**	**-0.2**
AVH	**Avacha**	**1.30**	**243**	*e*P	**Pn**	**00 42 27.7**	**+0.4**
AVH				*i* S	**Sn**	**00 42 46.0**	**+0.7**
PET	**Petropavlovsk**	**1.47**	**236**	*e*P	**Pn**	**00 42 29.3**	**0.0**
PET				*i* S	**Sn**	**00 42 49.0**	**0.0**
PET	**Petropavlovsk**	**1.47**	**236**	⇑*i*PN	**Pn**	**00 42 29.4**	**+0.1**
PET				*e*S	**Sn**	**00 42 48.7**	**-0.3**
PET				pmax	pmax		
	comp=Z,100nm,0.3s						
PET				pmax	pmax		
	comp=Z,61nm,0.2s						
PET				smax			
	comp=E,2μm,0.5s						
PET				smax			
	comp=N,1μm,0.7s						
PET				smax			
	comp=E,2μm,0.4s						
GNL	**Ganaly**	**1.63**	**265**	*e*P	**Pn**	**00 42 31.4**	**+0.1**
KMNR	**Kamenistaya**	**1.91**	**353**	*e*P	**Pn**	**00 42 35.3**	**+0.5**
GRL	**Gorelyy**	**2.04**	**231**	*e*P	**Pn**	**00 42 37.1**	**+0.6**
GRL				*i* S	**Sn**	**00 43 02.2**	**+0.4**
BZMR	**Bezymyannaya**	**2.08**	**357**	*e*P	**Pn**	**00 42 37.4**	**+0.5**
KPT	**Kopyto**	**2.12**	**353**	*e*P	**Pn**	**00 42 37.6**	**+0.1**
KPT				*i* S	**Sn**	**00 43 02.8**	**-0.8**
ZLN	**Zelenaya**	**2.16**	**2**	*e*P	**Pn**	**00 42 38.8**	**+0.8**
KOZ	**Kozyrevsk**	**2.25**	**348**	*e*P	**Pn**	**00 42 39.1**	**0.0**
KOZR	**Kozyr**	**2.25**	**349**	PN	**Pn**	**00 42 39.1**	**-0.1**
CIRR	**Tsirk**	**2.26**	**1**	*e*P	**Pn**	**00 42 40.2**	**+0.9**
KRSR	**Krestovskiy**	**2.36**	**358**	P	**Pn**	**00 42 40.5**	**-0.1**
ESO	**Esso**	**2.36**	**332**	*e*P	**Pn**	**00 42 40.1**	**-0.5**
ESO				*i* S	**Sn**	**00 43 07.7**	**-1.4**
KLY	**Klyuchi**	**2.46**	**360**	*e*P	**Pn**	**00 42 42.3**	**+0.4**
KLY				*i* S	**Sn**	**00 43 11.0**	**-0.3**
SRDR	**Sredinnyy**	**2.52**	**348**	*e*P	**Pn**	**00 42 42.2**	**-0.5**
KBTR	**Krutoberegovo**	**2.65**	**27**	*e*P	**Pn**	**00 42 44.9**	**+0.4**
KBTR				*i* S	**Sn**	**00 43 15.6**	**-0.4**
BDR	**Baidarnaya**	**2.73**	**6**	*e*P	**Pn**	**00 42 45.9**	**+0.4**
SMKR	**Semkarok**	**2.76**	**9**	*e*P	**Pn**	**00 42 46.3**	**+0.4**
SRKR	**Sorokina**	**2.81**	**6**	*e*P	**Pn**	**00 42 47.2**	**+0.6**
SRKR				*i* S	**Sn**	**00 43 20.0**	**+0.2**
MIPR	**Malaya Ipel'ka**	**2.85**	**238**	*e*P	**Pn**	**00 42 47.5**	**+0.4**
BKI	**Bering**	**3.37**	**64**	*e*P	**Pn**	**00 42 54.3**	**+0.3**
BKI				*i* S	**Sn**	**00 43 31.0**	**-2.0**
SKR	**Severo-Kuril's**	**4.24**	**223**	*e*PN	**Pn**	**00 43 05.4**	**-0.4**
SKR				*e*S	**Sn**	**00 43 52.0**	**-2.2**
SKR				pmax	pmax		
	comp=Z,40nm,0.5s						
SKR				smax			
	comp=N,140nm,0.3s						
SKR				smax			
	comp=E,140nm,0.3s						
ALID	**Alaid**	**4.34**	**228**	*e*P	**Pn**	**00 43 06.9**	**-0.3**

KRSC 24 01:16:08.3±0.4, 54°.11N×161°.67E, h26km±15km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.45**	**4**	*e*P	Pb	01 16 16.5	-1.2
MKZ				*i* S	Sb	01 16 22.3	-1.8
KII	**Karymskiy**	**1.31**	**268**	*e*P	Pn	01 16 31.5	+0.6
KII				*i* S	Sn	01 16 47.9	+0.4
SPN	**Mys Shipunski**	**1.41**	**225**	*e*P	Pn	01 16 32.0	-0.2
SPN				*i* S	Sn	01 16 48.8	-1.2
NLC	**Nalytchevo**	**1.67**	**237**	*e*P	Pn	01 16 36.1	+0.2
NLC				*i* S	Sn	01 16 56.4	0.0
KMNR	**Kamenistaya**	**1.84**	**334**	*e*P	Pn	01 16 39.9	+1.7
AVH	**Avacha**	**1.94**	**245**	*e*P	Pn	01 16 41.2	+1.7
AVH				*i* S	Sn	01 17 05.5	+2.5
KPT	**Kopyto**	**2.04**	**336**	*e*P	Pn	01 16 43.2	+2.3
PET	**Petropavlovsk**	**2.10**	**240**	P	Pn	01 16 41.8	+0.1
PET				*i* S	Sn	01 17 06.5	-0.5
KBTR	**Krutoberegovo**	**2.20**	**17**	P	Pn	01 16 45.0	+1.9
GNL	**Ganaly**	**2.25**	**261**	*e*P	Pn	01 16 45.8	+2.1
KLY	**Klyuchi**	**2.28**	**346**	P	Pn	01 16 45.7	+1.5
KLY				*i* S	Sn	01 17 13.1	+1.6
SRDR	**Sredinnyy**	**2.48**	**334**	*e*P	Pn	01 16 48.1	+1.2
BKI	**Bering**	**2.73**	**65**	*e*P	Pn	01 16 51.1	+0.8
BKI				*i* S	Sn	01 17 21.3	-1.2

IDC 24 01:17:19.1±1.8, 14°.65S×177°.43W, h0km, mb3.9/5, mb1 4.3/5, mb1mx4.1/15, mbtmp3.9/5, Error ellipse: s-maj=124.6km s-min=27.8km az=150.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**46.65**	**251**	P	P	01 25 49.6	0.0
	3.1nm,0.8s,baz=85,slow=8.1,SNR=20						
NVAR	**Mina Array Bea**	**76.43**	**44**	P	P	01 29 11.2	+0.5
	0.5nm,0.8s,baz=229,slow=9.4,SNR=3.6						
ILAR	**Eielson Array**	**82.52**	**13**	P	P	01 29 43.5	+0.3
	0.4nm,0.7s,baz=218,slow=6.6,SNR=6.0						
TXAR	**Lajitas Array**	**83.46**	**58**	P	P	01 29 49.6	+0.6
	1.0nm,1.0s,baz=238,slow=4.3,SNR=5.7						
PDAR	**Pinedale Array**	**84.35**	**43**	P	P	01 29 53.0	-0.3
	1.0nm,0.9s,baz=200,slow=2.4,SNR=7.5						

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*IDC **24** 01:25:34.1±1.4, 32°.31N×104°.87E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.5/23, mbtmp3.6/6, ML3.5/1, Error ellipse: s-maj=94.9km s-min=24.7km az=59.0*
*BJI **24** 01:25:35.1, 32°.82N×105°.52E, h13km, mb3.7/1, ML3.4/9, Ms2.8/1, Ms7 3.0/1*
ISC 24 01:25:35.1±1.2, 32°.72N±0°.07×105°.51E±0°.06, h6km±11km, n11, σ1°07/18, mb3.7/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.34**	**220**	Pn	**Pn**	**01 26 15.5**	**+1.3**
CD2				Pg	**Pg**	**01 26 18.3**	**-1.7**
CD2				Sg	**Sg**	**01 26 50.8**	**+0.4**
CD2				smax			
	comp=N,1μm,0.9s						
CD2				smax			
	comp=E,470nm,1.0s						
XAN	**Xi'an**	**3.14**	**64**	Pn	**Pn**	**01 26 24.8**	**-0.4**
XAN				Pg	**Pb**	**01 26 30.6**	**-0.8**
XAN				Sn	**Sb**	**01 27 10.0**	**0.0**
XAN				Sg	**Sg**	**01 27 16.8**	**+0.7**
XAN				smax			
	comp=N,140nm,0.7s						
XAN				smax			
	comp=E,89nm,0.8s						
LZH	**Lanzhou**	**3.63**	**338**	Pg	**Pn**	**01 26 33.5**	**+1.7**
LZH				Sn	**Sn**	**01 27 11.3**	**-3.7**
LZH				Sg	**Sb**	**01 27 18.5**	**-5.4**
LZH				smax			
	comp=N,220nm,1.0s						
LZH				smax			
	comp=E,240nm,0.7s						
LZH				LR	LR		
	comp=N,280nm,4.4s						
LZH				LR	LR		
	comp=Z,230nm,5.0s						
WHN	**Wuhan**	**7.84**	**104**	S	**Sn**	**01 28 54.5**	**-4.4**
GTA	**Gaotai**	**8.11**	**327**	*e*P	**Pn**	**01 27 33.3**	**-0.1**
GTA				pP		01 27 37.4	
GTA				sP		01 27 39.4	
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
SONM	**Songino Array**	**15.11**	**2**	Pn	**Pn**	**01 29 15.1**	**+6.0**
	comp=Z,0.2nm,0.3s,baz=186,slow=13,SNR=4.6						
MKAR	**Makanchi Array**	**22.61**	**315**	P	**P**	**01 30 36.6**	**+0.2**
	comp=Z,2.0nm,1.0s,mb3.5,baz=106,slow=13,SNR=6.2						
ZALV	**Zalesovo Beam**	**25.83**	**331**	P	**P**	**01 31 09.2**	**+2.1**
	comp=Z,0.4nm,0.2s,mb3.5,baz=156,slow=7.6,SNR=3.0						
FINES	**FINESS Array B**	**56.90**	**326**	P	**P**	**01 35 20.1**	**-0.5**
	comp=Z,0.6nm,0.4s,mb4.0,baz=103,slow=8.2,SNR=13						
ASAR	**Alice Springs**	**62.28**	**150**	P	**P**	**01 35 57.9**	**-0.2**
	comp=Z,0.2nm,0.3s,mb3.8,baz=340,slow=6.7,SNR=4.9						
NOA	**NORSAR Array B**	**63.94**	**327**	P	**P**	**01 36 07.5**	**-1.2**
	comp=Z,0.5nm,0.8s,mb3.6,baz=69,slow=6.2,SNR=3.3						

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*BJI **24** 01:43:13.5, 50°.87N×157°.78E, h33km, mB6.0/42, mb5.5/58, Ms6.1/70, Ms7 5.9/63*
*ISCJB **24** 01:43:15.6±0.1, 50°.84N±0°.02×157°.59E±0°.02, h39km, mb5.8/487, MS6.0/302, Error ellipse: s-maj=2.5km s-min=1.4km az=169.6*
*NEIC **24** 01:43:16.1±0.1, 50°.97N×157°.58E, h27km, mb6.0/292, ME5.9, MS6.0/204, MW6.2, MW6.1, Error ellipse: s-maj=3.1km s-min=1.7km az=170.0 Broadband fault plane solution: P waves. NP1:ϕ_s45.00000°, δ60.00000°, λ100.00000°. NP2:ϕ_s206.00000°, δ31.00000°, λ73.00000°. Principal axes: T Plg73.0000°, Azm340.0000°; N Plg0.0000°, Azm0.0000°; P Plg14.0000°, Azm128.0000°; Moment Tensor Solution. s177 Moment tensor: Scale 10^{18} Nm; M_{rr}1.58; $M_{\theta\theta}$-0.59; $M_{\phi\phi}$-0.99; $M_{r\theta}$0.56; $M_{\theta\phi}$-0.70; $M_{\phi r}$0.25; Best double couple: $M_0$1.70000×10^{18} NP1:ϕ_s47.00000°, δ55.00000°, λ101.00000°. NP2: ϕ_s208.00000°, δ36.00000°, λ75.00000°. Principal axes: T 1.7200, Plg76.0000°, Azm352.0000°; N -0.1100, Plg8.0000°, Azm220.0000°; P -1.6100, Plg9.0000°, Azm129.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
*BGS **24** 01:43:16.2±1.2, 51°.12N×157°.59E, h20km, mb5.9, MS5.9*
*MOS **24** 01:43:16.6±1.0, 50°.84N×157°.59E, h49km, mb6.1/117, MS6.1/104, Error ellipse: s-maj=5.9km s-min=3.1km az=90.8*
MOS Felt (III-IV) at Severo-Kuril'sk; (III) at Petropavlovsk-Kamchatskiy.
*KRSC **24** 01:43:17.6±1.5, 50°.80N×158°.30E, h36km±35km, ML6.3*
*SZGRF **24** 01:43:19.7, 50°.52N×158°.07E, h84km, mb6.1, East of Kuril Islands, Russia*
*IDC **24** 01:43:19.7±2.2, 50°.97N×157°.54E, h61km±19km, mb4.9/31, mb1 5.0/34, mb1mx5.0/35, mbtmp5.0/34, MS5.8/31, Ms1 5.9/31, ms1mx5.8/41, Error ellipse: s-maj=12.6km s-min=8.5km az=149.0*
*GCMT **24** 01:43:22.7±0.1, 50°.71N×158°.15E, h42km, MW6.2, Moment Tensor Solution. s109,c276; s85,c146; Moment tensor: Scale 10^{18}Nm; M_{rr}2.25±.01; $M_{\theta\theta}$-0.85±.01; $M_{\phi\phi}$-1.39±.01; $M_{r\theta}$0.86±.01; $M_{\theta\phi}$-1.34±.01; $M_{\phi r}$0.60±.01; Best double couple: $M_0$2.60000×10^{18} NP1:ϕ_s212.00000°, δ34.00000°, λ78.00000°. NP2: ϕ_s46.00000°, δ57.00000°, λ98.00000°. Principal axes: T 2.4900, Plg77.0000°, Azm341.0000°; N 0.2100, Plg7.0000°, Azm222.0000°; P -2.7000, Plg12.0000°, Azm130.0000°; Data Used: II IU IC G CN. Surface waves: sta=115, comp=277, per= 50.*
*DJA **24** 01:43:24, 51°.04N×157°.80E, h103km, Mw6.0/38*
ISC 24 01:43:18.4±0.1, 50°.93N±0°.02×157°.51E±0°.02, h45km, h45km±2.2km: pP-P, n2023, σ0°83/1978, mb5.8/487, MS6.0/301, 544C-263D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.92**	**255**	⇓*i*PN	**Pn**	**01 43 36.5**	**+1.6**
SKR				*i* S	**Sn**	**01 43 51.6**	**+4.7**
SKR				pmax	pmax		
	comp=E,130μm,6.0s						
SKR				pmax	pmax		
	comp=Z,140μm,6.0s						
SKR				pmax	pmax		
	comp=N,48μm,4.0s						
SKR				smax			
	comp=E,439μm,3.0s						
ALID	**Alaid**	**1.24**	**268**	*i* P	**Pn**	**01 43 42.6**	**+3.3**
MIPR	**Malaya Ipel'ka**	**1.43**	**341**	*i* P	**Pn**	**01 43 45.7**	**+3.8**
GRL	**Gorelyy**	**1.66**	**12**	*e*P	**Pn**	**01 43 47.0**	**+1.9**
PETK	**Petropavlovsk-**	**2.19**	**3**	P	**Pn**	**01 43 53.9**	**+1.6**
	comp=E,1μm,0.3s,baz=157,slow=15,SNR=1943						
PETK				S	**Sn**	**01 44 29.4**	**+11**
	comp=E,1μm,0.3s,baz=111,slow=19,SNR=8.1						
PET	**Petropavlovsk**	**2.21**	**18**	*e*P	**Pn**	**01 43 53.7**	**+1.1**
PET				*i* S	**Sn**	**01 44 20.1**	**+1.4**
PET	**Petropavlovsk**	**2.21**	**18**	*e*Pn	**Pn**	**01 43 53.7**	**+1.1**
PET				*e*S	**Sn**	**01 44 24.1**	**+5.4**
AVH	**Avacha**	**2.46**	**17**	*e*P	**Pn**	**01 43 58.2**	**+2.2**
NLC	**Nalytchevo**	**2.52**	**26**	*e*P	**Pn**	**01 43 56.0**	**-0.7**
SPN	**Mys Shipunski**	**2.67**	**35**	*e*P	**Pn**	**01 43 58.9**	**+0.1**
GNL	**Ganaly**	**2.78**	**5**	*e*P	**Pn**	**01 44 03.6**	**+3.2**
KII	**Karymskiy**	**3.33**	**20**	*e*P	**Pn**	**01 44 10.4**	**+2.5**
MKZ	**Mys Kozlova**	**4.45**	**34**	*e*P	**Pn**	**01 44 22.4**	**-0.8**
MKZ				*i* S	**Sn**	**01 45 09.9**	**-3.7**
KMNR	**Kamenistaya**	**5.10**	**18**	*e*P	**Pn**	**01 44 35.8**	**+3.6**
KPT	**Kopyto**	**5.30**	**17**	*e*P	**Pn**	**01 44 38.4**	**+3.5**
KPT				*i* S	**Sn**	**01 45 37.8**	**+3.2**
BZMR	**Bezymyannaya**	**5.32**	**18**	*e*P	**Pn**	**01 44 38.8**	**+3.6**
BZMR				*i* S	**Sn**	**01 45 39.0**	**+3.9**
KOZ	**Kozyrevsk**	**5.33**	**14**	*e*P	**Pn**	**01 44 38.8**	**+3.5**
KOZR	**Kozyr**	**5.34**	**15**	PN	**Pn**	**01 44 38.8**	**+3.3**
ZLN	**Zelenaya**	**5.46**	**20**	*e*P	**Pn**	**01 44 40.8**	**+3.7**
CIRR	**Tsirk**	**5.54**	**19**	*e*P	**Pn**	**01 44 41.9**	**+3.7**
SRDR	**Sredinnyy**	**5.56**	**13**	*e*P	**Pn**	**01 44 41.8**	**+3.4**
KRSR	**Krestovskiy**	**5.60**	**18**	*e*P	**Pn**	**01 44 42.0**	**+3.0**
KLY	**Klyuchi**	**5.71**	**18**	*e*P	**Pn**	**01 44 44.2**	**+3.7**
KLY				*i* S	**Sn**	**01 45 48.6**	**+4.0**
BDR	**Baidarnaya**	**6.06**	**20**	*e*P	**Pn**	**01 44 48.5**	**+3.2**
SMKR	**Semkarok**	**6.13**	**21**	*e*P	**Pn**	**01 44 48.9**	**+2.6**
SRKR	**Sorokina**	**6.13**	**19**	*e*P	**Pn**	**01 44 49.2**	**+2.9**
KBTR	**Krutoberegovo**	**6.16**	**29**	*e*P	**Pn**	**01 44 47.9**	**+1.2**
KBTR				*i* S	**Sn**	**01 45 53.8**	**-1.9**
BKI	**Bering**	**6.66**	**47**	*e*P	**Pn**	**01 44 51.9**	**-1.6**
BKI				*i* S	**Sn**	**01 45 59.7**	**-8.2**
KUR	**Kuril'sk**	**8.61**	**232**	*e*PN	**Pn**	**01 45 21.3**	**+1.0**
KUR				pmax	pmax		
	comp=N,1μm,1.0s						
KUR				pmax	pmax		
	comp=E,2μm,1.0s						
KUR				pmax	pmax		
	comp=Z,3μm,1.0s						
KUR				pmax	pmax		
	comp=N,8μm,3.0s						
KUR				pmax	pmax		
	comp=E,8μm,3.0s						
KUR				pmax	pmax		
	comp=Z,12μm,3.0s						
KUR				MLR	MLR		
	comp=N,45μm,16.0s						
KUR				MLR	MLR		
	comp=E,78μm,16.0s						
KUR				MLR	MLR		
	comp=Z,34μm,16.0s						
UGL	**Uglegorsk**	**10.12**	**265**	*e*PN	**Pn**	**01 45 47.0**	**+6.1**
UGL				*e*S	**Sn**	**01 47 46.0**	**+13**
UGL				pmax	pmax		
	comp=E,247nm,1.0s						
UGL				pmax	pmax		
	comp=Z,1μm,1.0s						
UGL				pmax	pmax		
	comp=N,149nm,0.7s						
UGL				pmax	pmax		
	comp=N,1μm,9.0s						
UGL				pmax	pmax		
	comp=E,6μm,9.0s						
SMY	**Shemya**	**10.43**	**74**	*e*PN	**Pn**	**01 45 41.1**	**-4.0**
SMY				pmax	pmax		
	comp=Z,1μm,0.8s						
SMY	**Shemya**	**10.43**	**74**	*e*P	**Pn**	**01 45 41.1**	**-4.0**
	comp=Z,1μm,0.8s						
YUK	**Yuzh-Kuril'sk**	**10.

YSS MLR MLR
comp=Z,46μm,18.0s
YSS MLR MLR
comp=N,48μm,19.0s
YSS Yuzh-Sakhalins 10.49 253 *e*Pn **Pn 01 45 50.5 +4.5**
ASAJ Asahikawa 12.16 242 P **Pn 01 46 10.0 +1.2**
comp=N,8.7nm,0.3s,baz=70,slow=9.5,SNR=48
ASAJ LR LR 01 50 48.6
comp=N,36μm,18.8s,baz=55,slow=37
ASAJ Asahikawa 12.16 242 PN **Pn 01 46 10.0 +1.2**
ASAJ pmax pmax
comp=Z,9.0nm,0.3s
ASAJ MLR MLR
comp=Z,36μm,18.8s
ASAJ Asahikawa 12.16 242 P **Pn 01 46 10.8 +2.0**
SEY Seymchan 12.35 349 *ce*PN **Pn 01 46 15.5 +4.2**
ERM Erimo 13.30 233 *e*Pn **Pn 01 46 23.1 -1.2**
ERM *e*S **Sn 01 48 51.2 +0.6**
AMKA Amchitka 13.68 80 *e*P **Pn 01 46 27.3 -2.2**
comp=Z,159nm,1.2s
HABR Khabarovsk 14.73 269 *i* P **Pn 01 46 47.7 +4.0**
HABR *e*S **Sn 01 49 32.1 +6.7**
HABR pmax pmax
comp=E,183nm,1.3s
HABR pmax pmax
comp=Z,156nm,1.3s
HABR pmax pmax
comp=N,55nm,1.3s
HABR MLR MLR
comp=N,27μm,18.0s
HABR MLR MLR
comp=E,46μm,17.0s
HABR MLR MLR
comp=Z,53μm,16.0s
ADK Adak 16.11 77 *e*P **Pn 01 46 57.3 -4.1**
ADK *e*S **S 01 49 55.6 -15**
ADK pmax pmax
comp=Z,474nm,1.3s
ADK Adak 16.11 77 *e*Pn **Pn 01 46 57.3 -4.1**
comp=Z,474nm,1.3s
ADK *e*S **S 01 49 55.6 -15**
KLR Kul'dur 16.60 274 ⇓ *i*P **Pn 01 47 08.0 +0.3**
KLR *e* 01 50 10.5
KLR pmax pmax
comp=E,350nm,2.2s
KLR pmax pmax
comp=Z,350nm,2.2s
KLR pmax pmax
comp=E,12μm,11.0s
KLR pmax pmax
comp=Z,18μm,11.0s
ATKA Atka Island 17.59 75 *e*Pn **Pn 01 47 17.6 -2.4**
comp=Z,3μm,2.4s
BILL Bilibino 17.70 11 *c i*P **Pn 01 47 21.1 0.0**
BILL *i* S **S 01 50 35.9 -6.6**
BILL pmax pmax
comp=Z,216nm,1.2s
BILL MLR MLR
comp=Z,29μm,16.0s
BILL Bilibino 17.70 11 *e*Pn **Pn 01 47 20.8 -0.3**
comp=Z,1μm,1.6s
YAK Yakutsk 18.80 317 *c i*P **Pn 01 47 34.2 -0.3**
YAK pmax pmax
comp=Z,304nm,1.0s
YAK pmax pmax
comp=N,132nm,1.3s
YAK pmax pmax
comp=E,409nm,1.2s
YAK pmax pmax
comp=Z,3μm,1.7s
YAK pmax pmax
comp=E,4μm,2.1s
YAK pmax pmax
comp=N,2μm,2.2s
YAK MLR MLR
comp=Z,80μm,15.0s
YAK MLR MLR
comp=E,58μm,15.0s
YAK MLR MLR
comp=N,32μm,13.0s
YAK Yakutsk 18.80 317 *e*P **Pn 01 47 34.4 -0.1**
comp=N,858nm,1.0s
VLA Vladivostok 19.06 256 *c i*P **Pn 01 47 37.2 -0.7**
VLA pmax pmax
comp=Z,88nm,1.3s
MDJ Mudanjiang 19.73 262 P **Pn 01 47 43.1 -2.6**
MDJ pP pP 01 47 51.1 -3.6
MDJ sP sP 01 47 55.1 -5.3
MDJ S **S 01 51 24.4 +0.7**
MDJ PcP PcP 01 51 57.9 -3.0
MDJ ScP ScP 01 55 31.1 -1.9
MDJ PcS PcS 01 55 36.6 -1.5
MDJ ScS ScS 01 59 15.8 +0.7
MDJ pmax pmax
comp=Z,51nm,1.2s
MDJ LR LR
comp=N,49μm,19.2s
MDJ LR LR
comp=E,38μm,20.6s
MDJ LR LR
comp=Z,29μm,23.5s
MDJ Mudanjiang 19.73 262 *e*P **Pn 01 47 43.2 -2.5**
comp=Z,174nm,1.0s
SPIA Saint Paul Isl 19.80 59 *e*Pn **Pn 01 47 45.7 -0.8**
comp=Z,2μm,1.8s
MAJO Matsushiro 19.95 231 *e*P **Pn 01 47 46.6 -1.8**
MAJO pmax pmax
comp=Z,419nm,1.2s
MAJO Matsushiro 19.95 231 *e*P **Pn 01 47 46.6 -1.8**
comp=Z,419nm,1.2s
MAT Matsushiro 19.95 231 P **Pn 01 47 46.7 -1.7**
MAT S **S 01 51 28.2 0.0**
MJAR Matsushiro Arr 19.95 231 P **Pn 01 47 46.8 -1.6**
comp=Z,5.0nm,0.3s,baz=27,slow=10,SNR=98
MJAR Matsushiro Arr 19.95 231 P **Pn 01 47 46.8 -1.6**
MJAR pmax pmax
comp=Z,5.0nm,0.3s
CLNS Chul'man 19.98 300 *e*P **Pn 01 47 49.0 +0.4**
CLNS *e* 01 48 07.0
CLNS *e*S **S 01 51 33.2 +4.6**
CLNS *e*SS 01 51 55.9
CLNS *e* 01 52 05.0
CLNS *e* 01 59 18.1
CLNS pmax pmax
comp=Z,160nm,0.9s
CLNS pmax pmax
comp=E,111nm,0.9s
CLNS pmax pmax
comp=N,95nm,1.0s
CLNS pmax pmax
comp=Z,410nm,1.0s
CLNS pmax pmax
comp=E,151nm,1.0s
CLNS pmax pmax
comp=N,409nm,1.3s
CLNS smax
comp=E,3μm,11.8s
CLNS smax
comp=N,4μm,12.2s
CLNS MLR MLR
comp=E,36μm,21.0s
CLNS MLR MLR
comp=N,19μm,21.0s
CLNS MLR MLR
comp=Z,44μm,22.0s
NIKO Nikolski 20.73 71 *e*Pn **P 01 47 55.6 +0.9**
comp=Z,686nm,1.2s
GAMB Gambell 20.74 40 *e*P **P 01 47 54.6 -0.2**
comp=Z,1μm,1.4s
UNV Unalaska Valle 22.01 68 *e*P **P 01 48 05.6 -2.9**
comp=Z,1μm,1.4s,mb6.1
UNV *e* 01 48 18.8
JHJ2 Mitsune 22.03 223 P **P 01 48 10.8 +1.9**
JHJ Hachijo jima 2 22.04 223 P **P 01 48 07.7 -1.3**
comp=Z,246nm,0.9s,mb5.6,baz=73,slow=23,SNR=5.9
JHJ LR LR 01 58 33.5
comp=Z,5μm,18.3s,MS5.0,baz=33,slow=41
AKUT Akutan 22.40 67 P **P 01 48 05.4 -7.2**
comp=Z,249nm,1.6s,mb5.4
CN2 Changchun 22.73 264 ⇑ P **P 01 48 13.5 -2.7**
CN2 *es*P sP 01 48 27.8 -5.0
CN2 *e*PP 01 48 42.6
CN2 *e*S **S 01 52 15.3 -6.3**
CN2 *e*SS 01 52 59.6
CN2 pmax pmax
comp=Z,30nm,1.4s,mb4.5
CN2 LR LR
comp=N,50μm,19.0s,MS6.1
CN2 LR LR
comp=E,36μm,19.0s,MS6.1
CN2 LR LR
comp=Z,33μm,20.0s,MS5.8
TNA Tin City 22.94 37 *e*P **P 01 48 18.0 -0.2**
comp=Z,959nm,1.2s,mb6.1
HIA Hailar 24.12 281 *e*P **P 01 48 29.2 -0.4**
HIA pmax pmax
comp=Z,124nm,0.8s
HIA MLR MLR
comp=Z,29μm,20.0s
HIA Hailar 24.12 281 *e*P **P 01 48 29.2 -0.4**
comp=Z,124nm,0.8s,mb5.4
HIA LR LR
comp=Z,29μm,20.0s,MS5.8
TIXI Tiksi 24.45 338 *c i*P **P 01 48 31.1 -1.3**
TIXI *e**PP 01 48 45.8
TIXI *e*S **S 01 52 50.5 +1.5**
TIXI pmax pmax
comp=Z,182nm,1.5s,mb5.3
TIXI MLR MLR
comp=Z,72μm,16.0s,MS6.3
TIXI MLR MLR
comp=E,25μm,18.0s,MS6.0
TIXI MLR MLR
comp=N,38μm,17.0s,MS6.0
TIXI Tiksi 24.45 338 *e*P **P 01 48 32.0 -0.4**
comp=N,988nm,1.6s,mb6.0
TIXI ScP ScP 01 56 03.3 +19
TIXI LR LR
comp=Z,54μm,20.0s,MS6.0
SNY Shenyang 24.93 262 ⇑ P **P 01 48 35.8 -1.3**
SNY S **S 01 52 55.5 -1.7**
SNY LR LR
comp=N,47μm,18.6s,MS6.0
SNY LR LR
comp=E,24μm,21.1s,MS6.0
SNY LR LR
comp=Z,26μm,21.9s,MS5.7
KSRS Korea Array 24.93 249 LR LR 01 57 25.7
comp=Z,16μm,21.8s,MS5.5,baz=48,slow=34
SDPT Sand Point 25.30 63 *e*P **P 01 48 37.2 -3.1**
comp=Z,274nm,1.2s,mb5.7
INCN Inchon 25.68 250 *e*P **P 01 48 44.5 +0.6**
comp=Z,1μm,2.9s,mb6.0
INCN LR LR
comp=Z,16μm,19.0s,MS5.6
CHGN Chignik 26.33 61 *e*P **P 01 48 47.0 -2.6**
JNU Nakatsue 26.39 238 P **P 01 48 51.3 +0.9**
CBIJ Chichi jima 26.50 212 P **P 01 48 52.2 +0.8**
comp=Z,35nm,0.7s,mb5.0,baz=78,slow=20,SNR=2.9
CBIJ LR LR 01 58 02.2
comp=Z,9μm,21.2s,MS5.3,baz=192,slow=33
CIT Chita 27.09 290 *e*P **P 01 48 56.5 -0.1**
CIT pmax pmax
comp=Z,262nm,2.3s,mb5.4
TTA Tatalina 27.39 46 *e*P **P 01 48 58.5 -0.6**
SVW2 Sparrevohn 27.52 50 *e*P **P 01 48 59.1 -1.2**
comp=Z,504nm,2.3s,mb5.7
DL2 Dalian 27.83 258 ⇑ *i*P **P 01 49 02.3 -0.9**
DL2 PcP PcP 01 52 18.4 +0.1
DL2 S **S 01 53 42.1 -0.9**
DL2 pmax pmax
comp=Z,30nm,0.6s,mb5.1
DL2 pmax pmax
comp=Z,1μm,11.5s
DL2 LR LR
comp=N,13μm,20.5s,MS5.6
DL2 LR LR
comp=E,12μm,20.5s,MS5.6
DL2 LR LR
comp=Z,13μm,22.9s,MS5.5
RSO Redoubt South 28.93 51 *e*P **P 01 49 11.8 -1.0**
OHAK Old Harbor 29.00 58 *e*P **P 01 49 11.2 -2.3**
comp=Z,493nm,1.8s,mb5.9
PPLA Purkeypile 29.14 46 *e*P **P 01 49 14.9 +0.3**
comp=Z,214nm,1.2s,mb5.8
KDAK Kodiak Island 29.29 57 P **P 01 49 14.2 -1.9**
comp=Z,27nm,0.7s,mb5.1,baz=280,slow=5.8,SNR=24
KDAK Kodiak Island 29.29 57 *e*P **P 01 49 13.7 -2.3**
KDAK pmax pmax
comp=Z,117nm,1.0s,mb5.6
KDAK MLR MLR
comp=Z,28μm,21.0s,MS5.9
KDAK Kodiak Island 29.29 57 *e*P **P 01 49 13.7 -2.3**
comp=Z,117nm,1.0s,mb5.6
KDAK LR LR
comp=Z,28μm,21.0s,MS5.9
MIDW Midway 29.56 131 PFAKE 01 49 30.0 +11
MIDW LR LR
comp=Z,24μm,20.0s,MS5.8
BPAW Bear Paw Mtn. 29.70 44 *e*P **P 01 49 19.0 -0.6**
comp=Z,13nm,0.8s,mb4.7
TRF Thorofare Moun 30.00 45 *e*P **P 01 49 21.7 -0.6**
comp=Z,144nm,1.4s,mb5.5
COLD Coldfoot 30.24 38 *e*P **P 01 49 23.8 -0.6**
comp=Z,48nm,0.8s,mb5.3
RC01 Rabbit Creek A 30.36 50 *e*P **P 01 49 24.3 -1.2**
comp=Z,414nm,1.6s,mb5.9
RC01 *e*PcP PcP 01 52 23.4 -0.9
BJI Beijing 30.58 265 P **P 01 49 27.0 -0.6**
BJI S **S 01 54 28.4 +2.2**
BJI LR LR
comp=N,41μm,20.9s,MS6.2
BJI LR LR
comp=E,36μm,19.6s,MS6.2
BJI LR LR
comp=Z,26μm,26.8s
SEW Seward 30.60 52 *e*P **P 01 49 25.6 -2.0**
comp=Z,316nm,1.1s,mb6.1
MCK McKinley 30.61 45 *e*P **P 01 49 26.8 -0.8**
MCK pmax pmax
comp=Z,281nm,1.2s,mb6.0
MCK McKinley 30.61 45 *e*P **P 01 49 26.8 -0.8**
comp=Z,281nm,1.2s,mb6.0
PMR Palmer 30.61 49 *e*P **P 01 49 26.6 -1.1**
PMR pmax pmax
comp=Z,85nm,1.4s,mb5.4
PMR Palmer 30.61 49 *e*P **P 01 49 26.6 -1.1**
comp=Z,85nm,1.4s,mb5.4
COLA College 31.07 42 *e*P **P 01 49 31.0 -0.7**
COLA pmax pmax
comp=Z,215nm,0.9s,mb6.0
COLA MLR MLR
comp=Z,17μm,19.0s,MS5.7
COLA College 31.07 42 *e*P **P 01 49 31.0 -0.7**
comp=Z,215nm,0.9s,mb6.0
COLA LR LR
comp=Z,17μm,19.0s,MS5.7
ILAR Eielson Array 31.48 43 P **P 01 49 34.0 -1.4**
comp=Z,28nm,0.8s,mb5.2,baz=261,slow=7.8,SNR=175
ILAR LR LR 02 03 39.3
comp=Z,20μm,19.4s,MS5.8,baz=276,slow=39
ILAR Eielson Array 31.48 43 P **P 01 49 34.0 -1.3**
ILAR pmax pmax
comp=Z,28nm,0.8s
ILAR MLR MLR
comp=Z,20μm,19.4s
PAX Paxson 32.21 46 *e*P **P 01 49 40.4 -1.3**
PAX pmax pmax
comp=Z,138nm,1.2s,mb5.7
PAX Paxson 32.21 46 *e*P **P 01 49 40.4 -1.2**
comp=Z,138nm,1.2s,mb5.7
DIV Divide 32.27 49 *e*P **P 01 49 41.4 -0.8**
comp=Z,323nm,1.2s,mb6.0
TIA Tai'an 32.30 259 ⇑ P **P 01 49 42.3 -0.5**
TIA S **S 01 54 52.6 -0.6**
TIA LR LR
comp=N,12μm,19.1s,MS5.8
TIA LR LR
comp=E,21μm,23.6s,MS5.8
WAKE Wake Island 32.40 164 PFAKE 01 50 00.0 +16
WAKE LR LR
comp=Z,26μm,19.0s,MS5.9
ULN Ulaanbaatar 32.47 285 *e*P **P 01 49 44.8 +0.7**
ULN *e* 01 52 31.2
ULN pmax pmax
comp=Z,65nm,1.0s,mb5.4
ULN MLR MLR
comp=Z,30μm,22.0s,MS6.0
ULN Ulaanbaatar 32.47 285 *e*P **P 01 49 44.8 +0.6**
comp=Z,65nm,1.0s,mb5.4
ULN *e*PcP PcP 01 52 31.2 +1.0
ULN LR LR
comp=Z,30μm,22.0s,MS6.0
ULN Ulaanbaatar 32.47 285 P **P 01 49 45.0 +0.9**
comp=Z,2μmcomp=Z,75nm,0.9s,mb5.5
ULN S **S 01 54 55.8 +0.3**
comp=Z,2μmcomp=Z,75nm,0.9s
ULN Ulaanbaatar 32.47 285 P **P 01 49 44.7 +0.6**
SNR=37
IRK Irkutsk 32.49 293 *e*P **P 01 49 45.2 +0.9**
IRK *e* 01 52 30.9
IRK pmax pmax
comp=Z,110nm,2.1s,mb5.3
JOW Kunigami 32.75 234 P **P 01 49 47.2 +0.4**
BMRM Bremner River 32.86 50 *e*P **P 01 49 46.9 -0.5**
comp=Z,354nm,1.1s,mb6.2
BMRM *e*PcP PcP 01 52 30.9 -0.1
SONM Songino Array 32.88 285 P **P 01 49 48.0 +0.3**
comp=Z,6.3nm,0.4s,mb4.9,baz=66,slow=7.8,SNR=64
SONM PcP PcP 01 52 29.8 -1.5
comp=Z,16nm,1.0s,baz=108,slow=4.8,SNR=3.8
SONM LR LR 02 04 11.3
comp=Z,37μm,21.2s,MS6.1,baz=65,slow=38
MENT Mentasta 33.01 46 *e*P **P 01 49 47.9 -0.8**
HHC Hu-ho-hao-te 33.04 270 *e*P **P 01 49 48.8 -0.4**
HHC pP pP 01 49 58.1 -3.2
HHC sP sP 01 50 02.3 -4.4
HHC PP PP 01 50 58.8 -5.5
HHC PcP PcP 01 52 32.4 +0.5
HHC S **S 01 55 04.1 -0.5**
HHC sS sS 01 55 20.5 -4.3
HHC ScP ScP 01 56 12.6 +0.5
HHC PcS PcS 01 56 16.5 -0.7
HHC SS SS 01 57 04.3 -24
HHC ScS ScS 02 00 11.3 -1.1
HHC pmax pmax
comp=Z,37nm,1.3s,mb5.2
HHC pmax pmax
comp=Z,890nm,6.1s
HHC LR LR
comp=N,19μm,13.9s,MS6.1
HHC LR LR
comp=E,22μm,14.5s,MS6.1
HHC LR LR
comp=Z,32μm,14.5s,MS6.2
TLY Talaya 33.05 293 P **P 01 49 50.5 +1.3**
comp=Z,164nm,1.2s,mb5.8,SNR=21
TLY Talaya 33.05 293 *c i*P **P 01 49 49.5 +0.3**
TLY *e* pP 01 50 06.1 +4.9
TLY *e* 01 52 30.5
TLY *e*S **S 01 54 57.1 -7.4**
TLY pmax pmax
comp=Z,131nm,2.7s,mb5.4
TLY MLR MLR
comp=Z,32μm,19.0s,MS6.0
TLY Talaya 33.05 293 *e*P **P 01 49 49.9 +0.8**
comp=Z,107nm,1.4s,mb5.6
TLY LR LR
comp=Z,34μm,20.0s,MS6.1
TLY Talaya 33.05 293 P **P 01 49 50.4 +1.2**
SNR=27
SSE Sheshan 33.35 248 P **P 01 49 52.8 +0.8**
SSE sP sP 01 50 08.9 -0.6
SSE PP PP 01 51 08.8 +0.8
SSE S **S 01 55 12.5 +2.9**
SSE pmax pmax
comp=Z,73nm,1.0s,mb5.6
SSE pmax pmax
comp=Z,2μm,12.0s
SSE LR LR
comp=N,5μm,18.7s,MS5.4
SSE LR LR
comp=E,4μm,18.7s,MS5.4
SSE LR LR
comp=Z,10μm,19.9s,MS5.5
EGAK Eagle 33.93 42 *e*P **P 01 49 55.1 -1.6**
comp=Z,186nm,0.9s,mb6.0
EGAK LR LR
comp=Z,15μm,20.0s,MS5.7
NJ2 Nanjing 34.05 251 *e*P **P 01 49 59.0 +0.9**
NJ2 pP pP 01 50 08.8 -1.4
NJ2 sP sP 01 50 12.6 -2.9
NJ2 PP PP 01 51 13.3 -2.4
NJ2 pmax pmax
comp=Z,110nm,1.0s,mb5.7
NJ2 pmax pmax
comp=Z,1μm,3.7s
NJ2 LR LR
comp=N,7μm,22.9s,MS5.4
NJ2 LR LR
comp=E,6μm,25.8s,MS5.4
NJ2 LR LR
comp=Z,4μm,25.1s,MS5.1
BTO Baotou 34.15 271 *e*P **P 01 49 57.6 -1.3**
TIY Taiyuan 34.31 265 *e*P **P 01 50 00.8 +0.6**
TIY S **S 01 55 24.0 -0.2**
TIY LR LR
comp=N,22μm,17.6s,MS6.0
TIY LR LR
comp=E,7μm,18.3s,MS6.0
TIY LR LR
comp=Z,16μm,22.6s,MS5.7
MOY Mondy 34.59 294 *e*P **P 01 50 03.5 +0.9**
MOY pmax pmax
comp=Z,181nm,3.0s
DAWY Dawson 34.78 43 *e*P **P 01 50 03.5 -0.6**
PNL Peninsula 35.66 51 *e*P **P 01 50 11.0 -0.7**
comp=Z,134nm,0.9s,mb5.9
HYT Haines Junctio 36.28 49 *e*P **P 01 50 17.3 +0.3**
INK Inuvik 36.56 36 P **P 01 50 18.8 -0.5**
comp=Z,52nm,0.6s,mb5.5,baz=286,slow=7.2,SNR=84
INK LR LR 02 08 05.9
comp=Z,12μm,20.4s,MS5.7,baz=273,slow=41
INK Inuvik 36.56 36 P **P 01 50 18.8 -0.5**
INK pmax pmax
comp=Z,52nm,0.6s
INK MLR MLR
comp=Z,12μm,20.4s
INK Inuvik 36.56 36 *e*P **P 01 50 19.2 0.0**
comp=Z,1μm,1.9s,mb6.4
SKAG Skagway 37.71 50 *e*P **P 01 50 29.8 +0.7**
comp=Z,2μm,2.3s,mb6.4
WHN Wuhan 37.84 254 ⇑ P **P 01 50 30.5 0.0**
WHN S **S 01 56 12.5 -5.8**
WHN pmax pmax
comp=Z,70nm,0.6s,mb5.6
WHN pmax pmax
comp=Z,2μm,4.3s
WHN LR LR
comp=N,19μm,14.3s,MS6.2
WHN LR LR
comp=E,16μm,14.1s,MS6.2
WHN LR LR
comp=Z,28μm,15.2s,MS6.2
TATO Taipei 37.85 240 PFAKE 01 50 40.0 +9.4
TATO LR LR
comp=Z,10μm,21.0s,MS5.6
YHNB Yeheng 38.15 240 *e*P **P 01 50 32.2 -1.0**
comp=Z,33nm,0.8s,mb5.1
NACB Ninganchiao 38.43 240 *e*P **P 01 50 34.4 -1.1**
comp=Z,5.7nm,0.5s,mb4.6
SIT Sitka 38.49 54 *e*P **P 01 50 36.3 +0.6**
SIT pmax pmax
comp=Z,990nm,2.2s,mb6.2
SIT Sitka 38.49 54 *e*P **P 01 50 36.3 +0.6**
comp=Z,990nm,2.2s,mb6.2
GUMO Guam 38.63 200 LR LR 02 04 05.5
comp=Z,3μm,21.8s,MS5.0,baz=271,slow=32
GUMO Guam 38.63 200 PFAKE 01 50 50.0 +13
GUMO LR LR
comp=Z,6μm,20.0s,MS5.4
XAN Xi'an 38.83 263 P **P 01 50 37.5 -1.3**
XAN pP pP 01 50 46.4 -4.6
XAN sP sP 01 50 50.4 -6.0
XAN S **S 01 56 30.8 -2.5**
XAN pmax pmax
comp=Z,10.0nm,1.2s,mb4.4
XAN LR LR
comp=N,14μm,20.7s,MS5.8
XAN LR LR
comp=E,8μm,21.9s,MS5.8
XAN LR LR
comp=Z,5μm,22.2s,MS5.3
SSLB Suanglung 39.09 240 *e*P **P 01 50 41.1 +0.1**
comp=Z,71nm,1.0s,mb5.3
YULB Yu-li 39.22 239 *e*P **P 01 50 41.8 -0.3**
comp=Z,60nm,0.8s,mb5.4
QZH Quanzhou 39.49 244 ⇑ *i*P **P 01 50 44.8 +0.4**
QZH S **S 01 56 41.0 -2.4**

QZH pmax pmax
comp=Z,190nm,0.9s,mb5.8
QZH pmax pmax
comp=Z,4μm,3.6s
QZH LR LR
comp=N,7μm,14.8s,MS5.8
QZH LR LR
comp=E,8μm,14.4s,MS5.8
QZH LR LR
comp=Z,16μm,26.3s
TPUB Ta-pu 39.65 240 *e*P **P 01 50 46.2 +0.4**
comp=Z,66nm,0.8s,mb5.4
TWG Pinlang 39.80 239 P **P 01 50 46.5 -0.4**
comp=Z,91nm,0.8s,mb5.6
CRAG Craig 40.23 56 *e*P **P 01 50 51.0 +0.8**
comp=Z,584nm,2.2s,mb5.9
DLBC Dease Lake 40.64 50 P **P 01 50 53.4 -0.1**
comp=Z,40nm,0.8s,mb5.1,baz=295,slow=8.6,SNR=63
DLBC LR LR 02 08 36.8
comp=Z,8μm,21.4s,MS5.5,baz=302,slow=37
DLBC Dease Lake 40.64 50 *e*P **P 01 50 54.7 +1.1**
LZH Lanzhou 40.73 270 ⇑*i*P **P 01 50 55.8 +1.2**
LZH pP pP 01 51 06.3 -0.6
LZH sP sP 01 51 10.8 -1.4
LZH PP PP 01 52 33.3 +4.4
LZH PcP PcP 01 52 55.9 +0.7
LZH *e*S **S 01 57 02.3 +0.6**
LZH sS sS 01 57 18.0 -4.3
LZH SS SS 02 00 01.0 -2.4
LZH pmax pmax
comp=Z,140nm,1.0s,mb5.5
LZH pmax pmax
comp=Z,640nm,4.8s
LZH LR LR
comp=E,24μm,16.4s
LZH LR LR
comp=Z,36μm,19.1s,MS6.2
ENH Enshi 41.02 259 *e*P **P 01 50 56.7 -0.3**
comp=Z,53nm,0.7s,mb5.3
ENH LR LR
comp=Z,14μm,19.0s,MS5.8
GTA Gaotai 41.27 277 ⇑P **P 01 50 59.8 +0.8**
GTA pP pP 01 51 09.6 -1.7
GTA sP sP 01 51 13.6 -3.0
GTA PP PP 01 52 39.0 +4.3
GTA S **S 01 57 12.1 +2.4**
GTA sS sS 01 57 28.3 -1.9
GTA SS SS 02 00 12.1 -1.8
GTA pmax pmax
comp=Z,46nm,2.0s,mb4.8
GTA pmax pmax
comp=Z,2μm,8.4s
GTA LR LR
comp=N,16μm,19.8s,MS6.0
GTA LR LR
comp=E,12μm,20.4s,MS6.0
GTA LR LR
comp=Z,22μm,20.1s,MS6.0
ZALV Zalesovo Beam 42.62 304 P **P 01 51 09.0 -0.9**
comp=Z,6.6nm,0.5s,mb4.6,baz=64,slow=6.8,SNR=42
ZALV PcP PcP 01 52 59.1 -2.1
comp=Z,18nm,0.9s,baz=72,slow=4.8,SNR=5.8
ZALV LR LR 02 09 38.0
comp=Z,11μm,21.6s,MS5.7,baz=61,slow=37
NVS Novosibirsk 43.05 305 ⇑*i*P **P 01 51 12.5 -0.7**
NVS *i* 01 52 59.4
NVS pmax pmax
comp=E,624nm,2.0s
NVS pmax pmax
comp=Z,555nm,2.0s,mb5.9
NVS pmax pmax
comp=N,151nm,1.8s
NVS pmax pmax
comp=Z,646nm,2.1s,mb6.0
NVS pmax pmax
comp=N,410nm,2.3s
NVS pmax pmax
comp=E,680nm,2.0s
JOHN Johnston Islan 43.09 130 PFAKE 01 51 30.0 +16
JOHN LR LR
comp=Z,20μm,21.0s,MS6.0
GZH Guangzhou 43.95 248 P **P 01 51 16.8 -4.1**
GZH S **S 01 57 41.6 -7.8**
GZH LR LR
comp=N,5μm,16.3s,MS5.7
GZH LR LR
comp=E,5μm,15.5s,MS5.7
GZH LR LR
comp=Z,10μm,18.0s,MS5.8
HKC Hong Kong Obse 44.08 246 P **P 01 51 20.0 -1.9**
CD2 Chengdu 44.16 264 ⇑*i*P **P 01 51 22.8 +0.3**
CD2 pP pP 01 51 32.8 -2.1
CD2 sP sP 01 51 36.6 -3.6
CD2 S **S 01 57 52.8 +0.5**
CD2 sS sS 01 58 09.1 -3.9
CD2 SS SS 02 01 02.3 -8.6
CD2 pmax pmax
comp=Z,100nm,1.2s,mb5.4
CD2 pmax pmax
comp=Z,2μm,4.3s
CD2 LR LR
comp=N,11μm,20.8s
CD2 LR LR
comp=Z,16μm,20.2s,MS5.9
ALE Alert 45.27 7 P **P 01 51 31.0 +0.3**
comp=Z,408nm,0.8s,mb6.3,SNR=16
KIP Kipapa 45.42 114 *e*P **P 01 51 36.2 +3.6**
KIP pmax pmax
comp=Z,1μm,2.0s,mb6.3
KIP MLR MLR
comp=Z,12μm,21.0s,MS5.8
KIP Kipapa 45.42 114 *e*P **P 01 51 36.2 +3.6**
comp=Z,1μm,2.0s,mb6.3
KIP LR LR
comp=Z,12μm,21.0s,MS5.8
GYA Guiyang 45.47 257 ⇑*i*P **P 01 51 33.3 +0.4**
GYA pP pP 01 51 44.8 -0.6
GYA sP sP 01 51 50.3 -0.4
GYA PcP PcP 01 53 13.0 +1.7
GYA PP PP 01 53 21.8 +2.0
GYA ScP ScP 01 57 01.3 +1.2
GYA S **S 01 58 15.3 +4.0**
GYA SS SS 02 01 27.3 -8.0
GYA pmax pmax
comp=Z,90nm,1.0s,mb5.5
GYA pmax pmax
comp=Z,2μm,13.6s
GYA LR LR
comp=N,9μm,17.4s,MS5.9
GYA LR LR
comp=E,8μm,18.9s,MS5.9
GYA LR LR
comp=Z,6μm,19.4s,MS5.6
YKA Yellowknife Ar 45.84 40 P **P 01 51 35.2 -0.2**
comp=Z,15nm,0.8s,mb5.0,baz=298,slow=7.7,SNR=28
YKA Yellowknife Ar 45.84 40 P **P 01 51 35.2 -0.2**
RES Resolute Bay 45.92 21 LR LR 02 12 42.5
comp=Z,10μm,21.6s,MS5.7,baz=307,slow=38
RES Resolute Bay 45.92 21 *e*P **P 01 51 35.9 -0.1**
RES pmax pmax
comp=Z,475nm,1.6s,mb6.2
RES Resolute Bay 45.92 21 *e*P **P 01 51 35.9 0.0**
comp=Z,475nm,1.6s,mb6.2
WMQ Urumqi 46.19 290 P **P 01 51 40.0 +1.6**
WMQ pP pP 01 51 49.9 -1.0
WMQ sP sP 01 51 53.8 -2.4
WMQ PcP PcP 01 53 15.8 +2.3
WMQ PP PP 01 53 28.4 +1.3
WMQ ScP ScP 01 57 05.1 +2.3
WMQ S **S 01 58 23.3 +2.0**
WMQ sS sS 01 58 39.8 -2.3
WMQ ScS ScS 02 01 30.1 +0.6
WMQ SS SS 02 01 40.8 -5.7
WMQ pmax pmax
comp=Z,110nm,1.2s,mb5.7
WMQ pmax pmax
comp=Z,3μm,7.0s
WMQ LR LR
comp=N,25μm,24.1s,MS6.2
WMQ LR LR
comp=E,15μm,20.8s,MS6.2
WMQ LR LR
comp=Z,24μm,24.8s,MS6.0
KURK Kurchatov 47.53 302 *e*P **P 01 51 48.4 -0.4**
KURK pmax pmax
comp=Z,102nm,0.9s,mb5.8
KURK MLR MLR
comp=Z,13μm,19.0s,MS5.9
KURK Kurchatov 47.53 302 *e*P **P 01 51 48.4 -0.4**
comp=Z,102nm,0.9s,mb5.8
KURK LR LR
comp=Z,13μm,19.0s,MS5.9
KURK Kurchatov 47.53 302 P **P 01 51 48.6 -0.2**
SNR=84
MK31 Makanchi Array 47.66 296 *c e*P **P 01 51 49.1 -0.8**
MK31 pmax pmax
comp=Z,7.0nm,0.3s,mb5.2
MK31 Makanchi Array 47.66 296 *e*P **P 01 51 49.6 -0.3**
MKAR Makanchi Array 47.66 296 P **P 01 51 49.6 -0.3**
comp=Z,11nm,0.5s,mb5.1,baz=60,slow=8.5,SNR=94
MKAR LR LR 02 12 41.0
comp=Z,33μm,21.2s,MS6.3,baz=46,slow=37
MKAR Makanchi Array 47.66 296 P **P 01 51 49.6 -0.3**
MKAR pmax pmax
comp=Z,11nm,0.5s
MKAR MLR MLR
comp=Z,33μm,21.2s
POHA Pohakuloa 48.16 112 PFAKE 01 52 10.0 +16
POHA LR LR
comp=Z,12μm,20.0s,MS5.9
KHU Kahuku 48.51 113 *e*P **P 01 51 56.2 -0.5**
PGC Sidney 48.75 60 *e*P **P 01 51 58.0 -0.2**
comp=Z,6.4nm,1.1s,mb4.6
KBS Kingsbay 48.80 352 *e*P **P 01 51 57.9 -0.4**
KBS AMb AMB 01 52 23.3
comp=Z,146nm,2.3s,mb5.6
KBS *e*S **S 01 58 59.4 +1.9**
KBS AMS AMS 02 12 26.7
comp=Z,13μm,18.4s,MS6.0
KBS Kingsbay 48.80 352 *e*P **P 01 51 57.7 -0.5**
KBS pmax pmax
comp=Z,102nm,1.0s,mb5.8
KBS MLR MLR
comp=Z,16μm,20.0s,MS6.0
KBS Kingsbay 48.80 352 *e*P **P 01 51 57.7 -0.5**
comp=Z,102nm,1.0s,mb5.8
KBS LR LR
comp=Z,16μm,20.0s,MS6.0
OOW Octopus West 48.86 61 P **P 01 51 59.3 +0.2**
KMI Kunming 48.87 259 ⇑P **P 01 52 00.5 +1.1**
KMI pP pP 01 52 11.0 -1.0
KMI sP sP 01 52 15.1 -2.1
KMI PcP PcP 01 53 25.4 +2.0
KMI PP PP 01 53 53.3 +0.4
KMI S **S 01 58 59.3 -0.4**
KMI sS sS 01 59 16.4 -4.2
KMI ScS ScS 02 01 47.4 -0.3
KMI SS SS 02 02 26.5 -4.0
KMI pmax pmax
comp=Z,130nm,1.5s,mb5.7
KMI pmax pmax
comp=Z,2μm,3.1s
KMI LR LR
comp=N,15μm,17.0s
KMI LR LR
comp=E,7μm,22.6s
KMI LR LR
comp=Z,11μm,17.9s,MS5.9
SPITS Spitsbergen Ar 49.00 350 P **P 01 51 58.8 -1.0**
comp=Z,23nm,0.4s,mb5.6,baz=63,slow=7.6,SNR=120
SPITS LR LR 02 13 02.4
comp=Z,15μm,20.1s,MS6.0,baz=355,slow=36
SPITS Spitsbergen Ar 49.00 350 P **P 01 51 58.8 -1.0**
SPITS pmax pmax
comp=Z,23nm,0.4s
SPITS MLR MLR
comp=Z,15μm,20.1s
QIZ Qiongzhong 49.15 248 P **P 01 52 01.9 +0.3**
QIZ pP pP 01 52 09.8 -4.4
QIZ S **S 01 58 58.9 -4.8**
QIZ sS sS 01 59 18.5 -6.2
QIZ pmax pmax
comp=Z,72nm,1.6s,mb5.5
QIZ pmax pmax
comp=Z,2μm,11.2s
QIZ LR LR
comp=N,6μm,19.6s,MS5.6
QIZ LR LR
comp=E,3μm,21.7s,MS5.6
QIZ LR LR
comp=Z,7μm,18.4s,MS5.7
QIZ Qiongzhong 49.15 248 *e*P **P 01 52 03.6 +2.0**
comp=Z,105nm,1.0s,mb5.8
QIZ LR LR
comp=Z,7μm,19.0s,MS5.7
NLWA Neilton Lookou 49.24 62 ⇑P **P 01 52 02.1 +0.2**
baz=49,SNR=27
NLWA ⇓S **S 01 59 06.8 +2.5**
baz=49
NLWA Neilton Lookou 49.24 62 *e*P **P 01 52 02.1 +0.1**
comp=Z,704nm,2.0s,mb6.3
NLWA LR LR
comp=Z,6μm,20.0s,MS5.5
A05A Maple Falls 49.30 59 ⇓P **P 01 52 01.9 -0.5**
baz=49,SNR=9.4
A05A ⇓S **S 01 59 06.2 +1.0**
baz=49
JCW Jim Creek 49.84 60 P **P 01 52 06.2 -0.4**
E03A Lebam 49.90 62 ⇑P **P 01 52 06.9 -0.1**
baz=50,SNR=14
E03A ⇑S **S 01 59 15.9 +2.3**
baz=50
B06A Marblemount 49.90 59 ⇓P **P 01 52 06.3 -0.8**
baz=50,SNR=10
B06A ⇓S **S 01 59 14.3 +0.7**
baz=50
RPW Rockport 49.92 59 *e*P **P 01 52 06.5 -0.7**
F03A Seaside 50.26 63 ⇓P **P 01 52 09.7 -0.1**
baz=50,SNR=10
VOSK Vostochnaya 50.37 308 P **P 01 52 08.6 -1.9**
D05A Enumclaw 50.40 61 ⇓P **P 01 52 11.0 +0.2**
baz=50,SNR=20
BVAR Borovoye Array 50.49 309 P **P 01 52 10.7 -0.7**
comp=Z,13nm,0.5s,mb5.2,baz=57,slow=8.4,SNR=64
BVAR LR LR 02 15 07.3
comp=Z,374nm,21.5s,baz=119,slow=38
BVAR PKPPKP 02 22 59.7
comp=Z,0.4nm,0.6s,baz=267,slow=3.0,SNR=4.1
BRVK Borovoye 50.52 309 *e*P **P 01 52 10.9 -0.7**
BRVK pmax pmax
comp=Z,224nm,1.5s,mb5.9
BRVK MLR MLR
comp=Z,37μm,22.0s,MS6.3
BRVK Borovoye 50.52 309 *e*P **P 01 52 10.9 -0.7**
comp=Z,224nm,1.5s,mb5.9
BRVK LR LR
comp=Z,37μm,22.0s,MS6.3
BRVK Borovoye 50.52 309 P **P 01 52 11.2 -0.4**
SNR=39
LON Longmire 50.75 61 *e*P **P 01 52 12.8 -0.7**
LON pmax pmax
comp=Z,115nm,1.4s,mb5.6
LON Longmire 50.75 61 *e*P **P 01 52 12.8 -0.7**
comp=Z,115nm,1.4s,mb5.6
F04A Amboy 50.90 62 ⇑P **P 01 52 14.1 -0.5**
baz=51,SNR=11
WPW White Pass 50.93 61 P **P 01 52 14.4 -0.4**
ETW Entiat 51.06 60 P **P 01 52 15.2 -0.6**
LTY Liberty 51.08 60 P **P 01 52 15.2 -0.7**
DAV Davao City (W) 51.12 222 PFAKE 01 52 30.0 +13
DAV LR LR
comp=Z,4μm,21.0s,MS5.4
DAV Davao City (W) 51.12 222 ⇑*i*P **P 01 52 14.8 -1.8**
B08A Colville Reser 51.16 58 ⇑P **P 01 52 15.9 -0.6**
baz=51,SNR=56
COR Corvallis 51.21 64 *e*P **P 01 52 17.2 +0.3**
COR pmax pmax
comp=Z,581nm,2.0s,mb6.2
COR MLR MLR
comp=Z,6μm,21.0s,MS5.6
COR Corvallis 51.21 64 *e*P **P 01 52 17.2 +0.3**
comp=Z,580nm,2.0s,mb6.2
COR LR LR
comp=Z,6μm,21.0s,MS5.6
ZRNK Zerenda 51.21 309 *i* P **P 01 52 15.5 -1.3**
ZRNK pmax pmax
comp=Z,67nm,1.3s,mb5.4
G04A Mulino 51.30 63 ⇑P **P 01 52 17.4 -0.2**
baz=51
EDM Edmonton 51.36 50 *e*P **P 01 52 17.6 -0.4**
KEBM Edson Butte 51.66 67 *e*P **P 01 52 21.4 +1.1**
comp=Z,159nm,1.2s,mb5.8
BJO Bjornoya 51.78 347 *e*S **S 01 59 44.0 +5.0**
BJO AMS AMS 02 14 36.5
comp=Z,11μm,21.8s,MS5.9
H04A Detroit Lake 51.78 64 ⇓P **P 01 52 20.6 -0.6**
baz=52,SNR=19
VFP Flag Point 51.80 62 P **P 01 52 21.2 -0.2**
E07A Sunnyside 51.95 60 ⇑P **P 01 52 21.9 -0.5**
baz=52,SNR=11
C09A Chrisman Ranch 52.06 58 ⇓P **P 01 52 22.5 -0.7**
baz=52,SNR=19
OD2 Odessa Site #2 52.07 59 P **P 01 52 22.4 -1.0**
D08A Wollman Farm, 52.16 59 ⇑P **P 01 52 23.2 -0.8**
baz=52,SNR=20
RSW Rattlesnake Hi, 52.19 60 *e*P **P 01 52 24.1 -0.1**
comp=Z,45nm,0.9s,mb5.4
HAWA Hanford 52.23 60 *e*P **P 01 52 24.0 -0.5**
comp=Z,469nm,2.0s,mb6.1
HAWA LR LR
comp=Z,5μm,20.0s,MS5.6
F07A Phinny Hill Vi 52.31 61 ⇓P **P 01 52 24.9 -0.2**
baz=52,SNR=24
G06A Carlson Farm, 52.32 62 ⇑P **P 01 52 24.9 -0.3**
baz=52,SNR=23
NEW Newport 52.40 57 *e*P **P 01 52 24.8 -0.9**
NEW pmax pmax
comp=Z,428nm,2.0s
NEW MLR MLR
comp=Z,6μm,20.0s
NEW Newport 52.40 57 *e*P **P 01 52 24.8 -0.9**
comp=Z,428nm,2.0s,mb6.0
NEW LR LR
comp=Z,6μm,20.0s,MS5.6
E08A Dider Farm, El 52.42 60 ⇑P **P 01 52 25.2 -0.8**
baz=52,SNR=11
DAG Danmarks Havn 52.55 359 ⇓*i*P **P 01 52 26.2 -0.3**
DAG pmax pmax
comp=Z,240nm,1.3s,mb6.0
DAG MLR MLR
comp=N,7μm,17.0s
DAG MLR MLR
comp=Z,13μm,17.0s,MS6.0
DAG Danmarks Havn 52.55 359 ⇓*i*P **P 01 52 26.2 -0.3**
comp=Z,242nm,1.3s,mb6.0
DAG
comp=Z,13μm,17.0s
HUMO Hull Mountain 52.62 66 *e*P **P 01 52 27.3 -0.1**
comp=Z,112nm,1.4s,mb5.6
HUMO LR LR
comp=Z,5μm,19.0s,MS5.6
SOKR Solikamsk 52.66 321 *c i*P **P 01 52 26.2 -1.3**
SOKR *PP pP 01 52 41.2 +1.0
SOKR 01 54 24.0
SOKR PPP 01 55 38.7
SOKR S **S 01 59 57.9 +6.5**
SOKR *SS sS 02 00 17.2 +4.7
SOKR pmax pmax
comp=Z,30nm,1.1s,mb5.1
SOKR MLR MLR
comp=Z,27μm,18.0s,MS6.3
SVE Sverdlovsk 52.76 317 ⇓*e*P **P 01 52 27.7 -0.6**
SVE *e* 01 54 32.9
SVE *e*S **S 01 59 54.7 +1.9**
SVE *e*SS SS 02 03 24.6 -6.5
SVE pmax pmax
comp=Z,143nm,1.6s,mb5.7
SVE MLR MLR
comp=Z,32μm,19.0s,MS6.4
A12A Yaak River Ran 52.76 56 ⇑P **P 01 52 28.3 -0.1**
baz=52,SNR=15
VIPM Ingram Point 52.77 63 P **P 01 52 28.4 -0.2**
E09A Wood Farm, Sta 52.91 59 ⇑P **P 01 52 28.9 -0.6**
baz=53,SNR=36
LSA Lhasa 52.95 273 P **P 01 52 31.8 +1.7**
LSA S **S 01 59 55.1 -1.1**
LSA LR LR
comp=N,6μm,16.5s,MS6.2
LSA LR LR
comp=E,17μm,17.5s,MS6.2
LSA LR LR
comp=Z,25μm,18.5s,MS6.3
LSA Lhasa 52.95 273 *e*P **P 01 52 32.0 +1.9**
LSA pmax pmax
comp=Z,54nm,1.0s,mb5.4
LSA MLR MLR
comp=Z,8μm,19.0s,MS5.8
LSA Lhasa 52.95 273 *e*P **P 01 52 32.0 +1.9**
comp=Z,54nm,1.0s,mb5.4
LSA LR LR
comp=Z,8μm,19.0s,MS5.8
B12A Libby 53.08 56 ⇑P **P 01 52 30.7 -0.1**
baz=53
C11A Tepee Creek (N 53.12 57 ⇓P **P 01 52 30.7 -0.4**
baz=53,SNR=56
G08A Pilot Rock 53.22 61 ⇓P **P 01 52 31.4 -0.4**
baz=53,SNR=28
LNOR Lincton Mounta 53.23 60 *e*P **P 01 52 31.3 -0.6**
KHMM Horse Mountain 53.25 68 *e*P **P 01 52 33.6 +1.4**
comp=Z,133nm,1.2s,mb5.7
YBH Yreka Blue Hor 53.31 67 P **P 01 52 32.0 -0.6**
comp=Z,28nm,0.9s,mb5.2,baz=325,slow=3.0,SNR=27
YBH LR LR 02 14 48.5
comp=Z,5μm,18.0s,MS5.6,baz=305,slow=36
YBH Yreka Blue Hor 53.31 67 P **P 01 52 32.0 -0.5**
YBH pmax pmax
comp=Z,28nm,0.9s
YBH MLR MLR
comp=Z,5μm,18.0s
YBH Yreka Blue Hor 53.31 67 *e*P **P 01 52 33.4 +0.8**
comp=Z,93nm,1.2s,mb5.6
YBH LR LR
comp=Z,5μm,20.0s,MS5.6
A13A Flathead Natio 53.41 55 ⇓P **P 01 52 33.0 -0.2**
baz=53
WALA Waterton Lakes 53.59 55 *e*P **P 01 52 34.4 -0.1**
comp=Z,10nm,1.5s,mb4.5
C12B Naegeli Ranch, 53.61 57 ⇓P **P 01 52 34.5 -0.2**
baz=53
I07A Izee 53.67 63 ⇓P **P 01 52 35.2 +0.1**
baz=53,SNR=27
B13A Whitefish 53.73 56 ⇓P **P 01 52 35.5 0.0**
baz=54,SNR=85
K05A Summer Lake 53.73 65 ⇑P **P 01 52 36.4 +0.8**
baz=54,SNR=43
F10A Beach Ranch, E 53.75 60 ⇑P **P 01 52 35.1 -0.6**
baz=54,SNR=30
TKM2 Tokmak 2 53.79 296 P **P 01 52 36.4 +0.4**
SNR=15
TKM2 Tokmak 2 53.79 296 *e*P **P 01 52 36.2 +0.1**
TKM2 pmax pmax
comp=Z,25nm,0.7s,mb5.2
TKM2 MLR MLR
comp=Z,34μm,22.0s,MS6.4
TKM2 Tokmak 2 53.79 296 *e*P **P 01 52 36.1 +0.1**
comp=Z,25nm,0.7s,mb5.2
TKM2 LR LR
comp=Z,34μm,22.0s,MS6.4
ULHL Ulahol 53.85 295 P **P 01 52 37.0 +0.6**
SNR=15
A14A Double T Ranch 53.90 55 ⇑P **P 01 52 36.2 -0.6**
baz=54,SNR=82
ARU Arti 53.91 317 P **P 01 52 35.3 -1.4**
comp=Z,470nm,0.6s,mb6.6,SNR=20
ARU Arti 53.91 317 *c i*P **P 01 52 35.4 -1.3**
ARU *e* 01 53 37.8
ARU *e* 01 54 35.2
ARU *e*PPP 01 55 51.3
ARU S **S 02 00 07.6 -0.8**
ARU *SS sS 02 00 32.6 +3.1
ARU 02 02 18.0
ARU SS SS 02 03 52.6 +3.5
ARU SSS 02 05 47.3
ARU pmax pmax
comp=Z,149nm,1.7s,mb5.6
ARU MLR MLR
comp=Z,35μm,18.0s,MS6.5
ARU Arti 53.91 317 *e*P **P 01 52 35.5 -1.2**
comp=Z,481nm,2.0s,mb6.1
ARU LR LR
comp=Z,36μm,19.0s,MS6.5
LVZ Lovozero 54.07 337 PFAKE 01 52 50.0 +12
LVZ LR LR
comp=Z,3μm,20.0s,MS5.3
D12A Red Ives Fores 54.08 57 ⇑P **P 01 52 37.6 -0.6**
baz=54
KCPM Cahto Peak 54.10 69 *e*P **P 01 52 39.4 +1.0**
comp=Z,148nm,1.8s,mb5.6
C13A Hot Springs 54.10 56 ⇓P **P 01 52 38.4 +0.1**

baz=54
WDC Whiskeytown Da 54.14 68 *e*P **P 01 52 38.5 -0.1**
WDC pmax pmax
comp=Z,121nm,1.4s,mb5.6
WDC MLR MLR
comp=Z,4µm,19.0s,MS5.5
WDC Whiskeytown Da 54.14 68 *e*P **P 01 52 38.5 -0.1**
comp=Z,121nm,1.4s,mb5.6
WDC LR LR
comp=Z,4µm,19.0s,MS5.5
USP Ospenovka 54.20 297 P **P 01 52 39.2 +0.2**
SNR=35
CHMS Chumysh 54.22 296 P **P 01 52 39.5 +0.2**
SNR=11
A15A Johnson Ranch, 54.25 54 ⇑P **P 01 52 38.3 -1.0**
baz=54,SNR=65
KBK Karagaybulak 54.33 296 P **P 01 52 40.5 +0.5**
SNR=14
KEV Kevo 54.35 341 *e*P **P 01 52 39.2 -0.6**
KEV LR LR
comp=Z,18µm,20.0s,MS6.1
KEV Kevo 54.35 341 *e*p **P 01 52 39.2 -0.6**
B14A Marquette Ranc 54.36 55 ⇑P **P 01 52 39.8 -0.3**
baz=54,SNR=23
E12A Beaver Dam Sad 54.37 58 ⇓P **P 01 52 39.9 -0.4**
baz=54,SNR=62
FRU Bishkek 54.40 296 *i* P **P 01 52 40.0 -0.5**
FRU *i* pP 01 52 56.0 +2.8
FRU *e* 01 53 44.0
FRU *e* 02 00 19.0
FRU pmax pmax
comp=Z,210nm,2.0s,mb5.7
FRU pmax pmax
comp=Z,1µm,4.0s
FRU MLR MLR
comp=Z,31µm,20.0s,MS6.4
FRU MLR MLR
comp=N,17µm,20.5s,MS6.3
FRU MLR MLR
comp=E,24µm,20.5s,MS6.3
BMO Blue Mountains 54.41 61 *e*P **P 01 52 40.2 -0.3**
comp=E,141nm,1.6s,mb5.7
BMO LR LR
comp=Z,4µm,21.0s,MS5.5
C14A Swan Lake 54.48 56 ⇑P **P 01 52 41.1 +0.1**
baz=54
D13A Huson 54.53 57 ⇑P **P 01 52 41.0 -0.4**
baz=54,SNR=24
CHRT Chiangrai 54.58 258 ⇑P **P 01 52 43.5 +1.5**
comp=Z,1µm,0.9s,mb6.9
MOD Modoc 54.59 65 *e*P **P 01 52 42.3 +0.4**
comp=Z,164nm,1.0s,mb6.0
MOD LR LR
comp=Z,10µm,22.0s,MS5.9
AAK Ala-Archa 54.60 296 P **P 01 52 42.1 +0.1**
comp=Z,337nm,0.7s,mb6.5,SNR=20
AAK Ala-Archa 54.60 296 P **P 01 52 42.3 +0.4**
SNR=14
AAK Ala-Archa 54.60 296 P **P 01 52 41.8 -0.2**
comp=Z,21nm,0.5s,mb5.4,baz=91,slow=5.5,SNR=31
AAK Ala-Archa 54.60 296 *e*P **P 01 52 42.3 +0.3**
AAK pmax pmax
comp=Z,191nm,1.6s,mb5.9
AAK MLR MLR
comp=Z,28µm,22.0s,MS6.3
AAK Ala-Archa 54.60 296 *e*P **P 01 52 42.3 +0.3**
comp=Z,191nm,1.6s,mb5.9
AAK LR LR
comp=Z,28µm,22.0s,MS6.3
AAK Ala-Archa 54.60 296 P **P 01 52 41.9 -0.1**
comp=Z,369nmcomp=Z,16nm,1.2s,mb4.9
AAK S **S 02 00 13.5 -4.6**
comp=Z,369nmcomp=Z,16nm,1.2s
AAK Ala-Archa 54.60 296 P **P 01 52 42.5 +0.5**
SNR=42
APA Apatity 54.63 337 ⇑*i*P **P 01 52 42.0 +0.2**
APA *i* pP 01 52 58.0 +3.5
APA *i* 01 53 48.0
APA *i* 01 54 46.3
APA *i* S **S 02 00 15.0 -2.9**
APA *e* 02 02 29.0
APA *e*SS SS 02 04 00.0 -0.2
APA pmax pmax
comp=Z,54nm,1.4s,mb5.4
APA MLR MLR
comp=Z,24µm,18.0s,MS6.3
J08A Circle Bar Ran 54.70 63 ⇓P **P 01 52 43.1 +0.4**
baz=54,SNR=46
B15A Bradely Ranch, 54.76 55 ⇓P **P 01 52 42.4 -0.6**
baz=54,SNR=63
ARCES ARCESS Array B 54.84 341 P **P 01 52 43.0 -0.3**
comp=Z,1.7nm,0.4s,mb4.5,baz=35,slow=7.6,SNR=33
ARCES LR LR 02 22 42.9
comp=Z,20µm,18.0s,MS6.2,baz=213,slow=43
ARCES ARCESS Array B 54.84 341 P **P 01 52 43.0 -0.3**
ARCES LR LR 02 22 42.9
HOPS Hopland 54.84 70 *e*P **P 01 52 43.9 +0.1**
comp=Z,316nm,1.8s,mb6.0
HOPS LR LR
comp=Z,10µm,22.0s,MS5.8
UCH Uchtor 54.85 296 P **P 01 52 44.4 +0.6**
SNR=9.3
UCH Uchtor 54.85 296 *e*P **P 01 52 44.3 +0.5**
comp=Z,23nm,1.1s,mb5.1
UCH LR LR
comp=Z,32µm,21.0s,MS6.4
A16A West Butte Ran 54.85 54 ⇑P **P 01 52 42.9 -0.8**
baz=55
F12A Elk City 54.95 59 ⇑P **P 01 52 44.5 0.0**
baz=55,SNR=63
MSO Missoula 54.98 57 *e*P **P 01 52 44.2 -0.4**
comp=Z,136nm,1.3s,mb5.8
MSO LR LR
comp=Z,4µm,19.0s,MS5.5
EKS2 Erkin-Say 54.99 296 P **P 01 52 45.2 +0.5**
SNR=26
EKS2 Erkin-Say 54.99 296 *e*P **P 01 52 45.1 +0.3**
comp=Z,105nm,1.3s,mb5.7
EKS2 LR LR
comp=Z,28µm,20.0s,MS6.3
D14A Greenough 55.05 56 ⇓P **P 01 52 44.8 -0.3**
baz=55,SNR=105
E13A Victor 55.09 57 ⇑P **P 01 52 45.1 -0.4**
baz=55,SNR=33
SMPI Sarmi 55.11 203 P **P 01 52 46.7 +0.8**
comp=Z,4µmcomp=Z,115nm,1.1s,mb5.8
B16A M & M Farms, S 55.13 54 ⇑P **P 01 52 44.9 -0.9**
baz=55,SNR=32
WVOR Wild Horse Val 55.20 64 *e*P **P 01 52 46.4 +0.1**
WVOR pmax pmax
comp=Z,109nm,0.9s,mb5.9
WVOR MLR MLR
comp=Z,7µm,22.0s,MS5.7
WVOR Wild Horse Val 55.20 64 *e*P **P 01 52 46.4 +0.1**
comp=Z,109nm,0.9s,mb5.9
WVOR LR LR
comp=Z,7µm,22.0s,MS5.7
A17A Triple J Farms 55.31 53 ⇓P **P 01 52 46.3 -0.7**
baz=55,SNR=74
G12A Big Creek, Yel 55.32 59 ⇑P **P 01 52 46.9 -0.2**
baz=55
AML Almayashu 55.38 296 P **P 01 52 48.6 +1.0**
SNR=12
AML Almayashu 55.38 296 *e*P **P 01 52 48.5 +0.9**
AML LR LR
comp=Z,22µm,21.0s,MS6.2
F13A Darby 55.43 58 ⇓P **P 01 52 47.5 -0.4**
baz=55,SNR=38
E14A Clinton 55.48 57 ⇓P **P 01 52 48.0 -0.2**
baz=55,SNR=12
C16A Fuhringer Ranc 55.51 55 ⇓P **P 01 52 48.1 -0.3**
baz=55,SNR=73
MCCM Marconi Confer 55.51 70 PFAKE 01 53 00.0 +11
MCCM LR LR
comp=Z,9µm,21.0s,MS5.8
OHCM Honcut 55.56 68 *e*P **P 01 52 48.4 -0.5**
J10A Berg Farm, Mel 55.61 62 ⇑P **P 01 52 49.1 -0.2**
baz=55
B17A L&G Farms, Che 55.68 54 ⇓P **P 01 52 48.9 -0.7**
baz=55,SNR=11
FFC Flin Flon 55.69 44 *e*P **P 01 52 49.6 0.0**
FFC pmax pmax
comp=Z,144nm,1.1s,mb5.9
FFC MLR MLR
comp=Z,17µm,20.0s,MS6.1
FFC Flin Flon 55.69 44 *e*P **P 01 52 49.6 0.0**
comp=Z,144nm,1.1s,mb5.9
FFC LR LR
comp=Z,17µm,20.0s,MS6.1
KTK1 Kautokeino 55.73 342 *e*P **P 01 52 50.6 +0.9**
KTK1 *e*S **S 02 00 35.9 +3.4**
KTK1 Kautokeino 55.73 342 *e*P **P 01 52 50.0 +0.3**
KSH Kashi 55.76 292 ⇑*i*P **P 01 52 54.6 +4.3**
KSH pP pP 01 53 04.8 +1.7
KSH sP sP 01 53 08.8 +0.5
KSH PcP PcP 01 53 54.8 +5.8
KSH PP PP 01 55 00.0 +5.2
KSH ScP ScP 01 57 49.4 +5.3
KSH PcS PcS 01 57 53.3 +4.0
KSH S **S 02 00 37.6 +4.0**
KSH ScS ScS 02 02 37.8 +2.4
KSH pmax pmax
comp=Z,160nm,1.6s,mb5.8
KSH pmax pmax
comp=Z,1µm,4.7s
KSH LR LR
comp=N,12µm,15.2s,MS6.2
KSH LR LR
comp=E,11µm,14.1s,MS6.2
KSH LR LR
comp=Z,14µm,15.8s,MS6.1
A18A Metzger Ranch, 55.76 53 ⇓P **P 01 52 49.3 -0.9**
baz=56,SNR=20
CHG Chiang Mai 55.89 257 ⇑P **P 01 52 53.3 +1.8**
comp=Z,252nm,1.0s,mb6.2
CHTO Chiang Mai 55.89 257 *e*P **P 01 52 53.2 +1.7**
CHTO pmax pmax
comp=Z,406nm,1.3s,mb6.3
CHTO MLR MLR
comp=Z,9µm,21.0s,MS5.8
CHTO Chiang Mai 55.89 257 *e*P **P 01 52 53.2 +1.7**
comp=Z,406nm,1.3s,mb6.3
CHTO LR LR
comp=Z,9µm,21.0s,MS5.8
CHTO Chiang Mai 55.89 257 P **P 01 52 53.3 +1.8**
comp=Z,5µmcomp=Z,316nm,1.2s,mb6.2
CHTO Chiang Mai 55.89 257 P **P 01 52 53.4 +1.9**
SNR=84
E15A Deer Lodge 55.92 57 ⇓P **P 01 52 51.2 -0.2**
baz=56,SNR=39
F14A Wisdom 55.93 58 ⇑P **P 01 52 51.3 -0.2**
baz=56
G13A Cobalt 55.93 59 ⇑P **P 01 52 51.0 -0.5**
baz=56,SNR=75
H12A Diamond D Ranc 55.94 60 ⇑P **P 01 52 51.2 -0.4**
baz=56,SNR=18
K10A MacKenzie Ranc 55.98 62 ⇑P **P 01 52 52.4 +0.6**
baz=56,SNR=112
MYLDM Lahad Datu 56.00 229 P **P 01 52 54.1 +1.8**
comp=Z,3µmcomp=Z,124nm,1.4s,mb5.7
TRO Tromso 56.01 344 *e*P **P 01 52 51.9 +0.2**
TRO *e*S **S 02 00 36.0 -0.2**
TRO AMS AMS 02 22 42.7
comp=Z,10µm,20.8s,MS5.9
D16A Dana Ranch, Ca 56.10 55 ⇓P **P 01 52 52.8 +0.1**
baz=56,SNR=61
C17A Wharram Farm, 56.12 55 ⇓P **P 01 52 52.4 -0.4**
baz=56
B18A Beardsley Farm 56.13 53 ⇑P **P 01 52 52.6 -0.3**
baz=56,SNR=94
MFID Camas Ranch 56.14 61 ⇑P **P 01 52 53.2 +0.1**
baz=56,SNR=45
CM31 Chiang Mai Arr 56.16 257 *e*P **P 01 52 55.5 +2.0**
comp=Z,127nm,1.1s,mb5.9
CM31 LR LR
comp=Z,8µm,20.0s,MS5.8
CMAR Chiang Mai Arr 56.16 257 P **P 01 52 54.8 +1.3**
comp=Z,68nm,0.8s,mb5.7,baz=25,slow=7.0,SNR=183
CMAR LR LR 02 17 13.8
comp=Z,9µm,21.5s,MS5.8,baz=37,slow=36
CMAR Chiang Mai Arr 56.16 257 P **P 01 52 54.8 +1.4**
CMAR pmax pmax
comp=Z,68nm,0.8s
CMAR MLR MLR
comp=Z,9µm,21.5s
FCC Fort Churchill 56.17 37 *e*P **P 01 52 52.7 -0.4**
comp=Z,12nm,1.3s,mb4.8
FCC *e* pP 01 53 02.3 -3.4
SWI Sorong 56.23 212 P **P 01 52 54.3 +0.4**
comp=Z,4µmcomp=Z,169nm,2.1s,mb5.7
SDKM Sandakan 56.23 231 P **P 01 52 54.4 +0.4**
H13A Challis 56.26 59 ⇓P **P 01 52 53.8 -0.1**
baz=56
I12A Atlanta 56.28 60 ⇓P **P 01 52 54.0 0.0**
baz=56,SNR=79
SUMG Summit 56.29 6 *e*P **P 01 52 54.3 +0.7**
comp=Z,613nm,1.4s,mb6.4
SUMG S **S 02 00 48.3 +8.4**
SUMG Summit 56.29 6 ⇑*i*P **P 01 52 54.6 +0.9**
comp=Z,130nm,0.9s,mb6.0
SUMG *i* 01 53 18.2
SUMG
comp=Z,10µm,23.0s
E16A East Helena 56.36 56 ⇑P **P 01 52 54.8 +0.2**
baz=56,SNR=13
KKM Kota Kinabalu 56.37 232 P **P 01 52 56.8 +1.8**
KKM Kota Kinabalu 56.37 232 P **P 01 52 56.0 +1.0**
comp=Z,63nm,1.3s,mb5.5
KKM LR LR
comp=Z,4µm,20.0s,MS5.5
KKM Kota Kinabalu 56.37 232 P **P 01 52 56.1 +1.1**
comp=Z,2µmcomp=Z,65nm,2.3s,mb5.3
F15A Butte 56.38 57 ⇑P **P 01 52 54.6 -0.1**
baz=56,SNR=29
EGMT Eagleton 56.38 54 ⇑P **P 01 52 54.2 -0.5**
baz=56,SNR=50
EGMT Eagleton 56.38 54 *e*P **P 01 52 54.3 -0.4**
comp=Z,397nm,1.6s,mb6.2
EGMT LR LR
comp=Z,16µm,22.0s,MS6.1
D17A Six Diamond Ra 56.47 55 ⇑P **P 01 52 55.3 -0.1**
baz=56,SNR=86
KK31 Karatay Array 56.53 299 *ce*P **P 01 52 54.9 -0.9**
KK31 pmax pmax
comp=Z,16nm,0.8s,mb5.1
PAHR Pah Rah Range 56.54 67 *e*P **P 01 52 56.0 +0.1**
comp=Z,574nm,2.1s,mb6.2
WCN Washoe City 56.59 67 ⇓P **P 01 52 56.6 +0.3**
baz=56,SNR=23
DLMT Dillon 56.64 58 *e*P **P 01 52 56.3 -0.2**
comp=Z,512nm,2.1s,mb6.2
J12A Stokes Ranch, 56.66 61 ⇑P **P 01 52 57.0 +0.3**
baz=56,SNR=113
L10A Juniper Basin 56.66 63 ⇓P **P 01 52 57.5 +0.7**
baz=56
H14A Leadore 56.71 59 ⇓P **P 01 52 56.6 -0.4**
baz=56,SNR=35
TAPN Taplejung 56.76 274 *e*P **P 01 52 58.0 +0.4**
comp=Z,236nm,0.9s,mb6.2
TAPN Taplejung 56.76 274 *e*Pn **P 01 52 58.5 +0.9**
comp=Z,236nm,0.9s,mb6.2
TAPN Taplejung 56.76 274 *e*Pn **P 01 52 58.5 +0.9**
comp=Z,236nm,0.9s,mb6.2
I13A Wildhorse Cree 56.76 60 ⇑P **P 01 52 57.8 +0.4**
baz=56,SNR=127
G15A Dillon 56.82 58 ⇑P **P 01 52 57.8 -0.1**
baz=56,SNR=58
HLID Hailey 56.83 60 ⇑P **P 01 52 58.2 +0.3**
baz=57,SNR=82
HLID Hailey 56.83 60 *e*P **P 01 52 58.2 +0.3**
comp=Z,334nm,1.9s,mb6.0
HLID LR LR
comp=Z,7µm,20.0s,MS5.7
E17A Martinsdale 56.84 56 ⇓P **P 01 52 58.6 +0.6**
baz=57,SNR=81
F16A Kennard Place, 56.88 57 ⇓P **P 01 52 58.2 0.0**
baz=57,SNR=19
D18A Linhart Farms, 56.90 54 ⇑P **P 01 52 58.6 +0.2**
baz=57,SNR=27
BOZ Bozeman (W) 56.96 57 ⇓P **P 01 52 59.3 +0.4**
baz=57,SNR=85
BOZ Bozeman (W) 56.96 57 *e*P **P 01 52 59.3 +0.5**
BOZ pmax pmax
comp=Z,137nm,1.3s,mb5.8
BOZ MLR MLR
comp=Z,6µm,20.0s,MS5.7
BOZ Bozeman (W) 56.96 57 *e*P **P 01 52 59.2 +0.4**
comp=Z,137nm,1.3s,mb5.8
BOZ LR LR
comp=Z,6µm,20.0s,MS5.7
AGT Agartala 56.98 268 *e*PKP **P 01 52 59.0 -0.3**
AGT *i* x PcP 01 53 47.0 -7.0
M10A I.L. Ranch, Tu 56.98 63 ⇓P **P 01 52 59.6 +0.5**
baz=57,SNR=52
L11A Cat Creek Ranc 57.00 62 ⇓P **P 01 52 59.9 +0.7**
baz=57,SNR=214
CMB Columbia Colle 57.06 69 *e*P **P 01 52 59.5 -0.2**
CMB pmax pmax
comp=Z,397nm,2.1s,mb6.1
CMB MLR MLR
comp=Z,10µm,22.0s,MS5.9
CMB Columbia Colle 57.06 69 *e*P **P 01 52 59.5 -0.2**
comp=Z,397nm,2.1s,mb6.1
CMB LR LR
comp=Z,10µm,22.0s,MS5.9
J13A Cove Ranch, Pi 57.07 60 ⇑P **P 01 53 00.2 +0.5**
baz=57,SNR=71
TSM Tawau 57.07 229 P **P 01 53 00.5 +0.5**
H15A Lima 57.10 58 ⇓P **P 01 52 59.5 -0.3**
baz=57,SNR=16
I14A Mackay 57.11 59 ⇑P **P 01 53 00.5 +0.5**
baz=57,SNR=160
G16A Moss Hill, Enn 57.15 57 ⇑P **P 01 53 00.4 +0.3**
baz=57,SNR=90
K12A Draper Farm, C 57.17 61 ⇑P **P 01 53 00.7 +0.4**
baz=57,SNR=86
E18A Harlowton 57.26 55 ⇑P **P 01 53 01.5 +0.6**
baz=57
SAO San Andreas Ge 57.28 71 *e*P **P 01 53 02.2 +1.0**
SAO pmax pmax
comp=Z,37nm,1.0s,mb5.4
SAO MLR MLR
comp=Z,8µm,21.0s,MS5.8
SAO San Andreas Ge 57.28 71 *e*P **P 01 53 02.2 +1.0**
comp=Z,37nm,1.0s,mb5.4
SAO LR LR
comp=Z,8µm,21.0s,MS5.8
ODAN Odare 57.30 273 *e*P **P 01 53 01.7 +0.2**
comp=Z,119nm,0.8s,mb6.0
ODAN Odare 57.30 273 *e*Pn **P 01 53 02.3 +0.8**
ODAN Odare 57.30 273 *e*Pn **P 01 53 02.3 +0.8**
F17A Fitzpatrick Pl 57.31 56 ⇑P **P 01 53 01.7 +0.5**
baz=57,SNR=53
WAKR Walker 57.31 68 *e*P **P 01 53 01.8 +0.4**
BMN Battle Mountai 57.31 65 *e*P **P 01 53 01.9 +0.5**
BMN pmax pmax
comp=Z,884nm,2.6s,mb6.3
BMN MLR MLR
comp=Z,6µm,22.0s,MS5.7
BMN Battle Mountai 57.31 65 *e*P **P 01 53 01.9 +0.5**
comp=Z,884nm,2.6s,mb6.3
BMN LR LR
comp=Z,6µm,22.0s,MS5.7
LBMI Labuha 57.36 216 P pP 01 53 12.1 -2.6
L12A House Creek Ra 57.43 62 ⇑P **P 01 53 02.8 +0.7**
baz=57,SNR=48
M11A Holland Ranch, 57.46 63 ⇓P **P 01 53 03.4 +0.9**
baz=57,SNR=56
J14A Carey 57.48 60 ⇓P **P 01 53 03.7 +1.2**
baz=57
GUN Gumba 57.52 275 *e*P **P 01 53 02.7 -0.3**
comp=Z,160nm,0.7s,mb6.2
GUN Gumba 57.52 275 *e*Pn **P 01 53 03.8 +0.8**
GUN Gumba 57.52 275 *e*Pn **P 01 53 03.8 +0.8**
N10A Dunphy 57.53 64 ⇓P **P 01 53 03.5 +0.6**
baz=57
NST Nakhon Sawan 57.55 254 P **P 01 53 03.8 +0.4**
comp=Z,82nm,0.8s,mb5.8
I15A Monteview 57.59 59 ⇓P **P 01 53 03.5 +0.2**
baz=57,SNR=9.5
K13A Stover Farm, H 57.61 61 ⇓P **P 01 53 04.0 +0.5**
baz=57,SNR=8.5
G17A Pierce Place, 57.65 57 ⇑P **P 01 53 04.3 +0.6**
baz=57,SNR=28
RAMN Ramite 57.74 274 *e*P **P 01 53 04.8 +0.2**
comp=Z,323nm,0.8s,mb6.4
RAMN Ramite 57.74 274 *e*Pn **P 01 53 05.4 +0.8**
comp=Z,298nm,0.7s,mb6.4
RAMN Ramite 57.74 274 *e*Pn **P 01 53 05.4 +0.8**
comp=Z,298nm,0.7s,mb6.4
H16A Russell Place, 57.79 57 ⇓P **P 01 53 05.2 +0.5**
baz=58,SNR=68
F18A Big Timber 57.80 56 ⇓P **P 01 53 05.2 +0.5**
baz=58,SNR=36
O10A Cortez Mining, 57.82 64 ⇓P **P 01 53 05.7 +0.7**
baz=58,SNR=23
N11A Elko Archery C 57.90 63 ⇓P **P 01 53 06.0 +0.5**
baz=58,SNR=5.6
YMR Madison River 57.96 57 *e*P **P 01 53 06.6 +0.7**
comp=Z,426nm,1.6s,mb6.2
M12A Wells 57.97 62 ⇑P **P 01 53 06.8 +0.8**
baz=58,SNR=52
AB31 Akbulak array 57.97 310 *ce*P **P 01 53 04.5 -1.4**
AB31 pmax pmax
comp=Z,24nm,0.6s,mb5.4
ABKAR Akbulak array 57.97 310 *e*P **P 01 53 04.8 -1.1**
comp=Z,33nm,0.8s,mb5.4
JMIC Jan Mayen 57.98 355 *e*P **P 01 53 07.2 +1.6**
JMIC *e*S **S 02 01 04.5 +2.4**
JMIC AMS AMS 02 16 23.1
comp=Z,6µm,21.2s,MS5.7
KKN Kakani 57.98 276 *e*P **P 01 53 05.8 -0.5**
comp=Z,237nm,0.6s,mb6.4
KKN Kakani 57.98 276 *e*Pn **P 01 53 07.2 +0.9**
comp=Z,237nm,0.6s,mb6.4
KKN Kakani 57.98 276 *e*P **P 01 53 07.2 +0.9**
KKN pmax pmax
comp=Z,237nm,0.6s,mb6.4
KKN Kakani 57.98 276 *e*Pn **P 01 53 07.2 +0.9**
comp=Z,237nm,0.6s,mb6.4
J15A Blackfoot 58.02 59 ⇑P **P 01 53 07.1 +0.9**
baz=58,SNR=38
NVAR Mina Array Bea 58.02 67 P **P 01 53 06.6 +0.2**
comp=Z,12nm,0.5s,mb5.2,baz=293,slow=7.5,SNR=92
NVAR PKP2bc 02 22 57.7
comp=Z,0.5nm,0.6s,baz=167,slow=4.0,SNR=4.7
NVAR Mina Array Bea 58.02 67 P **P 01 53 06.6 +0.2**
NVAR ⇑*e* 02 22 57.7
PKI Pulchoki 58.05 275 *e*P **P 01 53 06.4 -0.4**
comp=Z,640nm,1.5s,mb6.4
PKI Pulchoki 58.05 275 *e*Pn **P 01 53 07.5 +0.7**
PKI Pulchoki 58.05 275 *e*P **P 01 53 07.4 +0.6**
PKI Pulchoki 58.05 275 *e*Pn **P 01 53 07.4 +0.6**
PKIN Phulchoki 58.06 275 *e*P **P 01 53 06.5 -0.3**
comp=Z,239nm,0.8s,mb6.3
PKIN Phulchoki 58.06 275 *e*Pn **P 01 53 07.4 +0.6**
L13A Double Diamond 58.06 61 ⇑P **P 01 53 07.5 +0.9**
baz=58,SNR=20
YNR Norris Junctio 58.09 57 *e*P **P 01 53 08.2 +1.5**
comp=Z,463nm,1.8s,mb6.2
YFT Old Faithful 58.18 57 *e*P **P 01 53 09.3 +1.9**
comp=Z,220nm,1.2s,mb6.1
K14A Jones Ranch, D 58.18 60 ⇓P **P 01 53 08.4 +1.0**
baz=58,SNR=90
I16A Newdale 58.21 58 ⇑P **P 01 53 08.5 +0.9**
baz=58,SNR=56
DMN Daman 58.22 276 *e*P **P 01 53 07.3 -0.6**
comp=Z,296nm,0.8s,mb6.4
DMN Daman 58.22 276 *e*Pn **P 01 53 09.0 +1.1**
comp=Z,296nm,0.8s,mb6.4
DMN Daman 58.22 276 *e*Pn **P 01 53 09.0 +1.1**
comp=Z,296nm,0.8s,mb6.4
ELK Elko 58.23 63 *e*P **P 01 53 08.5 +0.7**
ELK pmax pmax
comp=Z,651nm,2.5s
ELK MLR MLR
comp=Z,9µm,22.0s
ELK Elko 58.23 63 *e*P **P 01 53 08.5 +0.6**
comp=Z,651nm,2.5s,mb6.2
ELK *e* 01 54 18.8
ELK LR LR
comp=Z,9µm,22.0s,MS5.8
GKN Gorkha 58.24 276 *e*P **P 01 53 07.3 -0.7**
comp=Z,218nm,0.7s,mb6.3
GKN Gorkha 58.24 276 *e*Pn **P 01 53 08.7 +0.7**
comp=Z,218nm,0.7s,mb6.3
GKN Gorkha 58.24 276 *e*Pn **P 01 53 08.7 +0.7**
comp=Z,218nm,0.7s,mb6.3
MLAC Mammoth Lakes 58.24 68 ⇓P **P 01 53 08.8 +0.8**
baz=58
G18A Lazy EL Ranch, 58.27 56 ⇑P **P 01 53 08.2 +0.2**
baz=58,SNR=29
N12A Clover Valley, 58.27 63 ⇑P **P 01 53 08.9 +0.8**
baz=58,SNR=33
P10A Eureka 58.29 65 ⇑P **P 01 53 08.9 +0.7**
baz=58,SNR=14
LKWY Lake 58.33 57 *e*P **P 01 53 10.5 +2.0**
LKWY pmax pmax
comp=Z,149nm,1.1s,mb5.9
LKWY MLR MLR
comp=Z,14µm,22.0s,MS6.0

LKWY **Lake** 58.33 57 *e*P P 01 53 10.5 +2.0
comp=Z,149nm,1.1s,mb5.9
LKWY LR LR
comp=Z,14µm,22.0s,MS6.0
H17A **Grant Village** 58.35 57 ⇓P P 01 53 10.7 +2.1
baz=58,SNR=40
O11A **Cowboy Ranch,** 58.41 64 ⇑P P 01 53 09.5 +0.4
baz=58,SNR=23
M13A **Montello** 58.42 62 ⇓P P 01 53 09.7 +0.5
baz=58,SNR=33
M13A **Montello** 58.42 62 *e*P P 01 53 09.6 +0.4
comp=Z,89nm,1.1s,mb5.7
K15A **Arbon** 58.44 60 ⇑P P 01 53 10.6 +1.3
baz=58,SNR=68
L14A **Malta** 58.49 61 ⇑P P 01 53 10.3 +0.7
baz=58,SNR=61
IMW **Indian Meadow** 58.49 58 *e*P P 01 53 10.5 +0.9
comp=Z,94nm,1.0s,mb5.8
J16A **Bone** 58.55 59 ⇑P P 01 53 11.0 +1.0
baz=58,SNR=27
RLMT **Red Lodge** 58.56 56 ⇓P P 01 53 10.9 +0.9
baz=58,SNR=117
RLMT **Red Lodge** 58.56 56 *e*P P 01 53 10.9 +0.8
comp=Z,414nm,1.4s,mb6.3
RLMT LR LR
comp=Z,11µm,20.0s,MS6.0
DCID1 **Drake Creek** 58.56 58 *e*P P 01 53 11.4 +1.4
comp=Z,71nm,1.0s,mb5.7
DCID1 *e* pP 01 53 27.0 +4.1
MRSI **Marisa** 58.59 223 P P 01 53 12.0 +1.4
comp=Z,3µmcomp=Z,63nm,2.2s,mb5.3
MTUM **Tungsten Hills** 58.59 68 *e*P P 01 53 10.8 +0.4
RRI2 **Red Ridge** 58.66 59 *e*P P 01 53 11.8 +1.0
comp=Z,824nm,2.0s,mb6.4
I17A **Pilgrim Ck.** 58.67 58 ⇑P P 01 53 12.4 +1.5
baz=58,SNR=12
P11A **Circle Ranch,** 58.74 65 ⇓P P 01 53 11.9 +0.5
baz=58,SNR=11
N13A **Wendover, West** 58.74 62 ⇑P P 01 53 11.9 +0.5
baz=58,SNR=29
N13A **Wendover, West** 58.74 62 *e*P P 01 53 12.0 +0.6
comp=Z,122nm,1.0s,mb5.9
TPAW **Teton Pass** 58.76 58 *e*P P 01 53 12.3 +0.8
comp=Z,216nm,1.3s,mb6.0
M14A **Sheep Mountain** 58.78 61 ⇓P P 01 53 12.2 +0.5
baz=58,SNR=32
O12A **Currie** 58.83 63 ⇓P P 01 53 12.4 +0.3
baz=59,SNR=70
JOF **Joensuu** 58.85 334 *e*P P 01 53 10.9 -0.9
JOF pmax pmax
comp=Z,12nm,0.4s,mb5.3
JOF **Joensuu** 58.85 334 *e*p P 01 53 10.9 -0.9
comp=Z,12nm,0.4s,mb5.3
K16A **Soda Springs** 58.86 59 ⇑P P 01 53 13.3 +1.2
baz=59,SNR=62
DGMT **Dagmar** 58.86 50 ⇓P P 01 53 12.0 0.0
baz=59,SNR=20
DGMT **Dagmar** 58.86 50 *e*P P 01 53 11.8 -0.2
comp=Z,331nm,1.4s,mb6.2
DGMT LR LR
comp=Z,12µm,21.0s,MS6.0
Q10A **Clear Creek Ra** 58.86 66 ⇑P P 01 53 12.4 +0.2
baz=59,SNR=12
LOHW **Long Hollow** 58.86 58 *e*P P 01 53 13.0 +0.9
comp=Z,295nm,1.5s,mb6.1
SNOW **Snow King Moun** 58.88 58 *e*P P 01 53 13.7 +1.3
comp=Z,257nm,1.3s,mb6.1
TPH **Tonopah** 58.89 67 PFAKE 01 53 20.0 +7.6
TPH LR LR
comp=Z,5µm,22.0s,MS5.6
RCTC **Rector, Farmer** 58.90 70 ⇑P P 01 53 11.8 -0.7
baz=59
REDW **Red Top Meadow** 58.90 58 *e*P P 01 53 13.4 +1.0
comp=Z,403nm,1.5s,mb6.2
REDW ScP ScP 01 58 04.2 +6.3
SCO **Scoresbysund** 58.90 360 *i* P P 01 53 12.5 +0.5
SCO *i* S S 02 01 16.6 +2.5
SCO pmax pmax
comp=Z,24nm,0.8s,mb5.3
SCO MLR MLR
comp=Z,7µm,18.0s,MS5.8
SCO **Scoresbysund** 58.90 360 *i* P P 01 53 12.5 +0.5
comp=Z,24nm,0.8s,mb5.3
SCO *i* S S 02 01 16.6 +2.5
SCO
comp=Z,7µm,18.0s
HVU **Hansel Valley** 58.91 61 *e*P P 01 53 13.0 +0.4
HVU pmax pmax
comp=Z,103nm,1.2s,mb5.7
HVU **Hansel Valley** 58.91 61 *e*P P 01 53 13.0 +0.5
comp=Z,103nm,1.2s,mb5.7
J17A **Brown Place, J** 58.97 58 ⇓P P 01 53 14.1 +1.1
baz=59,SNR=48
L15A **Malad City** 58.98 60 ⇑P P 01 53 13.6 +0.6
baz=59,SNR=59
TIN **Tinemaha** 58.99 68 ⇓P P 01 53 13.4 +0.2
baz=59,SNR=8.0
LAO **LASA Array** 59.07 53 *e*P P 01 53 14.0 +0.5
comp=Z,437nm,1.4s,mb6.3
LAO LR LR
comp=Z,15µm,22.0s,MS6.1
SMMC **Simmler** 59.12 71 ⇑P P 01 53 14.1 0.0
baz=59
AHID **Auburn Hatcher** 59.17 59 *e*P P 01 53 14.8 +0.5
comp=Z,166nm,1.1s,mb6.0
AHID LR LR
comp=Z,4µm,19.0s,MS5.6
I18A **Diamond G Ranc** 59.23 57 ⇑P P 01 53 15.9 +1.2
baz=59,SNR=25
Q11A **Duckwater** 59.27 65 ⇓P P 01 53 15.1 0.0
baz=59,SNR=24
K17A **Gardner Place,** 59.27 59 ⇑P P 01 53 15.4 +0.3
baz=59,SNR=12
P12A **McGill** 59.27 64 ⇑P P 01 53 15.4 +0.3
baz=59
R10A **Warm Springs** 59.28 66 ⇓P P 01 53 15.1 0.0
baz=59,SNR=10
VES **Vestal, Richgr** 59.31 70 ⇑P P 01 53 14.3 -1.0
baz=59,SNR=16
M15A **Larsen Ranch,** 59.31 61 ⇑P P 01 53 15.8 +0.5
baz=59,SNR=71
N14A **Grayback Hills** 59.31 62 ⇓P P 01 53 15.8 +0.4
baz=59,SNR=43
BGU **Big Grassy Mou** 59.35 62 *e*P P 01 53 15.7 +0.1
comp=Z,130nm,1.7s,mb5.7
O13A **Hicks Ranch, I** 59.35 63 ⇓P P 01 53 15.9 +0.3
baz=59,SNR=5.3
S10A **Tonopah Range,** 59.35 66 ⇓P P 01 53 15.7 0.0
baz=59,SNR=34
SPUT **South Promonto** 59.41 61 *e*P P 01 53 16.5 +0.5
comp=Z,575nm,2.2s,mb6.2
J18A **Kendall Valley** 59.45 58 ⇑P P 01 53 17.0 +0.8
baz=59,SNR=20
CWC **Cottonwood Cre** 59.49 69 ⇑P P 01 53 16.7 0.0
baz=59,SNR=20
L16A **Fish Haven** 59.49 60 ⇑P P 01 53 17.3 +0.7
baz=59,SNR=14
GRAC **Grapevine Rang** 59.53 68 ⇓P P 01 53 17.3 +0.4
baz=59,SNR=15
Q12A **Willow Creek R** 59.61 64 ⇓P P 01 53 17.8 +0.3
baz=59,SNR=24
R11A **Troy Canyon, C** 59.65 65 ⇑P P 01 53 17.7 0.0
baz=59,SNR=53
N15A **Stansbury Isla** 59.66 61 ⇑P P 01 53 18.0 +0.3
baz=59,SNR=33
HWUT **Hardware Ranch** 59.70 60 *e*P P 01 53 18.5 +0.6
comp=Z,675nm,2.3s,mb6.3
HWUT LR LR
comp=Z,7µm,20.0s,MS5.8
L17A **Cokeville** 59.74 59 ⇑P P 01 53 18.7 +0.4
baz=60,SNR=33
ISA **Isabella** 59.79 70 ⇑P P 01 53 17.8 -0.9
baz=60,SNR=9.8
P13A **Bates Ranch, G** 59.79 64 ⇑P P 01 53 19.1 +0.4
baz=60,SNR=66
K18A **Toltan Ranch,** 59.83 59 ⇓P P 01 53 19.8 +1.0
baz=60,SNR=61
MOR8 **Moi Rana** 59.87 344 *e*P P 01 53 17.2 -1.6
SBC **Santa Barbara** 59.89 71 ⇓P P 01 53 19.2 -0.2
baz=60
DAC **Darwin (Calif)** 59.89 68 PFAKE 01 53 30.0 +11
DAC LR LR
comp=Z,8µm,22.0s,MS5.8
FLOS **Flostrand** 59.91 344 *e*P P 01 53 19.6 +0.6
AAI **Ambon** 59.92 214 P P 01 53 21.8 +2.1
comp=Z,5µmcomp=Z,152nm,2.1s,mb5.7
ARVC **Arvin** 59.95 70 ⇓P P 01 53 18.8 -1.0
baz=60

DUG **Dugway** 59.97 62 ⇑P P 01 53 20.3 +0.4
baz=60,SNR=91
DUG **Dugway** 59.97 62 *e*P P 01 53 20.2 +0.3
DUG pmax pmax
comp=Z,117nm,1.2s,mb5.8
DUG MLR MLR
comp=Z,4µm,21.0s,MS5.5
DUG **Dugway** 59.97 62 *e*P P 01 53 20.2 +0.3
comp=Z,116nm,1.2s,mb5.8
DUG *e* 01 56 19.1
DUG LR LR
comp=Z,4µm,21.0s,MS5.5
STOK **Stokkvaagen** 59.97 344 *e*P P 01 53 20.1 +0.6
STOK *e*S S 02 01 31.4 +3.4
BW06 **Boulder Array** 60.00 58 ⇑P P 01 53 20.3 +0.3
baz=60,SNR=124
BW06 **Boulder Array** 60.00 58 *e*P P 01 53 20.2 +0.1
comp=Z,107nm,1.0s,mb5.8
BW06 LR LR
comp=Z,8µm,21.0s,MS5.8
PDAR **Pinedale Array** 60.00 58 P P 01 53 20.2 +0.2
comp=Z,60nm,1.0s,mb5.6,baz=304,slow=2.9,SNR=227
S11A **Rachel** 60.04 66 ⇑P P 01 53 20.8 +0.4
baz=60,SNR=37
NOQ **North Oquirrh** 60.04 61 *e*P P 01 53 21.3 +1.0
comp=Z,839nm,2.1s,mb6.4
O15A **The Old Anders** 60.10 62 ⇑P P 01 53 21.3 +0.5
baz=60,SNR=14
MPMC **Manual Prospec** 60.10 69 ⇑P P 01 53 20.7 -0.2
baz=60,SNR=43
Q13A **Wheeler Ranch,** 60.13 64 ⇓P P 01 53 21.4 +0.4
baz=60,SNR=73
HNR **Honiara** 60.15 177 PFAKE 01 53 30.0 +8.8
HNR LR LR
comp=Z,12µm,22.0s,MS6.0
FURC **Furnace Creek,** 60.19 68 ⇑P P 01 53 21.3 -0.1
baz=60,SNR=80
NNT **Nongplab** 60.19 252 P P 01 53 23.8 +2.1
R12A **Pony Springs,** 60.23 65 ⇓P P 01 53 21.8 +0.1
baz=60,SNR=39
P14A **Drum Mountains** 60.24 63 ⇑P P 01 53 22.0 +0.3
baz=60,SNR=53
TLE **Tual** 60.24 209 P P 01 53 23.2 +1.3
comp=Z,135nm,2.2s,mb5.6
BSC **Santa Cruz Isl** 60.24 72 ⇑P P 01 53 21.3 -0.5
baz=60
N16A **Rees Ranch, Co** 60.26 61 ⇑P P 01 53 22.3 +0.5
baz=60,SNR=8.7
M17A **Scullys Gap (B** 60.28 60 ⇓P P 01 53 22.1 +0.2
baz=60,SNR=20
L18A **Fontenelle, Gr** 60.32 59 ⇓P P 01 53 22.6 +0.4
baz=60,SNR=26
K19A **Absolon Red Bu** 60.34 58 ⇓P P 01 53 22.1 -0.3
baz=60,SNR=36
OSI **Osito Adit** 60.36 71 ⇓P P 01 53 22.5 -0.1
baz=60
LRMC **Laurel Mountai** 60.38 69 ⇓P P 01 53 22.4 -0.4
baz=60,SNR=5.4
JLU **Jordanelle** 60.45 61 *e*P P 01 53 23.7 +0.6
comp=Z,557nm,2.3s,mb6.2
SFJD **Kangerlussuaq** 60.49 12 P P 01 53 21.7 -1.3
comp=Z,52nm,0.8s,mb5.6,baz=314,slow=6.5,SNR=18
SFJD **Kangerlussuaq** 60.49 12 P P 01 53 21.7 -1.3
SFJD pmax pmax
comp=Z,53nm,0.9s,mb5.6
BLG **Laguna Peak** 60.51 71 ⇓P P 01 53 22.9 -0.7
baz=60
Q14A **Sevier Lake (B** 60.53 64 ⇑P P 01 53 24.3 +0.5
baz=60,SNR=80
U10A **Ash Meadows, A** 60.54 68 ⇑P P 01 53 23.9 +0.1
baz=60,SNR=27
NLU **North Lily Min** 60.55 62 *e*P P 01 53 24.1 +0.3
comp=Z,76nm,1.1s,mb5.7
N17A **Moffit Pass** 60.55 60 ⇓P P 01 53 24.1 +0.2
baz=60,SNR=18
L19A **Farson** 60.56 59 ⇑P P 01 53 23.9 +0.1
baz=60,SNR=24
SDNR **Sundarnagar** 60.57 285 *e*PKP P 01 53 25.1 +1.0
S12A **Delamar Landin** 60.58 66 ⇓P P 01 53 24.4 +0.4
baz=60,SNR=42
EDW2 **Edwards Air Fo** 60.62 70 ⇑P P 01 53 23.9 -0.5
baz=60,SNR=21
T11A **Corn Creek, Al** 60.62 66 ⇑P P 01 53 24.5 +0.2
baz=60,SNR=61
M18A **Lyman** 60.64 60 ⇑P P 01 53 24.5 +0.1
baz=60,SNR=16
THN **Thein Dam** 60.68 286 *e*PKP P 01 53 25.6 +0.7
DAU **Daniels Canyon** 60.69 61 *e*P P 01 53 25.5 +0.7
O16A **Springville** 60.69 61 ⇓P P 01 53 25.3 +0.5
baz=60,SNR=16
R13A **O'Grain Ranch,** 60.69 65 ⇓P P 01 53 25.0 +0.1
baz=60,SNR=15
P15A **Leamington** 60.69 62 ⇑P P 01 53 25.0 +0.2
baz=60,SNR=13
SMLA **Simla** 60.70 284 *i* P P 01 53 24.8 -0.3
DDI **Dehra Dun** 60.72 283 *e*PKP P 01 53 23.7 -1.4
DDI *ex* x 02 01 46.0
K20A **Yellowstone Ra** 60.73 58 ⇑P P 01 53 24.4 -0.6
baz=60,SNR=7.8
PCI **Palu** 60.75 224 P P 01 53 25.7 +0.3
comp=Z,2µmcomp=Z,92nm,1.1s,mb5.8
MPU **Maple Canyon** 60.75 62 *e*P P 01 53 25.7 +0.5
comp=Z,749nm,2.3s,mb6.4
PMG **Port Moresby** 60.75 192 *ce*P P 01 53 25.0 -0.4
PMG pmax pmax
comp=Z,79nm,1.7s
PMG **Port Moresby** 60.75 192 *e*P P 01 53 24.9 -0.4
comp=Z,97nm,1.3s,mb5.8
PMG LR LR
comp=Z,8µm,22.0s,MS5.8
PMG **Port Moresby** 60.75 192 P P 01 53 24.2 -1.2
comp=Z,2µmcomp=Z,57nm,1.3s,mb5.5
KAF **Kangasniemi** 60.84 336 *e*P P 01 53 24.5 -0.9
KAF pmax pmax
comp=Z,12nm,0.5s,mb5.3
KAF **Kangasniemi** 60.84 336 *e*P P 01 53 24.5 -0.9
comp=Z,12nm,0.5s,mb5.3
KAF **Kangasniemi** 60.84 336 *e*p P 01 53 24.5 -0.9
comp=Z,12nm,0.5s,mb5.3
DECC **Green Verdugo** 60.85 71 ⇑P P 01 53 25.3 -0.6
baz=61
SHOC **Shoshone** 60.92 68 ⇓P P 01 53 26.2 -0.2
baz=61,SNR=13
PASC **Pasadena Art C** 60.99 71 *e*P P 01 53 25.9 -1.0
comp=Z,3µm,2.6s,mb6.9
P16A **Fountain Green** 61.02 62 ⇓P P 01 53 27.7 +0.7
baz=61,SNR=8.9
GSC **Goldstone** 61.03 69 ⇓P P 01 53 26.9 -0.2
baz=61,SNR=25
GSC **Goldstone** 61.03 69 *e*P P 01 53 26.7 -0.4
GSC pmax pmax
comp=Z,554nm,2.5s,mb6.2
GSC **Goldstone** 61.03 69 *e*P P 01 53 26.7 -0.5
comp=Z,554nm,2.5s,mb6.2
MWC **Mount Wilson** 61.03 71 *e*P P 01 53 26.4 -0.8
MWC pmax pmax
comp=Z,379nm,2.0s,mb6.2
MWC **Mount Wilson** 61.03 71 *e*P P 01 53 26.4 -0.8
comp=Z,379nm,2.0s,mb6.2
Q15A **Fillmore** 61.03 63 ⇑P P 01 53 27.4 +0.3
baz=61,SNR=21
M19A **Rock Springs** 61.08 59 ⇑P P 01 53 27.2 -0.2
baz=61,SNR=8.8
U11A **Corn Creek** 61.09 67 ⇓P P 01 53 27.7 +0.1
baz=61
O17A **Robinson Place** 61.12 61 ⇑P P 01 53 28.2 +0.5
baz=61,SNR=20
R14A **James Farms, M** 61.15 64 ⇑P P 01 53 28.2 +0.3
baz=61
S13A **Holt Ranch, En** 61.17 65 ⇑P P 01 53 28.2 +0.1
baz=61,SNR=37
N18A **Larsen Ranch,** 61.17 60 ⇑P P 01 53 27.8 -0.2
baz=61
L20A **Wamsutter** 61.18 58 ⇑P P 01 53 28.2 +0.1
baz=61,SNR=36
RRX **Edison Barstow** 61.20 69 ⇑P P 01 53 28.1 -0.3
baz=61
FMP **Fort Macarthur** 61.24 71 ⇑P P 01 53 27.7 -0.9
baz=61
BFSC **Mount Baldy Ra** 61.26 70 ⇓P P 01 53 28.2 -0.5
baz=61,SNR=12
ARUT **Antelope Range** 61.27 65 *e*P P 01 53 28.7 0.0
ARUT pmax pmax
comp=Z,65nm,1.0s,mb5.7
ARUT **Antelope Range** 61.27 65 *e*P P 01 53 28.6 -0.1
comp=Z,66nm,1.0s,mb5.7
T12A **Moapa** 61.27 66 ⇓P P 01 53 28.8 0.0
baz=61

CIS **Catalina Islan** 61.39 71 ⇑P P 01 53 28.9 -0.8
baz=61
S14A **Cedar City** 61.44 64 ⇓P P 01 53 30.0 +0.1
baz=61,SNR=13
TUQ **Turquoise Moun** 61.45 68 ⇓P P 01 53 29.7 -0.3
baz=61,SNR=22
FINES **FINESS Array B** 61.46 336 P P 01 53 29.1 -0.6
comp=Z,9.3nm,0.4s,mb5.2,baz=31,slow=7.0,SNR=51
FINES LR LR 02 23 45.7
comp=Z,22µm,21.9s,MS6.3,baz=25,slow=40
FINES **FINESS Array B** 61.46 336 P P 01 53 29.1 -0.5
FINES pmax pmax
comp=Z,9.0nm,0.4s
FINES MLR MLR
comp=Z,22µm,21.9s
V11A **Goodsprings** 61.46 67 ⇓P P 01 53 30.0 -0.1
baz=61,SNR=14
SBUM **Sibu** 61.47 234 P P 01 53 32.3 +1.9
SBUM **Sibu** 61.47 234 P P 01 53 31.8 +1.5
comp=Z,3µmcomp=Z,68nm,2.4s,mb5.4
CCUT **Cedar City** 61.47 65 *e*P P 01 53 30.4 +0.3
comp=Z,63nm,1.1s,mb5.7
O18A **Roosevelt** 61.48 60 ⇓P P 01 53 31.0 +0.9
baz=61,SNR=33
ULM **Lac du Bonnet** 61.48 44 P P 01 53 29.1 -0.8
comp=Z,73nm,1.3s,mb5.6,baz=318,slow=7.3,SNR=21
ULM LR LR 02 21 35.9
comp=Z,9µm,21.8s,MS5.9,baz=322,slow=37
ULM **Lac du Bonnet** 61.48 44 *e*P P 01 53 29.2 -0.8
comp=Z,117nm,1.4s,mb5.8
ULM *e* pP 01 53 42.3 -0.5
ULM LR LR
comp=Z,14µm,22.0s,MS6.1
MSU **Marysvale** 61.48 63 *e*P P 01 53 30.7 +0.5
TMUT **Trail Mountain** 61.48 62 *e*P P 01 53 30.7 +0.5
comp=Z,1µm,2.5s,mb6.5
N19A **John Jarvie Ra** 61.50 59 ⇓P P 01 53 30.1 -0.2
baz=61,SNR=30
T13A **Saint George** 61.53 66 ⇑P P 01 53 30.9 +0.4
baz=61,SNR=51
U12A **Valley of Fire** 61.57 66 ⇓P P 01 53 31.0 +0.2
baz=61,SNR=5.8
SCI **San Clemente I** 61.60 72 ⇓P P 01 53 30.3 -0.7
baz=61
M20A **Sweetwater, Wa** 61.62 58 ⇓P P 01 53 31.7 +0.6
baz=61,SNR=40
P17A **Butcher Ranch,** 61.62 62 ⇓P P 01 53 31.4 +0.3
baz=61,SNR=35
R15A **Junction** 61.63 64 ⇑P P 01 53 31.8 +0.6
baz=61,SNR=8.4
HEC **Hector,Ludlow** 61.63 69 ⇑P P 01 53 30.9 -0.4
baz=61,SNR=34
BBRC **Big Bear Solar** 61.68 70 ⇑P P 01 53 31.2 -0.3
baz=61
L21A **Rawlins** 61.73 58 ⇓P P 01 53 31.8 0.0
baz=61,SNR=37
Q16A **Castle Valley** 61.77 62 ⇓P P 01 53 32.4 +0.3
baz=62,SNR=25
P18A **Preston Nutter** 61.79 61 ⇑P P 01 53 32.7 +0.5
baz=62,SNR=36
NSS **Namsos** 61.80 344 *e*P P 01 53 32.0 +0.1
NSS *e*S S 02 01 51.8 +0.4
NSS AMS AMS 02 27 04.0
comp=Z,12µm,19.2s,MS6.1
V12A **Nelson** 61.88 67 ⇑P P 01 53 33.0 +0.1
baz=62,SNR=28
U13A **Pakoon Wash** 61.91 66 ⇓P P 01 53 33.6 +0.4
baz=62,SNR=70
O19A **Miners Draw (B** 61.94 60 ⇓P P 01 53 33.1 -0.1
baz=62,SNR=32
RSSD **Black Hills** 61.95 54 *e*P P 01 53 33.3 0.0
RSSD pmax pmax
comp=Z,295nm,1.3s,mb6.3
RSSD MLR MLR
comp=Z,8µm,22.0s,MS5.8
RSSD **Black Hills** 61.95 54 *e*P P 01 53 33.3 0.0
comp=Z,295nm,1.3s,mb6.3
RSSD LR LR
comp=Z,8µm,22.0s,MS5.8
S15A **Panguitch** 61.96 64 ⇑P P 01 53 34.1 +0.8
baz=62,SNR=13
T14A **Hurricane** 61.97 65 ⇓P P 01 53 33.8 +0.3
baz=62,SNR=33
MURC **Murrieta** 61.98 70 ⇑P P 01 53 32.8 -0.7
baz=62,SNR=12
M21A **Separation Pea** 61.98 58 ⇓P P 01 53 33.4 -0.1
baz=62,SNR=33
SRU **San Rafael** 61.99 62 ⇓P P 01 53 33.8 +0.2
baz=62,SNR=113
SRU **San Rafael** 61.99 62 *e*P P 01 53 33.7 +0.1
SRU pmax pmax
comp=Z,112nm,0.9s,mb6.0
SRU **San Rafael** 61.99 62 *e*P P 01 53 33.7 +0.1
comp=Z,112nm,0.9s,mb6.0
RWWY **Rawlins** 62.00 58 *e*P P 01 53 33.6 0.0
comp=Z,626nm,2.2s,mb6.3
R16A **Teasdale** 62.03 63 ⇓P P 01 53 34.8 +0.9
baz=62,SNR=74
N20A **Spence Gulch,** 62.03 59 ⇓P P 01 53 34.5 +0.6
baz=62,SNR=101
GMRC **Granite Mounta** 62.06 68 ⇑P P 01 53 33.8 -0.3
baz=62,SNR=23
FUNA **Funafuti** 62.12 156 PFAKE 01 53 50.0 +15
FUNA LR LR
comp=Z,26µm,19.0s,MS6.4
W12A **Cal Nev Ari** 62.16 68 ⇓P P 01 53 34.6 -0.2
baz=62
L22A **Ellis Ranch, M** 62.18 57 ⇑P P 01 53 35.5 +0.7
baz=62
Q18A **Rafter H Ranch** 62.22 61 ⇑P P 01 53 34.7 -0.4
baz=62,SNR=27
V13A **Grand Canyon W** 62.30 67 ⇓P P 01 53 35.9 +0.2
baz=62,SNR=63
KDI **Kendari** 62.30 220 P P 01 53 39.3 +3.4
comp=Z,2µmcomp=Z,50nm,2.4s,mb5.2
S16A **Weppner Ranch,** 62.36 64 ⇓P P 01 53 36.8 +0.8
baz=62,SNR=96
U14A **Mt Trumbull** 62.37 66 ⇓P P 01 53 36.6 +0.5
baz=62,SNR=78
R17A **Hanksville Air** 62.37 62 ⇓P P 01 53 36.0 -0.2
baz=62,SNR=66
NDI **New Delhi** 62.39 282 *ex* P 01 53 34.0 -2.4
NDI *ex* x 02 03 39.0
T15A **Red Dirt Ranch** 62.40 65 ⇓P P 01 53 36.8 +0.4
baz=62,SNR=46
BELC **Belle Mtn. Jos** 62.41 69 ⇑P P 01 53 35.7 -0.8
baz=62,SNR=17
PFO **Pinyon Flat Ob** 62.41 70 ⇓P P 01 53 35.8 -0.7
baz=62,SNR=8.2
PFO **Pinyon Flat Ob** 62.41 70 *e*P P 01 53 35.8 -0.7
PFO pmax pmax
comp=Z,238nm,2.1s,mb6.0
PFO MLR MLR
comp=Z,6µm,20.0s,MS5.8
PFO **Pinyon Flat Ob** 62.41 70 *e*P P 01 53 35.8 -0.7
comp=Z,238nm,2.1s,mb6.0
PFO LR LR
comp=Z,6µm,20.0s,MS5.8
P19A **Cripple Cowboy** 62.48 60 ⇓P P 01 53 36.9 +0.1
baz=62
N21A **Black Mountain** 62.49 59 ⇓P P 01 53 37.2 +0.3
baz=62,SNR=19
109C **Camp Elliot, M** 62.53 71 ⇑P P 01 53 36.6 -0.7
baz=62
O20A **White River Ci** 62.54 60 ⇑P P 01 53 37.2 0.0
baz=62,SNR=42
MOS **Moscow** 62.60 326 *e*P P 01 53 33.5 -3.9
MOS *e*S S 02 01 56.4 -5.2
MOS *e*SSS 02 08 56.9
MOS MLR MLR
comp=E,9µm,16.0s
MOS MLR MLR
comp=Z,11µm,15.0s,MS6.1
TTSI **Tana Toraja** 62.66 223 P P 01 53 38.0 -0.3
comp=Z,2µmcomp=Z,32nm,1.1s,mb5.4
NEE2 **Needles Airpor** 62.69 68 ⇑P P 01 53 37.7 -0.6
baz=62
IRM **Iron Mountain** 62.80 69 ⇓P P 01 53 38.7 -0.3
baz=63,SNR=40
Q19A **Hogan Spring (** 62.80 61 ⇓P P 01 53 38.5 -0.5
baz=62,SNR=95
R18A **Canyonlands Na** 62.85 62 ⇑P P 01 53 38.9 -0.5
baz=63,SNR=117
S17A **Black Ridge (B** 62.87 63 ⇑P P 01 53 39.5 0.0
baz=63,SNR=46
U15A **North Rim** 62.87 65 ⇓P P 01 53 40.0 +0.5
baz=63,SNR=56

W13A **Hualapai Mount** 62.88 67 ⇓P P 01 53 39.4 -0.2
baz=63,SNR=17
O21A **Pagoda** 62.90 59 ⇑P P 01 53 39.8 +0.1
baz=63,SNR=48
AGMN **Agassiz Nation** 62.91 46 eP P 01 53 38.6 -1.0
comp=Z,190nm,1.4s,mb6.0
AGMN LR LR
comp=Z,12μm,22.0s,MS6.0
T16A **Glen Canyon Da** 62.93 64 ⇓P P 01 53 39.0 -0.8
baz=63,SNR=6.4
BAR **Barrett** 62.93 71 eP P 01 53 39.2 -0.8
comp=Z,182nm,1.8s,mb5.9
MONP **Monument Peak** 62.94 70 ⇓P P 01 53 39.4 -0.6
baz=63,SNR=5.7
V14A **Boquillas Ranc** 62.96 66 ⇑P P 01 53 40.5 +0.4
baz=63,SNR=92
BC3 **Big Chuckawall** 62.97 69 ⇓P P 01 53 39.6 -0.7
baz=63,SNR=21
N22A **Wattenberg Ran** 63.03 58 ⇓P P 01 53 41.0 +0.5
baz=63,SNR=42
KBL **Kabul** 63.20 292 eP P 01 53 40.6 -1.1
KBL pmax pmax
comp=Z,46nm,1.1s,mb5.5
KBL **Kabul** 63.20 292 eP P 01 53 40.6 -1.1
comp=Z,46nm,1.1s,mb5.5
PHWY **Pilot Hill** 63.21 57 eP P 01 53 41.0 -0.6
comp=Z,85nm,1.4s,mb5.7
N23A **Red Feather La** 63.24 58 ⇑P P 01 53 42.4 +0.5
baz=63,SNR=59
W14A **Seligman** 63.27 66 ⇑P P 01 53 42.5 +0.3
baz=63,SNR=54
X13A **Yucca** 63.27 67 ⇓P P 01 53 41.8 -0.4
baz=63,SNR=39
R19A **Curley Farm, L** 63.27 62 ⇑P P 01 53 42.0 -0.2
baz=63,SNR=38
SWSC **Sam W. Stewart** 63.27 70 ⇑P P 01 53 41.3 -0.9
baz=63,SNR=7.1
KSM **Kuching** 63.28 235 P P 01 53 44.3 +1.9
KSM **Kuching** 63.28 235 eP P 01 53 43.9 +1.4
comp=Z,105nm,1.3s,mb5.8
KSM LR LR
comp=Z,2μm,21.0s,MS5.3
KSM **Kuching** 63.28 235 P P 01 53 44.0 +1.5
comp=Z,3μmcomp=Z,76nm,2.1s,mb5.5
S18A **Hurst Farm, Bl** 63.29 63 ⇑P P 01 53 42.0 -0.3
baz=63,SNR=87
DVTC **Desert V Tower** 63.29 70 ⇑P P 01 53 41.8 -0.5
baz=63
T17A **Navajo Res., N** 63.32 64 ⇑P P 01 53 41.9 -0.6
baz=63,SNR=25
Q20A **Ridgley Place,** 63.34 60 ⇑P P 01 53 42.2 -0.4
baz=63,SNR=32
V15A **Kaibab Nationa** 63.37 65 ⇑P P 01 53 43.4 +0.6
baz=63,SNR=68
PV04 **Paradox Valley** 63.40 61 eP P 01 53 43.1 +0.2
O22A **Kremmling** 63.44 58 ⇑P P 01 53 43.5 +0.3
baz=63,SNR=33
OBN **Obninsk** 63.46 327 c iP P 01 53 43.5 +0.4
OBN i 01 54 15.8
OBN i 01 56 02.0
OBN i S S 02 02 06.4 -6.0
OBN pmax pmax
comp=Z,71nm,1.6s,mb5.5
OBN MLR MLR
comp=Z,15μm,17.0s,MS6.2
OBN **Obninsk** 63.46 327 eP P 01 53 42.3 -0.8
OBN LR LR
comp=Z,19μm,21.0s,MS6.2
SPSI **Sidrap Palu** 63.51 223 P P 01 53 44.2 +0.3
comp=Z,2μmcomp=Z,59nm,2.6s,mb5.2
U17A **Shonto** 63.68 64 ⇑P P 01 53 44.8 0.0
baz=63
S19A **Harvey Farm, M** 63.73 62 ⇑P P 01 53 45.0 -0.2
baz=64,SNR=114
U16A **Tuba City** 63.74 64 ⇑P P 01 53 45.5 +0.2
baz=64,SNR=24
O23A **Lake Granby, G** 63.74 58 ⇓P P 01 53 46.2 +1.0
baz=64,SNR=76
T18A **Mexican Hat** 63.74 63 ⇑P P 01 53 44.7 -0.5
baz=64,SNR=61
BNSI **Bone** 63.75 222 P P 01 53 48.6 +3.1
comp=Z,2μmcomp=Z,60nm,1.4s,mb5.5
W15A **Williams** 63.76 66 ⇓P P 01 53 46.0 +0.6
baz=64,SNR=21
PV01 **Paradox Valley** 63.77 61 eP P 01 53 45.5 +0.1
comp=Z,7μm,1.1s
GLA **Glamis** 63.77 69 ⇓P P 01 53 45.3 -0.2
baz=64,SNR=5.3
GLA **Glamis** 63.77 69 eP P 01 53 45.1 -0.4
GLA pmax pmax
comp=Z,74nm,1.0s,mb5.7
GLA **Glamis** 63.77 69 eP P 01 53 45.1 -0.4
comp=Z,74nm,1.0s,mb5.7
Y13A **Salome** 63.82 68 ⇓P P 01 53 45.5 -0.3
baz=64,SNR=12
Q21A **Lamborn Mesa,** 63.82 60 ⇓P P 01 53 46.0 +0.3
baz=64,SNR=18
R20A **Redvale** 63.83 61 ⇑P P 01 53 45.9 +0.1
baz=64,SNR=43
N24A **Carr** 63.85 57 ⇑P P 01 53 46.5 +0.5
baz=64,SNR=14
STKI **Sintang** 63.88 233 P P 01 53 48.4 +2.0
comp=Z,68nm,1.2s,mb5.5
SMCO **Snowmass** 63.90 59 eP P 01 53 46.5 +0.3
comp=Z,98nm,0.9s,mb5.8
SMCO e pP 01 53 58.2 -1.1
X14A **Yava** 63.90 67 ⇓P P 01 53 46.7 +0.3
baz=64,SNR=35
SNG **Songkhla** 63.95 248 P P 01 53 48.0 +1.1
comp=Z,300nm,0.9s,mb6.3
WUAZ **Wupatki** 64.04 65 ⇑P P 01 53 47.6 +0.3
baz=64,SNR=38
WUAZ **Wupatki** 64.04 65 eP P 01 53 47.4 +0.2
comp=Z,264nm,1.7s,mb6.0
WUAZ LR LR
comp=Z,10μm,22.0s,MS6.0
S20A **Disappointment** 64.10 61 ⇑P P 01 53 47.7 +0.1
baz=64,SNR=54
Q22A **Crested Butte,** 64.16 60 ⇓P P 01 53 48.6 +0.6
baz=64,SNR=63
R21A **Cimarron** 64.16 60 ⇑P P 01 53 48.7 +0.7
baz=64,SNR=96
ISCO **Idaho Springs** 64.20 58 eP P 01 53 49.0 +0.8
ISCO pmax pmax
comp=Z,321nm,1.5s,mb6.1
ISCO MLR MLR
comp=Z,8μm,20.0s,MS5.9
ISCO **Idaho Springs** 64.20 58 eP P 01 53 49.0 +0.8
comp=Z,321nm,1.5s,mb6.1
ISCO LR LR
comp=Z,8μm,20.0s,MS5.9
Y14A **Wickenburg** 64.21 67 ⇓P P 01 53 48.3 -0.1
baz=64,SNR=25
W16A **Flagstaff** 64.25 66 ⇑P P 01 53 49.1 +0.5
baz=64,SNR=19
O24A **Longmont** 64.25 58 ⇑P P 01 53 49.5 +0.9
baz=64,SNR=10
U18A **Rough Rock, Ch** 64.26 63 ⇑P P 01 53 48.7 +0.1
baz=64,SNR=24
X15A **Humboldt** 64.27 66 ⇓P P 01 53 49.2 +0.4
baz=64,SNR=60
112A **Yuma** 64.28 70 ⇓P P 01 53 48.4 -0.5
baz=64
N25A **Grover** 64.28 56 ⇑P P 01 53 49.4 +0.7
baz=64
V17A **Tonalea, Kykot** 64.30 65 ⇓P P 01 53 49.6 +0.7
baz=64,SNR=159
Z13A **Yuma Proving G** 64.36 68 ⇑P P 01 53 49.0 -0.4
baz=64,SNR=40
MOL **Molde** 64.37 345 eP P 01 53 48.4 -0.6
MOL AMb AMB 01 53 51.1
comp=Z,109nm,1.6s,mb5.6
MOL eS S 02 02 24.8 +1.3
MOL **Molde** 64.37 345 eP P 01 53 48.4 -0.6
comp=Z,109nm,1.6s,mb5.6
P23A **Jefferson** 64.38 59 ⇑P P 01 53 50.7 +1.2
baz=64,SNR=27
T19A **Beclabito** 64.44 63 ⇓P P 01 53 50.0 +0.2
baz=64,SNR=49
MVCO **Mesa Verde** 64.46 62 ⇑P P 01 53 50.2 +0.2
baz=64,SNR=41
MVCO **Mesa Verde** 64.46 62 eP P 01 53 50.0 0.0
comp=Z,236nm,1.4s,mb6.0
MVCO LR LR
comp=Z,5μm,20.0s,MS5.7
KBKI **Kotabaru** 64.53 227 P P 01 53 49.8 -0.8
comp=Z,5μmcomp=Z,90nm,2.1s,mb5.4
BKSI **Bulukumba** 64.57 222 P P 01 53 50.4 -0.5
comp=Z,1μmcomp=Z,29nm,0.8s,mb5.3
Y15A **Casa Rosa Ranc** 64.59 67 ⇑P P 01 53 51.1 +0.2
baz=64,SNR=37
113A **Mohawk Valley,** 64.60 69 ⇓P P 01 53 50.2 -0.7
baz=64,SNR=11
Z14A **Wintersburg** 64.66 68 ⇓P P 01 53 51.0 -0.3
baz=64
R22A **Saguache, Gunn** 64.70 60 ⇓P P 01 53 52.5 +1.0
baz=64,SNR=52
Q23A **Hartsel** 64.72 59 ⇓P P 01 53 52.4 +0.7
baz=64
U19A **Dine' College,** 64.72 63 ⇑P P 01 53 51.7 +0.1
baz=64,SNR=54
V18A **Ganado** 64.72 64 ⇓P P 01 53 51.9 +0.2
baz=64,SNR=15
W17A **Winslow** 64.73 65 ⇓P P 01 53 52.0 +0.2
baz=64
VRHR **Novokhopersk** 64.74 321 eP P 01 53 49.4 -2.2
VRHR ePPP 01 57 58.3
VRHR eS S 02 02 21.8 -6.6
VRHR pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
VRHR pmax pmax
comp=N,20nm,1.0s
VRHR pmax pmax
comp=E,20nm,1.0s
VRHR smax
comp=N,50nm,1.4s
VRHR smax
comp=E,80nm,1.4s
VRHR smax
comp=Z,10.0nm,1.4s
O25A **Wiggins** 64.77 57 ⇑P P 01 53 52.4 +0.5
baz=64,SNR=11
P24A **Kohler Place,** 64.78 58 ⇓P P 01 53 52.8 +0.8
baz=64,SNR=16
X16A **Lo Jia Camp, P** 64.78 66 ⇑P P 01 53 52.6 +0.5
baz=64,SNR=41
S22A **4UR Ranch, Cre** 65.01 61 ⇑P P 01 53 54.3 +0.8
baz=65,SNR=106
Q24A **Divide** 65.05 59 ⇓P P 01 53 53.9 +0.2
baz=65,SNR=15
U20A **Newcomb** 65.05 63 ⇑P P 01 53 53.9 +0.1
baz=65,SNR=13
EYMN **Ely** 65.12 44 eP P 01 53 53.1 -0.9
comp=Z,116nm,1.0s,mb5.9
EYMN LR LR
comp=Z,11μm,22.0s,MS6.0
114A **Black Gap (USA** 65.13 68 ⇑P P 01 53 54.3 -0.1
baz=65,SNR=15
Y16A **Circle Bar Ran** 65.14 66 ⇑P P 01 53 54.9 +0.4
baz=65,SNR=15
NB2 **NORSAR Subarra** 65.16 343 P P 01 53 53.8 -0.3
comp=Z,272nm,1.7s,mb6.0,baz=25,slow=6.9
NB2 **NORSAR Subarra** 65.16 343 P P 01 53 53.0 -1.1
NOA **NORSAR Array B** 65.16 343 P P 01 53 53.7 -0.4
comp=Z,33nm,0.9s,mb5.3,baz=23,slow=6.6,SNR=69
NOA LR LR 02 27 39.7
comp=Z,10μm,18.8s,MS6.0,baz=25,slow=41
NOA **NORSAR Array B** 65.16 343 P P 01 53 53.7 -0.4
NOA pmax pmax
comp=Z,33nm,0.9s
NOA MLR MLR
comp=Z,10μm,18.8s
NOA **NORSAR Array B** 65.16 343 P P 01 53 53.7 -0.4
NOA LR LR 02 27 39.7
T21A **Navajo Lake** 65.16 62 ⇓P P 01 53 55.1 +0.6
baz=65,SNR=19
Z15A **Gila River Ind** 65.17 67 ⇑P P 01 53 54.4 -0.2
baz=65,SNR=6.9
P25A **Willow Gulch B** 65.18 57 ⇓P P 01 53 55.2 +0.6
baz=65,SNR=38
X17A **Forest Lakes** 65.21 66 ⇓P P 01 53 55.5 +0.7
baz=65,SNR=15
V19A **Window Rock** 65.23 63 ⇑P P 01 53 55.5 +0.5
baz=65,SNR=17
W18A **Petrified Fore** 65.26 64 ⇑P P 01 53 55.7 +0.5
baz=65
OGNE **Ogallala** 65.26 55 eP P 01 53 55.0 -0.2
comp=Z,685nm,1.4s,mb6.5
OGNE LR LR
comp=Z,8μm,20.0s,MS5.9
NAO01 **NORSAR Array S** 65.40 343 eP P 01 53 55.5 -0.2
comp=Z,42nm,1.2s,mb5.3
NAO01 LR LR
comp=Z,13μm,20.0s,MS6.1
KULM **Kulim** 65.45 246 P P 01 53 58.7 +2.0
KULM **Kulim** 65.45 246 eP P 01 53 57.8 +1.1
comp=Z,97nm,1.2s,mb5.7
KULM LR LR
comp=Z,2μm,22.0s,MS5.2
KULM **Kulim** 65.45 246 P P 01 53 58.3 +1.6
comp=Z,3μmcomp=Z,82nm,2.3s,mb5.4
W19A **Sanders** 65.46 64 ⇑P P 01 53 57.2 +0.7
baz=65,SNR=5.9
S23A **Nye Farm, Mont** 65.49 60 ⇓P P 01 53 57.4 +0.8
baz=65,SNR=16
V20A **Brimhall** 65.49 63 ⇓P P 01 53 56.5 -0.2
baz=65,SNR=24
T22A **Edith** 65.49 61 ⇓P P 01 53 57.2 +0.6
baz=65,SNR=80
U21A **Nageezi** 65.49 62 ⇑P P 01 53 57.0 +0.3
baz=65,SNR=68
HFA0 **Hagfors New Ar** 65.50 341 P P 01 53 55.0 -1.3
115A **Sonoran Desert** 65.55 68 ⇑P P 01 53 57.2 +0.1
baz=65,SNR=24
AJM **Ajmer** 65.56 282 ePKP P 01 53 57.3 +0.1
AJM ePKP 01 53 57.5
X18A **Snowflake** 65.56 65 ⇑P P 01 53 57.6 +0.4
baz=65,SNR=17
Z16A **Peralta Trail,** 65.56 67 ⇑P P 01 53 57.1 0.0
baz=65,SNR=12
Q25A **Bedland, Calha** 65.57 58 ⇓P P 01 53 57.1 0.0
baz=65,SNR=27
R24A **Sanders Place,** 65.60 59 ⇑P P 01 53 57.9 +0.5
baz=65,SNR=48
VSR **Storozhevoye** 65.61 323 c iP P 01 53 55.7 -1.5
VSR e*SP sP 01 54 10.0 -5.4
VSR eS S 02 02 33.9 -5.1
VSR pmax pmax
comp=N,30nm,1.5s
VSR pmax pmax
comp=E,20nm,1.5s
VSR pmax pmax
comp=Z,40nm,1.5s,mb5.2
VSR smax
comp=Z,20nm,1.3s
VSR MLR MLR
comp=N,25μm,23.0s,MS6.5
VSR MLR MLR
comp=E,19μm,23.0s,MS6.5
VSR MLR MLR
comp=Z,41μm,23.0s,MS6.6
Y17A **Roosevelt** 65.64 66 ⇑P P 01 53 57.7 0.0
baz=65,SNR=42
FOO **Floro** 65.69 346 eP P 01 53 55.6 -1.9
FOO AMb AMB 01 53 58.9
comp=Z,99nm,2.4s,mb5.4
FOO eS S 02 02 42.2 +2.6
FOO **Floro** 65.69 346 eP P 01 53 55.6 -1.9
comp=Z,99nm,2.4s,mb5.4
SDCO **Great Sand Dun** 65.73 60 eP P 01 53 58.5 +0.2
comp=Z,215nm,1.6s,mb5.9
SDCO LR LR
comp=Z,8μm,21.0s,MS5.9
214A **Organ Pipe Nat** 65.74 69 ⇓P P 01 53 58.1 -0.3
baz=66,SNR=22
VORD **Divnogorie** 65.76 322 eP P 01 53 56.9 -1.2
VORD ePPP 01 58 07.2
VORD eS S 02 02 35.7 -5.1
VORD eSSS 02 09 56.4
VORD pmax pmax
comp=N,30nm,1.4s
VORD pmax pmax
comp=Z,40nm,1.4s,mb5.3
VORD pmax pmax
comp=E,20nm,0.7s
VORD smax
comp=N,560nm,6.1s
VORD smax
comp=E,580nm,6.1s
VORD smax
comp=Z,410nm,6.1s
VORD MLR MLR
comp=N,19μm,23.0s,MS6.4
VORD MLR MLR
comp=E,23μm,23.0s,MS6.4
VORD MLR MLR
comp=Z,31μm,23.0s,MS6.5
COEN **Coen** 65.81 195 eP P 01 53 58.1 -0.7
comp=Z,220nm,1.0s,mb6.1
COEN **Coen** 65.81 195 P P 01 53 58.1 -0.7
comp=Z,5μmcomp=Z,217nm,1.0s,mb6.2
IPM **Ipoh** 65.89 246 P P 01 54 00.8 +1.3
IPM **Ipoh** 65.89 246 P P 01 53 59.1 -0.4
comp=Z,2μmcomp=Z,70nm,1.2s,mb5.6
ECSD **EROS Data Cent** 65.93 50 eP P 01 53 58.4 -1.0
comp=Z,212nm,1.3s,mb6.0
ECSD epP pP 01 54 10.2 -2.1
ECSD LR LR
comp=Z,15μm,20.0s,MS6.2
V21A **Milan** 65.95 62 ⇑P P 01 53 59.8 +0.1
baz=66,SNR=18
T23A **Casias Ranch,** 65.95 61 ⇑P P 01 53 60.0 +0.3
baz=66,SNR=15
116A **Eloy** 65.96 68 ⇑P P 01 53 59.7 -0.1
baz=66,SNR=6.4
W20A **Ramah** 65.96 64 ⇓P P 01 53 59.7 0.0
baz=66,SNR=56
S24A **Houchin Ranch,** 65.97 60 ⇓P P 01 54 00.4 +0.6
baz=66,SNR=52
U22A **Llaves** 65.98 62 ⇑P P 01 54 00.3 +0.5
baz=66,SNR=9.6
X19A **St. Johns** 66.01 65 ⇓P P 01 54 00.6 +0.6
baz=66,SNR=28
Y18A **Canyon Day Jun** 66.05 66 ⇑P P 01 54 00.9 +0.6
baz=66,SNR=41
Z17A **San Carlos Hig** 66.15 66 ⇑P P 01 54 01.4 +0.5
baz=66,SNR=12
BHPL **Bhopal** 66.17 278 ePKP P 01 54 01.0 -0.2
BHPL AMb AMB 01 54 06.2
comp=Z,189nm,0.9s,mb6.1
IZAR **Zarasai** 66.26 332 eP P 01 54 01.3 0.0
OSL **Oslo** 66.27 342 eP P 01 54 00.7 -0.6
OSL AMb AMB 01 54 03.2
comp=Z,134nm,1.9s,mb5.6
OSL **Oslo** 66.27 342 eP P 01 54 00.7 -0.6
comp=Z,134nm,1.9s,mb5.7
V22A **San Miguel Ran** 66.28 62 ⇑P P 01 54 02.1 +0.3
baz=66,SNR=34
Y19A **Nutrioso** 66.37 65 ⇑P P 01 54 03.2 +0.9
baz=66,SNR=31
X20A **Quemado** 66.38 64 ⇓P P 01 54 03.2 +0.8
baz=66
U23A **El Rito** 66.38 61 ⇓P P 01 54 03.2 +0.7
baz=66,SNR=98
W21A **San Fidel** 66.45 63 ⇓P P 01 54 03.0 +0.2
baz=66
IDID **Didziasalis** 66.48 332 eP P 01 54 02.7 -0.1
MYKOM **Kota Tinggi** 66.49 241 P P 01 54 04.2 +0.8
comp=Z,2μmcomp=Z,36nm,3.1s
216A **Three Points,** 66.50 68 ⇓P P 01 54 03.1 -0.1
baz=66,SNR=10
VIS **Vishakhapatnam** 66.51 269 ePKP P 01 54 03.5 0.0
VIS AMb AMB 01 54 06.0
comp=Z,159nm,1.0s,mb6.0
VIS i x x 02 02 51.5
117A **Oracle** 66.51 67 ⇓P P 01 54 03.3 0.0
baz=66,SNR=25
Z18A **Geronimo** 66.55 66 ⇑P P 01 54 03.8 +0.3
baz=66
FRIM **Kepong** 66.56 244 P P 01 54 05.6 +1.8
KGM **Kluang** 66.60 242 P P 01 54 05.9 +1.8
IIGN **Ignalina** 66.61 332 eP P 01 54 03.5 0.0
SOFL **Sornfelli, Far** 66.68 352 AMS AMS 02 19 43.1
comp=Z,5μm,27.0s,MS5.6
TUC **Tucson** 66.68 67 eP P 01 54 04.0 -0.3
TUC pmax pmax
comp=Z,63nm,1.3s,mb5.5
TUC MLR MLR
comp=Z,3μm,20.0s,MS5.5
TUC **Tucson** 66.68 67 eP P 01 54 04.0 -0.4
comp=Z,63nm,1.3s,mb5.5
TUC LR LR
comp=Z,3μm,20.0s,MS5.5
ASK **Askoy** 66.72 345 eP P 01 54 03.6 -0.6
KONO **Kongsberg** 66.75 343 eP P 01 54 03.5 -0.9
KONO AMb AMB 01 54 06.8
comp=Z,130nm,2.4s,mb5.5
KONO eS S 02 02 52.8 +0.1
KONO AMS AMS 02 28 23.4
comp=Z,11μm,19.1s,MS6.1
KONO **Kongsberg** 66.75 343 eP P 01 54 04.3 0.0
comp=Z,137nm,1.3s,mb5.8
KONO epP pP 01 54 14.6 -2.8
KONO esP sP 01 54 19.1 -3.5
KONO LR LR
comp=Z,14μm,19.0s,MS6.2
T25A **Trinidad** 66.77 59 ⇓P P 01 54 05.1 +0.2
baz=66,SNR=60
BER **Bergen** 66.80 345 eP P 01 54 04.6 0.0
BER eS S 02 02 55.0 +1.9
BER AMS AMS 02 29 13.3
comp=Z,11μm,16.3s,MS6.2
V23A **Ortiz Mt. (NFS** 66.81 62 ⇓P P 01 54 06.2 +1.0
baz=66,SNR=56
NACGM **Naroch** 66.83 332 eP P 01 54 02.0 -2.9
U24A **Moreno Valley** 66.83 61 ⇓P P 01 54 06.1 +0.8
baz=67,SNR=28
MICGM **Minsk** 66.83 331 ⇑ eP P 01 54 03.0 -2.0
MNK **Minsk** 66.84 331 ceP P 01 54 03.0 -2.0
MNK e*PP pP 01 54 20.0 +1.9
MNK e*SP sP 01 54 27.0 +3.8
MNK ePPP 01 58 18.0
MNK eS S 02 02 48.0 -5.9
MNK e*SS sS 02 03 16.0 +0.4
MNK pmax pmax
comp=Z,1μm,4.0s
MNK pmax pmax
comp=E,90nm,1.0s
MNK pmax pmax
comp=Z,110nm,1.0s,mb5.8
MNK pmax pmax
comp=N,90nm,1.0s
MNK MLR MLR
comp=Z,73μm,18.0s,MS6.9
MNK MLR MLR
comp=N,34μm,18.0s,MS6.8
MNK MLR MLR
comp=E,48μm,18.0s,MS6.8
Z19A **T-Link Ranch,** 66.85 65 ⇑P P 01 54 05.9 +0.5
baz=67,SNR=12
X21A **Alamocita Cree** 66.86 64 ⇑P P 01 54 06.2 +0.8
baz=67,SNR=80
VAN **Vannovskaya** 66.90 302 ⇑ iP P 01 54 05.7 0.0
VAN eS S 02 02 51.7 -3.3
ABKT **Aibek** 66.90 302 P P 01 54 05.1 -0.6
comp=E,308nm,1.3s,mb6.2,SNR=16
Y20A **Horse Springs,** 66.91 64 ⇓P P 01 54 06.7 +0.9
baz=67,SNR=61
118A **Homack Ranch,** 66.91 66 ⇓P P 01 54 06.0 +0.2
baz=67,SNR=36
W22A **Albuquerque** 66.92 63 ⇑P P 01 54 06.5 +0.6
baz=67,SNR=5.5
ODD1 **Odda** 67.03 345 ⇑ iP P 01 54 06.2 +0.1
ODD1 AMb AMB 01 54 08.2
comp=Z,114nm,1.9s,mb5.6
ODD1 **Odda** 67.03 345 ⇑ iP P 01 54 06.2 +0.1
comp=Z,114nm,1.9s,mb5.6
KAKA **Kakadu** 67.04 207 eP P 01 54 05.9 -0.8
comp=Z,65nm,0.7s,mb5.8
KAKA **Kakadu** 67.04 207 eP P 01 54 06.0 -0.7
comp=Z,192nm,0.8s,mb6.2
KAKA **Kakadu** 67.04 207 P P 01 54 05.9 -0.8
comp=Z,1μmcomp=Z,150nm,0.8s,mb6.1
217A **Green Valley** 67.05 68 ⇑P P 01 54 06.7 0.0
baz=67,SNR=17
119A **Ashpeak Ranch,** 67.21 66 ⇑P P 01 54 07.9 +0.2
baz=67,SNR=14
ANMO **Albuquerque** 67.23 62 eP P 01 54 07.9 0.0
ANMO e pP 01 54 23.1 +2.2
ANMO pmax pmax
comp=Z,214nm,1.8s
ANMO MLR MLR
comp=Z,5μm,20.0s
ANMO **Albuquerque** 67.23 62 eP P 01 54 07.9 0.0
comp=Z,214nm,1.8s,mb5.9
ANMO e pP 01 54 23.1 +2.2
ANMO LR LR
comp=Z,5μm,20.0s,MS5.7
Y21A **Point of Rocks** 67.24 64 ⇓P P 01 54 08.7 +0.8
baz=67,SNR=26
X22A **Bernardo** 67.25 63 ⇓P P 01 54 09.0 +1.1
baz=67,SNR=18

LAZ	**Ladron**	67.25	63	*e*P	P	01 54 08.6	+0.7
	comp=Z,47nm,1.1s,mb5.4						
W23A	**Werner Place,**	67.25	62	⇓P	P	01 54 08.3	+0.3
	baz=67,SNR=27						
U25A	**Circle Dot Ran**	67.31	60	⇓P	P	01 54 08.4	+0.1
	baz=67,SNR=55						
V24A	**Rampart Ranch,**	67.33	61	⇓P	P	01 54 09.0	+0.5
	baz=67,SNR=59						
218A	**Dragoon**	67.35	67	⇑P	P	01 54 08.9	+0.3
	baz=67,SNR=29						
BLS5	**Blasjo**	67.52	344	⇑*i*P	P	01 54 09.3	0.0
QUE	**Quetta**	67.54	290	*e*P	P	01 54 10.0	+0.1
QUE				*e*S	S	02 03 01.0	-2.0
COWI	**Conover**	67.57	44	*e*P	P	01 54 08.4	-1.4
	comp=Z,131nm,1.3s,mb5.8						
COWI				LR	LR		
	comp=Z,12μm,22.0s,MS6.1						
LPM	**Los Pinos Moun**	67.61	63	*e*P	P	01 54 10.6	+0.4
V25A	**Rancho No Teng**	67.61	61	⇑P	P	01 54 10.6	+0.4
	baz=67,SNR=43						
Y22D	**IRIS PASSCAL I**	67.61	63	⇓P	P	01 54 11.1	+0.8
	baz=67						
W24A	**Lazy 6 Ranch,**	67.63	61	⇑P	P	01 54 10.9	+0.5
	baz=67,SNR=60						
X23A	**Hourglass Bar**	67.66	62	⇓P	P	01 54 10.8	+0.3
	baz=67,SNR=52						
U26A	**Atchley Ranch,**	67.68	60	⇑P	P	01 54 10.4	-0.3
	baz=67,SNR=27						
Y22A	**Socorro**	67.69	63	⇓P	P	01 54 11.3	+0.5
	baz=67,SNR=48						
BNM	**Barren Site**	67.72	63	*e*P	P	01 54 11.2	+0.2
	comp=Z,200nm,1.8s,mb5.8						
Z21A	**St. Cloud Mine**	67.75	64	⇓P	P	01 54 11.7	+0.6
	baz=68,SNR=38						
120A	**U Bar Ranch, L**	67.75	66	⇓P	P	01 54 11.4	+0.2
	baz=68,SNR=42						
318A	**Bisbee**	67.77	67	⇓P	P	01 54 11.3	0.0
	baz=68						
219A	**White Tail Can**	67.79	66	⇓P	P	01 54 11.7	+0.3
	baz=68,SNR=50						
KMY	**Karmoy**	67.92	345	⇑*i*P	P	01 54 11.7	-0.1
LRW	**Lerwick**	67.96	349	P	P	01 54 11.4	-0.6
LRW				AMb	AMB	01 54 12.8	
	comp=Z,164nm,1.9s,mb5.7						
LRW				AMS	AMS	02 22 12.9	
	comp=Z,6μm,20.4s						
LRW	**Lerwick**	67.96	349	⇑*e*P	P	01 54 11.4	-0.6
LRW				AMb	AMB	01 54 12.8	
	comp=Z,164nm,1.9s,mb5.7						
LRW				AMS	AMS	02 22 12.9	
	comp=Z,6μm,20.4s,MS5.8						
CBKS	**Cedar Bluff**	68.03	55	*e*P	P	01 54 11.6	-1.2
CBKS				*e*	pP	01 54 23.5	-2.3
CBKS				pmax	pmax		
	comp=Z,480nm,1.6s,mb6.3						
CBKS				MLR	MLR		
	comp=Z,7μm,20.0s,MS5.9						
CBKS	**Cedar Bluff**	68.03	55	*e*P	P	01 54 11.6	-1.2
	comp=Z,480nm,1.6s,mb6.3						
CBKS				*e*	pP	01 54 23.5	-2.4
CBKS				LR	LR		
	comp=Z,7μm,20.0s,MS5.9						
X24A	**Lazy VL Ranch,**	68.09	62	⇑P	P	01 54 13.8	+0.5
	baz=68,SNR=6.9						
W25A	**X Bar L Ranch,**	68.15	61	⇓P	P	01 54 13.5	-0.1
	baz=68,SNR=83						
Z22A	**Elephant Butte**	68.19	64	⇑P	P	01 54 14.2	+0.3
	baz=68,SNR=48						
Y23A	**Lovelace Mesa,**	68.21	63	⇑P	P	01 54 14.4	+0.4
	baz=68,SNR=50						
319A	**Douglas**	68.23	67	⇑P	P	01 54 14.2	0.0
	baz=68,SNR=24						
121A	**Cookes Peak, D**	68.25	65	⇓P	P	01 54 14.7	+0.5
	baz=68,SNR=21						
TPI	**Tanjungpandan**	68.25	235	P	P	01 54 15.7	+1.3
	comp=Z,2μmcomp=Z,52nm,2.1s,mb5.2						
220A	**Playas Peak, P**	68.28	66	⇑P	P	01 54 14.6	+0.1
	baz=68,SNR=28						
AKL	**Akola**	68.29	276	*i* P	P	01 54 14.4	-0.3
AKL				*e*PKP		01 54 15.2	
AKL				AMb	AMB	01 54 16.6	
	comp=Z,205nm,1.3s,mb6.0						
AKL				*i* x	x	02 03 09.6	
SCHQ	**Schefferville**	68.31	26	P	P	01 54 13.8	-0.4
	comp=Z,62nm,0.9s,mb5.6,baz=344,slow=6.4,SNR=42						
SCHQ				LR	LR	02 28 42.1	
	comp=Z,5μm,19.7s,MS5.7,baz=335,slow=40						
SCHQ	**Schefferville**	68.31	26	*e*P	P	01 54 13.8	-0.4
	comp=Z,758nm,1.8s,mb6.4						
SCHQ				LR	LR		
	comp=Z,6μm,20.0s,MS5.8						
PSI	**Prapat**	68.47	246	P	P	01 54 15.9	+0.1
	comp=Z,14nm,0.7s,mb5.1,baz=13,slow=6.3,SNR=13						
PSI	**Prapat**	68.47	246	P	P	01 54 15.9	+0.1
PSI				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.1						
MAK	**Makhachkala**	68.48	312	*e*P	P	01 54 14.3	-1.3
MAK				*e**PP	pP	01 54 30.8	+2.2
MAK				*e**SP	sP	01 54 37.3	+3.5
MAK				*e*		01 54 39.3	
MAK				*e*		01 56 46.8	
MAK				*e*PPP		01 58 24.7	
MAK				*e*S	S	02 03 12.3	-1.6
MAK				*e**SS	sS	02 03 40.2	+4.5
MAK				pmax	pmax		
	comp=Z,72nm,1.3s,mb5.5						
PPBI	**Pangkal Pinang**	68.55	237	P	P	01 54 17.2	+0.9
	comp=Z,56nm,2.2s,mb5.1						
X25A	**Clemmons Ranch**	68.55	62	⇑P	P	01 54 16.4	+0.3
	baz=68,SNR=12						
Y24A	**Capitan**	68.56	62	⇑P	P	01 54 16.4	+0.2
	baz=68,SNR=57						
122A	**Conniff Cattle**	68.58	64	⇓P	P	01 54 16.9	+0.6
	baz=68,SNR=14						
Z23A	**Rita Site, Whi**	68.60	63	⇓P	P	01 54 16.8	+0.3
	baz=68						
W26A	**Owens Ranch, T**	68.63	61	⇓P	P	01 54 16.6	0.0
	baz=68,SNR=9.3						
221A	**Mesquite Ranch**	68.64	65	⇑P	P	01 54 17.1	+0.3
	baz=68,SNR=10						
SUW	**Suwalki**	68.65	333	*e*P	P	01 54 15.1	-1.3
SUW				*e*pP	pP	01 54 31.0	+1.5
SUW				*e*PcP	PcP	01 54 38.9	-2.2
SUW				*e*S	S	02 03 13.9	-1.6
SUW				*e*SKS		02 04 15.1	
SUW				LMZ		02 26 15.6	
	comp=Z,28μm,22.7s						
SUW	**Suwalki**	68.65	333	*e*P	P	01 54 15.9	-0.5
	comp=Z,1μm,2.6s,mb6.4						
320A	**Kipp Ranch, An**	68.70	66	⇓P	P	01 54 17.2	+0.1
	baz=68,SNR=11						
KMMI	**Kalianget**	68.84	227	P	P	01 54 17.4	-0.7
	comp=Z,4μmcomp=Z,96nm,2.0s,mb5.4						
SCIA	**State Center**	68.94	49	*e*P	P	01 54 18.0	-0.5
	comp=Z,219nm,0.8s,mb6.1						
SCIA				LR	LR		
	comp=Z,15μm,22.0s,MS6.2						
222A	**Williams Famil**	68.96	65	⇑P	P	01 54 18.8	+0.1
	baz=69						
Y25A	**Mesa, Roswell**	68.98	62	⇓P	P	01 54 18.7	-0.1
	baz=69,SNR=102						
X26A	**CR and CF Fran**	69.00	61	⇓P	P	01 54 18.8	-0.2
	baz=69,SNR=31						
W27A	**Bowe Ranch, En**	69.04	60	⇑P	P	01 54 18.6	-0.6
	baz=69,SNR=18						
Z24A	**Sheeppen Canyo**	69.04	63	⇑P	P	01 54 19.3	+0.1
	baz=69						
123A	**Bell Site, Whi**	69.04	64	⇑P	P	01 54 19.4	+0.2
	baz=69						
TPTI		69.12	248	P	P	01 54 18.6	-1.3
	comp=Z,1μmcomp=Z,30nm,0.8s,mb5.3						
SRBI	**Singaraja**	69.19	225	P	P	01 54 19.9	-0.3
	comp=Z,106nm,1.6s,mb5.5						
KHKI	**Kahang-Kahang**	69.26	225	P	P	01 54 19.1	-1.5
	comp=Z,60nm,1.3s,mb5.4						
X27A	**F and S Farms,**	69.33	60	⇑P	P	01 54 20.9	0.0
	baz=69,SNR=15						
223A	**Chaparral, Ant**	69.41	64	⇑P	P	01 54 21.7	+0.1
	baz=69						
KSU1	**Kansas State U**	69.41	53	*e*P	P	01 54 19.8	-1.6
	comp=Z,743nm,2.3s,mb6.2						
KSU1				*e*pP	pP	01 54 31.4	-3.1
KSU1				LR	LR		
	comp=Z,13μm,20.0s,MS6.2						
Z25A	**Roswell**	69.44	62	⇓P	P	01 54 21.8	+0.1
	baz=69,SNR=43						
124A	**Stringfield Ra**	69.45	63	⇓P	P	01 54 21.7	0.0
	baz=69,SNR=37						
Y26A	**Elida**	69.46	61	⇓P	P	01 54 21.6	-0.2
	baz=69,SNR=26						
JFWS	**Jewell Farm**	69.55	47	*e*P	P	01 54 20.1	-2.1
JFWS				pmax	pmax		
	comp=Z,69nm,1.0s,mb5.5						
JFWS				MLR	MLR		
	comp=Z,13μm,20.0s,MS6.2						
JFWS	**Jewell Farm**	69.55	47	*e*P	P	01 54 20.1	-2.1
	comp=Z,68nm,1.0s,mb5.5						
JFWS				LR	LR		
	comp=Z,13μm,20.0s,MS6.2						
AKASG	**Malin Array Be**	69.62	328	P	P	01 54 20.8	-1.7
	comp=Z,5.4nm,0.4s,mb4.8,baz=32,slow=6.3,SNR=24						
AKASG				LR	LR	02 28 31.4	
	comp=Z,22μm,18.5s,MS6.4,baz=25,slow=39						
AKASG	**Malin Array Be**	69.62	328	P	P	01 54 20.8	-1.7
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.4s						
AKASG				MLR	MLR		
	comp=Z,22μm,18.5s						
AKBB	**Malin Array Si**	69.62	328	*e*P	P	01 54 20.9	-1.6
KIEV	**Kiev**	69.64	328	*e*P	P	01 54 20.8	-1.8
KIEV				pmax	pmax		
	comp=Z,63nm,1.0s,mb5.5						
KIEV				MLR	MLR		
	comp=Z,22μm,21.0s,MS6.4						
KIEV	**Kiev**	69.64	328	*e*P	P	01 54 20.8	-1.8
	comp=Z,63nm,1.0s,mb5.5						
KIEV				LR	LR		
	comp=Z,22μm,21.0s,MS6.4						
HYB	**Hyderabad**	69.75	273	*e*P	P	01 54 24.0	+0.2
HYB				*e*S	S	02 03 30.0	+0.5
HYB				pmax	pmax		
	comp=Z,242nm,1.2s,mb6.0						
HYB	**Hyderabad**	69.75	273	*e*P	P	01 54 24.0	+0.2
	comp=Z,242nm,1.2s,mb6.0						
HYB				*e*S	S	02 03 30.0	+0.5
HYB	**Hyderabad**	69.75	273	⇑*i*P	P	01 54 24.0	+0.2
	comp=Z,114nm,1.2s,mb5.7						
HYB				*e*PP	PP	01 57 04.0	+5.8
HYB				*e*S	S	02 03 30.0	+0.5
HYB				*e*SP		02 03 48.0	
HYB				*e*ScS	ScS	02 04 20.0	-2.0
HYB				*e*SS	SS	02 08 00.0	+1.8
HYB				LR	LR	02 28 00.0	
	comp=Z,11nm,18.0s						
ORE	**Reay**	69.82	350	P	P	01 54 23.3	-0.3
ORE	**Reay**	69.82	350	⇑*e*P	P	01 54 23.3	-0.3
MUD	**Monsted U'grnd**	69.82	342	⇑*i*P	P	01 54 23.9	+0.3
MUD				*i*		01 54 47.1	
MUD				MLR	MLR		
	comp=Z,14μm,18.0s,MS6.2						
MUD	**Monsted U'grnd**	69.82	342	⇑*i*P	P	01 54 23.9	+0.3
MUD				*i*		01 54 47.1	
MUD							
	comp=Z,14μm,18.0s						
BSD	**Bornholm Skovb**	69.83	338	⇑*i*P	P	01 54 22.8	-0.9
BSD				*i*		01 54 46.4	
BSD				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.2						
BSD				MLR	MLR		
	comp=Z,16μm,21.0s,MS6.2						
BSD	**Bornholm Skovb**	69.83	338	⇑*i*P	P	01 54 22.8	-0.9
	comp=Z,29nm,0.9s,mb5.2						
BSD				*i*		01 54 46.4	
BSD							
	comp=Z,16μm,21.0s						
Y27A	**Causey**	69.86	61	⇓P	P	01 54 24.0	-0.2
	baz=70,SNR=39						
Z26A	**Caprock**	69.86	62	⇓P	P	01 54 24.1	-0.2
	baz=70,SNR=74						
COP	**Copenhagen**	69.86	340	⇑*i*P	P	01 54 23.8	-0.1
COP				*i*		01 54 47.6	
COP				*i* S	S	02 03 29.9	+0.2
COP				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.2						
COP				MLR	MLR		
	comp=Z,7μm,18.0s,MS6.0						
COP	**Copenhagen**	69.86	340	⇑*i*P	P	01 54 23.8	-0.1
	comp=Z,26nm,0.9s,mb5.2						
COP				*i*		01 54 47.6	
COP				*i* S	S	02 03 29.9	+0.2
COP							
	comp=Z,7μm,18.0s						
224A	**Cornudas Mount**	69.88	64	⇓P	P	01 54 24.3	-0.1
	baz=70,SNR=45						
KIV	**Kislovodsk**	69.90	316	P	P	01 54 24.9	+0.6
	comp=Z,142nm,0.7s,mb6.0,SNR=16						
KIV	**Kislovodsk**	69.90	316	*c* *i*P	P	01 54 24.7	+0.4
KIV				*e*		01 54 50.3	
KIV				*e*S	S	02 03 28.6	-2.0
KIV				*e*SS	SS	02 07 59.6	+0.5
KIV				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.1						
KIV				MLR	MLR		
	comp=Z,10μm,20.0s,MS6.1						
KIV	**Kislovodsk**	69.90	316	*e*P	P	01 54 24.4	+0.1
	comp=Z,366nm,2.0s,mb6.0						
KIV				LR	LR		
	comp=Z,12μm,22.0s,MS6.1						
KIV	**Kislovodsk**	69.90	316	P	P	01 54 24.6	+0.3
	SNR=18						
AFI	**Afiamalu**	69.92	148	PFAKE		01 54 40.0	+15
AFI				LR	LR		
	comp=Z,5μm,21.0s,MS5.8						
AMTX	**Amarillo**	69.92	59	*e*P	P	01 54 24.4	-0.2
	comp=Z,651nm,2.0s,mb6.2						
AMTX				*e*	pP	01 54 36.4	-1.4
AMTX				LR	LR		
	comp=Z,5μm,22.0s,MS5.7						
125A	**Gardner Draw,**	69.94	63	⇑P	P	01 54 24.6	-0.2
	baz=70,SNR=55						
MSTX	**Muleshoe**	70.01	61	⇑P	P	01 54 24.7	-0.5
	baz=70,SNR=18						
SDSI	**Sungai Dareh**	70.09	242	P	P	01 54 25.6	-0.2
	comp=Z,3μmcomp=Z,59nm,2.8s,mb5.0						
RSC	**Scourie**	70.17	350	P	P	01 54 25.7	0.0
RSC	**Scourie**	70.17	350	⇑*i*P	P	01 54 25.7	0.0
MNTX	**Columbus Mount**	70.24	64	*e*P	P	01 54 26.2	-0.4
	comp=Z,92nm,1.3s,mb5.5						
MNTX				LR	LR		
	comp=Z,4μm,20.0s,MS5.7						
225A	**Deer Hill, Car**	70.25	63	⇑P	P	01 54 26.4	-0.2
	baz=70,SNR=29						
Z27A	**Tatum**	70.25	61	⇑P	P	01 54 26.2	-0.4
	baz=70,SNR=33						
LATR	**Latur**	70.27	275	*e*PKP	P	01 54 26.9	0.0
ZEI	**Tsey**	70.29	314	*e*P	P	01 54 23.3	-3.5
ZEI				*e**PP	pP	01 54 39.8	-0.1
ZEI				*e**SP	sP	01 54 46.9	+1.9
ZEI				*e*PPP		01 58 40.4	
ZEI				*e*		02 04 20.7	
ZEI				pmax	pmax		
	comp=Z,49nm,1.4s,mb5.2						
ZEI				MLR	MLR		
	comp=Z,23μm,18.0s,MS6.5						
ZEI				MLR	MLR		
	comp=E,6μm,14.0s,MS6.5						
ZEI				MLR	MLR		
	comp=N,20μm,17.0s,MS6.5						
126A	**Clayton Basin,**	70.30	62	⇓P	P	01 54 26.6	-0.4
	baz=70,SNR=20						
324A	**Moseley Ranch,**	70.37	64	⇓P	P	01 54 27.0	-0.4
	baz=70,SNR=19						
GSI	**Gunungsitoli**	70.46	247	P	P	01 54 27.3	-0.8
	comp=N,6μmcomp=N,112nm,1.1s,mb5.7						
MVH1	**Achvaich**	70.47	350	P	P	01 54 27.2	-0.4
MVH1	**Achvaich**	70.47	350	⇑*i*P	P	01 54 27.2	-0.4
GLMI	**Grayling**	70.52	42	*e*P	P	01 54 27.5	-0.7
	comp=N,41nm,0.5s,mb5.6						
GLMI				LR	LR		
	comp=Z,9μm,20.0s,MS6.0						
BHV	**Bhavnagar**	70.56	281	*e*PKP	P	01 54 28.5	-0.2
ONI	**Oni**	70.64	314	P	P	01 54 28.9	+0.1
ONI				S	S	02 03 38.2	-1.0
KEH	**Kehvi**	70.64	314	P	P	01 54 27.4	-1.5
127A	**Arkansas Junct**	70.65	62	⇑P	P	01 54 28.4	-0.7
	baz=70,SNR=13						
DGRG	**David-gareji**	70.65	312	P	P	01 54 28.8	-0.2
DGRG				S	S	02 03 40.9	+1.5
226A	**Malaga, Loving**	70.69	63	⇓P	P	01 54 28.9	-0.5
	baz=70,SNR=57						
MCD	**Coleburn Disti**	70.70	349	P	P	01 54 28.9	0.0
MCD	**Coleburn Disti**	70.70	349	⇑*i*P	P	01 54 28.9	0.0
MSVF	**Nonsavu**	70.70	159	PFAKE		01 54 40.0	+11
MSVF				LR	LR		
	comp=Z,5μm,20.0s,MS5.7						
PWJI	**Pagerwojo**	70.71	229	P	P	01 54 28.8	-0.8
	comp=Z,127nm,1.3s,mb5.7						
325A	**Bean Ranch, Si**	70.72	64	⇓P	P	01 54 29.3	-0.2
	baz=70,SNR=25						
RGN	**Rugen**	70.72	339	*e*P	P	01 54 29.5	+0.4
	comp=Z,387nm,1.6s,mb6.1						
RGN	**Rugen**	70.72	339	*e*P	P	01 54 30.2	+1.1
	comp=Z,130nm,1.3s,mb5.7						
RRR	**Rubha Reidh**	70.72	351	P	P	01 54 28.7	-0.4
RRR						01 54 49.7	
RRR	**Rubha Reidh**	70.72	351	⇑*i*P	P	01 54 28.7	-0.4
RRR				*e*		01 54 49.7	
TBLG	**Delisi**	70.73	313	*i* P	P	01 54 29.4	0.0
TBLG	**Delisi**	70.73	313	P	P	01 54 29.4	-0.1
MTA	**Mtatsminda**	70.73	313	P	P	01 54 29.2	-0.2
MTA				S	S	02 03 34.9	-5.4
RRH	**Rhenigidale**	70.74	351	P	P	01 54 29.1	-0.1
RRH	**Rhenigidale**	70.74	351	⇑*i*P	P	01 54 29.1	-0.1
GOR	**Gori**	70.82	314	P	P	01 54 30.5	+0.6
WAR	**Warsaw**	70.83	333	*e*P	P	01 54 30.0	+0.1
WAR				*e*pP	pP	01 54 39.5	-3.5
WAR				*e*PcP	PcP	01 54 51.8	+1.5
WAR				*e*S	S	02 03 42.9	+1.8
WAR				LMZ		02 27 42.5	
	comp=Z,26μm,23.1s						
MME1	**Meikle Cairn**	70.93	349	P	P	01 54 29.6	-0.8
MME1	**Meikle Cairn**	70.93	349	⇑*i*P	P	01 54 29.6	-0.8
GKP	**Gorka Klasztor**	70.93	336	*e*P	P	01 54 30.3	-0.2
GKP				*e*pP	pP	01 54 39.5	-4.0
GKP				*e*PcP	PcP	01 54 52.4	+1.7
GKP				*e*S	S	02 03 44.2	+2.0
GKP				*e*SKS		02 04 27.4	
GKP				LMZ		02 30 14.6	
	comp=Z,28μm,17.1s						
MDO	**Dochfour**	70.97	350	P	P	01 54 30.6	0.0
MDO	**Dochfour**	70.97	350	⇑*i*P	P	01 54 30.6	0.0
KNA	**Kununurra**	71.01	209	P	P	01 54 30.4	-0.9
	comp=Z,1μmcomp=Z,98nm,1.1s,mb5.7						
KAC	**Achnashellach**	71.01	350	P	P	01 54 30.5	-0.4
KAC	**Achnashellach**	71.01	350	⇑*i*P	P	01 54 30.5	-0.4
KRJI	**Kerinci**	71.03	241	P	P	01 54 33.9	+2.4
	comp=Z,470nm,1.2s,mb6.3						
425A	**Indio Mountain**	71.14	64	⇓P	P	01 54 31.9	-0.2
	baz=71,SNR=50						
227A	**Bennet, Jal**	71.18	62	⇓P	P	01 54 31.9	-0.5
	baz=71						
KPL	**Plockton**	71.21	350	P	P	01 54 31.8	-0.2
KPL				AMb	AMB	01 54 33.0	
	comp=Z,172nm,3.4s						
KPL				AMS	AMS	02 20 46.9	
	comp=Z,5μm,24.8s						
KPL	**Plockton**	71.21	350	⇑*i*P	P	01 54 31.8	-0.2
KPL				AMb	AMB	01 54 33.0	
	comp=Z,172nm,3.4s						
KPL				AMS	AMS	02 20 46.9	
	comp=Z,5μm,24.8s,MS5.7						
KSB	**Sheil Bridge**	71.31	350	P	P	01 54 32.8	+0.1
KSB	**Sheil Bridge**	71.31	350	⇑*i*P	P	01 54 32.8	+0.1
326A	**Caldwell Ranch**	71.32	63	⇓P	P	01 54 32.8	-0.4
	baz=71,SNR=17						
CTA	**Charters Tower**	71.40	191	*e*P	P	01 54 32.2	-1.3
	comp=Z,19nm,0.8s,mb5.1						
CTAO	**Charters Tower**	71.40	191	*e*P	P	01 54 32.4	-1.1
CTAO				pmax	pmax		
	comp=Z,72nm,1.1s,mb5.5						
CTAO				MLR	MLR		
	comp=Z,5μm,21.0s,MS5.7						
CTAO	**Charters Tower**	71.40	191	*e*P	P	01 54 32.4	-1.1
	comp=Z,72nm,1.1s,mb5.5						
CTAO				LR	LR		
	comp=Z,5μm,21.0s,MS5.7						
CTAO	**Charters Tower**	71.40	191	P	P	01 54 32.3	-1.2
	comp=Z,65nm,1.3s,mb5.4						
KLSI		71.42	237	P	P	01 54 32.3	-1.6
	comp=Z,4μmcomp=Z,112nm,1.1s,mb5.7						
ANN	**Anapa**	71.46	319	*c* *i*P	P	01 54 32.3	-1.5
ANN				*i* *PP	pP	01 54 48.1	+1.1
ANN				*i* *SP	sP	01 54 55.7	+3.6
ANN				*e*		01 57 09.8	
ANN				*i* PPP		01 58 53.8	
ANN				*e*S	S	02 03 43.6	-5.1
ANN				*i* *SS	sS	02 04 14.4	+3.7
ANN				*e*SS	SS	02 08 31.3	+8.3
ANN				pmax	pmax		
	comp=Z,104nm,2.9s,mb5.2						
ANN				MLR	MLR		
	comp=N,18μm,21.0s,MS6.4						
ANN				MLR	MLR		
	comp=E,17μm,21.0s,MS6.4						
ANN				MLR	MLR		
	comp=Z,11μm,21.0s,MS6.1						
SOC	**Sochi**	71.49	317	*e*P	P	01 54 33.2	-0.8
SOC				*e*		01 57 13.4	
SOC				*e*S	S	02 03 44.8	-4.3
SOC				*e**SS	sS	02 04 15.5	+4.5
SOC				*e*		02 04 30.3	
SOC				MLR	MLR		
	comp=Z,15μm,20.0s,MS6.3						
MDSI	**Maura Dua**	71.54	237	P	P	01 54 33.4	-1.2
	comp=Z,2μmcomp=Z,42nm,1.1s,mb5.3						
327A	**Balmorhea Ranc**	71.55	63	⇓P	P	01 54 34.5	-0.1
	baz=71						
WMOK	**Wichita Mounta**	71.60	57	*e*P	P	01 54 34.0	-0.8
WMOK				*e*	pP	01 54 46.2	-1.7
WMOK				pmax	pmax		
	comp=Z,118nm,1.1s,mb5.7						
WMOK				MLR	MLR		
	comp=Z,6μm,22.0s,MS5.8						
WMOK	**Wichita Mounta**	71.60	57	*e*P	P	01 54 34.0	-0.8
	comp=Z,118nm,1.1s,mb5.7						
WMOK				*e*	pP	01 54 46.2	-1.7
WMOK				LR	LR		
	comp=Z,6μm,22.0s,MS5.8						
KAR1	**Arisaig**	71.64	350	P	P	01 54 34.7	0.0
KAR1	**Arisaig**	71.64	350	⇑*i*P	P	01 54 34.7	0.0
LEM	**Lembang**	71.73	233	P	P	01 54 34.6	-1.2
	comp=Z,3μmcomp=Z,83nm,1.6s,mb5.4						
426A	**McDonald Obser**	71.77	64	⇓P	P	01 54 35.4	-0.5
	baz=72,SNR=33						
HDIL	**Hopedale**	71.85	47	*e*P	P	01 54 35.2	-1.0
	comp=Z,217nm,1.0s,mb6.0						
HDIL				*e*	pP	01 54 48.6	-0.7
HDIL				LR	LR		
	comp=Z,14μm,20.0s,MS6.2

ESY	**Stoneypath**	**72.25 348**	P	**P**	**01 54 38.0**	**-0.4**
ESY	**Stoneypath**	**72.25 348**	⇑*i*P	**P**	**01 54 38.0**	**-0.4**
EDI	**Edinburgh**	**72.32 349**	P	**P**	**01 54 38.4**	**-0.4**
EDI			AMb	AMB	01 54 39.5	
	comp=Z,143nm,2.0s,mb5.5					
EDI			AMS	AMS	02 33 22.9	
	comp=Z,6μm,18.2s					
EDI	**Edinburgh**	**72.32 349**	⇑*i*P	**P**	**01 54 38.4**	**-0.4**
EDI			AMb	AMB	01 54 39.5	
	comp=Z,143nm,2.0s,mb5.5					
EDI			AMS	AMS	02 33 22.9	
	comp=Z,6μm,18.2s,MS5.9					
KARS	**Kars**	**72.36 313**	*e*P	**P**	**01 54 40.6**	**+1.3**
BCA	**Borcka**	**72.37 315**	*e*P	**P**	**01 54 39.1**	**-0.2**
DIGO	**Kars**	**72.40 313**	⇑*i*P	**P**	**01 54 39.9**	**+0.4**
527A	**Woodward Ranch**	**72.41 64**	⇓P	**P**	**01 54 39.2**	**-0.5**
	baz=72,SNR=25					
EAU	**Auchinoon**	**72.42 349**	P	**P**	**01 54 39.4**	**0.0**
EAU	**Auchinoon**	**72.42 349**	⇑*i*P	**P**	**01 54 39.4**	**0.0**
DBOC	**Borcka**	**72.43 315**	⇑*i*P	**P**	**01 54 39.0**	**-0.7**
ARTV	**Artvin**	**72.44 314**	⇑*i*P	**P**	**01 54 39.3**	**-0.5**
EBL	**Broad Law**	**72.45 349**	P	**P**	**01 54 39.5**	**-0.1**
EBL	**Broad Law**	**72.45 349**	⇑*i*P	**P**	**01 54 39.5**	**-0.1**
428A	**Kincaid Ranch,**	**72.49 63**	⇑P	**P**	**01 54 40.5**	**+0.2**
	baz=72,SNR=41					
RUE	**Ruedersdorf**	**72.51 338**	*e*P	**P**	**01 54 40.1**	**+0.1**
	comp=Z,517nm,2.0s,mb6.1					
DAGI	**Agillar**	**72.54 314**	⇑*i*P	**P**	**01 54 40.3**	**0.0**
626A	**Big Bend Ranch**	**72.55 65**	⇑P	**P**	**01 54 40.2**	**-0.4**
	baz=72,SNR=43					
PGBU	**Glenifferbraes**	**72.58 349**	P	**P**	**01 54 40.3**	**0.0**
PGBU			AMb	AMB	01 54 41.5	
	comp=Z,428nm,1.7s,mb6.1					
PGBU			AMS	AMS	02 24 38.8	
	comp=Z,5μm,21.3s					
PGBU	**Glenifferbraes**	**72.58 349**	⇑*i*P	**P**	**01 54 40.3**	**0.0**
PGBU			AMb	AMB	01 54 41.5	
	comp=Z,428nm,1.7s,mb6.1					
PGBU			AMS	AMS	02 24 38.8	
	comp=Z,5μm,21.3s,MS5.7					
KWP	**Kalwaria Pacla**	**72.65 331**	*e*P	**P**	**01 54 41.1**	**+0.3**
	comp=Z,1μm,2.0s,mb6.4					
KWP			*e*PcP	PcP	01 54 56.3	-1.8
KWP			*e*		01 55 04.7	
KWP			*e*S	S	02 04 02.1	0.0
KWP			LMZ		02 29 44.5	
	comp=Z,47μm,21.0s					
KWP	**Kalwaria Pacla**	**72.65 331**	*e*P	**P**	**01 54 40.9**	**0.0**
	comp=Z,213nm,1.0s,mb6.0					
KWP			LR	LR		
	comp=Z,45μm,20.0s,MS6.8					
KWP	**Kalwaria Pacla**	**72.65 331**	⇑*i*P	**P**	**01 54 41.6**	**+0.8**
SIM	**Simferopol'**	**72.67 322***c*	*i*P	**P**	**01 54 39.8**	**-1.3**
SIM			*e*S	S	02 03 59.4	-3.2
SIM			pmax	pmax		
	comp=Z,33nm,1.1s,mb5.2					
SIM			MLR	MLR		
	comp=Z,16μm,15.0s,MS6.4					
528A	**Cox Ranch, San**	**72.86 63**	⇓P	**P**	**01 54 42.6**	**+0.2**
	baz=73,SNR=30					
CCM	**Cathedral Cave**	**72.89 50**	*e*P	**P**	**01 54 41.1**	**-1.3**
CCM			pmax	pmax		
	comp=Z,268nm,1.5s,mb6.0					
CCM			MLR	MLR		
	comp=Z,9μm,22.0s,MS6.0					
CCM	**Cathedral Cave**	**72.89 50**	*e*P	**P**	**01 54 41.1**	**-1.3**
	comp=Z,268nm,1.5s,mb6.0					
CCM			LR	LR		
	comp=Z,9μm,22.0s,MS6.0					
ESK	**Eskdalemuir**	**72.91 349**	P	**P**	**01 54 42.1**	**-0.2**
ESK			AMb	AMB	01 54 43.3	
	comp=Z,188nm,1.9s,mb5.7					
ESK			AMS	AMS	02 33 30.0	
	comp=Z,8μm,18.9s					
ESK	**Eskdalemuir**	**72.91 349**	⇑*i*P	**P**	**01 54 42.1**	**-0.2**
ESK			AMb	AMB	01 54 43.3	
	comp=Z,188nm,1.9s,mb5.7					
ESK			AMS	AMS	02 33 30.0	
	comp=Z,8μm,18.9s,MS6.0					
ESK	**Eskdalemuir**	**72.91 349**	*e*P	**P**	**01 54 42.4**	**+0.1**
ESK			pmax	pmax		
	comp=Z,362nm,1.5s,mb6.1					
ESK			MLR	MLR		
	comp=Z,9μm,20.0s,MS6.0					
ESK	**Eskdalemuir**	**72.91 349**	*e*P	**P**	**01 54 42.4**	**+0.1**
	comp=Z,362nm,1.5s,mb6.1					
ESK			LR	LR		
	comp=Z,9μm,20.0s,MS6.0					
SLM	**Saint Louis**	**72.92 49**	*e*P	**P**	**01 54 41.6**	**-1.0**
SLM			pmax	pmax		
	comp=Z,365nm,1.5s,mb6.1					
SLM	**Saint Louis**	**72.92 49**	*e*P	**P**	**01 54 41.6**	**-1.0**
	comp=Z,365nm,1.5s,mb6.1					
KIS	**Kishinev**	**72.92 326**	⇑*i*P	**P**	**01 54 40.0**	**-2.5**
	comp=Z,900nm,3.0s					
KIS	**Kishinev**	**72.92 326**	*i* PcP	PcP	01 55 02.0	+2.7
KIS			*e*S	S	02 04 00.0	-5.3
KIS	**Kishinev**	**72.92 326**	*e*PS		02 04 20.0	
KIS			*e*SS		02 09 57.0	
KIS			LRM		02 29 30.0	
	comp=Z,15μm,16.0s					
KIS	**Kishinev**	**72.92 326**α	*i*P	**P**	**01 54 40.0**	**-2.5**
KIS			*i*		01 55 02.0	
KIS			*e*		01 59 10.0	
KIS			*e*S	S	02 04 00.0	-5.3
KIS			pmax	pmax		
	comp=Z,900nm,3.0s					
KIS			pmax	pmax		
	comp=Z,2μm,12.0s					
KIS			MLR	MLR		
	comp=N,13μm,16.0s,MS6.5					
KIS			MLR	MLR		
	comp=E,15μm,16.0s,MS6.5					
KIS			MLR	MLR		
	comp=Z,24μm,16.0s,MS6.6					
KIS			MLR	MLR		
	comp=Z,23μm,18.0s					
KIS	**Kishinev**	**72.92 326**	P	**P**	**01 54 41.5**	**-1.0**
KIS	**Kishinev**	**72.92 326**	⇓*i*P	**P**	**01 54 44.7**	**+2.2**
DYDN	**Diyadin**	**72.94 312**	⇑*i*P	**P**	**01 54 43.6**	**+0.8**
AAM	**Ann Arbor**	**72.98 43**	*e*P	**P**	**01 54 42.3**	**-0.6**
AAM			pmax	pmax		
	comp=Z,405nm,1.8s,mb6.0					
AAM			MLR	MLR		
	comp=Z,6μm,20.0s,MS5.9					
AAM	**Ann Arbor**	**72.98 43**	*e*P	**P**	**01 54 42.3**	**-0.6**
	comp=Z,405nm,1.8s,mb6.0					
AAM			LR	LR		
	comp=Z,6μm,20.0s,MS5.9					
TXAR	**Lajitas Array**	**72.98 64**	P	**P**	**01 54 42.8**	**-0.3**
	comp=Z,31nm,0.6s,mb5.5,baz=299,slow=4.7,SNR=234					
TXAR			PKPPKP		02 22 27.1	
	comp=Z,0.7nm,1.0s,baz=224,slow=3.5,SNR=3.4					
ECK	**Cauldkaine Hil**	**73.03 349**	P	**P**	**01 54 43.0**	**0.0**
ECK	**Cauldkaine Hil**	**73.03 349**	⇑*i*P	**P**	**01 54 43.0**	**0.0**
627A	**Terlingua Ranc**	**73.05 64**	⇓P	**P**	**01 54 43.4**	**-0.2**
	baz=73,SNR=42					
DZM	**Mont Dzumac**	**73.10 171**	*e*P	**P**	**01 54 46.2**	**+2.5**
	comp=Z,166nm,1.4s,mb5.8					
DZM			*e*S	S	02 04 09.4	+1.8
	comp=Z,15μm,30.9s					
DZM			*e*LR	LR	02 17 18.9	
	comp=Z,16μm,25.9s					
CLDR	**Caldiran**	**73.15 312**	*e*P	**P**	**01 54 45.6**	**+1.6**
IAS	**Iasi**	**73.19 327**	⇑P	**P**	**01 54 44.9**	**+0.8**
IAS	**Iasi**	**73.19 327**	P	**P**	**01 54 44.1**	**0.0**
IAS	**Iasi**	**73.19 327**	⇑*i*P	**P**	**01 54 44.9**	**+0.8**
XAL	**Allendale**	**73.23 348**	P	**P**	**01 54 44.0**	**-0.1**
XAL	**Allendale**	**73.23 348**	⇓*e*P	**P**	**01 54 44.0**	**-0.1**
AGRB	**Hanur-Agry**	**73.24 313**	*e*P	**P**	**01 54 45.9**	**+1.4**
628A	**Black Gap, Mar**	**73.31 64**	⇑P	**P**	**01 54 44.8**	**-0.3**
	baz=73,SNR=22					
FVM	**French Village**	**73.34 50**	*e*P	**P**	**01 54 44.1**	**-1.0**
FVM			pmax	pmax		
	comp=Z,281nm,1.3s,mb6.0					
FVM	**French Village**	**73.34 50**	*e*P	**P**	**01 54 44.0**	**-1.1**
	comp=Z,281nm,1.3s,mb6.0					
NRDL	**Niedersach Rie**	**73.34 340**	*e*P	**P**	**01 54 43.9**	**-1.0**
	comp=Z,161nm,1.6s,mb5.7					
NRDL			*e*pP	pP	01 55 05.8	+7.8
NRDL			*e*S	S	02 04 08.0	-1.9
KSP	**Ksiaz**	**73.38 336**	*e*P	**P**	**01 54 45.3**	**+0.1**
KSP			*e*pP	pP	01 54 54.5	-3.8
KSP			*e*PcP	PcP	01 55 07.5	+6.3
KSP			*e*S	S	02 04 11.3	+0.8
KSP			*e*sS	sS	02 04 32.0	-0.4
KSP			*e*SKS		02 04 48.4	
KSP			LMZ		02 32 01.7	
	comp=Z,40μm,17.0s					
KSP	**Ksiaz**	**73.38 336**	⇑*e*P	**P**	**01 54 45.0**	**-0.1**
KSP			*e*	pP	01 54 54.0	-4.3
KSP			*e**PP	pP	01 55 05.8	+7.5
KSP			*e*		01 57 25.0	
KSP			*e*PPP		01 59 18.0	
KSP			*e*S	S	02 04 08.0	-2.4
KSP			*e*PPS		02 05 01.5	
KSP			MLR	MLR		
	comp=Z,47μm,17.0s,MS6.8					
WRAB	**Tennant Creek**	**73.44 203**	*e*P	**P**	**01 54 45.0**	**-0.7**
WRAB			pmax	pmax		
	comp=Z,106nm,1.1s,mb5.7					
WRAB			MLR	MLR		
	comp=Z,4μm,22.0s,MS5.6					
WRAB	**Tennant Creek**	**73.44 203**	*e*P	**P**	**01 54 45.0**	**-0.8**
	comp=Z,106nm,1.1s,mb5.7					
WRAB			LR	LR		
	comp=Z,4μm,22.0s,MS5.6					
WRAB	**Tennant Creek**	**73.44 203**	P	**P**	**01 54 45.6**	**-0.1**
	comp=Z,4μmcomp=Z,132nm,1.1s,mb5.8					
GCD	**Castle Douglas**	**73.45 349**	P	**P**	**01 54 45.3**	**-0.1**
GCD	**Castle Douglas**	**73.45 349**	⇑*i*P	**P**	**01 54 45.3**	**-0.1**
TUTA	**Tutak**	**73.46 313**	⇑*i*P	**P**	**01 54 46.4**	**+0.6**
GAL1	**Galloway**	**73.54 349**	P	**P**	**01 54 45.7**	**-0.3**
GAL1			AMb	AMB	01 54 46.8	
	comp=Z,209nm,1.8s,mb5.8					
GAL1			AMS	AMS	02 25 17.3	
	comp=Z,5μm,22.7s					
GAL1	**Galloway**	**73.54 349**	⇑*i*P	**P**	**01 54 45.7**	**-0.3**
GAL1			AMb	AMB	01 54 46.8	
	comp=Z,209nm,1.8s,mb5.8					
GAL1			AMS	AMS	02 25 17.3	
	comp=Z,5μm,22.7s,MS5.7					
NIE	**Niedzica**	**73.55 332**	*e*P	**P**	**01 54 47.5**	**+1.3**
RAC	**Raciborz**	**73.56 334**	*e*P	**P**	**01 54 46.6**	**+0.4**
RAC			*e*S	S	02 04 09.3	-3.1
RAC			MLR	MLR		
	comp=Z,19μm,20.0s,MS6.4					
RAC			MLR	MLR		
	comp=N,16μm,20.0s,MS6.4					
RAC			MLR	MLR		
	comp=E,12μm,17.0s,MS6.4					
KTUT	**Trabzon**	**73.57 316**	*e*P	**P**	**01 54 45.4**	**-1.0**
LEOM	**Leova**	**73.58 326**	⇑P	**P**	**01 54 46.9**	**+0.6**
LEOM	**Leova**	**73.58 326**	⇑*i*P	**P**	**01 54 46.9**	**+0.6**
BURAR	**Bucovina Array**	**73.62 329**	⇑*i*P	**P**	**01 54 46.7**	**+0.1**
UZH	**Uzhgorod**	**73.66 331**	*d i*P	**P**	**01 54 46.2**	**-0.6**
UZH			*e*		01 55 05.2	
UZH			*e*		01 57 30.4	
UZH			*e*S	S	02 04 12.3	-1.3
UZH			*e*PS		02 04 47.2	
UZH			*e*SS	SS	02 09 04.0	+7.8
UZH			*e*SSS		02 12 04.7	
UZH			MLR	MLR		
	comp=N,16μm,20.0s,MS6.4					
UZH			MLR	MLR		
	comp=E,14μm,20.0s,MS6.4					
UZH			MLR	MLR		
	comp=Z,19μm,20.0s,MS6.4					
ERZM	**Erzurum**	**73.73 314**	*e*P	**P**	**01 54 48.3**	**+1.0**
EZM	**Erzurum**	**73.73 314**	*e*P	**P**	**01 54 48.5**	**+1.1**
WIT	**Witteveen**	**73.75 342**	⇑*e*P	**P**	**01 54 47.9**	**+0.7**
	comp=Z,1μm,1.9s,mb6.5					
WIT	**Witteveen**	**73.75 342**	*e*pP	sP	01 55 12.9	+7.3
UPC	**Upice**	**73.76 336**	⇓*i*P	**P**	**01 54 48.0**	**+0.6**
UPC			*e**PP	pP	01 55 11.8	+11
UPC	**Upice**	**73.76 336**	⇓*i*P	**P**	**01 54 48.0**	**+0.6**
UPC			*ex*	x	01 55 11.8	
CLL	**Collm**	**73.78 338**	*e*P	**P**	**01 54 47.1**	**-0.4**
	comp=Z,260nm,1.6s,mb5.9					
CLL			*e*pP	pP	01 55 09.7	+9.0
CLL			*e*S	S	02 04 14.7	-0.2
CLL	**Collm**	**73.78 338**	⇑*i*P	**P**	**01 54 46.9**	**-0.6**
CLL			*e**SP	sP	01 55 09.0	+3.2
CLL			*e*S	S	02 04 10.0	-4.9
CLL			pmax	pmax		
	comp=Z,261nm,1.6s,mb5.9					
CLL			MLR	MLR		
	comp=Z,16μm,19.3s,MS6.3					
CLL	**Collm**	**73.78 338**	⇑*i*P	**P**	**01 54 46.9**	**-0.6**
	comp=Z,261nm,1.6s,mb5.9					
CLL			*es*P	sP	01 55 09.0	+3.2
CLL			*e*S	S	02 04 10.0	-4.9
CLL			LR	LR		
	comp=Z,16μm,19.3s,MS6.3					
CLL	**Collm**	**73.78 338**	⇑*i*P	**P**	**01 54 46.9**	**-0.6**
	comp=Z,261nm,1.6s,mb5.9					
CLL			*e*P(2)		01 55 09.0	
	comp=Z,713nm,2.1s					
CLL			*i*		01 55 17.8	
CLL			*e*PP	PP	01 57 41.0	+9.3
CLL			*e*PPP		01 59 30.0	
CLL			*e*S	S	02 04 10.0	-4.9
CLL			*e*PPS		02 05 05.0	
CLL			*e*SS	SS	02 09 18.0	+20
CLL			*e*		02 10 06.0	
CLL			*e*		02 13 36.0	
CLL			*e*		02 14 24.0	
CLL			Lm		02 31 00.0	
	comp=N,9μm,20.1s					
CLL			Lm		02 31 00.0	
	comp=E,9μm,20.4s					
CLL			Lm		02 31 00.0	
	comp=Z,16μm,19.3s					
OKC	**Ostrava-Krasne**	**73.79 334**	⇓*i*P	**P**	**01 54 48.2**	**+0.6**
OKC			*e**PP	pP	01 55 12.0	+11
OKC			*e*S	S	02 04 18.3	+3.2
OKC			MLR	MLR		
	comp=Z,19μm,20.8s,MS6.4					
OKC	**Ostrava-Krasne**	**73.79 334**	⇓*i*P	**P**	**01 54 48.2**	**+0.6**
OKC			*ex*	x	01 55 12.0	
OKC			*ex*	x	01 57 52.4	
OKC			*ex*	x	01 59 29.2	
OKC			*e*S	S	02 04 18.3	+3.2
OKC			*ex*	x	02 09 39.2	
OKC			AMS	AMS	02 30 10.0	
	comp=Z,19μm,20.8s					
DPC	**Dobruska-Polom**	**73.82 335**	⇓*i*P	**P**	**01 54 49.0**	**+1.3**
DPC			*e**PP	pP	01 55 10.8	+10
DPC			*e*		01 57 40.5	
DPC			*e*S	S	02 04 17.5	+2.1
DPC			MLR	MLR		
	comp=Z,23μm,16.8s,MS6.5					
DPC	**Dobruska-Polom**	**73.82 335**	⇓*i*P	**P**	**01 54 49.0**	**+1.3**
DPC			*ex*	x	01 55 10.8	
DPC			*e*PP	PP	01 57 40.5	+8.4
DPC			*ex*	x	01 59 30.0	
DPC			*e*S	S	02 04 17.5	+2.1
DPC			*ex*	x	02 09 30.7	
DPC			AMS	AMS	02 32 10.0	
	comp=Z,23μm,16.8s					
VANB	**Van**	**73.84 312**	*e*P	**P**	**01 54 49.5**	**+1.5**
OLIL	**Olney**	**73.85 48**	*e*P	**P**	**01 54 47.1**	**-1.0**
	comp=Z,220nm,1.4s,mb5.9					
CLZ	**Clausthal**	**73.89 339**	*e*P	**P**	**01 54 48.7**	**+0.6**
	comp=Z,416nm,1.7s,mb6.1					
CLZ			*e*S	S	02 04 15.6	-0.5
BRG	**Berggiesshubel**	**73.95 337**	*e*P	**P**	**01 54 48.4**	**-0.1**
	comp=Z,151nm,1.7s,mb5.7					
BRG			*e*S	S	02 04 18.2	+1.3
BRG	**Berggiesshubel**	**73.95 337**	*i* P	**P**	**01 54 48.4**	**-0.1**
	comp=Z,151nm,1.7s,mb5.7					
BRG			*i*		01 55 10.9	
	comp=Z,245nm,1.7s					
BRG			PP	PP	01 57 34.0	+0.9
BRG			S	S	02 04 16.0	-0.9
BRG			SS	SS	02 09 01.0	+0.4
BRG			*e*PKPPKP		02 22 18.2	
	comp=Z,25nm,2.2s					
BRG						
	comp=N,10μm,18.4s					
BRG						
	comp=E,12μm,15.0s					
BRG						
	comp=Z,18μm,17.6s					
IBBN	**Ibbenburen**	**74.01 341**	*e*P	**P**	**01 54 49.1**	**+0.3**
	comp=Z,188nm,1.3s,mb5.9					
IBBN			*e*S	S	02 04 17.9	+0.4
MORC	**Moravsky Berou**	**74.02 334**	*e*P	**P**	**01 54 48.8**	**-0.1**
MORC			pmax	pmax		
	comp=Z,553nm,2.1s,mb6.1					
MORC	**Moravsky Berou**	**74.02 334**	*e*P	**P**	**01 54 48.8**	**-0.1**
	comp=Z,553nm,2.1s,mb6.1					
MORC	**Moravsky Berou**	**74.02 334**	⇓*i*P	**P**	**01 54 49.8**	**+0.9**
TRPA	**Tarpa**	**74.03 330**	⇑*i*P	**P**	**01 54 48.7**	**-0.3**
KOPT	**Kop Dagi**	**74.03 315**	⇑*i*P	**P**	**01 54 50.0**	**+0.9**
HPK	**Haverah Park**	**74.03 347**	P	**P**	**01 54 49.1**	**+0.2**
HPK			AMb	AMB	01 54 50.1	
	comp=Z,341nm,1.5s,mb6.0					
HPK			AMS	AMS	02 34 45.4	
	comp=Z,7μm,16.9s					
HPK	**Haverah Park**	**74.03 347**	⇑*e*P	**P**	**01 54 49.1**	**+0.2**
HPK			AMb	AMB	01 54 50.1	
	comp=Z,341nm,1.5s,mb6.0					
HPK			AMS	AMS	02 34 45.4	
	comp=Z,7μm,16.9s,MS6.0					
ESPY	**Espiye-Giresun**	**74.08 316**	*e*P	**P**	**01 54 48.5**	**-0.9**
TESR		**74.10 327**	⇓P	**P**	**01 54 50.0**	**+0.6**
TESR		**74.10 327**	⇓*i*P	**P**	**01 54 50.0**	**+0.6**
PVCC	**Panska Ves**	**74.11 336**	⇓*i*P	**P**	**01 54 50.2**	**+0.8**
PVCC			*e**PP	sP	01 55 13.7	+5.9
PVCC			*e*		01 57 36.8	
PVCC			*e*S	S	02 04 19.9	+1.2
PVCC			MLR	MLR		
	comp=Z,15μm,17.4s,MS6.3					
PVCC	**Panska Ves**	**74.11 336**	⇓*i*P	**P**	**01 54 50.2**	**+0.8**
PVCC			*ex*	x	01 55 13.7	
PVCC			*e*PP	PP	01 57 36.8	+2.3
PVCC			*ex*	x	01 59 31.0	
PVCC			*e*S	S	02 04 19.9	+1.2
PVCC			AMS	AMS	02 31 40.0	
	comp=Z,15μm,17.4s					
GUMT	**Gumushane**	**74.12 316**	*e*P	**P**	**01 54 49.4**	**-0.3**
BMR	**Baia Mare**	**74.13 330**	P	**P**	**01 54 50.3**	**+0.7**
BMR	**Baia Mare**	**74.13 330**	⇑*i*P	**P**	**01 54 51.0**	**+1.4**
SIUC	**Southern Illin**	**74.14 49**	*e*P	**P**	**01 54 48.8**	**-1.0**
	comp=Z,215nm,1.1s,mb6.0					
FITZ	**Fitzroy Crossi**	**74.21 211**	*e*P	**P**	**01 54 50.3**	**0.0**
	comp=Z,60nm,0.9s,mb5.5					
FITZ	**Fitzroy Crossi**	**74.21 211**	*e*P	**P**	**01 54 50.4**	**+0.1**
	comp=Z,30nm,1.0s,mb5.2					
FITZ	**Fitzroy Crossi**	**74.21 211**	P	**P**	**01 54 49.5**	**-0.8**
	comp=Z,122nm,2.2s,mb5.5					
BLO	**Bloomington**	**74.23 47**	*e*P	**P**	**01 54 49.2**	**-1.1**
BLO			pmax	pmax		
	comp=Z,70nm,1.1s,mb5.5					
BLO	**Bloomington**	**74.23 47**	*e*P	**P**	**01 54 49.2**	**-1.1**
	comp=Z,70nm,1.1s,mb5.5					
GRSN	**GIRESUNGRSN**	**74.28 317**	*e*P	**P**	**01 54 49.4**	**-1.2**
JCT	**Junction City**	**74.29 61**	*e*P	**P**	**01 54 49.9**	**-0.9**
JCT			*e*	pP	01 55 02.3	-1.7
JCT			pmax	pmax		
	comp=Z,390nm,1.5s,mb6.1					
JCT			MLR	MLR		
	comp=Z,6μm,22.0s,MS5.8					
JCT	**Junction City**	**74.29 61**	*e*P	**P**	**01 54 49.9**	**-0.9**
	comp=Z,390nm,1.5s,mb6.1					
JCT			*e*	pP	01 55 02.3	-1.7
JCT			LR	LR		
	comp=Z,6μm,22.0s,MS5.8					
GMM	**Mts of Mourne**	**74.29 350**	P	**P**	**01 54 50.0**	**-0.4**
GMM	**Mts of Mourne**	**74.29 350**	⇑*i*P	**P**	**01 54 50.0**	**-0.4**
MIAR	**Mount Ida**	**74.47 54**	*e*P	**P**	**01 54 50.9**	**-0.9**
MIAR			*e*		01 57 44.4	
MIAR			pmax	pmax		
	comp=Z,286nm,1.4s,mb6.0					
MIAR			MLR	MLR		
	comp=Z,10μm,20.0s,MS6.1					
MIAR	**Mount Ida**	**74.47 54**	*e*P	**P**	**01 54 50.9**	**-0.9**
	comp=Z,286nm,1.4s,mb6.0					
MIAR			*e*PP	PP	01 57 44.4	+6.4
MIAR			LR	LR		
	comp=Z,10μm,20.0s,MS6.1					
KELT	**Kelkit**	**74.48 316**	⇑*i*P	**P**	**01 54 51.1**	**-0.7**
TLCR		**74.48 325**	⇑*i*P	**P**	**01 54 51.8**	**+0.2**
HAKT	**HAKKARI**	**74.52 311**	⇑*i*P	**P**	**01 54 52.4**	**+0.4**
WTSB	**Winterswijk**	**74.53 342**	⇑*i*P	**P**	**01 54 51.8**	**+0.1**
	comp=Z,238nm,1.8s,mb5.8					
WTSB	**Winterswijk**	**74.53 342**	*e*pP	sP	01 55 15.7	+5.6
	comp=Z,202nm,2.6s					
PRA	**Prague**	**74.57 336**	⇓P	**P**	**01 54 52.0**	**-0.1**
PRA			*ex*	x	01 55 14.0	
PRA			PP	PP	01 57 40.0	+1.6
PRA			S	S	02 04 20.0	-3.8
PRA			AMS	AMS	02 32 30.0	
PETR		**74.58 326**	⇑P	**P**	**01 54 54.3**	**+2.1**
PETR		**74.58 326**	⇑*i*P	**P**	**01 54 54.3**	**+2.1**
BNGL	**BINGOL**	**74.59 314**	⇑*i*P	**P**	**01 54 53.1**	**+0.7**
PRU	**Pruhonice**	**74.62 336**	⇓*i*P	**P**	**01 54 53.6**	**+1.2**
PRU			*e**PP	sP	01 55 17.4	+6.7
PRU			*e*		01 57 41.6	
PRU			*e*S	S	02 04 28.1	+3.8
PRU			MLR	MLR		
	comp=Z,19μm,16.4s,MS6.5					
PRU	**Pruhonice**	**74.62 336**	⇓*i*P	**P**	**01 54 53.6**	**+1.2**
PRU			*ex*	x	01 55 17.4	
PRU			*e*PP	PP	01 57 41.6	+2.8
PRU			*ex*	x	01 59 45.6	
PRU			*e*S	S	02 04 28.1	+3.8
PRU			*ex*	x	02 09 28.4	
PRU			AMS	AMS	02 32 20.0	
	comp=Z,19μm,16.4s					
VRI	**Vrincioaia**	**74.63 327**	P	**P**	**01 54 52.6**	**0.0**
VRI	**Vrincioaia**	**74.63 327**	⇓*i*P	**P**	**01 54 54.5**	**+2.0**
ERPA	**Erie**	**74.67 41**	*e*P	**P**	**01 54 52.5**	**-0.3**
	comp=Z,824nm,1.8s,mb6.4					
ERPA			*e*	pP	01 55 09.8	+3.7
ERPA			LR	LR		
	comp=Z,8μm,20.0s,MS6.0					
PLOR	**Plostina**	**74.67 327**	⇓P	**P**	**01 54 54.7**	**+2.0**
PLOR	**Plostina**	**74.67 327**	⇓*i*P	**P**	**01 54 54.7**	**+2.0**
LONY	**Lake Ozonia**	**74.67 36**	*e*P	**P**	**01 54 51.1**	**-1.7**
	comp=Z,131nm,1.4s,mb5.7					
LONY			*e*	pP	01 55 08.1	+2.1
LONY			LR	LR		
	comp=Z,6μm,20.0s,MS5.9					
VRAC	**Vranov**	**74.70 335**	⇓*i*P	**P**	**01 54 54.0**	**+1.1**
KBI1	**Birley Grange**	**74.70 347**	P	**P**	**01 54 52.4**	**-0.4**
KBI1	**Birley Grange**	**74.70 347**	⇑*i*P	**P**	**01 54 52.4**	**-0.4**
PARMO	**Parma**	**74.71 50**	*e*P	**P**	**01 54 52.7**	**-0.5**
MOX	**Moxa**	**74.73 338**	*j iP*	**P**	**01 54 53.4**	**+0.4**
	comp=Z,275nm,1.9s,mb5.9					
MOX			*e*		01 55 14.3	
MOX			*e*		01 55 51.8	
MOX			*e*		01 57 48.0	
MOX						
	comp=Z,10μm,18.0s					
MOX	**Moxa**	**74.73 338**	*e*P	**P**	**01 54 53.2**	**+0.2**
	comp=Z,206nm,1.6s,mb5.8					
MOX			*e*S	S	02 04 25.

NKC e 01 59 36.3
NKC eS S 02 04 28.1 +0.5
NKC MLR MLR
comp=Z,16µm,15.9s,MS6.4
NKC Novy Kostel 74.91 338 ⇓iP **P 01 54 54.9 +0.8**
NKC ex x 01 55 16.4
NKC ePP PP 01 57 43.1 +1.8
NKC ex x 01 59 36.3
NKC eS S 02 04 28.1 +0.5
NKC ex x 02 09 51.3
NKC AMS AMS 02 33 40.0
comp=Z,16µm,15.9s
UALR University of 74.92 53 eP **P 01 54 53.3 -1.1**
comp=Z,360nm,1.9s,mb6.0
WME Myndd Eilian 74.93 349 P **P 01 54 53.7 -0.4**
WME Myndd Eilian 74.93 349 ⇑iP **P 01 54 53.7 -0.4**
BUG Bochum--Univer 74.93 341 eP **P 01 54 54.2 +0.1**
comp=Z,432nm,1.8s,mb6.1
BUG eS S 02 04 27.4 -0.4
UBBA Unterbreizbach 74.93 339 eP **P 01 54 54.3 +0.1**
comp=Z,283nm,1.7s,mb5.9
UBBA eS S 02 04 27.9 +0.1
STNC Stoke 74.96 347 P **P 01 54 54.6 +0.3**
STNC Stoke 74.96 347 ⇑iP **P 01 54 54.6 +0.3**
BINT Bingol 74.96 314 eP **P 01 54 54.7 +0.2**
DIKM Dikmen 74.96 319 eP **P 01 54 55.2 +0.7**
ACSO Alum Creek Sta 74.96 44 eP **P 01 54 53.5 -1.0**
comp=Z,344nm,1.7s,mb6.0
ACSO LR LR
comp=Z,8µm,21.0s,MS6.0
GRER 74.97 326 ⇓iP **P 01 54 55.7 +1.3**
GRER 74.97 326 ⇓iP **P 01 54 55.7 +1.2**
ALLY Alegheny Colle 75.00 41 eP **P 01 54 54.0 -0.7**
comp=Z,690nm,1.6s,mb6.3
TREC Trest 75.01 335 ⇓iP **P 01 54 55.7 +1.1**
TREC e*PP sP 01 55 19.3 +6.3
TREC e 01 57 43.9
TREC e 01 59 29.6
TREC eS S 02 04 30.4 +1.7
TREC MLR MLR
comp=Z,23µm,16.4s,MS6.6
TREC Trest 75.01 335 ⇓iP **P 01 54 55.7 +1.1**
TREC ex x 01 55 19.3
TREC ePP PP 01 57 43.9 +1.8
TREC ex x 01 59 29.6
TREC eS S 02 04 30.4 +1.7
TREC ex x 02 09 50.2
TREC AMS AMS 02 33 00.0
comp=Z,23µm,16.4s
WPM1 Penmaenmawr 75.02 349 P **P 01 54 54.5 -0.1**
WPM1 Penmaenmawr 75.02 349 ⇑iP **P 01 54 54.5 -0.1**
PSZ Piszkesteto 75.02 332 PFAKE 01 55 10.0 +15
PSZ LR LR
comp=Z,26µm,21.0s,MS6.5
PSZ Piszkesteto 75.02 332 ⇓iP sP 01 55 19.9 +6.8
WLF1 Llynfaes 75.05 349 P **P 01 54 54.2 -0.5**
WLF1 AMb AMB 01 54 55.5
comp=Z,461nm,1.8s,mb6.1
WLF1 AMS AMS 02 34 53.4
comp=Z,27µm,19.1s
WLF1 Llynfaes 75.05 349 ⇑eP **P 01 54 54.2 -0.5**
WLF1 AMb AMB 01 54 55.5
comp=Z,461nm,1.8s,mb6.1
WLF1 AMS AMS 02 34 53.4
comp=Z,27µm,19.1s,MS6.6
KVT Kavak 75.10 318 eP **P 01 54 56.2 +0.8**
WCI Wyandotte Cave 75.10 47 eP **P 01 54 54.6 -0.8**
WCI pmax pmax
comp=Z,143nm,1.1s,mb5.8
WCI MLR MLR
comp=Z,13µm,19.0s,MS6.3
WCI Wyandotte Cave 75.10 47 eP **P 01 54 54.6 -0.8**
comp=Z,143nm,1.1s,mb5.8
WCI LR LR
comp=Z,13µm,19.0s,MS6.3
YRC Rhoscolyn 75.11 349 P **P 01 54 54.2 -0.9**
YRC Rhoscolyn 75.11 349 ⇑eP **P 01 54 54.2 -0.9**
GNAR Gosnell 75.14 51 eP **P 01 54 55.4 -0.3**
comp=Z,9µm,1.5s
HBAR Harrisburg 75.15 52 eP **P 01 54 55.2 -0.5**
DRGR 75.16 330 P **P 01 54 55.4 -0.1**
DRGR 75.16 330 ⇓iP **P 01 54 56.1 +0.6**
YLL Llanberis 75.16 349 P **P 01 54 55.3 -0.2**
YLL Llanberis 75.16 349 ⇑iP **P 01 54 55.3 -0.2**
CWF Charnwood Fore 75.17 347 P **P 01 54 55.5 -0.1**
CWF AMb AMB 01 54 56.6
comp=Z,311nm,1.7s,mb6.0
CWF AMS AMS 02 35 18.4
comp=Z,5µm,18.7s
CWF Charnwood Fore 75.17 347 ⇑iP **P 01 54 55.5 -0.1**
CWF AMb AMB 01 54 56.6
comp=Z,311nm,1.7s,mb6.0
CWF AMS AMS 02 35 18.4
comp=Z,5µm,18.7s,MS5.9
BZK Bozkurt 75.22 320 eP **P 01 54 55.6 -0.4**
MLR Muntele Rosu 75.23 327 P **P 01 54 56.3 +0.3**
MLR Muntele Rosu 75.23 327 ⇑iP **P 01 54 58.1 +2.1**
TIRR Tirgusor 75.25 325 eP **P 01 54 55.7 -0.4**
TIRR pmax pmax
comp=Z,38nm,0.9s,mb5.3
TIRR Tirgusor 75.25 325 eP **P 01 54 55.7 -0.4**
comp=Z,38nm,0.9s,mb5.3
TIRR Tirgusor 75.25 325 ⇓iP **P 01 54 56.7 +0.6**
GLAT Glass 75.25 50 eP **P 01 54 56.2 -0.1**
DLF Lyons Farm 75.28 350 ⇑iP **P 01 54 56.3 +0.2**
BYBT Boyabat 75.31 319 eP **P 01 54 56.5 0.0**
DSB Dublin 75.32 350 eP **P 01 54 56.5 +0.1**
comp=Z,124nm,1.1s,mb5.8
NCB Newcomb 75.36 36 eP **P 01 54 55.6 -1.2**
comp=Z,502nm,2.1s,mb6.1
NCB e pP 01 55 12.7 +2.7
NCB LR LR
comp=Z,7µm,21.0s,MS5.9
PGOR Pogoanele 75.37 326 ⇑iP **P 01 54 58.3 +1.5**
UTMT University of 75.40 50 eP **P 01 54 56.4 -0.7**
comp=Z,538nm,1.5s,mb6.2
ROTZ Rotzenmuhle 75.40 338 eP **P 01 54 57.5 +0.6**
comp=Z,289nm,1.7s,mb5.9
ROTZ eS S 02 04 34.3 +1.2
PTK Pertek 75.44 315 eP **P 01 54 58.6 +1.3**
HALT Halls 75.51 50 eP **P 01 54 57.2 -0.6**
KEMA Kemaliye 75.53 315 ⇑iP **P 01 54 57.0 -0.8**
TOKA Tokat 75.55 317 ⇑iP **P 01 54 58.2 +0.3**
VOIR 75.58 328 ⇓iP **P 01 54 59.1 +1.1**
HLM1 Long Mynd 75.61 348 P **P 01 54 58.1 +0.1**
HLM1 Long Mynd 75.61 348 ⇑eP **P 01 54 58.1 +0.1**
SCER sogukcermik 75.65 317 ⇑iP **P 01 54 58.9 +0.4**
KHC Kasperske Hory 75.65 336 ⇓iP **P 01 54 59.2 +0.9**
KHC e*PP sP 01 55 22.3 +5.6
KHC e 01 57 50.8
KHC e 01 59 37.2
KHC eS S 02 04 37.5 +1.7
KHC MLR MLR
comp=Z,20µm,16.4s,MS6.5
KHC Kasperske Hory 75.65 336 eP **P 01 54 58.5 +0.2**
comp=Z,413nm,1.6s,mb6.1
KHC Kasperske Hory 75.65 336 ⇓iP **P 01 54 59.2 +0.9**
KHC ex x 01 55 22.3
KHC ePP PP 01 57 50.8 +3.3
KHC ex x 01 59 37.2
KHC eS S 02 04 37.5 +1.7
KHC ex x 02 09 47.8
KHC AMS AMS 02 32 50.0
comp=Z,20µm,16.4s
SVSK Karacayir 75.66 317 eP **P 01 54 59.5 +0.9**
BUD Budapest 75.67 332 ⇑esP sP 01 55 18.7 +1.9
GRF Grafenberg Arr 75.71 338 eP **P 01 54 59.3 +0.7**
comp=Z,668nm,1.7s,mb6.3
GRF epP pP 01 55 20.6 +8.7
GRF ePP PP 01 57 48.4 +0.4
GRF eS S 02 04 37.1 +0.7
GRF Grafenberg Arr 75.71 338 eP **P 01 54 59.3 +0.7**
GRF e*PP pP 01 55 20.6 +8.7
GRF e 01 57 48.4
GRF eS S 02 04 37.1 +0.7
GRF pmax pmax
comp=Z,668nm,1.7s,mb6.3
MDV Middlebury 75.72 35 eP **P 01 54 58.0 -0.8**
WET Wettzell 75.82 337 eP **P 01 54 59.9 +0.6**
comp=Z,443nm,1.8s,mb6.1
WET epP sP 01 55 22.2 +4.6
WET eS S 02 04 38.7 +1.1
BALT Daday 75.82 320 eP **P 01 54 59.9 +0.4**

SULR 75.83 326 P **P 01 54 59.9 +0.5**
SULR 75.83 326 ⇓iP **P 01 54 59.9 +0.5**
TNS Taunus Mts 75.83 340 eP **P 01 54 59.7 +0.3**
comp=Z,306nm,1.4s,mb6.0
TNS eS S 02 04 38.1 +0.3
HGN Heimansgroeve 75.84 342 ⇑iP **P 01 54 59.5 +0.1**
comp=Z,363nm,1.5s,mb6.1
HGN Heimansgroeve 75.84 342 epP sP 01 55 23.2 +5.4
comp=Z,350nm,1.4s
HGN Heimansgroeve 75.84 342 eS S 02 04 34.3 -3.6
BEBN Eben Emael 75.86 342 P **P 01 54 59.1 -0.3**
comp=Z,110nm,2.0s,mb5.4
GEC2 GERESS Array S 75.89 336 eP **P 01 55 00.0 +0.3**
comp=Z,255nm,1.9s,mb5.8
GEC2 eS S 02 04 38.7 +0.3
SVRC Sivrice-ELAZID 75.90 314 eP **P 01 55 00.5 +0.6**
DIYA Diyarbakir 75.90 314 ⇑iP **P 01 55 00.5 +0.5**
ELZG Elazig 75.95 315 ⇑iP **P 01 55 00.7 +0.5**
LBNH Lisbon 75.97 34 eP **P 01 54 59.6 -0.6**
LBNH pmax pmax
comp=Z,222nm,1.5s,mb5.9
LBNH MLR MLR
comp=Z,11µm,22.0s,MS6.1
LBNH Lisbon 75.97 34 eP **P 01 54 59.6 -0.6**
comp=Z,222nm,1.5s,mb5.9
LBNH LR LR
comp=Z,11µm,22.0s,MS6.1
MEM Membach 75.97 342 P **P 01 55 00.5 +0.3**
comp=Z,178nm,1.7s,mb5.7
PKME Peaks-Kenny Pk 75.98 32 eP **P 01 55 00.4 +0.1**
comp=Z,530nm,2.0s,mb6.1
PKME LR LR
comp=Z,15µm,21.0s,MS6.3
TOS Tosya 75.98 319 eP **P 01 55 02.3 +2.0**
CTKT Corum 76.01 319 ⇑iP **P 01 55 00.8 +0.3**
WVT Waverly 76.07 49 eP **P 01 55 00.1 -0.8**
WVT pmax pmax
comp=Z,157nm,1.4s,mb5.8
WVT MLR MLR
comp=Z,10µm,22.0s,MS6.1
WVT Waverly 76.07 49 eP **P 01 55 00.1 -0.9**
comp=Z,157nm,1.4s,mb5.8
WVT LR LR
comp=Z,10µm,22.0s,MS6.1
ACCN Adirondack Com 76.07 36 eP **P 01 54 59.8 -1.0**
comp=Z,328nm,1.6s,mb6.0
PALK Pallekele 76.08 264 eP **P 01 55 01.8 +0.5**
PALK pmax pmax
comp=Z,115nm,1.1s,mb5.7
PALK Pallekele 76.08 264 eP **P 01 55 01.8 +0.5**
comp=Z,115nm,1.1s,mb5.7
PALK Pallekele 76.08 264 P **P 01 54 58.3 -3.0**
comp=Z,53nm,1.1s,mb5.4
NATX Nacogdoches 76.08 57 eP **P 01 55 01.0 -0.1**
comp=Z,996nm,1.6s,mb6.5
NATX LR LR
comp=Z,6µm,22.0s,MS5.9
HTR Trewern Hill 76.09 348 P **P 01 55 00.6 -0.2**
HTR Trewern Hill 76.09 348 ⇑iP **P 01 55 00.6 -0.2**
MARD Mardin 76.09 313 ⇑iP **P 01 55 01.6 +0.6**
ILGA Ilgaz 76.09 320 ⇑iP **P 01 55 01.5 +0.5**
DARE Darende-Malaty 76.10 316 eP **P 01 55 05.1 +4.0**
MCH1 Michaelchurch 76.13 348 P **P 01 55 01.0 0.0**
MCH1 AMb AMB 01 55 02.1
comp=Z,219nm,2.0s,mb5.7
MCH1 AMS AMS 02 36 02.9
comp=Z,6µm,17.1s
MCH1 Michaelchurch 76.13 348 ⇑iP **P 01 55 01.0 0.0**
MCH1 AMb AMB 01 55 02.1
comp=Z,219nm,2.0s,mb5.7
MCH1 AMS AMS 02 36 02.9
comp=Z,6µm,17.1s,MS6.0
CONA Conrad Observa 76.16 335 ⇑iP **P 01 55 01.9 +0.7**
comp=Z,143nm,1.7s,mb5.6,SNR=52
BINY Binghamton 76.21 38 PFAKE 01 55 10.0 +8.4
BINY LR LR
comp=Z,6µm,21.0s,MS5.9
HNH Hanover 76.30 35 eP **P 01 55 02.1 0.0**
MYA Malataya 76.34 315 eP **P 01 55 03.6 +1.2**
TOD Tromm 76.34 340 eP **P 01 55 02.7 +0.5**
ELSH Elham, Standar 76.34 345 P **P 01 55 02.5 +0.2**
ELSH AMb AMB 01 55 03.7
comp=Z,419nm,1.3s,mb6.2
ELSH Elham, Standar 76.34 345 ⇑iP **P 01 55 02.5 +0.2**
ELSH AMb AMB 01 55 03.7
comp=Z,419nm,1.3s,mb6.2
ABH Alteburg 76.35 341 eP **P 01 55 02.7 +0.4**
SAFT Safranbolu 76.36 320 eP **P 01 55 03.9 +1.4**
SIND Sindeldorf 76.40 339 P **P 01 55 03.0 +0.4**
SNF Seneffe 76.40 343 P **P 01 55 02.9 +0.3**
comp=Z,174nm,2.1s,mb5.6
SWN1 Swindon 76.44 347 P **P 01 55 03.2 +0.4**
SWN1 AMb AMB 01 55 04.2
comp=Z,594nm,1.4s,mb6.3
SWN1 AMS AMS 02 37 00.5
comp=Z,6µm,16.9s
SWN1 Swindon 76.44 347 ⇑iP **P 01 55 03.2 +0.4**
SWN1 AMb AMB 01 55 04.2
comp=Z,594nm,1.4s,mb6.3
SWN1 AMS AMS 02 37 00.5
comp=Z,6µm,16.9s,MS6.0
CORM Corum 76.45 319 eP **P 01 55 04.2 +1.2**
HGH Gray Hill 76.46 348 P **P 01 55 02.6 -0.2**
HGH Gray Hill 76.46 348 ⇑iP **P 01 55 02.6 -0.2**
WOL Wolverton 76.55 346 P **P 01 55 03.4 0.0**
WOL AMb AMB 01 55 04.3
comp=Z,288nm,1.4s,mb6.0
WOL AMS AMS 02 36 30.2
comp=Z,5µm,16.3s
WOL Wolverton 76.55 346 ⇑eP **P 01 55 03.4 0.0**
WOL AMb AMB 01 55 04.3
comp=Z,288nm,1.4s,mb6.0
WOL AMS AMS 02 36 30.2
comp=Z,5µm,16.3s,MS5.9
BZS Buzias 76.55 330 P **P 01 55 03.1 -0.4**
BZS Buzias 76.55 330 ⇓iP **P 01 55 03.6 +0.1**
TIM Timisoara 76.57 330 P **P 01 55 04.9 +1.3**
TIM Timisoara 76.57 330 ⇓iP **P 01 55 04.9 +1.3**
AKCD Akcadag 76.59 315 ⇑iP **P 01 55 03.8 -0.1**
OXF Oxford 76.60 51 eP **P 01 55 02.9 -1.1**
OXF pmax pmax
comp=Z,469nm,1.4s,mb6.2
OXF MLR MLR
comp=Z,7µm,21.0s,MS6.0
OXF Oxford 76.60 51 eP **P 01 55 02.9 -1.0**
comp=Z,469nm,1.4s,mb6.2
OXF LR LR
comp=Z,7µm,21.0s,MS6.0
RUP Ruppelstein 76.62 341 eP **P 01 55 04.2 +0.4**
TRY Troy 76.64 36 eP **P 01 55 03.4 -0.6**
MOA Molin 76.66 336 i P **P 01 55 04.4 +0.3**
comp=Z,91nm,1.6s,mb5.4,SNR=17
ELDT Eldivan 76.69 320 ⇑iP **P 01 55 04.3 0.0**
GIVF Givet 76.69 342 ⇑iP **P 01 55 04.4 +0.2**
comp=Z,726nm,1.6s,mb6.0
GIVF Givet 76.69 342 ⇑iP **P 01 55 04.4 +0.2**
GIVF pmax pmax
comp=Z,363nm,1.6s,mb6.1
GIVF Givet 76.69 342 ⇑iP **P 01 55 04.4 +0.2**
comp=Z,363nm,1.6s,mb6.1
MENF Mencas 76.74 344 eP **P 01 55 05.0 +0.5**
DOU Dourbes 76.74 342 P **P 01 55 04.6 +0.1**
comp=Z,120nm,1.9s,mb5.5
KTD Kalmit 76.77 340 eP **P 01 55 04.9 +0.3**
MCWV Mont Chateau 76.78 42 eP **P 01 55 04.3 -0.6**
comp=Z,315nm,1.6s,mb6.0
MCWV LR LR
comp=Z,10µm,20.0s,MS6.1
KDZE Karadeniz Ereo 76.79 321 eP **P 01 55 03.6 -1.3**
SARI SarD1z-Kayseri 76.81 316 eP **P 01 55 08.1 +3.0**
WLF Walferdange 76.84 341 P **P 01 55 05.6 +0.5**
comp=Z,225nm,2.0s,mb5.8
WLF Walferdange 76.84 341 eP **P 01 55 06.1 +1.0**
comp=Z,793nm,2.2s,mb6.3
WLF eS S 02 04 51.5 +2.6
WLF Walferdange 76.84 341 eP **P 01 55 05.7 +0.6**
WLF pmax pmax
comp=Z,450nm,1.6s,mb6.2
WLF MLR MLR
comp=Z,15µm,20.0s,MS6.3
WLF Walferdange 76.84 341 eP **P 01 55 05.7 +0.7**
comp=Z,450nm,1.6s,mb6.2
WLF LR LR
comp=Z,15µm,20.0s,MS6.3
BAIF Baives 76.85 343 ⇑iP **P 01 55 05.5 +0.4**

comp=Z,724nm,1.7s,mb6.0
BAIF Baives 76.85 343 ⇑iP **P 01 55 05.5 +0.4**
BAIF pmax pmax
comp=Z,362nm,1.7s,mb6.0
BAIF Baives 76.85 343 ⇑iP **P 01 55 05.5 +0.4**
comp=Z,362nm,1.7s,mb6.0
HKT Hockley 76.87 59 eP **P 01 55 04.8 -0.8**
HKT pmax pmax
comp=Z,305nm,1.8s,mb5.9
HKT MLR MLR
comp=Z,7µm,20.0s,MS6.0
HKT Hockley 76.87 59 eP **P 01 55 04.8 -0.8**
comp=Z,305nm,1.8s,mb5.9
HKT LR LR
comp=Z,7µm,20.0s,MS6.0
ARSA Arzberg 76.87 334 P **P 01 55 06.0 +0.7**
ARSA Arzberg 76.87 334 i P **P 01 55 06.1 +0.8**
comp=Z,152nm,1.7s,mb5.7,SNR=64
URFA Urfa 76.89 314 eP **P 01 55 06.8 +1.3**
PKSM Moragy 76.93 332 ⇓iP **P 01 55 05.7 +0.1**
PKSM Moragy 76.93 332 ⇓iP **P 01 55 05.7 +0.1**
PINB Pinarbasi 76.94 317 ⇑iP **P 01 55 06.3 +0.4**
BANOM Banah 76.95 295 P **P 01 55 06.5 +0.5**
SNR=5.5
HDH Heidenheim-Cha 76.98 338 P **P 01 55 06.6 +0.7**
CRAR CRAIOVA 76.98 328 P **P 01 55 06.9 +0.9**
VAL Valentia 76.99 352 ⇓iP **P 01 55 04.9 -0.9**
CDAG Cicekdag 77.02 318 ⇑iP **P 01 55 06.0 -0.2**
STU Stuttgart 77.04 339 eP **P 01 55 06.4 +0.2**
comp=Z,194nm,1.4s,mb5.8
STU eS S 02 04 52.0 +1.0
STU Stuttgart 77.04 339 eP **P 01 55 06.5 +0.3**
STU pmax pmax
comp=Z,319nm,1.6s,mb6.0
STU Stuttgart 77.04 339 eP **P 01 55 06.5 +0.3**
comp=Z,319nm,1.6s,mb6.0
ATAB Bozova 77.10 315 ⇑iP **P 01 55 07.5 +0.7**
FUR Furstenfeldbru 77.12 338 eP **P 01 55 07.1 +0.4**
comp=Z,572nm,1.8s,mb6.2
FUR eS S 02 04 53.3 +1.4
ASAR Alice Springs 77.14 202 P **P 01 55 06.8 0.0**
comp=Z,24nm,0.7s,mb5.3,baz=15,slow=5.2,SNR=122
ASAR Alice Springs 77.14 202 P **P 01 55 06.9 0.0**
ASAR pmax pmax
comp=Z,24nm,0.7s
LANF Langenberg 77.15 340 eP **P 01 55 07.3 +0.5**
HEX Exmoor 77.15 348 P **P 01 55 06.8 +0.1**
HEX Exmoor 77.15 348 ⇑iP **P 01 55 06.8 +0.1**
SGKT Sivrigoynuk 77.17 320 eP **P 01 55 07.2 +0.1**
SZH Strazhica 77.17 326 i P **P 01 55 06.1 -1.0**
LBG Lerchenberg 77.23 339 P **P 01 55 07.8 +0.5**
BR131 Keskin Array S 77.24 319 eP **P 01 55 07.7 +0.2**
comp=Z,35nm,1.0s,mb5.2
BR131 LR LR
comp=Z,6µm,20.0s,MS5.9
BRTR Keskin Array B 77.24 319 P **P 01 55 06.9 -0.6**
comp=Z,17nm,0.9s,mb5.0,baz=56,slow=3.3,SNR=51
BRTR PKP2ab 02 22 00.0
comp=Z,0.6nm,0.8s,baz=165,slow=5.1,SNR=3.7
BRTR LR LR 02 35 09.6
comp=Z,7µm,19.4s,MS6.0,baz=211,slow=40
BUCH Bad Urach 77.30 339 P **P 01 55 08.5 +0.8**
HTL Hartland 77.31 348 AMb AMB 01 55 08.9
comp=Z,187nm,1.7s,mb5.8
HTL AMS AMS 02 36 35.5
comp=Z,6µm,17.7s,MS6.0
HTL Hartland 77.31 348 AMb AMB 01 55 08.9
comp=Z,187nm,1.7s,mb5.8
HTL AMS AMS 02 36 35.5
comp=Z,6µm,17.7s
KOGS Kog 77.41 334 ⇑eP **P 01 55 08.4 +0.1**
KOGS e 01 55 31.5
KOGS ePP PP 01 58 18.7 +16
KOGS e 02 00 56.8
KOGS e 02 06 02.1
KOGS eSS SS 02 10 08.5 +15
KOGS e 02 14 04.3
KOGS i 02 15 45.1
PVL Pavlikeni 77.43 326 i P **P 01 55 08.2 -0.3**
LOD Lodumlu 77.47 320 eP **P 01 55 09.4 +0.6**
TRD Trivandrum 77.49 268 ⇑ix **P 01 55 12.0 +2.7**
KAMT Kaman 77.51 319 eP **P 01 55 10.0 +1.0**
AVNT Avonos 77.52 318 ⇑iP **P 01 55 09.0 -0.1**
SOKA Soboth 77.53 335 ⇑iP **P 01 55 09.5 +0.5**
comp=Z,236nm,1.5s,mb5.9
PERS Pernice 77.55 334 ⇑iP **P 01 55 09.5 +0.4**
PERS e 01 55 32.2
PERS eS S 02 04 57.7 +1.1
PERS e 02 06 01.8
MDU Mudurnu 77.60 321 eP **P 01 55 09.8 +0.3**
KVTX Kingsville 77.61 62 PFAKE 01 55 20.0 +10
KVTX LR LR
comp=Z,4µm,19.0s,MS5.8
BBAL Bala 77.61 319 ⇑iP **P 01 55 08.8 -0.8**
KBA Koelnbreinsper 77.61 336 i P **P 01 55 10.7 +1.3**
comp=Z,502nm,1.6s,mb6.2,SNR=84
BHD Baghdad 77.62 308 i x x 01 55 07.0
BHD i x x 01 55 24.0
BHD i x x 02 04 54.0
BHD i x x 02 05 16.0
BHD i x x 02 05 36.0
SILT Sile 77.63 322 eP **P 01 55 09.4 -0.3**
BFO Black Forest 77.65 340 eP **P 01 55 09.7 +0.1**
comp=Z,160nm,1.3s,mb5.8
BFO epP pP 01 55 31.4 +8.5
BFO eS S 02 04 59.2 +1.6
BFO Black Forest 77.65 340 eP **P 01 55 09.9 +0.3**
BFO e 01 55 29.5
BFO pmax pmax
comp=Z,279nm,1.6s,mb5.9
BFO MLR MLR
comp=Z,14µm,21.0s,MS6.2
BFO Black Forest 77.65 340 eP **P 01 55 09.8 +0.3**
comp=Z,279nm,1.6s,mb5.9
BFO e 01 55 29.5
BFO LR LR
comp=Z,14µm,21.0s,MS6.2
KMRS Kahramanmaras 77.69 316 eP **P 01 55 10.9 +0.8**
SWET Sewanee 77.71 49 eP **P 01 55 09.0 -1.2**
GUT Gutenstein 77.71 339 P **P 01 55 10.8 +0.8**
ZAVS Zavodnje 77.76 334 P **P 01 55 11.3 +1.0**
SPAK Spaichingen-Ko 77.76 339 eP **P 01 55 10.7 +0.5**
SPNC Sapanca-Adapaz 77.77 322 eP **P 01 55 10.3 -0.2**
KLYT Kilyos 77.78 323 eP **P 01 55 08.5 -2.0**
DYA Yadsworthy 77.78 348 P **P 01 55 10.4 +0.1**
DYA AMb AMB 01 55 11.4
comp=Z,259nm,1.5s,mb5.9
DYA AMS AMS 02 37 19.0
comp=Z,6µm,15.8s
DYA Yadsworthy 77.78 348 ⇑iP **P 01 55 10.4 +0.1**
DYA AMb AMB 01 55 11.4
comp=Z,259nm,1.5s,mb5.9
DYA AMS AMS 02 37 19.0
comp=Z,6µm,15.8s,MS6.0
CDF Champ du Feu 77.80 340 ⇑iP **P 01 55 10.8 +0.4**
comp=Z,797nm,1.6s,mb6.1
CDF Champ du Feu 77.80 340 ⇑iP **P 01 55 10.8 +0.4**
CDF pmax pmax
comp=Z,398nm,1.6s,mb6.1
CDF Champ du Feu 77.80 340 ⇑iP **P 01 55 10.8 +0.4**
comp=Z,398nm,1.6s,mb6.1
OBKA Obir 77.82 335 P **P 01 55 10.9 +0.3**
OBKA Obir 77.82 335 i P **P 01 55 10.9 +0.3**
comp=Z,222nm,1.6s,mb5.8,SNR=51
WATA Walderalm 77.82 337 ⇓iP **P 01 55 11.5 +0.9**
comp=Z,183nm,1.4s,mb5.8,SNR=45
GAZ Gaziantep 77.83 315 eP **P 01 55 11.9 +1.1**
CTYL Yal??k??y-??at 77.87 323 eP **P 01 55 11.4 +0.5**
VBMS Vicksburg 77.87 54 eP **P 01 55 11.1 -0.1**
comp=Z,508nm,1.5s,mb6.2
VBMS LR LR
comp=Z,7µm,22.0s,MS6.0
WTTA Wattenberg 77.87 337 i P **P 01 55 11.9 +1.0**
comp=Z,456nm,1.8s,mb6.1,SNR=128
RETA Reutte 77.88 338 i P **P 01 55 11.4 +0.5**
comp=Z,79nm,1.0s,mb5.6,SNR=34
ANDN Andirin 77.88 316 ⇑iP **P 01 55 11.3 +0.2**
SVIS Svilajnac 77.89 329 P **P 01 55 11.6 +0.6**
HATD Hatta, Dubai 77.89 294 P **P 01 55 11.7 +0.4**
SNR=18
HRT Hereke 77.91 322 eP **P 01 55 11.4 +0.3**
GULT Gulveren 77.91 321 eP **P 01 55 11.7 +0.5**
MOTA Moosalm 77.93 337 i P **P 01 55 12.0 +0.8**
comp=Z,233nm,1.2s,mb6.0,SNR=40

ISK Istanbul-Kandi 77.93 323 *eP* **P 01 55 11.2 -0.1**
WBK Wadi Bani Khal 77.93 291 P **P 01 55 13.3 +1.7**
SNR=10
MVL Millersville 77.94 39 *eP* **P 01 55 10.8 -0.6**
comp=Z,133nm,1.4s,mb5.7
BGKT Bogazkoy 77.94 323 *eP* **P 01 55 09.4 -2.0**
MYKA Terra Mystica 77.95 335⇑*iP* **P 01 55 11.4 +0.1**
comp=Z,156nm,1.4s,mb5.8
LIBD Limburg 77.97 340 *eP* **P 01 55 12.0 +0.6**
CTKS Kestanelik-??a 77.99 323 *eP* **P 01 55 10.3 -1.4**
ECH Echery 78.01 340 *eP* **P 01 55 12.0 +0.4**
ECH Echery 78.01 340 *eP* **P 01 55 11.8 +0.2**
ECH *e* 01 55 32.5
ECH pmax pmax
comp=Z,190nm,1.3s,mb5.9
ECH MLR MLR
comp=Z,9μm,19.0s,MS6.1
ECH Echery 78.01 340 *eP* **P 01 55 11.8 +0.2**
comp=Z,190nm,1.3s,mb5.9
ECH *e* 01 55 32.5
ECH LR LR
comp=Z,9μm,19.0s,MS6.1
PAL Palisades 78.03 37 *eP* **P 01 55 10.9 -1.0**
PAL pmax pmax
comp=Z,311nm,1.4s,mb6.0
PAL Palisades 78.03 37 *eP* **P 01 55 10.9 -1.0**
comp=Z,311nm,1.4s,mb6.0
NAZ Nazwa, Dubai 78.03 295 P **P 01 55 12.2 +0.1**
SNR=14
ASHO Ashiyiah 78.04 294 P **P 01 55 12.5 +0.3**
SNR=24
QLP Quilpie 78.06 192 *eP* **P 01 55 11.4 -0.5**
KIZ Kirchzarten 78.09 340 P **P 01 55 12.2 +0.1**
GPA Golpazari 78.11 321 *eP* **P 01 55 16.6 +4.2**
SLVT Silivri 78.11 323 *eP* **P 01 55 11.2 -1.1**
EDRB Edirne 78.12 325 *eP* **P 01 55 12.4 +0.1**
LSR Lussari 78.12 335⇑*eP* **P 01 55 12.0 -0.3**
SMDO Samad 78.13 292 P **P 01 55 13.7 +1.0**
SNR=11
ABTA Abfaltersbach 78.13 336⇑*iP* **P 01 55 12.6 +0.3**
comp=Z,199nm,1.5s,mb5.8,SNR=65
FELD Feldberg im Sc 78.15 340 *eP* **P 01 55 12.7 +0.3**
HOQ Hoqain 78.16 293 P **P 01 55 13.0 +0.1**
SNR=20
MEZF Maizieres J'vi 78.17 342⇑*iP* **P 01 55 13.2 +0.7**
comp=Z,1μm,1.7s,mb6.3
MEZF Maizieres J'vi 78.17 342⇑*iP* **P 01 55 13.2 +0.7**
comp=Z,1μm,1.7s,mb6.6
CPCT Cooper Cave 78.19 47 *eP* **P 01 55 12.1 -0.7**
KOZT Kozan 78.19 316 *eP* **P 01 55 13.6 +0.8**
CCA1 Carnmenellis 78.19 349 P **P 01 55 12.5 -0.1**
CCA1 AMb AMB 01 55 13.7
comp=Z,238nm,1.6s,mb5.9
CCA1 AMS AMS 02 36 34.8
comp=Z,5μm,20.1s
CCA1 Carnmenellis 78.19 349⇑*iP* **P 01 55 12.5 -0.1**
CCA1 AMb AMB 01 55 13.7
comp=Z,238nm,1.6s,mb5.9
CCA1 AMS AMS 02 36 34.8
comp=Z,5μm,20.1s,MS5.9
ADVT Abdulvahap 78.21 322 *eP* **P 01 55 13.3 +0.4**
KUZU Kuzuini 78.22 315⇑*iP* **P 01 55 12.9 -0.1**
SDMD Soldier's Deli 78.24 40 *eP* **P 01 55 12.6 -0.5**
comp=Z,302nm,1.6s,mb6.0
YLV Yalova 78.24 322 *eP* **P 01 55 12.3 -0.7**
THEF They Montfort 78.25 341 *eP* **P 01 55 13.7 +0.8**
LJU Ljubljana 78.25 335⇑*iP* **P 01 55 13.0 0.0**
LJU *e* pP 01 55 26.8 +0.5
LJU *e* 01 55 36.7
LJU *e*S S 02 05 04.3 0.0
LJU Ljubljana 78.25 335⇑*iP* **P 01 55 13.0 0.0**
LJU *e* pP 01 55 26.8 +0.5
LJU *e* 01 55 36.7
LJU *e*PP PP 01 58 23.6 +14
LJU *e* 02 01 03.5
LJU *e*S S 02 05 04.3 0.0
SISC Sisak 78.27 333 P **P 01 55 13.5 +0.4**
DAVA Damuels 78.27 338 P **P 01 55 13.7 +0.6**
DAVA Damuels 78.27 338 *iP* **P 01 55 13.8 +0.7**
comp=Z,120nm,1.1s,mb5.7,SNR=44
CADS Cadrg 78.30 335⇑*eP* **P 01 55 12.7 -0.5**
FETA Feichten 78.32 337⇑*iP* **P 01 55 14.4 +1.0**
comp=Z,235nm,1.2s,mb6.0,SNR=95
SVRH Sivrihisar-ESK 78.34 320 *eP* **P 01 55 13.6 0.0**
MOF Molkenrain 78.36 340 *eP* **P 01 55 13.9 +0.3**
TKL Tuckaleechee C 78.36 47 *eP* **P 01 55 12.7 -1.1**
CAVI Cavuskoy 78.37 322 *eP* **P 01 55 14.2 +0.4**
HAU Haudompre 78.38 341⇑*iP* **P 01 55 13.9 +0.2**
comp=Z,628nm,1.6s,mb6.0
HAU *e*MLR MLR
comp=Z,10μm,20.8s,MS5.8
HAU Haudompre 78.38 341⇑*iP* **P 01 55 13.9 +0.2**
HAU pmax pmax
comp=Z,314nm,1.6s,mb6.0
HAU MLR MLR
comp=Z,10μm,20.8s,MS6.1
HAU Haudompre 78.38 341⇑*iP* **P 01 55 13.9 +0.2**
comp=Z,314nm,1.6s,mb6.0
HAU LR LR
comp=Z,10μm,20.8s,MS6.1
GRUS Gruza 78.38 330 P **P 01 55 13.7 -0.1**
BORA Eskisehir 78.40 321⇑*iP* **P 01 55 13.1 -0.9**
BAD Bernadia 78.42 336⇑*eP* **P 01 55 13.0 -0.9**
ELN Prospectdale 78.42 44 *eP* **P 01 55 12.9 -1.2**
GEMT Gemlik 78.42 322 *eP* **P 01 55 14.0 0.0**
PGB Panagyurishte 78.42 327 *iP* **P 01 55 14.3 +0.3**
DIVS Divibare 78.42 330 P **P 01 55 12.5 -1.5**
VOY Vojsko 78.44 335 *eP* **P 01 55 13.4 -0.6**
VOY *e* 01 55 33.9
VOY *e* 01 55 52.0
VOY *e* 01 56 04.5
ARMT Armutlu 78.44 323 *eP* **P 01 55 14.0 -0.1**
HINF Hinteralfeld 78.45 340⇑*iP* **P 01 55 14.1 0.0**
comp=Z,497nm,1.7s,mb5.9
HINF Hinteralfeld 78.45 340⇑*iP* **P 01 55 14.1 0.0**
HINF pmax pmax
comp=Z,248nm,1.7s,mb5.9
HINF Hinteralfeld 78.45 340⇑*iP* **P 01 55 14.1 0.0**
comp=Z,248nm,1.7s,mb5.9
COLI Coloredo 78.48 335⇑*eP* **P 01 55 15.0 +0.8**
MPRI Monte Prat 78.48 336⇑*iP* **P 01 55 14.0 -0.3**
ASUD Al Ashush, Dub 78.50 295 P **P 01 55 15.3 +0.5**
SNR=12
BOJS Bojanci 78.55 334⇑*iP* **P 01 55 14.8 +0.2**
ESKT Eskisehir 78.55 321 *eP* **P 01 55 14.3 -0.5**
ESKT Eskisehir 78.55 321⇑*iP* **P 01 55 14.3 -0.5**
CEY Cerknica 78.56 335 P **P 01 55 14.8 +0.1**
TKR Tekirdag 78.57 324 *eP* **P 01 55 14.3 -0.6**
SULT Sultanhani-AKS 78.58 318 *eP* **P 01 55 15.2 +0.2**
BLA Blacksburg 78.58 44 *eP* **P 01 55 14.5 -0.5**
BLA pmax pmax
comp=Z,385nm,1.6s,mb6.1
BLA MLR MLR
comp=Z,5μm,22.0s,MS5.8
BLA Blacksburg 78.58 44 *eP* **P 01 55 14.4 -0.5**
comp=Z,385nm,1.6s,mb6.1
BLA LR LR
comp=Z,5μm,22.0s,MS5.8
MDNY Mudanya-Bursa 78.60 322 *eP* **P 01 55 14.7 -0.3**
CEYT Ceyhan 78.61 316 *eP* **P 01 55 16.2 +1.0**
CSO Casso 78.62 336⇑*eP* **P 01 55 14.0 -1.0**
JMDO Jabal Madar 78.63 291 P **P 01 55 16.0 +0.5**
SNR=32
PLD Plovdiv 78.63 326 P **P 01 55 14.1 -1.1**
BBS Basel-Blauen 78.64 340 *eP* **P 01 55 15.4 +0.3**
KIZT Kizilcal 78.68 320 *eP* **P 01 55 16.3 +0.8**
BLY Banja Luka 78.69 332 P **P 01 55 15.7 +0.3**
ULDT Uludag 78.70 322⇑*iP* **P 01 55 15.3 -0.3**
KARA Karaisali 78.71 317 *eP* **P 01 55 16.2 +0.5**
VTS Vitosha 78.72 327⇓*iP* **P 01 55 16.1 +0.5**
VTS Vitosha 78.72 327 P **P 01 55 14.1 -1.5**
VTS Vitosha 78.72 327 *iP* **P 01 55 16.4 +0.8**
VTS Vitosha 78.72 327⇓*iP* **P 01 55 16.1 +0.5**
FAU Forcella Aurin 78.75 336⇑*eP* **P 01 55 16.0 +0.3**
JSA Saint Aubin 78.76 347 AMS AMS 02 37 51.5
comp=Z,6μm,17.4s,MS6.0
TRI Trieste 78.77 335 *eP* **P 01 55 15.3 -0.6**
TRI pmax pmax
comp=Z,299nm,1.6s,mb6.0
TRI MLR MLR
comp=Z,8μm,20.0s,MS6.0
TRI Trieste 78.77 335 *eP* **P 01 55 15.3 -0.5**
comp=Z,299nm,1.6s,mb6.0
TRI LR LR
comp=Z,8μm,20.0s,MS6.0
KDZ Kurdzhali 78.77 325 *iP* **P 01 55 15.4 -0.6**
ARQ Araqi 78.81 293 P **P 01 55 16.9 +0.4**
SNR=24
GULE Gulek 78.81 317⇑*iP* **P 01 55 16.5 +0.3**
BBLS Lazići 78.82 331 P **P 01 55 16.8 +0.6**
YURE YUREGIR 78.82 316⇑*iP* **P 01 55 17.3 +1.0**
CAE Caneva 78.84 336⇑*iP* **P 01 55 16.0 -0.2**
MFT Murefte 78.84 324 *eP* **P 01 55 25.2 +8.8**
SKDS Skadanscina 78.85 335⇑*iP* **P 01 55 15.7 -0.6**
BSY Bisya 78.87 292 P **P 01 55 17.3 +0.5**
SNR=36
KCTX Karacabey (Bur 78.89 323 *eP* **P 01 55 16.8 +0.2**
LOMF Lomont 78.90 340 *eP* **P 01 55 17.1 +0.5**
FLN La Foliniere 78.91 345⇑*iP* **P 01 55 16.8 +0.2**
comp=Z,941nm,1.5s,mb6.2,baz=14
FLN *e*MLR MLR
comp=Z,11μm,19.2s,MS5.9
FLN La Foliniere 78.91 345⇑*iP* **P 01 55 16.8 +0.2**
FLN pmax pmax
comp=Z,470nm,1.5s,mb6.2
FLN MLR MLR
comp=Z,11μm,19.3s,MS6.2
FLN La Foliniere 78.91 345⇑*iP* **P 01 55 16.8 +0.2**
comp=Z,470nm,1.5s,mb6.2
FLN LR LR
comp=Z,11μm,19.3s,MS6.2
SART Tekirdag 78.97 324⇑*iP* **P 01 55 17.0 -0.1**
RKY Sarkoy-Tekirda 78.97 324 *eP* **P 01 55 17.6 +0.6**
LRAL Lakeview Retre 78.97 51 *eP* **P 01 55 15.6 -1.6**
comp=Z,86nm,1.6s,mb5.4
LRAL LR LR
comp=Z,6μm,21.0s,MS5.9
BNT Bandirma 78.98 323 *eP* **P 01 55 18.2 +1.1**
RZN Rozhen 78.99 326 *iP* **P 01 55 16.9 -0.3**
EDC Edincik 79.01 323 *eP* **P 01 55 17.5 +0.3**
LDF La Druitiere 79.02 345⇑*iP* **P 01 55 17.4 +0.2**
comp=Z,469nm,1.5s,mb5.9
LDF La Druitiere 79.02 345⇑*iP* **P 01 55 17.4 +0.2**
LDF pmax pmax
comp=Z,234nm,1.5s,mb5.9
LDF La Druitiere 79.02 345⇑*iP* **P 01 55 17.4 +0.2**
comp=Z,234nm,1.5s,mb5.9
CBN Corbin 79.04 41 *eP* **P 01 55 16.8 -0.7**
comp=Z,173nm,1.4s,mb5.8
CBN LR LR
comp=Z,8μm,20.0s,MS6.0
LADK Ladik-KONYA 79.06 319 *eP* **P 01 55 17.6 0.0**
MBWA Marble Bar 79.10 216 *eP* **P 01 55 17.4 -0.4**
comp=Z,35nm,1.0s,mb5.2
MBWA LR LR
comp=Z,2μm,21.0s,MS5.4
MBWA Marble Bar 79.10 216 P **P 01 55 15.2 -2.6**
comp=Z,44nm,1.6s,mb5.2
KRTS Karatas 79.14 316 *eP* **P 01 55 19.4 +1.3**
KBD Kabd 79.17 303 *eP* **P 01 55 17.8 -0.5**
KBD AMb AMB 01 55 19.2
comp=Z,126nm,1.2s,mb5.7
KRBG Karabiga-Canak 79.18 324 *eP* **P 01 55 18.7 +0.5**
BOLV Bolvadin 79.20 320⇑*iP* **P 01 55 18.1 -0.2**
ALN Alexandroupoli 79.21 325 P **P 01 55 16.8 -1.5**
ERIK Erikli-Kesan 79.23 324 *eP* **P 01 55 19.2 +0.7**
ALT Altintas 79.25 321 *eP* **P 01 55 19.0 +0.4**
JSRW J. Sargeant Re 79.26 42 *eP* **P 01 55 17.9 -0.9**
MERS Mersin 79.27 317 *eP* **P 01 55 18.9 +0.1**
YAYL Yayladag 79.27 315⇑*iP* **P 01 55 19.1 +0.3**
KONT Konya--Tatoy 79.28 319 *eP* **P 01 55 19.0 +0.2**
PLE Pljevlja 79.31 330⇑*iP* **P 01 55 19.4 +0.6**
PLE Pljevlja 79.31 330⇑*iP* **P 01 55 19.4 +0.6**
ENEZ Enez 79.31 325 *eP* **P 01 55 19.3 +0.4**
GONE Gonen-Balikesi 79.33 323 *eP* **P 01 55 19.2 +0.1**
GRR Gorron 79.34 346⇑*iP* **P 01 55 19.4 +0.5**
comp=Z,1μm,1.4s,mb6.2
GRR Gorron 79.34 346⇑*iP* **P 01 55 19.4 +0.5**
GRR pmax pmax
comp=Z,502nm,1.4s,mb6.2
GRR Gorron 79.34 346⇑*iP* **P 01 55 19.4 +0.5**
comp=Z,502nm,1.4s,mb6.2
LPK Lapseki 79.40 324 *eP* **P 01 55 20.0 +0.6**
KKB Krupnik 79.40 327 *iP* **P 01 55 19.5 +0.1**
MMB Musomiste 79.42 327 *iP* **P 01 55 19.0 -0.5**
RDF Al-Radifah 79.45 303 *eP* **P 01 55 19.4 -0.4**
RDF AMb AMB 01 55 21.5
comp=Z,481nm,1.1s,mb6.3
GDZ Gediz 79.47 321⇑*iP* **P 01 55 19.2 -0.6**
GELI Tayfur-Gelibol 79.48 324 *eP* **P 01 55 20.2 +0.3**
SHUT Suhut-Afyon 79.50 320 *eP* **P 01 55 20.5 +0.5**
NVLJ Novalja 79.52 334 P **P 01 55 19.5 -0.5**
IVA Berane 79.56 330⇑*iP* **P 01 55 20.4 +0.2**
UPM Unac-Piva 79.57 331⇑*iP* **P 01 55 19.9 -0.4**
LOR Lormes 79.59 342⇑*iP* **P 01 55 20.6 +0.3**
comp=Z,748nm,1.4s,mb6.1,baz=27
LOR *e*MLR MLR
comp=Z,16μm,21.0s,MS6.0
LOR Lormes 79.59 342⇑*iP* **P 01 55 20.6 +0.3**
LOR pmax pmax
comp=Z,374nm,1.4s,mb6.1
LOR MLR MLR
comp=Z,16μm,21.0s,MS6.3
LOR Lormes 79.59 342⇑*iP* **P 01 55 20.6 +0.3**
comp=Z,374nm,1.4s,mb6.1
LOR LR LR
comp=Z,16μm,21.0s,MS6.3
BALB Balikesir 79.61 323 *eP* **P 01 55 20.7 +0.1**
BALY Balya 79.63 323⇑*iP* **P 01 55 19.9 -0.8**
KAVA Kavala 79.67 326 P **P 01 55 19.6 -1.3**
SGMF Saint Gilles 79.73 347⇑*iP* **P 01 55 21.5 +0.5**
comp=Z,693nm,1.5s,mb6.1
SGMF Saint Gilles 79.73 347⇑*iP* **P 01 55 21.5 +0.5**
SGMF pmax pmax
comp=Z,346nm,1.5s,mb6.1
SGMF Saint Gilles 79.73 347⇑*iP* **P 01 55 21.5 +0.5**
comp=Z,346nm,1.5s,mb6.1
ROSF Rostrenen 79.75 347⇑*iP* **P 01 55 21.7 +0.5**
comp=Z,693nm,1.4s,mb6.1
ROSF Rostrenen 79.75 347⇑*iP* **P 01 55 21.7 +0.5**
ROSF pmax pmax
comp=Z,346nm,1.4s,mb6.1
ROSF Rostrenen 79.75 347⇑*iP* **P 01 55 21.7 +0.5**
comp=Z,346nm,1.4s,mb6.1
CABF La Chapelle 79.76 340⇑*iP* **P 01 55 22.0 +0.7**
comp=Z,804nm,1.7s,mb6.1
CABF La Chapelle 79.76 340⇑*iP* **P 01 55 22.0 +0.7**
CABF pmax pmax
comp=Z,402nm,1.7s,mb6.1
CABF La Chapelle 79.76 340⇑*iP* **P 01 55 22.0 +0.7**
comp=Z,402nm,1.7s,mb6.1
PVY Plav 79.78 330⇑*iP* **P 01 55 20.7 -0.8**
PVY Plav 79.78 330⇑*iP* **P 01 55 20.8 -0.7**
DEMI Demirci 79.81 322⇑*iP* **P 01 55 20.7 -0.9**
HYF Humbligny 79.82 343⇑*iP* **P 01 55 22.4 +0.8**
SSF Saint Saulge 79.85 342⇑*iP* **P 01 55 22.2 +0.5**
comp=Z,338nm,1.3s,mb5.8
SSF Saint Saulge 79.85 342⇑*iP* **P 01 55 22.2 +0.5**
SSF pmax pmax
comp=Z,169nm,1.3s,mb5.8
SSF Saint Saulge 79.85 342⇑*iP* **P 01 55 22.2 +0.5**
comp=Z,169nm,1.3s,mb5.8
SKO Skopje 79.86 328⇑*iP* **P 01 55 22.3 +0.4**
SRS Serrai 79.89 326 P **P 01 55 21.0 -1.1**
NKY Niksic 79.90 330⇑*iP* **P 01 55 20.8 -1.3**
NKY Niksic 79.90 330⇑*iP* **P 01 55 20.9 -1.2**
OG01 Vacheresse 79.90 340 *eP* **P 01 55 22.5 +0.5**
BRY Bratogost 79.96 331⇑*iP* **P 01 55 20.8 -1.6**
BRY Bratogost 79.96 331⇑*iP* **P 01 55 20.9 -1.5**
BCI Bajram Curri 79.96 329 *eP*N **P 01 55 21.4 -1.0**
EZN Ezine 80.04 324 *eP* **P 01 55 22.8 -0.1**
HDMB Hadim 80.06 318 *eP* **P 01 55 23.2 +0.1**
VAY Valandovo 80.06 327⇑*iP* **P 01 55 22.7 -0.3**
VAY Valandovo 80.06 327 P **P 01 55 22.2 -0.8**
KHAL Karahalli 80.08 321⇑*iP* **P 01 55 22.6 -0.6**
KNT Kendrikon 80.09 327 P **P 01 55 22.7 -0.4**
TAOE Nuku Hiva Isla 80.10 117 *eS* S 02 05 29.0 +4.4
comp=Z,7μm,32.2s
TAOE *e*LQ 02 16 50.9
comp=Z,5μm,26.5s
TAOE *e*LR LR 02 20 26.4
comp=Z,15μm,25.6s,baz=329
ISP Isparta 80.14 320 *eP* **P 01 55 22.9 -0.6**
ISP Isparta 80.14 320 *eP* **P 01 55 23.8 +0.3**
ISP pmax pmax
comp=Z,29nm,0.9s,mb5.2
ISP MLR MLR
comp=Z,6μm,21.0s,MS5.9
ISP Isparta 80.14 320 *eP* **P 01 55 23.8 +0.3**
comp=Z,29nm,0.9s,mb5.2
ISP LR LR
comp=Z,6μm,21.0s,MS5.9
AVF Avril sur Loir 80.14 342⇑*iP* **P 01 55 23.8 +0.5**
comp=Z,671nm,1.3s,mb6.1
AVF Avril sur Loir 80.14 342⇑*iP* **P 01 55 23.8 +0.5**
AVF pmax pmax
comp=Z,335nm,1.3s,mb6.1
AVF Avril sur Loir 80.14 342⇑*iP* **P 01 55 23.8 +0.5**
comp=Z,336nm,1.3s,mb6.1
QUIF Quistinic 80.14 347⇑*iP* **P 01 55 23.7 +0.4**
comp=Z,613nm,1.6s,mb6.0
QUIF Quistinic 80.14 347⇑*iP* **P 01 55 23.7 +0.4**
QUIF pmax pmax
comp=Z,307nm,1.6s,mb6.0
QUIF Quistinic 80.14 347⇑*iP* **P 01 55 23.7 +0.4**
comp=Z,307nm,1.6s,mb6.0
TTG Podgorica 80.16 330 *eP* **P 01 55 22.0 -1.5**
TTG Podgorica 80.16 330 *eP* **P 01 55 22.1 -1.4**
IKL Isikli 80.16 317 *eP* **P 01 55 23.2 -0.4**
TREB Trebinje 80.19 331 P **P 01 55 23.0 -0.6**
SMF Signal de Mont 80.19 342⇑*iP* **P 01 55 24.0 +0.4**
comp=Z,1μm,1.5s,mb6.3
SMF Signal de Mont 80.19 342⇑*iP* **P 01 55 24.0 +0.4**
SMF pmax pmax
comp=Z,602nm,1.5s,mb6.3
SMF Signal de Mont 80.19 342⇑*iP* **P 01 55 24.0 +0.4**
comp=Z,602nm,1.5s,mb6.3
SOH Sokhos 80.23 326 P **P 01 55 23.2 -0.7**
STON Ston 80.24 331 P **P 01 55 22.4 -1.5**
AKHS Akhisar 80.30 322⇑*iP* **P 01 55 23.6 -0.7**
AKS Akhisar 80.30 322 *eP* **P 01 55 24.7 +0.4**
PUK Puka 80.31 329 *eP*N **P 01 55 24.9 +0.6**
GOGA Godfrey 80.36 48 *eP* **P 01 55 23.5 -1.2**
GOGA pmax pmax
comp=Z,117nm,1.5s,mb5.6
GOGA MLR MLR
comp=Z,13μm,22.0s,MS6.2
GOGA Godfrey 80.36 48 *eP* **P 01 55 23.5 -1.2**
comp=Z,117nm,1.5s,mb5.6
GOGA LR LR
comp=Z,13μm,22.0s,MS6.2
HCY Herceg Novi 80.38 331⇓*iP* **P 01 55 24.1 -0.6**
HCY Herceg Novi 80.38 331⇓*iP* **P 01 55 24.1 -0.6**
BUM Brajici-Budva 80.39 330⇓*iP* **P 01 55 23.3 -1.4**
BUM Brajici-Budva 80.39 330⇓*iP* **P 01 55 23.4 -1.3**
LIA Limnos Island 80.40 325 *eP* **P 01 55 23.0 -1.8**
BCK Bucak 80.42 320 *eP* **P 01 55 24.4 -0.5**
OUR Ouranopolis 80.44 326 P **P 01 55 23.5 -1.6**
BGF Bois d'Agland 80.46 343⇑*iP* **P 01 55 25.6 +0.6**
comp=Z,542nm,1.5s,mb6.0
BGF Bois d'Agland 80.46 343⇑*iP* **P 01 55 25.6 +0.6**
BGF pmax pmax
comp=Z,271nm,1.5s,mb6.0
BGF Bois d'Agland 80.46 343⇑*iP* **P 01 55 25.6 +0.6**
comp=Z,271nm,1.5s,mb6.0
KRUS Krusevo 80.47 328⇑*iP* **P 01 55 24.6 -0.6**
HORT Hortiatis 80.52 327 P **P 01 55 24.8 -0.7**
EREN Erenkoy 80.55 316 *eP* **P 01 55 26.0 +0.3**
PRK Paraskevi 80.57 324 *eP* **P 01 55 24.5 -1.2**
PRK Paraskevi 80.57 324 P **P 01 55 24.6 -1.1**
BRAL Brewton 80.58 52 *eP* **P 01 55 25.8 -0.2**
comp=Z,685nm,1.5s,mb6.4
BRAL LR LR
comp=Z,7μm,21.0s,MS6.0
ULC Ulcinj 80.58 330⇑*iP* **P 01 55 25.0 -0.8**
PLG Polygyros 80.60 326 *eP* **P 01 55 25.0 -0.9**
PLG Polygyros 80.60 326 P **P 01 55 24.8 -1.1**
JSC Jenkinsville 80.65 46 *eP* **P 01 55 25.6 -0.7**
LPL La Plagne 80.66 340⇑*iP* **P 01 55 27.6 +1.5**
comp=Z,326nm,1.0s,mb5.9
LPL La Plagne 80.66 340⇑*iP* **P 01 55 27.6 +1.5**
LPL pmax pmax
comp=Z,163nm,1.0s,mb5.9
LPL La Plagne 80.66 340⇑*iP* **P 01 55 27.6 +1.5**
comp=Z,163nm,1.0s,mb5.9
LPG La Plagne 80.68 340⇑*iP* **P 01 55 27.7 +1.5**
comp=Z,610nm,1.2s,mb6.1
LPG La Plagne 80.68 340⇑*iP* **P 01 55 27.7 +1.5**
LPG pmax pmax
comp=Z,305nm,1.2s,mb6.1
LPG La Plagne 80.68 340⇑*iP* **P 01 55 27.7 +1.5**
comp=Z,305nm,1.2s,mb6.1
GAZI Gazipasa 80.75 318⇑*iP* **P 01 55 25.1 -1.7**
BIA Bitola 80.75 328 P **P 01 55 26.1 -0.6**
BIA Bitola 80.75 328⇑*iP* **P 01 55 25.6 -1.1**
HWQ Hawqa 80.81 314 *eP* **P 01 55 26.4 -0.7**
TCF Toulx Ste Croi 80.84 343⇑*iP* **P 01 55 27.8 +0.7**
comp=Z,587nm,1.4s,mb6.0
TCF Toulx Ste Croi 80.84 343⇑*iP* **P 01 55 27.8 +0.7**
TCF pmax pmax
comp=Z,294nm,1.4s,mb6.0
TCF Toulx Ste Croi 80.84 343⇑*iP* **P 01 55 27.8 +0.7**
comp=Z,294nm,1.4s,mb6.0
DNZL Cakiroluk 80.85 321⇑*iP* **P 01 55 27.2 0.0**
OHR Ohrid 80.85 328 *iP* **P 01 55 24.4 -2.8**
ANTB Antalya 80.88 319 *eP* **P 01 55 29.8 +2.4**
PAIG Paliouri 80.91 326 P **P 01 55 26.4 -1.2**
KORT Korkueli 80.91 320⇑*iP* **P 01 55 25.9 -1.7**
KDAG Bornova 80.92 323 *eP* **P 01 55 26.7 -1.0**
IZM Izmir 80.93 323 *eP* **P 01 55 27.9 +0.2**
TIR Tirane 80.94 329 *eP* **P 01 55 27.8 +0.1**
TIR pmax pmax
comp=Z,94nm,0.6s,mb5.9
TIR MLR MLR
comp=Z,14μm,19.0s,MS6.3
TIR Tirane 80.94 329 *eP* **P 01 55 27.8 +0.1**
comp=Z,94nm,0.6s,mb5.9
TIR LR LR
comp=Z,14μm,19.0s,MS6.3
FNA Florina 80.95 328 P **P 01 55 27.0 -0.7**
MFF Saint Martin d 80.96 345⇑*iP* **P 01 55 28.5 +0.8**
comp=Z,853nm,1.5s,mb6.2
MFF Saint Martin d 80.96 345⇑*iP* **P 01 55 28.5 +0.8**
MFF pmax pmax
comp=Z,427nm,1.5s,mb6.2
MFF Saint Martin d 80.96 345⇑*iP* **P 01 55 28.5 +0.8**
comp=Z,427nm,1.5s,mb6.2
BLCB Balcova 81.03 323 *eP* **P 01 55 27.9 -0.3**
BLCB Balcova 81.03 323 P **P 01 55 26.5 -1.7**
GOLH Golhisar 81.03 320⇑*iP* **P 01 55 27.8 -0.4**
LFK Lefkose 81.04 317 *eP* **P 01 55 28.2 -0.1**
RAR Rarotonga 81.06 140 PFAKE 01 55 40.0 +12
RAR LR LR
comp=Z,6μm,22.0s,MS5.9
PMOR Pomariorio Ree 81.08 127 *eP* **P 01 55 31.1 +2.5**
comp=Z,186nm,1.3s,mb5.8
VLC Villacollemand 81.08 337 *eP* **P 01 55 29.1 +0.6**
comp=Z,1μm,2.0s,mb6.5
VLC LR LR
comp=Z,16μm,19.0s,MS6.4
GDM Grand'Maison 81.09 340 *eP* **P 01 55 29.8 +1.4**
BNI Bardonecchia 81.12 340 *eP* **P 01 55 29.8 +1.2**
BNI pmax pmax
comp=Z,151nm,1.1s,mb5.8
BNI MLR MLR
comp=Z,19μm,19.0s,MS6.5
BNI Bardonecchia 81.12 340 *eP* **P 01 55 29.8 +1.3**
comp=Z,151nm,1.1s,mb5.8
BNI LR LR
comp=Z,19μm,19.0s,MS6.5
GLHS Glhisar (BURDU 81.13 320 *eP* **P 01 55 27.6 -1.1**
ARMA Armidale 81.16 185 *eP* **P 01 55 28.3 -0.4**
ARMA Armidale 81.16 185 *eP* **P 01 55 30.2 +1.6**
comp=Z,67nm,1.1s,mb5.5
KZN Kozani 81.24 327 *eP* **P 01 55 28.5 -0.8**
KZN Kozani 81.24 327 P **P 01 55 27.0 -2.3**
BHL Bhannes 81.25 314 *eP* **P 01 55 28.7 -0.8**
MAMC Mammari 81.27 317 P **P 01 55 29.3 -0.2**
KBN Korca 81.29 328 *eP*N **P 01 55 29.1 -0.5**
COLF Collangettes 81.30 342 *eP* **P 01 55 30.6 +1.1**
VERF Verneugheol 81.31 343 *eP* **P 01 55 30.4 +0.8**
ELL Elmali 81.31 320 *eP* **P 01 55 29.7 0.0**
SSB Saint Sauveur 81.36 341 *eP* **P 01 55 30.6 +0.8**
SSB Saint Sauveur 81.36 341 *eP* **P 01 55 30.7 +0.9**
SSB pmax pmax
comp=Z,350nm,1.6s,mb6.0
SSB MLR MLR
comp=Z,4μm,20.0s,MS5.8
SSB Saint Sauveur 81.36 341 *eP* **P 01 55 30.7 +0.9**
comp=Z,350nm,1.6s,mb6.0
SSB LR LR
comp=Z,4μm,20.0s,MS5.8
NEST Nestorio 81.39 328 P **P 01 55 29.9 -0.2**

CSS Prodhromos 81.39 317 ⇑P P 01 55 29.4 -0.8
comp=Z,1.7nm,0.9s
CHOS Chios island 81.40 323 P P 01 55 29.0 -1.2
MBDF Montbardon 81.41 339⇑*i*P P 01 55 30.8 +0.7
comp=Z,142nm,0.9s,mb5.6
MBDF Montbardon 81.41 339⇑*i*P P 01 55 30.8 +0.7
MBDF pmax pmax
comp=Z,71nm,0.9s,mb5.6
MBDF Montbardon 81.41 339⇑*i*P P 01 55 30.8 +0.7
comp=Z,71nm,0.9s,mb5.6
ORIF Oris-en-Rattie 81.42 340⇑*i*P P 01 55 31.3 +1.1
comp=Z,473nm,1.4s,mb5.9
ORIF *e*MLR MLR
comp=Z,12μm,22.5s,MS5.9
ORIF Oris-en-Rattie 81.42 340⇑*i*P P 01 55 31.3 +1.1
ORIF pmax pmax
comp=Z,236nm,1.4s,mb5.9
ORIF Oris-en-Rattie 81.42 340⇑*i*P P 01 55 31.3 +1.1
comp=Z,236nm,1.4s,mb5.9
LEF Lefka 81.45 317 *e*P P 01 55 30.1 -0.4
RCY Rachaya 81.53 314 *e*P P 01 55 31.2 +0.2
ALFC Alevga 81.54 317 P P 01 55 28.8 -2.2
comp=Z,3.4nm,0.6s,mb4.5
GCAM G?zelcaml? 81.55 322⇑*i*P P 01 55 30.3 -0.7
XOR Xorichti 81.58 326 P P 01 55 29.4 -1.7
NEO Neokhori 81.62 326 *e*P P 01 55 30.0 -1.4
SURF Saint Ours 81.63 339 *e*P P 01 55 32.5 +1.2
YER Yerkesik 81.63 321 *e*P P 01 55 29.8 -1.6
FRNF Fournols 81.64 342 *e*P P 01 55 32.4 +1.1
MLSB Milas 81.69 322 *e*P P 01 55 32.0 +0.2
SMG Samos 81.69 323 *e*P P 01 55 29.5 -2.3
TURN Turunc 81.73 321⇑*i*P P 01 55 33.0 +1.0
VIVF Saint-Julien-I 81.73 341⇑*i*P P 01 55 32.8 +1.0
comp=Z,1μm,1.8s,mb6.2
VIVF Saint-Julien-I 81.73 341⇑*i*P P 01 55 32.8 +1.0
VIVF pmax pmax
comp=Z,507nm,1.8s,mb6.2
VIVF Saint-Julien-I 81.73 341⇑*i*P P 01 55 32.8 +1.0
comp=Z,507nm,1.8s,mb6.2
HRI Mount Hermon 81.75 314 ⇑P P 01 55 32.3 +0.2
KSDI Kefar Szold 81.85 314 ⇑Pn P 01 55 33.0 +0.4
KSDI Kefar Szold 81.85 314 *e*P P 01 55 33.0 +0.4
OCF Saint Nazaire 81.87 340 *e*P P 01 55 33.8 +1.3
OG26 St.-Nazaire-De 81.87 340 *e*P P 01 55 33.8 +1.3
AKAS Kas 81.88 320⇑*i*P P 01 55 32.0 -0.7
PPCY Paphos 81.89 317 P P 01 55 29.3 -3.5
COCO West Island 81.92 239 PFAKE 01 55 40.0 +6.9
COCO LR LR
comp=Z,3μm,20.0s,MS5.7
RJF Les Rejaudoux 81.92 343⇑*i*P P 01 55 33.6 +0.8
comp=Z,930nm,1.6s,mb6.2
RJF *e*MLR MLR
comp=Z,20μm,22.0s,MS6.1
RJF Les Rejaudoux 81.92 343⇑*i*P P 01 55 33.6 +0.8
RJF pmax pmax
comp=Z,465nm,1.6s,mb6.2
RJF MLR MLR
comp=Z,20μm,22.0s,MS6.4
RJF Les Rejaudoux 81.92 343⇑*i*P P 01 55 33.6 +0.8
comp=Z,465nm,1.6s,mb6.2
RJF LR LR
comp=Z,20μm,22.0s,MS6.4
SAOF Saorge 81.93 339 *e*P P 01 55 33.0 +0.1
AQU L'Aquila 81.97 334 *e*P P 01 55 33.8 +0.7
AQU pmax pmax
comp=Z,885nm,1.6s,mb6.4
AQU MLR MLR
comp=Z,15μm,19.0s,MS6.4
AQU L'Aquila 81.97 334 *e*P P 01 55 33.8 +0.7
comp=Z,885nm,1.6s,mb6.4
AQU LR LR
comp=Z,15μm,19.0s,MS6.4
AQU L'Aquila 81.97 334⇓*i*P P 01 55 34.4 +1.3
TOUF Mont Tournerai 81.97 339 *e*P P 01 55 33.7 +0.6
BDRM Kayabasi 82.02 322⇑*i*P P 01 55 32.6 -0.9
LUCF Luceram 82.07 339 *e*P P 01 55 33.9 +0.3
SBF Sospel 82.07 339⇑*i*P P 01 55 33.8 +0.2
comp=Z,915nm,1.7s,mb6.1
SBF Sospel 82.07 339⇑*i*P P 01 55 33.8 +0.2
SBF pmax pmax
comp=Z,458nm,1.7s,mb6.1
SBF Sospel 82.07 339⇑*i*P P 01 55 33.8 +0.2
comp=Z,458nm,1.7s,mb6.1
BODT Bodrum 82.08 322 *e*P P 01 55 33.2 -0.5
MVIF Mont Vial 82.11 339 *e*P P 01 55 34.3 +0.5
MMAI Mount Meron Ar 82.11 314 P P 01 55 34.6 +0.6
comp=Z,38nm,0.5s,mb5.6,baz=40,slow=6.6,SNR=91
MMAI LR LR 02 37 27.7
comp=Z,8μm,20.6s,MS6.1,baz=15,slow=40
NHSC New Hope 82.13 46 *e*P P 01 55 33.6 -0.5
comp=Z,805nm,1.9s,mb6.3
NHSC LR LR
comp=Z,11μm,20.0s,MS6.2
ASF Jabal al Asfar 82.13 313 LR LR 02 36 28.0
comp=Z,12μm,21.3s,MS6.2,baz=248,slow=39
JAN Janina 82.14 328 *e*P P 01 55 33.5 -0.5
HNTI Hanita 82.16 314 Pn **P 01 55 34.6 +0.3**
CAF Calviac 82.18 343⇑*i*P P 01 55 35.4 +1.2
comp=Z,854nm,1.5s,mb6.2
CAF Calviac 82.18 343⇑*i*P P 01 55 35.4 +1.2
CAF pmax pmax
comp=Z,427nm,1.5s,mb6.2
CAF Calviac 82.18 343⇑*i*P P 01 55 35.4 +1.2
comp=Z,427nm,1.5s,mb6.2
MON Monaco 82.20 339 P P 01 55 35.0 +0.7
REVF Revere 82.21 339 *e*P P 01 55 34.7 +0.4
SRN Sarande 82.22 328 *e*PN P 01 55 33.2 -1.3
ATAL Atalanti 82.24 326 P P 01 55 33.1 -1.5
DAT Datca 82.26 322 *e*P P 01 55 34.0 -0.7
LKR Lokris 82.28 326 *e*P P 01 55 33.0 -1.9
LKR Lokris 82.29 326 P P 01 55 32.0 -2.9
CALN Calern 82.30 339 *e*P P 01 55 35.5 +0.7
SMRF Simiane la Rot 82.38 340⇑*i*P P 01 55 36.4 +1.2
comp=Z,581nm,1.6s,mb6.0
SMRF Simiane la Rot 82.38 340⇑*i*P P 01 55 36.4 +1.2
comp=Z,581nm,1.6s,mb6.3
LFF La Frestale 82.41 344⇑*i*P P 01 55 36.4 +1.0
comp=Z,1μm,1.6s,mb6.4
LFF La Frestale 82.41 344⇑*i*P P 01 55 36.4 +1.0
LFF pmax pmax
comp=Z,723nm,1.6s,mb6.4
LFF La Frestale 82.41 344⇑*i*P P 01 55 36.4 +1.0
comp=Z,723nm,1.6s,mb6.4
IGT Igoumenitsa 82.42 328 P P 01 55 33.7 -1.8
PPT Papeete 82.43 130 *e*PP PP 01 58 46.4 +1.0
comp=Z,374nm,27.8s
PPT *e*S S 02 05 52.7 +4.2
comp=Z,18μm,29.8s
PPT *e*LR LR 02 21 22.7
comp=Z,6μm,21.8s,baz=316
PPT Papeete 82.43 130 LR LR 02 30 16.7
comp=Z,5μm,18.9s,MS5.9,baz=316,slow=34
PPT Papeete 82.43 130 *e*P P 01 55 38.4 +2.7
PPT *e* 01 58 46.4
PPT *e*S S 02 05 52.7 +4.2
PPT pmax pmax
comp=Z,98nm,1.2s
PPT Papeete 82.43 130 *e*P P 01 55 38.4 +2.7
comp=Z,98nm,1.2s,mb5.6
PPT *e*PP PP 01 58 46.4 +1.0
PPT *e*S S 02 05 52.7 +4.2
KEK Kerkira 82.44 328 *e*P P 01 55 33.5 -2.1
ARG Arkhangelos 82.49 321 *e*P P 01 55 35.5 -0.4
ARG Arkhangelos 82.49 321 P P 01 55 35.0 -0.9
PAE Paea 82.51 130 *e*P P 01 55 38.0 +1.9
comp=Z,27nm,1.2s,mb5.1
PAE Paea 82.51 130 *e*P P 01 55 38.0 +1.9
PAE pmax pmax
comp=Z,27nm,1.2s,mb5.2
PTL Penteli 82.51 325 *e*P P 01 55 34.5 -1.5
FRF La Foret Royal 82.54 339⇑*i*P P 01 55 36.3 +0.2
comp=Z,634nm,1.7s,mb6.1
FRF La Foret Royal 82.54 339⇑*i*P P 01 55 36.3 +0.2
FRF pmax pmax
comp=Z,317nm,1.7s,mb6.1
FRF La Foret Royal 82.54 339⇑*i*P P 01 55 36.3 +0.2
comp=Z,317nm,1.7s,mb6.1
MMLI Mount Malkishu 82.59 314 Pn **P 01 55 36.4 -0.1**
ATH Athens Observa 82.63 325 *e*P P 01 55 35.5 -1.2
LASF Ste Croix 82.65 341⇑*i*P P 01 55 37.7 +1.1
comp=Z,608nm,1.7s,mb6.1
VLY Voula,Athens 82.71 325 *e*P P 01 55 34.0 -3.1
LMR La Mourre 82.79 339⇑*i*P P 01 55 37.7 +0.3
comp=Z,1μm,1.7s,mb6.3
LMR La Mourre 82.79 339⇑*i*P P 01 55 37.7 +0.3
LMR pmax pmax
comp=Z,560nm,1.7s,mb6.3
LMR La Mourre 82.79 339⇑*i*P P 01 55 37.7 +0.3
comp=Z,560nm,1.7s,mb6.3
KALE Kalithea 82.82 326 P P 01 55 36.2 -1.4
EFP Efpalio 82.87 326 *e*P P 01 55 35.5 -2.4
EFP Efpalio 82.87 326 P P 01 55 35.7 -2.2
SLTI Sal'it 82.93 314 ⇑Pn P 01 55 38.4 +0.1
PGF Pioggiola 82.94 337⇑*i*P P 01 55 38.4 +0.2
comp=Z,670nm,1.7s,mb6.1
PGF Pioggiola 82.94 337⇑*i*P P 01 55 38.4 +0.2
PGF pmax pmax
comp=Z,335nm,1.7s,mb6.1
PGF Pioggiola 82.94 337⇑*i*P P 01 55 38.4 +0.2
comp=Z,335nm,1.7s,mb6.1
LAKA Lakka 83.02 326 P P 01 55 36.7 -1.9
GUR Goura 83.16 326 *e*P P 01 55 37.5 -1.9
GUR Goura 83.16 326 P P 01 55 37.8 -1.6
DSI Dead Sea 83.33 313 Pn **P 01 55 40.3 -0.1**
RLS Riolos of Patr 83.36 327 *e*P P 01 55 39.0 -1.4
VLS Valsamata 83.55 327 *e*P P 01 55 39.0 -2.4
VLS Valsamata 83.55 327 P P 01 55 39.6 -1.8
STKA Stephens Creek 83.63 194 *e*P P 01 55 41.1 -0.5
comp=Z,12nm,0.6s,mb5.2
STKA Stephens Creek 83.63 194 P P 01 55 41.1 -0.5
comp=Z,18nm,0.9s,mb5.2,baz=340,slow=7.9,SNR=17
STKA LR LR 02 29 04.2
comp=Z,4μm,22.0s,MS5.8,baz=8.0,slow=33
STKA Stephens Creek 83.63 194 *e*P P 01 55 41.1 -0.5
comp=Z,10nm,1.0s,mb4.9
VLX Vlachokerasia 83.65 326 *e*P P 01 55 34.0 -7.9
MTLF Montolieu 83.68 342⇑*i*P P 01 55 43.0 +1.0
comp=Z,386nm,1.6s,mb6.0
MTLF Montolieu 83.68 342⇑*i*P P 01 55 43.0 +1.0
MTLF pmax pmax
comp=Z,193nm,1.6s,mb6.0
MTLF Montolieu 83.68 342⇑*i*P P 01 55 43.0 +1.0
comp=Z,193nm,1.6s,mb6.0
ITM Ithomi 83.98 326 *e*P P 01 55 42.0 -1.6
LRDF Laroque-de-Fa 84.01 342 *e*P P 01 55 44.6 +1.0
ZKR Zakros 84.20 322 *e*P P 01 55 44.0 -0.8
ZKR Zakros 84.20 322 P P 01 55 43.5 -1.3
ZFRI Zfri 84.28 313 Pn **P 01 55 45.3 0.0**
PYL PYLOS 84.30 326 *e*P P 01 55 43.5 -1.7
CARF Carcanieres 84.31 342 *e*P P 01 55 45.9 +0.7
EPF Esparros 84.33 343⇑*i*P P 01 55 45.5 +0.2
comp=Z,252nm,1.6s,mb5.8
EPF Esparros 84.33 343⇑*i*P P 01 55 45.5 +0.2
EPF pmax pmax
comp=Z,126nm,1.6s,mb5.8
EPF Esparros 84.33 343⇑*i*P P 01 55 45.5 +0.2
comp=Z,126nm,1.6s,mb5.8
KZIT Kziot 84.34 314 ⇑Pn P 01 55 45.6 0.0
LABF Labassere 84.36 344 *e*P P 01 55 45.2 -0.3
FILF Fillols 84.37 342 *e*P P 01 55 45.9 +0.4
ORDF Ordiarp 84.38 344 *e*P P 01 55 45.4 -0.1
OSSF Osses 84.39 345 *e*P P 01 55 45.4 -0.2
EJON La Jonquera 84.41 341 P P 01 55 46.0 +0.3
comp=Z,1μm,2.8s,mb6.5
REYF Montagne du Re 84.43 344 *e*P P 01 55 45.6 -0.2
LAST Lasithi 84.45 322 *e*P P 01 55 45.0 -1.0
LAST Lasithi 84.45 322 P P 01 55 44.4 -1.6
EALK Alkurruntz 84.47 345 P P 01 55 46.5 +0.5
comp=Z,1μm,3.7s
MEEK Meekatharra 84.52 214 *e*P P 01 55 45.3 -0.9
SJPF Ste Jean 84.53 345⇑*i*P P 01 55 46.7 +0.4
comp=Z,320nm,1.9s,mb5.8
SJPF Ste Jean 84.53 345⇑*i*P P 01 55 46.7 +0.4
SJPF pmax pmax
comp=Z,160nm,1.9s,mb5.8
SJPF Ste Jean 84.53 345⇑*i*P P 01 55 46.7 +0.4
comp=Z,160nm,1.9s,mb5.8
ELIZ Elizondo 84.53 345 P P 01 55 46.5 +0.2
ELIZ pmax pmax
comp=Z,320nm,2.1s,mb6.1
ELIZ Elizondo 84.53 345 P P 01 55 46.5 +0.3
comp=Z,320nm,2.1s,mb6.1
VIEF Viey 84.53 344 *e*P P 01 55 47.2 +0.9
RESF Ens 84.55 343 *e*P P 01 55 47.1 +0.7
CLLI Llivia 84.56 342 P P 01 55 47.4 +0.9
LARF Larrau 84.56 344 *e*P P 01 55 46.9 +0.5
ETSF Etsaut 84.62 344⇑*i*P P 01 55 47.8 +1.0
comp=Z,334nm,1.6s,mb5.9
ETSF Etsaut 84.62 344⇑*i*P P 01 55 47.8 +1.0
ETSF pmax pmax
comp=Z,167nm,1.6s,mb5.9
ETSF Etsaut 84.62 344⇑*i*P P 01 55 47.8 +1.0
comp=Z,167nm,1.6s,mb5.9
VALF Valcebollere 84.63 342 *e*P P 01 55 47.6 +0.8
EBIE Bielsa 84.70 343 P P 01 55 48.5 +1.3
comp=Z,1μm,3.2s
VAM Vamos 84.72 323 *e*P P 01 55 43.5 -3.9
ELAN Lanestosa 84.77 346 P P 01 55 47.6 +0.1
comp=Z,1μm,2.7s,mb6.6
HRFI Mount Harif 84.78 313 Pn **P 01 55 47.8 0.0**
CSOR Sort 84.82 343 P P 01 55 48.5 +0.7
comp=Z,587nm,2.4s,mb6.3
KARN Karanos 84.83 324 *e*P P 01 55 46.5 -1.5
SIVA Sivas 84.84 323 *e*P P 01 55 47.0 -1.0
SIVA Sivas 84.84 323 P P 01 55 46.6 -1.4
KRMI Paran Flat 84.86 313 ⇑Pn P 01 55 48.0 -0.2
EARI Arriondas 84.95 347 P P 01 55 49.1 +0.7
comp=Z,980nm,2.3s,mb6.5
CEL Celeste 85.01 331 *e*P P 01 55 49.1 +0.3
comp=Z,56nm,0.8s,mb5.8
CEL LR LR
comp=Z,16μm,19.0s,MS6.4
EIL Elat 85.13 313 LR LR 02 38 32.3
comp=Z,13μm,19.8s,MS6.3,baz=40,slow=39
EIL Elat 85.13 313 ⇑Pn P 01 55 49.6 +0.1
EIL Elat 85.13 313 *e*P sP 01 56 16.0 +7.9
CFON Fontmartina 85.16 342 P P 01 55 49.9 +0.4
comp=Z,2μm,4.8s
EPON Pontenova 85.18 349 P P 01 55 49.5 0.0
comp=Z,1μm,2.2s,mb6.6
EMIR Miracle 85.19 342 P P 01 55 49.7 +0.1
comp=Z,968nm,3.4s
ECRI Cripan 85.23 345 P P 01 55 50.3 +0.5
ECRI pmax pmax
comp=Z,538nm,2.5s,mb6.2
ECRI Cripan 85.23 345 P P 01 55 50.3 +0.5
comp=Z,538nm,2.5s,mb6.2
FORT Forrest 85.41 205 *e*P P 01 55 50.2 -0.4
comp=Z,88nm,0.8s,mb5.9
FORT Forrest 85.41 205 *e*P P 01 55 50.3 -0.3
comp=Z,134nm,0.9s,mb6.1
VSL Villasalto 85.72 336 *e*P P 01 55 52.6 +0.3
comp=Z,536nm,1.7s,mb6.5
VSL LR LR
comp=Z,12μm,20.0s,MS6.3
DWPF Disney 85.73 49 *e*P P 01 55 53.1 +0.6
comp=Z,487nm,1.8s,mb6.4
DWPF LR LR
comp=Z,10μm,20.0s,MS6.2
ESAC San Caprasio 85.75 344 P P 01 55 53.0 +0.6
comp=Z,1μm,2.6s,mb6.6
EMAZ Mazaricos 85.77 350 P P 01 55 52.5 0.0
comp=Z,819nm,2.0s,mb6.6
STS Santiago 85.78 350 P P 01 55 52.3 -0.3
STS pmax pmax
comp=Z,97nm,1.1s,mb6.0
STS Santiago 85.78 350 P P 01 55 52.3 -0.2
comp=Z,97nm,1.1s,mb5.9
EPOB Poblet 85.82 342 P P 01 55 52.9 +0.1
comp=Z,730nm,3.5s
ERUA La Rua 86.10 349 P P 01 55 54.2 +0.1
VAE Valguarnera 86.19 331 LR LR 02 39 34.9
comp=Z,18μm,18.4s,MS6.5,baz=39,slow=39
CAN Canberra 86.20 187 PFAKE 01 56 10.0 +16
CAN LR LR
comp=Z,6μm,22.0s,MS6.0
ERTA Horta de San J 86.34 343 P P 01 55 55.1 -0.3
comp=Z,440nm,3.0s
ECAL Calabor 86.49 348 P P 01 55 56.0 -0.1
comp=Z,1μm,3.8s
EZAM Zamans 86.53 350 P P 01 55 56.2 0.0
PBRG Braganca 86.63 348 *e*P P 01 55 58.2 +1.4
comp=Z,84nm,1.7s,mb5.7
PBRG Braganca 86.63 348 *e*P P 01 55 58.0 +1.2
ELOB Lobios 86.73 349 P P 01 55 56.8 -0.5
comp=Z,1μm,4.0s
PCAB Cabril 86.88 349 *e*P P 01 55 58.3 +0.3
comp=Z,115nm,1.6s,mb5.9
ETOR Torete 86.90 345 P P 01 55 57.9 -0.2
ETOR pmax pmax
comp=Z,17nm,0.8s,mb5.3
ETOR Torete 86.90 345 P P 01 55 57.9 -0.2
comp=Z,17nm,0.8s,mb5.3
ETOS Mallorca 87.00 341 P P 01 55 58.3 -0.3
comp=Z,420nm,3.4s
EMOS Mosqueruela 87.07 343 P P 01 55 59.1 +0.2
comp=Z,153nm,2.6s,mb5.8
PVRL Vila Real 87.27 349 *e*P P 01 56 00.1 +0.2
comp=Z,149nm,1.5s,mb6.0
PVRL Vila Real 87.27 349 *e*P P 01 55 59.3 -0.6
MVO Moncorvo 87.30 348 *e*P P 01 55 59.6 -0.4
comp=Z,131nm,1.6s,mb5.9
MVO *e*S S 02 06 32.8 -3.7
MVO *e*LQ 02 20 13.4
MVO *e*LR LR 02 25 47.8
comp=Z,7μm,18.0s
MVO Moncorvo 87.30 348 P P 01 55 59.4 -0.6
GUD Guadarrama 87.41 346 P P 01 56 00.4 -0.2
TBI Tubuai 87.44 133 *e*PP PP 01 59 33.4 +7.2
comp=Z,434nm,28.0s
TBI *e*S S 02 06 36.2 -1.7
comp=Z,4μm,28.7s
TBI *e*SS SS 02 12 24.1 -0.4
comp=Z,3μm,27.0s
TBI *e*LR LR 02 23 27.4
comp=Z,10μm,33.5s,baz=330
WDD Wield Dalam 87.64 331 *e*P P 01 56 03.0 +1.3
comp=Z,1μm,1.5s,mb6.8
WDD LR LR
comp=Z,10μm,20.0s,MS6.2
MORW Morawa 87.66 215 *e*P P 01 56 00.8 -0.8
PVIS Viseu 87.85 349 *e*P P 01 56 02.1 -0.6
comp=Z,125nm,1.9s,mb5.8
ECHE Chera 87.91 344 P P 01 56 02.7 -0.3
MILA Mila 87.92 187 *e*P P 01 56 02.8 +0.2
comp=Z,162nm,2.0s,mb5.9
EIBI Ibiza 88.01 342 P P 01 56 03.2 -0.3
comp=Z,608nm,4.7s
MTE Manteigas 88.11 349 *e*P P 01 56 03.6 -0.3
comp=Z,140nm,2.0s,mb5.8
MTE *e*S S 02 06 47.2 +2.9
MTE *e*LQ 02 20 13.3
MTE *e*LR LR 02 26 15.5
comp=Z,6μm,18.0s
MTE Manteigas 88.11 349 *e*P P 01 56 03.4 -0.5
comp=Z,390nm,2.2s,mb6.2
MTE LR LR
comp=Z,6μm,20.0s,MS6.0
EPLA Plasencia 88.25 347 P P 01 56 03.8 -0.8
EPLA pmax pmax
comp=Z,608nm,4.4s
EPLA Plasencia 88.25 347 P P 01 56 03.8 -0.8
comp=Z,608nm,4.4s
ESDC Sonseca Array 88.33 346 P P 01 56 04.4 -0.6
comp=Z,22nm,1.0s,mb5.4,baz=7.0,slow=4.2,SNR=43
ESDC LR LR 02 42 32.8
comp=Z,9μm,20.0s,MS6.2,baz=25,slow=40
ESDC Sonseca Array 88.33 346 P P 01 56 04.4 -0.5
comp=Z,24nm,1.0s,mb5.4
ESLA Sonseca Array 88.33 346 *e*P P 01 56 04.6 -0.4
comp=Z,40nm,1.6s,mb5.4
ESLA LR LR
comp=Z,63μm,20.0s,MS7.0
PAB San Pablo 88.51 346 *e*P P 01 56 05.0 -0.8
PAB pmax pmax
comp=Z,28nm,0.9s,mb5.6
PAB MLR MLR
comp=Z,10μm,19.0s,MS6.2
PAB San Pablo 88.51 346 *e*P P 01 56 05.0 -0.8
comp=Z,28nm,0.9s,mb5.6
PAB LR LR
comp=Z,10μm,19.0s,MS6.2
EBEN Beniarda 88.63 343 P P 01 56 06.4 0.0
comp=Z,157nm,1.9s,mb6.0
PCBR Castelo Branco 88.66 348 *e*P P 01 56 06.3 -0.2
comp=Z,90nm,2.0s,mb5.8
TOO Toolangi 88.76 190 *e*P P 01 56 06.9 +0.3
ETOB Tobarra 88.93 344 P P 01 56 07.4 -0.4
comp=Z,232nm,2.1s,mb6.1
CAEH 'Ain El Ouahch 88.93 337 P P 01 56 06.8 -1.0
CMAH Djebel Manchou 88.94 336 P P 01 56 06.8 -1.1
PTOM Tomar 88.99 349 *e*P P 01 56 07.7 -0.4
comp=Z,71nm,1.5s,mb5.8
PTOM Tomar 88.99 349 *e*P P 01 56 07.0 -1.1
PMRV Marv??o 89.05 348 *e*P P 01 56 07.2 -1.2
comp=Z,76nm,1.8s,mb5.7
PMRV *e*S S 02 06 54.8 +1.6
PMRV *e*LQ 02 20 58.4
PMRV *e*LR LR 02 30 12.1
comp=Z,5μm,18.0s
BBSR BB Station 89.09 35 P P 01 56 09.0 +0.3
comp=Z,54nm,1.1s,mb5.8
BBSR LR LR
comp=Z,4μm,21.0s,MS5.8
EVIA Vianos 89.10 344 P P 01 56 08.4 -0.2
ABSA Djebel Ababsia 89.25 336 P P 01 56 08.6 -0.8
CKFL Kef-Lekhel 89.32 337 P P 01 56 09.0 -0.7
DFRA Djebel Bou Aff 89.39 338 P P 01 56 09.6 -0.4
CASM Ain Smara 89.51 337 P P 01 56 09.2 -1.4
PESTR Estremoz 89.63 348 *e*P P 01 56 09.9 -1.2
comp=Z,65nm,1.6s,mb5.7
PESTR *e*S S 02 07 06.0 +7.4
PESTR *e*LQ 02 21 33.0
PESTR *e*LR LR 02 26 32.7
comp=Z,8μm,18.0s
EMUR La Murta 89.65 343 P P 01 56 10.4 -0.8
comp=Z,7.2nm,1.3s,mb4.8
EBAD Badajoz 89.67 348 P P 01 56 10.0 -1.2
PMAFR Mafra 89.75 350 *e*P P 01 56 10.7 -0.9
comp=Z,131nm,1.8s,mb6.0
PMAFR *e*S S 02 07 06.0 +6.3
PMAFR *e*LQ 02 21 14.7
PMAFR *e*LR LR 02 27 06.1
comp=Z,7μm,20.0s
EBAN Banos Encina 89.78 345 P P 01 56 11.2 -0.6
SET Setif 89.84 338 P P 01 56 14.0 +1.9
EADA Adamuz 89.90 346 P P 01 56 12.0 -0.3
comp=Z,230nm,2.3s,mb6.1
EHUE Huescar 89.92 344 P P 01 56 11.5 -1.0
LIS Lisbon 89.97 350 *e*P P 01 56 11.8 -0.9
LIS *e*S SKSac 02 06 40.2 +0.6
LIS *e*S SKSac 02 06 40.3 +0.7
LIS AMS AMS 02 44 18.3
comp=Z,7μm,25.2s,MS6.0
LIS Lisbon 89.97 350 *e*P P 01 56 11.8 -0.9
LIS *e*S SKSac 02 06 40.2 +0.6
LIS A 02 44 18.3
comp=Z,7μm,25.2s
LIS Lisbon 89.97 350 *e*P P 01 56 11.7 -1.0
LIS *e*S SKSac 02 06 40.2 +0.6
EQES Quesada 90.01 345 P P 01 56 12.7 -0.2
comp=Z,423nm,2.7s,mb6.3
EVO Evora 90.01 349⇑*i*P P 01 56 12.1 -0.8
comp=Z,92nm,1.6s,mb5.5
EVO *e*MLR MLR
comp=Z,9μm,18.0s,MS6.0
EVO Evora 90.01 349 *e*P P 01 56 12.0 -0.9
comp=Z,69nm,1.6s,mb5.7
EVO Evora 90.01 349 *e*P P 01 56 11.5 -1.4
EVOP Sao Brissos 90.03 349 *e*P P 01 56 12.2 -0.8
EVOP *e*S SKSac 02 06 40.3 +0.2
EVOP *e*S SKSac 02 06 40.4 +0.4
EVOP *e*SS SS 02 13 02.3 +2.9
EVOP AMS AMS 02 46 00.1
comp=Z,7μm,17.2s,MS6.1
EVOP Sao Brissos 90.03 349 *e*P P 01 56 12.1 -0.9
EVOP *e*S SKSac 02 06 40.2 +0.2
EVOP *e*SS SS 02 13 02.3 +2.8
ECAB El Cabril 90.11 347 P P 01 56 12.7 -0.6
PBAR Barrancos 90.24 348 *e*P P 01 56 12.8 -1.1
comp=Z,100nm,1.6s,mb5.9
PBAR *e*S S 02 07 08.4 +4.1
PBAR *e*LQ 02 21 20.0
PBAR *e*LR LR 02 27 23.1
comp=Z,8μm,16.0s
PBEJ Beja 90.49 348 *e*P P 01 56 14.5 -0.6
comp=Z,56nm,1.9s,mb5.6
EMIN Mina Concepcio 90.59 348 P P 01 56 15.2 -0.4
comp=Z,221nm,2.9s,mb6.0
ECOG Cogollos-Vega 90.61 345 P P 01 56 15.4 -0.3
ECOG pmax pmax
comp=Z,4.0nm,0.4s,mb5.1
ECOG Cogollos-Vega 90.61 345 P P 01 56 15.4 -0.2
comp=Z,4.4nm,0.4s,mb5.1
ENIJ Nijar 90.67 344 P P 01 56 14.6 -1.4
MESJ Messejana 90.72 349 *e*P P 01 56 15.6 -0.6

MESJ eS SKSac 02 06 45.1 +1.1
MESJ eS SKSac 02 06 45.1 +1.1
MESJ AMS AMS 02 46 18.8
comp=Z,5μm,16.5s,MS6.0
MESJ Messejana 90.72 349 eP **P 01 56 15.6 -0.6**
MESJ eS SKSac 02 06 45.0 +1.0
NWAO Narrogin (SRO) 90.73 213 PFAKE 01 56 30.0 +14
NWAO LR LR
comp=Z,3μm,20.0s,MS5.7
ELOJ Sierra Loja 90.83 345 P **P 01 56 15.8 -0.9**
ERON Agron 90.90 345 P **P 01 56 15.6 -1.4**
PCVE Castro Verde 90.91 349 eP **P 01 56 15.9 -1.1**
comp=Z,74nm,1.8s,mb5.7
PCVE eS S 02 07 13.0 +2.6
PCVE eLQ 02 20 19.8
PCVE eLR LR 02 26 36.3
comp=Z,6μm,18.0s
EGUA Guajares 91.04 345 P **P 01 56 16.2 -1.5**
PVAQ Vaqueiros 91.09 348 eP **P 01 56 16.8 -1.1**
comp=Z,75nm,1.6s,mb5.8
PVAQ eS S 02 07 14.2 +2.1
PVAQ eLQ 02 22 31.4
PVAQ eLR LR 02 30 46.9
comp=Z,7μm,16.0s
PBDV Barranco-do-Ve 91.28 348 eS S 02 07 15.1 +1.3
PBDV eLQ 02 20 27.2
PBDV eLR LR 02 26 46.5
comp=Z,8μm,16.0s
MORF Marmelete 91.30 349 eP **P 01 56 18.5 -0.4**
comp=Z,91nm,1.5s,mb5.9
MORF eS S 02 07 15.0 +1.0
MORF eLQ 02 22 27.4
MORF eLR LR 02 28 16.6
comp=Z,5μm,16.0s
MORF Marmelete 91.30 349 eP **P 01 56 17.9 -1.0**
MORF eS SKSac 02 06 48.2 +0.8
ESPR Espera 91.36 347 P **P 01 56 17.3 -1.9**
PFVI Vila Bisbo 91.49 349 eP **P 01 56 19.4 -0.4**
comp=Z,122nm,1.5s,mb6.0
PFVI eS S 02 07 13.9 -1.9
PFVI eLR LR 02 26 50.5
comp=Z,6μm,18.0s
PFVI Vila Bisbo 91.49 349 eP **P 01 56 19.1 -0.7**
EMIJ Mijas 91.50 346 P **P 01 56 18.7 -1.1**
comp=Z,15nm,1.1s,mb5.2
EJIF Jimena Fronter 91.71 346 P **P 01 56 20.3 -0.5**
SFS San Fernando 91.81 347 PFAKE 01 56 30.0 +8.8
SFS LR LR
comp=Z,23μm,19.0s,MS6.6
DGAR Diego Garcia 92.59 262 PFAKE 01 56 40.0 +15
DGAR LR LR
comp=Z,4μm,19.0s,MS5.9
SNZO South Karori 93.08 167 PFAKE 01 56 40.0 +13
SNZO LR LR
comp=Z,11μm,20.0s,MS6.3
TGUH Tegucigalpa,Un 94.29 62 eP **P 01 56 32.0 -1.0**
comp=Z,22nm,1.0s,mb5.5
TGUH LR LR
comp=Z,4μm,22.0s,MS5.8
RKT Rikitea 94.56 121 ePP PP 02 00 16.4 -6.2
comp=Z,436nm,30.8s
RKT eSKSac SKSac 02 07 05.8 +0.6
comp=Z,2μm,26.2s
RKT eSP SP 02 09 00.0 +1.0
comp=Z,3μm,32.8s
RKT eSS SS 02 14 06.2 -1.0
comp=Z,3μm,28.5s
RKT eLR LR 02 26 55.5
comp=Z,18μm,21.5s,baz=323
GTBY Guantanamo Bay 95.69 49 PFAKE 01 56 50.0 +11
GTBY LR LR
comp=Z,8μm,20.0s,MS6.2
MTDJ Mount Denham 95.96 52 PFAKE 01 56 50.0 +9.4
MTDJ LR LR
comp=Z,5μm,22.0s,MS6.0
ATD Arta Tunnel 96.03 296 LR LR 02 46 09.8
comp=Z,4μm,18.3s,MS6.0,baz=249,slow=39
GRTK Grand Turk 96.15 45 PFAKE 01 56 50.0 +8.6
GRTK LR LR
comp=Z,8μm,21.0s,MS6.2
PMAR Madeira 96.57 355 eP **P 01 56 43.1 0.0**
comp=Z,175nm,1.7s,mb6.2
SDDR Presa de Saban 98.29 46 PFAKE 01 57 00.0 +8.9
SDDR LR LR
comp=Z,5μm,22.0s,MS6.0
JTS JuntasAbangare 98.66 62 LR LR 02 47 21.8
comp=Z,1μm,19.6s,MS5.4,baz=323,slow=39
JTS JuntasAbangare 98.66 62 PFAKE 01 57 00.0 +7.2
JTS LR LR
comp=Z,3μm,22.0s,MS5.7
PTCN Pitcairn Islan 98.78 119 PFAKE 01 57 00.0 +7.0
PTCN LR LR
comp=Z,14μm,22.0s,MS6.4
MSEY Mahe Island 101.20 276 PFAKE 01 57 20.0 +16
MSEY LR LR
comp=Z,7μm,21.0s,MS6.1
SJG San Juan 101.31 42 PFAKE 01 57 20.0 +15
SJG LR LR
comp=Z,3μm,21.0s,MS5.8
BCIP Isla Barro Col 102.39 58 PFAKE 01 57 20.0 +11
BCIP LR LR
comp=Z,2μm,19.0s,MS5.7
TAM Tamanrasset 102.56 334 PFAKE 01 57 20.0 +10
TAM LR LR
comp=Z,11μm,21.0s,MS6.4
ANWB Willy Bob 103.50 38 PFAKE 01 57 30.0 +16
ANWB LR LR
comp=Z,3μm,20.0s,MS5.9
SDV Santo Domingo 107.36 50 PFAKE 02 01 50.0 +10
SDV LR LR
comp=Z,2μm,22.0s,MS5.7
BBGH Gun Hill 108.48 38 PFAKE 02 01 50.0 +7.9
BBGH LR LR
comp=Z,5μm,20.0s,MS6.0
GRGR Grenville 108.55 41 PFAKE 02 01 50.0 +7.8
GRGR LR LR
comp=Z,3μm,21.0s,MS5.9
KMBO Kilima Mbogo 109.51 294 PFAKE 02 02 00.0 +16
KMBO LR LR
comp=Z,3μm,20.0s,MS5.9
OTAV Otavalo 110.55 62 PFAKE 02 02 00.0 +14
OTAV LR LR
comp=Z,1μm,21.0s,MS5.5
RPN Rapa Nui 112.47 106 PFAKE 02 02 00.0 +11
RPN LR LR
comp=Z,7μm,20.0s,MS6.2
ABPO Ambohimpanom 117.28 273 PFAKE 02 02 10.0 +11
ABPO LR LR
comp=Z,3μm,21.0s,MS5.9
DRV Dumont d'Urvil 118.02 188 PP PP 02 03 22.0 +7.3
DRV SP SP 02 12 47.0 -6.8
DRV SS SS 02 19 36.0 +11
DRV L 02 32 00.0
DRV R 02 41 00.0
DBIC Dimbokro 120.65 340 PKP PKPdf 02 02 04.8 -0.6
comp=Z,7.3nm,0.7s,baz=8.3,slow=2.7,SNR=9.3
DBIC Dimbokro 120.65 340 PKP PKPdf 02 02 04.8 -0.6
DBIC LR LR
comp=Z,2μm,21.0s,MS5.8
TIC Toumodi 120.71 340 eP PKPdf 02 02 01.5 -4.0
comp=Z,241nm,1.8s
KIC Kosan Boka 120.92 339 eP PKPdf 02 02 05.4 -0.5
comp=Z,45nm,1.0s
LIC Lamto 121.12 340 eP PKPdf 02 02 03.7 -2.6
comp=Z,111nm,1.5s
LIC Lamto 121.12 340⇑ iPKIKP PKPdf 02 02 05.8 -0.5
comp=Z,128nm,1.5s
LIC eMLR MLR
comp=Z,7μm,21.2s,MS6.0
LIC Lamto 121.12 340⇑ iPKPdf PKPdf 02 02 05.8 -0.5
LIC LR LR
comp=Z,4μm,21.3s,MS6.0
CASY Casey 122.23 200 PFAKE 02 02 20.0 +13
CASY LR LR
comp=Z,4μm,22.0s,MS6.0
LSZ Lusaka 126.14 292 PFAKE 02 02 30.0 +14
LSZ LR LR
comp=Z,4μm,19.0s,MS6.1
MIR Mirnyy 126.91 207 ePKIKP PKPdf 02 02 13.0 -2.6
MIR pmax pmax
comp=Z,56nm,1.8s
SBA Scott Base 128.64 178 PFAKE 02 02 30.0 +11
SBA LR LR
comp=Z,4μm,21.0s,MS6.1
LPAZ La Paz 129.85 63 PKP PKPdf 02 02 22.6 -0.2
comp=Z,4.0nm,0.9s,baz=351,slow=3.0,SNR=13
LPAZ La Paz 129.85 63 ePKPdf PKPdf 02 02 22.9 +0.1
LPAZ LR LR
comp=Z,5μm,22.0s,MS6.1
RCBR Riachuelo 133.67 19 PFAKE 02 02 40.0 +10
RCBR LR LR
comp=Z,2μm,20.0s,MS5.8
LBTB Lobatse 135.17 287 PFAKE 02 02 40.0 +7.4
LBTB LR LR
comp=Z,3μm,19.0s,MS6.0
TSUM Tsumeb 135.30 300 PFAKE 02 02 50.0 +17
TSUM LR LR
comp=Z,4μm,22.0s,MS6.1
MAW Mawson 137.29 214 PKP PKPdf 02 02 37.2 +2.0
comp=Z,2.4nm,0.6s,baz=73,slow=2.7,SNR=4.4
MAW Mawson 137.29 214 PKP PKPdf 02 02 37.2 +2.0
MAW LR LR
comp=Z,4μm,20.0s,MS6.1
LCO Las Campanas 137.98 77 PFAKE 02 02 50.0 +12
LCO LR LR
comp=Z,3μm,20.0s,MS6.0
BOSA Boshof 137.99 284 PKP PKPdf 02 02 35.5 -2.3
comp=Z,5.0nm,0.8s,baz=136,slow=3.7,SNR=5.2
BOSA Boshof 137.99 284 PKPdf PKPdf 02 02 37.6 -0.2
BOSA LR LR
comp=Z,4μm,20.0s,MS6.2
QSPA South Pole Qui 140.67 180 ePKPdf PKPdf 02 02 33.5 -7.5
QSPA LR LR
comp=Z,5μm,22.0s,MS6.2
SHEL Horse Pasture 142.61 333 PFAKE 02 03 00.0 +14
SHEL LR LR
comp=Z,3μm,21.0s,MS6.0
SUR Sutherland 143.36 284 PFAKE 02 03 00.0 +13
SUR LR LR
comp=Z,4μm,20.0s,MS6.2
CPUP Villa Florida 143.87 60 PKP PKPdf 02 02 45.5 -2.9
comp=Z,4.8nm,0.6s,baz=336,slow=2.9,SNR=14
CPUP Villa Florida 143.87 60 PKP PKPdf 02 02 45.5 -2.9
CPUP LR LR
comp=Z,642nm,21.0s,MS5.4
PLCA Paso Flores 145.56 92 PKPbc PKPbc 02 02 50.1 -1.0
comp=Z,58nm,1.1s,baz=307,slow=3.5,SNR=18
PLCA Paso Flores 145.56 92 ePKPdf PKPdf 02 02 50.1 -0.7
PLCA LR LR
comp=Z,6μm,21.0s,MS6.3
SYO Syowa Base 146.00 215⇓ ieP PKPdf 02 02 47.6 -3.1
SYO Syowa Base 146.00 215⇓ iP PKPdf 02 02 51.1 +0.4
CAM4 Nova Friburgo 147.47 36⇑ iP PKPdf 02 02 56.5 +1.8
CAM4 i 02 02 59.3
CAM4 i 02 03 08.6
CAM4 i 02 03 10.6
CAM4 i 02 03 16.0
CAM4 i 02 03 19.9
CAM4 i 02 03 27.7
CAM4 i 02 03 44.1
TRQA Tornquist 149.41 81 ePKPdf PKPdf 02 02 57.3 0.0
TRQA ePKPbc PKPbc 02 03 01.3 -0.5
TRQA LR LR
comp=Z,4μm,21.0s,MS6.2
USHA Ushuaia 152.39 116 PKPbc PKPbc 02 03 07.7 -0.5
comp=Z,11nm,0.8s,baz=279,slow=2.2,SNR=8.0
USHA PKPab PKPab 02 03 16.4 -2.2
comp=Z,18nm,0.8s,baz=275,slow=7.1,SNR=6.7
PMSA Palmer Station 154.49 139 PFAKE 02 03 20.0 +16
PMSA LR LR
comp=Z,3μm,19.0s,MS6.2
MAIT Maitri 154.67 206 ePKPdif PKPdf 02 03 12.2 +8.1
VNA1 Neumayer--Stat 159.14 193 ePKPdf PKPab 02 03 45.4 -1.7
VNA1 e 02 03 55.9
VNA1 e 02 04 01.1

CSEM 24 01:46:25.0±0.3, 27°.24N×55°.88E, h2km, ML3.9, Error ellipse: s-maj=13.9km s-min=3.7km az=169.0, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.30**	**59**	ePg	Pg	01 46 30.6	-0.3
KRBR	**Kerman**	**2.84**	**16**	ePn	Pn	01 47 11.9	+0.6
ZHSF	**Zahedan**	**4.92**	**60**	ePn	Pn	01 47 40.5	+0.6
NASN	**Na'in**	**6.14**	**335**	ePn	Pn	01 47 57.1	+0.3
RDF	**Al-Radifah**	**7.55**	**285**	eP	Pn	01 48 15.8	-0.2
NAY	**Al-Naaiem**	**7.88**	**287**	eP	Pn	01 48 20.5	-0.1
MIB	**Mutribah**	**7.93**	**291**	eP	Pn	01 48 21.4	0.0

*ISCJB **24** 01:52:20.0±0.7, 50°.69N±0°.06×158°.01E±0°.10, h33km, mb3.9/7, Error ellipse: s-maj=10.6km s-min=6.5km az=42.4*
*MOS **24** 01:52:20.8±1.2, 50°.74N×157°.91E, h46km, mb4.3/2, Error ellipse: s-maj=35.3km s-min=10.2km az=76.5*
*NEIC **24** 01:52:22.1±1.0, 50°.70N×157°.98E, h35km, Error ellipse: s-maj=26.1km s-min=14.1km az=90.0*
*IDC **24** 01:52:24.6±4.6, 50°.84N×157°.71E, h62km±39km, mb3.6/7, mb1 3.9/8, mb1mx3.5/26, mbtmp3.6/8, ML3.6/1, Error ellipse: s-maj=43.3km s-min=25.0km az=147.0*

ISC 24 01:52:22.0±0.7, 50°.74N±0°.06×157°.9E±0°.1, h35km, n20, σ1°01/27, mb3.8/7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.12**	**268**	ePN	**Pn**	**01 52 40.6**	**-0.5**
SKR				eS	**Sn**	**01 52 55.5**	**+0.2**
SKR				pmax	pmax		
	comp=E,120nm,0.5s						
SKR				pmax	pmax		
	comp=Z,190nm,0.5s						
SKR				smax			
	comp=N,4μm,0.2s						
SKR				smax			
	comp=E,2μm,0.2s						
PET	**Petropavlovsk**	**2.34**	**12**	PN	**Pn**	**01 52 57.6**	**-0.3**
PET				S	**Sn**	**01 53 24.7**	**-0.6**
PET	**Petropavlovsk**	**2.34**	**12**	Pn	**Pn**	**01 52 57.7**	**-0.2**
PETK	**Petropavlovsk-**	**2.37**	**357**	P	**Pn**	**01 52 60.0**	**+1.6**
	comp=E,16nm,0.3s,baz=146,slow=16,SNR=33						
PETK				S	**Sn**	**01 53 31.3**	**+5.0**
	comp=E,14nm,0.3s,baz=147,slow=20,SNR=7.3						
PETK	**Petropavlovsk-**	**2.37**	**357**	PN	**Pn**	**01 53 00.0**	**+1.6**
PETK				S	**Sn**	**01 53 31.3**	**+5.1**
PETK				pmax	pmax		
	comp=Z,16nm,0.3s						
PETK				smax			
	comp=N,14nm,0.3s						
PETK	**Petropavlovsk-**	**2.37**	**357**	P	**Pn**	**01 52 60.0**	**+1.6**
PETK				S	**Sn**	**01 53 31.3**	**+5.0**
NLC	**Nalytchevo**	**2.60**	**20**	PN	**Pn**	**01 53 00.2**	**-1.3**
NLC				S	**Sn**	**01 53 29.2**	**-2.6**
KII	**Karymskiy**	**3.44**	**16**	PN	**Pn**	**01 53 15.0**	**+2.0**
KII				S	**Sn**	**01 53 54.1**	**+1.6**
MKZ	**Mys Kozlova**	**4.49**	**30**	PN	**Pn**	**01 53 26.6**	**-0.8**
KBTR	**Krutoberegovo**	**6.22**	**26**	PN	**Pn**	**01 53 51.4**	**+0.2**
ILAR	**Eielson Array**	**31.47**	**42**	P	**P**	**01 58 40.1**	**+0.4**
	comp=N,0.3nm,0.5s,mb3.4,baz=263,slow=8.7,SNR=3.0						
INK	**Inuvik**	**36.58**	**36**	P	**P**	**01 59 23.3**	**-0.7**
	comp=N,2.0nm,0.7s,mb4.0,baz=217,slow=5.1,SNR=2.8						
INK	**Inuvik**	**36.58**	**36**	P	**P**	**01 59 23.3**	**-0.7**
INK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NVAR	**Mina Array Bea**	**57.88**	**67**	P	**P**	**02 02 10.6**	**+0.5**
	comp=Z,0.6nm,0.7s,mb3.8,baz=303,slow=8.3,SNR=2.7						
PDAR	**Pinedale Array**	**59.90**	**58**	P	**P**	**02 02 24.7**	**+0.6**
	comp=Z,1.6nm,0.9s,mb4.0,baz=338,slow=1.6,SNR=4.2						
TXAR	**Lajitas Array**	**72.86**	**65**	P	**P**	**02 03 47.2**	**+0.1**
	comp=Z,1.0nm,0.7s,mb3.9,baz=297,slow=4.5,SNR=4.0						
TXAR	**Lajitas Array**	**72.86**	**65**	P	**P**	**02 03 47.2**	**0.0**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TXAR	**Lajitas Array**	**72.86**	**65**	P	**P**	**02 03 47.2**	**+0.1**
ASAR	**Alice Springs**	**77.05**	**202**	P	**P**	**02 04 11.1**	**0.0**
	comp=Z,0.3nm,0.7s,mb3.3,baz=21,slow=5.2,SNR=5.9						
MMAI	**Mount Meron Ar**	**82.41**	**314**	P	**P**	**02 04 39.4**	**-0.9**
	comp=Z,6.2nm,1.1s,mb4.5,baz=30,slow=7.2,SNR=2.7						

*ISCJB **24** 01:53:13.0±1.3, 50°.84N±0°.08×158°.0E±0°.1, h60km±10km, mb3.9/11, Error ellipse: s-maj=18.3km s-min=6.4km az=135.2*
*KRSC **24** 01:53:12.1±0.7, 50°.93N×158°.01E, h81km±88km, ML4.5*
*MOS **24** 01:53:13.5±1.2, 51°.03N×157°.53E, h70km, mb4.1/8, Error ellipse: s-maj=34.1km s-min=12.6km az=78.7*
*IDC **24** 01:53:16.2±4.0, 51°.06N×157°.72E, h68km±33km, mb3.6/10, mb1 3.8/11, mb1mx3.6/26, mbtmp3.6/11, ML3.6/1, Error ellipse: s-maj=31.0km s-min=20.8km az=171.0*
*NEIC **24** 01:53:17.1±2.4, 51°.13N×157°.56E, h78km±18km, Error ellipse: s-maj=24.9km s-min=15.7km az=172.0*

ISC 24 01:53:14.1±1.3, 50°.85N±0°.08×158°.0E±0°.1, h53km±11km, n30, σ1°06/36, mb3.9/11, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.18**	**263**	PN	**Pn**	**01 53 32.1**	**-2.0**
SKR				i S	**Sn**	**01 53 48.5**	**-0.6**
SKR				pmax	pmax		
	comp=E,350nm,0.5s						
SKR				pmax	pmax		
	comp=Z,390nm,0.5s						
SKR				pmax	pmax		
	comp=N,360nm,0.3s						
SKR				smax			
	comp=N,4μm,0.5s						
SKR				smax			
	comp=E,3μm,0.5s						
ALID	**Alaid**	**1.52**	**272**	eP	**Pn**	**01 53 39.1**	**+0.3**
ALID				eS	**Sn**	**01 53 58.5**	**+1.0**
MIPR	**Malaya Ipel'ka**	**1.61**	**333**	eP	**Pn**	**01 53 40.6**	**+0.5**
MIPR				eS	**Sn**	**01 54 01.7**	**+2.0**
GRL	**Gorelyy**	**1.71**	**3**	eP	**Pn**	**01 53 41.2**	**-0.2**
GRL				eS	**Sn**	**01 54 02.2**	**+0.1**
PET	**Petropavlovsk**	**2.22**	**11**	eP	**Pn**	**01 53 48.4**	**0.0**
PET				eS	**Sn**	**01 54 14.3**	**-0.3**
PETK	**Petropavlovsk-**	**2.27**	**356**	P	**Pn**	**01 53 48.8**	**-0.2**
	comp=E,20nm,0.3s,baz=281,slow=12,SNR=6.0						
PETK				S	**Sn**	**01 54 20.7**	**+4.9**
	comp=E,15nm,0.3s,baz=130,slow=18,SNR=3.1						
NLC	**Nalytchevo**	**2.48**	**20**	eS	**Sn**	**01 54 17.1**	**-3.9**
SPN	**Mys Shipunski**	**2.59**	**29**	eS	**Sn**	**01 54 22.6**	**-1.1**
GNL	**Ganaly**	**2.85**	**360**	P	**Pn**	**01 53 58.1**	**+1.1**
ILAR	**Eielson Array**	**31.36**	**43**	P	**P**	**01 59 28.2**	**-0.9**
	comp=E,0.5nm,0.7s,mb3.4,baz=257,slow=8.2,SNR=3.8						
ILAR	**Eielson Array**	**31.36**	**43**	P	**P**	**01 59 28.2**	**-0.9**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
INK	**Inuvik**	**36.47**	**36**	P	**P**	**02 00 13.6**	**+0.2**
	comp=Z,1.6nm,0.6s,mb4.2,baz=301,slow=5.9,SNR=2.6						
INK	**Inuvik**	**36.47**	**36**	P	**P**	**02 00 13.6**	**+0.2**
INK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR	**Makanchi Array**	**47.95**	**296**	P	**P**	**02 01 45.4**	**-1.6**
	comp=Z,1.8nm,0.8s,mb4.1,baz=53,slow=8.9,SNR=5.4						
MKAR	**Makanchi Array**	**47.95**	**296**	P	**P**	**02 01 45.4**	**-1.6**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SPITS	**Spitsbergen Ar**	**49.13**	**350**	P	**P**	**02 01 53.9**	**-1.8**
	comp=Z,1.0nm,0.4s,mb4.2,baz=57,slow=7.4,SNR=6.3						
SPITS	**Spitsbergen Ar**	**49.13**	**350**	P	**P**	**02 01 53.9**	**-1.8**
SPITS				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BVAR	**Borovoye Array**	**50.76**	**309**	P	**P**	**02 02 04.3**	**-4.0**
	comp=Z,0.7nm,0.5s,mb3.9,baz=64,slow=6.8,SNR=3.7						
BVAR	**Borovoye Array**	**50.76**	**309**	P	**P**	**02 02 04.3**	**-4.0**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR	**Borovoye Array**	**50.76**	**309**	P	**P**	**02 02 04.3**	**-4.0**
NVAR	**Mina Array Bea**	**57.80**	**67**	P	**P**	**02 03 01.1**	**+1.5**
	comp=Z,0.2nm,0.4s,mb3.5,baz=299,slow=7.8,SNR=5.1						
PDAR	**Pinedale Array**	**59.81**	**58**	P	**P**	**02 03 14.8**	**+1.2**
	comp=Z,1.2nm,0.9s,mb3.9,baz=310,slow=2.4,SNR=4.3						
NOA	**NORSAR Array B**	**65.32**	**343**	P	**P**	**02 03 49.1**	**-0.9**
	comp=Z,0.5nm,0.7s,mb3.6,baz=32,slow=8.4,SNR=2.5						
NOA	**NORSAR Array B**	**65.32**	**343**	P	**P**	**02 03 49.1**	**-0.9**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	**NORSAR Array B**	**65.32**	**343**	P	**P**	**02 03 49.1**	**-0.9**
TXAR	**Lajitas Array**	**72.77**	**65**	P	**P**	**02 04 37.6**	**+0.9**
	comp=Z,1.1nm,0.5s,mb4.0,baz=292,slow=4.9,SNR=8.8						
TXAR	**Lajitas Array**	**72.77**	**65**	P	**P**	**02 04 37.6**	**+0.9**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ASAR	**Alice Springs**	**77.17**	**203**	P	**P**	**02 05 03.0**	**+1.2**
	comp=Z,0.8nm,0.7s,mb3.7,baz=15,slow=5.5,SNR=4.7						
ASAR	**Alice Springs**	**77.17**	**203**	P	**P**	**02 05 03.0**	**+1.2**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MMAI	**Mount Meron Ar**	**82.37**	**314**	P	**P**	**02 05 30.2**	**0.0**
	comp=Z,1.1nm,0.4s,mb4.1,baz=46,slow=8.3,SNR=4.7						

KRSC 24 02:03:27.4±0.7, 50°.79N×158°.09E, h34km±34km, ML3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**1.61**	**274**	eP	Pn	02 03 53.5	+0.1
ALID				eS	Sn	02 04 13.0	0.0
MIPR	**Malaya Ipel'ka**	**1.71**	**331**	eP	Pn	02 03 56.5	+1.8
MIPR				eS	Sn	02 04 18.0	+2.7
GRL	**Gorelyy**	**1.77**	**360**	eP	Pn	02 03 57.4	+1.9
GRL				eS	Sn	02 04 18.9	+2.2
PET	**Petropavlovsk**	**2.26**	**9**	eP	Pn	02 04 05.4	+3.0
PET				eS	Sn	02 04 32.9	+3.9
NLC	**Nalytchevo**	**2.51**	**18**	eS	Sn	02 04 35.2	+0.1
SPN	**Mys Shipunski**	**2.60**	**27**	eS	Sn	02 04 39.8	+2.4
MKZ	**Mys Kozlova**	**4.37**	**29**	eP	Pn	02 04 33.2	+1.9

*IDC **24** 02:21:28.4±1.0, 13°.74S×71°.09W, h0km, mb4.3/6, mb1 4.4/9, mb1mx4.2/18, mbtmp4.2/9, ML3.6/3, Error ellipse: s-maj=50.3km s-min=14.1km az=40.0*
*ISCJB **24** 02:21:34.2±1.9, 14°.2S±0°.3×71°.3W±0°.2, h68km±20km, mb4.1/7, Error ellipse: s-maj=62.3km s-min=17.3km az=35.6*
*NEIC **24** 02:21:34.6±1.0, 14°.18S×71°.34W, h55km±10km, mb4.0/2, Error ellipse: s-maj=28.9km s-min=9.6km az=215.0*
NEIC Felt [III] at Yanaoca and [II] at Cusco.

ISC 24 02:21:34.5±1.5, 14°.2S±0°.3×71°.4W±0°.2, h55km±17km, n18, σ1°06/16, mb4.3/7, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.76**	**123**	Pn	**Pn**	**02 22 30.8**	**+0.8**
	3.0nm,0.3s,baz=297,slow=14,SNR=27						
LPAZ				Pg	**Pn**	**02 22 40.0**	**+10**
	2.3nm,0.3s,baz=312,slow=16,SNR=20						
LPAZ				Lg		02 23 29.4	
	2.8nm,0.3s,baz=153,slow=7.2,SNR=2.1						
LPAZ	**La Paz**	**3.76**	**123**	ePn	**Pn**	**02 22 30.9**	**+0.8**
LPAZ				Lg		02 23 29.4	
NNA	**Nana**	**5.75**	**292**	Pn	**Pn**	**02 22 56.3**	**-1.0**
	2.7nm,0.3s,baz=115,slow=8.9,SNR=4.7						
NNA				Sn	**Sn**	**02 24 10.6**	**+8.5**
	3.7nm,0.3s,baz=202,slow=12,SNR=4.6						
NNA	**Nana**	**5.75**	**292**	ePn	**Pn**	**02 22 57.3**	**0.0**
NNA				Sn	**Sn**	**02 24 10.6**	**+8.5**
ATAH	**Atahualpa**	**9.85**	**315**	Pn	**Pn**	**02 23 50.3**	**-3.2**
	0.3nm,0.3s,baz=74,slow=16,SNR=1.7						
ATAH				Lg		02 26 41.0	
	0.3nm,0.3s,baz=74,slow=3.5,SNR=2.8						
OTAV	**Otavalo**	**15.98**	**334**	ePn	**Pn**	**02 25 16.8**	**+0.8**
	6.9nm,1.0s						
TXAR	**Lajitas Array**	**53.35**	**324**	P	**P**	**02 30 49.1**	**+0.6**
	0.5nm,0.9s,mb3.4,baz=316,slow=56,SNR=4.1						
DUG	**Dugway**	**66.42**	**326**	P	**P**	**02 32 19.6**	**+1.6**
	4.0nm,1.2s,mb4.3						
PDAR	**Pinedale Array**	**66.66**	**330**	P	**P**	**02 32 19.4**	**-0.1**
	0.8nm,1.0s,mb3.7,baz=123,slow=5.5,SNR=5.6						
ULM	**Lac du Bonnet**	**67.71**	**343**	P	**P**	**02 32 24.6**	**-1.4**
	3.2nm,0.7s,mb4.5,baz=150,slow=6.7,SNR=3.4						
DBIC	**Dimbokro**	**69.20**	**77**	P	**P**	**02 32 34.8**	**-1.3**
	3.7nm,0.8s,mb4.4,baz=267,slow=14,SNR=3.6						
YKA	**Yellowknife Ar**	**83.58**	**341**	P	**P**	**02 33 56.4**	**-0.1**
	6.5nm,0.8s,mb4.8,baz=129,slow=5.2,SNR=12						
INK	**Inuvik**	**93.34**	**341**	P	**P**	**02 34 43.5**	**+0.4**
	4.0nm,0.9s,mb4.8,baz=164,slow=5.0,SNR=4.2						
ZALV	**Zalesovo Beam**	**136.19**	**20**	PKP	PKPdf	02 40 49.5	-0.1
	1.9nm,0.7s,baz=320,slow=3.9,SNR=3.7						
ZALV	**Zalesovo Beam**	**136.19**	**20**	PKP	PKPdf	02 40 49.5	-0.1
GUMO	**Guam**	**144.81**	**273**	PKPbc	PKPdf	02 41 06.9	+0.6
	41nm,0.3s,baz=33,slow=7.9,SNR=6.4						
MJAR	**Matsushiro Arr**	**145.47**	**315**	PKPbc	PKPbc	02 41 07.0	0.0
	2.9nm,0.8s,baz=62,slow=1.2,SNR=10						
SONM	**Songino Array**	**146.45**	**3**	PKPbc	PKPbc	02 41 09.7	+0.1
	0.9nm,0.7s,baz=350,slow=1.8,SNR=3.9						

IDC 24 02:26:00.6±1.1, 14.78S×72.20W, h0km, mb3.8/4, mb1 4.2/5, mb1mx4.0/15, mbtmp3.8/5, ML3.9/1, Error ellipse: s-maj=42.8km s-min=17.3km az=37.0, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**4.20**	**111**	Pn	Pn	02 27 05.9	0.0
	4.5nm,0.3s,baz=310,slow=12,SNR=18						
LPAZ				Pg	Pg	02 27 18.0	-3.1
	5.4nm,0.3s,baz=329,slow=12,SNR=9.6						
LPAZ				Lg		02 28 15.1	
	7.4nm,0.3s,baz=165,slow=8.2,SNR=4.1						
PLCA	**Paso Flores**	**25.89**	**177**	P	P	02 31 33.9	-0.3
	2.8nm,0.9s,baz=7.8,slow=13,SNR=3.0						
TXAR	**Lajitas Array**	**53.35**	**325**	P	P	02 35 22.3	+0.4
	0.2nm,0.6s,baz=110,slow=6.8,SNR=4.9						
PDAR	**Pinedale Array**	**66.75**	**331**	P	P	02 36 54.5	+0.8
	0.2nm,0.5s,baz=148,slow=6.0,SNR=2.9						
YKA	**Yellowknife Ar**	**83.85**	**342**	P	P	02 38 29.8	-1.9
	3.1nm,0.8s,baz=132,slow=6.0,SNR=5.4						
MJAR	**Matsushiro Arr**	**145.30**	**314**	PKPbc	PKPbc	02 45 41.2	+0.8
	1.1nm,0.6s,baz=95,slow=1.9,SNR=4.9						

NIED ***24*** *02:27:00, 39.60N×141.50E, h110km, Mw5.1 Best double couple: M0=5.37000×10^16 NP1:φs=202.00000°, δ=85.00000°, λ=-92.00000°. NP2:φs=49.00000°, δ=5.00000°, λ=-63.00000°.*

BJI ***24*** *02:27:51.1, 39.61N×141.56E, h117km, mB5.6/19, mb4.9/45*

ISCJB ***24*** *02:27:52.5±0.2, 39.71N±0.02×141.41E±0.03, h107km, mb4.7/111, Error ellipse: s-maj=4.2km s-min=2.6km az=31.2*

IDC ***24*** *02:27:52.9±1.6, 39.65N×141.49E, h108km±13km, mb4.1/29, mb1 4.1/34, mb1mx4.1/39, mbtmp4.0/34, MS4.1/1, Ms1 4.1/1, ms1mx3.7/27, Error ellipse: s-maj=13.0km s-min=9.6km az=142.0*

SZGRF ***24*** *02:27:52.7, 39.85N×142.63E, h104km, mb4.9, Near east coast of eastern Honshu, Japan*

MOS ***24*** *02:27:52.6±1.0, 39.81N×141.31E, h105km, mb4.9/49, Error ellipse: s-maj=7.6km s-min=4.5km az=106.9*

JMA ***24*** *02:27:53.9±0.1, 39.62N×141.52E, h112km±1km, M4.8 Broadband fault plane solution: P waves. NP1: φs=321.00000°, δ=10.00000°, λ=-158.00000°. NP2: φs=209.00000°, δ=86.00000°, λ=-81.00000°. Principal axes: T Plg41.0000°, Azm291.0000°; N Plg9.0000°, Azm29.0000°; P Plg48.0000°, Azm129.0000°;*

JMA Felt III J1.

NEIC ***24*** *02:27:54.0, 39.62N×141.52E, h112km, mb4.9/42, MW5.1(NIED), After JMA.*

NEIC Recorded [3 JMA] in Aomori and Iwate; [2 JMA] in Miyagi; [1 JMA] in Akita and Fukushima. Also recorded [2 JMA] in southwestern Hokkaido.

GCMT ***24*** *02:27:56.0±0.4, 39.80N×141.45E, h130km±6km, MW5.2, Moment Tensor Solution. s13,c13; s67,c95; Moment tensor: Scale 10^16Nm; Mrr=1.85±.44; Mθθ=2.07±.50; Mφφ=-0.22±.56; Mrθ=1.90±.27; Mrφ=2.94±.47; Mθφ=6.32±.30; Best double couple: M0=7.50000×10^16 NP1:φs=92.00000°, δ=25.00000°, λ=-19.00000°. NP2:φs=200.00000°, δ=82.00000°, λ=-114.00000°. Principal axes: T 7.5400, Plg33.0000°, Azm310.0000°; N -0.1000, Plg23.0000°, Azm203.0000°; P -7.4400, Plg48.0000°, Azm85.0000°; Data Used: II IU IC CN G.*

ISC 24 02:27:53.7±0.2, 39.66N±0.02×141.46E±0.03, h109km, h109km±1.9km: pP-P, n313, σ1°00/342, mb4.7/111, 33C-21D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOM	**Ohasama**	**0.23**	**215**	⇓P	**Pn**	**02 28 09.5**	**+0.4**
JOM				*e*S	**Sn**	**02 28 21.5**	**+0.9**
MIYJ	**Miyakonagasawa**	**0.29**	**106**	⇑P	**Pn**	**02 28 09.9**	**+0.5**
MIYJ				*e*S	**Sn**	**02 28 21.5**	**+0.4**
JTH	**Tanohata**	**0.42**	**48**	⇑P	**Pn**	**02 28 10.5**	**+0.5**
JTH				*e*S	**Sn**	**02 28 22.8**	**+0.6**
JANG	**Nango**	**0.72**	**3**	⇓P	**Pn**	**02 28 12.5**	**+0.3**
JANG				*e*S	**Sn**	**02 28 26.2**	**+0.1**
JMK	**Ichinoseki**	**0.73**	**195**	⇓P	**Pn**	**02 28 12.4**	**+0.1**
JMK				*e*S	**Sn**	**02 28 26.4**	**+0.2**
JAH	**Hinai**	**0.83**	**310**	⇓P	**Pn**	**02 28 14.3**	**+1.2**
JYK	**Kaneyama**	**1.13**	**229**	⇓P	**Pn**	**02 28 17.0**	**+0.8**
JYK				S	**Sn**	**02 28 33.9**	**+0.7**
JTM	**Tenmabayashi**	**1.17**	**345**	⇓P	**Pn**	**02 28 17.3**	**+0.6**
JTM				*e*S	**Sn**	**02 28 35.1**	**+1.1**
JIO	**Ouri**	**1.21**	**184**	⇑P	**Pn**	**02 28 16.8**	**-0.3**
JIO				S	**Sn**	**02 28 34.0**	**-0.7**
JOU	**Okura**	**1.43**	**206**	⇓P	**Pn**	**02 28 20.0**	**+0.3**
JOU				*e*S	**Sn**	**02 28 40.1**	**+0.7**
JOT	**Ohata**	**1.75**	**350**	⇓P	**Pn**	**02 28 23.9**	**+0.4**
JOT				*e*S	**Sn**	**02 28 47.2**	**+0.9**
JMM	**Marumori**	**1.86**	**196**	⇑P	**Pn**	**02 28 24.4**	**-0.6**
JMM				S	**Sn**	**02 28 47.7**	**-1.1**
ERM	**Erimo**	**2.68**	**28**	*e*Pn	**Pn**	**02 28 34.9**	**-0.6**
ERM				*e*Sn	**Sn**	**02 29 05.0**	**-2.6**
MAJO	**Matsushiro**	**4.03**	**221**	*e*P	**Pn**	**02 28 53.9**	**+0.4**
MAT	**Matsushiro**	**4.03**	**221**	P	**Pn**	**02 28 54.1**	**+0.6**
MAT				S	**Sn**	**02 29 40.0**	**+0.2**
MJAR	**Matsushiro Arr**	**4.03**	**221**	P	**Pn**	**02 28 53.8**	**+0.3**
	6.5nm,0.3s,baz=26,slow=14,SNR=32						
MJAR				S	**Sn**	**02 29 30.8**	**-9.0**
	16nm,0.3s,baz=42,slow=12,SNR=11						
ASAJ	**Asahikawa**	**4.54**	**10**	P	**Pn**	**02 29 00.8**	**+0.5**
	7.1nm,0.3s,baz=239,slow=12,SNR=18						
ASAJ				S	**Sn**	**02 29 50.9**	**-0.9**
	94nm,0.3s,baz=120,slow=31,SNR=12						
ASAJ				LR	LR	02 31 36.7	
	comp=Z,2μm,18.4s,baz=1.8,slow=49						
ASAJ	**Asahikawa**	**4.54**	**10**	P	**Pn**	**02 29 00.8**	**+0.6**
ASAJ				S	**Sn**	**02 29 50.9**	**-0.9**
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.3s						
ASAJ				smax			
	comp=N,94nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,2μm,18.4s						
YUK	**Yuzh-Kuril'sk**	**5.47**	**36**	⇓*i*P	**Pn**	**02 29 11.2**	**-1.6**
YUK				*i* S	**Sn**	**02 30 10.2**	**-4.3**
YUK				pmax	pmax		
	comp=Z,700nm,1.1s						
YUK				pmax	pmax		
	comp=N,300nm,0.3s						
YUK				pmax	pmax		
	comp=E,200nm,0.2s						
YUK				pmax	pmax		
	comp=Z,2μm,1.0s						
YUK				smax			
	comp=N,5μm,0.6s						
YUK				smax			
	comp=E,1μm,0.2s						
YUK				smax			
	comp=N,12μm,0.9s						
YUK				smax			
	comp=E,3μm,0.9s						
YUK				MLR	MLR		
	comp=Z,5μm,14.0s						
JHJ	**Hachijo jima 2**	**6.66**	**192**	S	**Sn**	**02 30 38.0**	**-5.5**
	comp=Z,284nm,0.3s,baz=46,slow=23,SNR=12						
KUR	**Kuril'sk**	**7.31**	**38**	P	**Pn**	**02 29 36.9**	**-0.9**
KUR				*e*S	**Sn**	**02 30 55.0**	**-4.1**
KUR				pmax	pmax		
	comp=N,140nm,0.9s						
KUR				pmax	pmax		
	comp=E,140nm,0.9s						
KUR				pmax	pmax		
	comp=Z,500nm,0.9s						
KUR				smax			
	comp=N,1μm,1.0s						
KUR				smax			
	comp=E,620nm,1.0s						
YSS	**Yuzh-Sakhalins**	**7.35**	**7**	⇑*i*P	**Pn**	**02 29 38.5**	**+0.2**
YSS				*i* S	**Sn**	**02 30 59.0**	**-1.1**
YSS				pmax	pmax		
	comp=Z,160nm,0.9s						
YSS				smax			
	comp=E,680nm,1.2s						
YSS				smax			
	comp=E,800nm,1.3s						
YSS				smax			
	comp=N,1μm,2.0s						
YSS				smax			
	comp=E,1.0nm,2.0s						
YSS	**Yuzh-Sakhalins**	**7.35**	**7**	*e*Pn	**Pn**	**02 29 38.4**	**+0.1**
HABR	**Khabarovsk**	**9.94**	**335**	*de*P	**Pn**	**02 30 13.9**	**+0.5**
HABR				*e*S	**Sn**	**02 32 04.4**	**+1.5**
HABR				pmax	pmax		
	comp=Z,175nm,1.2s						
HABR				pmax	pmax		
	comp=E,112nm,1.3s						
HABR				pmax	pmax		
	comp=N,125nm,1.1s						
HABR				MLR	MLR		
	comp=Z,961nm,16.0s						
MDJ	**Mudanjiang**	**10.11**	**303**	P	**Pn**	**02 30 15.6**	**-0.1**
MDJ				S	**Sn**	**02 32 00.8**	**-6.2**
MDJ				pmax	pmax		
	comp=Z,230nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,750nm,10.7s						
MDJ				LR	LR		
	comp=N,1μm,12.6s						
MDJ				LR	LR		
	comp=E,1μm,14.0s						
MDJ				LR	LR		
	comp=Z,2μm,15.4s						
MDJ	**Mudanjiang**	**10.11**	**303**	*e*Pn	**Pn**	**02 30 16.8**	**+1.1**
	comp=Z,312nm,1.2s						
MDJ				*e*S	**Sn**	**02 32 26.2**	**+19**
KSRS	**Korea Array**	**10.83**	**263**	P	**Pn**	**02 30 25.6**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=88,slow=16,SNR=5.0						
KSRS				S	**Sn**	**02 32 25.6**	**+1.1**
	baz=52,slow=17,SNR=1.9						
KLR	**Kul'dur**	**11.81**	**327**	*e*P	**Pn**	**02 30 33.8**	**-4.6**
KLR				pmax	pmax		
	comp=E,160nm,2.2s						
KLR				pmax	pmax		
	comp=Z,170nm,2.2s						
CBIJ	**Chichi jima**	**12.54**	**177**	P	**Pn**	**02 30 45.9**	**-2.5**
	comp=Z,6.5nm,0.3s,baz=261,slow=22,SNR=9.7						
CBIJ				S	**Sn**	**02 32 56.4**	**-10**
	comp=Z,56nm,0.3s,baz=188,slow=22,SNR=7.7						
CN2	**Changchun**	**12.65**	**294**	*e*P	**Pn**	**02 30 48.8**	**-0.8**
CN2				*e*S	**Sn**	**02 33 10.1**	**+1.3**
CN2				pmax	pmax		
	comp=Z,30nm,1.3s						
CN2				pmax	pmax		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=N,2μm,15.0s						
CN2				LR	LR		
	comp=E,2μm,15.0s						
CN2				LR	LR		
	comp=Z,2μm,16.0s						
SNY	**Shenyang**	**13.73**	**285**	⇓P	**Pn**	**02 31 04.6**	**+0.9**
SNY				pmax	pmax		
	comp=Z,22nm,1.2s						
SKR	**Severo-Kuril's**	**15.08**	**38**	*e*P	**Pn**	**02 31 27.0**	**+6.2**
DL2	**Dalian**	**15.38**	**274**	*e*P	**Pn**	**02 31 23.3**	**-1.4**
DL2				pmax	pmax		
	comp=Z,30nm,0.9s						
PETK	**Petropavlovsk-**	**17.45**	**34**	P	**Pn**	**02 31 47.4**	**-2.6**
	comp=Z,0.2nm,0.3s,baz=177,slow=36,SNR=3.2						
PETK				S	**Sn**	**02 34 57.2**	**-7.2**
	comp=Z,0.7nm,0.3s,baz=248,slow=22,SNR=3.2						
PETK	**Petropavlovsk-**	**17.45**	**34**	P	**Pn**	**02 31 47.4**	**-2.6**
PETK				S	**Sn**	**02 34 57.2**	**-7.2**
PETK				smax			
	comp=N,1.0nm,0.3s						
HIA	**Hailar**	**18.18**	**309**	*e*P	**P**	**02 31 54.8**	**-2.9**
HIA				pmax	pmax		
	comp=Z,75nm,1.1s						
HIA	**Hailar**	**18.18**	**309**	*e*Pn	**Pn**	**02 31 54.8**	**-4.0**
	comp=Z,75nm,1.1s						
BJI	**Beijing**	**19.40**	**279**	P	**P**	**02 32 09.3**	**-1.8**
BJI				pmax	pmax		
	comp=Z,54nm,1.5s						
BJI				pmax	pmax		
	comp=Z,820nm,11.2s						
NJ2	**Nanjing**	**19.80**	**254**	*e*P	**P**	**02 32 17.8**	**+2.3**
NJ2				pmax	pmax		
	comp=Z,40nm,0.6s						
CLNS	**Chul'man**	**20.33**	**333**	*e*P	**P**	**02 32 21.1**	**+0.2**
CLNS				*e*S	**S**	**02 36 04.3**	**+1.8**
CLNS				*e*		02 36 35.5	
CLNS				pmax	pmax		
	comp=Z,179nm,1.3s						
CLNS				pmax	pmax		
	comp=N,190nm,1.4s						
CLNS				pmax	pmax		
	comp=E,59nm,1.2s						
CLNS				pmax	pmax		
	comp=E,106nm,1.3s						
CLNS				pmax	pmax		
	comp=N,148nm,1.2s						
CLNS				pmax	pmax		
	comp=Z,84nm,1.5s						
CLNS				smax			
	comp=N,248nm,1.6s						
CLNS				smax			
	comp=E,128nm,1.5s						
CLNS				MLR	MLR		
	comp=Z,953nm,14.0s						
CLNS				MLR	MLR		
	comp=E,669nm,14.0s						
CLNS				MLR	MLR		
	comp=N,660nm,13.0s						
HHC	**Hu-ho-hao-te**	**22.80**	**283**	*e*P	**P**	**02 32 44.3**	**-2.9**
HHC				PcP	PcP	02 36 37.8	+3.2
HHC				S	**S**	**02 36 47.5**	**-0.2**
HHC				PcS	PcS	02 40 15.3	+1.8
HHC				pmax	pmax		
	comp=Z,26nm,0.5s,mb4.8						
HHC				pmax	pmax		
	comp=Z,2μm,5.1s						
HHC				LR	LR		
	comp=N,1μm,11.6s						
HHC				LR	LR		
	comp=E,1μm,11.7s						
HHC				LR	LR		
	comp=Z,2μm,12.0s						
YAK	**Yakutsk**	**23.53**	**346**	*e*P	**P**	**02 32 51.9**	**-1.7**
YAK				*e*		02 33 14.9	
YAK				*e*PPP		02 33 23.7	
YAK				*e*S	**S**	**02 37 01.2**	**+2.2**
YAK				*e*SSS		02 37 43.6	
YAK				pmax	pmax		
	comp=N,49nm,1.0s						
YAK				pmax	pmax		
	comp=E,17nm,1.0s						
YAK				pmax	pmax		
	comp=Z,113nm,0.9s,mb5.2						
YAK				pmax	pmax		
	comp=Z,34nm,0.7s,mb4.8						
YAK				smax			
	comp=N,2μm,2.7s						
YAK				smax			
	comp=E,807nm,1.5s						
YAK	**Yakutsk**	**23.53**	**346**	*e*P	**P**	**02 32 51.6**	**-1.9**
	comp=E,159nm,0.9s,mb5.3						
WHN	**Wuhan**	**23.90**	**256**	P	**P**	**02 32 55.5**	**-1.8**
WHN				S	**S**	**02 37 03.9**	**-1.7**
WHN				pmax	pmax		
	comp=Z,270nm,1.8s,mb5.3						
WHN				LR	LR		
	comp=Z,3μm,19.6s						
SEY	**Seymchan**	**24.22**	**12**	*ce*P	**P**	**02 33 01.1**	**+1.3**
SEY				*e*		02 33 40.6	
ULN	**Ulaanbaatar**	**26.00**	**300**	*e*P	**P**	**02 33 16.0**	**-0.1**
ULN				pmax	pmax		
	comp=Z,57nm,1.7s,mb4.7						
ULN	**Ulaanbaatar**	**26.00**	**300**	*e*P	**P**	**02 33 16.0**	**-0.2**
	comp=Z,57nm,1.7s,mb4.7						
ULN	**Ulaanbaatar**	**26.00**	**300**	P	**P**	**02 33 16.5**	**+0.4**
	SNR=16						
SONM	**Songino Array**	**26.43**	**300**	P	**P**	**02 33 20.8**	**+0.7**
	comp=Z,7.4nm,1.0s,mb4.1,baz=108,slow=9.5,SNR=38						
SONM	**Songino Array**	**26.43**	**300**	P	**P**	**02 33 20.8**	**+0.7**
SONM				pmax	pmax		
	comp=Z,7.0nm,1.0s						
XAN	**Xi'an**	**26.54**	**268**	P	**P**	**02 33 19.8**	**-1.4**
XAN				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.8						
XAN				pmax	pmax		
	comp=Z,170nm,11.4s						
ENH	**Enshi**	**27.70**	**260**	*e*P	**P**	**02 33 30.5**	**-1.1**
	comp=Z,40nm,0.9s,mb5.0						
IRK	**Irkutsk**	**28.43**	**309**	*e*P	**P**	**02 33 37.0**	**-0.8**
IRK				pmax	pmax		
	comp=Z,75nm,1.9s,mb4.9						
TLY	**Talaya**	**28.70**	**307**	*e*P	**P**	**02 33 40.4**	**+0.1**
TLY				pmax	pmax		
	comp=Z,68nm,1.6s,mb5.0						
TLY	**Talaya**	**28.70**	**307**	*e*P	**P**	**02 33 40.5**	**+0.3**
	comp=Z,84nm,1.5s,mb5.2						
TLY	**Talaya**	**28.70**	**307**	P	**P**	**02 33 40.9**	**+0.6**
	SNR=20						
LZH	**Lanzhou**	**29.76**	**275**	*e*P	**P**	**02 33 49.8**	**0.0**
LZH				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.7						
MOY	**Mondy**	**30.33**	**307**	*e*P	**P**	**02 33 55.3**	**+0.6**
MOY				pmax	pmax		
	comp=Z,96nm,2.2s,mb5.0						
BILL	**Bilibino**	**31.51**	**18**	*i*	PcP	02 36 58.2	+3.3
BILL				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.2						
CD2	**Chengdu**	**31.80**	**266**	P	**P**	**02 34 08.0**	**+0.2**
CD2				PP	PP	02 35 13.0	-8.6
CD2				S	**S**	**02 39 16.5**	**+6.5**
CD2				SS	SS	02 41 06.0	-25
CD2				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.0						
CD2				pmax	pmax		
	comp=Z,1μm,11.6s						
CD2				LR	LR		
	comp=N,1μm,16.7s						
CD2				LR	LR		
	comp=Z,2μm,17.8s						
GTA	**Gaotai**	**31.91**	**283**	⇑P	**P**	**02 34 08.8**	**+0.1**
GTA				PP	PP	02 35 16.6	-6.1
GTA				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.6						
GTA				pmax	pmax		
	comp=Z,650nm,8.1s						
GTA				LR	LR		
	comp=N,1μm,16.5s						
GTA				LR	LR		
	comp=E,890nm,14.7s						
GTA				LR	LR		
	comp=Z,2μm,15.6s						
KMI	**Kunming**	**35.47**	**258**	P	**P**	**02 34 40.3**	**+0.6**
KMI				PP	PP	02 35 59.0	-3.3
KMI				S	**S**	**02 40 10.1**	**+3.2**
KMI				SS	SS	02 42 29.8	-16
KMI				pmax	pmax		
	comp=Z,21nm,1.5s,mb4.8						
KMI				LR	LR		
	comp=N,540nm,23.1s						
KMI				LR	LR		
	comp=E,1μm,16.3s						
KMI				LR	LR		
	comp=Z,740nm,16.3s						
WMQ	**Urumqi**	**39.75**	**294**	P	**P**	**02 35 15.4**	**-0.1**
WMQ				PP	PP	02 36 50.8	+2.1
WMQ				pmax	pmax		
	comp=Z,78nm,1.2s,mb5.4						
WMQ				pmax	pmax		
	comp=Z,1μm,6.8s						
ZALV	**Zalesovo Beam**	**40.21**	**310**	P	**P**	**02 35 18.8**	**-0.4**
	comp=Z,9.5nm,0.5s,mb4.8,baz=90,slow=7.4,SNR=38						
ZALV	**Zalesovo Beam**	**40.21**	**310**	P	**P**	**02 35 18.8**	**-0.4**
ZALV				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.9						
CHTO	**Chiang Mai**	**42.03**	**253**	*e*P	**P**	**02 35 34.4**	**-0.1**
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
CHTO	**Chiang Mai**	**42.03**	**253**	*e*P	**P**	**02 35 34.4**	**-0.1**
	comp=Z,8.8nm,0.8s,mb4.5						
LSA	**Lhasa**	**42.07**	**272**	P	**P**	**02 35 33.9**	**-0.8**
LSA	**Lhasa**	**42.07**	**272**	*e*P	**P**	**02 35 36.6**	**+1.9**
LSA				pmax	pmax		
	comp=Z,99nm,1.6s,mb5.3						
LSA	**Lhasa**	**42.07**	**272**	*e*P	**P**	**02 35 36.6**	**+1.8**
	comp=Z,98nm,1.6s,mb5.3						
CMAR	**Chiang Mai Arr**	**42.26**	**253**	P	**P**	**02 35 35.8**	**-0.6**
	comp=Z,0.9nm,0.3s,mb4.0,baz=44,slow=7.3,SNR=6.9						
CMAR	**Chiang Mai Arr**	**42.26**	**253**	P	**P**	**02 35 35.8**	**-0.5**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MK31	**Makanchi Array**	**42.80**	**300**	*e*P	**P**	**02 35 40.1**	**-0.3**
MK31				*e*S	**S**	**02 41 54.0**	**-2.2**
MKAR	**Makanchi Array**	**42.80**	**300**	P	**P**	**02 35 39.9**	**-0.5**
	comp=Z,23nm,0.9s,mb4.9,baz=81,slow=8.7,SNR=64						
MKAR	**Makanchi Array**	**42.80**	**300**	*ce*P	**P**	**02 35 39.9**	**-0.5**
MKAR				*e**PP	sP	02 36 19.8	+1.8
MKAR				pmax	pmax		
	comp=Z,23nm,0.9s						
MKAR	**Makanchi Array**	**42.80**	**300**	P	**P**	**02 35 39.9**	**-0.5**
KURK	**Kurchatov**	**44.38**	**306**	*ce*P	**P**	**02 35 52.4**	**-0.6**
KURK				pmax	pmax		
	comp=Z,85nm,1.7s,mb5.2						
KURK	**Kurchatov**	**44.38**	**306**	*e*P	**P**	**02 35 52.0**	**-1.1**
	comp=Z,49nm,1.0s,mb5.2						
KURK	**Kurchatov**	**44.38**	**306**	P	**P**	**02 35 52.6**	**-0.4**
	SNR=33						
KDAK	**Kodiak Island**	**45.15**	**44**	P	**P**	**02 35 56.7**	**-2.3**
	comp=Z,5.5nm,0.4s,mb4.6,baz=258,slow=4.8,SNR=10.0						
KDAK	**Kodiak Island**	**45.15**	**44**	P	**P**	**02 35 56.7**	**-2.3**
KDAK				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.7						
KDAK	**Kodiak Island**	**45.15**	**44**	P	**P**	**02 35 56.7**	**-2.3**
TAPN	**Taplejung**	**45.85**	**271**	*e*P	**P**	**02 36 06.2**	**+1.2**
ODAN	**Odare**	**46.34**	**271**	*e*P	**P**	**02 36 09.4**	**+0.6**
PMR	**Palmer**	**46.52**	**38**	*e*P	**P**	**02 36 10.0**	**+0.3**
PMR				pmax	pmax		
	comp=Z,137nm,2.8s,mb5.2						
PMR	**Palmer**	**46.52**	**38**	*e*P	**P**	**02 36 10.0**	**+0.3**
	comp=Z,137nm,2.8s,mb5.2						
COLA	**College**	**46.86**	**34**	*e*P	**P**	**02 36 13.9**	**+1.6**
COLA				pmax	pmax		
	comp=Z,7.0nm,1.5s,mb4.2						
COLA	**College**	**46.86**	**34**	*e*P	**P**	**02 36 13.8**	**+1.6**
	comp=Z,7.0nm,1.5s,mb4.2						
RAMN	**Ramite**	**46.91**	**272**	*e*P	**P**	**02 36 13.5**	**+0.3**
GUN	**Gumba**	**46.99**	**273**	*e*P	**P**	**02 36 14.5**	**+0.7**
ILAR	**Eielson Array**	**47.28**	**34**	P	**P**	**02 36 15.2**	**-0.3**
	comp=Z,2.0nm,0.6s,mb4.0,baz=268,slow=6.3,SNR=19						
ILAR	**Eielson Array**	**47.28**	**34**	P	**P**	**02 36 15.3**	**-0.2**
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KKN	**Kakani**	**47.51**	**273**	*e*P	**P**	**02 36 18.1**	**+0.2**
	comp=Z,77nm,0.7s,mb5.7						
KKN	**Kakani**	**47.51**	**273**	*e*P	**P**	**02 36 18.1**	**+0.2**
KKN				pmax	pmax		
	comp=Z,77nm,0.7s,mb5.6						
PKI	**Pulchoki**	**47.52**	**273**	*e*P	**P**	**02 36 18.4**	**+0.5**
PKI	**Pulchoki**	**47.52**	**273**	*e*P	**P**	**02 36 18.5**	**+0.6**
PKIN	**Phulchoki**	**47.52**	**273**	*e*P	**P**	**02 36 18.5**	**+0.5**
DMN	**Daman**	**47.73**	**273**	*e*P	**P**	**02 36 20.5**	**+0.9**
GKN	**Gorkha**	**47.90**	**274**	*e*P	**P**	**02 36 21.6**	**+0.7**
	comp=Z,23nm,0.3s,mb5.5						
TKM2	**Tokmak 2**	**48.46**	**296**	P	**P**	**02 36 25.4**	**+0.5**
	SNR=30						
TKM2	**Tokmak 2**	**48.46**	**296**	*e*P	**P**	**02 36 25.2**	**+0.2**
TKM2				pmax	pmax		
	comp=Z,19nm,0.6s,mb5.1						
TKM2	**Tokmak 2**	**48.46**	**296**	*e*P	**P**	**02 36 25.2**	**+0.2**
	comp=Z,19nm,0.6s,mb5.1						
VOSK	**Vostochnaya**	**48.59**	**310**	P	**P**	**02 36 24.4**	**-1.4**
VOSK				pmax	pmax		
	comp=Z,24nm,1.3s,mb5.0						
BVAR	**Borovoye Array**	**48.86**	**311**	P	**P**	**02 36 27.5**	**-0.4**
	comp=Z,2.8nm,0.4s,mb4.5,baz=77,slow=6.5,SNR=22						
BVAR	**Borovoye Array**	**48.86**	**311**	P	**P**	**02 36 27.5**	**-0.4**
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.4s						
BRVK	**Borovoye**	**48.92**	**311**	*ce*P	**P**	**02 36 28.4**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.9						
BRVK	**Borovoye**	**48.92**	**311**	*e*P	**P**	**02 36 27.8**	**-0.6**
	comp=Z,19nm,1.0s,mb5.0						
BRVK	**Borovoye**	**48.92**	**311**	P	**P**	**02 36 28.9**	**+0.6**
	SNR=12						
KBK	**Karagaybulak**	**48.99**	**296**	P	**P**	**02 36 29.7**	**+0.6**
	SNR=14						
USP	**Ospenovka**	**49.09**	**297**	P	**P**	**02 36 30.4**	**+0.5**
	SNR=9.2						
FRU	**Bishk

AAK pmax pmax
comp=Z,12nm,1.7s,mb4.5
AAK Ala-Archa 49.32 296 *eP* **P 02 36 32.1 +0.6**
comp=Z,25nm,1.2s,mb5.0
AAK Ala-Archa 49.32 296 P **P 02 36 32.7 +1.2**
SNR=7.8
KSH Kashi 49.41 292 *eP* **P 02 36 37.0 +4.7**
KSH PcP PcP 02 37 57.8 +4.8
KSH PP PP 02 38 33.8 +6.6
KSH PcS PcS 02 41 52.8 +3.1
KSH pmax pmax
comp=Z,11nm,1.0s,mb4.7
KSH pmax pmax
comp=Z,170nm,5.3s
KSH LR LR
comp=N,1µm,14.1s
KSH LR LR
comp=E,1µm,14.5s
KSH LR LR
comp=Z,810nm,12.9s
ZRNK Zerenda 49.69 311 P **P 02 36 33.4 -0.8**
ZRNK pmax pmax
comp=Z,41nm,1.5s,mb5.1
EGAK Eagle 49.72 33 P **P 02 36 35.1 +0.9**
comp=Z,14nm,1.4s,mb4.7
EKS2 Erkin-Say 49.80 297 P **P 02 36 35.0 -0.2**
SNR=7.9
AML Almayashu 50.05 296 P **P 02 36 38.1 +1.0**
SNR=7.2
AML Almayashu 50.05 296 *eP* **P 02 36 37.9 +0.8**
comp=Z,33nm,1.2s,mb5.1
AML *ep*P pP 02 37 06.3 +3.3
KK31 Karatay Array 51.88 298 *ce*P **P 02 36 49.7 -1.1**
KK31 pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
INK Inuvik 52.05 28 P **P 02 36 52.5 +0.8**
comp=Z,2.8nm,0.7s,mb4.4,baz=263,slow=5.9,SNR=7.3
INK Inuvik 52.05 28 *eP* **P 02 36 53.5 +1.9**
INK pmax pmax
comp=Z,9.0nm,0.8s
INK Inuvik 52.05 28 *eP* **P 02 36 53.5 +1.9**
comp=Z,8.5nm,0.8s,mb4.8
HYT Haines Junctio 52.19 38 *eP* **P 02 36 55.6 +2.8**
SVE Sverdlovsk 53.23 317⇑*eP* **P 02 37 00.8 +0.3**
SVE pmax pmax
comp=Z,59nm,1.3s,mb5.5
SOKR Solikamsk 54.29 321 *c i*P **P 02 37 07.3 -0.9**
SOKR pmax pmax
comp=Z,30nm,1.3s,mb5.2
ARU Arti 54.44 317 *d i*P **P 02 37 08.9 -0.4**
ARU *PP pP 02 37 34.6 -0.9
ARU *SP sP 02 37 48.6 +0.9
ARU 02 38 09.1
ARU 02 39 08.3
ARU S **S 02 44 41.0 +1.8**
ARU SS SS 02 48 17.1 -5.3
ARU pmax pmax
comp=Z,88nm,1.7s,mb5.5
ARU Arti 54.44 317 *eP* **P 02 37 08.6 -0.7**
comp=Z,112nm,1.4s,mb5.7
AB31 Akbulak array 56.30 309 *ceP* **P 02 37 21.8 -1.0**
AB31 pmax pmax
comp=Z,6.0nm,0.4s,mb5.0
KBL Kabul 56.55 289 *eP* **P 02 37 25.7 +1.0**
KBL pmax pmax
comp=Z,14nm,0.8s,mb5.0
KBL Kabul 56.55 289 *eP* **P 02 37 25.6 +0.9**
comp=Z,14nm,0.8s,mb5.0
AKTK Aktyubinsk 56.97 311 P **P 02 37 26.3 -1.2**
AKTO Aktyubinsk 56.97 311 P **P 02 37 26.3 -1.2**
comp=Z,8.6nm,0.8s,mb4.8,baz=68,slow=12,SNR=21
AKTO Aktyubinsk 56.97 311 P **P 02 37 26.3 -1.2**
AKTO pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
APA Apatity 60.32 335⇑*eP* **P 02 37 44.4 -6.0**
APA MLR MLR
comp=Z,1µm,16.0s
KEV Kevo 61.01 339 *eP* **P 02 37 54.5 -0.6**
KEV pmax pmax
comp=Z,16nm,0.8s,mb5.1
KEV Kevo 61.01 339 *eP* **P 02 37 54.5 -0.6**
comp=Z,16nm,0.8s,mb5.1
KEV Kevo 61.01 339 *ep* **P 02 37 54.5 -0.6**
comp=Z,16nm,0.8s,mb5.1
YKA Yellowknife Ar 61.53 31 P **P 02 37 57.7 -1.0**
comp=Z,2.5nm,0.8s,mb4.3,baz=207,slow=34,SNR=2.9
YKA Yellowknife Ar 61.53 31 P **P 02 37 57.7 -1.0**
YKA pmax pmax
comp=Z,3.0nm,0.8s
ARCES ARCESS Array B 61.56 339 P **P 02 37 57.0 -1.8**
comp=Z,3.9nm,0.9s,mb4.4,baz=36,slow=6.3,SNR=5.3
ARCES ARCESS Array B 61.56 339 P **P 02 37 57.0 -1.8**
ARCES pmax pmax
comp=Z,4.0nm,0.9s
ASAR Alice Springs 63.39 188 P **P 02 38 10.1 -1.4**
comp=Z,2.6nm,0.3s,mb4.6,baz=0.1,slow=6.3,SNR=55
ASAR Alice Springs 63.39 188 P **P 02 38 10.1 -1.3**
ASAR pmax pmax
comp=Z,3.0nm,0.4s
JOF Joensuu 63.67 331 *eP* **P 02 38 11.5 -1.4**
JOF pmax pmax
comp=Z,11nm,0.4s,mb5.0
JOF Joensuu 63.67 331 *ep* **P 02 38 11.5 -1.4**
comp=Z,11nm,0.4s,mb5.0
MOS Moscow 65.18 323 *eP* **P 02 38 20.5 -2.3**
MOS *e* 02 39 02.3
MOS *e* 02 40 43.0
MOS *e*S S 02 46 54.6 -2.3
MOS pmax pmax
comp=Z,135nm,1.8s,mb5.5
MOS pmax pmax
comp=Z,100nm,1.5s,mb5.4
VRHR Novokhopersk 65.78 317 *eP* **P 02 38 25.3 -1.5**
VRHR *e* 02 39 06.6
VRHR pmax pmax
comp=N,9.0nm,1.2s
VRHR pmax pmax
comp=E,10.0nm,1.2s
VRHR pmax pmax
comp=Z,20nm,1.2s,mb4.8
KAF Kangasniemi 66.00 332 *eP* **P 02 38 26.6 -1.4**
KAF pmax pmax
comp=Z,8.0nm,0.6s,mb4.7
KAF Kangasniemi 66.00 332 *eP* **P 02 38 26.6 -1.4**
comp=Z,7.8nm,0.6s,mb4.7
KAF Kangasniemi 66.00 332 *ep* **P 02 38 26.6 -1.4**
comp=Z,7.8nm,0.6s,mb4.7
OBN Obninsk 66.03 323 *eP* **P 02 38 28.5 +0.2**
OBN *i* pP 02 38 55.3 -0.1
OBN *e*PP sP 02 39 09.8 +2.5
OBN *e* 02 40 52.2
OBN pmax pmax
comp=Z,59nm,1.6s,mb5.2
FINES FINESS Array B 66.52 332 P **P 02 38 30.2 -1.1**
comp=Z,5.6nm,0.6s,mb4.5,baz=25,slow=6.3,SNR=17
FINES FINESS Array B 66.52 332 P **P 02 38 30.3 -1.0**
FINES pmax pmax
comp=Z,6.0nm,0.6s
VSR Storozhevoye 67.00 318 *eP* **P 02 38 34.1 -0.4**
VSR *e* 02 39 15.0
VSR pmax pmax
comp=Z,7.0nm,0.5s,mb4.8
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,9.0nm,0.9s
SUMG Summit 68.07 360 P **P 02 38 42.3 +1.4**
comp=E,16nm,1.0s,mb4.8
ZEI Tsey 69.19 309 *eP* **P 02 38 47.0 -1.4**
ZEI pmax pmax
comp=Z,10.0nm,0.5s,mb4.9
KIV Kislovodsk 69.23 310 *eP* **P 02 38 49.7 +1.1**
KIV pmax pmax
comp=Z,60nm,1.2s,mb5.3
KIV Kislovodsk 69.23 310 *eP* **P 02 38 49.6 +1.0**
comp=Z,49nm,1.2s,mb5.2
KIV Kislovodsk 69.23 310 P **P 02 38 49.4 +0.8**
SNR=20
SCO Scoresbysund 69.51 354 *eP* **P 02 38 51.4 +1.5**
SCO pmax pmax
comp=Z,12nm,1.0s,mb4.7
JTMT Jette 70.08 44 *eP* **P 02 38 55.0 +1.2**
BMO Blue Mountains 70.14 48 *eP* **P 02 38 56.2 +2.0**
comp=Z,5.4nm,1.2s,mb4.2
GNI Garni 70.18 306 P **P 02 38 55.4 +0.9**
comp=Z,2.3nm,0.4s,mb4.4,baz=82,slow=17,SNR=6.1
GNI Garni 70.18 306 P **P 02 38 55.4 +0.9**
GNI pmax pmax
comp=Z,2.0nm,0.4s
IZAR Zarasai 70.22 327 *eP* **P 02 38 54.5 0.0**
IZAR AMB AMB 02 38 55.3
comp=Z,6.1nm,1.2s,mb4.3
IDID Didziasalis 70.31 327 *eP* **P 02 38 55.2 +0.2**
IDID AMB AMB 02 38 55.9
comp=Z,5.8nm,1.3s,mb4.2
SWMT Swartz Lake 70.38 44 *eP* **P 02 38 57.6 +2.0**
IIGN Ignalina 70.50 327 *eP* **P 02 38 56.4 +0.2**
IIGN AMB AMB 02 38 57.2
comp=Z,5.6nm,1.2s,mb4.3
NACGM Naroch 70.57 326 *e* **P 02 38 54.0 -2.6**
SLMT Seeley Lake 70.81 44 *eP* **P 02 38 59.0 +0.8**
HFS Hagfors 71.72 335 P **P 02 39 02.6 -0.8**
comp=Z,2.2nm,0.4s,mb4.4,baz=45,slow=7.0,SNR=32
HFS Hagfors 71.72 335 P **P 02 39 02.6 -0.8**
HFS pmax pmax
comp=Z,2.0nm,0.4s
ANN Anapa 71.75 313 *eP* **P 02 39 13.3 +9.4**
ANN pmax pmax
comp=Z,42nm,1.3s,mb5.1
NB2 NORSAR Subarra 71.79 337 P **P 02 39 02.9 -0.9**
comp=Z,28nm,1.4s,mb4.9,baz=37,slow=6.2
NOA NORSAR Array B 71.79 337 P **P 02 39 02.9 -0.9**
comp=Z,2.2nm,0.6s,mb4.2,baz=38,slow=6.0,SNR=13
NOA NORSAR Array B 71.79 337 P **P 02 39 02.9 -0.9**
NOA pmax pmax
comp=Z,2.0nm,0.6s
NOA NORSAR Array B 71.79 337 P **P 02 39 02.9 -0.9**
HRY Holter Researc 72.03 44 *eP* **P 02 39 06.7 +1.2**
AKASG Malin Array Be 72.25 322 P **P 02 39 05.7 -1.1**
comp=Z,1.9nm,0.3s,mb4.4,baz=45,slow=6.2,SNR=23
AKASG Malin Array Be 72.25 322 *ce*P **P 02 39 05.6 -1.2**
AKASG *e*SP sP 02 39 36.0 -10
AKASG *e*PP pP 02 39 47.2 +13
AKASG pmax pmax
comp=Z,2.0nm,0.3s
AKASG Malin Array Be 72.25 322 P **P 02 39 05.7 -1.1**
LRM Limekiln Ridge 72.26 45 *eP* **P 02 39 07.8 +0.9**
KIEV Kiev 72.27 322 *eP* **P 02 39 05.9 -1.0**
KIEV pmax pmax
comp=Z,14nm,1.0s,mb4.8
KIEV Kiev 72.27 322 *eP* **P 02 39 05.9 -1.0**
comp=Z,14nm,1.0s,mb4.8
DLMT Dillon 72.47 45 *eP* **P 02 39 08.7 +0.5**
comp=Z,12nm,1.3s,mb4.6
BOZ Bozeman (W) 72.81 45 *eP* **P 02 39 11.2 +1.0**
NVAR Mina Array Bea 73.40 54 P **P 02 39 14.2 +0.4**
comp=Z,2.0nm,0.7s,mb4.0,baz=291,slow=5.4,SNR=17
IMW Indian Meadow 74.31 46 *eP* **P 02 39 20.0 +1.0**
comp=Z,4.9nm,0.9s,mb4.2
BSD Bornholm Skovb 75.16 331 *i* P pP 02 39 47.0 -4.4
comp=Z,12nm,1.0s
HWUT Hardware Ranch 75.44 48 *eP* **P 02 39 27.2 +1.7**
COP Copenhagen 75.61 333 *i* P PcP 02 39 42.0 +3.4
comp=Z,9.8nm,0.8s
DUG Dugway 75.62 50 *eP* **P 02 39 27.5 +0.9**
BW06 Boulder Array 75.81 46 *eP* **P 02 39 27.5 -0.2**
PDAR Pinedale Array 75.81 46 P **P 02 39 27.7 +0.1**
comp=Z,1.9nm,0.5s,mb4.0,baz=287,slow=1.9,SNR=20
KWP Kalwaria Pacla 76.03 324 *eP* **P 02 39 30.2 +1.5**
KWP Kalwaria Pacla 76.03 324 *eP* **P 02 39 28.5 -0.2**
KWP pmax pmax
comp=Z,95nm,1.4s,mb5.3
KWP Kalwaria Pacla 76.03 324 *eP* **P 02 39 28.5 -0.3**
comp=Z,95nm,1.4s,mb5.3
KWP Kalwaria Pacla 76.03 324⇓*iP* **P 02 39 29.0 +0.3**
MUD Monsted U'grnd 76.09 335 *i* P pP 02 39 52.3 -4.4
comp=Z,8.0nm,0.9s
BUR08 Bucovina Ar. S 76.27 321 *eP* **P 02 39 30.0 -0.1**
BUR08 *ep*PcP PcP 02 39 43.2 +1.5
BURAR Bucovina Array 76.28 321⇑P **P 02 39 30.3 +0.1**
BURAR Bucovina Array 76.28 321⇑*iP* **P 02 39 30.3 +0.1**
VRI Vrincioaia 76.76 319⇓P **P 02 39 34.1 +1.2**
VRI Vrincioaia 76.76 319⇓*iP* **P 02 39 34.1 +1.2**
UZH Uzhgorod 76.94 324 *eP* **P 02 39 34.9 +1.0**
UZH *e* 02 40 11.5
CCUT Cedar City 76.99 52 *eP* **P 02 39 35.7 +1.3**
comp=Z,4.7nm,1.1s,mb4.1
MSU Marysvale 77.08 51 *eP* **P 02 39 36.8 +1.9**
BR131 Keskin Array S 77.15 311 P **P 02 39 35.2 0.0**
comp=Z,0.8nm,0.5s,mb3.7
BRTR Keskin Array B 77.15 311 P **P 02 39 34.2 -1.1**
comp=Z,1.4nm,0.5s,mb4.0,baz=108,slow=4.0,SNR=11
BRTR Keskin Array B 77.15 311 *ce*P **P 02 39 36.0 +0.7**
BRTR pmax pmax
comp=Z,1.0nm,0.5s
TRPA Tarpa 77.18 323⇓*iP* **P 02 39 36.5 +1.2**
MLR Muntele Rosu 77.41 319 P **P 02 39 37.4 +0.8**
comp=Z,2.5nm,0.9s,mb3.9,baz=317,slow=22,SNR=3.1
MLR Muntele Rosu 77.41 319 P **P 02 39 37.4 +0.8**
MLR pmax pmax
comp=Z,3.0nm,0.9s
MLR Muntele Rosu 77.41 319⇓P **P 02 39 37.6 +0.9**
MLR Muntele Rosu 77.41 319⇓*iP* **P 02 39 37.6 +1.0**
SRU San Rafael 77.67 49 *eP* **P 02 39 38.9 +0.7**
BSEG Bad Segeberg 77.74 333 *eP* **P 02 39 38.5 +0.2**
comp=Z,21nm,1.3s,mb4.7
BSEG *ep*PcP PcP 02 39 49.3 +1.4
OKC Ostrava-Krasne 77.88 326 *eP* **P 02 39 40.0 +0.9**
OKC *e*PP pP 02 40 05.9 -1.1
OKC *e* 02 40 21.1
OKC Ostrava-Krasne 77.88 326 *eP* **P 02 39 40.0 +0.9**
OKC *ep*P pP 02 40 05.9 -1.1
OKC *ex* x 02 40 09.4
OKC *es*P sP 02 40 21.1 +2.3
KSP Ksiaz 77.90 328 *eP* **P 02 39 40.3 +1.1**
VOIR 77.90 320⇓P **P 02 39 40.3 +1.0**
VOIR 77.90 320⇓*iP* **P 02 39 40.3 +1.0**
DRGR 78.07 322⇑P **P 02 39 40.4 +0.2**
DRGR 78.07 322⇑*iP* **P 02 39 40.4 +0.2**
MORC Moravsky Berou 78.19 327⇑P **P 02 39 40.5 -0.3**
MORC Moravsky Berou 78.19 327⇑*iP* **P 02 39 40.5 -0.3**
DPC Dobruska-Polom 78.26 328 *eP* **P 02 39 42.5 +1.3**
DPC *e*PP pP 02 40 08.2 -0.9
DPC *e* 02 40 24.0
DPC Dobruska-Polom 78.26 328 *eP* **P 02 39 42.5 +1.3**
DPC *ep*P pP 02 40 08.2 -0.9
DPC *ex* x 02 40 12.2
DPC *es*P sP 02 40 24.0 +3.2
UPC Upice 78.27 328 *eP* **P 02 39 42.0 +0.7**
UPC *e*PP pP 02 40 07.6 -1.5
UPC *e* 02 40 23.5
UPC Upice 78.27 328 *eP* **P 02 39 42.0 +0.7**
UPC *ep*P pP 02 40 07.6 -1.5
UPC *ex* x 02 40 11.9
UPC *es*P sP 02 40 23.5 +2.6
VYHS Vyhne 78.59 325 *eP* **P 02 39 43.3 +0.2**
VYHS pmax pmax
comp=Z,8.0nm,1.5s,mb4.3
VYHS Vyhne 78.59 325 *eP* **P 02 39 43.3 +0.2**
comp=Z,7.5nm,1.5s,mb4.3
VYHS Vyhne 78.59 325 *eP* **P 02 39 43.3 +0.2**
BRG Berggiesshubel 78.82 329 *eP* **P 02 39 44.3 +0.1**
comp=Z,11nm,1.4s,mb4.5
BRG *i* pP 02 40 14.4 +2.3
comp=Z,16nm,1.4s
BRG *i* 02 40 25.6
comp=Z,18nm,1.3s
BRG *e* 02 42 43.6
comp=Z,51nm,2.5s
BRG
comp=N,367nm,23.2s
BRG
comp=E,202nm,15.6s
BRG
comp=Z,648nm,20.6s
BRG Berggiesshubel 78.82 329 *eP* **P 02 39 44.3 0.0**
BRG *i* pP 02 40 14.4 +2.2
BRG *i* 02 40 25.6
BRG *e* 02 42 43.6
BRG pmax pmax
comp=Z,6.0nm,1.4s,mb4.2
BRG pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
BRG pmax pmax
comp=Z,11nm,1.3s,mb4.5
BRG pmax pmax
comp=Z,30nm,2.5s,mb4.7
BRG MLR MLR
comp=N,220nm,23.2s
BRG MLR MLR
comp=E,121nm,15.6s
BRG MLR MLR
comp=Z,388nm,20.6s
PVCC Panska Ves 78.84 329 *eP* **P 02 39 45.3 +0.9**
PVCC *e*PP pP 02 40 11.1 -1.2
PVCC *e* 02 40 26.9
PVCC Panska Ves 78.84 329 *eP* **P 02 39 45.3 +0.9**
PVCC *ep*P pP 02 40 11.1 -1.2
PVCC *ex* x 02 40 15.2
PVCC *es*P sP 02 40 26.9 +2.9
CLL Collm 78.85 330 *eP* **P 02 39 44.0 -0.4**
comp=Z,13nm,1.4s,mb4.6
CLL *ep*P pP 02 40 09.6 -2.7
CLL Collm 78.85 330⇑*iP* **P 02 39 44.0 -0.4**
CLL *i* *PP pP 02 40 10.0 -2.3
CLL pmax pmax
comp=Z,13nm,1.4s,mb4.6
CLL Collm 78.85 330⇑*iP* **P 02 39 44.0 -0.4**
comp=Z,13nm,1.4s,mb4.6
CLL *i* pP pP 02 40 10.0 -2.3
CLL Collm 78.85 330⇑*iP* **P 02 39 44.0 -0.4**
comp=Z,13nm,1.4s,mb4.6
CLL *e*PcP PcP 02 39 54.0 +1.2
CLL *i* pP pP 02 40 10.0 -2.3
comp=Z,13nm,1.0s
CLL *i* sP sP 02 40 24.9 +0.8
CLL *e*PP PP 02 42 43.0 -0.6
VRAC Vranov 78.95 327 P **P 02 39 44.8 -0.2**
comp=Z,1.5nm,0.5s,mb4.1,baz=235,slow=22,SNR=6.8
VRAC Vranov 78.95 327 P **P 02 39 44.8 -0.2**
VRAC pmax pmax
comp=Z,2.0nm,0.5s
BUD Budapest 79.27 324⇓*es*P pP 02 40 07.7 -7.0
PRU Pruhonice 79.27 328 *eP* **P 02 39 48.3 +1.6**
PRU *e*PP pP 02 40 14.2 -0.5
PRU *e* 02 40 29.7
PRU Pruhonice 79.27 328 *eP* **P 02 39 48.3 +1.6**
PRU *ep*P pP 02 40 14.2 -0.5
PRU *ex* x 02 40 17.7
PRU *es*P sP 02 40 29.7 +3.3
CLZ Clausthal 79.41 332 *eP* **P 02 39 47.4 -0.1**
comp=Z,14nm,1.3s,mb4.6
CLZ *e*PcP PcP 02 39 57.7 +2.5
CLZ *ep*P pP 02 40 14.5 -0.9
TREC Trest 79.42 327 *eP* **P 02 39 48.1 +0.5**
TREC *e*PP pP 02 40 15.0 -0.5
TREC *e* 02 40 29.3
TREC Trest 79.42 327 *eP* **P 02 39 48.1 +0.5**
TREC *ep*P pP 02 40 15.0 -0.5
TREC *ex* x 02 40 18.0
TREC *es*P sP 02 40 29.3 +2.1
MOX Moxa 79.91 330 *e*(P) **P 02 39 50.2 0.0**
MOX *e* pP 02 40 16.4 -1.7
MOX Moxa 79.91 330 *eP* **P 02 39 50.0 -0.2**
comp=Z,47nm,2.2s,mb4.9
MOX *e*PcP PcP 02 39 59.9 +2.5
MOX *ep*P pP 02 40 16.1 -2.0
ASF Jabal al Asfar 80.08 304 P **P 02 39 50.3 -1.2**
comp=Z,0.8nm,0.4s,mb4.0,baz=302,slow=14,SNR=3.2
ASF Jabal al Asfar 80.08 304 P **P 02 39 50.3 -1.2**
ASF pmax pmax
comp=Z,1.0nm,0.4s
CONA Conrad Observa 80.32 326⇑*iP* **P 02 39 53.3 +0.8**
comp=Z,8.8nm,1.6s,mb4.3
KHC Kasperske Hory 80.33 328 *eP* **P 02 39 52.1 -0.4**
KHC *e*PP pP 02 40 19.4 -1.1
KHC *e* 02 40 34.2
KHC Kasperske Hory 80.33 328 *eP* **P 02 39 52.5 0.0**
comp=Z,41nm,0.6s,mb5.4
KHC Kasperske Hory 80.33 328 *eP* **P 02 39 52.1 -0.4**
KHC *ep*P pP 02 40 19.4 -1.1
KHC *es*P sP 02 40 34.2 +2.0
UBBA Unterbreizbach 80.38 331 *eP* **P 02 39 51.9 -0.8**
UBBA *e*PcP PcP 02 40 00.9 +1.5
UBBA *ep*P pP 02 40 19.1 -1.6
ROTZ Rotzenmuhle 80.38 329 *eP* **P 02 39 53.3 +0.6**
comp=Z,25nm,1.8s,mb4.7
ROTZ *e*PcP PcP 02 40 03.1 +3.6
ROTZ *ep*P pP 02 40 19.5 -1.2
MMAI Mount Meron Ar 80.48 305 P **P 02 39 53.6 0.0**
comp=Z,3.1nm,0.7s,mb4.2,baz=16,slow=21,SNR=4.1
GEC2 GERESS Array S 80.51 328 *eP* **P 02 39 53.2 -0.2**
comp=Z,13nm,1.8s,mb4.5
GEC2 *ep*P pP 02 40 19.8 -1.6
WET Wettzell 80.61 329 *eP* **P 02 39 54.2 +0.3**
comp=Z,19nm,1.9s,mb4.6
WET *ep*P pP 02 40 21.2 -0.8
EKA Eskdalemuir Ar 80.68 340 P **P 02 39 54.1 -0.1**
comp=Z,0.5nm,0.7s,baz=218,slow=27,SNR=3.3
EKA Eskdalemuir Ar 80.68 340 P **P 02 39 54.2 0.0**
EKA pmax pmax
comp=Z,1.0nm,0.7s
GRF Grafenberg Arr 80.82 330 *eP* **P 02 39 54.8 -0.3**
comp=Z,24nm,1.2s,mb4.9
GRF *ep*P pP 02 40 22.1 -1.0
GRF *es*P sP 02 40 36.2 +1.4
GRF Grafenberg Arr 80.82 330 *eP* **P 02 39 54.8 -0.3**
GRF *e*PP pP 02 40 22.1 -1.0
GRF *e*SP sP 02 40 36.2 +1.4
GRF pmax pmax
comp=Z,24nm,1.2s,mb4.9
BUG Bochum--Univer 80.85 333 *eP* **P 02 39 54.9 -0.3**
comp=Z,6.0nm,0.7s,mb4.5
BUG *ep*P pP 02 40 22.7 -0.5
VTS Vitosha 80.86 319⇑P **P 02 39 55.6 +0.1**
VTS Vitosha 80.86 319⇑*iP* **P 02 39 55.6 +0.1**
SOKA Soboth 81.64 326⇑*iP* **P 02 39 59.1 -0.4**
comp=Z,16nm,1.4s,mb4.7
FUR Furstenfeldbru 82.03 329 *eP* **P 02 40 00.9 -0.6**
comp=Z,33nm,1.5s,mb4.9
STU Stuttgart 82.35 330 *eP* **P 02 40 03.0 -0.1**
comp=Z,8.0nm,0.9s,mb4.5
WLF Walferdange 82.73 333 *eP* **P 02 40 06.7 +1.6**
comp=Z,21nm,1.5s,mb4.8
RETA Reutte 82.78 329⇑*iP* **P 02 40 05.0 -0.4**
comp=Z,12nm,1.2s,mb4.6
EIL Elat 82.98 303 P **P 02 40 06.1 -0.7**
comp=Z,2.1nm,0.6s,mb4.1,baz=38,slow=5.1,SNR=4.8
EIL Elat 82.98 303 P **P 02 40 06.1 -0.7**
BFO Black Forest 83.04 331 *eP* **P 02 40 07.0 +0.3**
comp=Z,21nm,1.5s,mb4.8
BFO *e*PcP PcP 02 40 12.8 +1.6
BFO *ep*P pP 02 40 33.9 -1.0
BFO Black Forest 83.04 331 *eP* **P 02 40 06.5 -0.2**
BFO *e* pP 02 40 35.1 +0.2
BFO pmax pmax
comp=Z,19nm,1.5s,mb4.7
BFO Black Forest 83.04 331 *eP* **P 02 40 06.5 -0.2**
comp=Z,19nm,1.5s,mb4.7
BFO *e* pP 02 40 35.1 +0.2
FETA Feichten 83.17 329⇑*iP* **P 02 40 07.5 +0.1**
comp=Z,5.6nm,1.4s,mb4.2
CDF Champ du Feu 83.37 331 *eP* **P 02 40 07.4 -1.0**
CDF *ep*P pP 02 40 37.5 +0.9
DAVOX Davos/Dischmat 83.70 329 P **P 02 40 08.8 -1.4**
comp=Z,2.9nm,0.8s,mb4.2,baz=11,slow=5.2,SNR=4.0
HINF Hinteralfeld 84.02 331 *eP* **P 02 40 10.4 -1.3**
MEZF Maizieres J'vi 84.10 333 *eP* **P 02 40 11.4 -0.7**
MEZF *ep*P pP 02 40 40.1 -0.2
LOR Lormes 85.57 333 *eP* **P 02 40 18.3 -1.2**
comp=Z,28nm,1.2s,mb4.8
LOR *ep*P pP 02 40 48.6 +0.8
LOR Lormes 85.57 333 *eP* **P 02 40 18.3 -1.2**
LOR *e*PP pP 02 40 48.6 +0.8
LOR pmax pmax
comp=Z,14nm,1.3s,mb4.7
LOR Lormes 85.57 333 *eP* **P 02 40 18.3 -1.2**
comp=Z,14nm,1.3s,mb4.7
LOR *ep*P pP 02 40 48.6 +0.8
SSF Saint Saulge 85.87 333 *eP* **P 02 40 20.0 -1.0**
comp=Z,7.3nm,0.8s,mb4.3
SSF *ep*P pP 02 40 50.2 +0.9
SSF Saint Saulge 85.87 333 *eP* **P 02 40 20.0 -1.0**
SSF *e*PP pP 02 40 50.2 +0.9
SSF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
SSF Saint Saulge 85.87 333 *eP* **P 02 40 20.0 -1.0**
comp=Z,3.7nm,0.8s,mb4.4
SSF *ep*P pP 02 40 50.2 +0.9
LPL La Plagne 85.98 330 *eP* **P 02 40 20.9 -0.7**
comp=Z,8.5nm,0.9s,mb4.4
LPL *ep*P pP 02 40 51.3 +1.4
LPL La Plagne 85.98 330 *eP* **P 02 40 20.9 -0.7**
LPL *e*PP pP 02 40 51.3 +1.4

LPL				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
LPL	**La Plagne**	**85.98**	**330**	*e*P	**P**	**02 40 20.9**	**-0.7**
	comp=Z,4.3nm,0.9s,mb4.4						
LPL				*e*pP	pP	02 40 51.3	+1.4
LPG	**La Plagne**	**85.99**	**330**	*e*P	**P**	**02 40 21.0**	**-0.7**
	comp=Z,1.6nm,0.3s,mb4.1						
LPG	**La Plagne**	**85.99**	**330**	*e*P	**P**	**02 40 21.0**	**-0.7**
LPG				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.2						
LPG	**La Plagne**	**85.99**	**330**	*e*P	**P**	**02 40 21.0**	**-0.7**
	comp=Z,0.8nm,0.3s,mb4.1						
SMF	**Signal de Mont**	**86.11**	**332**	*e*P	**P**	**02 40 21.2**	**-1.0**
SMF				*e*pP	pP	02 40 51.5	+1.0
AVF	**Avril sur Loir**	**86.16**	**333**	*e*P	**P**	**02 40 21.5**	**-1.0**
	comp=Z,11nm,0.8s,mb4.6						
AVF				*e*pP	pP	02 40 51.8	+1.0
AVF	**Avril sur Loir**	**86.16**	**333**	*e*P	**P**	**02 40 21.5**	**-1.0**
AVF				*e**PP	pP	02 40 51.8	+1.0
AVF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
AVF	**Avril sur Loir**	**86.16**	**333**	*e*P	**P**	**02 40 21.5**	**-1.0**
	comp=Z,5.6nm,0.8s,mb4.5						
AVF				*e*pP	pP	02 40 51.8	+1.0
TCF	**Toulx Ste Croi**	**87.00**	**333**	*e*P	**P**	**02 40 25.8**	**-0.7**
VIVF	**Saint-Julien-l**	**87.33**	**331**	*e*P	**P**	**02 40 27.3**	**-0.9**
VIVF				*e*pP	pP	02 40 57.5	+0.9
MFF	**Saint Martin d**	**87.52**	**335**	*e*P	**P**	**02 40 28.6**	**-0.5**
	comp=Z,10nm,0.9s,mb4.6						
MFF	**Saint Martin d**	**87.52**	**335**	*e*P	**P**	**02 40 28.6**	**-0.5**
MFF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
MFF	**Saint Martin d**	**87.52**	**335**	*e*P	**P**	**02 40 28.6**	**-0.5**
	comp=Z,5.1nm,0.9s,mb4.5						
LMR	**La Mourre**	**87.90**	**329**	*e*P	**P**	**02 40 29.7**	**-1.2**
	comp=Z,5.3nm,0.8s,mb4.3						
LMR	**La Mourre**	**87.90**	**329**	*e*P	**P**	**02 40 29.7**	**-1.2**
LMR				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
LMR	**La Mourre**	**87.90**	**329**	*e*P	**P**	**02 40 29.7**	**-1.2**
	comp=Z,2.7nm,0.8s,mb4.3						
TXAR	**Lajitas Array**	**88.50**	**52**	P	**P**	**02 40 33.3**	**-0.7**
	comp=Z,0.4nm,0.5s,mb3.7,baz=276,slow=3.2,SNR=10						
LPAZ	**La Paz**	**145.27**	**56**	PKPbc	PKPbc	02 47 19.5	+0.7
	comp=Z,1.3nm,0.5s,baz=338,slow=4.2,SNR=12						

FUNV 24 02:34:56.9,6°91N×73°02W,h163km,MW3.8,8C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.18**	**36**	⇑*i*P	Pn	02 35 24.0	-0.4
CAPV				*e*S	Sn	02 35 44.1	-1.5
VIGV	**El Vigia**	**2.52**	**40**	⇑*i*P	Pn	02 35 38.3	-0.6
VIGV				*e*S	Sn	02 36 08.3	-3.1
SOCV	**Socops**	**2.54**	**57**	⇑*i*P	Pn	02 35 38.6	-0.6
SOCV				*e*S	Sn	02 36 09.2	-2.7
ELOV	**Elorza**	**3.51**	**88**	*e*P	Pn	02 35 49.3	-1.9
VIRV	**Villa del Rosa**	**3.62**	**10**	⇑*i*P	Pn	02 35 50.6	-2.1
VIRV				*e*S	Sn	02 36 31.3	-4.8
QARV	**Quebrada Arrib**	**4.10**	**37**	⇑*i*P	Pn	02 35 58.2	-0.6
QARV				*e*S	Sn	02 36 41.6	-5.5
SANV	**Sanarito**	**4.30**	**53**	*e*P	Pn	02 36 00.2	-1.2
SANV				*e*S	Sn	02 36 46.8	-4.9
CURV	**Curarigua**	**4.32**	**44**	⇑*e*P	Pn	02 36 00.5	-1.1
DABV	**Dabajuro**	**4.63**	**30**	*e*P	Pn	02 36 04.9	-0.8
TEPV	**Terepaima**	**4.85**	**51**	*e*P	Pn	02 36 07.3	-1.3
SIQV	**Siquisique**	**4.88**	**40**	⇑*e*P	Pn	02 36 07.7	-1.3
SIQV				*e*S	Sn	02 36 59.7	-5.8
BAUV	**El Baul**	**5.33**	**67**	*e*P	Pn	02 36 12.2	-2.7
MAPV	**Macapo**	**5.36**	**57**	⇑*e*P	Pn	02 36 13.6	-1.7
MONV	**Montecano**	**5.84**	**31**	*e*P	Pn	02 36 19.6	-2.1
TURV	**Turiamo**	**6.21**	**55**	*e*P	Pn	02 36 25.4	-1.2
CAOV	**Caicara del Or**	**6.66**	**86**	*e*P	Pn	02 36 29.8	-2.7

MEX 24 02:51:10.1±0.4,17°78N×100°27W,h67km±6km,MD3.8, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.72**	**180**	*e*P	Pn	02 51 23.7	-1.4
CAIG				*i* S	Sn	02 51 34.5	-1.6
PLIG	**Platanillo**	**0.95**	**50**	*i* P	Pn	02 51 26.7	-1.2
PLIG				*i* S	Sn	02 51 39.2	-1.7
ACX	**Acapulco**	**0.98**	**157**	*i* P	Pn	02 51 26.0	-2.2
ACX				*i* S	Sn	02 51 41.2	-0.5
ZIIG	**Zihuatanejo**	**1.16**	**262**	*i* P	Pn	02 51 28.9	-1.5
ZIIG				*i* S	Sn	02 51 43.9	-1.6
PPM	**Popocatepetl**	**2.02**	**50**	*e*P	Pn	02 51 41.2	-0.7
PPM				*i* S	Sn	02 52 05.2	-0.9
PNIG	**Pinotepa**	**2.47**	**124**	*i* P	Pn	02 51 47.5	-0.5
PNIG				*i* S	Sn	02 52 15.1	-2.0
MMIG	**Aquila**	**2.97**	**280**	*e*P	Pn	02 51 53.4	-1.5
MMIG				*i* S	Sn	02 52 28.5	-0.9

*ISCJB **24** 03:00:15.9±0.4,24°15N±0°01×121°78E±0°02,h1km±3km, Error ellipse: s-maj=3.8km s-min=2.0km az=20.1*
*TAP **24** 03:00:16.0,24°15N×121°75E,h13km,ML3.9,B*
*NEIC **24** 03:00:17.4±1.4,24°17N×121°65E,h10km,Error ellipse: s-maj=23.0km s-min=6.1km az=96.0*
ISC 24 03:00:16.4±0.4,24°14N±0°01×121°79E±0°02,h6km±3km, n52,σ0°78/89,5C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.17**	**345**	P	**Pg**	**03 00 19.9**	**0.0**
	baz=359						
EHP				*i* S	**Sg**	**03 00 23.0**	**+0.8**
	baz=359						
NACB	**Ninganchiao**	**0.18**	**280**	*e*Pg	**Pg**	**03 00 19.4**	**-0.6**
TWD	**Chiawan**	**0.19**	**250**	*i* P	**Pg**	**03 00 19.9**	**-0.2**
	baz=251						
TWD				*i* S	**Sg**	**03 00 22.9**	**+0.2**
	baz=251						
HWA	**Hwalien**	**0.23**	**225**	*e*P	**Pg**	**03 00 21.8**	**+0.7**
	baz=228						
HWA				*e*S	**Sg**	**03 00 26.0**	**+1.8**
	baz=228						
ENA	**Nanau**	**0.29**	**351**	⇑*i*P	**Pg**	**03 00 22.0**	**-0.1**
	baz=359						
ENA				S	**Sg**	**03 00 26.1**	**+0.3**
	baz=359						
ESF	**Shoufeng Towns**	**0.37**	**224**	*e*P	**Pg**	**03 00 23.5**	**-0.2**
	baz=228						
ESL	**Shilin**	**0.46**	**225**	P	**Pg**	**03 00 25.0**	**-0.3**
	baz=229						
ESL				*e*S	**Sg**	**03 00 32.0**	**+0.7**
	baz=229						
TWC	**Suao**	**0.47**	**7**	*i* P	**Pg**	**03 00 25.6**	**+0.1**
	baz=5.0						
TWC				S	**Sg**	**03 00 32.2**	**+0.6**
	baz=5.0						
WHF	**Hehuan Shan**	**0.48**	**270**	⇑*i*P	**Pg**	**03 00 25.1**	**-0.6**
	baz=271						
WHF				S	**Sg**	**03 00 31.3**	**-0.6**
	baz=271						
NNS	**Nan Shan**	**0.48**	**308**	⇑*i*P	**Pg**	**03 00 25.2**	**-0.5**
	baz=310						
NNS				*e*S	**Sg**	**03 00 31.5**	**-0.5**
	baz=310						
TWT	**Tachien**	**0.57**	**281**	*i* P	**Pg**	**03 00 27.3**	**-0.1**
	baz=281						
TWT				*i* S	**Sg**	**03 00 34.8**	**0.0**
	baz=281						
TWE	**Neicheng**	**0.59**	**349**	⇑*i*P	**Pg**	**03 00 27.8**	**+0.1**
	baz=353						
TWE				*i* S	**Sg**	**03 00 35.7**	**+0.3**
	baz=353						
ILA	**Ilan**	**0.62**	**357**	*e*P	**Pg**	**03 00 28.5**	**+0.2**
	baz=350						
YHNB	**Yeheng**	**0.65**	**324**	*e*Pg	**Pg**	**03 00 28.4**	**-0.5**
YHNB				*e*Sg	**Sg**	**03 00 36.9**	**-0.3**
NSK	**Sanguang**	**0.66**	**324**	⇑*i*P	**Pg**	**03 00 28.7**	**-0.4**
	baz=326						
NSK				*i* S	**Sg**	**03 00 37.2**	**-0.5**
	baz=326						
EHY	**Hungye**	**0.76**	**214**	*e*P	**Pg**	**03 00 30.0**	**-1.1**
	baz=225						
EHY				*e*S	**Sg**	**03 00 41.5**	**+0.5**
	baz=225						
SSLB	**Suanglung**	**0.84**	**245**	*e*Pg	**Pg**	**03 00 31.8**	**-0.8**
SSLB				*e*Sg	**Sg**	**03 00 42.4**	**-1.1**
SMLT	**Sun Moon Lake**	**0.85**	**253**	P	**Pg**	**03 00 32.1**	**-0.7**
	baz=253						
TWA	**Mucha**	**0.85**	**347**	P	**Pg**	**03 00 33.0**	**+0.2**
	baz=349						
TWA				*e*S	**Sg**	**03 00 43.8**	**-0.1**
	baz=349						
NSTT	**Nanjuang**	**0.87**	**304**	*e*P	**Pg**	**03 00 32.9**	**-0.1**
	baz=305						
NSTT				*e*S	**Sg**	**03 00 43.4**	**-1.0**
	baz=305						
YULB	**Yu-li**	**0.87**	**211**	*e*Pg	**Pg**	**03 00 33.2**	**+0.1**
YULB				*e*Sg	**Sg**	**03 00 45.3**	**+0.8**
TATO	**Taipei**	**0.87**	**342**	*e*Pg	**Pg**	**03 00 33.1**	**-0.1**
TATO				*e*S	**Sg**	**03 00 43.6**	**-0.9**
TWB1	**Santiao Chiao**	**0.88**	**12**	*e*P	**Pg**	**03 00 33.1**	**-0.2**
	baz=8.0						
TWB1				*e*S	**Sg**	**03 00 45.0**	**+0.2**
	baz=8.0						
TYC	**Yuchr**	**0.88**	**255**	*i* P	**Pg**	**03 00 32.6**	**-0.8**
	baz=255						
TYC				*e*S	**Sg**	**03 00 42.8**	**-2.1**
	baz=255						
TWF1	**Yuli**	**0.91**	**210**	*e*P	**Pg**	**03 00 32.2**	**-1.6**
	baz=224						
NWF	**Wu-fen Shan**	**0.92**	**360**	P	**Pg**	**03 00 34.2**	**+0.1**
	baz=352						
NWF				*e*S	**Sg**	**03 00 45.9**	**-0.3**
	baz=352						
TAP1	**Taipei**	**0.92**	**345**	*e*P	**Pg**	**03 00 34.3**	**+0.1**
	baz=345						
TAP1				*e*S	**Sg**	**03 00 46.9**	**+0.7**
	baz=345						
TWQ1	**Liyutan**	**0.95**	**283**	*i* P	**Pg**	**03 00 35.0**	**+0.4**
	baz=293						
TWQ1				*e*S	**Sg**	**03 00 48.0**	**+1.1**
	baz=293						
NSY	**Sanyi**	**0.98**	**286**	*e*P	**Pg**	**03 00 35.6**	**+0.4**
	baz=287						
NSY				*e*S	**Sg**	**03 00 49.3**	**+1.4**
	baz=287						
NCU	**National Centr**	**0.99**	**327**	*e*P	**Pg**	**03 00 33.8**	**-1.6**
	baz=327						
NCU				*e*S	**Sg**	**03 00 49.6**	**+1.3**
	baz=327						
HSN	**Hsinchu**	**0.99**	**312**	*e*P	**Pg**	**03 00 35.4**	**-0.1**
	baz=315						
HSN				*e*S	**Sg**	**03 00 49.1**	**+0.7**
	baz=315						
TWS1	**Kuangyinshan**	**1.01**	**341**	*e*P	**Pg**	**03 00 36.2**	**+0.4**
	baz=349						
TWS1				*e*S	**Sg**	**03 00 50.6**	**+1.6**
	baz=349						
TCU	**Taichung**	**1.02**	**270**	P	**Pg**	**03 00 36.3**	**+0.3**
	baz=271						
TCU				S	**Sg**	**03 00 50.3**	**+1.2**
	baz=271						
TWY	**Chenhua**	**1.14**	**351**	*e*P	**Pg**	**03 00 38.0**	**-0.3**
	baz=337						
CHN5	**Tsauling**	**1.15**	**242**	*i* P	**Pg**	**03 00 38.5**	**0.0**
	baz=243						
CHN5				S	**Sg**	**03 00 55.1**	**+1.7**
	baz=243						
YOJ	**Yonaguni jima**	**1.16**	**74**	*e*P	**Pg**	**03 00 38.4**	**-0.3**
	baz=83						
YOJ				*e*S	**Sg**	**03 00 54.3**	**+0.6**
	baz=83						
ELDTW	**Lidau**	**1.18**	**217**	P	**Pg**	**03 00 37.6**	**-1.5**
	baz=217						
WGK	**Gukeng**	**1.21**	**248**	*e*P	**Pb**	**03 00 38.8**	**-1.0**
	baz=249						
CHN4	**Tsaushan**	**1.35**	**234**	*e*P	**Pn**	**03 00 41.4**	**-0.3**
	baz=235						
CHN4				*e*S	**Sb**	**03 01 00.4**	**+0.8**
	baz=235						
TPUB	**Ta-pu**	**1.35**	**232**	*e*Pn	**Pn**	**03 00 41.0**	**-0.8**
TPUB				*e*S	**Sb**	**03 00 59.6**	**-0.1**
WTP	**Ta-pu**	**1.40**	**231**	*e*P	**Pn**	**03 00 42.0**	**-0.5**
	baz=232						
WTP				*e*S	**Sb**	**03 01 01.4**	**+0.4**
	baz=232						
CHY	**Chiayi**	**1.41**	**243**	*e*P	**Pn**	**03 00 42.3**	**-0.2**
	baz=244						
CHY				*e*S	**Sb**	**03 01 01.5**	**+0.3**
	baz=244						
TWG	**Pinlang**	**1.47**	**207**	*e*Pn	**Pn**	**03 00 44.0**	**+0.6**
TWK	**Hsinying**	**1.48**	**234**	P	**Pn**	**03 00 43.4**	**-0.1**
	baz=234						
TWK				*e*S	**Sn**	**03 01 03.1**	**0.0**
	baz=234						
SGST	**Jiashian**	**1.53**	**227**	*e*P	**Pn**	**03 00 44.1**	**-0.1**
	baz=228						
SGST				*e*S	**Sn**	**03 01 05.4**	**+1.0**
	baz=228						
TWM1	**Shoushan**	**1.82**	**224**	*e*P	**Pn**	**03 00 49.4**	**+1.3**
	baz=224						
EAST	**Anshuo**	**1.95**	**206**	*e*P	**Pn**	**03 00 50.9**	**+0.8**
	baz=195						
SCZT	**Fangliau**	**2.06**	**212**	*e*P	**Pn**	**03 00 51.5**	**-0.1**
	baz=196						
PNG	**Penghu**	**2.12**	**255**	*e*P	**Pn**	**03 00 51.0**	**-1.4**
	baz=257						
TWK1	**Hengchun**	**2.37**	**203**	*e*P	**Pn**	**03 00 58.2**	**+2.4**
	baz=192						
QZH	**Quanzhou**	**3.02**	**286**	Pn	**Pn**	**03 01 04.4**	**-0.3**
QZH				Sn	**Sn**	**03 01 37.1**	**-4.1**
QZH				smax			
	comp=N,270nm,0.8s						
QZH				smax			
	comp=E,140nm,0.8s						
KNM	**Kinmen**	**3.07**	**276**	*e*P	**Pn**	**03 01 04.3**	**-1.1**
	baz=276						

NNC 24 03:20:42.5±0.9,46°30N×79°21E,h0km,mb3.5,mpv3.1, 11C-5D,Error ellipse: s-maj=12.9km s-min=7.5km az=153.0,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**2.18**	**76**	⇓Pn	Pn	03 21 22.9	+2.9
	5.3nm,0.4s,baz=249,slow=15,SNR=279						
MK31				⇑Lg		03 21 52.1	
	6.7nm,0.3s,baz=245,slow=28,SNR=4.9						
TKM2	**Tokmak 2**	**4.25**	**219**	Pn	Pn	03 21 49.7	+1.2
TKM2				⇑Pg	Pg	03 22 00.2	-3.7
	4.9nm,1.0s						
TKM2				⇑Lg		03 22 54.1	
	11nm,0.4s						
KURK	**Kurchatov**	**4.44**	**355**	⇑Pg	Pg	03 22 04.8	-2.7
	4.4nm,0.6s						
KURK				⇑Lg		03 23 06.4	
	36nm,1.1s						
KK31	**Karatay Array**	**6.97**	**246**	⇑Pn	Pn	03 22 26.9	+1.0
	0.5nm,0.4s,baz=332,slow=38,SNR=9.3						
KK31				⇑Pg	Pg	03 22 47.2	-8.9
	0.3nm,0.3s,baz=313,slow=42,SNR=7.2						
KK31				⇑Sn	Sn	03 23 54.1	+8.3
	0.9nm,0.5s						
KK31				⇑Lg		03 24 20.8	
VOSK	**Vostochnaya**	**8.36**	**323**	⇑Sn	Sn	03 24 20.4	+0.5
	1.7nm,0.8s						
VOSK				⇓Lg		03 25 04.5	
	8.6nm,1.1s						
BRVK	**Borovoye**	**8.90**	**323**	⇓Sn	Sn	03 24 35.9	+2.8
	2.0nm,0.5s						
BRVK				⇓Lg		03 25 22.2	
	9.5nm,0.7s						
ZRNK	**Zerenda**	**9.38**	**319**	⇑Sn	Sn	03 24 42.8	-2.3
	1.0nm,0.6s						
ZRNK				⇓Lg		03 25 37.5	
	3.2nm,0.6s						

*JMA **24** 03:20:39.7±0.8,46°88N×153°35E,h30km,M4.6*
*ISCJB **24** 03:20:42.6±0.9,46°96N±0°09×152°8E±0°1,h73km±8km, mb4.0/15,Error ellipse: s-maj=20.2km s-min=5.3km az=138.2*
*MOS **24** 03:20:44.0±1.1,47°17N×152°76E,h80km,mb4.3/8,Error ellipse: s-maj=19.0km s-min=9.6km az=52.9*
*NEIC **24** 03:20:45.9±1.1,47°22N×152°75E,h74km±10km,mb4.3/3, Error ellipse: s-maj=15.7km s-min=7.6km az=136.0*
*IDC **24** 03:20:46.8±2.4,47°23N×152°72E,h83km±20km,mb3.7/14, mb1 3.9/17,mb1mx3.8/27,mbtmp3.7/17,Error ellipse: s-maj=21.2km s-min=12.0km az=150.0*
ISC 24 03:20:44.7±0.8,47°00N±0°09×152°8E±0°1,h72km±7km,

n69,σ1°47/81,mb4.0/15,2C,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.83**	**244**	⇑*i*PN	**Pn**	**03 21 42.6**	**+1.5**
KUR				*e*S	**Sn**	**03 22 28.5**	**+3.6**
KUR				pmax	pmax		
	comp=Z,150nm,0.6s						
KUR				smax			
	comp=N,430nm,0.7s						
KUR				smax			
	comp=E,200nm,0.7s						
SKR	**Severo-Kuril's**	**4.30**	**30**	*e*PN	**Pn**	**03 21 47.0**	**-0.6**
SKR				pmax	pmax		
	comp=Z,40nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**5.68**	**241**	⇑*i*PN	**Pn**	**03 22 07.4**	**+1.0**
YUK				*e*S	**Sn**	**03 23 14.4**	**+4.3**
YUK				pmax	pmax		
	comp=Z,160nm,0.2s						
YUK				pmax	pmax		
	comp=N,60nm,0.4s						
YUK				pmax	pmax		
	comp=E,40nm,0.2s						
YUK				smax			
	comp=N,60nm,0.3s						
YUK				smax			
	comp=E,200nm,0.6s						
YUK				smax			
	comp=N,100nm,0.8s						
YUK				smax			
	comp=E,250nm,0.8s						
NEM2	**Nemuro 2**	**6.14**	**236**	P	**Pn**	**03 22 11.9**	**-0.8**
NEM2				*e*S	**Sn**	**03 23 19.5**	**-2.0**
JRA	**Rausu**	**6.18**	**243**	P	**Pn**	**03 22 15.2**	**+2.0**
JNK	**Nakash**	**6.61**	**242**	P	**Pn**	**03 22 20.5**	**+1.3**
JNK				*e*S	**Sn**	**03 23 34.0**	**+0.9**
YSS	**Yuzh-Sakhalins**	**6.84**	**273**	*e*PN	**Pn**	**03 22 25.5**	**+3.2**
PETK	**Petropavlovsk-**	**6.89**	**26**	P	**Pn**	**03 22 22.1**	**-0.8**
	comp=E,1.0nm,0.3s,baz=194,slow=10,SNR=15						
PETK				S	**Sn**	**03 23 39.7**	**-0.1**
	baz=225,slow=14,SNR=1.9						
PETK	**Petropavlovsk-**	**6.89**	**26**	PN	**Pn**	**03 22 22.1**	**-0.8**
PETK				S	**Sn**	**03 23 39.7**	**-0.1**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
JTKR	**Abashiri--Toko**	**6.92**	**247**	P	**Pn**	**03 22 25.6**	**+2.3**
JAK	**Akkeshi**	**6.97**	**238**	P	**Pn**	**03 22 23.2**	**-0.9**
JAK				*e*S	**Sn**	**03 23 39.5**	**-2.3**
JMP	**Maruseppu**	**7.25**	**249**	P	**Pn**	**03 22 30.4**	**+2.6**
JAR	**Ashorobuto**	**7.35**	**243**	P	**Pn**	**03 22 30.7**	**+1.5**
JAR				*e*S	**Sn**	**03 23 51.9**	**+0.8**
JOB	**Onbets**	**7.53**	**240**	*e*S	**Sn**	**03 23 53.7**	**-1.9**
ASAJ	**Asahikawa**	**7.69**	**252**	P	**Pn**	**03 22 36.2**	**+2.4**
	comp=Z,0.7nm,0.3s,baz=90,slow=19,SNR=23						
ASAJ	**Asahikawa**	**7.69**	**252**	PN	**Pn**	**03 22 36.3**	**+2.5**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**7.69**	**252**	P	**Pn**	**03 22 37.6**	**+3.8**
JKK2	**Kamakawa 2**	**7.70**	**250**	P	**Pn**	**03 22 37.0**	**+3.0**
JWK2	**Keihoku**	**7.72**	**261**	P	**Pn**	**03 22 40.4**	**+6.1**
JCH	**Churui**	**7.99**	**240**	*e*S	**Sn**	**03 24 03.2**	**-3.4**
JEM	**Erimo**	**8.47**	**237**	*e*S	**Sn**	**03 24 13.1**	**-5.5**
ERM	**Erimo**	**8.47**	**237**	*e*PN	**Pn**	**03 22 45.4**	**+0.8**
ERM				pmax	pmax		
	comp=Z,13nm,0.4s						
ERM	**Erimo**	**8.47**	**237**	*e*Pn	**Pn**	**03 22 45.4**	**+0.8**
	comp=Z,13nm,0.4s						
ERM				*e*Sn	**Sn**	**03 24 18.1**	**-0.5**
JNBK	**Urakawa-nobuka**	**8.55**	**240**	P	**Pn**	**03 22 44.1**	**-1.5**
JNBK				*e*S	**Sn**	**03 24 14.8**	**-5.6**
JNB	**Noboribetsu**	**9.49**	**246**	P	**Pn**	**03 22 58.7**	**+0.3**
JNB				*e*S	**Sn**	**03 24 40.8**	**-2.5**
JKB	**Kayabe**	**9.81**	**243**	P	**Pn**	**03 23 01.4**	**-1.4**
JKB				*e*S	**Sn**	**03 24 44.8**	**-6.5**
JSH	**Shimam**	**10.02**	**249**	P	**Pn**	**03 23 07.1**	**+1.4**
JTM	**Tenmabayashi**	**10.47**	**238**	P	**Pn**	**03 23 08.8**	**-3.0**
JTM				*e*S	**Sn**	**03 24 58.2**	**-9.1**
JANG	**Nango**	**10.49**	**235**	P	**Pn**	**03 23 08.6**	**-3.4**
JANG				*e*S	**Sn**	**03 24 57.2**	**-11**
JTH	**Tanohata**	**10.60**	**232**	P	**Pn**	**03 23 10.0**	**-3.5**
JTH				*e*S	**Sn**	**03 24 59.9**	**-11**
JOSM	**Okushiri--Mats**	**10.67**	**247**	P	**Pn**	**03 23 14.1**	**-0.5**
JRG	**Rokugo**	**11.65**	**234**	P	**Pn**	**03 23 25.0**	**-2.9**
MAJO	**Matsushiro**	**15.04**	**231**	*e*P	**Pn**	**03 24 18.0**	**+5.0**
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.3s						
MAJO	**Matsushiro**	**15.04**	**231**	*e*P	**Pn**	**03 24 18.0**	**+5.0**
	comp=Z,4.8nm,0.3s						
MJAR	**Matsushiro Arr**	**15.04**	**231**	P	**Pn**	**03 24 16.1**	**+3.1**
	comp=Z,0.7nm,0.3s,baz=47,slow=9.1,SNR=9.6						
MJAR	**Matsushiro Arr**	**15.04**	**231**	P	**Pn**	**03 24 16.1**	**+3.1**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS	**Korea Array**	**20.64**	**251**	P	**P**	**03 25 20.7**	**+2.5**
	comp=Z,2.0nm,0.5s,baz=54,slow=11,SNR=6.7						
KSRS	**Korea Array**	**20.64**	**251**	P	**P**	**03 25 20.7**	**+2.5**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KDAK	**Kodiak Island**	**34.14**	**51**	P	**P**	**03 27 21.5**	**-0.9**
	comp=Z,4.9nm,0.7s,mb4.5,baz=211,slow=2.5,SNR=4.5						
KDAK	**Kodiak Island**	**34.14**	**51**	P	**P**	**03 27 21.5**	**-0.8**
KDAK				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
COLD	**Coldfoot**	**35.27**	**34**	*e*P	**P**	**03 27 31.6**	**-0.3**
	comp=Z,2.5nm,0.8s,mb4.1						
ILAR	**Eielson Array**	**36.51**	**39**	P	**P**	**03 27 40.9**	**-1.7**
	comp=Z,0.7nm,0.5s,mb3.9,baz=266,slow=5.8,SNR=18						
ILAR	**Eielson Array**	**36.51**	**39**	P	**P**	**03 27 40.9**	**-1.7**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
INK	**Inuvik**	**41.58**	**33**	P	**P**	**03 28 23.7**	**-1.1**
	comp=Z,2.0nm,0.5s,mb4.2,baz=279,slow=8.4,SNR=7.8						
INK	**Inuvik**	**41.58**	**33**	P	**P**	**03 28 23.7**	**-1.1**
INK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
INK	**Inuvik**	**41.58**	**33**	P	**P**	**03 28 23.7**	**-1.1**
ZALV	**Zalesovo Beam**	**42.27**	**305**	PcP	PcP	03 30 23.5	+0.4
	comp=Z,0.9nm,0.3s,baz=68,slow=3.6,SNR=6.8						
MKAR	**Makanchi Array**	**46.61**	**297**	P	**P**	**03 29 05.3**	**0.0**
	comp=Z,0.4nm,0.5s,mb3.4,baz=81,slow=11,SNR=4.0						
MKAR				PcP	PcP	03 30 38.6	+0.4
	comp=Z,0.6nm,0.3s,baz=77,slow=2.8,SNR=4.7						
BVAR	**Borovoye Array**	**50.51**	**309**	P	**P**	**

TXAR				pmax	pmax	
	comp=Z,4.0nm,0.5s					
PLCA	**Paso Flores**	**148.47**	**95**	PKPbc	PKPbc	03 40 23.7 +1.2
	comp=Z,3.0nm,1.2s,baz=232,slow=8.4,SNR=2.9					
CPUP	**Villa Florida**	**148.56**	**60**	PKPbc	PKPbc	03 40 23.4 +0.2
	comp=Z,1.1nm,0.6s,baz=28,slow=2.4,SNR=4.0					

DJA 24 03:28:24.0˝52N×126˚48E, h30km, MLv3.5/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.92**	**74**	P	Pn	03 28 42.3	+1.4
TNTI				S	Sn	03 28 53.3	+0.2
LBMI	**Labuha**	**1.54**	**138**	P	Pn	03 28 51.5	+2.1
LBMI				S	Sn	03 29 08.9	+0.5
LUWI	**Luwuk**	**4.02**	**247**	P	Pn	03 29 21.2	-2.4
SPSI	**Sidrap Palu**	**8.05**	**236**	P	Pn	03 30 21.1	+2.1

*ATH **24** 03:31:30.1, 35˝.88N×27˚.89E, h51km±1km, MD3.0/4*
*ISK **24** 03:31:30.8, 35˝.96N×27˚.79E, h23km, MD3.3*
*NEIC **24** 03:31:30.1, 35˝.88N×27˚.89E, h51km, MD3.0(ATH), After ATH.*
*ISCJB **24** 03:31:30.8±0.7, 35˝.88N±0˝.04×27˚.88E±0˝.04, h50km±10km, Error ellipse: s-maj=7.7km s-min=5.0km az=146.5*
*DDA **24** 03:31:31.5, 36˚.12N×28˚.08E, h7km±3km, Md3.1*
*CSEM **24** 03:31:31.2±0.4, 35˚.90N×27˚.86E, h33km±5km, MD3.0, Error ellipse: s-maj=8.4km s-min=5.6km az=146.0*

ISC 24 03:31:31.4±0.7, 35˚.88N±0˝.04×27˚.88E±0˝.04, h46km±13km, n40, σ0=91/63, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.39**	**30**	*e*P	**Pn**	**03 31 40.9**	**-0.3**
ARG				*e*S	**Sn**	**03 31 48.7**	**+0.6**
ARG	**Arkhangelos**	**0.39**	**30**	*e*P	**Pn**	**03 31 40.9**	**-0.3**
ARG				*e*S	**Sn**	**03 31 48.7**	**+0.6**
ARG	**Arkhangelos**	**0.39**	**30**	*e*P	**Pn**	**03 31 40.9**	**-0.3**
ARG				*e*S	**Sn**	**03 31 48.7**	**+0.6**
KARP	**Karpathos**	**0.67**	**241**	*e*P	**Pn**	**03 31 44.5**	**-0.1**
KARP				*e*S	**Sn**	**03 31 54.6**	**+0.5**
KARP	**Karpathos**	**0.67**	**241**	*e*P	**Pn**	**03 31 44.5**	**-0.1**
KARP				*e*S	**Sn**	**03 31 54.6**	**+0.5**
KARP	**Karpathos**	**0.67**	**241**	*e*P	**Pn**	**03 31 44.5**	**-0.1**
KARP				*e*S	**Sn**	**03 31 54.6**	**+0.5**
DAT	**Datca**	**0.89**	**344**	*e*PG	**Pn**	**03 31 46.7**	**-0.8**
DAT				*e*SG	**Sn**	**03 31 58.2**	**-1.0**
DAT	**Datca**	**0.89**	**344**	*e*Pg	**Pn**	**03 31 46.7**	**-0.8**
DAT				*e*Sg	**Sn**	**03 31 58.2**	**-1.0**
TURN	**Turunc**	**1.15**	**30**	*i* P	**Pn**	**03 31 48.9**	**-2.3**
TURN				*i* S	**Sn**	**03 32 03.3**	**-2.5**
TURN	**Turunc**	**1.15**	**30**	*i* P	**Pn**	**03 31 48.8**	**-2.3**
TURN				*i* S	**Sn**	**03 32 03.3**	**-2.5**
BDRM	**Kayabasi**	**1.24**	**344**	*i* P	**Pn**	**03 31 52.3**	**0.0**
BDRM				*i* S	**Sn**	**03 32 09.0**	**+1.2**
BDRM	**Kayabasi**	**1.24**	**344**	*i* P	**Pn**	**03 31 52.3**	**0.0**
BDRM				*i* S	**Sn**	**03 32 09.0**	**+1.2**
BODT	**Bodrum**	**1.27**	**339**	*e*PN	**Pn**	**03 31 52.2**	**-0.5**
BODT				*e*SN	**Sn**	**03 32 07.8**	**-0.8**
BODT	**Bodrum**	**1.27**	**339**	*e*Pn	**Pn**	**03 31 52.2**	**-0.5**
BODT				*e*Sn	**Sn**	**03 32 07.8**	**-0.8**
YER	**Yerkesik**	**1.30**	**14**	*e*PN	**Pn**	**03 31 53.4**	**+0.3**
YER	**Yerkesik**	**1.30**	**14**	*e*Pn	**Pn**	**03 31 53.4**	**+0.3**
MLSB	**Milas**	**1.42**	**357**	*e*PN	**Pn**	**03 31 54.6**	**-0.2**
MLSB	**Milas**	**1.42**	**357**	*e*Pn	**Pn**	**03 31 54.6**	**-0.2**
AKAS	**Kas**	**1.44**	**75**	*i* P	**Pn**	**03 31 54.4**	**-0.7**
AKAS				*i* S	**Sn**	**03 32 12.5**	**-0.3**
AKAS	**Kas**	**1.44**	**75**	*i* P	**Pn**	**03 31 54.4**	**-0.7**
AKAS				*i* S	**Sn**	**03 32 12.5**	**-0.3**
AYDN	**Tasoluk**	**1.78**	**360**	*i* P	**Pn**	**03 32 00.2**	**+0.5**
AYDN				*i* S	**Sn**	**03 32 22.5**	**+1.3**
AYDN	**Tasoluk**	**1.78**	**360**	*i* P	**Pn**	**03 32 00.2**	**+0.5**
AYDN				*i* S	**Sn**	**03 32 22.5**	**+1.4**
ELL	**Elmali**	**1.85**	**61**	*e*PN	**Pn**	**03 32 01.6**	**+0.8**
ELL	**Elmali**	**1.85**	**61**	*e*Pn	**Pn**	**03 32 01.6**	**+0.9**
GCAM	**G?zelcaml?**	**1.89**	**344**	*i* P	**Pn**	**03 32 01.7**	**+0.4**
GCAM	**G?zelcaml?**	**1.89**	**344**	*i* P	**Pn**	**03 32 01.7**	**+0.4**
GOLH	**Golhisar**	**1.92**	**44**	*i* P	**Pn**	**03 32 02.5**	**+1.0**
GOLH				*i* S	**Sn**	**03 32 26.4**	**+1.9**
GOLH	**Golhisar**	**1.92**	**44**	*i* P	**Pn**	**03 32 02.5**	**+0.9**
GOLH				*i* S	**Sn**	**03 32 26.4**	**+1.9**
NPS	**Neapolis**	**1.95**	**252**	*e*P	**Pn**	**03 32 02.0**	**0.0**
NPS	**Neapolis**	**1.95**	**252**	*e*P	**Pn**	**03 32 02.0**	**0.0**
NPS	**Neapolis**	**1.95**	**252**	*e*P	**Pn**	**03 32 02.0**	**0.0**
SMG	**Samos**	**2.01**	**336**	*e*P	**Pn**	**03 32 02.9**	**0.0**
SMG	**Samos**	**2.01**	**336**	*e*P	**Pn**	**03 32 02.9**	**0.0**
SMG	**Samos**	**2.01**	**336**	*e*P	**Pn**	**03 32 02.9**	**0.0**
DNZL	**Cakiroluk**	**2.04**	**27**	*i* P	**Pn**	**03 32 08.1**	**+4.8**
DNZL				*i* S	**Sn**	**03 32 34.6**	**+7.1**
DNZL	**Cakiroluk**	**2.04**	**27**	*i* P	**Pn**	**03 32 08.1**	**+4.9**
APE	**Apeiranthos**	**2.24**	**303**	*e*PN	**Pn**	**03 32 06.0**	**0.0**
APE	**Apeiranthos**	**2.24**	**303**	*e*Pn	**Pn**	**03 32 06.0**	**0.0**
IDI	**Anoyia**	**2.51**	**257**	*e*Pn	**Pn**	**03 32 09.0**	**-0.7**
IDI				*e*S	**Sn**	**03 32 39.6**	**+0.6**
IDI	**Anoyia**	**2.51**	**257**	*e*Pn	**Pn**	**03 32 09.0**	**-0.7**
IDI				*e*S	**Sn**	**03 32 39.6**	**+0.6**

*DJA **24** 03:34:18, 2˚.81N×129˚.06E, h10km, MLv4.4/3*
*ISCJB **24** 03:34:19.6±1.0, 2˚.50N±0˝.07×128˚.5E±0˝.1, h236km±10km, mb3.9/15, Error ellipse: s-maj=20.9km s-min=8.3km az=155.1*
*IDC **24** 03:34:19.4±2.6, 2˚.50N×128˚.59E, h219km±26km, mb3.6/12, mb1 3.7/12, mb1mx3.6/21, mbtmp3.6/12, Error ellipse: s-maj=23.8km s-min=10.5km az=79.0*
*NEIC **24** 03:34:19.2±3.2, 2˚.52N×128˚.58E, h215km±35km, mb4.3/4, Error ellipse: s-maj=19.6km s-min=11.1km az=70.0*

ISC 24 03:34:20.6±1.0, 2˚.47N±0˝.08×128˚.5E±0˝.1, h229km±10km, n25, σ0=74/27, mb3.9/15, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.03**	**214**	P	**Pn**	**03 35 01.9**	**+0.3**
TNTI				S	**S**	**03 35 34.1**	**+0.3**
SGSI	**Sangihe**	**3.20**	**292**	P	**Pn**	**03 35 14.2**	**+0.2**
LBMI	**Labuha**	**3.24**	**198**	P	**Pn**	**03 35 15.5**	**+0.9**
MNI	**Manado**	**3.79**	**254**	P	**S**	**03 36 07.5**	**-1.2**
KAKA	**Kakadu**	**15.58**	**166**	*e*Pn	**Pn**	**03 37 48.5**	**-0.3**
KAKA				*e*S	**S**	**03 40 35.7**	**-5.0**
FITZ	**Fitzroy Crossi**	**20.63**	**188**	P	**P**	**03 38 41.8**	**-1.0**
	2.0nm,0.6s,baz=35,slow=8.5,SNR=7.0						
FITZ	**Fitzroy Crossi**	**20.63**	**188**	*e*P	**P**	**03 38 42.4**	**-0.5**
WRAB	**Tennant Creek**	**22.99**	**166**	*e*P	**P**	**03 39 05.0**	**-0.5**
	11nm,0.9s,mb4.4						
ASAR	**Alice Springs**	**26.51**	**169**	P	**P**	**03 39 37.2**	**0.0**
	3.5nm,0.6s,mb4.2,baz=355,slow=8.1,SNR=42						
ASAR				ScP	ScP	03 46 13.8	-0.3
	0.7nm,0.7s,baz=352,slow=3.1,SNR=6.1						
CMAR	**Chiang Mai Arr**	**33.02**	**301**	P	**P**	**03 40 35.5**	**+0.9**
	2.0nm,0.5s,mb3.9,baz=121,slow=7.6,SNR=8.7						
KSRS	**Korea Array**	**34.82**	**359**	P	**P**	**03 40 49.2**	**-0.6**
	4.0nm,0.6s,mb4.1,baz=175,slow=9.8,SNR=12						
MJAR	**Matsushiro Arr**	**35.07**	**14**	P	**P**	**03 40 50.3**	**-1.7**
	2.1nm,0.7s,mb3.8,baz=185,slow=9.1,SNR=10						
STKA	**Stephens Creek**	**36.35**	**161**	P	**P**	**03 41 03.2**	**+0.3**
	5.0nm,0.8s,mb4.1,baz=334,slow=8.7,SNR=7.1						
STKA	**Stephens Creek**	**36.35**	**161**	P	**P**	**03 41 03.2**	**+0.3**
SONM	**Songino Array**	**49.05**	**340**	P	**P**	**03 42 44.5**	**0.0**
	1.4nm,0.7s,mb3.4,baz=154,slow=7.9,SNR=9.7						
PETK	**Petropavlovsk-**	**55.95**	**21**	P	**P**	**03 43 35.3**	**+0.4**
	2.7nm,0.9s,mb3.8,baz=163,slow=5.4,SNR=3.5						
MK31	**Makanchi Array**	**59.59**	**325**	*e*P	**P**	**03 44 00.8**	**+0.4**
MKAR	**Makanchi Array**	**59.59**	**325**	P	**P**	**03 44 01.0**	**+0.7**
	2.6nm,0.4s,mb4.2,baz=118,slow=8.4,SNR=32						
MKAR	**Makanchi Array**	**59.59**	**325**	P	**P**	**03 44 01.0**	**+0.7**
TKM2	**Tokmak 2**	**61.85**	**318**	*e*P	**P**	**03 44 16.6**	**+0.9**
	1.5nm,0.5s,mb3.9						
UCH	**Uchtor**	**62.29**	**317**	*e*P	**P**	**03 44 19.5**	**+0.9**
	1.6nm,0.8s,mb3.7						
ZALV	**Zalesovo Beam**	**62.50**	**333**	P	**P**	**03 44 18.1**	**-1.7**
	0.8nm,0.4s,mb3.8,baz=111,slow=6.7,SNR=4.4						
KURK	**Kurchatov**	**63.74**	**327**	*e*P	**P**	**03 44 28.0**	**0.0**
	4.9nm,0.6s,mb4.3						
BVAR	**Borovoye Array**	**69.33**	**327**	P	**P**	**03 45 03.1**	**-0.1**
	2.9nm,0.9s,mb3.9,baz=116,slow=6.8,SNR=10						
ILAR	**Eielson Array**	**85.48**	**25**	P	**P**	**03 46 32.9**	**+0.5**
	0.2nm,0.4s,mb3.2,baz=242,slow=5.3,SNR=5.4						

IDC 24 03:59:12.9±1.8, 57˚.45N×34˚.10W, h0km, mb3.4/6, mb1 3.7/7, mb1mx3.5/27, mbtmp3.5/7, ML2.6/1, MS3.1/1, Ms1 3.1/1, ms1mx3.0/29, Error ellipse: s-maj=69.6km s-min=21.0km az=172.0, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**9.56**	**35**	LR	LR	04 04 13.5	
	comp=Z,130nm,21.6s,baz=156,slow=31						
SCHQ	**Schefferville**	**18.33**	**276**	P	Pn	04 03 27.7	-0.5
	0.2nm,0.3s,baz=75,slow=12,SNR=4.5						
AKASG	**Malin Array Be**	**36.52**	**73**	P	P	04 06 19.5	-0.2
	0.6nm,0.5s,baz=301,slow=8.3,SNR=4.1						
ILAR	**Eielson Array**	**47.91**	**328**	P	P	04 07 51.7	-0.5
	0.6nm,0.9s,baz=33,slow=6.5,SNR=7.5						
PDAR	**Pinedale Array**	**48.00**	**286**	P	P	04 07 52.5	-0.7
	0.2nm,0.7s,baz=47,slow=14,SNR=2.5						
TXAR	**Lajitas Array**	**54.91**	**270**	P	P	04 08 45.0	-0.1
	0.1nm,0.5s,baz=71,slow=6.1,SNR=2.4						
NVAR	**Mina Array Bea**	**55.69**	**289**	P	P	04 08 52.6	+1.9
	0.3nm,0.6s,baz=45,slow=10,SNR=2.0						
MKAR	**Makanchi Array**	**63.50**	**43**	P	P	04 09 45.0	+0.6
	0.2nm,0.3s,baz=332,slow=5.5,SNR=4.9						
ASAR	**Alice Springs**	**145.15**	**19**	PKPbc	PKPbc	04 18 50.0	-1.5
	0.5nm,0.6s,baz=346,slow=3.2,SNR=6.1						

IDC 24 04:00:06.8±3.8, 57˚.07N×33˚.97W, h0km, mb3.6/7, mb1 3.7/7, mb1mx3.5/27, mbtmp3.6/7, Error ellipse: s-maj=98.9km s-min=30.4km az=9.0, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOA	**NORSAR Array B**	**23.20**	**61**	P	P	04 05 15.4	+0.5
	0.9nm,0.9s,baz=270,slow=8.9,SNR=3.3						
HFS	**Hagfors**	**24.59**	**63**	P	P	04 05 28.3	+0.3
	1.4nm,0.8s,baz=305,slow=5.1,SNR=3.2						
ARCES	**ARCESS Array B**	**28.15**	**40**	P	P	04 05 59.5	-0.6
	1.4nm,0.6s,baz=268,slow=6.3,SNR=4.6						
AKASG	**Malin Array Be**	**36.57**	**72**	P	P	04 07 14.5	+0.6
	0.2nm,0.3s,baz=301,slow=8.5,SNR=3.2						
ILAR	**Eielson Array**	**48.27**	**328**	P	P	04 08 49.5	+0.6
	0.2nm,0.6s,baz=34,slow=6.6,SNR=3.0						
BVAR	**Borovoye Array**	**54.14**	**46**	P	P	04 09 33.8	+0.7
	0.8nm,0.6s,baz=318,slow=4.0,SNR=3.8						
MKAR	**Makanchi Array**	**63.73**	**43**	P	P	04 10 38.8	-1.0
	0.5nm,0.4s,baz=341,slow=5.7,SNR=6.2						
ASAR	**Alice Springs**	**145.49**	**20**	PKPbc	PKPbc	04 19 44.9	-1.5
	0.4nm,0.6s,baz=356,slow=3.4,SNR=4.3						

*NEIC **24** 04:02:17.5, 31˚.32S×68˚.82W, h140km, MG3.5(GUC), After GUC.*

GUC 24 04:02:17.5±0.6, 31˚.32S×68˚.82W, h140km, ML3.5, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**1.88**	**274**	*i* P	Pn	04 02 50.9	+0.3
CMCH				*i* S	Sn	04 03 16.6	+0.8
CMCH	**Combarbala**	**1.88**	**274**	*i* P	Pn	04 02 50.9	+0.3
CMCH				*i* S	Sn	04 03 16.6	+0.8
CMCH				AML	AML	04 03 19.0	
	comp=N,970nm,0.4s						
JACH	**Jahuel**	**2.03**	**227**	P	Pn	04 02 53.6	+1.2
JACH	**Jahuel**	**2.03**	**227**	*e*P	Pn	04 02 53.6	+1.2
TLL	**Tololo Astrono**	**2.06**	**303**	*e*P	Pn	04 02 54.1	+1.4
TLL				*i* S	Sn	04 03 21.2	+1.5
TLL	**Tololo Astrono**	**2.06**	**303**	*e*P	Pn	04 02 54.1	+1.4
TLL				*i* S	Sn	04 03 21.2	+1.5
FCH	**Farellones**	**2.36**	**211**	*e*P	Pn	04 02 58.7	+2.3
FCH				*i* S	Sn	04 03 29.5	+3.2
PEL	**Peldehue**	**2.41**	**220**	*e*P	Pn	04 02 57.4	+0.4
PEL				*e*S	Sn	04 03 27.9	+0.4
PEL				AML	AML	04 03 31.4	
	comp=E,147nm,0.4s						
CLCH	**Cerro Calan**	**2.53**	**215**	*e*P	Pn	04 03 00.0	+1.5
CLCH				*e*S	Sn	04 03 31.9	+1.7
CLCH				AML	AML	04 03 38.8	
	comp=E,115nm,0.4s						
PCH	**Pirque**	**2.71**	**212**	*e*P	Pn	04 03 01.8	+1.1
PCH	**Pirque**	**2.71**	**212**	*e*P	Pn	04 03 01.8	+1.1
LMEL	**Las Melosas**	**2.78**	**205**	*e*P	Pn	04 03 02.8	+1.1
LMEL	**Las Melosas**	**2.78**	**205**	*e*P	Pn	04 03 02.8	+1.1
LCO	**Las Campanas**	**2.82**	**324**	Pn	Pn	04 02 54.1	-8.0
LCO				*e*S	Sn	04 03 37.7	+1.2
TACH	**Talagante**	**2.94**	**217**	*e*P	Pn	04 03 04.1	+0.5
TACH	**Talagante**	**2.94**	**217**	*e*P	Pn	04 03 04.1	+0.5
CACH	**El Canelo**	**3.17**	**208**	*e*P	Pn	04 03 07.9	+1.2
CACH	**El Canelo**	**3.17**	**208**	*e*P	Pn	04 03 07.9	+1.2
TRQA	**Tornquist**	**8.77**	**142**	*e*Pn	Pn	04 04 19.6	-1.5

*ATH **24** 04:02:57.8, 37˚.71N×20˚.72E, h27km±3km, MD3.3/6*
*CSEM **24** 04:02:57.8, 37˚.71N×20˚.72E, h27km, MD3.3, After ATH*
*NEIC **24** 04:02:57.8, 37˚.71N×20˚.72E, h27km, MD3.3(ATH), After ATH.*
*ISCJB **24** 04:02:58.8±1.2, 37˚.80N±0˚.09×20˚.7E±0˚.1, h48km±14km, Error ellipse: s-maj=18.5km s-min=10.9km az=42.1*

ISC 24 04:02:59.3±1.1, 37˚.83N±0˚.09×20˚.7E±0˚.1, h48km±15km, n21, σ1=17/28, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.35**	**350**	*e*Pb	**Pn**	**04 03 07.8**	**-1.0**
VLS				*e*Sb	**Sn**	**04 03 16.3**	**+0.9**
VLS	**Valsamata**	**0.35**	**350**	*e*PB	**Pn**	**04 03 07.8**	**-1.0**
VLS				*e*SB	**Sn**	**04 03 16.3**	**+0.9**
VLS	**Valsamata**	**0.35**	**350**	*e*Pb	**Pn**	**04 03 07.8**	**-1.0**
VLS				*e*Sb	**Sn**	**04 03 16.3**	**+0.9**
RLS	**Riolos of Patr**	**0.67**	**70**	*e*Pn	**Pn**	**04 03 11.1**	**-1.5**
RLS				*e*Sn	**Sn**	**04 03 21.9**	**-0.3**
RLS	**Riolos of Patr**	**0.67**	**70**	*e*PN	**Pn**	**04 03 11.1**	**-1.5**
RLS				*e*SN	**Sn**	**04 03 21.9**	**-0.3**
RLS	**Riolos of Patr**	**0.67**	**70**	*e*Pn	**Pn**	**04 03 11.1**	**-1.5**
RLS				*e*Sn	**Sn**	**04 03 21.9**	**-0.3**
EFP	**Efpalio**	**1.15**	**58**	*e*PN	**Pn**	**04 03 20.0**	**+1.1**
EFP	**Efpalio**	**1.15**	**58**	*e*Pn	**Pn**	**04 03 20.0**	**+1.1**
ITM	**Ithomi**	**1.20**	**123**	*e*Pn	**Pn**	**04 03 19.2**	**-0.4**
ITM	**Ithomi**	**1.20**	**123**	*e*PN	**Pn**	**04 03 19.2**	**-0.4**
ITM	**Ithomi**	**1.20**	**123**	*e*Pn	**Pn**	**04 03 19.2**	**-0.4**
PYL	**PYLOS**	**1.27**	**137**	*e*PN	**Pn**	**04 03 19.3**	**-1.3**
PYL	**PYLOS**	**1.27**	**137**	*e*Pn	**Pn**	**04 03 19.3**	**-1.3**
GUR	**Goura**	**1.33**	**85**	*e*PN	**Pn**	**04 03 22.2**	**+0.7**
GUR	**Goura**	**1.33**	**85**	*e*Pn	**Pn**	**04 03 22.2**	**+0.7**
VLX	**Vlachokerasia**	**1.44**	**108**	*e*PN	**Pn**	**04 03 23.0**	**+0.1**
VLX	**Vlachokerasia**	**1.44**	**108**	*e*Pn	**Pn**	**04 03 23.0**	**+0.1**
KYTH	**Kithira**	**2.45**	**128**	*e*Pb	**Pn**	**04 03 38.1**	**+1.3**
KYTH	**Kithira**	**2.45**	**128**	*e*PB	**Pn**	**04 03 38.1**	**+1.3**
KYTH	**Kithira**	**2.45**	**128**	*e*Pb	**Pn**	**04 03 38.1**	**+1.3**
STON	**Ston**	**5.52**	**337**	*e*Pn	**Pn**	**04 04 20.7**	**+1.8**
STON				Sn	**Sn**	**04 05 18.8**	**-2.2**

*ISCJB **24** 04:13:43.4±0.2, 46˚.03N±0˚.01×6˚.84E±0˚.03, h11km±2km, Error ellipse: s-maj=3.2km s-min=2.1km az=8.6*
*ZUR **24** 04:13:44.9, 46˚.04N×6˚.91E, h5km±1km, ML2.2/8*
*NEIC **24** 04:13:44.7, 46˚.03N×6˚.92E, h2km, ML2.8(STR), ML2.4(ZUR), ML2.8(LDG), After LDG.*
*LDG **24** 04:13:44.7±0.0, 46˚.03N×6˚.92E, h2km, Ml2.8/5, Error ellipse: s-maj=1.0km s-min=0.6km az=93.0*
*CSEM **24** 04:13:44.0±0.1, 46˚.03N×6˚.88E, h10km, ML3.0/15, Error ellipse: s-maj=1.7km s-min=1.3km az=89.0*
*ROM **24** 04:13:44.4±0.1, 46˚.02N×6˚.95E, h7km±1km, Md1.9/6, Error ellipse: s-maj=2.4km s-min=2.0km az=141.0*
*STR **24** 04:13:45.3±0.3, 46˚.05N×6˚.94E, h5km, Ml2.8, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 24 04:13:44.2±0.2, 46˚.04N±0˚.01×6˚.87E±0˚.03, h12km±2km, n128, σ0=73/191, 12C-14D, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMV	**Vieux Emosson**	**0.03**	**34**	⇓*i*Pg	**Pg**	**04 13 46.3**	**0.0**
	6μm,0.1s						
EMV				*i* Sg	**Sg**	**04 13 47.3**	**-0.5**
	6μm,0.1s						
EMV	**Vieux Emosson**	**0.03**	**34**	Pg	**Pg**	**04 13 46.3**	**0.0**
EMV				Sg	**Sg**	**04 13 47.3**	**-0.5**
EMV	**Vieux Emosson**	**0.03**	**34**	⇓*i*Pg	**Pg**	**04 13 46.3**	**0.0**
	6μm,0.1s						
EMV				*i* Sg	**Sg**	**04 13 47.3**	**-0.5**
	6μm,0.1s						
SALAN	**Lac Salanfe**	**0.13**	**33**	⇑*i*Pg	**Pg**	**04 13 47.5**	**+0.1**
	709nm,0.2s						
SALAN				*e*Sg	**Sg**	**04 13 49.4**	**-0.2**
	709nm,0.2s						
SALAN	**Lac Salanfe**	**0.13**	**33**	⇑*i*Pg	**Pg**	**04 13 47.5**	**+0.1**
	709nm,0.2s						
SALAN				*e*Sg	**Sg**	**04 13 49.4**	**-0.2**
	709nm,0.2s						
GRYON	**Gryon**	**0.27**	**38**	⇑*i*Pg	**Pg**	**04 13 49.9**	**+0.1**
	254nm,0.1s						
GRYON				*e*Sg	**Sg**	**04 13 53.6**	**+0.1**
	254nm,0.1s						
GRYON	**Gryon**	**0.27**	**38**	⇑*i*Pg	**Pg**	**04 13 49.9**	**+0.1**
	254nm,0.1s						
GRYON				*e*Sg	**Sg**	**04 13 53.6**	**+0.1**
	254nm,0.1s						
MRGE	**Morge**	**0.30**	**154**	Pg	**Pg**	**04 13 50.6**	**+0.4**
MRGE				Sg	**Sg**	**04 13 54.6**	**+0.4**
	738nm,0.1s						
MRGE	**Morge**	**0.30**	**154**	Pg	**Pg**	**04 13 50.6**	**+0.4**
MRGE				Sg	**Sg**	**04 13 54.6**	**+0.4**
	738nm,0.1s						
AIGLE	**Aigle**	**0.31**	**10**	⇑*i*Pg	**Pg**	**04 13 50.7**	**+0.2**
	723nm,0.2s						
AIGLE				*i* Sg	**Sg**	**04 13 54.8**	**+0.1**
	723nm,0.2s						
AIGLE	**Aigle**	**0.31**	**10**	⇑*i*Pg	**Pg**	**04 13 50.7**	**+0.2**
	723nm,0.2s						
AIGLE				*i* Sg	**Sg**	**04 13 54.8**	**+0.1**
	723nm,0.2s						
OG01	**Vacheresse**	**0.32**	**336**	Pg	**Pg**	**04 13 51.5**	**+0.8**
OG01				Sg	**Sg**	**04 13 55.9**	**+0.9**
OG01	**Vacheresse**	**0.32**	**336**	Pg	**Pg**	**04 13 51.5**	**+0.8**
OG01				Sg	**Sg**	**04 13 54.9**	**-0.1**
OG01	**Vacheresse**	**0.32**	**336**	Pg	**Pg**	**04 13 51.5**	**+0.8**
OG01				Sg	**Sg**	**04 13 54.9**	**-0.1**
DIX	**Grande Dixence**	**0.38**	**83**	⇓*i*Pg	**Pg**	**04 13 52.0**	**+0.4**
	2μm,0.2s						
DIX				*e*Sg	**Sg**	**04 13 56.9**	**+0.2**
	2μm,0.2s						
DIX	**Grande Dixence**	**0.38**	**83**	⇓*i*Pg	**Pg**	**04 13 52.0**	**+0.4**
DIX				Sg	**Sg**	**04 13 56.8**	**+0.1**
DIX	**Grande Dixence**	**0.38**	**83**	⇓*i*Pg	**Pg**	**04 13 52.0**	**+0.4**
	2μm,0.2s						
DIX				*e*Sg	**Sg**	**04 13 56.9**	**+0.2**
	2μm,0.2s						
SENIN	**Lac Senin/Sane**	**0.44**	**42**	⇑*i*Pg	**Pg**	**04 13 53.1**	**+0.2**
	370nm,0.2s						
SENIN				*i* Sg	**Sg**	**04 13 59.2**	**+0.4**
	370nm,0.2s						
SENIN	**Lac Senin/Sane**	**0.44**	**42**	⇑*i*Pg	**Pg**	**04 13 53.1**	**+0.2**
	370nm,0.2s						
SENIN				*i* Sg	**Sg**	**04 13 59.2**	**+0.4**
	370nm,0.2s						
LPL	**La Plagne**	**0.53**	**191**	*e*Pg	**Pg**	**04 13 54.9**	**+0.4**
LPL				*e*Sg	**Sg**	**04 14 01.3**	**-0.2**
	38nm,0.2s						
LPL	**La Plagne**	**0.53**	**191**	*e*Pg	**Pg**	**04 13 54.9**	**+0.4**
LPL				*e*Sg	**Sg**	**04 14 01.3**	**-0.2**
	19nm,0.2s						
LPG	**La Plagne**	**0.55**	**189**	*e*Pg	**Pg**	**04 13 55.3**	**+0.5**
LPG				*e*Sg	**Sg**	**04 14 02.3**	**+0.3**
	76nm,0.2s						
LPG	**La Plagne**	**0.55**	**189**	*e*Pg	**Pg**	**04 13 55.3**	**+0.5**
LPG				*e*Sg	**Sg**	**04 14 02.3**	**+0.3**
	38nm,0.2s						
LSD	**Lago del Serru**	**0.60**	**162**	Pg	**Pg**	**04 13 56.1**	**+0.2**
LSD				Sg	**Sg**	**04 14 03.7**	**-0.2**
	327nm,0.5s						
LSD	**Lago del Serru**	**0.60**	**162**	Pg	**Pg**	**04 13 56.1**	**+0.2**
LSD				Sg	**Sg**	**04 14 03.7**	**-0.2**
	327nm,0.5s						
LKBD	**Leukerbad**	**0.63**	**56**	⇑*i*Pg	**Pg**	**04 13 56.5**	**+0.1**
	103nm,0.2s						
LKBD	**Leukerbad**	**0.63**	**56**	⇓*i*P	**Pg**	**04 13 56.5**	**

MOF	**Molkenrain**	**1.82**	**6**	Pn	**Pn**	04 14 15.7	+0.3
VIVF	**Saint-Julien-l**	**1.95**	**233**	*e*Pg	**Pg**	04 14 21.2	-0.3
VIVF				*e*Sn	**Sn**	04 14 41.0	-0.4
4.4nm,0.2s							
VIVF	**Saint-Julien-l**	**1.95**	**233**	*e*Pn	**Pn**	04 14 17.9	+0.9
VIVF				*e*Pg	**Pg**	04 14 21.2	-0.3
VIVF				*e*Sn	**Sn**	04 14 41.0	-0.4
VIVF	**Saint-Julien-l**	**1.95**	**233**	*e*Pn	**Pn**	04 14 17.9	+0.9
VIVF	**Saint-Julien-l**	**1.95**	**233**	*e*Pg	**Pg**	04 14 21.2	-0.3
VIVF				*e*Sn	**Sn**	04 14 41.0	-0.4
2.2nm,0.2s							
FELD	**Feldberg im Sc**	**2.00**	**22**	Pn	**Pn**	04 14 17.4	-0.4
FELD	**Feldberg im Sc**	**2.00**	**22**	Pn	**Pn**	04 14 17.4	-0.4
HAU	**Haudompre**	**2.00**	**350**	*e*Pn	**Pn**	04 14 18.2	+0.4
HAU				*e*Sn	**Sn**	04 14 41.9	-0.9
HAU	**Haudompre**	**2.00**	**350**	*e*Pn	**Pn**	04 14 18.2	+0.4
HAU				*e*Sn	**Sn**	04 14 41.9	-0.9
TOUF	**Mont Tournerai**	**2.04**	**172**	Pn	**Pn**	04 14 21.2	+2.9
TOUF	**Mont Tournerai**	**2.04**	**172**	Pn	**Pn**	04 14 22.6	+4.3
TOUF	**Mont Tournerai**	**2.04**	**172**	Pn	**Pn**	04 14 21.2	+2.9
MVIF	**Mont Vial**	**2.15**	**175**	Pn	**Pn**	04 14 21.2	+1.4
MVIF	**Mont Vial**	**2.15**	**175**	Pn	**Pn**	04 14 25.0	+5.2
MVIF	**Mont Vial**	**2.15**	**175**	Pn	**Pn**	04 14 21.2	+1.4
SMF	**Signal de Mont**	**2.19**	**287**	*e*Pn	**Pn**	04 14 20.8	+0.5
SMF				*e*Sn	**Sn**	04 14 47.2	-0.1
SMF	**Signal de Mont**	**2.19**	**287**	*e*Pn	**Pn**	04 14 20.8	+0.5
SMF				*e*Sn	**Sn**	04 14 47.2	-0.1
ECH	**Echery**	**2.19**	**5**	Pn	**Pn**	04 14 20.2	-0.2
ECH	**Echery**	**2.19**	**5**	Pn	**Pn**	04 14 20.2	-0.2
SBF	**Sospel**	**2.21**	**169**	*e*Pg	**Pg**	04 14 25.4	-1.1
SBF	**Sospel**	**2.21**	**169**	*e*Pg	**Pg**	04 14 25.4	-1.1
SMRF	**Simiane la Rot**	**2.26**	**205**	*e*Pn	**Pn**	04 14 21.2	-0.1
SMRF				*e*Pg	**Pg**	04 14 26.8	-0.6
SMRF	**Simiane la Rot**	**2.26**	**205**	*e*Pn	**Pn**	04 14 21.2	-0.1
COLF	**Collangettes**	**2.28**	**258**	Pn	**Pn**	04 14 23.5	+1.8
COLF	**Collangettes**	**2.28**	**258**	Pn	**Pn**	04 14 23.5	+1.8
CDF	**Champ du Feu**	**2.39**	**6**	*e*Pn	**Pn**	04 14 23.1	-0.1
CDF				*e*Sn	**Sn**	04 14 51.4	-1.0
CDF	**Champ du Feu**	**2.39**	**6**	*e*Pn	**Pn**	04 14 23.1	-0.1
CDF				*e*Sn	**Sn**	04 14 51.4	-1.0
LOR	**Lormes**	**2.41**	**302**	*e*Pn	**Pn**	04 14 23.8	+0.3
LOR				*e*Pg	**Pg**	04 14 29.9	-0.5
LOR				*e*Sn	**Sn**	04 14 52.6	-0.3
LOR	**Lormes**	**2.41**	**302**	*e*Pn	**Pn**	04 14 23.8	+0.3
FRF	**La Foret Royal**	**2.48**	**184**	*e*Pg	**Pg**	04 14 30.5	-1.2
FRF	**La Foret Royal**	**2.48**	**184**	*e*Pg	**Pg**	04 14 30.5	-1.2
BFO	**Black Forest**	**2.50**	**23**	Pn	**Pn**	04 14 23.8	-0.8
BFO	**Black Forest**	**2.50**	**23**	Pn	**Pn**	04 14 23.8	-0.9
SFTF	**Sexfontaines**	**2.50**	**331**	*e*Pn	**Pn**	04 14 24.9	+0.2
SFTF				*e*Sn	**Sn**	04 14 54.6	-0.6
SFTF	**Sexfontaines**	**2.50**	**331**	*e*Pn	**Pn**	04 14 24.9	+0.2
SFTF				*e*Sn	**Sn**	04 14 54.6	-0.6
SSF	**Saint Saulge**	**2.54**	**295**	*e*Pn	**Pn**	04 14 25.6	+0.4
SSF				*e*Pg	**Pg**	04 14 32.4	-0.4
SSF				*e*Sn	**Sn**	04 14 55.5	-0.5
SSF	**Saint Saulge**	**2.54**	**295**	*e*Pn	**Pn**	04 14 25.6	+0.4
AVF	**Avril sur Loir**	**2.55**	**288**	*e*Pn	**Pn**	04 14 26.0	+0.7
AVF				*e*Sn	**Sn**	04 14 55.7	-0.6
AVF	**Avril sur Loir**	**2.55**	**288**	*e*Pn	**Pn**	04 14 26.0	+0.7
AVF				*e*Sn	**Sn**	04 14 55.7	-0.6
LMR	**La Mourre**	**2.71**	**186**	*e*Pg	**Pg**	04 14 34.8	-1.4
LMR	**La Mourre**	**2.71**	**186**	*e*Pg	**Pg**	04 14 34.8	-1.4
MEZF	**Maizieres J'vi**	**2.76**	**334**	*e*Sn	**Sn**	04 15 00.3	-1.2
MEZF	**Maizieres J'vi**	**2.76**	**334**	*e*Sn	**Sn**	04 15 00.3	-1.2
BGF	**Bois d'Agland**	**2.84**	**282**	*e*Pn	**Pn**	04 14 29.9	+0.6
BGF				*e*Pg	**Pg**	04 14 37.9	-0.7
BGF				*e*Sn	**Sn**	04 15 02.2	-1.2
BGF	**Bois d'Agland**	**2.84**	**282**	*e*Pn	**Pn**	04 14 29.9	+0.6
LASF	**Ste Croix**	**2.90**	**229**	*e*Pn	**Pn**	04 14 30.7	+0.6
LASF	**Ste Croix**	**2.90**	**229**	*e*Pn	**Pn**	04 14 30.7	+0.6
CAF	**Calviac**	**3.56**	**254**	*e*Pn	**Pn**	04 14 39.5	+0.3
CAF	**Calviac**	**3.56**	**254**	*e*Pn	**Pn**	04 14 39.5	+0.3

ISCJB ***24*** *04:14:06.0±0.2, 46°.05N±0°.01×6°.73E±0°.02, h10km, Error ellipse: s-maj=2.0km s-min=1.7km az=179.6*
NEIC ***24*** *04:14:07.6, 46°.04N×6°.89E, h2km, ML3.3(LDG), ML3.0(STR), After LDG.*
NEIC Felt in the Chamonix area.
CSEM ***24*** *04:14:07.0±0.1, 46°.04N×6°.84E, h10km, ML3.3/32, Error ellipse: s-maj=2.2km s-min=1.7km az=100.0*
ROM ***24*** *04:14:07.8±0.2, 46°.02N×6°.95E, h7km±2km, Ml2.5/5, Error ellipse: s-maj=2.5km s-min=2.4km az=68.0*
LDG ***24*** *04:14:07.6±0.0, 46°.04N×6°.89E, h2km, Md3.1/3, Ml3.3/28, Error ellipse: s-maj=0.9km s-min=0.5km az=88.0*
STR ***24*** *04:14:08.2±0.3, 46°.04N×6°.92E, h5km, Ml3.0, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ZUR ***24*** *04:14:08.3, 46°.04N×6°.92E, h5km±1km, ML2.6/8*
PRU ***24*** *04:14:10.8, 46°.13N×7°.03E, h0km*

ISC 24 04:14:07.0±0.2, 46°.04N±0°.01×6°.83E±0°.02, h11km±2km, n110, σ0°95/177, 10C-2D, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMV	**Vieux Emosson**	**0.05**	**68**	⇑*i*Pg	**Pg**	04 14 09.7	+0.5
33µm,0.1s							
EMV				*i* Sg	**Sg**	04 14 10.7	-0.1
33µm,0.1s							
EMV	**Vieux Emosson**	**0.05**	**68**	Pg	**Pg**	04 14 09.7	+0.5
EMV				Sg	**Sg**	04 14 10.7	-0.1
EMV	**Vieux Emosson**	**0.05**	**68**	⇑*i*Pg	**Pg**	04 14 09.7	+0.5
33µm,0.1s							
EMV				*i* Sg	**Sg**	04 14 10.7	-0.1
33µm,0.1s							
SALAN	**Lac Salanfe**	**0.14**	**45**	⇑*i*Pg	**Pg**	04 14 10.9	+0.5
3µm,0.2s							
SALAN				*e*Sg	**Sg**	04 14 12.7	0.0
3µm,0.2s							
SALAN	**Lac Salanfe**	**0.14**	**45**	⇑*i*Pg	**Pg**	04 14 10.9	+0.5
3µm,0.2s							
SALAN				*e*Sg	**Sg**	04 14 12.7	0.0
3µm,0.2s							
GRYON	**Gryon**	**0.29**	**43**	⇑*i*Pg	**Pg**	04 14 13.3	+0.5
696nm,0.1s							
GRYON	**Gryon**	**0.29**	**43**	⇑*i*Pg	**Pg**	04 14 13.3	+0.5
696nm,0.1s							
OG01	**Vacheresse**	**0.30**	**341**	Pg	**Pg**	04 14 14.6	+1.4
OG01				Sg	**Sg**	04 14 19.6	+2.3
OG01	**Vacheresse**	**0.30**	**341**	Pg	**Pg**	04 14 14.6	+1.4
OG01				Sg	**Sg**	04 14 19.6	+2.3
AIGLE	**Aigle**	**0.31**	**16**	⇑*i*Pg	**Pg**	04 14 14.1	+0.8
3µm,0.2s							
AIGLE				*e*Sg	**Sg**	04 14 18.2	+0.7
3µm,0.2s							
AIGLE	**Aigle**	**0.31**	**16**	⇑*i*Pg	**Pg**	04 14 14.1	+0.8
3µm,0.2s							
AIGLE				*e*Sg	**Sg**	04 14 18.2	+0.7
3µm,0.2s							
MRGE	**Morge**	**0.32**	**149**	Pg	**Pg**	04 14 14.0	+0.6
MRGE				Sg	**Sg**	04 14 17.9	+0.2
738nm,0.1s							
MRGE	**Morge**	**0.32**	**149**	Pg	**Pg**	04 14 14.0	+0.6
MRGE				Sg	**Sg**	04 14 17.9	+0.2
738nm,0.1s							
DIX	**Grande Dixence**	**0.41**	**85**	⇓*i*Pg	**Pg**	04 14 15.3	+0.3
7µm,0.2s							
DIX				*e*Sg	**Sg**	04 14 20.3	-0.1
7µm,0.2s							
DIX	**Grande Dixence**	**0.41**	**85**	Pg	**Pg**	04 14 15.3	+0.3
DIX				Sg	**Sg**	04 14 20.2	-0.2
DIX	**Grande Dixence**	**0.41**	**85**	⇓*i*Pg	**Pg**	04 14 15.3	+0.3
7µm,0.2s							
DIX				*e*Sg	**Sg**	04 14 20.3	-0.1
7µm,0.2s							
SENIN	**Lac Senin/Sane**	**0.46**	**45**	⇑*i*Pg	**Pg**	04 14 16.5	+0.5
892nm,0.4s							
SENIN				*e*Sg	**Sg**	04 14 22.5	+0.4
892nm,0.4s							
SENIN	**Lac Senin/Sane**	**0.46**	**45**	⇑*i*Pg	**Pg**	04 14 16.5	+0.5
892nm,0.4s							
SENIN				*e*Sg	**Sg**	04 14 22.5	+0.4
892nm,0.4s							
LPL	**La Plagne**	**0.53**	**187**	*e*Pg	**Pg**	04 14 18.2	+0.9
LPL				*e*Sg	**Sg**	04 14 24.8	+0.5
179nm,0.3s							
LPL	**La Plagne**	**0.53**	**187**	*e*Pg	**Pg**	04 14 18.2	+0.9
LPL				*e*Sg	**Sg**	04 14 24.8	+0.5
89nm,0.3s							
LPG	**La Plagne**	**0.55**	**186**	*e*Pg	**Pg**	04 14 18.5	+0.8
LPG				*e*Sg	**Sg**	04 14 25.6	+0.7
233nm,0.2s							
LPG	**La Plagne**	**0.55**	**186**	*e*Pg	**Pg**	04 14 18.5	+0.8
LPG				*e*Sg	**Sg**	04 14 25.6	+0.7
116nm,0.2s							
LSD	**Lago del Serru**	**0.62**	**160**	Pg	**Pg**	04 14 19.6	+0.6
LSD				Sg	**Sg**	04 14 27.0	-0.2
327nm,0.5s							
LKBD	**Leukerbad**	**0.65**	**58**	*e*Pg	**Pg**	04 14 19.9	+0.2
281nm,0.2s							
LKBD	**Leukerbad**	**0.65**	**58**	*e*Pg	**Pg**	04 14 19.9	+0.2
281nm,0.2s							
CABF	**La Chapelle**	**0.77**	**318**	*e*Pg	**Pg**	04 14 22.7	+0.9
CABF				*e*Sg	**Sg**	04 14 33.0	+1.2
129nm,0.3s							
CABF	**La Chapelle**	**0.77**	**318**	*e*Pg	**Pg**	04 14 22.7	+0.9
CABF				*e*Sg	**Sg**	04 14 33.0	+1.2
65nm,0.3s							
MMK	**Mattmark**	**0.79**	**89**	*e*Pg	**Pg**	04 14 21.8	-0.5
370nm,0.2s							
MMK	**Mattmark**	**0.79**	**89**	Pg	**Pg**	04 14 21.8	-0.5
MMK	**Mattmark**	**0.79**	**89**	*e*Pg	**Pg**	04 14 21.8	-0.5
370nm,0.2s							
TRAV	**Traversella**	**0.83**	**129**	Pg	**Pg**	04 14 23.0	-0.1
174nm,0.3s							
TRAV	**Traversella**	**0.83**	**129**	Pg	**Pg**	04 14 23.0	-0.1
174nm,0.3s							
RSP	**Reno Superiore**	**0.95**	**161**	Pg	**Pg**	04 14 25.9	+0.7
219nm,0.2s							
RSP	**Reno Superiore**	**0.95**	**161**	Pg	**Pg**	04 14 25.9	+0.7
219nm,0.2s							
BNI	**Bardonecchia**	**1.00**	**186**	Pg	**Pg**	04 14 26.5	+0.3
37nm,0.5s							
BNI	**Bardonecchia**	**1.00**	**186**	Pg	**Pg**	04 14 26.5	+0.3
37nm,0.5s							
OG22	**Abries**	**1.22**	**176**	Pg	**Pg**	04 14 30.9	+0.4
OG22				Sg	**Sg**	04 14 46.8	+0.4
OG22	**Abries**	**1.22**	**176**	Pg	**Pg**	04 14 30.9	+0.4
OG22				Sg	**Sg**	04 14 46.1	-0.3
OG22	**Abries**	**1.22**	**176**	Pg	**Pg**	04 14 30.9	+0.4
OG22				Sg	**Sg**	04 14 46.8	+0.4
ORIF	**Oris-en-Rattie**	**1.31**	**211**	*e*Pg	**Pg**	04 14 32.1	0.0
ORIF				*e*Sg	**Sg**	04 14 49.6	+0.5
84nm,0.3s							
ORIF	**Oris-en-Rattie**	**1.31**	**211**	*e*Pg	**Pg**	04 14 32.1	0.0
ORIF				*e*Sg	**Sg**	04 14 49.6	+0.5
42nm,0.3s							
MBDF	**Montbardon**	**1.32**	**182**	*e*Pn	**Pn**	04 14 31.3	+0.1
MBDF				*e*Sg	**Sg**	04 14 49.1	-0.3
77nm,0.5s							
MBDF	**Montbardon**	**1.32**	**182**	*e*Pn	**Pn**	04 14 31.3	+0.1
MBDF				*e*Sg	**Sg**	04 14 49.1	-0.3
39nm,0.5s							
BBS	**Basel-Blauen**	**1.50**	**18**	Pn	**Pn**	04 14 33.9	+0.2
HINF	**Hinteralfeld**	**1.77**	**1**	*e*Pg	**Pg**	04 14 40.8	-0.2
HINF				*e*Sg	**Sg**	04 15 03.2	-0.8
83nm,0.3s							
OG26	**St.-Nazaire-De**	**1.82**	**217**	Pg	**Pg**	04 14 43.4	+1.6
OG26	**St.-Nazaire-De**	**1.82**	**217**	Pg	**Pg**	04 14 43.4	+1.6
MOF	**Molkenrain**	**1.82**	**6**	Pn	**Pn**	04 14 39.1	+0.9
VIVF	**Saint-Julien-l**	**1.93**	**233**	*e*Pg	**Pg**	04 14 44.7	+0.8
VIVF				*e*Sg	**Sg**	04 15 09.1	+0.2
190nm,0.3s							
VIVF	**Saint-Julien-l**	**1.93**	**233**	*e*Pg	**Pg**	04 14 44.7	+0.8
VIVF				*e*Sg	**Sg**	04 15 09.1	+0.2
95nm,0.3s							
HAU	**Haudompre**	**1.99**	**351**	*e*Pg	**Pg**	04 14 44.6	-0.6
HAU				*e*Sg	**Sg**	04 15 10.6	-0.4
70nm,0.3s							
FELD	**Feldberg im Sc**	**2.00**	**23**	Pn	**Pn**	04 14 40.5	-0.2
FELD	**Feldberg im Sc**	**2.00**	**23**	Pn	**Pn**	04 14 40.5	-0.2
TOUF	**Mont Tournerai**	**2.05**	**172**	Pn	**Pn**	04 14 44.0	+2.7
TOUF	**Mont Tournerai**	**2.05**	**172**	Pn	**Pn**	04 14 44.1	+2.8
TOUF	**Mont Tournerai**	**2.05**	**172**	Pn	**Pn**	04 14 44.0	+2.7
SMF	**Signal de Mont**	**2.15**	**287**	*e*Pg	**Pg**	04 14 48.4	+0.1
SMF				*e*Sg	**Sg**	04 15 16.7	+0.5
27nm,0.2s							
SMF	**Signal de Mont**	**2.15**	**287**	*e*Pg	**Pg**	04 14 48.4	+0.1
SMF				*e*Sg	**Sg**	04 15 16.7	+0.5
14nm,0.2s							
MVIF	**Mont Vial**	**2.16**	**174**	Pn	**Pn**	04 14 44.3	+1.5
MVIF	**Mont Vial**	**2.16**	**174**	Pn	**Pn**	04 14 47.6	+4.8
MVIF	**Mont Vial**	**2.16**	**174**	Pn	**Pn**	04 14 44.3	+1.5
LUCF	**Luceram**	**2.18**	**170**	Pn	**Pn**	04 14 43.6	+0.5
LUCF	**Luceram**	**2.18**	**170**	Pn	**Pn**	04 14 43.6	+0.5
ECH	**Echery**	**2.19**	**6**	Pn	**Pn**	04 14 43.5	+0.3
SBF	**Sospel**	**2.22**	**169**	*e*Pg	**Pg**	04 14 48.8	-0.8
SBF				*e*Sg	**Sg**	04 15 17.1	-1.3
56nm,0.4s							
SBF	**Sospel**	**2.22**	**169**	*e*Pg	**Pg**	04 14 48.8	-0.8
SBF				*e*Sg	**Sg**	04 15 17.1	-1.3
28nm,0.4s							
SMRF	**Simiane la Rot**	**2.25**	**204**	*e*Pg	**Pg**	04 14 49.6	-0.5
SMRF				*e*Sg	**Sg**	04 15 18.6	-0.7
16nm,0.5s							
SMRF	**Simiane la Rot**	**2.25**	**204**	*e*Pg	**Pg**	04 14 49.6	-0.5
SMRF				*e*Sg	**Sg**	04 15 18.6	-0.7
7.8nm,0.5s							
COLF	**Collangettes**	**2.25**	**258**	Pn	**Pn**	04 14 45.7	+1.6
COLF	**Collangettes**	**2.25**	**258**	Pn	**Pn**	04 14 45.7	+1.6
LOR	**Lormes**	**2.38**	**302**	*e*Sg	**Sg**	04 15 23.6	0.0
29nm,0.3s							
LOR	**Lormes**	**2.38**	**302**	*e*Sg	**Sg**	04 15 23.6	0.0
14nm,0.3s							
CDF	**Champ du Feu**	**2.39**	**7**	*e*Pn	**Pn**	04 14 46.3	+0.3
CDF				*e*Sg	**Sg**	04 15 22.4	-1.4
32nm,0.3s							
CDF	**Champ du Feu**	**2.39**	**7**	*e*Pn	**Pn**	04 14 46.3	+0.3
CDF				*e*Sg	**Sg**	04 15 22.4	-1.4
16nm,0.3s							
DAVA	**Damuels**	**2.44**	**58**	Pn	**Pn**	04 14 52.1	+5.4
DAVA				Sn	**Sn**	04 15 23.9	+7.4
SFTF	**Sexfontaines**	**2.48**	**331**	*e*Pn	**Pn**	04 14 47.4	+0.1
SFTF				*e*Sg	**Sg**	04 15 26.4	-0.4
44nm,0.3s							
SFTF	**Sexfontaines**	**2.48**	**331**	*e*Pn	**Pn**	04 14 47.4	+0.1
SFTF				*e*Sg	**Sg**	04 15 26.4	-0.4
22nm,0.3s							
FRF	**La Foret Royal**	**2.48**	**183**	*e*Pg	**Pg**	04 14 53.7	-0.9
FRF				*e*Sg	**Sg**	04 15 25.8	-1.0
34nm,0.4s							
FRF	**La Foret Royal**	**2.48**	**183**	*e*Pg	**Pg**	04 14 53.7	-0.9
FRF				*e*Sg	**Sg**	04 15 25.8	-1.0
17nm,0.4s							
SSF	**Saint Saulge**	**2.51**	**295**	*e*Sg	**Sg**	04 15 27.7	+0.1
9.8nm,0.2s							
SSF	**Saint Saulge**	**2.51**	**295**	*e*Sg	**Sg**	04 15 27.7	+0.1
4.9nm,0.2s							
AVF	**Avril sur Loir**	**2.52**	**289**	*e*Sg	**Sg**	04 15 27.9	0.0
16nm,0.3s							
AVF	**Avril sur Loir**	**2.52**	**289**	*e*Sg	**Sg**	04 15 27.9	0.0
7.8nm,0.3s							
LMR	**La Mourre**	**2.72**	**185**	*e*Pg	**Pg**	04 14 57.8	-1.3
LMR				*e*Sg	**Sg**	04 15 32.8	-1.5
20nm,0.4s							
LMR	**La Mourre**	**2.72**	**185**	*e*Pg	**Pg**	04 14 57.8	-1.3
LMR				*e*Sg	**Sg**	04 15 32.8	-1.5
9.9nm,0.4s							
MEZF	**Maizieres J'vi**	**2.74**	**334**	*e*Pn	**Pn**	04 14 50.9	+0.1
MEZF				*e*Sg	**Sg**	04 15 34.3	-0.7
104nm,0.6s							
MEZF	**Maizieres J'vi**	**2.74**	**334**	*e*Pn	**Pn**	04 14 50.9	+0.1
MEZF				*e*Sg	**Sg**	04 15 34.3	-0.7
52nm,0.6s							
BGF	**Bois d'Agland**	**2.81**	**282**	*e*Pn	**Pn**	04 14 52.1	+0.4
BGF				*e*Sg	**Sg**	04 15 37.1	-0.1
65nm,0.4s							
BGF	**Bois d'Agland**	**2.81**	**282**	*e*Pn	**Pn**	04 14 52.1	+0.4
BGF				*e*Sg	**Sg**	04 15 37.1	-0.1
32nm,0.4s							
FETA	**Feichten**	**2.87**	**69**	Pn	**Pn**	04 14 57.1	+4.6
FETA				Sn	**Sn**	04 15 32.6	+5.7
LASF	**Ste Croix**	**2.88**	**228**	*e*Sg	**Sg**	04 15 38.8	-0.7
40nm,0.4s							
LASF	**Ste Croix**	**2.88**	**228**	*e*Sg	**Sg**	04 15 38.8	-0.7
20nm,0.4s							
MOTA	**Moosalm**	**3.22**	**65**	Pn	**Pn**	04 15 00.8	+3.5
MOTA				Sn	**Sn**	04 15 41.8	+6.2
TCF	**Toulx Ste Croi**	**3.22**	**276**	*e*Pg	**Pg**	04 15 08.1	-0.5
TCF				*e*Sg	**Sg**	04 15 49.8	-0.5
11nm,0.2s							
CAF	**Calviac**	**3.53**	**253**	*e*Pn	**Pn**	04 15 03.0	+1.3
CAF				*e*Sg	**Sg**	04 15 59.7	-0.7
26nm,0.4s							
RJF	**Les Rejaudoux**	**3.80**	**261**	*e*Pg	**Pg**	04 15 18.7	-1.0
RJF				*e*Sg	**Sg**	04 16 07.7	-1.1
22nm,0.4s							
RJF	**Les Rejaudoux**	**3.80**	**261**	*e*Pn	**Pn**	04 15 05.8	+0.5
RJF				*e*Pg	**Pg**	04 15 18.7	-1.0
RJF				*e*Sg	**Sg**	04 16 07.7	-1.1
RJF	**Les Rejaudoux**	**3.80**	**261**	*e*Pn	**Pn**	04 15 05.8	+0.5
RJF	**Les Rejaudoux**	**3.80**	**261**	*e*Pg	**Pg**	04 15 18.7	-1.0
RJF				*e*Sg	**Sg**	04 16 07.7	-1.1
11nm,0.4s							
MTLF	**Montolieu**	**4.25**	**232**	*e*Pn	**Pn**	04 15 11.8	+0.2
MTLF				*e*Sg	**Sg**	04 16 21.9	-1.7
7.5nm,0.4s							
MTLF	**Montolieu**	**4.25**	**232**	*e*Pn	**Pn**	04 15 11.8	+0.2
MTLF				*e*Sg	**Sg**	04 16 21.9	-1.7
3.8nm,0.4s							
GIVF	**Givet**	**4.28**	**342**	*e*Pn	**Pn**	04 15 12.0	+0.1
GIVF				*e*Sn	**Sn**	04 15 59.7	-2.0
3.4nm,0.3s							
LFF	**La Frestale**	**4.42**	**258**	*e*Pn	**Pn**	04 15 14.1	+0.2
LFF				*e*Sg	**Sg**	04 16 27.3	-1.6
21nm,0.4s							
KHC	**Kasperske Hory**	**5.51**	**53**	*e*PG	**Pn**	04 15 27.0	-1.9
KHC				*ex*	x	04 15 50.9	
KHC				*ex*	x	04 16 30.3	
KHC				*e*SG	**Sg**	04 17 02.6	-1.2
comp=Z,4.0nm,0.4s							
KHC	**Kasperske Hory**	**5.51**	**53**	Pg	**Pg**	04 15 50.9	-1.6
KHC				Sg	**Sg**	04 17 02.6	-1.2
comp=Z,4.0nm,0.4s							
NKC	**Novy Kostel**	**5.63**	**40**	*e*PG	**Pg**	04 15 52.1	-2.7
NKC				*e*SG	**Sg**	04 17 04.7	-2.9
PRU	**Pruhonice**	**6.51**	**50**	*e*SG	**Sg**	04 17 33.1	-2.6
comp=Z,5.0nm,0.7s							
CLL	**Collm**	**6.67**	**36**	*e*Sg	**Sg**	04 17 43.0	+2.2
BRG	**Berggiesshubel**	**6.76**	**42**	SG	**Sg**	04 17 43.2	-0.6
comp=Z,2.5nm,0.5s							
DPC	**Dobruska-Polom**	**7.67**	**52**	*e*SG	Sx	04 18 09.8	

DJA 24 04:59:07, 1°.31N×127°.32E, h90km, MLv3.6/3, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.54**	**175**	P	Pn	04 59 22.0	-0.1
TNTI				S	Sn	04 59 38.2	+5.0
LBMI	**Labuha**	**1.94**	**175**	P	Pn	04 59 36.3	-2.2
LBMI				S	Sn	05 00 05.2	+2.7
LUWI	**Luwuk**	**5.11**	**243**	P	Pn	05 00 22.1	+0.9
0.4nm57nm,1.4s							
SMPI	**Sarmi**	**11.85**	**106**	P	Pn	05 01 53.6	+0.6

CSEM 24 04:59:39.2, 30°.80N×49°.92E, h15km, ML4.2, After THR, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NASN	**Na'in**	**3.17**	**50**	*e*Pn	Pn	05 00 30.9	+2.4
ASAO	**Ashtian**	**3.74**	**1**	*e*Pn	Pn	05 00 38.7	+2.4
GHVR	**GHOM**	**3.85**	**17**	*e*Pn	Pn	05 00 40.1	+2.2
THKV	**Tehran--Karaj**	**5.17**	**9**	*e*Pn	Pn	05 00 58.2	+2.3
ZNJK	**Zanjan**	**5.94**	**350**	*e*Pn	Pn	05 01 09.0	+2.4
KRBR	**Kerman**	**5.97**	**96**	*e*Pn	Pn	05 01 09.2	+2.2
BNDS	**Bandar-Abbas**	**6.43**	**120**	*e*Pn	Pn	05 01 16.1	+2.7
BJRD	**Bojnurd**	**9.26**	**40**	*e*Pn	Pn	05 01 55.0	+2.9

IDC ***24*** *05:30:09.1±0.6, 32°.83N×105°.67E, h0km, mb4.4/20, mb1 4.5/22, mb1mx4.5/26, mbtmp4.4/22, ML4.0/2, MS4.1/18, Ms1 4.1/18, ms1mx3.9/30, Error ellipse: s-maj=17.1km s-min=13.5km az=55.0*
BJI ***24*** *05:30:09.2, 32°.75N×105°.57E, h10km, mB4.8

comp=Z,82nm,0.8s
GTA pmax pmax
comp=Z,84nm,6.3s
GTA LR LR
comp=N,5μm,9.0s
GTA LR LR
comp=E,3μm,9.9s
GTA LR LR
comp=Z,5μm,11.7s
BTO Baotou 8.64 23 *e*P **Pn 05 32 15.5 -0.8**
BTO S **Sn 05 33 56.3 +2.6**
BTO LR LR
comp=N,3μm,10.3s
BTO LR LR
comp=E,2μm,8.8s
HHC Hu-ho-hao-te 9.43 29 *e*P **Pn 05 32 26.4 -0.7**
HHC S **Sn 05 34 12.3 -0.8**
HHC PcS PcS 05 42 17.8 -0.8
HHC ScS ScS 05 45 48.4 -3.5
HHC pmax pmax
comp=Z,14nm,0.5s
HHC pmax pmax
comp=Z,100nm,5.0s
HHC LR LR
comp=N,4μm,8.4s
HHC LR LR
comp=E,6μm,8.5s
HHC LR LR
comp=Z,3μm,8.2s
BJI Beijing 11.25 47 P **Pn 05 32 50.9 -1.1**
BJI pmax pmax
comp=Z,30nm,0.6s
BJI pmax pmax
comp=Z,110nm,4.7s
NJ2 Nanjing 11.29 90 *e*P **Pn 05 32 52.4 -0.2**
NJ2 pP 05 32 55.6
NJ2 sP 05 32 58.6
NJ2 PP 05 33 01.3
NJ2 S **Sn 05 34 58.0 -0.8**
NJ2 sS 05 35 03.0
NJ2 pmax pmax
comp=Z,40nm,0.5s
NJ2 pmax pmax
comp=Z,470nm,3.6s
NJ2 LR LR
comp=N,310nm,8.0s
NJ2 LR LR
comp=E,280nm,9.9s
NJ2 LR LR
comp=Z,620nm,10.4s
GZH Guangzhou 11.84 142 P **Pn 05 32 55.3 -4.9**
GZH S **Sn 05 35 01.9 -10**
GZH LR LR
comp=N,5μm,5.4s
GZH LR LR
comp=E,7μm,5.8s
LSA Lhasa 12.68 260 P **Pn 05 33 12.6 +1.0**
LSA LR LR
comp=E,960nm,19.9s
LSA LR LR
comp=Z,760nm,12.4s
LSA Lhasa 12.68 260 *e*P **Pn 05 33 12.9 +1.3**
LSA pmax pmax
comp=Z,24nm,0.9s
LSA Lhasa 12.68 260 *e*Pn **Pn 05 33 12.9 +1.3**
comp=Z,24nm,0.9s
CHRT Chiangrai 13.81 203 P **Pn 05 33 27.0 -0.2**
QZH Quanzhou 13.83 121 *e*P **Pn 05 33 29.3 +1.9**
QZH S **Sn 05 36 05.0 +4.0**
QZH LR LR
comp=N,14μm,14.3s
QZH LR LR
comp=E,10μm,13.7s
QZH LR LR
comp=Z,3μm,12.8s
SHL Shillong 13.89 243 *e*PKP **Pn 05 33 28.0 -0.3**
SHL *ex* x 05 37 50.0
QIZ Qiongzhong 14.19 163 P **Pn 05 33 35.5 +3.1**
QIZ S **Sn 05 36 15.5 +5.5**
QIZ pmax pmax
comp=Z,10.0nm,0.7s
QIZ pmax pmax
comp=Z,45nm,2.7s
QIZ LR LR
comp=N,3μm,11.7s
QIZ LR LR
comp=E,500nm,7.0s
QIZ LR LR
comp=Z,4μm,11.3s
QIZ Qiongzhong 14.19 163 *e*Pn **Pn 05 33 30.9 -1.5**
comp=Z,15nm,0.6s
QIZ Sn **Sn 05 36 05.1 -4.9**
DL2 Dalian 14.43 60 P **Pn 05 33 40.1 +4.6**
DL2 pmax pmax
comp=Z,20nm,0.8s
DL2 LR LR
comp=N,830nm,14.8s
DL2 LR LR
comp=E,860nm,14.5s
DL2 LR LR
comp=Z,1μm,14.8s
CHG Chiang Mai 15.08 205 ⇓P **Pn 05 33 47.5 +3.1**
comp=Z,24nm,0.7s
CHTO Chiang Mai 15.08 205 *e*P **Pn 05 33 46.1 +1.7**
CHTO pmax pmax
comp=Z,23nm,1.0s
CHTO Chiang Mai 15.08 205 *e*Pn **Pn 05 33 46.1 +1.6**
comp=Z,23nm,1.0s
SONM Songino Array 15.09 2 Pn **Pn 05 33 42.4 -2.0**
comp=Z,0.4nm,0.3s,baz=185,slow=13,SNR=28
SONM Lg 05 38 04.6
comp=Z,0.4nm,0.3s,baz=184,slow=21,SNR=3.5
SONM LR LR 05 40 09.4
comp=Z,591nm,20.6s,baz=181,slow=40
ULN Ulaanbaatar 15.15 4 *e*P **Pn 05 33 43.3 -1.9**
ULN *e* 05 36 28.9
ULN pmax pmax
comp=Z,19nm,0.8s
ULN Ulaanbaatar 15.15 4 *e*Pn **Pn 05 33 43.3 -2.0**
comp=Z,19nm,0.8s
ULN *e*Sn **Sn 05 36 28.9 -4.1**
CM31 Chiang Mai Arr 15.41 204 *e*Pn **Pn 05 33 50.2 +1.4**
CMAR Chiang Mai Arr 15.41 204 Pn **Pn 05 33 49.0 +0.2**
comp=Z,0.3nm,0.3s,baz=16,slow=11,SNR=30
CMAR PcP PcP 05 38 54.7 +1.9
comp=Z,0.7nm,0.3s,baz=290,slow=1.4,SNR=4.4
CMAR LR LR 05 40 35.0
comp=Z,142nm,18.8s,baz=195,slow=40
YHNB Yeheng 16.05 116 *e*Pn **Pn 05 33 58.7 +1.6**
comp=Z,40nm,0.7s
SSLB Suanglung 16.24 119 *e*Pn **Pn 05 34 01.1 +1.6**
comp=Z,42nm,0.8s
TPUB Ta-pu 16.30 121 *e*Pn **Pn 05 34 01.9 +1.6**
comp=Z,35nm,0.9s
TAPN Taplejung 16.33 255 *e*P **Pn 05 34 00.6 -0.1**
comp=Z,323nm,1.1s
NACB Ninganchiao 16.49 117 *e*P **Pn 05 34 08.5 +5.8**
comp=Z,27nm,0.7s
ODAN Odare 16.79 254 *e*P **Pn 05 34 05.3 -1.3**
comp=Z,399nm,1.2s
TWG Pinlang 16.92 122 *e*Pn **Pn 05 34 09.2 +1.0**
comp=Z,44nm,1.0s
SNY Shenyang 16.96 53 ⇑P **Pn 05 34 09.8 +1.2**
SNY S **Sn 05 37 15.5 -1.6**
SNY pmax pmax
comp=Z,13nm,1.3s
SNY pmax pmax
comp=Z,200nm,3.2s
SNY LR LR
comp=N,1μm,9.6s
SNY LR LR
comp=E,1μm,13.1s
SNY LR LR
comp=Z,1μm,13.8s
RAMN Ramite 17.40 256 *e*P **Pn 05 34 13.0 -1.2**
comp=Z,189nm,0.8s
GUN Gumba 17.63 259 *e*P **Pn 05 34 17.8 +0.8**
comp=Z,341nm,1.1s
WMQ Urumqi 17.80 314 P **Pn 05 34 20.0 +0.9**
WMQ pP pP 05 34 23.6 +1.0
WMQ sP sP 05 34 27.0 +3.0
WMQ PP 05 34 34.8
WMQ S **Sn 05 37 36.0 -1.5**
WMQ sS sS 05 37 41.8 -7.1
WMQ SS 05 37 58.5
WMQ PcP PcP 05 38 57.8 +1.7
WMQ pmax pmax
comp=Z,36nm,0.8s
WMQ pmax pmax
comp=Z,270nm,4.0s
WMQ LR LR
comp=N,3μm,12.6s
WMQ LR LR
comp=E,2μm,13.6s
WMQ LR LR
comp=Z,2μm,14.0s
PKI Pulchoki 18.14 259 *e*P **Pn 05 34 22.2 -1.1**
comp=Z,98nm,0.8s
PKI Pulchoki 18.14 259 *e*P **Pn 05 34 22.4 -0.9**
PKI pmax pmax
comp=Z,44nm,0.5s
PKI Pulchoki 18.14 259 *e*P **Pn 05 34 22.4 -0.9**
comp=Z,44nm,0.5s
PKIN Phulchoki 18.15 259 *e*P **Pn 05 34 22.4 -1.0**
comp=Z,44nm,0.5s
KKN Kakani 18.17 260 *e*P **Pn 05 34 23.1 -0.6**
comp=Z,117nm,0.7s
KKN Kakani 18.17 260 *e*P **Pn 05 34 23.1 -0.6**
KKN pmax pmax
comp=Z,117nm,0.7s
DMN Daman 18.38 259 *e*P **Pn 05 34 25.0 -1.2**
GKN Gorkha 18.63 261 *e*P **Pn 05 34 27.6 -1.7**
comp=Z,113nm,0.7s
KSRS Korea Array 18.91 69 P **Pn 05 34 32.0 -0.6**
comp=Z,1.1nm,0.3s,baz=255,slow=10,SNR=43
KSRS LR LR 05 42 27.2
comp=Z,563nm,18.6s,baz=260,slow=39
KSRS Korea Array 18.91 69 P **Pn 05 34 32.0 -0.6**
KSRS pmax pmax
comp=Z,1.0nm,0.3s
KSRS MLR MLR
comp=Z,563nm,18.6s
TLY Talaya 18.98 356 *e*P **Pn 05 34 33.1 -0.2**
TLY pmax pmax
comp=Z,13nm,1.7s
TLY Talaya 18.98 356 P **Pn 05 34 32.5 -0.8**
comp=Z,11nm,1.0s
CN2 Changchun 19.09 49 ⇓P **Pn 05 34 34.3 -0.5**
CN2 *es*P sP 05 34 40.0 +1.8
CN2 *e*PP 05 34 50.8
CN2 *e*S **Sn 05 38 03.8 -4.9**
CN2 pmax pmax
comp=Z,60nm,1.2s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,900nm,12.0s
CN2 LR LR
comp=E,900nm,12.0s
CN2 LR LR
comp=Z,800nm,13.0s
MOY Mondy 19.20 351 *e*P **Pn 05 34 36.6 +0.6**
MOY pmax pmax
comp=Z,30nm,2.6s
IRK Irkutsk 19.51 358 *e*P **Pn 05 34 35.7 -4.0**
IRK pmax pmax
comp=Z,125nm,0.7s
HIA Hailar 19.63 29 P **Pn 05 34 41.1 -0.1**
HIA pmax pmax
comp=Z,18nm,0.6s
HIA Hailar 19.63 29 P **Pn 05 34 41.1 -0.1**
comp=Z,18nm,0.6s
MDJ Mudanjiang 22.13 51 P **P 05 35 07.8 +0.9**
MDJ pP 05 35 10.0
MDJ sP sP 05 35 12.3 +1.3
MDJ PcP PcP 05 39 05.6 +1.7
MDJ S **S 05 39 07.0 -3.7**
MDJ ScP ScP 05 42 42.5 +1.1
MDJ PcS PcS 05 42 44.8 +2.4
MDJ ScS ScS 05 46 28.6 +2.6
MDJ pmax pmax
comp=Z,22nm,1.5s,mb4.4
MDJ pmax pmax
comp=Z,61nm,3.7s
MDJ LR LR
comp=N,750nm,8.9s
MDJ LR LR
comp=E,580nm,8.2s
MDJ LR LR
comp=Z,910nm,10.2s,MS4.5
MDJ Mudanjiang 22.13 51 *e*P **P 05 35 07.2 +0.3**
comp=Z,9.3nm,0.5s,mb4.5
JOSI Joshimath 22.20 271 *e*PKP **P 05 35 07.2 -0.5**
MK31 Makanchi Array 22.61 315 *e*P **P 05 35 12.3 +0.4**
MKAR Makanchi Array 22.61 315 P **P 05 35 10.8 -1.1**
comp=Z,11nm,0.8s,mb4.3,baz=120,slow=12,SNR=38
MKAR LR LR 05 44 59.2
comp=Z,811nm,20.1s,MS4.2,baz=124,slow=39
MKAR Makanchi Array 22.61 315 P **P 05 35 10.9 -1.0**
MKAR pmax pmax
comp=Z,11nm,0.8s
MKAR MLR MLR
comp=Z,811nm,20.1s
DDI Dehra Dun 23.52 271 *e*PKP **P 05 35 21.0 -0.7**
BISR Bishrakh 24.49 268 *ex* x 05 35 41.3
KKR Kurukshetra 24.64 271 *e*PKP **P 05 35 32.3 +0.2**
NDI New Delhi 24.64 268 *e*PKP **P 05 35 33.0 +1.0**
KSH Kashi 24.74 294 P **P 05 35 40.8 +8.0**
KSH S **S 05 40 03.9 +9.0**
KSH LR LR
comp=N,780nm,12.5s,MS4.6
KSH LR LR
comp=E,630nm,10.2s,MS4.6
KSH Kashi 24.74 294 P **P 05 35 38.3 +5.5**
KSH pP 05 35 42.8
KSH sP sP 05 35 45.0 +7.9
KSH PP 05 36 16.8
KSH PcP PcP 05 39 14.9 +5.4
KSH S **S 05 39 58.5 +3.6**
KSH SS 05 40 56.3
KSH ScP ScP 05 42 51.3 +2.8
KSH PcS PcS 05 42 52.8 +3.3
KSH ScS ScS 05 46 37.5 +1.1
KSH pmax pmax
comp=Z,26nm,1.0s,mb4.7
KSH pmax pmax
comp=Z,140nm,3.1s
KSH LR LR
comp=N,760nm,13.2s,MS4.5
KSH LR LR
comp=E,630nm,10.2s,MS4.5
KSH LR LR
comp=Z,890nm,15.5s
AYAN Aya Nagar 24.78 268 *e*PKP **P 05 35 33.2 -0.1**
AYAN AMb AMB 05 35 37.9
comp=Z,26nm,0.8s,mb4.8
VIS Vishakhapatnam 24.96 239 *e*PKP **P 05 35 35.1 +0.1**
VIS AMb AMB 05 35 41.9
comp=Z,28nm,1.6s,mb4.5
KLR Kul'dur 25.56 42 *e*P **P 05 35 36.3 -3.9**
KLR *e*S **S 05 40 11.0 +3.2**
KLR pmax pmax
comp=E,170nm,1.8s
KLR pmax pmax
comp=Z,140nm,1.8s,mb5.2
KLR MLR MLR
comp=Z,3μm,13.0s,MS5.0
TKM2 Tokmak 2 25.61 302 *e*P **P 05 35 41.9 +1.2**
TKM2 pmax pmax
comp=Z,25nm,1.0s,mb4.7
TKM2 Tokmak 2 25.61 302 *e*P **P 05 35 41.9 +1.1**
comp=Z,25nm,1.0s,mb4.7
ZALV Zalesovo Beam 25.82 331 P **P 05 35 41.1 -1.4**
comp=Z,3.2nm,0.6s,mb4.0,baz=129,slow=8.9,SNR=14
ZALV LR LR 05 46 55.1
comp=Z,156nm,18.9s,MS3.6,baz=230,slow=39
ZALV Zalesovo Beam 25.82 331 P **P 05 35 41.1 -1.4**
ZALV pmax pmax
comp=Z,3.0nm,0.6s,mb4.0
ZALV MLR MLR
comp=Z,156nm,18.9s,MS3.6
ZALV Zalesovo Beam 25.82 331 P **P 05 35 41.1 -1.4**
ZALV LR LR 05 46 55.1
KHET Khetri 26.01 268 *e*PKP **P 05 35 43.0 -1.5**
KHET AMb AMB 05 35 48.4
comp=Z,60nm,1.5s,mb4.9
UCH Uchtor 26.25 300 *e*P **P 05 35 48.4 +1.9**
comp=Z,15nm,0.6s,mb4.7
FRU Bishkek 26.30 301 *e*P **P 05 35 46.0 -0.9**
AAK Ala-Archa 26.34 301 P **P 05 35 48.9 +1.6**
comp=Z,3.5nm,0.6s,mb4.1,baz=123,slow=6.4,SNR=11
AAK LR LR 05 47 32.1
comp=Z,932nm,19.1s,MS4.3,baz=83,slow=40
AAK Ala-Archa 26.34 301 *e*P **P 05 35 49.0 +1.7**
AAK pmax pmax
comp=Z,10.0nm,1.2s,mb4.2
AAK Ala-Archa 26.34 301 *e*P **P 05 35 48.1 +0.8**
comp=Z,19nm,1.1s,mb4.5
BHPL Bhopal 26.49 256 *e*PKP **P 05 35 48.4 -0.5**
KURK Kurchatov 26.71 320 *e*P **P 05 35 51.0 +0.4**
KURK pmax pmax
comp=Z,20nm,1.2s,mb4.5
KURK Kurchatov 26.71 320 *e*P **P 05 35 50.6 0.0**
comp=Z,20nm,1.0s,mb4.6
AML Almayashu 26.83 300 *e*P **P 05 35 53.2 +1.5**
comp=Z,28nm,1.1s,mb4.7
EKS2 Erkin-Say 26.87 301 *e*P **P 05 35 53.0 +0.9**
comp=Z,9.6nm,0.9s,mb4.3
MAJO Matsushiro 27.08 73 *e*P **P 05 35 54.2 +0.1**
MAJO pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
MAJO Matsushiro 27.08 73 *e*P **P 05 35 54.2 +0.1**
comp=Z,10nm,0.7s,mb4.5
MAT Matsushiro 27.08 73 P **P 05 35 53.3 -0.8**
MAT S **S 05 40 33.0 +1.0**
MJAR Matsushiro Arr 27.08 73 P **P 05 35 52.2 -1.9**
comp=Z,5.1nm,0.8s,mb4.1,baz=276,slow=11,SNR=12
MJAR LR LR 05 47 03.4
comp=Z,227nm,18.6s,MS3.8,baz=275,slow=38
MJAR Matsushiro Arr 27.08 73 P **P 05 35 52.2 -1.9**
MJAR pmax pmax
comp=Z,5.0nm,0.8s
MJAR MLR MLR
comp=Z,227nm,18.6s
AJM Ajmer 27.51 265 *e*PKP **P 05 35 58.5 +0.5**
AJM AMb AMB 05 36 02.9
comp=Z,32nm,1.2s,mb4.8
JHJ Hachijo jima 2 28.68 80 LR LR 05 48 25.8
comp=Z,255nm,19.5s,MS3.8,baz=246,slow=38
HYB Hyderabad 28.69 244 *e*P **P 05 36 10.0 +1.4**
HYB Hyderabad 28.69 244 *i*P **P 05 36 10.0 +1.4**
LATR Latur 29.65 248 *e*PKP **P 05 36 18.3 +1.2**
LATR AMb AMB 05 36 20.7
comp=Z,33nm,1.7s,mb4.8
KBL Kabul 30.33 284 *e*P **P 05 36 24.3 +1.3**
KBL pmax pmax
comp=Z,18nm,0.9s,mb4.8
KBL Kabul 30.33 284 *e*P **P 05 36 24.3 +1.3**
comp=Z,18nm,0.9s,mb4.8
PSI Prapat 30.42 193 P **P 05 36 24.4 +0.5**
comp=Z,9.7nm,0.7s,mb4.7,baz=347,slow=3.9,SNR=10
PSI Prapat 30.42 193 P **P 05 36 24.4 +0.5**
PSI pmax pmax
comp=Z,10.0nm,0.7s,mb4.7
JASL Jaisalmer 30.50 268 *e*PKP **P 05 36 24.1 -0.6**
CBIJ Chichi jima 32.16 90 LR LR 05 50 25.1
comp=Z,151nm,18.7s,MS3.7,baz=118,slow=38
BVAR Borovoye Array 32.30 319 P **P 05 36 39.6 -0.6**
comp=Z,3.5nm,0.7s,mb4.3,baz=121,slow=11,SNR=6.4
BVAR Borovoye Array 32.30 319 P **P 05 36 39.6 -0.5**
BVAR pmax pmax
comp=Z,4.0nm,0.7s
BRVK Borovoye 32.37 319 *e*P **P 05 36 41.6 +0.8**
BRVK pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
BRVK Borovoye 32.37 319 *e*P **P 05 36 50.5 +10**
comp=Z,4.3nm,0.6s,mb4.5
YAK Yakutsk 33.15 21 *e*P **P 05 36 53.2 +5.7**
YAK pmax pmax
comp=Z,31nm,0.9s,mb5.2
YAK MLR MLR
comp=E,359nm,12.0s,MS4.4
YAK MLR MLR
comp=Z,539nm,13.0s,MS4.4
YAK MLR MLR
comp=N,255nm,13.0s,MS4.4
ABKAR Akbulak array 37.52 310 *e*P **P 05 37 25.7 +0.4**
comp=N,4.1nm,0.6s,mb4.3
SVE Sverdlovsk 38.93 322 *e*P **P 05 37 37.7 +0.7**
AKTK Aktyubinsk 38.94 311 P **P 05 37 37.9 +0.7**
AKTO Aktyubinsk 38.94 311 P **P 05 37 37.9 +0.7**
comp=N,4.5nm,0.6s,mb4.3,baz=115,slow=13,SNR=14
AKTO Aktyubinsk 38.94 311 P **P 05 37 37.9 +0.8**
AKTO pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
ARU Arti 39.91 321 *d i*P **P 05 37 45.4 +0.2**
ARU SS SS 05 46 36.3 -10
ARU pmax pmax
comp=Z,43nm,1.7s,mb4.9
ARU Arti 39.91 321 *e*P **P 05 37 45.1 -0.1**
comp=Z,22nm,0.9s,mb4.9
TIXI Tiksi 40.92 11 *e*P **P 05 37 52.3 -1.0**
TIXI pmax pmax
comp=Z,15nm,0.6s,mb4.8
TIXI Tiksi 40.92 11 *e*P **P 05 37 52.3 -1.0**
comp=Z,14nm,0.6s,mb4.8
SOKR Solikamsk 41.73 325 *e*P **P 05 38 00.2 0.0**
SOKR pmax pmax
comp=Z,10.0nm,1.1s,mb4.4
SEY Seymchan 42.07 30 *e*P **P 05 38 04.6 +1.7**
PETK Petropavlovsk- 42.18 45 P **P 05 38 02.8 -1.1**
comp=Z,4.1nm,0.8s,mb4.1,baz=210,slow=3.7,SNR=11
PETK LR LR 05 57 14.5
comp=Z,353nm,20.0s,MS4.2,baz=259,slow=39
PETK Petropavlovsk- 42.18 45 P **P 05 38 02.8 -1.1**
PETK pmax pmax
comp=Z,4.0nm,0.8s,mb4.1
PETK MLR MLR
comp=Z,353nm,20.0s,MS4.2
ZEI Tsey 48.77 301 *e*P **P 05 38 54.4 -1.9**
ZEI pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
BILL Bilibino 49.18 26 *e*P **P 05 38 57.9 -1.2**
BILL *e*S **S 05 46 04.0 -0.2**
BILL pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
BILL MLR MLR
comp=Z,600nm,16.0s,MS4.7
BILL Bilibino 49.18 26 *e*P **P 05 38 59.2 +0.1**
comp=Z,14nm,0.7s,mb5.1
VRHR Novokhopersk 49.34 312 *e*P **P 05 39 01.3 +0.7**
VRHR pmax pmax
comp=N,10.0nm,0.8s
VRHR pmax pmax
comp=E,40nm,0.8s
VRHR pmax pmax
comp=Z,20nm,0.8s,mb5.2
RDF Al-Radifah 49.40 282 *e*P **P 05 39 00.5 -0.9**
RDF AMb AMB 05 39 05.8
comp=Z,56nm,0.7s,mb5.7
KIV Kislovodsk 49.45 302 *e*P **P 05 39 04.5 +3.0**
KIV pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
KIV MLR MLR
comp=Z,197nm,17.0s,MS4.2
NAY Al-Naaiem 49.55 282 *e*P **P 05 39 01.6 -0.9**
NAY AMb AMB 05 39 09.4
comp=Z,48nm,0.7s,mb5.6
VSR Storozhevoye 50.88 312 *e*P **P 05 39 12.3 +0.1**
VSR pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
VSR pmax pmax
comp=N,5.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,1.1s
SMY Shemya 52.08 46 *e*P **P 05 39 21.2 0.0**
SMY pmax pmax
comp=Z,48nm,0.7s,mb5.5
SMY Shemya 52.08 46 *e*P **P 05 39 21.2 0.0**
comp=Z,48nm,0.7s,mb5.5
OBN Obninsk 52.09 317 *e*P **P 05 39 24.2 +3.0**
OBN *i* 05 39 32.2
OBN *e* 05 41 20.2
OBN pmax pmax
comp=Z,33nm,1.7s,mb5.0
OBN MLR MLR
comp=Z,300nm,17.0s,MS4.4
ANN Anapa 53.00 304 *e*P **P 05 39 28.3 +0.2**
ANN pmax pmax
comp=Z,26nm,1.1s,mb5.1
ANN MLR MLR
comp=N,222nm,17.0s,MS4.5
ANN MLR MLR
comp=E,342nm,17.0s,MS4.5
ANN MLR MLR
comp=Z,241nm,17.0s,MS4.3
APA Apatity 53.39 333 ⇑ *i*P **P 05 39 26.0 -4.6**
APA pmax pmax

comp=Z,13nm,1.0s,mb4.8
APA MLR MLR
JOF Joensuu 54.30 327 *e*P **P 05 39 36.5 -0.9**
JOF pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
JOF Joensuu 54.30 327 *e*p **P 05 39 36.5 -0.9**
comp=Z,9.2nm,0.6s,mb4.9
ARCES ARCESS Array B 56.27 335 P **P 05 39 50.9 -0.6**
comp=Z,4.3nm,0.9s,mb4.5,baz=78,slow=6.7,SNR=4.9
ARCES LR LR 06 07 12.7
comp=Z,124nm,18.9s,MS4.0,baz=253,slow=40
ARCES ARCESS Array B 56.27 335 P **P 05 39 50.9 -0.6**
ARCES pmax pmax
comp=Z,4.0nm,0.9s
ARCES MLR MLR
comp=Z,124nm,18.9s
KAF Kangasniemi 56.69 326 *e*P **P 05 39 53.6 -1.0**
KAF pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
KAF Kangasniemi 56.69 326 *e*P **P 05 39 53.6 -1.0**
comp=Z,6.5nm,0.6s,mb4.8
KAF Kangasniemi 56.69 326 *e*p **P 05 39 53.6 -1.0**
comp=Z,6.5nm,0.6s,mb4.8
FINES FINESS Array B 56.89 326 P **P 05 39 55.5 -0.5**
comp=Z,5.6nm,0.4s,mb5.0,baz=92,slow=7.6,SNR=20
FINES FINESS Array B 56.89 326 P **P 05 39 55.5 -0.5**
FINES pmax pmax
comp=Z,6.0nm,0.4s
FINES FINESS Array B 56.89 326 P **P 05 39 55.5 -0.5**
BRTR Keskin Array B 57.00 299 P **P 05 39 56.9 -0.3**
comp=Z,2.5nm,0.7s,mb4.3,baz=100,slow=6.8,SNR=8.5
BRTR Keskin Array B 57.00 299 *i* P **P 05 39 56.9 -0.2**
BRTR pmax pmax
comp=Z,3.0nm,0.7s
AKASG Malin Array Be 57.16 313 P **P 05 39 57.0 -1.1**
comp=Z,7.8nm,0.6s,mb5.0,baz=68,slow=6.9,SNR=12
AKASG LR LR 06 06 00.5
comp=Z,258nm,20.4s,MS4.3,baz=70,slow=38
AKASG Malin Array Be 57.16 313 P **P 05 39 57.0 -1.1**
AKASG pmax pmax
comp=Z,8.0nm,0.6s
AKASG MLR MLR
comp=Z,258nm,20.4s
AKASG Malin Array Be 57.16 313 P **P 05 39 57.0 -1.1**
AKASG LR LR 06 06 00.5
AKBB Malin Array Si 57.16 313 *e*P **P 05 39 57.4 -0.7**
WRAB Tennant Creek 59.19 148 *e*P **P 05 40 13.3 +0.8**
WRAB pmax pmax
comp=Z,19nm,0.7s,mb5.2
WRAB Tennant Creek 59.19 148 *e*P **P 05 40 13.3 +0.7**
comp=Z,19nm,0.7s,mb5.2
VRI Vrincioaia 60.04 308 ⇓P **P 05 40 19.0 +0.8**
VRI Vrincioaia 60.04 308 ⇓*i*P **P 05 40 19.0 +0.8**
BURAR Bucovina Array 60.51 310 ⇓P **P 05 40 21.5 +0.1**
BURAR Bucovina Array 60.51 310 ⇓*i*P **P 05 40 21.5 +0.1**
BUR08 Bucovina Ar. S 60.51 310 *e*P **P 05 40 22.2 +0.8**
MLR Muntele Rosu 60.67 307 ⇓P **P 05 40 24.1 +1.5**
MLR Muntele Rosu 60.67 307 ⇓*i*P **P 05 40 24.1 +1.5**
VOIR 61.29 308 ⇓P **P 05 40 27.3 +0.5**
VOIR 61.29 308 ⇓*i*P **P 05 40 27.3 +0.5**
ASAR Alice Springs 62.29 151 P **P 05 40 33.5 -0.1**
comp=Z,5.7nm,0.5s,mb5.0,baz=332,slow=6.6,SNR=76
ASAR Alice Springs 62.29 151 P **P 05 40 33.5 -0.1**
ASAR pmax pmax
comp=Z,6.0nm,0.5s
DRGR 62.39 310 ⇓P **P 05 40 34.7 +0.6**
DRGR 62.39 310 ⇑*i*P **P 05 40 34.8 +0.7**
NB2 NORSAR Subarra 63.94 327 P **P 05 40 42.3 -1.9**
comp=Z,7.6nm,0.9s,mb4.7,baz=71,slow=6.9
NOA NORSAR Array B 63.94 327 P **P 05 40 42.7 -1.4**
comp=Z,4.8nm,0.8s,mb4.6,baz=71,slow=6.6,SNR=17
NOA LR LR 06 09 38.7
comp=Z,142nm,20.6s,MS4.1,baz=75,slow=37
NOA NORSAR Array B 63.94 327 P **P 05 40 42.7 -1.5**
NOA pmax pmax
comp=Z,5.0nm,0.8s
NOA MLR MLR
comp=Z,142nm,20.7s
NOA NORSAR Array B 63.94 327 P **P 05 40 42.7 -1.4**
NOA LR LR 06 09 38.7
OKC Ostrava-Krasne 64.21 314 *e*P **P 05 40 48.1 +2.0**
OKC MLR MLR
comp=Z,200nm,15.8s,MS4.4
OKC Ostrava-Krasne 64.21 314 *e*P **P 05 40 48.1 +2.0**
OKC AMS AMS 06 09 00.0
comp=Z,200nm,15.8s
MORC Moravsky Berou 64.59 314 *e*P **P 05 40 48.9 +0.2**
TTA Tatalina 65.05 30 *e*P **P 05 40 50.7 -0.7**
TTA pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
TTA Tatalina 65.05 30 *e*P **P 05 40 50.7 -0.7**
comp=Z,5.6nm,0.7s,mb4.7
DPC Dobruska-Polom 65.12 315 *e*P **P 05 40 52.4 +0.3**
DPC MLR MLR
comp=Z,200nm,15.2s,MS4.4
DPC Dobruska-Polom 65.12 315 *e*P **P 05 40 52.4 +0.3**
DPC AMS AMS 06 09 20.0
comp=Z,200nm,15.2s
UPC Upice 65.24 315 *e*P **P 05 40 55.8 +2.9**
UPC Upice 65.24 315 *e*P **P 05 40 55.8 +2.9**
TREC Trest 66.02 314 AMS AMS 06 09 50.0
comp=Z,300nm,20.5s
PVCC Panska Ves 66.09 316 AMS AMS 06 11 10.0
comp=Z,300nm,22.6s
PRU Pruhonice 66.31 315 AMS AMS 06 10 00.0
comp=Z,300nm,14.0s
BRG Berggiesshubel 66.32 316 *e*P **P 05 40 58.8 -1.0**
BRG *e* 05 41 06.7
comp=Z,4.3nm,0.8s
BRG
comp=N,217nm,13.9s
BRG
comp=E,179nm,14.3s
BRG
comp=Z,319nm,17.1s
BRG Berggiesshubel 66.32 316 *e*P **P 05 40 58.8 -1.0**
BRG *e* 05 41 06.7
BRG pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
BRG pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
BRG MLR MLR
comp=N,130nm,13.9s,MS4.4
BRG MLR MLR
comp=E,107nm,14.3s,MS4.4
BRG MLR MLR
comp=Z,191nm,17.1s,MS4.4
CONA Conrad Observa 66.32 313 ⇑*i*P **P 05 40 59.7 -0.1**
comp=Z,4.8nm,1.1s,mb4.5
BPAW Bear Paw Mtn. 66.59 28 *e*P **P 05 41 01.2 -0.1**
comp=Z,8.6nm,0.7s,mb4.9
PPLA Purkeypile 66.65 29 *e*P **P 05 41 01.3 -0.4**
comp=Z,20nm,0.6s,mb5.3
CLL Collm 66.69 317 *e*P **P 05 41 09.0 +6.8**
CLL MLR MLR
comp=Z,200nm,18.3s,MS4.4
CLL Collm 66.69 317 *e*(sP) sP 05 41 09.0 +2.4
CLL LmV 06 11 00.0
comp=Z,200nm,18.3s
TRF Thorofare Moun 67.17 28 *e*P **P 05 41 05.7 +0.7**
comp=Z,6.2nm,0.8s,mb4.7
KHC Kasperske Hory 67.23 315 *e*P **P 05 41 06.8 +1.1**
KHC MLR MLR
comp=Z,300nm,21.2s,MS4.5
KHC Kasperske Hory 67.23 315 *e*P **P 05 41 06.8 +1.1**
KHC AMS AMS 06 10 50.0
comp=Z,300nm,21.2s
SOKA Soboth 67.34 312 ⇑*i*P **P 05 41 06.5 +0.1**
comp=Z,6.0nm,0.9s,mb4.6
COLA College 67.43 26 *e*P **P 05 41 06.7 +0.1**
COLA pmax pmax
comp=Z,18nm,0.8s,mb5.2
COLA College 67.43 26 *e*P **P 05 41 06.7 +0.1**
comp=Z,18nm,0.8s,mb5.2
NKC Novy Kostel 67.45 316 AMS AMS 06 11 50.0
comp=Z,300nm,17.4s
RSO Redoubt South 67.50 32 *e*P **P 05 41 09.3 +2.2**
MCK McKinley 67.57 28 *e*P **P 05 41 09.4 +1.9**
ILAR Eielson Array 67.84 26 P **P 05 41 07.9 -1.3**
comp=Z,2.5nm,0.6s,mb4.4,baz=290,slow=4.1,SNR=30
ILAR LR LR 06 12 38.1
comp=Z,142nm,19.0s,MS4.2,baz=292,slow=38
ILAR Eielson Array 67.84 26 P **P 05 41 07.9 -1.3**
ILAR pmax pmax
comp=Z,3.0nm,0.6s
ILAR MLR MLR
comp=Z,142nm,19.0s
GRF Grafenberg Arr 68.39 316 *e*P **P 05 41 11.7 -1.3**
comp=Z,5.0nm,0.8s,mb4.6
GRF Grafenberg Arr 68.39 316 *e*P **P 05 41 11.7 -1.3**
GRF pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
PMR Palmer 68.52 30 *e*P **P 05 41 12.3 -1.3**
OHAK Old Harbor 68.73 35 *e*P **P 05 41 16.0 +1.1**
KDAK Kodiak Island 68.81 34 *e*P **P 05 41 14.8 -0.6**
SEW Seward 69.12 31 *e*P **P 05 41 17.6 +0.3**
comp=Z,14nm,0.7s,mb5.0
WTTA Wattenberg 69.20 313 ⇑*i*pP pP 05 41 20.0 -1.3
comp=Z,8.3nm,1.3s
FETA Feichten 69.86 313 ⇑*i*pP pP 05 41 23.9 -1.5
comp=Z,6.1nm,0.9s
EGAK Eagle 69.91 25 *e*P **P 05 41 23.1 +1.0**
INK Inuvik 70.21 20 *e*P **P 05 41 24.1 +0.2**
BMRM Bremner River 70.72 29 *e*P **P 05 41 29.2 +2.1**
comp=Z,15nm,0.7s,mb5.0
DAWY Dawson 70.95 25 *e*P **P 05 41 28.0 -0.5**
CDF Champ du Feu 71.29 316 *e*P **P 05 41 30.2 -0.6**
BCLA Clavier 71.46 318 AP pP 05 41 34.9 -0.2
HAU Haudompre 72.03 316 *e*P **P 05 41 34.6 -0.7**
HAU *e*MLR MLR
comp=Z,197nm,18.8s,MS4.1
HAU Haudompre 72.03 316 *e*P **P 05 41 34.6 -0.7**
HAU LR LR
comp=Z,200nm,18.8s,MS4.4
KMBO Kilima Mbogo 72.46 257 P **P 05 41 39.4 +1.0**
comp=Z,4.5nm,0.9s,mb4.4,baz=1,2,slow=23,SNR=6.9
KMBO Kilima Mbogo 72.46 257 P **P 05 41 39.4 +1.0**
KMBO pmax pmax
comp=Z,5.0nm,0.9s
KMBO Kilima Mbogo 72.46 257 P **P 05 41 39.4 +1.0**
STKA Stephens Creek 72.74 148 P **P 05 41 39.2 -0.3**
comp=Z,3.1nm,0.8s,mb4.3,baz=339,slow=10,SNR=3.1
CABF La Chapelle 72.87 315 *e*P **P 05 41 39.9 -0.4**
LPG La Plagne 73.01 313 *e*P **P 05 41 41.5 +0.3**
comp=Z,32nm,0.6s,mb5.1
LPG La Plagne 73.01 313 *e*P **P 05 41 41.5 +0.3**
LPG pmax pmax
comp=Z,16nm,0.6s,mb5.1
LPG La Plagne 73.01 313 *e*P **P 05 41 41.5 +0.3**
comp=Z,16nm,0.6s,mb5.1
LPL La Plagne 73.01 313 *e*P **P 05 41 41.4 +0.2**
comp=Z,20nm,0.6s,mb4.9
LPL La Plagne 73.01 313 *e*P **P 05 41 41.4 +0.2**
LPL pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
LPL La Plagne 73.01 313 *e*P **P 05 41 41.4 +0.2**
PGF Pioggiola 73.03 310 *e*P **P 05 41 41.3 -0.1**
comp=Z,14nm,0.8s,mb4.7
PGF Pioggiola 73.03 310 *e*P **P 05 41 41.3 -0.1**
PGF pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
PGF Pioggiola 73.03 310 *e*P **P 05 41 41.3 -0.1**
comp=Z,6.9nm,0.8s,mb4.6
BNI Bardonecchia 73.28 313 *e*P **P 05 41 44.9 +2.1**
MBDF Montbardon 73.38 313 *e*P **P 05 41 42.8 -0.6**
comp=Z,9.2nm,0.7s,mb4.5
MBDF Montbardon 73.38 313 *e*P **P 05 41 42.8 -0.6**
MBDF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
MBDF Montbardon 73.38 313 *e*P **P 05 41 42.8 -0.6**
comp=Z,4.6nm,0.7s,mb4.5
SBF Sospel 73.39 312 *e*P **P 05 41 43.3 -0.2**
comp=Z,23nm,0.7s,mb4.9
SBF Sospel 73.39 312 *e*P **P 05 41 43.3 -0.2**
SBF pmax pmax
comp=Z,11nm,0.7s,mb4.9
SBF Sospel 73.39 312 *e*P **P 05 41 43.3 -0.2**
comp=Z,11nm,0.7s,mb4.9
HYT Haines Junctio 73.62 27 *e*P **P 05 41 46.8 +2.2**
ORIF Oris-en-Rattie 73.83 313 *e*P **P 05 41 45.7 -0.4**
comp=Z,11nm,0.6s,mb4.7
ORIF *e*MLR MLR
comp=Z,242nm,17.8s,MS4.2
ORIF Oris-en-Rattie 73.83 313 *e*P **P 05 41 45.7 -0.4**
ORIF pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
ORIF Oris-en-Rattie 73.83 313 *e*P **P 05 41 45.7 -0.4**
comp=Z,5.3nm,0.6s,mb4.7
LOR Lormes 73.86 316 *e*P **P 05 41 45.4 -0.7**
LOR *e*MLR MLR
comp=Z,160nm,18.8s,MS4.0
LOR Lormes 73.86 316 *e*P **P 05 41 45.4 -0.7**
LOR LR LR
comp=Z,160nm,18.8s,MS4.3
SSF Saint Saulge 74.17 316 *e*P **P 05 41 47.5 -0.5**
SMF Signal de Mont 74.19 315 *e*P **P 05 41 47.4 -0.7**
AVF Avril sur Loir 74.40 316 *e*P **P 05 41 48.6 -0.7**
comp=Z,9.0nm,0.7s,mb4.4
AVF Avril sur Loir 74.40 316 *e*P **P 05 41 48.6 -0.7**
AVF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
AVF Avril sur Loir 74.40 316 *e*P **P 05 41 48.6 -0.7**
comp=Z,4.0nm,0.7s,mb4.5
VIVF Saint-Julien-l 74.61 314 *e*P **P 05 41 50.1 -0.5**
comp=Z,6.5nm,0.8s,mb4.3
VIVF Saint-Julien-l 74.61 314 *e*P **P 05 41 50.1 -0.5**
VIVF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
VIVF Saint-Julien-l 74.61 314 *e*P **P 05 41 50.1 -0.5**
comp=Z,3.3nm,0.8s,mb4.3
BGF Bois d'Agland 74.82 316 *e*P **P 05 41 51.0 -0.7**
SKAG Skagway 75.33 27 *e*P **P 05 41 56.0 +1.5**
LASF Ste Croix 75.51 313 *e*P **P 05 41 55.4 -0.4**
YKA Yellowknife Ar 79.77 18 P **P 05 42 18.0 -1.2**
comp=Z,3.5nm,0.7s,mb4.4,baz=325,slow=5.1,SNR=13
YKA Yellowknife Ar 79.77 18 P **P 05 42 18.0 -1.2**
YKA pmax pmax
comp=Z,4.0nm,0.7s
ESDC Sonseca Array 82.81 313 P **P 05 42 35.8 0.0**
comp=Z,0.4nm,0.3s,mb3.9,baz=25,slow=5.6,SNR=2.2
JCW Jim Creek 88.93 30 *e*P **P 05 43 08.6 +2.7**
BSMT Bassoo Peak 92.00 26 *e*P **P 05 43 20.3 0.0**
comp=Z,1.8nm,0.8s,mb4.5
SCHQ Schefferville 92.54 356 P **P 05 43 21.6 -0.9**
comp=Z,2.8nm,0.8s,mb4.7,baz=13,slow=4.3,SNR=4.3
SCHQ LR LR 06 28 09.7
comp=Z,97nm,19.3s,MS4.3,baz=34,slow=38
SCHQ Schefferville 92.54 356 P **P 05 43 21.6 -0.9**
SCHQ LR LR 06 28 09.7
SLMT Seeley Lake 92.99 25 *e*P **P 05 43 24.9 +0.1**
comp=Z,3.2nm,0.8s,mb4.8
ULM Lac du Bonnet 95.22 14 LR LR 06 27 16.7
comp=Z,98nm,18.8s,MS4.3,baz=262,slow=36
BOSA Boshof 97.54 241 LR LR 06 24 04.4
comp=Z,117nm,20.5s,MS4.4,baz=360,slow=33
PDAR Pinedale Array 98.26 25 P **P 05 43 50.8 +1.9**
comp=Z,0.2nm,0.7s,mb3.8,baz=17,slow=4.7,SNR=3.1
PDAR LR LR 06 31 38.0
comp=Z,86nm,18.9s,MS4.3,baz=149,slow=38
TXAR Lajitas Array 112.34 27 PKiKP PKiKP 05 48 47.3 -0.5
comp=Z,0.2nm,0.6s,baz=359,slow=3.6,SNR=3.7
TXAR Lajitas Array 112.34 27 *i* PKIKP PKiKP 05 48 47.3 -0.5
OTAV Otavalo 146.98 7 *e*PKPdf PKPdf 05 49 53.1 +0.2

BJI ***24*** *05:59:40.3, 6°.05S×131°.32E, h66km, mB4.9/15, mb4.9/22, Ms4.6/15, Ms7 4.3/15*
NEIC ***24*** *05:59:43.3±0.3, 5°.58S×130°.86E, h35km, mb4.8/14, Error ellipse: s-maj=10.9km s-min=5.6km az=62.0*
ISCJB ***24*** *05:59:47.6±0.6, 5°.66S±0°.03×131°.02E±0°.04, h100km±6km, mb4.7/31, Error ellipse: s-maj=7.2km s-min=5.0km az=146.2*
DJA ***24*** *05:59:50, 5°.69S×131°.10E, h105km, mb4.8/28*
IDC ***24*** *05:59:51.4±0.7, 5°.62S×131°.13E, h120km±5km, mb4.1/12, mb1 4.2/13, mb1mx4.1/18, mbtmp4.1/13, Error ellipse: s-maj=23.6km s-min=10.3km az=63.0*
ISC 24 05:59:48.9±0.5, 5°.66S±0°.04×131°.03E±0°.04, h93km±5km, h121km±1.2km; pP-P, n92, σ1s 20/109, mb4.7/31, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TLE	**Tual**	**1.70**	**89**	P		**Pn**		**06 00 19.0**	**+1.6**
TLE				S		**Sn**		**06 00 42.6**	**+3.6**
AAI	**Ambon**	**3.44**	**305**	P		**Pn**		**06 00 42.3**	**+1.9**
AAI				S		**Sn**		**06 01 19.1**	**-1.2**
NLAI	**Namlea**	**4.59**	**301**	P		**Pn**		**06 00 57.7**	**+1.6**
SWI	**Sorong**	**4.77**	**3**	P		**Pn**		**06 00 56.0**	**-2.5**
SWI				S		**Sn**		**06 01 46.5**	**-6.1**
LBMI	**Labuha**	**6.10**	**325**	P		**Pn**		**06 01 15.9**	**-0.8**
	2.7nm8μm229nm,0.9s								
BAKI	**Biak**	**6.74**	**49**	P		**Pn**		**06 01 25.9**	**+0.6**
	2μm112nm,0.7s								
KAKA	**Kakadu**	**7.15**	**169**	*e*P		**Pn**		**06 01 29.5**	**-1.4**
	152nm,0.2s								
KAKA				*e*S		**Sn**		**06 02 45.7**	**-4.8**
KAKA	**Kakadu**	**7.15**	**169**	*e*Pn		**Pn**		**06 01 29.5**	**-1.4**
	646nm,0.3s								
KAKA				*e*Sn		**Sn**		**06 02 43.7**	**-6.8**
KAKA	**Kakadu**	**7.15**	**169**	P		**Pn**		**06 01 29.4**	**-1.5**
	4.3nm567nm,0.7s								
TNTI	**Ternate**	**7.36**	**330**	P		**Pn**		**06 01 32.4**	**-1.4**
	0.3nm63nm,0.5s								
SMPI	**Sarmi**	**8.48**	**65**	P		**Pn**		**06 01 48.8**	**-0.3**
	43nm,1.0s								
KDI	**Kendari**	**8.55**	**281**	P		**Pn**		**06 01 53.1**	**+3.1**
	1μm115nm,1.2s								
KNA	**Kununurra**	**10.27**	**192**	P		**Pn**		**06 02 11.9**	**-1.5**
	1μm,0.9s								
BKSI	**Bulukumba**	**10.86**	**271**	P		**Pn**		**06 02 24.7**	**+3.2**
	28nm,1.0s								
MRSI	**Marisa**	**10.93**	**304**	P		**Pn**		**06 02 22.4**	**0.0**
	41nm,0.8s								
BNSI	**Bone**	**10.95**	**276**	P		**Pn**		**06 02 26.0**	**+3.3**
	32nm,2.0s								
SPSI	**Sidrap Palu**	**11.35**	**278**	P		**Pn**		**06 02 31.2**	**+3.1**
	32nm,1.5s								
TTSI	**Tana Toraja**	**11.47**	**283**	P		**Pn**		**06 02 34.4**	**+4.6**
	1μm33nm,1.0s								
FITZ	**Fitzroy Crossi**	**13.44**	**203**	*e*P		**Pn**		**06 02 51.4**	**-4.5**
	51nm,0.2s								
FITZ				*e*S		**Sn**		**06 05 09.9**	**-14**
FITZ	**Fitzroy Crossi**	**13.44**	**203**	P		**Pn**		**06 02 52.3**	**-3.6**
	13nm,0.3s,baz=34,slow=11,SNR=253								
FITZ				S		**Sn**		**06 05 11.7**	**-12**
	14nm,0.3s,baz=106,slow=23,SNR=11								
FITZ	**Fitzroy Crossi**	**13.44**	**203**	*e*Pn		**Pn**		**06 02 51.3**	**-4.6**
FITZ	**Fitzroy Crossi**	**13.44**	**203**	P		**Pn**		**06 02 51.6**	**-4.3**
	3μm104nm,0.8s								
COEN	**Coen**	**14.53**	**125**	*e*P		**Pn**		**06 03 06.8**	**-3.2**
COEN				*e*Pn		**Pn**		**06 03 08.4**	**-1.6**
COEN	**Coen**	**14.53**	**125**	P		**Pn**		**06 03 08.4**	**-1.6**
	134nm,0.6s								
WRAB	**Tennant Creek**	**14.55**	**167**	*e*Pn		**Pn**		**06 03 05.2**	**-5.1**
WRAB				*e*Sn		**Sn**		**06 05 39.6**	**-11**
WRAB	**Tennant Creek**	**14.55**	**167**	P		**Pn**		**06 03 06.1**	**-4.2**
	56nm,0.6s								
KBKI	**Kotabaru**	**15.00**	**278**	P		**Pn**		**06 03 17.6**	**+1.5**
	28nm,1.1s								
KHKI	**Kahang-Kahang**	**15.54**	**259**	P		**Pn**		**06 03 24.2**	**+1.3**
	32nm,1.1s								
PMG	**Port Moresby**	**16.42**	**104**	*e*Pn		**Pn**		**06 03 34.6**	**+0.7**
	9.7nm,0.8s								
PMG	**Port Moresby**	**16.42**	**104**	P		**Pn**		**06 03 34.6**	**+0.7**
	17nm,1.6s								
KMMI	**Kalianget**	**17.01**	**264**	P		**Pn**		**06 03 44.4**	**+3.2**
	2μm146nm,0.8s								
GMJI	**Gumukmas**	**17.65**	**261**	P		**Pn**		**06 03 47.6**	**-1.3**
	37nm,1.2s								
ASAR	**Alice Springs**	**18.12**	**171**	P		**Pn**		**06 03 53.1**	**-1.4**
	14nm,0.3s,baz=344,slow=7.7,SNR=127								
ASAR				S		**S**		**06 07 09.2**	**-7.2**
	4.3nm,0.3s,baz=357,slow=28,SNR=9.3								
KKM	**Kota Kinabalu**	**18.81**	**308**	*e*P		**Pn**		**06 03 56.9**	**-5.9**
	34nm,0.5s								
KKM	**Kota Kinabalu**	**18.81**	**308**	P		**Pn**		**06 04 02.5**	**-0.4**
	71nm,0.9s								
MBWA	**Marble Bar**	**18.91**	**214**	*e*P		**Pn**		**06 04 00.7**	**-3.2**
	29nm,1.0s								
MBWA				*e*Sn		**Sn**		**06 07 19.7**	**-16**
MBWA	**Marble Bar**	**18.91**	**214**	P		**Pn**		**06 04 00.9**	**-3.0**
	40nm,1.4s								
PWJI	**Pagerwojo**	**19.23**	**262**	P		**Pn**		**06 04 06.5**	**-1.4**
	35nm,2.0s								
SJI	**Sawahan**	**19.24**	**263**	P		**Pn**		**06 04 09.5**	**+1.5**
	67nm,0.8s								
PCJI	**Pacitan**	**19.87**	**262**	P		**Pn**		**06 04 10.5**	**-4.8**
	72nm,0.6s								
SBUM	**Sibu**	**20.44**	**293**	P		**P**		**06 04 18.5**	**-0.6**
	19nm,0.7s								
CTA	**Charters Tower**	**20.61**	**135**	*e*P		**P**		**06 04 22.2**	**+1.4**
	14nm,0.8s								
CTA				*e*S		**S**		**06 08 06.0**	**-0.2**
CTA	**Charters Tower**	**20.61**	**135**	P		**P**		**06 04 22.4**	**+1.6**
	20nm,0.9s,baz=320,slow=12,SNR=18								
CTA				S		**S**		**06 08 04.7**	**-1.5**
	3.1nm,0.5s,baz=52,slow=19,SNR=2.3								
CTAO	**Charters Tower**	**20.61**	**135**	*e*P		**P**		**06 04 22.3**	**+1.4**
	20nm,0.8s								
CTAO	**Charters Tower**	**20.61**	**135**	P		**P**		**06 04 22.8**	**+2.0**
	28nm,3.7s								
FORT	**Forrest**	**25.15**	**186**	*e*P		**P**		**06 05 05.3**	**-0.1**
	34nm,0.5s,mb5.0								
FORT	**Forrest**	**25.15**	**186**	*e*P		**P**		**06 05 05.5**	**+0.1**
	33nm,0.5s,mb5.0								
STKA	**Stephens Creek**	**27.90**	**161**	*e*P		**P**		**06 05 30.7**	**+0.5**
	4.7nm,0.4s,mb4.4								
STKA	**Stephens Creek**	**27.90**	**161**	P		**P**		**06 05 30.7**	**+0.5**
	5.6nm,0.4s,mb4.4,baz=340,slow=9.0,SNR=16								
STKA	**Stephens Creek**	**27.90**	**161**	*e*P		**P**		**06 05 30.5**	**+0.3**
	1.9nm,0.5s,mb3.9								
KLBR	**Kellerberrin**	**28.64**	**204**	*e*P		**P**		**06 05 37.1**	**+0.3**
	92nm,1.5s,mb5.2								
KLBR				*e*S		S		06 11 12.2	+53
NWAO	**Narrogin (SRO)**	**30.02**	**204**	P		**P**		**06 05 49.4**	**+0.4**
	3.8nm,0.6s,mb4.2,baz=44,slow=11,SNR=4.9								
PPI	**Padang Panjang**	**31.01**	**279**	P		**P**		**06 05 57.2**	**-0.8**
ARMA	**Armidale**	**31.35**	**144**	*e*P		**P**		**06 06 02.5**	**+1.8**
CNB	**Canberra Magne**	**34.01**	**153**	*e*P		**P**		**06 06 26.1**	**+2.2**
TOO	**Toolangi**	**34.40**	**159**	*e*P		**P**		**06 06 29.3**	**+2.1**
NJ2	**Nanjing**	**39.25**	**344**	*e*P		**P**		**06 07 08.8**	**+0.4**
NJ2				pmax		pmax			
	comp=Z,10.0nm,0.5s,mb4.9								
CMAR	**Chiang Mai Arr**	**39.69**	**308**	P		**P**		**06 07 12.2**	**-0.1**
	comp=Z,7.5nm,0.5s,mb4.7,baz=136,slow=7.3,SNR=43								
GYA	**Guiyang**	**39.71**	**325**	P		**P**		**06 07 12.9**	**+0.6**
GYA				pP		pP		06 07 23.6	-11
GYA				PP		PP		06 08 49.3	+3.9
GYA				PcP		PcP		06 09 20.0	+2.7
GYA				S		**S**		**06 13 14.9**	**+5.6**
GYA				SS		SS		06 16 03.8	-4.8
GYA				pmax		pmax			
	comp=Z,10.0nm,1.0s,mb4.6								
GYA				pmax		pmax			
	comp=Z,80nm,4.9s								
GYA				LR		LR			
	comp=N,430nm,17.8s								
GYA				LR		LR			
	comp=E,400nm,18.0s								
GYA				LR		LR			
	comp=Z,470nm,17.9s								
CHTO	**Chiang Mai**	**39.89**	**308**	*e*P		**P**		**06 07 13.1**	**-0.8**
	comp=Z,18nm,0.9s,mb4.9								
KMI	**Kunming**	**41.15**	**319**	P		**P**		**06 07 24.9**	**+0.7**
KMI				PP		PP		06 09 04.0	+3.0
KMI				S		**S**		**06 13 35.8**	**+5.1**
KMI				SS		SS		06 16 32.8	-4.3
KMI				pmax		pmax			
	comp=Z,8.0nm,1.1s,mb4.5								
KMI				pmax		pmax			
	comp=Z,68nm,3.5s								
KMI				LR		LR			
	comp=N,98nm,17.2s								
KMI				LR		LR			
	comp=E,160nm,16.6s								
KMI				LR		LR			
	comp=Z,130nm,18.4s								
MJAR	**Matsushiro Arr**	**42.51**	**9**	P		**P**		**06 07 33.3**	**-1.8**
	comp=Z,1.2nm,0.5s,mb3.9,baz=183,slow=9.9,SNR=5.4								
KSRS	**Korea Array**	**42.98**	**356**	P		**P**		**06 07 38.6**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=161,slow=7.7,SNR=3.4								
CD2	**Chengdu**	**44.74**	**326**	P		**P**		**06 07 55.4**	**+2.2**
CD2				pP		pP		06 08 05.3	-10
CD2				PP		PP		06 09 41.0	+1.5
CD2				S		**S**		**06 14 29.8**	**+6.5**
CD2				SS		SS		06 17 42.4	-4.7
CD2				pmax		pmax			
	comp=Z,10.0nm,0.5s,mb4.8								
CD2				pmax		pmax			
	comp=Z,120nm,8.9s								
CD2				LR		LR			
	comp=N,200nm,11.3s								
CD2				LR		LR			
	comp=Z,180nm,10.1s								
BJI	**Beijing**	**47.49**	**345**	P		**P**		**06 08 13.0**	**-1.5**

BJI				pmax	pmax		
	comp=Z,18nm,0.7s,mb4.9						
BJI				pmax	pmax		
	comp=Z,43nm,4.2s						
HHC	**Hu-ho-hao-te**	**49.61**	**341**	*e*P	**P**	**06 08 30.5**	**-0.3**
HHC				PcP	PcP	06 09 51.8	+0.8
HHC				PP	PP	06 10 25.8	-0.3
HHC				ScP	ScP	06 13 43.3	+5.1
HHC				PcS	PcS	06 13 47.3	-0.4
HHC				S	**S**	**06 15 36.3**	**+4.3**
HHC				ScS	ScS	06 18 16.0	+2.7
HHC				SS	SS	06 19 05.5	-0.1
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
HHC				pmax	pmax		
	comp=Z,87nm,6.4s						
HHC				LR	LR		
	comp=N,220nm,15.7s						
HHC				LR	LR		
	comp=E,240nm,15.3s						
HHC				LR	LR		
	comp=Z,230nm,15.6s						
LSA	**Lhasa**	**51.96**	**315**	*e*P	**P**	**06 08 49.3**	**+0.7**
	comp=Z,13nm,0.7s,mb5.1						
ODAN	**Odare**	**53.17**	**310**	*e*P	**P**	**06 08 57.3**	**-0.4**
	comp=Z,28nm,0.5s,mb5.6						
TAPN	**Taplejung**	**53.18**	**310**	*e*P	**P**	**06 08 57.5**	**-0.2**
	comp=Z,74nm,0.4s						
RAMN	**Ramite**	**53.83**	**309**	*e*P	**P**	**06 09 02.5**	**+0.1**
	comp=Z,115nm,0.5s						
GUN	**Gumba**	**54.86**	**310**	*e*P	**P**	**06 09 09.8**	**-0.1**
	comp=Z,64nm,0.4s						
PKI	**Pulchoki**	**55.05**	**309**	*e*P	**P**	**06 09 10.7**	**-0.6**
PKI	**Pulchoki**	**55.05**	**309**	*e*P	**P**	**06 09 10.8**	**-0.5**
PKIN	**Phulchoki**	**55.07**	**309**	*e*P	**P**	**06 09 10.8**	**-0.6**
KKN	**Kakani**	**55.26**	**309**	*e*P	**P**	**06 09 12.3**	**-0.5**
	comp=Z,25nm,0.5s,mb5.5						
DMN	**Daman**	**55.30**	**309**	*e*P	**P**	**06 09 12.9**	**-0.2**
	comp=Z,22nm,0.4s,mb5.5						
GKN	**Gorkha**	**55.86**	**309**	*e*P	**P**	**06 09 16.7**	**-0.4**
	comp=Z,66nm,0.5s,mb5.9						
ULN	**Ulaanbaatar**	**57.32**	**341**	*e*P	**P**	**06 09 27.6**	**+0.5**
	comp=Z,7.1nm,0.9s,mb4.7						
SONM	**Songino Array**	**57.51**	**341**	P	**P**	**06 09 28.7**	**+0.3**
	comp=Z,3.2nm,0.7s,mb4.5,baz=163,slow=6.8,SNR=23						
SONM				pP	pP	06 09 58.0	+6.5
	comp=Z,1.4nm,0.6s,baz=163,slow=7.1,SNR=4.1						
PETK	**Petropavlovsk-**	**62.74**	**18**	P	**P**	**06 10 04.0**	**0.0**
	comp=Z,2.2nm,0.8s,mb4.2,baz=205,slow=5.8,SNR=4.8						
WMQ	**Urumqi**	**62.84**	**326**	*e*P	**P**	**06 10 05.6**	**+0.7**
WMQ				PcP	PcP	06 10 43.9	+1.5
WMQ				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
WMQ				pmax	pmax		
	comp=Z,120nm,4.6s						
MK31	**Makanchi Array**	**67.68**	**326**	*e*P	**P**	**06 10 36.0**	**0.0**
MK31				*e*PcP	PcP	06 11 06.6	+4.2
MKAR	**Makanchi Array**	**67.68**	**326**	P	**P**	**06 10 36.2**	**+0.1**
	comp=Z,8.1nm,0.4s,mb4.9,baz=113,slow=8.3,SNR=102						
MKAR				pP	pP	06 11 05.8	+6.0
	comp=Z,3.4nm,0.4s,baz=115,slow=8.3,SNR=5.8						
KSH	**Kashi**	**67.73**	**317**	P	**P**	**06 10 37.5**	**+0.9**
KSH				PcP	PcP	06 11 06.0	+3.2
KSH				PP	PP	06 13 08.8	+1.6
KSH				PcS		06 15 08.3	
KSH				S	S	06 19 29.3	+2.2
KSH				ScS	ScS	06 20 29.5	+2.7
KSH				SS	SS	06 23 51.5	+1.2
KSH				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.6						
KSH				pmax	pmax		
	comp=Z,49nm,4.4s						
KSH				LR	LR		
	comp=N,120nm,4.9s						
KSH				LR	LR		
	comp=E,86nm,5.5s						
KSH				LR	LR		
	comp=Z,150nm,5.8s						
TKM2	**Tokmak 2**	**69.61**	**320**	*e*P	**P**	**06 10 48.5**	**+0.3**
	comp=Z,5.2nm,0.7s,mb4.5						
UCH	**Uchtor**	**69.99**	**319**	*e*P	**P**	**06 10 51.7**	**+1.2**
	comp=Z,9.7nm,0.9s,mb4.6						
EKS2	**Erkin-Say**	**70.67**	**319**	*e*P	**P**	**06 10 55.3**	**+0.6**
	comp=Z,12nm,1.1s,mb4.6						
ZALV	**Zalesovo Beam**	**70.84**	**333**	P	**P**	**06 10 54.7**	**-0.8**
	comp=Z,5.2nm,0.7s,mb4.5,baz=120,slow=5.3,SNR=15						
ZALV				pP	pP	06 11 25.0	+5.6
	comp=Z,3.1nm,0.7s,baz=108,slow=4.8,SNR=5.1						
ZALV	**Zalesovo Beam**	**70.84**	**333**	P	**P**	**06 10 54.7**	**-0.8**
ZALV				pP	pP	06 11 25.0	+5.6
KURK	**Kurchatov**	**71.92**	**328**	*e*P	**P**	**06 11 01.3**	**-0.7**
	comp=Z,6.9nm,0.6s,mb4.7						
BVAR	**Borovoye Array**	**77.48**	**327**	P	**P**	**06 11 33.8**	**-0.3**
	comp=Z,2.8nm,0.7s,mb4.1,baz=126,slow=9.3,SNR=12						
BVAR				pP	pP	06 12 04.1	+5.7
	comp=Z,3.6nm,0.8s,baz=129,slow=5.9,SNR=7.2						
ILAR	**Eielson Array**	**91.70**	**25**	P	**P**	**06 12 43.5**	**-2.1**
	comp=Z,0.5nm,0.6s,mb3.9,baz=271,slow=4.7,SNR=5.8						
ILAR				pP	pP	06 13 14.0	+3.5
	comp=Z,0.3nm,0.7s,baz=258,slow=4.6,SNR=2.9						

NIED ***24*** *06:01:00, 37.°40N×139.°00E, h5km, Mw3.7 Best double couple: M0=4.00000×10^14 NP1:φs=186.00000°, δ63.00000°, λ82.00000°. NP2:φs=24.00000°, δ28.00000°, λ106.00000°.*

JMA 24 06:01:52.3, 37.°40N×138.°99E, h9km±1km, M3.8, 3D Broadband fault plane solution: P waves. NP1: φs=28.00000°, δ23.00000°, λ102.00000°. **NP2:** φs=195.00000°, δ67.00000°, λ85.00000°. **Principal axes:** T Plg67.0000°, Azm96.0000°; N Plg5.0000°, Azm197.0000°; P Plg22.0000°, Azm289.0000°; **Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHK	**Hiroka**	**0.15**	**172**	P	Pg	06 01 55.5	-0.1
JHK				S	Sg	06 01 58.1	+0.3
JIZZ	**Izumozaki**	**0.26**	**301**	⇓P	Pg	06 01 58.1	+0.6
JNS	**Sasagawa**	**0.49**	**32**	P	Pg	06 02 01.7	-0.2
JNS				S	Sg	06 02 08.6	+0.3
JFY	**Yanaizu**	**0.57**	**89**	S	Sg	06 02 11.1	+0.3
JKT	**Katashina**	**0.67**	**162**	⇓P	Pg	06 02 04.8	-0.3
JKT				S	Sg	06 02 13.7	-0.1
JSD	**Sado**	**0.86**	**318**	⇓P	Pg	06 02 07.3	-1.6
JSD				S	Sg	06 02 20.3	+0.3
MAT	**Matsushiro**	**1.06**	**216**	P	Pg	06 02 11.4	-1.3
MAT				S	Sg	06 02 25.4	-1.0

MAN 24 06:17:58, 5.°70N×125.°21E, h9km, mb4.7, ML3.6, MS3.6, 2C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.47**	**326**	⇓*i*P	Pg	06 18 07.6	+0.6
GSPH				*i* S	Sg	06 18 15.8	+2.6
KCP	**Kidapawan**	**1.31**	**355**	⇑*i*P	Pn	06 18 22.1	-0.4
KCP				*i* S	Sb	06 18 41.4	+1.7
DMPH	**Davao City--Mi**	**1.41**	**12**	⇑*e*P	Pn	06 18 23.8	0.0
DMPH				*e*S	Sn	06 18 43.2	+0.7
CTBH	**Cotabato--PC H**	**1.79**	**328**	⇓*e*P	Pn	06 18 28.6	-0.5
CTBH				*i* S	Sn	06 18 53.6	+1.6
BUKP	**Musuan**	**2.17**	**356**	*e*P	Pn	06 18 36.3	+2.0
BUKP				*e*S	Sn	06 18 42.1	-19
PAGZ	**Pagadian**	**2.80**	**320**	*e*P	Pn	06 18 43.6	+0.6
PAGZ				*e*S	Sn	06 18 55.6	-21

ISCJB ***24*** *05:05:09.7±1.7, 42.°3N±0.°2×72.°4E±0.°1, h10km, Error ellipse: s-maj=34.6km s-min=6.5km az=16.3*
NNC ***24*** *07:05:10.1±3.2, 42.°45N×72.°39E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=69.4km s-min=10.1km az=11.0*

ISC 24 07:05:09.3±1.9, 42.°2N±0.°3×72.°4E±0.°1, h10km, n12, σ1§31/12, 1C-2D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**1.01**	**96**	P	**Pg**	**07 05 27.0**	**-1.6**
	SNR=12						
EKS2	**Erkin-Say**	**1.14**	**68**	P	**Pb**	**07 05 28.9**	**-2.2**
	SNR=10						
KK31	**Karatay Array**	**1.61**	**303**	P	**Pn**	**07 05 38.2**	**+0.5**
	17nm,0.3s,baz=127,slow=17,SNR=353						
KK31				S	**Sn**	**07 05 58.9**	**+0.4**
	12nm,0.2s,baz=127,slow=30,SNR=15						
UCH	**Uchtor**	**1.61**	**90**	P	**Pn**	**07 05 37.7**	**-0.1**
	SNR=22						
AAK	**Ala-Archa**	**1.64**	**75**	P	**Pn**	**07 05 38.7**	**+0.6**
	SNR=5.2						
USP	**Ospenovka**	**1.89**	**56**	P	**Pn**	**07 05 41.9**	**+0.3**
	SNR=21						
CHMS	**Chumysh**	**1.93**	**66**	P		07 06 37.4	
	SNR=6.9						
KBK	**Karagaybulak**	**1.97**	**77**	P	**Pn**	**07 05 44.3**	**+1.6**
	SNR=11						
TKM2	**Tokmak 2**	**2.50**	**73**	⇓Pn	**Pn**	**07 05 51.7**	**+1.7**
	4.5nm,0.4s						
TKM2				⇑Lg		07 06 24.7	
	43nm,0.5s						
TKM2	**Tokmak 2**	**2.50**	**73**	P	**Pn**	**07 05 51.7**	**+1.8**
	SNR=12						
ULHL	**Ulahol**	**2.89**	**89**	P	**Pn**	**07 05 59.5**	**+4.1**
	SNR=6.1						
AB31	**Akbulak array**	**11.14**	**313**	⇓Pn	**Pn**	**07 07 46.5**	**-2.0**
	0.7nm,0.6s,baz=104,slow=16,SNR=7.1						

TEH ***24*** *07:06:09.0, 32.°81N×105.°60E, h10km*
BJI ***24*** *07:09:27.7, 32.°76N×105.°61E, h10km, mB5.7/27, mb5.7/35, ML5.7/21, Ms6.0/69, Ms7 5.6/49*
BGS ***24*** *07:09:27.3±1.4, 32.°31N×105.°56E, h10km, mb5.3, MS5.6*
IDC ***24*** *07:09:28.4±0.4, 32.°81N×105.°67E, h0km, mb5.4/30, mb1 5.5/32, mb1mx5.5/32, mbtmp5.3/32, ML4.6/2, MS5.2/20, Ms1 5.2/20, ms1mx5.1/29, Error ellipse: s-maj=13.8km s-min=10.9km az=35.0*
ISCJB ***24*** *07:09:28.6±0.1, 32.°77N±0.°01×105.°50E±0.°01, h10km, mb5.5/406, MS5.4/252, Error ellipse: s-maj=2.0km s-min=1.8km az=17.4*
SZGRF ***24*** *07:09:29.7, 32.°15N×105.°74E, h33km, mb5.9, MS5.6, Sichuan, China*
MOS ***24*** *07:09:29.8±0.9, 32.°80N×105.°60E, h21km, mb5.7/145, MS5.3/91, Error ellipse: s-maj=5.6km s-min=3.3km az=120.5*
NEIC ***24*** *07:09:30.1±0.1, 32.°75N×105.°54E, h10km, mb5.6/243, MS5.4/179, MW5.7, Error ellipse: s-maj=3.4km s-min=2.6km az=193.0*
NEIC One person killed, 17 injured and 1,200 houses destroyed in Sichuan. Felt [IV] at Chengdu and [II] at Xi'an. Also felt at Baoji, Beidao, Chongqing, Deyang, Hanzhong, Mianyang, Nanchong, Xianyang and Yanliang.
GCMT ***24*** *07:09:31.8±0.1, 32.°82N×105.°55E, h13km, MW5.6, Moment Tensor Solution. s76,c127; s31,c34; Moment tensor: Scale 10^17Nm; Mrr1.31±.04; Mθθ1.01±.04; Mφφ-2.31±.04; Mrθ0.18±.09; Mθφ2.20±.03; Mφr0.31±.09; Best double couple: M0=2.80000×10^17 NP1:φs=110.00000°, δ75.00000°, λ12.00000°. NP2:φs=17.00000°, δ79.00000°, λ165.00000°. Principal axes: T 2.2100, Plg19.0000°, Azm333.0000°; N 1.2200, Plg71.0000°, Azm161.0000°; P -3.4100, Plg2.0000°, Azm64.0000°; Data Used: II IU G CN IC. Surface waves: sta=100, comp=196, per= 50.*
DJA ***24*** *07:09:33, 32.°73N×105.°49E, h10km, Mw5.9/30*

ISC 24 07:09:29.3±0.6, 32.°81N±0.°01×105.°57E±0.°01, h3km±3km, h23km±3.7km: pP-P, n1451, σ0§96/1381, mb5.5/406, MS5.4/252, 136C-117D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.44**	**220**	Pn	**Pn**	**07 10 09.6**	**-0.3**
CD2				Pg	**Pb**	**07 10 13.9**	**+0.2**
CD2				Sg	**Sg**	**07 10 45.5**	**-2.0**
CD2				smax			
	comp=N,392μm,0.9s						
CD2				smax			
	comp=E,232μm,0.8s						
XAN	**Xi'an**	**3.06**	**65**	Pn	**Pn**	**07 10 19.6**	**+1.1**
XAN				Pg	**Pb**	**07 10 25.5**	**+1.1**
XAN				Sn	**Sn**	**07 10 58.4**	**+2.7**
XAN				Sg	**Sg**	**07 11 06.3**	**-1.4**
XAN				smax			
	comp=N,33μm,1.0s						
XAN				smax			
	comp=E,16μm,0.8s						
XAN				LR	LR		
	comp=N,42μm,7.2s						
XAN				LR	LR		
	comp=E,42μm,7.4s						
XAN				LR	LR		
	comp=E,45μm,9.6s						
LZH	**Lanzhou**	**3.57**	**337**	*e*Pn	**Pn**	**07 10 27.8**	**+2.3**
LZH				Pg	**Pb**	**07 10 34.3**	**+1.3**
LZH				Sn	**Sn**	**07 11 13.1**	**+5.0**
LZH				Sg	**Sg**	**07 11 20.0**	**-4.0**
LZH				LR	LR		
	comp=E,218μm,7.6s						
LZH				LR	LR		
	comp=Z,107μm,7.7s						
ENH	**Enshi**	**4.19**	**126**	*e*Pn	**Pn**	**07 10 34.8**	**+0.8**
ENH				*e*Sg	**Sg**	**07 11 42.4**	**-1.6**
GYA	**Guiyang**	**6.40**	**171**	⇑*i*Pn	**Pn**	**07 11 04.1**	**-0.3**
GYA				Sn	**Sn**	**07 12 16.8**	**-1.1**
GYA				Sg	**Sg**	**07 12 47.3**	**-7.4**
GYA				smax			
	comp=N,14μm,1.0s						
GYA				smax			
	comp=E,7μm,0.8s						
GYA				LR	LR		
	comp=N,55μm,4.3s						
GYA				LR	LR		
	comp=E,147μm,5.2s						
GYA				LR	LR		
	comp=Z,64μm,6.5s						
TIY	**Taiyuan**	**7.45**	**47**	*e*Pn	**Pn**	**07 11 18.4**	**-0.4**
TIY				Sg	**Sb**	**07 13 15.3**	**+6.9**
TIY				smax			
	comp=N,10μm,0.9s						
TIY				smax			
	comp=E,7μm,0.8s						
WHN	**Wuhan**	**7.82**	**104**	Pn	**Pn**	**07 11 23.0**	**-0.9**
WHN				Sn	**Sn**	**07 12 52.0**	**-0.9**
WHN				LR	LR		
	comp=N,199μm,5.6s						
WHN				LR	LR		
	comp=E,221μm,5.3s						
WHN				LR	LR		
	comp=Z,145μm,4.8s						
KMI	**Kunming**	**8.04**	**199**	P	**Pn**	**07 11 26.9**	**-0.1**
KMI				S	**Sn**	**07 12 58.8**	**+0.4**
KMI				smax			
	comp=N,2μm,1.7s						
KMI				smax			
	comp=E,2μm,2.0s						
KMI				LR	LR		
	comp=N,84μm,8.4s						
KMI				LR	LR		
	comp=E,142μm,10.7s						
GTA	**Gaotai**	**8.07**	**326**	⇑P	**Pn**	**07 11 27.3**	**0.0**
GTA				pP		07 11 30.4	
GTA				sP		07 11 32.3	
GTA				S	**Sn**	**07 13 00.1**	**+1.2**
GTA				pmax	pmax		
	comp=Z,980nm,0.8s						
GTA				pmax	pmax		
	comp=Z,1μm,5.1s						
GTA				LR	LR		
	comp=N,62μm,10.5s						
GTA				LR	LR		
	comp=E,30μm,9.9s						
GTA				LR	LR		
	comp=Z,59μm,11.1s						
BTO	**Baotou**	**8.57**	**23**	*e*P	**Pn**	**07 11 33.3**	**-0.8**
BTO				S	**Sn**	**07 13 07.5**	**-3.7**
BTO				LR	LR		
	comp=N,49μm,10.5s						
BTO				LR	LR		
	comp=E,36μm,11.6s						
HHC	**Hu-ho-hao-te**	**9.36**	**29**	*e*P	**Pn**	**07 11 43.3**	**-1.6**
HHC				S	**Sn**	**07 13 28.3**	**-2.3**
HHC				PcS	PcS	07 21 34.5	-3.2
HHC				ScS	ScS	07 25 05.9	-5.8
HHC				pmax	pmax		
	comp=Z,34nm,1.0s						
HHC				pmax	pmax		
	comp=Z,690nm,5.0s						
HHC				LR	LR		
	comp=N,24μm,8.0s						
HHC				LR	LR		
	comp=E,55μm,8.7s						
HHC				LR	LR		
	comp=Z,45μm,8.1s						
TIA	**Tai'an**	**10.12**	**67**	*e*P	**Pn**	**07 11 58.1**	**+2.6**
TIA				S	**Sn**	**07 13 59.3**	**+10**
TIA				LR	LR		
	comp=N,21μm,10.4s						
TIA				LR	LR		
	comp=E,52μm,11.8s						
BJI	**Beijing**	**11.18**	**47**	P	**Pn**	**07 12 09.8**	**-0.1**
BJI				pmax	pmax		
	comp=Z,120nm,0.6s						
BJI				pmax	pmax		
	comp=Z,930nm,8.0s						
BJI				LR	LR		
	comp=N,50μm,10.6s						
BJI				LR	LR		
	comp=E,53μm,15.4s						
BJI				LR	LR		
	comp=Z,19μm,18.2s						
NJ2	**Nanjing**	**11.26**	**90**	*e*P	**Pn**	**07 12 10.6**	**-0.4**
NJ2				pP		07 12 13.8	
NJ2				sP		07 12 16.8	
NJ2				PP		07 12 19.4	
NJ2				S	**Sn**	**07 14 09.5**	**-7.8**
NJ2				pmax	pmax		
	comp=Z,120nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,1μm,3.6s						
NJ2				LR	LR		
	comp=N,76μm,12.0s						
NJ2				LR	LR		
	comp=E,24μm,8.2s						
NJ2				LR	LR		
	comp=Z,16μm,8.9s						
GZH	**Guangzhou**	**11.87**	**143**	P	**Pn**	**07 12 12.6**	**-6.8**
GZH				S	**Sn**	**07 14 17.6**	**-15**
GZH				LR	LR		
	comp=N,64μm,6.0s						
GZH				LR	LR		
	comp=E,91μm,6.1s						
GZH				LR	LR		
	comp=Z,74μm,11.3s						
LSA	**Lhasa**	**12.72**	**260**	P	**Pn**	**07 12 30.9**	**-0.1**
LSA				LR	LR		
	comp=E,17μm,18.5s						
LSA				LR	LR		
	comp=Z,24μm,18.5s						
LSA	**Lhasa**	**12.72**	**260**	*e*P	**Pn**	**07 12 31.1**	**+0.1**
LSA				pmax	pmax		
	comp=Z,99nm,0.7s						
LSA	**Lhasa**	**12.72**	**260**	*e*Pn	**Pn**	**07 12 31.1**	**+0.1**
	comp=Z,99nm,0.7s						
HKC	**Hong Kong Obse**	**12.94**	**142**	P	**Pn**	**07 12 34.0**	**-0.1**
IMP	**Imphal**	**12.95**	**235**	*e*PKP	**Pn**	**07 12 31.0**	**-3.2**
SSE	**Sheshan**	**13.38**	**93**	P	**Pn**	**07 12 39.5**	**-0.5**
SSE				S	**Sn**	**07 15 08.3**	**-0.9**
SSE				pmax	pmax		
	comp=Z,60nm,0.7s						
SSE				pmax	pmax		
	comp=Z,530nm,7.6s						
SSE				LR	LR		
	comp=N,55μm,12.9s						
SSE				LR	LR		
	comp=E,17μm,12.9s						
SSE				LR	LR		
	comp=Z,21μm,11.4s						
QZH	**Quanzhou**	**13.83**	**121**	⇓*i*P	**Pn**	**07 12 44.3**	**-2.0**
QZH				S	**Sn**	**07 15 16.0**	**-4.4**
QZH				LR	LR		
	comp=N,185μm,12.6s						
QZH				LR	LR		
	comp=E,139μm,12.1s						
QZH				LR	LR		
	comp=Z,48μm,8.8s						
SHL	**Shillong**	**13.95**	**242**	⇓*i*P	**Pn**	**07 12 46.0**	**-1.9**
SHL				*i* x	x	07 16 58.0	
QIZ	**Qiongzhong**	**14.24**	**163**	P	**Pn**	**07 12 52.1**	**+0.2**
QIZ				S	**Sn**	**07 15 31.8**	**+1.3**
QIZ				pmax	pmax		
	comp=Z,110nm,1.0s						
QIZ				pmax	pmax		
	comp=Z,490nm,6.6s						
QIZ				LR	LR		
	comp=N,37μm,11.7s						
QIZ				LR	LR		
	comp=E,8μm,5.9s						
QIZ				LR	LR		
	comp=Z,51μm,11.2s						
QIZ	**Qiongzhong**	**14.24**	**163**	*e*Pn	**Pn**	**07 12 48.8**	**-3.1**
	comp=Z,89nm,0.8s						
QIZ				*e*Sn	**Sn**	**07 15 20.6**	**-10**
DL2	**Dalian**	**14.37**	**60**	⇓*i*P	**Pn**	**07 12 56.4**	**+2.9**
DL2				S	**Sn**	**07 15 42.8**	**+9.4**
DL2				pmax	pmax		
	comp=Z,130nm,0.9s						
DL2				pmax	pmax		
	comp=Z,2μm,5.3s						
DL2				LR	LR		
	comp=N,10μm,15.0s						
DL2				LR	LR		
	comp=E,15μm,14.8s						
DL2				LR	LR		
	comp=Z,20μm,15.5s						
SONM	**Songino Array**	**15.03**	**2**	Pn	**Pn**	**07 13 01.0**	**-1.4**
	comp=Z,2.0nm,0.3s,baz=184,slow=11,SNR=107						
SONM				Lg		07 17 25.4	
	comp=Z,1.7nm,0.3s,baz=180,slow=20,SNR=4.3						
SONM				LR	LR	07 19 13.4	
	comp=Z,12μm,18.2s,baz=181,slow=39						
ULN	**Ulaanbaatar**	**15.09**	**4**	*e*P	**Pn**	**07 13 02.0**	**-1.2**
ULN				pmax	pmax		
	comp=Z,195nm,0.9s						
ULN	**Ulaanbaatar**	**15.09**	**4**	*e*Pn	**Pn**	**07 13 02.0**	**-1.2**
	comp=Z,195nm,0.9s						
ULN	**Ulaanbaatar**	**15.09**	**4**	Pn	**Pn**	**07 13 01.8**	**-1.4**
	SNR=174						
CHG	**Chiang Mai**	**15.15**	**205**	⇓P	**Pn**	**07 13 02.6**	**-1.6**
	comp=Z,183nm,1.3s						
CHTO	**Chiang Mai**	**15.15**	**205**	*e*P	**Pn**	**07 13 04.1**	**-0.1**
CHTO				pmax	pmax		
	comp=Z,148nm,0.9s						
CHTO	**Chiang Mai**	**15.15**	**205**	*e*Pn	**Pn**	**07 13 04.0**	**-0.1**
	comp=Z,148nm,0.9s						
CHTO	**Chiang Mai**	**15.15**	**205**	P	**Pn**	**07 13 03.7**	**-0.5**
	comp=Z,212nm,1.2s						
CHTO	**Chiang Mai**	**15.15**	**205**	Pn	**Pn**	**07 13 03.6**	**-0.6**
	SNR=55						
AGT	**Agartala**	**15.41**	**238**	*i* x	**Pn**	**07 13 15.0**	**+7.4**
CM31	**Chiang Mai Arr**	**15.48**	**204**	*e*Pn	**Pn**	**07 13 08.5**	**0.0**
CMAR	**Chiang Mai Arr**	**15.48**	**204**	Pn	**Pn**	**07 13 07.5**	**-1.0**
	comp=Z,1.0nm,0.3s,baz=15,slow=11,SNR=97						
CMAR				Lg		07 17 40.4	
	comp=Z,0.7nm,0.3s,baz=344,slow=30,SNR=2.7						
CMAR				PcP	PcP	07 18 13.0	+1.0
	comp=Z,0.9nm,0.3s,baz=298,slow=1.2,SNR=9.9						
CMAR				LR	LR	07 19 50.6	
	comp=Z,5μm,21.8s,baz=196,slow=40						
CMAR				ScP	ScP	07 21 47.2	+0.2
	comp=Z,0.5nm,0.3s,baz=333,slow=1.6,SNR=11						
GTK	**Gangtok**	**15.65**	**254**	*e*PKP	**Pn**	**07 13 09.5**	**-1.2**
TATO	**Taipei**	**15.97**	**115**	*e*Pn	**Pn**	**07 13 14.9**	**+0.1**
	comp=Z,603nm,1.2s						
TATO	**Taipei**	**15.97**	**115**	Pn	**Pn**	**07 13 19.3**	**+4.4**
	SNR=16						
YHNB	**Yeheng**	**16.05**	**116**	*e*Pn	**Pn**	**07 13 16.4**	**+0.5**
	comp=Z,400nm,0.8s						
SSLB	**Suanglung**	**16.25**	**120**	*e*Pn	**Pn**	**07 13 18.5**	**+0.1**
	comp=Z,577nm,1.0s						
TPUB	**Ta-pu**	**16.31**	**122**	*e*Pn	**Pn**	**07 13 18.9**	**-0.3**
	comp=Z,229nm,0.9s						
TPUB				*e*Sn	**Sn**	**07 16 22.3**	**+1.6**
TAPN	**Taplejung**	**16.38**	**255**	*e*P	**Pn**	**07 13 17.9**	**-2.3**
	comp=Z,4μm,1.3s						
NACB	**Ninganchiao**	**16.49**	**117**	*e*Pn	**Pn**	**07 13 21.2**	**-0.4**
	comp=Z,358nm,1.0s						
YULB	**Yu-li**	**16.73**	**120**	*e*Pn	**Pn**	**07 13 26.3**	**+1.6**
	comp=Z,137nm,0.8s						
YULB				*e*Sn	**Sn**	**07 16 28.9**	**-2.2**
ODAN	**Odare**	**16.84**	**254**	*e*P	**Pn**	**07 13 23.4**	**-2.6**
	comp=Z,2μm,1.1s						
SNY	**Shenyang**	**16.90**	**53**	⇓P	**Pn**	**07 13 27.6**	**+0.9**
SNY				S	**Sn**	**07 16 33.8**	**-1.0**
SNY				LR	LR		
	comp=N,13μm,9.6s						

SNY LR LR
comp=E,20μm,13.5s
SNY LR LR
comp=Z,21μm,14.1s
TWG Pinlang 16.93 122 *e*Pn **Pn 07 13 28.1 +0.9**
comp=Z,705nm,1.5s
RAMN Ramite 17.44 255 *e*P **Pn 07 13 30.9 -2.7**
UBT Ubonrachathani 17.49 182 P **Pn 07 13 36.2 +2.0**
JIRN Jiri 17.50 258 *e*P **Pn 07 13 32.0 -2.4**
GUN Gumba 17.67 259 *e*P **Pn 07 13 34.5 -1.9**
comp=Z,2μm,1.0s
NST Nakhon Sawan 17.75 197 P **Pn 07 13 35.0 -2.5**
comp=Z,130nm,1.1s
WMQ Urumqi 17.78 313 P **Pn 07 13 37.6 -0.1**
WMQ pP pP 07 13 41.3 +1.8
WMQ sP sP 07 13 44.6 +4.7
WMQ PP 07 13 52.4
WMQ S **Sn 07 16 53.6 -2.6**
WMQ sS sS 07 16 59.3 -5.7
WMQ SS 07 17 16.1
WMQ PcP PcP 07 18 15.4 +0.2
WMQ pmax pmax
comp=Z,290nm,0.9s
WMQ pmax pmax
comp=Z,2μm,4.3s
WMQ LR LR
comp=N,44μm,14.2s
WMQ LR LR
comp=E,26μm,12.3s
WMQ LR LR
comp=Z,20μm,13.5s
INCN Inchon 17.84 69 *e*P **Pn 07 13 39.3 +0.8**
comp=Z,141nm,0.8s
INCN Inchon 17.84 69 Pn **Pn 07 13 39.8 +1.3**
SNR=8.3
PKI Pulchoki 18.18 259 *e*P **Pn 07 13 40.3 -2.4**
comp=Z,548nm,0.6s
PKI Pulchoki 18.18 259 *e*P **Pn 07 13 40.3 -2.4**
PKI pmax pmax
comp=Z,423nm,0.6s
PKIN Phulchoki 18.19 259 *e*P **Pn 07 13 40.3 -2.5**
comp=Z,423nm,0.6s
KKN Kakani 18.21 259 *e*P **Pn 07 13 40.7 -2.4**
comp=Z,690nm,0.7s
KKN Kakani 18.21 259 *e*P **Pn 07 13 40.7 -2.4**
KKN pmax pmax
comp=Z,690nm,0.7s
CAL Calcutta 18.35 240⇑ *i*P **Pn 07 13 43.3 -1.5**
CAL *ex* x 07 17 15.3
DMN Daman 18.42 259 *e*P **Pn 07 13 43.1 -2.5**
comp=Z,2μm,1.1s
GKN Gorkha 18.67 261 *e*P **Pn 07 13 45.7 -3.0**
KSRS Korea Array 18.85 70 P **Pn 07 13 51.4 +0.5**
comp=Z,7.8nm,0.3s,baz=254,slow=10,SNR=260
KSRS Lg 07 19 25.9
comp=Z,0.3nm,0.3s,baz=251,slow=26,SNR=4.1
KSRS LR LR 07 21 03.3
comp=Z,6μm,19.9s,baz=268,slow=37
TLY Talaya 18.92 356 Pn **Pn 07 13 52.1 +0.6**
comp=Z,472nm,1.5s,SNR=19
TLY Talaya 18.92 356*c* *i*P **Pn 07 13 51.6 +0.1**
TLY *e*S **Sn 07 17 19.2 -4.3**
TLY pmax pmax
comp=Z,130nm,1.7s
TLY MLR MLR
comp=Z,6μm,14.0s
TLY Talaya 18.92 356 *e*Pn **Pn 07 13 52.0 +0.6**
comp=Z,106nm,1.0s
TLY Talaya 18.92 356 P **Pn 07 13 52.2 +0.7**
SNR=75
CN2 Changchun 19.03 49⇑P **Pn 07 13 53.5 +0.6**
CN2 *e*sP sP 07 14 00.0 +6.4
CN2 *e*PP 07 14 10.0
CN2 *e*S **Sn 07 17 22.9 -3.5**
CN2 *e*SS 07 17 47.1
CN2 pmax pmax
comp=Z,30nm,0.9s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,18μm,11.0s
CN2 LR LR
comp=E,10μm,11.0s
CN2 LR LR
comp=Z,12μm,13.0s
MOY Mondy 19.14 351 *e*P **Pn 07 13 53.8 -0.4**
MOY *e* 07 17 27.6
MOY pmax pmax
comp=Z,524nm,2.8s
IRK Irkutsk 19.45 358‖ *i*P **Pn 07 13 59.5 +1.6**
IRK pmax pmax
comp=Z,794nm,1.8s
HIA Hailar 19.56 29 *e*P **Pn 07 13 58.8 -0.5**
HIA pmax pmax
comp=Z,149nm,0.9s
HIA Hailar 19.56 29 *e*P **Pn 07 13 58.8 -0.5**
comp=Z,149nm,0.9s
CIT Chita 20.07 14 *e*P **P 07 14 04.9 +1.4**
CIT *e* 07 14 28.0
CIT pmax pmax
comp=Z,373nm,2.4s
PTH Pithoragarh 21.91 268 *e*PKP **P 07 14 22.7 -1.0**
PTH *ex* x 07 18 24.5
ALBI Allahabad 22.04 256 *ex* **P 07 14 22.5 -2.5**
MDJ Mudanjiang 22.06 51 P **P 07 14 24.6 -0.5**
MDJ pP 07 14 27.5
MDJ sP sP 07 14 28.9 +2.4
MDJ PcP PcP 07 18 22.3 -0.6
MDJ S **S 07 18 27.9 -1.0**
MDJ ScP ScP 07 21 59.3 -1.8
MDJ PcS PcS 07 22 00.6 -0.7
MDJ ScS ScS 07 25 44.1 -1.6
MDJ pmax pmax
comp=Z,160nm,1.8s,mb5.2
MDJ pmax pmax
comp=Z,1μm,5.1s
MDJ LR LR
comp=N,12μm,10.0s,MS5.7
MDJ LR LR
comp=E,10μm,10.2s,MS5.7
MDJ LR LR
comp=Z,15μm,10.0s,MS5.7
MDJ Mudanjiang 22.06 51 *e*P **P 07 14 27.4 +2.2**
comp=Z,844nm,1.6s,mb5.9
MDJ LR LR
comp=Z,8μm,19.0s,MS5.1
JOSI Joshimath 22.23 271 *e*PKP **P 07 14 27.4 +0.4**
MK31 Makanchi Array 22.58 315 *i* P **P 07 14 30.1 -0.5**
MK31 pmax pmax
comp=Z,286nm,1.1s,mb5.6
MK31 Makanchi Array 22.58 315 *e*P **P 07 14 31.0 +0.4**
MKAR Makanchi Array 22.58 315 P **P 07 14 30.8 +0.2**
comp=Z,112nm,0.7s,mb5.4,baz=116,slow=12,SNR=264
MKAR LR LR 07 24 18.7
comp=Z,11μm,19.8s,MS5.3,baz=124,slow=39
MKAR Makanchi Array 22.58 315 P **P 07 14 30.8 +0.2**
MKAR pmax pmax
comp=Z,112nm,0.7s
MKAR MLR MLR
comp=Z,11μm,19.8s
VLA Vladivostok 23.09 56*de*P **P 07 14 36.2 +0.2**
VLA pmax pmax
comp=Z,309nm,2.5s,mb5.3
VLA Vladivostok 23.09 56 *e*P **P 07 14 36.3 +0.3**
DDI Dehra Dun 23.55 271 *e*S **S 07 18 56.5 +1.1**
SMLA Simla 24.12 274 *i* P **P 07 14 46.2 -0.1**
SMLA *i* S **S 07 19 04.5 -0.3**
AGRA Agra 24.52 264 *e*PKP **P 07 14 49.5 -0.4**
KKR Kurukshetra 24.67 271 *e*PKP **P 07 14 51.5 +0.2**
NDI New Delhi 24.68 268 *e*PKP **P 07 14 50.0 -1.3**
BHK Bhakra 24.70 275 *e*PKP **P 07 14 49.4 -2.1**
BHK *ex* x 07 15 22.4
AAA Alma-Ata 24.73 303 *i* P **P 07 14 54.4 +2.7**
AAA pmax pmax
comp=Z,3μm,2.5s,mb6.3
AAA MLR MLR
comp=Z,8μm,10.0s,MS5.5
KSH Kashi 24.74 294⇑ *i*P **P 07 14 55.6 +3.7**
KSH pP 07 14 58.4
KSH sP sP 07 15 02.8 +10
KSH PP 07 15 34.1
KSH S **S 07 19 18.6 +4.0**
KSH sS sS 07 19 24.3 +8.1
KSH SS 07 20 17.9
KSH ScP ScP 07 22 07.6 -0.8
KSH PcS PcS 07 22 09.3 +0.6
KSH ScS ScS 07 25 55.8 -0.5
KSH pmax pmax
comp=Z,190nm,0.9s,mb5.6
KSH pmax pmax
comp=Z,1μm,4.8s
KSH LR LR
comp=N,12μm,11.4s,MS5.8
KSH LR LR
comp=E,11μm,10.7s,MS5.8
KSH LR LR
comp=Z,16μm,16.8s
AYAN Aya Nagar 24.81 268 *e*PKP **P 07 14 50.2 -2.4**
AYAN AMb AMB 07 14 54.6
comp=Z,248nm,1.4s,mb5.5
SONA Sohna 24.91 267 *e*PKP **P 07 14 52.1 -1.4**
SONA AMb AMB 07 14 55.8
comp=Z,215nm,1.0s,mb5.6
ULHL Ulahol 24.99 301 P **P 07 14 57.0 +3.0**
SNR=9.6
VIS Vishakhapatnam 25.02 239 *e*PKP **P 07 14 53.3 -1.3**
VIS *i* P pP 07 14 54.7 -0.9
VIS *ex* x 07 15 22.1
comp=Z,148nm,1.8s
VIS *i* S **S 07 19 18.0 -1.4**
THN Thein Dam 25.11 277 *e*PKP **P 07 14 55.0 -0.3**
RTK Rohtak 25.25 269 *e*PKP **P 07 14 56.0 -0.6**
KLR Kul'dur 25.50 42‖ *i*P **P 07 14 55.3 -3.3**
KLR *e*S **S 07 19 23.0 -3.4**
KLR pmax pmax
comp=Z,550nm,2.0s,mb5.7
KLR smax
comp=N,12μm,11.0s
KLR smax
comp=E,13μm,11.0s
TKM2 Tokmak 2 25.61 302 P **P 07 15 01.4 +1.7**
SNR=123
TKM2 Tokmak 2 25.61 302 *e*P **P 07 15 00.5 +0.8**
TKM2 pmax pmax
comp=Z,94nm,0.7s,mb5.4
TKM2 MLR MLR
comp=Z,13μm,20.0s,MS5.5
TKM2 Tokmak 2 25.61 302 *e*P **P 07 15 00.5 +0.8**
comp=Z,94nm,0.7s,mb5.4
TKM2 LR LR
comp=Z,13μm,20.0s,MS5.5
KZA Kyzart 25.68 300 P **P 07 15 03.1 +2.8**
SNR=65
ZAA0 Zalesovo Array 25.78 331 *e*P **P 07 15 01.0 -0.2**
ZALV Zalesovo Beam 25.78 331 P **P 07 15 01.0 -0.2**
comp=Z,71nm,0.8s,mb5.3,baz=129,slow=8.5,SNR=81
ZALV LR LR 07 26 15.9
comp=Z,2μm,19.4s,MS4.7,baz=140,slow=39
ZALV Zalesovo Beam 25.78 331 P **P 07 15 01.0 -0.1**
ZALV pmax pmax
comp=Z,71nm,0.8s,mb5.2
ZALV MLR MLR
comp=Z,2μm,19.4s,MS4.7
KBK Karagaybulak 26.01 301 P **P 07 15 05.6 +2.2**
SNR=225
KHET Khetri 26.04 267 *e*PKP **P 07 15 03.8 0.0**
CHMS Chumysh 26.23 302 P Px 07 15 22.9
SNR=6.1
UCH Uchtor 26.24 300 P **P 07 15 07.5 +2.0**
SNR=248
UCH Uchtor 26.24 300 *e*P **P 07 15 07.4 +2.0**
comp=Z,50nm,0.9s,mb5.0
UCH LR LR
comp=Z,11μm,21.0s,MS5.4
NGP Nagpur 26.25 250 *ex* x 07 19 42.9
NGP *ex* x 07 19 52.9
comp=Z,71nm,1.4s
NGP *ex* x 07 23 36.8
FRU Bishkek 26.29 301 *e*P **P 07 15 06.0 +0.1**
FRU *i* 07 15 54.0
FRU *e*S **S 07 19 40.2 +1.1**
FRU pmax pmax
comp=Z,180nm,2.0s,mb5.2
FRU pmax pmax
comp=Z,500nm,2.4s,mb5.6
FRU MLR MLR
comp=E,15μm,10.5s
FRU MLR MLR
comp=Z,12μm,10.5s,MS5.7
AAK Ala-Archa 26.34 301 P **P 07 15 08.9 +2.6**
comp=Z,704nm,1.0s,mb6.2,SNR=20
AAK Ala-Archa 26.34 301 P **P 07 15 08.2 +1.9**
SNR=28
AAK Ala-Archa 26.34 301 P **P 07 15 06.8 +0.5**
comp=Z,61nm,0.9s,mb5.1,baz=109,slow=7.1,SNR=20
AAK LR LR 07 26 42.4
comp=Z,15μm,19.9s,MS5.5,baz=86,slow=39
AAK Ala-Archa 26.34 301 *e*P **P 07 15 08.1 +1.8**
AAK pmax pmax
comp=Z,175nm,1.2s,mb5.5
AAK MLR MLR
comp=Z,14μm,19.0s,MS5.5
AAK Ala-Archa 26.34 301 *e*P **P 07 15 08.1 +1.8**
comp=Z,175nm,1.2s,mb5.5
AAK LR LR
comp=Z,14μm,19.0s,MS5.5
AAK Ala-Archa 26.34 301 P **P 07 15 07.8 +1.5**
comp=Z,349nmcomp=Z,29nm,1.0s,mb4.8
AAK Ala-Archa 26.34 301 P **P 07 15 07.9 +1.6**
SNR=60
USP Ospenovka 26.47 302 P **P 07 15 08.4 +1.0**
SNR=105
BHPL Bhopal 26.54 256 *e*PKP **P 07 15 06.5 -1.8**
BHPL *ex* x 07 19 39.2
KURK Kurchatov 26.68 320 P **P 07 15 09.7 +0.4**
comp=Z,1μm,0.8s,mb6.4
KURK Kurchatov 26.68 320 *e*P **P 07 15 09.3 0.0**
KURK pmax pmax
comp=Z,496nm,1.6s,mb5.8
KURK Kurchatov 26.68 320 *e*P **P 07 15 09.3 0.0**
comp=Z,496nm,1.6s,mb5.8
KURK Kurchatov 26.68 320 P **P 07 15 09.7 +0.4**
SNR=108
AML Almayashu 26.83 300 P **P 07 15 13.2 +2.4**
SNR=22
AML Almayashu 26.83 300 *e*P **P 07 15 12.2 +1.5**
comp=Z,104nm,0.8s,mb5.4
AML LR LR
comp=Z,15μm,20.0s,MS5.5
EKS2 Erkin-Say 26.86 301 P **P 07 15 12.7 +1.6**
SNR=29
EKS2 Erkin-Say 26.86 301 *e*P **P 07 15 11.4 +0.3**
comp=Z,50nm,0.9s,mb5.0
EKS2 LR LR
comp=Z,15μm,19.0s,MS5.6
MAJO Matsushiro 27.03 73 *e*P **P 07 15 11.3 -1.3**
MAJO pmax pmax
comp=Z,81nm,1.0s,mb5.2
MAJO MLR MLR
comp=Z,4μm,21.0s,MS4.9
MAJO Matsushiro 27.03 73 *e*P **P 07 15 11.3 -1.3**
comp=Z,81nm,1.0s,mb5.2
MAJO LR LR
comp=Z,4μm,21.0s,MS4.9
MAT Matsushiro 27.03 73 P **P 07 15 11.2 -1.4**
MAT S **S 07 19 53.1 +2.2**
MJAR Matsushiro Arr 27.03 73 P **P 07 15 11.7 -0.9**
comp=Z,38nm,0.9s,mb4.9,baz=274,slow=9.5,SNR=50
MJAR ScP ScP 07 22 13.8 -1.3
comp=Z,3.7nm,1.0s,baz=265,slow=2.8,SNR=4.8
MJAR LR LR 07 26 33.0
comp=Z,4μm,18.2s,MS5.0,baz=265,slow=38
NVS Novosibirsk 27.07 331⇑ *i*P **P 07 15 12.0 -0.7**
NVS *e*S **S 07 19 47.6 -3.5**
NVS pmax pmax
comp=Z,154nm,1.4s,mb5.3
NVS pmax pmax
comp=N,151nm,1.8s
NVS smax
comp=E,440nm,3.0s
HABR Khabarovsk 27.09 46 *e*P **P 07 15 12.0 -1.0**
HABR *e**PP pP 07 15 20.1 +6.1
HABR *e* 07 15 53.8
HABR *e* 07 18 30.4
HABR *e*S **S 07 19 48.8 -2.7**
HABR *e**SS sS 07 20 03.1 +10
HABR *e*SS 07 20 55.8
HABR *e* 07 25 59.8
HABR pmax pmax
comp=N,26nm,1.1s
HABR pmax pmax
comp=Z,271nm,2.4s,mb5.3
HABR pmax pmax
comp=E,290nm,2.8s
HABR MLR MLR
comp=Z,9μm,20.0s,MS5.3
KTGM Kuala Trenggan 27.43 185 P **P 07 15 17.4 +1.1**
CLNS Chul'man 27.47 23 *e*P **P 07 15 16.1 -0.2**
CLNS *e**PP pP 07 15 25.3 +7.9
CLNS *e* 07 16 03.8
CLNS *e*PPP 07 16 12.6
CLNS *e* 07 18 29.2
CLNS *e*S **S 07 19 59.0 +1.6**
CLNS pmax pmax
comp=Z,41nm,1.0s,mb4.9
CLNS pmax pmax
comp=N,21nm,0.7s
CLNS pmax pmax
comp=E,15nm,0.9s
CLNS pmax pmax
comp=N,28nm,0.9s
CLNS pmax pmax
comp=E,14nm,0.8s
CLNS pmax pmax
comp=Z,36nm,0.9s,mb4.9
CLNS smax
comp=N,688nm,11.9s
CLNS smax
comp=E,1μm,17.3s
CLNS MLR MLR
comp=N,7μm,10.0s
CLNS MLR MLR
comp=Z,8μm,10.0s,MS5.6
CLNS MLR MLR
comp=E,3μm,7.0s
AJM Ajmer 27.54 265 *e*PKP **P 07 15 17.1 -0.2**
AJM AMb AMB 07 15 22.7
comp=Z,320nm,0.9s,mb5.9
AJM *ex* x 07 19 56.4
KULM Kulim 27.76 191 P **P 07 15 19.5 +0.2**
KULM Kulim 27.76 191 *e*P **P 07 15 18.8 -0.5**
comp=Z,60nm,0.9s,mb5.2
KULM LR LR
comp=Z,6μm,19.0s,MS5.2
KULM Kulim 27.76 191 P **P 07 15 19.1 -0.2**
comp=Z,48nm,1.2s,mb5.0
KULM Kulim 27.76 191 P **P 07 15 19.5 +0.2**
comp=Z,48nm,1.2s,mb5.0
AKL Akola 28.11 252⇑ *i*P **P 07 15 22.3 -0.1**
AKL *ex* x 07 15 25.2
comp=Z,187nm,1.5s
AKL *i* x x 07 20 10.5
KKM Kota Kinabalu 28.41 157 P **P 07 15 25.4 +0.2**
KKM Kota Kinabalu 28.41 157 *e*P **P 07 15 24.5 -0.6**
comp=Z,329nm,1.5s,mb5.7
KKM LR LR
comp=Z,4μm,19.0s,MS5.0
KKM Kota Kinabalu 28.41 157 P **P 07 15 25.7 +0.6**
comp=Z,1μmcomp=Z,121nm,1.5s,mb5.3
IPM Ipoh 28.50 190 P **P 07 15 25.0 -0.9**
IPM Ipoh 28.50 190 P **P 07 15 24.5 -1.4**
comp=Z,58nm,1.1s,mb5.1
IPM Ipoh 28.50 190 P **P 07 15 24.8 -1.1**
comp=Z,58nm,1.1s,mb5.1
TBP Tagbilaran 28.54 140 *e*P **P 07 15 26.5 +0.2**
JHJ Hachijo jima 2 28.84 80 LR LR 07 27 35.2
comp=Z,3μm,19.6s,MS4.9,baz=73,slow=38
HYB Hyderabad 28.75 244 *e*P **P 07 15 28.0 -0.1**
HYB *e*S **S 07 20 18.0 -0.2**
HYB pmax pmax
comp=Z,197nm,1.2s,mb5.7
HYB Hyderabad 28.75 244 *e*P **P 07 15 28.0 -0.1**
comp=Z,197nm,1.2s,mb5.7
HYB *e*S **S 07 20 18.0 -0.2**
HYB Hyderabad 28.75 244 *i* P **P 07 15 28.0 -0.1**
comp=Z,93nm,1.2s,mb5.4
HYB *e*S **S 07 20 18.0 -0.2**
KK31 Karatay Array 29.30 301 *i* P **P 07 15 33.2 +0.4**
KK31 pmax pmax
comp=Z,17nm,0.4s,mb5.1
KK31 Karatay Array 29.30 301 *i* P **P 07 15 33.3 +0.5**
FRIM Kepong 29.64 188 P **P 07 15 36.2 +0.2**
TSI Tuntungan 29.88 194 P **P 07 15 38.7 +0.6**
comp=Z,941nm,0.9s,mb6.5
TSI Tuntungan 29.88 194 P **P 07 15 39.2 +1.1**
comp=Z,941nm,0.9s,mb6.5
MYLDM Lahad Datu 30.02 154 P **P 07 15 41.3 +1.9**
MYLDM Lahad Datu 30.02 154 P **P 07 15 40.8 +1.4**
comp=Z,2μmcomp=Z,182nm,1.4s,mb5.6
KBL Kabul 30.34 283 *e*P **P 07 15 43.3 +1.2**
KBL pmax pmax
comp=Z,109nm,0.8s,mb5.6
KBL Kabul 30.34 283 *e*P **P 07 15 43.3 +1.2**
comp=Z,109nm,0.8s,mb5.6
TPTI 30.42 197 P **P 07 15 41.2 -1.8**
comp=Z,68nm,0.9s,mb5.4
TPTI 30.42 197 P **P 07 15 42.9 -0.1**
comp=Z,68nm,0.9s,mb5.4
TSM Tawau 30.61 155 P **P 07 15 44.5 -0.2**
KGM Kluang 30.70 184 P **P 07 15 45.1 -0.3**
SBUM Sibu 30.84 167 P **P 07 15 47.7 +1.1**
SBUM Sibu 30.84 167 P **P 07 15 47.1 +0.5**
comp=Z,1μmcomp=Z,101nm,1.1s,mb5.5
ASAJ Asahikawa 30.88 58 P **P 07 15 46.2 -0.5**
comp=Z,27nm,0.6s,mb5.2,baz=269,slow=12,SNR=26
ASAJ LR LR 07 28 44.6
comp=Z,5μm,18.1s,MS5.2,baz=358,slow=38
ASAJ Asahikawa 30.88 58 P **P 07 15 46.2 -0.5**
ASAJ pmax pmax
comp=Z,27nm,0.6s
ASAJ MLR MLR
comp=Z,5μm,18.1s
MYKOM Kota Tinggi 30.89 183 P **P 07 15 46.1 -1.0**
comp=Z,1μmcomp=Z,81nm,0.9s,mb5.6
MYKOM Kota Tinggi 30.89 183 P **P 07 15 47.5 +0.4**
comp=Z,1μmcomp=Z,82nm,0.9s,mb5.6
ERM Erimo 31.04 62 P **P 07 15 49.3 +1.1**
comp=Z,304nm,0.6s,mb6.3,SNR=14
ERM Erimo 31.04 62‖ *e*P **P 07 15 47.1 -1.1**
ERM pmax pmax
comp=Z,31nm,0.7s,mb5.2
ERM Erimo 31.04 62 *e*P **P 07 15 46.9 -1.2**
ERM LR LR
comp=Z,7μm,20.0s,MS5.3
KSM Kuching 31.48 171 *e*P **P 07 15 52.0 -0.3**
comp=Z,44nm,1.0s,mb5.2
KSM *e*ScP ScP 07 22 27.4 -2.1
KSM LR LR
comp=Z,5μm,20.0s,MS5.2
KSM Kuching 31.48 171 P **P 07 15 52.8 +0.5**
comp=Z,44nm,1.2s,mb5.2
YSS Yuzh-Sakhalins 31.52 52⇑ *e*P **P 07 15 52.0 -0.4**
YSS *e* 07 16 50.0
YSS *e* 07 17 07.0
YSS *e* 07 18 45.0
YSS *e*S **S 07 20 57.0 -4.3**
YSS 07 26 28.0
YSS pmax pmax
comp=Z,120nm,1.0s,mb5.7
YSS pmax pmax
comp=Z,500nm,4.0s
YSS MLR MLR
comp=Z,8μm,16.0s,MS5.5
YSS MLR MLR
comp=N,7μm,13.0s,MS5.8
YSS MLR MLR
comp=E,10μm,12.0s,MS5.8
YSS Yuzh-Sakhalins 31.52 52 *e*P **P 07 15 52.4 0.0**
comp=E,177nm,1.1s,mb5.8
YSS LR LR
comp=Z,3μm,20.0s,MS4.9
BHV Bhavnagar 31.56 258 *e*PKP **P 07 15 53.5 +0.5**
DAV Davao City (W) 31.64 140 PFAKE 07 16 10.0 +16
DAV LR LR
comp=Z,4μm,20.0s,MS5.1
DAV Davao City (W) 31.64 140⇑ *e*P **P 07 15 53.5 -0.2**
POO Poona 31.78 251 *e*PKP **P 07 15 53.8 -1.2**
POO AMb AMB 07 15 56.1
comp=Z,141nm,0.9s,mb5.8
VOSK Vostochnaya 31.82 319 P **P 07 15 53.8 -1.1**
VOSK pmax pmax
comp=Z,130nm,1.8s,mb5.5
KAD Karad 32.19 249 *e*PKP **P 07 15 57.7 -0.8**
KAD AMb AMB 07 16 00.5
comp=Z,153nm,1.6s,mb5.6
GSI Gunungsitoli 32.22 195 P **P 07 15 57.3 -1.5**
comp=Z,3μmcomp=Z,159nm,0.9s,mb5.8

GSI	Gunungsitoli	32.22 195	P	P	07 16 00.0	+1.2
	comp=Z,3μmcomp=Z,159nm,0.9s,mb5.8					
BVAR	Borovoye Array	32.27 319	P	P	07 15 59.6	+0.7
	comp=Z,37nm,0.6s,mb5.4,baz=113,slow=9.8,SNR=83					
BVAR			PcP	PcP	07 18 47.6	+0.6
	comp=Z,17nm,0.8s,baz=116,slow=3.4,SNR=4.4					
BVAR	Borovoye Array	32.27 319	P	P	07 15 59.6	+0.7
BVAR					07 18 47.6	
BVAR			pmax	pmax		
	comp=Z,37nm,0.6s					
MNSI	Mandailing Nat	32.33 191	P	P	07 15 59.8	0.0
	comp=Z,4μmcomp=Z,50nm,0.9s,mb5.3					
MNSI	Mandailing Nat	32.33 191	P	P	07 16 01.3	+1.5
	comp=Z,4μmcomp=Z,50nm,0.9s,mb5.3					
BRVK	Borovoye	32.34 319	P	P	07 16 00.6	+1.1
	comp=Z,625nm,0.5s,mb6.7,SNR=19					
BRVK	Borovoye	32.34 319	eP	P	07 15 59.7	+0.2
BRVK			pmax	pmax		
	comp=Z,62nm,0.6s,mb5.6					
BRVK			MLR	MLR		
	comp=Z,6μm,20.0s,MS5.3					
BRVK	Borovoye	32.34 319	eP	P	07 15 59.7	+0.1
	comp=Z,62nm,0.6s,mb5.6					
BRVK			LR	LR		
	comp=Z,6μm,20.0s,MS5.3					
BRVK	Borovoye	32.34 319	P	P	07 16 00.2	+0.6
	SNR=38					
BKNI	Bangkinang	32.59 188	P	P	07 16 03.0	+1.0
	comp=Z,4μmcomp=Z,235nm,1.4s,mb5.9					
BKNI	Bangkinang	32.59 188	P	P	07 16 04.3	+2.3
	comp=Z,4μmcomp=Z,235nm,1.4s,mb5.9					
QUE	Quetta	32.91 276	eP	P	07 16 06.0	+1.2
QUE			eS	S	07 21 13.0	-10
BHJ	Bhuj	32.96 262	ePKP	P	07 16 03.1	-2.2
ZRNK	Zerenda	33.01 319	i P	P	07 16 04.5	-0.8
ZRNK			pmax	pmax		
	comp=Z,63nm,0.5s,mb5.8					
STKI	Sintang	33.04 169	P	P	07 16 07.4	+1.5
	comp=Z,85nm,1.7s,mb5.4					
YAK	Yakutsk	33.08 21	eP	P	07 16 05.8	-0.1
YAK			e*PP	pP	07 16 14.1	+7.2
YAK			e		07 17 14.1	
YAK			ePPP		07 17 26.3	
YAK			e		07 18 50.6	
YAK			eS	S	07 21 22.2	-3.0
YAK			eSS	SS	07 23 24.3	-23
YAK			pmax	pmax		
	comp=Z,186nm,0.8s,mb6.1					
YAK			pmax	pmax		
	comp=E,48nm,1.1s					
YAK			pmax	pmax		
	comp=N,45nm,1.0s					
YAK			smax			
	comp=N,549nm,4.6s					
YAK			MLR	MLR		
	comp=E,3μm,9.0s					
YAK			MLR	MLR		
	comp=Z,7μm,13.0s,MS5.6					
YAK			MLR	MLR		
	comp=N,4μm,12.0s					
YAK	Yakutsk	33.08 21	eP	P	07 16 06.4	+0.5
	comp=N,284nm,0.9s,mb6.2					
YAK			LR	LR		
	comp=Z,8μm,21.0s,MS5.4					
YUK	Yuzh-Kuril'sk	33.20 58⇑	iP	P	07 16 05.1	-2.0
YUK			i		07 17 14.9	
YUK			i S	S	07 21 32.9	+5.4
YUK			i SS	SS	07 23 54.1	+3.9
YUK			pmax	pmax		
	comp=N,500nm,1.9s					
YUK			pmax	pmax		
	comp=E,260nm,1.9s					
YUK			pmax	pmax		
	comp=Z,500nm,1.9s,mb6.1					
YUK			pmax	pmax		
	comp=N,100nm,0.9s					
YUK			smax			
	comp=N,1μm,3.5s					
YUK			smax			
	comp=E,2μm,3.5s					
YUK			MLR	MLR		
	comp=N,4μm,20.0s,MS5.3					
YUK			MLR	MLR		
	comp=E,5μm,20.0s,MS5.3					
YUK			MLR	MLR		
	comp=Z,6μm,20.0s,MS5.3					
PPI	Padang Panjang	33.44 189	P	P	07 16 08.2	-1.3
PPI	Padang Panjang	33.44 189	P	P	07 16 12.1	+2.6
	comp=Z,34nm,0.9s,mb5.2					
SDSI	Sungai Dareh	33.78 187	P	P	07 16 13.0	+0.6
	comp=Z,3μmcomp=Z,102nm,0.8s,mb5.8					
PALK	Pallekele	34.32 228	eP	P	07 16 17.5	+0.3
PALK			pmax	pmax		
	comp=Z,179nm,1.5s,mb5.8					
PALK	Pallekele	34.32 228	eP	P	07 16 17.5	+0.3
	comp=Z,179nm,1.5s,mb5.8					
PALK	Pallekele	34.32 228	P	P	07 16 18.3	+1.1
	comp=Z,39nm,1.4s,mb5.1					
PPBI	Pangkal Pinang	34.78 179	P	P	07 16 22.1	+1.0
	comp=Z,81nm,1.1s,mb5.6					
TPI	Tanjungpandan	35.42 176	P	P	07 16 29.2	+2.6
	comp=Z,62nm,1.1s,mb5.4					
MRSI	Marisa	35.66 151	P	P	07 16 30.1	+1.4
	comp=Z,2μmcomp=Z,133nm,0.7s,mb6.0					
PBKI	Pangkalan Bun	35.78 170	P	P	07 16 33.3	+3.5
	comp=Z,405nm,1.0s,mb6.3					
PCI	Palu	36.13 155	P	P	07 16 34.1	+1.3
	comp=Z,2μmcomp=Z,135nm,1.1s,mb5.8					
KSI	Kapahiang	36.37 185	P	P	07 16 37.0	+2.3
	comp=Z,150nm,0.8s,mb6.0					
KMSI	Cibinong	36.45 148	P	P	07 16 38.7	+3.2
	comp=Z,702nm,1.1s,mb6.5					
MDSI	Maura Dua	37.11 182	P	P	07 16 41.0	0.0
	comp=Z,1μmcomp=Z,93nm,1.1s,mb5.5					
KBKI	Kotabaru	37.29 162	P	P	07 16 42.4	-0.2
	comp=Z,4μmcomp=Z,140nm,1.3s,mb5.6					
KLSI		37.30 181	P	P	07 16 43.2	+0.6
	comp=Z,3μmcomp=Z,145nm,1.2s,mb5.7					
IMYA	Miami	37.34 288	eP	P	07 16 43.3	+0.4
LUWI	Luwuk	37.38 151	P	Px	07 16 56.1	
KLI	Kotabumi	37.47 181	P	Px	07 16 56.4	
AB31	Akbulak array	37.51 310	i P	P	07 16 44.6	+0.4
AB31			pmax	pmax		
	comp=Z,102nm,0.9s,mb5.5					
ABKAR	Akbulak array	37.51 310	eP	P	07 16 44.4	+0.2
	comp=Z,70nm,0.8s,mb5.4					
LWLI	Liwa	37.64 182	P	P	07 16 48.6	+3.0
	comp=Z,242nm,0.7s,mb6.0					
ISRO	Mashad	37.85 288	ePn	P	07 16 48.6	+1.4
TNTI	Ternate	37.90 143	P	P	07 16 47.9	+0.1
	comp=Z,153nm,1.1s,mb5.7					
IMOG	Moghan	37.99 288	eP	P	07 16 48.2	-0.2
TTSI	Tana Toraja	38.12 157	P	P	07 16 49.6	-0.1
	comp=Z,1μmcomp=Z,110nm,0.9s,mb5.6					
KASI	Kota Agung	38.13 182	P	Px	07 17 01.2	
IDAH	Dahanechah	38.19 283	eP	P	07 16 51.7	+1.6
IEMG	Emamgholi	38.35 290	eP	P	07 16 49.2	-2.2
IKRD	Kardeh	38.54 289	eP	P	07 16 47.6	-5.5
ABKT	Ailbek	38.70 291	P	P	07 16 56.6	+2.2
	comp=Z,633nm,1.0s,mb6.3,SNR=23					
SVE	Sverdlovsk	38.90 322‖	eP	P	07 16 56.2	+0.4
SVE			e		07 18 25.7	
SVE			eS	S	07 22 52.7	-1.8
SVE			e		07 27 01.1	
SVE			pmax	pmax		
	comp=Z,170nm,1.1s,mb5.7					
SVE			MLR	MLR		
	comp=Z,3μm,12.0s,MS5.4					
AKTK	Aktyubinsk	38.92 311	P	P	07 16 56.3	+0.3
AKTO	Aktyubinsk	38.92 311	P	P	07 16 56.3	+0.3
	comp=Z,21nm,0.8s,mb4.9,baz=94,slow=7.9,SNR=48					
AKTO	Aktyubinsk	38.92 311	P	P	07 16 56.3	+0.3
AKTO			pmax	pmax		
	comp=Z,21nm,0.8s,mb4.9					
SPSI	Sidrap Palu	38.97 157	P	P	07 16 56.3	-0.5
	comp=Z,2μmcomp=Z,112nm,1.7s,mb5.3					
LBMI	Labuha	39.18 144	P	P	07 17 05.0	+6.5
	comp=Z,3μmcomp=Z,277nm,0.9s,mb6.0					
LEM	Lembang	39.46 177	P	P	07 17 04.2	+3.4
	comp=Z,182nm,0.8s,mb5.8					
BNSI	Bone	39.49 157	P	P	07 17 00.8	-0.3
	comp=Z,1μmcomp=Z,77nm,1.3s,mb5.3					
ARU	Arti	39.88 321	P	P	07 17 04.5	+0.5
	comp=Z,1μm,1.0s,mb6.5,SNR=13					
ARU	Arti	39.88 321	c iP	P	07 17 04.5	+0.5
ARU			e		07 18 36.5	
ARU			PPP		07 19 00.9	
ARU			e		07 19 08.8	
ARU			S	S	07 23 09.5	+0.4
ARU			SSS		07 26 29.5	
ARU					07 27 07.7	
ARU			pmax	pmax		
	comp=Z,251nm,1.2s,mb5.8					
ARU	Arti	39.88 321	eP	P	07 17 04.2	+0.2
	comp=Z,154nm,0.8s,mb5.8					
ARU			LR	LR		
	comp=Z,3μm,19.0s,MS5.2					
SMRI	Semarang	39.90 172	P	P	07 17 08.0	+3.5
	comp=Z,192nm,1.9s,mb5.5					
BKSI	Bulukumba	40.36 157	P	P	07 17 07.8	-0.5
	comp=Z,1μmcomp=Z,82nm,1.0s,mb5.4					
KMMI	Kalianget	40.43 167	P	P	07 17 13.4	+4.5
	comp=Z,139nm,1.2s,mb5.5					
GUMO	Guam	40.58 109	PFAKE		07 17 20.0	+10
GUMO			LR	LR		
	comp=Z,2μm,20.0s,MS5.0					
SJI	Sawahan	40.74 171	P	P	07 17 12.6	+1.1
	comp=Z,4μmcomp=Z,293nm,1.0s,mb5.8					
UGM	Wanagama	40.76 172	P	P	07 17 17.9	+6.2
	comp=Z,286nm,1.1s,mb5.8					
SKR	Severo-Kuril's	40.85 49	eP	P	07 17 10.0	-2.1
SKR			e		07 18 48.0	
SKR			ePPP		07 19 11.0	
SKR			eS	S	07 23 12.0	-12
SKR			pmax	pmax		
	comp=Z,110nm,1.0s,mb5.4					
SKR			pmax	pmax		
	comp=Z,800nm,3.0s					
SKR			smax			
	comp=E,1μm,14.0s					
SKR			MLR	MLR		
	comp=Z,9μm,18.0s,MS5.7					
SKR			MLR	MLR		
	comp=N,5μm,16.0s,MS5.6					
SKR			MLR	MLR		
	comp=E,4μm,16.0s,MS5.6					
TIXI	Tiksi	40.85 11	eP	P	07 17 11.0	-0.8
TIXI			e		07 18 45.4	
TIXI			eS	S	07 23 20.4	-2.9
TIXI			eSS	SS	07 26 22.0	-2.0
TIXI			pmax	pmax		
	comp=Z,133nm,1.1s,mb5.5					
TIXI			MLR	MLR		
	comp=Z,4μm,15.0s,MS5.4					
TIXI	Tiksi	40.85 11	eP	P	07 17 11.0	-0.8
	comp=Z,76nm,0.7s,mb5.4					
TIXI			LR	LR		
	comp=Z,8μm,20.0s,MS5.6					
PWJI	Pagerwojo	41.03 171	P	P	07 17 14.4	+0.5
	comp=Z,148nm,0.9s,mb5.6					
NLAI	Namlea	41.24 146	P	P	07 17 16.8	+1.1
	comp=Z,1μmcomp=Z,142nm,0.7s,mb5.7					
SOKR	Solikamsk	41.70 325	c iP	P	07 17 19.3	+0.4
SOKR					07 18 56.9	
SOKR			S	S	07 23 34.2	-2.0
SOKR			pmax	pmax		
	comp=Z,150nm,0.9s,mb5.6					
SOKR			MLR	MLR		
	comp=Z,3μm,15.0s,MS5.3					
SEY	Seymchan	42.00 30	c iP	P	07 17 21.5	+0.1
IBAF	Bafgh	42.01 282	eP	P	07 17 22.9	+1.1
KHKI	Kahang-Kahang	42.04 165	P	P	07 17 22.8	+0.6
	comp=Z,4μmcomp=Z,261nm,1.1s,mb5.8					
PEA0B	Petropavlovsk-	42.11 45	eP	P	07 17 22.2	-0.2
PETK	Petropavlovsk-	42.11 45	P	P	07 17 22.3	-0.1
	comp=Z,59nm,0.8s,mb5.3,baz=219,slow=3.9,SNR=120					
PETK			LR	LR	07 36 34.4	
	comp=Z,6μm,19.8s,MS5.5,baz=258,slow=39					
PETK	Petropavlovsk-	42.11 45	P	P	07 17 22.3	-0.1
PETK			pmax	pmax		
	comp=Z,59nm,0.8s,mb5.3					
PETK			MLR	MLR		
	comp=Z,6μm,19.8s,MS5.5					
PETK	Petropavlovsk-	42.11 45	P	P	07 17 22.3	-0.1
PETK			LR	LR	07 36 34.4	
WBK	Wadi Bani Khal	42.20 268	P	P	07 17 24.8	+1.3
	SNR=5.7					
IANJ	Anjilo	42.44 288	eP	P	07 17 26.2	+0.9
PET	Petropavlovsk	42.67 45	eP	P	07 17 27.1	+0.1
PET			e		07 19 08.4	
PET			eS	S	07 23 48.9	-1.8
PET			eSS	SS	07 26 46.9	-14
PET			pmax	pmax		
	comp=Z,200nm,5.3s					
PET			pmax	pmax		
	comp=Z,400nm,6.0s					
PET			pmax	pmax		
	comp=Z,132nm,1.0s,mb5.6					
PET			pmax	pmax		
	comp=Z,700nm,3.9s					
PET			pmax	pmax		
	comp=Z,400nm,6.2s					
PET			MLR	MLR		
	comp=Z,8μm,19.0s,MS5.6					
PET			MLR	MLR		
	comp=Z,7μm,18.0s					
PET	Petropavlovsk	42.67 45	eP	P	07 17 26.6	-0.4
	comp=Z,107nm,0.9s,mb5.6					
PET			LR	LR		
	comp=Z,7μm,20.0s,MS5.6					
SMDO	Samad	42.79 269	P	P	07 17 29.5	+1.2
	SNR=8.4					
IMEH	Mehriz	42.85 282	eP	P	07 17 28.4	-0.3
HOQ	Hoqain	43.20 270	P	P	07 17 33.0	+1.3
	SNR=9.4					
BSY	Bisya	43.63 269	P	P	07 17 36.6	+1.5
	SNR=15					
ASHO	Ashiyiah	43.83 273	P	P	07 17 38.8	+2.1
	SNR=11					
IDMV	Damavand	43.92 289	eP	P	07 17 39.4	+2.1
ARQ	Araqi	43.96 271	P	P	07 17 39.2	+1.4
	SNR=15					
MMRI	Maumere	44.17 156	P	P	07 17 38.5	-0.9
	comp=Z,5μmcomp=Z,330nm,1.2s,mb5.9					
IZEF	Zefreh	44.31 285	eP	P	07 17 41.8	+1.3
BAKI	Biak	44.44 133	P	P	07 17 41.7	+0.1
	comp=Z,3μmcomp=Z,315nm,1.1s,mb6.0					
ASUD	Al Ashush, Dub	44.47 273	P	P	07 17 44.3	+2.5
	SNR=9.1					
IGAR	Gharneh	44.68 285	eP	P	07 17 43.9	+0.5
IKLH	Kolahrood	44.81 286	eP	P	07 17 47.4	+2.9
COCO	West Island	45.51 192	PFAKE		07 18 00.0	+10
COCO			LR	LR		
	comp=Z,3μm,20.0s,MS5.2					
IPIR	Pirpir	45.54 285	eP	P	07 17 51.5	+1.3
MAK	Makhachkala	46.12 300	eP	P	07 17 51.6	-3.1
MAK			e		07 19 44.1	
MAK			eS	S	07 24 34.8	-6.3
MAK			e		07 27 47.0	
MAK			eSS	SS	07 28 02.2	-3.7
MAK			eSSS		07 28 58.6	
MAK			pmax	pmax		
	comp=Z,127nm,1.0s,mb5.8					
MAK			MLR	MLR		
	comp=Z,4μm,12.0s,MS5.6					
TLE	Tual	46.13 141	P	P	07 17 57.7	+2.7
	comp=Z,202nm,1.2s,mb5.9					
SMPI	Sarmi	46.67 131	P	P	07 17 59.9	+0.5
	comp=Z,2μmcomp=Z,195nm,1.2s,mb5.9					
IVIS	Veis	48.30 289	eP	P	07 18 12.3	+0.5
MTA	Mtatsminda	48.30 299	P	P	07 18 11.7	0.0
TBLG	Delisi	48.33 299	P	P	07 18 13.7	+1.7
TBLG	Delisi	48.33 299	P	P	07 18 13.7	+1.8
GNI	Garni	48.62 297	P	P	07 18 15.0	+0.8
	comp=Z,14nm,0.5s,mb5.2,baz=330,slow=1.6,SNR=12					
GNI	Garni	48.62 297	P	P	07 18 15.0	+0.8
GNI			LR	LR		
	comp=Z,3μm,20.0s,MS5.2					
GOR	Gori	48.75 299	P	P	07 18 19.0	+3.8
ZEI	Tsey	48.77 300	eP	P	07 18 15.8	+0.5
ZEI			pmax	pmax		
	comp=Z,44nm,1.0s,mb5.4					
ZEI			MLR	MLR		
	comp=Z,4μm,16.0s,MS5.5					
KEH	Kehvi	48.82 300	P	P	07 18 15.3	-0.5
BILL	Bilibino	49.11 26	c iP	P	07 18 17.4	-0.2
BILL			i		07 19 40.1	
BILL			eS	S	07 25 11.7	-11
BILL			pmax	pmax		
	comp=Z,103nm,1.2s,mb5.7					
BILL			MLR	MLR		
	comp=Z,11μm,18.0s,MS5.9					
BILL	Bilibino	49.11 26	eP	P	07 18 17.6	0.0
	comp=Z,65nm,0.8s,mb5.7					
BILL			LR	LR		
	comp=Z,7μm,21.0s,MS5.6					
ONI	Oni	49.12 300	P	P	07 18 18.9	+0.8
KBD	Kabd	49.22 282	eP	P	07 18 18.6	-0.3
KBD			AMb	AMB	07 18 21.4	
	comp=Z,140nm,1.5s,mb5.8					
VRHR	Novokhopersk	49.32 312	eP	P	07 18 18.8	-0.6
VRHR			pmax	pmax		
	comp=E,230nm,1.1s					
VRHR			pmax	pmax		
	comp=Z,230nm,1.1s,mb6.1					
VRHR			pmax	pmax		
	comp=N,10.0nm,0.5s					
RDF	Al-Radifah	49.42 282	eP	P	07 18 19.8	-0.8
RDF			AMb	AMB	07 18 23.8	
	comp=Z,368nm,1.0s,mb6.3					
KIV	Kislovodsk	49.44 302	P	P	07 18 21.6	+1.1
	comp=Z,614nm,0.9s,mb6.6,SNR=11					
KIV	Kislovodsk	49.44 302	eP	P	07 18 21.1	+0.6
KIV			eS	S	07 25 26.7	-1.6
KIV			eSS	SS	07 28 59.8	+0.1
KIV			pmax	pmax		
	comp=Z,202nm,4.5s					
KIV			pmax	pmax		
	comp=Z,105nm,1.0s,mb5.8					
KIV			MLR	MLR		
	comp=Z,3μm,16.0s,MS5.3					
KIV	Kislovodsk	49.44 302	eP	P	07 18 21.4	+1.0
	comp=Z,99nm,0.9s,mb5.8					
KIV			LR	LR		
	comp=Z,2μm,19.0s,MS5.1					
KIV	Kislovodsk	49.44 302	P	P	07 18 21.2	+0.7
	SNR=29					
DYDN	Diyadin	49.54 296	i P	P	07 18 23.8	+2.5
NAY	Al-Naaiem	49.56 282	eP	P	07 18 20.9	-0.7
NAY			AMb	AMB	07 18 25.1	
	comp=Z,336nm,0.8s,mb6.4					
HAKT	HAKKARI	49.99 294	i P	P	07 18 23.9	-0.8
TUTA	Tutak	50.23 296	i P	P	07 18 26.9	+0.3
ARTV	Artvin	50.51 299	i P	P	07 18 28.8	+0.2
DAGI	Agillar	50.54 299	i P	P	07 18 30.1	+1.2
BHD	Baghdad	50.62 288	ex	x	07 18 25.0	
BHD			ex	x	07 25 38.0	
BHD			ex	x	07 28 14.0	
DBOC	Borcka	50.67 299	i P	P	07 18 30.5	+0.7
DDEM	Demirkent	50.70 298	i P	P	07 18 30.7	+0.6
DBAD	Bademkaya	50.72 299	i P	P	07 18 31.2	+1.0
VOR	Voronezh	50.79 313	eP	P	07 18 30.0	-0.5
VOR			pmax	pmax		
	comp=Z,400nm,1.0s,mb6.3					
VORD	Divnogorie	50.80 312	eP	P	07 18 30.6	-0.1
VORD			pmax	pmax		
	comp=N,70nm,0.9s					
VORD			pmax	pmax		
	comp=E,90nm,0.9s					
VORD			pmax	pmax		
	comp=Z,50nm,0.9s,mb5.4					
VSR	Storozhevoye	50.86 312	eP	P	07 18 30.6	-0.5
VSR			pmax	pmax		
	comp=N,40nm,0.9s					
VSR			pmax	pmax		
	comp=E,190nm,0.9s					
VSR			pmax	pmax		
	comp=Z,180nm,0.9s,mb6.0					
VSR			MLR	MLR		
	comp=N,1μm,19.0s,MS5.3					
VSR			MLR	MLR		
	comp=E,3μm,19.0s,MS5.3					
VSR			MLR	MLR		
	comp=Z,4μm,19.0s,MS5.5					
ERZM	Erzurum	51.21 297	i P	P	07 18 36.5	+2.6
MOS	Moscow	51.42 318	eP	P	07 18 34.9	-0.4
MOS			e		07 19 50.3	
MOS			e		07 20 31.9	
MOS			eS	S	07 25 52.8	-2.7
MOS			pmax	pmax		
	comp=Z,100nm,1.0s,mb5.7					
MOS			pmax	pmax		
	comp=Z,182nm,0.8s,mb6.1					
MOS			MLR	MLR		
	comp=Z,2μm,13.0s,MS5.3					
BNGL	BINGOL	51.60 296	i P	P	07 18 38.4	+1.5
SOC	Sochi	51.62 302	c iP	P	07 18 36.4	-0.6
SOC			e*PP	pP	07 18 44.1	+6.1
SOC			e		07 19 48.9	
SOC			e		07 20 35.4	
SOC			eS	S	07 25 58.5	-0.1
SOC			e*SS	sS	07 26 11.1	+11
SOC			e		07 28 19.4	
SOC			pmax	pmax		
	comp=Z,34nm,0.8s,mb5.3					
SOC			MLR	MLR		
	comp=Z,5μm,20.0s,MS5.5					
BEST	Besiri	51.77 295	i P	P	07 18 39.2	+1.0
SMY	Shemya	52.02 46	eP	P	07 18 38.7	-1.0
SMY			pmax	pmax		
	comp=Z,517nm,0.9s,mb6.5					
SMY	Shemya	52.02 46	eP	P	07 18 38.7	-1.0
	comp=Z,517nm,0.9s,mb6.5					
KAKA	Kakadu	52.04 146	eP	P	07 18 38.6	-1.7
	comp=Z,47nm,0.7s,mb5.5					
KAKA	Kakadu	52.04 146	eP	P	07 18 38.7	-1.6
	comp=Z,135nm,0.8s,mb5.9					
OBN	Obninsk	52.07 317	P	P	07 18 40.0	-0.1
	comp=Z,569nm,0.6s,mb6.7,SNR=5.2					
OBN	Obninsk	52.07 317	c iP	P	07 18 39.3	-0.8
OBN			i S	S	07 26 02.1	-2.3
OBN			i SS	SS	07 29 42.4	+1.4
OBN			pmax	pmax		
	comp=Z,92nm,1.0s,mb5.7					
OBN			MLR	MLR		
	comp=Z,4μm,16.0s,MS5.5					
OBN	Obninsk	52.07 317	eP	P	07 18 39.9	-0.2
	comp=Z,88nm,0.8s,mb5.7					
OBN			LR	LR		
	comp=Z,2μm,19.0s,MS5.2					
KTUT	Trabzon	52.15 299	eP	P	07 18 42.1	+1.2
MARD	Mardin	52.30 294	i P	P	07 18 43.1	+1.0
GUMT	Gumushane	52.48 298	eP	P	07 18 44.6	+1.2
DIYA	Diyarbakir	52.64 295	i P	P	07 18 45.0	+0.4
KELT	Kelkit	52.72 298	i P	P	07 18 45.3	+0.1
LVZ	Lovozero	52.89 333⇑	iP	P	07 18 47.7	+1.7
LVZ			pmax	pmax		
	comp=Z,74nm,1.0s,mb5.6					
LVZ	Lovozero	52.89 333⇑	iP	P	07 18 47.8	+1.8
LVZ			LR	LR		
	comp=Z,5μm,20.0s,MS5.5					
PTK	Pertek	52.94 297	eP	P	07 18 47.9	+1.1
ANN	Anapa	52.99 304	c iP	P	07 18 46.2	-0.9
ANN			eS	S	07 26 14.7	-2.6
ANN			pmax	pmax		
	comp=Z,200nm,1.0s,mb6.0					
ANN			MLR	MLR		
	comp=N,3μm,17.0s,MS5.4					
ANN			MLR	MLR		
	comp=E,2μm,17.0s,MS5.4					
ANN			MLR	MLR		
	comp=Z,3μm,17.0s,MS5.4					
KNA	Kununurra	53.13 152	P	P	07 18 47.4	-1.0
SVRC	Sivrice-ELAZID	53.14 296	eP	P	07 18 49.1	+0.8
GRSN	GIRESUNGRSN	53.26 299	i P	P	07 18 49.1	-0.1
APA	Apatity	53.35 333⇑	iP	P	07 18 49.0	-0.4
APA			i		07 20 00.0	
APA			eS	S	07 26 21.0	-0.6
APA			pmax	pmax		
	comp=Z,57nm,1.0s,mb5.5					
APA			MLR	MLR		
	comp=Z,5μm,17.0s,MS5.6					
ELZG	Elazig	53.35 296	i P	P	07 18 51.8	+2.0
SUSE	Susehri	53.49 298	i P	P	07 18 52.1	+1.3
KEMA	Kemaliye	53.52 297	i P	P	07 18 51.3	+0.2
MYA	Malataya	53.82 296	eP	P	07 18 55.2	+1.9
FITZ	Fitzroy Crossi	54.14 156⇑	iP	P	07 18 54.6	-1.1
	comp=Z,49nm,0.9s,mb5.4					
FITZ	Fitzroy Crossi	54.14 156	eP	P	07 18 54.6	-1.1
	comp=Z,21nm,0.7s,mb5.2					
FITZ			ePcP	PcP	07 19 57.9	-2.5
AKCD	Akcadag	54.21 296	i P	P	07 18 56.6	+0.4
JOF	Joensuu	54.27 327	eP	P	07 18 55.7	-0.5
JOF			pmax	pmax		
	comp=Z,268nm,0.8s,mb6.2					
JOF	Joensuu	54.27 327	ep	P	07 18 55.7	-0.5

comp=Z,268nm,0.8s,mb6.2
SCER sogukcermik 54.38 298 *i* P **P 07 18 58.2 +0.8**
SVSK Karacayir 54.46 298 *eP* **P 07 18 58.6 +0.6**
GZT Gaziantep 54.75 295 *i* P **P 07 19 00.3 +0.2**
KVT Kavak 54.85 300 *eP* **P 07 19 00.5 -0.3**
PUL Pulkovo 55.00 323⇑ *eP* **P 07 19 02.7 +1.2**
SARI SarD1z-Kayseri 55.02 297 *eP* **P 07 19 04.5 +2.4**
KMRS Kahramanmaras 55.21 296 *eP* **P 07 19 02.7 -0.8**
PINB Pinarbasi 55.25 297 *i* P **P 07 19 04.5 +0.8**
SIM Simferopol' 55.26 305 *eP* **P 07 19 03.0 -0.6**
SIM *eS* **S 07 26 47.4 -0.5**
SIM MLR MLR
comp=Z,3μm,17.0s,MS5.4
MBWA Marble Bar 55.34 164 *eP* **P 07 19 03.6 -0.8**
comp=Z,111nm,1.3s,mb5.7
MBWA LR LR
comp=Z,1μm,19.0s,MS4.9
AMKA Amchitka 55.39 47 *eP* **P 07 19 04.3 -0.2**
comp=Z,117nm,0.8s,mb6.0
ANDN Andirin 55.61 296 *i* P **P 07 19 06.8 +0.5**
KEV Kevo 55.69 336 *eP* **P 07 19 05.4 -1.0**
KEV pmax pmax
comp=Z,69nm,0.8s,mb5.7
KEV Kevo 55.69 336 *eP* **P 07 19 05.4 -1.0**
comp=Z,69nm,0.8s,mb5.7
KEV Kevo 55.69 336 *ep* **P 07 19 05.4 -1.0**
comp=Z,69nm,0.8s,mb5.7
YOZ Yozgat 55.78 298 *eP* **P 07 19 07.6 +0.1**
WAKE Wake Island 55.83 88 PFAKE 07 19 20.0 +12
WAKE LR LR
comp=Z,1μm,21.0s,MS5.0
CTKT Corum 55.89 300 *i* P **P 07 19 08.5 +0.3**
KOZT Kozan 56.03 296 *eP* **P 07 19 10.0 +0.6**
ARCES ARCESS Array B 56.23 335 P **P 07 19 10.1 -0.2**
comp=Z,30nm,0.8s,mb5.4,baz=70,slow=7.1,SNR=31
ARCES PcP PcP 07 20 07.9 +0.1
comp=Z,27nm,0.8s,baz=55,slow=4.6,SNR=5.2
ARCES LR LR 07 46 24.7
comp=Z,1μm,20.3s,MS5.0,baz=56,slow=39
ARCES ARCESS Array B 56.23 335 P **P 07 19 10.1 -0.1**
ARCES 07 20 07.9
ARCES pmax pmax
comp=Z,30nm,0.8s
ARCES MLR MLR
comp=Z,1μm,20.3s
ARE0 ARCESS Array S 56.23 335 *eP* **P 07 19 10.1 -0.2**
ARE0 *e*PcP PcP 07 20 09.8 +2.0
CEYT Ceyhan 56.24 295 *eP* **P 07 19 11.4 +0.6**
YAYL Yayladag 56.27 294 *i* P **P 07 19 10.5 -0.5**
TOS Tosya 56.33 300 *eP* **P 07 19 11.5 +0.1**
AVNT Avonos 56.37 298 *i* P **P 07 19 12.3 +0.6**
YURE YUREGIR 56.38 295 *i* P **P 07 19 12.7 +0.8**
CDAG Cicekdag 56.48 299 *i* P **P 07 19 12.9 +0.4**
BALT Daday 56.66 301 *i* P **P 07 19 14.3 +0.6**
KAF Kangasniemi 56.66 326 *eP* **P 07 19 12.3 -1.1**
KAF pmax pmax
comp=Z,155nm,0.8s,mb6.1
KAF Kangasniemi 56.66 326 *eP* **P 07 19 12.3 -1.1**
comp=Z,155nm,0.8s,mb6.1
KAF Kangasniemi 56.66 326 *ep* **P 07 19 12.3 -1.1**
comp=Z,155nm,0.8s,mb6.1
KARA Karaisali 56.69 296 *eP* **P 07 19 14.2 +0.1**
FINES FINESS Array B 56.86 326 P **P 07 19 14.3 -0.5**
comp=Z,234nm,0.9s,mb6.2,baz=84,slow=7.9,SNR=116
FINES FINESS Array B 56.86 326 P **P 07 19 14.3 -0.5**
FINES pmax pmax
comp=Z,234nm,0.9s
GULE Gulek 56.89 296 *i* P **P 07 19 16.1 +0.7**
ELDT Eldivan 56.92 300 *i* P **P 07 19 15.4 -0.2**
ASF Jabal al Asfar 56.94 290 P **P 07 19 16.2 +0.4**
comp=Z,26nm,0.9s,mb5.3,baz=313,slow=7.6,SNR=21
ASF Jabal al Asfar 56.94 290 P **P 07 19 16.2 +0.3**
ASF pmax pmax
comp=Z,26nm,0.9s
HWQ Hawqa 56.97 292 *eP* **P 07 19 15.7 -0.3**
BR131 Keskin Array S 56.99 299 *eP* **P 07 19 16.1 0.0**
comp=Z,14nm,0.6s,mb5.2
BR131 *e*PP PP 07 21 22.0 -0.5
BR131 LR LR
comp=Z,1μm,21.0s,MS5.0
BRTR Keskin Array B 56.99 299 P **P 07 19 16.1 0.0**
comp=Z,27nm,0.8s,mb5.3,baz=98,slow=6.5,SNR=75
BRTR Keskin Array B 56.99 299 *i* P **P 07 19 16.2 +0.1**
BRTR pmax pmax
comp=Z,27nm,0.8s
VSU Vasula 57.01 322*c i*P **P 07 19 15.5 -0.5**
MICGM Minsk 57.13 317⇑ *eP* **P 07 19 14.0 -2.9**
AKASG Malin Array Be 57.14 313 P **P 07 19 16.2 -0.7**
comp=Z,166nm,0.9s,mb6.1,baz=68,slow=6.7,SNR=95
AKASG LR LR 07 45 19.8
comp=Z,4μm,19.5s,MS5.5,baz=75,slow=38
AKASG Malin Array Be 57.14 313 P **P 07 19 16.3 -0.7**
AKASG pmax pmax
comp=Z,166nm,0.9s
AKASG MLR MLR
comp=Z,4μm,19.5s
AKBB Malin Array Si 57.14 313 *eP* **P 07 19 16.3 -0.7**
AKBB *e* 07 20 09.5
KIEV Kiev 57.15 313 *eP* **P 07 19 16.4 -0.7**
KIEV pmax pmax
comp=Z,77nm,0.8s,mb5.8
KIEV MLR MLR
comp=Z,4μm,19.0s,MS5.5
KIEV Kiev 57.15 313 *eP* **P 07 19 16.4 -0.7**
comp=Z,77nm,0.8s,mb5.8
KIEV *e*ScP ScP 07 24 14.9 +2.6
KIEV LR LR
comp=Z,4μm,19.0s,MS5.5
MNK Minsk 57.16 317⇑ *eP* **P 07 19 14.0 -3.0**
MNK *e*S **S 07 27 02.0 -11**
MNK pmax pmax
comp=Z,140nm,1.0s,mb6.0
MNK MLR MLR
comp=Z,8μm,14.0s,MS6.0
MERS Mersin 57.21 296 *eP* **P 07 19 16.9 -0.9**
SAFT Safranbolu 57.24 301 *eP* **P 07 19 18.1 +0.2**
BHL Bhannes 57.32 292 *eP* **P 07 19 19.2 +0.7**
RCY Rachaya 57.33 291 *eP* **P 07 19 18.9 +0.3**
SULT Sultanhani-AKS 57.55 297 *eP* **P 07 19 20.4 +0.2**
IDID Didziasalis 57.61 318 *eP* **P 07 19 20.3 +0.1**
IDID AMB AMB 07 19 25.3
comp=Z,53nm,0.9s,mb5.5
NACGM Naroch 57.67 318 *eP* **P 07 19 18.0 -2.7**
PMG Port Moresby 57.73 129 *eP* **P 07 19 21.1 -0.5**
PMG pmax pmax
comp=Z,31nm,0.8s
PMG MLR MLR
comp=Z,991nm,19.0s
PMG Port Moresby 57.73 129 *eP* **P 07 19 21.1 -0.4**
comp=Z,32nm,0.8s,mb5.4
PMG LR LR
comp=Z,991nm,19.0s,MS4.9
ADK Adak 57.73 46 *eP* **P 07 19 19.4 -1.8**
ADK pmax pmax
comp=Z,41nm,1.0s,mb5.4
ADK Adak 57.73 46 *eP* **P 07 19 19.4 -1.8**
comp=Z,42nm,1.0s,mb5.4
IZAR Zarasai 57.79 319 *eP* **P 07 19 21.6 +0.1**
IZAR AMB AMB 07 19 26.6
comp=Z,42nm,0.9s,mb5.5
MMAI Mount Meron Ar 57.82 291 P **P 07 19 22.6 +0.5**
comp=Z,28nm,0.8s,mb5.3,baz=82,slow=8.0,SNR=13
MMAI LR LR 07 48 09.4
comp=Z,2μm,19.6s,MS5.2,baz=55,slow=40
IIGN Ignalina 57.89 318 *eP* **P 07 19 22.3 +0.1**
IIGN AMB AMB 07 19 27.3
comp=Z,78nm,0.8s,mb5.8
SGKT Sivrigoynuk 57.90 300 *i* P **P 07 19 23.4 +0.9**
GAMB Gambell 57.97 31 *eP* **P 07 19 22.6 0.0**
comp=Z,93nm,1.0s,mb5.8
IKL Isikli 58.05 295 *eP* **P 07 19 22.5 -1.2**
KIS Kishinev 58.32 308 *eP* **P 07 19 23.0 -2.3**
KIS Kishinev 58.32 308 *e*PP PP 07 21 34.0 -0.1
KIS *e*S **S 07 27 26.0 -2.3**
KIS LRM 07 45 34.0
comp=Z,1μm,13.0s
KIS Kishinev 58.32 308 *eP* **P 07 19 23.0 -2.3**
KIS *e* 07 21 34.0
KIS *e* 07 22 57.0
KIS *e*S **S 07 27 26.0 -2.3**
KIS MLR MLR
comp=E,1μm,13.0s,MS5.4
KIS MLR MLR
comp=Z,2μm,13.0s,MS5.4
KIS MLR MLR
comp=N,2μm,12.0s,MS5.4
KIS MLR MLR
comp=Z,2μm,20.0s
LADK Ladik-KONYA 58.41 298 *e*P **P 07 19 25.2 -0.9**
LFK Lefkose 58.49 294 *e*P **P 07 19 27.0 +0.2**
TRO Tromso 58.51 336 *e*P **P 07 19 26.4 0.0**
TRO *e*S **S 07 27 29.5 -0.7**
TRO AMS AMS 07 46 29.5
comp=Z,3μm,13.6s,MS5.5
MDU Mudurnu 58.54 301 *e*P **P 07 19 26.0 -1.0**
KIZT Kizilcal 58.55 299 *e*P **P 07 19 26.4 -0.8**
SVRH Sivrihisar-ESK 58.63 299 *e*P **P 07 19 26.9 -0.8**
HENT Hendek 58.66 301 *i* P **P 07 19 27.4 -0.5**
HDMB Hadim 58.73 296 *e*P **P 07 19 27.6 -0.8**
KBS Kingsbay 58.75 347 *e*P **P 07 19 27.2 -0.7**
KBS *e*S **S 07 27 33.5 +0.3**
KBS AMS AMS 07 44 32.8
comp=Z,3μm,18.5s,MS5.5
CSS Prodhromos 58.76 294 *e*P **P 07 19 27.5 -1.1**
comp=Z,62nm,0.9s,mb5.6
CSS LR LR
comp=Z,2μm,20.0s,MS5.2
COEN Coen 58.77 136 *e*P **P 07 19 28.0 -0.8**
comp=Z,282nm,0.8s,mb6.3
TLCR 58.82 306 ⇓P **P 07 19 29.1 +0.2**
TLCR 58.82 306 ⇓*i*P **P 07 19 29.1 +0.2**
LEF Lefka 59.04 294 *e*P **P 07 19 31.3 +0.7**
GAZI Gazipasa 59.10 296 *i* P **P 07 19 28.0 -3.0**
ESKT Eskisehir 59.10 300 *i* P **P 07 19 30.6 -0.3**
WRAB Tennant Creek 59.22 148 P **P 07 19 31.0 -0.8**
comp=Z,882nm,0.6s,mb7.0,SNR=68
WRAB Tennant Creek 59.22 148 *e*P **P 07 19 31.0 -0.8**
WRAB *e*S **S 07 27 38.3 -2.2**
WRAB pmax pmax
comp=Z,127nm,0.8s,mb6.0
WRAB MLR MLR
comp=Z,1μm,20.0s,MS5.0
WRAB Tennant Creek 59.22 148 *e*P **P 07 19 31.0 -0.8**
comp=Z,127nm,0.8s,mb6.0
WRAB *e*S **S 07 27 38.3 -2.2**
WRAB LR LR
comp=Z,1μm,20.0s,MS5.0
WRA Warramunga Arr 59.23 148 P **P 07 19 31.0 -0.8**
comp=Z,73nm,0.7s,mb5.8,baz=341,slow=7.3,SNR=294
WRA Warramunga Arr 59.23 148 P **P 07 19 31.0 -0.9**
WRA pmax pmax
comp=Z,73nm,0.7s
WRA Warramunga Arr 59.23 148 P **P 07 19 31.0 -0.8**
TNA Tin City 59.23 29 *e*P **P 07 19 31.2 -0.1**
comp=Z,72nm,0.9s,mb5.7
BORA Eskisehir 59.28 300 *i* P **P 07 19 31.5 -0.6**
CFR Carcaliu 59.28 307 P **P 07 19 32.2 +0.1**
CFR Carcaliu 59.28 307 ⇓*i*P **P 07 19 32.1 0.0**
BOLV Bolvadin 59.29 299 *i* P **P 07 19 32.1 -0.2**
EIL Elat 59.41 288 P **P 07 19 33.8 +0.6**
comp=Z,60nm,1.0s,mb5.6,baz=97,slow=2.7,SNR=22
SHUT Suhut-Afyon 59.64 299 *e*P **P 07 19 34.1 -0.6**
SUTC Sutluce-Ispart 59.67 297 *e*P **P 07 19 33.4 -1.5**
PSN Preselentsi 59.70 305 P **P 07 19 35.7 +0.7**
ALT Altintas 59.80 299 *e*P **P 07 19 35.0 -0.7**
TESR 59.88 308 ⇑P **P 07 19 36.4 +0.1**
TESR 59.88 308 ⇑*i*P **P 07 19 36.3 +0.1**
ISP Isparta 59.91 298 *e*P **P 07 19 34.8 -1.7**
ISP Isparta 59.91 298 *e*P **P 07 19 36.6 +0.1**
ISP pmax pmax
comp=Z,116nm,0.8s,mb6.0
ISP MLR MLR
comp=Z,2μm,19.0s,MS5.2
ISP Isparta 59.91 298 *e*P **P 07 19 36.6 0.0**
comp=Z,116nm,0.8s,mb6.0
ISP LR LR
comp=Z,2μm,19.0s,MS5.2
ISP Isparta 59.91 298 P **P 07 19 35.3 -1.2**
ISP Isparta 59.91 298 ⇓*i*P **P 07 19 36.5 0.0**
SUW Suwalki 59.92 317 *e*P **P 07 19 36.1 -0.2**
SUW *e*pP pP 07 19 44.6 +7.2
SUW LMZ 07 45 49.9
comp=Z,3μm,21.4s
SUW Suwalki 59.92 317 *e*P **P 07 19 36.2 -0.2**
SUW pmax pmax
comp=Z,237nm,0.8s,mb6.3
SUW Suwalki 59.92 317 *e*P **P 07 19 36.1 -0.2**
comp=Z,237nm,0.8s,mb6.3
AMRR Amara 59.99 306 P **P 07 19 39.0 +2.0**
AMRR Amara 59.99 306 ⇓*i*P **P 07 19 38.0 +1.0**
GRER 60.01 307 P **P 07 19 39.6 +2.6**
GRER 60.01 307 ⇓*i*P **P 07 19 37.9 +0.8**
VRI Vrincioaia 60.02 308 P **P 07 19 38.0 +0.8**
VRI Vrincioaia 60.02 308 ⇑*i*P **P 07 19 37.9 +0.7**
BGKT Bogazkoy 60.07 302 *e*P **P 07 19 36.8 -0.8**
PLOR Plostina 60.08 308 ⇓P **P 07 19 38.8 +1.2**
PLOR Plostina 60.08 308 ⇓*i*P **P 07 19 38.8 +1.2**
PGOR Pogoanele 60.14 307 ⇓*i*P **P 07 19 38.4 +0.4**
STEI Steigen 60.17 334 *e*P **P 07 19 37.3 -0.6**
GDZ Gediz 60.25 300 *i* P **P 07 19 38.1 -0.7**
KORT Korkueli 60.32 297 *i* P **P 07 19 38.2 -1.2**
MSEY Mahe Island 60.33 242 PFAKE 07 19 50.0 +10
MSEY LR LR
comp=Z,2μm,20.0s,MS5.1
ISR Istrita 60.38 307 ⇑P **P 07 19 40.8 +1.2**
ISR Istrita 60.38 307 ⇑*i*P **P 07 19 40.8 +1.2**
PRD Provadia 60.39 305 P **P 07 19 40.6 +0.9**
KHAL Karahalli 60.49 299 *i* P **P 07 19 38.3 -2.2**
BURAR Bucovina Array 60.49 310 ⇑P **P 07 19 40.6 +0.3**
BURAR Bucovina Array 60.49 310 ⇑*i*P **P 07 19 40.6 +0.3**
BUR08 Bucovina Ar. S 60.49 310 *e*P **P 07 19 40.3 -0.1**
LVV L'vov 60.59 313 *e*P **P 07 19 40.7 -0.3**
LVV *e* 07 21 55.5
LVV *e*PPP 07 23 28.5
LVV *e*S **S 07 27 52.5 -5.1**
LVV *e*PS 07 28 11.9
LVV *e*SS SS 07 32 00.9 +5.7
LVV MLR MLR
comp=E,17μm,16.0s,MS6.3
LVV MLR MLR
comp=Z,2μm,16.0s,MS5.3
LVV MLR MLR
comp=N,900nm,17.0s,MS6.3
MLR Muntele Rosu 60.66 307 P **P 07 19 42.4 +0.9**
comp=N,66nm,0.7s,mb5.9,baz=177,slow=1.8,SNR=55
MLR Muntele Rosu 60.66 307 P **P 07 19 43.0 +1.4**
MLR Muntele Rosu 60.66 307 ⇑*i*P **P 07 19 42.4 +0.8**
SULR 60.71 307 P **P 07 19 43.4 +1.5**
SULR 60.71 307 ⇓*i*P **P 07 19 44.7 +2.8**
ELL Elmali 60.74 297 *e*P **P 07 19 40.1 -2.2**
DEMI Demirci 60.83 300 *i* P **P 07 19 42.3 -0.5**
DOPR Dopca 60.88 308 ⇑*i*P **P 07 19 44.1 +1.0**
MOR8 Moi Rana 60.92 332 *e*P **P 07 19 41.2 -1.8**
MOR8 AML AML 07 19 45.0
comp=Z,46nm,0.8s
DNZL Cakiroluk 61.05 298 *i* P **P 07 19 43.3 -1.0**
JMB Yambol 61.20 304 P **P 07 19 45.6 +0.3**
JMB Yambol 61.20 304 P **P 07 19 46.5 +1.2**
BALB Balikesir 61.23 301 *e*P **P 07 19 44.7 -0.8**
GONE Gonen-Balikesi 61.23 301 *e*P **P 07 19 44.9 -0.6**
VOIR 61.28 308 ⇓P **P 07 19 46.4 +0.7**
VOIR 61.28 308 ⇓*i*P **P 07 19 46.4 +0.7**
EDRB Edirne 61.29 303 *e*P **P 07 19 44.6 -1.3**
BALY Balya 61.38 301 *i* P **P 07 19 45.3 -1.3**
SZH Strazhica 61.38 305 P **P 07 19 46.7 +0.2**
KWP Kalwaria Pacla 61.46 313 *e*P **P 07 19 47.4 +0.4**
KWP *e*pP pP 07 19 53.3 +5.3
KWP *e*S **S 07 28 08.5 -0.3**
KWP LMZ 07 48 00.1
comp=Z,2μm,23.6s
KWP Kalwaria Pacla 61.46 313 *e*P **P 07 19 47.2 +0.3**
comp=Z,481nm,0.8s,mb6.7
KWP LR LR
comp=Z,3μm,19.0s,MS5.5
KWP Kalwaria Pacla 61.46 313 ⇓*i*P **P 07 19 47.5 +0.6**
AKHS Akhisar 61.54 300 *i* P **P 07 19 46.7 -1.0**
BMR Baia Mare 61.58 310 P **P 07 19 49.7 +2.0**
BMR Baia Mare 61.58 310 ⇓*i*P **P 07 19 49.9 +2.2**
WAR Warsaw 61.68 316 *e*P **P 07 19 49.3 +1.0**
PVL Pavlikeni 61.81 305 P **P 07 19 50.8 +1.4**
AYDN Tasoluk 61.93 299 *i* P **P 07 19 50.3 +0.1**
UZH Uzhgorod 62.04 312*c i*P **P 07 19 50.9 +0.1**
UZH *e* 07 20 30.8
UZH *e*PPP 07 23 36.9
UZH *e*S **S 07 28 11.2 -4.8**
UZH *e* 07 29 36.2
UZH *e*SS SS 07 32 13.0 -5.0
UZH *e*SSS 07 34 55.5
UZH MLR MLR
comp=N,2μm,13.0s,MS5.6
UZH MLR MLR
comp=E,2μm,13.0s,MS5.6
UZH MLR MLR
comp=Z,2μm,13.0s,MS5.3
TRPA Tarpa 62.04 311⇑*i*P **P 07 19 52.1 +1.2**
ALN Alexandroupoli 62.11 303 P **P 07 19 49.1 -2.3**
MLSB Milas 62.14 298 *e*P **P 07 19 51.2 -0.5**
BLCB Balcova 62.28 300 *e*P **P 07 19 52.0 -0.6**
KDZ Kurdzhali 62.29 303 P **P 07 19 53.6 +1.0**
ASAR Alice Springs 62.33 151 P **P 07 19 52.3 -0.6**
comp=Z,42nm,0.7s,mb5.7,baz=339,slow=6.8,SNR=221
ASAR PKPPKP 07 48 55.2
comp=Z,1.2nm,0.9s,baz=173,slow=3.3,SNR=6.1
DRGR 62.37 310 ⇓P **P 07 19 53.8 +0.7**
DRGR 62.37 310 P **P 07 19 53.4 +0.3**
DRGR 62.37 310 ⇓*i*P **P 07 19 53.8 +0.7**
GCAM G?zelcaml? 62.39 299 *i* P **P 07 19 54.1 +0.7**
NSS Namsos 62.40 331 *e*P **P 07 19 51.0 -1.9**
NSS AMS AMS 07 48 58.8
comp=Z,6μm,19.0s,MS5.8
STHS Stebnicka Huta 62.44 313 *e*P **P 07 19 54.2 +0.7**
STHS Stebnicka Huta 62.44 313 *e*P **P 07 19 54.2 +0.7**
BDRM Kayabasi 62.47 298 *i* P **P 07 19 53.5 -0.4**
DEV Deva 62.55 309⇑*i*P **P 07 19 56.3 +2.0**
BODT Bodrum 62.57 298 *e*P **P 07 19 53.3 -1.3**
URLA Izmir 62.62 300 *i* P **P 07 19 54.1 -0.8**
PLD Plovdiv 62.63 304 P **P 07 19 55.1 +0.2**
RZN Rozhen 62.77 304 P **P 07 19 56.3 +0.5**
GZR Gura Zlata 62.80 308 ⇑P **P 07 19 57.3 +1.3**
GZR Gura Zlata 62.80 308 ⇑*i*P **P 07 19 57.3 +1.3**
PGB Panagyurishte 62.85 305 P **P 07 19 56.9 +0.6**
CHOS Chios island 63.00 300 P **P 07 19 55.0 -2.5**
NIE Niedzica 63.01 313 *e*P **P 07 19 59.3 +2.0**
KECS Kecovo 63.22 312 *e*P **P 07 19 59.2 +0.5**
KECS pmax pmax
comp=Z,23nm,0.7s,mb5.4
KECS Kecovo 63.22 312 *e*P **P 07 19 59.2 +0.5**
comp=Z,23nm,0.7s,mb5.4
KECS Kecovo 63.22 312 *e*P **P 07 19 59.1 +0.4**
AKUT Akutan 63.42 41 *e*P **P 07 19 58.3 -1.6**
BZS Buzias 63.49 309 ⇓P **P 07 20 00.9 +0.4**
BZS Buzias 63.49 309 P **P 07 20 00.7 +0.1**
BZS Buzias 63.49 309 ⇓*i*P **P 07 20 00.9 +0.4**
VTS Vitosha 63.49 305 ⇓P **P 07 20 01.1 +0.5**
VTS Vitosha 63.49 305 P **P 07 20 00.7 +0.1**
VTS Vitosha 63.49 305 P **P 07 20 00.6 0.0**
VTS Vitosha 63.49 305 ⇓*i*P **P 07 20 01.1 +0.5**
GKP Gorka Klasztor 63.52 318 *e*P **P 07 20 00.3 -0.3**
GKP LMZ 07 48 18.2
comp=Z,3μm,20.5s
PSZ Piszkesteto 63.79 312 *e*P PcP 07 20 26.6 -12
PSZ LR LR
comp=Z,3μm,19.0s,MS5.5
PSZ Piszkesteto 63.79 312 ⇓*i*P PcP 07 20 26.3 -12
KKB Krupnik 63.84 304 P **P 07 20 02.6 -0.4**
APE Apeiranthos 63.88 299 ⇓P **P 07 20 03.0 -0.3**
APE Apeiranthos 63.88 299 ⇓*i*P **P 07 20 03.0 -0.3**
NB2 NORSAR Subarra 63.90 327 P **P 07 20 01.8 -1.2**
comp=Z,120nm,0.8s,mb6.0,baz=69,slow=6.5
NOA NORSAR Array B 63.90 327 P **P 07 20 01.7 -1.3**
comp=Z,106nm,0.8s,mb5.9,baz=70,slow=6.6,SNR=226
NOA NORSAR Array B 63.90 327 P **P 07 20 01.7 -1.3**
NOA pmax pmax
comp=Z,106nm,0.8s
NAO01 NORSAR Array S 64.12 327 *e*P **P 07 20 03.1 -1.3**
comp=Z,53nm,0.8s,mb5.6
NAO01 LR LR
comp=Z,2μm,21.0s,MS5.3
ZKR Zakros 64.13 296 *e*P **P 07 20 06.5 +1.6**
PLG Polygyros 64.14 303 P **P 07 20 04.2 -0.8**
PAIG Paliouri 64.14 302 P **P 07 20 04.5 -0.5**
BSD Bornholm Skovb 64.16 320⇑*i*P **P 07 20 04.3 -0.5**
BSD pmax pmax
comp=Z,79nm,0.9s,mb5.7
BSD MLR MLR
comp=Z,2μm,17.0s,MS5.3
BSD Bornholm Skovb 64.16 320⇑*i*P **P 07 20 04.3 -0.5**
comp=Z,79nm,0.9s,mb5.7
BSD
comp=Z,2μm,17.0s
OKC Ostrava-Krasne 64.19 314 *e*P **P 07 20 05.5 +0.4**
OKC *e*S **S 07 28 39.5 -3.4**
OKC *e* 07 35 44.8
OKC MLR MLR
comp=Z,2μm,21.0s,MS5.4
OKC Ostrava-Krasne 64.19 314 *e*P **P 07 20 05.5 +0.4**
OKC *e*S **S 07 28 39.5 -3.4**
OKC *ex* x 07 35 44.8
OKC AMS AMS 07 48 20.0
comp=Z,2μm,21.0s
VYHS Vyhne 64.24 312 *e*P **P 07 20 05.5 0.0**
VYHS pmax pmax
comp=Z,48nm,1.2s,mb5.4
VYHS Vyhne 64.24 312 *e*P **P 07 20 05.5 0.0**
comp=Z,48nm,1.2s,mb5.4
VYHS Vyhne 64.24 312 *e*P **P 07 20 05.5 0.0**
VAY Valandovo 64.40 304 *i* P **P 07 20 06.0 -0.7**
OSL Oslo 64.53 326 *e*P **P 07 20 06.8 -0.3**
OSL AMb AMB 07 20 11.0
comp=Z,175nm,0.8s,mb6.1
OSL Oslo 64.53 326 *e*P **P 07 20 06.2 -1.0**
comp=Z,175nm,0.8s,mb6.1
MORC Moravsky Berou 64.57 314 *e*P **P 07 20 07.6 0.0**
MORC *e* 07 22 28.5
MORC pmax pmax
comp=Z,75nm,0.8s,mb5.8
MORC Moravsky Berou 64.57 314 *e*P **P 07 20 07.6 0.0**
comp=Z,74nm,0.8s,mb5.8
MORC *e*PP PP 07 22 28.5 -0.7
MORC Moravsky Berou 64.57 314 ⇓*i*P **P 07 20 07.4 -0.2**
XRY Khrisi 64.62 296 *e*P **P 07 20 08.0 -0.2**
LAST Lasithi 64.67 297 *e*P **P 07 20 08.5 0.0**
LAST Lasithi 64.67 297 P **P 07 20 10.5 +2.0**
XOR Xorichti 64.71 302 P **P 07 20 07.6 -1.1**
ALE Alert 64.76 358 P **P 07 20 08.9 +0.5**
comp=Z,139nm,0.9s,mb6.0,SNR=7.8
KSP Ksiaz 64.93 316 *e*P **P 07 20 10.1 +0.2**
KSP *e*pP pP 07 20 14.1 +3.1
KSP *e*S **S 07 28 54.1 +2.1**
KSP LMZ 07 49 52.5
comp=Z,7μm,18.3s
KSP Ksiaz 64.93 316⇑*e*P **P 07 20 09.9 0.0**
KSP *e*S **S 07 28 51.0 -1.0**
KSP MLR MLR
comp=Z,8μm,18.3s,MS6.0
SKO Skopje 64.94 305 *i* P **P 07 20 10.3 +0.1**
MOL Molde 64.94 330 *e*P **P 07 20 09.4 -0.4**
MOL AMb AMB 07 20 15.4
comp=Z,88nm,1.8s,mb5.5
MOL AMS AMS 07 50 17.6
comp=Z,4μm,15.9s,MS5.7
MOL Molde 64.94 330 *e*P **P 07 20 09.4 -0.4**
comp=Z,88nm,1.8s,mb5.5
MOL LR LR
comp=Z,4μm,15.9s,MS5.7
TTA Tatalina 64.97 30 *e*P **P 07 20 11.8 +1.8**
KLBR Kellerberrin 65.08 169 *e*P **P 07 20 10.7 -0.2**
comp=Z,50nm,1.1s,mb5.5
ATAL Atalanti 65.09 301 P **P 07 20 10.6 -0.6**
DPC Dobruska-Polom 65.09 315 *e*P **P 07 20 11.4 +0.4**
DPC *e*S S 07 28 57.1 +3.0
DPC *e* 07 35 52.1
DPC MLR MLR
comp=Z,3μm,19.6s,MS5.5
DPC Dobruska-Polom 65.09 315 *e*P **P 07 20 11.4 +0.4**
DPC *e*S S 07 28 57.1 +3.0
DPC *ex* x 07 35 52.1
DPC AMS AMS 07 49 50.0
comp=Z,3μm,19.6s
DIVS Divibare 65.12 308 P **P 07 20 10.8 -0.5**
LKR Lokris 65.12 301 P **P 07 20 09.6 -1.8**
KONO Kongsberg 65.16 326 *e*P **P 07 20 10.5 -0.8**
KONO AMb AMB 07 20 15.4
comp=Z,58nm,0.8s,mb5.6
KONO *e*S S 07 28 53.3 -1.4
KONO AMS AMS 07 52 33.9
comp=Z,2μm,11.1s,MS5.6
KONO Kongsberg 65.16 326 *e*P **P 07 20 10.4 -0.9**
KONO pmax pmax
comp=Z,56nm,0.7s,mb5.7
KONO MLR MLR
comp=Z,2μm,21.0s,MS5.3

KONO Kongsberg 65.16 326 *eP* **P 07 20 10.4 -0.9**
comp=Z,56nm,0.7s,mb5.7
KONO LR LR
comp=Z,2µm,21.0s,MS5.3
MIDW Midway 65.17 71 PFAKE 07 20 20.0 +8.2
MIDW LR LR
comp=Z,1µm,21.0s,MS5.1
PKSM Moragy 65.20 310 P **P 07 20 11.7 -0.1**
PKSM Moragy 65.20 310⇑ *iP* **P 07 20 12.0 +0.2**
UPC Upice 65.22 315 *eP* **P 07 20 12.3 +0.5**
UPC Upice 65.22 315 *eP* **P 07 20 12.3 +0.5**
SIVA Sivas 65.22 297 *eP* **P 07 20 11.5 -0.6**
RGN Rugen 65.23 320 *eP* **P 07 20 11.9 +0.1**
comp=Z,121nm,0.9s,mb5.9
RGN Rugen 65.23 320 P **P 07 20 12.3 +0.6**
comp=Z,135nm,0.9s,mb6.0
RGN *e*PP PP 07 22 36.6 +1.8
COP Copenhagen 65.27 321 *i* P **P 07 20 12.1 +0.1**
COP pmax pmax
comp=Z,120nm,0.8s,mb6.0
COP MLR MLR
comp=Z,760nm,18.0s,MS4.9
COP Copenhagen 65.27 321 *i* P **P 07 20 12.1 +0.1**
comp=Z,116nm,0.8s,mb6.0
COP
comp=Z,750nm,18.0s
KRUS Krusevo 65.31 304 *i* P **P 07 20 11.6 -0.9**
VRAC Vranov 65.32 314 P **P 07 20 13.1 +0.6**
VRAC Vranov 65.32 314⇑ *iP* **P 07 20 12.7 +0.2**
CTA Charters Tower 65.41 138 *eP* **P 07 20 12.5 -0.8**
comp=Z,12nm,0.8s,mb5.0
CTAO Charters Tower 65.41 138 *eP* **P 07 20 12.5 -0.8**
CTAO pmax pmax
comp=Z,22nm,0.9s,mb5.2
CTAO MLR MLR
comp=Z,729nm,20.0s,MS4.9
CTAO Charters Tower 65.41 138 *eP* **P 07 20 12.5 -0.9**
comp=Z,22nm,0.9s,mb5.2
CTAO LR LR
comp=Z,729nm,20.0s,MS4.9
COLD Coldfoot 65.42 25 *eP* **P 07 20 12.6 -0.1**
comp=Z,88nm,0.9s,mb5.8
DAG Danmarks Havn 65.44 348⇑ *iP* **P 07 20 12.1 -0.7**
DAG pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
DAG Danmarks Havn 65.44 348⇑ *iP* **P 07 20 12.1 -0.7**
comp=Z,9.6nm,0.7s,mb4.9
FNA Florina 65.44 304 P **P 07 20 14.9 +1.5**
AGG Agios Georgios 65.46 302 P **P 07 20 12.3 -1.2**
THL Klokotos Trika 65.47 302 P **P 07 20 12.1 -1.5**
VAM Vamos 65.53 297 *eP* **P 07 20 16.0 +1.9**
IVA Berane 65.65 306⇑ *iP* **P 07 20 15.1 +0.4**
IVA Berane 65.65 306⇑ *iP* **P 07 20 15.1 +0.4**
PVY Plav 65.71 306⇓ *iP* **P 07 20 15.4 +0.3**
PVY Plav 65.71 306⇓ *iP* **P 07 20 15.5 +0.4**
OHR Ohrid 65.72 304 *eP* **P 07 20 06.5 -8.7**
BCI Bajram Curri 65.73 306 *i* PN **P 07 20 16.1 +0.8**
BCI *i* SN 07 20 36.9
KARN Karanos 65.74 298 *eP* **P 07 20 15.0 -0.4**
KARN Karanos 65.74 298 *eP* **P 07 20 15.0 -0.4**
KARN Karanos 65.74 298 P **P 07 20 13.8 -1.6**
RUE Ruedersdorf 65.76 318 *eP* **P 07 20 15.5 +0.2**
comp=Z,150nm,1.1s,mb5.9
RUE Ruedersdorf 65.76 318 *eP* **P 07 20 15.3 0.0**
comp=Z,124nm,1.0s,mb5.9
PLE Pljevlja 65.81 307⇓ *iP* **P 07 20 17.2 +1.4**
PLE Pljevlja 65.81 307⇓ *iP* **P 07 20 17.2 +1.5**
NEST Nestorio 65.82 304 P **P 07 20 15.2 -0.7**
SVW2 Sparrevohn 65.90 32 *eP* **P 07 20 16.6 +0.6**
comp=Z,86nm,1.4s,mb5.6
KBN Korca 65.92 304 *i* PN **P 07 20 16.5 0.0**
KBN *i* SN 07 20 38.7
PUK Puka 65.98 306 *i* PN **P 07 20 17.6 +0.7**
PUK *i* SN 07 20 39.4
TREC Trest 66.00 314 *eP* **P 07 20 18.0 +1.2**
TREC MLR MLR
comp=Z,3µm,15.0s,MS5.6
TREC Trest 66.00 314 *eP* **P 07 20 18.0 +1.2**
TREC AMS AMS 07 49 20.0
comp=Z,3µm,15.0s
EFP Efpalio 66.00 301 P **P 07 20 18.5 +1.5**
LAKA Lakka 66.02 301 P **P 07 20 17.5 +0.3**
KYTH Kithira 66.04 299 *eP* **P 07 20 16.5 -0.8**
PVCC Panska Ves 66.06 316 *eP* **P 07 20 18.2 +1.0**
PVCC MLR MLR
comp=Z,3µm,18.5s,MS5.6
PVCC Panska Ves 66.06 316 *eP* **P 07 20 18.2 +1.0**
PVCC AMS AMS 07 50 20.0
comp=Z,3µm,18.5s
HYA Hoyanger 66.10 328 *eP* **P 07 20 18.2 +0.8**
HYA AMb AMB 07 20 21.6
comp=Z,68nm,1.0s,mb5.7
HYA Hoyanger 66.10 328 *eP* **P 07 20 18.2 +0.8**
comp=Z,68nm,1.0s,mb5.6
UPM Unac-Piva 66.19 307⇓ *iP* **P 07 20 17.5 -0.7**
UPM Unac-Piva 66.19 307⇓ *iP* **P 07 20 17.6 -0.6**
TTG Podgorica 66.26 306⇑ *iP* **P 07 20 18.4 -0.2**
TTG Podgorica 66.26 306⇑ *iP* **P 07 20 18.5 -0.2**
TIR Tirane 66.27 305 *eP* **P 07 20 17.7 -1.1**
TIR pmax pmax
comp=Z,91nm,0.8s,mb5.9
TIR MLR MLR
comp=Z,2µm,19.0s,MS5.4
TIR Tirane 66.27 305 *eP* **P 07 20 17.7 -1.1**
comp=Z,91nm,0.8s,mb5.9
TIR LR LR
comp=Z,2µm,19.0s,MS5.4
NKY Niksic 66.28 307⇓ *iP* **P 07 20 18.3 -0.5**
NKY Niksic 66.28 307⇓ *iP* **P 07 20 18.3 -0.5**
PRU Pruhonice 66.29 315 *eP* **P 07 20 20.4 +1.7**
PRU *e*S S 07 29 10.8 +2.1
PRU MLR MLR
comp=Z,4µm,18.4s,MS5.6
PRU Pruhonice 66.29 315 *eP* **P 07 20 20.4 +1.7**
PRU *e*S S 07 29 10.8 +2.1
PRU *ex* x 07 36 31.6
PRU AMS AMS 07 50 30.0
comp=Z,4µm,18.4s
BRG Berggiesshubel 66.29 316 *eP* **P 07 20 18.6 -0.1**
comp=Z,57nm,0.9s,mb5.6
BRG *e*S S 07 29 08.4 -0.3
BRG Berggiesshubel 66.29 316 *i* P **P 07 20 18.5 -0.2**
comp=Z,57nm,0.8s,mb5.6
BRG PP PP 07 22 43.0 -1.2
BRG S S 07 29 10.0 +1.3
BRG SS SS 07 33 23.0 -1.2
BRG *e*PKPPKP 07 48 53.1
comp=Z,2.0nm,0.6s
BRG
comp=N,3µm,19.7s
BRG
comp=E,2µm,14.8s
BRG
comp=Z,3µm,15.4s
CONA Conrad Observa 66.30 313⇑ *iP* **P 07 20 19.1 +0.3**
comp=Z,69nm,1.1s,mb5.6,SNR=43
NWAO Narrogin (SRO) 66.30 169 *eP* **P 07 20 18.8 0.0**
NWAO pmax pmax
comp=Z,62nm,0.9s
NWAO MLR MLR
comp=Z,2µm,22.0s
NWAO Narrogin (SRO) 66.30 169 *eP* **P 07 20 18.8 0.0**
comp=Z,62nm,0.9s,mb5.6
NWAO LR LR
comp=Z,2µm,22.0s,MS5.3
PRA Prague 66.32 315 P **P 07 20 19.0 +0.1**
PRA AMS AMS 07 50 35.0
FOO Floro 66.42 329 *eP* **P 07 20 17.7 -1.7**
FOO AMS AMS 07 51 02.8
comp=Z,6µm,15.5s,MS5.9
ODD1 Odda 66.43 327 *eP* **P 07 20 18.6 -0.8**
ODD1 AMb AMB 07 20 23.4
comp=Z,38nm,1.1s,mb5.3
ODD1 Odda 66.43 327 *eP* **P 07 20 18.6 -0.8**
comp=Z,38nm,1.1s,mb5.3
ULC Ulcinj 66.45 306⇑ *iP* **P 07 20 19.7 -0.2**
ULC Ulcinj 66.45 306⇑ *iP* **P 07 20 19.8 -0.1**
CHGN Chignik 66.52 37 *eP* **P 07 20 18.6 -1.5**
BPAW Bear Paw Mtn. 66.52 28 *eP* **P 07 20 19.9 -0.1**
comp=Z,101nm,1.0s,mb5.8
BRY Bratogost 66.56 307 *eP* **P 07 20 20.7 +0.2**
BRY Bratogost 66.56 307 *eP* **P 07 20 20.8 +0.2**
BUM Brajici-Budva 66.56 306⇓ *iP* **P 07 20 20.2 -0.4**
BUM Brajici-Budva 66.56 306⇓ *iP* **P 07 20 20.2 -0.3**

PPLA Purkeypile 66.58 29 *eP* **P 07 20 20.7 +0.4**
comp=Z,96nm,0.7s,mb5.9
KOGS Kog 66.64 311 *i* P **P 07 20 20.4 -0.6**
MUD Monsted U'grnd 66.65 323⇑ *iP* **P 07 20 20.6 -0.3**
MUD pmax pmax
comp=Z,120nm,0.9s,mb5.9
MUD MLR MLR
comp=Z,2µm,18.0s,MS5.4
MUD Monsted U'grnd 66.65 323⇑ *iP* **P 07 20 20.6 -0.3**
comp=Z,123nm,0.9s,mb5.9
MUD
comp=Z,2µm,18.0s
HNR Honiara 66.66 119 PFAKE 07 20 30.0 +8.4
HNR LR LR
comp=Z,1µm,21.0s,MS5.1
CLL Collm 66.67 317 *eP* **P 07 20 20.7 -0.4**
comp=Z,64nm,1.0s,mb5.6
CLL *e*S S 07 29 13.5 +0.3
CLL Collm 66.67 317 *iP* **P 07 20 20.6 -0.5**
CLL *i* 07 20 29.7
CLL *e*S S 07 29 11.0 -2.2
CLL pmax pmax
comp=Z,64nm,1.0s,mb5.6
CLL MLR MLR
comp=Z,2µm,19.6s,MS5.4
CLL Collm 66.67 317 *iP* **P 07 20 20.6 -0.5**
comp=Z,64nm,1.0s,mb5.6
CLL *i* pP 07 20 23.0 +0.8
CLL *i* 07 20 29.7
CLL *e*S S 07 29 11.0 -2.2
CLL LR LR
comp=Z,2µm,19.6s,MS5.4
CLL Collm 66.67 317 *iP* **P 07 20 20.6 -0.5**
comp=Z,34nm,1.0s,mb5.3
CLL *i* Pmax pP 07 20 23.0 +0.8
comp=Z,64nm,1.0s
CLL *i* 07 20 29.7
CLL *e*S S 07 29 11.0 -2.2
CLL *e* 07 30 13.0
CLL *e*SS SS 07 33 42.0 +12
CLL *e*SSS 07 36 30.0
CLL LmH 07 46 00.0
comp=N,4µm,21.1s
CLL LmH 07 46 00.0
comp=E,2µm,21.6s
CLL LV 07 51 00.0
comp=Z,2µm,19.6s
BLS5 Blasjo 66.72 327 *eP* **P 07 20 20.9 -0.4**
BLS5 AMb AMB 07 20 25.5
comp=Z,65nm,0.8s,mb5.7
BLS5 Blasjo 66.72 327 *eP* **P 07 20 20.9 -0.4**
comp=Z,65nm,0.8s,mb5.7
FORT Forrest 66.72 159 *eP* **P 07 20 21.0 -0.6**
comp=Z,88nm,0.6s,mb6.0
FORT Forrest 66.72 159 *eP* **P 07 20 21.2 -0.4**
comp=Z,108nm,0.7s,mb6.0
PYL PYLOS 66.74 300 P **P 07 20 19.2 -2.6**
HCY Herceg Novi 66.77 306⇓ *iP* **P 07 20 21.9 0.0**
HCY Herceg Novi 66.77 306⇓ *iP* **P 07 20 22.0 +0.1**
ARSA Arzberg 66.78 312⇑ *iP* **P 07 20 21.6 -0.3**
comp=Z,40nm,1.0s,mb5.4,SNR=18
BER Bergen 66.82 328 *eP* **P 07 20 21.9 0.0**
BER AMb AMB 07 20 26.1
comp=Z,82nm,0.6s,mb6.0
BER AMS AMS 07 51 29.4
comp=Z,4µm,16.2s,MS5.7
BER Bergen 66.82 328 *eP* **P 07 20 21.9 0.0**
comp=Z,82nm,0.6s,mb5.9
BER LR LR
comp=Z,4µm,16.2s,MS5.7
ASK Askoy 66.84 328 *eP* **P 07 20 21.4 -0.6**
BSEG Bad Segeberg 67.09 320 *eP* **P 07 20 24.1 +0.4**
comp=Z,152nm,0.9s,mb6.0
BSEG *e*S S 07 29 18.3 0.0
TRF Thorofare Moun 67.10 28 *eP* **P 07 20 23.3 -0.3**
comp=Z,40nm,0.8s,mb5.5
STON Ston 67.13 307 P **P 07 20 23.9 -0.3**
KHC Kasperske Hory 67.21 315 *eP* **P 07 20 25.4 +0.8**
KHC *e*S S 07 29 20.4 +0.5
KHC MLR MLR
comp=Z,3µm,14.2s,MS5.7
KHC Kasperske Hory 67.21 315 *eP* **P 07 20 25.0 +0.4**
comp=Z,22nm,0.8s,mb5.2
KHC Kasperske Hory 67.21 315 *eP* **P 07 20 25.4 +0.8**
KHC *e*S S 07 29 20.4 +0.5
KHC *ex* x 07 36 55.8
KHC AMS AMS 07 50 00.0
comp=Z,3µm,14.2s
GEC2 GERESS Array S 67.25 314 *eP* **P 07 20 24.9 0.0**
comp=Z,722nm,2.9s,mb6.2
GEC2 *e*S S 07 29 20.9 +0.5
STAV Stavanger 67.28 326 *eP* **P 07 20 27.6 +2.7**
PERS Pernice 67.28 312 *iP* **P 07 20 24.7 -0.4**
MOA Molln 67.31 313⇑ *iP* **P 07 20 25.4 +0.1**
comp=Z,62nm,0.8s,mb5.7,SNR=22
SOKA Soboth 67.32 312⇓ *iP* **P 07 20 25.2 -0.2**
comp=Z,89nm,1.1s,mb5.7
TANN Tannenbergstha 67.34 316 *eP* **P 07 20 25.1 -0.3**
comp=Z,52nm,0.9s,mb5.6
TANN *e*S S 07 29 22.6 +1.2
COLA College 67.36 26 *eP* **P 07 20 25.1 -0.2**
COLA pmax pmax
comp=Z,199nm,0.9s,mb6.1
COLA MLR MLR
comp=Z,4µm,21.0s,MS5.6
COLA College 67.36 26 *eP* **P 07 20 25.1 -0.2**
comp=Z,199nm,0.9s,mb6.1
COLA LR LR
comp=Z,4µm,21.0s,MS5.6
KMY Karmoy 67.37 327 *eP* **P 07 20 24.6 -0.8**
KMY AMb AMB 07 20 29.4
comp=Z,52nm,0.8s,mb5.6
KMY Karmoy 67.37 327 *eP* **P 07 20 24.6 -0.8**
comp=Z,52nm,0.8s,mb5.6
WERD Werda 67.42 316 *eP* **P 07 20 25.5 -0.4**
comp=Z,49nm,1.0s,mb5.5
NKC Novy Kostel 67.42 316 *eP* **P 07 20 26.6 +0.7**
NKC *e*S S 07 29 23.3 +0.9
NKC MLR MLR
comp=Z,4µm,17.1s,MS5.7
NKC Novy Kostel 67.42 316 *eP* **P 07 20 26.6 +0.7**
NKC *e*S S 07 29 23.3 +0.9
NKC *ex* x 07 36 47.6
NKC AMS AMS 07 51 20.0
comp=Z,4µm,17.1s
RSO Redoubt South 67.43 32 *eP* **P 07 20 25.8 0.0**
GUNZ Gunzen 67.44 316 *eP* **P 07 20 26.0 0.0**
comp=Z,75nm,0.9s,mb5.7
MCK McKinley 67.50 28 *eP* **P 07 20 25.6 -0.6**
MCK pmax pmax
comp=Z,60nm,0.9s,mb5.6
MCK McKinley 67.50 28 *eP* **P 07 20 25.6 -0.5**
comp=Z,60nm,0.9s,mb5.6
WET Wettzell 67.62 315 *eP* **P 07 20 27.9 +0.7**
comp=Z,44nm,1.1s,mb5.4
BOJS Bojanci 67.66 311 *iP* **P 07 20 27.6 0.0**
BOJS *e*S S 07 29 27.6 +2.2
OBKA Obir 67.69 312⇑ *iP* **P 07 20 27.2 -0.5**
comp=Z,37nm,1.1s,mb5.3,SNR=6.4
MOX Moxa 67.74 317 *eP* **P 07 20 28.6 +0.7**
comp=Z,59nm,1.4s,mb5.4
MOX
comp=Z,2µm,18.0s
MOX Moxa 67.74 317 *eP* **P 07 20 27.5 -0.4**
comp=Z,35nm,1.0s,mb5.3
MOX *e*S S 07 29 26.4 +0.2
MOX Moxa 67.74 317 *eP* **P 07 20 28.6 +0.7**
comp=Z,59nm,1.4s,mb5.4
MOX LR LR
comp=Z,2µm,18.0s,MS5.3
ROTZ Rotzenmuhle 67.76 316 *eP* **P 07 20 28.2 +0.1**
comp=Z,89nm,1.0s,mb5.8
ROTZ *e*S S 07 29 27.7 +1.2
ILAR Eielson Array 67.77 26 P **P 07 20 26.4 -1.5**
comp=Z,17nm,0.8s,mb5.1,baz=281,slow=5.6,SNR=85
ILAR PKPPKP 07 48 47.5
comp=Z,0.8nm,1.0s,baz=123,slow=4.9,SNR=6.9
ILAR LR LR 07 52 30.9
comp=Z,3µm,20.2s,MS5.5,baz=136,slow=38
NRDL Niedersach Rie 67.81 319 *eP* **P 07 20 27.7 -0.6**
comp=Z,103nm,1.0s,mb5.8
NRDL *e*S S 07 29 27.5 +0.5
LJU Ljubljana 67.90 311 *iP* **P 07 20 28.5 -0.5**
CLZ Clausthal 67.94 318 *eP* **P 07 20 29.2 0.0**
comp=Z,144nm,0.9s,mb6.0
KBA Koelnbreinsper 68.20 313⇓ *iP* **P 07 20 30.5 -0.4**

comp=Z,96nm,1.1s,mb5.7,SNR=21
MYKA Terra Mystica 68.21 312⇑ *iP* **P 07 20 30.3 -0.6**
comp=Z,21nm,0.9s,mb5.2
RJOB Jochberg 68.26 313 *eP* **P 07 20 31.4 +0.1**
comp=Z,33nm,1.1s,mb5.3
RJOB *e*S S 07 29 34.7 +2.2
HLG Helgoland 68.28 321 *eP* **P 07 20 32.3 +1.0**
comp=Z,194nm,0.9s,mb6.1
NVLJ Novalja 68.30 310 P **P 07 20 30.6 -1.0**
VOY Vojsko 68.30 311 *eP* **P 07 20 30.9 -0.7**
VOY *e* 07 21 13.0
CADS Cadrg 68.32 312 *iP* **P 07 20 30.5 -1.1**
GRF Grafenberg Arr 68.37 316 *eP* **P 07 20 32.0 +0.1**
comp=Z,139nm,0.9s,mb6.0
GRF *e*S S 07 29 32.5 -1.3
GRF *e*L 07 52 03.1
comp=Z,4µm,18.6s
GRF Grafenberg Arr 68.37 316 *eP* **P 07 20 32.0 +0.1**
GRF *e*S S 07 29 32.5 -1.3
GRF pmax pmax
comp=Z,139nm,0.9s,mb6.0
GRF MLR MLR
comp=Z,4µm,18.6s,MS5.6
SKDS Skadanscina 68.43 311 *i* P **P 07 20 31.1 -1.2**
SKDS *e*S S 07 29 35.1 +0.5
RC01 Rabbit Creek A 68.44 30 *eP* **P 07 20 31.5 -0.7**
comp=Z,34nm,0.7s,mb5.5
PMR Palmer 68.45 30 *eP* **P 07 20 30.6 -1.6**
PMR pmax pmax
comp=Z,149nm,1.6s,mb5.8
PMR Palmer 68.45 30 *eP* **P 07 20 30.6 -1.6**
comp=Z,149nm,1.6s,mb5.8
TRI Trieste 68.52 311 *eP* **P 07 20 31.4 -1.5**
TRI pmax pmax
comp=Z,83nm,0.9s,mb5.7
TRI MLR MLR
comp=Z,2µm,21.0s,MS5.3
TRI Trieste 68.52 311 *eP* **P 07 20 31.4 -1.5**
comp=Z,83nm,0.9s,mb5.7
TRI LR LR
comp=Z,2µm,21.0s,MS5.3
UBBA Unterbreizbach 68.59 317 *eP* **P 07 20 32.6 -0.7**
comp=Z,33nm,1.1s,mb5.2
UBBA *e*S S 07 29 37.5 +1.2
OHAK Old Harbor 68.66 35 *eP* **P 07 20 32.7 -0.9**
comp=Z,128nm,1.1s,mb5.8
KDAK Kodiak Island 68.74 34 P **P 07 20 33.0 -1.0**
comp=Z,604nm,0.8s,mb6.6,SNR=24
KDAK Kodiak Island 68.74 34 *iP* **P 07 20 33.5 -0.5**
KDAK Kodiak Island 68.74 34 PFAKE 07 20 50.0 +16
KDAK LR LR
comp=Z,5µm,21.0s,MS5.7
ABTA Abfaltersbach 68.86 313⇑ *iP* **P 07 20 33.6 -1.4**
comp=Z,24nm,0.9s,mb5.1,SNR=12
FUR Furstenfeldbru 69.00 314 *eP* **P 07 20 36.3 +0.4**
comp=Z,183nm,0.9s,mb6.0
FUR *e*S S 07 29 43.6 +2.3
SEW Seward 69.05 31 *eP* **P 07 20 34.8 -1.1**
comp=Z,77nm,0.9s,mb5.6
WTTA Wattenberg 69.18 313⇑ *iP* **P 07 20 36.7 -0.3**
comp=Z,97nm,1.0s,mb5.7,SNR=34
WATA Walderalm 69.18 313 ⇑P **P 07 20 37.0 0.0**
comp=Z,70nm,0.9s,mb5.6,SNR=11
IBBN Ibbenburen 69.19 319 *eP* **P 07 20 37.3 +0.4**
comp=Z,93nm,1.1s,mb5.6
PAX Paxson 69.23 28 *eP* **P 07 20 36.9 -0.1**
PAX pmax pmax
comp=Z,17nm,0.6s,mb5.2
PAX Paxson 69.23 28 *eP* **P 07 20 36.9 -0.1**
comp=Z,17nm,0.6s,mb5.2
MOTA Moosalm 69.47 314⇓ *iP* **P 07 20 38.7 -0.1**
comp=Z,93nm,1.0s,mb5.7,SNR=33
RETA Reutte 69.61 314⇑ *iP* **P 07 20 39.4 -0.3**
comp=Z,43nm,1.0s,mb5.3,SNR=13
TNS Taunus Mts 69.75 317 *eP* **P 07 20 40.7 +0.3**
comp=Z,57nm,0.9s,mb5.5
TNS *e*S S 07 29 53.2 +3.2
LRW Lerwick 69.80 329 P **P 07 20 40.3 -0.3**
LRW AMb AMB 07 20 43.7
comp=Z,60nm,0.9s,mb5.5
LRW AMS AMS 07 53 31.8
comp=Z,5µm,15.7s
LRW Lerwick 69.80 329 *eP* **P 07 20 40.3 -0.3**
LRW AMb AMB 07 20 43.7
comp=Z,60nm,0.9s,mb5.5
LRW AMS AMS 07 53 31.8
comp=Z,5µm,15.7s,MS5.8
TOD Tromm 69.82 317 *eP* **P 07 20 40.4 -0.5**
FETA Feichten 69.84 313⇓ *iP* **P 07 20 40.7 -0.4**
comp=Z,126nm,1.1s,mb5.8,SNR=65
EGAK Eagle 69.84 25 *eP* **P 07 20 39.8 -1.0**
comp=Z,31nm,0.9s,mb5.2
EGAK LR LR
comp=Z,2µm,20.0s,MS5.4
BUG Bochum--Univer 69.85 319 *eP* **P 07 20 41.3 +0.2**
comp=Z,85nm,1.0s,mb5.6
BUG *e*S S 07 29 53.4 +2.2
WTSB Winterswijk 69.87 319 *eP* **P 07 20 41.2 0.0**
comp=Z,77nm,0.9s,mb5.6
WAL1 Walls 69.92 330 P **P 07 20 40.8 -0.5**
WAL1 Walls 69.92 330 *eP* **P 07 20 40.8 -0.5**
MENT Mentasta 69.93 27 *eP* **P 07 20 40.9 -0.4**
STU Stuttgart 69.97 316 *eP* **P 07 20 41.5 -0.3**
comp=Z,77nm,0.9s,mb5.6
STU Stuttgart 69.97 316 *eP* **P 07 20 41.9 +0.1**
STU pmax pmax
comp=Z,67nm,0.8s,mb5.6
STU Stuttgart 69.97 316 *eP* **P 07 20 41.9 +0.1**
comp=Z,67nm,0.8s,mb5.6
DIV Divide 70.08 29 *eP* **P 07 20 42.2 -0.1**
comp=Z,54nm,0.9s,mb5.5
INK Inuvik 70.14 20 *eP* **P 07 20 42.1 -0.5**
INK pmax pmax
comp=Z,82nm,0.8s
INK Inuvik 70.14 20 *eP* **P 07 20 42.1 -0.4**
comp=Z,82nm,0.8s,mb5.7
AQU L'Aquila 70.22 308 *eP* **P 07 20 44.1 +0.6**
AQU pmax pmax
comp=Z,142nm,1.0s,mb5.8
AQU MLR MLR
comp=Z,2µm,19.0s,MS5.5
AQU L'Aquila 70.22 308 *eP* **P 07 20 44.0 +0.5**
comp=Z,142nm,1.0s,mb5.8
AQU LR LR
comp=Z,2µm,19.0s,MS5.5
AQU L'Aquila 70.22 308⇓ *iP* **P 07 20 44.7 +1.2**
DAVA Damuels 70.24 314⇓ *iP* **P 07 20 43.1 -0.4**
comp=Z,34nm,0.9s,mb5.3,SNR=9.4
CEL Celeste 70.35 303 *eP* **P 07 20 44.2 -0.1**
comp=Z,142nm,0.9s,mb5.9
CEL LR LR
comp=Z,1µm,22.0s,MS5.0
SCO Scoresbysund 70.40 344 *i* P **P 07 20 46.4 +2.3**
SCO pmax pmax
comp=Z,18nm,1.0s,mb5.0
SCO MLR MLR
comp=Z,1µm,19.0s,MS5.2
SCO Scoresbysund 70.40 344 *i* P **P 07 20 46.4 +2.3**
comp=Z,18nm,1.0s,mb5.0
SCO
comp=Z,1µm,19.0s
SPAK Spaichingen-Ko 70.52 315 *eP* **P 07 20 45.8 +0.6**
BMRM Bremner River 70.65 29 *eP* **P 07 20 46.0 +0.2**
comp=Z,194nm,0.9s,mb6.0
BFO Black Forest 70.68 315 P **P 07 20 46.1 -0.1**
comp=Z,229nm,0.9s,mb6.1,SNR=13
BFO Black Forest 70.68 315 *eP* **P 07 20 45.8 -0.4**
comp=Z,47nm,1.0s,mb5.4
BFO *e*S S 07 30 04.1 +3.0
BFO Black Forest 70.68 315 *eP* **P 07 20 46.1 -0.1**
BFO pmax pmax
comp=Z,38nm,0.9s,mb5.3
BFO MLR MLR
comp=Z,3µm,19.0s,MS5.5
BFO Black Forest 70.68 315 *eP* **P 07 20 46.1 -0.1**
comp=Z,38nm,0.9s,mb5.3
BFO LR LR
comp=Z,3µm,19.0s,MS5.5
LANF Langenberg 70.69 316 *eP* **P 07 20 45.8 -0.4**
RUP Ruppelstein 70.78 317 *eP* **P 07 20 46.4 -0.4**
DAWY Dawson 70.88 25 *eP* **P 07 20 46.5 -0.7**
HGN Heimansgroeve 70.91 319 *eP* **P 07 20 47.1 -0.5**
comp=Z,42nm,1.2s,mb5.2
MEM Membach 70.95 318 P **P 07 20 48.2 +0.4**
BEBN Eben Emael 71.04 319 P **P 07 20 48.3 0.0**
FELD Feldberg im Sc 71.09 315 *eP* **P 07 20 48.2 -0.5**

CDF Champ du Feu 71.27 316 *e*P **P 07 20 49.2 -0.6**
comp=Z,111nm,0.9s,mb5.5
CDF Champ du Feu 71.27 316 *e*P **P 07 20 49.2 -0.6**
CDF pmax pmax
comp=Z,55nm,0.9s,mb5.5
CDF Champ du Feu 71.27 316 *e*P **P 07 20 49.2 -0.6**
comp=Z,56nm,0.9s,mb5.5
WLF Walferdange 71.32 317 P **P 07 20 50.9 +0.9**
comp=Z,104nm,1.0s,mb5.7
WLF Walferdange 71.32 317 *e*P **P 07 20 50.3 +0.3**
comp=Z,166nm,0.9s,mb6.0
WLF Walferdange 71.32 317 *e*P **P 07 20 50.8 +0.8**
WLF pmax pmax
comp=Z,150nm,0.9s,mb5.9
WLF MLR MLR
comp=Z,2µm,19.0s,MS5.5
WLF Walferdange 71.32 317 *e*P **P 07 20 50.8 +0.7**
comp=Z,150nm,0.9s,mb5.9
WLF LR LR
comp=Z,2µm,19.0s,MS5.5
VLC Villacollemand 71.36 311 *e*P **P 07 20 51.6 +1.2**
comp=Z,92nm,0.9s,mb5.7
VLC LR LR
comp=Z,3µm,21.0s,MS5.5
ECH Echery 71.43 316 *e*P **P 07 20 50.3 -0.4**
ECH Echery 71.43 316 *e*P **P 07 20 50.4 -0.3**
ECH pmax pmax
comp=Z,38nm,0.9s,mb5.3
ECH MLR MLR
comp=Z,2µm,20.0s,MS5.3
ECH Echery 71.43 316 *e*P **P 07 20 50.4 -0.3**
comp=Z,38nm,0.9s,mb5.3
ECH LR LR
comp=Z,2µm,20.0s,MS5.3
BCLA Clavier 71.43 318 P **P 07 20 50.8 +0.1**
comp=Z,37nm,1.2s,mb5.2
BBS Basel-Blauen 71.58 315 *e*P **P 07 20 50.8 -0.9**
MOF Molkenrain 71.62 315 *e*P **P 07 20 51.9 0.0**
ORE Reay 71.76 329 P **P 07 20 52.5 -0.1**
ORE Reay 71.76 329 *e*P **P 07 20 52.5 -0.1**
HINF Hinteralfeld 71.80 315 *e*P **P 07 20 52.1 -0.9**
comp=Z,95nm,0.9s,mb5.4
HINF Hinteralfeld 71.80 315 *e*P **P 07 20 52.1 -0.9**
HINF pmax pmax
comp=Z,47nm,0.9s,mb5.4
HINF Hinteralfeld 71.80 315 *e*P **P 07 20 52.1 -0.9**
comp=Z,47nm,0.9s,mb5.4
GIVF Givet 71.86 318 *e*P **P 07 20 52.9 -0.4**
comp=Z,121nm,0.9s,mb5.5
GIVF Givet 71.86 318 *e*P **P 07 20 52.9 -0.4**
GIVF pmax pmax
comp=Z,60nm,0.9s,mb5.5
GIVF Givet 71.86 318 *e*P **P 07 20 52.9 -0.4**
comp=Z,60nm,0.9s,mb5.5
RES Resolute Bay 71.93 6 *e*P **P 07 20 53.2 -0.2**
RES pmax pmax
comp=Z,47nm,1.0s,mb5.4
RES Resolute Bay 71.93 6 *e*P **P 07 20 53.2 -0.2**
comp=Z,47nm,1.0s,mb5.4
SNF Seneffe 71.95 319 P **P 07 20 53.7 -0.2**
comp=Z,33nm,1.3s,mb5.1
DOU Dourbes 71.99 318 P **P 07 20 54.2 +0.1**
comp=Z,24nm,1.4s,mb4.9
HAU Haudompre 72.00 316 *e*P **P 07 20 53.4 -0.8**
comp=Z,31nm,0.7s,mb5.1
HAU *e*MLR MLR
comp=Z,3µm,18.8s,MS5.2
HAU Haudompre 72.00 316 *e*P **P 07 20 53.4 -0.8**
HAU pmax pmax
comp=Z,15nm,0.7s,mb5.0
HAU MLR MLR
comp=Z,3µm,18.8s,MS5.5
HAU Haudompre 72.00 316 *e*P **P 07 20 53.4 -0.8**
comp=Z,15nm,0.7s,mb5.0
HAU LR LR
comp=Z,3µm,18.8s,MS5.5
SUMG Summit 72.01 349 *e*P **P 07 20 53.9 +0.1**
comp=Z,77nm,1.0s,mb5.6
SUMG Summit 72.01 349 *i* P **P 07 20 53.8 0.0**
comp=Z,63nm,0.9s,mb5.5
SUMG
comp=Z,1µm,18.0s
LOMF Lomont 72.04 315 *e*P **P 07 20 53.8 -0.6**
MCD Coleburn Disti 72.06 328 P **P 07 20 53.8 -0.6**
MCD Coleburn Disti 72.06 328 *e*P **P 07 20 53.8 -0.6**
MME1 Meikle Cairn 72.08 327 P **P 07 20 53.8 -0.7**
MME1 Meikle Cairn 72.08 327⇑ *e*P **P 07 20 53.8 -0.7**
THEF They Montfort 72.11 316 *e*P **P 07 20 54.2 -0.6**
BAIF Baives 72.22 318 *e*P **P 07 20 55.2 -0.3**
comp=Z,117nm,1.1s,mb5.4
BAIF Baives 72.22 318 *e*P **P 07 20 55.2 -0.3**
BAIF pmax pmax
comp=Z,59nm,1.1s,mb5.4
BAIF Baives 72.22 318 *e*P **P 07 20 55.2 -0.3**
comp=Z,59nm,1.1s,mb5.4
MVH1 Achvaich 72.29 328 P **P 07 20 55.7 0.0**
MVH1 Achvaich 72.29 328 *e*P **P 07 20 55.7 0.0**
EIDS Eidsvold 72.29 137 *e*P **P 07 20 56.0 -0.1**
comp=Z,50nm,1.1s,mb5.4
WDD Wield Dalam 72.42 302 *e*P **P 07 20 56.6 -0.3**
comp=Z,216nm,0.8s,mb6.1
WDD LR LR
comp=Z,498nm,20.0s,MS4.8
RSC Scourie 72.49 329 P **P 07 20 56.0 -0.9**
RSC Scourie 72.49 329⇑ *e*P **P 07 20 56.0 -0.9**
KMBO Kilima Mbogo 72.50 257 P **P 07 20 58.6 +0.8**
comp=Z,30nm,1.0s,mb5.2,baz=2.1,slow=24,SNR=29
KMBO LR LR 07 54 16.2
comp=Z,1µm,20.6s,MS5.1,baz=87,slow=37
KMBO Kilima Mbogo 72.50 257 P **P 07 20 58.6 +0.9**
KMBO pmax pmax
comp=Z,30nm,1.0s
KMBO MLR MLR
comp=Z,1µm,20.6s
MEZF Maizieres J'vi 72.52 317 *e*P **P 07 20 56.8 -0.5**
comp=Z,137nm,1.0s,mb5.5
MEZF Maizieres J'vi 72.52 317 *e*P **P 07 20 56.8 -0.5**
comp=Z,137nm,1.0s,mb5.8
OG01 Vacheresse 72.62 314 *e*P **P 07 20 57.3 -0.7**
MDO Dochfour 72.64 328 P **P 07 20 56.8 -1.0**
MDO Dochfour 72.64 328 *e*P **P 07 20 56.8 -1.0**
ESY Stoneypath 72.68 326 P **P 07 20 57.7 -0.4**
ESY Stoneypath 72.68 326⇑ *e*P **P 07 20 57.7 -0.4**
STKA Stephens Creek 72.78 148 *e*P **P 07 20 58.1 -0.8**
comp=Z,27nm,0.9s,mb5.2
STKA Stephens Creek 72.78 148 P **P 07 20 58.2 -0.6**
comp=Z,26nm,1.0s,mb5.1,baz=341,slow=7.1,SNR=14
STKA Stephens Creek 72.78 148 *e*P **P 07 20 57.8 -1.0**
comp=Z,7.6nm,0.9s,mb4.6
CABF La Chapelle 72.84 315 *e*P **P 07 20 58.7 -0.6**
comp=Z,122nm,1.0s,mb5.5
CABF La Chapelle 72.84 315 *e*P **P 07 20 58.7 -0.6**
CABF pmax pmax
comp=Z,61nm,1.0s,mb5.5
CABF La Chapelle 72.84 315 *e*P **P 07 20 58.7 -0.6**
comp=Z,61nm,1.0s,mb5.5
ELO Logie Almond 72.89 327 P **P 07 20 58.8 -0.6**
ELO Logie Almond 72.89 327 *e*P **P 07 20 58.8 -0.6**
EBH Black Hill 72.92 327 P **P 07 20 59.3 -0.2**
EBH Black Hill 72.92 327 *e*P **P 07 20 59.3 -0.2**
EDI Edinburgh 72.95 326 P **P 07 20 59.0 -0.7**
EDI AMb AMB 07 20 59.8
comp=Z,39nm,1.5s,mb5.1
EDI Edinburgh 72.95 326 *e*P **P 07 20 59.0 -0.7**
EDI AMb AMB 07 20 59.8
comp=Z,39nm,1.5s,mb5.1
EBL Broad Law 72.96 326 P **P 07 20 59.3 -0.5**
EBL Broad Law 72.96 326⇑ *e*P **P 07 20 59.3 -0.5**
LPG La Plagne 72.99 313 *e*P **P 07 21 00.4 +0.3**
comp=Z,393nm,0.7s,mb6.1
LPG La Plagne 72.99 313 *e*P **P 07 21 00.4 +0.3**
LPG pmax pmax
comp=Z,197nm,0.7s,mb6.2
LPG La Plagne 72.99 313 *e*P **P 07 21 00.4 +0.3**
comp=Z,196nm,0.7s,mb6.2
LPL La Plagne 72.99 313 *e*P **P 07 21 00.4 +0.2**
comp=Z,333nm,0.8s,mb6.0
LPL La Plagne 72.99 313 *e*P **P 07 21 00.4 +0.2**
LPL pmax pmax
comp=Z,166nm,0.8s,mb6.0
LPL La Plagne 72.99 313 *e*P **P 07 21 00.4 +0.2**
comp=Z,166nm,0.8s,mb6.0
PGF Pioggiola 73.02 310 *e*P **P 07 21 00.2 -0.2**
comp=Z,358nm,1.0s,mb5.9
PGF Pioggiola 73.02 310 *e*P **P 07 21 00.2 -0.2**
PGF pmax pmax
comp=Z,179nm,1.0s,mb6.0
PGF Pioggiola 73.02 310 *e*P **P 07 21 00.2 -0.2**
comp=Z,179nm,1.0s,mb6.0
KAC Achnashellach 73.03 328 P **P 07 21 00.1 -0.1**
KAC Achnashellach 73.03 328 *e*P **P 07 21 00.1 -0.1**
RRR Rubha Reidh 73.05 329 P **P 07 20 59.4 -0.9**
RRR Rubha Reidh 73.05 329⇑ *e*P **P 07 20 59.4 -0.9**
MENF Mencas 73.10 320 *e*P **P 07 21 02.8 +2.1**
EAU Auchinoon 73.11 326 P **P 07 20 59.9 -0.8**
EAU Auchinoon 73.11 326⇑ *e*P **P 07 20 59.9 -0.8**
SAOF Saorge 73.23 312 *e*P **P 07 21 01.5 -0.1**
KSB Sheil Bridge 73.25 328 P **P 07 21 01.2 -0.2**
KSB Sheil Bridge 73.25 328⇑ *e*P **P 07 21 01.2 -0.2**
BNI Bardonecchia 73.25 313 *e*P **P 07 21 01.7 0.0**
BNI pmax pmax
comp=Z,101nm,1.0s,mb5.7
BNI MLR MLR
comp=Z,3µm,22.0s,MS5.5
BNI Bardonecchia 73.25 313 *e*P **P 07 21 01.7 0.0**
comp=Z,101nm,1.0s,mb5.7
BNI LR LR
comp=Z,3µm,22.0s,MS5.5
HPK Haverah Park 73.27 324 P **P 07 21 00.9 -0.8**
HPK AMb AMB 07 21 06.2
comp=Z,71nm,1.2s,mb5.5
HPK AMS AMS 07 56 50.4
comp=Z,2µm,14.6s
HPK Haverah Park 73.27 324⇑ *e*P **P 07 21 00.9 -0.8**
HPK AMb AMB 07 21 06.2
comp=Z,71nm,1.2s,mb5.5
HPK AMS AMS 07 56 50.4
comp=Z,2µm,14.6s,MS5.5
KPL Plockton 73.28 328 P **P 07 21 00.7 -0.9**
KPL AMb AMB 07 21 02.8
comp=Z,71nm,4.7s
KPL AMS AMS 07 55 38.1
comp=Z,3µm,14.3s
KPL Plockton 73.28 328 *e*P **P 07 21 00.7 -0.9**
KPL AMb AMB 07 21 02.8
comp=Z,71nm,4.7s
KPL AMS AMS 07 55 38.1
comp=Z,3µm,14.3s,MS5.7
ESK Eskdalemuir 73.29 326 P **P 07 21 01.5 -0.2**
comp=Z,169nm,0.8s,mb6.0,SNR=5.8
ESK Eskdalemuir 73.29 326 P **P 07 21 00.7 -1.1**
ESK AMb AMB 07 21 02.7
comp=Z,54nm,3.3s
ESK AMS AMS 07 56 33.2
comp=Z,1µm,15.0s
ESK Eskdalemuir 73.29 326 *e*P **P 07 21 00.7 -1.1**
ESK AMb AMB 07 21 02.7
comp=Z,54nm,3.3s
ESK AMS AMS 07 56 33.2
comp=Z,1µm,15.0s,MS5.4
ESK Eskdalemuir 73.29 326 *e*P **P 07 21 01.2 -0.5**
ESK pmax pmax
comp=Z,26nm,0.9s,mb5.2
ESK MLR MLR
comp=Z,2µm,20.0s,MS5.3
ESK Eskdalemuir 73.29 326 *e*P **P 07 21 01.2 -0.6**
comp=Z,26nm,0.9s,mb5.2
ESK LR LR
comp=Z,2µm,20.0s,MS5.3
AUTN L'Aution 73.31 312 *e*P **P 07 21 01.9 -0.2**
ECK Cauldkaine Hil 73.33 325 P **P 07 21 01.1 -0.9**
ECK Cauldkaine Hil 73.33 325⇑ *e*P **P 07 21 01.1 -0.9**
EAB Aberfoyle 73.34 327 P **P 07 21 01.3 -0.6**
EAB Aberfoyle 73.34 327⇑ *e*P **P 07 21 01.3 -0.6**
MBDF Montbardon 73.36 313 *e*P **P 07 21 01.7 -0.6**
comp=Z,84nm,0.7s,mb5.5
MBDF Montbardon 73.36 313 *e*P **P 07 21 01.7 -0.6**
MBDF pmax pmax
comp=Z,42nm,0.7s,mb5.5
MBDF Montbardon 73.36 313 *e*P **P 07 21 01.7 -0.6**
comp=Z,42nm,0.7s,mb5.5
SBF Sospel 73.37 312 *e*P **P 07 21 01.8 -0.6**
comp=Z,279nm,0.8s,mb5.9
SBF Sospel 73.37 312 *e*P **P 07 21 01.8 -0.6**
SBF pmax pmax
comp=Z,139nm,0.8s,mb5.9
SBF Sospel 73.37 312 *e*P **P 07 21 01.8 -0.6**
comp=Z,139nm,0.8s,mb5.9
RRH Rhenigidale 73.39 329 P **P 07 21 01.6 -0.6**
RRH Rhenigidale 73.39 329 *e*P **P 07 21 01.6 -0.6**
LUCF Luceram 73.41 312 *e*P **P 07 21 02.3 -0.4**
TOUF Mont Tournerai 73.42 312 *e*P **P 07 21 02.4 -0.3**
SURF Saint Ours 73.46 312 *e*P **P 07 21 02.3 -0.6**
PNL Peninsula 73.52 29 *e*P **P 07 21 03.8 +0.8**
comp=Z,123nm,0.8s,mb5.9
GDM Grand'Maison 73.53 313 *e*P **P 07 21 02.9 -0.4**
MVIF Mont Vial 73.53 312 *e*P **P 07 21 03.7 +0.3**
KAR1 Arisaig 73.60 328 P **P 07 21 03.2 -0.3**
KAR1 Arisaig 73.60 328⇑ *e*P **P 07 21 03.2 -0.3**
KBI1 Birley Grange 73.60 323 P **P 07 21 02.4 -1.2**
KBI1 Birley Grange 73.60 323 *e*P **P 07 21 02.4 -1.2**
PGBU Glenifferbraes 73.62 326 P **P 07 21 03.1 -0.5**
PGBU AMb AMB 07 21 03.9
comp=Z,84nm,1.9s,mb5.3
PGBU AMS AMS 07 56 23.0
comp=Z,2µm,16.7s
PGBU Glenifferbraes 73.62 326⇑ *e*P **P 07 21 03.1 -0.5**
PGBU AMb AMB 07 21 03.9
comp=Z,84nm,1.9s,mb5.3
PGBU AMS AMS 07 56 23.0
comp=Z,2µm,16.7s,MS5.5
KSK Scoval 73.67 329 P **P 07 21 03.6 -0.3**
KSK Scoval 73.67 329 *e*P **P 07 21 03.6 -0.3**
CALN Calern 73.77 312 *e*P **P 07 21 04.2 -0.6**
CWF Charnwood Fore 73.77 323 P **P 07 21 04.8 +0.1**
CWF AMb AMB 07 21 06.9
comp=Z,21nm,1.4s,mb4.9
CWF AMS AMS 07 56 05.4
comp=Z,3µm,16.0s
CWF Charnwood Fore 73.77 323 *e*P **P 07 21 04.8 +0.1**
CWF AMb AMB 07 21 06.9
comp=Z,21nm,1.4s,mb4.9
CWF AMS AMS 07 56 05.4
comp=Z,3µm,16.0s,MS5.7
ORIF Oris-en-Rattie 73.81 313 *e*P **P 07 21 04.7 -0.3**
comp=Z,185nm,0.8s,mb5.8
ORIF *e*MLR MLR
comp=Z,4µm,18.0s,MS5.4
ORIF Oris-en-Rattie 73.81 313 *e*P **P 07 21 04.7 -0.3**
ORIF pmax pmax
comp=Z,92nm,0.8s,mb5.8
ORIF Oris-en-Rattie 73.81 313 *e*P **P 07 21 04.7 -0.3**
comp=Z,92nm,0.8s,mb5.8
LOR Lormes 73.83 316 *e*P **P 07 21 03.9 -1.2**
comp=Z,42nm,0.8s,mb5.1
LOR *e*MLR MLR
comp=Z,2µm,23.0s,MS5.1
LOR Lormes 73.83 316 *e*P **P 07 21 03.9 -1.2**
LOR pmax pmax
comp=Z,21nm,0.8s,mb5.1
LOR MLR MLR
comp=Z,2µm,23.0s,MS5.4
LOR Lormes 73.83 316 *e*P **P 07 21 03.9 -1.2**
comp=Z,21nm,0.8s,mb5.1
LOR LR LR
comp=Z,2µm,23.0s,MS5.4
GCD Castle Douglas 73.90 325 P **P 07 21 04.7 -0.6**
GCD Castle Douglas 73.90 325 *e*P **P 07 21 04.7 -0.6**
OG25 Le Caire 73.97 313 *e*P **P 07 21 06.5 +0.6**
FRF La Foret Royal 74.02 312 *e*P **P 07 21 05.4 -0.8**
comp=Z,48nm,0.8s,mb5.2
FRF La Foret Royal 74.02 312 *e*P **P 07 21 05.4 -0.8**
FRF pmax pmax
comp=Z,24nm,0.8s,mb5.2
FRF La Foret Royal 74.02 312 *e*P **P 07 21 05.4 -0.8**
comp=Z,24nm,0.8s,mb5.2
SSF Saint Saulge 74.14 316 *e*P **P 07 21 05.9 -1.0**
comp=Z,50nm,0.8s,mb5.2
SSF Saint Saulge 74.14 316 *e*P **P 07 21 05.9 -1.0**
SSF pmax pmax
comp=Z,25nm,0.8s,mb5.2
SSF Saint Saulge 74.14 316 *e*P **P 07 21 05.9 -1.0**
comp=Z,25nm,0.8s,mb5.2
SMF Signal de Mont 74.16 315 *e*P **P 07 21 06.2 -0.8**
comp=Z,145nm,0.9s,mb5.6
SMF Signal de Mont 74.16 315 *e*P **P 07 21 06.2 -0.8**
SMF pmax pmax
comp=Z,73nm,0.9s,mb5.6
SMF Signal de Mont 74.16 315 *e*P **P 07 21 06.2 -0.8**
comp=Z,73nm,0.9s,mb5.6
LMR La Mourre 74.22 312 *e*P **P 07 21 06.7 -0.7**
comp=Z,73nm,0.7s,mb5.4
LMR La Mourre 74.22 312 *e*P **P 07 21 06.7 -0.7**
LMR pmax pmax
comp=Z,37nm,0.7s,mb5.4
LMR La Mourre 74.22 312 *e*P **P 07 21 06.7 -0.7**
comp=Z,37nm,0.7s,mb5.4
VSL Villasalto 74.26 307 *e*P **P 07 21 07.9 +0.2**
comp=Z,42nm,1.0s,mb5.3
VSL LR LR
comp=Z,795nm,20.0s,MS5.0
GAL1 Galloway 74.26 326 P **P 07 21 06.3 -1.2**
GAL1 AMb AMB 07 21 07.5
comp=Z,45nm,2.6s,mb4.9
GAL1 AMS AMS 07 56 48.2
comp=Z,2µm,15.8s
GAL1 Galloway 74.26 326⇑ *e*P **P 07 21 06.3 -1.2**
GAL1 AMb AMB 07 21 07.5
comp=Z,45nm,2.6s,mb4.9
GAL1 AMS AMS 07 56 48.2
comp=Z,2µm,15.8s,MS5.6
OCF Saint Nazaire 74.34 313 *e*P **P 07 21 07.8 -0.3**
OG26 St.-Nazaire-De 74.34 313 *e*P **P 07 21 07.8 -0.3**
AVF Avril sur Loir 74.38 316 *e*P **P 07 21 07.5 -0.8**
comp=Z,122nm,0.9s,mb5.5
AVF Avril sur Loir 74.38 316 *e*P **P 07 21 07.5 -0.8**
AVF pmax pmax
comp=Z,61nm,0.9s,mb5.5
AVF Avril sur Loir 74.38 316 *e*P **P 07 21 07.5 -0.8**
comp=Z,61nm,0.9s,mb5.5
SSB Saint Sauveur 74.45 314 *e*P **P 07 21 07.8 -0.9**
SSB Saint Sauveur 74.45 314 *e*P **P 07 21 08.6 -0.1**
SSB *e* 07 21 25.3
SSB pmax pmax
comp=Z,19nm,0.8s,mb5.1
SSB MLR MLR
comp=Z,1µm,20.0s,MS5.2
SSB Saint Sauveur 74.45 314 *e*P **P 07 21 08.6 -0.1**
comp=Z,19nm,0.8s,mb5.1
SSB *e*PcP PcP 07 21 25.3 +2.0
SSB LR LR
comp=Z,1µm,20.0s,MS5.2
SMRF Simiane la Rot 74.48 312 *e*P **P 07 21 08.6 -0.3**
comp=Z,106nm,1.2s,mb5.3
SMRF Simiane la Rot 74.48 312 *e*P **P 07 21 08.6 -0.3**
comp=Z,106nm,1.2s,mb5.6
WOL Wolverton 74.51 321 AMS AMS 07 57 55.0
comp=Z,2µm,14.9s,MS5.5
HYF Humbligny 74.54 316 *e*P **P 07 21 08.9 -0.3**
VIVF Saint-Julien-l 74.58 314 *e*P **P 07 21 08.9 -0.6**
comp=Z,84nm,0.9s,mb5.4
VIVF Saint-Julien-l 74.58 314 *e*P **P 07 21 08.9 -0.6**
VIVF pmax pmax
comp=Z,42nm,0.9s,mb5.4
VIVF Saint-Julien-l 74.58 314 *e*P **P 07 21 08.9 -0.6**
comp=Z,42nm,0.9s,mb5.4
PLDF La Plantade 74.64 315 *e*P **P 07 21 10.8 +1.0**
SWN1 Swindon 74.70 322 AMS AMS 07 58 38.1
comp=Z,2µm,15.8s,MS5.4
WPM1 Penmaenmawr 74.79 324 P **P 07 21 09.9 -0.6**
WPM1 Penmaenmawr 74.79 324 *e*P **P 07 21 09.9 -0.6**
BGF Bois d'Agland 74.79 316 *e*P **P 07 21 09.9 -0.8**
comp=Z,73nm,1.2s,mb5.2
BGF Bois d'Agland 74.79 316 *e*P **P 07 21 09.9 -0.8**
BGF pmax pmax
comp=Z,36nm,1.2s,mb5.2
BGF Bois d'Agland 74.79 316 *e*P **P 07 21 09.9 -0.8**
comp=Z,36nm,1.2s,mb5.2
COLF Collangettes 74.83 315 *e*P **P 07 21 12.1 +1.2**
AGO Saint Agoulin 74.89 315 *e*P **P 07 21 11.9 +0.6**
YLL Llanberis 74.99 324 P **P 07 21 11.5 -0.2**
YLL Llanberis 74.99 324⇑ *e*P **P 07 21 11.5 -0.2**
WLF1 Llynfaes 75.01 324 P **P 07 21 11.2 -0.6**
WLF1 AMb AMB 07 21 14.1
comp=Z,154nm,0.9s,mb5.9
WLF1 AMS AMS 08 00 56.1
comp=Z,5µm,14.8s
WLF1 Llynfaes 75.01 324⇑ *e*P **P 07 21 11.2 -0.6**
WLF1 AMb AMB 07 21 14.1
comp=Z,154nm,0.9s,mb5.9
WLF1 AMS AMS 08 00 56.1
comp=Z,5µm,14.8s,MS5.9
MCH1 Michaelchurch 75.05 323 P **P 07 21 10.8 -1.2**
MCH1 AMb AMB 07 21 16.5
comp=Z,58nm,1.3s,mb5.3
MCH1 AMS AMS 07 57 02.1
comp=Z,2µm,18.1s
MCH1 Michaelchurch 75.05 323 *e*P **P 07 21 10.8 -1.2**
MCH1 AMb AMB 07 21 16.5
comp=Z,58nm,1.3s,mb5.3
MCH1 AMS AMS 07 57 02.1
comp=Z,2µm,18.1s,MS5.5
PYM Petit Puy Mans 75.12 315 *e*P **P 07 21 13.1 +0.5**
YRC Rhoscolyn 75.12 324 P **P 07 21 12.3 -0.1**
YRC Rhoscolyn 75.12 324 *e*P **P 07 21 12.3 -0.1**
GMM Mts of Mourne 75.21 326 P **P 07 21 11.9 -1.1**
GMM Mts of Mourne 75.21 326 *e*P **P 07 21 11.9 -1.1**
LBL Lubilhac 75.25 314 *e*P **P 07 21 14.1 +0.7**
SKAG Skagway 75.26 27 *e*P **P 07 21 13.3 +0.1**
comp=Z,188nm,1.1s,mb5.9
TCF Toulx Ste Croi 75.31 316 *e*P **P 07 21 13.2 -0.5**
comp=Z,110nm,1.0s,mb5.5
TCF Toulx Ste Croi 75.31 316 *e*P **P 07 21 13.2 -0.5**
TCF pmax pmax
comp=Z,55nm,1.0s,mb5.4
TCF Toulx Ste Croi 75.31 316 *e*P **P 07 21 13.2 -0.5**
comp=Z,55nm,1.0s,mb5.4
LDF La Druitiere 75.40 319 *e*P **P 07 21 13.3 -0.9**
comp=Z,45nm,0.8s,mb5.1
LDF La Druitiere 75.40 319 *e*P **P 07 21 13.3 -0.9**
LDF pmax pmax
comp=Z,22nm,0.8s,mb5.1
LDF La Druitiere 75.40 319 *e*P **P 07 21 13.3 -0.9**
comp=Z,22nm,0.8s,mb5.2
LASF Ste Croix 75.49 313 *e*P **P 07 21 14.4 -0.3**
comp=Z,116nm,1.0s,mb5.5
FLN La Foliniere 75.51 319 *e*P **P 07 21 14.0 -0.8**
comp=Z,135nm,1.1s,mb5.5
FLN *e*MLR MLR
comp=Z,3µm,23.0s,MS5.2
FLN La Foliniere 75.51 319 *e*P **P 07 21 14.0 -0.8**
FLN pmax pmax
comp=Z,67nm,1.1s,mb5.5
FLN MLR MLR
comp=Z,3µm,23.0s,MS5.5
FLN La Foliniere 75.51 319 *e*P **P 07 21 14.0 -0.8**
comp=Z,67nm,1.1s,mb5.5
FLN LR LR
comp=Z,3µm,23.0s,MS5.5
ABPO Ambohimpanom 75.90 236 *e*P **P 07 21 16.9 -0.5**
ABPO pmax pmax
comp=Z,53nm,1.1s,mb5.4
ABPO MLR MLR
comp=Z,1µm,21.0s,MS5.2
ABPO Ambohimpanom 75.90 236 *e*P **P 07 21 16.9 -0.4**
comp=Z,53nm,1.1s,mb5.4
ABPO LR LR
comp=Z,1µm,21.0s,MS5.2
GRR Gorron 75.92 319 *e*P **P 07 21 16.5 -0.7**
comp=Z,90nm,0.8s,mb5.4
GRR Gorron 75.92 319 *e*P **P 07 21 16.5 -0.7**
GRR pmax pmax
comp=Z,45nm,0.8s,mb5.5
GRR Gorron 75.92 319 *e*P **P 07 21 16.5 -0.7**
comp=Z,45nm,0.8s,mb5.5
DSB Dublin 76.00 325 *e*P **P 07 21 17.4 -0.1**
comp=Z,28nm,0.8s,mb5.2
DLF Lyons Farm 76.05 325 *e*P **P 07 21 17.1 -0.7**
CAF Calviac 76.12 315 *e*P **P 07 21 18.3 -0.1**
comp=Z,44nm,0.8s,mb5.1
CAF Calviac 76.12 315 *e*P **P 07 21 18.3 -0.1**
CAF pmax pmax
comp=Z,22nm,0.8s,mb5.1
CAF Calviac 76.12 315 *e*P **P 07 21 18.3 -0.1**
comp=Z,22nm,0.8s,mb5.1
JSA Saint Aubin 76.20 320 AMS AMS 07 58 20.4
comp=Z,2µm,15.1s,MS5.5
RJF Les Rejaudoux 76.25 315 *e*P **P 07 21 19.0 -0.1**
comp=Z,123nm,1.1s,mb5.4
RJF *e*MLR MLR
comp=Z,2µm,19.2s,MS5.1
RJF Les Rejaudoux 76.25 315 *e*P **P 07 21 19.0 -0.1**
RJF pmax pmax
comp=Z,62nm,1.1s,mb5.5
RJF MLR MLR
comp=Z,2µm,19.3s,MS5.4
RJF Les Rejaudoux 76.25 315 *e*P **P 07 21 19.0 -0.1**
comp=Z,62nm,1.1s,mb5.5

RJF LR LR
comp=Z,2µm,19.3s,MS5.4
DCN Croghan 76.38 325 *eP* **P 07 21 19.2 -0.4**
HTL Hartland 76.39 322 AMS AMS 07 57 55.3
comp=Z,2µm,15.7s,MS5.6
DYA Yadsworthy 76.42 322 AMS AMS 07 58 08.7
comp=Z,3µm,14.6s,MS5.7
MFF Saint Martin d 76.51 317 *eP* **P 07 21 20.3 -0.2**
comp=Z,133nm,0.9s,mb5.6
MFF Saint Martin d 76.51 317 *eP* **P 07 21 20.3 -0.2**
MFF pmax pmax
comp=Z,67nm,0.9s,mb5.6
MFF Saint Martin d 76.51 317 *eP* **P 07 21 20.3 -0.2**
comp=Z,66nm,0.9s,mb5.6
ARMA Armidale 76.52 140 *eP* **P 07 21 20.9 +0.3**
SIT Sitka 76.84 29 *eP* **P 07 21 25.2 +3.0**
SIT pmax pmax
comp=Z,77nm,1.0s,mb5.6
SIT Sitka 76.84 29 *eP* **P 07 21 25.2 +3.0**
comp=Z,77nm,1.0s,mb5.6
MTLF Montolieu 76.89 313 *eP* **P 07 21 22.2 -0.5**
comp=Z,36nm,0.9s,mb5.0
MTLF Montolieu 76.89 313 *eP* **P 07 21 22.2 -0.5**
MTLF pmax pmax
comp=Z,18nm,0.9s,mb5.0
MTLF Montolieu 76.89 313 *eP* **P 07 21 22.2 -0.5**
comp=Z,18nm,0.9s,mb5.0
LRDF Laroque-de-Fa 76.91 313 *eP* **P 07 21 21.3 -1.5**
LFF La Frestale 76.91 315 *eP* **P 07 21 22.7 -0.1**
comp=Z,64nm,0.9s,mb5.3
LFF La Frestale 76.91 315 *eP* **P 07 21 22.7 -0.1**
LFF pmax pmax
comp=Z,32nm,0.9s,mb5.2
LFF La Frestale 76.91 315 *eP* **P 07 21 22.7 -0.1**
comp=Z,32nm,0.9s,mb5.2
SGMF Saint Gilles 76.94 319 *eP* **P 07 21 22.6 -0.3**
comp=Z,96nm,0.8s,mb5.5
SGMF Saint Gilles 76.94 319 *eP* **P 07 21 22.6 -0.3**
SGMF pmax pmax
comp=Z,48nm,0.8s,mb5.5
SGMF Saint Gilles 76.94 319 *eP* **P 07 21 22.6 -0.3**
comp=Z,48nm,0.8s,mb5.5
JOHN Johnston Islan 76.94 78 PFAKE 07 21 30.0 +6.6
JOHN LR LR
comp=Z,2µm,22.0s,MS5.4
EJON La Jonquera 76.95 312 P **P 07 21 22.7 -0.4**
comp=Z,49nm,1.3s,mb5.3
FILF Fillols 77.09 312 *eP* **P 07 21 23.8 -0.1**
CCA1 Carnmenellis 77.24 322 AMS AMS 07 58 32.6
comp=Z,2µm,17.2s,MS5.5
ROSF Rostrenen 77.28 320 *eP* **P 07 21 24.6 -0.2**
comp=Z,108nm,0.9s,mb5.5
ROSF Rostrenen 77.28 320 *eP* **P 07 21 24.6 -0.2**
ROSF pmax pmax
comp=Z,54nm,0.9s,mb5.5
ROSF Rostrenen 77.28 320 *eP* **P 07 21 24.6 -0.2**
comp=Z,54nm,0.9s,mb5.5
CARF Carcanieres 77.29 313 *eP* **P 07 21 24.2 -0.8**
QUIF Quistinic 77.47 319 *eP* **P 07 21 25.4 -0.5**
comp=Z,93nm,1.1s,mb5.3
QUIF Quistinic 77.47 319 *eP* **P 07 21 25.4 -0.5**
QUIF pmax pmax
comp=Z,47nm,1.1s,mb5.3
QUIF Quistinic 77.47 319 *eP* **P 07 21 25.4 -0.5**
comp=Z,46nm,1.1s,mb5.3
CLLI Llivia 77.50 313 P **P 07 21 27.1 +0.9**
VALF Valcebollere 77.52 312 *eP* **P 07 21 25.4 -0.9**
MBAR Mbarara 77.60 261 PFAKE 07 21 40.0 +13
MBAR LR LR
comp=Z,507nm,22.0s,MS4.8
CFON Fontmartina 77.61 312 P **P 07 21 27.7 +0.9**
comp=Z,68nm,0.9s,mb5.6
DLBC Dease Lake 77.98 26 *eP* **P 07 21 28.8 +0.3**
CSOR Sort 78.08 313 P **P 07 21 31.7 +2.3**
comp=Z,64nm,1.4s,mb5.4
EMIR Miracle 78.09 312 P **P 07 21 28.7 -0.8**
comp=Z,70nm,0.8s,mb5.6
EPF Esparros 78.20 314 *eP* **P 07 21 30.0 -0.1**
comp=Z,23nm,0.8s,mb4.8
EPF Esparros 78.20 314 *eP* **P 07 21 30.0 -0.1**
EPF pmax pmax
comp=Z,11nm,0.8s,mb4.8
EPF Esparros 78.20 314 *eP* **P 07 21 30.0 -0.1**
comp=Z,11nm,0.8s,mb4.8
RESF Ens 78.33 314 *eP* **P 07 21 31.2 +0.4**
ETOS Mallorca 78.45 310 P **P 07 21 34.1 +2.6**
comp=Z,110nm,1.6s,mb5.5
VIEF Viey 78.48 314 *eP* **P 07 21 31.9 +0.3**
EBIE Bielsa 78.52 314 P **P 07 21 33.9 +2.1**
comp=Z,32nm,1.6s,mb5.0
EPOB Poblet 78.68 312 P **P 07 21 33.7 +1.0**
comp=Z,57nm,1.0s,mb5.5
CRAG Craig 78.81 30 *eP* **P 07 21 33.5 +0.3**
comp=Z,48nm,1.1s,mb5.3
ETSF Etsaut 78.82 314 *eP* **P 07 21 33.6 +0.1**
comp=Z,65nm,1.0s,mb5.2
ETSF Etsaut 78.82 314 *eP* **P 07 21 33.6 +0.1**
ETSF pmax pmax
comp=Z,32nm,1.0s,mb5.2
ETSF Etsaut 78.82 314 *eP* **P 07 21 33.6 +0.1**
comp=Z,32nm,1.0s,mb5.2
LARF Larrau 79.00 314 *eP* **P 07 21 34.6 +0.1**
CAN Canberra 79.06 145 PFAKE 07 21 50.0 +15
CAN LR LR
comp=Z,1µm,19.0s,MS5.2
SJPF Ste Jean 79.10 314 *eP* **P 07 21 35.5 +0.5**
comp=Z,88nm,1.0s,mb5.3
SJPF Ste Jean 79.10 314 *eP* **P 07 21 35.5 +0.5**
SJPF pmax pmax
comp=Z,44nm,1.0s,mb5.3
SJPF Ste Jean 79.10 314 *eP* **P 07 21 35.5 +0.5**
comp=Z,44nm,1.0s,mb5.3
CNB Canberra Magne 79.23 145 *eP* **P 07 21 35.4 -0.2**
ELIZ Elizondo 79.26 315 P **P 07 21 38.8 +2.9**
ELIZ pmax pmax
comp=Z,32nm,1.1s,mb5.2
ELIZ Elizondo 79.26 315 P **P 07 21 38.8 +2.9**
comp=Z,32nm,1.1s,mb5.2
TOO Toolangi 79.29 149 *eP* **P 07 21 35.8 -0.1**
ERTA Horta de San J 79.37 312 P **P 07 21 38.0 +1.5**
comp=Z,74nm,1.4s,mb5.4
ESAC San Caprasio 79.44 313 P **P 07 21 37.8 +0.9**
comp=Z,276nm,2.4s,mb5.8
DZM Mont Dzumac 79.70 125 *eP* **P 07 21 40.4 +1.9**
DZM *e*LR LR 07 46 21.9
comp=Z,3µm,24.8s
DZM Mont Dzumac 79.70 125 *eP* **P 07 21 39.1 +0.6**
comp=Z,197nm,0.8s,mb6.1
YKA Yellowknife Ar 79.70 18 P **P 07 21 37.4 -0.5**
comp=Z,31nm,0.8s,mb5.3,baz=328,slow=4.9,SNR=60
YKA PKKPbc PKKPbc 07 40 21.9 -3.4
comp=Z,2.0nm,0.7s,baz=151,slow=2.0,SNR=12
EIBI Ibiza 79.81 310 P **P 07 21 41.7 +2.8**
comp=Z,52nm,1.7s,mb5.2
ECRI Cripan 80.17 315 P **P 07 21 43.0 +2.2**
ECRI pmax pmax
comp=Z,20nm,1.1s,mb5.0
ECRI Cripan 80.17 315 P **P 07 21 43.0 +2.1**
comp=Z,20nm,1.1s,mb5.0
EMOS Mosqueruela 80.21 312 P **P 07 21 43.0 +1.9**
comp=Z,89nm,1.2s,mb5.6
ELAN Lanestosa 80.35 315 P **P 07 21 44.7 +2.9**
comp=Z,117nm,1.3s,mb5.7
ETOR Torete 80.93 313 P **P 07 21 45.5 +0.5**
ETOR pmax pmax
comp=Z,16nm,0.9s,mb5.0
ETOR Torete 80.93 313 P **P 07 21 45.5 +0.5**
comp=Z,16nm,0.9s,mb5.0
ECHE Chera 80.96 311 P **P 07 21 45.6 +0.4**
ECHE pmax pmax
comp=Z,32nm,1.1s,mb5.2
ECHE Chera 80.96 311 P **P 07 21 45.6 +0.4**
comp=Z,32nm,1.1s,mb5.2
FUNA Funafuti 81.06 106 PFAKE 07 22 00.0 +14
FUNA LR LR
comp=Z,5µm,21.0s,MS5.9
EARI Arriondas 81.35 316 P **P 07 21 49.9 +2.7**
comp=Z,307nm,3.5s
ETOB Tobarra 81.88 311 P **P 07 21 51.2 +1.2**
comp=Z,71nm,1.6s,mb5.3
EMUR La Murta 82.15 310 P **P 07 21 53.7 +2.2**
comp=Z,59nm,1.3s,mb5.4
GUD Guadarrama 82.32 314 P **P 07 21 52.8 +0.5**
GUD pmax pmax
comp=Z,64nm,1.9s,mb5.2
GUD Guadarrama 82.32 314 P **P 07 21 52.8 +0.5**
comp=Z,64nm,1.9s,mb5.2
EVIA Vianos 82.49 311 P **P 07 21 54.8 +1.6**
EVIA pmax pmax
comp=Z,21nm,0.7s,mb5.2
EVIA Vianos 82.49 311 P **P 07 21 54.8 +1.6**
comp=Z,21nm,0.7s,mb5.2
ESDC Sonseca Array 82.79 313 P **P 07 21 55.2 +0.4**
comp=Z,8.5nm,0.7s,mb4.9,baz=43,slow=5.2,SNR=23
ESDC LR LR 08 01 09.3
comp=Z,834nm,20.4s,MS5.1,baz=35,slow=37
ESDC Sonseca Array 82.79 313 P **P 07 21 54.6 -0.2**
comp=Z,14nm,0.8s,mb5.0
ESLA Sonseca Array 82.79 313 *eP* **P 07 21 55.5 +0.7**
comp=Z,1.9nm,0.8s,mb4.2
ESLA LR LR
comp=Z,6µm,19.0s,MS6.0
EHUE Huescar 83.03 311 P **P 07 21 56.2 +0.1**
EHUE pmax pmax
comp=Z,17nm,1.0s,mb5.0
EHUE Huescar 83.03 311 P **P 07 21 56.2 +0.1**
comp=Z,17nm,1.0s,mb5.0
ECAL Calabor 83.07 316 P **P 07 22 00.0 +3.8**
comp=Z,95nm,2.0s,mb5.5
PAB San Pablo 83.10 313 *eP* **P 07 21 56.5 +0.1**
PAB pmax pmax
comp=Z,16nm,1.0s,mb5.0
PAB MLR MLR
comp=Z,1µm,19.0s,MS5.3
PAB San Pablo 83.10 313 *eP* **P 07 21 56.5 +0.1**
comp=Z,16nm,1.0s,mb5.0
PAB LR LR
comp=Z,1µm,19.0s,MS5.3
PBRG Braganca 83.16 316 *eP* **P 07 21 57.0 +0.3**
comp=Z,34nm,1.4s,mb5.2
EQES Quesada 83.34 311 P **P 07 22 00.1 +2.4**
comp=Z,77nm,1.0s,mb5.7
EBAN Banos Encina 83.58 312 P **P 07 21 59.2 +0.3**
EBAN pmax pmax
comp=Z,14nm,0.7s,mb5.2
EBAN Banos Encina 83.58 312 P **P 07 21 59.2 +0.3**
comp=Z,14nm,0.7s,mb5.2
MVO Moncorvo 83.73 315 *eP* **P 07 22 00.4 +0.8**
comp=Z,40nm,1.1s,mb5.5
MVO *e*S S 07 32 23.8 +0.6
MVO *e*LQ 07 55 10.9
MVO *e*LR LR 08 00 06.5
comp=Z,992nm,20.0s
MVO Moncorvo 83.73 315 P **P 07 22 00.8 +1.1**
KIP Kipapa 83.80 69 PFAKE 07 22 10.0 +10
KIP LR LR
comp=Z,1µm,21.0s,MS5.2
EPLA Plasencia 83.84 314 P **P 07 22 00.9 +0.7**
EPLA pmax pmax
comp=Z,39nm,1.1s,mb5.5
EPLA Plasencia 83.84 314 P **P 07 22 00.9 +0.7**
comp=Z,39nm,1.1s,mb5.5
ELOB Lobios 83.89 317 P **P 07 22 03.5 +3.1**
comp=Z,52nm,1.9s,mb5.3
PCAB Cabril 83.97 316 *eP* **P 07 22 02.2 +1.4**
comp=Z,67nm,1.3s,mb5.6
EADA Adamuz 84.08 312 P **P 07 22 00.7 -0.8**
comp=Z,137nm,2.4s,mb5.7
MTE Manteigas 84.51 315 *eP* **P 07 22 03.8 +0.2**
comp=Z,51nm,1.4s,mb5.5
MTE *e*S S 07 32 31.7 +0.6
MTE *e*LQ 07 53 57.3
MTE *e*LR LR 08 00 11.4
comp=Z,963nm,20.0s
MTE Manteigas 84.51 315 *eP* **P 07 22 03.8 +0.2**
comp=Z,42nm,1.3s,mb5.4
MTE LR LR
comp=Z,1µm,19.0s,MS5.3
PVIS Viseu 84.52 316 *eP* **P 07 22 04.9 +1.2**
comp=Z,56nm,1.7s,mb5.4
ECAB El Cabril 84.66 312 P **P 07 22 06.8 +2.4**
comp=Z,31nm,0.9s,mb5.4
PCBR Castelo Branco 84.82 315 *eP* **P 07 22 08.5 +3.3**
comp=Z,31nm,1.2s,mb5.3
PMRV Marv??o 85.03 314 *eP* **P 07 22 06.8 +0.6**
comp=Z,40nm,1.6s,mb5.3
PMRV *e*S S 07 32 38.5 +2.2
PMRV *e*LQ 07 55 48.3
PMRV *e*LR LR 07 58 23.3
comp=Z,1µm,18.0s
EMIJ Mijas 85.17 311 P **P 07 22 06.4 -0.6**
comp=Z,25nm,0.8s,mb5.4
EBAD Badajoz 85.22 314 P **P 07 22 09.2 +2.0**
comp=Z,42nm,1.4s,mb5.4
PESTR Estremoz 85.50 314 *eP* **P 07 22 11.7 +3.1**
comp=Z,31nm,1.4s,mb5.3
PESTR *e*S S 07 32 45.9 +4.9
PESTR *e*LQ 07 55 25.7
PESTR *e*LR LR 07 58 46.7
comp=Z,1µm,20.0s
MSVF Nonsavu 85.51 114 *eP* **P 07 22 09.7 +0.9**
comp=Z,36nm,0.8s,mb5.7
PBAR Barrancos 85.60 313 *eP* **P 07 22 09.0 -0.1**
comp=Z,37nm,1.3s,mb5.5
PBAR *e*S S 07 32 44.3 +2.4
PBAR *e*LQ 07 55 16.8
PBAR *e*LR LR 07 58 27.3
comp=Z,1µm,16.0s
EMIN Mina Concepcio 85.63 313 P **P 07 22 11.7 +2.4**
comp=Z,70nm,1.4s,mb5.7
ESPR Espera 85.67 312 P **P 07 22 10.8 +1.3**
comp=Z,95nm,2.2s,mb5.6
TAM Tamanrasset 85.86 294 *eP* **P 07 22 10.9 +0.2**
TAM pmax pmax
comp=Z,22nm,0.9s,mb5.4
TAM MLR MLR
comp=Z,1µm,20.0s,MS5.2
TAM Tamanrasset 85.86 294 *eP* **P 07 22 10.9 +0.2**
comp=Z,22nm,0.9s,mb5.4
TAM LR LR
comp=Z,1µm,20.0s,MS5.2
EVO Evora 85.97 314 *eP* **P 07 22 11.3 +0.3**
comp=Z,26nm,0.8s,mb5.2
EVO *e*MLR MLR
comp=Z,2µm,21.8s,MS5.2
EVO Evora 85.97 314 *eP* **P 07 22 11.4 +0.4**
comp=Z,50nm,1.1s,mb5.7
EVOP Sao Brissos 86.04 314 *eP* **P 07 22 10.5 -0.8**
EVOP *e*SS SS 07 38 24.8 +1.6
EVOP AMS AMS 08 03 20.8
comp=Z,1µm,21.5s,MS5.2
EVOP Sao Brissos 86.04 314 *eP* **P 07 22 10.4 -0.9**
EVOP *e*SS SS 07 38 24.7 +1.6
SFS San Fernando 86.14 311 PFAKE 07 22 20.0 +8.1
SFS LR LR
comp=Z,2µm,19.0s,MS5.6
PBEJ Beja 86.20 313 *eP* **P 07 22 12.9 +0.8**
comp=Z,48nm,1.5s,mb5.5
PMAFR Mafra 86.46 315 *eP* **P 07 22 15.7 +2.3**
comp=Z,89nm,1.3s,mb5.8
PMAFR *e*S S 07 32 53.2 +2.8
PMAFR *e*LQ 07 54 47.9
PMAFR *e*LR LR 07 57 53.5
comp=Z,846nm,20.0s
PVAQ Vaqueiros 86.50 313 *eP* **P 07 22 13.8 +0.2**
comp=Z,54nm,1.5s,mb5.6
PVAQ *e*S S 07 32 52.0 +1.2
PVAQ *e*LR LR 07 58 23.3
comp=Z,1µm,18.0s
MESJ Messejana 86.53 313 *eP* **P 07 22 13.1 -0.7**
MESJ *e*SS SS 07 38 29.9 -0.6
MESJ AMS AMS 07 58 40.2
comp=N,1µm,14.7s
MESJ Messejana 86.53 313 *eP* **P 07 22 13.1 -0.7**
MESJ *e*SS SS 07 38 29.9 -0.5
MESJ Messejana 86.53 313 *eP* **P 07 22 13.1 -0.7**
MESJ *e*SS SS 07 38 29.8 -0.6
LIS Lisbon 86.54 315 *eP* **P 07 22 13.4 -0.3**
LIS *e*SS SS 07 38 28.0 -2.4
LIS *e*SS SS 07 38 30.9 +0.5
LIS AMS AMS 08 05 58.4
comp=Z,1µm,20.3s,MS5.4
LIS Lisbon 86.54 315 *eP* **P 07 22 13.4 -0.4**
LIS *e*SS SS 07 38 28.0 -2.4
LIS A 08 05 58.4
comp=Z,1µm,20.3s
LIS Lisbon 86.54 315 *eP* **P 07 22 13.4 -0.4**
LIS *e*SS SS 07 38 28.0 -2.4
PCVE Castro Verde 86.56 313 *eP* **P 07 22 13.9 0.0**
comp=Z,63nm,1.3s,mb5.7
PCVE *e*S S 07 32 50.6 -0.7
PCVE *e*LQ 07 55 51.0
PCVE *e*LR LR 07 58 54.9
comp=Z,1µm,18.0s
POHA Pohakuloa 86.65 69 PFAKE 07 22 30.0 +15
POHA LR LR
comp=Z,1µm,22.0s,MS5.2
PBDV Barranco-do-Ve 86.73 313 *eP* **P 07 22 17.3 +2.5**
comp=Z,81nm,1.4s,mb5.8
PBDV *e*S S 07 32 54.3 +1.2
PBDV *e*LQ 07 52 36.7
PBDV *e*LR LR 07 56 45.3
comp=Z,1µm,18.0s
PTEO Sao Teotonio 87.03 313 *eP* **P 07 22 18.2 +2.0**
comp=Z,67nm,1.4s,mb5.7
MORF Marmelete 87.14 313 *eP* **P 07 22 20.1 +3.4**
comp=Z,67nm,1.1s,mb5.8
MORF *e*LQ 07 56 32.2
MORF *e*LR LR 07 59 23.3
comp=Z,992nm,20.0s
MORF Marmelete 87.14 313 *eP* **P 07 22 16.0 -0.7**
MORF *e*SS SS 07 38 39.0 -0.3
FCC Fort Churchill 87.31 10 *eP* **P 07 22 16.4 -0.7**
comp=Z,2.4nm,1.0s,mb4.4
PFVI Vila Bisbo 87.36 313 *eP* **P 07 22 20.7 +2.9**
comp=Z,112nm,1.5s,mb5.9
PFVI *e*LQ 07 56 37.2
PFVI *e*LR LR 07 58 53.2
comp=Z,1µm,18.0s
PGC Sidney 87.86 30 *eP* **P 07 22 20.2 +0.3**
comp=Z,1.4nm,1.0s,mb4.2
EDM Edmonton 87.89 22 *eP* **P 07 22 19.9 -0.1**
LSZ Lusaka 87.91 250 PFAKE 07 22 30.0 +9.4
LSZ LR LR
comp=Z,1µm,21.0s,MS5.2
A05A Maple Falls 88.16 29 ⇑P **P 07 22 20.6 -0.8**
baz=88
CMW Cultus Mountai 88.60 30 P **P 07 22 24.1 +0.7**
NLWA Neilton Lookou 88.65 31 ⇓P **P 07 22 24.6 +0.8**
baz=88,SNR=8.4
NLWA Neilton Lookou 88.65 31 *eP* **P 07 22 24.6 +0.9**
comp=Z,28nm,1.0s,mb5.5
NLWA LR LR
comp=Z,2µm,21.0s,MS5.5
B06A Marblemount 88.78 29 ⇑P **P 07 22 24.2 -0.2**
baz=88
RPW Rockport 88.83 29 *eP* **P 07 22 24.2 -0.3**
comp=Z,9.3nm,0.7s,mb5.2
JCW Jim Creek 88.86 30 P **P 07 22 25.0 +0.3**
E03A Lebam 89.44 31 ⇓P **P 07 22 28.3 +0.8**
baz=89,SNR=7.3
D05A Enumclaw 89.62 30 ⇑P **P 07 22 28.8 +0.6**
baz=89,SNR=12
FFC Flin Flon 89.66 16 P **P 07 22 27.0 -1.3**
comp=Z,314nm,1.0s,mb6.6,SNR=22
FFC Flin Flon 89.66 16 *eP* **P 07 22 27.6 -0.7**
FFC pmax pmax
comp=Z,52nm,0.9s,mb5.9
FFC MLR MLR
comp=Z,2µm,22.0s,MS5.5
FFC Flin Flon 89.66 16 *eP* **P 07 22 27.6 -0.7**
comp=Z,52nm,0.9s,mb5.9
FFC LR LR
comp=Z,2µm,22.0s,MS5.5
B08A Colville Reser 89.78 28 ⇑P **P 07 22 29.1 +0.1**
baz=90
F03A Seaside 89.92 32 ⇓P **P 07 22 30.7 +1.0**
baz=90,SNR=9.2
ETW Entiat 89.98 29 *eP* **P 07 22 30.4 +0.4**
comp=Z,61nm,1.1s,mb5.8
LON Longmire 90.04 30 *eP* **P 07 22 29.9 -0.4**
LON pmax pmax
comp=Z,12nm,0.8s,mb5.3
LON Longmire 90.04 30 *eP* **P 07 22 29.9 -0.3**
comp=Z,12nm,0.8s,mb5.3
WTV Waterville 90.06 29 P **P 07 22 30.9 +0.5**
WPW White Pass 90.19 30 P **P 07 22 32.0 +1.1**
HEBO Mount Hebo 90.38 32 *eP* **P 07 22 33.6 +1.7**
comp=Z,117nm,1.2s,mb6.1
F04A Amboy 90.42 31 ⇑P **P 07 22 32.6 +0.5**
baz=90,SNR=25
MTMW Mount Mitchell 90.43 31 P **P 07 22 33.1 +1.0**
C09A Chrisman Ranch 90.65 28 ⇑P **P 07 22 33.4 +0.3**
baz=90,SNR=22
A12A Yaak River Ran 90.71 26 ⇑P **P 07 22 34.1 +0.8**
baz=90
NEW Newport 90.72 27 *eP* **P 07 22 33.8 +0.4**
NEW pmax pmax
comp=Z,30nm,1.0s
NEW MLR MLR
comp=Z,2µm,22.0s
NEW Newport 90.72 27 *eP* **P 07 22 33.8 +0.4**
comp=Z,30nm,1.0s,mb5.6
NEW LR LR
comp=Z,2µm,22.0s,MS5.6
OD2 Odessa Site #2 90.81 28 *eP* **P 07 22 33.9 +0.1**
comp=Z,36nm,1.1s,mb5.6
G04A Mulino 90.96 32 ⇑P **P 07 22 35.1 +0.5**
baz=91,SNR=32
D08A Wollman Farm, 90.99 29 ⇓P **P 07 22 35.0 +0.3**
baz=91,SNR=13
E07A Sunnyside 91.01 29 ⇑P **P 07 22 35.4 +0.7**
baz=91,SNR=11
COR Corvallis 91.07 33 *eP* **P 07 22 35.7 +0.6**
COR pmax pmax
comp=Z,51nm,0.8s,mb5.9
COR MLR MLR
comp=Z,1µm,20.0s,MS5.3
COR Corvallis 91.07 33 *eP* **P 07 22 35.7 +0.6**
comp=Z,51nm,0.8s,mb5.9
COR LR LR
comp=Z,1µm,20.0s,MS5.3
B12A Libby 91.12 26 ⇓P **P 07 22 35.7 +0.4**
baz=91
A13A Flathead Natio 91.16 25 ⇑P **P 07 22 35.8 +0.4**
baz=91
WALA Waterton Lakes 91.23 25 *eP* **P 07 22 35.8 +0.1**
comp=Z,0.8nm,0.9s,mb4.0
WALA *e*PP PP 07 26 12.6 +0.8
RSW Rattlesnake Hi 91.25 29 *eP* **P 07 22 36.8 +0.9**
comp=Z,57nm,1.0s,mb5.9
HAWA Hanford 91.28 29 *eP* **P 07 22 36.6 +0.6**
comp=Z,30nm,0.9s,mb5.6
HAWA LR LR
comp=Z,2µm,21.0s,MS5.4
AFI Afiamalu 91.39 106 PFAKE 07 22 50.0 +13
AFI LR LR
comp=Z,897nm,19.0s,MS5.2
E08A Dider Farm, El 91.39 29 ⇑P **P 07 22 37.0 +0.4**
baz=91
C11A Tepee Creek (N 91.39 27 ⇓P **P 07 22 37.4 +0.9**
baz=91
A14A Double T Ranch 91.48 25 ⇑P **P 07 22 37.0 +0.1**
baz=91
H04A Detroit Lake 91.49 32 ⇓P **P 07 22 37.3 +0.3**
baz=91,SNR=18
B13A Whitefish 91.61 25 ⇓P **P 07 22 38.4 +0.9**
baz=91
A15A Johnson Ranch, 91.71 24 ⇑P **P 07 22 37.9 -0.1**
baz=91
G06A Carlson Farm, 91.74 31 ⇓P **P 07 22 39.1 +0.9**
baz=91,SNR=12
E09A Wood Farm, Sta 91.75 29 ⇑P **P 07 22 38.7 +0.5**
baz=91,SNR=15
C12B Naegeli Ranch, 91.80 26 ⇑P **P 07 22 38.8 +0.4**
baz=92
BSMT Bassoo Peak 91.93 26 *eP* **P 07 22 39.9 +0.9**
comp=Z,14nm,0.9s,mb5.3
B14A Marquette Ranc 92.05 25 ⇓P **P 07 22 39.7 +0.1**
baz=92
A16A West Butte Ran 92.12 23 ⇑P **P 07 22 39.6 -0.2**
baz=92
C13A Hot Springs 92.16 26 ⇓P **P 07 22 40.7 +0.6**
baz=92,SNR=28
JTMT Jette 92.21 26 *eP* **P 07 22 40.9 +0.6**
comp=Z,12nm,0.9s,mb5.2
YBMT Yellow Bay 92.21 25 *eP* **P 07 22 41.4 +1.1**
comp=Z,11nm,0.9s,mb5.2
LNOR Lincton Mounta 92.21 29 *eP* **P 07 22 40.9 +0.5**
LNOR pmax pmax
comp=Z,9.0nm,0.8s,mb5.2
LNOR Lincton Mounta 92.21 29 *eP* **P 07 22 40.9 +0.6**
comp=Z,8.6nm,0.8s,mb5.1
VIPM Ingram Point 92.32 31 P **P 07 22 41.9 +1.0**
B15A Bradely Ranch, 92.34 24 ⇓P **P 07 22 40.4 -0.5**
baz=92,SNR=19
C14A Swan Lake 92.38 25 ⇓P **P 07 22 41.6 +0.5**
baz=92
D12A Red Ives Fores 92.39 27 ⇓P **P 07 22 41.2 0.0**

baz=92
G08A Pilot Rock 92.40 30 ⇑P P 07 22 41.7 +0.5
baz=92,SNR=8.7
A17A Triple J Farms 92.42 23 ⇑P P 07 22 40.9 -0.4
baz=92
SCHQ Schefferville 92.48 356 P P 07 22 40.4 -1.0
comp=Z,37nm,0.9s,mb5.7,baz=36,slow=5.0,SNR=27
SCHQ LR LR 08 09 18.8
comp=Z,1µm,20.1s,MS5.3,baz=0.3,slow=39
SCHQ Schefferville 92.48 356 *e*P **P 07 22 40.8 -0.6**
comp=Z,31nm,0.8s,mb5.7
SCHQ LR LR
comp=Z,1µm,21.0s,MS5.4
SWMT Swartz Lake 92.51 26 *e*P **P 07 22 42.1 +0.4**
comp=Z,12nm,1.0s,mb5.3
F10A Beach Ranch, E 92.56 28 ⇑P P 07 22 42.2 +0.2
baz=92,SNR=20
D13A Huson 92.69 26 ⇓P P 07 22 42.0 -0.5
baz=92,SNR=7.6
A18A Metzger Ranch, 92.72 22 ⇑P P 07 22 42.4 -0.3
baz=92
HUMO Hull Mountain 92.76 34 *e*P **P 07 22 42.0 -0.9**
comp=Z,19nm,1.0s,mb5.5
HUMO *e*PP PP 07 26 22.7 -1.3
HUMO LR LR
comp=Z,2µm,22.0s,MS5.5
SLMT Seeley Lake 92.92 25 *e*P **P 07 22 43.6 0.0**
comp=Z,21nm,0.8s,mb5.6
B17A L&G Farms, Che 92.96 23 ⇓P P 07 22 43.6 -0.1
baz=93,SNR=12
D14A Greenough 93.05 26 ⇓P P 07 22 43.9 -0.3
baz=93,SNR=18
C16A Fuhringer Ranc 93.06 24 ⇑P P 07 22 43.7 -0.5
baz=93,SNR=22
MSO Missoula 93.11 26 *e*P **P 07 22 44.4 -0.1**
comp=Z,9.2nm,0.9s,mb5.2
MSO *e*PP PP 07 26 27.4 +0.8
MSO LR LR
comp=Z,2µm,20.0s,MS5.6
I07A Izee 93.14 31 ⇓P P 07 22 45.7 +1.0
baz=93
B18A Beardsley Farm 93.20 23 ⇓P P 07 22 44.4 -0.5
baz=93
CHMT Chamberlain Mo 93.28 25 *e*P **P 07 22 45.0 -0.3**
comp=Z,4.2nm,0.8s,mb4.9
CHMT *e*PP PP 07 26 27.1 -0.9
E13A Victor 93.34 26 ⇓P P 07 22 45.1 -0.4
baz=93,SNR=28
BMO Blue Mountains 93.44 29 *e*P **P 07 22 45.9 -0.1**
comp=Z,6.2nm,0.9s,mb5.0
BMO LR LR
comp=Z,2µm,21.0s,MS5.5
F12A Elk City 93.51 27 ⇑P P 07 22 45.8 -0.5
baz=93,SNR=19
EGMT Eagleton 93.53 23 ⇓P P 07 22 46.1 -0.3
baz=93,SNR=14
EGMT Eagleton 93.53 23 *e*P **P 07 22 46.2 -0.2**
comp=Z,17nm,0.8s,mb5.5
EGMT LR LR
comp=Z,2µm,21.0s,MS5.6
YBH Yreka Blue Hor 93.55 34 PFAKE 07 23 00.0 +13
YBH LR LR
comp=Z,1µm,22.0s,MS5.2
K05A Summer Lake 93.61 32 ⇑P P 07 22 47.8 +1.0
baz=93
E14A Clinton 93.62 26 ⇑P P 07 22 46.7 -0.2
baz=93,SNR=5.1
D16A Dana Ranch, Ca 93.79 24 ⇑P P 07 22 47.6 -0.1
baz=94,SNR=20
F13A Darby 93.83 27 ⇓P P 07 22 47.3 -0.6
baz=94,SNR=19
E15A Deer Lodge 93.92 25 ⇓P P 07 22 48.0 -0.2
baz=94,SNR=17
HRY Holter Researc 93.97 25 *e*P **P 07 22 49.0 +0.6**
comp=Z,17nm,0.8s,mb5.5
D17A Six Diamond Ra 93.98 24 ⇑P P 07 22 48.1 -0.4
baz=94,SNR=15
J08A Circle Bar Ran 94.17 31 ⇓P P 07 22 49.7 +0.3
baz=94
F14A Wisdom 94.18 26 ⇑P P 07 22 49.3 -0.1
baz=94
D18A Linhart Farms, 94.24 23 ⇑P P 07 22 49.5 -0.2
baz=94
TOA0 Torodi Ar. Sit 94.29 288 *e*P **P 07 22 49.4 -1.0**
TORD Torodi Ar. Bea 94.29 288 P P 07 22 49.8 -0.7
comp=Z,5.2nm,0.7s,mb5.0,baz=36,slow=2.5,SNR=23
TORD LR LR 08 10 32.7
comp=Z,1µm,20.1s,MS5.3,baz=255,slow=39
G13A Cobalt 94.46 27 ⇓P P 07 22 50.6 -0.1
baz=94,SNR=6.2
F15A Butte 94.47 26 ⇓P P 07 22 50.6 -0.2
baz=94,SNR=12
LRM Limekiln Ridge 94.51 26 *e*P **P 07 22 51.3 +0.3**
comp=Z,44nm,1.0s,mb5.8
E17A Martinsdale 94.52 24 ⇓P P 07 22 51.0 0.0
baz=94,SNR=8.0
WDC Whiskeytown Da 94.53 35 PFAKE 07 23 00.0 +8.9
WDC LR LR
comp=Z,2µm,22.0s,MS5.5
MOD Modoc 94.53 33 *e*P **P 07 22 52.2 +1.1**
comp=Z,18nm,1.2s,mb5.4
MOD LR LR
comp=Z,2µm,19.0s,MS5.5
H12A Diamond D Ranc 94.67 28 ⇓P P 07 22 51.4 -0.3
baz=94
XMAS Kiritimati 94.78 85 PFAKE 07 23 00.0 +7.3
XMAS LR LR
comp=Z,2µm,20.0s,MS5.5
DGMT Dagmar 94.83 19 ⇓P P 07 22 52.1 -0.2
baz=94,SNR=12
DGMT Dagmar 94.83 19 *e*P **P 07 22 52.0 -0.3**
comp=Z,35nm,0.9s,mb5.8
DGMT *e*PP PP 07 26 42.9 +3.0
DGMT LR LR
comp=Z,2µm,21.0s,MS5.6
F16A Kennard Place, 94.83 25 ⇑P P 07 22 52.0 -0.5
baz=94
DLMT Dillon 94.84 26 *e*P **P 07 22 52.5 0.0**
comp=Z,9.0nm,0.8s,mb5.2
WVOR Wild Horse Val 94.85 31 *e*P **P 07 22 52.5 -0.1**
WVOR *e* 07 26 40.9
WVOR pmax pmax
comp=Z,9.0nm,0.9s,mb5.2
WVOR MLR MLR
comp=Z,992nm,20.0s,MS5.3
WVOR Wild Horse Val 94.85 31 *e*P **P 07 22 52.5 0.0**
comp=Z,8.9nm,0.9s,mb5.2
WVOR *e*PP PP 07 26 40.9 +0.6
WVOR LR LR
comp=Z,992nm,20.0s,MS5.3
H13A Challis 94.89 27 ⇑P P 07 22 52.4 -0.3
baz=95
G15A Dillon 95.05 26 ⇓P P 07 22 53.2 -0.2
baz=95,SNR=27
F17A Fitzpatrick Pl 95.07 24 ⇑P P 07 22 53.4 -0.1
baz=95,SNR=16
H14A Leadore 95.19 27 ⇓P P 07 22 54.0 -0.1
baz=95
I12A Atlanta 95.19 28 ⇑P P 07 22 54.6 +0.5
baz=95
MCMT McKenzie Canyo 95.21 26 *e*P **P 07 22 54.6 +0.4**
comp=Z,5.4nm,0.9s,mb5.0
MCMT *e*PP PP 07 26 45.2 +2.2
MFID Camas Ranch 95.23 29 ⇑P P 07 22 53.9 -0.4
baz=95
G16A Moss Hill, Enn 95.25 26 ⇓P P 07 22 54.0 -0.4
baz=95,SNR=12
K10A MacKenzie Ranc 95.32 30 ⇑P P 07 22 54.4 -0.4
baz=95
LBTB Lobatse 95.37 244 PFAKE 07 23 10.0 +15
LBTB LR LR
comp=Z,1µm,21.0s,MS5.3
F18A Big Timber 95.40 24 ⇑P P 07 22 54.8 -0.2
baz=95,SNR=14
I13A Wildhorse Cree 95.49 28 ⇓P P 07 22 55.1 -0.4
baz=95
HOPS Hopland 95.50 36 PFAKE 07 23 10.0 +14
HOPS LR LR
comp=Z,2µm,22.0s,MS5.5
GCMT Greycliff 95.51 24 *e*P **P 07 22 55.9 +0.3**
comp=Z,4.1nm,0.8s,mb4.9
J12A Stokes Ranch, 95.66 29 ⇓P P 07 22 56.0 -0.2
baz=95
HLID Hailey 95.67 28 ⇑P P 07 22 56.9 +0.6
baz=95
HLID Hailey 95.67 28 *e*P **P 07 22 57.2 +0.9**
comp=Z,27nm,1.5s,mb5.5
HLID *e*PP PP 07 26 46.9 +0.2
HLID LR LR
comp=Z,2µm,22.0s,MS5.5
I14A Mackay 95.74 27 ⇑P P 07 22 56.4 -0.2
baz=95
LAO LASA Array 95.84 21 *e*P **P 07 22 58.0 +1.0**
comp=Z,17nm,0.9s,mb5.5
LAO *e*PP PP 07 26 49.9 +2.1
LAO LR LR
comp=Z,3µm,19.0s,MS5.7
H16A Russell Place, 95.90 25 ⇑P P 07 22 57.1 -0.3
baz=96
J13A Core Ranch, Pi 95.91 28 ⇓P P 07 22 58.0 +0.6
baz=96
I15A Monteview 96.05 27 ⇓P P 07 22 58.1 +0.1
baz=96
L10A Juniper Basin 96.07 30 ⇓P P 07 22 58.0 -0.1
baz=96
RLMT Red Lodge 96.24 24 ⇓P P 07 22 58.7 -0.1
baz=96
RLMT Red Lodge 96.24 24 *e*P **P 07 22 58.6 -0.2**
comp=Z,4.3nm,0.8s,mb4.9
RLMT LR LR
comp=Z,2µm,19.0s,MS5.7
MCCM Marconi Confer 96.25 36 PFAKE 07 23 10.0 +11
MCCM LR LR
comp=Z,1µm,20.0s,MS5.4
K12A Draper Farm, C 96.25 29 ⇑P P 07 22 58.8 -0.1
baz=96
L11A Cat Creek Ranc 96.29 30 ⇑P P 07 22 59.6 +0.5
baz=96
LKWY Lake 96.33 25 PFAKE 07 23 10.0 +11
LKWY LR LR
comp=Z,4µm,21.0s,MS5.9
H17A Grant Village 96.41 25 ⇓P P 07 22 59.7 +0.1
baz=96
M10A I.L. Ranch, Tu 96.50 30 ⇓P P 07 23 00.8 +0.7
baz=96
I16A Newdale 96.53 26 ⇑P P 07 23 00.0 -0.2
baz=96
K13A Stover Farm, H 96.57 28 ⇓P P 07 23 00.5 +0.1
baz=96
J15A Blackfoot 96.58 27 ⇓P P 07 23 00.6 +0.2
baz=96
L12A House Creek Ra 96.62 29 ⇓P P 07 23 00.5 -0.2
baz=96
IMW Indian Meadow 96.71 26 *e*P **P 07 23 02.2 +1.2**
comp=Z,5.8nm,0.8s,mb5.1
WCN Washoe City 96.85 34 ⇑P P 07 23 02.0 +0.3
baz=97
M11A Holland Ranch, 96.89 30 ⇑P P 07 23 02.6 +0.7
baz=97
AGMN Agassiz Nation 97.02 14 *e*P **P 07 23 01.5 -0.8**
comp=Z,4.4nm,0.8s,mb4.9
AGMN LR LR
comp=Z,2µm,22.0s,MS5.5
K14A Jones Ranch, D 97.02 28 ⇑P P 07 23 02.8 +0.3
baz=97
BMN Battle Mountai 97.09 32 PFAKE 07 23 10.0 +7.2
BMN LR LR
comp=Z,2µm,20.0s,MS5.6
M12A Wells 97.27 29 ⇓P P 07 23 03.8 +0.2
baz=97
L14A Malta 97.43 28 ⇓P P 07 23 04.2 -0.1
baz=97
CMB Columbia Colle 97.56 35 *e*P **P 07 23 05.3 +0.3**
CMB pmax pmax
comp=Z,9.0nm,1.1s,mb5.2
CMB MLR MLR
comp=Z,2µm,22.0s,MS5.5
CMB Columbia Colle 97.56 35 *e*P **P 07 23 05.3 +0.3**
comp=Z,8.8nm,1.1s,mb5.2
CMB LR LR
comp=Z,2µm,22.0s,MS5.5
BOSA Boshof 97.60 241 P P 07 23 04.1 -1.1
comp=Z,5.4nm,0.9s,mb5.1,baz=75,slow=4.9,SNR=4.3
BOSA LR LR 08 03 58.8
comp=Z,1µm,21.5s,MS5.3,baz=61,slow=34
BOSA Boshof 97.60 241 P P 07 23 04.1 -1.1
BOSA LR LR 08 03 58.8
M13A Montello 97.62 29 ⇓P P 07 23 05.2 0.0
baz=97
M13A Montello 97.62 29 *e*P **P 07 23 06.0 +0.8**
comp=Z,4.0nm,0.8s,mb5.0
AHID Auburn Hatcher 97.63 26 PFAKE 07 23 20.0 +15
AHID LR LR
comp=Z,2µm,20.0s,MS5.5
J18A Kendall Valley 97.64 25 ⇓P P 07 23 05.1 -0.1
baz=97
N12A Clover Valley, 97.68 30 ⇑P P 07 23 05.5 0.0
baz=97
N12A Clover Valley, 97.68 30 *e*P **P 07 23 06.3 +0.8**
comp=Z,9.4nm,1.0s,mb5.3
ELK Elko 97.69 30 PFAKE 07 23 20.0 +14
ELK LR LR
comp=Z,2µm,21.0s,MS5.5
L15A Malad City 97.79 28 ⇑P P 07 23 05.8 -0.1
baz=98
M14A Sheep Mountain 97.83 28 ⇓P P 07 23 06.7 +0.5
baz=98
O11A Cowboy Ranch, 98.02 31 ⇓P P 07 23 07.3 +0.3
baz=98
SAO San Andreas Ge 98.04 36 PFAKE 07 23 20.0 +13
SAO LR LR
comp=Z,2µm,20.0s,MS5.6
K18A Toltan Ranch, 98.13 26 ⇑P P 07 23 07.6 +0.1
baz=98
EYMN Ely 98.17 11 *e*P **P 07 23 06.6 -0.9**
comp=Z,7.1nm,0.9s,mb5.2
EYMN LR LR
comp=Z,2µm,20.0s,MS5.5
BW06 Boulder Array 98.19 25 PFAKE 07 23 20.0 +12
BW06 LR LR
comp=Z,2µm,20.0s,MS5.6
PDAR Pinedale Array 98.19 25 P P 07 23 07.5 -0.2
comp=Z,1.0nm,0.6s,mb4.5,baz=6.6,slow=2.6,SNR=10
PDAR PP PP 07 27 02.1 -3.9
comp=Z,1.5nm,0.9s,baz=354,slow=6.0,SNR=5.0
PDAR PKKP PKKPbc 07 39 37.5 -2.1
comp=Z,0.8nm,0.7s,baz=154,slow=5.0,SNR=6.4
PDAR LR LR 08 10 58.6
comp=Z,1µm,18.4s,MS5.5,baz=335,slow=38
M15A Larsen Ranch, 98.22 28 ⇓P P 07 23 07.4 -0.5
baz=98
NVAR Mina Array Bea 98.23 33 P P 07 23 07.8 -0.2
comp=Z,2.2nm,0.8s,mb4.8,baz=295,slow=3.0,SNR=16
NVAR PP PP 07 27 06.4 -0.1
comp=Z,1.5nm,0.8s,baz=320,slow=6.7,SNR=4.1
NVAR PKKP PKKPbc 07 39 39.5 +0.2
comp=Z,1.1nm,0.7s,baz=148,slow=3.3,SNR=8.5
NVAR Mina Array Bea 98.23 33 P P 07 23 07.8 -0.2
NVAR PP PP 07 27 06.4 -0.1
NVAR PKKP PKKPbc 07 39 39.5 +0.2
O12A Currie 98.29 30 ⇑P P 07 23 08.6 +0.4
baz=98
HWUT Hardware Ranch 98.44 27 *e*P **P 07 23 09.4 +0.5**
comp=Z,5.7nm,1.0s,mb5.1
HWUT LR LR
comp=Z,2µm,21.0s,MS5.6
BGU Big Grassy Mou 98.45 29 *e*P **P 07 23 09.5 +0.6**
comp=Z,2.7nm,1.0s,mb4.7
N14A Grayback Hills 98.45 29 ⇑P P 07 23 08.8 -0.1
baz=98
TSUM Tsumeb 98.53 253 PFAKE 07 23 20.0 +10
TSUM LR LR
comp=Z,972nm,20.0s,MS5.3
N15A Stansbury Isla 98.68 28 ⇓P P 07 23 09.6 -0.4
baz=98
RSSD Black Hills 98.82 21 *e*P **P 07 23 10.8 +0.3**
RSSD pmax pmax
comp=Z,15nm,0.9s,mb5.5
RSSD MLR MLR
comp=Z,2µm,19.0s,MS5.7
RSSD Black Hills 98.82 21 *e*P **P 07 23 10.8 +0.3**
comp=Z,15nm,0.9s,mb5.5
RSSD LR LR
comp=Z,2µm,19.0s,MS5.7
CASY Casey 98.84 178 PFAKE 07 23 20.0 +10
CASY LR LR
comp=Z,756nm,20.0s,MS5.2
L19A Farson 98.84 26 ⇓P P 07 23 10.2 -0.4
baz=98
P12A McGill 98.89 31 ⇓P P 07 23 10.4 -0.5
baz=99
M17A Scullys Gap (B 98.90 27 ⇓P P 07 23 10.5 -0.4
baz=99
TPH Tonopah 99.01 33 PFAKE 07 23 20.0 +8.5
TPH LR LR
comp=Z,944nm,19.0s,MS5.3
Q11A Duckwater 99.08 31 ⇓P P 07 23 11.6 -0.2
baz=99
DUG Dugway 99.15 29 ⇑P P 07 23 12.2 +0.1
baz=99
DUG Dugway 99.15 29 *e*P **P 07 23 12.0 -0.1**
DUG pmax pmax
comp=Z,5.0nm,1.0s,mb5.0
DUG MLR MLR
comp=Z,1µm,20.0s,MS5.4
DUG Dugway 99.15 29 *e*P **P 07 23 12.0 -0.1**
comp=Z,4.8nm,1.0s,mb5.0
DUG LR LR
comp=Z,1µm,20.0s,MS5.4
M18A Lyman 99.17 26 ⇓P P 07 23 12.4 +0.3
baz=99
P13A Bates Ranch, G 99.28 30 ⇓P P 07 23 12.5 -0.2
baz=99
Q12A Willow Creek R 99.28 31 ⇑P P 07 23 12.9 +0.2
baz=99
N17A Moffit Pass 99.30 27 ⇓P P 07 23 12.8 +0.1
baz=99
S10A Tonopah Range, 99.42 33 ⇑P P 07 23 13.3 0.0
baz=99
R11A Troy Canyon, C 99.52 32 ⇓P P 07 23 13.6 -0.2
baz=99
P14A Drum Mountains 99.56 29 ⇑P P 07 23 14.4 +0.4
baz=99
Q13A Wheeler Ranch, 99.70 30 ⇓P Pdif 07 23 14.6 +0.2
baz=99
N18A Larsen Ranch, 99.71 26 ⇓P Pdif 07 23 14.5 0.0
baz=99
GRAC Grapevine Rang 99.82 34 ⇓P Pdif 07 23 15.3 +0.4
baz=100
R12A Pony Springs, 99.97 31 ⇑P Pdif 07 23 15.3 -0.3
baz=100
DAC Darwin (Calif) 100.30 34 PFAKE 07 23 30.0 +13
DAC LR LR
comp=Z,1µm,22.0s,MS5.4
COWI Conover 100.34 10 PFAKE 07 23 30.0 +13
COWI LR LR
comp=Z,2µm,20.0s,MS5.7
N20A Spence Gulch, 100.35 25 ⇓P Pdif 07 23 17.2 -0.1
baz=100
PHWY Pilot Hill 100.91 23 *e*Pdif Pdif 07 23 20.4 +0.6
comp=Z,4.2nm,0.7s
N22A Wattenberg Ran 101.02 24 ⇓P Pdif 07 23 20.0 -0.3
baz=101
ECSD EROS Data Cent 101.18 16 *e*Pdif Pdif 07 23 21.5 +0.5
comp=Z,3.4nm,0.9s
ECSD LR LR
comp=Z,2µm,19.0s,MS5.6
PKME Peaks-Kenny Pk 102.16 356 PFAKE 07 23 40.0 +15
PKME LR LR
comp=Z,1µm,20.0s,MS5.4
GLMI Grayling 102.19 7 PFAKE 07 23 40.0 +15
GLMI LR LR
comp=Z,1µm,21.0s,MS5.5
ISCO Idaho Springs 102.20 24 PFAKE 07 23 40.0 +14
ISCO LR LR
comp=Z,3µm,20.0s,MS5.8
SMCO Snowmass 102.28 25 *e*Pdif Pdif 07 23 26.8 +0.9
comp=Z,4.0nm,1.0s
OGNE Ogallala 102.32 21 PFAKE 07 23 40.0 +14
OGNE LR LR
comp=Z,2µm,21.0s,MS5.6
SUR Sutherland 102.84 240 PFAKE 07 23 40.0 +12
SUR LR LR
comp=Z,1µm,20.0s,MS5.5
LONY Lake Ozonia 102.94 0 PFAKE 07 23 40.0 +11
LONY LR LR
comp=Z,1µm,21.0s,MS5.4
PFO Pinyon Flat Ob 103.01 35 PFAKE 07 23 40.0 +11
PFO LR LR
comp=Z,1µm,21.0s,MS5.3
JFWS Jewell Farm 103.27 12 PFAKE 07 23 40.0 +10
JFWS LR LR
comp=Z,2µm,21.0s,MS5.5
DBIC Dimbokro 103.28 287 PP PP 07 27 46.2 +0.3
comp=Z,19nm,1.2s,baz=47,slow=9.3,SNR=3.6
DBIC Dimbokro 103.28 287 PFAKE 07 23 40.0 +10
DBIC LR LR
comp=Z,1µm,19.0s,MS5.4
LBNH Lisbon 103.29 358 PFAKE 07 23 40.0 +10
LBNH LR LR
comp=Z,2µm,19.0s,MS5.6
MVCO Mesa Verde 103.43 27 PFAKE 07 23 40.0 +9.0
MVCO LR LR
comp=Z,1µm,19.0s,MS5.5
NCB Newcomb 103.59 360 PFAKE 07 23 40.0 +8.3
NCB LR LR
comp=Z,1µm,19.0s,MS5.4
SCIA State Center 103.67 14 PFAKE 07 23 40.0 +7.9
SCIA LR LR
comp=Z,2µm,20.0s,MS5.6
WUAZ Wupatki 103.73 30 PFAKE 07 23 40.0 +7.7
WUAZ LR LR
comp=Z,1µm,20.0s,MS5.4
SDCO Great Sand Dun 104.08 25 PFAKE 07 23 50.0 +16
SDCO LR LR
comp=Z,2µm,19.0s,MS5.6
AAM Ann Arbor 104.78 7 PFAKE 07 23 50.0 +13
AAM LR LR
comp=Z,2µm,22.0s,MS5.5
CBKS Cedar Bluff 104.97 20 PFAKE 07 28 00.0 +7.2
CBKS LR LR
comp=Z,2µm,20.0s,MS5.6
MAW Mawson 105.12 196 PKKPbc PKKPbc 07 39 18.9 -1.8
comp=Z,2.3nm,0.8s,baz=239,slow=4.2,SNR=7.4
BINY Binghamton 105.35 1 PFAKE 07 28 00.0 +6.6
BINY LR LR
comp=Z,1µm,20.0s,MS5.5
KSU1 Kansas State U 105.56 18 PFAKE 07 28 10.0 +16
KSU1 LR LR
comp=Z,3µm,20.0s,MS5.8
HDIL Hopedale 105.72 12 PFAKE 07 28 10.0 +16
HDIL LR LR
comp=Z,2µm,21.0s,MS5.6
ANMO Albuquerque 106.20 27 PFAKE 07 28 10.0 +15
ANMO LR LR
comp=Z,1µm,21.0s,MS5.5
LAZ Ladron 106.42 28 *e*PKPdf PKiKP 07 27 50.9 -4.8
TUC Tucson 106.71 32 PFAKE 07 28 10.0 +14
TUC LR LR
comp=Z,1µm,19.0s,MS5.5
BNM Barren Site 106.84 27 *e*PKPdf PKiKP 07 27 58.3 +1.9
ACSO Alum Creek Sta 106.90 7 PFAKE 07 28 10.0 +14
ACSO LR LR
comp=Z,2µm,19.0s,MS5.6
MCWV Mont Chateau 107.73 4 PFAKE 07 28 10.0 +12
MCWV LR LR
comp=Z,2µm,20.0s,MS5.6
CCM Cathedral Cave 107.78 14 PFAKE 07 28 10.0 +12
CCM LR LR
comp=Z,1µm,20.0s,MS5.5
AMTX Amarillo 107.97 23 PFAKE 07 28 10.0 +11
AMTX LR LR
comp=Z,2µm,20.0s,MS5.7
WCI Wyandotte Cave 108.47 10 PFAKE 07 28 10.0 +11
WCI LR LR
comp=Z,2µm,19.0s,MS5.6
WMOK Wichita Mounta 109.03 21 PFAKE 07 28 10.0 +9.5
WMOK LR LR
comp=Z,2µm,19.0s,MS5.8
CBN Corbin 109.30 2 PFAKE 07 28 10.0 +9.1
CBN LR LR
comp=Z,2µm,19.0s,MS5.7
MNTX Cornudas Mount 109.50 28 *e*PKPdf PKiKP 07 28 01.4 -0.1
MNTX LR LR
comp=Z,1µm,19.0s,MS5.5
BLA Blacksburg 110.12 5 PFAKE 07 28 10.0 +7.5
BLA LR LR
comp=Z,2µm,19.0s,MS5.7
WVT Waverly 110.29 12 PFAKE 07 28 10.0 +7.2
WVT LR LR
comp=Z,1µm,19.0s,MS5.6
MIAR Mount Ida 110.63 17 PFAKE 07 28 10.0 +6.5
MIAR LR LR
comp=Z,2µm,22.0s,MS5.6
OXF Oxford 111.58 13 PFAKE 07 28 20.0 +15
OXF LR LR
comp=Z,2µm,21.0s,MS5.7
PPT Papeete 111.58 97 *e*PP PP 07 28 44.1 -3.0
comp=Z,84nm,23.2s
PPT Papeete 111.58 97 *e*PS PS 07 38 15.0 -4.3
comp=Z,225nm,28.5s

PPT eSS SS 07 44 17.8 -5.6
comp=Z,221nm,28.8s
PPT eLQ 07 56 33.4
comp=Z,4μm,36.0s
PPT eLR LR 08 01 01.1
comp=Z,1μm,23.8s,baz=305
TXAR Lajitas Array 112.27 27 PKiKP PKiKP 07 28 06.1 -0.6
comp=Z,1.4nm,0.6s,baz=262,slow=0.5,SNR=17
TXAR PKKPbc PKKPbc 07 38 56.6 -0.1
comp=Z,3.2nm,1.0s,baz=159,slow=5.9,SNR=17
TXAR Lajitas Array 112.27 27 *i* PKIKP PKiKP 07 28 06.1 -0.7
TXAR pmax pmax
comp=Z,1.0nm,0.6s
SYO Syowa Base 112.30 201⇑ *e*PKiKP PKiKP 07 28 04.6 -0.8
SYO Syowa Base 112.30 201⇓ *e*pPKiKP 07 28 09.2
JCT Junction City 112.63 24 *e*PKIKP PKiKP 07 28 06.8 -0.6
JCT MLR MLR
comp=Z,2μm,19.0s,MS5.7
NATX Nacogdoches 113.00 19 PFAKE 07 28 20.0 +12
NATX LR LR
comp=Z,1μm,19.0s,MS5.5
LRAL Lakeview Retre 113.45 11 PFAKE 07 28 20.0 +11
LRAL LR LR
comp=Z,2μm,19.0s,MS5.7
VBMS Vicksburg 113.57 15 PFAKE 07 28 20.0 +11
VBMS LR LR
comp=Z,2μm,20.0s,MS5.7
GOGA Godfrey 113.59 8 PFAKE 07 28 20.0 +11
GOGA LR LR
comp=Z,2μm,19.0s,MS5.7
NHSC New Hope 114.22 5 PFAKE 07 28 20.0 +10
NHSC LR LR
comp=Z,1μm,19.0s,MS5.5
TBI Tubuai 114.36 103 *e*LQ 07 57 44.1
comp=Z,1μm,35.8s
TBI eLR LR 08 02 27.6
comp=Z,880nm,23.8s,baz=303
HKT Hockley 114.38 20 PFAKE 07 28 20.0 +9.2
HKT LR LR
comp=Z,2μm,20.0s,MS5.8
BBSR BB Station 114.53 351 PFAKE 07 28 20.0 +9.0
BBSR LR LR
comp=Z,803nm,22.0s,MS5.3
TAOE Nuku Hiva Isla 115.14 84 *e*SP SP 07 38 44.4 -7.5
comp=Z,253nm,26.0s
TAOE eSS SS 07 45 14.8 +4.4
comp=Z,399nm,32.1s
TAOE eLR LR 08 02 53.3
comp=Z,2μm,25.8s,baz=304
BRAL Brewton 115.42 12 PFAKE 07 28 20.0 +7.2
BRAL LR LR
comp=Z,1μm,19.0s,MS5.5
KVTX Kingsville 115.97 23 PFAKE 07 28 30.0 +16
KVTX LR LR
comp=Z,3μm,20.0s,MS5.8
SBA Scott Base 116.17 168 PFAKE 07 28 20.0 +7.3
SBA LR LR
comp=Z,702nm,22.0s,MS5.2
DWPF Disney 119.06 7 PFAKE 07 28 30.0 +10
DWPF LR LR
comp=Z,2μm,21.0s,MS5.6
MAIT Maitri 121.83 203 *e*PKPab PKPdf 07 28 22.9 -0.8
QSPA South Pole Qui 122.57 180 PKKPbc PKKPbc 07 38 19.4 -1.4
comp=Z,4.2nm,0.8s,baz=189,slow=1.7,SNR=15
QSPA South Pole Qui 122.57 180 PFAKE 07 28 40.0 +15
QSPA LR LR
comp=Z,976nm,22.0s,MS5.4
GRTK Grand Turk 125.90 356 PFAKE 07 28 40.0 +6.9
GRTK LR LR
comp=Z,1μm,21.0s,MS5.5
RKT Rikitea 126.29 96 *e*LR LR 08 07 58.0
comp=Z,810nm,31.8s,baz=297
GTBY Guantanamo Bay 127.56 1 PFAKE 07 28 50.0 +14
GTBY LR LR
comp=Z,1μm,20.0s,MS5.6
ANWB Willy Bob 128.38 345 PFAKE 07 28 50.0 +12
ANWB LR LR
comp=Z,771nm,22.0s,MS5.3
SDDR Presa de Saban 128.42 356 PFAKE 07 28 50.0 +12
SDDR LR LR
comp=Z,1μm,20.0s,MS5.6
SJG San Juan 128.76 350 PFAKE 07 28 50.0 +11
SJG LR LR
comp=Z,880nm,22.0s,MS5.4
MTDJ Mount Denham 129.17 4 PFAKE 07 28 50.0 +11
MTDJ LR LR
comp=Z,1μm,19.0s,MS5.6
TGUH Tegucigalpa,Un 131.81 17 *e*PKPdf PKPdf 07 28 46.5 +2.0
TGUH LR LR
comp=Z,746nm,20.0s,MS5.4
BBGH Gun Hill 132.15 340 PFAKE 07 29 00.0 +15
BBGH LR LR
comp=Z,1μm,21.0s,MS5.5
GRGR Grenville 133.68 343 PFAKE 07 29 00.0 +12
GRGR LR LR
comp=Z,770nm,21.0s,MS5.4
RCBR Riachuelo 135.22 298 PFAKE 07 29 00.0 +9.1
RCBR LR LR
comp=Z,533nm,19.0s,MS5.3
JTS JuntasAbangare 135.99 15 PFAKE 07 29 00.0 +7.6
JTS LR LR
comp=Z,990nm,20.0s,MS5.5
BCIP Isla Barro Col 137.95 8 PFAKE 07 29 10.0 +14
BCIP LR LR
comp=Z,928nm,21.0s,MS5.5
SDV Santo Domingo 138.39 354 PFAKE 07 29 10.0 +13
SDV LR LR
comp=Z,329nm,21.0s,MS5.0
OTAV Otavalo 146.92 7 *e*PKPbc PKPbc 07 29 13.8 0.0
OTAV LR LR
comp=Z,516nm,22.0s,MS5.3
PMSA Palmer Station 147.37 188 PKPbc PKPbc 07 29 12.0 -1.4
comp=Z,28nm,0.8s,baz=297,slow=5.7,SNR=5.2
CAM4 Nova Friburgo 150.00 282⇑ *i* P PKPdf 07 29 16.4 -0.2
CAM4 *i* 07 29 23.1
CAM4 *i* 07 29 32.1
CAM4 *i* 07 29 48.8
CAM4 *i* 07 30 06.8
CAM4 *i* 07 30 13.8
CAM4 *i* 07 30 33.8
CAM4 Nova Friburgo 150.00 282⇓ *i* P PKPdf 07 29 16.8 +0.1
CAM4 *i* 07 29 21.1
CAM4 *i* 07 29 22.8
CAM4 *i* 07 29 32.1
CAM4 *i* 07 29 36.9
CAM4 *i* 07 29 38.5
CAM4 *i* 07 29 48.5
CAM4 *i* 07 29 57.4
CAM4 *i* 07 30 03.4
CAM4 *i* 07 30 05.9
CAM4 *i* 07 30 14.1
CAM4 *i* 07 30 34.8
ATAH Atahualpa 154.19 9 PKPbc PKPbc 07 29 33.7 +2.4
comp=Z,5.4nm,0.7s,baz=67,slow=3.8,SNR=5.0
ATAH PKPab PKPab 07 29 44.3 -0.5
comp=Z,11nm,0.9s,baz=42,slow=3.7,SNR=4.0
LPAZ La Paz 162.59 339 PKP PKPdf 07 29 32.7 -0.5
comp=Z,5.7nm,0.9s,baz=18,slow=5.5,SNR=15
LPAZ PKPab PKPab 07 30 21.9 +0.8
comp=Z,4.3nm,0.8s,baz=29,slow=6.9,SNR=4.0
LPAZ La Paz 162.59 339 *e*PKPdf PKPdf 07 29 33.0 -0.2
LPAZ LR LR
comp=Z,1μm,20.0s
CPUP Villa Florida 163.79 289 PKP PKPdf 07 29 33.2 -0.8
comp=Z,2.6nm,0.8s,baz=173,slow=2.6,SNR=8.2
CPUP PKPab PKPab 07 30 22.6 -3.8
comp=Z,6.2nm,0.8s,baz=345,slow=2.4,SNR=4.0
CPUP Villa Florida 163.79 289 PKIKP PKPdf 07 29 33.3 -0.7
CPUP 07 30 22.6
CPUP pmax pmax
comp=Z,3.0nm,0.8s
CPUP pmax pmax
comp=Z,6.0nm,0.9s
TRQA Tornquist 168.57 239 PFAKE 07 29 50.0 +13
TRQA LR LR
comp=Z,901nm,21.0s
PLCA Paso Flores 171.50 200 PKP PKPdf 07 29 39.8 +0.7
comp=Z,6.1nm,1.0s,baz=225,slow=2.9,SNR=2.4
PLCA Paso Flores 171.50 200 PKP PKPdf 07 29 39.8 +0.7
PLCA LR LR
comp=Z,871nm,22.0s
LCO Las Campanas 175.04 319 PFAKE 07 29 50.0 +9.2
LCO LR LR
comp=Z,819nm,22.0s

GUC 24 07:20:46.8±0.4, 19°.56S×69°.32W, h110km±4km, ML4.1, 1C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNMC	**Miaee Miaé**	**0.50**	**328**	⇓*iP*	Pn	07 21 04.3	+0.7
MNMC				*i* S	Sn	07 21 17.3	+1.1
MNMC				AML	AML	07 21 18.5	
	comp=E,12μm,0.3s						
HMBC	**Humberston**	**0.89**	**217**	⇑*iP*	Pn	07 21 07.3	+0.5
HMBC				*i* S	Sn	07 21 23.0	+1.0
HMBC				AML	AML	07 21 24.5	
	comp=E,4μm,0.5s						
PB01	**Plate Boundary**	**1.49**	**186**	*eP*	Pn	07 21 13.8	+0.3
PB01				*i* S	Sn	07 21 34.6	+1.0
PB01				AML	AML	07 21 36.0	
	comp=E,3μm,0.3s						
PB04	**Plate Boundary**	**2.70**	**183**	*eP*	Pn	07 21 31.4	+2.6
PB04				*eS*	Sn	07 22 05.2	+4.0
CEN1	**Los Morros**	**3.90**	**192**	*eP*	Pn	07 21 46.7	+1.9
ANCH	**Antofagasta**	**4.23**	**194**	*eP*	Pn	07 21 46.6	-2.6

CASC 24 07:36:08.5±2.4, 8°.41N×82°.98W, h4km, MD4.0, 1C-1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.30**	**323**	⇓*eP*	Pg	07 36 14.1	-0.3
ACR				*eP*		07 36 14.1	
ACR				*eS*	Sg	07 36 19.0	+0.6
BRU2	**Volcan**	**0.48**	**37**	*eP*	Pg	07 36 18.7	+0.9
BRU2				*eS*	Sg	07 36 27.1	+3.1
TBS2		**0.50**	**40**	*eP*	Pg	07 36 25.4	+7.2
TBS2				*eS*	Sg	07 36 34.7	+10
BRU	**Baru**	**0.58**	**47**	*eP*	Pg	07 36 14.1	-5.5
BAR1		**0.89**	**339**	⇑*eP*	Pg	07 36 24.7	-0.9
CNI	**Changuinola**	**1.10**	**25**	*eP*	Pg	07 36 29.0	-0.7
QCR	**Quepos**	**1.54**	**311**	*eP*	Pn	07 36 37.4	+0.6
QCR				*eS*	Sn	07 36 59.1	+1.8
URSC	**Urasca**	**1.62**	**331**	*eP*	Pn	07 36 37.5	-0.4
LAJ	**Bijagual**	**1.83**	**322**	*eP*	Pn	07 36 43.5	+2.7
PRS1	**Puriscal**	**2.04**	**320**	*eP*	Pn	07 36 43.3	-0.3
JCR	**Jicaral**	**2.54**	**304**	*eP*	Pn	07 36 51.3	+0.8
BCIP	**Isla Barro Col**	**3.20**	**76**	*eS*	Sn	07 37 50.8	+13

IDC 24 07:39:00.9±1.3, 12°.73S×66°.42E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.7/21, mbtmp3.9/6, Error ellipse: s-maj=40.2km s-min=29.0km az=14.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**44.60**	**47**	P	P	07 47 16.3	+1.0
	0.5nm,0.3s,baz=236,slow=6.4,SNR=4.6						
MKAR	**Makanchi Array**	**60.94**	**12**	P	P	07 49 14.9	-0.7
	0.4nm,0.3s,baz=214,slow=8.6,SNR=4.3						
ASAR	**Alice Springs**	**64.53**	**110**	P	P	07 49 40.0	-0.1
	0.8nm,0.6s,baz=273,slow=6.0,SNR=10						
ZALV	**Zalesovo Beam**	**68.25**	**12**	P	P	07 50 02.5	-0.7
	1.1nm,0.5s,baz=208,slow=5.9,SNR=4.0						
TORD	**Torodi Ar. Bea**	**69.12**	**289**	P	P	07 50 10.1	+0.5
	1.0nm,1.0s,baz=70,slow=4.7,SNR=3.3						
SONM	**Songino Array**	**70.00**	**27**	P	P	07 50 15.3	+1.0
	0.7nm,1.0s,baz=224,slow=5.4,SNR=4.1						
PDAR	**Pinedale Array**	**149.87**	**354**	PKPbc	PKPbc	07 58 53.0	-0.3
	0.8nm,0.7s,baz=52,slow=1.5,SNR=9.4						
TXAR	**Lajitas Array**	**161.09**	**332**	PKPab	PKPab	07 59 46.4	-0.5
	0.3nm,0.8s,baz=65,slow=7.1,SNR=4.2						

IDC 24 07:42:56.0±4.3, 41°.31N×114°.27E, h0km, mb3.5/2, mb1 3.6/3, mb1mx3.3/22, mbtmp3.4/3, ML3.1/1, Error ellipse: s-maj=95.3km s-min=34.2km az=25.0, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**8.61**	**322**	Pn	Pn	07 44 60.0	-1.8
	0.2nm,0.3s,baz=152,slow=13,SNR=4.5						
SONM				Lg		07 47 31.2	
	0.2nm,0.3s,baz=158,slow=23,SNR=4.4						
ZALV	**Zalesovo Beam**	**23.34**	**313**	P	P	07 48 06.0	+0.3
	2.4nm,0.7s,baz=110,slow=11,SNR=9.9						
ILAR	**Eielson Array**	**57.00**	**30**	P	P	07 52 43.0	0.0
	0.1nm,0.5s,baz=305,slow=6.6,SNR=4.2						

*IDC **24** 07:53:47.0±0.8, 15°.70S×172°.84W, h0km, mb4.0/8, mb1 4.3/8, mb1mx4.1/18, mbtmp4.0/8, MS3.1/1, Ms1 3.1/1, ms1mx3.1/19, Error ellipse: s-maj=44.1km s-min=20.5km az=129.0*
*ISCJB **24** 07:53:50.4±0.6, 15°.5S±0°.2×173°.0W±0°.2, h33km, mb4.0/10, Error ellipse: s-maj=32.2km s-min=11.4km az=41.0*
*NEIC **24** 07:53:53.0±0.7, 15°.54S×172°.89W, h45km, mb4.2/2, Error ellipse: s-maj=34.8km s-min=13.2km az=131.0*
ISC 24 07:53:52.4±0.6, 15°.6S±0°.2×172°.9W±0°.2, h35km, n14, σ0°.84/15, mb4.0/10, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.02**	**34**	Pn	**Pn**	**07 54 19.4**	**-4.6**
	17nm,0.3s,baz=139,slow=19,SNR=2.9						
AFI				Sn	**Sn**	**07 54 41.6**	**-6.5**
	91nm,0.3s,baz=53,slow=21,SNR=11						
AFI				LR	LR	07 54 58.8	
	comp=Z,461nm,19.5s,baz=301,slow=35						
AFI				T		07 56 44.0	
	14nm,0.3s,baz=58,slow=21,SNR=3.8						
AFI	**Afiamalu**	**2.02**	**34**	*e*Pn	**Pn**	**07 54 21.4**	**-2.7**
AFI				Sn	**Sn**	**07 54 41.6**	**-6.5**
AFI				LR	LR	07 54 58.8	
RAR	**Rarotonga**	**13.68**	**116**	Pn	**Pn**	**07 56 55.3**	**-8.6**
	1.2nm,0.3s,baz=231,slow=6.5,SNR=3.7						
RAR				T		08 11 07.7	
	2.1nm,0.3s,baz=12,slow=17,SNR=3.1						
URZ	**Urewera**	**24.22**	**199**	P	**P**	**07 59 05.4**	**-0.4**
	3.2nm,0.4s,mb4.1,baz=14,slow=18,SNR=3.9						
STKA	**Stephens Creek**	**44.32**	**240**	P	**P**	**08 01 58.7**	**-0.5**
	2.4nm,0.7s,mb4.0,baz=102,slow=11,SNR=4.0						
WRAB	**Tennant Creek**	**50.22**	**257**	*eP*	**P**	**08 02 46.0**	**+0.7**
	3.0nm,0.9s,mb4.3						
ASAR	**Alice Springs**	**50.47**	**252**	P	**P**	**08 02 46.4**	**-0.8**
	2.5nm,0.8s,mb4.3,baz=89,slow=7.3,SNR=4.5						
NVAR	**Mina Array Bea**	**74.18**	**42**	P	**P**	**08 05 25.4**	**-0.2**
	0.8nm,0.7s,mb3.7,baz=220,slow=11,SNR=4.8						
QSPA	**South Pole Qui**	**74.44**	**180**	P	**P**	**08 05 26.7**	**+0.3**
	2.0nm,1.0s,mb4.0,baz=58,slow=3.4,SNR=4.7						
BMO	**Blue Mountains**	**78.52**	**37**	*eP*	**P**	**08 05 51.4**	**+1.4**
	3.1nm,1.5s,mb4.0						
TXAR	**Lajitas Array**	**80.36**	**56**	P	**P**	**08 05 59.9**	**-0.5**
	1.4nm,1.1s,mb3.8,baz=235,slow=5.9,SNR=6.0						
PDAR	**Pinedale Array**	**82.12**	**42**	P	**P**	**08 06 10.2**	**+0.7**
	0.7nm,0.9s,mb3.6,baz=257,slow=2.6,SNR=5.5						
ILAR	**Eielson Array**	**82.56**	**11**	P	**P**	**08 06 12.0**	**+0.8**
	0.6nm,0.7s,mb3.8,baz=229,slow=6.2,SNR=13						
BRTR	**Keskin Array B**	**146.60**	**321**	PKPbc	PKPbc	08 13 32.5	+2.0
	2.8nm,1.0s,baz=92,slow=3.8,SNR=7.9						

IDC 24 08:00:52.2±3.7, 14°.67N×93°.44W, h0km, mb3.6/5, mb1 3.9/7, mb1mx3.7/19, mbtmp3.5/7, ML3.1/2, Error ellipse: s-maj=117.9km s-min=38.7km az=41.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**2.78**	**330**	Pn	Pn	08 01 38.0	+0.1
	2.0nm,0.3s,baz=153,slow=10,SNR=51						
CMIG				Sn	Sn	08 02 12.7	+0.5
	5.0nm,0.3s,baz=106,slow=12,SNR=7.3						
TXAR	**Lajitas Array**	**17.39**	**329**	P	Pn	08 04 58.2	+1.9
	0.0nm,0.3s,baz=155,slow=13,SNR=4.8						
PDAR	**Pinedale Array**	**31.24**	**337**	P	P	08 07 13.9	+0.4
	0.4nm,0.8s,baz=151,slow=11,SNR=3.0						
NVAR	**Mina Array Bea**	**32.28**	**322**	P	P	08 07 22.6	0.0
	0.5nm,0.8s,baz=153,slow=8.1,SNR=3.1						
YKA	**Yellowknife Ar**	**50.06**	**347**	P	P	08 09 47.7	-0.8
	1.1nm,0.7s,baz=159,slow=7.2,SNR=4.7						
ILAR	**Eielson Array**	**61.68**	**337**	P	P	08 11 12.0	+0.3
	0.4nm,0.8s,baz=143,slow=4.3,SNR=5.9						
NOA	**NORSAR Array B**	**84.22**	**28**	P	P	08 13 25.7	+0.4
	0.9nm,0.8s,baz=294,slow=4.8,SNR=3.5						

*IDC **24** 08:04:00.1±0.9, 6°.00S×151°.61E, h0km, mb4.2/10, mb1 4.4/10, mb1mx4.2/17, mbtmp4.2/10, Error ellipse: s-maj=35.5km s-min=16.9km az=112.0*
*ISCJB **24** 08:04:05.5±3.9, 5°.9S±0°.1×151°.5E±0°.2, h48km±32km, mb4.2/11, Error ellipse: s-maj=34.0km s-min=19.0km az=22.5*
*NEIC **24** 08:04:07.5±2.8, 6°.02S×151°.44E, h52km±23km, mb4.6/1, Error ellipse: s-maj=25.6km s-min=14.6km az=109.0*
ISC 24 08:04:07.2±3.4, 6°.0S±0°.1×151°.5E±0°.2, h47km±29km, n20, σ0°.94/20, mb4.2/11, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.45**	**231**	*e*Pn	**Pn**	**08 05 26.2**	**+0.4**
	134nm,0.8s						
PMG				*e*Sn	**Sn**	**08 06 31.4**	**+4.1**
KAKA	**Kakadu**	**19.91**	**249**	*eP*	**Pn**	**08 08 34.6**	**-2.4**
	17nm,0.6s						
KAKA	**Kakadu**	**19.91**	**249**	*eP*	**Pn**	**08 08 33.7**	**-3.3**
WRAB	**Tennant Creek**	**21.65**	**229**	*eP*	**P**	**08 08 53.0**	**-0.8**
	41nm,1.4s,mb4.7						
WRA	**Warramunga Arr**	**21.66**	**229**	P	**P**	**08 08 53.4**	**-0.6**
	baz=54,slow=10						
ASAR	**Alice Springs**	**24.38**	**222**	P	**P**	**08 09 21.2**	**+0.2**
	12nm,0.8s,mb4.4,baz=54,slow=9.5,SNR=78						
STKA	**Stephens Creek**	**27.36**	**198**	*eP*	**P**	**08 09 49.4**	**+1.4**
	7.0nm,1.0s,mb4.2						
STKA	**Stephens Creek**	**27.36**	**198**	P	**P**	**08 09 48.3**	**+0.3**
	8.5nm,1.0s,mb4.2,baz=30,slow=7.1,SNR=6.4						
FITZ	**Fitzroy Crossi**	**27.93**	**242**	*eP*	**P**	**08 09 53.2**	**0.0**
	10nm,0.5s,mb4.7						
FITZ	**Fitzroy Crossi**	**27.93**	**242**	P	**P**	**08 09 53.0**	**-0.2**
	4.7nm,0.5s,mb4.4,baz=59,slow=7.3,SNR=24						
PETK	**Petropavlovsk-**	**59.11**	**4**	P	**P**	**08 14 03.3**	**+0.6**
	0.9nm,0.5s,mb4.0,baz=154,slow=8.0,SNR=4.8						
SONM	**Songino Array**	**66.62**	**329**	P	**P**	**08 14 52.4**	**-0.3**
	0.3nm,0.5s,mb3.5,baz=126,slow=7.3,SNR=3.2						
SONM	**Songino Array**	**66.62**	**329**	P	**P**	**08 14 52.4**	**-0.3**
MKAR	**Makanchi Array**	**80.34**	**319**	P	**P**	**08 16 15.5**	**+2.0**
	0.3nm,0.2s,mb3.8,baz=106,slow=3.7,SNR=2.7						
MKAR	**Makanchi Array**	**80.34**	**319**	P	**P**	**08 16 15.5**	**+2.0**
ZALV	**Zalesovo Beam**	**81.40**	**327**	P	**P**	**08 16 19.0**	**+0.1**
	0.9nm,0.7s,mb3.8,baz=123,slow=7.2,SNR=3.1						
ILAR	**Eielson Array**	**83.76**	**22**	P	**P**	**08 16 29.9**	**-1.0**
	1.4nm,0.6s,mb4.2,baz=249,slow=4.9,SNR=24						
QSPA	**South Pole Qui**	**83.98**	**180**	P	**P**	**08 16 32.2**	**+0.3**
	5.8nm,0.9s,mb4.7,baz=25,slow=2.2,SNR=11						
NVAR	**Mina Array Bea**	**93.86**	**52**	P	**P**	**08 17 19.2**	**-0.7**
	0.2nm,0.3s,mb4.0,baz=268,slow=4.5,SNR=3.6						
TORD	**Torodi Ar. Bea**	**149.37**	**286**	PKPbc	PKPbc	08 23 51.6	-0.4
	2.3nm,0.7s,baz=58,slow=3.3,SNR=10						

*DDA **24** 08:05:20.9, 36°.93N×27°.99E, h10km±6km, Md2.9*
*ISK **24** 08:05:21.1, 36°.95N×27°.99E, h13km, MD2.7*
*CSEM **24** 08:05:21.8±0.2, 36°.97N×27°.97E, h8km, MD2.7, Error ellipse: s-maj=5.8km s-min=3.4km az=168.0*
ISC 24 08:05:22.3±0.6, 36°.97N±0°.05×27°.97E±0°.04, h7km±9km, n19, σ0°.82/36, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.30**	**56**	*e*PG	**Pg**	**08 05 27.7**	**-0.4**
YER				*e*SG	**Sg**	**08 05 32.6**	**+0.4**
YER	**Yerkesik**	**0.30**	**56**	*e*Pg	**Pg**	**08 05 27.7**	**-0.4**
YER				*e*Sg	**Sg**	**08 05 32.6**	**+0.5**
DAT	**Datca**	**0.40**	**233**	*e*PG	**Pg**	**08 05 29.2**	**-0.7**
DAT				*e*SG	**Sg**	**08 05 35.6**	**+0.5**
DAT	**Datca**	**0.40**	**233**	*e*Pg	**Pg**	**08 05 29.2**	**-0.7**
DAT				*e*Sg	**Sg**	**08 05 35.6**	**+0.5**
BDRM	**Kayabasi**	**0.43**	**283**	*i* P	**Pg**	**08 05 29.9**	**-0.7**
BDRM				*i* S	**Sg**	**08 05 37.1**	**+0.8**
BDRM	**Kayabasi**	**0.43**	**283**	*i* P	**Pg**	**08 05 30.0**	**-0.7**
BDRM				*i* S	**Sg**	**08 05 37.1**	**+0.7**
TURN	**Turunc**	**0.51**	**100**	*i* P	**Pg**	**08 05 26.6**	**-5.6**
TURN				*i* S	**Sg**	**08 05 29.0**	**-10**
BODT	**Bodrum**	**0.54**	**280**	*e*PG	**Pg**	**08 05 32.2**	**-0.5**
BODT				*e*SG	**Sg**	**08 05 40.6**	**+0.9**
BODT	**Bodrum**	**0.54**	**280**	*e*Pg	**Pg**	**08 05 32.2**	**-0.5**
BODT				*e*Sg	**Sg**	**08 05 40.6**	**+0.9**
AYDN	**Tasoluk**	**0.70**	**354**	*i* P	**Pg**	**08 05 35.3**	**-0.4**
AYDN				*i* S	**Sg**	**08 05 45.2**	**+0.4**
AYDN	**Tasoluk**	**0.70**	**354**	*i* P	**Pg**	**08 05 35.3**	**-0.4**
AYDN				*i* S	**Sg**	**08 05 45.2**	**+0.4**
DNZL	**Cakiroluk**	**1.12**	**50**	*i* P	**Pg**	**08 05 42.8**	**-1.0**
DNZL				*i* S	**Sg**	**08 05 59.3**	**+1.0**
DNZL	**Cakiroluk**	**1.12**	**50**	*i* P	**Pg**	**08 05 42.8**	**-1.0**
DNZL				*i* S	**Sg**	**08 05 59.3**	**+1.0**
GLHS	**Glhisar (BURDU**	**1.23**	**81**	*e*PN	**Pn**	**08 05 44.5**	**-1.4**
GLHS	**Glhisar (BURDU**	**1.23**	**81**	*e*Pn	**Pn**	**08 05 44.5**	**-1.5**
GOLH	**Golhisar**	**1.30**	**78**	*eP*	**Pn**	**08 05 45.7**	**-1.1**
GOLH				*eS*	**Sb**	**08 06 04.4**	**+0.5**
GOLH	**Golhisar**	**1.30**	**78**	*eP*	**Pn**	**08 05 45.7**	**-1.1**
GOLH				*eS*	**Sb**	**08 06 04.4**	**+0.5**
AKAS	**Kas**	**1.50**	**119**	*i* P	**Pn**	**08 05 50.0**	**+0.4**
AKAS				*i* S	**Sn**	**08 06 11.0**	**+1.4**
AKAS	**Kas**	**1.50**	**119**	*i* P	**Pn**	**08 05 50.0**	**+0.3**
AKAS				*i* S	**Sn**	**08 06 11.0**	**+1.5**

DJA 24 08:22:41, 9°.58S×115°.59E, h121km, MLv3.5/8, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGBI	**Denpasar**	**0.88**	**330**	P	Pn	08 23 03.0	+1.0
IGBI				S	Sn	08 23 18.7	+0.9
DNP	**Denpasar**	**0.97**	**337**	P	Pn	08 23 03.9	+1.0
DNP				S	Sn	08 23 22.0	+2.6
KHKI	**Kahang-Kahang**	**1.21**	**1**	P	Pn	08 23 03.9	-1.4
KHKI				S	Sn	08 23 21.0	-2.7
SRBI	**Singaraja**	**1.53**	**346**	P	Pn	08 23 10.8	+1.9
SRBI				S	Sn	08 23 32.2	+2.1
NBBI	**Negara**	**1.54**	**321**	P	Pn	08 23 10.2	+1.2
BYJI	**Banyuwangi**	**1.82**	**318**	P	Pn	08 23 13.6	+1.2
BYJI				S	Sn	08 23 37.7	+1.4
GMJI	**Gumukmas**	**2.49**	**301**	P	Pn	08 23 19.7	-1.0
PWJI	**Pagerwojo**	**4.05**	**292**	P	Pn	08 23 41.9	+0.6

CASC 24 08:27:24.9±2.2, 11°.90N×88°.03W, h0km±10km, MD3.8, ML3.1, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEON	**Leon**	**1.23**	**65**	*eP*	Pg	08 27 48.1	-0.3
CRIN	**San Cristobal**	**1.25**	**50**	*eP*	Pg	08 27 48.9	+0.1
CNCH	**Conchagua**	**1.39**	**8**	*eP*	Pg	08 27 50.4	-1.1
CNCH				*eS*	Sg	08 28 10.1	+0.6
CNGN	**Cerro Negro**	**1.43**	**65**	*eP*	Pn	08 27 51.3	-0.8
CNGN				*eS*	Sg	08 28 10.5	-0.5
CNGN				AML	AML	08 28 31.7	
	comp=N,303nm,0.1s						
COPN	**Copaltepe**	**1.43**	**78**	*eP*	Pn	08 27 51.4	-0.7
COPN				*eS*	Sg	08 28 13.5	+2.5
MOMN	**Momotombo**	**1.54**	**71**	*eP*	Pn	08 27 53.1	-0.5
BLLM	**Bellamira**	**1.55**	**352**	*eP*	Pn	08 27 53.1	-0.6
CSAN		**1.60**	**80**	*eP*	Pn	08 27 53.6	-0.8
TISN	**Laguna Tiscapa**	**1.74**	**82**	*eP*	Pn	08 27 55.5	-0.9
MGAN	**Managua**	**1.76**	**82**	*eP*	Pn	08 27 55.7	-1.0
HUEN		**1.87**	**76**	*eP*	Pn	08 27 57.4	-0.7
CAHU	**Cacacuatique**	**1.87**	**355**	*eP*	Pn	08 27 58.3	+0.1
LFRS	**El Faro**	**1.99**	**330**	*eP*	Pn	08 27 59.3	-0.6
LBRS	**Las Brisas**	**2.08**	**332**	*eP*	Pn	08 28 01.1	0.0
JTS	**JuntasAbangare**	**3.41**	**118**	*eP*	Pn	08 28 20.5	+1.0

BJI 24 08:28:20.1, 31°.14N×103°.73E, h22km, ML3.6/11, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.23**	**174**	Pg

comp=E,77nm,0.6s
XAN Xi'an 5.25 55 Pn Pn 08 29 37.3 +0.1
XAN Pg Pn 08 29 54.9 +18
XAN Sn Sn 08 30 34.9 -2.2
XAN smax
comp=N,76nm,0.7s
XAN smax
comp=E,48nm,0.9s
GYA Guiyang 5.33 150 Pn Pn 08 29 38.5 +0.2
GYA Sn Sn 08 30 42.4 +3.4
GYA Sg Sn 08 31 10.5 +31
GYA smax
comp=N,60nm,0.8s
GYA smax
comp=E,90nm,0.8s

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*IDC **24** 08:35:14.0±1.2, 15°.40S×173°.16W, h0km, mb4.0/8, mb1 4.3/8, mb1mx4.1/16, mbtmp4.0/8, MS3.9/2, Ms1 4.1/2, ms1mx3.5/18, Error ellipse: s-maj=68.2km s-min=21.0km az=145.0*
*ISCJB **24** 08:35:17.2±1.0, 15°.2S±0°.3×173°.1W±0°.3, h33km, mb4.0/9, Error ellipse: s-maj=56.4km s-min=9.3km az=142.2*
*NEIC **24** 08:35:23.5±1.3, 14°.62S×172°.94W, h40km±13km, mb4.6/1, Error ellipse: s-maj=60.6km s-min=12.1km az=155.0*
ISC 24 08:35:19.4±1.1, 15°.2S±0°.3×173°.1W±0°.3, h35km, n16, σ1§53/13, mb4.0/9, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.79**	**44**	Pn	**Pn**	**08 35 45.3**	**-2.5**
	20nm,0.3s,baz=351,slow=3.4,SNR=42						
AFI				Sn	**Sn**	**08 36 07.9**	**-1.4**
	119nm,0.3s,baz=240,slow=22,SNR=17						
MSVF	**Nonsavu**	**8.90**	**252**	*e*Pn	**Pn**	**08 37 34.0**	**+8.4**
	38nm,1.1s						
RAR	**Rarotonga**	**13.94**	**117**	LR	LR	08 42 03.3	
	comp=Z,256nm,19.0s,baz=310,slow=29						
ARMA	**Armidale**	**35.73**	**239**	*e*P	**P**	**08 42 13.1**	**-1.8**
	8.9nm,1.0s,mb4.7						
STKA	**Stephens Creek**	**44.42**	**240**	P	**P**	**08 43 24.8**	**-2.2**
	2.0nm,0.6s,mb4.1,baz=102,slow=11,SNR=9.6						
ASAR	**Alice Springs**	**50.49**	**252**	P	**P**	**08 44 12.7**	**-1.7**
	2.6nm,0.5s,mb4.5,baz=89,slow=7.7,SNR=38						
PETK	**Petropavlovsk-**	**72.56**	**342**	P	**P**	**08 46 43.0**	**+0.3**
	0.9nm,0.8s,mb3.8,baz=111,slow=7.9,SNR=2.3						
NVAR	**Mina Array Bea**	**73.97**	**42**	P	**P**	**08 46 52.6**	**+1.3**
	1.2nm,0.8s,mb3.9,baz=227,slow=9.1,SNR=7.8						
TXAR	**Lajitas Array**	**80.23**	**56**	P	**P**	**08 47 28.3**	**+1.5**
	0.7nm,0.9s,mb3.6,baz=225,slow=10,SNR=7.1						
TXAR	**Lajitas Array**	**80.23**	**56**	P	**P**	**08 47 28.3**	**+1.5**
PDAR	**Pinedale Array**	**81.90**	**42**	P	**P**	**08 47 36.6**	**+1.3**
	0.8nm,0.8s,mb3.7,baz=259,slow=0.8,SNR=8.1						
ILAR	**Eielson Array**	**82.20**	**11**	P	**P**	**08 47 37.5**	**+1.1**
	0.7nm,0.7s,mb3.7,baz=229,slow=6.6,SNR=9.6						
YKA	**Yellowknife Ar**	**89.80**	**23**	P	**P**	**08 48 14.8**	**+0.9**
	0.4nm,0.8s,mb3.8,baz=230,slow=4.7,SNR=3.1						
CMAR	**Chiang Mai Arr**	**92.88**	**288**	LR	LR	09 27 44.7	
	comp=Z,105nm,18.7s,baz=200,slow=34						
BRTR	**Keskin Array B**	**146.23**	**321**	PKPbc	PKPbc	08 54 57.3	+0.8
	2.4nm,1.0s,baz=29,slow=3.3,SNR=7.2						
MMAI	**Mount Meron Ar**	**148.72**	**310**	PKPbc	PKPbc	08 55 05.4	+1.9
	0.9nm,0.3s,baz=33,slow=3.4,SNR=4.2						

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*ISCJB **24** 08:57:59.0±0.4, 32°.33N×0°.02×115°.31W±0°.02, h10km±3km, Error ellipse: s-maj=3.1km s-min=2.5km az=177.7*
*ECX **24** 08:58:00.6±0.6, 32°.32N×115°.37W, h5km, MD3.4, ML3.5*
*NEIC **24** 08:58:00.6, 32°.32N×115°.37W, h5km, ML3.5(ECX), ML3.3(PAS), After ECX.*
ISC 24 08:57:59.4±0.3, 32°.31N±0°.02×115°.33W±0°.02, h13km±2km, n54, σ0§98/78, 23C-28D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.11**	**12**	⇓*e*P	**Pg**	**08 58 02.6**	**0.0**
CPBX				*e*S	**Sg**	**08 58 05.1**	**+0.2**
CPBX				⇓*e*		08 58 06.1	
	comp=N,57μm,0.4s						
EMX	**El Mayor**	**0.33**	**167**	⇓*e*P	**Pg**	**08 58 06.7**	**+0.6**
EMX				*e*S	**Sg**	**08 58 11.6**	**+1.0**
EMX				⇑*e*		08 58 12.4	
	comp=E,6μm,0.5s						
SGL	**Mount Signal**	**0.48**	**316**	⇓*e*P	**Pg**	**08 58 09.3**	**+0.4**
COA	**Coachella**	**0.58**	**18**	⇓*e*P	**Pg**	**08 58 11.1**	**+0.3**
YUH	**Yuha Desert**	**0.60**	**304**	⇓*e*P	**Pg**	**08 58 11.4**	**+0.1**
COK	**Cook Ranch**	**0.64**	**328**	⇓*e*P	**Pg**	**08 58 12.1**	**+0.2**
RDX	**Rancho Dawling**	**0.64**	**234**	⇑*e*P	**Pg**	**08 58 11.5**	**-0.5**
RDX				*e*S	**Sg**	**08 58 20.2**	**-0.3**
RDX				*e*		08 58 22.4	
	comp=E,2μm,0.4s						
RDX				⇑*e*		08 58 22.6	
	comp=N,1μm,0.4s						
112A	**Yuma**	**0.67**	**70**	⇓P	**Pg**	**08 58 12.3**	**-0.3**
	baz=0.7,SNR=309						
112A				⇓S	**Sg**	**08 58 21.9**	**+0.4**
	baz=0.7						
RMX	**La Rumorosa**	**0.70**	**295**	⇑*e*P	**Pg**	**08 58 12.0**	**-1.0**
RMX				*e*S	**Sg**	**08 58 21.4**	**-0.8**
DVTC	**Desert V Tower**	**0.74**	**299**	⇓P	**Pg**	**08 58 14.0**	**+0.2**
	baz=0.8,SNR=88						
DVTC				⇓S	**Sg**	**08 58 23.9**	**+0.4**
	baz=0.8						
SWSC	**Sam W. Stewart**	**0.74**	**328**	P	**Pg**	**08 58 13.4**	**-0.5**
	baz=0.8,SNR=158						
SWSC				⇓S	**Sg**	**08 58 23.9**	**+0.3**
	baz=0.8						
GLA	**Glamis**	**0.85**	**30**	P	**Pg**	**08 58 14.9**	**-1.1**
	baz=0.9,SNR=50						
GLA				⇑S	**Sg**	**08 58 26.7**	**-0.5**
	baz=0.9						
GLA	**Glamis**	**0.85**	**30**	*e*Pg	**Pg**	**08 58 14.8**	**-1.2**
GLA				*e*Sg	**Sg**	**08 58 26.6**	**-0.7**
ECBX	**El Chinero**	**0.87**	**164**	⇓*e*P	**Pg**	**08 58 15.8**	**-0.4**
ECBX				*e*S	**Sg**	**08 58 28.2**	**+0.7**
MONP	**Monument Peak**	**1.09**	**303**	⇓P	**Pb**	**08 58 19.3**	**-0.7**
	baz=1.1,SNR=324						
MONP				⇓S	**Sb**	**08 58 34.0**	**-0.1**
	baz=1.1						
CBX	**Cerro Bola**	**1.13**	**271**	*e*P	**Pb**	**08 58 20.8**	**0.0**
CBX				*e*S	**Sb**	**08 58 35.0**	**-0.4**
BAR	**Barrett**	**1.19**	**288**	*e*Pg	**Pg**	**08 58 21.8**	**-0.6**
BAR				*e*Sg	**Sg**	**08 58 37.2**	**-0.7**
ECNX	**Esteban Cantu**	**1.26**	**239**	⇑*e*P	**Pn**	**08 58 21.9**	**-0.7**
ECNX				⇑*e*P		08 58 21.2	
SPX	**San Pedro Mart**	**1.26**	**185**	⇑*e*P	**Pn**	**08 58 22.7**	**0.0**
SPX				*e*S	**Sb**	**08 58 40.2**	**+1.0**
PBX	**Punta Banda**	**1.31**	**245**	⇑*e*P	**Pn**	**08 58 22.7**	**-0.7**
BC3	**Big Chuckawall**	**1.35**	**356**	P	**Pn**	**08 58 22.4**	**-1.5**
	baz=1.4,SNR=54						
113A	**Mohawk Valley,**	**1.40**	**70**	⇑P	**Pn**	**08 58 23.3**	**-1.3**
	baz=1.4,SNR=20						
109C	**Camp Elliot, M**	**1.61**	**292**	⇑Pb	**Pb**	**08 58 28.5**	**-0.4**
	baz=1.6						
109C				⇑Sb	**Sb**	**08 58 49.3**	**+0.2**
	baz=1.6						
PFO	**Pinyon Flat Ob**	**1.61**	**324**	P	**Pn**	**08 58 26.1**	**-1.3**
	baz=1.7,SNR=55						
PFO	**Pinyon Flat Ob**	**1.61**	**324**	*e*Pn	**Pn**	**08 58 26.0**	**-1.4**
PFO				*e*Sn	**Sn**	**08 58 46.8**	**-1.2**
Z13A	**Yuma Proving G**	**1.67**	**57**	⇓P	**Pn**	**08 58 27.1**	**-1.2**
	baz=1.7						
BELC	**Belle Mtn. Jos**	**1.78**	**342**	⇑P	**Pn**	**08 58 28.7**	**-1.1**
	baz=1.9						
IRM	**Iron Mountain**	**1.85**	**5**	⇑P	**Pn**	**08 58 29.6**	**-1.3**
	baz=1.9,SNR=33						
Y13A	**Salome**	**1.96**	**40**	⇓P	**Pn**	**08 58 31.5**	**-0.9**
	baz=2.0						
MURC	**Murrieta**	**2.03**	**310**	⇑Sb	**Sb**	**08 59 02.9**	**+1.5**
	baz=2.1						
114A	**Black Gap (USA**	**2.12**	**77**	⇑P	**Pn**	**08 58 33.4**	**-1.0**
	baz=2.1,SNR=19						
114A				⇓Sb	**Sb**	**08 59 04.5**	**+0.7**
	baz=2.1						
214A	**Organ Pipe Nat**	**2.17**	**99**	⇑P	**Pn**	**08 58 33.8**	**-1.4**
	baz=2.1,SNR=8.5						
Z14A	**Wintersburg**	**2.27**	**62**	⇑P	**Pn**	**08 58 35.3**	**-1.3**
	baz=2.3						
GMRC	**Granite Mounta**	**2.48**	**354**	⇓P	**Pn**	**08 58 38.9**	**-0.6**
	baz=2.6						
X13A	**Yucca**	**2.60**	**28**	⇓P	**Pn**	**08 58 41.3**	**+0.1**
	baz=2.7						
BFSC	**Mount Baldy Ra**	**2.74**	**315**	⇓P	**Pn**	**08 58 42.8**	**-0.2**
	baz=2.8						
BFSC				⇓Sb	**Sb**	**08 59 23.5**	**+1.8**
	baz=2.8						
SCI	**San Clemente I**	**2.79**	**285**	⇑Sb	**Sb**	**08 59 24.8**	**+1.5**
	baz=2.8						
CIS	**Catalina Islan**	**2.81**	**294**	⇓Sb	**Sb**	**08 59 24.9**	**+1.2**
	baz=2.9						
Z15A	**Gila River Ind**	**2.85**	**69**	⇑P	**Pn**	**08 58 43.8**	**-0.7**
	baz=2.9						
FMP	**Fort Macarthur**	**2.86**	**300**	⇓Sb	**Sb**	**08 59 27.4**	**+2.3**
	baz=2.9						
X14A	**Yava**	**2.97**	**43**	⇓P	**Pn**	**08 58 46.0**	**-0.1**
	baz=3.0						
X14A				⇑Sb	**Sb**	**08 59 29.2**	**+0.9**
	baz=3.0						
MWC	**Mount Wilson**	**2.98**	**311**	*e*Pn	**Pn**	**08 58 49.8**	**+3.5**
MWC				*e*Sn	**Sn**	**08 59 31.5**	**+10**
Y15A	**Casa Rosa Ranc**	**3.00**	**56**	⇑P	**Pn**	**08 58 46.3**	**-0.4**
	baz=3.0						
PASC	**Pasadena Art C**	**3.03**	**309**	*e*Pn	**Pb**	**08 58 54.9**	**+1.7**
W13A	**Hualapai Mount**	**3.03**	**23**	⇑P	**Pn**	**08 58 47.0**	**-0.1**
	baz=3.1						
GSC	**Goldstone**	**3.23**	**338**	*e*Pn	**Pg**	**08 59 00.1**	**-1.2**
X15A	**Humboldt**	**3.38**	**49**	⇓P	**Pn**	**08 58 52.2**	**+0.3**
	baz=3.4						
V12A	**Nelson**	**3.43**	**7**	⇓P	**Pn**	**08 58 52.5**	**-0.1**
	baz=3.5						
Y16A	**Circle Bar Ran**	**3.59**	**63**	⇓P	**Pn**	**08 58 54.4**	**-0.3**
	baz=3.6						
TUC	**Tucson**	**3.85**	**89**	Pn	**Pn**	**08 59 00.6**	**+2.3**
TUC				*e*S	**Sb**	**08 59 55.4**	**+1.7**
WUAZ	**Wupatki**	**4.59**	**45**	*e*Pn	**Pn**	**08 59 10.3**	**+1.8**
WUAZ				*e*Sg	**Sg**	**09 00 30.9**	**+4.1**
CCUT	**Cedar City**	**5.47**	**17**	*e*Pn	**Pn**	**08 59 21.8**	**+1.2**
	comp=N,5.4nm,0.9s						
CCUT				*e*Sg	**Sg**	**09 00 56.8**	**+1.6**
ARUT	**Antelope Range**	**5.68**	**15**	*e*Pn	**Pn**	**08 59 29.1**	**+5.6**
	comp=N,8.6nm,0.8s						
MSU	**Marysvale**	**6.70**	**22**	Pn	**Pn**	**08 59 41.3**	**+3.8**
	comp=N,3.1nm,0.7s						
MSU				*e*Sg	**Sg**	**09 01 38.0**	**+3.4**

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*NIED **24** 09:14:00, 21°.30N×121°.10E, h8km, Mw4.4 Best double couple: M0=4.16000×10^15 NP1:φs=300.00000°, δ=49.00000°, λ=-66.00000°. NP2:φs=86.00000°, δ=46.00000°, λ=-115.00000°.*
*BJI **24** 09:14:32.6, 21°.08N×120°.74E, h3km, mB4.5/5, mb4.1/8, Ms4.2/7, Ms7 4.0/7*
*IDC **24** 09:14:34.3±0.7, 21°.25N×121°.11E, h0km, mb3.8/12, mb1 4.0/12, mb1mx3.9/22, mbtmp3.9/12, MS3.7/9, Ms1 3.7/9, ms1mx3.5/27, Error ellipse: s-maj=26.7km s-min=16.0km az=68.0*
*NEIC **24** 09:14:35.9±0.5, 21°.25N×121°.09E, h10km, mb4.1/1, Error ellipse: s-maj=14.5km s-min=8.1km az=90.0*
*ISCJB **24** 09:14:35.9±1.6, 21°.20N±0°.04×121°.08E±0°.05, h22km±13km, mb3.8/14, MS3.7/9, Error ellipse: s-maj=8.6km s-min=5.4km az=22.6*
*JMA **24** 09:14:37.7±0.5, 21°.35N×121°.06E, h172km, M4.1*
ISC 24 09:14:36.8±1.8, 21°.26N±0°.04×121°.01E±0°.05, h14km±12km, n38, σ1§05/45, mb3.8/13, MS3.7/9, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**1.56**	**2**	*e*Pn	**Pn**	**09 15 01.4**	**-2.7**
TWG				*e*Sn	**Sn**	**09 15 24.7**	**+0.7**
TPUB	**Ta-pu**	**2.06**	**350**	*e*Pn	**Pn**	**09 15 10.2**	**-0.8**
YULB	**Yu-li**	**2.14**	**7**	Pn	**Pn**	**09 15 11.1**	**-1.0**
SSLB	**Suanglung**	**2.52**	**359**	*e*Pn	**Pn**	**09 15 17.3**	**0.0**
SSLB				*e*Sn	**Sn**	**09 15 51.2**	**+3.4**
NACB	**Ninganchiao**	**2.95**	**10**	*e*Pn	**Pn**	**09 15 22.5**	**-0.7**
NACB				*e*Sn	**Sn**	**09 15 59.6**	**+1.2**
APYP	**Conner**	**3.39**	**176**	*e*P	**Pn**	**09 15 30.3**	**+1.0**
APYP				*e*S	**Pg**	**09 15 48.0**	**+6.4**
YHNB	**Yeheng**	**3.41**	**6**	*e*Pn	**Pn**	**09 15 29.6**	**+0.1**
YHNB				*e*Sn	**Sn**	**09 16 12.6**	**+2.7**
CVP	**Callao Caves**	**3.62**	**168**	⇑*i*P	**Pn**	**09 15 32.8**	**+0.4**
YOJ	**Yonaguni jima**	**3.68**	**30**	P	**Pn**	**09 15 33.9**	**+0.6**
TATO	**Taipei**	**3.73**	**7**	*e*Pn	**Pn**	**09 15 36.1**	**+2.3**
TATO				*e*Sn	**Sn**	**09 16 14.7**	**-2.8**
HATJ	**Hateruma jima**	**3.79**	**42**	P	**Pn**	**09 15 35.4**	**+0.6**
HATJ				*e*S	**Sn**	**09 16 19.1**	**-0.2**
IRIF	**Iriomote-Funau**	**3.96**	**39**	P	**Pn**	**09 15 36.9**	**-0.2**
IRIF				*e*S	**Sn**	**09 16 22.4**	**-0.9**
JKRS	**Kuro-shima**	**4.05**	**42**	P	**Pn**	**09 15 38.4**	**0.0**
JKRS				*e*S	**Sn**	**09 16 25.8**	**+0.1**
JIJ	**Ishigaki jima**	**4.23**	**42**	P	**Pn**	**09 15 41.1**	**+0.3**
JIJ				*e*S	**Sn**	**09 16 31.4**	**+1.4**
JTJ	**Tarama**	**4.78**	**45**	P	**Pn**	**09 15 48.0**	**-0.4**
JTJ				S	**Sn**	**09 16 42.3**	**-1.4**
GZH	**Guangzhou**	**7.34**	**286**	P	**Pn**	**09 16 19.9**	**-3.6**
GZH				S	**Sn**	**09 17 39.9**	**-6.7**
GZH				LR	LR		
	comp=N,1μm,13.1s						
GZH				LR	LR		
	comp=E,470nm,11.0s						
GZH				LR	LR		
	comp=Z,1μm,13.0s						
DAV	**Davao City (W)**	**14.78**	**162**	LR	LR	09 25 08.4	
	comp=Z,304nm,18.1s,baz=335,slow=43						
KSRS	**Korea Array**	**17.21**	**19**	P	**Pn**	**09 18 38.2**	**+1.3**
	comp=Z,0.0nm,0.3s,baz=201,slow=13,SNR=3.7						
BJI	**Beijing**	**19.17**	**349**	P	**Pn**	**09 19 00.8**	**0.0**
BJI				S	**Sn**	**09 22 34.9**	**-0.5**
BJI				pmax	pmax		
	comp=Z,12nm,1.2s						
BJI				pmax	pmax		
	comp=Z,67nm,7.5s						
BJI				LR	LR		
	comp=N,260nm,18.2s						
BJI				LR	LR		
	comp=E,490nm,18.7s						
BJI				LR	LR		
	comp=Z,260nm,22.7s						
CMAR	**Chiang Mai Arr**	**20.94**	**266**	P	**P**	**09 19 20.4**	**+1.1**
	comp=Z,2.4nm,0.7s,baz=70,slow=9.3,SNR=11						
LZH	**Lanzhou**	**21.05**	**318**	*e*P	**P**	**09 19 18.3**	**-2.1**
LZH				pP		09 19 28.6	
LZH				sP	sP	09 19 33.1	+7.0
LZH				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.2						
LZH				pmax	pmax		
	comp=Z,110nm,4.2s						
LZH				LR	LR		
	comp=N,520nm,12.6s						
LZH				LR	LR		
	comp=Z,500nm,12.6s,MS4.1						
MJAR	**Matsushiro Arr**	**21.36**	**41**	P	**P**	**09 19 23.4**	**-0.2**
	comp=Z,2.5nm,1.0s,mb3.5,baz=237,slow=10.0,SNR=8.5						
GUMO	**Guam**	**23.98**	**105**	LR	LR	09 28 52.1	
	comp=Z,83nm,18.8s,MS3.2,baz=283,slow=36						
ASAJ	**Asahikawa**	**28.98**	**33**	LR	LR	09 32 42.4	
	comp=Z,127nm,21.5s,MS3.5,baz=66,slow=38						
SONM	**Songino Array**	**29.02**	**339**	P	**P**	**09 20 36.7**	**+0.6**
	comp=Z,0.5nm,0.5s,mb3.5,baz=162,slow=9.6,SNR=5.4						
SONM				LR	LR	09 34 06.3	
	comp=Z,178nm,18.4s,MS3.7,baz=154,slow=40						
MKAR	**Makanchi Array**	**40.37**	**318**	P	**P**	**09 22 14.0**	**-0.1**
	comp=Z,0.3nm,0.3s,mb3.5,baz=111,slow=7.9,SNR=6.1						
MKAR				LR	LR	09 40 50.0	
	comp=Z,129nm,18.5s,MS3.8,baz=357,slow=39						
PETK	**Petropavlovsk-**	**42.39**	**32**	LR	LR	09 41 02.9	
	comp=Z,59nm,20.4s,MS3.5,baz=336,slow=38						
ZALV	**Zalesovo Beam**	**42.63**	**329**	P	**P**	**09 22 32.5**	**-0.1**
	comp=Z,2.4nm,0.7s,mb4.0,baz=117,slow=5.3,SNR=9.1						
ZALV				LR	LR	09 42 56.4	
	comp=Z,88nm,18.5s,MS3.7,baz=256,slow=40						
WRA	**Warramunga Arr**	**42.97**	**161**	P	**P**	**09 22 34.0**	**-1.6**
	comp=Z,2.4nm,0.8s,mb4.0						
AAK	**Ala-Archa**	**44.20**	**310**	LR	LR	09 43 18.4	
	comp=Z,129nm,18.1s,MS3.9,baz=93,slow=39						
KURK	**Kurchatov**	**44.26**	**322**	*e*P	**P**	**09 22 46.5**	**+0.7**
	comp=Z,2.7nm,1.0s,mb3.9						
ASAR	**Alice Springs**	**46.38**	**164**	P	**P**	**09 23 02.8**	**0.0**
	comp=Z,0.6nm,0.4s,mb3.8,baz=340,slow=6.7,SNR=9.7						
BVAR	**Borovoye Array**	**49.85**	**322**	P	**P**	**09 23 30.3**	**+0.9**
	comp=Z,0.7nm,0.7s,mb3.8,baz=121,slow=7.6,SNR=3.8						
STKA	**Stephens Creek**	**56.39**	**159**	P	**P**	**09 24 17.6**	**-0.1**
	comp=Z,2.0nm,0.6s,mb4.3,baz=334,slow=6.0,SNR=4.6						
ILAR	**Eielson Array**	**71.88**	**27**	P	**P**	**09 25 58.5**	**-0.5**
	comp=Z,0.2nm,0.5s,mb3.3,baz=280,slow=5.1,SNR=6.7						
FINES	**FINESS Array B**	**73.89**	**330**	P	**P**	**09 26 10.3**	**-0.7**
	comp=Z,0.5nm,0.3s,mb3.9,baz=72,slow=4.8,SNR=2.5						
NOA	**NORSAR Array B**	**80.73**	**332**	LR	LR	10 07 13.1	
	comp=Z,84nm,19.0s,MS4.1,baz=90,slow=39						
YKA	**Yellowknife Ar**	**85.72**	**23**	P	**P**	**09 27 15.2**	**+0.1**
	comp=Z,0.6nm,0.8s,mb3.9,baz=310,slow=4.9,SNR=4.1						

CASC 24 09:24:40.8±2.1, 8°.45N×83°.04W, h5km, MD4.0, 2C-2D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.24**	**327**	⇓*e*P	Pg	09 24 45.6	+0.1
ACR				*e*S	Sg	09 24 50.0	+1.3
BRU2	**Volcan**	**0.48**	**45**	*e*P	Pg	09 24 51.5	+1.4
TBS2		**0.51**	**48**	*e*P	Pg	09 24 52.2	+1.6
TBS2				*e*S	Sg	09 25 05.5	+8.3
BRU	**Baru**	**0.59**	**53**	*e*P	Pg	09 24 46.0	-6.2
BAR1		**0.83**	**341**	⇑*e*P	Pg	09 24 56.1	-0.7
CNI	**Changuinola**	**1.09**	**28**	*e*P	Pg	09 25 00.6	-1.1
QCR	**Quepos**	**1.48**	**311**	*e*P	Pn	09 25 06.9	-1.1
URSC	**Urasca**	**1.56**	**332**	⇓*e*P	Pn	09 25 08.9	-0.3
URSC				*e*S	Sn	09 25 30.1	+0.4
LAJ	**Bijagual**	**1.77**	**323**	*e*P	Pn	09 25 15.8	+3.8
PRS1	**Puriscal**	**1.98**	**321**	*e*P	Pn	09 25 15.1	+0.2
PRS1				*e*S	Sn	09 25 38.9	-1.2
CGA2	**Cerro Gallo 2**	**2.10**	**318**	⇑*e*P	Pn	09 25 17.7	+1.0

DJA 24 09:46:56, 1°.78N×121°.81E, h70km, MLv4.2/6, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**1.30**	**174**	P	Pn	09 47 19.7	+1.3
MPSI	**Mapaga**	**2.39**	**233**	P	Pn	09 47 33.4	+0.5
APSI	**Ampana**	**2.68**	**183**	P	Pn	09 47 37.5	+0.6
APSI				S	Sn	09 48 10.1	+1.9
LUWI	**Luwuk**	**2.96**	**161**	P	Pn	09 47 39.5	-1.2
LUWI				S	Sn	09 48 15.7	+0.5
LBMI	**Labuha**	**6.18**	**113**	P	Pn	09 48 25.2	+0.6
	0.1nm1μm34nm,1.3s						
BNSI	**Bone**	**6.37**	**195**	P	Pn	09 48 29.1	+1.8
SBUM	**Sibu**	**9.61**	**274**	P	Pn	09 49 12.2	+0.6

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*ISCJB **24** 09:51:31.9±1.8, 10°.61N±0°.06×91°.65E±0°.04, h4km±11km, mb4.5/36, Error ellipse: s-maj=10.0km s-min=7.1km az=0.2*
*BJI **24** 09:51:32.8, 10°.47N×91°.86E, h17km, mB4.2/4, mb4.5/14, Ms3.8/1, Ms7 3.7/1*
*IDC **24** 09:51:33.4±0.8, 10°.67N×91°.65E, h0km, mb4.3/14, mb1 4.4/15, mb1mx4.3/23, mbtmp4.3/15, ML4.1/1, Error ellipse: s-maj=29.8km s-min=15.1km az=53.0*
*NEIC **24** 09:51:35.2±0.5, 10°.70N×91°.69E, h10km, mb4.6/14, Error ellipse: s-maj=15.1km s-min=7.7km az=58.0*
*MOS **24** 09:51:36.7±1.0, 10°.71N×91°.76E, h33km, mb4.7/26, Error ellipse: s-maj=15.3km s-min=7.5km az=102.1*
ISC 24 09:51:35.6±2.1, 10°.70N±0°.06×91°.74E±0°.04, h13km±12km, h31km±2.0km: pP-P, n91, σ1§03/95, mb4.5/36, 5C-5D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**1.37**	**46**	*e*PKP	**Pn**	**09 52 00.5**	**-0.1**
PBA				*e*S	**Sn**	**09 52 20.7**	**+2.1**
CMAR	**Chiang Mai Arr**	**10.40**	**41**	Pn	**Pn**	**09 54 04.3**	**-0.2**
	0.5nm,0.3s,baz=232,slow=15,SNR=5.5						
CMAR	**Chiang Mai Arr**	**10.40**	**41**	P	**Pn**	**09 54 04.4**	**-0.2**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
VIS	**Vishakhapatnam**	**10.73**	**312**	*e*PKP	**Pn**	**09 54 07.0**	**-2.2**
VIS				*e*S	**Sn**	**09 55 56.7**	**-13**
VIS				*e*x	x	09 56 01.6	
	comp=E,105nm,0.3s						
VIS				*e*x	x	09 56 02.9	
	comp=N,100nm,0.2s						
HYB	**Hyderabad**	**14.43**	**299**	*e*P	**Pn**	**09 55 08.5**	**+8.8**
HYB				*e*S	**Sn**	**09 57 58.0**	**+18**
HYB	**Hyderabad**	**14.43**	**299**	*i*P	**Pn**	**09 55 08.5**	**+8.8**
HYB				*e*S	**Sn**	**09 57 40.0**	**+0.3**
RAMN	**Ramite**	**16.88**	**344**	*e*P	**Pn**	**09 55 30.9**	**-0.8**
	comp=N,36nm,0.4s						
TAPN	**Taplejung**	**16.99**	**348**	*e*P	**Pn**	**09 55 32.0**	**-1.2**
	comp=N,29nm,0.7s						
KMI	**Kunming**	**17.74**	**35**	P	**Pn**	**09 55 43.9**	**+1.3**
KMI				pmax	pmax		
	comp=Z,16nm,1.2s						
PKI	**Pulchoki**	**17.81**	**341**	*e*P	**Pn**	**09 55 43.0**	**-0.4**
	comp=Z,15nm,0.3s						
PKI	**Pulchoki**	**17.81**	**341**	*e*P	**Pn**	**09 55 43.1**	**-0.3**
PKI				pmax	pmax		
	comp=Z,9.0nm,0.2s						
PKI	**Pulchoki**	**17.81**	**341**	*e*P	**Pn**	**09 55 43.1**	**-0.3**
	comp=Z,9.3nm,0.2s						
PKIN	**Phulchoki**	**17.82**	**341**	*e*P	**Pn**	**09 55 43.1**	**-0.4**
	comp=Z,9.3nm,0.2s						
DMN	**Daman**	**17.94**	**341**	*e*P	**Pn**	**09 55 45.6**	**+0.6**
GKN	**Gorkha**	**18.46**	**340**	*e*P	**Pn**	**09 55 52.2**	**+0.8**
	comp=Z,20nm,0.3s						
BHPL	**Bhopal**	**18.50**	**314**	*e*PKP	**Pn**	**09 55 50.5**	**-1.3**
LSA	**Lhasa**	**18.91**	**358**	P

comp=Z,1.0nm,0.7s
KURK Kurchatov 41.33 347 *e*P **P** **09 59 21.6 +0.5**
KURK pmax pmax
comp=Z,11nm,1.1s,mb4.4
KURK Kurchatov 41.33 347 *e*P **P** **09 59 21.6 +0.5**
comp=Z,11nm,1.1s,mb4.4
TLY Talaya 42.01 11 *e*P **P** **09 59 28.2 +1.6**
TLY pmax pmax
comp=Z,7.0nm,1.5s,mb4.1
KSRS Korea Array 42.02 45 P **P** **09 59 26.0 -0.9**
comp=Z,1.0nm,0.7s,mb3.5,baz=254,slow=9.0,SNR=5.8
KSRS Korea Array 42.02 45 P **P** **09 59 26.0 -0.9**
KSRS pmax pmax
comp=Z,1.0nm,0.7s,mb3.5
ZAA0 Zalesovo Array 43.49 354 *e*P **P** **09 59 38.5 -0.1**
ZALV Zalesovo Beam 43.49 354 P **P** **09 59 38.6 0.0**
comp=Z,6.5nm,0.6s,mb4.5,baz=175,slow=8.9,SNR=12
ZALV Zalesovo Beam 43.49 354 P **P** **09 59 38.6 0.0**
ZALV pmax pmax
comp=Z,7.0nm,0.6s,mb4.6
FITZ Fitzroy Crossi 44.03 130 P **P** **09 59 43.8 +0.3**
comp=Z,3.0nm,0.5s,mb4.2,baz=281,slow=12,SNR=8.9
FITZ Fitzroy Crossi 44.03 130 *e*P **P** **09 59 43.8 +0.3**
comp=Z,2.7nm,0.4s,mb4.3
BVAR Borovoye Array 45.58 342 P **P** **09 59 55.5 +0.2**
comp=Z,2.0nm,0.8s,mb4.1,baz=143,slow=8.4,SNR=8.0
BVAR Borovoye Array 45.58 342 P **P** **09 59 55.5 +0.2**
BVAR pmax pmax
comp=Z,2.0nm,0.8s
BRVK Borovoye 45.64 342⇑ *i*P **P** **09 59 56.0 +0.2**
BRVK pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
ABKAR Akbulak array 46.63 332 *e*P **P** **10 00 03.7 0.0**
comp=Z,5.5nm,0.8s,mb4.5
WRAB Tennant Creek 51.83 126 *e*P **P** **10 00 45.0 +1.1**
WRAB pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
WRAB Tennant Creek 51.83 126 *e*P **P** **10 00 45.0 +1.2**
comp=Z,2.9nm,0.5s,mb4.5
HABR Khabarovsk 52.15 35 *e*P **P** **10 00 44.7 -1.2**
HABR *e**PP pP 10 00 54.7 +4.8
HABR *e* 10 01 55.3
HABR *e*PPP 10 03 46.3
HABR *e*S **S** **10 08 08.5 -1.5**
HABR *e**SS sS 10 08 25.3 +8.8
HABR 10 10 31.5
HABR *e*SS SS 10 11 48.0 +0.6
HABR pmax pmax
comp=N,9.0nm,1.0s
HABR pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
HABR pmax pmax
comp=E,12nm,1.1s
HABR MLR MLR
comp=Z,96nm,18.0s
ARU Arti 52.38 337 *d i*P **P** **10 00 47.4 -0.1**
ARU *e* 10 02 43.1
ARU S **S** **10 08 13.1 +0.2**
ARU SS SS 10 11 47.4 -3.3
ARU pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
ASAR Alice Springs 53.53 130 P **P** **10 00 57.0 +0.6**
comp=Z,4.6nm,0.7s,mb4.5,baz=307,slow=6.7,SNR=64
ASAR Alice Springs 53.53 130 P **P** **10 00 57.0 +0.6**
ASAR pmax pmax
comp=Z,5.0nm,0.7s
KIV Kislovodsk 53.65 317 *e*P **P** **10 00 58.0 +1.0**
KIV pmax pmax
comp=Z,12nm,1.0s,mb4.8
KMBO Kilima Mbogo 55.44 261 *c e*P **P** **10 01 07.0 -3.6**
KMBO pmax pmax
comp=Z,1.0nm,0.2s
YAK Yakutsk 58.13 20 *e*P **P** **10 01 28.8 0.0**
YAK pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
VSR Storozhevoye 58.73 324 *i*P **P** **10 01 32.7 -0.5**
VSR pmax pmax
comp=Z,20nm,1.3s,mb5.0
BRTR Keskin Array B 58.80 310 P **P** **10 01 33.4 -0.6**
comp=Z,1.7nm,0.8s,mb4.2,baz=107,slow=8.5,SNR=9.6
BRTR Keskin Array B 58.80 310 P **P** **10 01 33.4 -0.5**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
OBN Obninsk 61.74 328 *e*P **P** **10 01 53.8 +0.1**
OBN *e* 10 04 14.5
OBN pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
STKA Stephens Creek 63.76 134 P **P** **10 02 07.6 0.0**
comp=Z,0.9nm,0.4s,mb4.2,baz=314,slow=14,SNR=5.3
STKA Stephens Creek 63.76 134 P **P** **10 02 07.6 0.0**
STKA pmax pmax
comp=Z,1.0nm,0.4s
STKA Stephens Creek 63.76 134 *e*P **P** **10 02 08.7 +1.1**
comp=Z,0.8nm,1.1s,mb3.7
AKASG Malin Array Be 64.48 321 P **P** **10 02 10.9 -1.1**
comp=Z,1.8nm,0.6s,mb4.3,baz=96,slow=4.6,SNR=8.1
AKASG Malin Array Be 64.48 321 P **P** **10 02 11.0 -1.0**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
VRI Vrincioaia 65.04 316⇓ *i*P **P** **10 02 16.8 +1.0**
MLR Muntele Rosu 65.51 315⇓ *i*P **P** **10 02 19.9 +1.1**
BURAR Bucovina Array 66.38 317⇑ *i*P **P** **10 02 24.9 +0.5**
JOF Joensuu 67.30 334 *e*P **P** **10 02 29.4 -0.5**
JOF Joensuu 67.30 334 *e*p **P** **10 02 29.4 -0.5**
comp=Z,8.2nm,0.6s,mb4.9
SEY Seymchan 67.39 26⇑ *e*P **P** **10 02 30.2 -0.3**
DRGR 67.93 316⇑ *i*P **P** **10 02 34.7 +0.4**
VSU Vasula 67.96 329⇓ *e*P **P** **10 02 33.4 -0.8**
VSU pmax pmax
comp=Z,13nm,1.0s,mb4.9
FINES FINESS Array B 69.12 332 P **P** **10 02 41.4 0.0**
comp=Z,4.1nm,0.6s,mb4.6,baz=102,slow=8.4,SNR=15
FINES FINESS Array B 69.12 332 P **P** **10 02 41.4 0.0**
FINES pmax pmax
comp=Z,4.0nm,0.6s
ARCES ARCESS Array B 71.82 340 P **P** **10 02 58.3 +0.5**
comp=Z,5.0nm,0.9s,mb4.5,baz=96,slow=6.7,SNR=7.6
ARCES ARCESS Array B 71.82 340 P **P** **10 02 58.3 +0.5**
ARCES pmax pmax
comp=Z,5.0nm,0.9s
BILL Bilibino 74.37 22 *e*P **P** **10 03 12.2 -0.7**
BILL *e* 10 03 24.5
BILL pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
CLL Collm 74.69 320 *e*P **P** **10 03 13.0 -2.0**
NB2 NORSAR Subarra 76.12 330 P **P** **10 03 22.3 -0.8**
comp=Z,1.7nm,0.6s,mb4.2,baz=97,slow=5.3
NOA NORSAR Array B 76.12 330 P **P** **10 03 22.6 -0.5**
comp=Z,1.8nm,0.6s,mb4.2,baz=94,slow=5.7,SNR=12
NOA NORSAR Array B 76.12 330 P **P** **10 03 22.6 -0.5**
NOA pmax pmax
comp=Z,2.0nm,0.6s
KBS Kingsbay 77.61 349 *e*P **P** **10 03 27.5 -3.7**
KBS pmax pmax
comp=Z,20nm,0.8s,mb5.1
KBS Kingsbay 77.61 349 *e*P **P** **10 03 27.5 -3.7**
comp=Z,20nm,0.8s,mb5.1
ILAR Eielson Array 93.02 21 P **P** **10 04 47.5 -1.2**
comp=Z,0.8nm,0.7s,mb4.3,baz=302,slow=4.2,SNR=13
ILAR Eielson Array 93.02 21 P **P** **10 04 47.6 -1.2**
ILAR pmax pmax
comp=Z,1.0nm,0.7s
PDAR Pinedale Array 123.34 19 PKP PKPdf 10 10 31.9 -1.0
comp=Z,0.4nm,0.7s,baz=51,slow=4.7,SNR=4.3
NVAR Mina Array Bea 123.65 28 PKP PKPdf 10 10 34.5 +0.9
comp=Z,0.5nm,0.6s,baz=335,slow=1.2,SNR=5.2
TXAR Lajitas Array 137.52 20 PKP PKPdf 10 11 00.1 0.0
comp=Z,0.3nm,0.8s,baz=180,slow=0.9,SNR=3.4

NEIC ***24*** *10:11:05.2±1.5, 15°.23S×173°.35W, h10km, Error ellipse: s-maj=88.9km s-min=16.1km az=149.0*
IDC 24 10:11:03.5±1.9, 15°.30S×173°.33W, h0km, mb3.7/5, mb1 4.1/6, mb1mx3.9/17, mbtmp3.8/6, Error ellipse: s-maj=117.4km s-min=23.8km az=149.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.04**	**48**	Pn	Pn	10 11 38.4	-0.8
	166nm,0.3s,baz=229,slow=9.3,SNR=348						
AFI				Sn	Sn	10 11 58.5	-6.9
	248nm,0.3s,baz=273,slow=22,SNR=6.0						
AFI	**Afiamalu**	**2.04**	**48**	*e*Pn	Pn	10 11 38.5	-0.7
AFI				*e*Sn	Sn	10 11 58.5	-7.0
AFI				Sn	Sn	10 11 58.5	-6.9
ASAR	**Alice Springs**	**50.20**	**252**	P	P	10 20 00.8	-0.7
	0.8nm,0.5s,baz=90,slow=7.4,SNR=14						
NVAR	**Mina Array Bea**	**74.21**	**42**	P	P	10 22 43.0	+0.6
	0.2nm,0.5s,baz=226,slow=9.9,SNR=3.9						
TXAR	**Lajitas Array**	**80.50**	**56**	P	P	10 23 18.2	+0.4
	0.9nm,1.0s,baz=217,slow=6.0,SNR=5.8						
PDAR	**Pinedale Array**	**82.15**	**42**	P	P	10 23 26.5	+0.3
	0.7nm,0.9s,baz=204,slow=3.3,SNR=6.3						
ILAR	**Eielson Array**	**82.33**	**11**	P	P	10 23 26.4	-0.3
	0.4nm,0.7s,baz=233,slow=6.4,SNR=5.3						
BRTR	**Keskin Array B**	**146.12**	**321**	PKPbc	PKPbc	10 30 47.0	+1.1
	0.3nm,0.5s,baz=48,slow=2.1,SNR=3.9						

DJA 24 10:41:24, 7°.95S×107°.21E, h40km, MLv3.8/7, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**1.14**	**325**	P	Pn	10 41 41.8	-1.7
SKJI				S	Sn	10 41 59.3	+1.4
LEM	**Lembang**	**1.19**	**20**	P	Pn	10 41 44.7	+0.6
CMJI	**Cimerak**	**1.24**	**82**	P	Pn	10 41 45.7	+0.9
CMJI				S	Sn	10 41 58.8	-1.5
CGJI	**Cibinong**	**2.01**	**311**	P	Pn	10 41 56.1	+0.7
CGJI				S	Sn	10 42 18.8	-0.5
SJI	**Sawahan**	**4.52**	**88**	P	Pn	10 42 30.0	0.0
PWJI	**Pagerwojo**	**4.55**	**91**	P	Pn	10 42 31.2	+0.8
MDSI	**Maura Dua**	**4.57**	**319**	P	Pn	10 42 32.0	+1.3

ISCJB ***24*** *10:57:01.3±0.4, 5°.78N±0°.03×126°.11E±0°.06, h119km±5km, mb4.2/15, Error ellipse: s-maj=10.4km s-min=4.5km az=173.4*
MAN ***24*** *10:57:01, 5°.74N×125°.90E, h111km, mb5.0, ML3.9, MS4.0*
NEIC ***24*** *10:57:02.5±1.0, 5°.76N×125°.62E, h122km±10km, mb3.9/2, Error ellipse: s-maj=30.6km s-min=8.8km az=78.0*
IDC ***24*** *10:57:03.1±0.8, 5°.76N×125°.62E, h126km±8km, mb3.7/10, mb1 3.8/10, mb1mx3.6/22, mbtmp3.7/10, Error ellipse: s-maj=37.5km s-min=11.9km az=81.0*
DJA ***24*** *10:57:03, 5°.70N×126°.22E, h62km, mb4.6/25*
ISC 24 10:57:02.4±0.4, 5°.78N±0°.03×126°.10E±0°.06, h115km±4km, n50, σ1°.21/63, mb4.2/15, 2C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.17**	**8**	*e*P	**Pn**	**10 57 26.5**	**+0.7**
MATI				*e*S	**Sn**	**10 57 45.0**	**+1.4**
GSPH	**General Santos**	**1.18**	**285**⇓	*i*P	**Pn**	**10 57 22.3**	**-3.6**
GSPH				*i* S	**Sn**	**10 57 37.5**	**-6.3**
DAV	**Davao City (W)**	**1.38**	**338**	P	**Pn**	**10 57 28.4**	**+0.2**
	66nm,0.3s,baz=180,slow=4.0,SNR=5.1						
DAV				S	**Sn**	**10 57 48.3**	**+0.5**
	186nm,0.3s,baz=153,slow=22,SNR=20						
DAV	**Davao City (W)**	**1.38**	**338**	*e*Pn	**Pn**	**10 57 27.6**	**-0.5**
DAV				*e*Sn	**Sn**	**10 57 47.9**	**+0.2**
DMPH	**Davao City--Mi**	**1.42**	**336**⇑	*e*P	**Pn**	**10 57 28.3**	**-0.3**
DMPH				*e*S	**Sn**	**10 57 48.1**	**-0.5**
KCP	**Kidapawan**	**1.58**	**321**⇑	*e*P	**Pn**	**10 57 29.9**	**-0.6**
KCP				*i* S	**Sn**	**10 57 51.1**	**-0.7**
SGSI	**Sangihe**	**2.16**	**195**	P	**Pn**	**10 57 37.4**	**-0.3**
SGSI				S	**Sn**	**10 58 04.4**	**-0.3**
BUKP	**Musuan**	**2.32**	**334**	*e*P	**Pn**	**10 57 41.0**	**+1.3**
BUKP				*e*S	**Sn**	**10 58 09.1**	**+0.7**
CGP	**Cagayan de Oro**	**3.00**	**332**	*e*P	**Pn**	**10 57 47.8**	**-0.8**
CGP				*e*S	**Sn**	**10 58 19.3**	**-4.9**
PAGZ	**Pagadian**	**3.39**	**307**	*e*P	**Pn**	**10 57 52.1**	**-1.6**
ZMPH	**Zamboanga City**	**4.18**	**286**⇓	*i*P	**Pn**	**10 58 01.1**	**-3.2**
MNI	**Manado**	**4.49**	**196**	P	**Pn**	**10 58 08.5**	**0.0**
TNTI	**Ternate**	**5.14**	**166**	P	**Pn**	**10 58 16.2**	**-1.0**
	0.4nm2μm93nm,1.0s						
TNTI				S	**Sn**	**10 59 13.7**	**-1.7**
	0.4nm2μm93nm,1.0s						
LBMI	**Labuha**	**6.53**	**168**	P	**Pn**	**10 58 36.0**	**0.0**
	0.3nm1μm37nm,1.2s						
LBMI				S	**Sn**	**10 59 48.4**	**-0.7**
	0.3nm1μm37nm,1.2s						
MRSI	**Marisa**	**6.71**	**218**	P	**Pn**	**10 58 37.8**	**-0.7**
	0.4nm1μm108nm,0.9s						
LUWI	**Luwuk**	**7.55**	**206**	P	**Pn**	**10 58 50.7**	**+0.8**
	0.4nm108nm,1.0s						
LUWI				S	**Sn**	**11 00 18.4**	**+4.5**
	0.4nm108nm,1.0s						
MYLDM	**Lahad Datu**	**7.59**	**266**	P	**Pn**	**10 58 50.0**	**-0.4**
	0.1nm38nm,1.1s						
MPSI	**Mapaga**	**8.22**	**229**	P	**Pn**	**10 58 58.3**	**-0.7**
	1μm,0.8s						
MPSI				S	**Sn**	**11 00 25.1**	**-5.1**
	1μm,0.8s						
NLAI	**Namlea**	**9.02**	**174**	P	**Pn**	**10 59 07.8**	**-2.0**
	39nm,0.8s						
PCI	**Palu**	**9.12**	**223**	P	**Pn**	**10 59 12.3**	**+1.1**
	29nm,1.1s						
KKM	**Kota Kinabalu**	**9.84**	**272**	P	**Pn**	**10 59 22.2**	**+1.3**
	31nm,1.1s						
KDI	**Kendari**	**10.28**	**200**	P	**Pn**	**10 59 28.9**	**+2.0**
	26nm,1.2s						
TTSI	**Tana Toraja**	**10.78**	**216**	P	**Pn**	**10 59 35.7**	**+2.1**
	21nm,1.1s						
SPSI	**Sidrap Palu**	**11.56**	**213**	P	**Pn**	**10 59 44.8**	**+0.8**
	13nm,1.0s						
BNSI	**Bone**	**11.75**	**211**	P	**Pn**	**10 59 49.4**	**+2.9**
	19nm,1.4s						
BKSI	**Bulukumba**	**12.54**	**209**	P	**Pn**	**11 00 00.3**	**+3.4**
	12nm,1.0s						
SBUM	**Sibu**	**14.23**	**257**	P	**Pn**	**11 00 23.4**	**+4.6**
	35nm,0.9s						
SMPI	**Sarmi**	**14.77**	**121**	P	**Pn**	**11 00 30.6**	**+4.9**
	18nm,1.4s						
KAKA	**Kakadu**	**19.42**	**161**	*e*P	**P**	**11 01 20.7**	**+1.0**
KAKA	**Kakadu**	**19.42**	**161**	P	**P**	**11 01 20.5**	**+0.7**
	23nm,1.0s						
UGM	**Wanagama**	**20.65**	**229**	P	**P**	**11 01 39.4**	**+6.3**
	147nm,1.8s						
KNA	**Kununurra**	**21.56**	**173**	P	**P**	**11 01 43.6**	**+0.9**
	962nm114nm,0.7s,mb5.3						
FITZ	**Fitzroy Crossi**	**23.74**	**181**	P	**P**	**11 02 03.7**	**-0.4**
	7.7nm,0.5s,mb4.3,baz=2.1,slow=3.8,SNR=11						
BKNI	**Bangkinang**	**25.60**	**259**	P	**P**	**11 02 27.8**	**+6.7**
	41nm,0.8s,mb4.9						
COEN	**Coen**	**25.92**	**139**	P	**P**	**11 02 28.5**	**+4.5**
	50nm,1.6s,mb4.7						
WRAB	**Tennant Creek**	**26.81**	**163**	*e*P	**P**	**11 02 32.2**	**+0.2**
	7.4nm,1.2s,mb4.1						
WRAB	**Tennant Creek**	**26.81**	**163**	P	**P**	**11 02 38.4**	**+6.5**
	13nm,4.8s						
SISI	**Saibi**	**27.88**	**256**	P	**P**	**11 02 49.0**	**+7.3**
	39nm,0.9s,mb4.9						
CHTO	**Chiang Mai**	**29.46**	**298**	P	**P**	**11 03 02.5**	**+6.9**
ASAR	**Alice Springs**	**30.24**	**166**	P	**P**	**11 03 02.4**	**0.0**
	0.4nm,0.7s,mb3.2,baz=339,slow=7.4,SNR=12						
ASAR				PcP	PcP	11 06 00.2	-0.3
	0.7nm,0.7s,baz=344,slow=2.5,SNR=6.0						
NWAO	**Narrogin (SRO)**	**39.41**	**192**	P	**P**	**11 04 19.9**	**-1.1**
	5.8nm,0.5s,mb4.7,baz=18,slow=8.9,SNR=11						
NWAO	**Narrogin (SRO)**	**39.41**	**192**	P	**P**	**11 04 19.9**	**-1.1**
STKA	**Stephens Creek**	**40.26**	**159**	P	**P**	**11 04 29.1**	**+1.0**
	5.9nm,0.6s,mb4.6,baz=332,slow=9.3,SNR=9.1						
STKA	**Stephens Creek**	**40.26**	**159**	*e*P	**P**	**11 04 29.0**	**+0.9**
	0.9nm,0.6s,mb3.8						
SONM	**Songino Array**	**45.16**	**341**	P	**P**	**11 05 06.9**	**-0.6**
	0.2nm,0.4s,mb3.2,baz=150,slow=6.7,SNR=1.8						
SONM				PcP	PcP	11 06 45.3	-0.6
	0.7nm,0.8s,baz=162,slow=3.0,SNR=3.9						
PETK	**Petropavlovsk-**	**53.79**	**23**	P	**P**	**11 06 15.0**	**+2.1**
	1.1nm,0.6s,mb4.0,baz=204,slow=6.2,SNR=4.5						
MKAR	**Makanchi Array**	**55.52**	**325**	P	**P**	**11 06 23.5**	**-2.0**
	1.0nm,0.7s,mb3.9,baz=128,slow=7.9,SNR=8.5						
MKAR				PcP	PcP	11 07 21.9	-2.2
	0.6nm,0.7s,baz=106,slow=4.0,SNR=4.5						
BVAR	**Borovoye Array**	**65.27**	**327**	P	**P**	**11 07 29.3**	**-2.4**
	0.6nm,0.3s,mb3.8,baz=126,slow=7.4,SNR=3.7						
ILAR	**Eielson Array**	**83.53**	**26**	P	**P**	**11 09 16.9**	**-0.3**
	0.4nm,0.7s,mb3.4,baz=244,slow=4.6,SNR=5.5						
NOA	**NORSAR Array B**	**96.68**	**334**	P	**P**	**11 10 16.1**	**-3.3**
	0.5nm,0.7s,mb4.0,baz=65,slow=4.7,SNR=3.5						

NOU ***24*** *11:07:00.2±1.2, 19°.83S×170°.41E, h10km, MD3.2, ML3.0, MS3.3*
NEIC ***24*** *11:07:02.8±1.8, 21°.34S×170°.48E, h144km±17km, mb5.0/6, Error ellipse: s-maj=11.4km s-min=7.4km az=173.0*
ISCJB ***24*** *11:07:04.1±1.1, 21°.45±0°.1×170°.51E±0°.08, h174km±8km, mb4.6/18, Error ellipse: s-maj=16.9km s-min=12.3km az=166.7*
IDC ***24*** *11:07:04.3±2.2, 21°.35S×170°.45E, h156km±18km, mb4.2/12, mb1 4.3/14, mb1mx4.2/19, mbtmp4.2/14, Error ellipse: s-maj=17.6km s-min=15.0km az=159.0*
ISC 24 11:07:05.2±1.0, 21°.45±0°.1×170°.50E±0°.08, h169km±8km, n65, σ0°.91/42, mb4.6/18, 3C-2D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.45**	**256**	*e*P	**Pn**	**11 07 59.3**	**+0.2**
BAYA				*e*S	**Sn**	**11 08 41.4**	**+2.6**
LASL	**Noumea**	**3.78**	**256**	*e*S	**Sn**	**11 08 49.6**	**+3.0**
DZM	**Mont Dzumac**	**3.84**	**259**	*e*P	**Pn**	**11 08 03.7**	**-0.3**
DZM				AMP		11 09 01.0	
	comp=Z,1μm,12.0s						
ONTRN	**Noumea**	**3.88**	**255**	*e*P	**Pn**	**11 08 03.6**	**-0.8**
MVNO	**Noumea**	**3.88**	**256**	*e*P	**Pn**	**11 08 04.0**	**-0.4**
NOUC	**Port Laguerre**	**3.97**	**259**	*e*P	**Pn**	**11 08 05.1**	**-0.6**
NOUC				AMP		11 09 02.0	
	comp=Z,56nm,0.6s						
URZ	**Urewera**	**17.78**	**163**	P	**Pn**	**11 11 02.5**	**+0.3**
	comp=Z,2.1nm,0.3s,baz=10,slow=8.5,SNR=9.2						
URZ	**Urewera**	**17.78**	**163**	*e*P	**Pn**	**11 11 00.3**	**-1.9**
EIDS	**Eidsvold**	**18.27**	**254**	*e*Pn	**Pn**	**11 11 07.8**	**-0.3**
	comp=Z,30nm,0.9s						
AFI	**Afiamalu**	**18.43**	**69**	P	**P**	**11 11 08.5**	**+0.5**
	comp=Z,4.3nm,0.3s,baz=258,slow=14,SNR=6.3						
AFI	**Afiamalu**	**18.43**	**69**	*e*P	**P**	**11 11 07.3**	**-0.7**
ARMA	**Armidale**	**19.20**	**238**	*e*P	**P**	**11 11 18.2**	**+2.0**
CTA	**Charters Tower**	**22.71**	**269**	*e*P	**P**	**11 11 52.3**	**-0.4**
	comp=Z,16nm,1.7s,mb4.2						
CTA	**Charters Tower**	**22.71**	**269**	P	**P**	**11 11 53.5**	**+0.8**
	comp=Z,8.3nm,0.5s,mb4.4,baz=99,slow=9.0,SNR=19						
CTAO	**Charters Tower**	**22.71**	**269**	*e*P	**P**	**11 11 52.1**	**-0.6**
	comp=Z,39nm,1.2s,mb4.7						
CNB	**Canberra Magne**	**23.16**	**229**	*e*P	**P**	**11 11 57.1**	**+0.4**
TOO	**Toolangi**	**26.99**	**228**	*e*P	**P**	**11 12 31.1**	**-0.2**
STKA	**Stephens Creek**	**27.80**	**242**	*e*P	**P**	**11 12 38.9**	**+0.3**
	comp=Z,6.1nm,0.5s,mb4.6						
STKA	**Stephens Creek**	**27.80**	**242**	P	**P**	**11 12 39.0**	**+0.5**
	comp=Z,7.7nm,0.5s,mb4.7,baz=91,slow=11,SNR=32						
STKA	**Stephens Creek**	**27.80**	**242**	*e*P	**P**	**11 12 38.8**	**+0.2**
	comp=Z,2.6nm,0.9s,mb4.0						
WRAB	**Tennant Creek**	**33.81**	**266**	*e*P	**P**	**11 13 30.2**	**-1.3**
	comp=Z,13nm,0.5s,mb4.9						
WRA	**Warramunga Arr**	**33.82**	**266**	P	**P**	**11 13 30.8**	**-0.8**
	comp=Z,12nm,0.5s,mb4.9						
WRA	**Warramunga Arr**	**33.82**	**266**	P	**P**	**11 13 30.8**	**-0.8**
ASAR	**Alice Springs**	**33.83**	**259**	P	**P**	**11 13 30.9**	**-0.7**
	comp=Z,8.8nm,0.6s,mb4.7,baz=82,slow=8.9,SNR=103						
ASAR				ScP	ScP	11 19 37.0	+1.5
	comp=Z,0.8nm,0.6s,baz=106,slow=3.6,SNR=11						
KAKA	**Kakadu**	**37.31**	**277**	*e*P	**P**	**11 14 00.8**	**-0.6**
	comp=Z,18nm,0.4s,mb5.0						
KAKA	**Kakadu**	**37.31**	**277**	*e*P	**P**	**11 14 00.8**	**-0.6**
	comp=Z,49nm,0.5s,mb5.4						
FORT	**Forrest**	**39.07**	**247**	*e*P	**P**	**11 14 15.4**	**-0.5**
	comp=Z,26nm,0.5s,mb5.1						
FITZ	**Fitzroy Crossi**	**42.25**	**266**	P	**P**	**11 14 42.5**	**+0.4**
	comp=Z,17nm,0.6s,mb4.8,baz=111,slow=8.5						
MBWA	**Marble Bar**	**47.14**	**261**	*e*P	**P**	**11 15 20.4**	**-0.4**
	comp=Z,28nm,0.5s,mb5.2						
KLBR	**Kelberrin**	**47.91**	**246**	*e*P	**P**	**11 15 25.5**	**-1.1**
	comp=Z,31nm,0.5s,mb5.2						
NWAO	**Narrogin (SRO)**	**48.33**	**244**	P	**P**	**11 15 29.5**	**-0.3**
	comp=Z,29nm,0.5s,mb5.2,baz=90,slow=7.0,SNR=56						
KSM	**Kuching**	**63.00**	**283**	*e*P	**P**	**11 17 14.9**	**+0.3**
	comp=Z,14nm,0.5s,mb5.0						
MJAR	**Matsushiro Arr**	**65.17**	**332**	P	**P**	**11 17 28.5**	**+0.3**
	comp=Z,0.9nm,0.5s,mb3.9,baz=163,slow=6.6,SNR=5.6						
QSPA	**South Pole Qui**	**68.70**	**180**	P	**P**	**11 17 50.3**	**+0.4**
	comp=Z,5.7nm,0.8s,mb4.3,baz=42,slow=1.9,SNR=33						
QSPA	**South Pole Qui**	**68.70**	**180**	P	**P**	**11 17 50.3**	**+0.4**
MAW	**Mawson**	**76.92**	**202**	P	**P**	**11 18 39.4**	**+0.9**
	comp=Z,5.4nm,0.6s,mb4.3,baz=132,slow=6.4,SNR=21						
CMAR	**Chiang Mai Arr**	**80.45**	**294**	P	**P**	**11 18 59.0**	**+0.4**
	comp=Z,1.6nm,0.7s,mb3.8,baz=137,slow=4.4,SNR=6.3						
CMAR	**Chiang Mai Arr**	**80.45**	**294**	P	**P**	**11 18 59.0**	**+0.4**
NVAR	**Mina Array Bea**	**89.32**	**48**	P	**P**	**11 19 43.8**	**+1.4**
	comp=Z,0.1nm,0.4s,baz=224,slow=6.3,SNR=2.5						
SONM	**Songino Array**	**89.62**	**323**	P	**P**	**11 19 44.3**	**+0.8**
	comp=Z,0.7nm,0.7s,mb3.7,baz=141,slow=6.3,SNR=4.5						
ILAR	**Eielson Array**	**91.90**	**17**	P	**P**	**11 19 53.3**	**-0.4**
	comp=Z,0.2nm,0.5s,mb3.4,baz=242,slow=5.3,SNR=7.7						
ARCES	**ARCESS Array B**	**127.41**	**345**	PKP	PKPdf	11 25 49.4	+0.3
	comp=Z,4.3nm,0.9s,baz=29,slow=2.8,SNR=4.8						
FINES	**FINESS Array B**	**132.99**	**338**	PKP	PKPdf	11 26 00.7	+0.8
	comp=Z,0.6nm,0.4s,baz=31,slow=3.2,SNR=2.7						
FINES				SKPbc	SKPbc	11 29 13.1	+1.2
	comp=Z,2.0nm,0.7s,baz=48,slow=2.1,SNR=4.4						
FINES	**FINESS Array B**	**132.99**	**338**	PKP	PKPdf	11 26 00.7	+0.8
FINES				SKPbc	SKPbc	11 29 13.1	+1.2
VYHS	**Vyhne**	**144.70**	**327**	*e*P	PKPdf	11 26 21.9	+0.3
VYHS	**Vyhne**	**144.70**	**327**	*e*PKP	PKPdf	11 26 21.9	+0.3
KOLL	**Kolacno**	**144.87**	**327**	*e*P	PKPdf	11 26 22.7	+0.8
KOLL	**Kolacno**	**144.87**	**327**	*e*PKP	PKPdf	11 26 22.7	+0.8
BRG	**Berggiesshubel**	**145.29**	**334**	*i* P	PKPdf	11 26 23.6	+1.0
	comp=Z,9.0nm,0.6s						
CLL	**Collm**	**145.33**	**335**⇓	*i*PKPbc	PKPbc	11 26 23.2	+0.4
	comp=Z,8.0nm,0.8s						
CONA	**Conrad Observa**	**146.56**	**328**⇑	*i*PKPab	PKPab	11 26 27.7	-0.2
	comp=Z,4.2nm,0.7s						
MYKA	**Terra Mystica**	**148.55**	**329**⇑	*i*PKPbc	PKPbc	11 26 31.5	-0.5
	comp=Z,4.8nm,0.5s						
WTTA	**Wattenberg**	**149.02**	**332**⇑	*i*PKPbc	PKPbc	11 26 33.5	+0.4
	comp=Z,8.5nm,0.6s						
GIVF	**Givet**	**149.17**	**342**	*e*PKP1	PKPbc	11 26 34.8	+1.4
MOTA	**Moosalm**	**149.19**	**332**⇓	*i*PKPbc	PKPbc	11 26 33.9	+0.3
	comp=Z,6.6

1.7nm,0.4s,mb4.3,baz=194,slow=6.5,SNR=4.3
BVAR Borovoye Array 52.09 341 P P 11 42 54.3 -0.7
0.3nm,0.3s,mb3.8,baz=146,slow=4.6,SNR=3.8
BRTR Keskin Array B 64.98 312 P P **11 44 24.2 -0.7**
0.4nm,0.5s,mb3.5,baz=133,slow=7.9,SNR=3.3

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*IDC **24** 12:18:56.8±1.3, 12°.68N×91°.93E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.5/23, mbtmp3.7/6, ML3.8/1, Error ellipse: s-maj=52.6km s-min=20.6km az=56.0*
*ISCJB **24** 12:19:00.1±1.0, 12°.8N±0°.1×92°.1E±0°.2, h33km, mb3.6/5, Error ellipse: s-maj=24.9km s-min=11.5km az=142.7*
*NEIC **24** 12:19:02.3±0.7, 12°.78N×92°.03E, h35km, mb4.5/2, Error ellipse: s-maj=18.6km s-min=8.7km az=53.0*
ISC 24 12:19:02.3±1.0, 12°.8N±0°.1×92°.0E±0°.2, h35km, n15, σ0°51/15, mb3.6/5, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**8.73**	**49**	Pn	**Pn**	**12 21 06.3**	**+0.2**
	0.3nm,0.3s,baz=238,slow=15,SNR=3.2						
RAMN	**Ramite**	**14.99**	**341**	*e*P	**Pn**	**12 22 31.4**	**-0.2**
	15nm,0.4s						
TAPN	**Taplejung**	**15.05**	**345**	*e*P	**Pn**	**12 22 31.8**	**-0.6**
	7.9nm,0.3s						
PKI	**Pulchoki**	**15.97**	**338**	*e*P	**Pn**	**12 22 44.6**	**+0.2**
PKIN	**Phulchoki**	**15.98**	**338**	*e*P	**Pn**	**12 22 44.0**	**-0.5**
	12nm,0.4s						
KKN	**Kakani**	**16.21**	**338**	*e*P	**Pn**	**12 22 47.4**	**-0.1**
GKN	**Gorkha**	**16.65**	**337**	*e*P	**Pn**	**12 22 53.4**	**+0.4**
	14nm,0.3s						
MKAR	**Makanchi Array**	**34.88**	**348**	P	**P**	**12 25 51.0**	**+0.6**
	0.7nm,0.7s,mb3.7,baz=153,slow=8.2,SNR=6.1						
ZALV	**Zalesovo Beam**	**41.46**	**354**	P	**P**	**12 26 45.7**	**+0.1**
	0.3nm,0.3s,mb3.3,baz=174,slow=6.0,SNR=3.6						
ZALV	**Zalesovo Beam**	**41.46**	**354**	P	**P**	**12 26 45.7**	**+0.1**
WRA	**Warramunga Arr**	**52.83**	**127**	P	**P**	**12 28 14.4**	**-0.3**
	baz=310,slow=7.8						
ASAR	**Alice Springs**	**54.67**	**131**	P	**P**	**12 28 28.1**	**-0.1**
	0.3nm,0.6s,mb3.5,baz=311,slow=6.9,SNR=12						
FINES	**FINESS Array B**	**67.43**	**332**	P	**P**	**12 29 53.4**	**-0.7**
	1.3nm,0.9s,mb4.0,baz=75,slow=6.3,SNR=3.8						
FINES	**FINESS Array B**	**67.43**	**332**	P	**P**	**12 29 53.4**	**-0.7**
NOA	**NORSAR Array B**	**74.47**	**330**	P	**P**	**12 30 38.0**	**+1.2**
	0.5nm,0.6s,mb3.6,baz=95,slow=5.0,SNR=3.5						

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*ISCJB **24** 12:28:33.0±0.5, 4°.44N±0°.05×125°.5E±0°.1, h203km±5km, mb3.5/5, Error ellipse: s-maj=17.9km s-min=6.6km az=168.2*
*IDC **24** 12:28:36.4±9.2, 4°.39N×125°.26E, h222km±93km, mb3.2/5, mb1 3.3/5, mb1mx3.0/22, mbtmp3.2/5, Error ellipse: s-maj=41.8km s-min=18.5km az=75.0*
*DJA **24** 12:28:38, 4°.05N×125°.37E, h180km, mb4.9/5*
*MAN **24** 12:29:12, 8°.18N×124°.65E, h35km, mb3.9, ML2.7, MS2.4*
ISC 24 12:28:34.0±0.5, 4°.43N±0°.05×125°.5E±0°.1, h197km±5km, n18, σ0°82/23, mb3.5/5, 1C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**0.74**	**178**	P	**Pn**	**12 29 02.2**	**+0.3**
SGSI				S	**Sn**	**12 29 23.6**	**+0.1**
MATI	**Mati**	**2.61**	**17**	*e*P	**Sn**	**12 29 45.0**	**-9.2**
DMPH	**Davao City--Mi**	**2.64**	**0**	⇑*e*P	**Pn**	**12 29 20.2**	**+0.9**
DMPH				*e*S	**Sn**	**12 29 54.3**	**-0.4**
MNI	**Manado**	**3.04**	**193**	P	**Pn**	**12 29 24.6**	**+0.7**
BUKP	**Musuan**	**3.46**	**353**	*e*P	**Pn**	**12 29 25.2**	**-3.8**
BUKP				*e*S		12 29 33.4	
PAGZ	**Pagadian**	**4.00**	**328**	*e*P	**Pn**	**12 29 34.9**	**-0.8**
TNTI	**Ternate**	**4.08**	**153**	P	**Pn**	**12 29 36.9**	**+0.2**
TNTI				S	**Sn**	**12 30 26.7**	**+0.7**
KMSI	**Cibinong**	**4.12**	**202**	P	**Pn**	**12 29 38.0**	**+0.8**
MRSI	**Marisa**	**5.30**	**222**	P	**Pn**	**12 29 52.2**	**0.0**
LBMI	**Labuha**	**5.41**	**158**	P	**Pn**	**12 29 53.8**	**+0.1**
	4μm159nm,0.4s						
LBMI				S	**Sn**	**12 30 54.6**	**-2.0**
	4μm159nm,0.4s						
LUWI	**Luwuk**	**6.08**	**207**	P	**Pn**	**12 29 57.9**	**-4.4**
	52nm,1.2s						
NLAI	**Namlea**	**7.78**	**168**	P	**Pn**	**12 30 23.5**	**-0.9**
	7μm92nm,0.6s						
NLAI				S	**Sn**	**12 31 46.5**	**-5.8**
	7μm92nm,0.6s						
AAI	**Ambon**	**8.50**	**162**	P	**Pn**	**12 30 33.6**	**-0.2**
	4μm188nm,0.5s						
FITZ	**Fitzroy Crossi**	**22.39**	**180**	P	**P**	**12 33 15.6**	**-0.4**
	0.7nm,0.3s,mb3.6,baz=8.9,slow=13,SNR=13						
ASAR	**Alice Springs**	**29.10**	**164**	P	**P**	**12 34 17.4**	**+1.0**
	0.3nm,0.3s,mb3.4,baz=339,slow=7.3,SNR=12						
ASAR				PcP	PcP	12 37 19.4	+0.1
	0.2nm,0.4s,baz=348,slow=2.5,SNR=4.0						
PETK	**Petropavlovsk-**	**55.26**	**23**	P	**P**	**12 37 48.0**	**+1.4**
	1.3nm,0.8s,mb3.5,baz=201,slow=7.9,SNR=4.7						
MKAR	**Makanchi Array**	**56.29**	**326**	P	**P**	**12 37 53.4**	**-0.7**
	0.6nm,0.3s,mb3.6,baz=120,slow=7.9,SNR=16						
ILAR	**Eielson Array**	**85.00**	**25**	P	**P**	**12 40 46.4**	**-0.6**
	0.3nm,0.5s,mb3.2,baz=256,slow=4.5,SNR=12						

WEL 24 12:36:17.3±0.2, 37°.39S×177°.11E, h5km, ML3.6/7, 1C-1D, Error ellipse: s-maj=1.3km s-min=1.1km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	**White Island**	**0.15**	**156**	⇑PG	Pg	12 36 20.4	0.0
WIZ				SG	Sg	12 36 23.5	+1.0
OPRZ	**Ohinepanea**	**0.64**	**224**	⇓P*	Pb	12 36 29.7	-1.2
OPRZ				S*	Sg	12 36 38.5	+0.8
MYRZ	**Mayor Island**	**0.70**	**278**	P*	Pb	12 36 30.6	-1.4
MYRZ				S*	Sb	12 36 40.8	-1.1
TGRZ	**Tauranga**	**0.76**	**243**	P*	Pb	12 36 31.7	-1.3
URZ	**Urewera**	**0.87**	**180**	P*	Pb	12 36 33.4	-1.5
URZ				S*	Sb	12 36 45.7	-1.2
OMRZ	**Omania**	**0.93**	**219**	P*	Pb	12 36 34.3	-1.6
KARZ	**Kaharoa**	**0.94**	**227**	P*	Pb	12 36 34.7	-1.3
MWZ	**Matawai**	**1.00**	**161**	P*	Pb	12 36 35.1	-2.0
MWZ				S*	Sb	12 36 49.0	-1.7
PUZ	**Puketiti**	**1.14**	**127**	*e*P*	Pb	12 36 38.2	-1.2
KUZ	**Kuaotunu**	**1.28**	**299**	P*	Pb	12 36 38.0	-3.8
CNGZ	**Carnagh Statio**	**1.40**	**142**	PN	Pn	12 36 43.2	-0.3
MKAZ	**Moumakai**	**1.57**	**279**	PN	Pn	12 36 43.2	-2.7
KNZ	**Kokohu**	**1.69**	**165**	PN	Pn	12 36 46.8	-0.7
RVAZ	**Riverhead Bore**	**2.12**	**286**	PN	Pn	12 36 51.1	-2.1
WCZ	**Waipu Caves**	**2.65**	**302**	PN	Pn	12 36 58.0	-2.7

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*NIED **24** 12:54:00, 25°.00N×123°.00E, h150km, Mw4.5 Best double couple: M0=5.98000×10^15 NP1:φs=91.00000°, δ88.00000°, λ76.00000°. NP2:φs=352.00000°, δ14.00000°, λ170.00000°.*
*SZGRF **24** 12:54:14.4, 25°.67N×123°.41E, h33km, mb4.8, Northeast of Taiwan*
*ISCJB **24** 12:54:25.8±0.1, 25°.03N±0°.02×122°.96E±0°.01, h161km±1km, mb4.7/99, Error ellipse: s-maj=3.2km s-min=2.1km az=159.7*
*MOS **24** 12:54:26.7±0.8, 25°.16N×123°.02E, h169km, mb4.8/49, Error ellipse: s-maj=10.3km s-min=5.8km az=110.6*
*BJI **24** 12:54:27.6, 24°.98N×122°.92E, h186km, mB4.7/27, mb4.8/45*
*TAP **24** 12:54:27.3, 25°.00N×122°.98E, h157km, ML5.3, C*
*NEIC **24** 12:54:27.5±0.4, 25°.06N×122°.88E, h162km±3km, mb4.7/35, Error ellipse: s-maj=6.0km s-min=5.2km az=112.0*
NEIC Recorded [1 JMA] in the Yaeyama-retto, Ryukyu Islands.
*IDC **24** 12:54:27.5±1.8, 25°.14N×123°.01E, h161km±15km, mb4.2/24, mb1 4.2/25, mb1mx4.2/30, mbtmp4.1/25, Error ellipse: s-maj=12.6km s-min=11.0km az=50.0*
*JMA **24** 12:54:28.6±0.2, 25°.02N×122°.98E, h144km±3km, M4.7*
JMA Felt I J1.
*DJA **24** 12:55:10, 24°.05N×122°.33E, h619km, mb4.9/18*
ISC 24 12:54:26.9±0.1, 25°.03N±0°.02×122°.97E±0°.02, h156km±1km, h172km±3.0km: pP-P, n326, σ1°00/416, mb4.7/99, 15C-33D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.56**	**176**	P	**Pn**	**12 54 49.6**	**+0.4**
YOJ				S	**Sn**	**12 55 05.9**	**-0.3**
YOJ	**Yonaguni jima**	**0.56**	**176**	⇑*i*P	**Pn**	**12 54 49.8**	**+0.6**
	baz=172						
YOJ				*i*S	**Sn**	**12 55 06.5**	**+0.3**
	baz=172						
TWB1	**Santiao Chiao**	**0.89**	**269**	*i*P	**Pn**	**12 54 52.4**	**+1.1**
	baz=270						
TWB1				*e*S	**Sn**	**12 55 10.3**	**+0.5**
	baz=270						
IRIF	**Iriomote-Funau**	**0.98**	**135**	P	**Pn**	**12 54 52.4**	**+0.4**
IRIF				S	**Sn**	**12 55 10.6**	**-0.6**
NWF	**Wu-fen Shan**	**1.07**	**273**	⇓*i*P	**Pn**	**12 54 54.2**	**+1.4**
	baz=279						
NWF				S	**Sn**	**12 55 13.5**	**+0.9**
	baz=279						
TWC	**Suao**	**1.10**	**248**	⇓*i*P	**Pn**	**12 54 53.3**	**+0.3**
	baz=242						
TWC				S	**Sn**	**12 55 12.1**	**-0.8**
	baz=242						
ILA	**Ilan**	**1.14**	**257**	⇓P	**Pn**	**12 54 54.3**	**+0.9**
	baz=256						
ILA				*e*S	**Sn**	**12 55 13.9**	**+0.4**
	baz=256						
TWE	**Neicheng**	**1.22**	**256**	⇓*i*P	**Pn**	**12 54 54.8**	**+0.7**
	baz=250						
TWE				*e*S	**Sn**	**12 55 14.6**	**-0.3**
	baz=250						
HATJ	**Hateruma jima**	**1.23**	**141**	P	**Pn**	**12 54 54.9**	**+0.6**
HATJ				S	**Sn**	**12 55 15.6**	**+0.5**
JKRS	**Kuro-shima**	**1.23**	**129**	P	**Pn**	**12 54 55.1**	**+0.8**
JKRS				S	**Sn**	**12 55 15.1**	**0.0**
TWA	**Mucha**	**1.25**	**268**	⇓*i*P	**Pn**	**12 54 55.5**	**+1.1**
	baz=260						
TWA				S	**Sn**	**12 55 15.8**	**+0.3**
	baz=260						
JIJ	**Ishigaki jima**	**1.26**	**121**	P	**Pn**	**12 54 54.9**	**+0.4**
JIJ				S	**Sn**	**12 55 14.5**	**-1.1**
ENA	**Nanau**	**1.26**	**242**	⇓*i*P	**Pn**	**12 54 54.9**	**+0.4**
	baz=239						
ENA				*e*S	**Sn**	**12 55 15.1**	**-0.5**
	baz=239						
TWY	**Chenhua**	**1.26**	**282**	⇑P	**Pn**	**12 54 55.9**	**+1.5**
	baz=288						
TWY				S	**Sn**	**12 55 16.4**	**+0.8**
	baz=288						
TAP1	**Taipei**	**1.31**	**271**	P	**Pn**	**12 54 56.0**	**+1.0**
	baz=263						
TAP1				*e*S	**Sn**	**12 55 16.2**	**-0.2**
	baz=263						
ENTT	**Nioudou**	**1.33**	**253**	⇓*i*P	**Pn**	**12 54 56.0**	**+0.9**
	baz=249						
ENTT				*e*S	**Sn**	**12 55 17.2**	**+0.5**
	baz=249						
TATO	**Taipei**	**1.34**	**268**	*e*Pn	**Pn**	**12 54 55.8**	**+0.6**
TATO				*e*Sn	**Sn**	**12 55 15.6**	**-1.4**
TWS1	**Kuangyinshan**	**1.41**	**273**	P	**Pn**	**12 54 57.3**	**+1.4**
	baz=268						
TWS1				*e*S	**Sn**	**12 55 18.8**	**+0.8**
	baz=268						
YHNB	**Yeheng**	**1.49**	**256**	*e*Pn	**Pn**	**12 54 57.3**	**+0.6**
YHNB				*e*Sn	**Sn**	**12 55 18.1**	**-1.5**
NSK	**Sanguang**	**1.50**	**257**	P	**Pn**	**12 54 57.5**	**+0.7**
	baz=258						
NSK				S	**Sn**	**12 55 19.0**	**-0.8**
	baz=258						
NACB	**Ninganchiao**	**1.51**	**236**	*e*Pn	**Pn**	**12 54 56.5**	**-0.5**
NACB				*e*Sn	**Sn**	**12 55 18.7**	**-1.3**
NNS	**Nan Shan**	**1.56**	**248**	⇓*i*P	**Pn**	**12 54 58.4**	**+0.9**
	baz=245						
NNS				*e*S	**Sn**	**12 55 20.2**	**-0.7**
	baz=245						
TWD	**Chiawan**	**1.56**	**233**	⇓*i*P	**Pn**	**12 54 57.3**	**-0.2**
	baz=234						
TWD				S	**Sn**	**12 55 19.8**	**-1.2**
	baz=234						
NCU	**National Centr**	**1.61**	**268**	P	**Pn**	**12 54 59.2**	**+1.2**
	baz=263						
NCU				*e*S	**Sn**	**12 55 22.9**	**+0.9**
	baz=263						
HWA	**Hwalien**	**1.62**	**230**	*i*P	**Pn**	**12 54 58.2**	**0.0**
	baz=227						
HWA				S	**Sn**	**12 55 21.6**	**-0.5**
	baz=227						
JTJ	**Tarama**	**1.62**	**103**	P	**Pn**	**12 54 59.1**	**+0.9**
JTJ				S	**Sn**	**12 55 22.3**	**+0.2**
ESF	**Shoufeng Towns**	**1.76**	**229**	*e*P	**Pn**	**12 54 57.3**	**-2.4**
	baz=230						
WHF	**Hehuan Shan**	**1.78**	**241**	⇓*i*P	**Pn**	**12 55 00.7**	**+0.8**
	baz=241						
WHF				*e*S	**Sn**	**12 55 24.3**	**-0.8**
	baz=241						
HSN	**Hsinchu**	**1.82**	**263**	*e*P	**Pn**	**12 55 00.8**	**+0.4**
	baz=265						
HSN				S	**Sn**	**12 55 25.3**	**-0.7**
	baz=265						
NSTT	**Nanjuang**	**1.83**	**258**	⇓P	**Pn**	**12 55 01.1**	**+0.7**
	baz=258						
NSTT				*e*S	**Sn**	**12 55 25.3**	**-0.8**
	baz=258						
ESL	**Shilin**	**1.85**	**229**	⇓*i*P	**Pn**	**12 55 00.1**	**-0.5**
	baz=227						
ESL				*e*S	**Sn**	**12 55 24.4**	**-2.1**
	baz=227						
TEGC	**Jichi Village**	**1.85**	**225**	*e*P	**Pn**	**12 54 59.8**	**-0.8**
	baz=230						
TEGC				*e*S	**Sn**	**12 55 25.1**	**-1.4**
	baz=230						
NSY	**Sanyi**	**2.09**	**254**	⇓*i*P	**Pn**	**12 55 04.6**	**+1.2**
	baz=261						
NSY				*e*S	**Sn**	**12 55 31.7**	**+0.2**
	baz=261						
TWQ1	**Liyutan**	**2.10**	**252**	P	**Pn**	**12 55 04.2**	**+0.7**
	baz=252						
TWQ1				*e*S	**Sn**	**12 55 30.6**	**-1.2**
	baz=252						
JMJ	**Miyako jima 2**	**2.12**	**95**	P	**Pn**	**12 55 05.2**	**+1.4**
JMJ				S	**Sn**	**12 55 32.2**	**0.0**
JMJ	**Miyako jima 2**	**2.12**	**95**	*i*P	**Pn**	**12 55 05.1**	**+1.3**
	baz=90						
JMJ				S	**Sn**	**12 55 31.9**	**-0.2**
	baz=90						
EHY	**Hungye**	**2.13**	**225**	⇓P	**Pn**	**12 55 03.2**	**-0.7**
	baz=233						
SMLT	**Sun Moon Lake**	**2.20**	**239**	⇓P	**Pn**	**12 55 06.0**	**+1.3**
	baz=240						
SMLT				*e*S	**Sn**	**12 55 34.2**	**+0.5**
	baz=240						
SSLB	**Suanglung**	**2.21**	**236**	*e*Pn	**Pn**	**12 55 05.3**	**+0.5**
SSLB				*e*Sn	**Sn**	**12 55 33.5**	**-0.5**
TYC	**Yuchr**	**2.22**	**240**	⇓*i*P	**Pn**	**12 55 06.2**	**+1.3**
	baz=241						
TYC				*e*S	**Sn**	**12 55 34.5**	**+0.3**
	baz=241						
JOGS	**Gusukube**	**2.23**	**96**	P	**Pn**	**12 55 06.6**	**+1.5**
JOGS				S	**Sn**	**12 55 34.5**	**+0.1**
TWF1	**Yuli**	**2.26**	**223**	*e*P	**Pn**	**12 55 04.8**	**-0.5**
	baz=232						
TWF1				*e*S	**Sn**	**12 55 32.9**	**-2.1**
	baz=232						
TCU	**Taichung**	**2.26**	**248**	P	**Pn**	**12 55 06.3**	**+1.0**
	baz=248						
TCU				S	**Sn**	**12 55 34.4**	**-0.6**
	baz=248						
WNT	**Mingjian**	**2.37**	**242**	⇓*i*P	**Pn**	**12 55 07.9**	**+1.2**
	baz=242						
WNT				S	**Sn**	**12 55 37.7**	**+0.3**
	baz=242						
CHN5	**Tsauling**	**2.52**	**236**	⇓*i*P	**Pn**	**12 55 09.7**	**+1.1**
	baz=245						
CHN5				*e*S	**Sn**	**12 55 41.5**	**+0.8**
	baz=245						
ELDTW	**Lidau**	**2.55**	**225**	⇓*i*P	**Pn**	**12 55 08.9**	**0.0**
	baz=225						
ELDTW				*e*S	**Sn**	**12 55 40.2**	**-1.1**
	baz=225						
WGK	**Gukeng**	**2.57**	**239**	*e*P	**Pn**	**12 55 09.8**	**+0.7**
	baz=239						
WGK				*e*S	**Sn**	**12 55 42.3**	**+0.7**
	baz=239						
WTCT	**Ta-ch'eng**	**2.71**	**245**	*e*P	**Pn**	**12 55 10.9**	**+0.1**
	baz=238						
WTCT				*e*S	**Sn**	**12 55 43.7**	**-1.0**
	baz=238						
CHN4	**Tsaushan**	**2.73**	**233**	⇓P	**Pn**	**12 55 12.3**	**+1.2**
	baz=233						
CHN4				*e*S	**Sn**	**12 55 44.6**	**-0.7**
	baz=233						
TPUB	**Ta-pu**	**2.74**	**232**	*e*Pn	**Pn**	**12 55 11.8**	**+0.6**
TPUB				*e*Sn	**Sn**	**12 55 45.4**	**0.0**
CHY	**Chiayi**	**2.77**	**237**	*e*P	**Pn**	**12 55 12.4**	**+0.7**
	baz=245						
CHY				*e*S	**Sn**	**12 55 45.1**	**-1.1**
	baz=245						
WTP	**Ta-pu**	**2.79**	**231**	⇓*i*P	**Pn**	**12 55 12.7**	**+0.9**
	baz=231						
WTP				*e*S	**Sn**	**12 55 45.6**	**-0.9**
	baz=231						
TWG	**Pinlang**	**2.80**	**219**	*e*Pn	**Pn**	**12 55 11.2**	**-0.8**
TWG				*e*Sn	**Sn**	**12 55 45.4**	**-1.4**
TWG	**Pinlang**	**2.80**	**219**	*e*P	**Pn**	**12 55 11.0**	**-1.0**
	baz=219						
TWG				*e*S	**Sn**	**12 55 45.0**	**-1.8**
	baz=219						
TTN	**Taitung**	**2.81**	**217**	*e*P	**Pn**	**12 55 11.9**	**-0.2**
	baz=213						
TTN				*e*S	**Sn**	**12 55 46.8**	**-0.2**
	baz=213						
TWK	**Hsinying**	**2.86**	**233**	⇓*i*P	**Pn**	**12 55 13.5**	**+0.7**
	baz=233						
TWK				*e*S	**Sn**	**12 55 46.4**	**-1.8**
	baz=233						
SGST	**Jiashian**	**2.91**	**229**	⇓P	**Pn**	**12 55 14.5**	**+1.1**
	baz=229						
SGST				*e*S	**Sn**	**12 55 49.5**	**+0.2**
	baz=229						
CHN8	**Yiju**	**3.02**	**237**	*e*P	**Pn**	**12 55 14.5**	**-0.2**
	baz=237						
CHN8				*e*S	**Sn**	**12 55 50.7**	**-1.0**
	baz=237						
ECL	**Taimali**	**3.04**	**218**	⇓P	**Pn**	**12 55 14.1**	**-0.9**
	baz=218						
ECL				*e*S	**Sn**	**12 55 48.6**	**-3.6**
	baz=218						
CHN3	**Shinhua**	**3.07**	**231**	P	**Pn**	**12 55 16.4**	**+1.1**
	baz=238						
CHN3				*e*S	**Sn**	**12 55 54.0**	**+1.1**
	baz=238						
SCLT	**Jiali**	**3.13**	**235**	P	**Pn**	**12 55 16.7**	**+0.5**
	baz=229						
SCLT				*e*S	**Sn**	**12 55 53.7**	**-0.6**
	baz=229						
TAI1	**Yung-k'ang**	**3.19**	**232**	*e*P	**Pn**	**12 55 16.9**	**0.0**
	baz=232						
TAI1				*e*S	**Sn**	**12 55 55.1**	**-0.4**
	baz=232						
TWM1	**Shoushan**	**3.20**	**227**	*e*P	**Pn**	**12 55 18.3**	**+1.3**
	baz=227						
LAY	**Lan-yu**	**3.25**	**204**	⇓P	**Pn**	**12 55 17.0**	**-0.6**
	baz=204						
LAY				*e*S	**Sn**	**12 55 53.8**	**-3.1**
	baz=204						
TAW	**Tawu**	**3.26**	**216**	⇑P	**Pn**	**12 55 17.5**	**-0.4**
	baz=217						
EAST	**Anshuo**	**3.27**	**217**	⇓*i*P	**Pn**	**12 55 17.6**	**-0.4**
	baz=216						
SCZT	**Fangliau**	**3.41**	**220**	P	**Pn**	**12 55 20.5**	**+0.8**
	baz=214						
PNG	**Penghu**	**3.43**	**246**	⇓P	**Pn**	**12 55 19.4**	**-0.5**
	baz=245						
PNG				*e*S	**Sn**	**12 55 58.0**	**-3.1**
	baz=245						
TWP	**Hsiaoliuchiu**	**3.58**	**222**	*e*P	**Pn**	**12 55 23.0**	**+1.1**
	baz=222						
HEN	**Hengchun**	**3.64**	**215**	*e*P	**Pn**	**12 55 23.0**	**+0.4**
	baz=209						
HEN				*e*S	**Sn**	**12 56 06.2**	**+0.3**
	baz=209						
TSEB	**Hengchuen, Pin**	**3.64**	**212**	*e*P	**Pn**	**12 55 23.1**	**+0.4**
	baz=212						
TSEB				*e*S	**Sn**	**12 56 05.4**	**-0.7**
	baz=212						
TWK1	**Hengchun**	**3.65**	**213**	⇓P	**Pn**	**12 55 23.1**	**+0.3**
	baz=213						
TWK1				*e*S	**Sn**	**12 56 05.0**	**-1.3**
	baz=213						
JKE	**Kume jima 2**	**3.68**	**69**	P	**Pn**	**12 55 23.4**	**+0.2**
JKE				S	**Sn**	**12 56 07.8**	**+0.9**
QZH	**Quanzhou**	**3.97**	**270**	⇑*i*P	**Pn**	**12 55 26.9**	**0.0**
QZH				S	**Sn**	**12 56 10.9**	**-2.6**
QZH				smax			
	comp=N,380nm,1.0s						
QZH				smax			
	comp=E,230nm,0.5s						
JAGN	**Aguni-jima**	**4.16**	**67**	P	**Pn**	**12 55 29.4**	**+0.1**
JAGN				S	**Sn**	**12 56 17.0**	**-0.9**
KNM	**Kinmen**	**4.17**	**263**	*e*P	**Pn**	**12 55 30.9**	**+1.5**
	baz=262						
NAH1	**Naha**	**4.42**	**74**	P	**Pn**	**12 55 33.4**	**+0.6**
NAH1				S	**Sn**	**12 56 22.6**	**-1.5**
JJT2	**Tamagusuku 2**	**4.46**	**75**	P	**Pn**	**12 55 33.5**	**+0.2**
JJT2				S	**Sn**	**12 56 24.5**	**-0.5**
JIH	**Iheya**	**4.92**	**65**	P	**Pn**	**12 55 38.8**	**-0.6**
JIH				S	**Sn**	**12 56 33.0**	**-3.0**
JOW	**Kunigami**	**5.11**	**68**	P	**Pn**	**12 55 40.7**	**-1.1**
JOW				S	**Sn**	**12 56 36.5**	**-3.8**
JOW	**Kunigami**	**5.11**	**68**	*e*P	**Pn**	**12 55 40.7**	**-1.1**
	baz=67						
JOW				*e*S	**Sn**	**12 56 36.7**	**-3.6**
	baz=67						
JTK	**Tokunoshima**	**6.03**	**62**	P	**Pn**	**12 55 52.4**	**-1.6**
JTK				S	**Sn**	**12 56 57.9**	**-4.3**
JAM	**Amami Oshima**	**6.83**	**59**	P	**Pn**	**12 56 02.6**	**-2.0**
JAM				S	**Sn**	**12 57 14.7**	**-6.6**
JZK	**Kikaishima**	**7.07**	**61**	P	**Pn**	**12 56 06.3**	**-1.6**
JZK				*e*S	**Sn**	**12 57 23.8**	**-3.4**
JMZ	**Minamidaito 2**	**7.51**	**82**	P	**Pn**	**12 56 11.4**	**-2.3**
JMZ				S	**Sn**	**12 57 28.8**	**-8.8**
NJ2	**Nanjing**	**7.88**	**334**	*e*P	**Pn**	**12 56 24.3**	**+5.7**
NJ2				sP		12 57 02.8	
NJ2				S	**Sn**	**12 57 54.8**	**+8.3**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				smax			
	comp=N,100nm,1.0s						
NJ2				smax			
	comp=E,50nm,1.1s						
NJ2				LR	LR		
	comp=N,100nm,5.6s						
NJ2				LR	LR		
	comp=E,280nm,6.2s						
NJ2				LR	LR		
	comp=Z,80nm,7.1s						
WHN	**Wuhan**	**9.40**	**308**	⇓P	**Pn**	**12 56 40.3**	**+1.5**
WHN				S	**Sn**	**12 58 26.8**	**+3.7**
WHN				pmax	pmax		
	comp=Z,42nm,0.8s						
WHN				LR	LR		
	comp=Z,450nm,4.8s						
INCN	**Inchon**	**12.81**	**13**	*e*Pn	**Pn**	**12 57 26.2**	**+2.9**
ENH	**Enshi**	**13.04**	**297**	*e*Pn	**Pn**	**12 57 25.8**	**-0.5**
	comp=Z,13nm,0.7s						
KSRS	**Korea Array**	**13.09**	**18**	P	**Pn**	**12 57 29.4**	**+2.5**
	comp=Z,5.3nm,0.3s,baz=198,slow=11,SNR=85						
KSRS	**Korea Array**	**13.09**	**18**	P	**Pn**	**12 57 29.4**	**+2.5**
KSRS		

comp=Z,14nm,0.3s,baz=229,slow=11,SNR=9.0
SNY Shenyang 16.77 2 ⇓P Pn 12 58 13.8 +1.3
SNY sP sP 12 58 59.8 +1.4
SNY S **S 13 01 14.8 -3.9**
SNY pmax pmax
comp=Z,53nm,0.7s
SNY LR LR
comp=Z,95nm,13.9s
MAJO Matsushiro 17.39 45 *e*P **Pn 12 58 20.4 +0.4**
MAJO pmax pmax
comp=Z,10.0nm,1.0s
MAJO Matsushiro 17.39 45 *e*Pn **Pn 12 58 20.4 +0.3**
comp=Z,9.5nm,1.0s
MAT Matsushiro 17.39 45 P **Pn 12 58 19.1 -0.9**
MAT S **S 13 01 36.8 +5.0**
MJAR Matsushiro Arr 17.39 45 P **Pn 12 58 18.5 -1.6**
comp=Z,0.6nm,0.3s,baz=219,slow=9.7,SNR=5.5
MJAR Matsushiro Arr 17.39 45 P **Pn 12 58 18.5 -1.6**
MJAR pmax pmax
comp=Z,1.0nm,0.3s
CD2 Chengdu 17.94 293 P **Pn 12 58 25.9 -0.8**
CD2 S **S 13 01 36.3 -6.7**
CD2 PcP PcP 13 02 55.1 +1.7
CD2 pmax pmax
comp=Z,110nm,1.3s
KMI Kunming 18.32 275 P **P 12 58 30.0 +0.7**
KMI PP 12 58 52.8
KMI S **S 13 01 43.4 -7.4**
KMI pmax pmax
comp=Z,6.0nm,1.2s
KMI pmax pmax
comp=Z,76nm,3.7s
KMI LR LR
comp=N,190nm,17.5s
KMI LR LR
comp=E,110nm,22.4s
KMI LR LR
comp=Z,110nm,13.1s
HHC Hu-ho-hao-te 18.43 332 *e*P **P 12 58 32.1 +1.8**
HHC S **S 13 01 47.5 -5.0**
HHC PcP PcP 13 02 57.0 +3.0
HHC pmax pmax
comp=Z,45nm,1.0s
HHC pmax pmax
comp=Z,200nm,5.0s
HHC LR LR
comp=N,1μm,11.4s
HHC LR LR
comp=E,1μm,11.4s
HHC LR LR
comp=Z,1μm,11.2s
CN2 Changchun 18.84 6 *e*P **P 12 58 35.3 +0.6**
CN2 *e*S **S 13 01 56.4 -4.2**
CN2 pmax pmax
comp=Z,30nm,0.7s
CN2 pmax pmax
comp=Z,200nm,3.0s
BTO Baotou 18.93 328 *e*P **P 12 58 36.8 +1.0**
VLA Vladivostok 19.48 20*ce*P **P 12 58 41.8 +0.1**
VLA pmax pmax
comp=Z,77nm,1.7s
LZH Lanzhou 19.78 308 *e*P **P 12 58 46.8 +1.8**
LZH *e*S **S 13 02 12.1 -7.3**
LZH pmax pmax
comp=Z,72nm,1.0s
LZH pmax pmax
comp=Z,220nm,5.2s
KKM Kota Kinabalu 19.95 200 P **P 12 58 46.8 -0.2**
KKM Kota Kinabalu 19.95 200 *e*P **P 12 58 48.1 +1.1**
comp=Z,30nm,0.6s
KKM Kota Kinabalu 19.95 200 P **P 12 58 48.7 +1.7**
comp=Z,730nmcomp=Z,60nm,0.7s
SDKM Sandakan 20.05 197 P **P 12 58 47.3 -0.9**
MYLDM Lahad Datu 20.19 193 P **P 12 58 58.2 +8.6**
comp=Z,40nm,1.2s
MDJ Mudanjiang 20.27 14 P **P 12 58 50.4 +0.2**
MDJ S **S 13 02 30.8 +1.9**
MDJ PcP PcP 13 02 57.4 +0.2
MDJ ScP ScP 13 06 18.4 -0.7
MDJ PcS PcS 13 06 34.8 0.0
MDJ pmax pmax
comp=Z,13nm,0.9s
MDJ pmax pmax
comp=Z,84nm,9.6s
MDJ LR LR
comp=N,32nm,19.0s
MDJ LR LR
comp=E,30nm,18.4s
MDJ LR LR
comp=Z,45nm,16.3s
MDJ Mudanjiang 20.27 14 *e*P **P 12 58 50.7 +0.5**
comp=Z,18nm,0.9s
CMAR Chiang Mai Arr 23.23 258 P **P 12 59 21.4 +1.1**
comp=Z,2.7nm,0.8s,mb3.7,baz=69,slow=7.5,SNR=11
CMAR ScP ScP 13 06 27.2 +0.1
comp=Z,0.8nm,0.4s,baz=31,slow=3.3,SNR=4.3
ERM Erimo 23.79 40*de*P **P 12 59 21.7 -3.5**
ERM pmax pmax
comp=Z,29nm,1.2s,mb4.7
GTA Gaotai 24.18 312 ⇑P **P 12 59 28.8 0.0**
GTA pP 13 00 01.3
GTA S **S 13 03 34.3 -1.4**
GTA SS 13 04 43.9
GTA pmax pmax
comp=Z,15nm,1.4s,mb4.3
GTA pmax pmax
comp=Z,140nm,6.6s
GTA LR LR
comp=N,140nm,17.4s
GTA LR LR
comp=E,62nm,16.8s
GTA LR LR
comp=Z,83nm,18.0s
HIA Hailar 24.33 355 *e*P **P 12 59 29.0 -1.0**
HIA pmax pmax
comp=Z,10.0nm,0.4s
HIA Hailar 24.33 355 *e*P **P 12 59 29.0 -1.0**
comp=Z,9.9nm,0.4s,mb4.7
KMSI Cibinong 24.33 178 P **P 12 59 36.9 +6.5**
comp=Z,137nm,0.8s,mb5.5
KMSI Cibinong 24.33 178 P **P 12 59 38.0 +7.6**
comp=Z,137nm,0.8s,mb5.5
MRSI Marisa 24.43 182 P **P 12 59 34.3 +3.1**
comp=Z,790nmcomp=Z,76nm,1.0s,mb5.2
MRSI Marisa 24.43 182 P **P 12 59 33.8 +2.6**
comp=Z,791nmcomp=Z,76nm,1.0s,mb5.2
TNTI Ternate 24.48 169 P **P 12 59 34.9 +3.1**
comp=Z,2μmcomp=Z,138nm,0.9s,mb5.5
TNTI Ternate 24.48 169 P **P 12 59 35.7 +3.9**
comp=Z,2μmcomp=Z,137nm,0.9s,mb5.5
SBUM Sibu 24.72 206 P **P 12 59 33.7 -0.2**
SBUM Sibu 24.72 206 P **P 12 59 34.4 +0.5**
comp=Z,928nmcomp=Z,79nm,0.9s,mb5.2
SBUM Sibu 24.72 206 P **P 12 59 34.2 +0.3**
comp=Z,928nmcomp=Z,79nm,0.9s,mb5.2
ASAJ Asahikawa 24.87 35 P **P 12 59 34.0 -0.9**
comp=Z,13nm,0.3s,mb4.9,baz=237,slow=9.0,SNR=57
ASAJ Asahikawa 24.87 35 P **P 12 59 34.1 -0.9**
ASAJ pmax pmax
comp=Z,13nm,0.4s
KLR Kul'dur 25.12 14 *e*P **P 12 59 32.8 -4.4**
KLR *e* 13 00 09.8
HABR Khabarovsk 25.26 19 *e*P **P 12 59 35.7 -2.8**
HABR *e**PP pP 13 00 10.1 -0.6
HABR *e* 13 00 20.4
HABR *e* 13 03 05.9
HABR *e* 13 10 17.3
HABR pmax pmax
comp=N,20nm,2.8s
HABR pmax pmax
comp=Z,25nm,2.1s,mb4.4
HABR pmax pmax
comp=E,31nm,2.6s
HABR MLR MLR
comp=Z,35nm,19.0s
LBMI Labuha 25.89 170 P **P 12 59 50.2 +5.7**
comp=Z,2μmcomp=Z,65nm,1.0s,mb5.2
LBMI Labuha 25.89 170 P **P 12 59 50.3 +5.8**
comp=Z,2μmcomp=Z,65nm,1.0s,mb5.2
LUWI Luwuk 25.91 180 P **P 12 59 46.7 +2.0**
comp=Z,114nm,1.1s,mb5.4
LUWI Luwuk 25.91 180 P **P 12 59 47.6 +2.9**
comp=Z,114nm,1.1s,mb5.4
PCI Palu 25.96 187 P **P 12 59 47.4 +2.3**
comp=Z,987nmcomp=Z,72nm,1.3s,mb5.1
PCI Palu 25.96 187 P **P 12 59 47.6 +2.5**
comp=Z,989nmcomp=Z,72nm,1.3s,mb5.1
ULN Ulaanbaatar 26.04 335 *e*P **P 12 59 45.4 -0.1**
ULN *e**PP pP 13 00 20.8 +3.0
ULN pmax pmax
comp=Z,7.0nm,0.5s,mb4.5
ULN Ulaanbaatar 26.04 335 *e*P **P 12 59 45.4 -0.1**
comp=Z,7.4nm,0.5s,mb4.6
ULN *ep*P pP 13 00 20.8 +3.0
SONM Songino Array 26.27 334 P **P 12 59 47.7 +0.1**
comp=Z,7.5nm,0.7s,mb4.4,baz=146,slow=9.9,SNR=38
SONM PcP PcP 13 03 10.7 +1.0
comp=Z,0.6nm,0.6s,baz=130,slow=2.8,SNR=3.4
SONM ScP ScP 13 06 33.9 -1.2
comp=Z,1.4nm,0.8s,baz=162,slow=5.0,SNR=6.6
SONM Songino Array 26.27 334 P **P 12 59 47.7 +0.1**
SONM 13 03 10.7
SONM pmax pmax
comp=Z,8.0nm,0.7s
KSM Kuching 26.41 209 P **P 12 59 49.2 0.0**
KSM Kuching 26.41 209 *e*P **P 12 59 49.5 +0.4**
comp=Z,33nm,0.9s,mb5.0
KSM Kuching 26.41 209 P **P 12 59 50.9 +1.7**
comp=Z,43nm,1.1s,mb5.0
YSS Yuzh-Sakhalins 26.97 31⇑*e*P **P 12 59 55.8 +2.0**
YSS *e* pP 13 00 31.0 +4.7
YSS pmax pmax
comp=Z,30nm,1.0s,mb4.9
YSS Yuzh-Sakhalins 26.97 31 *e*P **P 12 59 55.2 +1.4**
comp=Z,21nm,0.8s,mb4.8
YSS *ep*P pP 13 00 30.1 +3.8
TTSI Tana Toraja 28.07 187 P **P 13 00 04.9 +0.9**
comp=Z,23nm,0.8s,mb5.0
TTSI Tana Toraja 28.07 187 P **P 13 00 04.6 +0.6**
comp=Z,23nm,0.8s,mb5.0
NLAI Namlea 28.38 171 P **P 13 00 07.0 +0.3**
comp=Z,34nm,0.8s,mb5.1
SPSI Sidrap Palu 28.98 187 P **P 13 00 12.3 +0.2**
comp=Z,20nm,0.9s,mb4.9
SPSI Sidrap Palu 28.98 187 P **P 13 00 12.4 +0.3**
comp=Z,20nm,0.9s,mb4.9
IPM Ipoh 29.36 229 P **P 13 00 16.5 +1.1**
comp=Z,29nm,0.8s,mb5.1
IPM Ipoh 29.36 229 P **P 13 00 16.5 +1.1**
comp=Z,29nm,0.8s,mb5.1
KGM Kluang 29.71 223 P **P 13 00 18.5 0.0**
BKSI Bulukumba 30.29 186 P **P 13 00 23.9 +0.3**
comp=Z,18nm,0.8s,mb4.8
TLY Talaya 30.43 336 *e*P **P 13 00 24.2 -0.2**
TLY pmax pmax
comp=Z,8.0nm,0.7s,mb4.6
TLY Talaya 30.43 336 *e*P **P 13 00 24.6 +0.1**
comp=Z,8.0nm,0.6s,mb4.6
MOY Mondy 31.45 333 *e*P **P 13 00 33.4 0.0**
MOY pmax pmax
comp=Z,18nm,1.5s,mb4.6
BKNI Bangkinang 32.44 224 P **P 13 00 44.0 +1.5**
comp=Z,63nm,0.8s,mb5.4
MNSI Mandailing Nat 33.03 227 P **P 13 00 48.5 +0.9**
comp=Z,52nm,0.9s,mb5.3
MNSI Mandailing Nat 33.03 227 P **P 13 00 48.2 +0.6**
comp=Z,52nm,0.9s,mb5.3
PPI Padang Panjang 33.45 224 P **P 13 00 53.2 +1.9**
comp=Z,31nm,1.2s,mb4.9
WMQ Urumqi 34.27 312 *e*P **P 13 00 58.0 0.0**
WMQ PP PP 13 02 18.3 -0.5
WMQ PcP PcP 13 03 32.0 +1.2
WMQ pmax pmax
comp=Z,26nm,0.6s,mb5.1
WMQ pmax pmax
comp=Z,150nm,8.8s
MDSI Maura Dua 34.55 214 P **P 13 01 03.2 +2.4**
comp=Z,1μmcomp=Z,14nm,0.9s,mb4.6
YAK Yakutsk 37.27 5 *e*P **P 13 01 21.9 -1.4**
YAK pmax pmax
comp=Z,50nm,0.9s,mb5.1
YAK pmax pmax
comp=N,17nm,1.1s
YAK Yakutsk 37.27 5 *e*P **P 13 01 22.6 -0.7**
comp=N,63nm,0.7s,mb5.4
PETK Petropavlovsk- 38.27 34 P **P 13 01 29.6 -2.2**
comp=N,2.1nm,0.6s,mb3.9,baz=213,slow=10,SNR=4.4
PETK PcP PcP 13 03 42.6 0.0
comp=N,1.3nm,0.6s,baz=230,slow=3.6,SNR=3.7
PETK Petropavlovsk- 38.27 34 P **P 13 01 29.6 -2.2**
PETK 13 03 42.6
PETK pmax pmax
comp=Z,2.0nm,0.6s,mb3.9
KAKA Kakadu 38.63 165 *e*P **P 13 01 34.0 -1.2**
comp=Z,17nm,0.6s,mb4.8
MK31 Makanchi Array 38.88 314*ce*P **P 13 01 36.7 -0.4**
MK31 pmax pmax
comp=Z,5.0nm,0.2s,mb4.8
MK31 Makanchi Array 38.88 314 *e*P **P 13 01 37.0 -0.1**
MKAR Makanchi Array 38.88 314 P **P 13 01 36.9 -0.2**
comp=Z,18nm,0.5s,mb5.0,baz=101,slow=10,SNR=155
MKAR PcP PcP 13 03 44.1 -0.6
comp=Z,2.0nm,0.6s,baz=78,slow=5.6,SNR=4.7
MKAR Makanchi Array 38.88 314*ce*P **P 13 01 36.9 -0.2**
MKAR pmax pmax
comp=Z,18nm,0.5s
ZAA0 Zalesovo Array 40.44 326 *e*P **P 13 01 48.5 -1.3**
ZALV Zalesovo Beam 40.44 326 P **P 13 01 48.7 -1.1**
comp=Z,14nm,0.4s,mb4.9,baz=113,slow=7.7,SNR=45
ZALV PcP PcP 13 03 48.1 -1.4
comp=Z,1.4nm,0.5s,baz=117,slow=4.5,SNR=4.1
ZALV ScP ScP 13 07 21.9 -2.4
comp=Z,1.3nm,0.6s,baz=117,slow=5.2,SNR=6.5
ZALV Zalesovo Beam 40.44 326 P **P 13 01 48.7 -1.1**
ZALV 13 03 48.1
ZALV pmax pmax
comp=Z,14nm,0.4s,mb4.9
ZALV pmax pmax
comp=N,1.0nm,0.6s
KNA Kununurra 40.92 171 P **P 13 01 54.5 +0.4**
KSH Kashi 41.82 302 P **P 13 02 05.3 +4.0**
KSH pP pP 13 02 40.5 +5.1
KSH PP PP 13 03 47.3 +6.2
KSH PcP PcP 13 03 57.6 +3.2
KSH ScP ScP 13 07 30.6 +0.5
KSH PcS PcS 13 07 48.3 +2.2
KSH S **S 13 08 11.5 +4.3**
KSH SS SS 13 11 17.3 -2.2
KSH pmax pmax
comp=Z,16nm,1.2s,mb4.5
KSH pmax pmax
comp=Z,100nm,5.2s
KSH LR LR
comp=N,140nm,5.5s
KSH LR LR
comp=E,74nm,4.9s
KSH LR LR
comp=Z,220nm,5.7s
KURK Kurchatov 42.51 319 *e*P **P 13 02 05.9 -0.8**
KURK pmax pmax
comp=Z,35nm,1.0s,mb4.9
KURK Kurchatov 42.51 319 *e*P **P 13 02 05.8 -0.8**
comp=Z,35nm,1.0s,mb4.9
TKM2 Tokmak 2 42.54 307 P **P 13 02 08.3 +1.2**
SNR=39
TKM2 Tokmak 2 42.54 307 *e*P **P 13 02 07.5 +0.4**
TKM2 pmax pmax
comp=Z,51nm,1.1s,mb5.1
TKM2 Tokmak 2 42.54 307 *e*P **P 13 02 07.5 +0.4**
comp=Z,51nm,1.1s,mb5.1
SEY Seymchan 42.64 19*de*P **P 13 02 07.1 -0.5**
KZA Kyzart 42.67 306 P **P 13 02 10.0 +1.9**
SNR=5.9
FITZ Fitzroy Crossi 42.95 176 P **P 13 02 10.9 +0.4**
KBK Karagaybulak 42.97 306 P **P 13 02 11.8 +1.2**
SNR=11
CHMS Chumysh 43.16 307 P **P 13 02 13.0 +0.9**
SNR=9.0
UCH Uchtor 43.23 306 P **P 13 02 14.6 +1.9**
SNR=11
UCH Uchtor 43.23 306 *e*P **P 13 02 13.9 +1.3**
comp=Z,20nm,1.0s,mb4.7
AAK Ala-Archa 43.30 306 P **P 13 02 14.2 +1.0**
comp=Z,1.6nm,0.3s,mb4.2,baz=106,slow=8.5,SNR=6.4
AAK PcP PcP 13 03 59.4 +0.1
comp=Z,1.9nm,0.3s,baz=0.0,slow=0.0,SNR=3.6
AAK Ala-Archa 43.30 306 P **P 13 02 14.2 +1.0**
AAK 13 03 59.4
AAK pmax pmax
comp=Z,2.0nm,0.3s,mb4.2
AAK Ala-Archa 43.30 306 *e*P **P 13 02 13.1 -0.1**
comp=Z,6.5nm,0.7s,mb4.4
COEN Coen 43.47 151 *e*P **P 13 02 15.7 +0.9**
comp=Z,210nm,1.0s,mb5.7
AML Almayashu 43.82 306 P **P 13 02 18.9 +1.5**
SNR=5.2
WRAB Tennant Creek 46.04 165 *e*P **P 13 02 35.4 +0.3**
WRAB pmax pmax
comp=Z,38nm,1.1s,mb4.9
WRAB Tennant Creek 46.04 165 *e*P **P 13 02 35.4 +0.4**
comp=Z,38nm,1.1s,mb4.9
KK31 Karatay Array 46.26 307*ce*P **P 13 02 36.7 +0.1**
KK31 pmax pmax
comp=Z,5.0nm,0.3s,mb4.6
TIXI Tiksi 46.77 3 *e*P **P 13 02 38.6 -1.6**
TIXI pmax pmax
comp=Z,18nm,0.9s,mb4.7
TIXI Tiksi 46.77 3 *e*P **P 13 02 39.2 -0.9**
comp=Z,24nm,0.8s,mb4.9
VOSK Vostochnaya 47.64 320 P **P 13 02 45.9 -1.3**
VOSK pmax pmax
comp=Z,8.0nm,0.5s,mb4.6
BVAR Borovoye Array 48.06 320 P **P 13 02 50.0 -0.4**
comp=Z,7.6nm,0.4s,mb4.7,baz=105,slow=8.1,SNR=40
BVAR PcP PcP 13 04 15.1 -0.6
comp=Z,4.2nm,0.6s,baz=115,slow=3.6,SNR=8.6
BVAR ScP ScP 13 07 54.0 -1.6
comp=Z,2.9nm,0.8s,baz=107,slow=5.1,SNR=9.9
BVAR Borovoye Array 48.06 320 P **P 13 02 50.0 -0.4**
BVAR 13 04 15.1
BVAR pmax pmax
comp=Z,8.0nm,0.4s
BVAR pmax pmax
comp=N,3.0nm,0.8s
BRVK Borovoye 48.13 320 *e*P **P 13 02 50.5 -0.4**
BRVK pmax pmax
comp=Z,21nm,0.8s,mb4.8
BRVK Borovoye 48.13 320 *e*P **P 13 02 50.5 -0.4**
comp=Z,21nm,0.8s,mb4.8
ZRNK Zerenda 48.86 319 *i*P **P 13 02 56.0 -0.5**
ZRNK pmax pmax
comp=Z,52nm,0.8s,mb5.2
ASAR Alice Springs 49.55 167 P **P 13 03 02.6 +0.6**
comp=Z,3.5nm,0.3s,mb4.5,baz=350,slow=7.0,SNR=187
ASAR PcP PcP 13 04 21.6 +0.1
comp=Z,1.1nm,0.8s,baz=3.8,slow=5.6,SNR=2.8
ASAR Alice Springs 49.55 167 P **P 13 03 02.6 +0.6**
ASAR 13 04 21.6
ASAR pmax pmax
comp=Z,4.0nm,0.3s
BILL Bilibino 50.35 20 *e*P **P 13 03 07.3 -0.2**
BILL *e**PP pP 13 03 46.5 +3.7
BILL *i* 13 04 24.2
BILL *i* 13 05 08.4
BILL pmax pmax
comp=Z,20nm,2.5s,mb4.3
AB31 Akbulak array 54.02 314*ce*P **P 13 03 34.8 -0.1**
AB31 pmax pmax
comp=Z,13nm,0.2s,mb5.3
ABKAR Akbulak array 54.02 314 *e*P **P 13 03 34.7 -0.2**
comp=Z,23nm,0.4s,mb5.3
SVE Sverdlovsk 54.34 323⇓*e*P **P 13 03 36.8 -0.2**
SVE pmax pmax
comp=Z,30nm,0.9s,mb5.0
AKTK Aktyubinsk 55.31 315 P **P 13 03 44.1 -0.1**
AKTO Aktyubinsk 55.31 315 P **P 13 03 44.1 -0.1**
comp=Z,3.1nm,0.4s,mb4.4,baz=88,slow=9.2,SNR=14
AKTO Aktyubinsk 55.31 315 P **P 13 03 44.1 -0.1**
AKTO pmax pmax
comp=Z,3.0nm,0.4s,mb4.4
ARU Arti 55.42 323*c i*P **P 13 03 44.0 -0.8**
ARU *e* 13 04 42.0
ARU *e* 13 05 46.6
ARU S **S 13 11 15.5 -1.7**
ARU SS SS 13 15 02.4 -1.4
ARU pmax pmax
comp=Z,27nm,1.0s,mb4.9
ARU Arti 55.42 323 *e*P **P 13 03 44.0 -0.9**
comp=Z,26nm,1.0s,mb4.9
FORT Forrest 55.70 175 *e*P **P 13 03 47.5 +0.4**
comp=Z,14nm,0.7s,mb4.9
KLBR Kellerberrin 56.52 185 *e*P **P 13 03 52.6 -0.3**
comp=Z,15nm,0.5s,mb5.1
STKA Stephens Creek 59.32 162 *e*P **P 13 04 12.4 0.0**
comp=Z,5.9nm,0.4s,mb4.8
STKA Stephens Creek 59.32 162 P **P 13 04 12.8 +0.5**
comp=Z,7.3nm,0.5s,mb4.8,baz=346,slow=6.4,SNR=18
STKA Stephens Creek 59.32 162 P **P 13 04 12.8 +0.4**
CNB Canberra Magne 65.01 156 *e*P **P 13 04 51.5 +1.3**
ZEI Tsey 65.71 308 *e*P **P 13 04 54.2 -0.6**
ZEI pmax pmax
comp=Z,12nm,0.5s,mb5.0
TOO Toolangi 65.77 160 *e*P **P 13 04 55.4 +0.3**
BPAW Bear Paw Mtn. 66.08 29 *e*P **P 13 04 57.5 +0.7**
comp=Z,4.1nm,0.6s,mb4.4
KIV Kislovodsk 66.32 309 *e*P **P 13 04 59.2 +0.5**
KIV pmax pmax
comp=Z,12nm,0.9s,mb4.7
VORD Divnogorie 67.10 317 *e*P **P 13 05 02.6 -0.9**
VORD pmax pmax
comp=N,3.0nm,0.5s
VORD pmax pmax
comp=E,3.0nm,0.5s
VORD pmax pmax
comp=Z,10.0nm,0.5s,mb4.9
VSR Storozhevoye 67.13 317 *e*P **P 13 05 02.7 -0.9**
VSR pmax pmax
comp=Z,10.0nm,0.4s,mb5.0
VSR pmax pmax
comp=N,3.0nm,0.2s
VSR pmax pmax
comp=E,10.0nm,0.4s
ILAR Eielson Array 67.72 28 P **P 13 05 06.5 -0.6**
comp=E,1.1nm,0.6s,mb3.8,baz=241,slow=4.1,SNR=21
ILAR Eielson Array 67.72 28 P **P 13 05 06.6 -0.5**
ILAR pmax pmax
comp=Z,1.0nm,0.6s
OBN Obninsk 67.85 322 *e*P **P 13 05 07.2 -0.9**
OBN *e* 13 05 32.8
OBN pmax pmax
comp=Z,15nm,0.6s,mb4.9
JOF Joensuu 68.77 331 *e*P **P 13 05 12.5 -1.2**
JOF pmax pmax
comp=Z,7.0nm,0.5s,mb4.7
JOF Joensuu 68.77 331 *ep* **P 13 05 12.5 -1.2**
comp=Z,6.5nm,0.5s,mb4.6
KEV Kevo 68.80 338 *e*P **P 13 05 13.2 -0.6**
KEV pmax pmax
comp=Z,5.0nm,0.5s,mb4.5
KEV Kevo 68.80 338 *e*P **P 13 05 13.2 -0.6**
comp=Z,4.5nm,0.5s,mb4.5
KEV Kevo 68.80 338 *ep* **P 13 05 13.2 -0.6**
comp=Z,4.5nm,0.5s,mb4.5
DIV Divide 69.02 31 *e*P **P 13 05 15.3 +0.1**
ARCES ARCESS Array B 69.37 338 P **P 13 05 16.6 -0.6**
comp=Z,2.2nm,0.6s,mb4.0,baz=55,slow=6.7,SNR=13
ARCES ARCESS Array B 69.37 338 P **P 13 05 16.6 -0.7**
ARCES pmax pmax
comp=Z,2.0nm,0.6s
ANN Anapa 69.77 311 *e*P **P 13 05 18.3 -1.9**
ANN pmax pmax
comp=Z,31nm,1.6s,mb4.8
EGAK Eagle 70.10 27 *e*P **P 13 05 21.2 -0.6**
comp=Z,2.4nm,0.7s,mb4.0
DAWY Dawson 71.05 27 *e*P **P 13 05 28.2 +0.6**
KAF Kangasniemi 71.23 330 *e*P **P 13 05 27.3 -1.4**
KAF pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
KAF Kangasniemi 71.23 330 *e*P **P 13 05 27.3 -1.4**
comp=Z,3.1nm,0.6s,mb4.2
KAF Kangasniemi 71.23 330 *ep* **P 13 05 27.3 -1.4**
comp=Z,3.1nm,0.6s,mb4.2
FINES FINESS Array B 71.54 330 P **P 13 05 29.8 -0.8**
comp=Z,3.4nm,0.4s,mb4.4,baz=52,slow=5.3,SNR=22
FINES FINESS Array B 71.54 330 P **P 13 05 29.8 -0.8**
FINES pmax pmax
comp=Z,3.0nm,0.4s
INK Inuvik 71.84 22 P **P 13 05 31.9 -0.4**
comp=Z,4.1nm,0.7s,mb4.3,baz=271,slow=7.0,SNR=14
INK Inuvik 71.84 22 P **P 13 05 31.9 -0.3**
INK pmax pmax
comp=Z,4.0nm,0.7s
INK Inuvik 71.84 22 *e*P **P 13 05 31.8 -0.4**
AKASG Malin Array Be 73.32 319 P **P 13 05 40.2 -1.1**
comp=Z,3.3nm,0.4s,mb4.4,baz=60,slow=6.0,SNR=10.0
AKASG Malin Array Be 73.32 319 P **P 13 05 40.3 -1.0**
AKASG pmax pmax
comp=Z,3.0nm,0.4s

AKBB **Malin Array Si** 73.32 319 *eP* **P** 13 05 40.0 -1.3
BR131 **Keskin Array S** 73.98 307 *eP* **P** 13 05 45.4 0.0
comp=Z,2.4nm,0.5s,mb4.2
BRTR **Keskin Array B** 73.98 307 P **P** 13 05 45.4 0.0
comp=Z,3.9nm,0.6s,mb4.3,baz=91,slow=4.7,SNR=15
BRTR **Keskin Array B** 73.98 307 *ceP* **P** 13 05 45.4 0.0
BRTR pmax pmax
comp=Z,4.0nm,0.6s
MMAI **Mount Meron Ar** 74.90 300 P **P** 13 05 51.7 +0.8
comp=Z,1.1nm,0.3s,mb3.9,baz=84,slow=5.1,SNR=2.9
SUW **Suwalki** 75.60 323 *eP* **P** 13 05 54.1 -0.3
SUW pmax pmax
comp=Z,41nm,0.8s,mb5.1
SUW **Suwalki** 75.60 323 *eP* **P** 13 05 54.1 -0.3
comp=Z,41nm,0.8s,mb5.1
BUR08 **Bucovina Ar. S** 76.88 317 *eP* **P** 13 06 01.0 -0.7
MLR **Muntele Rosu** 77.23 314 P **P** 13 06 04.2 +0.4
comp=Z,8.4nm,0.5s,mb4.6,baz=334,slow=5.2,SNR=20
MLR **Muntele Rosu** 77.23 314 P **P** 13 06 04.2 +0.4
MLR pmax pmax
comp=Z,8.0nm,0.5s
DLBC **Dease Lake** 77.40 31 P **P** 13 06 05.8 +1.3
comp=Z,1.2nm,0.6s,mb3.7,baz=281,slow=10,SNR=3.9
RES **Resolute Bay** 77.57 10 P **P** 13 06 04.3 -0.9
comp=Z,4.2nm,0.8s,mb4.1,baz=310,slow=1.8,SNR=4.2
RES **Resolute Bay** 77.57 10 P **P** 13 06 04.3 -0.8
RES pmax pmax
comp=Z,4.0nm,0.8s,mb4.1
NB2 **NORSAR Subarra** 78.23 332 P **P** 13 06 08.0 -1.0
comp=Z,3.8nm,0.5s,mb4.3,baz=56,slow=5.6
NOA **NORSAR Array B** 78.23 332 P **P** 13 06 08.2 -0.8
comp=Z,3.6nm,0.5s,mb4.2,baz=53,slow=5.7,SNR=26
NOA **NORSAR Array B** 78.23 332 P **P** 13 06 08.2 -0.8
NOA pmax pmax
comp=Z,4.0nm,0.5s
MORC **Moravsky Berou** 80.57 321 *eP* **P** 13 06 21.7 -0.2
YKA **Yellowknife Ar** 81.56 23 P **P** 13 06 26.5 -0.4
comp=Z,3.5nm,0.5s,mb4.2,baz=306,slow=5.4,SNR=37
BRG **Berggiesshubel** 82.06 323 *eP* **P** 13 06 29.4 -0.3
comp=Z,2.7nm,0.6s,mb4.0
BRG **Berggiesshubel** 82.06 323 *eP* **P** 13 06 29.4 -0.3
BRG pmax pmax
comp=Z,2.0nm,0.6s,mb3.9
CLL **Collm** 82.35 323 *eP* **P** 13 06 30.7 -0.5
comp=Z,7.0nm,0.7s,mb4.4
CLL **Collm** 82.35 323 *iP* **P** 13 06 30.9 -0.3
CLL pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
CLL **Collm** 82.35 323 *iP* **P** 13 06 30.9 -0.3
comp=Z,9.0nm,0.8s,mb4.5
CLL **Collm** 82.35 323 *iP* **P** 13 06 30.9 -0.3
comp=Z,9.0nm,0.8s,mb4.5
WERD **Werda** 83.17 323 *eP* **P** 13 06 34.8 -0.7
comp=Z,2.0nm,0.7s,mb4.0
GUNZ **Gunzen** 83.20 323 *eP* **P** 13 06 35.3 -0.3
comp=Z,3.0nm,0.7s,mb4.1
GEC2 **GERESS Array S** 83.22 321 *eP* **P** 13 06 35.3 -0.4
comp=Z,6.0nm,0.9s,mb4.3
PLN **Plauen** 83.23 323 *eP* **P** 13 06 35.3 -0.5
comp=Z,24nm,1.2s,mb4.8
SOKA **Soboth** 83.53 319⇑ *iP* **P** 13 06 37.1 -0.3
comp=Z,4.6nm,0.6s,mb4.4
ROTZ **Rotzenmuhle** 83.58 322 *eP* **P** 13 06 37.1 -0.5
comp=Z,5.0nm,0.9s,mb4.2
PDKS **Podkum** 83.85 318 *iP* **P** 13 06 38.7 -0.3
LJU **Ljubljana** 84.14 318 *iP* **P** 13 06 40.2 -0.3
CRNS **Crni Vrh** 84.29 319 *iP* **P** 13 06 40.5 -0.7
KMBO **Kilima Mbogo** 86.58 267 *ceP* **P** 13 06 52.5 -0.7
KMBO pmax pmax
comp=Z,1.0nm,0.4s
CDF **Champ du Feu** 87.04 323 *eP* **P** 13 06 54.2 -0.6
HINF **Hinteralfeld** 87.61 323 *eP* **P** 13 06 56.3 -1.2
HAU **Haudompre** 87.78 323 *eP* **P** 13 06 57.2 -1.1
comp=Z,9.7nm,0.7s,mb4.4
HAU **Haudompre** 87.78 323 *eP* **P** 13 06 57.2 -1.1
HAU pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
HAU **Haudompre** 87.78 323 *eP* **P** 13 06 57.2 -1.1
comp=Z,4.8nm,0.7s,mb4.4
ETW **Entiat** 88.06 37 *eP* **P** 13 07 00.3 +0.7
LPG **La Plagne** 89.01 321 *eP* **P** 13 07 04.2 0.0
comp=Z,14nm,0.6s,mb4.7
LPG **La Plagne** 89.01 321 *eP* **P** 13 07 04.2 0.0
LPG pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
LPG **La Plagne** 89.01 321 *eP* **P** 13 07 04.2 0.0
comp=Z,7.1nm,0.6s,mb4.8
LPL **La Plagne** 89.01 321 *eP* **P** 13 07 04.1 -0.1
comp=Z,16nm,0.8s,mb4.7
LPL **La Plagne** 89.01 321 *eP* **P** 13 07 04.1 -0.1
LPL pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
LPL **La Plagne** 89.01 321 *eP* **P** 13 07 04.1 -0.1
comp=Z,8.0nm,0.8s,mb4.7
SBF **Sospel** 89.56 319 *eP* **P** 13 07 05.7 -1.1
comp=Z,18nm,0.7s,mb4.8
SBF **Sospel** 89.56 319 *eP* **P** 13 07 05.7 -1.1
SBF pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
SBF **Sospel** 89.56 319 *eP* **P** 13 07 05.7 -1.1
comp=Z,8.9nm,0.7s,mb4.8
ORIF **Oris-en-Rattie** 89.85 321 *eP* **P** 13 07 07.3 -0.8
SSF **Saint Saulge** 89.89 323 *eP* **P** 13 07 07.2 -1.0
SMF **Signal de Mont** 89.96 323 *eP* **P** 13 07 07.7 -0.9
AVF **Avril sur Loir** 90.14 323 *eP* **P** 13 07 08.5 -0.9
comp=Z,3.9nm,0.5s,mb4.3
AVF **Avril sur Loir** 90.14 323 *eP* **P** 13 07 08.5 -0.9
AVF pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
AVF **Avril sur Loir** 90.14 323 *eP* **P** 13 07 08.5 -0.9
comp=Z,2.0nm,0.5s,mb4.3
WALA **Waterton Lakes** 90.53 33 *eP* **P** 13 07 12.8 +1.6
VIVF **Saint-Julien-l** 90.58 321 *eP* **P** 13 07 10.9 -0.6
comp=Z,11nm,0.7s,mb4.7
VIVF **Saint-Julien-l** 90.58 321 *eP* **P** 13 07 10.9 -0.6
VIVF pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
VIVF **Saint-Julien-l** 90.58 321 *eP* **P** 13 07 10.9 -0.6
comp=Z,5.4nm,0.7s,mb4.7
BMO **Blue Mountains** 91.39 38 *eP* **P** 13 07 16.0 +0.8
comp=Z,5.6nm,1.2s,mb4.5
MOD **Modoc** 91.42 42 *eP* **P** 13 07 16.3 +0.9
comp=Z,8.3nm,1.3s,mb4.6
FFC **Flin Flon** 91.71 24 *iP* **P** 13 07 16.8 +0.3
SLMT **Seeley Lake** 91.93 35 *eP* **P** 13 07 18.9 +1.2
MTLF **Montolieu** 92.91 321 *eP* **P** 13 07 21.9 -0.4
LRM **Limekiln Ridge** 93.40 35 *eP* **P** 13 07 25.9 +1.4
NVAR **Mina Array Bea** 94.71 44 P **P** 13 07 32.1 +1.4
comp=Z,2.5nm,0.7s,mb4.6,baz=291,slow=5.2,SNR=26
PCRV **Puerto La Cruz** 144.24 13 PKP PKPdf 13 13 42.3 -2.9
comp=Z,13nm,0.3s,baz=270,slow=4.0,SNR=7.1
LPAZ **La Paz** 166.46 52 PKPab PKPab 13 15 16.9 -0.1
comp=Z,2.2nm,0.9s,baz=334,slow=7.8,SNR=5.5
LPAZ **La Paz** 166.46 52 PKP2 PKPab 13 15 16.9 0.0
LPAZ pmax pmax
comp=Z,2.0nm,0.9s

CASC 24 13:13:31.3±1.8, 10°.61N×85°.37W, h35km±7km, MD3.5, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTS	**JuntasAbangare**	**0.52**	**128**	*eP*	Pn	13 13 41.8	-0.5
JTS				*eS*	Sb	13 13 51.4	+1.4
SSN	**San Juan del S**	**0.83**	**325**	*eP*	Pn	13 13 46.3	-0.3
CGA2	**Cerro Gallo 2**	**1.07**	**124**	*eP*	Pn	13 13 49.4	-0.4
CGA2				*eS*	Sn	13 14 04.9	+1.3
PRS1	**Puriscal**	**1.22**	**121**	*eP*	Pn	13 13 51.6	-0.2
PRS1				*eS*	Sn	13 14 09.1	+2.0
LAJ	**Bijagual**	**1.44**	**121**	*eP*	Pn	13 13 50.8	-4.1
LAJ				*eS*	Sn	13 14 08.3	-4.3
URSC	**Urasca**	**1.75**	**116**	*eP*	Pn	13 13 59.3	+0.1
BUS	**Buena Vista**	**1.90**	**123**	*eP*	Pn	13 14 02.4	+1.1
COPN	**Copaltepe**	**1.96**	**323**	*eP*	Pn	13 14 02.7	+0.5
BAR1		**2.44**	**124**	*eP*	Pn	13 14 10.3	+1.5

*BJI **24** 13:21:47.7, 3°.76S×101°.68E, h90km, mB4.9/9, mb5.0/18*
*ISCJB **24** 13:21:48.2±0.5, 3°.53S±0°.04×101°.51E±0°.04, h71km±4km, mb4.8/64, Error ellipse: s-maj=9.2km s-min=3.4km az=42.8*
*MOS **24** 13:21:49.1±1.1, 3°.28S×101°.76E, h72km, mb5.1/22, Error ellipse: s-maj=17.7km s-min=7.4km az=108.5*

*DJA **24** 13:21:50, 3°.55S×101°.48E, h47km, MLv4.9/17*
*NEIC **24** 13:21:50.5±1.1, 3°.45S×101°.66E, h75km±8km, mb5.1/18, Error ellipse: s-maj=11.0km s-min=4.9km az=46.0*
NEIC Felt [II] at Argamakmur, Bengkulu and Lais.
*IDC **24** 13:21:51.2±2.9, 3°.35S×101°.77E, h78km±24km, mb4.4/17, mb1 4.4/18, mb1mx4.4/20, mbtmp4.4/18, MS3.5/6, Ms1 3.5/6, ms1mx3.3/28, Error ellipse: s-maj=22.3km s-min=11.5km az=48.0*
ISC 24 13:21:49.6±0.5, 3°.55S±0°.04×101°.51E±0°.04, h68km±4km, n159, σ0s99/158, mb4.8/64, 6C-5D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.09**	**96**	P	**Pn**	**13 22 06.8**	**-2.3**
MNAI	**Manna**	**1.66**	**119**	P	**Pn**	**13 22 15.1**	**-1.5**
SDSI	**Sungai Dareh**	**2.60**	**358**	P	**Pn**	**13 22 28.6**	**-0.8**
PDSI	**Padang**	**2.82**	**338**	P	**Pn**	**13 22 31.7**	**-0.7**
PDSI				S	**Sn**	**13 23 04.2**	**-1.0**
MDSI	**Maura Dua**	**2.82**	**109**	P	**Pn**	**13 22 32.1**	**-0.3**
LWLI	**Liwa**	**2.93**	**120**	P	**Pn**	**13 22 34.4**	**+0.5**
LWLI				S	**Sn**	**13 23 09.2**	**+1.1**
PPI	**Padang Panjang**	**3.26**	**340**	P	**Pn**	**13 22 38.3**	**-0.2**
SISI	**Saibi**	**3.27**	**312**	P	**Pn**	**13 22 38.7**	**+0.2**
SISI				S	**Sn**	**13 23 15.3**	**-1.0**
RGRI	**Rengat**	**3.28**	**15**	P	**Pn**	**13 22 38.5**	**-0.2**
PMBI	**Palembang**	**3.32**	**79**	P	**Pn**	**13 22 39.1**	**-0.1**
KLSI		**3.41**	**110**	P	**Pn**	**13 22 40.9**	**+0.5**
KASI	**Kota Agung**	**3.57**	**123**	S	**Sn**	**13 23 24.4**	**+0.8**
BKNI	**Bangkinang**	**3.88**	**353**	P	**Pn**	**13 22 47.1**	**+0.3**
MNSI	**Mandailing Nat**	**4.72**	**336**	P	**Pn**	**13 22 58.5**	**+0.1**
RBSI	**Rajabasa**	**4.80**	**119**	P	**Pn**	**13 23 01.5**	**+2.1**
CGJI	**Cibinong**	**5.16**	**126**	P	**Pn**	**13 23 03.5**	**-0.9**
	3μm154nm,0.8s						
MYKOM	**Kota Tinggi**	**5.79**	**24**	P	**Pn**	**13 23 12.9**	**-0.1**
MYKOM	**Kota Tinggi**	**5.79**	**24**	P	**Pn**	**13 23 12.8**	**-0.3**
	0.5nm1μm135nm,0.9s						
KGM	**Kluang**	**5.81**	**18**	P	**Pn**	**13 23 13.3**	**0.0**
TPI	**Tanjungpandan**	**6.19**	**83**	P	**Pn**	**13 23 16.7**	**-1.7**
	0.3nm31nm,1.5s						
GSI	**Gunungsitoli**	**6.22**	**321**	P	**Pn**	**13 23 18.9**	**0.0**
	1.7nm309nm,0.5s						
FRIM	**Kepong**	**6.74**	**1**	P	**Pn**	**13 23 26.8**	**+0.8**
PSI	**Prapat**	**6.81**	**338**	P	**Pn**	**13 23 24.9**	**-2.1**
	5.2nm,0.3s,baz=354,slow=3.6,SNR=17						
PSI				LR	LR	13 26 25.0	
	comp=Z,276nm,21.4s,baz=149,slow=41						
PSI	**Prapat**	**6.81**	**338**	P	**Pn**	**13 23 24.9**	**-2.1**
PSI				LR	LR	13 26 25.0	
IPM	**Ipoh**	**7.99**	**357**	P	**Pn**	**13 23 44.1**	**+1.0**
IPM	**Ipoh**	**7.99**	**357**	P	**Pn**	**13 23 45.2**	**+2.1**
	0.2nm61nm,0.9s						
TPTI		**8.03**	**327**	P	**Pn**	**13 23 43.3**	**-0.3**
	50nm,1.3s						
KULM	**Kulim**	**8.82**	**354**	P	**Pn**	**13 23 55.2**	**+0.8**
KULM	**Kulim**	**8.82**	**354**	*e*Pn	**Pn**	**13 23 54.7**	**+0.3**
	25nm,0.8s						
KULM	**Kulim**	**8.82**	**354**	P	**Pn**	**13 23 55.0**	**+0.5**
	34nm,0.9s						
KTGM	**Kuala Trenggan**	**8.96**	**10**	P	**Pn**	**13 23 57.9**	**+1.5**
UGM	**Wanagama**	**9.96**	**116**	P	**Pn**	**13 24 09.5**	**-0.6**
	147nm,1.6s						
KSM	**Kuching**	**10.11**	**61**	P	**Pn**	**13 24 13.6**	**+1.5**
KSM	**Kuching**	**10.11**	**61**	*e*Pn	**Pn**	**13 24 10.4**	**-1.7**
	7.6nm,0.8s						
KSM	**Kuching**	**10.11**	**61**	P	**Pn**	**13 24 11.3**	**-0.8**
	11nm,0.9s						
SJI	**Sawahan**	**11.02**	**113**	P	**Pn**	**13 24 24.6**	**0.0**
	3μm65nm,0.6s						
PWJI	**Pagerwojo**	**11.16**	**114**	P	**Pn**	**13 24 25.9**	**-0.6**
	40nm,1.9s						
SBUM	**Sibu**	**12.25**	**61**	P	**Pn**	**13 24 43.0**	**+1.7**
SBUM	**Sibu**	**12.25**	**61**	P	**Pn**	**13 24 44.2**	**+2.8**
	18nm,1.1s						
GMJI	**Gumukmas**	**12.77**	**112**	P	**Pn**	**13 24 48.3**	**0.0**
	44nm,1.7s						
SRBI	**Singaraja**	**14.36**	**109**	P	**Pn**	**13 25 10.7**	**+1.1**
KKM	**Kota Kinabalu**	**17.51**	**57**	P	**Pn**	**13 25 50.9**	**+1.5**
KKM	**Kota Kinabalu**	**17.51**	**57**	*e*P	**Pn**	**13 25 49.6**	**+0.3**
TSM	**Tawau**	**18.11**	**65**	P	**Pn**	**13 25 58.3**	**+1.6**
SDKM	**Sandakan**	**18.13**	**60**	P	**Pn**	**13 25 58.2**	**+1.2**
SPSI	**Sidrap Palu**	**18.23**	**92**	P	**Pn**	**13 25 57.7**	**-0.5**
TTSI	**Tana Toraja**	**18.29**	**89**	P	**Pn**	**13 25 59.5**	**+0.6**
KDM	**Kudat**	**18.49**	**56**	P	**Pn**	**13 26 02.3**	**+1.0**
BNSI	**Bone**	**18.57**	**93**	P	**Pn**	**13 26 02.8**	**+0.5**
MYLDM	**Lahad Datu**	**19.06**	**63**	P	**Pn**	**13 26 09.5**	**+1.3**
CM31	**Chiang Mai Arr**	**22.01**	**353**	*e*P	**P**	**13 26 37.9**	**-0.6**
	5.3nm,0.5s,mb4.1						
CMAR	**Chiang Mai Arr**	**22.01**	**353**	P	**P**	**13 26 38.3**	**-0.2**
	6.9nm,0.5s,mb4.2,baz=185,slow=8.5,SNR=36						
CMAR				PcP	PcP	13 30 36.4	+1.6
	1.6nm,0.6s,baz=205,slow=2.8,SNR=7.1						
CMAR				LR	LR	13 36 18.0	
	comp=Z,53nm,21.2s,baz=185,slow=40						
CMAR	**Chiang Mai Arr**	**22.01**	**353**	P	**P**	**13 26 38.3**	**-0.2**
CMAR						13 30 36.4	
MBWA	**Marble Bar**	**24.91**	**136**	*e*P	**P**	**13 27 06.8**	**+0.3**
FITZ	**Fitzroy Crossi**	**27.71**	**123**	*e*P	**P**	**13 27 29.2**	**-2.6**
	7.5nm,0.4s,mb4.6						
FITZ	**Fitzroy Crossi**	**27.71**	**123**	P	**P**	**13 27 31.3**	**-0.5**
	4.4nm,0.5s,mb4.2,baz=289,slow=4.1,SNR=13						
KAKA	**Kakadu**	**31.91**	**108**	*e*P	**P**	**13 28 06.3**	**-2.7**
	53nm,1.9s,mb4.9						
KAKA	**Kakadu**	**31.91**	**108**	*e*P	**P**	**13 28 06.9**	**-2.1**
ODAN	**Odare**	**33.16**	**337**	*e*P	**P**	**13 28 20.4**	**+0.6**
	38nm,0.7s,mb5.3						
TAPN	**Taplejung**	**33.48**	**337**	*e*P	**P**	**13 28 23.4**	**+0.9**
	56nm,0.7s,mb5.5						
RAMN	**Ramite**	**33.56**	**335**	*e*P	**P**	**13 28 24.3**	**+1.0**
	15nm,0.4s,mb5.2						
JIRN	**Jiri**	**34.36**	**335**	*e*P	**P**	**13 28 31.3**	**+1.1**
	20nm,0.3s,mb5.5						
ENH	**Enshi**	**34.48**	**12**	*e*P	**P**	**13 28 29.8**	**-1.4**
	23nm,0.4s,mb5.4						
LSA	**Lhasa**	**34.52**	**344**	*e*P	**P**	**13 28 32.0**	**+0.5**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.6						
LSA	**Lhasa**	**34.52**	**344**	*e*P	**P**	**13 28 32.0**	**+0.5**
	comp=Z,5.2nm,0.5s,mb4.6						
PKI	**Pulchoki**	**34.61**	**334**	*e*P	**P**	**13 28 33.0**	**+0.6**
PKIN	**Phulchoki**	**34.62**	**334**	*e*P	**P**	**13 28 33.1**	**+0.6**
	comp=Z,9.9nm,0.4s,mb5.0						
GUN	**Gumba**	**34.71**	**335**	*e*P	**P**	**13 28 34.4**	**+1.2**
	comp=Z,105nm,0.6s,mb5.8						
DMN	**Daman**	**34.78**	**334**	*e*P	**P**	**13 28 34.9**	**+1.1**
KKN	**Kakani**	**34.86**	**334**	*e*P	**P**	**13 28 35.2**	**+0.7**
GKN	**Gorkha**	**35.33**	**334**	*e*P	**P**	**13 28 39.3**	**+0.8**
	comp=Z,16nm,0.3s,mb5.3						
WRAB	**Tennant Creek**	**35.93**	**120**	P	**P**	**13 28 43.9**	**+0.1**
	comp=Z,120nm,0.5s,SNR=16						
WRAB	**Tennant Creek**	**35.93**	**120**	*e*P	**P**	**13 28 42.3**	**-1.5**
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.4s,mb5.0						
WRAB	**Tennant Creek**	**35.93**	**120**	*e*P	**P**	**13 28 42.3**	**-1.5**
	comp=Z,9.1nm,0.4s,mb5.1						
ASAR	**Alice Springs**	**37.13**	**126**	P	**P**	**13 28 53.9**	**-0.2**
	comp=Z,6.4nm,0.4s,mb4.9,baz=298,slow=8.3,SNR=80						
ASAR				S	**S**	**13 34 34.0**	**-1.8**
	comp=Z,0.9nm,0.8s,baz=297,slow=14,SNR=6.0						
XAN	**Xi'an**	**38.03**	**10**	P	**P**	**13 28 59.8**	**-1.6**
XAN				pP	pP	13 29 18.4	+0.3
XAN				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
AGRA	**Agra**	**38.12**	**325**	*ex*	**P**	**13 29 01.0**	**-1.3**
AGRA				AMb	AMB	13 29 18.1	
	comp=Z,38nm,0.4s,mb5.6						
SONA	**Sohna**	**39.39**	**325**	*e*PKP	**P**	**13 29 13.6**	**+0.6**
SONA				AMb	AMB	13 29 14.0	
	comp=Z,12nm,0.3s,mb5.2						
BISR	**Bishrakh**	**39.44**	**326**	*e*PKP	**P**	**13 29 13.5**	**+0.2**
AYAN	**Aya Nagar**	**39.54**	**325**	*e*PKP	**P**	**13 29 14.4**	**+0.2**
AYAN				AMb	AMB	13 29 15.3	
	comp=Z,10nm,0.3s,mb5.2						
NDI	**New Delhi**	**39.65**	**325**	*e*PKP	**P**	**13 29 15.0**	**0.0**
KHET	**Khetri**	**40.01**	**323**	*e*PKP	**P**	**13 29 18.0**	**0.0**
KHET				AMb	AMB	13 29 25.5	
	comp=Z,5.2nm,0.6s,mb4.6						
KKR	**Kurukshetra**	**40.85**	**326**	*e*PKP	**P**	**13 29 24.5**	**-0.4**
KKR				AMb	AMB	13 29 25.0	
	comp=Z,49nm,0.3s,mb5.9						
SDNR	**Sundarnagar**	**41.96**	**328**	*ex*	**P**	**13 29 35.5**	**+1.5**
THN	**Thein Dam**	**43.35**	**328**	*e*PKP	**P**	**13 29 45.5**	**+0.2**
HHC	**Hu-ho-hao-te**	**45.13**	**11**	*eP*	**P**	**13 30 00.1**	**+0.7**
HHC				S	**S**	**13 36 33.9**	**0.0**
HHC				pmax	pmax		
	comp=Z,17nm,0.6s,mb5.0						
HHC				pmax	pmax		
	comp=Z,110nm,6.6s						
BJI	**Beijing**	**45.42**	**16**	P	**P**	**13 30 00.9**	**-0.8**
BJI				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.0						
CTA	**Charters Tower**	**46.59**	**114**	*eP*	**P**	**13 30 10.6**	**-0.6**
	comp=Z,4.8nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**47.00**	**131**	*eP*	**P**	**13 30 15.0**	**+0.7**
	comp=Z,9.4nm,0.6s,mb4.7						
STKA	**Stephens Creek**	**47.00**	**131**	P	**P**	**13 30 15.2**	**+0.8**
	comp=Z,11nm,0.6s,mb4.8,baz=306,slow=8.1,SNR=38						
STKA				LR	LR	13 52 00.4	
	comp=Z,117nm,18.1s,baz=24,slow=38						
STKA	**Stephens Creek**	**47.00**	**131**	*eP*	**P**	**13 30 14.3**	**0.0**
	comp=Z,2.9nm,0.8s,mb4.1						
KSRS	**Korea Array**	**47.61**	**29**	P	**P**	**13 30 19.2**	**+0.3**
	comp=Z,1.5nm,0.6s,mb4.0,baz=229,slow=7.8,SNR=5.3						
KSRS				LR	LR	13 54 40.2	
	comp=Z,42nm,18.1s,baz=338,slow=42						
KBL	**Kabul**	**48.66**	**324**	*eP*	**P**	**13 30 27.0**	**-0.1**
KBL				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
KBL	**Kabul**	**48.66**	**324**	*eP*	**P**	**13 30 27.0**	**0.0**
	comp=Z,5.4nm,0.6s,mb4.7						
WMQ	**Urumqi**	**48.76**	**347**	*eP*	**P**	**13 30 29.0**	**+1.3**
WMQ				pmax	pmax		
	comp=Z,100nm,5.0s						
KSH	**Kashi**	**48.87**	**334**	P	**P**	**13 30 27.5**	**-1.1**
KSH				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.0						
KSH				pmax	pmax		
	comp=Z,130nm,5.2s						
SONM	**Songino Array**	**51.34**	**4**	P	**P**	**13 30 47.5**	**+0.4**
	comp=Z,14nm,0.7s,mb5.2,baz=188,slow=9.6,SNR=61						
SONM				PcP	PcP	13 32 01.1	0.0
	comp=Z,2.2nm,0.6s,baz=180,slow=4.0,SNR=4.2						
ULN	**Ulaanbaatar**	**51.43**	**5**	*eP*	**P**	**13 30 47.6**	**-0.1**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
ULN	**Ulaanbaatar**	**51.43**	**5**	*eP*	**P**	**13 30 47.6**	**-0.1**
	comp=Z,6.1nm,0.8s,mb4.7						
CN2	**Changchun**	**51.82**	**22**	*eP*	**P**	**13 30 50.0**	**-0.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
TKM2	**Tokmak 2**	**51.84**	**336**	*eP*	**P**	**13 30 51.2**	**+0.2**
TKM2				pmax	pmax		
	comp=Z,13nm,0.4s,mb5.3						
TKM2	**Tokmak 2**	**51.84**	**336**	*eP*	**P**	**13 30 51.2**	**+0.3**
	comp=Z,14nm,0.4s,mb5.3						
AML	**Almayashu**	**52.00**	**334**	*eP*	**P**	**13 30 52.5**	**+0.4**
	comp=Z,7.7nm,0.7s,mb4.8						
AAK	**Ala-Archa**	**52.07**	**335⇓**	*iP*	**P**	**13 30 53.4**	**+0.8**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
EKS2	**Erkin-Say**	**52.40**	**334**	*eP*	**P**	**13 30 55.6**	**+0.5**
	comp=Z,17nm,0.7s,mb5.2						
MJAR	**Matsushiro Arr**	**52.55**	**37**	P	**P**	**13 30 54.8**	**-1.5**
	comp=Z,2.0nm,0.5s,mb4.4,baz=205,slow=8.0,SNR=9.6						
MK31	**Makanchi Array**	**52.92**	**344**	*eP*	**P**	**13 30 58.3**	**-0.5**
MKAR	**Makanchi Array**	**52.92**	**344**	P	**P**	**13 30 58.6**	**-0.2**
	comp=Z,28nm,0.4s,mb5.7,baz=156,slow=9.0,SNR=299						
MKAR	**Makanchi Array**	**52.92**	**344**	*ceP*	**P**	**13 30 58.7**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,28nm,0.4s						
TLY	**Talaya**	**55.05**	**2**	*eP*	**P**	**13 31 14.8**	**+0.6**
TLY				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
KURK	**Kurchatov**	**57.51**	**343**	P	**P**	**13 31 31.0**	**-0.8**
	comp=Z,143nm,0.7s,SNR=19						
KURK	**Kurchatov**	**57.51**	**343**	*deP*	**P**	**13 31 31.1**	**-0.7**
KURK				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.1						
KURK	**Kurchatov**	**57.51**	**343**	*eP*	**P**	**13 31 31.1**	**-0.7**
	comp=Z,13nm,0.6s,mb5.1						
KLR	**Kul'dur**	**58.74**	**23**	*eP*	**P**	**13 31 35.8**	**-4.7**
ZAA0	**Zalesovo Array**	**58.96**	**349**	*eP*	**P**	**13 31 41.3**	**-0.6**
ZALV	**Zalesovo Beam**	**58.96**	**349**	P	**P**	**13 31 41.3**	**-0.6**
	comp=Z,15nm,0.5s,mb5.3,baz=168,slow=5.1,SNR=92						
ZALV				LR	LR	14 00 15.4	
	comp=Z,33nm,20.3s,baz=98,slow=39						
ZALV	**Zalesovo Beam**	**58.96**	**349**	P	**P**	**13 31 41.3**	**-0.6**
ZALV				LR	LR	14 00 15.4	
YSS	**Yuzh-Sakhalins**	**62.01**	**31**	*eP*	**P**	**13 32 02.0**	**-0.8**
YSS				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.3						
YSS	**Yuzh-Sakhalins**	**62.01**	**31**	*eP*	**P**	**13 32 02.0**	**-0.8**
	comp=Z,19nm,1.0s,mb5.1						
BVAR	**Borovoye Array**	**62.15**	**339**	P	**P**	**13 32 02.7**	**-0.9**
	comp=Z,5.0nm,0.3s,mb5.1,baz=131,slow=6.5,SNR=40						
BRVK	**Borovoye**	**62.21**	**339**	P	**P**	**13 32 03.5**	**-0.5**
	comp=Z,78nm,0.5s,mb6.0,SNR=7.4						
BRVK	**Borovoye**	**62.21**	**339**	*c iP*	**P**	**13 32 02.9**	**-1.1**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
BRVK	**Borovoye**	**62.21**	**339**	*eP*	**P**	**13 32 02.5**	**-1.5**
	comp=Z,7.3nm,0.3s,mb5.2						
ABKAR	**Akbulak array**	**63.71**	**331**	*eP*	**P**	**13 32 13.3**	**-0.8**
	comp=Z,10nm,0.7s,mb4.8						
SVE	**Sverdlovsk**	**68.68**	**337⇓**	*eP*	**P**	**13 32 45.5**	**-0.2**
SVE				pmax	pmax		
	comp=

FINES	FINESS Array B	86.17	332	P	P	13 34 23.6	+0.4
	comp=Z,1.8nm,0.5s,mb4.3,baz=104,slow=5.2,SNR=9.9						
KAF	Kangasniemi	86.24	333	eP	P	13 34 23.6	+0.1
KAF				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
KAF	Kangasniemi	86.24	333	eP	P	13 34 23.6	+0.1
	comp=Z,7.2nm,0.6s,mb4.8						
KAF	Kangasniemi	86.24	333	ep	P	13 34 23.6	+0.1
	comp=Z,7.2nm,0.6s,mb4.8						
ARCES	ARCESS Array B	88.43	340	P	P	13 34 34.6	+0.6
	comp=Z,6.9nm,0.7s,mb4.8,baz=90,slow=4.0,SNR=10						
NB2	NORSAR Subarra	93.22	331	P	P	13 34 55.6	-0.8
	comp=Z,0.8nm,0.7s,mb4.2,baz=91,slow=5.1						
NOA	NORSAR Array B	93.22	331	P	P	13 34 56.0	-0.4
	comp=Z,1.1nm,0.8s,mb4.3,baz=90,slow=5.0,SNR=4.8						
PDAR	Pinedale Array	132.16	31	PKP	PKPdf	13 40 56.0	-0.1
	comp=Z,0.4nm,0.5s,baz=146,slow=1.1,SNR=5.0						
CPUP	Villa Florida	143.92	213	PKP	PKPdf	13 41 17.9	-0.2
	comp=Z,1.0nm,0.4s,baz=174,slow=5.8,SNR=5.9						
TXAR	Lajitas Array	144.96	40	PKP	PKPdf	13 41 19.7	-0.2
	comp=Z,10nm,0.6s,baz=277,slow=1.0,SNR=133						
MIAR	Mount Ida	146.12	23	ePKP2	PKPbc	13 41 22.1	-0.6
WVT	Waverly	146.45	14	ePKP2	PKPbc	13 41 22.5	-1.1
JCT	Junction City	146.49	35	ePKP2	PKPbc	13 41 23.5	-0.4

KRSC 24 13:30:41.9±1.0, 50°.96N×157°.90E, h87km±92km, ML3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	Alaid	1.49	267	eP	Pn	13 31 08.5	+1.2
ALID				eS	Sn	13 31 27.7	+1.1
MIPR	Malaya Ipel'ka	1.50	332	eP	Pn	13 31 09.9	+2.5
MIPR				eS	Sn	13 31 30.2	+3.5
GRL	Gorelyy	1.60	4	eP	Pn	13 31 10.8	+2.1
GRL				eS	Sn	13 31 32.0	+3.0
PET	Petropavlovsk	2.12	12	eP	Pn	13 31 18.2	+2.7
PET				eS	Sn	13 31 44.3	+3.1
AVH	Avacha	2.37	12	eP	Pn	13 31 22.0	+3.2
SPN	Mys Shipunski	2.51	31	eS	Sn	13 31 51.7	+1.2
GNL	Ganaly	2.74	1	eP	Pn	13 31 27.4	+3.6
MKZ	Mys Kozlova	4.29	31	eP	Pn	13 31 46.5	+1.8
KBTR	Krutoberegovo	6.02	27	P	Pn	13 32 11.2	+3.0

*IDC **24** 14:14:08.0±1.1, 45°.24N×36°.50E, h0km, mb3.9/6, mb1 4.0/10, mb1mx3.7/27, mbtmp3.9/10, ML4.1/4, MS3.1/3, Ms1 3.2/3, ms1mx2.4/31, Error ellipse: s-maj=20.1km s-min=12.8km az=31.0*
*MOS **24** 14:14:08.8±2.1, 45°.32N×36°.45E, h21km, mb4.1/5, Error ellipse: s-maj=7.9km s-min=6.2km az=106.7*
*ISCJB **24** 14:14:09.8±0.3, 45°.17N±0°.02×36°.46E±0°.03, h41km±6km, mb3.8/5, MS3.0/3, Error ellipse: s-maj=4.0km s-min=3.4km az=18.6*
*NEIC **24** 14:14:09.1±5.8, 45°.18N×36°.49E, h12km±42km, mb3.5/1, Error ellipse: s-maj=11.3km s-min=8.0km az=60.0*
*CSEM **24** 14:14:11.7±0.1, 45°.14N×36°.43E, h40km, mb3.8/5, Error ellipse: s-maj=4.8km s-min=3.8km az=30.0*

ISC 24 14:14:11.6±0.6, 45°.16N±0°.02×36°.44E±0°.03, h33km±5km, n123, σ0°95/140, mb3.8/5, MS3.0/3, 1C-2D, Crimea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KERU	Kerch	0.15	4	iP	Sb	14 14 21.6	-0.4
KERU	Kerch	0.15	4	iP	Sb	14 14 21.6	-0.4
ANN	Anapa	0.79	117	dP	Pn	14 14 26.0	-0.4
ANN				i		14 14 35.9	
ANN				pmax	pmax		
	comp=Z,397nm,0.3s						
ANN				smax			
	comp=N,2μm,0.4s						
ANN				smax			
	comp=E,2μm,0.4s						
ANN	Anapa	0.79	117	iP	Pn	14 14 26.0	-0.4
	comp=E,397nm,0.3s						
ANN				iS	Sn	14 14 35.9	-1.1
SUDU	Sudak	1.06	256	eP	Pn	14 14 30.6	+0.5
SUDU				eS	Sn	14 14 43.8	+0.2
SUDU	Sudak	1.06	256	eP	Pn	14 14 30.6	+0.5
SUDU				eS	Sn	14 14 43.8	+0.2
SIM	Simferopol'	1.66	264	eP	Pn	14 14 40.7	+2.3
SIM				eS	Sn	14 14 59.8	+1.3
YAL	Yalta	1.76	248	eP	Pn	14 14 40.3	+0.6
YAL				iS	Sn	14 15 00.0	-1.0
YAL	Yalta	1.76	248	eP	Pn	14 14 40.3	+0.6
YAL				iS	Sn	14 15 00.0	-1.0
SEV	Sevastopol'	2.07	254	eP	Pn	14 14 44.2	+0.3
SEV				eS	Sn	14 15 07.1	-1.4
SEV	Sevastopol'	2.07	254	eP	Pn	14 14 44.2	+0.3
SEV				eS	Sn	14 15 07.1	-1.4
SOC	Sochi	2.83	123	iP	Pn	14 14 54.8	+0.4
SOC				e		14 15 28.2	
SOC				pmax	pmax		
	comp=Z,8.0nm,0.4s						
SOC	Sochi	2.83	123	iP	Pn	14 14 54.8	+0.4
	comp=Z,8.0nm,0.4s						
SOC				eS	Sn	14 15 28.2	+1.0
DIKM	Dikmen	3.61	194	ePN	Pn	14 15 04.4	-0.7
BZK	Bozkurt	3.65	210	ePN	Pn	14 15 05.8	0.0
BYBT	Boyabat	3.88	199	ePN	Pn	14 15 08.7	-0.2
KVT	Kavak	4.08	184	ePN	Pn	14 15 11.6	-0.1
GRSN	GIRESUNGRSN	4.44	162	iP	Pn	14 15 14.9	-1.7
GRSN	GIRESUNGRSN	4.44	162	iP	Pn	14 15 14.9	-1.6
TOS	Tosya	4.48	204	ePN	Pn	14 15 18.0	+0.9
ESPY	Espiye-Giresun	4.56	158	ePN	Pn	14 15 16.8	-1.4
ILGA	Ilgaz	4.56	207	iP	Pn	14 15 18.4	+0.2
ILGA	Ilgaz	4.56	207	iP	Pn	14 15 18.4	+0.2
KIV	Kislovodsk	4.62	103	eP	Pn	14 15 18.8	-0.2
KIV				eS	Sn	14 16 11.6	+0.1
KIV				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KIV	Kislovodsk	4.62	103	eP	Pn	14 15 18.8	-0.2
	comp=Z,5.0nm,0.6s						
KIV				eS	Sn	14 16 11.6	+0.1
BEYR	Belyy Ugol+	4.70	102	eP	Pn	14 15 20.8	+0.7
BEYR	Belyy Ugol+	4.70	102	eP	Pn	14 15 20.8	+0.7
SAFT	Safranbolu	4.78	216	ePN	Pn	14 15 22.0	+0.8
KTUT	Trabzon	4.83	149	ePN	Pn	14 15 21.0	-0.9
TOKT	Tokat	4.83	179	ePN	Pn	14 15 23.0	+1.0
PYA	Pyatigorsk	4.86	101	eP	Pn	14 15 21.5	-0.8
PYA	Pyatigorsk	4.86	101	eP	Pn	14 15 21.5	-0.8
MACK	Trabzon	4.87	149	iP	Pn	14 15 21.5	-0.9
MACK	Trabzon	4.87	149	iP	Pn	14 15 21.5	-0.9
SUSE	Susehri	5.11	165	iP	Pn	14 15 25.5	-0.3
SUSE	Susehri	5.11	165	iP	Pn	14 15 25.5	-0.3
CORM	Corum	5.15	196	ePN	Pn	14 15 26.9	+0.6
GUMT	Gumushane	5.20	153	ePN	Pn	14 15 26.7	-0.3
SVSK	Karacayir	5.25	175	ePN	Pn	14 15 28.2	+0.5
BCA	Borcka	5.29	133	ePN	Pn	14 15 27.3	-1.0
KDZE	Karadeniz Ereo	5.30	225	ePN	Pn	14 15 28.1	-0.3
DBOC	Borcka	5.39	133	iP	Pn	14 15 28.4	-1.3
DBOC	Borcka	5.39	133	iP	Pn	14 15 28.4	-1.2
KELT	Kelkit	5.42	157	iP	Pn	14 15 30.3	+0.3
KELT	Kelkit	5.42	157	iP	Pn	14 15 30.3	+0.3
YOZ	Yozgat	5.58	189	ePN	Pn	14 15 32.2	0.0
ARTV	Artvin	5.64	133	iP	Pn	14 15 32.5	-0.6
TIRR	Tirgusor	5.76	266	eP	Pn	14 15 35.2	+0.6
TIRR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
TIRR	Tirgusor	5.76	266	eP	Pn	14 15 35.2	+0.6
	comp=Z,8.4nm,0.6s						
TIRR	Tirgusor	5.76	266	eP	Pn	14 15 35.2	+0.6
	comp=Z,8.4nm,0.6s						
DDEM	Demirkent	5.77	136	iP	Pn	14 15 35.1	+0.3
BR131	Keskin Array S	5.81	202	eP	Pn	14 15 34.9	-0.5
	comp=Z,16nm,0.3s						
BR131	Keskin Array S	5.81	202	eP	Pn	14 15 34.9	-0.5
	comp=Z,16nm,0.3s						
BRTR	Keskin Array B	5.81	202	Pn	Pn	14 15 35.2	-0.2
	comp=Z,6.5nm,0.3s,baz=26,slow=10,SNR=85						
BRTR				Sn	Sn	14 16 36.9	-3.9
	comp=Z,3.3nm,0.3s,baz=28,slow=16,SNR=9.9						
BRTR	Keskin Array B	5.81	202	iP	Pn	14 15 35.2	-0.2
BRTR				pmax	pmax		
	comp=Z,15nm,0.3s						
BRTR	Keskin Array B	5.81	202	iP	Pn	14 15 35.2	-0.2
	comp=Z,15nm,0.3s						
EZC	Erzincan	5.81	157	ePN	Pn	14 15 36.1	+0.6
HENT	Hendek	5.94	225	iP	Pn	14 15 35.8	-1.4
KEMA	Kemaliye	6.08	165	iP	Pn	14 15 39.7	+0.6
KEMA	Kemaliye	6.08	165	iP	Pn	14 15 39.7	+0.6
VSR	Storozhevoye	6.33	16	eP	Pn	14 15 43.4	+0.9
VSR				eS	Sn	14 16 52.1	-1.5
VSR				pmax	pmax		
	comp=Z,30nm,0.4s						
VSR				pmax	pmax		
	comp=N,5.0nm,0.2s						
VSR				pmax	pmax		
	comp=E,2.0nm,0.2s						
VSR				smax			
	comp=E,30nm,0.4s						
VSR				smax			
	comp=Z,20nm,0.8s						
VSR				smax			
	comp=N,10.0nm,0.4s						
VSR	Storozhevoye	6.33	16	eP	Pn	14 15 43.4	+0.9
	comp=N,30nm,0.4s						
VSR				eS	Sn	14 16 52.1	-1.5
	comp=N,10.0nm,0.4s						
AVNT	Avonos	6.48	191	iP	Pn	14 15 44.6	0.0
AVNT	Avonos	6.48	191	iP	Pn	14 15 44.6	0.0
PTK	Pertek	6.63	160	ePN	Pn	14 15 46.9	+0.2
VRHR	Novokhopersk	6.88	28	eP	Pn	14 15 53.1	+3.1
VRHR				eS	Sn	14 17 07.5	+0.5
VRHR				pmax	pmax		
	comp=N,30nm,0.6s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.6s						
VRHR				pmax	pmax		
	comp=Z,20nm,0.6s						
VRHR				smax			
	comp=N,70nm,0.8s						
VRHR				smax			
	comp=Z,30nm,0.8s						
VRHR				smax			
	comp=E,20nm,0.4s						
MYA	Malataya	6.98	167	ePN	Pn	14 15 51.4	-0.1
SVRC	Sivrice-ELAZID	7.10	161	ePN	Pn	14 15 53.5	+0.4
AKASG	Malin Array Be	7.37	321	Pn	Pn	14 15 56.4	-0.3
	comp=E,20nm,0.3s,baz=133,slow=14,SNR=43						
AKASG				Sn	Sn	14 17 15.2	-3.8
	comp=E,17nm,0.3s,baz=137,slow=24,SNR=13						
AKASG	Malin Array Be	7.37	321	eP	Pn	14 15 56.4	-0.3
AKASG	Malin Array Be	7.37	321	eP	Pn	14 15 56.4	-0.3
AKBB	Malin Array Si	7.37	321	eP	Pn	14 15 56.2	-0.5
AKBB	Malin Array Si	7.37	321	eP	Pn	14 15 56.2	-0.5
KIEV	Kiev	7.37	321	eP	Pn	14 15 56.2	-0.5
KIEV				pmax	pmax		
	comp=Z,14nm,0.3s						
KIEV	Kiev	7.37	321	eP	Pn	14 15 56.2	-0.5
	comp=Z,14nm,0.3s						
KIEV	Kiev	7.37	321	eP	Pn	14 15 56.2	-0.5
	comp=Z,14nm,0.3s						
MLR	Muntele Rosu	7.41	276	Pn	Pn	14 15 59.1	+1.8
	comp=Z,0.4nm,0.3s,baz=225,slow=1.4,SNR=4.1						
MLR				Sn	Sn	14 17 18.6	-1.6
	comp=Z,1.8nm,0.3s,baz=35,slow=22,SNR=5.7						
MLR	Muntele Rosu	7.41	276	P	Pn	14 15 59.1	+1.8
MLR						14 17 18.6	
MLR				smax			
	comp=N,2.0nm,0.3s						
MLR	Muntele Rosu	7.41	276	P	Pn	14 15 59.1	+1.8
	comp=N,2.0nm,0.3s						
MLR				S	Sn	14 17 18.6	-1.5
BUR08	Bucovina Ar. S	8.16	292	eP	Pn	14 16 06.1	-1.5
BUR08	Bucovina Ar. S	8.16	292	eP	Pn	14 16 06.1	-1.5
MAK	Makhachkala	8.26	102	eP	Pn	14 16 09.6	+0.6
MAK	Makhachkala	8.26	102	eP	Pn	14 16 09.6	+0.6
OBN	Obninsk	9.97	0	eP	Pn	14 16 34.1	+1.8
OBN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
OBN	Obninsk	9.97	0	eP	Pn	14 16 34.1	+1.8
	comp=Z,10.0nm,0.8s						
KECS	Kecovo	11.43	293	eP	Pn	14 16 52.9	+0.6
KECS	Kecovo	11.43	293	ePN	Pn	14 16 52.9	+0.6
MMAI	Mount Meron Ar	12.15	184	Pn	Pn	14 17 03.9	+1.6
	comp=Z,1.4nm,0.3s,baz=352,slow=15,SNR=3.5						
VYHS	Vyhne	12.51	292	eP	Pn	14 17 08.5	+1.4
VYHS	Vyhne	12.51	292	ePN	Pn	14 17 08.5	+1.4
VYHS	Vyhne	12.51	292	eP	Pn	14 17 08.5	+1.4
ABKAR	Akbulak array	16.47	67	eP	Pn	14 17 59.3	-0.6
	comp=Z,1.5nm,0.4s						
FINES	FINESS Array B	17.41	343	P	Pn	14 18 07.2	-4.4
	comp=Z,1.2nm,0.3s,baz=156,slow=13,SNR=24						
FINES	FINESS Array B	17.41	343	P	Pn	14 18 07.2	-4.5
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
FINES	FINESS Array B	17.41	343	P	Pn	14 18 07.2	-4.4
ARU	Arti	17.88	43	eP	Pn	14 18 18.2	+0.8
ARU				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ARU	Arti	17.88	43	eP	Pn	14 18 18.2	+0.8
	comp=Z,4.0nm,1.0s						
KAF	Kangasniemi	17.98	344	eP	Pn	14 18 16.3	-2.3
KAF				pmax	pmax		
	comp=Z,3.0nm,0.3s						
KAF	Kangasniemi	17.98	344	ep	Pn	14 18 16.3	-2.3
	comp=Z,2.5nm,0.3s						
KAF	Kangasniemi	17.98	344	eP	Pn	14 18 16.3	-2.3
	comp=Z,3.0nm,0.3s						
JOF	Joensuu	18.04	352	eP	Pn	14 18 16.0	-3.4
JOF				pmax	pmax		
	comp=Z,4.0nm,0.4s						
JOF	Joensuu	18.04	352	ep	Pn	14 18 16.0	-3.4
	comp=Z,4.0nm,0.4s						
HFS	Hagfors	20.22	326	P	P	14 18 42.6	-0.8
	comp=Z,6.2nm,0.6s,baz=125,slow=13,SNR=20						
HFS				LR	LR	14 26 11.1	
	comp=Z,28nm,18.3s,MS2.6,baz=177,slow=36						
HFS	Hagfors	20.22	326	P	P	14 18 42.6	-0.8
HFS				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HFS				MLR	MLR		
	comp=Z,28nm,18.3s						
HFS	Hagfors	20.22	326	P	P	14 18 42.6	-0.8
	comp=Z,28nm,18.3s						
NB2	NORSAR Subarra	21.75	326	P	P	14 18 59.0	-0.9
	comp=Z,2.2nm,0.8s,mb3.6,baz=125,slow=11						
NB2	NORSAR Subarra	21.75	326	P	P	14 18 59.0	-0.9
	comp=Z,2.2nm,0.8s,mb3.6,baz=125,slow=11,SNR=1.6						
NOA	NORSAR Array B	21.75	326	P	P	14 18 59.4	-0.5
	comp=Z,2.5nm,0.7s,mb3.8,baz=131,slow=11,SNR=12						
NOA				LR	LR	14 28 00.5	
	comp=Z,18nm,18.8s,MS2.5,baz=250,slow=38						
NOA	NORSAR Array B	21.75	326	P	P	14 18 59.4	-0.5
NOA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NOA				MLR	MLR		
	comp=Z,19nm,18.8s						
NOA	NORSAR Array B	21.75	326	P	P	14 18 59.4	-0.5
	comp=Z,19nm,18.8s						
ARCES	ARCESS Array B	25.06	351	P	P	14 19 32.8	+0.3
	comp=Z,2.5nm,0.6s,mb3.9,baz=162,slow=8.7,SNR=20						
ARCES	ARCESS Array B	25.06	351	P	P	14 19 32.8	+0.3
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ARCES	ARCESS Array B	25.06	351	P	P	14 19 32.8	+0.3
	comp=Z,3.0nm,0.6s,mb4.0						
AAK	Ala-Archa	27.37	82	P	P	14 19 54.7	+1.1
	comp=Z,2.0nm,0.4s,mb4.0,baz=277,slow=3.0,SNR=3.7						
AAK	Ala-Archa	27.37	82	P	P	14 19 54.7	+1.1
AAK				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.0						
AAK	Ala-Archa	27.37	82	P	P	14 19 54.7	+1.1
AAK	Ala-Archa	27.37	82	P	P	14 19 54.7	+1.1
	comp=Z,2.0nm,0.4s,mb4.0						
MKAR	Makanchi Array	31.56	70	P	P	14 20 31.3	+0.6
	comp=Z,0.6nm,0.4s,mb3.7,baz=274,slow=7.8,SNR=13						
MKAR	Makanchi Array	31.56	70	P	P	14 20 31.3	+0.6
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	Makanchi Array	31.56	70	P	P	14 20 31.3	+0.6
SONM	Songino Array	46.72	60	P	P	14 22 37.8	+0.7
	comp=Z,0.3nm,0.5s,mb3.5,baz=277,slow=11,SNR=2.4						
SONM	Songino Array	46.72	60	P	P	14 22 37.8	+0.7
TXAR	Lajitas Array	97.45	326	LR	LR	15 15 13.7	
	comp=Z,36nm,18.1s,MS3.9,baz=200,slow=38						

*CRAAG **24** 14:14:38.3, 37°.11N×3°.86E, Ml3.3*
*CSEM **24** 14:14:40.7±0.2, 37°.03N×3°.84E, h2km, ML3.3, Error ellipse: s-maj=8.2km s-min=5.4km az=53.0*
*ISCJB **24** 14:14:41.7±0.5, 37°.16N±0°.03×3°.70E±0°.04, h10km, Error ellipse: s-maj=5.2km s-min=4.1km az=139.0*
*MDD **24** 14:14:41.3±0.5, 37°.02N×3°.84E, h0km, mb4.5/18, Error ellipse: s-maj=6.8km s-min=4.5km az=63.0*
*NEIC **24** 14:14:43.1, 37°.12N×3°.80E, h0km, MG4.5(MDD), After MDD.*

ISC 24 14:14:42.9±0.5, 37°.15N±0°.03×3°.74E±0°.04, h10km, n133, σ1°26/180, 3C-3D, Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABA	Alger-Bouzarea	0.66	239	P	Pg	14 14 54.2	-1.5
ABA	Alger-Bouzarea	0.66	239	P	Pg	14 14 54.2	-1.5
ABA	Alger-Bouzarea	0.66	239	P	Pg	14 14 54.2	-1.5
ABA	Alger-Bouzarea	0.66	239	P	Pg	14 14 54.2	-1.5
AKF	Akfadou	0.84	128	P	Pg	14 14 53.6	-5.4
AKF	Akfadou	0.84	128	P	Pg	14 14 53.6	-5.4
AKF	Akfadou	0.84	128	P	Pg	14 14 53.6	-5.4
AKF	Akfadou	0.84	128	P	Pg	14 14 53.6	-5.4
ADJB	Djebel Djouab	1.02	194	P	Pg	14 14 57.7	-4.7
ADJB	Djebel Djouab	1.02	194	P	Pg	14 14 57.7	-4.7
ADJB	Djebel Djouab	1.02	194	P	Pg	14 14 57.7	-4.7
ADJB	Djebel Djouab	1.02	194	P	Pg	14 14 57.7	-4.7
AKET	Djebel Ketaf	1.10	174	P	Pg	14 14 59.0	-5.1
AKET	Djebel Ketaf	1.10	174	P	Pg	14 14 59.0	-5.1
AKET	Djebel Ketaf	1.10	174	P	Pg	14 14 59.0	-5.1
AKET	Djebel Ketaf	1.10	174	P	Pg	14 14 59.0	-5.1
EMHD	Djebel Mahouad	1.14	214	P	Sg	14 15 15.0	-4.5
EMHD	Djebel Mahouad	1.14	214	P	Sg	14 15 15.0	-4.5
EMHD	Djebel Mahouad	1.14	214	P	Sg	14 15 15.0	-4.5
EMHD	Djebel Mahouad	1.14	214	P	Sg	14 15 15.0	-4.5
SET	Setif	1.63	125	P	Pn	14 15 10.0	-1.6
SET	Setif	1.63	125	P	Pn	14 15 10.0	-1.6
SET	Setif	1.63	125	P	Pn	14 15 10.0	-1.6
SET	Setif	1.63	125	P	Pn	14 15 10.0	-1.6
DFRA	Djebel Bou Aff	1.81	109	P	Pn	14 15 08.8	-5.3
DFRA	Djebel Bou Aff	1.81	109	P	Pn	14 15 08.8	-5.3
DFRA	Djebel Bou Aff	1.81	109	P	Pn	14 15 08.8	-5.3
DFRA	Djebel Bou Aff	1.81	109	P	Pn	14 15 08.8	-5.3
CKHR	Kef el Ahmar	1.82	128	P	Pn	14 15 13.4	-0.8
CKHR	Kef el Ahmar	1.82	128	P	Pn	14 15 13.4	-0.8
CKHR	Kef el Ahmar	1.82	128	P	Pn	14 15 13.4	-0.8
CKHR	Kef el Ahmar	1.82	128	P	Pn	14 15 13.4	-0.8
EBNR	Beni Rached	1.97	245	P	Pg	14 15 21.0	+0.3
EBNR	Beni Rached	1.97	245	P	Pg	14 15 21.0	+0.3
CASM	Ain Smara	2.38	111	P	Pn	14 15 21.2	-0.7
CASM	Ain Smara	2.38	111	P	Pn	14 15 21.2	-0.7
CASM	Ain Smara	2.38	111	P	Pn	14 15 21.2	-0.7
CASM	Ain Smara	2.38	111	P	Pn	14 15 21.2	-0.7
CTEI	Djebel Teioual	2.40	116	P	Pn	14 15 23.0	+0.8
CTEI	Djebel Teioual	2.40	116	P	Pn	14 15 23.0	+0.8
CTEI	Djebel Teioual	2.40	116	P	Pn	14 15 23.0	+0.8
CTEI	Djebel Teioual	2.40	116	P	Pn	14 15 23.0	+0.8
EANR	'Ain N'Sour	2.44	241	P	Pn	14 15 26.0	+3.3
EANR	'Ain N'Sour	2.44	241	P	Pn	14 15 26.0	+3.3
EANR	'Ain N'Sour	2.44	241	P	Pn	14 15 26.0	+3.3
EANR	'Ain N'Sour	2.44	241	P	Pn	14 15 26.0	+3.3
ETRT	Tiaret	2.64	229	P	Pn	14 15 23.0	-2.5
ETRT	Tiaret	2.64	229	P	Pn	14 15 23.0	-2.5
ETRT	Tiaret	2.64	229	P	Pn	14 15 23.0	-2.5
ETRT	Tiaret	2.64	229	P	Pn	14 15 23.0	-2.5
EIBI	Ibiza	2.67	315	P	Pn	14 15 26.0	+0.2
EIBI				S	Sn	14 15 57.7	-0.5
EIBI	Ibiza	2.67	315	P	Pn	14 15 26.0	+0.2
	9.5nm,0.2s,SNR=25						
EIBI				S	Sn	14 15 57.7	-0.5
	23nm,0.4s,SNR=7.9						
EIBI				T		14 17 37.4	
	SNR=7.9						
EIBI	Ibiza	2.67	315	P	Pn	14 15 26.0	+0.2
	9.5nm,0.2s,SNR=25						
EIBI				S	Sn	14 15 57.7	-0.5
	23nm,0.4s,SNR=7.9						
EIBI				T		14 17 37.4	
	SNR=7.9						
EIBI	Ibiza	2.67	315	P	Pn	14 15 26.0	+0.1
	9.5nm,0.2s,SNR=25						
EIBI				S	Sn	14 15 57.7	-0.5
	23nm,0.4s,SNR=7.9						
ETOS	Mallorca	2.72	345	⇓P	Pn	14 15 27.0	+0.5
ETOS				S	Sn	14 15 58.7	-0.8
ETOS	Mallorca	2.72	345	⇓P	Pn	14 15 27.0	+0.5
	12nm,0.2s,SNR=18						
ETOS				S	Sn	14 15 58.7	-0.8
	7.7nm,0.2s,SNR=7.9						
ETOS				T		14 17 37.9	
	SNR=5.0						
ETOS	Mallorca	2.72	345	⇓P	Pn	14 15 27.0	+0.5
	12nm,0.2s,SNR=18						
ETOS				S	Sn	14 15 58.7	-0.8
	7.7nm,0.2s,SNR=7.9						
ETOS				T		14 17 37.9	
	SNR=5.0						
ETOS	Mallorca	2.72	345	P	Pn	14 15 27.0	+0.4
	12nm,0.2s,SNR=18						
ETOS				S	Sn	14 15 58.7	-0.8
	7.7nm,0.2s,SNR=7.9						
MAHO	Mahon	2.78	8	P	Pn	14 15 25.5	-1.9
MAHO				S	Sn	14 15 50.6	-10
MAHO	Mahon	2.78	8	P	Pn	14 15 25.5	-1.9
MAHO				S	Sn	14 15 50.6	-10
MAHO	Mahon	2.78	8	eP	Pn	14 15 25.5	-1.9
MAHO				eS	Sn	14 15 50.6	-10
CMAH	Djebel Manchou	2.99	99	P	Pn	14 15 24.1	-6.3
CMAH	Djebel Manchou	2.99	99	P	Pn	14 15 24.1	-6.3
CMAH	Djebel Man

CFON Fontmartina 4.72 348 ⇑P Pn 14 15 54.4 +0.3
CFON S Sn 14 16 48.0 -0.9
CFON Fontmartina 4.72 348 ⇑P Pn 14 15 54.4 +0.3
37nm,0.2s,SNR=18
CFON S Sn 14 16 48.0 -0.9
6.8nm,0.3s,SNR=7.9
CFON Fontmartina 4.72 348 ⇑P Pn 14 15 54.4 +0.3
37nm,0.2s,SNR=18
CFON S Sn 14 16 48.0 -0.9
6.8nm,0.3s,SNR=7.9
CFON Fontmartina 4.72 348 P Pn 14 15 54.4 +0.3
37nm,0.2s,SNR=18
CFON S Sn 14 16 48.0 -0.8
6.8nm,0.3s,SNR=7.9
EMIR Miracle 5.06 341 P Pn 14 16 00.1 +1.3
EMIR S Sn 14 16 57.7 +0.5
EMIR Miracle 5.06 341 P Pn 14 16 00.1 +1.3
25nm,0.2s,SNR=5.9
EMIR S Sn 14 16 57.7 +0.5
25nm,0.4s,SNR=7.9
EMIR Miracle 5.06 341 P Pn 14 16 00.1 +1.3
25nm,0.2s,SNR=5.9
EMIR S Sn 14 16 57.7 +0.5
25nm,0.4s,SNR=7.9
EMIR Miracle 5.06 341 P Pn 14 16 00.1 +1.3
25nm,0.2s,SNR=5.9
EMIR S Sn 14 16 57.7 +0.5
25nm,0.4s,SNR=7.9
EHUE Huescar 5.08 279 P Pn 14 15 59.7 +0.6
1.2nm,0.2s,SNR=7.9
EHUE S Sn 14 16 57.4 -0.5
0.6nm,0.2s,SNR=7.9
EHUE Huescar 5.08 279 P Pn 14 15 59.7 +0.6
1.2nm,0.2s,SNR=7.9
EHUE S Sn 14 16 57.4 -0.5
0.6nm,0.2s,SNR=7.9
EVIA Vianos 5.16 289 P Pn 14 15 59.9 -0.3
EVIA Vianos 5.16 289 P Pn 14 15 59.9 -0.3
7.8nm,0.4s,SNR=4.0
EVIA S Sn 14 16 57.4 -2.3
1.5nm,0.3s,SNR=7.9
EVIA Vianos 5.16 289 P Pn 14 15 59.9 -0.3
7.8nm,0.4s,SNR=4.0
EVIA S Sn 14 16 57.4 -2.3
1.5nm,0.3s,SNR=7.9
EVIA Vianos 5.16 289 P Pn 14 15 59.9 -0.2
7.8nm,0.4s,SNR=4.0
EJON La Jonquera 5.34 353 P Pn 14 16 03.2 +0.6
EJON La Jonquera 5.34 353 P Pn 14 16 03.2 +0.6
10nm,0.3s,SNR=21
EJON S Sn 14 17 01.6 -2.5
1.7nm,0.3s,SNR=7.9
EJON La Jonquera 5.34 353 P Pn 14 16 03.2 +0.6
10nm,0.3s,SNR=21
EJON S Sn 14 17 01.6 -2.5
1.7nm,0.3s,SNR=7.9
EJON La Jonquera 5.34 353 P Pn 14 16 03.2 +0.7
10nm,0.3s,SNR=21
EQES Quesada 5.46 279 P Pn 14 16 05.5 +1.2
EQES Quesada 5.46 279 P Pn 14 16 05.5 +1.2
1.5nm,0.1s,SNR=7.9
EQES Quesada 5.46 279 P Pn 14 16 05.5 +1.2
1.5nm,0.1s,SNR=7.9
EQES Quesada 5.46 279 P Pn 14 16 05.5 +1.2
1.5nm,0.1s,SNR=7.9
CLLI Llivia 5.50 346 P Pn 14 16 06.4 +1.7
CLLI Llivia 5.50 346 P Pn 14 16 06.4 +1.7
5.1nm,0.2s,SNR=7.3
CLLI Llivia 5.50 346 P Pn 14 16 06.4 +1.7
5.1nm,0.2s,SNR=7.3
CLLI Llivia 5.50 346 P Pn 14 16 06.4 +1.6
5.1nm,0.2s,SNR=7.3
CSOR Sort 5.60 340 P Pn 14 16 07.5 +1.4
CSOR S Sn 14 17 08.3 -2.1
CSOR Sort 5.60 340 P Pn 14 16 07.5 +1.4
1.5nm,0.2s,SNR=12
CSOR S Sn 14 17 08.3 -2.1
5.2nm,0.3s,SNR=7.9
CSOR Sort 5.60 340 P Pn 14 16 07.5 +1.4
1.5nm,0.2s,SNR=12
CSOR S Sn 14 17 08.3 -2.1
5.2nm,0.3s,SNR=7.9
CSOR Sort 5.60 340 P Pn 14 16 07.5 +1.4
1.5nm,0.2s,SNR=12
CSOR S Sn 14 17 08.3 -2.1
5.2nm,0.3s,SNR=7.9
ESAC San Caprasio 5.61 326 P Pn 14 16 07.4 +1.1
ESAC San Caprasio 5.61 326 P Pn 14 16 07.4 +1.1
10nm,0.3s,SNR=7.9
ESAC San Caprasio 5.61 326 P Pn 14 16 07.4 +1.1
10nm,0.3s,SNR=7.9
ESAC San Caprasio 5.61 326 P Pn 14 16 07.4 +1.1
10nm,0.3s,SNR=7.9
ETOR Torete 5.82 311 P Pn 14 16 11.8 +2.7
ETOR Torete 5.82 311 P Pn 14 16 11.8 +2.7
6.3nm,0.1s,SNR=4.0
ETOR Torete 5.82 311 P Pn 14 16 11.8 +2.7
6.3nm,0.1s,SNR=4.0
ETOR Torete 5.82 311 P Pn 14 16 11.8 +2.6
6.3nm,0.1s,SNR=4.0
EBIE Bielsa 6.19 335 P Pn 14 16 15.8 +1.6
EBIE Bielsa 6.19 335 P Pn 14 16 15.8 +1.6
2.3nm,0.2s,SNR=13
EBIE S Sn 14 17 23.0 -1.9
0.7nm,0.3s,SNR=7.9
EBIE Bielsa 6.19 335 P Pn 14 16 15.8 +1.6
2.3nm,0.2s,SNR=13
EBIE S Sn 14 17 23.0 -1.9
0.7nm,0.3s,SNR=7.9
EBIE Bielsa 6.19 335 P Pn 14 16 15.8 +1.6
2.3nm,0.2s,SNR=13
EALK Alkurruntz 7.28 328 P Pn 14 16 30.9 +1.8
EALK Alkurruntz 7.28 328 P Pn 14 16 30.9 +1.8
1.4nm,0.1s,SNR=4.0
EALK Alkurruntz 7.28 328 P Pn 14 16 30.9 +1.8
1.4nm,0.1s,SNR=4.0
EALK Alkurruntz 7.28 328 P Pn 14 16 30.9 +1.7
1.4nm,0.1s,SNR=4.0
ECAL Calabor 9.40 304 P Pn 14 16 59.9 +1.6
ECAL Calabor 9.40 304 P Pn 14 16 59.9 +1.6
4.0nm,0.3s,SNR=6.9
ECAL Calabor 9.40 304 P Pn 14 16 59.9 +1.6
4.0nm,0.3s,SNR=6.9
ECAL Calabor 9.40 304 P Pn 14 16 59.9 +1.6
4.0nm,0.3s,SNR=6.9

NEIC 24 14:21:35.1, 39.̊30S×177.̊19E, h38km, ML4.5(WEL), After WEL.
NEIC Felt [IV] at Napier, Napier South, Onekawa and Taradale.
WEL 24 14:21:35.3±0.1, 39.̊26S×177.̊16E, h29km, ML4.5/53, 34C-7D, Error ellipse: s-maj=1.3km s-min=0.8km az=90.0, Off east coast of North Island

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

NMHZ Naumai 0.32 300 ⇑P* Pb 14 21 42.4 -0.3
NMHZ S* Sb 14 21 47.7 -0.3
RAHZ Arahi 0.34 350 ⇑P* Pb 14 21 43.2 0.0
RAHZ S* Sb 14 21 50.1 +1.5
MCHZ McNeill Hill 0.41 242 ⇑P* Pb 14 21 43.9 -0.2
MCHZ S* Sb 14 21 51.5 +1.3
CKHZ Cape Kidnapper 0.41 189 ⇑P* Pb 14 21 44.3 +0.1
CKHZ S* Sb 14 21 52.0 +1.7
KNZ Kokohu 0.46 60 ⇓P* Pb 14 21 45.3 +0.3
KNZ S* Sb 14 21 53.1 +1.4
KNZ Kokohu 0.46 60 ⇓P Pb 14 21 45.3 +0.3
KNZ S Sb 14 21 53.1 +1.4
BKZ Black Stump Fm 0.53 280 ⇑P* Pb 14 21 45.2 -0.9
BKZ S* Sb 14 21 53.2 -0.3
BKZ Black Stump Fm 0.53 280 ⇓P Pb 14 21 45.2 -0.9
BKZ S Sb 14 21 53.2 -0.2
KAHZ Kahuranaki 0.58 202 P* Pb 14 21 47.0 0.0
MHGZ Mahia Peninsul 0.59 80 ⇓P* Pb 14 21 47.2 +0.1
PRGZ Paritu Road 0.65 60 ⇓P* Pb 14 21 47.9 -0.2
PXZ Pawanui 0.81 197 PN Pn 14 21 49.2 -1.5
HATZ Hinemaiaia 0.91 293 ⇑PN Pn 14 21 51.7 -0.4
HATZ Hinemaiaia 0.91 293 ⇑P Pn 14 21 51.7 -0.4
ALRZ Allen Road 0.94 317 ⇑PN Pn 14 21 52.2 -0.3
MWZ Matawai 0.96 17 ⇓PN Pn 14 21 52.2 -0.6
MWZ Matawai 0.96 17 ⇓P Pn 14 21 52.2 -0.6
PRRZ Plateau Road 0.97 321 ⇑PN Pn 14 21 52.4 -0.5
WPHZ Waipukurau 0.98 214 ⇑PN Pn 14 21 51.8 -1.3
PNHZ Pukenui 0.99 228 ⇑PN Pn 14 21 51.9 -1.3
URZ Urewera 1.00 358 PN Pn 14 21 52.7 -0.6
URZ Urewera 1.00 358 P Pn 14 21 52.7 -0.6
RRRZ Republican Roa 1.04 331 ⇑PN Pn 14 21 53.5 -0.5
RITZ Rihia Road 1.05 285 ⇑PN Pn 14 21 54.0 0.0
RITZ Rihia Road 1.05 285 ⇑P Pn 14 21 54.0 0.0
PRHZ Porangahau 1.09 202 PN Pn 14 21 52.7 -1.9
HRRZ Handcock Road 1.10 321 ⇑PN Pn 14 21 54.4 -0.4
MOVZ Moawhango 1.10 262 ⇑PN Pn 14 21 54.5 -0.3
MOVZ Moawhango 1.10 262 ⇑P Pn 14 21 54.5 -0.3
WHTZ Whakaora 1.11 302 ⇑PN Pn 14 21 54.6 -0.2
WHTZ Whakaora 1.11 302 ⇑P Pn 14 21 54.6 -0.2
CNGZ Carnagh Statio 1.12 47 PN Pn 14 21 54.0 -1.0
TARZ Mount Tarawera 1.14 333 ⇑PN Pn 14 21 55.1 -0.2
RATZ Rangitukua 1.15 289 ⇑PN Pn 14 21 55.0 -0.3
RATZ Rangitukua 1.15 289 ⇑P Pn 14 21 55.0 -0.4
OTVZ Oturere 1.17 274 ⇑PN Pn 14 21 55.4 -0.2
TUVZ Tukino 1.17 269 ⇑PN Pn 14 21 55.6 -0.1
TUVZ Tukino 1.17 269 ⇑P Pn 14 21 55.6 -0.1
KATZ Kakaramea 1.18 283 ⇑PN Pn 14 21 55.5 -0.3
KATZ Kakaramea 1.18 283 ⇑P Pn 14 21 55.5 -0.2
EDRZ Edgecumbe 1.19 344 PN Pn 14 21 55.7 -0.3
NGZ Ngauruhoe 1.22 273 ⇑PN Pn 14 21 56.1 -0.2
NGZ Ngauruhoe 1.22 273 ⇑P Pn 14 21 56.1 -0.2
TSZ Takapari Road 1.23 229 PN Pn 14 21 54.8 -1.7
TSZ Takapari Road 1.23 229 P Pn 14 21 54.8 -1.6
WTVZ West Tongariro 1.23 276 ⇑PN Pn 14 21 56.2 -0.2
WTVZ West Tongariro 1.23 276 ⇑P Pn 14 21 56.2 -0.3
DRZ Dome Shelter 1.24 269 PN Pn 14 21 56.5 -0.1
WATZ Wairara 1.24 296 ⇑PN Pn 14 21 55.0 -0.7
WATZ Wairara 1.24 296 ⇑P Pn 14 21 55.9 -0.7
FWVZ Far West T-bar 1.25 270 ⇑PN Pn 14 21 56.4 -0.4
TRVZ Turoa 1.25 268 PN Pn 14 21 56.6 -0.2
WPVZ Whakapapa 1.26 272 PN Pn 14 21 56.5 -0.3
DVHZ Dannevirke 1.29 216 PN Pn 14 21 55.4 -2.0
OMRZ Omania 1.30 331 PN Pn 14 21 56.6 -0.9
MTVZ Mangateitei 1.32 264 PN Pn 14 21 57.0 -0.7
MARZ Manawahe 1.32 343 PN Pn 14 21 55.8 -2.0
TWVZ Taurewa 1.35 277 PN Pn 14 21 57.4 -0.8
TWVZ Taurewa 1.35 277 P Pn 14 21 57.4 -0.8
PKVZ Pokaka 1.41 268 PN Pn 14 21 58.6 -0.3
PUZ Puketiti 1.46 36 PN Pn 14 21 58.3 -1.4
PUZ Puketiti 1.46 36 P Pn 14 21 58.3 -1.4
OPRZ Ohinepanea 1.49 341 PN Pn 14 21 58.8 -1.2
POWZ Post Office Ro 1.56 223 PN Pn 14 21 59.1 -2.0
BFZ Birch Farm 1.59 206 PN Pn 14 21 59.2 -2.3
BFZ Birch Farm 1.59 206 P Pn 14 21 59.2 -2.2
WIZ White Island 1.73 1 PN Pn 14 22 02.0 -1.3
WIZ White Island 1.73 1 P Pn 14 22 02.0 -1.3
MRZ Mangatainoka R 1.86 220 PN Pn 14 22 02.5 -2.6
MRZ Mangatainoka R 1.86 220 P Pn 14 22 02.5 -2.6
VRZ Vera Road 1.87 273 PN Pn 14 22 04.7 -0.6
VRZ Vera Road 1.87 273 P Pn 14 22 04.7 -0.6
HIZ Hauiti 1.95 292 PN Pn 14 22 05.5 -0.8
HIZ Hauiti 1.95 292 P Pn 14 22 05.5 -0.8
TOZ Tahuroa Road 2.00 319 PN Pn 14 22 06.4 -0.8
TOZ Tahuroa Road 2.00 319 P Pn 14 22 06.4 -0.7
HOWZ Holdsworth Sta 2.07 217 PN Pn 14 22 05.0 -3.0
RAEZ Rainy Point 2.15 268 PN Pn 14 22 09.2 0.0
RAEZ Rainy Point 2.15 268 P Pn 14 22 09.2 +0.1
OGWZ Otaki Gorge 2.18 224 PN Pn 14 22 06.9 -2.7
MHEZ Mangahewa 2.21 274 PN Pn 14 22 10.3 +0.2
KIW Kapiti Island 2.36 226 PN Pn 14 22 09.6 -2.4
KIW Kapiti Island 2.36 226 P Pn 14 22 09.6 -2.4
DFE Dawson Falls 2.37 267 PN Pn 14 22 12.8 +0.5
DFE Dawson Falls 2.37 267 P Pn 14 22 12.8 +0.6
NEZ North Egmont 2.38 269 PN Pn 14 22 13.0 +0.7
TRWZ Traveller 2.42 207 PN Pn 14 22 09.3 -3.6
PAWZ Paruwai Farm 2.50 211 PN Pn 14 22 10.8 -3.2
MSWZ Moikau Station 2.60 214 PN Pn 14 22 11.5 -3.9
MKAZ Moumakai 2.66 323 PN Pn 14 22 15.8 -0.3
WEL Wellington 2.73 221 PN Pn 14 22 13.8 -3.3
WEL Wellington 2.73 221 P Pn 14 22 13.8 -3.3
PLWZ Palliser 2.73 212 PN Pn 14 22 13.8 -3.4
KUZ Kuaotunu 2.75 335 PN Pn 14 22 17.0 -0.4
KUZ Kuaotunu 2.75 335 P Pn 14 22 17.0 -0.4
TUWZ Tuamarina 3.28 228 PN Pn 14 22 20.6 -4.1
NNZ Nelson 3.50 235 PN Pn 14 22 24.0 -3.6
BSWZ Blackbirch Sta 3.51 225 PN Pn 14 22 23.5 -4.3
QRZ Quartz Range 3.89 245 PN Pn 14 22 30.5 -2.5
WCZ Waipu Caves 4.00 325 PN Pn 14 22 34.9 +0.4
THZ Tophouse 4.10 231 PN Pn 14 22 31.9 -4.0
KHZ Kahutara 4.18 220 PN Pn 14 22 32.9 -4.2
DSZ Denniston Nort 4.78 237 PN Pn 14 22 42.3 -3.0
DSZ Denniston Nort 4.78 237 P Pn 14 22 42.3 -3.0
OUZ Omahuta 4.93 324 eP Pn 14 22 47.2 -0.2
LTZ Lake Taylor 5.11 225 PN Pn 14 22 44.3 -5.5
CRLZ Canterbury Las 5.50 217 PN Pn 14 22 49.7 -5.5
MQZ McQueen's Vall 5.59 216 PN Pn 14 22 50.7 -5.7
WVZ Waitaha Valley 6.17 230 PN Pn 14 22 59.7 -4.7
RPZ Rata Peaks 6.39 224 PN Pn 14 23 02.7 -4.7
CTZ Chatham Island 6.47 136 PN Pn 14 23 06.8 -1.7
FOZ Fox Glacier 7.08 230 PN Pn 14 23 10.6 -6.2
LBZ Lake Benmore 7.31 223 PN Pn 14 23 14.9 -5.1
LBZ Lake Benmore 7.31 223 P Pn 14 23 14.9 -5.1
ODZ Otahua Downs 7.54 218 PN Pn 14 23 17.4 -5.8
ODZ Otahua Downs 7.54 218 P Pn 14 23 17.4 -5.8
EAZ Earnscleugh 8.34 222 ePN Pn 14 23 29.1 -5.1
TUZ Tuapeka 8.69 217 PN Pn 14 23 33.7 -5.3
SYZ Scrubby Hill 9.36 216 PN Pn 14 23 44.3 -3.8

ISCJB 24 14:26:54.0±0.9, 50.̊32N±0.̊05×18.̊80E±0.̊05, h0km, Error ellipse: s-maj=8.0km s-min=3.7km az=17.8
WAR 24 14:26:54.1, 50.̊28N×18.̊83E
CSEM 24 14:26:56.4±0.6, 50.̊40N×18.̊66E, h1km, ML2.5/4, Error ellipse: s-maj=14.3km s-min=6.5km az=6.0
PRU 24 14:26:58.2, 50.̊30N×18.̊67E, h0km
ISC 24 14:26:55.7±0.9, 50.̊30N±0.̊05×18.̊80E±0.̊05, h0km, n16, σ1§19/31, Poland

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

OKC Ostrava-Krasne 0.63 222 ePG Pg 14 27 09.2 +1.5
OKC eSG Sg 14 27 18.2 +2.4
comp=Z,74nm,1.2s
OKC Ostrava-Krasne 0.63 222 Pg Pg 14 27 09.2 +1.5
OKC Sg Sg 14 27 18.2 +2.4
comp=Z,74nm,1.2s
MORC Moravsky Berou 0.97 237 ePg Pg 14 27 15.0 +0.8
MORC eSg Sg 14 27 28.0 +1.3
DPC Dobruska-Polom 1.59 273 ePG Pg 14 27 25.4 -0.7
DPC eSG Sg 14 27 47.1 +0.4
comp=Z,13nm,0.8s
DPC Dobruska-Polom 1.59 273 Pg Pg 14 27 25.4 -0.7
DPC Sg Sg 14 27 47.1 +0.4
comp=Z,13nm,0.8s
KSP Ksiaz 1.69 290 ePg Pg 14 27 28.7 +0.7
KSP eSg Sg 14 27 50.9 +1.0
VRAC Vranov 1.74 236 ePn Pg 14 27 28.3 -0.8
VRAC eSg Sg 14 27 51.6 0.0
VYHS Vyhne 1.81 179 ePN Pg 14 27 28.1 -2.3
VYHS eSN Sg 14 27 51.0 -0.7
VYHS Vyhne 1.81 179 ePn Pg 14 27 28.1 -2.3
VYHS eSn Sn 14 27 51.0 -0.7
STHS Stebnicka Huta 1.81 118 ePN Pg 14 27 31.0 +0.6
STHS eSN Sg 14 27 55.6 +1.7
STHS Stebnicka Huta 1.81 118 ePn Pg 14 27 31.0 +0.6
STHS eSn Sg 14 27 55.6 +1.7
KECS Kecovo 2.13 148 ePN Pg 14 27 35.3 -1.2
PRU Pruhonice 2.76 265 ePG Pg 14 27 47.1 -1.4
PRU eSG Sg 14 28 24.3 +0.1
comp=Z,4.7nm,0.6s
PRU Pruhonice 2.76 265 Pg Pg 14 27 47.1 -1.4
PRU Sg Sg 14 28 24.3 +0.1
comp=Z,4.7nm,0.6s
KHC Kasperske Hory 3.59 253 ePG Pg 14 28 02.8 -1.6
KHC eSG Sg 14 28 49.7 -1.1
comp=Z,4.0nm,0.5s
KHC Kasperske Hory 3.59 253 Pg Pg 14 28 02.8 -1.6
KHC Sg Sg 14 28 49.7 -1.1
comp=Z,4.0nm,0.5s

ISCJB 24 14:27:28.6±0.5, 53.̊32N±0.̊03×160.̊58E±0.̊08, h60km±4km, mb4.1/18, Error ellipse: s-maj=8.9km s-min=3.2km az=32.7
MOS 24 14:27:28.3±1.3, 53.̊43N×160.̊43E, h55km, mb4.3/14, Error ellipse: s-maj=13.6km s-min=7.7km az=74.9
KRSC 24 14:27:28.7±0.2, 53.̊34N×160.̊64E, h38km±28km, ML4.8
NEIC 24 14:27:30.6±1.4, 53.̊55N×160.̊29E, h55km±12km, mb4.6/2, Error ellipse: s-maj=15.2km s-min=11.1km az=124.0
IDC 24 14:27:32.4±2.2, 53.̊58N×160.̊31E, h71km±18km, mb3.7/12, mb1 3.9/13, mb1mx3.7/24, mbtmp3.8/13, MS3.6/7, Ms1 3.6/7, ms1mx3.3/24, Error ellipse: s-maj=22.9km s-min=16.5km az=136.0
ISC 24 14:27:30.0±0.5, 53.̊32N±0.̊03×160.̊54E±0.̊08, h55km±4km, n76, σ1§15/92, mb4.1/18, MS3.5/7, 1C-1D, Near east coast of Kamchatka Peninsula

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

SPN Mys Shipunski 0.38 235 iP Pn 14 27 38.7 -1.5
SPN iS Sn 14 27 45.6 -2.0
NLC Nalytchevo 0.73 259 eP Pn 14 27 43.2 -1.1
NLC iS Sn 14 27 53.9 -0.8
KII Karymskiy 0.97 318 eP Pn 14 27 45.9 -1.4
KII iS Sn 14 27 58.4 -1.8
AVH Avacha 1.08 268 eP Pn 14 27 48.7 -0.1
AVH iS Sn 14 28 03.3 +0.4
PET Petropavlovsk 1.17 256 eP Pn 14 27 49.5 -0.6
PET iS Sn 14 28 04.3 -0.7
PET Petropavlovsk 1.17 256 eP Pn 14 27 49.0 -1.1
MKZ Mys Kozlova 1.43 29 eP Pn 14 27 51.1 -2.4
MKZ iS Sn 14 28 06.8 -4.4
GNL Ganaly 1.59 285 eP Pn 14 27 55.8 0.0
GRL Gorelyy 1.68 244 eP Pn 14 27 57.5 +0.6
GRL iS Sn 14 28 18.5 +1.2
PETK Petropavlovsk- 1.72 264 P Pn 14 27 57.8 +0.3
143nm,0.3s,baz=86,slow=20,SNR=1792
PETK S Sn 14 28 19.8 +1.5
108nm,0.3s,baz=84,slow=17,SNR=10
PETK LR LR 14 28 52.0
comp=Z,613nm,20.5s,baz=60,slow=49
PETK Petropavlovsk- 1.72 264 PN Pn 14 27 57.8 +0.3
PETK S Sn 14 28 19.8 +1.5
PETK pmax pmax
comp=Z,143nm,0.3s
PETK smax
comp=N,109nm,0.3s
KMNR Kamenistaya 2.45 356 eP Pn 14 28 08.0 +0.6
KMNR iS Sn 14 28 37.8 +1.7
MIPR Malaya Ipel'ka 2.52 247 eP Pn 14 28 09.6 +1.2
BZMR Bezymyannaya 2.62 359 eP Pn 14 28 10.5 +0.7
KPT Kopyto 2.66 356 eP Pn 14 28 11.0 +0.7
KPT iS Sn 14 28 41.7 +0.4
ZLN Zelenaya 2.71 3 eP Pn 14 28 11.7 +0.7
ZLN iS Sn 14 28 42.9 +0.4
KOZ Kozyrevsk 2.77 352 eP Pn 14 28 11.9 +0.1
KOZR Kozyr 2.78 353 PN Pn 14 28 11.9 0.0
CIRR Tsirk 2.81 2 eP Pn 14 28 13.4 +1.1
CIRR iS Sn 14 28 46.5 +1.7
KRSR Krestovskiy 2.90 0 eP Pn 14 28 13.9 +0.3
KRSR iS Sn 14 28 46.6 -0.7
KLY Klyuchi 3.00 1 eP Pn 14 28 15.3 +0.3
KLY iS Sn 14 28 50.4 +0.8
SRDR Sredinnyy 3.04 351 eP Pn 14 28 16.6 +1.1
KBTR Krutoberegovo 3.18 24 eP Pn 14 28 17.0 -0.4
KBTR iS Sn 14 28 52.7 -1.4
BDR Baidarnaya 3.28 7 eP Pn 14 28 19.7 +0.9
SMKR Semkarok 3.31 9 eP Pn 14 28 19.7 +0.5
SMKR iS Sn 14 28 57.6 +0.3
SRKR Sorokina 3.36 6 eP Pn 14 28 20.8 +0.9
SRKR iS Sn 14 28 58.6 +0.1
BKI Bering 3.71 57 eP Pn 14 28 23.2 -1.4
BKI iS Sn 14 29 01.4 -5.5
SKR Severo-Kuril's 3.80 228 ePN Pn 14 28 27.0 +1.1
SKR eS Sn 14 29 10.4 +1.2
SKR pmax pmax
comp=N,30nm,0.5s
SKR pmax pmax
comp=E,40nm,0.5s
SKR pmax pmax
comp=Z,40nm,0.5s
SKR smax
comp=N,190nm,0.5s
SKR smax
comp=E,450nm,0.5s
SKR smax
comp=Z,120nm,0.5s
ALID Alaid 3.93 233 eP Pn 14 28 29.7 +2.0
ASAJ Asahikawa 14.96 239 P Pn 14 30 59.0 +1.2
comp=Z,1.0nm,0.3s,baz=65,slow=11,SNR=21
ASAJ Asahikawa 14.96 239 P Pn 14 30 59.1 +1.2
ASAJ pmax pmax
comp=Z,1.0nm,0.3s
ERM Erimo 16.23 233⇑eP Pn 14 31 12.3 -1.8
HABR Khabarovsk 16.75 263 eP Pn 14 31 26.3 +5.7
HABR 14 34 23.8
HABR pmax pmax
comp=Z,17nm,1.5s
HABR pmax pmax
comp=N,4.0nm,0.8s
HABR pmax pmax
comp=E,11nm,1.7s
HABR MLR MLR
comp=Z,109nm,18.0s
KLR Kul'dur 18.41 269 eP Pn 14 31 38.8 -2.1
YAK Yakutsk 18.49 310 eP Pn 14 31 39.1 -2.7
YAK pmax pmax
comp=Z,11nm,0.8s
YAK Yakutsk 18.49 310 eP Pn 14 31 39.4 -2.4
comp=Z,24nm,0.6s
MAJO Matsushiro 22.90 232 eP P 14 32 29.3 +0.5
MAJO pmax pmax
comp=Z,18nm,0.7s,mb4.6
MAJO Matsushiro 22.90 232 eP P 14 32 29.2 +0.5
comp=Z,18nm,0.7s,mb4.6
MAT Matsushiro 22.90 232 P P 14 32 29.4 +0.6
MJAR Matsushiro Arr 22.90 232 P P 14 32 30.0 +1.2
comp=Z,9.7nm,0.8s,mb4.3,baz=23,slow=11,SNR=17
MJAR LR LR 14 41 40.6
comp=Z,88nm,20.6s,MS3.2,baz=220,slow=37
MJAR Matsushiro Arr 22.90 232 P P 14 32 30.0 +1.2
MJAR pmax pmax
comp=Z,10.0nm,0.8s
MJAR MLR MLR
comp=Z,88nm,20.6s
KSRS Korea Array 27.55 248 LR LR 14 43 50.1
comp=Z,54nm,19.0s,MS3.1,baz=65,slow=36
ILAR Eielson Array 28.47 46 P P 14 33 19.5 +0.2
comp=Z,1.2nm,0.8s,mb3.6,baz=263,slow=8.1,SNR=9.3
ILAR Eielson Array 28.47 46 P P 14 33 19.5 +0.2
ILAR pmax pmax
comp=Z,1.0nm,0.8s
SONM Songino Array 34.11 283 P P 14 34 08.4 -0.6
comp=Z,0.4nm,0.3s,mb3.8,baz=53,slow=6.8,SNR=4.0
SONM PcP PcP 14 36 46.0 +0.9
comp=Z,0.8nm,0.6s,baz=11,slow=1.2,SNR=5.7
SONM LR LR 14 48 50.6
comp=Z,79nm,18.6s,MS3.5,baz=58,slow=38
ZALV Zalesovo Beam 42.88 303 LR LR 14 54 44.0
comp=Z,50nm,19.1s,MS3.4,baz=253,slow=38
KURK Kurchatov 47.84 302⇓eP P 14 35 58.8 -2.9
KURK pmax pmax
comp=Z,9.0nm,2.7s,mb4.3
MKAR Makanchi Array 48.30 296 P P 14 36 03.7 -1.6
comp=Z,0.5nm,0.4s,mb3.9,baz=56,slow=6.6,SNR=7.3
MKAR Makanchi Array 48.30 296 eP P 14 36 05.7 +0.4
MKAR pmax pmax
comp=Z,1.0nm,0.4s
MKAR Makanchi Array 48.30 296 P P 14 36 03.7 -1.6
BVAR Borovoye Array 50.46 308 P P 14 36 18.9 -2.8
comp=Z,0.6nm,0.4s,mb4.0,baz=31,slow=8.7,SNR=3.4
BVAR Borovoye Array 50.46 308 P P 14 36 18.9 -2.8
BVAR pmax pmax
comp=Z,1.0nm,0.4s
ARCES ARCESS Array B 53.16 342 P P 14 36 39.4 -2.2
comp=Z,3.4nm,0.8s,mb4.2,baz=29,slow=8.3,SNR=3.7
ARCES ARCESS Array B 53.16 342 P P 14 36 39.4 -2.1
ARCES pmax pmax
comp=Z,3.0nm,0.8s
NVAR Mina Array Bea 55.41 71 P P 14 37 03.9 +5.5
comp=Z,0.1nm,0.3s,mb3.3,baz=295,slow=8.8,SNR=2.6
JOF Joensuu 57.48 335 eP P 14 37 11.9 -0.8
JOF pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
JOF Joensuu 57.48 335 ep P 14 37 11.9 -0.8
comp=Z,1.1nm,0.3s,mb4.4
CMAR Chiang Mai Arr 58.49 258 P P 14 37 21.5 +1.1
comp=Z,0.6nm,0.6s,mb3.8,baz=22,slow=8.2,SNR=4.5
CMAR LR LR 15 05 46.5
comp=Z,66nm,18.3s,MS3.8,baz=240,slow=39
KAF Kangasniemi 59.38 337 eP P 14 37 25.3 -0.7
KAF pmax pmax

comp=Z,2.0nm,0.3s,mb4.6
KAF Kangasniemi 59.38 337 *e*p **P 14 37 25.3 -0.7**
comp=Z,1.9nm,0.3s,mb4.6
FINES FINESS Array B 60.02 337 P **P 14 37 29.0 -1.3**
comp=Z,2.3nm,0.4s,mb4.5,baz=38,slow=7.8,SNR=12
FINES LR LR 15 07 01.5
comp=Z,66nm,18.3s,MS3.8,baz=193,slow=40
FINES FINESS Array B 60.02 337 P **P 14 37 29.0 -1.3**
FINES pmax pmax
comp=Z,2.0nm,0.4s
FINES MLR MLR
comp=Z,66nm,18.3s
FINES FINESS Array B 60.02 337 P **P 14 37 29.0 -1.3**
FINES LR LR 15 07 01.5
OBN Obninsk 62.47 327 *e*P **P 14 37 47.6 +0.6**
OBN *e*S **S 14 46 27.0 +17**
OBN pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
NB2 NORSAR Subarra 63.40 344 P **P 14 37 52.1 -1.0**
comp=Z,0.7nm,0.5s,mb4.0,baz=24,slow=6.5
NOA NORSAR Array B 63.40 344 P **P 14 37 52.2 -0.8**
comp=Z,1.2nm,0.6s,mb4.2,baz=22,slow=6.7,SNR=6.5
NOA NORSAR Array B 63.40 344 P **P 14 37 52.3 -0.8**
NOA pmax pmax
comp=Z,1.0nm,0.6s
TXAR Lajitas Array 70.30 67 P **P 14 38 38.8 +1.3**
comp=Z,0.5nm,0.6s,mb3.6,baz=298,slow=4.7,SNR=7.3
TXAR Lajitas Array 70.30 67 P **P 14 38 38.8 +1.3**
TXAR pmax pmax
comp=Z,1.0nm,0.6s
EKA Eskdalemuir Ar 70.88 350 P **P 14 38 40.1 -0.4**
comp=Z,1.0nm,0.4s,mb4.1,baz=18,slow=5.2,SNR=9.8
EKA Eskdalemuir Ar 70.88 350 P **P 14 38 40.2 -0.3**
EKA pmax pmax
comp=Z,1.0nm,0.4s
ASAR Alice Springs 80.07 205 P **P 14 39 34.8 +1.4**
comp=Z,1.8nm,0.8s,mb4.0,baz=16,slow=5.2,SNR=20
ASAR Alice Springs 80.07 205 *e*P **P 14 39 34.8 +1.4**
ASAR pmax pmax
comp=Z,2.0nm,0.8s
PPT Papeete 82.60 133 LR LR 15 15 31.8
comp=Z,62nm,19.0s,MS4.0,baz=164,slow=35
LPAZ La Paz 127.12 65 PKhKP PKPpre 14 46 24.5
comp=Z,2.3nm,1.1s,baz=342,slow=3.2,SNR=8.8
QSPA South Pole Qui 143.06 180 PKhKP PKPpre 14 46 51.8
comp=Z,1.9nm,0.7s,baz=238,slow=1.6,SNR=6.8

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*SZGRF **24** 14:35:04.2, 22°.36S×179°.58W, h33km, South of Fiji Islands*
*ISCJB **24** 14:36:13.5±2.2, 20°.2S±0°.4×178°.8W±0°.2, h619km±17km, mb3.9/11, Error ellipse: s-maj=71.3km s-min=18.8km az=153.9*
*NEIC **24** 14:36:13.8±2.1, 20°.26S×178°.72W, h618km±15km, mb3.8/2, Error ellipse: s-maj=62.3km s-min=16.1km az=154.0*
*IDC **24** 14:36:15.7±3.9, 20°.22S×178°.74W, h636km±43km, mb3.4/9, mb1 3.7/9, mb1mx3.4/17, mbtmp3.4/9, Error ellipse: s-maj=49.6km s-min=18.1km az=152.0*
ISC 24 14:36:14.3±2.3, 20°.2S±0°.4×178°.8W±0°.2, h613km±17km, n30, σ0°.72/12, mb3.9/11, 2C-1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.86**	**308**	*e*P	**P**	**14 37 39.9**	**+0.1**
CTA	**Charters Tower**	**32.81**	**264**	P	**P**	**14 41 59.8**	**+0.5**
4.6nm,0.4s,mb4.5,baz=92,slow=9.9,SNR=10							
ASAR	**Alice Springs**	**43.90**	**256**	P	**P**	**14 43 28.2**	**-0.4**
2.1nm,0.7s,mb3.8,baz=95,slow=8.4,SNR=25							
ASAR				PcP	PcP	14 45 00.1	-0.7
0.9nm,0.5s,baz=105,slow=3.8,SNR=12							
WRAB	**Tennant Creek**	**43.93**	**262**	*e*P	**P**	**14 43 28.1**	**-0.8**
2.1nm,0.8s,mb3.7							
PETK	**Petropavlovsk-**	**75.76**	**346**	P	**P**	**14 46 58.2**	**0.0**
2.5nm,0.6s,mb3.8,baz=134,slow=8.5,SNR=9.3							
YBH	**Yreka Blue Hor**	**80.48**	**39**	P	**P**	**14 47 24.6**	**+0.8**
3.1nm,0.6s,mb3.8,baz=97,slow=8.1,SNR=4.6							
NVAR	**Mina Array Bea**	**81.27**	**44**	P	**P**	**14 47 27.9**	**0.0**
1.4nm,0.6s,mb3.6,baz=222,slow=8.2,SNR=11							
TXAR	**Lajitas Array**	**87.48**	**58**	P	**P**	**14 47 58.5**	**+0.2**
1.5nm,0.8s,mb3.8,baz=217,slow=7.6,SNR=13							
TXAR				PP	PP	14 51 27.1	-8.3
1.2nm,1.0s,baz=196,slow=9.4,SNR=7.6							
ILAR	**Eielson Array**	**88.15**	**13**	P	**P**	**14 47 59.1**	**-1.5**
1.5nm,0.6s,mb3.9,baz=216,slow=5.2,SNR=25							
MCMT	**McKenzie Canyo**	**88.16**	**41**	*e*P	**P**	**14 48 01.4**	**+0.2**
2.2nm,1.2s,mb3.8							
PDAR	**Pinedale Array**	**89.21**	**44**	P	**P**	**14 48 05.6**	**-0.5**
1.4nm,0.6s,mb4.0,baz=226,slow=3.2,SNR=14							
CMAR	**Chiang Mai Arr**	**89.33**	**290**	P	**P**	**14 48 08.7**	**+1.5**
1.1nm,0.7s,mb3.8,baz=137,slow=3.0,SNR=5.4							
ZALV	**Zalesovo Beam**	**109.78**	**321**	PKiKP	PKiKP	14 53 34.2	-2.3
0.4nm,0.3s,baz=144,slow=1.2,SNR=3.5							
MKAR	**Makanchi Array**	**110.44**	**314**	PKiKP	PKiKP	14 53 36.1	-1.9
0.3nm,0.4s,baz=178,slow=0.7,SNR=9.6							
BVAR	**Borovoye Array**	**118.36**	**320**	PKP	PKPdf	14 53 51.3	-1.7
1.6nm,0.4s,baz=54,slow=2.6,SNR=8.2							
ARCES	**ARCESS Array B**	**128.46**	**349**	PKP	PKPdf	14 54 10.3	-1.5
2.1nm,0.6s,baz=73,slow=1.6,SNR=6.8							
NOA	**NORSAR Array B**	**138.56**	**353**	PKhKP	PKPpre	14 54 23.2	
0.8nm,0.7s,baz=16,slow=5.0,SNR=3.8							
AKASG	**Malin Array Be**	**142.37**	**331**	PKhKP	PKPpre	14 54 33.7	
3.6nm,0.5s,baz=44,slow=4.2,SNR=20							
AKASG	**Malin Array Be**	**142.37**	**331**	PKP	PKPpre	14 54 33.7	
BRTR	**Keskin Array B**	**146.08**	**312**	PKPbc	PKPbc	14 54 46.5	-0.7
1.5nm,0.6s,baz=117,slow=4.5,SNR=5.6							
BURAR	**Bucovina Array**	**146.41**	**330**	⇑*i*P	PKPbc	14 54 48.4	+0.6
MMAI	**Mount Meron Ar**	**147.02**	**300**	PKPbc	PKPbc	14 54 49.5	-0.4
2.8nm,0.4s,baz=83,slow=7.1,SNR=7.2							
CLL	**Collm**	**147.57**	**346**	*e*PKPbc	PKPbc	14 54 49.9	-0.8
CLL	**Collm**	**147.57**	**346**	⇓*i*PKPbc	PKPbc	14 54 49.9	-0.8
comp=Z,9.0nm,0.6s							
CLL				⇑*i*PKPab	PKPab	14 54 54.4	-0.7
comp=Z,4.0nm,0.7s							
BRG	**Berggiesshubel**	**147.75**	**345**	*e*PKPbc	PKPbc	14 54 50.3	-0.8
BRG	**Berggiesshubel**	**147.75**	**345**	*e*P	PKPbc	14 54 50.4	-0.7
comp=Z,5.7nm,0.7s							
PLN	**Plauen**	**148.53**	**347**	*e*PKPbc	PKPbc	14 54 52.2	-0.9
TANN	**Tannenbergstha**	**148.53**	**346**	*e*PKPbc	PKPbc	14 54 52.4	-0.7
WERD	**Werda**	**148.53**	**346**	*e*PKPbc	PKPbc	14 54 52.3	-0.8
GUNZ	**Gunzen**	**148.60**	**346**	*e*PKPbc	PKPbc	14 54 52.2	-1.1

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*ISCJB **24** 14:40:31.6±0.6, 40°.45N±0°.05×29°.21E±0°.03, h2km±9km, Error ellipse: s-maj=8.2km s-min=4.3km az=5.7*
*ISK **24** 14:40:31.1, 40°.42N×29°.21E, h5km, MD2.8*
*DDA **24** 14:40:31.6, 40°.45N×29°.22E, h7km±4km, Md2.5*
*CSEM **24** 14:40:32.0±0.1, 40°.46N×29°.23E, h10km, MD2.8, Error ellipse: s-maj=2.0km s-min=1.6km az=163.0*
ISC 24 14:40:32.1±0.4, 40°.46N±0°.05×29°.22E±0°.04, h9km±6km, n35, σ0°.64/46, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YLV	**Yalova**	**0.16**	**48**	PG	**Pg**	**14 40 35.4**	**-0.1**
YLV				*e*SG	**Sg**	**14 40 38.9**	**+1.0**
YLV	**Yalova**	**0.16**	**48**	*i* Pg	**Pg**	**14 40 35.4**	**-0.1**
YLV				*e*Sg	**Sg**	**14 40 38.9**	**+1.1**
ARMT	**Armutlu**	**0.29**	**291**	*e*PG	**Pg**	**14 40 37.5**	**-0.4**
ARMT				*e*SG	**Sg**	**14 40 42.0**	**+0.1**
ARMT	**Armutlu**	**0.29**	**291**	*e*Pg	**Pg**	**14 40 37.5**	**-0.4**
ARMT				*e*Sg	**Sg**	**14 40 42.0**	**+0.2**
ADVT	**Abdulvahap**	**0.40**	**94**	*e*PG	**Pg**	**14 40 39.1**	**-0.7**
ADVT				*e*SG	**Sg**	**14 40 45.4**	**+0.2**
ADVT	**Abdulvahap**	**0.40**	**94**	*e*Pg	**Pg**	**14 40 39.1**	**-0.8**
ADVT				*e*Sg	**Sg**	**14 40 45.4**	**+0.3**
HRT	**Hereke**	**0.50**	**43**	*e*PG	**Pg**	**14 40 41.8**	**+0.1**
HRT	**Hereke**	**0.50**	**43**	*e*Pg	**Pg**	**14 40 41.8**	**+0.1**
KCTX	**Karacabey (Bur**	**0.69**	**254**	*e*PG	**Pg**	**14 40 44.6**	**-0.7**
KCTX	**Karacabey (Bur**	**0.69**	**254**	*e*Pg	**Pg**	**14 40 44.6**	**-0.8**
BGKT	**Bogazkoy**	**0.79**	**335**	*e*PG	**Pg**	**14 40 47.4**	**0.0**
BGKT	**Bogazkoy**	**0.79**	**335**	*e*Pg	**Pg**	**14 40 47.4**	**0.0**
KLYT	**Kilyos**	**0.80**	**350**	*e*PG	**Pg**	**14 40 47.6**	**0.0**
KLYT	**Kilyos**	**0.80**	**350**	*e*Pg	**Pg**	**14 40 47.6**	**+0.1**
CTKS	**Kestanelik-??a**	**0.94**	**325**	*e*PG	**Pg**	**14 40 50.3**	**0.0**
CTKS	**Kestanelik-??a**	**0.94**	**325**	*e*Pg	**Pg**	**14 40 50.3**	**+0.1**
GULT	**Gulveren**	**0.99**	**91**	*e*PG	**Pg**	**14 40 50.7**	**-0.4**
GULT	**Gulveren**	**0.99**	**91**	*e*Pg	**Pg**	**14 40 50.7**	**-0.4**
BNT	**Bandirma**	**1.00**	**264**	*e*PG	**Pg**	**14 40 51.0**	**-0.2**
DURS	**Dursunbey**	**1.03**	**214**	*i* P	**Pb**	**14 40 52.2**	**+0.1**
DURS				*i* S	**Sb**	**14 41 07.3**	**+1.6**
DURS	**Dursunbey**	**1.03**	**214**	*i* P	**Pb**	**14 40 52.2**	**+0.1**
DURS				*i* S	**Sb**	**14 41 07.3**	**+1.6**
GONE	**Gonen-Balikesi**	**1.24**	**251**	*e*PN	**Pn**	**14 40 55.3**	**-0.3**
GONE	**Gonen-Balikesi**	**1.24**	**251**	*e*Pn	**Pn**	**14 40 55.3**	**-0.3**
GDZ	**Gediz**	**1.39**	**172**	*i* P	**Pn**	**14 40 55.4**	**-2.2**
GDZ				*i* S	**Sn**	**14 41 16.6**	**+0.7**
GDZ	**Gediz**	**1.39**	**172**	*i* P	**Pn**	**14 40 55.4**	**-2.2**
BALY	**Balya**	**1.42**	**240**	*i* P	**Pn**	**14 40 58.0**	**0.0**
BALY				*i* S	**Sn**	**14 41 16.8**	**-0.1**
BALY	**Balya**	**1.42**	**240**	*i* P	**Pn**	**14 40 58.0**	**-0.1**
BALY				*i* S	**Sn**	**14 41 16.8**	**-0.1**
KRBG	**Karabiga-Canak**	**1.47**	**268**	*e*PN	**Pn**	**14 40 59.1**	**+0.4**
KRBG	**Karabiga-Canak**	**1.47**	**268**	*e*Pn	**Pn**	**14 40 59.1**	**+0.4**
MDU	**Mudurnu**	**1.52**	**89**	*e*PN	**Pn**	**14 40 59.8**	**+0.4**
MDU	**Mudurnu**	**1.52**	**89**	*e*Pn	**Pn**	**14 40 59.8**	**+0.4**
ALT	**Altintas**	**1.56**	**154**	*e*PN	**Pn**	**14 40 59.7**	**-0.3**
ALT	**Altintas**	**1.56**	**154**	*e*Pn	**Pn**	**14 40 59.7**	**-0.3**
RKY	**Sarkoy-Tekirda**	**1.57**	**279**	*e*PN	**Pn**	**14 41 00.3**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.57**	**279**	*e*Pn	**Pn**	**14 41 00.3**	**+0.2**

CSEM 24 14:52:47.5, 33°.10N×56°.93E, h14km, ML3.7, After THR, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRBR	**Kerman**	**3.11**	**183**	*e*Pn	Pn	14 53 38.5	+2.4
KRBR				*e*Sg	Sg	14 54 24.6	-2.9
NASN	**Na'in**	**3.48**	**266**	*e*Pn	Pn	14 53 43.5	+2.3
NASN				*e*Sg	Sg	14 54 36.0	-3.2
ZHSF	**Zahedan**	**4.79**	**136**	*e*Pn	Pn	14 54 01.4	+2.2
GHVR	**GHOM**	**4.89**	**288**	*e*Pn	Pn	14 54 03.4	+2.8
ASAO	**Ashtian**	**5.92**	**286**	*e*Pn	Pn	14 54 17.3	+2.5

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*IDC **24** 15:21:58.9±0.8, 41°.75N×81°.30E, h0km, mb4.0/9, mb1 4.0/15, mb1mx3.9/29, mbtmp3.9/15, ML3.5/6, MS3.4/2, Ms1 3.5/2, ms1mx2.8/35, Error ellipse: s-maj=15.3km s-min=13.4km az=37.0*
*ISCJB **24** 15:21:58.9±0.4, 41°.76N±0°.04×81°.36E±0°.04, h10km, mb3.9/11, MS3.4/2, Error ellipse: s-maj=6.0km s-min=4.7km az=163.8*
*BJI **24** 15:22:02.9, 41°.68N×81°.29E, h54km, mB4.4/3, mb4.4/6, ML3.9/8, Ms3.8/2, Ms7 3.2/1*
*MOS **24** 15:22:02.6±1.5, 41°.85N×81°.19E, h33km, mb4.2/9, Error ellipse: s-maj=12.1km s-min=6.7km az=107.0*
*NNC **24** 15:22:03.5±3.7, 41°.94N×81°.36E, h11km±17km, mb4.3, mpv4.1, Error ellipse: s-maj=27.9km s-min=14.6km az=135.0*
*NEIC **24** 15:22:05.4±0.8, 41°.89N×81°.21E, h46km±9km, mb3.9/4, Error ellipse: s-maj=8.5km s-min=7.5km az=187.0*
ISC 24 15:22:00.9±0.4, 41°.77N±0°.04×81°.36E±0°.04, h10km, n74, σ1°.44/83, mb3.9/11, MS3.4/2, 12C-8D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDC	**Almaty**	**3.56**	**295**	⇑Pn	**Pn**	**15 22 59.3**	**+3.2**
27nm,0.3s							
KNDC				⇑Lg		15 23 51.8	
464nm,0.9s							
AAA	**Alma-Ata**	**3.59**	**296**	*i* Pn	**Pb**	**15 23 04.3**	**-0.1**
AAA				pmax	pmax		
comp=Z,291nm,0.2s							
AAA				pmax	pmax		
comp=N,453nm,0.7s							
ULHL	**Ulahol**	**3.84**	**279**	P	**Pn**	**15 23 03.3**	**+3.3**
SNR=34							
TKM2	**Tokmak 2**	**4.42**	**287**	⇓Pn	**Pn**	**15 23 10.1**	**+2.1**
comp=N,35nm,0.4s							
TKM2				⇑Lg		15 24 19.6	
comp=N,99nm,0.7s							
TKM2	**Tokmak 2**	**4.42**	**287**	P	**Pn**	**15 23 09.9**	**+1.9**
SNR=7.3							
TKM2	**Tokmak 2**	**4.42**	**287**	*e*Pn	**Pn**	**15 23 09.5**	**+1.5**
TKM2				*e*Sn	**Sn**	**15 24 00.5**	**+1.0**
KZA	**Kyzart**	**4.57**	**276**	P	**Pn**	**15 23 12.2**	**+2.2**
SNR=8.8							
KSH	**Kashi**	**4.68**	**243**	*e*P	**Pb**	**15 23 18.6**	**-4.3**
KSH				S	**Sb**	**15 24 23.1**	**+3.8**
KSH				smax			
comp=N,160nm,0.7s							
KSH				smax			
comp=E,180nm,0.7s							
KBK	**Karagaybulak**	**4.84**	**283**	P	**Pn**	**15 23 15.6**	**+1.8**
SNR=28							
CHMS	**Chumysh**	**5.04**	**286**	P	**Pn**	**15 23 18.7**	**+2.1**
SNR=5.2							
MK31	**Makanchi Array**	**5.06**	**7**	⇑Pn	**Pn**	**15 23 19.2**	**+2.4**
comp=E,4.4nm,0.3s,baz=191,slow=12,SNR=164							
MK31				⇓Sn	**Sn**	**15 24 19.5**	**+4.2**
comp=E,22nm,0.7s,baz=185,slow=24,SNR=6.3							
MK31				⇓Lg		15 24 43.3	
comp=E,57nm,0.6s,baz=194,slow=29,SNR=5.4							
MK31	**Makanchi Array**	**5.06**	**7**	PN	**Pn**	**15 23 19.2**	**+2.4**
MK31						15 24 19.5	
MK31				pmax	pmax		
comp=Z,11nm,0.3s							
MK31				smax			
comp=N,39nm,0.7s							
MK31	**Makanchi Array**	**5.06**	**7**	*e*Pn	**Pn**	**15 23 18.9**	**+2.1**
MKAR	**Makanchi Array**	**5.06**	**7**	Pn	**Pn**	**15 23 19.6**	**+2.8**
comp=N,6.9nm,0.3s,baz=183,slow=14,SNR=100							
MKAR				Sn	**Sn**	**15 24 18.6**	**+3.3**
comp=N,7.9nm,0.3s,baz=186,slow=23,SNR=6.0							
MKAR				Lg		15 24 41.6	
comp=N,14nm,0.3s,baz=190,slow=34,SNR=9.2							
WMQ	**Urumqi**	**5.09**	**64**	*e*Pn	**Pb**	**15 23 28.5**	**-1.5**
WMQ				Sg	**Sg**	**15 24 45.0**	**+0.7**
WMQ				smax			
comp=N,140nm,0.9s							
WMQ				smax			
comp=E,89nm,1.0s							
AAK	**Ala-Archa**	**5.17**	**282**	Pn	**Pn**	**15 23 19.6**	**+1.3**
comp=E,2.1nm,0.3s,baz=103,slow=8.5,SNR=6.3							
AAK				Pg	**Pg**	**15 23 34.8**	**-5.1**
comp=E,16nm,0.3s,baz=115,slow=12,SNR=35							
AAK				Lg		15 24 43.4	
comp=E,3.3nm,0.3s,baz=240,slow=22,SNR=6.9							
AAK	**Ala-Archa**	**5.17**	**282**	PN	**Pn**	**15 23 19.6**	**+1.3**
AAK						15 23 34.8	
AAK				pmax	pmax		
comp=Z,2.0nm,0.3s							
AAK				pmax	pmax		
comp=Z,16nm,0.3s							
AAK	**Ala-Archa**	**5.17**	**282**	*e*Pn	**Pn**	**15 23 18.4**	**+0.2**
comp=Z,70nm,0.6s							
AAK				*e*Pg	**Pg**	**15 23 36.8**	**-3.1**
USP	**Ospenovka**	**5.28**	**289**	P	**Pn**	**15 23 20.9**	**+1.1**
SNR=17							
EKS2	**Erkin-Say**	**5.70**	**281**	P	**Pg**	**15 23 46.4**	**-3.6**
SNR=12							
EKS2	**Erkin-Say**	**5.70**	**281**	*e*Pn	**Pn**	**15 23 25.6**	**+0.1**
comp=Z,50nm,0.7s							
EKS2				*e*Pg	**Pg**	**15 23 44.3**	**-5.7**
AML	**Almayashu**	**5.73**	**276**	P	**Pb**	**15 23 45.1**	**+4.3**
SNR=9.8							
AML	**Almayashu**	**5.73**	**276**	*e*Pn	**Pn**	**15 23 28.1**	**+2.1**
comp=Z,85nm,0.8s							
AML				*e*Pg	**Pg**	**15 23 47.6**	**-2.9**
KK31	**Karatay Array**	**8.13**	**283**	⇓Pg	Px	15 24 31.8	
comp=Z,3.4nm,0.5s,baz=98,slow=16,SNR=7.1							
KK31				⇑Lg		15 26 20.0	
comp=Z,19nm,0.7s,baz=95,slow=24,SNR=5.2							
KURK	**Kurchatov**	**9.14**	**349**	⇑Pn	**Pn**	**15 24 16.0**	**+3.2**
comp=Z,7.0nm,0.6s							
KURK				⇑Sn	**Sn**	**15 26 00.2**	**+4.6**
comp=Z,22nm,0.9s							
KURK				⇓Lg		15 26 54.6	
comp=Z,29nm,0.9s							
KURK	**Kurchatov**	**9.14**	**349**	P	**Pn**	**15 24 12.9**	**+0.2**
KURK				pmax	pmax		
comp=Z,1.0nm,0.7s							
KURK				pmax	pmax		
comp=Z,7.0nm,0.6s							
KURK	**Kurchatov**	**9.14**	**349**	*e*Pn	**Pn**	**15 24 12.9**	**+0.2**
comp=Z,324nm,0.7s							
THN	**Thein Dam**	**10.35**	**208**	*e*PKP	**Pn**	**15 24 26.1**	**-3.3**
THN				*e*S	**Sn**	**15 26 17.0**	**-8.4**
KBL	**Kabul**	**12.08**	**237**	*e*P	**Pn**	**15 24 52.3**	**-0.7**
ZAA0	**Zalesovo Array**	**12.40**	**10**	*e*Pn	**Pn**	**15 24 56.5**	**-0.8**
ZALV	**Zalesovo Beam**	**12.40**	**10**	Pn	**Pn**	**15 24 56.7**	**-0.6**
comp=Z,0.8nm,0.3s,baz=188,slow=13,SNR=16							
ZALV				Sn	**Sn**	**15 27 15.0**	**-0.4**
comp=Z,0.2nm,0.3s,baz=168,slow=29,SNR=2.3							
ZALV	**Zalesovo Beam**	**12.40**	**10**	P	**Pn**	**15 24 56.7**	**-0.6**
ZALV						15 27 15.0	
ZALV				pmax	pmax		
comp=Z,1.0nm,0.3s							
VOSK	**Vostochnaya**	**13.01**	**331**	⇑Pn	**Pn**	**15 25 04.3**	**-1.3**
comp=Z,1.3nm,0.5s							
VOSK				⇓Lg		15 28 44.7	
comp=Z,21nm,1.6s							
NVS	**Novosibirsk**	**13.14**	**5**	*e*P	**Pn**	**15 25 11.6**	**+4.3**
NVS				*e*		15 27 32.4	
BVAR	**Borovoye Array**	**13.47**	**330**	Pn	**Pn**	**15 25 10.1**	**-1.8**
comp=Z,0.1nm,0.3s,baz=187,slow=10,SNR=2.8							
BVAR				Lg		15 29 07.6	
baz=130,slow=29,SNR=4.5							
BRVK	**Borovoye**	**13.53**	**330**	⇑Lg		15 29 01.6	
comp=Z,4.9nm,0.8s							
BRVK	**Borovoye**	**13.53**	**330**	P	**Pn**	**15 25 12.6**	**-0.2**
ZRNK	**Zerenda**	**13.95**	**328**	⇓Pn	**Pn**	**15 25 18.5**	**+0.1**
comp=Z,5.0nm,0.7s							
ZRNK				⇑Lg		15 29 21.7	
comp=Z,27nm,1.5s							
ZRNK	**Zerenda**	**13.95**	**328**	P	**Pn**	**15 25 18.1**	**-0.3**
ZRNK				pmax	pmax		
comp=Z,5.0nm,0.7s							
LSA	**Lhasa**	**14.42**	**144**	P	**Pn**	**15 25 30.6**	**+5.6**
AB31	**Akbulak array**	**16.74**	**304**	⇓Pn	**Pn**	**15 25 52.2**	**-3.1**
comp=Z,3.7nm,0.7s,baz=266,slow=7.6,SNR=30							
AB31	**Akbulak array**	**16.74**	**304**	*i* P	**Pn**	**15 25 51.2**	**-4.0**
AB31				pmax	pmax		
comp=Z,4.0nm,0.7s							
ABKAR	**Akbulak array**	**16.74**	**304**	*e*Pn	**Pn**	**15 25 51.9**	**-3.4**
comp=Z,3.8nm,0.6s							
AKTK	**Aktyubinsk**	**18.30**	**306**	P	**Pn**	**15 26 13.4**	**-1.2**
AKTO	**Aktyubinsk**	**18.30**	**306**	P	**Pn**	**15 26 13.4**	**-1.2**
comp=Z,0.3nm,0.3s,baz=110,slow=13,SNR=8.2							
SONM	**Songino Array**	**18.73**	**63**	P	**Pn**	**15 26 20.3**	**+0.4**
comp=Z,0.2nm,0.3s,baz=267,slow=10,SNR=13							
ULN	**Ulaanbaatar**	**19.17**	**63**	P	**Pn**	**15 26 25.0**	**-0.2**
ARU	**Arti**	**20.78**	**323**	*e*P	**P**	**15 26 41.2**	**-0.6**
ARU				pmax	pmax		
comp=Z,6.0nm,0.8s							
ARU	**Arti**	**20.78**	**323**	*e*P	**P**	**15 26 41.2**	**-0.7**
comp=Z,5.9nm,0.8s							
ENH	**Enshi**	**25.37**	**108**	P	**P**	**15 27 28.9**	**+0.8**
CHTO	**Chiang Mai**	**27.36**	**141**	P	**P**	**15 27 48.9**	**+2.8**
CHTO				pmax	pmax		
comp=Z,2.0nm,0.6s,mb3.8							
CHTO	**Chiang Mai**	**27.36**	**141**	P	**P**	**15 27 48.9**	**+2.8**
comp=Z,2.1nm,0.6s,mb3.8							
CMAR	**Chiang Mai Arr**	**27.66**	**142**	P	**P**	**15 27 50.5**	**+1.6**
comp=Z,1.2nm,0.8s,mb3.6,baz=328,slow=8.5,SNR=6.2							
CMAR	**Chiang Mai Arr**	**27.66**	**142**	P	**P**	**15 27 50.5**	**+1.6**
CMAR				pmax	pmax		
comp=Z,1.0nm,0.8s							
MDJ	**Mudanjiang**	**34.88**	**69**	P	**P**	**15 28 52.0**	**-0.2**
MDJ				pmax	pmax		
comp=Z,3.0nm,0.7s,mb4.3							
MDJ				pmax	pmax		
comp=Z,17nm,4.1s							
BR131	**Keskin Array S**	**35.85**	**283**	*e*P	**P**	**15 28 59.5**	**-1.1**
comp=Z,2.9nm,0.8s,mb4.3							
BRTR	**Keskin Array B**	**35.85**	**283**	P	**P**	**15 29 00.6**	**-0.1**
comp=Z,2.0nm,0.7s,mb4.2,baz=97,slow=8.6,SNR=11							
BRTR	**Keskin Array B**	**35.85**	**283**	*e*P	**P**	**15 29 00.6**	**0.0**
BRTR				pmax	pmax		
comp=Z,2.0nm,0.6s							
FINES	**FINESS Array B**	**38.12**	**320**	P	**P**	**15 29 18.6**	**-1.0**
comp=Z,1.0nm,0.8s,mb3.6,baz=38,slow=9.6,SNR=2.9							
FINES	**FINESS Array B**	**38.12**	**320**	P	**P**	**15 29 18.6**	**-1.0**
FINES				pmax	pmax		
comp=Z,1.0nm,0.8s							
ARCES	**ARCESS Array B**	**39.74**	**333**	P	**P**	**15 29 32.9**	**-0.3**
comp=Z,4.4nm,0.9s,mb4.2,baz=94,slow=9.9,SNR=8.9							
ARCES	**ARCESS Array B**	**39.74**	**333**	P	**P**	**15 29 32.9**	**-0.2**
ARCES				pmax	pmax		
comp=Z,4.0nm,0.9s							
MJAR	**Matsushiro Arr**	**43.71**	**77**	LR	LR	15 51 13.1	
comp=Z,68nm,18.6s,MS3.6,baz=200,slow=40							
HFS	**Hagfors**	**44.20**	**318**	P	**P**	**15 30 09.1**	**-0.6**
comp=Z,1.2nm,0.4s,mb4.0,baz=98,slow=11,SNR=13							
HFS	**Hagfors**	**44.20**	**318**	P	**P**	**15 30 09.1**	**-0.6**
HFS				pmax	pmax		
comp=Z,1.0nm,0.4s							
NB2	**NORSAR Subarra**	**45.30**	**320**	P	**P**	**15 30 17.5**	**-0.9**
comp=Z,2.2nm,0.6s,mb4.2,baz=81,slow=7.9							
NOA	**NORSAR Array B**	**45.30**	**320**	P	**P**	**15 30 17.9**	**-0.5**
comp=Z,1.6nm,0.7s,mb4.0,baz=83,slow=7.2,SNR=12							
NOA				LR	LR	15 50 02.8	
comp=Z,31nm,18.5s,MS3.3,baz=90,slow=37							
NOA	**NORSAR Array B**	**45.30**	**320**	P	**P**	**15 30 17.9**	**-0.5**
NOA				pmax	pmax		
comp=Z,2.0nm,0.7s					

INK Inuvik 20.39 32 P **P** **16 13 48.6 +2.4**
comp=Z,4.8nm,0.4s,baz=300,slow=1.9,SNR=4.3
INK Inuvik 20.39 32 P **P** **16 13 48.7 +2.5**
INK pmax pmax
comp=Z,5.0nm,0.4s
PETK Petropavlovsk- 22.91 284 P **P** **16 14 12.2 -1.1**
comp=Z,0.9nm,0.4s,mb3.5,baz=51,slow=33,SNR=28
PETK LR LR 16 22 04.5
comp=Z,60nm,19.7s,MS3.0,baz=243,slow=34
PETK Petropavlovsk- 22.91 284 P **P** **16 14 12.2 -1.2**
PETK pmax pmax
comp=Z,1.0nm,0.4s,mb3.6
PETK MLR MLR
comp=Z,61nm,19.7s,MS3.0
SEY Seymchan 24.46 310 ⇑*i*P **P** **16 14 28.3 +0.1**
YKA Yellowknife Ar 26.76 51 P **P** **16 14 50.7 +1.7**
comp=Z,1.2nm,0.8s,mb3.5,baz=272,slow=7.8,SNR=6.7
YKA pP pP 16 14 58.5 +2.5
comp=Z,0.9nm,0.7s,baz=274,slow=9.7,SNR=4.5
YKA Yellowknife Ar 26.76 51 P **P** **16 14 50.7 +1.7**
YKA *PP pP 16 14 58.5 +2.5
YKA pmax pmax
comp=Z,1.0nm,0.8s
YKA pmax pmax
comp=Z,1.0nm,0.7s
TIXI Tiksi 33.49 328 *e*P **P** **16 15 48.2 -0.2**
TIXI pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
TIXI Tiksi 33.49 328 *e*P **P** **16 15 47.7 -0.7**
comp=Z,3.0nm,0.5s,mb4.5
RES Resolute Bay 33.71 26 P **P** **16 15 50.7 +0.5**
RES pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
RES Resolute Bay 33.71 26 P **P** **16 15 50.7 +0.4**
comp=Z,8.8nm,1.2s,mb4.6
NVAR Mina Array Bea 34.28 98 P **P** **16 15 57.0 +1.4**
comp=Z,0.1nm,0.4s,mb3.1,baz=295,slow=12,SNR=2.5
NVAR pP pP 16 16 07.4 +4.6
comp=Z,0.4nm,0.6s,baz=300,slow=7.2,SNR=3.1
YAK Yakutsk 34.98 311 *e*P **P** **16 15 59.9 -1.5**
YAK pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
YAK Yakutsk 34.98 311 *e*P **P** **16 15 58.9 -2.5**
comp=Z,4.1nm,0.7s,mb4.5
HABR Khabarovsk 37.85 288 *e*P **P** **16 16 24.3 -1.7**
HABR *e**PP pP 16 16 33.9 +0.7
HABR *e* 16 17 51.1
HABR PPP 16 18 10.0
HABR *e* 16 18 40.1
HABR S **S** **16 22 14.0 -1.6**
HABR *e* 16 22 29.1
HABR *e*SS SS 16 24 57.6 -4.2
HABR *e*SSS 16 25 15.3
HABR 16 26 34.3
HABR pmax pmax
comp=N,5.0nm,0.8s
HABR pmax pmax
comp=E,8.0nm,0.9s
HABR pmax pmax
comp=Z,8.0nm,1.1s,mb4.4
HABR MLR MLR
comp=Z,63nm,18.0s,MS3.5
MAJO Matsushiro 43.20 271 *e*P **P** **16 17 10.3 0.0**
MAJO pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
MAJO Matsushiro 43.20 271 *e*P **P** **16 17 10.3 0.0**
comp=Z,10nm,1.0s,mb4.5
MJAR Matsushiro Arr 43.20 271 P **P** **16 17 09.9 -0.5**
comp=Z,0.5nm,0.4s,mb3.6,baz=36,slow=7.5,SNR=5.1
MJAR Matsushiro Arr 43.20 271 P **P** **16 17 09.9 -0.4**
MJAR pmax pmax
comp=Z,1.0nm,0.4s
KSRS Korea Array 48.68 280 P **P** **16 17 53.7 +0.1**
comp=Z,2.5nm,0.7s,mb4.3,baz=52,slow=7.9,SNR=8.9
KSRS Korea Array 48.68 280 P **P** **16 17 53.7 +0.2**
KSRS pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
TXAR Lajitas Array 49.30 95 P **P** **16 17 59.9 +1.5**
comp=Z,0.3nm,0.6s,mb3.5,baz=300,slow=7.2,SNR=3.5
TXAR pP pP 16 18 11.2 +5.5
comp=Z,0.5nm,0.6s,baz=297,slow=5.3,SNR=4.7
TLY Talaya 52.36 308 *e*P **P** **16 18 21.2 +0.1**
TLY pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
TLY Talaya 52.36 308 *e*P **P** **16 18 18.4 -2.7**
comp=Z,6.7nm,1.0s,mb4.5
ULN Ulaanbaatar 53.24 303 *e*P **P** **16 18 27.2 -0.5**
ULN pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
ULN Ulaanbaatar 53.24 303 *e*P **P** **16 18 27.2 -0.5**
comp=Z,7.9nm,0.9s,mb4.6
SONM Songino Array 53.59 303 P **P** **16 18 30.3 +0.1**
comp=Z,4.2nm,0.9s,mb4.4,baz=47,slow=6.8,SNR=20
SONM Songino Array 53.59 303 P **P** **16 18 30.3 0.0**
SONM pmax pmax
comp=Z,4.0nm,0.9s
SONM Songino Array 53.59 303 P **P** **16 18 30.3 +0.1**
ARCES ARCESS Array B 56.97 356 LR LR 16 44 11.7
comp=Z,41nm,18.1s,MS3.6,baz=290,slow=37
ZAA0 Zalesovo Array 58.78 320 *e*P **P** **16 19 07.0 -0.2**
ZALV Zalesovo Beam 58.78 320 P **P** **16 19 06.0 -1.1**
comp=Z,2.3nm,0.8s,mb4.3,baz=34,slow=6.5,SNR=8.4
ZALV PcP PcP 16 19 56.9 +0.3
comp=Z,1.2nm,0.7s,baz=60,slow=8.8,SNR=4.7
ZALV Zalesovo Beam 58.78 320 P **P** **16 19 06.0 -1.2**
ZALV 16 19 56.9
ZALV pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
ZALV pmax pmax
comp=Z,1.0nm,0.7s,mb4.0
GTA Gaotai 62.94 300 *e*P **P** **16 19 35.4 -0.3**
GTA pmax pmax
comp=Z,3.0nm,1.1s,mb4.3
KURK Kurchatov 63.67 321 *ce*P **P** **16 19 40.1 -0.3**
KURK pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
SVE Sverdlovsk 64.13 335 *e*P **P** **16 19 44.4 +1.1**
BVAR Borovoye Array 64.62 327 P **P** **16 19 47.0 +0.5**
comp=Z,3.5nm,0.7s,mb4.5,baz=48,slow=6.8,SNR=21
BVAR pP pP 16 19 56.6 +2.5
comp=Z,2.6nm,0.7s,baz=41,slow=7.9,SNR=7.5
BVAR PcP PcP 16 20 20.9 +0.6
comp=Z,0.6nm,0.5s,baz=351,slow=1.3,SNR=2.7
BVAR Borovoye Array 64.62 327 P **P** **16 19 47.0 +0.4**
BVAR *PP pP 16 19 56.6 +2.5
BVAR 16 20 20.9
BVAR pmax pmax
comp=Z,4.0nm,0.7s
BVAR pmax pmax
comp=Z,3.0nm,0.7s
BVAR pmax pmax
comp=Z,1.0nm,0.5s
BRVK Borovoye 64.63 327 *de*P **P** **16 19 47.1 +0.5**
BRVK pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
BRVK Borovoye 64.63 327 *e*P **P** **16 19 46.7 +0.1**
comp=Z,2.8nm,0.9s,mb4.3
ARU Arti 65.00 336 *d*iP **P** **16 19 49.3 +0.3**
ARU *e* 16 22 07.7
ARU PPP 16 23 41.8
ARU S **S** **16 28 30.3 +1.2**
ARU SS SS 16 32 41.2 +1.2
ARU pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
FINES FINESS Array B 65.02 355 P **P** **16 19 48.8 -0.2**
comp=Z,2.6nm,0.7s,mb4.4,baz=31,slow=8.9,SNR=6.7
FINES FINESS Array B 65.02 355 P **P** **16 19 48.8 -0.2**
FINES pmax pmax
comp=Z,3.0nm,0.7s
MKAR Makanchi Array 65.39 316 P **P** **16 19 50.8 -0.8**
comp=Z,1.3nm,0.8s,mb4.0,baz=45,slow=6.0,SNR=10
MKAR Makanchi Array 65.39 316 *ce*P **P** **16 19 51.2 -0.5**
MKAR pmax pmax
comp=Z,1.0nm,0.8s
NB2 NORSAR Subarra 65.61 3 P **P** **16 19 53.4 +0.6**
comp=Z,1.0nm,0.7s,mb4.0,baz=359,slow=6.2
NOA NORSAR Array B 65.61 3 P **P** **16 19 53.4 +0.6**
comp=Z,2.0nm,0.8s,mb4.2,baz=358,slow=6.6,SNR=6.3
NOA NORSAR Array B 65.61 3 P **P** **16 19 53.4 +0.6**
NOA pmax pmax
comp=Z,2.0nm,0.8s
NAO01 NORSAR Array S 65.79 3 *e*P **P** **16 19 52.4 -1.6**
comp=Z,5.6nm,1.0s,mb4.5
OBN Obninsk 70.35 348 *e*P **P** **16 20 21.9 -0.8**
OBN *i* 16 20 44.9
OBN pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
AKTK Aktyubinsk 70.56 333 P **P** **16 20 24.5 +0.4**
AKTK pP pP 16 20 35.3 +3.6
AKTO Aktyubinsk 70.56 333 P **P** **16 20 24.5 +0.4**
comp=Z,5.1nm,0.8s,mb4.5,baz=28,slow=5.6,SNR=15
AKTO pP pP 16 20 35.3 +3.6
comp=Z,6.1nm,0.7s,baz=17,slow=5.0,SNR=8.7
AKTO Aktyubinsk 70.56 333 P **P** **16 20 24.5 +0.4**
AKTO *PP pP 16 20 35.3 +3.6
AKTO pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
AKTO pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
ABKAR Akbulak array 71.10 332 *e*P **P** **16 20 27.8 +0.4**
comp=Z,2.1nm,0.6s,mb4.2
TKM2 Tokmak 2 71.28 318 P **P** **16 20 29.8 +1.2**
TKM2 pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
TKM2 Tokmak 2 71.28 318 P **P** **16 20 29.8 +1.3**
comp=Z,1.0nm,0.6s,mb3.9
EKS2 Erkin-Say 72.21 319 *e*P **P** **16 20 34.6 +0.4**
EKS2 pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
EKS2 Erkin-Say 72.21 319 *e*P **P** **16 20 34.6 +0.4**
comp=Z,2.7nm,0.9s,mb4.2
AKASG Malin Array Be 75.49 352 P **P** **16 20 52.8 -0.4**
comp=Z,2.2nm,0.6s,mb4.3,baz=8.9,slow=5.7,SNR=8.4
AKASG Malin Array Be 75.49 352 *ce*P **P** **16 20 52.7 -0.5**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
CMAR Chiang Mai Arr 79.67 287 P **P** **16 21 16.1 -0.9**
comp=Z,1.5nm,0.7s,mb4.1,baz=26,slow=6.2,SNR=6.3
CMAR pP pP 16 21 26.4 +1.7
comp=Z,1.8nm,0.9s,baz=21,slow=4.0,SNR=4.1
CMAR LR LR 16 59 39.1
comp=Z,37nm,20.3s,MS3.7,baz=220,slow=38
CMAR Chiang Mai Arr 79.67 287 P **P** **16 21 16.1 -1.0**
CMAR *PP pP 16 21 26.4 +1.7
CMAR pmax pmax
comp=Z,2.0nm,0.7s
CMAR pmax pmax
comp=Z,2.0nm,0.9s
CMAR MLR MLR
comp=Z,37nm,20.3s
BR131 Keskin Array S 85.84 347 *e*P **P** **16 21 50.0 +1.2**
comp=Z,3.3nm,1.0s,mb4.5
BRTR Keskin Array B 85.84 347 P **P** **16 21 49.8 +1.0**
comp=Z,2.2nm,0.9s,mb4.4,baz=29,slow=2.8,SNR=8.0
BRTR pP pP 16 22 00.2 +3.6
comp=Z,1.4nm,0.8s,baz=29,slow=2.8,SNR=4.1
BRTR Keskin Array B 85.84 347 P **P** **16 21 49.8 +1.0**
BRTR *PP pP 16 22 00.2 +3.6
BRTR pmax pmax
comp=Z,2.0nm,0.9s
BRTR pmax pmax
comp=Z,1.0nm,0.9s

*IDC **24** 16:11:29.8±1.0, 33°.53N×88°.37E, h0km, mb3.8/6, mb1 3.8/9, mb1mx3.6/24, mbtmp3.7/9, ML3.1/3, Error ellipse: s-maj=38.0km s-min=19.3km az=61.0*
*ISCJB **24** 16:11:35.4±1.3, 33°.70N±0°.06×88°.6E±0°.1, h54km±17km, mb3.7/6, Error ellipse: s-maj=16.5km s-min=10.7km az=175.0*
*NEIC **24** 16:11:37.6±1.0, 33°.70N×88°.48E, h58km±14km, mb3.6/2, Error ellipse: s-maj=14.2km s-min=8.4km az=81.0*
ISC 24 16:11:37.2±0.9, 33°.73N±0°.06×88°.6E±0°.1, h55km±13km, n25, σ0s93/25, mb3.7/6, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**4.57**	**151**	P	**Pn**	**16 12 46.5**	**+2.6**
LSA	**Lhasa**	**4.57**	**151**	*e*Pn	**Pn**	**16 12 46.2**	**+2.4**
GUN	**Gumba**	**6.25**	**203**	*e*P	**Pn**	**16 13 07.7**	**+0.9**
JIRN	**Jiri**	**6.39**	**199**	*e*P	**Pn**	**16 13 09.7**	**+0.9**
	15nm,0.5s						
TAPN	**Taplejung**	**6.40**	**187**	*e*P	**Pn**	**16 13 08.0**	**-0.9**
	20nm,0.6s						
KKN	**Kakani**	**6.56**	**207**	*e*P	**Pn**	**16 13 11.5**	**+0.3**
	12nm,0.6s						
PKIN	**Phulchoki**	**6.72**	**205**	*e*P	**Pn**	**16 13 13.9**	**+0.6**
	7.4nm,0.5s						
PKI	**Pulchoki**	**6.72**	**205**	*e*P	**Pn**	**16 13 13.9**	**+0.6**
	7.4nm,0.5s						
DMN	**Daman**	**6.79**	**207**	*e*P	**Pn**	**16 13 14.2**	**-0.1**
	16nm,0.5s						
ODAN	**Odare**	**6.92**	**189**	*e*P	**Pn**	**16 13 14.2**	**-1.9**
	22nm,0.6s						
RAMN	**Ramite**	**6.97**	**195**	*e*P	**Pn**	**16 13 15.4**	**-1.3**
	23nm,0.7s						
MKAR	**Makanchi Array**	**13.90**	**342**	Pn	**Pn**	**16 14 49.4**	**-1.9**
	0.0nm,0.3s,baz=169,slow=12,SNR=2.6						
CMAR	**Chiang Mai Arr**	**17.81**	**146**	P	**Pn**	**16 15 40.2**	**-1.0**
	0.1nm,0.3s,baz=327,slow=9.9,SNR=3.0						
SONM	**Songino Array**	**19.44**	**38**	P	**Pn**	**16 16 00.9**	**+0.2**
	0.1nm,0.3s,baz=227,slow=12,SNR=10						
ULN	**Ulaanbaatar**	**19.80**	**39**	*e*P	**Pn**	**16 16 04.6**	**-0.3**
	4.2nm,1.0s						
ZAA0	**Zalesovo Array**	**20.39**	**354**	*e*P	**P**	**16 16 10.4**	**+1.1**
ZALV	**Zalesovo Beam**	**20.39**	**354**	P	**P**	**16 16 09.9**	**+0.6**
	1.2nm,0.7s,baz=163,slow=11,SNR=8.5						
BVAR	**Borovoye Array**	**23.27**	**331**	P	**P**	**16 16 39.7**	**-0.1**
	0.6nm,0.6s,mb3.2,baz=128,slow=9.6,SNR=4.9						
BRVK	**Borovoye**	**23.33**	**331**	*e*P	**P**	**16 16 40.8**	**+0.3**
	1.4nm,0.8s,mb3.4						
NOA	**NORSAR Array B**	**55.15**	**325**	P	**P**	**16 21 03.7**	**0.0**
	1.0nm,0.8s,mb3.9,baz=85,slow=7.0,SNR=3.7						
NOA	**NORSAR Array B**	**55.15**	**325**	P	**P**	**16 21 03.6**	**0.0**
ASAR	**Alice Springs**	**71.54**	**137**	P	**P**	**16 22 52.6**	**+0.2**
	0.6nm,0.7s,mb3.6,baz=325,slow=6.6,SNR=8.3						
TORD	**Torodi Ar. Bea**	**80.27**	**279**	P	**P**	**16 23 42.4**	**-0.2**
	1.3nm,0.8s,mb3.9,baz=50,slow=5.4,SNR=6.0						
TORD	**Torodi Ar. Bea**	**80.27**	**279**	P	**P**	**16 23 42.4**	**-0.2**
STKA	**Stephens Creek**	**82.17**	**137**	P	**P**	**16 23 51.9**	**-0.3**
	3.1nm,1.0s,mb4.2,baz=324,slow=15,SNR=3.2						

MAN 24 16:15:04, 10°.08N×125°.11E, h33km, mb4.1, ML2.9, MS2.6, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.47**	**128**	‖*e*P	Pb	16 15 15.1	+0.8
SCPH				*e*S	Sb	16 15 24.9	+3.7
BUTP	**Butuan**	**1.21**	**155**	*e*P	Pn	16 15 25.9	+1.3
BUTP				*e*S	Sn	16 15 37.7	-2.2
CNP	**Catarman**	**2.46**	**350**	*e*P	Pn	16 15 43.7	+1.9
CNP				*e*S	Sn	16 16 11.7	+1.0

IDC 24 16:27:48.9±9.9, 24°.55S×179°.56W, h381km±93km, mb3.4/4, mb1 3.6/4, mb1mx3.2/14, mbtmp3.4/4, Error ellipse: s-maj=45.2km s-min=43.0km az=149.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**31.89**	**271**	*e*P	P	16 33 41.1	+0.5
	7.4nm,0.4s						
STKA	**Stephens Creek**	**34.86**	**249**	*e*P	P	16 34 06.0	+0.1
	2.7nm,0.6s						
STKA	**Stephens Creek**	**34.86**	**249**	P	P	16 34 06.6	+0.7
	2.7nm,0.6s,baz=90,slow=10.0,SNR=12						
ASAR	**Alice Springs**	**42.33**	**261**	P	P	16 35 06.5	-0.8
	2.2nm,0.5s,baz=94,slow=6.7,SNR=47						
ASAR				PcP	PcP	16 36 52.3	-0.5
	0.3nm,0.6s,baz=108,slow=4.7,SNR=2.9						
KAKA	**Kakadu**	**46.77**	**276**	*e*P	P	16 35 39.7	-2.4
	5.1nm,0.3s						
FITZ	**Fitzroy Crossi**	**51.19**	**266**	*e*P	P	16 36 13.8	-1.4
	6.4nm,0.5s						
MAW	**Mawson**	**77.28**	**200**	P	P	16 39 01.7	-0.2
	1.5nm,0.7s,baz=139,slow=9.3,SNR=6.3						
TXAR	**Lajitas Array**	**90.43**	**58**	P	P	16 40 08.1	-0.2
	0.5nm,0.8s,baz=197,slow=6.5,SNR=4.5						
BRTR	**Keskin Array B**	**148.29**	**307**	PKP	PKPdf	16 46 47.8	+0.9
	0.4nm,0.4s,baz=5.7,slow=2.9,SNR=2.6						
BRTR				PKPbc	PKPbc	16 46 52.4	+1.6
	0.6nm,0.6s,baz=129,slow=4.6,SNR=4.0						
MMAI	**Mount Meron Ar**	**148.34**	**293**	PKPbc	PKPbc	16 46 49.0	-2.2
	1.1nm,0.4s,baz=77,slow=7.8,SNR=4.2						

DJA 24 16:32:39, 0°.47N×98°.52E, h20km, MLv3.8/8, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**1.11**	**73**	P	Pn	16 32 57.7	-1.7
MNSI				S	Sb	16 33 12.8	-0.7
GSI	**Gunungsitoli**	**1.26**	**311**	P	Pn	16 32 59.6	-1.8
GSI				S	Sn	16 33 17.0	-0.8
SISI	**Saibi**	**1.87**	**162**	P	Pn	16 33 10.1	+0.2
PPI	**Padang Panjang**	**2.09**	**116**	P	Pn	16 33 13.4	+0.5
PDSI	**Padang**	**2.38**	**125**	P	Pn	16 33 19.6	+2.7
PDSI				S	Sn	16 33 53.7	+8.2
BKNI	**Bangkinang**	**2.52**	**93**	P	Pn	16 33 25.7	+6.8
BKNI				S	Sn	16 33 51.1	+2.0
TPTI		**3.08**	**334**	P	Pn	16 33 28.2	+1.7
TPTI				S	Sn	16 34 09.1	+6.3
SDSI	**Sungai Dareh**	**3.23**	**116**	P	Pn	16 33 31.2	+2.7
KULM	**Kulim**	**5.24**	**24**	P	Pn	16 33 56.8	+0.6
	0.1nm17nm,2.6s						
MYKOM	**Kota Tinggi**	**5.49**	**76**	P	Pn	16 34 01.7	+2.0

*DDA **24** 16:43:54.4, 37°.61N×31°.30E, h7km±6km, Md2.9*
*ISCJB **24** 16:43:58.8±1.1, 37°.17N±0°.05×30°.99E±0°.05, h97km±11km, Error ellipse: s-maj=9.1km s-min=6.4km az=10.1*
*CSEM **24** 16:43:59.2±0.2, 37°.14N×30°.98E, h90km, MD3.1, Error ellipse: s-maj=5.3km s-min=3.8km az=178.0*
*ISK **24** 16:43:59.1, 37°.23N×31°.00E, h92km, MD3.1*
ISC 24 16:43:59.2±1.0, 37°.17N±0°.05×30°.99E±0°.05, h96km±12km, n27, σ0s81/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KORT	**Korkueli**	**0.54**	**252**	*i*P	**Pn**	**16 44 14.4**	**-0.5**
KORT				*i*S	**Sn**	**16 44 26.8**	**+0.2**
KORT	**Korkueli**	**0.54**	**252**	*i*P	**Pn**	**16 44 14.4**	**-0.5**
KORT				*i*S	**Sn**	**16 44 26.8**	**+0.2**
ISP	**Isparta**	**0.75**	**330**	*e*PG	**Pn**	**16 44 16.9**	**+0.1**
ISP				*e*SG	**Sn**	**16 44 29.0**	**-0.9**
ELL	**Elmali**	**0.96**	**244**	*e*PG	**Pn**	**16 44 19.4**	**+0.4**
ELL				*e*SG	**Sn**	**16 44 34.9**	**+1.1**
ELL	**Elmali**	**0.96**	**244**	*e*Pg	**Pn**	**16 44 19.4**	**+0.4**
ELL				*e*Sg	**Sn**	**16 44 34.9**	**+1.1**
GOLH	**Golhisar**	**1.14**	**274**	*i*P	**Pn**	**16 44 20.9**	**-0.1**
GOLH				*i*S	**Sn**	**16 44 37.7**	**+0.3**
GOLH	**Golhisar**	**1.14**	**274**	*i*P	**Pn**	**16 44 20.9**	**-0.1**
GOLH				*i*S	**Sn**	**16 44 37.7**	**+0.4**
GLHS	**Glhisar (BURDU**	**1.19**	**270**	*e*PN	**Pn**	**16 44 22.3**	**+0.8**
GLHS	**Glhisar (BURDU**	**1.19**	**270**	*e*Pn	**Pn**	**16 44 22.3**	**+0.8**
HDMB	**Hadim**	**1.21**	**99**	*e*PN	**Pn**	**16 44 22.2**	**+0.4**
HDMB	**Hadim**	**1.21**	**99**	*e*Pn	**Pn**	**16 44 22.2**	**+0.4**
KONT	**Konya--Tatoy**	**1.33**	**54**	*e*PN	**Pn**	**16 44 23.6**	**+0.4**
KONT	**Konya--Tatoy**	**1.33**	**54**	*e*Pn	**Pn**	**16 44 23.6**	**+0.4**
GAZI	**Gazipasa**	**1.42**	**131**	*i*P	**Pn**	**16 44 23.8**	**-0.4**
GAZI	**Gazipasa**	**1.42**	**131**	*i*P	**Pn**	**16 44 23.8**	**-0.4**
AKAS	**Kas**	**1.46**	**230**	*i*P	**Pn**	**16 44 23.4**	**-1.3**
AKAS				*i*S	**Sn**	**16 44 41.5**	**-2.5**
AKAS	**Kas**	**1.46**	**230**	*i*P	**Pn**	**16 44 23.4**	**-1.3**
AKAS				*i*S	**Sn**	**16 44 41.5**	**-2.5**
LADK	**Ladik-KONYA**	**1.50**	**46**	*e*PN	**Pn**	**16 44 25.3**	**+0.1**
LADK	**Ladik-KONYA**	**1.50**	**46**	*e*Pn	**Pn**	**16 44 25.3**	**+0.1**
ERMK	**Ermenek**	**1.63**	**108**	*i*P	**Pn**	**16 44 27.6**	**+0.7**
ERMK				*i*S	**Sn**	**16 44 47.9**	**+0.1**
ERMK	**Ermenek**	**1.63**	**108**	*i*P	**Pn**	**16 44 27.6**	**+0.7**
ERMK				*i*S	**Sn**	**16 44 47.9**	**0.0**
DNZL	**Cakiroluk**	**1.63**	**289**	*i*P	**Pn**	**16 44 27.3**	**+0.4**
DNZL				*i*S	**Sn**	**16 44 49.4**	**+1.5**
DNZL	**Cakiroluk**	**1.63**	**289**	*i*P	**Pn**	**16 44 27.3**	**+0.4**
DNZL				*i*S	**Sn**	**16 44 49.4**	**+1.5**
KHAL	**Karahalli**	**1.69**	**316**	*i*P	**Pn**	**16 44 27.7**	**+0.2**
KHAL				*i*S	**Sn**	**16 44 48.1**	**-1.1**
KHAL	**Karahalli**	**1.69**	**316**	*i*P	**Pn**	**16 44 27.7**	**+0.1**
KHAL				*i*S	**Sn**	**16 44 48.1**	**-1.0**
KIZT	**Kizilcal**	**1.84**	**22**	*e*PN	**Pn**	**16 44 28.8**	**-0.8**
KIZT	**Kizilcal**	**1.84**	**22**	*e*Pn	**Pn**	**16 44 28.8**	**-0.8**

IDC 24 16:46:55.0±3.3, 15°.81S×175°.37W, h0km, mb4.0/2, mb1 4.1/2, mb1mx3.6/15, mbtmp4.0/2, Error ellipse: s-maj=128.9km s-min=28.9km az=136.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**42.19**	**240**	P	P	16 54 49.7	0.0
	2.3nm,0.9s,baz=83,slow=11,SNR=4.9						
ASAR	**Alice Springs**	**48.18**	**252**	P	P	16 55 37.4	0.0
	0.9nm,0.5s,baz=90,slow=7.5,SNR=36						
BRTR	**Keskin Array B**	**145.25**	**319**	PKPbc	PKPbc	17 06 34.0	-0.6
	1.1nm,0.9s,baz=80,slow=3.5,SNR=4.4						

*ISK **24** 16:47:21.3, 36°.97N×33°.19E, h10km, ML2.5*
*CSEM **24** 16:47:21.6±0.3, 37°.06N×33°.21E, h8km, MD2.8, Error ellipse: s-maj=8.0km s-min=3.9km az=162.0*
*ISCJB **24** 16:47:22.0±0.8, 37°.03N±0°.05×33°.22E±0°.04, h10km, Error ellipse: s-maj=7.7km s-min=3.8km az=164.8*
*DDA **24** 16:47:22.9, 36°.87N×33°.37E, h7km±4km, Md2.8*
ISC 24 16:47:22.2±1.0, 37°.05N±0°.07×33°.21E±0°.04, h9km±13km, n14, σ0s90/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERMK	**Ermenek**	**0.47**	**211**	*i*P	**Pg**	**16 47 31.9**	**+0.7**
ERMK				*i*S	**Sg**	**16 47 38.9**	**+1.5**
ERMK	**Ermenek**	**0.47**	**211**	*i*P	**Pg**	**16 47 31.9**	**+0.6**
ERMK				*i*S	**Sg**	**16 47 38.9**	**+1.5**
HDMB	**Hadim**	**0.59**	**262**	*e*PG	**Pg**	**16 47 32.9**	**-0.6**
HDMB				*e*SG	**Sg**	**16 47 41.0**	**-0.1**
HDMB	**Hadim**	**0.59**	**262**	*e*Pg	**Pg**	**16 47 32.9**	**-0.6**
HDMB				*e*Sg	**Sg**	**16 47 41.0**	**-0.1**
IKL	**Isikli**	**0.89**	**155**	*e*PG	**Pg**	**16 47 38.2**	**-1.1**
IKL				*e*SG	**Sg**	**16 47 49.6**	**-1.3**
IKL	**Isikli**	**0.89**	**155**	*e*Pg	**Pg**	**16 47 38.2**	**-1.1**
IKL				*e*Sg	**Sg**	**16 47 49.6**	**-1.3**
MERS	**Mersin**	**1.07**	**99**	*e*PG	**Pg**	**16 47 41.9**	**-0.8**
MERS				*e*SG	**Sg**	**16 47 57.9**	**+1.4**
MERS	**Mersin**	**1.07**	**99**	*e*Pg	**Pg**	**16 47 41.9**	**-0.7**
MERS				*e*Sg	**Sg**	**16 47 57.9**	**+1.4**
GAZI	**Gazipasa**	**1.08**	**222**	*i*P	**Pg**	**16 47 42.5**	**-0.5**
GAZI				*i*S	**Sg**	**16 47 57.6**	**+0.6**
GAZI	**Gazipasa**	**1.08**	**222**	*i*P	**Pg**	**16 47 42.5**	**-0.5**
GAZI				*i*S	**Sg**	**16 47 57.6**	**+0.6**
GULE	**Gulek**	**1.27**	**79**	*i*P	**Pn**	**16 47 45.4**	**-0.7**
GULE				*i*S	**Sb**	**16 48 03.9**	**+1.0**
GULE	**Gulek**	**1.27**	**79**	*i*P	**Pn**	**16 47 45.4**	**-0.8**
GULE				*i*S	**Sb**	**16 48 03.9**	**+1.1**
KARA	**Karaisali**	**1.49**	**81**	*e*PN	**Pn**	**16 47 49.1**	**0.0**
KARA	**Karaisali**	**1.49**	**81**	*e*Pn	**Pn**	**16 47 49.1**	**0.0**

*DDA **24** 16:50:06.5, 36°.98N×29°.17E, h7km±3km, Md3.2*
*ISCJB **24** 16:50:07.1±0.5, 36°.99N±0°.03×29°.19E±0°.03, h10km, Error ellipse: s-maj=5.0km s-min=3.5km az=3.8*
*CSEM **24** 16:50:07.4±0.1, 37°.06N×29°.21E, h10km, MD2.9, Error ellipse: s-maj=3.4km s-min=2.0km az=178.0*
*ISK **24** 16:50:07.0, 37°.05N×29°.18E, h7km, MD2.9*
ISC 24 16:50:07.3±0.6, 36°.99N±0°.03×29°.16E±0°.03, h5km±7km, n32, σ0s79/46, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.32**	**59**	*e*PG	**Pg**	**16 50 12.6**	**-0.9**
GLHS				*e*SG	**Sg**	**16 50 17.6**	**0.0**
GLHS	**Glhisar (BURDU**	**0.32**	**59**	*e*Pg	**Pg**	**16 50 12.6**	**-0.8**
GLHS				*e*Sg	**Sg**	**16 50 17.6**	**0.0**
GOLH	**Golhisar**	**0.40**	**53**	*i*P	**Pg**	**16 50 14.2**	**-0.9**
GOLH				*i*S	**Sg**	**16 50 21.6**	**+1.3**
GOLH	**Golhisar**	**0.40**	**53**	*i*P	**Pg**	**16 50 14.2**	**-0.9**
GOLH				*i*S	**Sg**	**16 50 21.6**	**+1.2**
ELL	**Elmali**	**0.65**	**112**	*e*PG	**Pg**	**16 50 20.1**	**+0.4**
ELL				*e*SG	**Sg**	**16 50 29.7**	**+1.5**
ELL	**Elmali**	**0.65**	**112**

AKAS	Kas	0.84	154	iP	Pg	16 50 22.7	-0.6
KORT	Korkueli	0.95	89	iP	Pg	16 50 24.2	-1.3
KORT	Korkueli	0.95	89	iP	Pg	16 50 24.2	-1.4
MLSB	Milas	1.15	286	ePN	Pg	16 50 29.1	-0.1
MLSB	Milas	1.15	286	ePn	Pg	16 50 29.2	0.0
AYDN	Tasoluk	1.22	304	iP	Pg	16 50 30.1	-0.6
AYDN				iS	Sg	16 50 46.5	+0.1
AYDN	Tasoluk	1.22	304	iP	Pg	16 50 30.1	-0.6
AYDN				iS	Sg	16 50 46.5	0.0
DAT	Datca	1.29	259	ePN	Pn	16 50 32.5	+0.6
DAT	Datca	1.29	259	ePn	Pn	16 50 32.5	+0.6
KHL	Karahalli	1.36	12	ePN	Pn	16 50 32.1	-0.7
KHL	Karahalli	1.36	12	ePn	Pn	16 50 32.1	-0.8
BDRM	Kayabasi	1.37	274	iP	Pn	16 50 33.2	+0.2
BDRM				iS	Sg	16 50 52.1	+0.6
BDRM	Kayabasi	1.37	274	iP	Pn	16 50 33.2	+0.2
BDRM				iS	Sg	16 50 52.1	+0.7
KHAL	Karahalli	1.40	11	iP	Pn	16 50 33.6	+0.2
KHAL				iS	Sg	16 50 53.5	+1.2
KHAL	Karahalli	1.40	11	iP	Pn	16 50 33.7	+0.3
KHAL				iS	Sg	16 50 53.5	+1.2
BODT	Bodrum	1.48	273	ePN	Pn	16 50 34.9	+0.4
BODT	Bodrum	1.48	273	ePn	Pn	16 50 34.9	+0.4
KULA	Kula-Manisa	1.57	346	ePN	Pn	16 50 35.1	-0.6
KULA	Kula-Manisa	1.57	346	ePn	Pn	16 50 35.1	-0.7

MEX 24 16:52:23.3±0.4,15.24N×93.25W,h79km±6km,MD4.0,
Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		0.46	4	eP	Pn	16 52 35.3	-1.4
PCIG				eS	Sn	16 52 44.8	-1.7
THIG		1.01	109	iP	Pn	16 52 41.2	-1.2
THIG				eS	Sn	16 52 54.9	-1.8
TGIG		1.54	5	eP	Pn	16 52 48.1	-0.9
TGIG				eS	Sn	16 53 06.6	-1.9
HUIG	Huatulco	2.80	281	iP	Pn	16 53 05.5	-0.5
HUIG				iS	Sn	16 53 36.6	-2.1
VHO	Vista Hermosa	3.81	299	iP	Pn	16 53 18.4	-1.3
VHO				iS	Sn	16 54 02.1	-1.2

ISCJB 24 17:07:57.4±1.1,25.1N±0.1×122.34E±0.04,h163km±9km,
Error ellipse: s-maj=17.4km s-min=5.3km az=177.3
TAP 24 17:07:57.1,25.17N×122.29E,h169km±1km,ML3.0,C
JMA 24 17:07:57.7±0.3,25.15N×122.38E,h167km,M2.1
ISC 24 17:07:57.5±1.1,25.2N±0.1×122.33E±0.04,h165km±9km,
n21,σ0§57/32,1D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.34	246	P	Pn	17 08 20.3	+0.3
	baz=247						
TWY	Chenhua	0.68	281	eP	Pn	17 08 21.7	+0.2
	baz=271						
TWC	Suao	0.69	219	eP	Pn	17 08 22.4	+0.7
	baz=216						
TWE	Neicheng	0.74	235	⇓eP	Pn	17 08 22.3	+0.4
	baz=228						
TWE				eS	Sn	17 08 40.5	-0.1
	baz=228						
ENTT	Nioudou	0.86	234	eP	Pn	17 08 23.0	+0.2
	baz=232						
ENTT				eS	Sn	17 08 42.0	0.0
	baz=232						
ENA	Nanau	0.90	217	P	Pn	17 08 23.2	+0.2
	baz=210						
YOJ	Yonaguni jima	0.92	138	P	Pn	17 08 23.4	+0.2
YOJ				eS	Sn	17 08 43.2	+0.4
NSK	Sanguang	1.00	242	eP	Pn	17 08 23.5	-0.2
	baz=232						
NSK				eS	Sn	17 08 42.8	-1.0
	baz=232						
NSTT	Nanjuang	1.31	247	eP	Pn	17 08 25.8	-0.7
	baz=252						
WHF	Hehuan Shan	1.40	224	eP	Pn	17 08 27.7	+0.5
	baz=229						
WHF				eS	Sn	17 08 50.1	0.0
	baz=229						
IRIF	Iriomote-Funau	1.51	122	eS	Sn	17 08 52.3	+0.3
ESL	Shilin	1.56	212	eP	Pn	17 08 27.3	-1.6
	baz=214						
HATJ	Hateruma jima	1.73	129	eS	Sn	17 08 56.7	+0.6
JKRS	Kuro-shima	1.78	120	P	Pn	17 08 31.2	+0.1
JKRS				eS	Sn	17 08 57.1	+0.1
SMLT	Sun Moon Lake	1.81	226	eP	Pn	17 08 32.6	+1.0
	baz=230						
SMLT				eS	Sn	17 08 58.4	+0.6
	baz=230						
JIJ	Ishigaki jima	1.82	115	P	Pn	17 08 31.3	-0.3
JIJ				eS	Sn	17 08 57.0	-0.9
TYC	Yuchr	1.83	228	eP	Pn	17 08 31.7	-0.1
	baz=231						
TYC				eS	Sn	17 08 57.9	-0.1
	baz=231						
CHN5	Tsauling	2.16	225	eP	Pn	17 08 34.6	-0.9
	baz=225						
JTJ	Tarama	2.21	103	P	Pn	17 08 36.3	+0.3
JTJ				eS	Sn	17 09 05.1	-0.6
ELDTW	Lidau	2.29	212	eP	Pn	17 08 36.9	-0.1
	baz=207						
JOGS	Gusukube	2.82	97	P	Pn	17 08 44.0	+0.8
JOGS				eS	Sn	17 09 18.0	-0.6

SFS 24 14:19:52.0,35.64N×0.97W,h22km,ML4.9
ISCJB 24 17:19:50.8±0.2,35.90N±0.02×1.17W±0.02,h10km,
mb4.0/25,MS3.5/7,Error ellipse: s-maj=2.3km
s-min=1.8km az=168.3
IDC 24 17:19:50.7±0.5,35.80N×1.22W,h0km,mb4.0/21,
mb1 4.2/26,mb1mx4.1/33,mbtmp4.0/26,ML4.4/5,MS3.4/9,
Ms1 3.4/9,ms1mx3.1/32,Error ellipse: s-maj=15.7km
s-min=11.3km az=117.0
IGIL 24 17:19:51.0,35.64N×0.98W,h2km,ML3.9
NEIC 24 17:19:52.1,35.64N×0.98W,h22km,MG4.9(MDD),After
MDD.
INMG 24 17:19:53.1±1.1,35.78N×1.17W,h10km±13km,ML3.6,
Error ellipse: s-maj=12.0km s-min=2.9km az=137.0
MDD 24 17:19:53.2±0.5,35.76N×1.02W,h19km±7km,mb4.8/39,
Error ellipse: s-maj=5.7km s-min=3.1km az=152.0
LDG 24 17:19:53.9±0.4,35.97N×1.37W,h10km,Ml3.9/9,Error
ellipse: s-maj=10.7km s-min=3.7km az=167.0
CSEM 24 17:19:53.5±0.1,35.81N×1.13W,h20km,mb4.3/16,
ML4.4/10,Error ellipse: s-maj=3.4km s-min=2.4km
az=161.0
MOS 24 17:19:54.4±1.3,35.97N×1.06W,h33km,mb4.3/11,Error
ellipse: s-maj=7.2km s-min=3.5km az=83.1
CRAAG 24 17:19:57.7,35.76N×0.44W,Ml4.2
CNRM 24 17:19:59.8,35.65N×1.47E,h30km,MD4.6
ISC 24 17:19:53.1±0.2,35.89N±0.02×1.21W±0.02,h10km,n641,
σ1§28/950,mb4.0/25,MS3.5/7,30C-70D,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USTO	Oran	0.56	106	P	Pg	17 20 01.0	-2.9
USTO	Oran	0.56	106	P	Pg	17 20 01.0	-2.9
USTO	Oran	0.56	106	P	Pg	17 20 01.0	-2.9
USTO	Oran	0.56	106	P	Pg	17 20 01.0	-2.9
ODZI	Dziouia	0.60	182	P	Pg	17 20 04.0	-0.6
ODZI	Dziouia	0.60	182	P	Pg	17 20 04.0	-0.6
ODZI	Dziouia	0.60	182	P	Pg	17 20 04.0	-0.6
ENIJ	Nijar	1.35	324	⇓P	Pn	17 20 17.9	0.0
ENIJ	Nijar	1.35	324	⇓P	Pn	17 20 17.9	-0.1
	415nm,0.2s,SNR=18						
ENIJ	Nijar	1.35	324	⇓P	Pn	17 20 17.9	-0.1
	415nm,0.2s,SNR=18						
ENIJ	Nijar	1.35	324	P	Pn	17 20 17.9	0.0
	415nm,0.2s,SNR=18						
EALB	Alboran	1.48	273	⇓P	Pn	17 20 19.2	-0.5
EALB				S	Sn	17 20 40.1	+0.9
EALB	Alboran	1.48	273	⇓P	Pn	17 20 19.2	-0.5
	568nm,0.3s,SNR=18						
EALB				S	Sn	17 20 40.1	+0.9
	395nm,0.1s,SNR=7.3						
EALB	Alboran	1.48	273	⇓P	Pn	17 20 19.2	-0.5
	568nm,0.3s,SNR=18						
EALB				S	Sn	17 20 40.1	+0.9
	395nm,0.1s,SNR=7.3						
EALB	Alboran	1.48	273	P	Pn	17 20 19.2	-0.5
	568nm,0.3s,SNR=18						
EALB				S	Sn	17 20 40.1	+0.9
	395nm,0.1s,SNR=7.3						
ZAI	Zaio	1.55	234	P	Pn	17 20 18.0	-2.7
ZAI				S	Sn	17 20 34.0	-6.9
ZAI	Zaio	1.55	234	P	Pn	17 20 18.0	-2.7
ZAI				S	Sn	17 20 34.0	-6.9
ZAI	Zaio	1.55	234	iP	Pn	17 20 18.0	-2.7
EBER	Berja	1.69	307	⇓P	Pn	17 20 22.8	+0.2
EBER				S	Sn	17 20 46.5	+2.2
EBER	Berja	1.69	307	⇓P	Pn	17 20 22.8	+0.2
	152nm,0.1s,SNR=18						
EBER				S	Sn	17 20 46.5	+2.2
	786nm,0.2s,SNR=8.0						
EBER	Berja	1.69	307	⇓P	Pn	17 20 22.8	+0.2
	152nm,0.1s,SNR=18						
EBER				S	Sn	17 20 46.5	+2.2
	786nm,0.2s,SNR=8.0						
EBER	Berja	1.69	307	P	Pn	17 20 22.8	+0.2
	152nm,0.1s,SNR=18						
EBER				S	Sn	17 20 46.5	+2.2
	786nm,0.2s,SNR=8.0						
CART	Cartagena	1.71	6	eP	Pn	17 20 20.4	-2.4
CART	Cartagena	1.71	6	⇓P	Pn	17 20 20.8	-2.1
CART				S	Sn	17 20 40.1	-4.5
CART	Cartagena	1.71	6	⇓P	Pn	17 20 20.8	-2.1
CART				S	Sn	17 20 40.1	-4.5
CART	Cartagena	1.71	6	eP	Pn	17 20 20.4	-2.4
EANR	'Ain N'Sour	1.88	87	P	Pn	17 20 21.0	-4.2
EANR	'Ain N'Sour	1.88	87	P	Pn	17 20 21.0	-4.2
EANR	'Ain N'Sour	1.88	87	P	Pn	17 20 21.0	-4.2
EANR	'Ain N'Sour	1.88	87	P	Pn	17 20 21.0	-4.2
EMUR	La Murta	1.95	359	⇓P	Pn	17 20 24.9	-1.3
EMUR				S	Sn	17 20 47.6	-3.1
EMUR	La Murta	1.95	359	⇓P	Pn	17 20 24.9	-1.3
	82nm,0.2s,SNR=18						
EMUR				S	Sn	17 20 47.7	-3.1
	417nm,0.3s,SNR=7.9						
EMUR				T		17 22 14.1	
	SNR=6.4						
EMUR	La Murta	1.95	359	⇓P	Pn	17 20 24.9	-1.3
	82nm,0.2s,SNR=18						
EMUR				S	Sn	17 20 47.7	-3.1
	417nm,0.3s,SNR=7.9						
EMUR				T		17 22 14.1	
	SNR=6.4						
EMUR	La Murta	1.95	359	P	Pn	17 20 24.9	-1.3
	82nm,0.2s,SNR=18						
EMUR				S	Sn	17 20 47.7	-3.1
	417nm,0.3s,SNR=7.9						
ECHF	Ech Chlef	2.08	82	P	Pn	17 20 23.5	-4.5
ECHF	Ech Chlef	2.08	82	P	Pn	17 20 23.5	-4.5
ETRT	Tiaret	2.10	103	P	Pn	17 20 24.0	-4.3
ETRT	Tiaret	2.10	103	P	Pn	17 20 24.0	-4.3
ETRT	Tiaret	2.10	103	P	Pn	17 20 24.0	-4.3
ETRT	Tiaret	2.10	103	P	Pn	17 20 24.0	-4.3
ECHA	Ech Chlef	2.11	82	P	Pn	17 20 23.5	-4.8
ECHA	Ech Chlef	2.11	82	P	Pn	17 20 23.5	-4.8
EGUA	Guajares	2.12	297	⇓P	Pn	17 20 28.1	-0.5
EGUA	Guajares	2.12	297	⇓P	Pn	17 20 28.1	-0.5
	104nm,0.2s,SNR=18						
EGUA				S	Sn	17 20 55.8	+0.8
	407nm,0.2s,SNR=7.9						
EGUA	Guajares	2.12	297	⇓P	Pn	17 20 28.1	-0.5
	104nm,0.2s,SNR=18						
EGUA				S	Sn	17 20 55.8	+0.8
	407nm,0.2s,SNR=7.9						
EGUA	Guajares	2.12	297	P	Pn	17 20 28.1	-0.5
	104nm,0.2s,SNR=18						
EHUE	Huescar	2.22	330	⇓P	Pn	17 20 31.3	+1.4
EHUE	Huescar	2.22	330	⇓P	Pn	17 20 31.3	+1.4
	58nm,0.2s,SNR=18						
EHUE				S	Sn	17 20 58.9	+1.5
	60nm,0.2s,SNR=7.9						
EHUE	Huescar	2.22	330	⇓P	Pn	17 20 31.3	+1.4
	58nm,0.2s,SNR=18						
EHUE				S	Sn	17 20 58.9	+1.5
	60nm,0.2s,SNR=7.9						
EHUE	Huescar	2.22	330	P	Pn	17 20 31.3	+1.4
	58nm,0.2s,SNR=18						
EQUE	Quentar	2.23	307	⇓P	Pn	17 20 31.8	+1.8
	140nm,0.2s,SNR=18						
EQUE				S	Sn	17 20 58.4	+0.9
	157nm,0.3s,SNR=7.9						
EQUE	Quentar	2.23	307	⇓P	Pn	17 20 31.8	+1.8
	140nm,0.2s,SNR=18						
EQUE				S	Sn	17 20 58.4	+0.9
	157nm,0.3s,SNR=7.9						
EQUE	Quentar	2.23	307	P	Pn	17 20 31.8	+1.8
	140nm,0.2s,SNR=18						
EBNR	Beni Rached	2.26	79	P	Pn	17 20 26.0	-4.4
EBNR	Beni Rached	2.26	79	P	Pn	17 20 26.0	-4.4
TOU	Touzarine	2.27	247	P	Pn	17 20 30.0	-0.6
TOU				S	Sn	17 20 53.0	-5.7
TOU	Touzarine	2.27	247	P	Pn	17 20 30.0	-0.6
TOU				S	Sn	17 20 53.0	-5.7
TOU	Touzarine	2.27	247	iP	Pn	17 20 30.0	-0.6
TOU				eS	Sn	17 20 53.0	-5.7
ECOG	Cogollos-Vega	2.35	307	⇑P	Pn	17 20 33.4	+1.7
ECOG	Cogollos-Vega	2.35	307	⇑P	Pn	17 20 33.4	+1.7
	67nm,0.3s,SNR=18						
ECOG				S	Sn	17 21 02.5	+2.0
	100nm,0.2s,SNR=7.9						
ECOG	Cogollos-Vega	2.35	307	⇑P	Pn	17 20 33.4	+1.7
	67nm,0.3s,SNR=18						
ECOG				S	Sn	17 21 02.5	+2.0
	100nm,0.2s,SNR=7.9						
ECOG	Cogollos-Vega	2.35	307	P	Pn	17 20 33.4	+1.7
	67nm,0.3s,SNR=18						
ERON	Agron	2.38	299	⇓P	Pn	17 20 32.5	+0.4
ERON	Agron	2.38	299	⇓P	Pn	17 20 32.5	+0.4
	91nm,0.2s,SNR=18						
ERON				S	Sn	17 21 04.7	+3.4
	231nm,0.1s,SNR=7.9						
ERON	Agron	2.38	299	⇓P	Pn	17 20 32.5	+0.4
	91nm,0.2s,SNR=18						
ERON				S	Sn	17 21 04.7	+3.4
	231nm,0.1s,SNR=7.9						
ERON	Agron	2.38	299	P	Pn	17 20 32.5	+0.4
	91nm,0.2s,SNR=18						
EQES	Quesada	2.43	323	⇓P	Pn	17 20 35.0	+2.3
EQES				S	Sn	17 21 06.0	+3.6
EQES	Quesada	2.43	323	⇓P	Pn	17 20 35.0	+2.3
	316nm,0.3s,SNR=18						
EQES				S	Sn	17 21 06.0	+3.6
	171nm,0.2s,SNR=7.9						
EQES	Quesada	2.43	323	⇓P	Pn	17 20 35.0	+2.3
	316nm,0.3s,SNR=18						
EQES				S	Sn	17 21 06.0	+3.6
	171nm,0.2s,SNR=7.9						
EQES	Quesada	2.43	323	P	Pn	17 20 35.0	+2.3
	316nm,0.3s,SNR=18						
EQES				S	Sn	17 21 06.0	+3.5
	171nm,0.2s,SNR=7.9						
ELOJ	Sierra Loja	2.68	299	P	Pn	17 20 38.1	+1.8
ELOJ	Sierra Loja	2.68	299	P	Pn	17 20 38.1	+1.8
	11nm,0.2s,SNR=4.0						
ELOJ				S	Sn	17 21 10.5	+1.6
	45nm,0.2s,SNR=7.9						
ELOJ	Sierra Loja	2.68	299	P	Pn	17 20 38.1	+1.8
	11nm,0.2s,SNR=4.0						
ELOJ				S	Sn	17 21 10.5	+1.6
	45nm,0.2s,SNR=7.9						
ELOJ	Sierra Loja	2.68	299	P	Pn	17 20 38.1	+1.8
	11nm,0.2s,SNR=4.0						
EMAL	Malaga-Limoner	2.74	290	eP	Pn	17 20 37.8	+0.7
ETOB	Tobarra	2.77	355	⇓P	Pn	17 20 38.0	+0.6
ETOB				S	Sn	17 21 11.4	+0.6
ETOB	Tobarra	2.77	355	⇓P	Pn	17 20 38.0	+0.6
	86nm,0.2s,SNR=18						
ETOB				S	Sn	17 21 11.4	+0.6
	219nm,0.3s,SNR=7.7						
ETOB	Tobarra	2.77	355	⇓P	Pn	17 20 38.0	+0.6
	86nm,0.2s,SNR=18						
ETOB				S	Sn	17 21 11.4	+0.6
	219nm,0.3s,SNR=7.7						
ETOB	Tobarra	2.77	355	P	Pn	17 20 38.0	+0.6
	86nm,0.2s,SNR=18						
ETOB				S	Sn	17 21 11.4	+0.6
	219nm,0.3s,SNR=7.7						
EBEN	Beniarda	2.92	15	P	Pn	17 20 38.0	-1.5
EBEN				S	Sn	17 21 09.3	-5.3
EBEN	Beniarda	2.92	15	P	Pn	17 20 38.0	-1.5
	1.6nm,0.1s,SNR=59						
EBEN				S	Sn	17 21 10.1	-4.6
	25nm,0.2s,SNR=7.9						
EBEN	Beniarda	2.92	15	P	Pn	17 20 38.0	-1.5
	1.6nm,0.1s,SNR=59						
EBEN				S	Sn	17 21 10.1	-4.6
	25nm,0.2s,SNR=7.9						
EBEN	Beniarda	2.92	15	P	Pn	17 20 38.0	-1.5
	1.6nm,0.1s,SNR=59						
EVIA	Vianos	2.93	340	⇓P	Pn	17 20 40.8	+1.1
EVIA	Vianos	2.93	340	⇓P	Pn	17 20 40.8	+1.1
	69nm,0.2s,SNR=18						
EVIA				S	Sn	17 21 16.4	+1.4
	330nm,0.2s,SNR=7.9						
EVIA	Vianos	2.93	340	⇓P	Pn	17 20 40.8	+1.1
	69nm,0.2s,SNR=18						
EVIA				S	Sn	17 21 16.4	+1.4
	330nm,0.2s,SNR=7.9						
EVIA	Vianos	2.93	340	P	Pn	17 20 40.8	+1.1
	69nm,0.2s,SNR=18						
EMIJ	Mijas	2.96	284	P	Pn	17 20 38.9	-1.1
EMIJ				S	Sn	17 21 14.6	-1.0
EMIJ	Mijas	2.96	284	P	Pn	17 20 38.9	-1.2
	3.2nm,0.1s,SNR=47						
EMIJ				S	Sn	17 21 14.6	-1.0
	76nm,0.2s,SNR=7.9						
EMIJ	Mijas	2.96	284	P	Pn	17 20 38.9	-1.2
	3.2nm,0.1s,SNR=47						
EMIJ				S	Sn	17 21 14.6	-1.0
	76nm,0.2s,SNR=7.9						
EMIJ	Mijas	2.96	284	P	Pn	17 20 38.9	-1.2
	3.2nm,0.1s,SNR=47						
EMIJ				S	Sn	17 21 14.6	-1.0
	76nm,0.2s,SNR=7.9						
TZK	Tazeka	3.03	235	P	Pn	17 20 41.0	0.0
TZK				S	Sn	17 21 11.0	-6.4
TZK	Tazeka	3.03	235	P	Pn	17 20 41.0	0.0
TZK				S	Sn	17 21 11.0	-6.4
TZK	Tazeka	3.03	235	iP	Pn	17 20 41.0	0.0
EBAN	Banos Encina	3.07	319	⇓P	Pn	17 20 43.0	+1.4
EBAN				S	Sn	17 21 21.2	+2.9
EBAN	Banos Encina	3.07	319	⇓P	Pn	17 20 43.0	+1.4
	26nm,0.2s,SNR=18						
EBAN				S	Sn	17 21 20.2	+1.9
	84nm,0.2s,SNR=7.9						
EBAN	Banos Encina	3.07	319	⇓P	Pn	17 20 43.0	+1.4
	26nm,0.2s,SNR=18						
EBAN				S	Sn	17 21 20.2	+1.9
	84nm,0.2s,SNR=7.9						
EBAN	Banos Encina	3.07	319	P	Pn	17 20 43.0	+1.4
	26nm,0.2s,SNR=18						
EBAN				S	Sn	17 21 21.2	+2.9
	84nm,0.2s,SNR=7.9						
ECEU	Ceuta	3.38	271	P	Pn	17 20 45.2	-0.7
	4.7nm,0.1s,SNR=8.3						
ECEU				S	Sn	17 21 23.7	-2.4
	28nm,0.1s,SNR=7.9						
ECEU				T		17 24 35.3	
	SNR=7.9						
ECEU	Ceuta	3.38	271	P	Pn	17 20 45.2	-0.7
	4.7nm,0.1s,SNR=8.3						
ECEU				S	Sn	17 21 23.7	-2.4
	28nm,0.1s,SNR=7.9						
ECEU				T		17 24 35.3	
	SNR=7.9						
ECEU	Ceuta	3.38	271	P	Pn	17 20 45.2	-0.7
	4.7nm,0.1s,SNR=8.3						
ECEU				S	Sn	17 21 23.7	-2.4
	28nm,0.1s,SNR=7.9						
EMHD	Djebel Mahoud	3.39	83	P	Pn	17 20 42.0	-4.0
EMHD	Djebel Mahoud	3.39	83	P	Pn	17 20 42.0	-4.0
EMHD	Djebel Mahoud	3.39	83	P	Pn	17 20 42.0	-4.0
EMHD	Djebel Mahoud	3.39	83	P	Pn	17 20 42.0	-4.0
EJIF	Jimena Fronter	3.49	281	P	Pn	17 20 48.1	+0.7
EJIF	Jimena Fronter	3.49	281	P	Pn	17 20 48.1	+0.7
	4.4nm,0.2s,SNR=7.9						
EJIF				S	Sn	17 21 27.8	-0.9
	58nm,0.4s,SNR=7.9						
EJIF	Jimena Fronter	3.49	281	P	Pn	17 20 48.1	+0.7
	4.4nm,0.2s,SNR=7.9						
EJIF				S	Sn	17 21 27.8	-0.9
	58nm,0.4s,SNR=7.9						
EJIF	Jimena Fronter	3.49	281	P	Pn	17 20 48.1	+0.7
	4.4nm,0.2s,SNR=7.9						
EADA	Adamuz	3.53	311	P	Pn	17 20 48.9	+1.0
EADA	Adamuz	3.53	311	P	Pn	17 20 48.9	+1.0
	5.2nm,0.1s,SNR=48						
EADA				S	Sn	17 21 29.8	+0.2
	39nm,0.2s,SNR=7.9						
EADA	Adamuz	3.53	311	P	Pn	17 20 48.9	+1.0
	5.2nm,0.1s,SNR=48						
EADA				S	Sn	17 21 29.8	+0.2
	39nm,0.2s,SNR=7.9						
EADA	Adamuz	3.53	311	P	Pn	17 20 48.9	+1.0
	5.2nm,0.1s,SNR=48						
LIJA	Lijar	3.53	288	P	Pn	17 20 51.3	+3.3
LIJA				S	Sn	17 21 25.0	-4.8
LIJA	Lijar	3.53	288	P	Pn	17 20 51.3	+3.3
LIJA				S	Sn	17 21 25.0	-4.8
ECHE	Chera	3.70	3	P	Pn	17 20 50.5	+0.2
ECHE				S	Sn	17 21 33.0	-0.9
ECHE	Chera	3.70	3	P	Pn	17 20 50.5	+0.2
	5.3nm,0.2s,SNR=26						
ECHE				S	Sn	17 21 33.0	-0.9
	28nm,0.2s,SNR=4.6						
ECHE	Chera	3.70	3	P	Pn	17 20 50.5	+0.2
	5.3nm,0.2s,SNR=26						
ECHE				S	Sn	17 21 33.0	-0.9
	28nm,0.2s,SNR=4.6						
ECHE	Chera	3.70	3	P	Pn	17 20 50.5	+0.2
	5.3nm,0.2s,SNR=26						
ECHE				S	Sn	17 21 33.0	-0.9
	28nm,0.2s,SNR=4.6						
EIBI	Ibiza	3.73	32	⇓P	Pn	17 20 49.0	-1.7
EIBI				S	Sn	17 21 29.8	-5.0
EIBI	Ibiza	3.73	32	⇓P	Pn	17 20 49.0	-1.7
	44nm,0.1s,SNR=18						
EIBI				S	Sn	17 21 29.8	-5.0
	145nm,0.2s,SNR=7.9						
EIBI	Ibiza	3.73	32	⇓P	Pn	17 20 49.0	-1.7
	44nm,0.1s,SNR=18						
EIBI				S	Sn	17 21 29.8	-5.0
	145nm,0.2s,SNR=7.9						
EIBI	Ibiza	3.73	32	P	Pn	17 20 49.0	-1.7
	44nm,0.1s,SNR=18						
EIBI				S	Sn	17 21 29.8	-5.0
	145nm,0.2s,SNR=7.9						
ESPR	Espera	3.88	286	P	Pn	17 20 55.1	+2.4
ESPR	Espera	3.88	286	P	Pn	17 20 55.1	+2.4
	2.0nm,0.1s,SNR=16						
ESPR				S	Sn	17 21 35.6	-2.6
	20nm,0.3s,SNR=7.9						
ESPR	Espera	3.88	286	P	Pn	17 20 55.1	+2.4
	2.0nm,0.1s,SNR=16						
ESPR				S	Sn	17 21 35.6	-2.6
	20nm,0.3s,SNR=7.9						
ESPR	Espera	3.88	286	P	Pn	17 20 55.1	+2.4
	2.0nm,0.1s,SNR=16						
RSA	Sarsar	3.91	256	P	Pn	17 20 52.0	-1.1
RSA				S	Sn	17 21 34.0	-5.0
RSA	Sarsar	3.91	256	P	Pn	17 20 52.0	-1.1
RSA				S	Sn	17 21 34.0	-5.0
RSA	Sarsar	3.91	256	iP	Pn	17 20 52.0	-1.1
RSA				eS	Sn	17 21 34.0	-5.0
CNIL	Conil	3.95	278	P	Pn	17 20 55.4	+1.7
CNIL				S	Sn	17 21 39.0	-1.1
CNIL	Conil	3.95	278	P	Pn	17 20 55.4	+1.7
CNIL				S	Sn	17 21 39.0	-1.1
CNIL	Conil	3.95	278	eP	Pn	17 20 55.4	+1.7
CNIL				eS	Sn	17 21 39.0	-1.1
GIBL	Gibalbin	3.95	285	P	Pn	17 20 57.7	+4.0
GIBL	Gibalbin	3.95	285	P	Pn	17 20 57.7	+4.0
ECAB	El Cabril	4.01	304	⇓P	Pn	17 20 55.1	+0.6
ECAB				S	Sn	17 21 41.3	-0.4
ECAB	El Cabril	4.01	304	⇓P	Pn	17 20 55.1	+0.6
	11nm,0.2s,SNR=18						
ECAB				S	Sn	17 21 41.3	-0.4
	13nm,0.2s,SNR=7.9						
ECAB	El Cabril	4.01	304	⇓P	Pn	17 20 55.1	+0.6
	11nm,0.2s,SNR=18						
ECAB				S	Sn	17 21 41.3	-0.4
	13nm,0.2s,SNR=7.9						
ECAB	El Cabril	4.01	304	P	Pn	17 20 55.2	+0.6
	11nm,0.2s,SNR=18						
ECAB				S	Sn	17 21 41.3	-0.4
	13nm,0.2s,SNR=7.9						
MDT	Midelt	4.16	224	Pn	Pn	17 20 56.3	-0.2
	21nm,0.3s,baz=53,slow=14,SNR=431						
MDT				Sn	Sn	17 21 43.4	-1.9

19nm,0.3s,baz=330,slow=19,SNR=6.3
MDT Lg 17 21 58.3
20nm,0.3s,baz=248,slow=23,SNR=4.8
MDT LR LR 17 22 29.2
comp=Z,153nm,20.6s,baz=268,slow=39
MDT Midelt 4.16 224 Pn **Pn 17 20 56.3 -0.3**
MDT Sn **Sn 17 21 43.4 -1.9**
CZD Col de Zad 4.26 229 P **Pn 17 20 58.0 +0.1**
CZD S **Sn 17 21 41.0 -6.7**
CZD Col de Zad 4.26 229 P **Pn 17 20 58.0 +0.1**
CZD S **Sn 17 21 41.0 -6.7**
CZD Col de Zad 4.26 229 *i* P **Pn 17 20 58.0 +0.1**
ESDC Sonseca Array 4.36 331 Pn **Pn 17 20 59.7 +0.4**
43nm,0.3s,baz=147,slow=13,SNR=247
ESDC Lg 17 22 01.8
39nm,0.3s,baz=145,slow=29,SNR=6.5
ESDC Sonseca Array 4.36 331 P **Pn 17 21 00.2 +0.8**
ESDC S **Sn 17 21 49.9 -0.4**
ESDC Sonseca Array 4.36 331 P **Pn 17 21 00.2 +0.8**
47nm,0.2s,baz=146,slow=13,SNR=196
ESDC S **Sn 17 21 49.9 -0.4**
7.5nm,0.2s,baz=148,slow=24,SNR=7.9
ESDC Sonseca Array 4.36 331 P **Pn 17 21 00.2 +0.8**
47nm,0.2s,baz=146,slow=13,SNR=196
ESDC S **Sn 17 21 49.9 -0.4**
7.5nm,0.2s,baz=148,slow=24,SNR=7.9
ESDC Sonseca Array 4.36 331 P **Pn 17 21 00.2 +0.8**
47nm,0.2s,baz=146,slow=13,SNR=196
ESDC S **Sn 17 21 49.9 -0.4**
7.5nm,0.2s,SNR=7.9
ESLA Sonseca Array 4.36 331 *e*P **Pn 17 20 59.8 +0.4**
ESLA Sonseca Array 4.36 331 *e*P **Pn 17 20 59.8 +0.4**
PAB San Pablo 4.42 327 *e*P **Pn 17 21 00.7 +0.6**
PAB San Pablo 4.42 327 *e*P **Pn 17 21 00.7 +0.6**
EMOS Mosqueruela 4.51 7 P **Pn 17 21 02.0 +0.6**
EMOS S **Sn 17 21 52.5 -1.3**
EMOS Mosqueruela 4.51 7 P **Pn 17 21 02.0 +0.6**
10.0nm,0.2s,SNR=73
EMOS S **Sn 17 21 52.5 -1.3**
36nm,0.3s,SNR=7.9
EMOS Mosqueruela 4.51 7 P **Pn 17 21 02.0 +0.6**
10.0nm,0.2s,SNR=73
EMOS S **Sn 17 21 52.5 -1.3**
36nm,0.3s,SNR=7.9
EMOS Mosqueruela 4.51 7 P **Pn 17 21 02.0 +0.7**
10.0nm,0.2s,SNR=73
EMOS S **Sn 17 21 52.5 -1.3**
36nm,0.3s,SNR=7.9
ZFT Errachidia 4.65 215 P **Pn 17 21 03.0 -0.3**
ZFT S **Sn 17 21 48.0 -9.2**
ZFT Errachidia 4.65 215 P **Pn 17 21 03.0 -0.3**
ZFT S **Sn 17 21 48.0 -9.2**
ZFT Errachidia 4.65 215 *i* P **Pn 17 21 03.0 -0.3**
EMIN Mina Concepcio 4.77 295 ⇓P **Pn 17 21 04.7 -0.2**
EMIN S **Sn 17 22 00.5 +0.3**
EMIN Mina Concepcio 4.77 295 ⇓P **Pn 17 21 04.7 -0.2**
2.5nm,0.2s,SNR=18
EMIN S **Sn 17 22 00.5 +0.3**
9.9nm,0.2s,SNR=7.9
EMIN Mina Concepcio 4.77 295 ⇓P **Pn 17 21 04.7 -0.2**
2.5nm,0.2s,SNR=18
EMIN S **Sn 17 22 00.5 +0.3**
9.9nm,0.2s,SNR=7.9
EMIN Mina Concepcio 4.77 295 P **Pn 17 21 04.7 -0.2**
2.5nm,0.2s,SNR=18
EMIN S **Sn 17 22 00.4 +0.2**
ETOR Torete 4.97 353 ⇑P **Pn 17 21 09.2 +1.5**
ETOR S **Sn 17 22 02.4 -2.8**
ETOR Torete 4.97 353 ⇑P **Pn 17 21 09.2 +1.5**
12nm,0.2s,SNR=18
ETOR S **Sn 17 22 02.4 -2.8**
37nm,0.3s,SNR=7.9
ETOR Torete 4.97 353 ⇑P **Pn 17 21 09.2 +1.5**
12nm,0.2s,SNR=18
ETOR S **Sn 17 22 02.4 -2.8**
37nm,0.3s,SNR=7.9
ETOR Torete 4.97 353 P **Pn 17 21 09.2 +1.5**
12nm,0.2s,SNR=18
ETOR S **Sn 17 22 02.4 -2.8**
37nm,0.3s,SNR=7.9
ETOS Mallorca 5.01 38 ⇑P **Pn 17 21 06.3 -2.1**
ETOS S **Sn 17 22 01.0 -5.4**
ETOS Mallorca 5.01 38 ⇑P **Pn 17 21 06.3 -2.1**
6.4nm,0.2s,SNR=18
ETOS S **Sn 17 22 01.0 -5.4**
61nm,0.3s,SNR=7.9
ETOS Mallorca 5.01 38 ⇑P **Pn 17 21 06.3 -2.1**
6.4nm,0.2s,SNR=18
ETOS S **Sn 17 22 01.0 -5.4**
61nm,0.3s,SNR=7.9
ETOS Mallorca 5.01 38 P **Pn 17 21 06.3 -2.0**
6.4nm,0.2s,SNR=18
ETOS S **Sn 17 22 01.0 -5.3**
61nm,0.3s,SNR=7.9
KIB El Ksiba 5.19 232 P **Pn 17 21 11.0 +0.3**
KIB S **Sn 17 22 03.0 -7.6**
KIB El Ksiba 5.19 232 P **Pn 17 21 11.0 +0.3**
KIB S **Sn 17 22 03.0 -7.6**
KIB El Ksiba 5.19 232 *i* P **Pn 17 21 11.0 +0.3**
PBAR Barrancos 5.19 298 *e*Pn **Pn 17 21 10.6 -0.2**
PBAR *e*Sn **Sn 17 22 10.0 -0.7**
PBAR A 17 22 41.8
48nm,0.5s
PBAR Barrancos 5.19 298 P **Pn 17 21 10.6 -0.2**
PBAR S **Sn 17 22 10.0 -0.7**
48nm,0.5s
PBAR Barrancos 5.19 298 P **Pn 17 21 10.6 -0.2**
PBAR S **Sn 17 22 10.0 -0.7**
48nm,0.5s
PBAR Barrancos 5.19 298 *e*Pn **Pn 17 21 10.6 -0.2**
PBAR *e*Sn **Sn 17 22 10.0 -0.7**
48nm,0.5s
ERTA Horta de San J 5.21 13 ⇓P **Pn 17 21 11.1 +0.2**
ERTA S **Sn 17 22 08.2 -2.8**
ERTA Horta de San J 5.21 13 ⇓P **Pn 17 21 11.1 +0.1**
6.6nm,0.1s,SNR=18
ERTA S **Sn 17 22 08.2 -2.8**
40nm,0.2s,SNR=5.5
ERTA Horta de San J 5.21 13 ⇓P **Pn 17 21 11.1 +0.1**
6.6nm,0.1s,SNR=18
ERTA S **Sn 17 22 08.2 -2.8**
40nm,0.2s,SNR=5.5
ERTA Horta de San J 5.21 13 P **Pn 17 21 11.1 +0.2**
6.6nm,0.1s,SNR=18
ERTA S **Sn 17 22 08.2 -2.8**
40nm,0.2s,SNR=5.5
GUD Guadarrama 5.28 335 P **Pn 17 21 12.4 +0.4**
GUD S **Sn 17 22 13.0 +0.1**
GUD Guadarrama 5.28 335 P **Pn 17 21 12.4 +0.4**
SNR=7.9
GUD S **Sn 17 22 13.0 +0.1**
52nm,0.3s,SNR=7.9
GUD Guadarrama 5.28 335 P **Pn 17 21 12.4 +0.4**
SNR=7.9
GUD S **Sn 17 22 13.0 +0.1**
52nm,0.3s,SNR=7.9
GUD Guadarrama 5.28 335 P **Pn 17 21 12.4 +0.4**
SNR=7.9
GUD S **Sn 17 22 13.0 +0.1**
52nm,0.3s,SNR=7.9
EGRO El Granado 5.30 290 P **Pn 17 21 12.5 +0.3**
EGRO S **Sn 17 22 11.7 -1.6**
EGRO El Granado 5.30 290 P **Pn 17 21 12.5 +0.3**
1.3nm,0.2s,SNR=30
EGRO S **Sn 17 22 11.7 -1.6**
96nm,0.5s,SNR=10
EGRO El Granado 5.30 290 P **Pn 17 21 12.5 +0.3**
1.3nm,0.2s,SNR=30
EGRO S **Sn 17 22 11.7 -1.6**
96nm,0.5s,SNR=10
EGRO El Granado 5.30 290 P **Pn 17 21 12.5 +0.3**
1.3nm,0.2s,SNR=30
EGRO S **Sn 17 22 11.7 -1.7**
96nm,0.5s,SNR=10
SET Setif 5.37 85 P **Pn 17 21 20.0 +6.9**
SET Setif 5.37 85 P **Pn 17 21 20.0 +6.9**
SET Setif 5.37 85 P **Pn 17 21 20.0 +6.9**
SET Setif 5.37 85 P **Pn 17 21 20.0 +6.9**
EBAD Badajoz 5.44 303 ⇓P **Pn 17 21 14.4 +0.2**
EBAD S **Sn 17 22 16.1 -0.7**
EBAD Badajoz 5.44 303 ⇓P **Pn 17 21 14.4 +0.2**
3.6nm,0.1s,SNR=18
EBAD S **Sn 17 22 16.1 -0.7**
54nm,0.2s,SNR=7.9
EBAD Badajoz 5.44 303 ⇓P **Pn 17 21 14.4 +0.2**
3.6nm,0.1s,SNR=18
EBAD S **Sn 17 22 16.1 -0.7**
54nm,0.2s,SNR=7.9
EBAD Badajoz 5.44 303 P **Pn 17 21 14.4 +0.3**
3.6nm,0.1s,SNR=18
EBAD S **Sn 17 22 16.1 -0.7**
54nm,0.2s,SNR=7.9
PVAQ Vaqueiros 5.45 288 *e*Pn **Pn 17 21 14.3 0.0**
PVAQ *e*Sn **Sn 17 22 14.8 -2.2**
PVAQ A 17 22 26.1
47nm,0.5s
PVAQ Vaqueiros 5.45 288 P **Pn 17 21 14.3 0.0**
PVAQ S **Sn 17 22 14.8 -2.2**
47nm,0.5s
PVAQ Vaqueiros 5.45 288 P **Pn 17 21 14.3 0.0**
PVAQ S **Sn 17 22 14.8 -2.2**
47nm,0.5s
PVAQ Vaqueiros 5.45 288 *e*Pn **Pn 17 21 14.3 0.0**
PVAQ *e*Sn **Sn 17 22 14.8 -2.2**
47nm,0.5s
CKHR Kef el Ahmar 5.46 87 P **Pn 17 21 14.0 -0.4**
CKHR Kef el Ahmar 5.46 87 P **Pn 17 21 14.0 -0.4**
CKHR Kef el Ahmar 5.46 87 P **Pn 17 21 14.0 -0.4**
CKHR Kef el Ahmar 5.46 87 P **Pn 17 21 14.0 -0.4**
PBDV Barranco-do-Ve 5.58 286 *e*Pn **Pn 17 21 16.2 +0.2**
PBDV *e*Sn **Sn 17 22 17.9 -2.3**
PBDV A 17 22 32.2
45nm,0.5s
PBDV Barranco-do-Ve 5.58 286 P **Pn 17 21 16.2 +0.2**
PBDV S **Sn 17 22 17.9 -2.3**
45nm,0.5s
PBDV Barranco-do-Ve 5.58 286 P **Pn 17 21 16.2 +0.2**
PBDV S **Sn 17 22 17.9 -2.3**
45nm,0.5s
PBDV Barranco-do-Ve 5.58 286 *e*Pn **Pn 17 21 16.2 +0.2**
PBDV *e*Sn **Sn 17 22 17.9 -2.3**
45nm,0.5s
EPLA Plasencia 5.67 319 ⇓P **Pn 17 21 18.3 +0.9**
EPLA S **Sn 17 22 21.6 -0.9**
EPLA Plasencia 5.67 319 ⇓P **Pn 17 21 18.3 +0.9**
11nm,0.2s,SNR=18
EPLA S **Sn 17 22 21.6 -0.9**
8.8nm,0.1s,SNR=7.9
EPLA Plasencia 5.67 319 ⇓P **Pn 17 21 18.3 +0.9**
11nm,0.2s,SNR=18
EPLA S **Sn 17 22 21.6 -0.9**
8.8nm,0.1s,SNR=7.9
EPLA Plasencia 5.67 319 P **Pn 17 21 18.3 +0.9**
11nm,0.2s,SNR=18
EPLA S **Sn 17 22 21.6 -0.9**
8.8nm,0.1s,SNR=7.9
PBEJ Beja 5.74 294 *e*Pn **Pn 17 21 18.6 +0.3**
PBEJ *e*Sn **Sn 17 22 23.4 -0.8**
PBEJ A 17 22 40.0
32nm,0.5s
PBEJ Beja 5.74 294 P **Pn 17 21 18.6 +0.3**
PBEJ S **Sn 17 22 23.4 -0.8**
16nm,0.5s
PBEJ Beja 5.74 294 P **Pn 17 21 18.6 +0.3**
PBEJ S **Sn 17 22 23.4 -0.8**
16nm,0.5s
PBEJ Beja 5.74 294 *e*Pn **Pn 17 21 18.6 +0.3**
PBEJ *e*Sn **Sn 17 22 23.4 -0.8**
32nm,0.5s
EPOB Poblet 5.74 17 ⇓P **Pn 17 21 17.9 -0.5**
EPOB S **Sn 17 22 18.0 -6.2**
EPOB Poblet 5.74 17 ⇓P **Pn 17 21 17.9 -0.5**
8.5nm,0.1s,SNR=18
EPOB S **Sn 17 22 18.0 -6.3**
44nm,0.3s,SNR=7.9
EPOB Poblet 5.74 17 ⇓P **Pn 17 21 17.9 -0.5**
8.5nm,0.1s,SNR=18
EPOB S **Sn 17 22 18.0 -6.3**
44nm,0.3s,SNR=7.9
EPOB Poblet 5.74 17 P **Pn 17 21 17.9 -0.4**
8.5nm,0.1s,SNR=18
PCVE Castro Verde 5.75 290 *e*Pn **Pn 17 21 19.2 +0.7**
PCVE *e*Sn **Sn 17 22 23.5 -1.0**
PCVE A 17 22 37.7
34nm,0.5s
PCVE Castro Verde 5.75 290 P **Pn 17 21 19.2 +0.7**
PCVE S **Sn 17 22 23.5 -1.0**
34nm,0.5s
PCVE Castro Verde 5.75 290 P **Pn 17 21 19.2 +0.7**
PCVE S **Sn 17 22 23.5 -1.0**
34nm,0.5s
PCVE Castro Verde 5.75 290 *e*Pn **Pn 17 21 19.2 +0.7**
PCVE *e*Sn **Sn 17 22 23.5 -1.0**
34nm,0.5s
TZC Tazercounte 5.75 231 P **Pn 17 21 18.0 -0.5**
TZC S **Sn 17 22 15.0 -10**
TZC Tazercounte 5.75 231 P **Pn 17 21 18.0 -0.5**
TZC S **Sn 17 22 15.0 -10**
DFRA Djebel Bou Aff 5.77 81 P **Pn 17 21 17.0 -1.7**
DFRA Djebel Bou Aff 5.77 81 P **Pn 17 21 17.0 -1.7**
DFRA Djebel Bou Aff 5.77 81 P **Pn 17 21 17.0 -1.7**
DFRA Djebel Bou Aff 5.77 81 P **Pn 17 21 17.0 -1.7**
ESAC San Caprasio 5.86 5 P **Pn 17 21 19.7 -0.1**
ESAC S **Sn 17 22 26.9 -0.1**
ESAC San Caprasio 5.86 5 P **Pn 17 21 19.7 -0.1**
3.2nm,0.1s,SNR=4.0
ESAC S **Sn 17 22 26.9 -0.1**
76nm,0.4s,SNR=7.9
ESAC San Caprasio 5.86 5 P **Pn 17 21 19.7 -0.1**
3.2nm,0.1s,SNR=4.0
ESAC S **Sn 17 22 26.9 -0.1**
76nm,0.4s,SNR=7.9
ESAC San Caprasio 5.86 5 P **Pn 17 21 19.7 -0.1**
3.2nm,0.1s,SNR=4.0
ESAC S **Sn 17 22 26.9 -0.1**
76nm,0.4s,SNR=7.9
PESTR Estremoz 5.89 302 *e*Pn **Pn 17 21 21.0 +0.7**
PESTR *e*Sn **Sn 17 22 27.7 -0.1**
PESTR A 17 22 59.3
48nm,0.7s
PESTR Estremoz 5.89 302 P **Pn 17 21 21.0 +0.7**
PESTR S **Sn 17 22 27.7 -0.1**
48nm,0.7s
PESTR Estremoz 5.89 302 P **Pn 17 21 21.0 +0.7**
PESTR S **Sn 17 22 27.7 -0.1**
48nm,0.7s
PESTR Estremoz 5.89 302 *e*Pn **Pn 17 21 21.0 +0.7**
PESTR *e*Sn **Sn 17 22 27.7 -0.1**
48nm,0.7s
MAHO Mahon 5.90 46 ⇓P **Pn 17 21 19.1 -1.3**
MAHO S **Sn 17 22 18.7 -9.3**
MAHO Mahon 5.90 46 ⇓P **Pn 17 21 19.1 -1.3**
MAHO S **Sn 17 22 18.7 -9.3**
MAHO Mahon 5.90 46 *i* P **Pn 17 21 19.1 -1.3**
MESJ Messejana 5.95 291 *e*P **Pn 17 21 21.7 +0.5**
MESJ *e*S **Sn 17 22 27.1 -2.2**
MESJ Messejana 5.95 291 P **Pn 17 21 21.7 +0.6**
MESJ S **Sn 17 22 27.1 -2.2**
MESJ Messejana 5.95 291 P **Pn 17 21 21.7 +0.6**
MESJ S **Sn 17 22 27.1 -2.2**
EVO Evora 6.04 298 *e*Pn **Pn 17 21 23.4 +1.0**
EVO *e*Sn **Sn 17 22 28.5 -3.0**
152nm,0.6s
EVO Evora 6.04 298 *e*Pn **Pn 17 21 22.9 +0.5**
EVO *e*Sn **Sn 17 22 29.3 -2.2**
EVO Evora 6.04 298 P **Pn 17 21 22.9 +0.5**
EVO S **Sn 17 22 29.3 -2.2**
EVO Evora 6.04 298 P **Pn 17 21 22.9 +0.5**
EVO S **Sn 17 22 29.3 -2.2**
EVO Evora 6.04 298 *e*Pn **Pn 17 21 22.9 +0.5**
EVO *e*Sn **Sn 17 22 29.3 -2.2**
PMRV Marv??o 6.04 308 *e*Pn **Pn 17 21 23.0 +0.5**
PMRV *e*Sn **Sn 17 22 28.8 -2.9**
PMRV A 17 23 04.0
58nm,0.6s
PMRV Marv??o 6.04 308 P **Pn 17 21 23.0 +0.5**
PMRV S **Sn 17 22 28.8 -2.9**
58nm,0.6s
PMRV Marv??o 6.04 308 P **Pn 17 21 23.0 +0.5**
PMRV S **Sn 17 22 28.8 -2.9**
58nm,0.6s
PMRV Marv??o 6.04 308 *e*Pn **Pn 17 21 23.0 +0.5**
EVOP Sao Brissos 6.11 298 *e*Pn **Pn 17 21 23.4 0.0**
MORF Marmelete 6.15 286 *e*Pn **Pn 17 21 24.6 +0.7**
MORF *e*Sn **Sn 17 22 35.2 +0.9**
MORF A 17 22 40.2
47nm,0.4s
MORF Marmelete 6.15 286 P **Pn 17 21 24.6 +0.7**
MORF S **Sn 17 22 35.2 +0.9**
47nm,0.4s
MORF Marmelete 6.15 286 P **Pn 17 21 24.6 +0.7**
MORF S **Sn 17 22 35.2 +0.9**
47nm,0.4s
MORF Marmelete 6.15 286 *e*Pn **Pn 17 21 24.6 +0.7**
MORF *e*Sn **Sn 17 22 35.2 +0.9**
47nm,0.4s
CASM Ain Smara 6.25 84 P **Pn 17 21 15.0 -10**
CASM Ain Smara 6.25 84 P **Pn 17 21 15.0 -10**
CASM Ain Smara 6.25 84 P **Pn 17 21 15.0 -10**
CASM Ain Smara 6.25 84 P **Pn 17 21 15.0 -10**
PTEO Sao Teotonio 6.26 288 *e*Pn **Pn 17 21 26.1 +0.7**
PTEO *e*Sn **Sn 17 22 34.9 -2.1**
PTEO A 17 22 43.4
64nm,0.5s
PTEO Sao Teotonio 6.26 288 P **Pn 17 21 26.1 +0.7**
PTEO S **Sn 17 22 34.9 -2.1**
32nm,0.5s
PTEO Sao Teotonio 6.26 288 P **Pn 17 21 26.1 +0.7**
PTEO S **Sn 17 22 34.9 -2.1**
32nm,0.5s
PTEO Sao Teotonio 6.26 288 *e*Pn **Pn 17 21 26.1 +0.7**
PTEO *e*Sn **Sn 17 22 34.9 -2.1**
64nm,0.5s
PFVI Vila Bisbo 6.26 284 *e*Pn **Pn 17 21 26.6 +1.2**
PFVI *e*Sn **Sn 17 22 35.1 -1.9**
PFVI A 17 22 43.0
57nm,0.6s
PFVI Vila Bisbo 6.26 284 P **Pn 17 21 26.5 +1.1**
PFVI S **Sn 17 22 35.0 -2.0**
PFVI Vila Bisbo 6.26 284 P **Pn 17 21 26.5 +1.1**
7.4nm,0.2s,SNR=8.8
PFVI S **Sn 17 22 35.0 -2.0**
SNR=7.9
PFVI Vila Bisbo 6.26 284 P **Pn 17 21 26.5 +1.1**
7.4nm,0.2s,SNR=8.8
PFVI S **Sn 17 22 35.0 -2.0**
SNR=7.9
PFVI Vila Bisbo 6.26 284 P **Pn 17 21 26.5 +1.1**
7.4nm,0.2s,SNR=8.8
PFVI *e*Sn **Sn 17 22 35.1 -1.9**
57nm,0.6s
MOE Montemor 6.28 297 *e*Pn **Pn 17 21 26.5 +0.9**
MOE *e*Sn **Sn 17 22 37.5 +0.1**
MOE Montemor 6.28 297 P **Pn 17 21 26.5 +0.9**
MOE S **Sn 17 22 37.5 +0.1**
MOE Montemor 6.28 297 P **Pn 17 21 26.5 +0.9**
MOE S **Sn 17 22 37.5 +0.1**
MOE Montemor 6.28 297 *e*Pn **Pn 17 21 26.5 +0.9**
MOE *e*Sn **Sn 17 22 37.5 +0.1**
PCBR Castelo Branco 6.34 310 *i* Pn **Pn 17 21 28.0 +1.5**
PCBR *e*Sn **Sn 17 22 36.0 -2.9**
PCBR A 17 22 43.8
49nm,0.7s
PCBR Castelo Branco 6.34 310 ⇓P **Pn 17 21 28.0 +1.5**
PCBR S **Sn 17 22 36.0 -2.9**
25nm,0.7s
PCBR Castelo Branco 6.34 310 ⇓P **Pn 17 21 28.0 +1.5**
PCBR S **Sn 17 22 36.0 -2.9**
25nm,0.7s
EMIR Miracle 6.38 19 ⇓P **Pn 17 21 27.1 0.0**
EMIR S **Sn 17 22 35.7 -4.3**
EMIR Miracle 6.38 19 ⇓P **Pn 17 21 27.1 0.0**
28nm,0.2s,SNR=18
EMIR S **Sn 17 22 35.7 -4.3**
17nm,0.3s,SNR=7.9
EMIR Miracle 6.38 19 ⇓P **Pn 17 21 27.1 0.0**
28nm,0.2s,SNR=18
EMIR S **Sn 17 22 35.7 -4.3**
17nm,0.3s,SNR=7.9
EMIR Miracle 6.38 19 P **Pn 17 21 27.1 0.0**
28nm,0.2s,SNR=18
CFON Fontmartina 6.52 25 ⇑P **Pn 17 21 27.9 -1.0**
CFON S **Sn 17 22 37.5 -5.9**
CFON Fontmartina 6.52 25 ⇑P **Pn 17 21 27.9 -1.0**
17nm,0.2s,SNR=18
CFON S **Sn 17 22 37.5 -5.9**
20nm,0.2s,SNR=4.0
CFON Fontmartina 6.52 25 ⇑P **Pn 17 21 27.9 -1.0**
17nm,0.2s,SNR=18
CFON S **Sn 17 22 37.5 -5.9**
20nm,0.2s,SNR=4.0
CFON Fontmartina 6.52 25 P **Pn 17 21 27.9 -1.1**
17nm,0.2s,SNR=18
MTE Manteigas 6.72 314 *e*Pn **Pn 17 21 33.5 +1.7**
MTE *e*Sn **Sn 17 22 47.0 -1.4**
MTE A 17 23 21.5
53nm,0.1s
MTE Manteigas 6.72 314 *e*P **Pn 17 21 32.7 +1.0**
80nm,0.7s
MTE Manteigas 6.72 314 P **Pn 17 21 33.5 +1.7**
MTE S **Sn 17 22 47.0 -1.4**
26nm,0.1s
MTE Manteigas 6.72 314 P **Pn 17 21 33.5 +1.7**
MTE S **Sn 17 22 47.0 -1.4**
26nm,0.1s
MTE Manteigas 6.72 314 *e*P **Pn 17 21 32.7 +0.9**
80nm,0.7s
MTE Manteigas 6.72 314 *e*Pn **Pn 17 21 33.5 +1.7**
MTE *e*Sn **Sn 17 22 47.0 -1.4**
53nm,0.1s
CSOR Sort 6.73 15 P **Pn 17 21 32.6 +0.8**
CSOR S **Sn 17 22 45.6 -3.0**
CSOR Sort 6.73 15 P **Pn 17 21 32.6 +0.8**
2.7nm,0.2s,SNR=20
CSOR S **Sn 17 22 45.6 -3.0**
6.4nm,0.2s,SNR=7.9
CSOR Sort 6.73 15 P **Pn 17 21 32.6 +0.8**
2.7nm,0.2s,SNR=20
CSOR S **Sn 17 22 45.6 -3.0**
6.4nm,0.2s,SNR=7.9
CSOR Sort 6.73 15 P **Pn 17 21 32.6 +0.7**
2.7nm,0.2s,SNR=20
ECRI Cripan 6.79 352 P **Pn 17 21 33.0 +0.3**
ECRI Cripan 6.79 352 P **Pn 17 21 33.0 +0.4**
1.1nm,0.1s,SNR=7.9
ECRI S **Sn 17 22 48.8 -1.1**
6.0nm,0.3s,SNR=7.9
ECRI Cripan 6.79 352 P **Pn 17 21 33.0 +0.4**
1.1nm,0.1s,SNR=7.9
ECRI S **Sn 17 22 48.8 -1.1**
6.0nm,0.3s,SNR=7.9
ECRI Cripan 6.79 352 P **Pn 17 21 33.0 +0.3**
1.1nm,0.1s,SNR=7.9
PTOM Tomar 6.81 305 *e*Pn **Pn 17 21 33.8 +0.8**
PTOM *e*Sn **Sn 17 22 49.7 -0.9**
PTOM Tomar 6.81 305 P **Pn 17 21 33.8 +0.8**
PTOM S **Sn 17 22 49.7 -0.9**
PTOM Tomar 6.81 305 P **Pn 17 21 33.8 +0.8**
PTOM S **Sn 17 22 49.7 -0.9**
PTOM Tomar 6.81 305 *e*Pn **Pn 17 21 33.8 +0.8**
PTOM *e*Sn **Sn 17 22 49.7 -0.9**
IUNC Unciti 6.86 358 P **Pn 17 21 35.2 +1.5**
9.0nm,0.3s,SNR=12
IUNC S **Sn 17 22 46.5 -5.3**
15nm,0.5s,SNR=7.9
IUNC Unciti 6.86 358 P **Pn 17 21 35.2 +1.5**
9.0nm,0.3s,SNR=12
IUNC S **Sn 17 22 46.5 -5.3**
15nm,0.5s,SNR=7.9
IUNC Unciti 6.86 358 P **Pn 17 21 35.2 +1.5**
9.0nm,0.3s,SNR=12
EBIE Bielsa 6.87 8 P **Pn 17 21 34.9 +1.1**
EBIE Bielsa 6.87 8 P **Pn 17 21 34.9 +1.1**
0.7nm,0.1s,SNR=4.0
EBIE S **Sn 17 22 49.6 -2.4**
3.3nm,0.3s,SNR=7.9
EBIE Bielsa 6.87 8 P **Pn 17 21 34.9 +1.1**
0.7nm,0.1s,SNR=4.0
EBIE S **Sn 17 22 49.6 -2.4**
3.3nm,0.3s,SNR=7.9
EBIE Bielsa 6.87 8 P **Pn 17 21 34.9 +1.1**
0.7nm,0.1s,SNR=4.0
EARA Aranguren 6.88 358 P **Pn 17 21 36.3 +2.3**
12nm,0.3s,SNR=7.9
EARA S **Sn 17 22 47.0 -5.3**
6.5nm,0.5s,SNR=7.9
EARA Aranguren 6.88 358 P **Pn 17 21 36.3 +2.3**
12nm,0.3s,SNR=7.9
EARA S **Sn 17 22 47.0 -5.3**
6.5nm,0.5s,SNR=7.9
EARA Aranguren 6.88 358 P **Pn 17 21 36.3 +2.4**
12nm,0.3s,SNR=7.9
IZUN Zunzarren 6.97 359 P **Pn 17 21 37.2 +2.0**
12nm,0.3s,SNR=7.9
IZUN S **Sn 17 22 51.7 -2.7**
3.3nm,0.3s,SNR=7.9

IZUN Zunzarren 6.97 359 P Pn 17 21 37.2 +2.0
12nm,0.3s,SNR=7.9
IZUN S Sn 17 22 51.7 -2.7
3.3nm,0.3s,SNR=7.9
IZUN Zunzarren 6.97 359 P Pn 17 21 37.2 +2.1
12nm,0.3s,SNR=7.9
MVO Moncorvo 6.97 321 *e*Pn **Pn 17 21 36.2 +1.1**
MVO *e*Sn **Sn 17 22 52.2 -2.2**
MVO A 17 23 38.6
59nm,0.3s
MVO Moncorvo 6.97 321 ⇓P **Pn 17 21 36.2 +1.0**
MVO S **Sn 17 22 53.8 -0.6**
MVO Moncorvo 6.97 321 ⇓P **Pn 17 21 36.2 +1.0**
103nm,0.7s,SNR=18
MVO S **Sn 17 22 53.8 -0.6**
22nm,0.3s,SNR=7.9
MVO Moncorvo 6.97 321 ⇓P **Pn 17 21 36.2 +1.0**
103nm,0.7s,SNR=18
MVO S **Sn 17 22 53.8 -0.6**
22nm,0.3s,SNR=7.9
MVO Moncorvo 6.97 321 P **Pn 17 21 36.2 +1.1**
103nm,0.7s,SNR=18
MVO *e*Sn **Sn 17 22 52.2 -2.2**
59nm,0.3s
MVO S **Sn 17 22 53.8 -0.6**
22nm,0.3s,SNR=7.9
VALF Valcebollere 6.97 20 P **Pn 17 21 35.5 +0.3**
VALF Valcebollere 6.97 20 P **Pn 17 21 35.5 +0.3**
EORO Oroz-Betelu 7.00 359 ⇑P **Pn 17 21 37.2 +1.7**
SNR=18
EORO S **Sn 17 22 52.2 -2.9**
8.9nm,0.3s,SNR=7.9
EORO Oroz-Betelu 7.00 359 ⇑P **Pn 17 21 37.2 +1.7**
SNR=18
EORO S **Sn 17 22 52.2 -2.9**
8.9nm,0.3s,SNR=7.9
EORO Oroz-Betelu 7.00 359 P **Pn 17 21 37.2 +1.7**
SNR=18
RESF Ens 7.01 9 P **Pn 17 21 37.2 +1.4**
RESF Ens 7.01 9 P **Pn 17 21 37.2 +1.4**
ETSF Etsaut 7.02 4 *e*Pn **Pn 17 21 35.6 -0.2**
ETSF *e*Sn **Sn 17 22 48.3 -7.4**
11nm,0.5s
ETSF Etsaut 7.02 4 P **Pn 17 21 35.6 -0.2**
ETSF S **Sn 17 22 48.3 -7.4**
5.7nm,0.5s
ETSF Etsaut 7.02 4 P **Pn 17 21 35.6 -0.2**
ETSF S **Sn 17 22 48.3 -7.4**
5.7nm,0.5s
ETSF Etsaut 7.02 4 *e*Pn **Pn 17 21 35.6 -0.2**
CLLI Llivia 7.03 20 P **Pn 17 21 37.1 +1.1**
CLLI S **Sn 17 22 52.1 -3.9**
1.2nm,0.1s,SNR=4.0
CLLI Llivia 7.03 20 P **Pn 17 21 37.1 +1.1**
CLLI S **Sn 17 22 52.1 -3.9**
2.1nm,0.1s,SNR=7.9
CLLI Llivia 7.03 20 P **Pn 17 21 37.1 +1.1**
1.2nm,0.1s,SNR=4.0
CLLI S **Sn 17 22 52.1 -3.9**
2.1nm,0.1s,SNR=7.9
CLLI Llivia 7.03 20 P **Pn 17 21 37.1 +1.1**
1.2nm,0.1s,SNR=4.0
VIEF Viey 7.05 7 P **Pn 17 21 36.9 +0.6**
VIEF Viey 7.05 7 P **Pn 17 21 36.9 +0.6**
IUSE Utxeti 7.05 358 P **Pn 17 21 38.9 +2.5**
20nm,0.6s,SNR=13
IUSE Utxeti 7.05 358 P **Pn 17 21 38.9 +2.5**
20nm,0.6s,SNR=13
IUSE Utxeti 7.05 358 P **Pn 17 21 38.9 +2.6**
20nm,0.6s,SNR=13
PMAFR Mafra 7.12 298 *e*Pn **Pn 17 21 37.8 +0.6**
PMAFR *e*Sn **Sn 17 22 57.4 -0.7**
PMAFR Mafra 7.12 298 P **Pn 17 21 37.8 +0.6**
54nm,0.6s,SNR=4.0
PMAFR S **Sn 17 22 57.2 -0.9**
20nm,0.2s,SNR=7.9
PMAFR Mafra 7.12 298 P **Pn 17 21 37.8 +0.6**
54nm,0.6s,SNR=4.0
PMAFR S **Sn 17 22 57.2 -0.9**
20nm,0.2s,SNR=7.9
PMAFR Mafra 7.12 298 P **Pn 17 21 37.8 +0.6**
54nm,0.6s,SNR=4.0
PMAFR *e*Sn **Sn 17 22 57.4 -0.7**
PVIS Viseu 7.13 315 *e*Pn **Pn 17 21 38.9 +1.5**
PVIS *e*Sn **Sn 17 22 56.4 -2.0**
PVIS A 17 23 12.4
29nm,0.6s
PVIS Viseu 7.13 315 P **Pn 17 21 38.9 +1.5**
PVIS S **Sn 17 22 56.4 -2.0**
14nm,0.6s
PVIS Viseu 7.13 315 P **Pn 17 21 38.9 +1.5**
PVIS S **Sn 17 22 56.4 -2.0**
14nm,0.6s
PVIS Viseu 7.13 315 *e*Pn **Pn 17 21 38.9 +1.5**
PVIS *e*Sn **Sn 17 22 56.4 -2.0**
29nm,0.6s
LARF Larrau 7.14 1 P **Pn 17 21 39.2 +1.7**
LARF Larrau 7.14 1 P **Pn 17 21 39.2 +1.7**
REYF Montagne du Re 7.20 5 P **Pn 17 21 39.6 +1.3**
REYF Montagne du Re 7.20 5 P **Pn 17 21 39.6 +1.3**
SJPF Ste Jean 7.22 360 *e*Pn **Pn 17 21 38.9 +0.4**
SJPF Ste Jean 7.22 360 P **Pn 17 21 38.9 +0.4**
SJPF Ste Jean 7.22 360 P **Pn 17 21 38.9 +0.4**
SJPF Ste Jean 7.22 360 *e*Pn **Pn 17 21 38.9 +0.4**
LABF Labassere 7.22 8 P **Pn 17 21 39.5 +0.9**
LABF Labassere 7.22 8 P **Pn 17 21 39.5 +0.9**
EPF Esparros 7.23 9 *e*Pn **Pn 17 21 37.5 -1.3**
EPF *e*Sn **Sn 17 22 53.7 -7.2**
15nm,0.3s
EPF Esparros 7.23 9 P **Pn 17 21 37.5 -1.3**
EPF S **Sn 17 22 53.7 -7.2**
7.4nm,0.3s
EPF Esparros 7.23 9 P **Pn 17 21 37.5 -1.3**
EPF S **Sn 17 22 53.7 -7.2**
7.4nm,0.3s
EPF Esparros 7.23 9 *e*Pn **Pn 17 21 37.5 -1.3**
OUK Oukaimeden 7.25 232 P **Pn 17 21 40.0 +0.9**
OUK S **Sn 17 22 54.0 -7.5**
OUK Oukaimeden 7.25 232 P **Pn 17 21 40.0 +0.9**
OUK S **Sn 17 22 54.0 -7.5**
OUK Oukaimeden 7.25 232 *i* P **Pn 17 21 40.0 +0.9**
ELIZ Elizondo 7.27 358 P **Pn 17 21 40.6 +1.3**
ELIZ Elizondo 7.27 358 P **Pn 17 21 40.6 +1.3**
20nm,0.3s,SNR=28
ELIZ Elizondo 7.27 358 P **Pn 17 21 40.6 +1.3**
20nm,0.3s,SNR=28
ELIZ Elizondo 7.27 358 P **Pn 17 21 40.6 +1.3**
20nm,0.3s,SNR=28
FILF Fillols 7.28 23 P **Pn 17 21 38.7 -0.7**
FILF Fillols 7.28 23 P **Pn 17 21 38.7 -0.7**
EJON La Jonquera 7.28 25 P **Pn 17 21 39.0 -0.5**
EJON S **Sn 17 22 56.0 -6.2**
EJON La Jonquera 7.28 25 P **Pn 17 21 39.0 -0.5**
SNR=7.9
EJON S **Sn 17 22 56.0 -6.2**
0.7nm,0.1s,SNR=7.9
EJON La Jonquera 7.28 25 P **Pn 17 21 39.0 -0.5**
SNR=7.9
EJON S **Sn 17 22 56.0 -6.2**
0.7nm,0.1s,SNR=7.9
EJON La Jonquera 7.28 25 P **Pn 17 21 39.0 -0.5**
SNR=7.9
CARF Carcanieres 7.29 20 P **Pn 17 21 40.0 +0.5**
CARF S **Sn 17 23 13.3 +11**
CARF Carcanieres 7.29 20 P **Pn 17 21 40.0 +0.5**
PBRG Braganca 7.32 326 *e*Pn **Pn 17 21 41.1 +1.2**
PBRG *e*Sn **Sn 17 23 02.6 -0.4**
PBRG A 17 23 49.7
24nm,0.6s
PBRG Braganca 7.32 326 P **Pn 17 21 41.1 +1.2**
PBRG S **Sn 17 23 02.6 -0.4**
12nm,0.6s
PBRG Braganca 7.32 326 P **Pn 17 21 41.1 +1.2**
PBRG S **Sn 17 23 02.6 -0.4**
12nm,0.6s
PBRG Braganca 7.32 326 *e*Pn **Pn 17 21 41.1 +1.2**
PBRG *e*Sn **Sn 17 23 02.6 -0.4**
24nm,0.6s
ORDF Ordiarp 7.32 2 P **Pn 17 21 41.2 +1.2**
ORDF Ordiarp 7.32 2 P **Pn 17 21 41.2 +1.2**
EALK Alkurruntz 7.33 358 P **Pn 17 21 40.4 +0.3**
EALK S **Sn 17 23 00.0 -3.2**
EALK Alkurruntz 7.33 358 P **Pn 17 21 40.4 +0.3**
0.7nm,0.3s,SNR=4.0
EALK S **Sn 17 23 00.0 -3.2**
14nm,0.4s,SNR=4.0
EALK Alkurruntz 7.33 358 P **Pn 17 21 40.4 +0.3**
0.7nm,0.3s,SNR=4.0
EALK S **Sn 17 23 00.0 -3.2**
14nm,0.4s,SNR=4.0
EALK Alkurruntz 7.33 358 P **Pn 17 21 40.4 +0.4**
0.7nm,0.3s,SNR=4.0
OSSF Osses 7.36 360 P **Pn 17 21 41.9 +1.4**
OSSF Osses 7.36 360 P **Pn 17 21 41.9 +1.4**
PVRL Vila Real 7.41 319 *e*Pn **Pn 17 21 42.9 +1.7**
PVRL *e*Sn **Sn 17 23 04.1 -1.1**
PVRL A 17 23 06.7
31nm,0.3s
PVRL Vila Real 7.41 319 P **Pn 17 21 42.9 +1.7**
PVRL S **Sn 17 23 04.1 -1.1**
15nm,0.3s
PVRL Vila Real 7.41 319 P **Pn 17 21 42.9 +1.7**
PVRL S **Sn 17 23 04.1 -1.1**
15nm,0.3s
PVRL Vila Real 7.41 319 *e*Pn **Pn 17 21 42.9 +1.7**
PVRL *e*Sn **Sn 17 23 04.1 -1.1**
31nm,0.3s
ECAL Calabor 7.42 326 P **Pn 17 21 42.5 +1.2**
ECAL S **Sn 17 23 05.2 -0.3**
ECAL Calabor 7.42 326 P **Pn 17 21 42.5 +1.2**
29nm,0.4s,SNR=42
ECAL S **Sn 17 23 05.3 -0.3**
5.9nm,0.2s,SNR=7.9
ECAL Calabor 7.42 326 P **Pn 17 21 42.5 +1.2**
29nm,0.4s,SNR=42
ECAL S **Sn 17 23 05.3 -0.3**
5.9nm,0.2s,SNR=7.9
ECAL Calabor 7.42 326 P **Pn 17 21 42.5 +1.1**
29nm,0.4s,SNR=42
ECAL S **Sn 17 23 05.2 -0.4**
ELAN Lanestosa 7.53 348 P **Pn 17 21 43.9 +1.0**
ELAN Lanestosa 7.53 348 P **Pn 17 21 43.9 +1.0**
8.7nm,0.2s,SNR=42
ELAN S **Sn 17 23 05.6 -2.7**
29nm,0.7s,SNR=7.9
ELAN Lanestosa 7.53 348 P **Pn 17 21 43.9 +1.0**
8.7nm,0.2s,SNR=42
ELAN S **Sn 17 23 05.6 -2.7**
29nm,0.7s,SNR=7.9
ELAN Lanestosa 7.53 348 P **Pn 17 21 43.9 +1.0**
8.7nm,0.2s,SNR=42
LRDF Laroque-de-Fa 7.62 21 P **Pn 17 21 44.4 +0.4**
LRDF Laroque-de-Fa 7.62 21 P **Pn 17 21 44.4 +0.4**
CIA Chichaoua 7.62 238 P **Pn 17 21 45.0 +0.8**
CIA S **Sn 17 23 00.0 -11**
CIA Chichaoua 7.62 238 P **Pn 17 21 45.0 +0.8**
CIA S **Sn 17 23 00.0 -11**
CIA Chichaoua 7.62 238 *i* P **Pn 17 21 45.0 +0.8**
PCAB Cabril 7.88 320 *e*Pn **Pn 17 21 48.7 +1.1**
PCAB *e*Sn **Sn 17 23 13.8 -3.1**
PCAB A 17 23 18.4
34nm,0.3s
PCAB Cabril 7.88 320 P **Pn 17 21 48.7 +1.1**
PCAB S **Sn 17 23 13.8 -3.1**
17nm,0.3s
PCAB Cabril 7.88 320 P **Pn 17 21 48.7 +1.1**
PCAB S **Sn 17 23 13.8 -3.1**
17nm,0.3s
PCAB Cabril 7.88 320 *e*Pn **Pn 17 21 48.7 +1.1**
MTLF Montolieu 7.90 19 *e*Pn **Pn 17 21 46.6 -1.3**
MTLF Montolieu 7.90 19 P **Pn 17 21 46.6 -1.3**
MTLF Montolieu 7.90 19 P **Pn 17 21 46.6 -1.3**
MTLF Montolieu 7.90 19 *e*Pn **Pn 17 21 46.6 -1.3**
ERUA La Rua 7.96 326 P **Pn 17 21 49.9 +1.2**
34nm,0.9s,SNR=7.9
ERUA S **Sn 17 23 12.8 -6.1**
9.1nm,0.4s,SNR=7.9
ERUA La Rua 7.96 326 P **Pn 17 21 49.9 +1.2**
34nm,0.9s,SNR=7.9
ERUA S **Sn 17 23 12.8 -6.1**
9.1nm,0.4s,SNR=7.9
ELOB Lobios 8.01 320 P **Pn 17 21 50.5 +1.1**
ELOB S **Sn 17 23 17.8 -2.3**
ELOB Lobios 8.01 320 P **Pn 17 21 50.5 +1.1**
7.8nm,0.1s,SNR=56
ELOB S **Sn 17 23 17.8 -2.3**
16nm,0.2s,SNR=7.9
ELOB Lobios 8.01 320 P **Pn 17 21 50.5 +1.1**
7.8nm,0.1s,SNR=56
ELOB S **Sn 17 23 17.8 -2.3**
16nm,0.2s,SNR=7.9
ELOB Lobios 8.01 320 P **Pn 17 21 50.5 +1.1**
7.8nm,0.1s,SNR=56
ELOB S **Sn 17 23 17.8 -2.3**
16nm,0.2s,SNR=7.9
JHA Jbel Lahdid 8.01 241 P **Pn 17 21 49.0 -0.5**
JHA S **Sn 17 23 11.0 -9.1**
JHA Jbel Lahdid 8.01 241 P **Pn 17 21 49.0 -0.5**
JHA S **Sn 17 23 11.0 -9.1**
JHA Jbel Lahdid 8.01 241 *e*P **Pn 17 21 49.0 -0.5**
EARI Arriondas 8.02 339 P **Pn 17 21 50.7 +1.1**
EARI S **Sn 17 23 17.9 -2.4**
EARI Arriondas 8.02 339 P **Pn 17 21 50.7 +1.1**
39nm,0.6s,SNR=90
EARI S **Sn 17 23 17.9 -2.4**
0.8nm,0.2s,SNR=7.9
EARI Arriondas 8.02 339 P **Pn 17 21 50.7 +1.1**
39nm,0.6s,SNR=90
EARI S **Sn 17 23 17.9 -2.4**
0.8nm,0.2s,SNR=7.9
EARI Arriondas 8.02 339 P **Pn 17 21 50.7 +1.1**
39nm,0.6s,SNR=90
EARI S **Sn 17 23 17.9 -2.4**
0.8nm,0.2s,SNR=7.9
EZAM Zamans 8.54 319 P **Pn 17 21 56.4 -0.3**
EZAM Zamans 8.54 319 P **Pn 17 21 56.4 -0.4**
16nm,0.3s,SNR=7.9
EZAM Zamans 8.54 319 P **Pn 17 21 56.4 -0.4**
16nm,0.3s,SNR=7.9
EZAM Zamans 8.54 319 P **Pn 17 21 56.4 -0.3**
16nm,0.3s,SNR=7.9
EPON Pontenova 8.73 330 P **Pn 17 21 59.8 +0.6**
EPON S **Sn 17 23 33.6 -4.0**
EPON Pontenova 8.73 330 P **Pn 17 21 59.8 +0.6**
7.2nm,0.3s,SNR=4.0
EPON S **Sn 17 23 33.6 -4.0**
4.0nm,0.2s,SNR=7.9
EPON Pontenova 8.73 330 P **Pn 17 21 59.8 +0.6**
7.2nm,0.3s,SNR=4.0
EPON S **Sn 17 23 33.6 -4.0**
4.0nm,0.2s,SNR=7.9
EPON Pontenova 8.73 330 P **Pn 17 21 59.8 +0.5**
7.2nm,0.3s,SNR=4.0
LASF Ste Croix 9.05 24 *e*Pn **Pn 17 22 02.0 -1.7**
LASF Ste Croix 9.05 24 P **Pn 17 22 02.0 -1.7**
LASF Ste Croix 9.05 24 P **Pn 17 22 02.0 -1.7**
LASF Ste Croix 9.05 24 *e*Pn **Pn 17 22 02.0 -1.7**
LFF La Frestale 9.16 9 *e*Pn **Pn 17 22 03.3 -1.9**
LFF La Frestale 9.16 9 P **Pn 17 22 03.3 -1.9**
LFF La Frestale 9.16 9 P **Pn 17 22 03.3 -1.9**
LFF La Frestale 9.16 9 *e*Pn **Pn 17 22 03.3 -1.9**
YBT Youssef Ben Ta 9.21 231 P **Pn 17 22 06.0 +0.1**
YBT S **Sn 17 23 39.0 -11**
YBT Youssef Ben Ta 9.21 231 P **Pn 17 22 06.0 +0.1**
YBT S **Sn 17 23 39.0 -11**
EMAZ Mazaricos 9.26 322 P **Pn 17 22 08.6 +2.0**
EMAZ Mazaricos 9.26 322 P **Pn 17 22 08.6 +2.0**
2.6nm,0.1s,SNR=6.2
EMAZ Mazaricos 9.26 322 P **Pn 17 22 08.6 +2.0**
2.6nm,0.1s,SNR=6.2
EMAZ Mazaricos 9.26 322 P **Pn 17 22 08.6 +2.0**
2.6nm,0.1s,SNR=6.2
CAF Calviac 9.37 14 *e*Pn **Pn 17 22 07.7 -0.3**
CAF Calviac 9.37 14 P **Pn 17 22 07.7 -0.3**
CAF Calviac 9.37 14 P **Pn 17 22 07.7 -0.3**
CAF Calviac 9.37 14 *e*Pn **Pn 17 22 07.7 -0.3**
LMR La Mourre 9.52 36 *e*Pn **Pn 17 22 09.8 -0.4**
LMR *e*Sn **Sn 17 23 49.8 -7.4**
8.4nm,0.3s
LMR La Mourre 9.52 36 P **Pn 17 22 09.8 -0.4**
LMR S **Sn 17 23 49.8 -7.4**
4.2nm,0.3s
LMR La Mourre 9.52 36 P **Pn 17 22 09.8 -0.4**
LMR S **Sn 17 23 49.8 -7.4**
4.2nm,0.3s
LMR La Mourre 9.52 36 *e*Pn **Pn 17 22 09.8 -0.4**
SMRF Simiane la Rot 9.61 31 *e*Pn **Pn 17 22 10.3 -1.0**
SMRF *e*Sn **Sn 17 23 51.5 -7.8**
4.2nm,0.6s
SMRF Simiane la Rot 9.61 31 P **Pn 17 22 10.3 -1.0**
SMRF S **Sn 17 23 51.5 -7.8**
4.2nm,0.6s
SMRF Simiane la Rot 9.61 31 *e*Pn **Pn 17 22 10.3 -1.0**
FRF La Foret Royal 9.76 36 *e*Pn **Pn 17 22 12.0 -1.4**
FRF *e*Sn **Sn 17 23 55.3 -7.7**
5.4nm,0.3s
FRF La Foret Royal 9.76 36 P **Pn 17 22 12.0 -1.4**
FRF S **Sn 17 23 55.3 -7.7**
2.7nm,0.3s
FRF La Foret Royal 9.76 36 P **Pn 17 22 12.0 -1.4**
FRF S **Sn 17 23 55.3 -7.7**
2.7nm,0.3s
FRF La Foret Royal 9.76 36 *e*Pn **Pn 17 22 12.0 -1.4**
LBL Lubilhac 9.93 19 P **Pn 17 22 15.6 -0.1**
LBL Lubilhac 9.93 19 P **Pn 17 22 15.6 -0.1**
VIVF Saint-Julien-l 10.02 25 *e*Pn **Pn 17 22 15.5 -1.4**
VIVF Saint-Julien-l 10.02 25 P **Pn 17 22 15.5 -1.4**
VIVF Saint-Julien-l 10.02 25 P **Pn 17 22 15.5 -1.4**
VIVF Saint-Julien-l 10.02 25 *e*Pn **Pn 17 22 15.5 -1.4**
PGF Pioggiola 10.34 47 *e*Pn **Pn 17 22 20.5 -0.8**
PGF *e*Sn **Sn 17 24 10.2 -7.0**
3.0nm,0.3s
PGF Pioggiola 10.34 47 P **Pn 17 22 20.5 -0.8**
PGF S **Sn 17 24 10.2 -7.0**
1.5nm,0.3s
PGF Pioggiola 10.34 47 P **Pn 17 22 20.5 -0.8**
PGF S **Sn 17 24 10.2 -7.0**
1.5nm,0.3s
PGF Pioggiola 10.34 47 *e*Pn **Pn 17 22 20.5 -0.8**
LUCF Luceram 10.35 37 P **Pn 17 22 22.2 +0.8**
LUCF Luceram 10.35 37 P **Pn 17 22 22.2 +0.8**
PYM Petit Puy Mans 10.36 17 P **Pn 17 22 22.2 +0.6**
PYM Petit Puy Mans 10.36 17 P **Pn 17 22 22.2 +0.6**
SBF Sospel 10.37 37 *e*Pn **Pn 17 22 20.8 -0.9**
SBF Sospel 10.37 37 P **Pn 17 22 20.8 -0.9**
SBF Sospel 10.37 37 P **Pn 17 22 20.8 -0.9**
SBF Sospel 10.37 37 *e*Pn **Pn 17 22 20.8 -0.9**
TOUF Mont Tournerai 10.39 36 P **Pn 17 22 23.0 +1.0**
TOUF Mont Tournerai 10.39 36 P **Pn 17 22 23.0 +1.0**
AUTN L'Aution 10.46 37 P **Pn 17 22 25.1 +2.1**
AUTN L'Aution 10.46 37 P **Pn 17 22 25.1 +2.1**
ORIF Oris-en-Rattie 10.51 29 *e*Pn **Pn 17 22 22.2 -1.5**
ORIF *e*Sn **Sn 17 24 13.0 -8.5**
2.5nm,0.4s
ORIF Oris-en-Rattie 10.51 29 P **Pn 17 22 22.2 -1.5**
ORIF S **Sn 17 24 13.0 -8.5**
1.2nm,0.4s
ORIF Oris-en-Rattie 10.51 29 P **Pn 17 22 22.2 -1.5**
ORIF S **Sn 17 24 13.0 -8.5**
1.2nm,0.4s
ORIF Oris-en-Rattie 10.51 29 *e*Pn **Pn 17 22 22.2 -1.5**
SAOF Saorge 10.52 37 P **Pn 17 22 24.1 +0.3**
SAOF Saorge 10.52 37 P **Pn 17 22 24.1 +0.3**
LGHD Ghdames 10.69 120 *i* P **Pn 17 22 20.7 -5.5**
SNR=34
TCF Toulx Ste Croi 10.71 13 *e*Pn **Pn 17 22 25.0 -1.3**
TCF *e*Sn **Sn 17 24 16.6 -10**
3.0nm,0.4s
TCF Toulx Ste Croi 10.71 13 P **Pn 17 22 25.0 -1.3**
TCF S **Sn 17 24 16.6 -10**
1.5nm,0.4s
TCF Toulx Ste Croi 10.71 13 P **Pn 17 22 25.0 -1.3**
TCF S **Sn 17 24 16.6 -10**
1.5nm,0.4s
TCF Toulx Ste Croi 10.71 13 *e*Pn **Pn 17 22 25.0 -1.3**
MBDF Montbardon 10.72 32 *e*Pn **Pn 17 22 25.7 -0.9**
MBDF Montbardon 10.72 32 P **Pn 17 22 25.7 -0.9**
MBDF Montbardon 10.72 32 P **Pn 17 22 25.7 -0.9**
MBDF Montbardon 10.72 32 *e*Pn **Pn 17 22 25.7 -0.9**
LPG La Plagne 11.34 30 *e*Pn **Pn 17 22 35.6 +0.6**
LPG La Plagne 11.34 30 P **Pn 17 22 35.6 +0.6**
LPG La Plagne 11.34 30 P **Pn 17 22 35.6 +0.6**
LPG La Plagne 11.34 30 *e*Pn **Pn 17 22 35.6 +0.6**
LPL La Plagne 11.34 30 *e*Pn **Pn 17 22 34.4 -0.7**
LPL La Plagne 11.34 30 P **Pn 17 22 34.4 -0.7**
LPL La Plagne 11.34 30 P **Pn 17 22 34.4 -0.7**
LPL La Plagne 11.34 30 *e*Pn **Pn 17 22 34.4 -0.7**
SMF Signal de Mont 11.40 18 *e*Pn **Pn 17 22 35.6 -0.2**
SMF Signal de Mont 11.40 18 P **Pn 17 22 35.6 -0.2**
SMF Signal de Mont 11.40 18 P **Pn 17 22 35.6 -0.2**
SMF Signal de Mont 11.40 18 *e*Pn **Pn 17 22 35.6 -0.2**
AVF Avril sur Loir 11.42 16 *e*Pn **Pn 17 22 35.0 -1.1**
AVF Avril sur Loir 11.42 16 P **Pn 17 22 35.0 -1.1**
AVF Avril sur Loir 11.42 16 P **Pn 17 22 35.0 -1.1**
AVF Avril sur Loir 11.42 16 *e*Pn **Pn 17 22 35.0 -1.1**
QUIF Quistinic 12.11 354 *e*Pn **Pn 17 22 46.2 +0.7**
QUIF Quistinic 12.11 354 P **Pn 17 22 46.2 +0.7**
QUIF Quistinic 12.11 354 P **Pn 17 22 46.2 +0.7**
QUIF Quistinic 12.11 354 *e*Pn **Pn 17 22 46.2 +0.7**
SGMF Saint Gilles 12.40 356 *e*Pn **Pn 17 22 49.7 +0.2**
SGMF Saint Gilles 12.40 356 P **Pn 17 22 49.7 +0.2**
SGMF Saint Gilles 12.40 356 P **Pn 17 22 49.7 +0.2**
SGMF Saint Gilles 12.40 356 *e*Pn **Pn 17 22 49.7 +0.2**
GHAR Gharyan 12.44 103 *i* P **Pn 17 22 43.3 -6.9**
SNR=34
ROSF Rostrenen 12.53 354 *e*Pn **Pn 17 22 50.5 -0.8**
ROSF Rostrenen 12.53 354 P **Pn 17 22 50.5 -0.8**
ROSF Rostrenen 12.53 354 P **Pn 17 22 50.5 -0.8**
ROSF Rostrenen 12.53 354 *e*Pn **Pn 17 22 50.5 -0.8**
DAVOX Davos/Dischmat 13.69 34 Pn **Pn 17 23 09.3 +2.2**
0.5nm,0.3s,baz=265,slow=11,SNR=3.6
DAVOX Davos/Dischmat 13.69 34 P **Pn 17 23 09.3 +2.2**
LSHF Shwairf 14.25 110 *i* P **Pn 17 23 10.0 -4.8**
SNR=34
LSHF *e*S **Sn 17 25 44.5 -8.4**
SNR=34
FETA Feichten 14.26 35 ⇑*i*P **Pn 17 23 21.7 +6.8**
4.6nm,1.0s
FETA Feichten 14.26 35 P **Pn 17 23 21.7 +6.8**
4.6nm,1.0s
MOTA Moosalm 14.67 35 ⇑*i*P **Pn 17 23 22.5 +2.0**
4.4nm,0.8s
WTTA Wattenberg 14.86 36 ⇑*i*Pn **Pn 17 23 23.7 +0.6**
9.7nm,1.1s
WTTA Wattenberg 14.86 36 Pn **Pn 17 23 23.7 +0.6**
9.7nm,1.1s
HGN Heimansgroeve 15.74 17 *e*P **Pn 17 23 37.0 +2.3**
20nm,1.9s
HGN Heimansgroeve 15.74 17 *e*P **Pn 17 23 37.0 +2.3**
20nm,1.9s
LJFR Jufra 15.87 110 *i* P **Pn 17 23 30.8 -5.7**
SNR=45
MOX Moxa 17.42 28 *e*(P) **Pn 17 23 59.0 +3.0**
MOX Moxa 17.42 28 *e*P **Pn 17 23 59.0 +3.0**
DLF Lyons Farm 17.80 350 *e*P **Pn 17 24 03.0 +2.2**
DLF Lyons Farm 17.80 350 *e*P **Pn 17 24 03.0 +2.2**
BRG Berggiesshubel 18.54 31 *e*P **Pn 17 24 13.1 +3.4**
4.8nm,1.4s
BRG Berggiesshubel 18.54 31 *e*P **Pn 17 24 13.1 +3.4**
BRG pmax pmax
comp=Z,3.0nm,1.4s
VRAC Vranov 18.69 39 P **Pn 17 24 12.6 +1.0**
comp=Z,0.3nm,0.3s,baz=226,slow=12,SNR=2.4
VRAC LR LR 17 30 47.2
comp=Z,36nm,19.7s,baz=53,slow=35
VRAC Vranov 18.69 39 P **Pn 17 24 12.6 +1.0**
comp=Z,36nm,19.7s
MORC Moravsky Berou 19.46 39 ⇓P **Pn 17 24 25.6 +4.6**
MORC Moravsky Berou 19.46 39 ⇓*i*P **Pn 17 24 25.6 +4.6**
EKA Eskdalemuir Ar 19.49 357 P **Pn 17 24 21.5 +0.2**
comp=Z,0.3nm,0.3s,baz=181,slow=12,SNR=9.4
EKA Eskdalemuir Ar 19.49 357 P **Pn 17 24 21.5 +0.2**
BZS Buzias 19.78 54 ⇑P **Pn 17 24 23.0 -1.7**
BZS Buzias 19.78 54 ⇑*i*P **Pn 17 24 23.0 -1.7**
BZS Buzias 19.78 54 P **Pn 17 24 23.0 -1.7**
DRGR 20.93 51 ⇑P **P 17 24 38.7 +3.0**
DRGR 20.93 51 ⇑*i*P **P 17 24 38.7 +3.0**
VOIR 22.00 56 ⇑P **P 17 24 49.7 +2.4**
VOIR 22.00 56 ⇑*i*P **P 17 24 49.7 +2.4**
MLR Muntele Rosu 22.62 57 P **P 17 24 54.8 +0.9**
comp=Z,7.4nm,0.8s,mb4.1,baz=225,slow=3.5,SNR=10
MLR Muntele Rosu 22.62 57 P **P 17 24 54.8 +0.9**
MLR pmax pmax
comp=Z,7.0nm,0.9s
MLR Muntele Rosu 22.62 57 ⇑P **P 17 24 55.2 +1.3**
MLR Muntele Rosu 22.62 57 ⇑*i*P **P 17 24 55.2 +1.3**
MLR Muntele Rosu 22.62 57 P **P 17 24 54.8 +0.9**
comp=Z,7.0nm,0.9s,mb4.1
TORD Torodi Ar. Bea 22.79 173 P **P 17 24 54.0 -1.9**
comp=Z,11nm,0.7s,mb4.4,baz=356,slow=10,SNR=51

TORD Lg 17 31 58.3
comp=Z,2.7nm,1.1s,baz=346,slow=21,SNR=3.8
TORD LR LR 17 34 24.9
comp=Z,153nm,19.0s,MS3.5,baz=65,slow=38
TORD Torodi Ar. Bea 22.79 173 P P 17 24 54.0 -1.9
TORD Lg 17 31 58.3
TORD LR LR 17 34 24.9
BURAR Bucovina Array 22.82 51 ⇑P P 17 24 58.0 +2.1
BURAR Bucovina Array 22.82 51 ⇑P P 17 24 58.0 +2.1
BURAR Bucovina Array 22.82 51 ⇑P P 17 24 58.0 +2.1
VRI Vrincioaia 23.25 56 ⇑P P 17 25 00.6 +0.1
VRI Vrincioaia 23.25 56 ⇑P P 17 25 00.6 +0.1
VRI Vrincioaia 23.25 56 P P 17 25 00.6 +0.1
HFS Hagfors 26.10 17 P P 17 25 27.1 +0.4
comp=Z,0.9nm,0.6s,mb3.5,baz=230,slow=9.0,SNR=2.9
HFS LR LR 17 34 32.9
comp=Z,43nm,21.9s,MS3.0,baz=335,slow=34
HFS Hagfors 26.10 17 P P 17 25 27.1 +0.4
HFS pmax pmax
comp=Z,1.0nm,0.6s
HFS MLR MLR
comp=Z,43nm,21.9s
HFS Hagfors 26.10 17 P P 17 25 27.1 +0.4
comp=Z,43nm,21.9s
NOA NORSAR Array B 26.39 14 P P 17 25 28.5 -0.8
comp=Z,1.0nm,0.8s,mb3.4,baz=206,slow=8.6,SNR=2.3
NOA LR LR 17 36 29.9
comp=Z,19nm,18.8s,MS2.7,baz=95,slow=38
NOA NORSAR Array B 26.39 14 P P 17 25 28.5 -0.8
NOA pmax pmax
comp=Z,1.0nm,0.8s
NOA MLR MLR
comp=Z,19nm,18.8s
NOA NORSAR Array B 26.39 14 P P 17 25 28.5 -0.8
comp=Z,19nm,18.8s
AKASG Malin Array Be 26.41 46 P P 17 25 26.0 -3.6
comp=Z,1.5nm,0.6s,mb3.7,baz=242,slow=9.8,SNR=4.6
AKASG Malin Array Be 26.41 46 P P 17 25 26.0 -3.6
AKASG pmax pmax
comp=Z,2.0nm,0.6s
IIGN Ignalina 27.04 35 eP P 17 25 36.7 +1.5
IIGN AMB AMB 17 25 37.4
comp=Z,9.0nm,0.9s,mb4.3
IIGN Ignalina 27.04 35 eP P 17 25 36.7 +1.5
comp=Z,9.0nm,0.9s,mb4.3,SNR=33
IDID Didziasalis 27.26 36 eP P 17 25 38.8 +1.5
IDID AMB AMB 17 25 40.2
comp=Z,4.4nm,0.8s,mb4.1
IDID Didziasalis 27.26 36 eP P 17 25 38.8 +1.6
comp=Z,4.4nm,0.8s,mb4.1,SNR=28
IZAR Zarasai 27.28 35 eP P 17 25 38.9 +1.5
IZAR AMB AMB 17 25 41.9
comp=Z,8.6nm,0.6s,mb4.5
IZAR Zarasai 27.28 35 eP P 17 25 38.9 +1.5
comp=Z,8.6nm,0.6s,mb4.5,SNR=28
DBIC Dimbokro 29.27 187 P P 17 25 54.0 -1.5
comp=Z,2.7nm,0.5s,mb4.2,baz=7.5,slow=10,SNR=3.9
DBIC LR LR 17 37 09.4
comp=Z,110nm,19.1s,MS3.5,baz=355,slow=36
DBIC Dimbokro 29.27 187 P P 17 25 54.0 -1.5
DBIC pmax pmax
comp=Z,3.0nm,0.5s
DBIC MLR MLR
comp=Z,110nm,19.1s
DBIC Dimbokro 29.27 187 P P 17 25 54.0 -1.5
DBIC LR LR 17 37 09.4
DBIC Dimbokro 29.27 187 P P 17 25 54.0 -1.5
comp=Z,110nm,19.1s
MMAI Mount Meron Ar 30.22 85 P P 17 26 04.3 +0.5
comp=Z,4.5nm,0.8s,mb4.3,baz=269,slow=12,SNR=4.4
FINES FINESS Array B 30.84 25 P P 17 26 07.6 -1.4
comp=Z,3.0nm,0.6s,mb4.3,baz=222,slow=6.3,SNR=17
FINES FINESS Array B 30.84 25 P P 17 26 07.6 -1.4
FINES pmax pmax
comp=Z,3.0nm,0.6s
FINES FINESS Array B 30.84 25 P P 17 26 07.6 -1.4
comp=Z,3.0nm,0.6s,mb4.3
ARCES ARCESS Array B 36.73 15 P P 17 26 59.9 -0.2
comp=Z,3.5nm,0.9s,mb4.2,baz=240,slow=7.2,SNR=4.1
ARCES ARCESS Array B 36.73 15 P P 17 26 59.9 -0.1
ARCES pmax pmax
comp=Z,4.0nm,0.9s
ARCES ARCESS Array B 36.73 15 P P 17 26 59.9 -0.1
comp=Z,4.0nm,0.9s,mb4.2
ARU Arti 44.57 43 P P 17 28 04.2 -0.7
ARU Arti 44.57 43 P P 17 28 04.2 -0.7
SCHQ Schefferville 47.94 315 P P 17 28 30.2 -1.3
comp=Z,1.6nm,0.7s,mb4.2,baz=107,slow=7.4,SNR=4.1
KMBO Kilima Mbogo 51.37 127 P P 17 28 57.9 -0.2
comp=Z,0.5nm,0.2s,mb4.0,baz=1.1,slow=24,SNR=4.2
KMBO Kilima Mbogo 51.37 127 P P 17 28 57.9 -0.1
KMBO pmax pmax
comp=Z,1.0nm,0.3s
KMBO Kilima Mbogo 51.37 127 P P 17 28 57.9 -0.1
comp=Z,1.0nm,0.3s,mb4.2
BVAR Borovoye Array 51.69 47 P P 17 28 60.0 0.0
comp=Z,0.2nm,0.4s,mb3.4,baz=251,slow=4.4,SNR=2.8
BVAR Borovoye Array 51.69 47 P P 17 29 00.0 0.0
NVS Novosibirsk 58.57 42 eP P 17 29 49.2 -0.4
NVS Novosibirsk 58.57 42 eP P 17 29 49.2 -0.4
ZALV Zalesovo Beam 59.74 43 P P 17 29 57.0 -0.8
comp=Z,1.6nm,0.8s,mb4.1,baz=294,slow=4.7,SNR=7.3
ZALV Zalesovo Beam 59.74 43 P P 17 29 57.0 -0.7
ZALV pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
ZALV Zalesovo Beam 59.74 43 P P 17 29 57.0 -0.7
comp=Z,2.0nm,0.8s,mb4.2
MKAR Makanchi Array 60.84 51 P P 17 30 04.3 -1.1
comp=Z,1.4nm,0.8s,mb4.2,baz=282,slow=5.8,SNR=13
MKAR Makanchi Array 60.84 51 P P 17 30 04.4 -1.0
MKAR pmax pmax
comp=Z,1.0nm,0.8s
YKA Yellowknife Ar 68.46 333 P P 17 30 53.9 -0.9
comp=Z,1.6nm,0.9s,mb4.0,baz=55,slow=7.3,SNR=5.0
YKA Yellowknife Ar 68.46 333 P P 17 30 53.9 -1.0
YKA pmax pmax
comp=Z,2.0nm,0.9s
YKA Yellowknife Ar 68.46 333 P P 17 30 53.9 -1.0
comp=Z,2.0nm,0.9s,mb4.2
BOSA Boshof 68.83 155 P P 17 30 56.3 -1.2
comp=Z,6.9nm,1.1s,mb4.5,baz=310,slow=4.1,SNR=3.9
BOSA LR LR 18 03 03.6
comp=Z,117nm,18.9s,MS4.1,baz=247,slow=38
BOSA Boshof 68.83 155 P P 17 30 56.3 -1.2
BOSA pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
BOSA MLR MLR
comp=Z,117nm,18.9s,MS4.1
BOSA Boshof 68.83 155 P P 17 30 56.3 -1.2
comp=Z,117nm,18.9s
SONM Songino Array 74.59 42 P P 17 31 30.0 -2.1
comp=Z,0.3nm,0.5s,mb3.5,baz=242,slow=3.1,SNR=3.1
SONM Songino Array 74.59 42 P P 17 31 30.0 -2.1
ILAR Eielson Array 76.12 346 P P 17 31 41.7 +1.0
comp=Z,0.4nm,0.6s,mb3.5,baz=16,slow=3.8,SNR=5.8
ILAR Eielson Array 76.12 346 P P 17 31 41.7 +1.1
PDAR Pinedale Array 78.08 314 P P 17 31 51.8 -0.2
comp=Z,0.9nm,0.7s,mb3.8,baz=63,slow=7.0,SNR=6.5
CPUP Villa Florida 81.44 229 P P 17 32 10.2 -0.1
comp=Z,1.6nm,0.7s,mb4.0,baz=121,slow=5.9,SNR=4.1
CPUP Villa Florida 81.44 229 P P 17 32 10.2 -0.1
CPUP pmax pmax
comp=Z,2.0nm,0.7s
CPUP Villa Florida 81.44 229 P P 17 32 10.2 -0.1
comp=Z,2.0nm,0.7s,mb4.2
LPAZ La Paz 81.78 243 LR LR 18 07 04.7
comp=Z,36nm,19.2s,MS3.8,baz=74,slow=35
TXAR Lajitas Array 82.44 301 P P 17 32 15.8 0.0
comp=Z,0.4nm,0.7s,mb3.5,baz=55,slow=4.7,SNR=4.5
TXAR LR LR 18 07 24.6
comp=Z,62nm,20.1s,MS4.0,baz=5.0,slow=35
TXAR Lajitas Array 82.44 301 P P 17 32 15.8 0.0
TXAR MLR MLR
comp=Z,62nm,20.1s
TXAR Lajitas Array 82.44 301 P P 17 32 15.8 0.0
comp=Z,62nm,20.1s
NVAR Mina Array Bea 85.94 315 P P 17 32 34.6 +1.2
comp=Z,0.5nm,0.5s,mb4.0,baz=64,slow=2.1,SNR=1.4
ASAR Alice Springs 139.50 85 PKP PKPdf 17 39 18.6 -2.4
comp=Z,0.9nm,1.0s,baz=249,slow=2.6,SNR=5.7
ASAR Alice Springs 139.50 85 PKIKP PKPdf 17 39 18.7 -2.4
ASAR pmax pmax
comp=Z,1.0nm,1.0s
STKA Stephens Creek 148.99 93 PKP PKPdf 17 39 34.5 -2.7
comp=Z,1.9nm,0.8s,baz=12,slow=14,SNR=2.4
STKA PKPbc PKPbc 17 39 40.3 -1.0

comp=Z,8.6nm,0.8s,baz=304,slow=5.9,SNR=10

*ISCJB **24** 17:24:59.2±0.8,31.°13N±0.°04×104.°22E±0.°05,h10km±8km, mb3.6/2, Error ellipse: s-maj=7.7km s-min=6.4km az=25.9*
*BJI **24** 17:25:00.4,31.°34N×103.°93E,h15km,ML3.6/12*
*IDC **24** 17:25:01.8±0.5,31.°13N×104.°49E,h0km,mb3.5/3, mb1 3.6/5,mb1mx3.4/24,mbtmp3.5/5,ML3.7/2,Error ellipse: s-maj=12.5km s-min=5.9km az=114.0*
ISC 24 17:25:01.4±0.8,31.°21N±0.°03×104.°02E±0.°06,h11km±7km, n10,σ1°21/17,mb3.6/2,Sichuan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.37**	**217**	Pg		**Pg**	**Pg**	**17 25 08.1**	**-0.7**
CD2				Sg			**Sg**	**17 25 14.4**	**+0.6**
CD2				smax					
	comp=N,6μm,0.6s								
CD2				smax					
	comp=E,9μm,0.6s								
LZH	**Lanzhou**	**4.87**	**358**	*e*Pg			**Pb**	**17 26 25.8**	**-0.8**
LZH				Sg			**Sb**	**17 27 26.8**	**+1.6**
LZH				smax					
	comp=N,67nm,1.1s								
LZH				smax					
	comp=E,98nm,1.3s								
XAN	**Xi'an**	**5.01**	**54**	Pn			**Pn**	**17 26 15.5**	**-0.9**
XAN				Pg			**Pb**	**17 26 30.6**	**+1.6**
XAN				Sg			**Sg**	**17 27 41.9**	**-0.3**
XAN				smax					
	comp=N,89nm,0.7s								
XAN				smax					
	comp=E,40nm,0.9s								
GYA	**Guiyang**	**5.27**	**153**	Pn			**Pn**	**17 26 14.6**	**-5.4**
GYA				Pg			**Pg**	**17 26 41.4**	**-0.9**
GYA				Sn			**Sn**	**17 27 23.0**	**+2.3**
GYA				Sg			**Sg**	**17 27 51.5**	**+0.9**
GYA				smax					
	comp=N,90nm,0.8s								
GYA				smax					
	comp=E,60nm,0.7s								
CMAR	**Chiang Mai Arr**	**13.50**	**201**	Pn			**Pn**	**17 28 18.0**	**+5.1**
	comp=E,0.2nm,0.3s,baz=9.9,slow=8.3,SNR=3.8								
SONM	**Songino Array**	**16.71**	**6**	Pn			**Pn**	**17 28 57.1**	**+1.8**
	comp=E,0.1nm,0.3s,baz=195,slow=10,SNR=3.3								
KSRS	**Korea Array**	**20.67**	**66**	P			**P**	**17 29 40.5**	**-0.7**
	comp=E,2.4nm,0.6s,baz=257,slow=10,SNR=11								
CN2	**Changchun**	**21.07**	**47**	*e*P			**P**	**17 29 44.4**	**-1.0**
WRA	**Warramunga Arr**	**58.60**	**146**	P			**P**	**17 34 57.0**	**-1.3**
	comp=E,0.6nm,0.7s,mb3.7,baz=318,slow=11								
ASAR	**Alice Springs**	**61.62**	**149**	P			**P**	**17 35 17.6**	**-1.4**
	comp=E,0.3nm,0.7s,mb3.5,baz=337,slow=6.6,SNR=9.0								

*NEIC **24** 18:24:08.7,33.°12S×70.°26W,h23km,ML2.8(GUC),After GUC.*
GUC 24 18:24:08.7±0.6,33.°12S×70.°26W,h23km±2km,MD3.8, ML2.8,3C-4D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FCH	**Farellones**	**0.21**	**187**	⇑*i*P			Pb	18 24 14.9	+0.6
FCH				*i* S			Sb	18 24 17.8	-0.3
FCH				AML			AML	18 24 18.3	
	comp=E,3μm,0.2s								
PEL	**Peldehue**	**0.36**	**266**	⇓*i*P			Pb	18 24 15.9	-0.6
PEL				*i* S			Sb	18 24 20.1	-1.7
PEL				AML			AML	18 24 27.7	
	comp=N,1μm,0.6s								
CLCH	**Cerro Calan**	**0.36**	**220**	*e*P			Pb	18 24 16.6	+0.1
CLCH				*i* S			Sb	18 24 22.1	+0.2
CLCH	**Cerro Calan**	**0.36**	**220**	*e*P			Pb	18 24 16.6	+0.1
CLCH				*i* S			Sb	18 24 22.1	+0.2
CLCH				AML			AML	18 24 24.0	
	comp=E,2μm,0.3s								
JACH	**Jahuel**	**0.52**	**327**	*e*P			Pb	18 24 19.2	+0.1
JACH	**Jahuel**	**0.52**	**327**	*e*P			Pb	18 24 19.2	+0.1
PCH	**Pirque**	**0.54**	**203**	*e*P			Pb	18 24 19.2	-0.4
PCH				*i* S			Sb	18 24 27.5	+0.5
PCH	**Pirque**	**0.54**	**203**	*e*P			Pb	18 24 19.2	-0.4
PCH				*i* S			Sb	18 24 27.5	+0.5
LMEL	**Las Melosas**	**0.73**	**176**	⇑*i*P			Pb	18 24 22.4	-0.3
LMEL				S			Sb	18 24 32.0	-0.3
LMEL	**Las Melosas**	**0.73**	**176**	⇑*i*P			Pb	18 24 22.4	-0.3
LMEL				*i* S			Sb	18 24 32.0	-0.3
TACH	**Talagante**	**0.78**	**227**	*e*P			Pb	18 24 23.3	-0.3
TACH	**Talagante**	**0.78**	**227**	*e*P			Pb	18 24 23.3	-0.3
CHCH	**Chadas Angostu**	**0.88**	**202**	*e*P			Pb	18 24 25.1	-0.1
CHCH	**Chadas Angostu**	**0.88**	**202**	*e*P			Pb	18 24 25.1	-0.1
CACH	**El Canelo**	**1.03**	**196**	*i* P			Pn	18 24 28.3	+0.5
CACH				*i* S			Sb	18 24 43.0	+1.9
CACH	**El Canelo**	**1.03**	**196**	*i* P			Pn	18 24 28.3	+0.5
CACH				*i* S			Sb	18 24 43.0	+1.9
LNV	**Longovilo**	**1.27**	**229**	⇓*i*P			Pn	18 24 31.6	+0.5
LNV	**Longovilo**	**1.27**	**229**	⇓*i*P			Pn	18 24 31.6	+0.5
CHNG	**Los Chungos**	**1.62**	**319**	⇓*i*P			Pn	18 24 37.1	+1.3
CHNG				*i* S			Sn	18 24 58.8	+2.9
TLL	**Tololo Astrono**	**2.98**	**351**	*e*P			Pn	18 25 00.8	+6.2
TLL	**Tololo Astrono**	**2.98**	**351**	*e*P			Pn	18 25 00.8	+6.2

*IDC **24** 18:38:17.4±1.1,6.°66S×102.°60E,h0km,mb4.3/13, mb1 4.4/14,mb1mx4.2/21,mbtmp4.3/14,ML3.9/1,MS3.4/2, Ms1 3.5/2,ms1mx2.9/22,Error ellipse: s-maj=38.9km s-min=15.6km az=52.0*
*ISCJB **24** 18:38:17.7±1.6,6.°74S±0.°04×102.°56E±0.°04,h16km±11km, mb4.6/44,MS3.6/3,Error ellipse: s-maj=7.4km s-min=4.9km az=38.9*
*BJI **24** 18:38:19.3,6.°60S×102.°70E,h16km,mB5.0/12,mb4.7/25, Ms4.6/5,Ms7 4.3/5*
*MOS **24** 18:38:20.4±1.1,6.°58S×102.°68E,h33km,mb4.7/19,Error ellipse: s-maj=18.4km s-min=7.6km az=108.9*
*NEIC **24** 18:38:20.4±5.3,6.°60S×102.°71E,h17km±32km,mb4.8/16, Error ellipse: s-maj=24.6km s-min=6.6km az=48.0*
*DJA **24** 18:38:22,6.°64S×102.°60E,h36km,MLv4.9/20*
ISC 24 18:38:19.5±1.6,6.°68S±0.°04×102.°58E±0.°03,h13km±10km, h27km±3.5km:pP-P,n119,σ1°13/127,mb4.6/44,MS3.6/3, 3C-1D,Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LWLI	**Liwa**	**2.21**	**42**	P			**Pn**	**18 38 56.4**	**+0.5**
LWLI				S			**Sn**	**18 39 22.8**	**-0.4**
MNAI	**Manna**	**2.33**	**9**	P			**Pn**	**18 38 59.1**	**+1.5**
MNAI				S			**Sn**	**18 39 26.7**	**+0.6**
MDSI	**Maura Dua**	**2.70**	**36**	P			**Pn**	**18 39 02.8**	**+0.2**
MDSI				S			**Sn**	**18 39 35.2**	**0.0**
KLI	**Kotabumi**	**2.90**	**52**	P			**Pn**	**18 39 06.0**	**+0.6**
BLSI	**Bandar Lampung**	**2.96**	**64**	P			**Pn**	**18 39 06.2**	**0.0**
KSI	**Kapahiang**	**3.00**	**0**	P			**Pn**	**18 39 06.6**	**-0.2**
KSI				S			**Sn**	**18 39 42.3**	**-0.4**
CGJI	**Cibinong**	**3.10**	**89**	P			**Pn**	**18 39 07.7**	**-0.4**
RBSI	**Rajabasa**	**3.25**	**75**	P			**Pn**	**18 39 07.6**	**-2.7**
RBSI				S			**Sn**	**18 39 51.5**	**+2.6**
SBJI	**Serang**	**3.58**	**81**	P			**Pn**	**18 39 15.0**	**+0.3**
SKJI	**Sukabumi**	**3.97**	**95**	P			**Pn**	**18 39 23.3**	**+3.2**
SKJI				S			**Sn**	**18 40 04.3**	**-2.2**
TNG	**Tangerang**	**4.08**	**83**	S			**Sn**	**18 40 08.2**	**-1.0**
TNG				S			**Sn**	**18 40 08.2**	**-1.0**
CBJI	**Citeko**	**4.25**	**87**	P			**Pn**	**18 39 26.0**	**+2.0**
PMBI	**Palembang**	**4.32**	**31**	P			**Pn**	**18 39 24.1**	**-0.8**
KRJI	**Kerinci**	**4.69**	**346**	P			**Pn**	**18 39 28.0**	**-2.0**
LEM	**Lembang**	**5.01**	**92**	P			**Pn**	**18 39 36.4**	**+2.0**
SDSI	**Sungai Dareh**	**5.82**	**349**	P			**Pn**	**18 39 44.4**	**-1.2**
	0.2nm37nm,0.7s								
PDSI	**Padang**	**6.10**	**340**	P			**Pn**	**18 39 48.4**	**-1.0**
	1.2nm4μm158nm,0.5s								
PPI	**Padang Panjang**	**6.55**	**341**	P			**Pn**	**18 39 53.8**	**-1.8**
	0.3nm6μm64nm,1.2s								
SMRI	**Semarang**	**7.82**	**93**	P			**Pn**	**18 40 14.9**	**+1.9**
	0.9nm236nm,0.8s								
UGM	**Wanagama**	**7.98**	**99**	P			**Pn**	**18 40 14.7**	**-0.5**
	0.9nm221nm,1.9s								
MNSI	**Mandailing Nat**	**8.00**	**338**	P			**Pn**	**18 40 12.9**	**-2.6**
	0.2nm30nm,1.0s								
PCJI	**Pacitan**	**8.66**	**101**	P			**Pn**	**18 40 23.6**	**-1.0**
	95nm,1.5s								
NGJI	**Ngawi**	**8.85**	**95**	P			**Pn**	**18 40 26.5**	**-0.7**
	10μm62nm,0.7s								
SJI	**Sawahan**	**9.18**	**97**	P			**Pn**	**18 40 32.5**	**+0.8**
	74nm,0.6s								
PWJI	**Pagerwojo**	**9.25**	**99**	P			**Pn**	**18 40 32.1**	**-0.6**
	96nm,0.8s								
PSI	**Prapat**	**10.10**	**339**	Pn			**Pn**	**18 40 41.9**	**-2.4**
	1.1nm,0.3s,baz=170,slow=9.5,SNR=4.9								
PSI				Sn			**Sn**	**18 42 31.0**	**-6.5**
	0.8nm,0.3s,baz=289,slow=18,SNR=1.8								
PSI	**Prapat**	**10.10**	**339**	P			**Pn**	**18 40 41.9**	**-2.4**
PSI								18 42 31.0	
PSI				pmax			pmax		
	comp=Z,1.0nm,0.3s								
PSI				smax					
	comp=N,1.0nm,0.3s								
PSI	**Prapat**	**10.10**	**339**	Pn			**Pn**	**18 40 41.9**	**-2.4**
PSI				Sn			**Sn**	**18 42 31.0**	**-6.5**
STKI	**Sintang**	**11.12**	**53**	P			**Pn**	**18 40 59.9**	**+1.5**
	comp=N,1μmcomp=N,48nm,0.9s								
SBUM	**Sibu**	**13.22**	**47**	P			**Pn**	**18 41 30.2**	**+3.1**
SBUM	**Sibu**	**13.22**	**47**	P			**Pn**	**18 41 29.9**	**+2.8**
	comp=N,30nm,1.3s								
BKSI	**Bulukumba**	**17.50**	**87**	P			**Pn**	**18 42 23.0**	**-0.5**
	comp=N,38nm,0.8s								
BNSI	**Bone**	**17.59**	**84**	P			**Pn**	**18 42 23.9**	**-0.7**
	comp=N,23nm,1.2s								
TSM	**Tawau**	**18.76**	**55**	P			**Pn**	**18 42 40.4**	**+1.5**
SDKM	**Sandakan**	**19.04**	**50**	P			**Pn**	**18 42 41.9**	**-0.5**
KDM	**Kudat**	**19.61**	**47**	P			**Pn**	**18 42 47.7**	**-1.5**
MYLDM	**Lahad Datu**	**19.78**	**54**	P			**Pn**	**18 42 51.5**	**+0.3**
MYLDM	**Lahad Datu**	**19.78**	**54**	P			**Pn**	**18 42 51.6**	**+0.4**
	comp=N,899nmcomp=N,112nm,1.1s								
MBWA	**Marble Bar**	**21.98**	**133**	*e*P			**P**	**18 43 20.0**	**+6.6**
FITZ	**Fitzroy Crossi**	**25.19**	**119**	*e*P			**P**	**18 43 45.7**	**+0.7**
	comp=N,8.3nm,0.6s,mb4.4								
FITZ	**Fitzroy Crossi**	**25.19**	**119**	P			**P**	**18 43 45.6**	**+0.6**
	comp=N,5.0nm,0.9s,mb4.0,baz=293,slow=0.6,SNR=6.2								
CM31	**Chiang Mai Arr**	**25.23**	**352**	*e*P			**P**	**18 43 44.7**	**-0.6**
	comp=N,15nm,0.7s,mb4.6								
CMAR	**Chiang Mai Arr**	**25.23**	**352**	P			**P**	**18 43 45.5**	**+0.2**
	comp=N,18nm,0.8s,mb4.6,baz=181,slow=9.1,SNR=92								
CMAR				LR			LR	18 54 06.2	
	comp=N,75nm,20.0s,MS3.2,baz=185,slow=38								
CMAR	**Chiang Mai Arr**	**25.23**	**352**	P			**P**	**18 43 45.5**	**+0.2**
CMAR				pmax			pmax		
	comp=Z,18nm,0.8s								
CMAR				MLR			MLR		
	comp=Z,75nm,20.0s								
CHTO	**Chiang Mai**	**25.58**	**352**	*e*P			**P**	**18 43 47.8**	**-0.7**
CHTO				pmax			pmax		
	comp=Z,19nm,1.0s,mb4.6								
CHTO	**Chiang Mai**	**25.58**	**352**	*e*P			**P**	**18 43 47.8**	**-0.6**
	comp=Z,19nm,1.0s,mb4.6								
TNTI	**Ternate**	**25.82**	**74**	P			**P**	**18 43 49.2**	**-1.6**
	comp=Z,48nm,1.2s,mb4.9								
KNA	**Kununurra**	**27.20**	**112**	P			**P**	**18 44 04.0**	**+0.8**
KMI	**Kunming**	**31.61**	**0**	P			**P**	**18 44 44.1**	**+1.9**
KMI				pmax			pmax		
	comp=Z,16nm,1.3s,mb4.7								
KMI				pmax			pmax		
	comp=Z,160nm,4.3s								
KMI				LR			LR		
	comp=N,360nm,12.6s,MS4.3								
KMI				LR			LR		
	comp=E,260nm,15.3s,MS4.3								
KMI				LR			LR		
	comp=Z,390nm,12.6s,MS4.3								
WRAB	**Tennant Creek**	**33.53**	**116**	*e*P			**P**	**18 44 58.6**	**-0.6**
ASAR	**Alice Springs**	**34.51**	**123**	P			**P**	**18 45 06.8**	**-0.8**
	comp=Z,1.2nm,0.7s,mb4.0,baz=295,slow=8.0,SNR=23								
ASAR	**Alice Springs**	**34.51**	**123**	P			**P**	**18 45 06.8**	**-0.8**
ASAR				pmax			pmax		
	comp=Z,1.0nm,0.7s								
ODAN	**Odare**	**36.44**	**337**	*e*P			**P**	**18 45 25.5**	**+1.3**
	comp=Z,19nm,0.7s,mb5.1								
TAPN	**Taplejung**	**36.76**	**338**	*e*P			**P**	**18 45 28.5**	**+1.6**
	comp=Z,43nm,1.0s,mb5.2								
RAMN	**Ramite**	**36.84**	**336**	*e*P			**P**	**18 45 29.4**	**+1.9**
	comp=Z,14nm,0.7s,mb4.9								
JIRN	**Jiri**	**37.63**	**336**	*e*P			**P**	**18 45 36.0**	**+1.7**
	comp=Z,30nm,0.7s,mb5.1								
LSA	**Lhasa**	**37.80**	**344**	*e*P			**P**	**18 45 36.7**	**+1.1**
LSA				pmax			pmax		
	comp=Z,8.0nm,0.9s,mb4.5								
LSA	**Lhasa**	**37.80**	**344**	*e*P			**P**	**18 45 36.7**	**+1.0**
	comp=Z,7.9nm,0.9s,mb4.4								
PKI	**Pulchoki**	**37.88**	**335**	*e*P			**P**	**18 45 37.6**	**+1.2**
PKIN	**Phulchoki**	**37.89**	**335**	*e*P			**P**	**18 45 37.6**	**+1.1**
DMN	**Daman**	**38.04**	**334**	*e*P			**P**	**18 45 38.8**	**+1.1**
	comp=Z,22nm,1.0s,mb4.9								
KKN	**Kakani**	**38.12**	**335**	*e*P			**P**	**18 45 39.6**	**+1.2**
GKN	**Gorkha**	**38.59**	**334**	*e*P			**P**	**18 45 43.5**	**+1.2**
	comp=Z,34nm,0.9s,mb5.1								
XAN	**Xi'an**	**40.94**	**8**	P			**P**	**18 46 01.9**	**+0.1**
XAN				pP			pP	18 46 10.1	+4.3
XAN				pmax			pmax		
	comp=Z,3.0nm,0.8s,mb4.0								
LZH	**Lanzhou**	**42.55**	**2**	*e*P			**P**	**18 46 16.5**	**+1.5**
LZH				pP			pP	18 46 24.4	+5.4
LZH				sP			sP	18 46 28.8	+8.2
LZH				pmax			pmax		
	comp=Z,26nm,1.2s,mb4.8								
STKA	**Stephens Creek**	**44.17**	**130**	*e*P			**P**	**18 46 27.6**	**-0.6**
	comp=Z,5.2nm,0.8s,mb4.3								
STKA	**Stephens Creek**	**44.17**	**130**	P			**P**	**18 46 27.9**	**-0.3**
	comp=Z,1.8nm,0.5s,mb4.0,baz=253,slow=4.8,SNR=5.5								
STKA	**Stephens Creek**	**44.17**	**130**	P			**P**	**18 46 27.9**	**-0.3**
STKA				pmax			pmax		
	comp=Z,2.0nm,0.5s								
STKA	**Stephens Creek**	**44.17**	**130**	*e*P			**P**	**18 46 27.9**	**-0.3**
CTAO	**Charters Tower**	**44.39**	**112**	P			**P**	**18 46 29.9**	**-0.2**
GTA	**Gaotai**	**45.92**	**357**	*e*P			**P**	**18 46 42.9**	**+0.9**
GTA				pP			pP	18 46 47.5	+1.5
GTA				sP			sP	18 46 50.0	+2.4
GTA				pmax			pmax		
	comp=Z,5.0nm,1.3s,mb4.3								
BJI	**Beijing**	**48.15**	**14**	P			**P**	**18 46 59.5**	**+0.2**
BJI				pmax			pmax		
	comp=Z,17nm,0.8s,mb5.1								
BJI				pmax			pmax		
	comp=Z,130nm,5.1s								
KSRS	**Korea Array**	**49.88**	**26**	P			**P**	**18 47 12.2**	**-0.5**
	comp=Z,7.8nm,0.8s,mb4.8,baz=224,slow=7.5,SNR=24								
KSRS	**Korea Array**	**49.88**	**26**	P			**P**	**18 47 12.2**	**-0.5**
KSRS				pmax			pmax		
	comp=Z,8.0nm,0.8s,mb4.8								
WMQ	**Urumqi**	**52.03**	**346**	*e*P			**P**	**18 47 30.0**

KURK pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
KURK Kurchatov 60.80 343 *e*P **P 18 48 30.0 -1.1**
comp=Z,12nm,1.2s,mb4.9
KLR Kul'dur 61.23 21 *e*P **P 18 48 29.7 -4.4**
ZAA0 Zalesovo Array 62.22 348 *e*P **P 18 48 40.7 0.0**
ZALV Zalesovo Beam 62.22 348 P **P 18 48 40.5 -0.2**
comp=Z,17nm,0.9s,mb5.2,baz=172,slow=4.0,SNR=69
ZALV LR LR 19 15 53.4
comp=Z,29nm,19.8s,MS3.4,baz=57,slow=36
ZALV Zalesovo Beam 62.22 348 P **P 18 48 40.5 -0.2**
ZALV pmax pmax
comp=Z,17nm,0.9s,mb5.2
ZALV MLR MLR
comp=Z,29nm,19.8s,MS3.4
NVS Novosibirsk 63.39 348 *e*P **P 18 48 46.5 -1.9**
NVS pmax pmax
comp=N,6.0nm,1.4s
NVS pmax pmax
comp=E,6.0nm,1.4s
NVS pmax pmax
comp=Z,8.0nm,1.4s,mb4.7
YSS Yuzh-Sakhalins 64.17 29 *e*P **P 18 48 51.8 -2.0**
VOSK Vostochnaya 64.98 339 P **P 18 48 58.3 -0.6**
VOSK pmax pmax
comp=Z,7.0nm,1.7s,mb4.4
BVAR Borovoye Array 65.43 339 P **P 18 49 01.3 -0.6**
comp=Z,2.3nm,0.6s,mb4.4,baz=146,slow=9.0,SNR=15
BVAR Borovoye Array 65.43 339 P **P 18 49 01.3 -0.6**
BVAR pmax pmax
comp=Z,2.0nm,0.6s
BRVK Borovoye 65.50 339 *ce*P **P 18 49 01.7 -0.6**
BRVK pmax pmax
comp=Z,5.0nm,1.7s,mb4.3
BRVK Borovoye 65.50 339 P **P 18 49 01.9 -0.3**
ZRNK Zerenda 65.87 338 *i* P **P 18 49 03.0 -1.7**
ZRNK pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
AB31 Akbulak array 66.95 331 *ce*P **P 18 49 11.2 -0.5**
AB31 pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
ABKAR Akbulak array 66.95 331 *e*P **P 18 49 11.4 -0.3**
comp=Z,7.2nm,0.8s,mb4.8
YAK Yakutsk 71.64 13 *e*P **P 18 49 38.9 -1.6**
YAK pmax pmax
comp=Z,15nm,0.9s,mb4.9
YAK pmax pmax
comp=N,4.0nm,1.1s
YAK Yakutsk 71.64 13 *e*P **P 18 49 38.3 -2.2**
comp=N,19nm,0.9s,mb5.0
ARU Arti 72.49 336 P **P 18 49 45.4 -0.3**
ARU Arti 72.49 336 *e*P **P 18 49 44.8 -0.9**
comp=N,4.0nm,1.0s,mb4.3
PETK Petropavlovsk- 75.51 31 P **P 18 50 02.7 -0.8**
comp=N,2.1nm,0.8s,mb4.1,baz=169,slow=3.0,SNR=5.2
PETK Petropavlovsk- 75.51 31 P **P 18 50 02.7 -0.7**
PETK pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
BRTR Keskin Array B 78.36 313 P **P 18 50 19.7 -0.1**
comp=Z,0.6nm,0.8s,mb3.6,baz=117,slow=7.4,SNR=3.3
BRTR Keskin Array B 78.36 313 P **P 18 50 19.7 -0.1**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
SEY Seymchan 79.02 21 ⇓*e*P **P 18 50 23.6 +0.7**
OBN Obninsk 82.09 328 *e*P **P 18 50 40.2 +0.6**
OBN *i* 18 50 47.2
OBN pmax pmax
comp=Z,5.0nm,1.3s,mb4.3
FINES FINESS Array B 89.42 332 P **P 18 51 16.4 +0.6**
comp=Z,1.3nm,0.9s,mb4.3,baz=73,slow=4.7,SNR=3.6
FINES FINESS Array B 89.42 332 P **P 18 51 16.4 +0.6**
FINES pmax pmax
comp=Z,1.0nm,0.9s
TXAR Lajitas Array 146.54 44 PKPbc PKPbc 18 58 02.1 +0.8
comp=Z,2.0nm,0.8s,baz=290,slow=1.2,SNR=12

*MOS **24** 19:09:13.6±1.4,55.°16N×113.°14E,h20km,mb4.4/2,Error ellipse: s-maj=12.4km s-min=7.9km az=78.9*
*IDC **24** 19:09:15.6±3.6,55.°25N×112.°53E,h0km,mb3.4/2, mb1 3.5/4,mb1mx3.2/26,mbtmp3.4/4,ML3.4/2,Error ellipse: s-maj=54.7km s-min=27.0km az=100.0*
*BYKL **24** 19:09:16.3±0.3,55.°20N×112.°91E*
ISC 24 19:09:14.3±0.3,55.°12N±0.°02×112.°94E±0.°03,h10km,n52, σ1§69/97,mb3.9/2,7C-8D,Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVK	**Severo-Muysk**	**1.11**	**17**	*e*PG	**Pg**	**19 09 34.2**	**-1.4**
YOA	**Uoyan**	**1.22**	**326**	⇓*i*PG	**Pg**	**19 09 37.2**	**-0.5**
YOA				*i*		19 09 52.5	
YOA				pmax	pmax		
	comp=Z,2μm,0.2s						
YOA				smax			
	comp=N,6μm,0.5s						
YOA	**Uoyan**	**1.22**	**326**	⇓*i*Pg	**Pg**	**19 09 37.2**	**-0.5**
	comp=N,196nm,0.5s						
YOA				⇑*i*Pg	**Pg**	**19 09 37.2**	**-0.5**
	comp=N,154nm,0.5s						
YOA				⇓*i*Pg	**Pg**	**19 09 37.2**	**-0.5**
	comp=N,2μm,0.5s						
YOA				*e*Pb	**Pb**	**19 09 38.1**	**+0.6**
YOA				max		19 09 40.0	
	comp=N,1μm,0.2s						
YOA				*e*Sg	**Sg**	**19 09 52.6**	**-1.0**
YOA				*e*Sb	**Sb**	**19 09 55.1**	**+1.8**
YOA				max		19 09 57.7	
	comp=N,6μm,0.5s						
KMO	**Kumora**	**1.25**	**308**	*e*PN	**Pn**	**19 09 37.6**	**-0.1**
KMO				*e*		19 09 52.8	
KMO				pmax	pmax		
	comp=Z,703nm,0.3s						
KMO				smax			
	comp=N,6μm,1.0s						
KMO	**Kumora**	**1.25**	**308**	⇑*i*Pg	**Pn**	**19 09 37.6**	**-0.1**
	comp=N,91nm,0.5s						
KMO				⇓*i*Pg	**Pn**	**19 09 37.6**	**-0.1**
	comp=N,91nm,0.5s						
KMO				⇑*i*Pg	**Pn**	**19 09 37.6**	**-0.1**
	comp=N,727nm,0.5s						
KMO				*i* Pb	**Pb**	**19 09 38.6**	**+0.7**
KMO				max		19 09 38.9	
	comp=N,999nm,0.3s						
KMO				*i* Sg	**Sg**	**19 09 53.3**	**-1.2**
KMO				*i* Sb	**Sb**	**19 09 55.4**	**+1.4**
KMO				max		19 09 56.2	
	comp=N,6μm,1.0s						
NIZ	**Nizh Angarsk**	**2.04**	**290**	*e*PN	**Pn**	**19 09 50.1**	**+1.5**
NIZ				*e*S	**Sn**	**19 10 15.7**	**+1.6**
NIZ	**Nizh Angarsk**	**2.04**	**290**	⇑*i*Pn	**Pn**	**19 09 50.2**	**+1.6**
NIZ				*e*		19 09 53.4	
NIZ				max		19 10 06.4	
	comp=N,63nm,0.3s						
NIZ				*e*		19 10 15.8	
NIZ				*e*Sg	**Sg**	**19 10 17.1**	**-2.7**
NIZ				Smax		19 10 19.6	
	comp=N,778nm,0.4s						
NLYR	**Nelyaty**	**2.08**	**48**	*e*PN	**Pn**	**19 09 52.6**	**+3.5**
NLYR				*e*		19 10 18.5	
NLYR				pmax	pmax		
	comp=Z,201nm,0.8s						
NLYR				smax			
	comp=N,3μm,1.0s						
NLYR	**Nelyaty**	**2.08**	**48**	*e*Pn	**Pn**	**19 09 50.1**	**+1.0**
NLYR				⇑*i*Pg	**Pg**	**19 09 52.2**	**-1.8**
NLYR				*e*		19 09 59.6	
NLYR				max		19 10 00.2	
	comp=N,397nm,0.8s						
NLYR				*i* Sg	**Sg**	**19 10 19.7**	**-1.2**
NLYR				Smax		19 10 20.7	
	comp=N,3μm,1.1s						
SYVR	**Suvo**	**2.26**	**231**	*e*PN	**Pn**	**19 09 53.8**	**+2.2**
SYVR				*e*		19 09 56.8	
SYVR				*e*		19 10 27.6	
SYVR				pmax	pmax		
	comp=Z,108nm,0.1s						
SYVR				smax			
	comp=E,650nm,0.4s						
SYVR	**Suvo**	**2.26**	**231**	⇓*i*Pn	**Pn**	**19 09 53.8**	**+2.2**
SYVR				⇓*i*Pg	**Pg**	**19 09 56.9**	**-0.7**
SYVR				Pmax		19 09 57.6	
	comp=E,106nm,0.2s						
SYVR				*e*Sn	**Sn**	**19 10 24.2**	**+4.7**
SYVR				*i* Sg	**Sg**	**19 10 28.3**	**+1.5**
SYVR				Smax		19 10 29.3	
	comp=E,631nm,0.5s						
MXMB	**Maximikha**	**3.09**	**235**	*e*Pn	**Pn**	**19 10 05.2**	**+2.2**
MXMB				*e*Pg	**Pg**	**19 10 11.2**	**-2.2**
MXMB				*e*PgPg		19 10 13.8	
MXMB				max		19 10 14.2	
	comp=E,166nm,0.8s						
MXMB				*e*Sn	**Sn**	**19 10 41.9**	**+1.9**
MXMB				*i* Sg	**Sg**	**19 10 53.8**	**+0.4**
MXMB				Smax		19 11 03.0	
	comp=E,781nm,0.9s						
CIT	**Chita**	**3.13**	**173**	*e*PN	**Pb**	**19 10 15.0**	**+5.1**
CIT				*e*		19 10 56.1	
CIT				pmax	pmax		
	comp=Z,190nm,0.6s						
CIT				smax			
	comp=E,980nm,0.2s						
CIT	**Chita**	**3.13**	**173**	*e*Pn	**Pn**	**19 10 05.3**	**+1.7**
CIT				*e*Pg	**Pg**	**19 10 12.8**	**-1.4**
CIT				Pmax		19 10 14.3	
	comp=E,87nm,0.1s						
CIT				*e*Sg	**Sg**	**19 10 55.9**	**+1.2**
CIT				Smax		19 11 03.1	
	comp=E,1μm,0.3s						
OGRR	**Ongureny**	**3.46**	**247**	*e*PN	**Pn**	**19 10 10.0**	**+1.9**
OGRR				*e*		19 10 18.3	
OGRR				*e*		19 11 04.5	
OGRR				pmax	pmax		
	comp=Z,123nm,1.1s						
OGRR				smax			
	comp=N,192nm,1.0s						
OGRR	**Ongureny**	**3.46**	**247**	*e*Pg	**Pg**	**19 10 17.4**	**-3.1**
OGRR				*e*PgPg		19 10 20.4	
OGRR				max		19 10 25.2	
	comp=N,75nm,0.5s						
OGRR				*e*Sg	**Sg**	**19 11 03.4**	**-1.8**
OGRR				Smax		19 11 13.1	
	comp=N,194nm,1.0s						
TUP	**Tupik**	**4.12**	**97**	*e*PN	**Pn**	**19 10 18.7**	**+1.5**
TUP				*e*		19 10 29.0	
TUP				*e*		19 11 24.4	
TUP				pmax	pmax		
	comp=Z,34nm,0.3s						
TUP				smax			
	comp=N,566nm,0.8s						
TUP	**Tupik**	**4.12**	**97**	⇓*i*Pn	**Pn**	**19 10 18.7**	**+1.5**
TUP				*e*Pg	**Pg**	**19 10 30.3**	**-2.9**
TUP				*e*		19 10 36.0	
TUP				max		19 10 45.2	
	comp=N,30nm,0.4s						
TUP				*e*		19 11 20.1	
TUP				*e*Sg	**Sg**	**19 11 25.6**	**-0.9**
TUP				*e*		19 11 27.7	
TUP				max		19 11 29.3	
	comp=N,541nm,0.7s						
UUDB	**Ulan-Yde**	**4.54**	**226**	*e*	**Pn**	**19 10 25.6**	**+2.7**
UUDB				*e*Pg	**Pg**	**19 10 38.4**	**-2.7**
UUDB				Pmax		19 10 48.9	
	comp=N,31nm,0.6s						
UUDB				*i* Sg	**Sg**	**19 11 38.8**	**-0.9**
UUDB				Smax		19 11 51.2	
	comp=N,379nm,1.5s						
TRG	**Tyrgan**	**4.56**	**241**	*e*PN	**Pn**	**19 10 25.1**	**+1.9**
TRG				*e*		19 10 37.9	
TRG				*e*S	**Sn**	**19 11 18.5**	**+2.4**
TRG				*e*		19 11 38.3	
TRG				pmax	pmax		
	comp=Z,17nm,0.5s						
TRG				smax			
	comp=N,98nm,0.4s						
TRG	**Tyrgan**	**4.56**	**241**	⇓*i*Pn	**Pn**	**19 10 25.3**	**+2.1**
TRG				⇑*i*Pg	**Pg**	**19 10 38.4**	**-3.1**
TRG				Pmax		19 10 48.9	
	comp=N,18nm,0.9s						
TRG				*e*Sg	**Sg**	**19 11 39.2**	**-1.3**
TRG				Smax		19 11 51.2	
	comp=N,97nm,0.6s						
KAB	**Kabansk**	**4.85**	**233**	*e*PN	**Pb**	**19 10 43.4**	**+4.2**
KAB				*e*		19 11 47.9	
KAB				pmax	pmax		
	comp=Z,39nm,0.4s						
KAB				smax			
	comp=N,613nm,0.8s						
KAB	**Kabansk**	**4.85**	**233**	*e*Pg	**Pg**	**19 10 43.9**	**-3.1**
KAB				Pmax		19 11 02.4	
	comp=N,70nm,0.8s						
KAB				*e*Sg	**Sg**	**19 11 48.5**	**-1.3**
KAB				Smax		19 12 15.8	
	comp=N,678nm,1.4s						
KPC	**Khapcheranga**	**5.44**	**184**	*e*PN	**Pn**	**19 10 37.0**	**+1.7**
KPC				*e*		19 10 55.0	
KPC				*e*		19 12 06.4	
KPC				pmax	pmax		
	comp=Z,8.0nm,0.4s						
KPC				smax			
	comp=E,296nm,0.8s						
KPC	**Khapcheranga**	**5.44**	**184**	*e*Pn	**Pn**	**19 10 37.1**	**+1.8**
KPC				*e*		19 10 42.3	
KPC				*e*Pg	**Pg**	**19 10 55.2**	**-3.2**
KPC				Pmax		19 11 25.1	
	comp=E,15nm,0.4s						
KPC				*e*		19 11 36.2	
KPC				*e*Sg	**Sg**	**19 12 07.4**	**-1.4**
KPC				*e*		19 12 09.4	
KPC				max		19 12 13.1	
	comp=E,296nm,0.8s						
LSTR	**Listvyanka**	**5.83**	**239**	*e*Pn	**Pn**	**19 10 40.3**	**-0.4**
LSTR				*e*		19 10 59.8	
LSTR				max		19 11 05.9	
	comp=E,11nm,0.9s						
LSTR				*e*Sg	**Sg**	**19 12 18.5**	**-2.9**
LSTR				Smax		19 12 31.5	
	comp=E,148nm,2.0s						
IRK	**Irkutsk**	**5.90**	**244**	*e*PG	**Pg**	**19 11 03.3**	**-3.9**
IRK				*e*		19 12 18.7	
IRK				pmax	pmax		
	comp=Z,22nm,0.4s						
IRK				smax			
	comp=N,173nm,0.5s						
IRK	**Irkutsk**	**5.90**	**244**	*e*	**Sn**	**19 11 33.5**	**-16**
IRK				*e*Sg	**Sg**	**19 12 19.8**	**-3.8**
IRK				Smax		19 12 47.5	
	comp=N,228nm,0.7s						
TLY	**Talaya**	**6.54**	**242**	*e*PN	**Pn**	**19 10 52.3**	**+1.9**
TLY				*e*		19 11 13.7	
TLY				*e*		19 12 38.6	
TLY				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TLY				smax			
	comp=N,68nm,1.2s						
TLY	**Talaya**	**6.54**	**242**	*e*Pn	**Pn**	**19 10 52.3**	**+1.9**
TLY				*e*		19 11 00.5	
TLY				*e*Pg	**Pg**	**19 11 13.8**	**-5.6**
TLY				Pmax		19 11 18.0	
	comp=N,6.0nm,0.9s						
TLY				*e*Sg	**Sg**	**19 12 39.3**	**-4.7**
TLY				Smax		19 12 57.4	
	comp=N,68nm,1.5s						
TNDR	**Tynda**	**6.76**	**85**	*e*	**Sn**	**19 12 27.2**	**+17**
TNDR				*e*Sg	**Sg**	**19 12 46.2**	**-4.8**
TNDR				*e*		19 13 03.0	
CLNS	**Chul'man**	**6.92**	**71**	*e*	**Pg**	**19 11 34.5**	**+7.8**
CLNS				*e*		19 12 26.7	
CLNS				*e*		19 12 40.7	
CLNS				*e*Sg	**Sg**	**19 12 51.4**	**-4.9**
ARS	**Arshan**	**7.04**	**247**	*e*PG	**Pg**	**19 11 22.7**	**-6.3**
ARS				*e*		19 12 54.4	
ARS				pmax	pmax		
	comp=Z,29nm,0.6s						
ARS				smax			
	comp=N,227nm,0.8s						
ARS	**Arshan**	**7.04**	**247**	*e*Pn	**Pn**	**19 10 58.2**	**+0.9**
ARS				*e*		19 11 12.9	
ARS				*e*Pg	**Pg**	**19 11 22.8**	**-6.2**
ARS				*e*		19 11 25.1	
ARS				max		19 11 27.9	
	comp=N,29nm,0.6s						
ARS				*e*Sn	**Sn**	**19 12 15.1**	**-2.2**
ARS				*e*Sg	**Sg**	**19 12 54.7**	**-5.4**
ARS				Smax		19 13 06.6	
	comp=N,226nm,0.9s						
HIA	**Hailar**	**7.20**	**142**	*e*PN	**Pn**	**19 11 01.4**	**+1.9**
HIA	**Hailar**	**7.20**	**142**	*e*	**Sb**	**19 12 46.0**	**+0.9**
HIA				*e*Sg	**Sg**	**19 13 01.0**	**-4.2**
MOY	**Mondy**	**7.94**	**249**	*e*PN	**Pn**	**19 11 12.3**	**+2.8**
MOY	**Mondy**	**7.94**	**249**	⇑*i*Pn	**Pn**	**19 11 12.5**	**+3.0**
MOY				*e*		19 11 20.3	
MOY				*e*Pg	Pn	19 11 38.2	+29
MOY				Pmax		19 11 48.0	
	comp=N,15nm,1.5s						
MOY				*e*		19 11 56.4	
MOY				*e*		19 12 40.8	
MOY				*e*Sg	Sn	19 13 23.9	+45
MOY				Smax		19 13 40.8	
	comp=N,91nm,1.3s						
ULN	**Ulaanbaatar**	**8.14**	**209**	*e*PN	**Pn**	**19 11 13.3**	**+0.9**
ULN	**Ulaanbaatar**	**8.14**	**209**	*e*	**Pb**	**19 11 33.4**	**-1.8**
ULN				*e*Pg	Pn	19 11 43.5	+31
ULN				*e*		19 13 02.4	
ULN				*e*Sg	Sn	19 13 30.5	+46
ORL	**Orlik**	**8.19**	**257**	*e*Pn	**Pn**	**19 11 15.5**	**+2.5**
ORL				*e*		19 11 24.9	
ORL				*e*Pg	Pn	19 11 41.9	+29
ORL				Pmax		19 11 47.3	
	comp=N,6.0nm,1.0s						
ORL				*e*		19 11 52.0	
ORL				*e*Sn	**Sn**	**19 12 44.6**	**-0.8**
ORL				*e*Sg	Sn	19 13 28.3	+43
ORL				Smax		19 13 36.6	
	comp=N,86nm,1.5s						
SONM	**Songino Array**	**8.36**	**212**	Pn	**Pn**	**19 11 18.2**	**+2.9**
	comp=N,0.5nm,0.3s,baz=21,slow=14,SNR=9.9						
SONM				Pg	Pn	19 11 49.1	+34
	comp=N,0.5nm,0.3s,baz=25,slow=14,SNR=4.8						
SONM				Sn	**Sn**	**19 12 47.5**	**-2.3**
	comp=N,0.8nm,0.3s,baz=22,slow=16,SNR=4.6						
SONM				Lg		19 13 38.3	
	comp=N,2.5nm,0.3s,baz=24,slow=26,SNR=12						
SONM	**Songino Array**	**8.36**	**212**	PN	**Pn**	**19 11 18.2**	**+2.8**
SONM						19 11 49.1	
SONM						19 12 47.5	
SONM				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM				smax			
	comp=N,1.0nm,0.3s						
YAK	**Yakutsk**	**11.12**	**45**	*e*P	**Pn**	**19 11 52.8**	**-0.3**
HABR	**Khabarovsk**	**15.17**	**107**	*e*P	**Pn**	**19 12 44.5**	**-3.9**
ZALV	**Zalesovo Beam**	**16.32**	**277**	Pn	**Pn**	**19 13 04.5**	**+1.2**
	comp=N,0.1nm,0.3s,baz=99,slow=9.2,SNR=2.2						
ZALV				Lg		19 17 45.6	
	comp=N,0.1nm,0.3s,baz=85,slow=18,SNR=2.3						
TIXI	**Tiksi**	**17.94**	**16**	*e*P	**Pn**	**19 13 20.4**	**-3.0**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MKAR	**Makanchi Array**	**20.89**	**259**	P	**P**	**19 13 57.0**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=60,slow=10,SNR=5.4						
MKAR	**Makanchi Array**	**20.89**	**259**	*i* P	**P**	**19 13 58.0**	**+1.7**
BILL	**Bilibino**	**27.44**	**41**	*e*P	**P**	**19 14 57.9**	**-1.9**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.0						
FINES	**FINESS Array B**	**42.86**	**315**	P	**P**	**19 17 12.3**	**+0.2**
	comp=Z,2.0nm,1.0s,mb3.8,baz=61,slow=11,SNR=4.8						
FINES	**FINESS Array B**	**42.86**	**315**	P	**P**	**19 17 12.3**	**+0.2**
FINES				pmax	pmax		
	comp=Z,2.0nm,1.0s						

*NDI **24** 19:23:18.4±4.4,33.°88N×72.°19E,h10km,ML3.1*
*ISCJB **24** 19:23:23.2±0.7,34.°17N±0.°05×73.°21E±0.°04,h10km,Error ellipse: s-maj=7.4km s-min=4.9km az=13.1*
ISC 24 19:23:25.1±0.6,34.°06N±0.°05×73.°15E±0.°04,h10km,n19, σ1§71/24,2C-3D,Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHCP	**Chirah Chowk**	**0.41**	**167**	⇓P	**Pg**	**19 23 33.4**	**+0.3**
CEP	**Cherat**	**1.06**	**258**	⇑P	**Pg**	**19 23 45.5**	**0.0**
CEP				S	**Sg**	**19 23 57.0**	**-2.3**
THW	**Thamme Wali**	**1.73**	**224**	⇓P	**Pn**	**19 23 55.0**	**-0.2**
THW				S	**Sn**	**19 24 19.0**	**+1.8**
SARP	**Sargodha**	**2.17**	**191**	P	**Pn**	**19 24 03.5**	**+2.2**
THN	**Thein Dam**	**2.69**	**126**	*e*PKP	**Pn**	**19 24 10.7**	**+2.2**
THN				*e*S	**Sn**	**19 24 46.8**	**+5.7**
SDNR	**Sundarnagar**	**4.10**	**127**	*e*PB	**Pg**	**19 24 41.5**	**-2.2**
SDNR				*e*SB	**Sg**	**19 25 42.5**	**+5.6**
SMLA	**Simla**	**4.47**	**130**	*i* P	**Pn**	**19 24 35.6**	**+2.6**
SMLA				*i* S	**Sn**	**19 25 26.8**	**+1.8**
SMLA						19 25 28.3	
	comp=N,378nm,0.2s						
SMLA						19 25 28.5	
	comp=E,518nm,0.3s						
KLP	**Kalpa**	**4.97**	**119**	*e*PKP	**Pn**	**19 24 41.0**	**+1.1**
KLP				*e*S	**Sn**	**19 25 42.0**	**+4.5**
KLP				AML	AML	19 26 09.4	
	comp=E,82nm,0.7s						
KLP				AML	AML	19 26 12.0	
	comp=N,66nm,0.9s						
DDI	**Dehra Dun**	**5.58**	**131**	*ex*	x	19 26 23.0	
KHET	**Khetri**	**6.38**	**158**	*e*S	Sx	19 26 04.5	
KHET				AML	AML	19 26 48.7	
	comp=N,6.3nm,0.3s						
KHET				AML	AML	19 26 49.7	
	comp=E,6.2nm,0.2s						
SONA	**Sohna**	**6.70**	**149**	*e*S	**Sn**	**19 26 15.1**	**-4.8**
KK31	**Karatay Array**	**9.27**	**348**	⇓Pn	**Pn**	**19 25 43.0**	**+4.2**
	comp=E,0.5nm,0.3s,baz=154,slow=11,SNR=32						
KK31				⇑Sn	**Sn**	**19 27 24.5**	**+1.5**
	comp=E,1.4nm,0.5s,baz=167,slow=21,SNR=7.4						
GKN	**Gorkha**	**11.55**	**118**	*e*P	**Pn**	**19 26 09.3**	**-0.7**
	comp=E,10.0nm,0.3s						
DMN	**Daman**	**12.11**	**119**	*e*P	**Pn**	**19 26 16.4**	**-1.4**
	comp=E,4.7nm,0.2s						
KKN	**Kakani**	**12.14**	**118**	*e*P	**Pn**	**19 26 16.4**	**-1.7**
PKIN	**Phulchoki**	**12.34**	**118**	*e*P	**Pn**	**19 26 19.2**	**-1.7**
	comp=E,7.0nm,0.4s						
PKI	**Pulchoki**	**12.35**	**118**	*e*P	**Pn**	**19 26 19.4**	**-1.7**
	comp=E,3.9nm,0.2s						
JIRN	**Jiri**	**12.88**	**116**	*e*P	**Pn**	**19 26 26.0**	**-2.3**
	comp=E,11nm,0.3s						
RAMN	**Ramite**	**13.58**	**118**	*e*P	**Pn**	**19 26 34.8**	**-3.0**

*ISK **24** 20:00:56.8,36.°99N×29.°19E,h5km,MD2.7*
*ISCJB **24** 20:00:57.8±0.8,36.°98N±0.°04×29.°16E±0.°05,h4km±10km, Error ellipse: s-maj=6.7km s-min=6.4km az=162.2*
*DDA **24** 20:00:58.0,37.°01N×29.°17E,h7km±2km,Md2.8*
*CSEM **24** 20:00:58.1±0.1,37.°00N×29.°19E,h10km,MD2.7,Error ellipse: s-maj=3.5km s-min=2.8km az=13.0*
ISC 24 20:00:58.3±0.7,36.°98N±0.°04×29.°17E±0.°05,h9km±7km, n18,σ0§62/28,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.32**	**57**	*e*PG	**Pg**	**20 01 03.8**	**-0.8**
GLHS				*e*SG	**Sg**	**20 01 08.9**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.32**	**57**	*e*Pg	**Pg**	**20 01 03.8**	**-0.8**
GLHS				*e*Sg	**Sg**	**20 01 08.9**	**+0.1**
GOLH	**Golhisar**	**0.40**	**51**	*i* P	**Pg**	**20 01 05.9**	**-0.4**
GOLH				*i* S	**Sg**	**20 01 11.8**	**+0.3**
GOLH	**Golhisar**	**0.40**	**51**	*i* P	**Pg**	**20 01 05.9**	**-0.3**
GOLH				*i* S	**Sg**	**20 01 11.8**	**+0.2**
ELL	**Elmali**	**0.64**	**111**	*e*PG	**Pg**	**20 01 10.0**	**-0.6**
ELL				*e*SG	**Sg**	**20 01 19.8**	**+0.8**
ELL	**Elmali**	**0.64**	**111**	*e*Pg	**Pg**	**20 01 10.0**	**-0.6**
ELL				*e*Sg	**Sg**	**20 01 19.8**	**+0.8**
DNZL	**Cakiroluk**	**0.71**	**352**	*i* P	**Pg**	**20 01 11.5**	**-0.5**
DNZL				*i* S	**Sg**	**20 01 21.9**	**+0.6**
DNZL	**Cakiroluk**	**0.71**	**352**	*i* P	**Pg**	**20 01 11.5**	**-0.6**
DNZL				*i* S	**Sg**	**20 01 21.9**	**+0.5**
YER	**Yerkesik**	**0.72**	**282**	*e*PG	**Pg**	**20 01 12.8**	**+0.6**
YER	**Yerkesik**	**0.72**	**282**	*e*Pg	**Pg**	**20 01 12.8**	**+0.5**
AKAS	**Kas**	**0.83**	**155**	*i* P	**Pg**	**20 01 14.5**	**+0.3**
AKAS	**Kas**	**0.83**	**155**	*i* P	**Pg**	**20 01 14.5**	**+0.3**
AYDN	**Tasoluk**	**1.23**	**304**	*i* P	**Pn**	**20 01 21.6**	**0.0**
AYDN	**Tasoluk**	**1.23**	**304**	*i* P	**Pn**	**20 01 21.6**	**-0.1**
DAT	**Datca**	**1.30**	**259**	*e*PN	**Pn**	**20 01 22.6**	**0.0**
DAT	**Datca**	**1.30**	**259**	*e*Pn	**Pn**	**20 01 22.6**	**0.0**
KHAL	**Karahalli**	**1.41**	**10**	*i* P	**Pn**	**20 01 22.9**	**-1.3**
KHAL				*i* S	**Sn**	**20 01 43.9**	**+1.0**
KHAL	**Karahalli**	**1.41**	**10**	*i* P	**Pn**	**20 01 22.9**	**-1.3**
KHAL				*i* S	**Sn**	**20 01 43.8**	**+0.9**

MEX 24 20:10:12.2±1.4,16.°71N×94.°85W,h140km±22km,MD3.7, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.53**	**233**	*e*P	Pn	20 10 39.2	-2.0
HUIG				*i* S	Sn	20 11 01.3	-2.1
TGIG		**1.66**	**87**	*e*P	Pn	20 10 41.1	-1.6
TGIG				*i* S	Sn	20 11 03.3	-2.7
VHO	**Vista Hermosa**	**1.84**	**282**	*i* P	Pn	20 10 44.4	-0.4
VHO				*i* S	Sn	20 11 08.7	-1.0
PCIG		**1.86**	**122**	*e*P	Pn	20 10 45.0	-0.1
PCIG				*i* S	Sn	20 11 09.4	-0.7
PNIG	**Pinotepa**	**3.16**	**265**	*i* P	Pn	20 10 59.5	-1.7
PNIG				*i* S	Sn	20 11 37.5	-1.6

CSEM ***24*** *20:29:24.8±0.1, 36°.99N×29°.14E, h2km, MD3.2, Error ellipse: s-maj=1.4km s-min=1.0km az=19.0*
DDA ***24*** *20:29:24.7, 36°.99N×29°.13E, h7km±2km, Md3.0*
ISK ***24*** *20:29:24.2, 37°.00N×29°.15E, h5km, MD3.2*
ISCJB ***24*** *20:29:25.5±0.4, 37°.01N±0°.03×29°.15E±0°.03, h10km, Error ellipse: s-maj=4.9km s-min=3.4km az=165.2*
ISC 24 20:29:25.8±0.5, 37°.03N±0°.03×29°.14E±0°.03, h5km±6km, n40, σ0§99/45, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.31**	**66**	*e*PG	**Pg**	**20 29 31.2**	**-0.7**
GLHS				*e*SG	**Sg**	**20 29 37.2**	**+1.3**
GLHS	**Glhisar (BURDU**	**0.31**	**66**	*e*Pg	**Pg**	**20 29 31.2**	**-0.7**
GLHS				*e*Sg	**Sg**	**20 29 37.3**	**+1.3**
GOLH	**Golhisar**	**0.40**	**58**	*i* P	**Pg**	**20 29 33.1**	**-0.3**
GOLH				*i* S	**Sg**	**20 29 39.9**	**+1.3**
GOLH	**Golhisar**	**0.40**	**58**	*i* P	**Pg**	**20 29 33.1**	**-0.3**
DNZL	**Cakiroluk**	**0.66**	**354**	*i* P	**Pg**	**20 29 38.5**	**0.0**
DNZL	**Cakiroluk**	**0.66**	**354**	*i* P	**Pg**	**20 29 38.5**	**0.0**
ELL	**Elmali**	**0.68**	**114**	*e*PG	**Pg**	**20 29 37.5**	**-1.2**
ELL				*e*SG	**Sg**	**20 29 48.5**	**+0.9**
ELL	**Elmali**	**0.68**	**114**	*e*Pg	**Pg**	**20 29 37.5**	**-1.3**
ELL				*e*Sg	**Sg**	**20 29 48.5**	**+0.9**
YER	**Yerkesik**	**0.69**	**279**	*e*PG	**Pg**	**20 29 38.4**	**-0.6**
YER	**Yerkesik**	**0.69**	**279**	*e*Pg	**Pg**	**20 29 38.4**	**-0.7**
DENT	**Denizli**	**0.73**	**353**	*e*PG	**Pg**	**20 29 40.3**	**+0.6**
DENT	**Denizli**	**0.73**	**353**	*e*Pg	**Pg**	**20 29 40.3**	**+0.5**
AKAS	**Kas**	**0.88**	**155**	*i* P	**Pg**	**20 29 41.1**	**-1.5**
AKAS	**Kas**	**0.88**	**155**	*i* P	**Pg**	**20 29 41.1**	**-1.5**
KSL	**Kastellorizon**	**0.95**	**158**	*e*P	**Pg**	**20 29 44.0**	**+0.1**
KORT	**Korkueli**	**0.97**	**91**	*i* P	**Pg**	**20 29 42.2**	**-2.2**
KORT	**Korkueli**	**0.97**	**91**	*i* P	**Pg**	**20 29 42.2**	**-2.2**
MLSB	**Milas**	**1.12**	**284**	*e*PN	**Pg**	**20 29 47.5**	**+0.3**
MLSB	**Milas**	**1.12**	**284**	*e*Pn	**Pg**	**20 29 47.5**	**+0.2**
ARG	**Arkhangelos**	**1.15**	**225**	*e*P	**Sg**	**20 30 05.0**	**+2.3**
AYDN	**Tasoluk**	**1.19**	**303**	*i* P	**Pg**	**20 29 48.0**	**-0.5**
AYDN	**Tasoluk**	**1.19**	**303**	*i* P	**Pg**	**20 29 48.0**	**-0.5**
BCK	**Bucak**	**1.23**	**69**	*e*PN	**Pn**	**20 29 49.4**	**-0.3**
BCK	**Bucak**	**1.23**	**69**	*e*Pn	**Pn**	**20 29 49.4**	**-0.3**
DAT	**Datca**	**1.29**	**257**	*e*PN	**Pn**	**20 29 50.4**	**+0.1**
DAT	**Datca**	**1.29**	**257**	*e*Pn	**Pn**	**20 29 50.4**	**0.0**
KHL	**Karahalli**	**1.33**	**13**	*e*PN	**Pn**	**20 29 51.3**	**+0.4**
KHL	**Karahalli**	**1.33**	**13**	*e*Pn	**Pn**	**20 29 51.3**	**+0.4**
ISP	**Isparta**	**1.36**	**54**	*e*PN	**Pn**	**20 29 52.2**	**+0.9**
ISP	**Isparta**	**1.36**	**54**	*e*Pn	**Pn**	**20 29 52.2**	**+0.9**
BDRM	**Kayabasi**	**1.36**	**272**	*i* P	**Pn**	**20 29 49.1**	**-2.2**
BDRM	**Kayabasi**	**1.36**	**272**	*i* P	**Pn**	**20 29 49.1**	**-2.2**
KHAL	**Karahalli**	**1.37**	**12**	*i* P	**Pn**	**20 29 51.1**	**-0.4**
KHAL	**Karahalli**	**1.37**	**12**	*i* P	**Pn**	**20 29 51.1**	**-0.4**
BODT	**Bodrum**	**1.46**	**272**	*e*PN	**Pn**	**20 29 53.3**	**+0.5**
BODT	**Bodrum**	**1.46**	**272**	*e*Pn	**Pn**	**20 29 53.3**	**+0.5**
SMG	**Samos**	**1.96**	**291**	*e*P	**Pn**	**20 29 59.0**	**-0.6**
IZM	**Izmir**	**2.02**	**313**	*e*PN	**Pn**	**20 30 00.3**	**-0.2**
KARP	**Karpathos**	**2.18**	**228**	*e*P	**Pn**	**20 30 03.5**	**+0.9**
LAST	**Lasithi**	**3.50**	**239**	*e*P	**Pn**	**20 30 22.0**	**+1.2**

ISCJB ***24*** *20:33:11.7±0.7, 37°.03N±0°.03×29°.18E±0°.04, h2km±9km, Error ellipse: s-maj=6.2km s-min=5.3km az=37.7*
CSEM ***24*** *20:33:11.5±0.1, 36°.99N×29°.24E, h10km, MD2.9, Error ellipse: s-maj=2.0km s-min=1.7km az=10.0*
DDA ***24*** *20:33:11.8, 37°.05N×29°.18E, h7km±5km, Md2.9*
ISK ***24*** *20:33:11.5, 37°.02N×29°.21E, h11km, MD2.9*
ISC 24 20:33:12.3±0.6, 37°.04N±0°.03×29°.19E±0°.05, h9km±8km, n28, σ0§89/41, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.27**	**65**	*e*PG	**Pg**	**20 33 17.3**	**-0.4**
GLHS				*e*SG	**Sg**	**20 33 22.2**	**+0.8**
GLHS	**Glhisar (BURDU**	**0.27**	**65**	*e*Pg	**Pg**	**20 33 17.3**	**-0.4**
GLHS				*e*Sg	**Sg**	**20 33 22.2**	**+0.8**
GOLH	**Golhisar**	**0.35**	**56**	*i* P	**Pg**	**20 33 18.5**	**-0.8**
GOLH				*i* S	**Sg**	**20 33 25.6**	**+1.6**
GOLH	**Golhisar**	**0.35**	**56**	*i* P	**Pg**	**20 33 18.5**	**-0.8**
GOLH				*i* S	**Sg**	**20 33 25.6**	**+1.6**
ELL	**Elmali**	**0.65**	**117**	*e*PG	**Pg**	**20 33 23.2**	**-1.5**
ELL				*e*SG	**Sg**	**20 33 33.5**	**+0.3**
ELL	**Elmali**	**0.65**	**117**	*e*Pg	**Pg**	**20 33 23.3**	**-1.4**
DNZL	**Cakiroluk**	**0.66**	**350**	*i* P	**Pg**	**20 33 24.3**	**-0.7**
DNZL	**Cakiroluk**	**0.66**	**350**	*i* P	**Pg**	**20 33 24.3**	**-0.7**
DENT	**Denizli**	**0.72**	**350**	*e*PG	**Pg**	**20 33 26.4**	**+0.2**
DENT	**Denizli**	**0.72**	**350**	*e*Pg	**Pg**	**20 33 26.5**	**+0.3**
YER	**Yerkesik**	**0.73**	**278**	*e*PG	**Pg**	**20 33 26.5**	**+0.1**
YER	**Yerkesik**	**0.73**	**278**	*e*Pg	**Pg**	**20 33 26.5**	**+0.1**
AKAS	**Kas**	**0.87**	**157**	*i* P	**Pg**	**20 33 27.1**	**-1.9**
AKAS				*i* S	**Sg**	**20 33 42.5**	**+2.2**
AKAS	**Kas**	**0.87**	**157**	*i* P	**Pg**	**20 33 27.1**	**-1.9**
AKAS				*i* S	**Sg**	**20 33 42.5**	**+2.1**
MLSB	**Milas**	**1.16**	**283**	*e*PN	**Pn**	**20 33 34.6**	**0.0**
MLSB	**Milas**	**1.16**	**283**	*e*Pn	**Pn**	**20 33 34.6**	**0.0**
AYDN	**Tasoluk**	**1.22**	**301**	*i* P	**Pb**	**20 33 34.7**	**-0.7**
AYDN				*i* S	**Sb**	**20 33 51.8**	**+0.6**
AYDN	**Tasoluk**	**1.22**	**301**	*i* P	**Pb**	**20 33 34.7**	**-0.7**
AYDN				*i* S	**Sb**	**20 33 51.8**	**+0.6**
KHL	**Karahalli**	**1.31**	**12**	*e*PN	**Pn**	**20 33 36.1**	**-0.6**
KHL	**Karahalli**	**1.31**	**12**	*e*Pn	**Pn**	**20 33 36.1**	**-0.6**
DAT	**Datca**	**1.33**	**257**	*e*PN	**Pn**	**20 33 37.3**	**+0.4**
DAT	**Datca**	**1.33**	**257**	*e*Pn	**Pn**	**20 33 37.3**	**+0.3**
KHAL	**Karahalli**	**1.35**	**10**	*i* P	**Pn**	**20 33 37.2**	**-0.1**
KHAL				*i* S	**Sb**	**20 33 55.1**	**0.0**
KHAL	**Karahalli**	**1.35**	**10**	*i* P	**Pn**	**20 33 37.2**	**0.0**
KHAL				*i* S	**Sb**	**20 33 55.1**	**+0.1**
BDRM	**Kayabasi**	**1.40**	**272**	*i* P	**Pn**	**20 33 37.9**	**0.0**
BDRM				*i* S	**Sb**	**20 33 57.6**	**+1.1**
BDRM	**Kayabasi**	**1.40**	**272**	*i* P	**Pn**	**20 33 37.9**	**0.0**
BDRM				*i* S	**Sb**	**20 33 57.6**	**+1.2**
BODT	**Bodrum**	**1.50**	**271**	*e*PN	**Pn**	**20 33 39.0**	**-0.4**
BODT	**Bodrum**	**1.50**	**271**	*e*Pn	**Pn**	**20 33 39.0**	**-0.4**

MEX 24 20:43:49.9±0.8, 15°.23N×93°.34W, h76km±9km, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.48**	**14**	*e*P	Pn	20 44 01.8	-1.3
PCIG				*i* S	Sn	20 44 11.2	-1.6
THIG		**1.09**	**107**	*i* P	Pn	20 44 08.3	-1.5
THIG				*i* S	Sn	20 44 21.7	-3.0
TGIG		**1.55**	**8**	*i* P	Pn	20 44 14.5	-1.2
TGIG				*i* S	Sn	20 44 33.0	-2.3
HUIG	**Huatulco**	**2.72**	**282**	*i* P	Pn	20 44 31.7	+0.3
HUIG				*i* S	Sn	20 45 01.1	-2.2
VHO	**Vista Hermosa**	**3.74**	**300**	*i* P	Pn	20 44 43.6	-1.6
VHO				*i* S	Sn	20 45 26.9	-1.2
PNIG	**Pinotepa**	**4.75**	**285**	*i* P	Pn	20 44 59.8	+0.7
PNIG				*i* S	Sn	20 45 51.6	-1.2

BJI ***24*** *20:44:52.9, 22°.34S×178°.45W, h603km, mB4.9/6, mb4.6/10*
ISCJB ***24*** *20:44:59.4±0.7, 21°.33S±0°.06×179°.35W±0°.07, h604km±10km, mb4.5/35, Error ellipse: s-maj=10.7km s-min=9.0km az=34.0*
IDC ***24*** *20:44:59.4±1.1, 21°.35S×179°.25W, h587km±13km, mb4.0/19, mb1 4.0/22, mb1mx4.0/25, mbtmp4.0/22, Error ellipse: s-maj=11.8km s-min=10.2km az=85.0*
NEIC ***24*** *20:45:00.5±0.6, 21°.35S×179°.27W, h604km±8km, mb4.7/13, Error ellipse: s-maj=9.9km s-min=9.1km az=130.0*
ISC 24 20:45:00.3±0.7, 21°.38S±0°.06×179°.31W±0°.07, h600km±9km, n105, σ1§03/58, mb4.5/35, 11C-3D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.40**	**325**	*e*P	**P**	**20 46 31.1**	**+2.4**
RAO	**Raoul Island**	**7.94**	**171**	P	**P**	**20 46 58.9**	**0.0**
	413nm,0.3s,baz=98,slow=11,SNR=12						
RAO				S	**S**	**20 48 35.4**	**-0.7**
	75nm,0.3s,baz=90,slow=20,SNR=2.8						
AFI	**Afiamalu**	**10.33**	**45**	P	**P**	**20 47 21.0**	**-1.5**
	5.0nm,0.3s,baz=80,slow=6.1,SNR=4.7						
AFI				S	**S**	**20 49 12.6**	**-6.5**
	11nm,0.3s,baz=216,slow=19,SNR=8.5						
OUZ	**Omahuta**	**15.13**	**203**	*e*P	**P**	**20 48 11.7**	**+2.2**
	53nm,0.8s						
URZ	**Urewera**	**17.10**	**190**	P	**P**	**20 48 25.7**	**-1.8**
	6.0nm,0.3s,baz=341,slow=7.5,SNR=15						
URZ				S	**S**	**20 51 08.4**	**-7.7**
	2.9nm,0.3s,baz=229,slow=19,SNR=10						
RAR	**Rarotonga**	**18.21**	**93**	P	**P**	**20 48 37.3**	**-0.6**
	1.0nm,0.3s,baz=281,slow=6.8,SNR=6.4						
RPZ	**Rata Peaks**	**23.67**	**198**	P	**P**	**20 49 25.9**	**-0.6**
	13nm,0.9s,mb4.6,baz=63,slow=9.0,SNR=3.0						
RPZ	**Rata Peaks**	**23.67**	**198**	P	**P**	**20 49 25.9**	**-0.6**
CTA	**Charters Tower**	**32.19**	**266**	*e*P	**P**	**20 50 41.7**	**+0.8**
	21nm,0.4s,mb5.1						
CTA	**Charters Tower**	**32.19**	**266**	P	**P**	**20 50 41.7**	**+0.9**
	27nm,0.5s,mb5.2,baz=93,slow=12,SNR=48						
CTA	**Charters Tower**	**32.19**	**266**	P	**P**	**20 50 41.7**	**+0.9**
CTAO	**Charters Tower**	**32.19**	**266**	*e*P	**P**	**20 50 41.7**	**+0.8**
	23nm,0.8s,mb4.8						
PMG	**Port Moresby**	**34.36**	**285**	*e*P	**P**	**20 50 59.4**	**+0.2**
	56nm,0.9s,mb5.2						
STKA	**Stephens Creek**	**36.30**	**245**	*e*P	**P**	**20 51 16.0**	**+1.1**
	2.2nm,0.4s,mb4.0						
STKA	**Stephens Creek**	**36.30**	**245**	P	**P**	**20 51 15.8**	**+0.9**
	3.2nm,0.5s,mb4.1,baz=83,slow=12,SNR=15						
STKA	**Stephens Creek**	**36.30**	**245**	*e*P	**P**	**20 51 15.8**	**+0.8**
ASAR	**Alice Springs**	**43.13**	**258**	P	**P**	**20 52 09.8**	**+0.4**
	23nm,0.8s,mb4.8,baz=96,slow=7.8,SNR=277						
ASAR				ScP	ScP	20 56 41.4	+1.2
	3.2nm,0.7s,baz=108,slow=4.2,SNR=12						
ASAR				S	**S**	**20 57 51.2**	**-2.4**
	4.5nm,0.8s,baz=93,slow=16,SNR=20						
WRAB	**Tennant Creek**	**43.26**	**263**	*e*P	**P**	**20 52 10.2**	**-0.4**
	29nm,1.0s,mb4.8						
KAKA	**Kakadu**	**46.78**	**272**	*e*P	**P**	**20 52 37.2**	**-0.2**
	20nm,0.4s,mb5.0						
FORT	**Forrest**	**47.82**	**247**	*e*P	**P**	**20 52 44.9**	**-0.1**
	7.3nm,0.6s,mb4.4						
GUMO	**Guam**	**49.44**	**311**	P	**P**	**20 52 56.5**	**-0.6**
	41nm,0.6s,mb5.0,baz=135,slow=10.0,SNR=6.0						
MBWA	**Marble Bar**	**56.47**	**258**	*e*P	**P**	**20 53 46.5**	**-0.5**
SBA	**Scott Base**	**56.92**	**183**	*e*P	**P**	**20 53 51.3**	**+2.3**
	18nm,0.9s,mb4.3						
CBIJ	**Chichi jima**	**60.92**	**321**	P	**P**	**20 54 16.5**	**0.0**
	56nm,0.5s,mb5.0,baz=287,slow=21,SNR=4.6						
JHJ	**Hachijo jima 2**	**66.79**	**323**	P	**P**	**20 54 52.7**	**-0.9**
	49nm,0.4s,mb5.3,baz=236,slow=22,SNR=9.6						
QSPA	**South Pole Qui**	**68.69**	**180**	P	**P**	**20 55 05.7**	**+1.3**
	38nm,0.9s,mb4.8,baz=29,slow=1.6,SNR=108						
QSPA	**South Pole Qui**	**68.69**	**180**	*e*P	**P**	**20 55 05.5**	**+1.1**
MJAR	**Matsushiro Arr**	**70.20**	**325**	P	**P**	**20 55 13.3**	**-0.7**
	8.8nm,0.6s,mb4.3,baz=154,slow=5.8,SNR=26						
MJAR	**Matsushiro Arr**	**70.20**	**325**	P	**P**	**20 55 13.3**	**-0.7**
MAJO	**Matsushiro**	**70.20**	**325**	*e*P	**P**	**20 55 13.9**	**-0.2**
	20nm,1.0s,mb4.5						
MAT	**Matsushiro**	**70.20**	**325**	P	**P**	**20 55 13.7**	**-0.3**
KSM	**Kuching**	**72.33**	**279**	*e*P	**P**	**20 55 27.4**	**+0.5**
	12nm,0.8s,mb4.5						
TWG	**Pinlang**	**72.83**	**304**	*e*P	**P**	**20 55 28.1**	**-1.5**
	22nm,0.4s,mb5.0						
TPUB	**Ta-pu**	**73.43**	**304**	*e*P	**P**	**20 55 31.9**	**-1.1**
	56nm,0.7s,mb5.2						
SSLB	**Suanglung**	**73.44**	**304**	*e*P	**P**	**20 55 31.8**	**-1.3**
	15nm,0.6s,mb4.7						
ASAJ	**Asahikawa**	**73.92**	**332**	P	**P**	**20 55 36.9**	**+1.6**
	15nm,0.8s,mb4.6,baz=215,slow=7.6,SNR=24						
PETK	**Petropavlovsk-**	**76.81**	**346**	P	**P**	**20 55 51.0**	**-0.1**
	15nm,0.8s,mb4.5,baz=127,slow=7.3,SNR=16						
MAW	**Mawson**	**80.32**	**200**	P	**P**	**20 56 09.9**	**+0.2**
	4.0nm,0.6s,mb3.9,baz=130,slow=7.3,SNR=20						
MAW	**Mawson**	**80.32**	**200**	*e*P	**P**	**20 56 09.7**	**0.0**
	0.8nm,0.6s						
MDJ	**Mudanjiang**	**80.54**	**326**	P	**P**	**20 56 11.8**	**+0.7**
MDJ				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.2						
MDJ				pmax	pmax		
	comp=Z,66nm,5.1s						
MDJ	**Mudanjiang**	**80.54**	**326**	*e*P	**P**	**20 56 12.3**	**+1.2**
CN2	**Changchun**	**82.25**	**323**	*e*P	**P**	**20 56 20.3**	**+0.5**
CN2				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.5						
NVAR	**Mina Array Bea**	**82.50**	**44**	P	**P**	**20 56 22.1**	**+0.9**
	comp=Z,4.9nm,1.1s,mb3.9,baz=220,slow=9.1,SNR=7.8						
SYO	**Syowa Base**	**85.60**	**193**	⇓*e*P	**P**	**20 56 33.6**	**-2.3**
TRF	**Thorofare Moun**	**87.57**	**13**	*e*P	**P**	**20 56 44.4**	**-0.7**
	comp=Z,12nm,0.7s,mb4.8						
HLID	**Hailey**	**87.79**	**41**	*e*P	**P**	**20 56 48.0**	**+1.4**
	comp=Z,2.4nm,1.2s,mb3.8						
MNTX	**Corrudas Mount**	**88.26**	**55**	*e*P	**P**	**20 56 49.5**	**+0.4**
	comp=Z,3.1nm,0.9s,mb4.0						
TXAR	**Lajitas Array**	**88.56**	**58**	P	**P**	**20 56 51.7**	**+1.2**
	comp=Z,3.5nm,0.8s,mb4.2,baz=214,slow=6.1,SNR=25						
HHC	**Hu-ho-hao-te**	**89.09**	**315**	*e*P	**P**	**20 56 52.8**	**+0.1**
HHC				pmax	pmax		
	comp=Z,18nm,0.5s,mb5.2						
HHC				pmax	pmax		
	comp=Z,82nm,4.8s						
CMAR	**Chiang Mai Arr**	**89.26**	**290**	P	**P**	**20 56 55.4**	**+1.4**
	comp=Z,5.8nm,0.8s,mb4.4,baz=124,slow=3.4,SNR=28						
ILAR	**Eielson Array**	**89.44**	**13**	P	**P**	**20 56 52.4**	**-1.3**
	comp=Z,1.2nm,0.4s,mb4.1,baz=216,slow=5.2,SNR=17						
PLCA	**Paso Flores**	**89.55**	**134**	P	**P**	**20 56 54.8**	**-0.2**
	comp=Z,5.3nm,0.7s,mb4.5,baz=229,slow=4.7,SNR=12						
PDAR	**Pinedale Array**	**90.44**	**44**	P	**P**	**20 56 59.0**	**+0.1**
	comp=Z,0.7nm,0.6s,mb3.7,baz=188,slow=4.3,SNR=7.7						
SONM	**Songino Array**	**95.61**	**319**	P	**P**	**20 57 22.4**	**0.0**
	comp=Z,0.4nm,0.7s,mb3.8,baz=112,slow=3.9,SNR=3.7						
MKAR	**Makanchi Array**	**110.91**	**313**	PKKPbc	PKKPbc	21 13 24.8	-1.6
	comp=Z,1.1nm,0.7s,baz=275,slow=5.1,SNR=8.2						
FINES	**FINESS Array B**	**136.26**	**343**	PKhKP	PKPpre	21 03 03.4	
	comp=Z,0.4nm,0.5s,baz=0.0,slow=1.9,SNR=3.4						
FINES				PKP	PKPdf	21 03 13.9	-0.1
	comp=Z,0.9nm,0.7s,baz=98,slow=4.2,SNR=4.3						
FINES				SKPbc	SKPbc	21 05 50.9	+0.3
	comp=Z,6.0nm,1.0s,baz=67,slow=6.4,SNR=6.8						
NOA	**NORSAR Array B**	**139.69**	**352**	PKhKP	PKPpre	21 03 12.3	
	comp=Z,0.5nm,0.5s,baz=344,slow=3.8,SNR=3.9						
NOA				SKP		21 05 59.4	
	comp=Z,1.5nm,0.9s,baz=7.9,slow=3.7,SNR=3.5						
NOA	**NORSAR Array B**	**139.69**	**352**	PKP	PKPpre	21 03 12.3	
NOA				SKP		21 05 59.4	
AKASG	**Malin Array Be**	**143.17**	**330**	PKhKP	PKPpre	21 03 23.4	
	comp=Z,14nm,0.6s,baz=43,slow=4.3,SNR=52						
AKASG				SKPbc	SKPbc	21 06 07.8	-1.5
	comp=Z,1.5nm,0.6s,baz=63,slow=1.9,SNR=8.4						
AKASG	**Malin Array Be**	**143.17**	**330**	PKP	PKPdf	21 03 23.4	-3.4
AKASG				SKPbc	SKPbc	21 06 07.8	-1.5
KIEV	**Kiev**	**143.18**	**330**	*e*P	PKPdf	21 03 23.9	-3.0
ASF	**Jabal al Asfar**	**146.08**	**296**	PKPbc	PKPbc	21 03 35.0	+0.4
	comp=Z,1.9nm,0.5s,baz=177,slow=1.2,SNR=4.5						
BRTR	**Keskin Array B**	**146.50**	**311**	PKPbc	PKPbc	21 03 35.2	-0.3
	comp=Z,2.6nm,0.6s,baz=130,slow=3.4,SNR=12						
KWP	**Kalwaria Pacla**	**146.84**	**334**	⇑*i*P	PKPbc	21 03 36.1	+0.1
MMAI	**Mount Meron Ar**	**147.16**	**298**	PKPbc	PKPbc	21 03 37.9	+0.4
	comp=Z,5.7nm,0.7s,baz=64,slow=5.7,SNR=5.1						
BURAR	**Bucovina Array**	**147.20**	**329**	⇑*i*P	PKPbc	21 03 36.7	-0.4
TESR		**147.23**	**326**	⇑*i*P	PKPbc	21 03 36.3	-0.9
VRI	**Vrincioaia**	**147.61**	**325**	⇑*i*P	PKPbc	21 03 38.3	+0.1
MLR	**Muntele Rosu**	**148.27**	**325**	⇑*i*P	PKPbc	21 03 39.3	-0.5
OKC	**Ostrava-Krasne**	**148.41**	**338**	*e*PKPab	PKPab	21 03 46.0	+0.3
UPC	**Upice**	**148.53**	**341**	*e*PKPAB	PKPab	21 03 46.8	+0.6
DPC	**Dobruska-Polom**	**148.57**	**341**	*e*PKPAB	PKPab	21 03 47.2	+0.8
CLL	**Collm**	**148.62**	**345**	⇓*i*PKPbc	PKPbc	21 03 40.0	-0.5
	comp=Z,6.0nm,1.2s						
CLL				*i* PKPab	PKPab	21 03 45.8	-0.7
	comp=Z,7.0nm,0.7s						
CLL				⇓*i*(SKPdf)		21 06 04.4	
	comp=Z,9.0nm,1.0s						
BRG	**Berggiesshubel**	**148.78**	**344**	*e*P	PKPbc	21 03 40.8	-0.1
	comp=Z,4.5nm,1.2s						
BRG				*e*		21 03 47.0	
	comp=Z,4.8nm,0.9s						
BRG				*e*		21 06 05.3	
	comp=Z,3.5nm,0.9s						
BRG							
	comp=N,2μm,11.8s						
BRG							
	comp=E,150nm,12.9s						
BRG							
	comp=Z,197nm,16.2s						
PVCC	**Panska Ves**	**148.93**	**343**	*e*PKPAB	PKPab	21 03 48.3	+0.5
DRGR		**148.98**	**330**	⇑*i*P	PKPbc	21 03 41.6	+0.1
PRU	**Pruhonice**	**149.42**	**342**	*e*PKPAB	PKPab	21 03 51.0	+1.1
NKC	**Novy Kostel**	**149.75**	**345**	*e*PKPAB	PKPab	21 03 52.4	+1.2
BZS	**Buzias**	**150.36**	**330**	⇑*i*P	PKPbc	21 03 44.4	-0.4
KHC	**Kasperske Hory**	**150.46**	**343**	*e*PKPAB	PKPab	21 03 54.9	+0.6
CONA	**Conrad Observa**	**150.83**	**339**	⇑*i*PKPab	PKPab	21 03 56.7	+0.8
	comp=Z,4.8nm,0.7s						
PKSM	**Moragy**	**151.22**	**334**	⇑*i*P	PKPbc	21 03 46.5	-0.3
BAIF	**Baives**	**151.25**	**355**	*e*PKP2	PKPab	21 03 56.8	-0.7
VTS	**Vitosha**	**151.66**	**323**	⇑*i*P	PKPab	21 03 59.0	-0.6
CDF	**Champ du Feu**	**152.52**	**350**	*e*PKP2	PKPab	21 04 02.9	-0.1
FLN	**La Foliniere**	**152.66**	**2**	*e*PKP2	PKPab	21 04 02.1	-1.5
	comp=Z,58nm,1.3s						
LDF	**La Druitiere**	**152.84**	**1**	*e*PKP2	PKPab	21 04 02.7	-1.6
ABTA	**Abfaltersbach**	**152.93**	**342**	⇑*i*PKPab	PKPab	21 04 04.5	-0.3
	comp=Z,2.6nm,0.6s						
HAU	**Haudompre**	**153.05**	**352**	*e*PKP2	PKPab	21 04 04.3	-0.9
	comp=Z,8.7nm,0.8s						
SGMF	**Saint Gilles**	**153.06**	**5**	*e*PKP2	PKPab	21 04 04.2	-1.1
	comp=Z,13nm,0.8s						
HINF	**Hinteralfeld**	**153.16**	**351**	*e*PKP2	PKPab	21 04 04.7	-1.0
LOR	**Lormes**	**154.05**	**355**	*e*PKP2	PKPab	21 04 08.5	-1.0
SSF	**Saint Saulge**	**154.28**	**356**	*e*PKP2	PKPab	21 04 09.7	-0.8
	comp=Z,8.7nm,0.8s						
CABF	**La Chapelle**	**154.45**	**351**	*e*PKP2	PKPab	21 04 11.0	-0.3
AVF	**Avril sur Loir**	**154.56**	**356**	*e*PKP2	PKPab	21 04 10.6	-1.1
	comp=Z,3.5nm,0.6s						
MFF	**Saint Martin d**	**154.83**	**1**	*e*PKP2	PKPab	21 04 10.8	-2.1
TCF	**Toulx Ste Croi**	**155.12**	**357**	*e*PKP2	PKPab	21 04 13.4	-0.8
LPL	**La Plagne**	**155.42**	**350**	*e*PKP2	PKPab	21 04 15.7	+0.2
	comp=Z,6.8nm,1.0s						
LPG	**La Plagne**	**155.43**	**350**	*e*PKP2	PKPab	21 04 15.8	+0.2
	comp=Z,7.2nm,0.8s						
RJF	**Les Rejaudoux**	**156.13**	**359**	*e*PKP2	PKPab	21 04 17.5	-1.0
ORIF	**Oris-en-Rattie**	**156.14**	**351**	*e*PKP2	PKPab	21 04 18.4	-0.2
	comp=Z,7.4nm,0.8s						
LFF	**La Frestale**	**156.50**	**360**	*e*PKP2	PKPab	21 04 19.4	-0.8
SMRF	**Simiane la Rot**	**157.10**	**351**	*e*PKP2	PKPab	21 04 23.5	+0.7
	comp=Z,9.8nm,0.9s						
ESDC	**

LZH	**Lanzhou**	**5.31**	**4**	*e*Pn	**Pn**	**20 55 39.1**	**+3.2**
LZH				Pg	**Pb**	**20 55 52.1**	**+2.3**
LZH				Sn	**Sn**	**20 56 39.4**	**+2.6**
LZH				Sg	**Sg**	**20 56 59.3**	**-8.6**
LZH				smax			
	comp=N,170nm,1.0s						
LZH				smax			
	comp=E,220nm,1.0s						
LZH				LR	LR		
	comp=N,3μm,6.7s						
LZH				LR	LR		
	comp=Z,2μm,7.5s						
KMI	**Kunming**	**5.66**	**186**	⇑Pn	**Pn**	**20 55 42.6**	**+1.9**
KMI				Sn	**Sn**	**20 56 49.1**	**+3.7**
KMI				smax			
	comp=N,120nm,1.7s						
KMI				smax			
	comp=E,110nm,1.7s						
KMI				LR	LR		
	comp=N,1μm,4.7s						
KMI				LR	LR		
	comp=E,1μm,5.0s						
XAN	**Xi'an**	**5.68**	**54**	Pn	**Pn**	**20 55 39.4**	**-1.6**
XAN				Sn	**Sn**	**20 56 44.4**	**-1.4**
XAN				Sg	**Sg**	**20 57 17.0**	**-2.6**
XAN				smax			
	comp=N,410nm,1.4s						
XAN				smax			
	comp=E,260nm,0.9s						
XAN				LR	LR		
	comp=N,890nm,4.5s						
XAN				LR	LR		
	comp=E,280nm,5.1s						
XAN				LR	LR		
	comp=Z,220nm,5.0s						
GTA	**Gaotai**	**9.11**	**342**	*e*P	**Pn**	**20 56 32.1**	**+4.0**
GTA				pP		20 56 36.1	
GTA				sP		20 56 38.1	
GTA				S	**Sn**	**20 58 12.5**	**+2.3**
GTA				sS		20 58 17.3	
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,90nm,5.1s						
GTA				LR	LR		
	comp=N,670nm,11.1s						
GTA				LR	LR		
	comp=E,760nm,10.8s						
GTA				LR	LR		
	comp=Z,540nm,10.2s						
WHN	**Wuhan**	**9.41**	**89**	*e*P	**Pn**	**20 56 31.5**	**-0.8**
WHN				S	**Sn**	**20 58 12.0**	**-5.8**
WHN				LR	LR		
	comp=N,2μm,9.6s						
WHN				LR	LR		
	comp=E,2μm,6.6s						
WHN				LR	LR		
	comp=Z,2μm,7.4s						
LSA	**Lhasa**	**10.67**	**267**	P	**Pn**	**20 56 51.6**	**+2.1**
LSA				S	**Sn**	**20 58 55.0**	**+6.4**
LSA				LR	LR		
	comp=E,870nm,9.1s						
LSA				LR	LR		
	comp=Z,980nm,10.7s						
LSA	**Lhasa**	**10.67**	**267**	*e*P	**Pn**	**20 56 51.4**	**+1.9**
LSA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
LSA	**Lhasa**	**10.67**	**267**	*e*P	**Pn**	**20 56 51.4**	**+1.9**
	comp=Z,8.3nm,0.6s						
SHL	**Shillong**	**11.42**	**246**	*e*PKP	**Pn**	**20 57 01.0**	**+1.2**
SHL				*e*S	Sx	21 00 30.0	
GZH	**Guangzhou**	**11.70**	**128**	P	**Pn**	**20 57 02.8**	**-0.7**
GZH				LR	LR		
	comp=N,690nm,5.5s						
GZH				LR	LR		
	comp=E,810nm,7.7s						
CHTO	**Chiang Mai**	**12.58**	**200**	*e*P	**Pn**	**20 57 15.7**	**+0.1**
CHTO				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CHTO	**Chiang Mai**	**12.58**	**200**	*e*P	**Pn**	**20 57 15.7**	**+0.1**
	comp=Z,8.6nm,1.1s						
CM31	**Chiang Mai Arr**	**12.92**	**199**	*e*P	**Pn**	**20 57 21.4**	**+1.1**
	comp=Z,4.8nm,0.4s						
CMAR	**Chiang Mai Arr**	**12.92**	**199**	Pn	**Pn**	**20 57 22.0**	**+1.7**
	comp=Z,0.3nm,0.3s,baz=9.9,slow=12,SNR=26						
NJ2	**Nanjing**	**13.24**	**80**	*e*P	**Pn**	**20 57 25.9**	**+1.2**
NJ2				pP		20 57 29.3	
NJ2				sP		20 57 32.5	
NJ2				PP		20 57 36.5	
NJ2				S	**Sn**	**20 59 47.8**	**-3.8**
NJ2				pmax	pmax		
	comp=Z,30nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,170nm,3.5s						
NJ2				LR	LR		
	comp=N,280nm,8.7s						
NJ2				LR	LR		
	comp=E,160nm,9.6s						
NJ2				LR	LR		
	comp=Z,140nm,10.5s						
BJI	**Beijing**	**13.90**	**45**	P	**Pn**	**20 57 32.4**	**-1.2**
BJI				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BJI				pmax	pmax		
	comp=Z,43nm,3.2s						
BJI				LR	LR		
	comp=N,680nm,4.6s						
BJI				LR	LR		
	comp=E,500nm,5.1s						
TAPN	**Taplejung**	**14.16**	**260**	*e*P	**Pn**	**20 57 37.0**	**-0.2**
	comp=E,63nm,1.0s						
ODAN	**Odare**	**14.59**	**258**	*e*P	**Pn**	**20 57 41.7**	**-1.3**
QZH	**Quanzhou**	**14.61**	**110**	P	**Pn**	**20 57 43.0**	**-0.4**
QZH				S	**Sn**	**21 00 25.0**	**-0.1**
QZH				LR	LR		
	comp=N,530nm,13.0s						
QZH				LR	LR		
	comp=E,1μm,8.5s						
QZH				LR	LR		
	comp=Z,1μm,9.5s						
RAMN	**Ramite**	**15.22**	**260**	*e*P	**Pn**	**20 57 50.0**	**-1.6**
	comp=Z,62nm,1.2s						
JIRN	**Jiri**	**15.37**	**263**	*e*P	**Pn**	**20 57 53.2**	**-0.2**
GUN	**Gumba**	**15.56**	**264**	*e*P	**Pn**	**20 57 55.5**	**-0.6**
PKI	**Pulchoki**	**16.06**	**263**	*e*P	**Pn**	**20 58 01.0**	**-1.4**
	comp=Z,52nm,0.7s						
PKIN	**Phulchoki**	**16.07**	**263**	*e*P	**Pn**	**20 58 01.0**	**-1.5**
	comp=Z,36nm,0.7s						
KKN	**Kakani**	**16.11**	**264**	*e*P	**Pn**	**20 58 01.9**	**-1.2**
	comp=Z,82nm,0.7s						
DMN	**Daman**	**16.30**	**263**	*e*P	**Pn**	**20 58 03.6**	**-2.0**
	comp=Z,56nm,0.9s						
GKN	**Gorkha**	**16.61**	**265**	*e*P	**Pn**	**20 58 08.0**	**-1.4**
	comp=Z,68nm,0.7s						
SSLB	**Suanglung**	**17.06**	**110**	*e*P	**Pn**	**20 58 18.6**	**+3.4**
	comp=Z,31nm,0.9s						
SONM	**Songino Array**	**17.19**	**7**	P	**Pn**	**20 58 17.2**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=186,slow=12,SNR=19						
SONM	**Songino Array**	**17.19**	**7**	P	**Pn**	**20 58 17.2**	**+0.5**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ULN	**Ulaanbaatar**	**17.30**	**8**	*e*P	**Pn**	**20 58 17.5**	**-0.5**
ULN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ULN	**Ulaanbaatar**	**17.30**	**8**	*e*P	**Pn**	**20 58 17.5**	**-0.4**
	comp=Z,8.7nm,1.0s						
WMQ	**Urumqi**	**18.02**	**321**	*e*P	**Pn**	**20 58 27.0**	**0.0**
WMQ				pP	pP	20 58 30.6	-1.4
WMQ				sP	sP	20 58 34.0	-0.2
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,150nm,6.0s						
WMQ				LR	LR		
	comp=N,300nm,9.6s						
WMQ				LR	LR		
	comp=E,230nm,9.0s						
WMQ				LR	LR		
	comp=Z,360nm,10.0s						
MOY	**Mondy**	**20.95**	**356**	*e*P	**P**	**20 59 00.7**	**+1.4**
KSRS	**Korea Array**	**21.32**	**65**	P	**P**	**20 59 04.0**	**+0.6**
	comp=Z,9.5nm,0.8s,mb4.2,baz=247,slow=9.4,SNR=25						
KSRS				LR	LR	21 07 10.1	
	comp=Z,97nm,21.5s,MS3.2,baz=318,slow=36						
KSRS	**Korea Array**	**21.32**	**65**	P	**P**	**20 59 04.0**	**+0.6**
KSRS				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.2						
KSRS				MLR	MLR		
	comp=Z,97nm,21.5s,MS3.2						
IRK	**Irkutsk**	**21.46**	**1**	*e*P	**P**	**20 59 06.1**	**+1.3**
IRK				pmax	pmax		
	comp=Z,35nm,1.3s,mb4.5						
CN2	**Changchun**	**21.74**	**47**	*e*P	**P**	**20 59 08.3**	**+0.4**
CN2				LR	LR		
	comp=N,200nm,12.0s,MS3.9						
CN2				LR	LR		
	comp=E,200nm,12.0s,MS3.9						
DDI	**Dehra Dun**	**21.84**	**275**	*ex*	**P**	**20 59 08.5**	**-0.6**
MK31	**Makanchi Array**	**22.86**	**320**	*e*P	**P**	**20 59 19.9**	**+0.2**
MKAR	**Makanchi Array**	**22.86**	**320**	P	**P**	**20 59 19.8**	**+0.1**
	comp=E,1.7nm,0.6s,mb3.6,baz=113,slow=11,SNR=18						
MKAR				PcP	PcP	21 03 10.1	-0.2
	comp=E,1.5nm,0.8s,baz=138,slow=9.0,SNR=4.1						
MKAR	**Makanchi Array**	**22.86**	**320**	P	**P**	**20 59 19.8**	**+0.1**
MKAR						21 03 10.1	
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MDJ	**Mudanjiang**	**24.76**	**49**	*e*P	**P**	**20 59 36.7**	**-1.4**
	comp=Z,4.1nm,0.3s,mb4.4						
TKM2	**Tokmak 2**	**25.23**	**306**	*e*P	**P**	**20 59 43.6**	**+1.2**
TKM2				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.0						
TKM2	**Tokmak 2**	**25.23**	**306**	*e*P	**P**	**20 59 43.6**	**+1.2**
	comp=Z,5.2nm,1.0s,mb4.0						
AAK	**Ala-Archa**	**25.91**	**305**	P	**P**	**20 59 50.3**	**+1.8**
	comp=Z,2.5nm,0.4s,mb4.1,baz=72,slow=6.4,SNR=6.8						
AAK				LR	LR	21 10 53.9	
	comp=Z,104nm,21.3s,MS3.3,baz=297,slow=39						
AAK	**Ala-Archa**	**25.91**	**305**	P	**P**	**20 59 50.3**	**+1.8**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.2						
AAK				MLR	MLR		
	comp=Z,104nm,21.3s,MS3.3						
AML	**Almayashu**	**26.34**	**304**	*e*P	**P**	**20 59 53.9**	**+1.6**
	comp=Z,6.7nm,1.1s,mb4.1						
EKS2	**Erkin-Say**	**26.43**	**305**	*e*P	**P**	**20 59 54.5**	**+1.4**
	comp=Z,4.5nm,0.9s,mb4.0						
ZAA0	**Zalesovo Array**	**26.77**	**335**	*e*P	**P**	**20 59 56.1**	**-0.1**
ZALV	**Zalesovo Beam**	**26.77**	**335**	P	**P**	**20 59 56.1**	**0.0**
	comp=Z,5.6nm,0.8s,mb4.1,baz=134,slow=8.5,SNR=22						
ZALV	**Zalesovo Beam**	**26.77**	**335**	P	**P**	**20 59 56.2**	**0.0**
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.1						
KURK	**Kurchatov**	**27.17**	**324**	*e*P	**P**	**20 59 59.5**	**-0.3**
KURK				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.3						
KURK	**Kurchatov**	**27.17**	**324**	*e*P	**P**	**20 59 59.5**	**-0.2**
	comp=Z,13nm,1.3s,mb4.3						
KBL	**Kabul**	**29.11**	**287**	*e*P	**P**	**21 00 17.3**	**0.0**
KBL				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
KBL	**Kabul**	**29.11**	**287**	*e*P	**P**	**21 00 17.3**	**+0.1**
	comp=Z,5.0nm,0.8s,mb4.3						
MJAR	**Matsushiro Arr**	**29.41**	**69**	P	**P**	**21 00 20.8**	**+0.8**
	comp=Z,0.9nm,0.6s,mb3.7,baz=277,slow=9.7,SNR=2.9						
MJAR	**Matsushiro Arr**	**29.41**	**69**	P	**P**	**21 00 20.8**	**+0.8**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR	**Borovoye Array**	**32.69**	**322**	P	**P**	**21 00 48.5**	**-0.2**
	comp=Z,1.4nm,0.6s,mb4.1,baz=113,slow=11,SNR=11						
BVAR				PcP	PcP	21 03 33.3	-0.7
	comp=Z,3.9nm,0.6s,baz=134,slow=3.5,SNR=16						
BVAR	**Borovoye Array**	**32.69**	**322**	P	**P**	**21 00 48.5**	**-0.2**
BVAR						21 03 33.3	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAJ	**Asahikawa**	**33.51**	**55**	P	**P**	**21 00 56.8**	**+0.8**
	comp=Z,2.2nm,0.7s,mb4.2,baz=247,slow=13,SNR=3.6						
ASAJ	**Asahikawa**	**33.51**	**55**	P	**P**	**21 00 56.8**	**+0.8**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ABKAR	**Akbulak array**	**37.46**	**312**	*e*P	**P**	**21 01 29.9**	**+0.1**
	comp=Z,1.3nm,0.6s,mb3.9						
AKTK	**Aktyubinsk**	**38.94**	**314**	P	**P**	**21 01 42.5**	**+0.2**
AKTK				PcP	PcP	21 03 52.0	-0.6
AKTO	**Aktyubinsk**	**38.94**	**314**	P	**P**	**21 01 42.5**	**+0.2**
	comp=Z,0.9nm,0.6s,mb3.7,baz=96,slow=9.2,SNR=3.7						
AKTO				PcP	PcP	21 03 52.0	-0.6
	comp=Z,1.0nm,0.4s,baz=145,slow=2.2,SNR=3.7						
AKTO	**Aktyubinsk**	**38.94**	**314**	P	**P**	**21 01 42.5**	**+0.2**
AKTO						21 03 52.1	
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
ARU	**Arti**	**40.34**	**323**	*e*P	**P**	**21 01 54.0**	**+0.2**
ARU				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
ARU	**Arti**	**40.34**	**323**	*e*P	**P**	**21 01 54.0**	**+0.1**
	comp=Z,7.7nm,0.8s,mb4.5						
TIXI	**Tiksi**	**43.19**	**11**	*e*P	**P**	**21 02 16.1**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.5						
TIXI	**Tiksi**	**43.19**	**11**	*e*P	**P**	**21 02 16.1**	**-0.9**
	comp=Z,3.9nm,0.4s,mb4.5						
PETK	**Petropavlovsk-**	**44.84**	**44**	P	**P**	**21 02 29.9**	**-0.5**
	comp=Z,2.6nm,0.5s,mb4.3,baz=168,slow=4.4,SNR=3.6						
PETK	**Petropavlovsk-**	**44.84**	**44**	P	**P**	**21 02 29.9**	**-0.5**
PETK				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.4						
GNI	**Garni**	**47.94**	**298**	LR	LR	21 26 45.0	
	comp=Z,37nm,18.6s,MS3.4,baz=70,slow=41						
BILL	**Bilibino**	**51.73**	**25**	*e*P	**P**	**21 03 23.3**	**-0.1**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
OBN	**Obninsk**	**52.34**	**318**	*e*P	**P**	**21 03 26.6**	**-1.5**
OBN				*e*		21 04 37.9	
OBN				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.5						
JOF	**Joensuu**	**55.00**	**328**	*e*P	**P**	**21 03 45.6**	**-1.9**
JOF				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.9						
JOF	**Joensuu**	**55.00**	**328**	*ep*	**P**	**21 03 45.6**	**-1.9**
	comp=Z,6.7nm,0.6s,mb4.8						
BRTR	**Keskin Array B**	**56.40**	**300**	P	**P**	**21 03 57.2**	**-0.7**
	comp=Z,3.6nm,1.1s,mb4.3,baz=104,slow=4.8,SNR=5.1						
BRTR				PP	PP	21 05 57.2	-6.1
	comp=Z,2.0nm,0.8s,baz=64,slow=4.0,SNR=8.3						
BRTR	**Keskin Array B**	**56.40**	**300**	P	**P**	**21 03 57.2**	**-0.7**
BRTR				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KEV	**Kevo**	**56.80**	**336**	*e*P	**P**	**21 04 00.3**	**0.0**
KEV	**Kevo**	**56.80**	**336**	*ep*	**P**	**21 04 00.3**	**0.0**
MMAI	**Mount Meron Ar**	**56.86**	**291**	PP	PP	21 06 00.0	-7.6
	comp=Z,1.8nm,0.7s,baz=38,slow=5.4,SNR=3.5						
ARCES	**ARCESS Array B**	**57.32**	**336**	P	**P**	**21 04 03.9**	**-0.1**
	comp=Z,7.2nm,1.0s,mb4.7,baz=76,slow=7.5,SNR=7.6						
ARCES				PcP	PcP	21 04 57.3	-0.6
	comp=Z,1.0nm,0.4s,baz=88,slow=4.8,SNR=9.4						
ARCES	**ARCESS Array B**	**57.32**	**336**	P	**P**	**21 04 03.9**	**-0.1**
ARCES						21 04 57.3	
ARCES				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KAF	**Kangasniemi**	**57.35**	**327**	*e*P	**P**	**21 04 03.4**	**-0.9**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
KAF	**Kangasniemi**	**57.35**	**327**	*e*P	**P**	**21 04 03.4**	**-0.9**
	comp=Z,2.1nm,0.5s,mb4.4						
KAF	**Kangasniemi**	**57.35**	**327**	*ep*	**P**	**21 04 03.4**	**-0.9**
	comp=Z,2.1nm,0.5s,mb4.4						
FINES	**FINESS Array B**	**57.52**	**326**	P	**P**	**21 04 05.0**	**-0.4**
	comp=Z,4.7nm,0.7s,mb4.7,baz=84,slow=7.3,SNR=13						
FINES	**FINESS Array B**	**57.52**	**326**	P	**P**	**21 04 05.1**	**-0.4**
FINES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ASAR	**Alice Springs**	**61.52**	**148**	P	**P**	**21 04 33.5**	**0.0**
	comp=Z,2.0nm,0.6s,mb4.4,baz=330,slow=7.4,SNR=43						
ASAR	**Alice Springs**	**61.52**	**148**	P	**P**	**21 04 33.5**	**0.0**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NB2	**NORSAR Subarra**	**64.62**	**327**	P	**P**	**21 04 52.6**	**-1.1**
	comp=Z,3.8nm,0.6s,mb4.6,baz=74,slow=6.9						
NOA	**NORSAR Array B**	**64.62**	**327**	P	**P**	**21 04 52.7**	**-1.0**
	comp=Z,2.9nm,0.6s,mb4.5,baz=72,slow=6.8,SNR=24						
NOA	**NORSAR Array B**	**64.62**	**327**	P	**P**	**21 04 52.7**	**-1.0**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NOA	**NORSAR Array B**	**64.62**	**327**	P	**P**	**21 04 52.7**	**-1.0**
CLL	**Collm**	**66.90**	**317**	*e*P	**P**	**21 05 09.0**	**+0.4**
COLD	**Coldfoot**	**68.01**	**24**	*e*P	**P**	**21 05 15.4**	**+0.1**
	comp=Z,9.9nm,0.9s,mb4.8						
BPAW	**Bear Paw Mtn.**	**69.16**	**27**	*e*P	**P**	**21 05 22.5**	**0.0**
	comp=Z,10nm,1.1s,mb4.7						
PPLA	**Purkeypile**	**69.23**	**28**	*e*P	**P**	**21 05 23.1**	**+0.1**
	comp=Z,9.1nm,0.9s,mb4.7						
COLA	**College**	**69.98**	**25**	*e*P	**P**	**21 05 27.9**	**+0.3**
COLA				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
COLA	**College**	**69.98**	**25**	*e*P	**P**	**21 05 27.9**	**+0.3**
	comp=Z,13nm,0.8s,mb4.9						
ILAR	**Eielson Array**	**70.39**	**25**	P	**P**	**21 05 29.2**	**-0.9**
	comp=Z,2.9nm,0.9s,mb4.2,baz=295,slow=5.1,SNR=22						
ILAR	**Eielson Array**	**70.39**	**25**	P	**P**	**21 05 29.2**	**-0.9**
ILAR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CDF	**Champ du Feu**	**71.45**	**316**	*e*P	**P**	**21 05 36.6**	**-0.2**
HINF	**Hinteralfeld**	**71.96**	**315**	*e*P	**P**	**21 05 40.2**	**+0.3**
STKA	**Stephens Creek**	**72.05**	**146**	P	**P**	**21 05 39.4**	**-1.1**
	comp=Z,2.3nm,0.5s,mb4.4,baz=336,slow=7.7,SNR=10						
HAU	**Haudompre**	**72.18**	**316**	*e*P	**P**	**21 05 40.9**	**-0.3**
BAIF	**Baives**	**72.52**	**318**	*e*P	**P**	**21 05 43.2**	**0.0**
INK	**Inuvik**	**72.66**	**19**	*e*P	**P**	**21 05 43.5**	**-0.2**
INK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
INK	**Inuvik**	**72.66**	**19**	*e*P	**P**	**21 05 43.5**	**-0.2**
	comp=Z,7.4nm,0.7s,mb4.7						
PGF	**Pioggiola**	**72.91**	**310**	*e*P	**P**	**21 05 46.0**	**+0.3**
LPG	**La Plagne**	**73.05**	**313**	*e*P	**P**	**21 05 47.0**	**+0.5**
	comp=Z,12nm,0.8s,mb4.6						
LPG	**La Plagne**	**73.05**	**313**	*e*P	**P**	**21 05 47.0**	**+0.5**
LPG				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
LPG	**La Plagne**	**73.05**	**313**	*e*P	**P**	**21 05 47.0**	**+0.5**
	comp=Z,6.2nm,0.8s,mb4.6						
LPL	**La Plagne**	**73.05**	**313**	*e*P	**P**	**21 05 47.0**	**+0.5**
	comp=Z,13nm,0.8s,mb4.6						
LPL	**La Plagne**	**73.05**	**313**	*e*P	**P**	**21 05 47.0**	**+0.5**
LPL				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
LPL	**La Plagne**	**73.05**	**313**	*e*P	**P**	**21 05 47.0**	**+0.5**
	comp=Z,6.3nm,0.8s,mb4.6						
BMRM	**Bremner River**	**73.30**	**28**	*e*P	**P**	**21 05 48.2**	**+0.5**
ORIF	**Oris-en-Rattie**	**73.86**	**313**	*e*P	**P**	**21 05 51.1**	**-0.1**
	comp=Z,8.7nm,1.0s,mb4.3						
ORIF	**Oris-en-Rattie**	**73.86**	**313**	*e*P	**P**	**21 05 51.1**	**-0.1**
ORIF				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
ORIF	**Oris-en-Rattie**	**73.86**	**313**	*e*P	**P**	**21 05 51.1**	**-0.1**
	comp=Z,4.3nm,1.0s,mb4.3						
LOR	**Lormes**	**74.02**	**316**	*e*P	**P**	**21 05 51.3**	**-0.8**
SMF	**Signal de Mont**	**74.32**	**315**	*e*P	**P**	**21 05 53.5**	**-0.4**
	comp=Z,52nm,1.4s,mb5.0						
SMF	**Signal de Mont**	**74.32**	**315**	*e*P	**P**	**21 05 53.5**	**-0.4**
SMF				pmax	pmax		
	comp=Z,26nm,1.4s,mb5.0						
SMF	**Signal de Mont**	**74.32**	**315**	*e*P	**P**	**21 05 53.5**	**-0.4**
	comp=Z,26nm,1.4s,mb5.0						
SSF	**Saint Saulge**	**74.33**	**316**	*e*P	**P**	**21 05 54.4**	**+0.5**
AVF	**Avril sur Loir**	**74.55**	**315**	*e*P	**P**	**21 05 54.8**	**-0.4**
	comp=Z,9.6nm,0.8s,mb4.5						
AVF	**Avril sur Loir**	**74.55**	**315**	*e*P	**P**	**21 05 54.8**	**-0.4**
AVF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
AVF	**Avril sur Loir**	**74.55**	**315**	*e*P	**P**	**21 05 54.8**	**-0.4**
	comp=Z,4.8nm,0.8s,mb4.5						
TCF	**Toulx Ste Croi**	**75.48**	**315**	*e*P	**P**	**21 06 00.6**	**0.0**
	comp=Z,26nm,1.4s,mb4.7						
TCF	**Toulx Ste Croi**	**75.48**	**315**	*e*P	**P**	**21 06 00.6**	**0.0**
TCF				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.7						
TCF	**Toulx Ste Croi**	**75.48**	**315**	*e*P	**P**	**21 06 00.6**	**0.0**
	comp=Z,13nm,1.4s,mb4.7						
LASF	**Ste Croix**	**75.54**	**313**	*e*P	**P**	**21 06 01.1**	**+0.1**
	comp=Z,17nm,1.3s,mb4.5						
YKA	**Yellowknife Ar**	**82.18**	**17**	P	**P**	**21 06 37.0**	**0.0**
	comp=Z,4.1nm,0.5s,mb4.6,baz=330,slow=5.2,SNR=13						
YKA	**Yellowknife Ar**	**82.18**	**17**	P	**P**	**21 06 37.0**	**-0.1**
YKA				pmax	pmax		
	comp=Z,4.0nm,0.5s						
YKA	**Yellowknife Ar**	**82.18**	**17**	P	**P**	**21 06 37.0**	**0.0**
ESDC	**Sonseca Array**	**82.81**	**312**	P	**P**	**21 06 40.4**	**-0.4**
	comp=Z,0.5nm,0.6s,mb3.7,baz=32,slow=5.8,SNR=3.4						
OTAV	**Otavalo**	**149.11**	**4**	*e*PKPbc	PKPbc	21 14 06.4	+0.8

PRU ***24*** *21:15:34.9, 37.°81N×20.°11E, h0km*
ISCJB ***24*** *21:15:36.5±0.2, 38.°28N±0.°01×21.°88E±0.°01, h9km±1km, mb4.0/28, MS3.4/6, Error ellipse: s-maj=2.3km s-min=1.8km az=24.2*
NEIC ***24*** *21:15:36.8, 38.°29N×21.°92E, h15km, mb4.1/17, ML3.8(ATH), After ATH.*
ATH ***24*** *21:15:36.8, 38.°29N×21.°92E, h15km±1km, MD4.1/31, ML3.8*
IDC ***24*** *21:15:36.0±0.6, 38.°35N×21.°87E, h0km, mb4.1/20, mb1 4.1/27, mb1mx4.1/34, mbtmp4.1/27, ML3.6/6, MS3.4/6, Ms1 3.5/6, ms1mx3.0/38, Error ellipse: s-maj=15.2km s-min=12.3km az=152.0*
PDG ***24*** *21:15:37.1±0.5, 38.°29N×21.°94E, h6km±1km, ML3.9/10, Error ellipse: s-maj=0.7km s-min=0.7km az=90.0*
THE ***24*** *21:15:37.1, 38.°30N×21.°89E, h3km, ML4.4/24, Error ellipse: s-maj=0.3km s-min=0.2km az=209.0*
CSEM ***24*** *21:15:37.0±0.1, 38.°27N×21.°90E, h5km, mb4.1/20, Error ellipse: s-maj=2.7km s-min=2.1km az=34.0*
MOS ***24*** *21:15:39.6±0.9, 38.°32N×21.°87E, h37km, mb4.2/21, Error ellipse: s-maj=6.1km s-min=3.6km az=93.1*
SOF ***24*** *21:16:05.5, 40.°17N×22.°85E, h20km, MD3.6*
ISC 24 21:15:37.4±0.2, 38.°27N±0.°01×21.°90E±0.°01, h5km±1km, n479, σ1°04/592, mb4.0/28, MS3.4/6, 17C-25D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC Res
LAKA	**Lakka**	**0.07**	**118**	P	**Pg**	**21 15 39.2**	**+0.1**
LAKA				S	**Sg**	**21 15 40.5**	**+0.3**
LAKA	**Lakka**	**0.07**	**118**	P	**Pg**	**21 15

AGG	Agios Georgios	0.82	24	P	Pg	21 15 51.9	-1.3	SOH	Sokhos	2.78	23	ePN	Pn	21 16 23.1	+0.6	VAE	Valguarnera	5.97	265	Pn	Pn	21 17 06.9	+0.5
AGG				S	Sg	21 16 03.7	-0.1	SOH	Sokhos	2.78	23	P	Pn	21 16 22.1	-0.4	0.5nm,0.3s,baz=18,slow=16,SNR=2.4							
LTK	Loutraki	0.88	106	ePN	Pg	21 15 54.3	0.0	SOH				S	Sn	21 16 57.0	+0.5	VAE				Sn	Sn	21 18 24.4	+9.3
LTK				eSN	Sg	21 16 05.2	-0.5	SOH	Sokhos	2.78	23	P	Pn	21 16 22.1	-0.4	2.0nm,0.3s,baz=41,slow=20,SNR=4.5							
LTK	Loutraki	0.88	106	P	Pg	21 15 54.0	-0.3	SOH	Sokhos	2.78	23	ePn	Pn	21 16 23.1	+0.6	VAE	Valguarnera	5.97	265	Pn	Pn	21 17 06.9	+0.5
LTK				S	Sg	21 16 06.7	+1.0	SOH				S	Sn	21 16 57.0	+0.5	VAE				Sn	Sn	21 18 24.4	+9.3
LTK	Loutraki	0.88	106	P	Pg	21 15 54.0	-0.3	OHR	Ohrid	2.96	344	ePn	Pn	21 16 26.6	+1.7	VAE	Valguarnera	5.97	265	Pn	Pn	21 17 06.9	+0.5
LTK	Loutraki	0.88	106	ePn	Pg	21 15 54.3	0.0	KNT	Kendrikon	2.99	15	P	Pn	21 16 25.1	-0.2	ZIMR		5.98	25	⇓P	Pn	21 17 07.8	+1.3
LTK				eSn	Sg	21 16 05.2	-0.5	KNT				S	Sn	21 17 01.8	+0.3	ZIMR		5.98	25	⇓i P	Pn	21 17 07.8	+1.3
LTK				S	Sg	21 16 06.7	+1.0	KNT	Kendrikon	2.99	15	P	Pn	21 16 25.1	-0.2	DIVS	Divibare	5.99	347	i Pn	Pn	21 17 06.7	+0.1
KFL	Anninata	0.89	260	P	Pg	21 15 53.9	-0.6	KNT				S	Sn	21 17 01.8	+0.3	ISP	Isparta	6.82	91	⇑P	Pn	21 17 20.6	+2.6
KFL				S	Sg	21 16 06.8	+0.8	LIA	Limnos Island	3.03	57	ePn	Pn	21 16 25.5	-0.4	ISP	Isparta	6.82	91	⇑i P	Pn	21 17 20.6	+2.6
KFL	Anninata	0.89	260	P	Pg	21 15 53.9	-0.6	LIA	Limnos Island	3.03	57	ePN	Pn	21 16 25.5	-0.4	KORT	Korkueli	6.83	98	i P	Pn	21 17 22.8	+4.6
KFL				S	Sg	21 16 06.8	+0.8	LIA	Limnos Island	3.03	57	P	Pn	21 16 25.6	-0.3	BZS	Buzias	7.34	358	⇑P	Pn	21 17 27.0	+1.9
LKR	Lokris	0.94	66	ePn	Pg	21 15 54.6	-0.9	LIA	Limnos Island	3.03	57	ePn	Pn	21 16 25.6	-0.4	BZS	Buzias	7.34	358	⇑i P	Pn	21 17 27.0	+1.9
LKR				eSn	Sg	21 16 07.7	-0.1	VAY	Valandovo	3.09	9	i Pn	Pn	21 16 27.2	+0.5	BZS	Buzias	7.34	358	P	Pn	21 17 27.0	+1.9
LKR	Lokris	0.94	66	ePN	Pg	21 15 54.6	-0.9	APE	Apeiranthos	3.12	112	⇓P	Pn	21 16 27.9	+0.7	AQU	L'Aquila	7.66	305	eP	Pn	21 17 26.9	-2.7
LKR				eSN	Sg	21 16 07.7	-0.1	APE	Apeiranthos	3.12	112	P	Pn	21 16 27.1	-0.1	AQU				e		21 18 55.0	
LKR	Lokris	0.94	66	P	Pg	21 15 54.8	-0.7	APE				S	Sn	21 17 06.4	+1.5	AQU				pmax	pmax		
LKR				S	Sg	21 16 08.3	+0.5	APE	Apeiranthos	3.12	112	⇓i P	Pn	21 16 27.9	+0.7	comp=Z,25nm,0.8s							
LKR	Lokris	0.94	66	P	Pg	21 15 54.8	-0.7	APE	Apeiranthos	3.12	112	P	Pn	21 16 27.1	-0.1	AQU	L'Aquila	7.66	305	ePn	Pn	21 17 26.9	-2.7
LKR				eSn	Sg	21 16 07.7	-0.1	APE				S	Sn	21 17 06.4	+1.5	comp=Z,26nm,0.8s							
LKR				S	Sg	21 16 08.3	+0.5	SRS	Serrai	3.13	24	P	Pn	21 16 26.5	-0.8	AQU				eSn	Sn	21 18 55.0	-1.7
ATAL	Atalanti	0.98	64	P	Pg	21 15 55.2	-0.9	SRS				S	Sn	21 17 05.3	+0.4	AQU	L'Aquila	7.66	305	⇓i P	Pn	21 17 28.6	-1.0
ATAL				S	Sg	21 16 09.3	+0.5	SRS	Serrai	3.13	24	P	Pn	21 16 26.5	-0.8	AQU	L'Aquila	7.66	305	⇓i P	Pn	21 17 28.6	-1.0
ATAL	Atalanti	0.98	64	P	Pg	21 15 55.2	-0.9	SRS				S	Sn	21 17 05.3	+0.4	AQU				eS	Sn	21 18 55.0	-1.7
ATAL				S	Sg	21 16 09.3	+0.5	KRUS	Krusevo	3.13	351	i Pn	Pn	21 16 26.8	-0.5	MLR	Muntele Rosu	7.82	21	Pn	Pn	21 17 32.5	+0.9
VLX	Vlachokerasia	0.98	157	ePN	Pg	21 15 55.3	-0.9	CHOS	Chios island	3.27	87	ePN	Pn	21 16 29.3	0.0	comp=Z,0.3nm,0.3s,baz=159,slow=13,SNR=16							
VLX				eSN	Sg	21 16 08.7	-0.2	CHOS	Chios island	3.27	87	P	Pn	21 16 29.4	+0.1	MLR	Muntele Rosu	7.82	21	⇑P	Pn	21 17 33.9	+2.3
VLX	Vlachokerasia	0.98	157	P	Pg	21 15 55.7	-0.5	CHOS				S	Sn	21 17 09.5	+1.0	MLR	Muntele Rosu	7.82	21	⇑i P	Pn	21 17 33.9	+2.2
VLX				S	Sg	21 16 10.4	+1.5	CHOS	Chios island	3.27	87	ePn	Pn	21 16 29.3	0.0	MLR	Muntele Rosu	7.82	21	P	Pn	21 17 33.9	+2.2
VLX	Vlachokerasia	0.98	157	ePn	Pg	21 15 55.3	-0.9	CHOS				S	Sn	21 17 09.5	+1.0	NVLJ	Novalja	8.20	322	ePn	Pn	21 17 36.8	-0.2
VLX	Vlachokerasia	0.98	157	P	Pg	21 15 55.7	-0.5	KARN	Karanos	3.29	150	P	Pn	21 16 30.0	+0.4	NVLJ				Sn	Sn	21 19 07.2	-2.8
VLX				eSn	Sg	21 16 08.7	-0.2	KARN	Karanos	3.29	150	P	Pn	21 16 30.0	+0.4	NVLJ	Novalja	8.20	322	ePn	Pn	21 17 36.7	-0.3
VLX				S	Sg	21 16 10.4	+1.5	THR3	Thira Island,	3.36	123	P	Pn	21 16 30.4	0.0	PKSM	Moragy	8.29	344	⇓P	Pn	21 17 37.0	-1.2
VLS	Valsamata	1.03	265	ePb	Pg	21 15 56.3	-0.9	THR3	Thira Island,	3.36	123	P	Pn	21 16 30.4	0.0	PKSM	Moragy	8.29	344	⇓i P	Pn	21 17 37.0	-1.2
VLS				eSn	Sn	21 16 12.7	-0.6	VAM	Vamos	3.41	146	eP	Pn	21 16 32.3	+1.2	PKSM	Moragy	8.29	344	P	Pn	21 17 37.0	-1.2
VLS	Valsamata	1.03	265	ePB	Pg	21 15 56.3	-0.9	VAM	Vamos	3.41	146	ePN	Pn	21 16 32.3	+1.2	PLOR	Plostina	8.35	23	⇓P	Pn	21 17 41.7	+2.7
VLS				eSN	Sn	21 16 12.7	-0.6	VAM	Vamos	3.41	146	ePn	Pn	21 16 32.3	+1.2	PLOR	Plostina	8.35	23	⇓i P	Pn	21 17 41.7	+2.7
VLS	Valsamata	1.03	265	P	Pg	21 15 56.2	-1.0	NVR	Nevrokopi	3.42	26	ePn	Pn	21 16 31.8	+0.4	VRI	Vrincioaia	8.39	24	⇓P	Pn	21 17 41.4	+1.8
VLS				S	Sg	21 16 11.6	+0.9	NVR	Nevrokopi	3.42	26	ePN	Pn	21 16 31.8	+0.4	VRI	Vrincioaia	8.39	24	⇓i P	Pn	21 17 41.4	+1.8
VLS	Valsamata	1.03	265	ePb	Pg	21 15 56.3	-0.9	NVR	Nevrokopi	3.42	26	ePn	Pn	21 16 31.8	+0.4	VRI	Vrincioaia	8.39	24	P	Pn	21 17 41.4	+1.8
VLS				S	Sg	21 16 11.6	+0.9	TIR	Tirane	3.45	334	ePn	Pn	21 16 30.6	-1.0	BR131	Keskin Array S	9.26	77	ePn	Pn	21 17 52.1	+0.7
VLS				eSn	Sn	21 16 12.7	-0.6	TIR				ePg	Pg	21 16 43.0	-0.5	comp=Z,3.5nm,0.5s							
ITM	Ithomi	1.09	179	ePn	Pg	21 15 57.7	-0.7	TIR	Tirane	3.45	334	eP	Pn	21 16 30.6	-1.1	BR131	Keskin Array S	9.26	77	ePn	Pn	21 17 52.1	+0.7
ITM	Ithomi	1.09	179	ePN	Pg	21 15 57.7	-0.7	TIR	Tirane	3.45	334	ePg	Pg	21 16 43.0	-0.4	comp=Z,3.5nm,0.5s							
ITM	Ithomi	1.09	179	P	Pg	21 15 57.8	-0.6	PRK	Paraskevi	3.56	73	eP	Pn	21 16 33.0	-0.2	BRTR	Keskin Array B	9.26	77	Pn	Pn	21 17 52.6	+1.2
ITM	Ithomi	1.09	179	P	Pg	21 15 57.8	-0.6	PRK	Paraskevi	3.56	73	ePN	Pn	21 16 33.0	-0.2	comp=Z,1.0nm,0.3s,baz=259,slow=13,SNR=27							
LKD2	Lefkada island	1.10	298	P	Pg	21 15 57.3	-1.2	PRK	Paraskevi	3.56	73	P	Pn	21 16 32.8	-0.4	BRTR	Keskin Array B	9.26	77	P	Pn	21 17 52.6	+1.2
LKD2				S	Sg	21 16 13.2	+0.4	PRK	Paraskevi	3.56	73	P	Pn	21 16 32.8	-0.4	BRTR				pmax	pmax		
LKD2	Lefkada island	1.10	298	P	Pg	21 15 57.3	-1.2	MMB	Musomiste	3.60	22	P	Pn	21 16 33.7	0.0	comp=Z,1.0nm,0.3s							
LKD2				S	Sg	21 16 13.2	+0.4	MMB				Pg	Pn	21 16 35.7	+2.0	BRTR	Keskin Array B	9.26	77	P	Pn	21 17 52.6	+1.2
THL	Klokotos Trika	1.29	4	ePN	Pg	21 16 00.8	-1.3	MMB	Musomiste	3.60	22	P	Pn	21 16 33.7	0.0	comp=Z,1.0nm,0.3s							
THL				eSN	Sn	21 16 18.5	-1.2	GADA	Gvkgeada	3.65	57	eP	Pn	21 16 33.6	-0.9	BUD	Budapest	9.44	348	⇓e	Px	21 18 26.9	
THL	Klokotos Trika	1.29	4	P	Pn	21 16 00.8	-1.3	GADA	Gvkgeada	3.65	57	Pn	Pn	21 16 33.6	-0.9	BURAR	Bucovina Array	9.65	14	⇓P	Pn	21 17 58.2	+1.5
THL				S	Sg	21 16 19.6	+0.6	URLA	Izmir	3.70	87	i P	Pn	21 16 35.4	+0.3	BURAR	Bucovina Array	9.65	14	⇓i P	Pn	21 17 58.2	+1.5
THL	Klokotos Trika	1.29	4	P	Pn	21 16 00.8	-1.3	URLA	Izmir	3.70	87	i P	Pn	21 16 35.4	+0.3	BURAR	Bucovina Array	9.65	14	⇓P	Pn	21 17 58.2	+1.5
THL				eSn	Sn	21 16 18.5	-1.2	KKB	Krupnik	3.70	14	i P	Pn	21 16 35.2	0.0	VOY	Vojsko	9.76	325	ePn	Pn	21 17 57.8	-0.5
THL				S	Sg	21 16 19.6	+0.6	KKB				Pg	Pn	21 16 39.8	+4.6	VOY				e		21 18 06.3	
DID	Didima	1.31	125	ePN	Pn	21 16 01.4	-0.9	KKB	Krupnik	3.70	14	i P	Pn	21 16 35.2	0.0	VOY				e		21 19 46.1	
DID				eSN	Sn	21 16 20.1	0.0	AYVA	Ayvalik	3.88	73	i P	Pn	21 16 36.8	-0.9	VOY				e		21 19 52.3	
DID	Didima	1.31	125	P	Pn	21 16 01.6	-0.7	AYVA	Ayvalik	3.88	73	i P	Pn	21 16 36.8	-0.9	VOY	Vojsko	9.76	325	ePn	Pn	21 17 57.8	-0.5
DID				S	Sg	21 16 20.7	+1.3	SMG	Samos	3.94	97	ePn	Pn	21 16 39.3	+0.8	SOKA	Soboth	9.81	331	⇑i Pn	Pn	21 17 57.8	-1.2
DID	Didima	1.31	125	P	Pn	21 16 01.6	-0.7	SMG	Samos	3.94	97	ePN	Pn	21 16 39.2	+0.7	SOKA				⇑i Sn	Sn	21 19 45.3	-4.1
DID				eSn	Sn	21 16 20.1	0.0	SMG	Samos	3.94	97	ePn	Pn	21 16 39.3	+0.8	SOKA	Soboth	9.81	331	Pn	Pn	21 17 57.8	-1.1
DID				S	Sg	21 16 20.7	+1.3	RZN	Rozhen	4.04	32	P	Pn	21 16 41.2	+1.4	OBKA	Obir	9.86	329	⇑i Pn	Pn	21 17 57.6	-2.0
NAIG	Nisos Aigina	1.36	112	ePn	Pn	21 16 03.2	+0.2	RZN	Rozhen	4.04	32	P	Pn	21 16 41.2	+1.4	OBKA				⇓i Sn	Sn	21 19 49.4	-1.2
NAIG	Nisos Aigina	1.36	112	ePN	Pn	21 16 03.2	+0.2	BLCB	Balcova	4.05	87	eP	Pn	21 16 39.8	-0.1	OBKA	Obir	9.86	329	Pn	Pn	21 17 57.6	-2.0
NAIG	Nisos Aigina	1.36	112	ePn	Pn	21 16 03.2	+0.2	BLCB	Balcova	4.05	87	Pn	Pn	21 16 39.8	-0.1	OBKA				Sn	Sn	21 19 49.4	-1.2
PYL	PYLOS	1.38	185	ePN	Pn	21 16 02.4	-0.9	PUK	Puka	4.07	338	ePN	Pn	21 16 41.2	+1.0	KECS	Kecovo	10.26	355	eP	Pn	21 18 13.6	+8.5
PYL	PYLOS	1.38	185	P	Pn	21 16 02.7	-0.6	PUK	Puka	4.07	338	ePn	Pn	21 16 41.2	+1.0	KECS	Kecovo	10.26	355	ePN	Pn	21 18 13.6	+8.5
PYL	PYLOS	1.38	185	ePn	Pn	21 16 02.4	-0.9	GELI	Tayfur-Gelibol	4.13	58	eP	Pn	21 16 40.1	-1.0	UZH	Uzhgorod	10.36	1	eP	Pn	21 18 10.6	+4.1
PYL	PYLOS	1.38	185	P	Pn	21 16 02.7	-0.6	GELI	Tayfur-Gelibol	4.13	58	eP	Pn	21 16 40.1	-1.0	VYHS	Vyhne	10.45	349	eP	Pn	21 18 13.0	+5.2
NEO	Neokhori	1.46	45	ePn	Pn	21 16 03.5	-0.9	ULC	Ulcinj	4.21	332	⇓i Pn	Pn	21 16 42.8	+0.7	VYHS	Vyhne	10.45	349	ePN	Pn	21 18 13.0	+5.2
NEO	Neokhori	1.46	45	ePN	Pn	21 16 03.5	-0.9	ULC				eSn	Sn	21 17 35.7	+4.1	KOLL	Kolacno	10.61	347	ePn	Pn	21 18 13.3	+3.4
NEO	Neokhori	1.46	45	ePn	Pn	21 16 03.5	-0.9	ULC	Ulcinj	4.21	332	⇓i Pn	Pn	21 16 42.8	+0.7	KOLL				eSn	Sn	21 20 09.5	+0.5
ATH	Athens Observa	1.47	101	ePn	Pn	21 16 04.7	+0.3	ULC				eSn	Sn	21 17 35.7	+4.1	KOLL	Kolacno	10.61	347	ePN	Pn	21 18 13.3	+3.4
ATH				eSn	Sn	21 16 24.0	0.0	IZM	Izmir	4.22	87	eP	Pn	21 16 42.5	+0.2	KOLL				eSN	Sn	21 20 09.5	+0.5
ATH	Athens Observa	1.47	101	ePN	Pn	21 16 04.7	+0.3	TAR1	Taranto	4.22	304	ePn	Pn	21 16 43.4	+1.1	KOLL	Kolacno	10.61	347	eS	Sn	21 20 09.5	+0.5
ATH				eSN	Sn	21 16 24.0	0.0	KDAG	Bornova	4.22	87	i P	Pn	21 16 43.1	+0.8	PGF	Pioggiola	10.72	298	eP	Pn	21 18 11.6	+0.1
ATH	Athens Observa	1.47	101	ePn	Pn	21 16 04.7	+0.3	KDAG	Bornova	4.22	87	i P	Pn	21 16 43.1	+0.7	comp=Z,31nm,1.2s							
ATH				eSn	Sn	21 16 24.0	0.0	NPS	Neapolis	4.23	134	eP	Pn	21 16 43.3	+0.8	PGF	Pioggiola	10.72	298	eP	Pn	21 18 11.6	+0.1
XOR	Xorichti	1.49	42	P	Pn	21 16 03.7	-1.0	NPS	Neapolis	4.23	134	ePN	Pn	21 16 43.3	+0.8	PGF				pmax	pmax		
XOR	Xorichti	1.49	42	P	Pn	21 16 03.8	-0.9	NPS	Neapolis	4.23	134	ePn	Pn	21 16 43.3	+0.8	comp=Z,16nm,1.2s							
XOR				S	Sn	21 16 24.5	0.0	PE1	Pezze di Greco	4.28	308	eP	Pn	21 16 43.4	+0.2	PGF	Pioggiola	10.72	298	eP	Pn	21 18 11.6	+0.1
XOR	Xorichti	1.49	42	P	Pn	21 16 03.8	-0.9	LPK	Lapseki	4.31	59	eP	Pn	21 16 42.8	-0.8	comp=Z,16nm,1.2s							
XOR				S	Sn	21 16 24.5	0.0	LPK	Lapseki	4.31	59	eP	Pn	21 16 42.8	-0.8	STHS	Stebnicka Huta	11.15	358	eP	Pn	21 18 19.1	+1.8
ATHU	Athens Univers	1.52	101	P	Pn	21 16 04.4	-0.8	BCI	Bajram Curri	4.32	342	ePN	Pn	21 16 45.4	+1.7	STHS	Stebnicka Huta	11.15	358	ePN	Pn	21 18 19.1	+1.8
ATHU				S	Sn	21 16 26.0	+0.7	BCI	Bajram Curri	4.32	342	ePn	Pn	21 16 45.4	+1.7	STHS	Stebnicka Huta	11.15	358	eP	Pn	21 18 19.1	+1.8
ATHU	Athens Univers	1.52	101	P	Pn	21 16 04.4	-0.8	VTS	Vitosha	4.43	13	⇑P	Pn	21 16 46.1	+1.0	OKC	Ostrava-Krasne	11.87	348	AMS	AMS	21 23 50.0	
ATHU				S	Sn	21 16 26.0	+0.7	VTS	Vitosha	4.43	13	P	Pn	21 16 45.8	+0.7	comp=Z,100nm,11.1s							
VLY	Voula,Athens	1.56	105	ePn	Pn	21 16 05.6	-0.1	VTS	Vitosha	4.43	13	⇑i P	Pn	21 16 46.1	+1.0	TREC	Trest	11.95	339	AMS	AMS	21 23 30.0	
VLY	Voula,Athens	1.56	105	ePN	Pn	21 16 05.6	-0.1	VTS	Vitosha	4.43	13	P	Pn	21 16 46.1	+1.0	comp=Z,300nm,12.3s							
VLY	Voula,Athens	1.56	105	ePn	Pn	21 16 05.6	-0.1	BARS	Barje	4.54	359	i Pn	Pn	21 16 48.7	+2.0	MMAI	Mount Meron Ar	12.17	111	Pn	Pn	21 18 32.4	+1.0
PTL	Penteli	1.57	98	ePn	Pn	21 16 05.5	-0.3	PVY	Plav	4.56	342	ePn	Pn	21 16 48.6	+1.7	comp=Z,0.9nm,0.3s,baz=310,slow=13,SNR=7.0							
PTL	Penteli	1.57	98	ePN	Pn	21 16 05.5	-0.3	PVY				eSn	Sn	21 17 42.1	+1.9	DAVOX	Davos/Dischmat	12.27	318	Pn	Pn	21 18 32.8	+0.2
PTL	Penteli	1.57	98	ePn	Pn	21 16 05.5	-0.3	PVY	Plav	4.56	342	ePn	Pn	21 16 48.6	+1.7	comp=Z,0.2nm,0.3s,baz=141,slow=18,SNR=2.6							
JAN	Janina	1.60	330	eP	Pn	21 16 06.5	+0.2	PVY				eSn	Sn	21 17 42.1	+1.9	DAVOX	Davos/Dischmat	12.27	318	P	Pn	21 18 32.8	+0.2
JAN	Janina	1.60	330	ePN	Pn	21 16 06.5	+0.2	BDRM	Kayabasi	4.56	104	i P	Pn	21 16 47.3	+0.3	KHC	Kasperske Hory	12.40	334	eP	Pn	21 18 31.5	-2.9
JAN	Janina	1.60	330	ePn	Pn	21 16 06.5	+0.2	BDRM	Kayabasi	4.56	104	i P	Pn	21 16 47.3	+0.3	KHC				MLR	MLR		
IGT	Igoumenitsa	1.75	316	P	Pn	21 16 09.6	+1.2	PDG	Podgorica	4.61	335	ePn	Pn	21 16 48.3	+0.6	comp=Z,400nm,13.8s							
IGT	Igoumenitsa	1.75	316	P	Pn	21 16 07.7	-0.7	PDG				eSn	Sn	21 17 42.8	+1.2	KHC	Kasperske Hory	12.40	334	eP	Pn	21 18 31.5	-2.9
IGT				S	Sn	21 16 30.9	-0.1	TTG	Podgorica	4.61	335	ePn	Pn	21 16 48.3	+0.6	KHC				AMS	AMS	21 23 50.0	
IGT	Igoumenitsa	1.75	316	P	Pn	21 16 07.7	-0.7	TTG				eSn	Sn	21 17 42.8	+1.2	comp=Z,400nm,13.8s							
IGT				S	Sn	21 16 30.9	-0.1	TTG	Podgorica	4.61	335	eP	Pn	21 16 48.3	+0.6	KHC	Kasperske Hory	12.40	334	Pn	Pn	21 18 31.5	-2.9
VLI	Veliai	1.76	152	ePn	Pn	21 16 08.8	+0.3	TTG				eS	Sn	21 17 42.8	+1.2	FRF	La Foret Royal	12.68	299	eP	Pn	21 18 35.6	-2.7
VLI	Veliai	1.76	152	ePN	Pn	21 16 08.8	+0.3	BUM	Brajici-Budva	4.63	331	⇑i Pn	Pn	21 16 48.0	+0.1	DPC	Dobruska-Polom	12.71	344	AMS	AMS	21 24 40.0	
VLI	Veliai	1.76	152	ePn	Pn	21 16 08.8	+0.3	BUM				eSn	Sn	21 17 43.6	+1.6	PRU	Pruhonice	12.84	338	AMS	AMS	21 24 00.0	
AOS	Alonnisos	1.79	59	P	Pn	21 16 08.0	-0.9	BUM	Brajici-Budva	4.63	331	⇑i Pn	Pn	21 16 48.0	+0.1	PVCC	Panska Ves	13.31	339	AMS	AMS	21 24 20.0	
AOS	Alonnisos	1.79	59	P	Pn	21 16 07.7	-1.2	BUM				eSn	Sn	21 17 43.6	+1.6	comp=Z,200nm,11.6s							
AOS				S	Sn	21 16 31.8	-0.2	BALY	Balya	4.69	70	i P	Pn	21 16 48.3	-0.5	LPG	La Plagne	13.38	307	eP	Pn	21 18 48.7	+0.9
AOS	Alonnisos	1.79	59	P	Pn	21 16 08.0	-0.9	BALY	Balya	4.69	70	i P	Pn	21 16 48.3	-0.5	comp=Z,11nm,1.0s							
AOS				S	Sn	21 16 31.8	-0.2	KRBG	Karabiga-Canak	4.69	62	eP	Pn	21 16 47.9	-0.9	LPG	La Plagne	13.38	307	eP	Pn	21 18 48.7	+0.9
KZN	Kozani	2.03	357	eP	Pn	21 16 13.4	+1.2	KRBG	Karabiga-Canak	4.69	62	eP	Pn	21 16 47.9	-0.9	LPG				pmax	pmax		
KZN	Kozani	2.03	357	ePN	Pn	21 16 13.4	+1.2	AYDN	Tasoluk	4.77	96	i P	Pn	21 16 51.2	+1.4	comp=Z,6.0nm,1.0s							
KZN	Kozani	2.03	357	ePn	Pn	21 16 13.4	+1.2	AYDN	Tasoluk	4.77	96	i P	Pn	21 16 51.2	+1.4	LPG	La Plagne	13.38	307	eP	Pn	21 18 48.7	+0.9
PAIG	Paliouri	2.16	39	P	Pn	21 16 12.5	-1.4	SG1	Sgolgore (BA)	4.78	304	eP	Pn	21 16 50.4	+0.4	comp=Z,5.7nm,1.0s							
PAIG	Paliouri	2.16	39	P	Pn	21 16 12.9	-1.0	BAI	Bari	4.79	308	eP	Pn	21 16 50.5	+0.3	LPG	La Plagne	13.38	307	eP	Pn	21 18 48.7	+0.9
PAIG				S	Sn	21 16 41.3	+0.3	GONE	Gonen-Balikesi	4.83	67	eP	Pn	21 16 50.6	-0.1	comp=Z,5.7nm,1.0s							
PAIG	Paliouri	2.16	39	P	Pn	21 16 12.9	-1.0	GONE	Gonen-Balikesi	4.83	67	eP	Pn	21 16 50.7	0.0	LPL	La Plagne	13.40	307	eP	Pn	21 18 48.7	+0.6
PAIG				S	Sn	21 16 41.3	+0.3	BEY	Berane	4.84	342	ePn	Pn	21 16 52.3	+1.5	LPL	La Plagne	13.40	307	eP	Pn	21 18 48.7	+0.6
KEK	Kerkira	2.18	312	ePn	Pn	21 16 14.9	+0.7	BEY				eSn	Sn	21 17 48.3	+1.2	AKASG	Malin Array Be	13.47	20	Pn	Pn	21 18 48.5	-0.5
KEK	Kerkira	2.18	312	ePN	Pn	21 16 14.9	+0.7	IVA	Berane	4.84	342	ePn	Pn	21 16 52.3	+1.5	comp=Z,0.1nm,0.3s,baz=206,slow=12,SNR=5.0							
KEK	Kerkira	2.18	312	ePn	Pn	21 16 14.9	+0.7	IVA				eSn	Sn	21 17 48.3	+1.2	AKASG	Malin Array Be	13.47	20	P	Pn	21 18 48.5	-0.5
SRN	Sarande	2.18	318	ePN	Pn	21 16 15.8	+1.5	IVA	Berane	4.84	342	ePn	Pn	21 16 52.3	+1.5	NKC	Novy Kostel	13.72	334	AMS	AMS	21 24 30.0	
SRN	Sarande	2.18	318	ePn	Pn	21 16 15.8	+1.5	IVA				eSn	Sn	21 17 48.3	+1.2	comp=Z,300nm,16.6s							
KYTH	Kithira	2.19	155	ePn	Pn	21 16 15.5	+1.1	BALB	Balikesir	4.86	72	eP	Pn	21 16 50.9	-0.2	CABF	La Chapelle	14.32	311	eP	Pn	21 19 08.9	+8.2
KYTH	Kithira	2.19	155	ePN	Pn	21 16 15.5	+1.1	BALB	Balikesir	4.86	72	eP	Pn	21 16 50.9	-0.2	comp=Z,27nm,1.1s							
KYTH	Kithira	2.19	155	ePn	Pn	21 16 15.5	+1.1	HCY	Herceg Novi	4.91	329	⇑i Pn	Pn	21 16 51.2	-0.6	CABF	La Chapelle	14.32	311	eP	Pn	21 19 08.9	+8.2
PLG	Polygyros	2.42	29	eP	Pn	21 16 17.4	-0.1	HCY				eSn	Sn	21 17 49.7	+0.8	comp=Z,13nm,1.1s							
PLG	Polygyros	2.42	29	ePN	Pn	21 16 17.4	-0.1	HCY	Herceg Novi	4.91	329	⇑i Pn	Pn	21 16 51.2	-0.6	CABF	La Chapelle	14.32	311	eP	Pn	21 19 08.9	+8.2
PLG	Polygyros	2.42	29	P	Pn	21 16 16.4	-1.1	HCY				eSn	Sn	21 17 49.7	+0.8	comp=Z,13

LOR	**Lormes**	**15.98**	**310**	*e*P	**Pn**	**21 19 27.0**	**+4.3**
LOR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
LOR	**Lormes**	**15.98**	**310**	*e*P	**Pn**	**21 19 27.0**	**+4.3**
	comp=Z,7.2nm,1.1s						
LOR	**Lormes**	**15.98**	**310**	*e*P	**Pn**	**21 19 27.0**	**+4.3**
	comp=Z,7.2nm,1.1s						
AVF	**Avril sur Loir**	**16.07**	**308**	*e*P	**Pn**	**21 19 28.0**	**+4.0**
	comp=Z,15nm,0.9s						
AVF	**Avril sur Loir**	**16.07**	**308**	*e*P	**Pn**	**21 19 28.0**	**+4.0**
AVF				pmax	pmax		
	comp=Z,7.0nm,0.9s						
AVF	**Avril sur Loir**	**16.07**	**308**	*e*P	**Pn**	**21 19 28.0**	**+4.0**
	comp=Z,7.4nm,0.9s						
AVF	**Avril sur Loir**	**16.07**	**308**	*e*P	**Pn**	**21 19 28.0**	**+4.0**
	comp=Z,7.4nm,0.9s						
SSF	**Saint Saulge**	**16.10**	**309**	*e*P	**Pn**	**21 19 28.3**	**+4.0**
	comp=Z,31nm,1.0s						
SSF	**Saint Saulge**	**16.10**	**309**	*e*P	**Pn**	**21 19 28.3**	**+4.0**
SSF				pmax	pmax		
	comp=Z,16nm,1.0s						
SSF	**Saint Saulge**	**16.10**	**309**	*e*P	**Pn**	**21 19 28.3**	**+4.0**
	comp=Z,16nm,1.0s						
SSF	**Saint Saulge**	**16.10**	**309**	*e*P	**Pn**	**21 19 28.3**	**+4.0**
	comp=Z,16nm,1.0s						
BGF	**Bois d'Agland**	**16.30**	**307**	*e*P	**Pn**	**21 19 30.9**	**+4.1**
	comp=Z,34nm,1.2s						
BGF	**Bois d'Agland**	**16.30**	**307**	*e*P	**Pn**	**21 19 30.9**	**+4.1**
BGF				pmax	pmax		
	comp=Z,17nm,1.2s						
BGF	**Bois d'Agland**	**16.30**	**307**	*e*P	**Pn**	**21 19 30.9**	**+4.1**
	comp=Z,17nm,1.2s						
BGF	**Bois d'Agland**	**16.30**	**307**	*e*P	**Pn**	**21 19 30.9**	**+4.1**
	comp=Z,17nm,1.2s						
IIGN	**Ignalina**	**17.33**	**8**	*e*P	**Pn**	**21 19 39.3**	**-0.5**
IIGN	**Ignalina**	**17.33**	**8**	*e*P	**Pn**	**21 19 39.3**	**-0.5**
	SNR=40						
IDID	**Didziasalis**	**17.36**	**9**	*e*P	**Pn**	**21 19 40.2**	**0.0**
IDID	**Didziasalis**	**17.36**	**9**	*e*P	**Pn**	**21 19 40.2**	**+0.1**
	SNR=40						
IZAR	**Zarasai**	**17.73**	**8**	*e*P	**Pn**	**21 19 43.9**	**-0.9**
IZAR	**Zarasai**	**17.73**	**8**	*e*P	**Pn**	**21 19 43.8**	**-0.9**
	SNR=40						
GNI	**Garni**	**17.80**	**77**	P	**Pn**	**21 19 47.0**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=262,slow=7.1,SNR=2.3						
GNI	**Garni**	**17.80**	**77**	P	**Pn**	**21 19 47.0**	**+1.3**
MFF	**Saint Martin d**	**18.23**	**304**	*e*P	**Pn**	**21 19 51.6**	**+0.6**
	comp=Z,48nm,1.2s						
MFF	**Saint Martin d**	**18.23**	**304**	*e*P	**Pn**	**21 19 51.6**	**+0.6**
MFF				pmax	pmax		
	comp=Z,24nm,1.2s						
MFF	**Saint Martin d**	**18.23**	**304**	*e*P	**Pn**	**21 19 51.6**	**+0.6**
	comp=Z,24nm,1.2s						
MFF	**Saint Martin d**	**18.23**	**304**	*e*P	**Pn**	**21 19 51.6**	**+0.6**
	comp=Z,24nm,1.2s						
LDF	**La Druitiere**	**18.96**	**310**	*e*P	**Pn**	**21 19 59.4**	**-0.5**
	comp=Z,9.3nm,0.8s						
LDF	**La Druitiere**	**18.96**	**310**	*e*P	**Pn**	**21 19 59.4**	**-0.5**
LDF				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LDF	**La Druitiere**	**18.96**	**310**	*e*P	**Pn**	**21 19 59.4**	**-0.5**
	comp=Z,4.7nm,0.8s						
LDF	**La Druitiere**	**18.96**	**310**	*e*P	**Pn**	**21 19 59.4**	**-0.5**
	comp=Z,4.7nm,0.8s						
ESDC	**Sonseca Array**	**20.14**	**282**	P	**P**	**21 20 12.3**	**+0.1**
	comp=Z,5.2nm,0.7s,baz=75,slow=11,SNR=19						
ESDC	**Sonseca Array**	**20.14**	**282**	P	**P**	**21 20 12.3**	**+0.1**
ESLA	**Sonseca Array**	**20.14**	**282**	*e*P	**P**	**21 20 12.0**	**-0.2**
	comp=Z,0.8nm,0.7s						
ESLA	**Sonseca Array**	**20.14**	**282**	*e*P	**P**	**21 20 12.0**	**-0.2**
	comp=Z,0.8nm,0.7s						
PAB	**San Pablo**	**20.44**	**282**	*e*P	**P**	**21 20 14.1**	**-1.4**
PAB				pmax	pmax		
	comp=Z,12nm,1.1s						
PAB	**San Pablo**	**20.44**	**282**	*e*P	**P**	**21 20 14.1**	**-1.4**
	comp=Z,12nm,1.1s						
PAB	**San Pablo**	**20.44**	**282**	*e*P	**P**	**21 20 14.1**	**-1.4**
	comp=Z,12nm,1.1s						
TAM	**Tamanrasset**	**20.86**	**227**	*e*P	**P**	**21 20 23.8**	**+3.7**
TAM				pmax	pmax		
	comp=Z,2.0nm,0.9s						
TAM	**Tamanrasset**	**20.86**	**227**	*e*P	**P**	**21 20 23.8**	**+3.7**
	comp=Z,2.0nm,0.9s						
MDT	**Midelt**	**22.21**	**264**	P	**P**	**21 20 33.9**	**-0.7**
	comp=Z,2.7nm,0.8s,mb3.8,baz=81,slow=6.7,SNR=6.0						
MDT	**Midelt**	**22.21**	**264**	P	**P**	**21 20 33.9**	**-0.7**
HFS	**Hagfors**	**22.49**	**349**	P	**P**	**21 20 34.7**	**-2.6**
	comp=Z,4.2nm,0.6s,mb4.0,baz=153,slow=10.0,SNR=19						
HFS				LR	LR	21 28 26.7	
	comp=Z,51nm,19.4s,MS3.0,baz=327,slow=34						
HFS	**Hagfors**	**22.49**	**349**	P	**P**	**21 20 34.7**	**-2.6**
HFS				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HFS				MLR	MLR		
	comp=Z,51nm,19.4s						
KONO	**Kongsberg**	**22.79**	**344**	*e*P	**P**	**21 20 36.7**	**-3.8**
KONO				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.3						
KONO	**Kongsberg**	**22.79**	**344**	*e*P	**P**	**21 20 36.7**	**-3.8**
	comp=Z,16nm,1.2s,mb4.3						
FINES	**FINESS Array B**	**23.34**	**5**	P	**P**	**21 20 43.8**	**-2.5**
	comp=Z,2.8nm,0.8s,mb3.7,baz=163,slow=7.4,SNR=7.4						
FINES				PcP	PcP	21 24 31.9	-1.0
	comp=Z,0.7nm,0.5s,baz=191,slow=6.8,SNR=6.2						
FINES	**FINESS Array B**	**23.34**	**5**	P	**P**	**21 20 43.8**	**-2.5**
FINES						21 24 31.9	
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FINES	**FINESS Array B**	**23.34**	**5**	PcP	PcP	21 24 31.9	-1.0
NAO01	**NORSAR Array S**	**23.63**	**347**	*e*P	**P**	**21 20 47.4**	**-1.9**
	comp=Z,5.7nm,0.8s,mb4.0						
NAO01	**NORSAR Array S**	**23.63**	**347**	*e*P	**P**	**21 20 47.4**	**-1.8**
	comp=Z,5.7nm,0.8s,mb4.0						
NB2	**NORSAR Subarra**	**23.75**	**347**	P	**P**	**21 20 48.6**	**-1.8**
	comp=Z,20nm,1.4s,mb4.4,baz=159,slow=9.3						
NB2	**NORSAR Subarra**	**23.75**	**347**	P	**P**	**21 20 48.6**	**-1.8**
	comp=Z,20nm,1.4s,mb4.4,SNR=7.0						
NOA	**NORSAR Array B**	**23.75**	**347**	P	**P**	**21 20 48.4**	**-2.0**
	comp=Z,4.4nm,0.8s,mb4.0,baz=154,slow=9.1,SNR=28						
NOA	**NORSAR Array B**	**23.75**	**347**	P	**P**	**21 20 48.4**	**-2.0**
NOA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NOA	**NORSAR Array B**	**23.75**	**347**	P	**P**	**21 20 48.4**	**-2.0**
	comp=Z,4.0nm,0.8s,mb3.9						
EKA	**Eskdalemuir Ar**	**23.99**	**323**	P	**P**	**21 20 51.2**	**-1.3**
	comp=Z,6.1nm,0.7s,mb4.1,baz=121,slow=10,SNR=27						
EKA	**Eskdalemuir Ar**	**23.99**	**323**	P	**P**	**21 20 51.3**	**-1.3**
EKA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
EKA	**Eskdalemuir Ar**	**23.99**	**323**	P	**P**	**21 20 51.3**	**-1.3**
	comp=Z,6.0nm,0.7s,mb4.1						
KAF	**Kangasniemi**	**24.02**	**5**	*e*P	**P**	**21 20 50.8**	**-2.0**
KAF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.1						
KAF	**Kangasniemi**	**24.02**	**5**	*e*P	**P**	**21 20 50.8**	**-2.0**
	comp=Z,6.4nm,0.7s,mb4.2						
KAF	**Kangasniemi**	**24.02**	**5**	*e*p	**P**	**21 20 50.8**	**-2.0**
	comp=Z,6.4nm,0.7s,mb4.2						
KAF	**Kangasniemi**	**24.02**	**5**	*e*P	**P**	**21 20 50.8**	**-2.0**
	comp=Z,6.4nm,0.7s,mb4.2						
JOF	**Joensuu**	**25.33**	**10**	*e*P	**P**	**21 21 03.1**	**-1.6**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.8						
JOF	**Joensuu**	**25.33**	**10**	*e*p	**P**	**21 21 03.1**	**-1.6**
	comp=Z,1.8nm,0.6s,mb3.8						
JOF	**Joensuu**	**25.33**	**10**	*e*P	**P**	**21 21 03.1**	**-1.6**
	comp=Z,2.0nm,0.6s,mb3.8						
AKTK	**Aktyubinsk**	**28.26**	**53**	P	**P**	**21 21 29.6**	**-1.6**
AKTK				LR	LR	21 35 32.2	
AKTK	**Aktyubinsk**	**28.26**	**53**	P	**P**	**21 21 29.6**	**-1.6**
	comp=Z,61nm,19.1s						
AKTO	**Aktyubinsk**	**28.26**	**53**	P	**P**	**21 21 29.6**	**-1.6**
	comp=Z,1.1nm,0.6s,mb3.7,baz=315,slow=4.3,SNR=5.0						
AKTO				LR	LR	21 35 32.2	
	comp=Z,61nm,19.1s,MS3.2,baz=88,slow=42						
AKTO	**Aktyubinsk**	**28.26**	**53**	P	**P**	**21 21 29.6**	**-1.6**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.6						
AKTO				MLR	MLR		
	comp=Z,61nm,19.1s,MS3.2						
ARCES	**ARCESS Array B**	**31.38**	**2**	P	**P**	**21 21 57.2**	**-1.5**
	comp=Z,2.4nm,0.8s,mb4.1,baz=198,slow=11,SNR=6.7						
ARCES				PcP	PcP	21 24 50.1	-1.9
	comp=Z,2.4nm,0.8s,baz=104,slow=22,SNR=4.8						
ARCES				LR	LR	21 35 31.4	
	comp=Z,76nm,20.8s,MS3.4,baz=180,slow=38						
ARCES	**ARCESS Array B**	**31.38**	**2**	P	**P**	**21 21 57.2**	**-1.5**
ARCES						21 24 50.1	
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES				MLR	MLR		
	comp=Z,76nm,20.8s						
ARCES	**ARCESS Array B**	**31.38**	**2**	P	**P**	**21 21 57.2**	**-1.5**
ARCES				PcP	PcP	21 24 50.1	-1.9
ARCES				LR	LR	21 35 31.4	
ARCES	**ARCESS Array B**	**31.38**	**2**	P	**P**	**21 21 57.2**	**-1.5**
	comp=Z,2.0nm,0.8s,mb4.0						
ARCES	**ARCESS Array B**	**31.38**	**2**	PcP	PcP	21 24 50.1	-1.9
	comp=Z,76nm,20.8s						
BVAR	**Borovoye Array**	**36.23**	**50**	P	**P**	**21 22 40.3**	**-0.7**
	comp=Z,0.8nm,0.5s,mb3.9,baz=245,slow=5.2,SNR=5.9						
BVAR	**Borovoye Array**	**36.23**	**50**	P	**P**	**21 22 40.3**	**-0.7**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR	**Borovoye Array**	**36.23**	**50**	P	**P**	**21 22 40.3**	**-0.7**
	comp=Z,1.0nm,0.5s,mb4.0						
DBIC	**Dimbokro**	**39.71**	**224**	P	**P**	**21 23 11.2**	**+0.4**
	comp=Z,3.6nm,1.0s,mb4.1,baz=354,slow=10,SNR=2.5						
DBIC	**Dimbokro**	**39.71**	**224**	P	**P**	**21 23 11.2**	**+0.5**
DBIC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
DBIC	**Dimbokro**	**39.71**	**224**	P	**P**	**21 23 11.1**	**+0.4**
KURK	**Kurchatov**	**41.35**	**54**	*e*P	**P**	**21 23 22.7**	**-1.2**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
KURK	**Kurchatov**	**41.35**	**54**	*e*P	**P**	**21 23 22.7**	**-1.3**
	comp=Z,4.0nm,0.9s,mb4.0						
KURK	**Kurchatov**	**41.35**	**54**	*e*P	**P**	**21 23 22.7**	**-1.2**
	comp=Z,4.0nm,0.9s,mb4.0						
NVS	**Novosibirsk**	**43.82**	**47**	*e*P	**P**	**21 23 43.6**	**-0.3**
NVS				pmax	pmax		
	comp=N,2.0nm,0.9s						
NVS				pmax	pmax		
	comp=E,5.0nm,0.9s						
NVS				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.3						
NVS	**Novosibirsk**	**43.82**	**47**	*e*P	**P**	**21 23 43.6**	**-0.3**
MK31	**Makanchi Array**	**44.33**	**59**	*e*P	**P**	**21 23 47.4**	**-0.7**
MK31	**Makanchi Array**	**44.33**	**59**	*e*P	**P**	**21 23 47.4**	**-0.7**
MKAR	**Makanchi Array**	**44.33**	**59**	P	**P**	**21 23 47.5**	**-0.6**
	comp=Z,7.8nm,0.5s,mb4.7,baz=274,slow=7.6,SNR=66						
MKAR	**Makanchi Array**	**44.33**	**59**	P	**P**	**21 23 47.5**	**-0.6**
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.5s						
ZAA0	**Zalesovo Array**	**44.82**	**48**	*e*P	**P**	**21 23 50.8**	**-1.2**
ZAA0	**Zalesovo Array**	**44.82**	**48**	*e*P	**P**	**21 23 50.8**	**-1.2**
ZALV	**Zalesovo Beam**	**44.82**	**48**	P	**P**	**21 23 50.7**	**-1.3**
	comp=Z,5.6nm,0.5s,mb4.6,baz=274,slow=8.3,SNR=23						
ZALV				LR	LR	21 42 53.2	
	comp=Z,23nm,19.4s,MS3.1,baz=66,slow=37						
ZALV	**Zalesovo Beam**	**44.82**	**48**	P	**P**	**21 23 50.7**	**-1.3**
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.7						
ZALV				MLR	MLR		
	comp=Z,23nm,19.4s,MS3.1						
ZALV	**Zalesovo Beam**	**44.82**	**48**	P	**P**	**21 23 50.7**	**-1.3**
	comp=Z,23nm,19.4s						
SCHQ	**Schefferville**	**59.12**	**318**	P	**P**	**21 25 36.9**	**-1.6**
	comp=Z,0.9nm,0.5s,mb4.0,baz=51,slow=6.5,SNR=2.6						
SCHQ	**Schefferville**	**59.12**	**318**	P	**P**	**21 25 36.9**	**-1.6**
SONM	**Songino Array**	**59.56**	**51**	P	**P**	**21 25 40.6**	**-1.1**
	comp=Z,0.8nm,0.7s,mb3.9,baz=275,slow=7.4,SNR=7.4						
SONM	**Songino Array**	**59.56**	**51**	P	**P**	**21 25 40.6**	**-1.1**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM	**Songino Array**	**59.56**	**51**	P	**P**	**21 25 40.6**	**-1.1**
	comp=Z,1.0nm,0.7s,mb4.0						
ULN	**Ulaanbaatar**	**59.95**	**51**	*e*P	**P**	**21 25 43.8**	**-0.5**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9						
ULN	**Ulaanbaatar**	**59.95**	**51**	*e*P	**P**	**21 25 43.8**	**-0.5**
	comp=Z,1.4nm,0.8s,mb4.0						
ULN	**Ulaanbaatar**	**59.95**	**51**	*e*P	**P**	**21 25 43.8**	**-0.5**
	comp=Z,1.4nm,0.8s,mb4.0						
BOSA	**Boshof**	**66.61**	**177**	P	**P**	**21 26 28.9**	**+0.4**
	comp=Z,1.3nm,0.6s,mb4.2,baz=15,slow=5.8,SNR=5.8						
BOSA	**Boshof**	**66.61**	**177**	P	**P**	**21 26 29.0**	**+0.4**
BOSA				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
BOSA	**Boshof**	**66.61**	**177**	P	**P**	**21 26 29.0**	**+0.4**
	comp=Z,1.0nm,0.6s,mb4.0						
YKA	**Yellowknife Ar**	**73.67**	**341**	P	**P**	**21 27 11.3**	**-0.2**
	comp=Z,1.0nm,0.6s,mb4.0,baz=36,slow=5.5,SNR=5.9						
YKA	**Yellowknife Ar**	**73.67**	**341**	P	**P**	**21 27 11.3**	**-0.2**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA	**Yellowknife Ar**	**73.67**	**341**	P	**P**	**21 27 11.3**	**-0.2**
	comp=Z,1.0nm,0.6s,mb3.9						
COLD	**Coldfoot**	**74.65**	**357**	*e*P	**P**	**21 27 16.2**	**-1.0**
	comp=Z,2.9nm,0.9s,mb4.2						
COLD	**Coldfoot**	**74.65**	**357**	*e*P	**P**	**21 27 16.2**	**-1.0**
	comp=Z,2.9nm,0.9s,mb4.2						
ILAR	**Eielson Array**	**76.91**	**355**	P	**P**	**21 27 30.1**	**-0.1**
	comp=Z,1.4nm,0.8s,mb4.0,baz=5.1,slow=4.5,SNR=14						
ILAR	**Eielson Array**	**76.91**	**355**	P	**P**	**21 27 30.1**	**-0.1**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ILAR	**Eielson Array**	**76.91**	**355**	P	**P**	**21 27 30.1**	**-0.1**
	comp=Z,1.0nm,0.8s,mb3.8						
DAWY	**Dawson**	**76.93**	**352**	*e*P	**P**	**21 27 30.7**	**+0.4**
DAWY	**Dawson**	**76.93**	**352**	*e*P	**P**	**21 27 30.7**	**+0.5**
KSRS	**Korea Array**	**78.43**	**51**	P	**P**	**21 27 38.0**	**-1.1**
	comp=Z,1.5nm,0.8s,mb4.0,baz=317,slow=5.0,SNR=3.6						
KSRS				LR	LR	22 09 56.8	
	comp=Z,34nm,18.1s,MS3.7,baz=230,slow=42						
KSRS	**Korea Array**	**78.43**	**51**	P	**P**	**21 27 38.0**	**-1.1**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
KSRS				MLR	MLR		
	comp=Z,34nm,18.1s,MS3.7						
KSRS	**Korea Array**	**78.43**	**51**	P	**P**	**21 27 38.0**	**-1.1**
	comp=Z,34nm,18.1s						
MJAR	**Matsushiro Arr**	**85.14**	**46**	P	**P**	**21 28 13.7**	**-0.8**
	comp=Z,0.7nm,0.5s,mb4.0,baz=302,slow=5.4,SNR=3.4						
MJAR	**Matsushiro Arr**	**85.14**	**46**	P	**P**	**21 28 13.7**	**-0.9**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MJAR	**Matsushiro Arr**	**85.14**	**46**	P	**P**	**21 28 13.7**	**-0.9**
	comp=Z,1.0nm,0.5s,mb4.2						
PDAR	**Pinedale Array**	**88.07**	**326**	P	**P**	**21 28 25.7**	**-3.1**
	comp=Z,0.5nm,0.8s,mb3.8,baz=41,slow=8.5,SNR=3.0						
PDAR				LR	LR	22 07 53.3	
	comp=Z,61nm,18.1s,MS4.0,baz=69,slow=36						
TXAR	**Lajitas Array**	**95.69**	**314**	P	**P**	**21 29 02.9**	**-1.4**
	comp=Z,0.3nm,0.8s,mb3.8,baz=70,slow=7.8,SNR=2.8						
TXAR	**Lajitas Array**	**95.69**	**314**	P	**P**	**21 29 02.9**	**-1.4**
ASAR	**Alice Springs**	**121.11**	**97**	PKP	PKPdf	21 34 30.2	-1.2
	comp=Z,0.3nm,0.6s,baz=313,slow=1.1,SNR=6.2						

ISCJB ***24*** *21:28:32.4±0.7, 36°.96N±0°.04×29°.11E±0°.05, h6km±9km, Error ellipse: s-maj=6.7km s-min=6.0km az=37.0*
ISK ***24*** *21:28:32.5, 37°.04N×29°.13E, h7km, MD2.8*
DDA ***24*** *21:28:32.1, 36°.94N×29°.14E, h7km±4km, Md2.9*
CSEM ***24*** *21:28:32.7±0.2, 36°.96N×29°.16E, h15km, MD2.8, Error ellipse: s-maj=5.3km s-min=3.4km az=11.0*
ISC 24 21:28:32.9±0.7, 36°.96N±0°.04×29°.12E±0°.05, h11km±7km, n22, σ1°.03/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.36**	**57**	*e*PG	**Pg**	**21 28 39.3**	**-0.7**
GLHS				*e*SG	**Sg**	**21 28 45.0**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.36**	**57**	*e*Pg	**Pg**	**21 28 39.3**	**-0.8**
GLHS				*e*Sg	**Sg**	**21 28 45.0**	**+0.1**
GOLH	**Golhisar**	**0.45**	**51**	*i* P	**Pg**	**21 28 41.5**	**-0.2**
GOLH				*i* S	**Sg**	**21 28 47.9**	**+0.3**
GOLH	**Golhisar**	**0.45**	**51**	*i* P	**Pg**	**21 28 41.5**	**-0.2**
GOLH				*i* S	**Sg**	**21 28 47.9**	**+0.2**
ELL	**Elmali**	**0.67**	**108**	*e*PG	**Pg**	**21 28 45.8**	**0.0**
ELL				*e*SG	**Sg**	**21 28 56.3**	**+1.8**
ELL	**Elmali**	**0.67**	**108**	*e*Pg	**Pg**	**21 28 45.8**	**0.0**
ELL				*e*Sg	**Sg**	**21 28 56.3**	**+1.8**
YER	**Yerkesik**	**0.69**	**285**	*e*PG	**Pg**	**21 28 46.9**	**+0.5**
YER	**Yerkesik**	**0.69**	**285**	*e*Pg	**Pg**	**21 28 46.9**	**+0.6**
DNZL	**Cakiroluk**	**0.73**	**355**	*i* P	**Pg**	**21 28 46.9**	**-0.2**
DNZL				*i* S	**Sg**	**21 28 58.3**	**+1.6**
DNZL	**Cakiroluk**	**0.73**	**355**	*i* P	**Pg**	**21 28 46.9**	**-0.2**
DNZL				*i* S	**Sg**	**21 28 58.3**	**+1.6**
DENT	**Denizli**	**0.80**	**355**	*e*PG	**Pg**	**21 28 46.1**	**-2.2**
DENT	**Denizli**	**0.80**	**355**	*e*Pg	**Pg**	**21 28 46.1**	**-2.2**
AKAS	**Kas**	**0.82**	**152**	*i* P	**Pg**	**21 28 47.5**	**-1.3**
AKAS	**Kas**	**0.82**	**152**	*i* P	**Pg**	**21 28 47.5**	**-1.2**
KORT	**Korkueli**	**0.98**	**87**	*i* P	**Pg**	**21 28 51.0**	**-0.9**
KORT				*i* S	**Sg**	**21 29 08.3**	**+3.6**
KORT	**Korkueli**	**0.98**	**87**	*i* P	**Pg**	**21 28 51.0**	**-0.8**
KORT				*i* S	**Sg**	**21 29 08.3**	**+3.6**
AYDN	**Tasoluk**	**1.21**	**306**	*i* P	**Pn**	**21 28 55.9**	**+0.1**
AYDN	**Tasoluk**	**1.21**	**306**	*i* P	**Pn**	**21 28 55.9**	**+0.1**
DAT	**Datca**	**1.26**	**260**	*e*PN	**Pn**	**21 28 57.6**	**+1.3**
DAT	**Datca**	**1.26**	**260**	*e*Pn	**Pn**	**21 28 57.6**	**+1.2**
KHAL	**Karahalli**	**1.44**	**12**	*i* P	**Pn**	**21 28 57.9**	**-1.0**
KHAL				*i* S	**Sn**	**21 29 17.8**	**0.0**
KHAL	**Karahalli**	**1.44**	**12**	*i* P	**Pn**	**21 28 57.9**	**-1.0**
KHAL				*i* S	**Sn**	**21 29 17.8**	**0.0**

ISK ***24*** *21:43:59.6, 36°.91N×43°.39E, h6km, MD3.7*
ISCJB ***24*** *21:44:00.8±1.2, 37°.03N±0°.05×43°.29E±0°.05, h6km±10km, Error ellipse: s-maj=9.6km s-min=6.7km az=23.7*
CSEM ***24*** *21:44:01.7±0.1, 37°.02N×43°.35E, h2km, MD3.7, Error ellipse: s-maj=3.8km s-min=3.1km az=113.0*
DDA ***24*** *21:44:02.0, 37°.12N×43°.22E, h7km±3km, MD3.1*
ISC 24 21:44:01.8±1.3, 37°.04N±0°.06×43°.30E±0°.06, h6km±11km, n29, σ0°.89/35, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUKT	**Cukurca**	**0.32**	**50**	*e*PG	**Pg**	**21 44 07.8**	**-0.3**
CUKT				*e*SG	**Sg**	**21 44 13.1**	**+0.8**
CUKT	**Cukurca**	**0.32**	**50**	*e*Pg	**Pg**	**21 44 07.8**	**-0.3**
CUKT				*e*Sg	**Sg**	**21 44 13.1**	**+0.7**
HAKT	**HAKKARI**	**0.61**	**32**	*i* P	**Pg**	**21 44 13.6**	**+0.1**
HAKT				*i* S	**Sg**	**21 44 21.9**	**+0.3**
HAKT	**HAKKARI**	**0.61**	**32**	*i* P	**Pg**	**21 44 13.6**	**0.0**
HAKT				*i* S	**Sg**	**21 44 21.9**	**+0.3**
VANT	**Van**	**1.38**	**359**	*e*PN	**Pg**	**21 44 28.2**	**0.0**
TVAN	**Van**	**1.49**	**3**	*i* P	**Pg**	**21 44 30.6**	**+0.3**
TVAN	**Van**	**1.49**	**3**	*i* P	**Pg**	**21 44 30.6**	**+0.3**
VANB	**Van**	**1.56**	**3**	*e*PN	**Pn**	**21 44 29.8**	**-0.2**
VANB	**Van**	**1.56**	**3**	*e*Pn	**Pn**	**21 44 29.8**	**-0.1**
TATV	**Tatvan**	**1.68**	**331**	*i* P	**Pg**	**21 44 33.9**	**-0.1**
TATV				*i* S	**Sg**	**21 44 56.0**	**+0.3**
TATV	**Tatvan**	**1.68**	**331**	*i* P	**Pg**	**21 44 33.8**	**-0.1**
TATV				*i* S	**Sg**	**21 44 56.0**	**+0.3**
BEST	**Besiri**	**1.82**	**298**	*i* P	**Pb**	**21 44 34.1**	**-1.4**
MARD	**Mardin**	**2.03**	**279**	*i* P	**Pb**	**21 44 38.3**	**-0.7**
CLDR	**Caldiran**	**2.16**	**13**	*e*PN	**Pb**	**21 44 39.5**	**-1.7**
CLDR	**Caldiran**	**2.16**	**13**	*e*Pn	**Pb**	**21 44 39.5**	**-1.7**
AGRB	**Hanur-Agry**	**2.54**	**355**	*e*PN	**Pb**	**21 44 45.4**	**-2.4**
AGRB	**Hanur-Agry**	**2.54**	**355**	*e*Pn	**Pb**	**21 44 45.4**	**-2.4**
BINT	**Bingol**	**2.88**	**310**	*e*PN	**Pn**	**21 44 49.8**	**+1.7**
BINT	**Bingol**	**2.88**	**310**	*e*Pn	**Pn**	**21 44 49.8**	**+1.7**
GNI	**Garni**	**3.31**	**20**	*e*PN	**Pn**	**21 44 54.3**	**+0.3**
GNI	**Garni**	**3.31**	**20**	*e*Pn	**Pn**	**21 44 54.3**	**+0.3**
SVRC	**Sivrice-ELAZID**	**3.44**	**294**	*e*PN	**Pn**	**21 44 56.7**	**+1.0**
SVRC	**Sivrice-ELAZID**	**3.44**	**294**	*e*Pn	**Pn**	**21 44 56.7**	**+0.9**
URFA	**Urfa**	**3.59**	**278**	*e*PN	**Pn**	**21 44 58.2**	**+0.3**
URFA	**Urfa**	**3.59**	**278**	*e*Pn	**Pn**	**21 44 58.3**	**+0.3**
PTK	**Pertek**

JOSM	**Okushiri--Mats**	**4.79 213**	P	**Pn**	**21 54 03.6**	**-0.1**
JOT	**Ohata**	**4.98 197**	P	**Pn**	**21 54 04.8**	**-0.9**
JOT			*e*S	**S**	**21 55 04.8**	**-5.1**
HABR	**Khabarovsk**	**5.86 296**	*e*PN	**Pn**	**21 54 15.5**	**+0.1**
HABR			*e*S	**S**	**21 55 26.1**	**-1.5**
HABR			pmax	pmax		
	comp=Z,106nm,1.6s					
HABR			pmax	pmax		
	comp=E,81nm,1.7s					
HABR			pmax	pmax		
	comp=N,15nm,1.1s					
KLR	**Kul'dur**	**8.17 296**	*e*PN	**Pn**	**21 54 38.3**	**-3.9**
KLR	**Kul'dur**	**8.17 296**	*e*rx	rx	21 54 38.3	
EKMR	**Ekimchan**	**9.49 320**	*e*P	**Pn**	**21 54 54.6**	**-3.2**
EKMR			AMB	AMB	21 54 56.4	
	comp=N,15nm,0.5s					
MDJ	**Mudanjiang**	**9.54 265**	P	**Pn**	**21 54 59.9**	**+1.2**
MDJ			pmax	pmax		
	comp=Z,42nm,0.9s					
MDJ			pmax	pmax		
	comp=Z,56nm,4.4s					
MDJ	**Mudanjiang**	**9.54 265**	*e*Pn	**Pn**	**21 55 00.1**	**+1.4**
	comp=Z,36nm,0.9s					
MDJ			*e*S	**S**	**21 56 47.4**	**+0.3**
MAJO	**Matsushiro**	**10.25 202**	*e*PN	**Pn**	**21 55 07.2**	**-0.1**
MAJO			pmax	pmax		
	comp=Z,19nm,0.5s					
MAJO	**Matsushiro**	**10.25 202**	*e*Pn	**Pn**	**21 55 07.2**	**-0.1**
	comp=Z,19nm,0.5s					
MAT	**Matsushiro**	**10.25 202**	P	**Pn**	**21 55 07.6**	**+0.3**
MJAR	**Matsushiro Arr**	**10.25 202**	P	**Pn**	**21 55 08.3**	**+1.0**
	comp=Z,3.6nm,0.3s,baz=17,slow=11,SNR=58					
MJAR	**Matsushiro Arr**	**10.25 202**	PN	**Pn**	**21 55 08.3**	**+1.0**
MJAR			pmax	pmax		
	comp=Z,4.0nm,0.3s					
BMKR	**Bomnak**	**12.40 319**	*e*P	**P**	**21 55 29.1**	**-3.0**
BMKR			AMB	AMB	21 55 29.9	
	comp=Z,25nm,0.8s					
ZEA	**Zeya**	**12.63 313**	*e*P	**P**	**21 55 33.2**	**-1.4**
ZEA			AMB	AMB	21 55 33.9	
	comp=Z,30nm,0.7s					
KROS	**Kirovskiy**	**13.13 315**	*e*P	**P**	**21 55 36.6**	**-3.5**
KROS			AMB	AMB	21 55 38.2	
	comp=Z,2.0nm,0.7s					
KSRS	**Korea Array**	**14.18 237**	P	**P**	**21 55 57.4**	**+5.5**
	comp=Z,0.2nm,0.3s,baz=44,slow=10,SNR=4.7					
HIA	**Hailar**	**15.93 290**	*e*P	**P**	**21 56 11.8**	**+1.1**
SEY	**Seymchan**	**17.64 14⇑**	*i*P	**P**	**21 56 29.6**	**+0.7**
ULN	**Ulaanbaatar**	**24.42 287**	*e*P	**P**	**21 57 34.5**	**+0.4**
ULN			pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.1					
ULN	**Ulaanbaatar**	**24.42 287**	*e*P	**P**	**21 57 34.5**	**+0.5**
	comp=Z,1.5nm,0.7s,mb3.3					
SONM	**Songino Array**	**24.86 287**	P	**P**	**21 57 38.4**	**+0.4**
	comp=Z,1.0nm,0.6s,mb3.2,baz=76,slow=7.9,SNR=8.2					
SONM	**Songino Array**	**24.86 287**	P	**P**	**21 57 38.4**	**+0.4**
SONM			pmax	pmax		
	comp=Z,1.0nm,0.6s					
TATO	**Taipei**	**27.27 227**	*e*Pn	**P**	**21 57 59.6**	**-0.1**
KDAK	**Kodiak Island**	**39.85 49**	P	**P**	**21 59 46.9**	**+0.3**
	comp=Z,6.6nm,0.6s,mb4.0,baz=270,slow=7.6,SNR=5.4					
KDAK	**Kodiak Island**	**39.85 49**	P	**P**	**21 59 46.9**	**+0.3**
KDAK			pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.1					
PMR	**Palmer**	**40.84 43**	P	**P**	**21 59 55.1**	**+0.5**
MKAR	**Makanchi Array**	**40.87 294**	P	**P**	**21 59 55.2**	**+0.2**
	comp=Z,0.6nm,0.7s,mb3.0,baz=79,slow=7.6,SNR=4.4					
MKAR	**Makanchi Array**	**40.87 294**	*e*P	**P**	**21 59 55.2**	**+0.2**
MKAR			pmax	pmax		
	comp=Z,1.0nm,0.7s					
ILAR	**Eielson Array**	**41.34 38**	P	**P**	**21 59 57.9**	**-0.7**
	comp=Z,1.7nm,0.6s,mb3.4,baz=277,slow=7.1,SNR=26					
ILAR	**Eielson Array**	**41.34 38**	P	**P**	**21 59 57.9**	**-0.7**
ILAR			pmax	pmax		
	comp=Z,2.0nm,0.6s					
KURK	**Kurchatov**	**41.73 301⇑**	*e*P	**P**	**22 00 00.6**	**-1.3**
KURK			*i* *PP	pP	22 01 08.5	-2.5
KURK			pmax	pmax		
	comp=Z,5.0nm,2.5s,mb3.2					
KURK	**Kurchatov**	**41.73 301**	*e*P	**P**	**22 00 01.4**	**-0.5**
	comp=Z,0.9nm,0.5s,mb3.2					
LSA	**Lhasa**	**43.27 266**	P	**P**	**22 00 15.1**	**+0.7**
EGAK	**Eagle**	**43.75 37**	*e*P	**P**	**22 00 17.6**	**-0.1**
	comp=Z,3.3nm,0.6s,mb3.6					
BVAR	**Borovoye Array**	**45.68 306**	P	**P**	**22 00 33.1**	**+0.1**
	comp=Z,0.4nm,0.5s,mb2.9,baz=70,slow=7.6,SNR=4.0					
EKS2	**Erkin-Say**	**48.12 292**	*e*P	**P**	**22 00 52.2**	**+0.3**
	comp=Z,0.3nm,0.2s,mb3.2					
AML	**Almayashu**	**48.44 292**	*e*P	**P**	**22 00 55.6**	**+1.3**
SIT	**Sitka**	**48.93 46**	*e*P	**P**	**22 00 58.1**	**+0.4**
SIT			pmax	pmax		
	comp=Z,15nm,0.8s,mb4.3					
SIT	**Sitka**	**48.93 46**	*e*P	**P**	**22 00 58.0**	**+0.4**
	comp=Z,15nm,0.8s,mb4.3					
RES	**Resolute Bay**	**53.50 16**	*e*P	**P**	**22 01 30.8**	**-0.2**
RES			pmax	pmax		
	comp=Z,2.0nm,0.4s,mb3.8					
RES	**Resolute Bay**	**53.50 16**	*e*P	**P**	**22 01 30.8**	**-0.2**
	comp=Z,2.0nm,0.4s,mb3.8					
YKA	**Yellowknife Ar**	**55.43 33**	P	**P**	**22 01 44.9**	**0.0**
	comp=Z,2.4nm,0.5s,mb3.8,baz=308,slow=7.3,SNR=12					
YKA	**Yellowknife Ar**	**55.43 33**	P	**P**	**22 01 44.9**	**-0.1**
YKA			pmax	pmax		
	comp=Z,2.0nm,0.5s					
YKA	**Yellowknife Ar**	**55.43 33**	P	**P**	**22 01 44.9**	**0.0**
ARCES	**ARCESS Array B**	**55.92 338**	P	**P**	**22 01 47.5**	**-0.9**
	comp=Z,3.9nm,0.9s,mb3.7,baz=29,slow=6.3,SNR=3.0					
ARCES	**ARCESS Array B**	**55.92 338**	P	**P**	**22 01 47.5**	**-0.8**
ARCES			pmax	pmax		
	comp=Z,4.0nm,0.9s					
JOF	**Joensuu**	**58.55 330**	*e*P	**P**	**22 02 05.5**	**-1.0**
JOF			pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.7					
JOF	**Joensuu**	**58.55 330**	*e*p	**P**	**22 02 05.5**	**-1.0**
	comp=Z,1.1nm,0.3s,mb3.8					
KAF	**Kangasniemi**	**60.80 331**	*e*P	**P**	**22 02 20.8**	**-1.0**
KAF			pmax	pmax		
	comp=Z,2.0nm,0.4s,mb3.9					
KAF	**Kangasniemi**	**60.80 331**	*e*p	**P**	**22 02 20.8**	**-1.0**
	comp=Z,1.5nm,0.4s,mb3.8					
FINES	**FINESS Array B**	**61.35 331**	P	**P**	**22 02 24.8**	**-0.6**
	comp=Z,2.6nm,0.5s,mb3.9,baz=43,slow=8.5,SNR=42					
FINES	**FINESS Array B**	**61.35 331**	P	**P**	**22 02 24.8**	**-0.6**
FINES			pmax	pmax		
	comp=Z,3.0nm,0.5s					
SUMG	**Summit**	**61.56 0**	*e*P	**P**	**22 02 27.3**	**+0.6**
	comp=Z,1.6nm,0.6s,mb3.7					
FFC	**Flin Flon**	**65.49 35**	*e*P	**P**	**22 02 53.1**	**+0.7**
FFC			pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.2					
FFC	**Flin Flon**	**65.49 35**	*e*P	**P**	**22 02 53.1**	**+0.7**
	comp=Z,3.9nm,0.7s,mb4.2					
WRAB	**Tennant Creek**	**66.24 189**	P	**P**	**22 02 57.5**	**0.0**
NB2	**NORSAR Subarra**	**66.25 337**	P	**P**	**22 02 56.3**	**-0.8**
	comp=Z,0.7nm,0.5s,mb3.6,baz=32,slow=6.5					
NOA	**NORSAR Array B**	**66.25 337**	P	**P**	**22 02 56.2**	**-0.9**
	comp=Z,0.7nm,0.6s,mb3.6,baz=34,slow=6.3,SNR=6.9					
NOA	**NORSAR Array B**	**66.25 337**	P	**P**	**22 02 56.2**	**-0.9**
NOA			pmax	pmax		
	comp=Z,1.0nm,0.6s					
NVAR	**Mina Array Bea**	**68.76 56**	P	**P**	**22 03 14.5**	**+1.4**
	comp=Z,1.6nm,0.7s,mb3.9,baz=299,slow=6.1,SNR=8.6					
NVAR	**Mina Array Bea**	**68.76 56**	P	**P**	**22 03 14.5**	**+1.4**
MBWA	**Marble Bar**	**70.24 203**	*e*P	**P**	**22 03 21.2**	**-0.9**
PDAR	**Pinedale Array**	**70.56 48**	P	**P**	**22 03 24.9**	**+1.0**
	comp=Z,1.7nm,0.9s,mb3.8,baz=310,slow=7.6,SNR=8.3					
BRTR	**Keskin Array B**	**73.73 311**	P	**P**	**22 03 41.0**	**-1.6**
	comp=Z,0.4nm,0.6s,mb3.4,baz=15,slow=12,SNR=3.5					
CLL	**Collm**	**73.78 330**	*e*P	**P**	**22 03 38.0**	**-4.6**
CLL			*e*		22 04 03.0	
SCHQ	**Schefferville**	**76.26 17**	*e*P	**P**	**22 03 56.9**	**+0.3**
	comp=Z,4.4nm,1.2s,mb4.1					
STKA	**Stephens Creek**	**77.68 181**	*e*P	**P**	**22 04 04.3**	**-0.3**
ANMO	**Albuquerque**	**77.91 52**	P	**P**	**22 04 06.1**	**0.0**
NWAO	**Narrogin (SRO)**	**82.09 202**	*e*P	**P**	**22 04 26.5**	**-1.5**
NWAO			pmax	pmax		
	comp=Z,1.0nm,0.6s					
NWAO	**Narrogin (SRO)**	**82.09 202**	*e*P	**P**	**22 04 26.5**	**-1.5**
	comp=Z,1.2nm,0.6s,mb3.9					
TXAR	**Lajitas Array**	**83.70 54**	P	**P**	**22 04 38.2**	**+1.7**
	comp=Z,0.4nm,0.5s,mb3.5,baz=359,slow=3.6,SNR=6.1					
ESDC	**Sonseca Array**	**89.56 335**	P	**P**	**22 05 05.2**	**+0.7**
	comp=Z,0.4nm,0.5s,mb3.6,baz=16,slow=3.7,SNR=5.4					
ESDC	**Sonseca Array**	**89.56 335**	P	**P**	**22 05 05.2**	**+0.7**

*ISCJB **24** 21:55:39.9±1.4,5.°14S×0.°07×151.°60E±0.°05,h146km±14km, mb4.5/40,Error ellipse: s-maj=12.2km s-min=8.0km az=169.0*
*BJI **24** 21:55:39.2,4.°53S×152.°10E,h134km,mB4.8/4,mb4.8/9*
*NEIC **24** 21:55:41.7±1.1,5.°15S×151.°63E,h150km±10km,mb4.6/16, Error ellipse: s-maj=8.9km s-min=7.7km az=121.0*
*IDC **24** 21:55:43.0±4.7,5.°15S×151.°64E,h160km±42km,mb4.1/15, mb1 4.2/17,mb1mx4.1/21,mbtmp4.1/17,Error ellipse: s-maj=24.1km s-min=13.4km az=95.0*
*DJA **24** 21:55:51,4.°81S×150.°47E,h164km,mb4.6/16*
ISC 24 21:55:41.4±1.1,5.°20S±0.°07×151.°62E±0.°05,h147km±12km, n86,σ0°80/75,mb4.5/39,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.09**	**226**	*e*Pn	**Pn**	**21 57 08.8**	**-0.6**
	112nm,0.8s						
PMG				*e*Sn	**Sn**	**21 58 18.7**	**+0.6**
HNR	**Honiara**	**9.27**	**117**	*e*Pn	**Pn**	**21 57 51.9**	**+0.1**
HNR				Sn	**Sn**	**21 59 33.5**	**-1.0**
CTA	**Charters Tower**	**15.70**	**199**	P	**Pn**	**21 59 18.0**	**+3.3**
	0.1nm,0.3s,baz=32,slow=13,SNR=2.3						
BAKI	**Biak**	**15.99**	**284**	P	**Pn**	**21 59 10.0**	**-8.4**
	20nm,1.2s						
GUMO	**Guam**	**19.83**	**340**	P	**P**	**22 00 01.7**	**+0.8**
	6.4nm,0.3s,baz=174,slow=9.1,SNR=12						
GUMO	**Guam**	**19.83**	**340**	*e*P	**P**	**22 00 01.3**	**+0.4**
	100nm,0.6s						
GUMO	**Guam**	**19.83**	**340**	P	**P**	**22 00 02.0**	**+1.1**
	268nm,1.1s						
KAKA	**Kakadu**	**20.36**	**247**	*e*P	**P**	**22 00 06.3**	**-0.3**
	29nm,0.4s						
KAKA	**Kakadu**	**20.36**	**247**	*e*P	**P**	**22 00 06.6**	**0.0**
	109nm,0.6s						
KAKA				*e*S	**S**	**22 03 44.8**	**-1.9**
KAKA	**Kakadu**	**20.36**	**247**	P	**P**	**22 00 06.6**	**0.0**
	1μm64nm,0.6s						
WRAB	**Tennant Creek**	**22.30**	**227**	*e*P	**P**	**22 00 27.3**	**+0.2**
	20nm,0.8s,mb4.6						
WRAB	**Tennant Creek**	**22.30**	**227**	P	**P**	**22 00 28.2**	**+1.1**
	26nm,1.2s,mb4.5						
WRA	**Warramunga Arr**	**22.31**	**227**	P	**P**	**22 00 26.9**	**-0.3**
	baz=52,slow=9.9						
KNA	**Kununurra**	**24.77**	**243**	P	**P**	**22 00 50.8**	**+1.0**
	726nm79nm,0.7s,mb5.3						
ASAR	**Alice Springs**	**25.07**	**221**	P	**P**	**22 00 53.3**	**+0.9**
	8.4nm,0.6s,mb4.4,baz=56,slow=9.1,SNR=60						
STKA	**Stephens Creek**	**28.16**	**198**	P	**P**	**22 01 21.0**	**+1.1**
	0.8nm,0.5s,mb3.7,baz=17,slow=14,SNR=2.9						
STKA	**Stephens Creek**	**28.16**	**198**	*e*P	**P**	**22 01 21.4**	**+1.5**
FITZ	**Fitzroy Crossi**	**28.44**	**241**	*e*P	**P**	**22 01 22.4**	**-0.3**
	8.3nm,0.4s,mb4.8						
FITZ	**Fitzroy Crossi**	**28.44**	**241**	P	**P**	**22 01 22.7**	**0.0**
	4.8nm,0.4s,mb4.6,baz=60,slow=9.5,SNR=36						
FITZ	**Fitzroy Crossi**	**28.44**	**241**	*e*P	**P**	**22 01 22.8**	**+0.2**
FITZ	**Fitzroy Crossi**	**28.44**	**241**	P	**P**	**22 01 22.7**	**0.0**
	21nm,1.3s,mb4.7						
BNSI	**Bone**	**31.41**	**270**	P	**P**	**22 01 48.1**	**-0.9**
	15nm,1.6s,mb4.5						
MBWA	**Marble Bar**	**34.76**	**240**	*e*P	**P**	**22 02 17.6**	**-0.3**
	5.4nm,0.4s,mb4.5						
MBWA	**Marble Bar**	**34.76**	**240**	P	**P**	**22 02 18.1**	**+0.2**
	22nm,1.6s,mb4.5						
YHNB	**Yeheng**	**41.81**	**317**	*e*P	**P**	**22 03 16.9**	**+0.1**
	13nm,0.7s,mb4.7						
YHNB				*e*PcP	PcP	22 05 09.7	-0.5
CGJI	**Cibinong**	**45.70**	**266**	P	**P**	**22 03 46.4**	**-1.7**
	30nm,1.4s,mb4.7						
MDSI	**Maura Dua**	**47.27**	**269**	P	**P**	**22 03 59.1**	**-1.3**
	9.4nm,1.1s,mb4.3						
QIZ	**Qiongzhong**	**47.67**	**301**	*e*P	**P**	**22 04 03.9**	**+0.5**
KSRS	**Korea Array**	**47.84**	**334**	P	**P**	**22 04 04.2**	**0.0**
	1.7nm,0.9s,mb3.7,baz=155,slow=7.3,SNR=5.9						
SDSI	**Sungai Dareh**	**50.29**	**273**	P	**P**	**22 04 22.2**	**-1.2**
	11nm,1.0s,mb4.4						
PPI	**Padang Panjang**	**51.36**	**274**	P	**P**	**22 04 30.3**	**-1.2**
	3μm32nm,0.9s,mb5.0						
KULM	**Kulim**	**51.96**	**281**	*e*P	**P**	**22 04 35.8**	**-0.1**
	2.4nm,0.5s,mb4.1						
KULM	**Kulim**	**51.96**	**281**	P	**P**	**22 04 34.5**	**-1.4**
	19nm,2.6s,mb4.3						
MNSI	**Mandailing Nat**	**52.32**	**275**	P	**P**	**22 04 37.8**	**-0.8**
	25nm,1.0s,mb4.8						
PSI	**Prapat**	**53.24**	**277**	P	**P**	**22 04 46.0**	**+0.7**
	2.8nm,0.4s,mb4.3,baz=68,slow=5.4,SNR=4.7						
GSI	**Gunungsitoli**	**54.37**	**275**	P	**P**	**22 04 52.4**	**-1.2**
	49nm,2.6s,mb4.8						
CM31	**Chiang Mai Arr**	**56.99**	**296**	*e*P	**P**	**22 05 11.9**	**-0.2**
	5.0nm,0.9s,mb4.3						
CMAR	**Chiang Mai Arr**	**56.99**	**296**	P	**P**	**22 05 13.2**	**+1.1**
	5.1nm,0.9s,mb4.3,baz=116,slow=5.0,SNR=18						
CHTO	**Chiang Mai**	**57.10**	**296**	*e*P	**P**	**22 05 13.0**	**+0.1**
	5.3nm,1.0s,mb4.3						
HIA	**Hailar**	**60.92**	**337**	P	**P**	**22 05 38.6**	**0.0**
ULN	**Ulaanbaatar**	**65.72**	**329**	*e*P	**P**	**22 06 09.4**	**-0.8**
	3.7nm,0.6s,mb4.4						
ULN	**Ulaanbaatar**	**65.72**	**329**	P	**P**	**22 06 11.3**	**+1.1**
SONM	**Songino Array**	**66.04**	**328**	P	**P**	**22 06 13.2**	**+0.9**
	7.7nm,0.5s,mb4.8,baz=144,slow=5.3,SNR=69						
CASY	**Casey**	**67.30**	**197**	*e*P	**P**	**22 06 19.8**	**-0.2**
LSA	**Lhasa**	**67.50**	**305**	*e*P	**P**	**22 06 22.3**	**+0.4**
	12nm,0.8s,mb4.8						
TAPN	**Taplejung**	**69.61**	**302**	*e*P	**P**	**22 06 35.5**	**+0.4**
ODAN	**Odare**	**69.74**	**301**	*e*P	**P**	**22 06 36.2**	**+0.3**
	20nm,0.7s,mb4.9						
RAMN	**Ramite**	**70.44**	**301**	*e*P	**P**	**22 06 40.5**	**+0.3**
JIRN	**Jiri**	**70.99**	**301**	*e*P	**P**	**22 06 44.1**	**+0.6**
GUN	**Gumba**	**71.33**	**302**	*e*P	**P**	**22 06 46.1**	**+0.6**
PKI	**Pulchoki**	**71.63**	**301**	*e*P	**P**	**22 06 47.4**	**+0.1**
PKI	**Pulchoki**	**71.63**	**301**	*e*P	**P**	**22 06 47.6**	**+0.3**
PKIN	**Phulchoki**	**71.64**	**301**	*e*P	**P**	**22 06 47.6**	**+0.2**
KKN	**Kakani**	**71.80**	**301**	*e*P	**P**	**22 06 48.6**	**+0.2**
	19nm,0.7s,mb5.0						
DMN	**Daman**	**71.90**	**301**	*e*P	**P**	**22 06 49.4**	**+0.5**
	28nm,0.7s,mb5.1						
GKN	**Gorkha**	**72.41**	**301**	*e*P	**P**	**22 06 52.0**	**0.0**
	17nm,0.6s,mb5.0						
MK31	**Makanchi Array**	**79.86**	**319**	*e*P	**P**	**22 07 32.8**	**-0.8**
MKAR	**Makanchi Array**	**79.86**	**319**	P	**P**	**22 07 33.8**	**+0.1**
	3.0nm,0.9s,mb3.9,baz=99,slow=7.7,SNR=7.9						
ZALV	**Zalesovo Beam**	**80.83**	**327**	P	**P**	**22 07 37.9**	**-0.8**
	4.4nm,0.3s,mb4.5,baz=122,slow=5.8,SNR=17						
MCK	**McKinley**	**81.68**	**23**	*e*P	**P**	**22 07 42.4**	**-0.5**
ILAR	**Eielson Array**	**82.97**	**22**	P	**P**	**22 07 48.2**	**-1.4**
	1.6nm,0.6s,mb4.0,baz=250,slow=5.4,SNR=18						
KURK	**Kurchatov**	**83.36**	**322**	*e*P	**P**	**22 07 51.6**	**-0.4**
	12nm,1.1s,mb4.5						
TKM2	**Tokmak 2**	**83.36**	**314**	*e*P	**P**	**22 07 52.3**	**+0.2**
	4.5nm,0.4s,mb4.5						
UCH	**Uchtor**	**83.99**	**313**	*e*P	**P**	**22 07 55.6**	**+0.3**
	3.2nm,0.7s,mb4.2						
AAK	**Ala-Archa**	**84.09**	**314**	P	**P**	**22 07 55.8**	**-0.1**
	1.9nm,0.3s,mb4.3,baz=94,slow=2.8,SNR=6.6						
AAK	**Ala-Archa**	**84.09**	**314**	*e*P	**P**	**22 07 56.3**	**+0.4**
AML	**Almayashu**	**84.56**	**313**	*e*P	**P**	**22 07 58.3**	**0.0**
	20nm,1.0s,mb4.8						
EKS2	**Erkin-Say**	**84.61**	**314**	*e*P	**P**	**22 07 59.6**	**+1.1**
	14nm,1.0s,mb4.7						
MAW	**Mawson**	**84.76**	**203**	P	**P**	**22 07 59.8**	**+1.0**
	1.8nm,0.5s,mb4.0,baz=97,slow=8.4,SNR=13						
MAW	**Mawson**	**84.76**	**203**	*e*P	**P**	**22 07 58.4**	**-0.3**
BVAR	**Borovoye Array**	**88.86**	**323**	P	**P**	**22 08 17.8**	**-1.0**
	3.3nm,0.6s,mb4.5,baz=105,slow=6.1,SNR=13						
NVAR	**Mina Array Bea**	**93.25**	**52**	P	**P**	**22 08 41.5**	**+1.9**
	2.5nm,0.9s,mb4.4,baz=257,slow=6.1,SNR=12						
PDAR	**Pinedale Array**	**99.98**	**48**	P	Pdif	22 09 10.3	+0.7
	0.7nm,0.8s,baz=223,slow=4.9,SNR=5.5						
NOA	**NORSAR Array B**	**116.88**	**340**	PKP	PKPdf	22 14 07.3	-1.0
	0.4nm,0.6s,baz=46,slow=1.7,SNR=4.7						
NOA	**NORSAR Array B**	**116.88**	**340**	PKP	PKPdf	22 14 07.3	-1.0
BOSA	**Boshof**	**118.45**	**234**	PKP	PKPdf	22 14 12.8	+0.4
	3.6nm,1.1s,baz=124,slow=3.6,SNR=3.6						
BOSA	**Boshof**	**118.45**	**234**	PKP	PKPdf	22 14 12.8	+0.4
HINF	**Hinteralfeld**	**127.94**	**330**	*e*PKP1	PKPdf	22 14 29.8	-0.1
	4.8nm,0.6s						
LPL	**La Plagne**	**129.56**	**328**	*e*PKP1	PKPdf	22 14 33.8	+0.7
LPG	**La Plagne**	**129.56**	**328**	*e*PKP1	PKPdf	22 14 34.0	+0.9
	4.5nm,0.8s						
LOR	**Lormes**	**129.76**	**332**	*e*PKP1	PKPdf	22 14 34.0	+0.6
SSF	**Saint Saulge**	**130.08**	**332**	*e*PKP1	PKPdf	22 14 35.4	+1.4
ORIF	**Oris-en-Rattie**	**130.40**	**328**	*e*PKP1	PKPdf	22 14 35.2	+0.5
	2.9nm,0.6s						
TCF	**Toulx Ste Croi**	**131.25**	**332**	*e*PKP1	PKPdf	22 14 36.4	+0.1
	3.1nm,0.6s						
VSL	**Villasalto**	**131.78**	**321**	PKPdf	PKPdf	22 14 37.1	-0.3
DBIC	**Dimbokro**	**156.56**	**275**	PKPdf	PKPdf	22 15 18.8	-1.2

*NIED **24** 21:56:00.20°.90N×121.°70E,h5km,Mw3.7 Best double couple: M0:4.65000×1014 NP1:φ1=274.00000°,δ1=65.00000°, λ1=-70.00000°. NP2:φ2=54.00000°,δ2=31.00000°, λ2=-126.00000°.*
*NEIC **24** 21:56:44.7±0.5,21.°05N×121.°63E,h10km,mb4.2/8,Error ellipse: s-maj=14.6km s-min=8.7km az=79.0*
ISC 24 21:56:43.5±1.9,21.°00N±0.°04×121.°6E±0.°1,h1km±11km, n22,σ1°22/29,mb4.3/8,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**1.88**	**345**	*e*Pn	**Pn**	**21 57 15.7**	**-1.1**
TWG				*e*S	**Sn**	**21 57 42.4**	**+1.1**
TPUB	**Ta-pu**	**2.46**	**338**	*e*Pn	**Pn**	**21 57 23.2**	**-1.7**
TPUB				*e*S	**Sn**	**21 57 54.9**	**-0.7**
SSLB	**Suanglung**	**2.84**	**348**	*e*Pn	**Pn**	**21 57 27.1**	**-2.9**
SSLB				*e*S	**Sn**	**21 58 03.5**	**-1.4**
NACB	**Ninganchiao**	**3.16**	**360**	*e*Pn	**Pn**	**21 57 32.9**	**-1.5**
NACB				S	**Sn**	**21 58 13.8**	**+1.0**
YHNB	**Yeheng**	**3.66**	**357**	*e*Pn	**Pn**	**21 57 38.8**	**-2.5**
YHNB				Pg	**Pg**	**21 57 55.5**	**+1.8**
YHNB				S	**Sn**	**21 58 19.5**	**-5.6**
CM31	**Chiang Mai Arr**	**21.49**	**267**	P	**P**	**22 01 34.0**	**+0.2**
HHC	**Hu-ho-hao-te**	**21.55**	**339**	*e*P	**P**	**22 01 34.8**	**+0.5**
HHC				S	**S**	**22 05 27.8**	**-6.1**
HHC			pmax	pmax			
	comp=Z,16nm,0.5s,mb4.7						
HHC			pmax	pmax			
	comp=Z,81nm,5.2s						
MDJ	**Mudanjiang**	**24.46 14**	P	**P**	**22 02 05.1**	**+1.2**	
KULM	**Kulim**	**25.64**	**235**	*e*P	**P**	**22 02 14.4**	**-0.6**
	comp=Z,2.4nm,0.6s,mb4.0						
TLY	**Talaya**	**33.68**	**340**	P	**P**	**22 03 28.3**	**+2.4**
WRAB	**Tennant Creek**	**42.55**	**162**	*e*P	**P**	**22 04 40.4**	**-0.5**
	comp=Z,7.5nm,1.2s,mb4.3						
TKM2	**Tokmak 2**	**44.08**	**311**	P	**P**	**22 04 56.5**	**+3.3**
UCH	**Uchtor**	**44.69**	**309**	*e*P	**P**	**22 05 00.0**	**+1.9**
	comp=Z,1.0nm,0.3s,mb4.2						
AAK	**Ala-Archa**	**44.80**	**310**	*e*P	**P**	**22 04 58.5**	**-0.5**
	comp=Z,4.2nm,1.3s,mb4.2						
EKS2	**Erkin-Say**	**45.32**	**310**	*e*P	**P**	**22 05 03.9**	**+0.8**
	comp=Z,3.1nm,1.0s,mb4.2						
CTAO	**Charters Tower**	**47.42**	**148**	*e*P	**P**	**22 05 19.0**	**-0.7**
KBL	**Kabul**	**47.94**	**298**	*e*P	**P**	**22 05 23.5**	**-0.3**
	comp=Z,4.8nm,1.5s,mb4.4						
BRVK	**Borovoye**	**50.47**	**322**	*e*P	**P**	**22 05 43.5**	**+0.6**
	comp=Z,3.7nm,0.8s,mb4.4						
ARU	**Arti**	**57.90**	**324**	P	**P**	**22 06 36.8**	**-0.1**
COLA	**College**	**71.43 27**	P	**P**	**22 08 05.9**	**+0.7**
SIT	**Sitka**	**79.46 33**	P	**P**	**22 08 51.8**	**+0.3**
MCQ	**Macquarie Isla**	**81.72**	**159**	P	**P**	**22 09 03.3**	**-0.2**

*IDC **24** 21:57:30.4±1.3,1.°82S×99.°83E,h0km,mb4.1/11, mb1 4.1/12,mb1mx4.0/21,mbtmp4.1/12,ML3.3/1,MS3.0/1, Ms1 3.0/1,ms1mx2.4/31,Error ellipse: s-maj=47.4km s-min=18.4km az=59.0*
*DJA **24** 21:57:34,1.°96S×99.°61E,h27km,MLv4.4/10*
*ISCJB **24** 21:57:35.4±0.8,1.°85S±0.°05×99.°70E±0.°06,h56km±6km, mb4.2/16,Error ellipse: s-maj=12.0km s-min=6.8km az=142.8*
*NEIC **24** 21:57:36.5±1.3,1.°80S

XAN Sg Sg 22 05 14.6 -1.1
XAN smax
comp=N,230nm,0.7s
XAN smax
comp=E,86nm,0.8s
XAN LR LR
comp=N,190nm,9.0s
XAN LR LR
comp=E,36nm,4.4s
XAN LR LR
comp=Z,55nm,7.2s
LZH Lanzhou 3.61 337 *e*Pn Pn 22 04 32.5 +0.5
LZH Pg Pg 22 04 39.3 -6.6
LZH Sn Sn 22 05 18.0 +3.7
LZH Sg Sg 22 05 24.8 -7.9
LZH smax
comp=N,410nm,0.5s
LZH smax
comp=E,470nm,0.7s
LZH LR LR
comp=N,420nm,5.0s
LZH LR LR
comp=Z,130nm,5.9s
GTA Gaotai 8.11 327 *e*P Pn 22 05 35.3 +1.6
GTA pP 22 05 38.6
GTA sP 22 05 41.4
GTA S Sn 22 07 06.6 +1.6
GTA pmax pmax
comp=Z,3.0nm,1.2s
GTA pmax pmax
comp=Z,49nm,5.4s
GTA LR LR
comp=N,67nm,8.7s
GTA LR LR
comp=E,140nm,9.3s
GTA LR LR
comp=Z,31nm,9.9s

NEIC ***24*** *22:11:35.0, 14°.39N×93°.18W, h12km, MD3.8(MEX), After MEX.*
MEX 24 22:11:35.4±1.0, 14°.40N×93°.16W, h17km±285km, MD3.4, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.00**	**59**	*i* P	Pb	22 11 51.0	-3.4
THIG				*i* S	Sb	22 12 03.3	-4.1
PCIG		**1.30**	**358**	*e*P	Pn	22 11 55.0	-3.8
PCIG				*i* S	Sn	22 12 10.1	-5.8
TGIG		**2.37**	**1**	*e*P	Pn	22 12 11.4	-2.2
TGIG				*i* S	Sn	22 12 39.1	-3.1
TGUH	**Tegucigalpa,Un**	**5.72**	**93**	Pn	Pn	22 13 00.0	+0.4
TEIG	**Tepich**	**7.44**	**38**	*e*Pn	Pn	22 13 22.9	-0.4
TEIG				*e*S	Sn	22 14 42.0	-5.3
JTS	**JuntasAbangare**	**9.00**	**116**	Pn	Pn	22 13 43.2	-1.5
BCIP	**Isla Barro Col**	**14.04**	**110**	Pn	Pn	22 14 53.5	-0.1
MTDJ	**Mount Denham**	**15.47**	**74**	*e*Pn	Pn	22 15 13.8	+0.7

ISCJB ***24*** *22:16:27.7±0.7, 37°.73N±0°.03×43°.66E±0°.07, h1km±10km, Error ellipse: s-maj=9.6km s-min=4.6km az=172.4*
DDA ***24*** *22:16:27.1, 37°.69N×43°.88E, h4km±1km, Md3.0*
ISK ***24*** *22:16:27.1, 37°.71N×43°.50E, h4km, MD3.0*
CSEM ***24*** *22:16:27.5±0.7, 37°.73N×43°.85E, h2km, MD3.0, Error ellipse: s-maj=26.6km s-min=7.1km az=90.0*
ISC 24 22:16:27.8±0.8, 37°.72N±0°.03×43°.75E±0°.09, h11km±8km, n18, σ0s74/27, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAKT	**HAKKARI**	**0.17**	**193**	*i* P	**Pg**	**22 16 31.4**	**-0.1**
HAKT				*i* S	**Sg**	**22 16 34.4**	**+0.4**
HAKT	**HAKKARI**	**0.17**	**193**	*i* P	**Pg**	**22 16 31.4**	**-0.1**
HAKT				*i* S	**Sg**	**22 16 34.4**	**+0.4**
CUKT	**Cukurca**	**0.49**	**194**	*e*PG	**Pg**	**22 16 36.9**	**-0.4**
CUKT				*e*SG	**Sg**	**22 16 43.9**	**+0.1**
CUKT	**Cukurca**	**0.49**	**194**	*e*Pg	**Pg**	**22 16 36.9**	**-0.4**
CUKT				*e*Sg	**Sg**	**22 16 43.9**	**+0.1**
VANT	**Van**	**0.80**	**331**	*e*PG	**Pg**	**22 16 42.0**	**-1.2**
TVAN	**Van**	**0.85**	**341**	*i* P	**Pg**	**22 16 44.8**	**+0.6**
TVAN	**Van**	**0.85**	**341**	*i* P	**Pg**	**22 16 44.8**	**+0.6**
VANB	**Van**	**0.92**	**342**	*e*PG	**Pg**	**22 16 44.6**	**-1.0**
VANB				*e*SG	**Sg**	**22 16 57.8**	**+0.4**
VANB	**Van**	**0.92**	**342**	*e*Pg	**Pg**	**22 16 44.6**	**-0.9**
VANB				*e*Sg	**Sg**	**22 16 57.8**	**+0.3**
TATV	**Tatvan**	**1.41**	**304**	*i* P	**Pg**	**22 16 56.5**	**+1.5**
TATV	**Tatvan**	**1.41**	**304**	*i* P	**Pg**	**22 16 56.5**	**+1.6**
CLDR	**Caldiran**	**1.43**	**5**	*e*PN	**Pb**	**22 16 55.3**	**+0.8**
CLDR	**Caldiran**	**1.43**	**5**	*e*Pn	**Pb**	**22 16 55.3**	**+0.9**
TUTA	**Tutak**	**1.83**	**337**	*i* P	**Pg**	**22 17 02.1**	**-0.9**
TUTA				*i* S	**Sb**	**22 17 24.2**	**-0.1**
TUTA	**Tutak**	**1.83**	**337**	*i* P	**Pg**	**22 17 02.1**	**-0.9**
TUTA				*i* S	**Sb**	**22 17 24.2**	**-0.1**
AGRB	**Hanur-Agry**	**1.94**	**342**	*e*PN	**Pn**	**22 17 01.3**	**+0.5**
AGRB	**Hanur-Agry**	**1.94**	**342**	*e*Pn	**Pn**	**22 17 01.3**	**+0.5**
MARD	**Mardin**	**2.40**	**261**	*i* P	**Pb**	**22 17 10.1**	**-0.9**
MARD				*i* S	**Sg**	**22 17 45.2**	**+0.2**

BJI ***24*** *22:22:05.5, 4°.67N×95°.24E, h78km, mB5.1/5, mb4.7/11*
ISCJB ***24*** *22:22:06.4±1.4, 4°.59N±0°.08×95°.15E±0°.08, h93km±13km, mb4.4/26, Error ellipse: s-maj=14.9km s-min=10.4km az=42.0*
IDC ***24*** *22:22:06.7±4.0, 4°.62N×95°.14E, h75km±36km, mb4.0/11, mb1 4.1/13, mb1mx3.9/24, mbtmp4.0/13, ML4.1/2, MS3.6/4, Ms1 3.6/4, ms1mx3.2/25, Error ellipse: s-maj=35.8km s-min=21.0km az=54.0*
NEIC ***24*** *22:22:07.0±0.9, 4°.57N×95°.13E, h83km±8km, mb4.5/12, Error ellipse: s-maj=9.1km s-min=5.9km az=224.0*
ISC 24 22:22:07.4±1.3, 4°.58N±0°.08×95°.13E±0°.08, h85km±12km, n43, σ0s65/43, mb4.4/26, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**4.18**	**115**	P	**Pn**	**22 23 08.9**	**+0.2**
	4.4nm,0.3s,baz=321,slow=14,SNR=14						
CM31	**Chiang Mai Arr**	**14.28**	**15**	*e*Pn	**Pn**	**22 25 27.2**	**+1.6**
	19nm,0.9s						
CMAR	**Chiang Mai Arr**	**14.28**	**15**	P	**Pn**	**22 25 26.1**	**+0.5**
	0.6nm,0.3s,baz=203,slow=14,SNR=12						
PALK	**Pallekele**	**14.60**	**281**	*e*Pn	**Pn**	**22 25 29.1**	**-0.7**
CHTO	**Chiang Mai**	**14.62**	**14**	*e*Pn	**Pn**	**22 25 29.2**	**-0.8**
	13nm,0.8s						
CHTO				*e*Sn	**Sn**	**22 28 04.9**	**-6.3**
KSM	**Kuching**	**15.46**	**101**	*e*Pn	**Pn**	**22 25 40.5**	**-0.3**
	11nm,0.8s						
QIZ	**Qiongzhong**	**20.30**	**44**	P	**P**	**22 26 36.7**	**+0.1**
LSA	**Lhasa**	**25.26**	**352**	*e*P	**P**	**22 27 25.6**	**-0.1**
	7.8nm,0.6s,mb4.3						
ENH	**Enshi**	**28.92**	**26**	P	**P**	**22 27 58.2**	**-0.3**
XAN	**Xi'an**	**31.99**	**22**	P	**P**	**22 28 24.8**	**-0.7**
XAN				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
GTA	**Gaotai**	**34.93**	**6**	*e*P	**P**	**22 28 50.6**	**-0.4**
GTA				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.6						
KBL	**Kabul**	**38.39**	**324**	*e*P	**P**	**22 29 20.0**	**-0.5**
	comp=Z,1.1nm,0.5s,mb3.9						
BJI	**Beijing**	**40.08**	**25**	P	**P**	**22 29 35.9**	**+1.4**
BJI				pmax	pmax		
	comp=Z,28nm,0.7s,mb5.2						
BJI				pmax	pmax		
	comp=Z,62nm,4.3s						
TKM2	**Tokmak 2**	**41.93**	**338**	*e*P	**P**	**22 29 50.2**	**+0.5**
	comp=Z,11nm,1.0s,mb4.5						
AAK	**Ala-Archa**	**42.10**	**337**	*e*P	**P**	**22 29 51.0**	**0.0**
	comp=Z,7.5nm,0.7s,mb4.5						
EKS2	**Erkin-Say**	**42.40**	**337**	*e*P	**P**	**22 29 53.8**	**+0.3**
	comp=Z,4.8nm,0.8s,mb4.3						
MK31	**Makanchi Array**	**43.49**	**347**	*e*P	**P**	**22 30 01.8**	**-0.5**
MKAR	**Makanchi Array**	**43.49**	**347**	P	**P**	**22 30 02.0**	**-0.2**
	comp=Z,3.3nm,0.6s,mb4.3,baz=171,slow=7.8,SNR=35						
MKAR				LR	LR	22 51 25.7	
	comp=Z,42nm,18.9s,baz=272,slow=40						
SONM	**Songino Array**	**44.16**	**11**	P	**P**	**22 30 07.3**	**-0.3**
	comp=Z,0.9nm,0.7s,mb3.6,baz=195,slow=8.7,SNR=5.5						
SONM				PcP	PcP	22 31 52.8	+1.7
	comp=Z,1.6nm,0.7s,baz=194,slow=4.0,SNR=7.8						
SONM				LR	LR	22 49 29.6	
	comp=Z,81nm,19.3s,baz=78,slow=37						
ULN	**Ulaanbaatar**	**44.32**	**11**	*e*P	**P**	**22 30 08.3**	**-0.5**
KSRS	**Korea Array**	**44.36**	**38**	P	**P**	**22 30 08.6**	**-0.8**
	comp=Z,2.8nm,0.8s,mb4.1,baz=222,slow=9.0,SNR=9.1						
KSRS				LR	LR	22 49 20.9	
	comp=Z,44nm,18.4s,baz=225,slow=37						
WRAB	**Tennant Creek**	**45.60**	**124**	*e*P	**P**	**22 30 20.4**	**+1.0**
	comp=Z,12nm,0.7s,mb4.7						
ASAR	**Alice Springs**	**47.08**	**128**	P	**P**	**22 30 31.4**	**+0.4**
	comp=Z,6.3nm,1.0s,mb4.3,baz=337,slow=8.6,SNR=5.7						
KURK	**Kurchatov**	**48.02**	**346**	*e*P	**P**	**22 30 37.9**	**+0.1**
	comp=Z,4.7nm,0.8s,mb4.4						
KURK				*e*PcP	PcP	22 32 06.0	+1.4
ZAA0	**Zalesovo Array**	**49.93**	**352**	*e*P	**P**	**22 30 51.6**	**-0.7**
ZAA0				*e*PcP	PcP	22 32 11.5	0.0
ZALV	**Zalesovo Beam**	**49.93**	**352**	P	**P**	**22 30 52.1**	**-0.2**
	comp=Z,4.4nm,0.5s,mb4.6,baz=183,slow=7.5,SNR=29						
ZALV				PcP	PcP	22 32 10.2	-1.2
	comp=Z,1.0nm,0.5s,baz=152,slow=4.2,SNR=2.7						
BVAR	**Borovoye Array**	**52.40**	**341**	P	**P**	**22 31 11.3**	**+0.4**
	comp=Z,9.1nm,0.6s,mb5.0,baz=146,slow=8.6,SNR=48						
BRVK	**Borovoye**	**52.46**	**341**	*e*P	**P**	**22 31 10.7**	**-0.7**
	comp=Z,7.0nm,0.5s,mb5.0						
ABKAR	**Akbulak array**	**53.58**	**332**	*e*P	**P**	**22 31 20.2**	**+0.6**
	comp=Z,6.6nm,0.9s,mb4.7						
PMG	**Port Moresby**	**53.68**	**105**	*e*P	**P**	**22 31 19.2**	**-1.8**
KMBO	**Kilima Mbogo**	**58.11**	**266**	LR	LR	22 52 54.7	
	comp=Z,77nm,19.1s,baz=270,slow=32						
ARU	**Arti**	**59.29**	**337**	*e*P	**P**	**22 31 59.9**	**-0.1**
	comp=Z,1.2nm,0.6s,mb4.1						
KIV	**Kislovodsk**	**60.42**	**319**	*e*P	**P**	**22 32 07.5**	**-0.5**
	comp=Z,2.4nm,0.4s,mb4.6						
BRTR	**Keskin Array B**	**65.33**	**312**	P	**P**	**22 32 41.0**	**+0.3**
	comp=Z,2.2nm,0.6s,mb4.1,baz=128,slow=7.6,SNR=13						
AKASG	**Malin Array Be**	**71.34**	**322**	P	**P**	**22 33 17.6**	**-0.3**
	comp=Z,2.3nm,0.5s,mb4.2,baz=92,slow=5.5,SNR=8.3						
BUR08	**Bucovina Ar. S**	**73.16**	**318**	*e*P	**P**	**22 33 30.1**	**+1.2**
JOF	**Joensuu**	**74.22**	**335**	*e*P	**P**	**22 33 34.7**	**-0.1**
JOF	**Joensuu**	**74.22**	**335**	*e*p	**P**	**22 33 34.7**	**-0.1**
	comp=Z,5.6nm,0.7s,mb4.4						
FINES	**FINESS Array B**	**76.06**	**332**	P	**P**	**22 33 45.9**	**+0.5**
	comp=Z,2.6nm,0.5s,mb4.2,baz=101,slow=5.5,SNR=22						
KAF	**Kangasniemi**	**76.15**	**333**	*e*P	**P**	**22 33 46.2**	**+0.3**
KAF	**Kangasniemi**	**76.15**	**333**	*e*p	**P**	**22 33 46.2**	**+0.3**
ARCES	**ARCESS Array B**	**78.68**	**340**	P	**P**	**22 34 00.7**	**+0.8**
	comp=Z,1.6nm,0.5s,mb4.1,baz=99,slow=6.2,SNR=24						
NOA	**NORSAR Array B**	**83.07**	**331**	P	**P**	**22 34 23.9**	**+0.5**
	comp=Z,1.0nm,0.9s,mb3.6,baz=91,slow=5.8,SNR=3.4						

NEIC ***24*** *22:24:27.9±0.8, 1°.43N×127°.07E, h108km±8km, mb4.8/28, Error ellipse: s-maj=8.4km s-min=3.6km az=65.0*
ISCJB ***24*** *22:24:28.5±0.4, 1°.48N±0°.03×127°.12E±0°.04, h128km±3km, mb4.7/47, Error ellipse: s-maj=7.1km s-min=4.6km az=166.4*
IDC ***24*** *22:24:29.0±1.7, 1°.44N×127°.02E, h118km±15km, mb4.1/14, mb1 4.2/16, mb1mx4.0/24, mbtmp4.1/16, MS3.6/1, Ms1 3.5/1, ms1mx2.6/27, Error ellipse: s-maj=24.9km s-min=9.5km az=72.0*
DJA ***24*** *22:24:34, 1°.26N×126°.87E, h94km, mb4.9/17*
ISC 24 22:24:29.4±0.4, 1°.48N±0°.03×127°.13E±0°.04, h121km±3km, n112, σ1s00/118, mb4.7/47, 2D, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.74**	**162**	P	**Pn**	**22 24 49.6**	**+0.3**
TNTI				S	**Sn**	**22 25 05.6**	**+1.4**
MNI	**Manado**	**2.29**	**269**	P	**Pn**	**22 25 06.2**	**-0.4**
MNI				S	**Sn**	**22 25 33.8**	**+0.5**
NLAI	**Namlea**	**4.69**	**180**	P	**Pn**	**22 25 38.2**	**-0.1**
NLAI				S	**Sn**	**22 26 27.8**	**-3.8**
LUWI	**Luwuk**	**5.03**	**240**	P	**Pn**	**22 25 43.5**	**+0.7**
GSPH	**General Santos**	**5.07**	**335**	‖ *i*P	**Pn**	**22 25 42.1**	**-1.3**
GSPH				*i* S	**Sn**	**22 26 36.4**	**-4.4**
AAI	**Ambon**	**5.24**	**168**	P	**Pn**	**22 25 47.7**	**+2.0**
	1.5nm7μm313nm,0.8s						
DAV	**Davao City (W)**	**5.76**	**344**	P	**Pn**	**22 25 51.8**	**-0.9**
	52nm,0.3s,baz=69,slow=18,SNR=5.3						
DAV				S	**Sn**	**22 26 56.8**	**-0.8**
	75nm,0.3s,baz=266,slow=19,SNR=2.4						
KCP	**Kidapawan**	**5.86**	**340**	‖ *i*P	**Pn**	**22 25 53.8**	**-0.2**
KCP	**Kidapawan**	**5.86**	**340**	*i* S	Px	22 25 59.5	
BUKP	**Musuan**	**6.68**	**342**	*e*P	**Pn**	**22 26 06.5**	**+1.3**
BUKP	**Musuan**	**6.68**	**342**	*e*S	Px	22 26 17.6	
KDI	**Kendari**	**7.04**	**220**	P	**Pn**	**22 26 09.3**	**-0.7**
	0.6nm2μm103nm,0.9s						
KDI				S	**Sn**	**22 27 20.3**	**-8.2**
	0.6nm2μm103nm,0.9s						
PAGZ	**Pagadian**	**7.34**	**330**	*e*P	**Pn**	**22 26 13.4**	**-0.8**
PAGZ	**Pagadian**	**7.34**	**330**	*e*S	Px	22 26 20.4	
PCI	**Palu**	**7.67**	**252**	P	**Pn**	**22 26 18.7**	**+0.2**
	0.6nm1μm202nm,0.9s						
IPIL	**Ipil**	**7.74**	**324**	*e*P	**Pn**	**22 26 19.3**	**-0.2**
BNSI	**Bone**	**9.13**	**230**	P	**Pn**	**22 26 39.5**	**+1.1**
	0.7nm1μm111nm,0.7s						
BNSI				S	**Sn**	**22 28 13.6**	**-5.8**
	0.7nm1μm111nm,0.7s						
BAKI	**Biak**	**9.36**	**106**	P	**Pn**	**22 26 48.4**	**+7.0**
	921nm73nm,1.2s						
MYLDM	**Lahad Datu**	**9.37**	**293**	P	**Pn**	**22 26 43.4**	**+1.9**
MYLDM	**Lahad Datu**	**9.37**	**293**	P	**Pn**	**22 26 42.9**	**+1.4**
	88nm,1.1s						
TSM	**Tawau**	**9.66**	**287**	P	**Pn**	**22 26 44.5**	**-1.0**
BKSI	**Bulukumba**	**9.73**	**226**	P	**Pn**	**22 26 48.8**	**+2.4**
BKSI				S	**Sn**	**22 28 32.0**	**-1.8**
SDKM	**Sandakan**	**10.74**	**293**	P	**Pn**	**22 26 58.6**	**-1.4**
KBKI	**Kotabaru**	**11.94**	**247**	P	**Pn**	**22 27 14.5**	**-1.4**
	49nm,1.2s						
SMPI	**Sarmi**	**12.08**	**107**	P	**Pn**	**22 27 25.8**	**+8.1**
	25nm,1.2s						
SBUM	**Sibu**	**14.93**	**274**	P	**Pn**	**22 27 54.7**	**+0.2**
SBUM	**Sibu**	**14.93**	**274**	P	**Pn**	**22 27 56.4**	**+1.9**
	509nm55nm,1.3s						
KAKA	**Kakadu**	**15.05**	**160**	*e*P	**Pn**	**22 27 53.6**	**-2.4**
	87nm,0.6s						
KAKA	**Kakadu**	**15.05**	**160**	*e*Pn	**Pn**	**22 27 53.5**	**-2.5**
	329nm,0.8s						
STKI	**Sintang**	**15.71**	**265**	P	**Pn**	**22 28 04.9**	**+0.6**
	42nm,1.2s						
KSM	**Kuching**	**16.82**	**270**	P	**Pn**	**22 28 17.7**	**-0.1**
KSM	**Kuching**	**16.82**	**270**	*e*Pn	**Pn**	**22 28 16.3**	**-1.5**
	16nm,0.6s						
KSM	**Kuching**	**16.82**	**270**	P	**Pn**	**22 28 17.1**	**-0.7**
	36nm,1.3s						
SJI	**Sawahan**	**17.85**	**239**	P	**Pn**	**22 28 30.9**	**+0.6**
	114nm,0.9s						
NGJI	**Ngawi**	**17.93**	**240**	P	**Pn**	**22 28 38.7**	**+7.4**
PWJI	**Pagerwojo**	**17.96**	**238**	P	**Pn**	**22 28 32.7**	**+1.0**
	149nm,0.8s						
FITZ	**Fitzroy Crossi**	**19.52**	**184**	*e*P	**P**	**22 28 46.3**	**-1.1**
	23nm,0.9s						
FITZ	**Fitzroy Crossi**	**19.52**	**184**	P	**P**	**22 28 46.4**	**-1.0**
	1.2nm,0.3s,baz=26,slow=10,SNR=34						
FITZ	**Fitzroy Crossi**	**19.52**	**184**	*e*P	**P**	**22 28 46.0**	**-1.4**
	12nm,0.7s						
TPI	**Tanjungpandan**	**19.92**	**258**	P	**P**	**22 28 53.6**	**+1.7**
	50nm,1.0s						
LEM	**Lembang**	**21.15**	**247**	P	**P**	**22 29 08.3**	**+3.2**
	102nm,0.8s,mb5.2						
CBJI	**Citeko**	**21.71**	**249**	P	**P**	**22 29 17.6**	**+6.5**
COEN	**Coen**	**22.09**	**134**	*e*P	**P**	**22 29 15.1**	**+0.1**
	52nm,0.6s,mb5.0						
WRAB	**Tennant Creek**	**22.43**	**162**	*e*P	**P**	**22 29 17.1**	**-1.4**
	103nm,0.9s,mb5.2						
TPUB	**Ta-pu**	**22.59**	**344**	*e*P	**P**	**22 29 20.0**	**-0.1**
	13nm,0.6s,mb4.5						
TPUB				*e*S	**S**	**22 33 18.1**	**-0.4**
SSLB	**Suanglung**	**22.97**	**345**	*e*P	**P**	**22 29 22.2**	**-1.4**
	23nm,1.1s,mb4.4						
NACB	**Ninganchiao**	**23.19**	**347**	P	**P**	**22 29 25.2**	**-0.4**
KLSI	**Ranau**	**23.21**	**255**	P	**P**	**22 29 29.1**	**+3.2**
	73nm,0.8s,mb5.1						
MBWA	**Marble Bar**	**23.64**	**197**	*e*P	**P**	**22 29 28.7**	**-1.0**
	14nm,0.7s,mb4.4						
MDSI	**Maura Dua**	**23.69**	**255**	P	**P**	**22 29 31.8**	**+1.5**
YHNB	**Yeheng**	**23.71**	**347**	P	**P**	**22 29 30.0**	**-0.4**
KTGM	**Kuala Trenggan**	**24.25**	**280**	P	**P**	**22 29 36.8**	**+1.3**
QIZ	**Qiongzhong**	**24.31**	**317**	*e*P	**P**	**22 29 35.6**	**-0.3**
ASAR	**Alice Springs**	**25.85**	**166**	P	**P**	**22 29 49.0**	**-0.7**
	2.8nm,0.4s,mb4.0,baz=334,slow=5.8,SNR=28						
ASAR				ScP	ScP	22 36 43.9	-0.9
	1.2nm,0.6s,baz=346,slow=2.9,SNR=8.0						
PSI	**Prapat**	**28.22**	**273**	P	**P**	**22 30 10.2**	**-0.9**
	11nm,0.8s,mb4.5,baz=134,slow=2.2,SNR=7.2						
CTA	**Charters Tower**	**28.48**	**140**	*e*P	**P**	**22 30 19.2**	**+5.8**
	8.8nm,0.6s,mb4.5						
CTA	**Charters Tower**	**28.48**	**140**	P	**P**	**22 30 14.2**	**+0.8**
	16nm,0.9s,mb4.6,baz=270,slow=3.0,SNR=2.8						
CTAO	**Charters Tower**	**28.48**	**140**	*e*P	**P**	**22 30 14.3**	**+0.9**
	11nm,0.6s,mb4.6						
FORT	**Forrest**	**32.09**	**178**	*e*P	**P**	**22 30 44.2**	**-0.9**
	18nm,0.7s,mb4.9						
CM31	**Chiang Mai Arr**	**32.39**	**303**	*e*P	**P**	**22 30 47.0**	**-0.8**
CMAR	**Chiang Mai Arr**	**32.39**	**303**	P	**P**	**22 30 47.5**	**-0.4**
	2.1nm,0.7s,mb4.0,baz=133,slow=6.8,SNR=7.9						
CHTO	**Chiang Mai**	**32.56**	**304**	*e*P	**P**	**22 30 48.6**	**-0.8**
	18nm,1.4s,mb4.7						
CHTO				*e*PP	PP	22 32 03.2	-2.1
ENH	**Enshi**	**33.17**	**331**	P	**P**	**22 30 54.7**	**+0.2**
KLBR	**Kellerberrin**	**34.07**	**194**	*e*P	**P**	**22 31 01.7**	**-0.6**
	10nm,0.4s,mb5.0						
NWAO	**Narrogin (SRO)**	**35.48**	**194**	P	**P**	**22 31 13.6**	**-0.8**
	8.5nm,0.4s,mb4.9,baz=40,slow=9.4,SNR=20						
STKA	**Stephens Creek**	**35.90**	**159**	*e*P	**P**	**22 31 17.2**	**-0.8**
	15nm,0.8s,mb5.0						
STKA	**Stephens Creek**	**35.90**	**159**	P	**P**	**22 31 17.6**	**-0.4**
	15nm,0.7s,mb5.0,baz=334,slow=8.7,SNR=36						
STKA				LR	LR	22 47 09.9	
	comp=Z,98nm,20.8s,baz=24,slow=38						
STKA	**Stephens Creek**	**35.90**	**159**	*e*P	**P**	**22 31 17.4**	**-0.6**
	2.7nm,0.6s,mb4.3						
STKA				*e*PP	PP	22 32 40.2	-1.9
STKA				LR	LR	22 47 09.9	
XAN	**Xi'an**	**36.60**	**334**	P	**P**	**22 31 24.3**	**+0.4**
XAN				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
ARMA	**Armidale**	**39.39**	**146**	*e*P	**P**	**22 31 48.5**	**+1.1**
LZH	**Lanzhou**	**40.64**	**331**	*e*P	**P**	**22 31 59.9**	**+2.2**
LZH				pmax	pmax		
	comp=Z,26nm,0.7s,mb5.2						
LSA	**Lhasa**	**44.23**	**313**	*e*P	**P**	**22 32 27.7**	**+0.8**
	comp=Z,49nm,0.5s,mb5.5						
GTA	**Gaotai**	**45.23**	**330**	*e*P	**P**	**22 32 36.3**	**+1.7**
GTA				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5						
TAPN	**Taplejung**	**45.68**	**308**	*e*P	**P**	**22 32 38.7**	**+0.3**
ODAN	**Odare**	**45.71**	**307**	*e*P	**P**	**22 32 39.0**	**+0.3**
	comp=Z,38nm,0.8s,mb5.2						
RAMN	**Ramite**	**46.39**	**307**	*e*P	**P**	**22 32 44.5**	**+0.6**
	comp=Z,37nm,0.7s,mb5.2						
JIRN	**Jiri**	**47.03**	**307**	*e*P	**P**	**22 32 49.7**	**+0.8**
	comp=Z,32nm,0.7s,mb5.2						
GUN	**Gumba**	**47.38**	**308**	*e*P	**P**	**22 32 52.3**	**+0.6**
	comp=Z,63nm,0.8s,mb5.4						
PKI	**Pulchoki**	**47.61**	**307**	*e*P	**P**	**22 32 53.5**	**+0.1**
PKIN	**Phulchoki**	**47.62**	**307**	*e*P	**P**	**22 32 53.3**	**-0.2**
KKN	**Kakani**	**47.81**	**307**	*e*P	**P**	**22 32 55.1**	**+0.1**
DMN	**Daman**	**47.87**	**307**	*e*P	**P**	**22 32 55.6**	**+0.2**
	comp=Z,39nm,1.0s,mb5.2						
GKN	**Gorkha**	**48.41**	**307**	*e*P	**P**	**22 32 59.5**	**-0.1**
	comp=Z,31nm,1.0s,mb5.1						
ULN	**Ulaanbaatar**	**49.37**	**342**	*e*P	**P**	**22 33 07.2**	**+0.7**
	comp=Z,4.3nm,0.8s,mb4.4						
SONM	**Songino Array**	**49.54**	**342**	P	**P**	**22 33 08.7**	**+0.9**
	comp=Z,2.8nm,0.8s,mb4.2,baz=154,slow=7.3,SNR=12						
WMQ	**Urumqi**	**54.79**	**326**	*e*P	**P**	**22 33 48.4**	**+1.6**
WMQ				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.2						
WMQ				pmax	pmax		
	comp=Z,140nm,4.2s						
MK31	**Makanchi Array**	**59.62**	**326**	*e*P	**P**	**22 34 20.5**	**-0.2**
MKAR	**Makanchi Array**	**59.62**	**326**	P	**P**	**22 34 21.4**	**+0.7**
	comp=Z,11nm,0.7s,mb5.0,baz=122,slow=8.5,SNR=70						
MKAR				ScP	ScP	22 38 54.6	-1.9
	comp=Z,0.7nm,0.7s,baz=116,slow=2.8,SNR=3.9						
TKM2	**Tokmak 2**	**61.69**	**319**	*e*P	**P**	**22 34 35.8**	**+1.0**
	comp=Z,7.1nm,0.7s,mb4.8						
AAK	**Ala-Archa**	**62.29**	**319**	*e*P	**P**	**22 34 38.8**	**0.0**
AML	**Almayashu**	**62.60**	**318**	*e*P	**P**	**22 34 42.3**	**+1.4**
	comp=Z,19nm,1.1s,mb4.9						
ZAA0	**Zalesovo Array**	**62.76**	**333**	*e*P	**P**	**22 34 40.6**	**-1.1**
ZALV	**Zalesovo Beam**	**62.76**	**333**	P	**P**	**22 34 40.9**	**-0.8**
	comp=Z,1.0nm,0.4s,mb4.1,baz=104,slow=6.3,SNR=6.9						
ZALV	**Zalesovo Beam**	**62.76**	**333**	P	**P**	**22 34 40.9**	**-0.8**
EKS2	**Erkin-Say**	**62.78**	**318**	*e*P	**P**	**22 34 43.1**	**+1.1**
	comp=Z,7.8nm,0.7s,mb4.8						
KBL	**Kabul**	**63.21**	**308**	*e*P	**P**	**22 34 45.2**	**+0.1**
	comp=Z,10nm,0.5s,mb5.0						
KURK	**Kurchatov**	**63.84**	**328**	*e*P	**P**	**22 34 48.7**	**-0.2**
	comp=Z,15nm,0.8s,mb4.9						
BVAR	**Borovoye Array**	**69.41**	**327**	P	**P**	**22 35 24.4**	**+0.1**
	comp=Z,6.8nm,0.9s,mb4.5,baz=126,slow=7.5,SNR=17						
BRVK	**Borovoye**	**69.48**	**327**	*e*P	**P**	**22 35 25.0**	**+0.3**
	comp=Z,4.

PET	Petropavlovsk	3.27	88	eP		P	22 29 24.3	-0.4
PET				eS		S	22 30 23.2	-0.5
AVH	Avacha	3.32	84	eP		P	22 29 25.3	+0.2
KOZ	Kozyrevsk	4.89	49	eP		P	22 29 39.6	+1.7
KMNR	Kamenistaya	4.90	54	eP		P	22 29 39.3	+1.3
KMNR				i S		S	22 30 45.7	-2.3
KOZR	Kozyr	4.91	50	PN		P	22 29 39.6	+1.5
SRDR	Sredinnyy	4.98	46	eP		P	22 29 40.0	+1.3
KPT	Kopyto	5.01	52	eP		P	22 29 39.8	+0.9
BZMR	Bezymyannaya	5.12	53	eP		P	22 29 41.3	+1.3
MKZ	Mys Kozlova	5.25	70	eP		P	22 29 38.9	-2.4
MKZ				i S		S	22 30 46.4	-7.5
KRSR	Krestovskiy	5.30	50	eP		P	22 29 42.5	+0.8
ZLN	Zelenaya	5.31	53	eP		P	22 29 42.7	+1.0
CIRR	Tsirk	5.33	52	eP		P	22 29 43.7	+1.7
BDR	Baidarnaya	5.80	50	P		P	22 29 46.3	0.0
SRKR	Sorokina	5.83	49	eP		P	22 29 48.1	+1.5
SMKR	Semkarok	5.92	50	eP		P	22 29 47.1	-0.5
KBTR	Krutoberegovo	6.40	57	eP		P	22 29 50.0	-2.2
KBTR				i S		S	22 31 05.9	-8.1
YSS	Yuzh-Sakhalins	9.10	232	ePN		P	22 30 20.5	+0.3
ASAJ	Asahikawa	11.38	222	P		P	22 30 44.5	+0.2
	comp=N,1.6nm,0.3s,baz=43,slow=4.8,SNR=8.0							
ASAJ	Asahikawa	11.38	222	PN		P	22 30 44.6	+0.2
ASAJ				pmax	pmax			
	comp=Z,2.0nm,0.3s							
ERM	Erimo	12.96	216	ePN		P	22 30 58.8	-2.4
ERM				pmax	pmax			
	comp=Z,41nm,0.4s							
ERM	Erimo	12.96	216	eP		P	22 30 58.8	-2.5
	comp=Z,41nm,0.4s							
ERM				eS		S	22 33 09.4	-11
YAK	Yakutsk	15.42	315	eP		P	22 31 25.4	-1.4
YAK				pmax	pmax			
	comp=Z,25nm,0.9s							
YAK				pmax	pmax			
	comp=E,10.0nm,1.1s							
YAK				pmax	pmax			
	comp=N,8.0nm,1.0s							
MAJO	Matsushiro	19.59	219	eP		P	22 32 07.8	+0.2
MAJO				pmax	pmax			
	comp=Z,20nm,0.5s							
MAJO	Matsushiro	19.59	219	eP		P	22 32 07.8	+0.1
	comp=Z,20nm,0.5s							
MAT	Matsushiro	19.59	219	P		P	22 32 08.1	+0.5
MJAR	Matsushiro Arr	19.59	219	P		P	22 32 08.4	+0.8
	comp=Z,2.2nm,0.3s,baz=16,slow=10,SNR=28							
MJAR	Matsushiro Arr	19.59	219	P		P	22 32 08.4	+0.8
MJAR				pmax	pmax			
	comp=Z,2.0nm,0.3s							
HIA	Hailar	21.23	273	eP		P	22 32 21.6	-0.7
KDAK	Kodiak Island	30.41	59	P		P	22 33 42.2	-1.1
	comp=Z,6.5nm,0.6s,mb4.2,baz=310,slow=4.8,SNR=5.2							
KDAK	Kodiak Island	30.41	59	P		P	22 33 42.2	-1.0
KDAK				pmax	pmax			
	comp=Z,7.0nm,0.6s,mb4.3							
KDAK	Kodiak Island	30.41	59	P		P	22 33 42.2	-1.1
ILAR	Eielson Array	31.77	45	P		P	22 33 54.4	-0.5
	comp=Z,1.6nm,0.7s,mb3.5,baz=281,slow=10,SNR=24							
ILAR	Eielson Array	31.77	45	P		P	22 33 54.4	-0.5
ILAR				pmax	pmax			
	comp=Z,2.0nm,0.7s							
YULB	Yu-li	38.24	232	P		P	22 34 49.9	+0.4
ZALV	Zalesovo Beam	39.25	300	P		P	22 34 57.1	-0.2
	comp=Z,1.7nm,0.5s,mb3.7,baz=66,slow=7.0,SNR=5.9							
ZALV	Zalesovo Beam	39.25	300	P		P	22 34 57.1	-0.2
ZALV				pmax	pmax			
	comp=Z,2.0nm,0.5s,mb3.8							
GUMO	Guam	39.93	193	eP		P	22 35 03.3	+0.1
KURK	Kurchatov	44.17	298	eP		P	22 35 36.5	+0.2
KURK				pmax	pmax			
	comp=Z,9.0nm,0.5s,mb4.5							
KURK	Kurchatov	44.17	298	eP		P	22 35 36.5	+0.2
	comp=Z,9.5nm,0.5s,mb4.5							
MKAR	Makanchi Array	44.38	292	P		P	22 35 38.1	+0.2
	comp=Z,3.3nm,0.5s,mb4.1,baz=56,slow=7.0,SNR=18							
MKAR	Makanchi Array	44.38	292	P		P	22 35 38.1	+0.2
MKAR				pmax	pmax			
	comp=Z,3.0nm,0.5s							
RES	Resolute Bay	44.85	20	P		P	22 35 40.9	-0.3
YKA	Yellowknife Ar	45.93	40	P		P	22 35 49.6	0.0
	comp=Z,0.9nm,0.4s,mb3.5,baz=305,slow=6.9,SNR=4.5							
YKA	Yellowknife Ar	45.93	40	P		P	22 35 49.6	0.0
YKA				pmax	pmax			
	comp=Z,1.0nm,0.4s							
BVAR	Borovoye Array	47.09	305	P		P	22 35 58.6	0.0
	comp=Z,5.3nm,0.4s,mb4.3,baz=54,slow=7.4,SNR=22							
BVAR	Borovoye Array	47.09	305	P		P	22 35 58.6	0.0
BVAR				pmax	pmax			
	comp=Z,5.0nm,0.4s							
BRVK	Borovoye	47.12	305	eP		P	22 35 58.5	-0.3
BRVK				pmax	pmax			
	comp=Z,6.0nm,0.4s,mb4.4							
BRVK	Borovoye	47.12	305	eP		P	22 35 58.5	-0.4
	comp=Z,5.9nm,0.4s,mb4.4							
LSA	Lhasa	50.29	268	eP		P	22 36 23.7	+1.0
LSA				pmax	pmax			
	comp=Z,2.0nm,0.6s,mb3.6							
LSA	Lhasa	50.29	268	eP		P	22 36 23.7	+1.0
	comp=Z,2.5nm,0.6s,mb3.7							
TKM2	Tokmak 2	50.51	292	eP		P	22 36 24.7	+0.5
TKM2				pmax	pmax			
	comp=Z,3.0nm,0.5s,mb3.9							
TKM2	Tokmak 2	50.51	292	eP		P	22 36 24.7	+0.6
	comp=Z,2.9nm,0.5s,mb3.9							
ARU	Arti	50.53	314	eP		P	22 36 23.4	-0.7
ARU				pmax	pmax			
	comp=Z,6.0nm,0.6s,mb4.1							
ARU	Arti	50.53	314	eP		P	22 36 23.4	-0.7
	comp=Z,6.1nm,0.6s,mb4.1							
AAK	Ala-Archa	51.31	292	eP		P	22 36 29.9	-0.1
AAK				pmax	pmax			
	comp=Z,5.0nm,0.3s,mb4.3							
AAK	Ala-Archa	51.31	292	eP		P	22 36 29.9	-0.1
	comp=Z,5.0nm,0.3s,mb4.3							
EKS2	Erkin-Say	51.70	292	eP		P	22 36 33.0	+0.2
	comp=Z,3.1nm,0.5s,mb3.9							
ARCES	ARCESS Array B	51.94	339	P		P	22 36 33.3	-0.8
	comp=Z,11nm,1.2s,mb4.1,baz=40,slow=7.7,SNR=9.3							
ARCES	ARCESS Array B	51.94	339	P		P	22 36 33.3	-0.8
ARCES				pmax	pmax			
	comp=Z,11nm,1.2s							
TAPN	Taplejung	54.07	269	eP		P	22 36 50.7	+0.7
CMAR	Chiang Mai Arr	54.18	252	P		P	22 36 51.5	+0.7
	comp=Z,1.3nm,0.9s,mb3.2,baz=19,slow=5.8,SNR=5.3							
CMAR	Chiang Mai Arr	54.18	252	P		P	22 36 51.5	+0.7
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.9s							
ODAN	Odare	54.62	269	eP		P	22 36 55.1	+1.2
RAMN	Ramite	55.03	269	eP		P	22 36 57.0	+0.2
	comp=Z,33nm,0.4s,mb5.0							
KKN	Kakani	55.22	271	eP		P	22 36 58.3	+0.3
	comp=Z,19nm,0.5s,mb4.7							
KKN	Kakani	55.22	271	eP		P	22 36 58.3	+0.3
KKN				pmax	pmax			
	comp=Z,19nm,0.5s,mb4.7							
PKI	Pulchoki	55.30	271	eP		P	22 36 59.1	+0.5
PKIN	Phulchoki	55.30	271	eP		P	22 36 58.8	+0.2
	comp=Z,3.9nm,0.4s,mb4.1							
GKN	Gorkha	55.45	272	eP		P	22 37 00.0	+0.4
DMN	Daman	55.45	271	eP		P	22 37 00.4	+0.7
JOF	Joensuu	55.75	332	eP		P	22 37 00.0	-1.2
JOF				pmax	pmax			
	comp=Z,3.0nm,0.6s,mb3.8							
JOF	Joensuu	55.75	332	ep		P	22 37 00.0	-1.2
	comp=Z,2.7nm,0.6s,mb3.8							
KAF	Kangasniemi	57.78	334	eP		P	22 37 13.9	-1.3
KAF	Kangasniemi	57.78	334	ep		P	22 37 13.9	-1.3
FINES	FINESS Array B	58.39	333	P		P	22 37 18.6	-0.7
	comp=Z,1.8nm,0.4s,mb3.7,baz=33,slow=7.6,SNR=20							
FINES				PcP	PcP		22 38 01.8	-1.9
	comp=Z,1.4nm,0.8s,baz=57,slow=5.1,SNR=3.4							
FINES	FINESS Array B	58.39	333	P		P	22 37 18.7	-0.6
FINES							22 38 01.8	
FINES				pmax	pmax			
	comp=Z,2.0nm,0.4s							
NVAR	Mina Array Bea	59.59	66	P		P	22 37 28.4	+0.6
	comp=Z,0.4nm,0.5s,mb3.1,baz=298,slow=7.7,SNR=3.5							
KBL	Kabul	59.97	288	eP		P	22 37 29.1	-1.3
KBL				pmax	pmax			
	comp=Z,2.0nm,0.6s,mb3.7							
KBL	Kabul	59.97	288	eP		P	22 37 29.1	-1.2
	comp=Z,1.5nm,0.6s,mb3.6							
PDAR	Pinedale Array	61.08	57	P		P	22 37 38.0	+0.4
	comp=Z,0.4nm,0.5s,mb3.1,baz=239,slow=0.9,SNR=4.6							
NB2	NORSAR Subarra	62.29	340	P		P	22 37 44.3	-0.9
	comp=Z,1.5nm,0.6s,mb3.6,baz=24,slow=6.5							
NOA	NORSAR Array B	62.29	340	P		P	22 37 44.5	-0.7
	comp=Z,1.4nm,0.6s,mb3.5,baz=25,slow=6.5,SNR=9.5							
NOA	NORSAR Array B	62.29	340	P		P	22 37 44.5	-0.7
NOA				pmax	pmax			
	comp=Z,1.0nm,0.6s							
AKASG	Malin Array Be	66.38	325	P		P	22 38 10.2	-1.1
	comp=Z,2.4nm,0.4s,mb4.1,baz=32,slow=6.5,SNR=7.2							
AKASG	Malin Array Be	66.38	325	P		P	22 38 10.2	-1.1
AKASG				pmax	pmax			
	comp=Z,2.0nm,0.4s							
KIV	Kislovodsk	66.52	312	eP		P	22 38 12.1	-0.2
KIV				pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.0							
KIV	Kislovodsk	66.52	312	eP		P	22 38 12.1	-0.2
	comp=Z,3.2nm,0.7s,mb4.1							
MORC	Moravsky Berou	70.91	331	eP		P	22 38 38.1	-0.7
MORC				pmax	pmax			
	comp=Z,1.0nm,0.5s,mb3.6							
MORC	Moravsky Berou	70.91	331	eP		P	22 38 38.1	-0.7
	comp=Z,1.4nm,0.5s,mb3.8							
PSZ	Piszkesteto	71.86	329	P		P	22 38 44.5	+0.1
BRTR	Keskin Array B	73.88	316	P		P	22 38 56.1	-0.1
	comp=Z,1.3nm,0.6s,mb3.6,baz=55,slow=2.6,SNR=6.5							
BRTR	Keskin Array B	73.88	316	P		P	22 38 56.1	-0.1
BRTR				pmax	pmax			
	comp=Z,1.0nm,0.6s							
TXAR	Lajitas Array	74.39	62	P		P	22 38 59.8	+0.5
	comp=Z,0.1nm,0.4s,baz=273,slow=4.4,SNR=3.6							
MMAI	Mount Meron Ar	78.72	311	P		P	22 39 23.2	+0.2
	comp=Z,2.3nm,0.5s,mb4.0,baz=41,slow=7.7,SNR=8.8							

*ISCJB **24** 22:28:26.9±0.8, 36°.97N±0°.04×29°.21E±0°.05, h5km±8km, Error ellipse: s-maj=6.5km s-min=6.0km az=142.3*
*ISK **24** 22:28:26.6, 36°.98N×29°.23E, h8km, MD2.9*
*DDA **24** 22:28:27.2, 37°.00N×29°.20E, h7km±4km, Md2.8*
*CSEM **24** 22:28:27.2±0.2, 36°.99N×29°.23E, h10km, MD2.9, Error ellipse: s-maj=4.2km s-min=3.7km az=8.0*

ISC 24 22:28:27.4±0.7, 36°.98N±0°.04×29°.22E±0°.05, h10km±6km, n22, σ0=81/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.29	51	ePG	Pg	22 28 32.9	-0.3
GLHS				eSG	Sg	22 28 37.2	+0.1
GLHS	Glhisar (BURDU	0.29	51	ePg	Pg	22 28 32.9	-0.3
GLHS				eSg	Sg	22 28 37.2	+0.1
GOLH	Golhisar	0.38	46	i P	Pg	22 28 34.5	-0.3
GOLH				i S	Sg	22 28 40.9	+0.9
GOLH	Golhisar	0.38	46	i P	Pg	22 28 34.5	-0.4
GOLH				i S	Sg	22 28 40.8	+0.9
ELL	Elmali	0.60	112	ePG	Pg	22 28 38.2	-0.8
ELL				eSG	Sg	22 28 47.5	+0.6
ELL	Elmali	0.60	112	ePg	Pg	22 28 38.2	-0.8
ELL				eSg	Sg	22 28 47.5	+0.7
DNZL	Cakiroluk	0.73	349	i P	Pg	22 28 40.6	-0.9
DNZL				i S	Sg	22 28 51.8	+0.8
DNZL	Cakiroluk	0.73	349	i P	Pg	22 28 40.6	-0.9
DNZL				i S	Sg	22 28 51.8	+0.8
YER	Yerkesik	0.77	282	ePG	Pg	22 28 42.0	-0.2
YER	Yerkesik	0.77	282	ePg	Pg	22 28 42.0	-0.2
AKAS	Kas	0.80	157	i P	Pg	22 28 43.5	+0.6
AKAS	Kas	0.80	157	i P	Pg	22 28 43.5	+0.6
MLSB	Milas	1.20	286	ePN	Pn	22 28 49.8	-0.4
MLSB	Milas	1.20	286	ePn	Pn	22 28 49.8	-0.4
DAT	Datca	1.34	260	ePN	Pn	22 28 52.4	+0.2
DAT	Datca	1.34	260	ePn	Pn	22 28 52.4	+0.2
KHL	Karahalli	1.37	10	ePN	Pn	22 28 52.4	-0.2
KHL	Karahalli	1.37	10	ePn	Pn	22 28 52.4	-0.2
KHAL	Karahalli	1.41	9	i P	Pn	22 28 52.3	-0.9
KHAL				i S	Sn	22 29 12.0	+0.2
KHAL	Karahalli	1.41	9	i P	Pn	22 28 52.3	-0.9
KHAL				i S	Sn	22 29 12.0	+0.2
BDRM	Kayabasi	1.42	274	i P	Pn	22 28 50.1	-3.3
BDRM				i S	Sn	22 29 13.9	+1.8
BDRM	Kayabasi	1.42	274	i P	Pn	22 28 50.1	-3.3
BDRM				i S	Sn	22 29 13.9	+1.7

IDC 24 22:39:51.5±55.0, 16°.49S×177°.24W, h0km, mb4.3/3, mb1 4.5/3, mb1mx3.9/16, mbtmp4.3/3, Error ellipse: s-maj=1020.0km s-min=164.2km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	40.30	240	P	P	22 47 30.8	+0.2
	2.2nm,0.5s,baz=101,slow=8.1,SNR=8.4						
WRA	Warramunga Arr	46.00	258	P	P	22 48 17.0	0.0
	1.1nm,0.5s,baz=93,slow=7.9						
ASAR	Alice Springs	46.26	253	P	P	22 48 18.6	-0.4
	8.2nm,0.6s,baz=88,slow=8.3,SNR=86						

*ISCJB **24** 22:48:19.1±0.7, 36°.95N±0°.04×29°.14E±0°.04, h3km±8km, Error ellipse: s-maj=7.3km s-min=5.4km az=149.5*
*DDA **24** 22:48:19.2, 36°.98N×29°.12E, h6km±6km, Md2.8*
*ISK **24** 22:48:19.0, 37°.00N×29°.16E, h13km, MD2.9*
*CSEM **24** 22:48:19.5±0.2, 36°.98N×29°.15E, h10km, MD2.9, Error ellipse: s-maj=5.2km s-min=3.9km az=175.0*

ISC 24 22:48:19.7±0.7, 36°.96N±0°.04×29°.14E±0°.04, h9km±6km, n25, σ0=76/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.35	55	ePG	Pg	22 48 25.5	-1.0
GLHS				eSG	Sg	22 48 31.1	0.0
GLHS	Glhisar (BURDU	0.35	55	ePg	Pg	22 48 25.5	-1.0
GLHS				eSg	Sg	22 48 31.1	0.0
GOLH	Golhisar	0.44	50	i P	Pg	22 48 27.6	-0.6
GOLH				i S	Sg	22 48 35.0	+1.0
GOLH	Golhisar	0.44	50	i P	Pg	22 48 27.6	-0.6
GOLH				i S	Sg	22 48 35.0	+1.1
TURN	Turunc	0.44	259	i P	Pg	22 48 33.4	+5.1
TURN				i S	Sg	22 48 44.2	+10
ELL	Elmali	0.65	108	ePG	Pg	22 48 32.4	+0.3
ELL	Elmali	0.65	108	ePg	Pg	22 48 32.4	+0.2
YER	Yerkesik	0.71	285	ePG	Pg	22 48 33.4	0.0
YER	Yerkesik	0.71	285	ePg	Pg	22 48 33.4	0.0
DNZL	Cakiroluk	0.74	354	i P	Pg	22 48 32.6	-1.3
DNZL				i S	Sg	22 48 44.8	+1.3
DNZL	Cakiroluk	0.74	354	i P	Pg	22 48 32.6	-1.3
DNZL				i S	Sg	22 48 44.8	+1.3
AKAS	Kas	0.81	153	i P	Pg	22 48 36.1	+0.8
AKAS	Kas	0.81	153	i P	Pg	22 48 36.1	+0.8
MLSB	Milas	1.14	288	ePN	Pg	22 48 41.2	-0.4
MLSB	Milas	1.14	288	ePn	Pg	22 48 41.2	-0.4
AYDN	Tasoluk	1.23	305	i P	Pn	22 48 42.9	-0.1
AYDN				i S	Sb	22 48 58.8	-0.2
AYDN	Tasoluk	1.23	305	i P	Pn	22 48 42.9	-0.1
AYDN				i S	Sb	22 48 58.8	-0.2
DAT	Datca	1.28	260	ePN	Pn	22 48 42.7	-0.9
DAT	Datca	1.28	260	ePn	Pn	22 48 42.7	-0.9
BDRM	Kayabasi	1.36	275	i P	Pn	22 48 45.7	+0.8
BDRM				i S	Sb	22 49 03.9	+1.0
BDRM	Kayabasi	1.36	275	i P	Pn	22 48 45.7	+0.8
BDRM				i S	Sb	22 49 03.8	+0.9
KHL	Karahalli	1.40	12	ePN	Pn	22 48 44.4	-0.9
KHL	Karahalli	1.40	12	ePn	Pn	22 48 44.4	-0.9
KHAL	Karahalli	1.44	11	i P	Pn	22 48 45.5	-0.3
KHAL				i S	Sn	22 49 05.5	+0.6
KHAL	Karahalli	1.44	11	i P	Pn	22 48 45.5	-0.4
KHAL				i S	Sn	22 49 05.5	+0.6

*CSEM **24** 23:04:49.9±0.1, 38°.29N×21°.88E, h8km, ML2.2/6, Error ellipse: s-maj=2.4km s-min=2.0km az=95.0*
*ISCJB **24** 23:04:50.1±0.5, 38°.28N±0°.03×21°.89E±0°.04, h10km±4km, Error ellipse: s-maj=4.9km s-min=4.4km az=178.0*
*NEIC **24** 23:04:50.5, 38°.28N×21°.85E, h6km, MD3.1(ATH), After ATH.*
*THE **24** 23:04:50.4, 38°.28N×21°.90E, h9km, ML2.2/6, Error ellipse: s-maj=0.9km s-min=0.3km az=248.0*
*ATH **24** 23:04:50.5, 38°.28N×21°.85E, h6km, MD3.1/11*

ISC 24 23:04:50.4±0.5, 38°.28N±0°.03×21°.88E±0°.04, h9km±4km, n41, σ0=35/63, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	University Cam	0.07	270	P	Pg	23 04 52.8	+0.2
UPR				S	Sg	23 04 54.4	+0.2
UPR	University Cam	0.07	270	P	Pg	23 04 52.8	+0.2
UPR				S	Sg	23 04 54.4	+0.2
LAKA	Lakka	0.09	119	P	Pg	23 04 52.5	-0.2
LAKA				S	Sg	23 04 54.1	-0.3
LAKA	Lakka	0.09	119	P	Pg	23 04 52.5	-0.2
LAKA				S	Sg	23 04 54.1	-0.3
EFP	Efpalio	0.14	7	ePG	Pg	23 04 53.8	+0.1
EFP				eSG	Sg	23 04 56.3	+0.4
EFP	Efpalio	0.14	7	P	Pg	23 04 53.6	-0.1
EFP				S	Sg	23 04 56.1	+0.2
EFP	Efpalio	0.14	7	P	Pg	23 04 53.6	-0.1
EFP				S	Sg	23 04 56.1	+0.2
TRIZ	Trizonia	0.17	61	P	Pg	23 04 53.9	-0.2
TRIZ				S	Sg	23 04 56.4	-0.2
TRIZ	Trizonia	0.17	61	P	Pg	23 04 53.9	-0.2
TRIZ				S	Sg	23 04 56.4	-0.2
KALE	Kalithea	0.23	62	P	Pg	23 04 55.0	-0.1
KALE				S	Sg	23 04 58.4	+0.1
KALE	Kalithea	0.23	62	P	Pg	23 04 55.0	-0.1
KALE				S	Sg	23 04 58.4	+0.1
GUR	Goura	0.50	134	ePB	Pg	23 04 59.9	-0.3
GUR				eSB	Sg	23 05 07.4	+0.6
GUR	Goura	0.50	134	P	Pg	23 04 59.9	-0.3
GUR				S	Sg	23 05 07.1	+0.3
GUR	Goura	0.50	134	P	Pg	23 04 59.9	-0.3
GUR				S	Sg	23 05 07.1	+0.3
GUR				eSb	Sg	23 05 07.4	+0.6
DSF	Desfina	0.52	76	P	Pg	23 05 00.0	-0.6
DSF				S	Sg	23 05 07.5	0.0
DSF	Desfina	0.52	76	P	Pg	23 05 00.0	-0.6
DSF				S	Sg	23 05 07.5	0.0
EVR	Evrytania	0.64	355	ePg	Pg	23 05 02.6	-0.1
EVR	Evrytania	0.64	355	ePG	Pg	23 05 02.6	-0.1
AGG	Agios Georgios	0.82	25	ePb	Pg	23 05 05.5	-0.7
AGG				eSb	Sb	23 05 17.8	-0.1
AGG	Agios Georgios	0.82	25	ePB	Pg	23 05 05.5	-0.7
AGG				eSB	Sb	23 05 17.8	-0.1
AGG	Agios Georgios	0.82	25	P	Pg	23 05 05.3	-0.9
AGG				S	Sg	23 05 17.2	+0.4
AGG	Agios Georgios	0.82	25	ePb	Pg	23 05 05.5	-0.7
AGG				S	Sg	23 05 17.2	+0.4
AGG				eSb	Sb	23 05 17.8	-0.1
LTK	Loutraki	0.89	107	ePB	Pg	23 05 07.8	+0.2
LTK	Loutraki	0.89	107	ePb	Pg	23 05 07.8	+0.2
LKR	Lokris	0.95	67	ePn	Pg	23 05 09.6	+0.9
LKR	Lokris	0.95	67	ePN	Pg	23 05 09.6	+0.9
LKR	Lokris	0.95	67	ePn	Pg	23 05 09.6	+0.9
VLX	Vlachokerasia	0.99	156	ePB	Pg	23 05 09.6	+0.1
VLX	Vlachokerasia	0.99	156	ePb	Pg	23 05 09.6	+0.1
VLS	Valsamata	1.02	264	ePb	Pg	23 05 09.6	-0.5
VLS	Valsamata	1.02	264	ePB	Pg	23 05 09.6	-0.5
VLS	Valsamata	1.02	264	ePb	Pg	23 05 09.6	-0.5
ITM	Ithomi	1.10	178	ePn	Pg	23 05 12.0	+0.4
ITM	Ithomi	1.10	178	ePN	Pg	23 05 12.0	+0.4
ITM	Ithomi	1.10	178	ePn	Pg	23 05 12.0	+0.4
THL	Klokotos Trika	1.28	5	ePB	Pb	23 05 15.0	+0.3
THL	Klokotos Trika	1.28	5	ePb	Pb	23 05 15.0	+0.3
DID	Didima	1.32	125	ePG	Pg	23 05 15.5	-0.3
DID	Didima	1.32	125	ePg	Pg	23 05 15.5	-0.3
PYL	PYLOS	1.39	185	ePB	Pb	23 05 16.5	0.0
PYL	PYLOS	1.39	185	ePb	Pb	23 05 16.5	0.0

*ISCJB **24** 23:26:30.9±0.8, 38°.29N±0°.03×21°.88E±0°.04, h12km±6km, Error ellipse: s-maj=5.2km s-min=4.6km az=138.5*
*CSEM **24** 23:26:30.8±0.1, 38°.31N×21°.87E, h8km, ML2.0/5, Error ellipse: s-maj=2.8km s-min=2.6km az=136.0*
*THE **24** 23:26:31.3, 38°.29N×21°.88E, h9km±1km, ML2.0/5, Error ellipse: s-maj=1.0km s-min=0.3km az=276.0*
*ATH **24** 23:26:31.2, 38°.29N×21°.86E, h10km±7km, MD3.0/7*
*NEIC **24** 23:26:31.2, 38°.29N×21°.86E, h10km, MD3.0(ATH), After ATH.*

ISC 24 23:26:31.5±0.7, 38°.29N±0°.03×21°.88E±0°.03, h8km±7km, n31, σ0=48/50, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	University Cam	0.08	267	P	Pg	23 26 33.4	-0.2
UPR				S	Sg	23 26 34.9	-0.1
UPR	University Cam	0.08	267	P	Pg	23 26 33.4	-0.2
UPR				S	Sg	23 26 34.9	-0.1
LAKA	Lakka	0.09	122	P	Pg	23 26 33.5	-0.2
LAKA				S	Sg	23 26 35.5	+0.2
LAKA	Lakka	0.09	122	P	Pg	23 26 33.5	-0.2
LAKA				S	Sg	23 26 35.5	+0.2
EFP	Efpalio	0.14	7	ePG	Pg	23 26 34.3	-0.3
EFP				eSG	Sg	23 26 36.7	0.0
EFP	Efpalio	0.14	7	P	Pg	23 26 34.3	-0.3
EFP				S	Sg	23 26 36.8	+0.1
EFP	Efpalio	0.14	7	P	Pg	23 26 34.3	-0.3
EFP				S	Sg	23 26 36.8	+0.1
TRIZ	Trizonia	0.17	63	P	Pg	23 26 34.7	-0.4
TRIZ				S	Sg	23 26 37.4	0.0
TRIZ	Trizonia	0.17	63	P	Pg	23 26 34.7	-0.4
TRIZ				S	Sg	23 26 37.4	0.0
KALE	Kalithea	0.23	63	P	Pg	23 26

FITZ	Fitzroy Crossi	30.22	179	P	P	23 36 54.2	-0.7
	2.1nm,0.5s,mb4.1,baz=276,slow=9.2,SNR=4.7						
WRAB	Tennant Creek	33.25	164	*e*P	P	23 37 23.6	+2.0
	3.3nm,0.9s,mb4.3						
ASAR	Alice Springs	36.73	167	P	P	23 37 50.0	-1.6
	0.4nm,0.5s,mb3.5,baz=346,slow=7.6,SNR=5.0						
ULN	Ulaanbaatar	38.60	340	*e*P	P	23 38 07.1	-0.1
	1.8nm,0.9s,mb3.8						
SONM	Songino Array	38.79	340	P	P	23 38 08.7	-0.1
	1.1nm,0.8s,mb3.6,baz=160,slow=9.3,SNR=7.7						
TLY	Talaya	43.01	340	*e*P	P	23 38 43.4	0.0
PALK	Pallekele	44.20	268	P	P	23 38 54.1	+0.5
MKAR	Makanchi Array	49.85	322	P	P	23 39 37.9	+0.7
	2.3nm,0.8s,mb4.2,baz=119,slow=8.4,SNR=14						
ZALV	Zalesovo Beam	52.40	331	P	P	23 39 55.9	-0.3
	1.3nm,0.7s,mb4.0,baz=129,slow=6.1,SNR=5.9						
AAK	Ala-Archa	53.23	314	P	P	23 40 03.3	+0.7
EKS2	Erkin-Say	53.74	314	*e*P	P	23 40 06.0	-0.3
KURK	Kurchatov	53.87	325	*e*P	P	23 40 07.0	0.0
	5.1nm,0.9s,mb4.5						
KBL	Kabul	55.42	304	*e*P	P	23 40 19.4	+0.7
BVAR	Borovoye Array	59.47	325	P	P	23 40 47.0	+0.2
	1.1nm,0.6s,mb4.1,baz=126,slow=7.5,SNR=12						
BRVK	Borovoye	59.54	325	*e*P	P	23 40 47.5	+0.2
	1.9nm,0.7s,mb4.2						
ARU	Arti	67.02	326	*e*P	P	23 41 36.2	-0.6
FINES	FINESS Array B	83.66	331	P	P	23 43 11.8	-0.5
	2.3nm,1.0s,mb4.3,baz=90,slow=5.7,SNR=8.2						
FINES	FINESS Array B	83.66	331	P	P	23 43 11.8	-0.5
AKASG	Malin Array Be	84.40	321	P	P	23 43 15.2	-1.1
	0.2nm,0.3s,mb3.8,baz=59,slow=5.5,SNR=4.8						
STU	Stuttgart	97.23	323	*e*P	P	23 44 16.3	-0.3
	5.9nm,0.6s,mb5.2						

BJI ***24*** *23:58:58.8, 31°.26N×103°.76E, h18km, ML3.6/14, Ms3.4/4, Ms7 3.5/3*
IDC ***24*** *23:58:58.6±1.2, 31°.15N×104°.19E, h0km, mb3.8/3, mb1 3.8/4, mb1mx3.5/20, mbtmp3.7/4, ML3.4/1, MS3.2/1, Ms1 3.2/1, ms1mx2.7/29, Error ellipse: s-maj=88.8km s-min=20.4km az=60.0*
NEIC ***24*** *23:58:59.8±0.6, 31°.39N×104°.93E, h10km, mb3.4/2, Error ellipse: s-maj=13.7km s-min=9.5km az=73.0*

ISC 24 23:59:00.5±0.8, 31°.19N±0°.03×103°.96E±0°.05, h6km±6km, n24, σ1°.31/34, mb3.6/4, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.32**	**212**	Pg	**Pg**	**23 59 06.0**	**-0.7**
CD2				Sg	**Sg**	**23 59 11.6**	**+0.6**
CD2				smax			
	comp=N,14μm,0.7s						
CD2				smax			
	comp=E,38μm,0.5s						
ENH	**Enshi**	**4.85**	**99**	*e*Pg	**Pn**	**00 00 18.5**	**+4.5**
ENH				*e*Sg	**Sn**	**00 01 11.1**	**+0.6**
LZH	**Lanzhou**	**4.89**	**359**	*e*Pg	**Pb**	**00 00 25.3**	**-1.2**
LZH				Sg	**Sb**	**00 01 25.8**	**+0.2**
LZH				smax			
	comp=N,62nm,0.9s						
LZH				smax			
	comp=E,72nm,0.9s						
XAN	**Xi'an**	**5.06**	**55**	Pn	**Pn**	**00 00 17.9**	**+0.9**
XAN				Pg	**Pg**	**00 00 32.5**	**-5.0**
XAN				Sn	**Sb**	**00 01 24.4**	**-6.2**
XAN				Sg	**Sg**	**00 01 43.6**	**+0.5**
XAN				smax			
	comp=N,150nm,0.9s						
XAN				smax			
	comp=E,100nm,0.9s						
XAN				LR	LR		
	comp=N,290nm,8.7s						
XAN				LR	LR		
	comp=E,48nm,6.4s						
XAN				LR	LR		
	comp=Z,61nm,7.4s						
GYA	**Guiyang**	**5.28**	**153**	Pn	**Pn**	**00 00 20.8**	**+0.9**
GYA				Sn	**Sn**	**00 01 22.3**	**+1.3**
GYA				Sg	**Sg**	**00 01 50.3**	**+0.4**
GYA				smax			
	comp=N,230nm,0.8s						
GYA				smax			
	comp=E,250nm,0.9s						
KMI	**Kunming**	**6.13**	**190**	⇑Pn	**Pn**	**00 00 30.3**	**-1.4**
KMI				Sn	**Sn**	**00 01 40.0**	**-2.2**
KMI				Sg	**Sg**	**00 02 17.5**	**0.0**
KMI				smax			
	comp=N,24nm,1.7s						
KMI				smax			
	comp=E,29nm,0.8s						
KMI				LR	LR		
	comp=N,260nm,13.1s						
KMI				LR	LR		
	comp=E,280nm,10.0s						
HHC	**Hu-ho-hao-te**	**11.44**	**30**	*e*P	**Pn**	**00 01 42.1**	**-2.2**
HHC				S	**Sn**	**00 03 51.6**	**-0.8**
CHTO	**Chiang Mai**	**13.13**	**201**	Pn	**Pn**	**00 02 11.8**	**+4.3**
CMAR	**Chiang Mai Arr**	**13.46**	**201**	Pn	**Pn**	**00 02 17.8**	**+5.7**
	comp=E,0.1nm,0.3s,baz=3.7,slow=8.7,SNR=9.5						
SONM	**Songino Array**	**16.73**	**6**	Pn	**Pn**	**00 02 53.5**	**-1.9**
	comp=E,0.1nm,0.3s,baz=178,slow=12,SNR=4.0						
ULN	**Ulaanbaatar**	**16.83**	**7**	*e*Pn	**Pn**	**00 02 50.4**	**-6.2**
	comp=E,2.0nm,0.8s						
KSRS	**Korea Array**	**20.73**	**66**	P	**P**	**00 03 41.9**	**+0.1**
	comp=E,2.1nm,0.7s,baz=261,slow=10,SNR=5.8						
MK31	**Makanchi Array**	**22.84**	**319**	P	**P**	**00 04 06.9**	**+2.7**
MKAR	**Makanchi Array**	**22.84**	**319**	P	**P**	**00 04 03.8**	**-0.4**
	comp=E,2.7nm,1.0s,mb3.6,baz=123,slow=11,SNR=10						
ZALV	**Zalesovo Beam**	**26.59**	**334**	P	**P**	**00 04 40.7**	**+1.4**
	comp=E,1.7nm,0.7s,mb3.7,baz=138,slow=9.1,SNR=8.1						
ZALV	**Zalesovo Beam**	**26.59**	**334**	P	**P**	**00 04 40.7**	**+1.4**
KURK	**Kurchatov**	**27.11**	**323**	*e*P	**P**	**00 04 46.5**	**+2.6**
	comp=E,0.6nm,0.5s,mb3.4						
KBL	**Kabul**	**29.43**	**286**	P	**P**	**00 05 11.4**	**+6.5**
BVAR	**Borovoye Array**	**32.65**	**322**	LR	LR	00 19 26.4	
	comp=E,42nm,21.3s,baz=300,slow=37						
ARU	**Arti**	**40.29**	**322**	*e*P	**P**	**00 06 39.2**	**+0.9**
WRA	**Warramunga Arr**	**58.61**	**146**	P	**P**	**00 08 56.4**	**-2.0**
	baz=338,slow=7.7						
WRA	**Warramunga Arr**	**58.61**	**146**	P	**P**	**00 08 56.4**	**-2.0**
ASAR	**Alice Springs**	**61.63**	**149**	P	**P**	**00 09 17.4**	**-1.7**
	comp=E,0.5nm,0.6s,mb3.8,baz=340,slow=6.2,SNR=5.5						
MORC	**Moravsky Berou**	**64.72**	**314**	*e*P	**P**	**00 09 40.7**	**+1.3**

CASC 25 00:22:21.3±1.6, 12°.17N×87°.35W, h54km±18km, MD3.6, ML3.4, 2C, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.61**	**29**	*e*P	Pn	00 22 34.6	+0.5
CRIN				*e*S	Sn	00 22 45.2	+1.9
CNGN	**Cerro Negro**	**0.72**	**62**	*e*P	Pn	00 22 35.1	-0.4
CNGN				*e*S	Sn	00 22 46.5	+0.7
COPN	**Copaltepe**	**0.74**	**89**⇑	*e*P	Pn	00 22 35.5	-0.3
COPN				*e*S	Sn	00 22 46.2	-0.1
MOMN	**Momotombo**	**0.83**	**73**	*e*P	Pn	00 22 36.9	+0.1
CSAN		**0.91**	**89**	*e*P	Pn	00 22 38.1	+0.2
XAVN	**Gruta Xavier**	**1.00**	**91**	*e*P	Pn	00 22 39.3	+0.1
TISN	**Laguna Tiscapa**	**1.06**	**91**	*e*P	Pn	00 22 39.6	-0.3
MGAN	**Managua**	**1.08**	**91**	*e*P	Pn	00 22 40.0	-0.2
MGAN				*e*S	Sn	00 22 54.5	+0.3
MGAN				AML	AML	00 22 55.2	
	comp=N,1μm,0.2s						
TICN	**Ticuantepe**	**1.10**	**97**	*e*P	Pn	00 22 40.5	0.0
HUEN		**1.16**	**81**	*e*P	Pn	00 22 41.2	-0.1
CNCH	**Conchagua**	**1.20**	**337**	*e*P	Pn	00 22 41.6	-0.2
CNCH				*e*S	Sn	00 22 57.5	+0.3
APON	**Apoyo**	**1.28**	**101**	*e*P	Pn	00 22 44.5	+1.7
BLLM	**Bellamira**	**1.54**	**326**	*e*P	Pn	00 22 46.2	-0.1
SSN	**San Juan del S**	**1.70**	**120**	*e*P	Pn	00 22 49.1	+0.5
CAHU	**Cacaucatique**	**1.80**	**332**	*e*P	Pn	00 22 50.4	+0.4
TGUH	**Tegucigalpa,Un**	**1.88**	**2**	*e*P	Pn	00 22 51.7	+0.6
SNVI	**San Vicente**	**2.04**	**315**	*e*P	Pn	00 22 55.0	+1.7
LFRS	**El Faro**	**2.21**	**311**⇑	*e*P	Pn	00 22 55.3	-0.3

BJI ***25*** *00:29:20.5, 51°.25N×179°.03E, h23km, mB6.0/45, mb6.0/68, Ms5.7/75, Ms7 5.4/63*
BGS ***25*** *00:29:21.1±1.2, 50°.94N×178°.58E, h20km, mb5.7, MS5.3*
NEIC ***25*** *00:29:23.0±0.1, 51°.28N×178°.98E, h21km, mb5.7/277, ME6.0, MS5.5/190, MW5.9, MW5.7, ML5.7(AEIC), Error ellipse: s-maj=3.4km s-min=1.8km az=181.0, Moment Tensor Solution. s155 Moment tensor: Scale 10^17Nm; Mrr3.53; Mθθ-3.68; Mφφ0.14; Mrθ2.75; Mθφ-0.51; Mφr1.73; Best double couple: M0=4.90000×10^17 NP1:φs67.00000°, δ66.00000°, λ76.00000°. NP2:φs278.00000°, δ27.00000°, λ118.00000°. Principal axes: T 4.9300, Plg65.0000°, Azm312.0000°; N -0.1000, Plg12.0000°, Azm72.0000°; P -4.8300, Plg20.0000°, Azm166.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*
NEIC Felt on Adak.
MOS ***25*** *00:29:22.0±0.9, 51°.28N×179°.07E, h25km, mb5.9/156, MS5.4/110 Error ellipse: s-maj=6.0km s-min=3.6km az=96.3*
ISCJB ***25*** *00:29:23.7±0.1, 51°.16N±0°.02×178°.98E±0°.01, h40km, mb5.7/509, MS5.5/303, Error ellipse: s-maj=2.9km s-min=1.2km az=1.6*
IDC ***25*** *00:29:24.7±1.4, 51°.38N×179°.09E, h31km±8km, mb5.4/25, mb1 5.5/27, mb1mx5.5/28, mbtmp5.4/27, ML5.0/2, MS5.4/28, Ms1 5.4/28, ms1mx5.4/35, Error ellipse: s-maj=15.5km s-min=9.1km az=161.0*
GCMT ***25*** *00:29:26.6±0.1, 51°.12N×178°.95E, h22km, MW5.9, Moment Tensor Solution. s106, c237; s69, c87; Moment tensor: Scale 10^17Nm; Mrr5.72±.06; Mθθ-5.97±.05; Mφφ0.25±.04; Mrθ4.61±.10; Mθφ-1.24±.04; Mφr1.90±.09; Best double couple: M0=7.80000×10^17 NP1:φs268.00000°, δ26.00000°, λ105.00000°. NP2:φs71.00000°, δ65.00000°, λ83.00000°. Principal axes: T 7.5900, Plg69.0000°, Azm328.0000°; N 0.3800, Plg6.0000°, Azm74.0000°; P -7.9700, Plg20.0000°, Azm167.0000°; Data Used: II IU IC G CN. Surface waves: sta=113, comp=257, per= 50.*
SZGRF ***25*** *00:29:29.7, 51°.78N×177°.39E, h33km, mb5.5, MS5.6, Rat Islands, Aleutian Islands, United States*
DJA ***25*** *00:29:50, 51°.05N×178°.98E, h276km, Mw5.7/37*

ISC 25 00:29:25.6±0.1, 51°.24N±0°.02×178°.95E±0°.01, h41km, h41km±2.1km: pP-P, n1890, σ0s86/2008, mb5.7/509, MS5.5/303, 823C-252D, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.26**	**59**	P	**Pn**	**00 29 30.9**	**-2.6**
AMKA				S	**Sn**	**00 29 37.3**	**-1.7**
GSTR	**Great Sitkin T**	**3.23**	**73**	*e*Pn	**Pn**	**00 30 12.7**	**-0.9**
GSTR				*e*Sn	**Sn**	**00 30 50.8**	**0.0**
SMY	**Shemya**	**3.34**	**298**	*e*P	**Pn**	**00 30 15.4**	**+0.1**
FX1	**Attu Island--F**	**3.93**	**297**	P	**Pn**	**00 30 24.0**	**+0.7**
FX1				S	**Sn**	**00 31 13.6**	**+5.5**
ATKA	**Atka Island**	**4.37**	**75**	P	**Pn**	**00 30 29.1**	**-0.3**
ATKA				S	**Sn**	**00 31 22.2**	**+3.2**
NIKO	**Nikolski**	**7.71**	**72**	P	**Pn**	**00 31 15.9**	**+0.7**
NIKO				S	**Sn**	**00 32 44.9**	**+3.7**
SPIA	**Saint Paul Isl**	**8.68**	**43**	P	**Pn**	**00 31 31.2**	**+2.7**
UNV	**Unalaska Valle**	**9.24**	**68**	P	**Pn**	**00 31 37.6**	**+1.4**
AKGG	**Akutan Green G**	**9.61**	**66**	P	**Pn**	**00 31 43.5**	**+2.3**
AKLV	**Akutan Long Va**	**9.62**	**66**	P	**Pn**	**00 31 43.5**	**+2.2**
AKUT	**Akutan**	**9.72**	**67**	*e*P	**Pn**	**00 31 44.0**	**+1.3**
	305nm,1.2s						
PET	**Petropavlovsk**	**12.59**	**286**α	*i*P	**Pn**	**00 32 23.9**	**+2.0**
PET				*i* S	**Sn**	**00 34 34.5**	**-6.1**
PET				pmax	pmax		
	comp=Z,267nm,1.3s						
PET				pmax	pmax		
	comp=Z,3μm,14.9s						
PET				pmax	pmax		
	comp=Z,3μm,8.4s						
PET				smax			
	comp=N,369nm,0.9s						
PET				MLR	MLR		
	comp=Z,13μm,20.0s						
PET				MLR	MLR		
	comp=Z,11μm,19.0s						
PET	**Petropavlovsk**	**12.59**	**286**⇑	*e*Pn	**Pn**	**00 32 21.4**	**-0.5**
PET				*e*Sn	**Sn**	**00 34 41.1**	**+0.5**
SDPT	**Sand Point**	**12.96**	**63**	*e*Pn	**Pn**	**00 32 25.3**	**-1.7**
SDPT				*e*P		00 32 28.4	
SDPT				*e*Sn	**Sn**	**00 34 52.2**	**+2.5**
PETK	**Petropavlovsk-**	**13.17**	**286**	Pn	**Pn**	**00 32 28.2**	**-1.5**
	comp=Z,1.4nm,0.3s,baz=82,slow=12,SNR=139						
PETK				Sn	**Sn**	**00 34 55.1**	**+0.4**
	comp=Z,2.9nm,0.3s,baz=190,slow=28,SNR=5.0						
PETK				PcP	PcP	00 37 59.2	+0.7
	comp=Z,0.2nm,0.3s,baz=102,slow=5.0,SNR=4.1						
PETK				ScP	ScP	00 41 27.7	-0.5
	comp=Z,0.6nm,0.3s,baz=102,slow=6.4,SNR=10.0						
GAMB	**Gambell**	**13.51**	**18**	*e*P	**Pn**	**00 32 32.9**	**-1.6**
	comp=Z,361nm,1.1s						
CHGN	**Chignik**	**14.28**	**60**	*e*Pn	**Pn**	**00 32 43.9**	**-1.0**
SKR	**Severo-Kuril's**	**14.39**	**277**	*e*P	**Pn**	**00 32 45.5**	**-0.9**
SKR				pmax	pmax		
	comp=N,110nm,1.0s						
SKR				pmax	pmax		
	comp=E,110nm,1.0s						
SKR				pmax	pmax		
	comp=Z,360nm,1.0s						
SKR				pmax	pmax		
	comp=N,2μm,10.0s						
SKR				pmax	pmax		
	comp=E,4μm,10.0s						
SKR				pmax	pmax		
	comp=Z,4μm,10.0s						
SKR				MLR	MLR		
	comp=Z,12μm,18.0s						
SKR				MLR	MLR		
	comp=N,10μm,14.0s						
SKR				MLR	MLR		
	comp=E,12μm,18.0s						
TNA	**Tin City**	**15.86**	**20**⇑	*i*Pn	**Pn**	**00 33 08.7**	**+3.0**
	comp=E,474nm,1.1s						
TNA				*e*S	**S**	**00 36 13.1**	**0.0**
SVW2	**Sparrevohn**	**17.16**	**45**	*e*P	**Pn**	**00 33 22.9**	**+0.9**
	comp=E,313nm,1.2s						
OHAK	**Old Harbor**	**17.22**	**59**	*e*P	**Pn**	**00 33 20.3**	**-2.5**
	comp=E,33nm,0.4s						
KDAK	**Kodiak Island**	**17.69**	**57**	P	**Pn**	**00 33 25.7**	**-2.8**
	comp=E,24nm,0.3s,baz=269,slow=5.1,SNR=59						
KDAK				S	**S**	**00 36 32.2**	**-18**
	comp=E,0.5nm,0.3s,baz=180,slow=9.1,SNR=2.3						
KDAK	**Kodiak Island**	**17.69**	**57**	P	**Pn**	**00 33 25.7**	**-2.8**
KDAK				S	**S**	**00 36 32.2**	**-18**
KDAK				pmax	pmax		
	comp=Z,24nm,0.3s						
KDAK				smax			
	comp=N,1.0nm,0.3s						
KDAK	**Kodiak Island**	**17.69**	**57**	*e*Pn	**Pn**	**00 33 25.4**	**-3.1**
	comp=N,425nm,1.2s						
KDAK				*e*S	**S**	**00 36 47.5**	**-2.7**
TTA	**Tatalina**	**17.80**	**39**	*e*P	**Pn**	**00 33 31.4**	**+1.5**
BILL	**Bilibino**	**17.95**	**344**	*e*P	**Pn**	**00 33 34.1**	**+2.4**
BILL				pmax	pmax		
	comp=Z,862nm,1.2s						
BILL				MLR	MLR		
	comp=Z,16μm,18.0s						
BILL	**Bilibino**	**17.95**	**344**⇑	*i*Pn	**Pn**	**00 33 33.9**	**+2.2**
	comp=Z,682nm,1.0s						
BILL				*e*S	**S**	**00 36 55.6**	**0.0**
RSO	**Redoubt South**	**18.23**	**49**	*e*Pn	**Pn**	**00 33 36.1**	**+0.9**
SEY	**Seymchan**	**18.42**	**320**⇑	*e*P	**Pn**	**00 33 38.6**	**+1.2**
PPLA	**Purkeypile**	**19.35**	**42**⇑	*i*P	**Pn**	**00 33 48.9**	**+0.2**
	comp=Z,100nm,1.0s						
PPLA				*e*S	**S**	**00 37 24.2**	**+0.4**
SEW	**Seward**	**19.73**	**51**	*e*P	**Pn**	**00 33 50.5**	**-2.6**
	comp=Z,298nm,0.8s						
RC01	**Rabbit Creek A**	**19.83**	**48**	*e*P	**Pn**	**00 33 51.6**	**-2.7**
	comp=Z,216nm,1.0s						
RC01				*e*S	**S**	**00 37 35.6**	**+2.2**
PMR	**Palmer**	**20.25**	**47**	*e*P	**P**	**00 33 55.7**	**-1.4**
PMR				pmax	pmax		
	comp=Z,90nm,1.6s						
PMR	**Palmer**	**20.25**	**47**	*e*P	**P**	**00 33 55.7**	**-1.4**
	comp=Z,90nm,1.6s						
BPAW	**Bear Paw Mtn.**	**20.34**	**39**⇑	*i*P	**P**	**00 33 59.1**	**+1.0**
	comp=Z,9.1nm,0.7s						
BPAW				*e*S	**S**	**00 37 43.5**	**0.0**
TRF	**Thorofare Moun**	**20.36**	**41**⇑	*i*P	**P**	**00 33 58.3**	**0.0**
	comp=Z,488nm,0.9s						
TRF				S	**S**	**00 37 55.3**	**+11**
MCK	**McKinley**	**21.03**	**41**⇑	*i*P	**P**	**00 34 04.1**	**-1.4**
MCK				*e*S	**S**	**00 37 54.6**	**-2.5**
MCK				pmax	pmax		
	comp=Z,454nm,1.1s,mb5.7						
MCK	**McKinley**	**21.03**	**41**⇑	*i*P	**P**	**00 34 04.1**	**-1.4**
	comp=Z,454nm,1.1s,mb5.7						
MCK				*e*S	**S**	**00 37 54.6**	**-2.5**
DIV	**Divide**	**21.72**	**49**	*e*P	**P**	**00 34 11.5**	**-1.4**
	comp=Z,275nm,0.9s,mb5.7						
DIV				*e*S	**S**	**00 38 10.6**	**+0.1**
COLA	**College**	**21.90**	**39**⇑	*i*P	**P**	**00 34 13.3**	**-1.5**
COLA				pmax	pmax		
	comp=Z,541nm,1.0s,mb5.9						
COLA				MLR	MLR		
	comp=Z,8μm,19.0s,MS5.2						
COLA	**College**	**21.90**	**39**⇑	*i*P	**P**	**00 34 13.3**	**-1.5**
	comp=Z,541nm,1.0s,mb5.9						
COLA				*e*S	**S**	**00 38 25.5**	**+11**
COLA				LR	LR		
	comp=Z,8μm,19.0s,MS5.2						
COLD	**Coldfoot**	**22.11**	**32**⇑	*i*P	**P**	**00 34 17.3**	**+0.3**
	comp=Z,344nm,1.1s,mb5.7						
COLD				S	**S**	**00 38 20.4**	**+2.3**
ILAR	**Eielson Array**	**22.24**	**39**	P	**P**	**00 34 15.8**	**-2.7**
	comp=Z,31nm,0.8s,mb4.8,baz=241,slow=8.8,SNR=82						
ILAR				PcP	PcP	00 38 12.1	-1.0
	comp=Z,4.3nm,0.7s,baz=239,slow=1.8,SNR=6.8						
ILAR				S	**S**	**00 38 26.1**	**+5.4**
	comp=Z,4.0nm,0.6s,baz=280,slow=2.7,SNR=4.7						
ILAR				ScP	ScP	00 41 46.2	-0.8
	comp=Z,5.5nm,0.9s,baz=284,slow=3.1,SNR=9.5						
ILAR				ScS	ScS	00 45 31.4	-0.2
	comp=Z,3.6nm,1.1s,baz=283,slow=3.7,SNR=8.2						
ILAR				P3KPbc		01 07 59.2	
	comp=Z,1.3nm,0.9s,baz=51,slow=4.0,SNR=8.1						
ILAR	**Eielson Array**	**22.24**	**39**	P	**P**	**00 34 15.8**	**-2.6**
ILAR						00 38 12.1	
ILAR				S	**S**	**00 38 26.1**	**+5.4**
ILAR						00 45 31.4	
ILAR				pmax	pmax		
	comp=Z,31nm,0.9s						
ILAR				smax			
	comp=N,4.0nm,0.6s						
ILAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ILAR	**Eielson Array**	**22.24**	**39**	P	**P**	**00 34 15.8**	**-2.7**
ILAR				PcP	PcP	00 38 12.1	-1.0
ILAR				S	**S**	**00 38 26.1**	**+5.4**
ILAR				ScP	ScP	00 41 46.2	-0.8
ILAR				ScS	ScS	00 45 31.4	-0.2
BMRM	**Bremner River**	**22.25**	**50**⇑	*i*P	**P**	**00 34 17.9**	**-0.6**
	comp=Z,452nm,1.0s,mb5.8						
BMRM				*e*S	**S**	**00 38 32.7**	**+12**
PAX	**Paxson**	**22.28**	**45**⇑	*i*P	**P**	**00 34 17.6**	**-1.2**
PAX				*e*S	**S**	**00 38 21.5**	**+0.1**
PAX				pmax	pmax		
	comp=Z,357nm,1.0s,mb5.8						
PAX	**Paxson**	**22.28**	**45**⇑	*i*P	**P**	**00 34 17.6**	**-1.2**
	comp=Z,357nm,1.0s,mb5.8						
PAX				*e*S	**S**	**00 38 21.5**	**+0.2**
MENT	**Mentasta**	**23.04**	**45**	*e*P	**P**	**00 34 26.3**	**-0.6**
MENT				*e*S	**S**	**00 38 52.3**	**+18**
MIDW	**Midway**	**23.17**	**172**	*e*P	**P**	**00 34 27.9**	**-0.6**
MIDW				LR	LR		
	comp=Z,8μm,19.0s,MS5.2						
YUK	**Yuzh-Kuril'sk**	**23.28**	**265**⇑	*i*P	**P**	**00 34 29.4**	**-0.2**
YUK				*i* *PP		00 34 39.8	
YUK				*i*		00 34 55.9	
YUK				*i* S	**S**	**00 38 38.2**	**-0.4**
YUK				pmax	pmax		
	comp=N,1μm,1.4s						
YUK				pmax	pmax		
	comp=E,2μm,1.4s						
YUK				smax			
	comp=N,3μm,3.4s						
YUK				smax			
	comp=E,1μm,3.4s						
YUK				MLR	MLR		
	comp=Z,5μm,20.0s,MS4.9						
YUK				MLR	MLR		
	comp=N,1μm,10.0s						
YUK				MLR	MLR		
	comp=E,8μm,20.0s						
YSS	**Yuzh-Sakhalins**	**23.92**	**274**α	*i*P	**P**	**00 34 36.3**	**+0.8**
YSS				*e*		00 34 46.0	
YSS				*e*		00 35 18.0	
YSS				*e*S	**S**	**00 38 46.0**	**-2.9**
YSS				*e*SS		00 39 37.0	
YSS				pmax	pmax		
	comp=Z,500nm,1.0s,mb5.9						
YSS				MLR	MLR		
	comp=Z,7μm,20.0s,MS5.1						
YSS				MLR	MLR		
	comp=N,6μm,15.0s						
YSS				MLR	MLR		
	comp=E,5μm,22.0s						
YSS	**Yuzh-Sakhalins**	**23.92**	**274**⇑	*i*P	**P**	**00 34 36.8**	**+1.3**
	comp=E,1μm,1.4s,mb6.1						
YSS				PcP	PcP	00 38 15.7	-1.2
YSS				S	**S**	**00 38 50.0**	**+1.1**
YSS				LR	LR		
	comp=Z,3μm,20.0s,MS4.8						
EGAK	**Eagle**	**24.58**	**41**⇑	*e*P	**P**	**00 34 40.5**	**-0.9**
	comp=Z,1μm,1.1s,mb6.4						
EGAK				*e*S	**S**	**00 39 00.2**	**+1.0**
EGAK				LR	LR		
	comp=Z,14μm,19.0s,MS5.5						
PNL	**Peninsula**	**24.70**	**54**	*e*P	**P**	**00 34 41.9**	**-0.6**
	comp=Z,152nm,0.9s,mb5.5						
DAWY	**Dawson**	**25.18**	**43**⇑	*e*P	**P**	**00 34 46.1**	**-0.7**
DAWY				*e*S	**S**	**00 39 09.7**	**+1.0**
ASAJ	**Asahikawa**	**25.29**	**268**	P	**P**	**00 34 49.2**	**+1.3**
	comp=Z,619nm,0.9s,mb6.1,baz=58,slow=7.3,SNR=269						
ASAJ				S	**S**	**00 39 16.2**	**+5.4**
	comp=Z,3.1nm,0.3s,baz=158,slow=19,SNR=2.9						
ASAJ				LR	LR	00 45 13.4	
	comp=Z,5μm,18.2s,MS5.1,baz=75,slow=37						
ASAJ	**Asahikawa**	**25.29**	**268**	P	**P**	**00 34 49.3**	**+1.4**
ASAJ				S	**S**	**00 39 16.3**	**+5.4**
ASAJ				pmax	pmax		
	comp=Z,619nm,0.9s						
ASAJ				smax			
	comp=N,3.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,5μm,18.2s						
HYT	**Haines Junctio**	**25.68**	**51**	*e*P	**P**	**00 34 50.8**	**-0.5**
ERM	**Erimo**	**26.02**	**263**⇓	*i*P	**P**	**00 34 55.4**	**+0.8**
ERM				*e*S	**S**	**00 39 25.1**	**+2.5**
ERM				pmax	pmax		
	comp=Z,294nm,1.1s,mb5.7						
ERM				MLR	MLR		
	comp=Z,5μm,20.0s,MS5.0						
ERM	**Erimo**	**26.02**	**263**⇓	*i*P	**P**	**00 34 55.4**	**+

YAK pmax pmax
comp=E,130nm,1.2s
YAK pmax pmax
comp=N,24nm,1.0s
YAK smax
comp=N,820nm,1.9s
YAK smax
comp=E,453nm,2.2s
YAK MLR MLR
comp=Z,11µm,19.0s,MS5.5
YAK MLR MLR
comp=E,8µm,16.0s,MS5.4
YAK MLR MLR
comp=N,2µm,15.0s,MS5.4
YAK Yakutsk 28.45 311⇑ iP P 00 35 15.6 -0.5
comp=N,459nm,1.0s,mb6.1
YAK eS S 00 40 00.9 +0.5
YAK LR LR
comp=Z,12µm,20.0s,MS5.5
DLBC Dease Lake 29.61 56 P P 00 35 25.6 -0.9
comp=Z,16nm,1.2s,mb4.6,baz=277,slow=8.0,SNR=8.7
DLBC S S 00 40 34.3 +16
comp=Z,2.3nm,0.9s,baz=106,slow=24,SNR=1.6
DLBC LR LR 00 47 26.3
comp=Z,11µm,21.2s,MS5.4,baz=279,slow=37
DLBC Dease Lake 29.61 56⇑ iP P 00 35 25.8 -0.7
DLBC S S 00 40 19.5 +0.8
KLR Kul'dur 29.85 285⇓ iP P 00 35 25.4 -3.3
KLR eS S 00 40 19.5 -3.1
KLR e 00 42 00.0
KLR pmax pmax
comp=Z,2µm,9.0s
KLR pmax pmax
comp=E,370nm,1.2s
KLR pmax pmax
comp=Z,600nm,1.2s,mb6.2
TIXI Tiksi 30.06 331c iP P 00 35 30.2 -0.2
TIXI e 00 36 26.7
TIXI e 00 38 30.4
TIXI eS S 00 40 22.2 -3.4
TIXI e 00 42 12.5
TIXI pmax pmax
comp=Z,40nm,0.9s,mb5.2
TIXI MLR MLR
comp=Z,10µm,15.0s,MS5.6
TIXI Tiksi 30.06 331 eP P 00 35 30.3 -0.1
comp=Z,44nm,0.9s,mb5.2
TIXI ePcP PcP 00 38 30.5 -0.6
TIXI eS S 00 40 25.8 +0.3
TIXI eScP ScP 00 42 08.0 -1.8
TIXI LR LR
comp=Z,12µm,20.0s,MS5.5
CLNS Chul'man 31.51 302c iP P 00 35 43.0 -0.3
CLNS e*PP pP 00 35 52.3 -2.1
CLNS ePPP 00 36 52.8
CLNS e 00 38 33.7
CLNS e 00 40 42.8
CLNS pmax pmax
comp=Z,110nm,1.3s,mb5.5
CLNS pmax pmax
comp=E,82nm,1.1s
CLNS pmax pmax
comp=N,64nm,1.3s
CLNS pmax pmax
comp=E,59nm,1.0s
CLNS pmax pmax
comp=N,38nm,0.9s
CLNS pmax pmax
comp=Z,85nm,1.2s,mb5.5
CLNS MLR MLR
comp=Z,8µm,18.0s,MS5.4
CLNS MLR MLR
comp=N,2µm,16.0s,MS5.2
CLNS MLR MLR
comp=E,3µm,16.0s,MS5.2
MAJO Matsushiro 32.37 259 PFAKE 00 36 00.0 +9.0
MAJO LR LR
comp=Z,7µm,22.0s,MS5.3
MAT Matsushiro 32.37 259 P P 00 35 52.3 +1.3
MJAR Matsushiro Arr 32.37 259 P P 00 35 51.7 +0.7
comp=Z,51nm,0.9s,mb5.4,baz=48,slow=10,SNR=5.0
MJAR PcP PcP 00 38 36.7 -1.2
comp=Z,25nm,1.0s,baz=326,slow=0.7,SNR=4.7
MJAR LR LR 00 46 49.0
comp=Z,6µm,21.6s,MS5.3,baz=65,slow=32
VLA Vladivostok 32.51 274c iP P 00 35 53.0 +0.8
VLA pmax pmax
comp=Z,314nm,1.2s,mb6.1
MDJ Mudanjiang 33.20 278 P P 00 35 57.8 -0.4
MDJ S S 00 41 13.8 -1.1
MDJ sS sS 00 41 35.6 +2.1
MDJ ScP ScP 00 42 20.3 -0.5
MDJ PcS PcS 00 42 25.8 +0.4
MDJ pmax pmax
comp=Z,63nm,1.1s,mb5.5
MDJ pmax pmax
comp=Z,830nm,7.6s
MDJ LR LR
comp=N,3µm,21.4s,MS5.2
MDJ LR LR
comp=E,5µm,22.8s,MS5.2
MDJ LR LR
comp=Z,8µm,23.8s,MS5.4
MDJ Mudanjiang 33.20 278⇑ iP P 00 35 58.0 -0.2
comp=Z,95nm,1.0s,mb5.7
MDJ PP PP 00 37 13.4 -0.1
MDJ ePcP PcP 00 38 40.5 +0.5
MDJ eS S 00 41 17.5 +2.6
MDJ LR LR
comp=Z,9µm,20.0s,MS5.5
WAKE Wake Island 33.34 201 PFAKE 00 36 10.0 +10
WAKE LR LR
comp=Z,6µm,20.0s,MS5.3
KIP Kipapa 34.78 140 eP P 00 36 12.8 +0.7
KIP pmax pmax
comp=Z,107nm,0.9s,mb5.8
KIP MLR MLR
comp=Z,6µm,20.0s,MS5.4
KIP Kipapa 34.78 140 eP P 00 36 12.8 +0.7
comp=Z,107nm,0.9s,mb5.8
KIP LR LR
comp=Z,6µm,20.0s,MS5.4
JOHN Johnston Islan 35.64 161 PFAKE 00 36 30.0 +10
JOHN LR LR
comp=Z,6µm,20.0s,MS5.4
CN2 Changchun 36.18 280 ⇑P P 00 36 23.8 -0.1
CN2 eS S 00 41 58.3 -2.6
CN2 pmax pmax
comp=Z,90nm,1.1s,mb5.6
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,5µm,21.0s,MS5.5
CN2 LR LR
comp=E,6µm,21.0s,MS5.5
CN2 LR LR
comp=Z,5µm,22.0s,MS5.2
OOW Octopus West 36.32 73 P P 00 36 26.5 +1.4
PGC Sidney 36.35 71⇑ eP P 00 36 25.4 0.0
comp=Z,2.5nm,0.9s
PGC ePcP PcP 00 38 49.9 +0.8
PGC eS S 00 42 05.0 +1.7
YKA Yellowknife Ar 36.35 46 P P 00 36 24.4 -0.7
comp=Z,102nm,0.9s,mb5.7,baz=283,slow=8.8,SNR=119
YKA PcP PcP 00 38 48.3 -0.5
comp=Z,50nm,1.0s,baz=294,slow=2.7,SNR=15
YKA S S 00 42 00.7 -2.4
comp=Z,1.6nm,0.9s,baz=273,slow=14,SNR=3.3
YKA ScP ScP 00 42 32.3 +0.5
comp=Z,14nm,0.8s,baz=290,slow=3.2,SNR=15
YKA Yellowknife Ar 36.35 46 P P 00 36 24.4 -0.8
YKA 00 38 48.3
YKA S S 00 42 00.7 -2.4
YKA pmax pmax
comp=Z,102nm,0.9s
YKA smax
comp=N,2.0nm,0.9s
YKA Yellowknife Ar 36.35 46 P P 00 36 24.4 -0.7
YKA PcP PcP 00 38 48.3 -0.5
YKA S S 00 42 00.7 -2.4
YKA ScP ScP 00 42 32.3 +0.5
NLWA Neilton Lookou 36.67 73 ⇑P P 00 36 29.2 +1.2
baz=37,SNR=74
NLWA ⇑S S 00 42 13.4 +5.1
baz=37
NLWA Neilton Lookou 36.67 73⇑ iP P 00 36 29.0 +0.9
comp=N,198nm,1.1s,mb5.9
NLWA eS S 00 42 09.7 +1.4
NLWA LR LR
comp=Z,5µm,20.0s,MS5.3
CBIJ Chichi jima 36.75 243 P P 00 36 29.6 +0.7
comp=Z,209nm,0.8s,mb6.0
CBIJ LR LR 00 48 46.4
comp=Z,4µm,21.0s,MS5.2,baz=213,slow=32
A05A Maple Falls 37.00 70 ⇓P P 00 36 30.7 -0.1
baz=37
A05A ⇑S S 00 42 16.2 +3.0
baz=37
HIA Hailar 37.02 291⇑ iP P 00 36 30.8 -0.2
HIA e 00 37 55.3
HIA eS S 00 42 13.5 0.0
HIA pmax pmax
comp=Z,238nm,1.1s
HIA MLR MLR
comp=Z,7µm,21.0s
HIA Hailar 37.02 291⇑ iP P 00 36 30.8 -0.2
comp=Z,238nm,1.1s,mb5.9
HIA ePP PP 00 37 55.3 -0.3
HIA eS S 00 42 13.5 0.0
HIA LR LR
comp=Z,7µm,21.0s,MS5.4
HDW Hoodsport 37.04 72 P P 00 36 32.1 +0.9
E03A Lebam 37.26 74 ⇑P P 00 36 34.0 +0.9
baz=37,SNR=44
POHA Pohakuloa 37.29 138 PFAKE 00 36 50.0 +16
POHA LR LR
comp=Z,7µm,21.0s,MS5.4
JCW Jim Creek 37.46 71 P P 00 36 35.0 +0.2
F03A Seaside 37.56 75 ⇑P P 00 36 36.7 +1.0
baz=38,SNR=10
B06A Marblemount 37.57 70 ⇑P P 00 36 35.5 -0.2
baz=38
RPW Rockport 37.59 70 eP P 00 36 35.5 -0.3
RPW S S 00 42 23.9 +1.7
HEBO Mount Hebo 37.80 76 eP P 00 36 39.4 +1.7
comp=Z,354nm,1.4s,mb5.9
D05A Enumclaw 37.89 72 ⇑P P 00 36 39.5 +1.0
baz=38,SNR=53
D05A ⇓S S 00 42 30.2 +3.3
baz=38
LON Longmire 38.21 73 P P 00 36 41.4 +0.3
KSRS Korea Array 38.22 269 P P 00 36 42.9 +1.6
comp=Z,96nm,0.9s,mb5.5,baz=60,slow=8.3,SNR=172
KSRS PcP PcP 00 38 55.7 +0.7
comp=Z,33nm,0.9s,baz=62,slow=3.7,SNR=16
KSRS S S 00 42 38.6 +6.5
comp=Z,0.9nm,0.6s,baz=101,slow=12,SNR=3.4
KSRS LR LR 00 51 08.8
comp=Z,2µm,19.0s,MS5.0,baz=55,slow=34
KSRS Korea Array 38.22 269 P P 00 36 42.9 +1.6
KSRS 00 38 55.7
KSRS S S 00 42 38.6 +6.5
KSRS pmax pmax
comp=Z,97nm,0.9s,mb5.5
KSRS smax
comp=N,1.0nm,0.6s
WRW Wenatchee Ridg 38.24 71 P P 00 36 41.5 +0.2
F04A Amboy 38.25 74 ⇑P P 00 36 42.0 +0.5
baz=38,SNR=23
F04A ⇓S S 00 42 34.1 +1.8
baz=38
MPOR Mary's Peak 38.29 77 P P 00 36 43.0 +1.2
COR Corvallis 38.40 77⇑ eP P 00 36 43.9 +1.2
COR e 00 38 09.7
COR e 00 38 55.5
COR eS S 00 42 34.8 +0.3
COR pmax pmax
comp=Z,203nm,1.1s,mb5.8
COR MLR MLR
comp=Z,5µm,22.0s,MS5.3
COR Corvallis 38.40 77⇑ eP P 00 36 43.9 +1.2
comp=Z,203nm,1.1s,mb5.8
COR ePP PP 00 38 09.7 -1.2
COR ePcP PcP 00 38 55.5 +0.1
COR eS S 00 42 34.8 +0.3
COR LR LR
comp=Z,5µm,22.0s,MS5.3
WPW White Pass 38.40 73 P P 00 36 43.3 +0.6
SNY Shenyang 38.40 278 ⇑P P 00 36 43.8 +1.0
SNY PP PP 00 38 10.0 -0.9
SNY pmax pmax
comp=Z,180nm,1.1s,mb5.7
SNY pmax pmax
comp=Z,1µm,6.1s
SNY LR LR
comp=N,4µm,19.4s
SNY LR LR
comp=E,3µm,25.1s
SNY LR LR
comp=Z,3µm,29.4s
G04A Mulino 38.58 75 ⇑P P 00 36 44.9 +0.6
baz=38,SNR=31
KEBM Edson Butte 38.67 80 eP P 00 36 46.7 +1.7
comp=Z,215nm,1.1s,mb5.8
ETW Entiat 38.68 71 eP P 00 36 45.2 +0.1
ETW ePcP PcP 00 38 53.4 -2.8
ETW eS S 00 42 40.3 +1.5
TBM Table Mountain 38.73 72 P P 00 36 45.7 +0.2
B08A Colville Reser 38.91 69 ⇑P P 00 36 46.7 -0.3
baz=39,SNR=65
INCN Inchon 39.02 270⇑ eP P 00 36 49.1 +1.1
comp=Z,332nm,1.0s,mb6.0
INCN ePP PP 00 38 17.7 -0.1
INCN LR LR
comp=Z,2µm,21.0s,MS4.9
INCN Inchon 39.02 270 P P 00 36 49.6 +1.6
SNR=13
H04A Detroit Lake 39.03 76 ⇓P P 00 36 48.7 +0.7
baz=39,SNR=54
VFP Flag Point 39.14 75 P P 00 36 49.6 +0.7
CIT Chita 39.36 298 eP P 00 36 51.6 +1.0
CIT e 00 36 55.0
CIT e pP 00 37 01.2 -0.8
CIT pmax pmax
comp=Z,978nm,1.1s,mb6.5
E07A Sunnyside 39.48 72 ⇓P P 00 36 51.9 +0.2
baz=39,SNR=9.8
HUMO Hull Mountain 39.66 79⇑ eP P 00 36 54.4 +1.1
comp=Z,70nm,1.1s,mb5.3
HUMO ePP PP 00 38 23.4 -1.3
HUMO ePcP PcP 00 38 59.7 +0.3
HUMO eScP ScP 00 42 46.5 +1.8
HUMO LR LR
comp=Z,6µm,22.0s,MS5.4
G06A Carlson Farm, 39.68 74 ⇑P P 00 36 53.8 +0.3
baz=40,SNR=41
RSW Rattlesnake Hi 39.72 72 eP P 00 36 54.2 +0.5
RSW ePcP PcP 00 38 59.6 +0.1
OD2 Odessa Site #2 39.75 70 eP P 00 36 53.4 -0.5
OD2 PcP PcP 00 39 00.7 +1.0
HAWA Hanford 39.76 72⇑ iP P 00 36 54.2 +0.2
comp=Z,302nm,1.3s,mb5.9
HAWA ePcP PcP 00 38 59.6 -0.1
HAWA eS S 00 42 56.8 +1.8
HAWA LR LR
comp=Z,4µm,20.0s,MS5.2
F07A Phinny Hill Vi 39.77 73 ⇓P P 00 36 54.6 +0.4
baz=40,SNR=26
D08A Wollman Farm, 39.79 71 ⇑P P 00 36 53.9 -0.4
baz=40,SNR=39
C09A Chrisman Ranch 39.80 69 ⇑P P 00 36 53.9 -0.5
baz=40,SNR=28
E08A Dider Farm, El 39.99 72 ⇑P P 00 36 55.9 -0.1
baz=40
EDM Edmonton 40.11 60⇑ iP P 00 36 55.8 -1.1
EDM e 00 38 28.4
EDM e 00 39 00.2
EDM eS S 00 43 01.2 +1.1
EDM Edmonton 40.11 60⇑ iP P 00 36 55.8 -1.1
EDM ePP PP 00 38 28.4 -1.0
EDM ePcP PcP 00 39 00.1 -0.5
EDM eScP ScP 00 42 47.1 +0.8
EDM eS S 00 43 01.1 +1.1
KHMM Horse Mountain 40.15 82 eP P 00 36 59.5 +2.1
comp=Z,129nm,1.2s,mb5.5
NEW Newport 40.25 68⇑ eP P 00 36 57.4 -0.7
NEW e 00 39 01.9
NEW eS S 00 43 02.6 +0.3
NEW pmax pmax
comp=Z,88nm,1.0s
NEW MLR MLR
comp=Z,4µm,20.0s
NEW Newport 40.25 68⇑ eP P 00 36 57.4 -0.7
comp=Z,88nm,1.0s,mb5.5
NEW ePcP PcP 00 39 01.9 +0.6
NEW eScP ScP 00 42 46.8 -0.1
NEW eS S 00 43 02.6 +0.3
NEW LR LR
comp=Z,4µm,20.0s,MS5.2
YBH Yreka Blue Hor 40.30 80⇑ eP P 00 36 56.4 -2.2
YBH e 00 38 58.0
YBH eS S 00 43 04.4 +1.2
YBH pmax pmax
comp=Z,96nm,1.1s
YBH MLR MLR
comp=Z,5µm,22.0s
YBH Yreka Blue Hor 40.30 80⇑ eP P 00 36 56.4 -2.3
comp=Z,96nm,1.1s,mb5.4
YBH ePcP PcP 00 38 58.0 -3.5
YBH eS S 00 43 04.4 +1.2
YBH LR LR
comp=Z,5µm,22.0s,MS5.3
RES Resolute Bay 40.45 24⇑ iP P 00 36 59.4 -0.1
RES e 00 38 31.6
RES eS S 00 43 04.0 -0.7
RES pmax pmax
comp=Z,181nm,1.1s,mb5.7
RES Resolute Bay 40.45 24⇑ iP P 00 36 59.4 -0.1
comp=Z,181nm,1.1s,mb5.7
RES ePP PP 00 38 31.6 -1.2
RES eScP ScP 00 42 47.1 -0.1
RES eS S 00 43 04.0 -0.7
E09A Wood Farm, Sta 40.52 71 ⇑P P 00 36 59.9 -0.5
baz=40,SNR=73
G08A Pilot Rock 40.66 73 ⇑P P 00 37 01.7 +0.1
baz=41,SNR=83
LNOR Lincton Mounta 40.77 72 eP P 00 37 02.4 0.0
LNOR 00 38 35.2
A12A Yaak River Ran 40.78 67 ⇑P P 00 37 02.1 -0.4
baz=41,SNR=25
K05A Summer Lake 40.87 78 ⇓P P 00 37 04.6 +1.3
baz=41,SNR=69
KCPM Cahto Peak 40.93 83 eP P 00 37 05.2 +1.4
comp=Z,69nm,1.2s,mb5.2
C11A Tepee Creek (N 40.97 68 ⇑P P 00 37 03.3 -0.7
baz=41
I07A Izee 40.98 75 ⇓P P 00 37 04.9 +0.7
baz=41,SNR=171
B12A Libby 41.05 67 ⇓P P 00 37 04.3 -0.3
baz=41,SNR=10
WDC Whiskeytown Da 41.06 81⇑ eP P 00 37 06.0 +1.1
WDC 00 39 04.3
WDC eS S 00 43 17.0 +2.5
WDC pmax pmax
comp=Z,118nm,1.3s,mb5.4
WDC MLR MLR
comp=Z,3µm,20.0s,MS5.1
WDC Whiskeytown Da 41.06 81⇑ eP P 00 37 06.0 +1.1
comp=Z,118nm,1.3s,mb5.4
WDC PcP PcP 00 39 04.3 +0.3
WDC eS S 00 43 17.0 +2.5
WDC LR LR
comp=Z,3µm,20.0s,MS5.1
DL2 Dalian 41.30 276⇑ iP P 00 37 07.6 +0.7
DL2 PP PP 00 38 45.1 +2.6
DL2 PcP PcP 00 39 05.3 +0.5
DL2 S S 00 43 18.6 +0.5
DL2 SS SS 00 46 18.9 -3.4
DL2 pmax pmax
comp=Z,120nm,1.1s,mb5.4
DL2 pmax pmax
comp=Z,520nm,6.1s
DL2 LR LR
comp=N,2µm,17.4s,MS5.0
DL2 LR LR
comp=E,1µm,18.5s,MS5.0
DL2 LR LR
comp=Z,2µm,17.3s,MS5.1
F10A Beach Ranch, E 41.35 71 ⇑P P 00 37 06.9 -0.2
baz=41,SNR=70
C12B Naegeli Ranch, 41.49 68 ⇑P P 00 37 07.8 -0.6
baz=41,SNR=18
A13A Flathead Natio 41.50 66 ⇓P P 00 37 07.4 -0.9
baz=41,SNR=40
HOPS Hopland 41.66 84⇑ eP P 00 37 10.2 +0.4
comp=Z,138nm,1.2s,mb5.5
HOPS eS S 00 43 24.3 +0.9
HOPS LR LR
comp=Z,7µm,20.0s,MS5.6
MOD Modoc 41.69 78⇓ iP P 00 37 10.7 +0.6
comp=Z,133nm,1.1s,mb5.5
MOD ePcP PcP 00 39 06.0 0.0
MOD eScP ScP 00 42 53.4 +0.7
MOD eS S 00 43 24.6 +0.7
MOD LR LR
comp=Z,6µm,22.0s,MS5.4
WALA Waterton Lakes 41.72 66⇑ eP P 00 37 09.7 -0.5
comp=Z,8.5nm,1.1s,mb4.3
WALA ePcP PcP 00 39 05.8 -0.2
WALA eScP ScP 00 42 53.6 +0.9
WALA eS S 00 43 24.9 +0.8
B13A Whitefish 41.74 67 ⇓P P 00 37 09.5 -0.9
baz=42,SNR=38
BSMT Bassoo Peak 41.82 68 eP P 00 37 10.7 -0.3
BSMT eScP ScP 00 42 54.2 +1.1
BMO Blue Mountains 41.89 73⇑ iP P 00 37 11.7 +0.1
comp=Z,124nm,1.1s,mb5.5
BMO eScP ScP 00 42 53.5 +0.1
BMO eS S 00 43 25.7 -1.1
BMO LR LR
comp=Z,3µm,22.0s,MS5.1
D12A Red Ives Fores 41.90 69 ⇑P P 00 37 10.6 -1.1
baz=42,SNR=16
J08A Circle Bar Ran 42.00 75 ⇓P P 00 37 13.0 +0.5
baz=42
C13A Hot Springs 42.03 68 ⇓P P 00 37 12.0 -0.7
baz=42,SNR=52
A14A Double T Ranch 42.05 65 ⇑P P 00 37 12.2 -0.7
baz=42,SNR=229
E12A Beaver Dam Sad 42.10 70 ⇓P P 00 37 12.8 -0.5
baz=42
JTMT Jette 42.16 68 eP P 00 37 13.4 -0.4
JTMT ePcP PcP 00 39 08.6 +1.1
JTMT eScP ScP 00 42 54.8 +0.3
YBMT Yellow Bay 42.26 67 eP P 00 37 14.1 -0.6
YBMT ScP ScP 00 42 55.8 +0.9
MCCM Marconi Confer 42.29 85 eP P 00 37 14.5 -0.5
MCCM eS S 00 43 33.3 +0.5
MCCM LR LR
comp=Z,5µm,21.0s,MS5.4
D13A Huson 42.40 68 ⇑P P 00 37 14.7 -1.0
baz=42,SNR=48
WVOR Wild Horse Val 42.41 77⇑ iP P 00 37 16.3 +0.4
WVOR e 00 39 07.5
WVOR eS S 00 43 31.6 -2.9
WVOR pmax pmax
comp=Z,143nm,1.1s,mb5.5
WVOR MLR MLR
comp=Z,5µm,22.0s,MS5.3
WVOR Wild Horse Val 42.41 77⇑ iP P 00 37 16.3 +0.3
comp=Z,143nm,1.1s,mb5.5
WVOR ePcP PcP 00 39 07.5 -0.9
WVOR eScP ScP 00 42 55.5 0.0
WVOR eS S 00 43 31.6 -2.9
WVOR LR LR
comp=Z,5µm,22.0s,MS5.3
A15A Johnson Ranch, 42.44 65 ⇑P P 00 37 14.4 -1.6
baz=42,SNR=115
B14A Marquette Ranc 42.44 66 ⇓P P 00 37 15.4 -0.6
baz=42,SNR=154
OHCM Honcut 42.45 82 eP P 00 37 16.3 0.0
SWMT Swartz Lake 42.45 68 eP P 00 37 15.4 -0.8
SWMT eScP ScP 00 42 54.8 -0.9
C14A Swan Lake 42.47 67 ⇑P P 00 37 15.6 -0.7
baz=42
F12A Elk City 42.63 71 ⇑P P 00 37 17.5 -0.2
baz=42,SNR=358
MSO Missoula 42.84 68⇑ iP P 00 37 18.4 -0.9
comp=Z,53nm,1.0s,mb5.2
MSO ePP PP 00 38 58.4 -0.6
MSO ePcP PcP 00 39 09.5 -0.3
MSO eScP ScP 00 42 59.3 +2.1
MSO eS S 00 43 39.3 -1.4
MSO LR LR
comp=Z,2µm,20.0s,MS4.9
B15A Bradely Ranch, 42.87 66 ⇑P P 00 37 18.3 -1.2

baz=43,SNR=187
SLMT Seeley Lake 42.88 68 *eP* **P 00 37 18.9 -0.8**
SLMT *ePcP* PcP 00 39 10.2 +0.3
SLMT *eScP* ScP 00 42 56.9 -0.5
SLMT *eS* **S 00 43 41.8 +0.5**
E13A Victor 42.90 69 ⇓P **P 00 37 19.0 -0.8**
baz=43,SNR=24
G12A Big Creek, Yel 42.93 71 ⇑P **P 00 37 19.8 -0.3**
baz=43
D14A Greenough 42.96 68 ⇑P **P 00 37 19.4 -0.9**
baz=43,SNR=92
ALE Alert 43.00 10 P **P 00 37 20.0 -0.3**
comp=Z,2μm,1.0s,mb6.7,SNR=63
F13A Darby 43.16 70 ⇓P **P 00 37 21.5 -0.5**
baz=43,SNR=74
CHMT Chamberlain Mo 43.20 68 *eP* **P 00 37 21.2 -1.0**
CHMT *eScP* ScP 00 42 58.5 -0.2
B16A M & M Farms, S 43.31 65 ⇓P **P 00 37 21.5 -1.6**
baz=43,SNR=62
E14A Clinton 43.32 69 ⇑P **P 00 37 22.6 -0.6**
baz=43,SNR=12
H12A Diamond D Ranc 43.52 72 ⇓P **P 00 37 24.5 -0.4**
baz=43,SNR=151
PAHR Pah Rah Range 43.53 80 *eP* **P 00 37 25.4 +0.4**
comp=Z,179nm,1.1s,mb5.7
WCN Washoe City 43.54 81 ⇓P **P 00 37 25.8 +0.7**
baz=44,SNR=30
MFID Camas Ranch 43.57 74 ⇓P **P 00 37 25.2 0.0**
baz=44,SNR=111
G13A Cobalt 43.60 71 ⇓P **P 00 37 25.2 -0.3**
baz=44,SNR=378
C16A Fuhringer Ranc 43.60 66 ⇑P **P 00 37 24.5 -1.0**
baz=44,SNR=136
A17A Triple J Farms 43.61 64 ⇑P **P 00 37 24.0 -1.5**
baz=44,SNR=97
F14A Wisdom 43.72 69 ⇓P **P 00 37 26.1 -0.3**
baz=44,SNR=38
I12A Atlanta 43.77 73 ⇑P **P 00 37 27.2 +0.2**
baz=44,SNR=399
E15A Deer Lodge 43.81 68 ⇓P **P 00 37 26.5 -0.7**
baz=44,SNR=44
H13A Challis 43.87 71 ⇑P **P 00 37 27.4 -0.3**
baz=44
B17A L&G Farms, Che 43.89 65 ⇓P **P 00 37 26.4 -1.4**
baz=44,SNR=34
CMB Columbia Colle 43.92 83⇑*eP* **P 00 37 28.2 +0.1**
CMB 00 39 15.5
CMB *eS* **S 00 43 55.1 -1.5**
CMB pmax pmax
comp=Z,88nm,1.2s,mb5.4
CMB MLR MLR
comp=Z,6μm,22.0s,MS5.5
CMB Columbia Colle 43.92 83⇑*eP* **P 00 37 28.2 +0.1**
comp=Z,88nm,1.2s,mb5.4
CMB PcP PcP 00 39 15.5 +2.0
CMB *eS* **S 00 43 55.1 -1.5**
CMB LR LR
comp=Z,6μm,22.0s,MS5.5
L10A Juniper Basin 43.94 76 ⇓P **P 00 37 28.6 +0.3**
baz=44,SNR=26
G14A Jackson 43.97 70 ⇓P **P 00 37 27.8 -0.6**
baz=44,SNR=14
BJI Beijing 44.01 281 P **P 00 37 30.0 +1.1**
BJI PP PP 00 39 10.9 -0.8
BJI S **S 00 43 57.0 -1.0**
BJI LR LR
comp=N,6μm,20.4s,MS5.6
BJI LR LR
comp=E,4μm,19.9s,MS5.6
BJI LR LR
comp=Z,4μm,20.4s,MS5.4
SAO San Andreas Ge 44.04 85 *eP* **P 00 37 28.9 -0.2**
SAO *eS* **S 00 43 59.5 +1.1**
SAO pmax pmax
comp=Z,72nm,1.1s,mb5.3
SAO MLR MLR
comp=Z,4μm,20.0s,MS5.3
SAO San Andreas Ge 44.04 85 *eP* **P 00 37 28.9 -0.2**
comp=Z,72nm,1.1s,mb5.3
SAO *eS* **S 00 43 59.5 +1.0**
SAO LR LR
comp=Z,4μm,20.0s,MS5.3
J12A Stokes Ranch, 44.10 74 ⇓P **P 00 37 30.1 +0.6**
baz=44,SNR=176
A18A Metzger Ranch, 44.10 64 ⇑P **P 00 37 27.6 -1.8**
baz=44,SNR=12
D16A Dana Ranch, Ca 44.12 67 ⇓P **P 00 37 28.7 -0.9**
baz=44,SNR=38
HRY Holter Researc 44.13 68 *eP* **P 00 37 29.0 -0.7**
HRY *eScP* ScP 00 43 03.0 +0.5
F15A Butte 44.22 69 ⇑P **P 00 37 29.6 -0.8**
baz=44,SNR=35
M10A I.L. Ranch, Tu 44.22 76 ⇓P **P 00 37 31.0 +0.5**
baz=44,SNR=83
WAKR Walker 44.22 82 *eP* **P 00 37 31.3 +0.7**
LRM Limekiln Ridge 44.25 69 *eP* **P 00 37 29.9 -0.8**
LRM *e* 00 39 13.6
LRM *eScP* ScP 00 43 04.0 +1.0
LRM *eS* **S 00 44 02.4 +1.2**
C17A Wharram Farm, 44.26 66 ⇑P **P 00 37 29.4 -1.3**
baz=44,SNR=148
IRK Irkutsk 44.32 302⇑*iP* **P 00 37 31.3 +0.2**
IRK *e* pP 00 37 43.6 +1.0
IRK *e* 00 39 15.0
IRK pmax pmax
comp=Z,230nm,2.6s,mb5.5
E16A East Helena 44.32 68 ⇑P **P 00 37 30.4 -0.8**
baz=44,SNR=21
I13A Wildhorse Cree 44.32 72 ⇑P **P 00 37 31.3 +0.1**
baz=44,SNR=306
L11A Cat Creek Ranc 44.32 75 ⇑P **P 00 37 32.1 +0.7**
baz=44,SNR=218
HLID Hailey 44.34 73 ⇓P **P 00 37 31.7 +0.3**
baz=44,SNR=432
HLID Hailey 44.34 73⇑*iP* **P 00 37 31.6 +0.2**
comp=Z,228nm,1.1s,mb5.8
HLID *e* 00 39 14.3
HLID *eScP* ScP 00 43 03.1 -0.3
HLID *eS* **S 00 44 03.5 +1.0**
HLID LR LR
comp=Z,3μm,22.0s,MS5.2
H14A Leadore 44.37 71 ⇑P **P 00 37 31.3 -0.4**
baz=44,SNR=129
B18A Beardsley Farm 44.42 64 ⇑P **P 00 37 30.6 -1.3**
baz=44,SNR=78
DLMT Dillon 44.42 70⇑*eP* **P 00 37 31.2 -0.8**
comp=Z,78nm,1.4s,mb5.2
DLMT *e* 00 39 15.3
DLMT *eScP* ScP 00 43 04.9 +1.3
DLMT *eS* **S 00 44 03.3 -0.3**
BMN Battle Mountai 44.44 78⇑*iP* **P 00 37 32.5 +0.2**
BMN *e* 00 39 15.6
BMN *eS* **S 00 44 05.6 +1.5**
BMN pmax pmax
comp=Z,80nm,0.8s,mb5.5
BMN MLR MLR
comp=Z,5μm,22.0s,MS5.4
BMN Battle Mountai 44.44 78⇑*iP* **P 00 37 32.5 +0.3**
comp=Z,80nm,0.8s,mb5.5
BMN *ePcP* PcP 00 39 15.6 +0.3
BMN *eScP* ScP 00 43 05.0 +1.1
BMN *eS* **S 00 44 05.6 +1.5**
BMN LR LR
comp=Z,5μm,22.0s,MS5.4
D17A Six Diamond Ra 44.56 66 ⇓P **P 00 37 32.2 -0.9**
baz=44,SNR=68
MCMT McKenzie Canyo 44.56 70 *eP* **P 00 37 32.8 -0.4**
comp=Z,39nm,1.0s,mb5.2
MCMT PcP PcP 00 39 15.5 -0.1
MCMT *eScP* ScP 00 43 04.5 +0.2
MCMT *eS* **S 00 44 08.1 +2.3**
K12A Draper Farm, C 44.57 74 ⇑P **P 00 37 33.8 +0.5**
baz=44,SNR=279
J13A Cove Ranch, Pi 44.57 73 ⇓P **P 00 37 33.7 +0.4**
baz=44,SNR=387
G15A Dillon 44.59 70 ⇑P **P 00 37 32.6 -0.8**
baz=44,SNR=101
EGMT Eagleton 44.62 65 ⇓P **P 00 37 32.4 -1.3**
baz=44,SNR=12
EGMT Eagleton 44.62 65⇑*eP* **P 00 37 32.0 -1.7**
comp=Z,127nm,1.3s,mb5.6
EGMT *ePcP* PcP 00 39 15.7 -0.1
EGMT *eScP* ScP 00 43 06.0 +1.6
EGMT LR LR
comp=Z,4μm,19.0s,MS5.3
I14A Mackay 44.71 72 ⇑P **P 00 37 34.7 +0.3**
baz=45,SNR=207
N10A Dunphy 44.71 77 ⇓P **P 00 37 35.1 +0.7**
baz=45,SNR=5.7
M11A Holland Ranch, 44.73 76 ⇓P **P 00 37 35.4 +0.8**
baz=45,SNR=53
F16A Kennard Place, 44.75 69 ⇑P **P 00 37 33.8 -0.9**
baz=45,SNR=34
L12A House Creek Ra 44.78 75 ⇓P **P 00 37 35.8 +0.8**
baz=45,SNR=143
H15A Lima 44.80 70 ⇓P **P 00 37 34.6 -0.5**
baz=45
E17A Martinsdale 44.83 67 ⇓P **P 00 37 34.9 -0.5**
baz=45,SNR=64
TLY Talaya 44.94 301 P **P 00 37 37.1 +1.0**
comp=Z,732nm,1.0s,mb6.5,SNR=43
TLY Talaya 44.94 301*c iP* **P 00 37 37.1 +1.0**
TLY *e* pP 00 37 49.3 +1.8
TLY *e* 00 39 17.7
TLY *e* 00 39 25.5
TLY *eS* **S 00 44 27.5 +16**
TLY pmax pmax
comp=Z,159nm,1.1s,mb5.8
TLY MLR MLR
comp=Z,14μm,18.0s,MS5.9
TLY Talaya 44.94 301⇑*iP* **P 00 37 36.9 +0.9**
comp=Z,129nm,1.0s,mb5.7
TLY *ePcP* PcP 00 39 17.5 +0.7
TLY *eScP* ScP 00 43 05.5 -0.2
TLY *eS* **S 00 44 13.8 +2.8**
TLY LR LR
comp=Z,15μm,19.0s,MS5.9
TLY Talaya 44.94 301 P **P 00 37 37.4 +1.3**
SNR=62
G16A Moss Hill, Enn 44.96 69 ⇓P **P 00 37 35.8 -0.6**
baz=45,SNR=85
O10A Cortez Mining, 44.97 78 ⇓P **P 00 37 37.3 +0.8**
baz=45,SNR=32
NVAR Mina Array Bea 44.97 81 P **P 00 37 37.0 +0.5**
comp=Z,98nm,1.1s,mb5.6,baz=296,slow=6.8,SNR=150
NVAR PcP PcP 00 39 18.3 +1.1
comp=Z,28nm,1.1s,baz=250,slow=1.0,SNR=3.5
NVAR ScP ScP 00 43 06.7 +0.6
comp=Z,3.7nm,1.0s,baz=275,slow=5.1,SNR=4.5
NVAR Mina Array Bea 44.97 81 P **P 00 37 37.0 +0.5**
NVAR PcP PcP 00 39 18.3 +1.1
NVAR ScP ScP 00 43 06.7 +0.6
J14A Carey 45.01 72 ⇓P **P 00 37 37.5 +0.7**
baz=45,SNR=115
D18A Linhart Farms, 45.04 66 ⇑P **P 00 37 36.5 -0.4**
baz=45,SNR=27
ULN Ulaanbaatar 45.05 295⇑*iP* **P 00 37 38.1 +1.1**
ULN *e* 00 39 17.3
ULN *e* 00 39 24.7
ULN *eS* **S 00 44 14.7 +2.0**
ULN pmax pmax
comp=Z,182nm,0.9s,mb5.9
ULN MLR MLR
comp=Z,11μm,19.0s,MS5.8
ULN Ulaanbaatar 45.05 295⇑*iP* **P 00 37 38.1 +1.1**
comp=Z,182nm,0.9s,mb5.9
ULN *ePcP* PcP 00 39 17.3 +0.1
ULN *ePP* PP 00 39 24.7 +2.2
ULN *eScP* ScP 00 43 06.5 +0.3
ULN *eS* **S 00 44 14.7 +2.0**
ULN LR LR
comp=Z,11μm,19.0s,MS5.8
ULN Ulaanbaatar 45.05 295 P **P 00 37 38.6 +1.6**
SNR=134
K13A Stover Farm, H 45.06 74 ⇑P **P 00 37 37.3 +0.1**
baz=45,SNR=36
N11A Elko Archery C 45.12 77 ⇑P **P 00 37 38.4 +0.7**
baz=45,SNR=15
MLAC Mammoth Lakes 45.13 82 ⇑P **P 00 37 38.8 +1.0**
baz=45
I15A Monteview 45.24 71 ⇑P **P 00 37 38.5 -0.1**
baz=45,SNR=20
F17A Fitzpatrick Pl 45.25 68 ⇓P **P 00 37 38.2 -0.5**
baz=45,SNR=59
M12A Wells 45.27 76 ⇓P **P 00 37 39.8 +0.9**
baz=45,SNR=108
E18A Harlowton 45.32 67 ⇑P **P 00 37 39.0 -0.2**
baz=45,SNR=90
FFC Flin Flon 45.37 53⇑*eP* **P 00 37 37.7 -1.7**
FFC *e* 00 39 18.2
FFC *eS* **S 00 44 17.7 +0.5**
FFC pmax pmax
comp=Z,21nm,0.6s,mb5.1
FFC MLR MLR
comp=Z,8μm,20.0s,MS5.6
FFC Flin Flon 45.37 53⇑*eP* **P 00 37 37.7 -1.8**
comp=Z,21nm,0.6s,mb5.1
FFC *ePcP* PcP 00 39 18.1 -0.1
FFC *eScP* ScP 00 43 06.3 -1.0
FFC *eS* **S 00 44 17.7 +0.5**
FFC LR LR
comp=Z,8μm,20.0s,MS5.6
P10A Eureka 45.39 79 ⇓P **P 00 37 40.6 +0.8**
baz=45,SNR=30
SONM Songino Array 45.44 296 P **P 00 37 41.6 +1.5**
comp=Z,120nm,0.9s,mb5.7,baz=56,slow=9.9,SNR=479
SONM PcP PcP 00 39 19.4 +0.8
comp=Z,35nm,1.0s,baz=36,slow=1.4,SNR=3.8
SONM ScP ScP 00 43 08.8 +1.0
comp=Z,5.8nm,1.0s,baz=46,slow=4.3,SNR=4.4
SONM S **S 00 44 23.0 +4.7**
comp=Z,2.4nm,1.0s,baz=301,slow=34,SNR=2.9
SONM LR LR 00 58 32.2
comp=Z,13μm,18.1s,MS5.9,baz=54,slow=38
SONM Songino Array 45.44 296 P **P 00 37 41.6 +1.5**
SONM 00 39 19.4
SONM S **S 00 44 23.0 +4.6**
SONM pmax pmax
comp=Z,120nm,0.9s
SONM smax
comp=N,2.0nm,1.0s
SONM MLR MLR
comp=Z,13μm,18.1s
SONM Songino Array 45.44 296 P **P 00 37 41.6 +1.5**
SONM PcP PcP 00 39 19.4 +0.8
SONM ScP ScP 00 43 08.8 +1.0
SONM S **S 00 44 23.0 +4.7**
SONM LR LR 00 58 32.2
L13A Double Diamond 45.47 74 ⇑P **P 00 37 41.2 +0.8**
baz=45,SNR=140
ELK Elko 45.47 76⇑*eP* **P 00 37 41.1 +0.6**
ELK *e* 00 39 19.5
ELK *eS* **S 00 44 17.5 -1.5**
ELK pmax pmax
comp=Z,64nm,0.9s
ELK MLR MLR
comp=Z,3μm,21.0s
ELK Elko 45.47 76⇑*eP* **P 00 37 41.1 +0.7**
comp=Z,64nm,0.9s,mb5.5
ELK *ePcP* PcP 00 39 19.5 +0.7
ELK *eScP* ScP 00 43 07.9 -0.2
ELK *eS* **S 00 44 17.5 -1.5**
ELK LR LR
comp=Z,3μm,21.0s,MS5.2
MTUM Tungsten Hills 45.48 82 *eP* **P 00 37 41.3 +0.8**
N12A Clover Valley, 45.53 76 ⇓P **P 00 37 41.5 +0.6**
baz=45,SNR=156
N12A Clover Valley, 45.53 76⇑*iP* **P 00 37 41.2 +0.3**
comp=Z,212nm,1.1s,mb6.0
N12A *ePcP* PcP 00 39 19.5 +0.5
N12A *ePP* PP 00 39 27.1 -0.7
N12A *eScP* ScP 00 43 09.2 +0.8
N12A *eS* **S 00 44 20.6 +0.8**
G17A Pierce Place, 45.53 69 ⇑P **P 00 37 40.7 -0.2**
baz=45,SNR=18
H16A Russell Place, 45.58 70 ⇑P **P 00 37 41.0 -0.3**
baz=46,SNR=66
O11A Cowboy Ranch, 45.58 77 ⇓P **P 00 37 41.8 +0.5**
baz=46,SNR=45
J15A Blackfoot 45.62 72 ⇑P **P 00 37 42.1 +0.5**
baz=46,SNR=106
K14A Jones Ranch, D 45.66 73 ⇑P **P 00 37 42.3 +0.3**
baz=46,SNR=27
RCTC Rector, Farmer 45.71 84 ⇓P **P 00 37 42.1 -0.3**
baz=46,SNR=9.6
M13A Montello 45.76 75 ⇓P **P 00 37 43.2 +0.5**
baz=46,SNR=168
M13A Montello 45.76 75⇑*iP* **P 00 37 43.2 +0.4**
comp=Z,192nm,1.2s,mb5.9
M13A *ePcP* PcP 00 39 20.4 +0.6
M13A *eScP* ScP 00 43 08.1 -1.2
M13A *eS* **S 00 44 24.8 +1.6**
YMR Madison River 45.76 69⇑*iP* **P 00 37 42.6 -0.1**
comp=Z,277nm,1.2s,mb6.1
YMR *ePcP* PcP 00 39 20.8 +1.0
YMR *eScP* ScP 00 43 09.2 0.0
YMR *eS* **S 00 44 24.5 +1.3**
TIA Tai'an 45.77 276 ⇓P **P 00 37 43.5 +0.6**
TIA *eS* **S 00 44 26.0 +2.5**
TIA pmax pmax
comp=Z,400nm,1.2s,mb6.2
TIA LR LR
comp=N,440nm,15.0s,MS4.9
TIA LR LR
comp=E,1μm,18.0s,MS4.9
F18A Big Timber 45.80 67 ⇑P **P 00 37 42.7 -0.3**
baz=46,SNR=34
TPH Tonopah 45.86 81 PFAKE 00 38 00.0 +16
TPH LR LR
comp=Z,5μm,20.0s,MS5.4
P11A Circle Ranch, 45.87 78 ⇓P **P 00 37 44.3 +0.7**
baz=46,SNR=27
TIN Tinemaha 45.87 83 ⇓P **P 00 37 44.3 +0.6**
baz=46,SNR=12
GCMT Greycliff 45.89 67 *eP* **P 00 37 42.9 -0.8**
comp=Z,38nm,1.1s,mb5.2
GCMT *ePcP* PcP 00 39 20.2 0.0
GCMT *eScP* ScP 00 43 12.6 +2.8
YNR Norris Junctio 45.91 69⇑*eP* **P 00 37 44.6 +0.8**
comp=Z,183nm,1.2s,mb5.9
YNR *ePcP* PcP 00 39 20.7 +0.4
I16A Newdale 45.91 71 ⇑P **P 00 37 44.1 +0.2**
baz=46,SNR=32
Q10A Clear Creek Ra 45.91 79 ⇓P **P 00 37 44.5 +0.5**
baz=46,SNR=37
L14A Malta 45.92 74 ⇓P **P 00 37 44.6 +0.6**
baz=46,SNR=245
YFT Old Faithful 45.96 70⇑*eP* **P 00 37 45.2 +0.9**
comp=Z,124nm,1.0s,mb5.8
YFT *ePcP* PcP 00 39 22.0 +1.5
YFT *eScP* ScP 00 43 10.8 +0.8
YFT *eS* **S 00 44 29.2 +3.1**
K15A Arbon 45.97 73 ⇓P **P 00 37 45.3 +0.9**
baz=46,SNR=231
N13A Wendover, West 46.03 76 ⇓P **P 00 37 45.4 +0.5**
baz=46,SNR=18
N13A Wendover, West 46.03 76⇑*iP* **P 00 37 45.3 +0.4**
comp=Z,168nm,0.9s,mb6.0
N13A *ePcP* PcP 00 39 20.9 +0.1
N13A *ePP* PP 00 39 34.0 +1.0
N13A *eS* **S 00 44 24.5 -2.7**
O12A Currie 46.05 77 ⇓P **P 00 37 45.4 +0.4**
baz=46,SNR=226
VES Vestal, Richgr 46.10 84 ⇓P **P 00 37 45.1 -0.4**
baz=46,SNR=28
H17A Grant Village 46.15 70 ⇑P **P 00 37 47.0 +1.2**
baz=46,SNR=65
LKWY Lake 46.15 69⇑*iP* **P 00 37 46.4 +0.6**
LKWY *e* 00 39 21.5
LKWY *eS* **S 00 44 30.3 +1.5**
LKWY pmax pmax
comp=Z,85nm,1.0s,mb5.6
LKWY MLR MLR
comp=Z,3μm,20.0s,MS5.2
LKWY Lake 46.15 69⇑*iP* **P 00 37 46.4 +0.5**
comp=Z,86nm,1.0s,mb5.6
LKWY *ePcP* PcP 00 39 21.5 +0.3
LKWY *eS* **S 00 44 30.3 +1.5**
LKWY LR LR
comp=Z,3μm,20.0s,MS5.2
M14A Sheep Mountain 46.17 74 ⇓P **P 00 37 46.5 +0.5**
baz=46,SNR=142
J16A Bone 46.18 71 ⇓P **P 00 37 46.7 +0.7**
baz=46,SNR=78
G18A Lazy EL Ranch, 46.22 68 ⇑P **P 00 37 45.4 -0.9**
baz=46,SNR=12
IMW Indian Meadow 46.22 70⇑*iP* **P 00 37 46.4 0.0**
comp=Z,123nm,1.2s,mb5.7
IMW *ePcP* PcP 00 39 21.8 +0.4
IMW *ePP* PP 00 39 34.7 -0.3
IMW *eScP* ScP 00 43 11.8 +0.7
IMW *eS* **S 00 44 31.4 +1.7**
DCID1 Drake Creek 46.25 71 *eP* **P 00 37 47.1 +0.5**
comp=Z,94nm,1.2s,mb5.6
DCID1 *eS* **S 00 44 31.7 +1.6**
R10A Warm Springs 46.30 80 ⇓P **P 00 37 47.3 +0.3**
baz=46,SNR=9.2
RRI2 Red Ridge 46.31 71⇑*iP* **P 00 37 47.3 +0.2**
comp=Z,149nm,1.1s,mb5.8
RRI2 *ePcP* PcP 00 39 16.2 -5.5
RRI2 *eScP* ScP 00 43 12.3 +0.8
RRI2 *eS* **S 00 44 32.5 +1.4**
S10A Tonopah Range, 46.34 80 ⇓P **P 00 37 47.6 +0.2**
baz=46,SNR=149
CWC Cottonwood Cre 46.35 83 ⇓P **P 00 37 47.8 +0.3**
baz=46
HVU Hansel Valley 46.35 74⇑*iP* **P 00 37 47.8 +0.4**
HVU 00 39 22.2
HVU *e* 00 39 35.7
HVU *eS* **S 00 44 34.2 +2.5**
HVU pmax pmax
comp=Z,163nm,1.0s,mb5.9
HVU Hansel Valley 46.35 74⇑*iP* **P 00 37 47.8 +0.4**
comp=Z,163nm,1.0s,mb5.9
HVU PcP PcP 00 39 22.2 +0.3
HVU *ePP* PP 00 39 35.7 -0.7
HVU *eScP* ScP 00 43 03.3 -8.5
HVU *eS* **S 00 44 34.2 +2.5**
MOY Mondy 46.35 303 *eP* **P 00 37 48.3 +1.0**
MOY pmax pmax
comp=Z,302nm,2.7s,mb5.8
HHC Hu-ho-hao-te 46.36 285⇑*iP* **P 00 37 48.8 +1.3**
HHC PcP PcP 00 39 24.0 +2.1
HHC PP PP 00 39 38.6 +2.1
HHC ScP ScP 00 43 10.1 -1.7
HHC PcS PcS 00 43 17.5 +1.0
HHC S **S 00 44 30.3 -1.5**
HHC ScS ScS 00 47 36.0 -2.9
HHC SS SS 00 47 48.3 -9.0
HHC pmax pmax
comp=Z,320nm,1.2s,mb6.1
HHC pmax pmax
comp=Z,3μm,7.0s
HHC LR LR
comp=N,4μm,16.9s,MS5.6
HHC LR LR
comp=E,4μm,17.5s,MS5.6
HHC LR LR
comp=Z,3μm,16.3s,MS5.4
Q11A Duckwater 46.36 79 ⇓P **P 00 37 47.8 +0.3**
baz=46,SNR=42
GRAC Grapevine Rang 46.44 82 ⇓P **P 00 37 48.6 +0.4**
baz=46,SNR=12
TPAW Teton Pass 46.45 71⇑*iP* **P 00 37 48.0 -0.2**
comp=Z,64nm,1.0s,mb5.5
TPAW *eScP* ScP 00 43 12.6 +0.5
TPAW *eS* **S 00 44 35.1 +2.1**
K16A Soda Springs 46.45 72 ⇓P **P 00 37 49.1 +1.0**
baz=46,SNR=182
L15A Malad City 46.45 73 ⇑P **P 00 37 48.4 +0.1**
baz=46,SNR=71
RLMT Red Lodge 46.50 68 ⇑P **P 00 37 48.4 -0.2**
baz=46,SNR=85
RLMT Red Lodge 46.50 68⇑*iP* **P 00 37 48.1 -0.5**
comp=Z,122nm,1.1s,mb5.8
RLMT PcP PcP 00 39 22.1 -0.3
RLMT *eScP* ScP 00 43 12.1 -0.2
RLMT *eS* **S 00 44 34.8 +1.0**
RLMT LR LR
comp=Z,3μm,19.0s,MS5.2
GUMO Guam 46.54 229 LR LR 00 55 09.6
comp=Z,3μm,19.9s,MS5.3,baz=34,slow=33
GUMO Guam 46.54 229 *eP* **P 00 37 48.9 -0.2**
GUMO *eS* **S 00 44 35.9 +1.1**
GUMO MLR MLR
comp=Z,3μm,20.0s,MS5.3
REDW Red Top Meadow 46.58 71⇑*iP* **P 00 37 49.5 +0.3**
comp=Z,136nm,1.3s,mb5.7
REDW *ePcP* PcP 00 39 22.1 -0.6
REDW ScP ScP 00 43 10.6 -2.1
REDW *eS* **S 00 44 36.8 +1.9**
SNOW Snow King Moun 46.58 71⇑*eP* **P 00 37 49.3 +0.1**
comp=Z,123nm,1.2s,mb5.7
SNOW *eScP* ScP 00 43 18.0 +5.3
SNOW *eS* **S 00 44 35.1 +0.2**
SSE Sheshan 46.58 267 P **P 00 37 49.8 +0.5**
SSE PP PP 00 39 37.6 -1.4

SSE S **S** **00 44 34.8 -0.4**
SSE pmax pmax
comp=Z,280nm,1.0s,mb6.2
SSE pmax pmax
comp=Z,1µm,7.1s
SSE LR LR
comp=N,2µm,24.3s,MS4.9
SSE LR LR
comp=E,820nm,24.3s,MS4.9
SSE LR LR
comp=Z,2µm,20.3s,MS5.0
LOHW Long Hollow 46.58 70⇑ eP P 00 37 49.0 -0.1
comp=Z,74nm,1.3s,mb5.5
LOHW ePcP PcP 00 39 22.0 -0.7
LOHW eScP ScP 00 43 13.5 +0.9
LOHW eS **S** **00 44 36.2 +1.3**
ISA Isabella 46.60 84 ⇑P P 00 37 48.9 -0.5
baz=46,SNR=33
ISA Isabella 46.60 84 eP P 00 37 48.8 -0.6
ISA pmax pmax
comp=Z,59nm,1.1s,mb5.4
ISA Isabella 46.60 84 eP P 00 37 48.8 -0.6
comp=Z,59nm,1.1s,mb5.4
O13A Hicks Ranch, I 46.60 76 ⇑P P 00 37 49.6 +0.2
baz=46,SNR=9.0
SBC Santa Barbara 46.61 86 ⇓P P 00 37 49.6 +0.1
baz=46
N14A Grayback Hills 46.66 75 ⇑P P 00 37 50.2 +0.4
baz=47,SNR=212
J17A Brown Place, J 46.66 71 ⇓P P 00 37 50.1 +0.3
baz=47,SNR=37
BGU Big Grassy Mou 46.71 75⇑ eP P 00 37 50.4 +0.2
comp=Z,141nm,1.2s,mb5.8
BGU PcP PcP 00 39 22.0 -1.2
BGU eScP ScP 00 43 10.8 -2.5
BGU eS **S** **00 44 36.2 -0.5**
R11A Troy Canyon, C 46.71 79 ⇓P P 00 37 50.2 0.0
baz=47,SNR=47
ARVC Arvin 46.72 85 ⇓P P 00 37 49.7 -0.7
baz=47
M15A Larsen Ranch, 46.74 74 ⇑P P 00 37 50.7 +0.3
baz=47,SNR=262
Q12A Willow Creek R 46.75 78 ⇓P P 00 37 50.9 +0.3
baz=47,SNR=39
DAC Darwin (Calif) 46.76 83 PFAKE 00 38 00.0 +9.4
DAC LR LR
comp=Z,4µm,21.0s,MS5.4
AHID Auburn Hatcher 46.78 72⇑ iP P 00 37 50.5 -0.2
comp=Z,129nm,1.0s,mb5.8
AHID eS **S** **00 44 39.0 +1.2**
AHID LR LR
comp=Z,4µm,20.0s,MS5.4
SPUT South Promonto 46.83 74⇑ eP P 00 37 51.5 +0.3
comp=Z,201nm,1.2s,mb5.9
SPUT ePcP PcP 00 39 23.9 +0.3
SPUT ePP PP 00 39 40.7 -0.8
SPUT eScP ScP 00 43 14.5 +0.7
SPUT eS **S** **00 44 36.8 -1.7**
K17A Gardner Place, 46.90 72 ⇓P P 00 37 51.5 -0.1
baz=47,SNR=11
BSC Santa Cruz Isl 46.95 87 ⇓P P 00 37 52.2 0.0
baz=47
MPMC Manual Prospec 46.96 83 ⇑P P 00 37 52.4 +0.1
baz=47,SNR=71
P13A Bates Ranch, G 46.99 77 ⇓P P 00 37 52.7 +0.3
baz=47,SNR=100
I18A Diamond G Ranc 46.99 70 ⇓P P 00 37 52.7 +0.3
baz=47,SNR=21
L16A Fish Haven 47.02 73 ⇓P P 00 37 53.1 +0.5
baz=47,SNR=25
N15A Stansbury Isla 47.04 75 ⇑P P 00 37 53.1 +0.3
baz=47,SNR=110
FCC Fort Churchill 47.07 45⇑ eP P 00 37 51.7 -1.1
FCC e 00 39 23.4
FCC 00 39 46.6
FCC Fort Churchill 47.07 45⇑ eP P 00 37 51.7 -1.1
comp=Z,4.5nm,1.2s,mb4.3
FCC ePcP PcP 00 39 23.4 -0.7
FCC PP PP 00 39 46.6 +3.2
FCC eScP ScP 00 43 16.6 +2.1
FURC Furnace Creek, 47.09 82 ⇓P P 00 37 53.4 +0.1
baz=47,SNR=45
OSI Osito Adit 47.12 85 ⇑P P 00 37 53.7 +0.2
baz=47
J18A Kendall Valley 47.16 71 ⇓P P 00 37 53.6 -0.1
baz=47,SNR=80
HWUT Hardware Ranch 47.18 73⇑ eP P 00 37 54.1 +0.2
comp=Z,168nm,1.2s,mb5.8
HWUT ePcP PcP 00 39 26.2 +1.3
HWUT ePP PP 00 39 44.8 0.0
HWUT eScP ScP 00 43 15.5 +0.3
HWUT eS **S** **00 44 43.3 -0.3**
HWUT LR LR
comp=Z,3µm,20.0s,MS5.3
LRMC Laurel Mountai 47.21 84 ⇓P P 00 37 54.0 -0.1
baz=47
BLG Laguna Peak 47.23 86 ⇑P P 00 37 54.0 -0.4
baz=47,SNR=7.1
DUG Dugway 47.28 76 ⇓P P 00 37 55.1 +0.5
baz=47,SNR=397
DUG Dugway 47.28 76⇑ eP P 00 37 55.1 +0.4
DUG e 00 39 26.1
DUG eS **S** **00 44 44.7 -0.2**
DUG pmax pmax
comp=Z,302nm,1.1s,mb6.1
DUG MLR MLR
comp=Z,2µm,22.0s,MS5.1
DUG Dugway 47.28 76⇑ eP P 00 37 55.1 +0.5
comp=Z,302nm,1.1s,mb6.1
DUG ePcP PcP 00 39 26.1 +0.9
DUG eScP ScP 00 43 14.9 -0.7
DUG eS **S** **00 44 44.6 -0.3**
DUG LR LR
comp=Z,2µm,22.0s,MS5.1
Q13A Wheeler Ranch, 47.30 78 ⇑P P 00 37 55.1 +0.3
baz=47,SNR=59
L17A Cokeville 47.31 72 ⇑P P 00 37 55.1 +0.2
baz=47,SNR=23
R12A Pony Springs, 47.32 79 ⇓P P 00 37 55.1 0.0
baz=47,SNR=40
LAO LASA Array 47.37 65⇑ eP P 00 37 54.6 -0.6
comp=Z,91nm,1.0s,mb5.7
LAO ePcP PcP 00 39 25.7 +0.3
LAO eScP ScP 00 43 15.6 -0.3
LAO eS **S** **00 44 45.2 -0.8**
LAO LR LR
comp=Z,5µm,20.0s,MS5.5
NJ2 Nanjing 47.40 270 eP P 00 37 56.0 +0.3
NJ2 PP PP 00 39 45.0 -2.0
NJ2 S **S** **00 44 46.0 -0.8**
NJ2 SS SS 00 48 05.5 -9.0
NJ2 pmax pmax
comp=Z,220nm,0.9s,mb6.1
NJ2 pmax pmax
comp=Z,1µm,3.6s
NJ2 LR LR
comp=N,2µm,18.9s,MS5.3
NJ2 LR LR
comp=E,2µm,21.8s,MS5.3
NJ2 LR LR
comp=Z,5µm,22.1s,MS5.4
EDW2 Edwards Air Fo 47.40 85 ⇑P P 00 37 55.6 -0.1
baz=47,SNR=24
NOQ North Oquirrh 47.42 75⇑ iP P 00 37 55.7 -0.1
comp=Z,360nm,1.3s,mb6.1
NOQ ePcP PcP 00 39 24.8 -0.9
NOQ ePP PP 00 39 47.8 +0.8
NOQ eScP ScP 00 43 18.6 +2.3
NOQ eS **S** **00 44 46.6 -0.3**
O15A The Old Anders 47.44 75 ⇑P P 00 37 56.5 +0.6
baz=47,SNR=21
BTO Baotou 47.44 285 i P P 00 37 57.8 +1.9
BTO S **S** **00 44 47.1 -0.2**
U10A Ash Meadows, A 47.45 82 ⇑P P 00 37 56.4 +0.3
baz=47,SNR=69
K18A Toltan Ranch, 47.48 71 ⇑P P 00 37 56.7 +0.5
baz=47,SNR=124
P14A Drum Mountains 47.49 76 ⇓P P 00 37 56.7 +0.4
baz=47,SNR=117
DGMT Dagmar 47.50 62 ⇓P P 00 37 54.9 -1.3
baz=47
DGMT Dagmar 47.50 62 eP P 00 37 55.4 -0.8
comp=Z,101nm,0.9s,mb5.8
DGMT eScP ScP 00 43 18.2 +1.8
DGMT eS **S** **00 44 51.3 +3.4**
DGMT LR LR
comp=Z,5µm,21.0s,MS5.5
DECC Green Verdugo 47.60 86 ⇑P P 00 37 57.1 -0.2
baz=48
CTU Camp Tracy 47.62 74⇑ eP P 00 37 57.4 +0.1
S12A Delamar Landin 47.62 80 ⇓P P 00 37 57.9 +0.5
baz=48,SNR=113
T11A Corn Creek, Al 47.62 80 ⇑P P 00 37 57.6 +0.2
baz=48,SNR=305
N16A Rees Ranch, Co 47.69 74 ⇓P P 00 37 58.2 +0.4
baz=48,SNR=38
BW06 Boulder Array 47.70 71 ⇑P P 00 37 57.8 -0.1
baz=48,SNR=292
BW06 Boulder Array 47.70 71⇑ iP P 00 37 57.5 -0.4
comp=Z,302nm,1.3s,mb6.2
BW06 ePcP PcP 00 39 25.8 -0.9
BW06 LR LR
comp=Z,6µm,19.0s,MS5.6
PDAR Pinedale Array 47.70 71 P P 00 37 57.5 -0.3
comp=Z,150nm,1.0s,mb6.0,baz=302,slow=3.3,SNR=429
PDAR ScP ScP 00 43 16.6 -0.8
comp=Z,5.7nm,0.9s,baz=1.9,slow=2.2,SNR=5.3
PDAR S **S** **00 44 55.9 +5.1**
comp=Z,0.9nm,0.9s,baz=311,slow=13,SNR=4.0
PDAR LR LR 00 55 13.7
comp=Z,3µm,21.9s,MS5.2,baz=315,slow=33
PDAR Pinedale Array 47.70 71 P P 00 37 57.5 -0.3
PDAR ScP ScP 00 43 16.6 -0.8
PDAR S **S** **00 44 55.9 +5.1**
PDAR LR LR 00 55 13.7
Q14A Sevier Lake (B 47.73 77 ⇑P P 00 37 58.7 +0.5
baz=48,SNR=133
PASC Pasadena Art C 47.74 86 eP P 00 37 58.5 +0.1
comp=Z,558nm,1.8s,mb6.3
PASC ePcP PcP 00 39 25.1 -1.9
TIY Taiyuan 47.74 281 eP P 00 38 00.0 +1.7
TIY PP PP 00 39 51.4 +1.4
TIY S **S** **00 44 58.8 +7.2**
TIY LR LR
comp=N,2µm,16.0s,MS5.4
TIY LR LR
comp=E,3µm,19.3s,MS5.4
TIY LR LR
comp=Z,4µm,22.0s,MS5.3
MWC Mount Wilson 47.79 85⇑ eP P 00 37 58.6 -0.1
MWC pmax pmax
comp=Z,88nm,1.0s,mb5.7
MWC Mount Wilson 47.79 85⇑ eP P 00 37 58.6 -0.1
comp=Z,88nm,1.0s,mb5.7
M17A Scullys Gap (B 47.80 73 ⇓P P 00 37 58.7 -0.1
baz=48,SNR=58
R13A O'Grain Ranch, 47.81 78 ⇑P P 00 37 59.1 +0.3
baz=48,SNR=26
SHOC Shoshone 47.81 82 ⇓P P 00 37 58.7 -0.2
baz=48,SNR=67
JLU Jordanelle 47.86 74⇑ eP P 00 37 59.6 +0.4
comp=Z,234nm,1.2s,mb6.1
JLU eScP ScP 00 43 16.7 -1.4
JLU eS **S** **00 44 54.4 +1.3**
GSC Goldstone 47.87 83 ⇑P P 00 37 59.2 -0.1
baz=48,SNR=74
GSC Goldstone 47.87 83⇓ eP P 00 37 59.4 +0.1
GSC e 00 39 27.7
GSC eS **S** **00 44 58.7 +5.2**
GSC pmax pmax
comp=Z,110nm,1.0s,mb5.8
GSC Goldstone 47.87 83⇓ eP P 00 37 59.4 +0.1
comp=Z,110nm,1.0s,mb5.8
GSC ePcP PcP 00 39 27.7 +0.3
GSC eS **S** **00 44 58.7 +5.2**
NLU North Lily Min 47.87 75⇑ eP P 00 37 59.4 +0.1
comp=Z,106nm,1.0s,mb5.8
NLU eScP ScP 00 43 19.5 +1.4
NLU eS **S** **00 44 53.7 +0.3**
L18A Fontenelle, Gr 47.91 72 ⇑P P 00 37 59.6 0.0
baz=48,SNR=38
FMP Fort Macarthur 47.97 86 ⇑P P 00 37 59.9 -0.3
baz=48
P15A Leamington 47.98 76 ⇓P P 00 38 00.4 +0.3
baz=48,SNR=48
RRX Edison Barstow 48.02 84 ⇑P P 00 38 00.4 -0.1
baz=48
N17A Moffit Pass 48.02 74 ⇓P P 00 38 00.4 -0.1
baz=48,SNR=57
BFSC Mount Baldy Ra 48.03 85 ⇑P P 00 38 00.4 -0.1
baz=48,SNR=28
U11A Corn Creek 48.04 81 ⇓P P 00 38 00.7 +0.1
baz=48,SNR=16
O16A Springville 48.07 75 ⇑P P 00 38 01.2 +0.5
baz=48,SNR=96
K19A Absolon Red Bu 48.08 70 ⇓P P 00 38 00.1 -0.7
baz=48,SNR=122
DAU Daniels Canyon 48.09 74 eP P 00 38 01.8 +0.8
DAU e 00 39 28.4
DAU eS **S** **00 44 58.0 +1.5**
DAU Daniels Canyon 48.09 74 eP P 00 38 01.8 +0.8
DAU ePcP PcP 00 39 28.4 +0.3
DAU eScP ScP 00 43 20.5 +1.4
DAU eS **S** **00 44 58.0 +1.6**
MPU Maple Canyon 48.10 75⇑ eP P 00 38 01.4 +0.3
comp=Z,101nm,1.2s,mb5.7
MPU PcP PcP 00 39 28.2 +0.1
MPU ePP PP 00 39 53.6 +0.3
MPU eScP ScP 00 43 27.1 +8.0
MPU eS **S** **00 44 58.0 +1.3**
CIS Catalina Islan 48.11 86 ⇓P P 00 38 00.7 -0.5
baz=48
M18A Lyman 48.19 73 ⇓P P 00 38 01.6 -0.1
baz=48,SNR=56
L19A Farson 48.21 71 ⇑P P 00 38 01.5 -0.3
baz=48,SNR=31
S13A Holt Ranch, En 48.25 79 ⇑P P 00 38 02.5 +0.3
baz=48,SNR=135
T12A Moapa 48.26 80 ⇑P P 00 38 02.4 +0.1
baz=48,SNR=15
Q15A Fillmore 48.27 77 ⇑P P 00 38 02.6 +0.2
baz=48,SNR=37
R14A James Farms, M 48.32 78 ⇑P P 00 38 02.9 +0.1
baz=48
TUQ Turquoise Moun 48.34 83 ⇓P P 00 38 02.7 -0.2
baz=48,SNR=9.9
P16A Fountain Green 48.34 75 ⇑P P 00 38 03.5 +0.7
baz=48,SNR=9.9
ARUT Antelope Range 48.38 79 eP P 00 38 03.2 0.0
comp=Z,13µm,1.1s
V11A Godsprings 48.38 82 ⇓P P 00 38 03.4 +0.1
baz=48,SNR=42
BBRC Big Bear Solar 48.47 85 ⇑P P 00 38 04.0 0.0
baz=48
HEC Hector,Ludlow 48.47 84 ⇑P P 00 38 03.8 -0.2
baz=48,SNR=20
K20A Yellowstone Ra 48.48 70 ⇓P P 00 38 03.2 -0.7
baz=48,SNR=41
O17A Robinson Place 48.54 74 ⇓P P 00 38 05.1 +0.7
baz=48,SNR=71
U12A Valley of Fire 48.56 81 ⇓P P 00 38 04.8 +0.1
baz=48,SNR=29
S14A Cedar City 48.56 78 ⇓P P 00 38 04.8 +0.2
baz=48,SNR=20
CCUT Cedar City 48.58 79⇑ iP P 00 38 04.8 +0.1
comp=Z,52nm,1.0s,mb5.5
CCUT ePcP PcP 00 39 30.1 +0.2
CCUT eS **S** **00 45 05.2 +1.8**
T13A Saint George 48.58 80 ⇓P P 00 38 05.3 +0.5
baz=48,SNR=154
M19A Rock Springs 48.69 72 ⇑P P 00 38 05.0 -0.5
baz=49,SNR=22
MSU Marysvale 48.70 77 eP P 00 38 05.9 +0.2
MSU e 00 39 31.3
MSU Marysvale 48.70 77 eP P 00 38 05.8 +0.2
MSU ePcP PcP 00 39 31.3 +0.9
MSU eScP ScP 00 43 23.1 +1.4
N18A Larsen Ranch, 48.70 73 ⇑P P 00 38 05.2 -0.5
baz=49,SNR=40
MURC Murrieta 48.73 85 ⇑P P 00 38 05.8 -0.2
baz=49,SNR=13
TMUT Trail Mountain 48.80 75⇑ eP P 00 38 06.8 +0.3
comp=Z,293nm,1.2s,mb6.2
TMUT ePcP PcP 00 39 31.2 +0.5
TMUT eScP **S** **00 45 05.1 -1.5**
V12A Nelson 48.82 82 ⇓P P 00 38 06.7 +0.1
baz=49,SNR=28
R15A Junction 48.83 77 ⇓P P 00 38 07.4 +0.7
baz=49,SNR=18
L20A Wamsutter 48.87 71 ⇓P P 00 38 06.5 -0.5
baz=49,SNR=29
GMRC Granite Mounta 48.92 83 ⇑P P 00 38 07.3 -0.1
baz=49,SNR=63
O18A Roosevelt 48.94 74 ⇑P P 00 38 08.2 +0.8
baz=49,SNR=75
P17A Butcher Ranch, 48.98 75 ⇓P P 00 38 08.2 +0.4
baz=49,SNR=74
N19A John Jarvie Ra 49.05 73 ⇑P P 00 38 08.0 -0.3
baz=49,SNR=78
T14A Hurricane 49.06 79 ⇑P P 00 38 09.0 +0.5
baz=49,SNR=32
Q16A Castle Valley 49.06 76 ⇑P P 00 38 09.0 +0.6
baz=49,SNR=47
W12A Cal Nev Ari 49.08 82 ⇑P P 00 38 08.5 -0.1
baz=49
S15A Panguitch 49.11 78 ⇓P P 00 38 09.7 +0.8
baz=49,SNR=14
P18A Preston Nutter 49.18 75 ⇓P P 00 38 09.9 +0.5
baz=49,SNR=174
PFO Pinyon Flat Ob 49.20 85 ⇑P P 00 38 09.2 -0.3
baz=49,SNR=23
PFO Pinyon Flat Ob 49.20 85⇑ eP P 00 38 09.5 0.0
PFO pmax pmax
comp=Z,60nm,1.3s,mb5.5
PFO MLR MLR
comp=Z,4µm,22.0s,MS5.4
PFO Pinyon Flat Ob 49.20 85⇑ eP P 00 38 09.4 -0.1
comp=Z,60nm,1.3s,mb5.5
PFO eScP ScP 00 43 14.2 -10
PFO LR LR
comp=Z,4µm,22.0s,MS5.4
BELC Belle Mtn. Jos 49.22 84 ⇑P P 00 38 09.2 -0.6
baz=49,SNR=20
109C Camp Elliot, M 49.26 86 ⇓P P 00 38 09.9 -0.1
baz=49,SNR=7.6
R16A Teasdale 49.27 77 ⇓P P 00 38 11.0 +1.0
baz=49
V13A Grand Canyon W 49.27 81 ⇓P P 00 38 10.3 +0.2
baz=49,SNR=107
M20A Sweetwater, Wa 49.28 71 ⇑P P 00 38 10.2 +0.1
baz=49,SNR=89
SRU San Rafael 49.34 75 ⇓P P 00 38 10.9 +0.3
baz=49,SNR=203
SRU San Rafael 49.34 75⇑ iP P 00 38 10.7 +0.2
SRU e 00 39 33.5
SRU eS **S** **00 45 11.2 -2.8**
SRU pmax pmax
comp=Z,168nm,1.0s,mb6.0
SRU San Rafael 49.34 75⇑ iP P 00 38 10.7 +0.1
comp=Z,168nm,1.0s,mb6.0
SRU ePcP PcP 00 39 33.5 +0.8
SRU eScP ScP 00 43 23.4 -1.0
SRU eS **S** **00 45 11.2 -2.8**
U14A Mt Trumbull 49.41 80 ⇓P P 00 38 11.5 +0.4
baz=49,SNR=76
O19A Miners Draw (B 49.45 73 ⇓P P 00 38 11.4 +0.1
baz=49,SNR=229
L21A Rawlins 49.47 70 ⇓P P 00 38 11.1 -0.4
baz=49,SNR=180
T15A Red Dirt Ranch 49.52 79 ⇑P P 00 38 12.5 +0.5
baz=49,SNR=113
S16A Weppner Ranch, 49.55 77 ⇑P P 00 38 12.9 +0.7
baz=50,SNR=79
Q18A Rafter H Ranch 49.58 75 ⇑P P 00 38 12.3 -0.1
baz=50,SNR=130
N20A Spence Gulch, 49.63 72 ⇑P P 00 38 13.1 +0.3
baz=50,SNR=74
IRM Iron Mountain 49.65 83 ⇓P P 00 38 12.7 -0.3
baz=50,SNR=34
R17A Hanksville Air 49.66 76 ⇑P P 00 38 13.1 +0.1
baz=50,SNR=143
BAR Barrett 49.67 86⇑ eP P 00 38 13.0 -0.2
comp=Z,61nm,1.0s,mb5.6
BAR ePcP PcP 00 39 34.4 +0.4
MONP Monument Peak 49.69 86 ⇓P P 00 38 13.4 +0.1
baz=50,SNR=20
M21A Separation Pea 49.70 71 ⇑P P 00 38 12.6 -0.6
baz=50,SNR=60
RWWY Rawlins 49.74 71⇑ iP P 00 38 12.8 -0.7
comp=Z,184nm,1.3s,mb6.0
RWWY ePcP PcP 00 39 33.0 -1.0
RWWY eS **S** **00 45 18.2 -1.3**
BC3 Big Chuckawall 49.79 84 ⇑P P 00 38 13.4 -0.7
baz=50,SNR=15
W13A Hualapai Mount 49.82 82 ⇑P P 00 38 14.3 0.0
baz=50,SNR=75
KBS Kingsbay 49.86 357 eP P 00 38 14.5 +0.5
KBS AMB AMB 00 38 15.7
comp=Z,134nm,0.9s,mb6.0
KBS eS **S** **00 45 24.4 +3.9**
KBS AMS AMS 01 01 27.1
comp=Z,5µm,20.4s,MS5.5
KBS Kingsbay 49.86 357⇑ eP P 00 38 14.5 +0.5
KBS e 00 39 33.1
KBS pmax pmax
comp=Z,121nm,1.0s,mb5.9
KBS MLR MLR
comp=Z,5µm,19.0s,MS5.5
KBS Kingsbay 49.86 357⇑ eP P 00 38 14.4 +0.4
comp=Z,121nm,1.0s,mb5.9
KBS ePcP PcP 00 39 33.1 -0.8
KBS LR LR
comp=Z,5µm,19.0s,MS5.5
P19A Cripple Cowboy 49.95 74 ⇓P P 00 38 15.3 +0.2
baz=50,SNR=300
U15A North Rim 49.95 79 ⇓P P 00 38 15.8 +0.5
baz=50,SNR=204
V14A Boquillas Ranc 49.96 80 ⇑P P 00 38 15.7 +0.4
baz=50,SNR=118
L22A Ellis Ranch, M 49.99 70 ⇓P P 00 38 15.5 0.0
baz=50
DVTC Desert V Tower 50.05 86 ⇓P P 00 38 15.8 -0.2
baz=50,SNR=13
SWSC Sam W. Stewart 50.05 85 ⇓P P 00 38 15.4 -0.6
baz=50,SNR=7.9
O20A White River Ci 50.08 73 ⇑P P 00 38 16.1 -0.1
baz=50,SNR=92
T16A Glen Canyon Da 50.08 78 ⇑P P 00 38 15.7 -0.5
baz=50
S17A Black Ridge (B 50.10 77 ⇑P P 00 38 16.6 +0.2
baz=50,SNR=46
RSSD Black Hills 50.12 66⇑ eP P 00 38 15.2 -1.2
RSSD e 00 39 35.0
RSSD e 00 40 10.9
RSSD eS **S** **00 45 25.7 +0.9**
RSSD pmax pmax
comp=Z,49nm,1.1s,mb5.5
RSSD MLR MLR
comp=Z,3µm,22.0s,MS5.2
RSSD Black Hills 50.12 66⇑ eP P 00 38 15.2 -1.2
comp=Z,49nm,1.1s,mb5.5
RSSD ePcP PcP 00 39 35.0 -0.4
RSSD ePP PP 00 40 10.9 -0.6
RSSD eScP ScP 00 43 30.0 +2.4
RSSD eS **S** **00 45 25.7 +0.9**
RSSD LR LR
comp=Z,3µm,22.0s,MS5.2
N21A Black Mountain 50.12 72 ⇑P P 00 38 16.2 -0.3
baz=50,SNR=65
R18A Canyonlands Na 50.17 76 ⇓P P 00 38 16.4 -0.5
baz=50,SNR=128
X13A Yucca 50.19 82 ⇑P P 00 38 16.5 -0.5
baz=50,SNR=54
Q19A Hogan Spring (50.20 75 ⇓P P 00 38 16.7 -0.4
baz=50,SNR=148
W14A Seligman 50.25 81 ⇑P P 00 38 17.6 +0.1
baz=50,SNR=66
P20A De Beque 50.38 73 ⇓P P 00 38 18.1 -0.4
baz=50
SPITS Spitsbergen Ar 50.41 355 LR LR 00 58 45.0
comp=Z,4µm,21.8s,MS5.3,baz=355,slow=35
V15A Kaibab Nationa 50.42 80 ⇑P P 00 38 19.3 +0.6
baz=50,SNR=218
O21A Pagoda 50.49 72 ⇓P P 00 38 19.0 -0.3
baz=50,SNR=73
T17A Navajo Res., N 50.50 78 ⇑P P 00 38 19.0 -0.4
baz=50,SNR=41
S18A Hurst Farm, Bl 50.55 76 ⇑P P 00 38 19.6 -0.2
baz=50,SNR=192
GLA Glamis 50.58 84 ⇓P P 00 38 19.7 -0.3
baz=50,SNR=18
GLA Glamis 50.58 84⇑ eP P 00 38 19.6 -0.5
GLA e 00 39 37.5
GLA pmax pmax
comp=Z,64nm,0.9s,mb5.5
GLA Glamis 50.58 84⇑ eP P 00 38 19.6 -0.4
comp=Z,64nm,0.9s,mb5.5
GLA ePcP PcP 00 39 37.5 +0.2
R19A Curley Farm, L 50.62 75 ⇓P P 00 38 20.0 -0.3

baz=50,SNR=134
TATO Taipei 50.69 261⇑eP P 00 38 20.8 -0.2
TATO ePP PP 00 40 16.8 -0.3
TATO LR LR
comp=Z,4μm,22.0s,MS5.3
Y13A Salome 50.70 83 ⇑P P 00 38 20.6 -0.3
baz=51,SNR=21
N22A Wattenberg Ran 50.73 71 ⇓P P 00 38 21.2 +0.1
baz=51,SNR=73
PV04 Paradox Valley 50.77 75⇑eP P 00 38 21.4 -0.1
PV04 ePcP PcP 00 39 37.3 -0.6
W15A Williams 50.77 80 ⇓P P 00 38 22.1 +0.6
baz=51,SNR=27
Q20A Ridgley Place, 50.79 74 ⇓P P 00 38 21.1 -0.4
baz=51,SNR=85
U17A Shonto 50.84 78 ⇓P P 00 38 21.8 -0.2
baz=51
U16A Tuba City 50.85 79 ⇓P P 00 38 22.2 +0.2
baz=51,SNR=24
X14A Yava 50.85 81 ⇓P P 00 38 22.3 +0.2
baz=51,SNR=101
N23A Red Feather La 50.98 71 ⇑P P 00 38 23.0 +0.1
baz=51,SNR=75
T18A Mexican Hat 50.98 77 ⇓P P 00 38 22.3 -0.7
baz=51,SNR=116
YHNB Yeheng 50.99 261⇑eP P 00 38 22.9 -0.3
comp=Z,65nm,0.9s,mb5.6
YHNB PcP PcP 00 39 39.5 +0.6
YHNB eS S 00 45 42.5 +5.2
YHNB LR LR
comp=Z,3μm,22.0s,MS5.3
PHWY Pilot Hill 51.01 70⇑eP P 00 38 22.2 -1.0
comp=Z,69nm,1.5s,mb5.4
PHWY ePcP PcP 00 39 39.3 +0.5
PHWY eScP ScP 00 43 36.1 +4.6
PHWY eS S 00 45 36.6 -0.6
S19A Harvey Farm, M 51.04 76 ⇑P P 00 38 23.2 -0.3
baz=51,SNR=46
O22A Kremmling 51.08 72 ⇑P P 00 38 23.6 -0.1
baz=51,SNR=95
112A Yuma 51.08 85 ⇑P P 00 38 23.7 -0.2
baz=51
WUAZ Wupatki 51.11 79 ⇑P P 00 38 24.2 +0.3
baz=51,SNR=51
WUAZ Wupatki 51.11 79⇑eP P 00 38 24.1 +0.1
comp=Z,115nm,1.0s,mb5.8
WUAZ ePcP PcP 00 39 39.4 +0.2
WUAZ eScP ScP 00 43 36.8 +4.8
WUAZ eS S 00 45 40.7 +1.9
WUAZ LR LR
comp=Z,6μm,22.0s,MS5.5
Y14A Wickenburg 51.13 82 ⇑P P 00 38 23.8 -0.3
baz=51,SNR=43
PV01 Paradox Valley 51.14 75 eP P 00 38 24.0 -0.2
comp=Z,13μm,1.1s
NACB Ninganchiao 51.21 261⇑eP P 00 38 23.7 -1.2
comp=Z,125nm,1.0s,mb5.8
NACB ePcP PcP 00 39 37.2 -2.5
NACB ePP PP 00 40 20.7 -1.1
NACB eScP ScP 00 43 33.1 +0.4
NACB eS S 00 45 42.0 +1.6
Z13A Yuma Proving G 51.22 83 ⇑P P 00 38 24.6 -0.3
baz=51,SNR=42
R20A Redvale 51.22 75 ⇓P P 00 38 24.7 -0.1
baz=51,SNR=57
X15A Humboldt 51.25 81 ⇓P P 00 38 25.3 +0.3
baz=51,SNR=49
WHN Wuhan 51.25 272 ⇑P P 00 38 25.0 -0.1
WHN PP PP 00 40 24.8 +2.8
WHN S S 00 45 42.0 +1.2
WHN LR LR
comp=N,4μm,15.7s,MS5.7
WHN LR LR
comp=E,4μm,17.0s,MS5.7
WHN LR LR
comp=Z,5μm,15.9s,MS5.7
W16A Flagstaff 51.28 80 ⇓P P 00 38 25.9 +0.6
baz=51,SNR=106
Q21A Lamborn Mesa, 51.30 74 ⇑P P 00 38 25.5 +0.1
baz=51,SNR=89
V17A Tonalea, Kykot 51.40 79 ⇓P P 00 38 26.8 +0.6
baz=51,SNR=97
O23A Lake Granby, G 51.42 71 ⇓P P 00 38 26.8 +0.6
baz=51,SNR=59
113A Mohawk Valley, 51.43 84 ⇓P P 00 38 25.9 -0.6
baz=51
SMCO Snowmass 51.44 73⇑eP P 00 38 26.4 0.0
comp=Z,56nm,1.1s,mb5.4
SMCO ePcP PcP 00 39 40.2 -0.1
SMCO eScP ScP 00 43 35.1 +1.6
SMCO eS S 00 45 45.9 +2.6
U18A Rough Rock, Ch 51.45 78 ⇓P P 00 38 26.3 -0.2
baz=51,SNR=21
S20A Disappointment 51.46 75 ⇑P P 00 38 26.4 -0.2
baz=51,SNR=140
Y15A Casa Rosa Ranc 51.54 82 ⇑P P 00 38 27.2 0.0
baz=51,SNR=43
Z14A Wintersburg 51.55 83 ⇓P P 00 38 26.9 -0.5
baz=52,SNR=10
R21A Cimarron 51.61 74 ⇓P P 00 38 27.9 +0.3
baz=52,SNR=116
N24A Carr 51.65 70 ⇑P P 00 38 28.0 +0.1
baz=52,SNR=6.3
Q22A Crested Butte, 51.68 73 ⇑P P 00 38 28.5 +0.3
baz=52
T19A Beclabito 51.70 77 ⇓P P 00 38 28.3 -0.1
baz=52
MVCO Mesa Verde 51.77 76 ⇓P P 00 38 29.0 0.0
baz=52,SNR=51
MVCO Mesa Verde 51.77 76 PFAKE 00 38 40.0 +11
MVCO LR LR
comp=Z,4μm,22.0s,MS5.4
X16A Lo Mia Camp, P 51.79 80 ⇓P P 00 38 29.5 +0.4
baz=52,SNR=85
W17A Winslow 51.80 79 ⇑P P 00 38 29.4 +0.2
baz=52,SNR=9.9
ISCO Idaho Springs 51.86 71⇑iP P 00 38 29.7 +0.1
ISCO e 00 39 42.9
ISCO e 00 40 27.3
ISCO eS S 00 45 47.0 -2.0
ISCO pmax pmax
comp=Z,145nm,1.3s,mb5.8
ISCO MLR MLR
comp=Z,3μm,20.0s,MS5.3
ISCO Idaho Springs 51.86 71⇑iP P 00 38 29.7 +0.1
comp=Z,145nm,1.3s,mb5.8
ISCO ePcP PcP 00 39 42.9 +0.9
ISCO ePP PP 00 40 27.3 -0.1
ISCO eScP ScP 00 43 33.4 -1.8
ISCO eS S 00 45 47.0 -2.0
ISCO LR LR
comp=Z,3μm,20.0s,MS5.3
V18A Ganado 51.87 78 ⇑P P 00 38 29.9 +0.2
baz=52
SSLB Suanglung 51.89 261⇑iP P 00 38 30.3 +0.3
comp=Z,329nm,1.1s,mb6.2
SSLB eS S 00 45 49.2 -0.6
U19A Dine' College, 51.94 77 ⇓P P 00 38 30.0 -0.2
baz=52,SNR=18
YULB Yu-li 51.97 260⇑eP P 00 38 30.5 0.0
O24A Longmont 51.98 71 ⇓P P 00 38 31.1 +0.7
baz=52,SNR=10
P23A Jefferson 52.00 72 ⇑P P 00 38 31.6 +1.0
baz=52,SNR=49
114A Black Gap (USA 52.00 83 ⇓P P 00 38 30.4 -0.3
baz=52,SNR=28
Z15A Gila River Ind 52.09 82 ⇑P P 00 38 31.0 -0.3
baz=52,SNR=9.5
AGMN Agassiz Nation 52.11 57⇑eP P 00 38 29.5 -1.8
comp=Z,46nm,1.0s,mb5.4
AGMN ePcP PcP 00 39 42.4 -0.4
AGMN eScP ScP 00 43 34.3 -1.9
AGMN eS S 00 45 52.7 +0.5
AGMN LR LR
comp=Z,6μm,21.0s,MS5.6
Y16A Circle Bar Ran 52.12 81 ⇓P P 00 38 31.8 +0.3
baz=52,SNR=58
N25A Grover 52.12 70 ⇓P P 00 38 31.7 +0.2
baz=52
R22A Saguache, Gunn 52.18 74 ⇓P P 00 38 32.9 +1.0
baz=52,SNR=138
X17A Forest Lakes 52.23 80 ⇑P P 00 38 33.1 +0.7
baz=52,SNR=19
XAN Xi'an 52.29 279 P P 00 38 33.0 +0.2
XAN pP pP 00 38 40.9 -3.6
XAN sP sP 00 38 46.4 -2.8
XAN PP PP 00 40 32.3 +0.9
XAN S S 00 45 54.1 -1.0
XAN sS sS 00 46 05.3 -9.1
XAN pmax pmax
comp=Z,69nm,1.1s,mb5.5
XAN pmax pmax
comp=Z,260nm,11.2s
XAN LR LR
comp=N,2μm,18.5s,MS5.1
XAN LR LR
comp=E,1μm,20.8s,MS5.1
XAN LR LR
comp=Z,1μm,19.8s,MS5.0
Q23A Hartsel 52.30 72 ⇑P P 00 38 33.6 +0.7
baz=52,SNR=12
U20A Newcomb 52.30 77 ⇓P P 00 38 33.0 +0.1
baz=52
W18A Petrified Fore 52.38 79 ⇑P P 00 38 33.8 +0.3
baz=52,SNR=14
V19A Window Rock 52.41 78 ⇓P P 00 38 34.1 +0.4
baz=52,SNR=7.0
115A Sonoran Desert 52.44 83 ⇓P P 00 38 34.1 +0.2
baz=52
S22A 4UR Ranch, Cre 52.44 74 ⇑P P 00 38 34.8 +0.9
baz=52
TPUB Ta-pu 52.45 261⇑eP P 00 38 34.2 +0.1
comp=Z,325nm,1.1s,mb6.2
TPUB ePcP PcP 00 39 43.8 -0.5
TPUB eS S 00 46 00.2 +2.8
P24A Kohler Place, 52.46 71 ⇑P P 00 38 34.6 +0.6
baz=52,SNR=11
T21A Navajo Lake 52.50 75 ⇓P P 00 38 34.9 +0.5
baz=52,SNR=22
Z16A Peralta Trail, 52.51 82 ⇑P P 00 38 34.3 -0.2
baz=52,SNR=22
QZH Quanzhou 52.52 264⇑iP P 00 38 35.1 +0.4
QZH S S 00 45 56.0 -2.4
QZH pmax pmax
comp=Z,700nm,1.1s,mb6.5
QZH pmax pmax
comp=Z,4μm,3.4s
QZH LR LR
comp=N,2μm,14.0s,MS5.3
QZH LR LR
comp=E,680nm,12.6s,MS5.3
QZH LR LR
comp=Z,4μm,22.1s
TWG Pinlang 52.53 260⇑eP P 00 38 33.8 -0.9
comp=Z,142nm,1.1s,mb5.8
O25A Wiggins 52.55 70 ⇑P P 00 38 35.1 +0.4
baz=52,SNR=8.4
214A Organ Pipe Nat 52.58 84 ⇑P P 00 38 34.6 -0.4
baz=52,SNR=27
W19A Sanders 52.60 78 ⇑P P 00 38 35.5 +0.4
baz=52
X18A Snowflake 52.64 79 ⇓P P 00 38 35.7 +0.4
baz=52,SNR=34
Y17A Roosevelt 52.64 81 ⇑P P 00 38 35.5 +0.1
baz=52,SNR=46
Q24A Divide 52.67 72 ⇑P P 00 38 35.9 +0.4
baz=53,SNR=18
V20A Brimhall 52.71 77 ⇑P P 00 38 36.1 +0.1
baz=53,SNR=17
U21A Nageezi 52.80 76 ⇑P P 00 38 36.9 +0.4
baz=53,SNR=55
116A Eloy 52.86 82 ⇑P P 00 38 36.9 -0.2
baz=53,SNR=14
T22A Edith 52.87 75 ⇑P P 00 38 37.9 +0.8
baz=53,SNR=145
XMAS Kiritimati 52.90 150 eP P 00 38 37.3 -0.2
XMAS ePcP PcP 00 39 45.5 -0.6
XMAS eS S 00 46 05.2 +1.5
XMAS LR LR
comp=Z,6μm,20.0s,MS5.7
P25A Willow Gulch B 52.90 71 ⇓P P 00 38 38.0 +0.7
baz=53,SNR=36
S23A Nye Farm, Mont 52.97 74 ⇓P P 00 38 39.0 +1.2
baz=53
Y18A Canyon Day Jun 53.08 80 ⇑P P 00 38 39.1 +0.5
baz=53,SNR=42
ZALV Zalesovo Beam 53.09 312 P P 00 38 38.4 -0.1
comp=Z,52nm,0.9s,mb5.5,baz=62,slow=6.9,SNR=145
ZALV PcP PcP 00 39 47.4 +1.1
comp=Z,67nm,0.9s,baz=34,slow=6.1,SNR=6.3
ZALV ScP ScP 00 43 43.1 +2.8
comp=Z,2.2nm,0.7s,baz=4.2,slow=5.9,SNR=2.9
ZALV LR LR 01 03 00.7
comp=Z,6μm,18.6s,MS5.7,baz=295,slow=38
X19A St. Johns 53.11 79 ⇑P P 00 38 39.3 +0.4
baz=53,SNR=17
Z17A San Carlos Hig 53.13 81 ⇓P P 00 38 39.3 +0.2
baz=53,SNR=15
W20A Ramah 53.13 78 ⇓P P 00 38 39.1 0.0
baz=53,SNR=15
R24A Sanders Place, 53.17 73 ⇓P P 00 38 39.8 +0.5
baz=53,SNR=68
V21A Milan 53.22 77 ⇓P P 00 38 39.9 +0.2
baz=53
Q25A Bedland, Calha 53.24 71 ⇑P P 00 38 40.1 +0.4
baz=53,SNR=68
SDCO Great Sand Dun 53.24 73⇑eP P 00 38 40.5 +0.6
comp=Z,222nm,1.3s,mb5.9
SDCO ePcP PcP 00 39 45.3 -1.9
SDCO ePP PP 00 40 39.7 -0.2
SDCO eScP ScP 00 43 41.4 0.0
SDCO eS S 00 46 09.4 +1.4
SDCO LR LR
comp=Z,3μm,19.0s,MS5.3
OGNE Ogallala 53.25 68⇑eP P 00 38 39.5 -0.2
comp=Z,168nm,1.3s,mb5.8
OGNE eS S 00 46 07.3 -0.6
OGNE LR LR
comp=Z,2μm,20.0s,MS5.1
NVS Novosibirsk 53.26 314⇑iP P 00 38 39.5 -0.2
NVS eS S 00 46 02.9 -4.8
NVS pmax pmax
comp=N,64nm,1.0s
NVS pmax pmax
comp=E,111nm,1.0s
NVS pmax pmax
comp=Z,264nm,1.0s,mb6.1
NVS smax
comp=N,55nm,1.5s
NVS smax
comp=E,80nm,1.5s
U22A Llaves 53.32 76 ⇑P P 00 38 40.7 +0.3
baz=53,SNR=39
T23A Casias Ranch, 53.38 74 ⇓P P 00 38 41.5 +0.6
baz=53,SNR=41
216A Three Points, 53.39 83 ⇑P P 00 38 40.8 -0.2
baz=53
Y19A Nutrioso 53.45 79 ⇑P P 00 38 42.2 +0.9
baz=53,SNR=40
117A Oracle 53.45 82 ⇓P P 00 38 41.5 +0.1
baz=53,SNR=55
S24A Houchin Ranch, 53.49 73 ⇓P P 00 38 42.4 +0.8
baz=53,SNR=98
X20A Quemado 53.52 78 ⇑P P 00 38 42.6 +0.7
baz=53,SNR=33
Z18A Geronimo 53.55 81 ⇓P P 00 38 42.7 +0.6
baz=54
V22A San Miguel Ran 53.59 76 ⇓P P 00 38 42.4 +0.1
baz=54,SNR=39
TUC Tucson 53.60 82⇑eP P 00 38 42.5 0.0
TUC e pP 00 38 50.8 -3.4
TUC e 00 39 47.2
TUC e 00 40 42.8
TUC eS S 00 46 18.0 +5.0
TUC pmax pmax
comp=Z,70nm,1.2s,mb5.5
TUC MLR MLR
comp=Z,2μm,20.0s,MS5.2
TUC Tucson 53.60 82⇑eP P 00 38 42.5 -0.1
comp=Z,70nm,1.2s,mb5.5
TUC e pP 00 38 50.8 -3.4
TUC ePcP PcP 00 39 47.2 -1.5
TUC ePP PP 00 40 42.8 -0.5
TUC eScP ScP 00 44 09.8 +27
TUC eS S 00 46 18.0 +5.0
TUC LR LR
comp=Z,2μm,20.0s,MS5.2
W21A San Fidel 53.66 77 ⇑P P 00 38 43.0 +0.1
baz=54
U23A El Rito 53.75 75 ⇑P P 00 38 44.3 +0.7
baz=54,SNR=59
SUMG Summit 53.76 13⇑eP P 00 38 43.8 +0.6
comp=Z,387nm,0.9s,mb6.3
SUMG ePcP PcP 00 39 48.4 -0.1
SUMG Summit 53.76 13⇑iP P 00 38 43.7 +0.6
comp=Z,368nm,1.0s,mb6.3
SUMG i S S 00 46 13.3 -0.8
SUMG
comp=Z,5μm,19.0s
BJO Bjornoya 53.80 353 AMS AMS 01 06 10.6
comp=Z,4μm,21.4s,MS5.4
Z19A T-Link Ranch, 53.88 80 ⇑P P 00 38 45.0 +0.5
baz=54
118A Homack Ranch, 53.89 81 ⇑P P 00 38 44.8 +0.2
baz=54
S25A Robets Cordova 53.94 73 ⇑P P 00 38 45.3 +0.3
baz=54,SNR=71
217A Green Valley 53.95 83 ⇓P P 00 38 45.0 -0.1
baz=54,SNR=14
Y20A Horse Springs, 54.02 79 ⇑P P 00 38 46.4 +0.8
baz=54,SNR=62
X21A Alamocita Cree 54.02 78 ⇓P P 00 38 46.6 +1.0
baz=54,SNR=85
LZH Lanzhou 54.06 285⇑iP P 00 38 47.5 +1.7
LZH pP pP 00 38 59.8 +2.3
LZH PcP PcP 00 39 53.8 +3.5
LZH PP PP 00 40 47.1 -0.2
LZH eS S 00 46 16.0 -3.0
LZH sS sS 00 46 40.0 +1.6
LZH SS SS 00 49 59.0 -1.4
LZH pmax pmax
comp=Z,470nm,1.0s,mb6.4
LZH pmax pmax
comp=Z,2μm,4.0s
LZH LR LR
comp=N,6μm,17.8s
LZH LR LR
comp=Z,6μm,17.9s,MS5.7
V23A Ortiz Mt. (NFS 54.14 76 ⇑P P 00 38 47.6 +1.1
baz=54,SNR=86
W22A Albuquerque 54.17 77 ⇑P P 00 38 47.6 +0.9
baz=54
119A Ashpeak Ranch, 54.22 81 ⇓P P 00 38 47.1 +0.1
baz=54
U24A Moreno Valley 54.25 74 ⇓P P 00 38 48.2 +0.9
baz=54,SNR=44
218A Dragoon 54.29 82 ⇑P P 00 38 47.8 +0.2
baz=54,SNR=9.2
GTA Gaotai 54.30 290 ⇑P P 00 38 48.8 +1.3
GTA PcP PcP 00 39 50.6 -0.6
GTA ScP ScP 00 43 46.0 +0.1
GTA S S 00 46 22.1 0.0
GTA SS SS 00 50 05.0 +1.0
GTA pmax pmax
comp=Z,310nm,1.1s,mb6.2
GTA pmax pmax
comp=Z,2μm,10.1s
GTA LR LR
comp=N,5μm,16.9s,MS5.9
GTA LR LR
comp=E,6μm,15.8s,MS5.9
GTA LR LR
comp=Z,9μm,16.7s,MS5.9
T25A Trinidad 54.30 73 ⇑P P 00 38 48.2 +0.7
baz=54,SNR=201
Y21A Point of Rocks 54.39 78 ⇓P P 00 38 49.0 +0.8
baz=54,SNR=16
Z20A Nine Sixteen R 54.42 80 ⇑P P 00 38 48.9 +0.4
baz=54,SNR=22
LAZ Ladron 54.45 78 eP P 00 38 48.9 +0.2
comp=Z,36nm,1.0s,mb5.3
LAZ ePcP PcP 00 39 52.6 +0.8
X22A Bernardo 54.46 77 ⇓P P 00 38 49.8 +1.1
baz=54
ENH Enshi 54.48 276⇑eP P 00 38 48.8 -0.2
comp=Z,311nm,1.1s,mb6.2
ENH ePcP PcP 00 39 52.3 +0.3
ENH ePP PP 00 40 51.6 +0.3
ENH eScP ScP 00 43 49.3 +2.5
ENH LR LR
comp=Z,3μm,19.0s,MS5.5
ANMO Albuquerque 54.50 77⇑eP P 00 38 49.2 +0.2
ANMO e 00 39 54.3
ANMO eS S 00 46 24.2 -0.8
ANMO pmax pmax
comp=Z,62nm,1.3s
ANMO MLR MLR
comp=Z,3μm,19.0s
ANMO Albuquerque 54.50 77⇑eP P 00 38 49.2 +0.1
comp=Z,62nm,1.3s,mb5.5
ANMO ePcP PcP 00 39 54.3 +2.3
ANMO eS S 00 46 24.2 -0.9
ANMO LR LR
comp=Z,3μm,19.0s,MS5.4
W23A Werner Place, 54.55 76 ⇑P P 00 38 49.9 +0.5
baz=54,SNR=33
ECSD EROS Data Cent 54.56 62⇑eP P 00 38 47.3 -2.0
comp=Z,97nm,1.0s,mb5.8
ECSD ePcP PcP 00 39 51.9 -0.2
ECSD eScP ScP 00 43 47.8 +0.8
ECSD eS S 00 46 12.5 -13
ECSD LR LR
comp=Z,5μm,20.0s,MS5.6
EYMN Ely 54.62 56⇑eP P 00 38 48.1 -1.6
comp=Z,74nm,1.0s,mb5.7
EYMN ePcP PcP 00 39 51.8 -0.4
EYMN eScP ScP 00 43 47.6 +0.5
EYMN eS S 00 46 26.5 +0.2
EYMN LR LR
comp=Z,5μm,20.0s,MS5.6
V24A Rampart Ranch, 54.71 75 ⇑P P 00 38 51.4 +0.8
baz=55,SNR=49
LENM Lemitar 54.71 78 eP P 00 38 51.2 +0.6
219A White Tail Can 54.76 81 ⇓P P 00 38 51.2 +0.2
baz=55
120A U Bar Ranch, L 54.78 80 ⇓P P 00 38 51.4 +0.3
baz=55
U25A Circle Dot Ran 54.79 74 ⇓P P 00 38 51.6 +0.5
baz=55,SNR=148
Y22D IRIS PASSCAL I 54.80 78 ⇓P P 00 38 52.2 +0.9
baz=55
LPM Los Pinos Moun 54.82 77 eP P 00 38 51.9 +0.5
Z21A St. Cloud Mine 54.86 79 ⇑P P 00 38 52.3 +0.6
baz=55,SNR=30
Y22A Socorro 54.87 78 ⇓P P 00 38 52.4 +0.7
baz=55,SNR=32
X23A Hourglass Bar 54.91 77 ⇓P P 00 38 52.4 +0.3
baz=55,SNR=24
BNM Barren Site 54.93 77 eP P 00 38 52.5 +0.3
comp=Z,54nm,1.2s,mb5.5
BNM ePcP PcP 00 39 54.0 +0.3
BNM eScP ScP 00 43 49.1 +0.3
W24A Lazy 6 Ranch, 54.97 76 ⇓P P 00 38 53.0 +0.6
baz=55,SNR=86
V25A Rancho No Teng 55.03 75 ⇑P P 00 38 53.4 +0.5
baz=55,SNR=123
319A Douglas 55.17 82 ⇑P P 00 38 54.0 +0.1
baz=55,SNR=25
U26A Atchley Ranch, 55.19 73 ⇓P P 00 38 54.1 +0.1
baz=55,SNR=94
220A Playas Peak, P 55.28 81 ⇓P P 00 38 54.7 0.0
baz=55,SNR=102
121A Cookes Peak, D 55.31 80 ⇑P P 00 38 55.2 +0.3
baz=55,SNR=28
Z22A Elephant Butte 55.33 78 ⇓P P 00 38 55.4 +0.3
baz=55,SNR=35
X24A Lazy VL Ranch, 55.39 76 ⇓P P 00 38 55.9 +0.4
baz=55
Y23A Lovelace Mesa, 55.43 77 ⇑P P 00 38 56.2 +0.4
baz=55,SNR=72
W25A X Bar L Ranch, 55.54 75 ⇓P P 00 38 56.8 +0.3
baz=55,SNR=185
320A Kipp Ranch, An 55.67 81 ⇑P P 00 38 57.7 +0.2
baz=56,SNR=36
221A Mesquite Ranch 55.67 80 ⇓P P 00 38 57.7 +0.2
baz=56,SNR=14
122A Conniff Cattle 55.68 79 ⇓P P 00 38 58.5 +0.9
baz=56
Z23A Rita Site, Whi 55.78 78 ⇓P P 00 38 58.5 +0.2
baz=56,SNR=12
Y24A Capitan 55.81 77 ⇓P P 00 38 58.6 +0.1
baz=56,SNR=52
X25A Clemmons Ranch 55.88 76 ⇓P P 00 38 59.6 +0.6
baz=56
CBKS Cedar Bluff 55.97 69⇑eP P 00 38 59.2 -0.4
CBKS e 00 39 57.4
CBKS eS S 00 46 45.8 +1.2
CBKS pmax pmax
comp=Z,350nm,1.3s,mb6.2

CBKS MLR MLR
comp=Z,2μm,19.0s,MS5.3
CBKS Cedar Bluff 55.97 69⇑ eP P 00 38 59.2 -0.4
comp=Z,350nm,1.3s,mb6.2
CBKS ePcP PcP 00 39 57.4 -0.3
CBKS eS **S 00 46 45.8 +1.2**
CBKS LR LR
comp=Z,2μm,19.0s,MS5.3
222A Williams Famil 56.03 80 ⇑P P 00 39 00.3 +0.2
baz=56,SNR=24
W26A Owens Ranch, T 56.05 75 ⇓P P 00 39 00.4 +0.2
baz=56,SNR=46
123A Bell Site, Whi 56.18 79 ⇓P P 00 39 01.4 +0.2
baz=56,SNR=6.6
Z24A Sheeppen Canyo 56.26 77 ⇑P P 00 39 01.8 +0.1
baz=56,SNR=35
Y25A Mesa, Roswell 56.27 76 ⇑P P 00 39 01.8 0.0
baz=56,SNR=72
SFJD Kangerlussuaq 56.30 21 PKP2bc 01 09 11.6
comp=Z,13nm,1.0s,baz=341,slow=1.4,SNR=4.1
X26A CR and CF Fran 56.38 75 ⇓P P 00 39 02.5 -0.1
baz=56,SNR=64
W27A Bowe Ranch, En 56.49 74 ⇑P P 00 39 03.1 -0.2
baz=56,SNR=49
223A Chaparral, Ant 56.51 79 ⇓P P 00 39 03.8 +0.3
baz=56,SNR=9.1
124A Stringfield Ra 56.64 78 ⇑P P 00 39 04.6 +0.2
baz=56,SNR=33
Z25A Roswell 56.69 77 ⇓P P 00 39 04.9 +0.1
baz=57,SNR=38
X27A F and S Farms, 56.75 75 ⇑P P 00 39 05.3 +0.1
baz=57,SNR=9.5
Y26A Elida 56.80 76 ⇓P P 00 39 05.6 +0.1
baz=57,SNR=38
224A Cornudas Mount 57.02 78 ⇓P P 00 39 07.3 +0.2
baz=57,SNR=45
COWI Conover 57.05 56⇑ eP P 00 39 05.7 -1.4
comp=Z,30nm,0.8s,mb5.4
COWI ePcP PcP 00 40 01.9 +0.1
COWI eS **S 00 46 59.7 +1.1**
COWI LR LR
comp=Z,5μm,20.0s,MS5.6
Z26A Caprock 57.15 76 ⇓P P 00 39 08.0 -0.1
baz=57,SNR=32
125A Gardner Draw, 57.15 77 ⇑P P 00 39 08.2 +0.1
baz=57,SNR=33
GZH Guangzhou 57.16 267 P **P 00 39 04.8 -3.4**
GZH S **S 00 46 55.4 -5.2**
GZH LR LR
comp=N,1μm,24.0s,MS5.1
GZH LR LR
comp=E,1μm,19.6s,MS5.1
GZH LR LR
comp=Z,2μm,20.6s,MS5.2
Y27A Causey 57.23 75 ⇑P P 00 39 08.4 -0.1
baz=57
MNTX Cornudas Mount 57.37 79⇑ iP P 00 39 09.3 -0.3
comp=Z,58nm,1.1s,mb5.5
MNTX ePcP PcP 00 40 02.1 -1.1
MNTX eScP ScP 00 44 00.5 +1.0
MNTX eS **S 00 47 04.8 +1.6**
MNTX LR LR
comp=Z,1μm,19.0s,MS5.1
CPRX Cap Rock 57.38 77 eP **P 00 39 08.9 -0.8**
comp=Z,24nm,0.9s,mb5.2
MSTX Muleshoe 57.41 75 ⇓P P 00 39 09.6 -0.3
baz=57,SNR=14
225A Deer Hill, Car 57.43 78 ⇓P P 00 39 10.1 +0.1
baz=57,SNR=48
AMTX Amarillo 57.45 73⇑ eP P 00 39 10.0 -0.1
comp=Z,189nm,1.1s,mb6.0
AMTX ePcP PcP 00 40 03.6 +0.1
AMTX eS **S 00 47 05.6 +1.4**
AMTX LR LR
comp=Z,2μm,19.0s,MS5.3
324A Moseley Ranch, 57.48 79 ⇓P P 00 39 10.1 -0.3
baz=57,SNR=27
126A Clayton Basin, 57.55 77 ⇑P P 00 39 10.5 -0.4
baz=58,SNR=15
Z27A Tatum 57.59 76 ⇑P P 00 39 10.7 -0.4
baz=58,SNR=33
KEV Kevo 57.59 349 eP **P 00 39 07.4 -3.2**
KEV e 00 39 11.0
KEV e 00 41 16.5
KEV eS **S 00 47 04.8 -0.3**
KEV MLR MLR
comp=Z,4μm,21.0s,MS5.5
KEV Kevo 57.59 349 ep **P 00 39 11.0 +0.4**
KSU1 Kansas State U 57.60 67⇑ eP P 00 39 10.0 -1.1
comp=Z,193nm,1.1s,mb6.0
KSU1 ePcP PcP 00 40 03.5 -0.5
KSU1 eS **S 00 47 06.8 +0.7**
KSU1 LR LR
comp=Z,3μm,19.0s,MS5.4
CD2 Chengdu 57.61 280⇑ iP P 00 39 11.8 +0.5
CD2 PcP PcP 00 40 04.5 +0.3
CD2 PP PP 00 41 21.4 +2.3
CD2 S **S 00 47 02.8 -3.6**
CD2 SS SS 00 50 54.9 -1.6
CD2 pmax pmax
comp=Z,260nm,1.0s,mb6.2
CD2 pmax pmax
comp=Z,1μm,5.9s
CD2 LR LR
comp=N,4μm,20.2s
CD2 LR LR
comp=Z,4μm,20.2s,MS5.5
SCIA State Center 57.64 62⇑ eP P 00 39 10.5 -0.9
comp=Z,190nm,1.1s,mb6.0
SCIA ePcP PcP 00 40 04.5 +0.3
SCIA eScP ScP 00 44 02.7 +2.1
SCIA eS **S 00 47 05.9 -0.6**
SCIA LR LR
comp=Z,4μm,21.0s,MS5.5
GDL2 Guadalupe Moun 57.65 78 eP **P 00 39 11.5 0.0**
SCO Scoresbysund 57.65 8⇑ iP P 00 39 11.0 0.0
SCO pmax pmax
comp=Z,90nm,1.0s,mb5.8
SCO MLR MLR
comp=Z,4μm,18.0s,MS5.5
SCO Scoresbysund 57.65 8⇑ iP P 00 39 11.0 0.0
comp=Z,90nm,1.0s,mb5.8
SCO i 00 42 59.0
SCO
comp=Z,4μm,18.0s
325A Bean Ranch, Si 57.85 79 ⇓P P 00 39 12.9 -0.1
baz=58,SNR=62
CLNB Carlsbad 57.90 77 eP **P 00 39 13.0 -0.4**
comp=Z,1.6nm,0.3s,mb4.5
CLNB ePcP PcP 00 40 05.4 +0.1
226A Malaga, Loving 57.91 78 ⇑P P 00 39 13.1 -0.3
baz=58,SNR=44
127A Arkansas Junct 57.94 76 ⇑P P 00 39 12.8 -0.8
baz=58
JMIC Jan Mayen 57.96 3 eP **P 00 39 13.7 +0.5**
JMIC AMB AMB 00 39 15.4
comp=Z,182nm,1.6s,mb5.9
JMIC eS **S 00 47 10.6 +0.7**
JMIC AMS AMS 01 06 15.2
comp=Z,1μm,17.5s,MS5.1
JMIC Jan Mayen 57.96 3 LR LR 01 07 38.1
comp=Z,2μm,18.2s,MS5.2,baz=161,slow=40
ARCES ARCESS Array B 57.98 349 P **P 00 39 12.4 -0.9**
comp=Z,28nm,0.9s,mb5.3,baz=25,slow=6.8,SNR=23
ARCES PcP PcP 00 40 04.6 -0.4
comp=Z,30nm,0.9s,baz=1.9,slow=7.3,SNR=5.7
ARCES LR LR 01 07 48.4
comp=Z,4μm,18.1s,MS5.6,baz=179,slow=40
ARCES PKPPKP 01 08 56.6
comp=Z,9.4nm,1.2s,baz=297,slow=6.7,SNR=4.5
ARCES PKP2bc 01 09 06.7
comp=Z,2.0nm,0.7s,baz=35,slow=4.4,SNR=4.3
ARCES ARCESS Array B 57.98 349 P **P 00 39 12.4 -0.9**
ARCES 00 40 04.6
ARCES pmax pmax
comp=Z,28nm,0.9s
ARCES MLR MLR
comp=Z,4μm,18.2s
ARCES pmax pmax
comp=Z,9.0nm,1.2s
ARCES pmax pmax
comp=Z,2.0nm,0.7s
ARCES ARCESS Array B 57.98 349 P **P 00 39 12.4 -0.9**
ARCES PcP PcP 00 40 04.6 -0.4
ARCES LR LR 01 07 48.4
ARCES P'P' 01 08 56.6

ARCES ⇑e 01 09 06.7
ARE0 ARCESS Array S 57.98 349 eP **P 00 39 12.9 -0.4**
ARE0 ePcP PcP 00 40 05.0 0.0
ARE0 PP PP 00 41 21.2 -0.2
KURK Kurchatov 58.08 313⇑ iP P 00 39 15.0 +0.7
KURK e 00 40 06.1
KURK e 00 41 22.1
KURK eS **S 00 47 13.0 +1.0**
KURK pmax pmax
comp=Z,525nm,1.1s,mb6.5
KURK MLR MLR
comp=Z,11μm,19.0s,MS6.0
KURK Kurchatov 58.08 313⇑ iP P 00 39 15.0 +0.7
comp=Z,525nm,1.1s,mb6.5
KURK ePcP PcP 00 40 06.1 +0.4
KURK ePP PP 00 41 22.1 -0.7
KURK eS **S 00 47 13.0 +1.0**
KURK LR LR
comp=Z,11μm,19.0s,MS6.0
KURK Kurchatov 58.08 313 P **P 00 39 15.2 +0.9**
SNR=236
LVZ Lovozero 58.22 345 ceP **P 00 39 13.8 -1.2**
LVZ pmax pmax
comp=Z,84nm,1.0s,mb5.7
LVZ Lovozero 58.22 345 eP **P 00 39 13.9 -1.1**
LVZ eS **S 00 47 14.8 +1.5**
LVZ LR LR
comp=Z,4μm,20.0s,MS5.6
WMQ Urumqi 58.22 302 P **P 00 39 17.3 +1.9**
WMQ PcP PcP 00 40 07.9 +1.5
WMQ PP PP 00 41 28.4 +4.2
WMQ ScP ScP 00 44 01.4 -1.7
WMQ S **S 00 47 12.6 -1.4**
WMQ ScS ScS 00 48 57.8 -3.6
WMQ SS SS 00 51 06.6 +1.2
WMQ pmax pmax
comp=Z,200nm,1.1s,mb6.1
WMQ pmax pmax
comp=Z,2μm,4.5s
WMQ LR LR
comp=N,7μm,19.0s,MS5.9
WMQ LR LR
comp=E,7μm,20.9s,MS5.9
WMQ LR LR
comp=Z,12μm,20.1s,MS6.0
425A Indio Mountain 58.24 79 ⇓P P 00 39 15.8 0.0
baz=58,SNR=78
227A Bennet, Jal 58.44 77 ⇑P P 00 39 16.8 -0.3
baz=58
326A Caldwell Ranch 58.49 78 ⇓P P 00 39 17.3 -0.2
baz=58,SNR=30
TRO Tromso 58.55 352 eP **P 00 39 16.8 -0.5**
TRO eS **S 00 47 24.4 +6.7**
TRO AMS AMS 01 08 31.1
comp=Z,2μm,20.7s,MS5.3
JFWS Jewell Farm 58.59 59⇑ eP P 00 39 16.3 -1.7
JFWS e 00 40 07.4
JFWS eS **S 00 47 17.4 -1.5**
JFWS pmax pmax
comp=Z,105nm,1.0s,mb5.8
JFWS MLR MLR
comp=Z,6μm,20.0s,MS5.7
JFWS Jewell Farm 58.59 59⇑ eP P 00 39 16.3 -1.7
comp=Z,105nm,1.0s,mb5.8
JFWS ePcP PcP 00 40 07.4 -0.4
JFWS eS **S 00 47 17.4 -1.6**
JFWS LR LR
comp=Z,6μm,20.0s,MS5.7
APA Apatity 58.72 345⇑ iP P 00 39 18.3 -0.2
APA i 00 40 08.8
APA e 00 41 32.0
APA eS **S 00 47 12.0 -7.8**
APA i PS 00 47 42.0
APA eSS SS 00 51 20.0 +7.7
APA pmax pmax
comp=Z,36nm,1.2s,mb5.3
APA pmax pmax
comp=Z,1μm,20.0s
APA MLR MLR
comp=Z,5μm,19.0s,MS5.7
KTK1 Kautokeino 58.73 350 eP **P 00 39 18.8 +0.2**
KTK1 AMB AMB 00 39 34.0
comp=Z,96nm,2.3s,mb5.4
KTK1 AMS AMS 01 08 55.7
comp=Z,4μm,17.8s,MS5.6
327A Balmorhea Ranc 58.76 78 ⇓P P 00 39 18.9 -0.4
baz=59
426A McDonald Obser 58.91 79 ⇓P P 00 39 19.9 -0.5
baz=59,SNR=32
GYA Guiyang 58.92 274⇑ iP P 00 39 20.8 +0.3
GYA PcP PcP 00 40 11.0 +1.6
GYA PP PP 00 41 34.8 +4.0
GYA ScP ScP 00 44 06.3 -0.2
GYA S **S 00 47 23.9 +0.2**
GYA SS SS 00 51 18.0 +0.7
GYA pmax pmax
comp=Z,70nm,1.0s,mb5.7
GYA pmax pmax
comp=Z,180nm,5.4s
GYA LR LR
comp=N,5μm,19.8s,MS5.8
GYA LR LR
comp=E,4μm,20.0s,MS5.8
GYA LR LR
comp=Z,6μm,19.9s,MS5.8
MK31 Makanchi Array 59.00 307⇑ iP P 00 39 20.9 +0.1
MK31 e 00 40 09.2
MK31 e 00 41 30.3
MK31 eS **S 00 47 25.7 +1.6**
MKAR Makanchi Array 59.00 307 P **P 00 39 20.8 0.0**
comp=Z,107nm,0.9s,mb5.9,baz=56,slow=6.9,SNR=337
MKAR LR LR 01 06 17.3
comp=Z,6μm,20.1s,MS5.7,baz=41,slow=38
MKAR PKPPKP 01 08 46.0
comp=Z,1.0nm,0.9s,baz=215,slow=4.0,SNR=4.9
MKAR Makanchi Array 59.00 307 P **P 00 39 20.8 0.0**
MKAR pmax pmax
comp=Z,107nm,0.9s
MKAR MLR MLR
comp=Z,6μm,20.1s
MKAR pmax pmax
comp=Z,1.0nm,0.9s
MKAR Makanchi Array 59.00 307 P **P 00 39 20.8 0.0**
MKAR LR LR 01 06 17.3
MKAR P'P' 01 08 46.0
328A Wristen Ranch, 59.17 77 ⇑P P 00 39 21.5 -0.6
baz=59,SNR=53
427A Hayter Ranch, 59.17 78 ⇑P P 00 39 21.8 -0.4
baz=59,SNR=21
WMOK Wichita Mounta 59.29 72⇑ iP P 00 39 22.7 -0.2
WMOK e 00 40 08.9
WMOK e 00 41 33.5
WMOK eS **S 00 47 29.5 +1.4**
WMOK MLR MLR
comp=Z,3μm,19.0s,MS5.4
526A Mary Lane Ranc 59.30 79 ⇑P P 00 39 23.0 -0.1
baz=59
527A Woodward Ranch 59.54 79 ⇓P P 00 39 24.3 -0.5
baz=59,SNR=30
626A Big Bend Ranch 59.63 80 ⇑P P 00 39 25.0 -0.3
baz=60,SNR=54
428A Kincaid Ranch, 59.70 78 ⇑P P 00 39 25.9 0.0
baz=60,SNR=53
528A Cox Ranch, San 60.03 78 ⇓P P 00 39 27.9 -0.2
baz=60,SNR=7.8
VOSK Vostochnaya 60.04 318 P **P 00 39 27.8 0.0**
VOSK pmax pmax
comp=Z,525nm,1.7s,mb6.3
SOKR Solikamsk 60.06 330 c iP **P 00 39 28.2 +0.4**
SOKR PPP 00 43 12.9
SOKR S **S 00 47 43.4 +6.1**
SOKR SS SS 00 51 39.0 +5.4
SOKR pmax pmax
comp=Z,230nm,0.9s,mb6.2
SOKR MLR MLR
comp=Z,4μm,16.0s,MS5.6
BVAR Borovoye Array 60.07 319 P **P 00 39 29.0 +1.0**
comp=Z,115nm,0.8s,mb6.0,baz=54,slow=7.5,SNR=460
BVAR PcP PcP 00 40 13.3 -0.2
comp=Z,48nm,0.8s,baz=29,slow=3.4,SNR=4.1
BVAR PKPPKP 01 08 49.4
comp=Z,0.2nm,0.2s,baz=195,slow=4.0,SNR=3.6
TXAR Lajitas Array 60.07 79 P **P 00 39 28.1 -0.4**
comp=Z,42nm,1.1s,mb5.4,baz=305,slow=4.4,SNR=92
TXAR PcP PcP 00 40 14.1 +0.1
comp=Z,46nm,1.3s,baz=291,slow=3.5,SNR=4.0
TXAR S **S 00 47 40.9 +2.5**
comp=Z,0.3nm,0.6s,baz=27,slow=4.2,SNR=2.2
TXAR LR LR 01 05 45.2
comp=Z,3μm,18.1s,MS5.5,baz=355,slow=36
TXAR PKPPKP 01 08 52.0
comp=Z,1.2nm,1.0s,baz=108,slow=4.1,SNR=4.2
TXAR Lajitas Array 60.07 79 P **P 00 39 28.1 -0.3**
TXAR 00 40 14.1
TXAR S **S 00 47 40.9 +2.5**
TXAR pmax pmax
comp=Z,42nm,1.1s
TXAR MLR MLR
comp=Z,3μm,18.1s
TXAR pmax pmax
comp=Z,1.0nm,1.0s
TXAR Lajitas Array 60.07 79 P **P 00 39 28.1 -0.4**
TXAR PcP PcP 00 40 14.1 +0.1
TXAR S **S 00 47 40.9 +2.5**
TXAR LR LR 01 05 45.2
TXAR P'P' 01 08 52.0
BRVK Borovoye 60.09 319⇑ iP P 00 39 29.1 +0.9
BRVK e 00 41 41.3
BRVK eS **S 00 47 34.2 -3.7**
BRVK pmax pmax
comp=Z,539nm,1.3s,mb6.4
BRVK MLR MLR
comp=Z,14μm,21.0s,MS6.1
BRVK Borovoye 60.09 319⇑ iP P 00 39 29.1 +0.9
comp=Z,539nm,1.3s,mb6.4
BRVK ePP PP 00 41 41.3 +0.8
BRVK eS **S 00 47 34.2 -3.7**
BRVK LR LR
comp=Z,14μm,21.0s,MS6.1
BRVK Borovoye 60.09 319 P **P 00 39 29.1 +0.9**
SNR=181
627A Terlingua Ranc 60.16 79 ⇓P P 00 39 28.9 -0.2
baz=60,SNR=51
628A Black Gap, Mar 60.45 79 ⇓P P 00 39 30.6 -0.4
baz=60,SNR=59
ZRNK Zerenda 60.69 319 i P **P 00 39 33.0 +0.7**
ZRNK pmax pmax
comp=Z,769nm,1.2s,mb6.7
HDIL Hopedale 60.73 61⇑ eP P 00 39 31.3 -1.4
comp=Z,344nm,1.3s,mb6.3
HDIL ePcP PcP 00 40 15.9 -0.5
HDIL LR LR
comp=Z,5μm,19.0s,MS5.7
SVE Sverdlovsk 60.94 326⇓ eP P 00 39 35.3 +1.4
SVE e 00 40 17.1
SVE e 00 41 50.7
SVE ePPP 00 43 23.0
SVE eS **S 00 47 50.5 +1.8**
SVE pmax pmax
comp=Z,410nm,1.2s,mb6.4
SVE MLR MLR
comp=Z,8μm,19.0s,MS5.9
SCHQ Schefferville 60.98 37 P **P 00 39 33.2 -1.0**
comp=Z,131nm,1.0s,mb6.0,baz=328,slow=6.5,SNR=79
SCHQ S **S 00 47 48.9 -0.4**
comp=Z,2.5nm,0.8s,baz=176,slow=19,SNR=2.1
SCHQ LR LR 01 08 37.6
comp=Z,5μm,19.2s,MS5.7,baz=320,slow=39
SCHQ Schefferville 60.98 37⇑ eP P 00 39 33.0 -1.2
SCHQ PcP PcP 00 40 17.5 +0.3
SCHQ ePP PP 00 41 45.5 -2.7
SCHQ eS **S 00 47 51.1 +1.8**
SCHQ LR LR
comp=Z,7μm,19.0s,MS5.8
CCM Cathedral Cave 61.38 64⇑ eP P 00 39 34.9 -2.3
CCM e 00 40 18.9
CCM eS **S 00 47 56.3 +1.5**
CCM MLR MLR
comp=Z,2μm,21.0s,MS5.3
CCM Cathedral Cave 61.38 64⇑ eP P 00 39 34.9 -2.3
CCM ePcP PcP 00 40 18.9 -0.2
CCM eScP ScP 00 44 18.2 +1.0
CCM eS **S 00 47 56.3 +1.5**
CCM LR LR
comp=Z,2μm,21.0s,MS5.3
SLM Saint Louis 61.54 63 eP **P 00 39 37.4 -0.9**
SLM e 00 40 19.4
SLM pmax pmax
comp=Z,51nm,0.8s,mb5.7
SLM Saint Louis 61.54 63 eP **P 00 39 37.4 -0.8**
comp=Z,51nm,0.8s,mb5.7
SLM ePcP PcP 00 40 19.4 -0.4
JCT Junction City 61.64 76⇑ eP P 00 39 37.9 -1.1
JCT e 00 41 55.0
JCT eS **S 00 47 59.3 +1.0**
JCT pmax pmax
comp=Z,138nm,1.4s,mb5.9
JCT MLR MLR
comp=Z,5μm,22.0s,MS5.7
JCT Junction City 61.64 76⇑ eP P 00 39 37.9 -1.1
comp=Z,138nm,1.4s,mb5.9
JCT ePP PP 00 41 55.0 +0.2
JCT eScP ScP 00 44 20.5 +2.0
JCT eS **S 00 47 59.3 +0.9**
JCT LR LR
comp=Z,5μm,22.0s,MS5.7
FVM French Village 61.89 64⇑ eP P 00 39 39.4 -1.2
FVM e 00 40 21.1
FVM eS **S 00 47 59.8 -1.5**
FVM pmax pmax
comp=Z,78nm,0.9s,mb5.8
FVM French Village 61.89 64⇑ eP P 00 39 39.4 -1.3
comp=Z,78nm,0.9s,mb5.8
FVM ePcP PcP 00 40 21.1 -0.1
FVM eS **S 00 47 59.8 -1.6**
ARU Arti 61.96 327 P **P 00 39 41.8 +1.0**
comp=Z,2μm,1.2s,mb7.2
ARU Arti 61.96 327 c iP **P 00 39 41.6 +0.8**
ARU e*PP pP 00 39 53.2 +0.5
ARU e 00 40 20.4
ARU e 00 41 56.6
ARU ePPP 00 43 29.6
ARU S **S 00 48 04.6 +2.9**
ARU 00 49 29.4
ARU SS SS 00 52 06.7 +3.2
ARU pmax pmax
comp=Z,451nm,1.0s,mb6.5
ARU MLR MLR
comp=Z,8μm,20.0s,MS5.8
ARU Arti 61.96 327⇑ iP P 00 39 41.5 +0.7
ARU ePcP PcP 00 40 21.1 0.0
ARU eS **S 00 48 01.7 +0.1**
ARU LR LR
comp=Z,8μm,20.0s,MS5.9
MOR8 Moi Rana 62.32 353 e **P 00 39 40.8 -2.2**
KMI Kunming 62.34 276 ⇑P P 00 39 44.3 +0.5
KMI PcP PcP 00 40 23.4 +0.2
KMI PP PP 00 42 05.6 +4.6
KMI ScP ScP 00 44 20.9 -0.7
KMI PcS PcS 00 44 27.1 +0.5
KMI S **S 00 48 04.3 -3.0**
KMI SKS 00 49 29.3
KMI SS SS 00 52 10.4 -0.4
KMI pmax pmax
comp=Z,70nm,1.1s,mb5.7
KMI pmax pmax
comp=Z,970nm,6.3s
KMI LR LR
comp=N,2μm,21.8s
KMI LR LR
comp=E,2μm,14.9s
KMI LR LR
comp=Z,2μm,17.2s,MS5.4
QIZ Qiongzhong 62.34 266 P **P 00 39 45.1 +1.2**
QIZ S **S 00 48 06.8 -0.6**
QIZ pmax pmax
comp=Z,62nm,1.3s,mb5.6
QIZ pmax pmax
comp=Z,1μm,9.9s
QIZ LR LR
comp=N,990nm,21.9s,MS5.0
QIZ LR LR
comp=E,410nm,20.1s,MS5.0
QIZ LR LR
comp=Z,1μm,24.7s,MS5.0
QIZ Qiongzhong 62.34 266 eP **P 00 39 44.7 +0.8**
comp=Z,81nm,1.2s,mb5.7
QIZ e pP 00 39 54.8 -1.0
QIZ PcP PcP 00 40 24.2 +1.0

QIZ eScP ScP 00 44 24.6 +2.8
QIZ eS **S** **00 48 10.3 +2.9**
QIZ LR LR
comp=Z,1μm,19.0s,MS5.1
MIAR Mount Ida 62.50 68⇑eP P 00 39 44.5 -0.2
MIAR e 00 40 23.8
MIAR e 00 42 01.8
MIAR eS **S** **00 48 09.1 0.0**
MIAR pmax pmax
comp=Z,326nm,1.3s,mb6.3
MIAR MLR MLR
comp=Z,2μm,19.0s,MS5.4
MIAR Mount Ida 62.50 68⇑eP P 00 39 44.5 -0.3
comp=Z,326nm,1.3s,mb6.3
MIAR ePcP PcP 00 40 23.8 +0.1
MIAR ePP PP 00 42 01.8 -0.4
MIAR eS **S** **00 48 09.1 +0.1**
MIAR LR LR
comp=Z,2μm,19.0s,MS5.4
AAM Ann Arbor 62.52 56 eP P 00 39 43.5 -1.3
AAM eS **S** **00 48 10.7 +1.6**
AAM pmax pmax
comp=Z,79nm,1.0s,mb5.8
AAM MLR MLR
comp=Z,4μm,21.0s,MS5.5
AAM Ann Arbor 62.52 56 eP P 00 39 43.5 -1.3
comp=Z,79nm,1.0s,mb5.8
AAM eS **S** **00 48 10.7 +1.6**
AAM LR LR
comp=Z,4μm,21.0s,MS5.5
OLIL Olney 62.66 62⇑eP P 00 39 44.6 -1.2
comp=Z,162nm,1.1s,mb6.1
OLIL ePcP PcP 00 40 23.6 -0.6
SIUC Southern Illin 62.76 63 eP P 00 39 45.5 -1.0
comp=Z,66nm,1.0s,mb5.7
SADO Sadowa 63.04 51 LR LR 01 07 25.6
comp=Z,5μm,21.4s,MS5.7,baz=342,slow=36
UALR University of 63.05 67⇑iP P 00 39 47.3 -1.1
comp=Z,76nm,1.0s,mb5.8
UALR ePcP PcP 00 40 26.3 +0.4
UALR ePP PP 00 42 04.6 -2.5
PARMO Parma 63.20 64⇑eP P 00 39 48.3 -1.1
PARMO ScP ScP 00 44 29.1 +3.8
PARMO eS **S** **00 48 18.4 +0.6**
BLO Bloomington 63.22 60⇑eP P 00 39 48.0 -1.5
BLO e 00 40 26.7
BLO pmax pmax
comp=Z,120nm,1.2s,mb5.9
BLO Bloomington 63.22 60⇑eP P 00 39 48.0 -1.4
comp=Z,120nm,1.2s,mb5.9
BLO ePcP PcP 00 40 26.7 +0.1
BORG Borgarnes 63.28 10 LR LR 01 09 40.2
comp=Z,2μm,18.8s,MS5.3,baz=333,slow=38
JOF Joensuu 63.35 344 eP P 00 39 49.2 -0.8
JOF pmax pmax
comp=Z,77nm,1.0s,mb5.8
JOF Joensuu 63.35 344 ep P 00 39 49.2 -0.8
comp=Z,77nm,1.0s,mb5.8
HBAR Harrisburg 63.47 66⇑eP P 00 39 50.3 -0.9
HBAR ePcP PcP 00 40 27.9 +0.2
GNAR Gosnell 63.54 65 eP P 00 39 51.5 -0.1
comp=Z,942nm,1.1s,mb6.7
GNAR ePcP PcP 00 40 28.2 +0.3
BAKI Biak 63.59 229 P **P** **00 39 53.6 +1.4**
comp=Z,2μmcomp=Z,138nm,1.4s,mb5.8
GLAT Glass 63.74 64 eP P 00 39 52.4 -0.6
GLAT e 00 39 59.5
GLAT ePcP PcP 00 40 29.0 +0.3
GLAT ePP PP 00 42 12.3 -0.8
NATX Nacogdoches 63.83 71⇑eP P 00 39 53.9 +0.3
comp=Z,267nm,1.1s,mb6.2
NATX ePcP PcP 00 40 29.1 -0.1
NATX eS **S** **00 48 25.6 -0.1**
NATX LR LR
comp=Z,4μm,20.0s,MS5.6
UTMT University of 63.93 64⇑eP P 00 39 53.9 -0.3
comp=Z,526nm,1.2s,mb6.4
UTMT ePcP PcP 00 40 29.2 -0.3
UTMT ePP PP 00 42 09.9 -4.9
HALT Halls 63.97 65⇑eP P 00 39 53.9 -0.6
HALT ePcP PcP 00 40 26.2 -3.5
WCI Wyandotte Cave 64.01 61⇑eP P 00 39 53.6 -1.1
WCI e 00 40 30.3
WCI e 00 42 15.1
WCI eS **S** **00 48 28.2 +0.3**
WCI MLR MLR
comp=Z,4μm,19.0s,MS5.6
NSS Namsos 64.12 354 eP P 00 39 54.0 -1.0
NSS AMS AMS 01 07 28.1
comp=Z,2μm,14.6s,MS5.5
ACSO Alum Creek Sta 64.36 57⇑eP P 00 39 55.8 -1.2
ACSO ePcP PcP 00 40 31.7 +0.5
ACSO ePP PP 00 42 18.1 -0.2
ACSO eS **S** **00 48 33.2 +1.1**
ACSO LR LR
comp=Z,4μm,20.0s,MS5.6
HKT Hockley 64.42 74⇑eP P 00 39 57.7 +0.2
HKT e 00 40 32.2
HKT e 00 42 19.3
HKT eS **S** **00 48 35.4 +2.3**
HKT pmax pmax
comp=Z,319nm,1.4s,mb6.2
HKT MLR MLR
comp=Z,3μm,19.0s,MS5.5
HKT Hockley 64.42 74⇑eP P 00 39 57.7 +0.2
comp=Z,319nm,1.4s,mb6.2
HKT ePcP PcP 00 40 32.2 +0.6
HKT ePP PP 00 42 19.2 +0.1
HKT eS **S** **00 48 35.4 +2.2**
HKT LR LR
comp=Z,3μm,19.0s,MS5.5
ERPA Erie 64.54 54⇑eP P 00 39 57.4 -0.7
ERPA ePcP PcP 00 40 31.5 -0.4
ERPA eS **S** **00 48 34.9 +0.7**
ERPA LR LR
comp=Z,5μm,20.0s,MS5.7
WVT Waverly 64.67 63⇑eP P 00 39 57.9 -1.1
WVT e 00 42 21.3
WVT eS **S** **00 48 36.2 +0.2**
WVT pmax pmax
comp=Z,57nm,1.0s,mb5.6
WVT MLR MLR
comp=Z,3μm,20.0s,MS5.5
WVT Waverly 64.67 63⇑eP P 00 39 57.9 -1.2
comp=Z,57nm,1.0s,mb5.5
WVT ePP PP 00 42 21.3 +0.1
WVT eS **S** **00 48 36.2 +0.2**
WVT LR LR
comp=Z,3μm,20.0s,MS5.5
ALLY Alegheny Colle 64.80 54 eP P 00 39 59.4 -0.4
comp=Z,119nm,1.0s,mb5.9
KVTX Kingsville 64.90 77 eP P 00 40 00.6 -0.1
KVTX eS **S** **00 48 36.5 -2.6**
KVTX LR LR
comp=Z,3μm,20.0s,MS5.4
KAF Kangasniemi 64.92 346 eP P 00 39 59.3 -0.9
KAF pmax pmax
comp=Z,54nm,1.0s,mb5.5
KAF Kangasniemi 64.92 346 eP P 00 39 59.3 -0.9
comp=Z,54nm,1.0s,mb5.5
KAF Kangasniemi 64.92 346 ep P 00 39 59.3 -0.9
comp=Z,54nm,1.0s,mb5.5
OXF Oxford 64.93 66⇑iP P 00 40 00.1 -0.7
OXF e 00 40 33.7
OXF e 00 42 23.0
OXF eS **S** **00 48 41.2 +1.9**
OXF pmax pmax
comp=Z,426nm,1.1s,mb6.4
OXF MLR MLR
comp=Z,2μm,20.0s,MS5.4
OXF Oxford 64.93 66⇑iP P 00 40 00.1 -0.7
comp=Z,426nm,1.1s,mb6.4
OXF ePcP PcP 00 40 33.7 +0.1
OXF ePP PP 00 42 23.0 -0.5
OXF eS **S** **00 48 41.2 +1.9**
OXF LR LR
comp=Z,2μm,20.0s,MS5.4
SGSI Sangihe 64.94 242 P **P** **00 39 59.4 -1.7**
comp=Z,252nm,0.9s,mb6.2
TKM2 Tokmak 2 65.10 308 P **P** **00 40 02.8 +1.0**
SNR=90
TKM2 Tokmak 2 65.10 308⇑iP P 00 40 02.9 +1.2
TKM2 e 00 40 34.1
TKM2 eS S 00 48 42.0 +0.9
TKM2 pmax pmax
comp=Z,159nm,1.0s,mb6.0
TKM2 Tokmak 2 65.10 308⇑iP P 00 40 02.9 +1.2
comp=Z,159nm,1.0s,mb6.0
TKM2 ePcP PcP 00 40 34.1 -0.1
TKM2 ePP PP 00 42 19.3 -5.4
TKM2 eS S 00 48 42.0 +1.0
ULHL Ulahol 65.27 307 P **P** **00 40 04.5 +1.6**
SNR=16
LONY Lake Ozonia 65.35 49⇑eP P 00 40 01.0 -2.3
comp=Z,38nm,1.3s,mb5.3
LONY ePP PP 00 42 27.9 +1.0
LONY eS S 00 48 43.4 -0.7
LONY LR LR
comp=Z,3μm,20.0s,MS5.5
AFI Afiamalu 65.38 170 PFAKE 00 40 20.0 +16
AFI LR LR
comp=Z,4μm,20.0s,MS5.6
USP Ospenovka 65.38 309 P **P** **00 40 04.9 +1.4**
SNR=6.0
CHMS Chumysh 65.45 309 P **P** **00 40 05.2 +1.2**
SNR=45
FINES FINESS Array B 65.59 346 P **P** **00 40 03.5 -1.1**
comp=Z,34nm,0.9s,mb5.4,baz=34,slow=7.1,SNR=78
FINES S S 00 48 48.7 +2.2
comp=Z,1.9nm,0.9s,baz=94,slow=18,SNR=2.5
FINES PKPPKP 01 08 41.9
comp=Z,3.5nm,0.8s,baz=149,slow=4.4,SNR=6.6
FINES PKP2bc 01 08 50.1
comp=Z,3.2nm,0.8s,baz=119,slow=2.4,SNR=4.9
FINES LR LR 01 13 39.0
comp=Z,3μm,18.9s,MS5.5,baz=23,slow=40
FINES FINESS Array B 65.59 346 P **P** **00 40 03.6 -1.0**
FINES S S 00 48 48.7 +2.1
FINES pmax pmax
comp=Z,34nm,0.9s
FINES smax
comp=N,2.0nm,0.9s
FINES pmax pmax
comp=Z,4.0nm,0.8s
FINES pmax pmax
comp=Z,3.0nm,0.8s
FINES MLR MLR
comp=Z,3μm,18.9s
FINES FINESS Array B 65.59 346 P **P** **00 40 03.5 -1.1**
FINES S S 00 48 48.7 +2.2
FINES P'P'
FINES ⇑e 01 08 50.1
FINES LR LR 01 13 39.0
KBK Karagaybulak 65.61 308 P **P** **00 40 06.5 +1.5**
SNR=74
FRU Bishkek 65.64 309⇑iP P 00 40 06.0 +0.7
FRU eS S 00 48 54.5 +6.7
FRU e 00 49 58.0
FRU pmax pmax
comp=Z,430nm,1.8s,mb6.2
FRU pmax pmax
comp=Z,2μm,3.2s
FRU smax
comp=E,400nm,5.5s
FRU MLR MLR
comp=Z,6μm,18.5s,MS5.9
FRU MLR MLR
comp=E,6μm,17.5s
FRNY Flat Rock 65.65 48 eP P 00 40 02.7 -2.6
comp=E,23nm,1.1s,mb5.1
SWI Sorong 65.70 234 P **P** **00 40 04.9 -1.1**
comp=E,4μmcomp=E,400nm,1.0s,mb6.4
AAK Ala-Archa 65.85 308 P **P** **00 40 08.5 +1.9**
comp=E,937nm,0.9s,mb6.8,SNR=41
AAK Ala-Archa 65.85 308 P **P** **00 40 04.0 -2.6**
SNR=37
AAK Ala-Archa 65.85 308⇑eP P 00 40 07.8 +1.2
AAK ePP PP 00 42 29.1 -2.3
AAK eS S 00 48 48.0 -2.3
AAK LR LR
comp=Z,6μm,19.0s,MS5.8
AAK Ala-Archa 65.85 308 P **P** **00 40 07.8 +1.2**
comp=Z,679nmcomp=Z,46nm,1.1s,mb5.4
AAK Ala-Archa 65.85 308 P **P** **00 40 08.3 +1.7**
SNR=42
KZA Kyzart 65.89 308 P **P** **00 40 08.8 +1.9**
SNR=20
VBMS Vicksburg 65.94 68⇑eP P 00 40 07.2 -0.2
VBMS ePcP PcP 00 40 37.5 -0.4
VBMS eS S 00 49 07.9 +16
VBMS LR LR
comp=Z,3μm,20.0s,MS5.5
NCB Newcomb 66.00 49⇑eP P 00 40 05.7 -1.9
NCB PcP PcP 00 40 37.2 -0.8
NCB ePP PP 00 42 31.9 -0.7
NCB eS S 00 48 54.3 +2.1
NCB LR LR
comp=Z,3μm,20.0s,MS5.6
LSA Lhasa 66.14 288 P **P** **00 40 10.8 +2.1**
LSA pP pP 00 40 19.8 -0.9
LSA sP sP 00 40 24.3 -1.0
LSA S S 00 49 04.0 +10
LSA LR LR
comp=N,1μm,23.1s,MS5.4
LSA LR LR
comp=E,2μm,23.1s,MS5.4
LSA LR LR
comp=Z,4μm,20.9s,MS5.5
LSA Lhasa 66.14 288⇑iP P 00 40 11.0 +2.3
LSA eS S 00 48 54.7 +0.4
LSA pmax pmax
comp=Z,246nm,1.0s,mb6.2
LSA MLR MLR
comp=Z,4μm,21.0s,MS5.6
LSA Lhasa 66.14 288⇑iP P 00 40 11.0 +2.3
comp=Z,246nm,1.0s,mb6.2
LSA eS S 00 48 54.7 +0.4
LSA LR LR
comp=Z,4μm,21.0s,MS5.6
UCH Uchtor 66.15 308 P **P** **00 40 10.4 +1.9**
SNR=30
EKS2 Erkin-Say 66.18 309 P **P** **00 40 10.2 +1.5**
SNR=112
EKS2 Erkin-Say 66.18 309⇑iP P 00 40 09.9 +1.2
comp=Z,191nm,1.0s,mb6.1
EKS2 ePP PP 00 42 30.3 -4.0
EKS2 eS S 00 48 55.8 +1.4
TNTI Ternate 66.36 239 P **P** **00 40 09.2 -1.0**
comp=Z,3μmcomp=Z,216nm,1.6s,mb5.9
PMG Port Moresby 66.36 215 eP P 00 40 09.7 -0.4
PMG 00 42 39.0
PMG eS S 00 49 01.5 +4.5
PMG MLR MLR
comp=Z,3μm,19.0s
PMG Port Moresby 66.36 215 eP P 00 40 09.7 -0.4
PMG PP PP 00 42 39.0 +2.2
PMG eS S 00 49 01.4 +4.5
PMG LR LR
comp=Z,3μm,19.0s,MS5.5
PMG Port Moresby 66.36 215 P **P** **00 40 00.5 -10**
comp=Z,43nm,1.9s,mb5.1
SWET Sewanee 66.39 63⇑eP P 00 40 08.9 -1.3
MCWV Mont Chateau 66.42 56⇑eP P 00 40 09.3 -1.0
MCWV ePcP PcP 00 40 38.7 -1.1
MCWV eS S 00 48 59.0 +1.7
MCWV LR LR
comp=Z,3μm,20.0s,MS5.5
PUL Pulkovo 66.47 343⇓eP P 00 40 10.3 0.0
PUL pmax pmax
comp=Z,244nm,0.8s,mb6.3
PUL Pulkovo 66.47 343⇓eP P 00 40 10.4 +0.1
MDV Middlebury 66.48 49 eP P 00 40 09.3 -1.3
BINY Binghamton 66.48 51⇑eP P 00 40 09.9 -0.7
BINY ePcP PcP 00 40 39.8 -0.2
BINY ePP PP 00 42 27.9 -9.0
BINY eS S 00 48 59.5 +1.5
BINY LR LR
comp=Z,6μm,21.0s,MS5.8
AML Almayashu 66.62 309 P **P** **00 40 13.7 +2.1**
SNR=92
AML Almayashu 66.62 309⇑iP P 00 40 13.6 +2.0
comp=Z,185nm,1.0s,mb6.1
AML ePcP PcP 00 40 41.5 +0.9
AML eS S 00 49 02.0 +2.3
AML LR LR
comp=Z,7μm,20.0s,MS5.9
ACCN Adirondack Com 66.71 49 eP P 00 40 10.8 -1.3
comp=Z,44nm,0.9s,mb5.5
LBNH Lisbon 66.88 48 eP P 00 40 12.3 -0.9
LBNH eS S 00 49 01.6 -1.1
LBNH pmax pmax
comp=Z,46nm,1.0s,mb5.5
LBNH MLR MLR
comp=Z,7μm,21.0s,MS5.8
LBNH Lisbon 66.88 48 eP P 00 40 12.3 -0.8
comp=Z,46nm,1.0s,mb5.5
LBNH eS S 00 49 01.6 -1.1
LBNH LR LR
comp=Z,7μm,21.0s,MS5.8
SOFL Sornfelli, Far 66.94 3 AMS AMS 01 07 44.1
comp=Z,3μm,25.1s,MS5.3
CPCT Cooper Cave 67.00 62⇑eP P 00 40 13.3 -0.8
CPCT ePP PP 00 42 41.2 -0.4
MNI Manado 67.18 241 P **P** **00 40 14.3 -1.1**
comp=Z,4μmcomp=Z,202nm,0.9s,mb6.2
AB31 Akbulak array 67.18 322ceP P 00 40 15.9 +0.9
AB31 pmax pmax
comp=Z,615nm,1.1s,mb6.5
ABKAR Akbulak array 67.18 322⇑iP P 00 40 15.9 +0.9
comp=Z,451nm,1.0s,mb6.5
TKL Tuckaleechee C 67.27 61 LR LR 01 12 13.4
comp=Z,5μm,18.2s,MS5.8,baz=314,slow=38
TKL Tuckaleechee C 67.27 61⇑eP P 00 40 14.7 -1.0
PKME Peaks-Kenny Pk 67.29 45⇑eP P 00 40 14.4 -1.3
PKME eS S 00 49 09.3 +1.7
PKME LR LR
comp=Z,5μm,19.0s,MS5.7
LRAL Lakeview Retre 67.38 65⇑eP P 00 40 14.8 -1.7
LRAL ePP PP 00 42 44.3 -0.6
LRAL eS S 00 49 10.0 +0.9
LRAL LR LR
comp=Z,2μm,20.0s,MS5.3
FOO Floro 67.41 357 eP P 00 40 15.2 -0.9
FOO AMB AMB 00 40 15.7
comp=Z,67nm,0.9s,mb5.7
FOO AMS AMS 01 19 04.1
comp=Z,1μm,12.0s,MS5.3
KK31 Karatay Array 67.42 311ceP P 00 40 17.2 +0.6
KK31 pmax pmax
comp=Z,356nm,1.1s,mb6.3
KSH Kashi 67.43 305⇑iP P 00 40 21.4 +4.6
KSH PcP PcP 00 40 47.1 +3.1
KSH PP PP 00 42 53.3 +8.1
KSH ScP 00 44 44.9
KSH PcS 00 44 51.3
KSH S S 00 49 13.8 +4.2
KSH ScS ScS 00 50 10.5 -0.9
KSH SS SS 00 53 37.4 +8.0
KSH pmax pmax
comp=Z,690nm,2.1s,mb6.3
KSH LR LR
comp=N,4μm,15.4s,MS5.8
KSH LR LR
comp=E,2μm,14.4s,MS5.8
KSH LR LR
comp=Z,7μm,17.0s,MS6.0
LBMI Labuha 67.47 238 P **P** **00 40 17.4 +0.2**
comp=Z,3μmcomp=Z,172nm,1.1s,mb6.0
NB2 NORSAR Subarra 67.64 354 P **P** **00 40 17.3 -0.4**
comp=Z,136nm,1.0s,mb5.9,baz=8.6,slow=6.5
NOA NORSAR Array B 67.64 354 P **P** **00 40 17.2 -0.4**
comp=Z,70nm,1.0s,mb5.7,baz=8.8,slow=6.3,SNR=184
NOA PKP2bc 01 08 40.5
comp=Z,3.7nm,1.0s,baz=178,slow=3.5,SNR=5.6
NOA LR LR 01 11 52.7
comp=Z,2μm,19.6s,MS5.2,baz=0.0,slow=38
NOA NORSAR Array B 67.64 354 P **P** **00 40 17.2 -0.5**
NOA pmax pmax
comp=Z,70nm,1.0s
NOA pmax pmax
comp=Z,4.0nm,1.0s
NOA MLR MLR
comp=Z,2μm,19.6s
NOA NORSAR Array B 67.64 354 P **P** **00 40 17.2 -0.4**
NOA ⇑e 01 08 40.5
NOA LR LR 01 11 52.7
ELN Prospectdale 67.74 58 eP P 00 40 17.5 -1.2
ELN ePcP PcP 00 40 45.5 +0.2
MYLDM Lahad Datu 67.75 249 P **P** **00 40 19.8 +0.7**
NAO01 NORSAR Array S 67.86 354⇑eP P 00 40 18.4 -0.7
comp=Z,38nm,1.0s,mb5.4
NAO01 ePP PP 00 42 49.2 +1.0
NAO01 eS S 00 49 11.7 -2.2
NAO01 LR LR
comp=Z,2μm,20.0s,MS5.4
BLA Blacksburg 67.93 58⇑eP P 00 40 19.1 -0.8
BLA eS S 00 49 17.2 +1.6
BLA pmax pmax
comp=Z,68nm,1.0s,mb5.6
BLA MLR MLR
comp=Z,5μm,21.0s,MS5.7
BLA Blacksburg 67.93 58⇑eP P 00 40 19.1 -0.8
comp=Z,68nm,1.0s,mb5.6
BLA eS S 00 49 17.2 +1.6
BLA LR LR
comp=Z,5μm,21.0s,MS5.7
MVL Millersville 67.95 53 eP P 00 40 19.2 -0.8
CHRT Chiangrai 68.04 275 ⇑P P 00 40 21.0 +0.2
comp=Z,605nm,1.0s,mb6.6
IMP Imphal 68.04 282 ePKP P 00 40 19.0 -1.8
IMP ex x 00 41 41.0
SDMD Soldier's Deli 68.15 54 eP P 00 40 20.3 -1.0
SDKM Sandakan 68.16 251 P **P** **00 40 21.7 +0.1**
VSU Vasula 68.33 345ceP P 00 40 21.1 -0.9
VSU pmax pmax
comp=Z,94nm,1.2s,mb5.7
HFS Hagfors 68.34 352 LR LR 01 09 41.4
comp=Z,3μm,21.5s,MS5.5,baz=18,slow=35
KMSI Cibinong 68.37 242 P **P** **00 40 22.2 -0.7**
comp=Z,5μmcomp=Z,406nm,1.1s,mb6.4
PAL Palisades 68.40 51 eP P 00 40 22.0 -0.8
KKM Kota Kinabalu 68.42 252 P **P** **00 40 24.0 +0.7**
KKM Kota Kinabalu 68.42 252⇑eP P 00 40 23.8 +0.5
KKM eS S 00 49 23.6 +1.6
KKM LR LR
comp=Z,2μm,21.0s,MS5.3
BER Bergen 68.61 357 eP P 00 40 22.5 -1.3
BER AMB AMB 00 40 24.7
comp=Z,62nm,1.6s,mb5.3
BER eS S 00 49 25.9 +3.0
BER AMS AMS 01 17 04.9
comp=Z,1μm,19.6s,MS5.1
MOS Moscow 68.66 338 eP P 00 40 23.1 -1.1
MOS e 00 40 49.6
MOS eS S 00 49 16.8 -6.9
MOS pmax pmax
comp=Z,245nm,1.0s,mb6.1
MOS pmax pmax
comp=Z,300nm,1.4s,mb6.0
MOS pmax pmax
comp=N,300nm,1.2s
MOS MLR MLR
comp=N,7μm,18.0s
MOS MLR MLR
comp=Z,8μm,18.0s,MS6.0
MSVF Nonsavu 68.68 181 eP P 00 40 24.4 -0.3
comp=Z,53nm,1.1s,mb5.4
MSVF eS S 00 49 26.5 +2.0
MSVF LR LR
comp=Z,4μm,20.0s,MS5.7
SHL Shillong 68.72 285⇑iP P 00 40 25.0 0.0
comp=Z,68nm,1.0s,mb5.5
SHL *i* x x 00 49 27.0
CBN Corbin 68.78 55 PFAKE 00 40 40.0 +15
CBN LR LR
comp=Z,4μm,20.0s,MS5.6
BRAL Brewton 68.83 67⇑eP P 00 40 25.0 -0.7
BRAL eS S 00 49 26.3 -0.2
BRAL LR LR
comp=Z,2μm,20.0s,MS5.3
TSM Tawau 68.83 249 P **P** **00 40 26.3 +0.5**
WAL1 Walls 68.86 0 P **P** **00 40 24.9 -0.4**
WAL1 Walls 68.86 0⇑eP P 00 40 24.9 -0.4
JSRW J. Sargeant Re 68.91 56 eP P 00 40 25.4 -0.7
LRW Lerwick 68.98 0 P **P** **00 40 25.7 -0.4**
LRW AMb AMB 00 40 27.2
comp=Z,148nm,1.0s,mb5.9
LRW AMS AMS 01 19 12.6
comp=Z,1μm,20.9s
LRW Lerwick 68.98 0⇑eP P 00 40 25.7 -0.4
LRW AMb AMB 00 40 27.2
comp=Z,148nm,1.0s,mb5.9
LRW AMS AMS 01 19 12.6
comp=Z,1μm,20.9s,MS5.1

TLE Tual 69.08 230 P **P 00 40 28.5 +1.2**
comp=Z,282nm,1.2s,mb6.1
GOGA Godfrey 69.10 63⇑ *eP* **P 00 40 26.1 -1.2**
GOGA *eS* S 00 49 29.3 -0.2
GOGA MLR MLR
comp=Z,3μm,20.0s,MS5.6
KONO Kongsberg 69.13 354 *eP* **P 00 40 26.8 -0.2**
KONO AMb AMB 00 40 28.3
comp=Z,116nm,0.5s,mb6.1
KONO *eS* S 00 49 30.3 +1.2
KONO AMS AMS 01 19 27.1
comp=Z,3μm,21.0s,MS5.4
KONO Kongsberg 69.13 354⇑ *eP* **P 00 40 26.8 -0.2**
KONO *e* pP 00 40 38.5 -0.6
KONO *e* 00 40 50.6
KONO *e* 00 42 58.5
KONO *eS* S 00 49 29.9 +0.8
KONO pmax pmax
comp=Z,141nm,1.0s,mb5.8
KONO MLR MLR
comp=Z,2μm,20.0s,MS5.4
KONO Kongsberg 69.13 354⇑ *eP* **P 00 40 26.8 -0.2**
comp=Z,141nm,1.0s,mb5.8
KONO *e* pP 00 40 38.5 -0.6
KONO *e*PcP PcP 00 40 50.6 -0.1
KONO *e*PP PP 00 42 58.5 -0.8
KONO *eS* S 00 49 29.9 +0.8
KONO LR LR
comp=Z,2μm,20.0s,MS5.4
CHG Chiang Mai 69.35 275 ⇑P **P 00 40 29.1 +0.1**
comp=Z,84nm,1.0s,mb5.6
CHTO Chiang Mai 69.35 275⇑ *eP* **P 00 40 28.9 -0.1**
CHTO *e* pP 00 40 38.4 -2.6
CHTO 00 40 52.8
CHTO *e* 00 43 02.8
CHTO MLR MLR
comp=Z,2μm,19.0s,MS5.3
CHTO Chiang Mai 69.35 275⇑ *eP* **P 00 40 28.9 -0.1**
CHTO *e* pP 00 40 38.4 -2.7
CHTO PcP PcP 00 40 52.8 +0.5
CHTO *e*PP PP 00 43 02.8 +0.4
CHTO LR LR
comp=Z,2μm,19.0s,MS5.3
CHTO Chiang Mai 69.35 275 P **P 00 40 28.7 -0.3**
comp=Z,2μmcomp=Z,109nm,1.3s,mb5.6
CHTO Chiang Mai 69.35 275 P **P 00 40 29.3 +0.3**
SNR=16
TAOE Nuku Hiva Isla 69.48 136 *eS* S 00 49 37.5 +3.2
comp=Z,994nm,29.1s
TAOE *e*LR LR 01 01 44.6
comp=Z,8μm,22.1s,baz=341
OBN Obninsk 69.48 338 P **P 00 40 29.5 +0.2**
comp=Z,1μm,1.1s,mb6.7,SNR=26
OBN Obninsk 69.48 338*c i*P **P 00 40 28.8 -0.5**
OBN *e**PP pP 00 40 41.9 +0.6
OBN *e* 00 42 59.6
OBN *eS* S 00 49 32.2 -1.2
OBN pmax pmax
comp=Z,317μm,1.6s
OBN MLR MLR
comp=Z,10μm,19.0s,MS6.1
OBN Obninsk 69.48 338⇑ *iP* **P 00 40 28.6 -0.7**
OBN *e*PcP PcP 00 40 51.8 -0.5
OBN *e*PP PP 00 43 01.9 -0.6
OBN *eS* S 00 49 35.2 +1.8
OBN LR LR
comp=Z,10μm,19.0s,MS6.1
MRSI Marisa 69.59 243 P **P 00 40 29.4 -1.1**
comp=Z,3μmcomp=Z,254nm,1.0s,mb6.1
CM31 Chiang Mai Arr 69.61 274⇑ *eP* **P 00 40 30.7 0.0**
comp=Z,34nm,0.8s,mb5.3
CM31 *e*PcP PcP 00 40 54.4 +1.0
CM31 *eS* S 00 49 37.9 +1.9
CM31 LR LR
comp=Z,1μm,20.0s,MS5.2
CMAR Chiang Mai Arr 69.61 274 P **P 00 40 30.9 +0.2**
comp=Z,42nm,0.9s,mb5.4,baz=26,slow=7.0,SNR=121
CMAR ScS ScS 00 50 30.6 +1.5
comp=Z,0.7nm,0.4s,baz=10,slow=10,SNR=4.0
CMAR PKP2ab 01 08 40.1
comp=Z,1.1nm,0.3s,baz=227,slow=4.1,SNR=7.9
CMAR LR LR 01 11 25.9
comp=Z,1μm,19.8s,MS5.2,baz=253,slow=36
CMAR Chiang Mai Arr 69.61 274 P **P 00 40 30.9 +0.3**
CMAR 00 50 30.6
CMAR pmax pmax
comp=Z,42nm,0.9s
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR MLR MLR
comp=Z,1μm,19.8s
JSC Jenkinsville 69.67 60 *eP* **P 00 40 29.8 -1.0**
AAI Ambon 69.68 235 P **P 00 40 30.4 -0.6**
NLAI Namlea 69.87 237 P **P 00 40 31.8 -0.4**
comp=Z,1μmcomp=Z,49nm,1.3s,mb5.3
TAPN Taplejung 69.92 289 *eP* **P 00 40 33.7 +1.3**
comp=Z,2μm,1.1s,mb6.9
LUWI Luwuk 70.38 242 P **P 00 40 33.4 -1.9**
comp=Z,4μmcomp=Z,322nm,1.2s,mb6.1
ODAN Odare 70.47 289 *eP* **P 00 40 36.8 +1.0**
comp=Z,655nm,1.0s,mb6.5
BDT Bhumibol Dam 70.48 273 P **P 00 40 34.0 -2.0**
comp=Z,31nm,1.1s,mb5.2
GUN Gumba 70.59 290 *eP* **P 00 40 38.0 +1.5**
comp=Z,2μm,1.0s,mb7.0
JIRN Jiri 70.59 290 *eP* **P 00 40 38.0 +1.5**
comp=Z,2μm,1.0s,mb6.9
RSC Scourie 70.72 2 P **P 00 40 36.5 -0.2**
RSC Scourie 70.72 2⇑ *eP* **P 00 40 36.5 -0.2**
RAMN Ramite 70.88 289 *eP* **P 00 40 39.5 +1.2**
comp=Z,2μm,1.0s,mb7.0
IZAR Zarasai 70.99 344 *eP* **P 00 40 38.0 -0.5**
IZAR AMB AMB 00 40 38.8
comp=Z,16nm,1.0s,mb4.9
KKN Kakani 71.03 291 *eP* **P 00 40 40.7 +1.5**
comp=Z,738nm,0.9s,mb6.6
KKN Kakani 71.03 291 *eP* **P 00 40 40.7 +1.5**
KKN pmax pmax
comp=Z,738nm,0.9s,mb6.6
RRH Rhenigidale 71.10 3 P **P 00 40 39.1 0.0**
RRH Rhenigidale 71.10 3⇑ *iP* **P 00 40 39.1 0.0**
PKI Pulchoki 71.12 291 *eP* **P 00 40 41.0 +1.3**
comp=Z,1μm,1.1s,mb6.8
PKI Pulchoki 71.12 291 *eP* **P 00 40 41.0 +1.3**
PKI pmax pmax
comp=Z,1μm,1.1s,mb6.8
PKIN Phulchoki 71.12 291 *eP* **P 00 40 40.9 +1.2**
comp=Z,785nm,1.0s,mb6.6
NHSC New Hope 71.14 61⇑ *eP* **P 00 40 39.5 -0.3**
NHSC *e*PP PP 00 43 15.4 -2.0
NHSC *eS* S 00 49 54.5 +1.0
NHSC LR LR
comp=Z,4μm,22.0s,MS5.7
MVH1 Achvaich 71.17 2 P **P 00 40 39.1 -0.4**
MVH1 Achvaich 71.17 2⇑ *iP* **P 00 40 39.1 -0.4**
RRR Rubha Reidh 71.19 3 P **P 00 40 39.6 -0.1**
RRR Rubha Reidh 71.19 3⇑ *iP* **P 00 40 39.6 -0.1**
GKN Gorkha 71.25 291 *eP* **P 00 40 41.7 +1.2**
comp=Z,1μm,1.0s,mb6.8
DMN Daman 71.27 291 *eP* **P 00 40 42.2 +1.6**
comp=Z,885nm,1.0s,mb6.6
IDID Didziasalis 71.32 344 *eP* **P 00 40 40.0 -0.5**
IDID AMB AMB 00 40 41.9
comp=Z,26nm,1.0s,mb5.1
IIGN Ignalina 71.38 344 *eP* **P 00 40 40.4 -0.4**
IIGN AMB AMB 00 40 42.2
comp=Z,27nm,1.0s,mb5.1
MCD Coleburn Disti 71.52 1 P **P 00 40 41.6 0.0**
MCD Coleburn Disti 71.52 1⇑ *iP* **P 00 40 41.6 0.0**
KSK Scoval 71.56 3 P **P 00 40 42.3 +0.4**
KSK Scoval 71.56 3⇑ *eP* **P 00 40 42.3 +0.4**
KAC Achnashellach 71.57 2 P **P 00 40 41.6 -0.3**
KAC Achnashellach 71.57 2⇑ *iP* **P 00 40 41.6 -0.3**
MDO Dochfour 71.65 2 P **P 00 40 42.1 -0.3**
MDO Dochfour 71.65 2⇑ *iP* **P 00 40 42.1 -0.3**
NACGM Naroch 71.71 343 *eP* **P 00 40 38.0 -4.8**
KPL Plockton 71.72 3 P **P 00 40 42.7 -0.1**
KPL AMb AMB 00 40 43.7
comp=Z,101nm,1.2s,mb5.6
KPL AMS AMS 01 12 40.4
comp=Z,2μm,19.7s
KPL Plockton 71.72 3⇑ *eP* **P 00 40 42.7 -0.1**
KPL AMb AMB 00 40 43.7
comp=Z,101nm,1.2s,mb5.6
KPL AMS AMS 01 12 40.4
comp=Z,2μm,19.7s,MS5.4
MME1 Meikle Cairn 71.80 1 P **P 00 40 42.3 -1.0**
MME1 Meikle Cairn 71.80 1⇑ *eP* **P 00 40 42.3 -1.0**
VRHR Novokhopersk 71.81 333 *eP* **P 00 40 42.1 -1.4**
VRHR pmax pmax
comp=N,170nm,1.1s
VRHR pmax pmax
comp=E,70nm,1.1s
VRHR pmax pmax
comp=Z,280nm,1.1s,mb6.1
KSB Sheil Bridge 71.85 2 P **P 00 40 43.7 0.0**
KSB Sheil Bridge 71.85 2⇑ *iP* **P 00 40 43.7 0.0**
MICGM Minsk 71.89 343⇑ *eP* **P 00 40 41.0 -2.9**
MNK Minsk 71.90 343⇑ *eP* **P 00 40 41.0 -3.0**
MNK pmax pmax
comp=Z,170nm,1.0s,mb5.9
MNK MLR MLR
comp=Z,9μm,17.0s,MS6.1
VOR Voronezh 71.90 335 P **P 00 40 42.0 -2.0**
VOR pmax pmax
comp=Z,160nm,1.0s,mb5.9
PCI Palu 71.91 245 P **P 00 40 43.1 -1.5**
comp=Z,2μmcomp=Z,160nm,1.2s,mb5.8
COEN Coen 72.02 217⇑ *eP* **P 00 40 44.6 -0.5**
comp=Z,363nm,1.2s,mb6.2
COEN Coen 72.02 217 P **P 00 40 44.3 -0.8**
comp=Z,146nm,1.8s,mb5.6
PMOR Pomariorio Ree 72.03 146 *eP* **P 00 40 51.6 +6.4**
comp=Z,123nm,1.2s,mb5.7
KAR1 Arisaig 72.13 3 P **P 00 40 45.1 -0.2**
KAR1 Arisaig 72.13 3⇑ *eP* **P 00 40 45.1 -0.2**
MUD Monsted U'grnd 72.34 354⇑ *iP* **P 00 40 46.6 0.0**
MUD *i* S S 00 50 09.4 +2.9
MUD pmax pmax
comp=Z,57nm,1.0s,mb5.5
MUD MLR MLR
comp=Z,2μm,19.0s,MS5.4
MUD Monsted U'grnd 72.34 354⇑ *iP* **P 00 40 46.6 0.0**
comp=Z,57nm,1.0s,mb5.5
MUD *i* S S 00 50 09.4 +2.9
MUD
comp=Z,2μm,19.0s
VAH Vaihoa 72.34 146 *eP* **P 00 40 53.3 +6.3**
comp=Z,120nm,1.1s,mb5.7
VSR Storozhevoye 72.38 335 *eP* **P 00 40 46.0 -0.9**
VSR *e**PP pP 00 40 59.1 +0.1
VSR *e* 00 43 25.0
VSR *e*PPP 00 45 06.3
VSR *eS* S 00 50 03.6 -3.5
VSR pmax pmax
comp=N,200nm,1.1s
VSR pmax pmax
comp=E,100nm,1.1s
VSR pmax pmax
comp=Z,170nm,1.1s,mb5.9
VSR pmax pmax
comp=Z,130nm,1.8s,mb5.6
VSR pmax pmax
comp=N,300nm,3.5s
VSR pmax pmax
comp=E,30nm,0.9s
VSR smax
comp=N,230nm,5.8s
VSR smax
comp=E,180nm,5.8s
VSR smax
comp=Z,80nm,5.8s
PTH Pithoragarh 72.63 296 *e*PKP **P 00 40 49.7 +0.9**
PTH *ex* x 00 43 26.5
COP Copenhagen 72.85 352⇑ *iP* **P 00 40 49.3 -0.3**
COP pmax pmax
comp=Z,27nm,0.9s,mb5.2
COP MLR MLR
comp=Z,810nm,18.0s,MS5.0
COP Copenhagen 72.85 352⇑ *iP* **P 00 40 49.3 -0.3**
comp=Z,27nm,0.9s,mb5.2
COP
comp=Z,810nm,18.0s
EBH Black Hill 72.86 1 P **P 00 40 49.4 -0.2**
EBH Black Hill 72.86 1⇑ *iP* **P 00 40 49.4 -0.2**
KDI Kendari 72.88 240 P **P 00 40 50.1 -0.2**
comp=Z,2μmcomp=Z,84nm,1.6s,mb5.4
EAB Aberfoyle 72.90 2 P **P 00 40 49.9 -0.1**
EAB Aberfoyle 72.90 2⇑ *iP* **P 00 40 49.9 -0.1**
THN Thein Dam 72.93 301 *e*PKP **P 00 40 49.4 -1.1**
SMLA Simla 73.14 299 *iP* **P 00 40 52.2 +0.4**
SMLA *i* x x 00 50 13.4
SUW Suwalki 73.17 345 *eP* **P 00 40 50.4 -1.1**
SUW *e*pP pP 00 41 02.4 -1.2
SUW *e*PcP PcP 00 41 06.6 -1.4
SUW *eS* S 00 50 24.9 +8.9
SUW LMZ 01 11 53.7
comp=Z,4μm,24.7s
SUW Suwalki 73.17 345⇑ *eP* **P 00 40 50.4 -1.1**
SUW *e**PP pP 00 41 02.4 -1.3
SUW *e* 00 41 06.6
SUW *eS* S 00 50 24.9 +8.9
SUW Suwalki 73.17 345⇑ *eP* **P 00 40 50.4 -1.1**
BSD Bornholm Skovb 73.18 350 *iP* **P 00 40 50.5 -1.1**
BSD pmax pmax
comp=Z,31nm,1.0s,mb5.2
BSD MLR MLR
comp=Z,2μm,19.0s,MS5.4
BSD Bornholm Skovb 73.18 350 *iP* **P 00 40 50.5 -1.1**
comp=Z,31nm,1.0s,mb5.2
BSD
comp=Z,2μm,19.0s
EDI Edinburgh 73.19 1 P **P 00 40 51.0 -0.6**
EDI AMb AMB 00 40 52.1
comp=Z,85nm,1.2s,mb5.5
EDI AMS AMS 01 12 18.5
comp=Z,1μm,19.7s
EDI Edinburgh 73.19 1⇑ *iP* **P 00 40 51.0 -0.6**
EDI AMb AMB 00 40 52.1
comp=Z,85nm,1.2s,mb5.5
EDI AMS AMS 01 12 18.5
comp=Z,1μm,19.7s,MS5.2
ESY Stoneypath 73.20 1 P **P 00 40 50.5 -1.2**
ESY Stoneypath 73.20 1⇑ *eP* **P 00 40 50.5 -1.2**
DDI Dehra Dun 73.26 298 *eS* S 00 50 18.8 +1.0
EAU Auchinoon 73.26 1 P **P 00 40 52.1 0.0**
EAU Auchinoon 73.26 1⇑ *iP* **P 00 40 52.1 0.0**
PGBU Glenifferbraes 73.28 2 P **P 00 40 51.9 -0.3**
PGBU AMb AMB 00 40 52.9
comp=Z,143nm,1.2s,mb5.8
PGBU AMS AMS 01 13 36.8
comp=Z,2μm,19.8s
PGBU Glenifferbraes 73.28 2⇑ *eP* **P 00 40 51.9 -0.3**
PGBU AMb AMB 00 40 52.9
comp=Z,143nm,1.2s,mb5.8
PGBU AMS AMS 01 13 36.8
comp=Z,2μm,19.8s,MS5.4
NIL Nilore 73.31 303 PFAKE 00 41 00.0 +7.2
NIL LR LR
comp=Z,89nm,19.0s,MS4.1
BHK Bhakra 73.33 299 *e*PKP **P 00 40 50.7 -2.2**
EBL Broad Law 73.34 1 P **P 00 40 52.3 -0.2**
EBL Broad Law 73.34 1⇑ *iP* **P 00 40 52.3 -0.2**
SBUM Sibu 73.67 253 P **P 00 40 55.7 +0.6**
SBUM Sibu 73.67 253 P **P 00 40 54.6 -0.5**
comp=Z,1μmcomp=Z,52nm,1.6s,mb5.2
TTSI Tana Toraja 73.67 243 P **P 00 40 54.4 -0.7**
comp=Z,2μmcomp=Z,148nm,1.5s,mb5.7
ESK Eskdalemuir 73.80 1 P **P 00 40 54.9 -0.3**
ESK AMb AMB 00 40 55.9
comp=Z,107nm,1.1s,mb5.7
ESK AMS AMS 01 12 25.1
comp=Z,1μm,20.7s
ESK Eskdalemuir 73.80 1⇑ *iP* **P 00 40 54.9 -0.3**
ESK AMb AMB 00 40 55.9
comp=Z,107nm,1.1s,mb5.7
ESK AMS AMS 01 12 25.1
comp=Z,1μm,20.7s,MS5.2
ESK Eskdalemuir 73.80 1⇑ *eP* **P 00 40 55.2 0.0**
ESK *e*PP PP 00 43 34.0 -5.3
ESK *eS* S 00 50 24.6 +1.6
ESK LR LR
comp=Z,2μm,20.0s,MS5.3
DZM Mont Dzumac 73.82 192 *eS* S 00 50 34.8 +11
comp=Z,5μm,27.5s
DZM *e*SS SS 00 55 15.7 +6.7
comp=Z,1μm,25.6s
DZM *e*LR LR 01 03 42.3
comp=Z,7μm,24.4s
PPT Papeete 73.86 149 *eS* S 00 50 29.1 +4.7
comp=Z,10μm,28.0s
PPT *e*SS SS 00 55 15.8 +6.2
comp=Z,2μm,24.8s
PPT *e*LR LR 01 03 38.3
comp=Z,8μm,25.2s,baz=342
PPT Papeete 73.86 149 LR LR 01 06 49.2
comp=Z,3μm,19.7s,MS5.6,baz=354,slow=30
ECK Cauldkaine Hil 73.93 1 P **P 00 40 55.3 -0.7**
ECK Cauldkaine Hil 73.93 1⇑ *iP* **P 00 40 55.3 -0.7**
GAL1 Galloway 74.22 2 P **P 00 40 57.4 -0.3**
GAL1 AMb AMB 00 40 58.3
comp=Z,92nm,1.2s,mb5.6
GAL1 AMS AMS 01 14 05.9
comp=Z,2μm,18.5s
GAL1 Galloway 74.22 2⇑ *iP* **P 00 40 57.4 -0.3**
GAL1 AMb AMB 00 40 58.3
comp=Z,92nm,1.2s,mb5.6
GAL1 AMS AMS 01 14 05.9
comp=Z,2μm,18.5s,MS5.4
DWPF Disney 74.23 65⇑ *eP* **P 00 40 58.1 -0.1**
comp=Z,47nm,0.8s,mb5.5
DWPF *eS* S 00 50 29.9 +1.1
DWPF LR LR
comp=Z,2μm,22.0s,MS5.3
GCD Castle Douglas 74.24 2 P **P 00 40 57.3 -0.5**
GCD Castle Douglas 74.24 2⇑ *iP* **P 00 40 57.3 -0.5**
XAL Allendale 74.26 1 P **P 00 40 57.6 -0.3**
XAL Allendale 74.26 1 *eP* **P 00 40 57.6 -0.3**
SPSI Sidrap Palu 74.46 243 P **P 00 40 56.6 -3.0**
comp=Z,3μmcomp=Z,64nm,0.9s,mb5.6
GKP Gorka Klasztor 74.73 349 *eP* **P 00 41 00.1 -0.6**
GKP *e*PcP PcP 00 41 09.9 -4.7
GKP *e*pP pP 00 41 12.7 -0.2
GKP *e*SKS 00 51 02.8
GKP LMZ 01 15 29.8
comp=Z,4μm,20.3s
GKP Gorka Klasztor 74.73 349⇑ *eP* **P 00 41 00.1 -0.6**
GKP *e* pP 00 41 09.9 -2.9
GKP *e**PP pP 00 41 12.7 -0.1
GKP *e* 00 51 02.8
GKP MLR MLR
comp=Z,4μm,20.3s,MS5.7
BSEG Bad Segeberg 74.76 353 *eP* **P 00 41 01.0 +0.2**
comp=Z,104nm,1.0s,mb5.7
BSEG Bad Segeberg 74.76 353 *eP* **P 00 41 01.0 +0.2**
BSEG pmax pmax
comp=Z,104nm,1.0s,mb5.7
KBL Kabul 74.79 306⇑ *iP* **P 00 41 01.3 -0.1**
KBL *e* 00 43 47.4
GMM Mts of Mourne 74.81 3 P **P 00 41 00.8 -0.4**
GMM Mts of Mourne 74.81 3⇑ *iP* **P 00 41 00.8 -0.4**
NDI New Delhi 74.98 297 *ex* **P 00 41 00.0 -2.6**
HPK Haverah Park 75.17 0 P **P 00 41 02.7 -0.5**
HPK AMb AMB 00 41 04.0
comp=Z,113nm,1.1s,mb5.7
HPK AMS AMS 01 25 19.8
comp=Z,1μm,18.0s
HPK Haverah Park 75.17 0⇑ *eP* **P 00 41 02.7 -0.5**
HPK AMb AMB 00 41 04.0
comp=Z,113nm,1.1s,mb5.7
HPK AMS AMS 01 25 19.8
comp=Z,1μm,18.0s,MS5.2
WAR Warsaw 75.22 346 *eP* **P 00 41 03.5 0.0**
WAR *e*PcP PcP 00 41 10.8 -6.0
WAR *e*pP pP 00 41 14.4 -1.3
WAR *eS* S 00 50 32.9 -6.2
WAR *e*SKS 00 51 05.8
WAR LMZ 01 19 57.6
comp=Z,4μm,17.1s
WAR Warsaw 75.22 346⇑ *eP* **P 00 41 03.5 0.0**
WAR *e* 00 41 10.8
WAR *e**PP pP 00 41 14.4 -1.3
WAR *eS* S 00 50 32.9 -6.2
WAR *e* 00 51 05.8
AKASG Malin Array Be 75.23 341 P **P 00 41 03.0 -0.5**
comp=Z,164nm,0.9s,mb5.9,baz=22,slow=5.8,SNR=171
AKASG LR LR 01 18 09.7
comp=Z,6μm,19.1s,MS5.9,baz=10.0,slow=39
AKASG Malin Array Be 75.23 341 P **P 00 41 03.1 -0.5**
AKASG pmax pmax
comp=Z,164nm,0.9s
AKASG MLR MLR
comp=Z,6μm,19.1s
AKBB Malin Array Si 75.23 341⇑ *eP* **P 00 41 02.8 -0.8**
KIEV Kiev 75.23 341⇑ *eP* **P 00 41 03.1 -0.5**
KIEV *e* 00 43 51.4
KIEV *eS* S 00 50 40.6 +1.3
KIEV pmax pmax
comp=Z,118nm,0.9s,mb5.8
KIEV MLR MLR
comp=Z,5μm,19.0s,MS5.8
KIEV Kiev 75.23 341⇑ *eP* **P 00 41 03.1 -0.5**
comp=Z,118nm,0.9s,mb5.8
KIEV *e*PP PP 00 43 51.4 -0.2
KIEV *eS* S 00 50 40.6 +1.3
KIEV LR LR
comp=Z,5μm,19.0s,MS5.8
BKSI Bulukumba 75.38 242 P **P 00 41 04.2 -0.7**
comp=Z,2μmcomp=Z,126nm,1.4s,mb5.7
KAKA Kakadu 75.39 227 *eP* **P 00 41 04.3 -0.6**
comp=Z,101nm,0.8s,mb5.8
KAKA Kakadu 75.39 227 *eP* **P 00 41 04.1 -0.8**
comp=Z,333nm,0.9s,mb6.3
KAKA *e*PP PP 00 43 57.0 +2.5
KAKA Kakadu 75.39 227 P **P 00 41 04.0 -0.9**
comp=Z,1μmcomp=Z,200nm,0.9s,mb6.0
KSM Kuching 75.59 254 P **P 00 41 06.7 +0.5**
KSM Kuching 75.59 254⇑ *eP* **P 00 41 06.1 -0.2**
comp=Z,202nm,1.6s,mb5.8
KSM LR LR
comp=Z,851nm,19.0s,MS5.1
KSM Kuching 75.59 254 P **P 00 41 06.1 -0.1**
comp=Z,2μmcomp=Z,77nm,1.6s,mb5.4
WME Myndd Eilian 75.70 2 P **P 00 41 05.6 -0.7**
WME Myndd Eilian 75.70 2⇑ *eP* **P 00 41 05.6 -0.7**
DLF Lyons Farm 75.73 3 *eP* **P 00 41 05.3 -1.1**
DSB Dublin 75.79 3⇑ *eP* **P 00 41 06.9 +0.1**
comp=Z,105nm,1.0s,mb5.7
WLF1 Llynfaes 75.81 2 P **P 00 41 05.8 -1.1**
WLF1 AMb AMB 00 41 07.2
comp=Z,174nm,1.3s,mb5.8
WLF1 AMS AMS 01 15 03.0
comp=Z,5μm,18.5s
WLF1 Llynfaes 75.81 2⇑ *eP* **P 00 41 05.8 -1.1**
WLF1 AMb AMB 00 41 07.2
comp=Z,174nm,1.3s,mb5.8
WLF1 AMS AMS 01 15 03.0
comp=Z,5μm,18.5s,MS5.8
WPM1 Penmaenmawr 75.85 2 P **P 00 41 06.5 -0.5**
WPM1 Penmaenmawr 75.85 2⇑ *eP* **P 00 41 06.5 -0.5**
KBI1 Birley Grange 75.88 0 P **P 00 41 07.0 -0.3**
KBI1 Birley Grange 75.88 0⇑ *iP* **P 00 41 07.0 -0.3**
RUE Ruedersdorf 75.90 351⇑ *eP* **P 00 41 07.1 -0.2**
comp=Z,48nm,1.1s,mb5.3
RUE *e*PP PP 00 43 55.1 -2.0
STKI Sintang 76.01 252 P **P 00 41 08.1 -0.5**
comp=Z,70nm,1.1s,mb5.5
STNC Stoke 76.04 1 P **P 00 41 08.2 0.0**
STNC Stoke 76.04 1⇑ *eP* **P 00 41 08.2 0.0**
WIT Witteveen 76.11 355⇑ *eP* **P 00 41 09.4 +0.8**
comp=Z,398nm,1.2s,mb6.2
WIT Witteveen 76.11 355 *ex* pP 00 41 22.0 +1.2
TEIG Tepich 76.19 75⇑ *eP* **P 00 41 09.6 0.0**
comp=Z,94nm,1.0s,mb5.7
NRDL Niedersach Rie 76.21 353 *eP* **P 00 41 07.8 -1.4**
comp=Z,58nm,1.1s,mb5.4
CWF Charnwood Fore 76.39 0 P **P 00 41 09.7 -0.5**
CWF AMb AMB 00 41 10.8
comp=Z,91nm,1.4s,mb5.5
CWF AMS AMS 01 23 09.4
comp=Z,2μm,20.6s
CWF Charnwood Fore 76.39 0⇑ *iP* **P 00 41 09.7 -0.5**
CWF AMb AMB 00 41 10.8
comp=Z,91nm,1.4s,mb5.5
CWF AMS AMS 01 23 09.4
comp=Z,2μm,20.6s,MS5.3
AEU East Anglia Un 76.50 359 P **P 00 41 10.6 -0.2**
AEU East Anglia Un 76.50 359 *eP* **P 00 41 10.6 -0.2**
IBBN Ibbenburen 76.56 354 *eP* **P 00 41 11.3 +0.2**
comp=Z,218nm,1.1s,mb6.0
CTA Charters Tower 76.60 211 *eP* **P 00 41 11.8 +0.1**
comp=Z,45nm,0.9s,mb5.4
CTAO Charters Tower 76.60 211 *eP* **P 00 41 11.6 -0.1**
CTAO MLR MLR
comp=Z,1μm,19.0s,MS5.3

CTAO	**Charters Tower**	**76.60**	**211**	*e*P	**P**	**00 41 11.6**	**0.0**
CTAO				LR	LR		
comp=Z,1μm,19.0s,MS5.3							
CTAO	**Charters Tower**	**76.60**	**211**	P	**P**	**00 41 11.4**	**-0.3**
comp=Z,72nm,1.4s,mb5.4							
HLM1	**Long Mynd**	**76.60**	**1**	P	**P**	**00 41 10.9**	**-0.4**
HLM1	**Long Mynd**	**76.60**	**1⇑**	*e*P	**P**	**00 41 10.9**	**-0.4**
CLZ	**Clausthal**	**76.84**	**353**	*e*P	**P**	**00 41 13.0**	**+0.3**
comp=Z,97nm,1.1s,mb5.7							
CLZ	**Clausthal**	**76.84**	**353**	*e*P	**P**	**00 41 13.0**	**+0.3**
CLZ				pmax	pmax		
comp=Z,97nm,1.1s,mb5.7							
WTSB	**Winterswijk**	**76.95**	**355⇑**	*e*P	**P**	**00 41 13.1**	**-0.2**
comp=Z,71nm,1.1s,mb5.5							
WTSB	**Winterswijk**	**76.95**	**355**	*e*x	pP	00 41 26.1	+0.6
KTGM	**Kuala Trenggan**	**76.99**	**262**	P	**P**	**00 41 15.2**	**+1.0**
MMRI	**Maumere**	**76.99**	**238**	P	**P**	**00 41 11.3**	**-2.7**
comp=Z,2μmcomp=Z,88nm,1.6s,mb5.5							
HTR	**Trewern Hill**	**77.04**	**1**	P	**P**	**00 41 13.6**	**-0.2**
HTR	**Trewern Hill**	**77.04**	**1⇑**	*i*P	**P**	**00 41 13.6**	**-0.2**
LVV	**L'vov**	**77.07**	**344**	*d i*P	**P**	**00 41 13.9**	**-0.2**
LVV				*e*	pP	00 41 28.4	+2.1
LVV				*e*		00 44 09.9	
LVV				*e*PPP		00 45 55.2	
LVV				*e*S	S	00 50 57.6	-1.9
LVV				*e*PS		00 51 46.4	
LVV				MLR	MLR		
comp=N,2μm,18.0s,MS5.6							
LVV				MLR	MLR		
comp=E,2μm,18.0s,MS5.6							
LVV				MLR	MLR		
comp=Z,4μm,18.0s,MS5.8							
MCH1	**Michaelchurch**	**77.12**	**1**	P	**P**	**00 41 14.0**	**-0.3**
MCH1				AMb	AMB	00 41 14.9	
comp=Z,114nm,1.1s,mb5.7							
MCH1				AMS	AMS	01 15 35.7	
comp=Z,1μm,18.0s							
MCH1	**Michaelchurch**	**77.12**	**1⇑**	*e*P	**P**	**00 41 14.0**	**-0.3**
MCH1				AMb	AMB	00 41 14.9	
comp=Z,114nm,1.1s,mb5.7							
MCH1				AMS	AMS	01 15 35.7	
comp=Z,1μm,18.0s,MS5.3							
MAK	**Makhachkala**	**77.13**	**326**	*c i*P	**P**	**00 41 16.0**	**+1.4**
MAK				*i*		00 41 22.4	
MAK				*e*		00 44 09.6	
MAK				*e*PPP		00 46 03.4	
MAK				*e*S	S	00 51 03.0	+2.6
MAK				*e*		00 51 26.0	
MAK				*e*SS	SS	00 56 00.5	+3.4
MAK				pmax	pmax		
comp=Z,480nm,1.2s,mb6.3							
MAK				pmax	pmax		
comp=N,151nm,1.2s							
MAK				pmax	pmax		
comp=E,90nm,1.2s							
MAK				pmax	pmax		
comp=Z,2μm,3.2s							
MAK				pmax	pmax		
comp=N,644nm,1.6s							
MAK				pmax	pmax		
comp=E,667nm,2.0s							
MAK				MLR	MLR		
comp=Z,10μm,19.0s,MS6.2							
MAK				MLR	MLR		
comp=E,6μm,22.0s,MS6.3							
MAK				MLR	MLR		
comp=N,13μm,20.0s,MS6.3							
CLL	**Collm**	**77.13**	**351**	*e*P	**P**	**00 41 13.5**	**-0.9**
comp=Z,28nm,1.1s,mb5.1							
CLL	**Collm**	**77.13**	**351⇑**	*i*P	**P**	**00 41 13.5**	**-0.9**
CLL				*i*		00 41 19.7	
CLL				*e*S	S	00 51 07.0	+6.9
CLL				pmax	pmax		
comp=Z,28nm,1.1s,mb5.1							
CLL				MLR	MLR		
comp=Z,2μm,20.4s,MS5.5							
CLL	**Collm**	**77.13**	**351⇑**	*i*P	**P**	**00 41 13.5**	**-0.9**
comp=Z,28nm,1.1s,mb5.1							
CLL				*i*		00 41 19.7	
CLL				*e*S	S	00 51 07.0	+6.9
CLL				LR	LR		
comp=Z,2μm,20.4s,MS5.5							
CLL	**Collm**	**77.13**	**351⇑**	*i*P	**P**	**00 41 13.5**	**-0.9**
comp=Z,28nm,1.1s,mb5.1							
CLL				*i* pP	pP	00 41 19.7	-6.9
CLL				*e*PP	PP	00 44 06.0	-1.5
CLL				*e*PPP		00 45 57.0	
CLL				*e*S	S	00 51 07.0	+6.9
CLL				*e*PPS		00 51 52.0	
CLL				*e*SS	SS	00 56 00.0	+3.4
CLL				*e*		01 01 12.0	
CLL				*e*		01 02 54.0	
CLL				LmV		01 17 00.0	
comp=Z,2μm,20.4s							
ABKT	**Ailbek**	**77.21**	**316**	P	**P**	**00 41 16.3**	**+1.2**
comp=Z,793nm,1.1s,mb6.6,SNR=60							
KSP	**Ksiaz**	**77.23**	**349**	*e*P	**P**	**00 41 14.4**	**-0.5**
KSP				*e*PcP	PcP	00 41 21.0	-4.5
KSP				*e*pP	pP	00 41 25.7	-1.5
KSP				*e*PP	PP	00 44 09.8	+1.4
KSP				*e*S	S	00 50 55.7	-5.4
KSP				*e*SKS		00 51 26.5	
KSP				LMZ		01 21 24.6	
comp=Z,6μm,18.5s							
KSP	**Ksiaz**	**77.23**	**349**	*e*P	**P**	**00 41 14.5**	**-0.5**
KSP				*e**PP	pP	00 41 18.8	-8.4
KSP				*e*PS		00 51 51.0	
SOR	**Soroa**	**77.39**	**69**	*e*P	**P**	**00 41 16.5**	**+0.2**
BUG	**Bochum--Univer**	**77.45**	**355**	*e*P	**P**	**00 41 15.9**	**-0.3**
comp=Z,90nm,1.4s,mb5.5							
BRG	**Berggiesshubel**	**77.47**	**350**	*e*P	**P**	**00 41 15.6**	**-0.7**
comp=Z,32nm,1.1s,mb5.2							
BRG	**Berggiesshubel**	**77.47**	**350**	*i* P	**P**	**00 41 15.7**	**-0.6**
comp=Z,32nm,1.1s,mb5.2							
BRG				*e*		00 41 22.2	
comp=Z,16nm,1.0s							
BRG				PP	PP	00 44 12.0	+1.6
BRG				*i*		00 46 04.0	
BRG				*e*		00 47 20.3	
comp=Z,10nm,1.3s							
BRG				S	S	00 51 04.0	+0.2
BRG				SS	SS	00 55 59.0	-2.7
BRG				*e*PKPPKP		01 08 24.5	
comp=Z,3.5nm,1.2s							
BRG							
comp=N,242nm,18.6s							
BRG							
comp=E,1μm,17.6s							
BRG							
comp=Z,3μm,18.5s							
BRG	**Berggiesshubel**	**77.47**	**350**	*i* P	**P**	**00 41 15.7**	**-0.6**
BRG				*e*		00 41 22.2	
BRG						00 44 12.0	
BRG				*i*		00 46 04.0	
BRG				S	S	00 51 04.0	+0.2
BRG				SS	SS	00 55 59.0	-2.7
BRG				pmax	pmax		
comp=Z,19nm,1.2s,mb4.9							
BRG				pmax	pmax		
comp=Z,10.0nm,1.0s,mb4.7							
BRG				pmax	pmax		
comp=Z,6.0nm,1.3s,mb4.4							
BRG				pmax	pmax		
comp=Z,2.0nm,1.2s							
BRG				MLR	MLR		
comp=N,145nm,18.6s,MS5.1							
BRG				MLR	MLR		
comp=E,818nm,17.6s,MS5.1							
BRG				MLR	MLR		
comp=Z,2μm,18.5s,MS5.4							
KWP	**Kalwaria Pacla**	**77.48**	**344**	*e*P	**P**	**00 41 16.9**	**+0.5**
KWP				*e*pP	pP	00 41 31.6	+3.0
KWP				*e*PP	PP	00 44 13.3	+2.9
KWP				*e*S	S	00 51 04.3	+0.4
KWP				*e*SKS		00 51 27.5	
KWP				LMZ		01 15 20.6	
comp=Z,6μm,23.6s							
KWP	**Kalwaria Pacla**	**77.48**	**344⇑**	*e*P	**P**	**00 41 16.9**	**+0.5**
KWP				*e**PP	pP	00 41 31.6	+3.0
KWP				*e*		00 44 13.3	
KWP				*e*S	S	00 51 04.3	+0.4
KWP				*e*		00 51 27.5	
KWP				MLR	MLR		
comp=Z,6μm,23.6s,MS5.8							
KWP	**Kalwaria Pacla**	**77.48**	**344⇑**	*e*P	**P**	**00 41 16.7**	**+0.3**
comp=Z,385nm,1.0s,mb6.3							
KWP	**Kalwaria Pacla**	**77.48**	**344⇑**	*i*P	**P**	**00 41 16.8**	**+0.4**
HGH	**Gray Hill**	**77.49**	**1**	P	**P**	**00 41 16.2**	**-0.2**
HGH	**Gray Hill**	**77.49**	**1⇑**	*i*P	**P**	**00 41 16.2**	**-0.2**
UPC	**Upice**	**77.59**	**349⇑**	*e*P	**P**	**00 41 16.6**	**-0.4**
UPC				*e*		00 41 20.9	
UPC	**Upice**	**77.59**	**349⇑**	*e*P	**P**	**00 41 16.6**	**-0.4**
UPC				*e*pP	pP	00 41 20.9	-8.3
SWN1	**Swindon**	**77.62**	**0**	P	**P**	**00 41 16.6**	**-0.5**
SWN1				AMb	AMB	00 41 18.7	
comp=Z,346nm,1.2s,mb6.2							
SWN1				AMS	AMS	01 15 16.9	
comp=Z,1μm,20.5s							
SWN1	**Swindon**	**77.62**	**0⇑**	*e*P	**P**	**00 41 16.6**	**-0.5**
SWN1				AMb	AMB	00 41 18.7	
comp=Z,346nm,1.2s,mb6.2							
SWN1				AMS	AMS	01 15 16.9	
comp=Z,1μm,20.5s,MS5.2							
DPC	**Dobruska-Polom**	**77.71**	**349⇑**	*e*P	**P**	**00 41 17.7**	**+0.1**
DPC				*e*		00 41 23.2	
DPC				MLR	MLR		
comp=Z,3μm,17.2s,MS5.6							
DPC	**Dobruska-Polom**	**77.71**	**349⇑**	*e*P	**P**	**00 41 17.7**	**+0.1**
DPC				*e*pP	pP	00 41 23.2	-6.7
DPC				*e*x	x	00 44 24.8	
DPC				*e*x	x	00 46 13.8	
DPC				AMS	AMS	01 23 20.0	
comp=Z,3μm,17.2s							
RAC	**Raciborz**	**77.73**	**347**	*e*P	**P**	**00 41 17.4**	**-0.4**
PVCC	**Panska Ves**	**77.74**	**350⇑**	*e*P	**P**	**00 41 17.3**	**-0.5**
PVCC				MLR	MLR		
comp=Z,3μm,20.5s,MS5.6							
PVCC	**Panska Ves**	**77.74**	**350⇑**	*e*P	**P**	**00 41 17.3**	**-0.5**
PVCC				AMS	AMS	01 19 20.0	
comp=Z,3μm,20.5s							
WOL	**Wolverton**	**77.82**	**0**	P	**P**	**00 41 18.0**	**-0.2**
WOL				AMb	AMB	00 41 19.8	
comp=Z,149nm,1.1s,mb5.8							
WOL				AMS	AMS	01 23 49.5	
comp=Z,1μm,18.9s							
WOL	**Wolverton**	**77.82**	**0⇑**	*e*P	**P**	**00 41 18.0**	**-0.2**
WOL				AMb	AMB	00 41 19.8	
comp=Z,149nm,1.1s,mb5.8							
WOL				AMS	AMS	01 23 49.5	
comp=Z,1μm,18.9s,MS5.3							
KIV	**Kislovodsk**	**77.88**	**329**	P	**P**	**00 41 19.7**	**+1.0**
comp=Z,944nm,0.9s,mb6.7,SNR=34							
KIV	**Kislovodsk**	**77.88**	**329**	*c i*P	**P**	**00 41 19.3**	**+0.6**
KIV				*e*	pP	00 41 28.0	-2.9
KIV				*e*		00 44 15.7	
KIV				*e*SS	SS	00 56 08.7	+0.4
KIV				pmax	pmax		
comp=Z,164nm,1.0s,mb5.9							
KIV				MLR	MLR		
comp=Z,4μm,23.0s,MS5.7							
KIV	**Kislovodsk**	**77.88**	**329**	*e*P	**P**	**00 41 19.6**	**+0.8**
KIV				*e*PP	PP	00 44 14.6	+0.6
KIV				*e*S	S	00 51 09.3	+0.9
KIV				LR	LR		
comp=Z,3μm,21.0s,MS5.7							
KIV	**Kislovodsk**	**77.88**	**329**	P	**P**	**00 41 20.0**	**+1.3**
SNR=40							
UBBA	**Unterbreizbach**	**77.88**	**353**	*e*P	**P**	**00 41 18.5**	**-0.1**
comp=Z,40nm,1.4s,mb5.2							
MOX	**Moxa**	**77.92**	**352**	*c i*P	**P**	**00 41 18.3**	**-0.5**
comp=Z,48nm,1.3s,mb5.3							
MOX				*e*		00 44 27.0	
MOX							
comp=Z,2μm,18.0s							
MOX	**Moxa**	**77.92**	**352**	*e*P	**P**	**00 41 18.5**	**-0.3**
comp=Z,38nm,1.1s,mb5.2							
MOX	**Moxa**	**77.92**	**352⇑**	*i*P	**P**	**00 41 18.3**	**-0.5**
MOX				pmax	pmax		
comp=Z,2.0nm,1.3s							
MOX				MLR	MLR		
comp=Z,48μm,18.0s,MS6.9							
STHS	**Stebnicka Huta**	**77.93**	**345**	*e*P	**P**	**00 41 20.1**	**+1.2**
STHS				pmax	pmax		
comp=Z,62nm,1.2s,mb5.4							
STHS	**Stebnicka Huta**	**77.93**	**345**	*e*P	**P**	**00 41 20.1**	**+1.2**
comp=Z,62nm,1.2s,mb5.4							
STHS	**Stebnicka Huta**	**77.93**	**345**	*e*P	**P**	**00 41 20.1**	**+1.2**
ELSH	**Elham, Standar**	**77.97**	**359**	P	**P**	**00 41 18.9**	**-0.2**
ELSH	**Elham, Standar**	**77.97**	**359⇑**	*e*P	**P**	**00 41 18.9**	**-0.2**
OKC	**Ostrava-Krasne**	**77.98**	**347⇑**	*e*P	**P**	**00 41 18.9**	**-0.2**
OKC				*e*		00 52 06.1	
OKC				MLR	MLR		
comp=Z,3μm,16.9s,MS5.7							
OKC	**Ostrava-Krasne**	**77.98**	**347⇑**	*e*P	**P**	**00 41 18.9**	**-0.2**
OKC				*e*x	x	00 46 16.8	
OKC				*e*x	x	00 52 06.1	
OKC				AMS	AMS	01 21 40.0	
comp=Z,3μm,16.9s							
HEX	**Exmoor**	**78.04**	**2**	P	**P**	**00 41 19.1**	**-0.4**
HEX	**Exmoor**	**78.04**	**2⇑**	*i*P	**P**	**00 41 19.1**	**-0.4**
TANN	**Tannenbergstha**	**78.07**	**351**	*e*P	**P**	**00 41 19.5**	**-0.1**
comp=Z,31nm,1.2s,mb5.1							
NIE	**Niedzica**	**78.07**	**346**	*e*P	**P**	**00 41 20.7**	**+1.0**
HTL	**Hartland**	**78.10**	**2**	P	**P**	**00 41 19.1**	**-0.7**
HTL				AMb	AMB	00 41 21.1	
comp=Z,61nm,1.3s,mb5.4							
HTL				AMS	AMS	01 23 21.5	
comp=Z,2μm,16.8s							
HTL	**Hartland**	**78.10**	**2**	*e*P	**P**	**00 41 19.1**	**-0.7**
HTL				AMb	AMB	00 41 21.1	
comp=Z,61nm,1.3s,mb5.4							
HTL				AMS	AMS	01 23 21.5	
comp=Z,2μm,16.8s,MS5.4							
PBKI	**Pangkalan Bun**	**78.11**	**250**	P	**P**	**00 41 19.6**	**-0.7**
comp=Z,203nm,1.2s,mb5.9							
MORC	**Moravsky Berou**	**78.12**	**348⇑**	*e*P	**P**	**00 41 19.7**	**-0.2**
MORC				pmax	pmax		
comp=Z,25nm,1.1s,mb5.1							
MORC	**Moravsky Berou**	**78.12**	**348⇑**	*e*P	**P**	**00 41 19.7**	**-0.3**
comp=Z,26nm,1.1s,mb5.1							
MORC				*e*PP	PP	00 44 06.6	-9.2
MORC	**Moravsky Berou**	**78.12**	**348⇓**	*i*P	**P**	**00 41 19.6**	**-0.3**
AJM	**Ajmer**	**78.13**	**297**	*e*PKP	**P**	**00 41 20.0**	**-0.3**
AJM				AMb	AMB	00 41 22.5	
comp=Z,273nm,1.0s,mb6.1							
BEBN	**Eben Emael**	**78.18**	**356**	P	**P**	**00 41 20.2**	**-0.1**
comp=Z,23nm,1.3s,mb5.0							
HGN	**Heimansgroeve**	**78.20**	**355⇑**	*e*P	**P**	**00 41 20.1**	**-0.3**
comp=Z,103nm,1.2s,mb5.6							
HGN	**Heimansgroeve**	**78.20**	**355**	*e*x	pP	00 41 32.6	+0.1
HGN	**Heimansgroeve**	**78.20**	**355**	*e*PP	PP	00 44 18.5	+2.1
HGN	**Heimansgroeve**	**78.20**	**355**	*e*S	S	00 51 16.0	+4.3
HGN	**Heimansgroeve**	**78.20**	**355**	*e*SS	SS	00 56 06.1	-6.6
PRA	**Prague**	**78.21**	**350**	⇑P	**P**	**00 41 20.0**	**-0.4**
PRA				pP	pP	00 41 33.0	+0.4
PRA				PP	PP	00 44 25.0	+8.5
PRA				*e*x	x	00 49 42.0	
PRA				*e*x	x	00 52 05.0	
PRA				AMS	AMS	01 20 05.0	
NKC	**Novy Kostel**	**78.25**	**351⇑**	*e*P	**P**	**00 41 20.5**	**-0.1**
NKC				*e*		00 44 21.6	
NKC				MLR	MLR		
comp=Z,2μm,16.6s,MS5.5							
NKC				MLR	MLR		
comp=Z,11μm,0.3s							
NKC	**Novy Kostel**	**78.25**	**351⇑**	*e*P	**P**	**00 41 20.5**	**-0.1**
NKC				*e*PP	PP	00 44 21.6	+4.7
NKC				AMS	AMS	01 23 40.0	
comp=Z,2μm,16.6s							
PRU	**Pruhonice**	**78.28**	**350⇑**	*e*P	**P**	**00 41 20.6**	**-0.2**
PRU				*e*		00 41 25.9	
PRU				*e*		00 44 25.9	
PRU				*e*S	S	00 51 12.6	+0.1
PRU				*e*		00 51 37.8	
PRU				MLR	MLR		
comp=Z,3μm,20.2s,MS5.6							
PRU	**Pruhonice**	**78.28**	**350⇑**	*e*P	**P**	**00 41 20.6**	**-0.2**
PRU				*e*pP	pP	00 41 25.9	-7.1
PRU				*e*PP	PP	00 44 25.9	+8.8
PRU				*e*x	x	00 46 18.4	
PRU				*e*S	S	00 51 12.6	+0.1
PRU				*e*SKS		00 51 37.8	
PRU				AMS	AMS	01 19 50.0	
comp=Z,3μm,20.2s							
MEM	**Membach**	**78.35**	**355**	P	**P**	**00 41 21.1**	**0.0**
comp=Z,60nm,1.1s,mb5.4							
UZH	**Uzhgorod**	**78.52**	**344**	*d i*P	**P**	**00 41 22.0**	**-0.1**
UZH				*e*		00 41 39.0	
UZH				*e*		00 44 21.6	
UZH				*e*PPP		00 46 14.0	
UZH				*e*S	S	00 51 10.0	-5.1
UZH				*e*		00 51 31.6	
UZH				*e*PS		00 51 59.2	
UZH				MLR	MLR		
comp=N,2μm,22.0s,MS5.5							
UZH				MLR	MLR		
comp=E,2μm,22.0s,MS5.5							
UZH				MLR	MLR		
comp=Z,1μm,22.0s,MS5.2							
SNF	**Seneffe**	**78.53**	**357**	P	**P**	**00 41 22.1**	**0.0**
comp=Z,37nm,1.2s,mb5.2							
ZEI	**Tsey**	**78.54**	**328**	*e*P	**P**	**00 41 22.2**	**-0.2**
ZEI				*e**PP	pP	00 41 37.3	+2.7
ZEI				*e*		00 44 24.8	
ZEI				*e*S	S	00 51 19.7	+4.1
ZEI				*e*		00 51 40.7	
ZEI				pmax	pmax		
comp=Z,241nm,1.0s,mb6.1							
ZEI				pmax	pmax		
comp=N,228nm,1.1s							
ZEI				pmax	pmax		
comp=E,177nm,1.0s							
BCLA	**Clavier**	**78.57**	**356**	P	**P**	**00 41 22.2**	**-0.2**
comp=Z,36nm,1.1s,mb5.2							
TNS	**Taunus Mts**	**78.59**	**354**	*e*P	**P**	**00 41 22.4**	**-0.1**
comp=Z,84nm,1.2s,mb5.5							
TNS	**Taunus Mts**	**78.59**	**354**	*e*P	**P**	**00 41 22.4**	**-0.1**
TNS				pmax	pmax		
comp=Z,84nm,1.2s,mb5.5							
DYA	**Yadsworthy**	**78.67**	**2**	P	**P**	**00 41 22.6**	**-0.4**
DYA				AMb	AMB	00 41 23.5	
comp=Z,138nm,1.2s,mb5.8							
DYA				AMS	AMS	01 11 57.3	
comp=Z,1μm,23.1s							
DYA	**Yadsworthy**	**78.67**	**2⇑**	*e*P	**P**	**00 41 22.6**	**-0.4**
DYA				AMb	AMB	00 41 23.5	
comp=Z,138nm,1.2s,mb5.8							
DYA				AMS	AMS	01 11 57.3	
comp=Z,1μm,23.1s,MS5.2							
VRAC	**Vranov**	**78.70**	**348**	PKPPKP		01 08 21.0	
comp=Z,1.3nm,0.5s,baz=213,slow=23,SNR=3.2							
VRAC				LR	LR	01 17 47.3	
comp=Z,2μm,20.8s,MS5.5,baz=8.8,slow=37							
VRAC	**Vranov**	**78.70**	**348**	⇓P	**P**	**00 41 23.3**	**+0.1**
VRAC				P		00 41 23.4	
VRAC	**Vranov**	**78.70**	**348**	⇓*i*P	**P**	**00 41 23.3**	**+0.2**
ANN	**Anapa**	**78.70**	**333**	*c i*P	**P**	**00 41 22.4**	**-0.9**
ANN				*e**PP	pP	00 41 37.1	+1.6
ANN				*e*		00 44 21.7	
ANN				*e*PPP		00 46 08.1	
ANN				*e*S	S	00 51 17.0	-0.3
ANN				*e*SS	SS	00 56 18.7	-1.9
ANN				*e*SSS		00 59 49.2	
ANN				pmax	pmax		
comp=Z,48nm,1.0s,mb5.4							
ANN				pmax	pmax		
comp=Z,673nm,9.4s							
ANN				MLR	MLR		
comp=N,4μm,20.0s,MS5.8							
ANN				MLR	MLR		
comp=E,1μm,20.0s,MS5.8							
ANN				MLR	MLR		
comp=Z,2μm,20.0s,MS5.4							
ROTZ	**Rotzenmuhle**	**78.74**	**351**	*e*P	**P**	**00 41 23.1**	**-0.2**
comp=Z,29nm,1.1s,mb5.1							
KIS	**Kishinev**	**78.82**	**340⇑**	*i*P	**P**	**00 41 22.0**	**-1.8**
comp=Z,900nm,3.0s							
KIS	**Kishinev**	**78.82**	**340**	*e*PcP	sP	00 41 40.0	-0.7
KIS	**Kishinev**	**78.82**	**340**	*e*PP	PP	00 44 08.0	-14
KIS	**Kishinev**	**78.82**	**340**	*e*PS		00 52 05.0	
KIS				*e*SS	SS	00 56 56.0	+34
KIS				LRM		01 20 44.0	
comp=Z,3μm,17.0s							
KIS	**Kishinev**	**78.82**	**340α**	*i*P	**P**	**00 41 22.0**	**-1.8**
KIS				*e*		00 41 40.0	
KIS				*e*		00 44 18.0	
KIS				*e*S	S	00 51 16.0	-2.4
KIS				*e*		00 51 42.0	
KIS				*e*PS		00 52 05.0	
KIS				pmax	pmax		
comp=Z,900nm,3.0s							
KIS				pmax	pmax		
comp=Z,1μm,10.0s							
KIS				MLR	MLR		
comp=N,4μm,18.0s,MS5.9							
KIS				MLR	MLR		
comp=Z,8μm,18.0s,MS6.1							
KIS				MLR	MLR		
comp=E,3μm,17.0s,MS5.9							
KIS				MLR	MLR		
comp=Z,7μm,16.0s							
TREC	**Trest**	**78.85**	**349⇑**	*e*P	**P**	**00 41 23.7**	**-0.3**
TREC				*e*	pP	00 41 33.1	-3.1
TREC				*e*		00 52 13.8	
TREC				MLR	MLR		
comp=Z,2μm,16.9s,MS5.6							
TREC	**Trest**	**78.85**	**349⇑**	*e*P	**P**	**00 41 23.7**	**-0.3**
TREC				*e*pP	pP	00 41 33.1	-3.1
TREC				*e*x	x	00 52 13.8	
TREC				AMS	AMS	01 22 10.0	
comp=Z,2μm,16.9s							
CCA1	**Carnmenellis**	**78.89**	**3**	P	**P**	**00 41 23.6**	**-0.6**
CCA1				AMb	AMB	00 41 24.8	
comp=Z,105nm,1.2s,mb5.6							
CCA1				AMS	AMS	01 16 59.9	
comp=Z,2μm,18.8s							
CCA1	**Carnmenellis**	**78.89**	**3⇑**	*e*P	**P**	**00 41 23.6**	**-0.6**
CCA1				AMb	AMB	00 41 24.8	
comp=Z,105nm,1.2s,mb5.6							
CCA1				AMS	AMS	01 16 59.9	
comp=Z,2μm,18.8s,MS5.5							
GRA1	**Grafenberg Arr**	**78.90**	**352**	*e*P	**P**	**00 41 24.4**	**+0.2**
comp=Z,86nm,1.1s,mb5.6							
GRA1				*e*PP	PP	00 44 25.9	+3.6
GRA1				LR	LR		
comp=Z,2μm,18.0s,MS5.6							
GRF	**Grafenberg Arr**	**78.90**	**352**	*e*P	**P**	**00 41 24.4**	**+0.2**
comp=Z,86nm,1.1s,mb5.6							
GRF				*e*PP	PP	00 44 25.9	+3.6
GRF				*e*L		01 24 12.0	
comp=Z,2μm,18.0s							
GRF	**Grafenberg Arr**	**78.90**	**352**	*e*P	**P**	**00 41 24.4**	**+0.2**
GRF				*e*		00 44 25.9	
GRF				pmax	pmax		
comp=Z,86nm,1.1s,mb5.6							
GRF				MLR	MLR		
comp=Z,2μm,18.0s,MS5.6							
GIVF	**Givet**	**78.91**	**356⇑**	*i*P	**P**	**00 41 24.0**	**-0.3**
comp=Z,135nm,1.1s,mb5.5							
GIVF	**Givet**	**78.91**	**356⇑**	*i*P	**P**	**00 41 24.0**	**-0.3**
GIVF				pmax	pmax		
comp=Z,67nm,1.1s,mb5.5							
GIVF	**Givet**	**78.91**	**356⇑**	*i*P	**P**	**00 41 24.0**	**-0.3**
comp=Z,67nm,1.1s,mb5.5							
DOU	**Dourbes**	**78.93**	**356**	P	**P**	**00 41 24.2**	**-0.2**
comp=Z,36nm,1.3s,mb5.2							
KEH	**Kehvi**	**78.94**	**328**	P	**P**	**00 41 24.0**	**-0.6**
BUR08	**Bucovina Ar. S**	**78.94**	**342⇑**	*e*P	**P**	**00 41 24.9**	**+0.3**
BUR08				*e*PP	PP	00 44 22.1	-0.7
KECS	**Kecovo**	**78.95**	**346**	*e*P	**P**	**00 41 24.7**	**+0.1**
KECS				pmax	pmax		
comp=Z,29nm,1.0s,mb5.2							
KECS	**Kecovo**	**78.95**	**346**	*e*P	**P**

SOC e 00 44 24.8
SOC ePPP 00 46 13.2
SOC eS S 00 51 22.0 0.0
SOC e*SS sS 00 51 38.7 -3.7
SOC pmax pmax
comp=Z,104nm,1.0s,mb5.7
SOC MLR MLR
comp=Z,4µm,17.0s,MS5.8
GOR Gori 79.17 327 P **P 00 41 27.1 +1.2**
GOR S sP 00 41 43.8 +1.1
KOLL Kolacno 79.17 347 eP **P 00 41 26.2 +0.5**
KOLL Kolacno 79.17 347 eP **P 00 41 26.1 +0.4**
TOD Tromm 79.18 353⇑eP **P 00 41 25.5 -0.3**
TBLG Delisi 79.18 327 i P **P 00 41 27.2 +1.3**
TBLG Delisi 79.18 327 P **P 00 41 27.2 +1.2**
TBLG S sP 00 41 46.4 +3.6
VYHS Vyhne 79.19 347 eP **P 00 41 26.2 +0.3**
VYHS pmax pmax
comp=Z,27nm,1.1s,mb5.1
VYHS Vyhne 79.19 347 eP **P 00 41 26.2 +0.3**
comp=Z,27nm,1.1s,mb5.1
VYHS Vyhne 79.19 347 eP **P 00 41 26.2 +0.3**
MTA Mtatsminda 79.20 327 P **P 00 41 27.1 +1.1**
MTA S sP 00 41 48.2 +5.4
RUP Ruppelstein 79.20 355⇑eP **P 00 41 25.5 -0.4**
DGRG David-gareji 79.21 326 P **P 00 41 27.4 +1.3**
DGRG S sP 00 41 45.1 +2.2
KHC Kasperske Hory 79.23 350⇑eP **P 00 41 26.0 0.0**
KHC e 00 44 27.0
KHC eS S 00 51 21.3 -1.4
KHC e 00 51 49.4
KHC MLR MLR
comp=Z,3µm,19.3s,MS5.7
KHC Kasperske Hory 79.23 350⇑eP **P 00 41 26.1 +0.1**
comp=Z,44nm,1.0s,mb5.3
KHC ePP PP 00 44 24.7 -0.4
KHC Kasperske Hory 79.23 350⇑eP **P 00 41 26.0 0.0**
KHC epP pP 00 41 30.0 -8.3
KHC ePP PP 00 44 27.0 +1.9
KHC eS S 00 51 21.3 -1.4
KHC eSKS 00 51 49.4
KHC AMS AMS 01 19 30.0
comp=Z,3µm,19.3s
BMR Baia Mare 79.23 343 P **P 00 41 27.0 +0.9**
BMR ⇑P 00 41 27.2
BMR Baia Mare 79.23 343⇑i P **P 00 41 27.2 +1.1**
WLF Walferdange 79.28 355 P **P 00 41 26.7 +0.3**
comp=Z,41nm,1.6s,mb5.1
WLF Walferdange 79.28 355 eP **P 00 41 26.6 +0.3**
comp=Z,65nm,1.2s,mb5.4
WLF Walferdange 79.28 355⇑eP **P 00 41 26.8 +0.5**
WLF ePP PP 00 44 25.1 -0.4
WLF eS S 00 51 25.4 +2.1
WLF LR LR
comp=Z,3µm,19.0s,MS5.6
WET Wettzell 79.29 351 eP **P 00 41 26.3 -0.1**
comp=Z,28nm,1.2s,mb5.1
WET Wettzell 79.29 351 eP **P 00 41 26.3 -0.1**
WET pmax pmax
comp=Z,28nm,1.2s,mb5.1
MYKOM Kota Tinggi 79.30 259 P **P 00 41 27.8 +0.8**
MYKOM Kota Tinggi 79.30 259 P **P 00 41 25.1 -1.8**
comp=Z,1µmcomp=Z,55nm,1.3s,mb5.3
TBI Tubuai 79.30 151 eS S 00 51 28.3 +4.5
comp=Z,2µm,33.8s
TBI eLR LR 01 06 13.0
comp=Z,7µm,22.2s,baz=339
QUE Quetta 79.32 305⇑i P **P 00 41 29.0 +2.1**
QUE eS S 00 51 33.0 +8.7
LEOM Leova 79.44 340⇓P **P 00 41 27.5 +0.2**
LEOM Leova 79.44 340⇓i P **P 00 41 27.5 +0.2**
KGM Kluang 79.45 260 P **P 00 41 28.4 +0.7**
SIM Simferopol' 79.47 335 eP **P 00 41 27.2 -0.2**
SIM eS SKSac 00 51 39.0 -1.4
SIM pmax pmax
comp=Z,330nm,12.0s
SIM pmax pmax
comp=Z,24nm,0.9s,mb5.1
GEC2 GERESS Array S 79.50 350 eP **P 00 41 27.2 -0.3**
comp=Z,36nm,1.1s,mb5.2
GEC2 GERESS Array S 79.50 350 eP **P 00 41 27.2 -0.3**
GEC2 pmax pmax
comp=Z,36nm,1.1s,mb5.2
FRIM Kepong 79.55 262 P **P 00 41 28.8 +0.5**
PSZ Piszkesteto 79.60 346 PFAKE 00 41 40.0 +12
PSZ LR LR
comp=Z,3µm,20.0s,MS5.7
BBSR BB Station 79.73 50 PFAKE 00 41 40.0 +11
BBSR LR LR
comp=Z,2µm,20.0s,MS5.5
NGP Nagpur 79.74 291 ePKP **P 00 41 28.5 -0.8**
NGP ex x 00 51 39.8
TESR 79.74 341⇓P **P 00 41 28.8 -0.1**
TESR 79.74 341⇓i P **P 00 41 28.8 -0.1**
KNA Kununurra 79.76 229 P **P 00 41 27.6 -1.6**
comp=Z,1µmcomp=Z,127nm,1.0s,mb5.8
VIS Vishakhapatnam 79.83 285 ePKP **P 00 41 30.1 +0.3**
VIS AMb AMB 00 41 32.3
comp=Z,242nm,1.2s,mb6.0
LANF Langenberg 79.87 354⇑eP **P 00 41 29.4 -0.1**
JSA Saint Aubin 79.94 1 P **P 00 41 29.6 -0.3**
JSA AMb AMB 00 41 30.5
comp=Z,181nm,1.2s,mb5.9
JSA AMS AMS 01 19 11.8
comp=Z,1µm,20.3s
JSA Saint Aubin 79.94 1⇑i P **P 00 41 29.6 -0.3**
JSA AMb AMB 00 41 30.5
comp=Z,181nm,1.2s,mb5.9
JSA AMS AMS 01 19 11.8
comp=Z,1µm,20.3s,MS5.3
STU Stuttgart 79.98 353 eP **P 00 41 29.7 -0.4**
comp=Z,51nm,1.1s,mb5.4
STU Stuttgart 79.98 353⇑eP **P 00 41 29.9 -0.2**
STU ePP PP 00 44 31.2 -0.1
CONA Conrad Observa 80.15 349 i P **P 00 41 31.5 +0.4**
comp=Z,66nm,1.2s,mb5.4,SNR=34
BUD Budapest 80.15 346⇑esP sP 00 41 55.3 +7.4
DRGR 80.22 344 ⇑P **P 00 41 31.8 +0.3**
DRGR P 00 41 32.0
DRGR 80.22 344⇑i P **P 00 41 31.8 +0.3**
KMMI Kalianget 80.27 246 P **P 00 41 30.0 -2.1**
comp=Z,144nm,1.3s,mb5.8
VRI Vrincioaia 80.34 341 ⇑P **P 00 41 32.5 +0.4**
VRI P 00 41 34.3
VRI Vrincioaia 80.34 341⇑i P **P 00 41 32.5 +0.4**
PLOR Plostina 80.37 341 P **P 00 41 33.0 +0.7**
PLOR Plostina 80.37 341⇑i P **P 00 41 33.3 +1.0**
FLN La Foliniere 80.38 360⇑i P **P 00 41 31.7 -0.6**
comp=Z,295nm,1.1s,mb5.8
FLN eMLR MLR
comp=Z,2µm,20.5s,MS5.2
FLN La Foliniere 80.38 360⇑i P **P 00 41 31.7 -0.6**
FLN pmax pmax
comp=Z,148nm,1.1s,mb5.8
FLN MLR MLR
comp=Z,2µm,20.5s,MS5.5
FLN La Foliniere 80.38 360⇑i P **P 00 41 31.7 -0.6**
comp=Z,148nm,1.1s,mb5.8
FLN LR LR
comp=Z,2µm,20.5s,MS5.5
SRBI Singaraja 80.40 244 P **P 00 41 30.7 -2.1**
comp=Z,63nm,1.4s,mb5.4
KHKI Kahang-Kahang 80.40 244 P **P 00 41 31.2 -1.6**
comp=Z,75nm,1.3s,mb5.5
FUR Furstenfeldbru 80.41 352 eP **P 00 41 32.3 -0.1**
comp=Z,69nm,1.0s,mb5.5
FUR Furstenfeldbru 80.41 352 eP **P 00 41 32.3 -0.1**
FUR pmax pmax
comp=Z,69nm,1.0s,mb5.5
MOA Molln 80.42 350⇑i P **P 00 41 32.4 -0.1**
comp=Z,22nm,1.1s,mb5.0,SNR=12
CDF Champ du Feu 80.47 354⇑i P **P 00 41 32.4 -0.4**
comp=Z,51nm,1.1s,mb5.1
CDF Champ du Feu 80.47 354⇑i P **P 00 41 32.4 -0.4**
CDF pmax pmax
comp=Z,26nm,1.1s,mb5.1
CDF Champ du Feu 80.47 354⇑i P **P 00 41 32.4 -0.4**
comp=Z,26nm,1.1s,mb5.1
BCA Borcka 80.48 329 eP **P 00 41 32.7 -0.3**
BFO Black Forest 80.48 354 eP **P 00 41 32.6 -0.2**
comp=Z,37nm,1.1s,mb5.2
BFO Black Forest 80.48 354 eP **P 00 41 32.6 -0.2**
BFO pmax pmax
comp=Z,37nm,1.1s,mb5.2

MEZF Maizieres J'vi 80.50 356⇑i P **P 00 41 32.9 0.0**
comp=Z,160nm,1.1s,mb5.5
MEZF Maizieres J'vi 80.50 356⇑i P **P 00 41 32.9 0.0**
comp=Z,160nm,1.1s,mb5.9
DOPR Dopca 80.52 342⇓i P **P 00 41 34.4 +1.3**
TLCR 80.54 339⇓P **P 00 41 33.6 +0.4**
TLCR 80.54 339⇓i P **P 00 41 33.6 +0.4**
LDF La Druitiere 80.54 359⇑i P **P 00 41 32.4 -0.7**
comp=Z,98nm,1.1s,mb5.4
LDF La Druitiere 80.54 359⇑i P **P 00 41 32.4 -0.7**
LDF pmax pmax
comp=Z,49nm,1.1s,mb5.3
LDF La Druitiere 80.54 359⇑i P **P 00 41 32.4 -0.7**
comp=Z,49nm,1.1s,mb5.3
MDB Medias 80.55 342 P **P 00 41 34.6 +1.4**
TPI Tanjungpandan 80.55 254 P **P 00 41 31.3 -2.4**
comp=Z,1µmcomp=Z,52nm,1.3s,mb5.3
GNI Garni 80.59 326 S S 00 51 46.5 +9.2
comp=Z,0.8nm,0.4s,baz=180,slow=20,SNR=1.9
GNI Garni 80.59 326⇑i P **P 00 41 35.2 +1.6**
GNI pmax pmax
comp=Z,178nm,1.0s
GNI Garni 80.59 326⇑i P **P 00 41 35.2 +1.6**
comp=Z,178nm,1.0s,mb6.0
ARTV Artvin 80.61 329 i P **P 00 41 34.3 +0.6**
ECH Echery 80.67 354⇑eP **P 00 41 33.5 -0.4**
ECH Echery 80.67 354⇑eP **P 00 41 33.4 -0.5**
ECH e 00 44 36.4
ECH eS S 00 51 39.8 +1.9
ECH pmax pmax
comp=Z,35nm,1.1s,mb5.2
ECH MLR MLR
comp=Z,2µm,19.0s,MS5.4
ECH Echery 80.67 354⇑eP **P 00 41 33.4 -0.4**
comp=Z,35nm,1.1s,mb5.2
ECH ePP PP 00 44 36.4 -0.6
ECH eS S 00 51 39.8 +1.9
ECH LR LR
comp=Z,2µm,19.0s,MS5.4
SPAK Spaichingen-Ko 80.68 353⇑eP **P 00 41 33.7 -0.2**
RJOB Jochberg 80.69 351 eP **P 00 41 33.8 -0.1**
comp=Z,21nm,0.9s,mb5.1
CFR Carcaliu 80.70 340⇓P **P 00 41 35.2 +1.2**
CFR Carcaliu 80.70 340 P **P 00 41 34.6 +0.6**
CFR ⇓P 00 41 35.2
CFR Carcaliu 80.70 340⇓i P **P 00 41 35.2 +1.2**
LIBD Limburg 80.71 354 eP **P 00 41 33.9 -0.2**
DAGI Agillar 80.72 329 i P **P 00 41 35.6 +1.4**
THEF They Montfort 80.73 355⇑eP **P 00 41 33.9 -0.3**
KARS Kars 80.73 328 eP **P 00 41 35.5 +1.2**
GRR Gorron 80.75 360⇑i P **P 00 41 33.9 -0.4**
comp=Z,211nm,1.1s,mb5.7
GRR Gorron 80.75 360⇑i P **P 00 41 33.9 -0.4**
GRR pmax pmax
comp=Z,106nm,1.1s,mb5.7
GRR Gorron 80.75 360⇑i P **P 00 41 33.9 -0.4**
comp=Z,106nm,1.1s,mb5.7
GRER 80.75 340⇓P **P 00 41 35.7 +1.4**
GRER P 00 41 36.6
GRER 80.75 340⇓i P **P 00 41 35.7 +1.3**
ROSF Rostrenen 80.78 1⇑i P **P 00 41 34.3 -0.2**
comp=Z,278nm,1.2s,mb5.8
ROSF Rostrenen 80.78 1⇑i P **P 00 41 34.3 -0.2**
ROSF pmax pmax
comp=Z,139nm,1.2s,mb5.8
ROSF Rostrenen 80.78 1⇑i P **P 00 41 34.3 -0.2**
comp=Z,139nm,1.2s,mb5.8
BST Brest 80.80 2⇑eP **P 00 41 34.7 +0.1**
DIGO Kars 80.82 327 i P **P 00 41 36.1 +1.3**
ARSA Arzberg 80.86 349 i P **P 00 41 35.4 +0.5**
comp=Z,48nm,1.1s,mb5.3,SNR=33
MLR Muntele Rosu 80.86 341 S S 00 51 50.0 +10
comp=Z,3.0nm,1.0s,baz=210,slow=20,SNR=2.7
MLR PKKPbc PKKPbc 01 00 11.8 +1.1
comp=Z,2.3nm,0.8s,baz=35,slow=5.2,SNR=4.2
MLR PKPPKP 01 08 16.3
comp=Z,6.1nm,1.2s,baz=60,slow=6.0,SNR=3.4
MLR LR LR 01 23 13.3
comp=Z,5µm,18.6s,MS5.9,baz=206,slow=40
MLR Muntele Rosu 80.86 341 ⇑P **P 00 41 35.4 +0.5**
MLR P 00 41 36.8
MLR Muntele Rosu 80.86 341⇑i P **P 00 41 35.4 +0.5**
SGMF Saint Gilles 80.88 1⇑i P **P 00 41 34.8 -0.1**
comp=Z,216nm,1.1s,mb5.7
SGMF Saint Gilles 80.88 1⇑i P **P 00 41 34.8 -0.1**
SGMF pmax pmax
comp=Z,108nm,1.1s,mb5.7
SGMF Saint Gilles 80.88 1⇑i P **P 00 41 34.8 -0.1**
comp=Z,108nm,1.1s,mb5.7
HAU Haudompre 80.93 355⇑i P **P 00 41 34.9 -0.3**
comp=Z,85nm,1.1s,mb5.3
HAU eMLR MLR
comp=Z,2µm,19.2s,MS5.2
HAU Haudompre 80.93 355⇑i P **P 00 41 34.9 -0.3**
HAU pmax pmax
comp=Z,43nm,1.1s,mb5.3
HAU MLR MLR
comp=Z,2µm,19.3s,MS5.5
HAU Haudompre 80.93 355⇑i P **P 00 41 34.9 -0.3**
comp=Z,42nm,1.1s,mb5.3
HAU LR LR
comp=Z,2µm,19.3s,MS5.5
WRAB Tennant Creek 80.94 222⇑eP **P 00 41 34.2 -1.3**
WRAB eS S 00 51 41.5 +0.4
WRAB pmax pmax
comp=Z,57nm,0.9s,mb5.5
WRAB MLR MLR
comp=Z,2µm,19.0s,MS5.4
WRAB Tennant Creek 80.94 222⇑eP **P 00 41 34.2 -1.3**
comp=Z,57nm,0.9s,mb5.5
WRAB eS S 00 51 41.5 +0.4
WRAB LR LR
comp=Z,2µm,19.0s,MS5.4
WRAB Tennant Creek 80.94 222 P **P 00 41 34.8 -0.7**
comp=Z,105nm,1.5s,mb5.5
FELD Feldberg im Sc 80.96 354⇑eP **P 00 41 35.0 -0.4**
SLE Schleitheim 81.03 353⇑i P **P 00 41 35.1 -0.7**
comp=Z,88nm,1.5s,mb5.5
MOF Molkenrain 81.04 354⇑eP **P 00 41 35.2 -0.6**
HINF Hinteralfeld 81.09 355⇑i P **P 00 41 35.5 -0.6**
comp=Z,74nm,1.3s,mb5.1
HINF Hinteralfeld 81.09 355⇑i P **P 00 41 35.5 -0.6**
HINF pmax pmax
comp=Z,37nm,1.3s,mb5.2
HINF Hinteralfeld 81.09 355⇑i P **P 00 41 35.5 -0.6**
comp=Z,37nm,1.3s,mb5.2
VOIR 81.09 342 ⇑P **P 00 41 37.2 +1.1**
VOIR P 00 41 37.4
VOIR 81.09 342⇑i P **P 00 41 37.2 +1.0**
RETA Reutte 81.13 352⇑i P **P 00 41 36.1 -0.2**
comp=Z,35nm,1.2s,mb5.2,SNR=20
WATA Walderalm 81.20 351⇑i P **P 00 41 36.9 +0.2**
comp=Z,82nm,1.1s,mb5.6,SNR=22
QUIF Quistinic 81.21 1⇑i P **P 00 41 36.4 -0.3**
comp=Z,142nm,1.1s,mb5.5
QUIF Quistinic 81.21 1⇑i P **P 00 41 36.4 -0.3**
QUIF pmax pmax
comp=Z,71nm,1.1s,mb5.5
QUIF Quistinic 81.21 1⇑i P **P 00 41 36.4 -0.3**
comp=Z,71nm,1.1s,mb5.5
MOTA Moosalm 81.24 352⇑i P **P 00 41 36.7 -0.2**
comp=Z,89nm,1.1s,mb5.6,SNR=25
TSI Tuntungan 81.26 265 P **P 00 41 35.7 -1.8**
WTTA Wattenberg 81.27 351⇑i P **P 00 41 37.4 +0.3**
comp=Z,113nm,1.1s,mb5.7,SNR=34
AKL Akola 81.28 292 ePKP **P 00 41 38.3 +0.8**
AKL AMb AMB 00 41 40.2
comp=Z,287nm,1.1s,mb6.1
KBA Koelnbreinsper 81.28 350⇑i P **P 00 41 38.0 +0.9**
comp=Z,176nm,1.1s,mb5.9,SNR=56
SULZ Cheisacher 81.30 354⇑i P **P 00 41 36.7 -0.5**
comp=Z,142nm,1.1s,mb5.8
TIRR Tirgusor 81.32 339⇑eP **P 00 41 38.1 +0.7**
TIRR pmax pmax
comp=Z,80nm,0.9s,mb5.7
TIRR Tirgusor 81.32 339⇑eP **P 00 41 38.1 +0.8**
comp=Z,80nm,0.9s,mb5.7
TIRR Tirgusor 81.32 339⇓i P **P 00 41 38.0 +0.6**
BBS Basel-Blauen 81.40 354⇑eP **P 00 41 37.4 -0.3**
DAVA Damuels 81.40 352⇑i P **P 00 41 37.5 -0.2**
comp=Z,40nm,1.3s,mb5.2,SNR=6.2
AMRR Amara 81.41 340 ⇑P **P 00 41 38.2 +0.4**
AMRR Amara 81.41 340⇑i P **P 00 41 38.2 +0.3**
ZUR Degenried 81.42 353⇑i P **P 00 41 37.6 -0.3**
comp=Z,99nm,1.0s,mb5.7

PKSM Moragy 81.45 346 ⇑P **P 00 41 37.5 -0.5**
PKSM P 00 41 38.1
PKSM Moragy 81.45 346⇑i P **P 00 41 37.5 -0.5**
SOKA Soboth 81.48 349⇑i P **P 00 41 38.5 +0.3**
comp=Z,192nm,1.1s,mb5.9
BOURR Bourrignon 81.49 354⇑i P **P 00 41 37.9 -0.3**
comp=Z,222nm,2.8s,mb5.6
KTUT Trabzon 81.49 330 eP **P 00 41 39.0 +0.7**
TIM Timisoara 81.50 344⇓P **P 00 41 39.0 +0.7**
TIM P 00 41 39.2
TIM Timisoara 81.50 344⇓i P **P 00 41 39.0 +0.7**
PERS Pernice 81.51 349 i P **P 00 41 38.6 +0.3**
PERS eS S 00 51 55.0 +8.3
PERS e 00 52 52.7
PERS e 00 57 21.5
BALST Balsthal 81.52 354⇑i P **P 00 41 38.1 -0.3**
comp=Z,128nm,1.4s,mb5.7
TGUH Tegucigalpa,Un 81.52 78⇑i P **P 00 41 40.3 +1.4**
TGUH ePP PP 00 44 44.6 -0.6
TGUH eS S 00 51 50.2 +2.6
TGUH LR LR
comp=Z,2µm,21.0s,MS5.4
BZS Buzias 81.55 344 ⇑P **P 00 41 38.8 +0.2**
BZS Buzias 81.55 344⇑i P **P 00 41 38.8 +0.2**
KOGS Kog 81.55 348 i P **P 00 41 38.4 -0.2**
LOMF Lomont 81.56 355⇑eP **P 00 41 38.7 +0.1**
GZR Gura Zlata 81.56 343⇓P **P 00 41 39.3 +0.6**
GZR Gura Zlata 81.56 343⇓i P **P 00 41 39.3 +0.6**
SULR 81.58 341 ⇑P **P 00 41 38.8 0.0**
SULR 81.58 341⇑i P **P 00 41 38.8 +0.1**
FETA Feichten 81.59 352⇑i P **P 00 41 39.0 +0.2**
comp=Z,80nm,1.0s,mb5.6,SNR=64
HOMI Horasan 81.65 328 i P **P 00 41 40.8 +1.6**
PLONS Plons/SG 81.68 353⇑i P **P 00 41 39.0 -0.2**
comp=Z,109nm,1.6s,mb5.5
MYKA Terra Mystica 81.69 350⇑i P **P 00 41 39.0 -0.3**
comp=Z,46nm,1.1s,mb5.3
ABTA Abfaltersbach 81.69 351⇑i P **P 00 41 39.2 -0.1**
comp=Z,81nm,1.1s,mb5.5,SNR=48
AGRB Hanur-Agry 81.70 327 eP **P 00 41 41.6 +2.1**
OBKA Obir 81.70 349⇑i P **P 00 41 39.5 +0.2**
comp=Z,78nm,1.0s,mb5.6,SNR=28
CLDR Caldiran 81.77 326 eP **P 00 41 41.9 +2.1**
LOR Lormes 81.78 357⇑i P **P 00 41 39.4 -0.4**
comp=Z,128nm,1.2s,mb5.4
LOR eMLR MLR
comp=Z,2µm,20.0s,MS5.1
LOR Lormes 81.78 357⇑i P **P 00 41 39.4 -0.4**
LOR pmax pmax
comp=Z,64nm,1.2s,mb5.4
LOR MLR MLR
comp=Z,2µm,20.0s,MS5.4
LOR Lormes 81.78 357⇑i P **P 00 41 39.4 -0.4**
comp=Z,64nm,1.2s,mb5.4
LOR LR LR
comp=Z,2µm,20.0s,MS5.4
MUO Muotathal 81.82 353⇑i P **P 00 41 39.9 -0.1**
comp=Z,168nm,1.5s,mb5.8
HYF Humbligny 81.82 357⇑i P **P 00 41 40.0 0.0**
ESPY Espiye-Giresun 81.88 331 eP **P 00 41 40.6 +0.2**
DAVOX Davos/Dischmat 81.91 352⇑i P **P 00 41 40.4 0.0**
comp=Z,90nm,1.0s,mb5.6
DAVOX Davos/Dischmat 81.91 352 S SKSac 00 52 02.2 +5.2
comp=Z,0.5nm,0.4s,baz=16,slow=20,SNR=2.5
DAVOX PKPPKP 01 08 14.2
comp=Z,1.7nm,0.8s,baz=341,slow=23,SNR=3.1
LLS Linth-Limmern 81.91 353⇑i P **P 00 41 40.5 +0.1**
comp=Z,167nm,2.8s,mb5.5
BNALP Bannalp 81.93 353⇑i P **P 00 41 40.7 +0.2**
comp=Z,117nm,1.1s,mb5.7
ERZM Erzurum 81.95 328 i P **P 00 41 42.8 +2.0**
EZM Erzurum 81.95 328 eP **P 00 41 42.8 +2.0**
NGJI Ngawi 81.97 248 P **P 00 41 41.5 +0.3**
comp=Z,79nm,1.3s,mb5.5
SSF Saint Saulge 82.00 357⇑i P **P 00 41 40.6 -0.3**
comp=Z,102nm,1.2s,mb5.3
SSF Saint Saulge 82.00 357⇑i P **P 00 41 40.6 -0.3**
SSF pmax pmax
comp=Z,51nm,1.2s,mb5.3
SSF Saint Saulge 82.00 357⇑i P **P 00 41 40.6 -0.3**
comp=Z,51nm,1.2s,mb5.3
GRSN GIRESUNGRSN 82.01 331 i P **P 00 41 40.9 -0.1**
GUMT Gumushane 82.06 330 eP **P 00 41 42.5 +1.2**
HASLI Hasliberg/Brie 82.06 354⇑i P **P 00 41 41.1 -0.1**
comp=Z,268nm,2.6s,mb5.7
CADS Cadrg 82.08 350 i P **P 00 41 40.4 -0.9**
SJI Sawahan 82.09 247 P **P 00 41 40.2 -1.6**
comp=Z,91nm,2.0s,mb5.4
PDKS Podkum 82.09 349 i P **P 00 41 40.9 -0.5**
TORNY Torny/Romont 82.12 354⇑i P **P 00 41 41.5 -0.1**
comp=Z,296nm,3.6s
LJU Ljubljana 82.17 349 i P **P 00 41 41.4 -0.4**
BKNI Bangkinang 82.18 261 P **P 00 41 42.0 -0.3**
comp=Z,2µmcomp=Z,231nm,1.2s,mb6.0
WIMIS Wimmis 82.19 354⇑i P **P 00 41 41.7 -0.2**
comp=Z,170nm,2.7s,mb5.5
DIKM Dikmen 82.22 333 eP **P 00 41 43.5 +1.3**
VDL Val di Lei 82.24 353⇑i P **P 00 41 42.5 +0.3**
comp=Z,116nm,1.0s,mb5.8
VOY Vojsko 82.25 350 eP **P 00 41 41.2 -1.1**
VOY e 00 41 59.7
BERNI Berninapass 82.26 352⇑i P **P 00 41 42.7 +0.4**
comp=Z,125nm,1.3s,mb5.7
AVF Avril sur Loir 82.28 357⇑i P **P 00 41 42.1 -0.3**
comp=Z,145nm,1.1s,mb5.5
AVF Avril sur Loir 82.28 357⇑i P **P 00 41 42.1 -0.3**
AVF pmax pmax
comp=Z,73nm,1.1s,mb5.5
AVF Avril sur Loir 82.28 357⇑i P **P 00 41 42.1 -0.3**
comp=Z,73nm,1.1s,mb5.5
BZK Bozkurt 82.28 334 eP **P 00 41 42.8 +0.3**
PWJI Pagerwojo 82.30 247 P **P 00 41 40.0 -2.9**
comp=Z,135nm,1.2s,mb5.8
FUSIO Fusio 82.32 353⇑i P **P 00 41 42.8 +0.2**
comp=Z,144nm,1.5s,mb5.7
CABF La Chapelle 82.33 355⇑i P **P 00 41 42.7 0.0**
comp=Z,103nm,1.1s,mb5.4
CABF La Chapelle 82.33 355⇑i P **P 00 41 42.7 0.0**
CABF pmax pmax
comp=Z,51nm,1.1s,mb5.4
CABF La Chapelle 82.33 355⇑i P **P 00 41 42.7 0.0**
comp=Z,51nm,1.1s,mb5.4
SMF Signal de Mont 82.40 357⇑i P **P 00 41 42.7 -0.3**
comp=Z,200nm,1.1s,mb5.7
SMF Signal de Mont 82.40 357⇑i P **P 00 41 42.7 -0.3**
SMF pmax pmax
comp=Z,100nm,1.1s,mb5.7
SMF Signal de Mont 82.40 357⇑i P **P 00 41 42.7 -0.3**
comp=Z,100nm,1.1s,mb5.7
CRAR CRAIOVA 82.41 342 P **P 00 41 44.0 +0.9**
KELT Kelkit 82.41 330 i P **P 00 41 43.2 0.0**
VANB Van 82.44 326 eP **P 00 41 44.7 +1.3**
LKBD Leukerbad 82.46 354⇑i P **P 00 41 43.4 0.0**
comp=Z,90nm,1.1s,mb5.6
SISC Sisak 82.50 348 P **P 00 41 43.6 +0.1**
BGF Bois d'Agland 82.52 357⇑i P **P 00 41 43.4 -0.3**
comp=Z,81nm,1.0s,mb5.4
BGF Bois d'Agland 82.52 357⇑i P **P 00 41 43.4 -0.3**
BGF pmax pmax
comp=Z,41nm,1.0s,mb5.4
BGF Bois d'Agland 82.52 357⇑i P **P 00 41 43.4 -0.3**
comp=Z,40nm,1.0s,mb5.4
KVT Kavak 82.53 333 eP **P 00 41 45.1 +1.3**
BYBT Boyabat 82.53 334 eP **P 00 41 45.4 +1.6**
MFF Saint Martin d 82.53 359⇑i P **P 00 41 43.5 -0.2**
comp=Z,138nm,1.0s,mb5.6
MFF Saint Martin d 82.53 359⇑i P **P 00 41 43.5 -0.2**
MFF pmax pmax
comp=Z,69nm,1.0s,mb5.6
MFF Saint Martin d 82.53 359⇑i P **P 00 41 43.5 -0.2**
comp=Z,69nm,1.0s,mb5.6
AIGLE Aigle 82.55 354⇑i P **P 00 41 43.5 -0.3**
comp=Z,118nm,1.5s,mb5.7
TRI Trieste 82.58 350⇑eP **P 00 41 43.1 -0.9**
TRI eS S 00 51 56.7 -1.1
TRI pmax pmax
comp=Z,26nm,0.8s,mb5.3
TRI MLR MLR
comp=Z,2µm,20.0s,MS5.5
TRI Trieste 82.58 350⇑eP **P 00 41 43.1 -0.9**
comp=Z,26nm,0.8s,mb5.3
TRI eS S 00 51 56.7 -1.1
TRI LR LR
comp=Z,2µm,20.0s,MS5.5
BOJS Bojanci 82.61 349 i P **P 00 41 43.9 -0.3**

MNSI Mandailing Nat 82.72 262 P P 00 41 41.9 -3.2
comp=Z,59nm,1.0s,mb5.6
ZIMR 82.74 341⇑ P 00 41 45.3 +0.5
ZIMR 82.74 341⇑ iP P 00 41 45.3 +0.5
EZC Erzincan 82.74 330 eP P 00 41 47.0 +2.0
SALAN Lac Salanfe 82.75 354⇑ iP P 00 41 44.9 +0.1
comp=Z,176nm,2.5s,mb5.7
MMK Mattmark 82.78 354⇑ iP P 00 41 45.6 +0.6
comp=Z,278nm,2.2s,mb5.9
DIX Grande Dixence 82.78 354⇑ iP P 00 41 45.7 +0.7
comp=Z,159nm,1.2s,mb5.9
PCJI Pacitan 82.80 247 P P 00 41 41.4 -4.1
comp=Z,99nm,1.5s,mb5.6
TCF Toulx Ste Croi 82.81 358⇑ iP P 00 41 44.8 -0.4
comp=Z,84nm,1.3s,mb5.3
TCF Toulx Ste Croi 82.81 358⇑ iP P 00 41 44.8 -0.4
TCF pmax pmax
comp=Z,42nm,1.3s,mb5.3
TCF Toulx Ste Croi 82.81 358⇑ iP P 00 41 44.8 -0.4
comp=Z,42nm,1.3s,mb5.3
SDSI Sungai Dareh 82.92 260 P P 00 41 45.0 -1.2
comp=Z,2µmcomp=Z,73nm,1.4s,mb5.5
HYB Hyderabad 82.93 289 eP P 00 41 46.5 +0.3
HYB eS S 00 52 04.0 +1.9
HYB pmax pmax
comp=Z,360nm,1.0s,mb6.4
HYB Hyderabad 82.93 289 eP P 00 41 46.5 +0.3
comp=Z,360nm,1.0s,mb6.4
HYB eS S 00 52 04.0 +1.9
HYB Hyderabad 82.93 289 iP P 00 41 46.5 +0.3
comp=Z,180nm,1.0s,mb6.1
HYB eS S 00 52 04.0 +1.9
HYB eScS ScS 00 52 18.0 +1.6
HYB LR LR 01 27 00.0
comp=Z,5.5nm,18.0s
UGM Wanagama 82.95 248 P P 00 41 44.0 -2.3
comp=Z,266nm,2.0s,mb5.9
LMGC Las Mercedes 83.01 67 eP P 00 41 47.4 +0.8
AGO Saint Agoulin 83.02 357⇑ eP P 00 41 47.7 +1.5
TOKT Tokat 83.08 332 eP P 00 41 48.5 +1.9
PLDF La Plantade 83.09 357 eP P 00 41 47.8 +1.2
TOS Tosya 83.14 334 eP P 00 41 48.5 +1.6
BINT Bingol 83.17 329 eP P 00 41 49.6 +2.4
PPI Padang Panjang 83.19 261 P P 00 41 45.5 -2.1
comp=Z,3µmcomp=Z,41nm,1.3s,mb5.3
ILGA Ilgaz 83.21 334 iP P 00 41 49.1 +1.8
HAKT HAKKARI 83.26 326 iP P 00 41 48.6 +1.0
FITZ Fitzroy Crossi 83.28 230 eP P 00 41 47.3 -0.5
comp=Z,99nm,1.0s,mb5.8
FITZ Fitzroy Crossi 83.28 230 P P 00 41 47.5 -0.3
comp=Z,3µmcomp=Z,195nm,1.4s,mb6.0
SAFT Safranbolu 83.31 335 eP P 00 41 48.9 +1.0
SVSK Karacayir 83.32 331 eP P 00 41 49.3 +1.4
PYM Petit Puy Mans 83.33 357⇑ eP P 00 41 48.9 +1.1
SCER sogukcermik 83.33 331 iP P 00 41 48.5 +0.6
VERF Verneugheol 83.34 358⇑ eP P 00 41 47.4 -0.5
LPL La Plagne 83.39 354⇑ iP P 00 41 49.0 +0.8
comp=Z,94nm,1.3s,mb5.4
LPL La Plagne 83.39 354⇑ iP P 00 41 49.0 +0.8
LPL pmax pmax
comp=Z,47nm,1.3s,mb5.4
LPL La Plagne 83.39 354⇑ iP P 00 41 49.0 +0.8
comp=Z,47nm,1.3s,mb5.4
LPG La Plagne 83.41 354⇑ iP P 00 41 49.3 +1.1
comp=Z,111nm,1.0s,mb5.5
LPG La Plagne 83.41 354⇑ iP P 00 41 49.3 +1.1
LPG pmax pmax
comp=Z,56nm,1.0s,mb5.5
LPG La Plagne 83.41 354⇑ iP P 00 41 49.3 +1.1
comp=Z,56nm,1.0s,mb5.5
BHJ Bhuj 83.44 299 ePKP **P 00 41 48.7 0.0**
KEMA Kemaliye 83.45 330 iP P 00 41 50.2 +1.6
PDSI Padang 83.50 260 P P 00 41 44.7 -4.5
comp=Z,116nm,1.2s,mb5.9
PTK Pertek 83.51 329 eP P 00 41 50.9 +2.0
KDZE Karadeniz Ereo 83.56 336 eP P 00 41 48.9 -0.3
CUKT Cukurca 83.57 326 eP P 00 41 50.5 +1.2
GSI Gunungsitoli 83.58 264 P P 00 41 48.6 -1.0
comp=Z,129nm,1.4s,mb5.9
NVLJ Novalja 83.58 349 P P 00 41 48.6 -0.5
CANT Cankiri 83.65 334 eP P 00 41 50.8 +1.2
NEJ Negril 83.66 69⇑ eP P 00 41 42.8 -7.2
FRNF Fournols 83.70 357⇑ eP P 00 41 49.9 +0.1
MOAC Moa 83.71 65 eP P 00 41 50.8 +0.6
SSB Saint Sauveur 83.74 356⇑ eP P 00 41 50.2 +0.2
SSB Saint Sauveur 83.74 356⇑ eP P 00 41 50.1 +0.1
SSB e 00 45 02.2
SSB eS S 00 52 08.0 -1.5
SSB pmax pmax
comp=Z,42nm,1.1s,mb5.5
SSB MLR MLR
comp=Z,2µm,20.0s,MS5.4
SSB Saint Sauveur 83.74 356⇑ eP P 00 41 50.1 +0.1
comp=Z,42nm,1.1s,mb5.5
SSB ePP PP 00 45 02.2 -0.1
SSB eS S 00 52 08.0 -1.4
SSB LR LR
comp=Z,2µm,20.0s,MS5.4
CORM Corum 83.77 333 eP P 00 41 51.9 +1.7
LEM Lembang 83.80 251 P P 00 41 48.6 -2.0
comp=Z,66nm,1.4s,mb5.6
BEST Besiri 83.80 328 iP P 00 41 52.2 +1.8
ELDT Eldivan 83.81 334 iP P 00 41 51.1 +0.6
RJF Les Rejaudoux 83.81 358⇑ iP P 00 41 50.0 -0.3
comp=Z,105nm,1.1s,mb5.6
RJF eMLR MLR
comp=Z,3µm,20.2s,MS5.4
RJF Les Rejaudoux 83.81 358⇑ iP P 00 41 50.0 -0.3
RJF pmax pmax
comp=Z,53nm,1.1s,mb5.6
RJF MLR MLR
comp=Z,3µm,20.3s,MS5.7
RJF Les Rejaudoux 83.81 358⇑ iP P 00 41 50.0 -0.3
comp=Z,52nm,1.1s,mb5.6
RJF LR LR
comp=Z,3µm,20.3s,MS5.7
RCC Rio Carpintero 83.81 66 eP P 00 41 50.0 -0.7
LBL Lubilhac 83.83 357 eP P 00 41 51.4 +0.9
KLSI 83.84 255 P P 00 41 48.3 -2.6
comp=Z,3µmcomp=Z,173nm,1.2s,mb6.1
BNI Bardonecchia 83.85 354⇑ iP P 00 41 51.4 +0.8
BNI eS S 00 52 11.8 +1.2
BNI pmax pmax
comp=Z,68nm,1.0s,mb5.7
BNI MLR MLR
comp=Z,2µm,19.0s,MS5.6
BNI Bardonecchia 83.85 354⇑ iP P 00 41 51.4 +0.8
comp=Z,68nm,1.0s,mb5.7
BNI ePP PP 00 44 58.0 -5.2
BNI eS S 00 52 11.8 +1.1
BNI LR LR
comp=Z,2µm,19.0s,MS5.6
KLI Kotabumi 83.90 255 P P 00 41 48.3 -2.9
comp=Z,10µmcomp=Z,105nm,1.2s,mb5.9
DARE Darende-Malaty 83.96 331 eP P 00 41 54.9 +3.7
ELZG Elazig 84.00 329 iP P 00 41 53.1 +1.6
SVRC Sivrice-ELAZID 84.01 329 eP P 00 41 53.7 +2.2
MDSI Maura Dua 84.02 255 P P 00 41 48.6 -3.2
comp=Z,1µmcomp=Z,77nm,1.4s,mb5.6
ORIF Oris-en-Rattie 84.03 355⇑ iP P 00 41 52.1 +0.6
comp=Z,66nm,0.9s,mb5.5
ORIF eMLR MLR
comp=Z,2µm,22.2s,MS5.2
ORIF Oris-en-Rattie 84.03 355⇑ iP P 00 41 52.1 +0.6
ORIF pmax pmax
comp=Z,33nm,0.9s,mb5.5
ORIF Oris-en-Rattie 84.03 355⇑ iP P 00 41 52.1 +0.6
comp=Z,33nm,0.9s,mb5.5
SGKT Sivrigoynuk 84.10 335 iP P 00 41 52.6 +0.7
MTDJ Mount Denham 84.14 68⇑ eP P 00 41 52.8 +0.4
MTDJ eS S 00 52 15.2 +1.0
MTDJ LR LR
comp=Z,2µm,22.0s,MS5.4
PLE Pljevlja 84.15 345 eP P 00 41 52.8 +0.7
PLE Pljevlja 84.15 345 eP P 00 41 52.9 +0.8
VIVF Saint-Julien-I 84.16 356⇑ iP P 00 41 52.3 +0.2
comp=Z,68nm,1.1s,mb5.4
VIVF Saint-Julien-I 84.16 356⇑ iP P 00 41 52.3 +0.2
VIVF pmax pmax
comp=Z,34nm,1.1s,mb5.4
VIVF Saint-Julien-I 84.16 356⇑ iP P 00 41 52.3 +0.2
comp=Z,34nm,1.1s,mb5.4
DIYA Diyarbakir 84.16 328 iP P 00 41 52.6 +0.4
HENT Hendek 84.16 336 iP P 00 41 52.4 +0.2
MBDF Montbardon 84.17 354⇑ iP P 00 41 52.7 +0.5
comp=Z,107nm,1.3s,mb5.5
MBDF Montbardon 84.17 354⇑ iP P 00 41 52.7 +0.5
MBDF pmax pmax
comp=Z,54nm,1.3s,mb5.5
MBDF Montbardon 84.17 354⇑ iP P 00 41 52.7 +0.5
comp=Z,54nm,1.3s,mb5.5
BBJ Bamboo Saint A 84.17 68⇓ iP P 00 41 53.5 +1.0
BBJ Bamboo Saint A 84.17 68 iP P 00 41 53.0 +0.4
CAF Calviac 84.18 358⇑ iP P 00 41 52.3 +0.1
comp=Z,137nm,1.1s,mb5.7
CAF Calviac 84.18 358⇑ iP P 00 41 52.3 +0.1
CAF pmax pmax
comp=Z,68nm,1.1s,mb5.7
CAF Calviac 84.18 358⇑ iP P 00 41 52.3 +0.1
comp=Z,68nm,1.1s,mb5.7
EDRB Edirne 84.18 339 eP P 00 41 52.9 +0.6
CTYL Yal??k??y-??at 84.18 338 eP P 00 41 52.4 +0.1
LFF La Frestale 84.19 359⇑ iP P 00 41 52.2 -0.1
comp=Z,249nm,1.1s,mb5.9
LFF La Frestale 84.19 359⇑ iP P 00 41 52.2 -0.1
LFF pmax pmax
comp=Z,125nm,1.1s,mb6.0
LFF La Frestale 84.19 359⇑ iP P 00 41 52.2 -0.1
comp=Z,125nm,1.1s,mb6.0
VTS Vitosha 84.19 342 ⇓P P 00 41 52.3 0.0
VTS Vitosha 84.19 342 ⇓iP P 00 41 52.3 0.0
GTBY Guantanamo Bay 84.20 65 eP P 00 41 52.4 -0.4
comp=Z,62nm,0.9s,mb5.7
GTBY ePP PP 00 45 07.2 +0.2
GTBY eS S 00 52 14.8 -0.1
GTBY LR LR
comp=Z,3µm,21.0s,MS5.6
KLYT Kilyos 84.21 338 eP P 00 41 52.4 -0.1
MCJ Malvern 84.29 69⇓ eP P 00 41 53.3 +0.1
MCJ Malvern 84.29 69⇑ iP P 00 41 53.3 +0.1
KSI Kapahiang 84.33 257 P P 00 41 51.0 -2.4
comp=Z,94nm,0.3s,mb6.3
MYA Malataya 84.34 330 eP P 00 41 53.6 +0.5
BGKT Bogazkoy 84.35 338 eP P 00 41 53.4 +0.3
UPM Unac-Piva 84.35 345⇑ iP P 00 41 52.7 -0.4
UPM Unac-Piva 84.35 345⇑ iP P 00 41 52.8 -0.3
CDAG Cicekdag 84.35 333 iP P 00 41 53.2 0.0
CTKS Kestanelik-??a 84.36 338 eP P 00 41 53.0 -0.2
ISK Istanbul-Kandi 84.39 338 eP P 00 41 52.4 -1.0
RKT Rikitea 84.39 138 eS S 00 52 17.0 +0.8
comp=Z,1µm,32.2s
RKT eSS SS 00 57 57.7 +10
comp=Z,1µm,27.5s
RKT eLR LR 01 08 31.9
comp=Z,5µm,24.2s,baz=331
OG26 St.-Nazaire-De 84.40 355⇑ eP P 00 41 54.1 +0.7
MDU Mudurnu 84.42 336 eP P 00 41 54.4 +0.9
SLVT Silivri 84.43 338 eP P 00 41 53.9 +0.4
ASAR Alice Springs 84.44 221 P P 00 41 53.2 -0.4
comp=Z,28nm,0.8s,mb5.5,baz=26,slow=4.8,SNR=164
ASAR PKPPKP 01 08 09.1
comp=Z,0.8nm,0.9s,baz=191,slow=5.1,SNR=4.2
ASAR Alice Springs 84.44 221 P P 00 41 53.3 -0.3
ASAR pmax pmax
comp=Z,29nm,0.8s
ASAR pmax pmax
comp=Z,1.0nm,0.9s
VLC Villacollemand 84.46 352⇑ eP P 00 41 53.6 -0.1
VLC eS S 00 52 18.7 +1.9
VLC LR LR
comp=Z,2µm,20.0s,MS5.6
BR131 Keskin Array S 84.46 334⇑ eP P 00 41 54.0 +0.2
comp=Z,43nm,0.9s,mb5.6
BR131 ePP PP 00 45 07.6 -0.8
BR131 eS S 00 52 18.9 +1.9
BR131 LR LR
comp=Z,1µm,20.0s,MS5.3
BRTR Keskin Array B 84.46 334 P P 00 41 54.0 +0.3
comp=Z,46nm,0.8s,mb5.6,baz=47,slow=2.1,SNR=156
BRTR PP PP 00 45 09.7 +1.2
comp=Z,6.0nm,0.9s,baz=32,slow=4.0,SNR=4.5
BRTR PKKPbc PKKPbc 01 00 03.5 +1.0
comp=Z,0.9nm,0.8s,baz=179,slow=6.2,SNR=4.9
BRTR PKPPKP 01 08 03.5
comp=Z,1.5nm,0.9s,baz=153,slow=5.5,SNR=6.5
BRTR Keskin Array B 84.46 334 P P 00 41 54.1 +0.3
BRTR 00 45 09.7
BRTR pmax pmax
comp=Z,46nm,0.9s
BRTR pmax pmax
comp=Z,6.0nm,0.9s
BRTR pmax pmax
comp=Z,1.0nm,0.8s
BRTR pmax pmax
comp=Z,2.0nm,0.9s
HRT Hereke 84.47 337 eP P 00 41 54.4 +0.6
MARD Mardin 84.49 328 iP P 00 41 55.3 +1.4
IVA Berane 84.51 345⇑ iP P 00 41 54.5 +0.6
IVA Berane 84.51 345⇑ iP P 00 41 54.5 +0.6
AKCD Akcadag 84.52 330 iP P 00 41 55.1 +1.0
LOD Lodumlu 84.55 335 eP P 00 41 55.4 +1.2
GULT Gulveren 84.63 336 eP P 00 41 55.4 +0.8
PINB Pinarbasi 84.64 331 iP P 00 41 55.6 +1.0
CRLT Corlu 84.64 339 eP P 00 41 56.5 +1.9
SISI Saibi 84.67 261 P P 00 41 53.9 -1.2
comp=Z,152nm,1.4s,mb5.9
STH Stony Hill 84.68 68⇓ eP P 00 41 55.3 +0.2
STH Stony Hill 84.68 68 iP P 00 41 55.7 +0.5
BRY Bratogost 84.70 346⇑ iP P 00 41 54.8 -0.1
BRY Bratogost 84.70 346⇑ iP P 00 41 54.9 0.0
NKY Niksic 84.72 345⇓ iP P 00 41 54.9 -0.1
NKY Niksic 84.72 345⇓ iP P 00 41 54.9 0.0
GWJ Greenwich 84.73 68⇓ eP P 00 41 55.4 0.0
GWJ Greenwich 84.73 68⇓ iP P 00 41 55.9 +0.5
PVY Plav 84.77 345⇑ iP P 00 41 55.7 +0.5
HOJ Hope 84.77 68⇓ eP P 00 41 55.4 -0.3
HOJ Hope 84.77 68 iP P 00 41 57.0 +1.4
KAMT Kaman 84.78 334 eP P 00 41 56.2 +0.8
BBAL Bala 84.78 334 iP P 00 41 55.1 -0.2
YLV Yalova 84.78 337 eP P 00 41 55.4 0.0
ARMA Armidale 84.80 203 eP P 00 41 57.0 +1.7
ARMA eS S 00 52 25.7 +5.7
ARMA Armidale 84.80 203 eP P 00 41 57.0 +1.7
comp=Z,32nm,0.9s,mb5.5
TKR Tekirdag 84.82 339 eP P 00 41 55.2 -0.3
POO Poona 84.82 293 ePKP **P 00 41 55.9 0.0**
ADVT Abdulvahap 84.82 337 eP P 00 41 55.5 0.0
TOUF Mont Tournerai 84.85 354⇓ eP P 00 41 55.8 +0.2
STON Ston 84.86 346 P P 00 41 54.4 -1.2
AUTN L'Aution 84.86 354⇓ eP P 00 41 55.8 +0.1
SAOF Saorge 84.86 354⇓ eP P 00 41 55.6 -0.1
CMJ Castle Mountai 84.89 67⇓ eP P 00 41 56.6 +0.4
CMJ Castle Mountai 84.89 67⇑ iP P 00 41 57.0 +0.8
ARMT Armutlu 84.91 338 eP P 00 41 56.0 0.0
LUCF Luceram 84.97 354⇓ eP P 00 41 56.1 -0.1
LASF Ste Croix 84.97 356⇑ iP P 00 41 56.3 +0.1
comp=Z,61nm,1.0s,mb5.4
MVIF Mont Vial 84.98 354⇓ eP P 00 41 56.4 +0.1
SMRF Simiane la Rot 84.99 355⇑ iP P 00 41 57.0 +0.7
comp=Z,257nm,1.1s,mb6.0
SMRF Simiane la Rot 84.99 355⇑ iP P 00 41 57.0 +0.7
comp=Z,257nm,1.1s,mb6.3
SBF Sospel 84.99 354⇑ iP P 00 41 56.1 -0.2
comp=Z,306nm,1.0s,mb6.1
SBF Sospel 84.99 354⇑ iP P 00 41 56.1 -0.2
SBF pmax pmax
comp=Z,153nm,1.0s,mb6.1
SBF Sospel 84.99 354⇑ iP P 00 41 56.1 -0.2
comp=Z,153nm,1.0s,mb6.1
AVNT Avonos 85.00 333 iP P 00 41 57.5 +1.0
YHJ Yallahs 85.01 68⇓ eP P 00 41 56.0 -0.9
YHJ Yallahs 85.01 68⇓ iP P 00 41 57.7 +0.9
CAVI Cavuskoy 85.01 337 eP P 00 41 58.4 +1.9
URFA Urfa 85.02 329 eP P 00 41 56.8 +0.2
TTG Podgorica 85.05 345⇑ iP P 00 41 56.2 -0.4
TTG Podgorica 85.05 345⇑ iP P 00 41 56.2 -0.4
MFT Murefte 85.07 339 eP P 00 41 57.7 +0.9
MDNY Mudanya-Bursa 85.09 337 eP P 00 41 56.5 -0.4
REVF Revere 85.12 354⇓ eP P 00 41 56.9 -0.1
SKO Skopje 85.12 343⇑ iP P 00 41 57.9 +0.9
CALN Calern 85.14 354⇓ eP P 00 41 57.1 0.0
HCY Herceg Novi 85.15 346⇑ iP P 00 41 57.0 -0.2
HCY Herceg Novi 85.15 346⇑ iP P 00 41 57.0 -0.1
ATAB Bozova 85.16 330 iP P 00 41 58.6 +1.3
GRTK Grand Turk 85.18 61 eP P 00 41 57.7 +0.1
comp=Z,123nm,1.0s,mb6.0
GRTK eS S 00 52 26.3 +1.8
GRTK LR LR
comp=Z,2µm,22.0s,MS5.5
SART Tekirdag 85.18 339 iP P 00 41 57.0 -0.4
RKY Sarkoy-Tekirda 85.19 339 eP P 00 41 57.1 -0.2
BUM Brajici-Budva 85.23 345⇑ iP P 00 41 58.3 +0.7
ULDT Uludag 85.24 337 iP P 00 41 58.5 +0.8
NVR Nevrokopi 85.26 341 eP P 00 41 58.0 +0.3
SVRH Sivrihisar-ESK 85.30 335 eP P 00 41 58.2 +0.3
KCTX Karacabey (Bur 85.31 338 eP P 00 41 58.4 +0.3
FRF La Foret Royal 85.34 354⇑ iP P 00 41 57.8 -0.3
comp=Z,159nm,1.1s,mb5.8
FRF La Foret Royal 85.34 354⇑ iP P 00 41 57.8 -0.3
FRF pmax pmax
comp=Z,80nm,1.1s,mb5.8
FRF La Foret Royal 85.34 354⇑ iP P 00 41 57.8 -0.3
comp=Z,80nm,1.1s,mb5.8
EDC Edincik 85.35 338 eP P 00 41 57.8 -0.5
ESKT Eskisehir 85.40 336 iP P 00 41 58.7 +0.2
KRBG Karabiga-Canak 85.44 339 eP P 00 41 57.8 -0.9
GZT Gaziantep 85.50 330 iP P 00 41 58.5 -0.5
ULC Ulcinj 85.50 345 eP P 00 41 59.0 +0.1
ULC Ulcinj 85.50 345 eP P 00 41 59.1 +0.1
VAY Valandovo 85.54 342⇑ iP P 00 41 58.6 -0.5
KMRS Kahramanmaras 85.56 331 eP P 00 42 00.4 +1.1
LMR La Mourre 85.58 354⇑ iP P 00 41 59.1 -0.2
comp=Z,166nm,1.1s,mb5.9
LMR La Mourre 85.58 354⇑ iP P 00 41 59.1 -0.2
LMR pmax pmax
comp=Z,83nm,1.1s,mb5.9
LMR La Mourre 85.58 354⇑ iP P 00 41 59.1 -0.2
comp=Z,83nm,1.1s,mb5.9
LPK Lapseki 85.58 339 eP P 00 41 58.7 -0.6
KAD Karad 85.59 292 ePKP **P 00 41 58.5 -1.2**
KAD ePKP 00 41 59.5
GELI Tayfur-Gelibol 85.62 339 eP P 00 41 58.7 -0.8
ANDN Andirin 85.67 331 iP P 00 42 00.8 +0.9
GONE Gonen-Balikesi 85.68 338 eP P 00 41 59.6 -0.2
KIZT Kizilcal 85.73 335 eP P 00 41 59.6 -0.5
KRUS Krusevo 85.74 343⇓ eP P 00 41 55.2 -4.9
MTLF Montolieu 85.75 358⇑ iP P 00 42 00.2 +0.1
comp=Z,62nm,1.0s,mb5.5
MTLF Montolieu 85.75 358⇑ iP P 00 42 00.2 +0.1
MTLF pmax pmax
comp=Z,31nm,1.0s,mb5.5
MTLF Montolieu 85.75 358⇑ iP P 00 42 00.2 +0.1
comp=Z,31nm,1.0s,mb5.5
GAZ Gaziantep 85.78 330 eP P 00 42 01.6 +1.3
JTS JuntasAbangare 85.86 79 PFAKE 00 42 10.0 +8.9
JTS LR LR
comp=Z,1µm,21.0s,MS5.2
OSSF Osses 85.88 0⇑ eP P 00 41 59.6 -1.2
ELAN Lanestosa 85.89 2 P P 00 42 00.6 -0.2
comp=Z,103nm,1.0s,mb6.0
KOZT Kozan 85.92 331 eP P 00 42 01.9 +0.8
EALK Alkurruntz 85.92 0 P P 00 42 01.4 +0.4
comp=Z,38nm,1.1s,mb5.5
SULT Sultanhani-AKS 85.92 333 eP P 00 42 00.9 -0.2
AQU L'Aquila 85.94 349⇑ eP P 00 42 01.3 +0.2
AQU e 00 45 19.4
AQU eS S 00 52 32.5 +1.1
AQU pmax pmax
comp=Z,135nm,0.9s,mb6.2
AQU MLR MLR
comp=Z,3µm,19.0s,MS5.7
AQU L'Aquila 85.94 349⇑ eP P 00 42 01.3 +0.2
comp=Z,135nm,0.9s,mb6.2
AQU ePP PP 00 45 19.4 -0.8
AQU eS S 00 52 32.5 +1.1
AQU LR LR
comp=Z,3µm,19.0s,MS5.7
AQU L'Aquila 85.94 349⇑ iP P 00 42 01.6 +0.5
ELIZ Elizondo 85.97 0 P P 00 42 01.7 +0.5
ELIZ pmax pmax
comp=Z,23nm,0.8s,mb5.5
ELIZ Elizondo 85.97 0 P P 00 42 01.7 +0.4
comp=Z,23nm,0.8s,mb5.5
BALY Balya 85.99 338 iP P 00 42 00.3 -1.0
TIR Tirane 86.00 344 PFAKE 00 42 10.0 +8.6
TIR LR LR
comp=Z,3µm,21.0s,MS5.7
BALB Balikesir 86.02 338 eP P 00 42 00.3 -1.2
SJPF Ste Jean 86.03 0⇑ iP P 00 42 01.1 -0.4
comp=Z,31nm,1.0s,mb5.2
SJPF Ste Jean 86.03 0⇑ iP P 00 42 01.1 -0.4
SJPF pmax pmax
comp=Z,16nm,1.0s,mb5.2
SJPF Ste Jean 86.03 0⇑ iP P 00 42 01.1 -0.4
comp=Z,16nm,1.0s,mb5.2
STS Santiago 86.03 6 P P 00 41 59.4 -2.1
STS pmax pmax
comp=Z,23nm,0.9s,mb5.4
STS Santiago 86.03 6 P P 00 41 59.4 -2.1
comp=Z,23nm,0.9s,mb5.4
ALT Altintas 86.03 336 eP P 00 42 01.9 +0.3
BIA Bitola 86.06 343⇑ eP P 00 42 01.1 -0.6
OHR Ohrid 86.07 344⇑ iP P 00 42 00.1 -1.6
EPF Esparros 86.10 359⇑ iP P 00 42 01.1 -0.8
comp=Z,33nm,1.1s,mb5.2
EPF Esparros 86.10 359⇑ iP P 00 42 01.1 -0.8
EPF pmax pmax
comp=Z,17nm,1.1s,mb5.2
EPF Esparros 86.10 359⇑ iP P 00 42 01.1 -0.8
comp=Z,17nm,1.1s,mb5.2
LARF Larrau 86.10 360⇑ eP P 00 42 01.1 -0.8
LRDF Laroque-de-Fa 86.15 357⇑ eP P 00 42 02.4 +0.3
PGF Pioggiola 86.18 353⇑ iP P 00 42 02.1 -0.2
comp=Z,332nm,1.1s,mb6.2
PGF Pioggiola 86.18 353⇑ iP P 00 42 02.1 -0.2
PGF pmax pmax
comp=Z,166nm,1.1s,mb6.2
PGF Pioggiola 86.18 353⇑ iP P 00 42 02.1 -0.2
comp=Z,166nm,1.1s,mb6.2
ETSF Etsaut 86.24 360⇑ iP P 00 42 02.8 +0.2
comp=Z,44nm,1.1s,mb5.3
ETSF Etsaut 86.24 360⇑ iP P 00 42 02.8 +0.2
ETSF pmax pmax
comp=Z,22nm,1.1s,mb5.3
ETSF Etsaut 86.24 360⇑ iP P 00 42 02.8 +0.2
comp=Z,22nm,1.1s,mb5.3
LADK Ladik-KONYA 86.24 334 eP P 00 42 03.1 +0.4
VIEF Viey 86.25 359⇑ eP P 00 42 02.9 +0.3
PLG Polygyros 86.28 341 eP P 00 42 02.0 -0.8
RESF Ens 86.32 359⇑ eP P 00 42 03.2 +0.2
KARA Karaisali 86.35 332 eP P 00 42 03.9 +0.7
CEYT Ceyhan 86.37 331 eP P 00 42 04.6 +1.3
LIA Limnos Island 86.38 340 eP P 00 42 03.0 -0.3
CARF Carcanieres 86.38 358⇑ eP P 00 42 02.8 -0.5
DEMI Demirci 86.39 337 iP P 00 42 02.0 -1.4
SHUT Suhut-Afyon 86.39 336 eP P 00 42 04.0 +0.6
GULE Gulek 86.41 332 iP P 00 42 02.7 -0.8
EBIE Bielsa 86.45 359 P P 00 42 04.7 +1.1
comp=Z,29nm,1.2s,mb5.4
KONT Konya--Tatoy 86.48 334 eP P 00 42 04.2 +0.4
ECRI Cripan 86.52 1 P P 00 42 03.3 -0.6
ECRI pmax pmax
comp=Z,14nm,0.9s,mb5.2
ECRI Cripan 86.52 1 P P 00 42 03.3 -0.7
comp=Z,14nm,0.9s,mb5.2
YURE YUREGIR 86.58 331 iP P 00 42 04.4 +0.1
ERUA La Rua 86.60 5 P P 00 42 04.2 -0.1
ERUA pmax pmax
comp=Z,18nm,0.7s,mb5.4
ERUA La Rua 86.60 5 P P 00 42 04.2 -0.1
comp=Z,18nm,0.7s,mb5.4
CLLI Llivia 86.62 358 P P 00 42 04.9 +0.4
KZN Kozani 86.67 343 eP P 00 42 04.0 -0.7
CSOR Sort 86.74 358 P P 00 42 05.7 +0.6
comp=Z,27nm,1.2s,mb5.3
PRK Paraskevi 86.77 339 eP P 00 42 04.5 -0.7
KHAL Karahalli 86.83 336 iP P 00 42 05.3 -0.3
BHD Baghdad 86.84 323 ex x 00 42 00.0
BHD ex x 00 45 24.0
BHD ex x 00 52 28.0
MERS Mersin 86.87 332 eP P 00 42 04.1 -1.7
KULA Kula-Manisa 86.90 337 eP P 00 42 05.4 -0.5
ECAL Calabor 87.06 4 P P 00 42 04.5 -2.1
comp=Z,33nm,1.2s,mb5.4
ISP Isparta 87.09 335 eP P 00 42 06.4 -0.4
ISP Isparta 87.09 335⇑ eP P 00 42 06.5 -0.3
ISP e 00 45 29.1
ISP eS S 00 52 39.2 -3.5
ISP pmax pmax
comp=Z,36nm,0.9s,mb5.6
ISP MLR MLR
comp=Z,2µm,19.0s,MS5.6
ISP Isparta 87.09 335⇑ eP P 00 42 06.5 -0.3

comp=Z,36nm,0.9s,mb5.6
ISP *e*PP PP 00 45 29.1 -0.5
ISP *e*S S 00 52 39.2 -3.5
ISP LR LR
comp=Z,2μm,19.0s,MS5.6
SDDR Presa de Saban 87.12 63⇑ *e*P **P 00 42 06.6 -0.6**
comp=Z,110nm,1.0s,mb6.0
SDDR *e*PP PP 00 45 30.8 +0.2
SDDR *e*S S 00 52 45.8 +2.3
SDDR LR LR
comp=Z,2μm,22.0s,MS5.4
PBRG Braganca 87.20 4 *e*P **P 00 42 06.6 -0.7**
comp=Z,27nm,0.9s,mb5.5
PCAB Cabril 87.23 5 *e*P **P 00 42 06.8 -0.6**
comp=Z,39nm,1.1s,mb5.5
NEO Neokhori 87.36 341 *e*P **P 00 42 06.0 -2.1**
HDMB Hadim 87.36 334 *e*P **P 00 42 08.1 0.0**
BCK Bucak 87.41 335 *e*P **P 00 42 07.6 -0.8**
BLCB Balcova 87.41 338 *e*P **P 00 42 08.4 0.0**
JAN Janina 87.47 343 *e*P **P 00 42 08.5 -0.1**
URLA Izmir 87.54 339 *i*P **P 00 42 07.4 -1.6**
PVRL Vila Real 87.68 5 *e*P **P 00 42 08.9 -0.7**
comp=Z,66nm,1.0s,mb5.8
IKL Isikli 87.70 333 *e*P **P 00 42 07.3 -2.5**
EPOB Poblet 87.77 358 P **P 00 42 09.9 -0.1**
comp=Z,12nm,1.0s,mb5.1
MVO Moncorvo 87.83 5 *e*P **P 00 42 09.6 -0.7**
comp=Z,56nm,0.9s,mb5.8
MVO *e*S S 00 52 47.3 -2.4
MVO *e*SS SS 00 59 02.0 +27
MVO *e*LQ 01 07 50.2
MVO *e*LR LR 01 12 12.7
comp=Z,1μm,21.9s
MVO Moncorvo 87.83 5 P **P 00 42 08.8 -1.5**
AYDN Tasoluk 87.90 337 *i*P **P 00 42 10.5 -0.2**
PTCN Pitcairn Islan 88.21 135 PFAKE 00 42 20.0 +7.9
PTCN LR LR
comp=Z,5μm,19.0s,MS5.9
PVIS Viseu 88.23 5 *e*P **P 00 42 11.5 -0.7**
comp=Z,60nm,1.0s,mb5.8
ELL Elmali 88.26 336 *e*P **P 00 42 11.4 -1.0**
MLSB Milas 88.28 337 *e*P **P 00 42 11.1 -1.4**
ETOR Torete 88.31 1 P **P 00 42 12.8 +0.2**
ETOR pmax pmax
comp=Z,12nm,1.1s,mb5.0
ETOR Torete 88.31 1 P **P 00 42 12.8 +0.1**
comp=Z,12nm,1.1s,mb5.0
GUD Guadarrama 88.45 2 P **P 00 42 11.8 -1.5**
GUD pmax pmax
comp=Z,20nm,1.2s,mb5.2
GUD Guadarrama 88.45 2 P **P 00 42 11.8 -1.5**
comp=Z,20nm,1.2s,mb5.2
MTE Manteigas 88.56 5 *e*P **P 00 42 13.1 -0.7**
comp=Z,62nm,1.0s,mb5.9
MTE *e*S S 00 52 58.2 +1.5
MTE *e*SS SS 00 58 58.5 +12
MTE *e*LQ 01 08 06.5
MTE *e*LR LR 01 12 17.9
comp=Z,2μm,18.4s
MTE Manteigas 88.56 5⇑ *e*P **P 00 42 12.9 -0.9**
comp=Z,57nm,0.9s,mb5.9
MTE *e*PP PP 00 45 40.9 -0.4
MTE *e*S S 00 52 58.2 +1.5
MTE LR LR
comp=Z,2μm,20.0s,MS5.6
MBWA Marble Bar 88.78 233 *e*P **P 00 42 13.5 -1.4**
MBWA Marble Bar 88.78 233 *e*P **P 00 42 14.0 -0.9**
comp=Z,53nm,1.1s,mb5.8
MBWA LR LR
comp=Z,1μm,20.0s,MS5.3
MBWA Marble Bar 88.78 233 P **P 00 42 13.9 -1.0**
comp=Z,61nm,1.5s,mb5.7
HWQ Hawqa 88.84 330 *e*P **P 00 42 14.5 -0.7**
EPLA Plasencia 88.97 4 P **P 00 42 14.0 -1.7**
EPLA pmax pmax
comp=Z,34nm,1.0s,mb5.6
EPLA Plasencia 88.97 4 P **P 00 42 14.0 -1.7**
comp=Z,34nm,1.0s,mb5.6
CSS Prodhromos 88.99 332⇑ *e*P **P 00 42 13.9 -2.0**
comp=Z,66nm,1.0s,mb5.9
CSS *e*PP PP 00 45 42.4 -2.6
CSS *e*S S 00 53 00.2 -0.7
CSS LR LR
comp=Z,2μm,20.0s,MS5.5
STKA Stephens Creek 89.06 211 *e*P **P 00 42 16.0 +0.1**
comp=Z,26nm,1.5s,mb5.3
STKA *e*S S 00 52 57.9 -3.2
STKA Stephens Creek 89.06 211 P **P 00 42 16.7 +0.8**
comp=Z,22nm,0.9s,mb5.5,baz=358,slow=5.4,SNR=19
STKA LR LR 01 21 30.1
comp=Z,3μm,19.2s,MS5.8,baz=17,slow=35
STKA Stephens Creek 89.06 211 *e*P **P 00 42 16.7 +0.8**
comp=Z,28nm,1.5s,mb5.4
PCBR Castelo Branco 89.12 5 *e*P **P 00 42 15.3 -1.1**
comp=Z,41nm,1.0s,mb5.7
KBD Kabd 89.16 319 *e*P **P 00 42 16.7 -0.1**
KBD AMb AMB 00 42 18.3
comp=Z,288nm,1.0s,mb6.5
VSL Villasalto 89.18 352⇑ *e*P **P 00 42 16.9 +0.2**
comp=Z,47nm,1.0s,mb5.8
VSL *e*PP PP 00 45 44.2 -2.1
VSL *e*S S 00 53 03.0 +0.4
VSL LR LR
comp=Z,1μm,20.0s,MS5.4
BHL Bhannes 89.27 330 *e*P **P 00 42 17.0 -0.2**
NAY Al-Naaiem 89.28 319 *e*P **P 00 42 17.1 -0.2**
NAY AMb AMB 00 42 19.1
comp=Z,276nm,1.0s,mb6.5
ASHO Ashiyiah 89.28 310 P **P 00 42 17.1 -0.4**
SNR=6.1
PTOM Tomar 89.29 6 *e*P **P 00 42 16.1 -1.1**
comp=Z,85nm,1.1s,mb6.0
ESDC Sonseca Array 89.43 2 P **P 00 42 16.7 -1.2**
comp=Z,8.5nm,0.9s,mb5.1,baz=358,slow=4.2,SNR=30
ESDC PP PP 00 45 52.4 +4.1
comp=Z,6.7nm,1.1s,baz=356,slow=8.3,SNR=6.4
ESDC PKKPbc PKKPbc 00 59 51.1 +0.3
comp=Z,1.0nm,0.9s,baz=165,slow=3.8,SNR=4.3
ESDC LR LR 01 22 32.8
comp=Z,1μm,21.1s,MS5.2,baz=40,slow=36
ESDC Sonseca Array 89.43 2 P **P 00 42 15.8 -2.1**
comp=Z,13nm,1.0s,mb5.2
ESLA Sonseca Array 89.43 2 *e*P **P 00 42 16.8 -1.0**
comp=Z,2.6nm,0.9s,mb4.6
ESLA *e*PP PP 00 45 48.1 -0.2
ESLA *e*S S 00 53 05.0 +0.2
ESLA LR LR
comp=Z,8μm,20.0s,MS6.1
RDF Al-Radifah 89.44 319 *e*P **P 00 42 18.0 -0.1**
RDF AMb AMB 00 42 20.1
comp=Z,688nm,1.0s,mb6.9
QRN Al-Qurain 89.44 319 *e*P **P 00 42 17.8 -0.3**
QRN AMb AMB 00 42 19.5
comp=Z,418nm,1.1s,mb6.7
PALK Pallekele 89.52 281 *i*P **P 00 42 19.7 +1.0**
PALK Pallekele 89.52 281 P **P 00 42 16.8 -1.9**
comp=Z,49nm,1.3s,mb5.7
PMRV Marv??o 89.54 5 *e*P **P 00 42 17.2 -1.2**
comp=Z,31nm,1.0s,mb5.6
PMRV *e*S S 00 53 09.8 +3.9
PMRV *e*SS SS 00 59 13.2 +13
PMRV *e*LQ 01 08 32.4
PMRV *e*LR LR 01 12 43.1
comp=Z,1μm,22.7s
PAB San Pablo 89.54 3⇑ *e*P **P 00 42 17.7 -0.7**
PAB *e* 00 45 49.2
PAB *e*S S 00 53 08.9 +3.0
PAB pmax pmax
comp=Z,12nm,1.0s,mb5.2
PAB MLR MLR
comp=Z,2μm,20.0s,MS5.5
PAB San Pablo 89.54 3⇑ *e*P **P 00 42 17.7 -0.7**
comp=Z,12nm,1.0s,mb5.2
PAB *e*PP PP 00 45 49.2 0.0
PAB *e*S S 00 53 08.9 +3.0
PAB LR LR
comp=Z,2μm,20.0s,MS5.5
CEL Celeste 89.64 347 *e*P **P 00 42 17.1 -1.8**
comp=Z,67nm,0.9s,mb6.0
CEL *e*PP PP 00 45 50.2 +0.1
CEL *e*S S 00 53 07.6 +0.7
CEL LR LR
comp=Z,2μm,20.0s,MS5.5
ASUD Al Ashush, Dub 89.68 311 P **P 00 42 19.4 +0.1**
SNR=13

AGPR Aguadilla, PR 89.84 60⇑ *e*P **P 00 42 20.4 +0.2**
comp=Z,386nm,1.2s,mb6.6
BCIP Isla Barro Col 89.87 76 PFAKE 00 42 30.0 +10
BCIP LR LR
comp=Z,1μm,21.0s,MS5.4
AGP Aguadilla 89.88 60 *e*P **P 00 42 21.0 +0.7**
PMAFR Mafra 89.89 6 *e*P **P 00 42 19.1 -0.9**
comp=Z,86nm,1.0s,mb6.0
PMAFR *e*S S 00 53 03.1 -6.1
PMAFR *e*LR LR 01 12 48.0
comp=Z,2μm,21.3s
CNB Canberra Magne 90.03 204 *e*P **P 00 42 21.5 +1.1**
CNB *e*S S 00 53 14.9 +5.0
MPR Mayaguez 90.04 60 *e*P **P 00 42 21.4 +0.3**
PESTR Estremoz 90.08 5 *e*P **P 00 42 19.6 -1.4**
comp=Z,47nm,1.1s,mb5.7
PESTR *e*S S 00 53 12.9 +1.9
PESTR *e*SS SS 00 59 18.5 +10
PESTR *e*LQ 01 08 39.9
PESTR *e*LR LR 01 12 25.6
comp=Z,2μm,21.2s
LSP Las Mesas 90.09 60 *e*P **P 00 42 21.9 +0.6**
CAN Canberra 90.13 204 PFAKE 00 42 30.0 +9.2
CAN LR LR
comp=Z,2μm,19.0s,MS5.4
LRS Lares 90.13 60 *e*P **P 00 42 21.6 +0.1**
AOPR Arecibo Observ 90.14 60 *e*P **P 00 42 21.7 +0.2**
LIS Lisbon 90.14 6 *e*P **P 00 42 21.9 +0.7**
LIS *e*PP PP 00 45 55.3 +1.4
LIS *e*S SKSac 00 52 45.0 -3.8
LIS *e*SS SS 00 59 08.7 -0.3
LIS AMS AMS 01 20 07.1
comp=Z,2μm,18.8s,MS5.6
LIS Lisbon 90.14 6 *e*PP PP 00 45 55.3 +1.4
LIS *e*S SKSac 00 52 45.0 -3.8
LIS *e*SS SS 00 59 08.7 -0.3
LIS A 01 20 07.1
comp=Z,2μm,18.8s
LIS Lisbon 90.14 6 *e*P **P 00 42 21.9 +0.7**
LIS *e* 00 45 55.2
LIS *e*S SKSac 00 52 45.0 -3.8
LIS *e*SS SS 00 59 08.6 -0.4
MMAI Mount Meron Ar 90.17 330 P **P 00 42 20.9 -0.5**
comp=Z,47nm,1.0s,mb5.8,baz=16,slow=6.9,SNR=37
MMAI PP PP 00 45 57.5 +3.1
comp=Z,13nm,1.0s,baz=41,slow=6.6,SNR=4.2
ARQ Araqi 90.20 309 P **P 00 42 21.8 0.0**
SNR=21
CRPR Cabo Rojo, PR 90.22 60⇑ *e*P **P 00 42 21.8 -0.1**
comp=Z,73nm,1.2s,mb5.9
JMDO Jabal Madar 90.23 307 P **P 00 42 22.3 +0.4**
SNR=7.9
BSY Bisya 90.36 308 P **P 00 42 22.1 -0.4**
SNR=13
EVOP Sao Brissos 90.39 6 *e*P **P 00 42 21.5 -0.9**
EVOP *e*S SKSac 00 52 47.8 -2.5
EVOP *e*S SKSac 00 52 47.9 -2.4
EVOP AMS AMS 01 19 57.2
comp=Z,2μm,25.9s,MS5.4
EVOP Sao Brissos 90.39 6 *e*P **P 00 42 21.4 -1.0**
EVOP *e*S SKSac 00 52 47.9 -2.4
EVO Evora 90.39 5⇑ *i*P **P 00 42 21.2 -1.2**
comp=Z,55nm,1.1s,mb5.5
EVO *e*MLR MLR
comp=Z,2μm,22.5s,MS5.3
EVO Evora 90.39 5 *e*P **P 00 42 21.2 -1.2**
comp=Z,30nm,1.1s,mb5.5
CELP Cerrillos 90.45 60 *e*P **P 00 42 23.3 +0.3**
OBIP Obispado Ponce 90.47 60 *e*P **P 00 42 23.6 +0.5**
EVIA Vianos 90.49 1 P **P 00 42 20.8 -2.0**
EVIA pmax pmax
comp=Z,29nm,1.0s,mb5.6
EVIA Vianos 90.49 1 P **P 00 42 20.8 -2.0**
comp=Z,29nm,1.0s,mb5.6
ICM Isla Caja Muer 90.63 60⇑ *e*P **P 00 42 23.6 -0.2**
SJG San Juan 90.66 60⇑ *e*P **P 00 42 23.5 -0.4**
SJG *e* 00 45 54.9
SJG *e*S S 00 53 15.7 -1.1
SJG pmax pmax
comp=Z,197nm,1.1s
SJG MLR MLR
comp=Z,2μm,22.0s
SJG San Juan 90.66 60⇑ *e*P **P 00 42 23.5 -0.4**
comp=Z,197nm,1.1s,mb6.3
SJG *e*PP PP 00 45 54.9 -4.0
SJG *e*S S 00 53 15.7 -1.1
SJG LR LR
comp=Z,2μm,22.0s,MS5.4
CBYP Canovanas 90.69 59 *e*P **P 00 42 23.5 -0.5**
comp=Z,104nm,1.0s,mb6.1
PBAR Barrancos 90.81 5 *e*P **P 00 42 23.3 -1.0**
comp=Z,53nm,1.0s,mb5.8
PBAR *e*S S 00 53 11.3 -6.3
PBAR *e*SS SS 00 59 32.4 +14
PBAR *e*LQ 01 09 03.6
PBAR *e*LR LR 01 12 51.6
comp=Z,1μm,17.5s
PBEJ Beja 90.91 5 *e*P **P 00 42 23.7 -1.1**
comp=Z,34nm,1.2s,mb5.5
EADA Adamuz 90.91 3 P **P 00 42 22.4 -2.4**
comp=Z,28nm,1.3s,mb5.4
EBAN Banos Encina 90.94 2 P **P 00 42 23.5 -1.4**
EBAN pmax pmax
comp=Z,11nm,0.7s,mb5.3
EBAN Banos Encina 90.94 2 P **P 00 42 23.5 -1.5**
comp=Z,11nm,0.7s,mb5.3
MTP Monte Pirata 90.99 59⇑ *i*P **P 00 42 25.4 -0.1**
comp=Z,531nm,1.1s,mb6.8
PAYG Puerto Ayora 91.00 90 PFAKE 00 42 40.0 +14
PAYG LR LR
comp=Z,1μm,19.0s,MS5.4
MESJ Messejana 91.07 6 *e*P **P 00 42 25.6 +0.1**
MESJ *e*PP PP 00 46 02.1 +0.8
MESJ *e*S SKSac 00 52 29.5 -25
MESJ AMS AMS 01 21 03.5
comp=Z,2μm,20.0s,MS5.5
MESJ Messejana 91.07 6 *e*PP PP 00 46 02.1 +0.8
MESJ *e*S SKSac 00 52 29.5 -25
MESJ A 01 21 03.5
comp=Z,2μm,20.0s
MESJ Messejana 91.07 6 *e*P **P 00 42 25.6 0.0**
MESJ *e* 00 46 02.0
EMIN Mina Concepcio 91.23 4 P **P 00 42 24.9 -1.4**
comp=Z,25nm,1.0s,mb5.5
PCVE Castro Verde 91.29 6 *e*P **P 00 42 25.8 -0.8**
comp=Z,28nm,1.9s,mb5.3
PCVE *e*S SKSac 00 53 04.1 +8.6
PCVE *e*SS SS 00 59 36.8 +11
PCVE *e*LR LR 01 13 04.1
comp=Z,2μm,21.7s
EHUE Huescar 91.31 1 P **P 00 42 26.0 -0.7**
EHUE pmax pmax
comp=Z,16nm,1.0s,mb5.3
EHUE Huescar 91.31 1 P **P 00 42 26.0 -0.6**
comp=Z,16nm,1.0s,mb5.3
PTEO Sao Teotonio 91.33 6 *e*P **P 00 42 27.2 +0.4**
EGRO El Granado 91.42 5 P **P 00 42 26.1 -1.1**
comp=Z,38nm,1.0s,mb5.7
PVAQ Vaqueiros 91.53 5 *e*P **P 00 42 27.2 -0.5**
comp=Z,50nm,1.0s,mb5.8
PVAQ *e*S S 00 53 30.7 +6.4
PVAQ *e*SS SS 00 59 37.9 +8.7
PVAQ *e*LR LR 01 13 12.4
comp=Z,1μm,22.4s
MORF Marmelete 91.57 6 *e*P **P 00 42 27.0 -0.9**
MORF *e*LR LR 01 13 21.0
comp=Z,3μm,21.8s
MORF Marmelete 91.57 6 *e*P **P 00 42 27.4 -0.5**
MORF *e* 00 46 06.4
MORF *e*SS SS 00 59 32.3 +2.5
PBDV Barranco-do-Ve 91.68 5 *e*P **P 00 42 27.9 -0.5**
PBDV *e*S SKSac 00 53 06.1 +8.4
PBDV *e*SS SS 00 59 39.0 +7.7
PBDV *e*LR LR 01 13 13.5
comp=Z,2μm,22.5s
PFVI Vila Bisbo 91.73 6 *e*P **P 00 42 28.9 +0.3**
PFVI *e*LR LR 01 13 43.0
comp=Z,2μm,22.4s
ECOG Cogollos-Vega 91.83 2 P **P 00 42 28.2 -0.9**
ECOG pmax pmax
comp=Z,18nm,1.0s,mb5.4
ECOG Cogollos-Vega 91.83 2 P **P 00 42 28.2 -0.9**
comp=Z,18nm,1.0s,mb5.3
ELOJ Sierra Loja 91.94 2 P **P 00 42 29.7 +0.1**
ELOJ pmax pmax

comp=Z,21nm,0.9s,mb5.5
ELOJ Sierra Loja 91.94 2 P **P 00 42 29.7 +0.1**
comp=Z,21nm,0.9s,mb5.5
ESPR Espera 92.16 4 P **P 00 42 29.5 -1.1**
comp=Z,56nm,1.1s,mb5.8
WDD Wield Dalam 92.19 347 PFAKE 00 42 40.0 +9.2
WDD LR LR
comp=Z,1μm,19.0s,MS5.4
SNZO South Karori 92.25 183 PFAKE 00 42 40.0 +10
SNZO LR LR
comp=Z,3μm,20.0s,MS5.7
SFS San Fernando 92.55 4 PFAKE 00 42 40.0 +7.6
SFS LR LR
comp=Z,3μm,21.0s,MS5.6
EJIF Jimena Fronter 92.59 4 P **P 00 42 32.3 -0.3**
EJIF pmax pmax
comp=Z,27nm,1.1s,mb5.6
EJIF Jimena Fronter 92.59 4 P **P 00 42 32.3 -0.3**
comp=Z,27nm,1.1s,mb5.6
FORT Forrest 93.14 222 *e*P **P 00 42 35.0 +0.1**
comp=Z,36nm,0.8s,mb5.9
FORT Forrest 93.14 222 *e*P **P 00 42 35.0 +0.1**
comp=Z,68nm,1.0s,mb6.0
ANWB Willy Bob 93.35 56 PFAKE 00 42 50.0 +14
ANWB LR LR
comp=Z,2μm,19.0s,MS5.6
FDF Fort de France 96.12 58 PFAKE 00 43 00.0 +11
FDF LR LR
comp=Z,3μm,22.0s,MS5.7
OTAV Otavalo 97.70 80 *e*P **P 00 42 57.1 +0.9**
comp=Z,3.1nm,1.0s,mb4.8
OTAV *e*PP PP 00 46 54.9 +0.7
OTAV LR LR
comp=Z,590nm,20.0s,MS5.1
GRGR Grenville 98.01 59 PFAKE 00 43 10.0 +12
GRGR LR LR
comp=Z,3μm,22.0s,MS5.7
BBGH Gun Hill 98.29 57 PFAKE 00 43 10.0 +11
BBGH LR LR
comp=Z,3μm,21.0s,MS5.7
NWAO Narrogin (SRO) 99.80 229 PFAKE 00 43 20.0 +14
NWAO LR LR
comp=Z,810nm,20.0s,MS5.2
TAM Tamanrasset 106.06 354 P Pdif 00 43 33.8 +0.4
TAM pmax pmax
comp=Z,3.0nm,1.1s
TAM MLR MLR
comp=Z,1μm,19.0s,MS5.5
TAM Tamanrasset 106.06 354 Pdif Pdif 00 43 33.8 +0.4
comp=Z,3.4nm,1.1s
TAM LR LR
comp=Z,1μm,19.0s,MS5.5
MSEY Mahe Island 114.11 294 PFAKE 00 48 10.0 +9.5
MSEY LR LR
comp=Z,2μm,20.0s,MS5.6
LPAZ La Paz 116.87 83 PKP PKPdf 00 48 05.2 -0.5
comp=Z,1.8nm,0.9s,baz=75,slow=3.1,SNR=5.9
LPAZ PP PP 00 49 17.0 +2.2
comp=Z,3.2nm,1.1s,baz=23,slow=11,SNR=3.7
LPAZ PKKPbc PKKPbc 00 58 30.8 +1.2
comp=Z,1.9nm,0.9s,baz=126,slow=6.1,SNR=4.5
LPAZ La Paz 116.87 83 PKIKP PKPdf 00 48 05.2 -0.5
LPAZ 00 49 17.0
LPAZ pmax pmax
comp=Z,2.0nm,0.9s
LPAZ pmax pmax
comp=Z,3.0nm,1.1s
LPAZ pmax pmax
comp=Z,2.0nm,0.9s
KMBO Kilima Mbogo 120.55 314 PKP PKPdf 00 48 13.4 +0.5
comp=Z,25nm,1.0s,baz=358,slow=24,SNR=31
KMBO PP PP 00 49 42.2 +2.4
comp=Z,7.0nm,1.0s,baz=3.3,slow=22,SNR=3.6
KMBO Kilima Mbogo 120.55 314 PKIKP PKPdf 00 48 13.5 +0.5
KMBO 00 49 42.2
KMBO pmax pmax
comp=Z,25nm,1.0s
KMBO pmax pmax
comp=Z,7.0nm,1.0s
KMBO Kilima Mbogo 120.55 314 PKP PKPdf 00 48 13.4 +0.5
KMBO PP PP 00 49 42.2 +2.4
DRV Dumont d'Urvil 121.24 197 SP SP 00 59 36.0 +5.1
DRV SS SS 01 06 32.0 +17
DRV R 01 27 00.0
DBIC Dimbokro 122.23 4 PKP PKPdf 00 48 16.2 +0.1
comp=Z,14nm,0.8s,baz=5.0,slow=4.6,SNR=20
DBIC Dimbokro 122.23 4 PKP PKPdf 00 48 16.2 +0.1
DBIC LR LR
comp=Z,2μm,20.0s,MS5.7
TIC Toumodi 122.25 5 *e*PKP1 PKPdf 00 48 15.4 -0.8
comp=Z,113nm,1.3s
KIC Kosan Boka 122.54 4 *e*PKP1 PKPdf 00 48 15.9 -0.9
comp=Z,63nm,1.1s
LIC Lamto 122.66 5 *e*PKP1 PKPdf 00 48 15.2 -1.8
comp=Z,109nm,1.5s
LIC Lamto 122.66 5 *e*PKIKP PKPdf 00 48 16.3 -0.7
LIC *e*MLR MLR
comp=Z,3μm,20.5s,MS5.6
LIC Lamto 122.66 5 *e*PKPdf PKPdf 00 48 16.3 -0.7
LIC LR LR
comp=Z,1μm,20.5s,MS5.6
MBAR Mbarara 122.84 321 *e*P PKPdf 00 48 16.1 -1.3
LCO Las Campanas 124.52 95 PFAKE 00 48 30.0 +10
LCO LR LR
comp=Z,2μm,21.0s,MS5.8
CASY Casey 128.15 209 PFAKE 00 48 40.0 +14
CASY LR LR
comp=Z,1μm,20.0s,MS5.7
SBA Scott Base 129.04 183 *e*PKIKP PKPdf 00 48 27.7 +0.5
SBA 00 50 36.0
SBA MLR MLR
comp=Z,1μm,21.0s,MS5.6
OPO Ambohidratompo130.04 292 PKP PKPdf 00 48 32.0 +1.1
comp=Z,15nm,1.1s,baz=225,slow=2.9,SNR=3.8
ABPO Ambohimpanom 130.37 292 PFAKE 00 48 40.0 +8.5
ABPO LR LR
comp=Z,986nm,19.0s,MS5.5
CPUP Villa Florida 131.02 82 PKP PKPdf 00 48 32.5 0.0
comp=Z,17nm,1.0s,baz=339,slow=2.8,SNR=18
CPUP SKPbc SKPbc 00 51 53.9 +0.3
comp=Z,6.1nm,0.8s,baz=301,slow=5.2,SNR=7.1
CPUP Villa Florida 131.02 82 PKP PKPdf 00 48 32.5 0.0
CPUP SKPbc SKPbc 00 51 53.9 +0.3
CPUP LR LR
comp=Z,218nm,21.0s,MS4.8
PLCA Paso Flores 132.29 106 PKP PKPdf 00 48 34.7 +0.2
comp=Z,25nm,1.0s,baz=228,slow=2.5,SNR=8.0
PLCA SKPbc SKPbc 00 51 59.0 +1.4
comp=Z,6.8nm,1.1s,baz=315,slow=7.9,SNR=4.6
PLCA Paso Flores 132.29 106 *e*PKPdf PKPdf 00 48 34.0 -0.4
PLCA *e*SKP 00 51 59.0
PLCA LR LR
comp=Z,1μm,20.0s,MS5.7
MIR Mirnyy 134.02 214 *e*PKIKP PKPdf 00 48 34.0 -2.9
MIR pmax pmax
comp=Z,77nm,1.8s
TRQA Tornquist 135.94 97 *e*PKPdf PKPdf 00 48 41.3 0.0
TRQA LR LR
comp=Z,1μm,20.0s,MS5.6
CAM4 Nova Friburgo 136.88 64 *e*P PKPdf 00 48 37.8 -5.8
CAM4 *i* 00 48 38.1
CAM4 *i* 00 48 43.3
CAM4 *i* 00 48 48.9
CAM4 *i* 00 48 50.1
CAM4 *i* 00 48 54.0
CAM4 *i* 00 48 57.7
CAM4 *i* 00 48 58.8
CAM4 *i* 00 49 00.2
LSZ Lusaka 137.14 316 PKhKP PKPpre 00 48 36.6
comp=Z,3.0nm,0.8s,baz=326,slow=1.7,SNR=6.4
LSZ PKP PKPdf 00 48 46.3 +2.0
comp=Z,16nm,1.0s,baz=343,slow=1.1,SNR=5.8
LSZ PP PP 00 51 30.8 +2.5
comp=Z,7.2nm,1.0s,baz=21,slow=9.0,SNR=4.7
LSZ SKPbc SKPbc 00 52 15.2 +1.3
comp=Z,8.4nm,1.0s,baz=40,slow=7.4,SNR=3.5
LSZ Lusaka 137.14 316 PKHKP PKPpre 00 48 36.6
LSZ 00 51 30.8
LSZ pmax pmax
comp=Z,3.0nm,0.8s
LSZ pmax pmax
comp=Z,16nm,1.0s
LSZ pmax pmax
comp=Z,7.0nm,1.0s
LSZ Lusaka 137.14 316 *e*PKPpre PKPpre 00 48 37.1
LSZ *e*PKPdf PKPdf 00 48 44.8 +0.5

LSZ			PKP	PKPdf	00 48 46.3	+2.0
LSZ			*e*PP	PP	00 51 27.7	-0.5
LSZ			PP	PP	00 51 30.8	+2.5
LSZ			SKPbc	SKPbc	00 52 15.2	+1.3
QSPA	**South Pole Qui**	**140.99 180**	*e*PKPpre	PKPpre	00 48 43.7	
QSPA			*e*PKPdf	PKPdf	00 48 50.2	+0.8
QSPA			*e*SKP		00 52 24.2	
QSPA			LR	LR		
	comp=Z,1μm,21.0s,MS5.6					
TSUM	**Tsumeb**	**144.80 328**	PKP	PKPdf	00 48 57.8	-0.1
	comp=Z,343nm,1.0s,baz=360,slow=4.2,SNR=171					
MAW	**Mawson**	**145.51 217**	PKPbc	PKPbc	00 48 57.2	-0.7
	comp=Z,46nm,1.0s,baz=59,slow=4.2,SNR=53					
MAW	**Mawson**	**145.51 217**	*e*PKPdf	PKPdf	00 48 57.0	-0.6
MAW			LR	LR		
	comp=Z,2μm,19.0s,MS6.0					
PMSA	**Palmer Station**	**145.59 137**	PFAKE		00 49 10.0	+12
PMSA			LR	LR		
	comp=Z,3μm,20.0s,MS6.0					
POGA	**Pongola**	**145.72 302**⇑	*i*P	PKPdf	00 49 00.3	+1.0
POGA			AMS	AMS	02 16 17.9	
	comp=Z,7μm,22.9s,MS6.4					
SLR	**Silverton**	**146.11 308**⇑	*i*P	PKPdf	00 49 00.6	+0.6
SLR			AMS	AMS	02 15 01.1	
	comp=Z,2μm,20.5s,MS5.8					
ERPM	**east rand prop**	**146.63 307**	*e*P	PKPdf	00 49 02.1	+1.2
ERPM			AMS	AMS	02 15 16.3	
	comp=Z,2μm,21.4s,MS5.8					
LBTB	**Lobatse**	**146.80 312**	PKPbc	PKPbc	00 49 02.3	-0.7
	comp=Z,198nm,1.0s,baz=47,slow=2.3,SNR=55					
LBTB	**Lobatse**	**146.80 312**	*e*PKP2	PKPbc	00 49 01.6	-1.4
LBTB			*e*		00 52 26.7	
LBTB			MLR	MLR		
	comp=Z,2μm,20.0s,MS5.8					
LBTB	**Lobatse**	**146.80 312**	*e*PKPdf	PKPdf	00 49 01.6	+0.4
LBTB			*e*PP	PP	00 52 26.7	-0.3
LBTB			LR	LR		
	comp=Z,2μm,20.0s,MS5.8					
LBTB	**Lobatse**	**146.80 312**	*e*P	PKPdf	00 49 01.7	+0.5
LBTB			AMS	AMS	02 02 50.8	
	comp=Z,1μm,21.5s,MS5.6					
KSR	**Koster**	**146.89 309**⇑	*i*P	PKPdf	00 49 03.2	+1.9
KSR			AMS	AMS	02 07 31.3	
	comp=Z,3μm,21.6s,MS6.0					
KLOF	**Kloof**	**146.95 308**	*e*P	PKPdf	00 49 02.1	+0.7
PRYS	**Parys**	**147.56 308**	*e*P	PKPdf	00 49 02.1	-0.3
PRYS			AMS	AMS	02 12 26.9	
	comp=Z,1μm,20.8s,MS5.8					
SEK	**Senekal**	**148.57 306**	*e*P	PKPdf	00 49 06.2	+2.2
SEK			AMS	AMS	02 15 24.5	
	comp=Z,2μm,19.6s,MS5.9					
SWZ	**Schweizer**	**148.76 310**	*e*P	PKPdf	00 49 04.8	+0.4
SWZ			AMS	AMS	02 03 37.4	
	comp=Z,1μm,20.0s,MS5.8					
BOSA	**Boshof**	**149.99 309**	PKPbc	PKPbc	00 49 11.9	+0.7
	comp=Z,164nm,1.0s,baz=38,slow=2.2,SNR=52					
BOSA	**Boshof**	**149.99 309**	*e*PKIKP	PKPdf	00 49 06.0	-0.3
BOSA			*e*		00 49 11.8	
BOSA					00 49 11.9	
BOSA			*e*		00 52 45.3	
BOSA			MLR	MLR		
	comp=Z,2μm,19.0s,MS6.0					
BOSA	**Boshof**	**149.99 309**	*e*PKPdf	PKPdf	00 49 06.0	-0.3
BOSA			*e*PKPbc	PKPbc	00 49 11.8	+0.5
BOSA			PKPbc	PKPbc	00 49 11.9	+0.7
BOSA			*e*PP	PP	00 52 45.2	-0.4
BOSA			LR	LR		
	comp=Z,2μm,19.0s,MS6.0					
BOSA	**Boshof**	**149.99 309**⇑	*i*P	PKPbc	00 49 11.8	+0.5
BOSA			AMS	AMS	02 10 34.8	
	comp=Z,1μm,19.5s,MS5.8					
HVD	**Gariep Dam**	**151.50 306**⇑	*i*P	PKPbc	00 49 15.3	+0.6
HVD			AMS	AMS	02 11 31.4	
	comp=Z,2μm,20.3s,MS6.0					
UPI	**Upington**	**151.65 315**	*e*P	PKPdf	00 49 09.0	+0.1
PKA	**Prieska**	**152.07 311**⇑	*i*P	PKPbc	00 49 16.4	+0.3
PKA			AMS	AMS	02 05 51.7	
	comp=Z,601nm,20.9s,MS5.4					
GRM	**Grahamstown**	**153.09 301**	*e*P	PKPbc	00 49 17.9	-0.4
GRM			AMS	AMS	02 13 01.8	
	comp=Z,3μm,18.6s,MS6.2					
SOE	**Somerset East**	**153.13 303**	*e*P	PKPdf	00 49 11.2	+0.3
SOE			AMS	AMS	02 12 29.2	
	comp=Z,2μm,20.3s,MS6.0					
SYO	**Syowa Base**	**153.81 212**⇓	*e*P	PKPdf	00 49 08.2	-2.5
KOMG	**Komaggas**	**154.50 320**	*e*P	PKPbc	00 49 20.4	-1.0
KOMG			AMS	AMS	02 11 43.9	
	comp=Z,2μm,20.5s,MS5.9					
CVNA	**Calvinia**	**154.98 314**	*e*P	PKPbc	00 49 20.9	-1.5
CVNA			AMS	AMS	02 05 30.1	
	comp=Z,2μm,21.6s,MS5.8					
SUR	**Sutherland**	**155.25 311**	PKP	PKPdf	00 49 15.4	+1.5
	comp=Z,10nm,0.9s,baz=130,slow=7.9,SNR=3.1					
SUR			PKPab	PKPab	00 49 40.1	+1.0
	comp=Z,36nm,1.1s,baz=28,slow=2.2,SNR=3.7					
SUR	**Sutherland**	**155.25 311**	PKP	PKPdf	00 49 15.4	+1.5
SUR			PKPab	PKPab	00 49 40.1	+1.0
SUR			LR	LR		
	comp=Z,3μm,19.0s,MS6.2					
SUR	**Sutherland**	**155.25 311**	*e*P	PKPdf	00 49 12.9	-1.0
SUR			AMS	AMS	02 07 02.4	
	comp=Z,1μm,21.2s,MS5.8					
MAIT	**Maitri**	**159.53 192**	*e*PKPdif	PKPdf	00 49 17.3	-0.8
MAIT			*e*		00 49 55.3	
VNA1	**Neumayer--Stat**	**160.24 173**	*e*PKPdf	PKPdf	00 49 17.3	-1.6
VNA1			*e*		00 49 31.2	
VNA1			*e*		00 49 58.7	

NIED ***25*** *00:34:00,37.°60N×142.°70E,h17km,Mw4.4 Best double couple: M₀3.89000×10¹⁵ NP1:φs119.00000°,δ57.00000°, λ47.00000°. NP2:φs359.00000°,δ52.00000°,λ136.00000°.*
MOS ***25*** *00:34:05.0±1.2,37.°70N×142.°73E,h18km,mb4.8/8, Error ellipse: s-maj=17.8km s-min=13.1km az=76.9*
IDC ***25*** *00:34:05.3±2.1,37.°63N×142.°54E,h0km,mb4.5/4, mb1 4.6/6,mb1mx4.2/23,mbtmp4.5/6,ML3.9/1,MS3.7/1, Ms1 3.7/1,ms1mx3.3/30,Error ellipse: s-maj=58.0km s-min=27.6km az=129.0*
NEIC ***25*** *00:34:05.6±0.8,37.°59N×142.°76E,h10km,mb4.8/4, MW4.3(NIED),Error ellipse: s-maj=17.9km s-min=11.3km az=144.0*
ISCJB ***25*** *00:34:06.6±0.6,37.°52N±0.°05×142.°82E±0.°05,h33km, mb4.6/7,Error ellipse: s-maj=6.7km s-min=5.3km az=158.3*
JMA ***25*** *00:34:07.4±0.2,37.°56N×142.°70E,h27km±4km,M4.7*
ISC 25 00:34:08.1±1.8,37.°55N±0.°04×142.°77E±0.°05,h31km±14km, n38,σ1°07/50,mb4.6/7,4C,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**1.45 309**		⇑P	**Pn**	**00 34 31.5**	**-0.6**
JIO				*e*S	**Sn**	**00 34 49.3**	**-0.7**
JFK	**Kawauchi**	**1.52 264**		P	**Pn**	**00 34 32.6**	**-0.5**
JFK				*e*S	**Sn**	**00 34 50.4**	**-1.4**
JMM	**Marumori**	**1.60 282**		P	**Pn**	**00 34 33.7**	**-0.5**
JMM				S	**Sn**	**00 34 52.5**	**-1.3**
ONAJ	**Iwakimizuishiy**	**1.63 255**		⇑P	**Pn**	**00 34 34.1**	**-0.5**
ONAJ				*e*S	**Sn**	**00 34 53.5**	**-1.1**
JOU	**Okura**	**1.86 297**		P	**Pn**	**00 34 37.8**	**+0.1**
JOU				*e*S	**Sn**	**00 35 00.4**	**+0.3**
JMK	**Ichinoseki**	**1.86 319**		⇑P	**Pn**	**00 34 37.6**	**-0.2**
JFT	**Otama**	**1.94 270**		P	**Pn**	**00 34 39.5**	**+0.7**
JFT				*e*S	**Sn**	**00 35 02.8**	**+0.7**
JYS	**Shirataka**	**2.25 288**		P	**Pn**	**00 34 43.9**	**+0.9**
JYS				*e*S	**Sn**	**00 35 10.5**	**+0.8**
JYK	**Kaneyama**	**2.34 307**		⇑P	**Pn**	**00 34 44.9**	**+0.5**
JNS	**Sasagawa**	**2.75 277**		P	**Pn**	**00 34 52.7**	**+2.6**
JNS				*e*S	**Sn**	**00 35 27.3**	**+5.0**
MJAR	**Matsushiro Arr**	**3.79 256**		Pn	**Pn**	**00 35 03.9**	**-0.4**
	9.8nm,0.3s,baz=87,slow=14,SNR=85						
MJAR				LR	LR	00 36 39.4	
	comp=Z,911nm,19.1s,baz=75,slow=43						
MJAR	**Matsushiro Arr**	**3.79 256**		P	**Pn**	**00 35 03.9**	**-0.3**
MJAR				pmax	pmax		
	comp=Z,10.0nm,0.3s						
MJAR				MLR	MLR		
	comp=Z,911nm,19.1s						
MAJO	**Matsushiro**	**3.79 256**		*e*Pn	**Pn**	**00 35 05.6**	**+1.4**
MAJO				*e*Sn	**Sn**	**00 35 46.4**	**-1.3**
MAT	**Matsushiro**	**3.79 256**		P	**Pn**	**00 35 05.7**	**+1.5**
MAT				*e*S	**Sn**	**00 35 50.8**	**+3.1**
JHJ	**Hachijo jima 2**	**5.05 210**		Pn	**Pn**	**00 35 21.4**	**-0.2**
	baz=38,slow=18						
JHJ				Sn	**Sn**	**00 36 17.5**	**-1.3**
	comp=Z,96nm,0.3s,baz=292,slow=23,SNR=4.5						
YUK	**Yuzh-Kuril'sk**	**6.89**	**19**	*e*P	**Pn**	**00 35 44.8**	**-2.1**
YUK				*i*S	**Sn**	**00 36 58.6**	**-5.6**
YUK				smax			
	comp=N,153nm,0.7s						
YUK				smax			
	comp=E,373nm,0.7s						
YUK				smax			
	comp=N,146nm,0.6s						
YUK				smax			
	comp=E,316nm,0.6s						
INCN	**Inchon**	**12.82 275**		Pn	**Pn**	**00 37 08.4**	**+0.3**
PET	**Petropavlovsk**	**19.02**	**30**	P	**Pn**	**00 38 26.6**	**-1.5**
HIA	**Hailar**	**20.34 312**		*e*P	**P**	**00 38 41.1**	**-0.5**
HIA				pmax	pmax		
	comp=Z,30nm,0.7s						
HIA	**Hailar**	**20.34 312**		*e*P	**P**	**00 38 41.0**	**-0.5**
	comp=Z,30nm,0.7s						
GUMO	**Guam**	**23.93 175**		*e*P	**P**	**00 39 19.4**	**0.0**
GUMO				pmax	pmax		
	comp=Z,23nm,0.6s,mb4.8						
GUMO	**Guam**	**23.93 175**		*e*P	**P**	**00 39 19.4**	**0.0**
	comp=Z,23nm,0.6s,mb4.8						
YAK	**Yakutsk**	**25.82 346**		*e*P	**P**	**00 39 35.5**	**-0.7**
YAK				pmax	pmax		
	comp=Z,47nm,1.0s,mb5.0						
YAK	**Yakutsk**	**25.82 346**		*e*P	**P**	**00 39 35.5**	**-0.7**
	comp=Z,47nm,1.0s,mb5.0						
TLY	**Talaya**	**30.82 310**		*e*P	**P**	**00 40 19.7**	**-1.2**
TLY				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.6						
TLY	**Talaya**	**30.82 310**		*e*P	**P**	**00 40 19.7**	**-1.2**
	comp=Z,7.0nm,0.7s,mb4.6						
LSA	**Lhasa**	**43.24 275**		*e*P	**P**	**00 42 06.8**	**+0.3**
ILAR	**Eielson Array**	**48.48**	**33**	P	**P**	**00 42 50.0**	**+2.6**
	comp=Z,2.5nm,0.8s,mb4.3,baz=256,slow=6.1,SNR=4.5						
ILAR	**Eielson Array**	**48.48**	**33**	P	**P**	**00 42 50.0**	**+2.6**
ILAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FINES	**FINESS Array B**	**68.86 333**		P	**P**	**00 45 10.0**	**+0.8**
	comp=Z,5.5nm,0.7s,mb4.6,baz=50,slow=6.0,SNR=5.2						
FINES	**FINESS Array B**	**68.86 333**		P	**P**	**00 45 10.0**	**+0.8**
FINES				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NB2	**NORSAR Subarra**	**74.13 338**		P	**P**	**00 45 42.3**	**+1.4**
	comp=Z,4.8nm,0.8s,mb4.5,baz=39,slow=6.2						
NOA	**NORSAR Array B**	**74.13 338**		P	**P**	**00 45 42.6**	**+1.7**
	comp=Z,3.7nm,0.8s,mb4.4,baz=38,slow=5.9,SNR=9.8						
NOA	**NORSAR Array B**	**74.13 338**		P	**P**	**00 45 42.6**	**+1.7**
NOA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AKASG	**Malin Array Be**	**74.55 323**		P	**P**	**00 45 44.2**	**+0.6**
	comp=Z,2.4nm,0.5s,mb4.4,baz=45,slow=6.0,SNR=9.7						
AKASG	**Malin Array Be**	**74.55 323**		P	**P**	**00 45 44.2**	**+0.6**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	**Malin Array Be**	**74.55 323**		P	**P**	**00 45 44.2**	**+0.6**
CLL	**Collm**	**81.19 331**		*e*P	**P**	**00 46 21.0**	**+0.5**

MAN 25 00:36:25,11.°77N×124.°92E,h95km,mb4.3,ML3.2,MS3.0, 1C,Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.54 108**		*e*P	Pn	00 36 42.1	+1.5
BESP				*e*S	Sn	00 36 47.6	-4.5
OCLP	**Ormoc**	**0.77 203**		*e*P	Pn	00 36 44.2	+1.5
CNP	**Catarman**	**0.78 342**		*e*P	Pn	00 36 44.3	+1.5
CNP				*e*S	Sn	00 36 52.5	-3.5
LLP	**Lapu-Lapu**	**1.72 213**		*e*P	Pn	00 36 54.1	+0.3
LLP				*e*S	Sn	00 37 16.0	+0.4
PVCP	**Virac**	**1.96 338**		*e*P	Pn	00 37 00.6	+3.7
SCPH	**Surigao**	**2.05 164**		*e*P	Pn	00 36 57.7	-0.4
SCPH				*e*S	Sn	00 37 24.4	+1.1
TBP	**Tagbilaran**	**2.31 207**		⇑*e*P	Pn	00 37 02.2	+0.7
TBP				*e*S	Sn	00 37 27.5	-1.8
GUIM	**Jordan**	**2.55 244**		*e*P	Pn	00 37 05.3	+0.7
CAUP	**Cauayan**	**5.96 330**		*e*P	Pn	00 37 52.0	+1.3

IDC ***25*** *00:39:18.8±0.8,37.°56N×142.°67E,h0km,mb4.1/13, mb1 4.2/18,mb1mx4.1/28,mbtmp4.1/18,ML3.8/5,Error ellipse: s-maj=22.7km s-min=18.2km az=133.0*
MOS ***25*** *00:39:20.5±0.8,37.°60N×142.°69E,h26km,mb4.5/15,Error ellipse: s-maj=12.7km s-min=10.5km az=85.6*
ISCJB ***25*** *00:39:21.4±0.4,37.°52N±0.°03×142.°74E±0.°04,h33km, mb4.2/20,Error ellipse: s-maj=5.2km s-min=4.3km az=148.5*
JMA ***25*** *00:39:21.1±0.1,37.°54N×142.°73E,h34km±4km,M4.7*
NEIC ***25*** *00:39:23.3±2.5,37.°57N×142.°64E,h29km±17km,mb4.5/7, Error ellipse: s-maj=11.1km s-min=6.4km az=132.0*
ISC 25 00:39:23.8±0.4,37.°56N±0.°03×142.°66E±0.°04,h35km,n65, σ0°90/79,mb4.2/20,5C-1D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**1.37 311**		⇑P	**Pn**	**00 39 45.3**	**-1.1**
JIO				*e*S	**Sn**	**00 40 03.2**	**-0.1**
JFK	**Kawauchi**	**1.43 263**		P	**Pn**	**00 39 46.2**	**-1.1**
JFK				*e*S	**Sn**	**00 40 04.5**	**-0.4**
JMM	**Marumori**	**1.51 282**		P	**Pn**	**00 39 47.5**	**-0.8**
JMM				*e*S	**Sn**	**00 40 06.7**	**-0.1**
ONAJ	**Iwakimizuishiy**	**1.55 254**		⇓P	**Pn**	**00 39 48.0**	**-0.9**
ONAJ				*e*S	**Sn**	**00 40 07.4**	**-0.4**
JOU	**Okura**	**1.77 298**		P	**Pn**	**00 39 51.8**	**-0.1**
JOU				*e*S	**Sn**	**00 40 14.2**	**+1.0**
JMK	**Ichinoseki**	**1.80 321**		⇑P	**Pn**	**00 39 51.6**	**-0.6**
JMK				*e*S	**Sn**	**00 40 14.6**	**+0.8**
JFT	**Otama**	**1.85 270**		P	**Pn**	**00 39 53.1**	**+0.2**
JFT				*e*S	**Sn**	**00 40 16.7**	**+1.6**
JOM	**Ohasama**	**2.19 331**		⇑P	**Pn**	**00 39 57.1**	**-0.6**
JOM				*e*S	**Sn**	**00 40 23.4**	**-0.2**
JYK	**Kaneyama**	**2.27 308**		⇑P	**Pn**	**00 39 58.7**	**0.0**
JAG	**Ashikaga**	**2.81 247**		⇑P	**Pn**	**00 40 06.0**	**-0.1**
MJAR	**Matsushiro Arr**	**3.70 255**		Pn	**Pn**	**00 40 18.3**	**-0.1**
	12nm,0.3s,baz=328,slow=24,SNR=40						
MJAR				Sn	**Sn**	**00 40 59.5**	**-1.3**
	4.4nm,0.3s,baz=84,slow=15,SNR=5.3						
MJAR	**Matsushiro Arr**	**3.70 255**		P	**Pn**	**00 40 18.3**	**-0.2**
MJAR						00 40 59.5	
MJAR				pmax	pmax		
	comp=Z,12nm,0.3s						
MJAR				smax			
	comp=N,4.0nm,0.3s						
MAJO	**Matsushiro**	**3.70 255**		*e*Pn	**Pn**	**00 40 19.0**	**+0.5**
MAJO				S	**Sn**	**00 41 16.5**	**+16**
MAT	**Matsushiro**	**3.70 255**		P	**Pn**	**00 40 19.2**	**+0.7**
MAT				*e*S	**Sn**	**00 41 02.0**	**+1.1**
JHJ	**Hachijo jima 2**	**5.01 209**		Pn	**Pn**	**00 40 34.5**	**-2.0**
	comp=N,42nm,0.3s,baz=77,slow=21,SNR=3.6						
JHJ				Sn	**Sn**	**00 41 31.3**	**-1.9**
	comp=N,50nm,0.3s,baz=85,slow=21,SNR=2.8						
ASAJ	**Asahikawa**	**6.55 360**		Pn	**Pn**	**00 40 55.9**	**-1.7**
	comp=N,1.5nm,0.3s,baz=193,slow=7.7,SNR=4.3						
ASAJ				Sn	**Sn**	**00 42 09.1**	**-1.9**
	comp=N,1.7nm,0.3s,baz=28,slow=32,SNR=4.4						
ASAJ	**Asahikawa**	**6.55 360**		P	**Pn**	**00 40 55.9**	**-1.7**
ASAJ						00 42 09.1	
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				smax			
	comp=N,2.0nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**6.91**	**20**	*e*P	Px	00 41 16.8	
YUK				*e*S	**Sn**	**00 42 12.8**	**-7.0**
YUK				pmax	pmax		
	comp=Z,103nm,0.6s						
YUK				pmax	pmax		
	comp=N,80nm,0.3s						
YUK				pmax	pmax		
	comp=E,59nm,0.3s						
YUK				smax			
	comp=N,203nm,0.7s						
YUK				smax			
	comp=E,398nm,0.7s						
YUK				smax			
	comp=N,207nm,0.6s						
YUK				smax			
	comp=E,398nm,0.6s						
KUR	**Kuril'sk**	**8.61**	**25**	P	**Pn**	**00 41 33.0**	**+7.2**
KUR				*e*S	**Sn**	**00 42 56.7**	**-4.8**
KUR				smax			
	comp=N,50nm,0.5s						
KUR				smax			
	comp=E,120nm,0.5s						
YSS	**Yuzh-Sakhalins**	**9.39**	**0**	*e*P	**Pn**	**00 41 36.0**	**-0.5**
KSRS	**Korea Array**	**11.71 274**		Pn	**Pn**	**00 42 08.4**	**+0.2**
	comp=E,0.2nm,0.3s,baz=85,slow=29,SNR=4.8						
PETK	**Petropavlovsk-**	**18.74**	**29**	P	**Pn**	**00 43 39.4**	**-0.6**
	comp=E,0.3nm,0.3s,baz=224,slow=8.3,SNR=3.6						
ULN	**Ulaanbaatar**	**27.89 303**		P	**P**	**00 45 10.5**	**+0.3**
ULN				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.2						
ULN	**Ulaanbaatar**	**27.89 303**		P	**P**	**00 45 10.5**	**+0.3**
	comp=Z,9.1nm,1.3s,mb4.2						
ENH	**Enshi**	**28.37 265**		*e*P	**P**	**00 45 17.7**	**+3.1**
ZALV	**Zalesovo Beam**	**42.30 312**		P	**P**	**00 47 14.0**	**+0.3**
	comp=Z,3.6nm,0.7s,mb4.1,baz=76,slow=5.3,SNR=5.7						
ZALV	**Zalesovo Beam**	**42.30 312**		P	**P**	**00 47 14.0**	**+0.2**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.2						
ZALV	**Zalesovo Beam**	**42.30 312**		P	**P**	**00 47 14.0**	**+0.3**
CHTO	**Chiang Mai**	**42.38 256**		P	**P**	**00 47 14.6**	**-0.2**
LSA	**Lhasa**	**43.15 275**		*e*P	**P**	**00 47 21.9**	**+0.9**
LSA				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.4						
LSA	**Lhasa**	**43.15 275**		*e*P	**P**	**00 47 21.9**	**+0.9**
	comp=Z,3.5nm,0.4s,mb4.4						
MKAR	**Makanchi Array**	**44.69 302**		P	**P**	**00 47 33.3**	**+0.2**
	comp=Z,4.8nm,1.0s,mb4.3,baz=72,slow=17,SNR=5.2						
MKAR	**Makanchi Array**	**44.69 302**		P	**P**	**00 47 33.3**	**+0.2**
MKAR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KSM	**Kuching**	**46.63 227**		*e*P	**P**	**00 47 49.1**	**+0.3**
ILAR	**Eielson Array**	**48.52**	**33**	P	**P**	**00 48 03.4**	**+0.5**
	comp=Z,2.5nm,0.8s,mb4.3,baz=261,slow=6.3,SNR=12						
ILAR	**Eielson Array**	**48.52**	**33**	P	**P**	**00 48 03.4**	**+0.6**
ILAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KULM	**Kulim**	**49.94 241**		*e*P	**P**	**00 48 14.8**	**+0.4**
	comp=Z,7.7nm,0.7s,mb4.8						
TKM2	**Tokmak 2**	**50.26 298**		*e*P	**P**	**00 48 17.2**	**+0.8**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
TKM2	**Tokmak 2**	**50.26 298**		*e*P	**P**	**00 48 17.2**	**+0.8**
	comp=Z,3.0nm,0.6s,mb4.5						
AML	**Almayashu**	**51.84 298**		*e*P	**P**	**00 48 29.1**	**+0.7**
WRAB	**Tennant Creek**	**57.71 189**		*e*P	**P**	**00 49 10.9**	**0.0**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
WRAB	**Tennant Creek**	**57.71 189**		*e*P	**P**	**00 49 10.9**	**0.0**
	comp=Z,4.0nm,0.8s,mb4.5						
ABKAR	**Akbulak array**	**58.36 310**		*e*P	**P**	**00 49 14.6**	**-0.7**
	comp=Z,12nm,1.3s,mb4.8						
ASAR	**Alice Springs**	**61.45 189**		P	**P**	**00 49 37.0**	**+0.4**
	comp=Z,1.2nm,0.7s,mb4.1,baz=15,slow=7.6,SNR=8.9						
ASAR	**Alice Springs**	**61.45 189**		P	**P**	**00 49 37.1**	**+0.5**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
RES	**Resolute Bay**	**61.85**	**15**	*e*P	**P**	**00 49 39.2**	**+0.4**
RES				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.5						
RES	**Resolute Bay**	**61.85**	**15**	*e*P	**P**	**00 49 39.2**	**+0.5**
	comp=Z,3.2nm,0.7s,mb4.6						
PALK	**Pallekele**	**63.45 258**		P	**P**	**00 49 50.5**	**+0.2**
FINES	**FINESS Array B**	**68.81 333**		P	**P**	**00 50 24.5**	**+0.4**
	comp=Z,5.2nm,0.7s,mb4.6,baz=53,slow=9.8,SNR=11						
FINES	**FINESS Array B**	**68.81 333**		P	**P**	**00 50 24.5**	**+0.5**
FINES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NVAR	**Mina Array Bea**	**73.88**	**54**	P	**P**	**00 50 57.2**	**+2.1**
	comp=Z,0.6nm,0.8s,mb3.5,baz=316,slow=8.3,SNR=2.7						
HFS	**Hagfors**	**74.02 336**		P	**P**	**00 50 55.7**	**+0.3**
	comp=Z,3.1nm,0.9s,mb4.2,baz=50,slow=9.9,SNR=7.7						
HFS	**Hagfors**	**74.02 336**		P	**P**	**00 50 55.7**	**+0.2**
HFS				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NB2	**NORSAR Subarra**	**74.09 338**		P	**P**	**00 50 56.2**	**+0.4**
	comp=Z,3.8nm,0.8s,mb4.4,baz=38,slow=5.9						
NOA	**NORSAR Array B**	**74.09 338**		P	**P**	**00 50 56.2**	**+0.4**
	comp=Z,2.6nm,0.7s,mb4.3,baz=38,slow=5.8,SNR=13						
NOA	**NORSAR Array B**	**74.09 338**		P	**P**	**00 50 56.2**	**+0.4**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NOA	**NORSAR Array B**	**74.09 338**		P	**P**	**00 50 56.2**	**+0.4**
AKASG	**Malin Array Be**	**74.49 323**		P	**P**	**00 50 58.5**	**+0.2**
	comp=Z,1.4nm,0.4s,mb4.2,baz=45,slow=5.8,SNR=8.4						
AKASG	**Malin Array Be**	**74.49 323**		P	**P**	**00 50 58.6**	**+0.2**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
PDAR	**Pinedale Array**	**76.59**	**46**	P	**P**	**00 51 09.5**	**-1.1**
	comp=Z,0.5nm,0.6s,mb3.7,baz=300,slow=4.1,SNR=3.6						
BRTR	**Keskin Array B**	**79.25 312**		P	**P**	**00 51 24.8**	**-0.6**
	comp=Z,1.2nm,1.0s,mb3.8,baz=52,slow=2.4,SNR=3.4						
BRTR	**Keskin Array B**	**79.25 312**		P	**P**	**00 51 24.8**	**-0.6**
BRTR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
EKA	**Eskdalemuir Ar**	**82.97 341**		P	**P**	**00 51 46.9**	**+2.0**
	comp=Z,1.0nm,0.7s,mb4.0,baz=16,slow=4.1,SNR=5.8						
EKA	**Eskdalemuir Ar**	**82.97 341

DIYA	Diyarbakir	3.08	276	*i* P	Pn	01 10 08.8	-0.8
SVRC	Sivrice-ELAZID	3.77	282	*e*PN	Pn	01 10 20.2	+1.1
SVRC	Sivrice-ELAZID	3.77	282	*e*Pn	Pn	01 10 20.2	+1.1
PTK	Pertek	3.82	290	*e*PN	Pn	01 10 20.2	+0.4
PTK	Pertek	3.82	290	*e*Pn	Pn	01 10 20.2	+0.4
URFA	Urfa	4.12	268	*e*PN	Pn	01 10 25.1	+1.2
URFA	Urfa	4.12	268	*e*Pn	Pn	01 10 25.1	+1.2

TAP 25 01:18:44.1, 21°.08N×121°.17E, h22km±2km, ML3.6, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSEB	Hengchuen, Pin	0.86	343	P	Pb	01 19 00.8	+0.5
	baz=340						
TSEB				S	Sb	01 19 13.6	+2.2
	baz=340						
TWK1	Hengchun	0.93	338	P	Pb	01 19 01.7	+0.2
	baz=338						
TWK1				S	Sb	01 19 14.7	+1.2
	baz=338						
HEN	Hengchun	1.01	336	P	Pb	01 19 03.1	+0.2
	baz=336						
HEN				S	Sb	01 19 17.1	+1.4
	baz=336						
LAY	Lan-yu	1.02	20	P	Pb	01 19 03.3	+0.2
	baz=20						
EAST	Anshuo	1.33	347	*e*P	Pn	01 19 07.9	+0.5
	baz=347						
EAST				*e*S	Sn	01 19 25.2	+0.6
	baz=347						
SCZT	Fangliau	1.39	338	P	Pn	01 19 08.6	+0.4
	baz=338						
SCZT				*e*S	Sn	01 19 25.5	-0.4
	baz=338						
TWG	Pinlang	1.74	357	*e*P	Pn	01 19 13.9	+0.9
	baz=357						
TWM1	Shoushan	1.87	338	*e*P	Pn	01 19 16.2	+1.3
	baz=338						
SGST	Jiashian	2.07	345	*e*P	Pn	01 19 19.2	+1.7
	baz=344						
ELDTW	Lidau	2.11	356	*e*P	Pn	01 19 18.3	+0.2
	baz=356						
STYT	Tauyuan	2.11	350	*e*P	Pn	01 19 19.3	+1.1
	baz=349						
TWF1	Yuli	2.27	3	*e*P	Pn	01 19 21.9	+1.6
	baz=3.0						
CHN4	Tsaushan	2.33	347	*e*P	Pn	01 19 24.1	+3.0
	baz=346						
CHN4				*e*S	Sn	01 19 49.2	+0.2
	baz=346						
EHY	Hungye	2.42	3	*e*P	Pn	01 19 23.7	+1.3
	baz=3.0						
CHN5	Tsauling	2.55	350	P	Pn	01 19 25.3	+1.1
	baz=349						
CHN5				*e*S	Sn	01 19 57.0	+2.4
	baz=349						
SMLT	Sun Moon Lake	2.80	355	*e*P	Pn	01 19 28.6	+0.9
	baz=354						
TYC	Yuchr	2.83	354	P	Pn	01 19 29.5	+1.4
	baz=354						
TYC				*e*S	Sn	01 20 01.8	+0.3
	baz=354						
WHF	Hehuan Shan	3.05	2	P	Pn	01 19 33.2	+2.0
	baz=1.0						
WHF				*e*S	Sn	01 20 07.1	+0.1
	baz=1.0						

*ISCJB **25** 01:38:57.8±0.4, 37°.11N±0°.03×5°.57E±0°.04, h10km, Error ellipse: s-maj=5.1km s-min=3.4km az=140.2*
*CSEM **25** 01:38:58.7±0.2, 36°.87N×5°.55E, h10km, ML2.9/6, Error ellipse: s-maj=7.3km s-min=4.0km az=50.0*
*MDD **25** 01:38:58.8±0.4, 36°.86N×5°.53E, h0km, mb3.6/13, Error ellipse: s-maj=7.1km s-min=3.8km az=57.0*
*CRAAG **25** 01:39:01.9, 36°.51N×5°.65E, Ml3.2*
*LDG **25** 01:39:01.3±0.3, 36°.80N×5°.66E, h25km, Ml3.0/8, Error ellipse: s-maj=6.2km s-min=3.7km az=148.0*
*NEIC **25** 01:39:01.3, 36°.89N×5°.32E, h0km, MG3.6(MDD), After MDD.*

ISC 25 01:38:59.1±0.4, 37°.04N±0°.03×5°.60E±0°.04, h10km, n128, σ1°47/207, Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DFRA	Djebel Bou Aff	0.54	155	P	Pg	01 39 07.0	-2.6
DFRA	Djebel Bou Aff	0.54	155	Pg	Pg	01 39 07.0	-2.6
DFRA	Djebel Bou Aff	0.54	155	Pg	Pg	01 39 07.0	-2.6
DFRA	Djebel Bou Aff	0.54	155	P	Pg	01 39 07.0	-2.6
SET	Setif	0.85	191	P	Pg	01 39 11.0	-4.5
SET	Setif	0.85	191	Pg	Pg	01 39 11.0	-4.5
SET	Setif	0.85	191	Pg	Pg	01 39 11.0	-4.5
SET	Setif	0.85	191	P	Pg	01 39 11.0	-4.5
CKHR	Kef el Ahmar	1.02	184	P	Pg	01 39 13.5	-5.2
CKHR	Kef el Ahmar	1.02	184	Pg	Pg	01 39 13.5	-5.2
CKHR	Kef el Ahmar	1.02	184	Pg	Pg	01 39 13.5	-5.2
CKHR	Kef el Ahmar	1.02	184	P	Pg	01 39 13.5	-5.2
CAEH	'Ain El Ouahch	1.04	104	P	Pn	01 39 19.7	+0.1
CAEH	'Ain El Ouahch	1.04	104	Pn	Pn	01 39 19.7	+0.1
CAEH	'Ain El Ouahch	1.04	104	Pn	Pn	01 39 19.7	+0.1
CAEH	'Ain El Ouahch	1.04	104	P	Pn	01 39 19.7	+0.1
CASM	Ain Smara	1.06	137	P	Pg	01 39 17.8	-1.6
CASM	Ain Smara	1.06	137	Pn	Pg	01 39 17.8	-1.6
CASM	Ain Smara	1.06	137	Pn	Pg	01 39 17.8	-1.6
CASM	Ain Smara	1.06	137	P	Pg	01 39 17.8	-1.6
CKFL	Kef-Lekhel	1.10	125	P	Pb	01 39 19.9	-0.3
CKFL	Kef-Lekhel	1.10	125	Pn	Pb	01 39 19.9	-0.3
CKFL	Kef-Lekhel	1.10	125	Pn	Pb	01 39 19.9	-0.3
CKFL	Kef-Lekhel	1.10	125	P	Pb	01 39 19.9	-0.3
CTEI	Djebel Teioual	1.17	146	P	Pb	01 39 19.5	-1.9
CTEI	Djebel Teioual	1.17	146	Pn	Pb	01 39 19.5	-1.9
CTEI	Djebel Teioual	1.17	146	Pn	Pb	01 39 19.5	-1.9
CTEI	Djebel Teioual	1.17	146	P	Pb	01 39 19.5	-1.9
CMAH	Djebel Manchou	1.52	105	P	Pn	01 39 26.0	-0.3
CMAH	Djebel Manchou	1.52	105	Pn	Pn	01 39 26.0	-0.3
CMAH	Djebel Manchou	1.52	105	Pn	Pn	01 39 26.0	-0.3
CMAH	Djebel Manchou	1.52	105	P	Pn	01 39 26.0	-0.3
ETOS	Mallorca	3.50	322	Pn	Pn	01 39 55.1	+1.6
ETOS				Sn	Sn	01 40 35.0	+0.1
ETOS	Mallorca	3.50	322	Pn	Pn	01 39 55.1	+1.6
	0.6nm,0.2s,SNR=7.9						
ETOS				Sn	Sn	01 40 35.0	+0.1
	1.8nm,0.2s,SNR=7.9						
ETOS	Mallorca	3.50	322	Pn	Pn	01 39 55.1	+1.6
	0.6nm,0.2s,SNR=7.9						
ETOS				Sn	Sn	01 40 35.0	+0.1
	1.8nm,0.2s,SNR=7.9						
ETOS	Mallorca	3.50	322	Pn	Pn	01 39 55.1	+1.6
	0.6nm,0.2s,SNR=7.9						
ETOS				Sn	Sn	01 40 35.0	+0.1
	1.8nm,0.2s,SNR=7.9						
EIBI	Ibiza	3.90	302	Pn	Pn	01 39 59.5	+0.5
EIBI				Sn	Sn	01 40 43.2	-1.7
EIBI	Ibiza	3.90	302	Pn	Pn	01 39 59.5	+0.5
	1.1nm,0.2s,SNR=12						
EIBI				Sn	Sn	01 40 43.2	-1.7
	4.5nm,0.2s,SNR=7.9						
EIBI	Ibiza	3.90	302	Pn	Pn	01 39 59.5	+0.5
	1.1nm,0.2s,SNR=12						
EIBI				Sn	Sn	01 40 43.2	-1.7
	4.5nm,0.2s,SNR=7.9						
EIBI	Ibiza	3.90	302	Pn	Pn	01 39 59.5	+0.4
	1.1nm,0.2s,SNR=12						
EIBI				Sn	Sn	01 40 43.2	-1.7
	4.5nm,0.2s,SNR=7.9						
EBEN	Beniarda	4.90	292	Pn	Pn	01 40 12.6	-0.2
EBEN				Sn	Sn	01 41 04.9	-4.6
EBEN	Beniarda	4.90	292	Pn	Pn	01 40 12.6	-0.2
	0.2nm,0.1s,SNR=7.9						
EBEN				Sn	Sn	01 41 06.9	-2.5
	0.1nm,0.1s,SNR=7.9						
EBEN	Beniarda	4.90	292	Pn	Pn	01 40 12.6	-0.2
	0.2nm,0.1s,SNR=7.9						
EBEN				Sn	Sn	01 41 06.9	-2.5
	0.1nm,0.1s,SNR=7.9						
EBEN	Beniarda	4.90	292	Pn	Pn	01 40 12.6	-0.1
	0.2nm,0.1s,SNR=7.9						
EBEN				Sn	Sn	01 41 04.9	-4.6
	0.1nm,0.1s,SNR=7.9						
CFON	Fontmartina	5.32	334	Pn	Pn	01 40 21.6	+3.2
CFON				Sn	Sn	01 41 20.1	+0.4
CFON	Fontmartina	5.32	334	Pn	Pn	01 40 21.6	+3.1
	0.6nm,0.2s,SNR=7.9						
CFON				Sn	Sn	01 41 20.1	+0.4
	2.0nm,0.2s,SNR=7.9						
CFON	Fontmartina	5.32	334	Pn	Pn	01 40 21.6	+3.1
	0.6nm,0.2s,SNR=7.9						
CFON				Sn	Sn	01 41 20.1	+0.4
	2.0nm,0.2s,SNR=7.9						
CFON	Fontmartina	5.32	334	Pn	Pn	01 40 21.6	+3.1
	0.6nm,0.2s,SNR=7.9						
CFON				Sn	Sn	01 41 20.1	+0.3
	2.0nm,0.2s,SNR=7.9						
EMUR	La Murta	5.50	280	Pn	Pn	01 40 20.8	-0.3
EMUR	La Murta	5.50	280	Pn	Pn	01 40 20.8	-0.3
	0.4nm,0.2s,SNR=7.9						
EMUR	La Murta	5.50	280	Pn	Pn	01 40 20.8	-0.3
	0.4nm,0.2s,SNR=7.9						
EMUR	La Murta	5.50	280	Pn	Pn	01 40 20.8	-0.2
	0.4nm,0.2s,SNR=7.9						
EPOB	Poblet	5.56	322	Pn	Pn	01 40 22.9	+1.1
EPOB				Sn	Sn	01 41 23.8	-1.9
EPOB	Poblet	5.56	322	Pn	Pn	01 40 22.9	+1.1
	SNR=7.9						
EPOB				Sn	Sn	01 41 23.8	-1.9
	0.5nm,0.1s,SNR=7.9						
EPOB	Poblet	5.56	322	Pn	Pn	01 40 22.9	+1.1
	SNR=7.9						
EPOB				Sn	Sn	01 41 23.8	-1.9
	0.5nm,0.1s,SNR=7.9						
EPOB	Poblet	5.56	322	Pn	Pn	01 40 22.9	+1.1
	SNR=7.9						
EPOB				Sn	Sn	01 41 23.8	-1.9
	0.5nm,0.1s,SNR=7.9						
ERTA	Horta de San J	5.67	315	Pn	Pn	01 40 25.6	+2.3
ERTA				Sn	Sn	01 41 25.9	-2.5
ERTA	Horta de San J	5.67	315	Pn	Pn	01 40 25.7	+2.3
	0.2nm,0.1s,SNR=7.9						
ERTA				Sn	Sn	01 41 25.9	-2.5
	0.1nm,0.2s,SNR=7.9						
ERTA	Horta de San J	5.67	315	Pn	Pn	01 40 25.7	+2.3
	0.2nm,0.1s,SNR=7.9						
ERTA				Sn	Sn	01 41 25.9	-2.5
	0.1nm,0.2s,SNR=7.9						
ERTA	Horta de San J	5.67	315	Pn	Pn	01 40 25.6	+2.3
ERTA				Sn	Sn	01 41 26.0	-2.4
EMOS	Mosqueruela	5.79	307	Pn	Pn	01 40 26.5	+1.4
EMOS				Sn	Sn	01 41 29.1	-2.4
EMOS	Mosqueruela	5.79	307	Pn	Pn	01 40 26.5	+1.4
	0.3nm,0.1s,SNR=7.9						
EMOS				Sn	Sn	01 41 29.1	-2.4
	0.2nm,0.1s,SNR=7.9						
EMOS	Mosqueruela	5.79	307	Pn	Pn	01 40 26.5	+1.4
	0.3nm,0.1s,SNR=7.9						
EMOS				Sn	Sn	01 41 29.1	-2.4
	0.2nm,0.1s,SNR=7.9						
EMOS	Mosqueruela	5.79	307	Pn	Pn	01 40 26.5	+1.5
	0.3nm,0.1s,SNR=7.9						
EMOS				Sn	Sn	01 41 29.1	-2.4
	0.2nm,0.1s,SNR=7.9						
EMIR	Miracle	5.80	328	Pn	Pn	01 40 28.1	+3.0
EMIR				Sn	Sn	01 41 31.9	+0.3
EMIR	Miracle	5.80	328	Pn	Pn	01 40 28.1	+3.0
	0.6nm,0.1s,SNR=7.9						
EMIR				Sn	Sn	01 41 31.9	+0.3
	0.6nm,0.1s,SNR=7.9						
EMIR	Miracle	5.80	328	Pn	Pn	01 40 28.1	+3.0
	0.6nm,0.1s,SNR=7.9						
EMIR				Sn	Sn	01 41 31.9	+0.3
	0.6nm,0.1s,SNR=7.9						
EMIR	Miracle	5.80	328	Pn	Pn	01 40 28.1	+3.0
	0.6nm,0.1s,SNR=7.9						
EMIR				Sn	Sn	01 41 31.9	+0.2
	0.6nm,0.1s,SNR=7.9						
ETOB	Tobarra	5.88	288	Pn	Pn	01 40 26.7	+0.5
ETOB				Sn	Sn	01 41 29.7	-4.0
ETOB	Tobarra	5.88	288	Pn	Pn	01 40 26.7	+0.5
	0.8nm,0.1s,SNR=11						
ETOB				Sn	Sn	01 41 29.7	-4.0
	0.1nm,0.2s,SNR=5.0						
ETOB	Tobarra	5.88	288	Pn	Pn	01 40 26.7	+0.5
	0.8nm,0.1s,SNR=11						
ETOB				Sn	Sn	01 41 29.7	-4.0
	0.1nm,0.2s,SNR=5.0						
ETOB	Tobarra	5.88	288	Pn	Pn	01 40 26.7	+0.5
	0.8nm,0.1s,SNR=11						
PGF	Pioggiola	6.09	24	*e*Pn	Pn	01 40 30.3	+1.1
PGF				*e*Sn	Sn	01 41 38.2	-0.7
	1.9nm,0.3s						
PGF	Pioggiola	6.09	24	Pn	Pn	01 40 30.3	+1.1
PGF				Sn	Sn	01 41 38.2	-0.7
	0.9nm,0.3s						
PGF	Pioggiola	6.09	24	Pn	Pn	01 40 30.3	+1.1
PGF				Sn	Sn	01 41 38.2	-0.7
	0.9nm,0.3s						
PGF	Pioggiola	6.09	24	*e*Pn	Pn	01 40 30.3	+1.1
PGF				*e*Sn	Sn	01 41 38.2	-0.7
	0.9nm,0.3s						
CLLI	Llivia	6.11	334	Pn	Pn	01 40 32.1	+2.7
CLLI				Sn	Sn	01 41 41.3	+2.0
CLLI	Llivia	6.11	334	Pn	Pn	01 40 32.1	+2.7
	0.2nm,0.1s,SNR=7.9						
CLLI				Sn	Sn	01 41 41.3	+2.0
	0.2nm,0.1s,SNR=7.9						
CLLI	Llivia	6.11	334	Pn	Pn	01 40 32.1	+2.7
	0.2nm,0.1s,SNR=7.9						
CLLI				Sn	Sn	01 41 41.3	+2.0
	0.2nm,0.1s,SNR=7.9						
CLLI	Llivia	6.11	334	Pn	Pn	01 40 32.1	+2.7
	0.2nm,0.1s,SNR=7.9						
CLLI				Sn	Sn	01 41 41.3	+2.0
	0.2nm,0.1s,SNR=7.9						
LMR	La Mourre	6.33	6	*e*Pn	Pn	01 40 33.9	+1.5
LMR				*e*Sn	Sn	01 41 43.6	-1.1
	1.5nm,0.3s						
LMR	La Mourre	6.33	6	Pn	Pn	01 40 33.9	+1.5
LMR				Sn	Sn	01 41 43.6	-1.1
	0.8nm,0.3s						
LMR	La Mourre	6.33	6	Pn	Pn	01 40 33.9	+1.5
LMR				Sn	Sn	01 41 43.6	-1.1
	0.8nm,0.3s						
LMR	La Mourre	6.33	6	*e*Pn	Pn	01 40 33.9	+1.5
LMR				*e*Sn	Sn	01 41 43.6	-1.1
	0.8nm,0.3s						
CSOR	Sort	6.34	329	Pn	Pn	01 40 35.4	+2.8
CSOR				Sn	Sn	01 41 44.5	-0.6
CSOR	Sort	6.34	329	Pn	Pn	01 40 35.4	+2.8
	0.3nm,0.1s,SNR=7.9						
CSOR				Sn	Sn	01 41 44.5	-0.6
	0.1nm,0.1s,SNR=7.9						
CSOR	Sort	6.34	329	Pn	Pn	01 40 35.4	+2.8
	0.3nm,0.1s,SNR=7.9						
CSOR				Sn	Sn	01 41 44.5	-0.6
	0.1nm,0.1s,SNR=7.9						
CSOR	Sort	6.34	329	Pn	Pn	01 40 35.4	+2.8
	0.3nm,0.1s,SNR=7.9						
CSOR				Sn	Sn	01 41 44.5	-0.6
	0.1nm,0.1s,SNR=7.9						
FRF	La Foret Royal	6.56	7	*e*Pn	Pn	01 40 36.8	+1.2
FRF				*e*Sn	Sn	01 41 49.5	-1.0
	1.1nm,0.2s						
FRF	La Foret Royal	6.56	7	Pn	Pn	01 40 36.8	+1.2
FRF				Sn	Sn	01 41 49.5	-1.0
	0.6nm,0.2s						
FRF	La Foret Royal	6.56	7	Pn	Pn	01 40 36.8	+1.2
FRF				Sn	Sn	01 41 49.5	-1.0
	0.6nm,0.2s						
FRF	La Foret Royal	6.56	7	*e*Pn	Pn	01 40 36.8	+1.2
FRF				*e*Sn	Sn	01 41 49.5	-1.0
	0.6nm,0.2s						
ESAC	San Caprasio	6.63	317	Pn	Pn	01 40 39.1	+2.6
ESAC				Sn	Sn	01 41 50.1	-2.0
ESAC	San Caprasio	6.63	317	Pn	Pn	01 40 39.1	+2.6
	1.6nm,0.2s,SNR=7.9						
ESAC				Sn	Sn	01 41 50.1	-2.0
	2.3nm,0.2s,SNR=7.9						
ESAC	San Caprasio	6.63	317	Pn	Pn	01 40 39.1	+2.6
	1.6nm,0.2s,SNR=7.9						
ESAC				Sn	Sn	01 41 50.1	-2.0
	2.3nm,0.2s,SNR=7.9						
ESAC	San Caprasio	6.63	317	Pn	Pn	01 40 39.1	+2.6
	1.6nm,0.2s,SNR=7.9						
ESAC				Sn	Sn	01 41 50.1	-2.0
	2.3nm,0.2s,SNR=7.9						
MTLF	Montolieu	6.81	339	*e*Pn	Pn	01 40 40.0	+1.1
MTLF				*e*Sn	Sn	01 41 54.8	-1.7
	1.4nm,0.4s						
MTLF	Montolieu	6.81	339	Pn	Pn	01 40 40.0	+1.1
MTLF				Sn	Sn	01 41 54.8	-1.7
	0.7nm,0.4s						
MTLF	Montolieu	6.81	339	Pn	Pn	01 40 40.0	+1.1
MTLF				Sn	Sn	01 41 54.8	-1.7
	0.7nm,0.4s						
MTLF	Montolieu	6.81	339	*e*Pn	Pn	01 40 40.0	+1.1
MTLF				*e*Sn	Sn	01 41 54.8	-1.7
	0.7nm,0.4s						
SMRF	Simiane la Rot	6.93	360	*e*Pn	Pn	01 40 42.1	+1.4
SMRF				*e*Sn	Sn	01 41 58.0	-1.5
	1.4nm,0.5s						
SMRF	Simiane la Rot	6.93	360	Pn	Pn	01 40 42.1	+1.4
SMRF				Sn	Sn	01 41 58.0	-1.5
	1.4nm,0.5s						
SMRF	Simiane la Rot	6.93	360	Pn	Pn	01 40 42.1	+1.4
SMRF				Sn	Sn	01 41 58.0	-1.5
	1.4nm,0.5s						
SMRF	Simiane la Rot	6.93	360	*e*Pn	Pn	01 40 42.1	+1.4
SMRF				*e*Sn	Sn	01 41 58.0	-1.5
	0.7nm,0.5s						
EQES	Quesada	6.94	279	Pn	Pn	01 40 41.3	+0.5
EQES	Quesada	6.94	279	Pn	Pn	01 40 41.3	+0.5
	0.3nm,0.1s,SNR=7.9						
EQES	Quesada	6.94	279	Pn	Pn	01 40 41.3	+0.5
	0.3nm,0.1s,SNR=7.9						
EQES	Quesada	6.94	279	Pn	Pn	01 40 41.3	+0.5
	0.3nm,0.1s,SNR=7.9						
SBF	Sospel	6.96	11	*e*Pn	Pn	01 40 42.2	+1.1
SBF				*e*Sn	Sn	01 41 58.9	-1.3
	2.3nm,0.3s						
SBF	Sospel	6.96	11	Pn	Pn	01 40 42.2	+1.1
SBF				Sn	Sn	01 41 58.9	-1.3
	1.2nm,0.3s						
SBF	Sospel	6.96	11	Pn	Pn	01 40 42.2	+1.1
SBF				Sn	Sn	01 41 58.9	-1.3
	1.2nm,0.3s						
SBF	Sospel	6.96	11	*e*Pn	Pn	01 40 42.2	+1.1
SBF				*e*Sn	Sn	01 41 58.9	-1.3
	1.1nm,0.3s						
LASF	Ste Croix	7.16	350	*e*Pn	Pn	01 40 44.8	+1.1
LASF				*e*Sn	Sn	01 42 03.2	-1.8
	1.1nm,0.3s						
LASF	Ste Croix	7.16	350	Pn	Pn	01 40 44.8	+1.1
LASF				Sn	Sn	01 42 03.2	-1.8
	0.6nm,0.3s						
LASF	Ste Croix	7.16	350	Pn	Pn	01 40 44.8	+1.1
LASF				Sn	Sn	01 42 03.2	-1.8
	0.6nm,0.3s						
LASF	Ste Croix	7.16	350	*e*Pn	Pn	01 40 44.8	+1.1
LASF				*e*Sn	Sn	01 42 03.2	-1.8
	0.6nm,0.3s						
EPF	Esparros	7.22	328	*e*Pn	Pn	01 40 45.5	+0.9
EPF				*e*Sn	Sn	01 42 04.4	-2.2
	2.6nm,0.3s						
EPF	Esparros	7.22	328	Pn	Pn	01 40 45.5	+0.9
EPF				Sn	Sn	01 42 04.4	-2.2
	1.3nm,0.3s						
EPF	Esparros	7.22	328	Pn	Pn	01 40 45.5	+0.9
EPF				Sn	Sn	01 42 04.4	-2.2
	1.3nm,0.3s						
EPF	Esparros	7.22	328	*e*Pn	Pn	01 40 45.5	+0.9
EPF				*e*Sn	Sn	01 42 04.4	-2.2
	1.3nm,0.3s						
ETSF	Etsaut	7.52	323	*e*Pn	Pn	01 40 49.7	+0.9
ETSF	Etsaut	7.52	323	Pn	Pn	01 40 49.7	+0.9
ETSF	Etsaut	7.52	323	Pn	Pn	01 40 49.7	+0.9
ETSF	Etsaut	7.52	323	*e*Pn	Pn	01 40 49.7	+0.9
SJPF	Ste Jean	8.01	321	*e*Pn	Pn	01 40 55.5	+0.1
SJPF	Ste Jean	8.01	321	Pn	Pn	01 40 55.5	+0.1
SJPF	Ste Jean	8.01	321	Pn	Pn	01 40 55.5	+0.1
SJPF	Ste Jean	8.01	321	*e*Pn	Pn	01 40 55.5	+0.1

*ISCJB **25** 01:52:40.3±0.7, 36°.95N±0°.04×29°.14E±0°.03, h10km, Error ellipse: s-maj=6.0km s-min=4.0km az=2.2*
*CSEM **25** 01:52:40.4±0.3, 36°.99N×29°.11E, h2km, MD2.7, Error ellipse: s-maj=6.1km s-min=4.4km az=15.0*
*DDA **25** 01:52:40.6, 36°.99N×29°.13E, h7km±5km, Md2.8*
*ISK **25** 01:52:40.1, 37°.06N×29°.13E, h13km, MD2.7*

ISC 25 01:52:40.8±0.7, 36°.97N±0°.04×29°.13E±0°.03, h6km±10km, n19, σ0°75/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.35	57	*e*PG	Pg	01 52 46.6	-1.1
GLHS				*e*SG	Sg	01 52 52.0	-0.3
GLHS	Glhisar (BURDU	0.35	57	*e*Pg	Pg	01 52 46.6	-1.1
GLHS				*e*Sg	Sg	01 52 52.0	-0.3
GOLH	Golhisar	0.44	52	*i* P	Pg	01 52 48.8	-0.6
GOLH				*i* S	Sg	01 52 55.8	+0.7
GOLH	Golhisar	0.44	52	*i* P	Pg	01 52 48.8	-0.5
GOLH				*i* S	Sg	01 52 55.8	+0.7
ELL	Elmali	0.66	109	*e*PG	Pg	01 52 54.1	+0.5
ELL	Elmali	0.66	109	*e*Pg	Pg	01 52 54.1	+0.5
YER	Yerkesik	0.70	284	*e*PG	Pg	01 52 53.7	-0.5
YER				*e*SG	Sg	01 53 03.6	+0.4
YER	Yerkesik	0.70	284	*e*Pg	Pg	01 52 53.7	-0.5
YER				*e*Sg	Sg	01 53 03.7	+0.4
DNZL	Cakiroluk	0.73	355	*i* P	Pg	01 52 53.6	-1.2
DNZL				*i* S	Sg	01 53 05.0	+0.8
DNZL	Cakiroluk	0.73	355	*i* P	Pg	01 52 53.6	-1.2
DNZL				*i* S	Sg	01 53 05.0	+0.7
AKAS	Kas	0.82	152	*i* P	Pg	01 52 57.4	+0.8
AKAS				*i* S	Sg	01 53 12.4	+5.1
AKAS	Kas	0.82	152	*i* P	Pg	01 52 57.4	+0.8
AKAS				*i* S	Sg	01 53 12.4	+5.1
KORT	Korkueli	0.98	88	*i* P	Pg	01 52 60.0	+0.3
KORT	Korkueli	0.98	88	*i* P	Pg	01 53 00.0	+0.4
MLSB	Milas	1.13	287	*e*PN	Pg	01 53 02.1	-0.4
MLSB	Milas	1.13	287	*e*Pn	Pg	01 53 02.1	-0.4
AYDN	Tasoluk	1.21	305	*i* P	Pg	01 53 04.2	+0.1
AYDN				*i* S	Sg	01 53 20.3	+0.5
KHAL	Karahalli	1.43	12	*i* P	Pn	01 53 06.0	-1.3
KHAL				*i* S	Sb	01 53 27.6	+1.2
KHAL	Karahalli	1.43	12	*i* P	Pn	01 53 06.0	-1.3
KHAL				*i* S	Sb	01 53 27.6	+1.2

CASC 25 02:05:13.5±2.8, 13°.89N×91°.41W, h22km±31km, MD3.5, 1C-1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	Jato	0.48	332⇓	*e*P	Pb	02 05 23.4	0.0
FUG	Fuego 3	0.78	44⇑	*e*P	Pb	02 05 28.7	+0.3
FG6		0.84	37	*e*P	Pb	02 05 29.6	+0.2
TP2	Tecpan 2	0.97	23	*e*P	Pb	02 05 30.9	-0.6
NBG	Las Nubes	1.24	56	*e*P	Pn	02 05 37.1	+1.5
RBDL	Robledal	1.68	82	*e*P	Pn	02 05 42.0	+0.4
RBDL				*e*S	Sn	02 06 03.4	+0.8
RTR	El Retiro	1.71	89	*e*P	Pn	02 05 42.0	0.0
RTR				*e*S	Sn	02 06 04.7	+1.5
SBLS	San Blas	1.73	91	*e*P	Pn	02 05 42.5	+0.2
SBLS				*e*S	Sn	02 06 04.9	+1.1
SNJE	San Jose	1.75	90	*e*P	Pn	02 05 43.0	+0.4
SNJE				*e*S	Sn	02 06 05.1	+0.9
MRL	Marmol	2.03	55	*e*P	Pn	02 05 50.0	+3.6

MAN 25 02:22:04, 8°.94N×126°.09E, h32km, mb4.4, ML3.3, MS3.1, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	Butuan	0.46	274	*e*P	Pb	02 22 16.0	+2.1
BUTP				*e*S	Sb	02 22 22.9	+2.2
SCPH	Surigao	1.02	325	*e*P	Pn	02 22 22.9	+0.7
SCPH				*e*S	Sn	02 22 47.1	+12
CGP	Cagayan de Oro	1.46	251⇓	*i*P	Pn	02 22 30.1	+2.0
CGP				*i* S	Sn	02 22 59.0	+13
BUKP	Musuan	1.46	224	*e*P	Pn	02 22 27.8	-0.4
BUKP				*e*S	Sn	02 22 41.7	-4.5

*DDA **25** 02:24:44.5, 35°.27N×28°.79E, h18km±3km, Md3.6*
*IDC **25** 02:24:44.7±1.4, 35°.42N×28°.84E, h0km, mb3.9/8, mb1 4.0/13, mb1mx3.8/26, mbtmp4.0/13, ML4.3/5, Error ellipse: s-maj=28.1km s-min=17.9km az=29.0*
*ISCJB **25** 02:24:48.8±0.2, 35°.36N±0°.02×28°.91E±0°.03, h59km±4km, mb3.8/14, Error ellipse: s-maj=3.0km s-min=2.6km az=26.9*
*ISK **25** 02:24:49.0, 35°.46N×28°.82E, h26km, MD3.6*
*CSEM **25** 02:24:50.3±0.1, 35°.40N×28°.90E, h50km±2km, mb3.9/4,*

Mw3.2, Error ellipse: s-maj=2.5km s-min=2.1km az=36.0
NEIC ***25*** *02:24:50.9±0.4, 35°.44N×28°.89E, h56km±5km, mb3.9/10, MD3.8(ATH), MD3.6(ISK), Error ellipse: s-maj=7.6km s-min=4.2km az=181.0*
ATH ***25*** *02:24:50.5, 35°.63N×28°.85E, h55km±5km, MD3.8/9*
NIC ***25*** *02:24:54.0±0.4, 35°.44N×29°.28E, h55km, mb4.2, ML3.8, MW3.2*
THE ***25*** *02:24:53.8, 35°.63N×28°.75E, h47km±3km, ML4.4/1, Error ellipse: s-maj=3.7km s-min=0.5km az=331.0*
HLW ***25*** *02:24:54.1, 35°.07N×28°.98E, h33km±54km, Md3.5, Ml3.7*
ISC 25 02:24:50.3±0.2, 35°.40N±0°.02×28°.90E±0°.02, h49km±4km, n266, σ1§00/309, mb3.8/14, 2C, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSL	Kastellorizon	0.94	36	eP	Pn	02 25 06.4	-0.8
KSL	Kastellorizon	0.94	36	eP	Pn	02 25 06.4	-0.8
KSL	Kastellorizon	0.94	36	eP	Pn	02 25 07.0	-0.2
AKAS	Kas	1.02	34	iP	Pn	02 25 08.1	-0.1
AKAS				iS	Sn	02 25 22.9	+1.5
ARG	Arkhangelos	1.03	323	eP	Pn	02 25 07.2	-1.2
ARG	Arkhangelos	1.03	323	eP	Pn	02 25 07.2	-1.2
ARG	Arkhangelos	1.03	323	eP	Pn	02 25 08.0	-0.4
ARG	Arkhangelos	1.03	323	P	Pn	02 25 07.8	-0.6
ARG				S	Sn	02 25 18.7	-3.1
ARG	Arkhangelos	1.03	323	P	Pn	02 25 07.8	-0.6
ARG				S	Sn	02 25 18.7	-3.1
KARP	Karpathos	1.42	277	eP	Pn	02 25 14.6	+0.9
KARP				eS	Sn	02 25 31.5	+0.2
KARP	Karpathos	1.42	277	eP	Pn	02 25 14.6	+0.9
KARP				eS	Sn	02 25 32.0	+0.7
KARP	Karpathos	1.42	277	eP	Pn	02 25 14.5	+0.8
KARP	Karpathos	1.42	277	eP	Pn	02 25 14.6	+0.9
KARP				eS	Sn	02 25 31.5	+0.2
ELL	Elmali	1.58	31	PN	Pn	02 25 16.1	+0.2
ELL	Elmali	1.58	31	Pn	Pn	02 25 16.5	+0.6
ELL	Elmali	1.58	31	iPn	Pn	02 25 16.1	+0.2
DAT	Datca	1.71	322	ePN	Pn	02 25 17.3	-0.3
DAT				eSN	Sn	02 25 36.4	-1.8
DAT	Datca	1.71	322	ePn	Pn	02 25 17.3	-0.3
DAT				eSn	Sn	02 25 36.4	-1.9
YER	Yerkesik	1.81	344	ePN	Pn	02 25 18.7	-0.3
YER				eSN	Sn	02 25 39.7	-1.0
YER	Yerkesik	1.81	344	Pn	Pn	02 25 19.1	+0.2
YER	Yerkesik	1.81	344	ePn	Pn	02 25 18.7	-0.3
YER				eSn	Sn	02 25 39.7	-1.0
GLHS	Glhisar (BURDU	1.82	15	ePN	Pn	02 25 19.0	-0.2
GLHS	Glhisar (BURDU	1.82	15	Pn	Pn	02 25 19.4	+0.2
GLHS	Glhisar (BURDU	1.82	15	ePn	Pn	02 25 19.0	-0.2
NIS1	Nisyros Isl.	1.84	311	P	Pn	02 25 19.2	-0.3
NIS1				S	Sn	02 25 38.5	-3.1
NIS1	Nisyros Isl.	1.84	311	P	Pn	02 25 19.2	-0.3
NIS1				S	Sn	02 25 38.5	-3.1
GOLH	Golhisar	1.92	16	iP	Pn	02 25 21.6	+1.1
GOLH				iS	Sn	02 25 44.5	+1.1
GOLH	Golhisar	1.92	16	iP	Pn	02 25 21.6	+1.1
GOLH				iS	Sn	02 25 44.5	+1.1
KORT	Korkueli	1.99	36	iP	Pn	02 25 22.5	+1.0
KORT	Korkueli	1.99	36	iP	Pn	02 25 22.5	+1.0
BDRM	Kayabasi	2.04	325	iP	Pn	02 25 21.6	-0.6
BDRM	Kayabasi	2.04	325	iP	Pn	02 25 21.6	-0.6
ANTB	Antalya	2.07	43	ePN	Pn	02 25 23.1	+0.6
ANTB	Antalya	2.07	43	ePn	Pn	02 25 23.2	+0.6
BODT	Bodrum	2.10	323	ePN	Pn	02 25 22.1	-0.9
BODT	Bodrum	2.10	323	Pn	Pn	02 25 22.6	-0.4
BODT	Bodrum	2.10	323	Pn	Pn	02 25 22.6	-0.4
MLSB	Milas	2.10	335	ePN	Pn	02 25 22.5	-0.6
MLSB	Milas	2.10	335	ePn	Pn	02 25 22.5	-0.5
ZKR	Zakros	2.21	264	eP	Pn	02 25 26.2	+1.7
ZKR				eS	Sn	02 25 51.5	+0.9
ZKR	Zakros	2.21	264	eP	Pn	02 25 26.2	+1.7
ZKR				eS	Sn	02 25 51.9	+1.3
ZKR	Zakros	2.21	264	eP	Pn	02 25 26.0	+1.5
ZKR	Zakros	2.21	264	P	Pn	02 25 25.9	+1.4
ZKR				S	Sn	02 25 51.7	+1.1
ZKR	Zakros	2.21	264	P	Pn	02 25 25.9	+1.4
ZKR				S	Sn	02 25 51.7	+1.1
DNZL	Cakiroluk	2.29	3	iP	Pn	02 25 25.9	+0.3
DNZL	Cakiroluk	2.29	3	iP	Pn	02 25 25.9	+0.2
DENT	Denizli	2.36	3	ePN	Pn	02 25 26.4	-0.1
DENT	Denizli	2.36	3	ePn	Pn	02 25 26.4	-0.1
AYDN	Tasoluk	2.41	340	iP	Pn	02 25 27.9	+0.7
AYDN	Tasoluk	2.41	340	iP	Pn	02 25 27.9	+0.7
BCK	Bucak	2.47	33	ePN	Pn	02 25 28.9	+0.8
BCK	Bucak	2.47	33	Pn	Pn	02 25 29.1	+1.0
BCK	Bucak	2.47	33	ePn	Pn	02 25 28.9	+0.8
NPS	Neapolis	2.69	268	eP	Pn	02 25 32.5	+1.5
NPS	Neapolis	2.69	268	eP	Pn	02 25 32.5	+1.5
NPS	Neapolis	2.69	268	eP	Pn	02 25 32.5	+1.5
NPS	Neapolis	2.69	268	eP	Pn	02 25 32.5	+1.5
ISP	Isparta	2.75	28	ePN	Pn	02 25 32.1	+0.2
ISP	Isparta	2.75	28	ePn	Pn	02 25 32.7	+0.8
ISP	Isparta	2.75	28	P	Pn	02 25 32.8	+0.8
ISP				S	Sn	02 26 03.4	-0.6
LAST	Lasithi	2.81	266	eP	Pn	02 25 34.5	+1.8
LAST				eS	Sn	02 26 05.8	+0.6
LAST	Lasithi	2.81	266	eP	Pn	02 25 34.5	+1.8
LAST				eS	Sn	02 26 06.8	+1.6
LAST	Lasithi	2.81	266	eP	Pn	02 25 34.5	+1.8
LAST	Lasithi	2.81	266	P	Pn	02 25 34.2	+1.5
LAST				S	Sn	02 26 05.6	+0.3
LAST	Lasithi	2.81	266	P	Pn	02 25 34.2	+1.5
LAST				S	Sn	02 26 05.6	+0.3
SMG	Samos	2.84	325	eP	Pn	02 25 32.4	-0.8
SMG	Samos	2.84	325	eP	Pn	02 25 32.4	-0.8
SMG	Samos	2.84	325	eP	Pn	02 25 33.0	-0.2
SMG	Samos	2.84	325	eP	Pn	02 25 32.4	-0.8
PPCY	Paphos	2.87	99	P	Pn	02 25 33.7	+0.1
PPCY	Paphos	2.87	99	P	Pn	02 25 33.7	+0.1
GAZI	Gazipasa	2.90	72	iP	Pn	02 25 33.5	-0.5
THR1	Thera Island 120nm,0.4s	2.96	290	P	Pn	02 25 35.1	+0.4
THR1				S	Sn	02 26 06.8	-2.1
THR1	Thera Island 120nm,0.4s	2.96	290	P	Pn	02 25 35.1	+0.4
THR1				S	Sn	02 26 06.8	-2.1
KHL	Karahalli	2.97	10	ePN	Pn	02 25 34.8	-0.1
KHL	Karahalli	2.97	10	ePn	Pn	02 25 34.8	-0.1
THR2	Thira island,	3.00	292	P	Pn	02 25 35.5	+0.2
THR2	Thira island,	3.00	292	P	Pn	02 25 35.5	+0.2
KHAL	Karahalli	3.01	9	iP	Pn	02 25 34.9	-0.6
KHAL	Karahalli	3.01	9	iP	Pn	02 25 34.8	-0.6
THR3	Thira Island,	3.01	291	P	Pn	02 25 35.9	+0.4
THR3	Thira Island,	3.01	291	P	Pn	02 25 35.9	+0.4
ALFC	Alevga 10nm,0.3s	3.04	93	P	Pn	02 25 35.9	0.0
ALFC				S	Sn	02 26 08.2	-2.8
ALFC	Alevga 10nm,0.3s	3.04	93	P	Pn	02 25 35.9	0.0
ALFC				S	Sn	02 26 08.2	-2.8
KULA	Kula-Manisa	3.12	357	ePN	Pn	02 25 36.8	-0.2
KULA	Kula-Manisa	3.12	357	ePn	Pn	02 25 36.8	-0.2
APE	Apeiranthos	3.19	303	ePN	Pn	02 25 37.5	-0.5
APE	Apeiranthos	3.19	303	eP	Pn	02 25 37.9	-0.1
APE				eS	Sn	02 26 12.4	-2.4
APE	Apeiranthos	3.19	303	eP	Pn	02 25 37.9	-0.1
APE				eS	Sn	02 26 12.4	-2.4
APE	Apeiranthos	3.19	303	eP	Pn	02 25 37.5	-0.5
APE	Apeiranthos	3.19	303	eP	Pn	02 25 37.9	-0.1
APE				eS	Sn	02 26 12.4	-2.4
IZM	Izmir	3.27	337	ePN	Pn	02 25 39.1	0.0
IZM	Izmir	3.27	337	Pn	Pn	02 25 39.6	+0.6
IZM	Izmir	3.27	337	ePn	Pn	02 25 39.1	+0.1
IDI	Anoyia	3.28	269	eP	Pn	02 25 40.6	+1.5
IDI				eS	Sn	02 26 16.8	0.0
IDI	Anoyia	3.28	269	eP	Pn	02 25 40.6	+1.5
IDI				eS	Sn	02 26 17.8	+1.0
IDI	Anoyia	3.28	269	eP	Pn	02 25 40.6	+1.5
IDI				eS	Sn	02 26 16.8	0.0
HDMB	Hadim	3.30	61	ePN	Pn	02 25 41.1	+1.6
HDMB	Hadim	3.30	61	ePn	Pn	02 25 41.1	+1.7
BLCB	Balcova	3.33	334	ePN	Pn	02 25 39.9	0.0
BLCB	Balcova	3.33	334	ePn	Pn	02 25 39.9	0.0
SIVA	Sivas	3.37	265	eP	Pn	02 25 42.5	+2.1
SIVA	Sivas	3.37	265	eP	Pn	02 25 42.5	+2.1
SIVA	Sivas	3.37	265	eP	Pn	02 25 42.0	+1.6
SIVA	Sivas	3.37	265	P	Pn	02 25 42.0	+1.6
SIVA	Sivas	3.37	265	P	Pn	02 25 42.0	+1.6
SHUT	Suhut-Afyon	3.42	22	ePN	Pn	02 25 41.0	-0.1
SHUT	Suhut-Afyon	3.42	22	ePn	Pn	02 25 41.0	-0.1
ERMK	Ermenek	3.49	68	iP	Pn	02 25 44.2	+2.2
ERMK	Ermenek	3.49	68	iP	Pn	02 25 44.2	+2.2
URLA	Izmir	3.49	329	iP	Pn	02 25 41.0	-1.0
URLA	Izmir	3.49	329	iP	Pn	02 25 41.0	-1.0
MAMC	Mammari	3.54	92	P	Pn	02 25 43.3	+0.5
DEMI	Demirci	3.64	358	iP	Pn	02 25 43.7	-0.5
DEMI	Demirci	3.64	358	iP	Pn	02 25 43.7	-0.5
CSS	Prodhromos 2.9nm,0.3s	3.66	95	P	Pn	02 25 44.1	-0.3
CSS				S	Sn	02 26 24.6	-1.6
CSS	Prodhromos 2.9nm,0.3s	3.66	95	P	Pn	02 25 44.1	-0.3
CSS				S	Sn	02 26 24.6	-1.6
BOLV	Bolvadin	3.70	26	iP	Pn	02 25 45.2	+0.3
BOLV	Bolvadin	3.70	26	iP	Pn	02 25 45.2	+0.2
GDZ	Gediz	3.72	7	iP	Pn	02 25 44.4	-0.8
GDZ	Gediz	3.72	7	iP	Pn	02 25 44.4	-0.8
KONT	Konya--Tatoy	3.77	47	ePN	Pn	02 25 47.2	+1.2
KONT	Konya--Tatoy	3.77	47	ePn	Pn	02 25 47.2	+1.3
VAM	Vamos	3.84	272	eP	Pn	02 25 48.8	+2.0
VAM	Vamos	3.84	272	eP	Pn	02 25 48.8	+2.0
VAM	Vamos	3.84	272	eP	Pn	02 25 49.0	+2.2
VAM	Vamos	3.84	272	eP	Pn	02 25 48.8	+2.0
LADK	Ladik-KONYA	3.95	44	ePN	Pn	02 25 49.7	+1.3
LADK	Ladik-KONYA	3.95	44	Pn	Pn	02 25 49.9	+1.6
LADK	Ladik-KONYA	3.95	44	ePn	Pn	02 25 49.7	+1.4
KARN	Karanos	4.07	272	eP	Pn	02 25 51.4	+1.4
KARN	Karanos	4.07	272	eP	Pn	02 25 51.5	+1.5
KARN	Karanos	4.07	272	eP	Pn	02 25 51.4	+1.4
KIZT	Kizilcal	4.22	34	ePN	Pn	02 25 52.6	+0.6
KIZT	Kizilcal	4.22	34	ePn	Pn	02 25 52.6	+0.6
PHNC	Paralimni 3.2nm,0.5s	4.22	94	P	Pn	02 25 54.1	+2.0
PHNC				S	Sn	02 26 41.7	+1.5
PHNC	Paralimni 3.2nm,0.5s	4.22	94	P	Pn	02 25 54.1	+2.0
PHNC				S	Sn	02 26 41.7	+1.5
ESKT	Eskisehir	4.40	20	Pn	Pn	02 25 55.2	+0.7
ESKT	Eskisehir	4.40	20	iP	Pn	02 25 54.6	+0.1
ESKT	Eskisehir	4.40	20	Pn	Pn	02 25 55.2	+0.7
SEYT	Eskypehyr	4.40	20	iP	Pn	02 25 54.6	+0.1
BALY	Balya	4.46	347	iP	Pn	02 25 54.6	-0.7
BALY	Balya	4.46	347	iP	Pn	02 25 54.6	-0.7
HMAT	Matruh baz=203	4.55	200	P	Pn	02 25 57.4	+0.8
HMAT				S	Sn	02 26 42.6	-5.5
HMAT	Matruh baz=203	4.55	200	P	Pn	02 25 57.4	+0.8
KYTH	Kithira	4.84	282	eP	Pn	02 26 01.7	+1.1
KYTH	Kithira	4.84	282	eP	Pn	02 26 01.7	+1.1
KYTH	Kithira	4.84	282	eP	Pn	02 26 01.7	+1.1
SLUM		4.96	219	P	Pn	02 26 02.5	+0.2
SLUM		4.96	219	P	Pn	02 26 02.5	+0.2
VLI	Veliai	5.00	287	eP	Pn	02 26 03.5	+0.7
VLI	Veliai	5.00	287	eP	Pn	02 26 03.5	+0.7
VLI	Veliai	5.00	287	eP	Pn	02 26 03.5	+0.7
GULE	Gulek	5.11	67	iP	Pn	02 26 04.5	+0.2
GULE	Gulek	5.11	67	iP	Pn	02 26 04.5	+0.3
LTBQ	Tobruq SNR=106	5.32	233	iP	Pn	02 26 08.2	+1.1
AANS		5.51	157	P	Pn	02 26 08.6	-1.2
YURE	YUREGIR	5.64	73	iP	Pn	02 26 10.9	-0.6
YURE	YUREGIR	5.64	73	iP	Pn	02 26 10.9	-0.6
BR131	Keskin Array S 4.6nm,0.3s	5.73	40	ePn	Pn	02 26 13.4	+0.6
BR131				eSn	Sn	02 27 16.4	-0.9
BR131	Keskin Array S 4.6nm,0.3s	5.73	40	ePn	Pn	02 26 13.4	+0.6
BRTR	Keskin Array B 2.2nm,0.3s,baz=355,slow=11,SNR=46	5.73	40	Pn	Pn	02 26 12.7	-0.1
BRTR				Sn	Sn	02 27 17.1	-0.1
BRTR	Keskin Array B 0.6nm,0.3s,baz=210,slow=25,SNR=5.5	5.73	40	Pn	Pn	02 26 12.7	-0.1
SGKT	Sivrigoynuk	5.74	25	iP	Pn	02 26 12.8	-0.1
SGKT	Sivrigoynuk	5.74	25	iP	Pn	02 26 12.8	-0.1
HMYD	Mayadedin baz=163	5.81	163	P	Pn	02 26 14.0	+0.1
SQR		5.83	160	P	Pn	02 26 14.1	-0.1
MMAI	Mount Meron Ar 8.8nm,0.3s,baz=303,slow=11,SNR=52	5.89	112	Pn	Pn	02 26 13.8	-1.2
MMAI				Sn	Sn	02 27 17.4	-3.8
YAYL	Yayladag	5.90	82	iP	Pn	02 26 14.5	-0.6
YAYL	Yayladag	5.90	82	iP	Pn	02 26 14.5	-0.6
HWQ	Hawqa	5.90	99	ePn	Pn	02 26 14.8	-0.4
AMAG	Maghara baz=139	5.96	141	P	Pn	02 26 15.1	-1.0
AMAG	Maghara	5.96	141	P	Pn	02 26 15.1	-0.9
AYT	Al 'Ayyat baz=160	5.99	161	P	Pn	02 26 16.5	+0.2
KOT	Kottamia baz=154	5.99	155	P	Pn	02 26 16.3	0.0
KOT				AMP		02 27 00.0	
	comp=N,100μm,0.2s,logA/T=5.7,baz=154						
RCY	Rachaya	6.03	106	ePn	Pn	02 26 16.2	-0.7
RCY	Rachaya	6.03	106	ePn	Pn	02 26 16.2	-0.7
HHAG	Hagoal baz=151	6.06	153	P	Pn	02 26 17.9	+0.5
HHAG				AMP		02 27 00.0	
	comp=E,70μm,0.1s,logA/T=5.7,baz=151						
HSAF	As Saff baz=157	6.18	158	P	Pn	02 26 18.3	-0.7
GLL	Jalalah baz=156	6.27	157	P	Pn	02 26 19.7	-0.5
SWA2	baz=209	6.79	206	P	Pn	02 26 27.8	+0.4
SWA2		6.79	206	P	Pn	02 26 27.8	+0.5
ZNM	baz=148	6.88	150	P	Pn	02 26 29.3	+0.7
ZNM		6.88	150	P	Pn	02 26 29.3	+0.7
HNKL	Nakhl baz=139	6.93	140	P	Pn	02 26 28.3	-1.0
AWBH	baz=181	7.05	180	P	Pn	02 26 30.5	-0.5
AWBH		7.05	180	P	Pn	02 26 30.5	-0.5
ASF	Jabal al Asfar comp=E,1.0nm,0.3s,baz=172,slow=4.8,SNR=9.2	7.39	113	Pn	Pn	02 26 34.6	-1.0
ASF				Sn	Sn	02 27 55.5	-2.6
	comp=E,0.8nm,0.3s,baz=314,slow=20,SNR=3.1						
EIL	Elat comp=E,5.4nm,0.3s,baz=311,slow=4.6,SNR=90	7.66	136	Pn	Pn	02 26 38.6	-0.7
EIL				Sn	Sn	02 27 59.8	-4.9
	comp=E,3.5nm,0.3s,baz=4.1,slow=15,SNR=4.9						
GRB	Gharib baz=153	7.83	154	P	Pn	02 26 41.1	-0.5
GRB	Gharib	7.83	154	P	Pn	02 26 41.1	-0.6
HBST	Basata baz=138	7.89	140	P	Pn	02 26 42.4	-0.1
TR2	baz=147	8.10	148	P	Pn	02 26 44.8	-0.5
TR2		8.10	148	P	Pn	02 26 44.8	-0.6
HKAT	Jabal Katrina baz=145	8.10	146	P	Pn	02 26 45.2	-0.1
HKAT	Jabal Katrina	8.10	146	P	Pn	02 26 45.2	-0.2
BIA	Bitola	8.19	316	⇑iPn	Pn	02 26 51.8	+5.4
HDHB	Dhahab baz=141	8.23	142	P	Pn	02 26 47.0	-0.2
HFRF	Wahat Farafira baz=185	8.24	184	P	Pn	02 26 46.6	-0.6
HFRF	Wahat Farafira	8.24	184	P	Pn	02 26 46.6	-0.6
ASUT	baz=163	8.29	163	P	Pn	02 26 47.7	-0.2
ASUT		8.29	163	P	Pn	02 26 47.7	-0.2
KRUS	Krusevo	8.46	317	⇑iPn	Pn	02 26 56.1	+5.9
LJBD	Adjabya SNR=99	8.55	241	iP	Pn	02 26 50.0	-1.5
SHRM	baz=147	8.71	148	P	Pn	02 26 53.4	-0.3
SHRM		8.71	148	P	Pn	02 26 53.4	-0.2
HDK1	Dakhla baz=177	9.83	177	P	Pn	02 27 09.1	+0.1
HDK1	Dakhla	9.83	177	P	Pn	02 27 09.1	+0.1
TAR1	Taranto	10.50	303	ePn	Pn	02 27 17.0	-1.1
HADB	baz=151	11.16	152	P	Pn	02 27 27.2	0.0
HADB		11.16	152	P	Pn	02 27 27.2	0.0
VAE	Valguarnera comp=E,1.7nm,0.3s,baz=155,slow=21,SNR=4.0	11.85	284	Sn	Sn	02 29 40.4	-6.9
VRAC	Vranov	16.58	331	Pn	Pn	02 28 38.7	-0.5
	comp=E,0.9nm,0.3s,baz=284,slow=22,SNR=3.7						
VRAC	Vranov	16.58	331	Pn	Pn	02 28 38.7	-0.5
PGF	Pioggiola	17.02	301	eP	Pn	02 28 35.7	-9.1
SBF	Sospel comp=E,14nm,0.7s	18.53	304	eP	Pn	02 28 58.1	-5.1
SBF	Sospel comp=E,6.9nm,0.7s	18.53	304	eP	Pn	02 28 58.1	-5.1
MBDF	Montbardon comp=E,11nm,0.9s	19.28	306	eP	Pn	02 29 09.6	-2.6
MBDF	Montbardon comp=E,5.5nm,0.9s	19.28	306	eP	Pn	02 29 09.6	-2.6
MBDF	Montbardon comp=E,5.5nm,0.9s	19.28	306	eP	Pn	02 29 09.6	-2.6
LPG	La Plagne	19.59	308	eP	Pn	02 29 11.4	-4.4
LPG	La Plagne	19.59	308	eP	Pn	02 29 11.4	-4.4
LPL	La Plagne comp=E,6.5nm,0.6s	19.61	308	eP	Pn	02 29 11.5	-4.6
LPL	La Plagne comp=E,3.3nm,0.6s	19.61	308	eP	Pn	02 29 11.5	-4.6
LPL	La Plagne comp=E,3.2nm,0.6s	19.61	308	eP	Pn	02 29 11.5	-4.6
ORIF	Oris-en-Rattie	19.94	305	eP	Pn	02 29 14.1	-5.9
CABF	La Chapelle comp=E,9.4nm,0.6s	20.46	310	eP	P	02 29 22.9	-0.8
CABF	La Chapelle comp=E,4.7nm,0.6s	20.46	310	eP	P	02 29 22.9	-0.8
CABF	La Chapelle comp=E,4.7nm,0.6s	20.46	310	eP	P	02 29 22.9	-0.8
SMF	Signal de Mont comp=E,11nm,0.9s,mb4.0	21.90	309	eP	P	02 29 36.4	-2.7
SMF	Signal de Mont comp=E,5.4nm,0.9s,mb4.0	21.90	309	eP	P	02 29 36.4	-2.7
LOR	Lormes	22.13	310	eP	P	02 29 39.6	-1.9
LOR	Lormes	22.13	310	eP	P	02 29 39.6	-1.9
AVF	Avril sur Loir comp=E,5.7nm,0.8s,mb3.8	22.26	309	eP	P	02 29 44.2	+1.2
AVF	Avril sur Loir comp=E,2.8nm,0.8s,mb3.7	22.26	309	eP	P	02 29 44.2	+1.2
AVF	Avril sur Loir comp=E,2.8nm,0.8s,mb3.7	22.26	309	eP	P	02 29 44.2	+1.2
SSF	Saint Saulge comp=E,12nm,0.9s,mb4.0	22.27	309	eP	P	02 29 42.2	-0.8
SSF	Saint Saulge comp=E,5.8nm,0.9s,mb4.0	22.27	309	eP	P	02 29 42.2	-0.8
SSF	Saint Saulge comp=E,5.8nm,0.9s,mb4.0	22.27	309	eP	P	02 29 42.2	-0.8
LDF	La Druitiere comp=E,4.1nm,0.5s,mb3.9	25.11	311	eP	P	02 30 09.2	-1.1
LDF	La Druitiere comp=E,2.0nm,0.5s,mb3.9	25.11	311	eP	P	02 30 09.2	-1.1
LDF	La Druitiere comp=E,2.0nm,0.5s,mb3.9	25.11	311	eP	P	02 30 09.2	-1.1
FLN	La Foliniere	25.39	311	eP	P	02 30 11.4	-1.5
GRR	Gorron comp=E,5.5nm,0.5s,mb4.1	25.49	310	eP	P	02 30 13.0	-0.8
GRR	Gorron comp=E,2.8nm,0.5s,mb4.0	25.49	310	eP	P	02 30 13.0	-0.8
GRR	Gorron comp=E,2.8nm,0.5s,mb4.0	25.49	310	eP	P	02 30 13.0	-0.8
GRR	Gorron comp=E,2.8nm,0.5s,mb4.0	25.49	310	eP	P	02 30 13.0	-0.8
AKTK	Aktyubinsk	25.88	45	P	P	02 30 18.4	+1.1
AKTK	Aktyubinsk	25.88	45	P	P	02 30 18.4	+1.1
AKTO	Aktyubinsk comp=E,3.6nm,0.6s,mb4.0,baz=249,slow=9.0,SNR=24	25.88	45	P	P	02 30 18.4	+1.1
FINES	FINESS Array B comp=E,0.6nm,0.5s,mb3.4,baz=157,slow=10,SNR=4.5	26.13	357	P	P	02 30 21.0	+1.6
FINES	FINESS Array B	26.13	357	P	P	02 30 21.0	+1.6
ESDC	Sonseca Array comp=E,1.5nm,0.7s,mb3.6,baz=82,slow=9.9,SNR=7.3	26.32	289	P	P	02 30 21.6	+0.2
ESDC	Sonseca Array	26.32	289	P	P	02 30 21.6	+0.2
HFS	Hagfors comp=E,0.8nm,0.7s,mb3.4,baz=144,slow=18,SNR=2.7	26.64	343	P	P	02 30 24.6	+0.5
HFS	Hagfors	26.64	343	P	P	02 30 24.6	+0.5
ARCES	ARCESS Array B comp=E,3.2nm,1.1s,mb4.2,baz=167,slow=8.2,SNR=2.7	34.25	358	P	P	02 31 31.0	-0.1
ARCES	ARCESS Array B	34.25	358	P	P	02 31 31.0	-0.1
KURK	Kurchatov comp=E,1.8nm,0.9s,mb3.8	38.66	51	eP	P	02 32 09.6	+0.7
KURK	Kurchatov comp=E,1.8nm,0.9s,mb3.8	38.66	51	eP	P	02 32 09.6	+0.7
MK31	Makanchi Array	41.09	57	eP	P	02 32 29.4	+0.3
MK31	Makanchi Array	41.09	57	eP	P	02 32 29.4	+0.3
MKAR	Makanchi Array comp=E,0.8nm,0.6s,mb3.5,baz=272,slow=7.1,SNR=6.4	41.09	57	P	P	02 32 29.9	+0.7
MKAR	Makanchi Array	41.09	57	P	P	02 32 29.9	+0.8
ZALV	Zalesovo Beam comp=E,1.5nm,0.4s,mb4.0,baz=272,slow=8.5,SNR=5.0	42.63	46	P	P	02 32 42.4	+0.7
ZALV	Zalesovo Beam	42.63	46	P	P	02 32 42.3	+0.7
SONM	Songino Array comp=E,0.5nm,0.4s,mb3.9,baz=296,slow=8.1,SNR=3.8	56.96	52	P	P	02 34 32.1	+1.6

WEL 25 02:30:31.3±0.9, 36°.85S×177°.43E, h175km±7km, ML3.6/5, Error ellipse: s-maj=10.2km s-min=8.4km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.00	136	PN	Pn	02 30 57.3	-1.1
MXZ				SN	Sn

MEX 25 03:50:15.6±1.1, 14°66N×93°32W, h6km, MD3.5, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.04**	**6**	*eP*	Pg	03 50 32.3	-3.3
PCIG				*eS*	Sg	03 50 45.7	-3.6
THIG		**1.05**	**76**	*eP*	Pg	03 50 32.8	-3.0
THIG				*i S*	Sg	03 50 46.9	-2.6
TGIG		**2.12**	**5**	*eP*	Pn	03 50 49.2	-2.4
TGIG				*i S*	Sn	03 51 14.6	-3.6

IDC ***25*** *03:52:22.9±1.9, 35°81N×30°75E, h0km, mb3.7/7, mb1 3.6/12, mb1mx3.6/27, mbtmp3.6/12, ML3.6/5, MS2.6/1, Ms1 2.6/1, ms1mx2.1/35, Error ellipse: s-maj=39.4km s-min=16.6km az=60.0*
NIC ***25*** *03:52:26.2±0.3, 36°09N×31°07E, h5km, ML3.6, MW3.4*
ISK ***25*** *03:52:28.6, 35°87N×31°12E, h8km, MD3.5*
DDA ***25*** *03:52:28.4, 35°78N×31°09E, h29km±2km, Md3.5*
NEIC ***25*** *03:52:30.0, 35°95N×31°18E, h5km, MD3.6(ISK), ML3.6(NIC), After ISK.*
CSEM ***25*** *03:52:31.1±0.2, 35°75N×31°04E, h40km, Mw3.4, Error ellipse: s-maj=6.3km s-min=3.2km az=34.0*

ISC 25 03:52:28.3±1.0, 35°78N±0°03×31°05E±0°03, h6km±7km, n117, σ1§12/138, mb3.6/7, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZI	**Gazipasa**	**1.12**	**66**	P	**Pg**	**03 52 48.8**	**-1.0**
GAZI	**Gazipasa**	**1.12**	**66**	*i P*	**Pg**	**03 52 48.9**	**-1.0**
GAZI				*i S*	**Sg**	**03 53 02.6**	**-1.7**
GAZI	**Gazipasa**	**1.12**	**66**	*i P*	**Pg**	**03 52 48.9**	**-0.9**
GAZI				*i S*	**Sg**	**03 53 02.7**	**-1.7**
ANTB	**Antalya**	**1.16**	**344**	*e*PN	**Pn**	**03 52 49.9**	**-1.2**
ANTB				*e*SN	**Sn**	**03 53 05.5**	**-1.8**
ANTB	**Antalya**	**1.16**	**344**	*e*Pn	**Pn**	**03 52 49.9**	**-1.2**
ANTB				*e*Sn	**Sn**	**03 53 05.5**	**-1.7**
KSL	**Kastellorizon**	**1.25**	**288**	*eP*	**Pb**	**03 52 52.5**	**+0.3**
AKAS	**Kas**	**1.25**	**292**	*i P*	**Pn**	**03 52 51.9**	**-0.4**
AKAS				*i S*	**Sg**	**03 53 15.3**	**+6.7**
AKAS	**Kas**	**1.25**	**292**	*i P*	**Pn**	**03 52 51.9**	**-0.4**
AKAS				*i S*	**Sg**	**03 53 15.3**	**+6.7**
ELL	**Elmali**	**1.33**	**317**	*e*PN	**Pn**	**03 52 53.9**	**+0.4**
ELL				*e*SN	**Sn**	**03 53 12.4**	**+0.9**
ELL	**Elmali**	**1.33**	**317**	Pn	**Pn**	**03 52 55.5**	**+2.1**
ELL	**Elmali**	**1.33**	**317**	*e*Pn	**Pn**	**03 52 53.9**	**+0.5**
ELL				*e*Sn	**Sn**	**03 53 12.4**	**+0.9**
KORT	**Korkueli**	**1.34**	**335**	*i P*	**Pn**	**03 52 53.9**	**+0.3**
KORT	**Korkueli**	**1.34**	**335**	*i P*	**Pn**	**03 52 53.9**	**+0.4**
PPCY	**Paphos**	**1.39**	**130**	P	**Pn**	**03 52 54.8**	**+0.7**
PPCY	**Paphos**	**1.39**	**130**	P	**Pn**	**03 52 54.8**	**+0.7**
ALFC	**Alevga** 34nm,0.3s	**1.41**	**116**	P	**Pn**	**03 52 53.8**	**-0.7**
ALFC				S	**Sb**	**03 53 15.2**	**+2.0**
ALFC	**Alevga** 34nm,0.3s	**1.41**	**116**	P	**Pn**	**03 52 53.8**	**-0.7**
ALFC				S	**Sb**	**03 53 15.2**	**+2.0**
LEF	**Lefka**	**1.64**	**113**	*e*PN	**Pn**	**03 52 57.1**	**-0.5**
LEF	**Lefka**	**1.64**	**113**	*e*Pn	**Pn**	**03 52 57.1**	**-0.5**
HDMB	**Hadim**	**1.66**	**44**	*e*Pn	**Pn**	**03 52 57.3**	**-0.6**
HDMB				*e*SN	**Sn**	**03 53 17.7**	**-1.7**
HDMB	**Hadim**	**1.66**	**44**	*e*Pn	**Pn**	**03 52 57.3**	**-0.5**
HDMB				*e*Sn	**Sn**	**03 53 17.7**	**-1.7**
BCK	**Bucak**	**1.72**	**348**	*e*PN	**Pn**	**03 52 58.5**	**-0.2**
BCK	**Bucak**	**1.72**	**348**	Pn	**Pn**	**03 52 59.2**	**+0.5**
BCK	**Bucak**	**1.72**	**348**	Pn	**Pn**	**03 52 59.2**	**+0.5**
ERMK	**Ermenek**	**1.73**	**60**	*i P*	**Pn**	**03 52 59.4**	**+0.4**
ERMK	**Ermenek**	**1.73**	**60**	*i P*	**Pn**	**03 52 59.3**	**+0.4**
GLHS	**Glhisar (BURDU**	**1.86**	**318**	*e*PN	**Pn**	**03 53 01.3**	**+0.7**
GLHS	**Glhisar (BURDU**	**1.86**	**318**	*e*Pn	**Pn**	**03 53 01.3**	**+0.7**
MAMC	**Mammari**	**1.87**	**108**	P	**Pn**	**03 53 00.1**	**-0.7**
MAMC	**Mammari**	**1.87**	**108**	P	**Pn**	**03 53 00.1**	**-0.7**
CSS	**Prodhromos** 5.6nm,0.6s	**2.04**	**113**	P	**Pn**	**03 53 02.4**	**-0.7**
CSS				S	**Sn**	**03 53 30.8**	**+2.0**
CSS	**Prodhromos** 5.6nm,0.6s	**2.04**	**113**	P	**Pn**	**03 53 02.4**	**-0.7**
CSS				S	**Sn**	**03 53 30.8**	**+2.0**
ISP	**Isparta**	**2.08**	**348**	*e*PN	**Pn**	**03 53 04.2**	**+0.5**
ISP	**Isparta**	**2.08**	**348**	*e*Pn	**Pn**	**03 53 03.7**	**0.0**
LFK	**Lefkose**	**2.09**	**103**	*e*PN	**Pn**	**03 53 04.6**	**+0.8**
LFK	**Lefkose**	**2.09**	**103**	Pn	**Pn**	**03 53 05.4**	**+1.6**
LFK	**Lefkose**	**2.09**	**103**	*e*Pn	**Pn**	**03 53 04.6**	**+0.8**
IKL	**Isikli**	**2.19**	**77**	*e*PN	**Pn**	**03 53 05.4**	**+0.2**
IKL	**Isikli**	**2.19**	**77**	*e*Pn	**Pn**	**03 53 05.4**	**+0.3**
KONT	**Konya--Tatoy**	**2.40**	**26**	*e*PN	**Pn**	**03 53 07.8**	**-0.4**
KONT	**Konya--Tatoy**	**2.40**	**26**	*e*Pn	**Pn**	**03 53 07.8**	**-0.3**
ARG	**Arkhangelos**	**2.41**	**281**	*eP*	**Pn**	**03 53 04.0**	**-4.2**
DNZL	**Cakiroluk**	**2.49**	**320**	*i P*	**Pn**	**03 53 10.7**	**+1.3**
DNZL	**Cakiroluk**	**2.49**	**320**	*i P*	**Pn**	**03 53 10.7**	**+1.3**
DENT	**Denizli**	**2.55**	**321**	*e*PN	**Pn**	**03 53 10.5**	**+0.3**
DENT	**Denizli**	**2.55**	**321**	*e*Pn	**Pn**	**03 53 10.5**	**+0.4**
EREN	**Erenkoy**	**2.55**	**95**	*e*PN	**Pn**	**03 53 10.5**	**+0.3**
EREN	**Erenkoy**	**2.55**	**95**	*e*Pn	**Pn**	**03 53 10.5**	**+0.3**
YER	**Yerkesik**	**2.61**	**302**	*eP*	**Pn**	**03 53 14.6**	**+3.7**
LADK	**Ladik-KONYA**	**2.63**	**23**	Pn	**Pn**	**03 53 12.3**	**+1.0**
LADK	**Ladik-KONYA**	**2.63**	**23**	Pn	**Pn**	**03 53 12.3**	**+1.0**
KHAL	**Karahalli**	**2.87**	**335**	*i P*	**Pn**	**03 53 14.0**	**-0.6**
KHAL	**Karahalli**	**2.87**	**335**	*i P*	**Pn**	**03 53 14.0**	**-0.5**
BOLV	**Bolvadin**	**2.93**	**358**	*i P*	**Pn**	**03 53 16.5**	**+1.1**
BOLV	**Bolvadin**	**2.93**	**358**	*i P*	**Pn**	**03 53 16.5**	**+1.1**
MERS	**Mersin**	**3.01**	**68**	*e*PN	**Pn**	**03 53 17.3**	**+0.9**
MERS	**Mersin**	**3.01**	**68**	*e*Pn	**Pn**	**03 53 17.3**	**+0.9**
AYDN	**Tasoluk**	**3.16**	**307**	*i P*	**Pn**	**03 53 18.6**	**0.0**
AYDN	**Tasoluk**	**3.16**	**307**	*i P*	**Pn**	**03 53 18.6**	**0.0**
KARP	**Karpathos**	**3.17**	**267**	*eP*	**Pn**	**03 53 19.5**	**+0.8**
BDRM	**Kayabasi**	**3.18**	**295**	*i P*	**Pn**	**03 53 18.4**	**-0.3**
BDRM	**Kayabasi**	**3.18**	**295**	*i P*	**Pn**	**03 53 18.4**	**-0.4**
ALT	**Altintas**	**3.35**	**347**	*e*PN	**Pn**	**03 53 22.1**	**+0.9**
ALT	**Altintas**	**3.35**	**347**	*e*Pn	**Pn**	**03 53 22.1**	**+0.9**
GULE	**Gulek**	**3.36**	**62**	*i P*	**Pn**	**03 53 23.6**	**+2.4**
GULE				*i S*	**Sn**	**03 54 07.2**	**+5.9**
GULE	**Gulek**	**3.36**	**62**	*i P*	**Pn**	**03 53 23.6**	**+2.4**
GULE				*i S*	**Sn**	**03 54 07.2**	**+5.8**
GDZ	**Gediz**	**3.53**	**340**	*i P*	**Pn**	**03 53 23.2**	**-0.4**
GDZ	**Gediz**	**3.53**	**340**	*i P*	**Pn**	**03 53 23.2**	**-0.4**
KARA	**Karaisali**	**3.55**	**64**	*e*PN	**Pn**	**03 53 24.9**	**+1.1**
KARA	**Karaisali**	**3.55**	**64**	*e*Pn	**Pn**	**03 53 24.9**	**+1.0**
ESKT	**Eskisehir**	**3.74**	**358**	*i P*	**Pn**	**03 53 27.1**	**+0.7**
SEYT	**Eskypehyr**	**3.74**	**358**	*i P*	**Pn**	**03 53 27.1**	**+0.6**
YURE	**YUREGIR**	**3.85**	**73**	*i P*	**Pn**	**03 53 28.7**	**+0.8**
YURE	**YUREGIR**	**3.85**	**73**	*i P*	**Pn**	**03 53 28.7**	**+0.7**
SMG	**Samos**	**3.89**	**301**	*eP*	**Pn**	**03 53 27.0**	**-1.6**
ZKR	**Zakros**	**4.00**	**262**	*eP*	**Sn**	**03 54 17.0**	**-0.3**
YAYL	**Yayladag**	**4.11**	**85**	*i P*	**Pn**	**03 53 33.1**	**+1.4**
YAYL	**Yayladag**	**4.11**	**85**	*i P*	**Pn**	**03 53 33.1**	**+1.5**
BORA	**Eskisehir**	**4.12**	**354**	*i P*	**Pn**	**03 53 32.0**	**+0.3**
BORA	**Eskisehir**	**4.12**	**354**	*i P*	**Pn**	**03 53 32.0**	**+0.3**
BR131	**Keskin Array S**	**4.44**	**27**	*e*Pn	**Pn**	**03 53 36.2**	**+0.1**
BR131	**Keskin Array S**	**4.44**	**27**	*e*Pn	**Pn**	**03 53 36.2**	**+0.1**
BRTR	**Keskin Array B** 1.8nm,0.3s,baz=31,slow=16,SNR=38	**4.44**	**27**	Pn	**Pn**	**03 53 34.9**	**-1.3**
BRTR				Sn	**Sn**	**03 54 28.1**	**-0.1**
BRTR	**Keskin Array B** 1.7nm,0.3s,baz=214,slow=27,SNR=8.0	**4.44**	**27**	Pn	**Pn**	**03 53 34.8**	**-1.3**
BRTR				Sn	**Sn**	**03 54 28.0**	**-0.1**
NPS	**Neapolis**	**4.46**	**265**	*eP*	**Pn**	**03 53 37.5**	**+1.0**
MMAI	**Mount Meron Ar** 7.2nm,0.3s,baz=305,slow=12,SNR=14	**4.54**	**126**	Pn	**Pn**	**03 53 36.4**	**-1.0**
MMAI				Sn	**Sn**	**03 54 28.7**	**-1.8**
CDAG	**Cicekdag**	**4.65**	**33**	*i P*	**Pn**	**03 53 39.1**	**+0.1**
CDAG	**Cicekdag**	**4.65**	**33**	*i P*	**Pn**	**03 53 39.1**	**0.0**
BALY	**Balya**	**4.80**	**327**	*i P*	**Pn**	**03 53 40.1**	**-0.9**
BALY	**Balya**	**4.80**	**327**	*i P*	**Pn**	**03 53 40.2**	**-0.8**
SGKT	**Sivrigoynuk**	**4.85**	**9**	*i P*	**Pn**	**03 53 41.0**	**-0.7**
SGKT	**Sivrigoynuk**	**4.85**	**9**	*i P*	**Pn**	**03 53 41.0**	**-0.8**
KUZU	**Kuzuini**	**4.97**	**77**	*i P*	**Pn**	**03 53 43.4**	**0.0**
KUZU	**Kuzuini**	**4.97**	**77**	*i P*	**Pn**	**03 53 43.3**	**-0.1**
SIVA	**Sivas**	**5.15**	**263**	*eP*	**Sn**	**03 54 44.0**	**-1.7**
VAM	**Vamos**	**5.59**	**268**	*eP*	**Sn**	**03 54 51.0**	**-5.5**
ASF	**Jabal al Asfar** 0.3nm,0.3s,baz=315,slow=5.6,SNR=2.2	**6.04**	**125**	Pn	**Pn**	**03 53 57.2**	**-1.0**
ASF				Sn	**Sn**	**03 55 09.2**	**+1.5**
EIL	**Elat** 0.6nm,0.3s,baz=345,slow=23,SNR=2.4	**6.92**	**151**	Pn	**Pn**	**03 54 08.5**	**-1.8**
EIL				Sn	**Sn**	**03 55 29.1**	**-0.2**
EIL	**Elat** 0.7nm,0.3s,baz=324,slow=22,SNR=2.7	**6.92**	**151**	Pn	**Pn**	**03 54 08.5**	**-1.8**
EIL				LR	LR	03 57 40.3	
EIL	**Elat** comp=Z,42nm,18.9s,baz=356,slow=45	**6.92**	**151**	Pn	**Pn**	**03 54 08.5**	**-1.8**
BUR08	**Bucovina Ar. S**	**12.63**	**342**	*e*Pn	**Pn**	**03 55 28.9**	**+0.6**
BUR08	**Bucovina Ar. S**	**12.63**	**342**	*e*Pn	**Pn**	**03 55 28.9**	**+0.6**
KIEV	**Kiev** 4.4nm,0.9s	**14.97**	**355**	*e*Pn	**Pn**	**03 56 03.0**	**+2.7**
AKASG	**Malin Array Be** 0.2nm,0.3s,baz=150,slow=14,SNR=2.6	**14.97**	**356**	Pn	**Pn**	**03 55 54.9**	**-5.5**
AKBB	**Malin Array Si**	**14.97**	**356**	*e*Pn	**Pn**	**03 56 00.8**	**+0.5**
AKBB	**Malin Array Si**	**14.97**	**356**	*e*Pn	**Pn**	**03 56 00.8**	**+0.5**
KWP	**Kalwaria Pacla**	**15.12**	**339**	Pn	**Pn**	**03 56 02.5**	**+0.1**
KWP				*eP*		03 56 06.3	
KWP	**Kalwaria Pacla**	**15.12**	**339**	Pn	**Pn**	**03 56 02.5**	**+0.1**
AKTK	**Aktyubinsk**	**24.36**	**45**	P	**P**	**03 57 43.5**	**-3.4**
AKTK	**Aktyubinsk**	**24.36**	**45**	P	**P**	**03 57 43.5**	**-3.3**
AKTO	**Aktyubinsk** 1.4nm,0.6s,mb3.5,baz=254,slow=9.7,SNR=5.5	**24.36**	**45**	P	**P**	**03 57 43.5**	**-3.4**
FINES	**FINESS Array B** 0.7nm,0.4s,mb3.5,baz=161,slow=12,SNR=5.1	**25.88**	**355**	P	**P**	**03 57 55.7**	**-4.8**
HFS	**Hagfors** 0.9nm,0.8s,mb3.4,baz=134,slow=14,SNR=2.6	**26.83**	**341**	P	**P**	**03 58 03.7**	**-5.4**
ARCES	**ARCESS Array B** 1.2nm,0.7s,mb4.0,baz=161,slow=8.6,SNR=5.5	**33.95**	**357**	P	**P**	**03 59 07.3**	**-4.6**
MKAR	**Makanchi Array** 0.8nm,0.9s,mb3.4,baz=259,slow=12,SNR=4.2	**39.40**	**58**	P	**P**	**03 59 55.6**	**-3.1**
MKAR	**Makanchi Array**	**39.40**	**58**	P	**P**	**03 59 55.6**	**-3.1**
ZALV	**Zalesovo Beam** 0.4nm,0.3s,mb3.5,baz=238,slow=8.3,SNR=2.4	**41.10**	**46**	P	**P**	**04 00 09.0**	**-3.7**
SONM	**Songino Array** 0.3nm,0.5s,mb3.6,baz=295,slow=7.9,SNR=2.4	**55.34**	**52**	P	**P**	**04 01 59.5**	**-3.2**

ATH ***25*** *03:58:44.4, 39°84N×23°40E, h34km, MD3.0/3*
ISCJB ***25*** *03:58:45.5±0.5, 39°84N±0°02×23°52E±0°07, h17km±11km, Error ellipse: s-maj=9.3km s-min=4.0km az=6.9*
CSEM ***25*** *03:58:45.0±0.1, 39°84N×23°50E, h15km, ML2.7/6, Error ellipse: s-maj=5.1km s-min=2.1km az=93.0*
THE ***25*** *03:58:45.2, 39°84N×23°49E, h14km, ML2.7/6, Error ellipse: s-maj=1.0km s-min=0.3km az=101.0*

ISC 25 03:58:45.1±0.7, 39°84N±0°02×23°51E±0°06, h19km±8km, n18, σ0§44/33, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAIG	**Paliouri**	**0.16**	**58**	P	**Pg**	**03 58 49.3**	**-0.3**
PAIG				S	**Sg**	**03 58 52.2**	**-0.4**
PLG	**Polygyros**	**0.53**	**355**	*e*PN	**Pg**	**03 58 55.3**	**-0.5**
PLG	**Polygyros**	**0.53**	**355**	P	**Pg**	**03 58 55.4**	**-0.4**
PLG				S	**Sg**	**03 59 03.2**	**+0.2**
PLG	**Polygyros**	**0.53**	**355**	P	**Pg**	**03 58 55.4**	**-0.4**
PLG				S	**Sg**	**03 59 03.2**	**+0.2**
XOR	**Xorichti**	**0.54**	**207**	P	**Pg**	**03 58 55.6**	**-0.2**
XOR				S	**Sg**	**03 59 03.5**	**+0.4**
XOR	**Xorichti**	**0.54**	**207**	P	**Pg**	**03 58 55.6**	**-0.2**
XOR				S	**Sg**	**03 59 03.5**	**+0.4**
NEO	**Neokhori**	**0.58**	**202**	*e*PN	**Pg**	**03 58 56.5**	**-0.1**
NEO				*e*SN	**Sg**	**03 59 04.6**	**+0.2**
NEO	**Neokhori**	**0.58**	**202**	*e*Pn	**Pg**	**03 58 56.5**	**-0.1**
NEO				*e*Sn	**Sg**	**03 59 04.6**	**+0.2**
OUR	**Ouranopolis**	**0.61**	**37**	P	**Pg**	**03 58 57.2**	**-0.1**
OUR				S	**Sg**	**03 59 06.3**	**+0.8**
OUR	**Ouranopolis**	**0.61**	**37**	P	**Pg**	**03 58 57.2**	**-0.1**
OUR				S	**Sg**	**03 59 06.3**	**+0.8**
AOS	**Alonnisos**	**0.73**	**157**	P	**Pg**	**03 58 59.0**	**-0.5**
AOS				S	**Sg**	**03 59 09.8**	**+0.6**
AOS	**Alonnisos**	**0.73**	**157**	P	**Pg**	**03 58 59.0**	**-0.5**
AOS				S	**Sg**	**03 59 09.8**	**+0.6**
HORT	**Hortiatis**	**0.81**	**338**	P	**Pg**	**03 59 00.6**	**-0.5**
HORT				S	**Sg**	**03 59 12.4**	**+0.5**
HORT	**Hortiatis**	**0.81**	**338**	P	**Pg**	**03 59 00.6**	**-0.5**
HORT				S	**Sg**	**03 59 12.4**	**+0.5**
SOH	**Sokhos**	**0.98**	**353**	P	**Pg**	**03 59 03.5**	**-0.7**
SOH				S	**Sg**	**03 59 17.7**	**+0.5**
SOH	**Sokhos**	**0.98**	**353**	P	**Pg**	**03 59 03.5**	**-0.7**
SOH				S	**Sg**	**03 59 17.7**	**+0.5**
NVR	**Nevrokopi**	**1.53**	**10**	*e*PN	**Pn**	**03 59 11.3**	**-0.1**
NVR	**Nevrokopi**	**1.53**	**10**	*e*Pn	**Pn**	**03 59 11.3**	**-0.1**

FUNV ***25*** *04:01:00.4, 6°70N×73°25W, h165km, MW4.3*
ISCJB ***25*** *04:01:02.2±0.6, 6°85N±0°05×72°86W±0°03, h181km±4km, mb3.9/21, Error ellipse: s-maj=7.5km s-min=5.3km az=13.2*
NEIC ***25*** *04:01:02.7±0.6, 6°76N×72°93W, h174km±6km, mb3.9/11, Error ellipse: s-maj=7.2km s-min=6.2km az=203.0*
IDC ***25*** *04:01:02.0±2.5, 6°78N×72°90W, h166km±22km, mb3.5/11, mb1 3.7/13, mb1mx3.6/19, mbtmp3.5/13, Error ellipse: s-maj=16.3km s-min=13.3km az=31.0*

ISC 25 04:01:03.0±0.6, 6°83N±0°05×72°86W±0°04, h173km±4km, n74, σ0§86/84, mb3.9/21, 10C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.16**	**28**	*i P*	**Pn**	**04 01 31.0**	**-0.2**
CAPV				*e*S	**Sn**	**04 01 52.5**	**-0.6**
SOCV	**Socops**	**2.45**	**54**	*i P*	**Pn**	**04 01 45.7**	**+0.9**
SOCV				*e*S	**Sn**	**04 02 18.0**	**+1.0**
VIGV	**El Vigia**	**2.49**	**36**	*eP*	**Pn**	**04 01 45.4**	**+0.3**
VIGV				*e*S	**Sn**	**04 02 18.8**	**+1.0**
SDV	**Santo Domingo**	**3.00**	**47**	*e*Pn	**Pn**	**04 01 52.5**	**+1.1**
SDV				*e*Sn	**Sn**	**04 02 30.1**	**+1.1**
ELOV	**Elorza**	**3.35**	**87**	*i P*	**Pn**	**04 01 57.0**	**+1.3**
VIRV	**Villa del Rosa**	**3.68**	**7**	*eP*	**Pn**	**04 01 57.9**	**-1.9**
VIRV				*e*S	**Sn**	**04 02 40.0**	**-4.2**
QARV	**Quebrada Arrib**	**4.07**	**34**	*i P*	**Pn**	**04 02 05.3**	**+0.5**
QARV				*e*S	**Sn**	**04 02 52.2**	**-0.9**
SANV	**Sanarito**	**4.22**	**51**	*eP*	**Pn**	**04 02 07.3**	**+0.5**
SANV				*e*S	**Sn**	**04 02 57.4**	**+0.8**
CURV	**Curarigua**	**4.27**	**42**	*eP*	**Pn**	**04 02 07.7**	**-0.4**
CURV				*e*S	**Sn**	**04 02 57.6**	**-0.1**
DABV	**Dabajuro**	**4.62**	**28**	*eP*	**Pn**	**04 02 12.0**	**+0.1**
DABV				*e*S	**Sn**	**04 03 04.2**	**-1.7**
TEPV	**Terepaima**	**4.78**	**49**	*eP*	**Pn**	**04 02 14.5**	**+0.6**
TEPV				*e*S	**Sn**	**04 03 09.8**	**+0.3**
SIQV	**Siquisique**	**4.85**	**38**	*i P*	**Pn**	**04 02 13.9**	**-0.9**
SIQV				*e*S	**Sn**	**04 03 10.6**	**-0.5**
BAUV	**El Baul**	**5.21**	**66**	*e*S	**Sn**	**04 03 19.0**	**-0.7**
MAPV	**Macapo**	**5.28**	**55**	*eP*	**Pn**	**04 02 20.9**	**+0.5**
JACV	**Jacura**	**5.81**	**43**	*i P*	**Pn**	**04 02 28.1**	**+0.7**
JACV				*e*S	**Sn**	**04 03 32.4**	**-1.3**
IMOV	**Isla Los Monje**	**5.82**	**19**	*eP*	**Pn**	**04 02 26.6**	**-1.0**
MONV	**Montecano**	**5.83**	**29**	*eP*	**Pn**	**04 02 26.8**	**-1.0**
CAOV	**Caicara del Or**	**6.50**	**85**	*eP*	**Pn**	**04 02 36.1**	**-0.5**
CAOV				*e*S	**Sn**	**04 03 48.9**	**-1.3**
MERV	**Las Mercedes**	**6.93**	**69**	*eP*	**Pn**	**04 02 41.9**	**-0.3**
BCIP	**Isla Barro Col**	**7.29**	**289**	*e*Pn	**Pn**	**04 02 40.6**	**-6.4**
BIRV	**Birongo**	**7.45**	**60**	*eP*	**Pn**	**04 02 48.9**	**-0.2**
BIRV				*e*S	**Sn**	**04 04 09.9**	**-2.9**
CUPV	**Cœpira**	**7.69**	**65**	*eP*	**Pn**	**04 02 52.1**	**-0.2**
PRGV	**PARIAGUAN**	**8.36**	**76**	*eP*	**Pn**	**04 03 01.1**	**+0.1**
OTAV	**Otavalo** 7.5nm,0.9s	**8.60**	**221**	*e*Pn	**Pn**	**04 03 02.5**	**-1.9**
PCRV	**Puerto La Cruz** 2.1nm,0.3s,baz=218,slow=4.2,SNR=14	**8.78**	**67**	P	**Pn**	**04 03 07.7**	**+1.0**
PCRV				S	**Sn**	**04 04 45.0**	**+0.3**
PCRV	**Puerto La Cruz** 1.9nm,0.3s,baz=233,slow=20,SNR=3.4	**8.78**	**67**	*eP*	**Pn**	**04 03 08.0**	**+1.4**
GUNV	**Guanoco**	**10.35**	**71**	*eP*	**Pn**	**04 03 27.9**	**+0.7**
YHJ	**Yallahs**	**11.55**	**342**	*eP*	**Pn**	**04 03 43.2**	**+0.3**
HOJ	**Hope**	**11.74**	**341**	*eP*	**Pn**	**04 03 47.6**	**+2.3**
CMJ	**Castle Mountai**	**11.75**	**343**	*eP*	**Pn**	**04 03 46.0**	**+0.5**
CMJ				*e*S	**Sn**	**04 05 45.2**	**-11**
GWJ	**Greenwich**	**11.80**	**342**	*eP*	**Pn**	**04 03 46.5**	**+0.5**
STH	**Stony Hill**	**11.83**	**341**	*eP*	**Pn**	**04 03 46.6**	**+0.2**
STH				*e*S	**Sn**	**04 05 44.1**	**-14**
STH				*i S*	**Sn**	**04 05 45.4**	**-12**
MTDJ	**Mount Denham** 67nm,0.7s	**12.21**	**338**	*e*Pn	**Pn**	**04 03 52.0**	**+0.6**
MTDJ				*e*Sn	**Sn**	**04 06 01.2**	**-5.8**
BBJ	**Bamboo Saint A**	**12.26**	**340**	*eP*	**Pn**	**04 03 52.7**	**+0.7**
JTS	**JuntasAbangare** 2.6nm,0.3s,baz=354,slow=1.7,SNR=15	**12.45**	**287**	P	**Pn**	**04 03 53.7**	**-0.7**
NEJ	**Negril**	**12.54**	**335**	*eP*	**Pn**	**04 03 55.8**	**+0.1**
LPAZ	**La Paz** 0.5nm,0.3s,mb3.4,baz=6.7,slow=9.2,SNR=4.8	**23.44**	**169**	P	**P**	**04 05 56.4**	**-0.5**
LPAZ				pP		04 06 26.9	
LPAZ	**La Paz** 3.2nm,0.8s,baz=345,slow=14,SNR=8.8	**23.44**	**169**	*eP*	**P**	**04 05 56.8**	**-0.1**
LPAZ				pP		04 06 26.9	
SIV	**San Ignacio** 0.8nm,0.5s,baz=287,slow=9.2,SNR=5.2	**25.50**	**153**	pP	pP	04 06 48.1	-2.8
WMOK	**Wichita Mounta** 1.6nm,0.7s,mb3.8	**36.63**	**323**	*eP*	**P**	**04 07 51.5**	**-1.3**
TXAR	**Lajitas Array** 1.4nm,0.6s,mb3.7,baz=130,slow=10,SNR=12	**36.65**	**311**	P	**P**	**04 07 52.6**	**-0.5**
MNTX	**Cornudas Mount** 1.6nm,0.6s,mb3.8	**39.16**	**313**	*eP*	**P**	**04 08 13.6**	**-0.5**
SDCO	**Great Sand Dun** 0.8nm,0.6s,mb3.5	**42.71**	**321**	*eP*	**P**	**04 08 43.5**	**+0.5**
TUC	**Tucson** 1.3nm,0.8s,mb3.6	**43.44**	**311**	*eP*	**P**	**04 08 48.9**	**0.0**
EYMN	**Ely** 2.5nm,0.5s,mb4.1	**43.94**	**342**	*eP*	**P**	**04 08 52.2**	**-0.5**
PLCA	**Paso Flores** 2.8nm,1.1s,mb3.8,baz=0.0,slow=4.0,SNR=3.1	**47.37**	**178**	P	**P**	**04 09 21.0**	**+1.4**
SCHQ	**Schefferville** 13nm,0.5s,mb4.8,baz=187,slow=6.7,SNR=47	**48.11**	**5**	P	**P**	**04 09 26.4**	**+1.3**
PDAR	**Pinedale Array** 0.3nm,0.4s,mb3.2,baz=117,slow=8.5,SNR=3.9	**48.23**	**324**	P	**P**	**04 09 25.7**	**-0.6**
PDAR				PcP	PcP	04 10 52.4	+1.7
TPAW	**Teton Pass** 1.1nm,0.6s,mb3.7	**49.48**	**324**	*eP*	**P**	**04 09 36.5**	**+0.7**
NVAR	**Mina Array Bea** 0.4nm,0.4s,mb3.4,baz=105,slow=6.6,SNR=3.3	**51.66**	**314**	P	**P**	**04 09 52.6**	**+0.4**
FFC	**Flin Flon** 4.7nm,1.2s,mb4.1	**53.17**	**339**	*eP*	**P**	**04 10 02.9**	**-0.1**
YKA	**Yellowknife Ar** 2.0nm,0.6s,mb4.2,baz=134,slow=6.5,SNR=15	**63.35**	**340**	P	**P**	**04 11 13.2**	**-0.2**
YKA	**Yellowknife Ar**	**63.35**	**340**	P	**P**	**04 11 13.2**	**-0.2**
TIC	**Toumodi** 68nm,1.4s	**67.31**	**86**	*eP*	**P**	**04 11 39.0**	**-0.9**
LIC	**Lamto** 23nm,0.6s	**67.34**	**86**	*eP*	**P**	**04 11 40.0**	**-0.1**
DBIC	**Dimbokro** 3.8nm,0.6s,mb4.4,baz=259,slow=4.9,SNR=12	**67.47**	**86**	P	**P**	**04 11 40.7**	**-0.2**
DBIC	**Dimbokro** 11nm,0.8s,mb4.8	**67.47**	**86**	*eP*	**P**	**04 11 40.7**	**-0.2**
KIC	**Kosan Boka** 21nm,0.7s,mb5.0	**67.61**	**86**	*eP*	**P**	**04 11 41.8**	**0.0**
SUMG	**Summit** 14nm,0.8s,mb4.7	**68.93**	**11**	*eP*	**P**	**04 11 49.8**	**+1.0**
SUMG	**Summit** 12nm,0.8s,mb4.7	**68.93**	**11**	*i P*	**P**	**04 11 49.7**	**+0.8**
TORD	**Torodi Ar. Bea** baz=283,slow=6.5	**73.48**	**78**	P	**P**	**04 12 16.8**	**-0.5**
ILAR	**Eielson Array** 0.4nm,0.9s,mb3.0,baz=96,slow=3.0,SNR=4.3	**77.

528nm,24.8s
OUZ Omahuta 18.42 199 *e*P **P 05 04 10.0 +0.2**
13nm,0.7s
PPT Papeete 28.16 94 *e*LR LR 05 13 16.1
145nm,26.2s
CTA Charters Tower 32.75 261 P **P 05 06 16.0 +0.6**
2.8nm,0.4s,mb4.2,baz=96,slow=9.5,SNR=7.7
STKA Stephens Creek 38.01 241 P **P 05 06 59.2 +0.7**
6.7nm,0.5s,mb4.5,baz=93,slow=10.0,SNR=23
WRAB Tennant Creek 43.92 260 *e*P **P 05 07 45.1 -0.2**
3.3nm,0.5s,mb4.1
ASAR Alice Springs 44.11 254 P **P 05 07 47.0 +0.4**
20nm,0.5s,mb4.9,baz=88,slow=8.6,SNR=183
FORT Forrest 49.37 245 *e*P **P 05 08 24.8 -1.0**
10nm,0.6s,mb4.4
QSPA South Pole Qui 72.16 180 *e*P **P 05 10 52.6 -1.1**
8.1nm,1.5s,mb4.0
YBH Yreka Blue Hor 78.97 39 P **P 05 11 32.4 +0.6**
1.6nm,0.6s,mb3.5,baz=180,slow=20,SNR=5.6
NVAR Mina Array Bea 79.91 44 P **P 05 11 37.0 +0.2**
1.3nm,0.7s,mb3.4,baz=224,slow=9.2,SNR=4.7
ILAR Eielson Array 86.04 13 P **P 05 12 05.5 -1.2**
0.6nm,0.5s,mb3.5,baz=233,slow=4.9,SNR=12
TXAR Lajitas Array 86.59 58 P **P 05 12 10.6 +0.5**
2.2nm,0.8s,mb3.9,baz=216,slow=5.7,SNR=14
PDAR Pinedale Array 87.83 44 P **P 05 12 15.3 -0.2**
0.7nm,0.6s,mb3.6,baz=225,slow=3.4,SNR=8.9
PLCA Paso Flores 91.85 134 P **P 05 12 35.0 +0.7**
0.7nm,0.3s,mb4.1,baz=180,slow=6.1,SNR=3.0
MKAR Makanchi Array 108.62 314 PKiKP PKiKP 05 17 48.5 -1.8
0.5nm,0.6s,baz=248,slow=0.8,SNR=5.4
BVAR Borovoye Array 116.39 321 PKP PKPdf 05 18 03.9 -1.0
0.9nm,0.5s,baz=66,slow=4.9,SNR=4.2
ARCES ARCESS Array B 126.18 350 PKP PKPdf 05 18 22.1 -1.1
2.1nm,0.8s,baz=29,slow=2.8,SNR=8.4
AKASG Malin Array Be 140.22 332 PKP PKPdf 05 18 47.7 -2.3
0.8nm,0.5s,baz=45,slow=3.2,SNR=3.8
BRTR Keskin Array B 144.27 314 PKP PKPdf 05 18 57.9 +0.3
1.8nm,0.8s,baz=131,slow=5.2,SNR=6.6
CLL Collm 145.29 347 *i* PKPbc PKPbc 05 19 00.3 +0.1
comp=Z,11nm,0.7s
MMAI Mount Meron Ar 145.54 303 PKPbc PKPbc 05 19 02.2 +0.6
comp=Z,2.2nm,0.5s,baz=98,slow=4.4,SNR=3.2

DJA ***25*** *05:01:05, 18.°35S×177.°02W, h485km, mb5.2/11*
MOS ***25*** *05:01:28.6±1.4, 17.°92S×179.°04W, h621km, mb4.5/23, Error ellipse: s-maj=12.4km s-min=10.0km az=156.5*
IDC ***25*** *05:01:28.1±1.0, 18.°12S×178.°93W, h611km±11km, mb3.9/16, mb1 4.2/17, mb1mx4.0/21, mbtmp4.0/17, Error ellipse: s-maj=15.3km s-min=9.0km az=149.0*
ISCJB ***25*** *05:01:29.1±0.8, 18.°12S±0.°06×179.°10W±0.°04, h632km±10km, mb4.5/83, Error ellipse: s-maj=9.6km s-min=5.2km az=159.6*
NEIC ***25*** *05:01:30.2±0.6, 18.°09S×179.°03W, h636km±7km, mb4.5/58, Error ellipse: s-maj=8.4km s-min=5.3km az=148.0*
ISC 25 05:01:30.2±0.8, 18.°09S±0.°06×179.°06W±0.°04, h627km±10km, h608km±3.1km: pP-P, n563, σ0s58/419, mb4.5/83, 147C-142D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.77**	**277**	*e*P	**P**	**05 02 50.7**	**+0.3**
AFI	**Afiamalu**	**8.14**	**60**	P	**P**	**05 03 26.6**	**-5.2**
	36nm,0.3s,baz=3.7,slow=3.3,SNR=24						
AFI				S	**S**	**05 05 01.3**	**-10**
	baz=17,slow=20,SNR=2.6						
AFI	**Afiamalu**	**8.14**	**60**	P	**P**	**05 03 26.6**	**-5.3**
AFI				S	**S**	**05 05 01.3**	**-10**
AFI				pmax	pmax		
	comp=Z,36nm,0.3s						
AFI	**Afiamalu**	**8.14**	**60**	*e*Pn	**P**	**05 03 26.9**	**-4.9**
	comp=Z,170nm,0.6s						
OUZ	**Omahuta**	**18.27**	**199**	*e*P	**P**	**05 05 08.3**	**+1.4**
	comp=Z,63nm,1.0s						
RAR	**Rarotonga**	**18.43**	**103**	P	**P**	**05 05 06.9**	**-1.7**
	comp=Z,1.1nm,0.3s,baz=270,slow=15,SNR=3.6						
RAR	**Rarotonga**	**18.43**	**103**	P	**P**	**05 05 06.9**	**-1.7**
RAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
URZ	**Urewera**	**20.37**	**189**	P	**P**	**05 05 23.2**	**-2.7**
	comp=Z,8.3nm,0.4s,baz=301,slow=8.1,SNR=6.9						
URZ				S	**S**	**05 08 28.8**	**-7.0**
	comp=Z,3.4nm,0.4s,baz=24,slow=20,SNR=1.8						
URZ	**Urewera**	**20.37**	**189**	*e*P	**P**	**05 05 22.9**	**-3.0**
	comp=Z,16nm,0.6s						
RPZ	**Rata Peaks**	**26.88**	**196**	P	**P**	**05 06 21.6**	**-1.6**
	comp=Z,18nm,0.8s,mb4.8,baz=38,slow=1.8,SNR=7.3						
RPZ	**Rata Peaks**	**26.88**	**196**	*e*P	**P**	**05 06 22.4**	**-0.8**
	comp=Z,31nm,0.9s,mb4.9						
ODZ	**Otahua Downs**	**28.22**	**196**	*e*P	**P**	**05 06 34.5**	**-0.4**
	comp=Z,156nm,1.2s,mb5.5						
EIDS	**Eidsvold**	**28.62**	**250**	*e*P	**P**	**05 06 39.0**	**+0.3**
	comp=Z,37nm,0.8s,mb5.1						
ARMA	**Armidale**	**29.31**	**240**	*e*P	**P**	**05 06 45.3**	**+0.7**
ARMA	**Armidale**	**29.31**	**240**	*e*P	**P**	**05 06 46.0**	**+1.4**
	comp=Z,57nm,0.6s,mb5.4						
CTA	**Charters Tower**	**32.80**	**261**	*e*P	**P**	**05 07 14.6**	**+0.2**
	comp=Z,35nm,0.8s,mb5.0						
CTA	**Charters Tower**	**32.80**	**261**	P	**P**	**05 07 14.7**	**+0.3**
	comp=Z,48nm,0.8s,mb5.2,baz=93,slow=10.0,SNR=42						
CTA				PcP	PcP	05 09 39.7	-0.3
	comp=Z,3.7nm,0.6s,baz=135,slow=1.4,SNR=3.4						
CTA	**Charters Tower**	**32.80**	**261**	P	**P**	**05 07 14.7**	**+0.3**
CTA						05 09 39.7	
CTA				pmax	pmax		
	comp=Z,48nm,0.8s						
CTA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CTAO	**Charters Tower**	**32.80**	**261**	*e*P	**P**	**05 07 14.0**	**-0.4**
CTAO				pmax	pmax		
	comp=Z,37nm,0.7s,mb5.1						
CTAO	**Charters Tower**	**32.80**	**261**	*e*P	**P**	**05 07 14.0**	**-0.4**
	comp=Z,37nm,0.7s,mb5.1						
CTAO	**Charters Tower**	**32.80**	**261**	P	**P**	**05 07 14.6**	**+0.2**
	comp=Z,54nm,0.8s,mb5.2						
CNB	**Canberra Magne**	**32.82**	**232**	*e*P	**P**	**05 07 15.2**	**+0.9**
CAN	**Canberra**	**33.10**	**232**	*e*P	**P**	**05 07 17.0**	**+0.4**
CAN				pmax	pmax		
	comp=Z,37nm,0.8s,mb5.1						
CAN	**Canberra**	**33.10**	**232**	*e*P	**P**	**05 07 17.0**	**+0.3**
	comp=Z,37nm,0.8s,mb5.1						
PMG	**Port Moresby**	**33.88**	**280**	*d i*P	**P**	**05 07 23.4**	**0.0**
PMG				pmax	pmax		
	comp=Z,81nm,0.8s						
PMG	**Port Moresby**	**33.88**	**280**	*e*P	**P**	**05 07 24.4**	**+0.9**
	comp=Z,75nm,0.8s,mb5.4						
PMG	**Port Moresby**	**33.88**	**280**	P	**P**	**05 07 24.3**	**+0.9**
	comp=Z,103nm,0.8s,mb5.5						
COEN	**Coen**	**36.48**	**271**	*e*P	**P**	**05 07 45.6**	**+0.7**
	comp=Z,451nm,0.7s						
COEN	**Coen**	**36.48**	**271**	P	**P**	**05 07 45.7**	**+0.8**
	comp=Z,325nm,0.8s						
TOO	**Toolangi**	**36.57**	**231**	*e*P	**P**	**05 07 45.9**	**+0.6**
STKA	**Stephens Creek**	**38.00**	**241**	*e*P	**P**	**05 07 57.7**	**+0.7**
	comp=Z,57nm,0.6s,mb5.3						
STKA	**Stephens Creek**	**38.00**	**241**	P	**P**	**05 07 57.8**	**+0.9**
	comp=Z,78nm,0.7s,mb5.3,baz=85,slow=8.6,SNR=84						
STKA	**Stephens Creek**	**38.00**	**241**	P	**P**	**05 07 57.8**	**+0.8**
STKA				pmax	pmax		
	comp=Z,78nm,0.7s						
STKA	**Stephens Creek**	**38.00**	**241**	*e*P	**P**	**05 07 57.8**	**+0.8**
	comp=Z,15nm,0.8s,mb4.6						
WRAB	**Tennant Creek**	**43.98**	**260**	*e*P	**P**	**05 08 43.6**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,31nm,0.7s,mb5.0						
WRAB	**Tennant Creek**	**43.98**	**260**	*e*P	**P**	**05 08 43.6**	**-0.6**
	comp=Z,31nm,0.7s,mb4.9						
WRAB	**Tennant Creek**	**43.98**	**260**	P	**P**	**05 08 44.0**	**-0.2**
	comp=Z,51nm,0.8s,mb5.1						
WRA	**Warramunga Arr**	**43.99**	**260**	P	**P**	**05 08 44.2**	**-0.1**
	baz=95,slow=7.1						
ASAR	**Alice Springs**	**44.14**	**254**	P	**P**	**05 08 45.6**	**+0.2**
	comp=Z,275nm,0.7s,baz=86,slow=8.5,SNR=377						
ASAR				PcP	PcP	05 10 15.8	-0.3
	comp=Z,9.3nm,0.9s,baz=87,slow=4.6,SNR=6.3						
ASAR				ScP	ScP	05 13 10.8	+1.4
	comp=Z,1.9nm,0.9s,baz=104,slow=4.2,SNR=4.7						
ASAR				S	**S**	**05 14 34.5**	**-0.2**
	comp=Z,3.7nm,0.9s,baz=90,slow=16,SNR=9.6						
ASAR	**Alice Springs**	**44.14**	**254**	P	**P**	**05 08 45.6**	**+0.2**
ASAR						05 10 15.8	
ASAR				S	**S**	**05 14 34.5**	**-0.2**
ASAR				pmax	pmax		
	comp=Z,275nm,0.7s						
ASAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ASAR				pmax	pmax		
	comp=N,2.0nm,0.9s						
ASAR				smax			
	comp=N,4.0nm,0.9s						
SMPI	**Sarmi**	**44.39**	**286**	P	**P**	**05 08 47.5**	**0.0**
KAKA	**Kakadu**	**46.96**	**269**	*e*P	**P**	**05 09 06.6**	**-0.3**
	comp=N,34nm,0.4s,mb5.2						
KAKA	**Kakadu**	**46.96**	**269**	*e*P	**P**	**05 09 06.5**	**-0.4**
	comp=N,159nm,0.7s,mb5.7						
BAKI	**Biak**	**47.09**	**286**	P	**P**	**05 09 08.7**	**+0.8**
GUMO	**Guam**	**47.50**	**309**	P	**P**	**05 09 10.1**	**-0.8**
	comp=N,21nm,0.5s,mb4.9,baz=163,slow=14,SNR=3.6						
GUMO	**Guam**	**47.50**	**309**	P	**P**	**05 09 10.1**	**-0.8**
GUMO				pmax	pmax		
	comp=Z,21nm,0.5s,mb4.9						
FORT	**Forrest**	**49.37**	**245**	*e*P	**P**	**05 09 23.7**	**-0.7**
	comp=Z,89nm,0.6s,mb5.4						
FORT	**Forrest**	**49.37**	**245**	*e*P	**P**	**05 09 23.7**	**-0.7**
	comp=Z,96nm,0.7s,mb5.3						
KNA	**Kununurra**	**49.84**	**264**	P	**P**	**05 09 27.2**	**-0.9**
	comp=Z,252nm,0.7s,comp=Z,3μm						
SWI	**Sorong**	**51.68**	**284**	P	**P**	**05 09 41.9**	**+0.5**
	comp=Z,1μmcomp=Z,137nm,0.8s,mb5.3						
FITZ	**Fitzroy Crossi**	**52.39**	**261**	*e*P	**P**	**05 09 46.6**	**+0.2**
	comp=Z,22nm,0.8s,mb4.5						
FITZ	**Fitzroy Crossi**	**52.39**	**261**	P	**P**	**05 09 46.7**	**+0.3**
	comp=Z,12nm,0.7s,mb4.3,baz=92,slow=4.9,SNR=23						
FITZ	**Fitzroy Crossi**	**52.39**	**261**	*e*P	**P**	**05 09 46.4**	**0.0**
	comp=Z,33nm,1.1s,mb4.6						
FITZ	**Fitzroy Crossi**	**52.39**	**261**	P	**P**	**05 09 46.2**	**-0.2**
	comp=Z,46nm,1.3s,mb4.7						
NLAI	**Namlea**	**54.71**	**279**	P	**P**	**05 10 02.9**	**+0.1**
	comp=Z,42nm,0.6s,mb5.0						
LBMI	**Labuha**	**55.25**	**282**	P	**P**	**05 10 05.2**	**-1.3**
	comp=Z,64nm,0.8s,mb5.0						
TNTI	**Ternate**	**55.90**	**284**	P	**P**	**05 10 10.9**	**-0.1**
	comp=Z,109nm,0.8s,mb5.1						
MBWA	**Marble Bar**	**57.43**	**256**	*e*P	**P**	**05 10 20.7**	**-0.6**
MBWA	**Marble Bar**	**57.43**	**256**	*e*P	**P**	**05 10 20.6**	**-0.7**
	comp=Z,28nm,0.7s,mb4.6						
MBWA	**Marble Bar**	**57.43**	**256**	P	**P**	**05 10 20.2**	**-1.1**
KLBR	**Kellerberrin**	**58.19**	**244**	*e*P	**P**	**05 10 25.4**	**-0.9**
	comp=Z,86nm,0.8s,mb4.9						
NWAO	**Narrogin (SRO)**	**58.58**	**242**	*e*P	**P**	**05 10 28.6**	**-0.2**
NWAO				pmax	pmax		
	comp=Z,350nm,2.7s						
NWAO	**Narrogin (SRO)**	**58.58**	**242**	*e*P	**P**	**05 10 28.6**	**-0.2**
	comp=Z,350nm,2.7s,mb5.0						
SBA	**Scott Base**	**60.20**	**183**	*e*P	**P**	**05 10 39.6**	**+0.8**
SBA				pmax	pmax		
	comp=Z,22nm,1.1s,mb4.3						
SBA	**Scott Base**	**60.20**	**183**	*e*P	**P**	**05 10 39.6**	**+0.8**
	comp=Z,22nm,1.1s,mb4.3						
CASY	**Casey**	**65.71**	**205**	*e*P	**P**	**05 11 13.1**	**-1.0**
	comp=Z,28nm,0.8s,mb4.7						
MJAR	**Matsushiro Arr**	**67.68**	**324**	P	**P**	**05 11 26.0**	**-0.7**
	comp=Z,1.5nm,0.3s,mb4.0,baz=121,slow=0.3,SNR=6.8						
MJAR	**Matsushiro Arr**	**67.68**	**324**	P	**P**	**05 11 26.0**	**-0.7**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MAJO	**Matsushiro**	**67.69**	**324**	*e*P	**P**	**05 11 25.9**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.3						
MAJO	**Matsushiro**	**67.69**	**324**	*e*P	**P**	**05 11 25.9**	**-0.8**
	comp=Z,9.1nm,0.7s,mb4.3						
MAT	**Matsushiro**	**67.69**	**324**	P	**P**	**05 11 26.7**	**0.0**
KKM	**Kota Kinabalu**	**68.18**	**284**	*e*P	**P**	**05 11 31.0**	**+0.8**
	comp=Z,14nm,0.7s,mb4.5						
TPUB	**Ta-pu**	**71.83**	**303**	*e*P	**P**	**05 11 50.1**	**-1.4**
	comp=Z,23nm,0.8s,mb4.8						
QSPA	**South Pole Qui**	**71.96**	**180**	*e*P	**P**	**05 11 51.0**	**-0.3**
	comp=Z,27nm,0.7s,mb4.9						
KSM	**Kuching**	**72.09**	**278**	*e*P	**P**	**05 11 54.0**	**+0.8**
	comp=Z,52nm,0.8s,mb5.1						
YSS	**Yuzh-Sakhalins**	**73.30**	**334**	*e*P	**P**	**05 11 58.4**	**-1.0**
YSS				pmax	pmax		
	comp=Z,36nm,2.5s,mb4.5						
PETK	**Petropavlovsk-**	**73.70**	**346**	P	**P**	**05 12 01.1**	**-0.4**
	comp=Z,6.0nm,0.6s,mb4.3,baz=127,slow=8.6,SNR=13						
PETK	**Petropavlovsk-**	**73.70**	**346**	P	**P**	**05 12 01.1**	**-0.4**
PETK				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.3						
HABR	**Khabarovsk**	**77.86**	**331**	*e*P	**P**	**05 12 21.3**	**-3.2**
HABR				*e*		05 12 29.7	
HABR				*e**PP	pP	05 14 27.3	-6.6
HABR				*SP	sP	05 15 28.5	-8.9
HABR				S	S	05 21 25.2	-2.4
HABR				*e*		05 21 46.3	
HABR				pmax	pmax		
	comp=N,7.0nm,0.7s						
HABR				pmax	pmax		
	comp=Z,24nm,0.7s,mb4.7						
HABR				pmax	pmax		
	comp=E,13nm,0.7s						
HABR				MLR	MLR		
	comp=Z,28nm,16.0s						
MDJ	**Mudanjiang**	**77.98**	**325**	P	**P**	**05 12 26.1**	**+0.9**
MDJ				S	S	05 21 32.3	+3.4
MDJ				ScS	ScS	05 21 51.0	+3.0
MDJ				sS	sS	05 25 15.8	-3.8
MDJ				SS	SS	05 26 52.9	+3.3
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.1						
MDJ				pmax	pmax		
	comp=Z,42nm,3.9s						
VES	**Vestal, Richgr**	**78.07**	**46**	⇓P	**P**	**05 12 25.3**	**-0.6**
	baz=78						
MURC	**Murrieta**	**78.21**	**49**	⇓P	**P**	**05 12 26.1**	**-0.5**
	baz=78						
BFSC	**Mount Baldy Ra**	**78.21**	**48**	⇓P	**P**	**05 12 26.4**	**-0.3**
	baz=78						
EDW2	**Edwards Air Fo**	**78.31**	**47**	⇓P	**P**	**05 12 27.5**	**+0.2**
	baz=78						
ISA	**Isabella**	**78.39**	**46**	⇑P	**P**	**05 12 27.7**	**0.0**
	baz=78						
ISA	**Isabella**	**78.39**	**46**	*e*P	**P**	**05 12 28.1**	**+0.5**
ISA				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.1						
ISA	**Isabella**	**78.39**	**46**	*e*P	**P**	**05 12 28.1**	**+0.5**
	comp=Z,7.3nm,0.9s,mb4.1						
CMB	**Columbia Colle**	**78.40**	**44**	*e*P	**P**	**05 12 26.7**	**-0.9**
CMB				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.2						
CMB	**Columbia Colle**	**78.40**	**44**	*e*P	**P**	**05 12 26.7**	**-0.9**
	comp=Z,5.7nm,0.6s,mb4.2						
MONP	**Monument Peak**	**78.41**	**50**	⇑P	**P**	**05 12 27.7**	**-0.1**
	baz=78						
DVTC	**Desert V Tower**	**78.52**	**50**	⇑P	**P**	**05 12 28.4**	**0.0**
	baz=79						
YBH	**Yreka Blue Hor**	**79.06**	**39**	P	**P**	**05 12 30.9**	**-0.1**
	comp=Z,5.8nm,0.5s,mb4.2,baz=175,slow=2.8,SNR=32						
YBH	**Yreka Blue Hor**	**79.06**	**39**	P	**P**	**05 12 30.9**	**-0.1**
YBH				pmax	pmax		
	comp=Z,6.0nm,0.5s						
YBH	**Yreka Blue Hor**	**79.06**	**39**	*e*P	**P**	**05 12 30.9**	**-0.1**
	comp=Z,10nm,0.7s,mb4.3						
CWC	**Cottonwood Cre**	**79.07**	**46**	⇑P	**P**	**05 12 31.1**	**-0.1**
	baz=79						
BELC	**Belle Mtn. Jos**	**79.27**	**49**	⇑P	**P**	**05 12 32.0**	**-0.3**
	baz=79						
MPMC	**Manual Prospec**	**79.28**	**46**	⇑P	**P**	**05 12 31.8**	**-0.5**
	baz=79						
WAKR	**Walker**	**79.28**	**44**	*e*P	**P**	**05 12 32.8**	**+0.5**
HUMO	**Hull Mountain**	**79.43**	**39**	*e*P	**P**	**05 12 33.0**	**+0.1**
	comp=Z,3.4nm,0.6s,mb3.9						
BC3	**Big Chuckawall**	**79.49**	**49**	⇑P	**P**	**05 12 33.4**	**-0.1**
	baz=80						
WCN	**Washoe City**	**79.51**	**43**	⇑P	**P**	**05 12 33.4**	**-0.1**
	baz=80						
GLA	**Glamis**	**79.65**	**50**	⇑P	**P**	**05 12 34.4**	**+0.1**
	baz=80						
CN2	**Changchun**	**79.79**	**323**	*e*P	**P**	**05 12 36.3**	**+1.6**
CN2				*e*S	S	05 21 52.4	+4.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.3s,mb4.6						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
GRAC	**Grapevine Rang**	**79.85**	**46**	⇑P	**P**	**05 12 35.6**	**+0.3**
	baz=80						
GMRC	**Granite Mounta**	**79.90**	**48**	⇑P	**P**	**05 12 35.7**	**+0.1**
	baz=80						
FURC	**Furnace Creek,**	**79.93**	**46**	⇓P	**P**	**05 12 35.4**	**-0.2**
	baz=80						
NVAR	**Mina Array Bea**	**79.98**	**44**	P	**P**	**05 12 35.6**	**-0.3**
	comp=Z,4.9nm,0.7s,mb4.0,baz=225,slow=9.0,SNR=21						
NVAR				pP	pP	05 14 45.0	-1.3
	comp=Z,0.8nm,0.7s,baz=219,slow=7.0,SNR=3.9						
U10A	**Ash Meadows, A**	**80.27**	**47**	⇑P	**P**	**05 12 37.5**	**0.0**
	baz=80						
Z13A	**Yuma Proving G**	**80.58**	**51**	⇓P	**P**	**05 12 39.3**	**+0.2**
	baz=81						
V11A	**Goodsprings**	**80.60**	**48**	⇓P	**P**	**05 12 39.1**	**0.0**
	baz=81						
214A	**Organ Pipe Nat**	**80.61**	**52**	⇑P	**P**	**05 12 39.8**	**+0.4**
	baz=81						
MOD	**Modoc**	**80.62**	**40**	*e*P	**P**	**05 12 39.1**	**0.0**
	comp=Z,6.1nm,0.6s,mb4.2						
K05A	**Summer Lake**	**80.73**	**39**	⇑P	**P**	**05 12 39.4**	**-0.2**
	baz=81,SNR=6.5						
S10A	**Tonopah Range,**	**80.86**	**45**	⇑P	**P**	**05 12 40.1**	**-0.3**
	baz=81,SNR=13						
V12A	**Nelson**	**80.95**	**48**	⇓P	**P**	**05 12 40.9**	**0.0**
	baz=81						
H04A	**Detroit Lake**	**81.11**	**37**	⇓P	**P**	**05 12 40.7**	**-0.8**
	baz=81,SNR=6.7						
X13A	**Yucca**	**81.12**	**49**	⇓P	**P**	**05 12 41.9**	**0.0**
	baz=81						
Z14A	**Wintersburg**	**81.18**	**51**	⇓P	**P**	**05 12 42.4**	**+0.2**
	baz=81						
R10A	**Warm Springs**	**81.25**	**45**	⇓P	**P**	**05 12 42.4**	**-0.1**
	baz=81,SNR=12						
W13A	**Hualapai Mount**	**81.33**	**49**	⇓P	**P**	**05 12 43.0**	**+0.1**
	baz=81						
115A	**Sonoran Desert**	**81.40**	**52**	⇑P	**P**	**05 12 43.5**	**+0.2**
	baz=82						
Y14A	**Wickenburg**	**81.41**	**50**	⇓P	**P**	**05 12 43.6**	**+0.3**
	baz=82						
T11A	**Corn Creek, Al**	**81.45**	**46**	⇑P	**P**	**05 12 43.4**	**-0.1**
	baz=82,SNR=11						
E03A	**Lebam**	**81.46**	**35**	⇑P	**P**	**05 12 43.4**	**+0.1**
	baz=82						
U12A	**Valley of Fire**	**81.52**	**47**	⇓P	**P**	**05 12 44.0**	**+0.1**
	baz=82						
T12A	**Moapa**	**81.54**	**47**	⇓P	**P**	**05 12 44.1**	**+0.1**
	baz=82						
V13A	**Grand Canyon W**	**81.62**	**48**	⇓P	**P**	**05 12 44.6**	**+0.2**
	baz=82						
216A	**Three Points,**	**81.66**	**53**	⇑P	**P**	**05 12 45.2**	**+0.5**
	baz=82						
F04A	**Amboy**	**81.72**	**36**	⇑P	**P**	**05 12 44.5**	**-0.2**
	baz=82						
116A	**Eloy**	**81.73**	**52**	⇓P	**P**	**05 12 45.1**	**+0.1**
	baz=82						
X14A	**Yava**	**81.74**	**50**	⇑P	**P**	**05 12 45.1**	**0.0**
	baz=82,SNR=8.8						
R11A	**Troy Canyon, C**	**81.76**	**45**	⇓P	**P**	**05 12 44.9**	**-0.2**
	baz=82,SNR=5.5						
NLWA	**Neilton Lookou**	**81.81**	**34**	⇓P	**P**	**05 12 45.1**	**0.0**
	baz=82						
P10A	**Eureka**	**81.83**	**44**	⇑P	**P**	**05 12 45.2**	**-0.1**
	baz=82						
S12A	**Delamar Landin**	**81.89**	**46**	⇓P	**P**	**05 12 45.9**	**+0.2**
	baz=82,SNR=14						
Y15A	**Casa Rosa Ranc**	**81.91**	**50**	⇑P	**P**	**05 12 46.1**	**+0.3**
	baz=82,SNR=5.8						
WVOR	**Wild Horse Val**	**81.95**	**41**	*e*P	**P**	**05 12 45.2**	**-0.7**
WVOR				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.2						
WVOR	**Wild Horse Val**	**81.95**	**41**	*e*P	**P**	**05 12 45.2**	**-0.7**
	comp=Z,9.4nm,1.0s,mb4.3						
W14A	**Seligman**	**81.96**	**49**	⇓P	**P**	**05 12 46.2**	**+0.1**
	baz=82,SNR=5.7						
Q11A	**Duckwater**	**81.97**	**45**	⇓P	**P**	**05 12 45.9**	**-0.2**
	baz=82,SNR=9.2						
217A	**Green Valley**	**82.04**	**53**	⇑P	**P**	**05 12 46.9**	**+0.3**
	baz=82,SNR=5.5						
V14A	**Boquillas Ranc**	**82.14**	**49**	⇑P	**P**	**05 12 47.3**	**+0.3**
	baz=82,SNR=9.5						
X15A	**Humboldt**	**82.23**	**50**	⇑P	**P**	**05 12 47.9**	**+0.4**
	baz=82,SNR=8.4						
T13A	**Saint George**	**82.25**	**47**	⇑P	**P**	**05 12 47.7**	**+0.2**
	baz=82,SNR=7.0						
P11A	**Circle Ranch,**	**82.27**	**44**	⇑P	**P**	**05 12 47.8**	**+0.2**
	baz=82						
Z16A	**Peralta Trail,**	**82.29**	**51**	⇑P	**P**	**05 12 47.7**	**-0.2**
	baz=82						
TUC	**Tucson**	**82.30**	**53**	*e*P	**P**	**05 12 48.4**	**+0.5**
TUC				pmax	pmax		
	comp=Z,26nm,1.7s,mb4.5						
TUC	**Tucson**	**82.30**	**53**	*e*P	**P**	**05 12 48.4**	**+0.5**
	comp=Z,26nm,1.7s,mb4.5						
G06A	**Carlson Farm,**	**82.33**	**37**	⇓P	**P**	**05 12 48.2**	**+0.5**
	baz=82						
I07A	**Izee**	**82.34**	**39**	⇓P	**P**	**05 12 47.6**	**-0.2**
	baz=82,SNR=13						
R12A	**Pony Springs,**	**82.42**	**46**	⇑P	**P**	**05 12 48.3**	**0.0**
	baz=82,SNR=7.5						
117A	**Oracle**	**82.45**	**52**	⇓P	**P**	**05 12 48.8**	**+0.2**
	baz=82						
U14A	**Mt Trumbull**	**82.47**	**48**	⇓P	**P**	**05 12 48.9**	**+0.2**
	baz=82,SNR=16						
Y16A	**Circle Bar Ran**	**82.50**	**51**	⇓P	**P**	**05 12 49.1**	**+0.3**
	baz=83,SNR=6.3						
W15A	**Williams**	**82.53**	**49**	⇑P	**P**	**05 12 49.5**	**+0.5**
	baz=83						
J08A	**Circle Bar Ran**	**82.56**	**40**	⇓P	**P**	**05 12 48

comp=Z,6.0nm,1.1s,mb4.0
MAW **Mawson** 83.48 200 *e*P P 05 12 52.6 -0.5
comp=Z,13nm,0.7s,mb4.6
MAW **Mawson** 83.48 200 P P 05 12 52.7 -0.5
comp=Z,15nm,0.7s,mb4.6,baz=122,slow=6.6,SNR=42
MAW **Mawson** 83.48 200 P P 05 12 52.7 -0.4
MAW pmax pmax
comp=Z,15nm,0.7s
MAW **Mawson** 83.48 200 *e*P P 05 12 52.5 -0.7
comp=Z,4.0nm,0.6s,mb4.1
Y18A **Canyon Day Jun** 83.53 52 ⇓P P 05 12 54.5 +0.6
baz=84,SNR=5.3
RSW **Rattlesnake Hi** 83.59 37 *e*P P 05 12 53.2 -0.8
comp=Z,6.7nm,0.6s,mb4.3
320A **Kipp Ranch, An** 83.60 54 ⇓P P 05 12 55.1 +0.7
baz=84,SNR=8.2
L11A **Cat Creek Ranc** 83.61 42 ⇑P P 05 12 53.8 -0.4
baz=84,SNR=5.6
HAWA **Hanford** 83.62 37 *e*P P 05 12 53.3 -0.8
comp=Z,5.3nm,0.7s,mb4.2
Q14A **Sevier Lake (B** 83.65 46 ⇑P P 05 12 54.6 +0.2
baz=84,SNR=9.1
RPW **Rockport** 83.71 34 *e*P P 05 12 53.4 -1.1
M12A **Wells** 83.77 43 ⇑P P 05 12 55.1 +0.2
baz=84
U16A **Tuba City** 83.80 49 ⇑P P 05 12 55.3 0.0
baz=84,SNR=5.6
V17A **Tonalea, Kykot** 83.80 50 ⇓P P 05 12 55.8 +0.5
baz=84
SEY **Seymchan** 83.81 347 *ce*P P 05 12 53.9 -0.8
220A **Playas Peak, P** 83.84 54 ⇑P P 05 12 56.1 +0.5
baz=84
ENH **Enshi** 83.86 304 *e*P P 05 12 56.0 +0.3
comp=Z,16nm,0.9s,mb4.6
T16A **Glen Canyon Da** 83.92 48 ⇑P P 05 12 56.2 +0.3
baz=84
X18A **Snowflake** 83.92 51 ⇑P P 05 12 56.0 +0.1
baz=84
N13A **Wendover, West** 83.95 44 ⇓P P 05 12 56.3 +0.4
baz=84
L12A **House Creek Ra** 84.07 42 ⇑P P 05 12 57.1 +0.7
baz=84
BMO **Blue Mountains** 84.07 39 *e*P P 05 12 56.0 -0.4
comp=Z,5.6nm,1.3s,mb3.9
P14A **Drum Mountains** 84.08 45 ⇓P P 05 12 56.9 +0.3
baz=84
Y19A **Nutrioso** 84.19 52 ⇑P P 05 12 57.9 +0.7
baz=84
S16A **Weppner Ranch,** 84.20 47 ⇓P P 05 12 58.3 +1.1
baz=84
MFID **Camas Ranch** 84.22 41 ⇑P P 05 12 56.9 -0.2
baz=84,SNR=5.0
M13A **Montello** 84.23 43 ⇓P P 05 12 57.5 +0.3
baz=84
Z20A **Nine Sixteen R** 84.31 53 ⇓P P 05 12 58.4 +0.5
baz=84
TRF **Thorofare Moun** 84.32 13 *e*P P 05 12 55.2 -1.9
comp=Z,11nm,0.7s,mb4.5
D08A **Wollman Farm,** 84.34 37 ⇑P P 05 12 57.4 -0.2
baz=84,SNR=5.0
X19A **St. Johns** 84.37 51 ⇑P P 05 12 58.4 +0.3
baz=84
K12A **Draper Farm, C** 84.39 42 ⇓P P 05 12 58.1 +0.1
baz=84
T17A **Navajo Res., N** 84.42 48 ⇑P P 05 12 59.2 +0.9
baz=84
E09A **Wood Farm, Sta** 84.48 37 ⇑P P 05 12 58.5 +0.1
baz=85
J12A **Stokes Ranch,** 84.59 41 ⇑P P 05 12 59.3 +0.3
baz=85
GYA **Guiyang** 84.59 300 P P 05 13 01.3 +2.0
GYA pP pP 05 15 10.0 -1.8
GYA PP PP 05 16 31.6 +4.1
GYA SKS 05 22 25.0
GYA S S 05 22 38.9 +3.1
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
N14A **Grayback Hills** 84.62 44 ⇓P P 05 12 59.2 +0.1
baz=85
OD2 **Odessa Site #2** 84.65 36 *e*P P 05 12 58.7 -0.4
comp=Z,5.9nm,0.8s,mb4.3
121A **Cookes Peak, D** 84.68 53 ⇑P P 05 13 00.1 +0.5
baz=85
F10A **Beach Ranch, E** 84.72 38 ⇓P P 05 12 59.1 -0.4
baz=85,SNR=15
Y20A **Horse Springs,** 84.82 52 ⇓P P 05 13 00.8 +0.5
baz=85
U18A **Rough Rock, Ch** 84.83 49 ⇑P P 05 13 00.2 -0.1
baz=85
M14A **Sheep Mountain** 84.83 43 ⇑P P 05 12 59.6 -0.5
baz=85
I12A **Atlanta** 84.84 41 ⇑P P 05 13 00.0 -0.1
baz=85,SNR=5.9
B08A **Colville Reser** 84.84 35 ⇓P P 05 12 59.0 -1.0
baz=85
K13A **Stover Farm, H** 84.92 42 ⇓P P 05 13 00.8 +0.2
baz=85
X20A **Quemado** 85.00 51 ⇑P P 05 13 01.5 +0.3
baz=85
Q16A **Castle Valley** 85.06 47 ⇓P P 05 13 01.9 +0.6
baz=85
Z21A **St. Cloud Mine** 85.09 53 ⇓P P 05 13 02.5 +0.9
baz=85
C09A **Chrisman Ranch** 85.12 36 ⇓P P 05 13 01.4 0.0
baz=85
T18A **Mexican Hat** 85.15 49 ⇓P P 05 13 01.7 -0.1
baz=85,SNR=12
L14A **Malta** 85.16 43 ⇑P P 05 13 01.7 0.0
baz=85
HLID **Hailey** 85.17 41 ⇓P P 05 13 01.8 +0.1
baz=85,SNR=11
HLID **Hailey** 85.17 41 *e*P P 05 13 01.7 -0.1
comp=Z,4.3nm,0.8s,mb4.1
U19A **Dine' College,** 85.25 50 ⇑P P 05 13 02.8 +0.5
baz=85
W20A **Ramah** 85.26 51 ⇓P P 05 13 02.7 +0.3
baz=85
Y21A **Point of Rocks** 85.39 52 ⇑P P 05 13 03.4 +0.4
baz=85
M15A **Larsen Ranch,** 85.40 44 ⇑P P 05 13 02.5 -0.4
baz=86
H12A **Diamond D Ranc** 85.40 40 ⇓P P 05 13 02.5 -0.4
baz=86,SNR=13
K14A **Jones Ranch, D** 85.45 43 ⇓P P 05 13 03.4 +0.3
baz=86
I13A **Wildhorse Cree** 85.54 41 ⇓P P 05 13 03.7 +0.2
baz=86
SRU **San Rafael** 85.59 47 ⇓P P 05 13 04.1 +0.2
baz=86
Z22A **Elephant Butte** 85.61 53 ⇑P P 05 13 03.8 -0.3
baz=86
J14A **Carey** 85.62 42 ⇓P P 05 13 04.3 +0.4
baz=86,SNR=13
T19A **Beclabito** 85.62 49 ⇓P P 05 13 04.4 +0.4
baz=86
L15A **Malad City** 85.70 43 ⇓P P 05 13 03.9 -0.4
baz=86
H13A **Challis** 85.78 40 ⇓P P 05 13 04.4 -0.2
baz=86,SNR=5.3
F12A **Elk City** 85.78 39 ⇓P P 05 13 03.9 -0.6
baz=86,SNR=16
U20A **Newcomb** 85.79 50 ⇑P P 05 13 04.5 -0.4
baz=86
Q18A **Rafter H Ranch** 85.86 47 ⇑P P 05 13 04.7 -0.4
baz=86
Y22A **Socorro** 85.89 52 ⇓P P 05 13 05.6 +0.1
baz=86
E12A **Beaver Dam Sad** 85.94 38 ⇑P P 05 13 04.9 -0.4
baz=86
K15A **Arbon** 85.94 43 ⇓P P 05 13 05.4 0.0
baz=86
O17A **Robinson Place** 85.94 46 ⇓P P 05 13 05.7 +0.2
baz=86,SNR=7.1
S19A **Harvey Farm, M** 85.95 48 ⇑P P 05 13 05.6 +0.1
baz=86
I14A **Mackay** 85.96 41 ⇑P P 05 13 06.1 +0.6
baz=86,SNR=11
324A **Moseley Ranch,** 86.01 55 ⇑P P 05 13 05.8 -0.2
baz=86
P18A **Preston Nutter** 86.02 46 ⇑P P 05 13 05.8 -0.1
baz=86
NEW **Newport** 86.02 36 *e*P P 05 13 04.3 -1.4
NEW pmax pmax
comp=Z,3.0nm,0.7s
NEW **Newport** 86.02 36 *e*P P 05 13 04.3 -1.4
comp=Z,3.2nm,0.7s,mb4.1
HWUT **Hardware Ranch** 86.05 44 *e*P P 05 13 05.7 -0.3
comp=Z,2.1nm,0.7s,mb3.9
G13A **Cobalt** 86.06 40 ⇑P P 05 13 05.5 -0.5
baz=86,SNR=5.3
COLA **College** 86.09 13 *e*P P 05 13 03.4 -2.2
COLA pmax pmax
comp=Z,7.0nm,0.6s,mb4.5
COLA **College** 86.09 13 *e*P P 05 13 03.4 -2.2
comp=Z,7.2nm,0.6s,mb4.5
R19A **Curley Farm, L** 86.10 48 ⇓P P 05 13 06.2 0.0
baz=86
425A **Indio Mountain** 86.14 56 ⇑P P 05 13 07.0 +0.4
baz=86,SNR=6.2
MNTX **Cornudas Mount** 86.19 55 *e*P P 05 13 06.5 -0.3
comp=Z,8.5nm,1.5s,mb4.2
ILAR **Eielson Array** 86.20 13 P P 05 13 04.1 -2.0
comp=Z,2.9nm,0.6s,mb4.1,baz=234,slow=5.2,SNR=42
ILAR **Eielson Array** 86.20 13 P P 05 13 04.1 -2.0
ILAR pmax pmax
comp=Z,3.0nm,0.6s
N17A **Moffit Pass** 86.23 45 ⇑P P 05 13 06.8 -0.1
baz=86
224A **Cornudas Mount** 86.23 55 ⇑P P 05 13 07.4 +0.3
baz=86,SNR=6.0
C11A **Tepee Creek (N** 86.29 37 ⇓P P 05 13 06.5 -0.5
baz=86,SNR=18
PV10 **Paradox Valley** 86.30 48 *e*P P 05 13 06.8 -0.4
comp=Z,36nm,0.7s,mb5.1
626A **Big Bend Ranch** 86.33 57 ⇑P P 05 13 08.0 +0.5
baz=86,SNR=12
L16A **Fish Haven** 86.33 44 ⇓P P 05 13 07.0 -0.3
baz=86
J15A **Blackfoot** 86.35 42 ⇓P P 05 13 07.5 +0.2
baz=86,SNR=18
F13A **Darby** 86.35 39 ⇑P P 05 13 06.4 -0.9
baz=86,SNR=8.2
H14A **Leadore** 86.36 41 ⇑P P 05 13 07.7 +0.4
baz=86,SNR=7.7
325A **Bean Ranch, Si** 86.38 56 ⇓P P 05 13 07.9 +0.1
baz=86
D12A **Red Ives Fores** 86.39 38 ⇓P P 05 13 07.1 -0.3
baz=86
Q19A **Hogan Spring (** 86.40 47 ⇑P P 05 13 06.9 -0.8
baz=86
U21A **Nageezi** 86.44 50 ⇑P P 05 13 07.8 -0.1
baz=86,SNR=7.3
PV01 **Paradox Valley** 86.52 48 *e*P P 05 13 08.1 -0.1
124A **Stringfield Ra** 86.54 54 ⇑P P 05 13 08.4 -0.1
baz=87
BILL **Bilibino** 86.55 355 *e*P P 05 13 07.6 -0.1
BILL pmax pmax
comp=Z,2.0nm,0.7s,mb4.0
526A **Mary Lane Ranc** 86.56 57 ⇑P P 05 13 09.0 +0.3
baz=87
G14A **Jackson** 86.61 40 ⇑P P 05 13 08.6 +0.1
baz=87
K16A **Soda Springs** 86.62 43 ⇓P P 05 13 09.2 +0.6
baz=87
TXAR **Lajitas Array** 86.62 58 P P 05 13 09.4 +0.5
comp=Z,9.6nm,0.9s,mb4.5,baz=224,slow=5.2,SNR=41
TXAR **Lajitas Array** 86.62 58 P P 05 13 09.4 +0.5
TXAR pmax pmax
comp=Z,10.0nm,0.9s
C12B **Naegeli Ranch,** 86.67 37 ⇑P P 05 13 08.7 0.0
baz=87
E13A **Victor** 86.77 39 ⇑P P 05 13 09.3 0.0
baz=87
MCMT **McKenzie Canyo** 86.78 41 *e*P P 05 13 10.1 +0.8
comp=Z,5.0nm,1.2s,mb4.1
225A **Deer Hill, Car** 86.79 55 ⇓P P 05 13 09.5 -0.2
baz=87
H15A **Lima** 86.81 41 ⇓P P 05 13 10.0 +0.6
baz=87,SNR=6.3
J16A **Bone** 86.81 42 ⇓P P 05 13 10.0 +0.5
baz=87,SNR=9.8
426A **McDonald Obser** 86.85 56 ⇓P P 05 13 10.4 +0.5
baz=87,SNR=7.8
627A **Terlingua Ranc** 86.89 58 ⇑P P 05 13 10.6 +0.4
baz=87,SNR=14
HHC **Hu-ho-hao-te** 86.96 315 *e*P P 05 13 10.1 -0.1
HHC PP PP 05 16 47.4 +1.5
HHC SKS 05 22 40.0
HHC S S 05 22 58.4 +0.8
HHC SS SS 05 29 04.9 +4.0
HHC pmax pmax
comp=Z,10.0nm,0.7s,mb4.7
HHC pmax pmax
comp=Z,69nm,7.3s
M18A **Lyman** 86.96 45 ⇓P P 05 13 10.4 +0.2
baz=87
527A **Woodward Ranch** 86.97 57 ⇑P P 05 13 10.6 0.0
baz=87,SNR=8.3
K17A **Gardner Place,** 87.01 43 ⇓P P 05 13 10.8 +0.4
baz=87
RRI2 **Red Ridge** 87.03 43 *e*P P 05 13 10.7 +0.2
comp=Z,7.9nm,0.9s,mb4.4
Y24A **Capitan** 87.05 53 ⇑P P 05 13 10.8 0.0
baz=87,SNR=7.1
Q20A **Ridgley Place,** 87.07 47 ⇓P P 05 13 10.7 -0.2
baz=87
O19A **Miners Draw (B** 87.09 46 ⇑P P 05 13 10.8 -0.1
baz=87
125A **Gardner Draw,** 87.14 54 ⇑P P 05 13 11.3 +0.1
baz=87
BSMT **Bassoo Peak** 87.14 37 *e*P P 05 13 10.7 -0.2
G15A **Dillon** 87.17 41 ⇓P P 05 13 11.3 +0.1
baz=87,SNR=5.4
I16A **Newdale** 87.18 42 ⇑P P 05 13 11.6 +0.4
baz=87,SNR=6.3
GDL2 **Guadalupe Moun** 87.18 55 *e*P P 05 13 12.2 +0.7
DLMT **Dillon** 87.20 40 *e*P P 05 13 10.9 -0.4
comp=Z,3.0nm,0.6s,mb4.2
A12A **Yaak River Ran** 87.21 36 ⇑P P 05 13 11.5 +0.3
baz=87
V23A **Ortiz Mt. (NFS** 87.23 51 ⇓P P 05 13 11.3 -0.3
baz=87
628A **Black Gap, Mar** 87.30 58 ⇑P P 05 13 12.3 +0.1
baz=87,SNR=10
226A **Malaga, Loving** 87.33 55 ⇓P P 05 13 12.4 +0.2
baz=87
TPAW **Teton Pass** 87.34 43 *e*P P 05 13 12.2 +0.2
comp=Z,3.8nm,0.9s,mb4.1
REDW **Red Top Meadow** 87.34 43 *e*P P 05 13 12.6 +0.6
comp=Z,4.0nm,0.7s,mb4.3
R21A **Cimarron** 87.34 48 ⇓P P 05 13 12.3 +0.2
baz=87
KMI **Kunming** 87.36 297 P P 05 13 14.1 +1.6
KMI pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
427A **Hayter Ranch,** 87.41 57 ⇑P P 05 13 12.6 0.0
baz=88,SNR=11
J17A **Brown Place, J** 87.43 43 ⇓P P 05 13 12.4 0.0
baz=88,SNR=8.4
DAWY **Dawson** 87.44 16 *e*P P 05 13 11.5 -0.4
U23A **El Rito** 87.47 51 ⇑P P 05 13 13.1 +0.3
baz=88
F15A **Butte** 87.49 40 ⇑P P 05 13 13.1 +0.5
baz=88
D14A **Greenough** 87.50 39 ⇑P P 05 13 12.0 -0.6
baz=88
Q21A **Lamborn Mesa,** 87.53 48 ⇑P P 05 13 13.0 +0.1
baz=88
K18A **Toltan Ranch,** 87.53 44 ⇓P P 05 13 12.8 -0.1
baz=88,SNR=8.6
IMW **Indian Meadow** 87.54 42 *e*P P 05 13 13.4 +0.5
comp=Z,5.2nm,0.8s,mb4.3
EGAK **Eagle** 87.55 15 *e*P P 05 13 11.2 -1.2
comp=Z,5.5nm,0.7s,mb4.4
CHMT **Chamberlain Mo** 87.56 39 *e*P P 05 13 12.7 -0.2
B13A **Whitefish** 87.59 37 ⇑P P 05 13 12.5 -0.5
baz=88
W24A **Lazy 6 Ranch,** 87.59 52 ⇓P P 05 13 13.4 0.0
baz=88
S22A **4UR Ranch, Cre** 87.59 49 ⇑P P 05 13 13.6 +0.3
baz=88
M19A **Rock Springs** 87.61 45 ⇑P P 05 13 13.1 -0.2
baz=88
Y25A **Mesa, Roswell** 87.61 53 ⇑P P 05 13 13.2 -0.3
baz=88
LOHW **Long Hollow** 87.62 43 *e*P P 05 13 13.3 +0.1
comp=Z,3.4nm,0.7s,mb4.2
G16A **Moss Hill, Enn** 87.62 41 ⇓P P 05 13 13.4 +0.2
baz=88
528A **Cox Ranch, San** 87.64 57 ⇓P P 05 13 13.4 -0.3
baz=88,SNR=6.5
C14A **Swan Lake** 87.70 38 ⇑P P 05 13 13.0 -0.6
baz=88
COLD **Coldfoot** 87.71 11 *e*P P 05 13 12.4 -0.8
comp=Z,13nm,0.8s,mb4.7
H16A **Russell Place,** 87.72 41 ⇓P P 05 13 13.9 +0.2
baz=88,SNR=6.1
L19A **Farson** 87.74 44 ⇑P P 05 13 13.8 -0.1
baz=88,SNR=8.6
J18A **Kendall Valley** 87.81 43 ⇓P P 05 13 14.1 -0.1
baz=88,SNR=18
R22A **Saguache, Gunn** 87.85 49 ⇑P P 05 13 14.6 +0.2
baz=88
Z26A **Caprock** 87.90 54 ⇓P P 05 13 14.7 -0.2
baz=88
BW06 **Boulder Array** 87.91 44 ⇓P P 05 13 14.2 -0.5
baz=88,SNR=8.1
BW06 **Boulder Array** 87.91 44 *e*P P 05 13 14.3 -0.4
comp=Z,3.1nm,0.6s,mb4.2
PDAR **Pinedale Array** 87.91 44 P P 05 13 14.2 -0.5
comp=Z,3.1nm,0.6s,mb4.2,baz=221,slow=3.2,SNR=30
PDAR pP pP 05 15 26.1 -2.4
comp=Z,0.7nm,0.9s,baz=254,slow=2.6,SNR=4.1
N20A **Spence Gulch,** 87.92 46 ⇓P P 05 13 14.7 0.0
baz=88
428A **Kincaid Ranch,** 87.94 57 ⇓P P 05 13 15.0 0.0
baz=88
F16A **Kennard Place,** 88.00 40 ⇓P P 05 13 15.2 +0.2
baz=88
H17A **Grant Village** 88.00 42 ⇓P P 05 13 16.2 +1.2
baz=88
Q22A **Crested Butte,** 88.01 48 ⇑P P 05 13 15.5 +0.3
baz=88
328A **Wristen Ranch,** 88.09 56 ⇓P P 05 13 15.1 -0.6
baz=88
127A **Arkansas Junct** 88.15 55 ⇓P P 05 13 15.8 -0.2
baz=88
WALA **Waterton Lakes** 88.25 37 *e*P P 05 13 15.9 -0.2
comp=Z,1.3nm,1.9s
M20A **Sweetwater, Wa** 88.26 45 ⇓P P 05 13 16.3 0.0
baz=88
B14A **Marquette Ranc** 88.27 37 ⇑P P 05 13 15.4 -0.8
baz=88
HRY **Holter Researc** 88.32 39 *e*P P 05 13 16.6 +0.2
G17A **Pierce Place,** 88.33 41 ⇑P P 05 13 16.2 -0.3
baz=88
CMAR **Chiang Mai Arr** 88.36 290 P P 05 13 18.8 +1.5
comp=Z,7.7nm,0.9s,mb4.4,baz=113,slow=2.7,SNR=20
CMAR **Chiang Mai Arr** 88.36 290 P P 05 13 18.8 +1.5
CMAR pmax pmax
comp=Z,8.0nm,0.9s
L20A **Wamsutter** 88.38 45 ⇓P P 05 13 16.9 0.0
baz=88,SNR=7.5
N21A **Black Mountain** 88.39 46 ⇑P P 05 13 17.4 +0.5
baz=88
K19A **Absolon Red Bu** 88.41 44 ⇑P P 05 13 16.5 -0.4
baz=88
V25A **Rancho No Teng** 88.43 52 ⇓P P 05 13 16.6 -0.7
baz=88
CHTO **Chiang Mai** 88.48 290 *e*P P 05 13 18.9 +1.1
CHTO pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
CHTO **Chiang Mai** 88.48 290 *e*P P 05 13 18.9 +1.1
comp=Z,4.9nm,0.8s,mb4.3
A14A **Double T Ranch** 88.49 37 ⇓P P 05 13 17.3 +0.1
baz=89
D16A **Dana Ranch, Ca** 88.64 39 ⇓P P 05 13 18.2 +0.3
baz=89
CD2 **Chengdu** 88.64 303 P P 05 13 19.8 +1.4
CD2 pP pP 05 15 30.0 -2.4
CD2 PP PP 05 17 02.6 +3.2
CD2 SKS 05 22 51.8
CD2 S S 05 23 15.6 +2.0
CD2 SS SS 05 29 30.6 +5.1
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
CD2 pmax pmax
comp=Z,140nm,6.6s
F17A **Fitzpatrick Pl** 88.65 40 ⇓P P 05 13 17.7 -0.3
baz=89
B15A **Bradely Ranch,** 88.66 38 ⇓P P 05 13 16.8 -1.2
baz=89
K20A **Yellowstone Ra** 88.66 44 ⇓P P 05 13 17.3 -0.9
baz=89,SNR=5.8
E17A **Martinsdale** 88.79 40 ⇓P P 05 13 18.7 +0.1
baz=89
O22A **Kremmling** 88.81 47 ⇑P P 05 13 18.8 -0.1
baz=89,SNR=5.2
SYO **Syowa Base** 88.84 193 ⇑*e*X P 05 13 15.4 -3.2
M21A **Separation Pea** 88.86 45 ⇓P P 05 13 19.1 0.0
baz=89
C16A **Fuhringer Ranc** 88.89 38 ⇓P P 05 13 18.9 -0.2
baz=89
G18A **Lazy EL Ranch,** 89.06 41 ⇑P P 05 13 20.1 +0.2
baz=89
MSTX **Muleshoe** 89.10 54 ⇑P P 05 13 20.0 -0.4
baz=89
N22A **Wattenberg Ran** 89.14 46 ⇓P P 05 13 20.3 -0.1
baz=89,SNR=8.5
RLMT **Red Lodge** 89.16 42 ⇓P P 05 13 20.7 +0.3
baz=89
D17A **Six Diamond Ra** 89.22 39 ⇑P P 05 13 21.1 +0.5
baz=89
F18A **Big Timber** 89.23 41 ⇑P P 05 13 21.3 +0.6
baz=89
O23A **Lake Granby, G** 89.27 47 ⇑P P 05 13 21.5 +0.4
baz=89
S25A **Robets Cordova** 89.29 50 ⇓P P 05 13 21.3 +0.1
baz=89
W27A **Bowe Ranch, En** 89.30 53 ⇓P P 05 13 20.9 -0.4
baz=89
U26A **Atchley Ranch,** 89.30 51 ⇑P P 05 13 20.9 -0.3
baz=89
C17A **Wharram Farm,** 89.40 39 ⇑P P 05 13 21.1 -0.3
baz=90
YAK **Yakutsk** 89.52 338 *e*P P 05 13 21.8 +0.2
YAK pmax pmax
comp=Z,14nm,0.8s,mb4.8
N23A **Red Feather La** 89.53 47 ⇑P P 05 13 22.6 +0.3
baz=90
L22A **Ellis Ranch, M** 89.67 45 ⇑P P 05 13 22.9 +0.1
baz=90
A17A **Triple J Farms** 90.05 38 ⇑P P 05 13 24.0 -0.4
baz=90
P25A **Willow Gulch B** 90.22 48 ⇑P P 05 13 25.7 +0.3
baz=90
B18A **Beardsley Farm** 90.33 39 ⇓P P 05 13 25.6 -0.1
baz=90
LZH **Lanzhou** 90.51 308 *e*P P 05 13 23.0 -3.9
LZH pP pP 05 15 32.8 -8.6
LZH sP sP 05 16 31.5 -12
LZH pmax pmax
comp=Z,13nm,1.0s,mb4.8
VNA1 **Neumayer--Stat** 91.26 177 *e*P P 05 13 28.3 -1.4
RSSD **Black Hills** 92.13 44 *e*P P 05 13 34.1 0.0
RSSD pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
RSSD **Black Hills** 92.13 44 *e*P P 05 13 34.1 0.0
comp=Z,1.6nm,0.5s,mb4.3
DGMT **Dagmar** 93.73 40 ⇓P P 05 13 41.2 -0.1
baz=94
YKA **Yellowknife Ar** 94.76 25 P P 05 13 43.7 -1.9
comp=Z,0.6nm,0.5s,mb4.0,baz=237,slow=4.6,SNR=4.7
YKA **Yellowknife Ar** 94.76 25 P P 05 13 43.7 -1.9
YKA pmax pmax
comp=Z,1.0nm,0.5s
YKA **Yellowknife Ar** 94.76 25 P P 05 13 43.7 -1.9
ZALV **Zalesovo Beam** 107.99 322 PKiKP PKiKP 05 18 45.5 -2.1
comp=Z,0.9nm,0.6s,baz=98,slow=1.2,SNR=4.3
MKAR **Makanchi Array** 108.81 314 PKiKP PKiKP 05 18 47.7 -1.7
comp=Z,1.2nm,0.6s,baz=195,slow=0.6,SNR=22
MKAR **Makanchi Array** 108.81 314 PKPdf PKiKP 05 18 47.7 -1.7
KURK **Kurchatov** 111.55 318 ⇓*i*PKIKP PKiKP 05 18 52.3 -2.1
KURK pmax pmax
comp=Z,6.0nm,2.5s
BVAR **Borovoye Array** 116.59 321 PKP PKPdf 05 19 02.5 -1.5
comp=Z,2.3nm,0.5s,baz=101,slow=3.0,SNR=12
BVAR **Borovoye Array** 116.59 321 PKIKP PKPdf 05 19 02.5 -1.6
BVAR pmax pmax
comp=Z,2.0nm,0.5s
BRVK **Borovoye** 116.65 321 *c i*PKIKP PKPdf 05 19 03.4 -0.8
BRVK pmax pmax
comp=Z,1.0nm,0.5s
KBL **Kabul** 117.84 300 *e*PKIKP PKPdf 05 19 06.2 -0.9
ARU **Arti** 122.66 326 *i* PKIKP PKPdf 05 19 14.4 -1.2
ARU 05 21 00.0
ARU 05 25 17.9
ARU **Arti** 122.66 326 *e*PKPdf PKPdf 05 19 14.3 -1.3
ABKAR **Akbulak array** 123.65 318 *e*PKPdf PKPdf 05 19 16.2 -1.6
AKTK **Aktyubinsk** 124.60 319 PKP PKPdf 05 19 17.9 -1.7
AKTO **Aktyubinsk** 124.60 319 PKP PKPdf 05 19 17.9 -1.7
comp=Z,3.4nm,0.8s,baz=59,slow=3.5,SNR=10
AKTO **Aktyubinsk** 124.60 319 PKIKP PKPdf 05 19 17.9 -1.6

AKTO pmax pmax
comp=Z,3.0nm,0.8s
ARCES ARCESS Array B 126.38 350 PKP PKPdf 05 19 20.9 -1.5
comp=Z,2.6nm,0.6s,baz=51,slow=1.1,SNR=20
ARCES ARCESS Array B 126.38 350 PKIKP PKPdf 05 19 20.9 -1.5
ARCES pmax pmax
comp=Z,3.0nm,0.6s
ARCES ARCESS Array B 126.38 350 PKP PKPdf 05 19 20.9 -1.5
JOF Joensuu 130.54 342 *e*PKIKP PKPdf 05 19 29.1 -1.4
JOF Joensuu 130.54 342 *e*pkp PKPdf 05 19 29.1 -1.4
KAF Kangasniemi 132.57 344 *e*PKIKP PKPdf 05 19 32.1 -2.2
KAF Kangasniemi 132.57 344 *e*pkp PKPdf 05 19 32.1 -2.2
FINES FINESS Array B 133.19 344 PKP PKPdf 05 19 33.3 -2.2
comp=Z,1.5nm,0.6s,baz=70,slow=2.2,SNR=5.8
FINES SKPbc SKPbc 05 22 06.5 +0.4
comp=Z,2.3nm,0.8s,baz=56,slow=7.1,SNR=5.7
FINES FINESS Array B 133.19 344 PKIKP PKPdf 05 19 33.3 -2.2
FINES 05 22 06.5
FINES pmax pmax
comp=Z,2.0nm,0.6s
FINES pmax pmax
comp=N,2.0nm,0.8s
OBN Obninsk 134.17 332 *e*PKIKP PKPdf 05 19 35.7 -1.8
OBN *e* 05 21 52.3
OBN pmax pmax
comp=Z,4.0nm,0.7s
NB2 NORSAR Subarra136.48 353 PKP PKPpre 05 19 33.6
comp=Z,0.4nm,0.6s,baz=17,slow=2.6
NOA NORSAR Array B 136.48 353 PKP PKPdf 05 19 40.5 -1.2
comp=Z,0.5nm,0.6s,baz=14,slow=4.1,SNR=3.5
NOA SKPbc SKPbc 05 22 17.4 +1.1
comp=Z,0.8nm,0.8s,baz=14,slow=4.4,SNR=3.7
NOA NORSAR Array B 136.48 353 PKIKP PKPdf 05 19 40.5 -1.1
NOA pmax pmax
comp=Z,1.0nm,0.6s
NOA pmax pmax
comp=N,1.0nm,0.8s
NOA NORSAR Array B 136.48 353 PKP PKPdf 05 19 40.5 -1.2
NOA SKPbc SKPbc 05 22 17.4 +1.1
KIV Kislovodsk 136.55 316 *e*PKIKP PKPdf 05 19 39.6 -2.7
KIV pmax pmax
comp=Z,7.0nm,1.1s
KMBO Kilima Mbogo 139.49 246 PKP PKPdf 05 19 49.6 +0.9
comp=Z,3.1nm,0.8s,baz=2.1,slow=24,SNR=6.7
KMBO Kilima Mbogo 139.49 246 PKIKP PKPdf 05 19 49.6 +1.0
KMBO pmax pmax
comp=Z,3.0nm,0.9s
AKASG Malin Array Be 140.43 332 PKhKP PKPpre 05 19 41.8
comp=Z,1.5nm,0.5s,baz=41,slow=4.1,SNR=9.6
AKASG PKP PKPdf 05 19 49.5 +0.3
comp=Z,2.3nm,0.7s,baz=44,slow=2.8,SNR=4.6
AKASG SKPbc SKPbc 05 22 27.7 +0.2
comp=Z,1.1nm,0.5s,baz=42,slow=3.5,SNR=6.5
AKASG Malin Array Be 140.43 332 PKHKP PKPpre 05 19 41.8
AKASG 05 19 49.5
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKASG pmax pmax
comp=Z,2.0nm,0.7s
AKASG pmax pmax
comp=N,1.0nm,0.5s
LVV L'vov 143.31 335 *e*PKIKP PKPdf 05 19 52.0 -2.3
BSEG Bad Segeberg 143.50 351 *e*PKPbc PKPdf 05 19 52.5 -2.0
BSEG Bad Segeberg 143.50 351 *e*PKIKP PKPdf 05 19 52.5 -2.0
TLCR 144.37 325 ⇑PKIKP PKPdf 05 19 57.4 +1.1
TLCR 144.37 325 ⇑*i*P PKPdf 05 19 57.4 +1.1
BUR08 Bucovina Ar. S 144.47 331 *e*PKPdf PKPdf 05 19 56.6 +0.2
BR131 Keskin Array S 144.47 314 *e*PKPdf PKPdf 05 19 56.3 -0.3
BRTR Keskin Array B 144.47 314 PKP PKPdf 05 19 56.1 -0.5
comp=N,8.7nm,0.8s,baz=135,slow=4.3,SNR=33
BRTR Keskin Array B 144.47 314 PKIKP PKPdf 05 19 56.2 -0.4
BRTR pmax pmax
comp=Z,9.0nm,0.8s
BURAR Bucovina Array 144.48 331 ⇓PKIKP PKPdf 05 19 56.8 +0.4
BURAR Bucovina Array 144.48 331 ⇓*i*P PKPdf 05 19 56.8 +0.4
TESR 144.60 329 ⇓*i*P PKPdf 05 19 57.1 +0.5
STHS Stebnicka Huta 144.72 337 *e*PKIKP PKPdf 05 19 57.3 +0.5
STHS Stebnicka Huta 144.72 337 *e*PKP PKPdf 05 19 57.3 +0.5
NRDL Niedersach Rie 144.92 350 *e*PKPbc PKPdf 05 19 56.0 -1.0
UZH Uzhgorod 144.95 335 *e*PKIKP PKPdf 05 19 57.0 -0.2
VRI Vrincioaia 145.01 328 ⇓PKIKP PKPdf 05 19 58.1 +0.7
VRI Vrincioaia 145.01 328 ⇓*i*P PKPdf 05 19 58.1 +0.7
KSP Ksiaz 145.10 343 *e*PKP PKPdf 05 19 58.1 +0.7
KSP Ksiaz 145.10 343 *e*PKIKP PKPdf 05 19 57.8 +0.4
TRPA Tarpa 145.25 334 ⇑*i*P PKPdf 05 19 58.5 +0.8
IBBN Ibbenburen 145.44 353 *e*PKPbc PKPbc 05 19 58.6 -0.8
UPC Upice 145.49 343 *e*PKP2 PKPbc 05 19 59.1 -0.5
UPC Upice 145.49 343 *e*PKP PKPbc 05 19 59.1 -0.5
CLL Collm 145.50 347 *e*PKP PKPbc 05 19 58.7 -0.9
CLL Collm 145.50 347 ⇓*i*PKIKP PKPdf 05 19 58.8 +0.8
CLL pmax pmax
comp=Z,24nm,0.7s
CLL Collm 145.50 347 ⇓*i*PKPbc PKPbc 05 19 58.8 -0.8
comp=Z,24nm,0.7s
CLZ Clausthal 145.51 350 *e*PKPbc PKPbc 05 19 59.1 -0.5
CLZ Clausthal 145.51 350 *e*PKP2 PKPbc 05 19 59.1 -0.5
DPC Dobruska-Polom 145.54 343 *e*PKP2 PKPbc 05 19 59.5 -0.2
DPC Dobruska-Polom 145.54 343 *e*PKP PKPbc 05 19 59.5 -0.2
MLR Muntele Rosu 145.66 328 ⇑PKIKP PKPbc 05 19 59.6 -0.6
MLR Muntele Rosu 145.66 328 ⇑*i*P PKPbc 05 19 59.6 -0.6
MORC Moravsky Berou 145.68 341 ⇓PKIKP PKPdf 05 19 59.2 +0.8
MORC Moravsky Berou 145.68 341 ⇓*i*P PKPdf 05 19 59.2 +0.8
BRG Berggiesshubel 145.69 345 *e*PKPbc PKPbc 05 19 58.5 -1.6
BRG Berggiesshubel 145.69 345 *i* PKP PKPdf 05 19 59.5 +1.1
comp=Z,11nm,0.8s
BRG *i* 05 20 04.8
comp=Z,6.7nm,1.2s
BRG *i* 05 20 11.7
comp=Z,2.7nm,0.5s
BRG *e*pPKP pPKPdf 05 22 23.9 +1.3
comp=Z,2.3nm,0.7s
BRG *e* 05 22 49.8
comp=Z,2.7nm,0.6s
BRG *e* 05 23 43.1
comp=Z,2.5nm,0.8s
MMAI Mount Meron Ar 145.72 302 PKPbc PKPbc 05 20 01.0 +0.2
comp=Z,25nm,0.8s,baz=54,slow=4.2,SNR=13
KECS Kecovo 145.77 337 *e*PKP2 PKPbc 05 20 00.2 -0.2
KECS Kecovo 145.77 337 *e*PKP PKPbc 05 20 00.2 -0.2
PVCC Panska Ves 145.85 344 *e*PKP2 PKPbc 05 20 00.2 -0.4
PVCC Panska Ves 145.85 344 *e*PKP PKPbc 05 20 00.2 -0.4
VOIR 146.15 329 ⇓PKP2 PKPbc 05 20 01.5 -0.1
VOIR 146.15 329 ⇓*i*P PKPbc 05 20 01.5 -0.1
DRGR 146.22 333 ⇓PKP2 PKPbc 05 20 01.3 -0.4
DRGR 146.22 333 ⇓*i*P PKPbc 05 20 01.3 -0.4
PRU Pruhonice 146.35 344 *e*PKP2 PKPbc 05 20 01.7 -0.3
PRU Pruhonice 146.35 344 *e*PKP PKPbc 05 20 01.7 -0.3
VYHS Vyhne 146.36 338 *e*PKP2 PKPbc 05 20 02.0 -0.1
VYHS Vyhne 146.36 338 *e*PKP PKPbc 05 20 02.0 -0.1
MOX Moxa 146.42 348 *e*PKPbc PKPbc 05 20 00.5 -1.7
KOLL Kolacno 146.44 339 *e*PKP2 PKPbc 05 20 02.4 +0.1
KOLL Kolacno 146.44 339 *e*PKP PKPbc 05 20 02.4 +0.1
TANN Tannenbergstha 146.46 347 *e*PKPbc PKPbc 05 20 01.7 -0.6
UBBA Unterbreizbach 146.56 350 *e*PKPbc PKPbc 05 20 01.8 -0.7
ROTZ Rotzenmuhle 147.12 347 *e*PKPbc PKPbc 05 20 03.0 -1.1
GZR Gura Zlata 147.26 331 ⇓PKHKP PKPbc 05 20 03.1 -1.5
GZR Gura Zlata 147.26 331 ⇓*i*P PKPbc 05 20 03.0 -1.6
TNS Taunus Mts 147.38 351 *e*PKPbc PKPbc 05 20 04.0 -0.7
TNS Taunus Mts 147.38 351 *e*PKP2 PKPbc 05 20 04.0 -0.7
KHC Kasperske Hory 147.39 345 *e*PKPbc PKPbc 05 20 04.2 -0.6
KHC Kasperske Hory 147.39 345 *e*PKP PKPbc 05 20 04.2 -0.6
GRF Grafenberg Arr 147.41 348 *e*PKPbc PKPbc 05 20 03.9 -0.9
GRF Grafenberg Arr 147.41 348 *e*PKP2 PKPbc 05 20 03.9 -0.9
SNF Seneffe 147.55 356 PKPbc PKPbc 05 20 04.5 -0.6
GEC2 GERESS Array S 147.62 344 *e*PKPbc PKPbc 05 20 04.0 -1.4
GEC2 GERESS Array S 147.62 344 *e*PKIKP PKPbc 05 20 04.0 -1.4
CONA Conrad Observa 147.84 341 ⇓*i*PKIKP PKPbc 05 20 05.6 -0.3
comp=Z,18nm,1.2s
GIVF Givet 147.91 355 *e*PKP1 PKPbc 05 20 04.9 -1.2
comp=Z,15nm,0.6s
DOU Dourbes 147.94 356 PKPbc PKPbc 05 20 05.5 -0.6
BAIF Baives 148.00 356 *e*PKP1 PKPbc 05 20 05.2 -1.1
comp=Z,15nm,0.6s
WLF Walferdange 148.22 354 PKPbc PKPbc 05 20 06.9 +0.1
WLF Walferdange 148.22 354 *e*PKPbc PKPbc 05 20 06.7 -0.1
PKSM Moragy 148.36 336 ⇑PKHKP PKPbc 05 20 06.0 -1.3
PKSM Moragy 148.36 336 ⇑*i*P PKPbc 05 20 06.0 -1.3
MOA Molln 148.38 343 ⇓*i*PKPbc PKPbc 05 20 06.1 -1.2
comp=Z,11nm,1.2s
STU Stuttgart 148.67 349 *e*PKPbc PKPbc 05 20 07.5 -0.5
RJOB Jochberg 148.88 344 *e*PKPbc PKPbc 05 20 07.5 -1.0
VTS Vitosha 149.11 327 ⇑PKHKP PKPbc 05 20 08.7 -0.5
VTS Vitosha 149.11 327 ⇑*i*P PKPbc 05 20 08.7 -0.5
SOKA Soboth 149.21 341 ⇑*i*PKPbc PKPbc 05 20 07.9 -1.5
comp=Z,10nm,1.0s
BFO Black Forest 149.24 350 *e*PKPbc PKPbc 05 20 08.6 -0.8
BFO Black Forest 149.24 350 *e*PKHKP PKPbc 05 20 08.6 -0.8
BFO Black Forest 149.24 350 *e*PKPbc PKPbc 05 20 08.6 -0.8
CDF Champ du Feu 149.32 352 *e*PKP1 PKPbc 05 20 08.4 -1.1
comp=Z,20nm,1.0s
KBA Koelnbreinsper 149.34 343 ⇓*i*PKPbc PKPbc 05 20 08.4 -1.2
comp=Z,11nm,1.1s
FLN La Foliniere 149.38 2 *e*PKP1 PKPbc 05 20 08.1 -1.6
comp=Z,22nm,0.7s
MEZF Maizieres J'vi 149.48 355 *e*PKP1 PKPbc 05 20 09.1 -0.8
LDF La Druitiere 149.56 1 *e*PKP1 PKPbc 05 20 08.4 -1.7
comp=Z,10nm,0.5s
WTTA Wattenberg 149.60 346 ⇓*i*PKPbc PKPbc 05 20 09.3 -0.9
comp=Z,22nm,1.0s
ROSF Rostrenen 149.64 6 *e*PKP1 PKPbc 05 20 08.5 -1.8
MOTA Moosalm 149.65 346 ⇑*i*PKPbc PKPbc 05 20 09.6 -0.8
comp=Z,13nm,0.9s
MYKA Terra Mystica 149.67 343 ⇓*i*PKPbc PKPbc 05 20 08.8 -1.6
comp=Z,9.4nm,0.9s
GRR Gorron 149.75 2 *e*PKP1 PKPbc 05 20 09.1 -1.5
comp=Z,17nm,0.6s
SGMF Saint Gilles 149.78 5 *e*PKP1 PKPbc 05 20 09.0 -1.6
comp=Z,16nm,0.7s
HAU Haudompre 149.84 353 *e*PKP1 PKPbc 05 20 09.6 -1.2
LJU Ljubljana 149.93 341 *i* PKPbc PKPbc 05 20 10.2 -0.9
HINF Hinteralfeld 149.96 352 *e*PKP1 PKPbc 05 20 09.7 -1.4
FETA Feichten 150.04 347 ⇓*i*PKPbc PKPbc 05 20 10.4 -0.9
comp=Z,14nm,1.0s
QUIF Quistinic 150.06 6 *e*PKP1 PKPbc 05 20 09.5 -1.8
BOJS Bojanci 150.18 340 *i* PKPbc PKPbc 05 20 11.0 -0.6
CEY Cerknica 150.24 341 *i* PKPbc PKPbc 05 20 10.6 -1.2
LOR Lormes 150.80 356 *e*PKP1 PKPbc 05 20 11.8 -1.2
comp=Z,21nm,0.9s
SSF Saint Saulge 151.03 356 *e*PKP1 PKPbc 05 20 12.3 -1.3
comp=Z,27nm,1.1s
CABF La Chapelle 151.24 353 *e*PKP1 PKPbc 05 20 13.4 -0.6
comp=Z,25nm,1.1s
AVF Avril sur Loir 151.31 357 *e*PKP1 PKPbc 05 20 13.5 -0.7
comp=Z,17nm,1.2s
SMF Signal de Mont 151.42 356 *e*PKP1 PKPbc 05 20 13.9 -0.6
MFF Saint Martin d 151.55 2 *e*PKP1 PKPbc 05 20 13.3 -1.4
comp=Z,18nm,0.7s
BGF Bois d'Agland 151.57 357 *e*PKP1 PKPbc 05 20 13.5 -1.3
TCF Toulx Ste Croi 151.86 358 *e*PKP1 PKPbc 05 20 14.0 -1.4
comp=Z,12nm,0.9s
LPG La Plagne 152.25 351 *e*PKP1 PKPbc 05 20 15.8 -0.5
RJF Les Rejaudoux 152.86 359 *e*PKP1 PKPbc 05 20 16.9 -0.7
comp=Z,26nm,1.4s
ORIF Oris-en-Rattie 152.93 352 *e*PKP1 PKPbc 05 20 17.7 -0.1
comp=Z,4.6nm,0.6s
MBDF Montbardon 153.00 351 *e*PKP1 PKPbc 05 20 16.8 -1.2
VIVF Saint-Julien-l 153.13 354 *e*PKP1 PKPbc 05 20 17.8 -0.4
comp=Z,7.7nm,0.9s
TORD Torodi Ar. Bea 175.03 189 PKP PKPdf 05 20 28.3 -1.8
comp=Z,2.6nm,0.9s,baz=257,slow=0.5,SNR=6.6

MEX 25 05:04:59.5±1.1, 16°.53N×93°.73W, h150km±14km, MD3.6, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**0.64**	**67**	*e*P	Pn	05 05 20.6	-1.0
TGIG				*e*S	Sn	05 05 35.6	-2.7
PCIG		**0.96**	**149**	*e*P	Pn	05 05 23.0	-0.9
PCIG				*e*S	Sn	05 05 40.4	-2.1
CMIG	**Matias Romero**	**1.23**	**297**	*e*P	Pn	05 05 25.6	-0.7
CMIG				*i* S	Sn	05 05 45.5	-1.4
HUIG	**Huatulco**	**2.40**	**252**	*i* P	Pn	05 05 37.3	-2.1
HUIG				*e*S	Sn	05 06 08.5	-1.7
VHO	**Vista Hermosa**	**2.92**	**281**	*i* P	Pn	05 05 46.9	+1.0
VHO				*i* S	Sn	05 06 19.8	-1.9

*ISCJB **25** 05:57:47.3±0.6, 38°.30N±0°.03×21°.91E±0°.03, h9km±6km, Error ellipse: s-maj=5.4km s-min=4.1km az=172.8*
*CSEM **25** 05:57:47.2±0.1, 38°.30N×21°.91E, h5km, ML2.5/5, Error ellipse: s-maj=3.3km s-min=2.9km az=83.0*
*THE **25** 05:57:47.4, 38°.29N×21°.90E, h0km±1km, ML2.5/5, Error ellipse: s-maj=1.1km s-min=0.3km az=217.0*
*ATH **25** 05:57:47.4, 38°.30N×21°.92E, h5km±2km, MD2.9/5*
*NEIC **25** 05:57:47.4, 38°.30N×21°.92E, h5km, MD2.9(ATH), After ATH.*

ISC 25 05:57:48.0±0.7, 38°.30N±0°.03×21°.91E±0°.03, h4km±13km, n27, σ0°.91/51, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAKA	**Lakka**	**0.08**	**139**	P	**Pg**	**05 57 49.4**	**-0.2**
LAKA				S	**Sg**	**05 57 50.7**	**0.0**
LAKA	**Lakka**	**0.08**	**139**	P	**Pg**	**05 57 49.4**	**-0.2**
LAKA				S	**Sg**	**05 57 50.7**	**0.0**
UPR	**University Cam**	**0.10**	**261**	*e*PG	**Pg**	**05 57 49.3**	**-0.7**
UPR				*e*SG	**Sg**	**05 57 51.5**	**+0.1**
UPR	**University Cam**	**0.10**	**261**	P	**Pg**	**05 57 49.3**	**-0.7**
UPR				S	**Sg**	**05 57 50.9**	**-0.5**
UPR	**University Cam**	**0.10**	**261**	P	**Pg**	**05 57 49.3**	**-0.7**
UPR				S	**Sg**	**05 57 50.9**	**-0.5**
UPR				*e*Sg	**Sg**	**05 57 51.5**	**+0.1**
EFP	**Efpalio**	**0.13**	**357**	*e*PG	**Pg**	**05 57 50.1**	**-0.4**
EFP				*e*SG	**Sg**	**05 57 52.3**	**0.0**
EFP	**Efpalio**	**0.13**	**357**	P	**Pg**	**05 57 50.2**	**-0.3**
EFP				S	**Sg**	**05 57 52.6**	**+0.3**
EFP	**Efpalio**	**0.13**	**357**	*e*Pg	**Pg**	**05 57 50.1**	**-0.4**
EFP				*e*Sg	**Sg**	**05 57 52.3**	**0.0**
EFP				S	**Sg**	**05 57 52.6**	**+0.3**
TRIZ	**Trizonia**	**0.14**	**62**	P	**Pg**	**05 57 50.5**	**-0.3**
TRIZ				S	**Sg**	**05 57 53.4**	**+0.7**
TRIZ	**Trizonia**	**0.14**	**62**	P	**Pg**	**05 57 50.5**	**-0.3**
TRIZ				S	**Sg**	**05 57 53.4**	**+0.7**
KALE	**Kalithea**	**0.20**	**63**	P	**Pg**	**05 57 51.6**	**-0.3**
KALE				S	**Sg**	**05 57 55.2**	**+0.7**
KALE	**Kalithea**	**0.20**	**63**	P	**Pg**	**05 57 51.6**	**-0.3**
KALE				S	**Sg**	**05 57 55.2**	**+0.7**
RLS	**Riolos of Patr**	**0.43**	**236**	*e*Pb	**Pg**	**05 57 55.8**	**-0.4**
RLS				*e*Sb	**Sg**	**05 58 02.5**	**+0.8**
RLS	**Riolos of Patr**	**0.43**	**236**	*e*PB	**Pg**	**05 57 55.8**	**-0.4**
RLS				*e*SB	**Sg**	**05 58 02.5**	**+0.8**
RLS	**Riolos of Patr**	**0.43**	**236**	*e*Pb	**Pg**	**05 57 55.8**	**-0.4**
RLS				*e*Sb	**Sg**	**05 58 02.5**	**+0.8**
GUR	**Goura**	**0.50**	**137**	*e*PG	**Pg**	**05 57 56.9**	**-0.6**
GUR				*e*SB	**Sg**	**05 58 04.8**	**+0.9**
GUR	**Goura**	**0.50**	**137**	P	**Pg**	**05 57 56.9**	**-0.6**
GUR				S	**Sg**	**05 58 04.5**	**+0.6**
GUR	**Goura**	**0.50**	**137**	P	**Pg**	**05 57 56.9**	**-0.6**
GUR				S	**Sg**	**05 58 04.5**	**+0.6**
GUR				*e*Sb	**Sg**	**05 58 04.8**	**+0.9**
EVR	**Evrytania**	**0.62**	**352**	*e*Pb	**Pg**	**05 57 59.5**	**-0.4**
EVR	**Evrytania**	**0.62**	**352**	*e*PB	**Pg**	**05 57 59.5**	**-0.4**
EVR	**Evrytania**	**0.62**	**352**	*e*Pb	**Pg**	**05 57 59.5**	**-0.4**
VLS	**Valsamata**	**1.05**	**264**	*e*Pn	**Pg**	**05 58 07.7**	**-0.4**
VLS				*e*Sb	**Sg**	**05 58 23.3**	**+1.6**
VLS	**Valsamata**	**1.05**	**264**	*e*PN	**Pg**	**05 58 07.7**	**-0.4**
VLS				*e*SB	**Sg**	**05 58 23.2**	**+1.5**
VLS	**Valsamata**	**1.05**	**264**	*e*Pn	**Pg**	**05 58 07.7**	**-0.4**
VLS				*e*Sb	**Sg**	**05 58 23.3**	**+1.6**
ITM	**Ithomi**	**1.12**	**179**	*e*Pb	**Pg**	**05 58 08.8**	**-0.6**
ITM	**Ithomi**	**1.12**	**179**	*e*PB	**Pg**	**05 58 08.8**	**-0.6**
ITM	**Ithomi**	**1.12**	**179**	*e*Pb	**Pg**	**05 58 08.8**	**-0.6**

IDC 25 06:06:15.4±1.5, 15°.50S×173°.00W, h0km, mb3.8/6, mb1 4.2/6, mb1mx4.0/16, mbtmp3.8/6, Error ellipse: s-maj=93.2km s-min=19.5km az=143.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.97**	**37**	Pn	Pn	06 06 48.1	-2.0
AFI	31nm,0.3s,baz=19,slow=7.6,SNR=31			Sn	Sn	06 07 09.9	-5.6
STKA	**Stephens Creek**	**44.32**	**240**	P	P	06 14 26.9	-0.5
ASAR	98nm,0.3s,baz=53,slow=22,SNR=12 2.0nm,0.8s,baz=37,slow=10,SNR=2.2 **Alice Springs**	**50.45**	**252**	P	P	06 15 14.8	-0.5
NVAR	1.4nm,0.5s,baz=91,slow=7.6,SNR=22 **Mina Array Bea**	**74.14**	**42**	P	P	06 17 55.2	+1.4
TXAR	0.6nm,0.7s,baz=222,slow=8.5,SNR=5.2 **Lajitas Array**	**80.34**	**56**	P	P	06 18 28.4	-0.5
PDAR	0.3nm,0.6s,baz=191,slow=1.3,SNR=4.1 **Pinedale Array**	**82.08**	**42**	P	P	06 18 38.5	+0.8
	0.3nm,0.7s,baz=227,slow=3.7,SNR=3.8						
ILAR	**Eielson Array**	**82.46**	**11**	P	P	06 18 39.7	+0.4
	0.6nm,0.6s,baz=230,slow=6.2,SNR=14						
BRTR	**Keskin Array B**	**146.47**	**321**	PKPbc	PKPbc	06 25 59.1	+0.2
	1.3nm,0.8s,baz=48,slow=1.8,SNR=5.8						

*NIED **25** 07:00:00, 37°.40N×143°.20E, h8km, Mw4.4 Best double couple: M0:4.16000×10^15 NP1:φ=14.00000°, δ=58.00000°, λ=77.00000°. NP2:φ=218.00000°, δ=35.00000°, λ=110.00000°.*
*IDC **25** 07:00:34.4±1.0, 37°.42N×143°.09E, h0km, mb4.0/11, mb1 4.1/14, mb1mx4.0/25, mbtmp4.0/14, ML3.8/3, MS3.7/9, Ms1 3.7/9, ms1mx3.3/32, Error ellipse: s-maj=23.0km s-min=20.6km az=136.0*
*MOS **25** 07:00:35.6±1.1, 37°.45N×143°.14E, h21km, mb4.4/14, Error ellipse: s-maj=11.8km s-min=8.4km az=98.4*
*JMA **25** 07:00:36.5±0.2, 37°.39N×143°.16E, h50km, MS3.9*
*ISCJB **25** 07:00:37.5±0.4, 37°.40N±0°.03×143°.09E±0°.04, h33km, mb4.3/24, MS3.9/10, Error ellipse: s-maj=5.7km s-min=3.8km az=39.8*
*BJI **25** 07:00:37.7, 37°.40N×143°.10E, h27km, mB4.6/5, mb4.6/10, Ms4.2/5, Ms7 4.1/5*
*NEIC **25** 07:00:38.7±3.5, 37°.43N×143°.07E, h28km±24km, mb4.7/7, MW4.3(NIED), Error ellipse: s-maj=15.1km s-min=9.7km az=133.0*

ISC 25 07:00:39.6±0.4, 37°.42N±0°.03×143°.05E±0°.05, h35km, n76, σ1°.90/81, mb4.3/24, MS3.9/10, 1C, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**1.70**	**308**	P	**Pn**	**07 01 05.9**	**-0.8**
JFK	**Kawauchi**	**1.73**	**269**	P	**Pn**	**07 01 06.4**	**-0.8**
JFK				S	**Sn**	**07 01 28.2**	**+0.2**
ONAJ	**Iwakimizuishiy**	**1.82**	**261**	P	**Pn**	**07 01 07.3**	**-1.1**
JMM	**Marumori**	**1.84**	**285**	P	**Pn**	**07 01 07.8**	**-1.0**
JMM				*e*S	**Sn**	**07 01 31.2**	**+0.4**
JMK	**Ichinoseki**	**2.10**	**317**	P	**Pn**	**07 01 11.4**	**-0.9**
JOM	**Ohasama**	**2.47**	**327**	P	**Pn**	**07 01 16.4**	**-1.0**
JOM				*e*S	**Sn**	**07 01 46.8**	**+0.4**
JYK	**Kaneyama**	**2.59**	**306**	P	**Pn**	**07 01 18.7**	**-0.4**
JAG	**Ashikaga**	**3.04**	**252**	P	**Pn**	**07 01 25.2**	**-0.1**
JAG				*e*S	**Sn**	**07 02 01.0**	**+0.5**
JAW	**Awa shima**	**3.18**	**290**	P	**Pn**	**07 01 27.9**	**+0.8**
JANG	**Nango**	**3.19**	**338**	P	**Pn**	**07 01 27.1**	**-0.1**
JANG				*e*S	**Sn**	**07 02 04.2**	**+0.3**
BSO1	**Boso 1**	**3.23**	**212**	P	**Pn**	**07 01 25.7**	**-2.1**
BSO1				*e*S	**Sn**	**07 02 03.4**	**-1.5**
JRY	**Ryogami san**	**3.61**	**248**	P	**Pn**	**07 01 32.6**	**-0.4**
JRY				*e*S	**Sn**	**07 02 13.9**	**-0.5**
JOD2	**Odawara 2**	**3.85**	**237**	P	**Pn**	**07 01 35.5**	**-0.8**
MJAR	**Matsushiro Arr**	**3.97**	**259**	Pn	**Pn**	**07 01 38.1**	**+0.2**
	7.2nm,0.3s,baz=87,slow=16,SNR=45						
MJAR	**Matsushiro Arr**	**3.97**	**259**	P	**Pn**	**07 01 38.2**	**+0.2**
MJAR				pmax	pmax		
	comp=Z,7.0nm,0.3s						
MAJO	**Matsushiro**	**3.97**	**259**	*e*P	**Pn**	**07 01 39.4**	**+1.4**
MAT	**Matsushiro**	**3.97**	**259**	P	**Pn**	**07 01 38.8**	**+0.8**
MAT				*e*S	**Sn**	**07 02 23.2**	**-0.1**
ERM	**Erimo**	**4.59**	**1**	*e*Pn	**Pn**	**07 01 44.2**	**-2.4**
ERM				*e*Sn	**Sn**	**07 02 38.0**	**-0.6**
JHJ	**Hachijo jima 2**	**5.05**	**213**	Sn	**Sn**	**07 02 45.1**	**-4.8**
	comp=Z,53nm,0.3s,baz=49,slow=19,SNR=4.1						
ASAJ	**Asahikawa**	**6.70**	**357**	Pn	**Pn**	**07 02 12.7**	**-2.8**
	comp=Z,3.2nm,0.3s,baz=229,slow=8.6,SNR=5.4						
ASAJ				Sn	**Sn**	**07 03 29.5**	**-1.1**
	comp=Z,1.8nm,0.3s,baz=266,slow=29,SNR=4.2						
ASAJ	**Asahikawa**	**6.70**	**357**	P	**Pn**	**07 02 12.7**	**-2.8**
ASAJ						07 03 29.5	
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				smax			
	comp=N,2.0nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**6.95**	**17**	*e*P	**Pn**	**07 02 17.4**	**-1.5**
KSRS	**Korea Array**	**12.03**	**275**	Pn	**Pn**	**07 03 30.4**	**+2.0**
	comp=N,0.2nm,0.3s,baz=88,slow=15,SNR=9.1						
KSRS				LR	LR	07 07 24.8	
	comp=N,173nm,18.5s,baz=137,slow=34						
KLR	**Kul'dur**	**14.37**	**329**	*e*P	**Pn**	**07 03 54.0**	**-6.3**
KLR				MLR	MLR		
	comp=N,800nm,13.5s						
KLR				MLR	MLR		
	comp=E,500nm,13.5s						
KLR				MLR	MLR		
	comp=Z,1μm,13.5s						
PETK	**Petropavlovsk-**	**18.72**	**28**	P	**Pn**	**07 04 56.1**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=218,slow=9.1,SNR=3.0						
GUMO	**Guam**	**23.78**	**176**	LR	LR	07 14 26.2	
	comp=Z,78nm,18.8s,MS3.2,baz=28,slow=35						
TPUB	**Ta-pu**	**23.84**	**240**	*e*P	**P**	**07 05 49.5**	**-0.1**
	comp=Z,22nm,1.0s,mb4.5						
HHC	**Hu-ho-hao-te**	**24.59**	**288**	*e*P	**P**	**07 05 56.5**	**+0.2**
HHC				PP		07 06 32.5	
HHC				PcP	PcP	07 09 35.5	+2.0
HHC				S	**S**	**07 10 12.5**	**-2.5**
HHC				PcS	PcS	07 13 14.5	+1.1
HHC				pmax	pmax		
	comp=Z,18nm,0.5s,mb4.9						
HHC				pmax	pmax		
	comp=Z,110nm,5.0s						
HHC				LR	LR		
	comp=N,160nm,12.3s,MS4.1						
HHC				LR	LR		
	comp=E,340nm,12.0s,MS4.1						
HHC				LR	LR		
	comp=Z,340nm,12.2s,MS4.0						
WHN	**Wuhan**	**24.70**	**262**	P	**P**	**07 05 58.0**	**+0.6**
WHN				LR	LR		
	comp=N,590nm,8.0s						
WHN				LR	LR		
	comp=E,440nm,11.0s						
WHN				LR	LR		
	comp=Z,910nm,12.0s,MS4.5						
SEY	**Seymchan**	**26.18**	**10**	*e*P	**P**	**07 06 11.0**	**+0.5**
ULN	**Ulaanbaatar**	**28.23**	**303**	*e*P	**P**	**07 06 30.1**	**+1.1**
ULN				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.6						
ULN	**Ulaanbaatar**	**28.23**	**303**	*e*P	**P**	**07 06 30.1**	**+1.1**
	comp=Z,12nm,0.8s,mb4.6						
TLY	**Talaya**	**31.07**	**310**	*e*P	**P**	**07 06 53.6**	**-0.6

comp=Z,3.0nm,0.6s,mb4.4
TKM2 Tokmak 2 50.59 299 *e*P **P 07 09 34.1 -0.8**
comp=Z,3.2nm,0.6s,mb4.4
BVAR Borovoye Array 51.28 312 P **P 07 09 38.2 -1.6**
comp=Z,1.3nm,0.7s,mb4.0,baz=71,slow=11,SNR=4.3
BVAR Borovoye Array 51.28 312 P **P 07 09 38.2 -1.6**
BVAR pmax pmax
comp=Z,1.0nm,0.7s
BRVK Borovoye 51.33 312 *e*P **P 07 09 41.4 +1.2**
BRVK pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
AAK Ala-Archa 51.45 299 LR LR 07 32 42.0
comp=Z,99nm,18.0s,MS3.9,baz=75,slow=37
WRAB Tennant Creek 57.62 190 *e*P **P 07 10 25.4 -0.8**
WRAB pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
WRAB Tennant Creek 57.62 190 *e*P **P 07 10 25.4 -0.8**
comp=Z,3.5nm,0.7s,mb4.5
AKTK Aktyubinsk 59.39 312 P **P 07 10 38.8 +0.6**
AKTO Aktyubinsk 59.39 312 P **P 07 10 38.8 +0.5**
comp=Z,1.1nm,0.7s,mb4.0,baz=75,slow=14,SNR=4.8
AKTO Aktyubinsk 59.39 312 P **P 07 10 38.8 +0.6**
AKTO pmax pmax
comp=Z,1.0nm,0.7s,mb4.0
ASAR Alice Springs 61.36 190 P **P 07 10 51.8 -0.1**
comp=Z,1.1nm,0.8s,mb4.1,baz=7.7,slow=6.1,SNR=11
ASAR Alice Springs 61.36 190 P **P 07 10 51.8 -0.1**
ASAR pmax pmax
comp=Z,1.0nm,0.8s
ARCES ARCESS Array B 64.10 340 LR LR 07 46 32.2
comp=Z,91nm,18.0s,MS4.0,baz=84,slow=43
FINES FINESS Array B 69.08 333 P **P 07 11 42.3 +0.7**
comp=Z,3.1nm,0.8s,mb4.3,baz=53,slow=7.4,SNR=6.7
FINES FINESS Array B 69.08 333 P **P 07 11 42.3 +0.8**
FINES pmax pmax
comp=Z,3.0nm,0.8s
VSR Storozhevoye 69.50 319 *e*P **P 07 11 44.8 +0.5**
VSR pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
KIV Kislovodsk 71.64 312 *e*P **P 07 11 59.3 +1.8**
KIV pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
NB2 NORSAR Subarra 74.33 338 P **P 07 12 13.5 +0.4**
comp=Z,2.6nm,0.8s,mb4.2,baz=38,slow=5.9
NOA NORSAR Array B 74.33 338 P **P 07 12 13.8 +0.7**
comp=Z,2.3nm,0.9s,mb4.1,baz=38,slow=5.8,SNR=9.9
NOA LR LR 07 48 21.0
comp=Z,71nm,19.2s,MS4.0,baz=45,slow=39
NOA NORSAR Array B 74.33 338 P **P 07 12 13.8 +0.7**
NOA pmax pmax
comp=Z,2.0nm,0.9s
NOA MLR MLR
comp=Z,71nm,19.3s
NOA NORSAR Array B 74.33 338 P **P 07 12 13.8 +0.7**
NOA LR LR 07 48 21.1
AKASG Malin Array Be 74.79 323 *i* P **P 07 12 15.0 -1.0**
comp=Z,0.3nm,0.3s,mb3.8,baz=45,slow=7.1,SNR=4.6
AKASG Malin Array Be 74.79 323 *i* P **P 07 12 16.8 +0.8**
PDAR Pinedale Array 76.47 46 P **P 07 12 26.6 +0.9**
comp=Z,0.4nm,0.7s,mb3.4,baz=303,slow=3.0,SNR=5.1
PV10 Paradox Valley 79.54 50 *e*P **P 07 12 44.8 +1.9**
comp=Z,43nm,0.8s,mb5.4
SCHQ Schefferville 84.61 17 LR LR 07 51 01.9
comp=Z,60nm,21.2s,MS4.0,baz=237,slow=36
TXAR Lajitas Array 88.85 53 P **P 07 13 29.9 -0.5**
comp=Z,0.4nm,0.7s,mb3.9,baz=35,slow=4.6,SNR=4.5
ESDC Sonseca Array 97.51 335 LR LR 07 59 28.9
comp=Z,56nm,20.0s,MS4.0,baz=140,slow=36

*IDC **25** 07:18:30.8±0.8,31°.44N×104°.00E,h0km,mb3.8/10, mb1 4.0/12,mb1mx3.8/25,mbtmp3.8/12,ML3.8/2,Error ellipse: s-maj=31.4km s-min=16.8km az=62.0*
*NEIC **25** 07:18:32.6±0.5,31°.40N×103°.81E,h10km,mb4.4/2,Error ellipse: s-maj=13.5km s-min=8.6km az=59.0*
*BJI **25** 07:18:33.9,31°.44N×104°.04E,h14km,mb4.0/1,ML3.5/16, Ms3.6/3,Ms7 3.5/3*
ISC 25 07:18:34.0±1.2,31°.45N±0°.05×103°.77E±0°.07,h19km±8km, n20,σ1°.21/28,mb4.0/10,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.54**	**181**	Pg	**Pg**	**07 18 44.3**	**-0.5**
CD2				Sg	**Sg**	**07 18 53.0**	**+0.9**
CD2				smax			
	comp=N,2μm,0.8s						
LZH	**Lanzhou**	**4.63**	**1**	*e*Pn	**Pn**	**07 19 46.5**	**+3.7**
LZH				Pg	**Pg**	**07 19 58.5**	**-4.1**
LZH				Sn	**Sn**	**07 20 40.5**	**+4.5**
LZH				Sg	**Sg**	**07 20 57.0**	**-5.5**
LZH				smax			
	comp=N,47nm,0.7s						
LZH				smax			
	comp=E,89nm,1.0s						
LZH				LR	LR		
	comp=N,410nm,6.3s						
LZH				LR	LR		
	comp=Z,460nm,8.5s						
XAN	**Xi'an**	**5.05**	**58**	Pn	**Pn**	**07 19 45.5**	**-3.1**
XAN				Pg	**Pb**	**07 20 03.0**	**+1.3**
XAN				Sn	**Sn**	**07 20 46.3**	**-0.1**
XAN				Sg	**Sb**	**07 21 04.0**	**+2.1**
XAN				smax			
	comp=N,110nm,0.7s						
XAN				smax			
	comp=E,82nm,0.6s						
ENH	**Enshi**	**5.05**	**102**	*e*Pn	**Pn**	**07 19 48.6**	**-0.1**
	comp=E,59nm,0.6s						
WHN	**Wuhan**	**9.12**	**93**	P	**Pn**	**07 20 47.0**	**+2.4**
WHN				S	**Sn**	**07 22 19.0**	**-7.7**
CMAR	**Chiang Mai Arr**	**13.65**	**200**	Pn	**Pn**	**07 21 45.8**	**-0.9**
	comp=E,0.6nm,0.3s,baz=14,slow=16,SNR=5.0						
SONM	**Songino Array**	**16.49**	**6**	Pn	**Pn**	**07 22 24.3**	**+0.3**
	comp=E,0.1nm,0.3s,baz=192,slow=14,SNR=6.9						
YHNB	**Yeheng**	**16.93**	**109**	*e*P	**Pn**	**07 22 30.2**	**+0.4**
	comp=E,12nm,0.7s						
KSRS	**Korea Array**	**20.77**	**67**	P	**P**	**07 23 12.3**	**-1.4**
	comp=E,1.5nm,0.7s,baz=242,slow=9.7,SNR=4.7						
MKAR	**Makanchi Array**	**22.54**	**319**	P	**P**	**07 23 34.9**	**+2.3**
	comp=E,2.1nm,1.1s,mb3.5,baz=126,slow=12,SNR=6.3						
ZALV	**Zalesovo Beam**	**26.29**	**334**	P	**P**	**07 24 09.2**	**+1.1**
	comp=E,1.8nm,0.7s,mb3.7,baz=133,slow=9.2,SNR=6.8						
ARCES	**ARCESS Array B**	**56.83**	**336**	P	**P**	**07 28 17.6**	**+0.9**
	comp=E,2.3nm,0.9s,mb4.2,baz=92,slow=8.1,SNR=2.8						
ARCES				PcP	PcP	07 29 11.6	-0.6
	comp=E,1.9nm,0.8s,baz=120,slow=5.3,SNR=4.2						
FINES	**FINESS Array B**	**57.12**	**326**	P	**P**	**07 28 19.7**	**+0.8**
	comp=E,4.1nm,1.0s,mb4.4,baz=68,slow=10,SNR=5.1						
WRAB	**Tennant Creek**	**58.91**	**146**	*e*P	**P**	**07 28 31.2**	**-0.7**
	comp=E,4.7nm,0.7s,mb4.6						
WRA	**Warramunga Arr**	**58.92**	**146**	P	**P**	**07 28 31.2**	**-0.7**
	comp=E,1.7nm,0.5s,mb4.3,baz=327,slow=9.0,SNR=16						
ASAR	**Alice Springs**	**61.93**	**149**	P	**P**	**07 28 51.9**	**-0.6**
	comp=E,0.6nm,0.7s,mb3.8,baz=341,slow=7.1,SNR=7.8						
NB2	**NORSAR Subarra**	**64.22**	**327**	P	**P**	**07 29 06.8**	**-0.4**
	comp=Z,0.5nm,0.5s,mb3.8,baz=73,slow=6.5						
NOA	**NORSAR Array B**	**64.22**	**327**	P	**P**	**07 29 07.2**	**-0.1**
	comp=Z,0.6nm,0.7s,mb3.9,baz=60,slow=1.8,SNR=4.9						
ILAR	**Eielson Array**	**69.65**	**26**	P	**P**	**07 29 40.0**	**-1.7**
	comp=Z,0.3nm,0.5s,mb3.5,baz=291,slow=4.0,SNR=8.2						
YKA	**Yellowknife Ar**	**81.45**	**17**	P	**P**	**07 30 49.2**	**-0.2**
	comp=Z,0.8nm,0.6s,mb3.8,baz=330,slow=5.5,SNR=4.1						

IDC 25 07:37:44.2±2.4,33°.85S×131°.56E,h0km,mb3.9/3, mb1 4.0/4,mb1mx3.7/17,mbtmp3.9/4,Error ellipse: s-maj=243.3km s-min=24.0km az=71.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**19.83**	**174**	P	Pn	07 42 17.2	-0.9
	0.5nm,0.3s,baz=353,slow=10,SNR=42						
STKA	**Stephens Creek**	**29.43**	**162**	P	P	07 43 49.3	-0.4
	0.8nm,0.3s,baz=318,slow=8.1,SNR=3.1						
MKAR	**Makanchi Array**	**66.49**	**325**	P	P	07 48 35.4	-0.4
	0.5nm,0.5s,baz=126,slow=8.3,SNR=6.3						
ZALV	**Zalesovo Beam**	**69.49**	**333**	P	P	07 48 54.9	+0.5
	0.5nm,0.4s,baz=112,slow=6.4,SNR=1.6						

IGQ 25 07:44:49.1,2°.05S×79°.82W,h26km±3km,Mb4.0,Ms3.8, 11D,Error ellipse: s-maj=3.0km s-min=1.4km az=114.5, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIOE	**Riobamba**	**1.23**	**76**	⇓P	Pn	07 45 12.4	+1.9
RIOE	**Riobamba**	**1.23**	**76**	⇓S	Sn	07 45 28.6	+2.4
IGUA	**Igualata**	**1.31**	**65**	⇓S	Sn	07 45 31.4	+3.1
IGUA	**Igualata**	**1.31**	**65**	⇓P	Pn	07 45 14.0	+2.4
CHIS	**Cerro-Chispas-**	**1.34**	**318**	P	Pn	07 45 14.7	+2.6
ARRY	**Arrayan**	**1.47**	**69**	⇓P	Pn	07 45 15.8	+1.9
MACE	**Macas**	**1.64**	**97**	⇓S	Sn	07 45 38.8	+2.4
MACE	**Macas**	**1.64**	**97**	⇓P	Pn	07 45 18.8	+2.6
JAMA	**Jama**	**1.81**	**348**	P	Pn	07 45 19.9	+1.3
CAMI	**Rancho Maria**	**1.89**	**44**	P	Pn	07 45 23.2	+3.4
NAS2	**Nasa**	**1.94**	**44**	P	Pn	07 45 24.3	+3.9
BREF	**Cotopaxi Volca**	**1.94**	**45**	*i* P	Pn	07 45 23.7	+3.3
MAG1	**Magdalena**	**1.96**	**1**	P	Pn	07 45 22.6	+2.0
BTAM	**Cotopaxi Volca**	**1.97**	**46**	⇓P	Pn	07 45 23.7	+2.9
BVC2	**Cotopaxi Volca**	**1.97**	**46**	⇓P	Pn	07 45 23.9	+3.1
TAMB	**Tambo**	**1.98**	**47**	P	Pn	07 45 23.9	+3.0
VC1	**Cotopaxi 1**	**1.99**	**46**	P	Pn	07 45 24.1	+3.1
COV1	**Cotopaxi Volc**	**2.02**	**47**	P	Pn	07 45 23.8	+2.4
JUA2	**San Juan 2**	**2.19**	**34**	P	Pn	07 45 26.8	+2.9
TERV	**Terraza Guagua**	**2.22**	**33**	S	Sn	07 45 55.8	+4.9
TERV	**Terraza Guagua**	**2.22**	**33**	P	Pn	07 45 27.3	+3.0
GGP	**Refugio Guagua**	**2.23**	**33**	P	Pn	07 45 27.2	+2.9
PINO	**Pino**	**2.23**	**33**	⇓P	Pn	07 45 27.1	+2.7
YANA	**Yana**	**2.29**	**33**	S	Sn	07 45 55.9	+3.4
YANA	**Yana**	**2.29**	**33**	P	Pn	07 45 27.8	+2.6
OTAV	**Otavalo**	**2.65**	**31**	⇓P	Pn	07 45 32.3	+2.2
CAYA	**Cayambe**	**2.79**	**41**	P	Pn	07 45 34.9	+2.9
COTA	**Cotacachi**	**2.79**	**32**	P	Pn	07 45 34.9	+2.8

*LDG **25** 07:48:08.7±0.5,22°.03S×68°.30W,h100km,Mb5.2/18, Ms3.7/8, Error ellipse: s-maj=44.0km s-min=22.9km az=155.0*
*ISCJB **25** 07:48:10.1±0.2,22°.24S±0°.04×68°.17W±0°.03,h117km, mb4.9/192, Error ellipse: s-maj=5.8km s-min=3.9km az=22.0*
*IDC **25** 07:48:10.4±0.5,22°.41S×68°.31W,h112km±4km,mb4.7/21, mb1 4.7/26,mb1mx4.7/27,mbtmp4.7/26,MS4.0/8, Ms1 4.0/8,ms1mx3.7/19,Error ellipse: s-maj=15.4km s-min=9.7km az=62.0*
*NEIC **25** 07:48:11.1±0.2,22°.33S×68°.17W,mb5.0/161,Error ellipse: s-maj=5.9km s-min=4.3km az=42.0*
*MOS **25** 07:48:12.2±1.1,22°.12S×68°.26W,h133km,mb5.0/48, Error ellipse: s-maj=11.4km s-min=6.8km az=93.9*
*GCMT **25** 07:48:15.9±0.2,22°.44S×68°.55W,h137km±2km,MW5.2, Moment Tensor Solution. s40,c48; s71,c106; Moment tensor: Scale 10^{16}Nm; M_{rr}-3.08±.21; $M_{\theta\theta}$1.08±.22; $M_{\phi\phi}$1.99±.26; $M_{r\theta}$3.26±.14; $M_{\theta\phi}$-2.20±.19; $M_{\phi r}$-5.30±.18; Best double couple: $M_0$7.10000×10^{16} NP1:ϕ_s131.00000°, δ15.00000°,λ-107.00000°. NP2:ϕ_s328.00000°, δ76.00000°,λ-86.00000°. Principal axes: T 7.4300, Plg31.0000°, Azm54.0000°; N -0.6500, Plg4.0000°, Azm147.0000°; P -6.7900, Plg59.0000°, Azm244.0000°; Data Used: II IU G CN IC.*
ISC 25 07:48:11.8±0.2,22°.28S±0°.04×68°.08W±0°.03,h119km, h119km±1.0km:pP-P,n781,σ0°.73/706,mb4.9/192, 201C-175D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**5.96**	**360**	P	**Pn**	**07 49 39.0**	**+1.2**
	19nm,0.3s,baz=164,slow=7.3,SNR=419						
LPAZ	**La Paz**	**5.96**	**360**	*e*Pn	**Pn**	**07 49 39.3**	**+1.5**
LCO	**Las Campanas**	**7.11**	**199**	*e*Pn	**Pn**	**07 49 43.9**	**-9.3**
LCO				eSn	**Sn**	**07 51 11.5**	**-0.9**
SIV	**San Ignacio**	**9.11**	**48**	P	**Pn**	**07 50 19.5**	**-0.9**
	92nm,0.3s,baz=228,slow=13,SNR=610						
SIV				S	**Sn**	**07 51 58.0**	**-3.2**
	9.8nm,0.3s,baz=311,slow=20,SNR=2.4						
CPUP	**Villa Florida**	**10.60**	**114**	P	**Pn**	**07 50 39.4**	**-1.0**
	4.0nm,0.3s,baz=275,slow=11,SNR=92						
CPUP				LR	LR	07 55 50.3	
	comp=Z,334nm,20.0s,baz=292,slow=43						
CPUP	**Villa Florida**	**10.60**	**114**	*e*Pn	**Pn**	**07 50 38.4**	**-2.0**
NNA	**Nana**	**13.22**	**319**	P	**Pn**	**07 51 13.5**	**-1.5**
	0.7nm,0.3s,baz=145,slow=16,SNR=2.5						
TRQA	**Tornquist**	**16.58**	**163**	*e*P	**Pn**	**07 51 52.8**	**-4.3**
	552nm,1.5s						
ATAH	**Atahualpa**	**18.04**	**325**	P	**P**	**07 52 13.2**	**-0.6**
	0.3nm,0.3s,baz=109,slow=18,SNR=2.9						
PLCA	**Paso Flores**	**18.51**	**186**	P	**P**	**07 52 15.8**	**-3.0**
	1.9nm,0.3s,baz=7.5,slow=12,SNR=16						
PLCA				PcP	PcP	07 56 43.4	-0.2
	0.2nm,0.3s,baz=267,slow=2.7,SNR=3.4						
PLCA	**Paso Flores**	**18.51**	**186**	*e*P	**P**	**07 52 15.0**	**-3.8**
PLCA				pmax	pmax		
	comp=Z,129nm,1.1s						
PLCA	**Paso Flores**	**18.51**	**186**	*e*P	**P**	**07 52 15.0**	**-3.8**
	comp=Z,129nm,1.1s						
CAM4	**Nova Friburgo**	**23.60**	**95**	⇑*i*P	**P**	**07 53 10.6**	**-1.3**
CAM4				*i*		07 53 11.3	
CAM4				*i*		07 53 13.4	
CAM4				*i*		07 53 18.8	
CAM4				*i*		07 53 25.1	
CAM4				*i*		07 53 29.8	
CAM4				*i*		07 53 36.4	
CAM4				*i*		07 53 39.9	
CAM4				*i*		07 53 48.6	
CAM4	**Nova Friburgo**	**23.60**	**95**	⇑*i*P	**P**	**07 53 10.6**	**-1.3**
CAM4				*i*		07 53 11.4	
CAM4				*i*		07 53 13.4	
CAM4				*i*		07 53 19.9	
CAM4	**Nova Friburgo**	**23.60**	**95**	⇑*i*P	**P**	**07 53 10.5**	**-1.4**
CAM4				*i*		07 53 11.5	
CAM4				*i*		07 53 13.3	
CAM4				*i*		07 53 15.8	
CAM4				*i*		07 53 18.8	
CAM4				*i*		07 53 40.0	
CAM4				*i*		07 55 25.1	
OTAV	**Otavalo**	**24.56**	**334**	*e*P	**P**	**07 53 23.1**	**+2.5**
	comp=Z,46nm,1.2s,mb4.8						
ROSC	**El Rosal**	**27.65**	**346**	P	**P**	**07 53 47.2**	**-1.4**
	comp=Z,3.2nm,0.6s,mb4.0,baz=96,slow=14,SNR=1.6						
ROSC				LR	LR	08 06 17.9	
	comp=Z,232nm,18.2s,baz=28,slow=39						
PAYG	**Puerto Ayora**	**30.47**	**312**	*e*P	**P**	**07 54 13.0**	**-0.5**
	comp=Z,54nm,1.0s,mb5.1						
PCRV	**Puerto La Cruz**	**32.43**	**6**	LR	LR	08 08 41.4	
	comp=Z,288nm,19.0s,baz=19,slow=38						
USHA	**Ushuaia**	**32.51**	**180**	P	**P**	**07 54 27.8**	**-3.2**
	comp=Z,35nm,0.9s,mb5.2,baz=1.9,slow=5.6,SNR=22						
GRGR	**Grenville**	**34.78**	**11**	*e*P	**P**	**07 54 52.2**	**+1.2**
	comp=Z,497nm,1.0s						
SVV	**Soufriere Volc**	**36.01**	**11**	*e*P	**P**	**07 55 04.0**	**+2.4**
BBGH	**Gun Hill**	**36.18**	**14**	*e*P	**P**	**07 55 04.6**	**+1.6**
	comp=Z,509nm,1.1s						
SLB	**Belfond**	**36.54**	**12**	*e*P	**P**	**07 55 06.1**	**0.0**
FDF	**Fort de France**	**37.41**	**11**	*e*P	**P**	**07 55 13.8**	**+0.4**
FDF				pmax	pmax		
	comp=Z,256nm,0.6s						
FDF	**Fort de France**	**37.41**	**11**	*e*P	**P**	**07 55 13.8**	**+0.4**
	comp=Z,256nm,0.6s						
ICM	**Isla Caja Muer**	**39.96**	**2**	*e*P	**P**	**07 55 32.8**	**-1.8**
CRPR	**Cabo Rojo, PR**	**40.05**	**1**	*e*P	**P**	**07 55 34.1**	**-1.3**
	comp=Z,70nm,1.6s,mb5.2						
OBIP	**Obispado Ponce**	**40.10**	**2**	*e*P	**P**	**07 55 33.8**	**-2.1**
	comp=Z,65nm,0.6s,mb5.6						
CELP	**Cerrillos**	**40.13**	**2**	*e*P	**P**	**07 55 34.0**	**-2.1**
ANWB	**Willy Bob**	**40.18**	**9**	*e*P	**P**	**07 55 35.5**	**-0.9**
	comp=Z,124nm,0.5s,mb6.0						
SJG	**San Juan**	**40.19**	**3**	P	**P**	**07 55 34.3**	**-2.2**
	comp=Z,40nm,0.6s,mb5.4,baz=0.9,slow=2.9,SNR=14						
SJG	**San Juan**	**40.19**	**3**	*e*P	**P**	**07 55 33.9**	**-2.7**
SJG				*e*PP	pP	07 56 03.7	+0.2
SJG				pmax	pmax		
	comp=Z,33nm,0.6s						
SJG	**San Juan**	**40.19**	**3**	*e*P	**P**	**07 55 33.9**	**-2.6**
	comp=Z,33nm,0.6s,mb5.3						
SJG				*e*pP	pP	07 56 03.7	+0.2
MTP	**Monte Pirata**	**40.21**	**4**	*e*P	**P**	**07 55 33.0**	**-3.7**
	comp=Z,17nm,0.7s,mb5.0						
MTP				*e*pP	pP	07 56 05.6	+2.0
MTP				*e*PP	PP	07 57 13.0	+1.2
HUMP	**Col San Antoni**	**40.23**	**3**	*e*P	**P**	**07 55 35.3**	**-1.7**
	comp=Z,35nm,1.3s,mb5.0						
MPR	**Mayaguez**	**40.25**	**1**	*e*P	**P**	**07 55 35.1**	**-2.0**
LRS	**Lares**	**40.34**	**2**	*e*P	**P**	**07 55 35.9**	**-1.9**
CBYP	**Canovanas**	**40.36**	**3**	*e*P	**P**	**07 55 34.6**	**-3.4**
	comp=Z,127nm,1.4s,mb5.6						
CBYP				*e*PP	PP	07 57 19.2	+5.8
AOPR	**Arecibo Observ**	**40.40**	**2**	*e*P	**P**	**07 55 36.2**	**-2.1**
	comp=Z,62nm,1.4s,mb5.2						
AGPR	**Aguadilla, PR**	**40.51**	**1**	*e*P	**P**	**07 55 41.7**	**+2.5**
	comp=Z,18nm,0.5s,mb5.2						
TGUH	**Tegucigalpa,Un**	**40.72**	**331**	*e*P	**P**	**07 55 41.4**	**+0.4**
	comp=Z,24nm,0.9s,mb5.0						
PMSA	**Palmer Station**	**42.56**	**177**	P	**P**	**07 55 53.0**	**-2.4**
	comp=Z,53nm,0.8s,mb5.3,baz=7.6,slow=7.6,SNR=8.4						
PMSA	**Palmer Station**	**42.56**	**177**	*e*P	**P**	**07 55 54.3**	**-1.1**
	comp=Z,55nm,0.7s,mb5.4						
DWPF	**Disney**	**51.73**	**345**	*e*P	**P**	**07 57 06.1**	**-0.9**
	comp=Z,52nm,1.3s,mb5.4						
DWPF				*e*pP	pP	07 57 35.3	+0.3
BBSR	**BB Station**	**54.44**	**4**	*e*P	**P**	**07 57 25.3**	**-1.5**
	comp=Z,39nm,0.8s,mb5.5						
NHSC	**New Hope**	**56.27**	**348**	*e*P	**P**	**07 57 39.6**	**-0.3**
	comp=Z,147nm,1.2s,mb5.9						
NHSC				*e*pP	pP	07 58 08.1	-0.2
JSC	**Jenkinsville**	**57.63**	**347**	*e*P	**P**	**07 57 48.9**	**-0.5**
JSC				*e*PP	pP	07 58 18.0	0.0
LRAL	**Lakeview Retre**	**57.89**	**341**	*e*P	**P**	**07 57 49.4**	**-1.9**
	comp=Z,8.1nm,1.0s,mb4.7						
LRAL				*e*		07 58 09.6	
HKT	**Hockley**	**58.39**	**332**	*e*P	**P**	**07 57 53.6**	**-1.2**
HKT				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
HKT	**Hockley**	**58.39**	**332**	*e*P	**P**	**07 57 53.6**	**-1.2**
	comp=Z,6.6nm,0.8s,mb4.7						
VNA1	**Neumayer--Stat**	**59.30**	**160**	*e*P	**P**	**07 57 59.6**	**-1.0**
CPCT	**Cooper Cave**	**59.49**	**344**	*e*P	**P**	**07 58 01.0**	**-1.3**
CPCT				*e*pP	pP	07 58 30.2	-0.8
TKL	**Tuckaleechee C**	**59.51**	**345**	LR	LR	08 26 41.1	
TKL	**Tuckaleechee C**	**59.51**	**345**	*e*P	**P**	**07 58 00.6**	**-1.9**
TKL				*e*		07 58 19.7	
TKL				*e*pP	pP	07 58 30.3	-0.9
SWET	**Sewanee**	**59.64**	**343**	*e*P	**P**	**07 58 01.3**	**-2.0**
SWET				*e*pP	pP	07 58 29.9	-2.1
OXF	**Oxford**	**60.01**	**340**	*e*P	**P**	**07 58 03.2**	**-2.7**
OXF				*e*PP	pP	07 58 33.0	-1.7
OXF				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.2						
OXF	**Oxford**	**60.01**	**340**	*e*P	**P**	**07 58 03.2**	**-2.7**
	comp=Z,24nm,1.0s,mb5.2						
OXF				*e*pP	pP	07 58 33.0	-1.7
BLA	**Blacksburg**	**60.30**	**349**	*e*P	**P**	**07 58 07.5**	**-0.3**
BLA				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.3						
BLA	**Blacksburg**	**60.30**	**349**	*e*P	**P**	**07 58 07.5**	**-0.4**
	comp=Z,33nm,1.0s,mb5.3						
ELN	**Prospectdale**	**60.38**	**348**	*e*P	**P**	**07 58 08.4**	**0.0**
ELN				*e*pP	pP	07 58 38.3	+1.1
JCT	**Junction City**	**60.66**	**329**	*e*P	**P**	**07 58 09.4**	**-1.0**
JCT				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.4						
JCT	**Junction City**	**60.66**	**329**	*e*P	**P**	**07 58 09.4**	**-1.1**
	comp=Z,30nm,0.7s,mb5.4						
WVT	**Waverly**	**61.02**	**342**	*e*P	**P**	**07 58 10.6**	**-2.1**
WVT				*e*PP	pP	07 58 39.7	-1.9
WVT				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.0						
WVT	**Waverly**	**61.02**	**342**	*e*P	**P**	**07 58 10.6**	**-2.1**
	comp=Z,13nm,0.8s,mb5.0						
WVT				*e*pP	pP	07 58 39.7	-1.9
628A	**Black Gap, Mar**	**61.41**	**325**	⇑P	**P**	**07 58 15.3**	**-0.2**
	baz=62,SNR=33						
MIAR	**Mount Ida**	**61.49**	**336**	*e*P	**P**	**07 58 14.4**	**-1.5**
MIAR				*e*PP	pP	07 58 43.1	-1.7
MIAR				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.1						
MIAR	**Mount Ida**	**61.49**	**336**	*e*P	**P**	**07 58 14.4**	**-1.5**
	comp=Z,19nm,1.0s,mb5.1						
MIAR				*e*pP	pP	07 58 43.1	-1.8
627A	**Terlingua Ranc**	**61.65**	**325**	⇑P	**P**	**07 58 16.4**	**-0.7**
	baz=62,SNR=9.3						
TXAR	**Lajitas Array**	**61.70**	**325**	P	**P**	**07 58 16.7**	**-0.8**
	comp=Z,2.9nm,0.6s,mb4.5,baz=152,slow=8.4,SNR=40						
TXAR				PKP2bc		08 27 33.4	
TXAR	**Lajitas Array**	**61.70**	**325**	P	**P**	**07 58 16.7**	**-0.7**
TXAR				⇑*e*		08 27 33.4	
528A	**Cox Ranch, San**	**61.90**	**326**	⇑P	**P**	**07 58 17.9**	**-0.9**
	baz=62,SNR=15						
626A	**Big Bend Ranch**	**62.13**	**325**	⇓P	**P**	**07 58 20.0**	**-0.3**
	baz=62,SNR=38						
428A	**Kincaid Ranch,**	**62.30**	**326**	⇓P	**P**	**07 58 20.7**	**-0.7**
	baz=63,SNR=16						
527A	**Woodward Ranch**	**62.32**	**325**	⇓P	**P**	**07 58 20.7**	**-0.8**
	baz=63,SNR=15						
526A	**Mary Lane Ranc**	**62.50**	**325**	⇓P	**P**	**07 58 22.4**	**-0.4**
	baz=63						
WCI	**Wyandotte Cave**	**62.57**	**344**	*e*P	**P**	**07 58 20.8**	**-2.3**
WCI				*e*PP	pP	07 58 49.8	-2.3
WCI				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
WCI	**Wyandotte Cave**	**62.57**	**344**	*e*P	**P**	**07 58 20.8**	**-2.3**
	comp=Z,11nm,0.8s,mb4.8						
WCI				*e*pP	pP	07 58 49.8	-2.3
MCWV	**Mont Chateau**	**62.59**	**350**	*e*P	**P**	**07 58 22.7**	**-0.5**
	comp=Z,14nm,0.6s,mb5.1						
MCWV				*e*pP	pP	07 58 51.2	-1.0
427A	**Hayter Ranch,**	**62.77**	**326**	⇓P	**P**	**07 58 23.7**	**-0.8**
	baz=63,SNR=12						
328A	**Wristen Ranch,**	**62.89**	**327**	⇑P	**P**	**07 58 24.

BINY **Binghamton** 64.57 354 eP P 07 58 36.0 -0.1
comp=Z,39nm,1.1s,mb5.2
Z27A **Tatum** 64.64 328 ⇑P P 07 58 35.4 -1.4
baz=65,SNR=20
CPRX **Cap Rock** 64.74 327 eP P 07 58 36.7 -0.8
comp=Z,5.0nm,0.7s,mb4.5
224A **Cornudas Mount** 64.84 325 ⇑P P 07 58 36.9 -1.2
baz=65,SNR=40
125A **Gardner Draw,** 64.85 326 ⇓P P 07 58 36.8 -1.4
baz=65,SNR=20
MSTX **Muleshoe** 64.96 329 ⇑P P 07 58 37.5 -1.3
baz=65,SNR=24
Z26A **Caprock** 64.99 327 ⇓P P 07 58 38.0 -1.0
baz=65,SNR=14
Y27A **Causey** 65.08 328 ⇑P P 07 58 38.2 -1.4
baz=65
AMTX **Amarillo** 65.19 330 eP P 07 58 39.0 -1.2
comp=Z,8.9nm,0.4s,mb5.0
223A **Chaparral, Ant** 65.27 325 ⇓P P 07 58 40.4 -0.5
baz=66
124A **Stringfield Ra** 65.29 326 ⇓P P 07 58 40.4 -0.6
baz=66,SNR=22
Z25A **Roswell** 65.37 327 ⇓P P 07 58 40.4 -1.1
baz=66,SNR=18
Y26A **Elida** 65.44 328 ⇓P P 07 58 42.2 +0.3
baz=66
HDIL **Hopedale** 65.56 342 eP P 07 58 40.3 -2.3
comp=Z,16nm,0.5s,mb5.1
HDIL e 07 59 01.6
222A **Williams Famil** 65.71 324 ⇓P P 07 58 43.7 0.0
baz=66,SNR=14
Z24A **Sheeppen Canyo** 65.74 326 ⇓P P 07 58 43.2 -0.7
baz=66
MAIT **Maitri** 65.80 159 eP P 07 58 43.3 -0.5
Y25A **Mesa, Roswell** 65.87 327 ⇓P P 07 58 43.4 -1.2
baz=66,SNR=17
320A **Kipp Ranch, An** 65.92 323 ⇓P P 07 58 44.9 -0.2
baz=66,SNR=7.3
X26A **CR and CF Fran** 65.93 328 ⇑P P 07 58 44.2 -0.9
baz=66,SNR=18
W27A **Bowe Ranch, En** 65.98 329 ⇑P P 07 58 44.4 -1.0
baz=66,SNR=8.5
221A **Mesquite Ranch** 66.01 324 ⇑P P 07 58 46.0 +0.3
baz=66
122A **Conniff Cattle** 66.11 325 ⇑P P 07 58 46.6 +0.3
baz=66,SNR=5.8
Z23A **Rita Site, Whi** 66.14 326 ⇓P P 07 58 46.3 -0.1
baz=66,SNR=11
NCB **Newcomb** 66.16 355 eP P 07 58 45.7 -0.6
comp=Z,25nm,1.1s,mb5.0
220A **Playas Peak, P** 66.34 323 ⇓P P 07 58 47.6 -0.2
baz=67,SNR=14
W26A **Owens Ranch, T** 66.34 329 ⇑P P 07 58 47.0 -0.7
baz=67,SNR=11
319A **Douglas** 66.37 322 ⇑P P 07 58 48.0 0.0
baz=67,SNR=14
121A **Cookes Peak, D** 66.41 324 ⇓P P 07 58 48.4 +0.2
baz=67,SNR=14
Z22A **Elephant Butte** 66.52 325 ⇓P P 07 58 49.2 +0.4
baz=67,SNR=20
Y23A **Lovelace Mesa,** 66.57 326 ⇑P P 07 58 48.7 -0.5
baz=67,SNR=12
W25A **X Bar L Ranch,** 66.78 328 ⇓P P 07 58 49.6 -0.9
baz=67,SNR=15
219A **White Tail Can** 66.82 323 ⇑P P 07 58 50.8 0.0
baz=67,SNR=12
LONY **Lake Ozonia** 66.84 355 eP P 07 58 50.4 -0.2
comp=Z,23nm,0.9s,mb5.0
120A **U Bar Ranch, L** 66.89 323 ⇑P P 07 58 51.4 +0.2
baz=67,SNR=11
Z21A **St. Cloud Mine** 66.94 325 ⇑P P 07 58 51.9 +0.4
baz=67,SNR=5.9
BNM **Barren Site** 67.04 326 eP P 07 58 52.4 +0.3
comp=Z,12nm,1.0s,mb4.7
BNM epP pP 07 59 20.3 -1.2
Y22A **Socorro** 67.05 325 ⇓P P 07 58 52.4 +0.2
baz=67,SNR=9.8
PKME **Peaks-Kenny Pk** 67.23 359 eP P 07 58 52.6 -0.4
comp=Z,55nm,0.8s,mb5.4
W24A **Lazy 6 Ranch,** 67.25 327 ⇑P P 07 58 52.9 -0.5
baz=68,SNR=11
218A **Dragoon** 67.25 322 ⇓P P 07 58 53.6 +0.1
baz=68,SNR=13
Z20A **Nine Sixteen R** 67.29 324 ⇑P P 07 58 54.2 +0.4
baz=68,SNR=17
V25A **Rancho No Teng** 67.36 328 ⇑P P 07 58 53.7 -0.4
baz=68,SNR=13
U26A **Atchley Ranch,** 67.39 329 ⇓P P 07 58 53.9 -0.4
baz=68,SNR=21
119A **Ashpeak Ranch,** 67.42 323 ⇑P P 07 58 54.5 -0.1
baz=68
Y21A **Point of Rocks** 67.48 325 ⇑P P 07 58 55.6 +0.7
baz=68,SNR=35
LAZ **Ladron** 67.50 326 eP P 07 58 55.2 +0.2
comp=Z,14nm,1.6s,mb4.5
217A **Green Valley** 67.55 321 ⇓P P 07 58 55.3 -0.1
baz=68,SNR=17
ANMO **Albuquerque** 67.57 327 P P 07 58 55.5 0.0
comp=Z,12nm,0.7s,mb4.8,baz=142,slow=9.8
W23A **Werner Place,** 67.58 327 ⇓P P 07 58 55.6 0.0
baz=68,SNR=14
V24A **Rampart Ranch,** 67.59 328 ⇑P P 07 58 55.1 -0.5
baz=68,SNR=28
CBKS **Cedar Bluff** 67.63 334 eP P 07 58 55.0 -0.7
CBKS e*PP pP 07 59 24.1 -1.1
CBKS pmax pmax
comp=Z,31nm,0.9s,mb5.1
CBKS **Cedar Bluff** 67.63 334 eP P 07 58 55.0 -0.7
comp=Z,31nm,0.9s,mb5.1
CBKS epP pP 07 59 24.1 -1.1
118A **Homack Ranch,** 67.70 322 ⇓P P 07 58 56.2 -0.1
baz=68,SNR=12
U25A **Circle Dot Ran** 67.71 329 ⇑P P 07 58 56.0 -0.3
baz=68,SNR=16
Y20A **Horse Springs,** 67.78 324 ⇓P P 07 58 57.2 +0.5
baz=68,SNR=18
Z19A **T-Link Ranch,** 67.80 323 ⇑P P 07 58 57.6 +0.6
baz=68
X21A **Alamocita Cree** 67.87 325 ⇑P P 07 58 58.0 +0.6
baz=68,SNR=33
LIC **Lamto** 67.87 73 eP P 07 58 57.3 -0.6
comp=Z,144nm,0.9s,mb5.8
LIC **Lamto** 67.87 73⇑iP P 07 58 57.9 0.0
comp=Z,85nm,0.8s,mb5.3
LIC eMLR MLR
comp=Z,91nm,22.5s
LIC **Lamto** 67.87 73⇑iP P 07 58 57.9 0.0
comp=Z,43nm,0.8s,mb5.3
LIC LR LR
comp=Z,50nm,22.5s
W22A **Albuquerque** 67.88 326 ⇑P P 07 58 57.9 +0.5
baz=68,SNR=12
TUC **Tucson** 67.92 322 eP P 07 58 57.6 -0.1
TUC pmax pmax
comp=Z,17nm,1.3s,mb4.7
TUC **Tucson** 67.92 322 eP P 07 58 57.6 -0.2
comp=Z,17nm,1.3s,mb4.7
JFWS **Jewell Farm** 68.01 343 eP P 07 58 56.3 -1.7
JFWS pmax pmax
comp=Z,17nm,0.5s,mb5.1
JFWS **Jewell Farm** 68.01 343 eP P 07 58 56.3 -1.7
comp=Z,17nm,0.5s,mb5.1
V23A **Ortiz Mt. (NFS** 68.06 327 ⇓P P 07 58 58.9 +0.4
baz=68,SNR=22
Z18A **Geronimo** 68.07 323 ⇑P P 07 58 58.9 +0.2
baz=68
TIC **Toumodi** 68.07 73 eP P 07 58 58.8 -0.3
comp=Z,195nm,1.1s,mb5.9
TIC **Toumodi** 68.07 73 eP P 07 58 58.8 -0.3
TIC pmax pmax
comp=Z,195nm,1.1s,mb5.8
216A **Three Points,** 68.09 321 ⇓P P 07 58 58.9 +0.2
baz=68,SNR=12
117A **Oracle** 68.09 322 ⇓P P 07 58 58.9 +0.1
baz=68,SNR=20
U24A **Moreno Valley** 68.14 328 ⇑P P 07 58 59.4 +0.4
baz=68,SNR=5.5
KIC **Kosan Boka** 68.19 73 eP P 07 58 59.2 -0.6
comp=Z,294nm,0.9s,mb6.1
DBIC **Dimbokro** 68.23 73 P P 07 59 00.3 +0.3
comp=Z,97nm,0.7s,mb5.7,baz=219,slow=6.5,SNR=79
DBIC LR LR 08 26 36.5
comp=Z,137nm,19.1s,baz=160,slow=34
DBIC **Dimbokro** 68.23 73 eP P 07 59 00.0 -0.1
DBIC pmax pmax
comp=Z,116nm,0.8s
DBIC **Dimbokro** 68.23 73 eP P 07 59 00.0 -0.1
comp=Z,116nm,0.8s,mb5.8

Y19A **Nutrioso** 68.29 324 ⇓P P 07 59 00.7 +0.7
baz=69,SNR=32
T25A **Trinidad** 68.30 329 ⇓P P 07 59 00.1 +0.1
baz=69,SNR=7.2
W21A **San Fidel** 68.31 326 ⇓P P 07 59 00.5 +0.3
baz=69,SNR=8.4
X20A **Quemado** 68.32 325 ⇑P P 07 59 00.5 +0.3
baz=69,SNR=13
Z17A **San Carlos Hig** 68.47 323 ⇑P P 07 59 01.3 +0.1
baz=69
U23A **El Rito** 68.52 328 ⇑P P 07 59 01.6 +0.2
baz=69,SNR=9.9
V22A **San Miguel Ran** 68.55 327 ⇓P P 07 59 02.1 +0.5
baz=69,SNR=15
Y18A **Canyon Day Jun** 68.58 323 ⇓P P 07 59 02.0 +0.1
baz=69,SNR=11
116A **Eloy** 68.64 321 ⇓P P 07 59 02.3 +0.1
baz=69,SNR=6.9
X19A **St. Johns** 68.66 324 ⇑P P 07 59 02.7 +0.4
baz=69
S25A **Robets Cordova** 68.73 330 ⇑P P 07 59 02.7 0.0
baz=69,SNR=13
W20A **Ramah** 68.77 325 ⇑P P 07 59 03.3 +0.3
baz=69,SNR=14
214A **Organ Pipe Nat** 68.85 320 ⇑P P 07 59 03.7 +0.2
baz=69,SNR=10
U22A **Llaves** 68.89 327 ⇑P P 07 59 04.3 +0.7
baz=69,SNR=7.7
Y17A **Roosevelt** 68.97 323 ⇓P P 07 59 04.6 +0.3
baz=69,SNR=20
T23A **Casias Ranch,** 69.00 328 ⇓P P 07 59 04.6 +0.2
baz=69,SNR=7.5
X18A **Snowflake** 69.10 324 ⇓P P 07 59 05.4 +0.4
baz=69,SNR=7.1
W19A **Sanders** 69.23 325 ⇑P P 07 59 06.1 +0.3
baz=70,SNR=5.3
V20A **Brimhall** 69.27 326 ⇑P P 07 59 06.2 +0.2
baz=70,SNR=5.1
SDCO **Great Sand Dun** 69.31 329 eP P 07 59 06.4 +0.2
comp=Z,14nm,0.9s,mb4.8
SDCO epP pP 07 59 35.8 +0.1
U21A **Nageezi** 69.33 327 ⇑P P 07 59 06.6 +0.2
baz=70,SNR=18
T22A **Edith** 69.41 328 ⇓P P 07 59 07.3 +0.5
baz=70,SNR=8.6
W18A **Petrified Fore** 69.42 324 ⇑P P 07 59 07.3 +0.3
baz=70
Z15A **Gila River Ind** 69.42 322 ⇑P P 07 59 07.1 +0.1
baz=70,SNR=5.9
X17A **Forest Lakes** 69.43 323 ⇓P P 07 59 07.7 +0.7
baz=70,SNR=21
114A **Black Gap (USA** 69.46 321 ⇓P P 07 59 07.4 +0.1
baz=70,SNR=12
Y16A **Circle Bar Ran** 69.47 322 ⇑P P 07 59 07.7 +0.4
baz=70,SNR=14
V19A **Window Rock** 69.50 325 ⇓P P 07 59 07.8 +0.3
baz=70,SNR=9.1
R24A **Sanders Place,** 69.51 330 ⇑P P 07 59 07.8 +0.3
baz=70,SNR=16
U20A **Newcomb** 69.74 326 ⇓P P 07 59 09.0 +0.1
baz=70,SNR=8.0
X16A **Lo Mia Camp, P** 69.84 323 ⇑P P 07 59 10.2 +0.6
baz=70,SNR=24
W17A **Winslow** 69.92 324 ⇑P P 07 59 10.6 +0.5
baz=70
Z14A **Wintersburg** 69.93 321 ⇓P P 07 59 10.3 +0.1
baz=70
S22A **4UR Ranch, Cre** 69.95 328 ⇓P P 07 59 10.6 +0.4
baz=70
V18A **Ganado** 69.97 325 ⇑P P 07 59 10.5 +0.1
baz=70,SNR=9.4
113A **Mohawk Valley,** 69.99 320 ⇓P P 07 59 10.6 0.0
baz=70
Y15A **Casa Rosa Ranc** 70.01 322 ⇑P P 07 59 10.8 +0.2
baz=70,SNR=20
U19A **Dine' College,** 70.03 326 ⇑P P 07 59 10.4 -0.3
baz=70,SNR=7.8
P25A **Willow Gulch B** 70.11 331 ⇑P P 07 59 11.5 +0.3
baz=70,SNR=14
Q24A **Divide** 70.12 330 ⇓P P 07 59 11.5 +0.4
baz=70,SNR=10
Z13A **Yuma Proving G** 70.23 320 ⇓P P 07 59 12.2 +0.1
baz=70
R22A **Saguache, Gunn** 70.29 328 ⇓P P 07 59 12.8 +0.6
baz=71,SNR=8.5
112A **Yuma** 70.32 319 ⇑P P 07 59 12.7 +0.2
baz=71
X15A **Humboldt** 70.34 322 ⇑P P 07 59 13.0 +0.4
baz=71,SNR=21
T19A **Beclabito** 70.34 326 ⇑P P 07 59 12.4 -0.2
baz=71,SNR=19
MVCO **Mesa Verde** 70.36 327 ⇑P P 07 59 12.9 +0.2
baz=71,SNR=18
V17A **Tonalea, Kykot** 70.37 324 ⇓P P 07 59 13.2 +0.4
baz=71,SNR=27
Y14A **Wickenburg** 70.38 321 ⇑P P 07 59 12.9 0.0
baz=71,SNR=14
W16A **Flagstaff** 70.39 323 ⇑P P 07 59 13.5 +0.6
baz=71,SNR=35
P24A **Kohler Place,** 70.45 331 ⇑P P 07 59 13.5 +0.3
baz=71,SNR=5.6
U18A **Rough Rock, Ch** 70.47 325 ⇑P P 07 59 13.8 +0.4
baz=71,SNR=16
WUAZ **Wupatki** 70.61 324 ⇓P P 07 59 14.9 +0.6
baz=71,SNR=13
WUAZ **Wupatki** 70.61 324 eP P 07 59 15.0 +0.7
comp=Z,25nm,1.0s,mb5.0
X14A **Yava** 70.70 322 ⇓P P 07 59 15.3 +0.5
baz=71,SNR=12
ECSD **EROS Data Cent** 70.72 338 eP P 07 59 13.0 -1.7
comp=Z,12nm,1.2s,mb4.6
P23A **Jefferson** 70.77 330 ⇑P P 07 59 15.8 +0.7
baz=71
Y13A **Salome** 70.77 321 ⇑P P 07 59 15.5 +0.3
baz=71,SNR=8.7
S20A **Disappointment** 70.77 327 ⇑P P 07 59 16.1 +0.9
baz=71,SNR=18
R21A **Cimarron** 70.79 328 ⇑P P 07 59 15.9 +0.6
baz=71,SNR=15
GLA **Glamis** 70.83 320 ⇓P P 07 59 15.7 +0.1
baz=71
W15A **Williams** 70.86 323 ⇑P P 07 59 16.5 +0.8
baz=71
Q22A **Crested Butte,** 70.87 329 ⇓P P 07 59 16.2 +0.5
baz=71
U16A **Tuba City** 70.94 324 ⇑P P 07 59 16.7 +0.5
baz=71,SNR=14
ISCO **Idaho Springs** 71.00 330 eP P 07 59 16.5 0.0
ISCO e*PP pP 07 59 46.1 -0.1
ISCO pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
ISCO **Idaho Springs** 71.00 330 eP P 07 59 16.5 0.0
comp=Z,4.9nm,0.8s,mb4.4
ISCO epP pP 07 59 46.1 0.0
T18A **Mexican Hat** 71.02 326 ⇓P P 07 59 16.8 +0.1
baz=71,SNR=31
U17A **Shonto** 71.03 325 ⇓P P 07 59 17.4 +0.7
baz=71,SNR=11
R20A **Redvale** 71.06 327 ⇑P P 07 59 17.7 +0.8
baz=71,SNR=28
S19A **Harvey Farm, M** 71.10 327 ⇓P P 07 59 17.4 +0.3
baz=71,SNR=17
PV01 **Paradox Valley** 71.11 327 eP P 07 59 17.8 +0.6
comp=Z,1μm,1.1s
PV01 epP pP 07 59 47.9 +1.0
SMCO **Snowmass** 71.14 329 eP P 07 59 17.9 +0.5
comp=Z,12nm,0.9s,mb4.7
SMCO epP pP 07 59 47.3 +0.2
Q21A **Lamborn Mesa,** 71.17 328 ⇓P P 07 59 18.0 +0.5
baz=72,SNR=7.1
V15A **Kaibab Nationa** 71.27 323 ⇑P P 07 59 18.9 +0.6
baz=72,SNR=19
X13A **Yucca** 71.33 321 ⇓P P 07 59 18.8 +0.2
baz=72,SNR=10
DVTC **Desert V Tower** 71.33 319 ⇑P P 07 59 18.9 +0.2
baz=72
SWSC **Sam W. Stewart** 71.33 319 ⇑P P 07 59 18.7 0.0
baz=72
W14A **Seligman** 71.34 322 ⇑P P 07 59 19.4 +0.7
baz=72,SNR=14
T17A **Navajo Res., N** 71.40 325 ⇑P P 07 59 19.8 +0.8
baz=72,SNR=12
O23A **Lake Granby, G** 71.47 330 ⇑P P 07 59 19.9 +0.6
baz=72,SNR=7.1
PV04 **Paradox Valley** 71.48 327 eP P 07 59 20.0 +0.5
S18A **Hurst Farm, Bl** 71.50 326 ⇑P P 07 59 20.3 +0.7
baz=72,SNR=35
PV10 **Paradox Valley** 71.53 327 eP P 07 59 19.6 -0.1

comp=Z,199nm,0.9s,mb5.9
R19A **Curley Farm, L** 71.58 327 ⇓P P 07 59 20.1 0.0
baz=72,SNR=14
Q20A **Ridgley Place,** 71.61 328 ⇓P P 07 59 20.1 -0.1
baz=72
BC3 **Big Chuckawall** 71.62 320 ⇑P P 07 59 20.5 +0.1
baz=72,SNR=6.3
V14A **Boquillas Ranc** 71.66 323 ⇑P P 07 59 21.3 +0.7
baz=72,SNR=20
MONP **Monument Peak** 71.68 319 ⇑P P 07 59 20.8 0.0
baz=72
W13A **Hualapai Mount** 71.72 322 ⇑P P 07 59 21.4 +0.5
baz=72,SNR=10
O22A **Kremmling** 71.72 330 ⇓P P 07 59 21.0 +0.1
baz=72,SNR=20
U15A **North Rim** 71.78 324 ⇓P P 07 59 22.3 +1.0
baz=72,SNR=23
IRM **Iron Mountain** 71.79 320 ⇓P P 07 59 21.7 +0.3
baz=72,SNR=5.2
S17A **Black Ridge (B** 71.88 325 ⇑P P 07 59 22.3 +0.5
baz=72,SNR=6.9
R18A **Canyonlands Na** 71.97 327 ⇓P P 07 59 22.5 +0.1
baz=72,SNR=11
N23A **Red Feather La** 72.03 331 ⇓P P 07 59 23.1 +0.5
baz=72,SNR=11
P20A **De Beque** 72.08 328 ⇑P P 07 59 23.3 +0.4
baz=72
Q19A **Hogan Spring (** 72.09 327 ⇑P P 07 59 23.4 +0.3
baz=72,SNR=17
BELC **Belle Mtn. Jos** 72.19 320 ⇓P P 07 59 23.6 -0.2
baz=72
N22A **Wattenberg Ran** 72.19 330 ⇓P P 07 59 24.3 +0.7
baz=72,SNR=12
PFO **Pinyon Flat Ob** 72.19 319 ⇑P P 07 59 23.8 -0.1
baz=72
O21A **Pagoda** 72.20 329 ⇑P P 07 59 24.6 +0.9
baz=72
T15A **Red Dirt Ranch** 72.27 324 ⇓P P 07 59 25.0 +0.8
baz=73,SNR=21
U14A **Mt Trumbull** 72.27 323 ⇑P P 07 59 25.0 +0.9
baz=73,SNR=24
V13A **Grand Canyon W** 72.31 322 ⇑P P 07 59 24.9 +0.5
baz=73,SNR=15
S16A **Weppner Ranch,** 72.36 325 ⇑P P 07 59 24.9 +0.2
baz=73,SNR=7.4
R17A **Hanksville Air** 72.42 326 ⇓P P 07 59 25.4 +0.3
baz=73,SNR=27
W12A **Cal Nev Ari** 72.43 321 ⇑P P 07 59 25.3 +0.2
baz=73
P19A **Cripple Cowboy** 72.47 328 ⇑P P 07 59 25.8 +0.5
baz=73,SNR=42
O20A **White River Ci** 72.50 329 ⇑P P 07 59 25.8 +0.3
baz=73,SNR=16
GMRC **Granite Mounta** 72.53 320 ⇑P P 07 59 26.2 +0.5
baz=73,SNR=12
Q18A **Rafter H Ranch** 72.64 327 ⇓P P 07 59 26.5 +0.1
baz=73,SNR=8.3
MURC **Murrieta** 72.64 319 ⇑P P 07 59 26.3 -0.2
baz=73
N21A **Black Mountain** 72.65 330 ⇓P P 07 59 27.3 +0.9
baz=73
T14A **Hurricane** 72.68 324 ⇓P P 07 59 27.3 +0.7
baz=73,SNR=20
V12A **Nelson** 72.72 322 ⇓P P 07 59 27.0 +0.1
baz=73,SNR=8.1
R16A **Teasdale** 72.72 326 ⇓P P 07 59 27.2 +0.4
baz=73,SNR=7.5
S15A **Panguitch** 72.74 325 ⇓P P 07 59 27.5 +0.6
baz=73
SRU **San Rafael** 72.84 327 ⇑P P 07 59 27.8 +0.3
baz=73,SNR=12
SRU **San Rafael** 72.84 327 eP P 07 59 27.6 +0.1
SRU e*PP pP 07 59 56.1 -1.2
SRU pmax pmax
comp=Z,23nm,1.1s,mb4.9
SRU **San Rafael** 72.84 327 eP P 07 59 27.6 0.0
comp=Z,23nm,1.1s,mb4.9
SRU epP pP 07 59 56.1 -1.2
BBRC **Big Bear Solar** 72.92 319 ⇓P P 07 59 28.6 +0.5
baz=73
HEC **Hector,Ludlow** 72.96 320 ⇑P P 07 59 28.8 +0.5
baz=73,SNR=5.9
EYMN **Ely** 73.00 344 eP P 07 59 26.7 -1.5
comp=Z,7.4nm,0.5s,mb4.8
Q16A **Castle Valley** 73.03 326 ⇓P P 07 59 29.1 +0.5
baz=73,SNR=11
U12A **Valley of Fire** 73.04 322 ⇑P P 07 59 29.2 +0.4
baz=73
O19A **Miners Draw (B** 73.05 328 ⇑P P 07 59 29.2 +0.4
baz=73
N20A **Spence Gulch,** 73.06 329 ⇓P P 07 59 29.2 +0.5
baz=73,SNR=11
R15A **Junction** 73.08 325 ⇑P P 07 59 29.5 +0.5
baz=73,SNR=7.7
P18A **Preston Nutter** 73.10 327 ⇓P P 07 59 29.7 +0.7
baz=73,SNR=18
T13A **Saint George** 73.11 323 ⇑P P 07 59 29.9 +0.7
baz=73,SNR=14
V11A **Goodsprings** 73.13 321 ⇓P P 07 59 29.6 +0.3
baz=73,SNR=5.2
TUQ **Turquoise Moun** 73.14 321 ⇑P P 07 59 29.7 +0.4
baz=73
L22A **Ellis Ranch, M** 73.16 331 ⇑P P 07 59 30.0 +0.7
baz=74
CCUT **Cedar City** 73.19 324 eP P 07 59 30.6 +1.0
comp=Z,18nm,0.9s,mb4.9
CCUT epP pP 07 59 59.1 -0.3
P17A **Butcher Ranch,** 73.23 327 ⇑P P 07 59 30.3 +0.5
baz=74
S14A **Cedar City** 73.23 324 ⇓P P 07 59 30.3 +0.4
baz=74
RWWY **Rawlins** 73.24 330 eP P 07 59 30.3 +0.5
comp=Z,12nm,0.9s,mb4.7
RWWY epP pP 08 00 00.0 +0.4
RWWY esP sP 08 00 13.8 +1.4
M21A **Separation Pea** 73.24 330 ⇓P P 07 59 30.2 +0.4
baz=74,SNR=12
MSU **Marysvale** 73.25 325 eP P 07 59 30.8 +0.8
MSU pmax pmax
comp=Z,17nm,0.9s,mb4.9
MSU **Marysvale** 73.25 325 eP P 07 59 30.8 +0.8
comp=Z,17nm,0.9s,mb4.9
BFSC **Mount Baldy Ra** 73.35 319 ⇓P P 07 59 30.8 +0.1
baz=74
FMP **Fort Macarthur** 73.39 318 ⇓P P 07 59 31.0 +0.1
baz=74
ARUT **Antelope Range** 73.40 324 eP P 07 59 31.8 +0.9
ARUT pmax pmax
comp=Z,20nm,0.9s,mb5.0
ARUT **Antelope Range** 73.40 324 eP P 07 59 31.8 +1.0
comp=Z,20nm,0.9s,mb5.0
O18A **Roosevelt** 73.46 328 ⇓P P 07 59 31.6 +0.5
baz=74,SNR=9.1
S13A **Holt Ranch, En** 73.48 324 ⇓P P 07 59 32.0 +0.7
baz=74,SNR=14
U11A **Corn Creek** 73.51 322 ⇑P P 07 59 31.9 +0.3
baz=74
L21A **Rawlins** 73.53 330 ⇓P P 07 59 31.6 +0.1
baz=74,SNR=26
M20A **Sweetwater, Wa** 73.53 330 ⇓P P 07 59 31.8 +0.2
baz=74
N19A **John Jarvie Ra** 73.54 329 ⇑P P 07 59 31.6 0.0
baz=74,SNR=12
R14A **James Farms, M** 73.55 325 ⇓P P 07 59 32.4 +0.7
baz=74
GSC **Goldstone** 73.56 320 ⇑P P 07 59 32.1 +0.3
baz=74,SNR=6.6
GSC **Goldstone** 73.56 320 eP P 07 59 32.3 +0.4
GSC pmax pmax
comp=Z,10.0nm,1.3s,mb4.4
GSC **Goldstone** 73.56 320 eP P 07 59 32.3 +0.5
comp=Z,9.9nm,1.3s,mb4.4
MWC **Mount Wilson** 73.59 319 eP P 07 59 32.1 +0.1
MWC pmax pmax
comp=Z,4.0nm,0.5s,mb4.4
MWC **Mount Wilson** 73.59 319 eP P 07 59 32.1 0.0
comp=Z,3.5nm,0.5s,mb4.3
Q15A **Fillmore** 73.72 325 ⇓P P 07 59 33.2 +0.5
baz=74,SNR=7.2
O17A **Robinson Place** 73.77 327 ⇑P P 07 59 33.6 +0.7
baz=74,SNR=31
P16A **Fountain Green** 73.80 326 ⇓P P 07 59 33.7 +0.6
baz=74,SNR=5.4
RSSD **Black Hills** 73.83 334 eP P 07 59 33.2 0.0
RSSD e*PP pP 08 00 02.7 -0.4
RSSD pmax pmax
comp=Z,9.0nm,1.1s,mb4.4
RSSD **Black Hills** 73.83 334 eP P 07 59 33.1 0.0

comp=Z,9.1nm,1.1s,mb4.4
RSSD epP pP 08 00 02.7 -0.4
N18A Larsen Ranch, 73.84 328 ⇑P **P 07 59 33.4 +0.1**
baz=74,SNR=6.6
TBI Tubuai 73.97 251 eLR LR 08 22 49.8
comp=Z,136nm,30.2s
TBI Tubuai 73.97 251 eLR LR 08 22 52.6
comp=Z,136nm,30.2s
R13A O'Grain Ranch, 73.97 324 ⇑P **P 07 59 35.0 +0.8**
baz=74,SNR=6.9
EDW2 Edwards Air Fo 73.99 319 ⇑P **P 07 59 34.1 -0.2**
baz=74,SNR=6.2
T11A Corn Creek, Al 74.00 323 ⇓P **P 07 59 35.0 +0.6**
baz=74,SNR=19
M19A Rock Springs 74.00 329 ⇑P **P 07 59 34.6 +0.3**
baz=74
L20A Wamsutter 74.01 330 ⇑P **P 07 59 34.5 +0.2**
baz=74,SNR=8.7
S12A Delamar Landin 74.05 323 ⇓P **P 07 59 35.1 +0.5**
baz=74
U10A Ash Meadows, A 74.06 321 ⇓P **P 07 59 35.0 +0.3**
baz=74,SNR=7.5
O16A Springville 74.17 327 ⇑P **P 07 59 35.7 +0.4**
baz=74
Q14A Sevier Lake (B 74.19 325 ⇑P **P 07 59 36.1 +0.7**
baz=74,SNR=16
DAU Daniels Canyon 74.20 327 eP **P 07 59 36.4 +1.0**
DAU pmax pmax
comp=Z,15nm,1.1s,mb4.6
DAU Daniels Canyon 74.20 327 eP **P 07 59 36.4 +1.0**
comp=Z,14nm,1.1s,mb4.6
NLU North Lily Min 74.27 326 eP **P 07 59 36.3 +0.4**
comp=Z,13nm,1.3s,mb4.5
M18A Lyman 74.38 329 ⇑P **P 07 59 36.2 -0.2**
baz=75,SNR=5.9
N17A Moffit Pass 74.39 328 ⇑P **P 07 59 37.1 +0.6**
baz=75,SNR=28
FURC Furnace Creek, 74.40 321 ⇓P **P 07 59 36.9 +0.2**
baz=75,SNR=9.1
R12A Pony Springs, 74.43 324 ⇑P **P 07 59 37.6 +0.8**
baz=75,SNR=18
JLU Jordanelle 74.44 327 eP **P 07 59 37.2 +0.4**
comp=Z,15nm,1.3s,mb4.6
JLU epP pP 08 00 07.2 +0.5
MPMC Manual Prospec 74.49 320 ⇑P **P 07 59 37.2 -0.1**
baz=75,SNR=7.9
P14A Drum Mountains 74.52 325 ⇑P **P 07 59 38.0 +0.7**
baz=75,SNR=21
K20A Yellowstone Ra 74.52 330 ⇓P **P 07 59 36.9 -0.3**
baz=75,SNR=9.3
AGMN Agassiz Nation 74.54 341 eP **P 07 59 35.8 -1.4**
comp=Z,5.9nm,0.8s,mb4.4
L19A Farson 74.56 329 ⇓P **P 07 59 37.8 +0.3**
baz=75,SNR=8.2
Q13A Wheeler Ranch, 74.56 324 ⇓P **P 07 59 38.0 +0.5**
baz=75,SNR=7.3
N16A Rees Ranch, Co 74.64 327 ⇓P **P 07 59 38.3 +0.3**
baz=75
M17A Scullys Gap (B 74.70 328 ⇓P **P 07 59 38.0 -0.3**
baz=75
O15A The Old Anders 74.72 326 ⇑P **P 07 59 38.8 +0.4**
baz=75
L18A Fontenelle, Gr 74.75 329 ⇑P **P 07 59 38.6 +0.1**
baz=75,SNR=26
ISA Isabella 74.81 319 ⇓P **P 07 59 39.3 +0.3**
baz=75,SNR=11
DUG Dugway 74.83 326 ⇓P **P 07 59 39.5 +0.5**
baz=75,SNR=17
DUG Dugway 74.83 326 eP **P 07 59 39.5 +0.4**
DUG pmax pmax
comp=Z,13nm,1.1s,mb4.6
DUG Dugway 74.83 326 eP **P 07 59 39.5 +0.4**
comp=Z,13nm,1.1s,mb4.6
K19A Absolon Red Bu 74.88 330 ⇓P **P 07 59 39.0 -0.3**
baz=75,SNR=9.4
P13A Bates Ranch, G 74.92 325 ⇑P **P 07 59 40.3 +0.7**
baz=75,SNR=11
R11A Troy Canyon, C 74.98 323 ⇑P **P 07 59 40.7 +0.6**
baz=75,SNR=14
Q12A Willow Creek R 75.06 324 ⇓P **P 07 59 40.8 +0.4**
baz=75,SNR=6.0
GRAC Grapevine Rang 75.06 321 ⇓P **P 07 59 40.8 +0.3**
baz=75,SNR=5.6
CWC Cottonwood Cre 75.10 320 ⇓P **P 07 59 41.0 +0.3**
baz=75
PDAR Pinedale Array 75.17 330 P **P 07 59 40.6 -0.3**
comp=Z,1.6nm,0.7s,mb3.9,baz=141,slow=5.7,SNR=16
PDAR pP pP 08 00 07.7 -3.2
comp=Z,3.1nm,0.5s,baz=125,slow=6.6,SNR=6.5
PDAR LR LR 08 36 11.1
comp=Z,63nm,18.6s,baz=284,slow=38
BW06 Boulder Array 75.17 330 ⇑P **P 07 59 40.7 -0.2**
baz=76,SNR=6.2
N15A Stansbury Isla 75.19 327 ⇑P **P 07 59 41.1 0.0**
baz=76,SNR=9.1
SBA Scott Base 75.20 190 eP **P 07 59 40.2 -0.6**
SBA pmax pmax
comp=Z,83nm,1.6s,mb5.2
SBA Scott Base 75.20 190 eP **P 07 59 40.2 -0.6**
comp=Z,83nm,1.6s,mb5.2
HWUT Hardware Ranch 75.25 328 eP **P 07 59 41.6 +0.1**
comp=Z,11nm,0.8s,mb4.6
S10A Tonopah Range, 75.25 322 ⇓P **P 07 59 41.9 +0.3**
baz=76,SNR=12
L17A Cokeville 75.28 328 ⇓P **P 07 59 41.3 -0.3**
baz=76,SNR=10
K18A Toltan Ranch, 75.29 329 ⇑P **P 07 59 42.3 +0.6**
baz=76,SNR=22
VES Vestal, Richgr 75.30 319 ⇑P **P 07 59 41.8 -0.1**
baz=76,SNR=13
R10A Warm Springs 75.34 323 ⇓P **P 07 59 43.0 +0.9**
baz=76,SNR=20
Q11A Duckwater 75.37 323 ⇑P **P 07 59 42.7 +0.5**
baz=76,SNR=12
O13A Hicks Ranch, I 75.39 325 ⇓P **P 07 59 42.5 +0.2**
baz=76
P12A McGill 75.41 324 ⇑P **P 07 59 42.9 +0.5**
baz=76
SPUT South Promonto 75.47 327 eP **P 07 59 42.8 0.0**
comp=Z,16nm,1.0s,mb4.7
BGU Big Grassy Mou 75.48 326 eP **P 07 59 42.9 +0.1**
comp=Z,9.7nm,1.2s,mb4.4
L16A Fish Haven 75.49 328 ⇓P **P 07 59 42.7 -0.1**
baz=76,SNR=8.1
SMMC Simmler 75.50 318 ⇑P **P 07 59 43.2 +0.2**
baz=76,SNR=7.7
N14A Grayback Hills 75.50 326 ⇓P **P 07 59 43.0 +0.1**
baz=76,SNR=8.5
SYO Syowa Base 75.50 159 ⇑iP **P 07 59 40.6 -2.0**
SYO Syowa Base 75.50 159 ⇓iP **P 07 59 50.6 +8.0**
M15A Larsen Ranch, 75.58 327 ⇑P **P 07 59 43.3 -0.1**
baz=76,SNR=16
RCTC Rector, Farmer 75.70 320 ⇓P **P 07 59 43.5 -0.6**
baz=76
J18A Kendall Valley 75.72 330 ⇓P **P 07 59 44.2 0.0**
baz=76,SNR=26
Q10A Clear Creek Ra 75.77 323 ⇑P **P 07 59 45.0 +0.4**
baz=76,SNR=6.9
K17A Gardner Place, 75.80 329 ⇓P **P 07 59 44.7 +0.1**
baz=76,SNR=10
PPT Papeete 75.89 257 eLR LR 08 23 07.4
comp=Z,196nm,29.0s
PPT Papeete 75.89 257 LR LR 08 25 24.3
comp=Z,107nm,19.2s,baz=156,slow=30
PPT Papeete 75.89 257 eLR LR 08 23 09.7
comp=Z,196nm,29.0s
O12A Currie 75.89 325 ⇓P **P 07 59 45.3 +0.2**
baz=76,SNR=15
P11A Circle Ranch, 75.93 324 ⇓P **P 07 59 45.7 +0.3**
baz=76
L15A Malad City 75.95 328 ⇑P **P 07 59 45.3 -0.2**
baz=76,SNR=18
I18A Diamond G Ranc 76.01 330 ⇓P **P 07 59 46.0 +0.3**
baz=76,SNR=7.5
N13A Wendover, West 76.03 326 ⇑P **P 07 59 46.0 0.0**
baz=76
M14A Sheep Mountain 76.06 327 ⇑P **P 07 59 46.0 -0.2**
baz=76,SNR=16
J17A Brown Place, J 76.17 329 ⇓P **P 07 59 47.0 +0.4**
baz=76,SNR=18
REDW Red Top Meadow 76.23 329 eP **P 07 59 47.3 +0.3**
comp=Z,11nm,0.9s,mb4.6
SNOW Snow King Moun 76.26 329 eP **P 07 59 47.6 +0.4**
comp=Z,13nm,1.0s,mb4.6
O11A Cowboy Ranch, 76.29 324 ⇓P **P 07 59 47.7 +0.3**
baz=77
LOHW Long Hollow 76.31 330 eP **P 07 59 47.5 +0.1**
comp=Z,14nm,1.1s,mb4.6
MLAC Mammoth Lakes 76.35 321 ⇑P **P 07 59 48.2 +0.4**
baz=77
P10A Eureka 76.36 324 ⇓P **P 07 59 48.5 +0.6**
baz=77
TPAW Teton Pass 76.38 329 eP **P 07 59 47.6 -0.2**
comp=Z,15nm,1.1s,mb4.7
M13A Montello 76.38 326 ⇑P **P 07 59 47.5 -0.4**
baz=77
L14A Malta 76.40 327 ⇓P **P 07 59 47.9 -0.1**
baz=77,SNR=19
RRI2 Red Ridge 76.44 329 eP **P 07 59 48.6 +0.4**
comp=Z,20nm,1.0s,mb4.8
N12A Clover Valley, 76.47 325 ⇓P **P 07 59 48.4 -0.1**
baz=77
N12A Clover Valley, 76.47 325 eP **P 07 59 48.3 -0.1**
comp=Z,9.4nm,1.3s,mb4.4
J16A Bone 76.53 329 ⇑P **P 07 59 48.9 +0.3**
baz=77,SNR=6.0
I17A Pilgrim Ck. 76.53 330 ⇑P **P 07 59 49.5 +0.8**
baz=77,SNR=7.2
K15A Arbon 76.53 328 ⇑P **P 07 59 48.8 +0.1**
baz=77,SNR=10.0
NVAR Mina Array Bea 76.58 322 P **P 07 59 49.4 +0.3**
comp=Z,3.0nm,0.7s,mb4.1,baz=159,slow=6.9,SNR=27
IMW Indian Meadow 76.68 330 eP **P 07 59 50.1 +0.6**
comp=Z,18nm,1.1s,mb4.7
IMW epP pP 08 00 17.3 -2.3
K14A Jones Ranch, D 76.75 327 ⇓P **P 07 59 49.7 -0.2**
baz=77,SNR=7.6
L13A Double Diamond 76.80 327 ⇓P **P 07 59 50.4 +0.2**
baz=77,SNR=23
SCHQ Schefferville 76.80 1 P **P 07 59 49.5 -0.4**
comp=Z,10nm,0.7s,mb4.7,baz=190,slow=3.8,SNR=20
SCHQ Schefferville 76.80 1 eP **P 07 59 49.2 -0.8**
comp=Z,6.7nm,0.6s,mb4.5
M12A Wells 76.81 326 ⇑P **P 07 59 50.3 0.0**
baz=77,SNR=11
N11A Elko Archery C 76.81 325 ⇓P **P 07 59 50.2 -0.2**
baz=77
O10A Cortez Mining, 76.86 324 ⇓P **P 07 59 50.5 -0.1**
baz=77
RLMT Red Lodge 76.86 331 ⇓P **P 07 59 50.8 +0.3**
baz=77,SNR=10
RLMT Red Lodge 76.86 331 eP **P 07 59 50.9 +0.4**
comp=Z,5.4nm,0.6s,mb4.5
H17A Grant Village 76.89 330 ⇑P **P 07 59 51.1 +0.4**
baz=77
TORD Torodi Ar. Bea 76.90 70 P **P 07 59 51.4 -0.1**
comp=Z,54nm,0.4s,mb5.7,baz=252,slow=5.3,SNR=417
TORD pP pP 08 00 21.0 -0.4
comp=Z,17nm,0.8s,baz=249,slow=5.5,SNR=1.6
TORD Torodi Ar. Bea 76.90 70 P **P 07 59 51.4 -0.1**
TORD pP pP 08 00 21.0 -0.5
I16A Newdale 76.92 329 ⇑P **P 07 59 51.2 +0.3**
baz=77,SNR=11
J15A Blackfoot 77.02 328 ⇑P **P 07 59 51.8 +0.4**
baz=77,SNR=18
G18A Lazy EL Ranch, 77.14 331 ⇑P **P 07 59 52.1 0.0**
baz=78,SNR=12
K13A Stover Farm, H 77.28 327 ⇑P **P 07 59 53.1 +0.1**
baz=78,SNR=8.5
YMR Madison River 77.28 330 eP **P 07 59 53.8 +1.0**
comp=Z,32nm,1.3s,mb4.9
M11A Holland Ranch, 77.28 325 ⇓P **P 07 59 53.3 +0.3**
baz=78,SNR=21
L12A House Creek Ra 77.39 326 ⇓P **P 07 59 53.8 +0.3**
baz=78,SNR=15
H16A Russell Place, 77.44 330 ⇑P **P 07 59 54.5 +0.7**
baz=78,SNR=12
I15A Monteview 77.49 329 ⇑P **P 07 59 54.7 +0.7**
baz=78,SNR=11
J14A Carey 77.49 328 ⇑P **P 07 59 54.5 +0.4**
baz=78,SNR=16
DGMT Dagmar 77.49 336 ⇓P **P 07 59 54.2 +0.3**
baz=78,SNR=6.6
DGMT Dagmar 77.49 336 eP **P 07 59 54.0 +0.1**
comp=Z,15nm,0.7s,mb4.8
SUR Sutherland 77.53 120 P **P 07 59 55.7 +1.0**
comp=Z,8.3nm,0.4s,mb4.8,baz=234,slow=6.4,SNR=22
SUR Sutherland 77.53 120 eP **P 07 59 55.8 +1.1**
comp=Z,23nm,0.8s,mb5.0
GCMT Greycliff 77.56 332 eP **P 07 59 54.4 0.0**
comp=Z,13nm,1.1s,mb4.6
GCMT epP pP 08 00 24.3 -0.3
F18A Big Timber 77.67 332 ⇓P **P 07 59 55.0 0.0**
baz=78,SNR=20
G17A Pierce Place, 77.68 331 ⇑P **P 07 59 55.7 +0.6**
baz=78
K12A Draper Farm, C 77.68 327 ⇓P **P 07 59 55.5 +0.4**
baz=78,SNR=20
M10A I.L. Ranch, Tu 77.74 325 ⇓P **P 07 59 55.7 +0.2**
baz=78
L11A Cat Creek Ranc 77.78 326 ⇓P **P 07 59 56.1 +0.4**
baz=78,SNR=14
J13A Cove Ranch, Pi 77.87 328 ⇑P **P 07 59 56.6 +0.5**
baz=78
I14A Mackay 77.90 328 ⇑P **P 07 59 57.0 +0.6**
baz=78,SNR=19
WCN Washoe City 78.00 322 ⇑P **P 07 59 57.3 +0.2**
baz=78
H15A Lima 78.03 329 ⇑P **P 07 59 57.5 +0.5**
baz=78
F17A Fitzpatrick Pl 78.09 331 ⇑P **P 07 59 57.8 +0.5**
baz=78,SNR=12
G16A Moss Hill, Enn 78.09 330 ⇓P **P 07 59 57.6 +0.3**
baz=78,SNR=7.2
L10A Juniper Basin 78.10 325 ⇓P **P 07 59 57.9 +0.4**
baz=78,SNR=19
HLID Hailey 78.11 327 ⇓P **P 07 59 58.2 +0.7**
baz=78,SNR=37
I13A Wildhorse Cree 78.22 328 ⇑P **P 07 59 58.8 +0.7**
baz=78,SNR=14
J12A Stokes Ranch, 78.22 327 ⇓P **P 07 59 58.6 +0.4**
baz=78,SNR=19
E18A Harlowton 78.27 332 ⇑P **P 07 59 58.5 +0.2**
baz=79,SNR=7.2
MCMT McKenzie Canyo 78.28 329 eP **P 07 59 59.6 +1.2**
comp=Z,6.4nm,0.9s,mb4.3
MCMT epP pP 08 00 26.9 -1.7
G15A Dillon 78.36 330 ⇓P **P 07 59 59.2 +0.4**
baz=79,SNR=12
H14A Leadore 78.37 329 ⇑P **P 07 59 59.5 +0.6**
baz=79
F16A Kennard Place, 78.43 331 ⇑P **P 07 59 59.4 +0.2**
baz=79
DLMT Dillon 78.56 330 eP **P 08 00 00.2 +0.3**
comp=Z,12nm,1.0s,mb4.7
E17A Martinsdale 78.60 331 ⇓P **P 08 00 00.4 +0.2**
baz=79,SNR=12
I12A Atlanta 78.64 327 ⇑P **P 08 00 00.9 +0.5**
baz=79,SNR=17
D18A Linhart Farms, 78.71 332 ⇓P **P 08 00 00.9 +0.1**
baz=79,SNR=6.3
MFID Camas Ranch 78.71 327 ⇓P **P 08 00 01.2 +0.3**
baz=79,SNR=12
H13A Challis 78.76 328 ⇑P **P 08 00 01.6 +0.6**
baz=79,SNR=35
LRM Limekiln Ridge 78.84 330 eP **P 08 00 02.0 +0.5**
comp=Z,45nm,1.1s,mb5.2
F15A Butte 78.87 330 ⇑P **P 08 00 02.2 +0.5**
baz=79,SNR=8.5
E16A East Helena 79.02 331 ⇑P **P 08 00 02.8 +0.4**
baz=79
H12A Diamond D Ranc 79.05 328 ⇓P **P 08 00 03.0 +0.4**
baz=79,SNR=20
D17A Six Diamond Ra 79.06 332 ⇓P **P 08 00 02.7 +0.1**
baz=79,SNR=14
G13A Cobalt 79.14 329 ⇑P **P 08 00 03.7 +0.6**
baz=79,SNR=57
HRY Holter Researc 79.23 331 eP **P 08 00 03.9 +0.3**
comp=Z,3.5nm,0.6s,mb4.4
F14A Wisdom 79.26 330 ⇓P **P 08 00 04.4 +0.6**
baz=80,SNR=14
EGMT Eagleton 79.34 333 ⇓P **P 08 00 03.8 -0.3**
baz=80,SNR=5.5
EGMT Eagleton 79.34 333 eP **P 08 00 03.5 -0.6**
comp=Z,4.5nm,0.8s,mb4.3
D16A Dana Ranch, Ca 79.34 331 ⇑P **P 08 00 04.6 +0.4**
baz=80,SNR=15
E15A Deer Lodge 79.38 330 ⇑P **P 08 00 04.4 +0.1**
baz=80,SNR=8.8
C17A Wharram Farm, 79.46 332 ⇑P **P 08 00 04.5 -0.3**
baz=80,SNR=8.4
WVOR Wild Horse Val 79.50 324 eP **P 08 00 04.6 -0.5**
WVOR pmax pmax
comp=Z,4.0nm,1.0s,mb4.2
WVOR Wild Horse Val 79.50 324 eP **P 08 00 04.6 -0.6**
comp=Z,3.8nm,1.0s,mb4.2
B18A Beardsley Farm 79.63 333 ⇓P **P 08 00 05.4 -0.3**
baz=80,SNR=18
F13A Darby 79.70 329 ⇓P **P 08 00 06.4 +0.2**
baz=80,SNR=35
E14A Clinton 79.77 330 ⇓P **P 08 00 06.9 +0.4**
baz=80,SNR=7.8
LBCM Butte Creek Ri 79.93 322 P **P 08 00 07.0 -0.6**
B17A L&G Farms, Che 79.99 333 ⇓P **P 08 00 07.1 -0.5**
baz=80
C16A Fuhringer Ranc 80.02 332 ⇑P **P 08 00 07.6 -0.2**
baz=80
CHMT Chamberlain Mo 80.03 330 eP **P 08 00 08.4 +0.5**
comp=Z,1.5nm,0.8s,mb3.9
J08A Circle Bar Ran 80.05 325 ⇑P **P 08 00 08.1 0.0**
baz=80
MOD Modoc 80.05 323 eP **P 08 00 07.7 -0.4**
comp=Z,16nm,1.0s,mb4.8
A18A Metzger Ranch, 80.07 334 ⇑P **P 08 00 07.2 -0.8**
baz=80,SNR=8.9
E13A Victor 80.11 330 ⇑P **P 08 00 08.5 +0.1**
baz=80,SNR=25
F12A Elk City 80.11 329 ⇓P **P 08 00 08.2 -0.2**
baz=80,SNR=7.7
D14A Greenough 80.27 330 ⇑P **P 08 00 09.0 -0.2**
baz=81,SNR=6.0
MSO Missoula 80.28 330 eP **P 08 00 09.1 -0.1**
comp=Z,6.8nm,1.3s,mb4.3
SLMT Seeley Lake 80.38 331 eP **P 08 00 09.8 +0.1**
comp=Z,9.1nm,0.9s,mb4.6
A17A Triple J Farms 80.45 333 ⇓P **P 08 00 09.6 -0.5**
baz=81,SNR=13
B16A M & M Farms, S 80.47 332 ⇓P **P 08 00 09.6 -0.6**
baz=81
BMO Blue Mountains 80.48 327 eP **P 08 00 10.2 -0.2**
comp=Z,15nm,1.1s,mb4.7
D13A Huson 80.71 330 ⇓P **P 08 00 11.6 +0.1**
baz=81,SNR=14
E12A Beaver Dam Sad 80.74 329 ⇑P **P 08 00 11.4 -0.3**
baz=81
B15A Bradely Ranch, 80.76 332 ⇓P **P 08 00 11.1 -0.7**
baz=81,SNR=15
SWMT Swartz Lake 80.81 330 eP **P 08 00 12.5 +0.5**
comp=Z,4.1nm,0.9s,mb4.3
C14A Swan Lake 80.89 331 ⇑P **P 08 00 12.4 0.0**
baz=81
K05A Summer Lake 80.92 324 ⇑P **P 08 00 13.0 +0.3**
baz=81,SNR=14
I07A Izee 81.09 325 ⇑P **P 08 00 13.8 +0.2**
baz=81,SNR=20
D12A Red Ives Fores 81.10 329 ⇓P **P 08 00 13.5 -0.1**
baz=81
JTMT Jette 81.11 330 eP **P 08 00 13.7 +0.1**
comp=Z,3.0nm,0.7s,mb4.2
B14A Marquette Ranc 81.11 331 ⇑P **P 08 00 13.3 -0.4**
baz=81
C13A Hot Springs 81.20 330 ⇓P **P 08 00 14.0 -0.1**
baz=82
F10A Beach Ranch, E 81.23 328 ⇑P **P 08 00 14.4 +0.1**
baz=82,SNR=18
PFVI Vila Bisbo 81.27 44 eP **P 08 00 15.4 +0.7**
comp=Z,45nm,1.1s,mb5.2
YBH Yreka Blue Hor 81.30 322 P **P 08 00 13.3 -1.4**
comp=Z,4.3nm,0.8s,mb4.4,baz=41,slow=4.3,SNR=9.8
A15A Johnson Ranch, 81.34 332 ⇓P **P 08 00 13.8 -1.0**
baz=82
BSMT Bassoo Peak 81.42 330 eP **P 08 00 15.6 +0.4**
comp=Z,9.9nm,0.8s,mb4.7
MORF Marmelete 81.48 44 eP **P 08 00 16.9 +1.0**
comp=Z,53nm,1.5s,mb5.2
PTEO Sao Teotonio 81.58 44 eP **P 08 00 18.3 +1.9**
comp=Z,76nm,1.6s,mb5.3
G08A Pilot Rock 81.63 326 ⇑P **P 08 00 16.2 -0.2**
baz=82,SNR=12
C12B Naegeli Ranch, 81.64 330 ⇑P **P 08 00 16.5 +0.1**
baz=82
A14A Double T Ranch 81.64 332 ⇓P **P 08 00 15.8 -0.6**
baz=82,SNR=5.8
B13A Whitefish 81.66 331 ⇓P **P 08 00 16.3 -0.2**
baz=82
MDT Midelt 81.66 50 P **P 08 00 18.2 +1.3**
comp=Z,22nm,0.8s,mb5.1,baz=238,slow=3.9,SNR=46
MDT pP pP 08 00 47.7 +0.4
comp=Z,7.1nm,0.9s,baz=226,slow=4.7,SNR=3.0
LNOR Lincton Mounta 81.69 327 eP **P 08 00 16.0 -0.7**
LNOR pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
LNOR Lincton Mounta 81.69 327 eP **P 08 00 16.0 -0.7**
comp=Z,3.7nm,0.8s,mb4.3
PBDV Barranco-do-Ve 81.91 44 eP **P 08 00 19.1 +1.0**
comp=Z,45nm,1.1s,mb5.2
WALA Waterton Lakes 81.92 332 eP **P 08 00 17.3 -0.6**
comp=Z,0.2nm,0.9s
A13A Flathead Natio 82.05 331 ⇑P **P 08 00 18.9 +0.4**
baz=82
PCVE Castro Verde 82.07 44 eP **P 08 00 19.9 +1.0**
comp=Z,37nm,1.0s,mb5.2
C11A Tepee Creek (N 82.09 330 ⇑P **P 08 00 18.5 -0.3**
baz=82
PVAQ Vaqueiros 82.14 44 eP **P 08 00 19.4 +0.1**
comp=Z,32nm,1.4s,mb5.0
B12A Libby 82.24 330 ⇑P **P 08 00 19.7 +0.2**
baz=82,SNR=7.9
EGRO El Granado 82.37 44 P **P 08 00 20.8 +0.3**
comp=Z,52nm,0.9s,mb5.4
BOSA Boshof 82.41 118 P **P 08 00 21.2 +0.1**
comp=Z,24nm,0.8s,mb5.1,baz=249,slow=4.8,SNR=22
BOSA pP pP 08 00 50.5 -0.9
comp=Z,11nm,0.8s,baz=263,slow=4.4,SNR=3.5
BOSA Boshof 82.41 118 eP **P 08 00 20.6 -0.5**
BOSA e*PP pP 08 00 51.8 +0.3
BOSA pmax pmax
comp=Z,25nm,0.8s,mb5.1
BOSA Boshof 82.41 118 eP **P 08 00 20.6 -0.5**
comp=Z,25nm,0.8s,mb5.1
BOSA epP pP 08 00 51.8 +0.4
G06A Carlson Farm, 82.46 326 ⇑P **P 08 00 21.2 +0.5**
baz=83,SNR=5.5
F07A Phinny Hill Vi 82.54 326 ⇓P **P 08 00 21.5 +0.3**
baz=83
A12A Yaak River Ran 82.61 331 ⇑P **P 08 00 21.4 0.0**
baz=83,SNR=13
EVO Evora 82.61 43 ⇑iP **P 08 00 22.2 +0.5**
comp=Z,38nm,0.9s,mb4.9
EVO eMLR MLR
comp=Z,69nm,17.5s
HAWA Hanford 82.68 327 eP **P 08 00 21.9 +0.1**
comp=Z,22nm,1.0s,mb4.9
RSW Rattlesnake Hi 82.71 327 eP **P 08 00 22.4 +0.4**
comp=Z,4.5nm,0.5s,mb4.5
RSW epP pP 08 00 54.2 +1.7
NEW Newport 82.80 329 eP **P 08 00 21.3 -1.2**
NEW pmax pmax
comp=Z,4.0nm,0.8s
NEW Newport 82.80 329 eP **P 08 00 21.3 -1.2**
comp=Z,3.6nm,0.8s,mb4.2
D08A Wollman Farm, 82.83 328 ⇓P **P 08 00 22.4 -0.2**
baz=83,SNR=6.7
H04A Detroit Lake 82.92 324 ⇑P **P 08 00 22.4 -0.8**
baz=83,SNR=5.8
VFP Flag Point 82.95 325 P **P 08 00 23.6 +0.3**
OD2 Odessa Site #2 82.96 328 P **P 08 00 23.3 0.0**
PTOM Tomar 83.00 42 eP **P 08 00 24.9 +1.2**
comp=Z,64nm,1.4s,mb5.3
PBAR Barrancos 83.03 44 eP **P 08 00 24.6 +0.7**
comp=Z,32nm,1.7s,mb4.9
C09A Chrisman Ranch 83.03 329 ⇑P **P 08 00 23.4 -0.2**
baz=83,SNR=23
EMIN Mina Concepcio 83.03 45 P **P 08 00 24.4 +0.5**
comp=Z,56nm,0.9s,mb5.4
DPW Davenport 83.04 329 P **P 08 00 23.8 +0.1**
ESPR Espera 83.06 46 P **P 08 00 24.5 +0.4**
comp=Z,25nm,0.8s,mb5.1
PESTR Estremoz 83.08 43 eP **P 08 00 24.9 +0.8**
comp=Z,30nm,2.1s,mb4.8
EJIF Jimena Fronter 83.08 46 P **P 08 00 25.7 +1.5**
EJIF pmax pmax
comp=Z,36nm,0.9s,mb5.2
EJIF Jimena Fronter 83.08 46 P **P 08 00 25.7 +1.5**
comp=Z,36nm,0.9s,mb5.2
MAW Mawson 83.36 163 P **P 08 00 24.5 -0.7**
comp=Z,24nm,0.5s,mb5.2,baz=211,slow=6.2,SNR=124
MAW pP pP 08 00 54.4 -1.3
comp=Z,19nm,0.8s,baz=214,slow=6.2,SNR=8.7
MAW LR LR 08 37 37.8
comp=Z,140nm,19.7s,baz=66,slow=36
MAW Mawson 83.36 163 eP **P 08 00 24.4 -0.8**
MAW e*PP pP 08 00 53.9 -1.8
MAW pmax pmax

comp=Z,6.0nm,0.6s
MAW Mawson 83.36 163 *e*P **P 08 00 24.4 -0.8**
comp=Z,5.5nm,0.6s,mb4.6
MAW *e*pP pP 08 00 53.9 -1.8
EBAD Badajoz 83.38 44 P **P 08 00 26.1 +0.4**
comp=Z,14nm,0.6s,mb5.0
G04A Mulino 83.42 325 ⇓P **P 08 00 25.1 -0.6**
baz=84
PMRV Marv??o 83.53 43 *e*P **P 08 00 26.3 -0.1**
comp=Z,26nm,1.3s,mb4.9
FCC Fort Churchill 83.56 347 *e*P **P 08 00 24.8 -1.3**
comp=Z,0.4nm,0.4s
PCBR Castelo Branco 83.72 42 *e*P **P 08 00 28.1 +0.7**
comp=Z,23nm,1.4s,mb4.8
WTV Waterville 83.78 328 P **P 08 00 27.6 +0.1**
F04A Amboy 83.86 325 ⇑P **P 08 00 27.4 -0.6**
baz=84
ETW Entiat 83.90 327 *e*P **P 08 00 28.1 0.0**
comp=Z,35nm,1.1s,mb5.1
B08A Colville Reser 83.93 328 ⇑P **P 08 00 27.6 -0.6**
baz=84,SNR=6.8
LBTB Lobatse 84.00 114 *e*P **P 08 00 29.0 -0.3**
LBTB *e**PP pP 08 01 00.1 +0.3
LBTB pmax pmax
comp=Z,20nm,0.8s,mb5.0
LBTB Lobatse 84.00 114 *e*P **P 08 00 29.0 -0.3**
comp=Z,20nm,0.8s,mb5.0
LBTB *e*pP pP 08 01 00.1 +0.3
MTE Manteigas 84.00 42 *e*P **P 08 00 29.5 +0.7**
comp=Z,33nm,1.5s,mb4.9
MTE Manteigas 84.00 42 *e*P **P 08 00 29.1 +0.3**
comp=Z,42nm,1.3s,mb5.1
ECAB El Cabril 84.02 45 P **P 08 00 28.6 -0.3**
comp=Z,33nm,0.9s,mb5.2
ELOJ Sierra Loja 84.34 46 P **P 08 00 32.2 +1.6**
ELOJ pmax pmax
comp=Z,31nm,0.7s,mb5.2
ELOJ Sierra Loja 84.34 46 P **P 08 00 32.2 +1.6**
comp=Z,31nm,0.7s,mb5.2
PVRL Vila Real 84.41 41 *e*P **P 08 00 31.7 +0.9**
comp=Z,50nm,1.6s,mb5.1
D05A Enumclaw 84.46 326 ⇑P **P 08 00 30.1 -0.8**
baz=85,SNR=6.0
PCAB Cabril 84.47 41 *e*P **P 08 00 31.6 +0.4**
comp=Z,45nm,1.9s,mb5.0
TAM Tamanrasset 84.49 63 *e*P **P 08 00 32.6 +0.9**
TAM pmax pmax
comp=Z,25nm,0.9s,mb5.0
TAM Tamanrasset 84.49 63 *e*P **P 08 00 32.6 +0.9**
comp=Z,25nm,0.9s,mb5.0
ELOB Lobios 84.55 41 P **P 08 00 31.1 -0.5**
comp=Z,16nm,0.8s,mb5.0
EADA Adamuz 84.62 45 P **P 08 00 32.1 +0.1**
comp=Z,46nm,0.9s,mb5.4
EPLA Plasencia 84.72 43 P **P 08 00 32.7 +0.2**
EPLA pmax pmax
comp=Z,26nm,0.6s,mb5.3
EPLA Plasencia 84.72 43 P **P 08 00 32.7 +0.2**
comp=Z,26nm,0.6s,mb5.3
MVO Moncorvo 84.76 42 *e*P **P 08 00 32.9 +0.3**
comp=Z,60nm,1.7s,mb5.2
MVO Moncorvo 84.76 42 P **P 08 00 33.3 +0.7**
EDM Edmonton 84.79 335 *e*P **P 08 00 30.5 -2.0**
EDM *e**PP pP 08 01 02.4 -0.7
ECOG Cogollos-Vega 84.81 46 P **P 08 00 33.2 +0.2**
ECOG pmax pmax
comp=Z,11nm,0.7s,mb4.9
ECOG Cogollos-Vega 84.81 46 P **P 08 00 33.2 +0.3**
comp=Z,11nm,0.7s,mb4.9
E03A Lebam 84.86 325 ⇓P **P 08 00 32.4 -0.6**
baz=85
RPW Rockport 85.06 328 *e*P **P 08 00 32.2 -1.8**
comp=Z,2.3nm,0.5s,mb4.4
RPW *e*pP pP 08 01 00.9 -3.6
B06A Marblemount 85.09 328 ⇓P **P 08 00 32.9 -1.2**
baz=85
JCW Jim Creek 85.10 327 *e*P **P 08 00 32.9 -1.2**
comp=Z,14nm,0.7s,mb5.0
EBAN Banos Encina 85.14 45 P **P 08 00 35.0 +0.4**
EBAN pmax pmax
comp=Z,52nm,0.7s,mb5.6
EBAN Banos Encina 85.14 45 P **P 08 00 35.0 +0.4**
comp=Z,52nm,0.7s,mb5.6
PBRG Braganca 85.31 41 *e*P **P 08 00 36.0 +0.6**
comp=Z,41nm,1.9s,mb5.0
CMW Cultus Mountai 85.34 327 P **P 08 00 34.5 -0.8**
ECAL Calabor 85.39 41 P **P 08 00 36.0 +0.3**
comp=Z,30nm,1.0s,mb5.2
EQES Quesada 85.42 46 P **P 08 00 36.1 +0.1**
comp=Z,66nm,0.9s,mb5.6
PAB San Pablo 85.53 44 *e*P **P 08 00 37.2 +0.7**
PAB pmax pmax
comp=Z,84nm,1.4s,mb5.5
PAB San Pablo 85.53 44 *e*P **P 08 00 37.2 +0.6**
comp=Z,84nm,1.4s,mb5.5
ENIJ Nijar 85.56 47 P **P 08 00 36.0 -0.7**
ENIJ pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
ENIJ Nijar 85.56 47 P **P 08 00 36.0 -0.8**
comp=Z,7.8nm,0.6s,mb4.8
NLWA Neilton Lookou 85.57 326 ⇑P **P 08 00 36.0 -0.4**
baz=86
NLWA Neilton Lookou 85.57 326 *e*P **P 08 00 35.9 -0.5**
comp=Z,13nm,1.1s,mb4.8
A05A Maple Falls 85.71 328 ⇓P **P 08 00 36.0 -1.1**
baz=86,SNR=7.2
VDB Vedder Mountai 85.73 328 P **P 08 00 36.1 -1.1**
EHUE Huescar 85.75 46 P **P 08 00 36.8 -0.8**
EHUE pmax pmax
comp=Z,17nm,0.9s,mb5.0
EHUE Huescar 85.75 46 P **P 08 00 36.8 -0.8**
comp=Z,17nm,0.9s,mb5.0
ESDC Sonseca Array 85.85 44 P **P 08 00 39.0 +0.9**
comp=Z,11nm,1.0s,mb4.8,baz=235,slow=4.7,SNR=32
ESDC Sonseca Array 85.85 44 P **P 08 00 38.6 +0.5**
comp=Z,16nm,1.0s,mb4.9
ESLA Sonseca Array 85.85 44 *e*P **P 08 00 38.6 +0.5**
comp=Z,16nm,1.3s,mb4.8
EPON Pontenova 85.95 40 P **P 08 00 37.9 -0.5**
comp=Z,27nm,1.1s,mb5.1
PGC Sidney 86.16 327 *e*P **P 08 00 38.2 -1.2**
comp=Z,0.6nm,0.6s,mb3.7
EVIA Vianos 86.25 46 P **P 08 00 40.9 +0.8**
EVIA pmax pmax
comp=Z,22nm,0.8s,mb5.1
EVIA Vianos 86.25 46 P **P 08 00 40.9 +0.8**
comp=Z,22nm,0.8s,mb5.1
GUD Guadarrama 86.26 43 P **P 08 00 40.5 +0.4**
GUD pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
GUD Guadarrama 86.26 43 P **P 08 00 40.5 +0.4**
comp=Z,7.0nm,0.8s,mb4.6
ETOB Tobarra 86.88 46 P **P 08 00 44.1 +0.9**
comp=Z,22nm,0.8s,mb5.2
ETOR Torete 87.70 44 P **P 08 00 47.8 +0.8**
ETOR pmax pmax
comp=Z,17nm,0.5s,mb5.3
ETOR Torete 87.70 44 P **P 08 00 47.8 +0.8**
comp=Z,16nm,0.5s,mb5.3
ECHE Chera 87.76 45 P **P 08 00 48.3 +0.9**
ECHE pmax pmax
comp=Z,20nm,0.9s,mb5.2
ECHE Chera 87.76 45 P **P 08 00 48.3 +0.9**
comp=Z,20nm,0.9s,mb5.1
EBEN Beniarda 87.80 46 P **P 08 00 48.7 +1.1**
comp=Z,14nm,0.9s,mb5.0
ELAN Lanestosa 88.13 41 P **P 08 00 48.4 -0.6**
comp=Z,8.0nm,0.8s,mb4.8
ESAC San Caprasio 89.19 44 P **P 08 00 54.0 0.0**
comp=Z,23nm,0.5s,mb5.5
ERTA Horta de San J 89.32 45 P **P 08 00 55.6 +1.0**
comp=Z,8.0nm,0.6s,mb4.9
SJPF Ste Jean 89.44 42 *e*P **P 08 00 56.0 +0.9**
comp=Z,19nm,1.0s,mb4.8
SJPF Ste Jean 89.44 42 *e*P **P 08 00 56.0 +0.9**
SJPF pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
SJPF Ste Jean 89.44 42 *e*P **P 08 00 56.0 +0.9**
comp=Z,9.4nm,1.0s,mb4.8
ETSF Etsaut 89.74 43 *e*P **P 08 00 57.8 +1.2**
comp=Z,24nm,1.2s,mb4.9
ETSF Etsaut 89.74 43 *e*P **P 08 00 57.8 +1.2**
ETSF pmax pmax
comp=Z,12nm,1.2s,mb4.9
ETSF Etsaut 89.74 43 *e*P **P 08 00 57.8 +1.2**
comp=Z,12nm,1.2s,mb4.9
EPOB Poblet 90.00 45 P **P 08 00 56.9 -0.9**
comp=Z,10nm,0.7s,mb5.1
EBIE Bielsa 90.08 43 P **P 08 00 59.2 +1.1**
comp=Z,14nm,1.0s,mb5.0
EPF Esparros 90.38 43 *e*P **P 08 00 59.7 +0.2**
CSOR Sort 90.55 44 P **P 08 01 00.4 0.0**
comp=Z,32nm,0.9s,mb5.5
BBB Bella Bella 90.70 328 P **P 08 01 00.1 -0.7**
comp=Z,6.5nm,1.0s,mb4.7,baz=0.3,slow=2.0,SNR=3.7
CFON Fontmartina 91.09 45 P **P 08 01 01.9 -1.0**
comp=Z,25nm,1.2s,mb5.2
LFF La Frestale 91.59 41 *e*P **P 08 01 05.1 0.0**
comp=Z,22nm,0.8s,mb5.1
LFF La Frestale 91.59 41 *e*P **P 08 01 05.1 0.0**
LFF pmax pmax
comp=Z,11nm,0.8s,mb5.1
LFF La Frestale 91.59 41 *e*P **P 08 01 05.1 0.0**
comp=Z,11nm,0.8s,mb5.1
CASY Casey 91.71 179 *e*P **P 08 01 05.0 -0.5**
comp=Z,51nm,0.9s,mb5.8
MTLF Montolieu 91.72 43 *e*P **P 08 01 05.6 -0.2**
comp=Z,28nm,1.3s,mb5.0
MTLF Montolieu 91.72 43 *e*P **P 08 01 05.6 -0.2**
MTLF pmax pmax
comp=Z,14nm,1.3s,mb5.0
MTLF Montolieu 91.72 43 *e*P **P 08 01 05.6 -0.2**
comp=Z,14nm,1.3s,mb5.0
MFF Saint Martin d 91.90 40 *e*P **P 08 01 05.9 -0.6**
comp=Z,37nm,1.1s,mb5.2
MFF Saint Martin d 91.90 40 *e*P **P 08 01 05.9 -0.6**
MFF pmax pmax
comp=Z,18nm,1.1s,mb5.2
MFF Saint Martin d 91.90 40 *e*P **P 08 01 05.9 -0.6**
comp=Z,18nm,1.1s,mb5.2
YKA Yellowknife Ar 92.17 340 P **P 08 01 06.7 -0.6**
comp=Z,6.9nm,0.5s,mb5.2,baz=139,slow=4.6,SNR=72
YKA pP pP 08 01 35.3 -3.0
comp=Z,6.4nm,0.8s,baz=130,slow=4.6,SNR=5.5
YKA Yellowknife Ar 92.17 340 P **P 08 01 06.7 -0.6**
YKA pP pP 08 01 35.3 -3.0
RJF Les Rejaudoux 92.25 41 *e*P **P 08 01 07.7 -0.5**
RJF *e*MLR MLR
comp=Z,61nm,19.8s
RJF Les Rejaudoux 92.25 41 *e*P **P 08 01 07.7 -0.5**
RJF LR LR
comp=Z,60nm,19.8s
CAF Calviac 92.40 42 *e*P **P 08 01 08.8 -0.1**
comp=Z,11nm,0.9s,mb4.8
CAF Calviac 92.40 42 *e*P **P 08 01 08.8 -0.1**
CAF pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
CAF Calviac 92.40 42 *e*P **P 08 01 08.8 -0.1**
comp=Z,5.6nm,0.9s,mb4.8
GRR Gorron 92.41 38 *e*P **P 08 01 07.9 -0.9**
comp=Z,30nm,1.1s,mb5.2
GRR Gorron 92.41 38 *e*P **P 08 01 07.9 -0.9**
GRR pmax pmax
comp=Z,15nm,1.1s,mb5.1
GRR Gorron 92.41 38 *e*P **P 08 01 07.9 -0.9**
comp=Z,15nm,1.1s,mb5.1
TCF Toulx Ste Croi 93.15 41 *e*P **P 08 01 11.7 -0.6**
VIVF Saint-Julien-l 94.00 43 *e*P **P 08 01 16.4 +0.2**
AVF Avril sur Loir 94.09 41 *e*P **P 08 01 16.1 -0.5**
comp=Z,4.8nm,0.8s,mb4.6
AVF Avril sur Loir 94.09 41 *e*P **P 08 01 16.1 -0.5**
AVF pmax pmax
comp=Z,2.0nm,0.8s,mb4.5
AVF Avril sur Loir 94.09 41 *e*P **P 08 01 16.1 -0.5**
comp=Z,2.4nm,0.8s,mb4.6
SMRF Simiane la Rot 94.17 44 *e*P **P 08 01 17.8 +0.8**
SSF Saint Saulge 94.31 41 *e*P **P 08 01 17.0 -0.6**
comp=Z,5.6nm,0.7s,mb4.7
SSF Saint Saulge 94.31 41 *e*P **P 08 01 17.0 -0.6**
SSF pmax pmax
comp=Z,3.0nm,0.7s,mb4.7
SSF Saint Saulge 94.31 41 *e*P **P 08 01 17.0 -0.6**
comp=Z,2.8nm,0.7s,mb4.7
SMF Signal de Mont 94.31 41 *e*P **P 08 01 17.4 -0.2**
comp=Z,16nm,0.9s,mb5.0
SMF Signal de Mont 94.31 41 *e*P **P 08 01 17.4 -0.2**
SMF pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
SMF Signal de Mont 94.31 41 *e*P **P 08 01 17.4 -0.2**
comp=Z,8.2nm,0.9s,mb5.1
LMR La Mourre 94.49 45 *e*P **P 08 01 18.0 -0.5**
comp=Z,14nm,0.6s,mb5.2
LMR La Mourre 94.49 45 *e*P **P 08 01 18.0 -0.5**
LMR pmax pmax
comp=Z,7.0nm,0.6s,mb5.2
LMR La Mourre 94.49 45 *e*P **P 08 01 18.0 -0.5**
comp=Z,7.3nm,0.6s,mb5.2
LOR Lormes 94.62 41 *e*P **P 08 01 18.3 -0.7**
LOR *e*MLR MLR
comp=Z,58nm,20.5s
LOR Lormes 94.62 41 *e*P **P 08 01 18.3 -0.7**
LOR LR LR
comp=Z,60nm,20.5s
FRF La Foret Royal 94.68 45 *e*P **P 08 01 19.6 +0.2**
ORIF Oris-en-Rattie 94.79 43 *e*P **P 08 01 20.8 +0.9**
comp=Z,9.8nm,0.7s,mb5.1
ORIF *e*MLR MLR
comp=Z,130nm,21.5s
ORIF Oris-en-Rattie 94.79 43 *e*P **P 08 01 20.8 +0.9**
ORIF pmax pmax
comp=Z,5.0nm,0.7s,mb5.0
ORIF Oris-en-Rattie 94.79 43 *e*P **P 08 01 20.8 +0.9**
comp=Z,4.9nm,0.7s,mb5.0
EKA Eskdalemuir Ar 94.88 31 P **P 08 01 19.4 -0.5**
comp=Z,2.6nm,0.8s,mb4.7,baz=243,slow=5.5,SNR=5.1
DLBC Dease Lake 95.25 332 P **P 08 01 20.5 -1.1**
comp=Z,3.7nm,1.0s,mb4.8,baz=98,slow=10,SNR=3.8
DLBC Dease Lake 95.25 332 *e*P **P 08 01 21.2 -0.4**
LPL La Plagne 95.59 43 *e*P **P 08 01 24.6 +1.1**
LPG La Plagne 95.60 43 *e*P **P 08 01 24.5 +1.0**
CABF La Chapelle 95.68 42 *e*P **P 08 01 25.4 +1.5**
comp=Z,12nm,0.8s,mb5.0
CABF La Chapelle 95.68 42 *e*P **P 08 01 25.4 +1.5**
CABF pmax pmax
comp=Z,6.0nm,0.8s,mb5.1
CABF La Chapelle 95.68 42 *e*P **P 08 01 25.4 +1.5**
comp=Z,5.8nm,0.8s,mb5.1
DAVOX Davos/Dischmat 98.11 43 P **P 08 01 35.0 +0.1**
comp=Z,1.3nm,0.3s,mb4.9,baz=165,slow=21,SNR=4.9
DAVOX PP PP 08 05 30.2 -5.7
comp=Z,5.6nm,0.8s,baz=271,slow=6.4,SNR=6.3
NB2 NORSAR Subarra104.22 30 PP PP 08 06 19.7 -1.8
comp=Z,22nm,1.7s,baz=250,slow=7.9
NB2 NORSAR Subarra104.22 30 PP PP 08 06 19.7 -1.8
baz=250,slow=7.9
NOA NORSAR Array B104.22 30 PP PP 08 06 20.3 -1.2
comp=Z,1.6nm,1.0s,baz=241,slow=7.3,SNR=4.3
ILAR Eielson Array 105.28 334 PP PP 08 06 22.8 -6.5
comp=Z,0.2nm,0.7s,baz=101,slow=4.8,SNR=3.1
FINES FINESS Array B 111.28 31 PP PP 08 07 09.5 -3.5
comp=Z,1.6nm,0.7s,baz=329,slow=3.3,SNR=4.9
FINES PKKPbc PKKPbc 08 17 25.3 -3.8
comp=Z,0.6nm,0.4s,baz=64,slow=4.4,SNR=3.9
AKASG Malin Array Be 111.46 43 PP PP 08 07 10.0 -4.6
comp=Z,6.4nm,0.9s,baz=260,slow=7.6,SNR=11
ARCES ARCESS Array B 111.92 22 PKKPbc PKKPbc 08 17 22.8 -4.4
comp=Z,1.0nm,0.5s,baz=94,slow=4.4,SNR=9.0
ARCES PKKPab PKKPab 08 17 32.2 -0.2
comp=Z,5.6nm,0.8s,baz=99,slow=5.8,SNR=11
BRTR Keskin Array B 112.65 55 PKiKP PKiKP 08 06 34.4 0.0
comp=Z,1.3nm,1.0s,baz=266,slow=3.3,SNR=3.9
STKA Stephens Creek 119.11 209 *e*P PKPdf 08 06 46.0 -1.1
comp=Z,2.6nm,0.8s
STKA Stephens Creek 119.11 209 PKP PKPdf 08 06 45.9 -1.2
comp=Z,3.1nm,0.7s,baz=185,slow=0.4,SNR=5.0
NWAO Narrogin (SRO) 124.87 185 PKP PKPdf 08 06 56.9 -1.2
comp=Z,6.8nm,0.8s,baz=139,slow=9.3,SNR=3.2
NWAO Narrogin (SRO) 124.87 185 PKP PKPdf 08 06 56.9 -1.2
FORT Forrest 125.02 197 *e*P PKPdf 08 06 56.9 -1.6
comp=Z,8.6nm,0.6s
FORT Forrest 125.02 197 *e*PKPdf PKPdf 08 06 56.5 -1.9
KLBR Kellerberrin 126.14 186 *e*P PKPdf 08 06 59.4 -1.2
comp=Z,16nm,0.8s
CTA Charters Tower 126.17 221 *e*P PKPdf 08 07 00.2 -0.7
comp=Z,7.3nm,1.1s
CTA Charters Tower 126.17 221 PKP PKPdf 08 06 59.9 -1.0
comp=Z,9.3nm,1.0s,baz=242,slow=4.7,SNR=5.3
CTA Charters Tower 126.17 221 PKP PKPdf 08 06 59.9 -1.0
ASAR Alice Springs 129.57 206 PKhKP PKPpre 08 06 54.5
comp=Z,0.5nm,0.7s,baz=116,slow=1.1,SNR=5.1
ASAR PKP PKPdf 08 06 07.3 -1.1
comp=Z,14nm,0.7s,baz=139,slow=1.8,SNR=68
ASAR Alice Springs 129.57 206 PKIKP PKPdf 08 06 07.3 -1.1
TIXI Tiksi 129.66 353 *e*PKIKP PKPdf 08 04 5 -1.5
TIXI pmax pmax
comp=Z,6.0nm,1.1s
ABKAR Akbulak array 131.20 43 *e*PKPdf PKPdf 08 07 09.1 -0.4
ABKAR *e*pPKPdf pPKPdf 08 07 41.1 -0.6
PETK Petropavlovsk- 133.65 323 PKhKP PKPpre 08 07 03.1
PETK PKP PKPdf 08 07 13.9 -0.1
comp=Z,2.4nm,0.5s,baz=71,slow=4.8,SNR=5.4
PETK SKPbc SKPbc 08 10 32.9 +1.0
comp=Z,2.2nm,0.8s,baz=70,slow=9.6,SNR=4.4
PETK Petropavlovsk- 133.65 323 PKP PKPdf 08 07 13.9 -0.1
PETK SKPbc SKPbc 08 10 32.9 +1.0
ZRNK Zerenda 135.28 36 PKIKP PKPdf 08 07 17.7 +0.6
ZRNK pmax pmax
comp=Z,5.0nm,0.5s
BVAR Borovoye Array 136.00 35 PKP PKPdf 08 07 19.2 +0.8
comp=Z,1.4nm,0.5s,baz=264,slow=1.5,SNR=6.7
BVAR pPKP pPKPdf 08 07 49.8 -0.9
comp=Z,2.4nm,0.8s,baz=253,slow=2.5,SNR=3.8
VOSK Vostochnaya 136.45 35 PKIKP PKPdf 08 07 19.6 +0.3
VOSK pmax pmax
comp=Z,7.0nm,1.2s
FITZ Fitzroy Crossi 137.68 200 *e*P PKPdf 08 07 21.7 -1.0
comp=Z,14nm,0.8s
FITZ Fitzroy Crossi 137.68 200 PKhKP PKPpre 08 07 11.6
comp=Z,2.7nm,0.7s,baz=178,slow=5.2,SNR=5.2
FITZ PKP PKPdf 08 07 22.2 -0.4
comp=Z,7.2nm,0.6s,baz=194,slow=4.7,SNR=11
FITZ Fitzroy Crossi 137.68 200 *e*PKPdf PKPdf 08 07 21.4 -1.3
ZALV Zalesovo Beam 142.32 26 PKhKP PKPpre 08 07 26.1
comp=Z,15nm,0.8s,baz=324,slow=1.8,SNR=11
ZALV PKP PKPdf 08 07 30.2 +0.3
comp=Z,20nm,0.9s,baz=295,slow=2.1,SNR=23
ZALV SKPbc SKPbc 08 10 58.5 +1.7
comp=Z,3.3nm,0.6s,baz=304,slow=2.9,SNR=4.8
ZALV Zalesovo Beam 142.32 26 PKP PKPpre 08 07 26.1
ZALV PKP PKPdf 08 07 30.2 +0.3
ZALV SKPbc SKPbc 08 10 58.5 +1.7
EKS2 Erkin-Say 142.36 48 *e*PKPdf PKPdf 08 07 29.2 -1.2
EKS2 *e*pPKPdf pPKPdf 08 08 01.2 -1.4
AML Almayashu 142.49 49 *e*PKPdf PKPdf 08 07 32.5 +1.9
TKM2 Tokmak 2 143.51 47 *e*PKIKP PKPdf 08 07 30.4 -2.0
CLNS Chul'man 144.19 348 *e*PKIKP PKPdf 08 07 31.0 -2.1
CLNS pmax pmax
comp=Z,16nm,0.8s
CLNS pmax pmax
comp=N,6.0nm,0.9s
YSS Yuzh-Sakhalins 145.03 322 *e*PKIKP PKPdf 08 07 34.1 -0.8
MK31 Makanchi Array 145.80 37 *i* PKP2 PKPdf 08 07 36.5 +0.3
MK31 pmax pmax
comp=Z,11nm,0.6s
MK31 Makanchi Array 145.80 37 *e*PKPdf PKPdf 08 07 36.6 +0.4
MKAR Makanchi Array 145.80 37 PKPbc PKPbc 08 07 36.4 -0.5
comp=Z,33nm,0.9s,baz=312,slow=2.5,SNR=77
THN Thein Dam 146.44 65 *ex* PKPdf 08 07 36.0 -1.8
ERM Erimo 147.30 314 *e*PKP2 PKPbc 08 07 41.4 -0.1
GUMO Guam 147.54 260 *e*PKP2 PKPbc 08 07 41.0 -1.9
NDI New Delhi 148.11 71 *e*PKP PKPdf 08 07 40.0 -0.7
KLR Kul'dur 148.85 335 *e*PKHKP PKPpre 08 07 36.8
GMJI Gumukmas 149.60 183 P PKPbc 08 07 47.7 -0.5
AAI Ambon 149.68 214 P PKPbc 08 07 46.3 -2.1
comp=Z,182nm,1.0s,comp=Z,3μm
PCJI Pacitan 149.71 179 P PKPbc 08 07 48.1 -0.4
comp=Z,203nm,1.0s
PWJI Pagerwojo 149.88 180 P PKPbc 08 07 48.2 -0.7
comp=Z,82nm,0.9s
SWI Sorong 150.25 222 P PKPbc 08 07 48.9 -0.9
comp=Z,1μmcomp=Z,70nm,0.8s
NLAI Namlea 150.61 212 P PKPbc 08 07 49.7 -1.0
comp=Z,64nm,0.8s
WMQ Urumqi 150.63 37 *e*PKPbc PKPdf 08 07 42.0 -2.2
BKSI Bulukumba 151.42 197 P PKPbc 08 07 51.2 -1.4
comp=Z,95nm,0.9s,comp=Z,845nm
KDI Kendari 151.90 203 P PKPbc 08 07 52.8 -0.9
comp=Z,84nm,1.1s
BNSI Bone 152.30 198 P PKPbc 08 07 54.2 -0.4
comp=Z,121nm,0.9s
MJAR Matsushiro Arr 153.16 308 PKPbc PKPbc 08 07 55.0 -0.8
comp=Z,4.7nm,0.6s,baz=91,slow=2.0,SNR=11
MJAR PKPab PKPab 08 08 06.5 -1.3
comp=Z,5.6nm,0.8s,baz=83,slow=1.9,SNR=8.6
MAJO Matsushiro 153.16 308 *e*PKIKP PKPbc 08 07 54.7 -1.1
MAJO *e* 08 08 06.9
MAT Matsushiro 153.16 308 PKP PKPbc 08 07 54.3 -1.5
SONM Songino Array 154.12 9 PKP PKPdf 08 07 49.8 +0.6
comp=Z,3.2nm,0.8s,baz=293,slow=0.9,SNR=13
SONM PKPbc PKPbc 08 07 57.6 +0.2
comp=Z,2.3nm,0.4s,baz=281,slow=1.1,SNR=9.5
SONM PKPab PKPab 08 08 12.2 +0.8
comp=Z,3.1nm,0.6s,baz=306,slow=3.3,SNR=6.9
ULN Ulaanbaatar 154.18 8 *e*PKPdf PKPdf 08 07 49.6 +0.3
ULN *e*PKPab PKPab 08 08 12.7 +1.0
KSRS Korea Array 159.52 321 PKP PKPdf 08 07 56.5 0.0
comp=Z,6.9nm,1.1s,baz=76,slow=0.6,SNR=7.0
KSRS PKPab PKPab 08 08 33.8 -1.3
comp=Z,2.8nm,0.6s,baz=53,slow=4.3,SNR=7.0
GTA Gaotai 160.05 28 *e*PKP PKPdf 08 07 57.8 +0.8
HHC Hu-ho-hao-te 161.49 1 *e*PKP PKPdf 08 07 55.5 -3.0
HHC PKS 08 11 27.8
HHC PP PP 08 12 27.3 +1.1
HHC SKS SKSdf 08 14 48.5 -4.1
HHC SKKS SKKSac 08 19 03.3 -0.8
HHC SS SS 08 32 31.5 -0.8
HHC AMB AMB
comp=Z,91nm,9.8s
HHC LR LR
comp=N,130nm,21.1s
HHC LR LR
comp=E,180nm,21.8s
HHC LR LR
comp=Z,100nm,21.5s
BJI Beijing 161.93 349 PKP PKPdf 08 07 59.3 +0.3
LZH Lanzhou 164.55 25 *e*PKP PKPdf 08 08 04.0 +2.4
LZH pPKP pPKPdf 08 08 30.8 -3.3
LZH sPKP 08 08 41.8
LZH PKS 08 11 34.5
LZH PP PP 08 12 49.0 +6.2
LZH SKS SKSdf 08 14 56.5 +1.4
LZH SS SS 08 33 07.0 +2.3
LZH AMB AMB
comp=Z,65nm,4.0s
CMAR Chiang Mai Arr 167.25 105 PKP PKPdf 08 08 04.0 -0.3
comp=Z,0.7nm,0.4s,baz=253,slow=1.4,SNR=7.7
CMAR PKPab PKPab 08 09 09.3 -0.4
comp=Z,2.9nm,0.7s,baz=257,slow=5.3,SNR=8.3
NJ2 Nanjing 168.48 329 *e*PKP PKPdf 08 08 07.0 +2.2
CD2 Chengdu 168.73 39 PKPbc PKPdf 08 08 14.0 +9.0
CD2 pPKP pPKPdf 08 08 41.0 +3.5
CD2 sPKP 08 08 51.5
CD2 PKPab PKPab 08 09 27.0 +11
CD2 PKS 08 11 45.3
CD2 PP PP 08 13 17.0 +12
CD2 SKS SKSdf 08 15 06.3 +8.4
CD2 SKKS SKKSac 08 19 53.0 +12
CD2 SS SS 08 34 00.0 +12
CD2 AMB AMB
comp=Z,490nm,8.9s
CD2 LR LR
comp=N,240nm,16.7s
CD2 LR LR
comp=Z,250nm,10.7s
KMI Kunming 171.13 70 PKP PKPdf 08 08 06.0 -0.5
GYA Guiyang 173.66 48 *e*PKP PKPdf 08 08 05.5 -2.1
GYA pPKP pPKPdf 08 08 38.5 -1.6
GYA sPKP 08 08 52.0
GYA PKPab PKPab 08 09 37.5 -0.3
GYA PKS 08 11 36.0
GYA PP PP 08 13 32.0 +2.4
GYA AMB AMB
comp=Z,110nm,8.7s

ISK ***25*** *07:58:37.8, 37°.02N×29°.17E, h6km, MD2.9*
ISCJB ***25*** *07:58:38.3±0.7, 36°.99N±0°.04×29°.17E±0°.04, h0km±8km, Error ellipse: s-maj=6.2km s-min=4.9km az=1.3*
CSEM ***25*** *07:58:38.8±0.1, 36°.99N×29°.17E, h8km, MD2.9, Error ellipse: s-maj=1.7km s-min=1.3km az=24.0*
DDA ***25*** *07:58:39.0, 37°.03N×29°.22E, h7km±3km, Md2.8*
ISC 25 07:58:39.0±0.6, 36°.99N±0°.04×29°.18E±0°.03, h9km±7km, n22, σ0°70/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.31**	**57**	*e*PG	**Pg**	**07 58 43.6**	**-1.4**

GLHS				*e*SG	**Sg**	**07 58 49.3**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.31**	**57**	*e*Pg	**Pg**	**07 58 43.6**	**-1.5**
GLHS				*e*Sg	**Sg**	**07 58 49.3**	**+0.1**
ELL	**Elmali**	**0.64**	**112**	*e*PG	**Pg**	**07 58 51.2**	**-0.1**
ELL				*e*SG	**Sg**	**07 59 00.0**	**+0.5**
ELL	**Elmali**	**0.64**	**112**	*e*Pg	**Pg**	**07 58 51.2**	**-0.1**
ELL				*e*Sg	**Sg**	**07 59 00.0**	**+0.4**
DNZL	**Cakiroluk**	**0.71**	**352**	*i* P	**Pg**	**07 58 53.0**	**+0.4**
DNZL				*i* S	**Sg**	**07 59 01.8**	**0.0**
DNZL	**Cakiroluk**	**0.71**	**352**	*i* P	**Pg**	**07 58 53.0**	**+0.4**
DNZL				*i* S	**Sg**	**07 59 01.8**	**0.0**
YER	**Yerkesik**	**0.73**	**282**	*e*PG	**Pg**	**07 58 52.9**	**-0.1**
YER				*e*SG	**Sg**	**07 59 01.8**	**-0.7**
YER	**Yerkesik**	**0.73**	**282**	*e*Pg	**Pg**	**07 58 52.9**	**-0.1**
YER				*e*Sg	**Sg**	**07 59 01.8**	**-0.7**
AKAS	**Kas**	**0.83**	**155**	*i* P	**Pg**	**07 58 55.2**	**+0.2**
AKAS				*i* S	**Sg**	**07 59 10.6**	**+4.8**
AKAS	**Kas**	**0.83**	**155**	*i* P	**Pg**	**07 58 55.2**	**+0.2**
AKAS				*i* S	**Sg**	**07 59 10.6**	**+4.8**
MLSB	**Milas**	**1.16**	**286**	*e*PN	**Pn**	**07 59 00.2**	**-1.2**
MLSB	**Milas**	**1.16**	**286**	*e*Pn	**Pn**	**07 59 00.2**	**-1.2**
AYDN	**Tasoluk**	**1.23**	**303**	*i* P	**Pg**	**07 59 02.5**	**-0.1**
AYDN				*i* S	**Sg**	**07 59 19.8**	**+1.2**
AYDN	**Tasoluk**	**1.23**	**303**	*i* P	**Pg**	**07 59 02.5**	**-0.1**
AYDN				*i* S	**Sg**	**07 59 19.8**	**+1.2**
DAT	**Datca**	**1.31**	**259**	*e*PN	**Pn**	**07 59 03.6**	**+0.2**
DAT	**Datca**	**1.31**	**259**	*e*Pn	**Pn**	**07 59 03.6**	**+0.2**
BDRM	**Kayabasi**	**1.39**	**274**	*i* P	**Pn**	**07 59 06.2**	**+1.7**
BDRM				*i* S	**Sb**	**07 59 22.4**	**-0.5**
BDRM	**Kayabasi**	**1.39**	**274**	*i* P	**Pn**	**07 59 06.2**	**+1.7**
BDRM				*i* S	**Sb**	**07 59 22.4**	**-0.5**
KHAL	**Karahalli**	**1.40**	**10**	*i* P	**Pn**	**07 59 04.5**	**-0.2**
KHAL				*i* S	**Sb**	**07 59 23.5**	**+0.2**
KHAL	**Karahalli**	**1.40**	**10**	*i* P	**Pn**	**07 59 04.5**	**-0.2**
KHAL				*i* S	**Sb**	**07 59 23.5**	**+0.2**
BODT	**Bodrum**	**1.49**	**273**	*e*PN	**Pn**	**07 59 05.7**	**-0.3**
BODT	**Bodrum**	**1.49**	**273**	*e*Pn	**Pn**	**07 59 05.7**	**-0.3**

IDC 25 08:07:50.1±3.1, 2°.09N×96°.08E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.5/22, mbtmp3.6/5, ML4.4/1, Error ellipse: s-maj=117.6km s-min=26.9km az=63.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**16.51**	**10**	Pn	Pn	08 11 44.6	+1.4
	0.5nm,0.3s,baz=198,slow=11,SNR=5.2						
ASAR	**Alice Springs**	**44.82**	**127**	P	P	08 16 06.2	+0.1
	0.2nm,0.7s,baz=297,slow=7.2,SNR=3.2						
MKAR	**Makanchi Array**	**46.12**	**347**	P	P	08 16 16.3	+0.2
	0.6nm,0.5s,baz=168,slow=7.9,SNR=5.7						
SONM	**Songino Array**	**46.44**	**10**	P	P	08 16 18.1	-0.4
	0.3nm,0.4s,baz=190,slow=8.8,SNR=2.9						
ZALV	**Zalesovo Beam**	**52.52**	**352**	P	P	08 17 04.9	0.0
	1.3nm,0.8s,baz=160,slow=4.6,SNR=4.2						

IDC 25 08:17:05.2±1.9, 13°.65N×92°.90E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.5/23, mbtmp3.7/6, Error ellipse: s-maj=87.5km s-min=20.4km az=62.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**7.52**	**50**	Sn	Sn	08 20 21.2	-1.0
	0.5nm,0.3s,baz=239,slow=29,SNR=5.1						
MKAR	**Makanchi Array**	**34.22**	**347**	P	P	08 23 53.3	+0.8
	1.0nm,0.8s,baz=156,slow=10,SNR=6.0						
SONM	**Songino Array**	**35.89**	**16**	P	P	08 24 06.8	-0.2
	0.4nm,0.5s,baz=191,slow=14,SNR=2.9						
ZALV	**Zalesovo Beam**	**40.71**	**353**	P	P	08 24 47.5	+0.1
	1.2nm,0.5s,baz=179,slow=8.3,SNR=5.7						
WRA	**Warramunga Arr**	**52.69**	**128**	P	P	08 26 21.7	-0.2
	0.4nm,0.6s,baz=309,slow=8.0						
ASAR	**Alice Springs**	**54.62**	**132**	P	P	08 26 36.1	+0.2
	0.3nm,0.4s,baz=311,slow=6.8,SNR=8.6						
ARCES	**ARCESS Array B**	**69.46**	**340**	P	P	08 28 14.6	-0.4
	1.1nm,0.7s,baz=106,slow=9.6,SNR=3.2						

CASC 25 08:34:33.1±1.6, 8°.52N×83°.05W, h4km, MD3.6, 2C-3D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.18**	**320**	⇑*i*P	Pg	08 34 37.0	+0.4
BRU2	**Volcan**	**0.45**	**52**	⇓*i*P	Pg	08 34 43.4	+1.6
BRU2				*e*S	Sg	08 34 51.0	+3.2
BRU	**Baru**	**0.57**	**59**	*e*P	Pg	08 34 39.0	-4.9
BRU				*e*S	Sg	08 34 47.6	-3.8
BAR1		**0.77**	**341**	⇓*e*P	Pg	08 34 47.5	-0.3
CNI	**Changuinola**	**1.04**	**31**	⇑*i*P	Pg	08 34 53.4	+0.4
BUS	**Buena Vista**	**1.25**	**326**	⇓*e*P	Pg	08 34 55.5	-1.5
URSC	**Urasca**	**1.49**	**331**	*e*P	Pn	08 34 59.4	-1.3
LAJ	**Bijagual**	**1.71**	**322**	*e*P	Pn	08 35 07.1	+3.5
PRS1	**Puriscal**	**1.92**	**320**	*e*P	Pn	08 35 08.8	-0.8
PRS1				*e*S	Sn	08 35 31.4	+0.3
CGA2	**Cerro Gallo 2**	**2.04**	**317**	*e*P	Pn	08 35 08.9	+0.7
CGA2				*e*S	Sn	08 35 35.5	+1.3

NIED ***25*** *08:59:00,39°.60N×142°.10E,h62km,Mw3.9 Best double couple: M0 7.16000×10^14 NP1:φ=211.00000°,δ=86.00000°, λ=-120.00000°. NP2:φ=114.00000°,δ=30.00000°, λ=-8.00000°.*
ISCJB ***25*** *08:59:23.9±0.6,39°.63N±0°.03×142°.13E±0°.08,h56km±4km, mb3.7/6, Error ellipse: s-maj=10.2km s-min=5.3km az=6.9*
MOS ***25*** *08:59:24.7±0.7,39°.65N×142°.18E,h74km,mb4.1/4, Error ellipse: s-maj=23.6km s-min=12.1km az=75.6*
JMA ***25*** *08:59:24.9,39°.63N×142°.11E,h48km±1km,M3.7*
JMA Felt II J1.
IDC ***25*** *08:59:24.8±1.5,39°.65N×142°.07E,h49km±8km,mb3.5/6, mb1 3.6/9,mb1mx3.4/24,mbtmp3.6/9, Error ellipse: s-maj=39.8km s-min=17.3km az=79.0*
NEIC ***25*** *08:59:24.9,39°.63N×142°.11E,h48km,MG3.9(JMA), After JMA.*
NEIC Recorded [2 JMA] in Iwate and [1 JMA] in Aomori.
ISC 25 08:59:25.1±0.6, 39°.62N±0°.03×142°.09E±0°.08, h49km±5km, h50km±4.1km: pP-P, n32, σ0§77/46, mb3.7/6, 2C-7D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**0.21**	**257**	⇓P	**Pn**	**08 59 33.2**	**-0.2**
MIYJ				S	**Sn**	**08 59 39.0**	**-0.3**
JTH	**Tanohata**	**0.36**	**331**	⇓P	**Pn**	**08 59 34.4**	**-0.3**
JTH				S	**Sn**	**08 59 41.1**	**-0.4**
OFUJ	**Ofunato**	**0.64**	**211**	⇑P	**Pn**	**08 59 37.6**	**-0.3**
JOM	**Ohasama**	**0.64**	**257**	⇓P	**Pn**	**08 59 38.1**	**+0.2**
JOM				S	**Sn**	**08 59 47.5**	**+0.3**
JKZ	**Kuzumaki**	**0.69**	**302**	⇓P	**Pn**	**08 59 38.7**	**+0.1**
JKZ				S	**Sn**	**08 59 48.2**	**-0.2**
JANG	**Nango**	**0.87**	**330**	⇓P	**Pn**	**08 59 40.5**	**-0.5**
JANG				S	**Sn**	**08 59 51.6**	**-1.0**
JMK	**Ichinoseki**	**0.95**	**225**	P	**Pn**	**08 59 42.2**	**+0.1**
JMK				S	**Sn**	**08 59 54.5**	**-0.1**
JAH	**Hinai**	**1.25**	**297**	⇓P	**Pn**	**08 59 46.4**	**+0.2**
JAH				S	**Sn**	**09 00 02.7**	**+0.8**
JIO	**Ouri**	**1.30**	**207**	⇑P	**Pn**	**08 59 46.5**	**-0.4**
JIO				S	**Sn**	**09 00 02.6**	**-0.5**
JTM	**Tenmabayashi**	**1.40**	**326**	⇓P	**Pn**	**08 59 48.1**	**-0.1**
JTM				S	**Sn**	**09 00 05.5**	**0.0**
ERM	**Erimo**	**2.52**	**18**	*e*P	**Pn**	**09 00 04.0**	**+0.5**
MAJO	**Matsushiro**	**4.34**	**226**	*e*P	**Pn**	**09 00 31.6**	**+3.1**
MAT	**Matsushiro**	**4.34**	**226**	P	**Pn**	**09 00 31.7**	**+3.2**
MAT				*e*S	**Sn**	**09 01 23.9**	**+6.1**
MJAR	**Matsushiro Arr**	**4.34**	**226**	P	**Pn**	**09 00 30.2**	**+1.8**
	2.2nm,0.3s,baz=32,slow=13,SNR=29						
MJAR	**Matsushiro Arr**	**4.34**	**226**	P	**Pn**	**09 00 30.3**	**+1.8**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ	**Asahikawa**	**4.50**	**5**	P	**Pn**	**09 00 31.1**	**+0.5**
	comp=Z,2.4nm,0.3s,baz=202,slow=8.0,SNR=16						
ASAJ				S	**Sn**	**09 01 28.9**	**+7.1**
	comp=Z,2.5nm,0.3s,baz=270,slow=29,SNR=3.7						
ASAJ	**Asahikawa**	**4.50**	**5**	P	**Pn**	**09 00 31.2**	**+0.5**
ASAJ				S	**Sn**	**09 01 28.9**	**+7.2**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				smax			
	comp=N,3.0nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**5.23**	**31**	*e*P	**Pn**	**09 00 41.7**	**+1.1**
YUK				*e*S	**Sn**	**09 01 34.5**	**-5.1**
YUK				pmax	pmax		
	comp=Z,89nm,0.5s						
YUK				pmax	pmax		
	comp=N,37nm,0.2s						
YUK				pmax	pmax		
	comp=E,65nm,0.7s						
YUK				smax			
	comp=E,43nm,0.1s						
YUK				smax			
	comp=N,202nm,0.4s						
JHJ	**Hachijo jima 2**	**6.75**	**197**	P	**Pn**	**09 01 01.2**	**-0.4**
	comp=N,4.4nm,0.3s,baz=66,slow=20,SNR=5.1						
JHJ				S	**Sn**	**09 02 13.7**	**-3.4**
	comp=N,2.9nm,0.3s,baz=81,slow=18,SNR=2.2						
SONM	**Songino Array**	**26.88**	**300**	P	**P**	**09 05 01.1**	**+0.1**
	comp=N,0.4nm,0.6s,mb3.2,baz=90,slow=8.6,SNR=2.8						
SONM				pP	pP	09 05 12.7	-0.9
	comp=N,0.4nm,0.6s,baz=90,slow=7.2,SNR=2.3						
SONM	**Songino Array**	**26.88**	**300**	P	**P**	**09 05 01.1**	**+0.1**
SONM				pP	pP	09 05 12.7	-1.0
ZALV	**Zalesovo Beam**	**40.61**	**310**	P	**P**	**09 06 59.1**	**-0.6**
	comp=N,1.2nm,0.4s,mb3.9,baz=92,slow=7.8,SNR=5.3						
ZALV				pP	pP	09 07 11.6	-1.2
	comp=N,0.7nm,0.3s,baz=82,slow=6.9,SNR=2.6						
ZALV	**Zalesovo Beam**	**40.61**	**310**	P	**P**	**09 06 59.1**	**-0.6**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.9						
ZALV	**Zalesovo Beam**	**40.61**	**310**	P	**P**	**09 06 59.1**	**-0.6**
ZALV				pP	pP	09 07 11.6	-1.2
MKAR	**Makanchi Array**	**43.24**	**300**	P	**P**	**09 07 21.1**	**-0.2**
	comp=Z,0.4nm,0.5s,mb3.5,baz=76,slow=10,SNR=3.8						
MKAR				pP	pP	09 07 33.2	-1.3
	comp=Z,0.7nm,0.7s,baz=92,slow=8.7,SNR=4.4						
MKAR	**Makanchi Array**	**43.24**	**300**	P	**P**	**09 07 21.1**	**-0.2**
MKAR				pP	pP	09 07 33.2	-1.3
BVAR	**Borovoye Array**	**49.26**	**311**	P	**P**	**09 08 07.6**	**-0.8**
	comp=Z,0.6nm,0.4s,mb4.0,baz=71,slow=11,SNR=2.8						
BVAR	**Borovoye Array**	**49.26**	**311**	P	**P**	**09 08 07.6**	**-0.8**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ASAR	**Alice Springs**	**63.42**	**188**	P	**P**	**09 09 48.6**	**-0.9**
	comp=Z,0.6nm,0.8s,mb3.8,baz=6.7,slow=5.5,SNR=6.5						
ASAR				pP	pP	09 10 04.2	+0.9
	comp=Z,0.3nm,0.8s,baz=359,slow=5.0,SNR=2.5						
ASAR	**Alice Springs**	**63.42**	**188**	P	**P**	**09 09 48.7**	**-0.8**
ASAR				*PP	pP	09 10 04.2	+0.9
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FINES	**FINESS Array B**	**66.78**	**332**	P	**P**	**09 10 11.1**	**+0.2**
	comp=Z,0.6nm,0.6s,mb3.8,baz=19,slow=13,SNR=2.0						
FINES	**FINESS Array B**	**66.78**	**332**	P	**P**	**09 10 11.1**	**+0.2**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						

TIR ***25*** *09:12:51.6±3.2,41°.49N×20°.23E,h3km±971km,ML3.2*
ISCJB ***25*** *09:12:53.7±0.5,41°.48N±0°.03×20°.16E±0°.04,h1km±7km, Error ellipse: s-maj=6.0km s-min=2.6km az=137.7*
CSEM ***25*** *09:12:54.6±0.4,41°.43N×19°.99E,h2km,ML3.2, Error ellipse: s-maj=10.0km s-min=5.2km az=60.0*
SKO ***25*** *09:12:55.2,41°.48N×20°.21E,h9km,M2.0,ML2.5*
PDG ***25*** *09:12:57.0±0.2,41°.53N×19°.93E,h0km±11km,ML2.3/10, Error ellipse: s-maj=0.9km s-min=1.2km az=0.0*
ISC 25 09:12:54.7±0.4, 41°.47N±0°.03×20°.18E±0°.04, h9km±6km, n31, σ1§11/62, 17C-4D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHR	**Ohrid**	**0.59**	**127**	*i* Pg	**Pg**	**09 13 05.3**	**-0.9**
OHR				*i* Sg	**Sg**	**09 13 15.1**	**+1.2**
OHR				*e*Lg		09 13 15.3	
	comp=E,150nm,0.4s						
OHR				*e*Lg		09 13 15.3	
	comp=N,244nm,0.7s						
PUK	**Puka**	**0.61**	**340**	*e*PG	**Pg**	**09 13 05.7**	**-0.7**
PUK				*e*SG	**Sg**	**09 13 14.7**	**+0.3**
PUK	**Puka**	**0.61**	**340**	*e*Pg	**Pg**	**09 13 05.7**	**-0.7**
PUK				*e*Sg	**Sg**	**09 13 14.7**	**+0.3**
KRUS	**Krusevo**	**0.81**	**97**	⇑*i*Pg	**Pg**	**09 13 08.6**	**-1.7**
KRUS				*i* Sg	**Sg**	**09 13 20.1**	**-0.8**
KRUS				*e*Lg		09 13 20.9	
	comp=E,45nm,0.2s						
KRUS				*e*Lg		09 13 21.5	
	comp=N,36nm,0.2s						
ULC	**Ulcinj**	**0.85**	**306**	⇑*i*Pg	**Pg**	**09 13 09.4**	**-1.6**
ULC				*e*Sg	**Sg**	**09 13 19.7**	**-2.4**
ULC	**Ulcinj**	**0.85**	**306**	⇑*i*Pg	**Pg**	**09 13 09.4**	**-1.6**
ULC				*e*Sg	**Sg**	**09 13 19.7**	**-2.4**
BCI	**Bajram Curri**	**0.90**	**355**	*e*PG	**Pg**	**09 13 11.9**	**0.0**
BCI				*e*SG	**Sg**	**09 13 23.6**	**0.0**
BCI	**Bajram Curri**	**0.90**	**355**	*e*Pg	**Pg**	**09 13 11.9**	**0.0**
BCI				*e*Sg	**Sg**	**09 13 23.6**	**0.0**
KBN	**Korca**	**0.97**	**151**	*e*PG	**Pg**	**09 13 14.3**	**+1.0**
KBN				*e*SG	**Sg**	**09 13 26.8**	**+1.0**
KBN	**Korca**	**0.97**	**151**	*e*Pg	**Pg**	**09 13 14.3**	**+1.0**
KBN				*e*Sg	**Sg**	**09 13 26.8**	**+1.0**
BIA	**Bitola**	**0.98**	**117**	*e*Pg	**Pg**	**09 13 11.7**	**-1.8**
BIA				*i* Sg	**Sg**	**09 13 26.4**	**+0.3**
BIA				*e*Lg		09 13 27.8	
	comp=N,42nm,0.2s						
BIA				*e*Lg		09 13 28.1	
	comp=E,46nm,0.2s						
SKO	**Skopje**	**1.07**	**62**	*e*Pg	**Pg**	**09 13 15.0**	**-0.2**
SKO				*i* Sg	**Sg**	**09 13 28.5**	**-0.6**
SKO				*e*Lg		09 13 28.8	
	comp=N,105nm,0.5s						
SKO				*e*Lg		09 13 28.8	
	comp=E,40nm,0.3s						
PVY	**Plav**	**1.13**	**352**	⇑*i*Pg	**Pg**	**09 13 17.4**	**+1.0**
PVY				*e*Sg	**Sg**	**09 13 33.1**	**+2.0**
PVY	**Plav**	**1.13**	**352**	⇑*i*Pg	**Pg**	**09 13 17.4**	**+1.0**
PVY				*e*Sg	**Sg**	**09 13 33.1**	**+2.0**
PDG	**Podgorica**	**1.17**	**325**	⇑*i*Pg	**Pn**	**09 13 15.7**	**-1.6**
PDG				*e*Sg	**Sg**	**09 13 32.7**	**+0.2**
TTG	**Podgorica**	**1.17**	**325**	⇑*i*Pg	**Pn**	**09 13 15.7**	**-1.6**
TTG				*e*Sg	**Sg**	**09 13 32.7**	**+0.2**
BUM	**Brajici-Budva**	**1.26**	**311**	⇓*i*Pg	**Pn**	**09 13 16.9**	**-1.6**
BUM				*e*Sg	**Sg**	**09 13 34.7**	**-0.6**
BUM	**Brajici-Budva**	**1.26**	**311**	⇓*i*Pg	**Pn**	**09 13 16.9**	**-1.6**
BUM				*e*Sg	**Sg**	**09 13 34.7**	**-0.6**
BEY	**Berane**	**1.41**	**352**	⇑*i*Pg	**Pg**	**09 13 21.7**	**-0.1**
BEY				*e*Sg	**Sg**	**09 13 42.4**	**+2.3**
IVA	**Berane**	**1.41**	**352**	⇑*i*Pg	**Pg**	**09 13 21.7**	**-0.1**
IVA				*e*Sg	**Sg**	**09 13 42.4**	**+2.3**
HCY	**Herceg Novi**	**1.58**	**308**	⇓*i*Pg	**Pn**	**09 13 22.9**	**0.0**
HCY				*e*Sg	**Sg**	**09 13 45.8**	**+0.2**
HCY	**Herceg Novi**	**1.58**	**308**	⇓*i*Pg	**Pn**	**09 13 22.9**	**0.0**
HCY				*e*Sg	**Sg**	**09 13 45.8**	**+0.2**
SRN	**Sarande**	**1.60**	**185**	*e*PG	**Pg**	**09 13 27.8**	**+2.5**
SRN				*e*SG	**Sg**	**09 13 51.2**	**+5.2**
NKY	**Niksic**	**1.60**	**327**	⇑*i*Pg	**Pn**	**09 13 23.6**	**+0.5**
NKY				*e*Sg	**Sg**	**09 13 46.6**	**+0.5**
NKY	**Niksic**	**1.60**	**327**	⇑*i*Pg	**Pn**	**09 13 23.6**	**+0.5**
NKY				*e*Sg	**Sg**	**09 13 46.6**	**+0.5**
BRY	**Bratogost**	**1.87**	**320**	⇑*i*Pn	**Pn**	**09 13 27.6**	**+0.7**
BRY				*e*Sn	**Sg**	**09 13 54.4**	**-0.4**
BRY	**Bratogost**	**1.87**	**320**	⇑*i*Pn	**Pn**	**09 13 27.6**	**+0.7**
BRY				*e*Sn	**Sg**	**09 13 54.4**	**-0.4**
PLE	**Pljevlja**	**1.94**	**343**	⇑*i*Pn	**Pg**	**09 13 31.0**	**-0.9**
PLE				*e*Sn	**Sg**	**09 13 57.8**	**+0.7**
PLE	**Pljevlja**	**1.94**	**343**	⇑*i*Pn	**Pg**	**09 13 31.0**	**-0.9**
PLE				*e*Sn	**Sg**	**09 13 57.8**	**+0.7**
UPM	**Unac-Piva**	**1.97**	**332**	⇑*i*Pn	**Pn**	**09 13 29.9**	**+1.7**
UPM				*e*Sn	**Sg**	**09 13 58.0**	**+0.1**
UPM	**Unac-Piva**	**1.97**	**332**	⇑*i*Pn	**Pn**	**09 13 29.9**	**+1.7**
UPM				*e*Sn	**Sg**	**09 13 58.0**	**+0.1**

DDA ***25*** *09:56:45.5,37°.05N×29°.05E,h7km±5km,Md2.8*
ISCJB ***25*** *09:56:47.0±0.5,37°.05N±0°.03×29°.16E±0°.03,h10km, Error ellipse: s-maj=4.7km s-min=3.9km az=15.2*
ISK ***25*** *09:56:46.4,37°.07N×29°.16E,h7km,MD2.8*
CSEM ***25*** *09:56:46.5±0.3,37°.04N×29°.14E,h10km,MD2.8, Error ellipse: s-maj=7.6km s-min=6.1km az=14.0*
ISC 25 09:56:47.4±0.5, 37°.06N±0°.03×29°.15E±0°.03, h10km, n20, σ1§22/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.29**	**70**	*e*PG	**Pg**	**09 56 52.0**	**-1.3**
GLHS				*e*SG	**Sg**	**09 56 57.4**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.29**	**70**	*e*Pg	**Pg**	**09 56 52.0**	**-1.3**
GLHS				*e*Sg	**Sg**	**09 56 57.4**	**+0.1**
GOLH	**Golhisar**	**0.37**	**61**	*i* P	**Pg**	**09 56 53.8**	**-1.0**
GOLH				*i* S	**Sg**	**09 57 01.1**	**+1.3**
GOLH	**Golhisar**	**0.37**	**61**	*i* P	**Pg**	**09 56 53.8**	**-1.0**
GOLH				*i* S	**Sg**	**09 57 01.0**	**+1.3**
TURN	**Turunc**	**0.48**	**247**	*i* P	**Pg**	**09 56 59.3**	**+2.6**
TURN				*i* S	**Sg**	**09 57 11.5**	**+8.5**
TURN	**Turunc**	**0.48**	**247**	*i* P	**Pg**	**09 56 59.3**	**+2.6**
DNZL	**Cakiroluk**	**0.64**	**352**	*i* P	**Pg**	**09 56 58.9**	**-0.9**
DNZL				*i* S	**Sg**	**09 57 10.0**	**+1.9**
DNZL	**Cakiroluk**	**0.64**	**352**	*i* P	**Pg**	**09 56 58.9**	**-0.9**
DNZL				*i* S	**Sg**	**09 57 10.0**	**+1.9**
ELL	**Elmali**	**0.68**	**117**	*e*PG	**Pg**	**09 57 00.1**	**-0.5**
ELL				*e*SG	**Sg**	**09 57 10.2**	**+0.8**
ELL	**Elmali**	**0.68**	**117**	*e*Pg	**Pg**	**09 57 00.1**	**-0.5**
ELL				*e*Sg	**Sg**	**09 57 10.2**	**+0.7**
YER	**Yerkesik**	**0.70**	**277**	*e*PG	**Pg**	**09 57 00.4**	**-0.6**
YER	**Yerkesik**	**0.70**	**277**	*e*Pg	**Pg**	**09 57 00.4**	**-0.5**
DENT	**Denizli**	**0.70**	**352**	*e*PG	**Pg**	**09 57 00.6**	**-0.4**
DENT	**Denizli**	**0.70**	**352**	*e*Pg	**Pg**	**09 57 00.5**	**-0.5**
AKAS	**Kas**	**0.90**	**156**	*i* P	**Pg**	**09 57 02.8**	**-1.9**
AKAS				*i* S	**Sg**	**09 57 17.7**	**+1.3**
AKAS	**Kas**	**0.90**	**156**	*i* P	**Pg**	**09 57 02.8**	**-1.9**
AKAS				*i* S	**Sg**	**09 57 17.7**	**+1.3**
DAT	**Datca**	**1.30**	**256**	*e*PN	**Pn**	**09 57 11.9**	**+0.2**
DAT	**Datca**	**1.30**	**256**	*e*Pn	**Pn**	**09 57 11.9**	**+0.2**
BDRM	**Kayabasi**	**1.37**	**271**	*i* P	**Pn**	**09 57 09.4**	**-3.2**
BDRM				*i* S	**Sb**	**09 57 27.7**	**+0.2**
BDRM	**Kayabasi**	**1.37**	**271**	*i* P	**Pn**	**09 57 09.4**	**-3.1**
BDRM				*i* S	**Sb**	**09 57 30.7**	**+0.1**

ISK ***25*** *10:04:13.6,36°.97N×29°.20E,h8km,MD3.0*
CSEM ***25*** *10:04:14.8±0.3,36°.98N×29°.22E,h8km,MD3.0, Error ellipse: s-maj=6.5km s-min=4.9km az=8.0*
ISCJB ***25*** *10:04:15.1±0.5,36°.97N±0°.03×29°.24E±0°.03,h10km, Error ellipse: s-maj=5.0km s-min=3.7km az=4.8*
DDA ***25*** *10:04:15.7,37°.02N×29°.22E,h7km±4km,Md2.9*
ISC 25 10:04:15.0±0.6, 36°.96N±0°.03×29°.21E±0°.04, h5km±7km, n28, σ0§96/45, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**50**	*e*PG	**Pg**	**10 04 20.0**	**-0.9**
GLHS				*e*SG	**Sg**	**10 04 24.9**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.30**	**50**	*e*Pg	**Pg**	**10 04 20.0**	**-0.9**
GLHS				*e*Sg	**Sg**	**10 04 25.0**	**+0.1**
GOLH	**Golhisar**	**0.40**	**46**	*i* P	**Pg**	**10 04 22.0**	**-0.6**
GOLH				*i* S	**Sg**	**10 04 28.3**	**+0.5**
GOLH	**Golhisar**	**0.40**	**46**	*i* P	**Pg**	**10 04 22.0**	**-0.6**
GOLH				*i* S	**Sg**	**10 04 28.3**	**+0.5**
ELL	**Elmali**	**0.60**	**110**	*e*PG	**Pg**	**10 04 25.6**	**-1.0**
ELL				*e*SG	**Sg**	**10 04 35.0**	**+0.7**
ELL	**Elmali**	**0.60**	**110**	*e*Pg	**Pg**	**10 04 25.6**	**-0.9**
ELL				*e*Sg	**Sg**	**10 04 35.0**	**+0.7**
DNZL	**Cakiroluk**	**0.74**	**350**	*i* P	**Pg**	**10 04 28.2**	**-1.0**
DNZL				*i* S	**Sg**	**10 04 39.8**	**+1.0**
DNZL	**Cakiroluk**	**0.74**	**350**	*i* P	**Pg**	**10 04 28.2**	**-1.0**
DNZL				*i* S	**Sg**	**10 04 39.8**	**+1.0**
YER	**Yerkesik**	**0.76**	**284**	*e*PG	**Pg**	**10 04 29.0**	**-0.5**
YER	**Yerkesik**	**0.76**	**284**	*e*Pg	**Pg**	**10 04 29.0**	**-0.5**
AKAS	**Kas**	**0.79**	**156**	*i* P	**Pg**	**10 04 31.5**	**+1.3**
AKAS				*i* S	**Sg**	**10 04 44.9**	**+4.5**
AKAS	**Kas**	**0.79**	**156**	*i* P	**Pg**	**10 04 31.5**	**+1.3**
AKAS				*i* S	**Sg**	**10 04 44.9**	**+4.4**
DENT	**Denizli**	**0.80**	**350**	*e*PG	**Pg**	**10 04 29.6**	**-0.8**
DENT	**Denizli**	**0.80**	**350**	*e*Pg	**Pg**	**10 04 29.6**	**-0.8

WRAB	**Tennant Creek**	**22.52**	**227**	*eP*	**P**	**11 01 48.7**	**+0.1**
	4.9nm,0.6s,mb4.1						
ASAR	**Alice Springs**	**25.30**	**221**	P	**P**	**11 02 13.9**	**+0.1**
	1.3nm,0.4s,mb3.8,baz=55,slow=9.0,SNR=19						
ASAR				pP	pP	11 02 40.5	-8.4
	2.4nm,0.8s,baz=53,slow=9.3,SNR=12						
ASAR				sP	sP	11 02 54.6	-14
	4.5nm,1.0s,baz=59,slow=8.5,SNR=9.6						
FITZ	**Fitzroy Crossi**	**28.64**	**241**	P	**P**	**11 02 43.6**	**-0.2**
	2.8nm,0.5s,mb4.3,baz=45,slow=7.0,SNR=21						
SONM	**Songino Array**	**65.95**	**328**	P	**P**	**11 07 31.6**	**+0.9**
	0.5nm,0.5s,mb3.6,baz=132,slow=2.2,SNR=3.6						
MKAR	**Makanchi Array**	**79.80**	**319**	P	**P**	**11 08 52.9**	**+0.7**
	0.4nm,0.5s,mb3.3,baz=94,slow=6.6,SNR=3.6						
ZALV	**Zalesovo Beam**	**80.75**	**327**	P	**P**	**11 08 56.2**	**-1.0**
	0.7nm,0.4s,mb3.6,baz=96,slow=6.1,SNR=3.8						
ILAR	**Eielson Array**	**82.75**	**22**	P	**P**	**11 09 05.9**	**-1.4**
	0.2nm,0.6s,mb3.0,baz=256,slow=5.0,SNR=5.5						
NVAR	**Mina Array Bea**	**93.03**	**52**	P	**P**	**11 09 58.2**	**+0.8**
	0.1nm,0.6s,mb3.2,baz=246,slow=8.8,SNR=3.7						
TORD	**Torodi Ar. Bea**	**149.37**	**287**	PKPbc	PKPbc	11 16 32.6	-0.2
	1.0nm,0.4s,baz=107,slow=1.8,SNR=11						

NIED ***25*** *11:06:00,24°.30N×125°.20E,h32km,Mw3.7 Best double couple: M0=4.38000×10^14 NP1:φs=18.00000°,δ=75.00000°, λ=27.00000°. NP2:φs=281.00000°,δ=64.00000°,λ=164.00000°.*
ISCJB ***25*** *11:06:22.0±1.7,24°.2N±0°.1×125°.27E±0°.06,h27km±12km, Error ellipse: s-maj=18.1km s-min=6.5km az=160.5*
NEIC ***25*** *11:06:21.9±2.4,23°.90N×125°.42E,h35km,mb3.9/1,Error ellipse: s-maj=56.7km s-min=11.0km az=153.0*
JMA ***25*** *11:06:23.6±0.1,24°.26N×125°.24E,h40km±4km,M3.8*
ISC 25 11:06:22.7±1.7,**24°.18N**±0°.09×**125°.26E**±0°.06,**h20**km±12km, **n15**,σ0°**66**/24,**Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**0.59**	**13**	P	**Pb**	**11 06 34.5**	**+0.1**
JOGS				S	**Sb**	**11 06 42.7**	**+0.4**
JMJ	**Miyako jima 2**	**0.63**	**3**	P	**Pb**	**11 06 34.8**	**-0.2**
JMJ				S	**Sb**	**11 06 43.3**	**-0.2**
JTJ	**Tarama**	**0.68**	**312**	P	**Pb**	**11 06 35.6**	**-0.3**
JTJ				S	**Sb**	**11 06 44.8**	**-0.1**
JIJ	**Ishigaki jima**	**1.03**	**280**	P	**Pb**	**11 06 41.7**	**-0.2**
JIJ				S	**Sb**	**11 06 55.1**	**+0.1**
JKRS	**Kuro-shima**	**1.14**	**273**	P	**Pn**	**11 06 43.8**	**+0.3**
JKRS				S	**Sb**	**11 06 58.2**	**+0.1**
HATJ	**Hateruma jima**	**1.33**	**265**	P	**Pn**	**11 06 46.3**	**+0.2**
HATJ				S	**Sn**	**11 07 03.2**	**-0.1**
IRIF	**Iriomote-Funau**	**1.40**	**277**	P	**Pn**	**11 06 47.3**	**+0.2**
YOJ	**Yonaguni jima**	**2.07**	**278**	P	**Pn**	**11 06 57.5**	**+1.3**
JKE	**Kume jima 2**	**2.54**	**33**	P	**Pn**	**11 07 03.3**	**+0.5**
NACB	**Ninganchiao**	**3.34**	**271**	*e*Pn	**Pn**	**11 07 13.0**	**-0.8**
YHNB	**Yeheng**	**3.57**	**279**	*e*Pn	**Pn**	**11 07 18.3**	**+1.4**
YHNB				*e*Sn	**Sn**	**11 07 57.3**	**-1.2**
JOW	**Kunigami**	**3.79**	**45**	*e*Pn	**Pn**	**11 07 19.3**	**-0.7**
SSLB	**Suanglung**	**3.96**	**265**	*e*Pn	**Pn**	**11 07 21.5**	**-0.7**
TWG	**Pinlang**	**4.07**	**251**	*e*Pn	**Pn**	**11 07 22.3**	**-1.5**
TWG				*e*Sn	**Sn**	**11 08 11.2**	**+0.2**
TPUB	**Ta-pu**	**4.33**	**259**	*e*Pn	**Pn**	**11 07 28.0**	**+0.6**
TPUB				*e*Sn	**Sn**	**11 08 17.8**	**+0.5**

IDC ***25*** *11:09:18.0±0.8,26°.78S×70°.85W,h0km,mb4.1/6, mb1 4.1/9,mb1mx4.1/15,mbtmp4.0/9,ML4.0/3,MS3.5/4, Ms1 3.5/4,ms1mx3.2/17,Error ellipse: s-maj=28.3km s-min=25.2km az=42.0*
GUC ***25*** *11:09:19.8±0.5,26°.65S×70°.87W,h47km±999km,ML4.7*
ISCJB ***25*** *11:09:21.7±0.4,26°.64S±0°.03×70°.54W±0°.09,h33km, mb4.1/14,Error ellipse: s-maj=11.3km s-min=4.7km az=175.2*
NEIC ***25*** *11:09:23.5±0.4,26°.72S×70°.64W,h35km,mb4.1/8,Error ellipse: s-maj=13.7km s-min=7.8km az=85.0*
NEIC Felt [III] at Caldera and Copiapo; [II] at Chanaral and Tierra Amarilla.
ISC 25 11:09:24.1±0.4,**26°.69S**±0°.04×**70°.63W**±0°.09,**h35**km,**n41**, σ1°**07**/37,**mb4.1**/14,**Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**2.32**	**182**	*e*P	**Pn**	**11 09 57.5**	**-2.2**
LCO				*i* S	**Sn**	**11 10 25.7**	**-1.3**
LCO	**Las Campanas**	**2.32**	**182**	*e*P	**Pn**	**11 09 57.5**	**-2.2**
LCO				*i* S	**Sn**	**11 10 25.7**	**-1.3**
LCO				AML	AML	11 10 36.0	
	comp=E,3μm,0.7s						
ANCH	**Antofagasta**	**3.00**	**4**	*e*P	**Pn**	**11 10 05.2**	**-3.9**
ANCH				*i* S	**Sn**	**11 10 39.3**	**-4.5**
ANCH	**Antofagasta**	**3.00**	**4**	*e*P	**Pn**	**11 10 05.2**	**-3.9**
ANCH				*i* S	**Sn**	**11 10 39.3**	**-4.5**
ANCH				AML	AML	11 11 08.0	
	comp=N,2μm,0.5s						
TLL	**Tololo Astrono**	**3.47**	**183**	*e*P	**Pn**	**11 10 16.5**	**+0.9**
TLL				*i* S	**Sn**	**11 10 57.2**	**+1.7**
TLL	**Tololo Astrono**	**3.47**	**183**	*e*P	**Pn**	**11 10 16.5**	**+0.9**
TLL				*i* S	**Sn**	**11 10 57.2**	**+1.7**
TLL				AML	AML	11 11 20.0	
	comp=N,2μm,0.7s						
CMCH	**Combarbala**	**4.48**	**184**	*e*P	**Pn**	**11 10 26.2**	**-3.3**
CMCH	**Combarbala**	**4.48**	**184**	*e*P	**Pn**	**11 10 26.2**	**-3.3**
LPAZ	**La Paz**	**10.61**	**13**	Pn	**Pn**	**11 11 53.9**	**+0.3**
	comp=N,0.5nm,0.3s,baz=196,slow=6.8,SNR=16						
LPAZ				LR	LR	11 14 54.8	
	comp=N,40nm,20.1s,baz=41,slow=31						
LPAZ	**La Paz**	**10.61**	**13**	Pn	**Pn**	**11 11 53.9**	**+0.3**
LPAZ				LR	LR	11 14 54.9	
CPUP	**Villa Florida**	**11.92**	**91**	Pn	**Pn**	**11 12 11.7**	**+0.2**
	comp=N,0.2nm,0.3s,baz=251,slow=15,SNR=2.3						
CPUP				LR	LR	11 17 21.2	
	comp=N,207nm,18.3s,baz=202,slow=40						
TRQA	**Tornquist**	**13.48**	**149**	*e*Pn	**Pn**	**11 12 31.1**	**-1.7**
	comp=N,7.0nm,0.6s						
TRQA				*e*Sn	**Sn**	**11 15 02.5**	**+1.3**
SIV	**San Ignacio**	**13.87**	**42**	Pn	**Pn**	**11 12 36.9**	**-1.3**
	comp=N,0.6nm,0.3s,baz=237,slow=9.4,SNR=8.4						
PLCA	**Paso Flores**	**14.01**	**180**	LR	LR	11 18 21.2	
	comp=N,263nm,19.2s,baz=348,slow=39						
SWET	**Sewanee**	**63.25**	**346**	*e*P	**P**	**11 19 47.7**	**-1.3**
JCT	**Junction City**	**63.32**	**332**	*e*P	**P**	**11 19 49.8**	**+0.2**
	comp=N,4.8nm,0.7s,mb4.7						
TXAR	**Lajitas Array**	**64.08**	**328**	P	**P**	**11 19 53.9**	**-0.7**
	comp=N,0.7nm,0.8s,mb3.8,baz=141,slow=6.4,SNR=4.8						
CPRX	**Cap Rock**	**67.28**	**330**	*e*P	**P**	**11 20 15.8**	**+0.6**
	comp=N,1.2nm,0.7s,mb4.0						
DBIC	**Dimbokro**	**71.75**	**73**	P	**P**	**11 20 44.2**	**+0.9**
	comp=N,2.9nm,0.7s,mb4.3,baz=216,slow=13,SNR=4.8						
DBIC	**Dimbokro**	**71.75**	**73**	P	**P**	**11 20 44.2**	**+0.9**
SMCO	**Snowmass**	**73.80**	**331**	*e*P	**P**	**11 20 55.8**	**+1.0**
	comp=N,1.9nm,0.8s,mb4.1						
ECSD	**EROS Data Cent**	**74.02**	**341**	*e*P	**P**	**11 20 55.5**	**-0.5**
	comp=N,2.0nm,0.7s,mb4.2						
JLU	**Jordanelle**	**76.94**	**329**	*e*P	**P**	**11 21 13.5**	**+0.7**
	comp=N,1.4nm,0.7s,mb4.0						
PDAR	**Pinedale Array**	**77.86**	**332**	P	**P**	**11 21 17.7**	**-0.2**
	comp=N,0.3nm,0.6s,mb3.4,baz=182,slow=4.5,SNR=3.9						
AHID	**Auburn Hatcher**	**78.52**	**331**	*e*P	**P**	**11 21 21.9**	**+0.3**
	comp=N,1.3nm,0.6s,mb4.0						
NVAR	**Mina Array Bea**	**78.66**	**324**	P	**P**	**11 21 22.5**	**0.0**
	comp=N,0.5nm,0.7s,mb3.5,baz=158,slow=5.9,SNR=6.1						
MAW	**Mawson**	**79.83**	**164**	P	**P**	**11 21 28.6**	**+0.1**
	comp=N,3.2nm,0.8s,mb4.3,baz=203,slow=2.9,SNR=5.7						
TORD	**Torodi Ar. Bea**	**80.58**	**70**	P	**P**	**11 21 34.0**	**+0.6**
	comp=N,5.8nm,0.6s,mb4.7,baz=257,slow=5.1,SNR=24						
HLID	**Hailey**	**80.63**	**329**	*e*P	**P**	**11 21 33.9**	**+0.9**
	comp=N,1.6nm,0.8s,mb4.0						
MCMT	**McKenzie Canyo**	**80.93**	**331**	*e*P	**P**	**11 21 35.7**	**+1.2**
	comp=N,1.0nm,0.8s,mb3.8						
BOSA	**Boshof**	**82.40**	**118**	LR	LR	11 54 46.8	
	comp=N,109nm,18.2s,baz=291,slow=33						
EDM	**Edmonton**	**87.81**	**336**	*e*P	**P**	**11 22 07.9**	**-1.3**
ASAR	**Alice Springs**	**124.61**	**208**	PKP	PKPdf	11 28 18.9	-1.5
	comp=N,0.8nm,0.8s,baz=150,slow=1.9,SNR=6.7						
WRA	**Warramunga Arr**	**127.70**	**210**	PKP	PKPdf	11 28 24.5	-2.0
	comp=N,0.8nm,0.7s,baz=159,slow=1.3,SNR=9.2						
ZAA0	**Zalesovo Array**	**147.28**	**27**	*e*PKPbc	PKPbc	11 29 03.8	+0.4
ZALV	**Zalesovo Beam**	**147.28**	**27**	PKPbc	PKPbc	11 29 01.8	-1.6
	comp=N,9.6nm,0.7s,baz=316,slow=3.3,SNR=31						
ZALV	**Zalesovo Beam**	**147.28**	**27**	PKPbc	PKPbc	11 29 01.8	-1.7
TKM2	**Tokmak 2**	**148.15**	**51**	*e*PKPbc	PKPbc	11 29 07.3	+1.1
MK31	**Makanchi Array**	**150.68**	**40**	*e*PKPbc	PKPbc	11 29 12.5	+0.2
MKAR	**Makanchi Array**	**150.68**	**40**	PKPbc	PKPbc	11 29 12.6	+0.3
	comp=N,7.5nm,0.7s,baz=316,slow=2.3,SNR=44						
MKAR				PKPab	PKPab	11 29 20.5	+1.2
	comp=N,2.5nm,0.6s,baz=312,slow=2.7,SNR=6.5						
MKAR	**Makanchi Array**	**150.68**	**40**	PKPbc	PKPbc	11 29 12.6	+0.3
MKAR				PKPab	PKPab	11 29 20.5	+1.2

ISK ***25*** *11:28:56.7,41°.56N×33°.77E,h2km,MD2.7*
ISCJB ***25*** *11:28:58.2±0.6,41°.58N±0°.03×33°.76E±0°.04,h10km,Error ellipse: s-maj=4.6km s-min=4.3km az=148.2*
DDA ***25*** *11:28:59.0,41°.52N×33°.73E,h8km±3km,Md2.9*
CSEM ***25*** *11:28:59.0,41°.52N×33°.73E,h8km,MD2.9,After DDA*
ISC 25 11:28:58.6±0.6,**41°.57N**±0°.03×**33°.76E**±0°.04,**h1**km±12km, **n23**,σ0°**94**/34,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALT	**Daday**	**0.28**	**263**	*i* P	**Pg**	**11 29 04.0**	**0.0**
BALT				*i* P		11 29 04.0	
BALT				*i* S	**Sg**	**11 29 08.8**	**+1.1**
BALT				*i* S	**Sg**	**11 29 08.8**	**+1.1**
BALT	**Daday**	**0.28**	**263**	*i* P	**Pg**	**11 29 04.1**	**0.0**
BALT	**Daday**	**0.28**	**263**	*i* P	**Pg**	**11 29 04.1**	**0.0**
BALT				*i* S	**Sg**	**11 29 08.8**	**+1.1**
BALT				*i* S	**Sg**	**11 29 08.8**	**+1.1**
BZK	**Bozkurt**	**0.43**	**25**	*e*PG	**Pg**	**11 29 06.3**	**-0.5**
BZK				*e*SG	**Sg**	**11 29 13.3**	**+0.9**
BZK	**Bozkurt**	**0.43**	**25**	*e*Sg	**Sg**	**11 29 13.3**	**+0.9**
ILGA	**Ilgaz**	**0.52**	**184**	*i* P	**Pg**	**11 29 08.1**	**-0.4**
ILGA				*i* P		11 29 08.1	
ILGA				*i* S	**Sg**	**11 29 15.4**	**+0.2**
ILGA	**Ilgaz**	**0.52**	**184**	*i* P	**Pg**	**11 29 08.1**	**-0.4**
ILGA	**Ilgaz**	**0.52**	**184**	*i* P	**Pg**	**11 29 08.1**	**-0.4**
ILGA				*i* S	**Sg**	**11 29 15.4**	**+0.2**
TOS	**Tosya**	**0.57**	**160**	*e*PG	**Pg**	**11 29 08.8**	**-0.6**
TOS				*e*SG	**Sg**	**11 29 16.9**	**0.0**
TOS	**Tosya**	**0.57**	**160**	*e*Pg	**Pg**	**11 29 08.8**	**-0.7**
TOS				*e*Sg	**Sg**	**11 29 16.9**	**+0.1**
BYBT	**Boyabat**	**0.76**	**97**	*e*PG	**Pg**	**11 29 11.9**	**-1.3**
BYBT	**Boyabat**	**0.76**	**97**	*e*Pg	**Pg**	**11 29 11.9**	**-1.3**
BOYT	**Boyabat**	**0.87**	**100**	*e*P	**Sg**	**11 29 28.9**	**+2.4**
BOYT	**Boyabat**	**0.87**	**100**	*e*P	**Sg**	**11 29 28.9**	**+2.4**
SAFT	**Safranbolu**	**0.87**	**248**	*e*PG	**Pg**	**11 29 14.2**	**-1.1**
SAFT	**Safranbolu**	**0.87**	**248**	*e*Pg	**Pg**	**11 29 14.2**	**-1.1**
DIKM	**Dikmen**	**1.12**	**85**	*e*PN	**Pg**	**11 29 18.7**	**-1.5**
CTKT	**Corum**	**1.22**	**140**	*i* P	**Pg**	**11 29 22.5**	**+0.4**
CTKT				*i* S	**Sg**	**11 29 38.6**	**+0.7**
CTKT	**Corum**	**1.22**	**140**	*i* P	**Pg**	**11 29 22.5**	**+0.5**
CTKT				*i* S	**Sg**	**11 29 38.6**	**+0.7**
CORM	**Corum**	**1.54**	**154**	*e*PN	**Pn**	**11 29 26.4**	**-0.7**
CORM	**Corum**	**1.54**	**154**	*e*Pn	**Pn**	**11 29 26.4**	**-0.7**
SGKT	**Sivrigoynuk**	**1.63**	**233**	*i* P	**Pn**	**11 29 29.3**	**+0.9**
SGKT	**Sivrigoynuk**	**1.63**	**233**	*i* P	**Pn**	**11 29 29.3**	**+0.9**

ISK ***25*** *11:29:00.3,35°.66N×27°.80E,h32km,MD3.9*
ISCJB ***25*** *11:29:01.7±0.2,35°.75N±0°.02×28°.01E±0°.02,h64km±3km, mb3.8/17,Error ellipse: s-maj=3.1km s-min=2.4km az=29.7*
NEIC ***25*** *11:29:02.8,35°.86N×27°.93E,h53km,mb3.9/12, MD3.8(ATH),After ATH.*
SGS ***25*** *11:29:02.3,35°.54N×27°.78E,h27km*
MOS ***25*** *11:29:02.2±1.1,35°.76N×27°.99E,h69km,mb4.0/10,Error ellipse: s-maj=9.0km s-min=4.9km az=121.4*
ATH ***25*** *11:29:02.8,35°.86N×27°.93E,h53km±2km,MD3.8/12*
CSEM ***25*** *11:29:03.2±0.1,35°.77N×27°.98E,h60km,mb3.8/12,Mw3.5, Error ellipse: s-maj=2.9km s-min=1.9km az=39.0*
IDC ***25*** *11:29:03.5±0.8,35°.83N×27°.98E,h57km±8km,mb3.6/11, mb1 3.7/18,mb1mx3.6/32,mbtmp3.7/18,MS2.8/4, Ms1 2.9/4,ms1mx2.5/36,Error ellipse: s-maj=16.2km s-min=11.7km az=135.0*
DDA ***25*** *11:29:03.5,35°.97N×27°.99E,h37km±2km,Md3.8*
THE ***25*** *11:29:05.7,35°.91N×27°.87E,h41km±1km,ML4.4/4,Error ellipse: s-maj=1.4km s-min=0.4km az=103.0*
HLW ***25*** *11:29:06.7,35°.45N×28°.08E,h36km±56km,Md3.5,Ml3.8*
NIC ***25*** *11:29:08.1±0.2,35°.78N×28°.45E,h55km,mb4.3,ML3.8, MW3.5*
ISC 25 11:29:03.2±0.2,**35°.78N**±0°.02×**27°.98E**±0°.02,**h57**km±3km, **h54**km±2.9km:**pP-P,n318**,σ1°**12**/380,**mb3.8**/17,**MS2.6**/2,**2C, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.45**	**15**	*e*P	**Pn**	**11 29 14.1**	**-0.3**
ARG				*e*S	**Sn**	**11 29 21.5**	**-1.0**
ARG	**Arkhangelos**	**0.45**	**15**	*e*P	**Pn**	**11 29 14.1**	**-0.3**
ARG				*e*S	**Sn**	**11 29 21.5**	**-1.0**
ARG	**Arkhangelos**	**0.45**	**15**	P	**Pn**	**11 29 14.3**	**-0.1**
ARG				S	**Sn**	**11 29 21.3**	**-1.2**
ARG	**Arkhangelos**	**0.45**	**15**	P	**Pn**	**11 29 14.3**	**-0.1**
ARG				*e*S	**Sn**	**11 29 21.5**	**-1.0**
KARP	**Karpathos**	**0.71**	**251**	*e*P	**Pn**	**11 29 17.5**	**+0.2**
KARP				*e*S	**Sn**	**11 29 27.8**	**+0.2**
KARP	**Karpathos**	**0.71**	**251**	*e*P	**Pn**	**11 29 17.5**	**+0.2**
KARP				*e*S	**Sn**	**11 29 27.8**	**+0.2**
KARP	**Karpathos**	**0.71**	**251**	*e*P	**Pn**	**11 29 17.5**	**+0.2**
KARP				*e*S	**Sn**	**11 29 27.8**	**+0.2**
DAT	**Datca**	**1.00**	**341**	*e*PG	**Pn**	**11 29 19.7**	**-1.5**
DAT				*e*SG	**Sn**	**11 29 33.5**	**-0.9**
DAT	**Datca**	**1.00**	**341**	*e*Pg	**Pn**	**11 29 19.7**	**-1.4**
DAT				*e*Sg	**Sn**	**11 29 33.5**	**-0.9**
NIS1	**Nisyros Isl.**	**1.05**	**322**	P	**Pn**	**11 29 20.9**	**-0.8**
NIS1				S	**Sn**	**11 29 33.0**	**-2.5**
NIS1	**Nisyros Isl.**	**1.05**	**322**	P	**Pn**	**11 29 20.9**	**-0.8**
TURN	**Turunc**	**1.20**	**24**	*i* P	**Pn**	**11 29 22.4**	**-1.3**
TURN				*i* S	**Sn**	**11 29 36.0**	**-3.1**
TURN	**Turunc**	**1.20**	**24**	*i* P	**Pn**	**11 29 22.4**	**-1.4**
TURN				*i* S	**Sn**	**11 29 36.0**	**-3.1**
BDRM	**Kayabasi**	**1.36**	**341**	*i* P	**Pn**	**11 29 25.2**	**-0.6**
BDRM				*i* S	**Sn**	**11 29 42.0**	**-0.8**
BDRM	**Kayabasi**	**1.36**	**341**	*i* P	**Pn**	**11 29 25.2**	**-0.6**
BDRM				*i* S	**Sn**	**11 29 42.0**	**-0.8**
YER	**Yerkesik**	**1.38**	**10**	*e*PN	**Pn**	**11 29 25.9**	**-0.2**
YER	**Yerkesik**	**1.38**	**10**	*e*Pn	**Pn**	**11 29 25.9**	**-0.2**
AKAS	**Kas**	**1.39**	**70**	*i* P	**Pn**	**11 29 27.9**	**+1.6**
AKAS				*i* S	**Sn**	**11 29 46.0**	**+2.4**
AKAS	**Kas**	**1.39**	**70**	*i* P	**Pn**	**11 29 27.9**	**+1.6**
AKAS				*i* S	**Sn**	**11 29 46.0**	**+2.3**
BODT	**Bodrum**	**1.39**	**337**	*e*PN	**Pn**	**11 29 25.0**	**-1.4**
BODT	**Bodrum**	**1.39**	**337**	*e*Pn	**Pn**	**11 29 25.0**	**-1.3**
MLSB	**Milas**	**1.52**	**354**	*e*PN	**Pn**	**11 29 27.6**	**-0.5**
MLSB	**Milas**	**1.52**	**354**	*e*Pn	**Pn**	**11 29 27.6**	**-0.5**
ZKR	**Zakros**	**1.59**	**246**	P	**Pn**	**11 29 30.6**	**+1.7**
ZKR	**Zakros**	**1.59**	**246**	P	**Pn**	**11 29 30.6**	**+1.7**
ELL	**Elmali**	**1.83**	**58**	*e*PN	**Pn**	**11 29 32.6**	**+0.3**
ELL	**Elmali**	**1.83**	**58**	*e*Pn	**Pn**	**11 29 32.6**	**+0.3**
GLHS	**Glhisar (BURDU**	**1.84**	**41**	*e*PN	**Pn**	**11 29 33.5**	**+1.1**
GLHS	**Glhisar (BURDU**	**1.84**	**41**	*e*Pn	**Pn**	**11 29 33.5**	**+1.1**
AYDN	**Tasoluk**	**1.88**	**357**	*i* P	**Pn**	**11 29 33.7**	**+0.7**
AYDN				*i* S	**Sn**	**11 29 55.5**	**-0.1**
AYDN	**Tasoluk**	**1.88**	**357**	*i* P	**Pn**	**11 29 33.7**	**+0.8**
AYDN				*i* S	**Sn**	**11 29 55.5**	**-0.1**
GOLH	**Golhisar**	**1.93**	**41**	*i* P	**Pn**	**11 29 35.7**	**+2.0**
GOLH	**Golhisar**	**1.93**	**41**	*i* P	**Pn**	**11 29 35.7**	**+2.1**
NPS	**Neapolis**	**2.00**	**256**	*e*P	**Pn**	**11 29 35.3**	**+0.7**
NPS				*e*S	**Sn**	**11 29 58.3**	**-0.2**
NPS	**Neapolis**	**2.00**	**256**	*e*P	**Pn**	**11 29 35.3**	**+0.7**
NPS				*e*S	**Sn**	**11 29 58.3**	**-0.2**
NPS	**Neapolis**	**2.00**	**256**	*e*P	**Pn**	**11 29 35.3**	**+0.7**
NPS				*e*S	**Sn**	**11 29 58.3**	**-0.2**
GCAM	**G?zelcaml?**	**2.01**	**343**	*i* P	**Pn**	**11 29 34.6**	**-0.1**
GCAM				*i* S	**Sn**	**11 29 56.9**	**-1.8**
GCAM	**G?zelcaml?**	**2.01**	**343**	*i* P	**Pn**	**11 29 34.6**	**-0.1**
GCAM				*i* S	**Sn**	**11 29 56.9**	**-1.8**
DNZL	**Cakiroluk**	**2.09**	**24**	*i* P	**Pn**	**11 29 36.3**	**+0.5**
DNZL	**Cakiroluk**	**2.09**	**24**	*i* P	**Pn**	**11 29 36.3**	**+0.5**
THR1	**Thera Island**	**2.13**	**287**	P	**Pn**	**11 29 36.2**	**-0.1**
	530nm,0.5s						
THR1				S	**Sn**	**11 30 00.3**	**-1.3**
THR1	**Thera Island**	**2.13**	**287**	P	**Pn**	**11 29 36.2**	**-0.1**
	530nm,0.5s						
THR1				S	**Sn**	**11 30 00.3**	**-1.3**
LAST	**Lasithi**	**2.13**	**254**	P	**Pn**	**11 29 37.5**	**+1.1**
LAST				S	**Sn**	**11 30 02.7**	**+1.0**
LAST	**Lasithi**	**2.13**	**254**	P	**Pn**	**11 29 37.5**	**+1.1**
LAST				S	**Sn**	**11 30 02.7**	**+1.0**
DENT	**Denizli**	**2.15**	**23**	*e*PN	**Pn**	**11 29 36.3**	**-0.2**
DENT	**Denizli**	**2.15**	**23**	*e*Pn	**Pn**	**11 29 36.3**	**-0.2**
THR2	**Thira island,**	**2.17**	**289**	P	**Pn**	**11 29 36.7**	**-0.1**
THR2	**Thira island,**	**2.17**	**289**	P	**Pn**	**11 29 36.7**	**-0.1**
THR3	**Thira Island,**	**2.18**	**288**	P	**Pn**	**11 29 37.0**	**-0.1**
THR3	**Thira Island,**	**2.18**	**288**	P	**Pn**	**11 29 37.0**	**-0.1**
THR5	**Thira Island,**	**2.23**	**287**	P	**Pn**	**11 29 37.7**	**+0.1**
THR5	**Thira Island,**	**2.23**	**287**	P	**Pn**	**11 29 37.7**	**+0.1**
APE	**Apeiranthos**	**2.36**	**304**	*e*PN	**Pn**	**11 29 37.1**	**-2.4**
APE	**Apeiranthos**	**2.36**	**304**	*e*P	**Pn**	**11 29 39.3**	**-0.2**
APE	**Apeiranthos**	**2.36**	**304**	*e*P	**Pn**	**11 29 39.2**	**-0.3**
APE	**Apeiranthos**	**2.36**	**304**	P	**Pn**	**11 29 39.2**	**-0.3**
APE				S	**Sn**	**11 30 05.5**	**-1.8**
APE	**Apeiranthos**	**2.36**	**304**	*e*Pn	**Pn**	**11 29 37.1**	**-2.4**
APE	**Apeiranthos**	**2.36**	**304**	*e*P	**Pn**	**11 29 39.3**	**-0.2**
APE				S	**Sn**	**11 30 05.5**	**-1.8**
IDI	**Anoyia**	**2.57**	**260**	*e*P	**Pn**	**11 29 43.0**	**+0.7**
IDI				*e*S	**Sn**	**11 30 12.4**	**0.0**
IDI	**Anoyia**	**2.57**	**260**	*e*P	**Pn**	**11 29 43.0**	**+0.7**
IDI				*e*S	**Sn**	**11 30 12.4**	**0.0**
IDI	**Anoyia**	**2.57**	**260**	*e*P	**Pn**	**11 29 43.0**	**+0.7**
IDI				*e*S	**Sn**	**11 30 12.4**	**0.0**
IZM	**Izmir**	**2.68**	**348**	*e*PN	**Pn**	**11 29 43.8**	**0.0**
IZM	**Izmir**	**2.68**	**348**	*e*Pn	**Pn**	**11 29 43.8**	**0.0**
KDAG	**Bornova**	**2.68**	**348**	*i* P	**Pn**	**11 29 43.6**	**-0.3**
KDAG	**Bornova**	**2.68**	**348**	*i* P	**Pn**	**11 29 43.6**	**-0.3**
SIVA	**Sivas**	**2.70**	**255**	*e*P	**Pn**	**11 29 45.4**	**+1.3**
SIVA	**Sivas**	**2.70**	**255**	*e*P	**Pn**	**11 29 45.4**	**+1.3**
SIVA	**Sivas**	**2.70**	**255**	P	**Pn**	**11 29 45.4**	**+1.3**
SIVA	**Sivas**	**2.70**	**255**	P	**Pn**	**11 29 45.4**	**+1.3**
BLCB	**Balcova**	**2.71**	**344**	*e*PN	**Pn**	**11 29 44.1**	**-0.2**
BLCB	**Balcova**	**2.71**	**344**	P	**Pn**	**11 29 44.0**	**-0.2**
BLCB				S	**Sn**	**11 30 13.9**	**-1.9**
BLCB	**Balcova**	**2.71**	**344**	*e*Pn	**Pn**	**11 29 44.1**	**-0.1**
BLCB				S	**Sn**	**11 30 13.9**	**-1.9**
KULA	**Kula-Manisa**	**2.79**	**11**	*e*PN	**Pn**	**11 29 46.3**	**+1.0**
KULA	**Kula-Manisa**	**2.79**	**11**	*e*Pn	**Pn**	**11 29 46.3**	**+1.0**
KHL	**Karahalli**	**2.82**	**25**	*e*PN	**Pn**	**11 29 47.0**	**+1.2**
KHL	**Karahalli**	**2.82**	**25**	*e*Pn	**Pn**	**11 29 47.0**	**+1.2**
ISP	**Isparta**	**2.88**	**44**	*e*PN	**Pn**	**11 29 48.4**	**+1.8**
ISP	**Isparta**	**2.88**	**44**	P	**Pn**	**11 29 50.1**	**+3.5**
ISP	**Isparta**	**2.88**	**44**	P	**Pn**	**11 29 48.3**	**+1.7**
ISP	**Isparta**	**2.88**	**44**	P	**Pn**	**11 29 48.3**	**+1.7**
CHOS	**Chios island**	**3.03**	**330**	*e*P	**Pn**	**11 29 48.3**	**-0.3**
CHOS				*e*S	**Sn**	**11 30 22.5**	**-1.1**
CHOS	**Chios island**	**3.03**

baz=150
SOH Sokhos 6.21 326 P Pn 11 30 34.6 +2.4
SOH Sokhos 6.21 326 P Pn 11 30 34.6 +2.4
SQR 6.47 154 P Pn 11 30 35.4 -0.4
baz=153
SQR 6.47 154 P Pn 11 30 35.4 -0.4
AYT Al 'Ayyat 6.62 155 P Pn 11 30 37.8 0.0
baz=154
AYT Al 'Ayyat 6.62 155 P Pn 11 30 37.8 0.0
KOT Kottamia 6.67 150 P Pn 11 30 37.9 -0.7
baz=149
KOT S **Sn 11 31 47.5 -5.7**
baz=149
KOT Kottamia 6.67 150 P Pn 11 30 37.9 -0.6
MMAI Mount Meron Ar 6.72 112 P Pn 11 30 38.6 -0.7
comp=N,12nm,0.3s,baz=299,slow=12,SNR=25
MMAI S **Sn 11 31 51.4 -3.0**
comp=N,62nm,0.3s,baz=314,slow=26,SNR=16
AMAG Maghara 6.74 138 P Pn 11 30 37.8 -1.6
baz=136
AMAG Maghara 6.74 138 P Pn 11 30 37.8 -1.6
HHAG Hagoal 6.76 148 P Pn 11 30 39.9 +0.1
baz=147
HHAG Hagoal 6.76 148 P Pn 11 30 39.9 +0.1
GRG Griva 6.78 321 P Pn 11 30 43.0 +3.0
HSAF As Saff 6.84 153 P Pn 11 30 40.5 -0.3
baz=152
HSAF As Saff 6.84 153 P Pn 11 30 40.5 -0.3
SWA2 6.86 199 P Pn 11 30 41.0 0.0
baz=201
SWA2 6.86 199 P Pn 11 30 41.0 -0.1
GLL Jalalah 6.93 152 P Pn 11 30 41.9 -0.3
baz=151
GLL Jalalah 6.93 152 P Pn 11 30 41.9 -0.2
AWBH 7.47 174 P Pn 11 30 49.0 -0.5
baz=174
AWBH 7.47 174 P Pn 11 30 49.0 -0.6
HNKL Nakhl 7.71 137 P Pn 11 30 51.8 -1.0
baz=136
HNKL Nakhl 7.71 137 P Pn 11 30 51.8 -1.0
ASF Jabal al Asfar 8.23 113 P Pn 11 31 00.4 +0.5
comp=N,1.6nm,0.3s,baz=206,slow=8.1,SNR=5.9
ASF S **Sn 11 32 28.2 -3.2**
comp=N,2.0nm,0.3s,baz=279,slow=13,SNR=3.2
ASF Jabal al Asfar 8.23 113 P Pn 11 31 00.4 +0.5
ASF S **Sn 11 32 28.2 -3.2**
ASF pmax pmax
comp=Z,2.0nm,0.3s
ASF smax
comp=N,2.0nm,0.3s
EIL Elat 8.46 134 P Pn 11 31 02.3 -0.7
comp=N,3.6nm,0.3s,baz=298,slow=3.8,SNR=26
EIL S **Sn 11 32 31.6 -5.3**
comp=N,15nm,0.3s,baz=327,slow=17,SNR=21
EIL Elat 8.46 134 P Pn 11 31 02.3 -0.7
HFRF Wahat Farafira 8.61 178 P Pn 11 31 04.5 -0.5
baz=178
HFRF Wahat Farafira 8.61 178 P Pn 11 31 04.5 -0.6
HBST Basata 8.67 137 P Pn 11 31 05.2 -0.8
baz=136
HBST Basata 8.67 137 P Pn 11 31 05.2 -0.8
HKAT Jabal Katrina 8.84 143 P Pn 11 31 07.9 -0.4
baz=142
HKAT Jabal Katrina 8.84 143 P Pn 11 31 07.9 -0.4
HAQS Haql 8.91 137 S Sn 11 32 41.8 -6.2
HAQS Haql 8.91 137 P Pn 11 31 08.4 -0.7
HAQS Haql 8.91 137 P Pn 11 31 08.4 -0.7
JLOS 9.47 136 P Pn 11 31 15.8 -1.1
JLOS 9.47 136 P Pn 11 31 15.8 -1.0
BDAS Al Bad' 9.49 139 P Pn 11 31 15.6 -1.5
BDAS Al Bad' 9.49 139 P Pn 11 31 15.6 -1.5
MLR Muntele Rosu 9.83 352 P Pn 11 31 24.3 +2.7
comp=N,0.2nm,0.3s,baz=168,slow=15,SNR=6.1
MLR LR LR 11 35 37.0
comp=N,72nm,20.1s,baz=45,slow=40
TBKS Tabuk 10.46 134 S Sn 11 33 20.2 -5.9
TBKS Tabuk 10.46 134 P Pn 11 31 29.7 -0.7
TBKS Tabuk 10.46 134 P Pn 11 31 29.7 -0.7
BIDS Bi'r al Bayda' 11.73 137 P Pn 11 31 47.6 -0.1
BIDS Bi'r al Bayda' 11.73 137 P Pn 11 31 47.6 -0.1
KIV Kislovodsk 13.92 50 P Pn 11 32 18.8 +1.3
KIV pmax pmax
comp=Z,3.0nm,0.9s
VYHS Vyhne 14.39 335 *eP* **Pn 11 32 30.3 +6.7**
VYHS Vyhne 14.39 335 *eP* **Pn 11 32 30.3 +6.7**
VYHS Vyhne 14.39 335 *eP* **Pn 11 32 30.3 +6.7**
AKASG Malin Array Be 14.95 3 P **Pn 11 32 32.2 +1.4**
comp=Z,1.6nm,0.3s,baz=188,slow=10,SNR=6.0
AKASG Malin Array Be 14.95 3 *i P* **Pn 11 32 35.2 +4.4**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKASG Malin Array Be 14.95 3 *i* P **Pn 11 32 35.2 +4.4**
comp=Z,2.0nm,0.5s
KBA Koelnbreinsper 15.72 320⇑*iP* **Pn 11 32 44.6 +3.8**
comp=Z,8.3nm,0.8s
KBA Koelnbreinsper 15.72 320 P **Pn 11 32 44.6 +3.8**
comp=Z,8.3nm,0.8s
VRAC Vranov 15.89 332 P **Pn 11 32 44.2 +1.3**
comp=Z,0.4nm,0.3s,baz=118,slow=15,SNR=5.5
VRAC LR LR 11 38 40.4
comp=Z,44nm,20.9s,baz=152,slow=36
VRAC Vranov 15.89 332 P **Pn 11 32 44.2 +1.2**
comp=Z,44nm,20.9s
KHC Kasperske Hory 17.02 326 *eP* **Pn 11 32 58.7 +1.6**
KHC pmax pmax
comp=Z,3.0nm,0.6s
KHC Kasperske Hory 17.02 326 *eP*n **Pn 11 32 58.6 +1.5**
comp=Z,3.4nm,0.6s
KHC Kasperske Hory 17.02 326 *eP* **Pn 11 32 58.7 +1.6**
comp=Z,3.0nm,0.6s
FETA Feichten 17.10 316⇑*iP* **Pn 11 32 59.8 +1.7**
comp=Z,8.8nm,0.8s
FETA Feichten 17.10 316 P **Pn 11 32 59.8 +1.7**
comp=Z,8.8nm,0.8s
DAVOX Davos/Dischmat 17.45 315 P **Pn 11 33 03.7 +1.3**
comp=Z,0.5nm,0.3s,baz=160,slow=18,SNR=2.8
DAVOX Davos/Dischmat 17.45 315 P **Pn 11 33 03.7 +1.3**
MBDF Montbardon 18.45 305 *eP* **Pn 11 33 13.2 -1.5**
comp=Z,6.1nm,0.6s
MBDF Montbardon 18.45 305 *eP* **Pn 11 33 13.2 -1.5**
MBDF pmax pmax
comp=Z,3.0nm,0.6s
MBDF Montbardon 18.45 305 *eP* **Pn 11 33 13.2 -1.5**
comp=Z,3.0nm,0.6s
MBDF Montbardon 18.45 305 *eP* **Pn 11 33 13.2 -1.5**
comp=Z,3.0nm,0.6s
LPG La Plagne 18.76 308 *eP* **Pn 11 33 17.6 -0.8**
comp=Z,6.8nm,0.6s
LPG La Plagne 18.76 308 *eP* **Pn 11 33 17.6 -0.8**
LPG pmax pmax
comp=Z,3.0nm,0.6s
LPG La Plagne 18.76 308 *eP* **Pn 11 33 17.6 -0.8**
comp=Z,3.4nm,0.6s
LPG La Plagne 18.76 308 *eP* **Pn 11 33 17.6 -0.8**
comp=Z,3.4nm,0.6s
LPL La Plagne 18.78 308 *eP* **Pn 11 33 17.7 -1.0**
comp=Z,9.3nm,0.6s
LPL La Plagne 18.78 308 *eP* **Pn 11 33 17.7 -1.0**
LPL pmax pmax
comp=Z,5.0nm,0.6s
LPL La Plagne 18.78 308 *eP* **Pn 11 33 17.7 -1.0**
comp=Z,4.7nm,0.6s
LPL La Plagne 18.78 308 *eP* **Pn 11 33 17.7 -1.0**
comp=Z,4.7nm,0.6s
CABF La Chapelle 19.65 310 *eP* **Pn 11 33 25.7 -3.2**
comp=Z,10nm,0.7s
CABF La Chapelle 19.65 310 *eP* **Pn 11 33 25.7 -3.2**
CABF pmax pmax
comp=Z,5.0nm,0.7s
CABF La Chapelle 19.65 310 *eP* **Pn 11 33 25.7 -3.2**
comp=Z,5.1nm,0.7s
CABF La Chapelle 19.65 310 *eP* **Pn 11 33 25.7 -3.2**
comp=Z,5.1nm,0.7s
HINF Hinteralfeld 19.75 314 *eP* **Pn 11 33 27.7 -2.4**
HINF Hinteralfeld 19.75 314 *eP* **Pn 11 33 27.7 -2.4**
CDF Champ du Feu 19.81 316 *eP* **Pn 11 33 29.5 -1.3**
comp=Z,14nm,0.8s
CDF Champ du Feu 19.81 316 *eP* **Pn 11 33 29.5 -1.3**
CDF pmax pmax
comp=Z,7.0nm,0.8s
CDF Champ du Feu 19.81 316 *eP* **Pn 11 33 29.5 -1.3**
comp=Z,6.8nm,0.8s
CDF Champ du Feu 19.81 316 *eP* **Pn 11 33 29.5 -1.3**
comp=Z,6.8nm,0.8s
VIVF Saint-Julien-l 19.90 304 *eP* **Pn 11 33 28.8 -3.1**
comp=Z,7.4nm,0.6s
VIVF Saint-Julien-l 19.90 304 *eP* **Pn 11 33 28.8 -3.1**
VIVF pmax pmax
comp=Z,4.0nm,0.6s
VIVF Saint-Julien-l 19.90 304 *eP* **Pn 11 33 28.8 -3.1**
comp=Z,3.7nm,0.6s
VIVF Saint-Julien-l 19.90 304 *eP* **Pn 11 33 28.8 -3.1**
comp=Z,3.7nm,0.6s
HAU Haudompre 20.14 314 *eP* **P 11 33 32.9 +0.5**
HAU Haudompre 20.14 314 *eP* **P 11 33 32.9 +0.5**
OBN Obninsk 20.23 14 *eP* **P 11 33 31.4 -1.9**
OBN pmax pmax
comp=Z,4.0nm,0.7s
OBN Obninsk 20.23 14 *eP* **P 11 33 31.4 -1.9**
comp=Z,4.0nm,0.7s
SMF Signal de Mont 21.08 308 *eP* **P 11 33 42.1 -0.5**
comp=Z,7.8nm,0.6s,mb3.9
SMF Signal de Mont 21.08 308 *eP* **P 11 33 42.1 -0.5**
SMF pmax pmax
comp=Z,4.0nm,0.6s,mb3.9
SMF Signal de Mont 21.08 308 *eP* **P 11 33 42.1 -0.5**
comp=Z,3.9nm,0.6s,mb3.9
SMF Signal de Mont 21.08 308 *eP* **P 11 33 42.1 -0.5**
comp=Z,3.9nm,0.6s,mb3.9
AVF Avril sur Loir 21.44 308 *eP* **P 11 33 46.0 -0.5**
comp=Z,3.9nm,0.6s,mb3.6
AVF Avril sur Loir 21.44 308 *eP* **P 11 33 46.0 -0.5**
AVF pmax pmax
comp=Z,2.0nm,0.6s,mb3.6
AVF Avril sur Loir 21.44 308 *eP* **P 11 33 46.0 -0.5**
comp=Z,2.0nm,0.6s,mb3.6
AVF Avril sur Loir 21.44 308 *eP* **P 11 33 46.0 -0.5**
comp=Z,2.0nm,0.6s,mb3.6
SSF Saint Saulge 21.45 309 *eP* **P 11 33 46.0 -0.5**
comp=Z,13nm,0.7s,mb4.1
SSF Saint Saulge 21.45 309 *eP* **P 11 33 46.0 -0.5**
SSF pmax pmax
comp=Z,6.0nm,0.7s,mb4.0
SSF Saint Saulge 21.45 309 *eP* **P 11 33 46.0 -0.5**
comp=Z,6.3nm,0.7s,mb4.0
SSF Saint Saulge 21.45 309 *eP* **P 11 33 46.0 -0.5**
comp=Z,6.3nm,0.7s,mb4.1
TCF Toulx Ste Croi 22.00 306 *eP* **P 11 33 53.3 +0.8**
TCF Toulx Ste Croi 22.00 306 *eP* **P 11 33 53.3 +0.8**
BAIF Baives 22.39 317 *eP* **P 11 33 55.9 -0.6**
BAIF Baives 22.39 317 *eP* **P 11 33 55.9 -0.6**
MFF Saint Martin d 23.65 306 *eP* **P 11 34 10.2 +1.0**
MFF Saint Martin d 23.65 306 *eP* **P 11 34 10.2 +1.0**
LDF La Druitiere 24.29 311 *eP* **P 11 34 14.5 -0.5**
comp=Z,5.8nm,0.4s,mb4.0
LDF La Druitiere 24.29 311 *eP* **P 11 34 14.5 -0.5**
comp=Z,2.9nm,0.4s,mb4.0
FLN La Foiniere 24.58 311 *eP* **P 11 34 16.7 -0.9**
FLN La Foiniere 24.58 311 *eP* **P 11 34 16.7 -0.9**
GRR Gorron 24.68 310 *eP* **P 11 34 18.4 -0.1**
comp=Z,18nm,0.5s,mb4.5
GRR Gorron 24.68 310 *eP* **P 11 34 18.4 -0.1**
GRR pmax pmax
comp=Z,9.0nm,0.5s,mb4.6
GRR Gorron 24.68 310 *eP* **P 11 34 18.4 -0.1**
comp=Z,9.1nm,0.5s,mb4.6
GRR Gorron 24.68 310 *eP* **P 11 34 18.4 -0.1**
comp=Z,9.1nm,0.5s,mb4.5
ESDC Sonseca Array 25.49 288 P **P 11 34 25.6 -0.4**
comp=Z,1.1nm,0.5s,mb3.7,baz=79,slow=9.2,SNR=5.8
ESDC Sonseca Array 25.49 288 P **P 11 34 25.6 -0.4**
SGMF Saint Gilles 25.71 308 *eP* **P 11 34 27.3 -0.6**
comp=Z,5.2nm,0.6s,mb4.0
SGMF Saint Gilles 25.71 308 *eP* **P 11 34 27.3 -0.6**
SGMF pmax pmax
comp=Z,3.0nm,0.6s,mb4.0
SGMF Saint Gilles 25.71 308 *eP* **P 11 34 27.3 -0.6**
comp=Z,2.6nm,0.6s,mb3.9
SGMF Saint Gilles 25.71 308 *eP* **P 11 34 27.3 -0.6**
comp=Z,2.6nm,0.6s,mb4.0
FINES FINESS Array B 25.72 358 P **P 11 34 27.0 -0.8**
comp=Z,0.9nm,0.5s,mb3.6,baz=153,slow=9.8,SNR=7.2
FINES FINESS Array B 25.72 358 P **P 11 34 27.0 -0.8**
FINES pmax pmax
comp=Z,1.0nm,0.5s
FINES FINESS Array B 25.72 358 P **P 11 34 27.0 -0.8**
comp=Z,1.0nm,0.5s,mb3.6
AKTK Aktyubinsk 26.15 47 P **P 11 34 32.9 +1.0**
AKTK pP pP 11 34 46.0 +0.1
AKTK Aktyubinsk 26.15 47 P **P 11 34 32.8 +1.0**
AKTO Aktyubinsk 26.15 47 P **P 11 34 32.9 +1.0**
comp=Z,1.0nm,0.7s,mb3.5,baz=229,slow=9.3,SNR=2.1
AKTO pP pP 11 34 46.0 +0.1
comp=Z,1.5nm,0.8s,baz=260,slow=7.7,SNR=3.5
AKTO Aktyubinsk 26.15 47 P **P 11 34 32.9 +1.1**
AKTO *PP pP 11 34 46.0 +0.1
AKTO pmax pmax
comp=Z,1.0nm,0.7s,mb3.5
AKTO pmax pmax
comp=Z,2.0nm,0.8s,mb3.7
ROSF Rostrenen 26.19 308 *eP* **P 11 34 31.3 -0.9**
ROSF Rostrenen 26.19 308 *eP* **P 11 34 31.3 -0.9**
NB2 NORSAR Subarra 27.45 342 P **P 11 34 42.4 -1.0**
comp=Z,0.7nm,0.6s,mb3.4,baz=156,slow=9.3
NB2 NORSAR Subarra 27.45 342 P **P 11 34 42.4 -1.0**
comp=Z,0.7nm,0.6s,mb3.4,SNR=4.3
NOA NORSAR Array B 27.45 342 P **P 11 34 42.2 -1.3**
comp=Z,0.6nm,0.5s,mb3.4,baz=154,slow=8.9,SNR=4.6
NOA LR LR 11 47 17.5
comp=Z,13nm,18.2s,MS2.5,baz=205,slow=40
NOA NORSAR Array B 27.45 342 P **P 11 34 42.2 -1.2**
NOA pmax pmax
comp=Z,1.0nm,0.5s
NOA MLR MLR
comp=Z,13nm,18.2s
NOA NORSAR Array B 27.45 342 P **P 11 34 42.2 -1.3**
NOA LR LR 11 47 17.5
NOA NORSAR Array B 27.45 342 P **P 11 34 42.2 -1.2**
comp=Z,13nm,18.2s
TORD Torodi Ar. Bea 32.67 233 P **P 11 35 31.0 +0.9**
comp=Z,2.2nm,0.5s,mb4.4,baz=32,slow=8.7,SNR=15
TORD pP pP 11 35 46.1 +1.8
comp=Z,1.9nm,0.5s,baz=41,slow=8.9,SNR=6.6
ARCES ARCESS Array B 33.84 358 P **P 11 35 39.5 -0.1**
comp=Z,0.4nm,0.4s,mb3.7,baz=177,slow=9.7,SNR=4.2
ARCES ARCESS Array B 33.84 358 P **P 11 35 39.5 -0.2**
MSKU Masuku 39.58 203 P **P 11 36 29.3 +0.3**
comp=Z,5.3nm,0.6s,mb4.5,baz=14,slow=19,SNR=5.2
MSKU Masuku 39.58 203 P **P 11 36 29.4 +0.4**
MKAR Makanchi Array 41.51 57 P **P 11 36 46.2 +1.5**
comp=Z,0.2nm,0.6s,mb2.9,baz=273,slow=5.1,SNR=2.7
MKAR pP pP 11 36 58.7 -0.5
comp=Z,0.7nm,0.6s,baz=283,slow=6.7,SNR=4.5
MKAR Makanchi Array 41.51 57 P **P 11 36 46.2 +1.6**
MKAR *PP pP 11 36 58.7 -0.5
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 41.51 57 P **P 11 36 46.1 +1.5**
MKAR pP pP 11 36 58.7 -0.5
MKAR Makanchi Array 41.51 57 P **P 11 36 46.2 +1.6**
comp=Z,1.0nm,0.6s,mb3.6
ZALV Zalesovo Beam 42.91 47 P **P 11 36 57.4 +1.4**
comp=Z,0.6nm,0.4s,mb3.7,baz=241,slow=11,SNR=2.8
ZALV pP pP 11 37 10.9 +0.3
comp=Z,0.7nm,0.5s,baz=287,slow=8.2,SNR=2.1
ZALV Zalesovo Beam 42.91 47 P **P 11 36 57.4 +1.5**
ZALV *PP pP 11 37 10.9 +0.3
ZALV pmax pmax
comp=Z,1.0nm,0.4s,mb3.9
ZALV pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
ILAR Eielson Array 79.70 358 P **P 11 41 04.1 -0.2**
comp=Z,0.2nm,0.5s,mb3.3,baz=335,slow=3.3,SNR=4.3

DJA 25 11:39:44, 8.26S×108.58E, h20km, MLv4.2/20, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMJI	**Cimerak**	**0.49**	**345**	P	Pb	11 39 54.7	+0.7
BJII	**Banjamegara**	**1.45**	**51**	P	Pn	11 40 09.4	+0.3
BJII				S	Sn	11 40 27.8	+0.3
TGJI	**Tegal**	**1.48**	**21**	P	Pn	11 40 07.6	-2.0
YOGI	**Yogyakarta**	**1.75**	**76**	P	Pn	11 40 13.4	+0.1
UGM	**Wanagama**	**1.96**	**80**	P	Pn	11 40 16.4	+0.4
SMRI	**Semarang**	**2.20**	**57**	P	Pn	11 40 21.1	+1.6
SMRI				S	Sn	11 40 49.7	+3.6
SKJI	**Sukabumi**	**2.36**	**302**	P	Pn	11 40 21.7	+0.1
PCJI	**Pacitan**	**2.57**	**89**	P	Pn	11 40 25.1	+0.6
PCJI				S	Sn	11 40 55.2	0.0
NGJI	**Ngawi**	**2.99**	**73**	P	Pn	11 40 29.7	-0.6
SJI	**Sawahan**	**3.20**	**81**	P	Pn	11 40 34.6	+1.4
PWJI	**Pagerwojo**	**3.20**	**86**	P	Pn	11 40 33.5	+0.3
PWJI				S	Sn	11 41 11.0	+0.2
CGJI	**Cibinong**	**3.30**	**300**	P	Pn	11 40 32.5	-2.0
RBSI	**Rajabasa**	**3.70**	**310**	P	Pn	11 40 41.2	+1.1
KRKI	**Karangkates**	**3.83**	**89**	P	Pn	11 40 42.8	+0.9
GMJI	**Gumukmas**	**4.81**	**91**	P	Pn	11 40 57.4	+2.0
MDSI	**Maura Dua**	**5.76**	**310**	P	Pn	11 41 10.6	+2.2
	0.1nm8.3nm,0.8s						
NBBI	**Negara**	**5.98**	**91**	P	Pn	11 41 13.5	+2.1
	0.9nm239nm,1.1s						
SRBI	**Singaraja**	**6.57**	**89**	P	Pn	11 41 21.2	+1.7
	0.3nm54nm,1.6s						
LHSI	**Lahat**	**6.68**	**311**	P	Pn	11 41 21.9	+0.8
	7.9nm,1.3s						
MNAI	**Manna**	**6.80**	**304**	P	Pn	11 41 21.9	-0.8
	1.2nm289nm,1.2s						
KHKI	**Kahang-Kahang**	**6.96**	**91**	P	Pn	11 41 26.0	+1.2
KRJI	**Kerinci**	**9.37**	**310**	P	Pn	11 41 57.9	-0.1
KSM	**Kuching**	**9.82**	**10**	P	Pn	11 42 04.3	+0.1
RGRI	**Rengat**	**10.03**	**321**	P	Pn	11 42 05.9	-1.1

NEIC ***25*** *12:10:12.5, 37.05S×177.48E, h151km, MG4.5(WEL), After WEL.*

WEL 25 12:10:12.9±0.3, 37.08S×177.47E, h150km±2km, ML4.4/17, 2C, Error ellipse: s-maj=2.2km s-min=1.9km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WIZ	**White Island**	**0.50**	**207**	PN	Pn	12 10 34.6	+0.4
MXZ	**Matakaoa Point**	**0.82**	**126**	⇑PN	Pn	12 10 36.0	-0.2
MXZ				SN	Sn	12 10 53.8	-0.2
MXZ	**Matakaoa Point**	**0.82**	**126**	P	Pn	12 10 36.0	-0.2
OPRZ	**Ohinepanea**	**1.06**	**223**	PN	Pn	12 10 38.2	+0.1
MARZ	**Manawahe**	**1.11**	**215**	⇑PN	Pn	12 10 38.7	+0.2
MARZ	**Manawahe**	**1.11**	**215**	P	Pn	12 10 38.7	+0.2
PUZ	**Puketiti**	**1.17**	**148**	PN	Pn	12 10 39.1	0.0
PUZ				SN	Sn	12 10 59.0	-0.3
PUZ	**Puketiti**	**1.17**	**148**	P	Pn	12 10 39.1	0.0
EDRZ	**Edgecumbe**	**1.18**	**209**	PN	Pn	12 10 39.6	+0.4
EDRZ	**Edgecumbe**	**1.18**	**209**	P	Pn	12 10 39.6	+0.4
URZ	**Urewera**	**1.21**	**194**	PN	Pn	12 10 39.4	-0.1
URZ				SN	Sn	12 10 59.6	-0.4
URZ	**Urewera**	**1.21**	**194**	P	Pn	12 10 39.4	-0.1
MWZ	**Matawai**	**1.25**	**178**	PN	Pn	12 10 39.9	-0.1
MWZ				SN	Sn	12 11 01.0	+0.3
MWZ	**Matawai**	**1.25**	**178**	P	Pn	12 10 39.9	0.0
MWZ				S	Sn	12 11 01.4	+0.7
TARZ	**Mount Tarawera**	**1.39**	**213**	PN	Pn	12 10 41.8	+0.6
KUZ	**Kuaotunu**	**1.44**	**283**	PN	Pn	12 10 41.6	-0.2
KUZ	**Kuaotunu**	**1.44**	**283**	P	Pn	12 10 41.6	-0.2
RRRZ	**Republican Roa**	**1.47**	**211**	PN	Pn	12 10 42.3	+0.2
CNGZ	**Carnagh Statio**	**1.52**	**158**	PN	Pn	12 10 42.9	+0.3
HRRZ	**Handcock Road**	**1.61**	**215**	PN	Pn	12 10 44.2	+0.6
PRRZ	**Plateau Road**	**1.66**	**211**	PN	Pn	12 10 44.2	+0.1
ALRZ	**Allen Road**	**1.73**	**211**	PN	Pn	12 10 45.0	+0.1
MKAZ	**Moumakai**	**1.84**	**268**	PN	Pn	12 10 46.5	+0.3
MKAZ	**Moumakai**	**1.84**	**268**	P	Pn	12 10 46.5	+0.3
RAHZ	**Arahi**	**1.86**	**189**	PN	Pn	12 10 46.1	-0.2
PRGZ	**Paritu Road**	**1.87**	**170**	PN	Pn	12 10 46.0	-0.5
KNZ	**Kokohu**	**1.94**	**175**	PN	Pn	12 10 46.8	-0.5
NMHZ	**Naumai**	**2.08**	**194**	PN	Pn	12 10 48.8	-0.1
MHGZ	**Mahia Peninsul**	**2.10**	**171**	PN	Pn	12 10 48.7	-0.4
BKZ	**Black Stump Fm**	**2.22**	**200**	PN	Pn	12 10 49.5	-1.1
BKZ	**Black Stump Fm**	**2.22**	**200**	P	Pn	12 10 49.5	-1.1
MCHZ	**McNeill Hill**	**2.44**	**194**	PN	Pn	12 10 52.7	-0.5
WTVZ	**West Tongariro**	**2.52**	**216**	PN	Pn	12 10 53.8	-0.3
OTVZ	**Oturere**	**2.52**	**214**	PN	Pn	12 10 53.8	-0.4
NGZ	**Ngauruhoe**	**2.56**	**215**	PN	Pn	12 10 54.5	-0.2
NGZ	**Ngauruhoe**	**2.56**	**215**	P	Pn	12 10 54.5	-0.2
WPVZ	**Whakapapa**	**2.61**	**215**	PN	Pn	12 10 55.1	-0.2
TUVZ	**Tukino**	**2.61**	**213**	PN	Pn	12 10 54.6	-0.7
FWVZ	**Far West T-bar**	**2.65**	**214**	PN	Pn	12 10 55.1	-0.6
FWVZ	**Far West T-bar**	**2.65**	**214**	P	Pn	12 10 55.1	-0.7
MOVZ	**Moawhango**	**2.69**	**210**	PN	Pn	12 10 54.7	-1.6
MOVZ	**Moawhango**	**2.69**	**210**	P	Pn	12 10 54.7	-1.6
KAHZ	**Kahuranaki**	**2.75**	**190**	PN	Pn	12 10 55.8	-1.2
PKVZ	**Pokaka**	**2.77**	**217**	PN	Pn	12 10 56.8	-0.5
MTVZ	**Mangateitei**	**2.79**	**214**	PN	Pn	12 10 56.6	-0.9
PXZ	**Pawanui**	**2.99**	**189**	PN	Pn	12 10 58.1	-1.9
PNHZ	**Pukenui**	**3.00**	**199**	PN	Pn	12 10 58.0	-2.2
WPHZ	**Waipukurau**	**3.09**	**195**	PN	Pn	12 10 59.2	-2.1
TSZ	**Takapari Road**	**3.20**	**201**	PN	Pn	12 11 00.3	-2.4
TSZ	**Takapari Road**	**3.20**	**201**	P	Pn	12 11 00.3	-2.4
PRHZ	**Porangahau**	**3.25**	**191**	PN	Pn	12 11 01.2	-2.1
WAZ	**Wanganui**	**3.31**	**215**	PN	Pn	12 11 03.0	-1.1
WAZ	**Wanganui**	**3.31**	**215**	P	Pn	12 11 03.0	-1.1
DVHZ	**Dannevirke**	**3.38**	**197**	PN	Pn	12 11 02.1	-2.8
POWZ	**Post Office Ro**	**3.57**	**201**	PN	Pn	12 11 04.6	-2.8
BFZ	**Birch Farm**	**3.72**	**195**	PN	Pn	12 11 06.5	-2.9
BFZ	**Birch Farm**	**3.72**	**195**	P	Pn	12 11 06.5	-2.9
MRZ	**Mangatainoka R**	**3.87**	**202**	PN	Pn	12 11 07.9	-3.5
MRZ	**Mangatainoka R**	**3.87**	**202**	P	Pn	12 11 07.9	-3.5
TIWZ	**Tintock**	**3.90**	**198**	PN	Pn	12 11 08.6	-3.1
HOWZ	**Holdsworth Sta**	**4.11**	**201**	PN	Pn	12 11 10.7	-3.8
OGWZ	**Otaki Gorge**	**4.14**	**205**	PN	Pn	12 11 11.4	-3.5
TMWZ	**Te Maipa**	**4.21**	**197**	PN	Pn	12 11 12.2	-3.5
KIW	**Kapiti Island**	**4.27**	**207**	PN	Pn	12 11 12.8	-3.8
KIW	**Kapiti Island**	**4.27**	**207**	P	Pn	12 11 12.8	-3.8
MTW	**Mount Morrison**	**4.35**	**200**	PN	Pn	12 11 13.6	-4.0
MTW	**Mount Morrison**	**4.35**	**200**	P	Pn	12 11 13.6	-4.0
CAW	**Cannon Point**	**4.44**	**204**	PN	Pn	12 11 14.7	-4.1
CAW	**Cannon Point**	**4.44**	**204**	P	Pn	12 11 14.7	-4.1
TRWZ	**Traveller**	**4.53**	**197**	PN	Pn	12 11 16.1	-3.8
MSWZ	**Moikau Station**	**4.66**	**201**	PN	Pn	12 11 17.4	-4.3
MSWZ	**Moikau Station**	**4.66**	**201**	P	Pn	12 11 17.4	-4.3
WEL	**Wellington**	**4.70**	**206**	PN	Pn	12 11 18.0	-4.2
WEL	**Wellington**	**4.70**	**206**	P	Pn	12 11 18.0	-4.2
SNZO	**South Karori**	**4.74**	**206**	PN	Pn	12 11 18.2	-4.6
SNZO	**South Karori**	**4.74**	**206**	P	Pn	12 11 18.2	-4.5
PLWZ	**Palliser**	**4.80**	**200**	PN	Pn	12 11 18.9	-4.7
TUWZ	**Tuamarina**	**5.14**	**211**	PN	Pn	12 11 23.3	-4.7
NNZ	**Nelson**	**5.22**	**216**	PN	Pn	12 11 24.3	-4.7
NNZ	**Nelson**	**5.22**	**216**	P	Pn	12 11 24.3	-4.7
QRZ	**Quartz Range**	**5.37**	**224**	PN	Pn	12 11 26.4	-4.7
QRZ	**Quartz Range**	**5.37**	**224**	P	Pn	12 11 26.4	-4.7
BSWZ	**Blackbirch Sta**	**5.40**	**210**	PN	Pn	12 11 27.3	-4.3
BSWZ	**Blackbirch Sta**	**5.40**	**210**	P	Pn	12 11 27.3	-4.2
THZ	**Tophouse**	**5.86**	**216**	PN	Pn	12 11 32.8	-4.9
THZ	**Tophouse**	**5.86**	**216**	P	Pn	12 11 32.8	-4.8
DSZ	**Denniston Nort**	**6.40**	**222**	PN	Pn	12 11 40.6	-4.2
LTZ	**Lake Taylor**	**6.96**	**213**	PN	Pn	12 11 46.5	-5.7
LTZ	**Lake Taylor**	**6.96**	**213**	P	Pn	12 11 46.5	-5.7
MQZ	**McQueen's Vall**	**7.57**	**208**	PN	Pn	12 11 53.5	-6.9
ODZ	**Otahua Downs**	**9.48**	**211**	PN	Pn	12 12 19.9	-5.9
ODZ	**Otahua Downs**	**9.48**	**211**	P	Pn	12 12 19.9	-5.9

ISCJB ***25*** *12:13:03.5±1.6, 28.14S±0.03×70.94W±0.06, h15km±12km, mb5.0/104, MS4.4/14, Error ellipse: s-maj=9.3km s-min=4.4km az=175.3*

IDC ***25*** *12:13:03.6±0.6, 28.31S×71.11W, h0km, mb4.6/10, mb1 4.6/13, mb1mx4.5/16, mbtmp4.5/13, ML4.3/3, MS4.3/14, Ms1 4.2/14, ms1mx4.2/18, Error ellipse: s-maj=26.2km s-min=17.1km az=55.0*

NEIC ***25*** *12:13:07.8±1.0, 28.18S×70.98W, h23km±7km, mb5.1/92, ML5.0(GUC), Error ellipse: s-maj=6.3km s-min=4.0km az=73.0*

*NEIC Felt [IV] at Vallenar; [III] at Alto del Carmen, Ca

ISC 25 12:13:08.5±1.7,28'20S±0'02×70'95W±0'06,h27km±12km, n630,σ0°58/593,mb5.0/104,MS4.4/14,197C-197D, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.84**	**165**	*e*Pg	**Pn**	**12 13 25.1**	**+0.6**
LCO				*e*Sg	**Sn**	**12 13 37.8**	**+1.8**
LCO	**Las Campanas**	**0.84**	**165**	*e*P	**Pn**	**12 13 25.5**	**+0.9**
LCO				*i* S	**Sn**	**12 13 37.3**	**+1.3**
LCO				AML	AML	12 13 39.0	
	comp=E,60μm,0.4s						
TLL	**Tololo Astrono**	**1.97**	**176**	*e*P	**Pn**	**12 13 40.9**	**+0.9**
TLL				*e*S	**Sn**	**12 14 05.6**	**+1.8**
TLL	**Tololo Astrono**	**1.97**	**176**	*e*P	**Pn**	**12 13 40.9**	**+0.9**
TLL				*e*S	**Sn**	**12 14 05.6**	**+1.8**
TLL				AML	AML	12 14 12.9	
	comp=N,26μm,0.6s						
OVCH	**Ovalle**	**2.41**	**185**	*e*P	**Pn**	**12 13 45.2**	**-0.9**
OVCH				*e*S	**Sn**	**12 14 14.0**	**-0.8**
OVCH	**Ovalle**	**2.41**	**185**	*e*P	**Pn**	**12 13 45.2**	**-0.9**
OVCH				*e*S	**Sn**	**12 14 14.0**	**-0.8**
CMCH	**Combarbala**	**2.97**	**181**	P	**Pn**	**12 13 52.8**	**-1.0**
CMCH				S	**Sn**	**12 14 28.8**	**+0.3**
CMCH	**Combarbala**	**2.97**	**181**	*e*P	**Pn**	**12 13 52.8**	**-1.0**
CMCH				*e*S	**Sn**	**12 14 28.8**	**+0.3**
CHNG	**Los Chungos**	**3.71**	**187**	*e*P	**Pn**	**12 14 00.8**	**-3.1**
CHNG				*e*S	**Sn**	**12 14 51.3**	**+4.6**
CEN1	**Los Morros**	**4.83**	**8**	*e*P	**Pn**	**12 14 15.0**	**-4.4**
CEN1				*e*S	**Sn**	**12 15 14.4**	**-0.2**
PEL	**Peldehue**	**4.94**	**177**	*e*P	**Pn**	**12 14 20.5**	**-0.4**
PEL				*e*S	**Sn**	**12 15 14.9**	**-2.1**
PCH	**Pirque**	**5.42**	**176**	*e*P	**Pn**	**12 14 27.6**	**+0.1**
PCH	**Pirque**	**5.42**	**176**	*e*P	**Pn**	**12 14 27.6**	**+0.1**
TACH	**Talagante**	**5.44**	**180**	*e*P	**Pn**	**12 14 27.2**	**-0.6**
TACH	**Talagante**	**5.44**	**180**	*e*P	**Pn**	**12 14 27.2**	**-0.6**
CACH	**El Canelo**	**5.91**	**177**	*e*P	**Pn**	**12 14 34.6**	**+0.4**
CACH	**El Canelo**	**5.91**	**177**	*e*P	**Pn**	**12 14 34.6**	**+0.4**
LPAZ	**La Paz**	**12.13**	**13**	Pn	**Pn**	**12 15 58.5**	**-1.1**
	comp=N,1.1nm,0.3s,baz=194,slow=6.7,SNR=27						
LPAZ	**La Paz**	**12.13**	**13**	*e*Pn	**Pn**	**12 15 57.4**	**-2.3**
CPUP	**Villa Florida**	**12.26**	**84**	Pn	**Pn**	**12 16 02.0**	**+0.7**
	comp=N,2.2nm,0.3s,baz=246,slow=11,SNR=11						
CPUP	**Villa Florida**	**12.26**	**84**	*e*Pn	**Pn**	**12 16 01.9**	**+0.7**
TRQA	**Tornquist**	**12.37**	**145**	*e*Pn	**Pn**	**12 16 04.4**	**+1.7**
TRQA				*e*Sn	**Sn**	**12 18 19.2**	**-0.4**
PLCA	**Paso Flores**	**12.51**	**179**	Pn	**Pn**	**12 16 02.9**	**-1.8**
	comp=N,0.1nm,0.3s,baz=353,slow=8.1,SNR=2.3						
PLCA				Lg		12 19 31.4	
	comp=N,0.1nm,0.3s,baz=18,slow=19,SNR=2.4						
PLCA				LR	LR	12 21 17.5	
	comp=N,657nm,18.4s,baz=360,slow=40						
SIV	**San Ignacio**	**15.20**	**39**	Pn	**Pn**	**12 16 36.5**	**-4.8**
	comp=N,1.7nm,0.3s,baz=236,slow=11,SNR=11						
NNA	**Nana**	**17.04**	**340**	LR	LR	12 22 15.9	
	comp=N,656nm,20.1s,baz=145,slow=32						
ATAH	**Atahualpa**	**22.10**	**340**	P	**P**	**12 18 02.4**	**+0.6**
	comp=N,16nm,0.8s,mb4.5,baz=155,slow=8.7,SNR=12						
ATAH				LR	LR	12 24 54.9	
	comp=N,516nm,21.9s,MS3.9,baz=305,slow=32						
USHA	**Ushuaia**	**26.68**	**177**	LR	LR	12 30 19.0	
	comp=N,426nm,19.4s,MS4.0,baz=131,slow=39						
OTAV	**Otavalo**	**29.17**	**344**	*e*P	**P**	**12 19 09.2**	**+1.6**
	comp=N,19nm,1.4s,mb4.6						
ROSC	**El Rosal**	**33.02**	**354**	P	**P**	**12 19 43.2**	**+1.7**
	comp=N,6.2nm,0.3s,mb5.0,baz=81,slow=19,SNR=3.8						
ROSC				LR	LR	12 33 20.1	
	comp=N,153nm,20.0s,MS3.7,baz=321,slow=37						
RPN	**Rapa Nui**	**33.92**	**263**	P	**P**	**12 19 50.8**	**+1.4**
	comp=N,19nm,0.3s,mb5.5,baz=76,slow=4.2,SNR=3.7						
RPN				LR	LR	12 29 29.9	
	comp=N,886nm,21.9s,MS4.5,baz=138,slow=29						
CELP	**Cerrillos**	**46.19**	**6**	*e*P	**P**	**12 21 30.0**	**-1.0**
SJG	**San Juan**	**46.27**	**6**	*e*P	**P**	**12 21 30.7**	**-1.0**
SJG				pmax	pmax		
	comp=Z,10.0nm,0.2s						
SJG	**San Juan**	**46.27**	**6**	*e*P	**P**	**12 21 30.7**	**-0.9**
	comp=Z,10nm,0.2s,mb5.4						
AOPR	**Arecibo Observ**	**46.45**	**5**	*e*P	**P**	**12 21 33.4**	**+0.4**
	comp=Z,4.3nm,0.4s,mb4.7						
SDDR	**Presa de Saban**	**46.90**	**360**	*e*P	**P**	**12 21 37.4**	**+0.8**
	comp=Z,6.3nm,0.6s,mb4.7						
TEIG	**Tepich**	**50.97**	**339**	*e*P	**P**	**12 22 07.3**	**-0.6**
	comp=Z,26nm,0.6s,mb5.3						
RKT	**Rikitea**	**57.36**	**259**	*e*LR	LR	12 39 41.2	
	comp=Z,404nm,24.5s						
RKT				*e*T		13 24 27.4	
	comp=Z,7.0nm,0.2s						
MAIT	**Maitri**	**61.27**	**158**	*e*P	**P**	**12 23 21.1**	**+0.3**
QSPA	**South Pole Qui**	**62.02**	**180**	*e*P	**P**	**12 23 25.3**	**-0.5**
	comp=Z,17nm,1.0s,mb5.1						
VBMS	**Vicksburg**	**62.90**	**341**	*e*P	**P**	**12 23 32.5**	**+0.3**
	comp=Z,11nm,0.4s,mb5.3						
NATX	**Nacogdoches**	**63.76**	**338**	*e*P	**P**	**12 23 38.2**	**+0.3**
	comp=Z,37nm,0.7s,mb5.5						
JCT	**Junction City**	**64.52**	**333**	*e*P	**P**	**12 23 42.1**	**-0.8**
JCT				pmax	pmax		
	comp=Z,162nm,1.9s,mb5.7						
JCT	**Junction City**	**64.52**	**333**	*e*P	**P**	**12 23 42.1**	**-0.8**
	comp=Z,162nm,1.9s,mb5.7						
CPCT	**Cooper Cave**	**64.59**	**348**	*e*P	**P**	**12 23 42.0**	**-1.2**
SWET	**Sewanee**	**64.64**	**346**	*e*P	**P**	**12 23 42.6**	**-1.0**
TKL	**Tuckaleechee C**	**64.65**	**348**	*e*P	**P**	**12 23 42.7**	**-1.0**
OXF	**Oxford**	**64.77**	**343**	*e*P	**P**	**12 23 43.7**	**-0.7**
OXF				pmax	pmax		
	comp=Z,21nm,0.5s,mb5.4						
OXF	**Oxford**	**64.77**	**343**	*e*P	**P**	**12 23 43.7**	**-0.7**
	comp=Z,21nm,0.5s,mb5.4						
627A	**Terlingua Ranc**	**65.18**	**329**	⇓P	**P**	**12 23 46.9**	**-0.4**
	baz=65						
TXAR	**Lajitas Array**	**65.21**	**329**	P	**P**	**12 23 47.0**	**-0.4**
	comp=Z,8.3nm,0.8s,mb4.8,baz=149,slow=8.1,SNR=72						
528A	**Cox Ranch, San**	**65.52**	**330**	⇓P	**P**	**12 23 49.1**	**-0.3**
	baz=66,SNR=28						
626A	**Big Bend Ranch**	**65.61**	**328**	⇓P	**P**	**12 23 50.2**	**+0.1**
	baz=66,SNR=90						
WVT	**Waverly**	**65.93**	**345**	*e*P	**P**	**12 23 50.5**	**-1.4**
WVT				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
WVT	**Waverly**	**65.93**	**345**	*e*P	**P**	**12 23 50.5**	**-1.4**
	comp=Z,16nm,0.9s,mb5.1						
428A	**Kincaid Ranch,**	**65.95**	**330**	⇑P	**P**	**12 23 52.0**	**-0.2**
	baz=66,SNR=13						
MIAR	**Mount Ida**	**65.97**	**340**	*e*P	**P**	**12 23 51.3**	**-0.9**
MIAR				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
MIAR	**Mount Ida**	**65.97**	**340**	*e*P	**P**	**12 23 51.3**	**-1.0**
	comp=Z,20nm,1.0s,mb5.1						
526A	**Mary Lane Ranc**	**66.02**	**329**	⇑P	**P**	**12 23 52.8**	**+0.2**
	baz=66						
427A	**Hayter Ranch,**	**66.38**	**330**	⇓P	**P**	**12 23 54.6**	**-0.3**
	baz=67,SNR=16						
426A	**McDonald Obser**	**66.50**	**329**	⇑P	**P**	**12 23 55.7**	**-0.1**
	baz=67,SNR=34						
328A	**Wristen Ranch,**	**66.57**	**331**	⇓P	**P**	**12 23 55.6**	**-0.5**
	baz=67,SNR=17						
327A	**Balmorhea Ranc**	**66.86**	**330**	⇑P	**P**	**12 23 57.7**	**-0.3**
	baz=67						
326A	**Caldwell Ranch**	**67.03**	**330**	⇓P	**P**	**12 23 58.7**	**-0.4**
	baz=67,SNR=18						
425A	**Indio Mountain**	**67.04**	**328**	⇓P	**P**	**12 23 58.6**	**-0.5**
	baz=67,SNR=19						
325A	**Bean Ranch, Si**	**67.53**	**329**	⇑P	**P**	**12 24 01.6**	**-0.7**
	baz=68,SNR=44						
TAOE	**Nuku Hiva Isla**	**67.57**	**272**	*e*LR	LR	12 44 19.4	
	comp=Z,646nm,38.5s						
226A	**Malaga, Loving**	**67.72**	**330**	⇓P	**P**	**12 24 03.4**	**0.0**
	baz=68,SNR=19						
SIUC	**Southern Illin**	**67.77**	**344**	*e*P	**P**	**12 24 02.6**	**-1.0**
	comp=Z,22nm,0.6s,mb5.4						
CLNB	**Carlsbad**	**67.79**	**330**	*e*P	**P**	**12 24 04.0**	**+0.2**
	comp=Z,1.3nm,0.2s,mb4.6						
324A	**Moseley Ranch,**	**67.82**	**328**	⇓P	**P**	**12 24 02.7**	**-1.4**
	baz=68,SNR=23						
WMOK	**Wichita Mounta**	**67.90**	**335**	*e*P	**P**	**12 24 03.0**	**-1.5**
WMOK				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.8						
WMOK	**Wichita Mounta**	**67.90**	**335**	*e*P	**P**	**12 24 03.0**	**-1.5**
	comp=Z,14nm,1.3s,mb4.8						
127A	**Arkansas Junct**	**67.92**	**331**	⇓P	**P**	**12 24 04.1**	**-0.6**
	baz=68						
GDL2	**Guadalupe Moun**	**67.95**	**330**	*e*P	**P**	**12 24 04.8**	**-0.1**
MNTX	**Cornudas Mount**	**67.99**	**329**	*e*P	**P**	**12 24 03.7**	**-1.5**
	comp=Z,16nm,0.9s,mb5.0						
225A	**Deer Hill, Car**	**68.08**	**329**	⇑P	**P**	**12 24 05.1**	**-0.7**
	baz=68,SNR=7.6						
126A	**Clayton Basin,**	**68.18**	**330**	⇑P	**P**	**12 24 05.7**	**-0.6**
	baz=68,SNR=10						
FVM	**French Village**	**68.32**	**344**	*e*P	**P**	**12 24 06.0**	**-1.0**
FVM				pmax	pmax		
	comp=Z,65nm,1.2s,mb5.5						
FVM	**French Village**	**68.32**	**344**	*e*P	**P**	**12 24 06.0**	**-1.0**
	comp=Z,65nm,1.2s,mb5.5						
224A	**Cornudas Mount**	**68.37**	**329**	⇓P	**P**	**12 24 06.5**	**-1.1**
	baz=69,SNR=21						
Z27A	**Tatum**	**68.41**	**331**	⇓P	**P**	**12 24 06.8**	**-0.9**
	baz=69,SNR=13						
CPRX	**Cap Rock**	**68.44**	**331**	*e*P	**P**	**12 24 08.2**	**+0.2**
	comp=Z,13nm,0.9s,mb5.0						
125A	**Gardner Draw,**	**68.47**	**330**	⇓P	**P**	**12 24 07.1**	**-1.0**
	baz=69,SNR=19						
CCM	**Cathedral Cave**	**68.59**	**343**	*e*P	**P**	**12 24 07.8**	**-1.0**
CCM				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.2						
CCM	**Cathedral Cave**	**68.59**	**343**	*e*P	**P**	**12 24 07.8**	**-1.0**
	comp=Z,26nm,0.9s,mb5.2						
BRNJ	**Basking Ridge**	**68.61**	**357**	*e*P	**P**	**12 24 09.7**	**+0.9**
	comp=Z,14nm,0.3s,mb5.4						
Z26A	**Caprock**	**68.70**	**331**	⇑P	**P**	**12 24 09.0**	**-0.5**
	baz=69,SNR=48						
223A	**Chaparral, Ant**	**68.73**	**328**	⇑P	**P**	**12 24 09.8**	**0.0**
	baz=69						
MSTX	**Muleshoe**	**68.79**	**332**	⇑P	**P**	**12 24 09.3**	**-0.8**
	baz=69,SNR=18						
124A	**Stringfield Ra**	**68.86**	**329**	⇓P	**P**	**12 24 10.1**	**-0.5**
	baz=69,SNR=26						
SBA	**Scott Base**	**68.93**	**191**	*e*P	**P**	**12 24 11.0**	**+0.5**
SBA				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
SBA	**Scott Base**	**68.93**	**191**	*e*P	**P**	**12 24 11.0**	**+0.5**
	comp=Z,2.3nm,0.8s,mb4.2						
Z25A	**Roswell**	**69.03**	**330**	⇑P	**P**	**12 24 10.7**	**-0.9**
	baz=69,SNR=16						
222A	**Williams Famil**	**69.13**	**328**	⇑P	**P**	**12 24 12.4**	**+0.2**
	baz=69						
AMTX	**Amarillo**	**69.14**	**333**	*e*P	**P**	**12 24 12.1**	**-0.1**
	comp=Z,23nm,1.0s,mb5.1						
123A	**Bell Site, Whi**	**69.18**	**329**	⇑P	**P**	**12 24 12.7**	**+0.2**
	baz=69						
320A	**Kipp Ranch, An**	**69.19**	**326**	⇓P	**P**	**12 24 12.6**	**-0.1**
	baz=69,SNR=7.0						
Y26A	**Elida**	**69.19**	**331**	⇑P	**P**	**12 24 11.9**	**-0.7**
	baz=69,SNR=8.5						
Z24A	**Sheeppen Canyo**	**69.36**	**330**	⇑P	**P**	**12 24 13.2**	**-0.5**
	baz=70,SNR=16						
221A	**Mesquite Ranch**	**69.37**	**327**	⇑P	**P**	**12 24 14.1**	**+0.3**
	baz=70						
X27A	**F and S Farms,**	**69.50**	**332**	⇓P	**P**	**12 24 13.8**	**-0.7**
	baz=70						
Y25A	**Mesa, Roswell**	**69.56**	**330**	⇑P	**P**	**12 24 13.9**	**-1.0**
	baz=70,SNR=8.6						
122A	**Conniff Cattle**	**69.58**	**328**	⇓P	**P**	**12 24 15.5**	**+0.5**
	baz=70						
319A	**Douglas**	**69.59**	**326**	⇓P	**P**	**12 24 15.3**	**+0.2**
	baz=70,SNR=11						
220A	**Playas Peak, P**	**69.65**	**326**	⇓P	**P**	**12 24 15.4**	**-0.1**
	baz=70,SNR=10						
Z23A	**Rita Site, Whi**	**69.69**	**329**	⇓P	**P**	**12 24 16.0**	**+0.3**
	baz=70,SNR=13						
TBI	**Tubuai**	**69.71**	**254**	*e*LR	LR	12 45 18.4	
	comp=Z,304nm,25.2s						
TBI				*e*T		13 39 53.0	
	comp=Z,5.3nm,0.2s						
X26A	**CR and CF Fran**	**69.72**	**331**	⇓P	**P**	**12 24 15.3**	**-0.5**
	baz=70,SNR=11						
W27A	**Bowe Ranch, En**	**69.85**	**332**	⇑P	**P**	**12 24 15.9**	**-0.8**
	baz=70,SNR=5.6						
Y24A	**Capitan**	**69.89**	**330**	⇓P	**P**	**12 24 16.5**	**-0.5**
	baz=70,SNR=6.3						
Z22A	**Elephant Butte**	**70.02**	**328**	⇑P	**P**	**12 24 18.0**	**+0.3**
	baz=70,SNR=24						
X25A	**Clemmons Ranch**	**70.06**	**331**	⇑P	**P**	**12 24 17.0**	**-1.0**
	baz=70						
219A	**White Tail Can**	**70.09**	**326**	⇑P	**P**	**12 24 18.4**	**+0.2**
	baz=70,SNR=28						
W26A	**Owens Ranch, T**	**70.16**	**332**	⇓P	**P**	**12 24 18.3**	**-0.3**
	baz=70,SNR=5.8						
Y23A	**Lovelace Mesa,**	**70.17**	**329**	⇑P	**P**	**12 24 18.8**	**+0.2**
	baz=70,SNR=17						
120A	**U Bar Ranch, L**	**70.23**	**327**	⇑P	**P**	**12 24 19.2**	**+0.2**
	baz=70,SNR=9.6						
Z21A	**St. Cloud Mine**	**70.39**	**328**	⇑P	**P**	**12 24 20.3**	**+0.3**
	baz=71						
X24A	**Lazy VL Ranch,**	**70.43**	**330**	⇑P	**P**	**12 24 20.2**	**0.0**
	baz=71						
218A	**Dragoon**	**70.46**	**325**	⇑P	**P**	**12 24 20.5**	**+0.1**
	baz=71,SNR=24						
HDIL	**Hopedale**	**70.49**	**345**	*e*P	**P**	**12 24 19.7**	**-0.8**
	comp=Z,28nm,0.6s,mb5.4						
W25A	**X Bar L Ranch,**	**70.56**	**331**	⇓P	**P**	**12 24 20.5**	**-0.5**
	baz=71,SNR=14						
Y22A	**Socorro**	**70.59**	**329**	⇓P	**P**	**12 24 21.4**	**+0.2**
	baz=71,SNR=9.6						
BNM	**Barren Site**	**70.61**	**329**	*e*P	**P**	**12 24 22.2**	**+0.8**
	comp=Z,7.5nm,1.0s,mb4.6						
Z20A	**Nine Sixteen R**	**70.67**	**327**	⇑P	**P**	**12 24 22.2**	**+0.4**
	baz=71,SNR=22						
Y22D	**IRIS PASSCAL I**	**70.68**	**329**	⇑P	**P**	**12 24 22.3**	**+0.6**
	baz=71						
MEH	**Mehetia**	**70.68**	**260**	*e*T		13 41 06.4	
	comp=Z,84nm,0.2s						
217A	**Green Valley**	**70.69**	**325**	⇑P	**P**	**12 24 21.9**	**0.0**
	baz=71,SNR=20						
119A	**Ashpeak Ranch,**	**70.73**	**326**	⇓P	**P**	**12 24 22.3**	**+0.3**
	baz=71,SNR=9.5						
LPM	**Los Pinos Moun**	**70.75**	**329**	*e*P	**P**	**12 24 22.6**	**+0.4**
X23A	**Hourglass Bar**	**70.78**	**330**	⇓P	**P**	**12 24 22.7**	**+0.4**
	baz=71						
SYO	**Syowa Base**	**70.92**	**159**	‖*e*P	**P**	**12 24 21.4**	**-1.4**
SYO	**Syowa Base**	**70.92**	**159**	‖*es*P	sP	12 24 32.4	**-2.3**
118A	**Homack Ranch,**	**70.96**	**326**	⇑P	**P**	**12 24 23.5**	**0.0**
	baz=71,SNR=13						
W24A	**Lazy 6 Ranch,**	**70.97**	**331**	⇓P	**P**	**12 24 23.1**	**-0.3**
	baz=71,SNR=14						
Y21A	**Point of Rocks**	**70.97**	**328**	⇓P	**P**	**12 24 24.2**	**+0.7**
	baz=71,SNR=14						
TUC	**Tucson**	**71.10**	**325**	*e*P	**P**	**12 24 24.3**	**0.0**
TUC				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
TUC	**Tucson**	**71.10**	**325**	*e*P	**P**	**12 24 24.3**	**-0.1**
	comp=Z,12nm,1.1s,mb4.7						
Z19A	**T-Link Ranch,**	**71.14**	**327**	⇓P	**P**	**12 24 25.0**	**+0.4**
	baz=71,SNR=6.7						
V25A	**Rancho No Teng**	**71.16**	**332**	⇓P	**P**	**12 24 24.3**	**-0.3**
	baz=71,SNR=21						
216A	**Three Points,**	**71.20**	**324**	⇑P	**P**	**12 24 24.9**	**-0.1**
	baz=71,SNR=5.0						
ANMO	**Albuquerque**	**71.21**	**330**	*e*P	**P**	**12 24 25.6**	**+0.7**
ANMO				pmax	pmax		
	comp=Z,20nm,1.4s						
ANMO	**Albuquerque**	**71.21**	**330**	*e*P	**P**	**12 24 25.6**	**+0.6**
	comp=Z,20nm,1.4s,mb4.8						
Y20A	**Horse Springs,**	**71.22**	**328**	⇓P	**P**	**12 24 25.6**	**+0.5**
	baz=71,SNR=20						
W23A	**Werner Place,**	**71.25**	**330**	⇑P	**P**	**12 24 25.4**	**+0.2**
	baz=72,SNR=14						
U26A	**Atchley Ranch,**	**71.28**	**333**	⇓P	**P**	**12 24 25.0**	**-0.4**
	baz=72,SNR=8.3						
117A	**Oracle**	**71.29**	**325**	⇑P	**P**	**12 24 25.3**	**-0.1**
	baz=72,SNR=10						
V24A	**Rampart Ranch,**	**71.34**	**331**	⇑P	**P**	**12 24 25.4**	**-0.3**
	baz=72,SNR=9.8						
Z18A	**Geronimo**	**71.35**	**326**	⇑P	**P**	**12 24 25.8**	**0.0**
	baz=72						
X21A	**Alamocita Cree**	**71.39**	**328**	⇑P	**P**	**12 24 26.7**	**+0.7**
	baz=72,SNR=16						
W22A	**Albuquerque**	**71.49**	**330**	⇓P	**P**	**12 24 27.2**	**+0.6**
	baz=72						
U25A	**Circle Dot Ran**	**71.56**	**332**	⇑P	**P**	**12 24 26.9**	**-0.1**
	baz=72,SNR=12						
Y19A	**Nutrioso**	**71.68**	**327**	⇓P	**P**	**12 24 28.6**	**+0.8**
	baz=72,SNR=22						
Z17A	**San Carlos Hig**	**71.74**	**326**	⇑P	**P**	**12 24 28.4**	**+0.2**
	baz=72						
V23A	**Ortiz Mt. (NFS**	**71.75**	**330**	⇓P	**P**	**12 24 28.8**	**+0.6**
	baz=72,SNR=6.7						
116A	**Eloy**	**71.77**	**325**	⇑P	**P**	**12 24 28.3**	**0.0**
	baz=72						
X20A	**Quemado**	**71.80**	**328**	⇓P	**P**	**12 24 29.0**	**+0.5**
	baz=72						
214A	**Organ Pipe Nat**	**71.87**	**323**	⇑P	**P**	**12 24 29.2**	**+0.2**
	baz=72,SNR=26						
W21A	**San Fidel**	**71.88**	**329**	⇑P	**P**	**12 24 29.6**	**+0.6**
	baz=72						
Y18A	**Canyon Day Jun**	**71.91**	**326**	⇓P	**P**	**12 24 29.3**	**+0.1**
	baz=72						
TIAR	**Tiarei**	**71.92**	**259**	*e*T		13 42 39.4	
	comp=Z,13nm,0.2s						
X19A	**St. Johns**	**72.08**	**327**	⇓P	**P**	**12 24 30.5**	**+0.3**
	baz=72						
LIC	**Lamto**	**72.10**	**73**	*e*P	**P**	**12 24 29.0**	**-1.8**
	comp=Z,87nm,1.8s,mb5.4						
PPT	**Papeete**	**72.12**	**259**	*e*S	S	12 33 48.0	-3.7
	comp=Z,84nm,23.0s						
PPT				*e*LR	LR	12 46 35.0	
	comp=Z,251nm,22.0s						
PPT	**Papeete**	**72.12**	**259**	LR	LR	12 48 04.6	
	comp=Z,361nm,18.1s,MS4.7,baz=129,slow=29						
T25A	**Trinidad**	**72.19**	**332**	⇑P	**P**	**12 24 31.1**	**+0.3**
	baz=72,SNR=18						
V22A	**San Miguel Ran**	**72.21**	**330**	⇓P	**P**	**12 24 31.6**	**+0.6**
	baz=72,SNR=19						
Y17A	**Roosevelt**	**72.24**	**326**	⇓P	**P**	**12 24 31.5**	**+0.3**
	baz=72,SNR=30						
Z16A	**Peralta Trail,**	**72.25**	**325**	⇑P	**P**	**12 24 31.3**	**+0.1**
	baz=72						
U23A	**El Rito**	**72.25**	**331**	⇑P	**P**	**12 24 31.7**	**+0.6**
	baz=72,SNR=8.4						
W20A	**Ramah**	**72.28**	**328**	⇓P	**P**	**12 24 31.7**	**+0.3**
	baz=72,SNR=20						
TIC	**Toumodi**	**72.33**	**72**	*e*P	**P**	**12 24 32.5**	**+0.3**
	comp=Z,57nm,1.3s,mb5.3						
TIC	**Toumodi**	**72.33**	**72**	*e*P	**P**	**12 24 32.5**	**+0.3**
TIC				pmax	pmax		
	comp=Z,57nm,1.3s,mb5.3						
KIC	**Kosan Boka**	**72.41**	**73**	*e*P	**P**	**12 24 32.9**	**+0.2**
	comp=Z,50nm,1.2s,mb5.3						
DBIC	**Dimbokro**	**72.48**	**72**	P	**P**	**12 24 33.5**	**+0.4**
	comp=Z,5.5nm,0.7s,mb4.6,baz=192,slow=7.8,SNR=7.9						
DBIC				LR	LR	12 57 01.6	
	comp=Z,216nm,19.1s,MS4.4,baz=199,slow=36						
DBIC	**Dimbokro**	**72.48**	**72**	*e*P	**P**	**12 24 34.0**	**+0.9**
DBIC				LR	LR	12 57 01.6	
X18A	**Snowflake**	**72.48**	**327**	⇑P	**P**	**12 24 33.0**	**+0.4**
	baz=73,SNR=6.5						
114A	**Black Gap (USA**	**72.53**	**324**	⇓P	**P**	**12 24 32.8**	**-0.1**
	baz=73,SNR=18						
U22A	**Llaves**	**72.58**	**330**	⇓P	**P**	**12 24 33.7**	**+0.6**
	baz=73,SNR=16						
Z15A	**Gila River Ind**	**72.58**	**325**	⇓P	**P**	**12 24 33.2**	**0.0**
	baz=73						
S25A	**Robets Cordova**	**72.65**	**333**	⇑P	**P**	**12 24 33.7**	**+0.2**
	baz=73,SNR=16						
W19A	**Sanders**	**72.68**	**328**	⇑P	**P**	**12 24 34.0**	**+0.2**
	baz=73						
Y16A	**Circle Bar Ran**	**72.70**	**326**	⇓P	**P**	**12 24 34.1**	**+0.2**
	baz=73,SNR=26						
X17A	**Forest Lakes**	**72.74**	**326**	⇑P	**P**	**12 24 34.8**	**+0.7**
	baz=73,SNR=14						
T23A	**Casias Ranch,**	**72.78**	**331**	⇑P	**P**	**12 24 34.7**	**+0.4**
	baz=73,SNR=5.2						
V20A	**Brimhall**	**72.82**	**329**	⇓P	**P**	**12 24 34.7**	**+0.2**
	baz=73,SNR=8.7						
W18A	**Petrified Fore**	**72.85**	**327**	⇑P	**P**	**12 24 34.7**	**-0.1**
	baz=73,SNR=5.6						
S24A	**Houchin Ranch,**	**72.95**	**332**	⇓P	**P**	**12 24 35.9**	**+0.6**
	baz=73,SNR=30						
JFWS	**Jewell Farm**	**72.95**	**345**	*e*P	**P**	**12 24 34.5**	**-0.7**
JFWS				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.0						
JFWS	**Jewell Farm**	**72.95**	**345**	*e*P	**P**	**12 24 34.5**	**-0.7**
	comp=Z,12nm,0.6s,mb5.0						
U21A	**Nageezi**	**72.97**	**330**	⇓P	**P**	**12 24 35.7**	**+0.2**
	baz=73,SNR=25						
113A	**Mohawk Valley,**	**73.00**	**323**	⇑P	**P**	**12 24 35.5**	**-0.3**
	baz=73,SNR=8.5						
V19A	**Window Rock**	**73.02**	**328**	⇓P	**P**	**12 24 36.1**	**+0.3**
	baz=73,SNR=11						
**

O25A **Wiggins** 74.64 334 ⇑P P 12 24 45.7 +0.6
baz=75
P23A **Jefferson** 74.68 333 ⇑P P 12 24 46.4 +1.0
baz=75
Q22A **Crested Butte,** 74.69 332 ⇓P P 12 24 46.0 +0.5
baz=75,SNR=9.5
S19A **Harvey Farm, M** 74.73 329 ⇓P P 12 24 46.0 +0.2
baz=75,SNR=34
R20A **Redvale** 74.76 330 ⇑P P 12 24 46.6 +0.8
baz=75,SNR=9.4
PV01 **Paradox Valley** 74.80 330 *eP* P 12 24 46.6 +0.5
comp=Z,2μm,1.2s
IRM **Iron Mountain** 74.81 323 ⇓P P 12 24 46.3 0.0
baz=75,SNR=8.4
T17A **Navajo Res., N** 74.88 328 ⇓P P 12 24 47.4 +0.8
baz=75,SNR=23
W13A **Hualapai Mount** 74.88 325 ⇓P P 12 24 47.1 +0.4
baz=75,SNR=17
109C **Camp Elliot, M** 74.91 321 ⇑P P 12 24 48.0 +1.1
baz=75
V14A **Boquillas Ranc** 74.91 326 ⇓P P 12 24 47.5 +0.7
baz=75,SNR=23
Q21A **Lamborn Mesa,** 74.95 331 ⇑P P 12 24 47.4 +0.4
baz=75,SNR=5.4
ISCO **Idaho Springs** 74.95 333 *eP* P 12 24 47.8 +0.8
ISCO pmax pmax
comp=Z,12nm,1.0s,mb4.8
ISCO **Idaho Springs** 74.95 333 *eP* P 12 24 47.8 +0.8
comp=Z,12nm,1.0s,mb4.8
SMCO **Snowmass** 74.98 332 *eP* P 12 24 48.0 +0.9
comp=Z,24nm,0.8s,mb5.2
O24A **Longmont** 75.01 334 ⇓P P 12 24 47.6 +0.3
baz=75
S18A **Hurst Farm, Bl** 75.07 329 ⇑P P 12 24 48.3 +0.6
baz=75,SNR=63
PFO **Pinyon Flat Ob** 75.09 322 ⇓P P 12 24 48.3 +0.4
baz=75,SNR=6.1
PFO **Pinyon Flat Ob** 75.09 322 *eP* P 12 24 48.8 +0.9
PFO pmax pmax
comp=Z,18nm,1.2s,mb4.9
PFO **Pinyon Flat Ob** 75.09 322 *eP* P 12 24 48.8 +0.8
comp=Z,18nm,1.2s,mb4.9
U15A **North Rim** 75.13 327 ⇓P P 12 24 48.9 +0.8
baz=75,SNR=35
BELC **Belle Mtn. Jos** 75.14 323 ⇑P P 12 24 48.5 +0.2
baz=75,SNR=6.5
PV04 **Paradox Valley** 75.16 330 *eP* P 12 24 48.7 +0.5
T16A **Glen Canyon Da** 75.20 327 ⇑P P 12 24 48.8 +0.3
baz=75,SNR=14
N25A **Grover** 75.23 335 ⇓P P 12 24 49.0 +0.4
baz=76
R19A **Curley Farm, L** 75.23 330 ⇓P P 12 24 48.5 -0.1
baz=75,SNR=14
ECSD **EROS Data Cent** 75.35 341 *eP* P 12 24 48.4 -0.8
comp=Z,24nm,0.9s,mb5.1
Q20A **Ridgley Place,** 75.36 331 ⇑P P 12 24 49.6 +0.2
baz=76
S17A **Black Ridge (B** 75.40 328 ⇓P P 12 24 50.0 +0.4
baz=76,SNR=14
O23A **Lake Granby, G** 75.42 333 ⇑P P 12 24 50.1 +0.4
baz=76,SNR=14
MURC **Murrieta** 75.49 321 ⇑P P 12 24 50.2 0.0
baz=76,SNR=5.2
V13A **Grand Canyon W** 75.52 325 ⇓P P 12 24 50.5 +0.1
baz=76,SNR=24
N24A **Carr** 75.55 334 ⇑P P 12 24 50.8 +0.5
baz=76
W12A **Cal Nev Ari** 75.55 324 ⇑P P 12 24 50.4 0.0
baz=76
GMRC **Granite Mounta** 75.56 323 ⇓P P 12 24 51.0 +0.4
baz=76,SNR=18
U14A **Mt Trumbull** 75.56 326 ⇑P P 12 24 51.3 +0.7
baz=76,SNR=45
R18A **Canyonlands Na** 75.59 329 ⇓P P 12 24 50.7 +0.1
baz=76
O22A **Kremmling** 75.64 333 ⇑P P 12 24 51.1 +0.2
baz=76,SNR=16
T15A **Red Dirt Ranch** 75.65 327 ⇓P P 12 24 51.9 +0.8
baz=76,SNR=23
Q19A **Hogan Spring (** 75.78 330 ⇑P P 12 24 52.2 +0.4
baz=76,SNR=12
SCI **San Clemente I** 75.78 320 ⇑P P 12 24 51.7 -0.2
baz=76
S16A **Weppner Ranch,** 75.84 328 ⇑P P 12 24 52.1 0.0
baz=76,SNR=24
BBRC **Big Bear Solar** 75.84 322 ⇑P P 12 24 52.8 +0.6
baz=76
V12A **Nelson** 75.86 324 ⇓P P 12 24 52.2 -0.1
baz=76,SNR=19
HEC **Hector,Ludlow** 75.95 323 ⇓P P 12 24 53.2 +0.4
baz=76,SNR=15
R17A **Hanksville Air** 75.99 329 ⇑P P 12 24 53.0 0.0
baz=76,SNR=31
CIS **Catalina Islan** 76.02 321 ⇑P P 12 24 53.3 +0.1
baz=76
N23A **Red Feather La** 76.02 333 ⇑P P 12 24 53.6 +0.5
baz=76,SNR=8.7
T14A **Hurricane** 76.02 326 ⇑P P 12 24 53.7 +0.5
baz=76,SNR=19
O21A **Pagoda** 76.06 332 ⇓P P 12 24 53.9 +0.6
baz=76
N22A **Wattenberg Ran** 76.14 333 ⇑P P 12 24 54.5 +0.7
baz=76,SNR=7.3
S15A **Panguitch** 76.16 327 ⇓P P 12 24 54.3 +0.3
baz=76
PHWY **Pilot Hill** 76.17 334 *eP* P 12 24 54.4 +0.5
comp=Z,14nm,1.0s,mb4.8
TUQ **Turquoise Moun** 76.20 324 ⇓P P 12 24 54.4 +0.2
baz=76,SNR=14
P19A **Cripple Cowboy** 76.22 331 ⇑P P 12 24 54.8 +0.6
baz=76,SNR=37
BFSC **Mount Baldy Ra** 76.22 322 ⇑P P 12 24 54.4 0.0
baz=76,SNR=6.2
R16A **Teasdale** 76.24 328 ⇑P P 12 24 54.7 +0.3
baz=76,SNR=9.4
V11A **Goodsprings** 76.25 324 ⇑P P 12 24 54.7 +0.2
baz=76
U12A **Valley of Fire** 76.25 325 ⇑P P 12 24 54.5 0.0
baz=76,SNR=9.6
Q18A **Rafter H Ranch** 76.28 330 ⇓P P 12 24 54.7 +0.1
baz=76,SNR=17
O20A **White River Ci** 76.32 331 ⇓P P 12 24 55.2 +0.5
baz=76,SNR=15
RRX **Edison Barstow** 76.35 322 ⇓P P 12 24 55.6 +0.5
baz=76
T13A **Saint George** 76.39 326 ⇑P P 12 24 55.6 +0.3
baz=77,SNR=14
SRU **San Rafael** 76.47 329 ⇓P P 12 24 55.6 -0.1
baz=77,SNR=12
SRU **San Rafael** 76.47 329 *eP* P 12 24 55.8 +0.1
SRU pmax pmax
comp=Z,23nm,0.9s,mb5.1
SRU **San Rafael** 76.47 329 *eP* P 12 24 55.8 +0.2
comp=Z,23nm,0.9s,mb5.1
N21A **Black Mountain** 76.54 332 ⇓P P 12 24 56.5 +0.5
baz=77,SNR=6.7
CCUT **Cedar City** 76.55 327 *eP* P 12 24 57.6 +1.5
comp=Z,28nm,1.0s,mb5.2
R15A **Junction** 76.55 328 ⇓P P 12 24 56.6 +0.5
baz=77
GSC **Goldstone** 76.56 323 ⇑P P 12 24 56.3 0.0
baz=77,SNR=9.7
GSC **Goldstone** 76.56 323 *eP* P 12 24 57.0 +0.7
GSC pmax pmax
comp=Z,19nm,1.1s,mb4.9
GSC **Goldstone** 76.56 323 *eP* P 12 24 57.0 +0.7
comp=Z,19nm,1.1s,mb4.9
T12A **Moapa** 76.57 325 ⇑P P 12 24 56.1 -0.2
baz=77
DECC **Green Verdugo** 76.60 321 ⇑P P 12 24 56.6 +0.1
baz=77
Q16A **Castle Valley** 76.60 329 ⇓P P 12 24 56.9 +0.4
baz=77,SNR=13
S14A **Cedar City** 76.62 327 ⇑P P 12 24 57.1 +0.6
baz=77,SNR=8.8
U11A **Corn Creek** 76.67 325 ⇓P P 12 24 57.4 +0.5
baz=77
SHOC **Shoshone** 76.74 324 ⇑P P 12 24 57.2 -0.1
baz=77
MSU **Marysvale** 76.74 328 *eP* P 12 24 57.8 +0.6
P18A **Preston Nutter** 76.77 330 ⇓P P 12 24 57.8 +0.5
baz=77,SNR=35
ARUT **Antelope Range** 76.77 327 *eP* P 12 24 50.3 -7.1
ARUT pmax pmax
comp=Z,86nm,1.6s,mb5.4
ARUT **Antelope Range** 76.77 327 *eP* P 12 24 50.3 -7.1
comp=Z,86nm,1.6s,mb5.4
S13A **Holt Ranch, En** 76.81 326 ⇓P P 12 24 58.2 +0.5
baz=77,SNR=23
O19A **Miners Draw (B** 76.83 331 ⇓P P 12 24 57.9 +0.3
baz=77,SNR=7.0
P17A **Butcher Ranch,** 76.86 329 ⇑P P 12 24 57.8 0.0
baz=77,SNR=14
EDW2 **Edwards Air Fo** 76.88 322 ⇓P P 12 24 57.6 -0.5
baz=77,SNR=6.1
BLG **Laguna Peak** 76.91 321 ⇓P P 12 24 58.0 -0.3
baz=77
N20A **Spence Gulch,** 76.91 332 ⇓P P 12 24 58.2 +0.1
baz=77,SNR=11
TMUT **Trail Mountain** 76.93 329 *eP* P 12 24 59.0 +0.8
comp=Z,14nm,1.1s,mb4.8
R14A **James Farms, M** 76.97 327 ⇓P P 12 24 59.3 +0.7
baz=77
OSI **Osito Adit** 77.09 321 ⇓P P 12 24 59.5 +0.2
baz=77
BSC **Santa Cruz Isl** 77.14 320 ⇓P P 12 24 59.5 0.0
baz=77
U10A **Ash Meadows, A** 77.16 324 ⇑P P 12 25 00.0 +0.4
baz=77,SNR=8.6
LRMC **Laurel Mountai** 77.17 322 ⇑P P 12 24 59.9 +0.2
baz=77
L22A **Ellis Ranch, M** 77.18 334 ⇓P P 12 25 00.1 +0.6
baz=77
O18A **Roosevelt** 77.18 330 ⇓P P 12 24 59.9 +0.3
baz=77,SNR=6.5
M21A **Separation Pea** 77.19 333 ⇑P P 12 24 59.8 +0.1
baz=77,SNR=17
RWWY **Rawlins** 77.20 333 *eP* P 12 25 00.2 +0.5
comp=Z,31nm,0.9s,mb5.2
T11A **Corn Creek, Al** 77.22 325 ⇓P P 12 25 00.5 +0.5
baz=77,SNR=33
Q15A **Fillmore** 77.23 328 ⇓P P 12 25 00.1 +0.2
baz=77,SNR=7.2
S12A **Delamar Landin** 77.32 326 ⇑P P 12 25 01.0 +0.5
baz=78,SNR=11
R13A **O'Grain Ranch,** 77.34 327 ⇓P P 12 25 01.2 +0.7
baz=78
N19A **John Jarvie Ra** 77.34 331 ⇓P P 12 25 00.5 0.0
baz=78,SNR=23
P16A **Fountain Green** 77.39 329 ⇓P P 12 25 01.3 +0.5
baz=78,SNR=6.7
M20A **Sweetwater, Wa** 77.43 332 ⇓P P 12 25 00.9 -0.1
baz=78,SNR=21
O17A **Robinson Place** 77.45 330 ⇓P P 12 25 01.6 +0.5
baz=78,SNR=33
FURC **Furnace Creek,** 77.48 324 ⇑P P 12 25 01.3 -0.1
baz=78,SNR=11
L21A **Rawlins** 77.49 333 ⇓P P 12 25 01.2 -0.1
baz=78,SNR=47
MPMC **Manual Prospec** 77.50 323 ⇑P P 12 25 01.4 -0.2
baz=78,SNR=7.7
SBC **Santa Barbara** 77.51 320 ⇑P P 12 25 01.8 +0.2
baz=78
TPNV **Topopah Spring** 77.52 324 ⇑P P 12 25 01.1 -0.6
baz=78
ARVC **Arvin** 77.53 321 ⇓P P 12 25 02.0 +0.3
baz=78
N18A **Larsen Ranch,** 77.62 331 ⇓P P 12 25 02.1 0.0
baz=78,SNR=14
P15A **Leamington** 77.64 328 ⇑P P 12 25 02.2 0.0
baz=78,SNR=11
Q14A **Sevier Lake (B** 77.64 328 ⇓P P 12 25 02.6 +0.3
baz=78,SNR=28
MPU **Maple Canyon** 77.70 329 *eP* P 12 25 02.6 0.0
comp=Z,37nm,1.1s,mb5.2
ISA **Isabella** 77.73 322 ⇓P P 12 25 03.0 +0.2
baz=78,SNR=11
ISA **Isabella** 77.73 322 *eP* P 12 25 03.5 +0.7
ISA pmax pmax
comp=Z,14nm,0.9s,mb4.9
ISA **Isabella** 77.73 322 *eP* P 12 25 03.5 +0.6
comp=Z,14nm,0.9s,mb4.9
R12A **Pony Springs,** 77.76 326 ⇓P P 12 25 03.4 +0.4
baz=78,SNR=24
O16A **Springville** 77.80 329 ⇓P P 12 25 03.1 0.0
baz=78
M19A **Rock Springs** 77.84 332 ⇑P P 12 25 03.1 -0.2
baz=78,SNR=6.3
DAU **Daniels Canyon** 77.85 330 *eP* P 12 25 04.5 +1.1
NLU **North Lily Min** 77.85 329 *eP* P 12 25 04.2 +0.8
comp=Z,18nm,1.0s,mb5.0
L20A **Wamsutter** 77.92 332 ⇓P P 12 25 03.8 +0.1
baz=78,SNR=20
Q13A **Wheeler Ranch,** 77.97 327 ⇑P P 12 25 04.3 +0.2
baz=78,SNR=12
P14A **Drum Mountains** 78.02 328 ⇑P P 12 25 04.9 +0.5
baz=78,SNR=32
RSSD **Black Hills** 78.08 336 *eP* P 12 25 05.0 +0.4
RSSD pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
RSSD **Black Hills** 78.08 336 *eP* P 12 25 05.0 +0.4
comp=Z,9.4nm,0.8s,mb4.8
JLU **Jordanelle** 78.09 330 *eP* P 12 25 05.1 +0.4
comp=Z,20nm,0.8s,mb5.1
N17A **Moffit Pass** 78.10 330 ⇓P P 12 25 05.1 +0.4
baz=78,SNR=20
CWC **Cottonwood Cre** 78.10 323 ⇑P P 12 25 05.0 +0.2
baz=78
GRAC **Grapevine Rang** 78.14 324 ⇑P P 12 25 05.4 +0.3
baz=78
M18A **Lyman** 78.16 331 ⇓P P 12 25 04.6 -0.5
baz=78,SNR=5.7
VES **Vestal, Richgr** 78.19 322 ⇓P P 12 25 05.1 -0.3
baz=78,SNR=8.1
R11A **Troy Canyon, C** 78.26 326 ⇓P P 12 25 06.1 +0.4
baz=78,SNR=23
O15A **The Old Anders** 78.30 329 ⇑P P 12 25 06.1 +0.2
baz=78,SNR=6.4
SMMC **Simmler** 78.31 321 ⇑P P 12 25 06.2 +0.2
baz=78,SNR=6.9
N16A **Rees Ranch, Co** 78.32 330 ⇑P P 12 25 06.1 +0.1
baz=78,SNR=11
P13A **Bates Ranch, G** 78.36 327 ⇓P P 12 25 06.7 +0.5
baz=79,SNR=19
DUG **Dugway** 78.38 329 ⇑P P 12 25 06.5 +0.1
baz=79,SNR=28
DUG **Dugway** 78.38 329 *eP* P 12 25 06.7 +0.3
DUG pmax pmax
comp=Z,25nm,0.9s,mb5.1
DUG **Dugway** 78.38 329 *eP* P 12 25 06.7 +0.3
comp=Z,25nm,0.9s,mb5.2
L19A **Farson** 78.42 332 ⇓P P 12 25 06.8 +0.3
baz=79,SNR=36
Q12A **Willow Creek R** 78.43 327 ⇑P P 12 25 06.8 +0.1
baz=79,SNR=7.3
S10A **Tonopah Range,** 78.44 325 ⇓P P 12 25 06.8 +0.1
baz=79,SNR=16
M17A **Scullys Gap (B** 78.46 331 ⇓P P 12 25 06.1 -0.6
baz=79,SNR=5.1
K20A **Yellowstone Ra** 78.47 333 ⇓P P 12 25 06.0 -0.7
baz=79,SNR=18
MAW **Mawson** 78.47 164 P P 12 25 05.9 -0.7
comp=Z,1.4nm,0.6s,mb4.1,baz=225,slow=10.0,SNR=6.4
MAW LR LR 13 01 28.0
comp=Z,168nm,21.8s,MS4.3,baz=49,slow=37
MAW **Mawson** 78.47 164 *eP* P 12 25 06.8 +0.3
MAW LR LR 13 01 28.0
L18A **Fontenelle, Gr** 78.56 331 ⇓P P 12 25 07.0 -0.2
baz=79
R10A **Warm Springs** 78.58 325 ⇑P P 12 25 08.2 +0.7
baz=79,SNR=22
RCTC **Rector, Farmer** 78.62 322 ⇑P P 12 25 06.9 -0.9
baz=79
TIN **Tinemaha** 78.64 323 ⇑P P 12 25 08.2 +0.4
baz=79
Q11A **Duckwater** 78.68 326 ⇑P P 12 25 08.2 +0.2
baz=79,SNR=16
P12A **McGill** 78.80 327 ⇓P P 12 25 09.0 +0.3
baz=79,SNR=6.9
N15A **Stansbury Isla** 78.81 329 ⇓P P 12 25 08.1 -0.5
baz=79
K19A **Absolon Red Bu** 78.81 333 ⇑P P 12 25 08.2 -0.4
baz=79,SNR=19
O13A **Hicks Ranch, I** 78.88 328 ⇓P P 12 25 08.9 -0.2
baz=79
HWUT **Hardware Ranch** 78.96 330 *eP* P 12 25 09.3 -0.2
comp=Z,38nm,0.8s,mb5.4
Q10A **Clear Creek Ra** 79.04 325 ⇑P P 12 25 10.1 +0.1
baz=79,SNR=10.0
BW06 **Boulder Array** 79.05 332 ⇑P P 12 25 09.5 -0.5
baz=79,SNR=24
BW06 **Boulder Array** 79.05 332 *eP* P 12 25 09.9 -0.1
comp=Z,14nm,1.0s,mb4.8
PDAR **Pinedale Array** 79.05 332 P P 12 25 09.6 -0.4
comp=Z,8.5nm,0.9s,mb4.7,baz=132,slow=8.2,SNR=46
L17A **Cokeville** 79.06 331 ⇑P P 12 25 09.3 -0.7
baz=79,SNR=12
BGU **Big Grassy Mou** 79.07 329 *eP* P 12 25 10.0 -0.1
comp=Z,26nm,1.3s,mb5.0
N14A **Grayback Hills** 79.08 329 ⇑P P 12 25 09.9 -0.3
baz=79,SNR=16
SPUT **South Promonto** 79.11 329 *eP* P 12 25 10.2 -0.1
comp=Z,36nm,0.9s,mb5.3
K18A **Toltan Ranch,** 79.15 332 ⇓P P 12 25 10.7 +0.2
baz=79,SNR=33
L16A **Fish Haven** 79.23 330 ⇑P P 12 25 10.6 -0.4
baz=79,SNR=29
M15A **Larsen Ranch,** 79.23 330 ⇑P P 12 25 10.5 -0.5
baz=79,SNR=13
P11A **Circle Ranch,** 79.28 326 ⇑P P 12 25 11.4 +0.1
baz=80
RAR **Rarotonga** 79.28 252 LR LR 12 54 08.3
comp=Z,310nm,18.4s,MS4.7,baz=357,slow=31
O12A **Currie** 79.35 327 ⇑P P 12 25 11.6 0.0
baz=80,SNR=28
AGMN **Agassiz Nation** 79.36 343 *eP* P 12 25 10.5 -1.0
comp=Z,11nm,0.9s,mb4.8
MLAC **Mammoth Lakes** 79.39 323 ⇑P P 12 25 12.1 +0.2
baz=80
N13A **Wendover, West** 79.55 328 ⇓P P 12 25 12.2 -0.5
baz=80
N13A **Wendover, West** 79.55 328 *eP* P 12 25 12.7 0.0
comp=Z,15nm,0.8s,mb5.0
J18A **Kendall Valley** 79.61 332 ⇑P P 12 25 12.5 -0.5
baz=80,SNR=25
K17A **Gardner Place,** 79.61 331 ⇑P P 12 25 12.8 -0.2
baz=80,SNR=17
HVU **Hansel Valley** 79.63 330 *eP* P 12 25 13.2 0.0
HVU pmax pmax
comp=Z,23nm,0.7s,mb5.2
HVU **Hansel Valley** 79.63 330 *eP* P 12 25 13.2 +0.1
comp=Z,23nm,0.7s,mb5.2
L15A **Malad City** 79.64 330 ⇓P P 12 25 12.5 -0.7
baz=80,SNR=19
M14A **Sheep Mountain** 79.67 329 ⇑P P 12 25 12.9 -0.4
baz=80,SNR=33
O11A **Cowboy Ranch,** 79.68 327 ⇑P P 12 25 13.6 +0.2
baz=80
AHID **Auburn Hatcher** 79.70 331 *eP* P 12 25 13.6 +0.1
comp=Z,26nm,0.8s,mb5.2
NVAR **Mina Array Bea** 79.71 324 P P 12 25 13.6 0.0
comp=Z,4.1nm,0.8s,mb4.4,baz=157,slow=6.2,SNR=32
TSUM **Tsumeb** 79.92 106 *eP* P 12 25 16.6 +1.2
I18A **Diamond G Ranc** 79.93 332 ⇓P P 12 25 14.7 0.0
baz=80,SNR=17
M13A **Montello** 79.93 328 ⇓P P 12 25 14.2 -0.6
baz=80,SNR=6.4
M13A **Montello** 79.93 328 *eP* P 12 25 14.8 0.0
comp=Z,14nm,0.9s,mb4.9
N12A **Clover Valley,** 79.94 328 ⇑P P 12 25 14.4 -0.4
baz=80,SNR=13
N12A **Clover Valley,** 79.94 328 *eP* P 12 25 14.7 -0.2
comp=Z,22nm,1.0s,mb5.0
ELK **Elko** 79.95 327 *eP* P 12 25 14.6 -0.3
ELK pmax pmax
comp=Z,17nm,0.8s
ELK **Elko** 79.95 327 *eP* P 12 25 14.6 -0.4
comp=Z,17nm,0.8s,mb5.0
J17A **Brown Place, J** 80.02 332 ⇓P P 12 25 15.1 -0.2
baz=80,SNR=13
L14A **Malta** 80.05 329 ⇓P P 12 25 14.9 -0.5
baz=80,SNR=31
REDW **Red Top Meadow** 80.08 332 *eP* P 12 25 15.8 +0.3
comp=Z,24nm,1.1s,mb5.0
SNOW **Snow King Moun** 80.12 332 *eP* P 12 25 16.0 +0.2
comp=Z,17nm,0.9s,mb5.0
LOHW **Long Hollow** 80.18 332 *eP* P 12 25 16.0 -0.1
comp=Z,34nm,1.4s,mb5.1
O10A **Cortez Mining,** 80.21 326 ⇑P P 12 25 16.0 -0.3
baz=80
TPAW **Teton Pass** 80.23 332 *eP* P 12 25 16.0 -0.3
comp=Z,25nm,1.1s,mb5.1
N11A **Elko Archery C** 80.25 327 ⇓P P 12 25 16.1 -0.4
baz=80
K15A **Arbon** 80.25 330 ⇑P P 12 25 16.1 -0.4
baz=80,SNR=9.7
RRI2 **Red Ridge** 80.27 331 *eP* P 12 25 16.3 -0.2
comp=Z,25nm,1.1s,mb5.1
M12A **Wells** 80.33 328 ⇑P P 12 25 16.7 -0.2
baz=80,SNR=15
J16A **Bone** 80.33 331 ⇑P P 12 25 16.8 -0.1
baz=80
WAKR **Walker** 80.35 323 *eP* P 12 25 18.2 +1.1
L13A **Double Diamond** 80.41 329 ⇑P P 12 25 17.4 +0.1
baz=81,SNR=35
I17A **Pilgrim Ck.** 80.42 332 ⇓P P 12 25 17.6 +0.2
baz=81,SNR=6.3
K14A **Jones Ranch, D** 80.42 330 ⇑P P 12 25 16.9 -0.6
baz=81,SNR=10
CMB **Columbia Colle** 80.51 323 *eP* P 12 25 18.4 +0.4
CMB pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
CMB **Columbia Colle** 80.51 323 *eP* P 12 25 18.4 +0.3
comp=Z,1.7nm,0.5s,mb4.2
N10A **Dunphy** 80.54 327 ⇓P P 12 25 17.8 -0.3
baz=81
IMW **Indian Meadow** 80.56 332 *eP* P 12 25 18.1 +0.1
comp=Z,19nm,1.0s,mb5.0
M11A **Holland Ranch,** 80.75 328 ⇓P P 12 25 19.2 0.0
baz=81,SNR=24
I16A **Newdale** 80.77 332 ⇑P P 12 25 19.0 -0.2
baz=81,SNR=13
J15A **Blackfoot** 80.78 331 ⇓P P 12 25 19.5 +0.1
baz=81,SNR=17
H17A **Grant Village** 80.81 332 ⇓P P 12 25 20.6 +1.1
baz=81
RLMT **Red Lodge** 80.89 334 ⇑P P 12 25 19.7 -0.2
baz=81,SNR=11
RLMT **Red Lodge** 80.89 334 *eP* P 12 25 20.1 +0.2
comp=Z,16nm,1.0s,mb4.9
K13A **Stover Farm, H** 80.91 329 ⇑P P 12 25 19.7 -0.3
baz=81,SNR=6.0
L12A **House Creek Ra** 80.94 328 ⇓P P 12 25 20.2 0.0
baz=81,SNR=12
YFT **Old Faithful** 80.97 332 *eP* P 12 25 21.0 +0.7
comp=Z,8.6nm,0.8s,mb4.7
LAO **LASA Array** 81.08 336 *eP* P 12 25 20.4 -0.4
comp=Z,28nm,1.0s,mb5.2
G18A **Lazy EL Ranch,** 81.17 334 ⇓P P 12 25 20.8 -0.5
baz=81,SNR=18
M10A **I.L. Ranch, Tu** 81.18 327 ⇓P P 12 25 21.3 -0.2
baz=81,SNR=9.6
J14A **Carey** 81.20 330 ⇑P P 12 25 21.7 +0.2
baz=81,SNR=7.6
YMR **Madison River** 81.20 332 *eP* P 12 25 22.5 +1.0
comp=Z,53nm,1.1s,mb5.4
PAHR **Pah Rah Range** 81.22 324 *eP* P 12 25 22.5 +0.8
comp=Z,32nm,1.1s,mb5.2
K12A **Draper Farm, C** 81.28 329 ⇓P P 12 25 22.0 +0.1
baz=82,SNR=12
I15A **Monteview** 81.29 331 ⇓P P 12 25 22.1 +0.1
baz=82,SNR=7.5
L11A **Cat Creek Ranc** 81.30 328 ⇓P P 12 25 22.1 0.0
baz=82,SNR=26
H16A **Russell Place,** 81.34 332 ⇓P P 12 25 22.4 +0.1
baz=82,SNR=8.7
TOA0 **Torodi Ar. Sit** 81.36 70 *eP* P 12 25 23.8 +0.8
TORD **Torodi Ar. Bea** 81.36 70 P P 12 25 23.1 +0.1
comp=Z,20nm,1.3s,mb4.9,baz=266,slow=4.8,SNR=18
TORD LR LR 12 59 58.9
comp=Z,148nm,18.4s,MS4.4,baz=210,slow=34
J13A **Cove Ranch, Pi** 81.55 330 ⇑P P 12 25 23.3 -0.1
baz=82,SNR=18
L10A **Juniper Basin** 81.57 328 ⇑P P 12 25 23.8 +0.2
baz=82
GCMT **Greycliff** 81.60 334 *eP* P 12 25 23.4 -0.3
comp=Z,16nm,1.2s,mb4.8
G17A **Pierce Place,** 81.64 333 ⇓P P 12 25 23.9 +0.1
baz=82
I14A **Mackay** 81.65 330 ⇓P P 12 25 24.1 +0.2
baz=82,SNR=15
F18A **Big Timber** 81.72 334 ⇑P P 12 25 23.7 -0.5
baz=82,SNR=14
HLID **Hailey** 81.78 330 ⇓P P 12 25 24.7 +0.1
baz=82,SNR=38
HLID **Hailey** 81.78 330 *eP* P 12 25 24.8 +0.2
comp=Z,22nm,1.0s,mb5.0
J12A **Stokes Ranch,** 81.84 329 ⇓P P 12 25 24.8 -0.2
baz=82,SNR=24
H15A **Lima** 81.86 331 ⇓P P 12 25 25.1 +0.1
baz=82,SNR=8.2
DGMT **Dagmar** 81.93 338 ⇑P P 12 25 25.0 -0.2
baz=82,SNR=9.1
DGMT **Dagmar** 81.93 338 *eP* P 12 25 25.2 0.0

comp=Z,42nm,0.9s,mb5.4
I13A Wildhorse Cree 81.93 330 ⇓P P 12 25 25.7 +0.3
baz=82,SNR=36
BOSA Boshof 81.95 118 P P 12 25 26.7 +0.6
comp=Z,2.9nm,0.4s,mb4.6,baz=290,slow=5.6,SNR=11
BOSA LR LR 12 56 29.1
comp=Z,343nm,18.9s,MS4.7,baz=176,slow=32
BOSA Boshof 81.95 118 P P 12 25 26.7 +0.6
BOSA LR LR 12 56 29.1
G16A Moss Hill, Enn 82.00 332 ⇓P P 12 25 25.3 -0.4
baz=82
F17A Fitzpatrick Pl 82.09 333 ⇓P P 12 25 26.1 -0.1
baz=82,SNR=8.6
MCMT McKenzie Canyo 82.11 331 eP P 12 25 26.8 +0.5
comp=Z,10nm,1.0s,mb4.7
H14A Leadore 82.16 331 ⇓P P 12 25 26.8 +0.2
baz=82,SNR=12
G15A Dillon 82.23 332 ⇓P P 12 25 26.9 0.0
baz=82,SNR=13
I12A Atlanta 82.29 329 ⇑P P 12 25 27.3 0.0
baz=82,SNR=14
MFID Camas Ranch 82.31 329 ⇑P P 12 25 27.2 -0.2
baz=82,SNR=12
E18A Harlowton 82.34 334 ⇑P P 12 25 27.3 -0.1
baz=83,SNR=11
F16A Kennard Place, 82.38 333 ⇓P P 12 25 27.2 -0.5
baz=83
DLMT Dillon 82.44 332 eP P 12 25 28.1 +0.1
comp=Z,16nm,1.1s,mb4.9
H13A Challis 82.50 330 ⇑P P 12 25 28.4 +0.1
baz=83,SNR=30
E17A Martinsdale 82.62 333 ⇑P P 12 25 28.7 -0.3
baz=83,SNR=7.9
G14A Jackson 82.70 331 ⇓P P 12 25 29.6 +0.2
baz=83
LRM Limekiln Ridge 82.75 332 eP P 12 25 29.6 0.0
H12A Diamond D Ranc 82.76 330 ⇓P P 12 25 29.5 -0.2
baz=83,SNR=8.0
SCHQ Schefferville 82.76 2 LR LR 13 00 49.6
comp=Z,77nm,20.8s,MS4.0,baz=301,slow=35
F15A Butte 82.78 332 ⇑P P 12 25 29.7 0.0
baz=83,SNR=14
D18A Linhart Farms, 82.82 334 ⇑P P 12 25 29.4 -0.5
baz=83,SNR=10
WVOR Wild Horse Val 82.88 327 eP P 12 25 30.3 -0.1
WVOR pmax pmax
comp=Z,15nm,1.3s,mb4.9
WVOR Wild Horse Val 82.88 327 eP P 12 25 30.3 -0.1
comp=Z,15nm,1.3s,mb4.9
G13A Cobalt 82.92 331 ⇓P P 12 25 30.5 0.0
baz=83,SNR=21
E16A East Helena 83.01 333 ⇑P P 12 25 30.8 -0.1
baz=83
F14A Wisdom 83.12 332 ⇑P P 12 25 31.6 +0.1
baz=83,SNR=7.6
D17A Six Diamond Ra 83.12 334 ⇑P P 12 25 31.3 -0.2
baz=83,SNR=28
HRY Holter Researc 83.22 333 eP P 12 25 32.5 +0.5
E15A Deer Lodge 83.31 332 ⇑P P 12 25 32.2 -0.3
baz=84
MOD Modoc 83.31 325 eP P 12 25 32.5 -0.1
comp=Z,17nm,0.9s,mb5.1
D16A Dana Ranch, Ca 83.36 333 ⇓P P 12 25 32.7 -0.1
baz=84,SNR=15
EGMT Eagleton 83.49 335 ⇓P P 12 25 32.5 -0.9
baz=84,SNR=6.8
EGMT Eagleton 83.49 335 eP P 12 25 32.5 -0.9
comp=Z,14nm,1.0s,mb4.9
J08A Circle Bar Ran 83.50 327 ⇑P P 12 25 33.3 -0.3
baz=84,SNR=37
F13A Darby 83.51 331 ⇑P P 12 25 33.2 -0.3
baz=84,SNR=14
C17A Wharram Farm, 83.55 334 ⇓P P 12 25 33.0 -0.7
baz=84,SNR=13
E14A Clinton 83.65 332 ⇑P P 12 25 34.0 -0.3
baz=84
B18A Beardsley Farm 83.81 335 ⇑P P 12 25 34.3 -0.7
baz=84,SNR=18
F12A Elk City 83.88 331 ⇓P P 12 25 35.0 -0.4
baz=84,SNR=11
LBTB Lobatse 83.89 115 eP P 12 25 36.7 +0.5
LBTB pmax pmax
comp=Z,240nm,2.8s,mb5.8
LBTB Lobatse 83.89 115 eP P 12 25 36.7 +0.5
comp=Z,240nm,2.8s,mb5.8
CHMT Chamberlain Mo 83.95 332 eP P 12 25 36.2 +0.4
E13A Victor 83.97 332 ⇓P P 12 25 35.7 -0.2
baz=84,SNR=6.8
C16A Fuhringer Ranc 84.07 334 ⇑P P 12 25 35.7 -0.7
baz=84,SNR=16
BMO Blue Mountains 84.09 329 eP P 12 25 36.2 -0.3
comp=Z,20nm,1.8s,mb5.0
B17A L&G Farms, Che 84.11 335 ⇑P P 12 25 35.6 -1.0
baz=84,SNR=7.5
MSO Missoula 84.17 332 eP P 12 25 37.6 +0.7
comp=Z,12nm,1.6s,mb4.8
D14A Greenough 84.19 332 ⇑P P 12 25 36.8 -0.3
baz=84
K05A Summer Lake 84.22 325 ⇓P P 12 25 37.3 +0.1
baz=84,SNR=18
A18A Metzger Ranch, 84.27 335 ⇑P P 12 25 36.2 -1.1
baz=84
SLMT Seeley Lake 84.31 332 eP P 12 25 37.4 -0.2
YBH Yreka Blue Hor 84.42 324 eP P 12 25 37.9 -0.4
YBH pmax pmax
comp=Z,7.0nm,0.9s
YBH Yreka Blue Hor 84.42 324 eP P 12 25 37.9 -0.5
comp=Z,7.0nm,0.9s,mb4.8
I07A Izee 84.54 327 ⇑P P 12 25 38.7 -0.1
baz=85,SNR=18
B16A M & M Farms, S 84.55 334 ⇑P P 12 25 37.9 -0.9
baz=85
D13A Huson 84.60 332 ⇑P P 12 25 38.6 -0.4
baz=85,SNR=8.2
A17A Triple J Farms 84.61 335 ⇑P P 12 25 38.4 -0.6
baz=85,SNR=22
B15A Bradely Ranch, 84.80 334 ⇓P P 12 25 38.9 -1.2
baz=85,SNR=12
F10A Beach Ranch, E 84.92 330 ⇑P P 12 25 39.7 -1.0
baz=85,SNR=6.7
D12A Red Ives Fores 84.94 331 ⇑P P 12 25 40.0 -0.8
baz=85
B14A Marquette Ranc 85.12 333 ⇓P P 12 25 40.6 -1.0
baz=85
G08A Pilot Rock 85.19 328 ⇓P P 12 25 41.5 -0.6
baz=85,SNR=7.4
BSMT Bassoo Peak 85.33 332 eP P 12 25 43.0 +0.3
A15A Johnson Ranch, 85.41 334 ⇑P P 12 25 41.9 -1.2
baz=86
C12B Naegeli Ranch, 85.51 332 ⇓P P 12 25 43.0 -0.6
baz=86
B13A Whitefish 85.61 333 ⇑P P 12 25 43.5 -0.7
baz=86
A14A Double T Ranch 85.67 333 ⇑P P 12 25 43.5 -0.9
baz=86,SNR=7.6
CASY Casey 85.82 181 eP P 12 25 44.1 -1.0
VTHM Trough 85.86 327 P P 12 25 46.0 +0.6
G06A Carlson Farm, 85.94 327 ⇓P P 12 25 45.8 0.0
baz=86,SNR=6.6
WALA Waterton Lakes 85.94 333 eP P 12 25 45.1 -0.6
comp=Z,0.9nm,1.1s,mb3.9
F07A Phinny Hill Vi 86.09 328 ⇑P P 12 25 46.4 -0.2
baz=86
B12A Libby 86.15 332 ⇓P P 12 25 46.3 -0.5
baz=86
REDWA Red Mountain 86.17 329 P P 12 25 47.0 0.0
HAWA Hanford 86.28 329 eP P 12 25 47.4 -0.1
comp=Z,16nm,1.0s,mb5.2
H04A Detroit Lake 86.28 326 ⇓P P 12 25 46.7 -0.9
baz=86,SNR=8.6
RSW Rattlesnake Hi 86.31 329 eP P 12 25 47.9 +0.3
VFP Flag Point 86.39 327 P P 12 25 48.3 +0.2
D08A Wollman Farm, 86.50 329 ⇑P P 12 25 47.5 -1.0
baz=87
RNO Roman Nose 86.51 325 P P 12 25 49.1 +0.5
A12A Yaak River Ran 86.54 332 ⇑P P 12 25 47.9 -0.8
baz=87,SNR=7.2
E07A Sunnyside 86.55 329 ⇑P P 12 25 48.2 -0.6
baz=87
NEW Newport 86.63 331 eP P 12 25 48.4 -0.8
NEW pmax pmax
comp=Z,10.0nm,1.5s
NEW Newport 86.63 331 eP P 12 25 48.4 -0.8
comp=Z,10nm,1.5s,mb4.8
OD2 Odessa Site #2 86.66 330 P P 12 25 48.8 -0.5
COR Corvallis 86.77 325 eP P 12 25 50.6 +0.7
COR pmax pmax
comp=Z,34nm,1.0s,mb5.5
COR Corvallis 86.77 325 eP P 12 25 50.6 +0.7
comp=Z,34nm,1.0s,mb5.5
C09A Chrisman Ranch 86.78 330 ⇓P P 12 25 49.2 -0.7
baz=87
G04A Mulino 86.80 326 ⇓P P 12 25 49.3 -0.7
baz=87
MPOR Mary's Peak 86.83 325 P P 12 25 50.5 +0.3
F04A Amboy 87.30 327 ⇓P P 12 25 51.6 -0.8
baz=88
ETW Entiat 87.55 329 P P 12 25 53.2 -0.4
LON Longmire 87.60 328 eP P 12 25 53.0 -0.9
LON pmax pmax
comp=Z,5.0nm,0.9s,mb4.7
LON Longmire 87.60 328 eP P 12 25 53.0 -0.9
comp=Z,5.0nm,0.9s,mb4.7
B08A Colville Reser 87.66 330 ⇓P P 12 25 52.8 -1.4
baz=88
F03A Seaside 87.85 326 ⇑P P 12 25 53.7 -1.4
baz=88
D05A Enumclaw 88.01 328 ⇑P P 12 25 54.7 -1.1
baz=88,SNR=5.4
E03A Lebam 88.29 327 ⇑P P 12 25 55.9 -1.2
baz=88
JCW Jim Creek 88.71 329 eP P 12 25 58.0 -1.1
B06A Marblemount 88.74 329 ⇓P P 12 25 57.6 -1.6
baz=89
NLWA Neilton Lookou 89.04 327 ⇓P P 12 26 00.2 -0.5
baz=89
NLWA Neilton Lookou 89.04 327 eP P 12 26 00.7 0.0
comp=Z,16nm,1.3s,mb5.2
A05A Maple Falls 89.37 329 ⇑P P 12 26 01.0 -1.1
baz=90,SNR=5.3
LSZ Lusaka 90.70 108 eP P 12 26 11.3 +2.0
LSZ pmax pmax
comp=Z,6.0nm,1.3s,mb4.8
LSZ Lusaka 90.70 108 eP P 12 26 11.3 +2.0
comp=Z,6.2nm,1.3s,mb4.8
ESDC Sonseca Array 91.86 45 LR LR 13 05 52.2
comp=Z,140nm,19.1s,MS4.4,baz=160,slow=34
YKA Yellowknife Ar 96.88 341 P P 12 26 35.6 -0.8
comp=Z,0.6nm,0.7s,mb4.1,baz=140,slow=4.9,SNR=3.8
DZM Mont Dzumac 105.41 234 eLR LR 13 01 59.0
comp=Z,187nm,27.4s
EGAK Eagle 107.26 335 ePKPdf PKiKP 12 31 28.6 -2.9
MCK McKinley 109.83 332 ePKPdf PKiKP 12 31 34.8 -1.5
BRTR Keskin Array B 118.08 58 PKP PKPdf 12 31 53.3 +0.5
comp=Z,0.5nm,0.5s,baz=252,slow=0.9,SNR=2.8
ASAR Alice Springs 123.14 207 PKP PKPdf 12 32 01.3 -1.9
comp=Z,1.2nm,0.4s,baz=146,slow=1.9,SNR=29
PETK Petropavlovsk- 136.60 319 PKP PKPdf 12 32 27.5 -0.1
comp=Z,1.9nm,0.8s,baz=46,slow=4.2,SNR=4.4
ABKAR Akbulak array 137.19 47 ePKPdf PKPdf 12 32 29.9 +1.0
BVAR Borovoye Array 142.27 38 PKhKP PKPpre 12 32 29.2
comp=Z,0.3nm,0.4s,baz=343,slow=1.5,SNR=2.2
BVAR PKP PKPdf 12 32 37.9 0.0
comp=Z,0.6nm,0.5s,baz=0.0,slow=3.0,SNR=3.6
NVS Novosibirsk 147.46 28 ePKIKP PKPdf 12 32 45.9 -1.0
KURK Kurchatov 147.85 37 ePKIKP PKPdf 12 32 48.0 +0.4
KURK e 12 32 51.4
KURK e 12 32 53.2
EKS2 Erkin-Say 148.09 54 ePKPdf PKPdf 12 32 48.9 +0.6
AML Almayashu 148.17 55 ePKPbc PKPbc 12 32 52.8 +1.1
AAK Ala-Archa 148.61 53 PKPbc PKPbc 12 32 50.9 -2.0
comp=Z,2.0nm,0.3s,baz=343,slow=2.8,SNR=3.8
FRU Bishkek 148.64 53 ePKIKP PKPdf 12 32 50.0 +0.8
UCH Uchtor 148.73 54 ePKPbc PKPbc 12 32 55.2 +2.0
ZAA0 Zalesovo Array 148.75 28 ePKPdf PKPdf 12 32 48.9 -0.1
ZAA0 ePKPbc PKPbc 12 32 52.7 -0.1
ZALV Zalesovo Beam 148.75 28 PKP PKPdf 12 32 49.1 +0.1
comp=Z,18nm,0.5s,baz=318,slow=1.9,SNR=18
ZALV PKPbc PKPbc 12 32 52.8 -0.1
comp=Z,18nm,0.5s,baz=318,slow=2.0,SNR=27
ASAJ Asahikawa 148.86 310 PKPbc PKPbc 12 32 51.6 -1.8
comp=Z,7.7nm,0.9s,baz=226,slow=6.8,SNR=5.4
TKM2 Tokmak 2 149.30 52 ePKHKP PKPpre 12 32 51.3
TKM2 e 12 32 55.7
TKM2 Tokmak 2 149.30 52 ePKPdf PKPdf 12 32 51.3 +1.0
TKM2 ePKPbc PKPbc 12 32 55.7 +1.1
TKM2 ePKPab PKPab 12 32 58.7 -0.6
HYB Hyderabad 149.99 104 i PKP PKPbc 12 32 57.0 0.0
KSH Kashi 150.46 59 ePKPbc PKPbc 12 32 57.8 +0.3
KSH PKS 12 36 30.5
KSH SKS SKSdf 12 39 58.8 +0.7
KSH AMB AMB
comp=Z,62nm,4.2s
KSH LR LR
comp=N,170nm,8.7s
KSH LR LR
comp=E,160nm,8.3s
KSH LR LR
comp=Z,180nm,7.2s
MKAR Makanchi Array 152.01 41 PKPbc PKPbc 12 33 00.6 -0.3
comp=Z,6.3nm,0.7s,baz=296,slow=2.0,SNR=26
MKAR PKPab PKPab 12 33 10.8 +0.5
comp=Z,2.5nm,0.6s,baz=284,slow=2.6,SNR=7.5
MKAR Makanchi Array 152.01 41 PKPbc PKPbc 12 33 00.6 -0.3
MKAR PKPab PKPab 12 33 10.8 +0.5
MJAR Matsushiro Arr 154.08 296 PKPab PKPab 12 33 18.9 -0.5
comp=Z,4.0nm,0.8s,baz=102,slow=2.9,SNR=12
MAT Matsushiro 154.08 296 ePKP PKPdf 12 32 55.7 -2.0
MDJ Mudanjiang 156.82 320 PKP PKPdf 12 33 00.8 -0.3
WMQ Urumqi 156.83 42 ePKP PKPdf 12 33 00.8 -0.4
WMQ LR LR
comp=N,92nm,22.8s
WMQ LR LR
comp=Z,70nm,21.2s,MS4.5
CN2 Changchun 159.60 324 ePKP PKPdf 12 33 03.0 -1.5
CN2 PP PP 12 37 26.8 +2.6
CN2 LR LR
comp=N,200nm,13.0s,MS5.3
CN2 LR LR
comp=E,200nm,13.0s,MS5.3
CN2 LR LR
comp=Z,200nm,13.0s,MS5.1
BJI Beijing 166.80 335 PKP PKPdf 12 33 10.8 -0.7
BJT Baijiatuau 166.82 335 ePKIKP PKPdf 12 33 11.5 0.0
HHC Hu-ho-hao-te 167.21 351 ePKP PKPdf 12 33 08.5 -3.3
HHC pPKP pPKPdf 12 33 15.5 -5.4
HHC sPKP 12 33 17.3
HHC PKS 12 36 40.0
HHC PP PP 12 38 03.8 +0.2
HHC SKS SKSdf 12 40 07.0 -6.8
HHC SKKS SKKSac 12 44 46.5 -3.3
HHC SS SS 12 58 44.0 -2.7
HHC AMB AMB
comp=Z,71nm,9.6s
HHC LR LR
comp=N,160nm,22.3s
HHC LR LR
comp=E,130nm,22.3s
HHC LR LR
comp=Z,150nm,22.3s
NJ2 Nanjing 170.69 297 ePKP PKPdf 12 33 12.3 -2.0
KMI Kunming 173.58 117 PKP PKPdf 12 33 16.0 +0.2
CD2 Chengdu 174.65 58 PKP PKPdf 12 33 18.5 +2.5
CD2 PKPab PKPab 12 34 53.8 +4.0
CD2 PKS 12 36 49.3
CD2 PP PP 12 38 47.0 +4.7
CD2 SKKS SKKSac 12 45 32.0 +5.1
CD2 SS SS 13 00 06.0 +3.3
CD2 AMB AMB
comp=Z,130nm,11.6s
CD2 LR LR
comp=N,170nm,10.7s
CD2 LR LR
comp=Z,150nm,8.9s
GYA Guiyang 177.26 129 PKP PKPdf 12 33 18.0 +1.3
GYA PKPab PKPab 12 35 04.3 +2.9
GYA PKS 12 36 48.0
GYA PP PP 12 38 58.0 +3.6
GYA SKKS SKKSac 12 45 40.3 +1.1
GYA SS SS 13 00 28.5 +1.4
GYA AMB AMB
comp=Z,120nm,8.0s
GYA LR LR
comp=N,140nm,25.8s
GYA LR LR
comp=E,110nm,26.0s
GYA LR LR
comp=Z,120nm,24.9s

*IDC **25** 12:13:36.0±2.8, 28°.29S×178°.79W, h276km±49km, mb3.1/2, mb1 3.3/2, mb1mx3.1/15, mbtmp3.1/2, Error ellipse: s-maj=179.5km s-min=29.2km az=166.0*

ISC 25 12:13:37.6±1.2, 29°.05S±0°.10×178°.9W±0°.5, h285km±21km, n19, σ0°98/19, mb3.2/2, Kermadec Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RAO Raoul Island 0.89 104 P Pn 12 14 15.7 -0.2
272nm,0.3s,baz=0.0,slow=20,SNR=28
RAO S S 12 14 45.7 -0.4
148nm,0.3s,baz=17,slow=19,SNR=3.4
MXZ Matakaoa Point 8.81 195 SN S 12 17 23.2 +2.1
PUZ Puketiti 9.31 194 SN S 12 17 33.1 +0.7
MWZ Matawai 9.73 197 PN Pn 12 15 53.8 +1.5
MWZ SN S 12 17 43.0 +0.9
URZ Urewera 9.77 199 PN Pn 12 15 52.5 -0.3
URZ SN S 12 17 42.5 -0.5
BFZ Birch Farm 12.27 198 SN S 12 18 38.4 -1.5
MRZ Mangatainoka R 12.44 200 PN Pn 12 16 24.6 -0.9
MRZ SN S 12 18 39.9 -3.7
NNZ Nelson 13.68 205 PN Pn 12 16 39.7 -0.9
NNZ SN S 12 19 10.0 -1.6
QRZ Quartz Range 13.68 209 PN Pn 12 16 41.8 +1.1
THZ Tophouse 14.33 206 PN Pn 12 16 48.5 +0.2
LTZ Lake Taylor 15.44 205 SN S 12 19 48.7 +0.4
MQZ McQueen's Vall 16.12 203 SN S 12 20 01.5 -0.4
ASAR Alice Springs 42.41 266 P P 12 21 05.3 +0.5
0.5nm,0.5s,mb3.0,baz=97,slow=6.8,SNR=15
FITZ Fitzroy Crossi 51.58 269 P P 12 22 15.3 -0.1
1.9nm,0.9s,mb3.4,baz=192,slow=9.3,SNR=3.0
FINES FINESS Array B 143.61 340 PKP PKPdf 12 32 33.1 -4.6
1.1nm,0.5s,baz=40,slow=2.4,SNR=9.7
NB2 NORSAR Subarra147.30 351 PKP PKPdf 12 32 44.3 +0.3
comp=Z,0.3nm,0.5s,baz=16,slow=3.2
NOA NORSAR Array B147.30 351 PKPbc PKPbc 12 32 44.4 -2.4
comp=Z,0.9nm,0.8s,baz=16,slow=4.6,SNR=5.3
AKASG Malin Array Be 149.75 323 PKPbc PKPbc 12 32 51.0 -2.3
comp=Z,2.0nm,0.5s,baz=44,slow=2.7,SNR=6.9
MMAI Mount Meron Ar 150.41 286 PKPbc PKPbc 12 32 55.6 0.0
comp=Z,4.0nm,0.7s,baz=66,slow=7.1,SNR=3.5

CSEM 25 12:16:41.6±0.2, 27°.76N×54°.98E, h2km, ML3.7, Error ellipse: s-maj=12.3km s-min=4.8km az=9.0, Southern Iran

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BNDS Bandar-Abbas 1.11 108 ePg Pg 12 17 02.3 -0.7
BNDS eSg Sg 12 17 19.2 +1.8
KRBR Kerman 2.71 35 ePn Pn 12 17 27.2 +1.0
NASN Na'in 5.37 340 ePn Pn 12 18 02.3 -0.4
ZHSF Zahedan 5.41 69 ePn Pn 12 18 03.7 +0.4
KBD Kabd 6.57 284 eP Pn 12 18 19.5 +0.3
UMR Umm Al-Rimmam 6.63 287 eP Pn 12 18 20.2 +0.1
NAY Al-Naaiem 6.97 284 eP Pn 12 18 24.7 -0.1
MIB Mutribah 7.01 289 eP Pn 12 18 25.2 -0.1

*IDC **25** 12:18:48.4±0.6, 11°.43S×166°.35E, h0km, mb4.4/17, mb1 4.4/17, mb1mx4.4/20, mbtmp4.3/17, MS3.9/10, Ms1 3.9/10, ms1mx3.6/25, Error ellipse: s-maj=23.1km s-min=15.6km az=100.0*

*BJI **25** 12:18:49.0, 11°.40S×166°.40E, h10km, mB5.1/5, mb4.7/10*

*NEIC **25** 12:18:50.0±0.4, 11°.41S×166°.36E, h10km, mb4.2/5, Error ellipse: s-maj=12.1km s-min=9.1km az=118.0*

ISC 25 12:18:57.0±2.6, 11°.44S±0°.09×166°.3E±0°.1, h60km±24km, n51, σ0°78/38, mb4.4/25, MS3.8/10, Santa Cruz Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
DZM Mont Dzumac 10.57 179 ePn Pn 12 21 26.5 +0.8
11nm,0.2s
DZM eSn Sn 12 23 14.8 -7.8
10nm,0.3s
DZM eLR LR 12 23 50.1
841nm,24.2s
CTA Charters Tower 21.08 243 eP P 12 23 34.4 -2.1
5.0nm,0.7s,mb4.0
CTA Charters Tower 21.08 243 P P 12 23 34.8 -1.7
3.1nm,0.7s,mb3.8,baz=61,slow=13,SNR=3.8
CTA LR LR 12 29 50.3
comp=Z,361nm,20.2s,MS3.8,baz=54,slow=31
RAO Raoul Island 23.05 143 LR LR 12 30 58.3
comp=Z,261nm,18.1s,MS3.7,baz=316,slow=32
ARMA Armidale 23.27 214 eP P 12 24 00.0 +0.5
CNB Canberra Magne 28.30 210 eP P 12 24 44.0 -0.9
URZ Urewera 28.41 162 P P 12 24 44.9 -1.0
1.9nm,0.4s,mb4.1,baz=342,slow=20,SNR=2.2
URZ LR LR 12 34 12.5
comp=Z,337nm,19.6s,MS4.0,baz=179,slow=32
STKA Stephens Creek 30.52 224 eP P 12 25 05.0 +0.3
4.2nm,0.0s,mb4.3
STKA Stephens Creek 30.52 224 P P 12 25 04.7 0.0
5.7nm,0.8s,mb4.5,baz=41,slow=9.4,SNR=13
STKA PcP PcP 12 28 02.5 0.0
4.0nm,1.0s,baz=84,slow=2.3,SNR=5.4
STKA LR LR 12 36 04.2
comp=Z,284nm,20.6s,MS3.9,baz=27,slow=34
STKA Stephens Creek 30.52 224 eP P 12 25 05.0 +0.3
1.1nm,0.8s,mb3.7
STKA PcP PcP 12 28 02.5 0.0
STKA LR LR 12 36 04.2
WRAB Tennant Creek 31.83 251 eP P 12 25 16.1 -0.2
TOO Toolangi 32.01 212 eP P 12 25 18.5 +0.8
RPZ Rata Peaks 32.42 174 P P 12 25 20.2 -1.0
12nm,0.9s,mb4.7,baz=342,slow=3.1,SNR=7.1
ASAR Alice Springs 33.09 244 P P 12 25 26.6 -0.8
5.8nm,0.8s,mb4.6,baz=74,slow=9.5,SNR=47
ASAR PcP PcP 12 28 09.6 -0.1
3.0nm,0.7s,baz=74,slow=2.4,SNR=19
ASAR ScP ScP 12 31 52.9 +3.9
1.0nm,0.9s,baz=63,slow=4.3,SNR=5.4
KAKA Kakadu 33.10 264 eP P 12 25 27.6 0.0
6.5nm,0.5s,mb4.8
MOO Moorlands 35.08 205 eP P 12 25 45.4 +1.1
FITZ Fitzroy Crossi 39.79 255 eP P 12 26 24.5 0.0
9.3nm,0.7s,mb4.6
FITZ Fitzroy Crossi 39.79 255 eP P 12 26 24.6 +0.1
5.0nm,0.8s,mb4.3
FORT Forrest 40.25 236 eP P 12 26 28.6 +0.4
7.3nm,0.8s,mb4.5
PPT Papeete 43.09 103 eLR LR 12 39 14.4
298nm,27.5s
TBI Tubuai 43.70 112 eLR LR 12 39 50.9
367nm,28.5s
KDI Kendari 43.85 276 P PcS 12 32 44.7 +8.0
MBWA Marble Bar 45.57 252 eP P 12 27 12.3 +1.0
16nm,1.0s,mb4.9
BKSI Bulukumba 46.02 274 P PcS 12 32 43.8 -1.9
32nm,1.2s
BNSI Bone 46.22 275 P PcS 12 32 46.3 -0.2
2um56nm,1.4s
SPSI Sidrap Palu 46.63 275 P PcS 12 32 48.3 +0.1
36nm,1.4s
KLBR Kellerberrin 48.94 238 eP P 12 27 37.0 -0.4
70nm,1.9s,mb5.4
MJAR Matsushiro Arr 54.56 332 P P 12 28 17.8 -1.3
1.9nm,0.7s,mb4.2,baz=166,slow=9.3,SNR=9.2
MJAR LR LR 12 48 46.6
comp=Z,92nm,20.8s,MS3.8,baz=225,slow=33
RKT Rikitea 56.96 110 eLR LR 12 45 56.4
342nm,29.0s
ASAJ Asahikawa 59.34 340 P P 12 28 52.6 -0.2
4.6nm,0.8s,mb4.6,baz=225,slow=19
ASAJ LR LR 12 51 01.4
comp=Z,94nm,19.9s,MS3.9,baz=331,slow=33
KSRS Korea Array 60.50 325 P P 12 29 01.0 +0.1
1.1nm,0.7s,mb4.0,baz=131,slow=7.8,SNR=4.4
KSRS LR LR 12 53 49.8
comp=Z,34nm,18.4s,MS3.5,baz=215,slow=35
PETK Petropavlovsk- 64.71 354 P P 12 29 28.0 -0.6
1.3nm,0.7s,mb4.0,baz=202,slow=7.3,SNR=3.5
PETK LR LR 12 50 49.0
comp=Z,78nm,21.8s,MS3.9,baz=348,slow=30
XAN Xi'an 70.78 312 P P 12 30 07.5 +0.3
XAN pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
CMAR Chiang Mai Arr 72.75 293 P P 12 30 20.5 +1.1
comp=Z,4.5nm,0.8s,mb4.4,baz=119,slow=4.4,SNR=15
ULN Ulaanbaatar 78.93 324 eP P 12 30 54.9 +0.9
comp=Z,3.2nm,0.8s,mb4.3
SONM Songino Array 79.30 324 P P 12 30 56.8 +0.8
comp=Z,1.9nm,0.7s,mb4.2,baz=137,slow=5.7,SNR=9.0
GTA Gaotai 79.71 314 eP P 12 30 59.5 +1.0
GTA pP pP 12 31 04.3 -11

GTA				sP	sP	12 31 07.8	-14
GTA				pmax	pmax		
comp=Z,9.0nm,1.3s,mb4.5							
ILAR	**Eielson Array**	**83.72**	**18**	P	**P**	**12 31 18.3**	**-0.7**
comp=Z,1.3nm,0.7s,mb4.2,baz=252,slow=5.6,SNR=15							
MAW	**Mawson**	**84.55**	**202**	P	**P**	**12 31 23.1**	**-0.2**
comp=Z,2.3nm,0.9s,mb4.3,baz=72,slow=12,SNR=4.3							
MAW	**Mawson**	**84.55**	**202**	*e*P	**P**	**12 31 23.2**	**-0.2**
comp=Z,0.5nm,0.9s,mb3.6							
NVAR	**Mina Array Bea**	**85.88**	**50**	P	**P**	**12 31 30.4**	**0.0**
comp=Z,1.4nm,0.9s,mb4.2,baz=236,slow=8.9,SNR=7.1							
MK31	**Makanchi Array**	**94.17**	**317**	*e*P	**P**	**12 32 09.4**	**+0.1**
MKAR	**Makanchi Array**	**94.17**	**317**	P	**P**	**12 32 09.2**	**-0.1**
comp=Z,6.5nm,0.8s,mb5.1,baz=98,slow=5.9,SNR=42							
ZALV	**Zalesovo Beam**	**94.18**	**324**	P	**P**	**12 32 07.9**	**-1.3**
comp=Z,2.5nm,0.7s,mb4.8,baz=108,slow=4.8,SNR=10							
ZALV				LR	LR	13 10 36.3	
comp=Z,33nm,20.0s,MS3.8,baz=70,slow=33							
TXAR	**Lajitas Array**	**95.56**	**61**	P	**P**	**12 32 17.2**	**+1.1**
comp=Z,0.3nm,0.7s,mb3.9,baz=224,slow=6.3,SNR=3.5							
TXAR				LR	LR	13 04 53.1	
comp=Z,85nm,21.0s,MS4.2,baz=110,slow=29							
ARCES	**ARCESS Array B**	**116.85**	**346**	PKP	PKPdf	12 37 33.3	-0.9
comp=Z,1.6nm,0.9s,baz=57,slow=3.3,SNR=3.7							
NOA	**NORSAR Array B**	**127.22**	**345**	PKP	PKPdf	12 37 53.9	-0.4
comp=Z,0.9nm,0.8s,baz=30,slow=1.9,SNR=4.0							
NOA	**NORSAR Array B**	**127.22**	**345**	PKP	PKPdf	12 37 53.9	-0.4
ESDC	**Sonseca Array**	**150.58**	**345**	PKPbc	PKPbc	12 38 42.1	-0.4
comp=Z,0.4nm,0.4s,baz=9.7,slow=3.5,SNR=4.5							
TORD	**Torodi Ar. Bea**	**164.84**	**278**	PKPab	PKPab	12 39 51.5	-0.1
comp=Z,1.4nm,1.0s,baz=112,slow=3.4,SNR=4.3							
DBIC	**Dimbokro**	**170.04**	**242**	PKPab	PKPab	12 40 14.3	-0.2
comp=Z,5.1nm,0.8s,baz=146,slow=3.6,SNR=4.7							

IDC 25 12:33:36.5±1.4, 24°.05N×143°.22E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.5/22, mbtmp3.7/6, ML3.4/1, Error ellipse: s-maj=53.0km s-min=26.3km az=85.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.18**	**343**	Pn	Pn	12 34 27.9	+0.1
5.9nm,0.3s,baz=279,slow=19,SNR=3.1							
CBIJ				Sn	Sn	12 35 06.2	-0.1
31nm,0.3s,baz=74,slow=23,SNR=13							
ASAR	**Alice Springs**	**48.28**	**191**	P	P	12 42 19.3	-0.2
0.1nm,0.4s,baz=16,slow=8.0,SNR=3.3							
MKAR	**Makanchi Array**	**53.16**	**311**	P	P	12 42 56.1	0.0
0.4nm,0.6s,baz=91,slow=8.5,SNR=4.4							
ILAR	**Eielson Array**	**59.95**	**28**	P	P	12 43 44.2	0.0
0.3nm,0.6s,baz=256,slow=5.4,SNR=4.9							
FINES	**FINESS Array B**	**81.09**	**334**	P	P	12 45 53.8	+0.5
1.0nm,0.5s,baz=49,slow=5.8,SNR=7.0							
NOA	**NORSAR Array B**	**86.78**	**339**	P	P	12 46 22.3	-0.1
0.8nm,0.9s,baz=44,slow=4.7,SNR=2.8							

*IDC **25** 12:36:56.0±0.8, 15°.75S×172°.92W, h0km, mb4.2/10, mb1 4.4/10, mb1mx4.3/18, mbtmp4.2/10, MS3.6/2, Ms1 3.6/2, ms1mx3.3/17, Error ellipse: s-maj=42.4km s-min=18.7km az=133.0*
*NEIC **25** 12:36:57.8±0.6, 15°.57S×173°.02W, h10km, mb4.6/7, Error ellipse: s-maj=29.6km s-min=12.5km az=140.0*
*ISCJB **25** 12:36:59.9±0.5, 15°.6S±0°.1×173°.2W±0°.1, h33km, mb4.3/17, Error ellipse: s-maj=24.1km s-min=11.6km az=141.5*
ISC 25 12:37:01.8±0.5, 15°.7S±0°.1×173°.1W±0°.1, h35km, n24, σ0°75/27, mb4.3/17, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.19**	**36**	Pn	**Pn**	**12 37 27.9**	**-7.8**
30nm,0.3s,baz=3.7,slow=2.9,SNR=44							
AFI				Sn	**Sn**	**12 37 50.6**	**-11**
176nm,0.3s,baz=195,slow=20,SNR=16							
AFI				LR	LR	12 38 13.6	
comp=Z,1μm,21.4s,baz=242,slow=36							
AFI	**Afiamalu**	**2.19**	**36**	Pn	**Pn**	**12 37 27.9**	**-7.8**
AFI				*e*Pn	**Pn**	**12 37 27.9**	**-7.8**
AFI				Sn	**Sn**	**12 37 50.6**	**-11**
AFI				*e*Sn	**Sn**	**12 37 54.1**	**-7.6**
AFI				LR	LR	12 38 13.6	
RAR	**Rarotonga**	**13.78**	**115**	Pn	**Pn**	**12 40 03.4**	**-11**
1.3nm,0.3s,baz=276,slow=9.2,SNR=3.7							
URZ	**Urewera**	**24.07**	**199**	P	**P**	**12 42 12.9**	**-0.9**
2.6nm,0.3s,baz=27,slow=2.3,SNR=3.9							
URZ	**Urewera**	**24.07**	**199**	P	**P**	**12 42 12.9**	**-0.9**
URZ				*e*P		12 42 13.5	
HNR	**Honiara**	**27.02**	**280**	*e*P	**P**	**12 42 39.4**	**-1.4**
31nm,0.6s,mb5.0							
STKA	**Stephens Creek**	**44.14**	**240**	P	**P**	**12 45 07.1**	**0.0**
4.0nm,0.9s,mb4.1,baz=101,slow=14,SNR=6.2							
STKA	**Stephens Creek**	**44.14**	**240**	P	**P**	**12 45 07.1**	**0.0**
WRAB	**Tennant Creek**	**50.05**	**257**	P	**P**	**12 45 55.0**	**+1.6**
16nm,1.5s,mb4.8							
ASAR	**Alice Springs**	**50.29**	**252**	P	**P**	**12 45 55.0**	**-0.1**
4.5nm,0.8s,mb4.6,baz=90,slow=7.6,SNR=53							
FITZ	**Fitzroy Crossi**	**58.43**	**258**	*e*P	**P**	**12 46 54.4**	**0.0**
3.6nm,1.0s,mb4.4							
PETK	**Petropavlovsk-**	**73.00**	**342**	P	**P**	**12 48 28.5**	**+0.9**
0.8nm,0.5s,mb3.9,baz=126,slow=9.1,SNR=2.2							
NVAR	**Mina Array Bea**	**74.36**	**42**	P	**P**	**12 48 35.5**	**-0.4**
1.5nm,0.9s,mb3.9,baz=230,slow=9.0,SNR=8.4							
MSU	**Marysvale**	**78.44**	**44**	*e*P	**P**	**12 49 00.0**	**+0.9**
5.1nm,1.2s,mb4.3							
DUG	**Dugway**	**78.89**	**43**	P	**P**	**12 49 01.9**	**+0.4**
3.1nm,0.9s,mb4.2							
TXAR	**Lajitas Array**	**80.54**	**56**	P	**P**	**12 49 10.1**	**-0.6**
1.9nm,1.1s,mb4.0,baz=224,slow=5.2,SNR=10							
TXAR				LR	LR	13 17 36.6	
comp=Z,58nm,20.1s,baz=45,slow=30							
GDL2	**Guadalupe Moun**	**81.17**	**53**	*e*P	**P**	**12 49 14.3**	**+0.3**
PDAR	**Pinedale Array**	**82.30**	**42**	P	**P**	**12 49 18.8**	**-1.0**
1.4nm,1.0s,mb3.9,baz=209,slow=2.7,SNR=8.3							
SMCO	**Snowmass**	**82.31**	**46**	*e*P	**P**	**12 49 20.3**	**+0.4**
6.9nm,1.4s,mb4.4							
COLA	**College**	**82.60**	**11**	*e*P	**P**	**12 49 21.0**	**+0.2**
9.2nm,1.4s,mb4.6							
ILAR	**Eielson Array**	**82.68**	**11**	P	**P**	**12 49 20.8**	**-0.5**
1.0nm,0.9s,mb3.9,baz=226,slow=5.1,SNR=10							
MAW	**Mawson**	**87.60**	**199**	P	**P**	**12 49 46.9**	**+0.9**
3.9nm,1.1s,mb4.5,baz=144,slow=8.7,SNR=3.9							
YKA	**Yellowknife Ar**	**90.26**	**23**	P	**P**	**12 49 57.8**	**-0.6**
0.6nm,0.7s,mb4.0,baz=236,slow=4.4,SNR=3.7							
BRTR	**Keskin Array B**	**146.57**	**321**	PKPbc	PKPbc	12 56 41.1	+1.4
3.0nm,0.9s,baz=116,slow=2.9,SNR=13							

*ISCJB **25** 12:47:53.5±0.9, 37°.13N±0°.04×37°.56E±0°.05, h3km±7km, Error ellipse: s-maj=8.6km s-min=5.4km az=140.7*
*CSEM **25** 12:47:53.5±0.3, 37°.16N×37°.54E, h5km, MD2.9, Error ellipse: s-maj=6.8km s-min=4.4km az=161.0*
*ISK **25** 12:47:53.4, 37°.26N×37°.52E, h6km, MD2.9*
*DDA **25** 12:47:53.5, 37°.15N×37°.56E, h6km±1km, Md3.2*
ISC 25 12:47:54.1±0.8, 37°.15N±0°.04×37°.54E±0°.05, h10km±7km, n18, σ0°98/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GZT	**Gaziantep**	**0.21**	**6**	*i* P	**Pg**	**12 47 58.1**	**-0.5**
GZT				*i* S	**Sg**	**12 48 02.8**	**+1.3**
GAZ	**Gaziantep**	**0.26**	**276**	*e*PG	**Pg**	**12 47 58.3**	**-1.1**
GAZ				*e*SG	**Sg**	**12 48 03.9**	**+0.9**
GAZ	**Gaziantep**	**0.26**	**276**	*e*Pg	**Pg**	**12 47 58.3**	**-1.1**
GAZ				*e*Sg	**Sg**	**12 48 03.9**	**+0.9**
KUZU	**Kuzuini**	**0.52**	**225**	*e*P	**Pg**	**12 48 03.9**	**-0.4**
KUZU				*i* S	**Sg**	**12 48 12.4**	**+1.2**
KUZU	**Kuzuini**	**0.52**	**225**	*e*P	**Pg**	**12 48 03.9**	**-0.4**
KUZU				*i* S	**Sg**	**12 48 12.4**	**+1.2**
KMRS	**Kahramanmaras**	**0.62**	**305**	*e*PG	**Pg**	**12 48 04.9**	**-1.3**
KMRS				*e*SG	**Sg**	**12 48 12.2**	**-2.1**
KMRS	**Kahramanmaras**	**0.62**	**305**	*e*Pg	**Pg**	**12 48 04.9**	**-1.3**
KMRS				*e*Sg	**Sg**	**12 48 12.2**	**-2.1**
ANDN	**Andirin**	**1.04**	**295**	*e*P	**Pg**	**12 48 13.9**	**-0.2**
ANDN				*i* S	**Sg**	**12 48 28.9**	**+1.2**
ANDN	**Andirin**	**1.04**	**295**	*e*P	**Pg**	**12 48 13.9**	**-0.3**
ANDN				*i* S	**Sg**	**12 48 28.9**	**+1.2**
URFA	**Urfa**	**1.07**	**74**	*e*PG	**Pg**	**12 48 14.0**	**-0.6**
URFA	**Urfa**	**1.07**	**74**	*e*Pg	**Pg**	**12 48 14.0**	**-0.6**
AKCD	**Akcadag**	**1.19**	**15**	*e*P	**Pb**	**12 48 17.8**	**+1.1**
AKCD				*i* S	**Sb**	**12 48 32.6**	**+0.4**
AKCD	**Akcadag**	**1.19**	**15**	*e*P	**Pb**	**12 48 17.8**	**+1.1**
AKCD				*i* S	**Sb**	**12 48 32.6**	**+0.5**
MYA	**Malataya**	**1.37**	**31**	*e*PN	**Pn**	**12 48 19.0**	**-0.3**
MYA	**Malataya**	**1.37**	**31**	*e*Pn	**Pn**	**12 48 19.0**	**-0.3**
KOZT	**Kozan**	**1.40**	**284**	*e*PN	**Pn**	**12 48 19.9**	**+0.1**
KOZT	**Kozan**	**1.40**	**284**	*e*Pn	**Pn**	**12 48 19.9**	**+0.2**
DARE	**Darende-Malaty**	**1.81**	**7**	*e*PN	**Pn**	**12 48 18.9**	**-6.6**

*ISCJB **25** 13:13:23.9±0.8, 37°.70N±0°.03×34°.47E±0°.09, h3km±21km, Error ellipse: s-maj=12.1km s-min=5.4km az=169.5*
*DDA **25** 13:13:23.8, 37°.62N×34°.34E, h7km±2km, Md2.8*
*ISK **25** 13:13:23.6, 37°.61N×34°.45E, h5km, ML2.1*
*CSEM **25** 13:13:24.7±0.3, 37°.66N×34°.48E, h12km, MD2.8, Error ellipse: s-maj=9.2km s-min=5.3km az=61.0*
ISC 25 13:13:24.7±0.7, 37°.69N±0°.03×34°.47E±0°.09, h8km±18km, n12, σ0°82/20, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GULE	**Gulek**	**0.47**	**149**	*i* P	**Pg**	**13 13 33.6**	**-0.2**
GULE				*i* S	**Sg**	**13 13 40.7**	**+0.7**
GULE	**Gulek**	**0.47**	**149**	*i* P	**Pg**	**13 13 33.6**	**-0.2**
GULE				*i* S	**Sg**	**13 13 40.7**	**+0.7**
KARA	**Karaisali**	**0.63**	**133**	*e*PG	**Pg**	**13 13 36.4**	**-0.4**
KARA				*e*SG	**Sg**	**13 13 45.8**	**+0.7**
KARA	**Karaisali**	**0.63**	**133**	*e*Pg	**Pg**	**13 13 36.4**	**-0.4**
KARA				*e*Sg	**Sg**	**13 13 45.8**	**+0.8**
MERS	**Mersin**	**0.82**	**177**	*e*PG	**Pg**	**13 13 38.8**	**-1.6**
MERS				*e*SG	**Sg**	**13 13 50.9**	**-0.3**
MERS	**Mersin**	**0.82**	**177**	*e*Pg	**Pg**	**13 13 38.8**	**-1.6**
MERS				*e*Sg	**Sg**	**13 13 50.9**	**-0.2**
SULT	**Sultanhani-AKS**	**0.91**	**304**	*e*PG	**Pg**	**13 13 43.1**	**+0.9**
SULT	**Sultanhani-AKS**	**0.91**	**304**	*e*Pg	**Pg**	**13 13 43.1**	**+0.9**
AVNT	**Avonos**	**1.13**	**15**	*i* P	**Pg**	**13 13 47.2**	**+0.9**
AVNT				*e*S	**Sg**	**13 13 59.9**	**-1.1**
AVNT	**Avonos**	**1.13**	**15**	*i* P	**Pg**	**13 13 47.2**	**+0.9**
AVNT				*e*S	**Sg**	**13 13 59.9**	**-1.1**
HDMB	**Hadim**	**1.74**	**246**	*e*PN	**Pn**	**13 13 55.3**	**+0.2**
HDMB	**Hadim**	**1.74**	**246**	*e*Pn	**Pn**	**13 13 55.3**	**+0.2**

*IDC **25** 13:38:19.9±2.1, 13°.54S×167°.59E, h0km, mb4.1/6, mb1 4.3/6, mb1mx3.9/18, mbtmp4.1/6, Error ellipse: s-maj=71.5km s-min=33.9km az=133.0*
*NEIC **25** 13:38:28.9±1.6, 13°.03S×166°.89E, h35km, mb3.9/2, Error ellipse: s-maj=34.6km s-min=20.3km az=87.0*
*ISCJB **25** 13:38:29.3±2.0, 13°.2S±0°.1×166°.6E±0°.3, h33km, mb3.9/8, Error ellipse: s-maj=40.3km s-min=19.0km az=165.3*
ISC 25 13:38:31.2±2.0, 13°.1S±0°.1×166°.6E±0°.3, h35km, n11, σ0°74/10, mb3.9/8, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.89**	**181**	Pn	**Pn**	**13 40 37.7**	**+0.4**
ARMA	**Armidale**	**22.08**	**216**	*e*P	**P**	**13 43 23.2**	**-0.1**
3.4nm,0.6s,mb4.0							
STKA	**Stephens Creek**	**29.57**	**227**	P	**P**	**13 44 32.0**	**-0.9**
5.4nm,0.4s,mb4.6,baz=44,slow=8.6,SNR=19							
WRAB	**Tennant Creek**	**31.62**	**253**	P	**P**	**13 44 51.3**	**+0.2**
0.9nm,0.7s,mb3.7							
WRA	**Warramunga Arr**	**31.63**	**253**	P	**P**	**13 44 51.1**	**0.0**
0.4nm,0.5s,mb3.5,baz=84,slow=8.7,SNR=5.0							
WRA	**Warramunga Arr**	**31.63**	**253**	P	**P**	**13 44 51.1**	**0.0**
ASAR	**Alice Springs**	**32.68**	**247**	P	**P**	**13 44 59.8**	**-0.6**
1.5nm,0.4s,mb4.3,baz=75,slow=10,SNR=67							
ASAR				PcP	PcP	13 47 40.7	-5.1
0.4nm,0.5s,baz=75,slow=2.4,SNR=9.0							
FITZ	**Fitzroy Crossi**	**39.71**	**257**	P	**P**	**13 46 01.2**	**+0.7**
2.5nm,0.8s,mb4.0,baz=84,slow=8.4,SNR=5.5							
CMAR	**Chiang Mai Arr**	**73.72**	**294**	P	**P**	**13 50 03.5**	**+1.4**
0.5nm,0.4s,mb3.8,baz=135,slow=5.6,SNR=4.0							
MKAR	**Makanchi Array**	**95.61**	**317**	P	**P**	**13 51 51.9**	**-1.1**
0.1nm,0.4s,mb3.6,baz=90,slow=5.9,SNR=4.4							
ARCES	**ARCESS Array B**	**118.55**	**345**	PKP	PKPdf	13 57 10.2	-4.5
0.8nm,0.5s,baz=63,slow=1.6,SNR=9.0							

*IDC **25** 13:39:51.3±0.6, 32°.80N×105°.65E, h0km, mb4.2/19, mb1 4.3/22, mb1mx4.2/29, mbtmp4.2/22, ML3.7/3, MS3.4/5, Ms1 3.4/5, ms1mx3.0/27, Error ellipse: s-maj=16.7km s-min=13.5km az=38.0*
*ISCJB **25** 13:39:51.2±0.2, 32°.79N±0°.02×105°.64E±0°.03, h10km, mb4.5/65, MS3.7/7, Error ellipse: s-maj=3.4km s-min=3.1km az=25.3*
*BJI **25** 13:39:51.5, 32°.76N×105°.65E, h10km, mB4.6/18, mb4.4/27, ML4.3/22, Ms4.0/30, Ms7 3.8/31*
*MOS **25** 13:39:52.9±0.8, 32°.75N×105°.64E, h23km, mb4.8/33, Error ellipse: s-maj=8.0km s-min=5.6km az=104.2*
*NEIC **25** 13:39:53.0±0.2, 32°.76N×105°.52E, h10km, mb4.5/30, Error ellipse: s-maj=5.3km s-min=4.5km az=167.0*
*SZGRF **25** 13:40:19.4, 37°.21N×104°.82E, h33km, mb4.8, Western Nei Mongol, China*
ISC 25 13:39:53.1±0.2, 32°.76N±0°.02×105°.60E±0°.03, h10km, n157, σ1°00/179, mb4.5/65, MS3.7/7, 6C-4D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.42**	**221**	Pn	**Pn**	**13 40 32.8**	**+0.1**
CD2				Pg	**Pb**	**13 40 36.0**	**-0.7**
CD2				Sn	**Sn**	**13 41 04.0**	**+1.7**
CD2				Sg	**Sg**	**13 41 08.5**	**-2.3**
CD2				smax			
comp=N,9μm,0.7s							
XAN	**Xi'an**	**3.06**	**64**	Pg	**Pn**	**13 40 43.0**	**+1.5**
XAN				Sg	**Sg**	**13 41 28.5**	**-3.0**
XAN				smax			
comp=N,1μm,0.9s							
XAN				smax			
comp=E,960nm,0.9s							
XAN				LR	LR		
comp=N,630nm,3.8s							
XAN				LR	LR		
comp=E,620nm,10.1s							
XAN				LR	LR		
comp=Z,420nm,8.8s							
LZH	**Lanzhou**	**3.62**	**337**	Pn	**Pn**	**13 40 51.0**	**+1.8**
LZH				Pg	**Pb**	**13 40 58.8**	**+1.6**
LZH				Sn	**Sn**	**13 41 37.8**	**+5.8**
LZH				Sg	**Sg**	**13 41 45.3**	**-4.1**
LZH				smax			
comp=N,3μm,0.8s							
LZH				smax			
comp=E,3μm,0.8s							
LZH				LR	LR		
comp=E,4μm,5.1s							
LZH				LR	LR		
comp=Z,1μm,7.0s							
ENH	**Enshi**	**4.15**	**126**	*e*Pn	**Pn**	**13 40 57.6**	**+1.1**
ENH				*e*Pg	**Pg**	**13 41 09.3**	**-3.3**
ENH				*e*Sg	**Sg**	**13 42 05.7**	**-0.6**
GYA	**Guiyang**	**6.35**	**171**	Pn	**Pn**	**13 41 27.8**	**+1.1**
GYA				Sn	**Sn**	**13 42 39.0**	**-0.3**
GYA				smax			
comp=N,260nm,0.8s							
GYA				smax			
comp=E,360nm,0.8s							
WHN	**Wuhan**	**7.78**	**104**	*e*Pn	**Pn**	**13 41 46.5**	**+0.1**
WHN				Sn	**Sn**	**13 43 12.5**	**-2.1**
WHN				LR	LR		
comp=N,2μm,4.6s							
WHN				LR	LR		
comp=E,1μm,8.7s							
WHN				LR	LR		
comp=Z,1μm,5.2s							
KMI	**Kunming**	**8.01**	**199**	P	**Pn**	**13 41 51.5**	**+2.0**
KMI				S	**Sn**	**13 43 23.8**	**+3.6**
KMI				smax			
comp=N,59nm,1.3s							
KMI				smax			
comp=E,46nm,1.3s							
KMI				LR	LR		
comp=N,510nm,6.2s							
KMI				LR	LR		
comp=E,670nm,6.5s							
GTA	**Gaotai**	**8.12**	**326**	*e*P	**Pn**	**13 41 50.8**	**-0.2**
GTA				pP		13 41 55.0	
GTA				sP		13 41 58.3	
GTA				S	**Sn**	**13 43 23.0**	**+0.2**
GTA				pmax	pmax		
comp=Z,24nm,1.1s							
GTA				pmax	pmax		
comp=Z,120nm,5.3s							
GTA				LR	LR		
comp=N,500nm,8.0s							
GTA				LR	LR		
comp=E,270nm,6.5s							
GTA				LR	LR		
comp=Z,280nm,8.4s							
BTO	**Baotou**	**8.60**	**23**	*e*P	**Pn**	**13 41 57.5**	**-0.1**
HHC	**Hu-ho-hao-te**	**9.38**	**29**	*e*P	**Pn**	**13 42 08.0**	**-0.3**
HHC				S	**Sn**	**13 43 54.5**	**+0.6**
HHC				PcS	PcS	13 51 57.5	-2.9
HHC				ScS	ScS	13 55 29.5	-4.2
HHC				pmax	pmax		
comp=Z,18nm,0.5s							
HHC				pmax	pmax		
comp=Z,99nm,4.8s							
HHC				LR	LR		
comp=N,850nm,8.6s							
HHC				LR	LR		
comp=E,440nm,8.2s							
HHC				LR	LR		
comp=Z,340nm,8.1s							
TIA	**Tai'an**	**10.12**	**67**	*e*P	**Pn**	**13 42 19.3**	**+0.9**
BJT	**Baijiatuau**	**11.18**	**47**	*e*P	**Pn**	**13 42 33.3**	**+0.4**
BJT				pmax	pmax		
comp=Z,10.0nm,0.6s							
BJT	**Baijiatuau**	**11.18**	**47**	*e*Pn	**Pn**	**13 42 33.3**	**+0.4**
comp=Z,10nm,0.6s							
BJI	**Beijing**	**11.20**	**47**	P	**Pn**	**13 42 33.5**	**+0.3**
BJI				pmax	pmax		
comp=Z,14nm,0.6s							
BJI				pmax	pmax		
comp=Z,74nm,4.2s							
BJI				LR	LR		
comp=N,500nm,12.4s							
BJI				LR	LR		
comp=E,260nm,10.0s							
BJI				LR	LR		
comp=Z,190nm,17.0s							
NJ2	**Nanjing**	**11.23**	**90**	*e*P	**Pn**	**13 42 35.0**	**+1.3**
NJ2				pP		13 42 38.5	
NJ2				sP		13 42 40.8	
NJ2				PP		13 42 42.8	
NJ2				S	**Sn**	**13 44 43.8**	**+4.5**
NJ2				sS		13 44 47.5	
NJ2				pmax	pmax		
comp=Z,20nm,0.6s							
NJ2				pmax	pmax		
comp=Z,40nm,3.5s							
NJ2				LR	LR		
comp=N,130nm,11.7s							
NJ2				LR	LR		
comp=E,490nm,8.4s							
GZH	**Guangzhou**	**11.82**	**143**	P	**Pn**	**13 42 34.0**	**-7.8**
GZH				S	**Sn**	**13 44 41.3**	**-12**
GZH				LR	LR		
comp=N,350nm,5.2s							
GZH				LR	LR		
comp=E,420nm,5.8s							
GZH				LR	LR		
comp=Z,410nm,4.5s							
SHL	**Shillong**	**13.95**	**243**	*e*PKP	**Pn**	**13 43 08.5**	**-2.4**
QIZ	**Qiongzhong**	**14.20**	**163**	P	**Pn**	**13 43 15.3**	**+1.1**
QIZ				S	**Sn**	**13 45 54.8**	**+2.9**
QIZ				pmax	pmax		
comp=Z,9.0nm,1.3s							
QIZ				pmax	pmax		
comp=Z,130nm,15.3s							
QIZ				LR	LR		
comp=N,130nm,13.6s							
QIZ				LR	LR		
comp=E,64nm,6.4s							
QIZ				LR	LR		
comp=Z,130nm,11.8s							
SONM	**Songino Array**	**15.07**	**2**	Pn	**Pn**	**13 43 24.6**	**-1.4**
comp=Z,0.2nm,0.3s,baz=190,slow=14,SNR=11							
SONM				Lg		13 47 41.0	
comp=Z,0.1nm,0.3s,baz=198,slow=32,SNR=2.3							
SONM				LR	LR	13 49 39.1	
comp=Z,178nm,18.2s,baz=88,slow=39							
ULN	**Ulaanbaatar**	**15.13**	**4**	*e*P	**Pn**	**13 43 26.7**	**-0.1**
ULN				pmax	pmax		
comp=Z,14nm,1.1s							
ULN	**Ulaanbaatar**	**15.13**	**4**	*e*Pn	**Pn**	**13 43 26.7**	**-0.1**
comp=Z,14nm,1.1s							
ULN				*e*		13 43 33.1	
CMAR	**Chiang Mai Arr**	**15.45**	**204**	Pn	**Pn**	**13 43 30.8**	**-0.4**
comp=Z,0.1nm,0.3s,baz=14,slow=12,SNR=5.1							
CMAR				PcP	PcP	13 48 35.2	+0.6
comp=Z,0.1nm,0.3s,baz=310,slow=1.9,SNR=5.7							
CMAR				LR	LR	13 50 12.2	
comp=Z,179nm,20.8s,baz=326,slow=40							
YHNB	**Yeheng**	**16.01**	**116**	*e*Pn	**Pn**	**13 43 41.2**	**+2.8**
comp=Z,11nm,0.7s							
RAMN	**Ramite**	**17.46**	**256**	*e*P	**Pn**	**13 43 55.4**	**-1.3**
comp=Z,21nm,0.7s							
JIRN	**Jiri**	**17.52**	**258**	*e*P	**Pn**	**13 43 57.8**	**+0.3**
GUN	**Gumba**	**17.69**	**259**	*e*P	**Pn**	**13 43 59.5**	**-0.1**
comp=Z,25nm,0.7s							
ZAK	**Zakamensk**	**17.69**	**355**	*e*P	**Pn**	**13 43 58.8**	**-0.7**
ZAK				pmax	pmax		
comp=Z,3.0nm,1.2s							
WMQ	**Urumqi**	**17.83**	**313**	*e*P	**Pn**	**13 44 00.5**	**-0.8**
WMQ				pP	pP	13 44 04.0	-0.8
WMQ				sP	sP	13 44 07.5	+1.4
WMQ				PP		13 44 15.3	
WMQ				pmax	pmax		
comp=Z,8.0nm,0.6s							
WMQ				pmax	pmax		
comp=Z,81nm,4.6s							
WMQ				LR	LR		
comp=N,250nm,12.0s							
WMQ				LR	LR		
comp=Z,150nm,8.0s							
PKI	**Pulchoki**	**18.20**	**259**	*e*P	**Pn**	**13 44 04.5**	**-1.4**
comp=Z,13nm,0.6s							
PKI	**Pulchoki**	**18.20**	**259**	*e*P	**Pn**	**13 44 04.5**	**-1.4**
PKI				pmax	pmax		
comp=Z,13nm,0.6s							
PKIN	**Phulchoki**	**18.20**	**259**	*e*P	**Pn**	**13 44 04.5**	**-1.5**
comp=Z,17nm,0.6s							
KKN	**Kakani**	**18.23**	**260**	*e*P	**Pn**	**13 44 05.1**	**-1.1**
comp=Z,28nm,0.7s							
KKN	**Kakani**	**18

MDJ LR LR
comp=E,130nm,16.2s,MS3.5
MDJ LR LR
comp=Z,160nm,18.3s,MS3.5
MDJ Mudanjiang 22.07 51 *e*P **P 13 44 50.5 +2.4**
comp=Z,7.1nm,0.5s,mb4.3
MK31 Makanchi Array 22.63 315 *e*P **P 13 44 53.4 -0.6**
MKAR Makanchi Array 22.63 315 P **P 13 44 53.8 -0.2**
comp=Z,8.7nm,0.9s,mb4.2,baz=118,slow=10,SNR=27
KSH Kashi 24.78 294 P **P 13 45 19.8 +4.7**
KSH pP 13 45 23.5
KSH sP sP 13 45 26.8 +7.5
KSH PP 13 45 57.5
KSH PcP PcP 13 48 54.0 +2.5
KSH S **S 13 49 41.8 +4.4**
KSH sS sS 13 49 48.5 +6.1
KSH PcS PcS 13 52 32.0 +0.5
KSH ScS ScS 13 56 18.3 -0.1
KSH pmax pmax
comp=Z,10.0nm,1.1s,mb4.3
KSH pmax pmax
comp=Z,110nm,5.8s
KSH LR LR
comp=N,370nm,11.7s,MS4.2
KSH LR LR
comp=E,340nm,13.4s,MS4.2
KSH LR LR
comp=Z,140nm,5.0s
KLR Kul'dur 25.51 42 *e*P **P 13 45 18.2 -3.4**
KLR pmax pmax
comp=E,57nm,1.6s
KLR pmax pmax
comp=Z,68nm,1.6s,mb4.9
KLR MLR MLR
comp=Z,1μm,13.0s,MS4.6
TKM2 Tokmak 2 25.65 302 *e*P **P 13 45 23.1 +0.2**
TKM2 pmax pmax
comp=Z,12nm,1.2s,mb4.3
TKM2 Tokmak 2 25.65 302 *e*P **P 13 45 23.1 +0.2**
comp=Z,12nm,1.2s,mb4.3
ZALV Zalesovo Beam 25.83 331 P **P 13 45 24.5 0.0**
comp=Z,4.9nm,0.8s,mb4.1,baz=134,slow=9.9,SNR=18
UCH Uchtor 26.29 300 *e*P **P 13 45 30.4 +1.7**
comp=Z,7.9nm,1.0s,mb4.2
AAK Ala-Archa 26.38 301 P **P 13 45 30.3 +0.8**
comp=Z,1.4nm,0.3s,mb3.9,baz=104,slow=4.2,SNR=5.0
AAK Ala-Archa 26.38 301 *e*P **P 13 45 30.5 +1.0**
AAK pmax pmax
comp=Z,3.0nm,1.3s,mb3.7
KURK Kurchatov 26.73 320*c i*P **P 13 45 32.5 -0.1**
KURK pmax pmax
comp=Z,16nm,1.2s,mb4.4
KURK Kurchatov 26.73 320 *e*P **P 13 45 32.4 -0.2**
comp=Z,18nm,1.1s,mb4.5
AML Almayashu 26.87 300 *e*P **P 13 45 35.2 +1.3**
comp=Z,6.1nm,0.9s,mb4.1
MJAR Matsushiro Arr 27.02 73 P **P 13 45 34.4 -1.0**
comp=Z,2.2nm,1.0s,mb3.6,baz=272,slow=9.8,SNR=6.7
MJAR LR LR 13 57 09.9
comp=Z,38nm,21.3s,MS2.9,baz=235,slow=38
HABR Khabarovsk 27.10 46 *e*P **P 13 45 36.0 +0.1**
HABR *e*'SP sP 13 45 48.1 +7.9
HABR S **S 13 50 12.3 -1.6**
HABR *SS sS 13 50 27.1 +8.2
HABR *e*SS 13 51 19.9
HABR *e* 13 56 23.1
HABR pmax pmax
comp=E,21nm,2.1s
HABR pmax pmax
comp=Z,20nm,2.1s,mb4.3
HABR pmax pmax
comp=N,21nm,2.5s
HABR MLR MLR
comp=Z,87nm,18.0s,MS3.4
PSI Prapat 30.45 193 P **P 13 46 07.1 +1.1**
comp=Z,3.7nm,0.7s,mb4.2,baz=325,slow=11,SNR=5.0
ASAJ Asahikawa 30.88 58 P **P 13 46 08.5 -1.1**
comp=Z,2.0nm,0.4s,mb4.3,baz=259,slow=8.1,SNR=5.6
ASAJ Asahikawa 30.88 58 P **P 13 46 08.5 -1.1**
ASAJ pmax pmax
comp=Z,2.0nm,0.4s
YSS Yuzh-Sakhalins 31.53 52 *i*P **P 13 46 15.1 -0.2**
YSS pmax pmax
comp=Z,20nm,1.3s,mb4.8
BVAR Borovoye Array 32.32 319 P **P 13 46 21.9 -0.2**
comp=Z,1.5nm,0.7s,mb3.9,baz=128,slow=11,SNR=7.4
BRVK Borovoye 32.39 319*d i*P **P 13 46 23.5 +0.7**
BRVK pmax pmax
comp=Z,6.0nm,1.2s,mb4.3
YAK Yakutsk 33.11 21 *i*P **P 13 46 29.4 +0.4**
YAK pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
ABKAR Akbulak array 37.56 310 *e*P **P 13 47 06.4 -1.0**
comp=Z,4.2nm,0.9s,mb4.2
SVE Sverdlovsk 38.95 322⇓*e*P **P 13 47 19.6 +0.6**
SVE pmax pmax
comp=Z,13nm,1.1s,mb4.6
AKTK Aktyubinsk 38.97 311 P **P 13 47 19.6 +0.4**
AKTO Aktyubinsk 38.97 311 P **P 13 47 19.6 +0.3**
comp=Z,1.2nm,0.6s,mb3.8,baz=119,slow=16,SNR=5.0
ARU Arti 39.93 321*d i*P **P 13 47 27.7 +0.5**
ARU 13 48 58.3
ARU S **S 13 53 32.9 +0.9**
ARU SS SS 13 56 24.3 -4.1
ARU pmax pmax
comp=Z,21nm,1.2s,mb4.7
ARU Arti 39.93 321 *e*P **P 13 47 26.4 -0.8**
comp=Z,20nm,1.1s,mb4.8
TIXI Tiksi 40.89 11 *e*P **P 13 47 34.4 -0.5**
TIXI pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
TIXI MLR MLR
comp=Z,125nm,17.0s,MS3.8
TIXI Tiksi 40.89 11 *e*P **P 13 47 34.1 -0.8**
comp=Z,5.4nm,0.6s,mb4.3
SOKR Solikamsk 41.75 325*c i*P **P 13 47 43.5 +1.3**
SOKR pmax pmax
comp=Z,20nm,1.2s,mb4.6
SEY Seymchan 42.03 30⇓*i*P **P 13 47 44.6 +0.2**
PETK Petropavlovsk- 42.12 45 P **P 13 47 45.0 -0.3**
comp=Z,3.2nm,0.6s,mb4.1,baz=269,slow=2.8,SNR=10
PETK LR LR 14 06 56.2
comp=Z,43nm,18.4s,MS3.4,baz=50,slow=39
PET Petropavlovsk 42.69 45 *e*P **P 13 47 50.3 +0.4**
PET pmax pmax
comp=Z,24nm,2.5s,mb4.5
BILL Bilibino 49.14 26↑*e*P **P 13 48 41.1 +0.5**
BILL *e* 13 50 35.6
BILL *e*SS SS 13 59 15.0 -1.2
BILL pmax pmax
comp=Z,17nm,1.7s,mb4.8
KIV Kislovodsk 49.49 302*c i*P **P 13 48 45.3 +1.7**
KIV *e* 13 48 51.3
KIV *e* 13 50 03.7
KIV pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
NAY Al-Naaiem 49.60 282 *e*P **P 13 48 44.1 -0.6**
NAY AMb AMB 13 48 45.6
comp=Z,20nm,0.9s,mb5.2
VSR Storozhevoye 50.91 312 *e*P **P 13 48 53.9 -0.3**
VSR pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
VSR pmax pmax
comp=N,8.0nm,0.9s
VSR pmax pmax
comp=E,10.0nm,0.9s
OBN Obninsk 52.12 317*c i*P **P 13 49 03.7 +0.5**
OBN *e* 13 50 15.2
OBN *e* 13 50 59.7
OBN *e*S **S 13 56 25.0 -2.1**
OBN *e*SS SS 14 00 04.2 +0.2
OBN pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
JOF Joensuu 54.32 327 *e*P **P 13 49 18.3 -1.0**
JOF pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
JOF Joensuu 54.32 327 *ep* **P 13 49 18.3 -1.0**
comp=Z,8.8nm,0.7s,mb4.8
ARCES ARCESS Array B 56.28 335 P **P 13 49 33.0 -0.3**
comp=Z,2.7nm,0.8s,mb4.3,baz=82,slow=8.7,SNR=8.0
KAF Kangasniemi 56.71 326 *e*P **P 13 49 35.6 -0.9**
KAF pmax pmax
comp=Z,5.0nm,0.5s,mb4.8
KAF Kangasniemi 56.71 326 *e*P **P 13 49 35.6 -0.9**
comp=Z,5.0nm,0.5s,mb4.8
KAF Kangasniemi 56.71 326 *ep* **P 13 49 35.6 -0.9**
comp=Z,5.0nm,0.5s,mb4.8
FINES FINESS Array B 56.91 326 P **P 13 49 37.8 -0.2**
comp=Z,5.4nm,0.5s,mb4.8,baz=88,slow=7.6,SNR=36
BRTR Keskin Array B 57.04 299 P **P 13 49 38.4 -0.9**
comp=Z,1.2nm,0.6s,mb4.1,baz=62,slow=6.6,SNR=8.1
BRTR Keskin Array B 57.04 299*ce*P **P 13 49 39.2 0.0**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
VSU Vasula 57.06 322 *e*P **P 13 49 39.0 -0.1**
VSU pmax pmax
comp=Z,20nm,1.2s,mb5.0
AKASG Malin Array Be 57.19 313 P **P 13 49 39.8 -0.3**
comp=Z,2.8nm,0.5s,mb4.6,baz=68,slow=6.5,SNR=16
WRAB Tennant Creek 59.17 148 *e*P **P 13 49 53.8 -0.5**
WRAB pmax pmax
comp=Z,17nm,1.0s,mb5.0
WRAB Tennant Creek 59.17 148 *e*P **P 13 49 53.8 -0.4**
comp=Z,17nm,1.0s,mb5.0
ASAR Alice Springs 62.28 151 P **P 13 50 15.4 0.0**
comp=Z,3.8nm,0.7s,mb4.7,baz=332,slow=6.6,SNR=101
STHS Stebnicka Huta 62.48 313 *e*P **P 13 50 17.6 +1.0**
STHS pmax pmax
comp=Z,3.0nm,0.9s,mb4.4
STHS pmax pmax
comp=N,6.0nm,0.8s
STHS Stebnicka Huta 62.48 313 *e*P **P 13 50 17.6 +1.0**
comp=N,3.0nm,0.9s,mb4.4
STHS Stebnicka Huta 62.48 313 *e*P **P 13 50 17.6 +1.0**
NB2 NORSAR Subarra 63.95 327 P **P 13 50 25.0 -1.1**
comp=Z,6.0nm,0.8s,mb4.7,baz=70,slow=6.9
NOA NORSAR Array B 63.95 327 P **P 13 50 25.2 -0.9**
comp=Z,3.6nm,0.7s,mb4.5,baz=70,slow=6.6,SNR=19
VYHS Vyhne 64.29 313 *e*P **P 13 50 28.9 +0.4**
VYHS pmax pmax
comp=Z,6.0nm,1.3s,mb4.5
VYHS Vyhne 64.29 313 *e*P **P 13 50 28.9 +0.4**
comp=Z,5.8nm,1.3s,mb4.5
VYHS Vyhne 64.29 313 *e*P **P 13 50 28.9 +0.4**
DPC Dobruska-Polom 65.14 315 *e*P **P 13 50 34.4 +0.3**
DPC Dobruska-Polom 65.14 315 *e*P **P 13 50 34.4 +0.3**
PRU Pruhonice 66.34 315 *e*P **P 13 50 42.9 +1.1**
PRU Pruhonice 66.34 315 *e*P **P 13 50 42.9 +1.1**
BRG Berggiesshubel 66.34 316 *e*P **P 13 50 42.2 +0.4**
comp=Z,6.0nm,1.2s,mb4.5
BRG Berggiesshubel 66.34 316 *e*P **P 13 50 42.2 +0.4**
comp=Z,5.7nm,1.2s,mb4.5
BRG Berggiesshubel 66.34 316 *e*P **P 13 50 42.2 +0.4**
BRG pmax pmax
comp=Z,3.0nm,1.2s,mb4.2
PPLA Purkeypile 66.61 29 *e*P **P 13 50 43.7 +0.5**
comp=Z,16nm,0.9s,mb5.0
CLL Collm 66.72 317 *e*P **P 13 50 43.7 -0.5**
comp=Z,5.0nm,1.0s,mb4.5
CLL Collm 66.72 317 *e*P **P 13 50 44.0 -0.2**
CLL *i* 13 51 10.7
CLL pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
CLL Collm 66.72 317 *e*P **P 13 50 44.0 -0.2**
comp=Z,5.0nm,1.0s,mb4.5
CLL *i* PcP PcP 13 51 10.7 -2.5
CLL Collm 66.72 317 *e*P **P 13 50 44.0 -0.2**
comp=Z,5.0nm,1.0s,mb4.5
KHC Kasperske Hory 67.26 315 *e*P **P 13 50 49.8 +2.1**
KHC Kasperske Hory 67.26 315 *e*P **P 13 50 49.8 +2.1**
GEC2 GERESS Array S 67.30 314 *e*P **P 13 50 48.5 +0.6**
comp=Z,5.0nm,1.1s,mb4.5
GEC2 GERESS Array S 67.30 314 *e*P **P 13 50 48.5 +0.6**
GEC2 pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
GEC2 GERESS Array S 67.30 314 *e*P **P 13 50 48.5 +0.6**
comp=Z,5.0nm,1.1s,mb4.5
COLA College 67.39 26 *e*P **P 13 50 47.6 -0.6**
COLA pmax pmax
comp=Z,18nm,1.3s,mb4.9
COLA College 67.39 26 *e*P **P 13 50 47.6 -0.6**
comp=Z,18nm,1.3s,mb5.0
TANN Tannenbergstha 67.39 316 *e*P **P 13 50 48.6 +0.1**
comp=Z,5.0nm,1.2s,mb4.4
NEUB Neuenburg 67.46 317 *e*P **P 13 50 48.6 -0.3**
comp=Z,8.0nm,0.8s,mb4.8
WERD Werda 67.47 316 *e*P **P 13 50 49.4 +0.4**
comp=Z,9.0nm,1.7s,mb4.5
GUNZ Gunzen 67.49 316 *e*P **P 13 50 49.2 +0.1**
comp=Z,7.0nm,1.0s,mb4.7
PLN Plauen 67.54 316 *e*P **P 13 50 49.9 +0.5**
comp=Z,57nm,1.5s,mb5.4
ILAR Eielson Array 67.80 26 P **P 13 50 49.8 -1.0**
comp=Z,4.2nm,1.2s,mb4.3,baz=286,slow=5.5,SNR=19
ROTZ Rotzenmuhle 67.81 316 *e*P **P 13 50 51.6 +0.5**
comp=Z,11nm,1.3s,mb4.7
GRFO Grafenberg 68.42 316 *e*P **P 13 50 55.1 +0.1**
comp=Z,8.0nm,0.9s,mb4.8
PMR Palmer 68.48 30 *e*P **P 13 50 53.9 -1.2**
PMR pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
PMR Palmer 68.48 30 *e*P **P 13 50 53.9 -1.3**
comp=Z,4.8nm,0.7s,mb4.6
INK Inuvik 70.18 20 *e*P **P 13 51 05.1 -0.4**
INK pmax pmax
comp=Z,9.0nm,1.3s
INK Inuvik 70.18 20 *e*P **P 13 51 05.1 -0.4**
comp=Z,8.7nm,1.3s,mb4.5
CDF Champ du Feu 71.31 316 *e*P **P 13 51 12.6 -0.2**
HINF Hinteralfeld 71.85 315 *e*P **P 13 51 16.6 +0.6**
KMBO Kilima Mbogo 72.52 257 P **P 13 51 21.6 +1.0**
comp=Z,0.7nm,0.3s,mb4.0,baz=180,slow=24,SNR=3.7
STKA Stephens Creek 72.73 148 P **P 13 51 20.6 -0.7**
comp=Z,1.8nm,0.7s,mb4.1,baz=308,slow=13,SNR=3.2
LPG La Plagne 73.04 313 *e*P **P 13 51 23.8 +0.6**
comp=Z,11nm,0.7s,mb4.6
LPG La Plagne 73.04 313 *e*P **P 13 51 23.8 +0.6**
LPG pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
LPG La Plagne 73.04 313 *e*P **P 13 51 23.8 +0.6**
comp=Z,5.7nm,0.6s,mb4.7
LPL La Plagne 73.04 313 *e*P **P 13 51 23.7 +0.5**
comp=Z,9.4nm,0.7s,mb4.5
LPL La Plagne 73.04 313 *e*P **P 13 51 23.7 +0.5**
LPL pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
LPL La Plagne 73.04 313 *e*P **P 13 51 23.7 +0.5**
comp=Z,4.7nm,0.7s,mb4.5
MBDF Montbardon 73.41 313 *e*P **P 13 51 25.6 +0.2**
SBF Sospel 73.42 312 *e*P **P 13 51 25.1 -0.4**
ORIF Oris-en-Rattie 73.86 313 *e*P **P 13 51 28.0 0.0**
SMF Signal de Mont 74.21 315 *e*P **P 13 51 29.5 -0.6**
AVF Avril sur Loir 74.42 316 *e*P **P 13 51 31.0 -0.3**
comp=Z,6.8nm,0.8s,mb4.3
AVF Avril sur Loir 74.42 316 *e*P **P 13 51 31.0 -0.3**
AVF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
AVF Avril sur Loir 74.42 316 *e*P **P 13 51 31.0 -0.3**
comp=Z,3.4nm,0.8s,mb4.3
TCF Toulx Ste Croi 75.36 316 *e*P **P 13 51 36.6 -0.1**
comp=Z,4.3nm,0.6s,mb4.2
TCF Toulx Ste Croi 75.36 316 *e*P **P 13 51 36.6 -0.1**
TCF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
TCF Toulx Ste Croi 75.36 316 *e*P **P 13 51 36.6 -0.1**
comp=Z,2.2nm,0.6s,mb4.3
MFF Saint Martin d 76.56 317 *e*P **P 13 51 43.6 +0.1**
YKA Yellowknife Ar 79.74 18 P **P 13 52 00.7 -0.1**
comp=Z,8.8nm,0.5s,mb3.9,baz=323,slow=4.9,SNR=6.8
YKA Yellowknife Ar 79.74 18 P **P 13 52 00.7 -0.2**
YKA pmax pmax
comp=Z,1.0nm,0.5s

*ATH **25** 14:19:02.9, 39.°99N×20.°54E, h5km, MD3.2/4*
*CSEM **25** 14:19:02.9, 39.°99N×20.°54E, h5km, MD3.2, After ATH*
*ISCJB **25** 14:19:03.8±0.7, 39.°94N±0.°04×20.°51E±0.°05, h10km, Error ellipse: s-maj=5.9km s-min=5.5km az=171.7*
ISC 25 14:19:04.4±0.8, 39.°91N±0.°04×20.°54E±0.°06, h8km±13km, n9, σ0§75/16, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.35**	**136**	*e*PG	**Pg**	**14 19 10.4**	**-0.8**
JAN				*e*SB	**Sg**	**14 19 16.4**	**+0.6**
JAN	**Janina**	**0.35**	**136**	*e*Pg	**Pg**	**14 19 10.4**	**-0.8**
JAN				*e*Sb	**Sg**	**14 19 16.4**	**+0.6**
KEK	**Kerkira**	**0.60**	**251**	*e*PB	**Pg**	**14 19 14.6**	**-1.4**
KEK				*e*SB	**Sg**	**14 19 24.9**	**+1.1**
KEK	**Kerkira**	**0.60**	**251**	*e*Pb	**Pg**	**14 19 14.6**	**-1.4**
KEK				*e*Sb	**Sg**	**14 19 24.9**	**+1.1**
THL	**Klokotos Trika**	**1.19**	**106**	*e*PB	**Pb**	**14 19 26.5**	**-0.7**
THL				*e*SB	**Sb**	**14 19 43.0**	**+0.2**
THL	**Klokotos Trika**	**1.19**	**106**	*e*Pb	**Pb**	**14 19 26.5**	**-0.7**
THL				*e*Sb	**Sb**	**14 19 43.0**	**+0.2**
EVR	**Evrytania**	**1.40**	**135**	*e*PB	**Pb**	**14 19 31.3**	**+0.6**
EVR	**Evrytania**	**1.40**	**135**	*e*Pb	**Pb**	**14 19 31.3**	**+0.6**
KRUS	**Krusevo**	**1.56**	**20**	*e*Pg	**Pg**	**14 19 34.2**	**-0.1**
KRUS				*e*Sg	**Sg**	**14 19 54.8**	**+0.4**

*NNC **25** 14:19:11.3±2.8, 50.°95N×75.°24E, h0km, mb3.3, mpv2.9, Error ellipse: s-maj=83.3km s-min=8.9km az=21.0*
*IDC **25** 14:19:11.7±1.1, 51.°69N×75.°46E, h0km, mb1 3.1/4, mb1mx3.0/27, mbtmp3.1/4, ML2.9/4, Error ellipse: s-maj=32.4km s-min=8.0km az=32.0*
*ISCJB **25** 14:19:12.4±0.6, 51.°6N±0.°1×75.°6E±0.°1, h10km, Error ellipse: s-maj=19.1km s-min=4.7km az=26.6*
ISC 25 14:19:14.1±0.6, 51.°7N±0.°1×75.°6E±0.°1, h10km, n9, σ1§51/15, 4C-5D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**2.11**	**116**	⇑Pn	**Pn**	**14 19 48.7**	**-0.7**
	2.1nm,0.5s						
KURK				⇓Sn	**Sn**	**14 20 16.3**	**+0.7**
	10nm,0.5s						
VOSK	**Vostochnaya**	**3.05**	**292**	⇓Pn	**Pn**	**14 20 02.6**	**+0.3**
	7.3nm,1.1s						
VOSK				⇑Sn	**Sn**	**14 20 40.8**	**+2.0**
	8.8nm,0.8s						
BVAR	**Borovoye Array**	**3.49**	**295**	Pn	**Pn**	**14 20 05.8**	**-2.5**
	0.5nm,0.3s,baz=110,slow=14,SNR=6.7						
BVAR				Pg	**Pg**	**14 20 10.6**	**-10**
	0.8nm,0.3s,baz=107,slow=15,SNR=9.6						
BVAR				Sn	**Sn**	**14 20 46.8**	**-2.8**
	0.7nm,0.3s,baz=111,slow=20,SNR=5.4						
BVAR				Lg		14 20 54.3	
	1.8nm,0.3s,baz=111,slow=28,SNR=10						
BRVK	**Borovoye**	**3.56**	**295**	⇑Pn	**Pn**	**14 20 11.2**	**+1.9**
	5.6nm,0.9s						
BRVK				⇓Sn	**Sn**	**14 20 57.8**	**+6.4**
	9.5nm,0.9s						
ZRNK	**Zerenda**	**4.26**	**290**	⇓Pn	**Pn**	**14 20 16.9**	**-2.1**
	1.4nm,0.8s						
ZRNK				⇑Sn	**Sn**	**14 21 11.1**	**+2.3**
	2.3nm,0.6s						
ZALV	**Zalesovo Beam**	**6.02**	**64**	Pn	**Pn**	**14 20 43.3**	**+0.3**
	0.5nm,0.3s,baz=256,slow=13,SNR=6.7						
ZALV				Lg		14 22 17.0	
	0.2nm,0.3s,baz=251,slow=26,SNR=2.4						
MK31	**Makanchi Array**	**6.54**	**136**	⇓Lg		14 22 32.4	
	1.5nm,0.6s,baz=314,slow=27,SNR=3.7						
MKAR	**Makanchi Array**	**6.54**	**136**	Pn	**Pn**	**14 20 50.2**	**-0.1**
	0.1nm,0.3s,baz=320,slow=13,SNR=2.5						
MKAR				Sn	**Sn**	**14 22 05.0**	**+0.1**
	0.0nm,0.3s,baz=316,slow=23,SNR=2.6						
MKAR				Lg		14 22 38.9	
	0.4nm,0.3s,baz=323,slow=28,SNR=6.4						
AKTO	**Aktyubinsk**	**11.16**	**271**	Pn	**Pn**	**14 21 48.9**	**-4.6**
	0.2nm,0.3s,baz=73,slow=13,SNR=3.4						

WEL 25 14:21:27.2±0.6, 37.°98S×176.°37E, h156km±4km, ML3.6/9, Error ellipse: s-maj=5.4km s-min=4.0km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARZ	**Mount Tarawera**	**0.28**	**157**	PN	Pn	14 21 48.9	+0.6
RRRZ	**Republican Roa**	**0.38**	**162**	PN	Pn	14 21 48.9	+0.2
URZ	**Urewera**	**0.65**	**116**	PN	Pn	14 21 49.7	-0.3
URZ				SN	Sn	14 22 07.2	-0.3
MWZ	**Matawai**	**0.98**	**112**	PN	Pn	14 21 52.3	0.0
MWZ				SN	Sn	14 22 11.2	-0.4
RAHZ	**Arahi**	**1.09**	**149**	PN	Pn	14 21 53.6	+0.3
RAHZ				SN	Sn	14 22 13.8	+0.4
NMHZ	**Naumai**	**1.17**	**163**	PN	Pn	14 21 54.5	+0.5
BKZ	**Black Stump Fm**	**1.19**	**175**	PN	Pn	14 21 53.7	-0.5
BKZ				SN	Sn	14 22 14.2	-0.7
KNZ	**Kokohu**	**1.46**	**136**	PN	Pn	14 21 56.6	-0.2
MCHZ	**McNeill Hill**	**1.49**	**170**	PN	Pn	14 21 57.1	+0.1
CNGZ	**Carnagh Statio**	**1.53**	**110**	PN	Pn	14 21 58.0	+0.5
MHGZ	**Mahia Peninsul**	**1.68**	**135**	PN	Pn	14 21 59.0	-0.1
KAHZ	**Kahuranaki**	**1.86**	**168**	PN	Pn	14 22 00.5	-0.5
PNHZ	**Pukenui**	**1.94**	**184**	PN	Pn	14 22 00.7	-1.2
PXZ	**Pawanui**	**2.09**	**170**	PN	Pn	14 22 02.6	-1.0
PXZ				SN	Sn	14 22 29.8	-2.0
TSZ	**Takapari Road**	**2.10**	**189**	PN	Pn	14 22 02.3	-1.5
MRZ	**Mangatainoka R**	**2.75**	**193**	PN	Pn	14 22 09.0	-2.5
OGWZ	**Otaki Gorge**	**2.98**	**198**	PN	Pn	14 22 11.7	-2.8
HOWZ	**Holdsworth Sta**	**2.99**	**192**	PN	Pn	14 22 11.7	-2.9
HOWZ				SN	Sn	14 22 45.6	-5.7
KIW	**Kapiti Island**	**3.09**	**201**	PN	Pn	14 22 13.1	-2.8
CAW	**Cannon Point**	**3.28**	**197**	PN	Pn	14 22 15.1	-3.2

MEX 25 14:24:46.8±1.1, 16.°04N×97.°63W, h21km±73km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.59**	**306**	*e*P	Pb	14 24 56.4	-2.1
PNIG				*i* S	Sb	14 25 04.3	-2.1
VHO	**Vista Hermosa**	**1.34**	**40**	*e*P	Pn	14 25 07.2	-3.1
VHO				*i* S	Sn	14 25 23.6	-3.9
OXX	**Oaxaca**	**1.35**	**40**	*i* P	Pn	14 25 07.7	-2.8
OXX				*i* S	Sn	14 25 24.2	-3.6
HUIG	**Huatulco**	**1.49**	**100**	*e*P	Pn	14 25 10.4	-1.9
HUIG				*i* S	Sn	14 25 28.1	-5.1
TPIG	**Tehuac#an**	**2.38**	**6**	*i* S	Sn	14 25 51.0	-2.2
PCIG		**4.26**	**94**	*i* P	Pn	14 25 47.6	-2.9
PCIG				*i* S	Sn	14 26 35.7	-3.8
TGIG		**4.39**	**80**	*i* S	Sn	14 26 38.8	-4.0

*NEIC **25** 14:41:58.3, 38.°08S×176.°18E, h159km, MG3.7(WEL), After WEL.*
WEL 25 14:41:58.9±0.6, 38.°12S×176.°20E, h158km±4km, ML3.7/8, 2C, Error ellipse: s-maj=5.0km s-min=3.8km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.73**	**101**	PN	Pn	14 42 21.8	-0.6
URZ				SN	Sn	14 42 39.9	-0.5
URZ	**Urewera**	**0.73**	**101**	*e*Pn	Pn	14 42 21.8	-0.6
URZ				*e*Sn	Sn	14 42 40.3	-0.1
RAHZ	**Arahi**	**1.06**	**139**	PN	Pn	14 42 25.1	+0.3
RAHZ				SN	Sn	14 42 45.6	+0.8
MWZ	**Matawai**	**1.07**	**102**	PN	Pn	14 42 24.8	-0.1
MWZ				SN	Sn	14 42 44.5	-0.3
MWZ	**Matawai**	**1.07**	**102**	P	Pn	14 42 24.8	-0.2
BKZ	**Black Stump Fm**	**1.07**	**168**	⇑PN	Pn	14 42 24.8	-0.2
BKZ				SN	Sn	14 42 45.0	-0.1
BKZ	**Black Stump Fm**	**1.07**	**168**	P	Pn	14 42 24.8	-0.2
BKZ				S	Sn	14 42 45.0	-0.1
NMHZ	**Naumai**	**1.09**	**154**	PN	Pn	14 42 25.8	+0.7
NMHZ				SN	Sn	14 42 46.5	+1.3
OTVZ	**Oturere**	**1.12**	**202**	PN	Pn	14 42 25.9	+0.5
OTVZ				SN	Sn	14 42 47.2	+1.3
NGZ	**Ngauruhoe**	**1.16**	**204**	PN	Pn	14 42 26.1	+0.4
NGZ	**Ngauruhoe**	**1.16**	**204**	P	Pn	14 42 26.1	+0.4
WPVZ	**Whakapapa**	**1.20**	**205**	PN	Pn	14 42 26.2	0.0
TUVZ	**Tukino**	**1.22**	**200**	PN	Pn	14 42 26.6	+0.3
TUVZ	**Tukino**	**1.22**	**200**	P	Pn	14 42 26.6	+0.2
MOVZ	**Moawhango**	**1.33**	**195**	PN	Pn	14 42 26.9	-0.5
MOVZ	**Moawhango**	**1.33**	**195**	P	Pn	14 42 26.9	-0.5
PKVZ	**Pokaka**	**1.35**	**210**	PN	Pn	14 42 27.5	0.0
MCHZ	**McNeill Hill**	**1.38**	**164**	PN	Pn	14 42 28.2	+0.4
MCHZ				SN	Sn	14 42 49.6	-0.4
MTVZ	**Mangateitei**	**1.39**	**204**	PN	Pn	14 42 27.9	0.0
VRZ	**Vera Road**	**1.51**	**228**	PN	Pn	14 42 29.6	+0.4
VRZ	**Vera Road**	**1.51**	**228**	P	Pn	14 42 29.6	+0.4
KAHZ	**Kahuranaki**	**1.75**	**163**	PN	Pn	14 42 31.5	-0.2
PNHZ	**Pukenui**	**1.79**	**180**	PN	Pn	14 42 31.3	-0.8
WAZ	**Wanganui**	**1.89**	**210**	PN	Pn	14 42 32.7	-0.5
WAZ	**Wanganui**	**1.89**	**210**	P	Pn	14 42 32.7	-0.5
TSZ	**Takapari Road**	**1.95**	**185**	PN	Pn	14 42 32.9	-1.0
TSZ	**Takapari Road**	**1.95**	**185**	P	Pn	14 42 32.9	-1.0
WPHZ	**Waipukurau**	**1.95**	**175**	PN	Pn	14 42 33.0	-0.9
PXZ	**Pawanui**	**1.98**	**165**	PN	Pn	14 42 33.4	-0.8
PRHZ	**Porangahau**	**2.17**	**171**	PN	Pn	14 42 35.4	-1.0
DVHZ	**Dannevirke**	**2.18**	**181**	PN	Pn	14 42 35.0	-1.5

POWZ	Post Office Ro	2.29 188	PN	Pn	14 42 36.3	-1.6
MRZ	Mangatainoka R	2.58 191	⇑PN	Pn	14 42 39.3	-2.1
MRZ	Mangatainoka R	2.58 191	P	Pn	14 42 39.3	-2.1
TIWZ	Tintock	2.67 185	PN	Pn	14 42 40.3	-2.0
OGWZ	Otaki Gorge	2.81 196	PN	Pn	14 42 42.0	-2.2
HOWZ	Holdsworth Sta	2.83 191	PN	Pn	14 42 41.8	-2.5
KIW	Kapiti Island	2.92 200	PN	Pn	14 42 42.8	-2.6
KIW	Kapiti Island	2.92 200	P	Pn	14 42 42.8	-2.7
MTW	Mount Morrison	3.08 190	PN	Pn	14 42 44.6	-3.0
MTW	Mount Morrison	3.08 190	P	Pn	14 42 44.6	-3.0
CAW	Cannon Point	3.11 196	PN	Pn	14 42 45.1	-2.8
CAW	Cannon Point	3.11 196	P	Pn	14 42 45.1	-2.8
TRWZ	Traveller	3.30 187	PN	Pn	14 42 47.3	-3.0
MSWZ	Moikau Station	3.37 192	PN	Pn	14 42 48.0	-3.3
MSWZ	Moikau Station	3.37 192	P	Pn	14 42 48.0	-3.2
SNZO	South Karori	3.39 199	PN	Pn	14 42 48.1	-3.3
SNZO	South Karori	3.39 199	P	Pn	14 42 48.1	-3.3
PLWZ	Palliser	3.52 192	PN	Pn	14 42 49.6	-3.5
TUWZ	Tuamarina	3.74 207	PN	Pn	14 42 52.4	-3.5
NNZ	Nelson	3.78 214	PN	Pn	14 42 52.8	-3.6
NNZ	Nelson	3.78 214	P	Pn	14 42 52.8	-3.7
QRZ	Quartz Range	3.92 225	PN	Pn	14 42 54.2	-4.1
QRZ	Quartz Range	3.92 225	P	Pn	14 42 54.2	-4.1
BSWZ	Blackbirch Sta	4.01 206	PN	Pn	14 42 56.0	-3.4
BSWZ	Blackbirch Sta	4.01 206	P	Pn	14 42 56.0	-3.4
THZ	Tophouse	4.43 214	PN	Pn	14 43 01.1	-3.8
THZ	Tophouse	4.43 214	P	Pn	14 43 01.1	-3.8
KHZ	Kahutara	4.75 205	PN	Pn	14 43 05.2	-3.9
KHZ	Kahutara	4.75 205	P	Pn	14 43 05.2	-3.9
DSZ	Denniston Nort	4.95 222	PN	Pn	14 43 06.9	-4.9
DSZ	Denniston Nort	4.95 222	P	Pn	14 43 06.9	-4.9
LTZ	Lake Taylor	5.54 212	PN	Pn	14 43 14.8	-4.6
LTZ	Lake Taylor	5.54 212	P	Pn	14 43 14.8	-4.7
RPZ	Rata Peaks	6.81 213	PN	Pn	14 43 31.3	-5.1
RPZ	Rata Peaks	6.81 213	P	Pn	14 43 31.3	-5.1
FOZ	Fox Glacier	7.34 220	PN	Pn	14 43 37.5	-5.9

*NEIC **25** 15:10:28.6, 31°.75S×71°.87W, h25km, ML3.8(GUC), After GUC.*

GUC 25 15:10:28.6±0.8, 31°.75S×71°.87W, h25km±4km, MD3.9, ML3.8, 4C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.34**	**113**	⇓*i*P	Pb	15 10 35.7	-0.6
CHNG				*i* S	Sb	15 10 41.4	-0.1
CMCH	**Combarbala**	**0.94**	**52**	⇑*i*P	Pn	15 10 45.5	-0.7
CMCH				*i* S	Sb	15 10 58.5	+0.3
CMCH	**Combarbala**	**0.94**	**52**	⇑*i*P	Pn	15 10 45.5	-0.7
CMCH				*i* S	Sb	15 10 58.5	+0.3
CMCH				AML	AML	15 10 59.8	
	comp=E,14μm,0.7s						
OVCH	**Ovalle**	**1.28**	**27**	*e*P	Pn	15 10 50.7	-0.1
OVCH				*i* S	Sn	15 11 07.7	+0.6
OVCH	**Ovalle**	**1.28**	**27**	*e*P	Pn	15 10 50.7	-0.1
OVCH				*i* S	Sn	15 11 07.7	+0.6
OVCH				AML	AML	15 11 10.1	
	comp=N,2μm,0.5s						
ROCH	**El Roble**	**1.42**	**149**	*e*P	Pn	15 10 53.2	+0.4
ROCH	**El Roble**	**1.42**	**149**	*e*P	Pn	15 10 53.2	+0.4
PEL	**Peldehue**	**1.71**	**144**	⇓*i*P	Pn	15 10 58.0	+1.3
PEL				*i* S	Sn	15 11 20.4	+2.6
PEL				AML	AML	15 11 28.3	
	comp=E,2μm,0.6s						
TLL	**Tololo Astrono**	**1.83**	**30**	*e*P	Pn	15 10 58.9	+0.6
TLL				*e*S	Sn	15 11 23.3	+2.7
TLL	**Tololo Astrono**	**1.83**	**30**	*e*P	Pn	15 10 58.9	+0.6
TLL				*e*S	Sn	15 11 23.3	+2.7
TLL				AML	AML	15 11 30.2	
	comp=N,1μm,0.5s						
CLCH	**Cerro Calan**	**1.99**	**146**	*i* P	Pn	15 11 02.0	+1.4
CLCH				*i* S	Sn	15 11 28.4	+3.7
CLCH				AML	AML	15 11 37.7	
	comp=N,2μm,0.5s						
FCH	**Farellones**	**2.06**	**140**	*e*P	Pn	15 11 03.3	+1.7
FCH	**Farellones**	**2.06**	**140**	*e*P	Pn	15 11 03.3	+1.7
FCH				AML	AML	15 11 41.3	
	comp=E,583nm,0.4s						
PCH	**Pirque**	**2.19**	**149**	*e*P	Pn	15 11 04.8	+1.4
PCH				*i* S	Sn	15 11 32.2	+2.6
PCH	**Pirque**	**2.19**	**149**	*e*P	Pn	15 11 04.8	+1.4
PCH				*i* S	Sn	15 11 32.2	+2.6
CHCH	**Chadas Angostu**	**2.41**	**155**	*e*P	Pn	15 11 08.0	+1.7
CHCH	**Chadas Angostu**	**2.41**	**155**	*e*P	Pn	15 11 08.0	+1.7
LMEL	**Las Melosas**	**2.52**	**147**	⇑*i*P	Pn	15 11 09.7	+1.8
LMEL				*i* S	Sn	15 11 40.3	+2.6
LMEL	**Las Melosas**	**2.52**	**147**	⇑*i*P	Pn	15 11 09.7	+1.8
LMEL				*i* S	Sn	15 11 40.3	+2.6
LMEL				AML	AML	15 11 49.7	
	comp=N,465nm,0.2s						
CACH	**El Canelo**	**2.59**	**156**	*e*P	Pn	15 11 11.1	+2.2
CACH	**El Canelo**	**2.59**	**156**	*e*P	Pn	15 11 11.1	+2.2
LCO	**Las Campanas**	**2.91**	**21**	*e*Pn	Pn	15 11 13.2	-0.2
LCO				*e*Sn	Sn	15 11 43.6	-3.9

*ISK **25** 15:18:40.8, 37°.18N×28°.24E, h14km, MD2.6*
*ISCJB **25** 15:18:41.3±0.5, 37°.12N±0°.04×28°.24E±0°.03, h10km±4km, Error ellipse: s-maj=6.2km s-min=4.6km az=6.5*
*DDA **25** 15:18:41.2, 37°.13N×28°.21E, h7km±5km, Md3.0*
*CSEM **25** 15:18:41.4±0.2, 37°.12N×28°.24E, h10km, MD2.6, Error ellipse: s-maj=4.2km s-min=2.8km az=165.0*

ISC 25 15:18:42.0±0.6, 37°.13N±0°.04×28°.24E±0°.03, h8km±6km, n18, σ1§01/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.03**	**87**	*e*PG	**Pg**	**15 18 43.9**	**+0.5**
YER				*e*SG	**Sg**	**15 18 45.6**	**+1.2**
YER	**Yerkesik**	**0.03**	**87**	*e*Pg	**Pg**	**15 18 43.9**	**+0.5**
YER				*e*Sg	**Sg**	**15 18 45.7**	**+1.2**
TURN	**Turunc**	**0.39**	**132**	*i* P	**Pg**	**15 18 47.6**	**-1.9**
TURN				*i* S	**Sg**	**15 18 53.1**	**-1.5**
TURN	**Turunc**	**0.39**	**132**	*i* P	**Pg**	**15 18 47.6**	**-1.9**
TURN				*i* S	**Sg**	**15 18 53.1**	**-1.5**
MLSB	**Milas**	**0.41**	**294**	*e*PG	**Pg**	**15 18 48.9**	**-1.0**
MLSB				*e*SG	**Sg**	**15 18 55.1**	**-0.1**
MLSB	**Milas**	**0.41**	**294**	*e*Pg	**Pg**	**15 18 48.9**	**-0.9**
MLSB				*e*Sg	**Sg**	**15 18 55.1**	**-0.1**
AYDN	**Tasoluk**	**0.60**	**331**	*i* P	**Pg**	**15 18 53.5**	**-0.1**
AYDN				*i* S	**Sg**	**15 19 01.9**	**+0.4**
AYDN	**Tasoluk**	**0.60**	**331**	*i* P	**Pg**	**15 18 53.5**	**-0.1**
AYDN				*i* S	**Sg**	**15 19 01.9**	**+0.5**
BDRM	**Kayabasi**	**0.64**	**264**	*i* P	**Pg**	**15 18 53.5**	**-0.8**
BDRM				*i* S	**Sg**	**15 19 03.1**	**+0.5**
BDRM	**Kayabasi**	**0.64**	**264**	*i* P	**Pg**	**15 18 53.5**	**-0.8**
BDRM				*i* S	**Sg**	**15 19 03.1**	**+0.4**
DAT	**Datca**	**0.67**	**233**	*e*PG	**Pg**	**15 18 54.8**	**-0.1**
DAT				*e*SG	**Sg**	**15 19 04.9**	**+1.4**
DAT	**Datca**	**0.67**	**233**	*e*Pg	**Pg**	**15 18 54.8**	**0.0**
DAT				*e*Sg	**Sg**	**15 19 04.9**	**+1.4**
BODT	**Bodrum**	**0.75**	**265**	*e*PG	**Pg**	**15 18 55.4**	**-1.0**
BODT	**Bodrum**	**0.75**	**265**	*e*Pg	**Pg**	**15 18 55.4**	**-1.0**
DNZL	**Cakiroluk**	**0.85**	**49**	*i* P	**Pg**	**15 18 58.4**	**+0.2**
DNZL				*i* S	**Sg**	**15 19 09.1**	**-0.2**
DNZL	**Cakiroluk**	**0.85**	**49**	*i* P	**Pg**	**15 18 58.4**	**+0.2**
DNZL				*i* S	**Sg**	**15 19 09.1**	**-0.2**
AKAS	**Kas**	**1.42**	**129**	*i* P	**Pn**	**15 19 08.9**	**+0.9**
AKAS				*i* S	**Sb**	**15 19 29.8**	**+3.0**
AKAS	**Kas**	**1.42**	**129**	*i* P	**Pn**	**15 19 08.9**	**+0.9**
AKAS				*i* S	**Sb**	**15 19 29.8**	**+3.0**

*ISCJB **25** 15:27:12.2±0.8, 19°.36S±0°.07×172°.6W±0°.1, h33km, mb3.8/6, Error ellipse: s-maj=16.8km s-min=9.3km az=17.2*
*IDC **25** 15:27:13.1±1.4, 19°.33S×173°.25W, h0km, mb3.7/5, mb1 4.0/6, mb1mx3.8/17, mbtmp3.8/6, ML1.8/1, Error ellipse: s-maj=55.5km s-min=23.1km az=129.0*
*NEIC **25** 15:27:14.7±0.7, 19°.38S×172°.62W, h35km, mb4.0/2, Error ellipse: s-maj=16.6km s-min=13.5km az=140.0*

ISC 25 15:27:14.8±0.7, 19°.37S±0°.07×172°.6W±0°.1, h35km, n10, σ0§97/12, mb3.8/6, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.49**	**9**	Pn	**Pn**	**15 28 35.8**	**+1.8**
	1.7nm,0.3s,baz=214,slow=3.6,SNR=6.6						
AFI				Sn	**Sn**	**15 29 35.3**	**-0.7**
	7.9nm,0.3s,baz=246,slow=14,SNR=3.7						
AFI	**Afiamalu**	**5.49**	**9**	*e*Pn	**Pn**	**15 28 34.7**	**+0.6**
AFI				*e*Sn	**Sn**	**15 29 35.9**	**-0.1**
RAR	**Rarotonga**	**12.19**	**101**	Pn	**Pn**	**15 30 05.0**	**-1.0**
	2.8nm,0.3s,baz=278,slow=10.0,SNR=16						
URZ	**Urewera**	**20.83**	**203**	P	**P**	**15 31 53.5**	**+0.2**
	2.6nm,0.4s,baz=352,slow=14,SNR=2.8						
STKA	**Stephens Creek**	**42.83**	**244**	P	**P**	**15 35 08.6**	**-0.9**
	0.9nm,0.5s,mb3.7,baz=90,slow=12,SNR=4.4						
ASAR	**Alice Springs**	**49.70**	**255**	P	**P**	**15 36 03.1**	**-0.6**
	1.2nm,0.6s,mb4.1,baz=91,slow=8.5,SNR=34						
WRAB	**Tennant Creek**	**49.77**	**260**	*e*P	**P**	**15 36 03.9**	**-0.3**
	1.0nm,0.7s,mb4.0						
QSPA	**South Pole Qui**	**70.70**	**180**	P	**P**	**15 38 28.5**	**+1.9**
	1.7nm,0.9s,mb4.0						
TXAR	**Lajitas Array**	**82.22**	**55**	P	**P**	**15 39 39.4**	**+6.8**
	0.4nm,0.9s,mb3.4,baz=234,slow=5.4,SNR=3.8						
ILAR	**Eielson Array**	**86.18**	**11**	P	**P**	**15 39 56.4**	**+4.5**
	0.2nm,0.7s,mb3.5,baz=229,slow=6.0,SNR=4.1						

WEL 25 15:40:11.0±0.6, 36°.91S×176°.96E, h208km±6km, ML3.5/5, Error ellipse: s-maj=7.5km s-min=6.1km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.25**	**122**	PN	Pn	15 40 43.3	0.0
MXZ				SN	Sn	15 41 08.2	-0.2
URZ	**Urewera**	**1.35**	**175**	PN	Pn	15 40 44.4	+0.3
MWZ	**Matawai**	**1.49**	**163**	PN	Pn	15 40 45.6	+0.3
MWZ				SN	Sn	15 41 11.7	-0.3
PUZ	**Puketiti**	**1.55**	**139**	PN	Pn	15 40 45.8	+0.1
PUZ				SN	Sn	15 41 12.2	-0.7
CNGZ	**Carnagh Statio**	**1.85**	**148**	PN	Pn	15 40 49.1	+0.5
KNZ	**Kokohu**	**2.18**	**165**	PN	Pn	15 40 51.6	-0.3
NMHZ	**Naumai**	**2.19**	**183**	PN	Pn	15 40 52.2	+0.3
BKZ	**Black Stump Fm**	**2.28**	**189**	PN	Pn	15 40 52.5	-0.4
KAHZ	**Kahuranaki**	**2.88**	**181**	PN	Pn	15 40 59.1	-0.5
PNHZ	**Pukenui**	**3.06**	**191**	PN	Pn	15 41 00.4	-1.2

*NEIC **25** 15:42:08.8, 31°.74S×71°.91W, h23km, ML3.5(GUC), After GUC.*

GUC 25 15:42:08.8±0.8, 31°.74S×71°.91W, h23km±5km, MD3.7, ML3.5, 4C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.38**	**113**	⇓*i*P	Pb	15 42 16.3	-0.6
CHNG				*i* S	Sb	15 42 22.4	-0.1
CHNG				AML	AML	15 42 23.4	
	comp=E,3μm,0.6s						
CMCH	**Combarbala**	**0.96**	**55**	⇑*i*P	Pb	15 42 26.1	-0.6
CMCH				*i* S	Sb	15 42 39.2	+0.2
CMCH	**Combarbala**	**0.96**	**55**	⇑*i*P	Pb	15 42 26.1	-0.6
CMCH				*i* S	Sb	15 42 39.2	+0.2
CMCH				AML	AML	15 42 40.4	
	comp=E,8μm,0.7s						
OVCH	**Ovalle**	**1.28**	**29**	*i* P	Pn	15 42 31.8	+0.6
OVCH				*i* S	Sn	15 42 48.6	+0.9
OVCH	**Ovalle**	**1.28**	**29**	*i* P	Pn	15 42 31.8	+0.6
OVCH				*i* S	Sn	15 42 48.6	+0.9
OVCH				AML	AML	15 42 50.7	
	comp=N,893nm,0.6s						
JACH	**Jahuel**	**1.46**	**131**	*e*P	Pn	15 42 34.5	+0.7
JACH				*i* S	Sn	15 42 53.8	+1.5
JACH	**Jahuel**	**1.46**	**131**	*e*P	Pn	15 42 34.5	+0.7
JACH				*i* S	Sn	15 42 53.8	+1.5
PEL	**Peldehue**	**1.75**	**144**	*e*P	Pn	15 42 38.8	+1.1
PEL				*e*S	Sn	15 43 01.1	+1.9
PEL				AML	AML	15 43 14.9	
	comp=E,1μm,0.5s						
TLL	**Tololo Astrono**	**1.83**	**32**	⇓*i*P	Pn	15 42 39.7	+0.9
TLL				*i* S	Sn	15 43 04.4	+3.1
TLL	**Tololo Astrono**	**1.83**	**32**	⇓*i*P	Pn	15 42 39.7	+0.9
TLL				*i* S	Sn	15 43 04.4	+3.1
TLL				AML	AML	15 43 10.8	
	comp=N,773nm,0.8s						
CLCH	**Cerro Calan**	**2.02**	**145**	*e*P	Pn	15 42 42.8	+1.3
CLCH				*i* S	Sn	15 43 09.0	+3.0
CLCH				AML	AML	15 43 18.3	
	comp=E,797nm,0.7s						
CLCH				AML	AML	15 43 19.0	
	comp=E,892nm,0.6s						
TACH	**Talagante**	**2.08**	**157**	⇑*i*P	Pn	15 42 43.6	+1.3
TACH	**Talagante**	**2.08**	**157**	⇑*i*P	Pn	15 42 43.6	+1.3
FCH	**Farellones**	**2.10**	**140**	AML	AML	15 43 15.2	
	comp=E,332nm,0.4s						
PCH	**Pirque**	**2.22**	**148**	*e*P	Pn	15 42 45.6	+1.4
PCH	**Pirque**	**2.22**	**148**	*e*P	Pn	15 42 45.6	+1.4
LMEL	**Las Melosas**	**2.55**	**146**	*e*P	Pn	15 42 50.3	+1.5
LMEL				*i* S	Sn	15 43 21.4	+2.3
LMEL	**Las Melosas**	**2.55**	**146**	*e*P	Pn	15 42 50.3	+1.5
LMEL				*i* S	Sn	15 43 21.4	+2.3
LMEL				AML	AML	15 43 34.7	
	comp=N,250nm,0.5s						
LCO	**Las Campanas**	**2.91**	**21**	*e*Pn	Pn	15 42 53.6	-0.1
LCO	**Las Campanas**	**2.91**	**21**	AML	AML	15 43 42.9	
	comp=E,260nm,0.5s						

*ISCJB **25** 15:47:46.8±0.6, 37°.49N±0°.04×35°.12E±0°.05, h10km, Error ellipse: s-maj=6.0km s-min=4.8km az=41.7*
*DDA **25** 15:47:46.3, 37°.54N×35°.08E, h7km±6km, Md3.0*
*ISK **25** 15:47:46.8, 37°.15N×35°.29E, h9km, ML2.2*
*CSEM **25** 15:47:46.4±0.3, 37°.52N×35°.05E, h10km, ML2.2, Error ellipse: s-maj=8.2km s-min=7.0km az=114.0*

ISC 25 15:47:46.9±0.6, 37°.53N±0°.04×35°.09E±0°.05, h5km±11km, n15, σ1§03/25, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARA	**Karaisali**	**0.27**	**186**	*e*PG	**Pg**	**15 47 51.2**	**-0.8**
KARA				*e*SG	**Sg**	**15 47 55.6**	**+0.1**
KARA	**Karaisali**	**0.27**	**186**	*e*Pg	**Pg**	**15 47 51.2**	**-0.8**
KARA				*e*Sg	**Sg**	**15 47 55.6**	**+0.1**
GULE	**Gulek**	**0.35**	**226**	*i* P	**Pg**	**15 47 53.2**	**-0.4**
GULE				*i* S	**Sg**	**15 47 59.5**	**+1.4**
GULE	**Gulek**	**0.35**	**226**	*i* P	**Pg**	**15 47 53.2**	**-0.3**
GULE				*i* S	**Sg**	**15 47 59.5**	**+1.4**
KOZT	**Kozan**	**0.59**	**94**	*e*PG	**Pg**	**15 47 57.7**	**-0.4**
KOZT				*e*SG	**Sg**	**15 48 06.1**	**+0.3**
KOZT	**Kozan**	**0.59**	**94**	*e*Pg	**Pg**	**15 47 57.7**	**-0.4**
KOZT				*e*Sg	**Sg**	**15 48 06.1**	**+0.3**
MERS	**Mersin**	**0.80**	**215**	*e*PG	**Pg**	**15 48 00.4**	**-1.7**
MERS	**Mersin**	**0.80**	**215**	*e*Pg	**Pg**	**15 48 00.4**	**-1.8**
YURE	**YUREGIR**	**0.82**	**148**	*i* P	**Pg**	**15 48 04.0**	**+1.4**
YURE				*i* S	**Sg**	**15 48 18.0**	**+4.7**
YURE	**YUREGIR**	**0.82**	**148**	*i* P	**Pg**	**15 48 04.0**	**+1.4**
YURE				*i* S	**Sg**	**15 48 18.0**	**+4.7**
AVNT	**Avonos**	**1.27**	**352**	*e*P	**Pg**	**15 48 10.1**	**-1.0**
AVNT				*i* S	**Sg**	**15 48 28.3**	**+0.8**
AVNT	**Avonos**	**1.27**	**352**	*e*P	**Pg**	**15 48 10.1**	**-1.0**
AVNT				*i* S	**Sg**	**15 48 28.3**	**+0.8**
IKL	**Isikli**	**1.71**	**222**	*e*PN	**Pn**	**15 48 16.2**	**-1.1**
IKL	**Isikli**	**1.71**	**222**	*e*Pn	**Pn**	**15 48 16.2**	**-1.1**
HDMB	**Hadim**	**2.15**	**256**	*e*PN	**Pn**	**15 48 24.8**	**+1.4**

*ISCJB **25** 16:26:27.0±0.5, 59°.7S±0°.1×30°.1W±0°.2, h10km, mb4.7/15, MS4.3/10, Error ellipse: s-maj=15.5km s-min=12.4km az=36.4*
*IDC **25** 16:26:27.4±0.7, 59°.64S×30°.14W, h0km, mb4.4/10, mb1 4.4/10, mb1mx4.4/14, mbtmp4.4/10, MS4.3/10, Ms1 4.3/10, ms1mx4.2/12, Error ellipse: s-maj=24.2km s-min=18.6km az=45.0*
*GCMT **25** 16:26:31.8±0.3, 59°.90S×29°.99W, h26km±1km, MW5.1, Moment Tensor Solution. s23,c28; s71,o98; Moment tensor: Scale 10^{16}Nm; M_{rr}-1.10±.23; M_{tt}-3.42±.19; M_{pp}4.52±.21; M_{rt}-0.05±.36; M_{rp}2.24±.14; M_{tp}2.15±.36; Best double couple: $M_0$4.90000×10^{16} NP1:ϕ_s61.00000°, δ69.00000°, λ3.00000°. NP2:ϕ_s330.00000°, δ87.00000°, λ159.00000°. Principal axes: T 5.7400, Plg17.0000°, Azm284.0000°; N -1.5900, Plg69.0000°, Azm143.0000°; P -4.1400, Plg13.0000°, Azm18.0000°; Data Used: II IC G IU CN.*
*NEIC **25** 16:26:32.6±0.4, 59°.68S×30°.21W, h35km, mb5.0/8 Error ellipse: s-maj=15.6km s-min=13.0km az=208.0*

ISC 25 16:26:29.1±0.5, 59°.73S±0°.09×30°.1W±0°.2, h10km, n36, σ1§13/21, mb4.7/15, MS4.3/10, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAIT	**Maitri**	**20.20**	**140**	*e*P	**P**	**16 31 01.6**	**-1.8**
USHA	**Ushuaia**	**21.07**	**266**	P	**P**	**16 31 12.0**	**-1.1**
	13nm,0.8s,mb4.3,baz=112,slow=11,SNR=4.0						
USHA				LR	LR	16 37 19.7	
	comp=Z,2μm,21.3s,MS4.5,baz=345,slow=31						
TRQA	**Tornquist**	**29.67**	**303**	*e*P	**P**	**16 32 35.2**	**+0.6**
	21nm,1.3s,mb4.7						
QSPA	**South Pole Qui**	**30.51**	**180**	P	**P**	**16 32 42.4**	**+0.7**
	6.8nm,1.2s,mb4.4,baz=199,slow=5.8,SNR=8.6						
QSPA	**South Pole Qui**	**30.51**	**180**	*e*P	**P**	**16 32 42.0**	**+0.3**
	12nm,1.3s,mb4.6						
PLCA	**Paso Flores**	**31.42**	**289**	LR	LR	16 44 31.3	
	comp=Z,785nm,19.9s,MS4.4,baz=123,slow=35						
MAW	**Mawson**	**38.16**	**142**	*e*P	**P**	**16 33 49.6**	**+1.7**
	5.9nm,1.0s,mb4.3						
MAW	**Mawson**	**38.16**	**142**	P	**P**	**16 33 49.1**	**+1.1**
	7.7nm,1.0s,mb4.4,baz=238,slow=11,SNR=7.8						
MAW				LR	LR	16 48 01.8	
	comp=Z,155nm,19.9s,MS3.8,baz=244,slow=34						
CPUP	**Villa Florida**	**38.31**	**319**	P	**P**	**16 33 49.3**	**-0.4**
	4.5nm,0.6s,mb4.3,baz=145,slow=6.7,SNR=11						
CPUP				LR	LR	16 48 18.6	
	comp=Z,347nm,19.7s,MS4.2,baz=147,slow=34						
CPUP	**Villa Florida**	**38.31**	**319**	*e*P	**P**	**16 33 48.0**	**-1.7**
	41nm,0.7s,mb5.3						
CPUP				LR	LR	16 48 18.6	
BOSA	**Boshof**	**48.40**	**75**	P	**P**	**16 35 10.1**	**-0.9**
	8.2nm,0.9s,mb4.7,baz=242,slow=7.9,SNR=5.1						
BOSA				LR	LR	16 50 20.5	
	comp=Z,366nm,20.4s,MS4.3,baz=218,slow=30						
LPAZ	**La Paz**	**51.42**	**311**	P	**P**	**16 35 33.2**	**-0.9**
	1.9nm,0.5s,mb4.3,baz=81,slow=3.1,SNR=8.3						
LPAZ	**La Paz**	**51.42**	**311**	*e*P	**P**	**16 35 33.2**	**-0.9**
	11nm,0.9s,mb4.8						
LBTB	**Lobatse**	**51.57**	**73**	P	**P**	**16 35 34.1**	**-1.0**
	4.5nm,0.8s,mb4.5,baz=225,slow=5.7,SNR=3.7						
LIC	**Lamto**	**68.69**	**27**	*e*P	**P**	**16 37 33.6**	**+1.1**
	63nm,1.4s,mb5.4						
KIC	**Kosan Boka**	**68.89**	**27**	*e*P	**P**	**16 37 34.9**	**+1.1**
	72nm,1.7s,mb5.3						
TIC	**Toumodi**	**69.10**	**27**	*e*P	**P**	**16 37 35.3**	**+0.2**
	7.1nm,0.2s,mb5.2						
DBIC	**Dimbokro**	**69.16**	**27**	P	**P**	**16 37 36.0**	**+0.5**
	2.8nm,0.6s,mb4.4,baz=167,slow=10,SNR=4.2						
DBIC				LR	LR	17 02 41.2	
	comp=Z,162nm,18.2s,MS4.3,baz=174,slow=32						
DBIC	**Dimbokro**	**69.16**	**27**	*e*P	**P**	**16 37 34.1**	**-1.3**
	6.2nm,0.9s,mb4.5						
OTAV	**Otavalo**	**70.54**	**308**	*e*P	**P**	**16 37 45.0**	**+1.0**
	18nm,1.2s,mb4.9						
ROSC	**El Rosal**	**73.19**	**313**	LR	LR	17 10 22.1	
	comp=Z,174nm,21.7s,MS4.3,baz=204,slow=36						
RKT	**Rikitea**	**77.47**	**246**	*e*LR	LR	17 02 24.2	
	431nm,31.2s						
KMBO	**Kilima Mbogo**	**77.77**	**71**	LR	LR	17 09 06.4	
	comp=Z,255nm,20.2s,MS4.5,baz=270,slow=33						
TBI	**Tubuai**	**83.60**	**234**	*e*LR	LR	17 05 12.2	
	220nm,23.0s						
STKA	**Stephens Creek**	**88.48**	**173**	P	**P**	**16 39 23.8**	**+2.4**
	3.0nm,1.0s,mb4.5,baz=177,slow=17,SNR=2.9						
STKA				LR	LR	17 16 05.5	
	comp=Z,384nm,19.9s,MS4.8,baz=312,slow=34						
PPT	**Papeete**	**88.81**	**236**	*e*LR	LR	17 07 36.2	
	115nm,22.2s						
PPT	**Papeete**	**88.81**	**236**	LR	LR	17 13 12.8	
	comp=Z,50nm,18.8s,MS4.0,baz=113,slow=32						
ASAR	**Alice Springs**	**95.88**	**165**	P	**P**	**16 39 54.9**	**-0.8**
	0.4nm,0.7s,mb3.9,baz=181,slow=3.7,SNR=9.1						
DZM	**Mont Dzumac**	**97.38**	**195**	*e*LR	LR	17 11 33.4	
	224nm,23.8s						
FINES	**FINESS Array B**	**128.36**	**31**	PKP	PKPdf	16 45 34.8	+0.7
	1.8nm,0.8s,baz=180,slow=1.0,SNR=5.1						
YKA	**Yellowknife Ar**	**137.82**	**317**	PKP	PKPdf	16 45 52.1	+0.1
	0.4nm,0.7s,baz=131,slow=3.0,SNR=3.3						
ZALV	**Zalesovo Beam**	**145.24**	**70**	PKPbc	PKPbc	16 46 04.4	-0.8
	1.0nm,0.6s,baz=259,slow=1.5,SNR=5.9						
DAWY	**Dawson**	**147.99**	**308**	*e*PKPdf	PKPdf	16 46 08.2	-1.6
DAWY				*e*PKPbc	PKPbc	16 46 13.7	+0.8
DAWY				*e*PKPab	PKPab	16 46 16.8	+1.1
ILAR	**Eielson Array**	**151.26**	**307**	PKPbc	PKPbc	16 46 20.6	-0.3
	1.4nm,0.8s,baz=137,slow=1.1,SNR=13						
SONM	**Songino Array**	**152.21**	**96**	PKPbc	PKPbc	16 46 23.7	+0.1
	0.8nm,

*PRU **25** 17:11:07.2, 51°.55N×16°.00E, h0km*
*WAR **25** 17:11:07.4, 51°.58N×15°.99E, ML2.8, Mining Induced*
*VIE **25** 17:11:09.3±0.5, 51°.32N×15°.99E, h0km, mb2.2/4, ML2.9/4, Error ellipse: s-maj=3.4km s-min=3.1km az=170.0 75 km WNW of Wroclaw Suspected Mining induced.*

ISC 25 17:11:05.8±0.5, 51°.59N±0°.03×16°.04E±0°.03, h0km, n55, σ0§98/96, 3C-1D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.77**	**168**	*e*Pg	**Pg**	**17 11 21.3**	**+0.9**
KSP				*e*Sg	**Sg**	**17 11 31.6**	**+1.3**
KSP	**Ksiaz**	**0.77**	**168**	*i* Pg	**Pg**	**17 11 21.4**	**+1.0**
KSP				*i* Sg	**Sg**	**17 11 31.5**	**+1.2**
KSP	**Ksiaz**	**0.77**	**168**	*e*Pg	**Pg**	**17 11 21.1**	**+0.7**
	baz=351						
KSP				*e*Sg	**Sg**	**17 11 31.2**	**+0.9**
	baz=351						
UPC	**Upice**	**1.08**	**181**	*e*PG	**Pg**	**17 11 27.1**	**+0.6**
UPC	**Upice**	**1.08**	**181**	Pg	**Pg**	**17 11 27.1**	**+0.6**
DPC	**Dobruska-Polom**	**1.25**	**172**	*e*PG	**Pg**	**17 11 30.1**	**+0.3**
DPC				*e*SG	**Sg**	**17 11 46.3**	**+0.3**
	comp=Z,50nm,0.5s						
DPC	**Dobruska-Polom**	**1.25**	**172**	Pg	**Pg**	**17 11 30.1**	**+0.3**
DPC				Sg	**Sg**	**17 11 46.3**	**+0.3**
	comp=Z,50nm,0.5s						
PVCC	**Panska Ves**	**1.41**	**222**	*e*PG	**Pg**	**17 11 32.7**	**-0.1**
PVCC				*e*SG	**Sg**	**17 11 51.7**	**+0.7**
	comp=Z,137nm,0.5s						
PVCC	**Panska Ves**	**1.41**	**222**	Pg	**Pg**	**17 11 32.7**	**-0.1**
PVCC				*e*Sg	**Sg**	**17 11 51.5**	**+0.5**
	baz=40						
BRG	**Berggiesshubel**	**1.50**	**242**	PN	**Pn**	**17 11 33.7**	**-0.2**
BRG				PG	**Pg**	**17 11 34.4**	**-0.1**
BRG				SG	**Sg**	**17 11 54.1**	**+0.2**
	comp=Z,79nm,0.3s						
PRU	**Pruhonice**	**1.86**	**211**	*e*PN	**Pn**	**17 11 39.2**	**+0.3**
PRU				*e*PG	**Pg**	**17 11 41.0**	**-0.4**
PRU				*e*SG	**Sg**	**17 12 05.0**	**-0.6**
	comp=Z,37nm,0.5s						
PRU	**Pruhonice**	**1.86**	**211**	Pn	**Pn**	**17 11 39.2**	**+0.3**
PRU	**Pruhonice**	**1.86**	**211**	Pg	**Pg**	**17 11 41.0**	**-0.4**
PRU				Sg	**Sg**	**17 12 05.0**	**-0.6**
	comp=Z,37nm,0.5s						
CLL	**Collm**	**1.92**	**263**	*e*Pn	**Pn**	**17 11 39.0**	**-0.6**
CLL				*i* Pg	**Pg**	**17 11 41.8**	**-0.7**
CLL				*e*Sg	**Sg**	**17 12 07.0**	**-0.4**
CLL	**Collm**	**1.92**	**263**	*e*Pn	**Pn**	**17 11 39.0**	**-0.6**
	comp=Z,10.0nm,0.5s						
CLL				*i* Pg	**Pg**	**17 11 41.8**	**-0.7**
CLL				*i*		17 11 45.8	
CLL				*e*Sg	**Sg**	**17 12 07.0**	**-0.4**
	comp=Z,18nm,0.4s						
CLL	**Collm**	**1.92**	**263**	*e*Pn	**Pn**	**17 11 39.0**	**-0.6**
MORC	**Moravsky Berou**	**2.05**	**152**	*e*Pn	**Pn**	**17 11 41.4**	**-0.1**
MORC				*e*Sn	**Sn**	**17 12 09.9**	**+2.2**
MORC	**Moravsky Berou**	**2.05**	**152**	*e*Pn	**Pn**	**17 11 41.5**	**0.0**
	baz=334						
MORC				*e*Sn	**Sn**	**17 12 09.9**	**+2.2**
MORC				*e*Sg	**Sg**	**17 12 11.0**	**-0.6**
	comp=Z,21nm,0.2s,baz=334						
OKC	**Ostrava-Krasne**	**2.21**	**142**	*e*SG	**Sg**	**17 12 17.1**	**+0.4**
OKC	**Ostrava-Krasne**	**2.21**	**142**	Sg	**Sg**	**17 12 17.1**	**+0.4**
VRAC	**Vranov**	**2.31**	**171**	*e*Pn	**Pn**	**17 11 45.6**	**+0.6**
	baz=352						
VRAC				*e*Sg	**Sg**	**17 12 19.3**	**-0.7**
	comp=Z,12nm,0.2s,baz=352						
TREC	**Trest**	**2.33**	**189**	*e*PN	**Pn**	**17 11 46.4**	**+1.2**
TREC	**Trest**	**2.33**	**189**	Pn	**Pn**	**17 11 46.4**	**+1.2**
KRUC	**Moravsky**	**2.54**	**175**	*e*Pn	**Pn**	**17 11 48.7**	**+0.5**
	baz=356						
KRUC				*e*Sg	**Sg**	**17 12 26.8**	**-0.5**
	comp=Z,37nm,0.9s,baz=356						
NKC	**Novy Kostel**	**2.65**	**241**	*e*PN	**Pn**	**17 11 50.0**	**+0.4**
NKC				*e*SG	**Sg**	**17 12 30.6**	**-0.1**
	comp=Z,38nm,0.3s						
NKC	**Novy Kostel**	**2.65**	**241**	Pn	**Pn**	**17 11 50.0**	**+0.4**
NKC				Sg	**Sg**	**17 12 30.6**	**-0.1**
	comp=Z,38nm,0.3s						
KHC	**Kasperske Hory**	**2.92**	**214**	*e*Pn	**Pn**	**17 11 53.7**	**+0.3**
KHC				*e*Sn	**Sn**	**17 12 25.4**	**-3.7**
KHC	**Kasperske Hory**	**2.92**	**214**	*e*PN	**Pn**	**17 11 53.7**	**+0.3**
KHC				*e*PG	**Pg**	**17 11 59.5**	**-2.2**
KHC				*e*SG	**Sg**	**17 12 38.5**	**-1.1**
	comp=Z,11nm,0.4s						
KHC	**Kasperske Hory**	**2.92**	**214**	Pn	**Pn**	**17 11 53.7**	**+0.3**
KHC	**Kasperske Hory**	**2.92**	**214**	Pg	**Pg**	**17 11 59.5**	**-2.2**
KHC				*e*Sn	**Sn**	**17 12 25.5**	**-3.7**
KHC				Sg	**Sg**	**17 12 38.5**	**-1.1**
	comp=Z,11nm,0.4s						
JAVC	**Velka Javorina**	**2.93**	**158**	*e*Pn	**Pn**	**17 11 55.0**	**+1.5**
JAVC				*e*Sg	**Sg**	**17 12 40.0**	**+0.2**
	comp=Z,13nm,0.8s						
MOX	**Moxa**	**2.94**	**253**	*e*PN	**Pn**	**17 11 53.9**	**+0.2**
MOX				*i* PG	**Pg**	**17 12 01.6**	**-0.5**
MOX				*i* SG	**Sg**	**17 12 41.1**	**+0.9**
MOX	**Moxa**	**2.94**	**253**	*e*Pn	**Pn**	**17 11 53.9**	**+0.2**
GEC2	**GERESS Array S**	**3.13**	**210**	*e*Pn	**Pn**	**17 11 57.5**	**+1.2**
GEC2	**GERESS Array S**	**3.13**	**210**	*e*Pn	**Pn**	**17 11 57.5**	**+1.2**
WET	**Wettzell**	**3.18**	**221**	*e*Pn	**Pn**	**17 11 57.4**	**+0.5**
WET	**Wettzell**	**3.18**	**221**	*e*Pn	**Pn**	**17 11 57.4**	**+0.5**
CLZ	**Clausthal**	**3.53**	**276**	*e*Pn	**Pn**	**17 12 02.4**	**+0.6**
CLZ	**Clausthal**	**3.53**	**276**	*e*Pn	**Pn**	**17 12 02.4**	**+0.6**
VYHS	**Vyhne**	**3.59**	**149**	*e*SG	**Sg**	**17 13 00.1**	**-0.8**
VYHS	**Vyhne**	**3.59**	**149**	*e*Sg	**Sg**	**17 13 00.1**	**-0.8**
BSD	**Bornholm Skovb**	**3.59**	**350**	*i* P	**Pn**	**17 12 01.6**	**-1.0**
BSD				*i* S	**Sn**	**17 12 42.8**	**-2.9**
BSD	**Bornholm Skovb**	**3.59**	**350**	*i* P	**Pn**	**17 12 01.6**	**-1.0**
BSD				*i* S	**Sn**	**17 12 42.8**	**-2.9**
GRA1	**Grafenberg Arr**	**3.61**	**240**	*e*Pn	**Pn**	**17 12 02.5**	**-0.3**
GRA1				*e*Sg	**Sg**	**17 13 03.0**	**+1.5**
GRA1	**Grafenberg Arr**	**3.61**	**240**	*e*Pn	**Pn**	**17 12 02.5**	**-0.3**
GRA1				*e*Sg	**Sg**	**17 13 03.0**	**+1.5**
GRF	**Grafenberg Arr**	**3.61**	**240**	*e*Pn	**Pn**	**17 12 02.5**	**-0.3**
GRF				*e*Sg	**Sg**	**17 13 03.0**	**+1.5**
GRF	**Grafenberg Arr**	**3.61**	**240**	*e*Pn	**Pn**	**17 12 02.5**	**-0.3**
GRF				*e*Sg	**Sg**	**17 13 03.0**	**+1.5**
CONA	**Conrad Observa**	**3.67**	**182**	⇑*i*Pn	**Pn**	**17 12 03.9**	**+0.2**
CONA				⇓*i*Sg	**Sg**	**17 13 01.8**	**-1.7**
	comp=Z,17nm,0.4s						
CONA	**Conrad Observa**	**3.67**	**182**	Pn	**Pn**	**17 12 03.9**	**+0.2**
CONA				Sg	**Sg**	**17 13 01.8**	**-1.7**
	comp=Z,17nm,0.4s						
MOA	**Molln**	**3.92**	**198**	⇑*i*Pn	**Pn**	**17 12 07.5**	**+0.5**
MOA				⇑*i*Sg	**Sg**	**17 13 09.8**	**-1.7**
	comp=Z,7.6nm,0.4s						
MOA	**Molln**	**3.92**	**198**	Pn	**Pn**	**17 12 07.5**	**+0.4**
MOA				Sg	**Sg**	**17 13 09.8**	**-1.7**
	comp=Z,7.6nm,0.4s						
STHS	**Stebnicka Huta**	**3.97**	**121**	*e*	**Pg**	**17 12 24.5**	**+2.7**
STHS	**Stebnicka Huta**	**3.97**	**121**	*e*SG	**Sg**	**17 13 11.8**	**-1.5**
STHS	**Stebnicka Huta**	**3.97**	**121**	*e*Sg	**Sg**	**17 13 11.8**	**-1.5**
KECS	**Kecovo**	**4.23**	**136**	*e*	**Sb**	**17 13 10.9**	**-1.6**

*SKO **25** 17:27:30.4, 41°.20N×23°.14E, h15km, M1.4, ML1.8*
*THE **25** 17:27:31.7, 41°.20N×23°.14E, h3km±1km, ML2.8/8, Error ellipse: s-maj=1.3km s-min=0.3km az=194.0*
*CSEM **25** 17:27:31.7±0.1, 41°.20N×23°.15E, h2km, ML2.8/8, Error ellipse: s-maj=2.3km s-min=2.0km az=61.0*
*BEO **25** 17:27:32.0±0.8, 41°.17N×23°.13E, h0km, ML1.9/4*
*ATH **25** 17:27:34.7, 41°.04N×23°.59E, h5km, MD3.0/3*
*NEIC **25** 17:27:34.7, 41°.04N×23°.59E, h5km, MD3.0(ATH), After ATH.*

ISC 25 17:27:32.0±0.4, 41°.21N±0°.02×23°.14E±0°.03, h1km±7km, n44, σ0§64/78, 1C, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNT	**Kendrikon**	**0.18**	**256**	P	**Pg**	**17 27 35.6**	**+0.1**
KNT				S	**Sg**	**17 27 38.1**	**+0.2**
KNT	**Kendrikon**	**0.18**	**256**	P	**Pg**	**17 27 35.6**	**+0.1**
KNT				S	**Sg**	**17 27 38.1**	**+0.2**
SRS	**Serrai**	**0.36**	**104**	P	**Pg**	**17 27 38.5**	**-0.3**
SRS				S	**Sg**	**17 27 43.9**	**+0.5**
SRS	**Serrai**	**0.36**	**104**	P	**Pg**	**17 27 38.5**	**-0.3**
SRS				S	**Sg**	**17 27 43.9**	**+0.5**
SOH	**Sokhos**	**0.42**	**157**	*e*Pg	**Pg**	**17 27 39.8**	**-0.2**
SOH				*e*Sg	**Sg**	**17 27 45.1**	**-0.3**
SOH	**Sokhos**	**0.42**	**157**	*e*PG	**Pg**	**17 27 39.8**	**-0.2**
SOH				*e*SG	**Sg**	**17 27 45.1**	**-0.3**
SOH	**Sokhos**	**0.42**	**157**	P	**Pg**	**17 27 39.8**	**-0.2**
SOH				S	**Sg**	**17 27 45.7**	**+0.3**
SOH	**Sokhos**	**0.42**	**157**	P	**Pg**	**17 27 39.8**	**-0.2**
SOH				*e*Sg	**Sg**	**17 27 45.1**	**-0.3**
SOH				S	**Sg**	**17 27 45.7**	**+0.3**
VAY	**Valandovo**	**0.44**	**285**	*e*Pg	**Pg**	**17 27 39.6**	**-0.8**
VAY				*e*Sg	**Sg**	**17 27 45.7**	**-0.4**
VAY	**Valandovo**	**0.44**	**285**	⇑*i*Pg	**Pg**	**17 27 39.6**	**-0.8**
VAY				*i* Sg	**Sg**	**17 27 45.8**	**-0.4**
VAY				*e*Lg		17 27 46.9	
	comp=E,37nm,0.2s						
VAY				*e*Lg		17 27 47.2	
	comp=N,67nm,0.4s						
VAY	**Valandovo**	**0.44**	**285**	P	**Pg**	**17 27 39.7**	**-0.7**
VAY				S	**Sg**	**17 27 46.6**	**+0.5**
VAY	**Valandovo**	**0.44**	**285**	P	**Pg**	**17 27 39.7**	**-0.7**
VAY				*e*Sg	**Sg**	**17 27 45.7**	**-0.4**
VAY				S	**Sg**	**17 27 46.6**	**+0.5**
NVR	**Nevrokopi**	**0.57**	**75**	*e*Pb	**Pg**	**17 27 42.3**	**-0.5**
NVR	**Nevrokopi**	**0.57**	**75**	*e*PB	**Pg**	**17 27 42.3**	**-0.5**
NVR	**Nevrokopi**	**0.57**	**75**	*e*Pb	**Pg**	**17 27 42.3**	**-0.5**
THE	**Thessaloniki**	**0.59**	**193**	P	**Pg**	**17 27 42.7**	**-0.5**
THE	**Thessaloniki**	**0.59**	**193**	P	**Pg**	**17 27 42.9**	**-0.3**
THE				S	**Sg**	**17 27 51.4**	**+0.6**
THE	**Thessaloniki**	**0.59**	**193**	P	**Pg**	**17 27 42.7**	**-0.5**
THE				S	**Sg**	**17 27 51.4**	**+0.6**
GRG	**Griva**	**0.61**	**246**	P	**Pg**	**17 27 42.8**	**-0.8**
GRG	**Griva**	**0.61**	**246**	P	**Pg**	**17 27 43.2**	**-0.4**
GRG				S	**Sg**	**17 27 52.0**	**+0.5**
GRG	**Griva**	**0.61**	**246**	P	**Pg**	**17 27 43.2**	**-0.4**
GRG				S	**Sg**	**17 27 52.0**	**+0.5**
HORT	**Hortiatis**	**0.61**	**183**	P	**Pg**	**17 27 42.9**	**-0.7**
HORT	**Hortiatis**	**0.61**	**183**	P	**Pg**	**17 27 43.4**	**-0.2**
HORT				S	**Sg**	**17 27 52.0**	**+0.5**
HORT	**Hortiatis**	**0.61**	**183**	P	**Pg**	**17 27 43.4**	**-0.2**
HORT				S	**Sg**	**17 27 52.0**	**+0.5**
PLG	**Polygyros**	**0.86**	**164**	*e*Pb	**Pg**	**17 27 47.6**	**-0.9**
PLG	**Polygyros**	**0.86**	**164**	*e*PB	**Pg**	**17 27 47.6**	**-0.9**
PLG	**Polygyros**	**0.86**	**164**	P	**Pg**	**17 27 47.8**	**-0.7**
PLG				S	**Sg**	**17 28 00.4**	**+0.7**
PLG	**Polygyros**	**0.86**	**164**	P	**Pg**	**17 27 47.8**	**-0.7**
PLG				S	**Sg**	**17 28 00.4**	**+0.7**
KAVA	**Kavala**	**1.06**	**101**	P	**Pg**	**17 27 51.6**	**-0.7**
KAVA				S	**Sg**	**17 28 07.2**	**+1.1**
KAVA	**Kavala**	**1.06**	**101**	P	**Pg**	**17 27 51.6**	**-0.7**
KAVA				S	**Sg**	**17 28 07.2**	**+1.1**
OUR	**Ouranopolis**	**1.08**	**143**	P	**Pg**	**17 27 52.6**	**-0.1**
OUR	**Ouranopolis**	**1.08**	**143**	P	**Pg**	**17 27 51.8**	**-0.9**
OUR				S	**Sg**	**17 28 07.8**	**+1.1**
OUR	**Ouranopolis**	**1.08**	**143**	P	**Pg**	**17 27 51.8**	**-0.9**
OUR				S	**Sg**	**17 28 07.8**	**+1.1**
PAIG	**Paliouri**	**1.34**	**162**	P	**Pn**	**17 27 56.5**	**-1.3**
PAIG	**Paliouri**	**1.34**	**162**	P	**Pn**	**17 27 56.5**	**-1.3**
VTS	**Vitosha**	**1.39**	**2**	*i* Pg	**Pn**	**17 27 57.7**	**-0.7**
VTS				*i* Sg	**Sg**	**17 28 16.7**	**+0.2**
VTS	**Vitosha**	**1.39**	**2**	P	**Pn**	**17 27 57.8**	**-0.6**
VTS	**Vitosha**	**1.39**	**2**	P	**Pn**	**17 27 57.4**	**-1.0**
VTS				S	**Sg**	**17 28 16.7**	**+0.2**
VTS	**Vitosha**	**1.39**	**2**	P	**Pn**	**17 27 57.8**	**-0.6**
VTS				S	**Sg**	**17 28 16.7**	**+0.2**
PLD	**Plovdiv**	**1.48**	**52**	*e*Pg	**Pn**	**17 27 59.0**	**-0.7**
PLD				*e*Sg	**Sg**	**17 28 19.4**	**-0.1**
PLD	**Plovdiv**	**1.48**	**52**	*e*Pg	**Pn**	**17 27 59.0**	**-0.7**
PLD				*e*Sg	**Sg**	**17 28 19.4**	**-0.1**
BARS	**Barje**	**1.89**	**329**	*e*Pn	**Pn**	**17 28 06.3**	**+1.0**
BARS				*e*Sg	**Sg**	**17 28 33.6**	**+0.5**
BARS	**Barje**	**1.89**	**329**	*e*Pn	**Pn**	**17 28 06.3**	**+1.0**
BARS				*e*Sg	**Sg**	**17 28 33.0**	**+0.5**
ZAPS	**Zavoj**	**2.10**	**350**	*e*Pn	**Pn**	**17 28 08.8**	**+0.6**
ZAPS				*e*Sn	**Sn**	**17 28 35.6**	**+0.7**

*BJI **25** 18:09:36.9, 23°.00N×94°.50E, h77km, mB4.8/2, mb4.3/8*
*ISCJB **25** 18:09:37.6±0.7, 22°.85N±0°.06×94°.15E±0°.05, h98km±6km, mb4.1/26, Error ellipse: s-maj=11.3km s-min=5.0km az=34.4*
*IDC **25** 18:09:38.6±3.6, 22°.75N×94°.10E, h95km±34km, mb3.8/13, mb1 3.8/14, mb1mx3.6/23, mbtmp3.7/14, Error ellipse: s-maj=30.1km s-min=13.5km az=61.0*
*NEIC **25** 18:09:39.8±0.4, 22°.90N×94°.42E, h104km±4km, mb4.2/15, Error ellipse: s-maj=11.3km s-min=4.0km az=224.0*

ISC 25 18:09:39.0±0.6, 22°.83N±0°.06×94°.16E±0°.05, h92km±6km, n50, σ1§37/65, mb4.1/26, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**1.95**	**354**	*e*PKP	**Pn**	**18 10 11.0**	**+0.4**
IMP				*e*S	**Sn**	**18 10 31.0**	**-3.7**
AGT	**Agartala**	**2.87**	**292**	*e*x	**Sn**	**18 10 58.0**	**+1.4**
SHL	**Shillong**	**3.43**	**323**	*i* x	**Pn**	**18 10 32.0**	**+1.7**
SHL				*e*x	**Sn**	**18 11 08.5**	**-1.4**
CHTO	**Chiang Mai**	**6.00**	**131**	*e*Pn	**Pn**	**18 11 03.2**	**-1.9**
	6.1nm,0.6s						
CMAR	**Chiang Mai Arr**	**6.24**	**133**	P	**Pn**	**18 11 08.0**	**-0.6**
	0.5nm,0.3s,baz=312,slow=13,SNR=13						
ODAN	**Odare**	**7.34**	**304**	*e*Pn	**Pn**	**18 11 26.9**	**+3.4**
ODAN				*e*Sn	**Sn**	**18 12 44.5**	**-0.7**
	383nm,0.4s						
LSA	**Lhasa**	**7.35**	**339**	P	**Pn**	**18 11 25.0**	**+1.4**
LSA				S	**Sn**	**18 12 43.3**	**-2.2**
LSA				smax			
	comp=N,80nm,0.7s						
LSA				smax			
	comp=E,80nm,0.8s						
LSA	**Lhasa**	**7.35**	**339**	*e*Pn	**Pn**	**18 11 25.2**	**+1.6**
	comp=E,26nm,0.6s						
LSA				*e*Sn	**Sn**	**18 12 38.4**	**-7.1**
TAPN	**Taplejung**	**7.38**	**309**	*e*Pn	**Pn**	**18 11 27.3**	**+3.4**
TAPN				*e*Sn	**Sn**	**18 12 46.7**	**+0.6**
	comp=E,334nm,0.4s						
RAMN	**Ramite**	**8.00**	**302**	*e*Pn	**Pn**	**18 11 35.8**	**+3.4**
RAMN				*e*Sn	**Sn**	**18 12 59.5**	**-1.7**
	comp=E,112nm,0.4s						
JIRN	**Jiri**	**8.67**	**305**	*e*Pn	**Pn**	**18 11 45.1**	**+3.5**
JIRN				*e*Sn	**Sn**	**18 13 16.7**	**-0.9**
	comp=E,222nm,0.4s						
GUN	**Gumba**	**9.04**	**306**	*e*Pn	**Pn**	**18 11 50.2**	**+3.7**
GUN				*e*Sn	**Sn**	**18 13 26.1**	**-0.4**
PKI	**Pulchoki**	**9.22**	**303**	*e*Pn	**Pn**	**18 11 52.5**	**+3.4**
PKI				*e*Sn	**Sn**	**18 13 30.2**	**-0.9**
	comp=E,93nm,0.4s						
PKI	**Pulchoki**	**9.22**	**303**	*e*Pn	**Pn**	**18 11 52.9**	**+3.8**
PKI				*e*Sn	**Sn**	**18 13 29.6**	**-1.5**
PKIN	**Phulchoki**	**9.24**	**303**	*e*Pn	**Pn**	**18 11 52.9**	**+3.6**
PKIN				*e*Sn	**Sn**	**18 13 29.6**	**-1.8**
	comp=E,152nm,0.3s						
KKN	**Kakani**	**9.43**	**303**	*e*Pn	**Pn**	**18 11 54.8**	**+2.9**
KKN				*e*Sn	**Sn**	**18 13 34.3**	**-1.8**
	comp=E,141nm,0.7s						
DMN	**Daman**	**9.48**	**302**	*e*Pn	**Pn**	**18 11 55.9**	**+3.3**
DMN				*e*Sn	**Sn**	**18 13 35.8**	**-1.5**
	comp=E,79nm,0.4s						
GKN	**Gorkha**	**10.03**	**303**	*e*Pn	**Pn**	**18 12 01.8**	**+1.7**
GKN				*e*Sn	**Sn**	**18 13 48.1**	**-2.7**
	comp=E,152nm,0.3s						
QIZ	**Qiongzhong**	**15.13**	**102**	*e*P	**Pn**	**18 13 06.9**	**-0.8**
	comp=E,12nm,1.0s						
WMQ	**Urumqi**	**21.61**	**347**	P	**P**	**18 14 20.5**	**-0.8**
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.3						
WMQ				pmax	pmax		
	comp=Z,160nm,5.3s						
KBL	**Kabul**	**24.86**	**304**	*e*P	**P**	**18 14 55.7**	**+2.8**
	comp=Z,5.0nm,0.6s,mb4.1						
TKM2	**Tokmak 2**	**25.28**	**327**	*e*P	**P**	**18 14 58.2**	**+1.5**
	comp=Z,4.7nm,0.9s,mb3.9						
AAK	**Ala-Archa**	**25.65**	**325**	P	**P**	**18 15 00.6**	**+0.7**
	comp=Z,1.6nm,0.4s,mb3.8,baz=35,slow=1.1,SNR=5.1						
MK31	**Makanchi Array**	**25.76**	**341**	*e*P	**P**	**18 15 00.5**	**-0.4**
MKAR	**Makanchi Array**	**25.76**	**341**	P	**P**	**18 15 01.2**	**+0.3**
	comp=Z,7.7nm,0.7s,mb4.2,baz=148,slow=9.9,SNR=75						
EKS2	**Erkin-Say**	**26.05**	**324**	*e*P	**P**	**18 15 05.8**	**+2.2**
	comp=Z,4.0nm,0.9s,mb3.9						
KSM	**Kuching**	**26.39**	**141**	P	**P**	**18 15 06.7**	**-0.3**
	comp=Z,1.7nm,0.5s,mb3.7						
SONM	**Songino Array**	**26.80**	**18**	P	**P**	**18 15 11.9**	**+1.6**
	comp=Z,0.3nm,0.4s,mb3.2,baz=205,slow=6.4,SNR=2.7						
KURK	**Kurchatov**	**30.36**	**340**	*e*P	**P**	**18 15 41.5**	**-0.4**
	comp=Z,6.2nm,0.8s,mb4.3						
ZALV	**Zalesovo Beam**	**31.86**	**350**	P	**P**	**18 15 54.2**	**-0.8**
	comp=Z,2.2nm,0.4s,mb4.3,baz=170,slow=9.0,SNR=14						
BVAR	**Borovoye Array**	**35.17**	**335**	P	**P**	**18 16 23.2**	**-0.5**
	comp=Z,1.4nm,0.4s,mb4.2,baz=134,slow=11,SNR=10						
BRVK	**Borovoye**	**35.23**	**335**	*e*P	**P**	**18 16 24.3**	**-0.1**
	comp=Z,2.0nm,0.6s,mb4.1						
ABKAR	**Akbulak array**	**37.69**	**323**	*e*P	**P**	**18 16 46.0**	**+0.7**
	comp=Z,2.1nm,0.6s,mb4.1						
ARU	**Arti**	**42.48**	**331**	*e*P	**P**	**18 17 24.8**	**+0.1**
	comp=Z,6.8nm,0.5s,mb4.6						
KIV	**Kislovodsk**	**47.01**	**309**	P	**P**	**18 18 03.2**	**+2.3**
	comp=Z,5.5nm,0.7s,mb4.4						
MBWA	**Marble Bar**	**50.33**	**148**	*e*P	**P**	**18 18 25.8**	**-0.8**
	comp=Z,2.6nm,0.6s,mb4.3						
PETK	**Petropavlovsk-**	**56.24**	**40**	P	**P**	**18 19 10.6**	**+1.0**
	comp=Z,1.8nm,0.6s,mb4.3,baz=92,slow=30,SNR=3.6						
AKASG	**Malin Array Be**	**56.89**	**317**	P	**P**	**18 19 13.2**	**-0.9**
	comp=Z,0.7nm,0.3s,mb4.1,baz=82,slow=6.3,SNR=4.9						
JOF	**Joensuu**	**57.61**	**331**	*e*P	**P**	**18 19 18.6**	**-0.4**
JOF	**Joensuu**	**57.61**	**331**	*e*p	**P**	**18 19 18.6**	**-0.4**
NWAO	**Narrogin (SRO)**	**59.66**	**158**	*e*P	**P**	**18 19 32.6**	**-1.0**
	comp=Z,8.7nm,0.9s,mb4.8						
KAF	**Kangasniemi**	**59.73**	**330**	*e*p	**P**	**18 19 33.4**	**-0.4**
FINES	**FINESS Array B**	**59.75**	**329**	P	**P**	**18 19 33.4**	**-0.5**
	comp=Z,1.4nm,0.5s,mb4.3,baz=83,slow=6.3,SNR=13						
ASAR	**Alice Springs**	**60.23**	**138**	P	**P**	**18 19 36.6**	**-1.1**
	comp=Z,1.2nm,0.6s,mb4.1,baz=320,slow=7.0,SNR=20						
ASAR				pP	pP	18 20 01.1	+0.5
	comp=Z,0.6nm,0.6s,baz=322,slow=6.8,SNR=4.6						
ARCES	**ARCESS Array B**	**61.36**	**338**	P	**P**	**18 19 44.1**	**-0.6**
	comp=Z,1.6nm,0.5s,mb4.3,baz=101,slow=7.2,SNR=19						
NB2	**NORSAR Subarra**	**66.91**	**328**	P	**P**	**18 20 20.0**	**-1.1**
	comp=Z,0.8nm,0.5s,mb3.8,baz=84,slow=6.2						
NOA	**NORSAR Array B**	**66.91**	**328**	P	**P**	**18 20 20.2**	**-0.9**
	comp=Z,1.0nm,0.6s,mb3.8,baz=85,slow=6.3,SNR=7.1						
STKA	**Stephens Creek**	**70.84**	**138**	P	**P**	**18 20 44.2**	**-1.7**
	comp=Z,1.2nm,0.9s,mb3.7,baz=354,slow=10,SNR=3.1						
LSZ	**Lusaka**	**74.84**	**246**	*e*P	**P**	**18 21 11.3**	**+1.5**
	comp=Z,1.5nm,0.5s,mb4.0						
BOSA	**Boshof**	**83.79**	**236**	P	**P**	**18 21 59.1**	**+0.8**
	comp=Z,1.3nm,0.5s,mb4.0,baz=69,slow=4.4,SNR=5.3						

MAN 25 18:32:08, 11°.26N×125°.95E, h3km, mb4.7, ML3.6, MS3.6, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.60**	**305**	*e*P	Pg	18 32 20.9	+1.3
OCLP	**Ormoc**	**1.33**	**261**	*e*P	Pn	18 32 33.6	+0.2
OCLP				*e*S	Sg	18 32 45.9	-4.8
SCPH	**Surigao**	**1.53**	**197**	*e*P	Pn	18 32 36.4	+0.1
SCPH				*e*S	Sn	18 32 58.1	+1.4
CNP	**Catarman**	**1.77**	**315**	*e*P	Pn	18 32 39.9	+0.3
CNP				*e*S	Sn	18 32 51.1	-11
PVCP	**Virac**	**2.91**	**323**	*e*P	Pn	18 32 57.4	+2.2

IDC 25 18:35:57.3±3.5, 17°.04S×179°.15W, h522km±36km, mb3.3/4, mb1 3.6/4, mb1mx3.2/14, mbtmp3.3/4, Error ellipse: s-maj=153.7km s-min=22.4km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.44**	**240**	P	P	18 42 34.0	-0.1
	2.2nm,0.8s,baz=106,slow=11,SNR=5.3						
ASAR	**Alice Springs**	**44.35**	**253**	P	P	18 43 21.1	0.0
	7.4nm,0.

*ISCJB **25** 19:15:40.3±1.4,30.1′N±0.1′×114.2′W±0.06,h10km, MS3.6/4,Error ellipse: s-maj=16.5km s-min=7.3km az=2.5*
*NEIC **25** 19:15:40.4±2.6,29.96N×114.40W,h10km,mb3.9/6,Error ellipse: s-maj=33.3km s-min=11.9km az=200.0*
*IDC **25** 19:15:42.3±2.5,30.25N×114.19W,h0km,mb3.5/1, mb1 3.8/4,mb1mx3.5/22,mbtmp3.4/4,ML3.9/3,MS3.6/6, Ms1 3.6/6,ms1mx3.3/21,Error ellipse: s-maj=36.3km s-min=17.7km az=30.0*

ISC 25 19:15:41.4±1.9,30.0N±0.1×114.5W±0.1,h10km,n31, σ1§50/27,MS3.6/4,Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLA	**Glamis**	**3.10**	**354**	*e*Pn	**Pn**	**19 16 27.3**	**-3.0**
BAR	**Barrett**	**3.31**	**326**	*e*Pn	**Pn**	**19 16 31.3**	**-1.8**
TUC	**Tucson**	**3.92**	**52**	*e*Pn	**Pn**	**19 16 37.4**	**-4.3**
PFO	**Pinyon Flat Ob**	**4.01**	**335**	*e*Pn	**Pn**	**19 16 41.2**	**-1.7**
MWC	**Mount Wilson**	**5.23**	**325**	Pn	**Pn**	**19 17 00.0**	**+0.4**
	50nm,0.9s						
GSC	**Goldstone**	**5.68**	**340**	*e*Pn	**Pn**	**19 17 06.6**	**+0.8**
	3.9nm,0.8s						
GSC				*e*Pg	**Pg**	**19 17 28.8**	**-1.3**
WUAZ	**Wupatki**	**6.12**	**24**	*e*Pn	**Pn**	**19 17 10.2**	**-1.7**
	18nm,0.8s						
CCUT	**Cedar City**	**7.62**	**7**	*e*Pn	**Pn**	**19 17 31.1**	**-1.4**
	23nm,1.2s						
BNM	**Barren Site**	**7.85**	**56**	*e*Pn	**Pn**	**19 17 32.3**	**-3.3**
	2.1nm,0.3s						
BNM				*e*Sg	Sn	19 19 54.5	+50
ARUT	**Antelope Range**	**7.85**	**6**	*e*Pn	**Pn**	**19 17 34.8**	**-0.8**
	11nm,0.8s						
ANMO	**Albuquerque**	**8.39**	**52**	Pn	**Pn**	**19 17 41.5**	**-1.5**
	0.2nm,0.3s,baz=246,slow=16,SNR=2.0						
ANMO				Lg		19 19 59.9	
	0.2nm,0.3s,baz=194,slow=18,SNR=2.8						
ANMO	**Albuquerque**	**8.39**	**52**	Pn	**Pn**	**19 17 41.5**	**-1.5**
ANMO				Lg		19 19 59.9	
MSU	**Marysvale**	**8.74**	**12**	*e*Pn	**Pn**	**19 17 49.7**	**+2.0**
	4.5nm,0.7s						
TXAR	**Lajitas Array**	**9.41**	**91**	Pn	**Pn**	**19 17 57.0**	**0.0**
	0.3nm,0.3s,baz=263,slow=13,SNR=13						
TXAR				Lg		19 20 33.6	
	0.1nm,0.3s,baz=276,slow=32,SNR=4.4						
TXAR				LR	LR	19 21 41.0	
	comp=Z,343nm,19.1s,baz=5.0,slow=39						
PV04	**Paradox Valley**	**9.58**	**27**	*e*Pn	**Pn**	**19 17 59.9**	**+0.5**
SRU	**San Rafael**	**9.69**	**19**	*e*Pn	**Pn**	**19 18 00.8**	**+0.1**
	5.4nm,0.8s						
SDCO	**Great Sand Dun**	**10.75**	**41**	*e*Pn	**Pn**	**19 18 18.5**	**+3.2**
	2.2nm,0.9s						
PDAR	**Pinedale Array**	**13.37**	**16**	Pn	**Pn**	**19 18 51.7**	**+0.6**
	0.2nm,0.3s,baz=176,slow=8.9,SNR=5.3						
YBH	**Yreka Blue Hor**	**13.51**	**333**	LR	LR	19 24 04.0	
	comp=Z,150nm,18.3s,baz=150,slow=38						
MCMT	**McKenzie Canyo**	**14.89**	**4**	*e*Pn	**Pn**	**19 19 14.5**	**+2.6**
	2.0nm,1.0s						
DLMT	**Dillon**	**15.44**	**5**	*e*Pn	**Pn**	**19 19 21.6**	**+2.4**
	14nm,1.5s						
LRM	**Limekiln Ridge**	**15.91**	**5**	*e*Pn	**Pn**	**19 19 26.0**	**+0.7**
	42nm,1.5s						
LNOR	**Lincton Mounta**	**16.16**	**350**	*e*Pn	**Pn**	**19 19 32.6**	**+4.1**
	4.1nm,1.0s						
CHMT	**Chamberlain Mo**	**16.95**	**3**	*e*Pn	**Pn**	**19 19 40.2**	**+1.6**
	5.8nm,1.1s						
LAO	**LASA Array**	**17.89**	**19**	*e*Pn	**Pn**	**19 19 50.8**	**+0.6**
	5.7nm,0.8s						
ECSD	**EROS Data Cent**	**19.76**	**41**	*e*Pn	**Pn**	**19 20 11.7**	**-1.2**
	29nm,1.5s						
CMIG	**Matias Romero**	**22.01**	**121**	LR	LR	19 29 29.5	
	comp=Z,232nm,21.3s,MS3.6,baz=120,slow=38						
ILAR	**Eielson Array**	**40.28**	**339**	P	**P**	**19 23 20.1**	**+1.9**
	1.1nm,1.0s,baz=152,slow=8.1,SNR=8.5						
SCHQ	**Schefferville**	**41.95**	**40**	LR	LR	19 40 48.6	
	comp=Z,65nm,19.4s,MS3.5,baz=98,slow=36						
LPAZ	**La Paz**	**64.09**	**129**	LR	LR	19 52 35.2	
	comp=Z,60nm,19.5s,MS3.8,baz=282,slow=34						
NOA	**NORSAR Array B**	**79.18**	**24**	LR	LR	20 04 06.6	
	comp=Z,24nm,18.2s,MS3.6,baz=125,slow=37						

*DDA **25** 19:26:13.7,38.97N×41.29E,h6km±2km,Md2.9*
*ISK **25** 19:26:13.8,39.06N×41.26E,h7km,MD2.7*
*CSEM **25** 19:26:13.9±0.1,39.03N×41.26E,h5km,MD2.7,Error ellipse: s-maj=4.7km s-min=2.4km az=145.0*
*ISCJB **25** 19:26:14.5±0.5,39.00N±0.03×41.25E±0.04,h10km,Error ellipse: s-maj=5.8km s-min=3.5km az=136.1*

ISC 25 19:26:14.3±0.6,38.98N±0.03×41.29E±0.04,h6km±5km, n18,σ0§71/31,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNGL	**BINGOL**	**0.11**	**254**	*i* P	**Pg**	**19 26 16.2**	**-0.5**
BNGL				*i* S	**Sg**	**19 26 18.4**	**+0.1**
BINT	**Bingol**	**0.63**	**260**	*e*PG	**Pg**	**19 26 25.8**	**-0.7**
BINT				*e*SG	**Sg**	**19 26 35.7**	**+1.0**
BINT	**Bingol**	**0.63**	**260**	*e*Pg	**Pg**	**19 26 25.8**	**-0.7**
BINT				*e*Sg	**Sg**	**19 26 35.7**	**+1.0**
EZM	**Erzurum**	**0.92**	**4**	*e*PG	**Pg**	**19 26 30.6**	**-1.4**
ERZM	**Erzurum**	**0.92**	**4**	*i* P	**Pg**	**19 26 31.4**	**-0.6**
ERZM				*i* S	**Sg**	**19 26 45.8**	**+1.7**
ERZM	**Erzurum**	**0.92**	**4**	*i* P	**Pg**	**19 26 31.4**	**-0.6**
ERZM				*i* S	**Sg**	**19 26 45.8**	**+1.8**
BEST	**Besiri**	**1.09**	**181**	*i* P	**Pg**	**19 26 34.8**	**-0.5**
BEST				*i* S	**Sg**	**19 26 49.9**	**+0.5**
TUTA	**Tutak**	**1.26**	**70**	*i* P	**Pn**	**19 26 37.7**	**-0.8**
TUTA				*i* S	**Sg**	**19 26 55.5**	**+0.7**
TUTA	**Tutak**	**1.26**	**70**	*i* P	**Pn**	**19 26 37.7**	**-0.7**
TUTA				*i* S	**Sg**	**19 26 55.5**	**+0.8**
DIYA	**Diyarbakir**	**1.40**	**221**	*i* P	**Pn**	**19 26 39.9**	**-0.5**
DIYA				*i* S	**Sb**	**19 26 59.5**	**+0.5**
DIYA	**Diyarbakir**	**1.40**	**221**	*i* P	**Pn**	**19 26 39.9**	**-0.5**
DIYA				*i* S	**Sb**	**19 26 59.5**	**+0.5**
AGRB	**Hanur-Agry**	**1.45**	**65**	*e*PN	**Pn**	**19 26 41.0**	**-0.1**
AGRB				*e*SN	**Sn**	**19 27 00.7**	**+0.3**
AGRB	**Hanur-Agry**	**1.45**	**65**	*e*Pn	**Pn**	**19 26 41.0**	**-0.1**
AGRB				*e*Sn	**Sn**	**19 27 00.7**	**+0.3**
PTK	**Pertek**	**1.48**	**267**	*e*PN	**Pn**	**19 26 41.4**	**-0.2**
PTK	**Pertek**	**1.48**	**267**	*e*Pn	**Pn**	**19 26 41.4**	**-0.1**
SVRC	**Sivrice-ELAZID**	**1.67**	**249**	*e*PN	**Pn**	**19 26 44.3**	**+0.3**
SVRC	**Sivrice-ELAZID**	**1.67**	**249**	*e*Pn	**Pn**	**19 26 44.3**	**+0.3**
MARD	**Mardin**	**1.71**	**194**	*i* P	**Pn**	**19 26 44.3**	**-0.4**
MARD				*i* S	**Sn**	**19 27 07.3**	**+0.4**

*ISCJB **25** 19:39:37.4±0.8,31.67N±0.05×104.83E±0.06,h10km, mb3.2/3,Error ellipse: s-maj=9.1km s-min=4.9km az=39.7*
*IDC **25** 19:39:38.6±1.6,32.14N×105.03E,h0km,mb3.3/3, mb1 3.4/4,mb1mx3.3/20,mbtmp3.3/4,ML3.8/1,MS3.1/1, Ms1 3.1/1,ms1mx2.3/18,Error ellipse: s-maj=76.9km s-min=25.4km az=63.0*
*BJI **25** 19:39:42.3,31.88N×104.41E,h14km,mb3.6/1,ML3.3/12, Ms3.4/2,Ms7 3.3/2*

ISC 25 19:39:39.8±0.7,31.72N±0.05×104.70E±0.06,h10km,n8, σ1§00/12,mb3.2/3,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.14**	**225**	Pg	**Pg**	**19 40 01.5**	**-0.2**
CD2				Sg	**Sg**	**19 40 16.8**	**+0.3**
CD2				smax			
	comp=N,2μm,0.8s						
XAN	**Xi'an**	**4.24**	**56**	Pg	**Pg**	**19 41 00.5**	**-0.5**
XAN				Sg	**Sg**	**19 41 55.8**	**-0.2**
XAN				smax			
	comp=N,84nm,0.8s						
XAN				smax			
	comp=E,45nm,0.7s						
LZH	**Lanzhou**	**4.42**	**351**	*e*Pn	**Pn**	**19 40 48.0**	**+1.1**
LZH				Pg	**Pb**	**19 40 57.0**	**-0.5**
LZH				Sn	**Sn**	**19 41 39.3**	**+0.9**
LZH				Sg	**Sb**	**19 41 51.5**	**+0.6**
LZH				smax			
	comp=N,42nm,0.4s						
LZH				smax			
	comp=E,50nm,0.6s						
LZH				LR	LR		
	comp=N,100nm,5.1s						
LZH				LR	LR		
	comp=Z,130nm,6.0s						
CMAR	**Chiang Mai Arr**	**14.19**	**203**	Pn	**Pn**	**19 43 08.2**	**+7.3**
	comp=Z,0.1nm,0.3s,baz=5.9,slow=9.8,SNR=3.4						
MKAR	**Makanchi Array**	**22.86**	**318**	P	**P**	**19 44 41.6**	**-1.6**
	comp=Z,0.2nm,0.7s,mb2.7,baz=112,slow=11,SNR=2.6						
ZALV	**Zalesovo Beam**	**26.40**	**333**	P	**P**	**19 45 14.7**	**-1.6**
	comp=Z,0.6nm,0.4s,mb3.4,baz=133,slow=12,SNR=3.1						
JHJ	**Hachijo jima 2**	**29.57**	**78**	LR	LR	19 56 20.9	
	comp=Z,38nm,20.6s,baz=251,slow=34						
ASAR	**Alice Springs**	**61.75**	**149**	P	**P**	**19 50 00.4**	**+1.8**
	comp=Z,0.2nm,0.4s,mb3.6,baz=336,slow=6.8,SNR=5.3						

*IDC **25** 20:11:01.9±0.4,5.92S×146.67E,h0km,mb5.2/20, mb1 5.3/21,mb1mx5.3/22,mbtmp5.2/21,ML5.6/1,MS4.7/18, Ms1 4.7/18,ms1mx4.5/22,Error ellipse: s-maj=16.4km s-min=9.3km az=97.0*
*BJI **25** 20:11:05.7,6.15S×147.15E,h70km,mB5.2/44,mb5.2/59, Ms4.8/54,Ms7 4.6/46*
*ISCJB **25** 20:11:06.9±0.1,5.83S±0.02×146.72E±0.02,h43km, mb5.5/186,MS4.9/200,Error ellipse: s-maj=3.3km s-min=3.1km az=167.3*
*MOS **25** 20:11:07.2±0.8,5.81S×146.59E,h46km,mb5.4/42, MS4.8/30,Error ellipse: s-maj=10.3km s-min=5.7km az=97.8*
*NEIC **25** 20:11:07.5±0.1,5.81S×146.66E,mb5.4/93,MS4.9/169, MW5.5,MW5.3,Error ellipse: s-maj=5.7km s-min=4.6km az=84.0,Moment Tensor Solution. s42 Moment tensor: Scale 10^{17}Nm; M_{rr}1.09; $M_{\theta\theta}$-1.34; $M_{\phi\phi}$0.24; $M_{r\theta}$0.22; $M_{\theta\phi}$0.45; $M_{\phi r}$-0.11; Best double couple: $M_0$1.30000×10^{17} NP1:ϕ_s281.00000°,δ40.00000°,λ84.00000°. NP2: ϕ_s109.00000°,δ50.00000°,λ95.00000°. Principal axes: T 1.1200, Plg83.0000°, Azm51.0000°; N 0.3600, Plg3.0000°, Azm285.0000°; P -1.4800, Plg5.0000°, Azm195.0000°;*
*GCMT **25** 20:11:13.5±0.1,5.91S×146.73E,h50km,MW5.4,Moment Tensor Solution. s99,c175; s88,c166; Moment tensor: Scale 10^{17}Nm; M_{rr}1.68±.02; $M_{\theta\theta}$-1.66±.02; $M_{\phi\phi}$-0.02±.02; $M_{r\theta}$-0.05±.02; $M_{\theta\phi}$0.78±.02; $M_{\phi r}$-0.06±.02; Best double couple: $M_0$1.80000×10^{17} NP1:ϕ_s115.00000°,δ45.00000°, λ94.00000°. NP2:ϕ_s289.00000°,δ45.00000°,λ86.00000°. Principal axes: T 1.6800, Plg87.0000°, Azm120.0000°; N 0.2900, Plg3.0000°, Azm292.0000°; P -1.9800, Plg0.0000°, Azm22.0000°; Data Used: II IU IC G CN.*
*DJA **25** 20:11:13,6.00S×146.75E,h87km,Mw5.9/47*

ISC 25 20:11:08.9±0.1,5.83S±0.02×146.75E±0.02,h45km, h45km±1.6km:pP-P,n671,σ0§98/382,mb5.5/185,MS4.9/200, 101C-73B,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.57**	**173**	*e*Pn	**Pn**	**20 12 02.2**	**+0.4**
PMG				*e*Sn	**Sn**	**20 12 42.1**	**-0.6**
PMG	**Port Moresby**	**3.57**	**173**	P	**Pn**	**20 12 02.6**	**+0.8**
MMPI	**Merauke**	**6.84**	**247**	P	**Pn**	**20 12 49.3**	**+2.7**
	1μm,0.7s						
COEN	**Coen**	**8.80**	**203⇓**	*e*Pn	**Pn**	**20 13 12.9**	**-0.7**
COEN				*e*Sn	**Sn**	**20 14 48.0**	**-3.6**
COEN	**Coen**	**8.80**	**203**	P	**Pn**	**20 13 14.5**	**+0.9**
	4μm,0.9s						
SMPI	**Sarmi**	**8.88**	**295**	P	**Pn**	**20 13 18.6**	**+3.9**
	7μm463nm,1.2s						
BAKI	**Biak**	**11.58**	**293**	P	**Pn**	**20 13 56.4**	**+4.8**
	2μm240nm,0.8s						
TLE	**Tual**	**13.94**	**270**	P	**Pn**	**20 14 31.6**	**+7.7**
CTA	**Charters Tower**	**14.18**	**182**	*e*P	**Pn**	**20 14 28.0**	**+0.9**
	96nm,0.7s						
CTA				*e*S	**Sn**	**20 17 10.8**	**+7.8**
CTA	**Charters Tower**	**14.18**	**182**	Pn	**Pn**	**20 14 27.4**	**+0.4**
	13nm,0.3s,baz=1.0,slow=14,SNR=219						
CTA				Sn	**Sn**	**20 16 56.7**	**-6.3**
	2.7nm,0.3s,baz=290,slow=18,SNR=4.9						
CTAO	**Charters Tower**	**14.18**	**182**	*e*P	**Pn**	**20 14 28.8**	**+1.7**
CTAO				*e*		20 16 55.3	
CTAO				pmax	pmax		
	comp=Z,170nm,0.8s						
CTAO	**Charters Tower**	**14.18**	**182**	*e*Pn	**Pn**	**20 14 28.8**	**+1.7**
	comp=Z,170nm,0.8s						
CTAO				*e*Sn	**Sn**	**20 16 55.3**	**-7.7**
CTAO	**Charters Tower**	**14.18**	**182**	P	**Pn**	**20 14 29.1**	**+2.0**
	comp=Z,4μmcomp=Z,262nm,1.7s						
KAKA	**Kakadu**	**15.68**	**243**	*e*P	**Pn**	**20 14 46.8**	**-0.1**
	comp=Z,252nm,0.6s						
KAKA				*e*S	S	20 17 30.6	-22
KAKA	**Kakadu**	**15.68**	**243**	*e*Pn	**Pn**	**20 14 46.5**	**-0.3**
	comp=Z,6.1nm,0.8s						
KAKA				*e*Sn	**Sn**	**20 17 30.6**	**-9.1**
KAKA	**Kakadu**	**15.68**	**243**	P	**Pn**	**20 14 47.6**	**+0.7**
	comp=Z,6μmcomp=Z,704nm,0.9s						
WRAB	**Tennant Creek**	**18.48**	**220**	Pn	**Pn**	**20 15 20.0**	**-1.7**
	comp=Z,2μm,0.7s,SNR=85						
WRAB	**Tennant Creek**	**18.48**	**220**	*e*P	**Pn**	**20 15 19.9**	**-1.8**
WRAB				*e*		20 18 34.6	
WRAB				pmax	pmax		
	comp=Z,316nm,0.9s						
WRAB	**Tennant Creek**	**18.48**	**220**	*e*P	**Pn**	**20 15 19.9**	**-1.9**
	comp=Z,316nm,0.9s						
WRAB				*e*Sn	**Sn**	**20 18 34.6**	**-13**
WRAB	**Tennant Creek**	**18.48**	**220**	P	**Pn**	**20 15 21.9**	**+0.2**
	comp=Z,5μmcomp=Z,424nm,1.0s						
AAI	**Ambon**	**18.61**	**276**	P	**Pn**	**20 15 25.2**	**+1.9**
	comp=Z,930nm,0.7s						
GUMO	**Guam**	**19.39**	**354**	P	**Pn**	**20 15 31.9**	**-0.6**
	comp=Z,19nm,0.3s,baz=178,slow=9.8,SNR=35						
GUMO				LR	LR	20 22 29.0	
	comp=Z,1μm,18.3s,baz=350,slow=35						
GUMO	**Guam**	**19.39**	**354**	P	**Pn**	**20 15 31.9**	**-0.7**
GUMO				pmax	pmax		
	comp=Z,19nm,0.3s						
GUMO				MLR	MLR		
	comp=Z,1μm,18.3s						
GUMO	**Guam**	**19.39**	**354**	*e*P	**Pn**	**20 15 33.3**	**+0.7**
	comp=Z,260nm,0.7s						
GUMO	**Guam**	**19.39**	**354**	P	**Pn**	**20 15 34.9**	**+2.3**
	comp=Z,6μmcomp=Z,527nm,1.8s						
NLAI	**Namlea**	**19.75**	**277**	P	**Pn**	**20 15 37.8**	**+0.8**
	comp=Z,5μmcomp=Z,554nm,0.9s						
EIDS	**Eidsvold**	**19.86**	**168**	*e*P	**Pn**	**20 15 36.5**	**-1.6**
	comp=Z,114nm,0.8s						
KNA	**Kununurra**	**20.21**	**239**	P	**P**	**20 15 40.8**	**+0.7**
	comp=Z,10μmcomp=Z,1μm,0.8s						
TNTI	**Ternate**	**20.43**	**288**	P	**P**	**20 15 44.4**	**+1.8**
	comp=Z,8μmcomp=Z,511nm,1.7s						
ASAR	**Alice Springs**	**21.61**	**214**	P	**P**	**20 15 54.0**	**-1.2**
	comp=Z,27nm,0.6s,mb4.8,baz=54,slow=9.2,SNR=250						
ASAR				S	**S**	**20 19 52.7**	**+0.5**
	comp=Z,43nm,0.9s,baz=31,slow=22,SNR=6.6						
MNI	**Manado**	**23.04**	**288**	P	**P**	**20 16 11.0**	**+0.5**
	comp=Z,8μmcomp=Z,792nm,0.9s,mb6.2						
KMSI	**Cibinong**	**23.61**	**285**	P	**P**	**20 16 16.5**	**+0.5**
	comp=Z,1μm,0.8s,mb6.5						
FITZ	**Fitzroy Crossi**	**23.94**	**238**	*e*P	**P**	**20 16 18.1**	**-0.9**
	comp=Z,368nm,0.8s,mb5.9						
FITZ				*e*S	**S**	**20 20 30.8**	**-1.9**
FITZ	**Fitzroy Crossi**	**23.94**	**238**	P	**P**	**20 16 16.9**	**-2.1**
	comp=Z,162nm,0.9s,mb5.4,baz=67,slow=8.2,SNR=154						
FITZ				S	**S**	**20 20 33.2**	**+0.5**
	comp=Z,18nm,1.0s,baz=81,slow=18,SNR=2.9						
FITZ				LR	LR	20 26 37.2	
	comp=Z,3μm,20.3s,MS4.8,baz=57,slow=39						
FITZ	**Fitzroy Crossi**	**23.94**	**238**	*e*P	**P**	**20 16 17.7**	**-1.3**
FITZ				*e*		20 16 31.4	
FITZ	**Fitzroy Crossi**	**23.94**	**238**	P	**P**	**20 16 18.7**	**-0.3**
	comp=Z,531nm,0.8s,mb6.0						
KDI	**Kendari**	**24.11**	**273**	P	**P**	**20 16 21.6**	**+1.0**
	comp=Z,3μmcomp=Z,125nm,1.4s,mb5.2						
LUWI	**Luwuk**	**24.40**	**280**	P	**P**	**20 16 24.7**	**+1.5**
	comp=Z,1μm,1.3s,mb6.2						
MMRI	**Maumere**	**24.47**	**262**	P	**P**	**20 16 23.4**	**-0.5**
	comp=Z,8μmcomp=Z,623nm,1.2s,mb5.9						
DAV	**Davao City (W)**	**24.71**	**301**	LR	LR	20 25 46.6	
	comp=Z,1μm,19.0s,MS4.3,baz=141,slow=36						
DAV	**Davao City (W)**	**24.71**	**301**	PFAKE		20 16 40.0	+14
DAV				LR	LR		
	comp=Z,1μm,21.0s,MS4.4						
ARMA	**Armidale**	**24.88**	**170**	*e*P	**P**	**20 16 27.4**	**0.0**
ARMA				*e*S	**S**	**20 20 48.9**	**+1.4**
ARMA	**Armidale**	**24.88**	**170**	*e*P	**P**	**20 16 27.2**	**-0.3**
	comp=Z,1μm,1.3s,mb6.3						
DZM	**Mont Dzumac**	**24.96**	**132**	*e*P	**P**	**20 16 27.7**	**-0.6**
	comp=Z,299nm,1.2s,mb5.7						
DZM				*e*S	**S**	**20 20 41.2**	**-7.8**
	comp=Z,1μm,27.7s						
DZM				*e*LR	LR	20 22 33.1	
	comp=Z,8μm,28.9s						
MRSI	**Marisa**	**25.55**	**283**	P	**P**	**20 16 33.6**	**-0.1**
	comp=Z,2μmcomp=Z,237nm,0.9s,mb5.7						
STKA	**Stephens Creek**	**26.35**	**190**	*e*P	**P**	**20 16 39.8**	**-1.0**
	comp=Z,50nm,0.9s,mb5.0						
STKA				*e*S	**S**	**20 21 10.2**	**-0.6**
STKA	**Stephens Creek**	**26.35**	**190**	P	**P**	**20 16 39.9**	**-0.9**
	comp=Z,34nm,0.6s,mb5.1,baz=357,slow=8.4,SNR=39						
STKA				S	**S**	**20 21 12.4**	**+1.6**
	comp=Z,10nm,1.0s,baz=193,slow=16,SNR=1.9						
STKA				LR	LR	20 27 47.7	
	comp=Z,6μm,19.6s,MS5.2,baz=111,slow=38						
WSI	**Waingapu**	**26.48**	**260**	P	**P**	**20 16 42.0**	**-0.1**
	comp=Z,3μm,0.9s						
BKSI	**Bulukumba**	**26.50**	**270**	P	**P**	**20 16 42.8**	**+0.4**
	comp=Z,2μmcomp=Z,179nm,0.9s,mb5.6						
BNSI	**Bone**	**26.57**	**272**	P	**P**	**20 16 44.1**	**+1.1**
	comp=Z,3μmcomp=Z,315nm,1.1s,mb5.8						
SPSI	**Sidrap Palu**	**26.94**	**273**	P	**P**	**20 16 46.4**	**+0.1**
	comp=Z,2μmcomp=Z,167nm,1.1s,mb5.5						
TTSI	**Tana Toraja**	**26.99**	**275**	P	**P**	**20 16 48.1**	**+1.4**
	comp=Z,241nm,1.4s,mb5.5						
PCI	**Palu**	**27.30**	**279**	P	**P**	**20 16 51.2**	**+1.7**
	comp=Z,6μmcomp=Z,576nm,1.4s,mb5.9						
CAN	**Canberra**	**29.42**	**176**	*e*P	**P**	**20 17 07.7**	**-0.4**
CAN				pmax	pmax		
	comp=Z,28nm,0.7s,mb5.1						
CAN				MLR	MLR		
	comp=Z,2μm,20.0s,MS4.8						
CAN	**Canberra**	**29.42**	**176**	*e*P	**P**	**20 17 07.7**	**-0.4**
	comp=Z,28nm,0.7s,mb5.1						
CAN				LR	LR		
	comp=Z,2μm,20.0s,MS4.8						
CNB	**Canberra Magne**	**29.44**	**176**	*e*P	**P**	**20 17 08.3**	**0.0**
CNB				*e*S	**S**	**20 22 01.0**	**+1.7**
MYLDM	**Lahad Datu**	**30.25**	**291**	P	**P**	**20 17 17.4**	**+1.6**
MYLDM	**Lahad Datu**	**30.25**	**291**	P	**P**	**20 17 18.0**	**+2.2**
	comp=Z,2μmcomp=Z,111nm,1.4s,mb5.4						
MBWA	**Marble Bar**	**30.29**	**237**	*e*P	**P**	**20 17 14.9**	**-1.0**
	comp=Z,38nm,0.8s,mb5.2						
MBWA				LR	LR		
	comp=Z,3μm,20.0s,MS4.9						
MBWA	**Marble Bar**	**30.29**	**237**	P	**P**	**20 17 15.8**	**-0.2**
	comp=Z,59nm,1.1s,mb5.2						
FORT	**Forrest**	**30.40**	**213**	*e*P	**P**	**20 17 16.4**	**-0.5**
	comp=Z,44nm,0.6s,mb5.4						
FORT				*e*S	**S**	**20 22 13.6**	**-0.9**
TSM	**Tawau**	**30.54**	**289**	P	**P**	**20 17 18.7**	**+0.4**
KBKI	**Kotabaru**	**30.59**	**273**	P	**P**	**20 17 18.9**	**+0.2**
	comp=Z,55nm,0.9s,mb5.4						
KHKI	**Kahang-Kahang**	**31.00**	**264**	P	**P**	**20 17 21.2**	**-1.2**
	comp=Z,91nm,0.8s,mb5.7						
SRBI	**Singaraja**	**31.38**	**264**	P	**P**	**20 17 27.5**	**+1.8**
	comp=Z,63nm,1.7s,mb5.2						
IGBI	**Denpasar**	**31.48**	**263**	P	**P**	**20 17 25.1**	**-1.5**
	comp=Z,198nm,0.9s,mb6.0						
TOO	**Toolangi**	**31.61**	**182**	*e*P	**P**	**20 17 27.3**	**-0.1**
SDKM	**Sandakan**	**31.63**	**291**	P	**P**	**20 17 30.4**	**+2.5**
WAKE	**Wake Island**	**31.74**	**38**	PFAKE		20 17 40.0	+11
WAKE				LR	LR		
	comp=Z,612nm,19.0s,MS4.3						
BYJI	**Banyuwangi**	**32.23**	**264**	P	**P**	**20 17 32.8**	**-0.4**
	comp=Z,261nm,1.4s,mb5.9						
FUNA	**Funafuti**	**32.30**	**97**	PFAKE		20 17 50.0	+16
FUNA				LR	LR		
	comp=Z,23μm,20.0s,MS5.9						
KMMI	**Kalianget**	**32.59**	**266**	P	**P**	**20 17 36.9**	**+0.5**
	comp=Z,75nm,1.2s,mb5.5						
MSVF	**Nonsavu**	**32.78**	**114**	*e*P	**P**	**20 17 39.1**	**+1.2**
	comp=Z,77nm,1.3s,mb5.5						
GMJI	**Gumukmas**	**33.13**	**264**	P	**P**	**20 17 40.4**	**-0.7**
	comp=Z,42nm,1.1s,mb5.3						
KRKI	**Karangkates**	**34.11**	**264**	P	**P**	**20 17 50.3**	**+0.7**
PWJI	**Pagerwojo**	**34.75**	**264**	P	**P**	**20 17 54.4**	**-0.8**
	comp=Z,119nm,0.7s,mb5.9						
SJI	**Sawahan**	**34.78**	**265**	P	**P**	**20 17 55.2**	**-0.2**
	comp=Z,83nm,0.6s,mb5.8						
BTM	**Bintulu**	**34.80**	**284**	P	**P**	**20 17 57.7**	**+2.1**
PCJI	**Pacitan**	**35.38**	**264**	P	**P**	**20 17 59.8**	**-0.8**
	comp=Z,254nm,1.0s,mb6.1						
SBUM	**Sibu**	**35.45**	**282**	P	**P**	**20 18 01.7**	**+0.5**
SBUM	**Sibu**	**35.45**	**282**	P	**P**	**20 18 02.7**	**+1.5**
	comp=Z,2μmcomp=Z,129nm,1.4s,mb5.7						
STKI	**Sintang**	**35.70**	**278**	P	**P**	**20 18 04.5**	**+1.2**
	comp=Z,5μmcomp=Z,148nm,1.6s,mb5.7						
UGM	**Wanagama**	**36.02**	**265**	P	**P**	**20 18 05.9**	**-0.2**
	comp=Z,267nm,0.9s,mb6.2						
SMRI	**Semarang**	**36.09**	**266**	P	**P**	**20 18 06.9**	**+0.2**
	comp=Z,191nm,0.8s,mb6.1						
YOGI	**Yogyakarta**	**36.24**	**265**	P	**P**	**20 18

comp=Z,18nm,0.6s,mb4.9,baz=7.3,slow=0.5,SNR=16
LWLI Liwa 42.50 269 P **P** **20 18 59.5 -0.7**
comp=Z,4μmcomp=Z,304nm,0.7s,mb6.0
MJAR Matsushiro Arr 42.91 350 P **P** **20 19 02.8 -0.3**
comp=Z,6.2nm,0.7s,mb4.4,baz=179,slow=9.7,SNR=21
MJAR LR LR 20 35 24.1
comp=Z,358nm,18.6s,MS4.3,baz=160,slow=34
MAJO Matsushiro 42.91 350⇑*i*P **P** **20 19 02.7 -0.4**
MAJO *e* pP 20 19 15.2 -0.3
MAJO pmax pmax
comp=Z,68nm,1.3s,mb5.2
MAJO MLR MLR
comp=Z,421nm,19.0s,MS4.4
MAJO Matsushiro 42.91 350⇑*i*P **P** **20 19 02.7 -0.4**
comp=Z,68nm,1.3s,mb5.2
MAJO *e* pP 20 19 15.2 -0.3
MAJO LR LR
comp=Z,421nm,19.0s,MS4.4
MAT Matsushiro 42.91 350 P **P** **20 19 02.7 -0.4**
MAT S **S** **20 25 16.0 -8.8**
SNZO South Karori 43.24 149 *e*P **P** **20 19 05.5 -0.3**
comp=Z,222nm,1.1s,mb5.8
SNZO LR LR
comp=Z,2μm,20.0s,MS4.9
RPZ Rata Peaks 43.37 154 *e*P **P** **20 19 07.0 +0.2**
comp=Z,79nm,0.7s,mb5.5
KHZ Kahutara 43.49 151 *e*P **P** **20 19 06.7 -1.1**
comp=Z,333nm,1.3s,mb5.9
KHZ *e* pP 20 19 19.5 -0.7
GZH Guangzhou 43.49 313 P **P** **20 19 10.3 +2.2**
GZH S **S** **20 25 37.5 +3.6**
GZH pmax pmax
comp=Z,230nm,6.7s
MYKOM Kota Tinggi 43.50 279 P **P** **20 19 08.9 +0.5**
MYKOM Kota Tinggi 43.50 279 P **P** **20 19 09.1 +0.8**
comp=Z,3μmcomp=Z,240nm,0.8s,mb6.0
QIZ Qiongzhong 43.96 305 P **P** **20 19 11.0 -0.8**
QIZ pP pP 20 19 30.5 +6.2
QIZ S **S** **20 25 37.5 -3.2**
QIZ pmax pmax
comp=Z,21nm,0.8s,mb4.9
QIZ pmax pmax
comp=Z,150nm,5.6s
QIZ LR LR
comp=N,370nm,28.6s,MS4.2
QIZ LR LR
comp=E,160nm,27.8s,MS4.2
QIZ LR LR
comp=Z,700nm,30.1s,MS4.4
QIZ Qiongzhong 43.96 305 PFAKE 20 19 20.0 +8.2
QIZ LR LR
comp=Z,420nm,22.0s,MS4.3
KSI Kapahiang 44.05 271 P **P** **20 19 11.8 -0.9**
comp=Z,146nm,0.8s,mb5.7
KGM Kluang 44.07 279 P **P** **20 19 14.2 +1.4**
SSE Sheshan 44.11 328 P **P** **20 19 11.0 -1.9**
SSE S **S** **20 25 38.5 -4.1**
SSE sS sS 20 26 15.0 +12
SSE pmax pmax
comp=Z,59nm,0.9s,mb5.3
SSE pmax pmax
comp=Z,230nm,10.3s
SSE LR LR
comp=N,320nm,19.8s,MS4.4
SSE LR LR
comp=E,280nm,19.8s,MS4.4
SSE LR LR
comp=Z,640nm,19.6s,MS4.5
RGRI Rengat 44.66 275 P **P** **20 19 19.1 +1.4**
comp=Z,453nm,1.4s,mb6.1
KTGM Kuala Trenggan 44.94 283 P **P** **20 19 20.9 +1.1**
KRJI Kerinci 45.32 273 P **P** **20 19 23.6 +0.7**
comp=Z,435nm,1.0s,mb6.2
SDSI Sungai Dareh 45.49 274 P **P** **20 19 23.6 -0.6**
comp=Z,489nm,0.9s,mb6.3
FRIM Kepong 45.96 280 P **P** **20 19 28.7 +0.8**
BKNI Bangkinang 46.04 276 P **P** **20 19 29.2 +0.6**
comp=Z,3μmcomp=Z,285nm,1.2s,mb6.1
NJ2 Nanjing 46.10 327 *e*P **P** **20 19 29.3 +0.6**
NJ2 pP pP 20 19 47.0 +5.8
NJ2 sP sP 20 19 55.3 +8.8
NJ2 PP PP 20 21 20.8 +3.2
NJ2 S **S** **20 26 09.5 -1.9**
NJ2 sS sS 20 26 40.5 +8.2
NJ2 pmax pmax
comp=Z,40nm,0.8s,mb5.4
NJ2 pmax pmax
comp=Z,210nm,6.1s
NJ2 LR LR
comp=N,400nm,17.8s,MS4.5
NJ2 LR LR
comp=E,180nm,16.0s,MS4.5
NJ2 LR LR
comp=Z,6μm,21.3s
UBT Ubonrachathani 46.35 297 P pP 20 19 45.0 +1.6
PDSI Padang 46.45 274 P **P** **20 19 30.8 -1.0**
comp=Z,214nm,0.6s,mb6.2
KSRS Korea Array 46.51 339 P **P** **20 19 32.5 +0.7**
comp=Z,21nm,0.7s,mb5.2,baz=156,slow=9.0,SNR=73
KSRS LR LR 20 36 07.4
comp=Z,998nm,21.9s,MS4.7,baz=144,slow=32
KSRS Korea Array 46.51 339 P **P** **20 19 32.5 +0.7**
KSRS pmax pmax
comp=Z,21nm,0.7s,mb5.2
KSRS MLR MLR
comp=Z,998nm,21.9s,MS4.7
PPI Padang Panjang 46.57 275 P **P** **20 19 32.8 +0.1**
comp=Z,7μmcomp=Z,351nm,1.0s,mb6.2
IPM Ipoh 46.79 282 P **P** **20 19 35.2 +0.7**
IPM Ipoh 46.79 282 P **P** **20 19 35.3 +0.8**
comp=Z,2μmcomp=Z,139nm,1.4s,mb5.7
INCN Inchon 47.00 338 *e*P **P** **20 19 35.8 +0.2**
comp=Z,48nm,1.0s,mb5.4
INCN *e* pP 20 19 47.5 -0.6
INCN LR LR
comp=Z,684nm,20.0s,MS4.6
MNSI Mandailing Nat 47.55 276 P **P** **20 19 40.7 +0.3**
comp=Z,1μmcomp=Z,179nm,0.8s,mb6.2
WHN Wuhan 47.65 321⇑P **P** **20 19 42.0 +1.2**
WHN pmax pmax
comp=Z,70nm,0.7s,mb5.8
ERM Erimo 47.73 356 P **P** **20 19 43.0 +1.8**
comp=Z,91nm,0.6s,mb6.0,SNR=6.6
ERM Erimo 47.73 356 *e*P **P** **20 19 42.0 +0.8**
ERM pmax pmax
comp=Z,25nm,1.0s,mb5.2
ERM MLR MLR
comp=Z,666nm,22.0s,MS4.6
ERM Erimo 47.73 356 *e*P **P** **20 19 42.0 +0.8**
comp=Z,24nm,1.0s,mb5.2
ERM LR LR
comp=Z,666nm,22.0s,MS4.6
SISI Saibi 47.76 273 P **P** **20 19 41.1 -0.9**
comp=Z,131nm,1.5s,mb5.8
SNG Songkhla 47.81 285 P **P** **20 19 42.0 -0.4**
comp=Z,180nm,0.8s,mb6.2
MIDW Midway 48.40 44 PFAKE 20 20 00.0 +13
MIDW LR LR
comp=Z,1μm,20.0s,MS4.8
JOHN Johnston Islan 48.70 62 PFAKE 20 20 00.0 +11
JOHN LR LR
comp=Z,1μm,21.0s,MS4.9
TSI Tuntungan 49.01 280 P **P** **20 19 51.6 0.0**
MCQ Macquarie Isla 49.52 171 *e*P **P** **20 19 55.8 +1.0**
GSI Gunungsitoli 49.61 277 P **P** **20 19 55.8 -0.4**
comp=Z,4μmcomp=Z,298nm,0.7s,mb6.4
ASAJ Asahikawa 49.86 356 P **P** **20 19 58.3 +0.8**
comp=Z,14nm,0.5s,mb5.2,baz=206,slow=6.4,SNR=17
ASAJ Asahikawa 49.86 356 P **P** **20 19 58.3 +0.8**
ASAJ pmax pmax
comp=Z,14nm,0.5s
DL2 Dalian 50.23 334 P **P** **20 20 01.3 +0.8**
DL2 S **S** **20 27 09.5 -0.1**
DL2 pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
DL2 LR LR
comp=N,310nm,24.4s,MS4.3
DL2 LR LR
comp=E,170nm,22.5s,MS4.3
DL2 LR LR
comp=Z,420nm,22.8s,MS4.4
TPTI 50.32 279 P **P** **20 20 00.9 -0.7**
comp=Z,2μmcomp=Z,140nm,1.2s,mb5.8
GYA Guiyang 50.39 311⇓*i*P **P** **20 20 03.0 +1.1**
GYA pP pP 20 20 21.5 +7.0
GYA sP sP 20 20 31.8 +12
GYA PcP PcP 20 21 21.3 +1.4
GYA PP PP 20 22 00.8 +2.9
GYA ScP ScP 20 25 08.8 -3.6
GYA PcS PcS 20 25 16.0 -1.3
GYA S **S** **20 27 09.3 -2.8**
GYA sS sS 20 27 41.3 +8.1
GYA SS SS 20 30 41.8 -4.8
GYA pmax pmax
comp=Z,30nm,1.0s,mb5.3
GYA pmax pmax
comp=Z,140nm,5.4s
GYA LR LR
comp=N,840nm,18.8s,MS4.9
GYA LR LR
comp=E,710nm,19.0s,MS4.9
GYA LR LR
comp=Z,920nm,17.9s,MS4.8
VLA Vladivostok 50.55 346⇑*i*P **P** **20 20 02.6 -0.2**
VLA pmax pmax
comp=Z,15nm,1.1s,mb4.8
ENH Enshi 50.63 317 PFAKE 20 20 10.0 +6.4
ENH LR LR
comp=Z,406nm,21.0s,MS4.4
NST Nakhon Sawan 50.86 295 P **P** **20 20 06.0 +0.4**
comp=Z,83nm,0.9s,mb5.7
SNY Shenyang 51.94 338⇑P **P** **20 20 13.5 +0.3**
SNY S **S** **20 27 32.0 -1.1**
SNY pmax pmax
comp=Z,18nm,0.5s,mb5.3
SNY pmax pmax
comp=Z,340nm,2.8s,mb5.8
SNY LR LR
comp=N,580nm,20.4s,MS4.7
SNY LR LR
comp=E,560nm,22.1s,MS4.7
SNY LR LR
comp=Z,1μm,21.1s,MS4.9
MDJ Mudanjiang 52.54 345 P **P** **20 20 17.5 -0.1**
MDJ pP pP 20 20 35.3 +5.0
MDJ sP sP 20 20 43.3 +7.7
MDJ PP PP 20 22 17.0 0.0
MDJ ScP ScP 20 25 17.3 -3.9
MDJ PcS PcS 20 25 25.3 -0.5
MDJ S **S** **20 27 39.8 -1.3**
MDJ sS sS 20 28 10.5 +8.1
MDJ ScS ScS 20 30 00.3 -3.3
MDJ pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
MDJ pmax pmax
comp=Z,140nm,6.4s
MDJ LR LR
comp=N,240nm,27.2s
MDJ LR LR
comp=E,410nm,43.0s
MDJ LR LR
comp=Z,570nm,22.8s,MS4.5
MDJ Mudanjiang 52.54 345 PFAKE 20 20 30.0 +12
MDJ LR LR
comp=Z,385nm,20.0s,MS4.4
YSS Yuzh-Sakhalins 52.68 357 *e*P **P** **20 20 19.0 +0.4**
YSS pmax pmax
comp=Z,39nm,1.7s,mb5.1
YSS Yuzh-Sakhalins 52.68 357 *e*P **P** **20 20 19.3 +0.8**
comp=Z,33nm,0.8s,mb5.3
YSS LR LR
comp=Z,149nm,19.0s,MS4.0
KMI Kunming 52.70 308⇑P **P** **20 20 20.5 +1.3**
KMI pP pP 20 20 39.5 +7.6
KMI sP sP 20 20 48.0 +11
KMI PcP PcP 20 21 29.3 +0.7
KMI PP PP 20 22 21.0 +2.1
KMI ScP ScP 20 25 18.3 -4.1
KMI PcS PcS 20 25 26.3 -1.0
KMI S **S** **20 27 41.0 -3.0**
KMI sS sS 20 28 14.0 +8.8
KMI ScS ScS 20 29 59.5 -6.1
KMI SS SS 20 31 19.3 -4.0
KMI pmax pmax
comp=Z,15nm,1.3s,mb4.8
KMI pmax pmax
comp=Z,180nm,6.3s
KMI LR LR
comp=N,280nm,18.5s,MS4.5
KMI LR LR
comp=E,360nm,22.7s,MS4.5
KMI LR LR
comp=Z,560nm,26.0s,MS4.5
CHRT Chiangrai 52.78 300⇑P **P** **20 20 20.5 +0.7**
comp=Z,342nm,1.0s,mb6.2
CMAR Chiang Mai Arr 52.95 298 P **P** **20 20 22.1 +1.0**
comp=Z,16nm,0.6s,mb5.1,baz=121,slow=5.9,SNR=103
CMAR LR LR 20 41 20.7
comp=Z,333nm,21.8s,MS4.3,baz=303,slow=34
CMAR PKP2bc 20 51 01.0
comp=Z,0.8nm,0.3s,baz=280,slow=4.6,SNR=4.5
CMAR Chiang Mai Arr 52.95 298 P **P** **20 20 22.1 +1.0**
CMAR LR LR 20 41 20.7
CMAR ⇑*e* 20 51 01.0
CN2 Changchun 53.02 341 *e*P **P** **20 20 21.8 +0.6**
CN2 *e*pP pP 20 20 37.5 +3.6
CN2 *e*sP sP 20 20 44.5 +5.3
CN2 *e*S **S** **20 27 50.8 +3.0**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
CN2 pmax pmax
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,500nm,18.0s,MS4.7
CN2 LR LR
comp=E,300nm,18.0s,MS4.7
CN2 LR LR
comp=Z,400nm,20.0s,MS4.5
CHG Chiang Mai 53.09 299⇓P **P** **20 20 31.0 +8.9**
comp=Z,52nm,0.8s,mb5.5
CHTO Chiang Mai 53.09 299 *e*P **P** **20 20 22.2 +0.1**
CHTO *e* pP 20 20 35.7 +0.8
CHTO pmax pmax
comp=Z,44nm,0.9s,mb5.4
CHTO MLR MLR
comp=Z,543nm,19.0s,MS4.6
CHTO Chiang Mai 53.09 299 *e*P **P** **20 20 22.2 0.0**
comp=Z,44nm,0.9s,mb5.4
CHTO *e* pP 20 20 35.7 +0.9
CHTO LR LR
comp=Z,543nm,19.0s,MS4.6
CHTO Chiang Mai 53.09 299 P **P** **20 20 23.0 +0.9**
comp=Z,70nm,1.2s,mb5.5
XAN Xi'an 53.40 321 P **P** **20 20 24.5 +0.4**
XAN PP PP 20 22 27.5 +2.5
XAN S **S** **20 27 50.8 -2.4**
XAN SS SS 20 31 37.8 +3.8
XAN pmax pmax
comp=Z,16nm,0.8s,mb5.0
XAN pmax pmax
comp=Z,49nm,7.9s
XAN LR LR
comp=N,250nm,32.4s,MS4.1
XAN LR LR
comp=E,100nm,37.4s,MS4.1
XAN LR LR
comp=Z,140nm,39.9s,MS3.7
BJT Baijiatuau 53.62 331 PFAKE 20 20 40.0 +14
BJT LR LR
comp=Z,746nm,22.0s,MS4.7
BJI Beijing 53.64 331 P **P** **20 20 25.5 -0.3**
BJI pP pP 20 20 43.8 +5.3
BJI sP sP 20 20 51.3 +7.5
BJI PP PP 20 22 24.5 -2.5
BJI S **S** **20 27 55.0 -1.3**
BJI sS sS 20 28 26.8 +9.3
BJI SS SS 20 31 37.0 -0.6
BJI pmax pmax
comp=Z,38nm,1.0s,mb5.3
BJI LR LR
comp=N,280nm,20.0s,MS4.6
BJI LR LR
comp=E,530nm,23.9s,MS4.6
BJI LR LR
comp=Z,470nm,37.5s
RAR Rarotonga 53.93 112 P **P** **20 20 29.0 +0.6**
comp=Z,10nm,0.7s,mb4.9,baz=246,slow=10.0,SNR=4.0
CD2 Chengdu 54.98 314 P **P** **20 20 36.0 +0.2**
CD2 pP pP 20 20 55.5 +7.0
CD2 sP sP 20 21 04.0 +10
CD2 PP PP 20 22 41.5 +2.2
CD2 S **S** **20 28 11.0 -3.7**
CD2 sS sS 20 28 44.3 +8.3
CD2 SS SS 20 31 55.8 -3.3
CD2 pmax pmax
comp=Z,60nm,0.7s,mb5.7
CD2 pmax pmax
comp=Z,160nm,7.3s
CD2 LR LR
comp=N,460nm,14.9s
CD2 LR LR
comp=Z,420nm,22.0s
HABR Khabarovsk 55.04 351 *e*P **P** **20 20 35.5 -0.3**
HABR *e* 20 21 35.0
HABR *e* 20 22 38.6
HABR *e*PPP 20 23 51.3
HABR *e*S **S** **20 28 12.8 -2.1**
HABR *e* 20 30 15.9
HABR *e*SS SS 20 31 58.1 -1.4
HABR pmax pmax
comp=Z,27nm,0.8s,mb5.3
HABR pmax pmax
comp=N,14nm,1.0s
HABR pmax pmax
comp=E,16nm,0.8s
HABR MLR MLR
comp=Z,393nm,16.0s,MS4.6
XMAS Kiritimati 56.28 84 PFAKE 20 21 00.0 +15
XMAS LR LR
comp=Z,2μm,20.0s,MS5.1
KLR Kul'dur 56.38 348 *e*P **P** **20 20 42.0 -3.4**
KLR *e*S **S** **20 28 30.0 -2.7**
KLR *e* 20 32 17.5
KLR pmax pmax
comp=Z,70nm,2.2s,mb5.3
HHC Hu-ho-hao-te 56.56 328 *e*P **P** **20 20 46.8 -0.1**
HHC pP pP 20 21 05.8 +6.1
HHC sP sP 20 21 14.5 +10
HHC PcP PcP 20 21 41.5 -1.5
HHC PP PP 20 22 55.5 +2.3
HHC ScP ScP 20 25 32.8 -6.2
HHC PcS PcS 20 25 40.8 -2.8
HHC S **S** **20 28 31.8 -3.6**
HHC sS sS 20 29 04.8 +8.0
HHC ScS ScS 20 30 25.5 -6.9
HHC SS SS 20 32 21.5 -2.2
HHC pmax pmax
comp=Z,29nm,0.8s,mb5.4
HHC pmax pmax
comp=Z,150nm,6.9s
HHC LR LR
comp=N,510nm,16.5s,MS4.8
HHC LR LR
comp=E,510nm,16.7s,MS4.8
HHC LR LR
comp=Z,520nm,16.8s,MS4.7
BTO Baotou 57.20 327 *e*P **P** **20 20 50.3 -1.1**
LZH Lanzhou 57.92 319 *e*P **P** **20 20 57.8 +1.2**
LZH pP pP 20 21 17.0 +7.5
LZH sP sP 20 21 24.5 +10
LZH PcP PcP 20 21 48.3 -0.2
LZH PP PP 20 23 04.5 -1.0
LZH *e*S **S** **20 28 47.8 -5.7**
LZH sS sS 20 29 23.5 +8.5
LZH pmax pmax
comp=Z,33nm,1.2s,mb5.2
LZH pmax pmax
comp=Z,240nm,5.1s
LZH LR LR
comp=N,210nm,12.0s
LZH LR LR
comp=Z,310nm,12.5s,MS4.6
PETK Petropavlovsk- 59.45 8 P **P** **20 21 07.8 +1.0**
comp=Z,29nm,0.7s,mb5.4,baz=173,slow=7.2,SNR=40
PETK LR LR 20 42 30.2
comp=Z,1μm,22.0s,MS5.0,baz=197,slow=32
PETK PKP2bc 20 50 45.1
comp=Z,4.8nm,1.1s,baz=118,slow=12,SNR=5.8
PETK Petropavlovsk- 59.45 8 P **P** **20 21 07.8 +1.0**
PETK LR LR 20 42 30.2
PETK ⇑*e* 20 50 45.1
PET Petropavlovsk 59.50 8 *e*P **P** **20 21 08.1 +0.9**
PET *e*S **S** **20 29 12.2 -1.1**
PET pmax pmax
comp=Z,25nm,0.9s,mb5.2
PET pmax pmax
comp=Z,200nm,10.4s
PET pmax pmax
comp=Z,100nm,11.5s
PET Petropavlovsk 59.50 8 PFAKE 20 21 20.0 +13
PET LR LR
comp=Z,763nm,22.0s,MS4.8
HIA Hailar 59.71 340 PFAKE 20 21 20.0 +11
HIA LR LR
comp=Z,444nm,21.0s,MS4.6
DRV Dumont d'Urvil 60.91 183 S **S** **20 29 40.0 +8.9**
DRV R 20 40 00.0
SHL Shillong 61.72 303 *e*PKP **P** **20 21 22.0 -0.9**
POHA Pohakuloa 62.19 64 PFAKE 20 21 40.0 +14
POHA LR LR
comp=Z,1μm,20.0s,MS5.1
GTA Gaotai 62.45 320 P **P** **20 21 28.3 +0.7**
GTA pP pP 20 21 47.5 +7.0
GTA sP sP 20 21 56.5 +11
GTA S **S** **20 29 53.5 +1.9**
GTA SS SS 20 34 02.8 +6.5
GTA pmax pmax
comp=Z,24nm,0.7s,mb5.4
GTA pmax pmax
comp=Z,220nm,5.7s
GTA LR LR
comp=N,180nm,20.2s,MS4.4
GTA LR LR
comp=E,180nm,17.8s,MS4.4
GTA LR LR
comp=Z,190nm,17.0s,MS4.3
PPT Papeete 63.18 107 *e*S **S** **20 29 58.2 -3.2**
comp=Z,308nm,26.0s
PPT *e*LR LR 20 40 12.5
comp=Z,1μm,25.2s
PPT Papeete 63.18 107 LR LR 20 44 27.2
comp=Z,531nm,19.7s,MS4.7,baz=358,slow=32
PAE Paea 63.18 107 *e*P **P** **20 21 34.3 +1.5**
comp=Z,7.0nm,0.9s,mb4.8
PAE Paea 63.18 107 *e*P **P** **20 21 34.3 +1.5**
PAE pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
TIAR Tiarei 63.40 107 *e*P **P** **20 21 36.0 +1.7**
comp=Z,111nm,0.9s,mb6.0
TIAR *e*pP pP 20 21 47.6 +0.3
comp=Z,134nm,1.0s
TBI Tubuai 63.66 113 *e*S **S** **20 30 03.2 -4.1**
comp=Z,933nm,26.2s
TBI *e*LR LR 20 40 26.1
comp=Z,1μm,34.5s
ULN Ulaanbaatar 63.84 331⇑*i*P **P** **20 21 37.3 +0.7**
ULN *e* pP 20 21 49.0 -0.6
ULN pmax pmax
comp=Z,24nm,0.8s,mb5.3
ULN MLR MLR
comp=Z,669nm,20.0s,MS4.8
ULN Ulaanbaatar 63.84 331⇑*i*P **P** **20 21 37.3 +0.7**
comp=Z,24nm,0.8s,mb5.3
ULN *e* pP 20 21 49.0 -0.6
ULN LR LR
comp=Z,669nm,20.0s,MS4.8
ULN Ulaanbaatar 63.84 331 P **P** **20 21 37.7 +1.1**
comp=Z,465nmcomp=Z,38nm,0.8s,mb5.5
LSA Lhasa 63.94 307 P **P** **20 21 38.0 +0.4**
LSA Lhasa 63.94 307 PFAKE 20 21 50.0 +12
LSA LR LR
comp=Z,256nm,20.0s,MS4.4
SONM Songino Array 64.14 331 P **P** **20 21 39.0 +0.5**
comp=Z,16nm,1.0s,mb5.0,baz=156,slow=7.1,SNR=46
SONM PKP2bc 20 50 33.6
comp=Z,3.0nm,0.9s,baz=215,slow=1.8,SNR=10
SONM LR LR 20 50 53.7
comp=Z,635nm,19.4s,MS4.8,baz=101,slow=37
SONM Songino Array 64.14 331 P **P** **20 21 39.0 +0.5**
SONM ⇑*e* 20 50 33.6
SONM LR LR 20 50 53.7
CIT Chita 64.21 338 *e*P **P** **20 21 39.4 +0.5**
CIT *e* pP 20 21 51.6 -0.3
CIT *e* 20 22 06.8
CIT pmax pmax
comp=Z,102nm,1.8s,mb5.5

MEH Mehetia 64.63 107 *e*P P **20 21 43.5 +1.1**
comp=Z,104nm,0.9s,mb5.8
MEH *e*pP pP 20 21 55.1 -0.3
comp=Z,169nm,1.0s
PMOR Pomariorio Ree 64.73 104 *e*P P **20 21 44.6 +1.5**
comp=Z,143nm,1.0s,mb6.0
PMOR *e*pP pP 20 21 56.3 +0.2
comp=Z,116nm,0.8s
CLNS Chul'man 64.97 347*c i*P P **20 21 44.8 +1.1**
CLNS *e**PP pP 20 21 56.5 -0.3
CLNS *e* 20 22 16.9
CLNS *e* 20 24 11.7
CLNS *e*S S **20 30 27.2 +5.1**
CLNS *e*SSS 20 37 27.3
CLNS pmax pmax
comp=Z,22nm,0.8s,mb5.2
CLNS pmax pmax
comp=N,16nm,0.8s
CLNS pmax pmax
comp=E,5.0nm,0.7s
CLNS pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
CLNS smax
comp=N,186nm,13.1s
CLNS smax
comp=E,180nm,16.2s
CLNS MLR MLR
comp=Z,209nm,18.0s,MS4.4
CLNS MLR MLR
comp=N,169nm,18.0s,MS4.5
CLNS MLR MLR
comp=E,139nm,13.0s,MS4.5
VAH Vaihoa 64.99 104 *e*P P **20 21 45.9 +1.1**
comp=E,60nm,1.0s,mb5.6
VAH *e*pP pP 20 21 57.6 -0.2
comp=E,63nm,0.9s
CASY Casey 65.35 195⇑*i*P P **20 21 45.9 -0.2**
CASY Casey 65.35 195⇑*i*P P **20 21 45.8 -0.3**
comp=E,82nm,1.2s,mb5.6
CASY LR LR
comp=Z,1μm,20.0s,MS5.1
TAPN Taplejung 65.85 303 *e*P P **20 21 49.7 -0.4**
comp=Z,56nm,0.8s,mb5.6
ODAN Odare 65.95 303 *e*P P **20 21 50.8 +0.1**
comp=Z,83nm,0.8s,mb5.8
RAMN Ramite 66.64 303 *e*P P **20 21 54.9 -0.3**
comp=Z,70nm,0.8s,mb5.8
PALK Pallekele 67.17 280 *e*P P **20 21 56.3 -2.5**
PALK *e* pP 20 22 10.3 -1.6
PALK pmax pmax
comp=Z,86nm,1.4s,mb5.6
PALK Pallekele 67.17 280 *e*P P **20 21 56.3 -2.5**
comp=Z,86nm,1.4s,mb5.6
PALK *e* pP 20 22 10.3 -1.6
PALK Pallekele 67.17 280 P P **20 22 00.1 +1.3**
comp=Z,24nm,2.5s,mb4.8
JIRN Jiri 67.22 303 *e*P P **20 21 59.3 +0.4**
comp=Z,55nm,0.9s,mb5.6
ZAK Zakamensk 67.38 332⇓*i*P P **20 21 59.1 -0.2**
ZAK pmax pmax
comp=Z,15nm,1.1s,mb4.9
GUN Gumba 67.57 303 *e*P P **20 22 01.4 +0.4**
comp=Z,270nm,1.2s,mb6.2
PKI Pulchoki 67.85 303 *e*P P **20 22 02.6 -0.2**
comp=Z,61nm,0.9s,mb5.6
PKI Pulchoki 67.85 303 *e*P P **20 22 02.6 -0.2**
PKI pmax pmax
comp=Z,61nm,0.9s,mb5.6
KKN Kakani 68.03 303 *e*P P **20 22 03.6 -0.3**
comp=Z,110nm,0.9s,mb5.9
KKN Kakani 68.03 303 *e*P P **20 22 03.6 -0.3**
KKN pmax pmax
comp=Z,110nm,0.9s,mb5.9
TLY Talaya 68.08 333 *i* P P **20 22 04.2 +0.4**
TLY *e* 20 22 22.4
TLY *e* 20 24 37.7
TLY *e*S S 20 31 04.5 +4.4
TLY *e* 20 31 34.8
TLY *e*SS SS 20 35 17.1 -6.3
TLY pmax pmax
comp=Z,12nm,0.9s,mb4.9
TLY MLR MLR
comp=Z,595nm,20.0s,MS4.8
TLY Talaya 68.08 333 *e*P P **20 22 04.1 +0.4**
comp=Z,7.0nm,0.6s,mb4.9
TLY *e* pP 20 22 15.7 -1.2
TLY LR LR
comp=Z,757nm,22.0s,MS4.9
DMN Daman 68.11 303 *e*P P **20 22 04.4 -0.1**
comp=Z,147nm,1.0s,mb6.0
GKN Gorkha 68.63 303 *e*P P **20 22 07.0 -0.7**
comp=Z,72nm,0.8s,mb5.6
SEY Seymchan 68.71 3*c i*P P **20 22 08.2 +0.8**
YAK Yakutsk 68.94 351 *e*P P **20 22 08.9 0.0**
YAK *e**PP pP 20 22 20.4 -1.6
YAK *e* 20 22 33.7
YAK *e* 20 24 44.0
YAK *e*S S 20 31 09.5 -0.3
YAK *e*SSS 20 38 45.2
YAK pmax pmax
comp=Z,18nm,0.9s,mb5.0
YAK pmax pmax
comp=E,2.0nm,0.9s
YAK pmax pmax
comp=N,5.0nm,1.4s
YAK pmax pmax
comp=Z,58nm,2.8s,mb5.0
YAK pmax pmax
comp=N,41nm,2.8s
YAK pmax pmax
comp=E,33nm,2.8s
YAK smax
comp=N,160nm,4.9s
YAK smax
comp=E,35nm,2.5s
YAK Yakutsk 68.94 351 *e*P P **20 22 08.6 -0.2**
comp=E,26nm,0.7s,mb5.3
YAK LR LR
comp=Z,428nm,22.0s,MS4.6
MOY Mondy 69.31 332 *e*P P **20 22 11.7 +0.3**
MOY pmax pmax
comp=Z,45nm,2.2s,mb5.0
MIR Mirnyy 70.85 200⇑*i*P P **20 22 21.0 +0.4**
MIR pmax pmax
comp=Z,245nm,1.2s,mb6.0
MIR pmax pmax
comp=Z,404nm,2.0s,mb6.0
MIR MLR MLR
comp=N,500nm,18.0s,MS5.0
MIR MLR MLR
comp=E,600nm,18.0s,MS5.0
MIR MLR MLR
comp=Z,700nm,18.0s,MS5.0
HYB Hyderabad 71.17 291 *e*P P **20 22 23.0 -0.5**
HYB Hyderabad 71.17 291 *i* P P **20 22 23.0 -0.5**
AKUT Akutan 71.70 27 *e*P P **20 22 26.8 +0.9**
comp=Z,84nm,0.9s,mb5.7
WMQ Urumqi 72.50 319 P P **20 22 31.5 +0.5**
WMQ PcP PcP 20 22 49.0 +0.5
WMQ pP pP 20 22 51.5 +7.3
WMQ sP sP 20 23 00.0 +11
WMQ PP PP 20 25 15.5 +2.7
WMQ S S 20 31 48.3 -3.7
WMQ ScS ScS 20 32 28.0 -6.4
WMQ SS SS 20 36 30.5 -1.2
WMQ pmax pmax
comp=Z,31nm,1.0s,mb5.2
WMQ pmax pmax
comp=Z,260nm,4.8s
WMQ LR LR
comp=N,220nm,25.3s,MS4.5
WMQ LR LR
comp=E,230nm,23.5s,MS4.5
WMQ LR LR
comp=Z,240nm,27.0s,MS4.3
SBA Scott Base 72.74 176⇑*i*P P **20 22 33.1 +1.3**
SBA pmax pmax
comp=Z,120nm,1.4s,mb5.6
SBA MLR MLR
comp=Z,781nm,19.0s,MS5.0
SBA Scott Base 72.74 176⇑*i*P P **20 22 33.1 +1.3**
comp=Z,120nm,1.4s,mb5.6
SBA LR LR
comp=Z,781nm,19.0s,MS5.0
SDPT Sand Point 74.88 28 *e*P P **20 22 44.4 -0.3**
comp=Z,62nm,0.7s,mb5.7

BILL Bilibino 74.98 7*c i*P P **20 22 45.6 +0.6**
BILL *e* pP 20 22 59.0 +0.7
BILL *e*S S 20 32 17.1 -1.9
BILL *e*SS SS 20 37 06.7 -1.8
BILL pmax pmax
comp=Z,26nm,1.0s,mb5.1
BILL Bilibino 74.98 7 *e*P P **20 22 45.3 +0.3**
comp=Z,27nm,0.9s,mb5.2
BILL LR LR
comp=Z,597nm,22.0s,MS4.8
NDI New Delhi 75.08 302 *ex* P **20 22 42.0 -4.4**
CHGN Chignik 76.38 28 *e*P P **20 22 49.5 -3.7**
AJM Ajmer 76.75 299 *ex* P **20 22 55.0 -1.0**
RKT Rikitea 76.97 112 *e*LR LR 20 46 34.9
comp=Z,1μm,35.8s
MK31 Makanchi Array 77.21 321 *e*P P **20 22 57.2 -0.9**
MKAR Makanchi Array 77.21 321 P P **20 22 57.6 -0.5**
comp=Z,4.4nm,0.7s,mb4.5,baz=99,slow=7.4,SNR=33
MKAR PKKPbc PKKPbc 20 42 04.1 -2.5
comp=Z,0.3nm,0.3s,baz=308,slow=2.9,SNR=4.9
MKAR PKPPKP 20 50 06.2
comp=Z,0.3nm,0.2s,baz=194,slow=0.5,SNR=5.0
THN Thein Dam 77.32 305 *ex* P **20 22 57.1 -1.9**
TIXI Tiksi 78.22 354 *e*P P **20 23 01.7 -1.5**
TIXI pmax pmax
comp=Z,18nm,0.9s,mb5.0
TIXI MLR MLR
comp=Z,234nm,18.0s,MS4.6
TIXI Tiksi 78.22 354 *e*P P **20 23 01.6 -1.6**
comp=Z,15nm,0.8s,mb5.0
TIXI LR LR
comp=Z,353nm,22.0s,MS4.7
ZALV Zalesovo Beam 78.74 328 P P **20 23 04.9 -1.6**
comp=Z,6.0nm,0.6s,mb4.7,baz=112,slow=6.1,SNR=38
ZALV PKKPbc PKKPbc 20 42 01.2 -2.4
comp=Z,2.2nm,0.5s,baz=317,slow=2.8,SNR=14
ZALV PKPPKP 20 50 05.9
comp=Z,1.9nm,0.8s,baz=282,slow=2.6,SNR=6.5
ZALV LR LR 20 57 22.0
comp=Z,418nm,21.4s,MS4.7,baz=78,slow=35
KSH Kashi 79.08 312 P P **20 23 10.0 +1.3**
KSH PcP PcP 20 23 17.0 0.0
KSH pP pP 20 23 29.3 +7.3
KSH sP sP 20 23 38.8 +12
KSH PP PP 20 26 11.8 +3.4
KSH S S 20 33 01.8 -3.0
KSH SKS 20 33 13.0
KSH ScS ScS 20 33 23.0 -4.6
KSH SS SS 20 38 12.5 +0.9
KSH pmax pmax
comp=Z,22nm,1.6s,mb4.8
KSH pmax pmax
comp=Z,230nm,7.4s
KSH LR LR
comp=N,120nm,6.1s
KSH LR LR
comp=E,140nm,5.6s
KSH LR LR
comp=Z,140nm,8.5s
NIL Nilore 79.63 306 PFAKE 20 23 20.0 +8.2
NIL LR LR
comp=Z,64nm,20.0s,MS4.0
KDAK Kodiak Island 79.87 28 *e*P P **20 23 13.0 +0.5**
KDAK pmax pmax
comp=Z,91nm,1.4s,mb5.5
KDAK Kodiak Island 79.87 28 *e*P P **20 23 13.0 +0.4**
comp=Z,91nm,1.4s,mb5.5
NVS Novosibirsk 79.96 328 *e*P P **20 23 10.7 -2.4**
NVS pmax pmax
comp=N,24nm,1.4s
NVS pmax pmax
comp=E,32nm,1.4s
NVS pmax pmax
comp=Z,41nm,1.4s,mb5.2
TKM2 Tokmak 2 80.35 315 *e*P P **20 23 14.6 -0.9**
TKM2 pmax pmax
comp=Z,13nm,0.8s,mb4.9
TKM2 MLR MLR
comp=Z,291nm,19.0s,MS4.7
TKM2 Tokmak 2 80.35 315 *e*P P **20 23 14.6 -0.8**
comp=Z,13nm,0.8s,mb4.9
TKM2 LR LR
comp=Z,291nm,19.0s,MS4.7
KURK Kurchatov 80.93 323 P P **20 23 17.1 -1.3**
comp=Z,84nm,0.9s,mb5.7,SNR=9.5
KURK Kurchatov 80.93 323 *e*P P **20 23 16.9 -1.5**
KURK pmax pmax
comp=Z,16nm,0.9s,mb5.0
KURK MLR MLR
comp=Z,372nm,22.0s,MS4.7
KURK Kurchatov 80.93 323 *e*P P **20 23 16.9 -1.5**
comp=Z,16nm,0.9s,mb4.9
KURK LR LR
comp=Z,372nm,22.0s,MS4.7
TTA Tatalina 81.00 23 *e*P P **20 23 19.5 +1.1**
FRU Bishkek 81.02 315 *e*P P **20 23 18.0 -1.0**
AAK Ala-Archa 81.05 315 PFAKE 20 23 30.0 +11
AAK LR LR
comp=Z,285nm,22.0s,MS4.6
RSO Redoubt South 81.08 26 P P **20 23 18.6 -0.4**
AML Almayashu 81.48 314 *e*P P **20 23 19.4 -2.1**
comp=Z,31nm,0.9s,mb5.2
AML LR LR
comp=Z,169nm,20.0s,MS4.4
EKS2 Erkin-Say 81.56 315 *e*P P **20 23 20.3 -1.7**
comp=Z,23nm,1.0s,mb5.1
EKS2 LR LR
comp=Z,237nm,19.0s,MS4.6
MAW Mawson 82.30 203⇑*i*P P **20 23 25.2 -0.1**
comp=Z,30nm,0.6s,mb5.4
MAW Mawson 82.30 203 P P **20 23 24.0 -1.4**
comp=Z,33nm,0.6s,mb5.4,baz=91,slow=6.6,SNR=86
MAW LR LR 20 59 12.8
comp=Z,722nm,18.1s,MS5.1,baz=90,slow=35
SEW Seward 82.38 27 *e*P P **20 23 25.0 -0.8**
comp=Z,41nm,1.0s,mb5.3
PPLA Purkeypile 82.49 24 *e*P P **20 23 24.6 -1.7**
comp=Z,12nm,0.8s,mb4.9
RC01 Rabbit Creek A 82.68 26 *e*P P **20 23 26.5 -0.8**
comp=Z,38nm,0.9s,mb5.4
PMR Palmer 83.17 26 *e*P P **20 23 29.7 -0.2**
PMR pmax pmax
comp=Z,32nm,1.1s,mb5.3
PMR Palmer 83.17 26 *e*P P **20 23 29.7 -0.2**
comp=Z,32nm,1.1s,mb5.3
KBL Kabul 83.23 306 *e*P P **20 23 28.1 -2.7**
KBL *e* pP 20 23 43.1 -1.2
KBL pmax pmax
comp=Z,13nm,0.7s,mb5.1
KBL Kabul 83.23 306 *e*P P **20 23 28.1 -2.7**
comp=Z,13nm,0.7s,mb5.1
KBL *e* pP 20 23 43.1 -1.2
TRF Thorofare Moun 83.51 24 *e*P P **20 23 30.2 -1.3**
comp=Z,16nm,0.7s,mb5.3
BPAW Bear Paw Mtn. 83.53 23 *e*P P **20 23 30.6 -1.1**
comp=Z,15nm,0.9s,mb5.1
BPAW *e* pP 20 23 43.5 -1.7
BPAW *e*PP PP 20 26 43.4 -1.2
QSPA South Pole Qui 84.13 180 P P **20 23 33.8 -0.8**
comp=Z,79nm,0.6s,mb6.0,baz=333,slow=1.3,SNR=155
QSPA South Pole Qui 84.13 180 P P **20 23 33.8 -0.8**
QSPA LR LR
comp=Z,2μm,20.0s,MS5.4
QUE Quetta 84.14 301 *e*P P **20 23 29.0 -6.6**
QUE *e*S S 20 33 30.0 -27
MCK McKinley 84.18 24 *e*P P **20 23 33.8 -1.2**
MCK *e* pP 20 23 46.1 -2.4
MCK pmax pmax
comp=Z,53nm,0.8s,mb5.7
MCK McKinley 84.18 24 *e*P P **20 23 33.8 -1.2**
comp=Z,53nm,0.8s,mb5.7
MCK *e* pP 20 23 46.1 -2.4
DIV Divide 84.45 27 *e*P P **20 23 36.5 +0.1**
comp=Z,40nm,0.9s,mb5.5
DIV *e* pP 20 23 48.5 -1.4
BMRM Bremner River 84.92 27 *e*P P **20 23 38.7 -0.1**
comp=Z,40nm,1.1s,mb5.5
COLA College 85.09 23 *e*P P **20 23 38.4 -1.2**
COLA pmax pmax
comp=Z,42nm,0.8s,mb5.6
COLA MLR MLR
comp=Z,425nm,20.0s,MS4.8
COLA College 85.09 23 *e*P P **20 23 38.4 -1.2**
comp=Z,42nm,0.8s,mb5.6
COLA LR LR
comp=Z,425nm,20.0s,MS4.8

COLD Coldfoot 85.27 20 *e*P P **20 23 40.6 +0.2**
comp=Z,21nm,0.9s,mb5.3
PAX Paxson 85.29 25 *e*P P **20 23 39.6 -1.0**
PAX pmax pmax
comp=Z,11nm,0.7s,mb5.1
PAX Paxson 85.29 25 *e*P P **20 23 39.6 -1.0**
comp=Z,11nm,0.7s,mb5.1
ILAR Eielson Array 85.43 23 P P **20 23 40.1 -1.1**
comp=Z,42nm,0.8s,mb5.7,baz=254,slow=4.9,SNR=262
ILAR PKKPbc PKKPbc 20 41 45.0 -3.5
comp=Z,0.6nm,0.8s,baz=329,slow=0.2,SNR=5.0
ILAR LR LR 20 57 47.0
comp=Z,531nm,20.7s,MS4.9,baz=273,slow=33
MENT Mentasta 86.03 25 *e*P P **20 23 42.2 -2.0**
BVAR Borovoye Array 86.49 324 P P **20 23 45.3 -1.5**
comp=Z,5.6nm,0.6s,mb5.0,baz=104,slow=6.3,SNR=28
BVAR PKKPbc PKKPbc 20 41 44.0 -1.4
comp=Z,0.9nm,0.7s,baz=251,slow=2.7,SNR=6.8
BRVK Borovoye 86.56 324 P P **20 23 45.6 -1.5**
comp=Z,34nm,1.0s,mb5.5,SNR=7.2
BRVK Borovoye 86.56 324 *e*P P **20 23 44.5 -2.6**
BRVK pmax pmax
comp=Z,12nm,0.9s,mb5.1
BRVK MLR MLR
comp=Z,355nm,21.0s,MS4.7
BRVK Borovoye 86.56 324 *e*P P **20 23 44.5 -2.6**
comp=Z,12nm,0.9s,mb5.1
BRVK LR LR
comp=Z,355nm,21.0s,MS4.7
EGAK Eagle 87.72 24 *e*P P **20 23 52.0 -0.5**
comp=Z,21nm,0.8s,mb5.4
EGAK LR LR
comp=Z,648nm,21.0s,MS5.0
DAWY Dawson 88.23 25 *e*P P **20 23 55.3 +0.4**
SYO Syowa Base 90.66 200⇓*e*P P **20 24 04.3 -2.0**
MSEY Mahe Island 90.79 265 PFAKE 20 24 20.0 +12
MSEY LR LR
comp=Z,550nm,20.0s,MS5.0
DLBC Dease Lake 91.38 31 LR LR 20 56 56.5
comp=Z,458nm,21.3s,MS4.9,baz=122,slow=30
BBB Bella Bella 91.58 38 LR LR 20 57 46.4
comp=Z,417nm,21.1s,MS4.8,baz=99,slow=31
INK Inuvik 91.59 21 PKKPbc PKKPbc 20 41 30.6 -2.7
comp=Z,2.3nm,0.5s,baz=26,slow=6.4,SNR=5.2
INK Inuvik 91.59 21 *e*P P **20 24 09.1 -1.5**
INK pmax pmax
comp=Z,15nm,1.0s
INK Inuvik 91.59 21 *e*P P **20 24 09.1 -1.4**
comp=Z,15nm,1.0s,mb5.3
ABKAR Akbulak array 92.29 319 *e*P P **20 24 11.2 -3.0**
comp=Z,6.4nm,0.8s,mb5.0
AKTO Aktyubinsk 93.64 320 LR LR 21 08 18.6
comp=Z,227nm,21.7s,MS4.6,baz=92,slow=37
HOPS Hopland 93.77 51 PFAKE 20 24 30.0 +8.7
HOPS LR LR
comp=Z,716nm,20.0s,MS5.1
ARU Arti 93.81 326*c i*P P **20 24 20.6 -0.4**
ARU 20 28 06.9
ARU S SKSac 20 34 47.6 -4.3
ARU SS SS 20 41 40.7 -5.8
ARU pmax pmax
comp=Z,6.0nm,1.7s,mb4.8
ARU MLR MLR
comp=Z,277nm,22.0s,MS4.7
ARU Arti 93.81 326 *e*P P **20 24 20.6 -0.5**
comp=Z,2.4nm,0.8s,mb4.7
ARU LR LR
comp=Z,311nm,22.0s,MS4.7
NLWA Neilton Lookou 93.83 43⇓P P **20 24 22.3 +0.9**
baz=94
NLWA Neilton Lookou 93.83 43 *e*P P **20 24 22.3 +1.0**
comp=Z,6.6nm,0.9s,mb5.1
NLWA LR LR
comp=Z,369nm,20.0s,MS4.8
MCCM Marconi Confer 93.85 52 PFAKE 20 24 30.0 +8.3
MCCM LR LR
comp=Z,552nm,19.0s,MS5.0
F03A Seaside 93.93 44⇑P P **20 24 22.9 +1.0**
baz=94
E03A Lebam 93.97 44⇑P P **20 24 22.8 +0.8**
baz=94
COR Corvallis 94.01 46 PFAKE 20 24 30.0 +7.7
COR LR LR
comp=Z,580nm,21.0s,MS5.0
HUMO Hull Mountain 94.12 48 *e*P P **20 24 23.1 +0.3**
comp=Z,15nm,1.1s,mb5.3
HUMO *e* pP 20 24 34.7 -1.7
HUMO LR LR
comp=Z,512nm,19.0s,MS5.0
YBH Yreka Blue Hor 94.24 49 LR LR 21 03 39.6
comp=Z,657nm,19.7s,MS5.1,baz=314,slow=34
YBH Yreka Blue Hor 94.24 49 *e*P P **20 24 24.1 +0.7**
YBH pmax pmax
comp=Z,13nm,1.0s
YBH MLR MLR
comp=Z,633nm,19.0s
YBH Yreka Blue Hor 94.24 49 *e*P P **20 24 24.1 +0.7**
comp=Z,13nm,1.0s,mb5.3
YBH LR LR
comp=Z,633nm,19.0s,MS5.1
WDC Whiskeytown Da 94.29 50 *e*P P **20 24 24.3 +0.7**
WDC pmax pmax
comp=Z,7.0nm,0.8s,mb5.1
WDC MLR MLR
comp=Z,503nm,20.0s,MS5.0
WDC Whiskeytown Da 94.29 50 *e*P P **20 24 24.2 +0.6**
comp=Z,6.8nm,0.8s,mb5.1
WDC LR LR
comp=Z,503nm,20.0s,MS5.0
SAO San Andreas Ge 94.89 54 PFAKE 20 24 40.0 +13
SAO LR LR
comp=Z,582nm,22.0s,MS5.0
JCW Jim Creek 95.19 42 *e*P P **20 24 27.9 +0.4**
comp=Z,17nm,1.0s,mb5.4
K05A Summer Lake 95.65 48⇑P P **20 24 30.4 +0.6**
baz=96
CMB Columbia Colle 95.81 52 PFAKE 20 24 40.0 +9.4
CMB LR LR
comp=Z,477nm,19.0s,MS5.0
MOD Modoc 96.05 49 *e*P P **20 24 31.8 +0.1**
comp=Z,4.6nm,0.9s,mb4.9
MOD LR LR
comp=Z,806nm,22.0s,MS5.2
BSC Santa Cruz Isl 96.22 57⇓P P **20 24 33.2 +0.6**
baz=96
ETW Entiat 96.24 43 *e*P P **20 24 32.4 0.0**
comp=Z,26nm,1.1s,mb5.6
E07A Sunnyside 96.53 44⇓P P **20 24 34.4 +0.6**
baz=97
BLG Laguna Peak 96.70 56⇓P P **20 24 35.0 +0.2**
baz=97
I07A Izee 96.71 46⇑P P **20 24 34.7 +0.1**
baz=97
HAWA Hanford 96.75 44 *e*P P **20 24 35.2 +0.5**
comp=Z,11nm,1.1s,mb5.2
HAWA *e* pP 20 24 47.5 -0.9
HAWA LR LR
comp=Z,317nm,19.0s,MS4.8
B08A Colville Reser 96.92 42⇓P P **20 24 35.6 +0.2**
baz=97,SNR=9.0
ABPO Ambohimpanom 97.06 250 PFAKE 20 24 50.0 +13
ABPO LR LR
comp=Z,637nm,20.0s,MS5.1
G08A Pilot Rock 97.13 45⇓P P **20 24 36.4 0.0**
baz=97
D08A Wollman Farm, 97.18 43⇑P P **20 24 37.4 +0.7**
baz=97
WVOR Wild Horse Val 97.30 48 *e*P P **20 24 37.0 -0.3**
WVOR pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
WVOR MLR MLR
comp=Z,420nm,20.0s,MS4.9
WVOR Wild Horse Val 97.30 48 *e*P P **20 24 37.0 -0.3**
comp=Z,4.9nm,0.8s,mb5.0
WVOR LR LR
comp=Z,420nm,20.0s,MS4.9
OD2 Odessa Site #2 97.33 43 *e*P P **20 24 37.4 +0.1**
comp=Z,11nm,0.6s,mb5.5
J08A Circle Bar Ran 97.44 47⇑P P **20 24 37.6 -0.4**
baz=98
EDW2 Edwards Air Fo 97.61 56⇑P P **20 24 39.2 +0.3**
baz=98
C09A Chrisman Ranch 97.63 43⇑P P **20 24 39.6 +1.0**
baz=98
E09A Wood Farm, Sta 97.71 44⇓P P **20 24 39.4 +0.3**
baz=98,SNR=11
LRMC Laurel Mountai 97.88 55⇑P P **20 24 40.4 +0.3**

baz=98
DAC Darwin (Calif) 97.97 54 PFAKE 20 24 50.0 +10
DAC LR LR
comp=Z,448nm,19.0s,MS5.0
MPMC Manual Prospec 98.05 55 ⇑P **P 20 24 40.9 +0.1**
baz=98
MURC Murrieta 98.23 57 ⇑P **P 20 24 41.8 +0.1**
baz=98
BMO Blue Mountains 98.30 46 *e*P **P 20 24 41.6 -0.1**
BMO pmax pmax
comp=Z,6.0nm,0.9s,mb5.1
BMO MLR MLR
comp=Z,361nm,22.0s,MS4.8
BMO Blue Mountains 98.30 46 *e*P **P 20 24 41.6 -0.1**
comp=Z,5.6nm,0.9s,mb5.1
BMO LR LR
comp=Z,361nm,22.0s,MS4.8
TPH Tonopah 98.31 52 PFAKE 20 24 50.0 +8.1
TPH LR LR
comp=Z,470nm,19.0s,MS5.0
BMN Battle Mountai 98.34 50 PFAKE 20 24 50.0 +8.0
BMN LR LR
comp=Z,498nm,19.0s,MS5.0
F10A Beach Ranch, E 98.35 45 ⇑P **P 20 24 42.1 +0.1**
baz=98,SNR=13
NEW Newport 98.40 42 *e*P **P 20 24 42.7 +0.6**
NEW pmax pmax
comp=Z,10.0nm,0.8s
NEW MLR MLR
comp=Z,283nm,20.0s
NEW Newport 98.40 42 *e*P **P 20 24 42.7 +0.6**
comp=Z,10nm,0.8s,mb5.4
NEW LR LR
comp=Z,283nm,20.0s,MS4.8
FURC Furnace Creek, 98.57 54 ⇓P **P 20 24 43.1 -0.1**
baz=99
GSC Goldstone 98.59 55 ⇓P **P 20 24 43.2 -0.1**
baz=99
S10A Tonopah Range, 98.80 53 ⇓P **P 20 24 44.0 -0.2**
baz=99
PFO Pinyon Flat Ob 98.85 57 ⇓P **P 20 24 43.8 -0.7**
baz=99
PFO Pinyon Flat Ob 98.85 57 PFAKE 20 25 00.0 +16
PFO LR LR
comp=Z,425nm,20.0s,MS4.9
MONP Monument Peak 98.87 58 ⇑P **P 20 24 45.0 +0.4**
baz=99
L10A Juniper Basin 98.91 48 ⇓P **P 20 24 44.7 +0.2**
baz=99
Q10A Clear Creek Ra 98.96 52 ⇑P **P 20 24 45.2 +0.3**
baz=99
YKA Yellowknife Ar 99.14 28 P **P 20 24 44.1 -0.9**
comp=Z,3.4nm,0.7s,mb5.0,baz=274,slow=4.7,SNR=17
YKA PKKPbc PKKPbc 20 41 09.2 -3.6
comp=Z,1.6nm,0.6s,baz=89,slow=2.9,SNR=9.8
YKA Yellowknife Ar 99.14 28 P **P 20 24 44.1 -1.0**
YKA pmax pmax
comp=Z,3.0nm,0.7s
YKA pmax pmax
comp=Z,2.0nm,0.6s
YKA Yellowknife Ar 99.14 28 P **P 20 24 44.1 -0.9**
YKA PKKPbc PKKPbc 20 41 09.2 -3.6
BELC Belle Mtn. Jos 99.24 57 ⇑P **P 20 24 46.5 +0.3**
baz=99
A12A Yaak River Ran 99.36 41 ⇓P **P 20 24 47.0 +0.7**
baz=100
MFID Camas Ranch 99.37 47 ⇓P **P 20 24 47.0 +0.4**
baz=100
L11A Cat Creek Ranc 99.44 48 ⇑P **P 20 24 47.3 +0.4**
baz=100
GMRC Granite Mounta 99.53 56 ⇑P 20 24 47.3
baz=100
O11A Cowboy Ranch, 99.53 50 ⇓P Pdif 20 24 47.6 +0.5
baz=100
Q11A Duckwater 99.54 52 ⇓P Pdif 20 24 47.5 +0.4
baz=100
R11A Troy Canyon, C 99.60 52 ⇑P Pdif 20 24 47.9 +0.5
baz=100
D12A Red Ives Fores 99.62 43 ⇓P Pdif 20 24 47.8 +0.4
baz=100
RPN Rapa Nui 99.64 119 LR LR 21 00 00.5
comp=Z,195nm,20.1s,MS4.6,baz=257,slow=30
BC3 Big Chuckawall 99.69 57 ⇑P Pdif 20 24 48.3 +0.5
baz=100
G12A Big Creek, Yel 99.70 45 ⇓P Pdif 20 24 47.9 +0.2
baz=100
F12A Elk City 99.73 45 ⇑P Pdif 20 24 48.3 +0.4
baz=100
ELK Elko 99.85 50 PFAKE 20 25 00.0 +12
ELK LR LR
comp=Z,475nm,22.0s,MS5.0
I12A Atlanta 99.87 47 ⇓P Pdif 20 24 49.2 +0.7
baz=100
T11A Corn Creek, Al 99.89 53 ⇑P Pdif 20 24 49.5 +0.9
baz=100
J12A Stokes Ranch, 99.91 47 ⇑P Pdif 20 24 49.0 +0.3
baz=100,SNR=7.7
IRM Iron Mountain 99.94 56 ⇓P Pdif 20 24 49.8 +0.9
baz=100
BSMT Bassoo Peak 99.98 43 *e*Pdif Pdif 20 24 49.4 +0.4
comp=Z,3.1nm,0.7s
BSMT *e* 20 25 00.8
L12A House Creek Ra 99.99 48 ⇑P Pdif 20 24 49.7 +0.7
baz=100
N12A Clover Valley, 100.00 50 ⇑P Pdif 20 24 49.4 +0.3
baz=100,SNR=7.8
N12A Clover Valley, 100.00 50 *e*P Pdif 20 24 50.0 +0.9
comp=Z,9.1nm,0.8s
H12A Diamond D Ranc 100.05 46 ⇓P Pdif 20 24 50.0 +0.6
baz=100
M12A Wells 100.08 49 ⇓P Pdif 20 24 50.4 +0.9
baz=100
B13A Whitefish 100.17 42 ⇑P Pdif 20 24 50.6 +0.8
baz=100
Q12A Willow Creek R 100.18 52 ⇓P Pdif 20 24 51.0 +1.0
baz=100
O12A Currie 100.23 50 ⇑P Pdif 20 24 50.2 0.0
baz=100,SNR=6.7
D13A Huson 100.23 43 ⇓P Pdif 20 24 50.5 +0.4
baz=100
F13A Darby 100.37 45 ⇑P Pdif 20 24 51.2 +0.4
baz=100,SNR=10.0
HLID Hailey 100.40 47 ⇑P Pdif 20 24 51.5 +0.6
baz=101
HLID Hailey 100.40 47 *e*P Pdif 20 24 51.5 +0.7
comp=Z,1.8nm,0.8s
HLID LR LR
comp=Z,478nm,21.0s,MS5.0
E13A Victor 100.45 44 ⇑P Pdif 20 24 52.0 +0.9
baz=101
G13A Cobalt 100.47 45 ⇓P Pdif 20 24 51.7 +0.5
baz=101
WALA Waterton Lakes 100.50 41 *e*P Pdif 20 24 52.0 +0.6
comp=Z,0.2nm,1.0s
I13A Wildhorse Cree 100.60 47 ⇑P Pdif 20 24 51.8 0.0
baz=101,SNR=6.3
MSO Missoula 100.60 44 PFAKE 20 25 00.0 +8.2
MSO LR LR
comp=Z,256nm,19.0s,MS4.8
M13A Montello 100.65 49 ⇓P Pdif 20 24 52.9 +0.9
baz=101
M13A Montello 100.65 49 *e*P Pdif 20 24 52.5 +0.6
comp=Z,2.2nm,0.6s
P13A Bates Ranch, G 100.81 51 ⇓P Pdif 20 24 53.7 +1.0
baz=101
Q13A Wheeler Ranch, 100.82 52 ⇑P Pdif 20 24 53.5 +0.8
baz=101
O13A Hicks Ranch, I 100.82 50 ⇑P Pdif 20 24 53.3 +0.5
baz=101
A14A Double T Ranch 100.83 41 ⇓P Pdif 20 24 53.9 +1.1
baz=101
B14A Marquette Ranc 100.97 42 ⇑P Pdif 20 24 54.6 +1.2
baz=101
CHMT Chamberlain Mo 101.07 43 *e*P Pdif 20 24 54.2 +0.4
comp=Z,1.2nm,0.9s
Z13A Yuma Proving G 101.19 57 ⇑P Pdif 20 24 55.9 +1.5
baz=101
M14A Sheep Mountain 101.26 49 ⇓P Pdif 20 24 54.6 -0.1
baz=101,SNR=8.7
A15A Johnson Ranch, 101.28 41 ⇑P Pdif 20 24 55.7 +0.8
baz=101
L14A Malta 101.31 48 ⇑P Pdif 20 24 55.6 +0.6
baz=102
CCUT Cedar City 101.37 53 *e*Pdif Pdif 20 24 56.6 +1.4
comp=Z,1.8nm,0.8s
Q14A Sevier Lake (B 101.39 52 ⇓P Pdif 20 24 55.7 +0.4
baz=102,SNR=6.7
N14A Grayback Hills 101.40 50 ⇓P Pdif 20 24 55.5 +0.1
baz=102,SNR=6.2
B15A Bradely Ranch, 101.44 42 ⇑P Pdif 20 24 56.4 +0.8
baz=102
MCMT McKenzie Canyo 101.47 46 *e*Pdif Pdif 20 24 56.8 +1.2
comp=Z,1.7nm,0.9s
E15A Deer Lodge 101.52 44 ⇓P Pdif 20 24 56.3 +0.5
baz=102
P14A Drum Mountains 101.54 51 ⇑P Pdif 20 24 56.1 +0.1
baz=102,SNR=6.4
V14A Boquillas Ranc 101.61 55 ⇑P Pdif 20 24 57.0 +0.8
baz=102
W14A Seligman 101.64 55 ⇓P Pdif 20 24 56.9 +0.5
baz=102
F15A Butte 101.66 45 ⇑P Pdif 20 24 56.6 +0.1
baz=102
G15A Dillon 101.70 45 ⇑P Pdif 20 24 57.0 +0.4
baz=102
DUG Dugway 101.71 50 ⇑P Pdif 20 24 57.1 +0.4
baz=102
DUG Dugway 101.71 50 PFAKE 20 25 10.0 +13
DUG LR LR
comp=Z,415nm,20.0s,MS5.0
N15A Stansbury Isla 101.91 50 ⇓P Pdif 20 24 58.3 +0.7
baz=102
M15A Larsen Ranch, 101.93 49 ⇑P Pdif 20 24 57.4 -0.3
baz=102,SNR=9.1
SPUT South Promonto 101.94 49 *e*Pdif Pdif 20 24 58.5 +0.7
comp=Z,5.1nm,0.9s
B16A M & M Farms, S 102.00 42 ⇓P Pdif 20 24 59.0 +1.0
baz=102
C16A Fuhringer Ranc 102.03 42 ⇓P Pdif 20 24 58.6 +0.5
baz=102
G16A Moss Hill, Enn 102.18 45 ⇑P Pdif 20 24 59.3 +0.5
baz=102
D16A Dana Ranch, Ca 102.22 43 ⇓P Pdif 20 24 59.6 +0.6
baz=102
U15A North Rim 102.25 54 ⇑P Pdif 20 25 00.0 +0.9
baz=102
F16A Kennard Place, 102.26 45 ⇓P Pdif 20 25 00.1 +1.0
baz=102
V15A Kaibab Nationa 102.37 55 ⇑P Pdif 20 25 00.8 +1.1
baz=102
K16A Soda Springs 102.50 48 ⇓P Pdif 20 25 01.2 +1.0
baz=103
HWUT Hardware Ranch 102.59 49 PFAKE 20 25 10.0 +9.4
HWUT LR LR
comp=Z,421nm,20.0s,MS5.0
B17A L&G Farms, Che 102.62 42 ⇓P Pdif 20 25 01.8 +1.1
baz=103
A17A Triple J Farms 102.62 41 ⇓P Pdif 20 25 01.6 +0.8
baz=103
L16A Fish Haven 102.66 48 ⇓P Pdif 20 25 01.2 +0.2
baz=103
C17A Wharram Farm, 102.70 43 ⇑P Pdif 20 25 01.9 +0.8
baz=103
E17A Martinsdale 102.74 44 ⇓P Pdif 20 25 02.0 +0.7
baz=103
S16A Weppner Ranch, 102.76 53 ⇓P Pdif 20 25 02.2 +0.9
baz=103
D17A Six Diamond Ra 102.80 43 ⇑P Pdif 20 25 01.5 0.0
baz=103
R16A Teasdale 102.83 52 ⇓P Pdif 20 25 02.7 +1.0
baz=103
AHID Auburn Hatcher 102.86 48 PFAKE 20 25 10.0 +8.2
AHID LR LR
comp=Z,518nm,19.0s,MS5.1
F17A Fitzpatrick Pl 102.93 44 ⇑P Pdif 20 25 03.0 +0.8
baz=103
TMUT Trail Mountain 102.99 51 *e*Pdif Pdif 20 25 03.5 +1.1
comp=Z,7.3nm,0.9s
WUAZ Wupatki 103.03 55 PFAKE 20 25 10.0 +7.4
WUAZ LR LR
comp=Z,293nm,19.0s,MS4.8
L17A Cokeville 103.07 48 ⇑P Pdif 20 25 03.2 +0.5
baz=103
A18A Metzger Ranch, 103.18 41 ⇓P Pdif 20 25 04.1 +0.8
baz=103
LKWY Lake 103.23 46 PFAKE 20 25 20.0 +17
LKWY LR LR
comp=Z,493nm,20.0s,MS5.0
O17A Robinson Place 103.30 50 ⇑P Pdif 20 25 04.9 +1.1
baz=104
EGMT Eagleton 103.34 42 PFAKE 20 25 20.0 +16
EGMT LR LR
comp=Z,319nm,21.0s,MS4.8
S17A Black Ridge (B 103.40 53 ⇓P Pdif 20 25 05.3 +1.1
baz=104
T17A Navajo Res., N 103.43 53 ⇑P Pdif 20 25 04.8 +0.5
baz=104
SRU San Rafael 103.53 51 ⇑P Pdif 20 25 05.4 +0.6
baz=104
F18A Big Timber 103.58 44 ⇑P Pdif 20 25 06.1 +1.1
baz=104
J18A Kendall Valley 103.61 47 ⇑P Pdif 20 25 06.0 +0.8
baz=104
TUC Tucson 103.63 58 PFAKE 20 25 20.0 +15
TUC LR LR
comp=Z,623nm,21.0s,MS5.1
K18A Toltan Ranch, 103.64 48 ⇓P Pdif 20 25 06.4 +1.1
baz=104
I18A Diamond G Ranc 103.72 47 ⇓P Pdif 20 25 06.8 +1.2
baz=104
Q18A Rafter H Ranch 103.83 51 ⇓P Pdif 20 25 07.0 +0.8
baz=104
RLMT Red Lodge 103.98 45 PFAKE 20 25 20.0 +13
RLMT LR LR
comp=Z,257nm,21.0s,MS4.7
BW06 Boulder Array 103.99 48 ⇓P Pdif 20 25 07.2 +0.3
baz=104
BW06 Boulder Array 103.99 48 PFAKE 20 25 20.0 +13
BW06 LR LR
comp=Z,652nm,22.0s,MS5.1
PDAR Pinedale Array 103.99 48 Pdiff Pdif 20 25 06.6 -0.2
comp=Z,3.0nm,0.9s,baz=267,slow=2.8,SNR=15
PDAR PKKPbc PKKPbc 20 40 56.0 -2.0
comp=Z,0.7nm,0.5s,baz=97,slow=5.4,SNR=4.0
R18A Canyonlands Na 104.07 52 ⇑P Pdif 20 25 07.7 +0.5
baz=104
KIV Kislovodsk 104.15 314 PFAKE 20 25 20.0 +12
KIV LR LR
comp=Z,188nm,21.0s,MS4.6
L19A Farson 104.20 48 ⇑P Pdif 20 25 08.3 +0.6
baz=104
U18A Rough Rock, Ch 104.21 54 ⇓P Pdif 20 25 09.1 +1.3
baz=104
K19A Absolon Red Bu 104.51 47 ⇑P Pdif 20 25 09.4 +0.3
baz=105
Q19A Hogan Spring (104.52 51 ⇑P Pdif 20 25 09.5 +0.3
baz=105
O19A Miners Draw (B 104.52 50 ⇑P Pdif 20 25 09.8 +0.6
baz=105
P19A Cripple Cowboy 104.69 51 ⇓P Pdif 20 25 10.8 +0.8
baz=105
S19A Harvey Farm, M 104.71 53 ⇓P Pdif 20 25 10.6 +0.6
baz=105
MVCO Mesa Verde 105.25 53 PFAKE 20 29 40.0 +13
MVCO LR LR
comp=Z,303nm,19.0s,MS4.9
Z20A Nine Sixteen R 105.44 57 ⇓P PKiKP 20 29 27.7 +0.3
baz=106
L21A Rawlins 105.68 48 ⇑P PKiKP 20 29 28.1 +0.5
baz=106
LAO LASA Array 105.89 43 PFAKE 20 29 40.0 +12
LAO LR LR
comp=Z,370nm,19.0s,MS5.0
ARCES ARCESS Array B 106.02 342 Pdiff Pdif 20 25 16.5 +0.6
comp=Z,3.0nm,1.0s,baz=56,slow=18,SNR=4.2
ARCES PKKPbc PKKPbc 20 40 48.8 -3.9
comp=Z,2.6nm,0.5s,baz=248,slow=2.2,SNR=31
ARCES ARCESS Array B 106.02 342 Pdif Pdif 20 25 16.5 +0.6
ARCES PKKPbc PKKPbc 20 40 48.8 -3.9
OBN Obninsk 106.25 326 *e*P Pdif 20 25 16.1 -0.8
OBN *e*SS SS 20 44 41.6 +1.8
OBN pmax pmax
comp=Z,2.0nm,0.7s
OBN MLR MLR
comp=Z,300nm,21.0s,MS4.8
OBN Obninsk 106.25 326 PFAKE 20 29 40.0 +12
OBN LR LR
comp=Z,386nm,22.0s,MS4.9
SMCO Snowmass 106.28 51 *e*Pdif Pdif 20 25 18.4 +1.4
comp=Z,2.5nm,0.7s
Z22A Elephant Butte 106.79 57 ⇓P PKiKP 20 29 30.2 +0.3
baz=107
DGMT Dagmar 106.95 41 PFAKE 20 29 40.0 +10
DGMT LR LR
comp=Z,250nm,19.0s,MS4.8
FFC Flin Flon 106.96 34 PFAKE 20 29 40.0 +10
FFC LR LR
comp=Z,427nm,22.0s,MS5.0
ANMO Albuquerque 107.08 55 PFAKE 20 29 40.0 +10
ANMO LR LR
comp=Z,275nm,19.0s,MS4.8
ISCO Idaho Springs 107.25 50 PFAKE 20 29 40.0 +9.4
ISCO LR LR
comp=Z,410nm,20.0s,MS5.0
SDCO Great Sand Dun 107.58 52 PFAKE 20 29 40.0 +8.8
SDCO LR LR
comp=Z,436nm,22.0s,MS5.0
RSSD Black Hills 107.81 46 PFAKE 20 29 40.0 +8.5
RSSD LR LR
comp=Z,548nm,20.0s,MS5.1
W24A Lazy 6 Ranch, 107.91 55 ⇓P PKiKP 20 29 32.6 +0.7
baz=108
V24A Rampart Ranch, 107.97 54 ⇓P PKiKP 20 29 32.4 +0.3
baz=108
Y24A Capitan 108.01 56 ⇓P PKiKP 20 29 31.8 -0.3
baz=108
124A Stringfield Ra 108.10 58 ⇓P PKiKP 20 29 32.9 +0.5
baz=108
Z24A Sheeppen Canyo 108.12 57 ⇓P PKiKP 20 29 32.8 +0.4
baz=108
324A Moseley Ranch, 108.17 59 ⇑P PKiKP 20 29 32.6 +0.1
baz=108
MNTX Cornudas Mount 108.24 59 PFAKE 20 29 40.0 +7.3
MNTX LR LR
comp=Z,274nm,19.0s,MS4.8
S25A Robets Cordova 108.43 52 ⇓P PKiKP 20 29 33.1 +0.3
baz=109
V25A Rancho No Teng 108.49 54 ⇑P PKiKP 20 29 33.4 +0.3
baz=109
325A Bean Ranch, Si 108.62 59 ⇑P PKiKP 20 29 33.3 0.0
baz=109
Y25A Mesa, Roswell 108.63 56 ⇓P PKiKP 20 29 33.6 +0.3
baz=109
W25A X Bar L Ranch, 108.69 55 ⇑P PKiKP 20 29 33.8 +0.4
baz=109
KMBO Kilima Mbogo 109.27 267 PFAKE 20 29 50.0 +15
KMBO LR LR
comp=Z,369nm,22.0s,MS4.9
X26A CR and CF Fran 109.29 56 ⇑P PKiKP 20 29 34.4 -0.2
baz=109
226A Malaga, Loving 109.30 58 ⇓P PKiKP 20 29 35.0 +0.4
baz=110
FINES FINESS Array B 109.42 334 Pdiff Pdif 20 25 32.5 +1.5
comp=Z,0.7nm,0.8s,baz=41,slow=7.4,SNR=4.4
FINES PP PP 20 30 03.4 -0.7
comp=Z,1.3nm,0.7s,baz=95,slow=4.8,SNR=3.8
FINES PKKPbc PKKPbc 20 40 41.1 -0.6
comp=Z,1.5nm,0.8s,baz=163,slow=7.2,SNR=4.7
626A Big Bend Ranch 109.48 61 ⇓P PKiKP 20 29 34.5 -0.6
baz=110
OGNE Ogallala 109.80 49 PFAKE 20 29 50.0 +15
OGNE LR LR
comp=Z,481nm,20.0s,MS5.1
527A Woodward Ranch109.88 60 ⇓P PKiKP 20 29 35.4 -0.4
baz=110
TXAR Lajitas Array 109.90 61 Pdiff Pdif 20 25 36.5 +3.4
comp=Z,0.4nm,1.0s,baz=161,slow=8.0,SNR=3.5
TXAR PKiKP PKiKP 20 29 35.8 -0.1
comp=Z,1.0nm,0.8s,baz=292,slow=2.0,SNR=9.0
TXAR PKKPbc PKKPbc 20 40 36.1 -3.1
comp=Z,0.4nm,0.5s,baz=91,slow=4.2,SNR=3.7
TXAR PKKP PKKPbc 20 40 50.9 +12
comp=Z,1.9nm,0.9s,baz=115,slow=6.7,SNR=8.6
Z27A Tatum 109.92 57 ⇑P PKiKP 20 29 35.7 -0.1
baz=110
427A Hayter Ranch, 110.00 59 ⇓P PKiKP 20 29 36.2 +0.2
baz=110
627A Terlingua Ranc 110.13 61 ⇓P PKiKP 20 29 36.1 -0.2
baz=110
628A Black Gap, Mar 110.57 61 ⇑P PKiKP 20 29 36.5 -0.6
baz=111
528A Cox Ranch, San 110.59 60 ⇑P PKiKP 20 29 37.2 0.0
baz=111
AMTX Amarillo 110.99 55 PFAKE 20 29 50.0 +12
AMTX LR LR
comp=Z,324nm,20.0s,MS4.9
BRTR Keskin Array B 111.43 310 PP PP 20 30 19.6 +0.2
comp=Z,0.8nm,0.8s,baz=141,slow=8.0,SNR=4.1
BRTR PKKPbc PKKPbc 20 40 34.4 -0.2
comp=Z,1.0nm,0.8s,baz=215,slow=3.6,SNR=5.2
BRTR PKKPbc PKKPbc 20 40 45.5 +11
comp=Z,2.4nm,1.1s,baz=192,slow=3.5,SNR=5.8
AKASG Malin Array Be 111.73 323 PKiKP PKiKP 20 29 39.6 +0.9
comp=Z,0.4nm,0.4s,baz=39,slow=29,SNR=2.7
AKASG PP PP 20 30 20.4 -0.7
comp=Z,0.4nm,0.4s,baz=62,slow=7.5,SNR=4.3
AKASG PKKPbc PKKPbc 20 40 31.2 -2.7
comp=Z,1.4nm,0.6s,baz=262,slow=3.9,SNR=6.5
AKASG Malin Array Be 111.73 323 PKIKP PKiKP 20 29 39.6 +0.9
AKASG 20 30 20.5
AKASG Malin Array Be 111.73 323 PKPdf PKiKP 20 29 39.6 +0.9
AKASG PP PP 20 30 20.4 -0.7
AKASG PKKPbc PKKPbc 20 40 31.2 -2.7
KIEV Kiev 111.75 323 PFAKE 20 29 50.0 +11
KIEV LR LR
comp=Z,311nm,22.0s,MS4.8
CBKS Cedar Bluff 111.91 51 PFAKE 20 29 50.0 +11
CBKS LR LR
comp=Z,398nm,20.0s,MS5.0
AGMN Agassiz Nation 112.38 40 PFAKE 20 29 50.0 +10
AGMN LR LR
comp=Z,334nm,22.0s,MS4.9
CSS Prodhromos 112.48 305 PFAKE 20 29 50.0 +9.4
CSS LR LR
comp=Z,159nm,19.0s,MS4.6
JCT Junction City 113.12 59 *e*PKIKP PKiKP 20 29 41.2 -0.7
JCT MLR MLR
comp=Z,763nm,22.0s,MS5.2
ECSD EROS Data Cent 113.14 45 *e*PKPdf PKiKP 20 29 38.6 -3.0
ECSD LR LR
comp=Z,388nm,19.0s,MS5.0
WMOK Wichita Mounta 113.37 55 *e*PKIKP PKiKP 20 29 41.2 -1.1
WMOK MLR MLR
comp=Z,264nm,19.0s,MS4.8
BOSA Boshof 114.13 235 PKP PKiKP 20 29 43.8 -0.2
comp=Z,3.2nm,0.7s,baz=125,slow=2.7,SNR=7.7
BOSA PKKPbc PKKPbc 20 40 24.6 -0.6
comp=Z,3.5nm,1.0s,baz=192,slow=14,SNR=2.3
BOSA Boshof 114.13 235 PKP PKiKP 20 29 43.8 -0.2
BOSA PKKPbc PKKPbc 20 40 24.6 -0.6
BOSA LR LR
comp=Z,731nm,21.0s,MS5.3
ISP Isparta 114.19 309 PFAKE 20 29 50.0 +6.2
ISP LR LR
comp=Z,190nm,22.0s,MS4.7
KSU1 Kansas State U 114.24 50 PFAKE 20 30 00.0 +16
KSU1 LR LR
comp=Z,365nm,19.0s,MS5.0
LBTB Lobatse 115.12 239 PKP PKiKP 20 29 45.9 -0.1
comp=Z,4.0nm,1.0s,baz=86,slow=4.2,SNR=5.0
KVTX Kingsville 115.14 62 PFAKE 20 30 00.0 +14
KVTX LR LR
comp=Z,678nm,20.0s,MS5.2
EYMN Ely 115.26 39 PFAKE 20 30 00.0 +15
EYMN LR LR
comp=Z,473nm,22.0s,MS5.0
LSZ Lusaka 115.63 250 PFAKE 20 30 00.0 +13
LSZ LR LR
comp=Z,556nm,22.0s,MS5.1
NB2 NORSAR Subarra115.71 338 PKKP PKKPbc 20 40 17.8 -2.9
comp=Z,2.3nm,0.8s,baz=231,slow=4.4
NOA NORSAR Array B115.71 338 PKP PKPdf 20 29 46.4 +0.4
comp=Z,0.4nm,0.7s,baz=175,slow=14,SNR=2.6
NOA PKKPbc PKKPbc 20 40 18.2 -2.5
comp=Z,1.1nm,0.7s,baz=224,slow=3.6,SNR=8.6
MBAR Mbarara 115.80 267 PFAKE 20 30 00.0 +12
MBAR LR LR
comp=Z,803nm,20.0s,MS5.3
KWP Kalwaria Pacla 116.03 323 PFAKE 20 30 00.0 +13
KWP LR LR
comp=Z,390nm,22.0s,MS5.0
SCIA State Center 116.03 46 PFAKE 20 30 00.0 +13
SCIA LR LR
comp=Z,287nm,21.0s,MS4.9
HKT Hockley 116.60 59 PFAKE 20 30 00.0 +11
HKT LR LR
comp=Z,693nm,22.0s,MS5.2
KONO Kongsberg 117.22 337 PFAKE 20 30 00.0 +11
KONO LR LR
comp=Z,312nm,20.0s,MS4.9
NATX Nacogdoches 117.29 57 PFAKE 20 30 00.0 +10

NATX LR LR
comp=Z,339nm,19.0s,MS5.0
COWI Conover 117.44 40 PFAKE 20 30 00.0 +10
COWI LR LR
comp=Z,258nm,20.0s,MS4.8
MIAR Mount Ida 117.62 54 *e*PKIKP PKPdf 20 29 49.8 -0.7
MIAR MLR MLR
comp=Z,356nm,19.0s,MS5.0
JFWS Jewell Farm 117.81 44 *e*PKIKP PKPdf 20 29 48.0 -2.6
JFWS MLR MLR
comp=Z,359nm,20.0s,MS5.0
UALR University of 118.56 54 *e*PKPdf PKPdf 20 29 51.1 -1.2
CCM Cathedral Cave 118.57 50 PFAKE 20 30 00.0 +7.8
CCM LR LR
comp=Z,339nm,20.0s,MS5.0
HDIL Hopedale 119.26 46 PFAKE 20 30 00.0 +6.6
HDIL LR LR
comp=Z,394nm,21.0s,MS5.0
BRG Berggiesshubel 120.43 327 PKP PKPdf 20 30 11.0 +16
BRG PP PP 20 31 27.0 +5.1
BRG SS SS 20 48 19.0 +32
BRG
comp=N,25μm,0.5s
BRG
comp=E,225nm,21.5s
BRG
comp=Z,489nm,27.0s
VBMS Vicksburg 120.64 56 PFAKE 20 30 10.0 +14
VBMS LR LR
comp=Z,431nm,21.0s,MS5.1
CLL Collm 120.69 328 *e*PKIKP pPKPdf 20 30 08.0 -1.9
CLL *e* 20 31 32.0
CLL pmax pmax
comp=Z,5.0nm,1.0s
CLL MLR MLR
comp=Z,500nm,21.9s,MS5.1
CLL Collm 120.69 328 *e*pPKPdf pPKPdf 20 30 08.0 -1.9
comp=Z,5.0nm,1.0s
CLL *e*PP PP 20 31 23.0 -0.6
CLL *e*PPP 20 34 00.0
CLL *e*PKKPbc PKKPbc 20 39 59.0 -3.5
CLL *e*PKKPab PKKPab 20 40 02.0 0.0
comp=Z,5.0nm,0.8s
CLL *e*pPKKPab 20 40 13.0
CLL *e*PS PS 20 41 10.0 -5.7
CLL *e*PPS 20 42 42.0
CLL *e*PPPrev 20 47 30.0
CLL *e*SS SS 20 48 12.0 +22
CLL *e*PSPS 20 48 48.0
CLL Lm 21 22 00.0
comp=Z,500nm,21.9s
GLMI Grayling 120.86 40 PFAKE 20 30 10.0 +14
GLMI LR LR
comp=Z,402nm,21.0s,MS5.0
OXF Oxford 120.96 53 PFAKE 20 30 10.0 +13
OXF LR LR
comp=Z,411nm,22.0s,MS5.0
TIR Tirane 121.07 315 PFAKE 20 30 10.0 +13
TIR LR LR
comp=Z,367nm,21.0s,MS5.0
KHC Kasperske Hory 121.55 326 *e*PKIKP PKPdf 20 29 56.4 -1.2
KHC Kasperske Hory 121.55 326 *e*pPKP pPKPdf 20 30 10.0 -1.6
WVT Waverly 121.74 51 *e*PKIKP PKPdf 20 29 54.0 -4.3
WVT MLR MLR
comp=Z,411nm,21.0s,MS5.0
WCI Wyandotte Cave 122.23 48 PFAKE 20 30 10.0 +11
WCI LR LR
comp=Z,376nm,20.0s,MS5.0
PLCA Paso Flores 122.40 147 PKP PKPdf 20 30 00.0 +0.5
comp=Z,20nm,0.7s,baz=229,slow=2.8,SNR=38
PLCA Paso Flores 122.40 147 *e*PKPdf PKPdf 20 29 60.0 +0.4
PLCA *e* 20 30 12.6
AAM Ann Arbor 122.56 43 PFAKE 20 30 10.0 +10
AAM LR LR
comp=Z,490nm,22.0s,MS5.1
CADS Cadrg 122.94 323 *e*PKPdf PKPdf 20 29 58.0 -2.4
CADS *e*pPKPdf pPKPdf 20 30 14.9 +0.5
CADS *e*PKKP PKKPbc 20 39 52.2 -1.5
CADS Cadrg 122.94 323 *e*PKPdf PKPdf 20 29 58.0 -2.4
CADS *e*pPKPdf pPKPdf 20 30 14.9 +0.5
TRI Trieste 123.19 322 PFAKE 20 30 10.0 +9.2
TRI LR LR
comp=Z,314nm,20.0s,MS5.0
LRAL Lakeview Retre 123.30 54 PFAKE 20 30 10.0 +8.6
LRAL LR LR
comp=Z,230nm,21.0s,MS4.8
BRAL Brewton 123.79 56 PFAKE 20 30 10.0 +7.6
BRAL LR LR
comp=Z,336nm,19.0s,MS5.0
ACSO Alum Creek Sta 123.87 45 PFAKE 20 30 10.0 +7.7
ACSO LR LR
comp=Z,344nm,20.0s,MS5.0
TSUM Tsumeb 124.11 242 PKP PKPdf 20 30 04.1 +0.7
comp=Z,8.2nm,0.7s,baz=104,slow=1.7,SNR=12
SCHQ Schefferville 124.19 23 PKP PKPdf 20 30 01.4 -1.1
comp=Z,2.9nm,0.6s,baz=8.7,slow=4.0,SNR=7.2
BFO Black Forest 124.88 327 PFAKE 20 30 10.0 +6.0
BFO LR LR
comp=Z,184nm,20.0s,MS4.7
AQU L'Aquila 125.03 319 PFAKE 20 30 20.0 +16
AQU LR LR
comp=Z,289nm,21.0s,MS4.9
CEL Celeste 125.07 313 PFAKE 20 30 20.0 +15
CEL LR LR
comp=Z,235nm,22.0s,MS4.8
ERPA Erie 125.08 41 PFAKE 20 30 20.0 +15
ERPA LR LR
comp=Z,407nm,20.0s,MS5.1
ESK Eskdalemuir 125.11 340 PFAKE 20 30 20.0 +16
ESK LR LR
comp=Z,247nm,20.0s,MS4.9
WLF Walferdange 125.19 330 PFAKE 20 30 20.0 +15
WLF LR LR
comp=Z,442nm,21.0s,MS5.1
CDF Champ du Feu 125.39 328 *e*PKIKP PKPdf 20 30 02.8 -2.2
GIVF Givet 125.56 331 *e*PKIKP PKPdf 20 30 03.8 -1.4
ECH Echery 125.57 328 PFAKE 20 30 20.0 +15
ECH LR LR
comp=Z,259nm,20.0s,MS4.9
BAIF Baives 125.89 331 *e*PKIKP PKPdf 20 30 04.2 -1.7
HINF Hinteralfeld 125.98 328 *e*PKIKP PKPdf 20 30 04.1 -2.0
comp=Z,17nm,1.1s
GOGA Godfrey 126.00 53 *e*PKIKP PKPdf 20 30 05.2 -1.4
GOGA *e* 20 30 18.3
GOGA MLR MLR
comp=Z,453nm,22.0s,MS5.1
VLC Villacollemand 126.04 322 PFAKE 20 30 20.0 +14
VLC LR LR
comp=Z,319nm,21.0s,MS5.0
HAU Haudompre 126.13 328 *e*PKIKP PKPdf 20 30 04.5 -1.9
comp=Z,7.5nm,0.6s
TGUH Tegucigalpa,Un 126.27 77 PFAKE 20 30 20.0 +12
TGUH LR LR
comp=Z,428nm,19.0s,MS5.1
MCWV Mont Chateau 126.30 44 PFAKE 20 30 20.0 +13
MCWV LR LR
comp=Z,449nm,21.0s,MS5.1
BLA Blacksburg 126.93 47 PFAKE 20 30 20.0 +12
BLA LR LR
comp=Z,531nm,20.0s,MS5.2
WDD Wield Dalam 127.01 311 PFAKE 20 30 20.0 +12
WDD LR LR
comp=Z,150nm,19.0s,MS4.7
LONY Lake Ozonia 127.17 36 *e*PKPdf PKPdf 20 30 06.6 -1.8
LONY LR LR
comp=Z,288nm,19.0s,MS5.0
JSC Jenkinsville 127.43 51 *e*PKIKP PKPdf 20 30 09.1 -0.2
JSC *e* 20 30 22.1
LPG La Plagne 127.43 325 *e*PKIKP PKPdf 20 30 07.7 -1.2
comp=Z,7.7nm,0.8s
LPL La Plagne 127.43 325 *e*PKIKP PKPdf 20 30 07.6 -1.3
comp=Z,10nm,1.0s
BINY Binghamton 127.63 40 PFAKE 20 30 20.0 +11
BINY LR LR
comp=Z,572nm,21.0s,MS5.2
BNI Bardonecchia 127.73 325 *e*PKIKP PKPdf 20 30 11.4 +1.9
BNI *e* 20 30 24.3
BNI MLR MLR
comp=Z,393nm,21.0s,MS5.1
NCB Newcomb 127.75 37 *e*PKPdf PKPdf 20 30 08.5 -1.2
NCB *e* 20 30 20.8
NCB LR LR
comp=Z,330nm,20.0s,MS5.0
PGF Pioggiola 127.75 321 *e*PKIKP PKPdf 20 30 07.9 -1.8
comp=Z,21nm,1.2s
MBDF Montbardon 127.87 324 *e*PKIKP PKPdf 20 30 08.3 -1.5
LOR Lormes 127.90 329 *e*PKIKP PKPdf 20 30 08.2 -1.6
comp=Z,10nm,1.0s
SBF Sospel 127.98 323 *e*PKIKP PKPdf 20 30 08.2 -1.9
comp=Z,14nm,0.8s
SSF Saint Saulge 128.22 329 *e*PKIKP PKPdf 20 30 08.8 -1.6
comp=Z,9.6nm,1.0s
SMF Signal de Mont 128.31 328 *e*PKIKP PKPdf 20 30 09.1 -1.5
comp=Z,21nm,1.2s
AVF Avril sur Loir 128.47 328 *e*PKIKP PKPdf 20 30 09.2 -1.7
FRF La Foret Royal 128.62 323 *e*PKIKP PKPdf 20 30 09.4 -1.9
JTS JuntasAbangare 128.66 82 PFAKE 20 30 20.0 +7.8
JTS LR LR
comp=Z,405nm,19.0s,MS5.1
CBN Corbin 128.67 45 PFAKE 20 30 20.0 +8.4
CBN LR LR
comp=Z,352nm,20.0s,MS5.0
NHSC New Hope 128.69 52 PFAKE 20 30 20.0 +8.2
NHSC LR LR
comp=Z,420nm,21.0s,MS5.1
TRQA Tornquist 128.81 151 *e*PKPdf PKPdf 20 30 11.5 -0.4
TRQA *e* 20 30 24.1
TRQA LR LR
comp=Z,195nm,19.0s,MS4.8
BGF Bois d'Agland 128.89 329 *e*PKIKP PKPdf 20 30 10.3 -1.4
comp=Z,14nm,0.9s
LBNH Lisbon 128.94 35 PFAKE 20 30 20.0 +8.1
LBNH LR LR
comp=Z,504nm,20.0s,MS5.2
VIVF Saint-Julien-l 128.99 326 *e*PKIKP PKPdf 20 30 10.3 -1.6
SMRF Simiane la Rot 129.01 324 *e*PKIKP PKPdf 20 30 11.0 -1.0
VSL Villasalto 129.08 318 PFAKE 20 30 20.0 +7.7
VSL LR LR
comp=Z,159nm,21.0s,MS4.7
DWPF Disney 129.29 58 PFAKE 20 30 20.0 +7.0
DWPF LR LR
comp=Z,226nm,20.0s,MS4.9
TCF Toulx Ste Croi 129.40 329 *e*PKIKP PKPdf 20 30 11.2 -1.5
comp=Z,8.2nm,0.8s
PKME Peaks-Kenny Pk 129.76 33 PFAKE 20 30 20.0 +6.6
PKME LR LR
comp=Z,319nm,20.0s,MS5.0
LASF Ste Croix 129.93 325 *e*PKIKP PKPdf 20 30 12.1 -1.7
MFF Saint Martin d 130.37 330 *e*PKIKP PKPdf 20 30 13.0 -1.5
CAF Calviac 130.37 327 *e*PKIKP PKPdf 20 30 13.6 -1.0
RJF Les Rejaudoux 130.41 328 *e*PKIKP PKPdf 20 30 13.3 -1.3
MTLF Montolieu 131.32 326 *e*PKIKP PKPdf 20 30 14.8 -1.6
comp=Z,5.9nm,1.0s
EPF Esparros 132.56 327 *e*PKIKP PKPdf 20 30 17.5 -1.3
ETSF Etsaut 133.14 327 *e*PKIKP PKPdf 20 30 18.1 -1.8
comp=Z,8.5nm,0.9s
ATAH Atahualpa 133.15 105 PKP PKPdf 20 30 22.2 +1.5
comp=Z,5.8nm,0.7s,baz=175,slow=4.0,SNR=5.2
SJPF Ste Jean 133.35 328 *e*PKIKP PKPdf 20 30 18.8 -1.5
BCIP Isla Barro Col 133.72 83 PFAKE 20 30 30.0 +8.2
BCIP LR LR
comp=Z,359nm,21.0s,MS5.1
OTAV Otavalo 134.54 95 PFAKE 20 30 40.0 +17
OTAV LR LR
comp=Z,253nm,19.0s,MS5.0
MTDJ Mount Denham 135.10 70 PFAKE 20 30 40.0 +16
MTDJ LR LR
comp=Z,193nm,19.0s,MS4.8
GTBY Guantanamo Bay 137.00 67 PFAKE 20 30 40.0 +12
GTBY LR LR
comp=Z,213nm,21.0s,MS4.8
ESLA Sonseca Array 137.22 326 PFAKE 20 30 40.0 +12
ESLA LR LR
comp=Z,1μm,20.0s,MS5.6
PAB San Pablo 137.52 326 PFAKE 20 30 40.0 +12
PAB LR LR
comp=Z,185nm,19.0s,MS4.8
MTE Manteigas 138.57 330 PFAKE 20 30 40.0 +10
MTE LR LR
comp=Z,305nm,20.0s,MS5.0
TAM Tamanrasset 139.00 298 PFAKE 20 30 40.0 +8.7
TAM LR LR
comp=Z,225nm,20.0s,MS4.9
LPAZ La Paz 139.08 123 PKhKP PKPpre 20 30 23.7
comp=Z,5.9nm,0.9s,baz=236,slow=2.2,SNR=16
LPAZ PKP PKPdf 20 30 33.7 +2.0
comp=Z,23nm,1.0s,baz=317,slow=4.7,SNR=16
LPAZ La Paz 139.08 123 PKHKP PKPpre 20 30 23.7
LPAZ pmax pmax
comp=Z,6.0nm,0.9s
LPAZ pmax pmax
comp=Z,23nm,1.0s
LPAZ La Paz 139.08 123 *e*PKPpre PKPpre 20 30 22.8
LPAZ *e*PKPdf PKPdf 20 30 33.4 +1.7
LPAZ PKP PKPdf 20 30 33.7 +2.0
LPAZ LR LR
comp=Z,39nm,19.0s,MS4.2
GRTK Grand Turk 140.18 63 PFAKE 20 30 40.0 +6.5
GRTK LR LR
comp=Z,242nm,19.0s,MS5.0
CPUP Villa Florida 140.41 145 PKhKP PKPpre 20 30 24.7
comp=Z,3.2nm,0.6s,baz=209,slow=1.4,SNR=8.5
CPUP PKP PKPdf 20 30 34.4 +0.6
comp=Z,17nm,0.7s,baz=251,slow=0.9,SNR=16
CPUP Villa Florida 140.41 145 PKP PKPpre 20 30 24.7
CPUP PKP PKPdf 20 30 34.4 +0.6
BBSR BB Station 140.54 44 PFAKE 20 30 50.0 +16
BBSR LR LR
comp=Z,394nm,21.0s,MS5.1
SFS San Fernando 140.72 325 PFAKE 20 30 50.0 +16
SFS LR LR
comp=Z,520nm,21.0s,MS5.3
SDDR Presa de Saban 140.73 67 PFAKE 20 30 50.0 +15
SDDR LR LR
comp=Z,304nm,19.0s,MS5.1
SDV Santo Domingo 142.81 83 PFAKE 20 30 50.0 +12
SDV LR LR
comp=Z,182nm,22.0s,MS4.8
CRPR Cabo Rojo, PR 144.81 67 *e*PKPdf PKPdf 20 30 39.5 -2.3
SHEL Horse Pasture 145.21 231 PKP2 PKPab 20 30 39.4 -2.9
SJG San Juan 145.66 66 *e*PKIKP PKPdf 20 30 41.4 -1.9
SJG MLR MLR
comp=Z,184nm,20.0s
CBYP Canovanas 145.88 66 *e*PKPdf PKPdf 20 30 41.9 -1.8
ANWB Willy Bob 149.74 65 PFAKE 20 31 00.0 +10
ANWB LR LR
comp=Z,275nm,21.0s,MS5.0
CAM4 Nova Friburgo 150.54 162 ⇑ *i*P PKPbc 20 30 57.1 +0.6
CAM4 *i* 20 30 59.7
CAM4 *i* 20 31 04.3
CAM4 *i* 20 31 08.4
CAM4 *i* 20 31 13.5
CAM4 *i* 20 31 15.5
CAM4 *i* 20 31 21.1
CAM4 *i* 20 31 25.8
CAM4 *i* 20 31 36.5
FDF Fort de France 151.19 70 PFAKE 20 31 00.0 +7.7
FDF LR LR
comp=Z,300nm,22.0s,MS5.0
GRGR Grenville 151.27 75 PFAKE 20 31 00.0 +7.5
GRGR LR LR
comp=Z,183nm,20.0s,MS4.9
KIC Kosan Boka 151.65 273 *e*P PKPbc 20 30 56.7 -2.7
comp=Z,183nm,0.9s
DBIC Dimbokro 151.76 273 PKPbc PKPbc 20 30 58.9 -0.8
comp=Z,18nm,0.8s,baz=76,slow=2.5,SNR=34
DBIC Dimbokro 151.76 273 PKIKP PKPbc 20 30 58.9 -0.8
DBIC pmax pmax
comp=Z,18nm,0.8s
DBIC Dimbokro 151.76 273 PFAKE 20 31 00.0 +6.7
DBIC LR LR
comp=Z,383nm,21.0s,MS5.2
TIC Toumodi 151.93 273 *e*P PKPbc 20 30 59.0 -1.1
comp=Z,170nm,1.0s
LIC Lamto 151.93 272 *e*P PKPbc 20 30 59.1 -1.0
comp=Z,226nm,0.8s
LIC Lamto 151.93 272 *e*PKP1 PKPbc 20 30 59.2 -0.9
comp=Z,143nm,0.8s

*ISCJB **25** 20:14:17.5±0.6,59°.73S±0°.10×29°.7W±0°.2,h10km, mb4.3/10,MS4.3/14,Error ellipse: s-maj=14.3km s-min=11.9km az=4.1*
*IDC **25** 20:14:18.4±0.6,59°.72S×29°.90W,h0km,mb4.3/9, mb1 4.4/9,mb1mx4.3/15,mbtmp4.2/9,MS4.3/14, Ms1 4.3/14,ms1mx4.2/20,Error ellipse: s-maj=24.2km s-min=18.3km az=30.0*
*NEIC **25** 20:14:21.1±0.5,59°.68S×29°.75W,h20km,mb4.7/4,Error ellipse: s-maj=18.3km s-min=13.2km az=170.0*
ISC 25 20:14:19.5±0.6,59°.75S±0°.10×29°.7W±0°.2,h10km,n33, σ0982/15,mb4.3/10,MS4.3/14,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**14.04**	**150**	*e*	**Pn**	**20 17 36.6**	**-1.5**
PMSA	**Palmer Station**	**16.62**	**238**	*e*P	**Pn**	**20 18 12.9**	**+0.8**
58nm,0.9s							
USHA	**Ushuaia**	**21.28**	**266**	P	**P**	**20 19 04.7**	**-1.0**
7.0nm,0.9s,mb4.0,baz=110,slow=10,SNR=3.4							
USHA				LR	LR	20 25 11.0	
comp=Z,2μm,21.2s,MS4.5,baz=231,slow=31							
QSPA	**South Pole Qui**	**30.50**	**180**	P	**P**	**20 20 32.3**	**+0.3**
4.1nm,0.8s,mb4.2,baz=196,slow=6.5,SNR=12							
QSPA				LR	LR	20 32 27.8	
comp=Z,1μm,18.2s,MS4.5,baz=6.3,slow=36							
PLCA	**Paso Flores**	**31.62**	**289**	LR	LR	20 32 41.7	
comp=Z,666nm,18.4s,MS4.3,baz=121,slow=35							
MAW	**Mawson**	**38.02**	**142**	P	**P**	**20 21 38.0**	**+0.8**
5.4nm,0.9s,mb4.3,baz=255,slow=14,SNR=7.4							
MAW				LR	LR	20 35 01.8	
comp=Z,231nm,21.1s,MS4.0,baz=114,slow=33							
CPUP	**Villa Florida**	**38.47**	**318**	P	**P**	**20 21 41.0**	**-0.4**
1.0nm,0.5s,mb3.8,baz=172,slow=8.1,SNR=3.9							
CPUP				LR	LR	20 36 30.3	
comp=Z,295nm,19.7s,MS4.1,baz=35,slow=35							
CPUP	**Villa Florida**	**38.47**	**318**	P	**P**	**20 21 41.0**	**-0.4**
CPUP				LR	LR	20 36 30.3	
BOSA	**Boshof**	**48.20**	**75**	P	**P**	**20 23 00.6**	**+0.7**
7.9nm,0.9s,mb4.7,baz=196,slow=10,SNR=7.5							
BOSA				LR	LR	20 38 35.1	
comp=Z,338nm,20.9s,MS4.3,baz=212,slow=30							
BOSA	**Boshof**	**48.20**	**75**	*e*P	**P**	**20 22 58.3**	**-1.6**
5.8nm,0.7s,mb4.7							
BOSA				LR	LR	20 38 35.1	
LBTB	**Lobatse**	**51.37**	**73**	P	**P**	**20 23 24.4**	**+0.3**
5.3nm,0.8s,mb4.5,baz=215,slow=8.6,SNR=8.1							
LPAZ	**La Paz**	**51.59**	**310**	P	**P**	**20 23 25.9**	**+0.1**
1.5nm,0.5s,mb4.2,baz=62,slow=4.3,SNR=6.4							
LPAZ				LR	LR	20 44 43.5	
comp=Z,82nm,19.9s,MS3.8,baz=328,slow=35							
LPAZ	**La Paz**	**51.59**	**310**	*e*P	**P**	**20 23 25.8**	**0.0**
5.7nm,1.0s,mb4.5							
LPAZ				LR	LR	20 44 43.5	
TSUM	**Tsumeb**	**52.65**	**61**	P	**P**	**20 23 34.4**	**+0.8**
1.6nm,0.6s,mb4.1,baz=23,slow=6.3,SNR=2.2							
TSUM				LR	LR	20 40 19.8	
comp=Z,175nm,20.7s,MS4.1,baz=212,slow=30							
LSZ	**Lusaka**	**60.94**	**69**	LR	LR	20 47 11.9	
comp=Z,325nm,19.9s,MS4.5,baz=39,slow=32							
LSZ	**Lusaka**	**60.94**	**69**	*e*P	**P**	**20 24 31.9**	**-0.6**
6.9nm,0.8s,mb4.8							
MSKU	**Masuku**	**66.85**	**48**	LR	LR	20 47 08.6	
comp=Z,162nm,20.6s,MS4.2,baz=174,slow=29							
DBIC	**Dimbokro**	**69.08**	**27**	LR	LR	20 50 33.8	
comp=Z,138nm,18.5s,MS4.2,baz=170,slow=32							
ROSC	**El Rosal**	**73.35**	**313**	LR	LR	20 58 11.4	
comp=Z,142nm,19.9s,MS4.2,baz=15,slow=36							
URZ	**Urewera**	**79.87**	**201**	LR	LR	20 56 32.9	
comp=Z,393nm,18.6s,MS4.8,baz=150,slow=32							
STKA	**Stephens Creek**	**88.43**	**173**	LR	LR	21 03 22.5	
comp=Z,578nm,19.1s,MS5.0,baz=322,slow=33							
ASAR	**Alice Springs**	**95.81**	**165**	P	**P**	**20 27 46.7**	**+0.9**
0.9nm,0.6s,mb4.4,baz=182,slow=4.0,SNR=4.7							
NOA	**NORSAR Array B**	**124.54**	**23**	PKP	PKPdf	20 33 19.2	+1.9
0.7nm,1.0s,baz=205,slow=1.9,SNR=3.3							
NOA	**NORSAR Array B**	**124.54**	**23**	PKP	PKPdf	20 33 19.2	+1.9
CMAR	**Chiang Mai Arr**	**124.85**	**115**	PKP	PKPdf	20 33 21.4	+2.1
1.1nm,0.9s,baz=271,slow=2.7,SNR=4.6							
FINES	**FINESS Array B**	**128.27**	**30**	PKP	PKPdf	20 33 26.5	+2.0
1.7nm,0.9s,baz=189,slow=7.9,SNR=3.8							
BVAR	**Borovoye Array**	**137.79**	**62**	PKP	PKPdf	20 33 45.3	+2.7
0.7nm,0.7s,baz=236,slow=1.6,SNR=4.0							
ZALV	**Zalesovo Beam**	**145.05**	**70**	PKPbc	PKPbc	20 33 57.0	+1.9
0.8nm,0.5s,baz=242,slow=3.2,SNR=4.3							
ZALV	**Zalesovo Beam**	**145.05**	**70**	PKPbc	PKPbc	20 33 57.0	+1.9
INK	**Inuvik**	**147.73**	**317**	PKPbc	PKPbc	20 34 03.3	+0.7
1.7nm,0.3s,baz=232,slow=9.6,SNR=4.4							
ILAR	**Eielson Array**	**151.44**	**307**	PKPbc	PKPbc	20 34 09.8	-2.1
1.3nm,0.8s,baz=145,slow=1.2,SNR=10							
ILAR				PKPab	PKPab	20 34 20.2	-0.1
2.3nm,0.8s,baz=163,slow=2.1,SNR=11							
SONM	**Songino Array**	**152.00**	**95**	PKPbc	PKPbc	20 34 12.4	-1.2
0.5nm,0.4s,baz=101,slow=20,SNR=3.4							
KSRS	**Korea Array**	**153.48**	**137**	PKPab	PKPab	20 34 32.4	+2.8
1.7nm,0.8s,baz=201,slow=3.6,SNR=4.7							

*IDC **25** 20:24:34.8±2.0,10°.76N×91°.72E,h0km,mb3.8/5, mb1 3.9/6,mb1mx3.6/22,mbtmp3.7/6,ML3.1/1,Error ellipse: s-maj=66.7km s-min=21.3km az=67.0*
*ISCJB **25** 20:24:37.7±0.7,10°.75N±0°.10×91°.9E±0°.1,h33km,mb3.9/6, Error ellipse: s-maj=15.4km s-min=14.1km az=4.7*
*NEIC **25** 20:24:38.8±4.8,10°.74N×91°.91E,h24km±38km,mb4.5/1, Error ellipse: s-maj=16.7km s-min=13.7km az=105.0*
ISC 25 20:24:37.3±7.3,10°.8N±0°.1×91°.9E±0°.1,h14km±48km,n11, σ0878/12,mb3.9/6,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.23**	**41**	Pn	**Pn**	**20 27 03.9**	**0.0**
0.1nm,0.3s,baz=237,slow=15,SNR=3.4							
PALK	**Pallekele**	**11.60**	**253**	Pn	**Pn**	**20 27 22.4**	**-0.3**
PALK				*e*Sn	**Sn**	**20 29 16.6**	**-16**
LSA	**Lhasa**	**18.85**	**358**	*e*Pn	**Pn**	**20 29 01.1**	**+3.5**
ENH	**Enshi**	**25.38**	**38**	P	**P**	**20 30 02.9**	**-1.4**
MK31	**Makanchi Array**	**36.82**	**349**	P	**P**	**20 31 45.7**	**+0.8**
MKAR	**Makanchi Array**	**36.82**	**349**	P	**P**	**20 31 44.1**	**-0.7**
0.8nm,0.6s,mb3.8,baz=168,slow=8.2,SNR=5.0							
SONM	**Songino Array**	**38.90**	**16**	P	**P**	**20 32 02.9**	**+0.4**
0.5nm,0.6s,mb3.8,baz=198,slow=9.1,SNR=2.0							
ZALV	**Zalesovo Beam**	**43.43**	**354**	P	**P**	**20 32 39.6**	**0.0**
0.6nm,0.5s,mb3.6,baz=168,slow=15,SNR=3.8							
FITZ	**Fitzroy Crossi**	**43.95**	**130**	P	**P**	**20 32 44.6**	**+0.3**
1.8nm,0.7s,mb3.9,baz=307,slow=15,SNR=4.2							
WRAB	**Tennant Creek**	**51.73**	**126**	*e*P	**P**	**20 33 44.3**	**-0.4**
6.4nm,1.0s,mb4.5							
ASAR	**Alice Springs**	**53.45**	**130**	P	**P**	**20 33 58.0**	**+0.6**
2.1nm,0.7s,mb4.2,baz=300,slow=7.2,SNR=14							

*IPEC **25** 20:49:26.2±0.3,51°.58N×16°.20E,h0km,ML2.3/4,Error ellipse: s-maj=2.0km s-min=1.5km az=34.0*
*ISCJB **25** 20:49:26.5±0.8,51°.43N±0°.04×16°.12E±0°.04,h0km,Error ellipse: s-maj=5.7km s-min=2.8km az=28.4*
*CSEM **25** 20:49:27.4±0.4,51°.48N×16°.12E,h2km,ML3.0/11,Error ellipse: s-maj=5.9km s-min=3.3km az=21.0*
*PRU **25** 20:49:27.2,51°.51N×16°.21E,h0km*
*WAR **25** 20:49:28.3,51°.51N×16°.12E,ML2.5,Mining Induced*
*VIE **25** 20:49:29.9±0.6,51°.29N×16°.10E,h0km,mb1.9/3,ML2.5/4, Error ellipse: s-maj=3.8km s-min=3.5km az=172.0 67 km WNW of Wroclaw Suspected Mining induced.*
ISC 25 20:49:26.5±0.7,51°.53N±0°.03×16°.17E±0°.04,h0km,n38, σ0979/70,2C-2D,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.69**	**173**	*e*Pg	**Pg**	**20 49 40.6**	**+1.0**
KSP				*e*Sg	**Sg**	**20 49 49.8**	**+1.2**
KSP	**Ksiaz**	**0.69**	**173**	*i* Pg	**Pg**	**20 49 40.7**	**+1.1**
KSP				*i* Sg	**Sg**	**20 49 49.8**	**+1.3**
KSP	**Ksiaz**	**0.69**	**173**	*e*Pg	**Pg**	**20 49 40.5**	**+0.9**
baz=356							
KSP				*i* Sg	**Sg**	**20 49 49.8**	**+1.3**
UPC	**Upice**	**1.03**	**186**	*e*PG	**Pg**	**20 49 46.7**	**+0.6**
UPC	**Upice**	**1.03**	**186**	Pg	**Pg**	**20 49 46.7**	**+0.6**
DPC	**Dobruska-Polom**	**1.18**	**175**	*e*PG	**Pg**	**20 49 49.5**	**+0.4**
DPC				*e*SG	**Sg**	**20 50 04.7**	**+0.3**
comp=Z,23nm,0.5s							
DPC	**Dobruska-Polom**	**1.18**	**175**	*e*Pg	**Pg**	**20 49 49.4**	**+0.3**
baz=356							
DPC				Sg	**Sg**	**20 50 04.7**	**+0.3**
comp=Z,23nm,0.5s							
PVCC	**Panska Ves**	**1.42**	**226**	*e*PG	**Pg**	**20 49 53.5**	**-0.2**
PVCC				*e*SG	**Sg**	**20 50 12.3**	**+0.2**
comp=Z,66nm,0.2s							
PVCC	**Panska Ves**	**1.42**	**226**	Pg	**Pg**	**20 49 53.5**	**-0.2**
PVCC				*e*Sg	**Sg**	**20 50 12.2**	**+0.1**
baz=44							
BRG	**Berggiesshubel**	**1.55**	**246**	PN	**Pn**	**20 49 55.4**	**+0.2**
BRG				PG	**Pg**	**20 49 56.4**	**+0.3**
BRG				SG	**Sg**	**20 50 16.5**	**+0.4**

comp=Z,25nm,0.5s
PRU Pruhonice 1.85 215 *e*PN **Pn 20 49 59.6 +0.1**
PRU *e*PG **Pg 20 50 01.7 -0.3**
PRU *e*SG **Sg 20 50 24.9 -1.1**
comp=Z,21nm,0.4s
PRU Pruhonice 1.85 215 Pn **Pn 20 49 59.6 +0.1**
PRU Pruhonice 1.85 215 Pg **Pg 20 50 01.7 -0.3**
PRU Sg **Sg 20 50 24.9 -1.1**
comp=Z,21nm,0.4s
MORC Moravsky Berou 1.96 153 *e*Pn **Pn 20 50 01.0 +0.1**
baz=335
MORC *e*Sg **Sg 20 50 28.8 -0.5**
comp=Z,15nm,0.4s,baz=335
CLL Collm 2.00 265 *e*Pn **Pn 20 50 01.0 -0.4**
CLL *e*Pg **Pg 20 50 04.0 -0.7**
CLL *i* 20 50 07.7
CLL *i* Sg **Sg 20 50 30.4 -0.1**
comp=Z,18nm,0.8s
OKC Ostrava-Krasne 2.11 143 *e*PG **Pg 20 50 06.9 +0.1**
OKC *e*SG **Sg 20 50 33.1 -1.0**
comp=Z,23nm,0.8s
OKC Ostrava-Krasne 2.11 143 Pg **Pg 20 50 06.9 +0.1**
OKC Sg **Sg 20 50 33.1 -1.0**
comp=Z,23nm,0.8s
VRAC Vranov 2.24 173 *e*Pn **Pn 20 50 05.3 +0.6**
baz=354
VRAC *e*Sg **Sg 20 50 38.0 -0.3**
comp=Z,20nm,0.7s,baz=354
KRUC Moravsky 2.47 177 *e*Pn **Pn 20 50 08.4 +0.5**
baz=357
KRUC *e*Sg **Sg 20 50 44.9 -0.9**
comp=Z,6.1nm,0.4s,baz=357
NKC Novy Kostel 2.69 243 *e*PN **Pn 20 50 11.5 +0.6**
NKC *e*PG **Pg 20 50 17.4 -0.6**
NKC *e*SG **Sg 20 50 53.6 +0.8**
comp=Z,20nm,0.3s
NKC Novy Kostel 2.69 243 Pn **Pn 20 50 11.5 +0.6**
NKC Novy Kostel 2.69 243 Pg **Pg 20 50 17.4 -0.6**
NKC Sg **Sg 20 50 53.6 +0.8**
comp=Z,20nm,0.3s
JAVC Velka Javorina 2.84 160 *e*Sg **Sg 20 50 59.1 +1.5**
comp=Z,13nm,0.8s
KHC Kasperske Hory 2.92 216 *e*PN **Pn 20 50 14.2 +0.2**
KHC *e*PG **Pg 20 50 20.4 -1.9**
KHC *e*SN **Sn 20 50 51.3 +1.5**
KHC *e*SG **Sg 20 50 59.0 -1.1**
comp=Z,5.3nm,0.3s
KHC Kasperske Hory 2.92 216 Pn **Pn 20 50 14.2 +0.2**
MOX Moxa 3.00 255 *e*PG **Pg 20 50 23.7 -0.3**
MOX *e*SG **Sg 20 51 03.7 +0.8**
KOLL Kolacno 3.28 153 *e*SG **Sg 20 51 11.9 0.0**
KOLL Kolacno 3.28 153 *e*Sg **Sg 20 51 11.9 0.0**
VYHS Vyhne 3.49 149 *e*SG **Sg 20 51 18.2 -0.3**
VYHS Vyhne 3.49 149 *e*Sg **Sg 20 51 18.2 -0.3**
CONA Conrad Observa 3.61 183 ⇓*i*Pn **Pn 20 50 24.4 +0.8**
CONA ⇓*i*Sg **Sg 20 51 20.8 -1.4**
comp=Z,7.3nm,0.4s
CONA Conrad Observa 3.61 183 Pn **Pn 20 50 24.4 +0.9**
CONA Sg **Sg 20 51 20.8 -1.5**
comp=Z,7.3nm,0.4s
BSD Bornholm Skovb 3.67 349 *i* P **Pn 20 50 23.1 -1.3**
BSD *i* S **Sn 20 51 03.2 -5.2**
BSD *i* S **Sn 20 51 03.8 -4.6**
BSD Bornholm Skovb 3.67 349 *i* P **Pn 20 50 23.1 -1.3**
STHS Stebnicka Huta 3.87 121 *e*SG **Sg 20 51 26.3 -4.4**
STHS Stebnicka Huta 3.87 121 *e*Sg **Sg 20 51 26.3 -4.4**
MOA Molln 3.88 199 ⇑*i*Pn **Pn 20 50 28.2 +0.9**
MOA ⇑*i*Sg **Sg 20 51 30.3 -0.8**
comp=Z,8.3nm,0.5s
MOA Molln 3.88 199 Pn **Pn 20 50 28.2 +0.9**
MOA Sg **Sg 20 51 30.3 -0.8**
comp=Z,8.3nm,0.5s

MAN 25 20:57:14,5°.85N×124°.52E, h32km, mb4.0, ML2.8, MS2.5, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.49**	**61**	⇑*i*P	Pb	20 57 29.6	+5.3
GSPH				*e*S	Sb	20 57 39.3	+7.8
BUKP	**Musuan**	**2.09**	**15**	*e*P	Pn	20 57 49.2	+2.4
BUKP				*e*S	Sn	20 58 05.5	-6.2
IPIL	**Ipil**	**2.73**	**315**	*e*P	Pn	20 57 57.4	+1.8
IPIL				*e*S	Sn	20 58 16.1	-11

*ISK **25** 21:00:46.6, 35°.95N×27°.24E, h18km, MD3.1*
*NEIC **25** 21:00:46.7, 35°.97N×27°.35E, h24km, MD3.3(ATH), After ATH.*
*ATH **25** 21:00:46.7, 35°.97N×27°.35E, h24km±3km, MD3.3/7*
*CSEM **25** 21:00:46.8±0.3, 36°.02N×27°.25E, h2km, MD3.3, Error ellipse: s-maj=7.5km s-min=5.2km az=142.0*
*ISCJB **25** 21:00:47.1±0.6, 35°.98N±0°.03×27°.30E±0°.04, h8km±4km, Error ellipse: s-maj=5.4km s-min=3.6km az=38.6*
*DDA **25** 21:00:50.7, 36°.15N×27°.68E, h7km±7km, Md3.0*

ISC 25 21:00:47.8±0.6, 35°.97N±0°.03×27°.31E±0°.04, h10km±4km, n42, σ0°.97/73, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.44**	**196**	*e*Pb	**Pg**	**21 00 56.0**	**-0.3**
KARP				*e*Sb	**Sg**	**21 01 03.0**	**+0.9**
KARP	**Karpathos**	**0.44**	**196**	*e*PB	**Pg**	**21 00 56.0**	**-0.3**
KARP				*e*SB	**Sg**	**21 01 03.0**	**+0.9**
KARP	**Karpathos**	**0.44**	**196**	*e*Pb	**Pg**	**21 00 56.0**	**-0.3**
KARP				*e*Sb	**Sg**	**21 01 03.0**	**+0.9**
ARG	**Arkhangelos**	**0.70**	**69**	*e*Pn	**Pg**	**21 01 00.1**	**-1.3**
ARG				*e*Sn	**Sg**	**21 01 10.1**	**-0.5**
ARG	**Arkhangelos**	**0.70**	**69**	*e*PN	**Pg**	**21 01 00.1**	**-1.3**
ARG				*e*SN	**Sg**	**21 01 10.1**	**-0.5**
ARG	**Arkhangelos**	**0.70**	**69**	*e*Pn	**Pg**	**21 01 00.1**	**-1.3**
DAT	**Datca**	**0.79**	**16**	*e*PG	**Pg**	**21 01 02.9**	**-0.1**
DAT				*e*SG	**Sg**	**21 01 15.1**	**+1.8**
DAT	**Datca**	**0.79**	**16**	*e*Pg	**Pg**	**21 01 02.9**	**-0.1**
DAT				*e*Sg	**Sg**	**21 01 15.1**	**+1.8**
BODT	**Bodrum**	**1.09**	**360**	*e*PN	**Pg**	**21 01 08.2**	**-0.6**
BODT				*e*SN	**Sg**	**21 01 23.2**	**+0.3**
BODT	**Bodrum**	**1.09**	**360**	*e*Pn	**Pg**	**21 01 08.2**	**-0.6**
BODT				*e*Sn	**Sg**	**21 01 23.2**	**+0.2**
BDRM	**Kayabasi**	**1.10**	**5**	*i* P	**Pg**	**21 01 08.1**	**-0.8**
BDRM				*i* S	**Sg**	**21 01 23.5**	**+0.3**
BDRM	**Kayabasi**	**1.10**	**5**	*i* P	**Pg**	**21 01 08.1**	**-0.8**
BDRM				*i* S	**Sg**	**21 01 23.5**	**+0.3**
MLSB	**Milas**	**1.38**	**16**	*e*PN	**Pn**	**21 01 11.2**	**-1.8**
MLSB	**Milas**	**1.38**	**16**	*e*Pn	**Pn**	**21 01 11.2**	**-1.8**
YER	**Yerkesik**	**1.40**	**34**	*e*PN	**Pn**	**21 01 12.3**	**-1.0**
YER	**Yerkesik**	**1.40**	**34**	*e*Pn	**Pn**	**21 01 12.4**	**-1.0**
NPS	**Neapolis**	**1.55**	**244**	*e*Pn	**Pn**	**21 01 15.3**	**-0.1**
NPS				*e*Sn	**Sn**	**21 01 35.7**	**0.0**
NPS	**Neapolis**	**1.55**	**244**	*e*PN	**Pn**	**21 01 15.3**	**-0.1**
NPS				*e*SN	**Sn**	**21 01 35.7**	**0.0**
NPS	**Neapolis**	**1.55**	**244**	*e*Pn	**Pn**	**21 01 15.3**	**-0.1**
NPS				*e*Sn	**Sn**	**21 01 35.7**	**0.0**
AYDN	**Tasoluk**	**1.75**	**15**	*i* P	**Pn**	**21 01 19.5**	**+1.3**
AYDN				*i* S	**Sn**	**21 01 40.0**	**-0.5**
AYDN	**Tasoluk**	**1.75**	**15**	*i* P	**Pn**	**21 01 19.5**	**+1.3**
AYDN				*i* S	**Sn**	**21 01 40.0**	**-0.5**
SMG	**Samos**	**1.78**	**348**	*e*Pb	**Pn**	**21 01 17.6**	**-1.0**
SMG				*e*Sn	**Sn**	**21 01 41.6**	**+0.4**
SMG	**Samos**	**1.78**	**348**	*e*PB	**Pn**	**21 01 17.6**	**-1.0**
SMG				*e*SN	**Sn**	**21 01 41.6**	**+0.4**
SMG	**Samos**	**1.78**	**348**	*e*Pb	**Pn**	**21 01 17.6**	**-1.0**
SMG				*e*Sn	**Sn**	**21 01 41.6**	**+0.4**
APE	**Apeiranthos**	**1.81**	**308**	*e*PN	**Pn**	**21 01 17.5**	**-1.5**
APE	**Apeiranthos**	**1.81**	**308**	*e*Pb	**Pn**	**21 01 18.5**	**-0.5**
APE				*e*Sn	**Sn**	**21 01 41.8**	**-0.1**
APE	**Apeiranthos**	**1.81**	**308**	*e*PB	**Pn**	**21 01 18.5**	**-0.5**
APE				*e*SN	**Sn**	**21 01 41.8**	**-0.1**
APE	**Apeiranthos**	**1.81**	**308**	*e*Pn	**Pn**	**21 01 17.5**	**-1.5**
APE	**Apeiranthos**	**1.81**	**308**	*e*Pb	**Pn**	**21 01 18.5**	**-0.5**
APE				*e*Sn	**Sn**	**21 01 41.8**	**-0.1**
AKAS	**Kas**	**1.88**	**81**	*i* P	**Pn**	**21 01 20.8**	**+0.9**
AKAS				*i* S	**Sn**	**21 01 41.7**	**-1.9**
AKAS	**Kas**	**1.88**	**81**	*i* P	**Pn**	**21 01 20.8**	**+0.9**
AKAS				*i* S	**Sn**	**21 01 41.7**	**-1.9**
IDI	**Anoyia**	**2.09**	**252**	*e*Pn	**Pn**	**21 01 22.6**	**-0.2**
IDI				*e*Sn	**Sn**	**21 01 48.7**	**-0.1**
IDI	**Anoyia**	**2.09**	**252**	*e*PN	**Pn**	**21 01 22.6**	**-0.2**
IDI				*e*SN	**Sn**	**21 01 48.7**	**-0.1**
IDI	**Anoyia**	**2.09**	**252**	*e*Pn	**Pn**	**21 01 22.6**	**-0.2**
IDI				*e*Sn	**Sn**	**21 01 48.7**	**-0.1**
GLHS	**Glhisar (BURDU**	**2.12**	**55**	*e*PN	**Pn**	**21 01 23.7**	**+0.4**
GLHS	**Glhisar (BURDU**	**2.12**	**55**	*e*Pn	**Pn**	**21 01 23.7**	**+0.4**
GOLH	**Golhisar**	**2.21**	**54**	*i* P	**Pn**	**21 01 26.8**	**+2.4**
GOLH				*i* S	**Sn**	**21 01 54.0**	**+2.1**
GOLH	**Golhisar**	**2.21**	**54**	*i* P	**Pn**	**21 01 26.8**	**+2.3**
GOLH				*i* S	**Sn**	**21 01 54.0**	**+2.2**
ELL	**Elmali**	**2.23**	**69**	*e*PN	**Pn**	**21 01 25.1**	**+0.2**
ELL	**Elmali**	**2.23**	**69**	*e*Pn	**Pn**	**21 01 25.1**	**+0.3**
KARN	**Karanos**	**2.82**	**259**	*e*PN	**Pn**	**21 01 33.5**	**+0.6**
KARN				*e*SN	**Sn**	**21 02 07.1**	**+0.2**
KARN	**Karanos**	**2.82**	**259**	*e*Pn	**Pn**	**21 01 33.5**	**+0.6**
KARN				*e*Sn	**Sn**	**21 02 07.1**	**+0.2**

CASC 25 21:10:21.1±1.0, 12°.88N×88°.63W, h45km±21km, MD3.7, ML3.3, 1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSM	**San Miguel**	**0.65**	**33**	*e*P	Pn	21 10 34.4	+0.4
BLLM	**Bellamira**	**0.68**	**35**	⇓*i*P	Pn	21 10 34.7	+0.3
BLLM				*e*S	Sn	21 10 44.6	+0.6
SNVI	**San Vicente**	**0.76**	**345**	*e*P	Pn	21 10 35.7	+0.3
SNVI				*e*S	Sn	21 10 46.7	+0.9
LFRS	**El Faro**	**0.85**	**331**	*e*P	Pn	21 10 36.6	-0.1
LFRS				*e*S	Sn	21 10 48.5	+0.5
CNCH	**Conchagua**	**0.87**	**63**	*e*P	Pn	21 10 37.0	0.0
CNCH				*e*S	Sn	21 10 49.8	+1.1
LBRS	**Las Brisas**	**0.94**	**335**	*e*P	Pn	21 10 38.1	+0.2
CAHU	**Cacacuatique**	**0.98**	**25**	*e*P	Pn	21 10 38.8	+0.4
CAHU				*e*S	Sn	21 10 52.8	+1.6
SNET	**Serv Nac Est T**	**0.99**	**324**	*e*P	Pn	21 10 38.3	-0.3
BOQS	**Boqueron**	**1.06**	**324**	*e*P	Pn	21 10 39.8	+0.3
BOQS				*e*S	Sn	21 10 54.1	+1.0
SBLS	**San Blas**	**1.36**	**315**	*e*P	Pn	21 10 44.1	+0.5
SBLS				*e*S	Sn	21 11 02.1	+1.7
RTR	**El Retiro**	**1.41**	**316**	*e*P	Pn	21 10 45.1	+0.7
RTR				*e*S	Sn	21 11 02.9	+1.1
RBDL	**Robledal**	**1.60**	**320**	*e*P	Pn	21 10 47.2	+0.3
MTO2	**Montecristo 2**	**1.67**	**335**	*e*P	Pn	21 10 48.1	+0.2
TGUH	**Tegucigalpa,Un**	**1.77**	**48**	*e*P	Pn	21 10 49.0	-0.2
CNGN	**Cerro Negro**	**1.93**	**101**	*e*P	Pn	21 10 52.0	+0.6
CNGN				*e*S	Sn	21 11 14.1	-0.3
CNGN				AML	AML	21 11 20.2	
comp=E,279nm,0.2s							
MOMN	**Momotombo**	**2.10**	**103**	*e*P	Pn	21 10 53.6	-0.1
COPN	**Copaltepe**	**2.11**	**109**	*e*P	Pn	21 10 53.5	-0.4
CSAN		**2.27**	**108**	*e*P	Pn	21 10 56.6	+0.6
TICN	**Ticuantepe**	**2.49**	**109**	*e*P	Pn	21 11 00.3	+1.1

*NEIC **25** 21:19:08.4, 31°.76S×71°.91W, h20km, ML3.6(GUC), After GUC.*

GUC 25 21:19:08.4±0.8, 31°.76S×71°.91W, h20km±6km, MD3.9, ML3.6, 7C-5D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.37**	**109**	⇓*i*P	Pg	21 19 15.8	-0.4
CHNG				*i* S	Sg	21 19 21.8	+0.3
CHNG				AML	AML	21 19 23.1	
comp=E,2μm,0.5s							
CMCH	**Combarbala**	**0.97**	**53**	⇑*i*P	Pb	21 19 25.9	-0.6
CMCH				*i* S	Sb	21 19 39.0	0.0
CMCH	**Combarbala**	**0.97**	**53**	⇑*i*P	Pb	21 19 25.9	-0.6
CMCH				*i* S	Sb	21 19 39.0	0.0
CMCH				AML	AML	21 19 40.4	
comp=E,9μm,0.7s							
OVCH	**Ovalle**	**1.30**	**28**	*e*P	Pn	21 19 31.3	-0.1
OVCH				*i* S	Sn	21 19 48.1	-0.2
OVCH	**Ovalle**	**1.30**	**28**	*e*P	Pn	21 19 31.3	-0.1
OVCH				*i* S	Sn	21 19 48.1	-0.2
OVCH				AML	AML	21 19 56.7	
comp=N,949nm,0.8s							
JACH	**Jahuel**	**1.44**	**130**	*e*P	Pn	21 19 33.7	+0.3
JACH				*i* S	Sn	21 19 52.6	+0.8
JACH	**Jahuel**	**1.44**	**130**	*e*P	Pn	21 19 33.7	+0.3
JACH				*i* S	Sn	21 19 52.6	+0.8
PEL	**Peldehue**	**1.72**	**143**	*e*P	Pn	21 19 37.6	+0.4
PEL				*i* S	Sn	21 20 00.6	+1.9
PEL				AML	AML	21 20 06.1	
comp=E,2μm,0.6s							
TLL	**Tololo Astrono**	**1.85**	**31**	*e*P	Pn	21 19 39.2	+0.2
TLL				*i* S	Sn	21 20 03.5	+1.6
TLL	**Tololo Astrono**	**1.85**	**31**	*e*P	Pn	21 19 39.2	+0.2
TLL				*i* S	Sn	21 20 03.5	+1.6
TLL				AML	AML	21 20 14.0	
comp=N,592nm,0.6s							
CLCH	**Cerro Calan**	**2.00**	**145**	*e*P	Pn	21 19 42.2	+1.1
CLCH				AML	AML	21 20 17.9	
comp=N,919nm,0.6s							
CLCH				AML	AML	21 20 19.1	
comp=E,1μm,0.4s							
TACH	**Talagante**	**2.06**	**157**	⇑*i*P	Pn	21 19 42.8	+1.0
TACH	**Talagante**	**2.06**	**157**	⇑*i*P	Pn	21 19 42.8	+1.0
FCH	**Farellones**	**2.08**	**139**	⇓*i*P	Pn	21 19 43.5	+1.4
FCH	**Farellones**	**2.08**	**139**	⇑*i*P	Pn	21 19 43.2	+1.1
FCH				⇓*i*P		21 19 43.5	
FCH				*i* S	Sn	21 20 10.5	+3.2
FCH				AML	AML	21 20 19.9	
comp=N,375nm,0.1s							
ANTU	**Antumapu**	**2.10**	**149**	*i* S	Sn	21 20 10.6	+2.7
ANTU				AML	AML	21 20 20.2	
comp=E,516nm,0.6s							
PCH	**Pirque**	**2.19**	**148**	*e*P	Pn	21 19 44.8	+1.1
PCH	**Pirque**	**2.19**	**148**	*e*P	Pn	21 19 44.8	+1.1
CHCH	**Chadas Angostu**	**2.41**	**154**	⇑*i*P	Pn	21 19 48.4	+1.7
CHCH	**Chadas Angostu**	**2.41**	**154**	⇑*i*P	Pn	21 19 48.4	+1.7
LMEL	**Las Melosas**	**2.53**	**146**	⇓*i*P	Pn	21 19 50.1	+1.7
LMEL				*i* S	Sn	21 20 21.1	+2.5
LMEL	**Las Melosas**	**2.53**	**146**	⇓*i*P	Pn	21 19 50.1	+1.7
LMEL				*i* S	Sn	21 20 21.1	+2.5
LMEL				AML	AML	21 20 31.4	
comp=N,467nm,0.2s							
LCO	**Las Campanas**	**2.94**	**21**	*e*Pn	Pn	21 19 53.7	-0.2
LCO				*e*Sg	Sg	21 20 42.0	-0.7
TRQA	**Tornquist**	**10.29**	**130**	*e*Pn	Pn	21 21 38.5	+3.6
LPAZ	**La Paz**	**15.79**	**13**	*e*Pn	Pn	21 22 50.0	+0.4

*IDC **25** 21:25:49.5±1.2, 30°.59N×103°.03E, h0km, mb3.5/6, mb1 3.6/7, mb1mx3.4/20, mbtmp3.5/7, ML3.4/1, Error ellipse: s-maj=82.7km s-min=22.4km az=59.0*
*ISCJB **25** 21:25:51.9±1.1, 31°.22N±0°.04×103°.32E±0°.06, h5km±7km, mb3.6/9, Error ellipse: s-maj=9.0km s-min=7.0km az=155.4*
*NEIC **25** 21:25:51.1±0.9, 30°.59N×103°.10E, h10km, mb3.7/2, Error ellipse: s-maj=27.3km s-min=15.3km az=61.0*
*BJI **25** 21:25:53.4, 30°.67N×103°.40E, h13km, ML3.6/14, Ms3.0/1, Ms7 2.6/1*

ISC 25 21:25:53.5±1.2, 31°.08N±0°.05×103°.27E±0°.06, h9km±8km, n20, σ1°.03/26, mb3.6/9, 2C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.45**	**111**	Pg	**Pg**	**21 26 01.8**	**-0.5**
CD2				Sg	**Sg**	**21 26 08.8**	**+0.6**
CD2				smax			
comp=N,10μm,0.5s							
LZH	**Lanzhou**	**5.02**	**5**	*e*Pg	**Pg**	**21 27 28.5**	**-1.2**
LZH				Sg	**Sg**	**21 28 35.0**	**+0.3**
LZH				smax			
comp=N,21nm,0.5s							
LZH				smax			
comp=E,30nm,0.5s							
XAN	**Xi'an**	**5.61**	**57**	Pn	**Pn**	**21 27 17.5**	**+0.4**
XAN				Pg	**Pg**	**21 27 39.8**	**-1.2**
XAN				Sn	**Sn**	**21 28 21.0**	**-0.7**
XAN				Sg	**Sg**	**21 28 55.0**	**+1.3**
XAN				smax			
comp=N,94nm,1.1s							
XAN				smax			
comp=E,36nm,0.9s							
XAN				LR	LR		
comp=N,100nm,6.8s							
XAN				LR	LR		
comp=E,25nm,7.1s							
XAN				LR	LR		
comp=Z,30nm,5.7s							
WHN	**Wuhan**	**9.54**	**90**	P	**Pn**	**21 28 17.3**	**+6.2**
WHN				S	**Sn**	**21 29 52.3**	**-6.2**
SONM	**Songino Array**	**16.91**	**7**	P	**Pn**	**21 29 54.4**	**+4.2**
comp=Z,0.1nm,0.3s,baz=181,slow=9.8,SNR=3.1							
MK31	**Makanchi Array**	**22.54**	**320**	*e*P	**P**	**21 30 54.7**	**+1.1**
MKAR	**Makanchi Array**	**22.54**	**320**	P	**P**	**21 30 55.2**	**+1.6**
comp=Z,0.5nm,0.7s,mb3.1,baz=123,slow=13,SNR=5.0							
ULHL	**Ulahol**	**24.28**	**305**	P	**P**	**21 31 20.6**	**+10**
SNR=5.3							
KZA	**Kyzart**	**24.93**	**304**	P	**P**	**21 31 10.5**	**-6.4**
SNR=84							
TKM2	**Tokmak 2**	**24.95**	**306**	⇑Pn	**P**	**21 31 19.7**	**+2.6**
comp=Z,6.7nm,0.3s,mb4.6							
TKM2				⇑Lg		21 31 57.0	
comp=Z,38nm,0.6s							
TKM2	**Tokmak 2**	**24.95**	**306**	P	**P**	**21 31 20.5**	**+3.4**
SNR=13							
KBK	**Karagaybulak**	**25.32**	**305**	P	**P**	**21 31 13.8**	**-6.6**
SNR=22							
ZALV	**Zalesovo Beam**	**26.44**	**335**	P	**P**	**21 31 31.1**	**+0.6**
comp=Z,1.0nm,0.8s,mb3.4,baz=130,slow=8.0,SNR=5.1							
BVAR	**Borovoye Array**	**32.37**	**322**	P	**P**	**21 32 22.2**	**-1.0**
comp=Z,0.2nm,0.5s,mb3.2,baz=82,slow=12,SNR=2.7							
ABKAR	**Akbulak array**	**37.16**	**312**	*e*P	**P**	**21 33 04.3**	**-0.2**
comp=Z,0.5nm,0.6s,mb3.5							
ARU	**Arti**	**40.02**	**323**	*e*P	**P**	**21 33 28.1**	**-0.4**
comp=Z,1.9nm,0.8s,mb3.9							
FINES	**FINESS Array B**	**57.19**	**326**	P	**P**	**21 35 40.0**	**-0.5**
comp=Z,0.5nm,0.5s,mb3.8,baz=94,slow=8.0,SNR=6.9							
ASAR	**Alice Springs**	**61.84**	**148**	P	**P**	**21 36 08.8**	**-4.3**
comp=Z,0.1nm,0.5s,mb3.2,baz=328,slow=7.4,SNR=3.5							
NB2	**NORSAR Subarra**	**64.30**	**327**	P	**P**	**21 36 27.3**	**-1.6**
comp=Z,0.6nm,0.5s,mb3.9,baz=73,slow=6.9							
NOA	**NORSAR Array B**	**64.30**	**327**	P	**P**	**21 36 27.8**	**-1.2**
comp=Z,0.6nm,0.5s,mb3.9,baz=75,slow=5.1,SNR=5.6							

*IDC **25** 21:27:37.8±0.9, 30°.81N×103°.15E, h0km, mb3.9/12, mb1 4.0/14, mb1mx3.8/23, mbtmp3.8/14, ML3.5/2, Error ellipse: s-maj=29.4km s-min=19.5km az=56.0*
*NEIC **25** 21:27:39.4±0.4, 30°.80N×103°.29E, h10km, mb3.9/5, Error ellipse: s-maj=13.3km s-min=7.9km az=75.0*
*ISCJB **25** 21:27:40.3±1.0, 30°.72N±0°.06×103°.29E±0°.08, h33km±7km, mb3.9/17, Error ellipse: s-maj=11.8km s-min=9.6km az=18.6*
*MOS **25** 21:27:40.5±1.0, 30°.73N×103°.18E, h33km, mb4.2/5, Error ellipse: s-maj=19.4km s-min=9.3km az=105.8*
*BJI **25** 21:27:41.3, 30°.79N×103°.33E, h9km, mB4.7/1, mb4.8/2, ML3.7/10*

ISC 25 21:27:40.0±1.4, 30°.73N±0°.06×103°.22E±0°.08, h14km±9km, n35, σ0°.75/38, mb3.9/17, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.50**	**68**	Pg	**Pg**	**21 27 49.5**	**-0.4**
CD2				Sg	**Sg**	**21 27 56.5**	**-0.1**
CD2				smax			
comp=N,17μm,0.5s							
LZH	**Lanzhou**	**5.37**	**5**	*e*Pg	**Pb**	**21 29 14.0**	**+0.4**
LZH				Sg	**Sb**	**21 30 21.3**	**+3.3**
LZH				smax			
comp=N,35nm,0.8s							
LZH				smax			
comp=E,46nm,0.6s							
HHC	**Hu-ho-hao-te**	**12.16**	**32**	*e*P	**Pn**	**21 30 32.8**	**+0.1**
HHC				S	**Sn**	**21 32 48.8**	**+0.8**
HHC				pmax	pmax		
comp=Z,14nm,0.5s							
HHC				pmax	pmax		
comp=Z,82nm,4.8s							
CMAR	**Chiang Mai Arr**	**12.81**	**199**	Pn	**Pn**	**21 30 43.0**	**+1.2**
comp=Z,0.1nm,0.3s,baz=7.5,slow=14,SNR=3.1							
SONM	**Songino Array**	**17.26**	**7**	P	**Pn**	**21 31 40.2**	**-0.3**
comp=Z,0.2nm,0.3s,baz=184,slow=10,SNR=4.2							
ZAK	**Zakamensk**	**19.64**	**0**	*e*P	**Pn**	**21 32 09.8**	**+0.4**
ZAK				pmax	pmax		
comp=Z,1.0nm,0.9s							
KSRS	**Korea Array**	**21.50**	**65**	P	**P**	**21 32 28.5**	**+0.1**
comp=Z,1.9nm,0.6s,mb3.7,baz=245,slow=9.5,SNR=5.4							
KSRS	**Korea Array**	**21.50**	**65**	P	**P**	**21 32 28.5**	**+0.1**
KSRS				pmax	pmax		
comp=Z,2.0nm,0.6s,mb3.7							
MK31	**Makanchi Array**	**22.78**	**321**	*e*P	**P**	**21 32 42.5**	**+0.6**
MKAR	**Makanchi Array**	**22.78**	**321**	P	**P**	**21 32 41.9**	**0.0**
comp=Z,0.8nm,0.6s,mb3.3,baz=120,slow=13,SNR=6.3							
ZALV	**Zalesovo Beam**	**26.74**	**336**	P	**P**	**21 33 18.7**	**-0.2**
comp=Z,2.0nm,0.8s,mb3.7,baz=128,slow=9.6,SNR=7.5							
KURK	**Kurchatov**	**27.10**	**324**	*e*P	**P**	**21 33 22.3**	**+0.1**
KURK				pmax	pmax		
comp=Z,1.0nm,1.0s,mb3.3							
KURK	**Kurchatov**	**27.10**	**324**	*e*P	**P**	**21 33 22.3**	**+0.1**
comp=Z,1.5nm,1.0s,mb3.5							
KBL	**Kabul**	**28.95**	**287**	*e*P	**P**	**21 33 40.0**	**+1.1**
KBL				pmax	pmax		
comp=Z,2.0nm,0.6s,mb4.0							
KBL	**Kabul**	**28.95**	**287**	*e*P	**P**	**21 33 40.0**	**+1.1**
comp=Z,2.2nm,0.6s,mb4.1							
BVAR	**Borovoye Array**	**32.62**	**323**	P	**P**	**21 34 11.1**	**0.0**
comp=Z,0.4nm,0.5s,mb3.6,baz=116,slow=6.6,SNR=3.0							
BVAR				PcP	PcP	21 36 56.5	-0.5
comp=Z,1.6nm,0.6s,baz=141,slow=2.6,SNR=10.0							
BVAR	**Borovoye Array**	**32.62**	**323**	P	**P**	**21 34 11.1**	**0.0**
BVAR				PcP	PcP	21 36 56.5	-0.5
ABKAR	**Akbulak array**	**37.36**	**312**	*e*P	**P**	**21 34 52.6**	**+0.7**
comp=Z,0.8nm,0.7s,mb3.7							
ARU	**Arti**	**40.27**	**323**	*e*P	**P**	**21 35 16.1**	**-0.2**
ARU				pmax	pmax		
comp=Z,2.0nm,0.6s,mb4.0							
ARU	**Arti**	**40.27**	**323**	*e*P	**P**	**21 35 16.1**	**-0.2**
comp=Z,2.0nm,0.6s,mb4.0							
JOF	**Joensuu**	**54.94**	**328

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=E,7.1nm,0.3s,baz=135,slow=24,SNR=5.1						
KK31				⇑Lg		21 32 00.2	
	comp=E,11nm,0.3s,baz=134,slow=29,SNR=6.3						

ISCJB **25** *21:33:39.7±0.6, 36°.99N±0°.03×29°.19E±0°.03, h8km±5km, Error ellipse: s-maj=5.4km s-min=4.1km az=20.7*
DDA **25** *21:33:39.9, 37°.03N×29°.16E, h7km±3km, Md3.1*
ISK **25** *21:33:39.6, 37°.00N×29°.25E, h17km, MD3.1*
CSEM **25** *21:33:40.2±0.1, 37°.01N×29°.24E, h15km, MD3.1, Error ellipse: s-maj=2.2km s-min=1.5km az=19.0*
ISC 25 21:33:40.2±0.5, **36°.99N**±0°.03×**29°.20E**±0°.04, **h13**km±4km, **n40, σ0.s81**/60, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.29**	**55**	PG	**Pg**	**21 33 44.9**	**-1.3**
GLHS				eSG	**Sg**	**21 33 50.0**	**-0.2**
GLHS	**Glhisar (BURDU**	**0.29**	**55**	i Pg	**Pg**	**21 33 44.9**	**-1.3**
GLHS				eSg	**Sg**	**21 33 50.0**	**-0.2**
GOLH	**Golhisar**	**0.38**	**50**	i P	**Pg**	**21 33 46.9**	**-0.9**
GOLH				i S	**Sg**	**21 33 53.9**	**+0.9**
GOLH	**Golhisar**	**0.38**	**50**	i P	**Pg**	**21 33 46.9**	**-0.9**
GOLH				i S	**Sg**	**21 33 53.9**	**+0.9**
ELL	**Elmali**	**0.62**	**113**	ePG	**Pg**	**21 33 51.8**	**-0.5**
ELL				eSG	**Sg**	**21 34 00.8**	**+0.4**
ELL	**Elmali**	**0.62**	**113**	ePg	**Pg**	**21 33 51.8**	**-0.5**
ELL				eSg	**Sg**	**21 34 00.8**	**+0.4**
DNZL	**Cakiroluk**	**0.71**	**350**	i P	**Pg**	**21 33 52.5**	**-1.5**
DNZL				i S	**Sg**	**21 34 03.4**	**+0.1**
DNZL	**Cakiroluk**	**0.71**	**350**	i P	**Pg**	**21 33 52.5**	**-1.5**
DNZL				i S	**Sg**	**21 34 03.4**	**+0.1**
YER	**Yerkesik**	**0.75**	**281**	ePG	**Pg**	**21 33 55.3**	**+0.6**
YER	**Yerkesik**	**0.75**	**281**	ePg	**Pg**	**21 33 55.3**	**+0.6**
DENT	**Denizli**	**0.77**	**350**	ePG	**Pg**	**21 33 55.9**	**+0.6**
DENT	**Denizli**	**0.77**	**350**	ePg	**Pg**	**21 33 55.9**	**+0.7**
AKAS	**Kas**	**0.82**	**156**	i P	**Pg**	**21 33 56.7**	**+0.6**
AKAS				i S	**Sg**	**21 34 10.5**	**+3.6**
AKAS	**Kas**	**0.82**	**156**	i P	**Pg**	**21 33 56.7**	**+0.6**
AKAS				i S	**Sg**	**21 34 10.5**	**+3.6**
KORT	**Korkueli**	**0.92**	**89**	i P	**Pg**	**21 33 58.2**	**+0.1**
KORT				i S	**Sg**	**21 34 11.6**	**+1.6**
KORT	**Korkueli**	**0.92**	**89**	i P	**Pg**	**21 33 58.2**	**+0.2**
KORT				i S	**Sg**	**21 34 11.6**	**+1.5**
ANTB	**Antalya**	**1.17**	**94**	ePN	**Pn**	**21 34 00.7**	**-1.6**
ANTB	**Antalya**	**1.17**	**94**	ePn	**Pn**	**21 34 00.7**	**-1.6**
MLSB	**Milas**	**1.18**	**285**	ePN	**Pn**	**21 34 01.9**	**-0.5**
MLSB	**Milas**	**1.18**	**285**	ePn	**Pn**	**21 34 01.9**	**-0.5**
BCK	**Bucak**	**1.21**	**67**	ePN	**Pn**	**21 34 02.3**	**-0.5**
BCK	**Bucak**	**1.21**	**67**	ePn	**Pn**	**21 34 02.3**	**-0.5**
AYDN	**Tasoluk**	**1.25**	**303**	i P	**Pn**	**21 34 03.2**	**-0.2**
AYDN				i S	**Sb**	**21 34 20.0**	**+0.3**
AYDN	**Tasoluk**	**1.25**	**303**	i P	**Pn**	**21 34 03.2**	**-0.2**
AYDN				i S	**Sb**	**21 34 20.0**	**+0.4**
DAT	**Datca**	**1.33**	**259**	ePN	**Pn**	**21 34 04.6**	**+0.2**
DAT	**Datca**	**1.33**	**259**	ePn	**Pn**	**21 34 04.6**	**+0.1**
KHL	**Karahalli**	**1.35**	**11**	ePN	**Pn**	**21 34 04.2**	**-0.6**
KHL	**Karahalli**	**1.35**	**11**	ePn	**Pn**	**21 34 04.3**	**-0.6**
KHAL	**Karahalli**	**1.40**	**9**	i P	**Pn**	**21 34 05.3**	**-0.2**
KHAL				i S	**Sn**	**21 34 24.9**	**+1.2**
KHAL	**Karahalli**	**1.40**	**9**	i P	**Pn**	**21 34 05.3**	**-0.1**
KHAL				i S	**Sn**	**21 34 24.9**	**+1.1**
BDRM	**Kayabasi**	**1.41**	**274**	eP	**Pn**	**21 34 06.0**	**+0.4**
BDRM				i S	**Sn**	**21 34 23.6**	**-0.4**
BDRM	**Kayabasi**	**1.41**	**274**	eP	**Pn**	**21 34 06.0**	**+0.4**
BDRM				i S	**Sn**	**21 34 23.6**	**-0.4**
BODT	**Bodrum**	**1.51**	**273**	ePN	**Pn**	**21 34 07.4**	**+0.4**
BODT	**Bodrum**	**1.51**	**273**	ePn	**Pn**	**21 34 07.4**	**+0.4**
KULA	**Kula-Manisa**	**1.58**	**344**	ePN	**Pn**	**21 34 07.4**	**-0.5**
KULA	**Kula-Manisa**	**1.58**	**344**	ePn	**Pn**	**21 34 07.4**	**-0.6**
DEMI	**Demirci**	**2.08**	**350**	i P	**Pn**	**21 34 15.0**	**+0.1**
DEMI				i S	**Sn**	**21 34 42.1**	**+1.4**
DEMI	**Demirci**	**2.08**	**350**	i P	**Pn**	**21 34 15.0**	**+0.1**
DEMI				i S	**Sn**	**21 34 42.1**	**+1.4**
HDMB	**Hadim**	**2.63**	**90**	ePN	**Pn**	**21 34 21.8**	**-0.6**
HDMB	**Hadim**	**2.63**	**90**	ePn	**Pn**	**21 34 21.8**	**-0.6**

ISK **25** *21:50:03.3, 40°.08N×41°.44E, h5km, MD2.9*
DDA **25** *21:50:04.9, 40°.03N×41°.47E, h7km±2km, Md3.0*
CSEM **25** *21:50:04.8±0.2, 40°.02N×41°.43E, h5km, MD3.0, Error ellipse: s-maj=5.6km s-min=3.7km az=134.0*
ISCJB **25** *21:50:05.1±0.7, 40°.06N±0°.03×41°.40E±0°.05, h4km±7km, Error ellipse: s-maj=7.5km s-min=4.6km az=37.3*
ISC 25 21:50:05.4±0.5, **40°.04N**±0°.03×**41°.41E**±0°.05, **h9**km±5km, **n20, σ0.s75**/31, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERZM	**Erzurum**	**0.14**	**194**	i P	**Pg**	**21 50 08.1**	**-0.4**
ERZM				i S	**Sg**	**21 50 11.4**	**+0.8**
ERZM	**Erzurum**	**0.14**	**194**	i P	**Pg**	**21 50 08.1**	**-0.4**
ERZM				i S	**Sg**	**21 50 11.4**	**+0.8**
EZM	**Erzurum**	**0.14**	**195**	PG	**Pg**	**21 50 07.5**	**-1.0**
EZM				eSG	**Sg**	**21 50 11.4**	**+0.8**
HOMI	**Horasan**	**0.38**	**89**	i P	**Pg**	**21 50 11.9**	**-0.9**
HOMI				i S	**Sg**	**21 50 18.2**	**+0.2**
DDEM	**Demirkent**	**0.89**	**17**	i P	**Pg**	**21 50 21.8**	**-0.8**
DDEM				i S	**Sg**	**21 50 34.7**	**+0.5**
DDEM	**Demirkent**	**0.89**	**17**	i P	**Pg**	**21 50 21.8**	**-0.7**
DDEM				i S	**Sg**	**21 50 34.7**	**+0.6**
DAGI	**Agillar**	**1.10**	**20**	i P	**Pg**	**21 50 25.9**	**-0.7**
DAGI				i S	**Sg**	**21 50 41.0**	**0.0**
BNGL	**BINGOL**	**1.11**	**191**	i P	**Pg**	**21 50 25.8**	**-0.9**
BNGL				i S	**Sg**	**21 50 41.7**	**+0.6**
ARTV	**Artvin**	**1.21**	**19**	i P	**Pb**	**21 50 28.2**	**-0.3**
ARTV				i S	**Sg**	**21 50 45.8**	**+1.5**
ARTV	**Artvin**	**1.21**	**19**	i P	**Pb**	**21 50 28.2**	**-0.3**
ARTV				i S	**Sg**	**21 50 45.8**	**+1.5**
AGRB	**Hanur-Agry**	**1.30**	**110**	ePN	**Pn**	**21 50 29.3**	**-0.5**
AGRB	**Hanur-Agry**	**1.30**	**110**	ePn	**Pn**	**21 50 29.3**	**-0.5**
BCA	**Borcka**	**1.41**	**7**	ePN	**Pn**	**21 50 30.2**	**-1.1**
BCA	**Borcka**	**1.41**	**7**	ePn	**Pn**	**21 50 30.2**	**-1.1**
GUMT	**Gumushane**	**1.54**	**286**	ePN	**Pn**	**21 50 33.4**	**+0.4**
GUMT	**Gumushane**	**1.54**	**286**	ePn	**Pn**	**21 50 33.4**	**+0.4**
DIGO	**Kars**	**1.55**	**75**	i P	**Pn**	**21 50 25.7**	**-7.5**
DIGO				eS	**Sn**	**21 50 54.6**	**+1.2**
EZC	**Erzincan**	**1.61**	**260**	ePN	**Pn**	**21 50 34.0**	**0.0**
ESPY	**Espiye-Giresun**	**2.23**	**294**	ePN	**Pn**	**21 50 43.0**	**+0.5**
ESPY	**Espiye-Giresun**	**2.23**	**294**	ePn	**Pn**	**21 50 43.0**	**+0.5**

JMA 25 22:07:02.1±0.4, **43°.98N×148°.41E, h0**km**, M3.5, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**2.03**	**253**	P	Pn	22 07 38.1	+0.6
NEM2				eS	Sn	22 08 04.8	+1.2
JRA	**Rausu**	**2.38**	**270**	P	Pn	22 07 43.3	+1.0
JAK	**Akkeshi**	**2.88**	**251**	eS	Sn	22 08 26.8	+2.4
JAR	**Ashorobuto**	**3.44**	**260**	P	Pn	22 07 59.1	+2.2
JKB	**Kayabe**	**5.80**	**251**	P	Pn	22 08 31.1	+1.7

NEIC **25** *22:29:34.2, 36°.76N×11°.13W, h0km, MN2.8(MDD), After MDD.*
LDG **25** *22:29:35.6±0.2, 36°.67N×11°.35W, h30km, Ml2.9/4, Error ellipse: s-maj=4.1km s-min=3.1km az=31.0*
IGIL **25** *22:29:35.9, 36°.61N×11°.27W, h31km, ML2.4*
MDD **25** *22:29:35.1±1.3, 36°.78N×11°.08W, h0km, mb4.2/11, Error ellipse: s-maj=11.7km s-min=8.8km az=44.0*
INMG **25** *22:29:36.8±0.9, 36°.67N×11°.26W, h31km, ML2.2, Error ellipse: s-maj=4.7km s-min=3.8km az=45.0*
CSEM **25** *22:29:37.8±0.3, 36°.86N×11°.06W, h30km, ML3.2/17, Error ellipse: s-maj=5.9km s-min=4.3km az=41.0*
ISC 25 22:29:37.1±0.8, **36°.92N**±0°.04×**10°.95W**±0°.05, **h10**km**, n160, σ0.s97**/306**, 3C, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.71**	**82**	i Pn	**Pn**	**22 30 06.6**	**-0.4**
PFVI				eSn	**Sn**	**22 30 29.0**	**0.0**
PFVI				A		22 30 30.9	
	23nm,0.8s						
PFVI	**Vila Bisbo**	**1.71**	**82**	⇑P	**Pn**	**22 30 06.6**	**-0.4**
PFVI				S	**Sn**	**22 30 29.0**	**0.0**
PFVI	**Vila Bisbo**	**1.71**	**82**	⇑P	**Pn**	**22 30 06.6**	**-0.4**
	6.9nm,0.1s,SNR=18						
PFVI				S	**Sn**	**22 30 29.0**	**0.0**
	27nm,0.1s,SNR=10						
PFVI	**Vila Bisbo**	**1.71**	**82**	⇑P	**Pn**	**22 30 06.6**	**-0.4**
	6.9nm,0.1s,SNR=18						
PFVI				S	**Sn**	**22 30 29.0**	**0.0**
	27nm,0.1s,SNR=10						
PFVI	**Vila Bisbo**	**1.71**	**82**	P	**Pn**	**22 30 06.6**	**-0.4**
	6.9nm,0.1s,SNR=18						
PFVI				S	**Sn**	**22 30 29.0**	**0.0**
	27nm,0.1s,SNR=10						
MORF	**Marmelete**	**1.88**	**78**	ePn	**Pn**	**22 30 09.2**	**-0.1**
MORF				eSn	**Sn**	**22 30 33.7**	**+0.6**
MORF				A		22 30 36.0	
	13nm,0.1s						
MORF	**Marmelete**	**1.88**	**78**	P	**Pn**	**22 30 09.2**	**-0.1**
MORF				S	**Sn**	**22 30 33.7**	**+0.6**
	13nm,0.1s						
MORF	**Marmelete**	**1.88**	**78**	P	**Pn**	**22 30 09.2**	**-0.1**
MORF				S	**Sn**	**22 30 33.7**	**+0.6**
	13nm,0.1s						
MORF	**Marmelete**	**1.88**	**78**	ePn	**Pn**	**22 30 09.2**	**-0.1**
MORF				eSn	**Sn**	**22 30 33.7**	**+0.6**
	13nm,0.1s						
PTEO	**Sao Teotonio**	**1.89**	**70**	ePn	**Pn**	**22 30 09.6**	**+0.2**
PTEO				eSn	**Sn**	**22 30 34.1**	**+0.9**
PTEO				A		22 30 35.4	
	17nm,0.2s						
PTEO	**Sao Teotonio**	**1.89**	**70**	P	**Pn**	**22 30 09.6**	**+0.2**
PTEO				S	**Sn**	**22 30 34.1**	**+0.9**
	8.3nm,0.2s						
PTEO	**Sao Teotonio**	**1.89**	**70**	P	**Pn**	**22 30 09.6**	**+0.2**
PTEO				S	**Sn**	**22 30 34.1**	**+0.9**
	8.3nm,0.2s						
PTEO	**Sao Teotonio**	**1.89**	**70**	ePn	**Pn**	**22 30 09.6**	**+0.2**
PTEO				eSn	**Sn**	**22 30 34.1**	**+0.9**
	17nm,0.2s						
MESJ	**Messejana**	**2.36**	**66**	eP	**Pn**	**22 30 16.3**	**+0.3**
MESJ				eS	**Sn**	**22 30 46.2**	**+1.2**
MESJ				eS	**Sn**	**22 30 46.2**	**+1.3**
MESJ	**Messejana**	**2.36**	**66**	P	**Pn**	**22 30 16.3**	**+0.4**
MESJ				S	**Sn**	**22 30 46.2**	**+1.2**
MESJ	**Messejana**	**2.36**	**66**	P	**Pn**	**22 30 16.3**	**+0.4**
MESJ				S	**Sn**	**22 30 46.2**	**+1.2**
MESJ	**Messejana**	**2.36**	**66**	eP	**Pn**	**22 30 16.3**	**+0.4**
MESJ				eS	**Sn**	**22 30 46.2**	**+1.2**
PMAFR	**Mafra**	**2.42**	**33**	ePn	**Pn**	**22 30 16.9**	**+0.1**
PMAFR				eSn	**Sn**	**22 30 48.1**	**+1.7**
PMAFR				A		22 30 50.2	
	21nm,0.2s						
PMAFR				A		22 30 53.1	
	13nm,0.2s						
PMAFR	**Mafra**	**2.42**	**33**	P	**Pn**	**22 30 16.9**	**+0.1**
	3.3nm,0.1s,SNR=7.4						
PMAFR				S	**Sn**	**22 30 48.2**	**+1.8**
	18nm,0.2s,SNR=11						
PMAFR	**Mafra**	**2.42**	**33**	P	**Pn**	**22 30 16.9**	**+0.1**
	3.3nm,0.1s,SNR=7.4						
PMAFR				S	**Sn**	**22 30 48.2**	**+1.8**
	18nm,0.2s,SNR=11						
PMAFR	**Mafra**	**2.42**	**33**	P	**Pn**	**22 30 16.9**	**+0.1**
	3.3nm,0.1s,SNR=7.4						
PMAFR				eSn	**Sn**	**22 30 48.1**	**+1.7**
	21nm,0.2s						
PCVE	**Castro Verde**	**2.43**	**72**	ePn	**Pn**	**22 30 17.0**	**+0.1**
PCVE				eSn	**Sn**	**22 30 47.0**	**+0.3**
PCVE				A		22 30 49.0	
	6.0nm,0.2s						
PCVE	**Castro Verde**	**2.43**	**72**	P	**Pn**	**22 30 17.0**	**+0.1**
PCVE				S	**Sn**	**22 30 47.0**	**+0.3**
	6.0nm,0.2s						
PCVE	**Castro Verde**	**2.43**	**72**	P	**Pn**	**22 30 17.0**	**+0.1**
PCVE				S	**Sn**	**22 30 47.0**	**+0.3**
	6.0nm,0.2s						
PCVE	**Castro Verde**	**2.43**	**72**	ePn	**Pn**	**22 30 17.0**	**+0.1**
PCVE				eSn	**Sn**	**22 30 47.0**	**+0.3**
	6.0nm,0.2s						
PBDV	**Barranco-do-Ve**	**2.44**	**82**	ePn	**Pn**	**22 30 17.0**	**0.0**
PBDV				eSn	**Sn**	**22 30 46.9**	**+0.1**
PBDV				A		22 30 51.0	
	5.2nm,0.3s						
PBDV	**Barranco-do-Ve**	**2.44**	**82**	P	**Pn**	**22 30 17.0**	**0.0**
PBDV				S	**Sn**	**22 30 46.9**	**+0.1**
	5.2nm,0.3s						
PBDV	**Barranco-do-Ve**	**2.44**	**82**	P	**Pn**	**22 30 17.0**	**0.0**
PBDV				S	**Sn**	**22 30 46.9**	**+0.1**
	5.2nm,0.3s						
PBDV	**Barranco-do-Ve**	**2.44**	**82**	ePn	**Pn**	**22 30 17.0**	**0.0**
PBDV				eSn	**Sn**	**22 30 46.9**	**+0.1**
	5.2nm,0.3s						
MOE	**Montemor**	**2.61**	**51**	ePn	**Pn**	**22 30 20.1**	**+0.8**
MOE				eSn	**Sn**	**22 30 53.1**	**+2.0**
MOE	**Montemor**	**2.61**	**51**	P	**Pn**	**22 30 20.1**	**+0.8**
MOE				S	**Sn**	**22 30 53.1**	**+2.0**
MOE	**Montemor**	**2.61**	**51**	P	**Pn**	**22 30 20.1**	**+0.8**
MOE				S	**Sn**	**22 30 53.1**	**+2.0**
MOE	**Montemor**	**2.61**	**51**	ePn	**Pn**	**22 30 20.1**	**+0.8**
MOE				eSn	**Sn**	**22 30 53.1**	**+2.0**
PVAQ	**Vaqueiros**	**2.63**	**79**	ePn	**Pn**	**22 30 19.6**	**0.0**
PVAQ				eSn	**Sn**	**22 30 51.6**	**0.0**
PVAQ				A		22 30 54.7	
	6.5nm,0.3s						
PVAQ	**Vaqueiros**	**2.63**	**79**	P	**Pn**	**22 30 19.6**	**0.0**
PVAQ				S	**Sn**	**22 30 51.6**	**0.0**
	6.5nm,0.3s						
PVAQ	**Vaqueiros**	**2.63**	**79**	P	**Pn**	**22 30 19.6**	**0.0**
PVAQ				S	**Sn**	**22 30 51.6**	**0.0**
	6.5nm,0.3s						
PVAQ	**Vaqueiros**	**2.63**	**79**	ePn	**Pn**	**22 30 19.6**	**0.0**
PVAQ				eSn	**Sn**	**22 30 51.6**	**0.0**
	6.5nm,0.3s						
PBEJ	**Beja**	**2.69**	**65**	ePn	**Pn**	**22 30 20.6**	**+0.1**
PBEJ				eSn	**Sn**	**22 30 53.9**	**+0.8**
PBEJ				A		22 30 56.4	
	4.1nm,0.1s						
PBEJ	**Beja**	**2.69**	**65**	P	**Pn**	**22 30 20.6**	**+0.1**
PBEJ				S	**Sn**	**22 30 53.9**	**+0.8**
	2.0nm,0.1s						
PBEJ	**Beja**	**2.69**	**65**	P	**Pn**	**22 30 20.6**	**+0.1**
PBEJ				S	**Sn**	**22 30 53.9**	**+0.8**
	2.0nm,0.1s						
PBEJ	**Beja**	**2.69**	**65**	ePn	**Pn**	**22 30 20.6**	**+0.1**
PBEJ				eSn	**Sn**	**22 30 53.9**	**+0.8**
	4.1nm,0.1s						
EVOP	**Sao Brissos**	**2.76**	**54**	eP	**Pn**	**22 30 21.5**	**+0.1**
EVO	**Evora**	**2.83**	**55**	ePn	**Pn**	**22 30 21.8**	**-0.6**
EVO				eSn	**Sn**	**22 30 57.1**	**+0.5**
	6.7nm,0.2s						
EVO	**Evora**	**2.83**	**55**	ePn	**Pn**	**22 30 23.0**	**+0.6**
EVO				eSn	**Sn**	**22 30 57.9**	**+1.3**
EVO				A		22 31 01.0	
	9.0nm,0.1s						
EVO	**Evora**	**2.83**	**55**	P	**Pn**	**22 30 23.0**	**+0.6**
EVO				S	**Sn**	**22 30 57.9**	**+1.3**
	9.0nm,0.1s						
EVO	**Evora**	**2.83**	**55**	P	**Pn**	**22 30 23.0**	**+0.6**
EVO				S	**Sn**	**22 30 57.9**	**+1.3**
	9.0nm,0.1s						
EVO	**Evora**	**2.83**	**55**	ePn	**Pn**	**22 30 23.0**	**+0.6**
EVO				eSn	**Sn**	**22 30 57.9**	**+1.3**
	9.0nm,0.1s						
EGRO	**El Granado**	**2.84**	**77**	P	**Pn**	**22 30 21.6**	**-0.9**
EGRO				S	**Sn**	**22 30 56.9**	**+0.2**
EGRO	**El Granado**	**2.84**	**77**	P	**Pn**	**22 30 21.6**	**-0.9**
	0.8nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**22 30 56.9**	**+0.2**
	3.5nm,0.1s,SNR=6.1						
EGRO	**El Granado**	**2.84**	**77**	P	**Pn**	**22 30 21.6**	**-0.9**
	0.8nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**22 30 56.9**	**+0.2**
	3.5nm,0.1s,SNR=6.1						
EGRO	**El Granado**	**2.84**	**77**	P	**Pn**	**22 30 21.6**	**-0.9**
	0.8nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**22 30 56.9**	**+0.2**
	3.5nm,0.1s,SNR=6.1						
PESTR	**Estremoz**	**3.29**	**53**	ePn	**Pn**	**22 30 29.6**	**+0.9**
PESTR				eSn	**Sn**	**22 31 10.0**	**+2.0**
PESTR				A		22 31 15.9	
	1.8nm,0.5s						
PESTR	**Estremoz**	**3.29**	**53**	P	**Pn**	**22 30 29.6**	**+0.9**
PESTR				S	**Sn**	**22 31 10.0**	**+2.0**
	1.8nm,0.5s						
PESTR	**Estremoz**	**3.29**	**53**	P	**Pn**	**22 30 29.6**	**+0.9**
PESTR				S	**Sn**	**22 31 10.0**	**+2.0**
	1.8nm,0.5s						
PESTR	**Estremoz**	**3.29**	**53**	ePn	**Pn**	**22 30 29.6**	**+0.9**
PESTR				eSn	**Sn**	**22 31 10.0**	**+2.0**
	1.8nm,0.5s						
PBAR	**Barrancos**	**3.35**	**67**	ePn	**Pn**	**22 30 30.2**	**+0.6**
PBAR				eSn	**Sn**	**22 31 09.7**	**+0.3**
PBAR				A		22 31 13.1	
	3.1nm,0.1s						
PBAR	**Barrancos**	**3.35**	**67**	P	**Pn**	**22 30 30.2**	**+0.6**
PBAR				S	**Sn**	**22 31 09.7**	**+0.3**
	3.1nm,0.1s						
PBAR	**Barrancos**	**3.35**	**67**	P	**Pn**	**22 30 30.2**	**+0.6**
PBAR				S	**Sn**	**22 31 09.7**	**+0.3**
	3.1nm,0.1s						
PBAR	**Barrancos**	**3.35**	**67**	ePn	**Pn**	**22 30 30.2**	**+0.6**
PBAR				eSn	**Sn**	**22 31 09.7**	**+0.3**
	3.1nm,0.1s						
PTOM	**Tomar**	**3.35**	**36**	ePn	**Pn**	**22 30 30.5**	**+0.9**
PTOM				eSn	**Sn**	**22 31 11.9**	**+2.5**
PTOM				A		22 31 14.5	
	3.5nm,0.3s						
PTOM	**Tomar**	**3.35**	**36**	P	**Pn**	**22 30 30.5**	**+0.9**
PTOM				S	**Sn**	**22 31 11.9**	**+2.5**
	1.8nm,0.3s						
PTOM	**Tomar**	**3.35**	**36**	P	**Pn**	**22 30 30.5**	**+0.9**
PTOM				S	**Sn**	**22 31 11.9**	**+2.5**
	1.8nm,0.3s						
PTOM	**Tomar**	**3.35**	**36**	ePn	**Pn**	**22 30 30.5**	**+0.9**
PTOM				eSn	**Sn**	**22 31 11.9**	**+2.5**
	3.5nm,0.3s						
EMIN	**Mina Concepcio**	**3.52**	**75**	P	**Pn**	**22 30 31.8**	**0.0**
EMIN				S	**Sn**	**22 31 13.0**	**-0.4**
EMIN	**Mina Concepcio**	**3.52**	**75**	P	**Pn**	**22 30 31.8**	**0.0**
	0.8nm,0.1s,SNR=20						
EMIN				S	**Sn**	**22 31 13.0**	**-0.4**
	2.4nm,0.2s						
EMIN	**Mina Concepcio**	**3.52**	**75**	P	**Pn**	**22 30 31.8**	**0.0**
	0.8nm,0.1s,SNR=20						
EMIN				S	**Sn**	**22 31 13.0**	**-0.4**
	2.4nm,0.2s						
EMIN	**Mina Concepcio**	**3.52**	**75**	P	**Pn**	**22 30 31.8**	**0.0**
	0.8nm,0.1s,SNR=20						
EMIN				S	**Sn**	**22 31 13.0**	**-0.4**
	2.4nm,0.2s						
EBAD	**Badajoz**	**3.62**	**58**	P	**Pn**	**22 30 33.6**	**+0.4**
EBAD				S	**Sn**	**22 31 16.7**	**+0.8**
EBAD	**Badajoz**	**3.62**	**58**	P	**Pn**	**22 30 33.6**	**+0.4**
	1.0nm,0.1s,SNR=12						
EBAD				S	**Sn**	**22 31 16.7**	**+0.8**
	4.9nm,0.2s						
EBAD	**Badajoz**	**3.62**	**58**	P	**Pn**	**22 30 33.6**	**+0.4**
	1.0nm,0.1s,SNR=12						
EBAD				S	**Sn**	**22 31 16.7**	**+0.8**
	4.9nm,0.2s						
EBAD	**Badajoz**	**3.62**	**58**	P	**Pn**	**22 30 33.6**	**+0.4**
	1.0nm,0.1s,SNR=12						
EBAD				S	**Sn**	**22 31 16.7**	**+0.8**
	4.9nm,0.2s						
PMRV	**Marv??o**	**3.76**	**47**	ePn	**Pn**	**22 30 35.3**	**+0.1**
PMRV				eSn	**Sn**	**22 31 19.8**	**+0.4**
PMRV				A		22 31 24.6	
	2.2nm,0.2s						
PMRV	**Marv??o**	**3.76**	**47**	P	**Pn**	**22 30 35.3**	**+0.1**
PMRV				S	**Sn**	**22 31 19.8**	**+0.4**
	2.2nm,0.2s						
PMRV	**Marv??o**	**3.76**	**47**	P	**Pn**	**22 30 35.3**	**+0.1**
PMRV				S	**Sn**	**22 31 19.8**	**+0.4**
	2.2nm,0.2s						
PMRV	**Marv??o**	**3.76**	**47**	ePn	**Pn**	**22 30 35.3**	**+0.1**
PMRV				eSn	**Sn**	**22 31 19.8**	**+0.4**
	2.2nm,0.2s						
PCBR	**Castelo Branco**	**3.99**	**42**	ePn	**Pn**	**22 30 39.4**	**+1.0**
PCBR				eSn	**Sn**	**22 31 26.2**	**+1.0**
PCBR				A		22 31 28.3	
	1.2nm,0.2s						
PCBR	**Castelo Branco**	**3.99**	**42**	P	**Pn**	**22 30 39.4**	**+1.0**
PCBR				S	**Sn**	**22 31 26.2**	**+1.0**
	0.6nm,0.2s						
PCBR	**Castelo Branco**	**3.99**	**42**	P	**Pn**	**22 30 39.4**	**+1.0**
PCBR				S	**Sn**	**22 31 26.2**	**+1.0**
	0.6nm,0.2s						
PCBR	**Castelo Branco**	**3.99**	**42**	ePn	**Pn**	**22 30 39.4**	**+1.0**
PCBR				eSn	**Sn**	**22 31 26.2**	**+1.0**
	1.2nm,0.2s						
ESPR	**Espera**	**4.09**	**89**	P	**Pn**	**22 30 39.0**	**-0.7**
ESPR				S	**Sn**	**22 31 26.2**	**-1.3**
ESPR	**Espera**	**4.09**	**89**	P	**Pn**	**22 30 39.0**	**-0.7**
	1.6nm,0.1s,SNR=7.9						
ESPR				S	**Sn**	**22 31 26.2**	**-1.4**
	16nm,0.3s						
ESPR	**Espera**	**4.09**	**89**	P	**Pn**	**22 30 39.0**	**-0.7**
	1.6nm,0.1s,SNR=7.9						
ESPR				S	**Sn**	**22 31 26.2**	**-1.4**
	16nm,0.3s						
ESPR	**Espera**	**4.09**	**89**	P	**Pn**	**22 30 39.0**	**-0.6**
	1.6nm,0.1s,SNR=7.9						
ESPR				S	**Sn**	**22 31 26.2**	**-1.3**
	16nm,0.3s						
PVIS	**Viseu**	**4.48**	**31**	ePn	**Pn**	**22 30 45.2**	**+0.2**
PVIS				eSn	**Sn**	**22 31 37.2**	**+0.1**
PVIS				A		22 31 39.8	
	2.5nm,0.2s						
PVIS	**Viseu**	**4.48**	**31**	P	**Pn**	**22 30 45.2**	**+0.2**
PVIS				S	**Sn**	**22 31 37.2**	**+0.1**
	1.2nm,0.2s						
PVIS	**Viseu**	**4.48**	**31**	P	**Pn**	**22 30 45.2**	**+0.2**
PVIS				S	**Sn**	**22 31 37.2**	**+0.1**
	1.2nm,0.2s						
PVIS	**Viseu**	**4.48**	**31**	ePn	**Pn**	**22 30 45.2**	**+0.2**
PVIS				eSn	**Sn**	**22 31 37.2**	**+0.1**
	2.5nm,0.2s						
ECAB	**El Cabril**	**4.55**	**74**	P	**Pn**	**22 30 46.3**	**+0.3**
ECAB				S	**Sn**	**22 31 37.9**	**-1.0**
ECAB	**El Cabril**	**4.55**	**74**	P	**Pn**	**22 30 46.3**	**+0.3**
	0.8nm,0.1s,SNR=13						
ECAB				S	**Sn**	**22 31 37.9**	**-1.0**
	2.3nm,0.1s						
ECAB	**El Cabril**	**4.55**	**74**	P	**Pn**	**22 30 46.3**	**+0.3**
	0.8nm,0.1s,SNR=13						
ECAB				S	**Sn**	**22 31 37.9**	**-1.0**
	2.3nm,0.1s						
ECAB	**El Cabril**	**4.55**	**74**	P	**Pn**	**22 30 46.3**	**+0.3**
	0.8nm,0.1s,SNR=13						
ECAB				S	**Sn**	**22 31 37.9**	**-1.0**
	2.3nm,0.1s						
EPLA	**Plasencia**	**4.95**	**49**	P	**Pn**	**22 30 52.3**	**+0.9**
EPLA				S	**Sn**	**22 31 49.5**	**+0.8**
EPLA	**Plasencia**	**4.95**	**49**	P	**Pn**	**22 30 52.3**	**+0.9**
	1.2nm,0.1s,SNR=6.5						
EPLA				S	**Sn**	**22 31 49.5**	**+0.8**
	1.0nm,0.1s,SNR=4.8						
EPLA	**Plasencia**	**4.95**	**49**	P	**Pn**	**22 30 52.3**	**+0.9**
	1.2nm,0.1s,SNR=6.5						
EPLA				S	**Sn**	**22 31 49.5**	**+0.8**
	1.0nm,0.1s,SNR=4.8						
EPLA	**Plasencia**	**4.95**	**49**	P	**Pn**	**22 30 52.3**	**+0.9**
	1.2nm,0.1s,SNR=6.5						
EPLA				S	**Sn**	**22 31 49.5**	**+0.8**
	1.0nm,0.1s,SNR=4.8						
PVRL	**Vila Real**	**5.02**	**29**	eSn	**Sn**	**22 31 49.5**	**-1.1**
PVRL				A		22 31 51.0	
	2.2nm,0.1s						
PVRL	**Vila Real**	**5.02**	**29**	S	**Sn**	**22 31 49.5**	**-1.1**
	1.1nm,0.1s						
PVRL	**Vila Real**	**5.02**	**29**	S	**Sn**	**22 31 49.5**	**-1.1**
	1.1nm,0.1s						
PVRL	**Vila Real**	**5.02**	**29**	eSn	**Sn**	**22 31 49.5**	**-1.1**
	2.2nm,0.1s						
EADA	**Adamuz**	**5.22**	**74**	P	**Pn**	**22 30 55.0**	**-0.2**
EADA				S	**Sn**	**22 31 53.8**	**-1.6**
EADA	**Adamuz**	**5.22**	**74**	P	**Pn**	**22 30 55.0**	**-0.2**
	0.5nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**22 31 53.8**	**-1.6**
	1.2nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**5.22**	**74**	P	**Pn**	**22 30 55.0**	**-0.2**
	0.5nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**22 31 53.8**	**-1.6**
	1.2nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**5.22**	**74**	P	**Pn**	**22 30 55.0**	**-0.2**
	0.5nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**22 31 53.8**	**-1.6**
	1.2nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**5.22**	**35**	ePn	**Pn**	**22 30 55.3**	**+0.1**
MVO				eSn	**Sn**	**22 31 55.1**	**-0.4**
MVO				A		22 31 57.1	
	1.9nm,0.3s						
MVO	**Moncorvo**	**5.22**	**35**	P	**Pn**	**22 30 55.1**	**-0.1**
MVO				S	**Sn**	**22 31 55.0**	**-0.5**

MVO Moncorvo 5.22 35 P **Pn 22 30 55.1 -0.1**
1.3nm,0.1s,SNR=7.1
MVO S **Sn 22 31 55.0 -0.5**
2.9nm,0.2s
MVO Moncorvo 5.22 35 P **Pn 22 30 55.1 -0.1**
1.3nm,0.1s,SNR=7.1
MVO S **Sn 22 31 55.0 -0.5**
2.9nm,0.2s
MVO Moncorvo 5.22 35 P **Pn 22 30 55.2 0.0**
1.3nm,0.1s,SNR=7.1
MVO *e*Sn **Sn 22 31 55.1 -0.4**
1.9nm,0.3s
PCAB Cabril 5.29 24 *e*Pn **Pn 22 30 55.9 -0.3**
PCAB *e*Sn **Sn 22 31 56.0 -1.2**
PCAB A 22 31 58.5
1.9nm,0.1s
PCAB Cabril 5.29 24 P **Pn 22 30 55.9 -0.3**
PCAB S **Sn 22 31 56.0 -1.2**
0.9nm,0.1s
PCAB Cabril 5.29 24 P **Pn 22 30 55.9 -0.3**
PCAB S **Sn 22 31 56.0 -1.2**
0.9nm,0.1s
PCAB Cabril 5.29 24 *e*Pn **Pn 22 30 55.9 -0.3**
PCAB *e*Sn **Sn 22 31 56.0 -1.2**
1.9nm,0.1s
ELUQ Luque 5.37 81 S **Sn 22 31 58.7 -0.5**
0.9nm,0.2s,SNR=7.9
ELUQ Luque 5.37 81 S **Sn 22 31 58.7 -0.5**
0.9nm,0.2s,SNR=7.9
ELUQ Luque 5.37 81 S **Sn 22 31 58.7 -0.5**
0.9nm,0.2s,SNR=7.9
ELOB Lobios 5.42 24 P **Pn 22 30 57.4 -0.5**
ELOB S **Sn 22 31 58.2 -2.2**
ELOB Lobios 5.42 24 P **Pn 22 30 57.4 -0.5**
2.1nm,0.2s,SNR=14
ELOB S **Sn 22 31 58.2 -2.2**
1.2nm,0.1s,SNR=6.2
ELOB Lobios 5.42 24 P **Pn 22 30 57.4 -0.5**
2.1nm,0.2s,SNR=14
ELOB S **Sn 22 31 58.2 -2.2**
1.2nm,0.1s,SNR=6.2
ELOB Lobios 5.42 24 P **Pn 22 30 57.4 -0.6**
2.1nm,0.2s,SNR=14
ELOB S **Sn 22 31 58.2 -2.2**
1.2nm,0.1s,SNR=6.2
EZAM Zamans 5.50 18 P **Pn 22 30 59.1 0.0**
EZAM S **Sn 22 31 57.5 -4.9**
EZAM Zamans 5.50 18 P **Pn 22 30 59.1 0.0**
2.2nm,0.1s,SNR=7.9
EZAM S **Sn 22 31 57.5 -4.9**
3.0nm,0.2s,SNR=7.9
EZAM Zamans 5.50 18 P **Pn 22 30 59.1 0.0**
2.2nm,0.1s,SNR=7.9
EZAM S **Sn 22 31 57.5 -4.9**
3.0nm,0.2s,SNR=7.9
EZAM Zamans 5.50 18 P **Pn 22 30 59.1 0.0**
2.2nm,0.1s,SNR=7.9
ECAL Calabor 5.98 32 P **Pn 22 31 05.0 -0.7**
ECAL S **Sn 22 32 12.8 -1.4**
ECAL Calabor 5.98 32 P **Pn 22 31 05.0 -0.7**
1.1nm,0.2s,SNR=7.9
ECAL S **Sn 22 32 12.8 -1.4**
1.7nm,0.2s,SNR=7.9
ECAL Calabor 5.98 32 P **Pn 22 31 05.0 -0.7**
1.1nm,0.2s,SNR=7.9
ECAL S **Sn 22 32 12.8 -1.4**
1.7nm,0.2s,SNR=7.9
ECAL Calabor 5.98 32 P **Pn 22 31 05.0 -0.7**
1.1nm,0.2s,SNR=7.9
ECAL S **Sn 22 32 12.8 -1.4**
1.7nm,0.2s,SNR=7.9
EQUE Quentar 6.01 85 S **Sn 22 32 16.3 +1.2**
0.5nm,0.2s,SNR=7.9
EQUE Quentar 6.01 85 S **Sn 22 32 16.3 +1.2**
0.5nm,0.2s,SNR=7.9
ESDC Sonseca Array 6.15 61 P **Pn 22 31 07.9 0.0**
ESDC S **Sn 22 32 18.0 -0.2**
ESDC Sonseca Array 6.15 61 P **Pn 22 31 07.9 0.0**
1.5nm,0.1s,baz=247,slow=13,SNR=9.8
ESDC S **Sn 22 32 18.0 -0.2**
3.2nm,0.2s,baz=244,slow=24,SNR=7.7
ESDC Sonseca Array 6.15 61 P **Pn 22 31 07.9 0.0**
1.5nm,0.1s,baz=247,slow=13,SNR=9.8
ESDC S **Sn 22 32 18.0 -0.2**
3.2nm,0.2s,baz=244,slow=24,SNR=7.7
ESDC Sonseca Array 6.15 61 P **Pn 22 31 07.9 0.0**
1.5nm,0.1s,baz=247,slow=13,SNR=9.8
ESDC S **Sn 22 32 18.0 -0.3**
3.2nm,0.2s,baz=244,slow=24,SNR=7.7
EMAZ Mazaricos 6.21 14 P **Pn 22 31 07.4 -1.4**
EMAZ S **Sn 22 32 13.8 -5.9**
EMAZ Mazaricos 6.21 14 P **Pn 22 31 07.4 -1.4**
0.4nm,0.1s,SNR=5.0
EMAZ S **Sn 22 32 13.8 -5.9**
2.4nm,0.1s
EMAZ Mazaricos 6.21 14 P **Pn 22 31 07.4 -1.4**
0.4nm,0.1s,SNR=5.0
EMAZ S **Sn 22 32 13.8 -5.9**
2.4nm,0.1s
EMAZ Mazaricos 6.21 14 P **Pn 22 31 07.4 -1.4**
0.4nm,0.1s,SNR=5.0
EQES Quesada 6.34 80 P **Pn 22 31 10.4 -0.2**
EQES S **Sn 22 32 21.2 -1.8**
EQES Quesada 6.34 80 P **Pn 22 31 10.4 -0.2**
0.2nm,0.1s,SNR=7.9
EQES S **Sn 22 32 21.2 -1.8**
0.8nm,0.2s,SNR=7.9
EQES Quesada 6.34 80 P **Pn 22 31 10.4 -0.2**
0.2nm,0.1s,SNR=7.9
EQES S **Sn 22 32 21.2 -1.8**
0.8nm,0.2s,SNR=7.9
EQES Quesada 6.34 80 P **Pn 22 31 10.4 -0.2**
0.2nm,0.1s,SNR=7.9
EQES S **Sn 22 32 21.2 -1.9**
0.8nm,0.2s,SNR=7.9
GUD Guadarrama 6.48 53 P **Pn 22 31 13.4 +0.8**
GUD S **Sn 22 32 25.0 -1.5**
GUD Guadarrama 6.48 53 P **Pn 22 31 13.4 +0.8**
1.0nm,0.2s,SNR=7.9
GUD S **Sn 22 32 25.0 -1.5**
1.2nm,0.2s,SNR=7.9
GUD Guadarrama 6.48 53 P **Pn 22 31 13.4 +0.8**
1.0nm,0.2s,SNR=7.9
GUD S **Sn 22 32 25.0 -1.5**
1.2nm,0.2s,SNR=7.9
GUD Guadarrama 6.48 53 P **Pn 22 31 13.4 +0.9**
1.0nm,0.2s,SNR=7.9
GUD S **Sn 22 32 25.0 -1.5**
1.2nm,0.2s,SNR=7.9
EHUE Huescar 6.72 80 S **Sn 22 32 30.3 -2.0**
0.3nm,0.1s,SNR=7.9
EHUE Huescar 6.72 80 S **Sn 22 32 30.3 -2.0**
0.3nm,0.1s,SNR=7.9
EHUE Huescar 6.72 80 S **Sn 22 32 30.3 -2.1**
0.3nm,0.1s,SNR=7.9
EPON Pontenova 7.03 23 P **Pn 22 31 19.2 -0.8**
EPON S **Sn 22 32 37.9 -2.1**
EPON Pontenova 7.03 23 P **Pn 22 31 19.2 -0.8**
2.8nm,0.2s,SNR=7.9
EPON S **Sn 22 32 37.9 -2.1**
0.7nm,0.2s,SNR=7.9
EPON Pontenova 7.03 23 P **Pn 22 31 19.2 -0.8**
2.8nm,0.2s,SNR=7.9
EPON S **Sn 22 32 37.9 -2.1**
0.7nm,0.2s,SNR=7.9
EPON Pontenova 7.03 23 P **Pn 22 31 19.2 -0.8**
2.8nm,0.2s,SNR=7.9
EPON S **Sn 22 32 37.9 -2.1**
0.7nm,0.2s,SNR=7.9
ETOB Tobarra 7.64 74 P **Pn 22 31 27.9 -0.6**
ETOB S **Sn 22 32 52.9 -2.3**
ETOB Tobarra 7.64 74 P **Pn 22 31 27.9 -0.6**
0.3nm,0.2s,SNR=7.9
ETOB S **Sn 22 32 52.9 -2.3**
0.3nm,0.2s,SNR=7.9
ETOB Tobarra 7.64 74 P **Pn 22 31 27.9 -0.6**
0.3nm,0.2s,SNR=7.9
ETOB S **Sn 22 32 52.9 -2.3**
0.3nm,0.2s,SNR=7.9
ETOB Tobarra 7.64 74 P **Pn 22 31 27.9 -0.6**
0.3nm,0.2s,SNR=7.9
ETOB S **Sn 22 32 52.9 -2.3**
0.3nm,0.2s,SNR=7.9
SJPF Ste Jean 9.69 47 *e*Pn **Pn 22 31 57.4 +0.9**
SJPF *e*Sn **Sn 22 33 41.6 -3.7**
0.4nm,0.3s
SJPF Ste Jean 9.69 47 *e*Pn **Pn 22 31 57.4 +0.9**
SJPF *e*Sn **Sn 22 33 41.6 -3.7**
ETSF Etsaut 9.96 50 *e*Pn **Pn 22 32 01.2 +0.9**
ETSF *e*Sn **Sn 22 33 48.5 -3.6**
0.2nm,0.3s
EPF Esparros 10.59 51 *e*Pn **Pn 22 32 09.3 +0.4**
EPF *e*Sn **Sn 22 34 03.6 -4.0**
0.5nm,0.3s

ISCJB ***25*** *22:54:23.5±0.4, 4.°00N±0.°04×126.°19E±0.°10, h138km±4km, mb3.9/15, Error ellipse: s-maj=16.7km s-min=4.7km az=165.3*
IDC ***25*** *22:54:26.2±1.5, 3.°94N×125.°87E, h140km±14km, mb3.6/11, mb1 3.7/12, mb1mx3.6/22, mbtmp3.7/12, Error ellipse: s-maj=53.3km s-min=11.5km az=81.0*
DJA ***25*** *22:54:26, 3.°95N×126.°37E, h67km, MLv4.7/3*
NEIC ***25*** *22:54:26.8±1.0, 4.°09N×126.°15E, h152km±8km, mb4.0/4, Error ellipse: s-maj=17.6km s-min=7.8km az=82.0*
MAN ***25*** *22:54:55, 6.°25N×125.°15E, h85km, mb4.6, ML3.5, MS3.4*
ISC 25 22:54:24.6±0.4, **4.°00N**±0.°04×**126.°18E**±0.°09, **h131**km±4km, **n36**, σ1°**17**/43, **mb3.9**/15, **2C-1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**0.72**	**244**	P	**Pn**	**22 54 43.6**	**-1.6**
SGSI				S	**Sn**	**22 54 58.0**	**-2.7**
GSPH	**General Santos**	**2.41**	**330**	⇓*i*P	**Pn**	**22 55 03.0**	**-0.7**
GSPH				*i* S	**Sn**	**22 55 31.5**	**-2.2**
MNI	**Manado**	**2.87**	**208**	P	**Pn**	**22 55 11.9**	**+2.4**
DAV	**Davao City (W)**	**3.11**	**349**	P	**Pn**	**22 55 14.2**	**+1.5**
	92nm,0.3s,baz=56,slow=3.6,SNR=5.2						
DAV				S	**Sn**	**22 55 53.3**	**+3.5**
	178nm,0.3s,baz=288,slow=20,SNR=6.8						
DMPH	**Davao City--Mi**	**3.14**	**348**	⇑*e*P	**Pn**	**22 55 14.9**	**+1.9**
DMPH				*e*S	**Sn**	**22 55 48.5**	**-1.9**
KCP	**Kidapawan**	**3.18**	**340**	⇑*i*P	**Pn**	**22 55 14.5**	**+0.9**
KCP				*i* S	**Sn**	**22 55 52.6**	**+1.1**
TNTI	**Ternate**	**3.42**	**160**	P	**Pn**	**22 55 17.6**	**+0.9**
TNTI				S	**Sn**	**22 55 55.9**	**-1.2**
BUKP	**Musuan**	**4.01**	**344**	*e*P	**Pn**	**22 55 25.7**	**+1.2**
PAGZ	**Pagadian**	**4.73**	**324**	*e*P	**Pn**	**22 55 33.6**	**-0.5**
LBMI	**Labuha**	**4.79**	**164**	P	**Pn**	**22 55 35.6**	**+0.6**
LBMI				S	**Sn**	**22 56 28.8**	**-0.9**
LUWI	**Luwuk**	**6.05**	**214**	P	**Pn**	**22 55 53.0**	**+1.1**
	0.3nm1μm67nm,1.0s						
NLAI	**Namlea**	**7.25**	**173**	P	**Pn**	**22 56 07.6**	**-0.4**
MYLDM	**Lahad Datu**	**7.74**	**279**	P	**Pn**	**22 56 17.7**	**+3.0**
KSM	**Kuching**	**16.05**	**261**	*e*Pn	**Pn**	**22 58 04.4**	**+1.4**
FITZ	**Fitzroy Crossi**	**21.97**	**181**	P	**P**	**22 59 07.1**	**-0.9**
	2.8nm,0.5s,mb4.0,baz=20,slow=7.1,SNR=11						
FITZ	**Fitzroy Crossi**	**21.97**	**181**	*e*P	**P**	**22 59 10.2**	**+2.2**
	3.0nm,0.6s,mb3.9						
ASAR	**Alice Springs**	**28.51**	**165**	P	**P**	**23 00 08.7**	**+0.8**
	0.3nm,0.5s,mb3.3,baz=341,slow=7.1,SNR=5.5						
ASAR				PcP	PcP	23 03 18.1	+1.6
	0.5nm,0.4s,baz=350,slow=2.9,SNR=4.9						
KSRS	**Korea Array**	**33.33**	**3**	P	**P**	**23 00 50.8**	**+0.7**
	0.9nm,0.4s,mb3.8,baz=179,slow=9.9,SNR=6.5						
NWAO	**Narrogin (SRO)**	**37.69**	**192**	P	**P**	**23 01 27.9**	**+0.6**
	5.3nm,0.8s,mb4.2,baz=342,slow=7.8,SNR=9.5						
SONM	**Songino Array**	**46.87**	**342**	P	**P**	**23 02 41.7**	**+0.3**
	0.4nm,0.5s,mb3.3,baz=151,slow=6.6,SNR=2.8						
SONM				PcP	PcP	23 04 14.1	+1.9
	1.3nm,0.9s,baz=146,slow=3.4,SNR=4.5						
MK31	**Makanchi Array**	**57.02**	**325**	*e*P	**P**	**23 03 56.5**	**-0.2**
MKAR	**Makanchi Array**	**57.02**	**325**	P	**P**	**23 03 56.8**	**0.0**
	1.0nm,0.4s,mb4.0,baz=116,slow=7.7,SNR=27						
MKAR				PcP	PcP	23 04 51.1	+0.8
	4.6nm,0.6s,baz=120,slow=3.8,SNR=20						
TKM2	**Tokmak 2**	**59.18**	**319**	*e*P	**P**	**23 04 10.5**	**-1.4**
	1.0nm,0.4s,mb4.0						
ZALV	**Zalesovo Beam**	**60.10**	**333**	P	**P**	**23 04 17.2**	**-0.7**
	0.6nm,0.5s,mb3.7,baz=135,slow=4.8,SNR=3.4						
ZALV				PcP	PcP	23 05 02.3	-0.1
	0.4nm,0.4s,baz=110,slow=3.4,SNR=3.1						
KBL	**Kabul**	**60.92**	**307**	*e*P	**P**	**23 04 22.6**	**-1.3**
	1.0nm,0.5s,mb3.9						
KURK	**Kurchatov**	**61.22**	**328**	*e*P	**P**	**23 04 24.9**	**-0.6**
	5.6nm,0.8s,mb4.5						
BVAR	**Borovoye Array**	**66.80**	**327**	P	**P**	**23 05 01.8**	**-0.2**
	1.6nm,0.8s,mb3.9,baz=120,slow=8.8,SNR=7.6						
BVAR				PcP	PcP	23 05 30.1	+0.3
	1.9nm,0.7s,baz=142,slow=3.6,SNR=7.6						
JOF	**Joensuu**	**88.69**	**333**	*e*p	**P**	**23 07 02.8**	**-0.1**
BRTR	**Keskin Array B**	**89.43**	**310**	P	**P**	**23 07 06.3**	**-0.6**
	0.3nm,0.6s,mb3.4,baz=119,slow=4.3,SNR=4.2						
ARCES	**ARCESS Array B**	**90.01**	**340**	P	**P**	**23 07 08.8**	**-0.2**
	4.2nm,0.8s,mb4.4,baz=75,slow=5.9,SNR=9.9						
ARCES	**ARCESS Array B**	**90.01**	**340**	P	**P**	**23 07 08.8**	**-0.2**
KAF	**Kangasniemi**	**91.11**	**332**	*e*p	**P**	**23 07 13.6**	**-0.6**
FINES	**FINESS Array B**	**91.34**	**332**	P	**P**	**23 07 14.6**	**-0.7**
	1.1nm,0.6s,mb4.1,baz=50,slow=6.0,SNR=10						
NB2	**NORSAR Subarra**	**98.30**	**334**	P	**P**	**23 07 46.3**	**-0.8**
	comp=Z,1.3nm,0.6s,mb4.5,baz=66,slow=4.6						
NOA	**NORSAR Array B**	**98.30**	**334**	P	**P**	**23 07 46.7**	**-0.4**
	comp=Z,1.9nm,0.7s,mb4.7,baz=67,slow=4.5,SNR=11						
NOA	**NORSAR Array B**	**98.30**	**334**	P	**P**	**23 07 46.7**	**-0.4**

ISK ***25*** *23:36:50.9, 37.°03N×29.°20E, h5km, MD2.6*
CSEM ***25*** *23:36:52.3±0.2, 36.°98N×29.°20E, h2km, MD2.6, Error ellipse: s-maj=5.3km s-min=3.5km az=179.0*
ISCJB ***25*** *23:36:53.3±0.6, 37.°01N±0.°04×29.°23E±0.°04, h10km, Error ellipse: s-maj=5.2km s-min=4.0km az=3.9*
DDA ***25*** *23:36:54.3, 37.°08N×29.°20E, h7km±4km, Md2.8*
ISC 25 23:36:53.3±0.7, **37.°01N**±0.°04×**29.°20E**±0.°04, **h5**km±9km, **n18**, σ0°**86**/33, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.28**	**59**	*e*PG	**Pg**	**23 36 57.3**	**-1.5**
GLHS				*e*SG	**Sg**	**23 37 02.5**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.28**	**59**	*e*Pg	**Pg**	**23 36 57.3**	**-1.5**
GLHS				*e*Sg	**Sg**	**23 37 02.5**	**+0.1**
GOLH	**Golhisar**	**0.37**	**52**	*i* P	**Pg**	**23 36 59.7**	**-0.7**
GOLH				*i* S	**Sg**	**23 37 05.8**	**+0.6**
GOLH	**Golhisar**	**0.37**	**52**	*i* P	**Pg**	**23 36 59.7**	**-0.7**
GOLH				*i* S	**Sg**	**23 37 05.8**	**+0.6**
ELL	**Elmali**	**0.63**	**115**	*e*PG	**Pg**	**23 37 04.3**	**-1.0**
ELL				*e*SG	**Sg**	**23 37 14.3**	**+0.8**
ELL	**Elmali**	**0.63**	**115**	*e*Pg	**Pg**	**23 37 04.3**	**-1.1**
ELL				*e*Sg	**Sg**	**23 37 14.3**	**+0.7**
DNZL	**Cakiroluk**	**0.69**	**350**	*e*P	**Pg**	**23 37 06.4**	**-0.1**
DNZL				*i* S	**Sg**	**23 37 15.9**	**+0.5**
DNZL	**Cakiroluk**	**0.69**	**350**	*e*P	**Pg**	**23 37 06.4**	**-0.1**
DNZL				*i* S	**Sg**	**23 37 15.9**	**+0.5**
YER	**Yerkesik**	**0.74**	**280**	*e*PG	**Pg**	**23 37 06.2**	**-1.3**
YER	**Yerkesik**	**0.74**	**280**	*e*Pg	**Pg**	**23 37 06.2**	**-1.3**
AKAS	**Kas**	**0.84**	**157**	*e*P	**Pg**	**23 37 11.3**	**+1.8**
AKAS				*i* S	**Sg**	**23 37 25.5**	**+5.1**
AKAS	**Kas**	**0.84**	**157**	*e*P	**Pg**	**23 37 11.3**	**+1.8**
AYDN	**Tasoluk**	**1.23**	**302**	*e*P	**Pg**	**23 37 16.8**	**-0.2**
AYDN				*i* S	**Sg**	**23 37 33.9**	**+0.9**
AYDN	**Tasoluk**	**1.23**	**302**	*e*P	**Pg**	**23 37 16.8**	**-0.2**
AYDN				*i* S	**Sg**	**23 37 33.9**	**+0.9**
DAT	**Datca**	**1.33**	**258**	*e*PN	**Pn**	**23 37 17.6**	**-0.9**
DAT				*e*SN	**Sn**	**23 37 37.2**	**+0.6**
DAT	**Datca**	**1.33**	**258**	*e*Pn	**Pn**	**23 37 17.6**	**-0.9**
DAT				*e*Sn	**Sn**	**23 37 37.2**	**+0.6**
KHAL	**Karahalli**	**1.38**	**10**	*e*P	**Pn**	**23 37 19.2**	**0.0**
KHAL				*i* S	**Sg**	**23 37 38.0**	**+0.5**
KHAL	**Karahalli**	**1.38**	**10**	*e*P	**Pn**	**23 37 19.2**	**0.0**
KHAL				*i* S	**Sg**	**23 37 38.0**	**+0.5**

ISCJB ***25*** *23:47:38.3±0.5, 38.°12N±0.°03×21.°53E±0.°03, h7km±4km, Error ellipse: s-maj=5.5km s-min=3.2km az=166.8*
CSEM ***25*** *23:47:38.4±0.1, 38.°12N×21.°53E, h12km, MD3.1, Error ellipse: s-maj=3.8km s-min=2.2km az=171.0*
THE ***25*** *23:47:38.2, 38.°10N×21.°53E, h0km±1km, ML2.9/8, Error ellipse: s-maj=1.0km s-min=0.2km az=274.0*
ATH ***25*** *23:47:38.5, 38.°13N×21.°52E, h17km±2km, MD3.1/7*
ISC 25 23:47:38.8±0.4, **38.°13N**±0.°04×**21.°52E**±0.°03, **h14**km±4km, **n34**, σ0°**70**/62, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.09**	**212**	*e*PB	**Pg**	**23 47 41.9**	**+0.3**
RLS				*e*SB	**Sg**	**23 47 44.4**	**+0.7**
RLS	**Riolos of Patr**	**0.09**	**212**	*e*Pb	**Pg**	**23 47 41.9**	**+0.3**
RLS				*e*Sb	**Sg**	**23 47 44.4**	**+0.7**
UPR	**University Cam**	**0.26**	**54**	*e*PB	**Pg**	**23 47 44.6**	**+0.4**
UPR				*e*SB	**Sg**	**23 47 48.8**	**+0.9**
UPR	**University Cam**	**0.26**	**54**	P	**Pg**	**23 47 43.9**	**-0.3**
UPR				S	**Sg**	**23 47 47.7**	**-0.2**
UPR	**University Cam**	**0.26**	**54**	P	**Pg**	**23 47 43.9**	**-0.3**
UPR	**University Cam**	**0.26**	**54**	*e*Pb	**Pg**	**23 47 44.6**	**+0.4**
UPR				S	**Sg**	**23 47 47.7**	**-0.2**
UPR				*e*Sb	**Sg**	**23 47 49.4**	**+1.5**
LAKA	**Lakka**	**0.37**	**73**	P	**Pg**	**23 47 45.8**	**-0.5**
LAKA				S	**Sg**	**23 47 51.4**	**0.0**
LAKA	**Lakka**	**0.37**	**73**	P	**Pg**	**23 47 45.8**	**-0.5**
LAKA				S	**Sg**	**23 47 51.4**	**0.0**
EFP	**Efpalio**	**0.42**	**45**	*e*PB	**Pg**	**23 47 46.6**	**-0.6**
EFP				*e*SB	**Sg**	**23 47 53.5**	**+0.7**
EFP	**Efpalio**	**0.42**	**45**	P	**Pg**	**23 47 46.6**	**-0.6**
EFP				S	**Sg**	**23 47 53.3**	**+0.5**
EFP	**Efpalio**	**0.42**	**45**	P	**Pg**	**23 47 46.6**	**-0.6**
EFP				S	**Sg**	**23 47 53.3**	**+0.5**
TRIZ	**Trizonia**	**0.49**	**61**	P	**Pg**	**23 47 47.8**	**-0.7**
TRIZ				S	**Sg**	**23 47 55.4**	**+0.4**
TRIZ	**Trizonia**	**0.49**	**61**	P	**Pg**	**23 47 47.8**	**-0.7**
TRIZ				S	**Sg**	**23 47 55.4**	**+0.4**
KALE	**Kalithea**	**0.55**	**62**	P	**Pg**	**23 47 48.7**	**-0.9**
KALE				S	**Sg**	**23 47 57.3**	**+0.4**
KALE	**Kalithea**	**0.55**	**62**	P	**Pg**	**23 47 48.7**	**-0.9**
KALE				S	**Sg**	**23 47 57.3**	**+0.4**
KFL	**Anninata**	**0.58**	**268**	P	**Pg**	**23 47 49.7**	**-0.4**
KFL				S	**Sg**	**23 47 58.2**	**+0.3**
KFL	**Anninata**	**0.58**	**268**	P	**Pg**	**23 47 49.7**	**-0.4**
KFL				S	**Sg**	**23 47 58.2**	**+0.3**
GUR	**Goura**	**0.68**	**107**	*e*PB	**Pg**	**23 47 50.6**	**-1.3**
GUR				*e*SN	**Sg**	**23 48 01.0**	**+0.2**
GUR	**Goura**	**0.68**	**107**	P	**Pg**	**23 47 50.6**	**-1.3**
GUR				S	**Sg**	**23 48 00.7**	**-0.1**
GUR	**Goura**	**0.68**	**107**	P	**Pg**	**23 47 50.6**	**-1.3**
GUR				S	**Sg**	**23 48 00.7**	**-0.1**
VLS	**Valsamata**	**0.74**	**274**	P	**Pg**	**23 47 52.2**	**-0.9**
VLS				S	**Sg**	**23 48 03.3**	**+0.5**
VLS	**Valsamata**	**0.74**	**274**	P	**Pg**	**23 47 52.2**	**-0.9**
VLS				S	**Sg**	**23 48 03.3**	**+0.5**
DSF	**Desfina**	**0.84**	**70**	P	**Pg**	**23 47 54.0**	**-1.0**
DSF				S	**Sg**	**23 48 06.6**	**+0.6**
DSF	**Desfina**	**0.84**	**70**	P	**Pg**	**23 47 54.0**	**-1.0**
DSF				S	**Sg**	**23 48 06.6**	**+0.6**
LKD2	**Lefkada island**	**0.94**	**314**	P	**Pb**	**23 47 56.2**	**-0.8**
LKD2				S	**Sg**	**23 48 10.4**	**+1.0**
LKD2	**Lefkada island**	**0.94**	**314**	P	**Pb**	**23 47 56.2**	**-0.8**
LKD2				S	**Sg**	**23 48 10.4**	**+1.0**
VLX	**Vlachokerasia**	**1.02**	**138**	*e*PN	**Pn**	**23 47 58.5**	**-0.2**
VLX	**Vlachokerasia**	**1.02**	**138**	*e*Pn	**Pn**	**23 47 58.5**	**-0.2**
LTK	**Loutraki**	**1.14**	**95**	*e*PN	**Pn**	**23 48 00.5**	**+0.1**
LTK	**Loutraki**	**1.14**	**95**	*e*Pn	**Pn**	**23 48 00.5**	**+0.1**
PYL	**PYLOS**	**1.25**	**172**	*e*PN	**Pn**	**23 48 01.9**	**+0.1**
PYL	**PYLOS**	**1.25**	**172**	*e*Pn	**Pn**	**23 48 01.9**	**+0.1**
DID	**Didima**	**1.49**	**114**	P	**Pn**	**23 48 05.0**	**-0.2**
DID				S	**Sn**	**23 48 26.4**	**+1.9**
DID	**Didima**	**1.49**	**114**	P	**Pn**	**23 48 05.0**	**-0.2**
DID				S	**Sn**	**23 48 26.4**	**+1.9**

SZGRF ***25*** *23:52:52.2, 17.°23N×16.°77W, h24km, mb4.4, Mauritania*
ISCJB ***25*** *23:53:09.8±0.2, 20.°44N±0.°03×17.°10W±0.°04, h10km, mb4.4/135, MS3.5/9, Error ellipse: s-maj=6.0km s-min=4.5km az=29.5*
BJI ***25*** *23:53:09.3, 20.°40N×17.°10W, h10km, mB5.2/5, mb4.9/6, Ms5.0/1, Ms7 4.9/1*
IDC ***25*** *23:53:09.6±0.5, 20.°45N×17.°10W, h0km, mb4.2/21, mb1 4.4/23, mb1mx4.4/24, mbtmp4.3/23, ML3.9/2, MS3.5/4, Ms1 3.6/4, ms1mx3.2/28, Error ellipse: s-maj=17.2km s-min=14.0km az=125.0*
MOS ***25*** *23:53:10.4±0.8, 20.°44N×17.°08W, h15km, mb4.6/83, Error ellipse: s-maj=10.1km s-min=3.6km az=62.8*
NEIC ***25*** *23:53:11.3±0.2, 20.°42N×17.°12W, h10km, mb4.5/103, Error ellipse: s-maj=4.8km s-min=3.6km az=120.0*
NEIC Felt at Banc d'Arguin.
CSEM ***25*** *23:53:13.2±0.1, 20.°43N×17.°09W, h21km, mb4.5/99, Ms3.3, Error ellipse: s-maj=5.2km s-min=3.6km az=121.0*
ISC 25 23:53:11.6±0.2, **20.°44N**±0.°03×**17.°13W**±0.°04, **h10**km, **(h21**km±1.1km**:pP-P), n564**, σ0°**83**/557, **mb4.4**/135, **MS3.5**/9, **124C-7D, Mauritania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIE	**El Hierro**	**7.30**	**354**	P	**Pn**	**23 54 53.4**	**-4.8**
CHIE				S	**Sn**	**23 56 16.5**	**-4.7**
EOSO	**Osorio**	**7.74**	**10**	P	**Pn**	**23 54 58.6**	**-5.7**
EOSO				S	**Sn**	**23 56 22.1**	**-10**
CCAN	**Las Canadas**	**7.77**	**3**	P	**Pn**	**23 54 57.7**	**-6.9**
EBAJ	**Bajamar**	**8.10**	**5**	P	**Pn**	**23 55 04.8**	**-4.4**
CFTV	**Fuerteventura**	**8.41**	**19**	P	**Pn**	**23 55 07.4**	**-6.1**
CFTV				S	**Sn**	**23 56 36.8**	**-12**
EFAM	**Famara**	**9.25**	**20**	P	**Pn**	**23 55 23.1**	**-1.9**
EFAM				S	**Sn**	**23 56 59.4**	**-10**
EFAM	**Famara**	**9.25**	**20**	P	**Pn**	**23 55 23.1**	**-1.9**
TZC	**Tazercounte**	**15.05**	**37**	*i* P	**Pn**	**23 56 51.0**	**+6.6**
ZFT	**Errachidia**	**16.25**	**42**	*i* P	**Pn**	**23 57 01.0**	**+1.0**
CZD	**Col de Zad**	**16.53**	**38**	*i* P	**Pn**	**23 57 06.0**	**+2.4**
MDT	**Midelt**	**16.63**	**40**	Pn	**Pn**	**23 57 03.9**	**-1.0**
	0.1nm,0.3s,baz=227,slow=11,SNR=11						
MDT				Sn	**Sn**	**00 00 18.0**	**+8.4**
	0.7nm,0.3s,baz=350,slow=13,SNR=2.6						
MDT				Lg		00 01 48.7	
	2.1nm,0.3s,baz=323,slow=20,SNR=5.8						
MDT				LR	LR	00 05 00.6	
	comp=Z,117nm,18.8s,baz=47,slow=43						
MDT	**Midelt**	**16.63**	**40**	Pn	**Pn**	**23 57 03.9**	**-0.9**
TIC	**Toumodi**	**18.05**	**138**	*e*P	**Pn**	**23 57 22.2**	**-0.4**
	88nm,0.4s						
TIC	**Toumodi**	**18.05**	**138**	*e*P	**Pn**	**23 57 22.2**	**-0.4**
TIC				pmax	pmax		
	comp=Z,88nm,0.4s						
TIC	**Toumodi**	**18.05**	**138**	*e*P	**Pn**	**23 57 22.2**	**-0.4**
	comp=Z,88nm,0.4s						
DBIC	**Dimbokro**	**18.14**	**137**	P	**Pn**	**23 57 22.7**	**-1.0**
	comp=Z,1.4nm,0.3s,baz=303,slow=14,SNR=45						
DBIC				S	**Sn**	**00 00 30.2**	**-16**
	comp=Z,2.6nm,0.3s,baz=33,slow=17,SNR=3.1						
DBIC				Lg		00 02 41.1	
	comp=Z,5.8nm,0.3s,baz=216,slow=22,SNR=4.8						
DBIC	**Dimbokro**	**18.14**	**137**	*e*Pn	**Pn**	**23 57

PVAQ *e*LR LR 00 02 52.3
comp=Z,161nm,20.0s
PVAQ Vaqueiros 18.79 24 *e*P **Pn 23 57 32.4 +0.9**
comp=Z,32nm,1.1s
PCVE Castro Verde 18.87 23 *e*P **Pn 23 57 32.1 -0.4**
comp=Z,20nm,1.3s
PCVE *e*LR LR 00 03 01.0
comp=Z,191nm,20.0s
PCVE Castro Verde 18.87 23 *e*P **Pn 23 57 32.1 -0.4**
comp=Z,20nm,1.3s
EGRO El Granado 18.99 24 P **Pn 23 57 33.7 -0.2**
comp=Z,10nm,0.7s
EGRO El Granado 18.99 24 P **Pn 23 57 33.7 -0.2**
comp=Z,10nm,0.7s
ESPR Espera 19.10 29 P **Pn 23 57 34.6 -0.7**
ESPR Espera 19.10 29 P **Pn 23 57 34.6 -0.7**
PBEJ Beja 19.28 23 *e*P **Pn 23 57 36.6 -0.8**
comp=Z,15nm,1.4s
PBEJ Beja 19.28 23 *e*P **Pn 23 57 36.6 -0.8**
comp=Z,15nm,1.4s
EMIN Mina Concepcio 19.51 26 P **Pn 23 57 39.1 -1.1**
comp=Z,31nm,1.7s
EMIN Mina Concepcio 19.51 26 P **Pn 23 57 39.2 -1.0**
comp=Z,31nm,1.7s
EVOP Sao Brissos 19.64 21⇑*iP* **Pn 23 57 40.2 -1.5**
comp=Z,8.0nm,0.8s
PMAFR Mafra 19.66 18 *e*LR LR 00 03 07.7
comp=Z,122nm,20.0s
EVO Evora 19.68 22⇑*iP* **Pn 23 57 40.2 -2.0**
comp=Z,16nm,0.8s
EVO *e*MLR MLR
comp=Z,252nm,22.5s
PBAR Barrancos 19.72 24 *e*P **Pn 23 57 41.6 -1.1**
comp=Z,16nm,0.7s
PBAR *e*LR LR 00 03 39.8
comp=Z,166nm,20.0s
PBAR Barrancos 19.72 24 *e*P **Pn 23 57 41.6 -1.1**
comp=Z,16nm,0.7s
ELOJ Sierra Loja 20.13 31 P **P 23 57 46.1 +0.4**
ELOJ pmax pmax
comp=Z,2.0nm,0.2s
ELOJ Sierra Loja 20.13 31 P **P 23 57 46.1 +0.4**
comp=Z,1.8nm,0.2s
ELOJ Sierra Loja 20.13 31 P **P 23 57 46.1 +0.4**
comp=Z,2.0nm,0.2s
PESTR Estremoz 20.13 22 *e*P **P 23 57 45.0 -0.7**
comp=Z,16nm,1.7s
PESTR *e*LR LR 00 03 33.5
comp=Z,187nm,20.0s
PESTR Estremoz 20.13 22 *e*P **P 23 57 45.0 -0.7**
comp=Z,16nm,1.7s
ERON Agron 20.20 32 P **P 23 57 47.5 +1.0**
ERON Agron 20.20 32 P **P 23 57 47.5 +1.0**
EBAD Badajoz 20.24 23 P **P 23 57 47.3 +0.5**
comp=Z,19nm,1.2s
EBAD Badajoz 20.24 23 P **P 23 57 47.3 +0.4**
comp=Z,19nm,1.2s
ECAB El Cabril 20.30 27 P **P 23 57 47.5 0.0**
comp=Z,9.1nm,0.6s
ECAB El Cabril 20.30 27 P **P 23 57 47.5 0.0**
comp=Z,9.1nm,0.6s
ELUQ Luque 20.40 30 P **P 23 57 50.5 +1.8**
ELUQ Luque 20.40 30 P **P 23 57 50.5 +1.8**
ECOG Cogollos-Vega 20.52 32 P **P 23 57 50.4 +0.5**
ECOG pmax pmax
comp=Z,6.0nm,0.7s
ECOG Cogollos-Vega 20.52 32 P **P 23 57 50.4 +0.4**
comp=Z,6.1nm,0.7s
ECOG Cogollos-Vega 20.52 32 P **P 23 57 50.4 +0.5**
comp=Z,6.0nm,0.7s
PTOM Tomar 20.53 20 *e*P **P 23 57 51.2 +1.1**
comp=Z,40nm,1.1s
PTOM Tomar 20.53 20 *e*P **P 23 57 51.2 +1.1**
PTOM Tomar 20.53 20 *e*P **P 23 57 51.2 +1.1**
comp=Z,40nm,1.1s
PMRV Marv??o 20.70 22 *e*P **P 23 57 52.5 +0.6**
comp=Z,24nm,1.2s
PMRV *e*LR LR 00 03 28.9
comp=Z,184nm,20.0s
PMRV Marv??o 20.70 22 *e*P **P 23 57 52.5 +0.6**
comp=Z,24nm,1.2s
EADA Adamuz 20.75 29 P **P 23 57 55.7 +3.3**
comp=Z,13nm,1.0s
PCBR Castelo Branco 21.04 21 *e*P **P 23 57 56.0 +0.5**
comp=Z,31nm,1.1s,mb4.5
PCBR Castelo Branco 21.04 21 *e*P **P 23 57 56.0 +0.5**
comp=Z,31nm,1.1s,mb4.5
EBAN Banos Encina 21.11 30 P **P 23 57 55.9 -0.4**
EBAN pmax pmax
comp=Z,4.0nm,0.5s,mb4.0
EBAN Banos Encina 21.11 30 P **P 23 57 55.9 -0.5**
comp=Z,4.0nm,0.5s,mb4.0
EBAN Banos Encina 21.11 30 P **P 23 57 55.9 -0.4**
comp=Z,4.0nm,0.5s,mb4.0
EQES Quesada 21.18 32 P **P 23 57 56.1 -0.9**
comp=Z,9.8nm,0.8s,mb4.2
EQES Quesada 21.18 32 P **P 23 57 56.1 -0.9**
comp=Z,9.8nm,0.8s,mb4.2
EHUE Huescar 21.43 33 P **P 23 57 59.4 -0.3**
EHUE pmax pmax
comp=Z,4.0nm,0.5s,mb4.0
EHUE Huescar 21.43 33 P **P 23 57 59.4 -0.3**
comp=Z,4.4nm,0.5s,mb4.0
EHUE Huescar 21.43 33 P **P 23 57 59.4 -0.3**
comp=Z,4.0nm,0.5s,mb4.0
MTE Manteigas 21.52 20 *e*P **P 23 58 01.2 +0.5**
comp=Z,30nm,1.8s,mb4.4
MTE *e*S **S 00 02 01.8 +2.6**
MTE *e*LR LR 00 03 53.8
comp=Z,163nm,18.0s
MTE Manteigas 21.52 20 *e*P **P 23 58 00.3 -0.4**
comp=Z,19nm,0.7s,mb4.6
PVIS Viseu 21.70 19 *e*P **P 23 58 02.3 -0.3**
comp=Z,42nm,1.8s,mb4.6
PVIS Viseu 21.70 19 *e*P **P 23 58 02.3 -0.3**
comp=Z,42nm,1.8s,mb4.6
EPLA Plasencia 21.73 23 P **P 23 58 02.7 -0.3**
EPLA pmax pmax
comp=Z,42nm,1.4s,mb4.7
EPLA Plasencia 21.73 23 P **P 23 58 02.7 -0.3**
comp=Z,42nm,1.4s,mb4.7
EPLA Plasencia 21.73 23 P **P 23 58 02.7 -0.3**
comp=Z,42nm,1.4s,mb4.7
EVIA Vianos 22.11 32 ⇓P **P 23 58 06.8 -0.2**
EVIA pmax pmax
comp=Z,25nm,0.7s,mb4.8
EVIA Vianos 22.11 32 ⇓P **P 23 58 06.8 -0.2**
comp=Z,25nm,0.7s,mb4.8
EVIA Vianos 22.11 32 P **P 23 58 06.8 -0.2**
comp=Z,25nm,0.7s,mb4.8
EMUR La Murta 22.16 35 P **P 23 58 07.2 -0.4**
comp=Z,16nm,0.8s,mb4.5
EMUR La Murta 22.16 35 P **P 23 58 07.2 -0.4**
comp=Z,16nm,0.8s,mb4.5
ESDC Sonseca Array 22.26 28 P **P 23 58 07.9 -0.7**
comp=Z,1.9nm,0.8s,mb3.6,baz=214,slow=10,SNR=10
ESDC Sonseca Array 22.26 28 P **P 23 58 07.9 -0.7**
ESLA Sonseca Array 22.26 28 *e*P **P 23 58 08.8 +0.2**
comp=Z,2.4nm,1.1s,mb3.5
ESLA Sonseca Array 22.26 28 *e*P **P 23 58 08.8 +0.2**
comp=Z,2.4nm,1.1s,mb3.5
PVRL Vila Real 22.26 19 *e*P **P 23 58 09.4 +0.8**
comp=Z,25nm,1.6s,mb4.4
PVRL Vila Real 22.26 19 *e*P **P 23 58 09.4 +0.8**
comp=Z,25nm,1.6s,mb4.4
MVO Moncorvo 22.38 20 *e*P **P 23 58 10.4 +0.5**
comp=Z,31nm,0.9s,mb4.7
MVO Moncorvo 22.38 20 P **P 23 58 10.7 +0.9**
MVO Moncorvo 22.38 20 *e*P **P 23 58 10.4 +0.5**
comp=Z,31nm,0.9s,mb4.7
PCAB Cabril 22.57 18 *e*P **P 23 58 12.0 +0.1**
comp=Z,28nm,1.3s,mb4.5
PCAB Cabril 22.57 18 *e*P **P 23 58 12.0 +0.1**
comp=Z,28nm,1.3s,mb4.5
ETOB Tobarra 22.59 33 P **P 23 58 12.0 -0.2**
comp=Z,3.8nm,0.5s,mb4.1
ETOB Tobarra 22.59 33 P **P 23 58 12.0 -0.2**
comp=Z,3.8nm,0.5s,mb4.1
GUD Guadarrama 22.98 26 P **P 23 58 17.5 +1.2**
GUD pmax pmax
comp=Z,18nm,1.0s,mb4.5
GUD Guadarrama 22.98 26 P **P 23 58 17.5 +1.2**
comp=Z,18nm,1.0s,mb4.4
GUD Guadarrama 22.98 26 P **P 23 58 17.5 +1.2**
comp=Z,18nm,1.0s,mb4.5
EMAZ Mazaricos 23.47 15 P **P 23 58 23.1 +1.7**
comp=Z,131nm,2.6s,mb4.9
EMAZ Mazaricos 23.47 15 P **P 23 58 23.1 +1.7**
comp=Z,131nm,2.6s,mb4.9
STS Santiago 23.52 16 P **P 23 58 21.7 -0.2**
STS pmax pmax
comp=Z,16nm,0.6s,mb4.6
STS Santiago 23.52 16 P **P 23 58 21.6 -0.3**
comp=Z,16nm,0.6s,mb4.6
STS Santiago 23.52 16 P **P 23 58 21.7 -0.2**
comp=Z,16nm,0.6s,mb4.6
ECHE Chera 23.60 32 P **P 23 58 22.8 +0.1**
ECHE pmax pmax
comp=Z,6.0nm,0.8s,mb4.1
ECHE Chera 23.60 32 P **P 23 58 22.8 +0.1**
comp=Z,6.1nm,0.8s,mb4.1
ECHE Chera 23.60 32 P **P 23 58 22.8 +0.1**
comp=Z,6.0nm,0.8s,mb4.1
ETOR Torete 24.04 29 ⇑P **P 23 58 26.8 +0.1**
ETOR pmax pmax
comp=Z,14nm,0.5s,mb4.7
ETOR Torete 24.04 29 ⇑P **P 23 58 26.8 0.0**
comp=Z,14nm,0.5s,mb4.7
ETOR Torete 24.04 29 P **P 23 58 26.8 +0.1**
comp=Z,14nm,0.5s,mb4.7
EARI Arriondas 24.89 21 P **P 23 58 35.8 +1.3**
comp=Z,13nm,0.8s,mb4.5
EARI Arriondas 24.89 21 P **P 23 58 35.8 +1.3**
comp=Z,13nm,0.8s,mb4.5
ECRI Cripan 25.30 26 P **P 23 58 38.8 +0.6**
ECRI Cripan 25.30 26 P **P 23 58 38.8 +0.6**
ELAN Lanestosa 25.46 24 P **P 23 58 40.6 +0.9**
comp=Z,6.8nm,0.7s,mb4.3
ELAN Lanestosa 25.46 24 P **P 23 58 40.6 +0.9**
comp=Z,6.8nm,0.7s,mb4.3
ESAC San Caprasio 25.48 30 P **P 23 58 40.0 +0.2**
ESAC San Caprasio 25.48 30 P **P 23 58 40.0 +0.1**
ELIZ Elizondo 26.17 27 P **P 23 58 45.1 -1.0**
ELIZ pmax pmax
comp=Z,12nm,0.5s,mb4.7
ELIZ Elizondo 26.17 27 P **P 23 58 45.1 -1.0**
comp=Z,12nm,0.5s,mb4.7
ELIZ Elizondo 26.17 27 P **P 23 58 45.1 -1.0**
comp=Z,12nm,0.5s,mb4.7
EALK Alkurruntz 26.22 26 P **P 23 58 48.9 +2.3**
comp=Z,3.8nm,0.5s,mb4.2
EALK Alkurruntz 26.22 26 P **P 23 58 48.9 +2.3**
comp=Z,3.8nm,0.5s,mb4.2
SJPF Ste Jean 26.25 27⇑*iP* **P 23 58 47.4 +0.6**
comp=Z,13nm,0.8s,mb4.2
SJPF Ste Jean 26.25 27⇑*iP* **P 23 58 47.4 +0.6**
SJPF pmax pmax
comp=Z,7.0nm,0.8s,mb4.2
SJPF Ste Jean 26.25 27⇑*iP* **P 23 58 47.4 +0.6**
comp=Z,6.6nm,0.8s,mb4.2
SJPF Ste Jean 26.25 27⇑*iP* **P 23 58 47.4 +0.6**
comp=Z,6.6nm,0.8s,mb4.2
ETSF Etsaut 26.37 28⇑*iP* **P 23 58 48.7 +0.8**
comp=Z,23nm,0.8s,mb4.4
ETSF Etsaut 26.37 28⇑*iP* **P 23 58 48.7 +0.8**
ETSF pmax pmax
comp=Z,12nm,0.8s,mb4.5
ETSF Etsaut 26.37 28⇑*iP* **P 23 58 48.7 +0.8**
comp=Z,12nm,0.8s,mb4.5
ETSF Etsaut 26.37 28⇑*iP* **P 23 58 48.7 +0.8**
comp=Z,12nm,0.8s,mb4.4
EPF Esparros 26.88 29 *e*P **P 23 58 52.9 +0.4**
comp=Z,2.2nm,0.5s,mb3.6
EPF Esparros 26.88 29 *e*P **P 23 58 52.9 +0.4**
EPF pmax pmax
comp=Z,1.0nm,0.5s,mb3.6
EPF Esparros 26.88 29 *e*P **P 23 58 52.9 +0.4**
comp=Z,1.1nm,0.5s,mb3.6
EPF Esparros 26.88 29 *e*P **P 23 58 52.9 +0.4**
comp=Z,1.1nm,0.5s,mb3.6
MTLF Montolieu 28.00 31⇑*iP* **P 23 59 01.8 -0.7**
comp=Z,3.4nm,0.7s,mb3.8
MTLF Montolieu 28.00 31⇑*iP* **P 23 59 01.8 -0.7**
MTLF pmax pmax
comp=Z,2.0nm,0.7s,mb3.9
MTLF Montolieu 28.00 31⇑*iP* **P 23 59 01.8 -0.7**
comp=Z,1.7nm,0.7s,mb3.8
MTLF Montolieu 28.00 31⇑*iP* **P 23 59 01.8 -0.7**
comp=Z,1.7nm,0.7s,mb3.8
LFF La Frestale 28.56 27⇑*iP* **P 23 59 07.9 +0.3**
LFF La Frestale 28.56 27⇑*iP* **P 23 59 07.9 +0.3**
CAF Calviac 29.13 29⇑*iP* **P 23 59 12.5 -0.1**
CAF Calviac 29.13 29⇑*iP* **P 23 59 12.5 -0.1**
RJF Les Rejaudoux 29.19 28⇑*iP* **P 23 59 12.8 -0.3**
RJF *e*MLR MLR
comp=Z,147nm,21.5s,MS3.3
RJF Les Rejaudoux 29.19 28⇑*iP* **P 23 59 12.8 -0.3**
RJF LR LR
comp=Z,150nm,21.5s,MS3.6
RJF Les Rejaudoux 29.19 28⇑*iP* **P 23 59 12.8 -0.3**
LASF Ste Croix 29.34 32 *e*P **P 23 59 14.3 -0.2**
comp=Z,19nm,1.1s,mb4.4
LASF Ste Croix 29.34 32 *e*P **P 23 59 14.3 -0.2**
comp=Z,9.4nm,1.1s,mb4.4
MFF Saint Martin d 29.56 24 *e*P **P 23 59 16.1 -0.3**
MFF Saint Martin d 29.56 24 *e*P **P 23 59 16.1 -0.3**
QUIF Quistinic 29.65 19⇑*iP* **P 23 59 16.7 -0.5**
comp=Z,9.7nm,0.6s,mb4.4
QUIF Quistinic 29.65 19⇑*iP* **P 23 59 16.7 -0.5**
QUIF pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
QUIF Quistinic 29.65 19⇑*iP* **P 23 59 16.7 -0.5**
comp=Z,4.8nm,0.6s,mb4.4
QUIF Quistinic 29.65 19⇑*iP* **P 23 59 16.7 -0.5**
comp=Z,4.8nm,0.6s,mb4.4
ROSF Rostrenen 29.99 19 *e*P **P 23 59 19.6 -0.6**
ROSF Rostrenen 29.99 19 *e*P **P 23 59 19.6 -0.6**
SGMF Saint Gilles 30.14 20⇑*iP* **P 23 59 21.1 -0.4**
comp=Z,5.0nm,0.6s,mb4.1
SGMF Saint Gilles 30.14 20⇑*iP* **P 23 59 21.1 -0.4**
SGMF pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
SGMF Saint Gilles 30.14 20⇑*iP* **P 23 59 21.1 -0.4**
comp=Z,2.5nm,0.6s,mb4.1
SGMF Saint Gilles 30.14 20⇑*iP* **P 23 59 21.1 -0.4**
comp=Z,2.5nm,0.6s,mb4.1
SMRF Simiane la Rot 30.14 34⇑*iP* **P 23 59 22.1 +0.5**
SMRF Simiane la Rot 30.14 34⇑*iP* **P 23 59 22.1 +0.5**
LMR La Mourre 30.20 36⇑*iP* **P 23 59 21.8 -0.3**
comp=Z,6.2nm,0.7s,mb4.1
LMR La Mourre 30.20 36⇑*iP* **P 23 59 21.8 -0.3**
LMR pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
LMR La Mourre 30.20 36⇑*iP* **P 23 59 21.8 -0.3**
comp=Z,3.1nm,0.7s,mb4.2
LMR La Mourre 30.20 36⇑*iP* **P 23 59 21.8 -0.3**
comp=Z,3.1nm,0.7s,mb4.1
TCF Toulx Ste Croi 30.26 27⇑*iP* **P 23 59 22.7 +0.1**
comp=Z,13nm,0.9s,mb4.4
TCF Toulx Ste Croi 30.26 27⇑*iP* **P 23 59 22.7 +0.1**
TCF pmax pmax
comp=Z,7.0nm,0.9s,mb4.4
TCF Toulx Ste Croi 30.26 27⇑*iP* **P 23 59 22.7 +0.1**
comp=Z,6.6nm,0.9s,mb4.4
TCF Toulx Ste Croi 30.26 27⇑*iP* **P 23 59 22.7 +0.1**
comp=Z,6.6nm,0.9s,mb4.4
VIVF Saint-Julien-l 30.31 32⇑*iP* **P 23 59 23.0 0.0**
comp=Z,7.0nm,0.8s,mb4.1
VIVF Saint-Julien-l 30.31 32⇑*iP* **P 23 59 23.0 0.0**
VIVF pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
VIVF Saint-Julien-l 30.31 32⇑*iP* **P 23 59 23.0 0.0**
comp=Z,3.5nm,0.8s,mb4.1
VIVF Saint-Julien-l 30.31 32⇑*iP* **P 23 59 23.0 0.0**
comp=Z,3.5nm,0.8s,mb4.1
FRF La Foret Royal 30.43 35 *e*P **P 23 59 24.0 -0.1**
FRF La Foret Royal 30.43 35 *e*P **P 23 59 24.0 -0.1**
BGF Bois d'Agland 30.75 27⇑*iP* **P 23 59 27.3 +0.4**
comp=Z,10nm,0.6s,mb4.6
BGF Bois d'Agland 30.75 27⇑*iP* **P 23 59 27.3 +0.4**
BGF pmax pmax
comp=Z,5.0nm,0.6s,mb4.5
BGF Bois d'Agland 30.75 27⇑*iP* **P 23 59 27.3 +0.4**
comp=Z,5.1nm,0.6s,mb4.5
BGF Bois d'Agland 30.75 27⇑*iP* **P 23 59 27.3 +0.4**
comp=Z,5.1nm,0.6s,mb4.6
GRR Gorron 30.81 21⇑*iP* **P 23 59 27.4 0.0**
comp=Z,22nm,0.7s,mb4.8
GRR Gorron 30.81 21⇑*iP* **P 23 59 27.4 0.0**
GRR pmax pmax
comp=Z,11nm,0.7s,mb4.8
GRR Gorron 30.81 21⇑*iP* **P 23 59 27.4 0.0**
comp=Z,11nm,0.7s,mb4.8
GRR Gorron 30.81 21⇑*iP* **P 23 59 27.4 0.0**
comp=Z,11nm,0.7s,mb4.8
ORIF Oris-en-Rattie 30.95 33 *e*P **P 23 59 29.6 +0.8**
ORIF *e*MLR MLR
comp=Z,99nm,20.0s,MS3.2
ORIF Oris-en-Rattie 30.95 33 *e*P **P 23 59 29.6 +0.8**
PGF Pioggiola 31.12 39 *e*P **P 23 59 30.2 -0.1**
PGF Pioggiola 31.12 39 *e*P **P 23 59 30.2 -0.1**
AVF Avril sur Loir 31.15 28 *e*P **P 23 59 30.5 +0.1**
AVF Avril sur Loir 31.15 28 *e*P **P 23 59 30.5 +0.1**
LDF La Druitiere 31.24 22⇑*iP* **P 23 59 31.0 -0.2**
comp=Z,6.4nm,0.6s,mb4.3
LDF La Druitiere 31.24 22⇑*iP* **P 23 59 31.0 -0.2**
LDF pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
LDF La Druitiere 31.24 22⇑*iP* **P 23 59 31.0 -0.2**
comp=Z,3.2nm,0.6s,mb4.3
LDF La Druitiere 31.24 22⇑*iP* **P 23 59 31.0 -0.2**
comp=Z,3.2nm,0.6s,mb4.3
SMF Signal de Mont 31.25 28⇑*iP* **P 23 59 31.5 +0.2**
SMF Signal de Mont 31.25 28⇑*iP* **P 23 59 31.5 +0.2**
FLN La Foliniere 31.26 21 *e*P **P 23 59 31.0 -0.4**
comp=Z,6.3nm,0.6s,mb4.4
FLN *e*MLR MLR
comp=Z,107nm,20.2s,MS3.2
FLN La Foliniere 31.26 21 *e*P **P 23 59 31.0 -0.4**
FLN pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
FLN MLR MLR
comp=Z,110nm,20.3s,MS3.5
FLN La Foliniere 31.26 21 *e*P **P 23 59 31.0 -0.4**
comp=Z,3.2nm,0.6s,mb4.3
FLN LR LR
comp=Z,110nm,20.3s,MS3.5
FLN La Foliniere 31.26 21 *e*P **P 23 59 31.0 -0.4**
comp=Z,3.2nm,0.6s,mb4.4
MBDF Montbardon 31.28 34⇑*iP* **P 23 59 32.3 +0.7**
comp=Z,5.0nm,0.8s,mb4.1
MBDF Montbardon 31.28 34⇑*iP* **P 23 59 32.3 +0.7**
MBDF pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
MBDF Montbardon 31.28 34⇑*iP* **P 23 59 32.3 +0.7**
comp=Z,2.5nm,0.8s,mb4.1
MBDF Montbardon 31.28 34⇑*iP* **P 23 59 32.3 +0.7**
comp=Z,2.5nm,0.8s,mb4.1
SSF Saint Saulge 31.42 28⇑*iP* **P 23 59 32.9 +0.1**
comp=Z,11nm,0.7s,mb4.5
SSF Saint Saulge 31.42 28⇑*iP* **P 23 59 32.9 +0.1**
SSF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
SSF Saint Saulge 31.42 28⇑*iP* **P 23 59 32.9 +0.1**
comp=Z,5.3nm,0.7s,mb4.5
SSF Saint Saulge 31.42 28⇑*iP* **P 23 59 32.9 +0.1**
comp=Z,5.3nm,0.7s,mb4.5
BNI Bardonecchia 31.46 33 *e*P **P 23 59 33.1 -0.1**
BNI pmax pmax
comp=Z,3.0nm,1.0s,mb4.1
BNI Bardonecchia 31.46 33 *e*P **P 23 59 33.1 -0.1**
comp=Z,3.2nm,1.0s,mb4.1
BNI Bardonecchia 31.46 33 *e*P **P 23 59 33.1 -0.1**
comp=Z,3.0nm,1.0s,mb4.1
LOR Lormes 31.74 28⇑*iP* **P 23 59 35.6 0.0**
comp=Z,5.0nm,0.6s,mb4.2
LOR *e*MLR MLR
comp=Z,115nm,19.0s,MS3.3
LOR Lormes 31.74 28⇑*iP* **P 23 59 35.6 0.0**
LOR pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
LOR MLR MLR
comp=Z,120nm,19.0s,MS3.6
LOR Lormes 31.74 28⇑*iP* **P 23 59 35.6 0.0**
comp=Z,2.5nm,0.6s,mb4.2
LOR LR LR
comp=Z,120nm,19.0s,MS3.6
LOR Lormes 31.74 28⇑*iP* **P 23 59 35.6 0.0**
comp=Z,2.5nm,0.6s,mb4.2
LPG La Plagne 31.80 33⇑*iP* **P 23 59 37.2 +1.0**
comp=Z,3.6nm,0.7s,mb4.0
LPG La Plagne 31.80 33⇑*iP* **P 23 59 37.2 +1.0**
LPG pmax pmax
comp=Z,2.0nm,0.7s,mb4.1
LPG La Plagne 31.80 33⇑*iP* **P 23 59 37.2 +1.0**
comp=Z,1.8nm,0.7s,mb4.0
LPG La Plagne 31.80 33⇑*iP* **P 23 59 37.2 +1.0**
comp=Z,1.8nm,0.7s,mb4.0
LPL La Plagne 31.80 33⇑*iP* **P 23 59 37.1 +0.9**
LPL La Plagne 31.80 33⇑*iP* **P 23 59 37.1 +0.9**
CABF La Chapelle 32.26 31⇑*iP* **P 23 59 40.6 +0.4**
CABF La Chapelle 32.26 31⇑*iP* **P 23 59 40.6 +0.4**
MEZF Maizieres J'vi 33.20 27⇑*iP* **P 23 59 48.8 +0.4**
comp=Z,18nm,0.6s,mb4.9
MEZF Maizieres J'vi 33.20 27⇑*iP* **P 23 59 48.8 +0.4**
comp=Z,18nm,0.6s,mb5.2
MEZF Maizieres J'vi 33.20 27⇑*iP* **P 23 59 48.8 +0.4**
comp=Z,9.2nm,0.6s,mb4.9
HAU Haudompre 33.40 29⇑*iP* **P 23 59 50.2 0.0**
comp=Z,5.7nm,0.6s,mb4.4
HAU *e*MLR MLR
comp=Z,79nm,18.0s,MS3.2
HAU Haudompre 33.40 29⇑*iP* **P 23 59 50.2 0.0**
HAU pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
HAU MLR MLR
comp=Z,80nm,18.0s,MS3.5
HAU Haudompre 33.40 29⇑*iP* **P 23 59 50.2 0.0**
comp=Z,2.8nm,0.6s,mb4.4
HAU LR LR
comp=Z,80nm,18.0s,MS3.5
HAU Haudompre 33.40 29⇑*iP* **P 23 59 50.2 0.0**
comp=Z,2.8nm,0.6s,mb4.4
HINF Hinteralfeld 33.49 30⇑*iP* **P 23 59 50.9 -0.1**
HINF Hinteralfeld 33.49 30⇑*iP* **P 23 59 50.9 -0.1**
AQU L'Aquila 33.72 43 *e*P **P 23 59 53.3 +0.3**
AQU pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
AQU L'Aquila 33.72 43 *e*P **P 23 59 53.3 +0.3**
comp=Z,6.3nm,0.8s,mb4.6
AQU L'Aquila 33.72 43 *e*P **P 23 59 53.3 +0.3**
comp=Z,6.0nm,0.8s,mb4.6
BAIF Baives 34.06 25⇑*iP* **P 23 59 55.7 -0.2**
comp=Z,23nm,0.6s,mb5.0
BAIF Baives 34.06 25⇑*iP* **P 23 59 55.7 -0.2**
BAIF pmax pmax
comp=Z,11nm,0.6s,mb5.0
BAIF Baives 34.06 25⇑*iP* **P 23 59 55.7 -0.2**
comp=Z,11nm,0.6s,mb5.0
BAIF Baives 34.06 25⇑*iP* **P 23 59 55.7 -0.2**
comp=Z,11nm,0.6s,mb5.0
CDF Champ du Feu 34.12 29⇑*iP* **P 23 59 56.4 0.0**
CDF Champ du Feu 34.12 29⇑*iP* **P 23 59 56.4 0.0**
DOU Dourbes 34.24 25 P **P 23 59 57.3 -0.2**
comp=Z,3.6nm,0.8s,mb4.3
DOU Dourbes 34.24 25 P **P 23 59 57.3 -0.2**
comp=Z,3.6nm,0.8s,mb4.3
DAVOX Davos/Dischmat 34.27 34 P **P 23 59 56.5 -1.3**
comp=Z,2.3nm,0.6s,mb4.3,baz=217,slow=9.9,SNR=7.3
DAVOX Davos/Dischmat 34.27 34 P **P 23 59 56.5 -1.3**
DAVOX pmax pmax
comp=Z,2.0nm,0.6s
DAVOX Davos/Dischmat 34.27 34 P **P 23 59 56.5 -1.3**
comp=Z,2.0nm,0.6s,mb4.2
GIVF Givet 34.34 25⇑*iP* **P 23 59 57.9 -0.4**
comp=Z,25nm,0.6s,mb5.0
GIVF Givet 34.34 25⇑*iP* **P 23 59 57.9 -0.4**
GIVF pmax pmax
comp=Z,13nm,0.6s,mb5.0
GIVF Givet 34.34 25⇑*iP* **P 23 59 57.9 -0.4**
comp=Z,13nm,0.6s,mb5.0
GIVF Givet 34.34 25⇑*iP* **P 23 59 57.9 -0.4**
comp=Z,13nm,0.6s,mb5.0
SNF Seneffe 34.45 24 P **P 23 59 58.9 -0.3**
SNF Seneffe 34.45 24 P **P 23 59 58.9 -0.4**
WLF Walferdange 34.55 27 *e*P **P 23 59 57.4 -2.8**
WLF pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
WLF Walferdange 34.55 27 *e*P **P 23 59 57.4 -2.7**
comp=Z,5.8nm,0.7s,mb4.6
DAVA Damuels 34.61 33 *i*P **P 00 00 00.0 -0.6**
comp=Z,12nm,0.8s,mb4.9
BCLA Clavier 34.78 25 P **P 00 00 01.8 -0.3**
BCLA Clavier 34.78 25 P **P 00 00 01.8 -0.3**
FETA Feichten 34.87 34⇑*iP* **P 00 00 02.2 -0.8**
comp=Z,16nm,0.8s,mb5.0,SNR=13
RETA Reutte 35.19 33⇑*iP* **P 00 00 04.8 -0.9**
comp=Z,9.0nm,0.7s,mb4.8,SNR=7.2
WTTA Wattenberg 35.50 34⇑*iP* **P 00 00 07.5 -0.9**
comp=Z,24nm,0.8s,mb5.2,SNR=13

ABTA	Abfaltersbach	35.66	36	⇑	iP	P	00 00 09.6	-0.1
	comp=Z,21nm,1.0s,mb5.0,SNR=18							
FUR	Furstenfeldbru	35.89	33		eP	P	00 00 11.4	-0.3
	comp=Z,14nm,0.6s,mb5.1							
FUR	Furstenfeldbru	35.89	33		eP	P	00 00 11.4	-0.3
FUR					pmax	pmax		
	comp=Z,14nm,0.6s,mb5.1							
FUR	Furstenfeldbru	35.89	33		eP	P	00 00 11.4	-0.3
	comp=Z,14nm,0.6s,mb5.1							
FUR	Furstenfeldbru	35.89	33		eP	P	00 00 11.4	-0.3
	comp=Z,14nm,0.6s,mb5.1							
TNS	Taunus Mts	35.96	28		eP	P	00 00 12.2	-0.1
	comp=Z,14nm,0.7s,mb5.0							
TNS	Taunus Mts	35.96	28		eP	P	00 00 12.2	-0.1
TNS					pmax	pmax		
	comp=Z,14nm,0.7s,mb5.0							
TNS	Taunus Mts	35.96	28		eP	P	00 00 12.2	-0.1
	comp=Z,14nm,0.7s,mb5.0							
TNS	Taunus Mts	35.96	28		eP	P	00 00 12.2	-0.1
	comp=Z,14nm,0.7s,mb5.0							
ESK	Eskdalemuir	36.38	13		P	P	00 00 14.9	-0.8
ESK	Eskdalemuir	36.38	13		P	P	00 00 14.9	-0.8
LJU	Ljubljana	36.38	38		eP	P	00 00 17.8	+1.8
LJU	Ljubljana	36.38	38		eP	P	00 00 17.8	+1.9
RJOB	Jochberg	36.41	35		eP	P	00 00 15.3	-0.9
	comp=Z,12nm,0.7s,mb4.9							
BOJS	Bojanci	36.51	39		eP	P	00 00 17.2	+0.2
BOJS	Bojanci	36.51	39		eP	P	00 00 17.2	+0.2
GRA1	Grafenberg Arr	36.88	31		eP	P	00 00 20.0	-0.1
	comp=Z,14nm,1.0s,mb4.8							
GRA1					epP	pP	00 00 26.3	+3.1
GRA1	Grafenberg Arr	36.88	31		epP	pP	00 00 26.3	+3.1
GRA1	Grafenberg Arr	36.88	31		eP	P	00 00 20.0	-0.1
	comp=Z,14nm,1.0s,mb4.8							
GRF	Grafenberg Arr	36.88	31		eP	P	00 00 20.0	-0.1
GRF					epP	pP	00 00 26.3	+3.1
GRF	Grafenberg Arr	36.88	31		eP	P	00 00 20.0	-0.1
GRF					e*PP	pP	00 00 26.3	+3.1
GRF					pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8							
DOBS	Dobrina	36.99	39		eP	P	00 00 21.3	+0.2
DOBS	Dobrina	36.99	39		eP	P	00 00 21.3	+0.2
SOKA	Soboth	37.03	37	⇓	iP	P	00 00 21.8	+0.4
	comp=Z,10nm,1.2s,mb4.5							
GROS	Grobnik	37.17	38		eP	P	00 00 23.2	+0.5
GROS					e	pP	00 00 26.7	+0.9
GROS					i		00 00 29.7	
GROS	Grobnik	37.17	38		eP	P	00 00 23.2	+0.5
IBBN	Ibbenburen	37.22	25		eP	P	00 00 26.0	+3.0
	comp=Z,10.0nm,0.7s,mb4.8							
MOA	Molln	37.27	35	⇓	iP	P	00 00 22.6	-0.9
	comp=Z,14nm,0.8s,mb4.8,SNR=9.0							
WET	Wettzell	37.34	33		eP	P	00 00 23.4	-0.6
	comp=Z,5.0nm,0.9s,mb4.3							
WET	Wettzell	37.34	33		eP	P	00 00 23.4	-0.6
WET					pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.3							
WET	Wettzell	37.34	33		eP	P	00 00 23.4	-0.6
	comp=Z,5.0nm,0.9s,mb4.3							
WET	Wettzell	37.34	33		eP	P	00 00 23.4	-0.6
	comp=Z,5.0nm,0.9s,mb4.3							
ROTZ	Rotzenmuhle	37.40	32		eP	P	00 00 24.5	-0.1
	comp=Z,13nm,1.8s,mb4.5							
GEC2	GERESS Array S	37.57	34		eP	P	00 00 26.1	+0.1
	comp=Z,9.0nm,0.8s,mb4.5							
GEC2	GERESS Array S	37.57	34		eP	P	00 00 26.1	+0.1
GEC2					pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5							
GEC2	GERESS Array S	37.57	34		eP	P	00 00 26.1	+0.1
	comp=Z,9.0nm,0.8s,mb4.5							
GEC2	GERESS Array S	37.57	34		eP	P	00 00 26.1	+0.1
	comp=Z,9.0nm,0.8s,mb4.5							
KHC	Kasperske Hory	37.69	33		eP	P	00 00 26.3	-0.7
KHC					e*PP	pP	00 00 32.5	+2.4
KHC					MLR	MLR		
	comp=Z,100nm,24.2s,MS3.5							
KHC	Kasperske Hory	37.69	33		eP	P	00 00 26.3	-0.7
KHC					ex	x	00 00 32.5	
KHC					AMS	AMS	00 16 50.0	
	comp=Z,100nm,24.2s							
KHC	Kasperske Hory	37.69	33		eP	P	00 00 26.3	-0.7
	comp=Z,100nm,24.2s							
MOX	Moxa	37.70	30		eP	P	00 00 26.9	-0.2
	comp=Z,3.0nm,1.1s,mb3.9							
CLZ	Clausthal	37.97	28		eP	P	00 00 31.9	+2.5
	comp=Z,4.0nm,1.1s,mb4.1							
CLZ	Clausthal	37.97	28		eP	P	00 00 31.9	+2.5
CLZ					pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.1							
CLZ	Clausthal	37.97	28		eP	P	00 00 31.9	+2.5
	comp=Z,4.0nm,1.1s,mb4.1							
CLZ	Clausthal	37.97	28		eP	P	00 00 31.9	+2.5
	comp=Z,4.0nm,1.1s,mb4.1							
PRU	Pruhonice	38.71	33		eP	P	00 00 35.5	-0.1
PRU					e*PP	pP	00 00 41.5	+2.8
PRU	Pruhonice	38.71	33		eP	P	00 00 35.5	-0.1
PRU					ex	x	00 00 41.5	
TREC	Trest	38.78	34		eP	P	00 00 42.3	+6.1
TREC	Trest	38.78	34		ex	P	00 00 42.3	+6.1
CLL	Collm	38.80	30		eP	P	00 00 36.2	-0.1
	comp=Z,2.0nm,0.6s,mb4.0							
CLL	Collm	38.80	30	⇑	iP	P	00 00 36.1	-0.2
CLL					i		00 00 41.1	
CLL					pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2							
CLL	Collm	38.80	30	⇑	iP	P	00 00 36.1	-0.2
	comp=Z,3.0nm,0.6s,mb4.2							
CLL					i		00 00 41.1	
CLL	Collm	38.80	30	⇑	iP	P	00 00 36.1	-0.2
	comp=Z,3.0nm,0.6s,mb4.2							
CLL					i sP	sP	00 00 41.1	+0.4
	comp=Z,5.0nm,0.9s							
CLL	Collm	38.80	30	⇑	iP	P	00 00 36.1	-0.2
BRG	Berggiesshubel	38.97	31		eP	P	00 00 37.7	-0.1
	comp=Z,2.0nm,0.7s,mb4.0							
PVCC	Panska Ves	39.06	32		eP	P	00 00 38.5	0.0
PVCC					e*PP	pP	00 00 45.0	+3.4
PVCC	Panska Ves	39.06	32		eP	P	00 00 38.5	0.0
PVCC					ex	x	00 00 45.0	
VRAC	Vranov	39.38	35	⇓	iP	P	00 00 41.1	-0.1
BSEG	Bad Segeberg	39.46	25		eP	P	00 00 41.4	-0.4
	comp=Z,18nm,1.2s,mb4.7							
BSEG	Bad Segeberg	39.46	25		eP	P	00 00 41.4	-0.4
BSEG	Bad Segeberg	39.46	25		eP	P	00 00 41.4	-0.4
UPC	Upice	39.78	33		eP	P	00 00 44.1	-0.4
UPC					e*PP	pP	00 00 50.5	+2.9
UPC	Upice	39.78	33		eP	P	00 00 44.1	-0.4
UPC					ex	x	00 00 50.5	
DPC	Dobruska-Polom	39.84	33		eP	P	00 00 44.8	-0.3
DPC					e*PP	pP	00 00 51.0	+2.8
DPC	Dobruska-Polom	39.84	33		eP	P	00 00 44.8	-0.3
DPC					ex	x	00 00 51.0	
MORC	Moravsky Berou	40.15	35		eP	P	00 00 47.3	-0.4
MORC					pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.9							
MORC	Moravsky Berou	40.15	35		eP	P	00 00 47.3	-0.4
	comp=Z,2.2nm,0.8s,mb3.9							
MORC	Moravsky Berou	40.15	35	⇑	iP	P	00 00 47.6	-0.1
MORC	Moravsky Berou	40.15	35		eP	P	00 00 47.3	-0.4
	comp=Z,2.2nm,0.8s,mb3.9							
VYHS	Vyhne	40.17	37		eP	P	00 00 47.5	-0.3
VYHS					pmax	pmax		
	comp=Z,4.0nm,1.5s,mb3.9							
VYHS	Vyhne	40.17	37		eP	P	00 00 47.5	-0.3
	comp=Z,3.7nm,1.5s,mb3.9							
VYHS	Vyhne	40.17	37		eP	P	00 00 47.5	-0.3
VYHS	Vyhne	40.17	37		eP	P	00 00 47.5	-0.3
	comp=Z,3.7nm,1.5s,mb3.9							
VTS	Vitosha	40.36	48	⇑	iP	P	00 00 51.3	+1.8
BZS	Buzias	40.48	43	⇑	iP	P	00 00 51.6	+1.2
APE	Apeiranthos	40.54	57	⇑	iP	P	00 00 48.7	-2.3
KECS	Kecovo	41.11	38		eP	P	00 00 51.5	-4.1
KECS					pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.5							
KECS	Kecovo	41.11	38		eP	P	00 00 51.5	-4.1
	comp=Z,1.4nm,0.8s,mb3.6							
KECS	Kecovo	41.11	38		eP	P	00 00 51.5	-4.1
DRGR		41.67	41	⇓	iP	P	00 01 01.0	+0.8
STHS	Stebnicka Huta	42.01	37		eP	P	00 00 58.0	-4.9
STHS					pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.9							
STHS	Stebnicka Huta	42.01	37		eP	P	00 00 58.0	-4.9
	comp=Z,3.1nm,0.9s,mb3.9							
STHS	Stebnicka Huta	42.01	37		eP	P	00 00 58.0	-4.9
VOIR		42.62	44	⇓	iP	P	00 01 09.2	+1.2
BALY	Balya	42.73	53	⇑	iP	P	00 01 09.7	+0.8
MLR	Muntele Rosu	43.23	45	⇑	iP	P	00 01 13.8	+0.9
BURAR	Bucovina Array	43.57	41	⇑	iP	P	00 01 16.4	+0.8
KONO	Kongsberg	43.58	19		P	P	00 01 14.6	-0.9
KONO					pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.4							
KONO	Kongsberg	43.58	19		P	P	00 01 14.6	-1.0
	comp=Z,9.5nm,1.2s,mb4.4							
KONO	Kongsberg	43.58	19		P	P	00 01 14.6	-0.9
	comp=Z,9.4nm,1.2s,mb4.4							
VRI	Vrincioaia	43.88	44	⇑	iP	P	00 01 19.1	+1.0
NAO01	NORSAR Array S	44.92	19		eP	P	00 01 24.4	-1.8
	comp=Z,1.9nm,0.7s,mb4.0							
NAO01	NORSAR Array S	44.92	19		eP	P	00 01 24.4	-1.9
	comp=Z,1.9nm,0.7s,mb4.0							
NB2	NORSAR Subarra	45.17	19		P	P	00 01 26.9	-1.4
	comp=Z,4.7nm,1.2s,mb4.2,baz=219,slow=7.9							
NB2	NORSAR Subarra	45.17	19		P	P	00 01 26.9	-1.4
	comp=Z,4.7nm,1.2s,mb4.2,SNR=7.3							
NOA	NORSAR Array B	45.17	19		P	P	00 01 27.2	-1.1
	comp=Z,0.7nm,0.6s,mb3.6,baz=218,slow=7.7,SNR=7.2							
NOA					PcP	PcP	00 03 09.4	+1.0
	comp=Z,1.0nm,0.8s,baz=46,slow=3.7,SNR=4.6							
NOA					LR	LR	00 19 28.2	
	comp=Z,20nm,20.1s,MS3.0,baz=215,slow=35							
NOA	NORSAR Array B	45.17	19		P	P	00 01 27.2	-1.1
NOA							00 03 09.4	
NOA					pmax	pmax		
	comp=Z,1.0nm,0.6s							
NOA					pmax	pmax		
	comp=Z,1.0nm,0.8s							
NOA					MLR	MLR		
	comp=Z,20nm,20.1s							
NOA	NORSAR Array B	45.17	19		P	P	00 01 27.2	-1.1
NOA					PcP	PcP	00 03 09.4	+1.0
NOA					LR	LR	00 19 28.2	
NOA	NORSAR Array B	45.17	19		P	P	00 01 27.2	-1.1
NOA	NORSAR Array B	45.17	19		PcP	PcP	00 03 09.4	+1.0
BBAL	Bala	46.86	55	⇑	iP	P	00 01 43.0	+1.1
KIEV	Kiev	47.18	39		eP	P	00 01 42.3	-1.9
KIEV					pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3							
KIEV	Kiev	47.18	39		eP	P	00 01 42.3	-2.0
	comp=Z,2.9nm,0.8s,mb4.3							
KIEV	Kiev	47.18	39		eP	P	00 01 42.3	-1.9
	comp=Z,2.9nm,0.8s,mb4.3							
AKASG	Malin Array Be	47.20	39		P	P	00 01 42.6	-1.7
	comp=Z,0.7nm,0.4s,mb3.9,baz=245,slow=8.8,SNR=6.1							
AKASG	Malin Array Be	47.20	39		P	P	00 01 42.6	-1.7
AKASG					pmax	pmax		
	comp=Z,1.0nm,0.4s							
AKASG	Malin Array Be	47.20	39		P	P	00 01 42.6	-1.7
BR131	Keskin Array S	47.28	54		eP	P	00 01 46.2	+1.0
	comp=Z,7.1nm,0.6s,mb4.8							
BR131	Keskin Array S	47.28	54		eP	P	00 01 46.2	+1.0
	comp=Z,7.1nm,0.6s,mb4.8							
BRTR	Keskin Array B	47.28	54		P	P	00 01 46.2	+1.0
	comp=Z,9.6nm,0.7s,mb4.8,baz=249,slow=6.8,SNR=64							
BRTR	Keskin Array B	47.28	54		P	P	00 01 46.2	+1.0
BRTR					pmax	pmax		
	comp=Z,10.0nm,0.7s							
BRTR	Keskin Array B	47.28	54		P	P	00 01 46.2	+1.0
BALT	Daday	47.39	52		eP	P	00 01 46.4	+0.4
ANDN	Andirin	49.14	58	⇑	iP	P	00 02 00.8	+1.3
GZT	Gaziantep	50.09	58	⇑	iP	P	00 02 08.2	+1.4
SCHQ	Schefferville	50.65	325		P	P	00 02 09.6	-1.2
	comp=Z,2.9nm,0.8s,mb4.2,baz=169,slow=4.5,SNR=4.1							
SCHQ					PcP	PcP	00 03 28.3	+0.1
	comp=Z,1.8nm,0.5s,baz=104,slow=3.2,SNR=7.4							
SCHQ	Schefferville	50.65	325		P	P	00 02 09.6	-1.2
SCHQ					PcP	PcP	00 03 28.3	+0.1
SCHQ	Schefferville	50.65	325		P	P	00 02 09.6	-1.2
SCHQ	Schefferville	50.65	325		PcP	PcP	00 03 28.3	+0.1
FINES	FINESS Array B	50.74	25		P	P	00 02 10.6	-0.7
	comp=Z,3.9nm,0.8s,mb4.4,baz=235,slow=5.5,SNR=21							
FINES	FINESS Array B	50.74	25		P	P	00 02 10.6	-0.7
FINES					pmax	pmax		
	comp=Z,4.0nm,0.9s							
FINES	FINESS Array B	50.74	25		P	P	00 02 10.6	-0.7
KEMA	Kemaliye	50.96	56		iP	P	00 02 13.7	+0.3
KAF	Kangasniemi	51.20	25		eP	P	00 02 13.6	-1.2
KAF	Kangasniemi	51.20	25		ep	P	00 02 13.6	-1.2
MBAR	Mbarara	51.28	108	⇑	iP	P	00 02 16.7	+0.5
OBN	Obninsk	52.91	35		eP	P	00 02 28.1	+0.5
OBN					e*PP	pP	00 02 35.5	+4.7
OBN					pmax	pmax		
	comp=Z,21nm,2.5s,mb4.6							
VSR	Storozhevoye	53.33	41		eP	P	00 02 29.9	-0.9
VSR					pmax	pmax		
	comp=N,10.0nm,1.4s							
VSR					pmax	pmax		
	comp=E,10.0nm,1.4s							
VSR					pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.5							
DDEM	Demirkent	53.57	54		eP	P	00 02 32.8	0.0
JOF	Joensuu	53.60	25		eP	P	00 02 31.1	-1.5
JOF	Joensuu	53.60	25		ep	P	00 02 31.1	-1.5
HOMI	Horasan	53.64	55		eP	P	00 02 34.7	+1.4
DAGI	Agilar	53.71	54	⇑	iP	P	00 02 34.2	+0.4
ARTV	Artvin	53.73	53	⇑	iP	P	00 02 34.2	+0.3
TUTA	Tutak	54.31	56		eP	P	00 02 38.5	+0.2
KIV	Kislovodsk	54.51	50		eP	P	00 02 38.8	-0.8
KIV					pmax	pmax		
	comp=Z,11nm,1.2s,mb4.8							
KIV	Kislovodsk	54.51	50		eP	P	00 02 38.3	-1.2
	comp=Z,7.1nm,1.2s,mb4.6							
KIV	Kislovodsk	54.51	50		eP	P	00 02 38.3	-1.3
	comp=Z,7.1nm,1.2s,mb4.6							
HAKT	HAKKARI	54.98	58	⇑	iP	P	00 02 43.8	+0.7
ARCES	ARCESS Array B	55.42	17		P	P	00 02 45.0	-0.7
	comp=Z,1.8nm,0.7s,mb4.2,baz=217,slow=7.0,SNR=9.3							
ARCES	ARCESS Array B	55.42	17		P	P	00 02 45.0	-0.7
ARCES					pmax	pmax		
	comp=Z,2.0nm,0.7s							
ARCES	ARCESS Array B	55.42	17		P	P	00 02 45.0	-0.7
GNI	Garni	55.82	55		eP	P	00 02 48.8	-0.3
GNI					pmax	pmax		
	comp=Z,6.0nm,0.8s							
GNI	Garni	55.82	55		eP	P	00 02 48.8	-0.3
	comp=Z,6.2nm,0.8s,mb4.7							
GNI	Garni	55.82	55		eP	P	00 02 48.8	-0.3
	comp=Z,6.2nm,0.8s,mb4.7							
KMBO	Kilima Mbogo	57.36	105		P	P	00 02 59.2	-1.3
	comp=Z,3.5nm,1.0s,mb4.3,baz=359,slow=24,SNR=5.6							
KMBO	Kilima Mbogo	57.36	105		P	P	00 02 59.2	-1.3
KMBO					pmax	pmax		
	comp=Z,4.0nm,1.0s							
KMBO	Kilima Mbogo	57.36	105		P	P	00 02 59.2	-1.3
KMBO	Kilima Mbogo	57.36	105		P	P	00 02 59.2	-1.3
CPUP	Villa Florida	60.68	222		P	P	00 03 23.2	0.0
	comp=Z,2.4nm,0.7s,mb4.4,baz=2.9,slow=7.0,SNR=5.5							
CPUP	Villa Florida	60.68	222		eP	P	00 03 28.2	+5.0
CPUP					pmax	pmax		
	comp=Z,19nm,1.2s							
CPUP	Villa Florida	60.68	222		eP	P	00 03 28.2	+5.0
	comp=Z,19nm,1.2s,mb5.1							
LBTB	Lobatse	61.37	135		eP	P	00 03 28.0	+0.1
LBTB					pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.7							
LBTB	Lobatse	61.37	135		eP	P	00 03 28.0	0.0
	comp=Z,3.2nm,0.5s,mb4.7							
LBTB	Lobatse	61.37	135		eP	P	00 03 28.0	+0.1
	comp=Z,3.2nm,0.5s,mb4.7							
LPAZ	La Paz	61.96	238		P	P	00 03 32.2	+0.1
	comp=Z,1.2nm,0.7s,mb4.2,baz=34,slow=7.4,SNR=7.1							
LPAZ					LR	LR	00 28 25.0	
	comp=Z,46nm,18.4s,MS3.7,baz=89,slow=34							
OLIL	Olney	62.91	304		eP	P	00 03 37.8	-0.3
	comp=Z,14nm,0.6s,mb5.3							
OLIL	Olney	62.91	304		eP	P	00 03 37.8	-0.4
	comp=Z,14nm,0.6s,mb5.3							
WVT	Waverly	62.96	301		eP	P	00 03 37.7	-0.8
WVT					pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.7							
WVT	Waverly	62.96	301		eP	P	00 03 37.7	-0.8
	comp=Z,4.0nm,0.6s,mb4.7							
WVT	Waverly	62.96	301		eP	P	00 03 37.7	-0.8
	comp=Z,4.0nm,0.6s,mb4.7							
OTAV	Otavalo	63.16	259		eP	P	00 03 41.0	+0.8
	comp=Z,1.3nm,0.5s,mb4.3							
OTAV	Otavalo	63.16	259		eP	P	00 03 41.0	+0.8
	comp=Z,1.3nm,0.5s,mb4.3							
BOSA	Boshof	63.66	139		P	P	00 03 42.5	-0.7
	comp=Z,10nm,0.5s,mb5.1,baz=317,slow=6.5,SNR=44							
BOSA					LR	LR	00 31 12.2	
	comp=Z,142nm,20.0s,MS4.2,baz=62,slow=36							
BOSA	Boshof	63.66	139		eP	P	00 03 43.1	-0.1
BOSA					pmax	pmax		
	comp=Z,11nm,0.6s,mb5.1							
BOSA	Boshof	63.66	139		eP	P	00 03 43.0	-0.1
	comp=Z,11nm,0.6s,mb5.1							
BOSA	Boshof	63.66	139		eP	P	00 03 43.0	-0.2
	comp=Z,11nm,0.6s,mb5.1							
SUR	Sutherland	63.84	145		eP	P	00 03 44.5	+0.2
	comp=Z,6.7nm,0.6s,mb4.8							
SUR	Sutherland	63.84	145		eP	P	00 03 44.5	+0.2
	comp=Z,6.7nm,0.6s,mb4.8							
ARU	Arti	65.33	36	c	iP	P	00 03 53.3	-0.4
ARU					e		00 06 13.8	
ARU					S	S	00 12 35.3	-2.2
ARU					SS	SS	00 16 44.5	-5.6
ARU					pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8							
ARU	Arti	65.33	36		eP	P	00 03 52.6	-1.1
	comp=Z,9.6nm,0.9s,mb4.8							
ARU	Arti	65.33	36		eP	P	00 03 52.6	-1.1
	comp=Z,9.6nm,0.9s,mb4.8							
RES	Resolute Bay	67.21	344		eP	P	00 04 05.8	+0.3
RES					pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2							
RES	Resolute Bay	67.21	344		eP	P	00 04 05.8	+0.3
	comp=Z,2.2nm,0.8s,mb4.2							
RES	Resolute Bay	67.21	344		eP	P	00 04 05.8	+0.3
	comp=Z,2.0nm,0.8s,mb4.2							
FFC	Flin Flon	70.64	322		eP	P	00 04 24.5	-2.6
FFC					pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3							
FFC	Flin Flon	70.64	322		eP	P	00 04 24.5	-2.6
	comp=Z,3.4nm,0.7s,mb4.4							
LCO	Las Campanas	71.32	228		eP	P	00 04 32.2	+0.6
	comp=Z,5.7nm,0.8s,mb4.5							
LCO	Las Campanas	71.32	228		eP	P	00 04 32.2	+0.6
	comp=Z,5.7nm,0.8s,mb4.5							
TRQA	Tornquist	71.83	216		eP	P	00 04 35.5	+0.9
	comp=Z,2.0nm,0.7s,mb4.2							
TRQA	Tornquist	71.83	216		eP	P	00 04 35.5	+1.0
	comp=Z,2.0nm,0.7s,mb4.2							
WMOK	Wichita Mounta	72.00	301		eP	P	00 04 34.4	-1.4
WMOK					pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5							
WMOK	Wichita Mounta	72.00	301		eP	P	00 04 34.4	-1.4
	comp=Z,4.6nm,0.7s,mb4.5							
WMOK	Wichita Mounta	72.00	301		eP	P	00 04 34.4	-1.4
	comp=Z,5.0nm,0.7s,mb4.5							
BRVK	Borovoye	72.40	39	c	iP	P	00 04 37.4	-0.4
BRVK					pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2							
BRVK	Borovoye	72.40	39		eP	P	00 04 37.9	+0.1
	comp=Z,3.8nm,0.7s,mb4.4							
BRVK	Borovoye	72.40	39		eP	P	00 04 37.9	+0.1
	comp=Z,3.8nm,0.7s,mb4.4							
BVAR	Borovoye Array	72.47	39		P	P	00 04 37.7	-0.6
	comp=Z,2.5nm,0.8s,mb4.2,baz=270,slow=4.2,SNR=18							
BVAR	Borovoye Array	72.47	39		P	P	00 04 37.7	-0.6
BVAR					pmax	pmax		
	comp=Z,3.0nm,0.8s							
BVAR	Borovoye Array	72.47	39		P	P	00 04 37.7	-0.6
	comp=Z,3.0nm,0.8s,mb4.3							
RSSD	Black Hills	73.90	312		eP	P	00 04 47.0	+0.1
RSSD					pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4							
RSSD	Black Hills	73.90	312		eP	P	00 04 47.0	+0.1
	comp=Z,3.6nm,0.8s,mb4.3							
RSSD	Black Hills	73.90	312		eP	P	00 04 47.0	+0.1
	comp=Z,4.0nm,0.8s,mb4.4							
YKA	Yellowknife Ar	75.48	332		P	P	00 04 55.3	-0.4
	comp=Z,0.7nm,0.7s,mb3.7,baz=71,slow=5.9,SNR=4.1							
YKA	Yellowknife Ar	75.48	332		P	P	00 04 55.3	-0.4
YKA					pmax	pmax		
	comp=Z,1.0nm,0.7s							
YKA	Yellowknife Ar	75.48	332		P	P	00 04 55.3	-0.4
YKA	Yellowknife Ar	75.48	332		P	P	00 04 55.3	-0.4
	comp=Z,1.0nm,0.7s,mb3.9							
KBL	Kabul	75.67	58		eP	P	00 04 56.6	-0.7
KBL					pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5							
KBL	Kabul	75.67	58		eP	P	00 04 56.6	-0.7
	comp=Z,4.0nm,0.7s,mb4.5							
KBL	Kabul	75.67	58		eP	P	00 04 56.6	-0.7

LOHW Long Hollow 78.62 312 *eP* **P 00 05 13.4 -0.3**
comp=Z,3.2nm,0.7s,mb4.4
IMW Indian Meadow 78.77 313 *eP* **P 00 05 14.6 +0.1**
comp=Z,7.3nm,0.8s,mb4.7
IMW Indian Meadow 78.77 313 *eP* **P 00 05 14.6 +0.1**
comp=Z,7.3nm,0.8s,mb4.7
TPAW Teton Pass 78.90 312 *eP* **P 00 05 15.3 +0.1**
comp=Z,3.2nm,0.7s,mb4.4
TPAW Teton Pass 78.90 312 *eP* **P 00 05 15.3 0.0**
comp=Z,3.2nm,0.7s,mb4.4
MVCO Mesa Verde 78.98 306 *eP* **P 00 05 17.0 +1.2**
comp=Z,3.7nm,0.8s,mb4.4
MVCO Mesa Verde 78.98 306 *eP* **P 00 05 17.0 +1.1**
comp=Z,3.7nm,0.8s,mb4.4
NVS Novosibirsk 79.31 35 *i P* **P 00 05 17.5 +0.2**
NVS Novosibirsk 79.31 35 *i P* **P 00 05 17.5 +0.2**
CHMT Chamberlain Mo 79.39 316 *eP* **P 00 05 18.4 +0.5**
CHMT Chamberlain Mo 79.39 316 *eP* **P 00 05 18.4 +0.5**
YBMT Yellow Bay 79.58 317 *eP* **P 00 05 22.3 +3.4**
KSH Kashi 79.59 52 P **P 00 05 19.5 +0.4**
KSH pP pP 00 05 25.0 +2.6
KSH sP sP 00 05 27.0 +3.4
KSH PcP PcP 00 05 27.5 +0.5
KSH PP PP 00 08 21.5 +2.0
KSH S S 00 15 18.5 -2.7
KSH sS sS 00 15 26.5 -0.2
KSH ScS ScS 00 15 28.5 -15
KSH SKS 00 15 30.8
KSH SS SS 00 20 28.3 -0.5
KSH pmax pmax
comp=Z,23nm,0.9s,mb5.1
KSH pmax pmax
comp=Z,120nm,6.6s
KSH LR LR
comp=N,93nm,5.6s
KSH LR LR
comp=E,99nm,6.2s
KSH LR LR
comp=Z,180nm,6.5s
KSH Kashi 79.59 52 P **P 00 05 19.5 +0.4**
KSH pP pP 00 05 25.0 +2.6
KSH sP sP 00 05 27.0 +3.4
KSH PcP PcP 00 05 27.5 +0.5
KSH PP PP 00 08 21.5 +2.0
KSH S S 00 15 18.5 -2.7
KSH sS sS 00 15 26.5 -0.2
KSH SS SS 00 20 28.3 -0.5
KSH pmax pmax
comp=Z,23nm,0.9s,mb5.1
KSH pmax pmax
comp=Z,120nm,6.6s
KSH LR LR
comp=N,93nm,5.6s
KSH LR LR
comp=E,99nm,6.2s
KSH LR LR
comp=Z,180nm,6.5s
SWMT Swartz Lake 79.68 317 *eP* **P 00 05 19.4 -0.1**
SWMT Swartz Lake 79.68 317 *eP* **P 00 05 19.4 -0.1**
BSMT Bassoo Peak 80.07 317 *eP* **P 00 05 21.5 -0.1**
BSMT Bassoo Peak 80.07 317 *eP* **P 00 05 21.5 -0.1**
ZALV Zalesovo Beam 80.49 36 P **P 00 05 23.4 -0.3**
comp=Z,2.5nm,0.6s,mb4.3,baz=297,slow=5.1,SNR=15
ZALV Zalesovo Beam 80.49 36 P **P 00 05 23.4 -0.3**
ZALV pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
ZALV Zalesovo Beam 80.49 36 P **P 00 05 23.4 -0.3**
comp=Z,3.0nm,0.6s,mb4.4
HLID Hailey 81.26 313 *eP* **P 00 05 28.3 +0.2**
comp=Z,2.9nm,0.9s,mb4.2
HLID Hailey 81.26 313 *eP* **P 00 05 28.3 +0.3**
comp=Z,2.9nm,0.9s,mb4.2
MSU Marysvale 81.34 308 *eP* **P 00 05 27.8 -0.8**
MSU pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
MSU Marysvale 81.34 308 *eP* **P 00 05 27.8 -0.8**
comp=Z,2.7nm,1.0s,mb4.1
MSU Marysvale 81.34 308 *eP* **P 00 05 27.8 -0.8**
comp=Z,3.0nm,1.0s,mb4.2
MK31 Makanchi Array 81.56 43 *eP* **P 00 05 29.3 -0.3**
MK31 Makanchi Array 81.56 43 *eP* **P 00 05 29.3 -0.3**
MKAR Makanchi Array 81.56 43 P **P 00 05 29.4 -0.1**
comp=Z,3.0nm,0.7s,mb4.3,baz=291,slow=3.1,SNR=15
MKAR Makanchi Array 81.56 43 P **P 00 05 29.5 -0.1**
MKAR pmax pmax
comp=Z,3.0nm,0.7s
TUC Tucson 82.30 301 *eP* **P 00 05 34.6 +0.9**
TUC Tucson 82.30 301 *eP* **P 00 05 34.5 +0.8**
BMO Blue Mountains 82.76 315 *eP* **P 00 05 36.1 +0.2**
BMO pmax pmax
comp=Z,10.0nm,2.0s,mb4.5
BMO Blue Mountains 82.76 315 *eP* **P 00 05 36.1 +0.3**
comp=Z,10nm,2.0s,mb4.5
BMO Blue Mountains 82.76 315 *eP* **P 00 05 36.1 +0.2**
comp=Z,10.0nm,2.0s,mb4.5
WMQ Urumqi 86.23 45 *eP* **P 00 05 53.0 -0.5**
WMQ pP pP 00 05 58.0 +1.2
WMQ sP sP 00 06 00.0 +2.0
WMQ pmax pmax
comp=Z,8.0nm,1.0s,mb4.9
WMQ pmax pmax
comp=Z,100nm,5.2s
ILAR Eielson Array 86.76 341 P **P 00 05 56.3 +0.7**
comp=Z,0.9nm,0.6s,mb4.2,baz=29,slow=4.7,SNR=12
ILAR Eielson Array 86.76 341 P **P 00 05 56.3 +0.7**
ILAR pmax pmax
comp=Z,1.0nm,0.6s
ILAR Eielson Array 86.76 341 P **P 00 05 56.3 +0.7**
comp=Z,1.0nm,0.6s,mb4.2
TLY Talaya 91.56 32 P **P 00 06 18.9 +0.4**
TLY Talaya 91.56 32 P **P 00 06 18.9 +0.4**
BILL Bilibino 91.75 359 *eP* **P 00 06 18.7 -0.4**
BILL *e* 00 09 54.9
BILL pmax pmax
comp=Z,3.0nm,1.0s,mb4.6
BILL Bilibino 91.75 359 *eP* **P 00 06 18.7 -0.4**
comp=Z,3.0nm,1.0s,mb4.6
SONM Songino Array 95.31 34 P **P 00 06 36.3 +0.4**
comp=Z,1.3nm,0.8s,mb4.4,baz=316,slow=6.2,SNR=5.2
SONM Songino Array 95.31 34 P **P 00 06 36.3 +0.4**
SONM pmax pmax
comp=Z,1.0nm,0.8s
SONM Songino Array 95.31 34 P **P 00 06 36.3 +0.4**
comp=Z,1.0nm,0.8s,mb4.3
ULN Ulaanbaatar 95.63 34 *eP* **P 00 06 38.5 +1.1**
ULN pmax pmax
comp=Z,1.0nm,0.6s,mb4.4
ULN Ulaanbaatar 95.63 34 *eP* **P 00 06 38.5 +1.1**
comp=Z,1.3nm,0.6s,mb4.5
ULN Ulaanbaatar 95.63 34 *eP* **P 00 06 38.5 +1.1**
comp=Z,1.0nm,0.6s,mb4.4
LZH Lanzhou 100.80 45 *eP* Pdif 00 06 58.5 -2.0
LZH pP 00 07 02.0
LZH sP 00 07 05.0
LZH pmax pmax
comp=Z,19nm,1.0s
HHC Hu-ho-hao-te 102.63 37 *eP* Pdif 00 07 05.8 -2.8
HHC pP 00 07 07.8
HHC PP PP 00 11 20.5 -0.9
HHC SKS 00 17 43.5
HHC S Sdif 00 18 44.8 -8.7
HHC sS 00 18 51.0
HHC SS SS 00 25 55.0 -5.2
HHC pmax pmax
comp=Z,13nm,0.8s
HHC pmax pmax
comp=Z,94nm,8.2s
HHC Hu-ho-hao-te 102.63 37 *eP* Pdif 00 07 05.8 -2.8
HHC PP PP 00 11 20.5 -0.9
HHC SKS 00 17 43.5
HHC S Sdif 00 18 44.8 -8.7
HHC pmax pmax
comp=Z,13nm,0.8s
HHC pmax pmax
comp=Z,94nm,8.2s
CN2 Changchun 107.45 27 *e*Pdif Pdif 00 07 30.8 +0.8
CN2 PP PP 00 12 02.3 +5.4
CN2 *eS* Sdif 00 19 31.0 -2.8
CN2 AMB AMB
comp=Z,200nm,4.0s
FORT Forrest 147.08 115 *e*PKPbc PKPbc 00 12 55.2 0.0
FORT Forrest 147.08 115 *e*PKPbc PKPbc 00 12 55.2 0.0
ASAR Alice Springs 152.98 102 PKP PKPdf 00 13 02.4 -0.2
comp=Z,5.0nm,0.7s,baz=315,slow=0.5,SNR=4.6
ASAR PKPbc PKPbc 00 13 10.0 +0.1
comp=Z,5.0nm,0.6s,baz=295,slow=1.6,SNR=44
ASAR PKPab PKPab 00 13 21.2 +0.1
comp=Z,3.5nm,0.5s,baz=280,slow=3.3,SNR=21
ASAR Alice Springs 152.98 102 PKIKP PKPdf 00 13 02.4 -0.2
ASAR 00 13 10.0
ASAR pmax pmax
comp=Z,5.0nm,0.7s
ASAR pmax pmax
comp=Z,5.0nm,0.6s
ASAR pmax pmax
comp=Z,4.0nm,0.5s
ASAR Alice Springs 152.98 102 PKIKP PKPdf 00 13 02.3 -0.3
WRAB Tennant Creek 153.24 94 *e*PKIKP PKPbc 00 13 10.3 -0.2
WRAB Tennant Creek 153.24 94 *e*PKPbc PKPbc 00 13 10.3 -0.2

SZGRF ***26*** *00:18:59.4, 20.°27S×169.°79E, h33km, Vanuatu Islands*
LDG ***26*** *00:19:01.0±0.2, 18.°76S×168.°41E, h10km, Mb4.5/2, Error ellipse: s-maj=21.5km s-min=4.4km az=109.0*
NOU ***26*** *00:19:04.0±1.1, 19.°06S×168.°69E, h10km, MD3.1, ML3.2*
ISCJB ***26*** *00:19:04.3±1.8, 19.°29S±0.°08×168.°70E±0.°10, h47km±15km, mb4.4/16, MS3.6/5, Error ellipse: s-maj=15.7km s-min=13.0km az=21.9*
NEIC ***26*** *00:19:04.4±0.4, 19.°10S×168.°88E, mb4.8/7, Error ellipse: s-maj=11.8km s-min=10.9km az=140.0*
IDC ***26*** *00:19:04.6±0.9, 19.°09S×168.°79E, h40km±6km, mb4.1/11, mb1 4.2/11, mb1mx4.1/16, mbtmp4.1/11, MS3.7/6, Ms1 3.7/6, ms1mx3.2/20, Error ellipse: s-maj=23.4km s-min=17.1km az=103.0*
ISC 26 00:19:05.1±1.9, 19.°24S±0.°08×168.°71E±0.°10, h41km±16km, h43km±1.2km; pP-P, n106, σ0.91/30, mb4.4/16, MS3.6/5, 36C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.36**	**210**	*e*P	**Pn**	**00 19 54.9**	**-0.2**
BAYA				*e*S	**Sn**	**00 20 32.7**	**-1.1**
PLUM	**Mont Dore**	**3.58**	**212**	*e*P	**Pn**	**00 19 58.3**	**+0.1**
PLUM				*e*S	**Sn**	**00 20 39.4**	**+0.2**
NORM	**Noumea**	**3.62**	**215**	*e*S	**Sn**	**00 20 39.1**	**-1.2**
NOUC	**Port Laguerre**	**3.62**	**218**	*e*P	**Pn**	**00 19 59.4**	**+0.6**
NOUC				*e*S	**Sn**	**00 20 39.8**	**-0.5**
NOUC				AMP		00 20 44.9	
	comp=Z,141nm,2.5s						
ONTRN	**Noumea**	**3.70**	**214**	*e*P	**Pn**	**00 20 00.5**	**+0.6**
ONTRN				*e*S	**Sn**	**00 20 42.0**	**-0.2**
MSVF	**Nonsavu**	**8.99**	**82**	*e*Pn	**Pn**	**00 21 20.1**	**+7.6**
AFI	**Afiamalu**	**19.44**	**77**	LR	LR	00 29 39.8	
	comp=Z,114nm,19.8s,baz=81,slow=33						
URZ	**Urewera**	**20.31**	**161**	P	**P**	**00 23 38.5**	**+0.9**
	comp=Z,6.3nm,0.6s,baz=11,slow=5.2,SNR=4.5						
CTA	**Charters Tower**	**21.16**	**264**	P	**P**	**00 23 49.2**	**+2.2**
	comp=Z,4.6nm,0.7s,mb3.9,baz=87,slow=14,SNR=4.7						
CTA				LR	LR	00 30 59.6	
	comp=Z,165nm,18.3s,MS3.5,baz=49,slow=34						
CTA	**Charters Tower**	**21.16**	**264**	P	**P**	**00 23 49.2**	**+2.2**
CTA				LR	LR	00 30 59.6	
CTAO	**Charters Tower**	**21.16**	**264**	*e*P	**P**	**00 23 50.0**	**+3.1**
	comp=Z,11nm,0.9s,mb4.2						
PMG	**Port Moresby**	**23.03**	**292**	*e*P	**P**	**00 24 07.5**	**+0.7**
	comp=Z,27nm,1.1s,mb4.6						
RPZ	**Rata Peaks**	**24.48**	**176**	P	**P**	**00 24 21.7**	**+1.4**
	comp=Z,14nm,0.7s,mb4.5,baz=332,slow=1.6,SNR=6.9						
RPZ				LR	LR	00 32 20.2	
	comp=Z,252nm,19.7s,MS3.7,baz=217,slow=32						
COEN	**Coen**	**25.01**	**278**	*e*P	**P**	**00 24 27.1**	**+1.7**
	comp=Z,70nm,1.1s,mb5.1						
STKA	**Stephens Creek**	**27.42**	**237**	P	**P**	**00 24 48.1**	**+1.0**
	comp=Z,2.6nm,0.7s,mb3.9,baz=105,slow=9.5,SNR=5.4						
STKA				PcP	PcP	00 28 05.4	+0.2
	comp=Z,1.5nm,0.6s,baz=76,slow=8.3,SNR=3.4						
STKA				LR	LR	00 34 45.9	
	comp=Z,155nm,20.3s,MS3.6,baz=23,slow=34						
ASAR	**Alice Springs**	**32.64**	**256**	P	**P**	**00 25 32.9**	**-0.4**
	comp=Z,2.4nm,0.4s,mb4.5,baz=84,slow=8.8,SNR=53						
ASAR				pP	pP	00 25 44.5	0.0
	comp=Z,5.7nm,0.8s,baz=86,slow=8.9,SNR=9.5						
FORT	**Forrest**	**38.39**	**245**	*e*P	**P**	**00 26 22.2**	**-0.5**
	comp=Z,21nm,1.0s,mb4.8						
FITZ	**Fitzroy Crossi**	**40.74**	**264**	LR	LR	00 42 13.6	
	comp=Z,95nm,21.5s,MS3.6,baz=122,slow=34						
MBWA	**Marble Bar**	**45.86**	**259**	*e*P	**P**	**00 27 23.4**	**-0.3**
	comp=Z,28nm,1.3s,mb5.0						
MJAR	**Matsushiro Arr**	**62.52**	**333**	P	**P**	**00 29 23.2**	**-1.5**
	comp=Z,1.8nm,0.9s,mb4.2,baz=170,slow=7.4,SNR=5.5						
MJAR				pP	pP	00 29 35.5	-1.1
	comp=Z,0.4nm,0.4s,baz=157,slow=6.5,SNR=1.5						
QSPA	**South Pole Qui**	**70.81**	**180**	*e*P	**P**	**00 30 17.0**	**+0.1**
	comp=Z,7.4nm,0.9s,mb4.6						
PETK	**Petropavlovsk-**	**72.68**	**353**	P	**P**	**00 30 27.7**	**-0.6**
	comp=Z,4.1nm,0.7s,mb4.5,baz=142,slow=6.6,SNR=8.6						
MAW	**Mawson**	**78.24**	**202**	P	**P**	**00 31 00.4**	**+0.2**
	comp=Z,1.8nm,0.9s,mb4.0,baz=84,slow=22,SNR=5.3						
ULN	**Ulaanbaatar**	**86.57**	**324**	*e*P	**P**	**00 31 43.3**	**-0.6**
	comp=Z,4.4nm,0.9s,mb4.7						
SONM	**Songino Array**	**86.92**	**323**	P	**P**	**00 31 45.5**	**-0.1**
	comp=Z,1.8nm,0.8s,mb4.4,baz=141,slow=4.7,SNR=10						
SONM				pP	pP	00 31 57.4	-0.7
	comp=Z,2.1nm,1.0s,baz=141,slow=5.5,SNR=4.9						
YBH	**Yreka Blue Hor**	**87.65**	**44**	LR	LR	01 03 47.9	
	comp=Z,41nm,18.5s,MS3.9,baz=82,slow=31						
HUMO	**Hull Mountain**	**87.91**	**43**	*e*P	**P**	**00 31 50.2**	**-0.3**
ILAR	**Eielson Array**	**90.39**	**17**	P	**P**	**00 31 58.8**	**-2.8**
	comp=Z,0.8nm,0.6s,mb4.2,baz=237,slow=4.9,SNR=8.0						
TXAR	**Lajitas Array**	**97.21**	**62**	P	**P**	**00 32 33.9**	**0.0**
	comp=Z,0.4nm,0.7s,mb4.0,baz=215,slow=6.2,SNR=5.2						
MKAR	**Makanchi Array**	**101.39**	**316**	P	Pdif	00 32 52.1	0.0
	comp=Z,0.3nm,0.6s,baz=83,slow=6.1,SNR=2.6						
ARCES	**ARCESS Array B**	**124.94**	**345**	PKP	PKPdf	00 37 58.3	-1.8
	comp=Z,1.8nm,0.5s,baz=110,slow=1.9,SNR=15						
ARCES				pPKP	pPKPdf	00 38 12.1	-0.9
	comp=Z,1.8nm,0.8s,baz=50,slow=1.7,SNR=1.7						
NB2	**NORSAR Subarra**	**135.32**	**345**	PKPdf	PKPdf	00 38 19.1	-0.9
	comp=Z,0.1nm,0.6s,baz=48,slow=2.6						
NOA	**NORSAR Array B**	**135.32**	**345**	PKP	PKPdf	00 38 19.6	-0.4
	comp=Z,0.6nm,0.6s,baz=33,slow=2.0,SNR=5.1						
DPC	**Dobruska-Polom**	**141.99**	**331**	*e*PKPdf	PKPdf	00 38 36.7	+4.2
VYHS	**Vyhne**	**142.02**	**327**	*e*P	PKPdf	00 38 29.2	-3.4
VYHS	**Vyhne**	**142.02**	**327**	*e*P	PKPdf	00 38 29.2	-3.4
PRU	**Pruhonice**	**143.05**	**332**	*e*PKPdf	PKPdf	00 38 31.6	-2.8
NKC	**Novy Kostel**	**143.76**	**334**	*e*PKPdf	PKPdf	00 38 32.5	-3.2
MOX	**Moxa**	**143.78**	**335**	*e*PKPbc	PKPdf	00 38 31.9	-3.8
CONA	**Conrad Observa**	**143.88**	**329** ⇑	*i*PKPdf	PKPdf	00 38 34.5	-1.4
	comp=Z,4.7nm,1.3s						
KHC	**Kasperske Hory**	**144.10**	**332**	*e*PKPdf	PKPdf	00 38 33.4	-2.9
ROTZ	**Rotzenmuhle**	**144.22**	**334**	*e*PKPbc	PKPdf	00 38 33.9	-2.6
GEC2	**GERESS Array S**	**144.26**	**331**	*e*PKPbc	PKPdf	00 38 34.1	-2.5
UBBA	**Unterbreizbach**	**144.26**	**337**	*e*PKPbc	PKPdf	00 38 34.0	-2.5
WET	**Wettzell**	**144.40**	**332**	*e*PKPbc	PKPdf	00 38 34.1	-2.7
GRA1	**Grafenberg Arr**	**144.68**	**335**	*e*PKPbc	PKPdf	00 38 35.3	-2.0
GRF	**Grafenberg Arr**	**144.68**	**335**	*e*PKPbc	PKPdf	00 38 35.3	-2.0
BUG	**Bochum--Univer**	**144.70**	**340**	*e*PKPbc	PKPdf	00 38 35.1	-2.2
MOA	**Molln**	**144.71**	**330** ⇑	*i*PKPdf	PKPdf	00 38 35.7	-1.7
	comp=Z,9.9nm,0.6s						
SOKA	**Soboth**	**145.15**	**328** ⇑	*i*PKPdf	PKPdf	00 38 36.6	-1.6
	comp=Z,6.5nm,0.7s						
TNS	**Taunus Mts**	**145.32**	**338**	*e*PKPbc	PKPbc	00 38 37.3	-0.9
RJOB	**Jochberg**	**145.48**	**331**	*e*PKPbc	PKPbc	00 38 37.8	-1.0
OBKA	**Obir**	**145.51**	**328** ⇑	*i*PKPab	PKPab	00 38 37.9	-1.3
	comp=Z,7.2nm,1.0s						
BEBN	**Eben Emael**	**145.76**	**341**	PKP	PKPdf	00 38 39.8	+0.7
MEM	**Membach**	**145.82**	**340**	PKP	PKPdf	00 38 39.1	-0.1
FUR	**Furstenfeldbru**	**145.84**	**333**	*e*PKPbc	PKPbc	00 38 39.4	-0.5
BCLA	**Clavier**	**146.21**	**341**	PKP	PKPdf	00 38 40.4	+0.5
STU	**Stuttgart**	**146.22**	**335**	*e*PKPbc	PKPbc	00 38 40.2	-0.9
STU	**Stuttgart**	**146.22**	**335**	*e*PKPbc	PKPbc	00 38 40.1	-0.9
SNF	**Seneffe**	**146.43**	**342**	PKP	PKPdf	00 38 40.9	+0.6
MOTA	**Moosalm**	**146.54**	**332** ⇑	*i*PKPab	PKPdf	00 38 40.9	+0.3
	comp=Z,11nm,0.9s						
WLF	**Walferdange**	**146.59**	**339**	PKP	PKPdf	00 38 42.1	+1.6
WLF	**Walferdange**	**146.59**	**339**	*e*PKPbc	PKPbc	00 38 41.9	-0.2
WLF	**Walferdange**	**146.59**	**339**	*e*PKPbc	PKPbc	00 38 41.7	-0.4
GIVF	**Givet**	**146.63**	**341**	*e*PKP1	PKPbc	00 38 41.2	-1.0
DOU	**Dourbes**	**146.71**	**341**	PKP	PKPdf	00 38 41.5	+0.7
BAIF	**Baives**	**146.86**	**342** ⇑	*i*PKP1	PKPbc	00 38 42.0	-0.9
	comp=Z,20nm,0.9s						
BFO	**Black Forest**	**146.92**	**336**	*e*PKPbc	PKPbc	00 38 42.0	-1.1
FETA	**Feichten**	**146.95**	**332** ⇑	*i*PKPab	PKPbc	00 38 42.5	-0.7
	comp=Z,10.0nm,1.1s						
DAVA	**Damuels**	**147.12**	**333** ⇑	*i*PKPab	PKPbc	00 38 42.9	-0.8
	comp=Z,8.2nm,1.1s						
CDF	**Champ du Feu**	**147.25**	**337** ⇑	*i*PKP1	PKPbc	00 38 43.1	-0.9
	comp=Z,23nm,0.9s						
HINF	**Hinteralfeld**	**147.90**	**337** ⇑	*i*PKP1	PKPbc	00 38 44.5	-1.3
	comp=Z,6.7nm,0.8s						
HAU	**Haudompre**	**147.93**	**337** ⇑	*i*PKP1	PKPbc	00 38 44.8	-1.1
	comp=Z,15nm,0.8s						
MEZF	**Maizieres J'vi**	**147.96**	**339** ⇑	*i*PKP1	PKPbc	00 38 45.4	-0.5
	comp=Z,40nm,1.1s						
AQU	**L'Aquila**	**148.89**	**323**	*e*PKPbc	PKPbc	00 38 48.4	-0.2
CABF	**La Chapelle**	**149.19**	**336** ⇑	*i*PKP1	PKPbc	00 38 48.6	-0.6
	comp=Z,33nm,0.9s						
FLN	**La Foliniere**	**149.28**	**346** ⇑	*i*PKP1	PKPbc	00 38 47.9	-1.5
	comp=Z,17nm,0.6s						
LDF	**La Druitiere**	**149.36**	**345** ⇑	*i*PKP1	PKPbc	00 38 47.9	-1.6
	comp=Z,5.6nm,0.6s						
LOR	**Lormes**	**149.43**	**340** ⇑	*i*PKP1	PKPbc	00 38 48.7	-1.1
	comp=Z,28nm,0.8s						
GRR	**Gorron**	**149.72**	**346** ⇑	*i*PKP1	PKPbc	00 38 49.2	-1.2
	comp=Z,22nm,0.9s						
SSF	**Saint Saulge**	**149.72**	**340** ⇑	*i*PKP1	PKPbc	00 38 49.5	-1.0
	comp=Z,27nm,0.9s						
HYF	**Humbligny**	**149.81**	**341**	*e*PKP1	PKPbc	00 38 50.0	-0.7
LPL	**La Plagne**	**149.84**	**334** ⇑	*i*PKP1	PKPbc	00 38 50.4	-0.4
	comp=Z,11nm,0.8s						
LPG	**La Plagne**	**149.85**	**334** ⇑	*i*PKP1	PKPbc	00 38 50.5	-0.4
	comp=Z,20nm,0.9s						
SMF	**Signal de Mont**	**149.97**	**339**	*e*PKP1	PKPbc	00 38 49.9	-1.2
	comp=Z,13nm,1.0s						
AVF	**Avril sur Loir**	**150.01**	**340**	*e*PKP1	PKPbc	00 38 49.8	-1.4
	comp=Z,10.0nm,0.9s						
SGMF	**Saint Gilles**	**150.21**	**348** ⇑	*i*PKP1	PKPbc	00 38 50.0	-1.6
	comp=Z,16nm,0.9s						
BNI	**Bardonecchia**	**150.24**	**334**	*e*PKPbc	PKPbc	00 38 51.1	-0.7
ROSF	**Rostrenen**	**150.26**	**349** ⇑	*i*PKP1	PKPbc	00 38 50.1	-1.7
	comp=Z,11nm,0.9s						
BGF	**Bois d'Agland**	**150.38**	**340** ⇑	*i*PKP1	PKPbc	00 38 51.0	-1.1
	comp=Z,20nm,0.9s						
MBDF	**Montbardon**	**150.47**	**333** ⇑	*i*PKP1	PKPbc	00 38 51.2	-1.2
	comp=Z,7.8nm,0.8s						
QUIF	**Quistinic**	**150.64**	**349** ⇑	*i*PKP1	PKPbc	00 38 51.0	-1.7
ORIF	**Oris-en-Rattie**	**150.68**	**335** ⇑	*i*PKP1	PKPbc	00 38 52.0	-0.9
	comp=Z,19nm,0.7s						
TCF	**Toulx Ste Croi**	**150.82**	**341** ⇑	*i*PKP1	PKPbc	00 38 52.0	-1.2
	comp=Z,17nm,0.9s						
SBF	**Sospel**	**150.86**	**332** ⇑	*i*PKP1	PKPbc	00 38 51.9	-1.4
	comp=Z,34nm,1.0s						
PGF	**Pioggiola**	**151.11**	**328** ⇑	*i*PKP1	PKPbc	00 38 52.9	-1.1
	comp=Z,34nm,0.9s						
VIVF	**Saint-Julien-l**	**151.21**	**336** ⇑	*i*PKP1	PKPbc	00 38 53.1	-1.0
	comp=Z,12nm,0.8s						
MFF	**Saint Martin d**	**151.22**	**344** ⇑	*i*PKP1	PKPbc	00 38 52.7	-1.4
	comp=Z,7.3nm,0.6s						
FRF	**La Foret Royal**	**151.45**	**332** ⇑	*i*PKP1	PKPbc	00 38 53.3	-1.4
	comp=Z,18nm,1.0s						
SMRF	**Simiane la Rot**	**151.58**	**334**	*e*PKP1	PKPbc	00 38 54.2	-0.8
	comp=Z,24nm,1.0s						
LMR	**La Mourre**	**151.69**	**332** ⇑	*i*PKP1	PKPbc	00 38 53.9	-1.4
	comp=Z,19nm,1.0s						
RJF	**Les Rejaudoux**	**151.92**	**341** ⇑	*i*PKP1	PKPbc	00 38 54.5	-1.2
	comp=Z,9.4nm,0.9s						
CAF	**Calviac**	**152.08**	**339**	*e*PKP1	PKPbc	00 38 55.0	-1.1
	comp=Z,4.3nm,0.9s						
LASF	**Ste Croix**	**152.18**	**336** ⇑	*i*PKP1	PKPbc	00 38 55.4	-1.0
	comp=Z,13nm,0.9s						
LFF	**La Frestale**	**152.49**	**341**	*e*PKP1	PKPbc	00 38 55.8	-1.2
	comp=Z,13nm,0.8s						
MTLF	**Montolieu**	**153.42**	**338** ⇑	*i*PKP1	PKPbc	00 38 57.9	-1.2
	comp=Z,2.9nm,0.7s						

NEIC ***26*** *00:22:53.4, 20.°04N×63.°93W, h25km, MD3.5(RSPR), After RSPR.*
RSPR 26 00:22:53.4, 20.°04N×63.°93W, h25km±26km, MD3.5/4, 5C-2D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**1.74**	**202** ⇑	*i*P	Pn	00 23 19.9	-2.1
TBVI				*e*S	Sn	00 23 40.3	-3.1
TBVI	**Tortola**	**1.74**	**202** ⇑	*i*P	Pn	00 23 19.9	-2.1
TBVI				*e*S	Sn	00 23 40.3	-3.1
STVI	**Saint Thomas**	**1.94**	**210** ⇓	*e*P	Pn	00 23 23.3	-1.5
STVI				*e*S	Sn	00 23 46.0	-2.3
STVI	**Saint Thomas**	**1.94**	**210** ⇓	*e*P	Pn	00 23 23.3	-1.5
STVI				*e*S	Sn	00 23 46.3	-2.0
HUMP	**Col San Antoni**	**2.62**	**224** ⇑	*e*P	Pn	00 23 32.7	-1.4
HUMP				*e*S	Sn	00 24 02.9	-2.2
HUMP	**Col San Antoni**	**2.62**	**224** ⇑	*e*P	Pn	00 23 32.7	-1.4
HUMP				*e*S	Sn	00 24 02.9	-2.2
SJG	**San Juan**	**2.84**	**228**	*e*S	Sn	00 24 09.0	-1.6
SJG	**San Juan**	**2.84**	**228**	*e*S	Sn	00 24 08.5	-2.1
AOPR	**Arecibo Observ**	**3.15**	**238** ⇑	*e*P	Pn	00 23 39.6	-1.8
AOPR				*e*S	Sn	00 24 15.9	-2.4
AOPR	**Arecibo Observ**	**3.15**	**238** ⇑	*e*P	Pn	00 23 39.6	-1.8
AOPR				*e*S	Sn	00 24 15.9	-2.4

ISCJB ***26*** *00:40:02.4±3.5, 56.°00S±0.°09×27.°6W±0.°2, h117km±34km, mb4.7/17, Error ellipse: s-maj=18.5km s-min=11.6km az=42.6*
IDC ***26*** *00:40:06.7±1.6, 56.°05S×27.°65W, h140km±12km, mb4.4/9, mb1 4.5/9, mb1mx4.3/13, mbtmp4.4/9, MS3.7/2, Ms1 3.6/2, ms1mx3.2/15, Error ellipse: s-maj=20.3km s-min=13.2km az=49.0*
NEIC ***26*** *00:40:07.4±2.5, 56.°02S×27.°60W, h151km±21km, mb4.6/11, Error ellipse: s-maj=12.0km s-min=8.1km az=217.0*
ISC 26 00:40:04.6±3.5, 56.°05S±0.°10×27.°6W±0.°2, h121km±34km, n65, σ0.87/26, mb4.7/17, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**16.88**	**158**	*e*	**Pn**	**00 43 52.9**	**-0.1**
MAIT	**Maitri**	**22.35**	**147**	*e*P	**P**	**00 44 51.8**	**-0.4**
MAIT				*e*		00 44 57.6	
TRQA	**Tornquist**	**29.12**	**294**	*e*P	**P**	**00 45 53.2**	**-0.5**
	7.2nm,0.9s,mb4.3						
PLCA	**Paso Flores

DBIC	Dimbokro	65.26	25	P	P	00 50 33.7	+0.6
3.7nm,0.6s,mb4.4,baz=170,slow=5.0,SNR=8.9							
DBIC	Dimbokro	65.26	25	eP	P	00 50 33.4	+0.3
3.9nm,0.7s,mb4.3							
OTAV	Otavalo	69.48	304	eP	P	00 51 01.5	+1.7
9.2nm,1.2s,mb4.5							
FORT	Forrest	91.05	159	eP	P	00 52 53.5	-1.6
17nm,0.7s,mb5.3							
STKA	Stephens Creek	91.94	171	P	P	00 52 58.7	-0.4
2.0nm,0.4s,mb4.7,baz=169,slow=5.5,SNR=3.8							
STKA	Stephens Creek	91.94	171	P	P	00 52 58.7	-0.4
ASAR	Alice Springs	99.05	163	P	P	00 53 30.6	-1.0
2.1nm,0.7s,mb4.8,baz=187,slow=4.0,SNR=23							
DUG	Dugway	119.77	298	ePKPdf	PKPdf	00 58 39.4	-0.1
PDAR	Pinedale Array	120.16	303	PKP	PKPdf	00 58 38.9	-1.2
0.3nm,0.5s,baz=124,slow=4.5,SNR=2.8							
NOA	NORSAR Array B	120.69	21	PKP	PKPdf	00 58 39.8	-0.7
0.1nm,0.5s,baz=179,slow=2.6,SNR=2.7							
TPAW	Teton Pass	121.37	302	ePKPdf	PKPdf	00 58 41.8	-0.6
WVOR	Wild Horse Val	124.35	296	ePKPdf	PKPdf	00 58 47.9	-0.2
FINES	FINESS Array B	124.49	28	PKP	PKPdf	00 58 47.0	-0.8
1.2nm,0.5s,baz=203,slow=0.5,SNR=27							
FINES	FINESS Array B	124.49	28	PKP	PKPdf	00 58 47.0	-0.8
CMAR	Chiang Mai Arr	125.27	111	PKP	PKPdf	00 58 50.7	0.0
1.4nm,0.3s,baz=232,slow=3.8,SNR=6.5							
BMO	Blue Mountains	125.45	299	ePKPdf	PKPdf	00 58 49.5	-0.7
ABKAR	Akbulak array	127.55	56	ePKPdf	PKPdf	00 58 53.4	-0.7
AML	Almayashu	129.41	71	ePKPdf	PKPdf	00 58 57.5	-0.3
EKS2	Erkin-Say	129.82	70	ePKPdf	PKPdf	00 58 58.0	-0.6
TKM2	Tokmak 2	130.97	71	ePKPdf	PKPdf	00 59 00.5	-0.3
ARCES	ARCESS Array B	131.03	22	PKP	PKPdf	00 58 59.7	-0.4
1.0nm,0.5s,baz=170,slow=2.3,SNR=14							
ARCES	ARCESS Array B	131.03	22	PKP	PKPdf	00 58 59.7	-0.4
ARU	Arti	131.86	48	ePKPdf	PKPdf	00 59 01.8	-0.2
BVAR	Borovoye Array	134.96	58	PKhKP	PKPpre	00 59 05.0	
0.8nm,0.6s,baz=245,slow=3.1,SNR=7.7							
BVAR				PKP	PKPdf	00 59 07.9	0.0
0.8nm,0.5s,baz=253,slow=4.4,SNR=7.7							
BVAR				SKPbc	SKPbc	01 02 24.1	-2.9
0.4nm,0.5s,baz=242,slow=3.1,SNR=3.8							
YKA	Yellowknife Ar	136.03	318	PKP	PKPdf	00 59 09.2	-0.4
1.1nm,0.5s,baz=126,slow=2.5,SNR=11							
YKA				SKPbc	SKPbc	01 02 27.2	-2.8
0.5nm,0.6s,baz=128,slow=2.9,SNR=5.4							
YKA	Yellowknife Ar	136.03	318	PKP	PKPdf	00 59 09.2	-0.4
YKA				SKPbc	SKPbc	01 02 27.2	-2.8
MK31	Makanchi Array	137.09	72	ePKPpre	PKPpre	00 59 07.4	
MK31				ePKPdf	PKPdf	00 59 12.6	+0.5
MKAR	Makanchi Array	137.09	72	PKhKP	PKPpre	00 59 05.7	
0.8nm,0.9s,baz=202,slow=5.6,SNR=4.4							
MKAR				PKP	PKPdf	00 59 11.2	-0.9
0.7nm,0.5s,baz=236,slow=2.0,SNR=7.0							
MKAR				SKPbc	SKPbc	01 02 30.7	-3.1
0.4nm,0.6s,baz=225,slow=3.1,SNR=3.8							
MKAR	Makanchi Array	137.09	72	PKP	PKPpre	00 59 05.7	
MKAR				PKP	PKPdf	00 59 11.2	-0.9
MKAR				SKPbc	SKPbc	01 02 30.7	-3.1
KURK	Kurchatov	137.60	65	ePKPdf	PKPdf	00 59 09.9	-3.0
RES	Resolute Bay	137.78	339	PKP	PKPdf	00 59 12.4	-0.1
1.6nm,0.9s,baz=220,slow=1.6,SNR=3.5							
RES	Resolute Bay	137.78	339	PKP	PKPdf	00 59 12.4	-0.1
RES				ePKPdf	PKPdf	00 59 12.5	-0.1
ZALV	Zalesovo Beam	142.56	64	PKhKP	PKPpre	00 59 17.2	
1.4nm,0.4s,baz=233,slow=3.9,SNR=8.0							
ZALV				SKP		01 02 42.6	
0.7nm,0.7s,baz=291,slow=4.5,SNR=3.0							
INK	Inuvik	145.66	321	ePKPbc	PKPbc	00 59 27.1	-0.3
DAWY	Dawson	146.63	312	ePKPbc	PKPbc	00 59 29.8	-0.5
ILAR	Eielson Array	149.95	312	PKP	PKPdf	00 59 31.2	-2.7
0.3nm,0.6s,baz=102,slow=1.6,SNR=6.3							
ILAR				PKPbc	PKPbc	00 59 38.9	-0.1
8.8nm,0.8s,baz=135,slow=1.8,SNR=79							
ILAR				pPKP	pPKPdf	01 00 10.3	+3.7
4.0nm,0.8s,baz=113,slow=1.1,SNR=6.5							
COLA	College	150.38	312	ePKPbc	PKPbc	00 59 39.0	-1.0
MCK	McKinley	150.60	309	ePKPdf	PKPdf	00 59 35.3	+0.3
MCK				ePKPbc	PKPbc	00 59 40.8	+0.3
SONM	Songino Array	150.94	87	PKPbc	PKPbc	00 59 41.8	-0.1
12nm,0.5s,baz=221,slow=3.5,SNR=89							
TRF	Thorofare Moun	151.13	308	ePKPbc	PKPbc	00 59 41.7	-0.1
ULN	Ulaanbaatar	151.33	87	ePKPbc	PKPbc	00 59 42.6	-0.1
BJT	Baijiatuan	151.36	109	ePKPbc	PKPbc	00 59 42.7	-0.4
BJI	Beijing	151.38	109	P	PKPbc	00 59 42.8	-0.3
BJI				pmax	pmax		
comp=Z,21nm,0.6s							
BPAW	Bear Paw Mtn.	151.56	310	ePKPbc	PKPbc	00 59 42.4	-0.3
PPLA	Purkeypile	151.86	307	ePKPbc	PKPbc	00 59 43.4	-0.1
KSRS	Korea Array	155.17	128	PKPab	PKPab	01 00 07.3	-0.7
comp=Z,1.0nm,0.7s,baz=210,slow=3.7,SNR=3.0							

*ISCJB **26** 00:40:04.7±0.5,59°.87N±0°.04×153°.18W±0°.09, h128km±5km, Error ellipse: s-maj=7.1km s-min=5.9km az=14.1*
*IDC **26** 00:40:05.0±2.0,59°.89N×153°.48W,h95km±33km,mb3.2/1, mb1 3.6/6,mb1mx3.2/24,mbtmp3.4/6,Error ellipse: s-maj=33.2km s-min=16.4km az=112.0*
*NEIC **26** 00:40:07.1,59°.85N×153°.13W,h120km,mb3.8/1,After AEIC.*

ISC 26 00:40:06.0±0.5,59°.87N±0°.04×153°.19W±0°.08, h120km±5km,n42,σ0s83/52,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUL	Augustine Lava	0.51	194	P	Pn	00 40 24.5	+0.6
AUL				S	Sn	00 40 38.3	+0.9
RSO	Redoubt South	0.63	20	ePn	Pn	00 40 25.1	+0.4
RSO				eSn	Sn	00 40 39.7	+0.7
BRLK	Bradley Lake	1.17	94	P	Pn	00 40 30.0	+0.4
BRLK				S	Sn	00 40 48.0	+0.3
SLKM	Skilak Lake	1.62	65	P	Pn	00 40 34.9	+0.2
SVW2	Sparrevohn	1.71	317	eP	Pn	00 40 35.1	-0.6
SEW	Seward	1.90	81	P	Pn	00 40 38.0	0.0
SEW				S	Sn	00 41 01.9	-0.7
FIB	Fire Island	1.98	48	P	Pn	00 40 40.4	+1.3
FIB				S	Sn	00 41 06.0	+1.6
RC01	Rabbit Creek A	2.10	53	P	Pn	00 40 40.7	+0.1
RC01				S	Sn	00 41 06.5	-0.6
KDAK	Kodiak Island	2.12	171	P	Pn	00 40 39.9	-0.9
12nm,0.3s,baz=351,slow=7.4,SNR=76							
KDAK				S	Sn	00 41 06.2	-1.3
24nm,0.3s,baz=157,slow=23,SNR=22							
KDAK	Kodiak Island	2.12	171	P	Pn	00 40 40.0	-0.9
SKT	Skwentna	2.27	20	P	Pn	00 40 42.9	+0.3
PMR	Palmer	2.64	47	P	Pn	00 40 47.6	+0.1
OHAK	Old Harbor	2.66	181	eP	Pn	00 40 46.2	-1.5
GHO	Glory Hole Cre	2.83	46	P	Pn	00 40 49.5	-0.4
SML	Sawmill	3.07	49	P	Pn	00 40 52.3	-0.8
PPLA	Purkeypile	3.08	9	P	Pn	00 40 54.2	+1.1
TT01	Tatalina	3.34	337	P	Pn	00 40 56.1	-0.4
TTA	Tatalina	3.35	337	eP	Pn	00 40 56.4	-0.4
MID	Middleton Isla	3.51	94	eP	Pn	00 40 58.7	-0.1
EYAK	Cordova Ski Ar	3.78	76	P	Pn	00 41 02.5	+0.1
TRF	Thorofare Moun	3.85	20	P	Pn	00 41 03.3	-0.1
DIV	Divide	3.88	68	P	Pn	00 41 04.4	+0.6
CHUM	Lake Minchumin	4.05	6	P	Pn	00 41 06.3	+0.4
RND	Reindeer	4.11	28	P	Pn	00 41 06.6	-0.2
DHY	Denali Highway	4.26	38	P	Pn	00 41 08.3	-0.4
MCK	McKinley	4.37	26	P	Pn	00 41 10.7	+0.4
BPAW	Bear Paw Mtn.	4.37	13	P	Pn	00 41 09.9	-0.4
BMRM	Bremner River	4.40	72	P	Pn	00 41 10.9	+0.2
PAX	Paxson	4.84	47	ePn	Pn	00 41 16.3	-0.2
PAX				eSn	Sn	00 42 09.9	-1.6
COLA	College	5.60	24	ePn	Pn	00 41 25.8	-1.0
5.7nm,0.3s							
COLA				eSn	Sn	00 42 27.4	-2.4
ILAR	Eielson Array	5.73	28	P	Pn	00 41 27.7	-0.8
4.4nm,0.3s,baz=217,slow=14,SNR=141							
ILAR				S	Sn	00 42 28.1	-4.8
1.2nm,0.3s,baz=216,slow=21,SNR=4.6							
IM3	Indian Mountai	6.14	358	P	Pn	00 41 34.4	+0.3
PNL	Peninsula	6.97	86	P	Pn	00 41 45.5	+0.1
EGAK	Eagle	7.45	44	ePn	Pn	00 41 50.9	-0.9
1.2nm,0.4s							
COLD	Coldfoot	7.50	9	P	Pn	00 41 52.7	+0.2
BM3	Burnt Mountain	8.47	23	P	Pn	00 42 05.0	-0.7
SKAG	Skagway	9.05	85	ePn	Pn	00 42 14.7	+1.2
DLBC	Dease Lake	11.96	87	P	Pn	00 42 55.6	+3.3
1.2nm,0.3s,baz=264,slow=8.6,SNR=14							
INK	Inuvik	12.00	37	P	Pn	00 42 53.8	+1.1
0.3nm,0.3s,baz=220,slow=9.8,SNR=5.0							
YKA	Yellowknife Ar	18.59	65	P	P	00 44 14.4	+1.1
0.1nm,0.3s,baz=277,slow=9.9,SNR=7.5							
YKA	Yellowknife Ar	18.59	65	P	P	00 44 14.4	+1.1
SONM	Songino Array	54.79	306	P	P	00 49 23.9	+1.2
0.2nm,0.4s,baz=18,slow=9.8,SNR=2.6							

*NEIC **26** 00:46:09.4,36°.64S×177°.30E,h241km,MG4.0(WEL), After WEL.*

WEL 26 00:46:09.1±0.4,36°.53S×177°.23E,h231km±4km,ML4.0/9, Error ellipse: s-maj=5.9km s-min=5.4km az=90.0,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.35	141	PN	Pn	00 46 44.4	+0.1
URZ	Urewera	1.73	183	PN	Pn	00 46 47.6	+0.1
URZ				SN	S	00 47 17.5	-0.2
URZ	Urewera	1.73	183	P	Pn	00 46 47.6	+0.1
PUZ	Puketiti	1.75	152	PN	Pn	00 46 47.6	0.0
PUZ				SN	S	00 47 16.5	-1.4
PUZ	Puketiti	1.75	152	P	Pn	00 46 47.6	0.0
PUZ				S	S	00 47 16.5	-1.4
MWZ	Matawai	1.82	173	PN	Pn	00 46 48.7	+0.4
MWZ				SN	S	00 47 19.4	+0.2
MWZ	Matawai	1.82	173	P	Pn	00 46 48.7	+0.5
MWZ				S	S	00 47 20.0	+0.9
CNGZ	Carnagh Statio	2.11	159	PN	Pn	00 46 51.4	+0.5
RAHZ	Arahi	2.39	183	PN	Pn	00 46 54.2	+0.5
RAHZ				SN	S	00 47 28.7	-0.4
KNZ	Kokohu	2.52	172	PN	Pn	00 46 54.8	-0.3
KNZ	Kokohu	2.52	172	P	Pn	00 46 54.8	-0.3
NMHZ	Naumai	2.59	187	PN	Pn	00 46 56.4	+0.5
BKZ	Black Stump Fm	2.70	192	PN	Pn	00 46 56.5	-0.5
BKZ	Black Stump Fm	2.70	192	P	Pn	00 46 56.5	-0.5
OTVZ	Oturere	2.91	205	PN	Pn	00 46 60.0	+0.7
MCHZ	McNeill Hill	2.94	188	PN	Pn	00 46 59.7	0.0
WNVZ	Wahianoa	3.08	204	PN	Pn	00 47 01.8	+0.6
MOVZ	Moawhango	3.10	202	PN	Pn	00 47 01.1	-0.4
MOVZ	Moawhango	3.10	202	P	Pn	00 47 01.1	-0.4
KAHZ	Kahuranaki	3.28	185	PN	Pn	00 47 02.9	-0.5
PNHZ	Pukenui	3.48	193	PN	Pn	00 47 04.7	-1.1
PXZ	Pawanui	3.51	185	PN	Pn	00 47 05.1	-1.1
WPHZ	Waipukurau	3.59	190	PN	Pn	00 47 06.0	-1.1
TSZ	Takapari Road	3.67	195	PN	Pn	00 47 06.8	-1.2
TSZ	Takapari Road	3.67	195	P	Pn	00 47 06.8	-1.2
WAZ	Wanganui	3.68	208	PN	Pn	00 47 06.9	-1.3
PRHZ	Porangahau	3.77	187	PN	Pn	00 47 07.9	-1.2
DVHZ	Dannevirke	3.86	192	PN	Pn	00 47 07.0	-3.2
POWZ	Post Office Ro	4.03	196	PN	Pn	00 47 10.8	-1.5
MRZ	Mangatainoka R	4.33	197	PN	Pn	00 47 13.7	-2.2
MRZ	Mangatainoka R	4.33	197	P	Pn	00 47 13.7	-2.2
KIW	Kapiti Island	4.70	202	PN	Pn	00 47 18.3	-2.1
KIW	Kapiti Island	4.70	202	P	Pn	00 47 18.3	-2.1
MTW	Mount Morrison	4.82	196	PN	Pn	00 47 20.0	-1.9
MTW	Mount Morrison	4.82	196	P	Pn	00 47 20.0	-1.9
CAW	Cannon Point	4.88	200	PN	Pn	00 47 20.3	-2.3
CAW	Cannon Point	4.88	200	P	Pn	00 47 20.3	-2.3
MSWZ	Moikau Station	5.12	197	PN	Pn	00 47 22.9	-2.7
MSWZ				SN	S	00 48 21.8	-4.8
MSWZ	Moikau Station	5.12	197	P	Pn	00 47 22.9	-2.8
MSWZ				S	S	00 48 21.8	-4.8
PLWZ	Palliser	5.27	196	PN	Pn	00 47 24.8	-2.7
TUWZ	Tuamarina	5.53	207	ePN	Pn	00 47 28.8	-1.9
TUWZ				SN	S	00 48 33.7	-2.1
NNZ	Nelson	5.56	211	ePN	Pn	00 47 29.3	-2.0
NNZ				SN	S	00 48 33.9	-2.8
NNZ	Nelson	5.56	211	eP	Pn	00 47 29.3	-1.9
NNZ				S	S	00 48 33.9	-2.8
THZ	Tophouse	6.22	211	ePN	Pn	00 47 38.4	-1.0
THZ				SN	S	00 48 49.5	-2.0
THZ	Tophouse	6.22	211	eP	Pn	00 47 38.4	-1.1
THZ				S	S	00 48 49.5	-2.1
KHZ	Kahutara	6.54	205	ePN	Pn	00 47 41.8	-1.7
LTZ	Lake Taylor	7.33	210	ePN	Pn	00 47 51.3	-2.3
LTZ				SN	S	00 49 10.6	-6.6
LTZ	Lake Taylor	7.33	210	eP	Pn	00 47 51.3	-2.3
LTZ				S	S	00 49 10.6	-6.7
CTZ	Chatham Island	8.61	149	ePN	Pn	00 48 19.8	+10

*ISCJB **26** 00:53:01.6±0.4,32°.34N±0°.02×115°.29W±0°.02,h13km±3km, Error ellipse: s-maj=3.5km s-min=3.0km az=4.9*
*ECX **26** 00:53:03.5±0.5,32°.30N×115°.33W,h7km,MD3.6,ML3.8*
*NEIC **26** 00:53:03.5,32°.30N×115°.33W,h7km,ML3.8(ECX), ML3.4(PAS),After ECX.*

ISC 26 00:53:01.9±0.3,32°.33N±0°.02×115°.32W±0°.02,h17km±2km, n40,σ0s86/65,21C-23D,California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	Cerro Prieto	0.09	8	eP	Pg	00 53 04.2	-1.0
CPBX				eS	Sg	00 53 05.9	-1.6
EMX	El Mayor	0.35	169	⇓eP	Pg	00 53 09.2	0.0
EMX				eS	Sg	00 53 14.2	0.0
EMX				⇓e		00 53 15.1	
comp=E,7μm,0.4s							
EMX	El Mayor	0.35	169	⇓eP	Pg	00 53 09.2	0.0
EMX				eS	Sg	00 53 14.2	0.0
SGL	Mount Signal	0.47	313	⇓eP	Pg	00 53 11.9	+0.6
EMSC	East Mesa	0.49	35	⇓eP	Pg	00 53 13.0	+1.2
ERPC	Ernies Place	0.50	325	⇓iP	Pg	00 53 13.0	+1.1
SNR	Schaffner Ranc	0.54	349	⇓eP	Pg	00 53 13.8	+1.2
COA	Coachella	0.55	17	⇓eP	Pg	00 53 13.8	+0.9
YUH	Yuha Desert	0.60	302	⇓eP	Pg	00 53 14.0	+0.3
COK	Cook Ranch	0.62	326	⇓eP	Pg	00 53 14.7	+0.6
COK	Cook Ranch	0.62	326	⇓eP	Pg	00 53 14.8	+0.6
112A	Yuma	0.66	72	⇓P	Pg	00 53 14.9	+0.1
baz=0.7,SNR=474							
112A				⇑S	Sg	00 53 24.1	+0.6
baz=0.7							
YMD	Yuma Desert	0.69	71	⇓eP	Pg	00 53 15.5	0.0
SWSC	Sam W. Stewart	0.73	326	⇑P	Pb	00 53 16.1	-0.1
baz=0.8,SNR=141							
DVTC	Desert V Tower	0.74	296	⇓P	Pb	00 53 16.2	-0.1
baz=0.8,SNR=37							
DVTC				⇓S	Sb	00 53 26.2	+0.1
baz=0.8							
GLA	Glamis	0.83	30	⇑P	Pb	00 53 17.6	-0.3
baz=0.9,SNR=114							
GLA				⇓S	Sb	00 53 28.6	-0.2
baz=0.9							
GLA	Glamis	0.83	30	ePg	Pg	00 53 17.6	-0.5
GLA				eSg	Sg	00 53 28.6	-0.4
ECBX	El Chinero	0.89	165	eP	Pb	00 53 18.7	-0.2
ECBX				eS	Sb	00 53 30.0	-0.5
MONP	Monument Peak	1.08	301	⇑P	Pb	00 53 21.9	-0.3
baz=1.1,SNR=443							
MONP				⇑S	Sb	00 53 36.2	+0.1
baz=1.1							
CBX	Cerro Bola	1.14	269	eP	Pn	00 53 23.4	+0.3
CBX				eS	Sb	00 53 38.6	+0.8
BAR	Barrett	1.20	287	eP	Pn	00 53 23.8	-0.1
BAR				eS	Sb	00 53 39.9	+0.5
SPX	San Pedro Mart	1.29	186	⇑eP	Pn	00 53 25.3	0.0
SPX				eS	Sb	00 53 42.5	+0.4
SPX				⇓e		00 53 46.9	
comp=N,1μm,0.2s							
BC3	Big Chuckawall	1.32	355	⇓P	Pn	00 53 24.9	-0.7
baz=1.4,SNR=25							
BC3				⇓Sn	Sn	00 53 41.8	-1.2
baz=1.4							
113A	Mohawk Valley,	1.38	71	⇑P	Pn	00 53 25.9	-0.6
baz=1.4,SNR=172							
113A				⇑Sn	Sn	00 53 43.7	-0.6
baz=1.4							
PFO	Pinyon Flat Ob	1.59	323	⇓Pn	Pn	00 53 28.8	-0.6
baz=1.7,SNR=80							
PFO				⇑Sn	Sn	00 53 48.6	-1.0
baz=1.7							
PFO	Pinyon Flat Ob	1.59	323	ePn	Pn	00 53 28.8	-0.6
109C	Camp Elliot, M	1.61	291	⇓Pn	Pn	00 53 29.5	-0.1
baz=1.6							
109C				⇑Pb	Pb	00 53 31.2	+0.1
baz=1.6							
109C				⇑Sb	Sb	00 53 51.8	+0.6
baz=1.6							
Z13A	Yuma Proving G	1.65	58	⇑Pn	Pn	00 53 29.6	-0.5
baz=1.7							
Z13A				⇓Pb	Pb	00 53 31.5	-0.3
baz=1.7							
Z13A				⇑Sn	Sn	00 53 50.4	-0.4
baz=1.7							
IRM	Iron Mountain	1.83	4	⇑Pn	Pn	00 53 31.8	-0.8
baz=1.9,SNR=38							
IRM				⇑Pb	Pb	00 53 34.1	-0.8
baz=1.9							
MURC	Murrieta	2.02	309	⇑Pn	Pn	00 53 34.5	-0.9
baz=2.1,SNR=8.1							
MURC				⇑Sb	Sb	00 54 04.0	+0.8
baz=2.1							
114A	Black Gap (USA	2.10	78	⇓Pn	Pn	00 53 35.9	-0.5
baz=2.1,SNR=12							
214A	Organ Pipe Nat	2.16	99	⇓Pn	Pn	00 53 36.6	-0.6
baz=2.2,SNR=30							
Z14A	Wintersburg	2.25	62	⇑Pn	Pn	00 53 37.5	-0.8
baz=2.3							
X14A	Yava	2.94	43	⇑Sb	Sb	00 54 31.1	+1.5
baz=3.0							
MWC	Mount Wilson	2.97	310	ePg	Pg	00 53 56.2	-2.7
MWC				eSg	Sg	00 54 35.6	-1.8
Y15A	Casa Rosa Ranc	2.98	56	⇑Pn	Pn	00 53 48.0	-0.5
baz=3.0,SNR=8.1							
GSC	Goldstone	3.21	338	Pn	Pn	00 53 53.0	+1.4
TUC	Tucson	3.84	89	Pn	Pn	00 54 01.4	+1.2
TUC				ePg	Pg	00 54 15.8	+0.3
TUC				eSg	Sg	00 55 00.8	-4.4
WUAZ	Wupatki	4.56	45	ePn	Pn	00 54 12.3	+2.1
CCUT	Cedar City	5.45	17	ePn	Pn	00 54 24.9	+2.5
CCUT				ePg	Pg	00 54 47.9	+1.7

WEL 26 00:56:24.1±0.6,36°.07S×177°.51E,h294km±8km,ML3.7/6, Error ellipse: s-maj=12.3km s-min=12.2km az=0.0,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	Puketiti	2.09	164	PN	Pn	00 57 10.5	-0.4
PUZ				SN	S	00 57 46.7	-1.5
URZ	Urewera	2.21	188	PN	Pn	00 57 12.3	+0.4
URZ				SN	S	00 57 49.1	-0.9
MWZ	Matawai	2.27	180	PN	Pn	00 57 12.8	+0.4
MWZ				SN	S	00 57 51.4	+0.5
CNGZ	Carnagh Statio	2.48	167	PN	Pn	00 57 14.9	+0.6
BKZ	Black Stump Fm	3.20	194	PN	Pn	00 57 21.6	+0.3
PNHZ	Pukenui	3.98	195	PN	Pn	00 57 29.5	-0.1
MRZ	Mangatainoka R	4.83	198	PN	Pn	00 57 38.8	-0.5
MRZ				SN	S	00 58 39.8	+0.1
KIW	Kapiti Island	5.21	202	ePN	Pn	00 57 42.6	-1.0
CAW	Cannon Point	5.39	200	ePN	Pn	00 57 45.1	-0.7
TUWZ	Tuamarina	6.04	206	ePN	Pn	00 57 53.4	-0.1
NNZ	Nelson	6.08	211	ePN	Pn	00 57 53.8	-0.2
NNZ				SN	S	00 59 06.8	+0.4
QRZ	Quartz Range	6.16	218	ePN	Pn	00 57 54.5	-0.5
THZ	Tophouse	6.73	211	ePN	Pn	00 58 02.2	+0.3
KHZ	Kahutara	7.05	205	ePN	Pn	00 58 05.9	+0.1
LTZ	Lake Taylor	7.84	210	ePN	Pn	00 58 14.6	-0.9

*NIED **26** 01:07:00,37°.60N×141°.90E,h41km,Mw4.1 Best double couple: M0 1.62000×10^15 NP1:φ0=18.00000°,δ69.00000°, λ83.00000°. NP2:φ0=218.00000°,δ22.00000°,λ108.00000°.*
*ISCJB **26** 01:07:39.2±0.4,37°.56N±0°.03×142°.01E±0°.04,h35km, mb4.3/28,Error ellipse: s-maj=5.4km s-min=4.0km az=136.6*
*JMA **26** 01:07:40.2±0.1,37°.57N×141°.91E,h36km±3km,M4.3*
JMA Felt I J1.
*MOS **26** 01:07:41.3±0.9,37°.63N×141°.87E,h52km,mb4.7/11,Error ellipse: s-maj=11.6km s-min=8.0km az=111.1*
*IDC **26** 01:07:41.2±0.9,37°.55N×141°.90E,h35km±6km,mb3.9/14, mb1 4.0/17,mb1mx3.9/22,mbtmp3.9/17,ML3.9/3,MS3.1/4, Ms1 3.2/4,ms1mx2.9/22,Error ellipse: s-maj=17.6km s-min=13.5km az=153.0*
*BJI **26** 01:07:41.3,37°.09N×141°.65E,h56km,mB4.9/2,mb4.7/9, Ms4.3/1,Ms7 3.9/1*
*NEIC **26** 01:07:42.4±0.8,37°.62N×141°.89E,h44km±6km,mb4.5/11, MW4.1(NIED),Error ellipse: s-maj=9.7km s-min=6.4km az=151.0*
NEIC Recorded [1 JMA] in Fukushima and Miyagi.

ISC 26 01:07:41.1±0.4,37°.55N±0°.03×141°.92E±0°.04,h35km, (h39km±1.1km:pP-P),n71,σ0s92/83,mb4.3/28,2C-13D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	Kawauchi	0.85	258	⇓P	Pn	01 07 55.9	-0.6
JFK				eS	Sn	01 08 06.7	-1.0
JMM	Marumori	0.95	290	⇓P	Pn	01 07 57.3	-0.5
JMM				eS	Sn	01 08 08.6	-1.5
ONAJ	Iwakimizuishiy	1.00	244	⇓P	Pn	01 07 57.8	-0.7
ONAJ				eS	Sn	01 08 10.1	-1.2
JIO	Ouri	1.01	334	⇓P	Pn	01 07 57.9	-0.8
JIO				S

MKAR Makanchi Array 44.19 302 P P 01 15 46.4 0.0
comp=Z,2.8nm,0.6s,mb4.2,baz=84,slow=9.7,SNR=32
MKAR Makanchi Array 44.19 302 P P 01 15 46.4 0.0
KURK Kurchatov 45.93 308*c* *i*P P 01 15 59.8 -0.4
KURK pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
KURK Kurchatov 45.93 308 *e*P P 01 15 59.5 -0.7
comp=Z,5.3nm,0.5s,mb4.7
ILAR Eielson Array 48.85 33 P P 01 16 23.1 +0.4
comp=Z,0.5nm,0.6s,mb3.7,baz=268,slow=6.7,SNR=5.9
TKM2 Tokmak 2 49.74 298 *e*P P 01 16 30.7 +0.9
TKM2 pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
TKM2 Tokmak 2 49.74 298 *e*P P 01 16 30.7 +0.9
comp=Z,6.4nm,0.6s,mb4.8
BVAR Borovoye Array 50.53 312 P P 01 16 35.2 -0.4
comp=Z,1.7nm,0.6s,mb4.2,baz=64,slow=6.8,SNR=12
BVAR PcP PcP 01 17 53.2 +0.1
comp=Z,1.1nm,0.6s,baz=85,slow=3.4,SNR=5.1
BRVK Borovoye 50.58 312 *e*P P 01 16 36.1 +0.1
BRVK pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
BRVK Borovoye 50.58 312 *e*P P 01 16 35.7 -0.3
comp=Z,2.9nm,0.7s,mb4.3
AML Almayashu 51.32 298 *e*P P 01 16 42.4 +0.6
comp=Z,5.1nm,0.6s,mb4.6
SVE Sverdlovsk 55.03 318⇓ *e*P P 01 17 09.2 +0.4
SVE pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
ARU Arti 56.24 318*c* *i*P P 01 17 17.3 -0.2
ARU 01 19 21.2
ARU S S 01 25 05.9 +1.3
ARU SS SS 01 28 47.5 -3.4
ARU pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
ARU Arti 56.24 318 *e*P P 01 17 17.3 -0.2
comp=Z,6.1nm,0.4s,mb5.0
ABKAR Akbulak array 57.92 310 *e*P P 01 17 28.7 -0.8
comp=Z,2.5nm,0.5s,mb4.5
ASAR Alice Springs 61.35 188 P P 01 17 53.2 -0.1
comp=Z,1.6nm,0.8s,mb4.2,baz=14,slow=6.2,SNR=13
RES Resolute Bay 62.01 15 *e*P P 01 17 57.0 -0.1
RES pmax pmax
comp=Z,3.0nm,1.1s,mb4.3
RES Resolute Bay 62.01 15 *e*P P 01 17 57.0 -0.1
comp=Z,3.2nm,1.1s,mb4.4
YKA Yellowknife Ar 63.16 30 P P 01 18 04.7 -0.3
comp=Z,0.3nm,0.5s,mb3.6,baz=327,slow=10,SNR=4.1
ARCES ARCESS Array B 63.66 339 P P 01 18 08.2 0.0
comp=Z,1.8nm,0.9s,mb4.1,baz=64,slow=5.5,SNR=3.8
JOF Joensuu 65.70 332 *e*P P 01 18 20.7 -0.9
JOF Joensuu 65.70 332 *e*p P 01 18 20.7 -0.9
KAF Kangasniemi 68.04 333 *e*P P 01 18 35.1 -1.4
KAF Kangasniemi 68.04 333 *e*p P 01 18 35.1 -1.4
FINES FINESS Array B 68.55 332 P P 01 18 39.3 -0.3
comp=Z,3.3nm,0.7s,mb4.4,baz=39,slow=9.2,SNR=22
VSR Storozhevoye 68.81 319 *e*P P 01 18 41.1 -0.4
VSR pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
KIV Kislovodsk 70.87 311 *e*P P 01 18 55.7 +1.4
KIV pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
KIV Kislovodsk 70.87 311 *e*P P 01 18 55.7 +1.3
comp=Z,3.9nm,0.5s,mb4.6
NB2 NORSAR Subarra 73.87 337 P P 01 19 11.7 -0.2
comp=Z,1.1nm,0.6s,mb4.0,baz=38,slow=6.2
NOA NORSAR Array B 73.87 337 P P 01 19 11.6 -0.3
comp=Z,1.7nm,0.7s,mb4.1,baz=38,slow=5.9,SNR=11
NOA LR LR 01 54 19.4
comp=Z,27nm,19.8s,baz=40,slow=38
AKASG Malin Array Be 74.14 322 P P 01 19 13.2 -0.5
comp=Z,2.0nm,0.4s,mb4.4,baz=45,slow=6.0,SNR=14
KIEV Kiev 74.15 322 *e*P P 01 19 12.7 -1.0
KIEV pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
KIEV Kiev 74.15 322 *e*P P 01 19 12.7 -1.0
comp=Z,2.6nm,0.5s,mb4.4
DUG Dugway 76.72 49 *e*P P 01 19 30.2 +1.6
DUG pmax pmax
comp=Z,1.0nm,0.8s,mb3.8
DUG Dugway 76.72 49 *e*P P 01 19 30.2 +1.6
comp=Z,1.0nm,0.8s,mb3.8
PDAR Pinedale Array 77.02 46 P P 01 19 30.6 +0.4
comp=Z,0.6nm,0.6s,mb3.7,baz=284,slow=1.4,SNR=6.9
PDAR pP pP 01 19 42.5 +1.3
comp=Z,0.4nm,0.6s,baz=228,slow=1.8,SNR=3.8
CLL Collm 80.85 330 *e*P P 01 19 51.0 -0.1
CLL Collm 80.85 330 *e*P P 01 19 51.0 -0.1
SCHQ Schefferville 84.73 16 P P 01 20 11.5 +0.3
comp=Z,1.1nm,0.6s,mb4.2,baz=315,slow=7.1,SNR=3.9
TXAR Lajitas Array 89.49 53 P P 01 20 35.2 +0.5
comp=Z,0.2nm,0.5s,mb3.7,baz=300,slow=2.9,SNR=4.4
TXAR pP pP 01 20 46.8 +1.0
comp=Z,0.4nm,0.7s,baz=314,slow=4.6,SNR=4.1
LPAZ La Paz 146.09 60 PKPbc PKPbc 01 27 18.4 +0.6
comp=Z,1.4nm,0.6s,baz=357,slow=4.6,SNR=7.3
LPAZ La Paz 146.09 60 *e*PKPbc PKPbc 01 27 18.5 +0.8

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*CRAAG **26** 01:07:45.1, 36.60N×3.67E, Ml3.2*
*CSEM **26** 01:07:49.7±0.3, 36.40N×3.32E, h10km, ML3.2, Error ellipse: s-maj=7.1km s-min=6.5km az=49.0*
*NEIC **26** 01:07:54.0, 36.69N×3.14E, h0km, MG3.4(MDD), After MDD.*
*LDG **26** 01:07:54.9±0.3, 36.64N×3.23E, h10km, Ml2.7/8, Error ellipse: s-maj=5.3km s-min=2.9km az=157.0*
MDD 26 01:07:49.4±0.6, 36.42N×3.39E, h0km, mb3.5/14, Error ellipse: s-maj=6.8km s-min=5.6km az=72.0, Northern Algeria

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

ADJB Djebel Djouab 0.26 172 P Pg 01 07 57.1 +2.7
ADJB Djebel Djouab 0.26 172 P Pg 01 07 57.1 +2.7
ADJB Djebel Djouab 0.26 172 P Pg 01 07 57.1 +2.7
ADJB Djebel Djouab 0.26 172 P Pg 01 07 57.1 +2.7
EMHD Djebel Mahouad 0.42 239 P Pg 01 07 57.2 -0.2
EMHD Djebel Mahouad 0.42 239 P Pg 01 07 57.2 -0.2
EMHD Djebel Mahouad 0.42 239 P Pg 01 07 57.2 -0.2
EMHD Djebel Mahouad 0.42 239 P Pg 01 07 57.2 -0.2
ABA Alger-Bouzarea 0.48 323 P Pg 01 07 58.2 -0.4
ABA Alger-Bouzarea 0.48 323 P Pg 01 07 58.2 -0.4
ABA Alger-Bouzarea 0.48 323 P Pg 01 07 58.2 -0.4
ABA Alger-Bouzarea 0.48 323 P Pg 01 07 58.2 -0.4
AKET Djebel Ketaf 0.54 133 P Pg 01 07 59.0 -0.8
AKET Djebel Ketaf 0.54 133 P Pg 01 07 59.0 -0.8
AKET Djebel Ketaf 0.54 133 P Pg 01 07 59.0 -0.8
AKET Djebel Ketaf 0.54 133 P Pg 01 07 59.0 -0.8
ATAF Djebel Tarf 0.90 127 P Pg 01 07 57.0 -10
ATAF Djebel Tarf 0.90 127 P Pg 01 07 57.0 -10
ATAF Djebel Tarf 0.90 127 P Pg 01 07 57.0 -10
ATAF Djebel Tarf 0.90 127 P Pg 01 07 57.0 -10
EIBI Ibiza 3.07 329 P Pn 01 08 37.8 -1.3
EIBI S Sn 01 09 10.5 -6.1
EIBI Ibiza 3.07 329 P Pn 01 08 37.8 -1.3
1.5nm,0.1s,SNR=9.2
EIBI S Sn 01 09 10.5 -6.1
5.6nm,0.2s
EIBI Ibiza 3.07 329 P Pn 01 08 37.8 -1.3
1.5nm,0.1s,SNR=9.2
EIBI S Sn 01 09 10.5 -6.1
5.6nm,0.2s
EIBI Ibiza 3.07 329 P Pn 01 08 37.8 -1.3
1.5nm,0.1s,SNR=9.2
EIBI S Sn 01 09 10.5 -6.0
5.6nm,0.2s
ETOS Mallorca 3.37 352 P Pn 01 08 42.4 -1.0
ETOS S Sn 01 09 17.5 -6.6
ETOS Mallorca 3.37 352 P Pn 01 08 42.3 -1.0
0.9nm,0.1s,SNR=10
ETOS S Sn 01 09 19.1 -5.0
2.1nm,0.2s
ETOS Mallorca 3.37 352 P Pn 01 08 42.3 -1.0
0.9nm,0.1s,SNR=10
ETOS S Sn 01 09 19.1 -5.0
2.1nm,0.2s
ETOS Mallorca 3.37 352 P Pn 01 08 42.3 -1.0
0.9nm,0.1s,SNR=10
ETOS S Sn 01 09 17.5 -6.6
2.1nm,0.2s
EBEN Beniarda 3.67 310 P Pn 01 08 45.5 -1.8
EBEN S Sn 01 09 23.0 -8.3
EBEN Beniarda 3.67 310 P Pn 01 08 45.5 -1.8
0.3nm,0.1s,SNR=7.9
EBEN S Sn 01 09 23.0 -8.3
0.8nm,0.3s,SNR=7.9
EBEN Beniarda 3.67 310 P Pn 01 08 45.5 -1.8
0.3nm,0.1s,SNR=7.9
EBEN S Sn 01 09 23.0 -8.3
0.8nm,0.3s,SNR=7.9
EBEN Beniarda 3.67 310 P Pn 01 08 45.5 -1.9
0.3nm,0.1s,SNR=7.9
EBEN S Sn 01 09 23.0 -8.3
0.8nm,0.3s,SNR=7.9
EMUR La Murta 3.97 292 P Pn 01 08 50.6 -0.8
EMUR S Sn 01 09 33.1 -5.6
EMUR La Murta 3.97 292 P Pn 01 08 50.6 -0.8
0.8nm,0.3s,SNR=7.9
EMUR S Sn 01 09 33.1 -5.6
1.5nm,0.4s,SNR=7.9
EMUR La Murta 3.97 292 P Pn 01 08 50.6 -0.8
0.8nm,0.3s,SNR=7.9
EMUR S Sn 01 09 33.1 -5.6
1.5nm,0.4s,SNR=7.9
EMUR La Murta 3.97 292 P Pn 01 08 50.6 -0.9
0.8nm,0.3s,SNR=7.9
EMUR S Sn 01 09 33.1 -5.6
1.5nm,0.4s,SNR=7.9
ETOB Tobarra 4.51 301 P Pn 01 08 57.7 -1.3
ETOB S Sn 01 09 45.0 -7.1
ETOB Tobarra 4.51 301 P Pn 01 08 57.7 -1.3
0.4nm,0.1s,SNR=6.6
ETOB S Sn 01 09 45.0 -7.1
1.5nm,0.2s
ETOB Tobarra 4.51 301 P Pn 01 08 57.7 -1.3
0.4nm,0.1s,SNR=6.6
ETOB S Sn 01 09 45.0 -7.1
1.5nm,0.2s
ETOB Tobarra 4.51 301 P Pn 01 08 57.7 -1.3
0.4nm,0.1s,SNR=6.6
ETOB S Sn 01 09 45.0 -7.1
1.5nm,0.2s
ECHE Chera 4.68 314 P Pn 01 09 00.8 -0.4
ECHE S Sn 01 09 50.1 -6.1
ECHE Chera 4.68 314 P Pn 01 09 00.8 -0.4
0.9nm,0.2s,SNR=7.9
ECHE S Sn 01 09 50.1 -6.1
0.8nm,0.2s,SNR=7.9
ECHE Chera 4.68 314 P Pn 01 09 00.8 -0.4
0.9nm,0.2s,SNR=7.9
ECHE S Sn 01 09 50.1 -6.1
0.8nm,0.2s,SNR=7.9
ECHE Chera 4.68 314 P Pn 01 09 00.8 -0.4
0.9nm,0.2s,SNR=7.9
ECHE S Sn 01 09 50.1 -6.1
0.8nm,0.2s,SNR=7.9
EMOS Mosqueruela 4.97 324 P Pn 01 09 04.2 -1.1
EMOS S Sn 01 09 56.8 -6.7
EMOS Mosqueruela 4.97 324 P Pn 01 09 04.2 -1.1
1.4nm,0.2s,SNR=15
EMOS S Sn 01 09 56.8 -6.7
1.2nm,0.2s
EMOS Mosqueruela 4.97 324 P Pn 01 09 04.2 -1.1
1.4nm,0.2s,SNR=15
EMOS S Sn 01 09 56.8 -6.7
1.2nm,0.2s
EMOS Mosqueruela 4.97 324 P Pn 01 09 04.2 -1.1
1.4nm,0.2s,SNR=15
EMOS S Sn 01 09 56.8 -6.7
1.2nm,0.2s
EHUE Huescar 4.98 288 P Pn 01 09 07.7 +2.2
EHUE S Sn 01 10 02.3 -1.4
EHUE Huescar 4.98 288 P Pn 01 09 07.7 +2.2
0.2nm,0.2s,SNR=7.9
EHUE S Sn 01 09 59.2 -4.5
0.4nm,0.2s,SNR=7.9
EHUE Huescar 4.98 288 P Pn 01 09 07.7 +2.2
0.2nm,0.2s,SNR=7.9
EHUE S Sn 01 09 59.2 -4.5
0.4nm,0.2s,SNR=7.9
EHUE Huescar 4.98 288 P Pn 01 09 07.7 +2.3
0.2nm,0.2s,SNR=7.9
ERTA Horta de San J 5.12 333 P Pn 01 09 02.5 -4.8
ERTA S Sn 01 10 00.1 -7.1
ERTA Horta de San J 5.12 333 P Pn 01 09 02.5 -4.8
0.2nm,0.2s,SNR=7.9
ERTA S Sn 01 10 00.1 -7.1
0.5nm,0.2s,SNR=7.9
ERTA Horta de San J 5.12 333 P Pn 01 09 02.5 -4.8
0.2nm,0.2s,SNR=7.9
ERTA S Sn 01 10 00.1 -7.1
0.5nm,0.2s,SNR=7.9
EPOB Poblet 5.25 341 P Pn 01 09 08.4 -0.6
EPOB S Sn 01 10 02.6 -7.6
EPOB Poblet 5.25 341 P Pn 01 09 08.4 -0.6
0.2nm,0.2s,SNR=7.9
EPOB S Sn 01 10 02.6 -7.6
0.2nm,0.1s,SNR=7.9
EPOB Poblet 5.25 341 P Pn 01 09 08.4 -0.6
0.2nm,0.2s,SNR=7.9
EPOB S Sn 01 10 02.6 -7.6
0.2nm,0.1s,SNR=7.9
EPOB Poblet 5.25 341 P Pn 01 09 08.4 -0.7
0.2nm,0.2s,SNR=7.9
EPOB S Sn 01 10 02.6 -7.6
0.2nm,0.1s,SNR=7.9
EQES Quesada 5.35 287 P Pn 01 09 10.5 +0.1
EQES S Sn 01 10 07.8 -4.9
EQES Quesada 5.35 287 P Pn 01 09 10.5 +0.1
0.2nm,0.2s,SNR=7.9
EQES S Sn 01 10 07.8 -4.9
0.5nm,0.4s,SNR=7.9
EQES Quesada 5.35 287 P Pn 01 09 10.5 +0.1
0.2nm,0.2s,SNR=7.9
EQES S Sn 01 10 07.8 -4.9
0.5nm,0.4s,SNR=7.9
EQES Quesada 5.35 287 P Pn 01 09 10.5 0.0
0.2nm,0.2s,SNR=7.9
EQES S Sn 01 10 07.8 -4.9
0.5nm,0.4s,SNR=7.9
CFON Fontmartina 5.39 352 P Pn 01 09 10.0 -1.0
CFON S Sn 01 10 05.3 -8.3
CFON Fontmartina 5.39 352 P Pn 01 09 10.0 -1.0
1.0nm,0.2s,SNR=7.9
CFON S Sn 01 10 05.3 -8.3
1.4nm,0.2s,SNR=7.9
CFON Fontmartina 5.39 352 P Pn 01 09 10.0 -1.0
1.0nm,0.2s,SNR=7.9
CFON S Sn 01 10 05.3 -8.3
1.4nm,0.2s,SNR=7.9
CFON Fontmartina 5.39 352 P Pn 01 09 10.0 -1.0
1.0nm,0.2s,SNR=7.9
CFON S Sn 01 10 05.3 -8.4
1.4nm,0.2s,SNR=7.9
EMIR Miracle 5.68 346 P Pn 01 09 15.2 +0.3
EMIR Miracle 5.68 346 P Pn 01 09 15.2 +0.3
2.2nm,0.2s,SNR=7.9
EMIR S Sn 01 10 14.4 -6.4
3.7nm,0.3s,SNR=7.9
EMIR Miracle 5.68 346 P Pn 01 09 15.2 +0.3
2.2nm,0.2s,SNR=7.9
EMIR S Sn 01 10 14.4 -6.4
3.7nm,0.3s,SNR=7.9
EMIR Miracle 5.68 346 P Pn 01 09 15.2 +0.3
2.2nm,0.2s,SNR=7.9
CSOR Sort 6.20 344 P Pn 01 09 22.3 +0.1
CSOR S Sn 01 10 26.9 -6.9
CSOR Sort 6.20 344 P Pn 01 09 22.3 +0.1
0.6nm,0.3s,SNR=7.9
CSOR S Sn 01 10 26.9 -6.9
0.4nm,0.2s,SNR=7.9
CSOR Sort 6.20 344 P Pn 01 09 22.3 +0.1
0.6nm,0.3s,SNR=7.9
CSOR S Sn 01 10 26.9 -6.9
0.4nm,0.2s,SNR=7.9
CSOR Sort 6.20 344 P Pn 01 09 22.3 +0.2
0.6nm,0.3s,SNR=7.9
CSOR S Sn 01 10 26.9 -6.8
0.4nm,0.2s,SNR=7.9
MTLF Montolieu 6.97 353 *e*Pn Pn 01 09 31.3 -1.4
MTLF *e*Sn Sn 01 10 43.3 -9.4
0.8nm,0.6s
MTLF Montolieu 6.97 353 P Pn 01 09 31.3 -1.4
MTLF S Sn 01 10 43.3 -9.4
0.4nm,0.6s
MTLF Montolieu 6.97 353 P Pn 01 09 31.3 -1.4
MTLF S Sn 01 10 43.3 -9.4
0.4nm,0.6s
MTLF Montolieu 6.97 353 *e*Pn Pn 01 09 31.3 -1.4
MTLF *e*Sn Sn 01 10 43.3 -9.4
0.4nm,0.6s
EPF Esparros 7.01 341 *e*Pn Pn 01 09 31.7 -1.6
EPF *e*Sn Sn 01 10 43.8 -10
1.7nm,0.6s
EPF Esparros 7.01 341 P Pn 01 09 31.7 -1.6
EPF S Sn 01 10 43.8 -10
0.9nm,0.6s
EPF Esparros 7.01 341 P Pn 01 09 31.7 -1.6
EPF S Sn 01 10 43.8 -10
0.9nm,0.6s
EPF Esparros 7.01 341 *e*Pn Pn 01 09 31.7 -1.6
EPF *e*Sn Sn 01 10 43.8 -10
0.9nm,0.6s
LMR La Mourre 7.31 18 *e*Pn Pn 01 09 37.4 0.0
LMR *e*Sn Sn 01 10 53.5 -7.5
0.6nm,0.3s
LMR La Mourre 7.31 18 P Pn 01 09 37.4 0.0
LMR S Sn 01 10 53.5 -7.5
0.3nm,0.3s
LMR La Mourre 7.31 18 P Pn 01 09 37.4 0.0
LMR S Sn 01 10 53.5 -7.5
0.3nm,0.3s
LMR La Mourre 7.31 18 *e*Pn Pn 01 09 37.4 0.0
LMR *e*Sn Sn 01 10 53.5 -7.5
0.3nm,0.3s
PGF Pioggiola 7.50 34 *e*Pn Pn 01 09 41.0 +1.0
PGF *e*Sn Sn 01 11 00.2 -5.5
0.5nm,0.3s
PGF Pioggiola 7.50 34 P Pn 01 09 41.0 +1.0
PGF S Sn 01 11 00.2 -5.5
0.2nm,0.3s
PGF Pioggiola 7.50 34 P Pn 01 09 41.0 +1.0
PGF S Sn 01 11 00.2 -5.5
0.2nm,0.3s
PGF Pioggiola 7.50 34 *e*Pn Pn 01 09 41.0 +1.0
PGF *e*Sn Sn 01 11 00.2 -5.5
0.2nm,0.3s
FRF La Foret Royal 7.56 18 *e*Pn Pn 01 09 40.7 -0.1
FRF *e*Sn Sn 01 10 59.3 -7.8
0.5nm,0.3s
FRF La Foret Royal 7.56 18 P Pn 01 09 40.7 -0.1
FRF S Sn 01 10 59.3 -7.8
0.2nm,0.3s
FRF La Foret Royal 7.56 18 P Pn 01 09 40.7 -0.1
FRF S Sn 01 10 59.3 -7.8
0.2nm,0.3s
FRF La Foret Royal 7.56 18 *e*Pn Pn 01 09 40.7 -0.1
FRF *e*Sn Sn 01 10 59.3 -7.8
0.2nm,0.3s
LASF Ste Croix 7.66 3 *e*Pn Pn 01 09 41.1 -1.0
LASF *e*Sn Sn 01 11 00.4 -9.1
1.2nm,0.4s
LASF Ste Croix 7.66 3 P Pn 01 09 41.1 -1.0
LASF S Sn 01 11 00.4 -9.1
0.6nm,0.4s
LASF Ste Croix 7.66 3 P Pn 01 09 41.1 -1.0
LASF S Sn 01 11 00.4 -9.1
0.6nm,0.4s
LASF Ste Croix 7.66 3 *e*Pn Pn 01 09 41.1 -1.0
LASF *e*Sn Sn 01 11 00.4 -9.1
0.6nm,0.4s
SBF Sospel 8.05 21 *e*Pn Pn 01 09 47.9 +0.3
SBF *e*Sn Sn 01 11 12.0 -7.3
1.1nm,0.4s
SBF Sospel 8.05 21 P Pn 01 09 47.9 +0.3
SBF S Sn 01 11 12.0 -7.3
0.6nm,0.4s
SBF Sospel 8.05 21 P Pn 01 09 47.9 +0.3
SBF S Sn 01 11 12.0 -7.3
0.6nm,0.4s
SBF Sospel 8.05 21 *e*Pn Pn 01 09 47.9 +0.3
SBF *e*Sn Sn 01 11 12.0 -7.3
0.6nm,0.4s
VIVF Saint-Julien-l 8.48 6 *e*Pn Pn 01 09 52.7 -0.8
VIVF *e*Sn Sn 01 11 20.3 -10
0.9nm,0.3s
VIVF Saint-Julien-l 8.48 6 P Pn 01 09 52.7 -0.8
VIVF S Sn 01 11 20.3 -10
0.4nm,0.3s
VIVF Saint-Julien-l 8.48 6 P Pn 01 09 52.7 -0.8
VIVF S Sn 01 11 20.3 -10
0.4nm,0.3s
VIVF Saint-Julien-l 8.48 6 *e*Pn Pn 01 09 52.7 -0.8

OTT 26 01:24:55.8±0.4, 71.99N×75.27W, h18km, MN3.9/16, 122km southeast from Pond Inlet, Nu Baffin Island Seismic Zone, Nt., Baffin Island region

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

GIFN Gifford Fjord, 2.89 229 PN Pn 01 25 41.3 +0.5
GIFN SN Sn 01 26 15.3 +0.3
GIFN LG 01 26 22.8
GIFN Trac 01 26 29.5
comp=Z,113nm,0.2s
ILON Igloolik, Nuna 3.41 223 PN Pn 01 25 48.3 +0.3
ILON SN Sn 01 26 26.9 -1.0
ILON LG 01 26 38.1
ILON Trac 01 26 44.9
comp=Z,284nm,0.3s
AP3N Apex site 3 Nu 3.96 235 PN Pn 01 25 54.6 -0.9
AP3N SN Sn 01 26 39.3 -2.2
AP3N LG 01 26 55.4
AP3N Trac 01 26 59.4
comp=Z,259nm,0.2s
LAIN Lailor River, 4.00 228 PN Pn 01 25 55.9 -0.1
LAIN SN Sn 01 26 41.3 -1.0
LAIN LG 01 26 54.7
LAIN Trac 01 26 59.3
comp=Z,144nm,0.3s
SRLN Sarcpa Lake, N 4.40 222 PN Pn 01 26 01.2 -0.3
SRLN SN Sn 01 26 49.4 -2.8
SRLN LG 01 27 08.7
SRLN Trac 01 27 09.2
comp=Z,239nm,0.5s
RES Resolute Bay 6.24 305 PN Pn 01 26 26.6 -0.2
RES SN Sn 01 27 34.9 -2.6
RES LG 01 28 10.2
RES Trac 01 28 23.3
comp=Z,32nm,0.5s
KUGN Kugaaruk Camp, 6.38 239 PN Pn 01 26 26.7 -2.1
KUGN SN Sn 01 27 35.6 -5.5
KUGN LG 01 28 10.8
KUGN Trac 01 28 14.4
comp=Z,169nm,0.7s
QILN Qililugaq Expl 6.63 222 PN Pn 01 26 30.8 -1.4
QILN SN Sn 01 27 41.6 -5.5
QILN LG 01 28 17.1
QILN Trac 01 28 18.5
comp=Z,170nm,0.9s
WAGN Wager Bay 7.96 227 PN Pn 01 26 49.7 -0.6
WAGN SN Sn 01 28 09.6 -10
WAGN LG 01 28 57.9
BULN Bullion Camp, 8.44 237 SN Sn 01 28 24.7 -6.9
BULN LG 01 29 12.5
BULN Trac 01 29 21.1
comp=Z,28nm,0.4s
FRB Frobisher Bay 8.65 160 PN Pn 01 26 58.6 -1.2
FRB SN Sn 01 28 30.4 -6.3
FRB LG 01 29 17.4
FRB Trac 01 29 26.2
comp=Z,71nm,0.6s
NUNN Nunuq Camp, NU 8.89 228 PN Pn 01 27 00.5 -2.6
NUNN SN Sn 01 28 36.4 -6.1
NUNN LG 01 29 26.6
NUNN Trac 01 29 42.9
comp=Z,66nm,0.7s
IVKQ Ivujivik 9.66 187 SN Sn 01 28 53.1 -8.5
IVKQ LG 01 29 43.9
IVKQ Trac 01 29 50.5
comp=Z,26nm,0.4s
CB31 Cambridge Bay 10.28 268 PN Pn 01 27 17.1 -5.0
CB31 SN Sn 01 29 06.5 -10
CB31 LG 01 30 08.8
CB31 Trac 01 30 16.6
comp=Z,36nm,0.3s
SEDN First Sedna Si 10.62 222 PN Pn 01 27 23.2 -3.5
SEDN SN Sn 01 29 14.9 -10
SEDN LG 01 30 18.7
SEDN Trac 01 30 28.7
comp=Z,64nm,0.8s
JOSN Second Sedna S 10.77 223 PN Pn 01 27 28.6 -0.2
JOSN SN Sn 01 29 18.7 -10
JOSN LG 01 30 24.1

YBKN	**Baker Lake, Hu**	**10.83 235**	SN	Sn	01 29 18.7	-11
YBKN			LG		01 30 26.5	
YBKN			Trac		01 30 37.4	
	comp=Z,32nm,0.5s					
SUMG	**Summit**	**11.11 70**	*i* P	Pn	01 27 32.4	-1.1
SUMG			*i* S	Sn	01 29 29.8	-7.2
AKVQ	**Akulivik**	**11.29 187**	PN	Pn	01 27 34.1	-1.8
AKVQ			SN	Sn	01 29 31.2	-10
AKVQ			LG		01 30 34.7	
AKVQ			Trac		01 30 43.0	
	comp=Z,34nm,0.6s					
INUQ	**Inukjuak**	**13.64 186**	PN	Pn	01 28 04.5	-3.5
INUQ			SN	Sn	01 30 26.5	-12
INUQ			LG		01 31 45.4	
FCC	**Fort Churchill**	**15.29 220**	PN	Pn	01 28 27.2	-3.2
FCC			SN	Sn	01 31 10.1	-8.9
FCC			LG		01 32 40.0	

*ISCJB **26** 01:34:27.6±0.5, 38°.28N×0°.03×21°.92E±0°.03, h9km±4km, Error ellipse: s-maj=5.1km s-min=3.9km az=151.7*
*THE **26** 01:34:27.8, 38°.28N×21°.91E, h7km±1km, ML2.0/7, Error ellipse: s-maj=1.0km s-min=0.3km az=237.0*
*ATH **26** 01:34:28.0, 38°.29N×21°.91E, h5km±5km, MD2.8/4*
*CSEM **26** 01:34:28.0±0.1, 38°.29N×21°.93E, h2km, ML2.0/7, Error ellipse: s-maj=2.5km s-min=2.1km az=153.0*

ISC 26 01:34:28.1±0.8, 38°.29N±0°.03×21°.92E±0°.03, h7km±8km, n21, σ0°.43/44, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAKA	**Lakka**	**0.07**	**136**	P	**Pg**	**01 34 29.6**	**-0.2**
LAKA				S	**Sg**	**01 34 31.1**	**0.0**
LAKA	**Lakka**	**0.07**	**136**	P	**Pg**	**01 34 29.6**	**-0.2**
LAKA				S	**Sg**	**01 34 31.1**	**0.0**
UPR	**University Cam**	**0.10**	**266**	*e*PG	**Pg**	**01 34 30.0**	**-0.4**
UPR				*e*SG	**Sg**	**01 34 31.9**	**0.0**
UPR	**University Cam**	**0.10**	**266**	P	**Pg**	**01 34 29.9**	**-0.5**
UPR				S	**Sg**	**01 34 31.9**	**0.0**
UPR	**University Cam**	**0.10**	**266**	*e*Pg	**Pg**	**01 34 30.0**	**-0.4**
UPR				S	**Sg**	**01 34 31.9**	**0.0**
EFP	**Efpalio**	**0.14**	**356**	*e*PG	**Pg**	**01 34 30.7**	**-0.3**
EFP				*e*SG	**Sg**	**01 34 33.3**	**+0.4**
EFP	**Efpalio**	**0.14**	**356**	P	**Pg**	**01 34 30.7**	**-0.3**
EFP				S	**Sg**	**01 34 33.0**	**+0.1**
EFP	**Efpalio**	**0.14**	**356**	P	**Pg**	**01 34 30.7**	**-0.3**
EFP				S	**Sg**	**01 34 33.0**	**+0.1**
EFP				*e*Sg	**Sg**	**01 34 33.3**	**+0.4**
TRIZ	**Trizonia**	**0.14**	**58**	P	**Pg**	**01 34 30.9**	**-0.2**
TRIZ				S	**Sg**	**01 34 33.2**	**+0.1**
TRIZ	**Trizonia**	**0.14**	**58**	P	**Pg**	**01 34 30.9**	**-0.2**
TRIZ				S	**Sg**	**01 34 33.2**	**+0.1**
KALE	**Kalithea**	**0.20**	**60**	P	**Pg**	**01 34 32.0**	**-0.1**
KALE				S	**Sg**	**01 34 35.0**	**+0.1**
KALE	**Kalithea**	**0.20**	**60**	P	**Pg**	**01 34 32.0**	**-0.1**
KALE				S	**Sg**	**01 34 35.0**	**+0.1**
RLS	**Riolos of Patr**	**0.42**	**237**	*e*PB	**Pg**	**01 34 36.1**	**-0.2**
RLS				*e*SB	**Sg**	**01 34 42.5**	**+0.7**
RLS	**Riolos of Patr**	**0.42**	**237**	*e*Pg	**Pg**	**01 34 36.1**	**-0.2**
RLS				*e*Sg	**Sg**	**01 34 43.1**	**+1.3**
GUR	**Goura**	**0.49**	**136**	*e*PB	**Pg**	**01 34 37.0**	**-0.5**
GUR				*e*SB	**Sg**	**01 34 44.6**	**+0.7**
GUR	**Goura**	**0.49**	**136**	P	**Pg**	**01 34 37.0**	**-0.5**
GUR				S	**Sg**	**01 34 43.9**	**0.0**
GUR	**Goura**	**0.49**	**136**	P	**Pg**	**01 34 37.0**	**-0.5**
GUR				S	**Sg**	**01 34 43.9**	**0.0**
GUR				*e*Sg	**Sg**	**01 34 44.6**	**+0.7**
DSF	**Desfina**	**0.49**	**76**	P	**Pg**	**01 34 37.2**	**-0.5**
DSF				S	**Sg**	**01 34 44.7**	**+0.6**
DSF	**Desfina**	**0.49**	**76**	P	**Pg**	**01 34 37.2**	**-0.5**
DSF				S	**Sg**	**01 34 44.7**	**+0.6**
AGG	**Agios Georgios**	**0.80**	**24**	P	**Pg**	**01 34 42.9**	**-0.6**
AGG				S	**Sg**	**01 34 54.5**	**+0.6**
AGG	**Agios Georgios**	**0.80**	**24**	P	**Pg**	**01 34 42.9**	**-0.6**
AGG				S	**Sg**	**01 34 54.5**	**+0.6**

*IDC **26** 01:50:20.5±7.0, 18°.74N×145°.59E, h273km±69km, mb3.3/9, mb1 3.5/9, mb1mx3.3/19, mbtmp3.3/9, Error ellipse: s-maj=24.2km s-min=16.0km az=97.0*

NEIC 26 01:50:19.3±4.6, 18°.67N×145°.53E, h265km±45km, mb4.0/12, Error ellipse: s-maj=14.0km s-min=10.9km az=90.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**35.65**	**13**	P	P	01 56 52.7	+0.5
	1.5nm,0.8s,baz=180,slow=4.3,SNR=4.0						
WRAB	**Tennant Creek**	**39.90**	**197**	*e*P	P	01 57 27.0	-0.9
	3.8nm,0.4s						
ASAR	**Alice Springs**	**43.58**	**196**	P	P	01 57 58.5	+0.9
	1.1nm,0.5s,baz=22,slow=11,SNR=26						
ZALV	**Zalesovo Beam**	**57.94**	**323**	P	P	01 59 44.4	+0.4
	0.7nm,0.4s,baz=109,slow=8.4,SNR=3.3						
MKAR	**Makanchi Array**	**58.37**	**314**	P	P	01 59 47.8	+0.7
	0.4nm,0.5s,baz=89,slow=9.0,SNR=3.6						
KURK	**Kurchatov**	**61.19**	**318**	*e*P	P	02 00 06.0	-0.1
	0.7nm,0.7s						
ILAR	**Eielson Array**	**63.74**	**26**	P	P	02 00 21.6	-1.1
	1.1nm,0.4s,baz=248,slow=6.4,SNR=21						
BVAR	**Borovoye Array**	**66.40**	**320**	P	P	02 00 40.1	+0.2
	1.0nm,0.5s,baz=64,slow=6.6,SNR=3.6						
INK	**Inuvik**	**69.47**	**23**	*e*P	P	02 00 58.5	-0.2
	2.4nm,0.8s						
ABKAR	**Akbulak array**	**73.25**	**317**	*e*P	P	02 01 21.7	+0.1
	0.3nm,0.4s						
YKA	**Yellowknife Ar**	**78.09**	**28**	P	P	02 01 48.8	+0.1
	1.4nm,0.7s,baz=288,slow=5.6,SNR=7.1						
YKA	**Yellowknife Ar**	**78.09**	**28**	P	P	02 01 48.8	+0.1
RES	**Resolute Bay**	**79.49**	**14**	*e*P	P	02 01 56.0	-0.2
	1.4nm,0.6s						
NEW	**Newport**	**81.04**	**42**	*e*P	P	02 02 04.8	-0.1
	1.4nm,0.5s						
WVOR	**Wild Horse Val**	**81.80**	**48**	*e*P	P	02 02 09.1	+0.1
	1.9nm,0.8s						
ARCES	**ARCESS Array B**	**82.47**	**342**	P	P	02 02 12.2	+0.3
	0.5nm,0.7s,baz=82,slow=6.7,SNR=2.9						
HRY	**Holter Researc**	**84.94**	**42**	*e*P	P	02 02 25.5	+0.7
	2.9nm,0.7s						
DUG	**Dugway**	**86.69**	**49**	*e*P	P	02 02 33.6	+0.2
	2.1nm,0.7s						
FINES	**FINESS Array B**	**86.85**	**335**	P	P	02 02 32.5	-1.3
	0.4nm,0.4s,baz=70,slow=3.1,SNR=6.7						
HWUT	**Hardware Ranch**	**87.04**	**47**	*e*P	P	02 02 35.4	+0.3
	2.0nm,0.8s						
ARUT	**Antelope Range**	**87.11**	**51**	*e*P	P	02 02 36.5	+1.0
	1.7nm,0.6s						
FFC	**Flin Flon**	**87.20**	**32**	*e*P	P	02 02 35.8	+0.2
	4.0nm,1.1s						
LPAZ	**La Paz**	**147.83**	**91**	PKPbc	PKPbc	02 09 35.1	+1.3
	1.5nm,0.6s,baz=342,slow=5.3,SNR=8.7						

*ISK **26** 02:10:46.8, 39°.70N×40°.08E, h17km, MD2.8*
*ISCJB **26** 02:10:47.3±0.7, 39°.68N±0°.04×40°.10E±0°.05, h3km±8km, Error ellipse: s-maj=7.7km s-min=5.4km az=147.0*
*DDA **26** 02:10:47.1, 39°.66N×40°.08E, h7km±3km, Md2.8*
*CSEM **26** 02:10:47.9±0.3, 39°.72N×40°.05E, h12km, MD2.8, Error ellipse: s-maj=6.7km s-min=4.6km az=156.0*

ISC 26 02:10:48.0±0.7, 39°.69N±0°.04×40°.09E±0°.05, h11km±7km, n16, σ0°.93/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOPT	**Kop Dagi**	**0.45**	**43**	*i* P	**Pg**	**02 10 56.7**	**-0.1**
KOPT				*i* S	**Sg**	**02 11 04.6**	**+1.7**
KOPT	**Kop Dagi**	**0.45**	**43**	*i* P	**Pg**	**02 10 56.7**	**-0.2**
KOPT				*i* S	**Sg**	**02 11 04.6**	**+1.7**
EZC	**Erzincan**	**0.57**	**277**	PG	**Pg**	**02 10 58.0**	**-1.1**
EZC				*e*SG	**Sg**	**02 11 07.4**	**+0.7**
KELT	**Kelkit**	**0.79**	**306**	*i* P	**Pg**	**02 11 03.0**	**-0.2**
KELT				*i* S	**Sg**	**02 11 13.9**	**+0.3**
KELT	**Kelkit**	**0.79**	**306**	*i* P	**Pg**	**02 11 03.0**	**-0.2**
KELT				*i* S	**Sg**	**02 11 13.9**	**+0.3**
GUMT	**Gumushane**	**0.90**	**329**	*e*PG	**Pg**	**02 11 04.2**	**-1.2**
GUMT	**Gumushane**	**0.90**	**329**	*e*Pg	**Pg**	**02 11 04.2**	**-1.2**
PTK	**Pertek**	**0.96**	**215**	*e*PG	**Pg**	**02 11 06.3**	**-0.2**
PTK				*e*SG	**Sg**	**02 11 19.6**	**+0.5**
PTK	**Pertek**	**0.96**	**215**	*e*Pg	**Pg**	**02 11 06.3**	**-0.2**
PTK				*e*Sg	**Sg**	**02 11 19.6**	**+0.5**
EZM	**Erzurum**	**1.00**	**77**	*e*PG	**Pg**	**02 11 07.0**	**-0.3**
KEMA	**Kemaliye**	**1.31**	**252**	*i* P	**Pn**	**02 11 11.8**	**-0.3**
KEMA				*i* S	**Sb**	**02 11 29.8**	**+0.5**
KEMA	**Kemaliye**	**1.31**	**252**	*i* P	**Pn**	**02 11 11.8**	**-0.3**
KEMA				*i* S	**Sb**	**02 11 29.8**	**+0.5**
SUSE	**Susehri**	**1.54**	**290**	*i* P	**Pn**	**02 11 15.5**	**+0.1**
SUSE				*i* S	**Sn**	**02 11 38.6**	**+3.1**
SUSE	**Susehri**	**1.54**	**290**	*i* P	**Pn**	**02 11 15.5**	**+0.1**
ESPY	**Espiye-Giresun**	**1.61**	**320**	*e*PN	**Pn**	**02 11 14.8**	**-1.5**
ESPY	**Espiye-Giresun**	**1.61**	**320**	*e*Pn	**Pn**	**02 11 14.9**	**-1.4**

*ISCJB **26** 02:57:36.0±0.4, 37°.96N±0°.03×21°.52E±0°.03, h23km±4km, Error ellipse: s-maj=5.4km s-min=3.9km az=1.2*
*CSEM **26** 02:57:35.4±0.1, 37°.92N×21°.52E, h12km, MD3.1, Error ellipse: s-maj=2.6km s-min=2.3km az=11.0*
*THE **26** 02:57:35.5, 37°.94N×21°.52E, h13km±1km, ML2.7/6, Error ellipse: s-maj=1.1km s-min=0.3km az=359.0*
*NEIC **26** 02:57:35.7, 37°.94N×21°.51E, h19km, MD3.1(ATH), After ATH.*
*ATH **26** 02:57:35.7, 37°.94N×21°.51E, h19km±4km, MD3.1/10*

ISC 26 02:57:35.8±0.5, 37°.94N±0°.04×21°.51E±0°.03, h17km±5km, n39, σ0°.71/66, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.12**	**345**	*e*Pb	**Pg**	**02 57 39.4**	**-0.2**
RLS				*e*Sb	**Sg**	**02 57 43.0**	**+0.8**
RLS	**Riolos of Patr**	**0.12**	**345**	*e*PB	**Pg**	**02 57 39.4**	**-0.2**
RLS				*e*SB	**Sg**	**02 57 43.0**	**+0.8**
RLS	**Riolos of Patr**	**0.12**	**345**	*e*Pb	**Pg**	**02 57 39.4**	**-0.2**
RLS				*e*Sb	**Sg**	**02 57 43.0**	**+0.8**
UPR	**University Cam**	**0.41**	**32**	*e*PB	**Pg**	**02 57 44.3**	**+0.1**
UPR				*e*SB	**Sg**	**02 57 50.8**	**+1.0**
UPR	**University Cam**	**0.41**	**32**	*e*Pb	**Pg**	**02 57 44.3**	**+0.1**
UPR				*e*Sb	**Sg**	**02 57 50.8**	**+1.0**
LAKA	**Lakka**	**0.48**	**51**	P	**Pg**	**02 57 44.5**	**-0.9**
LAKA				S	**Sg**	**02 57 51.8**	**-0.1**
LAKA	**Lakka**	**0.48**	**51**	P	**Pg**	**02 57 44.5**	**-0.9**
LAKA				S	**Sg**	**02 57 51.8**	**-0.1**
EFP	**Efpalio**	**0.58**	**33**	*e*PN	**Pg**	**02 57 46.7**	**-0.6**
EFP				*e*SN	**Sg**	**02 57 55.6**	**+0.5**
EFP	**Efpalio**	**0.58**	**33**	P	**Pg**	**02 57 46.7**	**-0.6**
EFP				S	**Sg**	**02 57 55.3**	**+0.2**
EFP	**Efpalio**	**0.58**	**33**	P	**Pg**	**02 57 46.7**	**-0.6**
EFP				S	**Sg**	**02 57 55.3**	**+0.2**
EFP				*e*Sn	**Sg**	**02 57 55.6**	**+0.5**
KFL	**Anninata**	**0.59**	**287**	P	**Pg**	**02 57 47.0**	**-0.5**
KFL				S	**Sg**	**02 57 56.1**	**+0.6**
KFL	**Anninata**	**0.59**	**287**	P	**Pg**	**02 57 47.0**	**-0.5**
KFL				S	**Sg**	**02 57 56.1**	**+0.6**
TRIZ	**Trizonia**	**0.62**	**46**	P	**Pg**	**02 57 47.4**	**-0.6**
TRIZ				S	**Sg**	**02 57 56.2**	**0.0**
TRIZ	**Trizonia**	**0.62**	**46**	P	**Pg**	**02 57 47.4**	**-0.6**
TRIZ				S	**Sg**	**02 57 56.2**	**0.0**
GUR	**Goura**	**0.66**	**90**	*e*PB	**Pg**	**02 57 47.6**	**-1.2**
GUR				*e*SN	**Sg**	**02 57 57.7**	**+0.1**
GUR	**Goura**	**0.66**	**90**	P	**Pg**	**02 57 47.6**	**-1.2**
GUR				S	**Sg**	**02 57 57.9**	**+0.3**
GUR	**Goura**	**0.66**	**90**	P	**Pg**	**02 57 47.6**	**-1.2**
GUR				*e*Sn	**Sg**	**02 57 57.7**	**+0.1**
KALE	**Kalithea**	**0.67**	**48**	P	**Pg**	**02 57 48.3**	**-0.7**
KALE				S	**Sg**	**02 57 58.0**	**0.0**
KALE	**Kalithea**	**0.67**	**48**	P	**Pg**	**02 57 48.3**	**-0.7**
KALE				S	**Sg**	**02 57 58.0**	**0.0**
VLS	**Valsamata**	**0.76**	**288**	*e*Pn	**Pb**	**02 57 50.0**	**-0.6**
VLS				*e*Sn	**Sn**	**02 58 02.2**	**-0.7**
VLS	**Valsamata**	**0.76**	**288**	*e*PN	**Pb**	**02 57 50.0**	**-0.6**
VLS				*e*SN	**Sn**	**02 58 02.2**	**-0.7**
VLS	**Valsamata**	**0.76**	**288**	P	**Pb**	**02 57 50.0**	**-0.6**
VLS				S	**Sg**	**02 58 01.5**	**+0.7**
VLS	**Valsamata**	**0.76**	**288**	P	**Pb**	**02 57 50.0**	**-0.6**
VLS				S	**Sg**	**02 58 01.5**	**+0.7**
VLS				*e*Sn	**Sn**	**02 58 02.2**	**-0.7**
ITM	**Ithomi**	**0.83**	**156**	*e*Pb	**Pb**	**02 57 51.2**	**-0.5**
ITM	**Ithomi**	**0.83**	**156**	*e*PB	**Pb**	**02 57 51.2**	**-0.5**
ITM	**Ithomi**	**0.83**	**156**	P	**Pb**	**02 57 51.0**	**-0.7**
ITM	**Ithomi**	**0.83**	**156**	*e*Pb	**Pb**	**02 57 51.2**	**-0.5**
VLX	**Vlachokerasia**	**0.90**	**129**	*e*PN	**Pn**	**02 57 53.8**	**+0.2**
VLX	**Vlachokerasia**	**0.90**	**129**	P	**Pb**	**02 57 52.3**	**-0.5**
VLX				S	**Sb**	**02 58 05.3**	**+0.8**
VLX	**Vlachokerasia**	**0.90**	**129**	P	**Pb**	**02 57 52.3**	**-0.5**
VLX	**Vlachokerasia**	**0.90**	**129**	*e*Pn	**Pn**	**02 57 53.8**	**+0.2**
VLX				S	**Sb**	**02 58 05.3**	**+0.8**
EVR	**Evrytania**	**1.00**	**14**	*e*Pn	**Pn**	**02 57 55.7**	**+0.6**
EVR	**Evrytania**	**1.00**	**14**	*e*PN	**Pn**	**02 57 55.7**	**+0.6**
EVR	**Evrytania**	**1.00**	**14**	*e*Pn	**Pn**	**02 57 55.7**	**+0.6**
PYL	**PYLOS**	**1.06**	**170**	*e*PN	**Pn**	**02 57 56.2**	**+0.4**
PYL	**PYLOS**	**1.06**	**170**	*e*Pn	**Pn**	**02 57 56.2**	**+0.4**
LKD2	**Lefkada island**	**1.08**	**322**	P	**Pb**	**02 57 55.6**	**-0.4**
LKD2	**Lefkada island**	**1.08**	**322**	P	**Pb**	**02 57 55.6**	**-0.4**
DID	**Didima**	**1.44**	**107**	*e*PN	**Pn**	**02 58 03.5**	**+2.5**

*IDC **26** 03:17:47.5±1.2, 19°.39N×121°.68E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.6/19, mbtmp3.7/7, Error ellipse: s-maj=40.9km s-min=23.8km az=68.0*
*ISCJB **26** 03:17:53.3±0.5, 19°.26N±0°.03×121°.3E±0°.1, h62km±8km, mb3.6/7, Error ellipse: s-maj=20.2km s-min=5.8km az=179.9*
*MAN **26** 03:17:55, 19°.00N×121°.27E, h6km, mb5.0, ML3.9, MS4.0*
*NEIC **26** 03:17:57.6±1.9, 19°.40N×121°.73E, h88km±15km, Error ellipse: s-maj=31.2km s-min=18.9km az=70.0*

ISC 26 03:17:54.5±0.5, 19°.22N±0°.03×121°.3E±0°.1, h59km±8km, n19, σ1°.34/24, mb3.6/7, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGCP	**Mt. Cagua**	**1.18**	**145**	*e*P	**Pn**	**03 18 15.4**	**+0.5**
APYP	**Conner**	**1.35**	**184**	*e*P	**Pn**	**03 18 15.9**	**-1.3**
APYP				*e*S	**Sn**	**03 18 33.6**	**-0.6**
CVP	**Callao Caves**	**1.57**	**163**	↑*i*P	**Pn**	**03 18 20.4**	**+0.2**
ABRA	**Dolores**	**1.67**	**201**	*e*P	**Pn**	**03 18 20.8**	**-0.7**
ABRA				*e*S	**Sn**	**03 18 41.4**	**-0.5**
CAUP	**Cauayan**	**2.31**	**169**	*e*P	**Pn**	**03 18 33.0**	**+2.9**
PALP	**Palanan**	**2.38**	**154**	*e*P	**Pn**	**03 18 37.6**	**+6.5**
TPUB	**Ta-pu**	**4.12**	**351**	*e*Pn	**Pn**	**03 18 57.0**	**+2.0**
TPUB				*e*Sn	**Sn**	**03 19 37.2**	**-4.6**
SSLB	**Suanglung**	**4.56**	**356**	*e*Pn	**Pn**	**03 19 03.4**	**+2.4**
SSLB				*e*Sn	**Sn**	**03 19 51.1**	**-1.6**
NACB	**Ninganchiao**	**4.94**	**3**	*e*Pn	**Pn**	**03 19 06.0**	**-0.2**
YHNB	**Yeheng**	**5.43**	**0**	*e*Pn	**Pn**	**03 19 13.6**	**+0.7**
	27nm,0.3s						
YHNB				*e*Sn	**Sn**	**03 20 13.4**	**-0.6**
KSRS	**Korea Array**	**19.06**	**16**	P	**Pn**	**03 22 12.6**	**-0.7**
	0.5nm,0.3s,baz=197,slow=12,SNR=9.0						
SONM	**Songino Array**	**31.03**	**340**	P	**P**	**03 24 04.9**	**-1.7**
	0.2nm,0.4s,mb3.3,baz=163,slow=10,SNR=2.1						
MKAR	**Makanchi Array**	**42.11**	**320**	P	**P**	**03 25 42.6**	**+1.8**
	0.2nm,0.3s,mb3.2,baz=116,slow=9.8,SNR=3.2						
PETK	**Petropavlovsk-**	**43.96**	**31**	P	**P**	**03 25 53.5**	**-2.1**
	1.0nm,0.4s,mb3.9,baz=215,slow=9.7,SNR=2.7						
ASAR	**Alice Springs**	**44.35**	**163**	P	**P**	**03 25 59.7**	**+0.7**
	0.3nm,0.3s,mb3.5,baz=341,slow=6.8,SNR=9.3						
ASAR	**Alice Springs**	**44.35**	**163**	P	**P**	**03 25 59.7**	**+0.6**
ZALV	**Zalesovo Beam**	**44.54**	**330**	P	**P**	**03 26 01.1**	**+0.8**
	0.5nm,0.4s,mb3.7,baz=107,slow=7.7,SNR=1.2						
ILAR	**Eielson Array**	**73.56**	**27**	P	**P**	**03 29 19.3**	**-1.7**
	0.2nm,0.8s,mb3.1,baz=274,slow=4.1,SNR=4.1						
YKA	**Yellowknife Ar**	**87.47**	**23**	P	**P**	**03 30 37.4**	**+1.9**
	1.2nm,0.6s,mb4.3,baz=308,slow=4.6,SNR=13						

*DDA **26** 03:21:05.2, 34°.04N×25°.65E, h26km, Md3.8*
*IDC **26** 03:21:07.0±0.6, 34°.27N×25°.90E, h0km, mb4.4/21, mb1 4.4/29, mb1mx4.4/33, mbtmp4.3/29, ML4.2/8, MS3.1/3, Ms1 3.2/3, ms1mx2.7/31, Error ellipse: s-maj=13.9km s-min=12.5km az=4.0*
*ISCJB **26** 03:21:10.3±0.3, 34°.22N±0°.02×25°.93E±0°.02, h37km±3km, mb4.4/110, MS3.2/8, Error ellipse: s-maj=3.8km s-min=2.2km az=5.4*
*BJI **26** 03:21:11.7, 34°.61N×25°.41E, h54km, mB4.7/10, mb4.7/13, Ms4.8/4, Ms7 4.5/4*
*ATH **26** 03:21:11.4, 34°.26N×25°.97E, h86km±2km, ML3.9*
*NEIC **26** 03:21:13.0±0.4, 34°.25N×25°.93E, h45km±3km, mb4.3/93, Error ellipse: s-maj=4.7km s-min=2.6km az=190.0*
*CSEM **26** 03:21:12.1±0.1, 34°.19N×25°.92E, h40km, mb4.4/84, Ms2.8, Mw3.5, Error ellipse: s-maj=2.8km s-min=1.8km az=12.0*
*SGS **26** 03:21:13.6, 33°.56N×25°.88E, h16km*
*MOS **26** 03:21:13.0±1.0, 34°.40N×25°.85E, h51km, mb4.5/46, Error ellipse: s-maj=5.6km s-min=2.8km az=114.0*
*NIC **26** 03:21:14.3±0.2, 34°.39N×26°.25E, h55km, mb4.5, ML4.1, MW3.5*
*TEH **26** 03:21:15.0, 34°.40N×25°.82E, h52km*
*THE **26** 03:21:16.7, 34°.48N×25°.84E, h56km±1km, ML4.5/8, Error ellipse: s-maj=1.5km s-min=0.4km az=160.0*
*SZGRF **26** 03:21:54.4, 37°.65N×23°.68E, h33km, mb4.1, Southern Greece*

ISC 26 03:21:12.3±0.3, 34°.22N±0°.02×25°.92E±0°.01, h39km±2km, h47km±2.9km: pP-P, n853, σ1°.14/921, mb4.4/110, MS3.2/8, 23C-12D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.93**	**15**	*e*P	**Pn**	**03 21 30.3**	**+1.4**
ZKR				*e*S	**Sn**	**03 21 43.6**	**+2.7**
ZKR	**Zakros**	**0.93**	**15**	*e*P	**Pn**	**03 21 30.3**	**+1.4**
ZKR				*e*S	**Sn**	**03 21 43.6**	**+2.7**
ZKR	**Zakros**	**0.93**	**15**	P	**Pn**	**03 21 30.0**	**+1.1**
ZKR				S	**Sn**	**03 21 40.9**	**0.0**
ZKR	**Zakros**	**0.93**	**15**	P	**Pn**	**03 21 30.0**	**+1.1**
ZKR				S	**Sn**	**03 21 40.9**	**0.0**
LAST	**Lasithi**	**1.01**	**339**	*e*P	**Pn**	**03 21 31.0**	**+1.0**
LAST				*e*S	**Sn**	**03 21 46.2**	**+3.3**
LAST	**Lasithi**	**1.01**	**339**	*e*P	**Pn**	**03 21 31.0**	**+1.0**
LAST				*e*S	**Sn**	**03 21 46.2**	**+3.3**
LAST	**Lasithi**	**1.01**	**339**	P	**Pn**	**03 21 30.8**	**+0.8**
LAST	**Lasithi**	**1.01**	**339**	P	**Pn**	**03 21 30.8**	**+0.8**
LAST				*e*S	**Sn**	**03 21 46.2**	**+3.3**
NPS	**Neapolis**	**1.07**	**346**	*e*P	**Pn**	**03 21 32.0**	**+1.1**
NPS				*e*S	**Sn**	**03 21 46.8**	**+2.3**
NPS	**Neapolis**	**1.07**	**346**	*e*P	**Pn**	**03 21 32.0**	**+1.1**
NPS				*e*S	**Sn**	**03 21 46.8**	**+2.3**
NPS	**Neapolis**	**1.07**	**346**	*e*P	**Pn**	**03 21 32.0**	**+1.1**
NPS				*e*S	**Sn**	**03 21 46.8**	**+2.3**
SIVA	**Sivas**	**1.21**	**311**	*e*P	**Pn**	**03 21 33.9**	**+1.1**
SIVA				*e*S	**Sn**	**03 21 51.4**	**+3.4**
SIVA	**Sivas**	**1.21**	**311**	*e*P	**Pn**	**03 21 33.9**	**+1.1**
SIVA				*e*S	**Sn**	**03 21 51.4**	**+3.4**
SIVA	**Sivas**	**1.21**	**311**	P	**Pn**	**03 21 34.1**	**+1.3**
SIVA				S	**Sn**	**03 21 47.7**	**-0.3**
SIVA	**Sivas**	**1.21**	**311**	*e*P	**Pn**	**03 21 33.9**	**+1.1**
SIVA				S	**Sn**	**03 21 47.7**	**-0.3**
IDI	**Anoyia**	**1.36**	**322**	*e*P	**Pn**	**03 21 36.1**	**+1.3**
IDI				*e*S	**Sn**	**03 21 54.9**	**+3.2**
IDI	**Anoyia**	**1.36**	**322**	*e*P	**Pn**	**03 21 36.1**	**+1.3**
IDI				*e*S	**Sn**	**03 21 54.9**	**+3.2**
IDI	**Anoyia**	**1.36**	**322**	*e*P	**Pn**	**03 21 36.1**	**+1.3**
IDI				*e*S	**Sn**	**03 21 54.9**	**+3.2**
GVD	**Gavdhos**	**1.64**	**293**	*e*Pn	**Pn**	**03 21 39.8**	**+1.2**
GVD	**Gavdhos**	**1.64**	**293**	*e*P	**Pn**	**03 21 40.0**	**+1.4**
GVD				*e*S	**Sn**	**03 22 01.4**	**+3.0**
GVD	**Gavdhos**	**1.64**	**293**	P	**Pn**	**03 21 40.4**	**+1.8**
GVD				S	**Sn**	**03 21 59.5**	**+1.1**
GVD	**Gavdhos**	**1.64**	**293**	*e*Pn	**Pn**	**03 21 39.8**	**+1.2**
GVD				S	**Sn**	**03 21 59.5**	**+1.1**
VAM	**Vamos**	**1.85**	**310**	*e*P	**Pn**	**03 21 42.8**	**+1.3**
VAM				*e*S	**Sn**	**03 22 06.0**	**+2.4**
VAM	**Vamos**	**1.85**	**310**	*e*P	**Pn**	**03 21 42.8**	**+1.3**
VAM				*e*S	**Sn**	**03 22 06.0**	**+2.4**
VAM	**Vamos**	**1.85**	**310**	*e*P	**Pn**	**03 21 42.8**	**+1.3**
VAM				*e*S	**Sn**	**03 22 06.0**	**+2.4**
KARN	**Karanos**	**2.03**	**306**	*e*P	**Pn**	**03 21 45.6**	**+1.6**
KARN				*e*S	**Sn**	**03 22 10.3**	**+2.2**
KARN	**Karanos**	**2.03**	**306**	P	**Pn**	**03 21 45.4**	**+1.4**
KARN	**Karanos**	**2.03**	**306**	P	**Pn**	**03 21 45.4**	**+1.4**
KARN				*e*S	**Sn**	**03 22 10.3**	**+2.2**
THR1	**Thera Island**	**2.18**	**350**	P	**Pn**	**03 21 46.6**	**+0.5**
THR1	**Thera Island**	**2.18**	**350**	P	**Pn**	**03 21 46.6**	**+0.5**
THR3	**Thira Island,**	**2.23**	**349**	P	**Pn**	**03 21 47.2**	**+0.5**
THR3	**Thira Island,**	**2.23**	**349**	P	**Pn**	**03 21 47.2**	**+0.5**
THR5	**Thira Island,**	**2.24**	**348**	P	**Pn**	**03 21 47.4**	**

IZM Izmir 4.31 14 ePN Pn 03 22 15.5 +0.2
IZM Izmir 4.31 14 ePn Pn 03 22 15.5 +0.2
DENT Denizli 4.34 35 ePN Pn 03 22 15.2 -0.5
DENT Denizli 4.34 35 ePn Pn 03 22 15.2 -0.5
ITM Ithomi 4.39 313 eP Pn 03 22 16.7 +0.2
ITM Ithomi 4.39 313 eP Pn 03 22 16.7 +0.2
ITM Ithomi 4.39 313 P Pn 03 22 16.9 +0.4
ITM Ithomi 4.39 313 eP Pn 03 22 16.7 +0.2
LTK Loutraki 4.49 329 P Pn 03 22 17.8 0.0
LTK Loutraki 4.49 329 P Pn 03 22 17.8 0.0
KORT Korkueli 4.55 51 i P Pn 03 22 19.9 +1.3
KORT i S Sn 03 23 09.8 -0.5
KORT Korkueli 4.55 51 i P Pn 03 22 20.0 +1.3
KORT i S Sn 03 23 09.8 -0.5
ANTB Antalya 4.69 54 ePN Pn 03 22 20.0 -0.6
ANTB Antalya 4.69 54 ePn Pn 03 22 20.0 -0.6
GUR Goura 4.71 323 P Pn 03 22 20.9 +0.1
GUR S Sn 03 23 11.5 -2.6
GUR Goura 4.71 323 P Pn 03 22 20.9 +0.1
KULA Kula-Manisa 4.82 26 ePN Pn 03 22 22.7 +0.3
KULA Kula-Manisa 4.82 26 ePn Pn 03 22 22.7 +0.3
AKS Akhisar 4.89 18 ePN Pn 03 22 23.7 +0.4
AKS Akhisar 4.89 18 ePn Pn 03 22 23.7 +0.4
BCK Bucak 4.98 48 ePN Pn 03 22 26.0 +1.4
BCK Bucak 4.98 48 ePn Pn 03 22 26.0 +1.4
SIGR SIGRI 4.98 359 P Pn 03 22 25.0 +0.4
SIGR SIGRI 4.98 359 P Pn 03 22 24.7 +0.1
SIGR SIGRI 4.98 359 P Pn 03 22 25.0 +0.4
DSF Desfina 5.00 328 P Pn 03 22 25.2 +0.4
DSF Desfina 5.00 328 P Pn 03 22 25.2 +0.4
LKR Lokris 5.01 333 P Pn 03 22 25.2 +0.2
LKR Lokris 5.01 333 P Pn 03 22 25.2 +0.2
LKR Lokris 5.01 333 P Pn 03 22 25.2 +0.2
KHL Karahalli 5.02 34 ePN Pn 03 22 25.4 +0.3
KHL Karahalli 5.02 34 ePn Pn 03 22 25.4 +0.3
PRK Paraskevi 5.03 3 P Pn 03 22 25.4 +0.2
PRK Paraskevi 5.03 3 P Pn 03 22 25.3 +0.1
PRK Paraskevi 5.03 3 P Pn 03 22 25.4 +0.2
ATAL Atalanti 5.04 333 P Pn 03 22 25.6 +0.3
ATAL Atalanti 5.04 333 P Pn 03 22 25.6 +0.3
KHAL Karahalli 5.05 34 i P Pn 03 22 25.0 -0.4
KHAL i S Sn 03 23 19.0 -3.5
KHAL Karahalli 5.05 34 i P Pn 03 22 25.0 -0.5
KHAL i S Sn 03 23 19.0 -3.5
LAKA Lakka 5.12 323 P Pn 03 22 27.0 +0.5
LAKA S Sn 03 23 21.6 -2.8
LAKA Lakka 5.12 323 P Pn 03 22 27.0 +0.5
KALE Kalithea 5.16 325 P Pn 03 22 27.5 +0.5
KALE S Sn 03 23 22.6 -2.7
KALE Kalithea 5.16 325 P Pn 03 22 27.5 +0.5
ISP Isparta 5.18 45 eP Pn 03 22 29.9 +2.6
ISP pmax pmax
comp=Z,17nm,0.7s
ISP Isparta 5.18 45 ePn Pn 03 22 29.9 +2.6
comp=Z,17nm,0.7s
ISP Isparta 5.18 45 eP Pn 03 22 29.9 +2.6
comp=Z,17nm,0.7s
AOS Alonnisos 5.21 342 P Pn 03 22 28.4 +0.8
AOS Alonnisos 5.21 342 P Pn 03 22 28.1 +0.5
AOS Alonnisos 5.21 342 P Pn 03 22 28.1 +0.5
RLS Riolos of Patr 5.26 318 P Pn 03 22 30.0 +1.6
RLS Riolos of Patr 5.26 318 P Pn 03 22 30.0 +1.6
DEMI Demirci 5.31 24 i P Pn 03 22 28.8 +0.7
DEMI eS Sn 03 23 26.9 -2.1
DEMI Demirci 5.31 24 i P Pn 03 22 29.8 +0.7
DEMI eS Sn 03 23 26.9 -2.1
PPCY Paphos 5.34 81 P Pn 03 22 28.3 -1.2
PPCY Paphos 5.34 81 P Pn 03 22 28.3 -1.2
NEO Neokhori 5.52 338 P Pn 03 22 32.4 +0.5
NEO Neokhori 5.52 338 P Pn 03 22 32.4 +0.5
ALFC Alevga 5.58 78 P Pn 03 22 31.9 -0.9
comp=Z,10nm,0.2s
ALFC S Sn 03 23 32.4 -3.3
ALFC Alevga 5.58 78 P Pn 03 22 31.9 -0.9
comp=Z,10nm,0.2s
XOR Xorichti 5.58 338 P Pn 03 22 33.8 +1.0
XOR Xorichti 5.58 338 P Pn 03 22 32.9 +0.1
XOR Xorichti 5.58 338 P Pn 03 22 32.9 +0.1
AGG Agios Georgios 5.60 330 P Pn 03 22 34.0 +1.0
AGG Agios Georgios 5.60 330 P Pn 03 22 33.1 +0.1
AGG Agios Georgios 5.60 330 P Pn 03 22 33.1 +0.1
EZN Ezine 5.61 3 ePN Pn 03 22 32.7 -0.4
EZN Ezine 5.61 3 ePn Pn 03 22 32.7 -0.4
GAZI Gazipasa 5.61 67 i P Pn 03 22 31.4 -1.7
GAZI i S Sn 03 23 29.1 -7.1
GAZI Gazipasa 5.61 67 i P Pn 03 22 31.4 -1.8
SHUT Suhut-Afyon 5.71 39 ePN Pn 03 22 35.1 +0.5
SHUT Suhut-Afyon 5.71 39 ePn Pn 03 22 35.1 +0.5
SZAC Souni-Zanaja 5.77 83 P Pn 03 22 35.1 -0.4
SZAC Souni-Zanaja 5.77 83 P Pn 03 22 35.1 -0.4
LEF Lefka 5.81 79 ePN Pn 03 22 33.8 -2.2
LEF Lefka 5.81 79 ePn Pn 03 22 33.8 -2.2
VLS Valsamata 5.85 314 P Pn 03 22 35.6 -0.8
VLS Valsamata 5.85 314 P Pn 03 22 35.6 -0.8
LJBD Adjabya 5.85 237 i P Pn 03 22 36.5 0.0
SNR=23
ALT Altintas 5.88 34 ePN Pn 03 22 36.9 0.0
ALT Altintas 5.88 34 ePn Pn 03 22 36.9 -0.1
PAIG Paliouri 5.97 343 P Pn 03 22 38.5 +0.3
PAIG Paliouri 5.97 343 P Pn 03 22 38.5 +0.3
PAIG Paliouri 5.97 343 P Pn 03 22 38.5 +0.3
GONE Gonen-Balikesi 5.99 13 ePN Pn 03 22 38.4 0.0
GONE Gonen-Balikesi 5.99 13 ePn Pn 03 22 38.4 +0.1
HDMB Hadim 6.01 61 ePN Pn 03 22 39.9 +1.2
HDMB Hadim 6.01 61 ePn Pn 03 22 39.9 +1.2
BOLV Bolvadin 6.05 41 i P Pn 03 22 39.9 +0.7
BOLV i S Sn 03 23 44.1 -3.1
BOLV Bolvadin 6.05 41 i P Pn 03 22 39.9 +0.7
MAMC Mammari 6.08 79 P Pn 03 22 39.1 -0.6
MAMC Mammari 6.08 79 P Pn 03 22 39.1 -0.6
CSS Prodhromos 6.16 81 P Pn 03 22 39.8 -0.9
comp=Z,3.2nm,0.3s
CSS S Sn 03 23 47.4 -2.4
CSS Prodhromos 6.16 81 P Pn 03 22 39.8 -0.9
comp=Z,3.2nm,0.3s
CSS S Sn 03 23 47.4 -2.4
LPK Lapseki 6.18 6 ePN Pn 03 22 41.5 +0.5
LPK Lapseki 6.18 6 ePn Pn 03 22 41.5 +0.5
GELI Tayfur-Gelibol 6.18 4 ePN Pn 03 22 41.2 +0.1
GELI Tayfur-Gelibol 6.18 4 ePn Pn 03 22 41.2 +0.1
LKD2 Lefkada island 6.22 319 P Pn 03 22 42.0 +0.4
LKD2 S Sn 03 23 48.8 -2.7
LKD2 Lefkada island 6.22 319 P Pn 03 22 42.0 +0.4
KRBG Karabiga-Canak 6.26 10 ePN Pn 03 22 42.1 0.0
KRBG Karabiga-Canak 6.26 10 ePn Pn 03 22 42.1 0.0
OUR Ouranopolis 6.30 346 P Pn 03 22 43.6 +1.0
OUR Ouranopolis 6.30 346 P Pn 03 22 42.8 +0.2
OUR Ouranopolis 6.30 346 P Pn 03 22 42.8 +0.2
KCTX Karacabey (Bur 6.34 17 ePN Pn 03 22 43.3 +0.1
KCTX Karacabey (Bur 6.34 17 ePn Pn 03 22 43.3 +0.1
LFK Lefkose 6.35 78 ePN Pn 03 22 43.9 +0.5
LFK Lefkose 6.35 78 ePn Pn 03 22 43.9 +0.5
KONT Konya--Tatoy 6.40 53 ePN Pn 03 22 44.0 -0.1
KONT Konya--Tatoy 6.40 53 ePn Pn 03 22 44.0 -0.1
PLG Polygyros 6.45 343 P Pn 03 22 44.9 +0.2
PLG Polygyros 6.45 343 P Pn 03 22 44.9 +0.2
ERIK Erikli-Kesan 6.46 4 ePN Pn 03 22 45.2 +0.4
ERIK Erikli-Kesan 6.46 4 ePn Pn 03 22 45.2 +0.4
RKY Sarkoy-Tekirda 6.53 8 ePN Pn 03 22 46.4 +0.6
RKY Sarkoy-Tekirda 6.53 8 ePn Pn 03 22 46.4 +0.5
LADK Ladik-KONYA 6.55 51 ePN Pn 03 22 45.2 -0.9
LADK Ladik-KONYA 6.55 51 ePn Pn 03 22 45.2 -0.9
ESKT Eskisehir 6.60 35 ePN Pn 03 22 46.9 +0.1
ESKT Eskisehir 6.60 35 ePn Pn 03 22 46.9 +0.1
IKL Isikli 6.67 70 ePN Pn 03 22 46.7 -1.0
IKL Isikli 6.67 70 ePn Pn 03 22 46.7 -1.0
KIZT Kizilcal 6.68 44 ePN Pn 03 22 48.1 +0.2
KIZT Kizilcal 6.68 44 ePn Pn 03 22 48.1 +0.2
PHNC Paralimni 6.73 81 P Pn 03 22 49.1 +0.5
PHNC S Sn 03 24 01.6 -2.4
PHNC Paralimni 6.73 81 P Pn 03 22 49.1 +0.5
PHNC S Sn 03 24 01.6 -2.4
HORT Hortiatis 6.75 341 P Pn 03 22 50.9 +2.1
HORT Hortiatis 6.75 341 P Pn 03 22 50.9 +2.1
ARMT Armutlu 6.75 19 ePN Pn 03 22 48.3 -0.6
ARMT Armutlu 6.75 19 ePn Pn 03 22 48.3 -0.6
JAN Janina 6.78 325 P Pn 03 22 50.2 +1.0
JAN Janina 6.78 325 P Pn 03 22 50.2 +1.0
EREN Erenkoy 6.91 77 ePN Pn 03 22 51.8 +0.8
EREN Erenkoy 6.91 77 ePn Pn 03 22 51.8 +0.8
YLV Yalova 6.91 22 ePN Pn 03 22 49.3 -1.6
YLV Yalova 6.91 22 ePn Pn 03 22 49.3 -1.7
IGT Igoumenitsa 6.94 321 P Pn 03 22 52.5 +1.1
IGT Igoumenitsa 6.94 321 P Pn 03 22 52.5 +1.1
GULT Gulveren 7.20 29 ePN Pn 03 22 56.1 +1.1
GULT Gulveren 7.20 29 ePn Pn 03 22 56.1 +1.1
GRG Griva 7.28 338 P Pn 03 22 57.3 +1.2
GRG Griva 7.28 338 P Pn 03 22 57.3 +1.2
NVR Nevrokopi 7.30 348 P Pn 03 22 57.3 +0.9
NVR Nevrokopi 7.30 348 P Pn 03 22 57.3 +0.9
SULT Sultanhani-AKS 7.31 55 ePN Pn 03 22 58.1 +1.6
SULT Sultanhani-AKS 7.31 55 ePn Pn 03 22 58.1 +1.6
KEK Kerkira 7.35 320 P Pn 03 22 56.1 -1.0
KEK Kerkira 7.35 320 P Pn 03 22 56.1 -1.0
SRN Sarande 7.37 322 ePN Pn 03 22 57.4 +0.1
SRN Sarande 7.37 322 ePn Pn 03 22 57.4 +0.1
FNA Florina 7.48 332 P Pn 03 23 00.2 +1.3
FNA Florina 7.48 332 P Pn 03 23 00.2 +1.3
MERS Mersin 7.49 67 ePN Pn 03 22 59.3 +0.3
MERS Mersin 7.49 67 ePn Pn 03 22 59.3 +0.3
KBN Korca 7.58 329 ePN Pn 03 23 02.6 +2.3
KBN Korca 7.58 329 ePn Pn 03 23 02.6 +2.3
BIA Bitola 7.71 333 i Pn Pn 03 23 02.5 +0.5
GULE Gulek 7.82 64 i P Pn 03 23 05.0 +1.5
GULE i S Sn 03 24 29.0 -1.8
GULE Gulek 7.82 64 i P Pn 03 23 05.0 +1.5
GULE i S Sn 03 24 29.0 -1.8
OHR Ohrid 7.99 331 ⇑i Pn Pn 03 23 06.5 +0.7
KARA Karaisali 8.02 65 ePN Pn 03 23 06.5 +0.2
KARA Karaisali 8.02 65 ePn Pn 03 23 06.5 +0.2
BHL Bhannes 8.08 90 ePn Pn 03 23 05.9 -1.2
BHL Bhannes 8.08 90 ePn Pn 03 23 05.9 -1.2
BRTR Keskin Array B 8.26 46 Pn Pn 03 23 09.9 +0.3
comp=Z,0.5nm,0.3s,baz=220,slow=14,SNR=20
BRTR Sn Sn 03 24 40.1 -1.5
comp=Z,0.2nm,0.3s,baz=213,slow=25,SNR=5.3
BRTR Keskin Array B 8.26 46 P Pn 03 23 10.0 +0.4
BRTR S Sn 03 24 40.2 -1.4
BR131 Keskin Array S 8.27 46 ePn Pn 03 23 11.6 +2.0
BR131 eSn Sn 03 24 39.6 -2.1
BR131 Keskin Array S 8.27 46 ePn Pn 03 23 11.6 +2.0
RCY Rachaya 8.27 92 ePn Pn 03 23 07.9 -1.7
RCY Rachaya 8.27 92 ePn Pn 03 23 07.9 -1.8
HWQ Hawqa 8.30 87 ePn Pn 03 23 08.4 -1.8
HWQ Hawqa 8.30 87 ePn Pn 03 23 08.4 -1.7
HTY Hatay 8.58 74 ePN Pn 03 23 13.6 -0.4
HTY Hatay 8.58 74 ePn Pn 03 23 13.6 -0.3
TIR Tirane 8.58 328 P Pn 03 23 14.4 +0.5
TIR Tirane 8.58 328 P Pn 03 23 14.4 +0.5
VTS Vitosha 8.62 347 ⇑i P Pn 03 23 16.0 +1.5
VTS Vitosha 8.62 347 ⇑i P Pn 03 23 16.0 +1.5
KOZT Kozan 8.68 65 ePN Pn 03 23 14.7 -0.6
EIL Elat 8.91 118 Pn Pn 03 23 18.0 -0.5
comp=Z,10nm,0.3s,baz=324,slow=6.7,SNR=94
EIL Sn Sn 03 24 49.9 -7.7
comp=Z,9.4nm,0.3s,baz=66,slow=15,SNR=6.5
EIL Elat 8.91 118 Pn Pn 03 23 18.0 -0.5
EIL Sn Sn 03 24 49.9 -7.7
EIL Elat 8.91 118 Pn Pn 03 23 18.0 -0.5
CEL Celeste 9.05 299 ePn Pn 03 23 19.0 -1.4
comp=Z,67nm,0.4s
CEL eSn Sn 03 24 50.9 -10
CEL Celeste 9.05 299 ePn Pn 03 23 19.0 -1.3
comp=Z,67nm,0.4s
LZLA Zalla 9.11 234 i P Pn 03 23 19.9 -1.3
SNR=22
PUK Puka 9.14 330 ePN Pn 03 23 20.6 -1.0
PUK Puka 9.14 330 ePn Pn 03 23 20.6 -1.0
HAQS Haql 9.24 121 P Pn 03 23 21.3 -1.7
TAR1 Taranto 9.32 315 ePn Pn 03 23 22.3 -1.7
BCI Bajram Curri 9.34 332 ePN Pn 03 23 23.5 -0.9
BCI Bajram Curri 9.34 332 ePn Pn 03 23 23.5 -0.9
ASF Jabal al Asfar 9.42 99 Pn Pn 03 23 23.7 -1.8
comp=Z,1.9nm,0.3s,baz=154,slow=5.6,SNR=9.3
ASF Sn Sn 03 25 04.0 -6.1
comp=Z,1.6nm,0.3s,baz=223,slow=19,SNR=4.3
KMRS Kahramanmaras 9.49 67 ePN Pn 03 23 24.7 -1.8
KMRS Kahramanmaras 9.49 67 ePn Pn 03 23 24.7 -1.8
BDAS Al Bad' 9.74 124 P Pn 03 23 27.4 -2.5
BDAS Al Bad' 9.74 124 P Pn 03 23 27.4 -2.5
VAE Valguarnera 9.89 292 Pn Pn 03 23 32.7 +0.8
comp=Z,7.2nm,0.3s,baz=88,slow=12,SNR=12
VAE Sn Sn 03 25 16.5 -5.1
comp=Z,2.2nm,0.3s,baz=105,slow=18,SNR=3.6
VAE Valguarnera 9.89 292 Pn Pn 03 23 32.7 +0.8
VAE Sn Sn 03 25 16.5 -5.1
VAE Valguarnera 9.89 292 Pn Pn 03 23 32.7 +0.8
BAI Bari 9.93 316 ePn Pn 03 23 30.3 -2.1
STON Ston 10.77 326 i Pn Pn 03 23 41.3 -2.5
STON Sn Sn 03 25 30.9 -12
TBKS Tabuk 10.88 120 P Pn 03 23 44.3 -1.1
TBKS Tabuk 10.88 120 P Pn 03 23 44.3 -1.2
DBAS Duba 11.11 126 S Sn 03 25 41.5 -10
DBAS Duba 11.11 126 P Pn 03 23 46.7 -1.9
DBAS Duba 11.11 126 P Pn 03 23 46.7 -2.0
VOIR 11.22 357 ⇑i P Pn 03 23 49.2 -0.9
VOIR 11.22 357 ⇑i P Pn 03 23 49.2 -0.9
MLR Muntele Rosu 11.26 0 Pn Pn 03 23 51.5 +1.0
comp=Z,0.1nm,0.3s,baz=217,slow=5.1,SNR=2.3
MLR Muntele Rosu 11.26 0 ⇑i P Pn 03 24 00.3 +10
MLR Muntele Rosu 11.26 0 P Pn 03 23 51.5 +0.9
GZR Gura Zlata 11.42 349 ⇓i P Pn 03 23 54.5 +1.8
GZR Gura Zlata 11.42 349 ⇓i P Pn 03 23 54.5 +1.8
GZR Gura Zlata 11.42 349 P Pn 03 23 54.5 +1.8
PLOR Plostina 11.63 3 ⇑i P Px 03 24 09.9
VRI Vrincioaia 11.65 3 ⇑i P Pn 03 24 02.2 +6.3
VRI Vrincioaia 11.65 3 ⇑i P Pn 03 24 02.2 +6.3
BZS Buzias 11.85 345 ⇓i P Pn 03 23 58.3 -0.4
BZS Buzias 11.85 345 ⇓i P Pn 03 23 58.3 -0.4
BZS Buzias 11.85 345 P Pn 03 23 58.3 -0.4
AQU L'Aquila 12.74 313 eP Pn 03 24 10.7 -0.2
AQU L'Aquila 12.74 313 ⇓i P Pn 03 24 08.1 -2.8
AQU L'Aquila 12.74 313 eP Pn 03 24 10.7 -0.2
DRGR 12.79 350 ⇑i P Pn 03 24 11.5 0.0
DRGR 12.79 350 ⇑i P Pn 03 24 11.5 0.0
DRGR 12.79 350 P Pn 03 24 11.5 0.0
NVLJ Novalja 13.39 324 ePn Pn 03 24 14.7 -5.0
NVLJ Sn Sn 03 26 35.1 -12
BURAR Bucovina Array 13.39 358 ⇓i P Pn 03 24 25.5 +5.8
BURAR Bucovina Array 13.39 358 ⇓i P Pn 03 24 25.5 +5.8
BUR08 Bucovina Ar. S 13.42 358 ePn Pn 03 24 20.9 +0.8
BUR08 Bucovina Ar. S 13.42 358 ePn Pn 03 24 20.9 +0.8
CRES Cresnjev 14.08 329 i Pn Pn 03 24 24.9 -4.2
PDKS Podkum 14.46 328 ePn Pn 03 24 30.2 -4.1
PDKS i 03 24 40.5
JAVS Javornik 14.76 326 i Pn Pn 03 24 34.5 -3.7
TRI Trieste 14.76 325 eP Pn 03 24 43.1 +4.8
TRI pmax pmax
comp=Z,8.0nm,0.5s
TRI Trieste 14.76 325 eP Pn 03 24 43.1 +4.8
comp=Z,7.7nm,0.5s
TRI Trieste 14.76 325 eP Pn 03 24 43.1 +4.8
comp=Z,7.7nm,0.5s
SOKA Soboth 14.93 330 ⇑i Pn Pn 03 24 36.5 -4.1
comp=Z,3.3nm,0.6s
VOY Vojsko 14.94 326 ePn Pn 03 24 37.8 -2.9
VOY e 03 24 45.5
VYHS Vyhne 15.21 342 eP sP 03 25 00.4 -2.9
VYHS Vyhne 15.21 342 epP pP 03 25 00.4 +2.1
STHS Stebnicka Huta 15.57 349 eP Pn 03 24 53.3 +4.4
STHS pmax pmax
comp=Z,7.0nm,0.6s
STHS Stebnicka Huta 15.57 349 eP Pn 03 24 53.3 +4.4
comp=Z,7.4nm,0.6s
STHS Stebnicka Huta 15.57 349 eP Pn 03 24 53.3 +4.4
STHS Stebnicka Huta 15.57 349 eP Pn 03 24 53.3 +4.4
comp=Z,7.4nm,0.6s
KWP Kalwaria Pacla 15.58 352 eP Pn 03 24 49.3 +0.3
KWP pmax pmax
comp=Z,3.0nm,0.4s
KWP Kalwaria Pacla 15.58 352 ePn Pn 03 24 49.3 +0.3
comp=Z,2.9nm,0.4s
KWP Kalwaria Pacla 15.58 352 ⇑i P pP 03 24 59.6 -2.8
KWP Kalwaria Pacla 15.58 352 ePn Pn 03 24 49.3 +0.3
comp=Z,2.9nm,0.4s
PGF Pioggiola 15.64 307 eP Pn 03 24 49.2 -0.6
comp=Z,7.1nm,0.6s
PGF Pioggiola 15.64 307 eP Pn 03 24 49.2 -0.6
PGF pmax pmax
comp=Z,4.0nm,0.6s
PGF Pioggiola 15.64 307 eP Pn 03 24 49.2 -0.6
comp=Z,3.5nm,0.6s
ABTA Abfaltersbach 16.11 325 i P Pn 03 24 59.4 +3.6
comp=Z,9.8nm,0.6s,SNR=8.8
ABTA Abfaltersbach 16.11 325 P Pn 03 24 59.4 +3.5
comp=Z,9.8nm,0.6s,SNR=8.8
KIV Kislovodsk 16.22 48 i P Pn 03 25 00.2 +3.0
KIV pmax pmax
comp=Z,19nm,0.8s
KIV Kislovodsk 16.22 48 ePn Pn 03 25 01.4 +4.2
comp=Z,17nm,0.7s
KIV Kislovodsk 16.22 48 i P Pn 03 25 00.2 +3.0
comp=Z,19nm,0.8s
ZEI Tsey 16.44 53 eP Pn 03 24 59.5 -0.5
ZEI pmax pmax
comp=Z,13nm,0.5s
VRAC Vranov 16.58 338 Pn Pn 03 25 03.1 +1.3
comp=Z,0.6nm,0.3s,baz=155,slow=8.8,SNR=7.5
VRAC Vranov 16.58 338 ⇑P Pn 03 25 03.1 +1.4
VRAC Vranov 16.58 338 ⇑i P Pn 03 25 03.1 +1.3
VRAC Vranov 16.58 338 ePn Pn 03 25 02.8 +1.0
VRAC Vranov 16.58 338 P Pn 03 25 03.1 +1.3
OKC Ostrava-Krasne 16.62 342 eP Pn 03 25 07.3 +5.0
OKC Ostrava-Krasne 16.62 342 eP Pn 03 25 07.3 +5.0
KIEV Kiev 16.64 7 eP Pn 03 25 01.3 -1.2
KIEV pmax pmax
comp=Z,18nm,0.6s
KIEV Kiev 16.64 7 ePn Pn 03 25 01.3 -1.1
comp=Z,18nm,0.6s
KIEV Kiev 16.64 7 ePn Pn 03 25 01.3 -1.2
comp=Z,18nm,0.6s
AKASG Malin Array Be 16.65 7 Pn Pn 03 25 01.7 -0.9
comp=Z,9.0nm,0.3s,baz=196,slow=11,SNR=23
AKASG Malin Array Be 16.65 7 Pn Pn 03 25 01.7 -0.9
AKASG Malin Array Be 16.65 7 Pn Pn 03 25 01.7 -0.9
RJOB Jochberg 16.72 328 eP Pn 03 25 00.5 -3.0
MORC Moravsky Berou 16.73 341 ⇑P Pn 03 25 02.5 -1.1
MORC Moravsky Berou 16.73 341 ePn Pn 03 25 01.5 -2.1
comp=Z,1.6nm,0.6s
MORC Moravsky Berou 16.73 341 ⇑i P Pn 03 25 02.5 -1.1
MORC Moravsky Berou 16.73 341 ePn Pn 03 25 01.5 -2.1
comp=Z,1.6nm,0.6s
FETA Feichten 17.18 323 ⇑i P Pn 03 25 10.3 +1.0
comp=Z,12nm,0.8s,SNR=8.4
FETA Feichten 17.18 323 P Pn 03 25 10.3 +1.0
comp=Z,12nm,0.8s,SNR=8.4
GEC2 GERESS Array S 17.21 332 eP Pn 03 25 10.1 +0.5
GEC2 GERESS Array S 17.21 332 eP Pn 03 25 10.1 +0.5
GEC2 GERESS Array S 17.21 332 eP Pn 03 25 10.1 +0.5
GEC2 GERESS Array S 17.21 332 eP Pn 03 25 10.1 +0.5
MOTA Moosalm 17.22 324 ⇑i Pn Pn 03 25 10.1 +0.3
comp=Z,7.9nm,0.4s,SNR=10.0
MOTA Moosalm 17.22 324 P Pn 03 25 10.1 +0.4
comp=Z,7.9nm,0.4s,SNR=10.0
SBF Sospel 17.26 309 eP Pn 03 25 09.4 -0.9
comp=Z,31nm,0.7s
SBF Sospel 17.26 309 eP Pn 03 25 09.4 -0.9
SBF pmax pmax
comp=Z,15nm,0.7s
SBF Sospel 17.26 309 eP Pn 03 25 09.4 -0.9
comp=Z,15nm,0.7s
SBF Sospel 17.26 309 eP Pn 03 25 09.4 -0.9
comp=Z,15nm,0.7s
DAVOX Davos/Dischmat 17.46 321 Pn Pn 03 25 12.8 +0.1
comp=Z,0.7nm,0.3s,baz=140,slow=17,SNR=8.2
DAVOX Davos/Dischmat 17.46 321 P Pn 03 25 12.8 +0.1
KHC Kasperske Hory 17.48 332 eP Pn 03 25 13.2 +0.2
comp=Z,3.5nm,0.6s
KHC Kasperske Hory 17.48 332 eP Pn 03 25 13.4 +0.4
KHC epP pP 03 25 21.7 -1.8
KHC Kasperske Hory 17.48 332 eP Pn 03 25 13.4 +0.4
DPC Dobruska-Polom 17.59 339 eP Pn 03 25 12.6 -1.7
DPC Dobruska-Polom 17.59 339 eP Pn 03 25 12.6 -1.7
DPC epP pP 03 25 20.7 -4.0
LMR La Mourre 17.63 307 eP Pn 03 25 13.8 -1.1
comp=Z,4.5nm,0.7s
LMR La Mourre 17.63 307 eP Pn 03 25 13.8 -1.1
LMR pmax pmax
comp=Z,2.0nm,0.7s
LMR La Mourre 17.63 307 eP Pn 03 25 13.8 -1.1
comp=Z,2.3nm,0.7s
LMR La Mourre 17.63 307 eP Pn 03 25 13.8 -1.1
comp=Z,2.2nm,0.7s
FRF La Foret Royal 17.63 308 eP Pn 03 25 14.8 -0.1
comp=Z,6.4nm,0.7s
FRF La Foret Royal 17.63 308 eP Pn 03 25 14.8 -0.1
FRF pmax pmax
comp=Z,3.0nm,0.7s
FRF La Foret Royal 17.63 308 eP Pn 03 25 14.8 -0.1
comp=Z,3.2nm,0.7s
FRF La Foret Royal 17.63 308 eP Pn 03 25 14.8 -0.1
comp=Z,3.2nm,0.7s
WET Wettzell 17.77 331 eP Pn 03 25 16.2 -0.4
WET Wettzell 17.77 331 eP Pn 03 25 16.2 -0.4
WET Wettzell 17.77 331 eP Pn 03 25 16.2 -0.4
WET Wettzell 17.77 331 eP Pn 03 25 16.2 -0.4
DAVA Damuels 17.79 322 ⇑i P Pn 03 25 17.3 +0.5
comp=Z,9.5nm,0.4s,SNR=9.9
DAVA Damuels 17.79 322 P Pn 03 25 17.3 +0.5
comp=Z,9.5nm,0.4s,SNR=9.9
PRU Pruhonice 17.84 335 eP Pn 03 25 10.1 -7.3
PRU Pruhonice 17.84 335 eP Pn 03 25 15.8 -1.6
MBDF Montbardon 18.09 311 eP Pn 03 25 19.4 -1.1
comp=Z,21nm,0.7s
MBDF Montbardon 18.09 311 eP Pn 03 25 19.4 -1.1
MBDF pmax pmax
comp=Z,11nm,0.7s
MBDF Montbardon 18.09 311 eP Pn 03 25 19.4 -1.1
comp=Z,11nm,0.7s
MBDF Montbardon 18.09 311 eP Pn 03 25 19.4 -1.1
comp=Z,11nm,0.7s
BNI Bardonecchia 18.30 312 eP Pn 03 25 22.5 -0.6
BNI pmax pmax
comp=Z,3.0nm,0.8s
BNI Bardonecchia 18.30 312 eP Pn 03 25 22.5 -0.6
comp=Z,3.2nm,0.8s
BNI Bardonecchia 18.30 312 eP Pn 03 25 22.5 -0.6
comp=Z,3.2nm,0.8s
LPG La Plagne 18.48 313 eP Pn 03 25 24.6 -0.7
comp=Z,6.7nm,0.4s
LPG La Plagne 18.48 313 eP Pn 03 25 24.6 -0.7
LPG pmax pmax
comp=Z,3.0nm,0.4s
LPG La Plagne 18.48 313 eP Pn 03 25 24.6 -0.7
comp=Z,3.3nm,0.4s
LPG La Plagne 18.48 313 eP Pn 03 25 24.6 -0.7
comp=Z,3.3nm,0.4s
LPL La Plagne 18.50 313 eP Pn 03 25 25.3 -0.2
comp=Z,5.9nm,0.4s
LPL La Plagne 18.50 313 eP Pn 03 25 25.3 -0.2
LPL pmax pmax
comp=Z,3.0nm,0.4s
LPL La Plagne 18.50 313 eP Pn 03 25 25.3 -0.2
comp=Z,3.0nm,0.4s
LPL La Plagne 18.50 313 eP Pn 03 25 25.3 -0.2
comp=Z,3.0nm,0.4s
SMRF Simiane la Rot 18.51 308 eP Pn 03 25 25.3 -0.4
SMRF Simiane la Rot 18.51 308 eP Pn 03 25 25.3 -0.4
ORIF Oris-en-Rattie 18.74 311 eP Pn 03 25 26.6 -1.7
comp=Z,4.5nm,0.6s
ORIF eMLR MLR
comp=Z,79nm,22.8s
ORIF Oris-en-Rattie 18.74 311 eP Pn 03 25 26.6 -1.7
ORIF pmax pmax
comp=Z,2.0nm,0.6s
ORIF Oris-en-Rattie 18.74 311 eP Pn 03 25 26.6 -1.7
comp=Z,2.3nm,0.6s
ORIF Oris-en-Rattie 18.74 311 eP Pn 03 25 26.6 -1.7
comp=Z,2.2nm,0.6s
BRG Berggiesshubel 18.80 336 eP Pn 03 25 27.3 -1.7
GRA1 Grafenberg Arr 18.88 329 eP Pn 03 25 29.6 -0.4
GRA1 Grafenberg Arr 18.88 329 eP Pn 03 25 29.6 -0.4
GRF Grafenberg Arr 18.88 329 eP Pn 03 25 29.6 -0.4
GRF Grafenberg Arr 18.88 329 eP Pn 03 25 29.6 -0.4
TANN Tannenbergstha 18.95 333 eP Pn 03 25 30.0 -0.9
STU Stuttgart 19.13 324 eP Pn 03 25 32.2 -0.8
STU Stuttgart 19.13 324 eP Pn 03 25 32.3 -0.7
STU pmax pmax
comp=Z,21nm,0.7s
STU Stuttgart 19.13 324 eP Pn 03 25 32.3 -0.8
comp=Z,21nm,0.7s
STU Stuttgart 19.13 324 eP Pn 03 25 32.3 -0.7
comp=Z,21nm,0.7s
FELD Feldberg im Sc 19.14 321 eP Pn 03 25 31.5 -1.7
FELD Feldberg im Sc 19.14 321 eP Pn 03 25 31.5 -1.7
BFO Black Forest 19.26 322 eP Pn 03 25 32.7 -1.9
comp=Z,5.0nm,0.6s

BFO **Black Forest** 19.26 322 *e*P Pn 03 25 32.7 -1.9
BFO pmax pmax
comp=Z,5.0nm,0.6s
BFO **Black Forest** 19.26 322 *e*P Pn 03 25 32.7 -1.9
comp=Z,5.0nm,0.6s
BFO **Black Forest** 19.26 322 *e*P Pn 03 25 32.7 -1.9
comp=Z,5.0nm,0.6s
MOX **Moxa** 19.46 332 *e*P Pn 03 25 35.3 -1.7
comp=Z,4.0nm,0.7s
CABF **La Chapelle** 19.46 315 *e*P Pn 03 25 34.3 -2.7
comp=Z,8.0nm,0.4s
CABF **La Chapelle** 19.46 315 *e*P Pn 03 25 34.3 -2.7
CABF pmax pmax
comp=Z,4.0nm,0.4s
CABF **La Chapelle** 19.46 315 *e*P Pn 03 25 34.3 -2.7
comp=Z,4.0nm,0.4s
CABF **La Chapelle** 19.46 315 *e*P Pn 03 25 34.3 -2.7
comp=Z,4.0nm,0.4s
VIVF **Saint-Julien-I** 19.47 309 *e*P Pn 03 25 35.3 -1.9
comp=Z,3.6nm,0.5s
VIVF **Saint-Julien-I** 19.47 309 *e*P Pn 03 25 35.3 -1.9
VIVF pmax pmax
comp=Z,2.0nm,0.5s
VIVF **Saint-Julien-I** 19.47 309 *e*P Pn 03 25 35.3 -1.9
comp=Z,1.8nm,0.5s
VIVF **Saint-Julien-I** 19.47 309 *e*P Pn 03 25 35.3 -1.9
comp=Z,1.8nm,0.5s
CLL **Collm** 19.48 335⇓*i*P Pn 03 25 35.1 -2.1
CLL pmax pmax
comp=Z,4.0nm,0.7s
CLL **Collm** 19.48 335⇓*i*P Pn 03 25 35.1 -2.1
comp=Z,4.0nm,0.7s
i pP pP 03 25 48.6 +3.1
CLL **Collm** 19.48 335⇓*i*P Pn 03 25 35.1 -2.1
comp=Z,4.0nm,0.7s
i pP pP 03 25 48.6 +3.1
CLL **Collm** 19.48 335⇓*i*P Pn 03 25 35.1 -2.1
comp=Z,4.0nm,0.7s
VSR **Storozhevoye** 19.52 26 *e*P Pn 03 25 36.0 -1.7
VSR pmax pmax
comp=Z,9.0nm,0.6s
VSR pmax pmax
comp=N,2.0nm,0.3s
VSR pmax pmax
comp=E,1.0nm,0.3s
VSR **Storozhevoye** 19.52 26 *e*P Pn 03 25 36.0 -1.7
comp=E,9.0nm,0.6s
LASF **Ste Croix** 19.69 307 *e*P Pn 03 25 37.0 -2.7
comp=E,4.9nm,0.7s
LASF **Ste Croix** 19.69 307 *e*P Pn 03 25 37.0 -2.7
comp=E,2.5nm,0.7s
HINF **Hinteralfeld** 19.71 319 *e*P Pn 03 25 37.4 -2.6
comp=E,4.3nm,0.4s
HINF **Hinteralfeld** 19.71 319 *e*P Pn 03 25 37.4 -2.6
HINF pmax pmax
comp=Z,2.0nm,0.4s
HINF **Hinteralfeld** 19.71 319 *e*P Pn 03 25 37.4 -2.6
comp=Z,2.2nm,0.4s
HINF **Hinteralfeld** 19.71 319 *e*P Pn 03 25 37.4 -2.6
comp=Z,2.2nm,0.4s
IRAZ **Razeghan** 19.74 80 *e*P Pn 03 25 40.8 +0.3
IRAZ **Razeghan** 19.74 80 *e*P Pn 03 25 40.8 +0.3
ECH **Echery** 19.80 321 *e*P Pn 03 25 39.8 -1.2
ECH pmax pmax
comp=Z,3.0nm,0.4s
ECH **Echery** 19.80 321 *e*P Pn 03 25 39.8 -1.1
comp=Z,2.7nm,0.4s
ECH **Echery** 19.80 321 *e*P Pn 03 25 39.8 -1.2
comp=Z,2.7nm,0.4s
EJON **La Jonquera** 19.81 301 P Pn 03 25 38.0 -3.1
comp=Z,47nm,2.1s
EJON **La Jonquera** 19.81 301 P Pn 03 25 38.0 -3.2
comp=Z,47nm,2.1s
CDF **Champ du Feu** 19.86 321 *e*P Pn 03 25 40.0 -1.7
comp=Z,23nm,0.8s
CDF **Champ du Feu** 19.86 321 *e*P Pn 03 25 40.0 -1.7
CDF pmax pmax
comp=Z,11nm,0.8s
CDF **Champ du Feu** 19.86 321 *e*P Pn 03 25 40.0 -1.7
comp=Z,11nm,0.8s
CDF **Champ du Feu** 19.86 321 *e*P Pn 03 25 40.0 -1.7
comp=Z,11nm,0.8s
SUW **Suwalki** 19.88 355 *e*P Pn 03 25 39.3 -2.6
SUW pmax pmax
comp=Z,50nm,0.5s
SUW **Suwalki** 19.88 355 *e*P Pn 03 25 39.3 -2.6
comp=Z,50nm,0.5s
SUW **Suwalki** 19.88 355 *e*P Pn 03 25 39.3 -2.6
comp=Z,50nm,0.5s
CFON **Fontmartina** 19.95 299 P Pn 03 25 40.2 -2.6
comp=Z,15nm,0.7s
CFON **Fontmartina** 19.95 299 P Pn 03 25 40.2 -2.6
comp=Z,15nm,0.7s
LANF **Langenberg** 19.95 323 *e*P Pn 03 25 41.0 -1.8
LANF **Langenberg** 19.95 323 *e*P Pn 03 25 41.0 -1.8
HAU **Haudompre** 20.10 319 *e*P P 03 25 41.4 -1.1
comp=Z,10nm,0.4s
HAU *e*MLR MLR
comp=Z,81nm,22.2s,MS2.7
HAU **Haudompre** 20.10 319 *e*P P 03 25 41.4 -1.1
HAU pmax pmax
comp=Z,5.0nm,0.4s
HAU MLR MLR
comp=Z,80nm,22.3s,MS3.0
HAU **Haudompre** 20.10 319 *e*P P 03 25 41.4 -1.1
comp=Z,5.2nm,0.4s
HAU LR LR
comp=Z,80nm,22.3s,MS3.0
HAU **Haudompre** 20.10 319 *e*P P 03 25 41.4 -1.1
comp=Z,5.2nm,0.4s
VRHR **Novokhopersk** 20.37 29 *e*P P 03 25 47.1 +1.7
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s
VRHR **Novokhopersk** 20.37 29 *e*P P 03 25 47.1 +1.7
THEF **They Montfort** 20.43 319 *e*P P 03 25 45.9 -0.2
THEF **They Montfort** 20.43 319 *e*P P 03 25 45.9 -0.2
CLLI **Llivia** 20.46 301 P P 03 25 46.4 -0.1
CLLI **Llivia** 20.46 301 P P 03 25 46.4 -0.1
TNS **Taunus Mts** 20.49 327 *e*P P 03 25 46.6 -0.1
comp=Z,18nm,0.6s
TNS **Taunus Mts** 20.49 327 *e*P P 03 25 46.6 -0.1
TNS pmax pmax
comp=Z,18nm,0.6s
TNS **Taunus Mts** 20.49 327 *e*P P 03 25 46.6 -0.1
comp=Z,18nm,0.6s
TNS **Taunus Mts** 20.49 327 *e*P P 03 25 46.6 -0.1
comp=Z,18nm,0.6s
MTLF **Montolieu** 20.55 303 *e*P P 03 25 47.0 -0.4
comp=Z,6.1nm,0.8s
MTLF **Montolieu** 20.55 303 *e*P P 03 25 47.0 -0.4
MTLF pmax pmax
comp=Z,3.0nm,0.8s
MTLF **Montolieu** 20.55 303 *e*P P 03 25 47.0 -0.4
comp=Z,3.0nm,0.8s
MTLF **Montolieu** 20.55 303 *e*P P 03 25 47.0 -0.4
comp=Z,3.0nm,0.8s
LBL **Lubilhac** 20.55 309 *e*P P 03 25 52.2 +4.8
EMIR **Miracle** 20.64 299 P P 03 25 48.8 +0.4
comp=Z,16nm,1.2s
EMIR **Miracle** 20.64 299 P P 03 25 48.8 +0.3
comp=Z,16nm,1.2s
RUP **Ruppelstein** 20.79 324 *e*P P 03 25 50.0 0.0
RUP **Ruppelstein** 20.79 324 *e*P P 03 25 50.0 0.0
SMF **Signal de Mont** 20.81 313 *e*P P 03 25 49.8 -0.5
comp=Z,7.3nm,0.6s
SMF **Signal de Mont** 20.81 313 *e*P P 03 25 49.8 -0.5
SMF pmax pmax
comp=Z,4.0nm,0.6s
SMF **Signal de Mont** 20.81 313 *e*P P 03 25 49.8 -0.5
comp=Z,3.7nm,0.6s
SMF **Signal de Mont** 20.81 313 *e*P P 03 25 49.8 -0.5
comp=Z,3.7nm,0.6s
EPOB **Poblet** 20.84 297 P P 03 25 50.0 -0.6
comp=Z,5.3nm,0.6s
EPOB **Poblet** 20.84 297 P P 03 25 50.0 -0.7
comp=Z,5.3nm,0.6s
IPIR **Pirpir** 20.88 87 *e*P P 03 25 53.3 +2.2
IPIR **Pirpir** 20.88 87 *e*P P 03 25 53.3 +2.2
PYM **Petit Puy Mans** 20.92 310 *e*P P 03 25 53.6 +2.2
PYM **Petit Puy Mans** 20.92 310 *e*P P 03 25 53.6 +2.2
AGO **Saint Agoulin** 20.97 311 *e*P P 03 25 55.2 +3.2
CSOR **Sort** 21.04 300 P P 03 25 53.3 +0.5
comp=Z,16nm,0.8s,mb4.4
CSOR **Sort** 21.04 300 P P 03 25 53.3 +0.6
comp=Z,16nm,0.8s,mb4.4
MEZF **Maizieres J'vi** 21.09 319 *e*P P 03 25 53.1 -0.2
comp=Z,25nm,0.6s,mb4.4
MEZF **Maizieres J'vi** 21.09 319 *e*P P 03 25 53.1 -0.2
comp=Z,25nm,0.6s,mb4.7
MEZF **Maizieres J'vi** 21.09 319 *e*P P 03 25 53.1 -0.2
comp=Z,12nm,0.6s,mb4.4
LOR **Lormes** 21.11 315 *e*P P 03 25 52.2 -1.2
comp=Z,6.5nm,0.5s,mb3.9
LOR *e*MLR MLR
comp=Z,85nm,22.8s,MS2.8
LOR **Lormes** 21.11 315 *e*P P 03 25 52.2 -1.2
LOR pmax pmax
comp=Z,3.0nm,0.5s,mb3.9
LOR MLR MLR
comp=Z,90nm,22.8s,MS3.1
LOR **Lormes** 21.11 315 *e*P P 03 25 52.2 -1.2
comp=Z,3.3nm,0.5s,mb3.9
LOR LR LR
comp=Z,90nm,22.8s,MS3.1
LOR **Lormes** 21.11 315 *e*P P 03 25 52.2 -1.2
comp=Z,3.2nm,0.5s,mb3.9
AVF **Avril sur Loir** 21.18 313 *e*P P 03 25 53.0 -1.2
comp=Z,4.6nm,0.5s,mb3.8
AVF **Avril sur Loir** 21.18 313 *e*P P 03 25 53.0 -1.2
AVF pmax pmax
comp=Z,2.0nm,0.5s,mb3.7
AVF **Avril sur Loir** 21.18 313 *e*P P 03 25 53.0 -1.2
comp=Z,2.3nm,0.5s,mb3.8
AVF **Avril sur Loir** 21.18 313 *e*P P 03 25 53.0 -1.2
comp=Z,2.3nm,0.5s,mb3.8
TAM **Tamanrasset** 21.19 243 *e*P P 03 25 57.2 +2.6
TAM pmax pmax
comp=Z,6.0nm,0.8s,mb4.0
TAM **Tamanrasset** 21.19 243 *e*P P 03 25 57.1 +2.6
comp=Z,5.6nm,0.8s,mb4.0
CAF **Calviac** 21.20 307 *e*P P 03 25 54.2 -0.2
comp=Z,6.7nm,0.7s,mb3.8
CAF **Calviac** 21.20 307 *e*P P 03 25 54.2 -0.2
CAF pmax pmax
comp=Z,3.0nm,0.7s,mb3.7
CAF **Calviac** 21.20 307 *e*P P 03 25 54.2 -0.2
comp=Z,3.3nm,0.7s,mb3.8
CAF **Calviac** 21.20 307 *e*P P 03 25 54.2 -0.2
comp=Z,3.3nm,0.7s,mb3.8
SSF **Saint Saulge** 21.21 314 *e*P P 03 25 54.1 -0.5
comp=Z,8.6nm,0.6s,mb4.0
SSF **Saint Saulge** 21.21 314 *e*P P 03 25 54.1 -0.5
SSF pmax pmax
comp=Z,4.0nm,0.6s,mb3.9
SSF **Saint Saulge** 21.21 314 *e*P P 03 25 54.1 -0.5
comp=Z,4.3nm,0.6s,mb4.0
SSF **Saint Saulge** 21.21 314 *e*P P 03 25 54.1 -0.5
comp=Z,4.3nm,0.6s,mb4.0
WLF **Walferdange** 21.22 323 P P 03 25 54.5 -0.1
comp=Z,8.8nm,1.4s,mb3.9
WLF **Walferdange** 21.22 323 *e*P P 03 25 54.1 -0.5
comp=Z,7.0nm,0.8s,mb4.0
WLF **Walferdange** 21.22 323 *e*P P 03 25 54.8 +0.2
WLF pmax pmax
comp=Z,21nm,1.4s,mb4.3
WLF **Walferdange** 21.22 323 *e*P P 03 25 54.8 +0.2
comp=Z,22nm,1.4s,mb4.3
WLF **Walferdange** 21.22 323 *e*P P 03 25 54.8 +0.2
comp=Z,22nm,1.4s,mb4.3
IKLH **Kolahrood** 21.34 85 *e*P P 03 25 58.0 +2.0
IKLH **Kolahrood** 21.34 85 *e*P P 03 25 58.0 +2.0
BGF **Bois d'Agland** 21.38 312 *e*P P 03 25 56.7 +0.4
comp=Z,30nm,0.6s,mb4.5
BGF **Bois d'Agland** 21.38 312 *e*P P 03 25 56.7 +0.4
BGF pmax pmax
comp=Z,15nm,0.6s,mb4.5
BGF **Bois d'Agland** 21.38 312 *e*P P 03 25 56.7 +0.4
comp=Z,15nm,0.6s,mb4.5
BGF **Bois d'Agland** 21.38 312 *e*P P 03 25 56.7 +0.4
comp=Z,15nm,0.6s,mb4.5
IDMV **Damavand** 21.44 79 *e*P P 03 25 58.0 +0.8
IDMV **Damavand** 21.44 79 *e*P P 03 25 58.0 +0.8
TCF **Toulx Ste Croi** 21.65 311 *e*P P 03 25 58.7 -0.6
comp=Z,11nm,1.0s,mb3.9
TCF **Toulx Ste Croi** 21.65 311 *e*P P 03 25 58.7 -0.6
TCF pmax pmax
comp=Z,6.0nm,1.0s,mb4.0
TCF **Toulx Ste Croi** 21.65 311 *e*P P 03 25 58.7 -0.6
comp=Z,5.7nm,1.0s,mb4.0
TCF **Toulx Ste Croi** 21.65 311 *e*P P 03 25 58.7 -0.6
comp=Z,5.7nm,1.0s,mb3.9
RJF **Les Rejaudoux** 21.70 308 *e*P P 03 25 59.7 -0.1
comp=Z,18nm,0.6s,mb4.4
RJF *e*MLR MLR
comp=Z,59nm,21.0s,MS2.7
RJF **Les Rejaudoux** 21.70 308 *e*P P 03 25 59.7 -0.1
RJF pmax pmax
comp=Z,9.0nm,0.6s,mb4.4
RJF MLR MLR
comp=Z,60nm,21.0s,MS3.0
RJF **Les Rejaudoux** 21.70 308 *e*P P 03 25 59.7 -0.1
comp=Z,9.1nm,0.6s,mb4.4
RJF LR LR
comp=Z,60nm,21.0s,MS3.0
RJF **Les Rejaudoux** 21.70 308 *e*P P 03 25 59.7 -0.1
comp=Z,9.1nm,0.6s,mb4.4
EPF **Esparros** 21.77 301 *e*P P 03 26 02.4 +1.8
EPF **Esparros** 21.77 301 *e*P P 03 26 02.4 +1.8
EBIE **Bielsa** 21.82 300 P P 03 26 03.1 +1.9
comp=Z,3.8nm,0.6s,mb4.0
EBIE **Bielsa** 21.82 300 P P 03 26 03.1 +1.9
comp=Z,3.8nm,0.6s,mb4.0
MEM **Membach** 21.90 324 P P 03 26 02.3 +0.4
comp=Z,12nm,0.9s,mb4.3
MEM **Membach** 21.90 324 P P 03 26 02.3 +0.4
comp=Z,12nm,0.9s,mb4.3
IFIR **Firoozkooh** 22.02 79 *e*P P 03 26 05.5 +2.1
IFIR **Firoozkooh** 22.02 79 *e*P P 03 26 05.5 +2.1
IZEF **Zefreh** 22.03 86 *e*P P 03 26 03.6 +0.1
IZEF **Zefreh** 22.03 86 *e*P P 03 26 03.6 +0.1
HGN **Heimansgroeve** 22.04 325 *e*P P 03 26 03.6 +0.3
comp=Z,13nm,1.3s,mb4.2
HGN **Heimansgroeve** 22.04 325 *e*P P 03 26 03.6 +0.2
comp=Z,13nm,1.3s,mb4.2
ESAC **San Caprasio** 22.06 298 P P 03 26 03.5 -0.2
comp=Z,14nm,0.6s,mb4.6
ESAC **San Caprasio** 22.06 298 P P 03 26 03.5 -0.2
comp=Z,14nm,0.6s,mb4.6
LFF **La Frestale** 22.08 306 *e*P P 03 26 03.6 -0.3
comp=Z,13nm,0.6s,mb4.2
LFF **La Frestale** 22.08 306 *e*P P 03 26 03.6 -0.3
LFF pmax pmax
comp=Z,6.0nm,0.6s,mb4.2
LFF **La Frestale** 22.08 306 *e*P P 03 26 03.6 -0.3
comp=Z,6.3nm,0.6s,mb4.2
LFF **La Frestale** 22.08 306 *e*P P 03 26 03.6 -0.3
comp=Z,6.3nm,0.6s,mb4.2
ECHE **Chera** 22.12 292 P P 03 26 05.7 +1.3
ECHE pmax pmax
comp=Z,8.0nm,1.0s,mb4.1
ECHE **Chera** 22.12 292 P P 03 26 05.7 +1.4
comp=Z,8.3nm,1.0s,mb4.1
ECHE **Chera** 22.12 292 P P 03 26 05.7 +1.3
comp=Z,8.3nm,1.0s,mb4.1
BCLA **Clavier** 22.12 323 P P 03 26 05.5 +1.2
BCLA **Clavier** 22.12 323 P P 03 26 05.4 +1.1
GIVF **Givet** 22.16 322 *e*P P 03 26 03.8 -0.9
comp=Z,11nm,0.5s,mb4.3
GIVF **Givet** 22.16 322 *e*P P 03 26 03.8 -0.9
GIVF pmax pmax
comp=Z,6.0nm,0.5s,mb4.3
GIVF **Givet** 22.16 322 *e*P P 03 26 03.8 -0.9
comp=Z,5.5nm,0.5s,mb4.2
GIVF **Givet** 22.16 322 *e*P P 03 26 03.8 -0.9
comp=Z,5.5nm,0.5s,mb4.3
OBN **Obninsk** 22.17 16 *e*P P 03 26 05.4 +0.7
OBN pmax pmax
comp=Z,15nm,1.0s,mb4.4
OBN **Obninsk** 22.17 16 *e*P P 03 26 05.4 +0.7
comp=Z,15nm,1.0s,mb4.4
DOU **Dourbes** 22.28 322 P P 03 26 04.6 -1.4
DOU **Dourbes** 22.28 322 P P 03 26 04.5 -1.4
ETSF **Etsaut** 22.38 301 *e*P P 03 26 07.6 +0.5
comp=Z,5.6nm,0.7s,mb3.8
ETSF **Etsaut** 22.38 301 *e*P P 03 26 07.6 +0.5
ETSF pmax pmax
comp=Z,3.0nm,0.7s,mb3.8
ETSF **Etsaut** 22.38 301 *e*P P 03 26 07.6 +0.5
comp=Z,2.8nm,0.7s,mb3.8
ETSF **Etsaut** 22.38 301 *e*P P 03 26 07.6 +0.5
comp=Z,2.8nm,0.7s,mb3.8
ISHM **Shahmirzad** 22.45 78 *e*P P 03 26 07.9 0.0
ISHM **Shahmirzad** 22.45 78 *e*P P 03 26 07.9 0.0
BAIF **Baives** 22.45 321 *e*P P 03 26 06.4 -1.4
comp=Z,34nm,0.5s,mb4.7
BAIF **Baives** 22.45 321 *e*P P 03 26 06.4 -1.4
BAIF pmax pmax
comp=Z,17nm,0.5s,mb4.7
BAIF **Baives** 22.45 321 *e*P P 03 26 06.4 -1.4
comp=Z,17nm,0.5s,mb4.7
BAIF **Baives** 22.45 321 *e*P P 03 26 06.4 -1.4
comp=Z,17nm,0.5s,mb4.7
WTSB **Winterswijk** 22.46 328 *e*P P 03 26 07.3 -0.5
comp=Z,16nm,1.1s,mb4.4
WTSB **Winterswijk** 22.46 328 *e*P P 03 26 07.3 -0.5
comp=Z,16nm,1.1s,mb4.4
SNF **Seneffe** 22.69 322 P P 03 26 10.7 +0.4
SNF **Seneffe** 22.69 322 P P 03 26 10.6 +0.3
SJPF **Ste Jean** 22.90 301 *e*P P 03 26 12.9 +0.3
SJPF **Ste Jean** 22.90 301 *e*P P 03 26 12.9 +0.3
IANJ **Anjilo** 22.98 79 *e*P P 03 26 14.1 +0.6
IANJ **Anjilo** 22.98 79 *e*P P 03 26 14.1 +0.6
ETOR **Torete** 23.09 295 P P 03 26 13.5 -1.1
ETOR pmax pmax
comp=Z,5.0nm,0.7s,mb4.0
ETOR **Torete** 23.09 295 P P 03 26 13.5 -1.1
comp=Z,4.9nm,0.7s,mb4.0
ETOR **Torete** 23.09 295 P P 03 26 13.5 -1.1
comp=Z,4.9nm,0.7s,mb4.0
EVIA **Vianos** 23.25 289 P P 03 26 16.5 +0.2
EVIA pmax pmax
comp=Z,13nm,1.0s,mb4.3
EVIA **Vianos** 23.25 289 P P 03 26 16.5 +0.2
comp=Z,13nm,1.0s,mb4.3
EVIA **Vianos** 23.25 289 P P 03 26 16.5 +0.2
comp=Z,13nm,1.0s,mb4.3
MFF **Saint Martin d** 23.27 310 *e*P P 03 26 16.0 -0.4
comp=Z,6.4nm,0.5s,mb4.0
MFF **Saint Martin d** 23.27 310 *e*P P 03 26 16.0 -0.4
MFF pmax pmax
comp=Z,3.0nm,0.5s,mb4.0
MFF **Saint Martin d** 23.27 310 *e*P P 03 26 16.0 -0.4
comp=Z,3.2nm,0.5s,mb4.0
MFF **Saint Martin d** 23.27 310 *e*P P 03 26 16.0 -0.4
comp=Z,3.2nm,0.5s,mb4.0
IPAR **Pars** 23.38 93 *e*P P 03 26 18.3 +0.6
IPAR **Pars** 23.38 93 *e*P P 03 26 18.3 +0.6
EBER **Berja** 23.55 285 P P 03 26 19.9 +0.6
comp=Z,39nm,1.2s,mb4.7
EBER **Berja** 23.55 285 P P 03 26 19.9 +0.6
comp=Z,39nm,1.2s,mb4.7
EQES **Quesada** 23.68 287 P P 03 26 21.6 +1.2
comp=Z,20nm,1.2s,mb4.4
EQES **Quesada** 23.68 287 P P 03 26 21.6 +1.2
comp=Z,20nm,1.2s,mb4.4
LDF **La Druitiere** 24.09 314 *e*P P 03 26 23.2 -0.9
comp=Z,18nm,0.5s,mb4.5
LDF **La Druitiere** 24.09 314 *e*P P 03 26 23.2 -0.9
LDF pmax pmax
comp=Z,9.0nm,0.5s,mb4.5
LDF **La Druitiere** 24.09 314 *e*P P 03 26 23.2 -0.9
comp=Z,9.2nm,0.5s,mb4.5
LDF **La Druitiere** 24.09 314 *e*P P 03 26 23.2 -0.9
comp=Z,9.2nm,0.5s,mb4.5
EBAN **Banos Encina** 24.25 288 P P 03 26 26.3 +0.7
EBAN pmax pmax
comp=Z,5.0nm,0.5s,mb4.2
EBAN **Banos Encina** 24.25 288 P P 03 26 26.3 +0.7
comp=Z,4.5nm,0.5s,mb4.2
EBAN **Banos Encina** 24.25 288 P P 03 26 26.3 +0.7
comp=Z,4.5nm,0.5s,mb4.2
IMEH **Mehriz** 24.25 89 *e*P P 03 26 27.5 +1.8
IMEH **Mehriz** 24.25 89 *e*P P 03 26 27.5 +1.8
VSU **Vasula** 24.26 1 *e*P P 03 26 23.8 -1.6
VSU pmax pmax
comp=Z,13nm,0.6s,mb4.5
VSU **Vasula** 24.26 1 *e*P P 03 26 23.8 -1.6
comp=Z,13nm,0.6s,mb4.5
FLN **La Foliniere** 24.38 315 *e*P P 03 26 26.0 -0.7
comp=Z,23nm,0.5s,mb4.5
FLN *e*MLR MLR
comp=Z,84nm,22.5s,MS2.9
FLN **La Foliniere** 24.38 315 *e*P P 03 26 26.0 -0.7
FLN pmax pmax
comp=Z,11nm,0.5s,mb4.5
FLN MLR MLR
comp=Z,80nm,22.5s,MS3.1
FLN **La Foliniere** 24.38 315 *e*P P 03 26 26.0 -0.7
comp=Z,11nm,0.5s,mb4.5
FLN LR LR
comp=Z,80nm,22.5s,MS3.1
FLN **La Foliniere** 24.38 315 *e*P P 03 26 26.0 -0.7
comp=Z,11nm,0.5s,mb4.5
ESDC **Sonseca Array** 24.43 292 P P 03 26 27.6 +0.4
comp=Z,2.8nm,0.5s,mb4.0,baz=78,slow=9.1,SNR=37
ESDC **Sonseca Array** 24.43 292 P P 03 26 27.6 +0.3
ESLA **Sonseca Array** 24.43 292 *e*P P 03 26 27.8 +0.5
ESLA **Sonseca Array** 24.43 292 *e*P P 03 26 27.8 +0.5
GRR **Gorron** 24.44 313 *e*P P 03 26 26.7 -0.5
comp=Z,9.5nm,0.4s,mb4.2
GRR **Gorron** 24.44 313 *e*P P 03 26 26.7 -0.5
GRR pmax pmax
comp=Z,5.0nm,0.4s,mb4.3
GRR **Gorron** 24.44 313 *e*P P 03 26 26.7 -0.5
comp=Z,4.8nm,0.4s,mb4.3
GRR **Gorron** 24.44 313 *e*P P 03 26 26.7 -0.5
comp=Z,4.8nm,0.4s,mb4.2
ELOJ **Sierra Loja** 24.55 286 P P 03 26 28.2 -0.2
ELOJ pmax pmax
comp=Z,6.0nm,0.7s,mb4.2
ELOJ **Sierra Loja** 24.55 286 P P 03 26 28.2 -0.2
comp=Z,6.3nm,0.7s,mb4.2
ELOJ **Sierra Loja** 24.55 286 P P 03 26 28.2 -0.2
comp=Z,6.3nm,0.7s,mb4.2
GUD **Guadarrama** 24.65 294 P P 03 26 29.5 +0.2
GUD pmax pmax
comp=Z,11nm,0.9s,mb4.4
GUD **Guadarrama** 24.65 294 P P 03 26 29.5 +0.2
comp=Z,11nm,0.9s,mb4.4
GUD **Guadarrama** 24.65 294 P P 03 26 29.5 +0.2
comp=Z,11nm,0.9s,mb4.4
EMIJ **Mijas** 25.08 284 P P 03 26 32.9 -0.3
comp=Z,29nm,1.2s,mb4.7
EMIJ **Mijas** 25.08 284 P P 03 26 32.9 -0.3
comp=Z,29nm,1.2s,mb4.7
SGMF **Saint Gilles** 25.42 312 *e*P P 03 26 36.6 +0.5
comp=Z,6.5nm,0.5s,mb4.2
SGMF **Saint Gilles** 25.42 312 *e*P P 03 26 36.6 +0.5
SGMF pmax pmax
comp=Z,3.0nm,0.4s,mb4.2
SGMF **Saint Gilles** 25.42 312 *e*P P 03 26 36.6 +0.5
comp=Z,3.3nm,0.4s,mb4.2
SGMF **Saint Gilles** 25.42 312 *e*P P 03 26 36.6 +0.5
comp=Z,3.2nm,0.5s,mb4.2
MDT **Midelt** 25.45 275 P P 03 26 37.5 +0.9
comp=Z,0.7nm,0.4s,mb3.5,baz=68,slow=8.0,SNR=5.3
MDT **Midelt** 25.45 275 P P 03 26 37.5 +0.9
ECAB **El Cabril** 25.53 288 P P 03 26 37.4 +0.1
comp=Z,8.4nm,0.7s,mb4.4
ECAB **El Cabril** 25.53 288 P P 03 26 37.3 0.0
comp=Z,8.4nm,0.7s,mb4.4
EJIF **Jimena Fronter** 25.65 284 P P 03 26 40.3 +1.9
EJIF pmax pmax
comp=Z,32nm,1.4s,mb4.7
EJIF **Jimena Fronter** 25.65 284 P P 03 26 40.3 +1.9
comp=Z,32nm,1.4s,mb4.7
EJIF **Jimena Fronter** 25.65 284 P P 03 26 40.3 +1.9
comp=Z,32nm,1.4s,mb4.7
QUIF **Quistinic** 25.67 311 *e*P P 03 26 39.2 +0.8
comp=Z,22nm,0.4s,mb4.7
QUIF **Quistinic** 25.67 311 *e*P P 03 26 39.2 +0.8
QUIF pmax pmax
comp=Z,11nm,0.4s,mb4.7
QUIF **Quistinic** 25.67 311 *e*P P 03 26 39.2 +0.8
comp=Z,11nm,0.4s,mb4.8
QUIF **Quistinic** 25.67 311 *e*P P 03 26 39.2 +0.8
comp=Z,11nm,0.4s,mb4.7
ROSF **Rostrenen** 25.89 312 *e*P P 03 26 39.5 -0.9
comp=Z,6.1nm,0.6s,mb4.0
ROSF **Rostrenen** 25.89 312 *e*P P 03 26 39.5 -0.9
ROSF pmax pmax
comp=Z,3.0nm,0.6s,mb4.0
ROSF **Rostrenen** 25.89 312 *e*P P 03 26 39.5 -0.9
comp=Z,3.0nm,0.6s,mb4.0
ROSF **Rostrenen** 25.89 312 *e*P P 03 26 39.5 -0.9
comp=Z,3.0nm,0.6s,mb4.0
ESPR **Espera** 25.93 285 P P 03 26 41.5 +0.6

comp=Z,11nm,0.7s,mb4.5
ESPR Espera 25.93 285 P P 03 26 41.5 +0.6
comp=Z,11nm,0.7s,mb4.5
EPLA Plasencia 26.08 292 P P 03 26 41.8 -0.4
EPLA pmax pmax
comp=Z,4.0nm,0.5s,mb4.2
EPLA Plasencia 26.08 292 P P 03 26 41.8 -0.4
comp=Z,4.1nm,0.5s,mb4.2
EPLA Plasencia 26.08 292 P P 03 26 41.8 -0.4
comp=Z,4.1nm,0.5s,mb4.2
EMIN Mina Concepcio 26.53 287 P P 03 26 46.6 +0.3
comp=Z,3.6nm,0.7s,mb4.0
EMIN Mina Concepcio 26.53 287 P P 03 26 46.7 +0.4
comp=Z,3.6nm,0.7s,mb4.0
PBRG Braganca 26.71 296 *eP* **P 03 26 48.0 +0.1**
comp=Z,13nm,2.2s,mb4.1
PBRG Braganca 26.71 296 *eP* **P 03 26 48.0 +0.1**
comp=Z,13nm,2.2s,mb4.1
ECAL Calabor 26.72 296 P P 03 26 47.1 -0.8
comp=Z,3.7nm,0.5s,mb4.2
ECAL Calabor 26.72 296 P P 03 26 47.1 -0.9
comp=Z,3.7nm,0.5s,mb4.2
EBAD Badajoz 26.78 289 P P 03 26 48.1 -0.4
comp=Z,6.4nm,0.5s,mb4.4
EBAD Badajoz 26.78 289 P P 03 26 48.1 -0.4
comp=Z,6.4nm,0.5s,mb4.4
PBAR Barrancos 26.81 288 *eP* **P 03 26 48.9 +0.1**
comp=Z,15nm,1.6s,mb4.3
PBAR Barrancos 26.81 288 *eP* **P 03 26 48.9 +0.1**
comp=Z,15nm,1.6s,mb4.3
MVO Moncorvo 26.87 295 *eP* **P 03 26 49.5 +0.2**
comp=Z,23nm,1.6s,mb4.5
MVO Moncorvo 26.87 295 P P 03 26 47.6 -1.7
MVO Moncorvo 26.87 295 *eP* **P 03 26 49.5 +0.2**
comp=Z,23nm,1.6s,mb4.5
PMRV Marv??o 27.07 291 *eP* **P 03 26 51.1 -0.1**
comp=Z,14nm,1.7s,mb4.2
PMRV Marv??o 27.07 291 *eP* **P 03 26 51.1 -0.1**
comp=Z,14nm,1.7s,mb4.2
HFS Hagfors 27.13 347 P P 03 26 50.0 -1.4
comp=Z,3.8nm,0.4s,mb4.3,baz=123,slow=11,SNR=56
HFS LR LR 03 38 15.2
comp=Z,56nm,19.5s,MS3.1,baz=140,slow=38
HFS Hagfors 27.13 347 P P 03 26 50.0 -1.5
PCBR Castelo Branco 27.15 292 *eP* **P 03 26 51.4 -0.4**
comp=Z,10nm,1.6s,mb4.1
PCBR Castelo Branco 27.15 292 *eP* **P 03 26 51.4 -0.4**
comp=Z,10nm,1.6s,mb4.1
PESTR Estremoz 27.23 290 *eP* **P 03 26 52.5 -0.1**
comp=Z,11nm,0.9s,mb4.4
PESTR Estremoz 27.23 290 *eP* **P 03 26 52.5 -0.1**
comp=Z,11nm,0.9s,mb4.4
FINES FINESS Array B 27.24 0 P P 03 26 50.8 -1.6
comp=Z,7.6nm,0.4s,mb4.6,baz=160,slow=11,SNR=139
FINES FINESS Array B 27.24 0 P P 03 26 50.8 -1.6
PVIS Viseu 27.50 294 *eP* **P 03 26 54.5 -0.5**
comp=Z,21nm,1.9s,mb4.3
PVIS Viseu 27.50 294 *eP* **P 03 26 54.5 -0.5**
comp=Z,21nm,1.9s,mb4.3
EVO Evora 27.57 289 *eP* **P 03 26 55.7 +0.1**
comp=Z,7.4nm,0.8s,mb4.1
EVO Evora 27.57 289 *eP* **P 03 26 55.9 +0.3**
comp=Z,17nm,1.6s,mb4.4
EVO Evora 27.57 289 *eP* **P 03 26 55.9 +0.3**
comp=Z,17nm,1.6s,mb4.4
EVOP Sao Brissos 27.65 289 *eP* **P 03 26 55.7 -0.7**
comp=Z,3.7nm,0.8s,mb4.1
PCAB Cabril 27.66 296 *eP* **P 03 26 56.6 +0.2**
comp=Z,22nm,1.5s,mb4.6
PCAB Cabril 27.66 296 *eP* **P 03 26 56.6 +0.2**
comp=Z,22nm,1.5s,mb4.6
PTOM Tomar 27.86 291 *eP* **P 03 26 58.2 0.0**
comp=Z,21nm,1.4s,mb4.6
PTOM Tomar 27.86 291 *eP* **P 03 26 58.2 0.0**
comp=Z,21nm,1.4s,mb4.6
KAF Kangasniemi 27.91 0 *eP* **P 03 26 56.2 -2.2**
KAF Kangasniemi 27.91 0 *ep* **P 03 26 56.2 -2.2**
NAO01 NORSAR Array S 28.36 344 *eP* **P 03 27 01.1 -1.4**
comp=Z,5.7nm,0.6s,mb4.4
NAO01 NORSAR Array S 28.36 344 *eP* **P 03 27 01.1 -1.3**
comp=Z,5.7nm,0.6s,mb4.4
AKTK Aktyubinsk 28.44 46 P P 03 27 03.5 +0.3
AKTK Aktyubinsk 28.44 46 P P 03 27 03.5 +0.2
AKTO Aktyubinsk 28.44 46 P P 03 27 03.5 +0.3
comp=Z,3.6nm,0.5s,mb4.3,baz=245,slow=7.6,SNR=13
NB2 NORSAR Subarra 28.47 345 P P 03 27 01.7 -1.7
comp=Z,1.0nm,0.4s,mb3.8,baz=156,slow=9.3
NB2 NORSAR Subarra 28.47 345 P P 03 27 01.7 -1.7
comp=Z,1.0nm,0.4s,mb3.8,baz=156,slow=9.0,SNR=3.7
NOA NORSAR Array B 28.47 345 P P 03 27 01.6 -1.8
comp=Z,1.8nm,0.6s,mb3.9,baz=157,slow=10,SNR=16
NOA LR LR 03 37 50.2
comp=Z,25nm,19.9s,MS2.8,baz=170,slow=35
NOA NORSAR Array B 28.47 345 P P 03 27 01.6 -1.8
JOF Joensuu 28.92 5 *eP* **P 03 27 05.3 -2.1**
JOF Joensuu 28.92 5 *ep* **P 03 27 05.3 -2.1**
EKA Eskdalemuir Ar 29.17 325 P P 03 27 09.3 -0.4
comp=Z,3.0nm,0.6s,mb4.2,baz=124,slow=10,SNR=17
EKA Eskdalemuir Ar 29.17 325 P P 03 27 09.3 -0.4
ESK Eskdalemuir 29.18 325 *eP* **P 03 27 09.1 -0.7**
ESK pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
ESK Eskdalemuir 29.18 325 *eP* **P 03 27 09.1 -0.7**
comp=Z,3.5nm,0.6s,mb4.3
ESK Eskdalemuir 29.18 325 *eP* **P 03 27 09.1 -0.7**
comp=Z,3.5nm,0.6s,mb4.3
ABKAR Akbulak array 29.20 49 *eP* **P 03 27 10.6 +0.5**
comp=Z,1.3nm,0.4s,mb4.0
ABKAR Akbulak array 29.20 49 *eP* **P 03 27 10.6 +0.5**
comp=Z,1.3nm,0.4s,mb4.0
ARU Arti 31.45 35*d iP* **P 03 27 28.7 -1.1**
ARU 03 28 29.1
ARU S **S 03 32 30.1 -4.7**
ARU pmax pmax
comp=Z,8.0nm,1.7s,mb4.3
ARU Arti 31.45 35 *eP* **P 03 27 30.4 +0.6**
ARU Arti 31.45 35 *eP* **P 03 27 30.4 +0.6**
ARCES ARCESS Array B 35.37 360 P P 03 28 02.1 -1.6
comp=Z,5.6nm,0.4s,mb4.8,baz=184,slow=8.1,SNR=107
ARCES PcP PcP 03 30 33.7 +0.6
comp=Z,3.9nm,1.1s,baz=180,slow=2.5,SNR=4.1
ARCES LR LR 03 42 11.7
comp=Z,44nm,21.2s,MS3.2,baz=100,slow=36
ARCES ARCESS Array B 35.37 360 P P 03 28 02.2 -1.6
ARCES 03 30 33.7
ARCES ARCESS Array B 35.37 360 P P 03 28 02.2 -1.6
ARCES ARCESS Array B 35.37 360 PcP PcP 03 30 33.7 +0.7
ARE0 ARCESS Array S 35.37 360 *eP* **P 03 28 01.9 -1.9**
KK31 Karatay Array 35.58 62*ceP* **P 03 28 06.8 +0.9**
KK31 pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
KK31 Karatay Array 35.58 62 *eP* **P 03 28 06.8 +0.9**
comp=Z,2.0nm,0.4s,mb4.4
KEV Kevo 35.59 1 *eP* **P 03 28 04.4 -1.3**
KEV Kevo 35.59 1 *ep* **P 03 28 04.4 -1.3**
KEV Kevo 35.59 1 *eP* **P 03 28 04.4 -1.3**
ZRNK Zerenda 35.72 45 *i P* **P 03 28 07.6 +0.6**
ZRNK pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
ZRNK Zerenda 35.72 45 *i P* **P 03 28 07.6 +0.6**
comp=Z,10.0nm,0.7s,mb4.8
BRVK Borovoye 36.50 45*c iP* **P 03 28 14.5 +0.9**
BRVK pmax pmax
comp=Z,10.0nm,2.5s,mb4.3
BRVK Borovoye 36.50 45 *eP* **P 03 28 14.3 +0.7**
comp=Z,4.4nm,1.1s,mb4.3
BRVK Borovoye 36.50 45 *eP* **P 03 28 14.3 +0.7**
comp=Z,4.4nm,1.1s,mb4.3
BVAR Borovoye Array 36.55 45 P P 03 28 15.1 +1.0
comp=Z,2.5nm,0.7s,mb4.2,baz=260,slow=6.8,SNR=14
BVAR Borovoye Array 36.55 45 P P 03 28 15.1 +1.0
DBIC Dimbokro 39.49 233 P P 03 28 39.5 +0.2
comp=Z,2.1nm,0.6s,mb4.1,baz=30,slow=2.7,SNR=9.5
DBIC Dimbokro 39.49 233 P P 03 28 39.5 +0.3
DBIC pmax pmax
comp=Z,2.0nm,0.6s
DBIC Dimbokro 39.49 233 *eP* **P 03 28 40.4 +1.2**
comp=Z,2.4nm,0.8s,mb4.0
DBIC Dimbokro 39.49 233 P P 03 28 39.5 +0.3
comp=Z,2.0nm,0.6s,mb4.0
TIC Toumodi 39.61 233 *eP* **P 03 28 40.0 -0.3**
comp=Z,4.0nm,0.2s,mb4.8
TIC Toumodi 39.61 233 *eP* **P 03 28 40.0 -0.3**
TIC pmax pmax
comp=Z,4.0nm,0.2s,mb4.8
TIC Toumodi 39.61 233 *eP* **P 03 28 40.0 -0.3**
comp=Z,4.0nm,0.2s,mb4.8
KIC Kosan Boka 39.64 233 *eP* **P 03 28 40.4 -0.1**
comp=Z,49nm,1.4s,mb5.0
KIC Kosan Boka 39.64 233 *eP* **P 03 28 40.4 -0.1**
comp=Z,49nm,1.4s,mb5.0
LIC Lamto 39.93 233 *eP* **P 03 28 43.4 +0.5**
comp=Z,43nm,1.2s,mb5.0
LIC Lamto 39.93 233 *eP* **P 03 28 44.9 +2.0**
KURK Kurchatov 41.29 50 *eP* **P 03 28 54.6 +0.8**
KURK pmax pmax
comp=Z,9.0nm,1.0s,mb4.3
KURK Kurchatov 41.29 50 *eP* **P 03 28 54.6 +0.8**
comp=Z,8.9nm,1.0s,mb4.3
KURK Kurchatov 41.29 50 *eP* **P 03 28 54.6 +0.8**
comp=Z,8.9nm,1.0s,mb4.3
MK31 Makanchi Array 43.78 56*ceP* **P 03 29 14.6 +0.6**
MK31 pmax pmax
comp=Z,5.0nm,0.4s,mb4.6
MK31 Makanchi Array 43.78 56 *eP* **P 03 29 15.2 +1.2**
MK31 Makanchi Array 43.78 56 *eP* **P 03 29 14.6 +0.6**
comp=Z,5.0nm,0.4s,mb4.6
MKAR Makanchi Array 43.78 56 P P 03 29 15.1 +1.1
comp=Z,7.9nm,0.5s,mb4.7,baz=277,slow=6.6,SNR=63
MKAR Makanchi Array 43.78 56 P P 03 29 15.1 +1.1
MKAR Makanchi Array 43.78 56 P P 03 29 15.1 +1.1
SCO Scoresbysund 44.44 339 *i P* **P 03 29 20.4 +1.4**
SCO pmax pmax
comp=Z,8.0nm,0.7s,mb4.6
SCO Scoresbysund 44.44 339 *i P* **P 03 29 20.4 +1.4**
comp=Z,8.0nm,0.7s,mb4.6
SCO Scoresbysund 44.44 339 *i P* **P 03 29 20.4 +1.4**
comp=Z,8.0nm,0.7s,mb4.6
KBS Kingsbay 45.20 356 *i P* **P 03 29 24.8 -0.1**
comp=Z,9.1nm,0.8s,mb4.6,SNR=24
ZALV Zalesovo Beam 45.21 45 P P 03 29 25.6 +0.2
comp=Z,6.0nm,0.5s,mb4.7,baz=267,slow=9.0,SNR=16
ZALV Zalesovo Beam 45.21 45 P P 03 29 25.5 +0.2
WMQ Urumqi 47.94 59 *eP* **P 03 29 49.8 +2.9**
WMQ pP pP 03 30 02.0 +3.9
WMQ sP sP 03 30 07.5 +4.9
WMQ pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
WMQ pmax pmax
comp=Z,100nm,4.6s
SUMG Summit 50.08 339 *eP* **P 03 30 04.1 +1.2**
comp=Z,5.6nm,0.6s,mb4.8
SUMG Summit 50.08 339 *i P* **P 03 30 03.2 +0.3**
comp=Z,4.8nm,0.7s,mb4.6
SUMG Summit 50.08 339 *eP* **P 03 30 04.1 +1.2**
comp=Z,5.6nm,0.6s,mb4.8
ZAK Zakamensk 56.90 48 *eP* **P 03 30 54.7 +1.5**
ZAK pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
ZAK Zakamensk 56.90 48 *eP* **P 03 30 54.7 +1.5**
comp=Z,3.0nm,0.9s,mb4.3
SONM Songino Array 59.60 50 P P 03 31 13.5 +1.4
comp=Z,4.1nm,0.5s,mb4.7,baz=283,slow=7.7,SNR=34
SONM Songino Array 59.60 50 P P 03 31 13.5 +1.4
ULN Ulaanbaatar 60.01 50 *eP* **P 03 31 15.7 +0.8**
ULN pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
ULN Ulaanbaatar 60.01 50 *eP* **P 03 31 15.7 +0.8**
comp=Z,4.6nm,0.6s,mb4.7
ULN Ulaanbaatar 60.01 50 *eP* **P 03 31 15.7 +0.8**
comp=Z,4.6nm,0.6s,mb4.7
BOSA Boshof 62.49 181 P P 03 31 33.5 +1.7
comp=Z,1.5nm,0.5s,mb4.4,baz=9.4,slow=7.2,SNR=12
BOSA Boshof 62.49 181 *eP* **P 03 31 33.7 +1.9**
BOSA pmax pmax
comp=Z,1.0nm,0.5s,mb4.2
BOSA Boshof 62.49 181 *eP* **P 03 31 33.7 +2.0**
comp=Z,1.2nm,0.5s,mb4.3
BOSA Boshof 62.49 181 *eP* **P 03 31 33.7 +1.9**
comp=Z,1.2nm,0.5s,mb4.3
CD2 Chengdu 64.14 69 P P 03 31 45.8 +2.9
CD2 pP pP 03 31 57.3 +2.9
CD2 sP sP 03 32 02.0 +3.1
CD2 PP PP 03 34 08.5 +4.5
CD2 S **S 03 40 17.8 +0.5**
CD2 SS SS 03 44 27.5 +1.0
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
CD2 pmax pmax
comp=Z,120nm,5.4s
CD2 LR LR
comp=N,270nm,7.1s
CD2 LR LR
comp=Z,180nm,6.5s
SCHQ Schefferville 64.31 320 P P 03 31 43.8 +0.2
comp=Z,2.2nm,0.3s,mb4.6,baz=68,slow=5.4,SNR=18
SCHQ Schefferville 64.31 320 P P 03 31 43.8 +0.2
HHC Hu-ho-hao-te 65.64 56 *eP* **P 03 31 53.3 +0.8**
HHC pP pP 03 32 06.0 +1.9
HHC sP sP 03 32 10.5 +2.0
HHC PcP PcP 03 32 25.0 +1.2
HHC PP PP 03 34 19.5 +2.6
HHC ScP 03 36 22.5
HHC PcS 03 36 27.8
HHC S S 03 40 33.0 -2.4
HHC ScS ScS 03 41 40.5 -4.7
HHC pmax pmax
comp=Z,15nm,0.7s,mb5.1
HHC pmax pmax
comp=Z,66nm,7.2s
KMI Kunming 65.94 75 P P 03 31 57.5 +2.8
KMI pP pP 03 32 12.5 +6.2
KMI sP sP 03 32 17.8 +7.0
KMI PP PP 03 34 24.8 +4.8
KMI S S 03 40 38.8 -0.8
KMI sS sS 03 41 03.5 +4.7
KMI SS SS 03 44 56.0 +1.2
KMI pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
KMI pmax pmax
comp=Z,42nm,4.1s
KMI LR LR
comp=N,110nm,17.3s,MS4.3
KMI LR LR
comp=E,120nm,14.5s,MS4.3
KMI LR LR
comp=Z,98nm,10.6s,MS4.3
CMAR Chiang Mai Arr 66.06 83 P P 03 31 54.6 -0.9
comp=Z,1.2nm,0.3s,mb4.3,baz=280,slow=7.2,SNR=6.7
CMAR Chiang Mai Arr 66.06 83 P P 03 31 54.6 -0.9
GYA Guiyang 68.44 72 *eP* **P 03 32 12.0 +1.5**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
BJI Beijing 69.15 55 P P 03 32 15.8 +1.1
BJI pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
BJI pmax pmax
comp=Z,51nm,4.0s
CN2 Changchun 73.33 48 *eP* **P 03 32 40.0 +0.1**
SEY Seymchan 74.19 22 *eP* **P 03 32 45.1 +0.5**
SEY Seymchan 74.19 22 *eP* **P 03 32 45.1 +0.5**
INK Inuvik 76.63 352 *eP* **P 03 32 58.0 -0.5**
INK pmax pmax
comp=Z,2.0nm,0.8s
INK Inuvik 76.63 352 *eP* **P 03 32 58.0 -0.5**
comp=Z,1.8nm,0.8s,mb4.0
INK Inuvik 76.63 352 *eP* **P 03 32 58.0 -0.5**
comp=Z,1.8nm,0.8s,mb4.0
KSRS Korea Array 78.36 53 P P 03 33 08.7 0.0
comp=Z,1.5nm,0.6s,mb4.1,baz=308,slow=4.7,SNR=2.5
KSRS Korea Array 78.36 53 P P 03 33 08.7 0.0
KSRS pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
KSRS Korea Array 78.36 53 P P 03 33 08.7 0.0
comp=Z,2.0nm,0.6s,mb4.2
YKA Yellowknife Ar 78.53 342 P P 03 33 09.5 +0.3
comp=Z,2.4nm,0.5s,mb4.4,baz=33,slow=5.0,SNR=28
YKA Yellowknife Ar 78.53 342 P P 03 33 09.5 +0.3
YKA Yellowknife Ar 78.53 342 P P 03 33 09.5 +0.3
FFC Flin Flon 80.75 332 *eP* **P 03 33 22.0 +0.6**
FFC pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
FFC Flin Flon 80.75 332 *eP* **P 03 33 22.0 +0.6**
comp=Z,2.3nm,0.6s,mb4.3
FFC Flin Flon 80.75 332 *eP* **P 03 33 22.0 +0.6**
comp=Z,2.3nm,0.6s,mb4.3
COWI Conover 80.92 320 *eP* **P 03 33 23.1 +0.6**
comp=Z,7.8nm,0.9s,mb4.6
COWI Conover 80.92 320 *eP* **P 03 33 23.1 +0.6**
comp=Z,7.8nm,0.9s,mb4.6
ILAR Eielson Array 81.18 357 P P 03 33 23.9 +0.4
comp=Z,0.5nm,0.6s,mb3.6,baz=356,slow=4.1,SNR=9.1
ILAR Eielson Array 81.18 357 P P 03 33 23.9 +0.4
PPLA Purkeypile 83.21 359 *eP* **P 03 33 34.8 +0.6**
comp=Z,4.3nm,0.4s,mb4.8
PPLA Purkeypile 83.21 359 *eP* **P 03 33 34.8 +0.7**
comp=Z,4.2nm,0.4s,mb4.8
BLO Bloomington 83.90 314 *eP* **P 03 33 39.5 +1.3**
BLO Bloomington 83.90 314 *eP* **P 03 33 39.5 +1.3**
MJAR Matsushiro Arr 85.48 48 P P 03 33 46.6 +0.4
comp=Z,0.9nm,0.5s,mb4.1,baz=305,slow=4.3,SNR=3.4
MJAR Matsushiro Arr 85.48 48 P P 03 33 46.6 +0.4
ECSD EROS Data Cent 86.41 322 *eP* **P 03 33 51.2 +0.5**
comp=Z,1.4nm,0.5s,mb4.5
ECSD EROS Data Cent 86.41 322 *eP* **P 03 33 51.2 +0.5**
comp=Z,1.4nm,0.5s,mb4.5
WVT Waverly 86.65 312 *eP* **P 03 33 51.3 -0.7**
WVT pmax pmax
comp=Z,3.0nm,0.7s,mb4.6
WVT Waverly 86.65 312 *eP* **P 03 33 51.3 -0.7**
comp=Z,2.7nm,0.7s,mb4.6
WVT Waverly 86.65 312 *eP* **P 03 33 51.3 -0.7**
comp=Z,2.7nm,0.7s,mb4.6
CCM Cathedral Cave 87.42 315 *eP* **P 03 33 56.3 +0.6**
CCM pmax pmax
comp=Z,4.0nm,0.7s,mb4.8
CCM Cathedral Cave 87.42 315 *eP* **P 03 33 56.3 +0.6**
comp=Z,4.2nm,0.7s,mb4.8
CCM Cathedral Cave 87.42 315 *eP* **P 03 33 56.3 +0.6**
comp=Z,4.2nm,0.7s,mb4.8
LRAL Lakeview Retre 88.13 309 *eP* **P 03 33 59.3 +0.1**
LRAL Lakeview Retre 88.13 309 *eP* **P 03 33 59.3 +0.1**
NEW Newport 91.49 336 *eP* **P 03 34 15.3 +0.7**
NEW pmax pmax
comp=Z,2.0nm,0.5s
NEW Newport 91.49 336 *eP* **P 03 34 15.3 +0.8**
comp=Z,1.6nm,0.5s,mb4.6
NEW Newport 91.49 336 *eP* **P 03 34 15.3 +0.7**
comp=Z,1.6nm,0.5s,mb4.6
BW06 Boulder Array 93.23 329 *eP* **P 03 34 22.4 -0.3**
comp=Z,0.7nm,0.5s,mb4.3
BW06 Boulder Array 93.23 329 *eP* **P 03 34 22.4 -0.3**
comp=Z,0.7nm,0.5s,mb4.3
PDAR Pinedale Array 93.23 329 P P 03 34 22.7 0.0
comp=Z,0.4nm,0.8s,mb3.9,baz=64,slow=4.1,SNR=3.1
PDAR Pinedale Array 93.23 329 P P 03 34 22.7 0.0
HWUT Hardware Ranch 95.04 329 *eP* **P 03 34 31.6 +0.6**
comp=Z,1.2nm,0.6s,mb4.5
HWUT Hardware Ranch 95.04 329 *eP* **P 03 34 31.6 +0.6**
comp=Z,1.1nm,0.6s,mb4.5
ASAR Alice Springs 117.26 101 PKP PKPdf 03 39 53.9 +0.2
comp=Z,0.3nm,0.3s,baz=316,slow=1.8,SNR=6.1
QSPA South Pole Qui 124.08 180 PKP PKPdf 03 40 05.9 +0.7
comp=Z,1.0nm,0.7s,baz=0.7,slow=0.5,SNR=4.4
QSPA South Pole Qui 124.08 180 PKP PKPdf 03 40 05.9 +0.7

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*IDC **26** 03:30:39.4±1.4, 12°.11N×85°.75W, h0km, mb3.4/4, mb1 3.8/4, mb1mx3.6/17, mbtmp3.4/4, Error ellipse: s-maj=171.3km s-min=24.1km az=53.0*
*CASC **26** 03:30:42.8±2.9, 11°.15N×86°.72W, h72km±49km, MD4.0, mb4.0(NEIC)*
*ISCJB **26** 03:30:44.6±1.1, 11°.3N±0°.1×86°.4W±0°.2, h82km±9km, mb3.5/7, Error ellipse: s-maj=36.9km s-min=6.0km az=147.8*
*NEIC **26** 03:30:46.2±1.4, 11°.84N×85°.81W, h59km±16km, mb4.0/3, Error ellipse: s-maj=50.1km s-min=12.9km az=61.0*
ISC 26 03:30:45.4±1.1, 11°.3N±0°.1×86°.4W±0°.2, h75km±9km, n33, σ1§13/34, mb3.5/7, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSN	**San Juan del S**	**0.57**	**92**	*eP*	**Pn**	**03 30 58.7**	**-0.6**
SSN				*eS*	**Sn**	**03 31 15.1**	**+5.5**
CRUN	**El Crucero**	**0.67**	**11**	*eP*	**Pn**	**03 31 01.3**	**+0.9**
APON	**Apoyo**	**0.69**	**31**	*eP*	**Pn**	**03 31 01.6**	**+1.0**
TICN	**Ticuantepe**	**0.74**	**15**	*eP*	**Pn**	**03 31 02.0**	**+0.9**
CONN	**Concepcion**	**0.83**	**73**	*eP*	**Pn**	**03 31 02.7**	**+0.6**
XAVN	**Gruta Xavier**	**0.83**	**7**	*eP*	**Pn**	**03 31 02.5**	**+0.3**
TISN	**Laguna Tiscapa**	**0.83**	**11**	*eP*	**Pn**	**03 31 02.2**	**0.0**
MGAN	**Managua**	**0.84**	**12**	*eP*	**Pn**	**03 31 02.5**	**+0.2**
CSAN		**0.86**	**1**	*eP*	**Pn**	**03 31 02.1**	**-0.4**
COPN	**Copaltepe**	**0.87**	**350**	*eP*	**Pn**	**03 31 01.5**	**-1.2**
HUEN		**1.04**	**14**	*eP*	**Pn**	**03 31 05.3**	**+0.6**
MOMN	**Momotombo**	**1.09**	**354**	*eP*	**Pn**	**03 31 04.9**	**-0.4**
NY14	**Universidad de**	**1.10**	**127**	*i P*	**Pn**	**03 31 03.9**	**-1.6**
NY14				*i S*	**Sn**	**03 31 21.2**	**+0.8**
BUEV	**Buena Vista**	**1.13**	**117**	*i P*	**Pn**	**03 31 04.9**	**-0.9**
GPS1	**Guardaparques**	**1.19**	**117**	*i P*	**Pn**	**03 31 05.7**	**-0.9**
LIM1	**Limonal**	**1.31**	**118**	*i P*	**Pn**	**03 31 06.5**	**-1.6**
JTS	**JuntasAbangare**	**1.77**	**125**	*e*Pn	**Pn**	**03 31 13.0**	**-1.2**
JCR	**Jicaral**	**1.95**	**138**	*eP*	**Pn**	**03 31 17.4**	**+0.8**
PRS1	**Puriscal**	**2.47**	**122**	*eP*	**Pn**	**03 31 25.3**	**+1.8**
LAJ	**Bijagual**	**2.69**	**122**	*eP*	**Pn**	**03 31 22.3**	**-4.2**
TGUH	**Tegucigalpa,Un**	**2.84**	**343**	*e*Pn	**Pn**	**03 31 27.9**	**-0.7**
QCR	**Quepos**	**2.92**	**130**	*eP*	**Pn**	**03 31 30.5**	**+1.0**
URSC	**Urasca**	**3.00**	**119**	*eP*	**Pn**	**03 31 33.2**	**+2.6**
BAR1		**3.70**	**124**	*eP*	**Pn**	**03 31 39.0**	**-1.2**
MIAR	**Mount Ida**	**24.02**	**345**	*eP*	**P**	**03 35 52.4**	**-0.9**
	3.2nm,0.8s,mb3.7						
TXAR	**Lajitas Array**	**24.08**	**321**	P	**P**	**03 35 54.9**	**+1.0**
	0.9nm,0.7s,mb3.2,baz=138,slow=11,SNR=14						
TXAR				PcP	PcP	03 39 38.5	+4.8
	0.6nm,0.9s,baz=138,slow=4.9,SNR=5.7						
CPCT	**Cooper Cave**	**24.09**	**4**	P	**P**	**03 35 51.8**	**-2.0**
CPCT				*e*		03 35 57.8	
WMOK	**Wichita Mounta**	**25.89**	**336**	*eP*	**P**	**03 36 11.6**	**+1.3**
	2.9nm,0.9s,mb3.7						
COWI	**Conover**	**34.74**	**357**	*eP*	**P**	**03 37 25.0**	**-3.2**
	5.1nm,0.8s,mb4.4						
SIV	**San Ignacio**	**36.96**	**137**	P	**P**	**03 37 51.4**	**+3.9**
	0.8nm,0.7s,mb3.7,baz=319,slow=9.5,SNR=5.7						
PDAR	**Pinedale Array**	**37.24**	**331**	P	**P**	**03 37 49.6**	**-0.1**
	0.2nm,0.5s,mb3.3,baz=104,slow=10,SNR=2.3						
ILAR	**Eielson Array**	**67.45**	**336**	P	**P**	**03 41 34.0**	**+1.2**
	0.1nm,0.6s,mb2.8,baz=124,slow=6.6,SNR=5.2						
ASAR	**Alice Springs**	**139.76**	**247**	PKP	PKPdf	03 50 10.9	+5.5
	0.2nm,0.8s,baz=90,slow=1.9,SNR=4.2						

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*IDC **26** 03:34:05.3±1.4, 32°.24S×177°.78W, h0km, mb4.6/4, mb1 4.5/6, mb1mx4.2/17, mbtmp4.5/6, ML4.0/2, MS4.0/5, Ms1 4.0/5, ms1mx3.6/21, Error ellipse: s-maj=47.7km s-min=23.8km az=132.0*
*ISCJB **26** 03:34:09.0±1.1, 32°.36S±0°.09×177°.8W±0°.2, h33km, mb4.7/12, MS4.0/5, Error ellipse: s-maj=23.0km s-min=10.0km az=21.0*
*NEIC **26** 03:34:10.9±3.4, 32°.37S×177°.83W, h37km±31km, mb4.9/5, Error ellipse: s-maj=33.0km s-min=16.0km az=186.0*
ISC 26 03:34:11.4±1.1, 32°.26S±0°.09×177°.9W±0°.2, h35km, n44, σ1§17/24, mb4.7/12, MS4.0/5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.26**	**213**	Pn	**Pn**	**03 35 54.4**	**-0.4**
	3.0nm,0.3s,baz=66,slow=10.0,SNR=10.0						
URZ				Sn	**Sn**	**03 37 16.8**	**+0.8**
	14nm,0.3s,baz=150,slow=15,SNR=12						
RPZ	**Rata Peaks**	**14.37**	**214**	Pn	**Pn**	**03 37 29.6**	**-2.7**
	0.6nm,0.3s,baz=22,slow=19,SNR=3.3						
RPZ				Sn	**Sn**	**03 39 58.7**	**-12**
	1.4nm,0.3s,baz=289,slow=19,SNR=6.7						
DZM	**Mont Dzumac**	**17.24**	**302**	*e*LR	LR	03 42 17.7	
	794nm,23.1s						
TBI	**Tubuai**	**26.59**	**78**	*e*LR	LR	03 46 28.9	
	238nm,26.2s,baz=254						
EIDS	**Eidsvold**	**27.99**	**276**	*eP*	**P**	**03 39 59.6**	**+0.6**
PPT	**Papeete**	**29.42**	**67**	*e*LR	LR	03 47 52.4	
	180nm,23.8s,baz=241						
PPT	**Papeete**	**29.42**	**67**	LR	LR	03 49 43.3	
	comp=Z,178nm,18.1s,MS3.7,baz=153,slow=32						
RMQ	**Roma**	**29.57**	**273**	*eP*	**P**	**03 40 14.8**	**+1.8**
	29nm,1.3s,mb4.8						
CMSA	**Cobar Meteorol**	**30.86**	**261**	*eP*	**P**	**03 40 25.9**	**+1.6**
STKA	**Stephens Creek**	**34.21**	**260**	*eP*	**P**	**03 40 55.2**	**+1.5**
	5.1nm,0.8s,mb4.5						
STKA	**Stephens Creek**	**34.21**	**260**	P	**P**	**03 40 54.1**	**+0.5**
	5.2nm,0.7s,mb4.6,baz=99,slow=9.4,SNR=14						
STKA				LR	LR	03 53 55.0	
	comp=Z,319nm,19.8s,MS4.0,baz=291,slow=35						
CTA	**Charters Tower**	**34.25**	**282**	*eP*	**P**	**03 40 53.9**	**-0.2**
	6.4nm,0.9s,mb4.5						
CTA	**Charters Tower**	**34.25**	**282**	P	**P**	**03 40 54.4**	**+0.3**
	6.8nm,0.7s,mb4.7,baz=86,slow=11,SNR=5.8						
CTAO	**Charters Tower**	**34.25**	**282**	*eP*	**P**	**03 40 54.0**	**-0.1**
	14nm,1.0s,mb4.9						

BBOO	Buckleboo	38.61	256	*e*P	P	03 41 30.4	-0.8
	11nm,0.8s,mb4.7						
RKT	Rikitea	38.85	87	*e*LR	LR	03 52 13.5	
	292nm,26.8s,baz=245						
COEN	Coen	39.92	288	*e*P	P	03 41 42.6	+0.3
COEN	Coen	39.92	288	*e*P	P	03 41 42.5	+0.2
	24nm,0.8s,mb5.0						
ASAR	Alice Springs	43.15	269	P	P	03 42 07.6	-1.1
	3.0nm,0.7s,mb4.1,baz=105,slow=7.5,SNR=26						
WRAB	Tennant Creek	44.30	274	*e*P	P	03 42 17.1	-0.9
	11nm,0.8s,mb4.6						
FORT	Forrest	45.71	257	*e*P	P	03 42 26.4	-2.7
	22nm,0.7s,mb5.2						
FORT	Forrest	45.71	257	*e*P	P	03 42 28.1	-0.9
	13nm,0.6s,mb5.0						
FITZ	Fitzroy Crossi	52.49	271	*e*P	P	03 43 20.2	-0.9
	8.0nm,0.9s,mb4.7						
QSPA	South Pole Qui	57.85	180	P	P	03 44 03.5	+4.5
	7.0nm,1.1s,mb4.6,baz=30,slow=2.2,SNR=3.1						
CBIJ	Chichi jima	70.22	323	LR	LR	04 11 10.3	
	comp=Z,55nm,19.4s,MS3.8,baz=119,slow=32						
VNA1	Neumayer--Stat	77.11	176	*e*	P	03 46 04.0	+3.3
PLCA	Paso Flores	81.16	133	LR	LR	04 15 15.8	
	comp=Z,145nm,18.6s,MS4.4,baz=267,slow=30						
PETK	Petropavlovsk-	87.64	346	P	P	03 46 55.4	-0.2
	3.0nm,0.5s,mb4.8,baz=138,slow=7.6,SNR=4.3						
TUC	Tucson	90.18	51	*e*P	P	03 47 08.1	0.0
	3.8nm,1.0s,mb4.7						
TXAR	Lajitas Array	93.30	57	LR	LR	04 25 58.1	
	comp=Z,55nm,18.2s,MS4.0,baz=280,slow=33						
MKAR	Makanchi Array	119.04	309	PKP	PKPdf	03 52 55.6	-0.4
	0.2nm,0.2s,baz=52,slow=2.4,SNR=2.8						
FINES	FINESS Array B	146.92	339	PKPbc	PKPbc	03 53 48.5	-0.7
	5.8nm,0.7s,baz=48,slow=3.2,SNR=38						
NB2	NORSAR Subarra	150.60	351	PKP	PKPbc	03 53 58.3	-0.4
	comp=Z,1.0nm,0.7s,baz=17,slow=2.6						
NOA	NORSAR Array B	150.60	351	PKPbc	PKPbc	03 53 58.3	-0.5
	comp=Z,0.9nm,0.7s,baz=14,slow=4.2,SNR=7.4						
AKASG	Malin Array Be	152.83	321	PKPbc	PKPbc	03 54 04.1	-0.1
	comp=Z,0.7nm,0.5s,baz=53,slow=2.3,SNR=8.3						
AKASG				PKPab	PKPab	03 54 13.7	-1.5
	comp=Z,1.8nm,0.7s,baz=46,slow=2.2,SNR=6.3						
BR131	Keskin Array S	153.54	295	*e*PKPbc	PKPbc	03 54 05.8	-0.3
BRTR	Keskin Array B	153.54	295	PKPbc	PKPbc	03 54 06.2	+0.1
	comp=Z,1.9nm,0.9s,baz=148,slow=4.6,SNR=9.4						
BRTR				PKPab	PKPab	03 54 16.6	-2.1
	comp=Z,1.6nm,0.8s,baz=70,slow=3.4,SNR=4.8						
KWP	Kalwaria Pacla	156.83	324	*e*PKPab	PKPab	03 54 30.7	-1.7
KECS	Kecovo	158.69	325	*e*PKP	PKPab	03 54 41.9	+1.5
KECS				*e*		03 54 51.5	
CLL	Collm	159.36	340	*i* PKPab	PKPab	03 54 41.4	-1.8
	comp=Z,4.0nm,1.0s						
CLL				*i* pPKPab	pPKPab	03 54 52.6	-1.8
CLL				*e*		03 54 55.0	
BRG	Berggiesshubel	159.46	338	*e*P	PKPab	03 54 43.1	-0.5
	comp=Z,6.5nm,1.3s						
BRG				*e*		03 54 56.2	
	comp=Z,4.2nm,1.3s						
VYHS	Vyhne	159.46	327	*e*PKP	PKPab	03 54 43.4	-0.4
VYHS				*e*		03 54 57.2	
VYHS	Vyhne	159.46	327	*e*	PKPab	03 54 43.4	-0.4
VYHS				*e*		03 54 57.2	
GRF	Grafenberg Arr	161.31	341	*e*P	PKPab	03 54 50.7	-1.0
	comp=Z,11nm,1.5s						
GRF				*e*pP	pPKPab	03 55 05.7	+2.8

ISCJB ***26*** *03:38:27.5±3.7,23°.90S±0°.07×64°.7W±0°.1, h6km±24km, mb3.9/11, Error ellipse: s-maj=15.6km s-min=12.3km az=179.3*
IDC ***26*** *03:38:28.4±0.9,23°.94S×64°.71W, h0km, mb3.5/3, mb1 3.9/6, mb1mx3.8/14, mbtmp3.6/6, ML4.2/3, Error ellipse: s-maj=28.7km s-min=19.7km az=56.0*
NEIC ***26*** *03:38:32.7±0.5,23°.78S×64°.54W, mb4.2/8, Error ellipse: s-maj=17.8km s-min=9.5km az=66.0*

ISC 26 03:38:29.7±4.4, 23°.96S±0°.07×64°.7W±0°.1, h8km±28km, h27km±1.2km: pP-P, n18, σ1º04/18, mb3.9/11, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPUP	Villa Florida	7.11	111	Pn	Pn	03 40 13.5	-0.6
	4.0nm,0.3s,baz=271,slow=11,SNR=43						
CPUP				Lg		03 42 14.3	
	31nm,0.3s,baz=192,slow=17,SNR=4.8						
CPUP	Villa Florida	7.11	111	Pn	Pn	03 40 13.5	-0.6
CPUP				Lg		03 42 14.3	
LPAZ	La Paz	8.27	337	Pn	Pn	03 40 31.6	+1.6
	0.3nm,0.3s,baz=161,slow=11,SNR=10						
LPAZ				Sn	Sn	03 42 02.3	-1.4
	0.5nm,0.3s,baz=223,slow=19,SNR=2.6						
SIV	San Ignacio	8.64	24	Pn	Pn	03 40 33.6	-1.5
	2.7nm,0.3s,baz=222,slow=13,SNR=52						
SIV				Sn	Sn	03 42 14.2	+1.3
	2.1nm,0.3s,baz=150,slow=20,SNR=3.6						
SIV				Lg		03 42 56.0	
	2.6nm,0.3s,baz=300,slow=20,SNR=4.2						
TRQA	Tornquist	14.25	171	*e*Pn	Pn	03 41 57.0	+5.3
OTAV	Otavalo	27.49	329	*e*P	P	03 44 18.6	+1.9
	2.4nm,0.8s,mb3.8						
WVT	Waverly	63.63	339	*e*P	P	03 49 00.6	-0.6
	4.3nm,1.1s,mb4.4						
TXAR	Lajitas Array	64.88	323	P	P	03 49 09.4	-0.1
	0.2nm,0.6s,mb3.3,baz=138,slow=7.0,SNR=2.6						
QSPA	South Pole Qui	66.25	180	P	P	03 49 18.4	+0.7
	1.1nm,0.7s,mb4.0,baz=174,slow=9.7,SNR=5.3						
MNTX	Cornudas Mount	67.64	323	*e*P	P	03 49 26.5	-0.7
	1.2nm,0.9s,mb3.9						
SDCO	Great Sand Dun	72.36	327	*e*P	P	03 49 56.6	+0.5
	2.9nm,1.2s,mb4.1						
SDCO				*e*pP	pP	03 50 03.9	+5.2
PDAR	Pinedale Array	78.19	328	P	P	03 50 30.0	+0.5
	0.3nm,0.7s,mb3.3,baz=126,slow=6.8,SNR=3.2						
HWUT	Hardware Ranch	78.33	326	*e*P	P	03 50 29.6	-0.8
	1.5nm,0.6s,mb4.1						
HWUT				*e*pP	pP	03 50 38.1	+5.1
LOHW	Long Hollow	79.33	328	*e*P	P	03 50 34.6	-1.2
	1.7nm,0.6s,mb4.2						
LOHW				*e*pP	pP	03 50 43.5	+5.1
HLID	Hailey	81.20	326	*e*P	P	03 50 47.1	+1.2
	4.6nm,0.9s,mb4.4						
HLID				*e*pP	pP	03 50 54.3	+5.8
MCMT	McKenzie Canyo	81.32	328	*e*P	P	03 50 46.0	-0.5
	1.3nm,0.8s,mb3.9						
MCMT				*e*pP	pP	03 50 54.9	+5.8
ASAR	Alice Springs	129.32	202	PKP	PKPdf	03 57 39.2	-0.3
	0.5nm,1.0s,baz=190,slow=4.3,SNR=3.7						
MKAR	Makanchi Array	145.16	41	PKPbc	PKPbc	03 58 06.5	-0.8
	0.3nm,0.3s,baz=300,slow=2.7,SNR=5.2						

GUC 26 03:56:16.9±0.8, 22°.93S×66°.99W, h220km, ML4.1,5C, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	Plate Boundary	2.40	285⇑	*i* P	Pn	03 57 08.6	+7.6
PB04				*i* S	S	03 57 48.9	+13
PB04				AML	AML	03 57 51.8	
	comp=N,304nm,0.3s						
PB01	Plate Boundary	2.98	308⇑	*i* P	Pn	03 57 08.8	+1.4
PB01				*i* S	S	03 57 49.3	+2.2
PB01				AML	AML	03 57 51.8	
	comp=E,446nm,0.2s						
CEN1	Los Morros	2.99	260	*e*P	Pn	03 57 11.6	+4.2
CEN1				*i* S	S	03 57 52.6	+5.4
CEN1				AML	AML	03 57 56.4	
	comp=E,88nm,0.7s						
ANCH	Antofagasta	3.23	256⇑	*i* P	Pn	03 57 09.3	-0.9
ANCH				*i* S	S	03 57 51.1	-1.2
HMBC	Humberston	3.77	314⇑	*i* P	Pn	03 57 17.4	+0.7
HMBC				*i* S	S	03 58 05.0	+1.2
PSGC	Pisagua	4.42	318	*e*P	Pn	03 57 24.5	-0.1
PSGC				*e*S	S	03 58 17.7	-0.4
MNMC	Miæe Miæ	4.49	327⇑	*i* P	Pn	03 57 27.0	+1.5
MNMC				*i* S	S	03 58 21.8	+2.0

IDC 26 04:01:15.9±3.3, 53°.53N×87°.62E, h0km, mb1 3.3/2, mb1mx3.1/22, mbtmp3.3/2, ML3.3/2, Error ellipse: s-maj=29.6km s-min=13.2km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	Zalesovo Beam	1.72	285	Pg	Pg	04 01 45.9	-2.9
	8.7nm,0.3s,baz=102,slow=15,SNR=123						
ZALV				Lg		04 02 10.1	
	8.8nm,0.3s,baz=106,slow=22,SNR=16						
MKAR	Makanchi Array	7.56	209	Pn	Pn	04 03 08.1	+0.9
	0.4nm,0.3s,baz=27,slow=11,SNR=7.2						
MKAR				Sn	Sn	04 04 34.2	+0.6
	0.4nm,0.3s,baz=30,slow=27,SNR=13						
MKAR				Lg		04 05 14.7	
	0.4nm,0.3s,baz=36,slow=30,SNR=5.5						
BVAR	Borovoye Array	10.34	274	Pn	Pn	04 03 45.0	-0.3
	0.2nm,0.3s,baz=77,slow=15,SNR=3.9						
BVAR				Sn	Sn	04 05 37.2	-4.5
	0.3nm,0.3s,baz=78,slow=21,SNR=7.6						

TIR ***26*** *04:03:00.4±2.8, 40°.77N×20°.58E, h0km±13km, ML3.1*
THE ***26*** *04:03:01.5, 40°.83N×20°.79E, h13km, ML3.3/2, Error ellipse: s-maj=1.1km s-min=0.5km az=296.0*
ISCJB ***26*** *04:03:02.3±0.5, 40°.80N±0°.02×20°.84E±0°.04, h10km, Error ellipse: s-maj=4.2km s-min=3.0km az=178.1*
SKO ***26*** *04:03:02.7, 40°.85N×20°.87E, h11km, M1.9, ML2.2*
CSEM ***26*** *04:03:03.5±0.3, 40°.74N×20°.85E, h2km, ML3.2, Error ellipse: s-maj=7.3km s-min=5.9km az=76.0*

ISC 26 04:03:02.9±0.8, 40°.78N±0°.02×20°.83E±0°.04, h12km±13km, n19, σ1º05/35, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBN	Korca	0.16	193	*i* PG	Pg	04 03 04.9	-1.6
KBN				*i* SG	Sg	04 03 09.7	+0.7
KBN	Korca	0.16	193	*i* Pg	Pg	04 03 04.9	-1.6
KBN				*i* Sg	Sg	04 03 09.7	+0.7
OHR	Ohrid	0.33	356	*i* Pg	Pg	04 03 08.1	-1.5
OHR				*i* Sg	Sg	04 03 14.0	-0.1
OHR				*e*Lg		04 03 14.9	
	comp=E,238nm,0.4s						
OHR				*e*Lg		04 03 15.4	
	comp=N,294nm,0.3s						
NEST	Nestorio	0.40	156	P	Pg	04 03 10.3	-0.5
NEST				S	Sg	04 03 17.4	+1.3
NEST	Nestorio	0.40	156	P	Pg	04 03 10.3	-0.5
NEST				S	Sg	04 03 17.4	+1.3
FNA	Florina	0.41	89	P	Pg	04 03 10.4	-0.6
FNA				S	Sg	04 03 17.1	+0.6
BIA	Bitola	0.44	57	*i* Pg	Pg	04 03 10.1	-1.5
BIA				*i* Sg	Sg	04 03 17.2	-0.3
BIA				*e*Lg		04 03 18.8	
	comp=N,125nm,0.2s						
BIA				*e*Lg		04 03 19.5	
	comp=E,168nm,0.2s						
BIA	Bitola	0.44	57	P	Pg	04 03 10.1	-1.5
BIA				S	Sg	04 03 17.1	-0.4
KRUS	Krusevo	0.67	28	*i* Pg	Pg	04 03 14.1	-1.8
KRUS				*i* Sg	Sg	04 03 25.6	+1.0
KRUS				*e*Lg		04 03 25.6	
	comp=N,44nm,0.3s						
KRUS				*e*Lg		04 03 26.4	
	comp=E,48nm,0.2s						
KZN	Kozani	0.86	123	P	Pg	04 03 18.9	-0.5
KZN				S	Sg	04 03 32.2	+1.6
KZN	Kozani	0.86	123	P	Pg	04 03 18.9	-0.5
KZN				S	Sg	04 03 32.2	+1.6
SRN	Sarande	1.10	216	*i* PG	Pg	04 03 24.1	0.0
SRN				*i* SG	Sg	04 03 42.9	+4.5
SRN	Sarande	1.10	216	*i* Pg	Pg	04 03 24.1	0.0
SKO	Skopje	1.28	21	*i* Pg	Pg	04 03 26.8	-0.6
SKO				*i* Sg	Sg	04 03 45.3	+1.3
SKO				*e*Lg		04 03 45.9	
	comp=E,35nm,0.3s						
SKO				*e*Lg		04 03 47.4	
	comp=N,39nm,0.3s						
VAY	Valandovo	1.42	67	*i* Pg	Pg	04 03 29.2	-1.0
VAY				*i* Sg	Sg	04 03 49.1	+0.5
VAY				*e*Lg		04 03 49.6	
	comp=N,27nm,0.7s						
VAY				*e*Lg		04 03 50.0	
	comp=E,16nm,0.5s						
PUK	Puka	1.45	331	*i* PG	Pg	04 03 32.1	+1.4
PUK	Puka	1.45	331	*i* Pg	Pg	04 03 32.1	+1.4
BCI	Bajram Curri	1.69	340	*i* PN	Pg	04 03 35.3	0.0
BCI				*i* SN	Sg	04 03 58.6	+1.5
BCI	Bajram Curri	1.69	340	*i* Pn	Pg	04 03 35.3	0.0
BCI				*i* Sn	Sg	04 03 58.6	+1.5

MEX 26 04:14:56.9±0.4, 15°.37N×92°.24W, h214km±6km, MD3.8, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.46	184	*e*P	Pn	04 15 23.8	-1.8
THIG				*e*S	S	04 15 45.3	-2.7
PCIG		1.00	290	*e*P	Pn	04 15 26.7	-1.5
PCIG				*e*S	S	04 15 50.2	-2.3
TGIG		1.64	329	*i* P	Pn	04 15 32.0	-1.1
TGIG				*i* S	S	04 15 58.4	-3.1
HUIG	Huatulco	3.75	277	*e*P	Pn	04 15 55.8	-0.5
HUIG				*i* S	S	04 16 39.7	-3.2
VHO	Vista Hermosa	4.64	292	*e*P	Pn	04 16 06.5	-0.6
VHO				*i* S	S	04 17 01.7	-0.9

SZGRF ***26*** *04:18:06.7, 32°.10N×31°.31E, h33km, mb4.1, Eastern Mediterranean Sea*
ISK ***26*** *04:18:27.8, 35°.08N×31°.12E, h10km, ML3.7*
NIC ***26*** *04:18:29.5±0.2, 35°.65N×30°.91E, h36km, mb4.3, ML4.1, MW3.6*
IDC ***26*** *04:18:31.4±1.8, 35°.48N×31°.46E, h0km, mb3.8/5, mb1 3.7/10, mb1mx3.6/26, mbtmp3.7/10, ML3.3/5, Error ellipse: s-maj=36.6km s-min=19.4km az=56.0*
DDA ***26*** *04:18:33.0, 35°.59N×31°.32E, h4km, Md3.5*
ISCJB ***26*** *04:18:34.1±0.5, 35°.39N±0°.04×31°.29E±0°.04, h36km±5km, mb3.9/15, MS3.0/2, Error ellipse: s-maj=7.3km s-min=3.6km az=30.2*
NEIC ***26*** *04:18:36.1±0.7, 35°.48N×31°.42E, h36km±10km, mb3.9/16, ML4.1(NIC), ML3.8(ISK), Error ellipse: s-maj=9.3km s-min=6.2km az=204.0*
CSEM ***26*** *04:18:36.3±0.1, 35°.43N×31°.34E, h40km, mb3.9/8, Ms2.9, Mw3.6, Error ellipse: s-maj=5.8km s-min=3.2km az=36.0*

ISC 26 04:18:35.6±1.5, 35°.39N±0°.04×31°.30E±0°.03, h34km±12km, n187, σ1º16/207, mb3.8/15, MS3.0/2, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPCY	Paphos	0.99	120	P	Pn	04 18 52.8	-0.3
PPCY	Paphos	0.99	120	P	Pn	04 18 52.8	-0.3
ALFC	Alevga	1.08	102	P	Pn	04 18 53.3	-1.1
	38nm,0.5s						
ALFC				S	Sn	04 19 12.2	+4.0
ALFC	Alevga	1.08	102	P	Pn	04 18 53.3	-1.1
	38nm,0.5s						
ALFC				S	Sn	04 19 12.2	+4.0
GAZI	Gazipasa	1.18	44	*i* P	Pn	04 18 52.2	-3.4
GAZI				*i* S	Sn	04 19 05.7	-4.8
LEF	Lefka	1.33	101	*e*PN	Pn	04 18 54.0	-3.7
LEF				*e*SN	Sn	04 19 13.7	-0.4
LEF	Lefka	1.33	101	*e*Pn	Pn	04 18 54.0	-3.7
LEF				*e*Sn	Sn	04 19 13.7	-0.5
MAMC	Mammari	1.58	97	P	Pn	04 19 00.6	-0.6
MAMC	Mammari	1.58	97	P	Pn	04 19 00.6	-0.6
ANTB	Antalya	1.60	341	*e*PN	Pn	04 19 00.6	-0.8
ANTB				*e*SN	Sn	04 19 23.9	+3.0
ANTB	Antalya	1.60	341	*e*Pn	Pn	04 19 00.6	-0.8
ANTB				*e*Sn	Sn	04 19 23.9	+3.0
AKAS	Kas	1.62	302	*e*P	Pn	04 19 05.5	+3.8
AKAS				*e*S	Sn	04 19 43.8	+22
CSS	Prodhromos	1.71	104	P	Pn	04 19 02.5	-0.5
CSS				S	Sn	04 19 28.3	+4.6
CSS	Prodhromos	1.71	104	P	Pn	04 19 02.5	-0.5
CSS				S	Sn	04 19 28.3	+4.6
ELL	Elmali	1.77	321	*e*PN	Pn	04 19 01.7	-2.0
ELL	Elmali	1.77	321	*e*Pn	Pn	04 19 01.7	-2.0
LFK	Lefkose	1.82	93	*e*PN	Pn	04 19 02.2	-2.3
LFK	Lefkose	1.82	93	*e*Pn	Pn	04 19 02.2	-2.3
IKL	Isikli	2.11	66	*e*PN	Pn	04 19 08.2	-0.3
IKL	Isikli	2.11	66	*e*Pn	Pn	04 19 08.2	-0.3
BCK	Bucak	2.15	345	*e*PN	Pn	04 19 08.3	-0.7
BCK	Bucak	2.15	345	*e*Pn	Pn	04 19 08.3	-0.7
PHNC	Paralimni	2.27	99	P	Pn	04 19 12.5	+1.9
	11nm,0.7s						
PHNC	Paralimni	2.27	99	P	Pn	04 19 12.5	+1.9
	11nm,0.7s						
GLHS	Gihisar (BURDU	2.29	321	*e*PN	Pn	04 19 09.7	-1.3
GLHS	Gihisar (BURDU	2.29	321	*e*Pn	Pn	04 19 09.7	-1.2
EREN	Erenkoy	2.34	86	*e*PN	Pn	04 19 10.2	-1.4
EREN	Erenkoy	2.34	86	*e*Pn	Pn	04 19 10.3	-1.4
ISP	Isparta	2.51	346	*e*PN	Pn	04 19 13.7	-0.2
KONT	Konya--Tatoy	2.69	18	*e*PN	Pn	04 19 16.3	-0.1
KONT	Konya--Tatoy	2.69	18	*e*Pn	Pn	04 19 16.3	-0.1
DNZL	Cakiroluk	2.93	322	*i* P	Pn	04 19 22.4	+2.6
DNZL				*i* S	Sn	04 20 02.8	+9.1
DNZL	Cakiroluk	2.93	322	*i* P	Pn	04 19 22.4	+2.7
LADK	Ladik-KONYA	2.93	17	*e*PN	Pn	04 19 20.5	+0.7
LADK	Ladik-KONYA	2.93	17	*e*Pn	Pn	04 19 20.5	+0.7
MERS	Mersin	2.99	60	*e*PN	Pn	04 19 20.8	+0.2
MERS	Mersin	2.99	60	*e*Pn	Pn	04 19 20.8	+0.2
YER	Yerkesik	3.00	306	*e*PN	Pn	04 19 17.9	-2.8
YER	Yerkesik	3.00	306	*e*Pn	Pn	04 19 17.9	-2.8
SHUT	Suhut-Afyon	3.21	349	*e*PN	Pn	04 19 24.2	+0.5
SHUT	Suhut-Afyon	3.21	349	*e*Pn	Pn	04 19 24.2	+0.5
KHL	Karahalli	3.26	335	*e*PN	Pn	04 19 23.6	-0.7
KHL	Karahalli	3.26	335	*e*Pn	Pn	04 19 23.6	-0.7
SULT	Sultanhani-AKS	3.32	32	*e*PN	Pn	04 19 26.2	+1.1
SULT	Sultanhani-AKS	3.32	32	*e*Pn	Pn	04 19 26.2	+1.1
GULE	Gulek	3.38	55	*i* P	Pn	04 19 27.4	+1.4
GULE				*i* S	Sn	04 20 10.6	+5.7
GULE	Gulek	3.38	55	*i* P	Pn	04 19 27.4	+1.5
MLSB	Milas	3.42	305	*e*PN	Pn	04 19 23.4	-3.2
MLSB	Milas	3.42	305	*e*Pn	Pn	04 19 23.4	-3.1
KRTS	Karatas	3.51	69	*e*PN	Pn	04 19 27.4	-0.3
KRTS	Karatas	3.51	69	*e*Pn	Pn	04 19 27.4	-0.3
KIZT	Kizilcal	3.52	7	*e*PN	Pn	04 19 28.0	+0.2
KIZT	Kizilcal	3.52	7	*e*Pn	Pn	04 19 28.0	+0.2
KARA	Karaisali	3.56	57	*e*PN	Pn	04 19 29.4	+1.0
KARA	Karaisali	3.56	57	*e*Pn	Pn	04 19 29.4	+1.0
AYDN	Tasoluk	3.57	310	*i* P	Pn	04 19 29.3	+0.7
AYDN				*i* S	Sn	04 20 07.8	-1.7
AYDN	Tasoluk	3.57	310	*i* P	Pn	04 19 29.3	+0.8
AYDN				*i* S	Sn	04 20 07.8	-1.7
BODT	Bodrum	3.63	299	*e*PN	Pn	04 19 25.7	-3.8
BODT	Bodrum	3.63	299	*e*Pn	Pn	04 19 25.7	-3.7
KULA	Kula-Manisa	3.77	327	*e*PN	Pn	04 19 31.1	-0.2
KULA	Kula-Manisa	3.77	327	*e*Pn	Pn	04 19 31.1	-0.2
ALT	Altintas	3.78	346	*e*PN	Pn	04 19 31.8	+0.3
ALT	Altintas	3.78	346	*e*Pn	Pn	04 19 31.8	+0.4
YURE	YUREGIR	3.79	66	*i* P	Pn	04 19 33.5	+2.0
YURE	YUREGIR	3.79	66	*i* P	Pn	04 19 33.5	+2.0
YAYL	Yayladag	3.96	79	*i* P	Pn	04 19 34.7	+0.8
YAYL				*i* S	Sn	04 20 17.6	-1.6
YAYL	Yayladag	3.96	79	*i* P	Pn	04 19 34.7	+0.8
YAYL				*i* S	Sn	04 20 17.6	-1.6
GDZ	Gediz	3.97	339	*e*P	Pn	04 19 33.2	-0.8
GDZ				*e*S	Sn	04 20 19.4	0.0
GDZ	Gediz	3.97	339	*e*P	Pn	04 19 33.2	-0.8
GDZ				*e*S	Sn	04 20 19.4	0.0
HTY	Hatay	4.00	78	*e*PN	Pn	04 19 34.2	-0.2
HTY	Hatay	4.00	78	*e*Pn	Pn	04 19 34.2	-0.2
ESKT	Eskisehir	4.14	355	*e*PN	Pn	04 19 38.1	+1.7
ESKT	Eskisehir	4.14	355	*e*Pn	Pn	04 19 38.1	+1.7
KOZT	Kozan	4.20	59	*e*PN	Pn	04 19 38.2	+1.0
BLCB	Balcova	4.54	312	*e*PN	Pn	04 19 40.6	-1.3
BLCB	Balcova	4.54	312	*e*Pn	Pn	04 19 40.6	-1.3
BRTR	Keskin Array B	4.71	23	Pn	Pn	04 19 43.5	-0.7
	0.6nm,0.3s,baz=194,slow=16,SNR=17						
BRTR	Keskin Array B	4.71	23	Pn	Pn	04 19 43.5	-0.7
BR131	Keskin Array S	4.71	23	*e*Pn	Pn	04 19 44.6	+0.4
BR131	Keskin Array S	4.71	23	*e*Pn	Pn	04 19 44.6	+0.4
KMRS	Kahramanmaras	4.98	63	*e*PN	Pn	04 19 48.8	+0.8
KMRS	Kahramanmaras	4.98	63	*e*Pn	Pn	04 19 48.8	+0.9
GAZ	Gaziantep	5.09	68	*e*PN	Pn	04 19 50.5	+1.0
GAZ	Gaziantep	5.09	68	*e*Pn	Pn	04 19 50.5	+1.0
YOZ	Yozgat	5.31	36	*e*PN	Pn	04 19 54.4	+1.9
YOZ	Yozgat	5.31	36	*e*Pn	Pn	04 19 54.4	+2.0
ASF	Jabal al Asfar	5.66	123	Pn	Pn	04 19 55.2	-2.0
	0.2nm,0.3s,baz=320,slow=7.9,SNR=2.0						
MYA	Malataya	6.42	61	*e*PN	Pn	04 20 08.7	+1.1
MYA	Malataya	6.42	61	*e*Pn	Pn	04 20 08.7	+1.0
EIL	Elat	6.48	151	Pn	Pn	04 20 09.1	+0.5
	1.4nm,0.3s,baz=348,slow=7.0,SNR=12						
EIL				Sn	Sn	04 21 22.1	+0.8
	0.3nm,0.3s,baz=17,slow=16,SNR=3.0						
EIL	Elat	6.48	151	Pn	Pn	04 20 09.1	+0.5
EIL				Sn	Sn	04 21 22.1	+0.8
EIL	Elat	6.48	151	Pn	Pn	04 20 09.1	+0.5
EIL				Sn	Sn	04 21 22.1	+0.8
ONI	Oni	11.87	49	P	Pn	04 21 26.9	+4.6
ONI				S	Px	04 21 29.7	
ONI	Oni	11.87	49	P	Pn	04 21 26.9	+4.5
ONI				S	Px	04 21 28.2	
ONI	Oni	11.87	49	P	Pn	04 21 29.7	+7.4
KIEV	Kiev	15.37	355	*e*P	Pn	04 22 13.3	+3.6
	5.6nm,0.9s						
KI

ORIF	Oris-en-Rattie	21.56	304	eP	P	04 23 22.4	+0.4
ORIF	Oris-en-Rattie	21.56	304	eP	P	04 23 22.4	+0.4
HINF	Hinteralfeld	22.00	312	eP	P	04 23 25.9	-0.7
HINF	Hinteralfeld	22.00	312	eP	P	04 23 25.9	-0.7
CDF	Champ du Feu	22.01	314	eP	P	04 23 26.1	-0.6
	comp=Z,11nm,1.1s,mb3.9						
CDF	Champ du Feu	22.01	314	eP	P	04 23 26.1	-0.6
	comp=Z,5.3nm,1.1s,mb3.9						
CDF	Champ du Feu	22.01	314	eP	P	04 23 26.1	-0.6
	comp=Z,5.3nm,1.1s,mb3.9						
VIVF	Saint-Julien-l	22.37	303	eP	P	04 23 30.2	-0.4
	comp=Z,8.7nm,1.0s,mb3.8						
VIVF	Saint-Julien-l	22.37	303	eP	P	04 23 30.2	-0.4
	comp=Z,4.3nm,1.0s,mb3.8						
VIVF	Saint-Julien-l	22.37	303	eP	P	04 23 30.2	-0.4
	comp=Z,4.3nm,1.0s,mb3.8						
HAU	Haudompre	22.38	312	eP	P	04 23 29.8	-0.9
HAU				eMLR	MLR		
	comp=Z,66nm,17.5s,MS2.8						
HAU	Haudompre	22.38	312	eP	P	04 23 29.8	-0.9
HAU				LR	LR		
	comp=Z,70nm,17.5s,MS3.1						
HAU	Haudompre	22.38	312	eP	P	04 23 29.8	-0.9
LASF	Ste Croix	22.74	301	eP	P	04 23 35.0	+0.4
	comp=Z,28nm,1.4s,mb4.2						
LASF	Ste Croix	22.74	301	eP	P	04 23 35.0	+0.4
	comp=Z,14nm,1.4s,mb4.2						
LOR	Lormes	23.65	309	eP	P	04 23 43.4	-0.4
LOR				eMLR	MLR		
	comp=Z,80nm,17.2s,MS3.0						
LOR	Lormes	23.65	309	eP	P	04 23 43.4	-0.4
LOR				LR	LR		
	comp=Z,80nm,17.3s,MS3.2						
LOR	Lormes	23.65	309	eP	P	04 23 43.4	-0.4
MTLF	Montolieu	23.76	298	eP	P	04 23 44.8	0.0
	comp=Z,8.8nm,1.2s,mb3.8						
MTLF	Montolieu	23.76	298	eP	P	04 23 44.8	0.0
	comp=Z,4.4nm,1.2s,mb3.8						
MTLF	Montolieu	23.76	298	eP	P	04 23 44.8	0.0
	comp=Z,4.4nm,1.2s,mb3.8						
SSF	Saint Saulge	23.81	308	eP	P	04 23 45.3	+0.1
	comp=Z,12nm,1.1s,mb3.9						
SSF	Saint Saulge	23.81	308	eP	P	04 23 45.3	+0.1
	comp=Z,6.2nm,1.1s,mb4.0						
SSF	Saint Saulge	23.81	308	eP	P	04 23 45.3	+0.1
	comp=Z,6.2nm,1.1s,mb3.9						
AKTK	Aktyubinsk	24.50	44	P	P	04 23 50.4	-1.1
AKTK	Aktyubinsk	24.50	44	P	P	04 23 50.3	-1.2
AKTO	Aktyubinsk	24.50	44	P	P	04 23 50.4	-1.1
	comp=Z,2.4nm,0.8s,mb3.7,baz=252,slow=8.4,SNR=8.4						
BAIF	Baives	24.55	315	eP	P	04 23 51.4	-0.5
BAIF	Baives	24.55	315	eP	P	04 23 51.4	-0.5
EPF	Esparros	25.07	297	eP	P	04 23 57.6	+0.8
EPF	Esparros	25.07	297	eP	P	04 23 57.6	+0.8
ABKAR	Akbulak array	25.12	48	eP	P	04 23 56.7	-0.5
	comp=Z,0.8nm,0.5s,mb3.5						
ABKAR	Akbulak array	25.12	48	eP	P	04 23 56.7	-0.5
	comp=Z,0.8nm,0.5s,mb3.5						
TAM	Tamanrasset	25.70	248	eP	P	04 24 06.3	+3.6
	comp=Z,4.9nm,1.0s,mb4.0						
ETSF	Etsaut	25.71	297	eP	P	04 24 03.3	+0.7
	comp=Z,8.3nm,0.9s,mb3.9						
ETSF	Etsaut	25.71	297	eP	P	04 24 03.3	+0.7
	comp=Z,4.2nm,0.9s,mb4.0						
ETSF	Etsaut	25.71	297	eP	P	04 24 03.3	+0.7
	comp=Z,4.2nm,0.9s,mb4.0						
SJPF	Ste Jean	26.22	297	eP	P	04 24 09.1	+1.9
	comp=Z,22nm,1.1s,mb4.3						
SJPF	Ste Jean	26.22	297	eP	P	04 24 09.1	+1.9
	comp=Z,11nm,1.1s,mb4.3						
SJPF	Ste Jean	26.22	297	eP	P	04 24 09.1	+1.9
	comp=Z,11nm,1.1s,mb4.3						
FINES	FINESS Array B	26.29	354	P	P	04 24 06.2	-1.4
	comp=Z,0.7nm,0.6s,mb3.4,baz=155,slow=10,SNR=5.2						
FINES	FINESS Array B	26.29	354	P	P	04 24 06.2	-1.4
NOA	NORSAR Array B	28.70	340	P	P	04 24 29.8	+0.6
	comp=Z,0.5nm,0.9s,mb3.3,baz=143,slow=9.3,SNR=2.7						
NOA	NORSAR Array B	28.70	340	P	P	04 24 29.8	+0.6
KURK	Kurchatov	37.14	51	eP	P	04 25 40.8	-2.1
	comp=Z,1.8nm,1.0s,mb3.9						
MK31	Makanchi Array	39.44	57	eP	P	04 26 02.1	-0.2
MK31	Makanchi Array	39.44	57	eP	P	04 26 02.1	-0.2
MKAR	Makanchi Array	39.44	57	P	P	04 26 02.2	-0.1
	comp=Z,3.2nm,0.8s,mb4.1,baz=282,slow=6.1,SNR=22						
MKAR	Makanchi Array	39.44	57	P	P	04 26 02.2	-0.1
SONM	Songino Array	55.41	52	P	P	04 28 06.9	+0.5
	comp=Z,0.8nm,0.5s,mb4.0,baz=286,slow=8.7,SNR=5.9						
SONM	Songino Array	55.41	52	P	P	04 28 06.9	+0.5

SZGRF ***26*** *04:21:31.6, 32°.32N×32°.09E, h33km, mb4.0, Eastern Mediterranean Sea*
IDC ***26*** *04:21:57.4±3.2, 35°.46N×31°.27E, h0km, mb3.8/3, mb1 3.7/5, mb1mx3.4/22, mbtmp3.7/5, ML2.6/3, Error ellipse: s-maj=69.5km s-min=24.0km az=70.0*
ISK ***26*** *04:22:00.4, 35°.37N×31°.36E, h8km, ML3.4*
DDA ***26*** *04:22:00.3, 35°.61N×31°.30E, h6km, Md3.4*
ISCJB ***26*** *04:22:00.5±1.0, 35°.54N±0°.05×31°.26E±0°.04, h15km±7km, mb3.6/5, Error ellipse: s-maj=8.8km s-min=4.9km az=11.1*
CSEM ***26*** *04:22:01.1±0.3, 35°.32N×31°.38E, h10km, MD3.4, Error ellipse: s-maj=10.1km s-min=5.5km az=21.0*
NEIC ***26*** *04:22:01.0, 35°.40N×31°.40E, h10km, mb3.5/3, ML3.4(ISK), After ISK.*

ISC 26 04:22:00.3±1.1, 35°.43N±0°.04×31°.31E±0°.04, h9km±7km, n69, σ1s54/83, mb3.6/5, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZI	Gazipasa	1.14	45	iP	Pb	04 22 19.6	-2.6
GAZI				iS	Sb	04 22 33.2	-4.0
GAZI	Gazipasa	1.14	45	iP	Pb	04 22 19.6	-2.6
GAZI				iS	Sb	04 22 33.2	-4.0
LEF	Lefka	1.33	103	ePN	Pn	04 22 24.6	-0.4
LEF				eSN	Sn	04 22 42.5	-0.3
LEF	Lefka	1.33	103	ePn	Pn	04 22 24.6	-0.4
LEF				eSn	Sn	04 22 42.5	-0.4
AKAS	Kas	1.60	300	eP	Pg	04 22 33.5	+2.5
AKAS				eS	Sg	04 23 01.8	+10
AKAS	Kas	1.60	300	eP	Pg	04 22 33.5	+2.6
AKAS				eS	Sg	04 23 01.8	+10
CSS	Prodhromos	1.72	105	ePn	Pn	04 22 30.0	-0.4
CSS	Prodhromos	1.72	105	ePn	Pn	04 22 30.0	-0.4
ELL	Elmali	1.73	320	ePN	Pg	04 22 32.7	-0.8
ELL	Elmali	1.73	320	ePn	Pg	04 22 32.7	-0.8
ERMK	Ermenek	1.77	47	iP	Pn	04 22 30.7	-0.4
ERMK				iS	Sn	04 22 53.5	-0.2
ERMK	Ermenek	1.77	47	iP	Pn	04 22 30.7	-0.4
ERMK				iS	Sn	04 22 53.5	-0.3
LFK	Lefkose	1.82	94	ePN	Pn	04 22 32.4	+0.6
LFK	Lefkose	1.82	94	ePn	Pn	04 22 32.4	+0.6
IKL	Isikli	2.09	67	ePN	Pn	04 22 36.4	+0.9
IKL	Isikli	2.09	67	ePn	Pn	04 22 36.4	+0.9
GLHS	Glhisar (BURDU	2.26	320	ePN	Pg	04 22 40.5	-3.0
GLHS	Glhisar (BURDU	2.26	320	ePn	Pg	04 22 40.5	-3.0
EREN	Erenkoy	2.34	87	ePN	Pn	04 22 40.0	+1.2
EREN	Erenkoy	2.34	87	ePn	Pn	04 22 40.0	+1.1
KONT	Konya--Tatoy	2.65	18	ePN	Pb	04 22 45.1	-2.7
KONT	Konya--Tatoy	2.65	18	ePn	Pb	04 22 45.1	-2.7
LADK	Ladik-KONYA	2.89	17	ePN	Pb	04 22 49.2	-2.7
LADK	Ladik-KONYA	2.89	17	ePn	Pb	04 22 49.2	-2.8
DNZL	Cakiroluk	2.90	322	eP	Pg	04 22 55.2	-0.6
DNZL				eS	Sg	04 23 38.6	+5.3
DNZL	Cakiroluk	2.90	322	eP	Pg	04 22 55.2	-0.6
DNZL				eS	Sg	04 23 38.6	+5.3
YER	Yerkesik	2.98	306	ePN	Pb	04 22 50.6	-2.9
YER	Yerkesik	2.98	306	ePn	Pb	04 22 50.6	-2.9
KHL	Karahalli	3.22	334	ePN	Pb	04 22 53.4	-4.2
KHL	Karahalli	3.22	334	ePn	Pb	04 22 53.4	-4.2
SULT	Sultanhani-AKS	3.28	32	ePN	Pn	04 22 53.3	+1.5
SULT	Sultanhani-AKS	3.28	32	ePn	Pn	04 22 53.3	+1.5
DAT	Datca	3.29	294	ePN	Pn	04 22 54.2	+2.3
DAT	Datca	3.29	294	ePn	Pn	04 22 54.2	+2.3
GULE	Gulek	3.35	56	iP	Pn	04 22 55.0	+2.2
GULE				iS	Sn	04 23 33.9	+1.2
GULE	Gulek	3.35	56	iP	Pn	04 22 55.0	+2.2
GULE				iS	Sn	04 23 33.9	+1.1
KIZT	Kizilcal	3.47	7	ePN	Pn	04 22 57.0	+2.6
KIZT	Kizilcal	3.47	7	ePn	Pn	04 22 57.0	+2.6
KARA	Karaisali	3.53	58	ePN	Pn	04 22 56.5	+1.3
KARA	Karaisali	3.53	58	ePn	Pn	04 22 56.6	+1.3
AYDN	Tasoluk	3.54	310	iP	Pn	04 22 57.1	+1.7
AYDN				iS	Sn	04 23 35.4	-2.1
AYDN	Tasoluk	3.54	310	iP	Pn	04 22 57.1	+1.6
BODT	Bodrum	3.62	298	ePN	Pn	04 22 58.6	+2.1
BODT	Bodrum	3.62	298	ePn	Pn	04 22 58.6	+2.1
KULA	Kula-Manisa	3.74	326	ePN	Pb	04 23 01.6	-4.8
KULA	Kula-Manisa	3.74	326	ePn	Pb	04 23 01.6	-4.8
HTY	Hatay	3.98	79	ePN	Pn	04 23 03.0	+1.4
HTY	Hatay	3.98	79	ePn	Pn	04 23 03.0	+1.5
ESKT	Eskisehir	4.10	355	ePN	Pb	04 23 06.6	-5.9
ESKT	Eskisehir	4.10	355	ePn	Pb	04 23 06.6	-5.9
KOZT	Kozan	4.17	59	ePN	Pn	04 23 06.2	+2.0
BRTR	Keskin Array B	4.67	23	Pn	Pn	04 23 07.1	-3.8
	0.0nm,0.3s,baz=221,slow=42,SNR=2.0						
BR131	Keskin Array S	4.67	23	ePn	Pn	04 23 11.9	+1.0
BR131	Keskin Array S	4.67	23	ePn	Pn	04 23 11.9	+1.0
ASF	Jabal al Asfar	5.67	123	Pn	Pn	04 23 22.6	-2.1
	0.2nm,0.3s,baz=54,slow=22,SNR=1.7						
EIL	Elat	6.52	151	Pn	Pn	04 23 35.2	-1.1
	0.7nm,0.3s,baz=333,slow=11,SNR=4.0						
EIL				Sn	Sn	04 24 50.0	-0.9
	baz=43,slow=16,SNR=2.3						
EIL	Elat	6.52	151	Pn	Pn	04 23 35.2	-1.1
KHC	Kasperske Hory	18.89	322	eP	Pn	04 26 20.9	-0.6
	1.1nm,0.5s						
KHC	Kasperske Hory	18.89	322	eP	Pn	04 26 20.9	-0.6
	1.1nm,0.5s						
GRF	Grafenberg Arr	20.45	320	eP	P	04 26 36.9	-1.0
	comp=Z,5.0nm,1.1s						
ABKAR	Akbulak array	25.09	48	eP	P	04 27 24.5	-0.6
	comp=Z,0.3nm,0.4s,mb3.2						
ABKAR	Akbulak array	25.09	48	eP	P	04 27 24.5	-0.6
	comp=Z,0.3nm,0.4s,mb3.2						
TAM	Tamanrasset	25.73	248	eP	P	04 27 33.1	+2.0
	comp=Z,1.1nm,0.5s,mb3.6						
FINES	FINESS Array B	26.24	354	P	P	04 27 33.4	-2.0
	comp=Z,0.8nm,0.7s,mb3.4,baz=153,slow=13,SNR=3.8						
MK31	Makanchi Array	39.41	57	eP	P	04 29 29.5	-0.8
MK31	Makanchi Array	39.41	57	eP	P	04 29 29.5	-0.8
MKAR	Makanchi Array	39.41	57	P	P	04 29 29.8	-0.6
	comp=Z,1.7nm,0.7s,mb3.9,baz=272,slow=7.2,SNR=9.8						
MKAR	Makanchi Array	39.41	57	P	P	04 29 29.8	-0.5
SONM	Songino Array	55.38	52	P	P	04 31 33.2	-1.3
	comp=Z,0.6nm,0.5s,mb3.9,baz=274,slow=9.8,SNR=4.3						

SZGRF ***26*** *04:25:03.3, 32°.56N×32°.29E, h33km, mb4.0, Eastern Mediterranean Sea*
IDC ***26*** *04:25:29.4±1.4, 35°.49N×31°.27E, h0km, mb3.8/7, mb1 3.7/11, mb1mx3.6/26, mbtmp3.7/11, ML3.4/4, Error ellipse: s-maj=27.6km s-min=17.7km az=54.0*
NIC ***26*** *04:25:29.3±0.2, 35°.34N×31°.00E, h46km, mb4.2, ML3.9, MW3.5*
NEIC ***26*** *04:25:29.0, 35°.35N×31°.36E, h8km, mb3.7/3, ML3.9(NIC), ML3.5(ISK), After ISK.*
ISK ***26*** *04:25:32.2, 35°.36N×31°.35E, h28km, ML3.6*
DDA ***26*** *04:25:33.2, 35°.62N×31°.41E, h27km, Md3.4*
CSEM ***26*** *04:25:34.2±0.2, 35°.40N×31°.35E, h40km, MD3.4, Mw3.5, Error ellipse: s-maj=6.1km s-min=3.2km az=25.0*

ISC 26 04:25:31.5±0.8, 35°.45N±0°.03×31°.34E±0°.03, h7km±6km, n123, σ1s13/152, mb3.6/9, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPCY	Paphos	1.00	124	P	Pg	04 25 49.6	-1.0
PPCY	Paphos	1.00	124	P	Pg	04 25 49.6	-1.0
ALFC	Alevga	1.07	105	P	Pg	04 25 51.3	-0.7
	37nm,0.3s						
ALFC				S	Sg	04 26 08.7	+2.8
ALFC	Alevga	1.07	105	P	Pg	04 25 51.3	-0.7
	37nm,0.3s						
ALFC				S	Sg	04 26 08.7	+2.8
GAZI	Gazipasa	1.12	45	iP	Pg	04 25 50.0	-2.9
GAZI				iS	Sg	04 26 03.6	-3.8
LEF	Lefka	1.31	104	ePN	Pn	04 25 54.6	-1.6
LEF				eSN	Sn	04 26 10.2	-3.7
LEF	Lefka	1.31	104	ePn	Pn	04 25 54.7	-1.5
LEF				eSn	Sn	04 26 10.3	-3.7
ANTB	Antalya	1.55	339	ePN	Pn	04 25 59.6	0.0
ANTB	Antalya	1.55	339	ePn	Pn	04 25 59.6	0.0
MAMC	Mammari	1.56	100	P	Pn	04 25 58.8	-0.9
MAMC	Mammari	1.56	100	P	Pn	04 25 58.8	-0.9
AKAS	Kas	1.61	300	iP	Pn	04 26 03.9	+3.4
AKAS				iS	Sn	04 26 29.3	+7.8
CSS	Prodhromos	1.70	106	P	Pn	04 26 00.5	-1.1
	3.6nm,0.5s						
CSS				S	Sn	04 26 24.7	+1.1
CSS	Prodhromos	1.70	106	P	Pn	04 26 00.5	-1.1
	3.6nm,0.5s						
CSS				S	Sn	04 26 24.7	+1.1
ELL	Elmali	1.74	319	ePN	Pn	04 26 02.1	0.0
ELL	Elmali	1.74	319	ePn	Pn	04 26 02.1	-0.1
ERMK	Ermenek	1.75	46	iP	Pn	04 26 00.9	-1.3
ERMK				iS	Sn	04 26 23.5	-1.2
ERMK	Ermenek	1.75	46	iP	Pn	04 26 00.9	-1.3
ERMK				iS	Sn	04 26 23.5	-1.3
KORT	Korkueli	1.75	333	iP	Pn	04 26 03.8	+1.6
KORT				iS	Sn	04 26 32.5	+7.8
KORT	Korkueli	1.75	333	iP	Pn	04 26 03.8	+1.6
LFK	Lefkose	1.80	95	ePN	Pn	04 26 01.9	-1.1
LFK	Lefkose	1.80	95	ePn	Pn	04 26 01.9	-1.1
IKL	Isikli	2.06	67	ePN	Pn	04 26 06.2	-0.4
IKL	Isikli	2.06	67	ePn	Pn	04 26 06.2	-0.4
BCK	Bucak	2.10	343	ePN	Pn	04 26 07.6	+0.5
BCK	Bucak	2.10	343	ePn	Pn	04 26 07.6	+0.5
PHNC	Paralimni	2.25	101	P	Pn	04 26 09.4	+0.3
	8.4nm,0.8s						
PHNC				S	Sn	04 26 40.0	+2.9
PHNC	Paralimni	2.25	101	P	Pn	04 26 09.4	+0.3
	8.4nm,0.8s						
PHNC				S	Sn	04 26 40.0	+2.9
GLHS	Glhisar (BURDU	2.26	319	ePN	Pn	04 26 09.8	+0.4
GLHS	Glhisar (BURDU	2.26	319	ePn	Pn	04 26 09.8	+0.4
EREN	Erenkoy	2.31	87	ePN	Pn	04 26 09.3	-0.7
EREN	Erenkoy	2.31	87	ePn	Pn	04 26 09.3	-0.7
ISP	Isparta	2.46	345	ePN	Pn	04 26 12.9	+0.8
KONT	Konya--Tatoy	2.62	18	ePN	Pn	04 26 15.0	+0.7
KONT	Konya--Tatoy	2.62	18	ePn	Pn	04 26 15.0	+0.7
LADK	Ladik-KONYA	2.87	16	ePN	Pn	04 26 18.8	+1.2
LADK	Ladik-KONYA	2.87	16	ePn	Pn	04 26 18.8	+1.1
MERS	Mersin	2.94	60	ePN	Pn	04 26 18.9	+0.3
MERS	Mersin	2.94	60	ePn	Pn	04 26 18.9	+0.2
YER	Yerkesik	2.99	305	ePN	Pn	04 26 19.9	+0.5
YER	Yerkesik	2.99	305	ePn	Pn	04 26 19.9	+0.6
SHUT	Suhut-Afyon	3.16	349	ePN	Pn	04 26 22.5	+0.8
SHUT	Suhut-Afyon	3.16	349	ePn	Pn	04 26 22.5	+0.8
KHL	Karahalli	3.22	334	ePN	Pn	04 26 23.5	+1.0
KHL	Karahalli	3.22	334	ePn	Pn	04 26 23.5	+1.0
SULT	Sultanhani-AKS	3.25	32	ePN	Pn	04 26 23.9	+0.9
SULT	Sultanhani-AKS	3.25	32	ePn	Pn	04 26 23.9	+0.9
KHAL	Karahalli	3.27	334	iP	Pn	04 26 23.5	+0.3
KHAL				iS	Sn	04 27 02.6	+0.2
KHAL	Karahalli	3.27	334	iP	Pn	04 26 23.5	+0.3
KHAL				iS	Sn	04 27 02.6	+0.2
DAT	Datca	3.31	294	ePN	Pn	04 26 23.9	+0.2
DAT	Datca	3.31	294	ePn	Pn	04 26 23.9	+0.2
GULE	Gulek	3.32	56	iP	Pn	04 26 25.1	+1.2
GULE				iS	Sn	04 27 04.3	+0.6
GULE	Gulek	3.32	56	iP	Pn	04 26 25.1	+1.2
GULE				iS	Sn	04 27 04.3	+0.6
KIZT	Kizilcal	3.45	7	ePN	Pn	04 26 27.0	+1.2
KIZT	Kizilcal	3.45	7	ePn	Pn	04 26 27.0	+1.3
KRTS	Karatas	3.46	70	ePN	Pn	04 26 25.9	+0.1
KRTS	Karatas	3.46	70	ePn	Pn	04 26 25.9	+0.1
KARA	Karaisali	3.50	58	ePN	Pn	04 26 26.8	+0.4
KARA	Karaisali	3.50	58	ePn	Pn	04 26 26.8	+0.4
BDRM	Kayabasi	3.54	298	iP	Pn	04 26 26.7	-0.2
BDRM				iS	Sn	04 27 06.2	-2.9
BDRM	Kayabasi	3.54	298	iP	Pn	04 26 26.7	-0.2
BDRM				iS	Sn	04 27 06.2	-2.8
AYDN	Tasoluk	3.56	309	iP	Pn	04 26 27.1	0.0
AYDN				iS	Sn	04 27 04.5	-4.9
AYDN	Tasoluk	3.56	309	iP	Pn	04 26 27.1	0.0
BODT	Bodrum	3.63	298	ePN	Pn	04 26 28.1	-0.1
BODT	Bodrum	3.63	298	ePn	Pn	04 26 28.1	-0.1
ALT	Altintas	3.73	345	ePN	Pn	04 26 30.6	+1.0
ALT	Altintas	3.73	345	ePn	Pn	04 26 30.6	+1.0
KULA	Kula-Manisa	3.74	326	ePN	Pn	04 26 30.8	+1.1
KULA	Kula-Manisa	3.74	326	ePn	Pn	04 26 30.8	+1.2
YAYL	Yayladag	3.92	80	iP	Pn	04 26 32.0	-0.2
YAYL				iS	Sn	04 27 18.2	-0.3
YAYL	Yayladag	3.92	80	iP	Pn	04 26 32.0	-0.2
YAYL				iS	Sn	04 27 18.2	-0.2
GDZ	Gediz	3.93	338	iP	Pn	04 26 32.6	+0.4
GDZ				iS	Sn	04 27 17.8	-0.7
GDZ	Gediz	3.93	338	iP	Pn	04 26 32.6	+0.4
GDZ				iS	Sn	04 27 17.8	-0.8
HTY	Hatay	3.96	79	ePN	Pn	04 26 32.6	0.0
HTY	Hatay	3.96	79	ePn	Pn	04 26 32.6	-0.1
SVRH	Sivrihisar-ESK	4.00	2	ePN	Pn	04 26 34.3	+1.1
SVRH	Sivrihisar-ESK	4.00	2	ePn	Pn	04 26 34.3	+1.1
ESKT	Eskisehir	4.08	355	ePN	Pn	04 26 35.2	+0.8
ESKT	Eskisehir	4.08	355	ePn	Pn	04 26 35.2	+0.8
KOZT	Kozan	4.15	59	ePN	Pn	04 26 35.9	+0.6
BLCB	Balcova	4.52	312	ePN	Pn	04 26 41.8	+1.4
BLCB	Balcova	4.52	312	ePn	Pn	04 26 41.8	+1.4
BRTR	Keskin Array B	4.64	22	Pn	Pn	04 26 42.1	+0.1
	0.8nm,0.3s,baz=193,slow=16,SNR=12						
BRTR				Sn	Sn	04 27 35.1	-1.2
	0.4nm,0.3s,baz=197,slow=16,SNR=4.1						
BRTR	Keskin Array B	4.64	22	Pn	Pn	04 26 42.1	0.0
BRTR				Sn	Sn	04 27 35.1	-1.2
BR131	Keskin Array S	4.64	22	ePn	Pn	04 26 42.3	+0.2
BR131	Keskin Array S	4.64	22	ePn	Pn	04 26 42.3	+0.2
KMRS	Kahramanmaras	4.93	64	ePN	Pn	04 26 47.4	+1.4
KMRS	Kahramanmaras	4.93	64	ePn	Pn	04 26 47.4	+1.4
GAZ	Gaziantep	5.04	68	ePN	Pn	04 26 48.4	+0.8
GAZ	Gaziantep	5.04	68	ePn	Pn	04 26 48.4	+0.8
YOZ	Yozgat	5.25	36	ePN	Pn	04 26 51.8	+1.4
YOZ	Yozgat	5.25	36	ePn	Pn	04 26 51.8	+1.5
ASF	Jabal al Asfar	5.66	124	Pn	Pn	04 26 56.8	+0.7
	0.6nm,0.3s,baz=10.0,slow=2.0,SNR=4.7						
ASF				Sn	Sn	04 28 03.1	+1.7
	0.2nm,0.3s,baz=40,slow=16,SNR=1.8						
EIL	Elat	6.52	151	Pn	Pn	04 27 07.2	-0.6
	1.0nm,0.3s,baz=343,slow=11,SNR=5.1						
EIL				Sn	Sn	04 28 22.9	+0.5
	0.9nm,0.3s,baz=275,slow=20,SNR=3.8						
EIL	Elat	6.52	151	Pn	Pn	04 27 07.2	-0.6
EIL				Sn	Sn	04 28 22.9	+0.5
EIL	Elat	6.52	151	Pn	Pn	04 27 07.2	-0.6
AKASG	Malin Array Be	15.32	355	Pn	Pn	04 29 06.4	-1.7
	0.6nm,0.3s,baz=22,slow=36,SNR=3.4						
AKASG	Malin Array Be	15.32	355	Pn	Pn	04 29 06.4	-1.7
KHC	Kasperske Hory	18.90	322	eP	Pn	04 29 51.5	-1.6
	2.0nm,0.6s						
KHC	Kasperske Hory	18.90	322	eP	Pn	04 29 51.5	-1.6
KHC	Kasperske Hory	18.90	322	eP	Pn	04 29 51.5	-1.6
	2.0nm,0.6s						
GRF	Grafenberg Arr	20.46	320	eP	P	04 30 07.7	-1.8
	comp=Z,5.0nm,0.9s						
AKTK	Aktyubinsk	24.43	44	P	P	04 30 51.2	+0.6
AKTK	Aktyubinsk	24.43	44	P	P	04 30 51.2	+0.6
AKTO	Aktyubinsk	24.43	44	P	P	04 30 51.2	+0.6
	comp=Z,0.6nm,0.5s,mb3.3,baz=214,slow=8.9,SNR=3.7						
ABKAR	Akbulak array	25.06	48	eP	P	04 30 53.4	-2.9
	comp=Z,0.4nm,0.3s,mb3.4						
ABKAR	Akbulak array	25.06	48	eP	P	04 30 53.4	-3.0
	comp=Z,0.4nm,0.3s,mb3.4						
TAM	Tamanrasset	25.75	248	eP	P	04 31 03.3	+0.4
	comp=Z,2.0nm,0.9s,mb3.6						
TAM	Tamanrasset	25.75	248	eP	P	04 31 03.3	+0.4
	comp=Z,2.0nm,0.9s,mb3.6						
FINES	FINESS Array B	26.23	354	P	P	04 31 03.8	-3.1
	comp=Z,1.1nm,0.8s,mb3.5,baz=142,slow=9.6,SNR=5.9						
FINES	FINESS Array B	26.23	354	P	P	04 31 03.8	-3.0
HFS	Hagfors	27.22	341	P	P	04 31 14.9	-0.8
	comp=Z,0.9nm,0.9s,mb3.3,baz=116,slow=13,SNR=3.5						
HFS	Hagfors	27.22	341	P	P	04 31 14.9	-0.8
ESDC	Sonseca Array	28.19	289	P	P	04 31 23

ROSC	**El Rosal**	**77.02**	**63**	LR	LR	05 23 44.4	
	comp=Z,42nm,21.9s,MS3.7,baz=11,slow=30						
FITZ	**Fitzroy Crossi**	**81.14**	**252**	P	**P**	**04 56 55.8**	**-0.1**
	4.6nm,0.8s,mb4.5,baz=113,slow=9.0,SNR=10						
MBWA	**Marble Bar**	**81.94**	**245**	*e*P	**P**	**04 56 59.4**	**-0.7**
	5.5nm,0.9s,mb4.5						
TXAR	**Lajitas Array**	**87.05**	**27**	P	**P**	**04 57 25.9**	**+0.5**
	0.8nm,0.7s,mb4.1,baz=191,slow=8.0,SNR=13						
TUC	**Tucson**	**88.22**	**20**	*e*P	**P**	**04 57 31.8**	**+0.7**
	1.8nm,0.8s,mb4.3						
MNTX	**Cornudas Mount**	**88.85**	**25**	*e*P	**P**	**04 57 33.8**	**-0.2**
	0.9nm,0.8s,mb4.2						
JCT	**Junction City**	**89.21**	**30**	*e*P	**P**	**04 57 36.2**	**+0.4**
ANMO	**Albuquerque**	**91.70**	**23**	*e*P	**P**	**04 57 47.2**	**0.0**
	2.3nm,1.0s,mb4.5						
PDAR	**Pinedale Array**	**98.58**	**18**	LR	LR	05 35 33.0	
	comp=Z,35nm,18.6s,MS3.9,baz=78,slow=31						
TKL	**Tuckaleechee C**	**99.36**	**40**	LR	LR	05 36 01.0	
	comp=Z,41nm,18.8s,MS4.0,baz=209,slow=31						
ILAR	**Eielson Array**	**118.60**	**354**	PKP	PKPdf	05 03 25.9	-0.8
	0.9nm,0.8s,baz=192,slow=2.1,SNR=9.6						
PETK	**Petropavlovsk-**	**120.39**	**320**	PKP	PKPdf	05 03 29.9	-0.6
	1.1nm,0.7s,baz=147,slow=12,SNR=5.1						
RES	**Resolute Bay**	**130.91**	**13**	*e*PKPdf	PKPdf	05 03 49.7	-0.4
TAM	**Tamanrasset**	**136.96**	**120**	*e*PKPdf	PKPdf	05 04 02.4	-0.6
SONM	**Songino Array**	**142.00**	**287**	PKP	PKPdf	05 04 07.1	-4.3
	1.1nm,0.8s,baz=144,slow=3.5,SNR=4.4						
SJPF	**Ste Jean**	**147.90**	**90**	*e*PKIKP	PKPbc	05 04 25.4	+0.7
	16nm,1.1s						
ETSF	**Etsaut**	**148.17**	**91**	*e*PKIKP	PKPbc	05 04 26.8	+1.3
	16nm,1.1s						
EPF	**Esparros**	**148.78**	**92**	*e*PKIKP	PKPbc	05 04 27.5	+0.5
MTLF	**Montolieu**	**150.08**	**93**	*e*PKIKP	PKPbc	05 04 29.4	-0.8
	5.3nm,0.9s						
RJF	**Les Rejaudoux**	**150.76**	**89**	*e*PKIKP	PKPbc	05 04 30.4	-1.4
MK31	**Makanchi Array**	**155.57**	**269**	*e*PKPab	PKPab	05 04 58.7	-0.6
MKAR	**Makanchi Array**	**155.57**	**269**	PKPbc	PKPdf	05 04 41.7	+8.5
	2.2nm,0.9s,baz=103,slow=2.7,SNR=9.9						
MKAR				PKPab	PKPab	05 04 58.4	-0.9
	1.2nm,0.6s,baz=106,slow=4.3,SNR=5.8						
ZALV	**Zalesovo Beam**	**156.90**	**287**	PKPbc	PKPdf	05 04 42.7	+8.0
	0.5nm,0.3s,baz=166,slow=24,SNR=3.1						
ZALV				PKPab	PKPab	05 05 04.5	-0.3
	1.9nm,0.6s,baz=118,slow=4.7,SNR=7.0						
KURK	**Kurchatov**	**159.48**	**275**	*e*PKPdf	PKPdf	05 04 37.8	-0.1
BRTR	**Keskin Array B**	**163.85**	**146**	PKP	PKPdf	05 04 40.9	-1.9
	1.4nm,0.9s,baz=225,slow=0.3,SNR=5.2						
BVAR	**Borovoye Array**	**165.04**	**277**	PKPab	PKPab	05 05 40.0	-0.4
	0.7nm,0.8s,baz=65,slow=7.2,SNR=3.3						

IDC ***26*** *05:35:31.9±0.4, 11°.61N×91°.82E, $h0^{km}$, mb4.9/28, mb1 4.9/30, mb1mx4.9/31, mbtmp4.8/30, ML4.1/2, MS4.5/30, Ms1 4.5/30, ms1mx4.4/37, Error ellipse: s-maj=14.0km s-min=10.7km az=61.0*

BJI ***26*** *05:35:32.2, 11°.50N×91°.72E, $h20^{km}$, mB5.3/43, mb5.0/61, Ms5.0/73, Ms7 4.8/59*

NEIC ***26*** *05:35:33.8±1.5, 11°.61N×91°.66E, $h12^{km}\pm8^{km}$, mb5.4/159, Error ellipse: s-maj=4.5km s-min=2.9km az=215.0*

ISCJB ***26*** *05:35:33.4±0.1, 11°.57N±0°.02×91°.72E±0°.02, $h22^{km}$, mb5.2/277, MS4.7/91, Error ellipse: s-maj=3.5km s-min=2.3km az=32.1*

MOS ***26*** *05:35:34.7±0.9, 11°.64N×91°.72E, $h29^{km}$, mb5.5/117, MS4.6/37, Error ellipse: s-maj=6.7km s-min=3.4km az=120.1*

SZGRF ***26*** *05:35:34.1, 10°.51N×91°.25E, $h21^{km}$, mb5.3, MS4.5, Andaman Islands, India, region*

GCMT ***26*** *05:35:35.8±0.2, 11°.61N×91°.64E, $h12^{km}$, MW5.1, Moment Tensor Solution. s42,c49; s87,c148; Moment tensor: Scale 10^{16}Nm; M_{rr}4.74±.10; $M_{\theta\theta}$0.19±.09; $M_{\phi\phi}$-4.93±.09; $M_{r\theta}$-1.35±.38; $M_{\theta\phi}$-0.42±.08; $M_{\phi r}$-2.46±.27; Best double couple: $M_0$5.60000×10^{16} NP1:ϕ_s353.00000°, δ32.00000°, λ70.00000°. NP2:ϕ_s196.00000°, δ60.00000°, λ102.00000°. Principal axes: T 5.6100, Plg72.0000°, Azm136.0000°; N 0.0000, Plg11.0000°, Azm10.0000°; P -5.6100, Plg14.0000°, Azm277.0000°; Data Used: IU II IC G CN.*

DJA ***26*** *05:35:47, 11°.60N×92°.60E, $h79^{km}$, mb5.2/28*

ISC 26 05:35:35.5±0.1, 11°.57N±0°.02×91°.71E±0°.02, $h24^{km}$, $h24^{km}\pm.9^{km}$:pP-P, n769, $_{\sigma}$0°.90/738, mb5.2/278, MS4.7/91, 127C-10D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**1.01**	**85**	*e*PKP	**Pn**	**05 35 54.0**	**-0.2**
PBA				*e*S	**Sb**	**05 36 07.1**	**-0.2**
BDT	**Bhumibol Dam**	**9.04**	**51**	P	Px	05 37 55.0	
	29nm,1.0s						
NST	**Nakhon Sawan**	**9.15**	**63**	P	Px	05 37 56.0	
CM31	**Chiang Mai Arr**	**9.78**	**45**	*e*Pn	**Pn**	**05 37 56.4**	**+1.7**
CMAR	**Chiang Mai Arr**	**9.78**	**45**	Pn	**Pn**	**05 37 53.8**	**-0.9**
	0.6nm,0.3s,baz=237,slow=15,SNR=21						
CMAR				Lg		05 40 39.7	
	1.2nm,0.3s,baz=284,slow=30,SNR=4.4						
CMAR				LR	LR	05 42 15.4	
	comp=Z,3μm,21.4s,baz=220,slow=42						
SNG	**Songkhla**	**9.81**	**116**	P	**Pn**	**05 37 59.5**	**+4.4**
	180nm,0.8s						
TPTI		**9.87**	**146**	P	Px	05 38 13.2	
CHTO	**Chiang Mai**	**10.03**	**43**	*e*Pn	**Pn**	**05 37 59.5**	**+1.4**
CHTO	**Chiang Mai**	**10.03**	**43**	P	**Pn**	**05 37 59.2**	**+1.1**
	1μm79nm,1.3s						
VIS	**Vishakhapatnam**	**10.16**	**308**	*e*PKP	**Pn**	**05 37 58.1**	**-1.8**
VIS				*e*S	**Sn**	**05 39 43.0**	**-10**
KULM	**Kulim**	**10.82**	**124**	P	**Pn**	**05 38 08.6**	**-0.3**
KULM	**Kulim**	**10.82**	**124**	*e*Pn	**Pn**	**05 38 11.6**	**+2.6**
	212nm,0.8s						
PSI	**Prapat**	**11.27**	**140**	Pn	**Pn**	**05 38 17.1**	**+2.1**
	0.8nm,0.3s,baz=4.3,slow=10.0,SNR=5.5						
MDRS	**Chennai**	**11.30**	**279**	*e*PKP	Px	05 38 34.5	
MDRS				*e*S	Sx	05 40 31.2	
CAL	**Calcutta**	**11.38**	**344**	*ex*	x	05 41 08.3	
IPM	**Ipoh**	**11.60**	**127**	P	**Pn**	**05 38 18.7**	**-0.9**
IPM	**Ipoh**	**11.60**	**127**	P	**Pn**	**05 38 18.7**	**-0.9**
	1μm93nm,1.1s						
PALK	**Pallekele**	**11.67**	**250**	*e*P	**Pn**	**05 38 21.8**	**+1.2**
PALK				pmax	pmax		
	comp=Z,92nm,1.1s						
PALK	**Pallekele**	**11.67**	**250**	*e*Pn	**Pn**	**05 38 21.8**	**+1.3**
	comp=Z,92nm,1.1s						
AGT	**Agartala**	**12.26**	**358**	*i* P	**Pn**	**05 38 25.0**	**-3.6**
AGT				*i* x	x	05 39 12.0	
FRIM	**Kepong**	**12.84**	**129**	P	**Pn**	**05 38 35.9**	**-0.7**
KTGM	**Kuala Trenggan**	**12.88**	**118**	P	**Pn**	**05 38 37.0**	**-0.2**
MNSI	**Mandailing Nat**	**13.25**	**143**	P	Px	05 38 57.6	
IMP	**Imphal**	**13.31**	**9**	*e*PKP	**Pn**	**05 38 43.0**	**-0.1**
SHL	**Shillong**	**13.93**	**1**	*ex*	**Pn**	**05 38 46.0**	**-5.4**
SHL				*ex*	**Sn**	**05 41 28.7**	**+3.3**
HYB	**Hyderabad**	**14.00**	**296**	*e*P	**Pn**	**05 38 58.0**	**+5.5**
HYB				*e*S	**Sn**	**05 41 28.0**	**+0.8**
HYB	**Hyderabad**	**14.00**	**296**	*i* P	**Pn**	**05 38 58.0**	**+5.5**
BKNI	**Bangkinang**	**14.51**	**140**	P	**Pn**	**05 39 02.6**	**+3.2**
	comp=Z,90nm,1.5s						
PPI	**Padang Panjang**	**14.73**	**144**	P	**Pn**	**05 39 04.1**	**+1.6**
	comp=Z,29nm,1.9s						
SISI	**Saibi**	**14.76**	**150**	P	**Pn**	**05 39 09.3**	**+6.5**
	comp=Z,210nm,1.3s						
TRD	**Trivandrum**	**14.84**	**260**	⇑*ex*	x	05 39 18.0	
TRD				*ex*	x	05 42 23.5	
KGM	**Kluang**	**14.92**	**129**	P	**Pn**	**05 39 04.0**	**-1.0**
PDSI	**Padang**	**15.14**	**144**	P	**Pn**	**05 39 08.0**	**+0.1**
	comp=Z,6μmcomp=Z,70nm,0.9s						
MYKOM	**Kota Tinggi**	**15.47**	**128**	P	**Pn**	**05 39 11.6**	**-0.6**
MYKOM	**Kota Tinggi**	**15.47**	**128**	P	**Pn**	**05 39 13.7**	**+1.4**
	comp=Z,51nm,1.1s						
ODAN	**Odare**	**15.75**	**346**	*e*P	**Pn**	**05 39 13.4**	**-2.4**
	comp=Z,271nm,1.1s						
RAMN	**Ramite**	**16.04**	**343**	*e*P	**Pn**	**05 39 17.4**	**-2.2**
	comp=Z,574nm,1.3s						
LATR	**Latur**	**16.14**	**297**	*ex*	**Pn**	**05 39 16.0**	**-4.8**
LATR				*ex*	x	05 42 06.1	
TAPN	**Taplejung**	**16.15**	**347**	*e*P	**Pn**	**05 39 18.9**	**-2.0**
	comp=Z,617nm,0.9s						
AKL	**Akola**	**16.78**	**305**	*e*PKP	**Pn**	**05 39 29.0**	**+0.1**
AKL				*ex*	x	05 39 35.7	
	comp=Z,162nm,1.2s						
AKL				*i* x	x	05 42 23.3	
JIRN	**Jiri**	**16.83**	**343**	*e*P	**Pn**	**05 39 28.3**	**-1.3**
	comp=Z,595nm,1.1s						
PKI	**Pulchoki**	**16.99**	**341**	*e*P	**Pn**	**05 39 30.1**	**-1.5**
	comp=Z,703nm,1.2s						
PKI	**Pulchoki**	**16.99**	**341**	*e*P	**Pn**	**05 39 30.3**	**-1.3**
PKI				pmax	pmax		
	comp=Z,675nm,1.2s						
PKI	**Pulchoki**	**16.99**	**341**	*e*P	**Pn**	**05 39 30.3**	**-1.3**
	comp=Z,675nm,1.2s						
PKIN	**Phulchoki**	**17.00**	**340**	*e*P	**Pn**	**05 39 30.3**	**-1.4**
	comp=Z,675nm,1.2s						
KMI	**Kunming**	**17.05**	**36**	P	**Pn**	**05 39 32.5**	**+0.1**
KMI				pP	pP	05 39 42.3	+1.7
KMI				sP	sP	05 39 46.5	+2.8
KMI				PP		05 39 50.0	
KMI				S	**Sn**	**05 42 44.0**	**+2.5**
KMI				sS	sS	05 42 55.0	-6.2
KMI				SS		05 43 05.3	
KMI				pmax	pmax		
	comp=Z,53nm,1.5s						
KMI				pmax	pmax		
	comp=Z,550nm,3.6s						
KMI				LR	LR		
	comp=N,2μm,16.0s						
KMI				LR	LR		
	comp=E,4μm,13.8s						
KMI				LR	LR		
	comp=Z,4μm,15.7s						
DMN	**Daman**	**17.12**	**340**	*e*P	**Pn**	**05 39 31.3**	**-2.0**
	comp=Z,430nm,1.4s						
GUN	**Gumba**	**17.16**	**342**	*e*P	**Pn**	**05 39 32.7**	**-1.0**
	comp=Z,739nm,1.3s						
KKN	**Kakani**	**17.23**	**340**	*e*P	**Pn**	**05 39 32.8**	**-1.8**
	comp=Z,458nm,1.4s						
KKN	**Kakani**	**17.23**	**340**	*e*P	**Pn**	**05 39 32.8**	**-1.8**
KKN				pmax	pmax		
	comp=Z,458nm,1.4s						
GKN	**Gorkha**	**17.65**	**339**	*e*P	**Pn**	**05 39 37.9**	**-1.9**
	comp=Z,994nm,1.5s						
KAD	**Karad**	**17.90**	**291**	*e*PKP	**Pn**	**05 39 43.0**	**-0.1**
KAD				AMb	AMB	05 39 48.0	
	comp=Z,118nm,1.9s						
LSA	**Lhasa**	**18.05**	**358**	P	**Pn**	**05 39 44.5**	**-0.2**
LSA				sP	sP	05 39 53.5	-1.2
LSA				S	**Sn**	**05 43 09.0**	**+3.5**
LSA				LR	LR		
	comp=N,1μm,14.5s						
LSA				LR	LR		
	comp=E,3μm,14.5s						
LSA				LR	LR		
	comp=Z,2μm,13.7s						
LSA	**Lhasa**	**18.05**	**358**	*e*P	**Pn**	**05 39 45.2**	**+0.5**
LSA				pmax	pmax		
	comp=Z,298nm,1.2s						
LSA	**Lhasa**	**18.05**	**358**	*e*P	**Pn**	**05 39 45.2**	**+0.5**
	comp=Z,298nm,1.2s						
POO	**Poona**	**18.58**	**294**	*e*PKP	**Pn**	**05 39 50.3**	**-1.0**
POO				AMb	AMB	05 39 57.9	
	comp=Z,98nm,0.9s						
KSI	**Kapahiang**	**18.59**	**144**	P	**Pn**	**05 39 51.0**	**-0.5**
	comp=Z,107nm,1.0s						
QIZ	**Qiongzhong**	**18.99**	**65**	P	**Pn**	**05 39 56.0**	**-0.2**
QIZ				pP	pP	05 40 04.0	+2.0
QIZ				sP	sP	05 40 08.3	+3.2
QIZ				S	**Sn**	**05 43 28.0**	**-0.3**
QIZ				pmax	pmax		
	comp=Z,22nm,1.7s						
QIZ				LR	LR		
	comp=N,2μm,18.4s						
QIZ				LR	LR		
	comp=Z,3μm,12.3s						
QIZ	**Qiongzhong**	**18.99**	**65**	*e*P	**Pn**	**05 39 55.6**	**-0.6**
	comp=Z,64nm,1.2s						
PPBI	**Pangkal Pinang**	**19.79**	**133**	P	**Pn**	**05 40 02.0**	**-3.9**
	comp=Z,32nm,1.1s						
MDSI	**Maura Dua**	**20.20**	**141**	P	**P**	**05 40 03.0**	**-5.7**
GYA	**Guiyang**	**20.45**	**41**	⇑*i* P	**P**	**05 40 11.3**	**0.0**
GYA				pP		05 40 20.0	
GYA				sP	sP	05 40 24.3	+3.3
GYA				PP		05 40 31.5	
GYA				S	**S**	**05 43 49.5**	**-10**
GYA				sS	sS	05 44 04.3	-5.4
GYA				PcP	PcP	05 44 24.5	+1.4
GYA				pmax	pmax		
	comp=Z,50nm,1.0s						
GYA				pmax	pmax		
	comp=Z,590nm,9.9s						
GYA				LR	LR		
	comp=N,2μm,14.6s,MS4.7						
GYA				LR	LR		
	comp=E,2μm,14.6s,MS4.7						
GYA				LR	LR		
	comp=Z,3μm,15.5s,MS4.8						
KLSI		**20.70**	**141**	P	**P**	**05 40 12.1**	**-2.0**
	comp=Z,36nm,1.3s						
PTH	**Pithoragarh**	**20.85**	**331**	*ex*	**P**	**05 40 12.8**	**-2.9**
PTH				*ex*	**S**	**05 44 17.0**	**+10**
KSM	**Kuching**	**21.00**	**117**	P	**P**	**05 40 17.1**	**-0.3**
KSM	**Kuching**	**21.00**	**117**	*e*P	**P**	**05 40 16.4**	**-1.0**
	comp=Z,83nm,1.0s,mb4.9						
KSM	**Kuching**	**21.00**	**117**	P	**P**	**05 40 15.8**	**-1.6**
	comp=Z,1μmcomp=Z,71nm,1.2s,mb4.9						
TPI	**Tanjungpandan**	**21.30**	**131**	P	**P**	**05 40 16.9**	**-3.7**
	comp=Z,103nm,1.2s,mb5.0						
SONA	**Sohna**	**21.52**	**323**	*e*PKP	**P**	**05 40 23.0**	**+0.2**
SONA				AMb	AMB	05 40 24.9	
	comp=Z,142nm,1.0s,mb5.4						
SONA				AMb	AMB	05 40 34.2	
	comp=N,171nm,1.2s						
BISR	**Bishrakh**	**21.55**	**324**	*e*PKP	**P**	**05 40 23.5**	**+0.4**
AYAN	**Aya Nagar**	**21.66**	**323**	*e*PKP	**P**	**05 40 23.7**	**-0.7**
NDI	**New Delhi**	**21.76**	**324**	*e*PKP	**P**	**05 40 24.0**	**-1.5**
NDI				*e*S	**S**	**05 44 26.0**	**+0.9**
AJM	**Ajmer**	**21.88**	**315**	*e*PKP	**P**	**05 40 27.3**	**+0.5**
AJM				AMb	AMB	05 40 32.6	
	comp=Z,230nm,0.9s,mb5.6						
JOSI	**Joshimath**	**22.00**	**331**	*e*PKP	**P**	**05 40 28.4**	**+0.3**
KHET	**Khetri**	**22.17**	**320**	*e*PKP	**P**	**05 40 29.3**	**-0.6**
KHET				AMb	AMB	05 40 35.2	
	comp=Z,221nm,1.2s,mb5.5						
CD2	**Chengdu**	**22.25**	**28**	P	**P**	**05 40 29.8**	**-0.9**
CD2				pP		05 40 39.0	
CD2				sP	sP	05 40 45.5	+5.1
CD2				PP		05 41 00.3	
CD2				S	**S**	**05 44 35.5**	**+0.9**
CD2				sS	sS	05 44 51.3	+6.0
CD2				SS		05 45 21.8	
CD2				pmax	pmax		
	comp=Z,100nm,1.2s,mb5.1						
CD2				pmax	pmax		
	comp=Z,700nm,2.5s,mb5.7						
CD2				LR	LR		
	comp=E,3μm,13.7s						
CD2				LR	LR		
	comp=Z,2μm,13.1s,MS4.7						
CD2	**Chengdu**	**22.25**	**28**	P	**P**	**05 40 30.0**	**-0.7**
CD2				pP		05 40 39.3	
CD2				sP	sP	05 40 43.3	+2.9
CD2				PP		05 40 57.5	
CD2				PcP	PcP	05 44 26.0	-0.5
CD2				S	**S**	**05 44 28.3**	**-6.3**
CD2				sS	sS	05 44 43.3	-2.0
CD2				SS		05 45 09.0	
CD2				pmax	pmax		
	comp=Z,20nm,0.6s,mb4.7						
CD2				pmax	pmax		
	comp=Z,1μm,9.8s						
CD2				LR	LR		
	comp=N,3μm,13.7s						
CD2				LR	LR		
	comp=Z,2μm,12.5s,MS4.7						
SBUM	**Sibu**	**22.26**	**112**	P	**P**	**05 40 30.3**	**-0.7**
SBUM	**Sibu**	**22.26**	**112**	P	**P**	**05 40 29.1**	**-1.8**
	comp=Z,42nm,1.1s,mb4.8						
DDI	**Dehra Dun**	**22.56**	**328**	*e*PKP	**P**	**05 40 33.8**	**-0.2**
DDI				*ex*	x	05 44 37.8	
STKI	**Sintang**	**22.71**	**119**	P	**P**	**05 40 35.3**	**-0.4**
	comp=Z,72nm,1.3s,mb4.9						
KKR	**Kurukshetra**	**22.95**	**325**	*e*PKP	**P**	**05 40 38.5**	**+0.4**
KLP	**Kalpa**	**23.44**	**330**	*e*PKP	**P**	**05 40 43.6**	**+0.4**
KLP				AMb	AMB	05 40 53.2	
	comp=Z,364nm,1.6s,mb5.5						
GZH	**Guangzhou**	**23.58**	**58**	P	**P**	**05 40 48.5**	**+3.9**
GZH				S	**S**	**05 45 09.3**	**+12**
GZH				LR	LR		
	comp=N,2μm,11.0s,MS4.9						
GZH				LR	LR		
	comp=E,2μm,12.3s,MS4.9						
GZH				LR	LR		
	comp=Z,2μm,16.6s,MS4.7						
SMLA	**Simla**	**23.67**	**328**	*i* P	**P**	**05 40 45.0**	**-0.4**
SMLA				*i* x	x	05 45 05.6	
HKC	**Hong Kong Obse**	**23.96**	**61**	⇑*e*P	**P**	**05 40 48.0**	**-0.1**
SDNR	**Sundarnagar**	**24.06**	**328**	*ex*	**P**	**05 40 50.5**	**+1.5**
BHK	**Bhakra**	**24.29**	**327**	*e*PKP	**P**	**05 40 49.0**	**-2.1**
PBKI	**Pangkalan Bun**	**24.39**	**124**	P	**P**	**05 40 51.8**	**-0.3**
	comp=Z,352nm,1.1s,mb5.7						
KKM	**Kota Kinabalu**	**24.82**	**101**	P	**P**	**05 40 57.4**	**+1.3**
KKM	**Kota Kinabalu**	**24.82**	**101**	*e*P	**P**	**05 40 57.5**	**+1.4**
	comp=Z,91nm,1.2s,mb5.2						
KKM	**Kota Kinabalu**	**24.82**	**101**	P	**P**	**05 41 02.2**	**+6.1**
JASL	**Jaisalmer**	**24.83**	**311**	*e*PKP	**P**	**05 40 56.5**	**+0.5**
JASL				AMb	AMB	05 41 02.0	
	comp=Z,80nm,1.4s,mb5.1						
ENH	**Enshi**	**24.88**	**39**	*e*P	**P**	**05 40 55.2**	**-1.2**
	comp=Z,145nm,1.0s,mb5.5						
KDM	**Kudat**	**25.21**	**98**	P	**P**	**05 41 00.7**	**+1.0**
THN	**Thein Dam**	**25.45**	**327**	*ex*	**P**	**05 40 58.1**	**-3.5**
CLJI	**Cilicap**	**25.75**	**137**	P	**P**	**05 41 07.2**	**+2.7**
	comp=Z,867nm,1.0s,mb6.2						
SDKM	**Sandakan**	**25.86**	**101**	P	**P**	**05 41 05.8**	**+0.2**
SMRI	**Semarang**	**26.25**	**134**	P	**P**	**05 41 08.9**	**-0.1**
	comp=Z,116nm,1.1s,mb5.3						
LZH	**Lanzhou**	**26.77**	**22**	*e*P	**P**	**05 41 14.0**	**+0.5**
LZH				pP	pP	05 41 23.0	+2.4
LZH				sP	sP	05 41 27.8	+4.3
LZH				PcP	PcP	05 44 34.0	-2.3
LZH				*e*S	**S**	**05 45 37.5**	**-11**
LZH				SS		05 46 55.5	
LZH				pmax	pmax		
	comp=Z,97nm,1.2s,mb5.2						
LZH				pmax	pmax		
	comp=Z,390nm,5.8s						
LZH				LR	LR		
	comp=E,2μm,13.2s						
LZH				LR	LR		
	comp=Z,2μm,14.1s,MS4.8						
TSM	**Tawau**	**26.88**	**103**	P	**P**	**05 41 14.8**	**0.0**
NGJI	**Ngawi**	**27.20**	**133**	P	**P**	**05 41 22.4**	**+4.8**
	comp=Z,9μmcomp=Z,154nm,1.1s,mb5.4						
MYLDM	**Lahad Datu**	**27.24**	**101**	P	**P**	**05 41 18.6**	**+0.6**
MYLDM	**Lahad Datu**	**27.24**	**101**	P	**P**	**05 41 18.4**	**+0.4**
	comp=Z,150nm,1.2s,mb5.4						
XAN	**Xi'an**	**27.34**	**32**	P	**P**	**05 41 16.8**	**-1.8**
XAN				pP	pP	05 41 27.5	+1.7
XAN				sP	sP	05 41 31.8	+3.1
XAN				S	**S**	**05 46 03.8**	**+6.7**
XAN				pmax	pmax		
	comp=Z,52nm,1.4s,mb4.9						
XAN				pmax	pmax		
	comp=Z,81nm,9.0s						
XAN				LR	LR		
	comp=N,1μm,13.1s,MS4.6						
XAN				LR	LR		
	comp=E,330nm,14.4s,MS4.6						
XAN				LR	LR		
	comp=Z,310nm,15.7s,MS4.0						
WHN	**Wuhan**	**28.23**	**45**	P	**P**	**05 41 26.5**	**-0.2**
WHN				PP	PP	05 42 13.3	-17
WHN				S	**S**	**05 46 13.5**	**+2.2**
WHN				pmax	pmax		
	comp=Z,69nm,1.2s,mb5.2						
WHN				pmax	pmax		
	comp=Z,470nm,4.2s						
WHN				LR	LR		
	comp=N,3μm,8.6s						
WHN				LR	LR		
	comp=E,2μm,12.3s						
WHN				LR	LR		
	comp=Z,4μm,14.4s,MS5.1						
KBKI	**Kotabaru**	**28.45**	**120**	P	**P**	**05 41 38.5**	**+10**
GTA	**Gaotai**	**28.65**	**13**	⇑P	**P**	**05 41 31.3**	**+1.0**
GTA				pP	pP	05 41 40.8	+3.4
GTA				sP	sP	05 41 44.8	+4.4
GTA				PcP	PcP	05 44 41.5	+0.7
GTA				S	**S**	**05 46 20.3**	**+2.6**
GTA				pmax	pmax		
	comp=Z,80nm,1.2s,mb5.3						
GTA				pmax	pmax		
	comp=Z,490nm,5.9s						
GTA				LR	LR		
	comp=N,1μm,17.5s,MS4.6						
GTA				LR	LR		
	comp=E,940nm,17.2s,MS4.6						
GTA				LR	LR		
	comp=Z,730nm,17.2s,MS4.3						
QZH	**Quanzhou**	**28.71**	**59**	P	**P**	**05 41 31.3**	**+0.3**
QZH				pmax	pmax		
	comp=Z,160nm,1.3s,mb5.6						
QZH				LR	LR		
	comp=N,490nm,8.0s						
QZH				LR	LR		
	comp=E,2μm,12.0s						
QZH				LR	LR		
	comp=Z,2μm,17.2s						
QUE	**Quetta**	**29.52**	**313**	*e*P	**P**	**05 41 34.0**	**-4.2**
QUE				*e*S	**S**	**05 46 24.0**	**-7.7**
TWG	**Pinlang**	**30.14**	**64**	*e*P	**P**	**05 41 45.7**	**+2.0**
	comp=Z,135nm,1.3s,mb5.5						
TWG				*e*	pP	05 41 51.3	+0.5
SSLB	**Suanglung**	**30.32**	**62**	*e*P	**P**	**05 41 45.7**	**+0.4**
	comp=Z,76nm,1.0s,mb5.4						
SSLB				*e*	pP	05 41 52.3	-0.2
SRBI	**Singaraja**	**30.45**	**129**	P	**P**	**05 41 45.2**	**-1.4**
	comp=Z,3μmcomp=Z,269nm,1.2s,mb5.8						
KBL	**Kabul**	**30.81**	**322**	*e*P	**P**	**05 41 50.3**	**+0.8**
KBL				pmax	pmax		
	comp=Z,37nm,1.0s,mb5.2						
KBL	**Kabul**	**30.81**	**322**	*e*P	**P**	**05 41 50.3**	**+0.8**
	comp=Z,37nm,1.0s,mb5.2						
KHKI	**Kahang-Kahang**	**30.93**	**129**	P	**P**	**05 41 49.8**	**-1.0**
	comp=Z,191nm,1.0s,mb5.9						
YHNB	**Yeheng**	**30.98**	**61**	*e*P	**P**	**05 41 51.9**	**+0.8**
	comp=Z,67nm,1.1s,mb5.4						
KSH	**Kashi**	**31.15**	**336**	P	**P**	**05 41 51.3**	**-1.1**
KSH				pP

comp=Z,510nm,4.6s
WMQ LR LR
comp=N,690nm,20.2s,MS4.8
WMQ LR LR
comp=E,2μm,22.6s,MS4.8
WMQ LR LR
comp=Z,500nm,24.5s,MS4.1
BNSI Bone 32.40 118 P **P** **05 42 03.4 -0.3**
comp=Z,60nm,1.2s,mb5.3
BKSI Bulukumba 32.87 119 P **P** **05 42 07.3 -0.5**
comp=Z,2μmcomp=Z,160nm,1.2s,mb5.8
LUWI Luwuk 33.31 110 P **P** **05 42 10.2 -1.5**
comp=Z,129nm,1.2s,mb5.7
ULHL Ulahol 33.41 339 P **P** **05 42 13.4 +1.1**
SNR=10.0
SSE Sheshan 33.47 50 P **P** **05 42 11.0 -1.9**
SSE PP PP 05 43 27.5 -1.3
SSE S **S** **05 47 31.3 -2.0**
SSE sS sS 05 47 46.5 +1.4
SSE pmax pmax
comp=Z,49nm,1.0s,mb5.4
SSE pmax pmax
comp=Z,170nm,4.6s
SSE LR LR
comp=N,950nm,21.0s,MS4.6
SSE LR LR
comp=E,810nm,21.0s,MS4.6
SSE LR LR
comp=Z,2μm,12.9s
TIA Tai'an 33.59 39 *e*P **P** **05 42 14.0 +0.1**
KZA Kyzart 33.63 338 P **P** **05 42 15.7 +1.6**
SNR=25
DAV Davao City (W) 33.70 95 LR LR 05 57 58.7
comp=Z,568nm,18.5s,MS4.3,baz=156,slow=40
HHC Hu-ho-hao-te 34.00 27 *e*P **P** **05 42 17.5 +0.1**
HHC pP pP 05 42 26.5 +1.9
HHC sP sP 05 42 30.5 +3.0
HHC PP PP 05 43 32.3 -2.3
HHC PcP PcP 05 44 54.5 -0.6
HHC S **S** **05 47 39.8 -1.5**
HHC sS sS 05 47 54.5 +1.4
HHC ScP ScP 05 48 35.8 -2.9
HHC PcS PcS 05 48 39.5 -1.6
HHC SS SS 05 49 49.3 -20
HHC ScS ScS 05 52 36.3 -4.2
HHC pmax pmax
comp=Z,30nm,0.8s,mb5.3
HHC pmax pmax
comp=Z,300nm,6.4s
HHC LR LR
comp=N,3μm,12.5s,MS5.3
HHC LR LR
comp=E,3μm,12.3s,MS5.3
HHC LR LR
comp=Z,3μm,12.9s,MS5.2
UCH Uchtor 34.04 337 *e*P **P** **05 42 19.6 +1.9**
comp=Z,21nm,1.3s,mb4.9
TKM2 Tokmak 2 34.24 339 P **P** **05 42 20.9 +1.5**
SNR=17
TKM2 Tokmak 2 34.24 339 *e*P **P** **05 42 20.7 +1.3**
TKM2 *e* pP 05 42 27.7 +1.2
TKM2 pmax pmax
comp=Z,35nm,1.1s,mb5.2
TKM2 Tokmak 2 34.24 339 *e*P **P** **05 42 20.7 +1.4**
comp=Z,35nm,1.1s,mb5.2
TKM2 *e* pP 05 42 27.7 +1.1
KBK Karagaybulak 34.24 338 P **P** **05 42 21.7 +2.3**
SNR=13
AML Almayashu 34.28 336 P **P** **05 42 21.5 +1.7**
SNR=48
AML Almayashu 34.28 336 *e*P **P** **05 42 21.3 +1.6**
comp=Z,113nm,1.3s,mb5.6
AML *e* pP 05 42 27.9 +1.0
AAK Ala-Archa 34.39 337 P **P** **05 42 22.8 +2.1**
comp=Z,292nm,1.4s,mb6.0,SNR=16
AAK Ala-Archa 34.39 337 P **P** **05 42 23.0 +2.3**
SNR=15
AAK Ala-Archa 34.39 337 P **P** **05 42 22.4 +1.7**
comp=Z,11nm,1.0s,mb4.8,baz=176,slow=7.0,SNR=41
AAK LR LR 05 57 22.7
comp=Z,1μm,19.4s,MS4.7,baz=144,slow=38
FRU Bishkek 34.52 338 *i* P **P** **05 42 23.0 +1.2**
FRU pmax pmax
comp=Z,150nm,2.0s,mb5.6
FRU MLR MLR
comp=Z,4μm,16.0s,MS5.2
CHMS Chumysh 34.61 338 P **P** **05 42 23.4 +0.8**
SNR=6.6
EKS2 Erkin-Say 34.69 336 P **P** **05 42 25.1 +1.8**
SNR=23
EKS2 Erkin-Say 34.69 336 *e*P **P** **05 42 24.9 +1.6**
comp=Z,96nm,1.3s,mb5.6
USP Ospenovka 34.93 338 P **P** **05 42 26.5 +1.1**
SNR=22
BJI Beijing 35.67 33 P **P** **05 42 32.0 +0.2**
BJI PP PP 05 43 53.8 +0.8
BJI S **S** **05 48 11.5 +4.6**
BJI pmax pmax
comp=Z,22nm,2.0s,mb4.7
BJI pmax pmax
comp=Z,389μm,3.3s
BJI LR LR
comp=N,880nm,18.6s,MS4.8
BJI LR LR
comp=E,1μm,20.1s,MS4.8
BJI LR LR
comp=Z,900nm,22.1s,MS4.5
MK31 Makanchi Array 36.01 349 *i* P **P** **05 42 34.8 +0.2**
MK31 pmax pmax
comp=Z,61nm,0.8s,mb5.6
MK31 Makanchi Array 36.01 349 *e*P **P** **05 42 35.0 +0.4**
MK31 *e* pP 05 42 41.3 -0.4
MKAR Makanchi Array 36.01 349 P **P** **05 42 34.9 +0.4**
comp=Z,31nm,0.8s,mb5.3,baz=163,slow=8.9,SNR=180
MKAR LR LR 05 59 21.7
comp=Z,558nm,19.5s,MS4.3,baz=164,slow=40
MKAR Makanchi Array 36.01 349 P **P** **05 42 34.9 +0.4**
MKAR LR LR 05 59 21.7
HATD Hatta, Dubai 36.16 296 P **P** **05 42 39.7 +3.5**
SNR=7.4
MMRI Maumere 36.39 122 P **P** **05 42 33.7 -4.6**
comp=Z,118nm,1.4s,mb5.6
KK31 Karatay Array 36.41 333 *i* P **P** **05 42 38.4 +0.3**
KK31 pmax pmax
comp=Z,117nm,1.4s,mb5.6
DL2 Dalian 38.06 39 P **P** **05 42 53.3 +1.1**
DL2 PP PP 05 44 21.5 +2.1
DL2 S **S** **05 48 44.5 +0.9**
DL2 pmax pmax
comp=Z,20nm,1.0s,mb4.8
DL2 pmax pmax
comp=Z,30nm,4.9s
DL2 LR LR
comp=N,530nm,15.3s
DL2 LR LR
comp=Z,750nm,18.6s,MS4.5
SONM Songino Array 38.20 16 P **P** **05 42 53.8 +0.7**
comp=Z,54nm,1.1s,mb5.2,baz=200,slow=7.6,SNR=160
SONM LR LR 06 01 40.3
comp=Z,870nm,18.9s,MS4.6,baz=187,slow=41
ULN Ulaanbaatar 38.41 17 *e*P **P** **05 42 54.9 0.0**
ULN *e* pP 05 43 01.5 -0.7
ULN pmax pmax
comp=Z,65nm,1.3s,mb5.2
ULN Ulaanbaatar 38.41 17 *e*P **P** **05 42 54.9 -0.1**
comp=Z,65nm,1.3s,mb5.2
ULN *e* pP 05 43 01.5 -0.7
ULN Ulaanbaatar 38.41 17 P **P** **05 42 55.6 +0.7**
SNR=30
ZAK Zakamensk 39.86 12 *e*P **P** **05 43 07.4 +0.4**
ZAK *e* 05 45 12.3
ZAK pmax pmax
comp=Z,17nm,1.7s,mb4.5
ABKT Ailbek 39.88 317 P **P** **05 43 09.9 +2.5**
comp=Z,239nm,0.9s,mb5.9,SNR=12
KURK Kurchatov 40.49 347 P **P** **05 43 12.2 0.0**
comp=Z,453nm,1.1s,mb6.1,SNR=36
KURK Kurchatov 40.49 347 *e*P **P** **05 43 12.4 +0.2**
KURK *e* pP 05 43 18.9 -0.6
KURK pmax pmax
comp=Z,33nm,1.8s,mb4.8
KURK Kurchatov 40.49 347 *e*P **P** **05 43 12.4 +0.1**
comp=Z,33nm,1.8s,mb4.8
KURK *e* pP 05 43 18.9 -0.6
KURK Kurchatov 40.49 347 P **P** **05 43 13.0 +0.8**
SNR=58

MOY Mondy 40.70 9 *e*P **P** **05 43 15.3 +1.3**
SNY Shenyang 41.03 37 ⇑P **P** **05 43 16.5 -0.4**
SNY S **S** **05 49 29.3 +1.3**
SNY pmax pmax
comp=Z,41nm,1.4s,mb4.9
SNY LR LR
comp=N,280nm,14.6s,MS4.5
SNY LR LR
comp=E,280nm,11.9s,MS4.5
SNY LR LR
comp=Z,280nm,33.9s
TLY Talaya 41.16 11 P **P** **05 43 19.0 +1.2**
comp=Z,175nm,1.2s,mb5.6,SNR=11
TLY Talaya 41.16 11 *c i*P **P** **05 43 19.4 +1.6**
TLY *e*S **S** **05 49 34.3 +4.6**
TLY pmax pmax
comp=Z,69nm,1.7s,mb5.0
TLY MLR MLR
comp=Z,502nm,18.0s,MS4.4
TLY Talaya 41.16 11 *e*P **P** **05 43 19.9 +2.1**
comp=Z,184nm,1.9s,mb5.4
TLY Talaya 41.16 11 P **P** **05 43 19.9 +2.1**
SNR=15
SWI Sorong 41.19 105 P **P** **05 43 17.7 -0.9**
KSRS Korea Array 41.42 45 P **P** **05 43 19.5 -0.7**
comp=Z,9.9nm,1.0s,mb4.4,baz=244,slow=9.0,SNR=23
KSRS LR LR 06 01 59.2
comp=Z,1μm,19.5s,MS4.7,baz=240,slow=38
IRK Irkutsk 41.82 12 *e*P **P** **05 43 24.0 +0.8**
IRK pmax pmax
comp=Z,111nm,1.9s,mb5.2
MBWA Marble Bar 42.61 140 *e*P **P** **05 43 28.6 -1.4**
MBWA Marble Bar 42.61 140 *e*P **P** **05 43 29.1 -0.9**
comp=Z,111nm,1.4s,mb5.4
MBWA *e* pP 05 43 36.5 -0.8
MBWA Marble Bar 42.61 140 P **P** **05 43 29.8 -0.2**
SNR=9.7
ZALV Zalesovo Beam 42.63 354 P **P** **05 43 29.8 0.0**
comp=Z,32nm,1.0s,mb5.0,baz=169,slow=8.6,SNR=98
ZALV LR LR 06 04 28.3
comp=Z,539nm,20.3s,MS4.4,baz=181,slow=41
ZALV Zalesovo Beam 42.63 354 P **P** **05 43 29.8 0.0**
ZALV LR LR 06 04 28.3
CN2 Changchun 43.33 36 *e*P **P** **05 43 35.0 -0.6**
CN2 *e*pP pP 05 43 45.0 +2.1
CN2 *e*sP sP 05 43 49.0 +3.2
CN2 *e*S **S** **05 50 04.0 +2.2**
CN2 pmax pmax
comp=Z,20nm,1.0s,mb4.8
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,900nm,16.0s,MS4.9
CN2 LR LR
comp=E,800nm,16.0s,MS4.9
CN2 LR LR
comp=Z,700nm,15.0s,MS4.7
NVS Novosibirsk 43.69 353 ⇑*i*P **P** **05 43 37.5 -0.8**
NVS pmax pmax
comp=N,73nm,1.5s
NVS pmax pmax
comp=E,10.0nm,1.5s
NVS pmax pmax
comp=Z,65nm,1.5s,mb5.1
HIA Hailar 44.18 26 *e*P **P** **05 43 42.4 0.0**
HIA pmax pmax
comp=Z,42nm,1.5s
HIA Hailar 44.18 26 *e*P **P** **05 43 42.4 0.0**
comp=Z,42nm,1.5s,mb5.0
VOSK Vostochnaya 44.31 342 P **P** **05 43 43.0 -0.3**
VOSK pmax pmax
comp=Z,74nm,1.0s,mb5.4
KBD Kabd 44.53 300 *e*P **P** **05 43 46.9 +1.4**
KBD AMb AMB 05 43 53.2
comp=Z,67nm,1.1s,mb5.4
RDF Al-Radifah 44.59 300 *e*P **P** **05 43 46.6 +0.6**
RDF AMb AMB 05 43 53.5
comp=Z,118nm,0.9s,mb5.7
FITZ Fitzroy Crossi 44.61 131 *e*P **P** **05 43 44.9 -1.3**
comp=Z,112nm,0.9s,mb5.7
FITZ Fitzroy Crossi 44.61 131 P **P** **05 43 45.1 -1.2**
comp=Z,41nm,0.8s,mb5.3,baz=315,slow=4.6,SNR=14
FITZ Fitzroy Crossi 44.61 131 *e*P **P** **05 43 44.8 -1.5**
comp=Z,68nm,0.9s,mb5.5
BVAR Borovoye Array 44.75 342 P **P** **05 43 46.9 0.0**
comp=Z,15nm,0.9s,mb4.8,baz=146,slow=8.2,SNR=51
BVAR PcP PcP 05 45 28.9 +0.1
comp=Z,3.3nm,0.8s,baz=149,slow=3.0,SNR=3.4
BRVK Borovoye 44.81 342 P **P** **05 43 47.3 0.0**
comp=Z,171nm,1.0s,mb5.8,SNR=10
BRVK Borovoye 44.81 342 *e*P **P** **05 43 47.5 +0.2**
BRVK pmax pmax
comp=Z,29nm,0.9s,mb5.1
BRVK Borovoye 44.81 342 *e*P **P** **05 43 47.5 +0.1**
comp=Z,29nm,0.9s,mb5.1
BRVK Borovoye 44.81 342 P **P** **05 43 47.7 +0.4**
SNR=24
NAY Al-Naaiem 44.93 300 *e*P **P** **05 43 49.5 +0.8**
NAY AMb AMB 05 43 56.2
comp=Z,69nm,1.1s,mb5.4
ZRNK Zerenda 45.12 341 P **P** **05 43 49.6 -0.2**
ZRNK pmax pmax
comp=Z,33nm,1.1s,mb5.1
AB31 Akbulak array 45.86 331 *i* P **P** **05 43 56.4 +0.7**
AB31 pmax pmax
comp=Z,93nm,1.1s,mb5.6
ABKAR Akbulak array 45.86 331 *e*P **P** **05 43 56.2 +0.5**
comp=Z,69nm,1.0s,mb5.5
ABKAR *e* pP 05 44 02.4 -0.7
MEEK Meekatharra 46.10 146 *e*P **P** **05 43 57.1 -0.8**
MDJ Mudanjiang 46.23 37 P **P** **05 43 58.8 +0.1**
MDJ pP pP 05 44 06.5 +0.5
MDJ sP sP 05 44 10.8 +1.9
MDJ PP PP 05 45 47.0 -0.3
MDJ ScP ScP 05 49 25.8 -0.3
MDJ PcS PcS 05 49 28.8 +0.3
MDJ S **S** **05 50 45.0 +1.1**
MDJ sS sS 05 50 59.0 +3.1
MDJ ScS ScS 05 53 51.8 -0.9
MDJ pmax pmax
comp=Z,14nm,1.1s,mb4.8
MDJ pmax pmax
comp=Z,180nm,7.3s
MDJ LR LR
comp=N,480nm,13.9s,MS4.9
MDJ LR LR
comp=E,770nm,14.8s,MS4.9
MDJ LR LR
comp=Z,930nm,13.9s,MS4.9
MDJ Mudanjiang 46.23 37 *e*P **P** **05 43 58.2 -0.5**
comp=Z,60nm,2.0s,mb5.2
VLA Vladivostok 46.85 40 *c i*P **P** **05 44 03.5 -0.1**
VLA pmax pmax
comp=Z,27nm,1.2s,mb5.0
KAKA Kakadu 47.07 120 *e*P **P** **05 44 04.3 -1.4**
comp=Z,28nm,1.0s,mb5.2
KAKA Kakadu 47.07 120 *e*P **P** **05 44 04.0 -1.7**
AKTK Aktyubinsk 47.58 331 P **P** **05 44 09.4 +0.2**
AKTK PcP PcP 05 45 39.6 +0.8
AKTO Aktyubinsk 47.58 331 P **P** **05 44 09.4 +0.2**
comp=Z,20nm,1.0s,mb5.1,baz=131,slow=8.4,SNR=32
AKTO PcP PcP 05 45 39.6 +0.8
comp=Z,6.3nm,0.9s,baz=30,slow=3.7,SNR=3.0
BHD Baghdad 48.30 304 *ex* **S** **05 51 15.0 +1.2**
BHD *ex* x 05 51 24.0
MAJO Matsushiro 48.60 51 *e*P **P** **05 44 17.3 0.0**
MAJO pmax pmax
comp=Z,42nm,1.2s,mb5.3
MAJO Matsushiro 48.60 51 *e*P **P** **05 44 17.3 0.0**
comp=Z,42nm,1.2s,mb5.3
MAT Matsushiro 48.60 51 P **P** **05 44 16.7 -0.6**
MAT *e*S **S** **05 51 16.0 -1.9**
MJAR Matsushiro Arr 48.60 51 P **P** **05 44 16.4 -0.8**
comp=Z,4.2nm,1.0s,mb4.4,baz=261,slow=7.8,SNR=16
MJAR PcP PcP 05 45 43.2 +0.5
comp=Z,4.7nm,1.0s,baz=250,slow=3.2,SNR=4.8
MJAR LR LR 06 09 14.5
comp=Z,382nm,18.0s,MS4.4,baz=245,slow=42
MJAR Matsushiro Arr 48.60 51 P **P** **05 44 16.4 -0.9**
MJAR 05 45 43.2
MAK Makhachkala 49.39 318 *e*P **P** **05 44 22.6 -0.6**
MAK *e* 05 46 15.4
MAK *e*S **S** **05 51 26.7 -2.1**
MAK *e* 05 54 13.5
MAK pmax pmax
comp=Z,174nm,1.2s,mb6.0

CBIJ Chichi jima 49.74 64 LR LR 06 04 23.8
comp=Z,212nm,19.4s,MS4.2,baz=162,slow=35
KLR Kul'dur 50.04 33 *e*P **P** **05 44 23.7 -4.4**
KLR *e*S **S** **05 51 40.5 +2.8**
KLR pmax pmax
comp=E,45nm,2.0s
KLR pmax pmax
comp=Z,63nm,2.0s,mb5.3
KLR MLR MLR
comp=N,1μm,14.0s,MS5.2
KLR MLR MLR
comp=E,1μm,14.0s,MS5.2
KLR MLR MLR
comp=Z,2μm,14.0s,MS5.3
GNI Garni 50.17 313 LR LR 06 07 29.2
comp=Z,498nm,21.5s,MS4.5,baz=289,slow=38
NWAO Narrogin (SRO) 50.51 152 P **P** **05 44 32.1 +0.3**
comp=Z,16nm,0.9s,mb4.9,baz=321,slow=9.5,SNR=4.0
NWAO Narrogin (SRO) 50.51 152 *e*P **P** **05 44 31.7 -0.1**
NWAO pmax pmax
comp=Z,52nm,1.2s
NWAO Narrogin (SRO) 50.51 152 *e*P **P** **05 44 31.7 -0.1**
comp=Z,52nm,1.2s,mb5.3
MTA Mtatsminda 50.71 315 P **P** **05 44 34.3 +1.1**
TBLG Delisi 50.76 315 P **P** **05 44 35.0 +1.3**
TBLG Delisi 50.76 315 P **P** **05 44 35.0 +1.3**
SVE Sverdlovsk 51.11 339 ‖*e*P **P** **05 44 36.7 +0.7**
SVE *e*S **S** **05 51 52.5 +0.2**
SVE *e* 05 54 19.5
SVE *e*SS SS 05 55 18.8 -8.8
SVE pmax pmax
comp=Z,103nm,1.3s,mb5.6
SVE MLR MLR
comp=Z,1μm,22.0s,MS4.9
HABR Khabarovsk 51.47 36 *e*P **P** **05 44 38.1 -0.7**
HABR *e**PP pP 05 44 47.7 +1.4
HABR *e* 05 45 50.9
HABR *e*PPP 05 47 34.5
HABR *e*S **S** **05 51 56.4 -1.1**
HABR *SS sS 05 52 12.4 +2.7
HABR *e* 05 54 24.5
HABR *e*SS SS 05 55 32.0 -1.6
HABR *e*SSS 05 57 10.3
HABR pmax pmax
comp=E,29nm,1.4s
HABR pmax pmax
comp=N,11nm,0.7s
HABR pmax pmax
comp=Z,42nm,1.5s,mb5.2
HABR MLR MLR
comp=Z,377nm,16.0s,MS4.5
ARU Arti 51.58 337 P **P** **05 44 40.8 +1.3**
comp=Z,242nm,1.0s,mb6.1,SNR=6.7
ARU Arti 51.58 337 *c i*P **P** **05 44 39.4 -0.1**
ARU 05 46 35.8
ARU PPP 05 47 35.9
ARU S **S** **05 52 00.5 +1.7**
ARU pmax pmax
comp=Z,73nm,1.7s,mb5.3
ARU MLR MLR
comp=Z,1μm,21.0s,MS4.9
ARU Arti 51.58 337 *e*P **P** **05 44 40.2 +0.6**
comp=Z,87nm,1.3s,mb5.5
ZEI Tsey 51.73 316 *e*P **P** **05 44 40.7 -0.2**
ZEI *e*S **S** **05 52 05.7 +4.4**
ZEI pmax pmax
comp=Z,45nm,1.0s,mb5.3
CLNS Chul'man 51.89 22 *e*P **P** **05 44 42.2 +0.3**
CLNS *e* 05 46 01.0
CLNS *e* 05 46 37.0
CLNS *e*S **S** **05 51 55.2 -7.9**
CLNS pmax pmax
comp=Z,52nm,1.3s,mb5.3
CLNS pmax pmax
comp=E,28nm,1.3s
CLNS pmax pmax
comp=N,25nm,1.2s
CLNS pmax pmax
comp=E,9.0nm,1.2s
CLNS pmax pmax
comp=Z,7.0nm,1.5s,mb4.4
CLNS pmax pmax
comp=N,9.0nm,1.3s
CLNS smax
comp=N,99nm,13.1s
CLNS smax
comp=E,149nm,15.0s
CLNS MLR MLR
comp=Z,1μm,23.0s,MS4.8
CLNS MLR MLR
comp=N,422nm,11.0s
CLNS MLR MLR
comp=E,235nm,11.0s
ONI Oni 51.97 316 P **P** **05 44 44.1 +1.4**
WRAB Tennant Creek 52.36 126 P **P** **05 44 45.2 -0.7**
comp=E,369nm,1.0s,mb6.3,SNR=7.6
WRAB Tennant Creek 52.36 126 *e*P **P** **05 44 46.3 +0.4**
WRAB pmax pmax
comp=Z,84nm,1.0s,mb5.6
WRAB Tennant Creek 52.36 126 *e*P **P** **05 44 46.3 +0.4**
comp=Z,84nm,1.0s,mb5.6
KIV Kislovodsk 53.00 317 P **P** **05 44 51.5 +1.2**
comp=Z,633nm,1.0s,mb6.5,SNR=13
KIV Kislovodsk 53.00 317 ‖*e*P **P** **05 44 51.1 +0.8**
KIV *e* 05 46 48.2
KIV *e*S **S** **05 52 17.8 -0.9**
KIV pmax pmax
comp=Z,100nm,1.0s,mb5.7
KIV MLR MLR
comp=Z,600nm,21.0s,MS4.6
KIV Kislovodsk 53.00 317 *e*P **P** **05 44 51.3 +1.0**
comp=Z,168nm,1.2s,mb5.8
KIV Kislovodsk 53.00 317 P **P** **05 44 51.7 +1.3**
SNR=42
OPO Ambohidratompo 53.15 236 P **P** **05 44 54.8 +3.0**
comp=Z,3.2nm,0.7s,mb4.3,baz=26,slow=8.1,SNR=3.2
ERM Erimo 53.99 46 *e*P **P** **05 44 57.9 +0.3**
ERM pmax pmax
comp=Z,5.0nm,1.3s,mb4.3
ASAR Alice Springs 54.11 131 P **P** **05 44 58.1 -0.7**
comp=Z,8.6nm,0.8s,mb4.7,baz=304,slow=6.5,SNR=21
ASAR PcP PcP 05 46 03.9 +0.4
comp=Z,6.5nm,0.9s,baz=270,slow=3.8,SNR=2.5
ASF Jabal al Asfar 54.24 301 LR LR 06 10 19.1
comp=Z,620nm,19.9s,MS4.7,baz=322,slow=38
ASAJ Asahikawa 54.30 43 LR LR 06 11 17.1
comp=Z,590nm,18.0s,MS4.7,baz=243,slow=40
SOKR Solikamsk 54.52 339 *c i*P **P** **05 45 01.5 +0.4**
SOKR pmax pmax
comp=Z,40nm,1.2s,mb5.3
SOKR MLR MLR
comp=Z,790nm,15.0s,MS4.9
FORT Forrest 54.70 141 *e*P **P** **05 45 03.4 +0.5**
comp=Z,77nm,0.9s,mb5.7
FORT Forrest 54.70 141 *e*P **P** **05 45 03.5 +0.6**
comp=Z,263nm,1.2s,mb6.1
FORT *e* pP 05 45 09.5 -0.9
SOC Sochi 54.88 316 *e*P **P** **05 45 04.8 +0.7**
SOC *e* 05 47 02.1
SOC *e*S **S** **05 52 43.6 -0.5**
SOC *e**SS sS 05 52 57.1 +0.7
SOC *e* 05 54 45.8
SOC *e*SS SS 05 56 27.3 -0.4
SOC *e*SSS 05 58 27.8
SOC pmax pmax
comp=Z,45nm,1.0s,mb5.5
SOC MLR MLR
comp=Z,520nm,19.0s,MS4.6
YSS Yuzh-Sakhalins 55.45 40 α *i*P **P** **05 45 08.1 0.0**
YSS pmax pmax
comp=Z,40nm,1.0s,mb5.4
YSS MLR MLR
comp=E,800nm,15.0s
YSS MLR MLR
comp=Z,800nm,15.0s,MS4.9
YSS Yuzh-Sakhalins 55.45 40 *e*P **P** **05 45 08.8 +0.7**
comp=Z,39nm,0.8s,mb5.5
KMBO Kilima Mbogo 55.55 261 P **P** **05 45 10.9 +1.5**
comp=Z,4.7nm,0.9s,mb4.5,baz=360,slow=23,SNR=5.0
KMBO LR LR 06 05 34.5
comp=Z,570nm,20.8s,MS4.6,baz=90,slow=32
EIL Elat 55.56 298 LR LR 06 11 32.7
comp=Z,341nm,19.7s,MS4.4,baz=97,slow=39
VRHR Novokhopersk 56.56 325 *e*P **P** **05 45 16.3 +0.3**
VRHR *e*S **S** **05 53 04.5 -1.8**
VRHR pmax pmax

comp=N,50nm,0.9s
VRHR pmax pmax
comp=E,50nm,0.9s
VRHR pmax pmax
comp=Z,60nm,0.9s,mb5.6
VRHR smax
comp=E,80nm,1.1s
VRHR smax
comp=Z,50nm,2.1s
VRHR smax
comp=N,40nm,0.7s
ANN Anapa 56.82 316 *e*P **P 05 45 20.0 +2.0**
ANN *e**PP pP 05 45 30.1 +4.6
ANN *e* 05 46 13.7
ANN *e* 05 47 27.7
ANN *e*PPP 05 48 47.8
ANN *e*S **S 05 53 13.6 +3.6**
ANN pmax pmax
comp=Z,44nm,1.4s,mb5.3
ANN MLR MLR
comp=N,243nm,19.0s,MS4.6
ANN MLR MLR
comp=E,410nm,19.0s,MS4.6
ANN MLR MLR
comp=Z,542nm,19.0s,MS4.7
COEN Coen 56.98 115 *e*P **P 05 45 19.6 0.0**
comp=Z,119nm,1.0s,mb5.9
YAK Yakutsk 57.32 20*c i*P **P 05 45 20.7 -0.5**
YAK *e**PP pP 05 45 26.6 -2.1
YAK *e* 05 46 13.2
YAK *e* 05 47 28.0
YAK *e*S **S 05 53 14.2 -1.8**
YAK *e**SS sS 05 53 31.3 +3.0
YAK *e*SS SS 05 57 04.4 -1.1
YAK pmax pmax
comp=Z,38nm,0.9s,mb5.4
YAK pmax pmax
comp=E,36nm,1.8s
YAK pmax pmax
comp=N,28nm,1.5s
YAK pmax pmax
comp=Z,11nm,0.7s,mb5.0
YAK smax
comp=E,56nm,3.5s
YAK smax
comp=N,72nm,3.9s
YAK MLR MLR
comp=N,496nm,16.0s,MS4.9
YAK MLR MLR
comp=E,571nm,17.0s,MS4.9
YAK MLR MLR
comp=Z,555nm,18.0s,MS4.7
YAK Yakutsk 57.32 20 *e*P **P 05 45 21.3 +0.1**
comp=Z,42nm,0.5s,mb5.7
VORD Divnogorie 57.84 324 *e*P **P 05 45 25.1 0.0**
VORD pmax pmax
comp=Z,60nm,1.2s,mb5.5
VORD pmax pmax
comp=N,100nm,0.6s
VORD pmax pmax
comp=E,100nm,1.2s
VORD MLR MLR
comp=N,940nm,19.0s,MS4.9
VORD MLR MLR
comp=E,140nm,19.0s,MS4.9
VORD MLR MLR
comp=Z,490nm,19.0s,MS4.6
VSR Storozhevoye 58.02 324 *e*P **P 05 45 26.2 -0.1**
VSR *e*S **S 05 53 23.6 -1.8**
VSR MLR MLR
comp=N,410nm,19.0s,MS4.8
VSR MLR MLR
comp=E,550nm,19.0s,MS4.8
VSR MLR MLR
comp=Z,670nm,19.0s,MS4.8
BR131 Keskin Array S 58.23 310 *e*P **P 05 45 27.6 -0.4**
comp=Z,20nm,0.8s,mb5.2
BR131 *e* pP 05 45 33.3 -2.2
BRTR Keskin Array B 58.23 310 P **P 05 45 27.2 -0.8**
comp=Z,16nm,0.8s,mb5.1,baz=119,slow=7.2,SNR=50
BRTR LR LR 06 13 44.5
comp=Z,282nm,21.9s,MS4.3,baz=331,slow=39
PMG Port Moresby 58.93 108 *e*P **P 05 45 33.3 0.0**
PMG pmax pmax
comp=Z,51nm,1.0s
PMG Port Moresby 58.93 108 *e*P **P 05 45 33.3 +0.1**
comp=Z,51nm,1.0s,mb5.5
SIM Simferopol' 59.12 316*ce*P **P 05 45 34.2 +0.1**
SIM *e*S **S 05 53 40.5 +0.4**
SIM pmax pmax
comp=Z,30nm,1.0s,mb5.3
SIM pmax pmax
comp=Z,54nm,9.7s
SIM MLR MLR
comp=Z,340nm,21.0s,MS4.5
ISP Isparta 60.29 307⇑*i*P **P 05 45 42.5 +0.2**
MOS Moscow 60.70 328 *e*P **P 05 45 44.3 -0.5**
MOS *e* 05 46 28.9
MOS *e*S **S 05 53 58.3 -1.7**
MOS pmax pmax
comp=Z,135nm,1.5s,mb5.8
MOS pmax pmax
comp=Z,300nm,1.6s,mb6.2
MOS Moscow 60.70 328 *e*P **P 05 45 44.1 -0.7**
OBN Obninsk 61.00 327 P **P 05 45 47.7 +0.9**
comp=Z,568nm,1.3s,mb6.5,SNR=5.9
OBN Obninsk 61.00 327⇑*e*P **P 05 45 46.0 -0.8**
OBN *e*S **S 05 54 06.6 +2.8**
OBN *e*SS SS 05 58 09.4 +6.0
OBN pmax pmax
comp=Z,154nm,1.7s,mb5.9
OBN MLR MLR
comp=Z,700nm,19.0s,MS4.8
OBN Obninsk 61.00 327 *e*P **P 05 45 47.4 +0.6**
comp=Z,147nm,1.2s,mb6.0
CTA Charters Tower 62.20 120 *e*P **P 05 45 55.5 0.0**
comp=Z,50nm,1.2s,mb5.5
CTA Charters Tower 62.20 120 P **P 05 45 54.9 -0.6**
comp=Z,40nm,1.1s,mb5.5,baz=308,slow=7.9,SNR=16
CTAO Charters Tower 62.20 120 *e*P **P 05 45 55.8 +0.3**
CTAO *e* pP 05 46 01.8 -1.3
CTAO pmax pmax
comp=Z,144nm,1.3s,mb5.9
CTAO Charters Tower 62.20 120 *e*P **P 05 45 55.8 +0.3**
comp=Z,144nm,1.3s,mb6.0
CTAO *e* pP 05 46 01.8 -1.2
TIRR Tirgusor 62.98 314 *e*P **P 05 45 59.8 -0.5**
TIRR *e* pP 05 46 05.7 -2.2
TIRR pmax pmax
comp=Z,21nm,1.1s,mb5.2
TIRR Tirgusor 62.98 314 *e*P **P 05 45 59.8 -0.5**
comp=Z,21nm,1.1s,mb5.2
TIRR *e* pP 05 46 05.7 -2.1
TIRR Tirgusor 62.98 314⇓*i*P **P 05 45 59.8 -0.5**
KIS Kishinev 63.20 317 *e*P **P 05 46 02.0 +0.3**
KIS *e*S **S 05 54 29.0 -2.9**
KIS LRM 06 18 20.0
comp=Z,400nm,20.0s
KIS Kishinev 63.20 317 *e*P **P 05 46 02.0 +0.3**
KIS *e* 05 46 06.0
KIS *e*S **S 05 54 29.0 -2.9**
KIS MLR MLR
comp=Z,400nm,19.0s,MS4.6
KIS MLR MLR
comp=Z,400nm,20.0s
LEOM Leova 63.48 316⇑P **P 05 46 03.3 -0.3**
LEOM Leova 63.48 316⇑*i*P **P 05 46 03.3 -0.3**
AKASG Malin Array Be 63.79 321 P **P 05 46 05.2 -0.3**
comp=Z,9.0nm,0.9s,mb4.8,baz=91,slow=4.9,SNR=31
AKASG LR LR 06 15 36.4
comp=Z,354nm,20.2s,MS4.5,baz=130,slow=38
KIEV Kiev 63.80 321 *e*P **P 05 46 04.5 -1.1**
KIEV *e* pP 05 46 10.9 -2.3
KIEV pmax pmax
comp=Z,31nm,1.1s,mb5.2
KIEV Kiev 63.80 321 *e*P **P 05 46 04.5 -1.1**
comp=Z,31nm,1.1s,mb5.2
KIEV *e* pP 05 46 10.8 -2.4
TIXI Tiksi 64.13 12 *e*P **P 05 46 06.4 -1.0**
TIXI *e* 05 46 39.2
TIXI *e* 05 48 28.1
TIXI *e*S **S 05 54 40.8 -1.9**
TIXI pmax pmax
comp=Z,89nm,1.7s,mb5.5
TIXI Tiksi 64.13 12 *e*P **P 05 46 07.0 -0.5**
comp=Z,29nm,1.0s,mb5.3
STKA Stephens Creek 64.37 134 *e*P **P 05 46 09.5 -0.2**
comp=Z,17nm,0.9s,mb5.1
STKA Stephens Creek 64.37 134 P **P 05 46 09.3 -0.4**
comp=Z,14nm,1.0s,mb5.0,baz=304,slow=5.5,SNR=12
STKA LR LR 06 19 33.0
comp=Z,466nm,18.6s,MS4.7,baz=285,slow=41
VRI Vrincioaia 64.40 315⇑P **P 05 46 10.4 +0.7**
VRI P 05 46 10.7
VRI Vrincioaia 64.40 315⇑*i*P **P 05 46 10.4 +0.7**
PLOR Plostina 64.45 315 P **P 05 46 11.4 +1.4**
PLOR Plostina 64.45 315⇓*i*P **P 05 46 11.2 +1.2**
TESR 64.57 316⇑P **P 05 46 10.8 +0.1**
TESR P 05 46 11.1
TESR 64.57 316⇑*i*P **P 05 46 10.8 0.0**
MLR Muntele Rosu 64.88 315⇓P **P 05 46 13.6 +0.8**
MLR Muntele Rosu 64.88 315 P **P 05 46 13.5 +0.7**
MLR Muntele Rosu 64.88 315⇓*i*P **P 05 46 13.6 +0.8**
VOIR 65.49 315⇑P **P 05 46 17.1 +0.3**
VOIR 65.49 315⇑*i*P **P 05 46 17.0 +0.2**
MICGM Minsk 65.55 325 *e*P **P 05 46 15.0 -2.0**
MNK Minsk 65.58 325 *e*P **P 05 46 15.0 -2.1**
BURAR Bucovina Array 65.72 317⇑P **P 05 46 18.6 +0.4**
BURAR Bucovina Array 65.72 317⇑*i*P **P 05 46 18.6 +0.4**
BUR08 Bucovina Ar. S 65.74 317 *e*P **P 05 46 18.6 +0.2**
NACGM Naroch 66.27 325 *e* Px 05 46 40.0
IDID Didziasalis 66.39 326 *e*P **P 05 46 22.5 +0.1**
IDID AMB AMB 05 46 29.8
comp=Z,30nm,1.1s,mb5.2
VTS Vitosha 66.45 311⇑P **P 05 46 22.7 -0.3**
VTS Vitosha 66.45 311⇑*i*P **P 05 46 22.7 -0.3**
PETK Petropavlovsk- 66.46 37 P **P 05 46 21.1 -1.7**
comp=Z,2.5nm,1.0s,mb4.2,baz=186,slow=6.7,SNR=4.0
PETK LR LR 06 20 15.3
comp=Z,252nm,18.2s,MS4.5,baz=116,slow=40
JOF Joensuu 66.51 334 *e*P **P 05 46 21.5 -1.5**
JOF Joensuu 66.51 334 *e*p **P 05 46 21.5 -1.5**
SEY Seymchan 66.63 26*c i*P **P 05 46 23.4 -0.3**
IIGN Ignalina 66.69 326 *e*P **P 05 46 24.3 0.0**
IIGN AMB AMB 05 46 31.7
comp=Z,30nm,1.1s,mb5.2
IZAR Zarasai 66.77 326 *e*P **P 05 46 24.9 +0.1**
IZAR AMB AMB 05 46 32.2
comp=Z,26nm,1.2s,mb5.1
VAY Valandovo 66.81 310⇑*i*P **P 05 46 23.6 -1.7**
LVV L'vov 66.87 319 *i* P **P 05 46 25.0 -0.5**
PET Petropavlovsk 67.01 37 *e*P **P 05 46 16.4 -10**
PET *e*S S 05 55 13.6 -4.9
PET pmax pmax
comp=Z,100nm,9.8s
PET MLR MLR
comp=Z,600nm,17.0s,MS4.9
PET MLR MLR
comp=Z,700nm,18.0s
VSU Vasula 67.21 329*c i*P **P 05 46 27.6 +0.1**
VSU pmax pmax
comp=Z,60nm,1.0s,mb5.6
LVZ Lovozero 67.29 340 *e*P **P 05 46 27.5 -0.4**
LVZ pmax pmax
comp=Z,34nm,1.0s,mb5.3
LVZ Lovozero 67.29 340 *e*P **P 05 46 27.6 -0.3**
DRGR 67.29 316 P **P 05 46 28.9 +0.6**
DRGR ⇑P 05 46 32.5
DRGR 67.29 316⇑*i*P **P 05 46 32.5 +4.2**
APA Apatity 67.57 339⇑*i*P **P 05 46 30.6 +0.9**
APA *e*S S 05 55 20.0 -4.8
APA pmax pmax
comp=Z,52nm,1.3s,mb5.4
APA MLR MLR
comp=Z,1μm,17.0s,MS5.2
UZH Uzhgorod 67.82 318 *e*P **P 05 46 31.1 -0.4**
UZH *e* 05 47 00.1
UZH *e*S S 05 55 19.3 -9.0
UZH *i* 05 55 57.3
UZH *e* 05 56 29.5
UZH MLR MLR
comp=N,500nm,17.0s,MS4.9
UZH MLR MLR
comp=E,400nm,17.0s,MS4.9
UZH MLR MLR
comp=Z,150nm,17.0s,MS4.3
BZS Buzias 67.91 315 P **P 05 46 32.3 +0.1**
BZS Buzias 67.91 315⇓P **P 05 46 32.1 -0.1**
BZS P 05 46 32.3
BZS Buzias 67.91 315⇓*i*P **P 05 46 32.1 -0.1**
OHR Ohrid 68.12 310⇑*e*P **P 05 46 31.0 -2.7**
SUW Suwalki 68.13 324 *e*P **P 05 46 33.1 -0.3**
SUW Suwalki 68.13 324 *e*P **P 05 46 33.0 -0.4**
SUW pmax pmax
comp=Z,176nm,0.9s,mb6.1
SUW Suwalki 68.13 324 *e*P **P 05 46 33.0 -0.5**
comp=Z,176nm,0.9s,mb6.1
FINES FINESS Array B 68.35 332 P **P 05 46 34.9 +0.3**
comp=Z,18nm,0.9s,mb5.1,baz=106,slow=11,SNR=25
FINES LR LR 06 20 50.5
comp=Z,590nm,19.1s,MS4.8,baz=107,slow=40
KAF Kangasniemi 68.43 333 *e*P **P 05 46 33.2 -2.0**
KAF Kangasniemi 68.43 333 *e*p **P 05 46 33.2 -2.0**
EIDS Eidsvold 68.48 123 *e*P **P 05 46 36.8 +0.7**
comp=Z,57nm,1.5s,mb5.4
EIDS *e* pP 05 46 42.4 -1.3
STHS Stebnicka Huta 68.60 319 *e*P **P 05 46 37.2 +0.7**
STHS pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
STHS Stebnicka Huta 68.60 319 *e*P **P 05 46 37.2 +0.7**
comp=Z,6.3nm,1.0s,mb4.5
STHS Stebnicka Huta 68.60 319 *e*P **P 05 46 37.2 +0.7**
STHS *e*pP pP 05 46 44.0 -0.1
KECS Kecovo 68.99 318 *e*P **P 05 46 39.8 +0.9**
KECS pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
KECS Kecovo 68.99 318 *e*P **P 05 46 39.8 +0.9**
comp=Z,6.4nm,1.0s,mb4.5
KECS Kecovo 68.99 318 *e*P **P 05 46 39.8 +0.9**
PKSM Moragy 70.03 315⇑P **P 05 46 44.7 -0.7**
PKSM Moragy 70.03 315⇑*i*P **P 05 46 44.7 -0.7**
VYHS Vyhne 70.08 317 *e*P **P 05 46 45.8 +0.2**
VYHS pmax pmax
comp=Z,12nm,1.2s,mb4.7
VYHS Vyhne 70.08 317 *e*P **P 05 46 45.8 +0.2**
comp=Z,12nm,1.2s,mb4.7
VYHS *e*PcP PcP 05 47 08.2 +0.6
VYHS Vyhne 70.08 317 *e*P **P 05 46 45.8 +0.2**
VYHS *e*pP pP 05 46 51.8 -1.5
VYHS *e*PCP PcP 05 47 08.2 +0.6
TOO Toolangi 70.17 137 *e*P **P 05 46 47.7 +1.4**
KOLL Kolacno 70.38 318 *e*P **P 05 46 48.1 +0.7**
KOLL Kolacno 70.38 318 *e*P **P 05 46 48.1 +0.7**
OKC Ostrava-Krasne 70.65 319 *e*P **P 05 46 49.5 +0.4**
OKC MLR MLR
comp=Z,300nm,19.7s,MS4.5
OKC Ostrava-Krasne 70.65 319 *e*P **P 05 46 49.5 +0.4**
OKC AMS AMS 06 29 50.0
comp=Z,300nm,19.7s
ARCES ARCESS Array B 71.00 340 P **P 05 46 51.0 +0.2**
comp=Z,17nm,0.9s,mb5.0,baz=80,slow=7.6,SNR=18
ARCES LR LR 06 20 22.4
comp=Z,889nm,20.6s,MS5.0,baz=294,slow=38
ARE0 ARCESS Array S 71.00 340 *e*P **P 05 46 51.6 +0.7**
MORC Moravsky Berou 71.04 319 *e*P **P 05 46 51.4 0.0**
MORC pmax pmax
comp=Z,55nm,1.4s,mb5.3
MORC Moravsky Berou 71.04 319 *e*P **P 05 46 51.4 0.0**
comp=Z,55nm,1.4s,mb5.3
MORC Moravsky Berou 71.04 319⇑*i*P **P 05 46 51.6 +0.2**
ARMA Armidale 71.10 128 *e*P **P 05 46 51.6 -0.5**
ARMA Armidale 71.10 128 *e*P **P 05 46 54.0 +1.9**
comp=Z,45nm,1.0s,mb5.3
CAN Canberra 71.43 133 *e*P **P 05 46 54.0 0.0**
CAN pmax pmax
comp=Z,42nm,1.3s,mb5.2
CAN Canberra 71.43 133 *e*P **P 05 46 54.0 0.0**
comp=Z,42nm,1.3s,mb5.2
VRAC Vranov 71.62 318 LR LR 06 20 26.5
comp=Z,186nm,21.6s,MS4.3,baz=89,slow=38
CNB Canberra Magne 71.69 133 *e*P **P 05 46 55.6 0.0**
CEL Celeste 71.83 307 *e*P **P 05 46 56.6 +0.1**
comp=Z,120nm,1.1s,mb5.7
DPC Dobruska-Polom 71.86 319 *e*P **P 05 46 56.9 +0.5**
DPC *e* pP 05 47 02.8 -1.3
DPC MLR MLR
comp=Z,200nm,17.0s,MS4.5
DPC Dobruska-Polom 71.86 319 *e*P **P 05 46 56.9 +0.5**
DPC *e*pP pP 05 47 02.8 -1.3
DPC AMS AMS 06 25 50.0
comp=Z,200nm,17.0s
KSP Ksiaz 71.91 320 *e*P **P 05 46 57.2 +0.5**
KSP Ksiaz 71.91 320 *e*P **P 05 46 56.2 -0.5**
KSP *e*S S 05 56 20.0 +3.6
CONA Conrad Observa 72.03 317⇑*i*P **P 05 46 57.3 -0.2**
comp=Z,18nm,1.4s,mb4.8,SNR=9.1
UPC Upice 72.07 319 *e*P **P 05 46 58.1 +0.4**
UPC *e* pP 05 47 03.5 -1.8
UPC Upice 72.07 319 *e*P **P 05 46 58.1 +0.4**
UPC *e*pP pP 05 47 03.5 -1.8
GOLS Golise 72.12 315 *e*P **P 05 46 57.8 -0.3**
ARSA Arzberg 72.23 316⇑*i*P **P 05 46 58.7 0.0**
comp=Z,33nm,1.5s,mb5.0,SNR=13
TREC Trest 72.34 318 *e*P **P 05 46 59.5 +0.2**
TREC MLR MLR
comp=Z,300nm,18.6s,MS4.6
TREC Trest 72.34 318 *e*P **P 05 46 59.5 +0.2**
TREC AMS AMS 06 23 00.0
comp=Z,300nm,18.6s
BOJS Bojanci 72.36 314 *e*P **P 05 46 59.0 -0.6**
ZAVS Zavodnje 72.55 315 *e*P **P 05 47 00.4 -0.2**
SOKA Soboth 72.55 315⇑*i*P **P 05 47 00.6 0.0**
comp=Z,44nm,1.2s,mb5.3
OBKA Obir 72.88 315⇑*i*P **P 05 47 02.4 -0.2**
comp=Z,38nm,1.3s,mb5.2,SNR=12
LJU Ljubljana 72.88 315 *e*P **P 05 47 02.1 -0.5**
PRU Pruhonice 72.99 319 *e*P **P 05 47 04.0 +0.9**
PRU *e* pP 05 47 10.1 -0.7
PRU MLR MLR
comp=Z,300nm,15.0s,MS4.7
PRU Pruhonice 72.99 319 *e*P **P 05 47 04.0 +0.9**
PRU *e*pP pP 05 47 10.1 -0.7
PRU AMS AMS 06 33 20.0
comp=Z,300nm,15.0s
PVCC Panska Ves 72.99 319 *e*P **P 05 47 03.8 +0.7**
PVCC MLR MLR
comp=Z,300nm,21.2s,MS4.5
PVCC Panska Ves 72.99 319 *e*P **P 05 47 03.8 +0.7**
PVCC AMS AMS 06 26 30.0
comp=Z,300nm,21.2s
BSD Bornholm Skovb 73.04 324 *i* P **P 05 47 03.3 -0.1**
BSD *i* S S 05 56 30.1 +1.0
BSD pmax pmax
comp=Z,25nm,0.9s,mb5.1
BSD MLR MLR
comp=Z,340nm,20.0s,MS4.6
BSD Bornholm Skovb 73.04 324 *i* P **P 05 47 03.3 -0.1**
comp=Z,25nm,0.9s,mb5.1
BSD *i* S S 05 56 30.1 +1.0
BSD
comp=Z,330nm,20.0s
MOA Molln 73.10 317⇑*i*P **P 05 47 03.3 -0.5**
comp=Z,18nm,1.2s,mb4.9,SNR=8.8
TRO Tromso 73.25 340 *e*P **P 05 47 04.4 +0.1**
TRO AMb AMB 05 47 05.9
comp=Z,104nm,3.4s
TRO *e*S S 05 56 32.8 +1.8
TRO AMS AMS 06 21 44.5
comp=Z,1μm,17.1s,MS5.2
TRO Tromso 73.25 340 *e*P **P 05 47 04.4 +0.1**
TRO pmax pmax
comp=Z,104nm,3.3s
TRO MLR MLR
comp=Z,1μm,17.1s,MS5.2
TRO Tromso 73.25 340 *e*P **P 05 47 04.4 +0.1**
comp=Z,104nm,3.3s
TRO LR LR
comp=Z,1μm,17.1s,MS5.2
VOY Vojsko 73.32 315 *e*P **P 05 47 04.4 -0.8**
VOY *e* 05 47 07.6
VOY *e* pP 05 47 10.8 -2.1
BRG Berggiesshubel 73.40 320 *e*P **P 05 47 05.7 +0.1**
comp=Z,51nm,1.3s,mb5.3
BRG Berggiesshubel 73.40 320 *e*P **P 05 47 05.9 +0.3**
comp=Z,43nm,1.4s,mb5.2
BRG *e* pP 05 47 12.0 -1.2
comp=Z,51nm,1.3s
BRG *i* PCP PcP 05 47 25.0 +3.3
comp=Z,22nm,1.5s
BRG *e*PP PP 05 49 39.2 -10
comp=Z,11nm,1.5s
BRG S S 05 56 35.0 +1.7
BRG SS SS 06 01 20.0 +4.4
BRG
comp=N,417nm,18.4s
BRG
comp=E,215nm,22.6s
BRG
comp=Z,336nm,17.7s
BRG Berggiesshubel 73.40 320 *e*P **P 05 47 05.9 +0.3**
BRG *e* pP 05 47 12.0 -1.2
BRG *i* 05 47 25.0
BRG S S 05 56 35.0 +1.7
BRG SS SS 06 01 20.0 +4.4
BRG pmax pmax
comp=Z,26nm,1.4s,mb5.0
BRG pmax pmax
comp=Z,30nm,1.3s,mb5.1
BRG pmax pmax
comp=Z,13nm,1.5s,mb4.6
BRG pmax pmax
comp=Z,7.0nm,1.5s,mb4.4
BRG MLR MLR
comp=N,250nm,18.4s,MS4.5
BRG MLR MLR
comp=E,129nm,22.6s,MS4.5
BRG MLR MLR
comp=Z,201nm,17.7s,MS4.5
CADS Cadrg 73.44 315 *e*P **P 05 47 05.1 -0.7**
GEC2 GERESS Array S 73.50 318 *e*P **P 05 47 06.2 0.0**
comp=Z,28nm,1.1s,mb5.1
GEC2 GERESS Array S 73.50 318 *e*P **P 05 47 06.2 0.0**
GEC2 pmax pmax
comp=Z,28nm,1.1s,mb5.1
MYKA Terra Mystica 73.50 315⇑*i*P **P 05 47 06.0 -0.2**
comp=Z,26nm,1.5s,mb4.9
RUE Ruedersdorf 73.57 321 *e*P **P 05 47 07.0 +0.5**
comp=Z,90nm,1.2s,mb5.6
BILL Bilibino 73.58 22⇓*i*P **P 05 47 06.1 -0.2**
BILL *e* 05 49 50.1
BILL *e*S S 05 56 29.6 -5.1
BILL *e*SS SS 06 01 20.6 +3.1
BILL pmax pmax
comp=Z,47nm,1.7s,mb5.1
BILL MLR MLR
comp=Z,700nm,17.0s,MS5.0
BILL Bilibino 73.58 22 *e*P **P 05 47 06.3 0.0**
comp=Z,17nm,0.8s,mb5.0
BILL *e* pP 05 47 12.5 -1.5
KHC Kasperske Hory 73.59 318 *e*P **P 05 47 07.0 +0.3**
KHC pmax pmax
comp=Z,21nm,1.4s,mb4.9
KHC Kasperske Hory 73.59 318 *e*P **P 05 47 07.0 +0.3**
comp=Z,21nm,1.4s,mb4.9
KHC Kasperske Hory 73.59 318 *e*P **P 05 47 06.8 +0.1**
KHC *e*pP pP 05 47 12.3 -2.1
KHC AMS AMS 06 25 40.0
comp=Z,300nm,16.9s
AQU L'Aquila 73.69 311 *e*P **P 05 47 06.8 -0.6**
AQU pmax pmax
comp=Z,17nm,1.1s,mb4.9
AQU L'Aquila 73.69 311 *e*P **P 05 47 06.8 -0.7**
comp=Z,17nm,1.1s,mb4.9
LBTB Lobatse 73.96 240 *e*P **P 05 47 11.3 +2.0**
LBTB pmax pmax
comp=Z,48nm,1.6s,mb5.2
LBTB Lobatse 73.96 240 *e*P **P 05 47 11.3 +2.0**
comp=Z,48nm,1.6s,mb5.2
CLL Collm 74.01 320 *e*P **P 05 47 08.7 -0.4**
comp=Z,35nm,1.2s,mb5.2
CLL Collm 74.01 320⇑*i*P **P 05 47 08.9 -0.2**
CLL *i* pP 05 47 15.1 -1.7
CLL *e*S S 05 56 40.0 -0.2
CLL pmax pmax
comp=Z,38nm,1.4s,mb5.1
CLL MLR MLR
comp=Z,300nm,19.3s,MS4.6
CLL Collm 74.01 320⇑*i*P **P 05 47 08.9 -0.2**
comp=Z,38nm,1.4s,mb5.1
CLL *i* pP 05 47 15.1 -1.7
CLL *e*S S 05 56 40.0 -0.2
CLL LR LR
comp=Z,300nm,19.3s,MS4.6
CLL Collm 74.01 320⇑*i*P **P 05 47 08.9 -0.2**
comp=Z,38nm,1.4s,mb5.1

CLL *i* sP sP 05 47 15.1 -4.5
CLL *e*PPP 05 51 48.0
CLL *e*S S 05 56 40.0 -0.2
CLL *e*SS SS 06 01 35.0 +10
CLL *e*SSS 06 04 39.0
CLL *e*(SSSS) 06 06 36.0
CLL LmV 06 26 00.0
comp=Z,300nm,19.3s
WET Wettzell 74.05 318 *e*P **P 05 47 09.4 0.0**
comp=Z,28nm,1.3s,mb5.0
WET Wettzell 74.05 318 *e*P **P 05 47 09.4 0.0**
WET pmax pmax
comp=Z,28nm,1.3s,mb5.0
HFS Hagfors 74.08 329 LR LR 06 24 54.0
comp=Z,671nm,19.1s,MS5.0,baz=98,slow=40
RJOB Jochberg 74.09 316 *e*P **P 05 47 09.1 -0.6**
comp=Z,22nm,1.4s,mb4.9
ABTA Abfaltersbach 74.28 315 *i* P **P 05 47 09.9 -0.9**
comp=Z,20nm,1.3s,mb4.9,SNR=8.3
TANN Tannenbergstha 74.33 319 *e*P **P 05 47 11.0 0.0**
comp=Z,35nm,1.4s,mb5.1
NKC Novy Kostel 74.34 319 *e*P **P 05 47 11.4 +0.3**
NKC *e* pP 05 47 17.5 -1.3
NKC Novy Kostel 74.34 319 *e*P **P 05 47 11.4 +0.3**
NKC *e*pP pP 05 47 17.5 -1.3
COP Copenhagen 74.49 325 *i* P **P 05 47 15.4 +3.6**
COP pmax pmax
comp=Z,19nm,0.8s,mb5.1
COP MLR MLR
comp=Z,140nm,18.0s,MS4.3
COP Copenhagen 74.49 325 *i* P **P 05 47 15.4 +3.6**
comp=Z,19nm,0.8s,mb5.1
COP
comp=Z,130nm,18.0s
ROTZ Rotzenmuhle 74.49 319 *e*P **P 05 47 12.5 +0.5**
comp=Z,52nm,1.3s,mb5.3
MOX Moxa 74.88 319 *e*P **P 05 47 14.6 +0.4**
comp=Z,50nm,1.6s,mb5.2
MOX *e* 05 47 56.4
MOX
comp=Z,300nm,18.0s
MOX Moxa 74.88 319 *e*P **P 05 47 14.2 0.0**
comp=Z,41nm,1.4s,mb5.2
MOX Moxa 74.88 319 *e*P **P 05 47 14.6 +0.4**
MOX pmax pmax
comp=Z,50nm,1.6s,mb5.2
MOX MLR MLR
comp=Z,300nm,18.0s,MS4.6
WTTA Wattenberg 74.88 316⇓*i*P **P 05 47 13.3 -1.0**
comp=Z,34nm,1.3s,mb5.1,SNR=9.6
FUR Furstenfeldbru 75.11 317 *e*P **P 05 47 15.0 -0.6**
comp=Z,24nm,0.5s,mb5.4
FUR Furstenfeldbru 75.11 317 *e*P **P 05 47 15.0 -0.6**
FUR pmax pmax
comp=Z,24nm,0.5s,mb5.4
GRA1 Grafenberg Arr 75.13 318 *e*P **P 05 47 16.0 +0.3**
comp=Z,75nm,1.2s,mb5.5
GRA1 *e*pP pP 05 47 22.0 -1.4
GRA1 LR LR
comp=Z,200nm,20.3s,MS4.4
GRF Grafenberg Arr 75.13 318 *e*P **P 05 47 16.0 +0.3**
comp=Z,75nm,1.2s,mb5.5
GRF *e*pP pP 05 47 22.0 -1.4
GRF *e*L 06 25 20.6
comp=Z,228nm,20.3s
GRF Grafenberg Arr 75.13 318 *e*P **P 05 47 16.0 +0.3**
GRF *e**PP pP 05 47 22.0 -1.4
GRF pmax pmax
comp=Z,75nm,1.2s,mb5.5
GRF MLR MLR
comp=Z,200nm,20.3s,MS4.4
NSS Namsos 75.22 334 *e*P **P 05 47 14.7 -1.2**
MOTA Moosalm 75.24 316⇑*i*P **P 05 47 15.7 -0.6**
comp=Z,15nm,0.9s,mb4.9
NB2 NORSAR Subarra 75.36 330 P **P 05 47 16.1 -0.6**
comp=Z,48nm,1.1s,mb5.3,baz=92,slow=5.3
NB2 NORSAR Subarra 75.36 330 P **P 05 47 16.1 -0.6**
baz=92,slow=5.3
NOA NORSAR Array B 75.36 330 P **P 05 47 16.2 -0.6**
comp=Z,13nm,1.0s,mb4.8,baz=92,slow=5.9,SNR=18
NOA LR LR 06 23 25.1
comp=Z,565nm,19.9s,MS4.9,baz=110,slow=38
NOA NORSAR Array B 75.36 330 P **P 05 47 16.2 -0.6**
NOA LR LR 06 23 25.1
RETA Reutte 75.47 316⇓*i*P **P 05 47 16.9 -0.8**
comp=Z,54nm,1.4s,mb5.3,SNR=19
FETA Feichten 75.50 316⇑*i*P **P 05 47 17.3 -0.6**
comp=Z,24nm,1.2s,mb5.0,SNR=8.6
NAO01 NORSAR Array S 75.51 330 *e*P **P 05 47 17.7 0.0**
comp=Z,35nm,1.1s,mb5.2
BOSA Boshof 75.56 236 P **P 05 47 20.3 +1.8**
comp=Z,18nm,1.1s,mb4.9,baz=71,slow=5.6,SNR=8.6
BOSA LR LR 06 19 50.8
comp=Z,405nm,18.8s,MS4.8,baz=50,slow=35
BOSA Boshof 75.56 236 *e*P **P 05 47 19.7 +1.2**
BOSA pmax pmax
comp=Z,24nm,1.1s,mb5.0
BOSA Boshof 75.56 236 *e*P **P 05 47 19.7 +1.2**
comp=Z,24nm,1.1s,mb5.0
CLZ Clausthal 75.65 321 *e*P **P 05 47 18.7 +0.1**
comp=Z,38nm,1.1s,mb5.2
CLZ Clausthal 75.65 321 *e*P **P 05 47 18.7 +0.1**
CLZ pmax pmax
comp=Z,38nm,1.1s,mb5.2
BSEG Bad Segeberg 75.68 323 *e*P **P 05 47 19.0 +0.3**
comp=Z,72nm,1.2s,mb5.5
BSEG Bad Segeberg 75.68 323 *e*P **P 05 47 19.0 +0.3**
BSEG pmax pmax
comp=Z,72nm,1.2s,mb5.5
SPITS Spitsbergen Ar 75.76 348 P **P 05 47 19.0 +0.2**
comp=Z,36nm,0.9s,mb5.3,baz=80,slow=9.4,SNR=12
UBBA Unterbreizbach 75.90 320 *e*P **P 05 47 19.9 -0.2**
comp=Z,17nm,1.6s,mb4.7
DAVA Damuels 76.07 316⇑*i*P **P 05 47 20.8 -0.3**
comp=Z,50nm,1.1s,mb5.3,SNR=14
DAVOX Davos/Dischmat 76.09 316 LR LR 06 23 56.4
comp=Z,195nm,19.1s,MS4.4,baz=319,slow=38
KONO Kongsberg 76.12 329 *e*P **P 05 47 18.5 -2.6**
KONO AMb AMB 05 47 23.1
comp=Z,32nm,1.6s,mb5.0
KONO *e*S S 05 57 04.1 +0.7
KONO AMS AMS 06 24 17.3
comp=Z,497nm,22.1s,MS4.8
KONO Kongsberg 76.12 329 *e*P **P 05 47 20.8 -0.3**
KONO pmax pmax
comp=Z,63nm,1.4s,mb5.3
KONO Kongsberg 76.12 329 *e*P **P 05 47 20.8 -0.4**
comp=Z,63nm,1.4s,mb5.4
MUD Monsted U'grnd 76.33 325 *i* P **P 05 47 21.1 -1.3**
MUD *i* S S 05 57 07.4 +1.6
MUD pmax pmax
comp=Z,23nm,1.0s,mb5.1
MUD MLR MLR
comp=Z,280nm,18.0s,MS4.6
MUD Monsted U'grnd 76.33 325 *i* P **P 05 47 21.1 -1.3**
comp=Z,23nm,1.0s,mb5.1
MUD *i* S S 05 57 07.4 +1.6
MUD
comp=Z,270nm,18.0s
STU Stuttgart 76.48 318 *e*P **P 05 47 23.2 -0.2**
comp=Z,29nm,1.1s,mb5.1
TOD Tromm 76.70 318 *e*P **P 05 47 24.6 0.0**
KBS Kingsbay 76.76 349 *e*P **P 05 47 27.4 +3.0**
KBS Kingsbay 76.76 349 *e*P **P 05 47 24.4 -0.1**
KBS pmax pmax
comp=Z,23nm,0.9s,mb5.1
KBS Kingsbay 76.76 349 *e*P **P 05 47 24.4 -0.1**
comp=Z,23nm,0.9s,mb5.1
SPAK Spaichingen-Ko 76.78 317 *e*P **P 05 47 24.6 -0.5**
TNS Taunus Mts 76.91 319 *e*P **P 05 47 25.8 0.0**
comp=Z,66nm,1.5s,mb5.3
TNS Taunus Mts 76.91 319 *e*P **P 05 47 25.8 0.0**
TNS pmax pmax
comp=Z,66nm,1.5s,mb5.3
PGF Pioggiola 76.93 311⇑*i*P **P 05 47 25.5 -0.6**
comp=Z,53nm,1.3s,mb5.0
PGF Pioggiola 76.93 311⇑*i*P **P 05 47 25.5 -0.6**
PGF pmax pmax
comp=Z,27nm,1.3s,mb5.0
PGF Pioggiola 76.93 311⇑*i*P **P 05 47 25.5 -0.6**
comp=Z,27nm,1.3s,mb5.0
BFO Black Forest 77.07 317 *e*P **P 05 47 26.1 -0.7**
comp=Z,22nm,1.2s,mb5.0
BFO Black Forest 77.07 317 *e*P **P 05 47 26.1 -0.7**
BFO pmax pmax
comp=Z,22nm,1.2s,mb5.0

IBBN Ibbenburen 77.26 321 *e*P **P 05 47 27.8 +0.1**
comp=Z,59nm,1.2s,mb5.4
FELD Feldberg im Sc 77.31 317 *e*P **P 05 47 27.4 -0.7**
LANF Langenberg 77.39 318 *e*P **P 05 47 28.5 0.0**
LIBD Limburg 77.57 317 *e*P **P 05 47 29.1 -0.4**
BBS Basel-Blauen 77.67 316 *e*P **P 05 47 29.4 -0.7**
CDF Champ du Feu 77.77 317⇑*i*P **P 05 47 30.2 -0.5**
comp=Z,87nm,1.4s,mb5.2
CDF Champ du Feu 77.77 317⇑*i*P **P 05 47 30.2 -0.5**
CDF pmax pmax
comp=Z,44nm,1.4s,mb5.2
CDF Champ du Feu 77.77 317⇑*i*P **P 05 47 30.2 -0.5**
comp=Z,44nm,1.4s,mb5.2
RUP Ruppelstein 77.83 319 *e*P **P 05 47 30.9 -0.1**
ECH Echery 77.86 317 *e*P **P 05 47 30.4 -0.8**
ECH Echery 77.86 317 *e*P **P 05 47 30.6 -0.6**
ECH pmax pmax
comp=Z,21nm,1.4s,mb4.9
ECH Echery 77.86 317 *e*P **P 05 47 30.6 -0.6**
comp=Z,20nm,1.4s,mb4.9
SAOF Saorge 77.89 313 *e*P **P 05 47 30.9 -0.5**
MOF Molkenrain 77.90 317 *e*P **P 05 47 30.7 -0.7**
MIR Mirnyy 77.91 179 *e*P **P 05 47 32.0 +1.1**
MIR pmax pmax
comp=Z,72nm,2.0s,mb5.3
AUTN L'Aution 77.98 313 *e*P **P 05 47 31.3 -0.6**
SBF Sospel 77.98 313 *e*P **P 05 47 31.3 -0.6**
comp=Z,37nm,1.1s,mb4.9
SBF Sospel 77.98 313 *e*P **P 05 47 31.3 -0.6**
SBF pmax pmax
comp=Z,18nm,1.1s,mb4.9
SBF Sospel 77.98 313 *e*P **P 05 47 31.3 -0.6**
comp=Z,18nm,1.1s,mb4.9
LUCF Luceram 78.04 313 *e*P **P 05 47 31.9 -0.4**
HINF Hinteralfeld 78.09 317 *e*P **P 05 47 31.8 -0.7**
TOUF Mont Tournerai 78.10 313 *e*P **P 05 47 32.4 -0.2**
LOMF Lomont 78.14 316 *e*P **P 05 47 31.7 -1.1**
MVIF Mont Vial 78.18 313 *e*P **P 05 47 32.8 -0.2**
BER Bergen 78.25 330 *e*P **P 05 47 33.4 +0.3**
BER *e*S S 05 57 27.1 +0.6
BER AMS AMS 06 25 24.6
comp=Z,524nm,16.9s,MS4.9
BER Bergen 78.25 330 *e*P **P 05 47 35.7 +2.6**
BER LR LR
comp=Z,520nm,16.9s,MS4.9
FOO Floro 78.33 331 *e*P **P 05 47 33.2 -0.3**
FOO *e*S S 05 57 29.9 +2.5
FOO AMS AMS 06 25 11.6
comp=Z,741nm,16.5s,MS5.1
LPG La Plagne 78.34 314⇑*i*P **P 05 47 33.9 0.0**
comp=Z,79nm,1.3s,mb5.2
LPG La Plagne 78.34 314⇑*i*P **P 05 47 33.9 0.0**
LPG pmax pmax
comp=Z,40nm,1.3s,mb5.2
LPG La Plagne 78.34 314⇑*i*P **P 05 47 33.9 0.0**
comp=Z,40nm,1.3s,mb5.2
LPL La Plagne 78.35 314⇑*i*P **P 05 47 34.0 +0.1**
comp=Z,65nm,1.0s,mb5.2
LPL La Plagne 78.35 314⇑*i*P **P 05 47 34.0 +0.1**
LPL pmax pmax
comp=Z,32nm,1.0s,mb5.2
LPL La Plagne 78.35 314⇑*i*P **P 05 47 34.0 +0.1**
comp=Z,32nm,1.0s,mb5.2
CALN Calern 78.38 313 *e*P **P 05 47 33.9 -0.3**
MBDF Montbardon 78.39 314 *e*P **P 05 47 33.1 -1.1**
comp=Z,64nm,1.4s,mb5.1
MBDF Montbardon 78.39 314 *e*P **P 05 47 33.1 -1.1**
MBDF pmax pmax
comp=Z,32nm,1.4s,mb5.1
MBDF Montbardon 78.39 314 *e*P **P 05 47 33.1 -1.1**
comp=Z,32nm,1.4s,mb5.1
HAU Haudompre 78.42 317⇑*i*P **P 05 47 33.7 -0.6**
comp=Z,119nm,1.3s,mb5.3
HAU *e*MLR MLR
comp=Z,243nm,22.8s,MS4.2
HAU Haudompre 78.42 317⇑*i*P **P 05 47 33.7 -0.6**
HAU pmax pmax
comp=Z,59nm,1.3s,mb5.4
HAU MLR MLR
comp=Z,240nm,22.8s,MS4.5
HAU Haudompre 78.42 317⇑*i*P **P 05 47 33.7 -0.6**
comp=Z,60nm,1.3s,mb5.4
HAU LR LR
comp=Z,240nm,22.8s,MS4.5
WLF Walferdange 78.42 319 P **P 05 47 35.2 +1.0**
comp=Z,24nm,1.8s,mb4.8
WLF Walferdange 78.42 319 *e*P **P 05 47 34.6 +0.4**
comp=Z,50nm,1.5s,mb5.2
WLF Walferdange 78.42 319 *e*P **P 05 47 35.1 +0.9**
WLF pmax pmax
comp=Z,31nm,1.3s,mb5.1
WLF Walferdange 78.42 319 *e*P **P 05 47 35.1 +0.9**
comp=Z,31nm,1.3s,mb5.1
MEM Membach 78.45 320 P **P 05 47 35.2 +0.8**
comp=Z,11nm,1.8s,mb4.5
FRF La Foret Royal 78.58 312⇑*i*P **P 05 47 34.8 -0.4**
comp=Z,66nm,1.2s,mb5.1
FRF La Foret Royal 78.58 312⇑*i*P **P 05 47 34.8 -0.4**
FRF pmax pmax
comp=Z,33nm,1.2s,mb5.1
FRF La Foret Royal 78.58 312⇑*i*P **P 05 47 34.8 -0.4**
comp=Z,33nm,1.2s,mb5.1
THEF They Montfort 78.64 317 *e*P **P 05 47 35.0 -0.5**
LMR La Mourre 78.70 312⇑*i*P **P 05 47 35.4 -0.5**
comp=Z,46nm,1.3s,mb5.0
LMR La Mourre 78.70 312⇑*i*P **P 05 47 35.4 -0.5**
LMR pmax pmax
comp=Z,23nm,1.3s,mb5.0
LMR La Mourre 78.70 312⇑*i*P **P 05 47 35.4 -0.5**
comp=Z,23nm,1.3s,mb5.0
CABF La Chapelle 78.71 315⇑*i*P **P 05 47 36.0 +0.1**
comp=Z,118nm,1.3s,mb5.3
CABF La Chapelle 78.71 315⇑*i*P **P 05 47 36.0 +0.1**
CABF pmax pmax
comp=Z,59nm,1.3s,mb5.4
CABF La Chapelle 78.71 315⇑*i*P **P 05 47 36.0 +0.1**
comp=Z,59nm,1.3s,mb5.4
BCLA Clavier 78.91 319 P **P 05 47 37.7 +0.8**
comp=Z,13nm,1.8s,mb4.6
ORIF Oris-en-Rattie 79.00 314 *e*P **P 05 47 37.6 +0.1**
comp=Z,36nm,1.2s,mb4.9
ORIF *e*MLR MLR
comp=Z,307nm,21.5s,MS4.3
ORIF Oris-en-Rattie 79.00 314 *e*P **P 05 47 37.6 +0.1**
ORIF pmax pmax
comp=Z,18nm,1.2s,mb4.9
ORIF Oris-en-Rattie 79.00 314 *e*P **P 05 47 37.6 +0.1**
comp=Z,18nm,1.2s,mb4.9
MEZF Maizieres J'vi 79.24 317⇑*i*P **P 05 47 38.5 -0.3**
comp=Z,76nm,1.3s,mb5.2
MEZF Maizieres J'vi 79.24 317⇑*i*P **P 05 47 38.5 -0.3**
comp=Z,76nm,1.3s,mb5.5
GIVF Givet 79.24 319 *e*P **P 05 47 38.5 -0.2**
SMRF Simiane la Rot 79.31 313⇑*i*P **P 05 47 39.5 +0.2**
comp=Z,95nm,1.5s,mb5.2
SMRF Simiane la Rot 79.31 313⇑*i*P **P 05 47 39.5 +0.2**
comp=Z,95nm,1.5s,mb5.5
DOU Dourbes 79.39 319 P **P 05 47 39.9 +0.3**
OCF Saint Nazaire 79.44 313 *e*P **P 05 47 40.1 +0.1**
OG26 St.-Nazaire-De 79.44 313 *e*P **P 05 47 40.1 +0.1**
SNF Seneffe 79.55 320 P **P 05 47 40.9 +0.5**
comp=Z,17nm,1.9s,mb4.7
BAIF Baives 79.64 319⇑*i*P **P 05 47 40.8 -0.1**
comp=Z,85nm,1.5s,mb5.2
BAIF Baives 79.64 319⇑*i*P **P 05 47 40.8 -0.1**
BAIF pmax pmax
comp=Z,42nm,1.5s,mb5.2
BAIF Baives 79.64 319⇑*i*P **P 05 47 40.8 -0.1**
comp=Z,42nm,1.5s,mb5.2
VIVF Saint-Julien-l 79.86 314⇑*i*P **P 05 47 42.0 -0.2**
comp=Z,76nm,1.2s,mb5.2
VIVF Saint-Julien-l 79.86 314⇑*i*P **P 05 47 42.0 -0.2**
VIVF pmax pmax
comp=Z,38nm,1.2s,mb5.2
VIVF Saint-Julien-l 79.86 314⇑*i*P **P 05 47 42.0 -0.2**
comp=Z,38nm,1.2s,mb5.2
SSB Saint Sauveur 79.91 314 *e*P **P 05 47 42.2 -0.3**
LOR Lormes 80.16 316⇑*i*P **P 05 47 43.3 -0.5**
comp=Z,125nm,1.3s,mb5.4
LOR *e*MLR MLR
comp=Z,281nm,21.8s,MS4.3
LOR Lormes 80.16 316⇑*i*P **P 05 47 43.3 -0.5**
LOR pmax pmax
comp=Z,63nm,1.3s,mb5.4
LOR MLR MLR
comp=Z,280nm,21.8s,MS4.6

LOR Lormes 80.16 316⇑*i*P **P 05 47 43.3 -0.5**
comp=Z,62nm,1.3s,mb5.4
LOR LR LR
comp=Z,280nm,21.8s,MS4.6
SMF Signal de Mont 80.24 316⇑*i*P **P 05 47 43.7 -0.6**
comp=Z,117nm,1.4s,mb5.3
SMF Signal de Mont 80.24 316⇑*i*P **P 05 47 43.7 -0.6**
SMF pmax pmax
comp=Z,59nm,1.4s,mb5.3
SMF Signal de Mont 80.24 316⇑*i*P **P 05 47 43.7 -0.6**
comp=Z,59nm,1.4s,mb5.3
PLDF La Plantade 80.47 315⇑*e*P **P 05 47 45.2 -0.3**
DZM Mont Dzumac 80.51 115 *e*LR LR 06 12 58.4
comp=Z,358nm,32.0s
LASF Ste Croix 80.53 313⇑*i*P **P 05 47 46.1 +0.2**
comp=Z,163nm,1.3s,mb5.5
AVF Avril sur Loir 80.56 316⇑*i*P **P 05 47 45.4 -0.6**
comp=Z,113nm,1.4s,mb5.3
AVF Avril sur Loir 80.56 316⇑*i*P **P 05 47 45.4 -0.6**
AVF pmax pmax
comp=Z,57nm,1.4s,mb5.3
AVF Avril sur Loir 80.56 316⇑*i*P **P 05 47 45.4 -0.6**
comp=Z,57nm,1.4s,mb5.3
AGO Saint Agoulin 80.80 315⇑*e*P **P 05 47 47.1 -0.2**
LBL Lubilhac 80.82 314 *e*P **P 05 47 47.7 +0.3**
PYM Petit Puy Mans 80.92 315⇑*e*P **P 05 47 48.0 +0.1**
BGF Bois d'Agland 80.94 316⇑*i*P **P 05 47 47.8 -0.2**
comp=Z,111nm,1.4s,mb5.3
BGF Bois d'Agland 80.94 316⇑*i*P **P 05 47 47.8 -0.2**
BGF pmax pmax
comp=Z,55nm,1.4s,mb5.3
BGF Bois d'Agland 80.94 316⇑*i*P **P 05 47 47.8 -0.2**
comp=Z,55nm,1.4s,mb5.3
HYF Humbligny 80.99 316 *e*P **P 05 47 48.4 +0.2**
VERF Verneugheol 81.29 315 *e*P **P 05 47 50.0 +0.1**
TCF Toulx Ste Croi 81.41 315⇑*i*P **P 05 47 50.5 0.0**
comp=Z,82nm,1.3s,mb5.2
TCF Toulx Ste Croi 81.41 315⇑*i*P **P 05 47 50.5 0.0**
TCF pmax pmax
comp=Z,41nm,1.3s,mb5.2
TCF Toulx Ste Croi 81.41 315⇑*i*P **P 05 47 50.5 0.0**
comp=Z,41nm,1.3s,mb5.2
EJON La Jonquera 81.44 312 P **P 05 47 50.2 -0.6**
comp=Z,15nm,1.1s,mb4.8
LRDF Laroque-de-Fa 81.63 312 *e*P **P 05 47 51.8 +0.1**
MAW Mawson 81.67 191 P **P 05 47 55.3 +4.0**
comp=Z,6.0nm,0.8s,mb4.6,baz=350,slow=6.9,SNR=6.1
MAW LR LR 06 18 28.8
comp=Z,83nm,18.2s,MS4.1,baz=91,slow=32
CAF Calviac 81.69 314⇑*i*P **P 05 47 52.2 +0.2**
comp=Z,56nm,1.2s,mb5.1
CAF Calviac 81.69 314⇑*i*P **P 05 47 52.2 +0.2**
CAF pmax pmax
comp=Z,28nm,1.2s,mb5.1
CAF Calviac 81.69 314⇑*i*P **P 05 47 52.2 +0.2**
comp=Z,28nm,1.2s,mb5.1
MTLF Montolieu 81.81 313⇑*i*P **P 05 47 52.6 -0.1**
comp=Z,67nm,1.2s,mb5.2
MTLF Montolieu 81.81 313⇑*i*P **P 05 47 52.6 -0.1**
MTLF pmax pmax
comp=Z,33nm,1.2s,mb5.1
MTLF Montolieu 81.81 313⇑*i*P **P 05 47 52.6 -0.1**
comp=Z,33nm,1.2s,mb5.1
ETOS Mallorca 81.87 309 P **P 05 47 52.2 -0.8**
comp=Z,13nm,0.7s,mb5.0
CFON Fontmartina 81.87 311 P **P 05 47 53.5 +0.5**
comp=Z,2.2nm,0.5s,mb4.3
RJF Les Rejaudoux 82.02 315⇑*i*P **P 05 47 54.1 +0.3**
comp=Z,125nm,1.4s,mb5.4
RJF *e*MLR MLR
comp=Z,147nm,18.2s,MS4.1
RJF Les Rejaudoux 82.02 315⇑*i*P **P 05 47 54.1 +0.3**
RJF pmax pmax
comp=Z,63nm,1.4s,mb5.3
RJF MLR MLR
comp=Z,150nm,18.3s,MS4.4
RJF Les Rejaudoux 82.02 315⇑*i*P **P 05 47 54.1 +0.3**
comp=Z,62nm,1.4s,mb5.3
RJF LR LR
comp=Z,150nm,18.3s,MS4.4
VALF Valcebollere 82.08 312 *e*P **P 05 47 54.6 +0.5**
CLLI Llivia 82.11 312 P **P 05 47 54.0 -0.3**
TAM Tamanrasset 82.14 292 *e*P **P 05 47 55.9 +1.1**
TAM pmax pmax
comp=Z,38nm,1.4s,mb5.1
TAM Tamanrasset 82.14 292 *e*P **P 05 47 55.9 +1.1**
comp=Z,38nm,1.4s,mb5.1
JMIC Jan Mayen 82.46 341 *e*P **P 05 48 01.1 +5.5**
EMIR Miracle 82.52 311 P **P 05 47 56.8 +0.4**
comp=Z,47nm,0.9s,mb5.5
LFF La Frestale 82.62 314⇑*i*P **P 05 47 57.2 +0.3**
comp=Z,75nm,1.2s,mb5.3
LFF La Frestale 82.62 314⇑*i*P **P 05 47 57.2 +0.3**
LFF pmax pmax
comp=Z,38nm,1.2s,mb5.3
LFF La Frestale 82.62 314⇑*i*P **P 05 47 57.2 +0.3**
comp=Z,38nm,1.2s,mb5.3
LDF La Druitiere 82.64 318⇑*i*P **P 05 47 56.4 -0.5**
comp=Z,25nm,1.0s,mb4.9
LDF La Druitiere 82.64 318⇑*i*P **P 05 47 56.4 -0.5**
LDF pmax pmax
comp=Z,13nm,1.0s,mb4.9
LDF La Druitiere 82.64 318⇑*i*P **P 05 47 56.4 -0.5**
comp=Z,13nm,1.0s,mb4.9
CSOR Sort 82.74 312 P **P 05 47 57.3 -0.3**
comp=Z,53nm,1.3s,mb5.4
FLN La Foliniere 82.85 318⇑*i*P **P 05 47 57.6 -0.4**
comp=Z,72nm,1.2s,mb5.3
FLN *e*MLR MLR
comp=Z,252nm,19.0s,MS4.3
FLN La Foliniere 82.85 318⇑*i*P **P 05 47 57.6 -0.4**
FLN pmax pmax
comp=Z,36nm,1.2s,mb5.3
FLN MLR MLR
comp=Z,250nm,19.0s,MS4.6
FLN La Foliniere 82.85 318⇑*i*P **P 05 47 57.6 -0.4**
comp=Z,36nm,1.2s,mb5.3
FLN LR LR
comp=Z,250nm,19.0s,MS4.6
EPOB Poblet 82.94 311 P **P 05 47 57.8 -0.8**
comp=Z,44nm,1.0s,mb5.4
MFF Saint Martin d 82.97 316⇑*i*P **P 05 47 58.3 -0.4**
comp=Z,77nm,1.1s,mb5.3
MFF Saint Martin d 82.97 316⇑*i*P **P 05 47 58.3 -0.4**
MFF pmax pmax
comp=Z,39nm,1.1s,mb5.3
MFF Saint Martin d 82.97 316⇑*i*P **P 05 47 58.3 -0.4**
comp=Z,38nm,1.1s,mb5.3
GRR Gorron 83.15 318 *e*P **P 05 47 59.2 -0.4**
comp=Z,84nm,1.5s,mb5.2
GRR Gorron 83.15 318 *e*P **P 05 47 59.2 -0.4**
GRR pmax pmax
comp=Z,42nm,1.5s,mb5.2
GRR Gorron 83.15 318 *e*P **P 05 47 59.2 -0.4**
comp=Z,42nm,1.5s,mb5.2
EPF Esparros 83.21 312 *e*P **P 05 47 59.3 -0.7**
comp=Z,20nm,1.2s,mb4.7
EPF Esparros 83.21 312 *e*P **P 05 47 59.3 -0.7**
EPF pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
EPF Esparros 83.21 312 *e*P **P 05 47 59.3 -0.7**
comp=Z,10nm,1.2s,mb4.7
RESF Ens 83.25 312 *e*P **P 05 48 00.4 +0.2**
ESK Eskdalemuir 83.37 325 *i* P **P 05 48 01.8 +1.3**
EBIE Bielsa 83.41 312 P **P 05 48 00.8 -0.3**
comp=Z,15nm,0.8s,mb5.1
ERTA Horta de San J 83.56 310 P **P 05 48 01.1 -0.7**
comp=Z,50nm,1.0s,mb5.6
REYF Montagne du Re 83.73 313 *e*P **P 05 48 02.8 +0.1**
ETSF Etsaut 83.88 312 *e*P **P 05 48 03.8 +0.3**
comp=Z,49nm,1.2s,mb5.2
ETSF Etsaut 83.88 312 *e*P **P 05 48 03.8 +0.3**
ETSF pmax pmax
comp=Z,24nm,1.2s,mb5.2
ETSF Etsaut 83.88 312 *e*P **P 05 48 03.8 +0.3**
comp=Z,24nm,1.2s,mb5.2
ESAC San Caprasio 84.02 311 P **P 05 48 03.5 -0.7**
comp=Z,32nm,0.7s,mb5.6
LARF Larrau 84.17 313 *e*P **P 05 48 05.2 +0.3**
EMOS Mosqueruela 84.26 310 P **P 05 48 05.8 +0.3**
comp=Z,117nm,1.3s,mb5.8
SGMF Saint Gilles 84.29 318 *e*P **P 05 48 05.2 -0.2**
comp=Z,40nm,1.3s,mb5.1
SGMF Saint Gilles 84.29 318 *e*P **P 05 48 05.2 -0.2**
SGMF pmax pmax
comp=Z,20nm,1.3s,mb5.1
SGMF Saint Gilles 84.29 318 *e*P **P 05 48 05.2 -0.2**

comp=Z,20nm,1.3s,mb5.1
SJPF Ste Jean 84.33 313 *e*P **P 05 48 06.0 +0.3**
comp=Z,40nm,1.1s,mb5.1
SJPF Ste Jean 84.33 313 *e*P **P 05 48 06.0 +0.3**
SJPF pmax pmax
comp=Z,20nm,1.1s,mb5.2
SJPF Ste Jean 84.33 313 *e*P **P 05 48 06.0 +0.3**
comp=Z,20nm,1.1s,mb5.2
EBEN Beniarda 84.37 308 P **P 05 48 05.4 -0.6**
comp=Z,37nm,1.2s,mb5.4
EALK Alkurruntz 84.51 313 P **P 05 48 06.8 +0.2**
comp=Z,11nm,0.8s,mb5.0
ROSF Rostrenen 84.75 318 *e*P **P 05 48 07.4 -0.3**
comp=Z,55nm,1.4s,mb5.2
ROSF Rostrenen 84.75 318 *e*P **P 05 48 07.4 -0.3**
ROSF pmax pmax
comp=Z,28nm,1.4s,mb5.2
ROSF Rostrenen 84.75 318 *e*P **P 05 48 07.4 -0.3**
comp=Z,28nm,1.4s,mb5.2
QUIF Quistinic 84.76 318 *e*P **P 05 48 07.2 -0.6**
comp=Z,83nm,1.6s,mb5.3
QUIF Quistinic 84.76 318 *e*P **P 05 48 07.2 -0.6**
QUIF pmax pmax
comp=Z,42nm,1.6s,mb5.3
QUIF Quistinic 84.76 318 *e*P **P 05 48 07.2 -0.6**
comp=Z,42nm,1.6s,mb5.3
ECHE Chera 84.78 309 P **P 05 48 07.4 -0.7**
ECHE pmax pmax
comp=Z,24nm,0.8s,mb5.4
ECHE Chera 84.78 309 P **P 05 48 07.4 -0.6**
comp=Z,24nm,0.8s,mb5.4
ETOR Torete 85.36 311 P **P 05 48 10.5 -0.5**
ETOR pmax pmax
comp=Z,8.0nm,0.7s,mb5.0
ETOR Torete 85.36 311 P **P 05 48 10.5 -0.5**
comp=Z,8.1nm,0.7s,mb5.0
ETOB Tobarra 85.40 308 P **P 05 48 11.6 +0.4**
comp=Z,40nm,1.2s,mb5.4
ELAN Lanestosa 85.89 313 P **P 05 48 13.0 -0.6**
comp=Z,7.3nm,0.6s,mb5.1
EVIA Vianos 86.13 308 P **P 05 48 13.6 -1.2**
EVIA pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
EVIA Vianos 86.13 308 P **P 05 48 13.6 -1.2**
comp=Z,4.6nm,0.8s,mb4.8
ENIJ Nijar 86.24 307 P **P 05 48 15.4 0.0**
ENIJ pmax pmax
comp=Z,26nm,1.0s,mb5.4
ENIJ Nijar 86.24 307 P **P 05 48 15.4 0.0**
comp=Z,26nm,1.0s,mb5.4
EHUE Huescar 86.37 308 P **P 05 48 16.3 +0.3**
EHUE pmax pmax
comp=Z,6.0nm,0.7s,mb4.9
EHUE Huescar 86.37 308 P **P 05 48 16.3 +0.3**
comp=Z,5.5nm,0.7s,mb4.9
EQES Quesada 86.74 308 P **P 05 48 17.3 -0.6**
comp=Z,17nm,0.8s,mb5.3
SCO Scoresbysund 86.82 342 *i*P **P 05 48 18.5 +0.9**
SCO *i*S S 05 58 58.1 +4.3
SCO pmax pmax
comp=Z,5.0nm,1.0s,mb4.7
SCO MLR MLR
comp=Z,440nm,20.0s,MS4.9
SCO Scoresbysund 86.82 342 *i*P **P 05 48 18.5 +0.9**
comp=Z,5.1nm,1.0s,mb4.7
SCO Scoresbysund 86.82 342 *i*S S 05 58 58.1 +4.3
SCO
comp=Z,440nm,20.0s
GUD Guadarrama 86.96 311 P **P 05 48 18.4 -0.5**
GUD pmax pmax
comp=Z,6.0nm,0.6s,mb5.0
GUD Guadarrama 86.96 311 P **P 05 48 18.4 -0.5**
comp=Z,5.9nm,0.6s,mb5.0
ESDC Sonseca Array 87.03 310 P **P 05 48 19.1 -0.1**
comp=Z,4.3nm,0.9s,mb4.7,baz=56,slow=4.7,SNR=9.7
ESDC LR LR 06 33 55.0
comp=Z,112nm,19.2s,MS4.3,baz=70,slow=40
ESDC Sonseca Array 87.03 310 P **P 05 48 18.5 -0.7**
comp=Z,5.7nm,1.1s,mb4.7
ESLA Sonseca Array 87.03 310 *e*P **P 05 48 18.9 -0.3**
comp=Z,3.1nm,1.1s,mb4.5
EBAN Banos Encina 87.22 308 P **P 05 48 19.4 -0.8**
EBAN pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
EBAN Banos Encina 87.22 308 P **P 05 48 19.4 -0.8**
comp=Z,4.8nm,0.8s,mb4.8
EGUA Guajares 87.33 307 P **P 05 48 20.9 +0.2**
EGUA pmax pmax
comp=Z,180nm,1.0s,mb6.3
EGUA Guajares 87.33 307 P **P 05 48 20.9 +0.1**
comp=Z,180nm,1.0s,mb6.3
PAB San Pablo 87.34 310 *e*P **P 05 48 21.2 +0.4**
PAB pmax pmax
comp=Z,10.0nm,1.1s,mb5.0
PAB San Pablo 87.34 310 *e*P **P 05 48 21.2 +0.5**
comp=Z,10.0nm,1.1s,mb5.0
EADA Adamuz 87.82 308 P **P 05 48 21.6 -1.5**
comp=Z,6.4nm,0.6s,mb5.0
SYO Syowa Base 88.22 197⇑ *e*P **P 05 48 24.3 +0.1**
EPLA Plasencia 88.53 310 P **P 05 48 26.3 -0.1**
EPLA pmax pmax
comp=Z,27nm,1.2s,mb5.5
EPLA Plasencia 88.53 310 P **P 05 48 26.3 -0.1**
comp=Z,27nm,1.2s,mb5.5
ECAL Calabor 88.56 312 P **P 05 48 28.5 +2.1**
comp=Z,10nm,0.9s,mb5.2
EJIF Jimena Fronter 88.91 307 P **P 05 48 28.8 +0.5**
EJIF pmax pmax
comp=Z,32nm,1.3s,mb5.5
EJIF Jimena Fronter 88.91 307 P **P 05 48 28.8 +0.6**
comp=Z,32nm,1.3s,mb5.5
MVO Moncorvo 88.96 312 *e*P **P 05 48 28.7 +0.3**
comp=Z,25nm,1.7s,mb5.3
MVO *e*SKS 05 59 16.6
MVO Moncorvo 88.96 312 P **P 05 48 27.9 -0.4**
MDT Midelt 89.05 303 LR LR 06 32 47.6
comp=Z,668nm,18.1s,MS5.1,baz=231,slow=39
EMIN Mina Concepcio 89.53 308 P **P 05 48 30.7 -0.4**
comp=Z,3.9nm,0.6s,mb4.9
MTE Manteigas 89.53 311 *e*SKS 05 59 29.1
ELOB Lobios 89.53 313 P **P 05 48 29.0 -2.1**
comp=Z,14nm,0.9s,mb5.3
EBAD Badajoz 89.54 309 P **P 05 48 30.5 -0.7**
comp=Z,17nm,1.1s,mb5.3
PCAB Cabril 89.55 312 *e*P **P 05 48 32.1 +1.0**
comp=Z,31nm,1.3s,mb5.5
TTA Tatalina 89.59 25 *e*P **P 05 48 31.9 +1.0**
TTA pmax pmax
comp=Z,30nm,1.2s,mb5.5
TTA Tatalina 89.59 25 *e*P **P 05 48 31.9 +1.0**
comp=Z,30nm,1.2s,mb5.5
PCBR Castelo Branco 89.62 311 *e*P **P 05 48 32.8 +1.3**
comp=Z,22nm,1.3s,mb5.3
PMRV Marv??o 89.66 310 *e*P **P 05 48 32.2 +0.5**
comp=Z,20nm,1.6s,mb5.2
PVIS Viseu 89.71 311 *e*P **P 05 48 32.6 +0.7**
comp=Z,28nm,1.6s,mb5.3
PBAR Barrancos 89.71 309 *e*P **P 05 48 32.2 +0.2**
comp=Z,51nm,1.3s,mb5.7
PBAR *e*SKS 05 59 28.1
COLD Coldfoot 89.78 20 *e*P **P 05 48 32.1 +0.4**
comp=Z,50nm,1.9s,mb5.5
PESTR Estremoz 89.95 310 *e*SKS 05 59 31.3
SUMG Summit 90.03 347 *e*P **P 05 48 34.1 +1.3**
comp=Z,40nm,1.0s,mb5.7
SUMG Summit 90.03 347 *i*P **P 05 48 33.4 +0.7**
comp=Z,29nm,1.0s,mb5.6
SUMG
comp=Z,260nm,20.0s
EGRO El Granado 90.21 308 P **P 05 48 29.3 -5.0**
comp=Z,8.5nm,0.7s,mb5.2
EVO Evora 90.36 309⇑ *i*P **P 05 48 36.1 +1.1**
comp=Z,26nm,1.2s,mb5.1
EVO *e*MLR MLR
comp=Z,190nm,20.2s,MS4.2
EVO Evora 90.36 309 *e*P **P 05 48 36.4 +1.4**
comp=Z,29nm,1.9s,mb5.3
PTOM Tomar 90.37 310 *e*P **P 05 48 36.5 +1.5**
comp=Z,64nm,1.6s,mb5.7
PBEJ Beja 90.38 309 *e*P **P 05 48 36.3 +1.2**
comp=Z,25nm,1.7s,mb5.3
PVAQ Vaqueiros 90.42 308 *e*P **P 05 48 36.0 +0.7**
comp=Z,45nm,1.2s,mb5.7
PVAQ *e*SKS 05 59 36.0
SVW2 Sparrevohn 90.56 27 *e*P **P 05 48 36.5 +1.1**
comp=Z,71nm,1.5s,mb5.8
PCVE Castro Verde 90.61 309 *e*SKS 05 59 37.5

BPAW Bear Paw Mtn. 91.06 23 *e*P **P 05 48 38.1 +0.5**
comp=Z,27nm,1.0s,mb5.5
PPLA Purkeypile 91.17 24 *e*P **P 05 48 38.5 +0.3**
comp=Z,22nm,1.1s,mb5.4
PMAFR Mafra 91.20 310 *e*SKS 05 59 44.1
MCK McKinley 92.03 23 *e*P **P 05 48 42.5 +0.3**
MCK *e* pP 05 48 49.0 -1.0
MCK pmax pmax
comp=Z,24nm,1.0s,mb5.5
MCK McKinley 92.03 23 *e*P **P 05 48 42.5 +0.3**
comp=Z,24nm,1.0s,mb5.5
MCK *e* pP 05 48 49.0 -1.1
ILAR Eielson Array 92.23 21 P **P 05 48 42.4 -0.7**
comp=Z,3.0nm,0.8s,mb4.7,baz=298,slow=4.1,SNR=26
ILAR PP PP 05 52 21.2 -1.8
comp=Z,1.0nm,0.9s,baz=294,slow=5.8,SNR=4.8
ILAR LR LR 06 37 37.6
comp=Z,297nm,18.9s,MS4.8,baz=126,slow=40
ILAR Eielson Array 92.23 21 P **P 05 48 42.4 -0.7**
ILAR 05 52 21.2
PMR Palmer 93.06 25 *e*P **P 05 48 46.7 -0.3**
PMR pmax pmax
comp=Z,14nm,1.0s,mb5.3
PMR Palmer 93.06 25 *e*P **P 05 48 46.7 -0.3**
comp=Z,14nm,1.0s,mb5.3
RC01 Rabbit Creek A 93.07 25 *e*P **P 05 48 47.6 +0.6**
comp=Z,40nm,1.1s,mb5.8
RC01 *e* pP 05 48 53.3 -1.6
KDAK Kodiak Island 93.41 29 P **P 05 48 49.7 +1.0**
comp=Z,16nm,1.0s,mb5.4,baz=218,slow=3.7,SNR=2.9
KDAK Kodiak Island 93.41 29 *e*P **P 05 48 49.3 +0.6**
KDAK pmax pmax
comp=Z,36nm,1.0s,mb5.8
KDAK Kodiak Island 93.41 29 *e*P **P 05 48 49.3 +0.6**
comp=Z,36nm,1.0s,mb5.8
RES Resolute Bay 93.82 2 P **P 05 48 51.2 +0.9**
comp=Z,14nm,0.9s,mb5.4,baz=332,slow=3.4,SNR=16
RES Resolute Bay 93.82 2 *e*P **P 05 48 50.4 +0.1**
RES pmax pmax
comp=Z,21nm,0.9s,mb5.6
RES Resolute Bay 93.82 2 *e*P **P 05 48 50.4 +0.1**
comp=Z,21nm,0.9s,mb5.6
INK Inuvik 94.11 15 P **P 05 48 52.1 +0.5**
comp=Z,9.3nm,1.2s,mb5.1,baz=317,slow=5.1,SNR=12
INK Inuvik 94.11 15 *e*P **P 05 48 51.9 +0.2**
INK pmax pmax
comp=Z,20nm,1.3s
INK Inuvik 94.11 15 *e*P **P 05 48 51.9 +0.2**
comp=Z,20nm,1.3s,mb5.4
EGAK Eagle 94.22 20 *e*P **P 05 48 52.6 +0.4**
comp=Z,9.9nm,1.4s,mb5.0
MENT Mentasta 94.43 22 *e*P **P 05 48 54.4 +1.2**
DBIC Dimbokro 95.07 278 LR LR 06 33 22.9
comp=Z,261nm,18.1s,MS4.7,baz=60,slow=36
BMRM Bremner River 95.23 24 *e*P **P 05 48 57.7 +0.8**
comp=Z,36nm,1.4s,mb5.6
DAWY Dawson 95.26 20 *e*P **P 05 48 57.6 +0.5**
YKA Yellowknife Ar 103.38 12 PP PP 05 53 46.9 -1.4
comp=Z,1.3nm,0.9s,baz=337,slow=7.2,SNR=4.0
HUMO Hull Mountain 117.43 28 *e*PKPdf PKPdf 05 54 20.0 +0.5
MSO Missoula 117.50 20 *e*PKPdf PKPdf 05 54 19.9 +0.5
MSO *e*PP PP 05 55 32.0 +1.7
GCMT Greycliff 119.75 17 *e*PKPdf PKPdf 05 54 24.6 +0.8
HLID Hailey 120.19 22 *e*PKPdf PKPdf 05 54 25.1 +0.4
RLMT Red Lodge 120.47 17 *e*PKPdf PKPdf 05 54 26.5 +1.3
PPT Papeete 120.59 104 *e*LR LR 06 31 33.5
comp=Z,308nm,30.8s
TBI Tubuai 120.85 110 *e*LR LR 06 31 46.9
comp=Z,302nm,35.0s
TPAW Teton Pass 121.44 19 *e*PKPdf PKPdf 05 54 27.9 +0.8
SNOW Snow King Moun 121.52 19 *e*PKPdf PKPdf 05 54 28.7 +1.4
REDW Red Top Meadow 121.58 19 *e*PKPdf PKPdf 05 54 28.1 +0.7
M13A Montello 122.18 23 *e*PKPdf PKPdf 05 54 29.6 +1.0
N12A Clover Valley, 122.28 24 *e*PKPdf PKPdf 05 54 30.4 +1.6
PDAR Pinedale Array 122.53 18 PKP PKPdf 05 54 29.1 -0.2
comp=Z,2.1nm,0.9s,baz=4.4,slow=1.9,SNR=13
RSSD Black Hills 122.76 13 *e*PKIKP PKPdf 05 54 29.9 +0.3
HWUT Hardware Ranch 122.91 21 *e*PKPdf PKPdf 05 54 29.8 -0.2
DUG Dugway 123.70 22 *e*PKIKP PKPdf 05 54 32.5 +0.9
ECSD EROS Data Cent 124.45 7 *e*PKPdf PKPdf 05 54 32.1 -0.8
BINY Binghamton 125.32 349 *e*PKPdf PKPdf 05 54 34.2 -0.4
MSU Marysvale 125.41 23 *e*PKIKP PKPdf 05 54 37.0 +2.1
JFWS Jewell Farm 125.76 2 *e*PKIKP PKPdf 05 54 34.9 -0.5
GSC Goldstone 126.14 29 *e*PKIKP PKPdf 05 54 38.3 +1.9
SMCO Snowmass 126.60 18 *e*PKPdf PKPdf 05 54 37.7 +0.5
PV01 Paradox Valley 127.04 20 *e*PKPdf PKPdf 05 54 38.9 +0.9
PV01 *e*PP PP 05 56 35.7 +0.6
MVCO Mesa Verde 127.90 20 *e*PKPdf PKPdf 05 54 40.9 +1.2
ACSO Alum Creek Sta 128.23 355 *e*PKPdf PKPdf 05 54 40.4 +0.1
SDCO Great Sand Dun 128.36 17 *e*PKPdf PKPdf 05 54 40.4 -0.2
GLA Glamis 128.92 29 *e*PKIKP PKPdf 05 54 44.0 +2.2
ANMO Albuquerque 130.64 20 *e*PKIKP PKPdf 05 54 46.2 +1.2
LAZ Ladron 130.91 21 *e*PKPdf PKPdf 05 54 47.4 +1.9
BNM Barren Site 131.31 20 *e*PKPdf PKPdf 05 54 47.9 +1.6
TUC Tucson 131.35 26 *e*PKIKP PKPdf 05 54 48.2 +1.8
WVT Waverly 132.56 359 *e*PKIKP PKPdf 05 54 48.3 -0.3
TKL Tuckaleechee C 132.84 355 PKP PKPdf 05 54 49.6 +0.5
comp=Z,5.1nm,0.9s,baz=128,slow=2.9,SNR=7.2
WMOK Wichita Mounta 132.89 12 *e*PKIKP PKPdf 05 54 50.1 +0.9
CPCT Cooper Cave 133.11 356 *e*PKPdf PKPdf 05 54 50.6 +1.0
GDL2 Guadalupe Moun 133.84 19 *e*PKPdf PKPdf 05 54 52.0 +0.9
MIAR Mount Ida 133.87 6 *e*PKIKP PKPdf 05 54 52.9 +1.8
JSC Jenkinsville 133.92 352 *e*PKIKP PKPdf 05 54 51.5 +0.3
MNTX Cornudas Mount 133.97 20 *e*PKPdf PKPdf 05 54 53.3 +2.0
RKT Rikitea 134.16 111 *e*LR LR 06 37 50.2
comp=Z,285nm,39.2s
TXAR Lajitas Array 136.72 20 PKhKP PKPpre 05 54 47.3
comp=Z,0.3nm,0.8s,baz=322,slow=0.6,SNR=3.8
TXAR PKP PKPdf 05 54 57.3 +0.8
comp=Z,2.8nm,1.0s,baz=288,slow=1.2,SNR=13
TXAR PP PP 05 57 35.1 -2.2
comp=Z,1.9nm,1.1s,baz=321,slow=3.2,SNR=5.7
TXAR Lajitas Array 136.72 20 PKIKP PKPdf 05 54 57.3 +0.8
TXAR 05 57 35.2
JCT Junction City 136.76 15 *e*PKIKP PKPdf 05 54 56.9 +0.3
CRPR Cabo Rojo, PR 143.94 324 *e*PKPdf PKPdf 05 55 10.1 +0.3
TRQA Tornquist 144.66 217 *e*PKPdf PKPdf 05 55 08.8 -1.7
SDDR Presa de Saban 145.33 331 *e*PKPdf PKPdf 05 55 12.5 +0.3
PLCA Paso Flores 147.01 205 PKPbc PKPbc 05 55 16.9 +0.4
comp=Z,21nm,1.0s,baz=147,slow=3.6,SNR=15
PLCA Paso Flores 147.01 205 *e*PKPdf PKPdf 05 55 16.2 +1.8
CPUP Villa Florida 147.35 239 PKPbc PKPbc 05 55 18.1 +0.2
comp=Z,6.4nm,1.0s,baz=78,slow=4.4,SNR=7.2
MTDJ Mount Denham 148.55 340 *e*PKPdf PKPdf 05 55 18.8 +1.1
MTDJ *e*PKPbc PKPbc 05 55 22.2 +1.0
CMIG Matias Romero 150.79 13 PKPbc PKPbc 05 55 27.1 +0.2
comp=Z,15nm,0.9s,baz=305,slow=1.0,SNR=12
TGUH Tegucigalpa,Un 154.52 358 *e*PKPdf PKPdf 05 55 27.7 +1.0
LPAZ La Paz 159.88 254 PKP PKPdf 05 55 34.4 +0.9
comp=Z,2.9nm,1.0s,baz=47,slow=3.4,SNR=8.6
LPAZ PKPab PKPab 05 56 13.7 +0.9
comp=Z,6.7nm,1.1s,baz=78,slow=3.7,SNR=6.3
OTAV Otavalo 164.74 320 *e*PKPdf PKPdf 05 55 39.9 +1.3

IDC 26 05:42:09.2±3.7, 9°.95S×159°.65E, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.9/16, mbtmp3.9/5, Error ellipse: s-maj=114.3km s-min=37.8km az=142.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**33.93**	**252**	P	P	05 48 54.1	-0.3
	1.7nm,0.9s,baz=100,slow=11,SNR=2.4						
CMAR	**Chiang Mai Arr**	**66.20**	**295**	P	P	05 53 00.5	+1.2
	1.0nm,0.6s,baz=124,slow=5.0,SNR=4.3						
SONM	**Songino Array**	**74.32**	**326**	P	P	05 53 48.0	-0.5
	0.8nm,0.7s,baz=131,slow=6.1,SNR=4.7						
ILAR	**Eielson Array**	**84.47**	**20**	P	P	05 54 43.9	+0.4
	1.4nm,1.0s,baz=242,slow=4.0,SNR=5.5						
MKAR	**Makanchi Array**	**88.66**	**318**	P	P	05 55 04.0	-0.4
	0.5nm,0.8s,baz=103,slow=6.4,SNR=3.0						

*ISCJB **26** 05:46:11.6±2.1, 14°.53N±0°.07×42°.50E±0°.10, h5km±17km, Error ellipse: s-maj=18.9km s-min=6.2km az=145.7*
*CSEM **26** 05:46:12.1±0.8, 14°.39N×42°.38E, h20km, ML3.9, Error ellipse: s-maj=21.2km s-min=8.5km az=55.0*
*SGS **26** 05:46:13.3, 14°.31N×42°.23E, h25km*
*DHMR **26** 05:46:13.4±1.4, 14°.51N×42°.71E, h4km±11km, ML3.9*
ISC 26 05:46:12.8±2.6, 14°.50N±0°.07×42°.5E±0°.1, h12km±21km, n12, σ1§02/20, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UDYN	**Al 'Udayn**	**1.53**	**110**	*i*P	**Pn**	**05 46 39.0**	**-0.9**
UDYN				*i*S	**Sn**	**05 46 58.3**	**-1.5**
UDYN				AML	AML	05 47 01.2	
	comp=E,2μm,0.7s						
DHBB	**Dhamar BB**	**1.84**	**88**	*i*P	**Pn**	**05 46 43.6**	**-0.6**
DHBB				*i*S	**Sn**	**05 47 07.2**	**-0.3**
DHBB	**Dhamar BB**	**1.84**	**88**	*i*P	**Pn**	**05 46 43.6**	**-0.7**
DHBB				*i*S	**Sn**	**05 47 07.2**	**-0.3**
SANA	**San'a**	**1.88**	**62**	*i*P	**Pn**	**05 46 45.0**	**+0.2**
SANA				*i*S	**Sn**	**05 47 08.0**	**-0.4**
TRBA	**At Turbah**	**2.02**	**129**	*i*P	**Pn**	**05 46 46.2**	**-0.5**
TRBA				*i*S	**Sn**	**05 47 13.5**	**+1.5**
TRBA				AML	AML	05 47 21.6	
	comp=E,1μm,0.7s						
FRSS	**Farasan al Kab**	**2.25**	**351**	P	**Pn**	**05 46 49.7**	**-0.3**
FRSS	**Farasan al Kab**	**2.25**	**351**	P	**Pn**	**05 46 49.7**	**-0.3**
FRSS				S	**Sn**	**05 47 17.0**	**-0.7**
JAZS	**Jizan**	**2.58**	**9**	P	**Pn**	**05 46 53.8**	**-0.8**
JAZS	**Jizan**	**2.58**	**9**	P	**Pn**	**05 46 53.8**	**-0.7**
BDHA	**Al Bayda'**	**3.03**	**100**	*i*P	**Pn**	**05 47 02.8**	**+2.2**
BDHA				*i*S	**Sn**	**05 47 40.9**	**+4.1**
BDHA				AML	AML	05 47 49.3	
	comp=N,2μm,0.5s						
DJNS	**Zahran al Janu**	**3.34**	**18**	P	**Pn**	**05 47 06.1**	**+1.2**
DJNS	**Zahran al Janu**	**3.34**	**18**	P	**Pn**	**05 47 06.1**	**+1.2**
DJNS				S	**Sn**	**05 47 45.6**	**+1.1**

IDC 26 06:02:22.3±67.0, 3°.90N×95°.98E, h0km, mb3.9/3, mb1 3.9/3, mb1mx3.5/19, mbtmp3.9/3, Error ellipse: s-maj=1264.0km s-min=149.3km az=177.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**44.35**	**347**	P	P	06 10 34.0	-0.1
	0.9nm,0.6s,baz=158,slow=7.2,SNR=9.8						
SONM	**Songino Array**	**44.68**	**10**	P	P	06 10 36.9	+0.1
	0.4nm,0.4s,baz=194,slow=7.7,SNR=4.1						
ZALV	**Zalesovo Beam**	**50.72**	**351**	P	P	06 11 23.7	+0.1
	1.0nm,0.4s,baz=173,slow=5.7,SNR=6.3						

*DDA **26** 06:15:58.9, 35°.51N×31°.53E, h14km±1km, Md3.3*
*ISK **26** 06:16:00.8, 35°.60N×31°.72E, h15km, MD3.5*
*CSEM **26** 06:16:01.2±0.1, 35°.56N×31°.68E, h15km, MD3.3, Error ellipse: s-maj=2.8km s-min=1.2km az=32.0*
ISC 26 06:15:59.2±1.2, 35°.49N±0°.06×31°.53E±0°.06, h4km±8km, n44, σ1§19/54, 1C, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPCY	**Paphos**	**0.90**	**132**	P	**Pg**	**06 16 19.8**	**+3.4**
PPCY	**Paphos**	**0.90**	**132**	P	**Pg**	**06 16 19.8**	**+3.4**
ALFC	**Alevga**	**0.93**	**111**	P	**Pg**	**06 16 17.8**	**+0.7**
	16nm,0.3s						
ALFC	**Alevga**	**0.93**	**111**	P	**Pg**	**06 16 17.8**	**+0.7**
	16nm,0.3s						
GAZI	**Gazipasa**	**0.97**	**40**	*i*P	**Pg**	**06 16 17.6**	**-0.2**
GAZI				*i*S	**Sg**	**06 16 31.1**	**+0.6**
GAZI	**Gazipasa**	**0.97**	**40**	*i*P	**Pg**	**06 16 17.6**	**-0.3**
GAZI				*i*S	**Sg**	**06 16 31.1**	**+0.5**
LEF	**Lefka**	**1.17**	**108**	*e*PG	**Pg**	**06 16 21.4**	**-0.2**
LEF				*e*SG	**Sg**	**06 16 36.1**	**-0.7**
LEF	**Lefka**	**1.17**	**108**	*e*Pg	**Pg**	**06 16 21.4**	**-0.2**
LEF				*e*Sg	**Sg**	**06 16 36.1**	**-0.7**
CSS	**Prodhromos**	**1.56**	**109**	P	**Pn**	**06 16 28.0**	**+0.2**
	2.8nm,0.5s						
CSS	**Prodhromos**	**1.56**	**109**	P	**Pn**	**06 16 28.0**	**+0.2**
	2.8nm,0.5s						
ANTB	**Antalya**	**1.57**	**333**	*e*PN	**Pn**	**06 16 28.8**	**+0.8**
ANTB	**Antalya**	**1.57**	**333**	*e*Pn	**Pn**	**06 16 28.8**	**+0.9**
LFK	**Lefkose**	**1.65**	**97**	*e*PN	**Pn**	**06 16 28.2**	**-0.7**
LFK	**Lefkose**	**1.65**	**97**	*e*Pn	**Pn**	**06 16 28.2**	**-0.7**
HDMB	**Hadim**	**1.66**	**27**	*e*PN	**Pn**	**06 16 27.7**	**-1.3**
HDMB	**Hadim**	**1.66**	**27**	*e*Pn	**Pn**	**06 16 27.7**	**-1.4**
AKAS	**Kas**	**1.73**	**296**	*i*P	**Pn**	**06 16 20.3**	**-10**
KORT	**Korkueli**	**1.78**	**328**	*i*P	**Pn**	**06 16 31.5**	**+0.7**
KORT				*i*S	**Sn**	**06 16 56.5**	**+2.6**
KORT	**Korkueli**	**1.78**	**328**	*i*P	**Pn**	**06 16 31.5**	**+0.7**
KORT				*i*S	**Sn**	**06 16 56.5**	**+2.6**
ELL	**Elmali**	**1.82**	**314**	*e*PN	**Pn**	**06 16 32.9**	**+1.7**
ELL	**Elmali**	**1.82**	**314**	*e*Pn	**Pn**	**06 16 32.9**	**+1.6**
IKL	**Isikli**	**1.90**	**66**	*e*PN	**Pn**	**06 16 31.3**	**-1.1**
IKL	**Isikli**	**1.90**	**66**	*e*Pn	**Pn**	**06 16 31.3**	**-1.1**
PHNC	**Paralimni**	**2.10**	**103**	P	**Pn**	**06 16 43.8**	**+8.6**
	3.0nm,0.7s						
BCK	**Bucak**	**2.11**	**339**	*e*PN	**Pn**	**06 16 36.0**	**+0.7**
BCK	**Bucak**	**2.11**	**339**	*e*Pn	**Pn**	**06 16 36.0**	**+0.8**
EREN	**Erenkoy**	**2.15**	**88**	*e*PN	**Pn**	**06 16 34.8**	**-1.1**
EREN	**Erenkoy**	**2.15**	**88**	*e*Pn	**Pn**	**06 16 34.8**	**-1.0**
KONT	**Konya--Tatoy**	**2.54**	**15**	*e*PN	**Pn**	**06 16 40.8**	**-0.4**
KONT	**Konya--Tatoy**	**2.54**	**15**	*e*Pn	**Pn**	**06 16 40.8**	**-0.4**
MERS	**Mersin**	**2.78**	**60**	*e*PN	**Pn**	**06 16 43.3**	**-1.2**
MERS	**Mersin**	**2.78**	**60**	*e*Pn	**Pn**	**06 16 43.3**	**-1.2**
LADK	**Ladik-KONYA**	**2.78**	**14**	*e*PN	**Pn**	**06 16 44.2**	**-0.4**
LADK	**Ladik-KONYA**	**2.78**	**14**	*e*Pn	**Pn**	**06 16 44.2**	**-0.3**
DNZL	**Cakiroluk**	**2.97**	**318⇑**	*i*P	**Pn**	**06 16 40.4**	**-6.7**
GULE	**Gulek**	**3.17**	**55**	*i*P	**Pn**	**06 16 52.0**	**+2.2**
GULE				*i*S	**Sn**	**06 17 35.9**	**+7.8**
KHAL	**Karahalli**	**3.31**	**331**	*i*P	**Pn**	**06 16 50.5**	**-1.2**
KHAL				*i*S	**Sn**	**06 17 30.0**	**-1.5**
KHAL	**Karahalli**	**3.31**	**331**	*i*P	**Pn**	**06 16 50.5**	**-1.2**
KHAL				*i*S	**Sn**	**06 17 30.0**	**-1.5**
KARA	**Karaisali**	**3.34**	**57**	*e*PN	**Pn**	**06 16 51.3**	**-1.0**
KARA	**Karaisali**	**3.34**	**57**	*e*Pn	**Pn**	**06 16 51.3**	**-1.0**
AYDN	**Tasoluk**	**3.65**	**307**	*i*P	**Pn**	**06 16 55.0**	**-1.5**
YAYL	**Yayladag**	**3.76**	**80**	*i*P	**Pn**	**06 17 00.3**	**+2.4**
YAYL				*i*S	**Sn**	**06 17 44.0**	**+1.3**
HTY	**Hatay**	**3.79**	**79**	*e*PN	**Pn**	**06 16 58.2**	**-0.3**
HTY	**Hatay**	**3.79**	**79**	*e*Pn	**Pn**	**06 16 58.2**	**-0.2**

*ISCJB **26** 06:16:46.4±0.7, 50°.24N±0°.04×18°.79E±0°.04, h0km, Error ellipse: s-maj=6.0km s-min=3.1km az=24.3*
*IPEC **26** 06:16:47.4±0.4, 50°.27N×18°.87E, h4km±1km, ML2.1/3, Error ellipse: s-maj=2.6km s-min=2.3km az=73.0*
*CSEM **26** 06:16:47.0±0.3, 50°.24N×18°.82E, h2km, ML2.8/6, Error ellipse: s-maj=6.8km s-min=3.4km az=19.0*
*PRU **26** 06:16:48.0, 50°.22N×18°.81E, h0km*
ISC 26 06:16:47.6±0.6, 50°.20N±0°.04×18°.81E±0°.04, h0km, n31, σ1§19/51, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.56**	**230**	*e*PG	**Pg**	**06 16 58.5**	**+0.2**
OKC				*e*SG	**Sg**	**06 17 06.8**	**+1.3**
	comp=Z,29nm,0.5s						
OKC	**Ostrava-Krasne**	**0.56**	**230**	Pg	**Pg**	**06 16 58.5**	**+0.2**
OKC				Sg	**Sg**	**06 17 06.8**	**+1.3**
	comp=Z,29nm,0.5s						
MORC	**Moravsky Berou**	**0.92**	**243**	*e*Pg	**Pg**	**06 17 05.6**	**+0.4**
	baz=60						
MORC				*e*Sg	**Sg**	**06 17 18.7**	**+1.6**
	comp=Z,37nm,0.3s,baz=60						
LIKS	**Likavka**	**1.16**	**170**	*e*SN	**Sn**	**06 17 26.9**	**-0.7**
LIKS	**Likavka**	**1.16**	**170**	*e*Sn	**Sn**	**06 17 26.9**	**-0.7**
NIE	**Niedzica**	**1.25**	**128**	*e*Pg	**Pg**	**06 17 10.3**	**-1.2**
NIE				*e*Sg	**Sg**	**06 17 28.3**	**+0.7**
NIE	**Niedzica**	**1.25**	**128**	*e*Pg	**Pg**	**06 17 10.3**	**-1.2**
NIE				*e*Sg	**Sg**	**06 17 28.3**	**+0.7**
DPC	**Dobruska-Polom**	**1.60**	**276**	*e*PG	**Pg**	**06 17 16.3**

KSP	**Ksiaz**	**1.73 293**	*e*Pn		**Pn**	**06 17 19.9**	**+0.9**
KSP			*e*Pg		**Pg**	**06 17 22.6**	**+1.8**
KSP			*e*Sn		**Sn**	**06 17 43.4**	**+1.7**
KSP			*e*Sg		**Sg**	**06 17 46.4**	**+3.1**
KSP	**Ksiaz**	**1.73 293**	*e*Pg		**Pg**	**06 17 19.9**	**-0.9**
KSP			*e*Sg		**Sg**	**06 17 43.3**	**+0.1**
KSP	**Ksiaz**	**1.73 293**	*e*Pg		**Pg**	**06 17 19.9**	**-0.9**
KSP			*e*Sg		**Sg**	**06 17 43.3**	**+0.1**
STHS	**Stebnicka Huta**	**1.76 115**	*e*PN		**Pn**	**06 17 19.6**	**+0.3**
STHS			*e*SN		**Sn**	**06 17 44.2**	**+1.9**
STHS	**Stebnicka Huta**	**1.76 115**	*e*Pn		**Pn**	**06 17 19.6**	**+0.3**
STHS			*e*Sn		**Sn**	**06 17 44.2**	**+1.9**
KRUC	**Moravsky**	**1.94 235**	*e*Pn		**Pn**	**06 17 22.5**	**+0.8**
	baz=52						
KRUC			*e*Sn		**Sn**	**06 17 48.4**	**+1.7**
	comp=Z,9.4nm,0.3s,baz=52						
KECS	**Kecovo**	**2.03 147**	*e*SN		**Sn**	**06 17 46.5**	**-2.6**
KECS	**Kecovo**	**2.03 147**	*e*Sn		**Sn**	**06 17 46.5**	**-2.6**
PRU	**Pruhonice**	**2.76 267**	*e*SG		**Sg**	**06 18 14.5**	**-1.6**
	comp=Z,7.1nm,0.8s						
PRU	**Pruhonice**	**2.76 267**	Sg		**Sg**	**06 18 14.5**	**-1.6**
	comp=Z,7.1nm,0.8s						
BRG	**Berggiesshubel**	**3.18 284**	SG		**Sg**	**06 18 29.7**	**0.0**
	comp=Z,4.8nm,0.6s						
KHC	**Kasperske Hory**	**3.56 255**	*e*PN		**Pn**	**06 17 43.2**	**-0.9**
KHC			*e*PG		**Pg**	**06 17 52.2**	**-3.6**
KHC			*e*SG		**Sg**	**06 18 40.3**	**-1.7**
	comp=Z,7.9nm,0.6s						
KHC	**Kasperske Hory**	**3.56 255**	Pn		**Pn**	**06 17 43.2**	**-0.9**
KHC			Sg		**Sg**	**06 18 40.3**	**-1.7**
	comp=Z,7.9nm,0.6s						
CLL	**Collm**	**3.85 289**	*e*Sg		**Sg**	**06 18 51.0**	**-0.3**
	comp=Z,6.0nm,0.8s						
CLL	**Collm**	**3.85 289**	*e*Sg		**Sg**	**06 18 51.0**	**-0.3**

WEL 26 06:43:44.7±0.7, 38°.34S×175°.76E, h139km±10km, ML3.6/6, 2C, Error ellipse: s-maj=11.5km s-min=6.5km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKZ	**Black Stump Fm**	**1.01**	**146**	⇑PN	Pn	06 44 08.8	+0.3
BKZ				SN	Sn	06 44 26.6	-0.1
URZ	**Urewera**	**1.07**	**86**	PN	Pn	06 44 09.0	0.0
URZ				SN	Sn	06 44 27.5	0.0
MOVZ	**Moawhango**	**1.07**	**180**	⇑PN	Pn	06 44 09.4	+0.3
RAHZ	**Arahi**	**1.19**	**120**	PN	Pn	06 44 10.8	+0.7
RAHZ				SN	Sn	06 44 30.3	+0.6
MWZ	**Matawai**	**1.39**	**91**	PN	Pn	06 44 12.2	0.0
MWZ				SN	Sn	06 44 31.9	-1.3
WAZ	**Wanganui**	**1.54**	**203**	PN	Pn	06 44 14.1	+0.3
PNHZ	**Pukenui**	**1.61**	**168**	PN	Pn	06 44 14.0	-0.6
WPHZ	**Waipukurau**	**1.81**	**163**	PN	Pn	06 44 16.0	-0.9
POWZ	**Post Office Ro**	**2.06**	**180**	PN	Pn	06 44 18.4	-1.4
MRZ	**Mangatainoka R**	**2.33**	**183**	PN	Pn	06 44 21.1	-2.0
BFZ	**Birch Farm**	**2.37**	**171**	PN	Pn	06 44 21.8	-1.8
HOWZ	**Holdsworth Sta**	**2.57**	**184**	PN	Pn	06 44 23.7	-2.4
KIW	**Kapiti Island**	**2.61**	**194**	PN	Pn	06 44 24.2	-2.3
CAW	**Cannon Point**	**2.82**	**191**	PN	Pn	06 44 26.6	-2.7
MSWZ	**Moikau Station**	**3.10**	**187**	PN	Pn	06 44 29.5	-3.3
TUWZ	**Tuamarina**	**3.39**	**204**	PN	Pn	06 44 33.5	-3.1
NNZ	**Nelson**	**3.41**	**212**	PN	Pn	06 44 33.8	-3.0
QRZ	**Quartz Range**	**3.52**	**224**	PN	Pn	06 44 35.1	-3.2
THZ	**Tophouse**	**4.06**	**212**	PN	Pn	06 44 42.2	-3.2
KHZ	**Kahutara**	**4.42**	**202**	PN	Pn	06 44 46.3	-3.8
LTZ	**Lake Taylor**	**5.17**	**210**	PN	Pn	06 44 55.7	-4.5

IDC 26 06:47:52.0±1.4, 22°.70S×175°.94W, h0km, mb4.0/4, mb1 4.3/7, mb1mx4.0/19, mbtmp4.2/7, ML4.3/2, Error ellipse: s-maj=50.2km s-min=23.6km az=152.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.59**	**25**	Pn	Pn	06 50 12.1	+0.6
	1.2nm,0.3s,baz=18,slow=13,SNR=3.2						
RAR	**Rarotonga**	**15.07**	**87**	Pn	Pn	06 51 26.3	-0.1
	1.6nm,0.3s,baz=217,slow=10,SNR=3.4						
URZ	**Urewera**	**16.61**	**199**	Pn	Pn	06 51 47.4	+1.1
	1.0nm,0.3s,baz=162,slow=20,SNR=4.0						
CTA	**Charters Tower**	**35.24**	**267**	P	P	06 54 49.1	+0.7
	1.0nm,0.3s,baz=97,slow=8.1,SNR=2.8						
STKA	**Stephens Creek**	**38.63**	**247**	P	P	06 55 17.0	-0.2
	2.0nm,0.6s,baz=108,slow=11,SNR=6.1						
ASAR	**Alice Springs**	**45.92**	**259**	P	P	06 56 16.1	-0.7
	0.7nm,0.4s,baz=95,slow=8.3,SNR=10.0						
TXAR	**Lajitas Array**	**86.64**	**56**	P	P	07 00 37.7	0.0
	0.5nm,1.2s,baz=217,slow=4.3,SNR=3.6						

*NEIC **26** 07:21:52.3, 32°.25S×72°.41W, h21km, ML3.8(GUC), After GUC.*

GUC 26 07:21:52.3±0.7, 32°.25S×72°.41W, h21km±3km, MD4.0, ML3.8, 8C-4D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.85**	**65**	⇑*i*P	Pb	07 22 07.8	-0.6
CHNG				*i* S	Sb	07 22 19.5	0.0
JACH	**Jahuel**	**1.59**	**106**	*e*P	Pn	07 22 19.6	+0.3
JACH				*i* S	Sn	07 22 40.6	+1.3
JACH	**Jahuel**	**1.59**	**106**	*e*P	Pn	07 22 19.6	+0.3
JACH				*i* S	Sn	07 22 40.6	+1.3
CMCH	**Combarbala**	**1.61**	**49**	⇓*i*P	Pn	07 22 20.0	+0.5
CMCH				*i* S	Sn	07 22 40.8	+1.1
CMCH	**Combarbala**	**1.61**	**49**	⇓*i*P	Pn	07 22 20.0	+0.5
CMCH				*i* S	Sn	07 22 40.8	+1.1
CMCH				AML	AML	07 22 52.6	
	comp=E,4μm,0.6s						
PEL	**Peldehue**	**1.71**	**122**	⇑*i*P	Pn	07 22 21.4	+0.6
PEL				*i* S	Sn	07 22 43.6	+1.6
PEL				AML	AML	07 22 51.9	
	comp=N,2μm,0.4s						
TACH	**Talagante**	**1.87**	**139**	⇑*i*P	Pn	07 22 23.8	+0.7
TACH	**Talagante**	**1.87**	**139**	⇑*i*P	Pn	07 22 23.8	+0.7
LNV	**Longovilo**	**1.90**	**154**	*e*P	Pn	07 22 24.2	+0.7
LNV	**Longovilo**	**1.90**	**154**	*e*P	Pn	07 22 24.2	+0.7
SAN	**Santiago**	**1.90**	**130**	*e*P	Pn	07 22 24.1	+0.7
SAN				*e*S	Sn	07 22 48.0	+1.3
SAN	**Santiago**	**1.90**	**130**	*e*P	Pn	07 22 24.1	+0.7
SAN				*e*S	Sn	07 22 48.0	+1.3
SAN				AML	AML	07 22 55.5	
	comp=N,882nm,0.7s						
CLCH	**Cerro Calan**	**1.95**	**126**	⇑*i*P	Pn	07 22 25.0	+0.9
CLCH				*i* S	Sn	07 22 49.9	+1.9
CLCH				AML	AML	07 22 59.3	
	comp=N,1μm,0.5s						
FCH	**Farellones**	**2.08**	**122**	⇑*i*P	Pn	07 22 25.3	-0.7
FCH				*i* S	Sn	07 22 52.3	+1.0
FCH				AML	AML	07 23 00.1	
	comp=N,579nm,0.3s						
PCH	**Pirque**	**2.10**	**131**	*e*P	Pn	07 22 27.9	+1.6
PCH	**Pirque**	**2.10**	**131**	*e*P	Pn	07 22 27.9	+1.6
CHCH	**Chadas Angostu**	**2.23**	**139**	*e*P	Pn	07 22 29.8	+1.7
CHCH	**Chadas Angostu**	**2.23**	**139**	*e*P	Pn	07 22 29.8	+1.7
LMEL	**Las Melosas**	**2.44**	**131**	⇑*i*P	Pn	07 22 32.6	+1.6
LMEL				*i* S	Sn	07 23 03.3	+3.1
LMEL	**Las Melosas**	**2.44**	**131**	⇑*i*P	Pn	07 22 32.6	+1.6
LMEL				*i* S	Sn	07 23 03.3	+3.1
LMEL				AML	AML	07 23 14.5	
	comp=N,369nm,0.5s						
TLL	**Tololo Astrono**	**2.49**	**34**	*e*P	Pn	07 22 33.5	+1.9
TLL	**Tololo Astrono**	**2.49**	**34**	*e*P	Pn	07 22 33.5	+1.9
TLL				AML	AML	07 23 19.8	
	comp=N,488nm,0.5s						
LCO	**Las Campanas**	**3.55**	**25**	⇓*i*P	Pn	07 22 47.9	+1.7
LCO				*e*S	Sn	07 23 29.8	+2.3
LCO	**Las Campanas**	**3.55**	**25**	⇓*i*P	Pn	07 22 47.9	+1.7
LCO				*e*S	Sn	07 23 29.8	+2.3
LCO				AML	AML	07 23 53.4	
	comp=E,101nm,0.5s						

NNC 26 07:22:34.9±5.0, 44°.10N×81°.87E, h0km, mb3.5, mpv3.1, 5C-2D, Error ellipse: s-maj=44.5km s-min=28.2km az=147.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**2.71**	**6**	⇑Pn	Pn	07 23 21.7	+2.0
	1.8nm,0.4s,baz=185,slow=12,SNR=90						
MK31				⇓Lg		07 23 59.5	
	14nm,0.6s,baz=183,slow=28,SNR=8.1						
TKM2	**Tokmak 2**	**4.71**	**258**	⇓Pg	Pg	07 23 59.2	-6.0
	2.8nm,0.5s						
TKM2				⇑Lg		07 25 01.2	
	5.1nm,0.6s						
KURK	**Kurchatov**	**6.98**	**343**	⇑Pn	Pn	07 24 17.8	-0.5
	1.1nm,0.6s						
KURK				⇑Sn	Sn	07 25 37.0	-1.3
	2.3nm,0.6s						
KURK				⇑Lg		07 26 10.2	
	5.0nm,0.6s						

*ISCJB **26** 07:22:49.2±1.1, 9°.9N±0°.1×104°.12W±0°.09, h10km, mb4.0/12, MS3.8/6, Error ellipse: s-maj=17.7km s-min=12.3km az=169.4*
*IDC **26** 07:22:50.2±1.3, 9°.92N×104°.05W, h0km, mb3.8/4, mb1 4.1/6, mb1mx3.9/18, mbtmp3.8/6, ML2.2/1, MS3.7/8, Ms1 3.7/8, ms1mx3.4/24, Error ellipse: s-maj=39.8km s-min=24.3km az=63.0*
*NEIC **26** 07:22:51.5±1.1, 9°.99N×104°.06W, h10km, mb4.0/9, Error ellipse: s-maj=24.4km s-min=15.9km az=52.0*

ISC 26 07:22:50.9±1.1, 9°.9N±0°.1×104°.22W±0°.09, h10km, n24, σ1§10/18, mb4.0/12, MS3.8/6, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**11.55**	**51**	Pn	**Pn**	**07 25 34.3**	**-1.7**
	0.0nm,0.3s,baz=245,slow=14,SNR=2.7						
CMIG				Sn	**Sn**	**07 27 46.1**	**+1.0**
	0.1nm,0.3s,baz=14,slow=13,SNR=2.4						
CMIG				LR	LR	07 28 55.9	
	comp=Z,521nm,19.1s,baz=14,slow=32						
JTS	**JuntasAbangare**	**18.97**	**87**	LR	LR	07 32 24.8	
	comp=Z,134nm,21.9s,baz=147,slow=31						
TXAR	**Lajitas Array**	**19.34**	**1**	P	**Pn**	**07 27 16.6**	**-1.1**
	0.0nm,0.3s,baz=181,slow=11,SNR=9.4						
TXAR				PcP	PcP	07 31 40.6	+1.8
	0.0nm,0.3s,baz=170,slow=5.5,SNR=4.8						
MNTX	**Cornudas Mount**	**21.72**	**357**	*e*P	**P**	**07 27 39.6**	**-2.7**
	11nm,1.5s,mb4.0						
GDL2	**Guadalupe Moun**	**22.19**	**360**	*e*P	**P**	**07 27 46.1**	**-1.2**
	3.0nm,1.0s,mb3.7						
TUC	**Tucson**	**23.12**	**346**	*e*P	**P**	**07 27 56.6**	**-0.6**
	2.6nm,1.0s,mb3.6						
ANMO	**Albuquerque**	**25.02**	**356**	P	**P**	**07 28 16.4**	**+1.3**
	1.4nm,0.8s,mb3.6,baz=159,slow=7.8,SNR=6.5						
ANMO	**Albuquerque**	**25.02**	**356**	*e*P	**P**	**07 28 16.3**	**+1.2**
	2.1nm,1.0s,mb3.6						
WUAZ	**Wupatki**	**26.32**	**347**	*e*P	**P**	**07 28 28.2**	**+1.3**
	3.6nm,0.9s,mb3.9						
PV10	**Paradox Valley**	**28.68**	**352**	*e*P	**P**	**07 28 49.0**	**+0.9**
	42nm,0.9s						
ATAH	**Atahualpa**	**30.79**	**122**	LR	LR	07 39 00.8	
	comp=Z,450nm,18.5s,MS4.2,baz=312,slow=32						
PDAR	**Pinedale Array**	**33.07**	**353**	P	**P**	**07 29 28.1**	**+1.3**
	0.8nm,0.8s,mb3.7,baz=174,slow=9.8,SNR=7.7						
PDAR				PcP	PcP	07 32 11.7	+1.5
	0.3nm,0.6s,baz=102,slow=4.2,SNR=4.7						
HDIL	**Hopedale**	**33.28**	**21**	*e*P	**P**	**07 29 29.5**	**+0.9**
	7.2nm,0.8s,mb4.7						
HLID	**Hailey**	**34.69**	**347**	*e*P	**P**	**07 29 41.9**	**+1.0**
	1.6nm,1.1s,mb3.9						
YBH	**Yreka Blue Hor**	**35.64**	**336**	LR	LR	07 41 59.5	
	comp=Z,131nm,19.9s,MS3.7,baz=151,slow=32						
NEW	**Newport**	**39.75**	**347**	*e*P	**P**	**07 30 22.9**	**-0.8**
	3.8nm,0.9s,mb4.1						
EDM	**Edmonton**	**43.83**	**352**	*e*P	**P**	**07 30 56.3**	**-0.7**
LPAZ	**La Paz**	**44.18**	**126**	P	**P**	**07 31 00.1**	**-0.2**
	0.7nm,0.8s,mb3.5,baz=342,slow=9.6,SNR=3.3						
LPAZ				LR	LR	07 47 44.6	
	comp=Z,55nm,21.0s,MS3.5,baz=349,slow=34						
BBB	**Bella Bella**	**46.43**	**340**	LR	LR	07 51 10.7	
	comp=Z,44nm,21.1s,MS3.4,baz=272,slow=37						
PLCA	**Paso Flores**	**59.19**	**151**	LR	LR	07 52 44.3	
	comp=Z,206nm,19.8s,MS4.3,baz=270,slow=30						
ILAR	**Eielson Array**	**62.30**	**341**	P	**P**	**07 33 13.2**	**+0.1**
	3.0nm,0.8s,mb4.5,baz=158,slow=4.7,SNR=24						
SUMG	**Summit**	**73.46**	**17**	*e*P	**P**	**07 34 23.3**	**+0.2**
	5.6nm,1.0s,mb4.5						
NOA	**NORSAR Array B**	**93.25**	**26**	LR	LR	08 19 00.1	
	comp=Z,18nm,19.2s,MS3.5,baz=100,slow=36						
MKAR	**Makanchi Array**	**123.27**	**355**	PKP	PKPdf	07 41 50.0	+1.7
	0.9nm,0.8s,baz=28,slow=2.9,SNR=8.4						

IDC 26 08:19:02.2±11.0, 12°.19N×144°.20E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.7/20, mbtmp3.9/5, Error ellipse: s-maj=306.8km s-min=50.3km az=176.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**62.05**	**317**	P	P	08 29 25.7	+1.1
	0.6nm,0.5s,baz=88,slow=9.2,SNR=8.3						
ZALV	**Zalesovo Beam**	**62.38**	**325**	P	P	08 29 26.0	-0.7
	0.4nm,0.4s,baz=97,slow=3.6,SNR=3.0						
ILAR	**Eielson Array**	**70.11**	**25**	P	P	08 30 16.4	+0.4
	0.3nm,0.5s,baz=251,slow=6.1,SNR=8.4						
BVAR	**Borovoye Array**	**70.62**	**322**	P	P	08 30 19.5	+0.1
	0.9nm,0.4s,baz=98,slow=7.4,SNR=4.6						
FINES	**FINESS Array B**	**92.15**	**335**	P	P	08 32 12.3	-1.1
	0.6nm,0.4s,baz=67,slow=5.0,SNR=7.8						

*ISK **26** 08:33:12.8, 37°.31N×28°.26E, h9km, MD2.8*
*ISCJB **26** 08:33:13.4±0.6, 37°.28N±0°.04×28°.27E±0°.05, h10km, Error ellipse: s-maj=6.1km s-min=4.3km az=43.7*
*CSEM **26** 08:33:13.2±0.1, 37°.27N×28°.27E, h15km, MD2.8, Error ellipse: s-maj=3.1km s-min=2.3km az=13.0*
*DDA **26** 08:33:14.5, 37°.22N×28°.18E, h7km±5km, Md2.5*

ISC 26 08:33:13.4±0.7, 37°.26N±0°.04×28°.27E±0°.05, h19km±5km, n18, σ0§80/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.12**	**173**	PG	**Pg**	**08 33 17.0**	**-0.5**
YER				*e*SG	**Sg**	**08 33 19.7**	**-0.5**
YER	**Yerkesik**	**0.12**	**173**	*i* Pg	**Pg**	**08 33 17.0**	**-0.5**
YER				*e*Sg	**Sg**	**08 33 19.7**	**-0.5**
MLSB	**Milas**	**0.39**	**276**	*e*PG	**Pg**	**08 33 20.9**	**-0.8**
MLSB				*e*SG	**Sg**	**08 33 26.7**	**-0.5**
MLSB	**Milas**	**0.39**	**276**	*e*Pg	**Pg**	**08 33 20.9**	**-0.8**
MLSB				*e*Sg	**Sg**	**08 33 26.7**	**-0.5**
TURN	**Turunc**	**0.47**	**145**	*i* P	**Pg**	**08 33 22.6**	**-0.4**
TURN				*i* S	**Sg**	**08 33 31.2**	**+1.8**
TURN	**Turunc**	**0.47**	**145**	*i* P	**Pg**	**08 33 22.6**	**-0.4**
TURN				*i* S	**Sg**	**08 33 31.2**	**+1.8**
AYDN	**Tasoluk**	**0.51**	**323**	*i* P	**Pg**	**08 33 24.6**	**+0.8**
AYDN				*i* S	**Sg**	**08 33 31.7**	**+1.0**
AYDN	**Tasoluk**	**0.51**	**323**	*i* P	**Pg**	**08 33 24.5**	**+0.7**
AYDN				*i* S	**Sg**	**08 33 31.7**	**+1.0**
BDRM	**Kayabasi**	**0.68**	**254**	*i* P	**Pb**	**08 33 26.4**	**-0.3**
BDRM				*i* S	**Sb**	**08 33 36.1**	**+0.4**
BDRM	**Kayabasi**	**0.68**	**254**	*i* P	**Pb**	**08 33 26.4**	**-0.3**
BDRM				*i* S	**Sb**	**08 33 36.1**	**+0.4**
DNZL	**Cakiroluk**	**0.76**	**55**	*i* P	**Pb**	**08 33 26.5**	**-1.5**
DNZL				*i* S	**Sb**	**08 33 43.3**	**+5.4**
DNZL	**Cakiroluk**	**0.76**	**55**	*i* P	**Pb**	**08 33 26.5**	**-1.5**
DAT	**Datca**	**0.76**	**227**	*e*PG	**Pg**	**08 33 28.8**	**+0.4**
DAT	**Datca**	**0.76**	**227**	*e*Pg	**Pg**	**08 33 28.8**	**+0.4**
BODT	**Bodrum**	**0.79**	**256**	*e*PG	**Pg**	**08 33 28.6**	**-0.2**
BODT	**Bodrum**	**0.79**	**256**	*e*Pg	**Pg**	**08 33 28.6**	**-0.3**
KULA	**Kula-Manisa**	**1.30**	**14**	*e*PN	**Pn**	**08 33 36.9**	**+0.4**
KULA	**Kula-Manisa**	**1.30**	**14**	*e*Pn	**Pn**	**08 33 36.9**	**+0.4**

*NNC **26** 08:36:58.9±3.7, 51°.01N×75°.73E, h0km, mb2.6, mpv2.3, Error ellipse: s-maj=130.5km s-min=12.3km az=18.0*
*ISCJB **26** 08:36:59.2±0.8, 51°.3N±0°.2×76°.0E±0°.1, h10km, Error ellipse: s-maj=23.8km s-min=4.7km az=22.1*
*IDC **26** 08:37:01.4±1.3, 51°.26N×76°.16E, h0km, mb1 2.7/3, mb1mx2.7/22, mbtmp2.7/3, ML2.7/3, Error ellipse: s-maj=44.9km s-min=13.1km az=37.0*

ISC 26 08:37:01.0±0.8, 51°.3N±0°.2×76.0E±0°.1, h10km, n7, σ1§17/10, 5C-2D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**1.77**	**108**	⇑Pn	**Pn**	**08 37 30.5**	**-1.1**
	1.3nm,0.4s						
KURK				⇑Sn	**Sg**	**08 37 57.4**	**-0.4**
	3.1nm,0.3s						
VOSK	**Vostochnaya**	**3.41**	**297**	⇑Pn	**Pn**	**08 37 56.0**	**+1.9**
	0.3nm,0.3s						
VOSK				⇑Sn	**Sn**	**08 38 33.2**	**-1.2**
	1.2nm,0.5s						
BVAR	**Borovoye Array**	**3.85**	**299**	Pn	**Pn**	**08 38 03.0**	**+2.8**
	0.4nm,0.3s,baz=117,slow=15,SNR=4.1						
BVAR				Sn	**Sb**	**08 38 54.2**	**-1.4**
	0.6nm,0.3s,baz=118,slow=25,SNR=4.2						
ZRNK	**Zerenda**	**4.61**	**294**	⇓Pn	**Pn**	**08 38 11.2**	**+0.7**
	0.2nm,0.4s						
ZRNK				⇑Sn	**Sn**	**08 39 03.7**	**-0.4**
	1.1nm,0.6s						
ZALV	**Zalesovo Beam**	**6.02**	**60**	Pn	**Pn**	**08 38 30.4**	**+0.4**
	0.6nm,0.3s,baz=250,slow=13,SNR=6.3						
MK31	**Makanchi Array**	**6.12**	**135**	⇓Lg		08 40 09.7	
	0.3nm,0.4s,baz=314,slow=27,SNR=4.0						
MKAR	**Makanchi Array**	**6.12**	**135**	Pn	**Pn**	**08 38 31.3**	**0.0**
	0.1nm,0.3s,baz=325,slow=12,SNR=3.9						
MKAR				Lg		08 40 12.2	
	0.3nm,0.3s,baz=337,slow=26,SNR=5.2						

*ISK **26** 08:43:07.2, 35°.86N×27°.39E, h8km, MD3.1*
*ATH **26** 08:43:09.0, 35°.93N×27°.78E, h51km±2km, MD2.9/3*
*ISCJB **26** 08:43:11.5±0.8, 35°.96N±0°.06×27°.66E±0°.07, h29km±8km, Error ellipse: s-maj=12.0km s-min=6.8km az=39.9*
*CSEM **26** 08:43:11.1±0.5, 36°.01N×27°.58E, h21km±5km, MD3.1, Error ellipse: s-maj=13.6km s-min=9.0km az=134.0*

ISC 26 08:43:11.6±0.8, 35°.97N±0°.05×27°.66E±0°.07, h27km±9km, n16, σ1§12/24, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.45**	**57**	*e*P	**Pb**	**08 43 20.0**	**-1.1**
ARG				*e*S	**Sb**	**08 43 27.6**	**0.0**
ARG	**Arkhangelos**	**0.45**	**57**	*e*P	**Pb**	**08 43 20.0**	**-1.1**
ARG				*e*S	**Sb**	**08 43 27.6**	**0.0**
KARP	**Karpathos**	**0.58**	**224**	*e*P	**Pb**	**08 43 22.5**	**-0.7**
KARP				*e*S	**Sb**	**08 43 32.5**	**+1.4**
KARP	**Karpathos**	**0.58**	**224**	*e*P	**Pb**	**08 43 22.5**	**-0.7**
KARP				*e*S	**Sb**	**08 43 32.5**	**+1.4**
DAT	**Datca**	**0.76**	**355**	*e*PG	**Pb**	**08 43 25.4**	**-0.9**
DAT				*e*SG	**Sb**	**08 43 37.7**	**+1.4**
DAT	**Datca**	**0.76**	**355**	*e*Pg	**Pb**	**08 43 25.4**	**-0.9**
DAT				*e*Sg	**Sb**	**08 43 37.7**	**+1.4**
BODT	**Bodrum**	**1.13**	**346**	*e*PN	**Pn**	**08 43 30.1**	**-1.5**
BODT				*e*SN	**Sn**	**08 43 46.8**	**+0.5**
BODT	**Bodrum**	**1.13**	**346**	*e*Pn	**Pn**	**08 43 30.1**	**-1.5**
BODT				*e*Sn	**Sn**	**08 43 46.8**	**+0.5**
YER	**Yerkesik**	**1.27**	**23**	*e*PN	**Pn**	**08 43 34.2**	**+0.7**
YER	**Yerkesik**	**1.27**	**23**	*e*Pn	**Pn**	**08 43 34.3**	**+0.7**
FETY	**Fethiye**	**1.33**	**60**	*e*PN	**Pn**	**08 43 35.8**	**+1.4**
FETY	**Fethiye**	**1.33**	**60**	*e*Pn	**Pn**	**08 43 35.8**	**+1.4**
APE	**Apeiranthos**	**2.04**	**303**	*e*PN	**Pn**	**08 43 41.6**	**-2.5**
APE	**Apeiranthos**	**2.04**	**303**	*e*P	**Pn**	**08 43 43.7**	**-0.4**
APE	**Apeiranthos**	**2.04**	**303**	*e*Pn	**Pn**	**08 43 41.6**	**-2.5**
APE	**Apeiranthos**	**2.04**	**303**	*e*P	**Pn**	**08 43 43.7**	**-0.4**

IDC 26 09:02:55.6±2.0, 8°.67N×93°.36E, h24km±6km, mb3.5/4, mb1 3.6/4, mb1mx3.3/20, mbtmp3.5/4, MS2.9/1, Ms1 2.9/1, ms1mx2.6/22, Error ellipse: s-maj=105.1km s-min=27.0km az=59.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**39.15**	**348**	P	P	09 10 21.1	-0.2
	0.4nm,0.7s,baz=155,slow=7.9,SNR=3.4						
MKAR				pP	pP	09 10 28.9	+0.3
	0.7nm,0.8s,baz=173,slow=7.9,SNR=6.1						
KSRS	**Korea Array**	**42.38**	**42**	LR	LR	09 30 58.8	
	comp=Z,13nm,18.9s,baz=205,slow=40						
ZALV	**Zalesovo Beam**	**45.68**	**353**	P	P	09 11 14.2	-0.1
	0.3nm,0.3s,baz=155,slow=4.8,SNR=2.3						
ZALV				pP	pP	09 11 21.6	-0.1
	1.1nm,0.4s,baz=170,slow=8.8,SNR=5.2						
ASAR	**Alice Springs**	**51.01**	**130**	P	P	09 11 55.9	0.0
	0.5nm,0.7s,baz=311,slow=8.1,SNR=5.5						
FINES	**FINESS Array B**	**71.65**	**332**	P	P	09 14 15.2	+0.1
	2.7nm,1.0s,baz=168,slow=14,SNR=3.3						
FINES				pP	pP	09 14 22.6	-0.2
	0.8nm,0.5s,baz=95,slow=9.6,SNR=2.1						

IDC 26 09:17:11.3±1.6, 14°.57S×167°.53E, h0km, mb4.0/6, mb1 4.2/6, mb1mx4.0/15, mbtmp4.0/6, Error ellipse: s-maj=74.6km s-min=27.5km az=138.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**29.29**	**230**	P	P	09 23 16.6	+1.1

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZRNK	**Zerenda**	**4.33**	**291**	⇑Pn	**Pn**	**09 19 49.4**	**-3.1**
	0.2nm,0.2s						
ZRNK				⇓Lg		09 20 55.4	
	18nm,0.8s						
ZALV	**Zalesovo Beam**	**6.01**	**63**	Pn	**Pn**	**09 20 15.8**	**+0.2**
	0.4nm,0.3s,baz=256,slow=15,SNR=4.5						
ZALV				Sn	**Sn**	**09 21 24.0**	**-0.3**
	0.2nm,0.3s,baz=241,slow=23,SNR=2.5						
MK31	**Makanchi Array**	**6.47**	**136**	⇓Pg	**Pg**	**09 20 44.2**	**-6.3**
	0.2nm,0.4s,baz=311,slow=12,SNR=3.6						
MK31				⇑Sn	**Sn**	**09 21 38.4**	**+2.7**
	0.4nm,0.5s,baz=313,slow=24,SNR=3.6						
MK31				⇑Lg		09 22 11.5	
	1.2nm,0.5s,baz=325,slow=26,SNR=7.2						
MKAR	**Makanchi Array**	**6.47**	**136**	Pn	**Pn**	**09 20 21.5**	**-0.4**
	0.1nm,0.3s,baz=324,slow=12,SNR=3.5						
MKAR				Sn	**Sn**	**09 21 39.4**	**+3.8**
	0.2nm,0.3s,baz=313,slow=23,SNR=5.1						
MKAR				Lg		09 22 11.0	
	0.5nm,0.3s,baz=324,slow=27,SNR=10						
TKM2	**Tokmak 2**	**8.69**	**181**	⇑Sn	**Sn**	**09 22 25.5**	**-4.9**
	0.7nm,0.8s						
TKM2				⇑Lg		09 23 16.2	
	0.2nm,0.3s						

*ISK **26** 09:20:15.0, 40°.33N×40°.99E, h5km, ML2.6*
*DDA **26** 09:20:16.0, 40°.33N×41°.05E, h7km±5km, Md2.9*
*CSEM **26** 09:20:16.6±0.2, 40°.27N×41°.03E, h20km, ML2.6, Error ellipse: s-maj=4.8km s-min=4.2km az=144.0*

ISC 26 09:20:16.5±0.5, 40°.31N±0°.03×41°.03E±0°.05, h15km±6km, n24, σ0s94/44, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZM	**Erzurum**	**0.48**	**148**	*e*PG	**Pg**	**09 20 25.3**	**-0.7**
EZM				*e*SG	**Sg**	**09 20 32.9**	**+0.5**
ERZM	**Erzurum**	**0.48**	**148**	*i* P	**Pg**	**09 20 25.3**	**-0.8**
ERZM				*i* S	**Sg**	**09 20 32.9**	**+0.4**
ERZM	**Erzurum**	**0.48**	**148**	*i* P	**Pg**	**09 20 25.3**	**-0.7**
ERZM				*i* S	**Sg**	**09 20 32.9**	**+0.4**
KOPT	**Kop Dagi**	**0.50**	**235**	*i* P	**Pg**	**09 20 25.7**	**-0.8**
KOPT				*i* S	**Sg**	**09 20 35.5**	**+2.3**
KOPT	**Kop Dagi**	**0.50**	**235**	*i* P	**Pg**	**09 20 25.7**	**-0.8**
KOPT				*i* S	**Sg**	**09 20 35.5**	**+2.3**
DDEM	**Demirkent**	**0.80**	**43**	*i* P	**Pg**	**09 20 31.4**	**-0.6**
DDEM				*i* S	**Sg**	**09 20 44.8**	**+2.3**
DDEM	**Demirkent**	**0.80**	**43**	*i* P	**Pg**	**09 20 31.4**	**-0.6**
DDEM				*i* S	**Sg**	**09 20 44.8**	**+2.3**
DAGI	**Agillar**	**1.02**	**41**	*i* P	**Pg**	**09 20 36.0**	**-0.2**
DAGI				*i* S	**Sg**	**09 20 49.2**	**-0.3**
ARTV	**Artvin**	**1.11**	**38**	*i* P	**Pg**	**09 20 37.1**	**-0.7**
ARTV				*i* S	**Sg**	**09 20 51.8**	**-0.5**
ARTV	**Artvin**	**1.11**	**38**	*i* P	**Pg**	**09 20 37.2**	**-0.7**
ARTV				*i* S	**Sg**	**09 20 51.8**	**-0.5**
DBOC	**Borcka**	**1.14**	**25**	*i* P	**Pg**	**09 20 37.7**	**-0.8**
DBOC				*i* S	**Sg**	**09 20 52.9**	**-0.4**
DBOC	**Borcka**	**1.14**	**25**	*i* P	**Pg**	**09 20 37.7**	**-0.8**
DBOC				*i* S	**Sg**	**09 20 52.9**	**-0.5**
MACK	**Trabzon**	**1.15**	**304**	*i* P	**Pn**	**09 20 38.8**	**+0.8**
MACK				*i* S	**Sb**	**09 20 54.3**	**+1.5**
MACK	**Trabzon**	**1.15**	**304**	*i* P	**Pn**	**09 20 38.8**	**+0.8**
MACK				*i* S	**Sb**	**09 20 54.3**	**+1.6**
GUMT	**Gumushane**	**1.19**	**278**	*e*PN	**Pn**	**09 20 38.1**	**-0.5**
GUMT				*e*SN	**Sn**	**09 20 53.5**	**-1.0**
GUMT	**Gumushane**	**1.19**	**278**	*e*Pn	**Pn**	**09 20 38.1**	**-0.5**
GUMT				*e*Sn	**Sn**	**09 20 53.5**	**-1.0**
BCA	**Borcka**	**1.22**	**21**	*e*PN	**Pn**	**09 20 39.1**	**+0.1**
BCA				*e*SN	**Sn**	**09 20 55.5**	**+0.4**
BCA	**Borcka**	**1.22**	**21**	*e*Pn	**Pn**	**09 20 39.1**	**+0.2**
BCA				*e*Sn	**Sn**	**09 20 55.6**	**+0.5**
KELT	**Kelkit**	**1.37**	**264**	*i* P	**Pn**	**09 20 40.5**	**-0.6**
KELT				*i* S	**Sn**	**09 20 57.5**	**-1.4**
KELT	**Kelkit**	**1.37**	**264**	*i* P	**Pn**	**09 20 40.5**	**-0.5**
KELT				*i* S	**Sn**	**09 20 57.5**	**-1.4**
KARS	**Kars**	**1.59**	**78**	*e*PN	**Pn**	**09 20 45.2**	**+1.1**
KARS	**Kars**	**1.59**	**78**	*e*Pn	**Pn**	**09 20 45.2**	**+1.1**
ESPY	**Espiye-Giresun**	**1.85**	**290**	*e*PN	**Pn**	**09 20 48.5**	**+0.8**
ESPY	**Espiye-Giresun**	**1.85**	**290**	*e*Pn	**Pn**	**09 20 48.5**	**+0.8**

DJA 26 09:20:43, 4°.66S×127°.97E, h13km, MLv3.9/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.99**	**13**	P	Pb	09 21 00.1	-2.0
AAI				S	Sb	09 21 14.9	-0.2
MSAI	**Masohi**	**1.62**	**36**	P	Pn	09 21 10.1	-1.2
MSAI				S	Sn	09 21 23.8	-8.2
NLAI	**Namlea**	**1.66**	**328**	P	Pn	09 21 11.2	-0.6
NLAI				S	Sn	09 21 31.9	-1.1
LBMI	**Labuha**	**4.02**	**353**	P	Pn	09 21 46.4	+2.0
SWI	**Sorong**	**5.00**	**41**	P	Pn	09 21 57.1	-0.7

*ISCJB **26** 09:21:36.9±0.7, 39°.46N±0°.04×28°.17E±0°.07, h9km±8km, Error ellipse: s-maj=9.8km s-min=6.2km az=147.2*
*DDA **26** 09:21:36.7, 39°.51N×28°.20E, h7km±5km, Md2.6*
*ISK **26** 09:21:36.3, 39°.44N×28°.18E, h13km, MD2.8*
*CSEM **26** 09:21:37.1±0.2, 39°.45N×28°.14E, h15km, MD2.8, Error ellipse: s-maj=4.8km s-min=2.5km az=50.0*

ISC 26 09:21:37.4±0.6, 39°.45N±0°.05×28°.13E±0°.06, h15km±6km, n22, σ0s87/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.27**	**315**	*e*PG	**Pg**	**09 21 42.8**	**-0.4**
BALB				*e*SG	**Sg**	**09 21 48.2**	**+1.1**
BALB	**Balikesir**	**0.27**	**315**	*e*Pg	**Pg**	**09 21 42.8**	**-0.4**
BALB				*e*Sg	**Sg**	**09 21 48.3**	**+1.1**
BALY	**Balya**	**0.49**	**307**	*i* P	**Pg**	**09 21 46.1**	**-1.0**
BALY				*i* S	**Sg**	**09 21 55.3**	**+1.5**
BALY	**Balya**	**0.49**	**307**	*i* P	**Pg**	**09 21 46.1**	**-1.1**
BALY				*i* S	**Sg**	**09 21 55.3**	**+1.5**
DEMI	**Demirci**	**0.61**	**131**	*i* P	**Pg**	**09 21 49.0**	**-0.3**
DEMI				*i* S	**Sg**	**09 21 58.0**	**+0.6**
DEMI	**Demirci**	**0.61**	**131**	*i* P	**Pg**	**09 21 49.0**	**-0.3**
DEMI				*i* S	**Sg**	**09 21 58.0**	**+0.6**
KCTX	**Karacabey (Bur**	**0.84**	**12**	*e*PG	**Pg**	**09 21 52.9**	**-0.7**
KCTX				*e*SG	**Sg**	**09 22 04.7**	**+0.1**
KCTX	**Karacabey (Bur**	**0.84**	**12**	*e*Pg	**Pg**	**09 21 52.9**	**-0.7**
KCTX				*e*Sg	**Sg**	**09 22 04.7**	**+0.1**
BNT	**Bandirma**	**0.92**	**350**	*e*PG	**Pg**	**09 21 54.6**	**-0.6**
BNT	**Bandirma**	**0.92**	**350**	*e*Pg	**Pg**	**09 21 54.7**	**-0.6**
KULA	**Kula-Manisa**	**1.02**	**156**	*e*PG	**Pg**	**09 21 56.1**	**-1.0**
KULA	**Kula-Manisa**	**1.02**	**156**	*e*Pg	**Pg**	**09 21 56.1**	**-1.0**
GDZ	**Gediz**	**1.11**	**108**	*i* P	**Pb**	**09 21 57.9**	**-0.3**
GDZ				*i* S	**Sb**	**09 22 15.0**	**+2.5**
GDZ	**Gediz**	**1.11**	**108**	*i* P	**Pb**	**09 21 57.9**	**-0.3**
GDZ				*i* S	**Sb**	**09 22 15.0**	**+2.5**
KRBG	**Karabiga-Canak**	**1.14**	**326**	*e*PN	**Pn**	**09 21 58.8**	**-0.1**
KRBG	**Karabiga-Canak**	**1.14**	**326**	*e*Pn	**Pn**	**09 21 58.8**	**0.0**
ARMT	**Armutlu**	**1.25**	**26**	*e*PN	**Pn**	**09 21 59.8**	**-0.6**
ARMT	**Armutlu**	**1.25**	**26**	*e*Pn	**Pn**	**09 21 59.8**	**-0.5**
RKY	**Sarkoy-Tekirda**	**1.44**	**330**	*e*PN	**Pn**	**09 22 03.0**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.44**	**330**	*e*Pn	**Pn**	**09 22 03.0**	**+0.1**
YLV	**Yalova**	**1.47**	**40**	*e*PN	**Pn**	**09 22 03.4**	**+0.1**
YLV	**Yalova**	**1.47**	**40**	*e*Pn	**Pn**	**09 22 03.4**	**0.0**

IDC 26 09:24:43.6±1.6, 16°.47S×178°.66W, h0km, mb3.8/5, mb1 4.1/5, mb1mx3.9/14, mbtmp3.8/5, Error ellipse: s-maj=113.6km s-min=24.8km az=148.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.13**	**240**	P	P	09 32 13.3	+0.2
	1.1nm,0.8s,baz=104,slow=8.3,SNR=3.0						
ASAR	**Alice Springs**	**44.97**	**253**	P	P	09 33 00.7	-0.2
	1.9nm,0.3s,baz=91,slow=8.3,SNR=48						
ILAR	**Eielson Array**	**84.55**	**13**	P	P	09 37 17.9	-0.2
	0.2nm,0.4s,baz=225,slow=5.0,SNR=6.6						
TXAR	**Lajitas Array**	**85.43**	**58**	P	P	09 37 23.8	+0.4
	0.2nm,0.6s,baz=216,slow=4.1,SNR=3.0						
PDAR	**Pinedale Array**	**86.48**	**44**	P	P	09 37 28.7	+0.4
	0.2nm,0.5s,baz=262,slow=4.4,SNR=3.0						

GUC 26 09:41:41.9±0.9, 22°.76S×70°.41W, h33km±3km, ML3.5, 4C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**0.66**	**163**	⇑*i*P	Pn	09 41 58.2	+3.3
CEN1				*i* S	Sb	09 42 10.0	+6.0
ANCH	**Antofagasta**	**0.92**	**180**	⇑*i*P	Pn	09 41 57.9	-0.7
ANCH				*i* S	Sn	09 42 10.8	+0.1
ANCH				AML	AML	09 42 12.6	
	comp=E,867nm,0.7s						
PB04	**Plate Boundary**	**0.98**	**60**	⇓*i*P	Pn	09 41 52.5	-6.8
PB04				*i* S	Sn	09 41 59.8	-12
PB04				AML	AML	09 42 00.9	
	comp=N,6μm,0.3s						
PB01	**Plate Boundary**	**1.91**	**27**	⇑*i*P	Pn	09 42 14.0	+1.9
PB01				*i* S	Sn	09 42 38.4	+3.4
PB01				AML	AML	09 42 43.8	
	comp=E,598nm,0.2s						
HMBC	**Humberston**	**2.51**	**11**	*e*P	Pn	09 42 22.9	+2.5
HMBC				*e*S	Sn	09 42 53.8	+3.9
HMBC				AML	AML	09 43 07.8	
	comp=N,303nm,0.4s						
MNMC	**Miæe Miæ**	**3.69**	**12**	⇑*i*P	Pn	09 42 38.6	+2.0
MNMC				*i* S	Sn	09 43 22.6	+3.7
MNMC				AML	AML	09 43 46.3	
	comp=E,177nm,0.6s						

*ISCJB **26** 09:44:19.2±2.8, 39°.5N±0°.1×30°.2E±0°.1, h8km±16km, Error ellipse: s-maj=30.2km s-min=7.1km az=143.8*
*ISK **26** 09:44:20.0, 39°.45N×30°.30E, h10km, MD2.6*
*CSEM **26** 09:44:20.0, 39°.45N×30°.30E, h10km, MD2.6, After ISK*

ISC 26 09:44:19.2±3.3, 39°.5N±0°.2×30°.2E±0°.2, h10km±16km, n11, σ0s23/17, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORA	**Eskisehir**	**0.39**	**28**	*i* P	**Pg**	**09 44 33.0**	**+6.1**
ALT	**Altintas**	**0.48**	**189**	*e*PG	**Pg**	**09 44 28.7**	**+0.1**
ALT				*e*SG	**Sg**	**09 44 34.9**	**0.0**
ALT	**Altintas**	**0.48**	**189**	*e*Pg	**Pg**	**09 44 28.7**	**+0.1**
ALT				*e*Sg	**Sg**	**09 44 34.9**	**-0.1**
ESKT	**Eskisehir**	**0.50**	**91**	*e*PG	**Pg**	**09 44 29.1**	**+0.2**
ESKT				*e*SG	**Sg**	**09 44 35.5**	**+0.2**
ESKT	**Eskisehir**	**0.50**	**91**	*i* P	**Pg**	**09 44 29.1**	**+0.3**
ESKT	**Eskisehir**	**0.50**	**91**	*e*Pg	**Pg**	**09 44 29.1**	**+0.3**
ESKT				*e*Sg	**Sg**	**09 44 35.5**	**+0.1**
SVRH	**Sivrihisar-ESK**	**1.02**	**94**	*e*PG	**Pg**	**09 44 38.3**	**-0.5**
SVRH				*e*SG	**Sg**	**09 44 52.0**	**0.0**
SVRH	**Sivrihisar-ESK**	**1.02**	**94**	*e*Pg	**Pg**	**09 44 38.3**	**-0.5**
SVRH				*e*Sg	**Sg**	**09 44 52.0**	**0.0**
DURS	**Dursunbey**	**1.34**	**273**	*i* P	**Pn**	**09 44 37.8**	**-6.2**
KIZT	**Kizilcal**	**1.45**	**116**	*e*PN	**Pn**	**09 44 45.5**	**0.0**
KIZT	**Kizilcal**	**1.45**	**116**	*e*Pn	**Pn**	**09 44 45.6**	**+0.1**

*BJI **26** 09:45:46.8, 10°.20N×91°.71E, h10km, mB4.7/16, mb4.5/30, Ms4.2/12, Ms7 4.1/12*
*IDC **26** 09:45:50.8±0.8, 10°.61N×91°.57E, h0km, mb4.1/13, mb1 4.2/14, mb1mx4.1/22, mbtmp4.1/14, ML4.1/1, MS3.2/3, Ms1 3.2/3, ms1mx2.8/24, Error ellipse: s-maj=29.9km s-min=15.4km az=55.0*
*ISCJB **26** 09:45:51.2±1.7, 10°.60N±0°.06×91°.65E±0°.04, h15km±12km, mb4.5/38, MS3.6/7, Error ellipse: s-maj=10.3km s-min=7.3km az=171.6*
*MOS **26** 09:45:52.9±0.8, 10°.63N×91°.72E, h26km, mb4.7/21, Error ellipse: s-maj=12.0km s-min=7.8km az=102.1*
*NEIC **26** 09:45:52.7±0.4, 10°.65N×91°.70E, h10km, mb4.4/8, Error ellipse: s-maj=9.4km s-min=8.1km az=47.0*

ISC 26 09:45:55.6±1.7, 10°.67N±0°.06×91°.68E±0°.05, h29km±12km, h18km±3.1km; pP-P, n81, σ0s81/91, mb4.5/38, MS3.6/7, 4C-2D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.46**	**41**	Pn	**Pn**	**09 48 24.1**	**+0.4**
	0.4nm,0.3s,baz=242,slow=15,SNR=2.6						
VIS	**Vishakhapatnam**	**10.71**	**312**	*e*PKP	**Pn**	**09 48 23.4**	**-3.7**
VIS				AMb	AMB	09 48 27.0	
	comp=Z,41nm,0.8s						
VIS				*e*S	**Sn**	**09 50 14.8**	**-11**
VIS				*i* S	**Sn**	**09 50 14.9**	**-11**
PALK	**Pallekele**	**11.36**	**254**	*e*Pn	**Pn**	**09 48 35.8**	**-0.2**
PALK				*e*Sn	**Sn**	**09 50 32.6**	**-9.5**
KMI	**Kunming**	**17.80**	**35**	P	**Pn**	**09 50 02.5**	**+1.2**
KMI				pP	pP	09 50 05.8	-3.8
KMI				sP	sP	09 50 07.5	-5.9
KMI				PP		09 50 18.0	
KMI				S	**Sn**	**09 53 19.0**	**+0.1**
KMI				SS		09 53 42.0	
KMI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KMI				pmax	pmax		
	comp=Z,79nm,4.9s						
KMI				LR	LR		
	comp=N,220nm,19.5s						
KMI				LR	LR		
	comp=E,120nm,18.7s						
KMI				LR	LR		
	comp=Z,120nm,21.9s						
KAD	**Karad**	**18.21**	**293**	*ex*	**Sn**	**09 53 23.7**	**-5.3**
BHPL	**Bhopal**	**18.48**	**314**	*e*PKP	**Pn**	**09 50 07.5**	**-2.1**
BHPL				AMb	AMB	09 50 13.0	
	comp=Z,19nm,2.4s						
BHPL				*e*S	**Sn**	**09 53 35.0**	**-0.5**
LSA	**Lhasa**	**18.94**	**359**	*e*P	**Pn**	**09 50 14.7**	**-0.5**
LSA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
LSA	**Lhasa**	**18.94**	**359**	*e*P	**Pn**	**09 50 14.7**	**-0.5**
	comp=Z,7.5nm,0.6s						
GYA	**Guiyang**	**21.14**	**40**	P	**P**	**09 50 38.0**	**-0.4**
GYA				PP		09 51 02.5	
GYA				S	**S**	**09 54 27.0**	**-5.1**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.1						
GYA				pmax	pmax		
	comp=Z,20nm,3.0s						
GYA				LR	LR		
	comp=N,100nm,6.0s						
GYA				LR	LR		
	comp=E,190nm,5.5s						
GYA				LR	LR		
	comp=Z,230nm,5.4s						
CD2	**Chengdu**	**23.05**	**27**	P	**P**	**09 50 59.0**	**+0.3**
CD2				pP		09 51 03.3	
CD2				sP	sP	09 51 06.0	-4.4
CD2				PP		09 51 29.5	
CD2				S	**S**	**09 55 06.0**	**-1.8**
CD2				sS	sS	09 55 12.3	-9.3
CD2				SS		09 55 50.5	
CD2				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.5						
CD2				pmax	pmax		
	comp=Z,120nm,4.7s						
CD2				LR	LR		
	comp=N,230nm,9.5s						
CD2				LR	LR		
	comp=Z,180nm,9.5s						
ENH	**Enshi**	**25.59**	**38**	*e*P	**P**	**09 51 21.2**	**-1.3**
	comp=Z,17nm,0.6s,mb4.7						
LZH	**Lanzhou**	**27.60**	**22**	*e*P	**P**	**09 51 41.0**	**+0.5**
LZH				pP	pP	09 51 46.0	-3.0
LZH				sP	sP	09 51 48.0	-4.5
LZH				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.5						
GTA	**Gaotai**	**29.53**	**13**	*e*P	**P**	**09 51 58.5**	**+0.9**
GTA				pP	pP	09 52 03.0	-3.1
GTA				sP	sP	09 52 06.3	-3.3
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.3						
KBL	**Kabul**	**31.49**	**323**	*e*P	**P**	**09 52 15.3**	**+0.3**
KBL				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
KBL	**Kabul**	**31.49**	**323**	*e*P	**P**	**09 52 15.3**	**+0.2**
	comp=Z,2.1nm,0.6s,mb4.1						
KSH	**Kashi**	**31.95**	**337**	*e*P	**P**	**09 52 18.3**	**-0.7**
KSH				pP	pP	09 52 22.0	-5.5
KSH				sP	sP	09 52 25.3	-5.7
KSH				PP	PP	09 53 22.3	-9.2
KSH				PcP	PcP	09 55 10.0	+1.2
KSH				S	**S**	**09 57 25.5**	**-3.0**
KSH				ScP	ScP	09 58 52.3	+1.9
KSH				PcS	PcS	09 58 53.5	+0.1
KSH				ScS	ScS	10 02 48.5	-0.3
KSH				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.3						
KSH				pmax	pmax		
	comp=Z,77nm,5.2s						
KSH				LR	LR		
	comp=N,210nm,8.3s						
KSH				LR	LR		
	comp=E,210nm,8.8s						
KSH				LR	LR		
	comp=Z,160nm,7.4s						
WMQ	**Urumqi**	**33.21**	**355**	*e*P	**P**	**09 52 30.5**	**+0.6**
WMQ				pP	pP	09 52 35.0	-3.5
WMQ				sP	sP	09 52 37.5	-4.5
WMQ				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
WMQ				pmax	pmax		
	comp=Z,93nm,4.2s						
HHC	**Hu-ho-hao-te**	**34.81**	**27**	*e*P	**P**	**09 52 43.0**	**-0.9**
HHC				sP	sP	09 52 48.8	-7.2
HHC				PP	PP	09 54 00.8	-2.3
HHC				PcP	PcP	09 55 16.3	-0.5
HHC				S	**S**	**09 58 13.0**	**+0.2**
HHC				ScP	ScP	09 58 59.8	-0.6
HHC				PcS	PcS	09 59 01.5	-1.9
HHC				SS	SS	10 00 26.5	-18
HHC				ScS	ScS	10 03 01.0	-2.6
HHC				pmax	pmax		
	comp=Z,14nm,0.6s,mb5.1						
HHC				pmax	pmax		
	comp=Z,170nm,6.1s						
HHC				LR	LR		
	comp=N,97nm,13.1s,MS3.9						
HHC				LR	LR		
	comp=E,120nm,13.8s,MS3.9						
HHC				LR	LR		
	comp=Z,100nm,13.4s,MS3.7						
AML	**Almayashu**	**35.08**	**336**	*e*P	**P**	**09 52 47.9**	**+1.7**
AML				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8						
AML	**Almayashu**	**35.08**	**336**	*e*P	**P**	**09 52 47.9**	**+1.7**
	comp=Z,13nm,1.1s,mb4.8						
AAK	**Ala-Archa**	**35.20**	**338**	LR	LR	10 09 02.1	
	comp=Z,63nm,18.7s,MS3.4,baz=188,slow=40						
BJI	**Beijing**	**36.43**	**32**	P	**P**	**09 52 57.8**	**0.0**
BJI				PP	PP	09 54 20.8	-0.2
BJI				S	**S**	**09 58 38.5**	**+0.8**
BJI				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
BJI				pmax	pmax		
	comp=Z,90nm,6.0s						
BJI				LR	LR		
	comp=N,110nm,19.1s,MS3.9						
BJI				LR	LR		
	comp=E,120nm,14.9s,MS3.9						
BJI				LR	LR		
	comp=Z,42nm,29.4s						
MK31	**Makanchi Array**	**36.88**	**349**	*e*P	**P**	**09 53 01.6**	**+0.1**
MKAR	**Makanchi Array**	**36.88**	**349**	P	**P**	**09 53 01.7**	**+0.2**
	comp=Z,4.9nm,0.9s,mb4.3,baz=165,slow=8.2,SNR=37						
MKAR	**Makanchi Array**	**36.88**	**349**	P	**P**	**09 53 01.7**	**+0.2**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SONM	**Songino Array**	**39.06**	**16**	P	**P**	**09 53 20.4**	**+0.5**
	comp=Z,3.7nm,0.9s,mb4.1,baz=198,slow=9.4,SNR=19						
SONM				PcP	PcP	09 55 29.7	+0.1
	comp=Z,0.5nm,0.5s,baz=197,slow=4.5,SNR=2.6						
SONM	**Songino Array**	**39.06**	**16**	P	**P**	**09 53 20.4**	**+0.5**
SONM						09 55 29.7	
SONM				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ULN	**Ulaanbaatar**	**39.27**	**16**	*e*P	**P**	**09 53 21.4**	**-0.3**
KURK	**Kurchatov**	**41.35**	**347**	*d i*P	**P**	**09 53 39.1**	**+0.3**
KURK				pmax	pmax		
	comp=Z,12nm,1.5s,mb4.3						
KURK	**Kurchatov**	**41.35**	**347**	*e*P	**P**	**09 53 38.7**	**-0.1**
	comp=Z,7.7nm,1.1s,mb4.2						
KSRS	**Korea Array**	**42.08**	**45**	P	**P**	**09 53 45.1**	**+0.1**
	comp=Z,1.5nm,1.0s,mb3.6,baz=253,slow=8.4,SNR=3.6						
KSRS				LR	LR	10 12 22.3	
	comp=Z,31nm,21.7s,MS3.2,baz=330,slow=38						
KSRS	**Korea Array**	**42.08**	**45**	P	**P**	**09 53 45.1**	**+0.1**
KSRS				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.7						
KSRS				MLR	MLR		
	comp=Z,31nm,21.7s,MS3.1						
ZALV	**Zalesovo Beam**	**43.51**	**354**	P	**P**	**09 53 56.5**	**+0.1**
	comp=Z,6.5nm,0.9s,mb4.3,baz=170,slow=9.0,SNR=18						
ZALV				LR	LR	10 17 01.2	
	comp=Z,20nm,18.1s,MS3.0,baz=235,slow=43						
FITZ	**Fitzroy Crossi**	**44.06**	**130**	P	**P**	**09 54 00.9**	**-0.4**
	comp=Z,3.8nm,0.8s,mb4.2,baz=351,slow=4.5,SNR=6.4						
FITZ	**Fitzroy Crossi**	**44.06**	**130**	*e*P	**P**	**09 54 01.0**	**-0.2**
	comp=Z,7.1nm,0.9s,mb4.4						
CN2	**Changchun**	**44.07**	**35**	*e*P	**P**	**09 54 01.5**	**+0.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
BVAR	**Borovoye Array**	**45.59**	**342**	P	**P**	**09 54 12.9**	**-0.1**
	comp=Z,1.4nm,0.8s,mb4.0,baz=141,slow=7.3,SNR=6.8						
BVAR	**Borovoye Array**	**45.59**	**342**	P	**P**	**09 54 12.9**	**-0.1**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRVK	**Borovoye**	**45.65**	**342**	⇑*i*P	**P**	**09 54 13.9**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.2						
ABKAR	**Akbulak array**	**46.63**	**332**	*e*P	**P**	**09 54 22.1**	**+0.8**
	comp=Z,3.9nm,0.8s,mb4.4						
VLA	**Vladivostok**	**47.55**	**40**	*e*P	**P**	**09 54 27.5**	**-1.1**
VLA				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.9						
GNI	**Garni**	**50.76**	**314**	P	**P**	**09 54 55.4**	**+2.2**
	comp=Z,3.4nm,0.4s,mb4.7,baz=328,slow=15,SNR=4.4						
GNI	**Garni**	**50.76**	**314**	P	**P**	**09 54 55.4**	**+2.2**
GNI				pmax	pmax		
	comp=Z,3.0nm,0.4s						
WRAB	**Tennant Creek**	**51.85**	**126**	*e*P	**P**	**09 55 02.1**	**+0.5**
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4

STKA	**Stephens Creek**	**63.78**	**133**	P	**P**	**09 56 24.7**	**-0.5**
STKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKASG	**Malin Array Be**	**64.47**	**321**	P	**P**	**09 56 28.6**	**-0.8**
	comp=Z,2.7nm,0.9s,mb4.3,baz=89,slow=5.1,SNR=6.4						
AKASG	**Malin Array Be**	**64.47**	**321**	P	**P**	**09 56 28.7**	**-0.8**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
JOF	**Joensuu**	**67.30**	**334**	*e*P	**P**	**09 56 47.4**	**0.0**
JOF	**Joensuu**	**67.30**	**334**	*e*p	**P**	**09 56 47.4**	**0.0**
SEY	**Seymchan**	**67.44**	**26**	||P	**P**	**09 56 47.8**	**-0.6**
FINES	**FINESS Array B**	**69.12**	**332**	P	**P**	**09 56 59.2**	**+0.3**
	comp=Z,4.3nm,0.8s,mb4.4,baz=116,slow=11,SNR=12						
FINES	**FINESS Array B**	**69.12**	**332**	P	**P**	**09 56 59.2**	**+0.3**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
FINES	**FINESS Array B**	**69.12**	**332**	P	**P**	**09 56 59.2**	**+0.3**
KAF	**Kangasniemi**	**69.21**	**333**	*e*P	**P**	**09 56 58.5**	**-0.9**
KAF	**Kangasniemi**	**69.21**	**333**	*e*p	**P**	**09 56 58.5**	**-0.9**
DPC	**Dobruska-Polom**	**72.52**	**319**	*e*P	**P**	**09 57 20.5**	**+0.7**
DPC	**Dobruska-Polom**	**72.52**	**319**	*e*P	**P**	**09 57 20.5**	**+0.7**
BRG	**Berggiesshubel**	**74.06**	**320**	*e*P	**P**	**09 57 29.1**	**+0.2**
	comp=Z,3.8nm,1.0s,mb4.3						
BRG	**Berggiesshubel**	**74.06**	**320**	*e*P	**P**	**09 57 29.1**	**+0.2**
BRG				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
KHC	**Kasperske Hory**	**74.23**	**318**	*e*P	**P**	**09 57 30.4**	**+0.5**
KHC	**Kasperske Hory**	**74.23**	**318**	*e*P	**P**	**09 57 30.4**	**+0.5**
CLL	**Collm**	**74.68**	**320**	*e*P	**P**	**09 57 32.0**	**-0.4**
CLL	**Collm**	**74.68**	**320**	*e*P	**P**	**09 57 32.0**	**-0.4**
NB2	**NORSAR Subarra**	**76.12**	**330**	P	**P**	**09 57 40.0**	**-0.5**
	comp=Z,0.1nm,0.6s,baz=96,slow=6.2						
NOA	**NORSAR Array B**	**76.12**	**330**	P	**P**	**09 57 40.0**	**-0.5**
	comp=Z,1.5nm,0.8s,mb4.0,baz=93,slow=5.7,SNR=7.4						
NOA	**NORSAR Array B**	**76.12**	**330**	P	**P**	**09 57 40.0**	**-0.5**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NOA	**NORSAR Array B**	**76.12**	**330**	P	**P**	**09 57 40.0**	**-0.6**
ILAR	**Eielson Array**	**93.07**	**21**	P	**P**	**09 59 05.3**	**-1.1**
	comp=Z,0.6nm,0.7s,mb4.1,baz=300,slow=4.2,SNR=7.3						
ILAR	**Eielson Array**	**93.07**	**21**	P	**P**	**09 59 05.3**	**-1.1**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						

*ISK **26** 10:52:59.4, 39°.46N×28°.22E, h5km, MD2.8*
*CSEM **26** 10:53:00.9±0.2, 39°.46N×28°.15E, h10km, MD2.8, Error ellipse: s-maj=5.3km s-min=3.3km az=64.0*
*ISCJB **26** 10:53:01.1±0.4, 39°.46N±0°.03×28°.15E±0°.04, h10km, Error ellipse: s-maj=5.7km s-min=3.4km az=140.8*
*DDA **26** 10:53:01.2, 39°.46N×28°.15E, h8km±3km, Md2.7*
ISC 26 10:53:01.4±0.5, 39°.46N±0°.03×28°.16E±0°.04, h10km±6km, n32, σ0°95/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.28**	**309**	*e*PG	**Pg**	**10 53 06.9**	**-0.1**
BALB				*e*SG	**Sg**	**10 53 12.5**	**+1.8**
BALB	**Balikesir**	**0.28**	**309**	*e*Pg	**Pg**	**10 53 06.9**	**-0.1**
BALB				*e*Sg	**Sg**	**10 53 12.5**	**+1.8**
BALY	**Balya**	**0.50**	**304**	*i* P	**Pg**	**10 53 09.7**	**-1.4**
BALY				*i* S	**Sg**	**10 53 18.9**	**+1.2**
BALY	**Balya**	**0.50**	**304**	*i* P	**Pg**	**10 53 09.7**	**-1.4**
BALY				*i* S	**Sg**	**10 53 18.9**	**+1.2**
DEMI	**Demirci**	**0.60**	**134**	*i* P	**Pg**	**10 53 12.9**	**-0.1**
DEMI				*i* S	**Sg**	**10 53 21.9**	**+0.9**
DEMI	**Demirci**	**0.60**	**134**	*i* P	**Pg**	**10 53 12.9**	**-0.2**
DEMI				*i* S	**Sg**	**10 53 21.9**	**+0.9**
AKHS	**Akhisar**	**0.64**	**205**	*i* P	**Pg**	**10 53 12.4**	**-1.4**
AKHS				*i* S	**Sg**	**10 53 22.6**	**+0.4**
AKHS	**Akhisar**	**0.64**	**205**	*i* P	**Pg**	**10 53 12.4**	**-1.4**
AKHS				*i* S	**Sg**	**10 53 22.6**	**+0.4**
AKS	**Akhisar**	**0.64**	**205**	*e*PG	**Pg**	**10 53 13.4**	**-0.4**
AKS	**Akhisar**	**0.64**	**205**	*e*Pg	**Pg**	**10 53 13.4**	**-0.4**
GONE	**Gonen-Balikesi**	**0.69**	**328**	*e*PG	**Pg**	**10 53 13.9**	**-0.7**
GONE	**Gonen-Balikesi**	**0.69**	**328**	*e*Pg	**Pg**	**10 53 13.9**	**-0.8**
KCTX	**Karacabey (Bur**	**0.81**	**11**	*e*PG	**Pg**	**10 53 16.0**	**-1.1**
KCTX	**Karacabey (Bur**	**0.81**	**11**	*e*Pg	**Pg**	**10 53 16.0**	**-1.1**
BNT	**Bandirma**	**0.91**	**348**	*e*PG	**Pg**	**10 53 18.5**	**-0.5**
BNT	**Bandirma**	**0.91**	**348**	*e*Pg	**Pg**	**10 53 18.5**	**-0.4**
KULA	**Kula-Manisa**	**1.03**	**157**	*e*PG	**Pg**	**10 53 19.9**	**-1.2**
KULA	**Kula-Manisa**	**1.03**	**157**	*e*Pg	**Pg**	**10 53 19.9**	**-1.2**
GDZ	**Gediz**	**1.09**	**110**	*i* P	**Pg**	**10 53 22.8**	**+0.4**
GDZ				*i* S	**Sg**	**10 53 38.0**	**+1.4**
GDZ	**Gediz**	**1.09**	**110**	*i* P	**Pg**	**10 53 22.8**	**+0.4**
GDZ				*i* S	**Sg**	**10 53 38.0**	**+1.4**
KRBG	**Karabiga-Canak**	**1.14**	**325**	*e*PN	**Pn**	**10 53 22.5**	**-0.9**
KRBG	**Karabiga-Canak**	**1.14**	**325**	*e*Pn	**Pn**	**10 53 22.5**	**-0.9**
ARMT	**Armutlu**	**1.23**	**26**	*e*PN	**Pn**	**10 53 24.0**	**-0.6**
ARMT	**Armutlu**	**1.23**	**26**	*e*Pn	**Pn**	**10 53 24.0**	**-0.6**
EZN	**Ezine**	**1.46**	**285**	*e*PN	**Pn**	**10 53 29.0**	**+1.2**
EZN	**Ezine**	**1.46**	**285**	*e*Pn	**Pn**	**10 53 29.0**	**+1.2**
MFT	**Murefte**	**1.48**	**333**	*e*PN	**Pn**	**10 53 28.2**	**0.0**
MFT	**Murefte**	**1.48**	**333**	*e*Pn	**Pn**	**10 53 28.2**	**0.0**
GELI	**Tayfur-Gelibol**	**1.60**	**306**	*e*PN	**Pn**	**10 53 29.9**	**+0.2**
GELI	**Tayfur-Gelibol**	**1.60**	**306**	*e*Pn	**Pn**	**10 53 30.0**	**+0.3**
ERIK	**Erikli-Kesan**	**1.75**	**314**	*e*PN	**Pn**	**10 53 32.9**	**+1.1**
ERIK	**Erikli-Kesan**	**1.75**	**314**	*e*Pn	**Pn**	**10 53 32.9**	**+1.1**

*IDC **26** 11:07:38.2±0.8, 15°.95S×172°.80W, h0km, mb4.2/8, mb1 4.5/8, mb1mx4.2/17, mbtmp4.3/8, Error ellipse: s-maj=36.9km s-min=21.4km az=134.0*
*ISCJB **26** 11:07:41.8±0.6, 15°.9S±0°.1×172°.9W±0°.2, h33km, mb4.2/12, Error ellipse: s-maj=26.0km s-min=13.2km az=40.4*
*NEIC **26** 11:07:52.5±2.4, 16°.05S×172°.82W, h115km±21km, mb4.1/4, Error ellipse: s-maj=21.5km s-min=13.3km az=125.0*
ISC 26 11:07:43.7±0.6, 15°.9S±0°.1×172°.9W±0°.2, h35km, n25, σ0°48/16, mb4.2/12, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.26**	**27**	Pn	**Pn**	**11 08 10.3**	**-8.3**
	16nm,0.3s,baz=5.8,slow=24,SNR=23						
AFI				Sn	**Sn**	**11 08 32.7**	**-13**
	57nm,0.3s,baz=46,slow=22,SNR=12						
MSVF	**Nonsavu**	**8.90**	**257**	*e*Pn	**Pn**	**11 09 58.7**	**+8.9**
URZ	**Urewera**	**23.94**	**200**	P	**P**	**11 12 54.6**	**0.0**
	26nm,1.0s,mb4.6,baz=130,slow=7.9,SNR=2.6						
STKA	**Stephens Creek**	**44.24**	**241**	P	**P**	**11 15 49.9**	**+0.1**
	1.5nm,0.3s,mb4.1,baz=69,slow=8.6,SNR=3.9						
MCQ	**Macquarie Isla**	**44.26**	**203**	*e*P	**P**	**11 15 50.2**	**+0.6**
	1μm,0.4s						
WRAB	**Tennant Creek**	**50.23**	**257**	*e*P	**P**	**11 16 36.9**	**+0.2**
	6.4nm,1.1s,mb4.6						
ASAR	**Alice Springs**	**50.45**	**252**	P	**P**	**11 16 37.6**	**-0.7**
	4.5nm,0.7s,mb4.6,baz=93,slow=7.6,SNR=53						
PETK	**Petropavlovsk-**	**73.29**	**342**	P	**P**	**11 19 11.7**	**+0.5**
	2.3nm,0.8s,mb4.1,baz=107,slow=9.5,SNR=7.0						
MOD	**Modoc**	**75.21**	**38**	*e*P	**P**	**11 19 22.4**	**-0.3**
	2.0nm,1.0s,mb4.0						
TXAR	**Lajitas Array**	**80.47**	**56**	P	**P**	**11 19 52.8**	**+0.6**
	1.5nm,1.1s,mb3.9,baz=232,slow=7.7,SNR=10						
DLMT	**Dillon**	**81.77**	**38**	*e*P	**P**	**11 19 59.4**	**+0.6**
	11nm,1.8s,mb4.5						
PDAR	**Pinedale Array**	**82.31**	**42**	P	**P**	**11 20 01.7**	**0.0**
	1.2nm,0.8s,mb3.9,baz=196,slow=2.2,SNR=10						
ILAR	**Eielson Array**	**82.86**	**11**	P	**P**	**11 20 03.3**	**-0.7**
	1.2nm,0.7s,mb4.0,baz=219,slow=6.0,SNR=16						
HRY	**Holter Researc**	**82.94**	**37**	*e*P	**P**	**11 20 04.8**	**-0.1**
	1.4nm,0.8s,mb4.0						
PLCA	**Paso Flores**	**88.77**	**132**	P	**P**	**11 20 33.2**	**-0.8**
	1.2nm,0.8s,mb4.3,baz=240,slow=8.1,SNR=2.7						
BAIF	**Baives**	**145.88**	**3**	*e*PKP1	PKPbc	11 27 19.2	-0.1
	10nm,1.0s						
BR131	**Keskin Array S**	**146.90**	**321**	*e*PKPbc	PKPbc	11 27 24.0	+1.3
BR131				*e*PKPab	PKPab	11 27 26.5	+2.5
BRTR	**Keskin Array B**	**146.90**	**321**	PKPbc	PKPbc	11 27 23.9	+1.2
	3.5nm,0.9s,baz=96,slow=2.5,SNR=17						
LOR	**Lormes**	**148.63**	**4**	*e*PKP1	PKPbc	11 27 27.2	+0.1
SSF	**Saint Saulge**	**148.81**	**5**	*e*PKP1	PKPbc	11 27 27.8	+0.3
	6.1nm,0.9s						
SMF	**Signal de Mont**	**149.25**	**4**	*e*PKP1	PKPbc	11 27 28.5	-0.1
BGF	**Bois d'Agland**	**149.25**	**6**	*e*PKP1	PKPbc	11 27 28.9	+0.3
LPL	**La Plagne**	**150.50**	**1**	*e*PKP1	PKPbc	11 27 32.9	+1.2
	5.5nm,1.0s						
LPG	**La Plagne**	**150.52**	**1**	*e*PKP1	PKPbc	11 27 33.1	+1.3
LFF	**La Frestale**	**150.58**	**9**	*e*PKP1	PKPbc	11 27 32.0	+0.1

*ATH **26** 11:26:52.5, 40°.62N×21°.11E, h28km±1km, MD3.2/4*
*ISCJB **26** 11:27:01.3±0.7, 40°.45N±0°.04×21°.94E±0°.07, h8km±7km, Error ellipse: s-maj=9.0km s-min=5.9km az=27.2*
*CSEM **26** 11:27:02.1±0.5, 40°.41N×21°.96E, h5km, ML2.6/3, Error ellipse: s-maj=12.8km s-min=9.4km az=56.0*
*THE **26** 11:27:02.7, 40°.42N×21°.88E, h2km±14km, ML2.6/3, Error ellipse: s-maj=14.3km s-min=0.5km az=238.0*
ISC 26 11:27:01.7±0.7, 40°.46N±0°.03×21°.95E±0°.08, h9km±8km, n16, σ0°90/27, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZN	**Kozani**	**0.20**	**223**	*e*PN	**Pg**	**11 27 05.0**	**-0.9**
KZN				*e*SN	**Sg**	**11 27 14.0**	**+5.2**
KZN	**Kozani**	**0.20**	**223**	P	**Pg**	**11 27 05.0**	**-0.9**
KZN				S	**Sg**	**11 27 07.6**	**-1.2**
KZN	**Kozani**	**0.20**	**223**	P	**Pg**	**11 27 05.0**	**-0.9**
KZN				S	**Sg**	**11 27 07.6**	**-1.2**
FNA	**Florina**	**0.55**	**307**	P	**Pg**	**11 27 12.4**	**+0.1**
FNA				S	**Sg**	**11 27 20.2**	**+0.7**
FNA	**Florina**	**0.55**	**307**	P	**Pg**	**11 27 12.4**	**+0.1**
FNA				S	**Sg**	**11 27 20.2**	**+0.7**
GRG	**Griva**	**0.60**	**34**	P	**Pg**	**11 27 15.1**	**+1.7**
GRG	**Griva**	**0.60**	**34**	P	**Pg**	**11 27 15.1**	**+1.7**
THL	**Klokotos Trika**	**0.89**	**177**	*e*PN	**Pn**	**11 27 15.8**	**-4.6**
THL				*e*SN	**Sn**	**11 27 33.8**	**+0.4**
THL	**Klokotos Trika**	**0.89**	**177**	P	**Pg**	**11 27 19.1**	**+0.3**
THL				S	**Sg**	**11 27 31.4**	**+1.0**
THL	**Klokotos Trika**	**0.89**	**177**	*e*Pn	**Pn**	**11 27 15.8**	**-4.6**
THL	**Klokotos Trika**	**0.89**	**177**	P	**Pg**	**11 27 19.1**	**+0.3**
THL				S	**Sg**	**11 27 31.4**	**+1.0**
VAY	**Valandovo**	**0.98**	**28**	*e*Pg	**Pg**	**11 27 19.3**	**-1.2**
VAY				*e*Sg	**Sg**	**11 27 41.0**	**+7.7**
SOH	**Sokhos**	**1.13**	**71**	*e*PN	**Pn**	**11 27 23.2**	**-0.4**
SOH	**Sokhos**	**1.13**	**71**	*e*Pn	**Pn**	**11 27 23.2**	**-0.4**
PLG	**Polygyros**	**1.14**	**94**	*e*PN	**Pn**	**11 27 23.0**	**-0.8**
PLG				*e*SN	**Sn**	**11 27 45.6**	**+6.1**
PLG	**Polygyros**	**1.14**	**94**	*e*Pn	**Pn**	**11 27 23.0**	**-0.8**
PLG				*e*Sn	**Sn**	**11 27 45.6**	**+6.1**

*IDC **26** 11:27:51.9±1.4, 2°.11N×102°.04W, h0km, mb3.9/5, mb1 4.2/5, mb1mx4.0/14, mbtmp3.9/5, MS3.2/5, Ms1 3.2/5, ms1mx3.0/23, Error ellipse: s-maj=73.8km s-min=21.6km az=56.0*
*ISCJB **26** 11:27:52.1±1.3, 2°.1N±0°.2×102°.0W±0°.1, h10km, mb3.7/7, MS3.2/3, Error ellipse: s-maj=34.6km s-min=9.8km az=34.0*
*NEIC **26** 11:27:53.3±0.9, 2°.06N×102°.06W, h10km, mb3.7/2, Error ellipse: s-maj=29.7km s-min=10.1km az=223.0*
ISC 26 11:27:53.5±1.3, 2°.1N±0°.2×102°.1W±0°.1, h10km, n15, σ0°66/11, mb3.7/7, MS3.2/3, Galapagos Triple Junction region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAYG	**Puerto Ayora**	**12.07**	**103**	*e*Pn	**Pn**	**11 30 46.0**	**+0.2**
PAYG				*e*Sn	**Sn**	**11 33 00.3**	**-0.3**
CMIG	**Matias Romero**	**16.52**	**25**	LR	LR	11 36 33.4	
	comp=Z,53nm,21.4s,baz=210,slow=32						
JTS	**JuntasAbangare**	**18.85**	**64**	LR	LR	11 37 23.8	
	comp=Z,56nm,20.8s,baz=121,slow=30						
OTAV	**Otavalo**	**23.66**	**94**	*e*P	**P**	**11 33 05.7**	**+0.1**
	4.7nm,1.1s,mb3.8						
ATAH	**Atahualpa**	**25.31**	**111**	LR	LR	11 40 20.3	
	comp=Z,71nm,20.1s,MS3.2,baz=121,slow=30						
TXAR	**Lajitas Array**	**27.17**	**357**	P	**P**	**11 33 37.2**	**0.0**
	0.6nm,0.8s,mb3.2,baz=184,slow=10,SNR=7.5						
TXAR				PcP	PcP	11 36 57.6	-0.1
	0.2nm,0.5s,baz=176,slow=3.0,SNR=4.3						
TXAR				LR	LR	11 43 22.1	
	comp=Z,44nm,21.3s,MS3.0,baz=15,slow=34						
TXAR	**Lajitas Array**	**27.17**	**357**	P	**P**	**11 33 37.2**	**0.0**
TXAR				PcP	PcP	11 36 57.6	-0.1
LPAZ	**La Paz**	**38.14**	**120**	P	**P**	**11 35 14.4**	**+1.1**
	2.2nm,0.8s,mb3.9,baz=326,slow=7.6,SNR=8.1						
LPAZ				LR	LR	11 48 51.2	
	comp=Z,62nm,20.2s,MS3.4,baz=290,slow=33						
PDAR	**Pinedale Array**	**41.09**	**352**	P	**P**	**11 35 37.5**	**0.0**
	2.5nm,0.8s,mb3.9,baz=153,slow=6.6,SNR=23						
MCMT	**McKenzie Canyo**	**43.65**	**349**	*e*P	**P**	**11 35 59.1**	**+0.8**
	0.6nm,0.8s,mb3.4						
CPUP	**Villa Florida**	**51.57**	**126**	P	**P**	**11 36 59.4**	**-0.8**
	0.4nm,0.4s,mb3.8,baz=217,slow=5.1,SNR=3.8						
CPUP	**Villa Florida**	**51.57**	**126**	P	**P**	**11 36 59.4**	**-0.8**
ILAR	**Eielson Array**	**70.37**	**341**	P	**P**	**11 39 06.2**	**-1.2**
	1.0nm,0.7s,mb3.8,baz=156,slow=5.5,SNR=12						
MKAR	**Makanchi Array**	**131.21**	**356**	PKP	PKPdf	11 47 06.0	-0.1
	0.2nm,0.2s,baz=9.9,slow=3.4,SNR=3.0						
CMAR	**Chiang Mai Arr**	**150.97**	**315**	PKPbc	PKPbc	11 47 48.1	+0.5
	4.4nm,1.0s,baz=346,slow=1.3,SNR=14						

DDA 26 11:28:20.6, 38°.26N×26°.60E, h7km±1km, Md2.7, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.10**	**356**	*i* P	Pg	11 28 23.0	+0.1
URLA				*i* S	Sg	11 28 25.3	+0.8
BLCB	**Balcova**	**0.37**	**69**	*e*PG	Pg	11 28 27.8	+0.1
BLCB				*e*SG	Sg	11 28 33.5	+0.9
BLCB	**Balcova**	**0.37**	**69**	*e*Pg	Pg	11 28 27.8	+0.1
IZM	**Izmir**	**0.54**	**74**	*e*PG	Pg	11 28 30.4	-0.6
AYDN	**Tasoluk**	**1.17**	**120**	*i* P	Pg	11 28 43.0	-0.1
AYDN				*i* S	Sg	11 28 59.4	+1.2

*IDC **26** 11:37:29.3±0.8, 5°.87S×150°.50E, h0km, mb4.2/11, mb1 4.3/12, mb1mx4.2/17, mbtmp4.2/12, ML3.4/1, MS3.6/7, Ms1 3.6/7, ms1mx3.4/17, Error ellipse: s-maj=31.3km s-min=15.6km az=95.0*
*ISCJB **26** 11:37:37.0±2.4, 5°.88S±0°.07×150°.3E±0°.1, h67km±20km, mb4.2/14, Error ellipse: s-maj=20.6km s-min=11.3km az=179.1*
*BJI **26** 11:37:37.8, 5°.90S×150°.30E, h69km, mB4.9/4, mb4.9/5*
*NEIC **26** 11:37:38.8±2.1, 5°.94S×150°.30E, h70km±19km, mb4.6/5, Error ellipse: s-maj=21.4km s-min=11.2km az=85.0*
ISC 26 11:37:38.9±2.0, 5°.90S±0°.07×150°.3E±0°.1, h68km±17km, n38, σ1°18/35, mb4.2/14, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.65**	**221**	*e*Pn	**Pn**	**11 38 46.6**	**0.0**
PMG				*e*Sn	**Sn**	**11 39 39.4**	**0.0**
COEN	**Coen**	**10.62**	**221**	*e*Pn	**Pn**	**11 40 07.5**	**-0.9**
COEN				*e*Sn	**Sn**	**11 41 57.0**	**-8.7**
CTA	**Charters Tower**	**14.63**	**195**	*e*P	**Pn**	**11 41 03.3**	**+1.0**
	5.6nm,0.9s						
CTA	**Charters Tower**	**14.63**	**195**	Pn	**Pn**	**11 41 00.5**	**-1.8**
	0.1nm,0.3s,baz=35,slow=14,SNR=4.2						
CTA				LR	LR	11 45 36.5	
	comp=Z,228nm,20.8s,baz=24,slow=33						
CTAO	**Charters Tower**	**14.63**	**195**	*e*Pn	**Pn**	**11 41 02.9**	**+0.6**
	29nm,1.4s						
KAKA	**Kakadu**	**18.84**	**248**	*e*P	**Pn**	**11 41 53.4**	**-1.3**
	20nm,0.6s						
KAKA	**Kakadu**	**18.84**	**248**	*e*P	**Pn**	**11 41 53.4**	**-1.3**
	56nm,0.6s						
EIDS	**Eidsvold**	**19.38**	**178**	*e*P	**Pn**	**11 42 00.7**	**-0.3**
EIDS	**Eidsvold**	**19.38**	**178**	*e*P	**Pn**	**11 41 59.6**	**-1.4**
	10nm,0.6s						
GUMO	**Guam**	**20.09**	**345**	P	**P**	**11 42 09.7**	**+2.7**
	46nm,0.9s,baz=188,slow=16,SNR=3.2						
GUMO				LR	LR	11 48 31.6	
	comp=Z,153nm,19.5s,baz=87,slow=33						
RMQ	**Roma**	**20.52**	**184**	*e*P	**P**	**11 42 13.7**	**+2.0**
	41nm,0.7s						
WRAB	**Tennant Creek**	**20.83**	**227**	*e*P	**P**	**11 42 15.3**	**+0.2**
	18nm,0.6s						
QLP	**Quilpie**	**21.36**	**195**	*e*P	**P**	**11 42 22.4**	**+1.7**
KNA	**Kununurra**	**23.25**	**243**	*e*P	**P**	**11 42 41.5**	**+0.9**
	21nm,0.7s,mb4.6						
ASAR	**Alice Springs**	**23.67**	**220**	P	**P**	**11 42 45.0**	**+0.6**
	5.9nm,0.6s,mb4.1,baz=57,slow=8.9,SNR=74						
ASAR				PcP	PcP	11 46 28.8	+1.5
	1.9nm,0.6s,baz=60,slow=2.8,SNR=6.4						
CMSA	**Cobar Meteorol**	**25.86**	**189**	*e*P	**P**	**11 43 05.7**	**+1.5**
FITZ	**Fitzroy Crossi**	**26.93**	**241**	*e*P	**P**	**11 43 13.8**	**-0.2**
	28nm,1.0s,mb4.8						
FITZ	**Fitzroy Crossi**	**26.93**	**241**	P	**P**	**11 43 13.9**	**0.0**
	8.8nm,0.6s,mb4.5,baz=71,slow=7.6,SNR=37						
FITZ				LR	LR	11 55 00.0	
	comp=Z,107nm,20.4s,baz=73,slow=39						
FITZ	**Fitzroy Crossi**	**26.93**	**241**	*e*P	**P**	**11 43 13.8**	**-0.1**
	8.2nm,0.7s,mb4.4						
FITZ				LR	LR	11 55 00.0	
STKA	**Stephens Creek**	**27.09**	**196**	*e*P	**P**	**11 43 14.3**	**-1.0**
	8.0nm,0.8s,mb4.3						
STKA	**Stephens Creek**	**27.09**	**196**	P	**P**	**11 43 14.9**	**-0.4**
	12nm,1.0s,mb4.4,baz=8.8,slow=9.5,SNR=11						
STKA				LR	LR	11 53 17.3	
	comp=Z,227nm,18.2s,baz=26,slow=35						
FORT	**Forrest**	**32.37**	**217**	*e*P	**P**	**11 44 00.5**	**-1.5**
	20nm,0.8s,mb4.9						
KMBL	**Kambalda**	**36.73**	**223**	*e*P	**P**	**11 44 39.8**	**+0.1**
	71nm,0.6s						
AFI	**Afiamalu**	**38.18**	**105**	LR	LR	11 58 18.3	
	comp=Z,106nm,20.8s,baz=158,slow=33						
URZ	**Urewera**	**40.39**	**147**	LR	LR	11 58 47.6	
	comp=Z,3μm,20.2s,baz=276,slow=32						
RPZ	**Rata Peaks**	**41.87**	**157**	P	**P**	**11 45 20.0**	**-2.4**
	11nm,1.1s,mb4.5,baz=332,slow=16,SNR=2.3						
MJAR	**Matsushiro Arr**	**43.70**	**346**	P	**P**	**11 45 37.0**	**-0.2**
	1.8nm,0.8s,mb3.9,baz=167,slow=7.5,SNR=5.7						
KSRS	**Korea Array**	**47.90**	**336**	P	**P**	**11 46 11.4**	**+1.2**
	2.3nm,0.7s,mb4.1,baz=159,slow=8.4,SNR=7.2						
KSRS				LR	LR	12 03 57.5	
	comp=Z,67nm,22.0s,baz=26,slow=33						
PETK	**Petropavlovsk-**	**59.12**	**5**	P	**P**	**11 47 32.2**	**+0.1**
	1.0nm,0.7s,mb3.9,baz=184,slow=5.1,SNR=4.1						
PETK				LR	LR	12 11 58.1	
	comp=Z,28nm,18.8s,baz=289,slow=35						
PETK	**Petropavlovsk-**	**59.12**	**5**	P	**P**	**11 47 32.2**	**+0.1**
PETK				LR	LR	12 11 58.1	
SONM	**Songino Array**	**65.94**	**329**	P	**P**	**11 48 18.3**	**+0.6**
	1.5nm,0.6s,mb4.0,baz=143,slow=6.1,SNR=8.7						
MKAR	**Makanchi Array**	**79.51**	**320**	P	**P**	**11 49 37.2**	**-1.0**
	0.2nm,0.3s,mb3.4,baz=90,slow=5.9,SNR=4.9						
ZALV	**Zalesovo Beam**	**80.68**	**327**	P	**P**	**11 49 42.8**	**-1.5**
	0.7nm,0.4s,mb3.8,baz=107,slow=5.0,SNR=4.3						
QSPA	**South Pole Qui**	**84.07**	**180**	*e*P	**P**	**11 50 02.7**	**+1.1**
	14nm,1.0s,mb4.7						
ILAR	**Eielson Array**	**84.12**	**23**	P	**P**	**11 50 00.2**	**-1.8**
	0.6nm,0.6s,mb3.6,baz=249,slow=5.0,SNR=15						
LPAZ	**La Paz**	**136.08**	**121**	PKP	PKPdf	11 56 55.6	+2.3
	2.3nm,0.9s,baz=207,slow=4.4,SNR=7.7						
CPUP	**Villa Florida**	**138.26**	**141**	PKP	PKPdf	11 56 57.7	+0.5
	1.3nm,0.6s,baz=278,slow=3.4,SNR=5.9						
CPUP	**Villa Florida**	**138.26**	**141**	PKP	PKPdf	11 56 57.7	+0.5

IDC 26 12:02:29.4±23.0, 24°.68S×179°.66E, h601km±299km, mb3.1/4, mb1 3.3/4, mb1mx3.0/14, mbtmp3.1/4, Error ellipse: s-maj=128.0km s-min=86.7km az=121.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**31.18**	**272**	P	P	12 08 01.4	+0.2
	6.2nm,0.5s,baz=108,slow=9.6,SNR=10						
STKA	**Stephens Creek**	**34.15**	**249**	P	P	12 08 25.8	-0.3
	1.7nm,0.4s,baz=91,slow=11,SNR=5.8						
ASAR	**Alice Springs**	**41.61**	**262**	P	P	12 09 26.6	0.0
	1.1nm,0.9s,baz=86,slow=8.6,SNR=8.5						
TXAR	**Lajitas Array**	**91.10**	**58**	P	P	12 14 31.2	+0.1
	0.3nm,0.7s,baz=207,slow=8.0,SNR=3.8						

*ISCJB **26** 12:02:52.7±0.4, 13°.38N±0°.05×89°.43W±0°.04, h74km±2km, mb4.2/24, Error ellipse: s-maj=10.1km s-min=3.2km az=34.5*
*CASC **26** 12:02:53.3±1.9, 13°.24N×89°.51W, h34km±4km, MD4.1

MIAR	Mount Ida	21.36	351	*e*P	P	12 07 35.8	-0.1
	comp=Z,9.5nm,1.1s,mb4.0						
526A	Mary Lane Ranc	21.41	323	⇑P	P	12 07 36.4	0.0
	baz=20						
UALR	University of	21.41	353	*e*P	P	12 07 37.7	+1.2
	comp=Z,16nm,0.8s,mb4.4						
328A	Wristen Ranch,	21.71	328	⇓P	P	12 07 39.0	-0.7
	baz=20						
426A	McDonald Obser	21.82	324	⇑P	P	12 07 40.4	-0.5
	baz=20						
SWET	Sewanee	21.91	8	*e*P	P	12 07 40.9	-1.0
WVT	Waverly	22.64	3	*e*P	P	12 07 53.1	+3.5
	comp=Z,2.5nm,0.6s,mb3.7						
TKL	Tuckaleechee C	22.70	12	P	P	12 07 50.0	-0.2
	comp=Z,1.7nm,0.6s,mb3.6,baz=191,slow=12,SNR=4.2						
TKL				LR	LR	12 17 19.8	
	comp=Z,78nm,18.0s,baz=102,slow=38						
SJG	San Juan	22.85	75	LR	LR	12 15 10.8	
	comp=Z,36nm,19.5s,baz=267,slow=32						
WMOK	Wichita Mounta	22.85	340	*e*P	P	12 07 49.8	-1.9
	comp=Z,13nm,1.4s,mb4.1						
WMOK				*e*pP		12 08 05.1	
325A	Bean Ranch, Si	22.88	324	⇓P	P	12 07 52.0	-0.2
	baz=21						
324A	Moseley Ranch,	23.23	323	⇓P	P	12 07 54.6	-1.0
	baz=22						
MNTX	Cornudas Mount	23.36	324	*e*P	P	12 07 56.0	-0.8
	comp=Z,1.4nm,0.8s,mb3.3						
MNTX				*e*PcP	PcP	12 11 40.4	-1.4
PCRV	Puerto La Cruz	24.45	95	LR	LR	12 17 06.5	
	comp=Z,40nm,20.8s,baz=295,slow=35						
CCM	Cathedral Cave	24.58	356	*e*P	P	12 08 07.3	-0.5
	comp=Z,6.0nm,0.8s,mb4.1						
WCI	Wyandotte Cave	24.85	6	*e*P	P	12 08 10.4	+0.2
	comp=Z,5.7nm,0.8s,mb4.0						
220A	Playas Peak, P	25.41	319	⇓P	P	12 08 15.2	-0.2
	baz=24						
219A	White Tail Can	25.94	319	⇑P	P	12 08 20.9	+0.6
	baz=24						
V25A	Rancho No Teng	26.18	331	⇓P	P	12 08 22.5	+0.2
	baz=25,SNR=5.9						
U26A	Atchley Ranch,	26.24	333	⇓P	P	12 08 23.0	+0.1
	baz=25,SNR=5.5						
T25A	Trinidad	27.16	333	⇑P	P	12 08 31.8	+0.7
	baz=26						
U23A	El Rito	27.33	329	⇓P	P	12 08 32.6	-0.1
	baz=26,SNR=6.9						
214A	Organ Pipe Nat	28.29	315	⇓P	P	12 08 41.6	+0.3
	baz=27						
BC3	Big Chuckawall	31.08	315	P	P	12 09 07.3	+1.2
	baz=30,SNR=8.3						
PHWY	Pilot Hill	31.10	336	*e*P	P	12 09 06.4	+0.3
	comp=Z,9.7nm,0.4s,mb4.9						
PHWY				*e*pP	pP	12 09 28.1	+5.8
MONP	Monument Peak	31.34	313	⇓P	P	12 09 09.4	+1.1
	baz=30						
GMRC	Granite Mounta	31.86	316	⇑P	P	12 09 13.8	+0.9
	baz=30						
V12A	Nelson	31.89	319	⇑P	P	12 09 14.7	+1.5
	baz=30						
N20A	Spence Gulch,	31.90	332	⇓P	P	12 09 13.8	+0.7
	baz=30,SNR=5.9						
HEC	Hector,Ludlow	32.34	316	⇓P	P	12 09 18.3	+1.3
	baz=31						
N19A	John Jarvie Ra	32.37	331	⇓P	P	12 09 17.3	+0.1
	baz=31						
BFSC	Mount Baldy Ra	32.93	314	⇑P	P	12 09 23.2	+0.9
	baz=32						
MPMC	Manual Prospec	33.82	317	⇓P	P	12 09 30.6	+0.7
	baz=32,SNR=7.4						
PDAR	Pinedale Array	34.02	333	PcP	PcP	12 12 07.0	-1.2
	comp=Z,1.1nm,0.8s,baz=124,slow=4.6,SNR=6.5						
L17A	Cokeville	34.10	331	⇑P	P	12 09 32.3	0.0
	baz=32						
ARVC	Arvin	34.22	314	⇑P	P	12 09 34.7	+1.2
	baz=33						
EYMN	Ely	34.45	358	*e*P	P	12 09 33.7	-1.5
	comp=Z,2.2nm,0.6s,mb4.2						
J17A	Brown Place, J	35.01	332	⇓P	P	12 09 40.8	+0.7
	baz=33,SNR=8.2						
REDW	Red Top Meadow	35.08	332	*e*P	P	12 09 41.1	+0.4
	comp=Z,1.1nm,0.6s,mb4.8						
LOHW	Long Hollow	35.16	333	*e*P	P	12 09 41.4	0.0
	comp=Z,3.3nm,0.7s,mb4.3						
M13A	Montello	35.21	327	*e*P	P	12 09 42.0	+0.1
	comp=Z,32nm,2.7s,mb4.7						
TPAW	Teton Pass	35.22	332	*e*P	P	12 09 42.3	+0.4
	comp=Z,11nm,1.4s,mb4.5						
IMW	Indian Meadow	35.53	333	*e*P	P	12 09 44.4	-0.2
	comp=Z,2.6nm,0.6s,mb4.3						
RLMT	Red Lodge	35.82	336	*e*P	P	12 09 46.4	-0.7
G18A	Lazy EL Ranch,	36.10	336	⇓P	P	12 09 49.3	-0.1
	baz=34,SNR=5.3						
LPAZ	La Paz	36.25	144	P	P	12 09 50.0	-1.1
	comp=Z,0.9nm,0.7s,mb3.8,baz=0.9,slow=16,SNR=4.4						
LPAZ				PcP	PcP	12 12 15.1	0.0
	comp=Z,0.8nm,0.3s,baz=265,slow=8.5,SNR=8.0						
LPAZ	La Paz	36.25	144	P	P	12 09 50.0	-1.1
LPAZ				PcP	PcP	12 12 15.1	0.0
F18A	Big Timber	36.64	336	⇑P	P	12 09 54.1	+0.1
	baz=35,SNR=8.1						
F17A	Fitzpatrick Pl	37.02	335	⇑P	P	12 09 57.8	+0.6
	baz=35,SNR=5.8						
DGMT	Dagmar	37.03	344	*e*P	P	12 09 57.3	0.0
	comp=Z,19nm,0.8s,mb5.1						
WCN	Washoe City	37.15	320	⇓P	P	12 09 58.7	+0.2
	baz=36						
H14A	Leadore	37.20	331	P	P	12 09 59.6	+0.8
	baz=36,SNR=5.5						
G15A	Dillon	37.22	333	⇓P	P	12 09 59.1	+0.2
	baz=36						
E18A	Harlowton	37.27	336	⇑P	P	12 09 59.4	0.0
	baz=36						
DLMT	Dillon	37.42	333	*e*P	P	12 10 01.7	+1.1
	comp=Z,2.6nm,0.8s,mb4.2						
I12A	Atlanta	37.45	329	⇑P	P	12 10 00.8	-0.1
	baz=36						
H13A	Challis	37.58	330	⇓P	P	12 10 02.0	0.0
	baz=36,SNR=8.0						
LRM	Limekiln Ridge	37.71	333	*e*P	P	12 10 04.4	+1.3
F15A	Butte	37.74	333	⇑P	P	12 10 04.4	+1.0
	baz=36						
E16A	East Helena	37.95	335	⇓P	P	12 10 05.5	+0.4
	baz=36						
D17A	Six Diamond Ra	38.05	336	⇓P	P	12 10 06.1	+0.2
	baz=36,SNR=5.1						
F12A	Elk City	38.94	331	⇓P	P	12 10 12.8	-0.6
	baz=37,SNR=8.7						
A17A	Triple J Farms	39.53	338	⇓P	P	12 10 17.9	-0.5
	baz=38						
E12A	Beaver Dam Sad	39.57	331	⇓P	P	12 10 17.6	-1.1
	baz=38						
A14A	Double T Ranch	40.60	336	⇓P	P	12 10 26.9	-0.3
	baz=39,SNR=6.3						
EDM	Edmonton	44.02	339	*e*P	P	12 10 53.7	-1.2
SCHQ	Schefferville	44.92	18	P	P	12 11 00.1	-1.9
	comp=Z,3.4nm,0.6s,mb4.3,baz=213,slow=6.8,SNR=5.5						
YKA	Yellowknife Ar	52.18	346	P	P	12 11 56.1	-1.6
	comp=Z,4.4nm,0.8s,mb4.5,baz=145,slow=7.8,SNR=11						
RES	Resolute Bay	61.32	358	P	P	12 12 59.7	-2.6
	comp=Z,1.7nm,0.6s,mb4.3,baz=194,slow=10.0,SNR=8.3						
INK	Inuvik	61.71	343	P	P	12 13 03.2	-1.8
	comp=Z,3.2nm,0.9s,mb4.3,baz=121,slow=9.6,SNR=4.2						
INK	Inuvik	61.71	343	P	P	12 13 03.2	-1.8
ILAR	Eielson Array	64.36	336	P	P	12 13 20.4	-2.1
	comp=Z,1.1nm,0.9s,mb3.7,baz=122,slow=4.7,SNR=11						
PPLA	Purkeypile	65.86	333	*e*P	P	12 13 32.9	+0.5
NIKO	Nikolski	73.05	322	*e*P	P	12 14 07.2	-10
NOA	NORSAR Array B	83.43	29	LR	LR	12 49 38.0	
	comp=Z,21nm,19.6s,baz=200,slow=34						
ARCES	ARCESS Array B	85.87	19	P	P	12 15 23.7	-2.5
	comp=Z,6.2nm,1.1s,mb4.4,baz=295,slow=4.9,SNR=4.2						
MKAR	Makanchi Array	119.59	7	PKP	PKPdf	12 21 34.5	-2.0
	comp=Z,0.3nm,0.2s,baz=3.8,slow=2.2,SNR=3.0						
ASAR	Alice Springs	137.85	250	PKP	PKPdf	12 22 08.5	-3.2
	comp=Z,1.0nm,0.7s,baz=111,slow=3.1,SNR=6.5						
CMAR	Chiang Mai Arr	147.26	345	PKPbc	PKPbc	12 22 28.3	-2.5
	comp=Z,3.3nm,0.7s,baz=339,slow=3.4,SNR=18						

*ISCJB **26** 12:21:02.8±0.8,38°.29N±0°.04×21°.87E±0°.04, h9km±5km, Error ellipse: s-maj=6.8km s-min=5.5km az=164.8*
*CSEM **26** 12:21:03.4±0.1,38°.29N×21°.89E, h2km, ML2.4/6, Error ellipse: s-maj=2.4km s-min=2.0km az=159.0*
*THE **26** 12:21:03.2,38°.29N×21°.88E, h5km±1km, ML2.4/6, Error ellipse: s-maj=1.5km s-min=0.3km az=266.0*
*ATH **26** 12:21:03.4,38°.29N×21°.88E, h2km, MD2.6/4*

ISC 26 12:21:03.3±1.2,38°.30N±0°.04×21°.87E±0°.04, h6km±10km, n19,σ0s36/37,2C,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	University Cam	0.07	259	*e*PG	Pg	12 21 05.1	0.0
UPR	University Cam	0.07	259	P	Pg	12 21 05.0	-0.1
UPR				S	Sg	12 21 06.4	+0.1
UPR	University Cam	0.07	259	*e*Pg	Pg	12 21 05.1	0.0
UPR				S	Sg	12 21 06.4	+0.1
LAKA	Lakka	0.10	124	P	Pg	12 21 05.2	-0.4
LAKA				S	Sg	12 21 06.8	-0.3
LAKA	Lakka	0.10	124	P	Pg	12 21 05.2	-0.4
LAKA				S	Sg	12 21 06.8	-0.3
EFP	Efpalio	0.13	11	⇑*i*PG	Pg	12 21 05.9	-0.2
EFP				*e*SG	Sg	12 21 08.5	+0.5
EFP	Efpalio	0.13	11	P	Pg	12 21 05.8	-0.3
EFP				S	Sg	12 21 08.2	+0.2
EFP	Efpalio	0.13	11	⇑*i*Pg	Pg	12 21 05.9	-0.2
EFP				S	Sg	12 21 08.2	+0.2
EFP				*e*Sg	Sg	12 21 08.5	+0.5
TRIZ	Trizonia	0.17	66	P	Pg	12 21 06.4	-0.4
TRIZ				S	Sg	12 21 09.3	+0.1
TRIZ	Trizonia	0.17	66	P	Pg	12 21 06.4	-0.4
TRIZ				S	Sg	12 21 09.3	+0.1
KALE	Kalithea	0.23	66	P	Pg	12 21 07.6	-0.3
KALE				S	Sg	12 21 11.3	+0.3
KALE	Kalithea	0.23	66	P	Pg	12 21 07.6	-0.3
KALE				S	Sg	12 21 11.3	+0.3
RLS	Riolos of Patr	0.40	233	*e*PG	Pg	12 21 11.4	+0.3
RLS	Riolos of Patr	0.40	233	*e*Pb	Pg	12 21 11.4	+0.3
GUR	Goura	0.52	134	*e*PG	Pg	12 21 13.1	-0.2
GUR				*e*SG	Sg	12 21 20.9	+0.9
GUR	Goura	0.52	134	P	Pg	12 21 13.0	-0.3
GUR				S	Sg	12 21 20.4	+0.4
GUR	Goura	0.52	134	*e*Pg	Pg	12 21 13.1	-0.2
GUR				S	Sg	12 21 20.4	+0.4
GUR				*e*Sb	Sg	12 21 20.9	+0.9
DSF	Desfina	0.53	77	P	Pg	12 21 13.0	-0.5
DSF				S	Sg	12 21 20.9	+0.5
DSF	Desfina	0.53	77	P	Pg	12 21 13.0	-0.5
DSF				S	Sg	12 21 20.9	+0.5

*ISK **26** 13:17:12.0,38°.33N×26°.50E, h8km, MD3.1*
*ATH **26** 13:17:12.9,38°.27N×26°.78E, h38km±19km, MD3.2/3*
*DDA **26** 13:17:13.0,38°.25N×26°.56E, h10km±1km, Md3.2*
*ISCJB **26** 13:17:13.3±0.5,38°.26N±0°.02×26°.55E±0°.03, h9km±3km, Error ellipse: s-maj=3.7km s-min=3.4km az=152.8*
*THE **26** 13:17:13.5,38°.23N×26°.58E, h11km, ML3.5/2, Error ellipse: s-maj=0.9km s-min=0.4km az=28.0*
*CSEM **26** 13:17:13.2±0.2,38°.29N×26°.53E, h10km, MD3.2, Error ellipse: s-maj=4.5km s-min=3.7km az=56.0*

ISC 26 13:17:13.7±0.4,38°.27N±0°.02×26°.55E±0°.03, h11km±3km, n61,σ1s04/95,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	Izmir	0.10	22	*i* P	Pg	13 17 15.9	-0.5
URLA				*i* S	Sg	13 17 18.0	-0.4
URLA	Izmir	0.10	22	*i* P	Pg	13 17 15.9	-0.5
URLA				*i* S	Sg	13 17 18.0	-0.4
BLCB	Balcova	0.41	73	PG	Pg	13 17 20.9	-0.8
BLCB				*e*SG	Sg	13 17 27.1	0.0
BLCB	Balcova	0.41	73	P	Pg	13 17 21.4	-0.3
BLCB				S	Sg	13 17 27.4	+0.3
BLCB	Balcova	0.41	73	*i* Pg	Pg	13 17 20.9	-0.8
BLCB	Balcova	0.41	73	P	Pg	13 17 21.4	-0.3
BLCB				*e*Sg	Sg	13 17 27.1	0.0
BLCB				S	Sg	13 17 27.4	+0.3
CHOS	Chios island	0.41	287	P	Pg	13 17 22.0	+0.3
CHOS				S	Sg	13 17 29.2	+2.1
CHOS	Chios island	0.41	287	P	Pg	13 17 22.0	+0.3
CHOS				S	Sg	13 17 29.2	+2.1
IZM	Izmir	0.58	77	PG	Pg	13 17 24.2	-0.7
IZM				*e*SG	Sg	13 17 33.0	+0.5
KDAG	Bornova	0.58	76	*i* P	Pg	13 17 24.8	-0.1
KDAG				*i* S	Sg	13 17 32.9	+0.2
KDAG	Bornova	0.58	76	*i* P	Pg	13 17 24.8	-0.2
KDAG				*i* S	Sg	13 17 32.8	+0.2
SMG	Samos	0.60	158	*e*PN	Pg	13 17 24.9	-0.5
SMG				*e*SN	Sg	13 17 33.5	+0.2
SMG	Samos	0.60	158	*e*Pn	Pg	13 17 24.9	-0.5
GCAM	G?zelcaml?	0.78	136	*i* P	Pg	13 17 28.1	-0.6
GCAM				*i* S	Sg	13 17 39.3	+0.3
GCAM	G?zelcaml?	0.78	136	*i* P	Pg	13 17 28.1	-0.7
GCAM				*i* S	Sg	13 17 39.3	+0.3
PRK	Paraskevi	1.00	348	*e*PN	Pn	13 17 33.0	-0.6
PRK				*e*SN	Sn	13 17 47.1	-0.6
PRK	Paraskevi	1.00	348	P	Pg	13 17 32.8	-0.2
PRK				S	Sg	13 17 47.5	+1.5
PRK	Paraskevi	1.00	348	P	Pg	13 17 32.8	-0.2
PRK	Paraskevi	1.00	348	*e*Pn	Pn	13 17 33.0	-0.6
PRK				*e*Sn	Sn	13 17 47.1	-0.6
PRK				S	Sg	13 17 47.5	+1.5
AYVA	Ayvalik	1.05	6	*i* P	Pb	13 17 32.7	-1.1
AYVA				*i* S	Sb	13 17 49.5	+2.1
AYVA	Ayvalik	1.05	6	*i* P	Pb	13 17 32.7	-1.0
SIGR	SIGRI	1.09	330	P	Pb	13 17 34.1	-0.4
SIGR	SIGRI	1.09	330	P	Pb	13 17 34.1	-0.4
AKHS	Akhisar	1.17	58	*i* P	Pb	13 17 34.3	-1.4
AKHS				*i* S	Sb	13 17 52.1	+1.3
AKHS	Akhisar	1.17	58	*i* P	Pb	13 17 34.3	-1.5
AKHS				*i* S	Sb	13 17 52.2	+1.4
AKS	Akhisar	1.17	58	*e*PN	Pn	13 17 34.8	-1.1
AKS	Akhisar	1.17	58	*e*Pn	Pn	13 17 34.8	-1.0
AYDN	Tasoluk	1.21	120	*i* P	Pn	13 17 35.7	-0.8
AYDN				*i* S	Sb	13 17 51.9	-0.3
AYDN	Tasoluk	1.21	120	*i* P	Pn	13 17 35.7	-0.8
AYDN				*i* S	Sb	13 17 51.9	-0.3
BODT	Bodrum	1.35	153	*e*PN	Pn	13 17 38.6	+0.3
BODT	Bodrum	1.35	153	*e*Pn	Pn	13 17 38.6	+0.3
MLSB	Milas	1.37	135	*e*PN	Pn	13 17 39.9	+1.2
MLSB	Milas	1.37	135	*e*Pn	Pn	13 17 39.9	+1.2
BDRM	Kayabasi	1.39	149	*i* P	Pn	13 17 39.2	+0.2
BDRM				*i* S	Sn	13 17 57.6	+0.3
BDRM	Kayabasi	1.39	149	*i* P	Pn	13 17 39.2	+0.2
BDRM				*i* S	Sn	13 17 57.6	+0.3
APE	Apeiranthos	1.44	214	*e*PN	Pn	13 17 39.5	-0.2
APE	Apeiranthos	1.44	214	*e*PB	Pb	13 17 40.2	-0.3
APE				*e*SN	Sn	13 17 59.5	+1.0
APE	Apeiranthos	1.44	214	P	Pn	13 17 38.1	-1.5
APE				S	Sn	13 17 57.4	-1.1
APE	Apeiranthos	1.44	214	P	Pn	13 17 38.1	-1.5
APE	Apeiranthos	1.44	214	*e*Pn	Pn	13 17 39.5	-0.1
APE				S	Sn	13 17 57.4	-1.1
APE				*e*Sn	Sn	13 17 59.5	+1.0
EZN	Ezine	1.57	354	*e*PN	Pn	13 17 40.1	-1.3
EZN	Ezine	1.57	354	*e*Pn	Pn	13 17 40.1	-1.3
KULA	Kula-Manisa	1.68	81	*e*PN	Pn	13 17 42.9	0.0
KULA	Kula-Manisa	1.68	81	*e*Pn	Pn	13 17 42.9	0.0
BALY	Balya	1.69	29	*i* P	Pn	13 17 43.3	+0.2
BALY				*i* S	Sn	13 18 07.1	+2.4
BALY	Balya	1.69	29	*i* P	Pn	13 17 43.3	+0.2
DAT	Datca	1.74	152	*e*PN	Pn	13 17 45.2	+1.4
DAT	Datca	1.74	152	*e*Pn	Pn	13 17 45.2	+1.5
YER	Yerkesik	1.78	129	*e*PN	Pn	13 17 44.8	+0.5
YER	Yerkesik	1.78	129	*e*Pn	Pn	13 17 44.8	+0.5
DEMI	Demirci	1.87	65	*i* P	Pn	13 17 47.9	+2.4
DEMI				*i* S	Sn	13 18 07.4	-1.6
DEMI	Demirci	1.87	65	*i* P	Pn	13 17 47.9	+2.4
DEMI				*i* S	Sn	13 18 07.4	-1.6
GONE	Gonen-Balikesi	1.98	26	*e*PN	Pn	13 17 46.2	-0.9
GONE	Gonen-Balikesi	1.98	26	*e*Pn	Pn	13 17 46.2	-0.9
GADA	Gvkgeada	1.99	345	*e*PN	Pn	13 17 45.6	-1.5
GADA	Gvkgeada	1.99	345	*e*Pn	Pn	13 17 45.6	-1.5
DNZL	Cakiroluk	2.06	106	*i* P	Pn	13 17 50.8	+2.7
DNZL				*i* S	Sn	13 18 18.4	+4.8
DNZL	Cakiroluk	2.06	106	*i* P	Pn	13 17 50.8	+2.7
GELI	Tayfur-Gelibol	2.13	358	*e*PN	Pn	13 17 47.9	-1.2
GELI	Tayfur-Gelibol	2.13	358	*e*Pn	Pn	13 17 47.9	-1.2
KHAL	Karahalli	2.32	87	*i* P	Pn	13 17 57.0	+5.3
KHAL				*i* S	Sn	13 18 25.0	+4.9

WEL 26 13:19:26.0±0.1,41°.75S×174°.33E, h56km±1km, ML3.5/15, 2C-2D, Error ellipse: s-maj=1.2km s-min=0.8km az=0.0,

Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSWZ	Blackbirch Sta	0.34	276	⇑PN	Pn	13 19 36.0	-0.1
BSWZ				SN	Sn	13 19 42.9	-0.3
TUWZ	Tuamarina	0.43	317	PN	Pn	13 19 36.4	-0.5
TUWZ				SN	Sn	13 19 43.6	-1.2
SNZO	South Karori	0.52	33	PN	Pn	13 19 37.7	-0.2
SNZO				SN	Sn	13 19 46.2	-0.2
BHW	Baring Head	0.53	50	PN	Pn	13 19 37.7	-0.2
WEL	Wellington	0.57	35	PN	Pn	13 19 38.3	-0.1
WEL				SN	Sn	13 19 47.8	+0.5
PLWZ	Palliser	0.71	76	⇓PN	Pn	13 19 39.9	-0.3
MSWZ	Moikau Station	0.77	64	⇓PN	Pn	13 19 40.4	-0.4
CAW	Cannon Point	0.85	41	PN	Pn	13 19 41.5	-0.4
KHZ	Kahutara	0.89	221	⇑PN	Pn	13 19 42.4	-0.1
NNZ	Nelson	0.89	306	PN	Pn	13 19 41.8	-0.7
PAWZ	Paruwai Farm	0.90	66	PN	Pn	13 19 41.9	-0.7
KIW	Kapiti Island	0.99	26	PN	Pn	13 19 43.6	-0.2
MTW	Mount Morrison	1.06	57	PN	Pn	13 19 43.8	-0.8
THZ	Tophouse	1.07	269	PN	Pn	13 19 44.3	-0.5
TRWZ	Traveller	1.07	71	PN	Pn	13 19 44.1	-0.8
OGWZ	Otaki Gorge	1.12	34	PN	Pn	13 19 44.9	-0.6
HOWZ	Holdsworth Sta	1.23	47	PN	Pn	13 19 46.1	-0.8
MRZ	Mangatainoka R	1.44	41	PN	Pn	13 19 49.0	-0.8
QRZ	Quartz Range	1.64	304	PN	Pn	13 19 52.3	-0.2
POWZ	Post Office Ro	1.74	39	PN	Pn	13 19 52.8	-1.0
LTZ	Lake Taylor	1.85	235	PN	Pn	13 19 54.7	-0.6
DSZ	Denniston Nort	1.89	269	PN	Pn	13 19 55.7	-0.2
WAZ	Wanganui	2.05	14	PN	Pn	13 19 59.2	+1.1
CRLZ	Canterbury Las	2.22	214	PN	Pn	13 19 58.6	-1.8
MQZ	McQueen's Vall	2.32	212	PN	Pn	13 19 59.7	-2.0
PNHZ	Pukenui	2.32	38	PN	Pn	13 20 00.4	-1.3
MOVZ	Moawhango	2.58	25	PN	Pn	13 20 04.7	-0.6
VRZ	Vera Road	2.64	7	PN	Pn	13 20 07.1	+0.9
OTVZ	Oturere	2.77	22	PN	Pn	13 20 08.1	+0.1
WVZ	Waitaha Valley	2.98	242	PN	Pn	13 20 09.8	-0.9
RPZ	Rata Peaks	3.11	230	PN	Pn	13 20 11.4	-1.2
HIZ	Hauiti	3.26	7	PN	Pn	13 20 15.3	+0.7
FOZ	Fox Glacier	3.88	241	PN	Pn	13 20 20.4	-2.6
LBZ	Lake Benmore	4.02	228	PN	Pn	13 20 23.7	-1.3
MWZ	Matawai	4.20	37	PN	Pn	13 20 24.1	-3.4
ODZ	Otahua Downs	4.25	218	PN	Pn	13 20 26.1	-2.1
EAZ	Earnscleugh	5.05	225	PN	Pn	13 20 37.4	-1.7
TUZ	Tuapeka	5.41	217	PN	Pn	13 20 42.1	-1.9

*IDC **26** 13:23:53.3±1.0,12°.93N×92°.43E, h0km, mb4.0/11, mb1 4.1/12, mb1mx3.9/22, mbtmp3.9/12, ML3.7/1, MS3.5/4, Ms1 3.5/4, ms1mx3.0/24, Error ellipse: s-maj=31.2km s-min=17.6km az=53.0*
*NEIC **26** 13:23:55.2±3.5,12°.97N×92°.56E, h12km±22km, mb4.1/1, Error ellipse: s-maj=11.3km s-min=9.2km az=144.0*

ISC 26 13:23:55.2±4.5,12°.96N±0°.09×92°.56E±0°.09, h11km±29km, n21,σ0s71/23, mb3.9/11, MS3.6/3, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	8.22	48	*e*Pn	Pn	13 25 53.7	-0.8
	4.1nm,0.6s						
CM31				*e*Sn	Sn	13 27 20.2	-7.3
CMAR	Chiang Mai Arr	8.22	48	Pn	Pn	13 25 55.0	+0.5
	0.2nm,0.3s,baz=241,slow=15,SNR=7.2						
CMAR				Sn	Sn	13 27 21.8	-5.8
	0.6nm,0.3s,baz=239,slow=28,SNR=6.3						
CHTO	Chiang Mai	8.46	46	*e*Pn	Pn	13 25 56.7	-1.1
CHTO				*e*Sn	Sn	13 27 23.8	-10
PSI	Prapat	11.90	148	LR	LR	13 31 47.5	
	comp=Z,170nm,19.3s,baz=301,slow=39						
PALK	Pallekele	12.96	245	*e*Pn	Pn	13 26 59.5	-0.1
PALK				*e*Sn	Sn	13 29 11.9	-12
LSA	Lhasa	16.71	356	P	Pn	13 27 51.0	+1.7
LSA	Lhasa	16.71	356	*e*Pn	Pn	13 27 51.4	+2.0
	7.4nm,0.5s						
MK31	Makanchi Array	34.81	348	*e*P	P	13 30 45.3	-0.7
MK31				*e*		13 30 57.3	
MKAR	Makanchi Array	34.81	348	P	P	13 30 45.9	-0.1
	1.6nm,0.8s,mb4.0,baz=163,slow=8.6,SNR=15						
SONM	Songino Array	36.63	16	P	P	13 31 02.9	+1.3
	0.5nm,0.7s,mb3.5,baz=201,slow=7.6,SNR=3.0						
KSRS	Korea Array	39.86	46	P	P	13 31 29.1	+0.2
	0.9nm,0.7s,mb3.6,baz=245,slow=8.1,SNR=3.7						
KSRS				LR	LR	13 50 09.5	
	comp=Z,44nm,18.5s,MS3.3,baz=230,slow=40						
ZALV	Zalesovo Beam	41.34	353	P	P	13 31 40.9

PRK				S	Sb	13 32 06.0	+2.2
AYVA	Ayvalik	1.07	5	*i* P	Pb	13 31 50.2	-0.8
AYVA				*i* S	Sb	13 32 06.1	+1.2
AYVA	Ayvalik	1.07	5	*i* P	Pb	13 31 50.2	-0.8
AYVA				*i* S	Sb	13 32 06.1	+1.2
SIGR	SIGRI	1.12	330	P	Pb	13 31 51.3	-0.5
SIGR				S	Sb	13 32 08.6	+2.3
SIGR	SIGRI	1.12	330	P	Pb	13 31 51.3	-0.5
SIGR				S	Sb	13 32 08.6	+2.3
AKS	Akhisar	1.17	56	*e*PN	Pn	13 31 51.6	-1.0
AKS	Akhisar	1.17	56	*e*Pn	Pn	13 31 51.6	-1.0
AKHS	Akhisar	1.17	56	*i* P	Pb	13 31 49.8	-2.8
AKHS				*i* S	Sb	13 32 08.4	+0.7
AKHS	Akhisar	1.17	56	*i* P	Pb	13 31 49.8	-2.8
AKHS				*i* S	Sb	13 32 08.4	+0.7
AYDN	Tasoluk	1.19	119	*i* P	Pn	13 31 52.2	-0.7
AYDN				*i* S	Sb	13 32 08.9	+0.6
AYDN	Tasoluk	1.19	119	*i* P	Pn	13 31 52.2	-0.7
AYDN				*i* S	Sb	13 32 08.9	+0.7
BODT	Bodrum	1.31	153	*e*PN	Pn	13 31 54.7	0.0
BODT	Bodrum	1.31	153	*e*Pn	Pn	13 31 54.7	0.0
MLSB	Milas	1.34	134	*e*PN	Pn	13 31 55.1	+0.1
MLSB	Milas	1.34	134	*e*Pn	Pn	13 31 55.1	0.0
BDRM	Kayabasi	1.36	149	*i* P	Pn	13 31 55.4	0.0
BDRM				*i* S	Sn	13 32 15.2	+2.0
BDRM	Kayabasi	1.36	149	*i* P	Pn	13 31 55.4	+0.1
BDRM				*i* S	Sn	13 32 15.2	+1.9
APE	Apeiranthos	1.43	215	*e*PN	Pn	13 31 54.8	-1.5
APE	Apeiranthos	1.43	215	*e*PN	Pn	13 31 55.2	-1.1
APE				*e*SN	Sn	13 32 13.3	-1.6
APE	Apeiranthos	1.43	215	P	Pn	13 31 54.7	-1.6
APE				S	Sn	13 32 13.8	-1.1
APE	Apeiranthos	1.43	215	P	Pn	13 31 54.7	-1.6
APE	Apeiranthos	1.43	215	*e*Pn	Pn	13 31 55.2	-1.1
APE				*e*Sn	Sn	13 32 13.3	-1.6
APE				S	Sn	13 32 13.8	-1.1
EZN	Ezine	1.59	353	*e*PN	Pn	13 31 58.6	0.0
EZN	Ezine	1.59	353	*e*Pn	Pn	13 31 58.6	+0.1
KULA	Kula-Manisa	1.67	80	*e*PN	Pn	13 32 00.2	+0.7
KULA	Kula-Manisa	1.67	80	*e*Pn	Pn	13 32 00.2	+0.7
BALY	Balya	1.71	28	*i* P	Pn	13 31 59.8	-0.3
BALY				*i* S	Sn	13 32 23.4	+1.5
BALY	Balya	1.71	28	*i* P	Pn	13 31 59.8	-0.3
BALB	Balikesir	1.73	36	*e*PN	Pn	13 31 59.6	-0.8
BALB	Balikesir	1.73	36	*e*Pn	Pn	13 31 59.6	-0.8
YER	Yerkesik	1.75	129	*e*PN	Pn	13 31 59.8	-0.9
YER	Yerkesik	1.75	129	*e*Pn	Pn	13 31 59.8	-0.9
LIA	Limnos Island	1.98	327	P	Pn	13 32 04.0	+0.2
LIA				S	Sn	13 32 30.6	+2.2
LIA	Limnos Island	1.98	327	P	Pn	13 32 04.0	+0.2
LIA				S	Sn	13 32 30.6	+2.2
GONE	Gonen-Balikesi	2.00	25	*e*PN	Pn	13 32 03.8	-0.4
GONE	Gonen-Balikesi	2.00	25	*e*Pn	Pn	13 32 03.8	-0.3
DURS	Dursunbey	2.02	47	*i* P	Pn	13 32 02.9	-1.4
DURS				*i* S	Sn	13 32 29.1	-0.3
DURS	Dursunbey	2.02	47	*i* P	Pn	13 32 02.9	-1.4
DURS				*i* S	Sn	13 32 29.1	-0.3
GADA	Gvkgeada	2.02	345	*e*PN	Pn	13 32 03.8	-0.5
GADA	Gvkgeada	2.02	345	*e*Pn	Pn	13 32 03.8	-0.5
GELI	Tayfur-Gelibol	2.16	358	*e*PN	Pn	13 32 06.0	-0.2
GELI	Tayfur-Gelibol	2.16	358	*e*Pn	Pn	13 32 06.0	-0.3
KCTX	Karacabey (Bur	2.45	34	*e*PN	Pn	13 32 10.4	+0.1
KCTX	Karacabey (Bur	2.45	34	*e*Pn	Pn	13 32 10.4	+0.1

NEIC ***26*** *13:51:56.0, 36°.67N×28°.94E, h28km, MD3.4(ATH), MD3.3(ISK), After ATH.*
ATH ***26*** *13:51:56.0, 36°.67N×28°.94E, h28km±2km, MD3.4/4*
ISK ***26*** *13:51:57.8, 36°.23N×28°.89E, h12km, MD3.3*
DDA ***26*** *13:51:58.7, 36°.21N×28°.91E, h35km±2km, Md3.3*
ISCJB ***26*** *13:51:58.6±0.6, 36°.26N±0°.04×28°.86E±0°.03, h12km±4km, Error ellipse: s-maj=6.3km s-min=4.6km az=179.1*
CSEM ***26*** *13:51:59.0±0.3, 36°.25N×28°.88E, h15km, MD3.3, Error ellipse: s-maj=6.9km s-min=4.7km az=175.0*

ISC 26 13:51:59.2±0.6, 36°.25N±0°.04×28°.87E±0°.03, h15km±4km, n45, σ1§07/65, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSL	Kastellorizon	0.58	100	*e*Pn	Pg	13 52 10.6	-0.1
KSL	Kastellorizon	0.58	100	*e*PN	Pg	13 52 10.6	-0.1
KSL	Kastellorizon	0.58	100	*e*Pn	Pg	13 52 10.6	-0.1
AKAS	Kas	0.59	91	*i* P	Pg	13 52 10.0	-0.8
AKAS				*i* S	Sg	13 52 20.0	+1.3
AKAS	Kas	0.59	91	*i* P	Pg	13 52 10.0	-0.8
AKAS				*i* S	Sg	13 52 20.0	+1.3
ARG	Arkhangelos	0.60	267	*e*Pn	Pg	13 52 11.9	+0.9
ARG				*e*Sn	Sg	13 52 23.4	+4.4
ARG	Arkhangelos	0.60	267	*e*PN	Pg	13 52 11.9	+0.9
ARG				*e*SN	Sg	13 52 23.4	+4.4
ARG	Arkhangelos	0.60	267	*e*Pn	Pg	13 52 11.9	+0.9
YER	Yerkesik	1.00	332	*e*PG	Pg	13 52 12.2	-0.3
YER				*e*SG	Sg	13 52 32.3	+0.6
YER	Yerkesik	1.00	332	*e*Pg	Pg	13 52 18.2	-0.4
YER				*e*Sg	Sg	13 52 32.3	+0.6
GLHS	Glhisar (BURDU	1.03	29	*e*PG	Pg	13 52 18.2	-1.0
GLHS	Glhisar (BURDU	1.03	29	*e*Pg	Pg	13 52 18.2	-1.0
GOLH	Golhisar	1.13	29	*i* P	Pg	13 52 19.8	-1.2
GOLH				*i* S	Sg	13 52 36.8	+1.1
GOLH	Golhisar	1.13	29	*i* P	Pg	13 52 19.8	-1.2
GOLH				*i* S	Sg	13 52 36.8	+1.1
DAT	Datca	1.15	295	*e*PN	Pg	13 52 20.8	-0.5
DAT	Datca	1.15	295	*e*Pn	Pg	13 52 20.8	-0.5
BDRM	Kayabasi	1.41	306	*i* P	Pn	13 52 25.0	+0.6
BDRM				*i* S	Sn	13 52 46.3	+3.7
BDRM	Kayabasi	1.41	306	*i* P	Pn	13 52 25.0	+0.7
KORT	Korkueli	1.41	57	*i* P	Pn	13 52 24.8	+0.5
KORT				*i* S	Sn	13 52 43.5	+0.9
KORT	Korkueli	1.41	57	*i* P	Pn	13 52 24.8	+0.5
KORT				*i* S	Sn	13 52 43.5	+0.9
DNZL	Cakiroluk	1.44	6	*i* P	Pn	13 52 26.0	+1.1
DNZL				*i* S	Sn	13 52 42.8	-0.8
DNZL	Cakiroluk	1.44	6	*i* P	Pn	13 52 26.0	+1.2
DNZL				*i* S	Sn	13 52 42.8	-0.7
BODT	Bodrum	1.49	303	*e*PN	Pn	13 52 24.9	-0.6
BODT	Bodrum	1.49	303	*e*Pn	Pn	13 52 24.9	-0.6
DENT	Denizli	1.51	5	*e*PN	Pn	13 52 26.0	+0.3
DENT	Denizli	1.51	5	*e*Pn	Pn	13 52 26.0	+0.3
KARP	Karpathos	1.56	244	*e*Pb	Pb	13 52 27.1	-0.6
KARP	Karpathos	1.56	244	*e*PB	Pb	13 52 27.1	-0.6
KARP	Karpathos	1.56	244	*e*Pb	Pb	13 52 27.1	-0.6
AYDN	Tasoluk	1.62	331	*i* P	Pn	13 52 28.6	+1.4
AYDN				*i* S	Sn	13 52 47.3	-0.5
AYDN	Tasoluk	1.62	331	*i* P	Pn	13 52 28.6	+1.4
AYDN				*i* S	Sn	13 52 47.3	-0.5
BCK	Bucak	1.83	48	*e*PN	Pn	13 52 30.0	-0.2
BCK	Bucak	1.83	48	*e*Pn	Pn	13 52 30.0	-0.2
KHAL	Karahalli	2.17	13	*i* P	Pn	13 52 34.9	0.0
KHAL				*i* S	Sn	13 53 02.4	+0.8
KHAL	Karahalli	2.17	13	*i* P	Pn	13 52 34.9	0.0
KHAL				*i* S	Sn	13 53 02.3	+0.8
URLA	Izmir	2.78	320	*i* P	Pn	13 52 41.1	-2.1
URLA				*i* S	Pg	13 52 54.5	+2.1
URLA	Izmir	2.78	320	*i* P	Pn	13 52 41.1	-2.1
NPS	Neapolis	2.83	251	*e*Pn	Pn	13 52 44.4	+0.5
NPS	Neapolis	2.83	251	*e*PN	Pn	13 52 44.4	+0.5
NPS	Neapolis	2.83	251	*e*Pn	Pn	13 52 44.4	+0.5
GDZ	Gediz	2.87	10	*i* P	Pn	13 52 42.2	-2.3
GDZ				*i* S	Sn	13 53 11.7	-7.2
GDZ	Gediz	2.87	10	*i* P	Pn	13 52 42.2	-2.3
HDMB	Hadim	2.99	75	*e*PN	Pn	13 52 45.6	-0.6
HDMB	Hadim	2.99	75	*e*Pn	Pn	13 52 45.6	-0.6
ULDT	Uludag	3.89	3	*i* P	Pn	13 53 03.3	+4.8
ULDT				*i* S	Pg	13 53 11.1	-2.7

NEIC ***26*** *14:05:41.0, 38°.22N×26°.62E, h5km, MD3.2(ATH), MD3.0(ISK), After ISK.*
CSEM ***26*** *14:05:41.8±0.1, 38°.23N×26°.56E, h2km, MD2.8, Error ellipse: s-maj=3.2km s-min=2.8km az=59.0*
ISCJB ***26*** *14:05:41.4±0.6, 38°.24N±0°.02×26°.54E±0°.03, h1km±4km, Error ellipse: s-maj=3.5km s-min=3.1km az=149.8*
THE ***26*** *14:05:41.2, 38°.20N×26°.58E, h0km, ML3.4/4, Error ellipse: s-maj=0.8km s-min=0.5km az=124.0*
DDA ***26*** *14:05:41.0, 38°.27N×26°.56E, h16km±1km, Md2.8*
ATH ***26*** *14:05:41.7, 38°.26N×26°.58E, h23km±2km, MD3.2/5*
ISK ***26*** *14:05:42.0, 38°.21N×26°.60E, h5km, MD3.1*

ISC 26 14:05:42.1±0.4, 38°.24N±0°.02×26°.55E±0°.03, h3km±3km, n65, σ1§12/108, 1D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	Izmir	0.13	17	*i* P	Pg	14 05 44.4	-0.2
URLA				*i* S	Sg	14 05 46.8	+0.4
URLA	Izmir	0.13	17	*i* P	Pg	14 05 44.4	-0.3
URLA				*i* S	Sg	14 05 46.8	+0.4
CHOS	Chios island	0.41	291	*i*PB	Pg	14 05 50.5	+0.4
CHOS	Chios island	0.41	291	P	Pg	14 05 50.4	+0.3
CHOS				S	Sg	14 05 57.7	+2.2
CHOS	Chios island	0.41	291	P	Pg	14 05 50.4	+0.3
CHOS				S	Sg	14 05 57.7	+2.2
BLCB	Balcova	0.41	69	PG	Pg	14 05 50.0	-0.2
BLCB				*e*SG	Sg	14 05 55.5	-0.1
BLCB	Balcova	0.41	69	P	Pg	14 05 49.8	-0.3
BLCB				S	Sg	14 05 55.9	+0.4
BLCB	Balcova	0.41	69	P	Pg	14 05 49.8	-0.3
BLCB				*e*Sg	Sg	14 05 55.5	0.0
BLCB				S	Sg	14 05 55.9	+0.4
SMG	Samos	0.58	157	*e*Pn	Pg	14 05 53.3	+0.1
SMG				*e*Sn	Sg	14 06 02.2	+1.5
SMG	Samos	0.58	157	*e*PN	Pg	14 05 53.3	+0.1
SMG				*e*SN	Sg	14 06 02.2	+1.5
SMG	Samos	0.58	157	*e*Pn	Pg	14 05 53.3	+0.1
IZM	Izmir	0.58	74	PG	Pg	14 05 53.1	-0.2
IZM				*e*SG	Sg	14 06 01.5	+0.6
KDAG	Bornova	0.59	74	*i* P	Pg	14 05 53.1	-0.3
KDAG				*i* S	Sg	14 06 00.9	-0.2
KDAG	Bornova	0.59	74	*i* P	Pg	14 05 53.1	-0.3
KDAG				*i* S	Sg	14 06 00.9	-0.2
GCAM	G?zelcaml?	0.76	135	*i* P	Pg	14 05 56.2	-0.6
GCAM				*i* S	Sg	14 06 07.5	+0.8
GCAM	G?zelcaml?	0.76	135	*i* P	Pg	14 05 56.2	-0.6
GCAM				*i* S	Sg	14 06 07.5	+0.8
PRK	Paraskevi	1.03	348	*e*Pn	Pn	14 06 01.1	-2.3
PRK				*e*Sn	Sn	14 06 15.9	-2.4
PRK	Paraskevi	1.03	348	*e*PN	Pn	14 06 01.1	-2.3
PRK				*e*SN	Sn	14 06 15.9	-2.4
PRK	Paraskevi	1.03	348	P	Pg	14 06 01.3	-0.6
PRK				S	Sg	14 06 17.1	+1.9
PRK	Paraskevi	1.03	348	P	Pg	14 06 01.3	-0.6
PRK				*e*Sn	Sn	14 06 15.9	-2.4
PRK				S	Sg	14 06 17.1	+1.9
AYVA	Ayvalik	1.07	6	*i* P	Pg	14 05 59.9	-2.9
AYVA				*i* S	Sg	14 06 16.8	+0.1
SIGR	SIGRI	1.11	331	P	Pg	14 06 03.0	-0.5
SIGR				S	Sg	14 06 20.2	+2.3
SIGR	SIGRI	1.11	331	P	Pg	14 06 03.0	-0.5
SIGR				S	Sg	14 06 20.2	+2.3
AKHS	Akhisar	1.18	57	*i* P	Pg	14 06 03.2	-1.5
AKHS				*i* S	Sg	14 06 20.3	+0.2
AKHS	Akhisar	1.18	57	*i* P	Pg	14 06 03.2	-1.6
AKHS				*i* S	Sg	14 06 20.3	+0.2
AKS	Akhisar	1.18	57	*e*PN	Pn	14 06 04.8	-0.7
AKS	Akhisar	1.18	57	*e*Pn	Pn	14 06 04.8	-0.7
AYDN	Tasoluk	1.20	118	*i* P	Pg	14 06 04.2	-1.0
AYDN				*i* S	Sg	14 06 20.4	-0.3
AYDN	Tasoluk	1.20	118	*i* P	Pg	14 06 04.2	-1.0
AYDN				*i* S	Sg	14 06 20.4	-0.3
BODT	Bodrum	1.32	153	*e*PN	Pn	14 06 07.3	-0.1
BODT	Bodrum	1.32	153	*e*Pn	Pn	14 06 07.3	-0.1
MLSB	Milas	1.35	134	*e*PN	Pn	14 06 06.7	-1.2
MLSB	Milas	1.35	134	*e*Pn	Pn	14 06 06.7	-1.2
BDRM	Kayabasi	1.37	148	*i* P	Pn	14 06 07.2	-0.9
BDRM				*i* S	Sg	14 06 26.5	+0.3
BDRM	Kayabasi	1.37	148	*i* P	Pn	14 06 07.2	-0.9
BDRM				*i* S	Sg	14 06 26.5	+0.3
APE	Apeiranthos	1.42	215	*e*PN	Pn	14 06 08.4	-0.4
APE	Apeiranthos	1.42	215	*e*Pn	Pn	14 06 08.3	-0.5
APE				*e*Sn	Sn	14 06 29.1	+1.2
APE	Apeiranthos	1.42	215	*e*PN	Pn	14 06 08.3	-0.5
APE				*e*SN	Sn	14 06 29.1	+1.2
APE	Apeiranthos	1.42	215	P	Pn	14 06 06.8	-2.0
APE				S	Sg	14 06 27.1	-0.7
APE	Apeiranthos	1.42	215	P	Pn	14 06 06.8	-2.0
APE	Apeiranthos	1.42	215	*e*Pn	Pn	14 06 08.4	-0.4
APE				S	Sg	14 06 27.1	-0.7
APE				*e*Sn	Sn	14 06 29.1	+1.2
KULA	Kula-Manisa	1.68	80	*e*PN	Pn	14 06 12.8	+0.4
KULA	Kula-Manisa	1.68	80	*e*Pn	Pn	14 06 12.8	+0.4
BALY	Balya	1.72	29	*i* P	Pn	14 06 11.7	-1.2
BALY				*i* S	Sn	14 06 34.1	-1.1
BALY	Balya	1.72	29	*i* P	Pn	14 06 11.6	-1.3
BALY				*i* S	Sn	14 06 34.1	-1.2
BALB	Balikesir	1.74	36	*e*PN	Pn	14 06 14.0	+0.7
BALB	Balikesir	1.74	36	*e*Pn	Pn	14 06 14.0	+0.8
YER	Yerkesik	1.76	128	*e*PN	Pn	14 06 13.7	+0.2
YER	Yerkesik	1.76	128	*e*Pn	Pn	14 06 13.7	+0.2
DEMI	Demirci	1.88	64	*i* P	Pn	14 06 15.0	-0.1
DEMI				*i* S	Sn	14 06 41.1	+1.8
DEMI	Demirci	1.88	64	*i* P	Pn	14 06 15.0	-0.1
DEMI				*i* S	Sn	14 06 41.1	+1.8
LIA	Limnos Island	1.97	328	*e*Pb	Pb	14 06 15.5	-3.1
LIA	Limnos Island	1.97	328	*e*PB	Pb	14 06 15.5	-3.1
LIA	Limnos Island	1.97	328	P	Pn	14 06 15.3	-1.0
LIA				S	Sn	14 06 42.2	+0.7
LIA	Limnos Island	1.97	328	P	Pn	14 06 15.3	-1.0
LIA				S	Sn	14 06 42.2	+0.7
GONE	Gonen-Balikesi	2.01	26	*e*PN	Pn	14 06 17.5	+0.6
GONE	Gonen-Balikesi	2.01	26	*e*Pn	Pn	14 06 17.5	+0.6
DNZL	Cakiroluk	2.05	105	*i* P	Pn	14 06 16.9	-0.5
DNZL				*i* S	Sn	14 06 47.6	+4.1
DNZL	Cakiroluk	2.05	105	*i* P	Pn	14 06 16.9	-0.6
GELI	Tayfur-Gelibol	2.16	359	*e*PN	Pn	14 06 20.2	+1.3
GELI	Tayfur-Gelibol	2.16	359	*e*Pn	Pn	14 06 20.3	+1.4
KHAL	Karahalli	2.32	86	*i* P	Pn	14 06 25.2	+4.0
KHAL				*i* S	Sn	14 06 52.1	+1.9
GDZ	Gediz	2.45	69	*i* P	Pn	14 06 26.4	+3.4
GDZ				*i* S	Sn	14 06 59.3	+6.0
KCTX	Karacabey (Bur	2.46	34	*e*PN	Pn	14 06 24.0	+0.9
KCTX	Karacabey (Bur	2.46	34	*e*Pn	Pn	14 06 24.0	+0.9

MOS ***26*** *14:36:05.5±2.8, 52°.48N×170°.83E, h17km, mb4.3/1, Error ellipse: s-maj=37.1km s-min=22.1km az=25.4*
IDC ***26*** *14:36:07.0±2.8, 52°.73N×171°.18E, h0km, mb3.3/3, mb1 3.7/4, mb1mx3.4/22, mbtmp3.4/4, ML3.4/1, Error ellipse: s-maj=109.3km s-min=33.7km az=176.0*
KRSC ***26*** *14:36:08.1±2.0, 52°.95N×170°.68E, h15km±15km, ML4.1*
ISCJB ***26*** *14:36:10.7±0.9, 53°.02N±0°.10×170°.67E±0°.08, h33km, mb3.3/3, Error ellipse: s-maj=14.0km s-min=6.5km az=6.1*

ISC 26 14:36:12.9±0.9, 53°.1N±0°.1×170°.80E±0°.08, h35km, n13, σ1§03/21, mb3.3/3, Near Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	Bering	3.56	309	*e*P	Pn	14 37 05.0	-0.5
BKI				*i* S	Sn	14 37 46.7	+0.5
MKZ	Mys Kozlova	5.58	289	*e*P	Pn	14 37 33.4	+0.2
MKZ				*i* S	Sn	14 38 34.5	-1.4
KBTR	Krutoberegovo	5.60	307	*e*P	Pn	14 37 33.9	+0.4
KBTR				*i* S	Sn	14 38 36.2	-0.3
KMNR	Kamenistaya	6.73	298	*e*P	Pn	14 37 50.6	+1.6
KMNR				*i* S	Sn	14 39 04.7	+0.4
AVH	Avacha	7.25	276	*e*P	Pn	14 37 57.0	+0.8
AVH				*i* S	Sn	14 39 15.2	-2.1
PET	Petropavlovsk	7.32	275	*e*P	Pn	14 37 58.1	+0.9
PET				*i* S	Sn	14 39 17.9	-1.0
GNL	Ganaly	7.71	280	*e*P	Pn	14 38 04.4	+1.8
GNL				*i* S	Sn	14 39 28.4	-0.2
PETK	Petropavlovsk-	7.89	276	Pn	Pn	14 38 06.5	+1.6
	0.5nm,0.3s,baz=90,slow=17,SNR=21						
PETK				Sn	Sn	14 39 32.5	-0.3
	0.5nm,0.3s,baz=30,slow=16,SNR=8.5						
PETK	Petropavlovsk-	7.89	276	P	Pn	14 38 06.5	+1.6
PETK						14 39 32.5	
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK				smax			
	comp=N,1.0nm,0.3s						
SKR	Severo-Kuril's	9.39	261	*e*P	Pn	14 38 19.0	-6.5
SKR				*e*		14 40 03.5	
ILAR	Eielson Array	24.26	45	P	P	14 41 26.1	-0.1
	comp=N,0.3nm,0.5s,mb3.0,baz=251,slow=5.6,SNR=2.0						
PDAR	Pinedale Array	51.73	67	P	P	14 45 15.2	-1.2
	comp=N,0.5nm,0.5s,mb3.7,baz=320,slow=3.3,SNR=5.2						
TXAR	Lajitas Array	64.56	75	P	P	14 46 45.2	-1.0
	comp=N,0.1nm,0.3s,mb3.3,baz=297,slow=5.5,SNR=3.7						

DJA 26 14:44:31, 1°.80S×99°.40E, h5km, MLv3.7/4, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	Saibi	0.56	327	P	Pg	14 44 42.5	+0.6
PDSI	Padang	1.38	50	P	Pn	14 44 55.5	-1.4
PDSI				S	Sb	14 45 16.0	+0.7
PPI	Padang Panjang	1.67	37	P	Pn	14 45 00.1	-0.8
PPI				S	Sn	14 45 22.8	+0.2
MNSI	Mandailing Nat	2.58	4	P	Pn	14 45 14.5	+1.0
MNAI	Manna	4.37	126	P	Pn	14 45 41.8	+3.7
MNAI				S	Sn	14 46 32.9	+3.5

ISCJB ***26*** *14:52:08.6±0.5, 37°.17N±0°.02×29°.84E±0°.02, h1km±4km, Error ellipse: s-maj=4.1km s-min=3.0km az=9.8*
DDA ***26*** *14:52:08.0, 37°.13N×29°.87E, h20km±1km, Md3.4*
ISK ***26*** *14:52:08.5, 37°.15N×29°.83E, h6km, ML3.6*
CSEM ***26*** *14:52:09.6±0.2, 37°.15N×29°.81E, h10km, ML3.6, Error ellipse: s-maj=4.8km s-min=3.4km az=21.0*

ISC 26 14:52:09.3±0.4, 37°.17N±0°.02×29°.84E±0°.02, h2km±4km, n94, σ0§90/117, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	Golhisar	0.23	288	*i* P	Pg	14 52 13.7	0.0
GOLH				*i* S	Sg	14 52 19.8	+3.1
GOLH	Golhisar	0.23	288	*i* P	Pg	14 52 13.7	0.0
GOLH				*i* S	Sg	14 52 19.8	+3.1
GLHS	Glhisar (BURDU	0.27	268	PG	Pg	14 52 13.8	-0.7
GLHS				*e*SG	Sg	14 52 18.3	+0.3
GLHS	Glhisar (BURDU	0.27	268	*i* Pg	Pg	14 52 13.8	-0.7
GLHS				*e*Sg	Sg	14 52 18.3	+0.3
ELL	Elmali	0.42	172	PG	Pg	14 52 16.0	-1.4
ELL				*e*SG	Sg	14 52 23.8	+1.0
ELL	Elmali	0.42	172	*i* Pg	Pg	14 52 16.0	-1.4
ELL				*e*Sg	Sg	14 52 23.8	+1.0
KORT	Korkueli	0.44	112	*i* P	Pg	14 52 16.8	-1.0
KORT				*i* S	Sg	14 52 26.5	+3.0
KORT	Korkueli	0.44	112	*i* P	Pg	14 52 16.8	-1.0
KORT				*i* S	Sg	14 52 26.5	+3.0
BCK	Bucak	0.67	64	*e*PG	Pg	14 52 21.8	-0.3
BCK	Bucak	0.67	64	*e*Pg	Pg	14 52 21.8	-0.3
ANTB	Antalya	0.71	112	*e*PG	Pg	14 52 22.4	-0.4
ANTB	Antalya	0.71	112	*e*Pg	Pg	14 52 22.4	-0.4
DNZL	Cakiroluk	0.82	310	*i* P	Pg	14 52 24.4	-0.5
DNZL	Cakiroluk	0.82	310	*i* P	Pg	14 52 24.4	-0.6
ISP	Isparta	0.85	40	*e*PG	Pg	14 52 25.8	+0.1
DENT	Denizli	0.87	313	*e*PG	Pg	14 52 26.3	+0.3
DENT	Denizli	0.87	313	*e*Pg	Pg	14 52 26.3	+0.4
AKAS	Kas	0.95	191	*i* P	Pg	14 52 26.1	-1.4
AKAS				*i* S	Sg	14 52 44.9	+5.1
AKAS	Kas	0.95	191	*i* P	Pg	14 52 26.1	-1.4
AKAS				*i* S	Sg	14 52 44.8	+5.0
KSL	Kastellorizon	1.03	191	*e*P	Pg	14 52 30.5	+1.4
KHL	Karahalli	1.18	348	*e*PN	Pn	14 52 32.1	-0.8
KHL	Karahalli	1.18	348	*e*Pn	Pn	14 52 32.1	-0.8
KHAL	Karahalli	1.23	347	*i* P	Pg	14 52 31.3	-1.6
KHAL				*i* S	Sg	14 52 51.6	+2.7
KHAL	Karahalli	1.23	347	*i* P	Pg	14 52 31.3	-1.6
KHAL				*i* S	Sg	14 52 51.6	+2.7
YER	Yerkesik	1.24	269	*e*PN	Pn	14 52 33.2	-0.4
YER	Yerkesik	1.24	269	*e*Pn	Pn	14 52 33.3	-0.4
SHUT	Suhut-Afyon	1.50	22	*e*PN	Pn	14 52 36.8	-0.4
SHUT	Suhut-Afyon	1.50	22	*e*Pn	Pn	14 52 36.8	-0.4
AYDN	Tasoluk	1.63	288	*i* P	Pn	14 52 39.1	0.0
AYDN				*i* S	Sn	14 53 01.2	+0.5
AYDN	Tasoluk	1.63	288	*i* P	Pn	14 52 39.1	0.0
AYDN				*i* S	Sn	14 53 01.2	+0.5
KULA	Kula-Manisa	1.64	326	*e*PN	Pn	14 52 39.0	-0.1
KULA	Kula-Manisa	1.64	326	*e*Pn	Pn	14 52 39.0	-0.1
MLSB

ISC 26 15:07:08.8±0.5, 12°48'N±0'.02×59°44'W±0'.04, h49km±4km, n117, σ1°02/170, mb4.2/27, 9C, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBSP	**Saint Philip**	**0.62**	**358**	⇑*iP*	**Pn**	**15 07 22.1**	**+0.6**
BBSP				*eS*	**Sn**	**15 07 30.3**	**-0.3**
BBSP	**Saint Philip**	**0.62**	**358**	⇑*iP*	**Pn**	**15 07 22.1**	**+0.6**
BBSP				*eS*	**Sn**	**15 07 30.3**	**-0.3**
BBGH	**Gun Hill**	**0.67**	**350**	*eP*g	**Pn**	**15 07 22.4**	**+0.3**
BBGH				*eS*g	**Sn**	**15 07 33.6**	**+1.9**
BOT	**Bacolet**	**1.81**	**224**	*eP*	**Pn**	**15 07 38.6**	**+1.0**
BOT				*eS*	**Sn**	**15 07 55.9**	**-3.5**
BOT	**Bacolet**	**1.81**	**224**	*eP*	**Pn**	**15 07 38.6**	**+1.0**
BOT				*eS*	**Sn**	**15 08 00.9**	**+1.6**
TPR	**Prospect**	**1.84**	**226**	*eP*	**Pn**	**15 07 38.5**	**+0.6**
TPR				*eS*	**Sn**	**15 07 55.6**	**-4.4**
TPR	**Prospect**	**1.84**	**226**	*eP*	**Pn**	**15 07 38.5**	**+0.6**
TPR				*eS*	**Sn**	**15 07 59.9**	**-0.1**
FCV	**Fort Charlotte**	**1.89**	**291**	*eP*	**Pn**	**15 07 39.8**	**+1.2**
FCV				*eS*	**Sn**	**15 08 00.9**	**-0.4**
FCV	**Fort Charlotte**	**1.89**	**291**	*eP*	**Pn**	**15 07 39.8**	**+1.2**
FCV				*eS*	**Sn**	**15 08 00.9**	**-0.4**
MCLT	**Moule a Chique**	**1.91**	**310**	*eP*	**Pn**	**15 07 38.7**	**-0.2**
MCLT				*eS*	**Sn**	**15 08 01.4**	**-0.4**
MCLT	**Moule a Chique**	**1.91**	**310**	*eP*	**Pn**	**15 07 38.7**	**-0.2**
MCLT				*eS*	**Sn**	**15 08 01.4**	**-0.4**
SSV	**Crater Summit**	**1.91**	**296**	⇑*iP*	**Pn**	**15 07 39.7**	**+0.8**
SSV	**Crater Summit**	**1.91**	**296**	⇑*iP*	**Pn**	**15 07 39.7**	**+0.8**
SSV				*eS*	**Sn**	**15 08 01.3**	**-0.5**
SFAN	**Fancy Village**	**1.92**	**298**	*eS*	**Sn**	**15 08 01.7**	**-0.2**
SVV	**Soufriere Volc**	**1.93**	**296**	⇑*iP*	**Pn**	**15 07 40.0**	**+0.9**
SVV				*eS*	**Sn**	**15 08 01.3**	**-0.9**
SVV				*eS*	**Sn**	**15 08 02.1**	**0.0**
SVV	**Soufriere Volc**	**1.93**	**296**	⇑*iP*	**Pn**	**15 07 40.0**	**+0.9**
SVV				*eS*	**Sn**	**15 08 02.1**	**0.0**
SVB	**Belmont**	**1.94**	**294**	*eP*	**Pn**	**15 07 38.9**	**-0.4**
SVB				*eS*	**Sn**	**15 08 01.7**	**-0.8**
SVB	**Belmont**	**1.94**	**294**	*eP*	**Pn**	**15 07 38.9**	**-0.4**
SVB				*eS*	**Sn**	**15 08 01.7**	**-0.8**
SLPE	**Piton Saint Es**	**2.04**	**312**	*eP*	**Pn**	**15 07 40.7**	**0.0**
SLPE				*eS*	**Sn**	**15 08 04.1**	**-0.8**
SLPE	**Piton Saint Es**	**2.04**	**312**	*eP*	**Pn**	**15 07 40.7**	**0.0**
SLPE				*eS*	**Sn**	**15 08 04.1**	**-0.8**
SLDE	**Delcer**	**2.06**	**310**	*eP*	**Pn**	**15 07 41.1**	**+0.2**
SLDE				*eS*	**Sn**	**15 08 05.1**	**-0.3**
SLDE	**Delcer**	**2.06**	**310**	*eP*	**Pn**	**15 07 41.1**	**+0.2**
SLDE				*eS*	**Sn**	**15 08 05.1**	**-0.3**
SLB	**Belfond**	**2.06**	**311**	*eP*	**Pn**	**15 07 41.6**	**+0.7**
SLB				*eS*	**Sn**	**15 08 05.3**	**-0.1**
SLB	**Belfond**	**2.06**	**311**	*eP*	**Pn**	**15 07 41.6**	**+0.7**
SLB				*eS*	**Sn**	**15 08 05.3**	**-0.1**
SLW	**Petit Monier**	**2.12**	**316**	*eP*	**Pn**	**15 07 41.4**	**-0.4**
SLW				*eS*	**Sn**	**15 08 05.7**	**-1.2**
SLW	**Petit Monier**	**2.12**	**316**	*eP*	**Pn**	**15 07 41.4**	**-0.4**
SLW				*eS*	**Sn**	**15 08 05.7**	**-1.2**
GRGR	**Grenville**	**2.19**	**261**	*ePn*	**Pn**	**15 07 42.1**	**-0.7**
GRGR				*eSn*	**Sn**	**15 08 07.8**	**-1.0**
GRGR				*eSg*	**Sn**	**15 08 15.3**	**+6.5**
GRW	**Mount Saint Ca**	**2.20**	**262**	*eP*	**Pn**	**15 07 43.8**	**+0.9**
GRW				*eS*	**Sn**	**15 08 08.3**	**-0.6**
GRW	**Mount Saint Ca**	**2.20**	**262**	*eP*	**Pn**	**15 07 43.8**	**+0.9**
GRW				*eS*	**Sn**	**15 08 08.3**	**-0.6**
TBH	**Brigand Hill**	**2.55**	**219**	⇑*iP*	**Pn**	**15 07 49.1**	**+1.5**
TBH				*eS*	**Sn**	**15 08 18.2**	**+0.8**
TBH	**Brigand Hill**	**2.55**	**219**	⇑*iP*	**Pn**	**15 07 49.1**	**+1.5**
TBH				*eS*	**Sn**	**15 08 18.2**	**+0.8**
TRN	**Trinidad (W)**	**2.65**	**227**	*eP*	**Pn**	**15 07 50.1**	**+1.1**
TRN				*eS*	**Sn**	**15 08 20.2**	**+0.2**
TRN	**Trinidad (W)**	**2.65**	**227**	*eP*	**Pn**	**15 07 50.1**	**+1.1**
TRN				*eS*	**Sn**	**15 08 20.2**	**+0.2**
FDF	**Fort de France**	**2.79**	**324**	*ePn*	**Pn**	**15 07 50.4**	**-0.6**
FDF				*eSn*	**Sn**	**15 08 23.1**	**-0.4**
TCE	**Chacachacare**	**2.88**	**232**	*eP*	**Pn**	**15 07 54.2**	**+1.9**
TCE				*eS*	**Sn**	**15 08 26.0**	**+0.3**
TCE	**Chacachacare**	**2.88**	**232**	*eP*	**Pn**	**15 07 54.2**	**+1.9**
TCE				*eS*	**Sn**	**15 08 26.0**	**+0.3**
GUIV	**Guiria**	**3.28**	**237**	*eP*	**Pn**	**15 07 58.1**	**+0.3**
GUIV				*eS*	**Sn**	**15 08 30.1**	**-5.5**
DSTT	**Stowe**	**3.29**	**327**	*eP*	**Pn**	**15 07 58.5**	**+0.6**
DSTT				*eS*	**Sn**	**15 08 35.2**	**-0.6**
DSTT	**Stowe**	**3.29**	**327**	*eP*	**Pn**	**15 07 58.5**	**+0.6**
DSTT				*eS*	**Sn**	**15 08 35.2**	**-0.6**
DSHT	**Scott's Head**	**3.31**	**326**	*eP*	**Pn**	**15 07 59.1**	**+1.1**
DSHT				*eS*	**Sn**	**15 08 34.3**	**-1.8**
DSHT	**Scott's Head**	**3.31**	**326**	*eP*	**Pn**	**15 07 59.1**	**+1.1**
DSHT				*eS*	**Sn**	**15 08 34.3**	**-1.8**
DFBT	**Forest Bistro**	**3.32**	**326**	*eP*	**Pn**	**15 07 58.8**	**+0.6**
DFBT				*eS*	**Sn**	**15 08 35.6**	**-0.8**
DFBT	**Forest Bistro**	**3.32**	**326**	*eP*	**Pn**	**15 07 58.8**	**+0.6**
DFBT				*eS*	**Sn**	**15 08 35.6**	**-0.8**
DLPL	**La Plaine**	**3.34**	**328**	*eP*	**Pn**	**15 07 58.5**	**0.0**
DLPL				*eS*	**Sn**	**15 08 36.0**	**-0.8**
MDN	**Morne-Daniel**	**3.40**	**326**	*eS*	**Sn**	**15 08 37.0**	**-1.5**
DWS	**Wesley**	**3.57**	**330**	*eP*	**Pn**	**15 08 02.8**	**+1.1**
DWS				*eS*	**Sn**	**15 08 41.8**	**-0.8**
DWS	**Wesley**	**3.57**	**330**	*eP*	**Pn**	**15 08 02.8**	**+1.1**
DWS				*eS*	**Sn**	**15 08 41.8**	**-0.8**
ITEV	**Isla Los Testi**	**3.79**	**253**	⇑*eP*	**Pn**	**15 08 04.5**	**-0.1**
ITEV				*eS*	**Sn**	**15 08 43.5**	**-4.5**
MGG	**Marie-Galante**	**3.87**	**332**	*eP*	**Pn**	**15 08 04.4**	**-1.5**
TBG	**Guadaloupe-3**	**3.98**	**328**	*eP*	**Pn**	**15 08 07.1**	**-0.2**
PHG	**Guadaloupe-2**	**4.11**	**329**	*eP*	**Pn**	**15 08 08.8**	**-0.4**
HMG	**Houelmont**	**4.12**	**328**	*eP*	**Pn**	**15 08 09.2**	**+0.1**
HMG				*eS*	**Sn**	**15 08 57.5**	**+1.4**
CRUV	**Carupano**	**4.13**	**245**	*eP*	**Pn**	**15 08 09.4**	**0.0**
CRUV				*eS*	**Sn**	**15 08 50.2**	**-6.4**
GUNV	**Guanoco**	**4.14**	**237**	*eP*	**Pn**	**15 08 08.8**	**-0.7**
GUNV				*eS*	**Sn**	**15 08 50.8**	**-5.9**
SCG	**Saint Claude**	**4.14**	**329**	*eP*	**Pn**	**15 08 10.6**	**+1.0**
LZG	**Guadaloupe-1**	**4.29**	**328**	*eP*	**Pn**	**15 08 11.4**	**-0.2**
SEG	**Port Louis**	**4.38**	**333**	*eP*	**Pn**	**15 08 12.2**	**-0.7**
RIOV	**Rio Grande**	**4.97**	**208**	*eP*	**Pn**	**15 08 19.9**	**-1.0**
IBAV	**Isla La Blanqu**	**5.07**	**263**	*eP*	**Pn**	**15 08 22.0**	**-0.3**
IBAV				*eS*	**Sn**	**15 09 14.2**	**-5.4**
ORIV	**Oritupano**	**5.17**	**229**	*eP*	**Pn**	**15 08 22.3**	**-1.3**
PCRV	**Puerto La Cruz**	**5.59**	**246**	Pn	**Pn**	**15 08 29.6**	**+0.2**
	5.9nm,0.3s,baz=93,slow=3.3,SNR=9.5						
PCRV				Sn	**Sn**	**15 09 29.4**	**-3.0**
	2.9nm,0.3s,baz=122,slow=23,SNR=7.5						
ANWB	**Willy Bob**	**5.64**	**337**	*ePn*	**Pn**	**15 08 28.2**	**-1.8**
ANWB				*eSn*	**Sn**	**15 09 36.2**	**+2.7**
SKI	**Saint Kitts**	**5.79**	**327**	*eP*	**Pn**	**15 08 32.4**	**+0.3**
SKI	**Saint Kitts**	**5.79**	**327**	*eP*	**Pn**	**15 08 32.4**	**+0.3**
GURV	**El Guri**	**5.91**	**218**	*eP*	**Pn**	**15 08 31.4**	**-2.4**
GURV				*eS*	**Sn**	**15 09 29.0**	**-11**
SJG	**San Juan**	**8.56**	**312**	Pn	**Pn**	**15 09 10.2**	**0.0**
	8.0nm,0.3s,baz=134,slow=6.3,SNR=6.3						
SJG	**San Juan**	**8.56**	**312**	*ePn*	**Pn**	**15 09 09.6**	**-0.6**
AGPR	**Aguadilla, PR**	**9.49**	**310**	*ePn*	**Pn**	**15 09 23.6**	**+0.7**
SDV	**Santo Domingo**	**11.57**	**253**	Pn	**Pn**	**15 09 50.3**	**-1.1**
SDDR	**Presa de Saban**	**13.11**	**301**	*ePn*	**Pn**	**15 10 15.0**	**+2.6**
	19nm,0.7s						
SDDR				*eSn*	**Sn**	**15 12 38.1**	**+1.3**
ROSC	**El Rosal**	**16.55**	**244**	Pn	**Pn**	**15 11 02.8**	**+5.2**
	1.7nm,0.3s,baz=112,slow=19,SNR=4.5						
BCIP	**Isla Barro Col**	**20.30**	**263**	*eP*	**P**	**15 11 39.6**	**-1.3**
	30nm,0.7s						
OTAV	**Otavalo**	**22.44**	**239**	*eP*	**P**	**15 12 03.1**	**-0.6**
	7.1nm,0.6s,mb4.3						
DWPF	**Disney**	**25.77**	**310**	*eP*	**P**	**15 12 35.7**	**+0.6**
ATAH	**Atahualpa**	**27.11**	**225**	P	**P**	**15 12 48.5**	**+1.2**
	16nm,0.8s,mb4.6,baz=28,slow=5.5,SNR=8.9						
LPAZ	**La Paz**	**29.85**	**197**	P	**P**	**15 13 10.9**	**-0.8**
	1.3nm,0.7s,mb3.8,baz=13,slow=6.7,SNR=5.4						
LPAZ				LR	LR	15 25 00.6	
	comp=Z,41nm,18.9s,baz=321,slow=36						
SIUC	**Southern Illin**	**36.58**	**319**	P	**P**	**15 14 11.2**	**+1.1**
MIAR	**Mount Ida**	**37.96**	**311**	P	**P**	**15 14 21.5**	**-0.3**
CPUP	**Villa Florida**	**38.63**	**177**	P	**P**	**15 14 25.1**	**-2.4**
	2.6nm,0.6s,mb4.1,baz=335,slow=8.0,SNR=13						
CPUP	**Villa Florida**	**38.63**	**177**	*eP*	**P**	**15 14 24.7**	**-2.8**
	16nm,0.7s,mb4.9						
WMOK	**Wichita Mounta**	**41.94**	**309**	P	**P**	**15 14 55.1**	**+0.2**
TXAR	**Lajitas Array**	**44.30**	**299**	P	**P**	**15 15 15.5**	**+1.4**
	0.4nm,0.5s,mb3.4,baz=96,slow=8.3,SNR=6.7						
TXAR				PcP	PcP	15 16 59.4	+1.7
	1.3nm,0.7s,baz=120,slow=5.3,SNR=12						
TXAR	**Lajitas Array**	**44.30**	**299**	P	**P**	**15 15 15.5**	**+1.4**
TXAR				PcP	PcP	15 16 59.4	+1.7
MNTX	**Cornudas Mount**	**46.28**	**302**	*eP*	**P**	**15 15 30.5**	**+0.7**
	5.0nm,0.9s,mb4.4						
BNM	**Barren Site**	**47.90**	**305**	*eP*	**P**	**15 15 44.2**	**+1.9**
	4.7nm,1.1s,mb4.4						
ANMO	**Albuquerque**	**47.98**	**306**	P	**P**	**15 15 44.6**	**+1.7**
	2.4nm,0.9s,mb4.2,baz=140,slow=5.5,SNR=4.2						
ANMO	**Albuquerque**	**47.98**	**306**	*eP*	**P**	**15 15 44.5**	**+1.5**
	2.7nm,0.9s,mb4.3						
SDCO	**Great Sand Dun**	**48.08**	**310**	*eP*	**P**	**15 15 44.5**	**+0.8**
	0.7nm,0.7s,mb3.8						
WUAZ	**Wupatki**	**52.02**	**305**	*eP*	**P**	**15 16 15.9**	**+2.3**
	3.4nm,0.8s,mb4.3						
PDAR	**Pinedale Array**	**52.67**	**315**	P	**P**	**15 16 18.9**	**+0.6**
	1.6nm,0.8s,mb4.0,baz=106,slow=9.4,SNR=12						
FCC	**Fort Churchill**	**52.99**	**338**	*eP*	**P**	**15 16 17.6**	**-2.7**
HWUT	**Hardware Ranch**	**53.73**	**313**	*eP*	**P**	**15 16 26.8**	**+0.7**
PLCA	**Paso Flores**	**53.93**	**190**	P	**P**	**15 16 25.8**	**-1.7**
	6.5nm,0.9s,mb4.6,baz=10,slow=8.0,SNR=9.5						
PLCA	**Paso Flores**	**53.93**	**190**	*eP*	**P**	**15 16 25.3**	**-2.1**
	19nm,1.4s,mb4.8						
ESDC	**Sonseca Array**	**55.68**	**50**	P	**P**	**15 16 40.1**	**-0.1**
	1.5nm,0.8s,mb4.1,baz=265,slow=7.4,SNR=9.2						
ESLA	**Sonseca Array**	**55.68**	**50**	*eP*	**P**	**15 16 39.5**	**-0.7**
HLID	**Hailey**	**56.30**	**314**	*eP*	**P**	**15 16 45.2**	**+0.6**
	2.8nm,1.1s,mb4.2						
NVAR	**Mina Array Bea**	**58.03**	**308**	P	**P**	**15 16 58.5**	**+1.6**
	0.8nm,0.7s,mb3.9,baz=112,slow=6.5,SNR=7.1						
NEW	**Newport**	**59.43**	**319**	*eP*	**P**	**15 17 06.8**	**+0.3**
	2.3nm,0.8s,mb4.3						
TORD	**Torodi Ar. Bea**	**59.48**	**82**	P	**P**	**15 17 03.7**	**-3.7**
	2.1nm,0.8s,mb4.2,baz=270,slow=6.1,SNR=11						
YKA	**Yellowknife Ar**	**63.31**	**335**	P	**P**	**15 17 32.6**	**+0.2**
	1.6nm,0.6s,mb4.3,baz=108,slow=7.6,SNR=3.1						
GRA1	**Grafenberg Arr**	**68.08**	**41**	*eP*	**P**	**15 18 02.8**	**-0.6**
	7.0nm,1.4s,mb4.5						
GRF	**Grafenberg Arr**	**68.08**	**41**	*eP*	**P**	**15 18 02.8**	**-0.6**
	comp=Z,7.0nm,1.4s,mb4.5						
NB2	**NORSAR Subarra**	**69.81**	**29**	P	**P**	**15 18 13.9**	**0.0**
	comp=Z,2.0nm,0.8s,mb4.1,baz=254,slow=6.5						
NOA	**NORSAR Array B**	**69.81**	**29**	P	**P**	**15 18 13.7**	**-0.2**
	comp=Z,0.7nm,0.7s,mb3.7,baz=261,slow=6.3,SNR=4.6						
INK	**Inuvik**	**72.61**	**338**	P	**P**	**15 18 30.3**	**-0.5**
	comp=Z,6.6nm,1.1s,mb4.5						
VYHS	**Vyhne**	**73.00**	**43**	*eP*	**P**	**15 18 33.0**	**-0.4**
	comp=Z,11nm,2.1s,mb4.4						
VYHS	**Vyhne**	**73.00**	**43**	*eP*	**P**	**15 18 33.0**	**-0.4**
ARCES	**ARCESS Array B**	**76.63**	**21**	P	**P**	**15 18 53.5**	**-0.5**
	comp=Z,4.4nm,0.9s,mb4.4,baz=347,slow=6.0,SNR=4.6						
FINES	**FINESS Array B**	**77.00**	**29**	P	**P**	**15 18 55.8**	**-0.4**
	comp=Z,2.1nm,0.6s,mb4.3,baz=256,slow=4.1,SNR=17						
BUR08	**Bucovina Ar. S**	**77.30**	**44**	*eP*	**P**	**15 18 58.7**	**+0.6**
ILAR	**Eielson Array**	**77.72**	**334**	P	**P**	**15 19 00.9**	**+0.7**
	comp=Z,0.6nm,0.8s,mb3.6,baz=82,slow=5.7,SNR=10						
AKASG	**Malin Array Be**	**79.62**	**40**	P	**P**	**15 19 09.6**	**-1.3**
	comp=Z,0.2nm,0.3s,mb3.5,baz=253,slow=5.8,SNR=4.1						
BRTR	**Keskin Array B**	**84.48**	**51**	P	**P**	**15 19 36.2**	**-0.4**
	comp=Z,1.4nm,0.7s,mb4.2,baz=262,slow=3.8,SNR=8.2						
SUR	**Sutherland**	**88.53**	**122**	*eP*	**P**	**15 19 54.2**	**-2.4**
CMAR	**Chiang Mai Arr**	**142.59**	**35**	PKP	PKPdf	15 26 37.3	-0.1
	comp=Z,0.6nm,0.7s,baz=305,slow=3.2,SNR=3.1						
ASAR	**Alice Springs**	**163.15**	**227**	PKP	PKPdf	15 27 06.4	-0.2
	comp=Z,0.2nm,0.5s,baz=136,slow=2.6,SNR=6.6						
ASAR				PKPab	PKPab	15 27 56.1	-0.7
	comp=Z,0.7nm,0.7s,baz=126,slow=4.9,SNR=9.9						

BJI ***26*** *15:24:37.7, 27°.26N×52°.84E, h30km, mb4.4/3*
ISCJB ***26*** *15:24:39.0±0.3, 27°.26N±0°.03×53°.39E±0°.03, h10km, mb4.2/57, MS3.1/3, Error ellipse: s-maj=4.2km s-min=3.2km az=34.5*
IDC ***26*** *15:24:38.9±0.9, 27°.22N×53°.49E, h0km, mb4.1/20, mb1 4.2/21, mb1mx4.1/28, mbtmp4.1/21, ML3.8/1, MS3.1/2, Ms1 3.1/2, ms1mx2.4/37, Error ellipse: s-maj=21.5km s-min=15.3km az=180.0*
THR ***26*** *15:24:38.1±1.3, 27°.05N×53°.46E, h15km, ML3.9*
CSEM ***26*** *15:24:39.8±0.2, 27°.16N×53°.45E, h10km, mb4.3/37*
KISR ***26*** *15:24:40.1±1.3, 23°.74N×47°.66E, h3km±999km, ML3.6*
TEH ***26*** *15:24:40.5, 27°.14N×53°.45E, h8km*
NEIC ***26*** *15:24:40.0, 27°.14N×53°.45E, h8km, mb4.3/27, ML3.9(THR), MN4.0(TEH), After TEH.*
MOS ***26*** *15:24:41.8±1.0, 27°.26N×53°.44E, h33km, mb4.5/25, Error ellipse: s-maj=8.5km s-min=6.0km az=110.2*
OMAN ***26*** *15:25:16.5±99.0, 25°.47N×55°.14E, h30km±4km, Error ellipse: s-maj=34.7km s-min=7.1km az=287.0*

ISC 26 15:24:40.6±0.3, 27°23N±0°.03×53°42E±0°.03, h10km, n285, σ1°03/306, mb4.2/57, MS3.1/3, 11C-3D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISRV	**Sarvestan**	**2.17**	**353**	Pn	**Pn**	**15 25 18.1**	**+1.4**
ISRV				Sg	**Sg**	**15 25 50.5**	**+0.2**
ISRV	**Sarvestan**	**2.17**	**353**	*ePn*	**Pn**	**15 25 18.2**	**+1.4**
ISRV				*eSg*	**Sg**	**15 25 50.6**	**+0.3**
ISRV				*e*		15 26 05.7	
	comp=Z,10μm,0.4s						
ISRV	**Sarvestan**	**2.17**	**353**	*ePn*	**Pn**	**15 25 18.2**	**+1.4**
ISRV				*eSg*	**Sg**	**15 25 50.6**	**+0.3**
BNDS	**Bandar-Abbas**	**2.46**	**85**	Pn	**Pn**	**15 25 20.0**	**-0.7**
BNDS	**Bandar-Abbas**	**2.46**	**85**	*ePn*	**Pn**	**15 25 20.0**	**-0.7**
BNDS				*eSg*	**Sn**	**15 25 54.1**	**+3.3**
BNDS	**Bandar-Abbas**	**2.46**	**85**	*ePn*	**Pn**	**15 25 20.0**	**-0.7**
BNDS				*eSg*	**Sn**	**15 25 54.1**	**+3.3**
IPAR	**Pars**	**2.63**	**353**	Pn	**Pn**	**15 25 24.2**	**+1.1**
IPAR				Sg	**Sg**	**15 26 04.0**	**-1.1**
IPAR	**Pars**	**2.63**	**353**	*ePn*	**Pn**	**15 25 24.3**	**+1.2**
IPAR				*eSg*	**Sg**	**15 26 04.0**	**-1.1**
IPAR				*e*		15 26 17.6	
	comp=Z,3μm,0.4s						
IPAR	**Pars**	**2.63**	**353**	*ePn*	**Pn**	**15 25 24.3**	**+1.2**
IPAR				*eSg*	**Sg**	**15 26 04.0**	**-1.1**
IBND	**Bandar-abas**	**2.79**	**85**	*ePn*	**Pn**	**15 25 24.5**	**-0.8**
IBND				*ePn*	**Pn**	**15 25 24.9**	**-0.4**
IBND				*eSg*	**Sg**	**15 26 08.3**	**-1.9**
IBND				*e*		15 26 39.5	
	comp=Z,13μm,0.4s						
IBND				*e*		15 26 39.7	
	comp=Z,17μm,0.4s						
IBND	**Bandar-abas**	**2.79**	**85**	*ePn*	**Pn**	**15 25 24.5**	**-0.8**
BANOM	**Banah**	**2.89**	**116**	P	**Pg**	**15 25 36.2**	**+0.2**
BANOM	**Banah**	**2.89**	**116**	P	**Pg**	**15 25 36.2**	**+0.2**
BANOM	**Banah**	**2.89**	**116**	⇑P	**Pg**	**15 25 36.2**	**+0.2**
NAZ	**Nazwa, Dubai**	**3.00**	**137**	P	**Pn**	**15 25 30.8**	**+2.5**
NAZ	**Nazwa, Dubai**	**3.00**	**137**	P	**Pn**	**15 25 30.8**	**+2.5**
NAZ	**Nazwa, Dubai**	**3.00**	**137**	⇑P	**Pn**	**15 25 30.8**	**+2.5**
ASUD	**Al Ashush, Dub**	**3.11**	**146**	P	**Pn**	**15 25 32.7**	**+3.0**
	SNR=21						
ASUD	**Al Ashush, Dub**	**3.11**	**146**	⇓P	**Pn**	**15 25 32.7**	**+3.0**
	SNR=21						
ASHO	**Ashiyiah**	**3.47**	**136**	P	**Pn**	**15 25 36.5**	**+1.8**
	SNR=38						
ASHO	**Ashiyiah**	**3.47**	**136**	⇓P	**Pn**	**15 25 36.5**	**+1.8**
	SNR=38						
KRBR	**Kerman**	**4.02**	**46**	Pn	**Pn**	**15 25 42.0**	**-0.3**
KRBR	**Kerman**	**4.02**	**46**	*ePn*	**Pn**	**15 25 43.1**	**+0.8**
KRBR				Sn	**Sn**	**15 26 30.8**	**+1.3**
KRBR				AML	AML	15 26 55.5	
	comp=E,163nm,1.2s						
KRBR				AML	AML	15 26 55.9	
	comp=N,178nm,0.8s						
KRBR	**Kerman**	**4.02**	**46**	*ePn*	**Pn**	**15 25 42.3**	**0.0**
IMEH	**Mehriz**	**4.28**	**14**	Pn	**Pn**	**15 25 47.7**	**+1.9**
IMEH	**Mehriz**	**4.28**	**14**	*ePn*	**Pn**	**15 25 47.8**	**+2.0**
IMEH				*e*		15 25 49.7	
	comp=Z,3μm,0.1s						
IMEH	**Mehriz**	**4.28**	**14**	*ePn*	**Pn**	**15 25 47.8**	**+2.0**
ISAD	**Sadrabad**	**4.68**	**3**	Pn	**Pn**	**15 25 53.9**	**+2.6**
ISAD	**Sadrabad**	**4.68**	**3**	*ePn*	**Pn**	**15 25 54.0**	**+2.7**
ISAD				*e*		15 25 59.3	
	comp=Z,2μm,0.3s						
ISAD	**Sadrabad**	**4.68**	**3**	*ePn*	**Pn**	**15 25 54.0**	**+2.7**
IBAF	**Bafgh**	**4.74**	**23**	Pn	**Pn**	**15 25 52.5**	**+0.4**
IBAF	**Bafgh**	**4.74**	**23**	*ePn*	**Pn**	**15 25 52.6**	**+0.5**
IBAF				*e*		15 25 57.2	
	comp=Z,848nm,0.1s						
IBAF	**Bafgh**	**4.74**	**23**	*ePn*	**Pn**	**15 25 52.6**	**+0.5**
HOQ	**Hoqain**	**5.05**	**135**	P	**Pn**	**15 25 58.2**	**+1.7**
HOQ	**Hoqain**	**5.05**	**135**	P	**Pn**	**15 25 58.2**	**+1.7**
HOQ	**Hoqain**	**5.05**	**135**	⇑P	**Pn**	**15 25 58.2**	**+1.7**
ICHK	**Chekchek**	**5.08**	**10**	Pn	**Pn**	**15 25 57.7**	**+0.9**
ICHK	**Chekchek**	**5.08**	**10**	*ePn*	**Pn**	**15 25 57.7**	**+0.9**
ICHK				*e*		15 25 59.2	
	comp=Z,3μm,0.2s						
ICHK	**Chekchek**	**5.08**	**10**	*ePn*	**Pn**	**15 25 57.7**	**+0.9**
IGAR	**Gharneh**	**5.30**	**347**	*ePn*	**Pn**	**15 26 00.4**	**+0.6**
IGAR				*e*		15 26 22.4	
	comp=Z,567nm,0.3s						
KBD	**Kabd**	**5.41**	**292**	*eP*	**Pn**	**15 26 05.7**	**+4.3**
KBD	**Kabd**	**5.41**	**292**	*eP*	**Pn**	**15 26 05.7**	**+4.3**
RDF	**Al-Radifah**	**5.45**	**289**	*eP*	**Pn**	**15 26 03.1**	**+1.1**
RDF				*eS*	**Sn**	**15 27 05.3**	**+0.5**
RDF				AML	AML	15 27 08.1	
	comp=Z,59nm,0.6s						
RDF	**Al-Radifah**	**5.45**	**289**	*eP*	**Pn**	**15 26 03.1**	**+1.1**
RDF				*eS*	**Sn**	**15 27 05.3**	**+0.5**
NASN	**Na'in**	**5.58**	**355**	Pn	**Pn**	**15 26 04.0**	**+0.3**
NASN	**Na'in**	**5.58**	**355**	*ePn*	**Pn**	**15 26 04.7**	**+1.0**
NASN				AML	AML	15 27 10.2	
	comp=N,45nm,0.4s						
NASN	**Na'in**	**5.58**	**355**	Pn	**Pn**	**15 26 04.0**	**+0.3**
BSY	**Bisya**	**5.63**	**142**	⇑P	**Pn**	**15 26 06.3**	**+1.9**
	SNR=9.3						
BSYO	**Bisya**	**5.66**	**141**	P	**Pn**	**15 26 06.3**	**+1.5**
	SNR=9.3						
BSYO	**Bisya**	**5.66**	**141**	P	**Pn**	**15 26 06.3**	**+1.5**
	SNR=9.3						
IZEF	**Zefreh**	**5.73**	**351**	Pn	**Pn**	**15 26 06.1**	**+0.4**
IZEF	**Zefreh**	**5.73**	**351**	*e*	**Pg**	**15 26 33.8**	**+3.4**
	comp=Z,538nm,0.4s						
IZEF				*ePn*	**Pn**	**15 26 06.2**	**+0.5**
NAY	**Al-Naaiem**	**5.81**	**292**	*eP*	**Pn**	**15 26 08.0**	**+1.1**
NAY				*eS*	**Sn**	**15 27 12.8**	**-0.8**
NAY				AML	AML	15 27 13.2	
	comp=Z,17nm,0.6s						
NAY	**Al-Naaiem**	**5.81**	**292**	*eP*	**Pn**	**15 26 08.0**	**+1.2**
NAY				*eS*	**Sn**	**15 27 12.8**	**-0.7**
IPIR	**Pirpir**	**5.87**	**339**	Pn	**Pn**	**15 26 08.7**	**+1.1**
IPIR	**Pirpir**	**5.87**	**339**	*ePn*	**Pn**	**15 26 08.7**	**+1.1**
IPIR				*e*		15 27 23.6	
	comp=Z,442nm,0.2s						
IPIR	**Pirpir**	**5.87**	**339**	*ePn*	**Pn**	**15 26 08.7**	**+1.1**
IKLH	**

comp=Z,3.5nm,0.5s,mb4.1,baz=185,slow=11,SNR=14
AKTO LR LR 15 41 08.2
comp=Z,38nm,20.3s,MS2.9,baz=163,slow=42
TKM2 Tokmak 2 23.87 43 *e*P **P 15 29 51.7 -2.5**
TKM2 pmax pmax
comp=Z,4.0nm,0.7s,mb4.0
TKM2 Tokmak 2 23.87 43 *e*P **P 15 29 51.7 -2.5**
comp=Z,4.0nm,0.7s,mb4.0
TKM2 Tokmak 2 23.87 43 *e*P **P 15 29 51.7 -2.5**
comp=Z,4.0nm,0.7s,mb4.0
VRHR Novokhopersk 25.47 343 *e*P **P 15 30 09.3 +0.6**
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.6s
VRHR pmax pmax
comp=Z,20nm,0.6s,mb4.8
VRHR Novokhopersk 25.47 343 *e*P **P 15 30 09.3 +0.6**
VSR Storozhevoye 26.29 340 *e*P **P 15 30 16.4 +0.3**
VSR pmax pmax
comp=Z,6.0nm,0.7s,mb4.2
VSR pmax pmax
comp=N,1.0nm,0.2s
VSR pmax pmax
comp=E,10.0nm,0.7s
VSR Storozhevoye 26.29 340 *e*P **P 15 30 16.4 +0.3**
comp=E,1.0nm,0.2s,mb4.0
BRVK Borovoye 28.70 21 *e*P **P 15 30 36.3 -1.4**
BRVK pmax pmax
comp=Z,6.0nm,1.1s,mb4.2
BRVK Borovoye 28.70 21 *e*P **P 15 30 36.3 -1.4**
comp=Z,5.5nm,1.1s,mb4.2
BRVK Borovoye 28.70 21 *e*P **P 15 30 36.3 -1.4**
comp=Z,6.0nm,1.1s,mb4.2
BVAR Borovoye Array 28.70 22 P **P 15 30 37.5 -0.2**
comp=Z,2.0nm,0.5s,mb4.1,baz=205,slow=6.6,SNR=14
BVAR PcP PcP 15 33 47.9 -0.1
comp=Z,0.6nm,0.5s,baz=197,slow=4.5,SNR=3.5
BVAR Borovoye Array 28.70 22 P **P 15 30 37.5 -0.2**
BVAR Borovoye Array 28.70 22 PcP PcP 15 33 47.9 -0.1
ARU Arti 29.42 6*d i*P **P 15 30 42.8 -1.2**
ARU 15 31 34.7
ARU S **S 15 35 40.1 +2.3**
ARU SS SS 15 37 06.2 -36
ARU pmax pmax
comp=Z,2.0nm,1.0s,mb3.8
ARU Arti 29.42 6 P **P 15 30 41.5 -2.6**
ARU Arti 29.42 6 *i* P **P 15 30 42.8 -1.2**
comp=Z,2.0nm,1.0s,mb3.8
ARU S **S 15 35 40.1 +2.3**
AKASG Malin Array Be 29.81 328 P **P 15 30 46.8 -0.8**
comp=Z,1.8nm,0.4s,mb4.1,baz=136,slow=8.1,SNR=10
AKASG Malin Array Be 29.81 328 P **P 15 30 46.8 -0.8**
MK31 Makanchi Array 29.96 42 *e*P **P 15 30 47.8 -1.1**
MK31 Makanchi Array 29.96 42 *e*P **P 15 30 47.8 -1.1**
MKAR Makanchi Array 29.96 42 P **P 15 30 48.7 -0.3**
comp=Z,0.8nm,0.4s,mb3.8,baz=224,slow=8.5,SNR=7.8
MKAR Makanchi Array 29.96 42 P **P 15 30 48.7 -0.3**
MKAR Makanchi Array 29.96 42 P **P 15 30 48.7 -0.2**
KURK Kurchatov 30.29 32 *e*P **P 15 30 49.4 -2.5**
KURK pmax pmax
comp=Z,2.0nm,0.9s,mb3.9
KURK Kurchatov 30.29 32 *e*P **P 15 30 49.4 -2.5**
comp=Z,1.7nm,0.9s,mb3.8
KURK Kurchatov 30.29 32 *e*P **P 15 30 49.4 -2.5**
comp=Z,2.0nm,0.9s,mb3.9
OBN Obninsk 30.45 341⇑*e*P **P 15 30 53.8 +0.6**
OBN *e*S **S 15 35 59.5 +5.5**
OBN pmax pmax
comp=Z,6.0nm,0.5s,mb4.6
OBN MLR MLR
comp=Z,100nm,14.0s,MS3.6
OBN Obninsk 30.45 341 *e*P **P 15 30 53.8 +0.6**
comp=Z,6.0nm,0.5s,mb4.6
ZALV Zalesovo Beam 35.28 32 P **P 15 31 34.5 -1.0**
comp=Z,4.1nm,0.6s,mb4.5,baz=238,slow=9.3,SNR=20
ZALV Zalesovo Beam 35.28 32 P **P 15 31 34.5 -1.0**
MORC Moravsky Berou 35.49 319 *e*P **P 15 31 36.6 -0.7**
MORC pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
MORC Moravsky Berou 35.49 319 *e*P **P 15 31 36.6 -0.6**
comp=Z,2.3nm,0.6s,mb4.3
MORC Moravsky Berou 35.49 319 *e*P **P 15 31 36.6 -0.7**
comp=Z,2.0nm,0.6s,mb4.2
KHC Kasperske Hory 37.61 316 *e*P **P 15 31 54.4 -0.9**
KHC pmax pmax
comp=Z,1.0nm,0.7s,mb3.6
KHC Kasperske Hory 37.61 316 *e*P **P 15 31 54.4 -0.9**
comp=Z,1.4nm,0.7s,mb3.8
KHC Kasperske Hory 37.61 316 *e*P **P 15 31 54.4 -0.9**
comp=Z,1.0nm,0.7s,mb3.6
JOF Joensuu 38.54 344 *e*P **P 15 32 01.0 -2.0**
JOF Joensuu 38.54 344 *ep* **P 15 32 01.0 -2.0**
JOF Joensuu 38.54 344 *e*P **P 15 32 01.0 -2.0**
CLL Collm 38.76 319 *e*P **P 15 32 05.0 0.0**
CLL Collm 38.76 319 *e*P **P 15 32 05.0 0.0**
CLL Collm 38.76 319 *e*P **P 15 32 05.0 0.0**
FETA Feichten 38.77 312⇑*i*P **P 15 32 05.5 +0.4**
comp=Z,3.5nm,0.6s,mb4.2
FETA Feichten 38.77 312 P **P 15 32 05.5 +0.3**
comp=Z,3.5nm,0.6s,mb4.2
FINES FINESS Array B 38.82 339 P **P 15 32 04.9 -0.5**
comp=Z,3.1nm,0.6s,mb4.2,baz=142,slow=9.6,SNR=36
FINES FINESS Array B 38.82 339 P **P 15 32 04.9 -0.5**
KAF Kangasniemi 39.26 340 *e*P **P 15 32 08.7 -0.4**
KAF Kangasniemi 39.26 340 *ep* **P 15 32 08.7 -0.4**
KAF Kangasniemi 39.26 340 *e*P **P 15 32 08.7 -0.4**
DAVA Damuels 39.40 312⇑*i*P **P 15 32 10.3 -0.1**
comp=Z,13nm,0.5s,mb5.0
DAVA Damuels 39.40 312 P **P 15 32 10.3 -0.1**
comp=Z,13nm,0.5s,mb5.0
GTA Gaotai 40.23 60 *e*P **P 15 32 17.5 0.0**
GTA pP pP 15 32 23.0 +2.4
GTA sP sP 15 32 26.3 +4.5
GTA pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
LPL La Plagne 41.14 309 *e*P **P 15 32 24.3 -0.6**
LPL La Plagne 41.14 309 *e*P **P 15 32 24.3 -0.6**
CDF Champ du Feu 41.37 313 *e*P **P 15 32 24.3 -2.5**
CDF Champ du Feu 41.37 313 *e*P **P 15 32 24.3 -2.5**
ECH Echery 41.40 313 *e*P **P 15 32 26.0 -1.0**
ECH pmax pmax
comp=Z,4.0nm,0.9s,mb4.0
ECH Echery 41.40 313 *e*P **P 15 32 26.0 -1.1**
comp=Z,3.9nm,0.9s,mb4.0
ECH Echery 41.40 313 *e*P **P 15 32 26.0 -1.0**
comp=Z,4.0nm,0.9s,mb4.0
HINF Hinteralfeld 41.51 312 *e*P **P 15 32 27.0 -0.9**
comp=Z,3.8nm,0.6s,mb3.9
HINF Hinteralfeld 41.51 312 *e*P **P 15 32 27.0 -0.9**
HINF pmax pmax
comp=Z,2.0nm,0.6s,mb3.9
HINF Hinteralfeld 41.51 312 *e*P **P 15 32 27.0 -0.9**
comp=Z,1.9nm,0.6s,mb3.9
HINF Hinteralfeld 41.51 312 *e*P **P 15 32 27.0 -0.9**
comp=Z,1.9nm,0.6s,mb3.9
SMRF Simiane la Rot 41.73 306 *e*P **P 15 32 29.8 +0.1**
comp=Z,3.7nm,0.7s,mb3.9
SMRF Simiane la Rot 41.73 306 *e*P **P 15 32 29.8 +0.1**
comp=Z,3.7nm,0.6s,mb4.2
SMRF Simiane la Rot 41.73 306 *e*P **P 15 32 29.8 +0.1**
comp=Z,1.9nm,0.7s,mb3.9
CHTO Chiang Mai 42.54 91 *e*P **P 15 32 36.2 -0.5**
CHTO pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
CHTO Chiang Mai 42.54 91 *e*P **P 15 32 36.2 -0.5**
comp=Z,5.5nm,0.9s,mb4.3
CHTO Chiang Mai 42.54 91 *e*P **P 15 32 36.2 -0.5**
comp=Z,6.0nm,0.9s,mb4.3
CMAR Chiang Mai Arr 42.66 92 P **P 15 32 37.6 -0.1**
comp=Z,0.9nm,0.6s,mb3.7,baz=283,slow=9.5,SNR=6.3
CMAR Chiang Mai Arr 42.66 92 P **P 15 32 37.6 -0.1**
SMF Signal de Mont 43.31 310 *e*P **P 15 32 41.7 -0.9**
SMF Signal de Mont 43.31 310 *e*P **P 15 32 41.7 -0.9**
LOR Lormes 43.40 311 *e*P **P 15 32 42.3 -1.0**
comp=Z,1.6nm,0.4s,mb3.8
LOR Lormes 43.40 311 *e*P **P 15 32 42.3 -1.0**
comp=Z,0.8nm,0.4s,mb3.8
BAIF Baives 43.71 315 *e*P **P 15 32 46.2 +0.5**
comp=Z,14nm,0.9s,mb4.4
BAIF Baives 43.71 315 *e*P **P 15 32 46.2 +0.5**
BAIF pmax pmax
comp=Z,7.0nm,0.9s,mb4.4
BAIF Baives 43.71 315 *e*P **P 15 32 46.2 +0.5**
comp=Z,7.3nm,0.9s,mb4.4
BAIF Baives 43.71 315 *e*P **P 15 32 46.2 +0.5**
comp=Z,7.2nm,0.9s,mb4.4
NB2 NORSAR Subarra 44.06 332 P **P 15 32 47.1 -1.3**
comp=Z,0.8nm,0.6s,mb3.6,baz=120,slow=8.6
NB2 NORSAR Subarra 44.06 332 P **P 15 32 47.1 -1.3**
comp=Z,0.8nm,0.6s,mb3.6,baz=120,slow=8.0,SNR=5.2
NOA NORSAR Array B 44.06 332 P **P 15 32 47.5 -1.0**
comp=Z,0.7nm,0.6s,mb3.6,baz=121,slow=8.1,SNR=5.3
NOA NORSAR Array B 44.06 332 P **P 15 32 47.5 -1.0**
NOA NORSAR Array B 44.06 332 P **P 15 32 47.5 -0.9**
MTLF Montolieu 44.09 305 *e*P **P 15 32 49.2 +0.3**
comp=Z,3.1nm,0.5s,mb4.0
MTLF Montolieu 44.09 305 *e*P **P 15 32 49.2 +0.3**
MTLF pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
MTLF Montolieu 44.09 305 *e*P **P 15 32 49.2 +0.3**
comp=Z,1.5nm,0.5s,mb4.0
MTLF Montolieu 44.09 305 *e*P **P 15 32 49.2 +0.3**
comp=Z,1.5nm,0.5s,mb4.0
CAF Calviac 44.33 307 *e*P **P 15 32 50.7 -0.1**
comp=Z,5.8nm,0.9s,mb4.0
CAF Calviac 44.33 307 *e*P **P 15 32 50.7 -0.1**
CAF pmax pmax
comp=Z,3.0nm,0.9s,mb4.0
CAF Calviac 44.33 307 *e*P **P 15 32 50.7 -0.1**
comp=Z,2.9nm,0.9s,mb4.0
CAF Calviac 44.33 307 *e*P **P 15 32 50.7 -0.1**
comp=Z,2.9nm,0.9s,mb4.0
TCF Toulx Ste Croi 44.38 309 *e*P **P 15 32 50.7 -0.5**
comp=Z,3.9nm,0.6s,mb4.0
TCF Toulx Ste Croi 44.38 309 *e*P **P 15 32 50.7 -0.5**
TCF pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
TCF Toulx Ste Croi 44.38 309 *e*P **P 15 32 50.7 -0.5**
comp=Z,2.0nm,0.6s,mb4.0
TCF Toulx Ste Croi 44.38 309 *e*P **P 15 32 50.7 -0.5**
comp=Z,2.0nm,0.6s,mb4.0
RJF Les Rejaudoux 44.75 308 *e*P **P 15 32 53.8 -0.4**
comp=Z,4.1nm,0.5s,mb4.2
RJF Les Rejaudoux 44.75 308 *e*P **P 15 32 53.8 -0.4**
RJF pmax pmax
comp=Z,2.0nm,0.5s,mb4.2
RJF Les Rejaudoux 44.75 308 *e*P **P 15 32 53.8 -0.4**
comp=Z,2.0nm,0.5s,mb4.2
RJF Les Rejaudoux 44.75 308 *e*P **P 15 32 53.8 -0.4**
comp=Z,2.0nm,0.5s,mb4.2
LFF La Frestale 45.27 307 *e*P **P 15 32 58.4 +0.1**
comp=Z,11nm,0.5s,mb4.6
LFF La Frestale 45.27 307 *e*P **P 15 32 58.4 +0.1**
LFF pmax pmax
comp=Z,5.0nm,0.5s,mb4.6
LFF La Frestale 45.27 307 *e*P **P 15 32 58.4 +0.1**
comp=Z,5.4nm,0.5s,mb4.6
LFF La Frestale 45.27 307 *e*P **P 15 32 58.4 +0.1**
comp=Z,5.4nm,0.5s,mb4.6
ARCES ARCESS Array B 45.35 347 P **P 15 32 58.9 +0.2**
comp=Z,1.4nm,0.8s,mb3.8,baz=145,slow=8.7,SNR=5.5
ARCES ARCESS Array B 45.35 347 P **P 15 32 58.9 +0.3**
SONM Songino Array 45.77 49 P **P 15 33 01.9 -0.3**
comp=Z,1.1nm,0.7s,mb3.9,baz=275,slow=8.8,SNR=8.1
SONM Songino Array 45.77 49 P **P 15 33 01.9 -0.3**
ETSF Etsaut 46.09 304 *e*P **P 15 33 05.5 +0.6**
comp=Z,4.7nm,0.7s,mb4.2
ETSF Etsaut 46.09 304 *e*P **P 15 33 05.5 +0.6**
ETSF pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
ETSF Etsaut 46.09 304 *e*P **P 15 33 05.5 +0.6**
comp=Z,2.3nm,0.7s,mb4.2
ETSF Etsaut 46.09 304 *e*P **P 15 33 05.5 +0.6**
comp=Z,2.3nm,0.7s,mb4.2
ULN Ulaanbaatar 46.22 49 *e*P **P 15 33 05.5 -0.2**
ULN pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
ULN Ulaanbaatar 46.22 49 *e*P **P 15 33 05.5 -0.3**
comp=Z,2.0nm,0.6s,mb4.2
ULN Ulaanbaatar 46.22 49 *e*P **P 15 33 05.5 -0.2**
comp=Z,2.0nm,0.6s,mb4.2
LDF La Druitiere 46.24 312 *e*P **P 15 33 04.7 -1.2**
comp=Z,5.7nm,0.4s,mb4.5
LDF La Druitiere 46.24 312 *e*P **P 15 33 04.7 -1.2**
comp=Z,2.8nm,0.4s,mb4.5
FLN La Foliniere 46.50 313 *e*P **P 15 33 06.8 -1.2**
comp=Z,6.8nm,0.7s,mb4.4
FLN La Foliniere 46.50 313 *e*P **P 15 33 06.8 -1.2**
FLN pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
FLN La Foliniere 46.50 313 *e*P **P 15 33 06.8 -1.2**
comp=Z,3.4nm,0.7s,mb4.4
FLN La Foliniere 46.50 313 *e*P **P 15 33 06.8 -1.2**
comp=Z,3.4nm,0.7s,mb4.4
SJPF Ste Jean 46.59 305 *e*P **P 15 33 09.2 +0.4**
comp=Z,8.4nm,0.5s,mb4.6
SJPF Ste Jean 46.59 305 *e*P **P 15 33 09.2 +0.4**
SJPF pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
SJPF Ste Jean 46.59 305 *e*P **P 15 33 09.2 +0.4**
comp=Z,4.2nm,0.5s,mb4.6
SJPF Ste Jean 46.59 305 *e*P **P 15 33 09.2 +0.4**
comp=Z,4.2nm,0.5s,mb4.6
SGMF Saint Gilles 47.82 312 *e*P **P 15 33 17.3 -0.9**
comp=Z,3.0nm,0.4s,mb4.4
SGMF Saint Gilles 47.82 312 *e*P **P 15 33 17.3 -0.9**
comp=Z,1.5nm,0.4s,mb4.4
QUIF Quistinic 48.20 311 *e*P **P 15 33 20.1 -1.1**
QUIF Quistinic 48.20 311 *e*P **P 15 33 20.1 -1.1**
ROSF Rostrenen 48.30 312 *e*P **P 15 33 21.1 -0.9**
ROSF Rostrenen 48.30 312 *e*P **P 15 33 21.1 -0.9**
ESDC Sonseca Array 48.71 300 P **P 15 33 25.9 +0.6**
comp=Z,1.1nm,0.3s,mb4.3,baz=67,slow=7.3,SNR=6.9
ESDC Sonseca Array 48.71 300 P **P 15 33 25.9 +0.6**
ESDC Sonseca Array 48.71 300 P **P 15 33 25.9 +0.6**
TORD Torodi Ar. Bea 50.20 265 P **P 15 33 37.7 +0.8**
comp=Z,2.5nm,0.6s,mb4.4,baz=60,slow=7.7,SNR=19
EVO Evora 51.95 299 *e*P **P 15 33 51.0 +1.1**
comp=Z,5.4nm,0.6s,mb4.3
EVOP Sao Brissos 52.04 299 *e*P **P 15 33 51.0 +0.5**
comp=Z,2.7nm,0.6s,mb4.3
DBIC Dimbokro 58.83 261 P **P 15 34 40.7 +1.0**
comp=Z,5.6nm,0.9s,mb4.6,baz=57,slow=7.1,SNR=3.3
DBIC Dimbokro 58.83 261 P **P 15 34 40.7 +1.0**
DBIC pmax pmax
comp=Z,6.0nm,0.9s
DBIC Dimbokro 58.83 261 *e*P **P 15 34 40.2 +0.5**
comp=Z,16nm,1.1s,mb5.0
DBIC Dimbokro 58.83 261 P **P 15 34 40.7 +1.0**
comp=Z,6.0nm,0.9s,mb4.6
VLA Vladivostok 63.88 53 *e*P **P 15 35 12.3 -1.3**
VLA pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
VLA Vladivostok 63.88 53 *e*P **P 15 35 12.3 -1.3**
comp=Z,8.0nm,0.7s,mb4.9
SEY Seymchan 70.05 29⇑*i*P **P 15 35 52.2 -0.2**
SEY Seymchan 70.05 29 *i* P **P 15 35 52.2 -0.2**
YSS Yuzh-Sakhalins 70.21 47 *i* P **P 15 35 52.4 -1.3**
YSS pmax pmax
comp=Z,11nm,1.3s,mb4.6
YSS Yuzh-Sakhalins 70.21 47 *i* P **P 15 35 52.4 -1.3**
comp=Z,11nm,1.3s,mb4.6
FRB Frobisher Bay 78.58 337 P **P 15 36 42.6 +0.5**
comp=Z,9.4nm,0.9s,mb4.7,baz=53,slow=5.1,SNR=3.4
FRB Frobisher Bay 78.58 337 P **P 15 36 42.6 +0.5**
SCHQ Schefferville 83.59 330 P **P 15 37 09.1 +0.1**
comp=Z,4.0nm,0.6s,mb4.7,baz=39,slow=6.6,SNR=6.5
SCHQ Schefferville 83.59 330 P **P 15 37 09.1 +0.1**
ILAR Eielson Array 86.95 9 P **P 15 37 25.1 -0.5**
comp=Z,0.4nm,0.9s,mb3.6,baz=314,slow=2.4,SNR=4.4
ILAR Eielson Array 86.95 9 P **P 15 37 25.1 -0.5**
WRA Warramunga Arr 91.27 112 P **P 15 37 45.0 -1.7**
comp=Z,0.2nm,0.6s,mb3.6,baz=310,slow=3.9,SNR=4.5
WRA Warramunga Arr 91.27 112 P **P 15 37 45.0 -1.7**
ASAR Alice Springs 92.68 115 P **P 15 37 52.5 -0.7**
comp=Z,0.4nm,0.7s,mb4.0,baz=296,slow=3.7,SNR=4.5
ASAR Alice Springs 92.68 115 P **P 15 37 52.5 -0.6**

*ISCJB **26** 15:39:14.7±0.7,36°.97N±0°.04×29°.11E±0°.04,h4km±8km,*
Error ellipse: s-maj=6.3km s-min=5.0km az=23.8
*CSEM **26** 15:39:14.9±0.2,36°.99N×29°.12E,h8km,MD2.9,Error*
ellipse: s-maj=4.9km s-min=3.3km az=5.0
*ISK **26** 15:39:14.8,37°.05N×29°.16E,h18km,MD2.9*
*DDA **26** 15:39:15.0,37°.00N×29°.13E,h7km±6km,Md2.7*
ISC 26 15:39:15.2±0.6,36°.98N±0°.04×29°.11E±0°.04,h10km±7km,
n29,σ0°89/45,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.36**	**61**	*e*PG	**Pg**	**15 39 21.2**	**-1.0**
GLHS				*e*SG	**Sg**	**15 39 26.7**	**-0.3**
GLHS	**Glhisar (BURDU**	**0.36**	**61**	*e*Pg	**Pg**	**15 39 21.2**	**-1.0**
GLHS				*e*Sg	**Sg**	**15 39 26.7**	**-0.3**
GOLH	**Golhisar**	**0.44**	**55**	*i* P	**Pg**	**15 39 23.1**	**-0.8**
GOLH				*i* S	**Sg**	**15 39 30.3**	**+0.6**
GOLH	**Golhisar**	**0.44**	**55**	*i* P	**Pg**	**15 39 23.0**	**-0.8**
GOLH				*i* S	**Sg**	**15 39 30.3**	**+0.6**
YER	**Yerkesik**	**0.68**	**283**	*e*PG	**Pg**	**15 39 29.1**	**+0.8**
YER	**Yerkesik**	**0.68**	**283**	*e*Pg	**Pg**	**15 39 29.2**	**+0.9**
ELL	**Elmali**	**0.68**	**110**	*e*PG	**Pg**	**15 39 29.0**	**+0.7**
ELL				*e*SG	**Sg**	**15 39 38.3**	**+1.1**
ELL	**Elmali**	**0.68**	**110**	*e*Pg	**Pg**	**15 39 29.0**	**+0.7**
ELL				*e*Sg	**Sg**	**15 39 38.3**	**+1.1**
DNZL	**Cakiroluk**	**0.71**	**356**	*i* P	**Pg**	**15 39 28.0**	**-0.9**
DNZL				*i* S	**Sg**	**15 39 39.5**	**+1.4**
DNZL	**Cakiroluk**	**0.71**	**356**	*i* P	**Pg**	**15 39 28.0**	**-0.9**
DNZL				*i* S	**Sg**	**15 39 39.5**	**+1.4**
DENT	**Denizli**	**0.77**	**355**	*e*PG	**Pg**	**15 39 29.2**	**-0.9**
DENT	**Denizli**	**0.77**	**355**	*e*Pg	**Pg**	**15 39 29.2**	**-0.9**
AKAS	**Kas**	**0.85**	**152**	*i* P	**Pg**	**15 39 31.6**	**+0.2**
AKAS				*i* S	**Sg**	**15 39 46.9**	**+4.4**
AKAS	**Kas**	**0.85**	**152**	*i* P	**Pg**	**15 39 31.6**	**+0.1**
AKAS				*i* S	**Sg**	**15 39 46.9**	**+4.4**
KORT	**Korkueli**	**0.99**	**89**	*i* P	**Pg**	**15 39 33.2**	**-1.1**
KORT				*i* S	**Sg**	**15 39 51.6**	**+4.4**
KORT	**Korkueli**	**0.99**	**89**	*i* P	**Pg**	**15 39 33.2**	**-1.1**
MLSB	**Milas**	**1.11**	**287**	*e*PN	**Pn**	**15 39 35.9**	**-0.9**
MLSB	**Milas**	**1.11**	**287**	*e*Pn	**Pn**	**15 39 35.9**	**-0.9**
AYDN	**Tasoluk**	**1.19**	**305**	*i* P	**Pn**	**15 39 38.1**	**+0.1**
AYDN				*i* S	**Sb**	**15 39 54.7**	**+1.3**
AYDN	**Tasoluk**	**1.19**	**305**	*i* P	**Pn**	**15 39 38.1**	**+0.2**
AYDN				*i* S	**Sb**	**15 39 54.7**	**+1.3**
DAT	**Datca**	**1.25**	**259**	*e*PN	**Pn**	**15 39 38.6**	**-0.1**
DAT	**Datca**	**1.25**	**259**	*e*Pn	**Pn**	**15 39 38.6**	**-0.2**
BDRM	**Kayabasi**	**1.34**	**274**	*i* P	**Pn**	**15 39 40.3**	**+0.4**
BDRM				*i* S	**Sb**	**15 39 56.6**	**-0.9**
BDRM	**Kayabasi**	**1.34**	**274**	*i* P	**Pn**	**15 39 40.3**	**+0.4**
BDRM				*i* S	**Sb**	**15 39 56.6**	**-0.9**
KHL	**Karahalli**	**1.38**	**14**	*e*PN	**Pn**	**15 39 39.0**	**-1.5**
KHL	**Karahalli**	**1.38**	**14**	*e*Pn	**Pn**	**15 39 39.0**	**-1.5**
KHAL	**Karahalli**	**1.42**	**12**	*i* P	**Pn**	**15 39 31.8**	**-9.2**
KHAL				*i* S	**Sn**	**15 40 01.1**	**+1.3**
BODT	**Bodrum**	**1.44**	**274**	*e*PN	**Pn**	**15 39 41.5**	**+0.1**
BODT	**Bodrum**	**1.44**	**274**	*e*Pn	**Pn**	**15 39 41.5**	**+0.1**

IDC 26 15:51:24.5±2.3,1°.33N×126°.73E,h0km,mb3.1/3,
mb1 3.3/3,mb1mx3.2/19,mbtmp3.2/3,Error ellipse:
s-maj=190.3km s-min=27.6km az=66.0,Northern
Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.42**	**161**	P	P	15 56 25.2	+0.3
	0.2nm,0.5s,baz=340,slow=11,SNR=4.8						
ASAR	**Alice Springs**	**25.80**	**165**	P	P	15 56 57.4	-0.1
	0.3nm,0.8s,baz=349,slow=9.5,SNR=5.3						
MKAR	**Makanchi Array**	**59.52**	**326**	P	P	16 01 29.8	+0.1
	0.1nm,0.2s,baz=132,slow=8.3,SNR=3.8						

*ISCJB **26** 16:09:11.6±0.2,38°.81N±0°.01×7°.88W±0°.02,h9km±2km,*
Error ellipse: s-maj=2.6km s-min=1.9km az=3.5
*CSEM **26** 16:09:12.9±0.1,38°.79N×7°.98W,h10km,ML4.0/10,Error*
ellipse: s-maj=2.4km s-min=1.6km az=100.0
*LDG **26** 16:09:13.9±0.1,38°.79N×8°.01W,h2km,Ml3.0/3,Error*
ellipse: s-maj=2.8km s-min=2.4km az=77.0
*NEIC **26** 16:09:13.4,38°.80N×7°.97W,h0km,MN3.3(MDD),After*
MDD.
*SFS **26** 16:09:13.0,38°.79N×7°.97W,h0km,ML3.3*
*MDD **26** 16:09:13.9±0.2,38°.78N×8°.00W,h10km,mbLg3.2/45,*
Error ellipse: s-maj=2.2km s-min=1.8km az=95.0
*INMG **26** 16:09:14.1±1.1,38°.78N×7°.98W,h14km±2km,MD3.2,*
ML3.3,Error ellipse: s-maj=1.6km s-min=0.9km az=92.0
*IGIL **26** 16:09:14.3,38°.77N×7°.97W,h14km,ML3.0*
ISC 26 16:09:12.9±0.2,38°.79N±0°.01×7°.96W±0°.02,h14km±2km,
n261,σ1°11/366,2C-6D,Portugal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EVO	**Evora**	**0.26**	**190**	*e*Pg	**Pg**	**16 09 19.3**	**+0.9**
EVO				*e*Sg	**Sg**	**16 09 22.6**	**+0.4**
	4μm,0.2s						
EVO	**Evora**	**0.26**	**190**	*e*Pg	**Pg**	**16 09 19.2**	**+0.8**
EVO				*e*Sg	**Sg**	**16 09 22.9**	**+0.7**
EVO				A		16 09 23.3	
	8μm,0.2s						
EVO	**Evora**	**0.26**	**190**	⇑Pg	**Pg**	**16 09 19.2**	**+0.8**
EVO				Lg		16 09 22.9	
	8μm,0.2s						
EVO	**Evora**	**0.26**	**190**	⇑Pg	**Pg**	**16 09 19.2**	**+0.8**
EVO				Lg		16 09 22.9	
	8μm,0.2s						
EVOP	**Sao Brissos**	**0.29**	**207**	*e*Pg	**Pg**	**16 09 19.3**	**+0.3**
EVOP				*e*Sg	**Sg**	**16 09 22.6**	**-0.5**
	2μm,0.2s						
PESTR	**Estremoz**	**0.29**	**75**	*e*Pg	**Pg**	**16 09 20.2**	**+1.2**
PESTR				*e*Sg	**Sg**	**16 09 24.7**	**+1.5**
PESTR				A		16 09 28.2	
	271nm,0.5s						
PESTR	**Estremoz**	**0.29**	**75**	Pg	**Pg**	**16 09 20.2**	**+1.2**
PESTR				Lg		16 09 24.7	
	271nm,0.5s						
PESTR	**Estremoz**	**0.29**	**75**	Pg	**Pg**	**16 09 20.2**	**+1.2**
PESTR				Lg		16 09 24.7	
	271nm,0.5s						
PESTR	**Estremoz**	**0.29**	**75**	*e*Pg	**Pg**	**16 09 20.2**	**+1.2**
PESTR				*e*Sg	**Sg**	**16 09 24.7**	**+1.5**
	271nm,0.5s						
MOE	**Montemor**	**0.41**	**229**	*e*Pg	**Pg**	**16 09 21.4**	**+0.3**
MOE				*i* Sg	**Sg**	**16 09 26.5**	**-0.1**
MOE	**Montemor**	**0.41**	**229**	Pg	**Pg**	**16 09 21.4**	**+0.3**
MOE				Lg		16 09 26.5	
MOE	**Montemor**	**0.41**	**229**	Pg	**Pg**	**16 09 21.4**	**+0.3**
MOE				Lg		16 09 26.5	
MOE	**Montemor**	**0.41**	**229**	*e*Pg	**Pg**	**16 09 21.4**	**+0.3**
MOE				*i* Sg	**Sg**	**16 09 26.5**	**-0.1**
ALMR	**Almeirim**	**0.61**	**307**	*e*P	**Pg**	**16 09 25.0**	**+0.3**
ALMR				*e*S	**Sg**	**16 09 33.0**	**+0.2**
ALMR				*e*S	**Sg**	**16 09 33.0**	**+0.2**
ALMR				AML	AML	16 09 33.5	
	comp=N,560nm,0.3s						
ALMR	**Almeirim**	**0.61**	**307**	*e*P	**Pg**	**16 09 25.0**	**+0.3**
ALMR				*e*S	**Sg**	**16 09 33.0**	**+0.2**
ALMR	**Almeirim**	**0.61**	**307**	Pg	**Pg**	**16 09 25.0**	**+0.3**
ALMR				Lg		16 09 33.0	
ALMR	**Almeirim**	**0.61**	**307**	Pg	**Pg**	**16 09 25.0**	**+0.3**
ALMR				Lg		16 09 33.0	
ALMR	**Almeirim**	**0.61**	**307**	*e*P	**Pg**	**16 09 25.0**	**+0.3**
ALMR				*e*S	**Sg**	**16 09 33.0**	**+0.2**
EBAD	**Badajoz**	**0.74**	**92**	Pg	**Pg**	**16 09 28.1**	**+0.9**
EBAD				Lg		16 09 38.0	
EBAD	**Badajoz**	**0.74**	**92**	⇓Pg	**Pg**	**16 09 28.1**	**+0.9**
	comp=N,77nm,0.1s,SNR=18						
EBAD				Lg		16 09 38.0	
	comp=N,2μm,0.2s,SNR=76						
EBAD	**Badajoz**	**0.74**	**92**	⇓Pg	**Pg**	**16 09 28.1**	**+0.9**
	comp=N,77nm,0.1s,SNR=18						
EBAD				Lg		16 09 38.0	
	comp=N,2μm,0.2s,SNR=76						
EBAD	**Badajoz**	**0.74**	**92**	Pg	**Pg**	**16 09 28.1**	**+0.9**
	comp=N,42nm,0.3s,SNR=506						
EBAD				Lg		16 09 38.0	
	comp=N,2μm,0.2s,SNR=76						
PBEJ	**Beja**	**0.77**	**175**	*e*Pg	**Pg**	**16 09 27.5**	**-0.2**
PBEJ				*e*Sg	**Sg**	**16 09 37.8**	**0.0**
PBEJ				A		16 09 40.7	
	comp=N,1μm,0.3s						
PBEJ	**Beja**	**0.77**	**175**	Pg	**Pg**	**16 09 27.5**	**-0.2**
PBEJ				Lg		16 09

PMRV Marv??o 0.77 34 Pg **Pg 16 09 28.8 +0.9**
PMRV Lg 16 09 39.2
comp=N,543nm,0.4s
PMRV Marv??o 0.77 34 Pg **Pg 16 09 28.8 +0.9**
PMRV Lg 16 09 39.2
comp=N,543nm,0.4s
PMRV Marv??o 0.77 34 *e*P **Pg 16 09 28.8 +0.9**
PMRV *e*S **Sg 16 09 39.2 +1.1**
comp=N,543nm,0.4s
PLML Palmela 0.78 253 *e*P **Pg 16 09 28.4 +0.4**
PLML Palmela 0.78 253 Pg **Pg 16 09 28.4 +0.4**
PLML Palmela 0.78 253 Pg **Pg 16 09 28.4 +0.4**
PLML Palmela 0.78 253 *e*P **Pg 16 09 28.4 +0.4**
PTOM Tomar 0.90 337 *e*P **Pg 16 09 30.7 +0.4**
PTOM *e*S **Sb 16 09 42.7 +0.7**
PTOM A 16 09 44.6
comp=N,640nm,0.5s
PTOM Tomar 0.90 337 Pg **Pg 16 09 30.7 +0.4**
PTOM Lg 16 09 42.7
comp=N,320nm,0.5s
PTOM Tomar 0.90 337 Pg **Pg 16 09 30.7 +0.4**
PTOM Lg 16 09 42.7
comp=N,320nm,0.5s
PTOM Tomar 0.90 337 *e*P **Pg 16 09 30.7 +0.4**
PTOM *e*S **Sb 16 09 42.7 +0.7**
comp=N,640nm,0.5s
LIS Lisbon 0.94 266 *e*S **Sb 16 09 42.3 -0.8**
LIS *e*S **Sb 16 09 42.3 -0.8**
LIS AML AML 16 09 43.0
comp=N,162nm,0.3s
LIS Lisbon 0.94 266 Lg 16 09 42.3
LIS Lisbon 0.94 266 Lg 16 09 42.3
LIS Lisbon 0.94 266 *e*S **Sb 16 09 42.3 -0.8**
PBAR Barrancos 0.95 130 *e*P **Pg 16 09 31.1 0.0**
PBAR *e*S **Sb 16 09 44.1 +0.8**
PBAR A 16 09 46.3
comp=N,670nm,0.3s
PBAR Barrancos 0.95 130 Pg **Pg 16 09 31.1 0.0**
PBAR Lg 16 09 44.1
comp=N,670nm,0.3s
PBAR Barrancos 0.95 130 Pg **Pg 16 09 31.1 0.0**
PBAR Lg 16 09 44.1
comp=N,670nm,0.3s
PBAR Barrancos 0.95 130 *e*P **Pg 16 09 31.1 0.0**
PBAR *e*S **Sb 16 09 44.1 +0.8**
comp=N,670nm,0.3s
MESJ Messejana 0.97 192 *e*P **Pb 16 09 31.4 -0.1**
MESJ *e*S **Sb 16 09 43.0 -1.1**
MESJ Messejana 0.97 192 Pg **Pb 16 09 31.4 0.0**
MESJ Lg 16 09 43.0
MESJ Messejana 0.97 192 Pg **Pb 16 09 31.4 0.0**
MESJ Lg 16 09 43.0
MESJ Messejana 0.97 192 *e*P **Pb 16 09 31.4 0.0**
MESJ *e*S **Sb 16 09 43.0 -1.1**
PMAFR Mafra 1.05 279 *e*P **Pb 16 09 32.6 -0.2**
PMAFR *e*S **Sb 16 09 46.8 +0.5**
PMAFR A 16 09 53.3
comp=N,465nm,0.4s
PMAFR Mafra 1.05 279 Pg **Pg 16 09 32.6 -0.5**
comp=N,28nm,0.1s,SNR=37
PMAFR Lg 16 09 46.8
comp=N,800nm,0.3s,SNR=17
PMAFR Mafra 1.05 279 Pg **Pg 16 09 32.6 -0.5**
comp=N,28nm,0.1s,SNR=37
PMAFR Lg 16 09 46.8
comp=N,800nm,0.3s,SNR=17
PMAFR Mafra 1.05 279 *e*P **Pb 16 09 32.6 -0.2**
PMAFR Mafra 1.05 279 Pg **Pg 16 09 32.9 -0.2**
comp=N,161nm,0.4s,SNR=37
PMAFR *e*S **Sb 16 09 46.8 +0.5**
comp=N,465nm,0.4s
PMAFR Lg 16 09 46.8
comp=N,800nm,0.3s,SNR=17
PCBR Castelo Branco 1.11 19 *e*P **Pb 16 09 34.0 +0.2**
PCBR *e*S **Sb 16 09 49.3 +1.1**
PCBR A 16 09 49.8
comp=N,414nm,0.3s
PCBR Castelo Branco 1.11 19 Pg **Pb 16 09 34.0 +0.2**
PCBR Lg 16 09 49.3
comp=N,207nm,0.3s
PCBR Castelo Branco 1.11 19 Pg **Pb 16 09 34.0 +0.2**
PCBR Lg 16 09 49.3
comp=N,207nm,0.3s
PCBR Castelo Branco 1.11 19 *e*P **Pb 16 09 34.0 +0.2**
PCBR *e*S **Sb 16 09 49.3 +1.1**
comp=N,414nm,0.3s
PCVE Castro Verde 1.16 183 *e*P **Pn 16 09 34.5 -0.1**
PCVE *e*S **Sb 16 09 49.6 +0.1**
PCVE A 16 09 55.1
comp=N,744nm,0.5s
PCVE Castro Verde 1.16 183 Pg **Pn 16 09 34.5 -0.1**
PCVE Lg 16 09 49.6
comp=N,744nm,0.5s
PCVE Castro Verde 1.16 183 Pg **Pn 16 09 34.5 -0.1**
PCVE Lg 16 09 49.6
comp=N,744nm,0.5s
PCVE Castro Verde 1.16 183 *e*P **Pn 16 09 34.5 -0.1**
PCVE *e*S **Sb 16 09 49.6 +0.1**
comp=N,744nm,0.5s
EGRO El Granado 1.31 163 Pg **Pg 16 09 36.8 -1.3**
EGRO Lg 16 09 55.8
EGRO El Granado 1.31 163 ⇓Pg **Pg 16 09 36.8 -1.3**
comp=N,75nm,0.2s,SNR=18
EGRO Lg 16 09 55.8
comp=N,216nm,0.1s,SNR=8.3
EGRO El Granado 1.31 163 ⇓Pg **Pg 16 09 36.8 -1.3**
comp=N,75nm,0.2s,SNR=18
EGRO Lg 16 09 55.8
comp=N,216nm,0.1s,SNR=8.3
EGRO El Granado 1.31 163 Pg **Pg 16 09 36.8 -1.2**
comp=N,102nm,0.3s,SNR=252
EGRO Lg 16 09 55.8
comp=N,216nm,0.1s,SNR=8.3
PTEO Sao Teotonio 1.38 206 *e*P **Pn 16 09 36.9 -0.8**
PTEO *e*S **Sn 16 09 55.7 0.0**
PTEO A 16 09 59.1
comp=N,669nm,0.4s
PTEO Sao Teotonio 1.38 206 Pg **Pn 16 09 36.9 -0.8**
PTEO Lg 16 09 55.7
comp=N,334nm,0.4s
PTEO Sao Teotonio 1.38 206 Pg **Pn 16 09 36.9 -0.8**
PTEO Lg 16 09 55.7
comp=N,334nm,0.4s
PTEO Sao Teotonio 1.38 206 *e*P **Pn 16 09 36.9 -0.8**
PTEO *e*S **Sn 16 09 55.7 0.0**
comp=N,669nm,0.4s
PVAQ Vaqueiros 1.40 172 *e*P **Pn 16 09 37.9 0.0**
PVAQ *e*S **Sn 16 09 55.9 -0.2**
PVAQ A 16 10 02.6
comp=N,522nm,0.2s
PVAQ Vaqueiros 1.40 172 Pg **Pn 16 09 37.9 0.0**
PVAQ Lg 16 09 55.9
comp=N,522nm,0.2s
PVAQ Vaqueiros 1.40 172 Pg **Pn 16 09 37.9 0.0**
PVAQ Lg 16 09 55.9
comp=N,522nm,0.2s
PVAQ Vaqueiros 1.40 172 *e*P **Pn 16 09 37.9 0.0**
PVAQ *e*S **Sn 16 09 55.9 -0.2**
comp=N,522nm,0.2s
EMIN Mina Concepcio 1.44 135 Pg **Pg 16 09 38.7 -1.8**
EMIN Lg 16 09 59.8
EMIN Mina Concepcio 1.44 135 ⇓Pn **Pn 16 09 38.7 +0.3**
comp=N,35nm,0.3s,SNR=18
EMIN Pg **Pg 16 09 39.8 -0.7**
comp=N,15nm,0.1s,SNR=41
EMIN Lg 16 09 58.8
comp=N,129nm,0.2s,SNR=5.0
EMIN Mina Concepcio 1.44 135 ⇓Pn **Pn 16 09 38.7 +0.3**
comp=N,35nm,0.3s,SNR=18
EMIN Pg **Pg 16 09 39.8 -0.7**
comp=N,15nm,0.1s,SNR=41
EMIN Lg 16 09 58.8
comp=N,129nm,0.2s,SNR=5.0
EMIN Mina Concepcio 1.44 135 Pg **Pg 16 09 38.7 -1.8**
comp=N,38nm,0.3s,SNR=41
EMIN Lg 16 09 59.8
comp=N,129nm,0.2s,SNR=5.0
PBDV Barranco-do-Ve 1.54 179 *e*Pn **Pn 16 09 40.1 +0.2**
PBDV *e*Sg **Sg 16 10 01.6 -1.0**
PBDV A 16 10 05.2
comp=N,616nm,0.4s
PBDV Barranco-do-Ve 1.54 179 Pn **Pn 16 09 40.1 +0.2**
PBDV Lg 16 10 01.6
comp=N,616nm,0.4s
PBDV Barranco-do-Ve 1.54 179 Pn **Pn 16 09 40.1 +0.2**
PBDV Lg 16 10 01.6
comp=N,616nm,0.4s
PBDV Barranco-do-Ve 1.54 179 *e*Pn **Pn 16 09 40.1 +0.2**
PBDV *e*Sg **Sg 16 10 01.6 -1.0**
MORF Marmelete 1.58 201 *e*Pn **Pn 16 09 40.1 -0.3**
MORF *e*Sg **Sg 16 10 02.1 -1.6**
MORF A 16 10 04.5
comp=N,553nm,0.3s
MORF Marmelete 1.58 201 Pn **Pn 16 09 40.1 -0.3**
MORF Lg 16 10 02.1
comp=N,553nm,0.3s
MORF Marmelete 1.58 201 Pn **Pn 16 09 40.1 -0.3**
MORF Lg 16 10 02.1
comp=N,553nm,0.3s
MORF Marmelete 1.58 201 *e*Pn **Pn 16 09 40.1 -0.3**
MORF *e*Sg **Sg 16 10 02.1 -1.6**
MTE Manteigas 1.64 11 *e*Pn **Pn 16 09 41.3 +0.1**
MTE Manteigas 1.64 11 *e*Pg **Pg 16 09 43.9 -0.4**
MTE *e*Sg **Sg 16 10 05.0 -0.6**
MTE A 16 10 09.1
comp=N,252nm,0.6s
MTE Manteigas 1.64 11 *e*Pn **Pn 16 09 41.1 -0.1**
MTE *e*Sn **Sn 16 10 04.7 +2.6**
MTE Manteigas 1.64 11 Pn **Pn 16 09 41.3 +0.1**
MTE Pg **Pg 16 09 43.9 -0.4**
MTE Lg 16 10 05.0
comp=N,126nm,0.6s
MTE Manteigas 1.64 11 Pn **Pn 16 09 41.3 +0.1**
MTE Pg **Pg 16 09 43.9 -0.4**
MTE Lg 16 10 05.0
comp=N,126nm,0.6s
MTE Manteigas 1.64 11 *e*Pn **Pn 16 09 41.3 +0.1**
MTE Manteigas 1.64 11 *e*Pg **Pg 16 09 43.9 -0.4**
MTE *e*Sn **Sn 16 10 04.7 +2.7**
MTE *e*Sg **Sg 16 10 05.0 -0.6**
comp=N,252nm,0.6s
PFVI Vila Bisbo 1.79 203 *e*Pn **Pn 16 09 43.2 -0.1**
PFVI *e*Sg **Sg 16 10 08.7 -1.8**
PFVI A 16 10 13.3
comp=N,249nm,0.6s
PFVI Vila Bisbo 1.79 203 Pn **Pn 16 09 43.7 +0.4**
PFVI Lg 16 10 09.6
PFVI Vila Bisbo 1.79 203 Pn **Pn 16 09 43.0 -0.3**
comp=N,0.3nm,0.1s,SNR=27
PFVI Pg **Pg 16 09 46.1 -1.2**
comp=N,20nm,0.1s,SNR=13
PFVI Lg 16 10 09.6
comp=N,226nm,0.1s,SNR=16
PFVI Vila Bisbo 1.79 203 Pn **Pn 16 09 43.0 -0.3**
comp=N,0.3nm,0.1s,SNR=27
PFVI Pg **Pg 16 09 46.1 -1.2**
comp=N,20nm,0.1s,SNR=13
PFVI Lg 16 10 09.6
comp=N,226nm,0.1s,SNR=16
PFVI Vila Bisbo 1.79 203 Pn **Pn 16 09 43.7 +0.4**
comp=N,9.7nm,0.3s,SNR=27
PFVI *e*Sg **Sg 16 10 08.7 -1.8**
comp=N,249nm,0.6s
PFVI Lg 16 10 09.6
comp=N,226nm,0.1s,SNR=16
PVIS Viseu 1.92 1 *e*Pn **Pn 16 09 46.0 +0.9**
PVIS Viseu 1.92 1 *e*Pg **Pg 16 09 49.2 -0.6**
PVIS *e*Sg **Sg 16 10 14.2 -0.5**
PVIS A 16 10 20.6
comp=N,118nm,0.5s
PVIS Viseu 1.92 1 Pn **Pn 16 09 46.0 +0.9**
PVIS Pg **Pg 16 09 49.2 -0.6**
PVIS Lg 16 10 14.2
comp=N,59nm,0.5s
PVIS Viseu 1.92 1 Pn **Pn 16 09 46.0 +0.9**
PVIS Pg **Pg 16 09 49.2 -0.6**
PVIS Lg 16 10 14.2
comp=N,59nm,0.5s
PVIS Viseu 1.92 1 *e*Pn **Pn 16 09 46.0 +0.9**
PVIS Viseu 1.92 1 *e*Pg **Pg 16 09 49.2 -0.6**
PVIS *e*Sg **Sg 16 10 14.2 -0.5**
comp=N,118nm,0.5s
EPLA Plasencia 1.93 48 Pn **Pn 16 09 45.7 +0.5**
EPLA Lg 16 10 13.2
EPLA Plasencia 1.93 48 Pn **Pn 16 09 45.7 +0.5**
comp=N,1.7nm,0.0s,SNR=18
EPLA Pg **Pg 16 09 49.0 -0.9**
comp=N,2.3nm,0.1s,SNR=17
EPLA Lg 16 10 13.2
comp=N,18nm,0.1s,SNR=5.0
EPLA Plasencia 1.93 48 Pn **Pn 16 09 45.7 +0.5**
comp=N,1.7nm,0.0s,SNR=18
EPLA Pg **Pg 16 09 49.0 -0.9**
comp=N,2.3nm,0.1s,SNR=17
EPLA Lg 16 10 13.2
comp=N,18nm,0.1s,SNR=5.0
EPLA Plasencia 1.93 48 Pn **Pn 16 09 45.7 +0.5**
comp=N,9.8nm,0.4s,SNR=18
EPLA Lg 16 10 13.2
comp=N,18nm,0.1s,SNR=5.0
ECAB El Cabril 2.12 109 Pn **Pn 16 09 50.4 +2.6**
ECAB Lg 16 10 19.6
ECAB El Cabril 2.12 109 Pn **Pn 16 09 50.4 +2.6**
comp=N,14nm,0.4s,SNR=57
ECAB Pg **Pg 16 09 52.8 -0.7**
comp=N,36nm,0.4s
ECAB Lg 16 10 19.6
comp=N,151nm,0.3s,SNR=19
ECAB El Cabril 2.12 109 Pn **Pn 16 09 50.4 +2.6**
comp=N,14nm,0.4s,SNR=57
ECAB Pg **Pg 16 09 52.8 -0.7**
comp=N,36nm,0.4s
ECAB Lg 16 10 19.6
comp=N,151nm,0.3s,SNR=19
ECAB El Cabril 2.12 109 Pn **Pn 16 09 50.4 +2.6**
comp=N,14nm,0.4s,SNR=57
ECAB Lg 16 10 19.6
comp=N,151nm,0.3s,SNR=19
MVO Moncorvo 2.48 16 *e*Pn **Pn 16 09 52.9 +0.2**
MVO *e*Sg **Sg 16 10 32.0 -0.4**
MVO A 16 10 35.0
comp=N,104nm,0.5s
MVO Moncorvo 2.48 16 Pn **Pn 16 09 52.9 +0.2**
MVO Lg 16 10 32.8
MVO Moncorvo 2.48 16 Pn **Pn 16 09 52.9 +0.2**
comp=N,3.1nm,0.2s,SNR=32
MVO Pg **Pg 16 09 59.7 -0.6**
comp=N,7.7nm,0.1s,SNR=18
MVO Lg 16 10 32.8
comp=N,84nm,0.4s,SNR=17
MVO Moncorvo 2.48 16 Pn **Pn 16 09 52.9 +0.2**
comp=N,3.1nm,0.2s,SNR=32
MVO Pg **Pg 16 09 59.7 -0.6**
comp=N,7.7nm,0.1s,SNR=18
MVO Lg 16 10 32.8
comp=N,84nm,0.4s,SNR=17
MVO Moncorvo 2.48 16 Pn **Pn 16 09 52.9 +0.2**
comp=N,4.9nm,0.4s,SNR=32
MVO *e*Sg **Sg 16 10 32.0 -0.4**
comp=N,104nm,0.5s
MVO Lg 16 10 32.8
comp=N,84nm,0.4s,SNR=17
PVRL Vila Real 2.49 4 *e*Pn **Pn 16 09 53.5 +0.6**
PVRL *e*Sg **Sg 16 10 31.6 -1.2**
PVRL A 16 10 36.0
comp=N,115nm,0.3s
PVRL Vila Real 2.49 4 Pn **Pn 16 09 53.5 +0.6**
PVRL Lg 16 10 31.6
comp=N,58nm,0.3s
PVRL Vila Real 2.49 4 Pn **Pn 16 09 53.5 +0.6**
PVRL Lg 16 10 31.6
comp=N,58nm,0.3s
PVRL Vila Real 2.49 4 *e*Pn **Pn 16 09 53.5 +0.6**
PVRL *e*Sg **Sg 16 10 31.6 -1.2**
comp=N,115nm,0.3s
GIBL Gibalbin 2.51 141 Pg **Pg 16 10 00.0 -1.0**
GIBL Lg 16 10 33.0
GIBL Gibalbin 2.51 141 Pg **Pg 16 10 00.0 -1.0**
GIBL Lg 16 10 33.0
GIBL Gibalbin 2.51 141 *e*P **Pg 16 10 00.0 -1.0**
GIBL *e*S **Sn 16 10 33.0 +9.4**
ESPR Espera 2.54 138 Pn **Pn 16 09 54.9 +1.4**
ESPR Lg 16 10 36.7
ESPR Espera 2.54 138 Pn **Pn 16 09 54.9 +1.4**
comp=N,2.9nm,0.1s,SNR=12
ESPR Pg **Pg 16 10 01.0 -0.5**
comp=N,32nm,0.2s,SNR=11
ESPR Lg 16 10 36.7
comp=N,82nm,0.3s,SNR=4.7
ESPR Espera 2.54 138 Pn **Pn 16 09 54.9 +1.3**
comp=N,3.7nm,0.3s,SNR=12
ESPR Lg 16 10 36.7
comp=N,82nm,0.3s,SNR=4.7
SFS San Fernando 2.71 149 Rg 16 10 53.3
SFS San Fernando 2.71 149 Rg 16 10 53.3
EADA Adamuz 2.72 102 Pn **Pn 16 09 57.0 +0.8**
EADA Lg 16 10 38.6
EADA Adamuz 2.72 102 Pn **Pn 16 09 57.0 +0.8**
comp=N,0.5nm,0.1s,SNR=22
EADA Pg **Pg 16 10 04.4 -0.7**
comp=N,2.6nm,0.1s,SNR=11
EADA Sn **Sn 16 10 29.0 +0.2**
comp=N,7.6nm,0.1s,SNR=7.9
EADA Lg 16 10 40.4
comp=N,86nm,0.4s,SNR=11
EADA Adamuz 2.72 102 Pn **Pn 16 09 57.0 +0.8**
comp=N,0.5nm,0.1s,SNR=22
EADA Pg **Pg 16 10 04.4 -0.7**
comp=N,2.6nm,0.1s,SNR=11
EADA Sn **Sn 16 10 29.0 +0.2**
comp=N,7.6nm,0.1s,SNR=7.9
EADA Lg 16 10 40.4
comp=N,86nm,0.4s,SNR=11
EADA Adamuz 2.72 102 Pn **Pn 16 09 57.0 +0.9**
comp=N,9.6nm,0.4s,SNR=22
EADA Lg 16 10 38.6
comp=N,86nm,0.4s,SNR=11
LIJA Lijar 2.76 132 Pg **Pg 16 10 05.0 -0.8**
LIJA Lg 16 10 37.0
LIJA Lijar 2.76 132 Pg **Pg 16 10 05.0 -0.8**
LIJA Lg 16 10 37.0
LIJA Lijar 2.76 132 *i*P **Pg 16 10 05.0 -0.8**
LIJA *e*S **Sn 16 10 37.0 +7.3**
PAB San Pablo 2.90 74 *e*Pn **Pn 16 09 59.5 +1.0**
PAB *e*Pg **Pg 16 10 10.8 +2.3**
PAB *e*Sg **Sg 16 10 43.8 -2.3**
PAB San Pablo 2.90 74 *e*Pn **Pn 16 09 59.5 +0.9**
PCAB Cabril 2.92 359 *e*Pn **Pn 16 09 59.4 +0.6**
PCAB *e*Sg **Sg 16 10 44.5 -2.1**
PCAB A 16 10 48.7
comp=N,82nm,0.5s
PCAB Cabril 2.92 359 Pn **Pn 16 09 59.4 +0.6**
PCAB Lg 16 10 44.5
comp=N,41nm,0.5s
PCAB Cabril 2.92 359 Pn **Pn 16 09 59.4 +0.6**
PCAB Lg 16 10 44.5
comp=N,41nm,0.5s
PCAB Cabril 2.92 359 *e*Pn **Pn 16 09 59.4 +0.6**
PCAB *e*Sg **Sg 16 10 44.5 -2.1**
comp=N,82nm,0.5s
EJIF Jimena Fronter 3.06 139 Pn **Pn 16 10 00.9 +0.2**
comp=N,1.4nm,0.2s,SNR=7.9
EJIF Pg **Pg 16 10 11.4 -0.1**
comp=N,5.7nm,0.2s,SNR=7.9
EJIF Lg 16 10 53.3
comp=N,22nm,0.4s,SNR=7.9
EJIF Jimena Fronter 3.06 139 Pn **Pn 16 10 00.9 +0.2**
comp=N,1.4nm,0.2s,SNR=7.9
EJIF Pg **Pg 16 10 11.4 -0.1**
comp=N,5.7nm,0.2s,SNR=7.9
EJIF Lg 16 10 53.3
comp=N,22nm,0.4s,SNR=7.9
ELOB Lobios 3.07 359 Pn **Pn 16 10 01.3 +0.3**
ELOB Lg 16 10 50.0
ELOB Lobios 3.07 359 Pn **Pn 16 10 01.3 +0.3**
comp=N,3.6nm,0.1s,SNR=18
ELOB Pg **Pg 16 10 11.7 0.0**
comp=N,2.8nm,0.1s,SNR=9.0
ELOB Sn **Sn 16 10 35.7 -1.8**
comp=N,4.5nm,0.1s,SNR=16
ELOB Lg 16 10 51.0
comp=N,33nm,0.3s,SNR=5.0
ELOB Lobios 3.07 359 Pn **Pn 16 10 01.3 +0.3**
comp=N,3.6nm,0.1s,SNR=18
ELOB Pg **Pg 16 10 11.7 0.0**
comp=N,2.8nm,0.1s,SNR=9.0
ELOB Sn **Sn 16 10 35.7 -1.8**
comp=N,4.5nm,0.1s,SNR=16
ELOB Lg 16 10 51.0
comp=N,33nm,0.3s,SNR=5.0
ELOB Lobios 3.07 359 Pn **Pn 16 10 01.3 +0.4**
comp=N,4.0nm,0.3s,SNR=18
ELOB Lg 16 10 50.0
comp=N,33nm,0.3s,SNR=5.0
PBRG Braganca 3.15 17 *e*Pn **Pn 16 10 02.8 +0.8**
PBRG *e*Sg **Sg 16 10 52.3 -1.7**
PBRG A 16 10 56.8
comp=N,48nm,0.8s
PBRG Braganca 3.15 17 Pn **Pn 16 10 02.8 +0.8**
PBRG Lg 16 10 52.3
comp=N,24nm,0.8s
PBRG Braganca 3.15 17 Pn **Pn 16 10 02.8 +0.8**
PBRG Lg 16 10 52.3
comp=N,24nm,0.8s
PBRG Braganca 3.15 17 *e*Pn **Pn 16 10 02.8 +0.8**
PBRG *e*Sg **Sg 16 10 52.3 -1.7**
comp=N,48nm,0.8s
ELUQ Luque 3.15 112 Pn **Pn 16 10 04.0 +1.9**
comp=N,0.6nm,0.1s,SNR=7.9
ELUQ Pg **Pg 16 10 13.6 +0.3**
comp=N,6.3nm,0.2s,SNR=7.9
ELUQ Lg 16 10 54.1
comp=N,33nm,0.2s,SNR=7.9
ELUQ Luque 3.15 112 Pn **Pn 16 10 04.0 +1.9**
comp=N,0.6nm,0.1s,SNR=7.9
ELUQ Pg **Pg 16 10 13.6 +0.3**
comp=N,6.3nm,0.2s,SNR=7.9
ELUQ Lg 16 10 54.1
comp=N,33nm,0.2s,SNR=7.9
ESDC Sonseca Array 3.22 73 Pn **Pn 16 10 03.3 +0.3**
comp=N,3.9nm,0.3s,baz=256,slow=13,SNR=78
ESDC Sn **Sn 16 10 40.1 -1.1**
comp=N,5.1nm,0.3s,baz=257,slow=23,SNR=9.5
ESDC Lg 16 10 54.3
comp=N,14nm,0.4s,baz=256,slow=28,SNR=11
ESDC Sonseca Array 3.22 73 Pn **Pn 16 10 03.3 +0.3**
comp=N,3.9nm,0.3s,baz=256,slow=13,SNR=78
ESDC Sn **Sn 16 10 40.1 -1.1**
comp=N,5.1nm,0.3s,baz=257,slow=23,SNR=9.5
ESDC Lg 16 10 54.3
comp=N,14nm,0.4s,baz=256,slow=28,SNR=11
ECAL Calabor 3.28 16 Pn **Pn 16 10 04.6 +0.8**
ECAL Lg 16 10 58.4
ECAL Calabor 3.28 16 Pn **Pn 16 10 04.6 +0.8**
comp=N,34nm,0.3s,SNR=42
ECAL Sn **Sn 16 10 41.4 -1.2**
comp=N,24nm,0.4s,SNR=5.0
ECAL Lg 16 10 58.4
comp=N,96nm,0.5s,SNR=5.0
ECAL Calabor 3.28 16 Pn **Pn 16 10 04.6 +0.8**
comp=N,34nm,0.3s,SNR=42
ECAL Sn **Sn 16 10 41.4 -1.2**
comp=N,24nm,0.4s,SNR=5.0
ECAL Lg 16 10 58.4
comp=N,96nm,0.5s,SNR=5.0
ECAL Calabor 3.28 16 Pn **Pn 16 10 04.6 +0.8**
comp=N,29nm,0.3s,SNR=42
ECAL Lg 16 10 58.4
comp=N,96nm,0.5s,SNR=5.0
EBAN Banos Encina 3.33 100 Pn **Pn 16 10 05.3 +0.8**
comp=N,0.8nm,0.2s,SNR=8.2
EBAN Lg 16 10 58.9
comp=N,53nm,0.3s,SNR=13
EBAN Banos Encina 3.33 100 Pn **Pn 16 10 05.3 +0.8**
comp=N,0.8nm,0.2s,SNR=8.2
EBAN Lg 16 10 58.9
comp=N,53nm,0.3s,SNR=13
EMIJ Mijas 3.36 130 Pn **Pn 16 10 07.0 +2.0**
EMIJ Lg 16 11 00.1
EMIJ Mijas 3.36 130 Pn **Pn 16 10 06.9 +2.0**
comp=N,1.7nm,0.1s,SNR=11
EMIJ Sn **Sn 16 10 45.3 +0.6**
comp=N,5.9nm,0.3s,SNR=5.9
EMIJ Lg 16 11 03.2
comp=N,32nm,0.5s,SNR=5.0
EMIJ Mijas 3.36 130 Pn **Pn 16 10 06.9 +2.0**
comp=N,1.7nm,0.1s,SNR=11
EMIJ Sn **Sn 16 10 45.3 +0.6**
comp=N,5.9nm,0.3s,SNR=5.9
EMIJ Lg 16 11 03.2
comp=N,32nm,0.5s,SNR=5.0

EMIJ	**Mijas**	**3.36**	**130**	Pn	**Pn**	**16 10 06.9 +2.0**
	comp=N,4.3nm,0.4s,SNR=11					
EMIJ				Lg		16 11 00.1
	comp=N,10nm,0.3s,SNR=5.0					
EZAM	**Zamans**	**3.40**	**351**	Pn	**Pn**	**16 10 05.8 +0.4**
EZAM				Lg		16 11 02.2
EZAM	**Zamans**	**3.40**	**351**	Pn	**Pn**	**16 10 05.8 +0.4**
	comp=N,9.5nm,0.1s,SNR=7.9					
EZAM				Sn	**Sn**	**16 10 43.9 -1.6**
	comp=N,9.6nm,0.3s,SNR=7.9					
EZAM				Lg		16 11 02.2
	comp=N,49nm,0.4s,SNR=7.9					
EZAM	**Zamans**	**3.40**	**351**	Pn	**Pn**	**16 10 05.8 +0.4**
	comp=N,9.5nm,0.1s,SNR=7.9					
EZAM				Sn	**Sn**	**16 10 43.9 -1.6**
	comp=N,9.6nm,0.3s,SNR=7.9					
EZAM				Lg		16 11 02.2
	comp=N,49nm,0.4s,SNR=7.9					
EZAM	**Zamans**	**3.40**	**351**	Pn	**Pn**	**16 10 05.8 +0.4**
	SNR=7.9					
EZAM				Lg		16 11 02.2
	comp=N,49nm,0.4s,SNR=7.9					
ELOJ	**Sierra Loja**	**3.42**	**117**	Pn	**Pn**	**16 10 07.7 +1.9**
	comp=N,1.2nm,0.2s,SNR=9.0					
ELOJ				Pg	**Pg**	**16 10 17.2 -1.3**
	comp=N,4.4nm,0.2s,SNR=4.6					
ELOJ				Lg		16 11 05.0
	comp=N,11nm,0.2s,SNR=8.0					
ELOJ	**Sierra Loja**	**3.42**	**117**	Pn	**Pn**	**16 10 07.7 +1.9**
	comp=N,1.2nm,0.2s,SNR=9.0					
ELOJ				Pg	**Pg**	**16 10 17.2 -1.3**
	comp=N,4.4nm,0.2s,SNR=4.6					
ELOJ				Lg		16 11 05.0
	comp=N,11nm,0.2s,SNR=8.0					
ELOJ	**Sierra Loja**	**3.42**	**117**	Lg		16 11 06.0
	comp=N,11nm,0.2s,SNR=8.0					
GUD	**Guadarrama**	**3.47**	**57**	Pn	**Pn**	**16 10 07.0 +0.7**
GUD				Lg		16 11 03.4
GUD	**Guadarrama**	**3.47**	**57**	Pn	**Pn**	**16 10 07.0 +0.7**
	comp=N,4.6nm,0.2s,SNR=7.9					
GUD				Sn	**Sn**	**16 10 47.1 0.0**
	comp=N,8.4nm,0.4s,SNR=7.9					
GUD				Lg		16 11 03.4
	comp=N,35nm,0.4s,SNR=7.9					
GUD	**Guadarrama**	**3.47**	**57**	Pn	**Pn**	**16 10 07.0 +0.7**
	comp=N,4.6nm,0.2s,SNR=7.9					
GUD				Sn	**Sn**	**16 10 47.1 0.0**
	comp=N,8.4nm,0.4s,SNR=7.9					
GUD				Lg		16 11 03.4
	comp=N,35nm,0.4s,SNR=7.9					
GUD	**Guadarrama**	**3.47**	**57**	Pn	**Pn**	**16 10 07.0 +0.7**
	SNR=7.9					
GUD				Lg		16 11 03.4
	comp=N,35nm,0.4s,SNR=7.9					
ECEU	**Ceuta**	**3.54**	**144**	Pn	**Pn**	**16 10 08.5 +1.1**
	comp=N,1.6nm,0.2s,SNR=7.9					
ECEU				Sn	**Sn**	**16 10 48.3 -0.7**
	comp=N,2.5nm,0.3s,SNR=7.9					
ECEU	**Ceuta**	**3.54**	**144**	Pn	**Pn**	**16 10 08.5 +1.1**
	comp=N,1.6nm,0.2s,SNR=7.9					
ECEU				Sn	**Sn**	**16 10 48.3 -0.7**
	comp=N,2.5nm,0.3s,SNR=7.9					
ERUA	**La Rua**	**3.65**	**9**	Pn	**Pn**	**16 10 09.7 +0.8**
ERUA	**La Rua**	**3.65**	**9**	Pn	**Pn**	**16 10 09.7 +0.8**
	comp=N,4.6nm,0.1s,SNR=7.9					
ERUA				Lg		16 11 08.8
	comp=N,8.9nm,0.2s,SNR=7.9					
ERUA	**La Rua**	**3.65**	**9**	Pn	**Pn**	**16 10 09.7 +0.8**
	comp=N,4.6nm,0.1s,SNR=7.9					
ERUA				Lg		16 11 08.8
	comp=N,8.9nm,0.2s,SNR=7.9					
ERUA	**La Rua**	**3.65**	**9**	Pn	**Pn**	**16 10 09.7 +0.8**
	SNR=7.9					
ERON	**Agron**	**3.73**	**117**	Lg		16 11 15.2
	comp=N,9.1nm,0.4s,SNR=7.9					
ERON	**Agron**	**3.73**	**117**	Lg		16 11 15.2
	comp=N,9.1nm,0.4s,SNR=7.9					
ECOG	**Cogollos-Vega**	**3.78**	**112**	Lg		16 11 16.9
	comp=N,9.9nm,0.3s,SNR=11					
ECOG	**Cogollos-Vega**	**3.78**	**112**	Lg		16 11 16.9
	comp=N,9.9nm,0.3s,SNR=11					
EQUE	**Quentar**	**3.90**	**113**	Pn	**Pn**	**16 10 14.4 +2.1**
	comp=N,0.3nm,0.1s,SNR=9.4					
EQUE				Lg		16 11 19.4
	comp=N,21nm,0.4s,SNR=6.5					
EQUE	**Quentar**	**3.90**	**113**	Pn	**Pn**	**16 10 14.4 +2.1**
	comp=N,0.3nm,0.1s,SNR=9.4					
EQUE				Lg		16 11 19.4
	comp=N,21nm,0.4s,SNR=6.5					
EQUE	**Quentar**	**3.90**	**113**	Pn	**Pn**	**16 10 14.4 +2.1**
	comp=N,2.0nm,0.3s,SNR=9.4					
EQUE				Lg		16 11 19.4
	comp=N,21nm,0.4s,SNR=6.5					
EQES	**Quesada**	**3.97**	**103**	Pn	**Pn**	**16 10 15.0 +1.8**
	comp=N,4.7nm,0.4s,SNR=6.3					
EQES				Sn	**Sn**	**16 10 58.2 -1.3**
	comp=N,4.2nm,0.2s,SNR=4.7					
EQES				Lg		16 11 22.9
	comp=N,41nm,0.4s,SNR=7.7					
EQES	**Quesada**	**3.97**	**103**	Pn	**Pn**	**16 10 15.0 +1.8**
	comp=N,4.7nm,0.4s,SNR=6.3					
EQES				Sn	**Sn**	**16 10 58.2 -1.3**
	comp=N,4.2nm,0.2s,SNR=4.7					
EQES				Lg		16 11 22.9
	comp=N,41nm,0.4s,SNR=7.7					
EGUA	**Guajares**	**3.99**	**118**	Pn	**Pn**	**16 10 15.2 +1.7**
	comp=N,5.1nm,0.4s,SNR=7.9					
EGUA				Sn	**Sn**	**16 10 59.1 -0.9**
	comp=N,16nm,0.3s,SNR=7.9					
EGUA				Lg		16 11 23.1
	comp=N,83nm,0.4s,SNR=7.9					
EGUA	**Guajares**	**3.99**	**118**	Pn	**Pn**	**16 10 15.2 +1.7**
	comp=N,5.1nm,0.4s,SNR=7.9					
EGUA				Sn	**Sn**	**16 10 59.1 -0.9**
	comp=N,16nm,0.3s,SNR=7.9					
EGUA				Lg		16 11 23.1
	comp=N,83nm,0.4s,SNR=7.9					
STS	**Santiago**	**4.12**	**354**	Lg		16 11 24.0
	comp=N,4.7nm,0.2s,SNR=15					
STS	**Santiago**	**4.12**	**354**	Lg		16 11 24.0
	comp=N,4.7nm,0.2s,SNR=15					
STS	**Santiago**	**4.12**	**354**	Lg		16 11 27.3
	comp=N,61nm,0.6s,SNR=15					
EMAZ	**Mazaricos**	**4.23**	**350**	P	**Pn**	**16 10 19.8 +3.0**
EMAZ				Lg		16 11 28.3
EMAZ	**Mazaricos**	**4.23**	**350**	Pn	**Pn**	**16 10 16.8 0.0**
	comp=N,0.4nm,0.1s,SNR=6.3					
EMAZ				Sn	**Sn**	**16 11 03.7 -2.2**
	comp=N,0.9nm,0.1s,SNR=5.0					
EMAZ				Lg		16 11 28.3
	comp=N,9.2nm,0.3s,SNR=6.0					
EMAZ	**Mazaricos**	**4.23**	**350**	Pn	**Pn**	**16 10 16.8 0.0**
	comp=N,0.4nm,0.1s,SNR=6.3					
EMAZ				Sn	**Sn**	**16 11 03.7 -2.2**
	comp=N,0.9nm,0.1s,SNR=5.0					
EMAZ				Lg		16 11 28.3
	comp=N,9.2nm,0.3s,SNR=6.0					
EMAZ	**Mazaricos**	**4.23**	**350**	P	**Pn**	**16 10 19.8 +3.0**
	comp=N,2.7nm,0.3s,SNR=6.3					
EMAZ				Lg		16 11 28.3
	comp=N,9.2nm,0.3s,SNR=6.0					
EVIA	**Vianos**	**4.27**	**90**	Pn	**Pn**	**16 10 18.0 +0.6**
	comp=N,0.5nm,0.2s,SNR=6.5					
EVIA				Sn	**Sn**	**16 11 04.0 -2.9**
	comp=N,5.7nm,0.2s,SNR=5.5					
EVIA				Lg		16 11 30.4
	comp=N,26nm,0.4s,SNR=9.4					
EVIA	**Vianos**	**4.27**	**90**	Pn	**Pn**	**16 10 18.0 +0.6**
	comp=N,0.5nm,0.2s,SNR=6.5					
EVIA				Sn	**Sn**	**16 11 04.0 -2.9**
	comp=N,5.7nm,0.2s,SNR=5.5					
EVIA				Lg		16 11 30.4
	comp=N,26nm,0.4s,SNR=9.4					
EVIA	**Vianos**	**4.27**	**90**	Lg		16 11 30.4
	comp=N,73nm,0.7s,SNR=9.4					
EHUE	**Huescar**	**4.33**	**101**	Sn	**Sn**	**16 11 07.0 -1.4**
	comp=N,2.7nm,0.3s,SNR=7.9					
EHUE				Lg		16 11 31.7
	comp=N,14nm,0.3s,SNR=7.9					
EHUE	**Huescar**	**4.33**	**101**	Sn	**Sn**	**16 11 07.0 -1.4**
	comp=N,2.7nm,0.3s,SNR=7.9					
EHUE				Lg		16 11 31.7
	comp=N,14nm,0.3s,SNR=7.9					
EBER	**Berja**	**4.43**	**114**	Pn	**Pn**	**16 10 20.6 +1.0**
	comp=N,5.0nm,0.3s,SNR=15					
EBER				Lg		16 11 35.2
	comp=N,30nm,0.4s,SNR=7.9					
EBER	**Berja**	**4.43**	**114**	Pn	**Pn**	**16 10 20.6 +1.0**
	comp=N,5.0nm,0.3s,SNR=15					
EBER				Lg		16 11 35.2
	comp=N,30nm,0.4s,SNR=7.9					
EPON	**Pontenova**	**4.57**	**7**	Pn	**Pn**	**16 10 21.6 +0.1**
	comp=N,0.4nm,0.1s,SNR=7.9					
EPON				Lg		16 11 38.8
	comp=N,27nm,0.5s,SNR=7.9					
EPON	**Pontenova**	**4.57**	**7**	Pn	**Pn**	**16 10 21.6 +0.1**
	comp=N,0.4nm,0.1s,SNR=7.9					
EPON				Lg		16 11 38.8
	comp=N,27nm,0.5s,SNR=7.9					
EARI	**Arriondas**	**4.96**	**24**	Pn	**Pn**	**16 10 27.0 +0.2**
	comp=N,23nm,0.7s,SNR=9.4					
EARI				Lg		16 11 51.9
	comp=N,14nm,0.7s,SNR=7.9					
EARI	**Arriondas**	**4.96**	**24**	Pn	**Pn**	**16 10 27.0 +0.2**
	comp=N,23nm,0.7s,SNR=9.4					
EARI				Lg		16 11 51.9
	comp=N,14nm,0.7s,SNR=7.9					
ETOR	**Torete**	**4.97**	**64**	P	**Pn**	**16 10 27.4 +0.4**
ETOR				Lg		16 11 52.7
ETOR	**Torete**	**4.97**	**64**	Pn	**Pn**	**16 10 27.2 +0.1**
	comp=N,14nm,0.3s,SNR=14					
ETOR				Sn	**Sn**	**16 11 22.3 -2.0**
	comp=N,5.1nm,0.2s,SNR=5.0					
ETOR				Lg		16 11 52.7
	comp=N,14nm,0.2s,SNR=5.4					
ETOR	**Torete**	**4.97**	**64**	Pn	**Pn**	**16 10 27.2 +0.1**
	comp=N,14nm,0.3s,SNR=14					
ETOR				Sn	**Sn**	**16 11 22.3 -2.0**
	comp=N,5.1nm,0.2s,SNR=5.0					
ETOR				Lg		16 11 52.7
	comp=N,14nm,0.2s,SNR=5.4					
ETOR	**Torete**	**4.97**	**64**	P	**Pn**	**16 10 27.4 +0.3**
	comp=N,13nm,0.3s,SNR=14					
ETOR				Lg		16 11 52.7
	comp=N,14nm,0.2s,SNR=5.4					
ETOB	**Tobarra**	**5.01**	**90**	Pn	**Pn**	**16 10 28.2 +0.6**
	comp=N,18nm,0.5s,SNR=7.9					
ETOB				Lg		16 11 53.2
	comp=N,25nm,0.6s,SNR=7.9					
ETOB	**Tobarra**	**5.01**	**90**	Pn	**Pn**	**16 10 28.2 +0.6**
	comp=N,18nm,0.5s,SNR=7.9					
ETOB				Lg		16 11 53.2
	comp=N,25nm,0.6s,SNR=7.9					
ETOB	**Tobarra**	**5.01**	**90**	Lg		16 11 53.2
	comp=N,35nm,0.5s,SNR=7.9					
EMUR	**La Murta**	**5.37**	**98**	Sn	**Sn**	**16 11 32.2 -1.7**
	comp=N,5.1nm,0.4s,SNR=5.7					
EMUR				Lg		16 12 06.6
	comp=N,34nm,0.6s,SNR=7.9					
EMUR	**La Murta**	**5.37**	**98**	Sn	**Sn**	**16 11 32.2 -1.7**
	comp=N,5.1nm,0.4s,SNR=5.7					
EMUR				Lg		16 12 06.6
	comp=N,34nm,0.6s,SNR=7.9					
ELAN	**Lanestosa**	**5.60**	**36**	Pn	**Pn**	**16 10 37.2 +1.5**
	comp=N,0.2nm,0.1s,SNR=24					
ELAN				Lg		16 12 13.5
	comp=N,31nm,0.8s,SNR=7.9					
ELAN	**Lanestosa**	**5.60**	**36**	Pn	**Pn**	**16 10 37.2 +1.5**
	comp=N,0.2nm,0.1s,SNR=24					
ELAN				Lg		16 12 13.5
	comp=N,31nm,0.8s,SNR=7.9					
ECRI	**Cripan**	**5.63**	**46**	Lg		16 12 12.5
	SNR=7.9					
ECRI	**Cripan**	**5.63**	**46**	Lg		16 12 12.5
	SNR=7.9					
EMOS	**Mosqueruela**	**5.99**	**72**	Pn	**Pn**	**16 10 43.0 +2.0**
	comp=N,1.8nm,0.5s,SNR=6.2					
EMOS				Sn	**Sn**	**16 11 45.9 -3.5**
	comp=N,0.1nm,0.2s,SNR=5.0					
EMOS				Lg		16 12 24.8
	comp=N,9.7nm,0.5s,SNR=5.0					
EMOS	**Mosqueruela**	**5.99**	**72**	Pn	**Pn**	**16 10 43.0 +2.0**
	comp=N,1.8nm,0.5s,SNR=6.2					
EMOS				Sn	**Sn**	**16 11 45.9 -3.5**
	comp=N,0.1nm,0.2s,SNR=5.0					
EMOS				Lg		16 12 24.8
	comp=N,9.7nm,0.5s,SNR=5.0					
EBEN	**Beniarda**	**6.04**	**88**	Sn	**Sn**	**16 11 48.8 -1.8**
	SNR=7.9					
EBEN				Lg		16 12 27.9
	comp=N,30nm,1.2s,SNR=7.9					
EBEN	**Beniarda**	**6.04**	**88**	Sn	**Sn**	**16 11 48.8 -1.8**
	SNR=7.9					
EBEN				Lg		16 12 27.9
	comp=N,30nm,1.2s,SNR=7.9					
IZUN	**Zunzarren**	**6.39**	**48**	Lg		16 12 37.9
	comp=N,2.8nm,0.4s,SNR=7.9					
IZUN	**Zunzarren**	**6.39**	**48**	Lg		16 12 37.9
	comp=N,2.8nm,0.4s,SNR=7.9					
ESAC	**San Caprasio**	**6.43**	**61**	Lg		16 12 41.2
	comp=N,22nm,0.4s,SNR=4.8					
ESAC	**San Caprasio**	**6.43**	**61**	Lg		16 12 41.2
	comp=N,22nm,0.4s,SNR=4.8					
EORO	**Oroz-Betelu**	**6.49**	**49**	Pn	**Pn**	**16 10 48.5 +0.6**
	comp=N,5.2nm,0.4s,SNR=7.9					
EORO				Lg		16 12 41.5
	comp=N,14nm,0.6s,SNR=7.9					
EORO	**Oroz-Betelu**	**6.49**	**49**	Pn	**Pn**	**16 10 48.5 +0.6**
	comp=N,5.2nm,0.4s,SNR=7.9					
EORO				Lg		16 12 41.5
	comp=N,14nm,0.6s,SNR=7.9					
ELIZ	**Elizondo**	**6.54**	**46**	Pn	**Pn**	**16 10 49.2 +0.8**
	comp=N,3.5nm,0.4s,SNR=7.9					
ELIZ				Lg		16 12 42.6
	comp=N,6.2nm,1.0s,SNR=7.9					
ELIZ	**Elizondo**	**6.54**	**46**	Pn	**Pn**	**16 10 49.2 +0.8**
	comp=N,3.5nm,0.4s,SNR=7.9					
ELIZ				Lg		16 12 42.6
	comp=N,6.2nm,1.0s,SNR=7.9					
EALK	**Alkurruntz**	**6.58**	**46**	Pn	**Pn**	**16 10 51.5 +2.4**
	comp=N,8.2nm,0.4s,SNR=4.8					
EALK				Sn	**Sn**	**16 11 59.3 -4.7**
	comp=N,8.7nm,0.5s,SNR=5.8					
EALK				Lg		16 12 39.9
	comp=N,3.4nm,0.5s,SNR=5.0					
EALK	**Alkurruntz**	**6.58**	**46**	Pn	**Pn**	**16 10 51.5 +2.4**
	comp=N,8.2nm,0.4s,SNR=4.8					
EALK				Sn	**Sn**	**16 11 59.3 -4.7**
	comp=N,8.7nm,0.5s,SNR=5.8					
EALK				Lg		16 12 39.9
	comp=N,3.4nm,0.5s,SNR=5.0					
SJPF	**Ste Jean**	**6.68**	**48**	*e*Pn	**Pn**	**16 10 50.9 +0.5**
SJPF				*e*Sn	**Sn**	**16 12 03.6 -2.6**
	comp=N,1.2nm,0.3s					
SJPF	**Ste Jean**	**6.68**	**48**	Pn	**Pn**	**16 10 50.9 +0.5**
SJPF				Sn	**Sn**	**16 12 03.6 -2.6**
	comp=N,0.6nm,0.3s					
SJPF	**Ste Jean**	**6.68**	**48**	Pn	**Pn**	**16 10 50.9 +0.5**
SJPF				Sn	**Sn**	**16 12 03.6 -2.6**
	comp=N,0.6nm,0.3s					
SJPF	**Ste Jean**	**6.68**	**48**	*e*Pn	**Pn**	**16 10 50.9 +0.5**
ERTA	**Horta de San J**	**6.73**	**69**	Sn	**Sn**	**16 12 04.0 -3.6**
	SNR=7.9					
ERTA				Lg		16 12 49.1
	comp=N,4.8nm,0.4s,SNR=7.9					
ERTA	**Horta de San J**	**6.73**	**69**	Sn	**Sn**	**16 12 04.0 -3.6**
	SNR=7.9					
ERTA				Lg		16 12 49.1
	comp=N,4.8nm,0.4s,SNR=7.9					
ETSF	**Etsaut**	**6.95**	**51**	*e*Pn	**Pn**	**16 10 54.6 +0.5**
ETSF				*e*Sn	**Sn**	**16 12 10.3 -2.6**
	comp=N,2.3nm,0.4s					
ETSF	**Etsaut**	**6.95**	**51**	Pn	**Pn**	**16 10 54.6 +0.5**
ETSF				Sn	**Sn**	**16 12 10.3 -2.6**
	comp=N,1.2nm,0.4s					
ETSF	**Etsaut**	**6.95**	**51**	Pn	**Pn**	**16 10 54.6 +0.5**
ETSF				Sn	**Sn**	**16 12 10.3 -2.6**
	comp=N,1.2nm,0.4s					
ETSF	**Etsaut**	**6.95**	**51**	*e*Pn	**Pn**	**16 10 54.6 +0.5**
EBIE	**Bielsa**	**7.28**	**55**	Pn	**Pn**	**16 10 59.3 +0.7**
	comp=N,2.0nm,0.3s,SNR=11					
EBIE				Sn	**Sn**	**16 12 17.4 -3.6**
	comp=N,1.3nm,0.4s,SNR=5.6					
EBIE				Lg		16 13 07.2
	comp=N,6.2nm,0.8s,SNR=5.0					
EBIE	**Bielsa**	**7.28**	**55**	Pn	**Pn**	**16 10 59.3 +0.7**
	comp=N,2.0nm,0.3s,SNR=11					
EBIE				Sn	**Sn**	**16 12 17.4 -3.6**
	comp=N,1.3nm,0.4s,SNR=5.6					
EBIE				Lg		16 13 07.2
	comp=N,6.2nm,0.8s,SNR=5.0					
EPOB	**Poblet**	**7.38**	**67**	Pn	**Pn**	**16 10 59.0 -1.2**
	comp=N,0.6nm,0.3s,SNR=7.9					
EPOB				Lg		16 13 12.0
	comp=N,0.9nm,0.4s,SNR=7.9					
EPOB	**Poblet**	**7.38**	**67**	Pn	**Pn**	**16 10 59.0 -1.2**
	comp=N,0.6nm,0.3s,SNR=7.9					
EPOB				Lg		16 13 12.0
	comp=N,0.9nm,0.4s,SNR=7.9					
EPF	**Esparros**	**7.58**	**53**	*e*Pn	**Pn**	**16 11 03.3 +0.6**
EPF				*e*Sn	**Sn**	**16 12 25.2 -3.1**
	comp=N,4.2nm,0.5s					
EPF	**Esparros**	**7.58**	**53**	Pn	**Pn**	**16 11 03.3 +0.6**
EPF				Sn	**Sn**	**16 12 25.2 -3.1**
	comp=N,2.1nm,0.5s					
EPF	**Esparros**	**7.58**	**53**	Pn	**Pn**	**16 11 03.3 +0.6**
EPF				Sn	**Sn**	**16 12 25.2 -3.1**
	comp=N,2.1nm,0.5s					
EPF	**Esparros**	**7.58**	**53**	*e*Pn	**Pn**	**16 11 03.3 +0.6**
CSOR	**Sort**	**7.79**	**60**	Pn	**Pn**	**16 11 05.3 -0.4**
	comp=N,0.8nm,0.4s,SNR=7.9					
CSOR				Sn	**Sn**	**16 12 28.8 -4.8**
	comp=N,0.8nm,0.3s,SNR=7.9					
CSOR	**Sort**	**7.79**	**60**	Pn	**Pn**	**16 11 05.3 -0.4**
	comp=N,0.8nm,0.4s,SNR=7.9					
CSOR				Sn	**Sn**	**16 12 28.8 -4.8**
	comp=N,0.8nm,0.3s,SNR=7.9					

*ISCJB **26** 16:16:16.7±0.9, 31°.83N±0°.04×103°.54E±0°.07, h10km, mb3.4/2, Error ellipse: s-maj=8.5km s-min=5.3km az=8.8*
*BJI **26** 16:16:21.2, 31°.59N×103°.30E, h14km, ML3.5/17, Ms3.3/2, Ms7 3.3/2*
*IDC **26** 16:16:21.4±1.6, 32°.07N×103°.29E, h0km, mb3.2/3, mb1 3.4/4, mb1mx3.2/23, mbtmp3.3/4, Error ellipse: s-maj=41.6km s-min=30.4km az=57.0*
ISC 26 16:16:21.3±1.2, 31°.87N±0°.07×103°.54E±0°.07, h10km, n7, σ1°.85/12, mb3.4/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.98**	**169**	Pg	**Pg**	**16 16 35.0**	**-5.1**
CD2				Sg	**Sg**	**16 16 47.3**	**-5.6**
CD2				smax			
	comp=N,3μm,0.6s						
CD2				smax			
	comp=E,4μm,0.7s						
LZH	**Lanzhou**	**4.21**	**3**	*e*Pg	**Pg**	**16 17 40.3**	**-1.6**
LZH				Sg	**Sg**	**16 18 38.3**	**+1.9**
LZH				smax			
	comp=N,110nm,1.0s						
LZH				smax			
	comp=E,62nm,0.8s						
LZH				LR	LR		
	comp=N,130nm,4.3s						
LZH				LR	LR		
	comp=Z,250nm,5.1s						
XAN	**Xi'an**	**5.02**	**63**	Pn	**Pn**	**16 17 41.5**	**+4.9**
XAN				Pg	**Pg**	**16 17 55.5**	**-1.9**
XAN				Sn	**Sb**	**16 18 47.5**	**-2.0**
XAN				Sg	**Sg**	**16 19 04.0**	**+1.7**
XAN				smax			
	comp=N,52nm,0.5s						
XAN				smax			
	comp=E,31nm,0.8s						
CMAR	**Chiang Mai Arr**	**13.99**	**198**	Pn	**Pn**	**16 19 41.6**	**+2.0**
	comp=E,0.1nm,0.3s,baz=21,slow=11,SNR=2.2						
KSRS	**Korea Array**	**20.79**	**68**	P	**P**	**16 21 04.8**	**+2.2**
	comp=E,0.7nm,0.7s,baz=249,slow=12,SNR=2.6						
MKAR	**Makanchi Array**	**22.08**	**319**	P	**P**	**16 21 15.0**	**-1.4**
	comp=E,0.6nm,0.6s,mb3.2,baz=119,slow=11,SNR=6.1						
ASAR	**Alice Springs**	**62.40**	**148**	P	**P**	**16 26 48.4**	**+4.0**
	comp=E,0.4nm,0.8s,mb3.6,baz=332,slow=5.6,SNR=2.9						

MAN 26 16:17:43, 12°.75N×123°.12E, h4km, mb3.8, ML2.6, MS2.2, 2C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.63**	**128**	⇑*e*P	Pg	16 17 55.6	+0.5
MMPH				*e*S	Sg	16 18 05.5	+2.2
AUQP	**San Andres**	**0.71**	**323**	*e*P	Pg	16 17 57.6	+0.9
AUQP				*e*S	Sg	16 18 05.2	-0.7
OTRP	**Odiongan**	**1.14**	**250**	*e*P	Pg	16 18 05.2	+0.4
PVCP	**Virac**	**1.31**	**50**	*e*P	Pn	16 18 07.6	-0.5
PVCP				*e*S	Sg	16 18 26.8	+1.6
GQP	**Guinayangan**	**1.32**	**330**	⇑*i*P	Pn	16 18 14.3	+6.1
GQP				*i*S	Sg	16 18 33.0	+7.5
BOAC	**Boac**	**1.43**	**300**	*e*P	Pn	16 18 08.5	-1.2
CNP	**Cataman**	**1.53**	**99**	*e*P	Pn	16 18 14.4	+3.3

*SZGRF **26** 16:49:39.0, 8°.58N×93°.34E, h33km, mb4.8, Nicobar Islands, India, region*
*BJI **26** 16:49:51.0, 10°.26N×93°.13E, h87km, mB4.9/28, mb5.1/43, Ms4.4/29, Ms7 4.2/26*
*ISCJB **26** 16:49:52.9±0.5, 10°.33N±0°.03×93°.10E±0°.03, h95km±5km, mb4.7/133, Error ellipse: s-maj=5.3km s-min=3.5km az=141.9*
*MOS **26** 16:49:52.9±0.8, 10°.34N×93°.16E, h97km, mb4.8/62, Error ellipse: s-maj=8.1km s-min=4.2km az=117.4*
*IDC **26** 16:49:53.5±0.5, 10°.37N×93°.22E, h86km±3km, mb4.4/20, mb1 4.5/22, mb1mx4.4/26, mbtmp4.4/22, MS3.6/11, Ms1 3.6/11, ms1mx3.5/22, Error ellipse: s-maj=14.9km s-min=7.6km az=59.0*
*NEIC **26** 16:49:53.1±0.1, 10°.33N×93°.14E, mb4.8/72, Error ellipse: s-maj=5.0km s-min=3.3km az=54.0*
*DJA **26** 16:50:14, 9°.40N×94°.10E, h191km, mb4.7/15*
ISC 26 16:49:54.4±0.4, 10°.35N±0°.03×93°.12E±0°.03, h94km±4km, h87km±2.2km: pP-P, n412, σ0°.88/426, mb4.7/133, 27C-21D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNG	**Songkhla**	**8.05**	**112**	P	**Pn**	**16 51 49.0**	**+0.4**
	260nm,0.9s						
TPTI		**8.11**	**150**	P	**Pn**	**16 51 53.3**	**+3.8**
	0.2nm65nm,1.1s						
TPTI				S	**Sn**	**16 53 13.0**	**-6.6**
	0.2nm65nm,1.1s						
NST	**Nakhon Sawan**	**8.64**	**51**	P	**Pn**	**16 51 58.5**	**+1.8**
TSI	**Tuntungan**	**8.69**	**141**	P	**Pn**	**16 51 57.4**	**+0.1**
BDT	**Bhumibol Dam**	**8.92**	**39**	P	**Pn**	**16 52 00.0**	**-0.5**
	20nm,0.7s						
KULM	**Kulim**	**8.99**	**123**	P	**Pn**	**16 52 01.7**	**+0.3**
KULM	**Kulim**	**8.99**	**123**	*e*Pn	**Pn**	**16 52 00.9**	**-0.5**
	23nm,0.5s						
KULM				*e*Sn	**Sn**	**16 53

VIS	**Vishakhapatnam**	**12.00**	**309**	*e*PKP	**Pn**	**16 52 38.7**	**-3.5**
VIS				AMb	AMB	16 52 41.7	
	comp=Z,104nm,0.3s						
VIS				*e*S	Sn	16 54 32.7	-21
PALK	**Pallekele**	**12.64**	**257**	*e*Pn	**Pn**	**16 52 50.9**	**+0.1**
PALK				*e*Sn	**Sn**	**16 54 56.8**	**-13**
PPI	**Padang Panjang**	**12.95**	**146**	P	**Pn**	**16 52 55.7**	**+0.8**
	comp=Z,4μmcomp=Z,19nm,0.9s						
SISI	**Saibi**	**13.03**	**153**	P	**Pn**	**16 53 02.9**	**+6.9**
KGM	**Kluang**	**13.08**	**129**	P	**Pn**	**16 52 57.3**	**+0.7**
PDSI	**Padang**	**13.36**	**146**	P	**Pn**	**16 53 06.0**	**+5.7**
AGT	**Agartala**	**13.58**	**353**	*i x*	**Pn**	**16 53 06.0**	**+2.9**
SHL	**Shillong**	**15.18**	**356**	*ex*	**Pn**	**16 53 19.5**	**-4.2**
SHL				*ex*	**S**	**16 56 03.5**	**-19**
HYB	**Hyderabad**	**15.79**	**298**	*e*P	**Pn**	**16 53 30.5**	**-0.9**
HYB				*e*S	**S**	**16 56 21.5**	**-13**
HYB	**Hyderabad**	**15.79**	**298**	*i* P	**Pn**	**16 53 30.5**	**-0.9**
HYB				*e*S	**S**	**16 56 21.5**	**-13**
TRD	**Trivandrum**	**16.05**	**265**⇓	*ex*	**S**	**16 56 33.0**	**-7.0**
KSI	**Kapahiang**	**16.80**	**145**	P	**Pn**	**16 53 43.6**	**-0.4**
	comp=Z,86nm,0.8s						
ODAN	**Odare**	**17.29**	**343**	*e*P	**Pn**	**16 53 49.6**	**-0.3**
	comp=Z,127nm,0.4s						
KMI	**Kunming**	**17.30**	**31**	P	**Pn**	**16 53 51.5**	**+1.4**
KMI				pP	pP	16 54 05.0	-2.9
KMI				PP		16 54 08.0	
KMI				sP	sP	16 54 16.8	-3.0
KMI				S	**S**	**16 57 00.5**	**-2.9**
KMI				sS	sS	16 57 21.5	-13
KMI				pmax	pmax		
	comp=Z,110nm,0.8s						
KMI				pmax	pmax		
	comp=Z,190nm,4.4s						
KMI				LR	LR		
	comp=N,98nm,26.7s						
KMI				LR	LR		
	comp=E,170nm,18.8s						
KMI				LR	LR		
	comp=Z,130nm,23.8s						
RAMN	**Ramite**	**17.62**	**340**	*e*P	**Pn**	**16 53 53.2**	**-0.7**
	comp=Z,348nm,0.4s						
TAPN	**Taplejung**	**17.67**	**344**	*e*P	**Pn**	**16 53 54.3**	**-0.1**
LATR	**Latur**	**17.93**	**298**	*e*PKP	**Pn**	**16 53 50.1**	**-7.6**
LATR				*e*S	**S**	**16 57 01.8**	**-16**
QIZ	**Qiongzhong**	**18.32**	**60**	P	**Pn**	**16 54 00.8**	**-1.6**
QIZ				pP	pP	16 54 16.5	-2.7
QIZ				sP	sP	16 54 27.0	-4.1
QIZ				S	**S**	**16 57 25.3**	**-0.7**
QIZ				LR	LR		
	comp=N,240nm,12.8s						
QIZ				LR	LR		
	comp=Z,160nm,9.7s						
QIZ	**Qiongzhong**	**18.32**	**60**	*e*P	**Pn**	**16 54 00.4**	**-2.0**
JIRN	**Jiri**	**18.42**	**340**	*e*P	**Pn**	**16 54 03.3**	**-0.2**
	comp=Z,198nm,0.6s						
PKI	**Pulchoki**	**18.61**	**338**	*e*P	**Pn**	**16 54 04.8**	**-1.0**
PKI	**Pulchoki**	**18.61**	**338**	*e*P	**Pn**	**16 54 05.5**	**-0.3**
PKI				pmax	pmax		
	comp=Z,243nm,0.5s						
PKI	**Pulchoki**	**18.61**	**338**	*e*P	**Pn**	**16 54 05.5**	**-0.3**
	comp=Z,243nm,0.5s						
PKIN	**Phulchoki**	**18.62**	**338**	*e*P	**Pn**	**16 54 05.5**	**-0.4**
	comp=Z,243nm,0.5s						
GUN	**Gumba**	**18.75**	**340**	*e*P	**Pn**	**16 54 07.3**	**-0.2**
	comp=Z,111nm,0.5s						
DMN	**Daman**	**18.76**	**337**	*e*P	**Pn**	**16 54 06.9**	**-0.6**
KKN	**Kakani**	**18.86**	**338**	*e*P	**Pn**	**16 54 07.9**	**-0.8**
	comp=Z,115nm,0.6s						
KKN	**Kakani**	**18.86**	**338**	*e*P	**Pn**	**16 54 07.9**	**-0.8**
KKN				pmax	pmax		
	comp=Z,115nm,0.6s						
KLSI		**18.89**	**142**	P	**Pn**	**16 54 04.0**	**-5.2**
	comp=Z,28nm,1.0s						
KSM	**Kuching**	**19.22**	**116**	*e*Pn	**Pn**	**16 54 11.3**	**-1.9**
	comp=Z,52nm,0.8s						
KSM	**Kuching**	**19.22**	**116**	P	**Pn**	**16 54 11.7**	**-1.4**
	comp=Z,1μmcomp=Z,85nm,1.1s						
GKN	**Gorkha**	**19.29**	**337**	*e*P	**Pn**	**16 54 13.0**	**-0.8**
	comp=Z,341nm,0.5s						
LSA	**Lhasa**	**19.34**	**355**	P	**Pn**	**16 54 13.0**	**-1.4**
LSA	**Lhasa**	**19.34**	**355**	*e*P	**Pn**	**16 54 12.6**	**-1.8**
LSA				pmax	pmax		
	comp=Z,87nm,0.6s						
LSA	**Lhasa**	**19.34**	**355**	*e*Pn	**Pn**	**16 54 12.6**	**-1.9**
	comp=Z,87nm,0.6s						
KASI	**Kota Agung**	**19.41**	**144**	P	**Pn**	**16 54 09.9**	**-5.5**
	comp=Z,86nm,0.6s						
TPI	**Tanjungpandan**	**19.46**	**131**	P	**Pn**	**16 54 14.5**	**-1.5**
	comp=Z,38nm,0.7s						
KAD	**Karad**	**19.64**	**293**	*ex*	**Pn**	**16 54 16.6**	**-1.3**
BHPL	**Bhopal**	**19.73**	**313**	*e*PKP	**Pn**	**16 54 17.0**	**-2.0**
BHPL				AMb	AMB	16 54 22.2	
	comp=Z,68nm,1.4s						
BHPL				*ex*	x	16 57 45.3	
POO	**Poona**	**20.34**	**296**	*e*PKP	**P**	**16 54 27.1**	**+3.8**
POO				AMb	AMB	16 54 27.9	
	comp=Z,58nm,1.1s						
GYA	**Guiyang**	**20.51**	**37**	P	**P**	**16 54 25.5**	**+0.4**
GYA				pP		16 54 41.0	
GYA				sP	sP	16 54 51.0	-4.1
GYA				S	**S**	**16 58 03.5**	**-6.0**
GYA				sS	sS	16 58 28.5	-11
GYA				PcP	PcP	16 58 35.5	+2.3
GYA				SS		16 58 39.0	
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,150nm,5.0s						
GYA				LR	LR		
	comp=N,2μm,14.6s						
GYA				LR	LR		
	comp=E,2μm,14.9s						
GYA				LR	LR		
	comp=Z,3μm,14.6s						
SBUM	**Sibu**	**20.52**	**111**	P	**P**	**16 54 25.7**	**+0.3**
	comp=Z,721nmcomp=Z,52nm,1.0s						
STKI	**Sintang**	**20.92**	**118**	P	**P**	**16 54 30.3**	**+0.7**
	comp=Z,2μmcomp=Z,52nm,1.1s						
BTM	**Bintulu**	**21.05**	**108**	P	**P**	**16 54 33.3**	**+2.4**
PTH	**Pithoragarh**	**22.59**	**330**	*e*PKP	**P**	**16 54 45.0**	**-2.2**
PTH				*ex*	x	16 58 50.8	
COCO	**West Island**	**22.69**	**171**	P	**P**	**16 54 48.5**	**+0.2**
COCO				pmax	pmax		
	comp=Z,97nm,0.8s,mb5.2						
COCO	**West Island**	**22.69**	**171**	P	**P**	**16 54 48.5**	**+0.2**
	comp=Z,97nm,0.8s,mb5.2						
CD2	**Chengdu**	**22.73**	**24**⇓	*i* P	**P**	**16 54 47.5**	**-1.1**
CD2				pP		16 55 04.5	
CD2				sP	sP	16 55 13.8	-5.1
CD2				PP		16 55 20.0	
CD2				S	**S**	**16 58 46.0**	**-4.0**
CD2				sS	sS	16 59 15.5	-8.0
CD2				SS		16 59 35.8	
CD2				pmax	pmax		
	comp=Z,80nm,0.8s,mb5.1						
CD2				pmax	pmax		
	comp=Z,120nm,6.5s						
CD2				LR	LR		
	comp=N,260nm,7.7s						
CD2				LR	LR		
	comp=Z,220nm,7.7s						
NDI	**New Delhi**	**23.56**	**323**	*ex*	x	16 59 18.0	
NDI				*ex*	x	17 04 57.0	
AJM	**Ajmer**	**23.71**	**315**	*e*PKP	**P**	**16 54 59.1**	**+1.3**
DDI	**Dehra Dun**	**24.33**	**327**	*e*PKP	**P**	**16 55 03.9**	**+0.5**
DDI				*ex*	x	16 59 28.0	
ENH	**Enshi**	**25.01**	**35**	*e*P	**P**	**16 55 08.5**	**-1.1**
	comp=Z,39nm,0.4s,mb5.2						
ENH				*e*pP	pP	16 55 29.8	-0.7
MYLDM	**Lahad Datu**	**25.66**	**100**	P	**P**	**16 55 17.1**	**+1.5**
SDNR	**Sundarnagar**	**25.83**	**327**	*e*PKP	**P**	**16 55 18.5**	**+1.5**
LZH	**Lanzhou**	**27.41**	**19**	*e*P	**P**	**16 55 31.8**	**+0.6**
LZH				pP	pP	16 55 50.8	-1.5
LZH				sP	sP	16 56 02.3	-1.0
LZH				PcP	PcP	16 58 46.0	-1.9
LZH				*e*S	**S**	**17 00 05.0**	**+0.4**
LZH				sS	sS	17 00 35.0	-6.4
LZH				SS		17 01 28.3	
LZH				pmax	pmax		
	comp=Z,87nm,1.3s,mb5.1						
LZH				pmax	pmax		
	comp=Z,180nm,4.8s						
LZH				LR	LR		
	comp=E,1μm,15.8s						
LZH				LR	LR		
	comp=Z,2μm,16.5s						
XAN	**Xi'an**	**27.67**	**29**	P	**P**	**16 55 32.0**	**-1.5**
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.1						
XAN				pmax	pmax		
	comp=Z,19nm,3.8s						
GTA	**Gaotai**	**29.55**	**11**⇓	P	**P**	**16 55 50.8**	**+0.7**
GTA				pP	pP	16 56 09.0	-2.4
GTA				sP	sP	16 56 18.5	-3.8
GTA				S	**S**	**17 00 41.5**	**+3.3**
GTA				sS	sS	17 01 12.0	-3.1
GTA				SS	SS	17 02 21.0	-27
GTA				pmax	pmax		
	comp=Z,35nm,0.9s,mb5.0						
GTA				pmax	pmax		
	comp=Z,150nm,5.6s						
GTA				LR	LR		
	comp=N,100nm,12.5s						
GTA				LR	LR		
	comp=E,210nm,10.1s						
GTA				LR	LR		
	comp=Z,120nm,11.9s						
NJ2	**Nanjing**	**32.12**	**44**	*e*P	**P**	**16 56 05.3**	**-7.6**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.0						
KSH	**Kashi**	**32.82**	**335**	P	**P**	**16 56 18.5**	**-0.4**
KSH				pP	pP	16 56 35.5	-4.8
KSH				sP	sP	16 56 45.5	-5.7
KSH				PP	PP	16 57 28.5	-6.3
KSH				PcP	PcP	16 59 04.3	+2.4
KSH				S	**S**	**17 01 25.8**	**-3.5**
KSH				ScP	ScP	17 02 40.0	+2.4
KSH				PcS	PcS	17 02 47.5	+0.4
KSH				SS	SS	17 03 25.8	-29
KSH				ScS	ScS	17 06 37.3	-0.3
KSH				pmax	pmax		
	comp=Z,54nm,0.5s,mb5.6						
KSH				pmax	pmax		
	comp=Z,62nm,4.7s						
KSH				LR	LR		
	comp=N,140nm,6.8s						
KSH				LR	LR		
	comp=E,130nm,6.1s						
KSH				LR	LR		
	comp=Z,180nm,5.6s						
WMQ	**Urumqi**	**33.68**	**353**	P	**P**	**16 56 27.5**	**+1.2**
WMQ				pP	pP	16 56 45.5	-2.3
WMQ				sP	sP	16 56 54.5	-4.1
WMQ				PP	PP	16 57 42.5	-1.8
WMQ				PcP	PcP	16 59 06.0	+1.8
WMQ				*e*S	**S**	**17 01 44.3**	**+1.8**
WMQ				SS	SS	17 03 53.8	-18
WMQ				ScS	ScS	17 06 42.8	+0.9
WMQ				pmax	pmax		
	comp=Z,24nm,0.6s,mb5.2						
WMQ				pmax	pmax		
	comp=Z,100nm,5.0s						
WMQ				LR	LR		
	comp=N,95nm,25.8s						
WMQ				LR	LR		
	comp=E,150nm,24.8s						
WMQ				LR	LR		
	comp=Z,100nm,28.0s						
HHC	**Hu-ho-hao-te**	**34.48**	**25**	*e*P	**P**	**16 56 33.3**	**0.0**
HHC				pP	pP	16 56 54.0	-0.8
HHC				sP	sP	16 57 02.5	-3.1
HHC				PP	PP	16 57 51.8	-1.4
HHC				PcP	PcP	16 59 06.5	0.0
HHC				S	**S**	**17 01 56.0**	**+1.1**
HHC				sS	sS	17 02 28.8	-3.2
HHC				ScP	ScP	17 02 44.0	+0.6
HHC				PcS	PcS	17 02 51.3	-1.6
HHC				SS	SS	17 04 12.5	-16
HHC				ScS	ScS	17 06 45.8	-0.5
HHC				pmax	pmax		
	comp=Z,27nm,0.6s,mb5.2						
HHC				pmax	pmax		
	comp=Z,110nm,6.1s						
HHC				LR	LR		
	comp=N,520nm,13.1s						
HHC				LR	LR		
	comp=E,540nm,13.2s						
HHC				LR	LR		
	comp=Z,520nm,13.4s						
ULHL	**Ulahol**	**35.05**	**338**	P	**P**	**16 56 39.2**	**+1.0**
	SNR=24						
KZA	**Kyzart**	**35.28**	**337**	P	**P**	**16 56 41.7**	**+1.6**
	SNR=25						
UCH	**Uchtor**	**35.70**	**336**	P	**P**	**16 56 45.4**	**+1.7**
	SNR=6.2						
UCH	**Uchtor**	**35.70**	**336**	*e*P	**P**	**16 56 45.1**	**+1.4**
UCH				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
UCH	**Uchtor**	**35.70**	**336**	*e*P	**P**	**16 56 45.1**	**+1.4**
	comp=Z,6.0nm,0.6s,mb4.7						
KBK	**Karagaybulak**	**35.89**	**337**	P	**P**	**16 56 47.0**	**+1.6**
	SNR=71						
BJT	**Baijiatuan**	**35.94**	**31**	*e*P	**P**	**16 56 46.8**	**+0.9**
BJT				pmax	pmax		
	comp=Z,11nm,0.5s						
BJT	**Baijiatuan**	**35.94**	**31**	*e*P	**P**	**16 56 46.8**	**+1.0**
	comp=Z,11nm,0.5s,mb5.0						
AML	**Almayashu**	**35.95**	**335**	P	**P**	**16 56 47.8**	**+1.9**
	SNR=37						
AML	**Almayashu**	**35.95**	**335**	*e*P	**P**	**16 56 47.3**	**+1.4**
AML				pmax	pmax		
	comp=Z,122nm,0.6s						
AML	**Almayashu**	**35.95**	**335**	*e*P	**P**	**16 56 47.3**	**+1.4**
	comp=Z,122nm,0.6s						
BJI	**Beijing**	**35.96**	**31**	P	**P**	**16 56 47.0**	**+1.0**
BJI				PP	PP	16 58 10.0	+0.5
BJI				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
BJI				LR	LR		
	comp=N,100nm,20.2s						
BJI				LR	LR		
	comp=E,160nm,15.7s						
AAK	**Ala-Archa**	**36.05**	**336**	P	**P**	**16 56 48.6**	**+1.9**
	comp=E,323nm,0.6s,SNR=17						
AAK	**Ala-Archa**	**36.05**	**336**	P	**P**	**16 56 48.4**	**+1.6**
	comp=E,19nm,0.5s,mb5.3,baz=146,slow=6.0,SNR=70						
AAK				LR	LR	17 13 09.7	
	comp=E,145nm,19.0s,baz=151,slow=39						
AAK	**Ala-Archa**	**36.05**	**336**	P	**P**	**16 56 48.4**	**+1.7**
AAK				pmax	pmax		
	comp=Z,19nm,0.5s,mb5.3						
AAK				MLR	MLR		
	comp=Z,145nm,19.0s						
AAK	**Ala-Archa**	**36.05**	**336**	*e*P	**P**	**16 56 47.9**	**+1.2**
	comp=Z,49nm,0.9s,mb5.4						
AAK				LR	LR	17 13 09.7	
FRU	**Bishkek**	**36.17**	**337**	*e*P	**P**	**16 56 48.0**	**+0.2**
FRU				*e*	pP	16 57 10.0	+0.6
FRU				pmax	pmax		
	comp=Z,40nm,1.6s,mb5.1						
CHMS	**Chumysh**	**36.26**	**337**	P	**P**	**16 56 49.4**	**+0.8**
	SNR=20						
EKS2	**Erkin-Say**	**36.36**	**336**	P	**P**	**16 56 51.0**	**+1.7**
	SNR=86						
EKS2	**Erkin-Say**	**36.36**	**336**	*e*P	**P**	**16 56 50.6**	**+1.2**
EKS2				pmax	pmax		
	comp=Z,69nm,0.7s,mb5.7						
EKS2	**Erkin-Say**	**36.36**	**336**	*e*P	**P**	**16 56 50.6**	**+1.3**
	comp=Z,69nm,0.7s,mb5.7						
USP	**Ospenovka**	**36.58**	**337**	P	**P**	**16 56 52.3**	**+1.0**
	SNR=73						
MK31	**Makanchi Array**	**37.47**	**348**	*i* P	**P**	**16 56 58.5**	**-0.2**
MK31				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb4.9						
MKAR	**Makanchi Array**	**37.47**	**348**	P	**P**	**16 56 58.6**	**-0.1**
	comp=Z,15nm,0.7s,mb5.0,baz=169,slow=7.7,SNR=127						
MKAR				sP	sP	16 57 28.3	-2.9
	comp=Z,6.3nm,0.7s,baz=161,slow=7.9,SNR=3.8						
MKAR				ScP	ScP	17 02 55.1	+0.8
	comp=Z,2.1nm,0.9s,baz=142,slow=6.1,SNR=7.1						
MKAR				LR	LR	17 14 46.2	
	comp=Z,55nm,19.6s,baz=159,slow=40						
MKAR	**Makanchi Array**	**37.47**	**348**	P	**P**	**16 56 58.6**	**-0.1**
MKAR				*SP	sP	16 57 28.3	-3.0
MKAR				pmax	pmax		
	comp=Z,15nm,0.7s						
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MKAR				pmax	pmax		
	comp=N,2.0nm,0.9s						
MKAR				MLR	MLR		
	comp=Z,55nm,19.6s						
KK31	**Karatay Array**	**38.12**	**333**	*i* P	**P**	**16 57 04.6**	**+0.4**
KK31				pmax	pmax		
	comp=Z,13nm,0.3s,mb5.2						
SONM	**Songino Array**	**39.01**	**14**	P	**P**	**16 57 11.9**	**+0.3**
	comp=Z,7.4nm,0.4s,mb4.9,baz=196,slow=8.2,SNR=37						
SONM	**Songino Array**	**39.01**	**14**	P	**P**	**16 57 11.9**	**+0.3**
SONM				pmax	pmax		
	comp=Z,7.0nm,0.4s						
ULN	**Ulaanbaatar**	**39.20**	**15**	*e*P	**P**	**16 57 12.9**	**-0.3**
ULN				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.9						
ULN	**Ulaanbaatar**	**39.20**	**15**	*e*P	**P**	**16 57 12.9**	**-0.2**
	comp=Z,15nm,0.8s,mb4.9						
ZAK	**Zakamensk**	**40.79**	**10**⇓	*i* P	**P**	**16 57 26.9**	**+0.6**
ZAK				*e*		16 58 58.0	
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.1						
MBWA	**Marble Bar**	**40.79**	**140**	*e*P	**P**	**16 57 23.8**	**-2.9**
	comp=Z,7.3nm,0.6s,mb4.7						
KSRS	**Korea Array**	**41.32**	**43**	P	**P**	**16 57 30.2**	**-0.7**
	comp=Z,1.4nm,0.5s,mb4.0,baz=242,slow=8.6,SNR=10						
KSRS				ScP	ScP	17 03 10.1	+0.7
	comp=Z,1.2nm,0.7s,baz=260,slow=3.3,SNR=5.4						
KSRS				LR	LR	17 15 36.5	
	comp=Z,56nm,18.7s,baz=46,slow=37						
KSRS	**Korea Array**	**41.32**	**43**	P	**P**	**16 57 30.3**	**-0.6**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.9						
KSRS				pmax	pmax		
	comp=N,1.0nm,0.7s						
KSRS				MLR	MLR		
	comp=Z,56nm,18.7s						
MOY	**Mondy**	**41.70**	**7**	*e*P	**P**	**16 57 34.8**	**+1.1**
ABKT	**Ailbek**	**41.71**	**317**	P	**P**	**16 57 35.4**	**+1.4**
	comp=Z,340nm,0.6s,SNR=22						
KURK	**Kurchatov**	**41.98**	**346**	P	**P**	**16 57 36.4**	**+0.3**
	comp=Z,99nm,0.6s,mb5.7,SNR=20						
KURK	**Kurchatov**	**41.98**	**346***d*	*i* P	**P**	**16 57 36.0**	**-0.1**
KURK				*i* *PP	pP	16 58 03.5	+5.4
KURK				pmax	pmax		
	comp=Z,24nm,1.1s,mb4.8						
KURK	**Kurchatov**	**41.98**	**346**	*e*P	**P**	**16 57 35.5**	**-0.6**
	comp=Z,19nm,1.0s,mb4.8						
KURK				*e*ScP	ScP	17 03 10.1	-1.6
TLY	**Talaya**	**42.10**	**10**	*e*P	**P**	**16 57 38.6**	**+1.6**
TLY				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.6						
TLY				MLR	MLR		
	comp=Z,56nm,17.0s						
TLY	**Talaya**	**42.10**	**10**	*e*P	**P**	**16 57 37.3**	**+0.3**
	comp=Z,13nm,0.8s,mb4.7						
FITZ	**Fitzroy Crossi**	**42.77**	**131**	*e*P	**P**	**16 57 41.1**	**-1.8**
	comp=Z,43nm,0.5s,mb5.4						
FITZ	**Fitzroy Crossi**	**42.77**	**131**	P	**P**	**16 57 41.2**	**-1.8**
	comp=Z,27nm,0.5s,mb5.3,baz=325,slow=6.3,SNR=181						
FITZ				PcP	PcP	16 59 33.5	+0.7
	comp=Z,4.6nm,0.4s,baz=272,slow=3.4,SNR=3.7						
FITZ	**Fitzroy Crossi**	**42.77**	**131**	*e*P	**P**	**16 57 41.1**	**-1.9**
	comp=Z,48nm,0.8s,mb5.3						
FITZ	**Fitzroy Crossi**	**42.77**	**131**	P	**P**	**16 57 41.8**	**-1.1**
	comp=Z,111nm,1.1s,mb5.5						
CN2	**Changchun**	**43.52**	**34**	*e*P	**P**	**16 57 49.3**	**+0.7**
CN2				*es*P	sP	16 58 16.8	-4.7
CN2				*e*S	**S**	**17 04 12.5**	**+1.9**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.8						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,15.0s						
CN2				LR	LR		
	comp=E,200nm,15.0s						
CN2				LR	LR		
	comp=Z,200nm,15.0s						
KNA	**Kununurra**	**43.80**	**126**	P	**P**	**16 57 50.4**	**-0.8**
	comp=Z,832nmcomp=Z,91nm,0.6s,mb5.7						
ZALV	**Zalesovo Beam**	**43.99**	**353**	P	**P**	**16 57 51.9**	**-0.3**
	comp=Z,6.4nm,0.3s,mb4.8,baz=169,slow=8.0,SNR=41						
ZALV				sP	sP	16 58 24.1	-1.0
	comp=Z,6.1nm,0.7s,baz=172,slow=8.4,SNR=2.4						
ZALV				ScP	ScP	17 03 20.3	+0.5
	comp=Z,2.3nm,0.9s,baz=180,slow=3.0,SNR=5.6						
ZALV				LR	LR	17 20 22.4	
	comp=Z,32nm,18.0s,baz=248,slow=42						
ZALV	**Zalesovo Beam**	**43.99**	**353**	P	**P**	**16 57 51.9**	**-0.3**
ZALV				*SP	sP	16 58 24.1	-1.0
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.3s,mb4.8						
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.4						
ZALV				pmax	pmax		
	comp=N,2.0nm,0.9s						
ZALV				MLR	MLR		
	comp=Z,32nm,18.0s						
HIA	**Hailar**	**44.68**	**25**	*e*P	**P**	**16 57 57.8**	**0.0**
HIA				pmax	pmax		
	comp=Z,4.0nm,0.4s						
HIA	**Hailar**	**44.68**	**25**	*e*P	**P**	**16 57 57.8**	**0.0**
	comp=Z,3.9nm,0.4s,mb4.5						
KAKA	**Kakadu**	**45.27**	**119**	*e*P	**P**	**16 58 02.0**	**-0.9**
	comp=Z,5.0nm,0.4s,mb4.6						
BVAR	**Borovoye Array**	**46.34**	**341**	P	**P**	**16 58 10.4**	**-0.4**
	comp=Z,9.4nm,0.5s,mb4.8,baz=142,slow=8.5,SNR=64						
BVAR				ScP	ScP	17 03 31.0	+1.5
	comp=Z,1.5nm,0.7s,baz=145,slow=6.5,SNR=6.7						
BVAR				S	**S**	**17 04 50.9**	**0.0**
	comp=Z,1.6nm,0.8s,baz=129,slow=14,SNR=7.6						
BVAR	**Borovoye Array**	**46.34**	**341**	P	**P**	**16 58 10.4**	**-0.4**
BVAR				S	**S**	**17 04 50.9**	**0.0**
BVAR				pmax	pmax		
	comp=Z,9.0nm,0.5s						
BVAR				pmax	pmax		
	comp=N,2.0nm,0.7s						
BVAR				smax			
	comp=N,2.0nm,0.8s						
MDJ	**Mudanjiang**	**46.37**	**36**	P	**P**	**16 58 11.5**	**+0.3**
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
MDJ				pmax	pmax		
	comp=Z,64nm,6.5s						
BRVK	**Borovoye**	**46.40**	**341**	P	**P**	**16 58 11.2**	**-0.1**
	comp=Z,161nm,0.5s,SNR=16						
BRVK	**Borovoye**	**46.40**	**341***d*	*i* P	**P**	**16 58 11.0**	**-0.3**
BRVK				*i* *PP	pP	16 58 31.2	-2.5
BRVK				pmax	pmax		
	comp=Z,23nm,1.0s,mb4.9						
BRVK	**Borovoye**	**46.40**	**341**	*e*P	**P**	**16 58 10.9**	**-0.4**
	comp=Z,10nm,0.6s,mb4.7						
AB31	**Akbulak array**	**47.59**	**331**	*i* P	**P**	**16 58 21.3**	**+0.7**
AB31				pmax	pmax		
	comp=Z,29nm,0.4s,mb5.5						
ABKAR	**Akbulak array**	**47.59**	**331**	*e*P	**P**	**16 58 21.0**	**+0.4**
	comp=Z,30nm,0.5s,mb5.4						
MJAR	**Matsushiro Arr**	**48.30**	**50**	PcP	PcP	16 59 52.7	+0.8
	comp=Z,0.4nm,0.3s,baz=253,slow=3.7,SNR=6.6						
MJAR				ScP	ScP	17 03 38.6	+0.5
	comp=Z,2.8nm,0.8s,baz=242,slow=3.3,SNR=14						
NWAO	**Narrogin (SRO)**	**48.79**	**153**	P	**P**	**16 58 28.6**	**-1.5**
	comp=Z,9.2nm,0.5s,mb5.0,baz=305,slow=6.5,SNR=24						
NWAO	**Narrogin (SRO)**	**48.79**	**153**	P	**P**	**16 58 28.6**	**-1.5**
NWAO		

WRA pmax pmax
comp=Z,2.0nm,0.4s
WRA smax
comp=N,1.0nm,0.8s
WRAB Tennant Creek 50.52 127 P **P 16 58 42.0 -1.4**
comp=N,436nm,0.5s,SNR=93
WRAB Tennant Creek 50.52 127 *e*P **P 16 58 42.1 -1.3**
WRAB pmax pmax
comp=Z,37nm,0.6s,mb5.6
WRAB Tennant Creek 50.52 127 *e*P **P 16 58 42.0 -1.4**
comp=Z,37nm,0.6s,mb5.6
WRAB Tennant Creek 50.52 127 P **P 16 58 44.3 +0.9**
GNI Garni 52.01 313 *e*P **P 16 58 55.1 +0.8**
GNI pmax pmax
comp=Z,31nm,1.3s
GNI Garni 52.01 313 *e*P **P 16 58 55.1 +0.8**
comp=Z,31nm,1.3s,mb5.2
DGRG David-gareji 52.05 315 P **P 16 58 56.2 +1.6**
ASAR Alice Springs 52.27 131 P **P 16 58 55.3 -1.1**
comp=Z,77nm,0.6s,mb5.9,baz=307,slow=6.8,SNR=1176
ASAR Alice Springs 52.27 131 P **P 16 58 55.3 -1.1**
ASAR pmax pmax
comp=Z,77nm,0.6s
MTA Mtatsminda 52.54 315 P **P 16 58 58.4 +0.2**
TBLG Delisi 52.59 315 *e*P **P 16 59 00.0 +1.4**
TBLG Delisi 52.59 315 P **P 16 58 59.6 +1.0**
SVE Sverdlovsk 52.75 338⇑*e*P **P 16 58 59.8 +0.4**
SVE *e* 17 00 01.5
SVE *e*S **S 17 06 21.8 +1.6**
SVE pmax pmax
comp=Z,43nm,0.6s,mb5.7
ARU Arti 53.23 337 P **P 16 59 02.0 -1.0**
comp=Z,183nm,0.4s,SNR=8.8
ARU Arti 53.23 337*d i*P **P 16 59 02.9 -0.1**
ARU *e* 17 01 03.2
ARU S **S 17 06 26.6 -0.3**
ARU SS SS 17 10 03.5 -4.2
ARU pmax pmax
comp=Z,23nm,1.0s,mb5.2
ARU Arti 53.23 337 *e*P **P 16 59 02.6 -0.4**
comp=Z,40nm,1.1s,mb5.4
ZEI Tsey 53.56 316 *e*P **P 16 59 05.7 0.0**
ZEI pmax pmax
comp=Z,12nm,0.5s,mb5.2
KIV Kislovodsk 54.83 317⇓*e*P **P 16 59 15.6 +0.8**
KIV *e* 17 01 22.3
KIV pmax pmax
comp=Z,37nm,1.0s,mb5.4
KIV MLR MLR
comp=Z,100nm,17.0s
KIV Kislovodsk 54.83 317 *e*P **P 16 59 14.4 -0.4**
comp=Z,41nm,1.0s,mb5.4
KIV *e*pP pP 16 59 38.7 +0.8
YSS Yuzh-Sakhalins 55.49 39 *i* P **P 16 59 20.5 +0.9**
YSS pmax pmax
comp=Z,22nm,1.5s,mb5.0
YSS Yuzh-Sakhalins 55.49 39 *e*P **P 16 59 20.2 +0.6**
comp=Z,8.5nm,0.7s,mb4.9
SOKR Solikamsk 56.15 339*d i*P **P 16 59 24.3 +0.3**
SOKR pmax pmax
comp=Z,20nm,0.7s,mb5.3
YAK Yakutsk 58.00 19 *e*P **P 16 59 35.7 -1.3**
YAK pmax pmax
comp=Z,22nm,0.9s,mb5.2
YAK pmax pmax
comp=E,8.0nm,1.3s
YAK pmax pmax
comp=N,6.0nm,1.1s
YAK Yakutsk 58.00 19 *e*P **P 16 59 35.3 -1.7**
comp=N,39nm,0.9s,mb5.4
VRHR Novokhopersk 58.35 325 *e*P **P 16 59 39.6 0.0**
VRHR *e*S **S 17 07 33.5 -1.5**
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,20nm,0.7s
VRHR pmax pmax
comp=Z,70nm,0.7s,mb5.8
VRHR smax
comp=N,20nm,0.9s
VRHR smax
comp=E,60nm,0.9s
VRHR smax
comp=Z,10.0nm,0.9s
ANN Anapa 58.66 316 *e*P **P 16 59 32.4 -10**
ANN pmax pmax
comp=Z,17nm,0.9s,mb5.1
VSR Storozhevoye 59.81 324 *e*P **P 16 59 48.7 -1.0**
VSR pmax pmax
comp=N,10.0nm,0.6s
VSR pmax pmax
comp=E,6.0nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
BRTR Keskin Array B 60.07 310 P **P 16 59 50.6 -1.2**
comp=Z,4.1nm,0.7s,mb4.6,baz=124,slow=7.6,SNR=29
BRTR pP pP 17 00 14.9 -0.2
comp=Z,2.5nm,0.7s,baz=120,slow=7.3,SNR=5.6
BRTR LR LR 17 25 40.5
comp=Z,39nm,20.2s,baz=215,slow=36
BRTR Keskin Array B 60.07 310 P **P 16 59 50.6 -1.2**
BRTR *PP pP 17 00 15.0 -0.1
BRTR pmax pmax
comp=Z,4.0nm,0.7s
BRTR pmax pmax
comp=Z,3.0nm,0.7s
BRTR MLR MLR
comp=Z,39nm,20.2s
CTA Charters Tower 60.40 120 *e*P **P 16 59 54.7 +0.4**
comp=Z,5.8nm,0.8s,mb4.7
CTAO Charters Tower 60.40 120 *e*P **P 16 59 53.9 -0.4**
CTAO *e* 17 00 38.8
CTAO pmax pmax
comp=Z,37nm,1.5s,mb5.2
CTAO Charters Tower 60.40 120 *e*P **P 16 59 53.9 -0.4**
comp=Z,37nm,1.5s,mb5.2
CTAO *e*PcP PcP 17 00 38.8 +0.3
MOS Moscow 62.46 328 *e*P **P 17 00 07.3 -0.3**
MOS pmax pmax
comp=Z,52nm,1.4s,mb5.4
STKA Stephens Creek 62.53 134 *e*P **P 17 00 08.7 +0.2**
comp=Z,20nm,0.4s,mb5.4
STKA Stephens Creek 62.53 134 P **P 17 00 08.7 +0.3**
comp=Z,37nm,0.6s,mb5.5,baz=316,slow=5.9,SNR=51
STKA Stephens Creek 62.53 134 P **P 17 00 08.7 +0.2**
STKA pmax pmax
comp=Z,37nm,0.6s
STKA Stephens Creek 62.53 134 *e*P **P 17 00 08.4 0.0**
OBN Obninsk 62.77 327⇑*e*P **P 17 00 09.1 -0.5**
OBN *e*S **S 17 08 34.3 +3.1**
OBN pmax pmax
comp=Z,29nm,1.2s,mb5.1
OBN MLR MLR
comp=Z,100nm,21.0s
TIXI Tiksi 65.03 12*d i*P **P 17 00 23.7 -0.5**
TIXI pmax pmax
comp=Z,27nm,0.5s,mb5.3
TIXI Tiksi 65.03 12 *e*P **P 17 00 23.6 -0.6**
comp=Z,29nm,0.5s,mb5.4
AKASG Malin Array Be 65.61 321 P **P 17 00 27.0 -1.3**
comp=Z,5.5nm,0.6s,mb4.6,baz=91,slow=5.3,SNR=26
AKASG pP pP 17 00 50.0 -2.0
comp=Z,2.7nm,0.7s,baz=87,slow=5.2,SNR=2.9
AKASG Malin Array Be 65.61 321 P **P 17 00 27.0 -1.3**
AKASG *PP pP 17 00 50.0 -2.0
AKASG pmax pmax
comp=Z,6.0nm,0.6s
AKASG pmax pmax
comp=Z,3.0nm,0.7s
KIEV Kiev 65.61 321 *e*P **P 17 00 26.8 -1.5**
KIEV *e**PP pP 17 00 48.4 -3.6
KIEV pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
KIEV Kiev 65.61 321 *e*P **P 17 00 26.8 -1.5**
comp=Z,5.3nm,0.7s,mb4.5
KIEV *e*pP pP 17 00 48.4 -3.6
VRI Vrincioaia 66.24 316 ⇑P **P 17 00 33.2 +0.8**
VRI Vrincioaia 66.24 316⇑*i*P **P 17 00 33.2 +0.8**
PLOR Plostina 66.29 316 ⇑P **P 17 00 33.6 +0.9**
PLOR Plostina 66.29 316⇑*i*P **P 17 00 33.6 +0.9**
TESR 66.40 316⇑*i*P **P 17 00 33.6 +0.1**
PETK Petropavlovsk- 66.61 36 LR LR 17 35 28.9
comp=Z,32nm,18.2s,baz=247,slow=41
MLR Muntele Rosu 66.72 315 ⇑P **P 17 00 36.2 +0.7**
MLR Muntele Rosu 66.72 315⇑*i*P **P 17 00 36.2 +0.7**
SEY Seymchan 67.12 25⇑*i*P **P 17 00 37.6 -0.1**

VOIR 67.33 315 ⇑P **P 17 00 38.8 -0.6**
VOIR 67.33 315⇑*i*P **P 17 00 38.8 -0.6**
BURAR Bucovina Array 67.55 317 ⇑P **P 17 00 41.0 +0.3**
BURAR Bucovina Array 67.55 317⇑*i*P **P 17 00 41.0 +0.3**
IDID Didziasalis 68.18 326 *e*P **P 17 00 44.0 -0.4**
IDID AMB AMB 17 00 45.5
comp=Z,4.7nm,1.1s,mb4.2
IDID Didziasalis 68.18 326 *e*P **P 17 00 44.4 -0.1**
JOF Joensuu 68.20 334 *e*P **P 17 00 43.0 -1.5**
JOF Joensuu 68.20 334 *ep* **P 17 00 43.0 -1.5**
VTS Vitosha 68.29 312 ⇑P **P 17 00 44.9 -0.6**
VTS Vitosha 68.29 312⇑*i*P **P 17 00 44.9 -0.6**
TOO Toolangi 68.35 137 *e*P **P 17 00 47.0 +1.2**
IIGN Ignalina 68.47 326 *e*P **P 17 00 46.0 -0.3**
IIGN AMB AMB 17 00 47.5
comp=Z,6.9nm,1.1s,mb4.4
IIGN Ignalina 68.47 326 *e*P **P 17 00 46.1 -0.2**
IZAR Zarasai 68.55 326 *e*P **P 17 00 46.5 -0.3**
IZAR AMB AMB 17 00 47.7
comp=Z,5.3nm,1.4s,mb4.2
IZAR Zarasai 68.55 326 *e*P **P 17 00 46.7 -0.1**
VSU Vasula 68.96 329 *i* P **P 17 00 49.4 +0.1**
VSU pmax pmax
comp=Z,18nm,1.6s,mb4.7
DRGR 69.12 316 ⇑P **P 17 00 51.0 +0.4**
DRGR 69.12 316⇑*i*P **P 17 00 51.0 +0.4**
LSZ Lusaka 69.17 249 *e*P **P 17 00 52.3 +1.0**
LSZ pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
LSZ Lusaka 69.17 249 *e*P **P 17 00 52.3 +0.9**
comp=Z,2.5nm,0.6s,mb4.2
APA Apatity 69.19 339⇓*e*P **P 17 00 50.0 -0.6**
APA pmax pmax
comp=Z,59nm,1.4s,mb5.2
ARMA Armidale 69.26 128 *e*P **P 17 00 53.4 +1.7**
ARMA Armidale 69.26 128 *e*P **P 17 00 53.3 +1.7**
comp=Z,29nm,0.8s,mb5.2
HNR Honiara 69.33 104 *e*P **P 17 00 52.1 -0.3**
HNR pmax pmax
comp=Z,46nm,0.8s,mb5.4
HNR Honiara 69.33 104 *e*P **P 17 00 52.1 -0.3**
comp=Z,46nm,0.8s,mb5.4
CNB Canberra Magne 69.85 134 *e*P **P 17 00 55.6 +0.4**
FINES FINESS Array B 70.07 332 P **P 17 00 55.5 -0.5**
comp=Z,2.9nm,0.5s,mb4.4,baz=86,slow=4.9,SNR=41
FINES FINESS Array B 70.07 332 P **P 17 00 55.6 -0.5**
FINES pmax pmax
comp=Z,3.0nm,0.5s
KAF Kangasniemi 70.15 333 *e*P **P 17 00 55.3 -1.2**
KAF Kangasniemi 70.15 333 *ep* **P 17 00 55.3 -1.2**
STHS Stebnicka Huta 70.43 319 *e*P **P 17 00 58.7 +0.2**
STHS pmax pmax
comp=Z,5.0nm,1.0s,mb4.3
STHS Stebnicka Huta 70.43 319 *e*P **P 17 00 58.7 +0.2**
comp=Z,5.4nm,1.0s,mb4.3
STHS Stebnicka Huta 70.43 319 *e*P **P 17 00 58.7 +0.2**
PKSM Moragy 71.87 315 ⇑P **P 17 01 06.9 -0.4**
PKSM Moragy 71.87 315⇑*i*P **P 17 01 06.9 -0.4**
VYHS Vyhne 71.91 318 *i* P **P 17 01 07.6 +0.1**
VYHS pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
VYHS Vyhne 71.91 318 *i* P **P 17 01 07.6 +0.1**
comp=Z,3.4nm,0.7s,mb4.3
VYHS Vyhne 71.91 318 *i* P **P 17 01 07.6 +0.1**
KEV Kevo 72.18 340 *e*P **P 17 01 07.9 -0.8**
KEV Kevo 72.18 340 *ep* **P 17 01 07.9 -0.8**
KOLL Kolacno 72.20 318 *e*P **P 17 01 09.1 -0.1**
KOLL Kolacno 72.20 318 *e*P **P 17 01 09.1 -0.1**
OKC Ostrava-Krasne 72.47 319 *e*P **P 17 01 11.1 +0.3**
OKC Ostrava-Krasne 72.47 319 *e*P **P 17 01 11.1 +0.3**
ARCES ARCESS Array B 72.61 340 P **P 17 01 11.4 +0.2**
comp=Z,1.7nm,0.4s,mb4.2,baz=98,slow=6.1,SNR=18
ARCES pP pP 17 01 33.3 -2.1
comp=Z,3.3nm,0.6s,baz=79,slow=6.3,SNR=2.7
ARCES LR LR 17 35 38.4
comp=Z,118nm,19.1s,baz=283,slow=38
ARCES ARCESS Array B 72.61 340 P **P 17 01 11.4 +0.1**
ARCES *PP pP 17 01 33.3 -2.1
ARCES pmax pmax
comp=Z,2.0nm,0.4s
ARCES pmax pmax
comp=Z,3.0nm,0.6s
ARCES MLR MLR
comp=Z,118nm,19.1s
MORC Moravsky Berou 72.86 319 *e*P **P 17 01 12.2 -0.9**
MORC pmax pmax
comp=Z,12nm,1.0s,mb4.7
MORC Moravsky Berou 72.86 319 *e*P **P 17 01 12.2 -0.9**
comp=Z,12nm,1.0s,mb4.7
MORC Moravsky Berou 72.86 319⇑*i*P **P 17 01 13.6 +0.5**
KOGS Kog 73.53 315 *i* P **P 17 01 17.1 0.0**
DPC Dobruska-Polom 73.68 319 *e*P **P 17 01 18.5 +0.6**
DPC *e* 17 01 28.1
DPC Dobruska-Polom 73.68 319 *e*P **P 17 01 18.5 +0.6**
DPC *e*PCP PcP 17 01 28.1 -5.1
CSNA Conrad Observa 73.86 317⇓*i*P **P 17 01 18.8 -0.2**
comp=Z,5.8nm,1.0s,mb4.3
UPC Upice 73.89 320 *e*P **P 17 01 18.2 -0.9**
UPC Upice 73.89 320 *e*P **P 17 01 18.2 -0.9**
GROS Grobnik 74.05 315 *i* P **P 17 01 20.0 -0.2**
ARSA Arzberg 74.06 316⇓*i*P **P 17 01 20.3 +0.1**
comp=Z,5.3nm,0.7s,mb4.4
TREC Trest 74.17 318 *e*P **P 17 01 20.9 +0.1**
TREC Trest 74.17 318 *e*P **P 17 01 20.9 +0.1**
BILL Bilibino 74.18 22⇑*e*P **P 17 01 20.4 -0.1**
BILL pmax pmax
comp=Z,1.0nm,0.3s,mb4.0
BOJS Bojanci 74.20 314 *i* P **P 17 01 20.7 -0.4**
SOKA Soboth 74.38 316⇑*i*P **P 17 01 21.9 -0.2**
comp=Z,12nm,1.1s,mb4.5
OBKA Obir 74.71 315⇓*i*P **P 17 01 24.1 +0.1**
comp=Z,5.9nm,0.7s,mb4.5
LJU Ljubljana 74.72 315 *i* P **P 17 01 24.2 +0.1**
PRU Pruhonice 74.81 319 *e*P **P 17 01 25.2 +0.7**
PRU *e* 17 01 35.1
PRU Pruhonice 74.81 319 *e*P **P 17 01 25.2 +0.7**
PRU *e*PCP PcP 17 01 35.1 -3.0
BRG Berggiesshubel 75.22 320 *e*P **P 17 01 26.9 +0.1**
comp=Z,6.0nm,0.8s,mb4.4
BRG Berggiesshubel 75.22 320 *e*P **P 17 01 27.0 +0.2**
comp=Z,5.5nm,0.8s,mb4.3
BRG Berggiesshubel 75.22 320 *e*P **P 17 01 27.0 +0.2**
BRG pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
CADS Cadrg 75.27 315 *i* P **P 17 01 26.9 -0.3**
GEC2 GERESS Array S 75.33 318 *e*P **P 17 01 27.3 -0.2**
comp=Z,11nm,1.0s,mb4.5
GEC2 GERESS Array S 75.33 318 *e*P **P 17 01 27.3 -0.2**
GEC2 pmax pmax
comp=Z,11nm,1.0s,mb4.5
KHC Kasperske Hory 75.41 318 *e*P **P 17 01 27.6 -0.4**
KHC pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
KHC Kasperske Hory 75.41 318 *e*P **P 17 01 27.6 -0.4**
comp=Z,3.5nm,0.8s,mb4.1
KHC Kasperske Hory 75.41 318 *e*P **P 17 01 27.9 -0.1**
KHC *e*PCP PcP 17 01 36.6 -4.1
KBA Koelnbreinsper 75.55 316⇓*i*P **P 17 01 28.2 -0.6**
comp=Z,3.2nm,0.7s,mb4.2
CLL Collm 75.82 320 *e*PP PP 17 04 19.0 -2.3
WET Wettzell 75.87 318 *e*P **P 17 01 30.7 +0.1**
comp=Z,10.0nm,1.3s,mb4.4
WET Wettzell 75.87 318 *e*P **P 17 01 30.7 +0.1**
WET pmax pmax
comp=Z,10.0nm,1.3s,mb4.4
RJOB Jochberg 75.92 317 *e*P **P 17 01 30.3 -0.6**
comp=Z,7.0nm,1.1s,mb4.3
BOSA Boshof 76.06 237 P **P 17 01 33.4 +1.4**
comp=Z,6.1nm,0.5s,mb4.6,baz=76,slow=5.2,SNR=21
BOSA Boshof 76.06 237 P **P 17 01 33.4 +1.4**
BOSA pmax pmax
comp=Z,6.0nm,0.5s,mb4.6
TANN Tannenbergstha 76.15 319 *e*P **P 17 01 32.1 0.0**
comp=Z,17nm,2.1s,mb4.4
ROTZ Rotzenmuhle 76.31 319 *e*P **P 17 01 33.3 +0.2**
comp=Z,7.0nm,1.1s,mb4.3
WTTA Wattenberg 76.71 316⇓*i*P **P 17 01 34.8 -0.6**
comp=Z,11nm,0.6s,mb4.8
WATA Walderalm 76.75 316⇓*i*P **P 17 01 34.7 -0.9**
comp=Z,4.6nm,0.5s,mb4.5
GRA1 Grafenberg Arr 76.95 319 *e*P **P 17 01 36.7 0.0**
comp=Z,12nm,0.7s,mb4.7
GRF Grafenberg Arr 76.95 319 *e*P **P 17 01 36.7 0.0**
comp=Z,12nm,0.7s,mb4.7

GRF Grafenberg Arr 76.95 319 *e*P **P 17 01 36.7 0.0**
GRF pmax pmax
comp=Z,12nm,0.7s,mb4.7
MOTA Moosalm 77.07 316⇓*i*P **P 17 01 36.7 -0.7**
comp=Z,7.1nm,0.7s,mb4.5
NB2 NORSAR Subarra 77.10 330 P **P 17 01 36.4 -0.8**
comp=Z,6.7nm,1.2s,mb4.2,baz=95,slow=5.3
NOA NORSAR Array B 77.10 330 P **P 17 01 36.3 -1.0**
comp=Z,1.5nm,0.6s,mb3.9,baz=91,slow=5.8,SNR=11
NOA pP pP 17 01 58.2 -3.4
comp=Z,1.7nm,0.8s,baz=94,slow=5.2,SNR=4.1
NOA PP PP 17 04 30.6 -1.2
comp=Z,0.7nm,0.6s,baz=97,slow=8.6,SNR=4.4
NOA LR LR 17 39 15.2
comp=Z,32nm,19.9s,baz=100,slow=38
NOA NORSAR Array B 77.10 330 P **P 17 01 36.3 -0.9**
NOA *PP pP 17 01 58.2 -3.4
NOA 17 04 30.6
NOA pmax pmax
comp=Z,2.0nm,0.6s
NOA pmax pmax
comp=Z,2.0nm,0.8s
NOA pmax pmax
comp=Z,1.0nm,0.6s
NOA MLR MLR
comp=Z,32nm,19.9s
NOA NORSAR Array B 77.10 330 P **P 17 01 36.3 -1.0**
NOA pP pP 17 01 58.2 -3.4
NOA PP PP 17 04 30.6 -1.2
NOA LR LR 17 39 15.2
RETA Reutte 77.30 316⇑*i*P **P 17 01 38.2 -0.5**
comp=Z,8.7nm,0.6s,mb4.6
FETA Feichten 77.33 316⇑*i*P **P 17 01 38.6 -0.3**
comp=Z,9.6nm,1.1s,mb4.5
CLZ Clausthal 77.47 321 *e*P **P 17 01 39.4 -0.1**
comp=Z,7.0nm,0.8s,mb4.4
CLZ Clausthal 77.47 321 *e*P **P 17 01 39.4 -0.1**
CLZ pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
BSEG Bad Segeberg 77.48 323 *e*P **P 17 01 39.9 +0.4**
comp=Z,11nm,0.9s,mb4.6
CASY Casey 77.49 173 *e*P **P 17 01 38.7 -0.5**
comp=Z,7.1nm,0.9s,mb4.4
NRDL Niedersach Rie 77.62 322 *e*P **P 17 01 39.5 -0.8**
comp=Z,17nm,1.7s,mb4.5
DAVA Damuels 77.90 316⇑*i*P **P 17 01 42.0 0.0**
comp=Z,14nm,0.7s,mb4.8
PGF Pioggiola 78.77 311 *e*P **P 17 01 47.1 +0.2**
comp=Z,4.8nm,0.6s,mb4.2
PGF Pioggiola 78.77 311 *e*P **P 17 01 47.1 +0.2**
PGF pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
PGF Pioggiola 78.77 311 *e*P **P 17 01 47.1 +0.2**
comp=Z,2.4nm,0.6s,mb4.2
BFO Black Forest 78.90 317 *e*P **P 17 01 47.0 -0.5**
comp=Z,3.0nm,0.9s,mb4.1
BFO Black Forest 78.90 317 *e*P **P 17 01 47.0 -0.5**
BFO pmax pmax
comp=Z,3.0nm,0.9s,mb4.1
IBBN Ibbenburen 79.07 321 *e*P **P 17 01 48.6 +0.3**
comp=Z,15nm,1.3s,mb4.7
CDF Champ du Feu 79.60 317 *e*P **P 17 01 50.8 -0.5**
comp=Z,5.6nm,0.8s,mb4.1
CDF Champ du Feu 79.60 317 *e*P **P 17 01 50.8 -0.5**
CDF pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
CDF Champ du Feu 79.60 317 *e*P **P 17 01 50.8 -0.5**
comp=Z,2.8nm,0.8s,mb4.1
SBF Sospel 79.82 313 *e*P **P 17 01 52.3 -0.3**
comp=Z,20nm,0.8s,mb4.7
SBF Sospel 79.82 313 *e*P **P 17 01 52.3 -0.3**
SBF pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
SBF Sospel 79.82 313 *e*P **P 17 01 52.3 -0.3**
comp=Z,10nm,0.8s,mb4.7
HINF Hinteralfeld 79.92 317 *e*P **P 17 01 52.7 -0.4**
comp=Z,5.0nm,0.7s,mb4.2
HINF Hinteralfeld 79.92 317 *e*P **P 17 01 52.7 -0.4**
HINF pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
HINF Hinteralfeld 79.92 317 *e*P **P 17 01 52.7 -0.4**
comp=Z,2.5nm,0.7s,mb4.2
LPG La Plagne 80.17 315 *e*P **P 17 01 54.8 +0.3**
comp=Z,27nm,0.7s,mb4.9
LPG La Plagne 80.17 315 *e*P **P 17 01 54.8 +0.3**
LPG pmax pmax
comp=Z,14nm,0.7s,mb4.9
LPG La Plagne 80.17 315 *e*P **P 17 01 54.8 +0.3**
comp=Z,14nm,0.7s,mb4.9
LPL La Plagne 80.19 315 *e*P **P 17 01 54.9 +0.4**
comp=Z,33nm,0.7s,mb5.0
LPL La Plagne 80.19 315 *e*P **P 17 01 54.9 +0.4**
LPL pmax pmax
comp=Z,17nm,0.7s,mb5.0
LPL La Plagne 80.19 315 *e*P **P 17 01 54.9 +0.4**
comp=Z,17nm,0.7s,mb5.0
MBDF Montbardon 80.22 314 *e*P **P 17 01 54.1 -0.7**
comp=Z,13nm,0.8s,mb4.5
MBDF Montbardon 80.22 314 *e*P **P 17 01 54.1 -0.7**
MBDF pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
MBDF Montbardon 80.22 314 *e*P **P 17 01 54.1 -0.7**
comp=Z,6.3nm,0.8s,mb4.5
HAU Haudompre 80.25 317 *e*P **P 17 01 54.4 -0.4**
comp=Z,21nm,0.9s,mb4.7
HAU Haudompre 80.25 317 *e*P **P 17 01 54.4 -0.4**
HAU pmax pmax
comp=Z,10.0nm,0.9s,mb4.7
HAU Haudompre 80.25 317 *e*P **P 17 01 54.4 -0.4**
comp=Z,10nm,0.9s,mb4.7
FRF La Foret Royal 80.41 313 *e*P **P 17 01 55.6 -0.2**
LMR La Mourre 80.53 312 *e*P **P 17 01 56.3 -0.1**
MAW Mawson 80.74 191 P **P 17 01 58.2 +1.3**
comp=Z,8.6nm,0.8s,mb4.6,baz=357,slow=6.5,SNR=6.3
MAW ScP 17 06 05.4
comp=Z,2.7nm,0.6s,baz=326,slow=22,SNR=2.8
MAW Mawson 80.74 191 P **P 17 01 58.2 +1.3**
MAW pmax pmax
comp=Z,9.0nm,0.9s
MAW pmax pmax
comp=N,3.0nm,0.6s
ORIF Oris-en-Rattie 80.84 314 *e*P **P 17 01 57.7 -0.3**
comp=N,6.8nm,0.8s,mb4.2
ORIF Oris-en-Rattie 80.84 314 *e*P **P 17 01 57.7 -0.3**
ORIF pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
ORIF Oris-en-Rattie 80.84 314 *e*P **P 17 01 57.7 -0.3**
comp=Z,3.4nm,0.8s,mb4.2
SUR Sutherland 80.91 235 *e*P **P 17 02 00.6 +2.0**
comp=Z,11nm,0.7s,mb4.8
SMRF Simiane la Rot 81.15 313 *e*P **P 17 02 00.1 +0.4**
comp=Z,8.3nm,0.7s,mb4.4
SMRF Simiane la Rot 81.15 313 *e*P **P 17 02 00.1 +0.4**
comp=Z,8.3nm,0.7s,mb4.7
BAIF Baives 81.46 319 *e*P **P 17 02 01.2 0.0**
comp=Z,11nm,1.0s,mb4.3
BAIF Baives 81.46 319 *e*P **P 17 02 01.2 0.0**
BAIF pmax pmax
comp=Z,5.0nm,1.0s,mb4.3
BAIF Baives 81.46 319 *e*P **P 17 02 01.2 0.0**
comp=Z,5.4nm,1.0s,mb4.3
VIVF Saint-Julien-I 81.70 314 *e*P **P 17 02 02.5 -0.1**
comp=Z,8.4nm,0.9s,mb4.3
VIVF Saint-Julien-I 81.70 314 *e*P **P 17 02 02.5 -0.1**
VIVF pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
VIVF Saint-Julien-I 81.70 314 *e*P **P 17 02 02.5 -0.1**
comp=Z,4.2nm,0.9s,mb4.3
LOR Lormes 81.99 317 *e*P **P 17 02 03.6 -0.5**
comp=Z,15nm,0.9s,mb4.5
LOR Lormes 81.99 317 *e*P **P 17 02 03.6 -0.5**
LOR pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
LOR Lormes 81.99 317 *e*P **P 17 02 03.6 -0.5**
comp=Z,7.3nm,0.9s,mb4.5
SMF Signal de Mont 82.08 316 *e*P **P 17 02 04.1 -0.4**
comp=Z,5.8nm,0.5s,mb4.3
SMF Signal de Mont 82.08 316 *e*P **P 17 02 04.1 -0.4**
SMF pmax pmax
comp=Z,3.0nm,0.5s,mb4.4
SMF Signal de Mont 82.08 316 *e*P **P 17 02 04.1 -0.4**
comp=Z,2.9nm,0.5s,mb4.4
SSF Saint Saulge 82.26 316 *e*P **P 17 02 05.1 -0.4**
comp=Z,3.3nm,0.5s,mb4.1
SSF Saint Saulge 82.26 316 *e*P **P 17 02 05.1 -0.4**
SSF pmax pmax
comp=Z,2.0nm,0.5s,mb4.2

SSF	**Saint Saulge**	**82.26**	**316**	*e*P	**P**	**17 02 05.1**	**-0.4**
	comp=Z,1.6nm,0.5s,mb4.1						
LASF	**Ste Croix**	**82.37**	**313**	*e*P	**P**	**17 02 06.3**	**+0.2**
AVF	**Avril sur Loir**	**82.39**	**316**	*e*P	**P**	**17 02 05.7**	**-0.5**
	comp=Z,5.6nm,0.7s,mb4.2						
AVF	**Avril sur Loir**	**82.39**	**316**	*e*P	**P**	**17 02 05.7**	**-0.5**
AVF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
AVF	**Avril sur Loir**	**82.39**	**316**	*e*P	**P**	**17 02 05.7**	**-0.5**
	comp=Z,2.8nm,0.7s,mb4.2						
BGF	**Bois d'Agland**	**82.77**	**316**	*e*P	**P**	**17 02 08.1**	**0.0**
TCF	**Toulx Ste Croi**	**83.24**	**316**	*e*P	**P**	**17 02 10.5**	**-0.1**
MTLF	**Montolieu**	**83.64**	**313**	*e*P	**P**	**17 02 12.1**	**-0.6**
	comp=Z,10nm,1.0s,mb4.3						
MTLF	**Montolieu**	**83.64**	**313**	*e*P	**P**	**17 02 12.1**	**-0.6**
MTLF				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.3						
MTLF	**Montolieu**	**83.64**	**313**	*e*P	**P**	**17 02 12.1**	**-0.6**
	comp=Z,5.2nm,1.0s,mb4.3						
RJF	**Les Rejaudoux**	**83.86**	**315**	*e*P	**P**	**17 02 13.9**	**+0.1**
	comp=Z,5.8nm,0.7s,mb4.2						
RJF	**Les Rejaudoux**	**83.86**	**315**	*e*P	**P**	**17 02 13.9**	**+0.1**
RJF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
RJF	**Les Rejaudoux**	**83.86**	**315**	*e*P	**P**	**17 02 13.9**	**+0.1**
	comp=Z,2.9nm,0.7s,mb4.2						
TAM	**Tamanrasset**	**83.87**	**292**	P	**P**	**17 02 15.4**	**+1.1**
TAM				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.4						
TAM	**Tamanrasset**	**83.87**	**292**	P	**P**	**17 02 15.4**	**+1.1**
	comp=Z,1.6nm,0.3s,mb4.3						
LDF	**La Druitiere**	**84.46**	**318**	*e*P	**P**	**17 02 16.4**	**-0.3**
	comp=Z,6.1nm,0.6s,mb4.3						
LDF	**La Druitiere**	**84.46**	**318**	*e*P	**P**	**17 02 16.4**	**-0.3**
LDF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3						
LDF	**La Druitiere**	**84.46**	**318**	*e*P	**P**	**17 02 16.4**	**-0.3**
	comp=Z,3.0nm,0.6s,mb4.3						
FLN	**La Foliniere**	**84.67**	**318**	*e*P	**P**	**17 02 17.4**	**-0.4**
	comp=Z,3.5nm,0.6s,mb4.2						
FLN	**La Foliniere**	**84.67**	**318**	*e*P	**P**	**17 02 17.4**	**-0.4**
FLN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
FLN	**La Foliniere**	**84.67**	**318**	*e*P	**P**	**17 02 17.4**	**-0.4**
	comp=Z,1.8nm,0.6s,mb4.2						
MFF	**Saint Martin d**	**84.80**	**316**	*e*P	**P**	**17 02 18.2**	**-0.3**
	comp=Z,9.6nm,0.9s,mb4.4						
MFF	**Saint Martin d**	**84.80**	**316**	*e*P	**P**	**17 02 18.2**	**-0.3**
MFF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
MFF	**Saint Martin d**	**84.80**	**316**	*e*P	**P**	**17 02 18.2**	**-0.3**
	comp=Z,4.8nm,0.9s,mb4.4						
ETSF	**Etsaut**	**85.72**	**313**	*e*P	**P**	**17 02 23.4**	**+0.2**
	comp=Z,4.4nm,0.7s,mb4.2						
ETSF	**Etsaut**	**85.72**	**313**	*e*P	**P**	**17 02 23.4**	**+0.2**
ETSF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
ETSF	**Etsaut**	**85.72**	**313**	*e*P	**P**	**17 02 23.4**	**+0.2**
	comp=Z,2.2nm,0.7s,mb4.2						
SGMF	**Saint Gilles**	**86.12**	**318**	*e*P	**P**	**17 02 24.8**	**-0.2**
SJPF	**Ste Jean**	**86.16**	**313**	*e*P	**P**	**17 02 25.6**	**+0.3**
ROSF	**Rostrenen**	**86.57**	**318**	*e*P	**P**	**17 02 27.0**	**-0.2**
QUIF	**Quistinic**	**86.59**	**318**	*e*P	**P**	**17 02 26.7**	**-0.6**
	comp=Z,4.3nm,0.7s,mb4.2						
QUIF	**Quistinic**	**86.59**	**318**	*e*P	**P**	**17 02 26.7**	**-0.6**
QUIF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
QUIF	**Quistinic**	**86.59**	**318**	*e*P	**P**	**17 02 26.7**	**-0.6**
	comp=Z,2.2nm,0.7s,mb4.2						
SYO	**Syowa Base**	**87.46**	**197**⇓	*e*P	**P**	**17 02 30.8**	**-0.2**
SYO	**Syowa Base**	**87.46**	**197**⇓	*e*pP	pP	17 02 53.6	-2.2
MSVF	**Nonsavu**	**88.35**	**108**	*e*P	**P**	**17 02 37.4**	**+1.1**
MSVF				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0						
MSVF	**Nonsavu**	**88.35**	**108**	*e*P	**P**	**17 02 37.4**	**+1.1**
	comp=Z,12nm,0.8s,mb5.0						
ESDC	**Sonseca Array**	**88.86**	**310**	P	**P**	**17 02 38.7**	**+0.3**
	comp=Z,0.8nm,0.5s,mb4.0,baz=62,slow=4.0,SNR=8.1						
ESDC				pP	pP	17 03 02.3	-1.0
	comp=Z,1.3nm,0.7s,baz=53,slow=4.6,SNR=4.2						
TORD	**Torodi Ar. Bea**	**89.06**	**283**	P	**P**	**17 02 40.1**	**+0.4**
	comp=Z,0.4nm,0.5s,mb3.7,baz=76,slow=3.4,SNR=3.9						
TORD				LR	LR	17 42 07.1	
	comp=Z,29nm,19.6s,baz=260,slow=35						
BPAW	**Bear Paw Mtn.**	**91.63**	**23**	*e*P	**P**	**17 02 51.6**	**+0.9**
	comp=Z,2.4nm,0.6s,mb4.6						
ILAR	**Eielson Array**	**92.84**	**22**	P	**P**	**17 02 55.8**	**-0.6**
	comp=Z,1.1nm,0.7s,mb4.3,baz=302,slow=4.6,SNR=16						
ILAR				pP	pP	17 03 19.2	-2.0
	comp=Z,1.0nm,0.7s,baz=305,slow=4.4,SNR=4.7						
ILAR				PP	PP	17 06 43.3	+4.0
	comp=Z,0.3nm,0.6s,baz=296,slow=6.2,SNR=4.1						
ILAR				PKKP	PKKPbc	17 20 06.5	-2.6
	comp=Z,0.3nm,0.4s,baz=144,slow=1.6,SNR=7.4						
ILAR				LR	LR	17 45 34.2	
	comp=Z,37nm,19.2s,baz=278,slow=36						
ILAR	**Eielson Array**	**92.84**	**22**	P	**P**	**17 02 55.8**	**-0.5**
ILAR				*PP	pP	17 03 19.3	-2.0
ILAR						17 06 43.3	
ILAR						17 20 06.6	
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ILAR				MLR	MLR		
	comp=Z,37nm,19.2s						
RES	**Resolute Bay**	**94.99**	**2**	*e*P	**P**	**17 03 06.7**	**+0.7**
RES				*e**SP	sP	17 03 37.0	-4.0
RES				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.8						
RES	**Resolute Bay**	**94.99**	**2**	*e*P	**P**	**17 03 06.7**	**+0.7**
	comp=Z,3.2nm,0.8s,mb4.8						
RES				*e*pP	pP	17 03 28.3	-2.7
RES				*e*sP	sP	17 03 37.0	-4.0
PDAR	**Pinedale Array**	**123.22**	**20**	PKP	PKPdf	17 08 40.9	+0.4
	comp=Z,1.1nm,0.7s,baz=32,slow=1.9,SNR=9.6						
NVAR	**Mina Array Bea**	**123.30**	**29**	PKP	PKPdf	17 08 42.2	+1.4
	comp=Z,2.0nm,0.7s,baz=306,slow=2.3,SNR=18						
ECSD	**EROS Data Cent**	**125.46**	**9**	*e*PKPdf	PKPdf	17 08 45.1	+0.3
MSU	**Marysvale**	**125.96**	**24**	*e*PKIKP	PKPdf	17 08 48.4	+2.5
TXAR	**Lajitas Array**	**137.36**	**22**	PKhKP	PKPpre	17 08 56.6	
	comp=Z,0.1nm,0.5s,baz=11,slow=1.9,SNR=3.5						
TXAR				PKP	PKPdf	17 09 09.0	+1.3
	comp=Z,0.4nm,0.5s,baz=291,slow=0.5,SNR=10						
TXAR				pPKP	pPKPdf	17 09 32.4	-1.3
	comp=Z,0.6nm,0.5s,baz=12,slow=0.2,SNR=5.3						
TXAR				SKP		17 12 34.5	
	comp=Z,4.5nm,0.9s,baz=264,slow=1.7,SNR=26						
TXAR	**Lajitas Array**	**137.36**	**22**	PKP	PKPpre	17 08 56.6	
TXAR				PKP	PKPdf	17 09 09.0	+1.3
TXAR				pPKP	pPKPdf	17 09 32.4	-1.3
TXAR				SKP		17 12 34.5	
PLCA	**Paso Flores**	**146.47**	**203**	PKPbc	PKPbc	17 09 25.9	+0.9
	comp=Z,8.6nm,0.8s,baz=103,slow=1.2,SNR=13						
CPUP	**Villa Florida**	**147.87**	**236**	PKPbc	PKPbc	17 09 29.4	+0.1
	comp=Z,2.6nm,0.6s,baz=84,slow=3.2,SNR=8.1						
CPUP				PKPab	PKPab	17 09 32.0	-0.1
	comp=Z,4.6nm,0.8s,baz=88,slow=3.2,SNR=11						
LPAZ	**La Paz**	**160.83**	**250**	PKP	PKPdf	17 09 45.9	+1.4
	comp=Z,0.6nm,0.6s,baz=82,slow=1.7,SNR=6.1						
LPAZ				PKPab	PKPab	17 10 28.2	+1.0
	comp=Z,0.9nm,0.7s,baz=118,slow=5.6,SNR=4.9						
LPAZ				pPKPab	pPKPab	17 10 54.0	+1.7
	comp=Z,1.2nm,0.8s,baz=190,slow=9.8,SNR=2.3						
LPAZ	**La Paz**	**160.83**	**250**	PKIKP	PKPdf	17 09 45.9	+1.4
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						

IDC ***26*** *17:03:08.4±1.3,30°.70N×103°.53E,h0km,mb3.3/4, mb1 3.4/4,mb1mx3.2/21,mbtmp3.3/4,Error ellipse: s-maj=45.2km s-min=23.8km az=56.0*

ISCJB ***26*** *17:03:10.9±0.8,30°.74N±0°.04×103°.62E±0°.09,h28km±5km, mb3.3/4,Error ellipse: s-maj=12.5km s-min=6.7km az=0.1*

BJI ***26*** *17:03:11.3,30°.75N×103°.50E,h17km,ML3.6/11,Ms3.4/3, Ms7 3.1/2*

ISC 26 17:03:11.1±1.1,30°.74N±0°.04×103°.54E±0°.07,h14km±6km, n10,σ1§10/17,mb3.3/4,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.26**	**48**	Pg	**Pg**	**17 03 15.8**	**-0.7**	
CD2				Sg	**Sg**	**17 03 21.0**	**+0.8**	
CD2				smax				
	comp=N,12μm,0.6s							
CD2				smax				
	comp=E,12μm,0.7s							
GYA	**Guiyang**	**5.07**	**146**	Pn	**Pn**	**17 04 26.8**	**+0.1**	
GYA				Pg	**Pb**	**17 04 39.5**	**-0.1**	
GYA				Sn	**Sn**	**17 05 24.8**	**-0.3**	
GYA				smax				
	comp=N,110nm,1.1s							
GYA				smax				
	comp=E,120nm,1.1s							
LZH	**Lanzhou**	**5.34**	**3**	*e*Pg	**Pb**	**17 04 43.0**	**-1.2**	
LZH				Sg	**Sb**	**17 05 50.5**	**+2.4**	
LZH				smax				
	comp=N,45nm,0.7s							
LZH				smax				
	comp=E,25nm,0.8s							
XAN	**Xi'an**	**5.62**	**53**	Pg	**Pg**	**17 04 55.8**	**-2.8**	
XAN				Sn	**Sn**	**17 05 38.3**	**-0.2**	
XAN				Sg	**Sg**	**17 06 13.0**	**+1.6**	
XAN				smax				
	comp=N,66nm,1.4s							
XAN				smax				
	comp=E,41nm,1.0s							
XAN				LR	LR			
	comp=N,230nm,13.2s							
XAN				LR	LR			
	comp=E,64nm,16.4s							
KMI	**Kunming**	**5.64**	**187**	Pn	**Pn**	**17 04 34.8**	**+0.3**	
KMI				Sn	**Sn**	**17 05 40.8**	**+1.8**	
KMI				LR	LR			
	comp=N,98nm,8.3s							
KMI				LR	LR			
	comp=E,300nm,6.9s							
KMI				LR	LR			
	comp=Z,170nm,6.9s							
KSRS	**Korea Array**	**21.24**	**65**	P	**P**	**17 07 55.8**	**-0.9**	
	comp=Z,1.7nm,0.6s,mb3.6,baz=241,slow=9.9,SNR=10							
MKAR	**Makanchi Array**	**22.94**	**320**	P	**P**	**17 08 15.3**	**+0.6**	
	comp=Z,0.3nm,0.7s,mb2.8,baz=125,slow=9.0,SNR=3.1							
ZALV	**Zalesovo Beam**	**26.84**	**335**	P	**P**	**17 08 49.8**	**-1.1**	
	comp=Z,0.8nm,0.6s,mb3.4,baz=138,slow=9.7,SNR=3.0							
WRA	**Warramunga Arr**	**58.44**	**146**	P	**P**	**17 13 05.7**	**-0.9**	
	baz=326,slow=9.1							
ASAR	**Alice Springs**	**61.43**	**148**	P	**P**	**17 13 27.2**	**+0.2**	
	comp=Z,0.2nm,0.7s,mb3.3,baz=332,slow=7.4,SNR=1.6							

ISCJB ***26*** *17:39:25.8±0.4,21°.54S±0°.03×68°.23W±0°.04,h111km±3km, mb4.7/128,Error ellipse: s-maj=6.3km s-min=4.9km az=42.5*

GUC ***26*** *17:39:27.5±0.8,21°.55S×68°.59W,h138km±9km,ML4.9*

NEIC ***26*** *17:39:29.8±0.2,21°.56S×68°.24W,mb4.7/109,Error ellipse: s-maj=7.6km s-min=4.7km az=224.0*

NEIC Felt [II] at Maria Elena.

LDG ***26*** *17:39:30.2±0.3,20°.88S×68°.19W,h130km,Mb4.8/8,Error ellipse: s-maj=17.6km s-min=9.4km az=11.0*

IDC ***26*** *17:39:30.3±0.7,21°.39S×68°.13W,h135km±5km,mb4.4/12, mb1 4.6/14,mb1mx4.6/16,mbtmp4.5/14,MS3.1/2, Ms1 3.1/2,ms1mx2.9/15,Error ellipse: s-maj=17.8km s-min=12.7km az=54.0*

MOS ***26*** *17:39:31.5±1.2,21°.25S×68°.29W,h153km,mb4.6/38, Error ellipse: s-maj=12.3km s-min=7.1km az=97.5*

BJI ***26*** *17:39:31.8,21°.60S×68°.20W,h136km,mB5.0/8*

ISC 26 17:39:26.3±0.4,21°.55S±0°.03×68°.16W±0°.03,h101km±3km, h138km±1.6km;pP-P,n598,σ0§72/557,mb4.7/128, 145C-150D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**1.33**	**292**	⇑*i*P		**Pn**	**17 39 51.5**	**+0.9**
PB01				*i* S		**Sn**	**17 40 09.3**	**+3.1**
PB01				AML		AML	17 40 11.7	
	comp=E,29μm,0.5s							
PB04	**Plate Boundary**	**1.42**	**240**	⇑*i*P		**Pn**	**17 39 58.1**	**+6.5**
PB04				*i* S		**Sn**	**17 40 21.7**	**+13**
PB04				AML		AML	17 40 34.2	
	comp=N,5μm,0.6s							
MACH	**Maria Elena**	**1.61**	**246**	⇑*i*P		**Pn**	**17 39 54.0**	**0.0**
MACH				*e*S		**Sn**	**17 40 14.3**	**+1.2**
TOCH	**Tocopilla**	**1.97**	**254**	*e*P		**Pn**	**17 39 57.8**	**-0.7**
TOCH				*e*S		**Sn**	**17 40 20.8**	**-0.9**
TOCH				AML		AML	17 40 27.4	
	comp=N,8μm,0.1s							
HMBC	**Humberston**	**2.05**	**308**	⇑*i*P		**Pn**	**17 39 60.0**	**+0.4**
HMBC				*i* S		**Sn**	**17 40 24.6**	**+0.9**
HMBC				AML		AML	17 40 26.4	
	comp=E,18μm,0.3s							
HMBC				AML		AML	17 40 26.6	
	comp=N,19μm,0.6s							
CEN1	**Los Morros**	**2.63**	**225**	*e*P		**Pn**	**17 40 08.7**	**+1.6**
PSGC	**Pisagua**	**2.67**	**316**	⇑*i*P		**Pn**	**17 40 07.5**	**-0.3**
PSGC				*i* S		**Sn**	**17 40 38.7**	**-0.2**
PSGC				AML		AML	17 40 45.2	
	comp=E,6μm,0.7s							
MNMC	**Miæe Miæ**	**2.76**	**331**	*e*P		**Pn**	**17 40 10.9**	**+2.0**
MNMC				*e*S		**Sn**	**17 40 43.0**	**+2.1**
MNMC				AML		AML	17 40 49.9	
	comp=E,6μm,0.2s							
LPAZ	**La Paz**	**5.23**	**0**	P		**Pn**	**17 40 46.9**	**+4.6**
	comp=E,12nm,0.3s,baz=172,slow=7.6,SNR=151							
LPAZ				S		**Sn**	**17 41 42.5**	**+1.1**
	comp=E,2.3nm,0.3s,baz=16,slow=17,SNR=1.2							
LPAZ	**La Paz**	**5.23**	**0**	P		**Pn**	**17 40 46.9**	**+4.7**
LPAZ				S		**Sn**	**17 41 42.5**	**+1.2**
LPAZ				pmax		pmax		
	comp=Z,13nm,0.3s							
LPAZ				smax				
	comp=N,2.0nm,0.3s							
LPAZ	**La Paz**	**5.23**	**0**	*e*Pn		**Pn**	**17 40 46.8**	**+4.6**
	comp=N,38nm,0.6s							
LCO	**Las Campanas**	**7.78**	**197**	*e*Pn		**Pn**	**17 41 11.7**	**-5.0**
	comp=N,87nm,0.7s							
LCO				*e*Sn		**Sn**	**17 42 34.2**	**-8.8**
SIV	**San Ignacio**	**8.70**	**52**	P		**Pn**	**17 41 29.7**	**+0.3**
	comp=N,56nm,0.3s,baz=245,slow=13,SNR=396							
SIV				S		**Sn**	**17 43 03.7**	**-2.0**
	baz=139,slow=21,SNR=3.8							
CPUP	**Villa Florida**	**10.99**	**118**	P		**Pn**	**17 42 01.6**	**+1.2**
	comp=N,1.4nm,0.3s,baz=277,slow=11,SNR=24							
CPUP				LR		LR	17 47 27.9	
	comp=N,98nm,20.5s,baz=286,slow=43							
CPUP	**Villa Florida**	**10.99**	**118**	P		**Pn**	**17 42 01.7**	**+1.3**
CPUP				pmax		pmax		
	comp=Z,1.0nm,0.3s							
CPUP				MLR		MLR		
	comp=Z,98nm,20.5s							
TRQA	**Tornquist**	**17.30**	**163**	*e*Pn		**Pn**	**17 43 20.4**	**-0.9**
	comp=Z,22nm,0.8s							
TRQA				*e*			17 44 02.1	
ATAH	**Atahualpa**	**17.41**	**324**	P		**Pn**	**17 43 26.8**	**+3.9**
	comp=Z,0.2nm,0.3s,baz=170,slow=20,SNR=3.5							
PLCA	**Paso Flores**	**19.23**	**186**	P		**P**	**17 43 41.7**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=4.6,slow=14,SNR=15							
PLCA	**Paso Flores**	**19.23**	**186**	P		**P**	**17 43 41.7**	**-0.7**
PLCA				pmax		pmax		
	comp=Z,1.0nm,0.3s							
PLCA	**Paso Flores**	**19.23**	**186**	P		**P**	**17 43 41.7**	**-0.7**
OTAV	**Otavalo**	**23.87**	**334**	*e*P		**P**	**17 44 30.7**	**+0.1**
	comp=Z,6.5nm,0.8s,mb4.0							
ROSC	**El Rosal**	**26.93**	**346**	LR		LR	17 56 21.2	
	comp=Z,49nm,19.9s,baz=16,slow=38							
FDF	**Fort de France**	**36.71**	**11**	*e*P		**P**	**17 46 23.3**	**-0.4**
FDF				pmax		pmax		
	comp=Z,45nm,0.8s,mb5.5							
FDF	**Fort de France**	**36.71**	**11**	*e*P		**P**	**17 46 23.3**	**-0.4**
	comp=Z,45nm,0.8s,mb5.5							
SJG	**San Juan**	**39.47**	**3**	P		**P**	**17 46 44.7**	**-2.2**
	comp=Z,7.9nm,0.3s,mb5.0,baz=19,slow=22,SNR=4.2							
SJG	**San Juan**	**39.47**	**3**	P		**P**	**17 46 44.7**	**-2.2**
SJG				pmax		pmax		
	comp=Z,8.0nm,0.3s							
ANWB	**Willy Bob**	**39.47**	**10**	*e*P		**P**	**17 46 42.2**	**-4.7**
	comp=Z,61nm,0.6s,mb5.6							
MTDJ	**Mount Denham**	**40.58**	**346**	P		**P**	**17 46 53.5**	**-2.6**
CMIG	**Matias Romero**	**46.48**	**324**	P		**P**	**17 47 43.5**	**0.0**
	comp=Z,11nm,0.9s,mb4.6,baz=101,slow=3.2,SNR=10.0							
DWPF	**Disney**	**51.01**	**345**	*e*P		**P**	**17 48 17.7**	**-0.2**
	comp=Z,34nm,1.1s,mb5.3							
GOGA	**Godfrey**	**56.57**	**345**	*e*P		**P**	**17 48 56.9**	**-1.5**
GOGA				pmax		pmax		
	comp=Z,2.0nm,0.6s,mb4.3							
GOGA	**Godfrey**	**56.57**	**345**	*e*P		**P**	**17 48 56.9**	**-1.5**
	comp=Z,2.1nm,0.6s,mb4.3							
JSC	**Jenkinsville**	**56.90**	**347**	*e*P		**P**	**17 49 00.1**	**-0.6**
LRAL	**Lakeview Retre**	**57.18**	**341**	*e*P		**P**	**17 49 01.3**	**-1.4**
	comp=Z,5.9nm,0.7s,mb4.7							
HKT	**Hockley**	**57.71**	**332**	*e*P		**P**	**17 49 06.4**	**-0.1**
HKT				pmax		pmax		
	comp=Z,6.0nm,0.9s,mb4.6							
HKT	**Hockley**	**57.71**	**332**	*e*P		**P**	**17 49 06.3**	**-0.2**
	comp=Z,6.3nm,0.9s,mb4.7							
SWET	**Sewanee**	**58.92**	**343**	*e*P		**P**	**17 49 13.6**	**-1.3**
OXF	**Oxford**	**59.30**	**340**	*e*P		**P**	**17 49 15.5**	**-1.9**
OXF				pmax		pmax		
	comp=Z,47nm,0.9s,mb5.5							
OXF	**Oxford**	**59.30**	**340**	*e*P		**P**	**17 49 15.5**	**-1.9**
	comp=Z,47nm,0.9s,mb5.5							
ELN	**Prospectdale**	**59.65**	**348**	*e*P		**P**	**17 49 19.8**	**-0.1**
JCT	**Junction City**	**60.00**	**328**	*e*P		**P**	**17 49 21.8**	**-0.6**
JCT				pmax		pmax		
	comp=Z,25nm,0.8s,mb5.3							
JCT	**Junction City**	**60.00**	**328**	*e*P		**P**	**17 49 21.8**	**-0.6**
	comp=Z,25nm,0.8s,mb5.3							
VNA1	**Neumayer--Stat**	**60.01**	**161**	*e*P		**P**	**17 49 19.8**	**-2.1**
WVT	**Waverly**	**60.31**	**342**	*e*P		**P**	**17 49 22.4**	**-1.9**
WVT				pmax		pmax		
	comp=Z,35nm,0.9s,mb5.4							
WVT	**Waverly**	**60.31**	**342**	*e*P		**P**	**17 49 22.4**	**-1.9**
	comp=Z,35nm,0.9s,mb5.4							
UALR	**University of**	**60.54**	**337**	*e*P		**P**	**17 49 24.5**	**-1.4**
	comp=Z,15nm,0.9s,mb5.0							
MIAR	**Mount Ida**	**60.79**	**336**	*e*P		**P**	**17 49 26.4**	**-1.3**
MIAR				pmax		pmax		
	comp=Z,25nm,1.1s,mb5.2							
MIAR	**Mount Ida**	**60.79**	**336**	*e*P		**P**	**17 49 26.4**	**-1.3**
	comp=Z,25nm,1.1s,mb5.2							
UTMT	**University of**	**60.81**	**341**	*e*P		**P**	**17 49 26.5**	**-1.2**
	comp=Z,109nm,0.8s,mb5.9							
627A	**Terlingua Ranc**	**61.01**	**325**	P		**P**	**17 49 28.9**	**-0.4**
	baz=61,SNR=15							
TXAR	**Lajitas Array**	**61.07**	**325**	P		**P**	**17 49 28.9**	**-0.8**
	comp=Z,2.8nm,0.7s,mb4.4,baz=149,slow=8.8,SNR=37							
TXAR	**Lajitas Array**	**61.07**	**325**	P		**P**	**17 49 28.9**	**-0.7**
TXAR				pmax		pmax		
	comp=Z,3.0nm,0.7s							
528A	**Cox Ranch, San**	**61.25**	**326**	⇓P		**P**	**17 49 30.0**	**-0.8**
	baz=62,SNR=10							
PARMO	**Parma**	**61.38**	**340**	*e*P		**P**	**17 49 30.7**	**-0.9**
626A	**Big Bend Ranch**	**61.49**	**324**	⇑P		**P**	**17 49 32.3**	**-0.2**
	baz=62,SNR=36							
428A	**Kincaid Ranch,**	**61.65**	**326**	⇓P		**P**	**17 49 33.0**	**-0.5**
	baz=62,SNR=9.6							
527A	**Woodward Ranch**	**61.68**	**325**	⇑P		**P**	**17 49 32.9**	**-0.8**
	baz=62,SNR=16							
WCI	**Wyandotte Cave**	**61.85**	**344**	*e*P		**P**	**17 49 32.6**	**-2.1**
WCI				pmax		pmax		
	comp=Z,25nm,0.8s,mb5.3							
WCI	**Wyandotte Cave**	**61.85**	**344**	*e*P		**P**	**17 49 32.6**	**-2.2**
	comp=Z,25nm,0.8s,mb5.3							
MCWV	**Mont Chateau**	**61.86**	**350**	*e*P		**P**	**17 49 34.4**	**-0.3**
	comp=Z,18nm,0.8s,mb5.2							
526A	**Mary Lane Ranc**	**61.87**	**325**	⇓P		**P**	**17 49 34.5**	**-0.5**
	baz=62,SNR=19							
427A	**Hayter Ranch,**	**62.12**	**326**	⇑P		**P**	**17 49 36.1**	**-0.6**
	baz=62,SNR=9.3							
SIUC	**Southern Illin**	**62.19**	**341**	*e*P		**P**	**17 49 35.6**	**-1.3**
	comp=Z,29nm,0.8s,mb5.4							
328A	**Wristen Ranch,**	**62.24**	**327**	⇑P		**P**	**17 49 36.7**	**-0.7**
	baz=62,SNR=11							
426A	**McDonald Obser**	**62.31**	**325**	⇑P		**P**	**17 49 36.8**	**-1.1**
	baz=62,SNR=9.7							
326A	**Caldwell Ranch**	**62.79**	**326**	⇑P		**P**	**17 49 40.5**	**-0.7**
	baz=63,SNR=9.7							
BLO	**Bloomington**	**62.80**	**344**	*e*P		**P**	**17 49 39.4**	**-1.6**
BLO				pmax		pmax		
	comp=Z,12nm,0.8s,mb4.9							
BLO	**Bloomington**	**62.80**	**344**	*e*P		**P**	**17 49 39.4**	**-1.6**
	comp=Z,12nm,0.8s,mb4.9							
FVM	**French Village**	**62.81**	**340**	*e*P		**P**	**17 49 39.6**	**-1.5**
FVM				pmax		pmax		
	comp=Z,63nm,1.0s,mb5.5							
FVM	**French Village**	**62.81**	**340**	*e*P		**P**	**17 49 39.6**	**-1.5**
	comp=Z,63nm,1.0s,mb5.5							
425A	**Indio Mountain**	**62.91**	**325**	⇓P		**P**	**17 49 41.5**	**-0.5**
	baz=63,SNR=22							
ACSO	**Alum Creek Sta**	**62.99**	**347**	*e*P		**P**	**17 49 40.5**	**-1.8**
	comp=Z,28nm,0.9s,mb5.2							
WMOK	**Wichita Mounta**	**63.09**	**332

baz=67,SNR=10
V25A **Rancho No Teng** 66.70 328 ⇑P P 17 50 06.0 -0.4
baz=67,SNR=9.5
U26A **Atchley Ranch,** 66.72 329 ⇑P P 17 50 05.6 -1.0
baz=67,SNR=10
Y21A **Point of Rocks** 66.84 325 ⇓P P 17 50 07.1 -0.2
baz=67,SNR=14
LAZ **Ladron** 66.86 326 eP P 17 50 07.4 -0.1
comp=Z,11nm,1.6s,mb4.4
ANMO **Albuquerque** 66.93 326 eP P 17 50 07.7 -0.2
ANMO pmax pmax
comp=Z,6.0nm,0.7s
ANMO **Albuquerque** 66.93 326 eP P 17 50 07.7 -0.2
comp=Z,6.5nm,0.7s,mb4.6
W23A **Werner Place,** 66.93 327 ⇓P P 17 50 08.0 +0.1
baz=67,SNR=7.4
V24A **Rampart Ranch,** 66.93 328 ⇑P P 17 50 07.6 -0.3
baz=67,SNR=10
217A **Green Valley** 66.93 321 ⇑P P 17 50 07.7 -0.3
baz=67,SNR=9.7
U25A **Circle Dot Ran** 67.05 329 ⇑P P 17 50 08.5 -0.1
baz=67,SNR=12
118A **Homack Ranch,** 67.08 322 ⇓P P 17 50 09.0 0.0
baz=67
Y20A **Horse Springs,** 67.14 324 ⇓P P 17 50 10.0 +0.8
baz=67,SNR=10
Z19A **T-Link Ranch,** 67.17 323 ⇑P P 17 50 10.0 +0.5
baz=67
W22A **Albuquerque** 67.23 326 ⇓P P 17 50 11.0 +1.1
baz=68
X21A **Alamocita Cree** 67.23 325 ⇑P P 17 50 10.6 +0.7
baz=68,SNR=8.5
JFWS **Jewell Farm** 67.29 343 eP P 17 50 07.9 -2.1
JFWS pmax pmax
comp=Z,19nm,0.9s,mb4.9
JFWS **Jewell Farm** 67.29 343 eP P 17 50 07.9 -2.1
comp=Z,19nm,0.9s,mb4.9
V23A **Ortiz Mt. (NFS** 67.40 327 ⇓P P 17 50 11.0 +0.1
baz=68,SNR=7.6
Z18A **Geronimo** 67.44 323 ⇓P P 17 50 12.1 +0.9
baz=68
117A **Oracle** 67.47 322 ⇑P P 17 50 11.9 +0.5
baz=68,SNR=13
216A **Three Points,** 67.47 321 ⇑P P 17 50 12.0 +0.6
baz=68,SNR=7.4
T25A **Trinidad** 67.64 329 ⇑P P 17 50 12.6 +0.2
baz=68
Y19A **Nutrioso** 67.66 324 P P 17 50 13.8 +1.3
baz=68,SNR=24
W21A **San Fidel** 67.67 326 ⇓P P 17 50 13.4 +0.8
baz=68
X20A **Quemado** 67.69 325 ⇓P P 17 50 13.4 +0.7
baz=68,SNR=6.1
LIC **Lamto** 67.74 73 eP P 17 50 13.3 -0.2
comp=Z,68nm,1.4s,mb5.3
V22A **San Miguel Ran** 67.90 327 ⇓P P 17 50 14.7 +0.7
baz=68
TIC **Toumodi** 67.93 73 eP P 17 50 14.0 -0.7
comp=Z,7.7nm,0.2s,mb5.2
TIC **Toumodi** 67.93 73 eP P 17 50 14.0 -0.7
TIC pmax pmax
comp=Z,8.0nm,0.2s,mb5.2
Y18A **Canyon Day Jun** 67.95 323 ⇓P P 17 50 14.7 +0.3
baz=68
116A **Eloy** 68.02 321 ⇓P P 17 50 14.8 0.0
baz=68
X19A **St. Johns** 68.03 324 ⇓P P 17 50 14.2 -0.7
baz=68
KIC **Kosan Boka** 68.05 73 eP P 17 50 15.5 0.0
comp=Z,12nm,0.5s,mb5.0
S25A **Robets Cordova** 68.07 330 ⇑P P 17 50 15.0 0.0
baz=68,SNR=12
DBIC **Dimbokro** 68.08 73 P P 17 50 15.6 -0.1
comp=Z,9.7nm,0.8s,mb4.7,baz=200,slow=8.8,SNR=10.0
DBIC **Dimbokro** 68.08 73 P P 17 50 15.6 -0.1
DBIC pmax pmax
comp=Z,10.0nm,0.8s
DBIC **Dimbokro** 68.08 73 eP P 17 50 15.0 -0.6
comp=Z,13nm,0.9s,mb4.8
W20A **Ramah** 68.13 325 ⇓P P 17 50 15.9 +0.4
baz=68
U22A **Llaves** 68.24 327 ⇓P P 17 50 17.2 +1.1
baz=68
214A **Organ Pipe Nat** 68.24 320 P P 17 50 17.2 +0.9
baz=68,SNR=9.2
T23A **Casias Ranch,** 68.34 328 ⇓P P 17 50 17.6 +0.8
baz=69
Y17A **Roosevelt** 68.35 323 P P 17 50 17.7 +0.8
baz=69,SNR=12
S24A **Houchin Ranch,** 68.42 329 P P 17 50 18.1 +0.9
baz=69,SNR=8.7
Z16A **Peralta Trail,** 68.42 322 ⇑P P 17 50 17.6 +0.2
baz=69
X18A **Snowflake** 68.47 324 ⇓P P 17 50 18.1 +0.5
baz=69
W19A **Sanders** 68.59 325 ⇓P P 17 50 18.9 +0.6
baz=69,SNR=7.1
V20A **Brimhall** 68.62 326 ⇓P P 17 50 18.9 +0.4
baz=69,SNR=5.2
QSPA **South Pole Qui** 68.64 180 eP P 17 50 18.2 +0.2
comp=Z,27nm,0.9s,mb5.1
SDCO **Great Sand Dun** 68.64 329 eP P 17 50 18.5 -0.1
comp=Z,19nm,1.1s,mb4.8
U21A **Nageezi** 68.69 327 ⇑P P 17 50 19.3 +0.4
baz=69,SNR=5.3
T22A **Edith** 68.76 327 ⇓P P 17 50 20.0 +0.7
baz=69
W18A **Petrified Fore** 68.79 324 ⇓P P 17 50 20.4 +0.8
baz=69
X17A **Forest Lakes** 68.80 323 ⇑P P 17 50 20.8 +1.1
baz=69
Z15A **Gila River Ind** 68.81 321 ⇓P P 17 50 19.9 +0.2
baz=69
R24A **Sanders Place,** 68.84 330 P P 17 50 20.5 +0.7
baz=69,SNR=13
Y16A **Circle Bar Ran** 68.84 322 ⇑P P 17 50 20.2 +0.2
baz=69,SNR=6.8
114A **Black Gap (USA** 68.85 321 ⇑P P 17 50 20.2 +0.1
baz=69
V19A **Window Rock** 68.86 325 ⇑P P 17 50 20.6 +0.5
baz=69,SNR=10
T21A **Navajo Lake** 69.06 327 ⇓P P 17 50 21.7 +0.5
baz=69,SNR=5.1
U20A **Newcomb** 69.09 326 ⇓P P 17 50 21.4 0.0
baz=69,SNR=6.7
X16A **Lo Mia Camp, P** 69.22 323 ⇑P P 17 50 21.8 -0.4
baz=69,SNR=9.5
S22A **4UR Ranch, Cre** 69.29 328 P P 17 50 23.0 +0.4
baz=70,SNR=6.5
V18A **Ganado** 69.34 325 ⇑P P 17 50 22.9 0.0
baz=70
U19A **Dine' College,** 69.39 325 ⇓P P 17 50 22.7 -0.6
baz=70
113A **Mohawk Valley,** 69.39 320 ⇓P P 17 50 22.6 -0.7
baz=70
Y15A **Casa Rosa Ranc** 69.39 322 ⇓P P 17 50 22.7 -0.6
baz=70,SNR=7.8
P25A **Willow Gulch B** 69.44 331 ⇑P P 17 50 23.1 -0.4
baz=70,SNR=8.1
Q24A **Divide** 69.45 330 ⇓P P 17 50 23.9 +0.3
baz=70,SNR=8.7
Z13A **Yuma Proving G** 69.63 320 ⇑P P 17 50 24.4 -0.4
baz=70
R22A **Saguache, Gunn** 69.63 328 ⇑P P 17 50 25.3 +0.6
baz=70
T19A **Beclabito** 69.70 326 P P 17 50 25.6 +0.4
baz=70,SNR=6.6
X15A **Humboldt** 69.72 322 P P 17 50 26.3 +1.0
baz=70,SNR=11
V17A **Tonalea, Kykot** 69.74 324 ⇓P P 17 50 25.8 +0.3
baz=70,SNR=14
W16A **Flagstaff** 69.76 323 ⇑P P 17 50 26.4 +0.8
baz=70
Y14A **Wickenburg** 69.77 321 ⇓P P 17 50 26.0 +0.4
baz=70,SNR=9.9
U18A **Rough Rock, Ch** 69.83 325 ⇑P P 17 50 25.8 -0.2
baz=70,SNR=9.3
O25A **Wiggins** 69.91 331 ⇓P P 17 50 26.9 +0.5
baz=70
ECSD **EROS Data Cent** 70.02 338 eP P 17 50 25.6 -1.3
comp=Z,11nm,1.1s,mb4.6
X14A **Yava** 70.08 322 ⇓P P 17 50 27.4 -0.1
baz=70,SNR=16
P23A **Jefferson** 70.10 330 ⇓P P 17 50 28.2 +0.7
baz=70,SNR=6.6
S20A **Disappointment** 70.12 327 ⇓P P 17 50 27.8 +0.1
baz=70,SNR=6.7
R21A **Cimarron** 70.13 328 ⇓P P 17 50 27.9 +0.1
baz=70
Y13A **Salome** 70.16 321 ⇓P P 17 50 28.8 +0.8
baz=70,SNR=7.0
Q22A **Crested Butte,** 70.20 329 ⇑P P 17 50 28.5 +0.3
baz=70
W15A **Williams** 70.23 323 ⇑P P 17 50 29.0 +0.5
baz=70,SNR=5.4
U16A **Tuba City** 70.31 324 ⇓P P 17 50 29.1 +0.2
baz=70,SNR=6.9
ISCO **Idaho Springs** 70.33 330 eP P 17 50 29.1 +0.1
ISCO pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
ISCO **Idaho Springs** 70.33 330 eP P 17 50 29.1 +0.1
comp=Z,3.3nm,0.6s,mb4.3
T18A **Mexican Hat** 70.38 326 ⇑P P 17 50 29.2 -0.1
baz=71
R20A **Redvale** 70.41 327 ⇓P P 17 50 30.1 +0.7
baz=71,SNR=12
S19A **Harvey Farm, M** 70.45 327 ⇑P P 17 50 29.8 +0.1
baz=71,SNR=9.0
PV01 **Paradox Valley** 70.46 327 eP P 17 50 30.2 +0.5
SMCO **Snowmass** 70.48 329 eP P 17 50 30.8 +0.9
comp=Z,5.1nm,0.5s,mb4.6
Q21A **Lamborn Mesa,** 70.51 328 ⇓P P 17 50 30.4 +0.3
baz=71
V15A **Kaibab Nationa** 70.65 323 ⇓P P 17 50 31.2 +0.2
baz=71,SNR=17
P22A **Eagle** 70.71 329 ⇑P P 17 50 31.2 0.0
baz=71
X13A **Yucca** 70.71 321 ⇓P P 17 50 31.6 +0.2
baz=71,SNR=13
W14A **Seligman** 70.72 322 ⇓P P 17 50 32.4 +1.0
baz=71,SNR=10
DVTC **Desert V Tower** 70.73 318 ⇓P P 17 50 31.7 +0.1
baz=71,SNR=6.0
SWSC **Sam W. Stewart** 70.74 319 ⇓P P 17 50 31.4 -0.1
baz=71
T17A **Navajo Res., N** 70.76 325 ⇓P P 17 50 32.4 +0.7
baz=71,SNR=14
S18A **Hurst Farm, Bl** 70.85 326 P P 17 50 33.2 +1.0
baz=71,SNR=12
R19A **Curley Farm, L** 70.93 327 ⇓P P 17 50 32.8 +0.2
baz=71
Q20A **Ridgley Place,** 70.95 328 ⇓P P 17 50 32.6 -0.1
baz=71
P21A **Newcastle** 70.98 329 ⇓P P 17 50 33.2 +0.3
baz=71
BC3 **Big Chuckawall** 71.02 320 ⇓P P 17 50 33.6 +0.3
baz=71,SNR=16
V14A **Boquillas Ranc** 71.04 323 ⇑P P 17 50 34.2 +0.9
baz=71,SNR=20
O22A **Kremmling** 71.06 330 P P 17 50 33.5 +0.2
baz=71,SNR=14
MONP **Monument Peak** 71.09 318 ⇑P P 17 50 34.0 +0.3
baz=71,SNR=7.0
BAR **Barrett** 71.10 318 eP P 17 50 34.2 +0.4
comp=Z,17nm,0.9s,mb4.9
W13A **Hualapai Mount** 71.10 322 ⇑P P 17 50 34.2 +0.4
baz=71
U15A **North Rim** 71.15 324 ⇓P P 17 50 35.0 +1.0
baz=71,SNR=18
IRM **Iron Mountain** 71.19 320 ⇑P P 17 50 34.2 0.0
baz=71,SNR=11
R18A **Canyonlands Na** 71.33 326 ⇓P P 17 50 35.1 +0.1
baz=72,SNR=7.6
N23A **Red Feather La** 71.36 331 ⇓P P 17 50 34.8 -0.4
baz=72,SNR=7.0
P20A **De Beque** 71.42 328 ⇑P P 17 50 35.9 +0.3
baz=72,SNR=5.1
Q19A **Hogan Spring (** 71.44 327 ⇑P P 17 50 36.3 +0.6
baz=72,SNR=14
N22A **Wattenberg Ran** 71.52 330 ⇓P P 17 50 36.8 +0.7
baz=72
O21A **Pagoda** 71.53 329 ⇓P P 17 50 36.7 +0.5
baz=72
BELC **Belle Mtn. Jos** 71.58 320 ⇑P P 17 50 36.6 -0.1
baz=72,SNR=8.4
PFO **Pinyon Flat Ob** 71.59 319 ⇑P P 17 50 36.8 +0.1
baz=72,SNR=7.7
PFO **Pinyon Flat Ob** 71.59 319 eP P 17 50 37.4 +0.6
PFO pmax pmax
comp=Z,11nm,1.1s,mb4.6
PFO **Pinyon Flat Ob** 71.59 319 eP P 17 50 37.4 +0.6
comp=Z,12nm,1.1s,mb4.6
T15A **Red Dirt Ranch** 71.63 324 ⇑P P 17 50 37.6 +0.7
baz=72,SNR=17
U14A **Mt Trumbull** 71.64 323 ⇑P P 17 50 36.9 0.0
baz=72,SNR=22
V13A **Grand Canyon W** 71.69 322 P P 17 50 38.0 +0.8
baz=72,SNR=22
S16A **Weppner Ranch,** 71.72 325 ⇓P P 17 50 37.4 -0.1
baz=72,SNR=6.4
R17A **Hanksville Air** 71.77 326 ⇑P P 17 50 37.7 0.0
baz=72,SNR=12
W12A **Cal Nev Ari** 71.81 321 ⇓P P 17 50 38.2 +0.2
baz=72
P19A **Cripple Cowboy** 71.82 328 P P 17 50 38.8 +0.9
baz=72,SNR=27
O20A **White River Ci** 71.84 329 ⇓P P 17 50 38.5 +0.5
baz=72,SNR=6.1
GMRC **Granite Mounta** 71.92 320 ⇑P P 17 50 39.1 +0.4
baz=72,SNR=20
N21A **Black Mountain** 71.98 330 ⇓P P 17 50 39.3 +0.4
baz=72
Q18A **Rafter H Ranch** 71.99 327 ⇑P P 17 50 39.0 0.0
baz=72
T14A **Hurricane** 72.05 324 ⇓P P 17 50 39.7 +0.3
baz=72,SNR=13
R16A **Teasdale** 72.08 325 ⇓P P 17 50 38.5 -1.1
baz=72
V12A **Nephi** 72.10 322 ⇓P P 17 50 39.5 -0.2
baz=72,SNR=11
S15A **Panguitch** 72.10 324 ⇑P P 17 50 40.0 +0.3
baz=72
SRU **San Rafael** 72.20 327 P P 17 50 40.7 +0.5
baz=72,SNR=20
SRU **San Rafael** 72.20 327 eP P 17 50 40.6 +0.4
HEC **Hector,Ludlow** 72.35 320 ⇑P P 17 50 42.1 +0.8
baz=73,SNR=14
Q16A **Castle Valley** 72.39 326 ⇑P P 17 50 41.9 +0.5
baz=73,SNR=6.4
N20A **Spence Gulch,** 72.39 329 ⇓P P 17 50 41.5 +0.2
baz=73,SNR=8.9
O19A **Miners Draw (B** 72.40 328 ⇑P P 17 50 41.2 -0.2
baz=73,SNR=13
U12A **Valley of Fire** 72.42 322 ⇓P P 17 50 42.2 +0.6
baz=73,SNR=10
P18A **Preston Nutter** 72.44 327 ⇓P P 17 50 42.1 +0.5
baz=73,SNR=19
R15A **Junction** 72.45 325 ⇑P P 17 50 42.4 +0.7
baz=73,SNR=5.9
T13A **Saint George** 72.48 323 ⇓P P 17 50 42.3 +0.4
baz=73,SNR=11
V11A **Goodsprings** 72.52 321 ⇑P P 17 50 42.5 +0.3
baz=73,SNR=5.4
TUQ **Turquoise Moun** 72.53 321 ⇑P P 17 50 42.1 -0.2
baz=73,SNR=5.7
CCUT **Cedar City** 72.56 324 eP P 17 50 43.9 +1.5
comp=Z,31nm,0.9s,mb5.1
M21A **Separation Pea** 72.58 330 ⇓P P 17 50 42.9 +0.5
baz=73
P17A **Butcher Ranch,** 72.58 327 ⇑P P 17 50 42.6 +0.1
baz=73
S14A **Cedar City** 72.60 324 ⇓P P 17 50 43.1 +0.5
baz=73
MSU **Marysvale** 72.61 325 eP P 17 50 43.5 +0.8
TMUT **Trail Mountain** 72.69 326 eP P 17 50 43.5 +0.4
comp=Z,13nm,0.9s,mb4.8
BFSC **Mount Baldy Ra** 72.76 319 ⇓P P 17 50 43.0 -0.6
baz=73,SNR=6.9
ARUT **Antelope Range** 72.77 324 eP P 17 50 45.0 +1.3
ARUT pmax pmax
comp=Z,26nm,0.9s,mb5.1
ARUT **Antelope Range** 72.77 324 eP P 17 50 45.0 +1.3
comp=Z,26nm,0.9s,mb5.1
O18A **Roosevelt** 72.81 328 ⇓P P 17 50 43.4 -0.4
baz=73
S13A **Holt Ranch, En** 72.85 323 ⇑P P 17 50 43.6 -0.6
baz=73,SNR=14
L21A **Rawlins** 72.86 330 ⇓P P 17 50 44.2 +0.1
baz=73
M20A **Sweetwater, Wa** 72.87 330 ⇓P P 17 50 43.8 -0.4
baz=73,SNR=5.7
N19A **John Jarvie Ra** 72.88 329 ⇓P P 17 50 43.7 -0.5
baz=73,SNR=12
GSC **Goldstone** 72.96 320 ⇑P P 17 50 44.1 -0.7
baz=73,SNR=7.2
GSC **Goldstone** 72.96 320 eP P 17 50 45.6 +0.8
GSC pmax pmax
comp=Z,15nm,1.3s,mb4.7
GSC **Goldstone** 72.96 320 eP P 17 50 45.6 +0.8
comp=Z,15nm,1.3s,mb4.7
Q15A **Fillmore** 73.08 325 ⇑P P 17 50 45.2 -0.2
baz=73
O17A **Robinson Place** 73.12 327 ⇓P P 17 50 46.0 +0.3
baz=73,SNR=24
RSSD **Black Hills** 73.14 334 eP P 17 50 45.1 -0.6
RSSD pmax pmax
comp=Z,6.0nm,1.0s,mb4.4
RSSD **Black Hills** 73.14 334 eP P 17 50 45.1 -0.6
comp=Z,5.8nm,1.0s,mb4.4
L20A **Wamsutter** 73.34 330 ⇑P P 17 50 47.4 +0.5
baz=74
R13A **O'Grain Ranch,** 73.34 324 ⇓P P 17 50 46.8 -0.2
baz=74,SNR=8.4
T11A **Corn Creek, Al** 73.38 322 ⇑P P 17 50 47.0 -0.3
baz=74,SNR=16
EDW2 **Edwards Air Fo** 73.39 319 ⇑P P 17 50 47.2 -0.2
baz=74,SNR=9.5
U10A **Ash Meadows, A** 73.44 321 ⇑P P 17 50 48.0 +0.4
baz=74
P15A **Leamington** 73.45 326 ⇑P P 17 50 47.8 +0.3
baz=74
O16A **Springville** 73.52 327 ⇑P P 17 50 48.4 +0.4
baz=74,SNR=6.4
BLG **Lagna Peak** 73.54 318 ⇑P P 17 50 48.0 -0.3
baz=74
DAU **Daniels Canyon** 73.55 327 eP P 17 50 49.0 +0.8
DAU pmax pmax
comp=Z,11nm,0.7s,mb4.7
DAU **Daniels Canyon** 73.55 327 eP P 17 50 49.0 +0.9
comp=Z,11nm,0.7s,mb4.7
Q14A **Sevier Lake (B** 73.55 325 ⇑P P 17 50 48.7 +0.5
baz=74,SNR=24
LRMC **Laurel Mountai** 73.61 320 ⇑P P 17 50 49.4 +0.8
baz=74
NLU **North Lily Min** 73.62 326 eP P 17 50 49.6 +0.9
comp=Z,9.6nm,1.2s,mb4.4
M18A **Lyman** 73.72 328 P P 17 50 48.9 -0.2
baz=74,SNR=7.9
N17A **Moffit Pass** 73.73 328 ⇓P P 17 50 49.6 +0.3
baz=74,SNR=17
JLU **Jordanelle** 73.78 327 eP P 17 50 50.0 +0.4
comp=Z,21nm,1.0s,mb4.8
FURC **Furnace Creek,** 73.79 321 ⇓P P 17 50 50.4 +0.7
baz=74,SNR=11
R12A **Pony Springs,** 73.80 324 ⇑P P 17 50 50.2 +0.5
baz=74,SNR=17
BSC **Santa Cruz Isl** 73.82 317 ⇑P P 17 50 49.8 -0.1
baz=74
AGMN **Agassiz Nation** 73.83 341 eP P 17 50 48.5 -1.1
comp=Z,12nm,1.0s,mb4.6
K20A **Yellowstone Ra** 73.85 330 P P 17 50 49.7 -0.2
baz=74,SNR=12
P14A **Drum Mountains** 73.88 325 ⇓P P 17 50 50.9 +0.8
baz=74,SNR=19
MPMC **Manual Prospec** 73.88 320 ⇑P P 17 50 50.1 -0.1
baz=74,SNR=11
L19A **Farson** 73.89 329 ⇓P P 17 50 50.2 +0.1
baz=74,SNR=8.7
Q13A **Wheeler Ranch,** 73.93 324 ⇓P P 17 50 51.2 +0.8
baz=74,SNR=8.3
S11A **Rachel** 73.96 322 ⇑P P 17 50 50.2 -0.5
baz=74
M17A **Scullys Gap (B** 74.05 328 ⇓P P 17 50 51.0 0.0
baz=74
L18A **Fontenelle, Gr** 74.08 329 ⇓P P 17 50 51.1 -0.2
baz=74,SNR=8.0
DUG **Dugway** 74.18 326 eP P 17 50 51.8 -0.1
DUG pmax pmax
comp=Z,14nm,1.0s,mb4.7
DUG **Dugway** 74.18 326 eP P 17 50 51.8 -0.1
comp=Z,14nm,1.0s,mb4.6
ISA **Isabella** 74.21 319 ⇑P P 17 50 52.4 +0.2
baz=74,SNR=14
K19A **Absolon Red Bu** 74.21 330 P P 17 50 52.0 0.0
baz=74,SNR=6.7
R11A **Troy Canyon, C** 74.36 323 ⇓P P 17 50 53.0 0.0
baz=75,SNR=12
Q12A **Willow Creek R** 74.43 324 ⇓P P 17 50 53.5 +0.2
baz=75,SNR=5.7
CWC **Cottonwood Cre** 74.49 320 ⇓P P 17 50 53.8 0.0
baz=75,SNR=6.4
PDAR **Pinedale Array** 74.50 330 P P 17 50 53.4 -0.3
comp=Z,1.7nm,0.5s,mb4.0,baz=128,slow=7.0,SNR=12
PDAR pP pP 17 51 26.6 +7.1
comp=Z,0.6nm,0.4s,baz=78,slow=14,SNR=1.9
N15A **Stansbury Isla** 74.54 327 ⇑P P 17 50 54.4 +0.5
baz=75
HWUT **Hardware Ranch** 74.59 328 eP P 17 50 54.0 -0.2
comp=Z,16nm,0.8s,mb4.8
L17A **Cokeville** 74.62 328 ⇓P P 17 50 54.5 +0.1
baz=75,SNR=8.2
K18A **Toltan Ranch,** 74.63 329 ⇑P P 17 50 55.2 +0.8
baz=75,SNR=8.0
S10A **Tonopah Range,** 74.63 322 ⇓P P 17 50 55.1 +0.6
baz=75,SNR=13
VES **Vestal, Richgr** 74.69 319 ⇓P P 17 50 55.2 +0.3
baz=75,SNR=5.1
R10A **Warm Springs** 74.72 323 ⇑P P 17 50 56.1 +1.0
baz=75,SNR=17
Q11A **Duckwater** 74.75 323 ⇓P P 17 50 55.7 +0.5
baz=75,SNR=15
P12A **McGill** 74.78 324 ⇑P P 17 50 55.7 +0.4
baz=75
BGU **Big Grassy Mou** 74.83 326 eP P 17 50 55.7 +0.1
comp=Z,13nm,1.2s,mb4.5
N14A **Grayback Hills** 74.86 326 ⇓P P 17 50 56.0 +0.3
baz=75,SNR=11
M15A **Larsen Ranch,** 74.93 327 ⇑P P 17 50 56.3 +0.1
baz=75,SNR=15
J18A **Kendall Valley** 75.06 330 ⇓P P 17 50 56.7 -0.2
baz=75,SNR=18
RCTC **Rector, Farmer** 75.10 319 ⇑P P 17 50 56.8 -0.5
baz=75
K17A **Gardner Place,** 75.14 329 ⇓P P 17 50 57.3 0.0
baz=75,SNR=9.0
Q10A **Clear Creek Ra** 75.15 323 ⇓P P 17 50 58.7 +1.2
baz=75,SNR=5.6
AHID **Auburn Hatcher** 75.23 329 eP P 17 50 57.8 -0.1
comp=Z,27nm,0.9s,mb5.0
O12A **Currie** 75.26 325 ⇑P P 17 50 58.5 +0.4
baz=76,SNR=17
L15A **Malad City** 75.30 327 ⇑P P 17 50 58.1 -0.2
baz=76,SNR=18
HVU **Hansel Valley** 75.33 327 eP P 17 50 57.8 -0.6
HVU pmax pmax
comp=Z,11nm,0.9s,mb4.6
HVU **Hansel Valley** 75.33 327 eP P 17 50 57.8 -0.6
comp=Z,11nm,0.9s,mb4.6
I18A **Diamond G Ranc** 75.34 330 ⇑P P 17 50 58.6 +0.1
baz=76,SNR=6.2
M14A **Sheep Mountain** 75.42 327 ⇓P P 17 50 58.8 -0.1
baz=76,SNR=10
J17A **Brown Place, J** 75.50 329 ⇑P P 17 50 59.4 0.0
baz=76,SNR=8.5
K16A **Soda Springs** 75.52 329 ⇓P P 17 51 00.5 +0.9
baz=76,SNR=19
REDW **Red Top Meadow** 75.57 329 eP P 17 51 00.1 +0.3
comp=Z,15nm,1.1s,mb4.6
SNOW **Snow King Moun** 75.60 329 eP P 17 51 00.3 +0.3
comp=Z,16nm,1.0s,mb4.7
LOHW **Long Hollow** 75.64 330 eP P 17 51 00.3 +0.1
comp=Z,7.8nm,0.7s,mb4.5
TPAW **Teton Pass** 75.71 329 eP P 17 51 00.5 -0.1
comp=Z,19nm,1.0s,mb4.8
L14A **Malta** 75.75 327 ⇑P P 17 51 00.6 -0.2
baz=76,SNR=20
RRI2 **Red Ridge** 75.78 329 eP P 17 51 00.6 -0.4
comp=Z,24nm,0.9s,mb4.9
I17A **Pilgrim Ck.** 75.86 330 ⇓P P 17 51 00.9 -0.5
baz=76
K15A **Arbon** 75.87 328 ⇑P P 17 51 02.0 +0.4
baz=76,SNR=9.5
DCID1 **Drake Creek** 75.90 329 eP P 17 51 00.8 -0.9
SBA **Scott Base** 75.90 190 eP P 17 51 02.2 +0.9
NVAR **Mina Array Bea** 75.96 322 P P 17 51 02.6 +0.5
comp=Z,5.6nm,0.8s,mb4.4,baz=158,slow=7.1,SNR=38
NVAR pP pP 17 51 37.3 +9.2
comp=Z,0.8nm,0.6s,baz=139,slow=7.3,SNR=1.6
IMW **Indian Meadow** 76.01 330 eP P 17 51 02.8 +0.5
comp=Z,15nm,0.9s,mb4.7
SCHQ **Schefferville** 76.08 1 P P 17 51 01.2 -1.2
comp=Z,6.7nm,0.7s,mb4.5,baz=169,slow=4.4,SNR=7.6
K14A **Jones Ranch, D** 76.09 327 ⇓P P 17 51 03.0 +0.2
baz=76

L13A Double Diamond 76.15 327 ⇑P P 17 51 03.5 +0.4
baz=76,SNR=11
M12A Wells 76.17 326 ⇓P P 17 51 03.7 +0.4
baz=76,SNR=8.3
RLMT Red Lodge 76.19 331 *eP* **P 17 51 03.2 -0.1**
comp=Z,9.3nm,0.9s,mb4.5
SYO Syowa Base 76.21 159⇑ *eP* **P 17 51 01.6 -1.6**
I16A Newdale 76.26 329 ⇓P P 17 51 04.3 +0.6
baz=76,SNR=9.1
J15A Blackfoot 76.36 328 ⇓P P 17 51 04.8 +0.5
baz=77,SNR=15
G18A Lazy EL Ranch, 76.47 331 ⇓P P 17 51 04.8 0.0
baz=77,SNR=14
K13A Stover Farm, H 76.63 327 ⇑P P 17 51 06.2 +0.4
baz=77
M11A Holland Ranch, 76.64 325 ⇓P P 17 51 06.3 +0.3
baz=77,SNR=7.8
TORD Torodi Ar. Bea 76.72 70 P **P 17 51 06.7 -0.2**
comp=Z,21nm,0.9s,mb4.9,baz=254,slow=5.5,SNR=112
TORD pP pP 17 51 41.2 +8.4
comp=Z,8.0nm,0.7s,baz=252,slow=5.5,SNR=5.6
L12A House Creek Ra 76.74 326 ⇓P P 17 51 06.9 +0.5
baz=77
H16A Russell Place, 76.77 330 ⇑P P 17 51 07.2 +0.7
baz=77,SNR=6.0
I15A Monteview 76.83 329 ⇓P P 17 51 07.7 +0.8
baz=77,SNR=12
J14A Carey 76.83 328 ⇑P P 17 51 07.9 +0.9
baz=77,SNR=20
GCMT Greycliff 76.88 332 *eP* **P 17 51 07.3 +0.1**
comp=Z,12nm,0.9s,mb4.6
GCMT *e* 17 53 50.1
CMB Columbia Colle 76.92 320 *eP* **P 17 51 06.9 -0.7**
CMB pmax pmax
comp=Z,6.0nm,1.0s,mb4.3
CMB Columbia Colle 76.92 320 *eP* **P 17 51 06.9 -0.6**
comp=Z,6.3nm,1.0s,mb4.3
F18A Big Timber 76.99 332 ⇓P P 17 51 07.8 0.0
baz=77,SNR=24
G17A Pierce Place, 77.00 331 ⇓P P 17 51 07.9 0.0
baz=77
M10A I.L. Ranch, Tu 77.10 325 ⇓P P 17 51 08.8 +0.3
baz=77
L11A Cat Creek Ranc 77.14 326 P **P 17 51 09.3 +0.6**
baz=77,SNR=14
J13A Cove Ranch, Pi 77.22 327 ⇓P P 17 51 09.7 +0.6
baz=78,SNR=5.5
I14A Mackay 77.25 328 ⇓P P 17 51 09.7 +0.4
baz=78,SNR=15
H15A Lima 77.36 329 ⇓P P 17 51 10.1 +0.2
baz=78
WCN Washoe City 77.39 321 ⇑P P 17 51 10.6 +0.5
baz=78
F17A Fitzpatrick Pl 77.42 331 P **P 17 51 10.9 +0.7**
baz=78,SNR=13
G16A Moss Hill, Enn 77.42 330 ⇑P P 17 51 10.5 +0.3
baz=78
HLID Hailey 77.45 327 *eP* **P 17 51 11.1 +0.7**
comp=Z,21nm,1.0s,mb4.8
I13A Wildhorse Cree 77.56 328 P **P 17 51 12.2 +1.2**
baz=78,SNR=17
E18A Harlowton 77.59 332 ⇑P P 17 51 10.8 -0.3
baz=78,SNR=7.8
MCMT McKenzie Canyo 77.62 329 *eP* **P 17 51 12.1 +0.8**
comp=Z,7.6nm,0.9s,mb4.4
G15A Dillon 77.70 330 ⇓P P 17 51 11.7 -0.1
baz=78,SNR=11
H14A Leadore 77.71 329 ⇓P P 17 51 12.4 +0.6
baz=78,SNR=9.1
F16A Kennard Place, 77.76 330 ⇑P P 17 51 12.0 -0.1
baz=78
DLMT Dillon 77.90 330 *eP* **P 17 51 13.1 +0.2**
comp=Z,8.8nm,1.0s,mb4.4
E17A Martinsdale 77.93 331 ⇑P P 17 51 13.2 +0.2
baz=78,SNR=11
SUR Sutherland 77.95 120 *eP* **P 17 51 14.9 +1.3**
comp=Z,28nm,1.2s,mb4.9
I12A Atlanta 77.98 327 ⇑P P 17 51 13.5 +0.2
baz=78,SNR=19
D18A Linhart Farms, 78.03 332 ⇓P P 17 51 13.1 -0.5
baz=78
MFID Camas Ranch 78.07 327 ⇑P P 17 51 14.3 +0.5
baz=78,SNR=8.7
H13A Challis 78.10 328 ⇓P P 17 51 14.3 +0.3
baz=78,SNR=36
LRM Limekiln Ridge 78.17 330 *eP* **P 17 51 14.4 +0.1**
comp=Z,18nm,0.8s,mb4.9
F15A Butte 78.20 330 ⇑P P 17 51 15.0 +0.4
baz=78,SNR=7.5
E16A East Helena 78.35 331 ⇓P P 17 51 15.6 +0.3
baz=79
D17A Six Diamond Ra 78.38 332 ⇑P P 17 51 15.4 -0.1
baz=79,SNR=10
H12A Diamond D Ranc 78.39 328 P **P 17 51 16.4 +0.8**
baz=79,SNR=22
G13A Cobalt 78.48 329 P **P 17 51 17.0 +0.9**
baz=79,SNR=85
HRY Holter Researc 78.56 331 *eP* **P 17 51 17.0 +0.5**
comp=Z,7.0nm,0.9s,mb4.5
F14A Wisdom 78.59 330 ⇓P P 17 51 17.7 +1.0
baz=79,SNR=7.8
D16A Dana Ranch, Ca 78.67 331 ⇓P P 17 51 17.3 +0.3
baz=79,SNR=22
E15A Deer Lodge 78.71 330 ⇑P P 17 51 16.7 -0.6
baz=79,SNR=10
C17A Wharram Farm, 78.78 332 ⇑P P 17 51 16.9 -0.8
baz=79,SNR=6.2
WVOR Wild Horse Val 78.86 324 *eP* **P 17 51 18.4 +0.2**
WVOR pmax pmax
comp=Z,5.0nm,0.9s,mb4.3
WVOR Wild Horse Val 78.86 324 *eP* **P 17 51 18.4 +0.1**
comp=Z,5.0nm,0.9s,mb4.3
B18A Beardsley Farm 78.95 333 ⇓P P 17 51 18.5 -0.1
baz=79
F13A Darby 79.03 329 ⇓P P 17 51 19.6 +0.5
baz=79,SNR=37
G12A Big Creek, Yel 79.04 328 ⇑P P 17 51 18.6 -0.5
baz=79
E14A Clinton 79.10 330 ⇑P P 17 51 19.9 +0.5
baz=79,SNR=6.2
B17A L&G Farms, Che 79.31 333 ⇑P P 17 51 20.4 -0.1
baz=80
C16A Fuhringer Ranc 79.34 332 ⇑P P 17 51 20.3 -0.4
baz=80,SNR=9.1
TSUM Tsumeb 79.36 106 *eP* **P 17 51 21.9 +0.3**
comp=Z,12nm,0.8s,mb4.8
A18A Metzger Ranch, 79.39 333 ⇓P P 17 51 20.2 -0.8
baz=80
J08A Circle Bar Ran 79.41 325 ⇓P P 17 51 20.8 -0.4
baz=80,SNR=7.7
MOD Modoc 79.42 323 *eP* **P 17 51 21.3 0.0**
comp=Z,17nm,0.9s,mb4.9
E13A Victor 79.44 330 ⇑P P 17 51 21.4 +0.1
baz=80,SNR=9.7
F12A Elk City 79.45 329 P **P 17 51 21.6 +0.2**
baz=80,SNR=7.8
D14A Greenough 79.60 330 ⇑P P 17 51 22.3 +0.2
baz=80
MSO Missoula 79.61 330 *eP* **P 17 51 21.9 -0.2**
comp=Z,3.3nm,1.0s,mb4.1
C15A Salmond Ranch, 79.70 331 ⇑P P 17 51 23.1 +0.4
baz=80
A17A Triple J Farms 79.76 333 ⇑P P 17 51 22.8 -0.2
baz=80
BMO Blue Mountains 79.83 327 *eP* **P 17 51 23.4 -0.1**
comp=Z,14nm,0.9s,mb4.8
WDC Whiskeytown Da 79.84 321 *eP* **P 17 51 22.1 -1.5**
WDC pmax pmax
comp=Z,12nm,0.7s,mb4.8
WDC Whiskeytown Da 79.84 321 *eP* **P 17 51 22.1 -1.5**
comp=Z,12nm,0.7s,mb4.8
D13A Huson 80.05 330 ⇓P P 17 51 24.2 -0.3
baz=80,SNR=10
E12A Beaver Dam Sad 80.08 329 ⇑P P 17 51 24.3 -0.4
baz=80,SNR=6.9
B15A Bradely Ranch, 80.09 332 ⇑P P 17 51 23.7 -1.0
baz=80,SNR=15
SWMT Swartz Lake 80.14 330 *eP* **P 17 51 24.7 -0.3**
comp=Z,3.1nm,0.8s,mb4.2
A16A West Butte Ran 80.15 333 ⇓P P 17 51 24.6 -0.4
baz=80
C14A Swan Lake 80.21 331 ⇓P P 17 51 25.5 +0.1
baz=80
K05A Summer Lake 80.30 323 ⇓P P 17 51 26.7 +0.7
baz=80,SNR=19
D12A Red Ives Fores 80.44 329 ⇓P P 17 51 26.4 -0.2
baz=81
B14A Marquette Ranc 80.44 331 ⇓P P 17 51 26.0 -0.6
baz=81
I07A Izee 80.45 325 ⇑P P 17 51 27.2 +0.4
baz=81,SNR=23
C13A Hot Springs 80.53 330 ⇓P P 17 51 27.2 +0.1
baz=81,SNR=9.5
F10A Beach Ranch, E 80.58 328 P **P 17 51 27.8 +0.3**
baz=81,SNR=11
A15A Johnson Ranch, 80.66 332 ⇓P P 17 51 26.5 -1.3
baz=81
YBH Yreka Blue Hor 80.68 322 *eP* **P 17 51 26.6 -1.4**
YBH pmax pmax
comp=Z,5.0nm,1.0s
YBH Yreka Blue Hor 80.68 322 *eP* **P 17 51 26.6 -1.4**
comp=Z,5.0nm,1.0s,mb4.3
BSMT Bassoo Peak 80.75 330 *eP* **P 17 51 28.6 +0.3**
comp=Z,8.8nm,1.0s,mb4.5
PFVI Vila Bisbo 80.80 44 *eP* **P 17 51 29.7 +0.9**
comp=Z,49nm,1.2s,mb5.2
A14A Double T Ranch 80.96 332 ⇓P P 17 51 28.6 -0.8
baz=81,SNR=5.5
G08A Pilot Rock 80.98 326 ⇓P P 17 51 29.4 -0.2
baz=81,SNR=7.2
B13A Whitefish 80.99 331 ⇑P P 17 51 29.6 +0.1
baz=81,SNR=8.2
PTEO Sao Teotonio 81.11 44 *eP* **P 17 51 30.5 +0.1**
comp=Z,26nm,1.8s,mb4.8
WALA Waterton Lakes 81.24 332 *eP* **P 17 51 30.5 -0.4**
comp=Z,0.4nm,0.9s
FFC Flin Flon 81.30 341 *i* P **P 17 51 30.9 -0.1**
FFC Flin Flon 81.30 341 *eP* **P 17 51 30.0 -1.1**
comp=Z,3.3nm,0.8s,mb4.2
A13A Flathead Natio 81.37 331 ⇓P P 17 51 31.4 -0.2
baz=82
C11A Tepee Creek (N 81.43 330 ⇓P P 17 51 31.4 -0.5
baz=82
PBDV Barranco-do-Ve 81.44 44 *eP* **P 17 51 29.4 -2.8**
comp=Z,35nm,1.8s,mb4.9
PCVE Castro Verde 81.60 44 *eP* **P 17 51 34.3 +1.3**
comp=Z,16nm,1.6s,mb4.6
G06A Carlson Farm, 81.82 326 ⇑P P 17 51 33.0 -1.0
baz=82
PBEJ Beja 81.94 44 *eP* **P 17 51 36.0 +1.2**
comp=Z,14nm,1.8s,mb4.5
HAWA Hanford 82.03 327 *eP* **P 17 51 34.6 -0.4**
comp=Z,14nm,0.9s,mb4.8
RSW Rattlesnake Hi 82.06 327 *eP* **P 17 51 35.5 +0.3**
EVO Evora 82.13 43 *eP* **P 17 51 35.4 -0.4**
comp=Z,12nm,1.0s,mb4.4
NEW Newport 82.14 329 *eP* **P 17 51 33.5 -2.1**
NEW pmax pmax
comp=Z,3.0nm,0.8s
NEW Newport 82.14 329 *eP* **P 17 51 33.5 -2.1**
comp=Z,2.7nm,0.8s,mb4.1
D08A Wollman Farm, 82.17 328 ⇓P P 17 51 35.5 -0.4
baz=82
OD2 Odessa Site #2 82.30 328 *eP* **P 17 51 36.4 0.0**
comp=Z,39nm,1.0s,mb5.2
C09A Chrisman Ranch 82.37 329 ⇑P P 17 51 36.8 -0.1
baz=83,SNR=11
PBAR Barrancos 82.56 44 *eP* **P 17 51 39.0 +1.0**
comp=Z,12nm,1.8s,mb4.4
EMIN Mina Concepcio 82.56 45 P **P 17 51 38.8 +0.7**
comp=Z,2.5nm,0.6s,mb4.2
PESTR Estremoz 82.60 43 *eP* **P 17 51 42.2 +4.0**
comp=Z,16nm,2.3s,mb4.4
ESPR Espera 82.60 46 P **P 17 51 40.0 +1.7**
comp=Z,1.5nm,0.4s,mb4.2
EJIF Jimena Fronter 82.63 46 P **P 17 51 40.1 +1.6**
EJIF pmax pmax
comp=Z,2.0nm,0.4s,mb4.3
EJIF Jimena Fronter 82.63 46 P **P 17 51 40.1 +1.6**
comp=Z,2.1nm,0.4s,mb4.3
BOSA Boshof 82.81 118 P **P 17 51 40.0 +0.3**
comp=Z,13nm,0.8s,mb4.8,baz=253,slow=4.4,SNR=19
BOSA Boshof 82.81 118 P **P 17 51 40.0 +0.3**
BOSA pmax pmax
comp=Z,13nm,0.8s,mb4.8
EBAD Badajoz 82.90 44 P **P 17 51 40.8 +1.0**
comp=Z,1.2nm,0.7s,mb3.8
F04A Amboy 83.22 325 ⇓P P 17 51 40.3 -1.0
baz=84
ETW Entiat 83.25 327 *eP* **P 17 51 41.1 -0.2**
comp=Z,30nm,0.9s,mb5.1
B08A Colville Reser 83.27 328 ⇓P P 17 51 41.0 -0.4
baz=84
ELOJ Sierra Loja 83.89 46 P **P 17 51 46.0 +1.1**
ELOJ pmax pmax
comp=Z,2.0nm,0.4s,mb4.3
ELOJ Sierra Loja 83.89 46 P **P 17 51 46.0 +1.1**
comp=Z,2.2nm,0.4s,mb4.3
PVRL Vila Real 83.91 41 *eP* **P 17 51 45.7 +0.8**
comp=Z,20nm,1.8s,mb4.7
ELUQ Luque 84.04 46 P **P 17 51 46.9 +1.2**
ELUQ pmax pmax
comp=Z,1.0nm,0.2s,mb4.3
ELUQ Luque 84.04 46 P **P 17 51 46.9 +1.2**
comp=Z,0.9nm,0.2s,mb4.2
ELOB Lobios 84.04 41 P **P 17 51 46.0 +0.5**
comp=Z,1.0nm,0.6s,mb3.8
MAW Mawson 84.08 163 P **P 17 51 45.8 +0.3**
comp=Z,14nm,1.0s,mb4.8,baz=221,slow=5.9,SNR=7.8
MAW Mawson 84.08 163 P **P 17 51 45.8 +0.3**
MAW pmax pmax
comp=Z,14nm,1.0s
EDM Edmonton 84.10 335 *eP* **P 17 51 43.6 -2.0**
EADA Adamuz 84.16 45 P **P 17 51 47.3 +1.0**
comp=Z,1.4nm,0.6s,mb4.0
TAM Tamanrasset 84.22 63 *eP* **P 17 51 46.9 0.0**
TAM pmax pmax
comp=Z,4.0nm,1.0s,mb4.2
TAM Tamanrasset 84.22 63 *eP* **P 17 51 46.9 -0.1**
comp=Z,4.3nm,1.0s,mb4.2
EPLA Plasencia 84.24 43 P **P 17 51 47.5 +0.9**
EPLA pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
EPLA Plasencia 84.24 43 P **P 17 51 47.5 +0.9**
comp=Z,1.9nm,0.6s,mb4.1
MVO Moncorvo 84.27 42 *eP* **P 17 51 47.1 +0.4**
comp=Z,20nm,1.1s,mb4.8
MVO Moncorvo 84.27 42 P **P 17 51 47.3 +0.6**
LBTB Lobatse 84.37 115 *eP* **P 17 51 47.6 -0.2**
LBTB pmax pmax
comp=Z,14nm,0.8s,mb4.8
LBTB Lobatse 84.37 115 *eP* **P 17 51 47.6 -0.1**
comp=Z,14nm,0.8s,mb4.9
B06A Malemount 84.44 328 ⇑P P 17 51 46.5 -0.9
baz=85
JCW Jim Creek 84.44 327 *eP* **P 17 51 46.0 -1.5**
comp=Z,10nm,0.4s,mb5.0
EBAN Banos Encina 84.69 46 P **P 17 51 50.3 +1.4**
EBAN pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
EBAN Banos Encina 84.69 46 P **P 17 51 50.3 +1.4**
comp=Z,2.8nm,0.6s,mb4.4
NLWA Neilton Lookou 84.92 326 P **P 17 51 49.5 -0.3**
comp=Z,4.3nm,0.3s,mb4.9
EQES Quesada 84.97 46 P **P 17 51 49.8 -0.6**
comp=Z,0.9nm,0.9s,mb3.7
PAB San Pablo 85.06 44 *eP* **P 17 51 51.3 +0.5**
PAB pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
PAB San Pablo 85.06 44 *eP* **P 17 51 51.3 +0.5**
comp=Z,8.3nm,0.9s,mb4.7
ESDC Sonseca Array 85.38 44 P **P 17 51 53.0 +0.6**
comp=Z,2.3nm,0.8s,mb4.2,baz=242,slow=4.4,SNR=13
ESDC Sonseca Array 85.38 44 P **P 17 51 52.0 -0.4**
comp=Z,1.8nm,0.8s,mb4.0
ESLA Sonseca Array 85.38 44 *eP* **P 17 51 52.8 +0.4**
comp=Z,1.7nm,1.0s,mb3.9
EPON Pontenova 85.44 40 P **P 17 51 52.6 +0.1**
comp=Z,1.1nm,0.5s,mb4.0
GUD Guadarrama 85.78 43 P **P 17 51 54.4 +0.1**
comp=Z,0.4nm,0.3s,mb3.8
EVIA Vianos 85.79 46 P **P 17 51 55.9 +1.5**
EVIA pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
EVIA Vianos 85.79 46 P **P 17 51 55.9 +1.4**
comp=Z,2.6nm,0.5s,mb4.4
ETOB Tobarra 86.43 46 P **P 17 51 57.7 +0.2**
comp=Z,2.5nm,0.6s,mb4.3
ETOR Torete 87.23 44 P **P 17 52 01.5 +0.1**
ETOR pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
ETOR Torete 87.23 44 P **P 17 52 01.5 +0.1**
comp=Z,2.7nm,0.6s,mb4.3
SJPF Ste Jean 88.95 42 *eP* **P 17 52 09.1 -0.4**
ETSF Etsaut 89.26 43 *eP* **P 17 52 11.1 +0.2**
EPF Esparros 89.89 43 *eP* **P 17 52 13.7 -0.2**
QUIF Quistinic 90.32 38 *eP* **P 17 52 15.5 -0.2**
SGMF Saint Gilles 90.84 37 *eP* **P 17 52 17.5 -0.7**
LFF La Frestale 91.09 42 *eP* **P 17 52 19.7 +0.3**
comp=Z,13nm,0.7s,mb4.9
LFF La Frestale 91.09 42 *eP* **P 17 52 19.7 +0.3**
LFF pmax pmax
comp=Z,7.0nm,0.7s,mb4.9
LFF La Frestale 91.09 42 *eP* **P 17 52 19.7 +0.3**
comp=Z,6.7nm,0.7s,mb4.9
MTLF Montolieu 91.24 43 *eP* **P 17 52 19.4 -0.8**
MFF Saint Martin d 91.39 40 *eP* **P 17 52 20.1 -0.7**
comp=Z,13nm,1.0s,mb4.7
MFF Saint Martin d 91.39 40 *eP* **P 17 52 20.1 -0.7**
MFF pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
MFF Saint Martin d 91.39 40 *eP* **P 17 52 20.1 -0.7**
comp=Z,6.7nm,1.0s,mb4.7
YKA Yellowknife Ar 91.47 340 P **P 17 52 20.0 -0.7**
comp=Z,14nm,0.5s,mb5.3,baz=134,slow=4.5,SNR=64
YKA Yellowknife Ar 91.47 340 P **P 17 52 20.0 -0.7**
YKA pmax pmax
comp=Z,14nm,0.5s
RJF Les Rejaudoux 91.75 41 *eP* **P 17 52 21.8 -0.7**
GRR Gorron 91.88 38 *eP* **P 17 52 22.5 -0.5**
comp=Z,15nm,1.1s,mb4.8
GRR Gorron 91.88 38 *eP* **P 17 52 22.5 -0.5**
GRR pmax pmax
comp=Z,8.0nm,1.1s,mb4.9
GRR Gorron 91.88 38 *eP* **P 17 52 22.5 -0.5**
comp=Z,7.7nm,1.1s,mb4.8
CAF Calviac 91.91 42 *eP* **P 17 52 22.6 -0.6**
LDF La Druitiere 92.41 38 *eP* **P 17 52 24.2 -1.2**
LASF Ste Croix 92.64 43 *eP* **P 17 52 26.4 -0.2**
TCF Toulx Ste Croi 92.65 41 *eP* **P 17 52 25.8 -0.8**
BGF Bois d'Agland 93.17 41 *eP* **P 17 52 27.9 -1.1**
SSF Saint Saulge 93.80 41 *eP* **P 17 52 31.4 -0.5**
SMF Signal de Mont 93.81 41 *eP* **P 17 52 32.2 +0.2**
comp=Z,6.5nm,0.9s,mb4.7
SMF Signal de Mont 93.81 41 *eP* **P 17 52 32.2 +0.2**
SMF pmax pmax
comp=Z,3.0nm,0.9s,mb4.6
SMF Signal de Mont 93.81 41 *eP* **P 17 52 32.2 +0.2**
comp=Z,3.3nm,0.9s,mb4.7
LOR Lormes 94.11 41 *eP* **P 17 52 32.2 -1.1**
comp=Z,2.5nm,0.6s,mb4.5
LOR Lormes 94.11 41 *eP* **P 17 52 32.2 -1.1**
LOR pmax pmax
comp=Z,1.0nm,0.6s,mb4.3
LOR Lormes 94.11 41 *eP* **P 17 52 32.2 -1.1**
comp=Z,1.3nm,0.6s,mb4.4
ANN Anapa 115.76 50 *i* PKIKP PKPdf 17 57 57.7 +0.9
ANN pmax pmax
comp=Z,33nm,1.2s
OBN Obninsk 115.78 38⇑ *i* PKIKP PKPdf 17 57 58.1 +1.6
OBN *e* 17 59 05.3
OBN *e* 18 04 25.3
OBN pmax pmax
comp=Z,6.0nm,0.6s
KIV Kislovodsk 119.47 51⇑ *i* PKIKP PKPdf 17 58 06.3 +2.3
KIV *e* 18 04 51.4
KIV *e*PS PS 18 09 18.4 +1.1
KIV *e*SS SS 18 16 00.3 +18
KIV pmax pmax
comp=Z,4.0nm,0.5s
BILL Bilibino 122.82 339⇓ *i* PKIKP PKPdf 17 58 09.7 0.0
BILL *e* 17 59 47.9
BILL *e* 18 04 57.4
BILL pmax pmax
comp=Z,4.0nm,1.4s
CTA Charters Tower 126.67 221 PKP PKPdf 17 58 17.4 -1.3
comp=Z,0.9nm,0.6s,baz=212,slow=23,SNR=3.8
CTA Charters Tower 126.67 221 PKIKP PKPdf 17 58 17.4 -1.2
CTA pmax pmax
comp=Z,1.0nm,0.6s
ARU Arti 127.80 34 *i* PKIKP PKPdf 17 58 19.9 +0.3
ARU 18 00 23.5
TIXI Tiksi 128.93 353 *i* PKIKP PKPdf 17 58 24.8 +3.5
ASAR Alice Springs 130.19 207 PKP PKPdf 17 58 24.3 -0.9
comp=Z,4.9nm,0.9s,baz=130,slow=2.3,SNR=24
ASAR Alice Springs 130.19 207 PKIKP PKPdf 17 58 24.3 -1.0
ASAR pmax pmax
comp=Z,5.0nm,0.9s
SEY Seymchan 130.42 337⇑ *i* PKIKP PKPdf 17 58 24.6 +0.2
ABKAR Akbulak array 130.72 43 *e*PKPdf PKPdf 17 58 25.5 +0.2
PETK Petropavlovsk- 133.01 324 PKP PKPdf 17 58 29.4 -0.2
comp=Z,2.9nm,0.9s,baz=66,slow=2.7,SNR=6.5
PETK Petropavlovsk- 133.01 324 PKIKP PKPdf 17 58 29.4 -0.2
PETK pmax pmax
comp=Z,3.0nm,0.9s
PETK Petropavlovsk- 133.01 324 PKP PKPdf 17 58 29.4 -0.2
BRVK Borovoye 135.37 35 *i* PKIKP PKPdf 17 58 35.6 +1.6
BVAR Borovoye Array 135.44 35 PKP PKPdf 17 58 33.8 -0.3
comp=Z,1.6nm,0.8s,baz=223,slow=21,SNR=7.2
BVAR Borovoye Array 135.44 35 PKIKP PKPdf 17 58 33.8 -0.3
BVAR pmax pmax
comp=Z,2.0nm,0.8s
FITZ Fitzroy Crossi 138.34 200 PKP PKPdf 17 58 40.0 -0.6
comp=Z,3.5nm,0.8s,baz=180,slow=5.6,SNR=5.4
KAKA Kakadu 140.40 213 *e*PKPdf PKPdf 17 58 41.0 -3.4
KURK Kurchatov 140.99 34 *e*PKIKP PKPdf 17 58 42.1 -2.3
ZALV Zalesovo Beam 141.70 26 PKhKP PKPpre 17 58 39.7
comp=Z,3.3nm,0.6s,baz=310,slow=2.8,SNR=11
ZALV PKP PKPdf 17 58 45.9 +0.3
comp=Z,2.1nm,0.4s,baz=305,slow=3.8,SNR=10
ZALV PKiKP PKiKP 17 58 48.2 -0.2
comp=Z,2.2nm,0.3s,baz=293,slow=1.9,SNR=8.3
ZALV pPKP pPKPdf 17 59 20.8 +7.4
comp=Z,1.4nm,0.6s,baz=278,slow=3.0,SNR=2.3
ZALV Zalesovo Beam 141.70 26 PKHKP PKPpre 17 58 39.7
ZALV 17 58 45.9
ZALV pmax pmax
comp=Z,3.0nm,0.6s
ZALV pmax pmax
comp=Z,2.0nm,0.4s
ZALV pmax pmax
comp=Z,2.0nm,0.4s
ZALV pmax pmax
comp=Z,1.0nm,0.6s
ZALV Zalesovo Beam 141.70 26 PKP PKPpre 17 58 39.7
ZALV PKP PKPdf 17 58 45.9 +0.3
ZALV PKPdf PKPdf 17 58 48.2 +2.6
ZALV pPKP pPKPdf 17 59 20.8 +7.4
EKS2 Erkin-Say 141.93 48 *e*PKIKP PKPdf 17 58 45.7 -0.6
YSS Yuzh-Sakhalins 144.40 323 *e*PKIKP PKPdf 17 58 48.0 -2.6
KSH Kashi 144.59 51 PKP PKPdf 17 58 50.5 -0.6
KSH PKS 18 02 25.3
KSH AMB AMB
comp=Z,140nm,5.4s
KSH LR LR
comp=N,120nm,5.8s
KSH LR LR
comp=E,140nm,7.1s
KSH LR LR
comp=Z,130nm,5.7s
MKAR Makanchi Array 145.26 36 PKPbc PKPbc 17 58 51.9 -0.1
comp=Z,12nm,0.8s,baz=322,slow=0.8,SNR=102
MKAR pPKP pPKPdf 17 59 25.7 +5.8
comp=Z,4.4nm,0.7s,baz=316,slow=3.3,SNR=5.7
MKAR Makanchi Array 145.26 36 PKPbc PKPbc 17 58 51.9 -0.1
MKAR pPKP pPKPdf 17 59 25.7 +5.8
ASAJ Asahikawa 146.05 319 PKPbc PKPbc 17 58 54.2 -0.2
comp=Z,7.4nm,0.8s,baz=161,slow=1.4,SNR=10
ERM Erimo 146.74 315 *e*PKP2 PKPab 17 58 57.0 -1.0
HABR Khabarovsk 147.34 331 *e*PKIKP PKPdf 17 58 55.3 -0.2
HABR *e* 18 02 22.9
HABR *e*PPP 18 05 39.5
HABR *e* 18 14 57.6
HABR pmax pmax
comp=E,9.0nm,0.9s
HABR pmax pmax
comp=N,6.0nm,0.8s
HABR pmax pmax
comp=Z,23nm,1.1s
KLR Kul'dur 148.16 335 *e*PKHKP PKPpre 17 58 53.7
WMQ Urumqi 150.10 36 *e*P PKPbc 17 59 05.5 +0.3
WMQ Urumqi 150.10 36 *e*PKPbc PKPdf 17 58 59.3 -0.8
ZAK Zakamensk 150.45 11 *e*PKIKP PKPdf 17 59 01.1 +0.6
MJAR Matsushiro Arr 152.64 309 PKPbc PKPbc 17 59 10.5 -0.8
comp=Z,4.9nm,1.0s,baz=79,slow=1.8,SNR=20
MAJO Matsushiro 152.65 309 *e*PKIKP PKPbc 17 59 10.4 -1.0
SONM Songino Array 153.41 8 PKP PKPdf 17 59 03.8 -1.2
comp=Z,2.3nm,0.9s,baz=213,slow=5.0,SNR=3.1
SONM PKPbc PKPbc 17 59 12.7 +0.1
comp=Z,2.1nm,0.8s,baz=283,slow=36,SNR=3.3

SONM				pPKPbc	pPKPbc	17 59 47.8	+7.5
	comp=Z,1.0nm,0.5s,baz=135,slow=55,SNR=2.7						
SONM	**Songino Array**	**153.41**	**8**	PKIKP	PKPdf	17 59 03.8	-1.2
SONM						17 59 47.8	
SONM				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SONM				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CN2	**Changchun**	**155.09**	**336**	*e*PKP	PKPdf	17 59 06.0	-1.5
KSRS	**Korea Array**	**158.90**	**322**	PKP	PKPdf	17 59 11.6	-1.0
	comp=Z,1.1nm,0.6s,baz=88,slow=3.1,SNR=8.6						
KSRS				PKPab	PKPab	17 59 48.9	-0.2
	comp=Z,1.6nm,0.7s,baz=65,slow=4.7,SNR=5.4						
KSRS	**Korea Array**	**158.90**	**322**	PKIKP	PKPdf	17 59 11.6	-0.9
KSRS						17 59 48.9	
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GTA	**Gaotai**	**159.44**	**27**	*e*PKP	PKPdf	17 59 13.5	+0.4
HHC	**Hu-ho-hao-te**	**160.76**	**1**	*e*PKP	PKPdf	17 59 12.5	-2.0
HHC				PKS		18 02 45.5	
HHC				PP	PP	18 03 40.8	+2.0
HHC				SKS	SKSdf	18 06 06.3	-4.2
HHC				SKKS	SKKSac	18 10 18.0	-0.8
HHC				SS	SS	18 23 43.3	+0.5
HHC				AMB	AMB		
	comp=Z,77nm,9.2s						
HHC				LR	LR		
	comp=N,230nm,21.2s						
HHC				LR	LR		
	comp=E,140nm,20.9s						
HHC				LR	LR		
	comp=Z,130nm,20.5s						
BJI	**Beijing**	**161.20**	**350**	PKP	PKPdf	17 59 14.3	-0.7
CMAR	**Chiang Mai Arr**	**167.50**	**102**	PKP	PKPdf	17 59 19.7	-1.5
	comp=Z,0.6nm,0.4s,baz=281,slow=30,SNR=6.0						
CMAR				PKPab	PKPab	18 00 28.0	+0.6
	comp=Z,0.3nm,0.4s,baz=54,slow=32,SNR=1.6						
CMAR	**Chiang Mai Arr**	**167.50**	**102**	PKIKP	PKPdf	17 59 19.7	-1.5
CMAR						18 00 28.0	
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CD2	**Chengdu**	**168.20**	**36**	PKP	PKPdf	17 59 19.5	-1.9
KMI	**Kunming**	**170.92**	**65**	PKP	PKPdf	17 59 21.8	-1.4
KMI				PP	PP	18 04 35.0	+1.7
KMI				AMB	AMB		
	comp=Z,55nm,4.9s						
KMI				LR	LR		
	comp=N,150nm,19.5s						
KMI				LR	LR		
	comp=E,95nm,22.8s						
KMI				LR	LR		
	comp=Z,75nm,17.1s						
GYA	**Guiyang**	**173.20**	**43**	*e*PKP	PKPdf	17 59 22.0	-2.2
GYA				PKPab	PKPab	18 00 53.3	+0.9
GYA				PKS		18 02 54.3	
GYA				PP	PP	18 04 46.0	+2.3
GYA				SKKS	SKKSac	18 11 22.5	+1.0
GYA				SS	SS	18 25 50.0	-0.3
GYA				AMB	AMB		
	comp=Z,120nm,8.0s						
GYA				LR	LR		
	comp=N,130nm,25.6s						
GYA				LR	LR		
	comp=E,110nm,24.9s						
GYA				LR	LR		
	comp=Z,120nm,25.6s						

*ISCJB **26** 17:42:40.7±0.5, 38°.45N±0°.03×21°.81E±0°.03, h4km±6km, Error ellipse: s-maj=4.9km s-min=3.5km az=143.8*
*CSEM **26** 17:42:40.6±0.1, 38°.44N×21°.83E, h8km, ML2.7/7, Error ellipse: s-maj=2.4km s-min=1.9km az=165.0*
*THE **26** 17:42:40.7, 38°.43N×21°.83E, h12km, ML2.7/7, Error ellipse: s-maj=0.8km s-min=0.3km az=133.0*
*ATH **26** 17:42:41.3, 38°.45N×21°.78E, h5km±2km, MD3.0/7*
*NEIC **26** 17:42:41.3, 38°.45N×21°.78E, h5km, MD3.0(ATH), After ATH.*

ISC 26 17:42:41.2±0.4, 38°.44N±0°.03×21°.82E±0°.03, h8km±5km, n40, σ0°.67/75, 1D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	**Efpalio**	**0.07**	**101**	⇓*i*PG	**Pg**	**17 42 43.0**	**0.0**
EFP				*e*SG	**Sg**	**17 42 44.8**	**+0.4**
EFP	**Efpalio**	**0.07**	**101**	P	**Pg**	**17 42 43.0**	**0.0**
EFP				S	**Sg**	**17 42 44.6**	**+0.2**
EFP	**Efpalio**	**0.07**	**101**	P	**Pg**	**17 42 43.0**	**0.0**
EFP				S	**Sg**	**17 42 44.6**	**+0.2**
UPR	**University Cam**	**0.16**	**190**	*e*PG	**Pg**	**17 42 44.4**	**-0.1**
UPR				*e*SG	**Sg**	**17 42 47.7**	**+1.0**
UPR	**University Cam**	**0.16**	**190**	P	**Pg**	**17 42 44.3**	**-0.2**
UPR				S	**Sg**	**17 42 46.8**	**+0.1**
UPR	**University Cam**	**0.16**	**190**	*e*Pg	**Pg**	**17 42 44.4**	**-0.1**
UPR				S	**Sg**	**17 42 46.8**	**+0.1**
UPR				*e*Sg	**Sg**	**17 42 47.7**	**+1.0**
TRIZ	**Trizonia**	**0.21**	**111**	P	**Pg**	**17 42 45.1**	**-0.3**
TRIZ				S	**Sg**	**17 42 48.4**	**+0.1**
TRIZ	**Trizonia**	**0.21**	**111**	P	**Pg**	**17 42 45.1**	**-0.3**
TRIZ				S	**Sg**	**17 42 48.4**	**+0.1**
LAKA	**Lakka**	**0.23**	**148**	P	**Pg**	**17 42 45.5**	**-0.3**
LAKA				S	**Sg**	**17 42 48.7**	**-0.3**
LAKA	**Lakka**	**0.23**	**148**	P	**Pg**	**17 42 45.5**	**-0.3**
LAKA				S	**Sg**	**17 42 48.7**	**-0.3**
KALE	**Kalithea**	**0.25**	**101**	P	**Pg**	**17 42 45.9**	**-0.3**
KALE				S	**Sg**	**17 42 50.0**	**+0.4**
KALE	**Kalithea**	**0.25**	**101**	P	**Pg**	**17 42 45.9**	**-0.3**
KALE				S	**Sg**	**17 42 50.0**	**+0.4**
RLS	**Riolos of Patr**	**0.47**	**216**	*e*Pg	**Pg**	**17 42 50.1**	**-0.2**
RLS				*e*Sb	**Sg**	**17 42 57.9**	**+1.4**
RLS	**Riolos of Patr**	**0.47**	**216**	*e*PG	**Pg**	**17 42 50.1**	**-0.2**
RLS				*e*SB	**Sg**	**17 42 57.9**	**+1.4**
RLS	**Riolos of Patr**	**0.47**	**216**	*e*Pg	**Pg**	**17 42 50.1**	**-0.2**
RLS				*e*Sb	**Sg**	**17 42 57.9**	**+1.4**
EVR	**Evrytania**	**0.48**	**359**	*e*Pg	**Pg**	**17 42 50.3**	**-0.1**
EVR				*e*Sb	**Sg**	**17 42 57.8**	**+1.1**
EVR	**Evrytania**	**0.48**	**359**	*e*PG	**Pg**	**17 42 50.3**	**-0.1**
EVR				*e*SB	**Sg**	**17 42 57.8**	**+1.1**
EVR	**Evrytania**	**0.48**	**359**	*e*Pg	**Pg**	**17 42 50.3**	**-0.1**
EVR				*e*Sb	**Sg**	**17 42 57.8**	**+1.1**
DSF	**Desfina**	**0.55**	**93**	P	**Pg**	**17 42 51.0**	**-0.9**
DSF				S	**Sg**	**17 42 59.2**	**+0.1**
DSF	**Desfina**	**0.55**	**93**	P	**Pg**	**17 42 51.0**	**-0.9**
DSF				S	**Sg**	**17 42 59.2**	**+0.1**
GUR	**Goura**	**0.65**	**141**	P	**Pg**	**17 42 52.6**	**-1.0**
GUR				S	**Sg**	**17 43 02.4**	**+0.3**
GUR	**Goura**	**0.65**	**141**	P	**Pg**	**17 42 52.6**	**-1.0**
GUR				S	**Sg**	**17 43 02.4**	**+0.3**
AGG	**Agios Georgios**	**0.70**	**34**	P	**Pg**	**17 42 53.8**	**-0.9**
AGG				S	**Sg**	**17 43 04.3**	**+0.4**
AGG	**Agios Georgios**	**0.70**	**34**	P	**Pg**	**17 42 53.8**	**-0.9**
AGG				S	**Sg**	**17 43 04.3**	**+0.4**
KFL	**Anninata**	**0.88**	**248**	P	**Pg**	**17 42 57.5**	**-0.5**
KFL				S	**Sg**	**17 43 10.3**	**+0.9**
KFL	**Anninata**	**0.88**	**248**	P	**Pg**	**17 42 57.5**	**-0.5**
KFL				S	**Sg**	**17 43 10.3**	**+0.9**
LKR	**Lokris**	**0.95**	**77**	*e*Pn	**Pn**	**17 43 00.7**	**0.0**
LKR				*e*Sb	**Sb**	**17 43 14.2**	**+1.7**
LKR	**Lokris**	**0.95**	**77**	*e*PN	**Pn**	**17 43 00.7**	**0.0**
LKR				*e*SB	**Sb**	**17 43 14.2**	**+1.7**
LKR	**Lokris**	**0.95**	**77**	*e*Pn	**Pn**	**17 43 00.7**	**0.0**
LKR				*e*Sb	**Sb**	**17 43 14.2**	**+1.7**
LKD2	**Lefkada island**	**0.98**	**291**	P	**Pg**	**17 42 59.1**	**-0.8**
LKD2	**Lefkada island**	**0.98**	**291**	P	**Pg**	**17 42 59.1**	**-0.8**
LTK	**Loutraki**	**0.99**	**114**	*e*PG	**Pg**	**17 43 00.2**	**0.0**
LTK	**Loutraki**	**0.99**	**114**	*e*Pg	**Pg**	**17 43 00.2**	**0.0**
VLS	**Valsamata**	**1.00**	**255**	*e*Pb	**Pb**	**17 43 00.0**	**-0.8**
VLS				*e*Sb	**Sb**	**17 43 14.5**	**+0.3**
VLS	**Valsamata**	**1.00**	**255**	*e*PB	**Pb**	**17 43 00.0**	**-0.8**
VLS				*e*SB	**Sb**	**17 43 14.5**	**+0.3**
VLS	**Valsamata**	**1.00**	**255**	P	**Pg**	**17 42 59.3**	**-1.1**
VLS				S	**Sg**	**17 43 14.1**	**+0.6**
VLS	**Valsamata**	**1.00**	**255**	P	**Pg**	**17 42 59.3**	**-1.1**
VLS	**Valsamata**	**1.00**	**255**	*e*Pb	**Pb**	**17 43 00.0**	**-0.8**
VLS				S	**Sg**	**17 43 14.1**	**+0.6**
VLS				*e*Sb	**Sb**	**17 43 14.5**	**+0.3**
THL	**Klokotos Trika**	**1.13**	**8**	*e*PB	**Pb**	**17 43 02.8**	**-0.2**
THL	**Klokotos Trika**	**1.13**	**8**	*e*Pb	**Pb**	**17 43 02.8**	**-0.2**

*MOS **26** 17:42:53.6±1.5, 54°.02N×110°.21E, h21km, mb4.3/1, Error ellipse: s-maj=24.7km s-min=14.5km az=74.6*

BYKL 26 17:42:54.2±0.3, 54°.05N×110°.27E, h18km±6km, 1C-7D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SYVR	**Suvo**	**0.42**	**202**	*e*PG	Pg	17 43 02.1	-0.8
SYVR				*e*S	Sg	17 43 08.1	-0.6
SYVR	**Suvo**	**0.42**	**202**	*e*Pg	Pg	17 43 02.1	-0.8
SYVR				*i* Sg	Sg	17 43 08.4	-0.3
SYVR				*e*Sb	Sb	17 43 12.0	+2.8
SYVR				Pmax			
	46nm,0.1s						
SYVR				max			
	741nm,0.5s						
MXMB	**Maximikha**	**1.20**	**230**	*e*Pg	Pg	17 43 15.9	-1.5
MXMB				*e*Pb	Pb	17 43 17.3	+0.9
MXMB				*e*		17 43 19.6	
MXMB				*i* Sg	Sg	17 43 32.4	-0.7
MXMB				max			
	64nm,0.5s						
MXMB				Smax			
	2μm,0.8s						
OGRR	**Ongureny**	**1.64**	**257**	*e*PN	Pn	17 43 23.2	+1.2
OGRR				*e*		17 43 44.8	
OGRR				pmax	pmax		
	comp=Z,51nm,0.4s						
OGRR				smax			
	comp=N,802nm,1.1s						
OGRR	**Ongureny**	**1.64**	**257**	⇓*i*Pg	Pg	17 43 23.3	-2.4
OGRR				*e*Sg	Sg	17 43 44.8	-2.1
OGRR				Pmax			
	comp=N,50nm,0.4s						
OGRR				Smax			
	comp=N,803nm,1.1s						
NIZ	**Nizh Angarsk**	**1.78**	**347**	*e*PN	Pn	17 43 24.7	+0.7
NIZ				*e*		17 43 26.0	
NIZ				*e*		17 43 49.5	
NIZ				pmax	pmax		
	comp=Z,113nm,0.6s						
NIZ				smax			
	comp=E,440nm,0.5s						
NIZ	**Nizh Angarsk**	**1.78**	**347**	⇓*i*Pn	Pn	17 43 24.8	+0.8
NIZ				⇑*i*Pg	Pg	17 43 26.0	-2.4
NIZ				*e*		17 43 29.5	
NIZ				*i* Sg	Sg	17 43 50.0	-1.5
NIZ				Pmax			
	comp=E,113nm,0.8s						
NIZ				Smax			
	comp=E,441nm,0.4s						
KMO	**Kumora**	**1.92**	**16**	*e*PN	Pn	17 43 28.2	+2.3
KMO				*e*		17 43 52.5	
KMO				pmax	pmax		
	comp=Z,52nm,0.3s						
KMO				smax			
	comp=E,579nm,1.2s						
KMO	**Kumora**	**1.92**	**16**	⇓*i*Pg	Pg	17 43 28.3	-2.7
KMO				*e*		17 43 36.0	
KMO				*i* Sg	Sg	17 43 54.7	-1.2
KMO				*e*		17 43 57.9	
KMO				max			
	comp=E,110nm,0.3s						
KMO				max			
	comp=E,575nm,1.2s						
YOA	**Uoyan**	**2.25**	**21**	⇓*i*Pg	Pg	17 43 34.9	-2.4
YOA				*e*PgPg		17 43 39.3	
YOA				*i* Sg	Sg	17 44 05.0	-1.5
YOA				*e*		17 44 08.3	
YOA				max			
	comp=E,147nm,0.5s						
YOA				max			
	comp=E,703nm,1.6s						
ZRHB	**Zarechye**	**2.40**	**233**	Pg	Pg	17 43 37.9	-2.2
ZRHB				*e*		17 43 47.8	
ZRHB				*i* Sg	Sg	17 44 09.5	-1.7
ZRHB				Smax			
	comp=E,363nm,0.5s						
TRG	**Tyrgan**	**2.68**	**243**	*e*Pn	Pn	17 43 36.6	+0.2
TRG				Pg	Pg	17 43 41.8	-3.7
TRG				*e*		17 44 08.5	
TRG				*e*Sg	Sg	17 44 16.4	-3.9
TRG				Pmax			
	comp=E,10.0nm,0.3s						
TRG				Smax			
	comp=E,166nm,0.5s						
UUDB	**Ulan-Yde**	**2.70**	**217**	*e*Pn	Pn	17 43 38.9	+2.3
UUDB				*e*Pg	Pg	17 43 42.8	-3.0
UUDB				*e*		17 43 50.3	
UUDB				*e*		17 44 07.8	
UUDB				*e*Sg	Sg	17 44 19.4	-1.4
UUDB				*e*SgSg		17 44 23.4	
UUDB				max			
	comp=E,32nm,0.9s						
UUDB				Smax			
	comp=E,207nm,0.6s						
CIT	**Chita**	**2.84**	**134**	⇓*i*Pg	Pg	17 43 43.7	-4.9
CIT				*e*Sg	Sg	17 44 21.0	-4.3
CIT				Pmax			
	comp=E,49nm,0.3s						
CIT				Smax			
	comp=E,300nm,0.2s						
KAB	**Kabansk**	**2.96**	**229**	*e*	Pg	17 43 51.5	+0.6
KAB				*i* Sg	Sg	17 44 27.5	-1.8
KAB				Smax			
	comp=E,428nm,0.9s						
LSTR	**Listvyanka**	**3.95**	**239**	*e*Pn	Pn	17 43 54.0	+0.2
LSTR				*e*		17 43 58.2	
LSTR				*e*		17 44 03.0	
LSTR				*e*Sg	Sg	17 44 55.6	-5.3
LSTR				max			
	comp=E,10.0nm,1.0s						
LSTR				Smax			
	comp=E,194nm,1.7s						
IRK	**Irkutsk**	**4.04**	**246**	*e*	Pn	17 44 01.1	+6.1
IRK				*e*		17 44 30.8	
IRK				*e*Sg	Sg	17 44 58.2	-5.6
IRK				*e*		17 45 02.1	
IRK				max			
	comp=E,36nm,0.3s						
IRK				max			
	comp=E,277nm,0.4s						
KPC	**Khapcheranga**	**4.54**	**162**	*e*PN	Pn	17 44 02.4	+0.4
KPC				*e*		17 44 15.7	
KPC				*e*		17 45 14.1	
KPC				pmax	pmax		
	comp=Z,8.0nm,0.2s						
KPC				smax			
	comp=E,108nm,1.2s						
KPC	**Khapcheranga**	**4.54**	**162**	*e*Pn	Pn	17 44 00.4	-1.6
KPC				⇓*i*Pg	Pg	17 44 15.8	-5.4
KPC				*e*		17 44 18.4	
KPC				*e*Sg	Sg	17 45 15.7	-4.3
KPC				max			
	comp=E,8.0nm,0.5s						
KPC				Smax			
	comp=E,109nm,0.9s						
TLY	**Talaya**	**4.66**	**242**	*e*	Pg	17 44 21.7	-1.7
TLY				*e*		17 44 55.3	
TLY				*e*Sg	Sg	17 45 17.1	-6.7
TLY				Smax			
	comp=E,56nm,1.4s						
ARS	**Arshan**	**5.20**	**249**	*e*PN	Pg	17 44 26.5	-7.1
ARS				*e*		17 45 32.3	
ARS				pmax	pmax		
	comp=Z,14nm,0.4s						
ARS				smax			
	comp=E,172nm,0.6s						
ARS	**Arshan**	**5.20**	**249**	Pg	Pg	17 44 25.5	-8.1
ARS				*e*		17 44 31.8	
ARS				*i* Sg	Sg	17 45 32.6	-8.3
ARS				*e*		17 45 37.9	
ARS				max			
	comp=E,16nm,0.5s						
ARS				max			
	comp=E,19nm,0.8s						
ZAK	**Zakamensk**	**5.65**	**232**	*e*Pn	Pn	17 44 20.9	+3.7
ZAK				*e*		17 44 30.5	
ZAK				*e*Pg	Pg	17 44 37.2	-5.1
ZAK				*e*Sg	Sg	17 45 51.3	-4.1
ZAK				Pmax			
	comp=E,2.0nm,0.4s						
ZAK				Smax			
	comp=E,13nm,0.9s						
TUP	**Tupik**	**5.69**	**82**	*e*PN	Pg	17 44 35.5	-7.6
TUP				*e*		17 45 50.3	
TUP				pmax	pmax		
	comp=Z,5.0nm,0.5s						
TUP				smax			
	comp=N,103nm,0.8s						
TUP	**Tupik**	**5.69**	**82**	*e*Pn	Pn	17 44 18.1	+0.4
TUP				⇓*i*Pg	Pg	17 44 35.5	-7.6
TUP				*e*		17 44 53.7	
TUP				*e*		17 45 39.1	
TUP				*e*Sg	Sg	17 45 49.8	-6.9
TUP				*e*		17 45 59.3	
TUP				Pmax			
	comp=N,5.0nm,0.5s						
TUP				max			
	comp=N,113nm,1.2s						
MOY	**Mondy**	**6.11**	**251**	*e*PN	Pn	17 44 21.8	-1.6
MOY				*e*		17 44 42.6	
MOY				*e*		17 45 59.4	
MOY				pmax	pmax		
	comp=Z,5.0nm,0.5s						
MOY				smax			
	comp=E,82nm,1.0s						
MOY	**Mondy**	**6.11**	**251**	Pg	Pn	17 44 43.2	+20
MOY				*e*Sg	Sn	17 46 02.5	+30
MOY				Pmax			
	comp=E,6.0nm,0.6s						
MOY				Smax			
	comp=E,64nm,0.8s						
ORL	**Orlik**	**6.45**	**261**	*e*PN	Pn	17 44 29.8	+1.6
ORL				*e*		17 44 49.9	
ORL				*e*		17 46 11.9	
ORL				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ORL				smax			
	comp=N,59nm,1.1s						
ORL	**Orlik**	**6.45**	**261**	*e*Pn	Pn	17 44 30.0	+1.8
ORL				*e*Pg	Pn	17 44 49.8	+22
ORL				*e*Sn	Sn	17 45 42.2	+1.0
ORL				*e*Sg	Sn	17 46 14.4	+33
ORL				max			
	comp=N,4.0nm,0.6s						
ORL				Smax			
	comp=N,134nm,1.3s						
ULN	**Ulaanbaatar**	**6.52**	**199**	*e*	Sn	17 45 49.1	+6.2
ULN				*e*Sg	Sn	17 46 17.0	+34
HIA	**Hailar**	**7.59**	**125**	*e*Sg	Sn	17 46 50.2	+41
HIA				*e*		17 46 59.3	

IDC 26 17:45:09.7±1.8, 1°.74N×126°.62E, h0km, mb4.0/3, mb1 4.0/4, mb1mx3.6/20, mbtmp3.9/4, ML3.4/1, MS3.5/1, Ms1 3.5/1, ms1mx2.8/19, Error ellipse: s-maj=129.9km s-min=22.9km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.74**	**183**	P	Pn	17 49 41.1	-1.6
	0.1nm,0.3s,baz=19,slow=12,SNR=3.5						
ASAR	**Alice Springs**	**26.23**	**165**	P	P	17 50 46.5	-0.1
	2.3nm,0.3s,baz=355,slow=16,SNR=18						
PSI	**Prapat**	**27.70**	**273**	LR	LR	18 03 09.7	
	comp=Z,101nm,19.9s,baz=127,slow=39						
STKA	**Stephens Creek**	**36.33**	**158**	P	P	17 52 15.8	+0.4
	1.6nm,0.7s,baz=326,slow=7.3,SNR=3.6						
MKAR	**Makanchi Array**	**59.12**	**326**	P	P	17 55 12.2	0.0
	1.4nm,0.7s,baz=123,slow=7.8,SNR=15						

*ISCJB **26** 18:20:30.4±0.5, 7°.06S±0°.09×106°.74E±0°.05, h142km±4km, mb3.7/14, Error ellipse: s-maj=15.9km s-min=5.0km az=29.3*
*IDC **26** 18:20:30.8±4.7, 6°.87S×106°.82E, h122km±43km, mb3.5/12, mb1 3.6/12, mb1mx3.6/19, mbtmp3.5/12, Error ellipse: s-maj=36.1km s-min=11.1km az=49.0*
*DJA **26** 18:20:30, 7°.31S×106°.60E, h116km, MLv4.5/24*
*NEIC **26** 18:20:33.3±1.9, 6°.73S×106°.93E, h143km±18km, mb4.1/4, Error ellipse: s-maj=27.5km s-min=7.0km az=50.0*

ISC 26 18:20:31.3±0.5, 7°.06S±0°.08×106°.74E±0°.05, h131km±3km, n57, σ1°.29/56, mb3.7/14, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.19**	**285**	P	**Pn**	**18 20 47.5**	**-1.7**
SKJI				S	**Sn**	**18 21 00.1**	**-2.6**
TNG	**Tangerang**	**0.88**	**354**	P	**Pn**	**18 20 54.2**	**+0.9**
TNG				P		18 20 54.1	
LEM	**Lembang**	**0.90**	**75**	P	**Pn**	**18 20 52.9**	**-0.5**
SBJI	**Serang**	**1.11**	**327**	P	**Pn**	**18 20 55.7**	**+0.3**
CGJI	**Cibinong**	**1.13**	**293**	P	**Pn**	**18 20 55.6**	**+0.1**
RBSI	**Rajabasa**	**1.56**	**320**	P	**Pn**	**18 21 00.9**	**+0.7**
JCJI	**Jatiwangi**	**1.62**	**70**	P	**Sn**	**18 21 20.6**	**+1.4**
BLSI	**Bandar Lampung**	**2.24**	**318**	P	**Pn**	**18 21 09.5**	**+1.2**
KASI	**Kota Agung**	**2.70**	**304**	P	**Pn**	**18 21 15.0**	**+0.9**
KLI	**Kotabumi**	**2.87**	**319**	P	**Pn**	**18 21 17.6**	**+1.3**
BJII	**Banjamegara**	**2.96**	**96**	P	**Pn**	**18 21 17.7**	**+0.3**
KLSI		**3.09**	**319**	P	**Pn**	**18 21 20.8**	**+1.7**
LWLI	**Liwa**	**3.35**	**307**	P	**Pn**	**18 21 23.3**	**+0.8**
MDSI	**Maura Dua**	**3.61**	**315**	P	**Pn**	**18 21 27.3**	**+1.4**
SMRI	**Semarang**	**3.67**	**90**	P	**Pn**	**18 21 27.6**	**+0.9**
UGM	**Wanagama**	**3.84**	**103**	P	**Pn**	**18 21 28.1**	**-0.9**
TPI	**Tanjungpandan**	**4.37**	**12**	P	**Pn**	**18 21 37.7**	**+1.7**
PCJI	**Pacitan**	**4.54**	**105**	P	**Pn**	**18 21 37.0**	**-1.3**
PMBI	**Palembang**	**4.55**	**334**	P	**Pn**	**18 21 41.9**	**+3.5**
MNAI	**Manna**	**4.62**	**305**	P	**Pn**	**18 21 40.1**	**+0.7**
NGJI	**Ngawi**	**4.69**	**94**	P	**Pn**	**18 21 45.4**	**+5.1**
SJI	**Sawahan**	**5.03**	**98**	P	**Pn**	**18 21 45.8**	**+1.0**
	0.9nm4μm74nm,0.9s						
PWJI	**Pagerwojo**	**5.11**	**101**	P	**Pn**	**18 21 45.2**	**-0.7**
	1.1nm4μm127nm,0.5s						
KSI	**Kapahiang**	**5.34**	**309**	P	**Pn**	**18 21 50.3**	**+1.3**
	3.3nm9μm916nm,0.6s						
KRKI	**Karangkates**	**5.77**	**101**	P	**Pn**	**18 21 53.3**	**-1.4**
	227nm,0.6s						
GMJI	**Gumukmas**	**6.75**	**101**	P	**Pn**	**18 22 07.6**	**-0.4**
	32nm,0.6s						
STKI	**Sintang**	**8.51**	**34**	P	**Pn**	**18 22 34.8**	**+3.1**
	0.1nm3μm41nm,0.9s						
PDSI	**Padang**	**8.74**	**314**	P	**Pn**	**18 22 32.4**	**-2.5**
	5μm107nm,0.4s						
PPI	**Padang Panjang**	**9.11**	**316**	P	**Pn**	**18 22 38.1**	**-1.7**
	27nm,0.7s						
BKNI	**Bangkinang**	**9.28**	**322**	P	**Pn**	**18 22 41.8**	**-0.3**
	77nm,0.9s						
SISI	**Saibi**	**9.52**	**306**	P	**Pn**	**18 22 42.6**	**-2.7**
	112nm,0.6s						
MNSI	**Mandailing Nat**	**10.58**	**317**	P	**Pn**	**18 22 56.0**	**-3.4**
	32nm,0.4s						
GSI	**Gunungsitoli**	**12.35**	**312**	P	**Pn**	**18 23 18.5**	**-4.3**
	55nm,1.5s						
KULM	**Kulim**	**13.69**	**333**	*e*P	**Pn**	**18 23 39.0**	**-1.1**
	7.6nm,0.7s						
PCI	**Palu**	**14.41**	**65**	P	**Pn**	**18 23 51.4**	**+2.0**
MBWA	**Marble Bar**	**18.83**	**139**	*e*P	**P**	**18 24 44.6**	**+3.6**
	4.3nm,0.5s						
MBWA				*e*Sn	Sn	18 27 51.8	-23
FITZ	**Fitzroy Crossi**	**21.44**	**123**	P	**P**	**18 25 11.5**	**+2.3**
	1.4nm,0.7s,mb3.4,baz=207,slow=13,SNR=3.6						
FITZ				S	**S**	**18 29 02.2**	**+2.5**
	3.1nm,0.9s,baz=6.4,slow=22,SNR=2.1						
CMAR	**Chiang Mai Arr**	**26.49**	**343**	P	**P**	**18 25 55.6**	**-0.9**
	1.2nm,0.8s,mb3.6,baz=179,slow=8.7,SNR=6.5						
CHTO	**Chiang Mai**	**26.83**	**343**	P	**P**	**18 25 57.4**	**-2.2**
WRA	**Warramunga Arr**	**29.67**	**118**	P	**P**	**18 26 24.8**	**-0.1**
	baz=302,slow=9.1,SNR=15						
WRAB	**Tennant Creek**	**29.68**	**118**	*e*P	**P**	**18 26 25.0**	**0.0**
	3.6nm,0.8s,m

ABKAR	Akbulak array	69.33	329	*e*P	P	18 31 23.6	-0.9
	1.3nm,0.4s,mb4.0						
PETK	Petropavlovsk-	73.76	29	P	P	18 31 50.3	-0.7
	0.5nm,0.5s,mb3.5,baz=204,slow=3.2,SNR=6.6						
BRTR	Keskin Array B	81.67	312	P	P	18 32 36.2	+1.0
	0.8nm,0.7s,mb3.5,baz=124,slow=6.6,SNR=4.7						
BRTR				sP	sP	18 33 16.6	-5.5
	0.7nm,0.7s,baz=104,slow=0.5,SNR=3.3						
FINES	FINESS Array B	91.70	332	P	P	18 33 24.4	+0.8
	1.4nm,0.8s,mb4.0,baz=101,slow=6.0,SNR=4.1						
ARCES	ARCESS Array B	93.50	340	P	P	18 33 32.0	+0.3
	1.3nm,0.8s,mb4.1,baz=145,slow=4.4,SNR=4.1						
TXAR	Lajitas Array	143.79	48	PKP	PKPdf	18 39 50.5	-1.2
	0.6nm,0.6s,baz=307,slow=1.1,SNR=11						
JCT	Junction City	145.90	43	*e*PKPdf	PKPdf	18 39 56.2	+0.9

DDA ***26*** *18:39:30.8, 37°.46N×38°.69E, h3km, Md2.8*
ISK ***26*** *18:39:30.4, 37°.44N×38°.74E, h20km, MD2.8*
CSEM ***26*** *18:39:30.8±0.2, 37°.46N×38°.64E, h10km, MD2.8, Error ellipse: s-maj=5.1km s-min=3.8km az=171.0*
ISCJB ***26*** *18:39:31.1±0.7, 37°.50N±0°.05×38°.65E±0°.04, h5km±8km, Error ellipse: s-maj=8.1km s-min=5.0km az=163.7*
ISC 26 18:39:31.4±0.7, 37°.48N±0°.05×38°.66E±0°.04, h12km±5km, n17, σ0°73/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URFA	Urfa	0.13	107	PG	Pg	18 39 34.3	-0.3
URFA				*e*SG	Sg	18 39 37.0	+0.1
URFA	Urfa	0.13	107	*i* Pg	Pg	18 39 34.3	-0.3
URFA				*e*Sg	Sg	18 39 37.0	+0.1
GZT	Gaziantep	0.88	262	*i* P	Pg	18 39 47.8	-0.7
GZT				*i* S	Sg	18 40 01.8	+1.8
AKCD	Akcadag	1.00	324	*i* P	Pb	18 39 50.9	+0.2
AKCD				*i* S	Sg	18 40 04.0	+0.2
AKCD	Akcadag	1.00	324	*i* P	Pb	18 39 50.9	+0.2
AKCD				*i* S	Sg	18 40 04.0	+0.2
SVRC	Sivrice-ELAZID	1.03	29	*e*PG	Pg	18 39 50.9	-0.4
SVRC				*e*SG	Sg	18 40 04.1	-0.6
SVRC	Sivrice-ELAZID	1.03	29	*e*Pg	Pg	18 39 50.9	-0.4
SVRC				*e*Sg	Sg	18 40 04.1	-0.6
ELZG	Elazig	1.05	14	*i* P	Pb	18 39 51.7	+0.2
ELZG				*i* S	Sb	18 40 05.4	+0.2
ELZG	Elazig	1.05	14	*i* P	Pb	18 39 51.7	+0.2
ELZG				*i* S	Sb	18 40 05.4	+0.2
GAZ	Gaziantep	1.20	256	*e*PN	Pn	18 39 53.4	-0.6
GAZ	Gaziantep	1.20	256	*e*Pn	Pn	18 39 53.4	-0.6
DIYA	Diyarbakir	1.24	69	*i* P	Pn	18 39 54.6	+0.1
DIYA				*i* S	Sb	18 40 12.2	+1.6
DIYA	Diyarbakir	1.24	69	*i* P	Pn	18 39 54.6	+0.1
DIYA				*i* S	Sb	18 40 12.2	+1.6
KMRS	Kahramanmaras	1.40	272	*e*PN	Pn	18 39 56.0	-0.8
KMRS	Kahramanmaras	1.40	272	*e*Pn	Pn	18 39 56.0	-0.8
PTK	Pertek	1.52	22	*e*PN	Pn	18 39 57.8	-0.6
PTK	Pertek	1.52	22	*e*Pn	Pn	18 39 57.8	-0.7

ISK ***26*** *18:42:28.8, 37°.03N×29°.15E, h6km, MD3.0*
CSEM ***26*** *18:42:28.9±0.2, 36°.99N×29°.16E, h5km, MD3.0, Error ellipse: s-maj=4.9km s-min=3.6km az=1.0*
ISCJB ***26*** *18:42:29.8±0.6, 36°.99N±0°.04×29°.20E±0°.04, h17km±11km, Error ellipse: s-maj=7.6km s-min=5.4km az=16.9*
DDA ***26*** *18:42:29.2, 37°.02N×29°.24E, h20km, Md2.9*
ISC 26 18:42:29.4±0.7, 36°.98N±0°.04×29°.15E±0°.04, h7km±9km, n26, σ0°91/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.33	57	*e*PG	Pg	18 42 35.0	-0.8
GLHS				*e*SG	Sg	18 42 40.5	+0.2
GLHS	Glhisar (BURDU	0.33	57	*e*Pg	Pg	18 42 35.0	-0.9
GLHS				*e*Sg	Sg	18 42 40.5	+0.2
GOLH	Golhisar	0.42	51	*i* P	Pg	18 42 36.3	-1.2
GOLH				*i* S	Sg	18 42 44.1	+1.1
GOLH	Golhisar	0.42	51	*i* P	Pg	18 42 36.3	-1.2
GOLH				*i* S	Sg	18 42 44.1	+1.1
ELL	Elmali	0.65	110	*e*PG	Pg	18 42 41.6	-0.2
ELL				*e*SG	Sg	18 42 52.0	+1.6
ELL	Elmali	0.65	110	*e*Pg	Pg	18 42 41.7	-0.2
ELL				*e*Sg	Sg	18 42 52.0	+1.7
YER	Yerkesik	0.71	283	*e*PG	Pg	18 42 42.9	-0.2
YER	Yerkesik	0.71	283	*e*Pg	Pg	18 42 42.9	-0.1
DNZL	Cakiroluk	0.72	353	*i* P	Pg	18 42 42.1	-1.1
DNZL				*i* S	Sg	18 42 54.2	+1.6
DNZL	Cakiroluk	0.72	353	*i* P	Pg	18 42 42.1	-1.1
DNZL				*i* S	Sg	18 42 54.2	+1.7
DENT	Denizli	0.78	353	*e*PG	Pg	18 42 42.9	-1.5
DENT	Denizli	0.78	353	*e*Pg	Pg	18 42 42.9	-1.5
AKAS	Kas	0.83	153	*i* P	Pg	18 42 44.7	-0.5
AKAS				*i* S	Sg	18 43 00.9	+5.0
AKAS	Kas	0.83	153	*i* P	Pg	18 42 44.7	-0.5
AKAS				*i* S	Sg	18 43 00.9	+5.0
MLSB	Milas	1.14	287	*e*PN	Pn	18 42 50.8	-0.9
MLSB	Milas	1.14	287	*e*Pn	Pn	18 42 50.8	-0.9
AYDN	Tasoluk	1.22	304	*i* P	Pg	18 42 52.5	-0.3
AYDN				*i* S	Sg	18 43 09.8	+1.1
AYDN	Tasoluk	1.22	304	*i* P	Pg	18 42 52.5	-0.3
DAT	Datca	1.28	259	*e*PN	Pn	18 42 54.2	+0.6
DAT	Datca	1.28	259	*e*Pn	Pn	18 42 54.2	+0.6
BDRM	Kayabasi	1.37	274	*i* P	Pn	18 42 54.6	-0.2
BDRM				*i* S	Sb	18 43 13.7	+0.8
BDRM	Kayabasi	1.37	274	*i* P	Pn	18 42 54.6	-0.2
BDRM				*i* S	Sb	18 43 13.7	+0.8
KHL	Karahalli	1.38	12	*e*PN	Pn	18 42 54.5	-0.4
KHL	Karahalli	1.38	12	*e*Pn	Pn	18 42 54.5	-0.4
BODT	Bodrum	1.47	274	*e*PN	Pn	18 42 56.5	+0.3
BODT	Bodrum	1.47	274	*e*Pn	Pn	18 42 56.5	+0.3

NEIC ***26*** *18:43:01.4, 40°.31S×173°.55E, h5km, ML4.3(WEL), After WEL.*
WEL 26 18:43:01.6±0.1, 40°.33S×173°.56E, h5km, ML4.3/51, 7C-4D, Error ellipse: s-maj=1.2km s-min=0.6km az=90.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNZ	Nelson	0.90	189	⇑P*	Pb	18 43 18.6	-1.2
NNZ				S*	Sb	18 43 31.3	-0.8
NNZ	Nelson	0.90	189	⇑P	Pg	18 43 18.6	-0.3
NNZ				S	Sg	18 43 31.3	+0.6
QRZ	Quartz Range	0.93	237	⇓P*	Pb	18 43 19.4	-0.9
QRZ				S*	Sb	18 43 32.9	-0.1
QRZ	Quartz Range	0.93	237	⇑P	Pg	18 43 19.4	-0.1
NWEZ	Newall Road	1.07	13	P*	Pb	18 43 22.2	-0.4
NWEZ				S*	Sb	18 43 37.7	+0.7
NWEZ	Newall Road	1.07	13	P	Pg	18 43 22.2	0.0
DFE	Dawson Falls	1.08	23	P*	Pb	18 43 21.7	-1.0
NEZ	North Egmont	1.13	22	P*	Pb	18 43 22.6	-1.0
NEZ	North Egmont	1.13	22	P	Pg	18 43 22.6	-0.6
TUWZ	Tuamarina	1.14	166	⇑P*	Pb	18 43 22.3	-1.5
TUWZ				S*	Sb	18 43 38.2	-0.8
KIW	Kapiti Island	1.16	118	⇑P*	Pb	18 43 22.7	-1.3
KIW	Kapiti Island	1.16	118	⇑P	Pg	18 43 22.7	-1.1
RAEZ	Rainy Point	1.22	32	P*	Pb	18 43 23.9	-1.1
RAEZ	Rainy Point	1.22	32	P	Pg	18 43 23.9	-1.0
WAZ	Wanganui	1.23	63	⇓P*	Pb	18 43 23.7	-1.6
WAZ	Wanganui	1.23	63	⇓P	Pg	18 43 23.7	-1.5
SNZO	South Karori	1.31	139	P*	Pb	18 43 25.8	-0.9
SNZO	South Karori	1.31	139	P	Pn	18 43 25.8	-0.7
SNZO				P		18 43 26.1	
OGWZ	Otaki Gorge	1.32	112	P*	Pb	18 43 25.9	-1.0
WEL	Wellington	1.33	137	P*	Pb	18 43 26.1	-0.9
WEL	Wellington	1.33	137	P	Pn	18 43 26.1	-0.6
MHEZ	Mangahewa	1.38	25	PN	Pn	18 43 26.1	-1.4
CAW	Cannon Point	1.39	125	PN	Pn	18 43 27.1	-0.5
BSWZ	Blackbirch Sta	1.41	170	PN	Pn	18 43 27.7	-0.2
BSWZ	Blackbirch Sta	1.41	170	P	Pn	18 43 27.7	-0.2
BHW	Baring Head	1.47	138	PN	Pn	18 43 29.0	+0.3
VRZ	Vera Road	1.51	38	PN	Pn	18 43 27.8	-1.5
VRZ	Vera Road	1.51	38	P	Pn	18 43 27.8	-1.5
THZ	Tophouse	1.52	199	PN	Pn	18 43 28.9	-0.6
THZ	Tophouse	1.52	199	P	Pn	18 43 28.9	-0.5
MRZ	Mangatainoka R	1.57	103	PN	Pn	18 43 30.1	-0.1
MRZ	Mangatainoka R	1.57	103	P	Pn	18 43 30.1	-0.1
HOWZ	Holdsworth Sta	1.59	112	PN	Pn	18 43 30.3	-0.1
MSWZ	Moikau Station	1.68	131	PN	Pn	18 43 31.0	-0.6
POWZ	Post Office Ro	1.69	93	PN	Pn	18 43 32.0	+0.3
MTW	Mount Morrison	1.69	120	PN	Pn	18 43 31.3	-0.5
PKVZ	Pokaka	1.72	54	PN	Pn	18 43 31.3	-0.8
MTVZ	Mangateitei	1.74	58	PN	Pn	18 43 31.8	-0.7
PAWZ	Paruwai Farm	1.76	127	PN	Pn	18 43 32.3	-0.5
PAWZ	Paruwai Farm	1.76	127	P	Pn	18 43 32.3	-0.5
PLWZ	Palliser	1.79	135	PN	Pn	18 43 32.5	-0.5
TIWZ	Tintock	1.83	105	PN	Pn	18 43 33.4	-0.2
TSZ	Takapari Road	1.86	83	PN	Pn	18 43 34.2	+0.1
TSZ	Takapari Road	1.86	83	P	Pn	18 43 34.2	+0.2
DRZ	Dome Shelter	1.86	56	PN	Pn	18 43 33.7	-0.4
DRZ	Dome Shelter	1.86	56	P	Pn	18 43 33.7	-0.4
FWVZ	Far West T-bar	1.87	56	PN	Pn	18 43 33.6	-0.6
FWVZ	Far West T-bar	1.87	56	P	Pn	18 43 33.6	-0.6
WPVZ	Whakapapa	1.89	54	PN	Pn	18 43 33.8	-0.7
TWVZ	Taurewa	1.91	50	PN	Pn	18 43 33.7	-1.1
MOVZ	Moawhango	1.92	62	PN	Pn	18 43 33.9	-1.0
MOVZ	Moawhango	1.92	62	P	Pn	18 43 33.9	-1.0
TUVZ	Tukino	1.93	57	PN	Pn	18 43 34.4	-0.5
TUVZ	Tukino	1.93	57	P	Pn	18 43 34.4	-0.6
TRWZ	Traveller	1.94	124	*e*PN	Pn	18 43 34.3	-0.9
NGZ	Ngauruhoe	1.94	55	PN	Pn	18 43 34.3	-0.9
DSZ	Denniston Nort	1.95	223	PN	Pn	18 43 34.1	-1.2
DSZ	Denniston Nort	1.95	223	P	Pn	18 43 34.1	-1.2
DVHZ	Dannevirke	1.99	90	PN	Pn	18 43 35.9	+0.1
OTVZ	Oturere	1.99	55	PN	Pn	18 43 35.1	-0.8
PNHZ	Pukenui	2.06	79	PN	Pn	18 43 37.3	+0.4
HIZ	Hauiti	2.07	29	PN	Pn	18 43 34.7	-2.2
HIZ	Hauiti	2.07	29	P	Pn	18 43 34.7	-2.2
KHZ	Kahutara	2.09	180	⇑PN	Pn	18 43 38.1	+0.8
KHZ	Kahutara	2.09	180	⇓P	Pn	18 43 38.1	+0.8
WATZ	Wairara	2.33	47	PN	Pn	18 43 40.0	-0.5
WATZ	Wairara	2.33	47	P	Pn	18 43 40.0	-0.5
BKZ	Black Stump Fm	2.54	64	PN	Pn	18 43 42.4	-1.0
BKZ	Black Stump Fm	2.54	64	P	Pn	18 43 42.4	-1.0
LTZ	Lake Taylor	2.64	201	PN	Pn	18 43 44.8	0.0
LTZ	Lake Taylor	2.64	201	P	Pn	18 43 44.8	0.0
ALRZ	Allen Road	2.78	52	PN	Pn	18 43 47.0	+0.3
PRRZ	Plateau Road	2.85	51	PN	Pn	18 43 48.9	+1.2
TOZ	Tahuroa Road	3.00	31	PN	Pn	18 43 47.5	-2.2
RAHZ	Arahi	3.06	64	PN	Pn	18 43 51.4	+0.8
CRLZ	Canterbury Las	3.32	192	PN	Pn	18 43 53.2	-1.1
CRLZ	Canterbury Las	3.32	192	P	Pn	18 43 53.2	-1.0
KNZ	Kokohu	3.43	69	PN	Pn	18 43 54.5	-1.1
KNZ	Kokohu	3.43	69	P	Pn	18 43 54.5	-1.2
URZ	Urewera	3.44	54	PN	Pn	18 43 55.2	-0.6
URZ	Urewera	3.44	54	P	Pn	18 43 55.2	-0.6
MKAZ	Moumakai	3.44	22	PN	Pn	18 43 54.0	-1.9
MKAZ	Moumakai	3.44	22	P	Pn	18 43 54.0	-1.9
MQZ	McQueen's Vall	3.45	191	PN	Pn	18 43 54.3	-1.6
MQZ	McQueen's Vall	3.45	191	P	Pn	18 43 54.3	-1.6
WVZ	Waitaha Valley	3.47	217	PN	Pn	18 43 55.2	-1.0
WVZ	Waitaha Valley	3.47	217	P	Pn	18 43 55.2	-1.0
WTAZ	Waiatarua	3.48	13	PN	Pn	18 43 55.0	-1.3
WTAZ	Waiatarua	3.48	13	P	Pn	18 43 55.0	-1.3
MHGZ	Mahia Peninsul	3.55	72	PN	Pn	18 43 56.3	-1.0
RVAZ	Riverhead Bore	3.64	13	PN	Pn	18 43 56.9	-1.6
MWZ	Matawai	3.66	58	PN	Pn	18 43 58.3	-0.5
RPZ	Rata Peaks	3.87	208	PN	Pn	18 44 00.7	-1.0
RPZ	Rata Peaks	3.87	208	*e*Pn	Pn	18 44 00.4	-1.3
KUZ	Kuaotunu	3.95	26	PN	Pn	18 44 00.4	-2.5
FOZ	Fox Glacier	4.34	220	PN	Pn	18 44 05.7	-2.5
WCZ	Waipu Caves	4.42	8	PN	Pn	18 44 07.0	-2.3
LBZ	Lake Benmore	4.77	211	PN	Pn	18 44 12.0	-2.1
JCZ	Jackson Bay	5.17	222	PN	Pn	18 44 18.3	-1.3
JCZ	Jackson Bay	5.17	222	P	Pn	18 44 18.3	-1.3
ODZ	Otahua Downs	5.18	204	PN	Pn	18 44 17.7	-2.0
WKZ	Wanaka	5.61	215	PN	Pn	18 44 23.1	-2.5
EAZ	Earnscleugh	5.82	211	PN	Pn	18 44 25.3	-3.1
MSZ	Milford Sound	6.02	222	PN	Pn	18 44 29.7	-1.5
TUZ	Tuapeka	6.32	206	PN	Pn	18 44 33.1	-2.3
TUZ	Tuapeka	6.32	206	P	Pn	18 44 33.1	-2.2
DCZ	Deep Cove	6.97	220	PN	Pn	18 44 43.6	-0.7

DMN ***26*** *18:51:38.6±0.6, 23°.85N×90°.70E, h10km, Mb7.0/2, Error ellipse: s-maj=18.6km s-min=11.6km az=69.0*
IDC ***26*** *18:51:48.9±0.5, 24°.87N×90°.52E, h0km, mb4.6/22, mb1 4.7/23, mb1mx4.6/28, mbtmp4.6/23, ML4.8/1, MS3.9/19, Ms1 4.0/19, ms1mx3.8/29, Error ellipse: s-maj=16.9km s-min=11.5km az=41.0*
ISCJB ***26*** *18:51:49.4±0.7, 24°.75N±0°.02×90°.50E±0°.02, h21km±4km, mb4.8/196, MS4.0/48, Error ellipse: s-maj=4.1km s-min=2.8km az=2.4*
BJI ***26*** *18:51:49.9, 24°.96N×90°.55E, h19km, mB4.8/23, mb4.7/45, ML4.7/3, Ms4.3/50, Ms7 4.0/41*
LDG ***26*** *18:51:49.8±0.2, 24°.90N×90°.09E, h10km, Mb4.9/36, Ms3.8/7, Error ellipse: s-maj=9.4km s-min=7.2km az=179.0*
NEIC ***26*** *18:51:51.0±1.2, 24°.79N×90°.54E, h18km±7km, mb4.8/108, MS4.1/7, Error ellipse: s-maj=4.7km s-min=2.8km az=213.0*
NEIC At least 25 people injured at Dhaka. Felt [IV] at Dhaka. Felt at Maimansingh. Also felt at Agartala, India.
MOS ***26*** *18:51:50.3±0.8, 24°.75N×90°.51E, h27km, mb5.0/99, MS4.0/37, Error ellipse: s-maj=7.4km s-min=3.4km az=127.7*
SZGRF ***26*** *18:51:57.8, 24°.73N×89°.62E, h33km, mb5.2, MS4.2, Bangladesh*
BGS ***26*** *18:52:19.4±1.7, 25°.69N×88°.80E, h33km, mb4.7*
ISC 26 18:51:51.1±0.9, 24°.74N±0°.02×90°.51E±0°.02, h18km±5km, h30km±4.4km: pP-P, n602, σ0°86/628, mb4.8/196, MS4.0/48, 115C-51D, Bangladesh

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGT	Agartala	1.09	142	*i* P	Pb	18 52 10.0	-1.3
SHL	Shillong	1.49	56	*e*PKP	Pn	18 52 16.4	-0.5
SHL				*i* S	Sn	18 52 34.0	-1.8
SLGI	Shiliguri	2.71	316	*i* P	Pn	18 52 33.7	-0.1
SLGI				*i* x	Sb	18 53 13.9	+1.9
CAL	Calcutta	2.97	223	*e*x	Pn	18 52 36.8	-0.5
CAL				*e*x	x	18 52 53.9	
GTK	Gangtok	3.09	327	*e*PKP	Pn	18 52 38.5	-0.4
GTK				*e*x	x	18 53 08.5	
ODAN	Odare	3.52	307	*e*P	Pn	18 52 45.4	+0.6
ODAN	Odare	3.52	307	*e*P	Pn	18 52 45.8	+1.0
	2μm,0.3s						
ODAN				*e*S	Sb	18 53 36.1	+1.0
ODAN	Odare	3.52	307	*e*P	Pn	18 52 45.8	+1.0
ODAN				*e*S	Sb	18 53 36.1	+1.0
TAPN	Taplejung	3.62	316	*e*P	Pn	18 52 47.2	+1.0
TAPN	Taplejung	3.62	316	*e*P	Pn	18 52 47.8	+1.6
	6μm,0.4s						
TAPN				*e*S	Sb	18 53 39.2	+1.1
TAPN	Taplejung	3.62	316	*e*P	Pn	18 52 47.8	+1.6
TAPN				*e*S	Sb	18 53 39.2	+1.1
RAMN	Ramite	4.16	303	*e*P	Pn	18 52 54.0	+0.4
BOK	Bokaro	4.33	258	*e*PKP	Pn	18 52 56.4	+0.4
BOK				*e*S	Sn	18 53 44.1	-1.9
JIRN	Jiri	4.85	308	*e*P	Pn	18 53 04.2	+1.1
LSA	Lhasa	4.97	6	Pn	Pn	18 53 05.8	+1.0
LSA				Sn	Sn	18 54 01.8	+0.1
LSA				LR	LR		
	comp=E,6μm,7.6s						
LSA	Lhasa	4.97	6	*e*Pn	Pn	18 53 05.8	+1.1
LSA				*e*Pg	Pg	18 53 22.0	-4.2
LSA				*e*Sn	Sn	18 54 00.2	-1.5
GUN	Gumba	5.22	308	*e*P	Pn	18 53 09.1	+0.9
GUN	Gumba	5.22	308	*e*P	Pn	18 53 09.5	+1.3
GUN	Gumba	5.22	308	*e*P	Pn	18 53 09.5	+1.3
PKI	Pulchoki	5.38	303	*e*P	Pn	18 53 10.5	+0.1
PKI	Pulchoki	5.38	303	*e*P	Pn	18 53 11.2	+0.8
PKI	Pulchoki	5.38	303	*e*P	Pn	18 53 11.3	+0.9
PKI				pmax	pmax		
	comp=Z,2μm,0.5s						
PKI	Pulchoki	5.38	303	*e*P	Pn	18 53 11.3	+0.9
	comp=Z,2μm,0.5s						
PKIN	Phulchoki	5.39	303	*e*P	Pn	18 53 11.3	+0.7
	comp=Z,2μm,0.5s						
KKN	Kakani	5.59	304	*e*P	Pn	18 53 13.6	+0.3
DMN	Daman	5.63	302	*e*P	Pn	18 53 14.2	+0.3
DMN	Daman	5.63	302	*e*P	Pn	18 53 14.3	+0.4
DMN	Daman	5.63	302	*e*P	Pn	18 53 14.3	+0.4
GKN	Gorkha	6.19	303	*e*P	Pn	18 53 21.6	+0.1
KOLN	Koldanda	6.90	297	*e*P	Pn	18 53 30.7	-0.6
	comp=Z,752nm,0.3s						
PYUN	Piuthan	7.53	298	*e*P	Pn	18 53 39.8	-0.1
ALBI	Allahabad	7.92	276	*e*x	Pn	18 53 42.0	-3.2
VIS	Vishakhapatnam	9.68	225	*e*PKP	Pn	18 54 10.4	+1.0
VIS				*i* S	Sn	18 55 50.1	-7.7
VIS				AML	AML	18 57 03.8	
	comp=N,236nm,0.6s						
VIS				AML	AML	18 57 04.1	
	comp=E,398nm,0.5s						
CHG	Chiang Mai	9.80	125	⇑P	Pn	18 54 11.3	+0.1
	comp=E,73nm,1.0s						
CHTO	Chiang Mai	9.80	125	*e*P	Pn	18 54 10.3	-0.9
CHTO				pmax	pmax		
	comp=Z,62nm,0.8s						
CHTO	Chiang Mai	9.80	125	*e*Pn	Pn	18 54 10.3	-0.9
	comp=Z,62nm,0.8s						
CHRT	Chiangrai	9.85	118	⇑P	Pn	18 54 12.0	+0.1
	comp=Z,263nm,0.6s						
CM31	Chiang Mai Arr	10.03	127	*e*Pn	Pn	18 54 14.2	0.0
	comp=Z,47nm,0.8s						
CMAR	Chiang Mai Arr	10.03	127	Pn	Pn	18 54 14.7	+0.4
	comp=Z,2.1nm,0.3s,baz=302,slow=12,SNR=20						
CMAR	Chiang Mai Arr	10.03	127	P	Pn	18 54 14.7	+0.5
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PTH	Pithoragarh	10.34	300	*e*PKP	Pn	18 54 17.8	-0.7
BDT	Bhumibol Dam	10.88	132	P	Pn	18 54 26.0	0.0
	comp=Z,33nm,0.9s						
KMI	Kunming	11.10	85	P	Pn	18 54 30.8	+1.9
KMI				pP		18 54 32.8	
KMI				PP		18 54 40.5	
KMI				S	Sn	18 56 37.8	+5.1
KMI				SS		18 56 51.3	
KMI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KMI				pmax	pmax		
	comp=Z,44nm,3.1s						
KMI				LR	LR		
	comp=N,820nm,10.1s						
KMI				LR	LR		
	comp=E,750nm,11.2s						
KMI				LR	LR		
	comp=Z,640nm,10.6s						
BHPL	Bhopal	12.06	266	*e*PKP	Pn	18 54 39.4	-2.6
BHPL				*e*S	Sn	18 56 46.5	-10
DDI	Dehra Dun	12.37	299	*e*x	Pn	18 54 38.9	-7.3
NDI	New Delhi	12.52	291	*e*x	Pn	18 54 43.0	-5.2
NDI				*e*S	Sn	18 56 54.0	-13
NST	Nakhon Sawan	12.76	133	P	Pn	18 54 54.5	+2.9
AKL	Akola	13.09	255	⇓*i*P	Pn	18 54 54.9	-1.2
AKL				*i* x	x	18 57 14.3	
CD2	Chengdu	13.23	59	⇑*i*P	Pn	18 54 57.8	-0.2
CD2				pP		18 55 02.0	
CD2				sP		18 55 05.3	
CD2				PP		18 55 09.3	
CD2				S	Sn	18 57 26.3	+1.7
CD2				sS		18 57 31.5	
CD2				SS		18 57 41.5	
CD2				pmax	pmax		
	comp=Z,40nm,0.9s						
CD2				pmax	pmax		
	comp=Z,160nm,6.9s						
CD2				LR	LR		
	comp=N,1μm,13.1s						
CD2				LR	LR		
	comp=Z,1μm,13.7s						
HYB	Hyderabad	13.33	239	*e*P	Pn	18 54 58.0	-1.4
HYB				*e*S	Sn	18 57 27.0	-0.1
HYB				pmax	pmax		
	comp=Z,119nm,0.6s						
HYB	Hyderabad	13.33	239	*e*P	Pn	18 54 58.0	-1.4
	comp=Z,119nm,0.6s						
HYB				*e*S	Sn	18 57 27.0	-0.1
HYB	Hyderabad	13.33	239	⇓*i*P	Pn	18 54 58.0	-1.4
	comp=Z,63nm,0.6s						
HYB				*e*S	Sn	18 57 27.0	-0.1
SMLA	Simla	13.40	301	*i* x	Pn	18 54 56.5	-3.8
SMLA				*i* S	Sn	18 57 17.1	-12
SMLA				⇓		18 57 19.8	
	comp=N,1μm,0.5s						
SMLA				⇓		18 57 19.8	
	comp=E,1μm,0.5s						
SDNR	Sundarnagar	13.71	302	*e*x	Pn	18 55 01.5	-3.0
SDNR				*e*x	x	18 57 26.5	
BHK	Bhakra	14.10	301	*e*x	Pn	18 55 01.8	-8.1
BHK				*e*S	Sn	18 57 46.0	+0.1
AJM	Ajmer	14.42	280	*e*x	Pn	18 55 10.9	-3.5
AJM				*e*x	x	18 57 45.8	
GYA	Guiyang	14.67	80	P	Pn	18 55 17.3	-0.4
GYA				PP		18 55 29.3	
GYA				S	Sn	18 58 02.8	+2.9
GYA				SS		18 58 21.5	
GYA				PcP	PcP	19 00 26.5	-3.6
GYA				pmax	pmax		
	comp=Z,20nm,0.7s						
GYA				pmax	pmax		
	comp=Z,100nm,5.1s						

comp=Z,130nm,0.7s
KSH LR LR
comp=N,610nm,10.1s
KSH LR LR
comp=E,930nm,11.5s
KSH LR LR
comp=Z,210nm,10.5s
WMQ Urumqi 19.17 354 P **Pn** **18 56 14.0 -0.4**
WMQ pP pP 18 56 17.5 -1.1
WMQ sP sP 18 56 21.0 0.0
WMQ PP 18 56 30.8
WMQ S **Sn** **18 59 43.3 -5.5**
WMQ sS sS 18 59 49.0 -9.2
WMQ SS 19 00 09.0
WMQ PcP PcP 19 00 38.0 +1.1
WMQ pmax pmax
comp=Z,31nm,0.9s
WMQ pmax pmax
comp=Z,230nm,4.5s
WMQ LR LR
comp=N,660nm,15.2s
WMQ LR LR
comp=E,1μm,21.6s
WMQ LR LR
comp=Z,660nm,15.2s
PALK Pallekele 19.75 210 *e*P **Pn** **18 56 19.4 -2.2**
PALK *e*S **Sn** **18 59 45.7 -17**
KBL Kabul 21.02 303 *e*P **P** **18 56 34.1 +0.3**
KBL pmax pmax
comp=Z,197nm,0.9s,mb5.4
KBL Kabul 21.02 303 *e*P **P** **18 56 34.1 +0.4**
comp=Z,197nm,0.9s,mb5.4
ULHL Ulahol 21.07 329 P **P** **18 56 36.3 +2.1**
SNR=10
KZA Kyzart 21.42 328 P **P** **18 56 39.7 +1.8**
SNR=22
QUE Quetta 21.58 290 *e*P **P** **18 56 35.0 -4.8**
QUE *e*S **S** **19 00 30.0 -8.3**
KULM Kulim 21.66 152 *e*P **P** **18 56 41.7 +1.0**
comp=Z,23nm,1.0s,mb4.6
WHN Wuhan 21.87 69 P **P** **18 56 43.0 +0.1**
WHN S **S** **19 00 37.3 -6.7**
WHN LR LR
comp=N,520nm,7.2s
WHN LR LR
comp=E,450nm,5.0s
WHN LR LR
comp=Z,820nm,14.8s,MS4.3
UCH Uchtor 21.89 327 P **P** **18 56 44.6 +1.5**
SNR=7.7
UCH Uchtor 21.89 327 *e*P **P** **18 56 44.4 +1.4**
UCH pmax pmax
comp=Z,19nm,0.8s,mb4.6
UCH Uchtor 21.89 327 *e*P **P** **18 56 44.4 +1.3**
comp=Z,19nm,0.8s,mb4.6
KBK Karagaybulak 22.00 328 P **P** **18 56 45.5 +1.3**
SNR=23
AAK Ala-Archa 22.20 327 P **P** **18 56 48.0 +1.6**
SNR=12
AAK Ala-Archa 22.20 327 P **P** **18 56 47.2 +0.9**
comp=Z,12nm,0.6s,mb4.5,baz=129,slow=8.2,SNR=28
AAK LR LR 19 05 25.0
comp=Z,430nm,20.6s,MS3.9,baz=314,slow=37
AAK Ala-Archa 22.20 327 P **P** **18 56 47.2 +0.9**
AAK pmax pmax
comp=Z,12nm,0.6s,mb4.5
AAK MLR MLR
comp=Z,430nm,20.6s,MS3.9
AML Almayashu 22.24 325 P **P** **18 56 47.9 +1.1**
SNR=20
AML Almayashu 22.24 325 *e*P **P** **18 56 47.2 +0.5**
AML pmax pmax
comp=Z,60nm,0.8s,mb5.1
AML Almayashu 22.24 325 *e*P **P** **18 56 47.2 +0.5**
comp=Z,60nm,0.8s,mb5.1
FRU Bishkek 22.30 328 *e*P **P** **18 56 48.0 +0.7**
FRU *e* 18 57 12.0
FRU pmax pmax
comp=Z,100nm,1.6s,mb5.0
CHMS Chumysh 22.36 328 P **P** **18 56 48.3 +0.4**
SNR=7.2
EKS2 Erkin-Say 22.58 326 P **P** **18 56 51.4 +1.0**
SNR=31
EKS2 Erkin-Say 22.58 326 *e*P **P** **18 56 50.6 +0.2**
EKS2 pmax pmax
comp=Z,75nm,1.1s,mb5.0
EKS2 Erkin-Say 22.58 326 *e*P **P** **18 56 50.6 +0.3**
comp=Z,75nm,1.1s,mb5.0
USP Ospenovka 22.68 328 P **P** **18 56 51.5 +0.1**
SNR=29
BTO Baotou 22.72 41 *e*P **P** **18 56 51.3 -0.6**
MK31 Makanchi Array 22.97 345*ce*P **P** **18 56 53.5 -0.9**
MK31 pmax pmax
comp=Z,85nm,1.0s,mb5.1
MK31 Makanchi Array 22.97 345 *e*P **P** **18 56 53.3 -1.1**
MKAR Makanchi Array 22.97 345 P **P** **18 56 53.3 -1.1**
comp=Z,23nm,0.7s,mb4.7,baz=156,slow=9.1,SNR=125
MKAR LR LR 19 07 13.9
comp=Z,347nm,19.0s,MS3.8,baz=158,slow=40
MKAR Makanchi Array 22.97 345 P **P** **18 56 53.3 -1.1**
MKAR pmax pmax
comp=Z,23nm,0.7s
MKAR MLR MLR
comp=Z,347nm,19.0s
HHC Hu-ho-hao-te 23.80 42 *e*P **P** **18 57 01.5 -1.3**
HHC sP sP 18 57 08.0 -2.6
HHC PP 18 57 34.8
HHC PcP PcP 19 00 46.8 +0.8
HHC S **S** **19 01 12.5 -5.0**
HHC sS sS 19 01 19.5 -7.1
HHC SS 19 02 03.0
HHC ScP ScP 19 04 22.8 -0.7
HHC PcS PcS 19 04 25.0 -0.4
HHC pmax pmax
comp=Z,18nm,0.5s,mb4.8
HHC pmax pmax
comp=Z,120nm,5.2s
HHC LR LR
comp=N,850nm,12.4s,MS4.6
HHC LR LR
comp=E,810nm,12.6s,MS4.6
HHC LR LR
comp=Z,860nm,12.1s,MS4.4
KK31 Karatay Array 24.61 323*ce*P **P** **18 57 10.1 -0.1**
KK31 pmax pmax
comp=Z,27nm,0.8s,mb4.8
TIA Tai'an 25.54 57 *e*P **P** **18 57 19.3 +0.6**
NJ2 Nanjing 25.92 67 *e*P **P** **18 57 22.0 -0.2**
NJ2 pP pP 18 57 31.5 +3.8
NJ2 PP 18 58 03.5
NJ2 S **S** **19 01 49.0 -2.6**
NJ2 pmax pmax
comp=Z,310nm,5.6s
NJ2 LR LR
comp=N,280nm,11.3s,MS4.3
NJ2 LR LR
comp=E,490nm,13.2s,MS4.3
NJ2 LR LR
comp=Z,360nm,17.2s,MS4.0
SONM Songino Array 26.26 25 P **P** **18 57 25.8 +0.7**
comp=Z,20nm,0.7s,mb4.8,baz=207,slow=10,SNR=40
SONM Songino Array 26.26 25 P **P** **18 57 25.8 +0.7**
SONM pmax pmax
comp=Z,20nm,0.7s
BJI Beijing 26.37 48 P **P** **18 57 27.0 +0.8**
BJI pmax pmax
comp=Z,10.0nm,1.3s,mb4.2
BJI pmax pmax
comp=Z,57nm,4.2s
BJI LR LR
comp=N,570nm,25.9s
BJI LR LR
comp=E,280nm,19.3s
BJI LR LR
comp=Z,140nm,17.1s
ULN Ulaanbaatar 26.54 25 *e*P **P** **18 57 27.7 +0.1**
ULN pmax pmax
comp=Z,27nm,0.9s,mb4.8
ULN Ulaanbaatar 26.54 25 *e*P **P** **18 57 27.7 +0.1**
comp=Z,27nm,0.9s,mb4.8
ZAK Zakamensk 27.44 18 *e*P **P** **18 57 36.5 +0.8**
ZAK *e* 18 58 30.9
ZAK pmax pmax
comp=Z,8.0nm,1.4s,mb4.1
KURK Kurchatov 27.51 344*ce*P **P** **18 57 36.3 0.0**
KURK pmax pmax
comp=Z,21nm,1.1s,mb4.7
KURK MLR MLR
comp=Z,292nm,19.0s,MS3.9
KURK Kurchatov 27.51 344 *e*P **P** **18 57 36.0 -0.3**
comp=Z,22nm,1.0s,mb4.7
TLY Talaya 28.71 17 *e*P **P** **18 57 48.7 +1.7**
TLY *e* 18 58 34.0
TLY *e*S **S** **19 02 42.7 +7.5**
TLY *e*SS SS 19 04 17.9 -19
TLY pmax pmax
comp=Z,7.0nm,1.4s,mb4.2
TLY MLR MLR
comp=Z,484nm,14.0s,MS4.3
ZALV Zalesovo Beam 29.48 353 P **P** **18 57 53.1 -0.7**
comp=Z,2.5nm,0.6s,mb4.1,baz=181,slow=8.4,SNR=15
ZALV LR LR 19 09 39.9
comp=Z,128nm,20.0s,MS3.5,baz=183,slow=36
ZALV Zalesovo Beam 29.48 353 P **P** **18 57 53.1 -0.7**
ZALV pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
ZALV MLR MLR
comp=Z,128nm,20.0s,MS3.5
NVS Novosibirsk 30.54 352 *e*P **P** **18 58 02.3 -0.9**
BVAR Borovoye Array 32.07 337 P **P** **18 58 16.4 -0.3**
comp=Z,2.2nm,0.7s,mb4.1,baz=131,slow=9.8,SNR=12
BVAR LR LR 19 13 17.7
comp=Z,334nm,20.8s,MS4.0,baz=265,slow=40
BVAR Borovoye Array 32.07 337 P **P** **18 58 16.4 -0.3**
BVAR pmax pmax
comp=Z,2.0nm,0.7s
BVAR MLR MLR
comp=Z,334nm,20.8s
BRVK Borovoye 32.13 337 *e*P **P** **18 58 18.7 +1.5**
BRVK pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
SNY Shenyang 32.22 50 ⇑P **P** **18 58 18.3 +0.2**
SNY pmax pmax
comp=Z,11nm,1.2s,mb4.6
SNY LR LR
comp=N,110nm,13.2s,MS4.0
SNY LR LR
comp=E,210nm,16.5s,MS4.0
SNY LR LR
comp=Z,180nm,14.7s,MS3.9
HIA Hailar 33.46 35 *e*P **P** **18 58 29.1 +0.2**
HIA pmax pmax
comp=Z,8.0nm,0.8s
HIA Hailar 33.46 35 *e*P **P** **18 58 29.1 +0.2**
comp=Z,8.5nm,0.8s,mb4.7
AB31 Akbulak array 34.17 324*ce*P **P** **18 58 35.2 +0.1**
AB31 pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
ABKAR Akbulak array 34.17 324 *e*P **P** **18 58 35.1 +0.1**
comp=Z,6.7nm,0.6s,mb4.8
CN2 Changchun 34.23 47 *e*P **P** **18 58 36.0 +0.4**
CN2 *es*P sP 18 58 43.0 -0.5
CN2 *e*S **S** **19 04 01.0 -0.5**
CN2 pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,200nm,15.0s,MS4.1
CN2 LR LR
comp=E,200nm,15.0s,MS4.1
CN2 LR LR
comp=Z,200nm,18.0s,MS3.9
KSRS Korea Array 34.23 59 P **P** **18 58 34.5 -1.3**
comp=Z,0.9nm,0.6s,mb3.9,baz=252,slow=8.6,SNR=6.0
KSRS LR LR 19 14 15.0
comp=Z,120nm,18.4s,MS3.7,baz=265,slow=39
KSRS Korea Array 34.23 59 P **P** **18 58 34.5 -1.2**
KSRS pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
KSRS MLR MLR
comp=Z,121nm,18.5s,MS3.7
AKTK Aktyubinsk 35.86 324 P **P** **18 58 49.7 0.0**
AKTK LR LR 19 14 38.4
AKTO Aktyubinsk 35.86 324 P **P** **18 58 49.7 0.0**
comp=Z,3.7nm,0.6s,mb4.5,baz=126,slow=8.7,SNR=18
AKTO LR LR 19 14 38.4
comp=Z,269nm,18.6s,MS4.0,baz=303,slow=38
AKTO Aktyubinsk 35.86 324 P **P** **18 58 49.7 0.0**
AKTO pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
AKTO MLR MLR
comp=Z,269nm,18.6s,MS4.0
MDJ Mudanjiang 37.30 48 P **P** **18 59 01.8 -0.2**
MDJ pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
MDJ pmax pmax
comp=Z,55nm,5.0s
VLA Vladivostok 38.46 51⇑*i*P **P** **18 59 11.8 0.0**
VLA pmax pmax
comp=Z,12nm,1.0s,mb4.6
SVE Sverdlovsk 38.64 334⇓*e*P **P** **18 59 13.8 +0.7**
SVE pmax pmax
comp=Z,30nm,1.2s,mb4.9
SVE MLR MLR
comp=Z,209nm,14.0s,MS4.1
ARU Arti 39.22 332*c i*P **P** **18 59 18.0 0.0**
ARU *e* 19 00 45.9
ARU S **S** **19 05 17.1 -0.3**
ARU SS SS 19 08 09.4 -1.1
ARU pmax pmax
comp=Z,20nm,1.0s,mb4.8
ARU Arti 39.22 332 *e*P **P** **18 59 17.7 -0.3**
comp=Z,13nm,0.8s,mb4.7
KLR Kul'dur 40.31 42 *e*P **P** **18 59 24.0 -3.2**
DGRG David-gareji 40.83 305 P **P** **18 59 33.6 +2.0**
MTA Mtatsminda 41.30 306 P **P** **18 59 36.3 +0.8**
TBLG Delisi 41.35 306 *e*P **P** **18 59 36.7 +0.8**
TBLG Delisi 41.35 306 P **P** **18 59 36.7 +0.9**
SOKR Solikamsk 41.99 335*d i*P **P** **18 59 41.8 +1.0**
SOKR pmax pmax
comp=Z,20nm,0.8s,mb4.8
SOKR MLR MLR
comp=Z,160nm,17.0s,MS4.0
KEH Kehvi 42.03 306 P **P** **18 59 40.9 -0.6**
HABR Khabarovsk 42.10 44 P **P** **18 59 39.8 -2.1**
HABR *e**PP pP 18 59 49.1 +1.5
HABR 19 01 17.1
HABR 19 01 33.6
HABR *e*S **S** **19 05 57.7 -2.8**
HABR *e**SS sS 19 06 14.2 +4.4
HABR *e*SS SS 19 09 07.2 -0.8
HABR *e* 19 09 39.4
HABR MLR MLR
comp=Z,199nm,16.0s,MS4.1
ZEI Tsey 42.14 307 *e*P **P** **18 59 42.9 +0.6**
ZEI pmax pmax
comp=Z,26nm,0.5s,mb5.1
MAJO Matsushiro 42.30 62 *e*P **P** **18 59 42.9 -0.8**
MAJO pmax pmax
comp=Z,6.0nm,0.9s,mb4.2
MAJO Matsushiro 42.30 62 *e*P **P** **18 59 42.9 -0.8**
comp=Z,6.5nm,0.9s,mb4.3
MAT Matsushiro 42.30 62 P **P** **18 59 42.0 -1.7**
MAT *e*S **S** **19 06 10.0 +6.2**
MJAR Matsushiro Arr 42.30 62 P **P** **18 59 44.3 +0.6**
comp=Z,1.8nm,0.8s,mb3.8,baz=269,slow=8.5,SNR=12
MJAR LR LR 19 17 20.2
comp=Z,122nm,21.6s,MS3.8,baz=265,slow=36
MJAR Matsushiro Arr 42.30 62 P **P** **18 59 44.3 +0.6**
MJAR pmax pmax
comp=Z,2.0nm,0.8s
MJAR MLR MLR
comp=Z,122nm,21.6s
ONI Oni 42.43 307 P **P** **18 59 47.2 +2.5**
KIV Kislovodsk 43.22 309⇓*e*P **P** **18 59 51.0 0.0**
KIV *e*S **S** **19 06 14.9 -2.1**
KIV pmax pmax
comp=Z,31nm,1.3s,mb4.9
KIV Kislovodsk 43.22 309 *e*P **P** **18 59 50.3 -0.7**
comp=Z,18nm,0.7s,mb4.9
VRHR Novokhopersk 45.57 318 *e*P **P** **19 00 09.2 -0.5**
VRHR pmax pmax
comp=N,7.0nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.6s
VRHR pmax pmax
comp=Z,40nm,0.6s,mb5.5
YAK Yakutsk 45.62 25 *e*P **P** **19 00 14.4 +4.4**
YAK pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
YAK pmax pmax
comp=E,9.0nm,1.9s
YAK pmax pmax
comp=N,4.0nm,1.5s
YAK Yakutsk 45.62 25 P **P** **19 00 09.1 -0.8**
comp=N,8.1nm,0.6s,mb4.8
YSS Yuzh-Sakhalins 46.79 48 *e*P **P** **19 00 19.5 +0.1**
YSS *e* 19 00 27.3
YSS Yuzh-Sakhalins 46.79 48 P **P** **19 00 19.8 +0.3**
comp=N,19nm,1.0s,mb5.0
VORD Divnogorie 46.96 318 *e*P **P** **19 00 19.8 -0.8**
VORD pmax pmax
comp=Z,6.0nm,0.4s,mb4.9
VORD pmax pmax
comp=N,10.0nm,0.9s
VORD pmax pmax
comp=E,80nm,0.9s
VORD MLR MLR
comp=Z,310nm,17.0s,MS4.3
VORD MLR MLR
comp=N,20nm,4.0s
VORD MLR MLR
comp=E,220nm,17.0s
VSR Storozhevoye 47.09 318 *e*P **P** **19 00 20.9 -0.8**
VSR pmax pmax
comp=Z,9.0nm,0.3s,mb5.2
VSR pmax pmax
comp=N,4.0nm,0.6s
VSR pmax pmax
comp=E,9.0nm,0.6s
VSR MLR MLR
comp=Z,340nm,25.0s,MS4.2
VSR MLR MLR
comp=N,230nm,12.0s
VSR MLR MLR
comp=E,90nm,12.0s
ASF Jabal al Asfar 47.31 292 P **P** **19 00 25.4 +1.7**
comp=E,15nm,0.8s,mb5.0,baz=317,slow=6.0,SNR=25
ASF Jabal al Asfar 47.31 292 P **P** **19 00 25.4 +1.6**
ASF pmax pmax
comp=Z,15nm,0.8s
MMAI Mount Meron Ar 48.49 293 P **P** **19 00 34.3 +1.4**
comp=Z,15nm,0.7s,mb5.1,baz=80,slow=11,SNR=15
EIL Elat 49.27 289 P **P** **19 00 39.2 +0.3**
comp=Z,18nm,0.7s,mb5.2,baz=34,slow=2.3,SNR=17
SIM Simferopol' 49.43 309 P **P** **19 00 39.7 -0.2**
SIM S **S** **19 07 47.9 +1.8**
SIM pmax pmax
comp=Z,19nm,0.9s,mb5.1
SIM MLR MLR
comp=Z,110nm,19.0s,MS3.9
BR131 Keskin Array S 49.60 302 *e*P **P** **19 00 40.7 -0.5**
comp=Z,4.0nm,0.5s,mb4.7
BRTR Keskin Array B 49.60 302 P **P** **19 00 40.9 -0.3**
comp=Z,4.4nm,0.6s,mb4.7,baz=126,slow=10,SNR=39
BRTR LR LR 19 26 55.7
comp=Z,52nm,18.5s,MS3.6,baz=250,slow=42
BRTR Keskin Array B 49.60 302 P **P** **19 00 40.9 -0.3**
BRTR pmax pmax
comp=Z,4.0nm,0.6s
BRTR MLR MLR
comp=Z,52nm,18.5s
OBN Obninsk 49.60 322⇑*e*P **P** **19 00 40.5 -0.5**
OBN *e*S **S** **19 07 49.0 +0.8**
OBN pmax pmax
comp=Z,26nm,1.2s,mb5.1
OBN MLR MLR
comp=Z,100nm,17.0s,MS3.9
TLCR 53.19 309 ⇓P **P** **19 01 08.2 +0.1**
TLCR 53.19 309⇓*i*P **P** **19 01 08.2 +0.1**
AKASG Malin Array Be 53.20 316 P **P** **19 01 07.0 -1.1**
comp=Z,16nm,0.5s,mb5.2,baz=82,slow=6.7,SNR=92
AKASG Malin Array Be 53.20 316 P **P** **19 01 07.0 -1.1**
AKASG pmax pmax
comp=Z,16nm,0.5s
AKBB Malin Array Si 53.20 316 *e*P **P** **19 01 06.9 -1.2**
KIEV Kiev 53.21 316 *e*P **P** **19 01 06.8 -1.3**
KIEV pmax pmax
comp=Z,19nm,0.7s,mb5.1
KIEV Kiev 53.21 316 *e*P **P** **19 01 06.8 -1.3**
comp=Z,19nm,0.7s,mb5.1
TIRR Tirgusor 53.47 308 ⇓P **P** **19 01 10.3 +0.1**
TIRR Tirgusor 53.47 308⇓*i*P **P** **19 01 10.3 +0.1**
LEOM Leova 53.61 311 ⇓P **P** **19 01 11.3 +0.2**
LEOM Leova 53.61 311⇓*i*P **P** **19 01 11.3 +0.2**
PSN Preselentsi 53.64 307 *e*P **P** **19 01 14.7 +3.3**
CFR Carcaliu 53.67 309 ⇓P **P** **19 01 11.8 +0.2**
CFR Carcaliu 53.67 309⇓*i*P **P** **19 01 11.8 +0.2**
MBWA Marble Bar 53.75 146 *e*P **P** **19 01 12.8 +0.4**
comp=Z,6.6nm,0.9s,mb4.6
JOF Joensuu 54.33 331 *e*P **P** **19 01 15.1 -1.0**
JOF Joensuu 54.33 331 *ep* **P** **19 01 15.1 -1.0**
GRER 54.49 309⇓*i*P **P** **19 01 19.4 +1.8**
FITZ Fitzroy Crossi 54.63 138 *e*P **P** **19 01 22.0 +3.1**
comp=Z,6.3nm,0.9s,mb4.7
FITZ Fitzroy Crossi 54.63 138 LR LR 19 24 27.1
comp=Z,105nm,20.6s,MS3.9,baz=65,slow=36
VRI Vrincioaia 54.66 310 ⇓P **P** **19 01 20.0 +1.2**
VRI Vrincioaia 54.66 310⇓*i*P **P** **19 01 20.0 +1.2**
LVZ Lovozero 54.66 337⇑*i*P **P** **19 01 18.3 -0.2**
LVZ pmax pmax
comp=Z,36nm,1.2s,mb5.3
PLOR Plostina 54.72 310 ⇓P **P** **19 01 20.6 +1.4**
PLOR Plostina 54.72 310⇓*i*P **P** **19 01 20.5 +1.3**
TESR 54.72 311 ⇓P **P** **19 01 19.5 +0.3**
TESR 54.72 311⇓*i*P **P** **19 01 19.5 +0.3**
JMB Yambol 54.85 306 *e*P **P** **19 01 20.8 +0.5**
APA Apatity 54.98 337⇓*i*P **P** **19 01 21.8 +1.0**
APA pmax pmax
comp=Z,36nm,1.2s,mb5.3
APA MLR MLR
comp=Z,500nm,21.0s,MS4.6
KARP Karpathos 55.01 297 *e*P **P** **19 01 20.5 -1.0**
SULR 55.01 308 ⇓P **P** **19 01 22.4 +1.1**
SULR 55.01 308⇓*i*P **P** **19 01 22.4 +1.0**
IDID Didziasalis 55.16 321 *e*P **P** **19 01 22.6 +0.3**
IDID AMB AMB 19 01 22.9
comp=Z,9.5nm,0.8s,mb4.9
MLR Muntele Rosu 55.21 309 ⇓P **P** **19 01 24.2 +1.4**
MLR Muntele Rosu 55.21 309⇓*i*P **P** **19 01 24.2 +1.4**
SZH Strazhica 55.29 307 *e*P **P** **19 01 29.5 +6.1**
ALN Alexandroupoli 55.35 304 *e*P **P** **19 01 23.5 -0.4**
IIGN Ignalina 55.46 321 *e*P **P** **19 01 24.8 +0.3**
IIGN AMB AMB 19 01 25.3
comp=Z,18nm,0.6s,mb5.3
IZAR Zarasai 55.49 322 *e*P **P** **19 01 24.9 +0.3**
IZAR AMB AMB 19 01 25.3
comp=Z,13nm,0.7s,mb5.1
SEY Seymchan 55.51 29 *e*P **P** **19 01 23.5 -1.2**
CHOS Chios island 55.56 301 *e*P **P** **19 01 25.5 0.0**
VSU Vasula 55.58 325*c i*P **P** **19 01 24.8 -0.4**
VSU pmax pmax
comp=Z,11nm,0.6s,mb5.1
DOPR Dopca 55.59 310⇓*i*P **P** **19 01 26.1 +0.6**
BURAR Bucovina Array 55.70 312 ⇓P **P** **19 01 26.7 +0.5**
BURAR Bucovina Array 55.70 312⇓*i*P **P** **19 01 26.7 +0.5**
BUR08 Bucovina Ar. S 55.71 312 *e*P **P** **19 01 26.1 -0.3**
KDZ Kurdzhali 55.77 305 *e*P **P** **19 01 26.9 0.0**
VOIR 55.85 309 ⇓P **P** **19 01 27.3 -0.1**
VOIR 55.85 309⇓*i*P **P** **19 01 27.3 -0.1**
APE Apeiranthos 56.13 299⇑P **P** **19 01 28.9 -0.6**
APE Apeiranthos 56.13 299 *e*P **P** **19 01 28.5 -1.0**
APE Apeiranthos 56.13 299⇑*i*P **P** **19 01 28.9 -0.6**
PLD Plovdiv 56.27 305 *e*P **P** **19 01 30.0 -0.4**
NPS Neapolis 56.30 297 *e*P **P** **19 01 30.5 -0.3**
FINES FINESS Array B 56.39 329 P **P** **19 01 30.7 -0.3**
comp=Z,13nm,0.6s,mb5.1,baz=99,slow=7.9,SNR=68
FINES LR LR 19 26 10.9
comp=Z,162nm,20.2s,MS4.1,baz=136,slow=37
FINES FINESS Array B 56.39 329 P **P** **19 01 30.7 -0.3**
FINES pmax pmax
comp=Z,13nm,0.6s
FINES MLR MLR
comp=Z,162nm,20.2s
FINES FINESS Array B 56.39 329 P **P** **19 01 30.7 -0.3**
FINES LR LR 19 26 10.9
KAF Kangasniemi 56.40 329 *e*P **P** **19 01 29.8 -1.2**
KAF Kangasniemi 56.40 329 *ep* **P** **19 01 29.8 -1.2**
LVV L'vov 56.49 315 *e*P **P** **19 01 31.1 -0.8**
PGB Panagyurishte 56.63 306 *e*P **P** **19 01 33.3 +0.3**
BMR Baia Mare 56.86 312 ⇓P **P** **19 01 35.1 +0.6**
BMR Baia Mare 56.86 312⇓*i*P **P** **19 01 35.1 +0.6**
NVR Nevrokopi 56.96 304 *e*P **P** **19 01 35.0 -0.4**
PETK Petropavlovsk- 57.00 42 LR LR 19 28 40.4
comp=Z,88nm,18.4s,MS3.9,baz=84,slow=39

SUW Suwalki 57.12 320 *eP* **P 19 01 35.7 -0.6**
SUW Suwalki 57.12 320 *eP* **P 19 01 34.9 -1.4**
comp=Z,64nm,1.0s,mb5.6
DEV Deva 57.33 310 ⇓P **P 19 01 39.0 +1.1**
DEV Deva 57.33 310 ⇓*i*P **P 19 01 39.0 +1.1**
VTS Vitosha 57.34 306 ⇓P **P 19 01 38.8 +0.8**
VTS Vitosha 57.34 306 *eP* **P 19 01 37.0 -1.0**
VTS Vitosha 57.34 306 ⇓*i*P **P 19 01 38.8 +0.8**
KWP Kalwaria Pacla 57.35 314 *eP* **P 19 01 38.1 +0.2**
KWP Kalwaria Pacla 57.35 314 ⇓P **P 19 01 38.5 +0.5**
KWP Kalwaria Pacla 57.35 314 ⇓*i*P **P 19 01 38.5 +0.5**
PLG Polygyros 57.37 303 *eP* **P 19 01 38.0 -0.3**
VAM Vamos 57.42 297 *eP* **P 19 01 38.5 -0.2**
DRGR 57.42 311 ⇓P **P 19 01 39.4 +0.9**
DRGR 57.42 311 ⇓*i*P **P 19 01 39.3 +0.8**
GZR Gura Zlata 57.45 309 ⇓P **P 19 01 38.8 0.0**
GZR Gura Zlata 57.45 309 ⇓*i*P **P 19 01 38.8 +0.1**
UZH Uzhgorod 57.64 313 *eP* **P 19 01 39.5 -0.5**
UZH *eS* **S 19 09 33.3 -4.1**
UZH *e*SS SS 19 13 29.7 +2.3
UZH MLR MLR
comp=N,100nm,16.0s,MS4.5
UZH MLR MLR
comp=E,300nm,16.0s,MS4.5
UZH MLR MLR
comp=Z,150nm,16.0s,MS4.2
KARN Karanos 57.65 297 *eP* **P 19 01 38.5 -1.9**
KEV Kevo 57.90 338 *eP* **P 19 01 40.9 -0.6**
KEV Kevo 57.90 338 *ep* **P 19 01 40.9 -0.6**
KYTH Kithira 58.22 299 *eP* **P 19 01 38.0 -6.3**
BZS Buzias 58.25 310 ⇓P **P 19 01 44.7 +0.3**
BZS Buzias 58.25 310 ⇓*i*P **P 19 01 44.7 +0.3**
STHS Stebnicka Huta 58.30 314 *eP* **P 19 01 44.4 -0.3**
STHS pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
STHS Stebnicka Huta 58.30 314 *eP* **P 19 01 44.4 -0.3**
comp=Z,7.6nm,0.7s,mb4.8
STHS Stebnicka Huta 58.30 314 *eP* **P 19 01 44.4 -0.3**
ARCES ARCESS Array B 58.35 338 P **P 19 01 45.1 +0.4**
comp=Z,7.5nm,0.5s,mb5.0,baz=97,slow=7.9,SNR=65
ARCES PcP PcP 19 02 36.3 +0.8
comp=Z,4.0nm,0.7s,baz=87,slow=6.4,SNR=3.5
ARCES LR LR 19 27 57.3
comp=Z,162nm,18.2s,MS4.2,baz=105,slow=37
ARCES ARCESS Array B 58.35 338 P **P 19 01 45.1 +0.4**
ARCES 19 02 36.3
ARCES pmax pmax
comp=Z,8.0nm,0.5s
ARCES pmax pmax
comp=Z,4.0nm,0.7s
ARCES MLR MLR
comp=Z,162nm,18.2s
ARE0 ARCESS Array S 58.35 338 *eP* **P 19 01 44.8 +0.1**
KZN Kozani 58.65 303 *eP* **P 19 01 46.0 -1.3**
NIE Niedzica 58.91 314 *eP* **P 19 01 50.1 +1.2**
VYHS Vyhne 59.94 313 *i* P **P 19 01 55.8 -0.2**
VYHS pmax pmax
comp=Z,6.0nm,1.5s,mb4.4
VYHS Vyhne 59.94 313 *i* P **P 19 01 55.8 -0.2**
comp=Z,6.3nm,1.5s,mb4.4
VYHS Vyhne 59.94 313 *i* P **P 19 01 55.8 -0.2**
TIR Tirane 59.95 305 *eP* **P 19 01 54.2 -2.0**
TIR pmax pmax
comp=Z,25nm,0.6s,mb5.4
TIR Tirane 59.95 305 *eP* **P 19 01 54.2 -2.0**
comp=Z,25nm,0.6s,mb5.4
KOLL Kolacno 60.22 313 *eP* **P 19 01 57.9 -0.1**
KOLL Kolacno 60.22 313 *eP* **P 19 01 57.9 -0.1**
PKSM Moragy 60.27 311 ⇑P **P 19 01 58.3 0.0**
PKSM Moragy 60.27 311 ⇑*i*P **P 19 01 58.3 0.0**
OKC Ostrava-Krasne 60.29 315 *eP* **P 19 01 58.0 -0.4**
OKC Ostrava-Krasne 60.29 315 *eP* **P 19 01 58.0 -0.4**
MORC Moravsky Berou 60.69 315 ⇓P **P 19 02 01.7 +0.6**
MORC Moravsky Berou 60.69 315 *eP* **P 19 02 01.1 0.0**
comp=Z,16nm,1.0s,mb5.2
MORC Moravsky Berou 60.69 315 ⇓*i*P **P 19 02 01.7 +0.6**
VRAC Vranov 61.34 314 ⇓P **P 19 02 06.3 +0.7**
VRAC Vranov 61.34 314 ⇓*i*P **P 19 02 06.3 +0.7**
KSP Ksiaz 61.40 316 *eP* **P 19 02 06.1 +0.1**
KSP Ksiaz 61.40 316 *eP* **P 19 02 06.0 0.0**
DPC Dobruska-Polom 61.43 315 *eP* **P 19 02 06.5 +0.4**
DPC MLR MLR
comp=Z,100nm,15.7s,MS4.1
DPC Dobruska-Polom 61.43 315 *eP* **P 19 02 06.5 +0.4**
DPC AMS AMS 19 32 00.0
comp=Z,100nm,15.7s
WRA Warramunga Arr 61.58 132 P **P 19 02 09.3 +1.8**
baz=323,slow=7.0,SNR=55
WRA Warramunga Arr 61.58 132 P **P 19 02 09.3 +1.8**
WRAB Tennant Creek 61.58 132 *eP* **P 19 02 08.8 +1.3**
WRAB pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
WRAB Tennant Creek 61.58 132 *eP* **P 19 02 08.8 +1.3**
comp=Z,10nm,0.7s,mb5.1
UPC Upice 61.61 316 *eP* **P 19 02 07.5 +0.1**
UPC Upice 61.61 316 *eP* **P 19 02 07.5 +0.1**
KOGS Kog 61.89 311 *i* P **P 19 02 09.2 -0.1**
CONA Conrad Observa 61.97 313 ⇑P **P 19 02 09.7 -0.1**
comp=Z,14nm,0.9s,mb5.1,SNR=16
BILL Bilibino 61.98 24⇓*eP* **P 19 02 09.9 +0.3**
BILL *e* 19 04 26.5
BILL *e*SS SS 19 14 39.1 +4.4
BILL pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
BILL MLR MLR
comp=Z,100nm,14.0s,MS4.1
MOR8 Moi Rana 62.02 333 ⇑*i*P **P 19 02 08.8 -1.0**
MOR8 AMB AMB 19 02 09.8
comp=Z,30nm,0.8s,mb5.5
MOR8 Moi Rana 62.02 333 *eP* **P 19 02 09.1 -0.7**
TREC Trest 62.07 314 *eP* **P 19 02 10.6 +0.1**
TREC Trest 62.07 314 *eP* **P 19 02 10.6 +0.1**
ARSA Arzberg 62.28 312 ⇑*i*P **P 19 02 11.7 -0.2**
comp=Z,7.5nm,0.7s,mb5.0
LOF Lofoten 62.44 336 ⇑*i*P **P 19 02 11.9 -0.8**
LOF Lofoten 62.44 336 *eP* **P 19 02 11.9 -0.7**
PVCC Panska Ves 62.52 316 *eP* **P 19 02 13.4 -0.1**
PVCC MLR MLR
comp=Z,100nm,15.7s,MS4.1
PVCC Panska Ves 62.52 316 *eP* **P 19 02 13.4 -0.1**
PVCC AMS AMS 19 33 00.0
comp=Z,100nm,15.7s
PRU Pruhonice 62.60 315 *eP* **P 19 02 14.7 +0.7**
PRU MLR MLR
comp=Z,100nm,19.5s,MS4.0
PRU Pruhonice 62.60 315 *eP* **P 19 02 14.7 +0.7**
PRU AMS AMS 19 32 40.0
comp=Z,100nm,19.5s
PERS Pernice 62.64 311 *i* P **P 19 02 14.3 -0.1**
SOKA Soboth 62.69 311 ⇑*i*P **P 19 02 14.7 0.0**
comp=Z,9.4nm,0.6s,mb5.1
BOJS Bojanci 62.70 310 *eP* **P 19 02 14.8 0.0**
NWAO Narrogin (SRO) 62.75 155 LR LR 19 28 38.7
comp=Z,1.7nm,21.1s,baz=240,slow=35
BRG Berggiesshubel 62.88 316 *eP* **P 19 02 15.7 -0.2**
comp=Z,12nm,0.7s,mb5.1
BRG Berggiesshubel 62.88 316 *i* P **P 19 02 15.9 0.0**
comp=Z,12nm,0.7s,mb5.1
BRG
comp=N,289nm,16.4s
BRG
comp=E,139nm,25.8s
BRG
comp=Z,170nm,25.0s
BRG Berggiesshubel 62.88 316 *i* P **P 19 02 15.9 0.0**
BRG pmax pmax
comp=Z,7.0nm,0.7s,mb4.9
BRG MLR MLR
comp=N,173nm,16.4s
BRG MLR MLR
comp=E,83nm,25.8s
BRG MLR MLR
comp=Z,102nm,25.0s
MBAR Mbarara 63.04 256 ⇑*i*P **P 19 02 18.2 +0.7**
OBKA Obir 63.04 311 ⇑*i*P **P 19 02 17.1 0.0**
comp=Z,11nm,0.8s,mb5.0
MOA Molln 63.05 313 *i* P **P 19 02 16.6 -0.5**
comp=Z,15nm,0.6s,mb5.3,SNR=25
LJU Ljubljana 63.13 311 *i* P **P 19 02 17.7 +0.1**
GEC2 GERESS Array S 63.29 314 *eP* **P 19 02 18.5 -0.1**
comp=Z,17nm,0.8s,mb5.2
GEC2 pmax pmax
comp=Z,17nm,0.8s,mb5.2

KHC Kasperske Hory 63.33 314 *eP* **P 19 02 18.6 -0.3**
KHC *e* pP 19 02 25.1 +0.3
KHC Kasperske Hory 63.33 314 *eP* **P 19 02 18.2 -0.7**
comp=Z,17nm,1.2s,mb5.0
KHC Kasperske Hory 63.33 314 *eP* **P 19 02 18.6 -0.3**
KHC *e*pP pP 19 02 25.1 +0.3
CLL Collm 63.42 317 *eP* **P 19 02 18.8 -0.7**
comp=Z,4.0nm,0.8s,mb4.6
CLL Collm 63.42 317 ⇑*i*P **P 19 02 18.9 -0.6**
CLL pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
CLL MLR MLR
comp=Z,100nm,18.3s,MS4.0
CLL Collm 63.42 317 ⇑*i*P **P 19 02 18.9 -0.6**
comp=Z,5.0nm,0.8s,mb4.7
CLL LR LR
comp=Z,100nm,18.3s,MS4.0
CLL Collm 63.42 317 ⇑*i*P **P 19 02 18.9 -0.6**
comp=Z,5.0nm,0.8s,mb4.7
CLL LmV 19 33 00.0
comp=Z,100nm,18.3s
JAVS Javornik 63.47 311 *i* P **P 19 02 19.6 -0.3**
CEL Celeste 63.48 302 *eP* **P 19 02 19.4 -0.7**
comp=Z,46nm,1.0s,mb5.6
NB2 NORSAR Subarra 63.53 328 P **P 19 02 19.2 -0.8**
comp=Z,12nm,0.7s,mb5.0,baz=86,slow=6.5
NB2 NORSAR Subarra 63.53 328 P **P 19 02 19.2 -0.8**
baz=86,slow=6.5
NOA NORSAR Array B 63.53 328 P **P 19 02 19.0 -1.0**
comp=Z,10.0nm,0.7s,mb5.0,baz=86,slow=6.5,SNR=69
NOA LR LR 19 31 29.5
comp=Z,154nm,21.9s,MS4.1,baz=85,slow=38
NOA NORSAR Array B 63.53 328 P **P 19 02 19.0 -1.0**
NOA pmax pmax
comp=Z,10.0nm,0.7s
NOA MLR MLR
comp=Z,154nm,21.9s
CADS Cadrg 63.64 311 *i* P **P 19 02 20.4 -0.7**
NAO01 NORSAR Array S 63.70 327 *eP* **P 19 02 19.9 -1.2**
comp=Z,9.4nm,0.7s,mb4.9
KBA Koelnbreinsper 63.78 312 ⇑*i*P **P 19 02 21.3 -0.6**
comp=Z,4.9nm,0.5s,mb4.8,SNR=5.4
WET Wettzell 63.78 314 *eP* **P 19 02 21.8 -0.1**
comp=Z,12nm,1.1s,mb4.8
WET Wettzell 63.78 314 *eP* **P 19 02 21.8 -0.1**
WET pmax pmax
comp=Z,12nm,1.1s,mb4.8
TANN Tannenbergstha 63.88 316 *eP* **P 19 02 22.3 -0.2**
comp=Z,8.0nm,0.8s,mb4.8
NKC Novy Kostel 63.91 316 *eP* **P 19 02 22.8 +0.1**
NKC MLR MLR
comp=Z,200nm,18.6s,MS4.3
NKC Novy Kostel 63.91 316 *eP* **P 19 02 22.8 +0.1**
NKC AMS AMS 19 32 20.0
comp=Z,200nm,18.6s
ASAR Alice Springs 63.92 135 P **P 19 02 24.8 +1.7**
comp=Z,3.0nm,0.8s,mb4.4,baz=318,slow=6.1,SNR=35
ASAR Alice Springs 63.92 135 P **P 19 02 24.8 +1.8**
ASAR pmax pmax
comp=Z,3.0nm,0.8s
RJOB Jochberg 64.05 313 *eP* **P 19 02 22.9 -0.7**
comp=Z,6.0nm,1.1s,mb4.5
ROTZ Rotzenmuhle 64.13 315 *eP* **P 19 02 24.6 +0.4**
comp=Z,17nm,0.9s,mb5.1
MOX Moxa 64.38 316 *eP* **P 19 02 25.8 0.0**
comp=Z,14nm,1.0s,mb5.0
MOX
comp=Z,100nm,18.0s
MOX Moxa 64.38 316 *eP* **P 19 02 25.5 -0.3**
comp=Z,8.0nm,0.8s,mb4.8
MOX Moxa 64.38 316 *eP* **P 19 02 25.8 0.0**
MOX pmax pmax
comp=Z,14nm,1.0s,mb5.0
MOX MLR MLR
comp=Z,100nm,18.0s,MS4.0
ABTA Abfaltersbach 64.39 312 ⇑*i*P **P 19 02 24.7 -1.3**
comp=Z,7.3nm,0.9s,mb4.7,SNR=6.7
BSEG Bad Segeberg 64.71 320 *eP* **P 19 02 28.2 +0.3**
comp=Z,26nm,0.9s,mb5.3
GRA1 Grafenberg Arr 64.77 315 *eP* **P 19 02 28.8 +0.4**
comp=Z,30nm,1.5s,mb5.1
GRA1 LR LR
comp=Z,200nm,20.0s,MS4.3
GRF Grafenberg Arr 64.77 315 *eP* **P 19 02 28.8 +0.4**
comp=Z,30nm,1.5s,mb5.1
GRF *e*L 19 33 33.2
comp=Z,154nm,20.0s
GRF Grafenberg Arr 64.77 315 *eP* **P 19 02 28.8 +0.4**
GRF pmax pmax
comp=Z,30nm,1.5s,mb5.1
GRF MLR MLR
comp=Z,200nm,20.0s,MS4.3
WTTA Wattenberg 64.90 312 ⇑*i*P **P 19 02 28.4 -0.9**
comp=Z,19nm,1.0s,mb5.1
CLZ Clausthal 64.97 318 *eP* **P 19 02 29.7 +0.1**
comp=Z,20nm,0.8s,mb5.2
CLZ Clausthal 64.97 318 *eP* **P 19 02 29.7 +0.1**
CLZ pmax pmax
comp=Z,20nm,0.8s,mb5.2
FUR Furstenfeldbru 64.98 313 *eP* **P 19 02 29.6 -0.2**
comp=Z,20nm,1.2s,mb5.0
FUR Furstenfeldbru 64.98 313 *eP* **P 19 02 29.6 -0.2**
FUR pmax pmax
comp=Z,20nm,1.2s,mb5.0
NRDL Niedersach Rie 65.04 318 *eP* **P 19 02 29.4 -0.6**
comp=Z,36nm,1.1s,mb5.3
MOTA Moosalm 65.24 313 ⇑*i*P **P 19 02 30.3 -1.1**
comp=Z,12nm,0.8s,mb5.0,SNR=14
RETA Reutte 65.44 313 ⇑*i*P **P 19 02 32.1 -0.7**
comp=Z,8.4nm,0.7s,mb4.9
DAVA Damuels 66.07 313 ⇑*i*P **P 19 02 36.2 -0.6**
comp=Z,25nm,1.2s,mb5.1,SNR=9.8
STU Stuttgart 66.24 314 *eP* **P 19 02 37.6 -0.3**
comp=Z,14nm,0.9s,mb5.0
TNS Taunus Mts 66.44 316 *eP* **P 19 02 39.1 -0.1**
comp=Z,23nm,0.8s,mb5.3
TNS Taunus Mts 66.44 316 *eP* **P 19 02 39.1 -0.1**
TNS pmax pmax
comp=Z,23nm,0.8s,mb5.3
IBBN Ibbenburen 66.49 318 *eP* **P 19 02 39.4 0.0**
comp=Z,24nm,1.0s,mb5.2
BFO Black Forest 66.89 314 *eP* **P 19 02 42.3 +0.3**
comp=Z,3.0nm,1.0s,mb4.3
BFO Black Forest 66.89 314 *eP* **P 19 02 42.3 +0.3**
BFO pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
CDF Champ du Feu 67.56 314 ⇑*i*P **P 19 02 45.8 -0.5**
comp=Z,15nm,0.9s,mb4.7
CDF Champ du Feu 67.56 314 ⇑*i*P **P 19 02 45.8 -0.5**
CDF pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
CDF Champ du Feu 67.56 314 ⇑*i*P **P 19 02 45.8 -0.5**
comp=Z,7.4nm,0.9s,mb4.7
ECH Echery 67.68 314 *eP* **P 19 02 45.3 -1.7**
ECH pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
ECH Echery 67.68 314 *eP* **P 19 02 45.3 -1.8**
comp=Z,3.6nm,0.9s,mb4.4
PGF Pioggiola 67.69 308 ⇑*i*P **P 19 02 46.8 -0.4**
comp=Z,16nm,0.7s,mb4.9
PGF Pioggiola 67.69 308 ⇑*i*P **P 19 02 46.8 -0.4**
PGF pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
PGF Pioggiola 67.69 308 ⇑*i*P **P 19 02 46.8 -0.4**
comp=Z,7.8nm,0.7s,mb4.8
MEM Membach 67.90 317 P **P 19 02 48.7 +0.3**
comp=Z,5.7nm,1.1s,mb4.5
HINF Hinteralfeld 67.97 314 *eP* **P 19 02 48.5 -0.4**
comp=Z,6.5nm,0.7s,mb4.5
HINF Hinteralfeld 67.97 314 *eP* **P 19 02 48.5 -0.4**
HINF pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
HINF Hinteralfeld 67.97 314 *eP* **P 19 02 48.5 -0.4**
comp=Z,3.3nm,0.7s,mb4.5
WLF Walferdange 68.01 316 P **P 19 02 49.8 +0.7**
comp=Z,16nm,1.4s,mb4.8
WLF Walferdange 68.01 316 *eP* **P 19 02 49.6 +0.5**
comp=Z,33nm,1.4s,mb5.2
HAU Haudompre 68.25 314 ⇑*i*P **P 19 02 50.3 -0.4**
comp=Z,15nm,0.8s,mb4.8
HAU *e*MLR MLR
comp=Z,116nm,19.8s,MS3.8
HAU Haudompre 68.25 314 ⇑*i*P **P 19 02 50.3 -0.4**
HAU pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
HAU MLR MLR
comp=Z,120nm,19.8s,MS4.1

HAU Haudompre 68.25 314 ⇑*i*P **P 19 02 50.3 -0.4**
comp=Z,7.7nm,0.8s,mb4.8
HAU LR LR
comp=Z,120nm,19.8s,MS4.1
BCLA Clavier 68.38 317 P **P 19 02 51.6 +0.2**
SBF Sospel 68.49 309 ⇑*i*P **P 19 02 51.9 -0.3**
LPG La Plagne 68.57 311 ⇑*i*P **P 19 02 53.0 +0.3**
comp=Z,20nm,0.8s,mb4.8
LPG La Plagne 68.57 311 ⇑*i*P **P 19 02 53.0 +0.3**
LPG pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
LPG La Plagne 68.57 311 ⇑*i*P **P 19 02 53.0 +0.3**
comp=Z,10nm,0.8s,mb4.8
LPL La Plagne 68.58 311 ⇑*i*P **P 19 02 53.0 +0.3**
comp=Z,20nm,0.7s,mb4.9
LPL La Plagne 68.58 311 ⇑*i*P **P 19 02 53.0 +0.3**
LPL pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
LPL La Plagne 68.58 311 ⇑*i*P **P 19 02 53.0 +0.3**
comp=Z,9.9nm,0.7s,mb4.8
MBDF Montbardon 68.74 311 ⇑*i*P **P 19 02 52.9 -0.9**
comp=Z,7.5nm,0.6s,mb4.5
MBDF Montbardon 68.74 311 ⇑*i*P **P 19 02 52.9 -0.9**
MBDF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
MBDF Montbardon 68.74 311 ⇑*i*P **P 19 02 52.9 -0.9**
comp=Z,3.8nm,0.6s,mb4.5
GIVF Givet 68.75 316 *eP* **P 19 02 53.9 +0.2**
comp=Z,17nm,0.8s,mb4.7
GIVF Givet 68.75 316 *eP* **P 19 02 53.9 +0.2**
GIVF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
GIVF Givet 68.75 316 *eP* **P 19 02 53.9 +0.2**
comp=Z,8.4nm,0.8s,mb4.7
DOU Dourbes 68.89 316 P **P 19 02 54.6 -0.1**
comp=Z,3.5nm,1.3s,mb4.1
MEZF Maizieres J'vi 68.98 315 ⇑*i*P **P 19 02 55.1 -0.1**
comp=Z,35nm,0.8s,mb5.0
MEZF Maizieres J'vi 68.98 315 ⇑*i*P **P 19 02 55.1 -0.1**
comp=Z,35nm,0.8s,mb5.3
SNF Seneffe 68.99 317 P **P 19 02 55.1 -0.1**
comp=Z,7.5nm,2.3s,mb4.2
FRF La Foret Royal 69.12 309 ⇑*i*P **P 19 02 55.8 -0.4**
comp=Z,40nm,1.0s,mb5.0
FRF La Foret Royal 69.12 309 ⇑*i*P **P 19 02 55.8 -0.4**
FRF pmax pmax
comp=Z,20nm,1.0s,mb5.0
FRF La Foret Royal 69.12 309 ⇑*i*P **P 19 02 55.8 -0.4**
comp=Z,20nm,1.0s,mb5.0
BAIF Baives 69.14 317 ⇑*i*P **P 19 02 56.2 0.0**
comp=Z,33nm,1.2s,mb4.8
BAIF Baives 69.14 317 ⇑*i*P **P 19 02 56.2 0.0**
BAIF pmax pmax
comp=Z,16nm,1.2s,mb4.8
BAIF Baives 69.14 317 ⇑*i*P **P 19 02 56.2 0.0**
comp=Z,16nm,1.2s,mb4.8
LMR La Mourre 69.27 309 ⇑*i*P **P 19 02 56.8 -0.3**
comp=Z,9.7nm,0.7s,mb4.6
LMR La Mourre 69.27 309 ⇑*i*P **P 19 02 56.8 -0.3**
LMR pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
LMR La Mourre 69.27 309 ⇑*i*P **P 19 02 56.8 -0.3**
comp=Z,4.8nm,0.6s,mb4.6
ORIF Oris-en-Rattie 69.31 311 ⇑*i*P **P 19 02 56.6 -0.7**
comp=Z,4.9nm,0.5s,mb4.4
ORIF *e*MLR MLR
comp=Z,166nm,22.2s,MS3.9
ORIF Oris-en-Rattie 69.31 311 ⇑*i*P **P 19 02 56.6 -0.7**
ORIF pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
ORIF Oris-en-Rattie 69.31 311 ⇑*i*P **P 19 02 56.6 -0.7**
comp=Z,2.5nm,0.5s,mb4.4
SMRF Simiane la Rot 69.76 310 *eP* **P 19 03 00.2 +0.1**
comp=Z,6.9nm,0.6s,mb4.5
SMRF Simiane la Rot 69.76 310 *eP* **P 19 03 00.2 +0.1**
comp=Z,6.9nm,0.6s,mb4.8
LOR Lormes 70.07 314 ⇑*i*P **P 19 03 01.1 -0.8**
comp=Z,12nm,1.0s,mb4.5
LOR *e*MLR MLR
comp=Z,114nm,19.2s,MS3.8
LOR Lormes 70.07 314 ⇑*i*P **P 19 03 01.1 -0.8**
LOR pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
LOR MLR MLR
comp=Z,110nm,19.3s,MS4.1
LOR Lormes 70.07 314 ⇑*i*P **P 19 03 01.1 -0.8**
comp=Z,5.9nm,1.0s,mb4.5
LOR LR LR
comp=Z,110nm,19.3s,MS4.1
VIVF Saint-Julien-l 70.15 311 ⇑*i*P **P 19 03 02.2 -0.3**
comp=Z,21nm,1.1s,mb4.7
VIVF Saint-Julien-l 70.15 311 ⇑*i*P **P 19 03 02.2 -0.3**
VIVF pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
VIVF Saint-Julien-l 70.15 311 ⇑*i*P **P 19 03 02.2 -0.3**
comp=Z,10nm,1.1s,mb4.7
CTA Charters Tower 70.19 124 *eP* **P 19 03 05.9 +2.9**
comp=Z,2.1nm,0.6s,mb4.2
CTAO Charters Tower 70.19 124 *eP* **P 19 03 05.0 +2.0**
CTAO pmax pmax
comp=Z,12nm,1.1s,mb4.7
CTAO Charters Tower 70.19 124 *eP* **P 19 03 05.0 +2.0**
comp=Z,12nm,1.1s,mb4.7
SMF Signal de Mont 70.24 313 ⇑*i*P **P 19 03 02.5 -0.5**
comp=Z,22nm,0.9s,mb4.8
SMF Signal de Mont 70.24 313 ⇑*i*P **P 19 03 02.5 -0.5**
SMF pmax pmax
comp=Z,11nm,0.9s,mb4.8
SMF Signal de Mont 70.24 313 ⇑*i*P **P 19 03 02.5 -0.5**
comp=Z,11nm,0.9s,mb4.8
SSF Saint Saulge 70.35 314 ⇑*i*P **P 19 03 03.3 -0.4**
comp=Z,17nm,0.7s,mb4.8
SSF Saint Saulge 70.35 314 ⇑*i*P **P 19 03 03.3 -0.4**
SSF pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
SSF Saint Saulge 70.35 314 ⇑*i*P **P 19 03 03.3 -0.4**
comp=Z,8.5nm,0.7s,mb4.8
AVF Avril sur Loir 70.53 313 ⇑*i*P **P 19 03 04.2 -0.6**
comp=Z,13nm,0.7s,mb4.7
AVF Avril sur Loir 70.53 313 ⇑*i*P **P 19 03 04.2 -0.6**
AVF pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
AVF Avril sur Loir 70.53 313 ⇑*i*P **P 19 03 04.2 -0.6**
comp=Z,6.3nm,0.7s,mb4.7
HYF Humbligny 70.87 314 *eP* **P 19 03 07.1 +0.3**
BGF Bois d'Agland 70.93 313 *eP* **P 19 03 06.8 -0.4**
LASF Ste Croix 70.93 310 ⇑*i*P **P 19 03 07.3 0.0**
comp=Z,42nm,1.2s,mb5.0
TCF Toulx Ste Croi 71.42 313 ⇑*i*P **P 19 03 10.2 0.0**
comp=Z,20nm,0.8s,mb4.8
TCF Toulx Ste Croi 71.42 313 ⇑*i*P **P 19 03 10.2 0.0**
TCF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
TCF Toulx Ste Croi 71.42 313 ⇑*i*P **P 19 03 10.2 0.0**
comp=Z,10nm,0.8s,mb4.8
MCD Coleburn Disti 71.43 325 P **P 19 03 09.3 -0.8**
MCD Coleburn Disti 71.43 325 *eP* **P 19 03 09.3 -0.8**
ESY Stoneypath 71.57 324 P **P 19 03 10.2 -0.8**
ESY Stoneypath 71.57 324 *eP* **P 19 03 10.2 -0.8**
CAF Calviac 71.92 312 ⇑*i*P **P 19 03 13.3 +0.1**
comp=Z,10nm,0.7s,mb4.6
CAF Calviac 71.92 312 ⇑*i*P **P 19 03 13.3 +0.1**
CAF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
CAF Calviac 71.92 312 ⇑*i*P **P 19 03 13.3 +0.1**
comp=Z,5.1nm,0.7s,mb4.6
EBH Black Hill 71.95 324 P **P 19 03 12.5 -0.7**
EBH Black Hill 71.95 324 *eP* **P 19 03 12.5 -0.7**
MDO Dochfour 72.04 326 P **P 19 03 13.4 -0.3**
MDO Dochfour 72.04 326 *eP* **P 19 03 13.4 -0.3**
EAU Auchinoon 72.04 324 P **P 19 03 13.8 +0.1**
EAU Auchinoon 72.04 324 *eP* **P 19 03 13.8 +0.1**
ECK Cauldkaine Hil 72.07 323 P **P 19 03 13.3 -0.6**
ECK Cauldkaine Hil 72.07 323 *eP* **P 19 03 13.3 -0.6**
ESK Eskdalemuir 72.07 323 P **P 19 03 13.5 -0.5**
ESK AMb AMB 19 03 14.8
comp=Z,12nm,1.0s,mb4.8
ESK Eskdalemuir 72.07 323 *eP* **P 19 03 13.5 -0.5**
ESK AMb AMB 19 03 14.8
comp=Z,12nm,1.0s,mb4.8
RSC Scourie 72.17 327 P **P 19 03 14.6 +0.2**
RSC Scourie 72.17 327 *eP* **P 19 03 14.6 +0.2**
RJF Les Rejaudoux 72.17 312 ⇑*i*P **P 19 03 15.1 +0.4**
comp=Z,19nm,0.8s,mb4.8
RJF *e*MLR MLR
comp=Z,47nm,19.8s,MS3.5

RJF Les Rejaudoux 72.17 312⇑ iP P 19 03 15.1 +0.4
RJF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
RJF MLR MLR
comp=Z,50nm,19.8s,MS3.8
RJF Les Rejaudoux 72.17 312⇑ iP P 19 03 15.1 +0.4
comp=Z,9.3nm,0.8s,mb4.8
RJF LR LR
comp=Z,50nm,19.8s,MS3.8
LDF La Druitiere 72.27 316⇑ iP P 19 03 14.8 -0.4
comp=Z,7.8nm,0.6s,mb4.5
LDF La Druitiere 72.27 316⇑ iP P 19 03 14.8 -0.4
LDF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
LDF La Druitiere 72.27 316⇑ iP P 19 03 14.8 -0.4
comp=Z,3.9nm,0.6s,mb4.5
MTLF Montolieu 72.28 310⇑ iP P 19 03 15.3 -0.1
comp=Z,9.0nm,0.8s,mb4.5
MTLF Montolieu 72.28 310⇑ iP P 19 03 15.3 -0.1
MTLF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
MTLF Montolieu 72.28 310⇑ iP P 19 03 15.3 -0.1
comp=Z,4.5nm,0.8s,mb4.5
FLN La Foliniere 72.44 316 eP P 19 03 15.8 -0.5
FLN eMLR MLR
comp=Z,188nm,22.0s,MS4.0
FLN La Foliniere 72.44 316 eP P 19 03 15.8 -0.5
FLN LR LR
comp=Z,190nm,22.0s,MS4.3
KAC Achnashellach 72.50 326 P P 19 03 16.1 -0.4
KAC Achnashellach 72.50 326 eP P 19 03 16.1 -0.4
PGBU Glenifferbraes 72.61 324 P P 19 03 17.3 +0.2
PGBU AMb AMB 19 03 18.2
comp=Z,40nm,5.0s
PGBU Glenifferbraes 72.61 324 eP P 19 03 17.3 +0.2
PGBU AMb AMB 19 03 18.2
comp=Z,40nm,5.0s
LSZ Lusaka 72.63 244 eP P 19 03 19.0 +1.2
LSZ pmax pmax
comp=Z,14nm,0.8s,mb4.9
LSZ Lusaka 72.63 244 eP P 19 03 19.0 +1.2
comp=Z,14nm,0.8s,mb5.0
CLLI Llivia 72.71 309 P P 19 03 17.5 -0.5
KPL Plockton 72.74 326 P P 19 03 17.5 -0.3
KPL AMb AMB 19 03 18.3
comp=Z,28nm,2.3s,mb4.8
KPL Plockton 72.74 326 eP P 19 03 17.5 -0.3
KPL AMb AMB 19 03 18.3
comp=Z,28nm,2.3s,mb4.8
GRR Gorron 72.80 316⇑ iP P 19 03 18.0 -0.4
comp=Z,7.8nm,0.7s,mb4.5
GRR Gorron 72.80 316⇑ iP P 19 03 18.0 -0.4
GRR pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
GRR Gorron 72.80 316⇑ iP P 19 03 18.0 -0.4
comp=Z,3.9nm,0.7s,mb4.5
LFF La Frestale 72.81 312⇑ iP P 19 03 18.7 +0.2
comp=Z,13nm,0.6s,mb4.7
LFF La Frestale 72.81 312⇑ iP P 19 03 18.7 +0.2
LFF pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
LFF La Frestale 72.81 312⇑ iP P 19 03 18.7 +0.2
comp=Z,6.6nm,0.6s,mb4.7
MFF Saint Martin d 72.89 314 eP P 19 03 18.6 -0.4
comp=Z,7.0nm,0.7s,mb4.4
MFF Saint Martin d 72.89 314 eP P 19 03 18.6 -0.4
MFF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
MFF Saint Martin d 72.89 314 eP P 19 03 18.6 -0.4
comp=Z,3.5nm,0.7s,mb4.4
ETOS Mallorca 72.94 306 P P 19 03 20.5 +1.1
comp=Z,3.0nm,0.7s,mb4.3
MCH1 Michaelchurch 72.98 320 P P 19 03 19.1 -0.3
MCH1 AMb AMB 19 03 32.5
comp=Z,18nm,2.9s,mb4.5
MCH1 Michaelchurch 72.98 320 eP P 19 03 19.1 -0.3
MCH1 AMb AMB 19 03 32.5
comp=Z,18nm,2.9s,mb4.5
GAL1 Galloway 73.04 323 P P 19 03 19.6 -0.1
GAL1 AMb AMB 19 03 25.0
comp=Z,20nm,3.2s
GAL1 Galloway 73.04 323 eP P 19 03 19.6 -0.1
GAL1 AMb AMB 19 03 25.0
comp=Z,20nm,3.2s
RRH Rhenigidale 73.07 326 P P 19 03 20.0 +0.2
RRH Rhenigidale 73.07 326 eP P 19 03 20.0 +0.2
WPM1 Penmaenmawr 73.10 321 P P 19 03 19.4 -0.7
WPM1 Penmaenmawr 73.10 321 eP P 19 03 19.4 -0.7
EMIR Miracle 73.20 309 P P 19 03 21.7 +0.8
comp=Z,3.4nm,0.8s,mb4.3
YLL Llanberis 73.29 321 P P 19 03 20.9 -0.3
YLL Llanberis 73.29 321 eP P 19 03 20.9 -0.3
CSOR Sort 73.33 309 P P 19 03 21.6 -0.1
comp=Z,1.2nm,0.5s,mb4.1
WLF1 Llynfaes 73.37 321 P P 19 03 20.9 -0.8
WLF1 AMb AMB 19 03 23.5
comp=Z,46nm,1.5s,mb5.2
WLF1 Llynfaes 73.37 321 eP P 19 03 20.9 -0.8
WLF1 AMb AMB 19 03 23.5
comp=Z,46nm,1.5s,mb5.2
EPF Esparros 73.68 310 eP P 19 03 22.8 -0.9
EPOB Poblet 73.70 308 P P 19 03 23.9 0.0
comp=Z,5.7nm,0.5s,mb4.8
SGMF Saint Gilles 73.91 316⇑ iP P 19 03 24.9 -0.1
comp=Z,28nm,0.9s,mb4.9
SGMF Saint Gilles 73.91 316⇑ iP P 19 03 24.9 -0.1
SGMF pmax pmax
comp=Z,14nm,0.9s,mb4.9
SGMF Saint Gilles 73.91 316⇑ iP P 19 03 24.9 -0.1
comp=Z,14nm,0.9s,mb4.9
ROSF Rostrenen 74.34 316⇑ iP P 19 03 27.4 -0.1
comp=Z,22nm,0.7s,mb4.9
ROSF Rostrenen 74.34 316⇑ iP P 19 03 27.4 -0.1
ROSF pmax pmax
comp=Z,11nm,0.7s,mb4.9
ROSF Rostrenen 74.34 316⇑ iP P 19 03 27.4 -0.1
comp=Z,11nm,0.7s,mb4.9
ETSF Etsaut 74.35 310⇑ iP P 19 03 27.9 +0.3
comp=Z,13nm,0.6s,mb4.7
ETSF Etsaut 74.35 310⇑ iP P 19 03 27.9 +0.3
ETSF pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
ETSF Etsaut 74.35 310⇑ iP P 19 03 27.9 +0.3
comp=Z,6.5nm,0.6s,mb4.7
ERTA Horta de San J 74.36 308 P P 19 03 27.7 0.0
comp=Z,2.1nm,0.5s,mb4.3
QUIF Quistinic 74.41 316⇑ iP P 19 03 27.5 -0.4
comp=Z,11nm,0.8s,mb4.5
QUIF Quistinic 74.41 316⇑ iP P 19 03 27.5 -0.4
QUIF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
QUIF Quistinic 74.41 316⇑ iP P 19 03 27.5 -0.4
comp=Z,5.6nm,0.8s,mb4.5
STKA Stephens Creek 74.50 137 eP P 19 03 28.3 -0.2
comp=Z,1.5nm,0.6s,mb4.1
STKA Stephens Creek 74.50 137 P P 19 03 29.4 +0.8
comp=Z,1.8nm,0.7s,mb4.1,baz=297,slow=11,SNR=3.1
STKA LR LR 19 38 57.0
comp=Z,135nm,18.7s,MS4.3,baz=207,slow=38
STKA Stephens Creek 74.50 137 P P 19 03 29.4 +0.9
STKA pmax pmax
comp=Z,2.0nm,0.7s
STKA MLR MLR
comp=Z,135nm,18.7s
SJPF Ste Jean 74.74 311 eP P 19 03 29.8 -0.1
comp=Z,7.9nm,0.7s,mb4.5
SJPF Ste Jean 74.74 311 eP P 19 03 29.8 -0.1
SJPF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
SJPF Ste Jean 74.74 311 eP P 19 03 29.8 -0.1
comp=Z,4.0nm,0.7s,mb4.5
EMOS Mosqueruela 75.13 308 P P 19 03 33.4 +1.2
comp=Z,3.9nm,0.6s,mb4.5
ECHE Chera 75.76 307 P P 19 03 36.6 +0.8
ECHE pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
ECHE Chera 75.76 307 P P 19 03 36.6 +0.7
comp=Z,2.6nm,0.5s,mb4.4
ETOR Torete 76.11 309 P P 19 03 37.5 -0.3
ETOR pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
ETOR Torete 76.11 309 P P 19 03 37.5 -0.3
comp=Z,2.4nm,0.5s,mb4.4
TAM Tamanrasset 76.49 289 eP P 19 03 40.9 +0.6
TAM pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
TAM Tamanrasset 76.49 289 eP P 19 03 40.9 +0.6
comp=Z,1.2nm,0.5s,mb4.1
ETOB Tobarra 76.51 306 P P 19 03 40.6 +0.5
comp=Z,2.9nm,0.5s,mb4.5
EMUR La Murta 76.57 306 P P 19 03 41.0 +0.5
comp=Z,1.8nm,0.4s,mb4.3
EVIA Vianos 77.21 307 P P 19 03 43.7 -0.4
EVIA pmax pmax
comp=Z,1.0nm,0.1s,mb4.7
EVIA Vianos 77.21 307 P P 19 03 43.7 -0.4
comp=Z,1.0nm,0.1s,mb4.7
EARI Arriondas 77.39 312 P P 19 03 45.1 +0.1
comp=Z,1.2nm,0.6s,mb4.0
EHUE Huescar 77.58 306 P P 19 03 45.8 -0.4
EHUE pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
EHUE Huescar 77.58 306 P P 19 03 45.8 -0.4
comp=Z,3.0nm,0.5s,mb4.5
ENIJ Nijar 77.60 305 P P 19 03 46.9 +0.6
ENIJ pmax pmax
comp=Z,3.0nm,0.4s,mb4.6
ENIJ Nijar 77.60 305 P P 19 03 46.9 +0.6
comp=Z,3.0nm,0.4s,mb4.6
GUD Guadarrama 77.66 309 P P 19 03 46.5 0.0
GUD pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
GUD Guadarrama 77.66 309 P P 19 03 46.5 -0.1
comp=Z,3.0nm,0.5s,mb4.5
ESDC Sonseca Array 77.88 308 P P 19 03 47.9 0.0
comp=Z,2.7nm,0.7s,mb4.3,baz=59,slow=5.3,SNR=16
ESDC LR LR 19 45 30.8
comp=Z,41nm,19.9s,MS3.8,baz=95,slow=41
ESDC Sonseca Array 77.88 308 P P 19 03 49.8 +2.0
comp=Z,0.1nm,0.1s,mb3.7
ESLA Sonseca Array 77.88 308 eP P 19 03 47.2 -0.6
comp=Z,2.2nm,1.0s,mb4.0
EQES Quesada 77.94 306 P P 19 03 48.3 +0.1
comp=Z,4.1nm,0.5s,mb4.6
EBER Berja 78.14 305 P P 19 03 49.8 +0.5
comp=Z,7.0nm,0.5s,mb4.8
EBAN Banos Encina 78.32 307 P P 19 03 51.5 +1.2
EBAN pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
EBAN Banos Encina 78.32 307 P P 19 03 51.5 +1.2
comp=Z,3.3nm,0.5s,mb4.5
ERON Agron 78.77 306 P P 19 03 52.1 -0.7
comp=Z,4.0nm,0.5s,mb4.6
EADA Adamuz 78.90 307 P P 19 03 53.7 +0.2
comp=Z,1.5nm,0.7s,mb4.0
ELUQ Luque 78.91 306 P P 19 03 53.1 -0.4
ELUQ pmax pmax
comp=Z,2.0nm,0.3s,mb4.5
ELUQ Luque 78.91 306 P P 19 03 53.1 -0.4
comp=Z,1.7nm,0.3s,mb4.5
ELOJ Sierra Loja 78.98 306 P P 19 03 53.5 -0.4
ELOJ pmax pmax
comp=Z,2.0nm,0.2s,mb4.7
ELOJ Sierra Loja 78.98 306 P P 19 03 53.5 -0.5
comp=Z,1.5nm,0.2s,mb4.6
EPLA Plasencia 79.24 309 P P 19 03 55.6 +0.3
EPLA pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
EPLA Plasencia 79.24 309 P P 19 03 55.6 +0.3
comp=Z,3.1nm,0.8s,mb4.3
BPAW Bear Paw Mtn. 79.43 23 eP P 19 03 56.4 +0.5
comp=Z,11nm,1.0s,mb4.8
BPAW e 19 04 04.7
MVO Moncorvo 79.47 310 eP P 19 03 57.0 +0.5
comp=Z,13nm,2.0s,mb4.5
MVO Moncorvo 79.47 310 P P 19 03 56.7 +0.2
PVRL Vila Real 79.90 311 eP P 19 03 59.4 +0.6
comp=Z,14nm,1.6s,mb4.7
LBTB Lobatse 79.94 237 eP P 19 04 00.2 +1.0
LBTB pmax pmax
comp=Z,28nm,1.1s,mb5.1
LBTB Lobatse 79.94 237 eP P 19 04 00.2 +1.0
comp=Z,28nm,1.1s,mb5.1
PVIS Viseu 80.25 310 eP P 19 04 01.2 +0.4
comp=Z,16nm,2.1s,mb4.6
PCBR Castelo Branco 80.31 309 eP P 19 04 01.8 +0.7
comp=Z,10nm,1.9s,mb4.4
MCK McKinley 80.38 23 P P 19 04 03.3 +2.3
MCK pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
MCK McKinley 80.38 23 P P 19 04 03.3 +2.3
comp=Z,6.6nm,0.9s,mb4.6
PMRV Marv??o 80.42 309 eP P 19 04 02.0 +0.3
comp=Z,9.6nm,1.8s,mb4.4
EBAD Badajoz 80.42 308 P P 19 04 01.8 +0.1
comp=Z,1.2nm,0.6s,mb4.0
ILAR Eielson Array 80.44 21 P P 19 04 01.4 +0.1
comp=Z,0.5nm,0.6s,mb3.6,baz=296,slow=5.0,SNR=7.6
ILAR LR LR 19 43 56.1
comp=Z,76nm,20.1s,MS4.0,baz=31,slow=39
ILAR Eielson Array 80.44 21 P P 19 04 01.4 +0.1
ILAR pmax pmax
comp=Z,1.0nm,0.6s
ILAR MLR MLR
comp=Z,76nm,20.1s
PBAR Barrancos 80.68 308 eP P 19 04 03.3 +0.2
comp=Z,15nm,2.1s,mb4.6
PTOM Tomar 81.06 309 eP P 19 04 05.9 +0.8
comp=Z,22nm,1.4s,mb4.9
EVO Evora 81.23 308 eP P 19 04 06.4 +0.3
comp=Z,16nm,2.0s,mb4.6
EGRO El Granado 81.26 307 P P 19 04 06.9 +0.6
comp=Z,1.2nm,0.5s,mb4.1
PBEJ Beja 81.33 308 eP P 19 04 07.1 +0.5
comp=Z,11nm,1.8s,mb4.5
PVAQ Vaqueiros 81.48 307 eP P 19 04 07.8 +0.4
comp=Z,20nm,2.1s,mb4.7
PMR Palmer 81.62 25 P P 19 04 07.5 -0.1
PMR pmax pmax
comp=Z,16nm,1.1s,mb4.9
PMR Palmer 81.62 25 P P 19 04 07.5 -0.1
comp=Z,16nm,1.1s,mb4.9
PBDV Barranco-do-Ve 81.70 307 eP P 19 04 09.1 +0.5
comp=Z,22nm,1.5s,mb4.9
INK Inuvik 81.76 15 P P 19 04 07.3 -1.0
INK pmax pmax
comp=Z,16nm,1.1s
INK Inuvik 81.76 15 P P 19 04 07.3 -1.0
comp=Z,16nm,1.1s,mb4.8
BOSA Boshof 82.17 234 P P 19 04 12.3 +1.3
comp=Z,5.2nm,0.7s,mb4.6,baz=51,slow=6.5,SNR=13
BOSA LR LR 19 35 38.0
comp=Z,103nm,19.3s,MS4.2,baz=162,slow=32
BOSA Boshof 82.17 234 P P 19 04 12.4 +1.4
BOSA pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
BOSA MLR MLR
comp=Z,103nm,19.3s,MS4.2
BOSA Boshof 82.17 234 eP P 19 04 12.1 +1.1
comp=Z,21nm,1.2s,mb4.9
TSUM Tsumeb 83.33 245 eP P 19 04 17.9 +0.7
comp=Z,1.5nm,0.6s,mb4.2
DBIC Dimbokro 92.09 278 P P 19 05 00.8 +1.0
comp=Z,19nm,0.8s,mb5.5,baz=50,slow=5.9,SNR=18
DBIC LR LR 19 48 03.1
comp=Z,78nm,19.4s,MS4.2,baz=327,slow=37
DBIC Dimbokro 92.09 278 P P 19 05 00.8 +1.0
DBIC pmax pmax
comp=Z,19nm,0.8s
DBIC MLR MLR
comp=Z,78nm,19.4s
DBIC Dimbokro 92.09 278 eP P 19 05 00.7 +0.8
comp=Z,20nm,0.8s,mb5.5
KIC Kosan Boka 92.12 278 ePKP2 P 19 05 00.8 +0.9
comp=Z,44nm,1.0s,mb5.8
TIC Toumodi 92.25 278 ePKP2 P 19 05 01.3 +0.7
comp=Z,16nm,0.6s,mb5.5
LIC Lamto 92.43 278 ePKP2 P 19 05 02.0 +0.6
comp=Z,131nm,1.9s,mb5.9
SCHQ Schefferville 98.39 347 LR LR 19 53 30.1
comp=Z,77nm,18.4s,MS4.2,baz=150,slow=38
NVAR Mina Array Bea 111.60 24 PKiKP PKiKP 19 10 26.4 +1.7
comp=Z,0.2nm,0.5s,baz=72,slow=2.9,SNR=3.4
TXAR Lajitas Array 124.53 15 PKP PKPdf 19 10 50.3 +0.6
comp=Z,0.4nm,0.6s,baz=25,slow=1.8,SNR=8.3
TXAR PKKPab 19 20 40.5
comp=Z,0.2nm,0.8s,baz=96,slow=2.7,SNR=3.4
ROSC El Rosal 147.09 331 PKPbc PKPbc 19 11 36.0 +2.3
comp=Z,21nm,0.7s,baz=80,slow=6.1,SNR=13
CPUP Villa Florida 150.98 260 PKP PKPdf 19 11 39.9 +2.4
comp=Z,4.9nm,0.8s,baz=227,slow=1.6,SNR=3.1
CPUP PKPbc PKPbc 19 11 43.5 +0.2
comp=Z,4.9nm,0.8s,baz=67,slow=1.2,SNR=14
CPUP Villa Florida 150.98 260 PKIKP PKPdf 19 11 39.9 +2.4
CPUP 19 11 43.5
CPUP pmax pmax
comp=Z,5.0nm,0.8s
CPUP pmax pmax
comp=Z,5.0nm,0.8s
CPUP Villa Florida 150.98 260 PKP PKPdf 19 11 39.9 +2.4
CPUP PKPbc PKPbc 19 11 43.5 +0.2
SIV San Ignacio 152.02 283 PKPbc PKPbc 19 11 46.1 +0.2
comp=Z,2.9nm,0.6s,baz=125,slow=4.7,SNR=18
SIV PKPab PKPab 19 11 55.8 +0.5
comp=Z,2.6nm,0.7s,baz=87,slow=6.1,SNR=8.9
LPAZ La Paz 158.32 289 PKPab PKPab 19 12 22.7 +0.5
comp=Z,4.3nm,0.8s,baz=36,slow=2.2,SNR=16
LPAZ La Paz 158.32 289 PKP2 PKPab 19 12 22.7 +0.5
LPAZ pmax pmax
comp=Z,4.0nm,0.8s

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*ISCJB **26** 19:20:46.6±0.6, 37°.89N±0°.05×21°.47E±0°.03, h23km±7km, Error ellipse: s-maj=8.9km s-min=4.4km az=179.6*
*CSEM **26** 19:20:46.2±0.2, 37°.89N×21°.48E, h18km±1km, MD2.8, Error ellipse: s-maj=6.3km s-min=4.3km az=173.0*
*THE **26** 19:20:46.7, 37°.90N×21°.48E, h19km±16km, ML2.4/5, Error ellipse: s-maj=16.5km s-min=0.3km az=0.0*
*ATH **26** 19:20:46.2, 37°.91N×21°.49E, h21km±2km, MD2.8/8*
ISC 26 19:20:46.6±0.6, 37°.89N±0°.05×21°.47E±0°.03, h21km±7km, n29, σ0s76/47, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.17**	**358**	*e*PB	**Pb**	**19 20 51.1**	**-0.4**
RLS				*e*SB	**Sb**	**19 20 54.4**	**-0.4**
RLS	**Riolos of Patr**	**0.17**	**358**	*e*Pb	**Pb**	**19 20 51.1**	**-0.4**
RLS				*e*Sb	**Sb**	**19 20 54.4**	**-0.4**
LAKA	**Lakka**	**0.53**	**48**	P	**Pb**	**19 20 56.8**	**-0.4**
LAKA				S	**Sb**	**19 21 04.9**	**+0.5**
LAKA	**Lakka**	**0.53**	**48**	P	**Pb**	**19 20 56.8**	**-0.4**
LAKA				S	**Sb**	**19 21 04.9**	**+0.5**
KFL	**Anninata**	**0.58**	**292**	P	**Pb**	**19 20 58.1**	**0.0**
KFL				S	**Sb**	**19 21 06.5**	**+0.6**
KFL	**Anninata**	**0.58**	**292**	P	**Pb**	**19 20 58.1**	**0.0**
KFL				S	**Sb**	**19 21 06.5**	**+0.6**
EFP	**Efpalio**	**0.64**	**32**	*e*PN	**Pn**	**19 20 58.2**	**-2.1**
EFP	**Efpalio**	**0.64**	**32**	P	**Pb**	**19 20 58.5**	**-0.5**
EFP				S	**Sb**	**19 21 07.8**	**+0.3**
EFP	**Efpalio**	**0.64**	**32**	*e*Pn	**Pn**	**19 20 58.2**	**-2.1**
EFP	**Efpalio**	**0.64**	**32**	P	**Pb**	**19 20 58.5**	**-0.5**
EFP				S	**Sb**	**19 21 07.8**	**+0.3**
TRIZ	**Trizonia**	**0.67**	**45**	P	**Pb**	**19 20 59.4**	**-0.2**
TRIZ				S	**Sb**	**19 21 08.8**	**+0.3**
TRIZ	**Trizonia**	**0.67**	**45**	P	**Pb**	**19 20 59.4**	**-0.2**
TRIZ				S	**Sb**	**19 21 08.8**	**+0.3**
GUR	**Goura**	**0.69**	**86**	*e*PN	**Pb**	**19 20 59.4**	**-0.5**
GUR	**Goura**	**0.69**	**86**	P	**Pb**	**19 20 59.4**	**-0.5**
GUR				S	**Sb**	**19 21 09.6**	**+0.6**
GUR	**Goura**	**0.69**	**86**	P	**Pb**	**19 20 59.4**	**-0.5**
GUR				S	**Sb**	**19 21 09.6**	**+0.6**
KALE	**Kalithea**	**0.73**	**46**	P	**Pb**	**19 21 00.3**	**-0.2**
KALE				S	**Sb**	**19 21 10.7**	**+0.6**
KALE	**Kalithea**	**0.73**	**46**	P	**Pb**	**19 21 00.3**	**-0.2**
KALE				S	**Sb**	**19 21 10.7**	**+0.6**
VLS	**Valsamata**	**0.76**	**293**	*e*PB	**Pb**	**19 21 00.3**	**-0.7**
VLS				*e*SN	**Sn**	**19 21 12.6**	**-0.1**
VLS	**Valsamata**	**0.76**	**293**	P	**Pb**	**19 21 00.7**	**-0.3**
VLS				S	**Sb**	**19 21 11.8**	**+1.0**
VLS	**Valsamata**	**0.76**	**293**	*e*Pb	**Pb**	**19 21 00.3**	**-0.7**
VLS	**Valsamata**	**0.76**	**293**	P	**Pb**	**19 21 00.7**	**-0.3**
VLS				S	**Sb**	**19 21 11.8**	**+1.0**
VLS				*e*Sn	**Sn**	**19 21 12.6**	**-0.1**
ITM	**Ithomi**	**0.79**	**153**	*e*PN	**Pn**	**19 21 01.7**	**-0.8**
ITM	**Ithomi**	**0.79**	**153**	*e*Pn	**Pn**	**19 21 01.7**	**-0.8**
VLX	**Vlachokerasia**	**0.89**	**125**	*e*PN	**Pn**	**19 21 03.1**	**-0.6**
VLX	**Vlachokerasia**	**0.89**	**125**	*e*Pn	**Pn**	**19 21 03.1**	**-0.6**
PYL	**PYLOS**	**1.01**	**168**	*e*PN	**Pn**	**19 21 06.1**	**+0.6**
PYL	**PYLOS**	**1.01**	**168**	*e*Pn	**Pn**	**19 21 06.1**	**+0.6**
DID	**Didima**	**1.45**	**105**	*e*PN	**Pn**	**19 21 13.6**	**+2.1**
DID	**Didima**	**1.45**	**105**	*e*Pn	**Pn**	**19 21 13.6**	**+2.1**

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*IDC **26** 19:27:40.4±0.9, 30°.40S×177°.66W, h0km, mb4.6/7, mb1 4.7/9, mb1mx4.4/19, mbtmp4.6/9, ML4.1/2, MS3.8/6, Ms1 3.8/6, ms1mx3.4/30, Error ellipse: s-maj=40.2km s-min=19.9km az=152.0*
*ISCJB **26** 19:27:43.8±0.6, 30°.56S±0°.07×177°.7W±0°.1, h33km, mb4.7/15, MS3.8/6, Error ellipse: s-maj=15.9km s-min=8.2km az=23.9*
*NEIC **26** 19:27:43.5±5.4, 30°.49S×177°.63W, h22km±37km, mb4.8/9, Error ellipse: s-maj=18.2km s-min=13.9km az=192.0*
ISC 26 19:27:45.6±0.6, 30°.50S±0°.07×177°.6W±0°.1, h35km, n72, σ1s25/33, mb4.7/15, MS3.8/6, 1C, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.87**	**208**	Pn	**Pn**	**19 29 50.5**	**-0.8**
	2.7nm,0.3s,baz=119,slow=19,SNR=1.6						
URZ				Sn	**Sn**	**19 31 30.6**	**+0.6**
	7.1nm,0.3s,baz=204,slow=19,SNR=17						
KHZ	**Kahutara**	**13.84**	**208**	*e*Pn	**Pn**	**19 30 57.6**	**-1.6**
KHZ				*e*Sn	Sn	19 33 10.5	-21
RPZ	**Rata Peaks**	**15.96**	**211**	Pn	**Pn**	**19 31 26.6**	**-0.8**
	0.6nm,0.3s,baz=58,slow=16,SNR=1.5						
RPZ				Sn	**Sn**	**19 34 13.2**	**-10**
	2.1nm,0.3s,baz=16,slow=15,SNR=2.5						
DZM	**Mont Dzumac**	**16.55**	**297**	*e*LR	LR	19 35 33.7	
	284nm,25.3s						
TBI	**Tubuai**	**26.07**	**81**	*e*T		20 00 52.5	
	61nm,0.4s						
ARMA	**Armidale**	**26.46**	**262**	*e*P	**P**	**19 33 22.7**	**+3.3**
CNB	**Canberra Magne**	**28.04**	**251**	*e*P	**P**	**19 33 36.1**	**+2.5**
EIDS	**Eidsvold**	**28.06**	**273**	*e*P	**P**	**19 33 34.5**	**+0.7**
	7.1nm,0.7s,mb4.4						
PAE	**Paea**	**28.54**	**70**	*e*T		20 03 49.6	
	12nm,0.3s						
PPT	**Papeete**	**28.59**	**70**	*e*LR	LR	19 41 04.4	
	156nm,26.2s						
PPT	**Papeete**	**28.59**	**70**	LR	LR	19 43 00.2	
	comp=Z,302nm,18.3s,MS3.9,baz=360,slow=32						
TIAR	**Tiarei**	**28.78**	**70**	*e*T		20 04 07.7	
	10.0nm,0.3s						
MCQ	**Macquarie Isla**	**29.28**	**208**	P	**P**	**19 33 43.4**	**-0.9**
MEH	**Mehetia**	**29.66**	**72**	*e*T		20 05 15.2	
	109nm,0.3s						
TOO	**Toolangi**	**31.21**	**247**	*e*P	**P**	**19 34 03.9**	**+2.2**
PMOR	**Pomariorio Ree**	**31.34**	**67**	*e*T		20 07 17.6	
	4.1nm,0.3s						
VAH	**Vaihoa**	**31.42**	**68**	*e*T		20 07 23.6	
	64nm,0.2s						
CTA	**Charters Tower**	**34.13**	**279**	*e*P	**P**	**19 34 28.0**	**+0.7**
	12nm,0.4s,mb5.2						
CTA	**Charters Tower**	**34.13**	**279**	P	**P**	**19 34 28.2**	**+0.9**
	16nm,0.4s,mb5.3,baz=103,slow=10,SNR=65						
CTA				LR	LR	19 47 03.3	
	comp=Z,165nm,19.2s,MS3.8,baz=134,slow=34						
CTAO	**Charters Tower**	**34.13**	**279**	*e*P	**P**	**19 34 27.9**	**+0.6**
	17nm,0.5s,mb5.2						
STKA	**Stephens Creek**	**34.76**	**257**	*e*P	**P**	**19 34 34.5**	**+1.8**
	19nm,0.9s,mb5.0						
STKA	**Stephens Creek**	**34.76**	**257**	P	**P**	**19 34 34.1**	**+1.4**
	21nm,0.7s,mb5.2,baz=99,slow=10,SNR=58						
STKA				LR	LR	19 47 37.0	
	comp=Z,126nm,20.9s,MS3.6,baz=27,slow=34						
STKA	**Stephens Creek**	**34.76**	**257**	*e*P	**P**	**19 34 34.0**	**+1.3**
	5.0nm,0.8s,mb4.5						
STKA				LR	LR	19 47 37.0	
RKT	**Rikitea**	**38.60**	**90**	*e*T		20 16 37.5	
	2.5nm,0.2s						
ASAR	**Alice Springs**	**43.42**	**267**	P	**P**	**19 35 44.5**	**-0.6**
	5.5nm,0.6s,mb4.5,baz=106,slow=7.5,SNR=85						
WRAB	**Tennant Creek**	**44.41**	**272**	*e*P	**P**	**19 35 51.8**	**-1.4**
	11nm,0.4s,mb5.0						
WRA	**Warramunga Arr**	**44.42**	**272**	P	**P**	**19 35 52.1**	**-1.1**
	baz=110,slow=8.1,SNR=335						
SBA	**Scott Base**	**47.96**	**184**	*e*P	**P**	**19 36 26.3**	**+6.0**
	7.9nm,0.9s,mb4.7						
KAKA	**Kakadu**	**49.26**	**280**	*e*P	**P**	**19 36 30.9**	**-0.2**
	2.6nm,0.6s,mb4.4						
FITZ	**Fitzroy Crossi**	**52.67**	**270**	*e*P	**P**	**19 36 55.5**	**-1.3**
	7.6nm,0.8s,mb4.7						
FITZ	**Fitzroy Crossi**	**52.67**	**270**	P	**P**	**19 36 55.7**	**-1.0**
	3.2nm,0.6s,mb4.4,baz=147,slow=8.6,SNR=13						
FITZ				LR	LR	19 57 30.4	
	comp=Z,69nm,20.2s,MS3.7,baz=20,slow=34						

CASY	Casey	55.20	208	eP	P	19 37 15.8	+1.3
	13nm,0.6s,mb5.2						
MBWA	Marble Bar	56.53	264	eP	P	19 37 22.2	-2.5
	3.2nm,0.8s,mb4.4						
QSPA	South Pole Qui	59.61	180	eP	P	19 37 49.8	+4.4
	9.6nm,0.6s,mb5.0						
SYO	Syowa Base	77.09	193⇑	eP	P	19 39 36.2	+1.4
PETK	Petropavlovsk-	85.99	345	P	P	19 40 21.5	-0.3
	3.3nm,0.6s,mb4.7,baz=131,slow=7.9,SNR=9.1						
PETK	Petropavlovsk-	85.99	345	P	P	19 40 21.5	-0.3
CMB	Columbia Colle	86.63	42	eP	P	19 40 24.7	-0.6
YBH	Yreka Blue Hor	87.92	38	LR	LR	20 12 04.1	
	comp=Z,49nm,19.4s,MS3.9,baz=348,slow=30						
NVAR	Mina Array Bea	88.10	43	P	P	19 40 33.8	+1.4
	1.7nm,0.7s,mb4.4,baz=224,slow=7.9,SNR=12						
KDAK	Kodiak Island	90.43	13	LR	LR	20 17 43.9	
	comp=Z,40nm,18.0s,MS3.9,baz=106,slow=33						
M13A	Montello	92.42	42	P	P	19 40 52.6	+0.1
	3.7nm,0.9s,mb4.7						
ILAR	Eielson Array	97.95	13	P	P	19 41 16.6	-0.7
	0.3nm,0.8s,mb3.9,baz=206,slow=6.0,SNR=4.1						
BOSA	Boshof	117.29	203	PKP	PKPdf	19 46 29.1	+1.4
	1.9nm,1.1s,baz=191,slow=5.2,SNR=3.4						
MK31	Makanchi Array	118.08	310	ePKPdf	PKPdf	19 46 27.4	-1.1
MKAR	Makanchi Array	118.08	310	PKP	PKPdf	19 46 27.9	-0.5
	0.5nm,0.4s,baz=143,slow=1.1,SNR=10						
ZALV	Zalesovo Beam	118.32	318	PKP	PKPdf	19 46 27.9	-0.8
	0.5nm,0.3s,baz=129,slow=2.1,SNR=4.0						
AML	Almayashu	122.89	303	ePKPdf	PKPdf	19 46 38.6	+0.7
BVAR	Borovoye Array	126.70	316	PKP	PKPdf	19 46 44.9	+0.1
	2.3nm,0.6s,baz=48,slow=2.2,SNR=11						
ARCES	ARCESS Array B	138.75	348	PKhKP	PKPpre	19 46 58.5	
	6.3nm,1.0s,baz=57,slow=9.3,SNR=5.8						
JOF	Joensuu	142.63	339	ep	PKPdf	19 47 09.4	-4.8
KAF	Kangasniemi	144.75	341	ep	PKPdf	19 47 15.5	-2.4
FINES	FINESS Array B	145.35	340	PKP	PKPdf	19 47 18.3	-0.7
	18nm,0.5s,baz=52,slow=4.0,SNR=26						
FINES	FINESS Array B	145.35	340	PKP	PKPdf	19 47 18.3	-0.7
NB2	NORSAR Subarra	148.90	352	PKP	PKPbc	19 47 28.5	-0.4
	comp=Z,11nm,1.1s,baz=13,slow=2.6						
NOA	NORSAR Array B	148.90	352	PKPbc	PKPbc	19 47 29.0	+0.1
	comp=Z,4.0nm,0.7s,baz=16,slow=4.3,SNR=22						
NAO01	NORSAR Array S	149.13	352	ePKPbc	PKPbc	19 47 28.9	-0.5
AKASG	Malin Array Be	151.57	323	PKPbc	PKPbc	19 47 35.2	-0.4
	comp=Z,8.0nm,0.7s,baz=49,slow=2.8,SNR=21						
MMAI	Mount Meron Ar	151.86	284	PKPbc	PKPbc	19 47 38.1	+1.2
	comp=Z,7.6nm,0.6s,baz=87,slow=7.9,SNR=12						
BR131	Keskin Array S	152.93	298	ePKPbc	PKPbc	19 47 38.5	-0.6
BRTR	Keskin Array B	152.93	298	PKPbc	PKPbc	19 47 38.9	-0.2
	comp=Z,1.6nm,0.5s,baz=141,slow=5.1,SNR=13						
CLL	Collm	157.76	342	i PKPab	PKPab	19 48 09.9	-0.7
CLL				i pPKPab	pPKPab	19 48 13.7	-8.1
BAIF	Baives	160.41	356	ePKP2	PKPab	19 48 24.1	+2.0
FLN	La Foliniere	161.63	6	ePKP2	PKPab	19 48 27.6	+0.1
	comp=Z,5.0nm,0.6s						
LDF	La Druitiere	161.83	5	ePKP2	PKPab	19 48 28.8	+0.5
	comp=Z,2.4nm,0.5s						
GRR	Gorron	161.97	7	ePKP2	PKPab	19 48 28.9	0.0
LOR	Lormes	163.22	356	ePKP2	PKPab	19 48 34.0	-0.4
SSF	Saint Saulge	163.44	357	ePKP2	PKPab	19 48 35.1	-0.3
AVF	Avril sur Loir	163.72	358	ePKP2	PKPab	19 48 36.1	-0.5
SMF	Signal de Mont	163.84	356	ePKP2	PKPab	19 48 36.7	-0.5
	comp=Z,10.0nm,0.9s						
TCF	Toulx Ste Croi	164.24	0	ePKP2	PKPab	19 48 39.3	+0.4
CAF	Calviac	165.60	1	ePKP2	PKPab	19 48 44.8	-0.2
	comp=Z,3.7nm,0.9s						

TAP 26 19:57:14.0, 24.°91N×122.°48E, h16km, ML3.5, 2C, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.46	283	⇑iP	Pg	19 57 23.9	+0.6
	baz=282						
TWB1				i S	Sg	19 57 30.7	+1.2
	baz=282						
TWC	Suao	0.65	243	i P	Pg	19 57 26.4	-0.3
	baz=242						
TWC				S	Sg	19 57 35.2	-0.1
	baz=242						
NWF	Wu-fen Shan	0.66	285	i P	Pg	19 57 27.7	+0.7
	baz=284						
NWF				eS	Sg	19 57 38.1	+2.4
	baz=284						
ILA	Ilan	0.68	258	i P	Pg	19 57 28.0	+0.6
	baz=258						
TWE	Neicheng	0.76	256	i P	Pg	19 57 28.9	0.0
	baz=246						
TWA	Mucha	0.82	275	eP	Pb	19 57 30.0	+0.1
	baz=275						
ENA	Nanau	0.82	235	⇑iP	Pb	19 57 29.8	-0.2
	baz=234						
ENA				eS	Sb	19 57 41.1	+0.2
	baz=234						
ENTT	Nioudou	0.87	253	i P	Pb	19 57 31.0	+0.2
	baz=237						
ENTT				i S	Sb	19 57 43.7	+1.4
	baz=237						
TAP1	Taipei	0.88	279	eP	Pb	19 57 31.6	+0.7
	baz=279						
TWY	Chenhua	0.88	295	eP	Pb	19 57 31.1	+0.1
	baz=295						
TWS1	Kuangyinshan	0.99	282	eP	Pb	19 57 33.9	+1.1
	baz=282						
NSK	Sanguang	1.05	258	P	Pb	19 57 34.0	+0.1
	baz=257						
NNS	Nan Shan	1.11	246	P	Pb	19 57 34.9	+0.1
	baz=245						
TWD	Chiawan	1.15	225	eP	Pn	19 57 35.1	-0.4
	baz=235						
WHF	Hehuan Shan	1.34	236	eP	Pn	19 57 38.3	+0.2
	baz=235						
TWT	Tachien	1.36	242	eP	Pn	19 57 39.5	+1.2
	baz=242						
NSTT	Nanjuang	1.38	259	eP	Pn	19 57 39.8	+1.2
	baz=259						
ESL	Shilin	1.45	222	eP	Pn	19 57 38.8	-0.8
	baz=221						
NSY	Sanyi	1.64	253	eP	Pn	19 57 43.7	+1.5
	baz=267						
TWQ1	Liyutan	1.65	251	eP	Pn	19 57 44.9	+2.5
	baz=266						
EHY	Hungye	1.75	218	eP	Pn	19 57 44.5	+0.8
	baz=217						
SMLT	Sun Moon Lake	1.77	235	i P	Pn	19 57 46.0	+2.0
	baz=216						
TYC	Yuchr	1.79	236	P	Pn	19 57 46.0	+1.7
	baz=218						
TWF1	Yuli	1.89	215	eP	Pn	19 57 45.0	-0.6
	baz=214						
WNT	Mingjian	1.93	238	eP	Pn	19 57 49.5	+3.2
	baz=257						
CHN5	Tsauling	2.10	232	P	Pn	19 57 50.6	+2.1
	baz=214						
CHN5				eS	Sn	19 58 19.2	+4.9
	baz=214						
WGK	Gukeng	2.13	236	eP	Pn	19 57 52.7	+3.7
	baz=252						
ELDTW	Lidau	2.17	218	eP	Pn	19 57 50.1	+0.6
	baz=204						
CHN4	Tsaushan	2.32	229	eP	Pn	19 57 55.6	+4.1
	baz=212						
CHN4				eS	Sn	19 58 25.2	+5.4
	baz=212						
CHY	Chiayi	2.34	234	eP	Pn	19 57 55.4	+3.5
	baz=249						
STYT	Tauyuan	2.34	223	eP	Pn	19 57 52.8	+0.9
	baz=207						
WTP	Ta-pu	2.38	226	eP	Pn	19 57 54.4	+2.0
	baz=210						
TWG	Pinlang	2.44	212	eP	Pn	19 57 52.0	-1.3
	baz=211						
TWK	Hsinying	2.45	229	eP	Pn	19 57 57.0	+3.7
	baz=212						
SGST	Jiashian	2.51	224	eP	Pn	19 57 55.4	+1.1
	baz=208						
ECL	Taimali	2.69	212	eP	Pn	19 57 58.5	+1.8
	baz=211						
SSD	Sandimen	2.74	219	eP	Pn	19 57 59.6	+2.3
	baz=218						
TWM1	Shoushan	2.80	223	eP	Pn	19 58 01.0	+2.7
	baz=222						
EAST	Anshuo	2.92	211	eP	Pn	19 58 00.8	+0.9
	baz=210						
SCZT	Fangliau	3.05	214	eP	Pn	19 58 02.8	+1.2
	baz=201						

IDC ***26*** *20:15:07.8±1.1, 22.°95N×120.°24E, h0km, mb3.5/6, mb1 3.6/7, mb1mx3.4/24, mbtmp3.5/7, ML3.3/1, Error ellipse: s-maj=40.3km s-min=19.8km az=71.0*
NEIC ***26*** *20:15:09.8±1.3, 23.°16N×120.°53E, h15km±7km, ML4.4(TAP), Error ellipse: s-maj=11.8km s-min=8.2km az=72.0*
NEIC Recorded [3 TAP] in Chia-i; [2 TAP] in Kao-hsiung and T'ai-nan; [1 TAP] in Chang-hua and Yun-lin.
TAP ***26*** *20:15:10.4, 23.°20N×120.°55E, h15km, ML4.1, B*
ISCJB ***26*** *20:15:11.3±0.2, 23.°20N±0.°01×120.°53E±0.°02, h20km±2km, mb3.4/5, Error ellipse: s-maj=2.7km s-min=2.1km az=2.3*
ISC 26 20:15:11.4±0.2, 23.°20N±0.°01×120.°54E±0.°02, h17km±1km, n78, σ0°83/123, mb3.4/5, 15C-11D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WTP	Ta-pu	0.08	56	⇓iP	Pg	20 15 14.0	-0.7
	baz=59						
TWK	Hsinying	0.08	323	⇓iP	Pg	20 15 14.0	-0.7
	baz=325						
TWK				S	Sg	20 15 16.6	-0.4
	baz=325						
SGST	Jiashian	0.12	162	⇓iP	Pg	20 15 14.7	-0.5
	baz=163						
SGST				eS	Sg	20 15 17.3	-0.4
	baz=163						
TPUB	Ta-pu	0.13	39	ePg	Pg	20 15 14.0	-1.2
TPUB				eSg	Sg	20 15 16.9	-0.9
CHN4	Tsaushan	0.16	17	⇓iP	Pg	20 15 15.1	-0.5
	baz=24						
CHN4				i S	Sg	20 15 18.3	-0.1
	baz=24						
STYT	Tauyuan	0.20	101	S	Sg	20 15 19.6	+0.1
	baz=96						
CHN3	Shinhua	0.20	233	⇓iP	Pg	20 15 16.6	+0.3
	baz=239						
CHN3				eS	Sg	20 15 21.3	+1.7
	baz=239						
CHY	Chiayi	0.32	340	⇑iP	Pg	20 15 18.0	-0.1
	baz=340						
CHY				S	Sg	20 15 23.4	+0.8
	baz=340						
SCLT	Jiali	0.32	265	⇑iP	Pg	20 15 18.2	0.0
	baz=276						
SCLT				eS	Sg	20 15 24.6	+1.8
	baz=276						
TAI1	Yung-k'ang	0.33	241	⇑P	Pg	20 15 18.6	+0.3
	baz=240						
CHN8	Yiju	0.34	295	⇑iP	Pg	20 15 18.1	-0.3
	baz=296						
CHN8				eS	Sg	20 15 24.7	+1.5
	baz=296						
TWM1	Shoushan	0.39	196	P	Pg	20 15 20.6	+1.2
	baz=183						
CHN5	Tsauling	0.41	18	⇑iP	Pg	20 15 19.4	-0.4
	baz=17						
CHN5				eS	Sg	20 15 26.1	+0.6
	baz=17						
ELDTW	Lidau	0.44	91	⇑iP	Pg	20 15 19.9	-0.3
	baz=93						
ELDTW				S	Sg	20 15 26.7	+0.5
	baz=93						
SSD	Sandimen	0.46	170	⇑iP	Pg	20 15 20.6	-0.1
	baz=158						
SSD				i S	Sg	20 15 28.0	+1.1
	baz=158						
WGK	Gukeng	0.48	2	⇑iP	Pg	20 15 21.2	+0.1
	baz=2.0						
WGK				eS	Sg	20 15 29.0	+1.3
	baz=2.0						
WSF	Szhu	0.53	326	eP	Pg	20 15 21.4	-0.5
	baz=326						
WSF				S	Sg	20 15 29.7	+0.8
	baz=326						
TWG	Pinlang	0.62	128	ePg	Pg	20 15 23.1	-0.5
TWG				eSg	Sg	20 15 31.8	0.0
TWG	Pinlang	0.62	128	P	Pg	20 15 23.6	0.0
	baz=128						
TWG				i S	Sg	20 15 32.4	+0.6
	baz=128						
KAU	Kaohsiung	0.67	199	eP	Pg	20 15 24.6	+0.2
	baz=199						
WNT	Mingjian	0.69	11	⇓iP	Pg	20 15 24.6	-0.3
	baz=11						
WNT				S	Sg	20 15 34.9	+0.9
	baz=11						
SSLB	Suanglung	0.70	33	ePg	Pg	20 15 23.8	-1.2
SSLB				eSg	Sg	20 15 33.8	-0.5
WTCT	Ta-ch'eng	0.70	340	P	Pg	20 15 24.3	-0.8
	baz=340						
WTCT				eS	Sg	20 15 34.9	+0.4
	baz=340						
TWF1	Yuli	0.71	78	⇑iP	Pg	20 15 24.6	-0.7
	baz=78						
TWF1				i S	Sg	20 15 34.3	-0.5
	baz=78						
ECL	Taimali	0.71	148	⇑iP	Pg	20 15 24.7	-0.6
	baz=148						
ECL				S	Sg	20 15 35.2	+0.4
	baz=148						
TTN	Taitung	0.71	128	eP	Pb	20 15 24.7	-0.6
	baz=129						
TTN				eS	Sg	20 15 36.4	+1.6
	baz=129						
YULB	Yu-li	0.72	75	ePg	Pg	20 15 24.5	-1.0
YULB				eSg	Sg	20 15 34.3	-0.8
SMLT	Sun Moon Lake	0.75	26	⇓iP	Pb	20 15 25.6	-0.4
	baz=26						
SMLT				S	Sb	20 15 36.7	+0.6
	baz=26						
TYC	Yuchr	0.76	22	⇓iP	Pb	20 15 25.7	-0.4
	baz=23						
TYC				eS	Sb	20 15 37.0	+0.8
	baz=23						
EHY	Hungye	0.78	67	⇑iP	Pb	20 15 25.9	-0.6
	baz=75						
EHY				S	Sb	20 15 36.2	-0.5
	baz=75						
SCZT	Fangliau	0.83	175	eP	Pb	20 15 26.7	-0.6
	baz=166						
SCZT				eS	Sb	20 15 40.2	+2.0
	baz=166						
EAST	Anshuo	0.86	161	⇑iP	Pb	20 15 27.6	-0.3
	baz=153						
EAST				eS	Sb	20 15 40.1	+0.9
	baz=153						
TWP	Hsiaoliuchiu	0.87	191	eP	Pb	20 15 28.4	+0.4
	baz=213						
TAW	Tawu	0.90	159	⇑P	Pb	20 15 28.3	-0.3
	baz=158						
TAW				eS	Sb	20 15 41.3	+1.0
	baz=158						
TCU	Taichung	0.95	7	⇓iP	Pb	20 15 28.7	-0.7
	baz=355						
TCU				eS	Sb	20 15 42.3	+0.6
	baz=355						
PNG	Penghu	0.98	292	⇑P	Pb	20 15 28.1	-1.7
	baz=292						
PNG				eS	Sb	20 15 41.0	-1.5
	baz=292						
ESL	Shilin	1.02	53	⇑P	Pb	20 15 30.2	-0.4
	baz=54						
ESL				eS	Sb	20 15 44.0	+0.3
	baz=54						
WHF	Hehuan Shan	1.15	35	eP	Pn	20 15 32.5	-0.2
	baz=35						
WHF				eS	Sb	20 15 48.7	+1.2
	baz=35						
TWQ1	Liyutan	1.16	10	eP	Pn	20 15 32.0	-0.8
	baz=359						
TWQ1				eS	Sb	20 15 48.6	+0.8
	baz=359						
TWT	Tachien	1.20	29	P	Pn	20 15 33.1	-0.3
	baz=28						
TWT				eS	Sb	20 15 49.2	+0.4
	baz=28						
HEN	Hengchun	1.20	171	eP	Pn	20 15 32.9	-0.6
	baz=171						
NSY	Sanyi	1.23	9	P	Pn	20 15 33.6	-0.1
	baz=357						
HWA	Hwalien	1.24	51	eP	Pn	20 15 32.8	-1.1
	baz=52						
HWA				eS	Sb	20 15 49.9	-0.3
	baz=52						
TWK1	Hengchun	1.27	169	eP	Pn	20 15 33.8	-0.6
	baz=168						
TWD	Chiawan	1.30	48	P	Pn	20 15 34.9	+0.1
	baz=48						
TWD				eS	Sn	20 15 51.9	+0.1
	baz=48						
TSEB	Hengchuen, Pin	1.34	166	eP	Pn	20 15 35.9	+0.6
	baz=184						
NACB	Ninganchiao	1.37	45	ePn	Pn	20 15 35.5	-0.1
NACB				eSn	Sn	20 15 53.1	-0.3
NNS	Nan Shan	1.45	32	⇓eP	Pn	20 15 37.0	+0.2
	baz=32						
NSTT	Nanjuang	1.48	16	eP	Pn	20 15 36.4	-0.9
	baz=16						
NSTT				eS	Sn	20 15 56.7	+0.4
	baz=16						
LAY	Lan-yu	1.49	141	eP	Pn	20 15 36.8	-0.5
	baz=141						
HSN	Hsinchu	1.64	14	eP	Pn	20 15 39.6	+0.1
	baz=15						
ENA	Nanau	1.64	42	eP	Pn	20 15 39.5	0.0
	baz=59						
ENA				eS	Sn	20 16 01.4	+1.2
	baz=59						
NSK	Sanguang	1.65	27	⇓iP	Pn	20 15 39.6	0.0
	baz=10.0						
NSK				eS	Sn	20 16 01.3	+0.9
	baz=10.0						
YHNB	Yeheng	1.65	27	ePn	Pn	20 15 39.1	-0.5
YHNB				eSn	Sn	20 16 01.4	+1.1
ENTT	Nioudou	1.71	33	eP	Pn	20 15 40.4	0.0
	baz=21						
TWE	Neicheng	1.83	34	eP	Pn	20 15 42.5	+0.5
	baz=16						
TWC	Suao	1.84	40	eP	Pn	20 15 43.0	+0.8
	baz=40						
TWC				eS	Sn	20 16 06.9	+1.7
	baz=40						
ILA	Ilan	1.91	35	eP	Pn	20 15 45.3	+2.2
	baz=18						
TATO	Taipei	1.97	26	ePn	Pn	20 15 42.8	-1.1
TATO				eSg	Sg	20 16 15.6	+0.8
TWA	Mucha	2.01	28	eP	Pn	20 15 44.5	-0.1
	baz=36						
TAP1	Taipei	2.04	26	eP	Pn	20 15 44.1	-0.8
	baz=10.0						
TWS1	Kuangyinshan	2.05	23	eP	Pn	20 15 44.6	-0.5
	baz=5.0						
NWF	Wu-fen Shan	2.18	31	eP	Pn	20 15 46.6	-0.2
	baz=14						
NWF				eS	Sn	20 16 14.1	+0.7
	baz=14						
TWB1	Santiao Chiao	2.23	36	eP	Pn	20 15 47.9	+0.3
	baz=19						
KNM	Kinmen	2.28	302	eP	Pn	20 15 47.9	-0.4
	baz=301						
TWY	Chenhua	2.28	25	eP	Pn	20 15 47.8	-0.4
	baz=8.0						
QZH	Quanzhou	2.49	315	Pn	Pn	20 15 49.8	-1.3
QZH				Sn	Sn	20 16 17.3	-3.7
QZH				smax			
	comp=N,750nm,0.9s						
QZH				smax			
	comp=E,430nm,0.8s						
YOJ	Yonaguni jima	2.59	60	eP	Pn	20 15 52.8	+0.3
	baz=60						
KSRS	Korea Array	15.56	22	Pn	Pn	20 18 52.9	+2.9
	comp=E,0.1nm,0.3s,baz=205,slow=11,SNR=4.1						
MJAR	Matsushiro Arr	20.24	45	P	P	20 19 49.2	+3.5
	comp=E,1.1nm,0.8s,baz=234,slow=7.8,SNR=5.4						
MJAR	Matsushiro Arr	20.24	45	P	P	20 19 49.2	+3.5
SONM	Songino Array	27.05	339	P	P	20 20 52.3	-0.5
	comp=E,0.8nm,0.8s,mb3.3,baz=153,slow=10.0,SNR=5.0						
MKAR	Makanchi Array	38.64	317	P	P	20 22 33.7	-0.1
	comp=E,0.6nm,0.9s,mb3.3,baz=104,slow=13,SNR=4.5						
MKAR	Makanchi Array	38.64	317	P	P	20 22 33.7	-0.1
ZALV	Zalesovo Beam	40.76	328	P	P	20 22 50.5	-0.8
	comp=E,1.4nm,0.8s,mb3.6,baz=116,slow=10,SNR=6.4						
WRA	Warramunga Arr	44.94	161	P	P	20 23 22.8	-2.8
	comp=E,0.4nm,0.6s,mb3.4,baz=345,slow=8.7,SNR=6.1						
WRA	Warramunga Arr	44.94	161	P	P	20 23 22.8	-2.8
ASAR	Alice Springs	48.36	164	P	P	20 23 50.7	-1.6
	comp=E,0.2nm,0.5s,mb3.4,baz=346,slow=6.8,SNR=5.9						

NIED ***26*** *20:28:00, 39.°20N×140.°90E, h5km, Mw3.5 Best double couple: M0=2.05000×10^14 NP1:φ0=6.00000°, δ53.00000°, λ77.00000°. NP2:φ0=207.00000°, δ39.00000°, λ107.00000°.*
ISCJB ***26*** *20:28:42.4±0.5, 39.°15N±0.°03×140.°93E±0.°03, h11km±4km, mb3.5/3, Error ellipse: s-maj=5.2km s-min=4.5km az=14.0*
JMA ***26*** *20:28:42.6, 39.°16N×140.°93E, h10km±1km, M3.7*
JMA Felt I J1.
IDC ***26*** *20:28:44.5±4.4, 39.°02N×141.°01E, h18km±28km, mb3.4/3, mb1 3.5/6, mb1mx3.3/25, mbtmp3.4/6, ML3.1/3, Error ellipse: s-maj=31.7km s-min=20.3km az=120.0*
ISC 26 20:28:43.0±0.5, 39.°14N±0.°03×140.°94E±0.°04, h2km±5km, n14, σ0°99/24, mb3.5/3, 3C-3D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	Ichinoseki	0.29	130	⇓P	Pg	20 28 48.7	+0.1
JMK				eS	Sg	20 28 52.9	+0.6
JRG	Rokugo	0.35	318	⇓P	Pg	20 28 49.4	-0.4
JRG				S	Sg	20 28 54.3	0.0
JOM	Ohasama	0.44	39	⇑P	Pg	20 28 50.9	-0.5
JOM				S	Sg	20 28 56.6	-0.5
JYK	Kaneyama	0.50	244	⇑P	Pg	20 28 52.6	0.0
JYK				S	Sg	20 28 59.2	+0.1
OFUJ	Ofunato	0.57	95	⇓P	Pg	20 28 53.8	-0.2
OFUJ				eS	Sg	20 29 02.1	+0.6
JIO	Ouri	0.75	154	P	Pg	20 28 57.0	-0.5
JIO				S	Sg	20 29 07.3	+0.1
JOU	Okura	0.80	195	⇑P	Pg	20 28 58.2	-0.1
JOU				S	Sg	20 29 09.4	+0.7
MJAR	Matsushiro Arr	3.37	221	Pn	Pn	20 29 37.2	+0.5
	0.8nm,0.3s,baz=301,slow=17,SNR=18						
MJAR				Pg	Pg	20 29 44.5	-3.2
	2.2nm,0.3s,baz=27,slow=14,SNR=25						
MJAR				Lg		20 30 30.1	
	1.4nm,0.3s,baz=18,slow=25,SNR=6.0						
MAT	Matsushiro	3.37	221	P	Pn	20 29 37.3	+0.6
MAT				S	Sn	20 30 15.7	-1.6
ASAJ	Asahikawa	5.13	14	Pn	Pn	20 30 02.6	+1.8
	0.6nm,0.3s,baz=222,slow=9.3,SNR=4.2						
KSRS	Korea Array	10.37	265	Pn	Pn	20 31 14.0	+1.2
	0.4nm,0.3s,baz=81,slow=14,SNR=11						
KSRS				Sn	Sn	20 33 11.4	+1.9
	0.2nm,0.3s,baz=77,slow=22,SNR=4.7						
MKAR	Makanchi Array	42.71	300	P	P	20 36 39.5	-1.8
	0.6nm,0.8s,mb3.4,baz=76,slow=10,SNR=5.0						
ILAR	Eielson Array	47.94	33	P	P	20 37 22.9	+0.3
	0.4nm,0.7s,mb3.6,baz=271,slow=6.9,SNR=6.5						
WRA	Warramunga Arr	59.09	187	P	P	20 38 42.9	-1.9
	0.2nm,0.4s,mb3.5,baz=23,slow=6.5,SNR=12						

MAN 26 20:33:30, 7.°70N×124.°86E, h25km, mb4.0, ML2.7, MS2.4, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	Musuan	0.27	49	eP	Pb	20 33 38.1	+1.5
BUKP				eS	Sb	20 33 45.8	+4.8
CTBH	Cotabato--PC H	0.77	232	⇑iP	Pb	20 33 45.2	+0.4
CTBH				i S	Sb	20 33 56.9	+2.0
PAGZ	Pagadian	1.47	276	eP	Pn	20 33 54.5	-0.4
PAGZ				eS	Sn	20 34 11.0	-2.4
IPIL	Ipil	2.27	272	eP	Pn	20 34 07.6	+1.7
IPIL				eS	Sn	20 34 27.7	-5.4

BJI ***26*** *20:51:16.8, 23.°11N×120.°86E, h17km, ML4.1/5, Ms7 3.9/1*
IDC ***26*** *20:51:19.1±0.9, 23.°13N×120.°57E, h0km, mb3.6/11, mb1 3.8/12,

Kao-hsiung, T'ai-nan and Yun-lin; [1 TAP] in T'ai-tung and P'eng-hu.

ISC 26 20:51:22.8±0.2,23°20N±0°01×120°53E±0°02,h17km±1km, n90,σ0s99/136,mb3.7/11,13C-12D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWK	**Hsinying** baz=323	**0.08**	**327**	⇓*i*P	**Pg**	**20 51 25.4**	**-0.7**
TWK	baz=323			*e*S	**Sg**	**20 51 28.2**	**0.0**
WTP	**Ta-pu** baz=63	**0.09**	**59**	⇓*i*P	**Pg**	**20 51 25.4**	**-0.7**
SGST	**Jiashian** baz=163	**0.13**	**159**	⇓*i*P	**Pg**	**20 51 26.2**	**-0.4**
TPUB	**Ta-pu**	**0.13**	**42**	*e*Pg	**Pg**	**20 51 25.1**	**-1.6**
TPUB				*e*Sg	**Sg**	**20 51 28.4**	**-0.8**
CHN4	**Tsaushan** baz=25	**0.16**	**20**	⇓*i*P	**Pg**	**20 51 26.4**	**-0.6**
CHN4	baz=25			*i* S	**Sg**	**20 51 29.6**	**-0.2**
CHN3	**Shinhua** baz=238	**0.20**	**231**	⇓*i*P	**Pg**	**20 51 28.0**	**+0.4**
CHN3	baz=238			*i* S	**Sg**	**20 51 33.1**	**+2.3**
STYT	**Tauyuan** baz=97	**0.21**	**101**	S	**Sg**	**20 51 31.1**	**0.0**
CHY	**Chiayi** baz=340	**0.31**	**341**	⇑*i*P	**Pg**	**20 51 29.4**	**-0.1**
CHY	baz=340			S	**Sg**	**20 51 34.7**	**+0.7**
SCLT	**Jiali** baz=275	**0.31**	**265**	⇑*i*P	**Pg**	**20 51 29.4**	**-0.1**
SCLT	baz=275			*e*S	**Sg**	**20 51 35.8**	**+1.8**
TAI1	**Yung-k'ang** baz=239	**0.33**	**240**	*e*P	**Pg**	**20 51 30.2**	**+0.5**
CHN8	**Yiju** baz=295	**0.33**	**296**	⇑*i*P	**Pg**	**20 51 29.5**	**-0.3**
CHN8	baz=295			*e*S	**Sg**	**20 51 36.0**	**+1.5**
TWM1	**Shoushan** baz=183	**0.39**	**195**	⇑*i*P	**Pg**	**20 51 32.1**	**+1.3**
CHN5	**Tsauling** baz=24	**0.41**	**19**	⇑*i*P	**Pg**	**20 51 30.9**	**-0.4**
ELDTW	**Lidau** baz=93	**0.45**	**92**	⇑*i*P	**Pg**	**20 51 31.4**	**-0.4**
ELDTW	baz=93			*i* S	**Sg**	**20 51 38.1**	**+0.3**
SSD	**Sandimen** baz=158	**0.46**	**169**	⇑*i*P	**Pg**	**20 51 32.0**	**-0.1**
SSD	baz=158			S	**Sg**	**20 51 38.8**	**+0.4**
WGK	**Gukeng** baz=2.0	**0.48**	**3**	⇑*i*P	**Pg**	**20 51 32.6**	**+0.1**
WGK	baz=2.0			S	**Sg**	**20 51 40.7**	**+1.7**
WSF	**Szhu** baz=326	**0.52**	**327**	*e*P	**Pg**	**20 51 32.9**	**-0.3**
WSF	baz=326			*e*S	**Sg**	**20 51 41.2**	**+1.0**
TWG	**Pinlang**	**0.62**	**127**	*e*Pg	**Pg**	**20 51 34.4**	**-0.8**
TWG				*e*Sg	**Sg**	**20 51 43.5**	**0.0**
TWG	**Pinlang** baz=129	**0.62**	**127**	*i* P	**Pg**	**20 51 35.0**	**-0.1**
TWG	baz=129			*i* S	**Sg**	**20 51 44.3**	**+0.8**
KAU	**Kaohsiung** baz=199	**0.67**	**198**	*e*P	**Pg**	**20 51 37.3**	**+1.4**
WNT	**Mingjian** baz=11	**0.69**	**12**	⇓*i*P	**Pg**	**20 51 35.9**	**-0.4**
WNT	baz=11			S	**Sg**	**20 51 46.3**	**+0.9**
WTCT	**Ta-ch'eng** baz=340	**0.70**	**341**	⇑*i*P	**Pg**	**20 51 35.6**	**-1.0**
WTCT	baz=340			S	**Sg**	**20 51 45.9**	**+0.1**
SSLB	**Suanglung**	**0.70**	**33**	*e*Pg	**Pg**	**20 51 35.0**	**-1.5**
SSLB				*e*Sg	**Sg**	**20 51 44.9**	**-0.9**
ECL	**Taimali** baz=148	**0.72**	**147**	⇑*i*P	**Pg**	**20 51 36.2**	**-0.7**
ECL	baz=148			S	**Sg**	**20 51 47.9**	**+1.6**
TWF1	**Yuli** baz=79	**0.72**	**78**	⇑*i*P	**Pg**	**20 51 36.1**	**-0.8**
TWF1	baz=79			S	**Sg**	**20 51 45.6**	**-0.8**
TTN	**Taitung** baz=130	**0.72**	**128**	P	**Pg**	**20 51 36.8**	**-0.1**
TTN	baz=130			*e*S	**Sg**	**20 51 48.5**	**+2.1**
YULB	**Yu-li**	**0.73**	**75**	*e*Pg	**Pg**	**20 51 35.6**	**-1.4**
YULB				*e*Sg	**Sg**	**20 51 45.7**	**-1.0**
SMLT	**Sun Moon Lake** baz=26	**0.76**	**26**	⇓*i*P	**Pb**	**20 51 37.0**	**-0.5**
SMLT	baz=26			*e*S	**Sb**	**20 51 48.4**	**+0.8**
TYC	**Yuchr** baz=23	**0.76**	**23**	⇓*i*P	**Pb**	**20 51 37.1**	**-0.6**
TYC	baz=23			S	**Sb**	**20 51 48.4**	**+0.7**
EHY	**Hungye** baz=76	**0.79**	**67**	⇑*i*P	**Pb**	**20 51 37.3**	**-0.7**
EHY	baz=76			S	**Sb**	**20 51 47.5**	**-0.9**
SCZT	**Fangliau** baz=166	**0.83**	**174**	*e*P	**Pb**	**20 51 38.2**	**-0.6**
EAST	**Anshuo** baz=154	**0.86**	**160**	⇑*i*P	**Pb**	**20 51 39.1**	**-0.3**
EAST	baz=154			*e*S	**Sb**	**20 51 51.9**	**+1.2**
TWP	**Hsiaoliuchiu** baz=214	**0.87**	**191**	*e*P	**Pb**	**20 51 41.2**	**+1.7**
TAW	**Tawu** baz=159	**0.91**	**158**	P	**Pb**	**20 51 39.6**	**-0.5**
TAW	baz=159			*e*S	**Sb**	**20 51 52.0**	**+0.2**
TCU	**Taichung** baz=355	**0.95**	**8**	*e*P	**Pb**	**20 51 39.9**	**-1.0**
TCU	baz=355			*e*S	**Sb**	**20 51 53.6**	**+0.4**
PNG	**Penghu** baz=291	**0.97**	**292**	*i* P	**Pb**	**20 51 39.7**	**-1.5**
PNG	baz=291			S	**Sb**	**20 51 52.5**	**-1.3**
ESL	**Shilin** baz=54	**1.03**	**53**	⇓*i*P	**Pb**	**20 51 41.5**	**-0.7**
ESL	baz=54			*e*S	**Sb**	**20 51 55.8**	**+0.4**
WHF	**Hehuan Shan** baz=35	**1.15**	**35**	*e*P	**Pn**	**20 51 44.0**	**-0.2**
WHF	baz=35			S	**Sb**	**20 52 00.4**	**+1.4**
TWQ1	**Liyutan** baz=358	**1.16**	**11**	⇓*i*P	**Pn**	**20 51 43.8**	**-0.5**
TWQ1	baz=358			*e*S	**Sb**	**20 51 59.6**	**+0.3**
TWT	**Tachien** baz=28	**1.20**	**29**	*e*P	**Pn**	**20 51 44.0**	**-0.9**
TWT	baz=28			*e*S	**Sb**	**20 52 00.8**	**+0.4**
HEN	**Hengchun** baz=171	**1.21**	**171**	*e*P	**Pn**	**20 51 44.8**	**-0.2**
NSY	**Sanyi** baz=358	**1.23**	**10**	*i* P	**Pn**	**20 51 45.1**	**-0.2**
NSY	baz=358			*e*S	**Sb**	**20 52 01.9**	**+0.7**
HWA	**Hwalien** baz=52	**1.25**	**52**	*e*P	**Pn**	**20 51 46.3**	**+0.7**
HWA	baz=52			*e*S	**Sb**	**20 52 01.5**	**-0.3**
TWK1	**Hengchun** baz=169	**1.28**	**169**	*e*P	**Pn**	**20 51 44.8**	**-1.2**
TWD	**Chiawan** baz=57	**1.31**	**48**	*e*P	**Pn**	**20 51 46.2**	**-0.1**
TWD	baz=57			*e*S	**Sn**	**20 52 03.5**	**0.0**
TSEB	**Hengchuen, Pin** baz=184	**1.34**	**165**	*e*P	**Pn**	**20 51 48.5**	**+1.7**
NACB	**Ninganchiao**	**1.37**	**45**	*e*Pn	**Pn**	**20 51 46.5**	**-0.7**
NACB				*e*Sn	**Sn**	**20 52 04.3**	**-0.8**
NNS	**Nan Shan** baz=32	**1.45**	**32**	*e*P	**Pn**	**20 51 48.2**	**-0.2**
NSTT	**Nanjuang** baz=16	**1.48**	**17**	⇓P	**Pn**	**20 51 48.0**	**-0.8**
NSTT	baz=16			*e*S	**Sn**	**20 52 08.5**	**+0.6**
LAY	**Lan-yu**	**1.49**	**141**	*e*P	**Pn**	**20 51 48.8**	**-0.1**
HSN	**Hsinchu** baz=15	**1.64**	**14**	*e*P	**Pn**	**20 51 51.7**	**+0.7**
ENA	**Nanau** baz=57	**1.65**	**42**	*e*P	**Pn**	**20 51 51.5**	**+0.5**
ENA	baz=57			*e*S	**Sn**	**20 52 13.5**	**+1.7**
NSK	**Sanguang** baz=18	**1.65**	**27**	⇓*i*P	**Pn**	**20 51 50.9**	**-0.1**
NSK	baz=18			*e*S	**Sn**	**20 52 13.2**	**+1.3**
YHNB	**Yeheng**	**1.65**	**28**	*e*Pn	**Pn**	**20 51 50.5**	**-0.6**
YHNB				*e*Sn	**Sn**	**20 52 12.0**	**0.0**
ENTT	**Nioudou** baz=33	**1.71**	**33**	*e*P	**Pn**	**20 51 52.1**	**+0.2**
ENTT	baz=33			*e*S	**Sn**	**20 52 16.1**	**+2.5**
TWE	**Neicheng** baz=34	**1.83**	**34**	*e*P	**Pn**	**20 51 54.5**	**+0.9**
TWE	baz=34			*e*S	**Sn**	**20 52 19.4**	**+3.0**
TWC	**Suao** baz=40	**1.85**	**40**	P	**Pn**	**20 51 54.9**	**+1.1**
TWC	baz=40			*e*S	**Sn**	**20 52 19.3**	**+2.5**
NCU	**National Centr** baz=3.0	**1.86**	**19**	*e*P	**Pn**	**20 51 54.5**	**+0.6**
ILA	**Ilan** baz=35	**1.91**	**35**	*e*P	**Pn**	**20 51 55.8**	**+1.2**
ILA	baz=35			*e*S	**Sn**	**20 52 21.1**	**+2.8**
TATO	**Taipei**	**1.97**	**26**	*e*Pn	**Pn**	**20 51 54.5**	**-1.0**
TATO				*e*Sn	**Sn**	**20 52 26.7**	**+7.0**
TWA	**Mucha** baz=36	**2.01**	**28**	*e*P	**Pn**	**20 51 56.0**	**-0.1**
TAP1	**Taipei** baz=9.0	**2.04**	**26**	*e*P	**Pn**	**20 51 58.0**	**+1.6**
TWS1	**Kuangyinshan** baz=5.0	**2.06**	**23**	*e*P	**Pn**	**20 51 55.1**	**-1.5**
NWF	**Wu-fen Shan** baz=31	**2.18**	**31**	*e*P	**Pn**	**20 51 58.4**	**0.0**
TWB1	**Santiao Chiao** baz=16	**2.24**	**36**	*e*P	**Pn**	**20 51 59.1**	**0.0**
TWB1	baz=16			*e*S	**Sn**	**20 52 28.8**	**+2.4**
KNM	**Kinmen** baz=301	**2.27**	**303**	*e*P	**Pn**	**20 51 58.8**	**-0.8**
TWY	**Chenhua** baz=9.0	**2.28**	**25**	*e*P	**Pn**	**20 51 57.7**	**-2.1**
QZH	**Quanzhou**	**2.48**	**315**	Pn	**Pn**	**20 52 01.0**	**-1.5**
QZH				Sn	**Sn**	**20 52 28.5**	**-3.9**
QZH	comp=N,1μm,1.0s			smax			
QZH	comp=E,710nm,0.8s			smax			
YOJ	**Yonaguni jima** baz=61	**2.59**	**61**	*e*P	**Pn**	**20 52 04.2**	**+0.2**
GZH	**Guangzhou**	**6.62**	**270**	P	**Pn**	**20 53 00.5**	**+1.1**
GZH				S	**Sn**	**20 54 13.3**	**-1.2**
GZH	comp=N,130nm,1.0s			smax			
GZH	comp=E,110nm,1.0s			smax			
WHN	**Wuhan**	**9.16**	**324**	P	**Pn**	**20 53 38.0**	**+3.7**
WHN				S	**Sn**	**20 55 21.8**	**+4.8**
WHN	comp=Z,640nm,10.2s			LR	LR		
QIZ	**Qiongzhong**	**10.81**	**249**	*e*Pn	**Pn**	**20 53 57.3**	**+0.4**
KSRS	**Korea Array** comp=Z,0.2nm,0.3s,baz=205,slow=11,SNR=6.0	**15.56**	**22**	Pn	**Pn**	**20 55 01.7**	**+0.3**
DAV	**Davao City (W)** comp=Z,65nm,21.8s,baz=150,slow=39	**16.76**	**162**	LR	LR	21 02 08.2	
MAJO	**Matsushiro** comp=Z,5.6nm,1.0s	**20.24**	**45**	Pn	**P**	**20 55 56.6**	**-0.6**
MJAR	**Matsushiro Arr** comp=Z,1.0nm,0.5s,baz=214,slow=8.9,SNR=7.7	**20.25**	**45**	P	**P**	**20 55 57.4**	**+0.1**
SONM	**Songino Array** comp=Z,0.6nm,0.7s,mb3.2,baz=159,slow=9.8,SNR=5.1	**27.05**	**339**	P	**P**	**20 57 02.9**	**-1.3**
MKAR	**Makanchi Array** comp=Z,0.2nm,0.5s,mb3.1,baz=116,slow=9.0,SNR=3.9	**38.64**	**317**	P	**P**	**20 58 45.3**	**0.0**
ZALV	**Zalesovo Beam** comp=Z,0.7nm,0.4s,mb3.7,baz=114,slow=8.4,SNR=5.6	**40.75**	**328**	P	**P**	**20 59 01.2**	**-1.6**
BVAR	**Borovoye Array** comp=Z,0.3nm,0.4s,mb3.7,baz=125,slow=9.5,SNR=2.7	**48.06**	**321**	P	**P**	**21 00 01.5**	**+0.3**
ASAR	**Alice Springs** comp=Z,0.6nm,0.8s,mb3.7,baz=345,slow=6.4,SNR=4.4	**48.37**	**164**	P	**P**	**21 00 02.3**	**-1.5**
CTA	**Charters Tower** comp=Z,95nm,18.9s,baz=187,slow=36	**49.81**	**148**	LR	LR	21 21 15.7	
ARU	**Arti** comp=Z,5.8nm,1.3s,mb4.5	**55.53**	**324**	*e*P	**P**	**21 00 56.0**	**-0.9**
STKA	**Stephens Creek** comp=Z,1.4nm,0.8s,mb4.0,baz=329,slow=5.9,SNR=3.6	**58.36**	**159**	P	**P**	**21 01 15.2**	**-2.1**
FINES	**FINESS Array B** comp=Z,0.4nm,0.5s,mb3.6,baz=74,slow=6.2,SNR=4.6	**71.99**	**330**	P	**P**	**21 02 45.1**	**-0.2**
BRTR	**Keskin Array B** comp=Z,0.5nm,0.6s,mb3.6,baz=74,slow=5.2,SNR=3.6	**73.27**	**306**	P	**P**	**21 02 53.9**	**+0.4**
BRTR	**Keskin Array B**	**73.27**	**306**	P	**P**	**21 02 53.9**	**+0.4**
NOA	**NORSAR Array B** comp=Z,0.4nm,0.7s,mb3.4,baz=55,slow=1.3,SNR=3.6	**78.81**	**332**	P	**P**	**21 03 24.1**	**-0.5**
YKA	**Yellowknife Ar** comp=Z,1.4nm,0.6s,mb4.3,baz=311,slow=5.0,SNR=5.4	**84.10**	**23**	P	**P**	**21 03 51.2**	**-1.3**
YKA	**Yellowknife Ar**	**84.10**	**23**	P	**P**	**21 03 51.2**	**-1.3**

*IDC **26** 21:13:08.6±1.9, 6°.58S×152°.53E, h0km, mb4.1/7, mb1 4.2/8, mb1mx4.0/17, mbtmp4.1/8, ML3.9/1, Error ellipse: s-maj=64.7km s-min=23.0km az=118.0*

*ISCJB **26** 21:13:11.9±1.2, 6°.7S±0°.1×152°.6E±0°.2, h33km, mb4.0/8, Error ellipse: s-maj=34.8km s-min=13.3km az=29.0*

*NEIC **26** 21:13:13.3±0.9, 6°.69S×152°.67E, h35km, mb4.1/2, Error ellipse: s-maj=23.9km s-min=9.6km az=113.0*

ISC 26 21:13:13.5±1.2,6°.7S±0°.1×152°.7E±0°.2,h35km,n13, σ0s72/14,mb4.0/8,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby** 22nm,0.6s	**6.09**	**243**	*e*Pn	**Pn**	**21 14 40.4**	**-0.6**
PMG				*e*S	**Sn**	**21 15 42.7**	**-6.9**
CTA	**Charters Tower** 0.3nm,0.3s,baz=37,slow=15,SNR=3.6	**14.71**	**204**	Pn	**Pn**	**21 16 39.5**	**+0.4**
CTAO	**Charters Tower**	**14.71**	**204**	*e*Pn	**Pn**	**21 16 38.1**	**-0.9**
KAKA	**Kakadu** 127nm,0.5s	**20.82**	**252**	*e*P	**P**	**21 17 53.3**	**+1.2**
WRAB	**Tennant Creek** 3.9nm,0.9s,mb3.8	**22.13**	**232**	*e*P	**P**	**21 18 07.0**	**+0.8**
ASAR	**Alice Springs** 4.1nm,0.7s,mb4.1,baz=57,slow=9.3,SNR=29	**24.70**	**225**	P	**P**	**21 18 31.8**	**+0.3**
FITZ	**Fitzroy Crossi** 3.6nm,0.5s,mb4.3,baz=74,slow=6.4,SNR=18	**28.69**	**244**	P	**P**	**21 19 06.3**	**-1.1**
FITZ	**Fitzroy Crossi** 3.2nm,0.5s,mb4.3	**28.69**	**244**	*e*P	**P**	**21 19 06.1**	**-1.3**
SONM	**Songino Array** 1.0nm,0.7s,mb4.0,baz=140,slow=4.1,SNR=7.1	**67.85**	**328**	P	**P**	**21 24 08.6**	**+0.5**
MKAR	**Makanchi Array** 0.8nm,1.0s,mb3.6,baz=100,slow=6.3,SNR=7.0	**81.66**	**319**	P	**P**	**21 25 28.1**	**0.0**
ZALV	**Zalesovo Beam** 1.1nm,0.7s,mb4.0,baz=110,slow=5.1,SNR=4.7	**82.64**	**326**	P	**P**	**21 25 32.7**	**-0.4**
ILAR	**Eielson Array** 1.5nm,0.8s,mb4.2,baz=252,slow=5.3,SNR=18	**83.94**	**22**	P	**P**	**21 25 40.0**	**+0.4**
BVAR	**Borovoye Array** 1.0nm,0.8s,mb4.2,baz=74,slow=6.3,SNR=5.0	**90.67**	**323**	P	**P**	**21 26 11.7**	**-0.7**

*SZGRF **26** 21:16:00.2, 19°.62S×177°.46W, h33km, mb4.6, Fiji Islands region*

*IDC **26** 21:17:07.7±1.4, 17°.74S×178°.61W, h586km±16km, mb3.8/12, mb1 4.0/13, mb1mx3.8/18, mbtmp3.8/13, Error ellipse: s-maj=27.5km s-min=9.7km az=151.0*

*ISCJB **26** 21:17:09.3±0.7, 18°.0S±0°.1×178°.59W±0°.07, h628km±7km, mb4.3/50, Error ellipse: s-maj=19.3km s-min=6.5km az=154.4*

*NEIC **26** 21:17:09.8±0.7, 17°.86S×178°.63W, h614km±7km, mb4.3/32, Error ellipse: s-maj=17.3km s-min=5.1km az=153.0*

ISC 26 21:17:09.8±0.6,18°.0S±0°.1×178°.55W±0°.07,h617km±7km, h607km±2.2km:pP-P,n404,σ0s55/292,mb4.3/50,148C-95D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.25**	**274**	*e*P	**P**	**21 18 30.5**	**-1.3**
MSVF				*e*S	**S**	**21 19 39.0**	**+0.4**
AFI	**Afiamalu** 4.8nm,0.3s,baz=252,slow=7.3,SNR=6.4	**7.67**	**59**	P	**P**	**21 19 01.9**	**-4.9**
AFI				S	**S**	**21 20 33.5**	**-8.9**
AFI	**Afiamalu** 2.0nm,0.3s,baz=202,slow=21,SNR=2.2	**7.67**	**59**	*e*P	**P**	**21 19 00.8**	**-5.9**
EIDS	**Eidsvold** 39nm,1.5s,mb4.8	**29.12**	**250**	*e*P	**P**	**21 22 22.9**	**-0.2**
ARMA	**Armidale**	**29.79**	**240**	*e*P	**P**	**21 22 29.4**	**+0.6**
ARMA	**Armidale** 15nm,0.8s,mb4.7	**29.79**	**240**	*e*P	**P**	**21 22 28.6**	**-0.2**
CNB	**Canberra Magne**	**33.28**	**232**	*e*P	**P**	**21 22 58.7**	**+0.4**
CTA	**Charters Tower** 15nm,0.6s,mb4.8	**33.30**	**261**	*e*P	**P**	**21 22 58.6**	**-0.1**
CTA	**Charters Tower** 17nm,0.6s,mb4.9,baz=88,slow=10,SNR=33	**33.30**	**261**	P	**P**	**21 22 58.7**	**-0.1**
CTA	**Charters Tower**	**33.30**	**261**	P	**P**	**21 22 58.7**	**-0.1**
CTAO	**Charters Tower** 19nm,0.7s,mb4.8	**33.30**	**261**	*e*P	**P**	**21 22 58.7**	**0.0**
PMG	**Port Moresby** 78nm,0.9s,mb5.3	**34.34**	**280**	*e*P	**P**	**21 23 08.5**	**+1.1**
COEN	**Coen** 327nm,0.9s	**36.97**	**271**	*e*P	**P**	**21 23 29.8**	**+0.7**
TOO	**Toolangi**	**37.02**	**231**	*e*P	**P**	**21 23 29.7**	**+0.5**
STKA	**Stephens Creek** 13nm,0.9s,mb4.5	**38.48**	**241**	*e*P	**P**	**21 23 41.6**	**+0.5**
STKA	**Stephens Creek** 17nm,0.8s,mb4.6,baz=84,slow=9.4,SNR=25	**38.48**	**241**	P	**P**	**21 23 41.6**	**+0.6**
STKA	**Stephens Creek** 4.4nm,1.0s,mb3.9	**38.48**	**241**	*e*P	**P**	**21 23 41.5**	**+0.4**
WRAB	**Tennant Creek** 16nm,0.7s,mb4.7	**44.48**	**260**	*e*P	**P**	**21 24 27.6**	**-0.7**
ASAR	**Alice Springs** 60nm,0.6s,mb5.3,baz=88,slow=8.7,SNR=520	**44.64**	**254**	P	**P**	**21 24 29.6**	**0.0**
ASAR	1.3nm,0.9s,baz=82,slow=13,SNR=7.1			S	**S**	**21 30 21.6**	**-0.8**
KAKA	**Kakadu** 23nm,0.6s,mb4.9	**47.45**	**269**	*e*P	**P**	**21 24 50.8**	**0.0**
KAKA	**Kakadu** 64nm,0.6s,mb5.3	**47.45**	**269**	*e*P	**P**	**21 24 50.8**	**0.0**
FORT	**Forrest** 19nm,0.5s,mb4.8	**49.85**	**245**	*e*P	**P**	**21 25 07.3**	**-1.0**
FITZ	**Fitzroy Crossi** 5.0nm,0.5s,mb4.1	**52.88**	**261**	*e*P	**P**	**21 25 30.2**	**0.0**
FITZ	**Fitzroy Crossi** 2.7nm,0.5s,mb3.8,baz=140,slow=8.4,SNR=14	**52.88**	**261**	P	**P**	**21 25 30.4**	**+0.1**
MBWA	**Marble Bar** 5.1nm,0.6s,mb3.8	**57.93**	**256**	*e*P	**P**	**21 26 04.5**	**-0.6**
KLBR	**Kellerberrin** 46nm,1.4s,mb4.4	**58.68**	**244**	*e*P	**P**	**21 26 09.3**	**-0.6**
NWAO	**Narrogin (SRO)**	**59.06**	**242**	P	**P**	**21 26 12.3**	**-0.2**
MJAR	**Matsushiro Arr** 1.1nm,0.6s,mb3.5,baz=151,slow=6.0,SNR=6.1	**67.88**	**323**	P	**P**	**21 27 07.8**	**-0.4**
PETK	**Petropavlovsk-** 6.1nm,0.6s,mb4.3,baz=117,slow=6.6,SNR=9.4	**73.71**	**345**	P	**P**	**21 27 42.0**	**+0.1**
KHMM	**Horse Mountain**	**77.53**	**39**	*e*P	**P**	**21 28 05.0**	**+1.7**
VES	**Vestal, Richgr** baz=78	**77.64**	**46**	⇑P	**P**	**21 28 04.2**	**+0.2**
BFSC	**Mount Baldy Ra** baz=78	**77.77**	**48**	⇑P	**P**	**21 28 04.8**	**0.0**
RCTC	**Rector, Farmer** baz=78	**77.79**	**45**	⇑P	**P**	**21 28 04.7**	**-0.2**
NJ2	**Nanjing**	**77.88**	**310**	*e*P	**P**	**21 28 09.5**	**+4.1**
NJ2				pP	pP	21 30 16.5	+3.3
NJ2				sP	sP	21 31 15.5	-0.3
NJ2				S	S	21 37 08.0	-1.5
NJ2	comp=Z,310nm,5.0s			pmax	pmax		
EDW2	**Edwards Air Fo** baz=78	**77.88**	**47**	⇑P	**P**	**21 28 05.3**	**0.0**
ISA	**Isabella** baz=78	**77.96**	**46**	⇓P	**P**	**21 28 06.4**	**+0.6**
ISA	**Isabella**	**77.96**	**46**	*e*P	**P**	**21 28 06.5**	**+0.8**
MONP	**Monument Peak** baz=78	**77.96**	**50**	⇑P	**P**	**21 28 06.4**	**+0.5**
CMB	**Columbia Colle** comp=Z,8.1nm,0.9s,mb4.2	**77.98**	**43**	*e*P	**P**	**21 28 05.9**	**+0.1**
DVTC	**Desert V Tower** baz=78	**78.08**	**50**	⇑P	**P**	**21 28 06.4**	**-0.1**
SWSC	**Sam W. Stewart** baz=78	**78.44**	**50**	⇑P	**P**	**21 28 08.3**	**-0.1**
YBH	**Yreka Blue Hor** comp=Z,5.0nm,0.8s,mb3.9	**78.66**	**39**	*e*P	**P**	**21 28 10.0**	**+0.6**
MTUM	**Tungsten Hills**	**78.81**	**45**	*e*P	**P**	**21 28 11.0**	**+0.7**
MPMC	**Manual Prospec** baz=79	**78.85**	**46**	⇓P	**P**	**21 28 10.7**	**+0.2**
HUMO	**Hull Mountain** comp=Z,11nm,1.1s,mb4.1	**79.04**	**38**	*e*P	**P**	**21 28 12.0**	**+0.7**
BC3	**Big Chuckawall** baz=79	**79.05**	**49**	⇑P	**P**	**21 28 12.1**	**+0.5**
WCN	**Washoe City** baz=79	**79.10**	**43**	⇓P	**P**	**21 28 12.3**	**+0.6**
GMRC	**Granite Mounta** baz=80	**79.47**	**48**	⇑P	**P**	**21 28 14.2**	**+0.4**
FURC	**Furnace Creek,** baz=80	**79.50**	**46**	⇓P	**P**	**21 28 14.4**	**+0.6**
IRM	**Iron Mountain** baz=80	**79.52**	**49**	⇓P	**P**	**21 28 14.7**	**+0.7**
NVAR	**Mina Array Bea** comp=Z,6.0nm,0.7s,mb4.0,baz=224,slow=8.9,SNR=39	**79.57**	**44**	P	**P**	**21 28 14.7**	**+0.5**
SHOC	**Shoshone** baz=80	**79.60**	**47**	⇑P	**P**	**21 28 14.6**	**+0.1**
U10A	**Ash Meadows, A** baz=80	**79.84**	**46**	⇓P	**P**	**21 28 15.9**	**+0.2**
113A	**Mohawk Valley,** baz=80	**79.84**	**51**	⇑P	**P**	**21 28 16.4**	**+0.6**
CN2	**Changchun**	**79.99**	**322**	*e*P	**P**	**21 28 19.8**	**+3.5**
CN2	comp=Z,10.0nm,0.6s,mb4.3			pmax	pmax		
Z13A	**Yuma Proving G** baz=80,SNR=6.8	**80.13**	**50**	⇓P	**P**	**21 28 17.5**	**+0.2**
214A	**Organ Pipe Nat** baz=80	**80.16**	**52**	⇓P	**P**	**21 28 17.6**	**+0.1**
MOD	**Modoc** comp=Z,5.8nm,0.6s,mb4.1	**80.22**	**40**	*e*P	**P**	**21 28 17.9**	**+0.4**
K05A	**Summer Lake** baz=80	**80.34**	**39**	⇑P	**P**	**21 28 18.5**	**+0.4**
S10A	**Tonopah Range,** baz=81,SNR=11	**80.44**	**45**	⇓P	**P**	**21 28 19.0**	**+0.3**
X13A	**Yucca** baz=81	**80.68**	**49**	⇑P	**P**	**21 28 20.2**	**+0.1**
H04A	**Detroit Lake** baz=81	**80.73**	**37**	⇓P	**P**	**21 28 20.2**	**+0.1**
Z14A	**Wintersburg** baz=81	**80.73**	**51**	⇑P	**P**	**21 28 20.8**	**+0.5**
R10A	**Warm Springs** baz=81	**80.83**	**45**	⇓P	**P**	**21 28 21.2**	**+0.5**
S11A	**Rachel** baz=81	**80.87**	**46**	⇑P	**P**	**21 28 20.9**	**0.0**
W13A	**Hualapai Mount** baz=81	**80.89**	**49**	⇑P	**P**	**21 28 21.7**	**+0.5**
Y14A	**Wickenburg** baz=81	**80.96**	**50**	⇑P	**P**	**21 28 21.2**	**-0.4**
T11A	**Corn Creek, Al** baz=81,SNR=10.0	**81.02**	**46**	⇑P	**P**	**21 28 22.4**	**+0.6**
U12A	**Valley of Fire** baz=81,SNR=5.0	**81.09**	**47**	⇑P	**P**	**21 28 22.7**	**+0.6**
E03A	**Lebam** baz=81	**81.09**	**35**	⇑P	**P**	**21 28 22.5**	**+0.6**
V13A	**Grand Canyon W** baz=81,SNR=5.6	**81.19**	**48**	⇑P	**P**	**21 28 22.7**	**+0.1**
216A	**Three Points,** baz=81	**81.20**	**52**	⇓P	**P**	**21 28 22.8**	**0.0**
X14A	**Yava** baz=81,SNR=8.1	**81.30**	**50**	⇓P	**P**	**21 28 23.6**	**+0.3**
R11A	**Troy Canyon, C** baz=82	**81.34**	**45**	⇑P	**P**	**21 28 23.8**	**+0.4**
BMN	**Battle Mountai** comp=Z,11nm,0.9s,mb4.3	**81.35**	**43**	*e*P	**P**	**21 28 23.3**	**-0.1**
P10A	**Eureka** baz=82	**81.41**	**44**	⇑P	**P**	**21 28 24.3**	**+0.6**
Y15A	**Casa Rosa Ranc** baz=82	**81.46**	**50**	⇑P	**P**	**21 28 24.7**	**+0.6**
S12A	**Delamar Landin** baz=82,SNR=13	**81.46**	**46**	⇑P	**P**	**21 28 24.5**	**+0.4**
W14A	**Seligman** baz=82,SNR=10	**81.52**	**49**	⇑P	**P**	**21 28 25.1**	**+0.7**
Q11A	**Duckwater** baz=82,SNR=12	**81.55**	**45**	⇑P	**P**	**21 28 24.7**	**+0.3**
WVOR	**Wild Horse Val** comp=Z,13nm,1.0s,mb4.4	**81.55**	**40**	*e*P	**P**	**21 28 24.7**	**+0.4**
217A	**Green Valley** baz=82,SNR=7.8	**81.58**	**53**	⇑P	**P**	**21 28 25.2**	**+0.4**
V14A	**Boquillas Ranc** baz=82,SNR=16	**81.70**	**48**	⇓P	**P**	**21 28 25.4**	**+0.1**
X15A	**Humboldt** baz=82,SNR=7.3	**81.78**	**50**	⇓

baz=82
I07A Izee 81.94 39 ⇑P P 21 28 26.5 +0.2
baz=82
R12A Pony Springs, 81.99 46 ⇓P P 21 28 26.4 -0.3
baz=82
U14A Mt Trumbull 82.03 48 P P 21 28 27.4 +0.5
baz=82,SNR=27
Y16A Circle Bar Ran 82.05 51 ⇑P P 21 28 26.9 -0.2
baz=82,SNR=5.6
318A Bisbee 82.06 53 ⇑P P 21 28 27.5 +0.3
baz=82
S13A Holt Ranch, En 82.13 46 ⇓P P 21 28 27.1 -0.3
baz=82
J08A Circle Bar Ran 82.16 40 ⇓P P 21 28 27.2 -0.2
baz=82
Q12A Willow Creek R 82.20 45 ⇑P P 21 28 27.4 -0.3
baz=82
O11A Cowboy Ranch, 82.21 44 ⇓P P 21 28 27.8 +0.1
baz=82
X16A Lo Mia Camp, P 82.33 50 ⇑P P 21 28 29.0 +0.5
baz=82,SNR=11
P12A McGill 82.37 44 ⇑P P 21 28 28.9 +0.3
baz=82
M10A I.L. Ranch, Tu 82.37 42 ⇓P P 21 28 29.0 +0.5
baz=82
T14A Hurricane 82.41 47 ⇓P P 21 28 29.1 +0.3
baz=82,SNR=6.5
CCUT Cedar City 82.46 47 eP P 21 28 29.9 +0.9
comp=Z,3.3nm,0.8s,mb3.9
V15A Kaibab Nationa 82.46 49 ⇑P P 21 28 29.6 +0.5
baz=83,SNR=9.4
TTA Tatalina 82.56 10 eP P 21 28 28.9 0.0
319A Douglas 82.58 54 ⇑P P 21 28 29.9 +0.1
baz=83
118A Homack Ranch, 82.61 52 ⇑P P 21 28 30.2 +0.3
baz=83
U15A North Rim 82.67 48 ⇑P P 21 28 29.9 -0.2
baz=83,SNR=24
PMR Palmer 82.70 14 eP P 21 28 28.8 -0.8
comp=Z,4.1nm,0.5s,mb4.2
Q13A Wheeler Ranch, 82.70 45 ⇑P P 21 28 30.5 +0.2
baz=83
L10A Juniper Basin 82.70 42 ⇑P P 21 28 30.3 +0.1
baz=83
219A White Tail Can 82.87 53 ⇓P P 21 28 30.9 -0.4
baz=83
O12A Currie 82.88 44 ⇑P P 21 28 31.2 +0.1
baz=83
T15A Red Dirt Ranch 82.88 48 ⇓P P 21 28 31.1 -0.1
baz=83,SNR=10.0
WUAZ Wupatki 82.89 49 eP P 21 28 32.3 +1.0
G08A Pilot Rock 82.95 38 ⇑P P 21 28 30.9 -0.4
baz=83,SNR=10
N12A Clover Valley, 82.98 43 ⇓P P 21 28 31.3 -0.3
baz=83,SNR=5.3
320A Kipp Ranch, An 83.14 54 ⇓P P 21 28 29.0 -3.6
baz=83,SNR=36
L11A Cat Creek Ranc 83.21 42 ⇓P P 21 28 31.8 -0.9
baz=83,SNR=10.0
RSW Rattlesnake Hi 83.21 37 eP P 21 28 33.1 +0.5
Q14A Sevier Lake (B 83.22 45 ⇑P P 21 28 32.3 -0.5
baz=83,SNR=16
HAWA Hanford 83.24 37 eP P 21 28 33.0 +0.3
comp=Z,6.4nm,0.7s,mb4.3
M12A Wells 83.35 43 ⇓P P 21 28 32.6 -0.9
baz=84,SNR=5.9
U16A Tuba City 83.36 49 ⇑P P 21 28 34.3 +0.8
baz=84,SNR=5.6
V17A Tonalea, Kykot 83.36 49 ⇓P P 21 28 33.1 -0.5
baz=84,SNR=9.9
ETW Entiat 83.49 35 eP P 21 28 33.9 0.0
P14A Drum Mountains 83.66 45 ⇓P P 21 28 35.0 0.0
baz=84,SNR=6.2
L12A House Creek Ra 83.66 42 ⇑P P 21 28 34.9 0.0
baz=84
BMO Blue Mountains 83.68 39 eP P 21 28 34.8 -0.2
MSU Marysvale 83.74 46 eP P 21 28 36.9 +1.5
comp=Z,2.3nm,0.8s,mb3.8
MFID Camas Ranch 83.81 41 ⇑P P 21 28 34.9 -0.7
baz=84,SNR=7.4
D08A Wollman Farm, 83.96 36 ⇓P P 21 28 36.1 -0.2
baz=84,SNR=5.2
T17A Navajo Res., N 83.99 48 ⇓P P 21 28 36.3 -0.3
baz=84
V18A Ganado 84.02 50 ⇑P P 21 28 36.7 -0.1
baz=84
TRF Thorofare Moun 84.11 12 eP P 21 28 35.4 -1.2
comp=Z,19nm,0.7s,mb4.7
F10A Beach Ranch, E 84.34 38 P P 21 28 38.0 -0.2
baz=84,SNR=17
Y20A Horse Springs, 84.37 52 ⇓P P 21 28 37.9 -0.7
baz=84
M14A Sheep Mountain 84.42 43 ⇓P P 21 28 38.5 -0.1
baz=84,SNR=7.9
I12A Atlanta 84.44 41 ⇑P P 21 28 38.1 -0.6
baz=85,SNR=8.6
B08A Colville Reser 84.47 35 ⇓P P 21 28 38.0 -0.7
baz=85,SNR=7.7
MCK McKinley 84.64 13 eP P 21 28 38.2 -0.9
comp=Z,7.9nm,0.7s,mb4.5
Z21A St. Cloud Mine 84.64 53 ⇓P P 21 28 40.2 +0.2
baz=85
T18A Mexican Hat 84.71 48 ⇑P P 21 28 40.1 -0.1
baz=85
C09A Chrisman Ranch 84.75 36 ⇓P P 21 28 39.9 -0.2
baz=85
HLID Hailey 84.77 41 eP P 21 28 40.8 +0.5
TMUT Trail Mountain 84.78 46 eP P 21 28 41.8 +1.4
comp=Z,4.4nm,0.6s,mb4.3
U19A Dine' College, 84.81 49 ⇑P P 21 28 40.0 -0.6
baz=85,SNR=5.5
W20A Ramah 84.81 51 ⇓P P 21 28 41.2 +0.5
baz=85
J13A Cove Ranch, Pi 84.84 41 ⇓P P 21 28 40.3 -0.3
baz=85
Y21A Point of Rocks 84.94 52 ⇓P P 21 28 40.7 -0.7
baz=85,SNR=5.9
GYA Guiyang 84.95 300 eP P 21 28 42.0 +0.4
GYA pP pP 21 30 50.5 -2.0
GYA sP sP 21 31 49.0 -5.3
GYA PP PP 21 32 13.3 +2.7
GYA SKS 21 38 09.5
GYA sS sS 21 42 09.5 -4.2
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
M15A Larsen Ranch, 84.98 44 ⇓P P 21 28 41.1 -0.3
baz=85
H12A Diamond D Ranc 85.00 40 P P 21 28 41.5 +0.1
baz=85,SNR=15
G12A Big Creek, Yel 85.02 39 ⇑P P 21 28 41.8 +0.4
baz=85,SNR=14
I13A Wildhorse Cree 85.14 41 ⇑P P 21 28 42.0 0.0
baz=85
J14A Carey 85.21 42 ⇓P P 21 28 42.6 +0.2
baz=85,SNR=6.8
R18A Canyonlands Na 85.27 47 ⇑P P 21 28 42.4 -0.4
baz=85
L15A Malad City 85.29 43 ⇓P P 21 28 42.6 -0.3
baz=85
H13A Challis 85.38 40 ⇓P P 21 28 43.0 -0.2
baz=86
F12A Elk City 85.39 39 ⇓P P 21 28 42.9 -0.3
baz=86,SNR=21
O17A Robinson Place 85.52 45 ⇑P P 21 28 44.7 +0.7
baz=86,SNR=6.9
K15A Arbon 85.53 43 ⇓P P 21 28 43.6 -0.3
baz=86
324A Moseley Ranch, 85.55 55 ⇑P P 21 28 43.7 -0.7
baz=86,SNR=6.6
E12A Beaver Dam Sad 85.55 38 ⇑P P 21 28 43.6 -0.4
baz=86
I14A Mackay 85.56 41 ⇓P P 21 28 43.5 -0.5
baz=86,SNR=8.1
HWUT Hardware Ranch 85.63 44 P P 21 28 44.2 -0.2
comp=Z,1.7nm,0.5s,mb3.9
NEW Newport 85.65 36 eP P 21 28 43.9 -0.5
comp=Z,3.5nm,1.0s,mb3.9
G13A Cobalt 85.66 40 ⇓P P 21 28 44.1 -0.4
baz=86,SNR=6.1
R19A Curley Farm, L 85.67 48 ⇑P P 21 28 44.1 -0.7
baz=86
425A Indio Mountain 85.67 56 ⇓P P 21 28 44.9 -0.1
baz=86,SNR=6.9
MNTX Cornudas Mount 85.73 55 eP P 21 28 45.5 +0.3
comp=Z,4.6nm,1.2s,mb4.0
224A Cornudas Mount 85.77 55 ⇓P P 21 28 45.6 +0.2
baz=86,SNR=8.2
626A Big Bend Ranch 85.86 57 ⇑P P 21 28 45.7 -0.2
baz=86
COLA College 85.87 13 P P 21 28 44.1 -0.9
comp=Z,5.1nm,0.6s,mb4.3
C11A Tepee Creek (N 85.91 37 ⇓P P 21 28 45.4 -0.2
baz=86
325A Bean Ranch, Si 85.92 55 ⇓P P 21 28 46.0 -0.1
baz=86,SNR=6.2
J15A Blackfoot 85.94 42 ⇑P P 21 28 46.4 +0.6
baz=86,SNR=16
F13A Darby 85.96 39 ⇑P P 21 28 45.0 -0.9
baz=86,SNR=10
ILAR Eielson Array 85.98 13 P P 21 28 44.3 -1.3
comp=Z,2.9nm,0.5s,mb4.2,baz=222,slow=4.9,SNR=37
U21A Nageezi 85.99 50 ⇑P P 21 28 46.1 -0.2
baz=86,SNR=7.1
D12A Red Ives Fores 86.01 38 ⇓P P 21 28 45.3 -0.8
baz=86
124A Stringfield Ra 86.08 54 ⇓P P 21 28 47.1 +0.3
baz=86
PV01 Paradox Valley 86.08 48 eP P 21 28 47.2 +0.5
comp=Z,125nm,0.5s
526A Mary Lane Ranc 86.09 57 ⇓P P 21 28 47.3 +0.4
baz=86
Y23A Lovelace Mesa, 86.13 53 ⇑P P 21 28 46.4 -0.6
baz=86
TXAR Lajitas Array 86.15 58 P P 21 28 48.3 +1.1
comp=Z,8.4nm,0.8s,mb4.4,baz=219,slow=6.1,SNR=105
K16A Soda Springs 86.20 43 ⇑P P 21 28 47.5 +0.4
baz=86
G14A Jackson 86.21 40 ⇑P P 21 28 46.9 -0.2
baz=86
ANMO Albuquerque 86.25 52 eP P 21 28 47.8 +0.2
comp=Z,4.6nm,1.1s,mb4.0
C12B Naegeli Ranch, 86.28 37 ⇓P P 21 28 47.3 -0.1
baz=86
E13A Victor 86.38 39 ⇑P P 21 28 47.3 -0.5
baz=86
426A McDonald Obser 86.38 56 ⇑P P 21 28 48.4 +0.1
baz=86,SNR=7.1
MCMT McKenzie Canyo 86.38 41 eP P 21 28 48.7 +0.8
comp=Z,6.0nm,1.1s,mb4.1
J16A Bone 86.40 42 ⇑P P 21 28 48.8 +0.7
baz=86,SNR=6.0
H15A Lima 86.40 41 ⇓P P 21 28 48.5 +0.5
baz=86,SNR=8.4
Z24A Sheeppen Canyo 86.40 53 ⇓P P 21 28 47.7 -0.7
baz=86
627A Terlingua Ranc 86.42 58 ⇑P P 21 28 48.9 +0.4
baz=86,SNR=28
527A Woodward Ranch 86.51 57 ⇑P P 21 28 48.9 0.0
baz=87,SNR=9.1
M18A Lyman 86.54 44 ⇑P P 21 28 48.9 +0.1
baz=87
D13A Huson 86.55 38 ⇑P P 21 28 48.0 -0.7
baz=87
Y24A Capitan 86.59 53 ⇓P P 21 28 49.0 -0.2
baz=87,SNR=13
RRI2 Red Ridge 86.62 42 eP P 21 28 50.0 +0.8
comp=Z,13nm,0.9s,mb4.7
O19A Miners Draw (B 86.67 46 ⇓P P 21 28 49.1 -0.2
baz=87
125A Gardner Draw, 86.68 54 ⇑P P 21 28 48.7 -0.9
baz=87
BSMT Bassoo Peak 86.75 37 eP P 21 28 49.6 0.0
G15A Dillon 86.77 40 ⇓P P 21 28 50.1 +0.4
baz=87,SNR=10
I16A Newdale 86.77 42 ⇓P P 21 28 48.8 -1.0
baz=87,SNR=6.8
E14A Clinton 86.78 39 ⇑P P 21 28 49.8 0.0
baz=87
V23A Ortiz Mt. (NFS 86.78 51 ⇓P P 21 28 50.5 +0.5
baz=87
C13A Hot Springs 86.79 37 ⇓P P 21 28 49.4 -0.4
baz=87
P20A De Beque 86.81 47 ⇑P P 21 28 50.0 -0.1
baz=87
226A Malaga, Loving 86.87 55 ⇑P P 21 28 50.4 -0.2
baz=87
Z25A Roswell 86.88 54 ⇓P P 21 28 50.0 -0.6
baz=87
R21A Cimarron 86.91 48 ⇓P P 21 28 49.8 -0.8
baz=87
TPAW Teton Pass 86.93 42 eP P 21 28 50.8 +0.2
REDW Red Top Meadow 86.93 43 eP P 21 28 51.2 +0.6
427A Hayter Ranch, 86.95 56 ⇑P P 21 28 51.0 +0.1
baz=87,SNR=7.6
J17A Brown Place, J 87.02 43 ⇑P P 21 28 50.8 -0.2
baz=87,SNR=7.2
SNOW Snow King Moun 87.04 42 eP P 21 28 51.9 +0.9
F15A Butte 87.10 40 ⇓P P 21 28 50.8 -0.5
baz=87
D14A Greenough 87.11 38 ⇑P P 21 28 50.5 -0.7
baz=87
LRM Limekiln Ridge 87.11 40 eP P 21 28 51.4 +0.1
K18A Toltan Ranch, 87.12 43 ⇓P P 21 28 51.2 -0.3
baz=87
IMW Indian Meadow 87.13 42 eP P 21 28 52.5 +1.0
comp=Z,12nm,0.9s,mb4.6
W24A Lazy 6 Ranch, 87.14 52 ⇓P P 21 28 50.6 -1.2
baz=87
S22A 4UR Ranch, Cre 87.16 49 ⇑P P 21 28 51.5 -0.2
baz=87
Y25A Mesa, Roswell 87.16 53 ⇑P P 21 28 51.5 -0.3
baz=87
528A Cox Ranch, San 87.17 57 ⇑P P 21 28 52.2 +0.2
baz=87,SNR=5.1
CHMT Chamberlain Mo 87.17 39 eP P 21 28 51.6 0.0
DAWY Dawson 87.19 16 eP P 21 28 51.5 +0.2
O20A White River Ci 87.20 46 ⇓P P 21 28 51.1 -0.8
baz=87
B13A Whitefish 87.21 37 ⇓P P 21 28 50.8 -0.9
baz=87
LOHW Long Hollow 87.21 42 eP P 21 28 52.1 +0.3
comp=Z,3.0nm,0.7s,mb4.1
G16A Moss Hill, Enn 87.22 41 ⇑P P 21 28 51.0 -0.9
baz=87
HHC Hu-ho-hao-te 87.22 315 eP P 21 28 52.5 +0.5
HHC pP pP 21 31 03.8 -0.1
HHC sP sP 21 32 03.0 -2.4
HHC PP PP 21 32 31.3 +3.0
HHC SKS 21 38 23.3
HHC S S 21 38 41.8 +0.5
HHC sS sS 21 42 34.0 -2.3
HHC SS SS 21 44 49.0 +3.6
HHC pmax pmax
comp=Z,10.0nm,0.7s,mb4.7
HHC pmax pmax
comp=Z,120nm,7.8s
E15A Deer Lodge 87.29 39 ⇑P P 21 28 51.8 -0.4
baz=87
EGAK Eagle 87.32 15 eP P 21 28 51.7 -0.2
comp=Z,3.2nm,0.6s,mb4.2
L19A Farson 87.32 44 ⇓P P 21 28 51.8 -0.7
baz=87
J18A Kendall Valley 87.40 43 ⇑P P 21 28 53.1 +0.4
baz=88,SNR=22
Z26A Caprock 87.44 54 ⇑P P 21 28 52.9 -0.3
baz=88
V24A Rampart Ranch, 87.45 51 ⇑P P 21 28 52.6 -0.6
baz=88
428A Kincaid Ranch, 87.47 57 ⇑P P 21 28 53.0 -0.4
baz=88
N20A Spence Gulch, 87.49 46 ⇑P P 21 28 52.8 -0.5
baz=88
BW06 Boulder Array 87.49 43 eP P 21 28 53.1 -0.1
PDAR Pinedale Array 87.50 43 P P 21 28 53.5 +0.2
comp=Z,4.5nm,0.7s,mb4.3,baz=237,slow=2.9,SNR=25
A13A Flathead Natio 87.53 36 ⇓P P 21 28 52.4 -0.8
baz=88
Q22A Crested Butte, 87.57 48 ⇑P P 21 28 53.1 -0.5
baz=88
328A Wristen Ranch, 87.62 56 ⇑P P 21 28 54.0 -0.1
baz=88
SMCO Snowmass 87.66 48 eP P 21 28 54.6 +0.5
127A Arkansas Junct 87.69 55 ⇑P P 21 28 54.6 +0.2
baz=88
KMI Kunming 87.74 297 P P 21 28 58.0 +3.2
KMI pP pP 21 31 07.5 +0.6
KMI sP sP 21 32 07.0 -1.4
KMI PP PP 21 32 36.0 +3.3
KMI S S 21 38 48.0 +1.2
KMI sS sS 21 42 39.3 -2.8
KMI SS SS 21 44 57.0 +3.5
KMI pmax pmax
comp=Z,4.0nm,1.3s,mb4.0
KMI pmax pmax
comp=Z,100nm,6.0s
I18A Diamond G Ranc 87.75 43 ⇓P P 21 28 54.9 +0.5
baz=88
M20A Sweetwater, Wa 87.83 45 ⇑P P 21 28 54.4 -0.4
baz=88
W25A X Bar L Ranch, 87.85 52 ⇓P P 21 28 54.6 -0.5
baz=88
WALA Waterton Lakes 87.87 36 eP P 21 28 55.1 +0.3
B14A Marquette Ranc 87.89 37 ⇑P P 21 28 54.5 -0.4
baz=88
L20A Wamsutter 87.96 45 ⇑P P 21 28 55.1 -0.3
baz=88
N21A Black Mountain 87.97 46 ⇑P P 21 28 54.9 -0.5
baz=88
Z27A Tatum 88.05 54 ⇑P P 21 28 55.3 -0.7
baz=88
A14A Double T Ranch 88.11 37 ⇓P P 21 28 56.1 +0.1
baz=88
D16A Dana Ranch, Ca 88.25 39 ⇓P P 21 28 56.4 -0.2
baz=88
K20A Yellowstone Ra 88.25 44 ⇓P P 21 28 56.4 -0.3
baz=88
F17A Fitzpatrick Pl 88.25 40 ⇓P P 21 28 56.5 -0.2
baz=88
B15A Bradely Ranch, 88.27 38 ⇑P P 21 28 55.4 -1.3
baz=88
U25A Circle Dot Ran 88.36 51 ⇑P P 21 28 56.8 -0.6
baz=88
O22A Kremmling 88.38 47 ⇑P P 21 28 56.9 -0.5
baz=88
M21A Separation Pea 88.44 45 ⇑P P 21 28 57.6 0.0
baz=88
C16A Fuhringer Ranc 88.50 38 ⇓P P 21 28 57.5 -0.3
baz=89
A15A Johnson Ranch, 88.50 37 ⇑P P 21 28 57.2 -0.6
baz=89
RWWY Rawlins 88.58 45 eP P 21 28 58.7 +0.5
MSTX Muleshoe 88.64 54 ⇓P P 21 28 58.6 -0.1
baz=89
T25A Trinidad 88.66 50 ⇓P P 21 28 58.3 -0.4
baz=89
G18A Lazy EL Ranch, 88.66 41 ⇓P P 21 28 58.3 -0.2
baz=89
N22A Wattenberg Ran 88.72 46 ⇓P P 21 28 58.5 -0.5
baz=89
RLMT Red Lodge 88.76 41 eP P 21 29 00.0 +1.0
comp=Z,5.6nm,0.9s,mb4.4
B16A M & M Farms, S 88.82 38 ⇓P P 21 28 58.6 -0.6
baz=89
D17A Six Diamond Ra 88.82 39 ⇓P P 21 28 59.3 +0.1
baz=89
F18A Big Timber 88.83 41 ⇓P P 21 29 00.1 +0.8
baz=89
S25A Robets Cordova 88.85 50 ⇓P P 21 28 59.4 -0.2
baz=89
CD2 Chengdu 88.99 303 P P 21 29 01.5 +1.0
CD2 pP pP 21 31 12.0 -1.0
CD2 sP sP 21 32 10.8 -3.5
CD2 PP PP 21 32 45.8 +3.4
CD2 SKS 21 38 34.0
CD2 S S 21 38 58.8 +0.9
CD2 sS sS 21 42 49.3 -4.9
CD2 SS SS 21 45 15.3 +4.1
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.9
CD2 pmax pmax
comp=Z,90nm,7.7s
C17A Wharram Farm, 89.00 39 ⇓P P 21 29 00.2 +0.1
baz=89
E18A Harlowton 89.02 40 ⇑P P 21 29 00.3 +0.1
baz=89
N23A Red Feather La 89.11 46 ⇑P P 21 29 00.8 +0.1
baz=89
A16A West Butte Ran 89.14 37 ⇑P P 21 29 00.9 +0.2
baz=89
L22A Ellis Ranch, M 89.25 45 ⇑P P 21 29 01.7 +0.3
baz=89
B17A L&G Farms, Che 89.29 38 ⇓P P 21 29 01.4 -0.1
baz=89
O24A Longmont 89.39 47 ⇓P P 21 29 02.1 0.0
baz=90
A17A Triple J Farms 89.66 38 ⇑P P 21 29 03.0 -0.1
baz=90
INK Inuvik 91.99 15 eP P 21 29 12.8 -0.6
SONM Songino Array 93.52 319 P P 21 29 21.8 +1.0
comp=Z,0.3nm,0.6s,mb3.6,baz=132,slow=2.1,SNR=2.5
YKA Yellowknife Ar 94.45 25 P P 21 29 23.8 -1.0
comp=Z,1.5nm,0.9s,mb4.1,baz=243,slow=4.1,SNR=3.4
ZALV Zalesovo Beam 108.20 322 PKiKP PKiKP 21 34 27.4 -1.2
comp=Z,0.6nm,0.6s,baz=45,slow=2.2,SNR=3.0
MK31 Makanchi Array 109.09 314 ePKPdf PKiKP 21 34 29.7 -0.8
MKAR Makanchi Array 109.09 314 PKiKP PKiKP 21 34 29.4 -1.2
comp=Z,0.5nm,0.5s,baz=172,slow=0.9,SNR=9.1
BVAR Borovoye Array 116.81 321 PKP PKPdf 21 34 44.1 -1.0
comp=Z,1.3nm,0.5s,baz=207,slow=0.3,SNR=8.0
ARU Arti 122.83 326 ePKPdf PKPdf 21 34 56.2 -0.4
ARCES ARCESS Array B 126.36 350 PKP PKPdf 21 35 02.4 -0.6
comp=Z,1.9nm,0.6s,baz=48,slow=1.8,SNR=13
FINES FINESS Array B 133.22 344 PKP PKPdf 21 35 15.2 -1.0
comp=Z,1.4nm,0.6s,baz=59,slow=0.8,SNR=12
NB2 NORSAR Subarra 136.43 353 PKP PKPpre 21 35 14.2
comp=Z,0.2nm,0.5s,baz=17,slow=2.6
NOA NORSAR Array B 136.43 353 PKP PKPdf 21 35 21.8 -0.3
comp=Z,0.8nm,0.7s,baz=14,slow=4.1,SNR=6.3
BSEG Bad Segeberg 143.46 351 ePKPbc PKPdf 21 35 33.4 -1.6
BSEG Bad Segeberg 143.46 351 ePKPbc PKPdf 21 35 33.4 -1.6
LEOM Leova 143.99 328 ⇑iP PKPdf 21 35 36.5 +0.3
TLCR 144.56 326 ⇑iP PKPdf 21 35 38.2 +1.0
BUR08 Bucovina Ar. S 144.60 332 ePKPdf PKPdf 21 35 38.5 +1.3
BURAR Bucovina Array 144.61 332 ⇑iP PKPdf 21 35 38.8 +1.6
BR131 Keskin Array S 144.74 315 ePKPdf PKPdf 21 35 38.6 +0.9
BRTR Keskin Array B 144.74 315 PKP PKPdf 21 35 38.6 +0.9
comp=Z,3.4nm,0.9s,baz=122,slow=3.7,SNR=16
TESR 144.75 329 ⇓iP PKPdf 21 35 38.3 +0.8
NRDL Niedersach Rie 144.89 351 ePKPbc PKPdf 21 35 37.0 -0.5
KSP Ksiaz 145.14 343 ePKP PKPbc 21 35 39.8 +0.7
VRI Vrincioaia 145.17 329 ⇑iP PKPbc 21 35 39.4 0.0
BMR Baia Mare 145.32 334 ⇑iP PKPbc 21 35 40.8 +1.0
TRPA Tarpa 145.35 335 ⇑iP PKPbc 21 35 40.2 +0.3
IBBN Ibbenburen 145.39 353 ePKPbc PKPbc 21 35 39.6 -0.2
CLZ Clausthal 145.48 350 ePKPbc PKPbc 21 35 40.1 0.0
CLZ Clausthal 145.48 350 ePKPbc PKPbc 21 35 40.1 0.0
OKC Ostrava-Krasne 145.50 341 ePKP PKPdf 21 35 40.1 +1.4
OKC ex x 21 35 42.4
CLL Collm 145.50 347 ePKPbc PKPbc 21 35 39.9 -0.3
CLL Collm 145.50 347 ⇑iPKP PKPbc 21 35 40.3 +0.1
CLL Collm 145.50 347 ⇑iPKPbc PKPbc 21 35 40.3 +0.1
comp=Z,21nm,0.8s
UPC Upice 145.52 344 ePKP PKPbc 21 35 40.5 +0.3
DPC Dobruska-Polom 145.58 343 ePKP PKPbc 21 35 41.0 +0.6
DPC ex x 21 35 42.7
BRG Berggiesshubel 145.70 346 ePKPbc PKPbc 21 35 40.6 -0.1
BRG Berggiesshubel 145.70 346 i PKP PKPbc 21 35 40.8 0.0
comp=Z,8.2nm,0.7s
BRG e 21 35 47.2
comp=Z,3.8nm,0.9s
MORC Moravsky Berou 145.74 341 ePKPdf PKPbc 21 35 40.9 0.0
MORC Moravsky Berou 145.74 341 ⇓iP PKPbc 21 35 41.4 +0.5
DOPR Dopca 145.75 330 ⇑iP PKPbc 21 35 42.3 +1.2
MLR Muntele Rosu 145.82 329 ⇑iP PKPbc 21 35 40.9 -0.4
PVCC Panska Ves 145.87 345 ePKP PKPbc 21 35 41.7 +0.5
PVCC ex x 21 35 43.6
MMAI Mount Meron Ar 146.07 303 PKPbc PKPbc 21 35 43.2 +0.8
comp=Z,2.6nm,0.4s,baz=74,slow=6.2,SNR=16
VOIR 146.30 329 ⇑iP PKPbc 21 35 43.6 +1.0
DRGR 146.34 333 ⇓iP PKPbc 21 35 42.8 +0.1
PRU Pruhonice 146.38 345 ePKP PKPbc 21 35 43.3 +0.7
PRU ex x 21 35 45.9
MOX Moxa 146.41 348 ePKPbc PKPbc 21 35 42.5 -0.2
VRAC Vranov 146.44 342 ⇑iP PKPdf 21 35 32.5 -7.8
VYHS Vyhne 146.44 339 ePKP PKPbc 21 35 43.3 +0.4
VYHS Vyhne 146.44 339 ePKP PKPdf 21 35 43.3 +3.0
TANN Tannenbergstha 146.46 347 ePKPbc PKPbc 21 35 42.8 -0.1
TANN ePKPab PKPab 21 35 45.4 -0.3
KOLL Kolacno 146.51 339 ePKP PKPbc 21 35 43.7 +0.7
KOLL Kolacno 146.51 339 ePKP PKPbc 21 35 43.7 +0.7
UBBA Unterbreizbach 146.53 350 ePKPbc PKPbc 21 35 42.7 -0.3
NKC Novy Kostel 146.63 347 ePKP PKPbc 21 35 43.6 +0.3
NKC ex x 21 35 46.0
TREC Trest 146.76 343 ePKP PKPbc 21 35 43.9 +0.2
ROTZ Rotzenmuhle 147.13 347 ePKPbc PKPbc 21 35 44.7 +0.1
MEM Membach 147.24 355 PKPbc PKPbc 21 35 44.6 -0.3
MEM PKPab PKPab 21 35 48.6 -0.2
TNS Taunus Mts 147.35 352 ePKPbc PKPbc 21 35 45.0 -0.2
TNS ePKPab PKPab 21 35 49.4 +0.1
TNS Taunus Mts 147.35 352 ePKPbc PKPbc 21 35 45.0 -0.2

TNS			*e*PKPab	PKPab	21 35 49.4	+0.1
GZR	**Gura Zlata**	**147.40 332**	⇑*i*P	PKPbc	21 35 45.4	-0.1
GRA1	**Grafenberg Arr**	**147.40 348**	*e*PKPbc	PKPbc	21 35 44.7	-0.6
GRA1			*e*PKPab	PKPab	21 35 49.7	+0.2
GRA1			LR	LR		
	comp=Z,100nm,19.5s					
GRF	**Grafenberg Arr**	**147.40 348**	*e*PKPbc	PKPbc	21 35 44.7	-0.6
GRF			*e*PKPab	PKPab	21 35 49.7	+0.2
GRF			*e*L		22 38 03.9	
	comp=Z,97nm,19.5s					
KHC	**Kasperske Hory**	**147.41 345**	*e*PKPdf	PKPdf	21 35 41.9	0.0
KHC			*e*PKPbc	PKPbc	21 35 45.6	+0.2
KHC	**Kasperske Hory**	**147.41 345**	*e*PKP	PKPbc	21 35 45.6	+0.2
KHC			*ex*	x	21 35 49.1	
SNF	**Seneffe**	**147.47 357**	PKPbc	PKPbc	21 35 45.3	-0.2
BCLA	**Clavier**	**147.49 355**	PKPbc	PKPbc	21 35 45.5	0.0
BCLA			PKPab	PKPab	21 35 49.5	-0.3
WET	**Wettzell**	**147.56 346**	*e*PKPbc	PKPbc	21 35 45.8	0.0
WET			*e*PKPab	PKPab	21 35 50.8	+0.6
WET	**Wettzell**	**147.56 346**	*e*PKPbc	PKPbc	21 35 45.8	0.0
WET			*e*PKPab	PKPab	21 35 50.8	+0.6
GEC2	**GERESS Array S**	**147.64 345**	*e*PKPbc	PKPbc	21 35 45.8	-0.2
GEC2			*e*PKPab	PKPab	21 35 51.4	+0.9
GEC2	**GERESS Array S**	**147.64 345**	*e*PKPbc	PKPbc	21 35 45.8	-0.2
GEC2			*e*PKPab	PKPab	21 35 51.4	+0.9
BZS	**Buzias**	**147.74 333**	⇑*i*P	PKPbc	21 35 46.2	-0.1
GIVF	**Givet**	**147.84 356**	⇑*i*PKP1	PKPbc	21 35 46.6	+0.1
	comp=Z,14nm,0.6s					
DOU	**Dourbes**	**147.86 356**	PKPbc	PKPbc	21 35 46.6	+0.1
DOU			PKPab	PKPab	21 35 51.0	-0.3
BAIF	**Baives**	**147.92 357**	⇑*i*PKP1	PKPbc	21 35 46.8	+0.1
	comp=Z,14nm,0.7s					
WLF	**Walferdange**	**148.16 354**	PKPbc	PKPbc	21 35 48.0	+0.7
WLF	**Walferdange**	**148.16 354**	*e*PKPbc	PKPbc	21 35 47.7	+0.4
WLF	**Walferdange**	**148.16 354**	*e*PKPdf	PKPdf	21 35 43.0	-0.1
WLF			*e*PKPbc	PKPbc	21 35 48.1	+0.8
PKSM	**Moragy**	**148.45 337**	⇑*i*P	PKPbc	21 35 47.3	-0.8
STU	**Stuttgart**	**148.65 350**	*e*PKPbc	PKPbc	21 35 48.5	0.0
FUR	**Furstenfeldbru**	**148.84 347**	*e*PKPbc	PKPbc	21 35 48.9	-0.1
FUR	**Furstenfeldbru**	**148.84 347**	*e*PKPbc	PKPbc	21 35 48.9	-0.1
RJOB	**Jochberg**	**148.90 345**	*e*PKPbc	PKPbc	21 35 48.8	-0.3
RJOB			*e*PKPab	PKPab	21 35 56.0	+0.3
BFO	**Black Forest**	**149.21 351**	*e*PKPbc	PKPbc	21 35 49.8	-0.1
BFO			*e*PKPab	PKPab	21 35 56.8	-0.2
BFO	**Black Forest**	**149.21 351**	*e*PKPdf	PKPdf	21 35 44.1	-0.8
BFO			*e*PKPbc	PKPbc	21 35 49.6	-0.3
BFO			*e*PKPbc	PKPbc	21 35 49.8	-0.1
BFO			*e*PKPab	PKPab	21 35 56.8	-0.2
BFO			PKPab	PKPab	21 35 56.9	-0.1
FLN	**La Foliniere**	**149.25 2**	⇑*i*PKP1	PKPbc	21 35 49.7	-0.3
	comp=Z,29nm,0.9s					
CDF	**Champ du Feu**	**149.28 352**	⇑*i*PKP1	PKPbc	21 35 50.2	+0.2
	comp=Z,18nm,0.9s					
VTS	**Vitosha**	**149.28 328**	⇑*i*P	PKPbc	21 35 50.6	+0.4
MEZF	**Maizieres J'vi**	**149.41 355**	⇑*i*PKP1	PKPbc	21 35 50.7	+0.3
	comp=Z,9.8nm,0.6s					
LDF	**La Drutiiere**	**149.44 2**	⇑*i*PKP1	PKPbc	21 35 49.9	-0.5
	comp=Z,6.8nm,0.5s					
ROSF	**Rostrenen**	**149.48 6**	⇑*i*PKP1	PKPbc	21 35 49.9	-0.6
	comp=Z,17nm,1.0s					
GRR	**Gorron**	**149.61 3**	⇑*i*PKP1	PKPbc	21 35 50.6	-0.2
	comp=Z,14nm,0.6s					
SGMF	**Saint Gilles**	**149.63 5**	⇑*i*PKP1	PKPbc	21 35 50.4	-0.5
	comp=Z,23nm,0.9s					
HAU	**Haudompre**	**149.78 353**	⇑*i*PKP1	PKPbc	21 35 51.2	0.0
	comp=Z,9.7nm,0.6s					
VNDS	**Vrh nad Dolski**	**149.88 341**	*i*PKPbc	PKPbc	21 35 51.2	-0.3
QUIF	**Quistinic**	**149.90 6**	⇑*i*PKP1	PKPbc	21 35 51.1	-0.4
	comp=Z,7.0nm,0.8s					
HINF	**Hinteralfeld**	**149.91 353**	⇑*i*PKP1	PKPbc	21 35 51.3	-0.3
	comp=Z,8.9nm,0.8s					
LJU	**Ljubljana**	**149.98 342**	*i*PKPbc	PKPbc	21 35 51.7	-0.1
CRNS	**Crni Vrh**	**150.03 342**	*i*PKPbc	PKPbc	21 35 51.3	-0.6
VISS	**Visnje**	**150.10 341**	*i*PKPbc	PKPbc	21 35 51.8	-0.2
BOJS	**Bojanci**	**150.24 340**	*i*PKPbc	PKPbc	21 35 52.6	+0.2
LOR	**Lormes**	**150.72 357**	⇑*i*PKP1	PKPbc	21 35 53.5	+0.1
	comp=Z,11nm,0.6s					
HYF	**Humbligny**	**150.77 358**	⇑*i*PKP1	PKPbc	21 35 53.9	+0.3
SSF	**Saint Saulge**	**150.95 357**	⇑*i*PKP1	PKPbc	21 35 54.1	+0.1
	comp=Z,10.0nm,0.6s					
AVF	**Avril sur Loir**	**151.22 357**	⇑*i*PKP1	PKPbc	21 35 54.2	-0.4
	comp=Z,3.4nm,0.7s					
SMF	**Signal de Mont**	**151.34 357**	⇑*i*PKP1	PKPbc	21 35 54.7	-0.2
MFF	**Saint Martin d**	**151.43 2**	⇑*i*PKP1	PKPbc	21 35 54.8	-0.2
	comp=Z,20nm,0.9s					
BGF	**Bois d'Agland**	**151.48 358**	⇑*i*PKP1	PKPbc	21 35 55.1	-0.1
	comp=Z,14nm,0.8s					
TCF	**Toulx Ste Croi**	**151.76 359**	⇑*i*PKP1	PKPbc	21 35 55.6	-0.2
	comp=Z,11nm,0.9s					
LPL	**La Plagne**	**152.19 352**	⇑*i*PKP1	PKPbc	21 35 57.6	+0.8
	comp=Z,3.3nm,0.7s					
LPG	**La Plagne**	**152.21 352**	⇑*i*PKP1	PKPbc	21 35 57.7	+0.9
	comp=Z,4.0nm,0.7s					
RJF	**Les Rejaudoux**	**152.75 360**	⇑*i*PKP1	PKPbc	21 35 57.8	-0.2
	comp=Z,5.7nm,0.8s					
ORIF	**Oris-en-Rattie**	**152.88 353**	*e*PKP1	PKPbc	21 35 58.5	+0.2
	comp=Z,4.4nm,0.7s					
MBDF	**Montbardon**	**152.96 352**	⇑*i*PKP1	PKPbc	21 35 58.7	+0.2
	comp=Z,4.9nm,0.6s					
VIVF	**Saint-Julien-l**	**153.07 355**	⇑*i*PKP1	PKPbc	21 35 58.9	+0.2
	comp=Z,2.4nm,0.6s					
CAF	**Calviac**	**153.13 359**	⇑*i*PKP1	PKPbc	21 35 58.9	+0.1
	comp=Z,3.3nm,0.8s					
ESDC	**Sonseca Array**	**157.88 11**	PKPab	PKPab	21 36 34.0	-0.2
	comp=Z,0.1nm,0.4s,baz=341,slow=3.6,SNR=8.2					
DBIC	**Dimbokro**	**167.19 151**	PKPab	PKPab	21 37 18.9	+3.0
	comp=Z,8.1nm,1.0s,baz=39,slow=1.4,SNR=3.4					

*NEIC **26** 21:33:41.2, 37.°97S×176.°06E, h178km, MG4.1(WEL), After WEL.*
WEL 26 21:33:41.8±0.3, 37.°95S×176.°07E, h172km±3km, ML4.1/19, 1D, Error ellipse: s-maj=3.3km s-min=2.4km az=0.0,

North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALRZ	**Allen Road**	**0.65**	**161**	PN	Pn	21 34 06.9	+0.6
URZ	**Urewera**	**0.87**	**111**	⇓PN	Pn	21 34 07.6	0.0
URZ				SN	Sn	21 34 27.4	-0.2
URZ	**Urewera**	**0.87**	**111**	*e*Pn	Pn	21 34 07.8	+0.1
URZ				*e*S	Sn	21 34 27.6	0.0
MWZ	**Matawai**	**1.21**	**109**	PN	Pn	21 34 10.4	+0.1
MWZ				SN	Sn	21 34 31.7	-0.6
MWZ	**Matawai**	**1.21**	**109**	P	Pn	21 34 10.4	+0.1
TWVZ	**Taurewa**	**1.23**	**204**	PN	Pn	21 34 10.9	+0.4
RAHZ	**Arahi**	**1.25**	**141**	PN	Pn	21 34 11.2	+0.6
RAHZ				SN	Sn	21 34 33.0	0.0
BKZ	**Black Stump Fm**	**1.26**	**165**	PN	Pn	21 34 10.7	-0.1
BKZ	**Black Stump Fm**	**1.26**	**165**	P	Pn	21 34 10.7	0.0
WPVZ	**Whakapapa**	**1.32**	**198**	PN	Pn	21 34 11.6	+0.3
TUVZ	**Tukino**	**1.36**	**194**	PN	Pn	21 34 11.9	+0.3
TUVZ				SN	Sn	21 34 34.7	0.0
TUVZ	**Tukino**	**1.36**	**194**	P	Pn	21 34 11.9	+0.3
TUVZ				S	Sn	21 34 34.7	0.0
FWVZ	**Far West T-bar**	**1.37**	**197**	PN	Pn	21 34 12.0	+0.3
FWVZ	**Far West T-bar**	**1.37**	**197**	P	Pn	21 34 12.0	+0.3
TRVZ	**Turoa**	**1.41**	**197**	PN	Pn	21 34 12.4	+0.3
MOVZ	**Moawhango**	**1.48**	**190**	PN	Pn	21 34 12.3	-0.5
VRZ	**Vera Road**	**1.56**	**221**	PN	Pn	21 34 13.6	0.0
KNZ	**Kokohu**	**1.65**	**131**	PN	Pn	21 34 14.4	-0.1
KNZ	**Kokohu**	**1.65**	**131**	P	Pn	21 34 14.4	-0.1
PRGZ	**Paritu Road**	**1.72**	**125**	PN	Pn	21 34 15.1	-0.1
PUZ	**Puketiti**	**1.73**	**95**	PN	Pn	21 34 15.0	-0.3
PUZ	**Puketiti**	**1.73**	**95**	P	Pn	21 34 15.0	-0.3
CNGZ	**Carnagh Statio**	**1.76**	**108**	PN	Pn	21 34 16.2	+0.5
MHGZ	**Mahia Peninsul**	**1.87**	**130**	PN	Pn	21 34 16.9	+0.1
KAHZ	**Kahuranaki**	**1.95**	**161**	PN	Pn	21 34 17.4	-0.2
PNHZ	**Pukenui**	**1.96**	**177**	PN	Pn	21 34 16.8	-1.0
WAZ	**Wanganui**	**1.99**	**205**	PN	Pn	21 34 17.4	-0.7
WAZ	**Wanganui**	**1.99**	**205**	P	Pn	21 34 17.4	-0.7
TSZ	**Takapari Road**	**2.11**	**182**	PN	Pn	21 34 18.2	-1.2
TSZ	**Takapari Road**	**2.11**	**182**	P	Pn	21 34 18.2	-1.2
WPHZ	**Waipukurau**	**2.13**	**172**	PN	Pn	21 34 18.6	-1.0
PXZ	**Pawanui**	**2.17**	**164**	PN	Pn	21 34 17.9	-2.1
DVHZ	**Dannevirke**	**2.35**	**178**	PN	Pn	21 34 20.4	-1.7
PRHZ	**Porangahau**	**2.35**	**169**	PN	Pn	21 34 20.9	-1.3
POWZ	**Post Office Ro**	**2.45**	**185**	PN	Pn	21 34 21.5	-1.9
BFZ	**Birch Farm**	**2.73**	**177**	PN	Pn	21 34 24.5	-2.2
BFZ	**Birch Farm**	**2.73**	**177**	P	Pn	21 34 24.5	-2.2
MRZ	**Mangatainoka R**	**2.73**	**188**	PN	Pn	21 34 24.3	-2.5
MRZ	**Mangatainoka R**	**2.73**	**188**	P	Pn	21 34 24.3	-2.4
TIWZ	**Tintock**	**2.83**	**183**	PN	Pn	21 34 25.4	-2.4
OGWZ	**Otaki Gorge**	**2.95**	**193**	PN	Pn	21 34 26.7	-2.6
HOWZ	**Holdsworth Sta**	**2.98**	**188**	PN	Pn	21 34 26.8	-2.9
KIW	**Kapiti Island**	**3.04**	**197**	PN	Pn	21 34 27.5	-2.9
KIW	**Kapiti Island**	**3.04**	**197**	P	Pn	21 34 27.5	-3.0
MTW	**Mount Morrison**	**3.23**	**188**	PN	Pn	21 34 29.5	-3.4
MTW	**Mount Morrison**	**3.23**	**188**	P	Pn	21 34 29.5	-3.4
CAW	**Cannon Point**	**3.25**	**194**	PN	Pn	21 34 29.8	-3.2
CAW	**Cannon Point**	**3.25**	**194**	P	Pn	21 34 29.8	-3.2
TRWZ	**Traveller**	**3.46**	**185**	PN	Pn	21 34 32.3	-3.4
PAWZ	**Paruwai Farm**	**3.46**	**188**	PN	Pn	21 34 32.2	-3.6
PAWZ	**Paruwai Farm**	**3.46**	**188**	P	Pn	21 34 32.2	-3.5
WEL	**Wellington**	**3.48**	**196**	PN	Pn	21 34 32.4	-3.6
WEL	**Wellington**	**3.48**	**196**	P	Pn	21 34 32.4	-3.5
SNZO	**South Karori**	**3.52**	**197**	PN	Pn	21 34 32.6	-3.8
SNZO	**South Karori**	**3.52**	**197**	*e*Pn	Pn	21 34 32.7	-3.7
SNZO				*e*S	Sn	21 35 14.9	-4.1
MSWZ	**Moikau Station**	**3.52**	**190**	PN	Pn	21 34 32.7	-3.7
MSWZ	**Moikau Station**	**3.52**	**190**	P	Pn	21 34 32.7	-3.7
BHW	**Baring Head**	**3.58**	**195**	PN	Pn	21 34 33.0	-4.2
BHW	**Baring Head**	**3.58**	**195**	P	Pn	21 34 33.0	-4.1
PLWZ	**Palliser**	**3.67**	**190**	PN	Pn	21 34 34.4	-3.9
TUWZ	**Tuamarina**	**3.84**	**205**	PN	Pn	21 34 36.5	-4.0
NNZ	**Nelson**	**3.87**	**212**	PN	Pn	21 34 37.0	-3.9
NNZ	**Nelson**	**3.87**	**212**	P	Pn	21 34 37.0	-3.9
QRZ	**Quartz Range**	**3.97**	**223**	PN	Pn	21 34 38.1	-4.1
QRZ	**Quartz Range**	**3.97**	**223**	P	Pn	21 34 38.1	-4.1
BSWZ	**Blackbirch Sta**	**4.12**	**204**	PN	Pn	21 34 40.2	-3.9
BSWZ	**Blackbirch Sta**	**4.12**	**204**	P	Pn	21 34 40.2	-3.9
THZ	**Tophouse**	**4.52**	**212**	PN	Pn	21 34 45.2	-4.1
KHZ	**Kahutara**	**4.87**	**203**	PN	Pn	21 34 49.3	-4.4
KHZ	**Kahutara**	**4.87**	**203**	P	Pn	21 34 49.3	-4.4
LTZ	**Lake Taylor**	**5.63**	**210**	PN	Pn	21 34 58.7	-5.0
LTZ	**Lake Taylor**	**5.63**	**210**	P	Pn	21 34 58.7	-5.0
MQZ	**McQueen's Vall**	**6.31**	**203**	PN	Pn	21 35 06.3	-6.3
WVZ	**Waitaha Valley**	**6.54**	**217**	PN	Pn	21 35 10.9	-4.7
FOZ	**Fox Glacier**	**7.41**	**219**	PN	Pn	21 35 20.5	-6.7
FOZ	**Fox Glacier**	**7.41**	**219**	P	Pn	21 35 20.5	-6.6
ODZ	**Otahua Downs**	**8.17**	**208**	PN	Pn	21 35 31.4	-5.8
ODZ	**Otahua Downs**	**8.17**	**208**	P	Pn	21 35 31.4	-5.8

*ISCJB **26** 21:56:37.8±0.7, 36.°97N±0.°03×29.°16E±0.°03, h2km±7km, Error ellipse: s-maj=5.7km s-min=4.4km az=13.2*
*ISK **26** 21:56:37.7, 37.°01N×29.°17E, h5km, MD2.9*
*DDA **26** 21:56:38.4, 37.°01N×29.°18E, h7km±3km, Md3.0*
*CSEM **26** 21:56:38.2±0.1, 36.°97N×29.°17E, h8km, MD2.9, Error ellipse: s-maj=3.4km s-min=1.7km az=7.0*
ISC 26 21:56:38.4±0.6, 36.°98N±0.°03×29.°16E±0.°04, h6km±5km, n44, σ0§83/58, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.33**	**56**	*e*PG	**Pg**	**21 56 43.8**	**-1.0**
GLHS				*e*SG	**Sg**	**21 56 48.7**	**-0.4**
GLHS	**Glhisar (BURDU**	**0.33**	**56**	*e*Pg	**Pg**	**21 56 43.8**	**-1.0**
GLHS				*e*Sg	**Sg**	**21 56 48.7**	**-0.4**
GOLH	**Golhisar**	**0.41**	**51**	*i*P	**Pg**	**21 56 45.6**	**-0.8**
GOLH				*i*S	**Sg**	**21 56 52.3**	**+0.4**
ELL	**Elmali**	**0.64**	**110**	*e*PG	**Pg**	**21 56 50.6**	**-0.2**
ELL				*e*SG	**Sg**	**21 56 59.7**	**+0.5**
ELL	**Elmali**	**0.64**	**110**	*e*Pg	**Pg**	**21 56 50.6**	**-0.2**
ELL				*e*Sg	**Sg**	**21 56 59.7**	**+0.5**
YER	**Yerkesik**	**0.72**	**283**	*e*PG	**Pg**	**21 56 52.3**	**+0.1**
YER	**Yerkesik**	**0.72**	**283**	*e*Pg	**Pg**	**21 56 52.3**	**+0.1**
DNZL	**Cakiroluk**	**0.72**	**353**	*i*P	**Pg**	**21 56 51.4**	**-0.9**
DNZL				*i*S	**Sg**	**21 57 03.2**	**+1.6**
DNZL	**Cakiroluk**	**0.72**	**353**	*i*P	**Pg**	**21 56 51.3**	**-0.9**
DNZL				*i*S	**Sg**	**21 57 03.2**	**+1.6**
DENT	**Denizli**	**0.78**	**353**	*e*PG	**Pg**	**21 56 52.5**	**-1.0**
DENT	**Denizli**	**0.78**	**353**	*e*Pg	**Pg**	**21 56 52.5**	**-1.0**
AKAS	**Kas**	**0.82**	**154**	*i*P	**Pg**	**21 56 54.5**	**+0.3**
AKAS				*i*S	**Sg**	**21 57 12.6**	**+7.7**
KORT	**Korkueli**	**0.95**	**88**	*i*P	**Pg**	**21 56 56.6**	**-0.2**
KORT				*i*S	**Sg**	**21 57 11.1**	**+1.9**
KORT	**Korkueli**	**0.95**	**88**	*i*P	**Pg**	**21 56 56.6**	**-0.2**
KORT				*i*S	**Sg**	**21 57 11.1**	**+1.9**
MLSB	**Milas**	**1.15**	**287**	*e*PN	**Pn**	**21 56 60.0**	**-1.1**
MLSB	**Milas**	**1.15**	**287**	*e*Pn	**Pn**	**21 57 00.0**	**-1.1**
ANTB	**Antalya**	**1.20**	**93**	*e*PN	**Pn**	**21 57 00.8**	**-1.0**
ANTB	**Antalya**	**1.20**	**93**	*e*Pn	**Pn**	**21 57 00.8**	**-1.0**
AYDN	**Tasoluk**	**1.23**	**304**	*i*P	**Pb**	**21 57 01.9**	**-0.1**
AYDN				*i*S	**Sb**	**21 57 19.8**	**+1.7**
AYDN	**Tasoluk**	**1.23**	**304**	*i*P	**Pb**	**21 57 01.9**	**-0.1**
AYDN				*i*S	**Sb**	**21 57 19.8**	**+1.7**
BCK	**Bucak**	**1.24**	**67**	*e*PN	**Pn**	**21 57 01.8**	**-0.6**
BCK	**Bucak**	**1.24**	**67**	*e*Pn	**Pn**	**21 57 01.8**	**-0.5**
DAT	**Datca**	**1.29**	**259**	*e*PN	**Pn**	**21 57 02.9**	**-0.1**
DAT	**Datca**	**1.29**	**259**	*e*Pn	**Pn**	**21 57 02.9**	**-0.1**
BDRM	**Kayabasi**	**1.37**	**274**	*i*P	**Pn**	**21 57 05.2**	**+1.1**
BDRM	**Kayabasi**	**1.37**	**274**	*i*P	**Pn**	**21 57 05.2**	**+1.1**
KHL	**Karahalli**	**1.38**	**12**	*e*PN	**Pn**	**21 57 03.5**	**-0.7**
KHL	**Karahalli**	**1.38**	**12**	*e*Pn	**Pn**	**21 57 03.5**	**-0.7**
ISP	**Isparta**	**1.38**	**52**	*e*PN	**Pn**	**21 57 04.3**	**+0.1**
ISP	**Isparta**	**1.38**	**52**	*e*Pn	**Pn**	**21 57 04.3**	**+0.1**
KHAL	**Karahalli**	**1.42**	**11**	*i*P	**Pn**	**21 57 04.7**	**-0.1**
KHAL				*i*S	**Sb**	**21 57 24.4**	**+0.8**
KHAL	**Karahalli**	**1.42**	**11**	*i*P	**Pn**	**21 57 04.7**	**-0.1**
KHAL				*i*S	**Sb**	**21 57 24.4**	**+0.8**
BODT	**Bodrum**	**1.48**	**274**	*e*PN	**Pn**	**21 57 06.5**	**+0.9**
BODT	**Bodrum**	**1.48**	**274**	*e*Pn	**Pn**	**21 57 06.5**	**+0.9**
KULA	**Kula-Manisa**	**1.59**	**346**	*e*PN	**Pn**	**21 57 06.1**	**-1.0**
KULA	**Kula-Manisa**	**1.59**	**346**	*e*Pn	**Pn**	**21 57 06.1**	**-1.0**
IZM	**Izmir**	**2.07**	**314**	*e*PN	**Pn**	**21 57 12.9**	**-0.8**
IZM	**Izmir**	**2.07**	**314**	*e*Pn	**Pn**	**21 57 12.9**	**-0.8**
BLCB	**Balcova**	**2.19**	**311**	*e*PN	**Pn**	**21 57 15.2**	**-0.2**
BLCB	**Balcova**	**2.19**	**311**	*e*Pn	**Pn**	**21 57 15.2**	**-0.2**
ALT	**Altintas**	**2.21**	**20**	*e*PN	**Pn**	**21 57 15.7**	**+0.1**
ALT	**Altintas**	**2.21**	**20**	*e*Pn	**Pn**	**21 57 15.7**	**+0.1**
HDMB	**Hadim**	**2.67**	**89**	*e*PN	**Pn**	**21 57 22.9**	**+1.0**
HDMB	**Hadim**	**2.67**	**89**	*e*Pn	**Pn**	**21 57 22.9**	**+1.0**

*ISK **26** 22:07:03.4, 37.°16N×29.°86E, h5km, MD3.3*
*NEIC **26** 22:07:03.0, 37.°15N×29.°84E, h5km, MD3.2(ISK), After ISK.*
*CSEM **26** 22:07:04.9±0.1, 37.°18N×29.°86E, h2km, MD3.3, Error ellipse: s-maj=3.8km s-min=2.7km az=13.0*
*DDA **26** 22:07:04.3, 37.°02N×29.°78E, h7km±4km, Md3.3*
*IDC **26** 22:07:05.4±1.8, 37.°12N×29.°77E, h0km, mb3.2/1, mb1 3.5/4, mb1mx3.2/24, mbtmp3.4/4, ML3.3/3, Error ellipse: s-maj=32.7km s-min=24.4km az=27.0*
*ISCJB **26** 22:07:05.2±0.3, 37.°17N±0.°02×29.°85E±0.°02, h10km, Error ellipse: s-maj=3.4km s-min=2.6km az=19.4*
ISC 26 22:07:06.0±0.3, 37.°19N±0.°02×29.°84E±0.°02, h10km, n86, σ1§09/95, 1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.23**	**282**	*i*P	**Pg**	**22 07 09.6**	**-1.2**
GOLH	**Golhisar**	**0.23**	**282**	*i*P	**Pg**	**22 07 09.6**	**-1.2**
GOLH				*i*S	**Sg**	**22 07 15.6**	**+1.6**
GLHS	**Glhisar (BURDU**	**0.28**	**263**	PG	**Pg**	**22 07 10.0**	**-1.7**
GLHS	**Glhisar (BURDU**	**0.28**	**263**	*i*Pg	**Pg**	**22 07 10.0**	**-1.6**
ELL	**Elmali**	**0.44**	**173**	PG	**Pg**	**22 07 11.9**	**-2.8**
ELL				*e*SG	**Sg**	**22 07 19.7**	**-0.9**
ELL	**Elmali**	**0.44**	**173**	*i*Pg	**Pg**	**22 07 11.9**	**-2.8**
ELL				*e*Sg	**Sg**	**22 07 19.7**	**-0.9**
KORT	**Korkueli**	**0.45**	**115**	*i*P	**Pg**	**22 07 12.7**	**-2.1**
KORT	**Korkueli**	**0.45**	**115**	*i*P	**Pg**	**22 07 12.7**	**-2.0**
KORT				*i*S	**Sg**	**22 07 21.0**	**+0.3**
BCK	**Bucak**	**0.65**	**65**	*e*PG	**Pg**	**22 07 17.1**	**-1.6**
BCK	**Bucak**	**0.65**	**65**	*e*Pg	**Pg**	**22 07 17.1**	**-1.5**
ANTB	**Antalya**	**0.71**	**114**	*e*PG	**Pg**	**22 07 18.3**	**-1.4**
ANTB	**Antalya**	**0.71**	**114**	*e*Pg	**Pg**	**22 07 18.3**	**-1.4**
DNZL	**Cakiroluk**	**0.81**	**308**	*i*S	**Sg**	**22 07 30.7**	**-1.5**
DNZL	**Cakiroluk**	**0.81**	**308**	*i*S	**Sg**	**22 07 20.4**	**-1.2**
DNZL	**Cakiroluk**	**0.81**	**308**	*i*S	**Sg**	**22 07 30.7**	**-1.4**
ISP	**Isparta**	**0.83**	**40**	*e*PG	**Pg**	**22 07 20.6**	**-1.4**
ISP	**Isparta**	**0.83**	**40**	*e*Pg	**Pg**	**22 07 19.2**	**-2.8**
ISP				*e*S	**Sg**	**22 07 34.9**	**+2.1**
DENT	**Denizli**	**0.86**	**311**	*e*PG	**Pg**	**22 07 22.1**	**-0.4**
DENT	**Denizli**	**0.86**	**311**	*e*Pg	**Pg**	**22 07 22.1**	**-0.4**
KSL	**Kastellorizon**	**1.06**	**192**	*e*P	**Pg**	**22 07 29.5**	**+3.1**
KHL	**Karahalli**	**1.16**	**347**	*e*PN	**Pn**	**22 07 27.5**	**-0.8**
KHL	**Karahalli**	**1.16**	**347**	*e*Pn	**Pn**	**22 07 27.5**	**-0.8**
KHAL	**Karahalli**	**1.21**	**347**	*i*P	**Pn**	**22 07 28.4**	**-0.6**
KHAL	**Karahalli**	**1.21**	**347**	*i*S	**Sg**	**22 07 49.6**	**+4.6**
KHAL	**Karahalli**	**1.21**	**347**	*i*P	**Pn**	**22 07 28.4**	**-0.6**
YER	**Yerkesik**	**1.25**	**268**	*e*PN	**Pn**	**22 07 29.1**	**-0.4**
YER	**Yerkesik**	**1.25**	**268**	*e*Pn	**Pn**	**22 07 29.2**	**-0.3**
SHUT	**Suhut-Afyon**	**1.47**	**22**	*e*PN	**Pn**	**22 07 32.1**	**-0.5**
SHUT	**Suhut-Afyon**	**1.47**	**22**	*e*Pn	**Pn**	**22 07 32.1**	**-0.5**
KULA	**Kula-Manisa**	**1.62**	**325**	*e*PN	**Pn**	**22 07 34.7**	**+0.1**
KULA	**Kula-Manisa**	**1.62**	**325**	*e*Pn	**Pn**	**22 07 34.7**	**+0.1**
AYDN	**Tasoluk**	**1.63**	**287**	*i*P	**Pn**	**22 07 35.5**	**+0.7**
AYDN	**Tasoluk**	**1.63**	**287**	*i*S	**Sg**	**22 07 58.0**	**-0.6**
AYDN	**Tasoluk**	**1.63**	**287**	*i*P	**Pn**	**22 07 35.5**	**+0.7**
AYDN				*i*S	**Sg**	**22 07 58.0**	**-0.6**
MLSB	**Milas**	**1.65**	**274**	*e*PN	**Pn**	**22 07 34.9**	**-0.2**
MLSB	**Milas**	**1.65**	**274**	*e*Pn	**Pn**	**22 07 34.9**	**-0.2**
ARG	**Arkhangelos**	**1.69**	**235**	*e*P	**Pn**	**22 07 35.5**	**-0.1**
DAT	**Datca**	**1.87**	**256**	*e*PN	**Pn**	**22 07 38.3**	**+0.2**
DAT	**Datca**	**1.87**	**256**	*e*Pn	**Pn**	**22 07 38.3**	**+0.2**
ALT	**Altintas**	**1.87**	**6**	*e*PN	**Pn**	**22 07 38.6**	**+0.5**
ALT	**Altintas**	**1.87**	**6**	*e*Pn	**Pn**	**22 07 38.6**	**+0.5**
GDZ	**Gediz**	**1.92**	**352**	*i*P	**Pn**	**22 07 38.2**	**-0.5**
GDZ	**Gediz**	**1.92**	**352**	*i*P	**Pn**	**22 07 38.2**	**-0.5**
BDRM	**Kayabasi**	**1.92**	**267**	*i*P	**Pn**	**22 07 40.5**	**+1.7**
BDRM	**Kayabasi**	**1.92**	**267**	*i*S	**Sg**	**22 08 07.2**	**-0.6**
BDRM	**Kayabasi**	**1.92**	**267**	*i*P	**Pn**	**22 07 40.5**	**+1.7**
BODT	**Bodrum**	**2.03**	**267**	*e*PN	**Pn**	**22

GNI Garni 2.09 37 Pn **Pn 22 17 25.3 +0.2**
74nm,0.3s,baz=275,slow=2.9,SNR=166
GNI Sn **Sn 22 17 47.3 -3.8**
48nm,0.3s,baz=23,slow=18,SNR=7.3
GNI Lg 22 17 56.1
74nm,0.3s,baz=132,slow=15,SNR=6.2
GNI Garni 2.09 37 P **Pn 22 17 25.3 +0.2**
GNI 22 17 47.3
GNI pmax pmax
comp=Z,75nm,0.3s
GNI smax
comp=N,48nm,0.3s
GNI Garni 2.09 37 *e*Pn **Pn 22 17 25.4 +0.4**
GNI Garni 2.09 37⇓*i*P **Pn 22 17 25.3 +0.3**
GNI ⇓*i*S **Sg 22 17 58.4 +1.2**
GNI Garni 2.09 37 P **Pn 22 17 25.3 +0.2**
comp=N,75nm,0.3s
GNI S **Sn 22 17 47.3 -3.8**
AMBZ Amberd 2.10 25⇓*i*P **Pn 22 17 25.8 +0.7**
AMBZ ⇑*i*S **Sg 22 17 59.7 +2.3**
KARS Kars 2.13 360 *e*PN **Pn 22 17 25.5 -0.1**
KARS Kars 2.13 360 Pn **Pn 22 17 27.6 +1.9**
MARD Mardin 2.18 238⇑*i*P **Pn 22 17 26.9 +0.7**
KAPZ Kaputan 2.21 34⇓*i*P **Pn 22 17 27.3 +0.6**
KAPZ ⇓*i*S **Sg 22 18 02.5 +1.4**
GMRZ Gyumri 2.38 14 *e*P **Pn 22 17 30.0 +0.9**
GMRZ *e*S **Sg 22 18 14.0 +7.3**
DIYA Diyarbakir 2.41 257⇑*i*P **Pn 22 17 30.1 +0.6**
DIYA *i* S **Sg 22 18 04.0 -3.6**
DIYA Diyarbakir 2.41 257 *i* P **Pn 22 17 30.1 +0.6**
DIYA *i* S **Sg 22 18 04.0 -3.6**
KOPT Kop Dagi 2.53 308 *i* P **Pn 22 17 30.8 -0.3**
KOPT Kop Dagi 2.53 308 *i* P **Pn 22 17 30.8 -0.3**
DDEM Demirkent 2.61 337⇑*i*P **Pn 22 17 32.2 -0.1**
DDEM *i* S **Sg 22 18 13.6 -0.4**
DDEM Demirkent 2.61 337 *i* P **Pn 22 17 32.2 0.0**
VADZ Vardenis 2.65 50 *e*P **Pn 22 17 32.0 -0.8**
VADZ *e*S **Sg 22 18 15.0 -0.3**
DAGI Agillar 2.74 341 *i* P **Pn 22 17 32.8 -1.2**
DAGI *i* S **Sg 22 18 14.2 -3.9**
ARTV Artvin 2.84 342⇓*i*P **Pn 22 17 35.3 0.0**
ARTV Artvin 2.84 342 *i* P **Pn 22 17 35.3 0.0**
PTK Pertek 2.93 279 *e*PN **Pn 22 17 36.8 +0.2**
PTK Pertek 2.93 279 Pn **Pn 22 17 41.9 +5.4**
PTK Pertek 2.93 279 *e*Pn **Pn 22 17 36.8 +0.2**
DBOC Borcka 3.05 339 *i* P **Pn 22 17 38.9 +0.6**
DBOC Borcka 3.05 339 *i* P **Pn 22 17 38.9 +0.6**
BCA Borcka 3.16 339 *e*PN **Pn 22 17 39.6 -0.1**
BCA Borcka 3.16 339 Pn **Pn 22 17 44.1 +4.3**
BCA Borcka 3.16 339 *e*Pn **Pn 22 17 39.6 -0.2**
PZAR Pazar-Rize 3.17 328 *e*PN **Pn 22 17 40.4 +0.4**
PZAR Pazar-Rize 3.17 328 *e*Pn **Pn 22 17 40.4 +0.5**
EZC Erzincan 3.17 295 *e*PN **Pn 22 17 40.4 +0.4**
EZC Erzincan 3.17 295 Pn **Pn 22 17 45.0 +5.1**
ELZG Elazig 3.23 271⇑*i*P **Pn 22 17 41.3 +0.6**
ELZG Elazig 3.23 271 *i* P **Pn 22 17 41.3 +0.6**
KELT Kelkit 3.41 300⇑*i*P **Pg 22 17 50.0 -5.3**
KELT *i* S **Sg 22 18 39.1 -0.4**
GUMT Gumushane 3.42 306 *e*PN **Pn 22 17 44.2 +0.8**
GUMT Gumushane 3.42 306 Pn **Pn 22 17 48.9 +5.5**
GUMT Gumushane 3.42 306 *e*Pn **Pn 22 17 44.2 +0.9**
DGRG David-gareji 3.43 30 P **Pn 22 17 45.2 +1.6**
DGRG S **Sg 22 18 39.6 -0.8**
MTA Mtatsminda 3.45 22 P **Pn 22 17 44.5 +0.7**
MTA S **Sg 22 18 36.5 -4.5**
TBLG Delisi 3.47 21 P **Pn 22 17 45.0 +1.0**
TBLG Delisi 3.47 21 P **Pn 22 17 45.0 +0.9**
TBLG S **Sg 22 18 38.4 -3.1**
TBLG Delisi 3.47 21 P **Pn 22 17 45.0 +1.0**
URFA Urfa 3.54 254 *e*PN **Pn 22 17 45.6 +0.6**
URFA Urfa 3.54 254 Pn **Pn 22 17 50.3 +5.4**
URFA Urfa 3.54 254 *e*Pn **Pn 22 17 45.6 +0.6**
GOR Gori 3.57 12 P **Pn 22 17 50.9 +5.4**
GOR S **Sg 22 18 45.7 +0.9**
KTUT Trabzon 3.58 315 *e*PN **Pn 22 17 46.6 +1.1**
KTUT Trabzon 3.58 315 *e*Pn **Pn 22 17 46.6 +1.1**
MYA Malataya 3.67 269 P **Pn 22 17 50.3 +3.5**
MYA Malataya 3.67 269 P **Pn 22 17 50.3 +3.5**
KEMA Kemaliye 3.67 284 *i* P **Pn 22 17 47.3 +0.5**
KEMA Kemaliye 3.67 284 *i* P **Pn 22 17 47.3 +0.4**
KEH Kehvi 3.87 9 P **Pn 22 17 48.9 -0.5**
ATAB Bozova 3.93 256 *i* P **Pn 22 17 50.6 +0.2**
ATAB *i* S **Sg 22 18 50.7 -5.5**
ATAB Bozova 3.93 256 *i* P **Pn 22 17 50.6 +0.3**
ONI Oni 4.10 4 P **Pn 22 17 53.5 +0.8**
ONI S **Sg 22 18 57.7 -4.1**
ESPY Espiye-Giresun 4.15 307 *e*PN **Pn 22 17 54.2 +0.8**
ESPY Espiye-Giresun 4.15 307 *e*Pn **Pn 22 17 54.2 +0.8**
SUSE Susehri 4.16 296 *i* P **Pg 22 18 03.4 -6.4**
ZEI Tsey 4.32 8 *e*P **Pn 22 17 57.5 +1.8**
ZEI pmax pmax
comp=Z,81nm,0.7s
ZEI Tsey 4.32 8 *e*P **Pn 22 17 57.5 +1.8**
comp=Z,81nm,0.7s
GRSN GIRESUNGRSN 4.45 305 *i* P **Pg 22 18 09.1 -6.1**
GZT Gaziantep 4.52 257 *i* P **Pn 22 17 59.1 +0.6**
SCER sogukcermik 4.83 288 *i* P **Pg 22 18 17.9 -4.8**
GAZ Gaziantep 4.84 256 Pn **Pn 22 18 09.9 +7.0**
DOMR Dombai 4.92 347 *e*P **Pn 22 18 08.2 +4.2**
DOMR Dombai 4.92 347 *e*P **Pn 22 18 08.2 +4.2**
SVSK Karacayir 4.95 289 *e*PN **Pn 22 18 05.7 +1.3**
SVSK Karacayir 4.95 289 Pn **Pn 22 18 10.9 +6.6**
SVSK Karacayir 4.95 289 *e*Pn **Pn 22 18 05.7 +1.4**
KMRS Kahramanmaras 4.99 261 *e*PN **Pn 22 18 07.1 +2.1**
KMRS Kahramanmaras 4.99 261 *e*Pn **Pn 22 18 07.1 +2.1**
KUZU Kuzuini 5.08 252 *i* P **Pn 22 18 03.0 -3.1**
KUZU Kuzuini 5.08 252 *i* P **Pn 22 18 03.0 -3.1**
PINB Pinarbasi 5.25 274 *i* P **Pn 22 18 07.5 -1.0**
PINB Pinarbasi 5.25 274 *i* P **Pn 22 18 07.5 -1.0**
BHD Baghdad 5.31 168 *e*x **Pn 22 18 09.0 -0.4**
BHD *e*x **Pg 22 18 32.0 +0.1**
BHD *e*x **Sn 22 19 11.0 +0.4**
BHD *e*x **Sg 22 19 45.0 +4.3**
BHD Baghdad 5.31 168 *e*Pn **Pn 22 18 09.0 -0.4**
TRKR Terskaya 5.37 13 *e*P **Pn 22 18 13.6 +3.5**
TRKR Terskaya 5.37 13 *e*P **Pn 22 18 13.6 +3.5**
TOKA Tokat 5.44 292 *i* P **Pb 22 18 23.5 -1.7**
KIV Kislovodsk 5.47 357⇑*i*P **Pn 22 18 15.2 +3.7**
KIV *i* S **Sn 22 19 16.4 +2.1**
KIV pmax pmax
comp=Z,11nm,1.0s
KIV MLR MLR
comp=Z,300nm,13.0s
KIV Kislovodsk 5.47 357 *e*Pn **Pn 22 18 14.4 +2.9**
BEYR Belyy Ugol+ 5.52 358 *i* P **Pn 22 18 15.3 +3.1**
PYA Pyatigorsk 5.54 360⇓*i*P **Pn 22 18 14.9 +2.5**
MAK Makhachkala 5.58 35 *i* P **Pn 22 18 12.3 -0.7**
MAK Makhachkala 5.58 35 *i* P **Pn 22 18 12.3 -0.7**
SOC Sochi 5.69 334 *e*P **Pn 22 18 19.7 +5.2**
SOC *e* 22 19 28.2
SOC pmax pmax
comp=Z,50nm,0.9s
SOC MLR MLR
comp=Z,560nm,11.0s
KOZT Kozan 5.83 262 *e*PN **Pn 22 18 19.0 +2.5**
KVT Kavak 6.01 298 *e*PN **Pn 22 18 21.9 +2.9**
KVT Kavak 6.01 298 Pn **Pn 22 18 24.8 +5.8**
HWQ Hawqa 7.14 236 *e*Pn **Pn 22 18 35.7 +1.3**
BR131 Keskin Array S 7.46 282 *e*Pn **Pn 22 18 41.1 +2.3**
comp=Z,1.8nm,0.8s
BR131 Keskin Array S 7.46 282 *e*Pn **Pn 22 18 41.1 +2.3**
comp=Z,1.8nm,0.8s
BRTR Keskin Array B 7.46 282 Pn **Pn 22 18 40.5 +1.7**
comp=Z,0.2nm,0.3s,baz=107,slow=14,SNR=12
BRTR Sn **Sn 22 20 04.0 +0.6**
baz=127,slow=18,SNR=2.4
BRTR Lg 22 20 48.0
comp=Z,0.0nm,0.3s,baz=108,slow=17,SNR=2.6
BRTR LR LR 22 22 05.6
comp=Z,722nm,19.0s,baz=11,slow=42
BRTR Keskin Array B 7.46 282 P **Pn 22 18 40.5 +1.7**
BRTR 22 20 04.0
BRTR Keskin Array B 7.46 282 P **Pn 22 18 40.5 +1.7**
BRTR S **Sn 22 20 04.0 +0.7**
BHL Bhannes 7.56 235 *e*Pn **Pn 22 18 44.7 +4.5**
ASF Jabal al Asfar 8.09 221 Pn **Pn 22 18 48.7 +1.2**
comp=Z,0.6nm,0.3s,baz=265,slow=11,SNR=8.7
ASF Lg 22 21 13.1
comp=Z,0.6nm,0.3s,baz=270,slow=23,SNR=5.6
ASF LR LR 22 22 17.3
comp=Z,415nm,21.0s,baz=276,slow=40

MMAI Mount Meron Ar 8.30 231 Pn **Pn 22 18 53.1 +2.6**
comp=Z,2.8nm,0.3s,baz=67,slow=16,SNR=11
MMAI Sn **Sn 22 20 20.9 -3.2**
baz=61,slow=17,SNR=1.8
MMAI Lg 22 21 18.4
comp=Z,1.3nm,0.3s,baz=48,slow=30,SNR=3.5
MMAI LR LR 22 22 36.5
comp=Z,982nm,19.4s,baz=70,slow=41
SIM Simferopol' 9.31 317 P Px 22 19 19.4
SIM pmax pmax
comp=Z,7.0nm,1.0s
EIL Elat 11.09 220 Pn **Pn 22 19 34.8 +6.2**
comp=Z,0.2nm,0.3s,baz=52,slow=17,SNR=2.1
EIL Lg 22 22 57.3
comp=Z,0.2nm,0.3s,baz=288,slow=16,SNR=4.2
EIL LR LR 22 24 31.2
comp=Z,854nm,18.4s,baz=46,slow=41
TIRR Tirgusor 12.52 303⇑P **Pn 22 19 49.3 +1.3**
TIRR Tirgusor 12.52 303 *e*Pn **Pn 22 19 47.6 -0.4**
comp=Z,8.0nm,1.1s
TIRR Tirgusor 12.52 303⇑*i*P **Pn 22 19 49.3 +1.3**
TIRR Tirgusor 12.52 303 *e*Pn **Pn 22 19 47.6 -0.4**
comp=Z,8.0nm,1.1s
TIRR Tirgusor 12.52 303 P **Pn 22 19 49.3 +1.3**
VRHR Novokhopersk 12.64 356 *e*P **Pn 22 19 54.0 +4.2**
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,7.0nm,0.6s
VRHR pmax pmax
comp=Z,8.0nm,0.6s
VSR Storozhevoye 13.02 349 *e*P **Pn 22 19 55.8 +0.9**
VSR pmax pmax
comp=N,20nm,1.2s
VSR pmax pmax
comp=E,8.0nm,1.2s
VSR pmax pmax
comp=Z,10.0nm,1.2s
VSR MLR MLR
comp=N,360nm,14.0s
VSR MLR MLR
comp=E,120nm,14.0s
VSR MLR MLR
comp=Z,500nm,14.0s
VSR Storozhevoye 13.02 349 *e*P **Pn 22 19 55.8 +0.9**
APE Apeiranthos 13.97 270⇓P **Pn 22 20 17.5 +10**
APE Apeiranthos 13.97 270⇓*i*P **Pn 22 20 17.5 +10**
SULR 14.03 301⇑*i*P **Pn 22 20 16.3 +7.6**
VRI Vrincioaia 14.18 307⇑P **Pn 22 20 12.0 +1.2**
VRI Vrincioaia 14.18 307⇑*i*P **Pn 22 20 12.0 +1.2**
VRI Vrincioaia 14.18 307⇑P **Pn 22 20 12.0 +1.2**
PLOR Plostina 14.23 306⇑P **Pn 22 20 13.0 +1.6**
PLOR Plostina 14.23 306⇑*i*P **Pn 22 20 13.0 +1.6**
PLOR Plostina 14.23 306 P **Pn 22 20 13.0 +1.6**
TESR 14.52 309⇑*i*P **Pn 22 20 14.4 -1.0**
MLR Muntele Rosu 14.53 304 Pn **Pn 22 20 16.9 +1.3**
baz=122,slow=10
MLR LR LR 22 26 36.5
comp=Z,206nm,19.9s,baz=308,slow=40
MLR Muntele Rosu 14.53 304⇓P **Pn 22 20 17.3 +1.7**
MLR Muntele Rosu 14.53 304⇓*i*P **Pn 22 20 17.3 +1.8**
DOPR Dopca 15.08 305⇓*i*P **Pn 22 20 30.8 +7.8**
VOIR 15.10 303⇑P **Pn 22 20 25.2 +2.0**
VOIR 15.10 303⇑*i*P **Pn 22 20 25.2 +2.0**
VTS Vitosha 15.66 291⇓P **Pn 22 20 33.6 +3.0**
VTS Vitosha 15.66 291⇓*i*P **Pn 22 20 33.6 +3.0**
VTS Vitosha 15.66 291⇓P **Pn 22 20 33.6 +3.0**
AKASG Malin Array Be 15.67 326 Pn **Pn 22 20 29.4 -1.3**
comp=Z,0.3nm,0.3s,baz=134,slow=12,SNR=22
AKASG Malin Array Be 15.67 326 Pn **Pn 22 20 29.4 -1.3**
AKBB Malin Array Si 15.67 326 *e*P **Pn 22 20 30.4 -0.3**
AKBB Malin Array Si 15.67 326 *e*Pn **Pn 22 20 30.4 -0.3**
KIEV Kiev 15.67 326 *e*P **Pn 22 20 30.3 -0.4**
KIEV pmax pmax
comp=Z,25nm,1.0s
KIEV Kiev 15.67 326 *e*Pn **Pn 22 20 30.3 -0.4**
comp=Z,25nm,1.0s
KIEV Kiev 15.67 326 *e*Pn **Pn 22 20 30.3 -0.4**
comp=Z,25nm,1.0s
BURAR Bucovina Array 15.90 311⇑P **Pn 22 20 35.4 +1.6**
BURAR Bucovina Array 15.90 311⇑*i*P **Pn 22 20 35.4 +1.6**
BURAR Bucovina Array 15.90 311⇑P **Pn 22 20 35.4 +1.6**
BUR08 Bucovina Ar. S 15.93 311 *e*Pn **Pn 22 20 34.7 +0.7**
BUR08 Bucovina Ar. S 15.93 311 *e*Pn **Pn 22 20 34.7 +0.6**
AKTK Aktyubinsk 15.96 37 Pn **Pn 22 20 32.4 -2.1**
AKTK LR LR 22 28 21.5
AKTK Aktyubinsk 15.96 37 Pn **Pn 22 20 32.4 -2.1**
AKTO Aktyubinsk 15.96 37 Pn **Pn 22 20 32.4 -2.1**
comp=Z,0.2nm,0.3s,baz=223,slow=11,SNR=18
AKTO LR LR 22 28 21.5
comp=Z,288nm,18.9s,baz=225,slow=43
ABKAR Akbulak array 16.19 43 *e*Pn **Pn 22 20 37.4 0.0**
comp=Z,6.4nm,0.8s
ABKAR Akbulak array 16.19 43 *e*Pn **Pn 22 20 37.4 0.0**
comp=Z,6.4nm,0.8s
DJES Djerdap 16.57 298⇑*i*P **Pn 22 20 46.4 +4.1**
DRGR 17.10 306⇓P **Pn 22 20 51.1 +2.1**
DRGR 17.10 306⇓*i*P **Pn 22 20 51.1 +2.1**
DRGR 17.10 306⇓P **Pn 22 20 51.1 +2.1**
OBN Obninsk 17.20 347⇓*e*P **Pn 22 20 48.6 -1.6**
OBN *e*S **Sn 22 24 07.2 +5.8**
OBN pmax pmax
comp=Z,43nm,1.5s
OBN MLR MLR
comp=Z,100nm,13.0s
OBN Obninsk 17.20 347 *e*Pn **Pn 22 20 48.5 -1.7**
comp=Z,69nm,1.6s
OBN Obninsk 17.20 347 *e*Pn **Pn 22 20 48.5 -1.7**
comp=Z,69nm,1.6s
BZS Buzias 17.44 301⇑P **Pn 22 20 54.5 +1.3**
BZS Buzias 17.44 301⇑*i*P **Pn 22 20 54.5 +1.3**
BZS Buzias 17.44 301⇑P **Pn 22 20 54.5 +1.3**
GRUS Gruza 17.67 295 *e*P **Pn 22 20 56.3 +0.2**
LVV L'vov 17.70 316 *e*P **Pn 22 21 01.9 +5.5**
TRPA Tarpa 17.75 309⇓*e*P **Pn 22 20 59.8 +2.8**
UZH Uzhgorod 18.11 311 *e*P **Pn 22 21 01.1 -0.4**
UZH Uzhgorod 18.11 311 *e*P **Pn 22 21 01.1 -0.4**
DIVS Divibare 18.22 295 *e*P **Pn 22 21 04.3 +1.5**
BBLS Lazići 18.60 294 *e*P **Pn 22 21 05.8 -1.7**
PKSN Nyarlorinc 18.98 304⇓*e*P **Pn 22 21 13.7 +1.6**
MICGM Minsk 19.06 332 *e* **Pn 22 21 08.0 -5.0**
MNK Minsk 19.08 332 *e*P **Pn 22 21 08.0 -5.2**
PKSM Moragy 19.60 301⇑P **Pn 22 21 19.2 -0.3**
PKSM Moragy 19.60 301⇑*i*P **Pn 22 21 19.2 -0.3**
PKSM Moragy 19.60 301⇑P **Pn 22 21 19.2 -0.3**
BUD Budapest 19.71 305⇓*e*P **Pn 22 21 21.1 +0.3**
NACGM Naroch 19.78 331 *e* **Pn 22 21 17.0 -4.6**
RHK3 Tenkes 19.79 300⇓*e*P **Pn 22 21 20.9 -0.9**
PKS9 Tamasi 19.94 302⇓*e*P **Pn 22 21 23.4 -0.1**
PKSG 20.09 304⇓*e*P **P 22 21 24.8 +1.3**
IDID Didziasalis 20.11 332 *e*P **P 22 21 23.2 -0.5**
IDID AMB AMB 22 21 25.5
comp=Z,10nm,0.9s
IDID Didziasalis 20.11 332 *e*P **P 22 21 23.2 -0.5**
comp=Z,10nm,0.9s,SNR=40
VYHS Vyhne 20.16 308 *e*P **P 22 21 25.5 +1.2**
VYHS pmax pmax
comp=Z,13nm,1.1s
VYHS Vyhne 20.16 308 *e*P **P 22 21 25.5 +1.2**
comp=Z,13nm,1.1s
VYHS Vyhne 20.16 308 *e*P **P 22 21 25.5 +1.2**
VYHS Vyhne 20.16 308 *e*P **P 22 21 25.5 +1.2**
comp=Z,13nm,1.1s
IIGN Ignalina 20.33 332 *e*P **P 22 21 25.6 -0.4**
IIGN AMB AMB 22 21 28.4
comp=Z,13nm,1.4s
IIGN Ignalina 20.33 332 *e*P **P 22 21 25.6 -0.5**
comp=Z,13nm,1.4s,SNR=40
KOLL Kolacno 20.46 307 *e*P **P 22 21 28.7 +1.1**
KOLL Kolacno 20.46 307 *e*P **P 22 21 28.7 +1.1**
KOLL Kolacno 20.46 307 *e*P **P 22 21 28.7 +1.1**
IZAR Zarasai 20.63 332 *e*P **P 22 21 28.9 -0.3**
IZAR AMB AMB 22 21 31.9
comp=Z,14nm,1.1s
IZAR Zarasai 20.63 332 *e*P **P 22 21 29.0 -0.3**
comp=Z,14nm,1.1s,SNR=35
SUW Suwalki 20.64 325 *e*P **P 22 21 29.6 +0.2**
SUW pmax pmax
comp=Z,42nm,1.0s
SUW Suwalki 20.64 325 *e*P **P 22 21 29.6 +0.2**
comp=Z,42nm,1.0s
SUW Suwalki 20.64 325 *e*P **P 22 21 29.6 +0.2**
comp=Z,42nm,1.0s
ARU Arti 20.68 25*d i*P **P 22 21 29.4 -0.5**

ARU *e* 22 21 49.2
ARU S **S 22 25 21.1 +0.5**
ARU SS 22 25 40.4
ARU pmax pmax
comp=Z,35nm,1.2s
ARU MLR MLR
comp=Z,257nm,18.0s,MS3.6
ARU Arti 20.68 25 *e*P **P 22 21 29.1 -0.8**
comp=Z,58nm,1.3s
ARU Arti 20.68 25 *i* P **P 22 21 29.4 -0.5**
comp=Z,35nm,1.2s
OKC Ostrava-Krasne 21.08 311 *e*P **P 22 21 41.0 +6.7**
OKC MLR MLR
comp=Z,200nm,6.5s
OKC Ostrava-Krasne 21.08 311 *e*P **P 22 21 41.0 +6.7**
OKC AMS AMS 22 32 30.0
comp=Z,200nm,6.5s
KBL Kabul 21.20 93 *e*P **P 22 21 37.8 +2.1**
KBL pmax pmax
comp=Z,14nm,1.1s,mb4.2
KBL Kabul 21.20 93 *e*P **P 22 21 37.8 +2.2**
comp=Z,14nm,1.1s,mb4.2
KBL Kabul 21.20 93 *e*P **P 22 21 37.8 +2.1**
comp=Z,14nm,1.1s,mb4.2
KOGS Kog 21.27 301 *e*P **P 22 21 37.3 +1.0**
KOGS *e* 22 21 44.9
KOGS Kog 21.27 301 *e*P **P 22 21 37.3 +1.0**
MORC Moravsky Berou 21.42 310 *e*P **P 22 21 37.8 -0.1**
MORC pmax pmax
comp=Z,14nm,1.4s,mb4.1
MORC Moravsky Berou 21.42 310 *e*P **P 22 21 37.8 -0.1**
comp=Z,14nm,1.4s,mb4.1
MORC Moravsky Berou 21.42 310⇓*i*P **P 22 21 41.0 +3.1**
MORC Moravsky Berou 21.42 310 *e*P **P 22 21 37.8 -0.1**
comp=Z,14nm,1.4s,mb4.1
GCIS Gornji Cirnik 21.58 299 *i* P **P 22 21 40.5 +0.8**
SVE Sverdlovsk 21.70 27 *e*P **P 22 21 40.5 -0.4**
SVE *e*S **S 22 25 44.9 +4.2**
SVE pmax pmax
comp=Z,35nm,1.1s,mb4.7
SVE MLR MLR
comp=Z,330nm,14.0s,MS3.9
SVE Sverdlovsk 21.70 27 *e*P **P 22 21 40.5 -0.4**
comp=Z,35nm,1.1s,mb4.7
VRAC Vranov 21.83 308 P **P 22 21 42.3 0.0**
comp=Z,4.7nm,0.9s,mb3.9,baz=116,slow=11,SNR=8.2
VRAC LR LR 22 32 50.4
comp=Z,178nm,18.5s,MS3.5,baz=111,slow=44
VRAC Vranov 21.83 308 P **P 22 21 42.3 0.0**
VRAC pmax pmax
comp=Z,5.0nm,0.9s
VRAC MLR MLR
comp=Z,179nm,18.5s
VRAC Vranov 21.83 308⇑P **P 22 21 44.0 +1.6**
VRAC Vranov 21.83 308⇑*i*P **P 22 21 44.0 +1.7**
VRAC Vranov 21.83 308 P **P 22 21 42.3 0.0**
comp=Z,179nm,18.5s
CONA Conrad Observa 21.88 304⇓*i*P **P 22 21 43.4 +0.6**
comp=Z,22nm,1.2s,mb4.5
CONA Conrad Observa 21.88 304 P **P 22 21 43.4 +0.6**
comp=Z,22nm,1.2s,mb4.5
DPC Dobruska-Polom 22.37 311 *e*P **P 22 21 49.3 +1.3**
DPC *e* 22 21 54.5
DPC MLR MLR
comp=Z,200nm,10.4s,MS3.8
DPC Dobruska-Polom 22.37 311 *e*P **P 22 21 49.3 +1.3**
DPC *e*pP 22 21 54.5
DPC AMS AMS 22 33 20.0
comp=Z,200nm,10.4s
DPC Dobruska-Polom 22.37 311 *e*P **P 22 21 49.3 +1.3**
comp=Z,200nm,10.4s
TREC Trest 22.51 308 *e*P **P 22 21 50.0 +0.4**
TREC *e* 22 21 57.4
TREC MLR MLR
comp=Z,200nm,15.5s,MS3.7
TREC Trest 22.51 308 *e*P **P 22 21 50.0 +0.4**
TREC *e*pP 22 21 57.4
TREC AMS AMS 22 32 40.0
comp=Z,200nm,15.5s
TREC Trest 22.51 308 *e*P **P 22 21 50.0 +0.4**
comp=Z,200nm,15.5s
UPC Upice 22.61 311 *e*P **P 22 21 50.9 +0.3**
UPC Upice 22.61 311 *e*P **P 22 21 50.9 +0.3**
UPC Upice 22.61 311 *e*P **P 22 21 50.9 +0.3**
VSU Vasula 22.62 337*d i*P **P 22 21 50.9 +0.3**
VSU Vasula 22.62 337 *i* P **P 22 21 50.9 +0.3**
SOKR Solikamsk 22.84 18*d i*P **P 22 21 57.0 +4.1**
SOKR pmax pmax
comp=Z,20nm,0.9s,mb4.5
SOKR MLR MLR
comp=Z,130nm,15.0s,MS3.5
AQU L'Aquila 22.88 289 *e*P **P 22 21 53.4 -0.1**
AQU pmax pmax
comp=Z,18nm,0.9s,mb4.5
AQU L'Aquila 22.88 289 *e*P **P 22 21 53.4 -0.1**
comp=Z,18nm,0.9s,mb4.5
AQU L'Aquila 22.88 289 *e*P **P 22 21 53.4 -0.1**
comp=Z,18nm,0.9s,mb4.5
MOA Molln 22.90 303⇑*i*P **P 22 21 53.4 -0.3**
comp=Z,10nm,1.1s,mb4.2
MOA Molln 22.90 303 P **P 22 21 53.4 -0.3**
comp=Z,10nm,1.1s,mb4.2
PRU Pruhonice 23.32 309 *e*P **P 22 21 59.6 +1.5**
PRU *e* 22 22 07.8
PRU MLR MLR
comp=Z,200nm,19.7s,MS3.6
PRU Pruhonice 23.32 309 *e*P **P 22 21 59.6 +1.5**
PRU *e*x x 22 22 07.8
PRU *e*S **S 22 26 17.0 +6.8**
PRU AMS AMS 22 33 10.0
comp=Z,200nm,19.7s
PRU Pruhonice 23.32 309 P **P 22 21 59.6 +1.5**
PVCC Panska Ves 23.48 310 *e*P **P 22 21 59.1 -0.7**
PVCC MLR MLR
comp=Z,200nm,13.4s,MS3.8
PVCC Panska Ves 23.48 310 *e*P **P 22 21 59.1 -0.7**
PVCC AMS AMS 22 33 40.0
comp=Z,200nm,13.4s
PVCC Panska Ves 23.48 310 P **P 22 21 59.1 -0.7**
GEC2 GERESS Array S 23.51 306 *e*P **P 22 21 59.1 -1.0**
comp=Z,5.0nm,1.1s,mb3.9
GEC2 GERESS Array S 23.51 306 *e*P **P 22 21 59.1 -1.0**
GEC2 pmax pmax
comp=Z,5.0nm,1.1s,mb3.9
GEC2 GERESS Array S 23.51 306 *e*P **P 22 21 59.1 -1.0**
comp=Z,5.0nm,1.1s,mb3.9
GEC2 GERESS Array S 23.51 306 *e*P **P 22 21 59.1 -1.0**
comp=Z,5.0nm,1.1s,mb3.9
AML Almayashu 23.55 71 *e*P **P 22 22 01.9 +1.3**
comp=Z,5.8nm,0.2s,mb4.7
AML Almayashu 23.55 71 *e*P **P 22 22 01.9 +1.3**
comp=Z,5.8nm,0.2s,mb4.7
EKS2 Erkin-Say 23.60 70 *e*P **P 22 22 02.8 +1.7**
comp=Z,11nm,0.8s,mb4.3
EKS2 Erkin-Say 23.60 70 *e*P **P 22 22 02.8 +1.7**
comp=Z,11nm,0.8s,mb4.3
KHC Kasperske Hory 23.66 306 *e*P **P 22 22 00.6 -1.0**
KHC *e* 22 22 07.5
KHC MLR MLR
comp=Z,200nm,10.5s,MS3.9
KHC Kasperske Hory 23.66 306 *e*P **P 22 22 00.8 -0.8**
comp=Z,6.1nm,1.1s,mb3.9
KHC Kasperske Hory 23.66 306 *e*P **P 22 22 00.6 -1.0**
KHC *e*pP 22 22 07.5
KHC *e*S **S 22 26 27.3 +11**
KHC AMS AMS 22 33 40.0
comp=Z,200nm,10.5s
KHC Kasperske Hory 23.66 306 *e*P **P 22 22 00.8 -0.8**
comp=Z,6.1nm,1.1s,mb3.9
BRVK Borovoye 23.72 43 *e*P **P 22 22 01.7 -0.3**
BRVK pmax pmax
comp=Z,19nm,0.9s,mb4.5
BRVK Borovoye 23.72 43 *e*P **P 22 22 01.7 -0.3**
comp=Z,19nm,0.9s,mb4.5
BRVK Borovoye 23.72 43 *e*P **P 22 22 01.7 -0.3**
comp=Z,19nm,0.9s,mb4.5
BVAR Borovoye Array 23.76 43 P **P 22 22 02.1 -0.3**
comp=Z,1.9nm,0.6s,mb3.7,baz=224,slow=8.3,SNR=12
BVAR Borovoye Array 23.76 43 P **P 22 22 02.1 -0.3**
RJOB Jochberg 23.84 303 *e*P **P 22 22 02.9 -0.3**
comp=Z,14nm,1.3s,mb4.2
BRG Berggiesshubel 23.97 311 *e*P **P 22 22 03.5 -0.8**
comp=Z,3.7nm,1.0s,mb3.8
BRG
comp=N,142nm,15.2s
BRG

comp=E,182nm,14.9s
BRG
comp=Z,274nm,10.4s
BRG Berggiesshubel 23.97 311 *eP* **P 22 22 03.5 -0.8**
BRG pmax pmax
comp=Z,2.0nm,1.0s,mb3.5
BRG MLR MLR
comp=N,85nm,15.2s,MS3.5
BRG MLR MLR
comp=E,109nm,14.9s,MS3.5
BRG MLR MLR
comp=Z,164nm,10.4s,MS3.8
WET Wettzell 24.11 306 *eP* **P 22 22 04.4 -1.2**
comp=Z,9.0nm,1.3s,mb4.0
WET Wettzell 24.11 306 *eP* **P 22 22 04.4 -1.2**
WET pmax pmax
comp=Z,9.0nm,1.3s,mb4.0
WET Wettzell 24.11 306 *eP* **P 22 22 04.4 -1.2**
comp=Z,9.0nm,1.3s,mb4.0
WET Wettzell 24.11 306 *eP* **P 22 22 04.4 -1.2**
comp=Z,9.0nm,1.3s,mb4.0
AAK Ala-Archa 24.13 70 P **P 22 22 07.0 +1.1**
comp=Z,1.6nm,0.4s,mb3.9,baz=238,slow=6.2,SNR=5.9
AAK Ala-Archa 24.13 70 P **P 22 22 07.0 +1.1**
AAK pmax pmax
comp=Z,2.0nm,0.4s,mb3.9
AAK Ala-Archa 24.13 70 *eP* **P 22 22 06.8 +0.8**
comp=Z,6.0nm,0.8s,mb4.1
AAK Ala-Archa 24.13 70 *eP* **P 22 22 06.8 +0.9**
comp=Z,6.0nm,0.8s,mb4.1
WTTA Wattenberg 24.53 301⇑ *iP* **P 22 22 09.9 +0.4**
comp=Z,12nm,0.9s,mb4.5
WTTA Wattenberg 24.53 301 P **P 22 22 09.9 +0.4**
comp=Z,12nm,0.9s,mb4.5
CLL Collm 24.67 311 *eP* **P 22 22 09.3 -1.5**
comp=Z,7.0nm,1.0s,mb4.2
CLL Collm 24.67 311 *eP* **P 22 22 10.0 -0.8**
CLL *i* *PP 22 22 15.0
CLL *eS* **S 22 26 38.0 +5.9**
CLL pmax pmax
comp=Z,7.0nm,1.0s,mb4.2
CLL Collm 24.67 311 *eP* **P 22 22 10.0 -0.8**
comp=Z,7.0nm,1.0s,mb4.2
CLL *i* pP 22 22 15.0
CLL *eS* **S 22 26 38.0 +5.9**
CLL Collm 24.67 311 *eP* **P 22 22 10.0 -0.8**
comp=Z,7.0nm,1.0s,mb4.2
CLL *i* sP sP 22 22 15.0 -0.4
CLL *e* 22 22 27.0
CLL *eS* **S 22 26 38.0 +5.9**
CLL LH 22 32 00.0
comp=N,200nm,21.0s
CLL LH 22 32 00.0
comp=E,100nm,20.9s
CLL Collm 24.67 311 *eP* **P 22 22 10.0 -0.8**
comp=E,7.0nm,1.0s,mb4.2
NKC Novy Kostel 24.68 308 *eP* **P 22 22 11.0 +0.2**
NKC Novy Kostel 24.68 308 *eP* **P 22 22 11.0 +0.2**
NKC Novy Kostel 24.68 308 P **P 22 22 11.0 +0.2**
ROTZ Rotzenmuhle 24.70 307 *eP* **P 22 22 10.1 -0.9**
comp=Z,13nm,1.2s,mb4.3
MOTA Moosalm 24.90 301⇑ *iP* **P 22 22 12.2 -0.7**
comp=Z,24nm,0.9s,mb4.7
MOTA Moosalm 24.90 301 P **P 22 22 12.2 -0.7**
comp=Z,24nm,0.9s,mb4.7
FUR Furstenfeldbru 24.93 303 *eP* **P 22 22 13.4 +0.3**
comp=Z,39nm,1.2s,mb4.8
FUR Furstenfeldbru 24.93 303 *eP* **P 22 22 13.4 +0.3**
FUR pmax pmax
comp=Z,39nm,1.2s,mb4.8
FUR Furstenfeldbru 24.93 303 *eP* **P 22 22 13.4 +0.3**
comp=Z,39nm,1.2s,mb4.8
FUR Furstenfeldbru 24.93 303 *eP* **P 22 22 13.4 +0.3**
comp=Z,39nm,1.2s,mb4.8
FETA Feichten 25.10 300⇓ *iP* **P 22 22 13.5 -1.2**
comp=Z,9.8nm,1.2s,mb4.2
FETA Feichten 25.10 300 P **P 22 22 13.5 -1.2**
comp=Z,9.8nm,1.2s,mb4.2
FINES FINESS Array B 25.29 341 P **P 22 22 14.9 -1.3**
comp=Z,7.1nm,0.9s,mb4.2,baz=137,slow=9.8,SNR=15
FINES FINESS Array B 25.29 341 P **P 22 22 14.9 -1.3**
FINES FINESS Array B 25.29 341 P **P 22 22 14.9 -1.3**
GRA1 Grafenberg Arr 25.30 307 *eP* **P 22 22 17.3 +0.9**
comp=Z,96nm,1.2s,mb5.2
GRA1 Grafenberg Arr 25.30 307 *eP* **P 22 22 17.3 +0.9**
comp=Z,96nm,1.2s,mb5.2
GRF Grafenberg Arr 25.30 307 *eP* **P 22 22 17.3 +0.9**
comp=Z,96nm,1.2s,mb5.2
GRF Grafenberg Arr 25.30 307 *eP* **P 22 22 17.3 +0.9**
GRF pmax pmax
comp=Z,96nm,1.2s,mb5.2
JOF Joensuu 25.48 347 *eP* **P 22 22 15.9 -2.1**
JOF Joensuu 25.48 347 *ep* **P 22 22 15.9 -2.1**
KSH Kashi 25.50 77 P **P 22 22 19.8 +1.5**
KSH pP pP 22 22 31.0 +9.4
KSH sP sP 22 22 36.5 +14
KSH PP 22 22 59.8
KSH PcP PcP 22 25 53.5 +3.7
KSH S **S 22 26 39.5 -6.0**
KSH sS sS 22 26 58.5 +7.6
KSH SS 22 27 41.8
KSH ScP ScP 22 29 27.8 -1.2
KSH PcS PcS 22 29 32.3 +2.0
KSH ScS ScS 22 33 14.5 -3.4
KSH pmax pmax
comp=Z,6.0nm,0.9s,mb4.1
KSH pmax pmax
comp=Z,44nm,4.9s
KSH LR LR
comp=N,110nm,4.9s
KSH LR LR
comp=E,110nm,6.5s
KSH LR LR
comp=Z,220nm,5.5s
DAVOX Davos/Dischmat 25.65 300 P **P 22 22 19.9 +0.2**
comp=Z,4.1nm,0.7s,mb4.0,baz=104,slow=9.9,SNR=8.3
DAVOX Davos/Dischmat 25.65 300 P **P 22 22 19.9 +0.2**
KAF Kangasniemi 25.80 342 *eP* **P 22 22 18.4 -2.5**
KAF Kangasniemi 25.80 342 *ep* **P 22 22 18.4 -2.5**
PGF Pioggiola 26.13 290⇑ *iP* **P 22 22 23.3 -0.8**
comp=Z,20nm,0.8s,mb4.4
PGF Pioggiola 26.13 290⇑ *iP* **P 22 22 23.3 -0.8**
PGF pmax pmax
comp=Z,10.0nm,0.8s,mb4.4
PGF Pioggiola 26.13 290⇑ *iP* **P 22 22 23.3 -0.8**
comp=Z,9.9nm,0.8s,mb4.4
PGF Pioggiola 26.13 290⇑ *iP* **P 22 22 23.3 -0.8**
comp=Z,9.9nm,0.8s,mb4.4
VSL Villasalto 26.14 283 *eP* **P 22 22 24.2 0.0**
comp=Z,6.6nm,0.7s,mb4.3
VSL Villasalto 26.14 283 *eP* **P 22 22 24.2 0.0**
comp=Z,6.6nm,0.7s,mb4.3
CLZ Clausthal 26.40 311 *eP* **P 22 22 25.8 -0.6**
comp=Z,19nm,1.5s,mb4.4
CLZ Clausthal 26.40 311 *eP* **P 22 22 25.8 -0.6**
CLZ pmax pmax
comp=Z,19nm,1.5s,mb4.4
CLZ Clausthal 26.40 311 *eP* **P 22 22 25.8 -0.6**
comp=Z,19nm,1.5s,mb4.4
CLZ Clausthal 26.40 311 *eP* **P 22 22 25.8 -0.6**
comp=Z,19nm,1.5s,mb4.4
NRDL Niedersach Rie 26.76 312 *eP* **P 22 22 28.2 -1.4**
comp=Z,13nm,1.3s,mb4.3
SBF Sospel 27.23 293⇑ *iP* **P 22 22 33.7 -0.3**
comp=Z,45nm,1.0s,mb4.7
SBF Sospel 27.23 293⇑ *iP* **P 22 22 33.7 -0.3**
SBF pmax pmax
comp=Z,22nm,1.0s,mb4.6
SBF Sospel 27.23 293⇑ *iP* **P 22 22 33.7 -0.3**
comp=Z,22nm,1.0s,mb4.7
SBF Sospel 27.23 293⇑ *iP* **P 22 22 33.7 -0.3**
comp=Z,22nm,1.0s,mb4.7
MBDF Montbardon 27.70 295⇑ *iP* **P 22 22 37.6 -0.6**
comp=Z,10nm,0.9s,mb4.2
MBDF Montbardon 27.70 295⇑ *iP* **P 22 22 37.6 -0.6**
MBDF pmax pmax
comp=Z,5.0nm,0.9s,mb4.1
MBDF Montbardon 27.70 295⇑ *iP* **P 22 22 37.6 -0.6**
comp=Z,5.1nm,0.9s,mb4.2
MBDF Montbardon 27.70 295⇑ *iP* **P 22 22 37.6 -0.6**
comp=Z,5.1nm,0.9s,mb4.2
LPG La Plagne 27.73 296 *eP* **P 22 22 38.0 -0.4**
LPG La Plagne 27.73 296 *eP* **P 22 22 38.0 -0.4**
LPL La Plagne 27.74 296 *eP* **P 22 22 38.2 -0.3**
comp=Z,7.8nm,0.9s,mb4.0
LPL La Plagne 27.74 296 *eP* **P 22 22 38.2 -0.3**
LPL pmax pmax
comp=Z,4.0nm,0.9s,mb4.0
LPL La Plagne 27.74 296 *eP* **P 22 22 38.2 -0.3**
comp=Z,3.9nm,0.9s,mb4.0
LPL La Plagne 27.74 296 *eP* **P 22 22 38.2 -0.3**
comp=Z,3.9nm,0.9s,mb4.0
FRF La Foret Royal 27.81 292 *eP* **P 22 22 38.4 -0.8**
comp=Z,29nm,1.4s,mb4.4
FRF La Foret Royal 27.81 292 *eP* **P 22 22 38.4 -0.8**
FRF pmax pmax
comp=Z,15nm,1.4s,mb4.4
FRF La Foret Royal 27.81 292 *eP* **P 22 22 38.4 -0.8**
comp=Z,15nm,1.4s,mb4.4
FRF La Foret Royal 27.81 292 *eP* **P 22 22 38.4 -0.8**
comp=Z,15nm,1.4s,mb4.4
KURK Kurchatov 27.81 52 *eP* **P 22 22 38.9 -0.2**
KURK pmax pmax
comp=Z,14nm,1.0s,mb4.5
KURK Kurchatov 27.81 52 *eP* **P 22 22 38.9 -0.2**
comp=Z,14nm,1.0s,mb4.5
KURK Kurchatov 27.81 52 *eP* **P 22 22 38.9 -0.2**
comp=Z,14nm,1.0s,mb4.5
CABF La Chapelle 28.24 299 *eP* **P 22 22 42.8 -0.1**
comp=Z,27nm,1.1s,mb4.5
CABF La Chapelle 28.24 299 *eP* **P 22 22 42.8 -0.1**
CABF pmax pmax
comp=Z,14nm,1.1s,mb4.5
CABF La Chapelle 28.24 299 *eP* **P 22 22 42.8 -0.1**
comp=Z,14nm,1.1s,mb4.5
CABF La Chapelle 28.24 299 *eP* **P 22 22 42.8 -0.1**
comp=Z,14nm,1.1s,mb4.5
ORIF Oris-en-Rattie 28.34 295 *eP* **P 22 22 43.7 -0.1**
comp=Z,5.5nm,0.8s,mb3.9
ORIF *e*MLR MLR
comp=Z,223nm,22.8s,MS3.4
ORIF Oris-en-Rattie 28.34 295 *eP* **P 22 22 43.7 -0.1**
ORIF pmax pmax
comp=Z,3.0nm,0.8s,mb4.0
ORIF Oris-en-Rattie 28.34 295 *eP* **P 22 22 43.7 -0.1**
comp=Z,2.8nm,0.8s,mb3.9
ORIF Oris-en-Rattie 28.34 295 *eP* **P 22 22 43.7 -0.1**
comp=Z,2.8nm,0.8s,mb3.9
HFS Hagfors 28.50 329 P **P 22 22 44.0 -1.2**
comp=Z,3.5nm,0.9s,mb4.1,baz=141,slow=9.6,SNR=6.8
HFS Hagfors 28.50 329 P **P 22 22 44.0 -1.2**
VIVF Saint-Julien-l 29.19 295 *eP* **P 22 22 50.2 -1.3**
VIVF Saint-Julien-l 29.19 295 *eP* **P 22 22 50.2 -1.3**
MK31 Makanchi Array 29.75 61 *eP* **P 22 22 56.6 +0.2**
MK31 Makanchi Array 29.75 61 *eP* **P 22 22 56.6 +0.2**
MKAR Makanchi Array 29.75 61 P **P 22 22 56.3 -0.1**
comp=Z,1.1nm,0.6s,mb3.8,baz=264,slow=6.5,SNR=13
MKAR LR LR 22 36 56.3
comp=Z,86nm,19.6s,MS3.4,baz=84,slow=40
MKAR Makanchi Array 29.75 61 P **P 22 22 56.3 -0.1**
SMF Signal de Mont 29.79 299 *eP* **P 22 22 55.3 -1.4**
comp=Z,17nm,1.2s,mb4.3
SMF Signal de Mont 29.79 299 *eP* **P 22 22 55.3 -1.4**
SMF pmax pmax
comp=Z,8.0nm,1.2s,mb4.3
SMF Signal de Mont 29.79 299 *eP* **P 22 22 55.3 -1.4**
comp=Z,8.3nm,1.2s,mb4.3
SMF Signal de Mont 29.79 299 *eP* **P 22 22 55.3 -1.4**
comp=Z,8.3nm,1.2s,mb4.3
LOR Lormes 29.80 300 *eP* **P 22 22 56.4 -0.4**
comp=Z,8.9nm,1.1s,mb4.1
LOR *e*MLR MLR
comp=Z,159nm,19.0s,MS3.4
LOR Lormes 29.80 300 *eP* **P 22 22 56.4 -0.4**
LOR pmax pmax
comp=Z,4.0nm,1.1s,mb4.1
LOR MLR MLR
comp=Z,160nm,19.0s,MS3.7
LOR Lormes 29.80 300 *eP* **P 22 22 56.4 -0.4**
comp=Z,4.4nm,1.1s,mb4.1
LOR LR LR
comp=Z,160nm,19.0s,MS3.7
LOR Lormes 29.80 300 *eP* **P 22 22 56.4 -0.4**
comp=Z,4.4nm,1.1s,mb4.1
LASF Ste Croix 29.80 293 *eP* **P 22 22 55.8 -1.1**
LASF Ste Croix 29.80 293 *eP* **P 22 22 55.8 -1.1**
BAIF Baives 29.82 306 *eP* **P 22 22 55.5 -1.5**
BAIF Baives 29.82 306 *eP* **P 22 22 55.5 -1.5**
SSF Saint Saulge 30.03 299⇑ *iP* **P 22 22 58.8 0.0**
comp=Z,12nm,1.4s,mb4.1
SSF Saint Saulge 30.03 299⇑ *iP* **P 22 22 58.8 0.0**
SSF pmax pmax
comp=Z,6.0nm,1.4s,mb4.1
SSF Saint Saulge 30.03 299⇑ *iP* **P 22 22 58.8 0.0**
comp=Z,5.9nm,1.4s,mb4.1
SSF Saint Saulge 30.03 299⇑ *iP* **P 22 22 58.8 0.0**
comp=Z,5.9nm,1.4s,mb4.1
NB2 NORSAR Subarra 30.03 329 P **P 22 22 56.8 -1.9**
comp=Z,5.4nm,1.4s,mb4.1,baz=125,slow=9.3
NB2 NORSAR Subarra 30.03 329 P **P 22 22 56.8 -1.9**
comp=Z,5.4nm,1.4s,mb4.1,SNR=5.1
NOA NORSAR Array B 30.03 329 P **P 22 22 57.0 -1.7**
comp=Z,0.4nm,0.6s,mb3.3,baz=126,slow=8.8,SNR=5.4
NOA LR LR 22 36 29.6
comp=Z,84nm,18.7s,MS3.4,baz=115,slow=39
NOA NORSAR Array B 30.03 329 P **P 22 22 57.0 -1.7**
NOA LR LR 22 36 29.6
NOA NORSAR Array B 30.03 329 P **P 22 22 57.0 -1.7**
AVF Avril sur Loir 30.12 299 *eP* **P 22 22 58.7 -1.0**
comp=Z,8.4nm,0.9s,mb4.2
AVF Avril sur Loir 30.12 299 *eP* **P 22 22 58.7 -1.0**
AVF pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
AVF Avril sur Loir 30.12 299 *eP* **P 22 22 58.7 -1.0**
comp=Z,4.2nm,0.9s,mb4.2
AVF Avril sur Loir 30.12 299 *eP* **P 22 22 58.7 -1.0**
comp=Z,4.2nm,0.9s,mb4.2
TCF Toulx Ste Croi 30.91 298⇑ *iP* **P 22 23 05.8 -0.8**
comp=Z,4.6nm,0.9s,mb4.0
TCF Toulx Ste Croi 30.91 298⇑ *iP* **P 22 23 05.8 -0.8**
TCF pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
TCF Toulx Ste Croi 30.91 298⇑ *iP* **P 22 23 05.8 -0.8**
comp=Z,2.3nm,0.9s,mb4.0
TCF Toulx Ste Croi 30.91 298⇑ *iP* **P 22 23 05.8 -0.8**
comp=Z,2.3nm,0.9s,mb4.0
MTLF Montolieu 31.04 292 *eP* **P 22 23 08.3 +0.5**
MTLF Montolieu 31.04 292 *eP* **P 22 23 08.3 +0.5**
CAF Calviac 31.05 295 *eP* **P 22 23 06.9 -0.9**
comp=Z,16nm,1.4s,mb4.3
CAF Calviac 31.05 295 *eP* **P 22 23 06.9 -0.9**
CAF pmax pmax
comp=Z,8.0nm,1.4s,mb4.4
CAF Calviac 31.05 295 *eP* **P 22 23 06.9 -0.9**
comp=Z,7.8nm,1.4s,mb4.3
CAF Calviac 31.05 295 *eP* **P 22 23 06.9 -0.9**
comp=Z,7.8nm,1.4s,mb4.3
RJF Les Rejaudoux 31.42 296⇑ *iP* **P 22 23 10.9 -0.2**
comp=Z,7.2nm,0.9s,mb4.2
RJF *e*MLR MLR
comp=Z,194nm,20.5s,MS3.5
RJF Les Rejaudoux 31.42 296⇑ *iP* **P 22 23 10.9 -0.2**
RJF pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
RJF MLR MLR
comp=Z,190nm,20.5s,MS3.8
RJF Les Rejaudoux 31.42 296⇑ *iP* **P 22 23 10.9 -0.2**
comp=Z,3.6nm,0.9s,mb4.2
RJF LR LR
comp=Z,190nm,20.5s,MS3.8
RJF Les Rejaudoux 31.42 296⇑ *iP* **P 22 23 10.9 -0.2**
comp=Z,3.6nm,0.9s,mb4.2
NVS Novosibirsk 31.50 46⇑ *iP* **P 22 23 17.0 +5.3**
NVS *e* 22 24 20.5
NVS *e* 22 26 09.7
NVS *eS* **S 22 28 16.0 -3.6**
NVS pmax pmax
comp=N,8.0nm,1.7s
NVS pmax pmax
comp=E,12nm,1.7s
NVS pmax pmax
comp=Z,18nm,1.7s,mb4.6
NVS pmax pmax
comp=N,6.0nm,1.7s
NVS pmax pmax
comp=E,8.0nm,1.7s
NVS pmax pmax
comp=Z,10.0nm,1.7s,mb4.4
NVS smax
comp=N,11nm,2.3s
NVS smax
comp=E,17nm,2.1s
LFF La Frestale 31.98 295 *eP* **P 22 23 15.7 -0.4**
comp=E,11nm,0.8s,mb4.4
LFF La Frestale 31.98 295 *eP* **P 22 23 15.7 -0.4**
LFF pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
LFF La Frestale 31.98 295 *eP* **P 22 23 15.7 -0.4**
comp=Z,5.4nm,0.8s,mb4.4
LFF La Frestale 31.98 295 *eP* **P 22 23 15.7 -0.4**
comp=Z,5.4nm,0.8s,mb4.4
ZALV Zalesovo Beam 32.20 48 P **P 22 23 16.4 -1.5**
comp=Z,0.7nm,0.4s,mb3.8,baz=266,slow=8.8,SNR=5.2
ZALV LR LR 22 38 00.7
comp=Z,76nm,20.1s,MS3.4,baz=75,slow=40
ZALV Zalesovo Beam 32.20 48 P **P 22 23 16.4 -1.5**
ZALV LR LR 22 38 00.7
ARCES ARCESS Array B 32.51 349 P **P 22 23 19.7 -0.7**
comp=Z,3.0nm,0.9s,mb4.2,baz=48,slow=20,SNR=3.4
ARCES LR LR 22 36 10.2
comp=Z,53nm,19.3s,MS3.2,baz=154,slow=36
ARCES ARCESS Array B 32.51 349 P **P 22 23 19.7 -0.7**
ARCES LR LR 22 36 10.2
ARCES ARCESS Array B 32.51 349 P **P 22 23 19.7 -0.7**
LDF La Druitiere 32.52 302 *eP* **P 22 23 20.4 -0.4**
comp=Z,1.7nm,0.6s,mb3.9
LDF La Druitiere 32.52 302 *eP* **P 22 23 20.4 -0.4**
LDF pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
LDF La Druitiere 32.52 302 *eP* **P 22 23 20.4 -0.4**
comp=Z,0.9nm,0.6s,mb3.9
LDF La Druitiere 32.52 302 *eP* **P 22 23 20.4 -0.4**
comp=Z,0.9nm,0.6s,mb3.9
MFF Saint Martin d 32.53 299 *eP* **P 22 23 19.1 -1.8**
comp=Z,14nm,1.3s,mb4.4
MFF Saint Martin d 32.53 299 *eP* **P 22 23 19.1 -1.8**
MFF pmax pmax
comp=Z,7.0nm,1.3s,mb4.4
MFF Saint Martin d 32.53 299 *eP* **P 22 23 19.1 -1.8**
comp=Z,7.1nm,1.3s,mb4.4
MFF Saint Martin d 32.53 299 *eP* **P 22 23 19.1 -1.8**
comp=Z,7.1nm,1.3s,mb4.4
FLN La Foliniere 32.77 303 *eP* **P 22 23 22.2 -0.7**
comp=Z,11nm,1.1s,mb4.4
FLN *e*MLR MLR
comp=Z,98nm,18.8s,MS3.2
FLN La Foliniere 32.77 303 *eP* **P 22 23 22.2 -0.7**
FLN pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
FLN MLR MLR
comp=Z,100nm,18.8s,MS3.5
FLN La Foliniere 32.77 303 *eP* **P 22 23 22.2 -0.7**
comp=Z,5.7nm,1.1s,mb4.4
FLN LR LR
comp=Z,100nm,18.8s,MS3.5
FLN La Foliniere 32.77 303 *eP* **P 22 23 22.2 -0.7**
comp=Z,5.7nm,1.1s,mb4.4
GRR Gorron 33.01 302 *eP* **P 22 23 24.5 -0.5**
comp=Z,14nm,1.1s,mb4.5
GRR Gorron 33.01 302 *eP* **P 22 23 24.5 -0.5**
GRR pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
GRR Gorron 33.01 302 *eP* **P 22 23 24.5 -0.5**
comp=Z,7.3nm,1.1s,mb4.5
GRR Gorron 33.01 302 *eP* **P 22 23 24.5 -0.5**
comp=Z,7.2nm,1.1s,mb4.5
ETSF Etsaut 33.11 292 *eP* **P 22 23 26.0 0.0**
comp=Z,11nm,1.1s,mb4.4
ETSF Etsaut 33.11 292 *eP* **P 22 23 26.0 0.0**
ETSF pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
ETSF Etsaut 33.11 292 *eP* **P 22 23 26.0 0.0**
comp=Z,5.3nm,1.1s,mb4.4
ETSF Etsaut 33.11 292 *eP* **P 22 23 26.0 0.0**
comp=Z,5.3nm,1.1s,mb4.4
SJPF Ste Jean 33.57 292 *eP* **P 22 23 29.4 -0.6**
SJPF Ste Jean 33.57 292 *eP* **P 22 23 29.4 -0.6**
WMQ Urumqi 33.68 66 *eP* **P 22 23 32.5 +1.5**
WMQ pP pP 22 23 47.5 +13
WMQ sP sP 22 23 54.5 +19
WMQ PP PP 22 24 46.8 -0.3
WMQ PcP PcP 22 26 11.3 +0.7
WMQ *eS* **S 22 28 50.5 -3.3**
WMQ SS SS 22 30 58.5 -21
WMQ ScS ScS 22 33 49.5 -6.9
WMQ pmax pmax
comp=Z,13nm,1.0s,mb4.8
WMQ pmax pmax
comp=Z,140nm,4.5s
WMQ LR LR
comp=N,220nm,23.5s,MS3.9
WMQ LR LR
comp=E,110nm,21.0s,MS3.9
WMQ LR LR
comp=Z,71nm,21.8s,MS3.4
SGMF Saint Gilles 34.14 302 *eP* **P 22 23 33.2 -1.7**
comp=Z,32nm,1.4s,mb4.8
SGMF Saint Gilles 34.14 302 *eP* **P 22 23 33.2 -1.7**
SGMF pmax pmax
comp=Z,16nm,1.4s,mb4.8
SGMF Saint Gilles 34.14 302 *eP* **P 22 23 33.2 -1.7**
comp=Z,16nm,1.4s,mb4.8
SGMF Saint Gilles 34.14 302 *eP* **P 22 23 33.2 -1.7**
comp=Z,16nm,1.4s,mb4.8
QUIF Quistinic 34.55 301 *eP* **P 22 23 38.1 -0.4**
comp=Z,23nm,1.1s,mb4.7
QUIF Quistinic 34.55 301 *eP* **P 22 23 38.1 -0.4**
QUIF pmax pmax
comp=Z,12nm,1.1s,mb4.7
QUIF Quistinic 34.55 301 *eP* **P 22 23 38.1 -0.4**
comp=Z,12nm,1.1s,mb4.7
QUIF Quistinic 34.55 301 *eP* **P 22 23 38.1 -0.4**
comp=Z,12nm,1.1s,mb4.7
ROSF Rostrenen 34.62 302 *eP* **P 22 23 35.6 -3.4**
EKA Eskdalemuir Ar 35.04 314 P **P 22 23 41.9 -0.8**
comp=Z,7.0nm,1.0s,mb4.5,baz=110,slow=8.5,SNR=17
EKA Eskdalemuir Ar 35.04 314 P **P 22 23 41.8 -0.8**
ESK Eskdalemuir 35.07 314 *i* P **P 22 23 43.2 +0.4**
TAM Tamanrasset 35.64 255 *eP* **P 22 23 48.8 +0.7**
TAM pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
TAM Tamanrasset 35.64 255 *eP* **P 22 23 48.8 +0.7**
comp=Z,7.3nm,1.0s,mb4.6
TAM Tamanrasset 35.64 255 *eP* **P 22 23 48.8 +0.7**
comp=Z,7.2nm,1.0s,mb4.6
ESDC Sonseca Array 36.22 287 P **P 22 23 52.0 -1.0**
comp=Z,1.8nm,0.9s,mb4.0,baz=65,slow=8.5,SNR=12
ESDC LR LR 22 40 45.6
comp=Z,49nm,18.6s,MS3.3,baz=80,slow=40
ESDC Sonseca Array 36.22 287 P **P 22 23 52.0 -1.0**
ESDC LR LR 22 40 45.6
ESDC Sonseca Array 36.22 287 P **P 22 23 52.0 -1.0**
ESLA Sonseca Array 36.22 287 *eP* **P 22 23 52.0 -0.9**
comp=Z,6.9nm,1.7s,mb4.3
ESLA Sonseca Array 36.22 287 *eP* **P 22 23 52.0 -1.0**
comp=Z,6.9nm,1.7s,mb4.3
MDT Midelt 38.84 277 P **P 22 24 14.0 -1.1**
comp=Z,3.5nm,1.0s,mb4.1,baz=203,slow=4.2,SNR=5.0
MDT Midelt 38.84 277 P **P 22 24 14.0 -1.2**
EVO Evora 39.56 287 *eP* **P 22 24 18.0 -3.2**
comp=Z,27nm,1.4s,mb4.5
EVO *e*MLR MLR
comp=Z,106nm,22.8s,MS3.3
LSA Lhasa 40.37 88 P **P 22 24 29.8 +1.9**
LSA Lhasa 40.37 88 *eP* **P 22 24 29.2 +1.3**
LSA pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
LSA Lhasa 40.37 88 *eP* **P 22 24 29.1 +1.2**
comp=Z,3.5nm,0.8s,mb4.1
LSA Lhasa 40.37 88 *eP* **P 22 24 29.1 +1.2**
comp=Z,3.5nm,0.8s,mb4.1
JMIC Jan Mayen 41.81 337 LR LR 22 43 01.6
comp=Z,72nm,19.2s,MS3.6,baz=93,slow=38
ZAK Zakamensk 43.45 54 *eP* **P 22 24 58.7 +5.8**
ZAK *e* 22 26 39.3
ZAK pmax pmax
comp=Z,1.0nm,1.3s,mb3.4
GTA Gaotai 43.49 70 *eP* **P 22 24 56.5 +3.2**
GTA pmax pmax
comp=Z,4.0nm,1.1s,mb4.1
TLY Talaya 43.51 52 *eP* **P 22 25 02.0 +8.7**
TLY pmax pmax
comp=Z,4.0nm,1.0s,mb4.1
TLY MLR MLR
comp=Z,58nm,15.0s,MS3.6
SONM Songino Array 45.92 57 LR LR 22 46 30.5
comp=Z,130nm,19.6s,MS3.9,baz=111,slow=39
ULN Ulaanbaatar 46.35 57 *eP* **P 22 25 16.7 +0.7**
ULN Ulaanbaatar 46.35 57 *eP* **P 22 25 16.7 +0.7**

LZH	**Lanzhou**	**47.62**	**73**	*e*P	**P**	**22 25 27.0**	**+0.9**
LZH				pP	pP	22 25 41.0	+12
LZH				sP	sP	22 25 46.0	+15
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
LZH				pmax	pmax		
	comp=Z,100nm,4.8s						
CD2	**Chengdu**	**49.66**	**79**	P	**P**	**22 25 42.3**	**+0.4**
CD2				pP	pP	22 25 57.8	+12
CD2				sP	sP	22 26 05.0	+18
CD2				PP	PP	22 27 37.5	+1.3
CD2				S	**S**	**22 32 44.8**	**-5.6**
CD2				sS	sS	22 33 11.5	+15
CD2				SS	SS	22 36 13.5	-9.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,200nm,6.5s						
CD2				LR	LR		
	comp=N,180nm,7.7s						
CD2				LR	LR		
	comp=Z,170nm,8.3s						
HHC	**Hu-ho-hao-te**	**51.51**	**64**	*e*P	**P**	**22 25 55.0**	**-0.7**
HHC				pP	pP	22 26 09.8	+11
HHC				sP	sP	22 26 16.8	+16
HHC				PcP	PcP	22 27 09.0	-0.8
HHC				PP	PP	22 27 53.8	+1.0
HHC				ScP	ScP	22 30 58.5	-7.9
HHC				PcS	PcS	22 31 05.3	-2.3
HHC				S	**S**	**22 33 08.5**	**-7.4**
HHC				sS	sS	22 33 34.5	+13
HHC				ScS	ScS	22 35 36.5	-10
HHC				SS	SS	22 36 42.3	-9.3
HHC				pmax	pmax		
	comp=Z,16nm,0.6s						
HHC				pmax	pmax		
	comp=Z,70nm,6.9s						
HHC				LR	LR		
	comp=N,170nm,16.8s						
HHC				LR	LR		
	comp=E,150nm,16.9s						
HHC				LR	LR		
	comp=Z,120nm,16.2s						
KMI	**Kunming**	**51.59**	**87**	P	**P**	**22 25 59.3**	**+2.7**
KMI				pP	pP	22 26 13.5	+14
KMI				sP	sP	22 26 20.0	+19
KMI				PP	PP	22 27 57.5	+3.6
KMI				S	**S**	**22 33 14.5**	**-2.9**
KMI				sS	sS	22 33 39.3	+16
KMI				SS	SS	22 36 49.3	-4.2
KMI				pmax	pmax		
	comp=Z,4.0nm,1.4s						
KMI				pmax	pmax		
	comp=Z,92nm,3.6s						
KMI				LR	LR		
	comp=N,180nm,18.8s						
KMI				LR	LR		
	comp=E,110nm,18.8s						
KMI				LR	LR		
	comp=Z,73nm,27.6s						
CMAR	**Chiang Mai Arr**	**52.18**	**96**	P	**P**	**22 26 01.0**	**0.0**
	comp=Z,1.4nm,0.7s,mb4.0,baz=300,slow=8.1,SNR=7.0						
CMAR				LR	LR	22 52 17.2	
	comp=Z,100nm,18.1s,MS3.9,baz=69,slow=41						
CMAR	**Chiang Mai Arr**	**52.18**	**96**	P	**P**	**22 26 01.0**	**0.0**
XAN	**Xi'an**	**52.25**	**73**	P	**P**	**22 26 06.8**	**+5.5**
XAN				pP	pP	22 26 15.3	+11
XAN				pmax	pmax		
	comp=Z,2.0nm,1.1s						
TIXI	**Tiksi**	**52.68**	**23**	*i* P	**P**	**22 26 04.4**	**+0.4**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
DBIC	**Dimbokro**	**53.59**	**246**	P	**P**	**22 26 10.1**	**-1.4**
	comp=Z,9.2nm,0.7s,mb4.8,baz=22,slow=7.1,SNR=12						
DBIC	**Dimbokro**	**53.59**	**246**	P	**P**	**22 26 10.1**	**-1.3**
DBIC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
DBIC	**Dimbokro**	**53.59**	**246**	*e*P	**P**	**22 26 09.9**	**-1.5**
	comp=Z,11nm,0.8s,mb4.8						
DBIC	**Dimbokro**	**53.59**	**246**	*e*P	**P**	**22 26 09.9**	**-1.5**
	comp=Z,11nm,0.8s,mb4.8						
KIC	**Kosan Boka**	**53.72**	**246**	*e*P	**P**	**22 26 10.6**	**-1.8**
	comp=Z,38nm,0.8s,mb5.4						
KIC	**Kosan Boka**	**53.72**	**246**	*e*P	**P**	**22 26 10.6**	**-1.8**
	comp=Z,38nm,0.8s,mb5.4						
TIC	**Toumodi**	**53.72**	**247**	*e*P	**P**	**22 26 10.3**	**-2.1**
	comp=Z,107nm,1.6s						
TIC	**Toumodi**	**53.72**	**247**	*e*P	**P**	**22 26 10.3**	**-2.1**
TIC				pmax	pmax		
	comp=Z,107nm,1.6s						
TIC	**Toumodi**	**53.72**	**247**	*e*P	**P**	**22 26 10.3**	**-2.1**
	comp=Z,107nm,1.6s						
GYA	**Guiyang**	**54.00**	**83**	*e*P	**P**	**22 26 16.3**	**+2.0**
GYA				pP	pP	22 26 31.8	+14
GYA				sP	sP	22 26 38.0	+19
GYA				PP	PP	22 28 19.3	+3.7
GYA				ScP	ScP	22 31 12.8	-4.6
GYA				PcS	PcS	22 31 19.0	+0.1
GYA				S	**S**	**22 33 46.5**	**-3.7**
GYA				sS	sS	22 34 12.3	+16
GYA				ScS	ScS	22 35 57.8	-6.1
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,70nm,5.1s						
LIC	**Lamto**	**54.02**	**246**	*e*P	**P**	**22 26 12.5**	**-2.1**
	comp=Z,55nm,0.8s						
LIC	**Lamto**	**54.02**	**246⇑**	*i* P	**P**	**22 26 12.9**	**-1.7**
	comp=Z,36nm,0.8s,mb5.0						
LIC				*e*MLR	MLR		
	comp=Z,107nm,18.0s,MS3.6						
LIC	**Lamto**	**54.02**	**246⇑**	*i* P	**P**	**22 26 12.9**	**-1.7**
	comp=Z,18nm,0.8s,mb5.0						
LIC				LR	LR		
	comp=Z,50nm,18.0s,MS3.6						
LIC	**Lamto**	**54.02**	**246⇑**	*i* P	**P**	**22 26 12.9**	**-1.7**
	comp=Z,18nm,0.8s,mb5.0						
BJI	**Beijing**	**55.07**	**64**	P	**P**	**22 26 20.5**	**-1.4**
BJI				S	**S**	**22 34 00.0**	**-4.3**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.9						
BJI				pmax	pmax		
	comp=Z,88nm,8.5s						
BJI				LR	LR		
	comp=N,150nm,29.5s						
BJI				LR	LR		
	comp=E,130nm,21.8s						
BJI				LR	LR		
	comp=Z,36nm,19.7s						
CN2	**Changchun**	**59.79**	**56**	*e*P	**P**	**22 26 56.0**	**+0.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
SEY	**Seymchan**	**64.37**	**29⇑**	*e*P	**P**	**22 27 25.8**	**+0.2**
KSRS	**Korea Array**	**64.43**	**61**	P	**P**	**22 27 25.4**	**-1.0**
	comp=Z,3.9nm,0.9s,mb4.5,baz=294,slow=6.8,SNR=12						
KSRS				LR	LR	22 57 55.3	
	comp=Z,34nm,19.2s,MS3.5,baz=347,slow=38						
KSRS	**Korea Array**	**64.43**	**61**	P	**P**	**22 27 25.4**	**-1.0**
KSRS				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
KSRS				MLR	MLR		
	comp=Z,34nm,19.2s,MS3.5						
BILL	**Bilibino**	**65.62**	**20⇓**	*e*P	**P**	**22 27 33.6**	**0.0**
BILL				*e*		22 30 01.3	
BILL				*e*S	S	22 36 19.0	+0.3
BILL				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.7						
BOSA	**Boshof**	**68.81**	**197**	P	**P**	**22 27 53.9**	**-0.3**
	comp=Z,2.9nm,0.9s,mb4.2,baz=122,slow=9.0,SNR=3.7						
BOSA	**Boshof**	**68.81**	**197**	P	**P**	**22 27 53.9**	**-0.3**
MJAR	**Matsushiro Arr**	**71.87**	**58**	P	**P**	**22 28 12.3**	**-0.8**
	comp=Z,0.6nm,0.4s,mb3.8,baz=314,slow=7.5,SNR=5.8						
MJAR	**Matsushiro Arr**	**71.87**	**58**	P	**P**	**22 28 12.3**	**-0.9**
PETK	**Petropavlovsk-**	**72.69**	**35**	LR	LR	23 04 15.9	
	comp=Z,73nm,19.8s,MS4.0,baz=118,slow=39						
SUR	**Sutherland**	**73.50**	**200**	P	**P**	**22 28 21.9**	**-0.7**
SUR	**Sutherland**	**73.50**	**200**	P	**P**	**22 28 21.9**	**-0.7**
ILAR	**Eielson Array**	**76.77**	**4**	P	**P**	**22 28 38.3**	**-2.9**
	comp=Z,0.4nm,0.8s,mb3.4,baz=338,slow=5.2,SNR=4.4						
ILAR				LR	LR	23 03 48.7	
	comp=Z,53nm,21.0s,MS3.8,baz=79,slow=37						
BPAW	**Bear Paw Mtn.**	**77.14**	**6**	*e*P	**P**	**22 28 42.8**	**-0.4**
	comp=Z,23nm,1.6s,mb4.8						
BPAW	**Bear Paw Mtn.**	**77.14**	**6**	*e*P	**P**	**22 28 42.8**	**-0.4**
	comp=Z,23nm,1.6s,mb4.8						
DAWY	**Dawson**	**77.76**	**1**	*e*P	**P**	**22 28 46.3**	**-0.4**
DAWY	**Dawson**	**77.76**	**1**	*e*P	**P**	**22 28 46.3**	**-0.4**
YKA	**Yellowknife Ar**	**77.77**	**350**	P	**P**	**22 28 44.0**	**-2.8**
	comp=Z,1.1nm,0.9s,mb3.8,baz=14,slow=15,SNR=2.9						
PDAR	**Pinedale Array**	**95.39**	**340**	LR	LR	23 13 43.9	
	comp=Z,52nm,20.3s,MS4.0,baz=171,slow=36						

KRSC 26 22:19:03.0±0.8, 55°.87N×164°.79E, h19km±18km, ML3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.95**	**134**	*e*P		Pb	22 19 20.4	-0.4
BKI					*e*S	Sb	22 19 32.9	0.0
KBTR	**Krutoberegovo**	**1.16**	**288**	*e*P		Pn	22 19 21.8	-2.3
KBTR					*e*S	Sb	22 19 35.9	-3.0
BDR	**Baidarnaya**	**2.12**	**291**	*e*P		Pn	22 19 37.8	+0.5
BDR					*e*S	Sn	22 20 02.9	-0.2
SRKR	**Sorokina**	**2.17**	**293**	*e*P		Pn	22 19 37.9	-0.1
SRKR					*e*S	Sn	22 20 03.5	-0.8
MKZ	**Mys Kozlova**	**2.19**	**234**	*e*P		Pn	22 19 37.2	-1.1
MKZ					*e*S	Sn	22 20 02.1	-2.8
ZLN	**Zelenaya**	**2.25**	**275**	*e*S		Sn	22 20 07.3	+1.0
KLY	**Klyuchi**	**2.36**	**283**	*e*P		Pn	22 19 39.3	-1.4
KLY					*e*S	Sn	22 20 05.8	-3.3
BZMR	**Bezymyannaya**	**2.42**	**273**	*e*P		Pn	22 19 43.8	+2.3
BZMR					*e*S	Sn	22 20 14.2	+3.6
KMNR	**Kamenistaya**	**2.57**	**269**	*e*P		Pn	22 19 44.9	+1.3
KMNR					*e*S	Sn	22 20 15.8	+1.5
KPT	**Kopyto**	**2.57**	**274**	*e*P		Pn	22 19 44.7	+1.1
KPT					*e*S	Sn	22 20 14.5	+0.2
KOZ	**Kozyrevsk**	**2.77**	**276**	*e*P		Pn	22 19 48.7	+2.4
KOZ					*e*S	Sn	22 20 22.4	+3.2
SRDR	**Sredinnyy**	**2.88**	**281**	*e*P		Pn	22 19 48.6	+0.8
SRDR					*e*S	Sn	22 20 22.2	+0.4
AVH	**Avacha**	**4.38**	**236**	*e*P		Pn	22 20 09.9	+1.5
AVH					*e*S	Sn	22 20 59.9	+1.0
PET	**Petropavlovsk**	**4.58**	**234**	*e*P		Pn	22 20 12.0	+0.9
PET					*e*S	Sn	22 21 02.6	-1.1

*CSEM **26** 22:20:26.8±0.2, 38°.50N×26°.82E, h18km±3km, MD2.8, Error ellipse: s-maj=8.3km s-min=4.2km az=165.0*
*DDA **26** 22:20:26.7, 38°.55N×26°.79E, h16km±1km, Md2.8*
*ISCJB **26** 22:20:27.2±0.9, 38°.50N±0°.05×26°.81E±0°.05, h22km±10km, Error ellipse: s-maj=8.8km s-min=6.6km az=10.0*
*THE **26** 22:20:27.5, 38°.50N×26°.78E, h17km±12km, ML2.7/2, Error ellipse: s-maj=14.4km s-min=0.3km az=136.0*

ISC 26 22:20:27.4±0.6, 38°.51N±0°.07×26°.80E±0°.05, h19km±9km, n14, σ0°54/28, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.22**	**226**	*i* P		**Pg**	**22 20 32.5**	**-0.2**
URLA				*i* S		**Sg**	**22 20 36.5**	**+0.2**
URLA	**Izmir**	**0.22**	**226**	*i* P		**Pg**	**22 20 32.5**	**-0.2**
URLA				*i* S		**Sg**	**22 20 36.5**	**+0.2**
BLCB	**Balcova**	**0.23**	**124**	P		**Pg**	**22 20 33.0**	**+0.2**
BLCB				S		**Sg**	**22 20 36.9**	**+0.4**
BLCB	**Balcova**	**0.23**	**124**	P		**Pg**	**22 20 33.0**	**+0.2**
BLCB				S		**Sg**	**22 20 36.9**	**+0.4**
CHOS	**Chios island**	**0.60**	**258**	P		**Pb**	**22 20 39.0**	**-0.2**
CHOS				S		**Sb**	**22 20 47.5**	**+0.2**
CHOS	**Chios island**	**0.60**	**258**	P		**Pb**	**22 20 39.0**	**-0.2**
CHOS				S		**Sb**	**22 20 47.5**	**+0.2**
AYVA	**Ayvalik**	**0.80**	**354**	*i* P		**Pb**	**22 20 41.5**	**-1.1**
AYVA				*i* S		**Sb**	**22 20 52.9**	**-0.2**
AYVA	**Ayvalik**	**0.80**	**354**	*i* P		**Pb**	**22 20 41.5**	**-1.2**
AYVA				*i* S		**Sb**	**22 20 52.9**	**-0.2**
PRK	**Paraskevi**	**0.84**	**331**	P		**Pb**	**22 20 43.1**	**-0.3**
PRK				S		**Sb**	**22 20 55.2**	**+0.9**
PRK	**Paraskevi**	**0.84**	**331**	P		**Pb**	**22 20 43.1**	**-0.3**
PRK				S		**Sb**	**22 20 55.2**	**+0.9**
SIGR	**SIGRI**	**1.01**	**314**	P		**Pb**	**22 20 45.8**	**-0.5**
SIGR				S		**Sb**	**22 20 59.8**	**+0.5**
SIGR	**SIGRI**	**1.01**	**314**	P		**Pb**	**22 20 45.8**	**-0.5**
SIGR				S		**Sb**	**22 20 59.8**	**+0.5**
BALY	**Balya**	**1.38**	**27**	*i* P		**Pn**	**22 20 51.1**	**-0.5**
BALY				*i* S		**Sn**	**22 21 10.2**	**+0.8**
BALY	**Balya**	**1.38**	**27**	*i* P		**Pn**	**22 20 51.1**	**-0.6**
BALY				*i* S		**Sn**	**22 21 10.2**	**+0.8**

*NEIC **26** 22:39:41.9, 14°.48N×95°.17W, h14km, MD4.3(MEX), After MEX.*
*MEX **26** 22:39:42.0±0.8, 14°.48N×95°.17W, h15km±31km, MD4.1*
*IDC **26** 22:39:45.0±2.2, 15°.23N×94°.61W, h0km, mb3.6/4, mb1 4.0/5, mb1mx3.8/18, mbtmp3.6/5, ML3.1/1, MS2.9/2, Ms1 2.9/2, ms1mx2.6/33, Error ellipse: s-maj=57.5km s-min=31.9km az=51.0*
*ISCJB **26** 22:39:46.2±1.0, 15°.02N±0°.09×95°.00W±0°.05, h33km, mb3.5/4, Error ellipse: s-maj=13.1km s-min=5.7km az=15.6*

ISC 26 22:39:47.2±1.0, 15°.04N±0°.09×95°.03W±0°.04, h35km, n17, σ1°52/25, mb3.5/4, 1C, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.27**	**305**	*e*P		**Pn**	**22 40 06.8**	**-1.7**
HUIG					*e*S	**Sn**	**22 40 23.8**	**-0.6**
HUIG	**Huatulco**	**1.27**	**305**	*e*P		**Pn**	**22 40 06.8**	**-1.7**
HUIG					*e*S	**Sn**	**22 40 23.8**	**-0.6**
PCIG		**1.87**	**69**	*e*P		**Pn**	**22 40 14.7**	**-2.0**
PCIG					⇑*e*S	**Sn**	**22 40 41.8**	**+2.8**
CMIG	**Matias Romero**	**2.05**	**4**	Pn		**Pn**	**22 40 18.7**	**-0.5**
	8.7nm,0.3s,baz=170,slow=11,SNR=54							
CMIG					Sn	**Sn**	**22 40 43.1**	**-0.4**
	20nm,0.3s,baz=80,slow=16,SNR=6.4							
TGIG		**2.52**	**46**	*e*P		**Pn**	**22 40 25.9**	**+0.2**
TGIG					*e*S	**Sn**	**22 41 02.5**	**+7.3**
VHO	**Vista Hermosa**	**2.60**	**321**	*e*P		**Pn**	**22 40 26.8**	**0.0**
VHO					*e*S	**Sn**	**22 41 00.8**	**+3.5**
VHO	**Vista Hermosa**	**2.60**	**321**	*e*P		**Pn**	**22 40 26.8**	**0.0**
VHO					*e*S	**Sn**	**22 41 00.8**	**+3.5**
THIG		**2.67**	**92**	*e*P		**Pn**	**22 40 21.6**	**-6.2**
THIG					*e*S	**Sn**	**22 40 57.6**	**-1.4**
PNIG	**Pinotepa**	**3.28**	**295**	*i* P		**Pn**	**22 40 37.1**	**+1.0**
PNIG					*i* S	**Sn**	**22 41 11.8**	**-2.0**
TEIG	**Tepich**	**8.25**	**50**	*e*Pn		**Pn**	**22 41 42.6**	**-1.8**
	15nm,0.6s							
TXAR	**Lajitas Array**	**16.31**	**332**	Pn		**Pn**	**22 43 37.1**	**+3.5**
	0.0nm,0.3s,baz=154,slow=15,SNR=13							
TXAR					LR	LR	22 50 16.6	
	comp=Z,38nm,20.8s,baz=185,slow=39							
TKL	**Tuckaleechee C**	**22.88**	**24**	LR		LR	22 54 26.6	
	comp=Z,36nm,19.9s,baz=286,slow=39							
NVAR	**Mina Array Bea**	**31.05**	**323**	P		**P**	**22 46 07.1**	**+5.3**
	0.5nm,0.8s,mb3.4,baz=118,slow=9.7,SNR=3.2							
NVAR	**Mina Array Bea**	**31.05**	**323**	P		**P**	**22 46 07.1**	**+5.3**
ILAR	**Eielson Array**	**60.75**	**337**	P		**P**	**22 49 56.7**	**+1.6**
	0.5nm,0.8s,mb3.7,baz=135,slow=4.4,SNR=6.9							
ESDC	**Sonseca Array**	**81.37**	**51**	P		**P**	**22 52 01.6**	**+1.0**
	0.2nm,0.4s,mb3.4,baz=285,slow=5.4,SNR=6.0							
NOA	**NORSAR Array B**	**84.62**	**28**	P		**P**	**22 52 19.4**	**+2.5**
	0.4nm,0.7s,mb3.7,baz=292,slow=4.8,SNR=3.4							

*IDC **26** 22:57:50.6±2.3, 15°.32N×94°.60W, h0km, mb3.6/4, mb1 4.0/5, mb1mx3.7/18, mbtmp3.6/5, ML3.2/1, MS3.3/2, Ms1 3.3/2, ms1mx2.5/25, Error ellipse: s-maj=54.9km s-min=31.7km az=52.0*
*ISCJB **26** 22:57:51.7±1.0, 15°.10N±0°.08×94°.99W±0°.04, h33km, mb3.6/4, MS3.4/2, Error ellipse: s-maj=12.1km s-min=5.6km az=3.1*
*MEX **26** 22:57:51.8±0.5, 14°.97N×94°.99W, h20km±14km, MD4.0*

ISC 26 22:57:52.7±1.1, 15°.09N±0°.09×95°.00W±0°.04, h35km, n12, σ1°30/17, mb3.6/4, MS3.4/2, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.26**	**302**	*e*P		**Pn**	**22 58 12.3**	**-1.5**
HUIG					*i* S	**Sn**	**22 58 28.2**	**-1.3**
PCIG		**1.82**	**70**	*e*P		**Pn**	**22 58 19.7**	**-1.8**
PCIG					*i* S	**Sn**	**22 58 42.5**	**-0.9**
CMIG	**Matias Romero**	**1.99**	**3**	Pn		**Pn**	**22 58 23.4**	**-0.4**
	6.0nm,0.3s,baz=169,slow=10,SNR=62							
CMIG					Sn	**Sn**	**22 58 47.8**	**+0.3**
	9.4nm,0.3s,baz=176,slow=21,SNR=6.6							
TGIG		**2.46**	**47**	*i* P		**Pn**	**22 58 29.8**	**-0.5**
TGIG					*i* S	**Sn**	**22 58 59.0**	**-0.2**
VHO	**Vista Hermosa**	**2.58**	**320**	*i* P		**Pn**	**22 58 32.6**	**+0.7**
VHO					*i* S	**Sn**	**22 59 03.5**	**+1.4**
PNIG	**Pinotepa**	**3.28**	**294**	*i* P		**Pn**	**22 58 41.8**	**+0.3**
PNIG					*i* S	**Sn**	**22 59 17.4**	**-1.9**
TXAR	**Lajitas Array**	**16.27**	**332**	Pn		**Pn**	**23 01 42.2**	**+3.6**
	0.0nm,0.3s,baz=152,slow=13,SNR=11							
SCHQ	**Schefferville**	**45.27**	**23**	LR		LR	23 27 37.2	
	comp=Z,53nm,18.6s,MS3.5,baz=304,slow=40							
YKA	**Yellowknife Ar**	**49.33**	**348**	P		**P**	**23 06 39.0**	**+0.8**
	1.0nm,0.7s,mb4.0,baz=150,slow=8.2,SNR=4.0							
ILAR	**Eielson Array**	**60.70**	**337**	P		**P**	**23 08 03.5**	**+3.3**
	0.5nm,0.8s,mb3.7,baz=139,slow=4.2,SNR=5.7							
ESDC	**Sonseca Array**	**81.31**	**51**	P		**P**	**23 10 07.0**	**+1.3**
	0.2nm,0.5s,mb3.3,baz=295,slow=4.4,SNR=5.8							
NOA	**NORSAR Array B**	**84.56**	**28**	P		**P**	**23 10 24.6**	**+2.5**
	0.3nm,0.7s,mb3.5,baz=285,slow=7.4,SNR=3.4							
NOA				LR		LR	23 51 34.8	
	comp=Z,9.4nm,18.8s,MS3.2,baz=90,slow=38							

CASC 26 23:09:24.5±1.3, 12°.28N×87°.52W, h42km±49km, MD3.6, ML2.9, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CNGN	**Cerro Negro**	**0.83**	**75**	*e*P		**Pn**	**23 09 40.2**	**+0.4**
CNGN					*e*S	Sn	23 09 51.8	+0.9
CNGN					AML	AML	23 09 56.9	
	comp=E,333nm,0.3s							
COPN	**Copaltepe**	**0.91**	**96**	*e*P		Pn	23 09 40.8	-0.2
COPN					*e*S	Sn	23 09 53.3	+0.4
MOMN	**Momotombo**	**0.97**	**82**	*e*P		Pn	23 09 42.1	+0.5
CNCH	**Conchagua**	**1.03**	**343**	*e*P		Pn	23 09 42.5	0.0
CNCH					*e*S	Sn	23 09 57.0	+1.2
CSAN		**1.08**	**95**	*e*P		Pn	23 09 44.0	+0.9
MGAN	**Managua**	**1.25**	**96**	*e*S		Sn	23 10 01.0	-0.2
TICN	**Ticuantepe**	**1.28**	**101**	*e*P		Pn	23 09 46.2	+0.2
BLLM	**Bellamira**	**1.35**	**329**	*e*P		Pn	23 09 46.9	0.0
BLLM					*e*S	Sn	23 10 04.7	+1.1
CAHU	**Cacacuatique**	**1.62**	**336**	*e*P		Pn	23 09 51.1	+0.4
CAHU					*e*S	Sn	23 10 13.0	+2.6
TGUH	**Tegucigalpa,Un**	**1.78**	**8**	*e*P		Pn	23 09 53.1	+0.3
TGUH					*e*S	Sn	23 10 14.4	+0.2
LFRS	**El Faro**	**2.01**	**312**	*e*P		Pn	23 09 55.9	0.0
LFRS					*e*S	Sn	23 10 20.1	+0.3

*NEIC **26** 23:11:44.4±1.0, 11°.07S×164°.60E, h10km, mb4.1/1, Error ellipse: s-maj=28.7km s-min=14.9km az=143.0*
*ISCJB **26** 23:11:45.6±6.5, 11°.2S±0°.2×164°.5E±0°.1, h31km±46km, mb4.1/6, MS3.2/3, Error ellipse: s-maj=27.9km s-min=17.5km az=17.2*
*IDC **26** 23:11:53.5±11.0, 11°.27S×164°.47E, h88km±100km, mb3.8/6, mb1 3.9/7, mb1mx3.7/17, mbtmp3.7/7, ML3.7/1, MS3.2/4, Ms1 3.2/4, ms1mx3.0/21, Error ellipse: s-maj=59.7km s-min=32.0km az=127.0*

ISC 26 23:11:47.1±6.6, 11°.2S±0°.2×164°.5E±0°.1, h30km±47km, n13, σ0°45/11, mb4.1/6, MS3.2/3, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.84**	**291**	*e*Pn		**Pn**	**23 12 57.6**	**-0.4**
HNR					*e*Sn	**Sn**	**23 13 53.2**	**+0.2**
CTA	**Charters Tower**	**19.67**	**241**	P		**Pn**	**23 16 16.2**	**+0.8**
	0.2nm,0.3s,baz=66,slow=15,SNR=6.0							
CTA				LR		LR	23 22 35.0	
	comp=Z,58nm,20.7s,baz=226,slow=33							
CTAO	**Charters Tower**	**19.67**	**241**	*e*P		**Pn**	**23 16 16.3**	**+0.9**
	9.3nm,0.9s							
GUMO	**Guam**	**31.42**	**321**	LR		LR	23 30 11.7	
	comp=Z,45nm,19.2s,MS3.2,baz=122,slow=35							
ASAR	**Alice Springs**	**31.66**	**243**	P		**P**	**23 18 07.0**	**-0.9**
	1.9nm,0.7s,mb4.0,baz=70,slow=9.9,SNR=16							
ASAR				PcP		PcP	23 20 58.6	-1.0
	0.5nm,0.9s,baz=4.3,slow=5.0,SNR=5.0							
DAV	**Davao City (W)**	**42.80**	**293**	LR		LR	23 36 55.1	
	comp=Z,46nm,20.8s,MS3.4,baz=226,slow=35							
KSRS	**Korea Array**	**59.34**	**327**	LR		LR	23 47 02.9	
	comp=Z,18nm,19.7s,MS3.2,baz=163,slow=36							
PETK	**Petropavlovsk-**	**64.32**	**355**	P		**P**	**23 22 19.6**	**+0.1**
	2.9nm,0.8s,mb4.4,baz=154,slow=7.8,SNR=6.4							
SONM	**Songino Array**	**78.09**	**324**	P		**P**	**23 23 43.2**	**+0.2**
	1.0nm,0.8s,mb3.8,baz=136,slow=5.5,SNR=6.6							
ILAR	**Eielson Array**	**84.04**	**19**	P		**P**	**23 24 14.6**	**+0.2**
	1.3nm,0.8s,mb4.1,baz=231,slow=6.0,SNR=14							
NVAR	**Mina Array Bea**	**87.04**	**50**	P		**P**	**23 24 30.0**	**+0.1**
	0.6nm,0.9s,mb3.8,baz=242,slow=6.2,SNR=4.1							
NVAR	**Mina Array Bea**	**87.04**	**50**	P		**P**	**23 24 30.0**	**+0.1**
MKAR	**Makanchi Array**	**92.82**	**317**	P		**P**	**23 24 56.6**	**-0.3**
	0.9nm,0.9s,mb4.2,baz=98,slow=5.5,SNR=5.4							

*ISCJB **26** 23:50:09.8±0.9, 9°.8N±0°.1×57°.41E±0°.09, h10km, mb4.1/23, MS3.7/7, Error ellipse: s-maj=20.2km s-min=12.2km az=1.2*
*IDC **26** 23:50:11.0±0.9, 9°.86N×57°.63E, h0km, mb3.9/14, mb1 4.0/14, mb1mx3.9/23, mbtmp3.9/14, MS3.7/6, Ms1 3.7/6, ms1mx3.4/22, Error ellipse: s-maj=22.3km s-min=20.8km az=8.0*
*NEIC **26** 23:50:12.3±0.6, 9°.89N×57°.44E, h10km, mb4.5/9, Error ellipse: s-maj=13.1km s-min=9.7km az=174.0*
*CSEM **26** 23:50:16.1±0.3, 9°.93N×57°.43E, h33km, mb4.5/9, Ms3.5, Error ellipse: s-maj=13.0km s-min=9.6km az=173

CLL	**Collm**	**55.01**	**328**	*e*P	**P**	**23 59 43.0**	**-0.6**
FRF	**La Foret Royal**	**55.32**	**317**	*e*P	**P**	**23 59 45.7**	**-0.3**
	8.8nm,0.9s,mb4.5						
FRF	**La Foret Royal**	**55.32**	**317**	*e*P	**P**	**23 59 45.7**	**-0.3**
	4.4nm,0.9s,mb4.5						
FRF	**La Foret Royal**	**55.32**	**317**	*e*P	**P**	**23 59 45.7**	**-0.3**
	4.4nm,0.9s,mb4.5						
LMR	**La Mourre**	**55.33**	**316**	*e*P	**P**	**23 59 45.6**	**-0.5**
LMR	**La Mourre**	**55.33**	**316**	*e*P	**P**	**23 59 45.6**	**-0.5**
SONM	**Songino Array**	**55.84**	**38**	P	**P**	**23 59 49.1**	**-0.5**
	1.0nm,0.9s,mb3.9,baz=236,slow=8.0,SNR=5.5						
SONM	**Songino Array**	**55.84**	**38**	P	**P**	**23 59 49.1**	**-0.5**
LPG	**La Plagne**	**55.99**	**319⇑**	*i*P	**P**	**23 59 50.7**	**-0.1**
	11nm,1.2s,mb4.5						
LPG	**La Plagne**	**55.99**	**319⇑**	*i*P	**P**	**23 59 50.7**	**-0.1**
	5.6nm,1.2s,mb4.5						
LPG	**La Plagne**	**55.99**	**319⇑**	*i*P	**P**	**23 59 50.7**	**-0.1**
	5.6nm,1.2s,mb4.5						
LPL	**La Plagne**	**56.01**	**319⇑**	*i*P	**P**	**23 59 50.8**	**-0.1**
LPL	**La Plagne**	**56.01**	**319⇑**	*i*P	**P**	**23 59 50.8**	**-0.1**
FINES	**FINESS Array B**	**56.43**	**343**	P	**P**	**23 59 53.3**	**-0.3**
	1.1nm,0.8s,mb3.9,baz=170,slow=8.5,SNR=2.3						
FINES				LR	LR	00 25 51.5	
	comp=Z,66nm,19.4s,MS3.7,baz=320,slow=38						
FINES	**FINESS Array B**	**56.43**	**343**	P	**P**	**23 59 53.3**	**-0.3**
CABF	**La Chapelle**	**56.85**	**320⇑**	*i*P	**P**	**23 59 57.6**	**+0.7**
	20nm,1.0s,mb4.8						
CABF	**La Chapelle**	**56.85**	**320⇑**	*i*P	**P**	**23 59 57.6**	**+0.7**
	10nm,1.0s,mb4.8						
CABF	**La Chapelle**	**56.85**	**320⇑**	*i*P	**P**	**23 59 57.6**	**+0.7**
	10nm,1.0s,mb4.8						
CDF	**Champ du Feu**	**56.85**	**322⇑**	*i*P	**P**	**23 59 57.0**	**+0.1**
CDF	**Champ du Feu**	**56.85**	**322⇑**	*i*P	**P**	**23 59 57.0**	**+0.1**
HINF	**Hinteralfeld**	**56.86**	**322**	*e*P	**P**	**23 59 56.7**	**-0.2**
HINF	**Hinteralfeld**	**56.86**	**322**	*e*P	**P**	**23 59 56.7**	**-0.2**
MEZF	**Maizieres J'vi**	**58.24**	**322**	*e*P	**P**	**00 00 06.0**	**-0.7**
MEZF	**Maizieres J'vi**	**58.24**	**322**	*e*P	**P**	**00 00 06.0**	**-0.7**
LOR	**Lormes**	**58.51**	**320⇑**	*i*P	**P**	**00 00 08.6**	**0.0**
LOR				*e*MLR	MLR		
	comp=Z,46nm,18.2s,MS3.3						
LOR	**Lormes**	**58.51**	**320⇑**	*i*P	**P**	**00 00 08.6**	**0.0**
LOR				LR	LR		
	comp=Z,50nm,18.3s,MS3.7						
LOR	**Lormes**	**58.51**	**320⇑**	*i*P	**P**	**00 00 08.6**	**0.0**
SSF	**Saint Saulge**	**58.66**	**320⇑**	*i*P	**P**	**00 00 09.5**	**-0.1**
	comp=Z,4.2nm,0.8s,mb4.2						
SSF	**Saint Saulge**	**58.66**	**320⇑**	*i*P	**P**	**00 00 09.5**	**-0.1**
	comp=Z,2.1nm,0.8s,mb4.2						
SSF	**Saint Saulge**	**58.66**	**320⇑**	*i*P	**P**	**00 00 09.5**	**-0.1**
	comp=Z,2.1nm,0.8s,mb4.2						
BGF	**Bois d'Agland**	**58.91**	**319**	*e*P	**P**	**00 00 10.7**	**-0.6**
	comp=Z,9.2nm,0.8s,mb4.5						
BGF	**Bois d'Agland**	**58.91**	**319**	*e*P	**P**	**00 00 10.7**	**-0.6**
	comp=Z,4.6nm,0.8s,mb4.6						
BGF	**Bois d'Agland**	**58.91**	**319**	*e*P	**P**	**00 00 10.7**	**-0.6**
	comp=Z,4.6nm,0.8s,mb4.6						
TCF	**Toulx Ste Croi**	**59.23**	**318**	*e*P	**P**	**00 00 13.0**	**-0.6**
TCF	**Toulx Ste Croi**	**59.23**	**318**	*e*P	**P**	**00 00 13.0**	**-0.6**
BAIF	**Baives**	**59.37**	**323**	*e*P	**P**	**00 00 14.7**	**+0.3**
BAIF	**Baives**	**59.37**	**323**	*e*P	**P**	**00 00 14.7**	**+0.3**
SJPF	**Ste Jean**	**60.63**	**314**	*e*P	**P**	**00 00 21.7**	**-1.6**
SJPF	**Ste Jean**	**60.63**	**314**	*e*P	**P**	**00 00 21.7**	**-1.6**
LDF	**La Druitiere**	**61.48**	**320**	*e*P	**P**	**00 00 28.6**	**-0.4**
LDF	**La Druitiere**	**61.48**	**320**	*e*P	**P**	**00 00 28.6**	**-0.4**
ESDC	**Sonseca Array**	**61.87**	**310**	P	**P**	**00 00 32.6**	**+0.9**
	comp=Z,1.2nm,0.7s,mb4.2,baz=88,slow=5.8,SNR=17						
ESDC	**Sonseca Array**	**61.87**	**310**	P	**P**	**00 00 32.6**	**+0.9**
KSRS	**Korea Array**	**68.59**	**54**	P	**P**	**00 01 13.6**	**-1.8**
	comp=Z,0.6nm,0.7s,mb3.6,baz=263,slow=8.2,SNR=4.5						
ASAR	**Alice Springs**	**81.70**	**116**	P	**P**	**00 02 30.4**	**-0.9**
	comp=Z,0.3nm,0.4s,mb3.6,baz=302,slow=5.3,SNR=3.3						
ASAR	**Alice Springs**	**81.70**	**116**	P	**P**	**00 02 30.4**	**-0.9**
STKA	**Stephens Creek**	**90.19**	**122**	LR	LR	00 38 16.9	
	comp=Z,144nm,18.9s,MS4.4,baz=25,slow=32						

*IDC **27** 00:02:46.7±0.4, 19°.21N×119°.69E, h0km, mb4.9/24, mb1 4.9/26, mb1mx4.9/29, mbtmp4.9/26, ML4.3/2, MS4.2/18, Ms1 4.3/18, ms1mx4.1/24, Error ellipse: s-maj=14.5km s-min=12.4km az=50.0*

*ISCJB **27** 00:02:48.0±0.8, 19°.30N±0°.02×119°.65E±0°.02, h16km±5km, mb5.1/194, MS4.5/60, Error ellipse: s-maj=3.9km s-min=2.6km az=175.4*

*SZGRF **27** 00:02:49.7, 19°.60N×120°.83E, h33km, mb5.1, MS4.9, Philippine Islands region*

*NEIC **27** 00:02:50.1±1.4, 19°.18N×119°.67E, h23km±9km, mb5.2/88, Error ellipse: s-maj=5.3km s-min=4.5km az=88.0*

*MOS **27** 00:02:51.3±0.9, 19°.24N×119°.65E, h42km, mb5.4/86, MS4.7/35, Error ellipse: s-maj=8.5km s-min=4.1km az=118.8*

*BJI **27** 00:02:51.9, 19°.51N×119°.48E, h28km, mB5.0/37, mb4.7/47, ML4.5/4, Ms4.8/54, Ms7 4.7/47*

*TEH **27** 00:02:52.0, 19°.17N×119°.68E, h35km*

*DJA **27** 00:03:02, 19°.19N×119°.65E, h139km, mb5.1/37*

ISC 27 00:02:50.9±0.8, 19°.29N±0°.02×119°.67E±0°.02, h25km±5km, h33km±1.0km:pP-P,n554,σ1º03/565,mb5.1/194,MS4.5/60, 21C-67D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**1.31**	**137⇑**	*i*P	**Pn**	**00 03 12.1**	**-1.5**
ABRA	**Dolores**	**1.91**	**149**	*e*P	**Pn**	**00 03 20.5**	**-1.3**
APYP	**Conner**	**2.06**	**133**	*e*P	**Pn**	**00 03 23.1**	**-0.8**
SGCP	**Mt. Cagua**	**2.48**	**114**	*e*P	**Pn**	**00 03 30.5**	**+0.8**
CVP	**Callao Caves**	**2.58**	**127**	*e*P	**Pn**	**00 03 30.6**	**-0.4**
CVP				*e*S	**Sn**	**00 04 01.7**	**+0.1**
BOLP	**Bolinao**	**2.90**	**175**	*e*P	**Pn**	**00 03 34.6**	**-0.9**
CAUP	**Cauayan**	**3.10**	**138**	*e*P	**Pn**	**00 03 41.1**	**+2.8**
PALP	**Palanan**	**3.43**	**130**	*e*P	**Pn**	**00 03 44.7**	**+2.0**
TWG	**Pinlang**	**3.75**	**20**	*e*Pn	**Pn**	**00 03 47.7**	**+0.5**
TWG				*e*Sn	**Sn**	**00 04 28.8**	**-1.8**
BALP	**Baler**	**3.97**	**152**	*e*P	**Pn**	**00 03 51.2**	**+1.1**
TPUB	**Ta-pu**	**4.09**	**12**	*e*Pn	**Pn**	**00 03 50.9**	**-1.0**
TPUB				*e*S	**Sn**	**00 04 35.9**	**-3.1**
YULB	**Yu-li**	**4.36**	**20**	*e*Pn	**Pn**	**00 03 56.2**	**+0.7**
YULB				*e*S	**Sn**	**00 04 42.6**	**-2.9**
SSLB	**Suanglung**	**4.64**	**15**	*e*Pn	**Pn**	**00 03 58.6**	**-0.7**
SSLB				*e*S	**Sn**	**00 04 48.7**	**-3.7**
NACB	**Ninganchiao**	**5.18**	**20**	*e*Pn	**Pn**	**00 04 07.4**	**+0.6**
NACB				*e*S	**Sn**	**00 05 04.7**	**-1.1**
TGY	**Tagaytay City**	**5.30**	**167**	Pn	**Pn**	**00 04 11.0**	**+2.5**
	20nm,0.3s,baz=256,slow=7.9,SNR=4.5						
TGY				Sn	**Sn**	**00 05 11.7**	**+3.0**
	17nm,0.3s,baz=171,slow=19,SNR=4.1						
YHNB	**Yeheng**	**5.59**	**16**	*e*Pn	**Pn**	**00 04 13.2**	**+0.8**
YHNB				*e*S	**Sn**	**00 05 14.7**	**-1.1**
QZH	**Quanzhou**	**5.72**	**350**	Pn	**Pn**	**00 04 12.0**	**-2.2**
QZH				Sn	**Sn**	**00 05 13.0**	**-6.0**
QZH				smax			
	comp=N,420nm,0.7s						
QZH				smax			
	comp=E,650nm,0.8s						
QZH				LR	LR		
	comp=N,16μm,14.8s						
QZH				LR	LR		
	comp=E,5μm,15.9s						
QZH				LR	LR		
	comp=Z,14μm,14.0s						
TATO	**Taipei**	**5.91**	**16**	*e*Pn	**Pn**	**00 04 17.5**	**+0.7**
TATO				*e*S	**Sn**	**00 05 20.9**	**-2.8**
GQP	**Guinayangan**	**5.98**	**153**	*e*P	**Sn**	**00 05 24.7**	**-0.7**
GZH	**Guangzhou**	**7.01**	**304**	Pn	**Pn**	**00 04 30.0**	**-2.0**
GZH				Sn	**Sn**	**00 05 42.8**	**-8.1**
GZH				smax			
	comp=N,230nm,0.8s						
GZH				smax			
	comp=E,220nm,0.8s						
QIZ	**Qiongzhong**	**9.29**	**270**	P	**Pn**	**00 05 04.0**	**+0.7**
QIZ				S	**Sn**	**00 06 48.5**	**+1.4**
QIZ				LR	LR		
	comp=N,990nm,10.9s						
QIZ				LR	LR		
	comp=Z,1μm,11.8s						
SSE	**Sheshan**	**11.84**	**6**	P	**Pn**	**00 05 38.5**	**+0.4**
SSE				S	**Sn**	**00 07 52.0**	**+2.6**
SSE				pmax	pmax		
	comp=Z,27nm,0.7s						
SSE				pmax	pmax		
	comp=Z,93nm,4.0s						
SSE				LR	LR		
	comp=N,1μm,17.3s						
SSE				LR	LR		
	comp=E,280nm,17.3s						
SSE				LR	LR		
	comp=Z,1μm,17.7s						
WHN	**Wuhan**	**12.20**	**338**	*e*P	**Pn**	**00 05 47.5**	**+4.4**
WHN				S	**Sn**	**00 07 47.5**	**-11**
WHN				LR	LR		
	comp=N,4μm,12.2s						
WHN				LR	LR		
	comp=E,5μm,11.4s						
WHN				LR	LR		
	comp=Z,11μm,13.6s						
NJ2	**Nanjing**	**12.73**	**357**	*e*P	**Pn**	**00 05 51.0**	**+0.6**
NJ2				pP		00 05 58.5	
NJ2				PP		00 06 01.3	
NJ2				sP		00 06 03.0	
NJ2				S	**Sn**	**00 08 13.0**	**+1.7**
NJ2				sS		00 08 25.0	
NJ2				pmax	pmax		
	comp=Z,20nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,220nm,8.1s						
NJ2				LR	LR		
	comp=N,4μm,13.4s						
NJ2				LR	LR		
	comp=E,2μm,13.2s						
NJ2				LR	LR		
	comp=Z,4μm,14.0s						
DAV	**Davao City (W)**	**13.43**	**154**	LR	LR	00 12 04.1	
	comp=Z,3μm,19.7s,baz=8.5,slow=42						
KKM	**Kota Kinabalu**	**13.59**	**195**	P	**Pn**	**00 05 58.9**	**-3.2**
KKM	**Kota Kinabalu**	**13.59**	**195**	Pn	**Pn**	**00 06 01.1**	**-1.0**
	comp=Z,40nm,1.1s						
SDKM	**Sandakan**	**13.78**	**190**	P	**Pn**	**00 06 05.4**	**+0.7**
GYA	**Guiyang**	**13.95**	**303**	P	**Pn**	**00 06 04.3**	**-2.7**
GYA				pP		00 06 13.5	
GYA				S	**Sn**	**00 08 36.0**	**-5.0**
GYA				pmax	pmax		
	comp=Z,30nm,0.8s						
GYA				pmax	pmax		
	comp=Z,190nm,4.5s						
GYA				LR	LR		
	comp=N,3μm,12.3s						
GYA				LR	LR		
	comp=E,2μm,13.9s						
GYA				LR	LR		
	comp=Z,4μm,12.6s						
MYLDM	**Lahad Datu**	**14.07**	**185**	P	**Pn**	**00 06 11.9**	**+3.2**
MYLDM	**Lahad Datu**	**14.07**	**185**	P	**Pn**	**00 06 18.3**	**+10**
	comp=Z,77nm,1.4s						
ENH	**Enshi**	**14.31**	**322**	*e*Pn	**Pn**	**00 06 09.9**	**-2.0**
	comp=Z,30nm,1.2s						
TSM	**Tawau**	**15.00**	**187**	P	**Pn**	**00 06 21.6**	**+0.2**
SGSI	**Sangihe**	**16.53**	**159**	P	**Pn**	**00 06 42.1**	**+1.0**
	comp=Z,6μmcomp=Z,152nm,1.1s						
KMI	**Kunming**	**16.71**	**293**	P	**Pn**	**00 06 42.8**	**-0.6**
KMI				pP	pP	00 06 52.8	+0.4
KMI				PP		00 06 57.8	
KMI				S	**Sn**	**00 09 47.0**	**-1.4**
KMI				pmax	pmax		
	comp=Z,11nm,1.9s						
KMI				pmax	pmax		
	comp=Z,250nm,4.6s						
KMI				LR	LR		
	comp=N,2μm,12.1s						
KMI				LR	LR		
	comp=E,2μm,13.3s						
KMI				LR	LR		
	comp=Z,1μm,12.7s						
TIA	**Tai'an**	**17.01**	**353**	P	**Pn**	**00 06 48.0**	**+0.9**
TIA				LR	LR		
	comp=N,3μm,12.2s						
TIA				LR	LR		
	comp=E,1μm,17.6s						
BTM	**Bintulu**	**17.23**	**203**	P	**Pn**	**00 06 51.4**	**+1.4**
XAN	**Xi'an**	**17.54**	**329**	P	**Pn**	**00 06 52.8**	**-0.8**
XAN				pP	pP	00 07 00.5	-0.9
XAN				sP	sP	00 07 04.0	-0.6
XAN				PP		00 07 07.5	
XAN				SS		00 10 25.3	
XAN				PcP	PcP	00 11 34.0	+0.9
XAN				pmax	pmax		
	comp=Z,7.0nm,1.5s						
XAN				pmax	pmax		
	comp=Z,150nm,10.8s						
XAN				LR	LR		
	comp=N,2μm,14.0s						
XAN				LR	LR		
	comp=E,580nm,12.7s						
XAN				LR	LR		
	comp=Z,1μm,13.8s						
SBUM	**Sibu**	**18.25**	**204**	P	**Pn**	**00 07 02.7**	**+0.2**
SBUM	**Sibu**	**18.25**	**204**	P	**Pn**	**00 07 03.8**	**+1.2**
	comp=Z,1μmcomp=Z,71nm,1.7s						
MNI	**Manado**	**18.44**	**163**	P	**Pn**	**00 07 05.7**	**+0.8**
	comp=Z,6μmcomp=Z,364nm,0.9s						
CD2	**Chengdu**	**18.46**	**312**	P	**Pn**	**00 07 04.5**	**-0.5**
CD2				pP	pP	00 07 15.5	+3.9
CD2				sP	sP	00 07 20.0	+5.2
CD2				PP		00 07 23.5	
CD2				S	**Sn**	**00 10 31.5**	**+0.9**
CD2				pmax	pmax		
	comp=Z,20nm,1.1s						
CD2				pmax	pmax		
	comp=Z,630nm,7.6s						
CD2				LR	LR		
	comp=N,4μm,11.3s						
CD2				LR	LR		
	comp=Z,4μm,13.7s						
MRSI	**Marisa**	**18.82**	**173**	P	**Pn**	**00 07 09.4**	**-0.1**
	comp=Z,2μmcomp=Z,80nm,1.4s						
INCN	**Inchon**	**19.12**	**17**	*e*P	**Pn**	**00 07 13.0**	**0.0**
	comp=Z,69nm,1.1s						
INCN	**Inchon**	**19.12**	**17**	P	**Pn**	**00 07 13.1**	**+0.1**
	SNR=7.3						
TIY	**Taiyuan**	**19.42**	**343**	*e*P	**Pn**	**00 07 16.5**	**0.0**
TIY				LR	LR		
	comp=N,3μm,14.6s						
TIY				LR	LR		
	comp=E,920nm,13.7s						
TIY				LR	LR		
	comp=Z,2μm,15.4s						
KSRS	**Korea Array**	**19.49**	**20**	P	**Pn**	**00 07 16.6**	**-0.7**
	comp=Z,1.0nm,0.3s,baz=201,slow=12,SNR=78						
KSRS				PcP	PcP	00 11 36.3	0.0
	comp=Z,0.1nm,0.3s,baz=180,slow=0.5,SNR=5.5						
KSRS				LR	LR	00 15 25.6	
	comp=Z,649nm,18.5s,baz=199,slow=39						
CHTO	**Chiang Mai**	**19.60**	**272**	*e*P	**Pn**	**00 07 16.8**	**-2.0**
CHTO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CHTO	**Chiang Mai**	**19.60**	**272**	*e*P	**Pn**	**00 07 16.8**	**-2.0**
	comp=Z,10.0nm,1.0s						
DL2	**Dalian**	**19.62**	**5**	⇓P	**Pn**	**00 07 19.0**	**0.0**
DL2				pmax	pmax		
	comp=Z,40nm,1.2s						
DL2				pmax	pmax		
	comp=Z,340nm,7.7s						
DL2				LR	LR		
	comp=N,1μm,15.8s						
DL2				LR	LR		
	comp=E,730nm,13.6s						
DL2				LR	LR		
	comp=Z,1μm,14.4s						
CMAR	**Chiang Mai Arr**	**19.63**	**271**	P	**Pn**	**00 07 17.9**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=85,slow=8.6,SNR=12						
CMAR				PcP	PcP	00 11 37.7	+0.8
	comp=Z,0.2nm,0.3s,baz=46,slow=1.2,SNR=8.9						
CMAR				LR	LR	00 15 00.5	
	comp=Z,215nm,20.0s,baz=100,slow=37						
CMAR				ScP	ScP	00 15 11.6	0.0
	comp=Z,0.1nm,0.3s,baz=58,slow=1.8,SNR=6.1						
TNTI	**Ternate**	**19.89**	**157**	P	**Pn**	**00 07 18.9**	**-3.4**
	comp=Z,2μmcomp=Z,141nm,1.2s						
KSM	**Kuching**	**19.94**	**208**	P	**Pn**	**00 07 21.4**	**-1.4**
KSM	**Kuching**	**19.94**	**208**	*e*P	**Pn**	**00 07 21.1**	**-1.7**
	comp=Z,192nm,1.2s						
KSM	**Kuching**	**19.94**	**208**	P	**Pn**	**00 07 21.5**	**-1.4**
	comp=Z,2μmcomp=Z,152nm,1.3s						
PCI	**Palu**	**20.07**	**180**	P	**P**	**00 07 23.5**	**+1.0**
	comp=Z,2μmcomp=Z,193nm,1.2s						
LUWI	**Luwuk**	**20.43**	**171**	P	**P**	**00 07 26.3**	**-0.1**
	comp=Z,3μmcomp=Z,228nm,1.2s						
STKI	**Sintang**	**20.72**	**204**	P	**P**	**00 07 29.9**	**+0.3**
	comp=Z,8μmcomp=Z,117nm,1.3s						
BJT	**Baijiatuau**	**20.88**	**352**	*e*P	**P**	**00 07 32.6**	**+1.5**
BJT				pmax	pmax		
	comp=Z,56nm,0.7s						
BJT	**Baijiatuau**	**20.88**	**352**	*e*P	**P**	**00 07 32.5**	**+1.4**
	comp=Z,56nm,0.7s						
BJI	**Beijing**	**20.90**	**352**	P	**P**	**00 07 32.8**	**+1.4**
BJI				pP		00 07 41.8	
BJI				sP	sP	00 07 46.0	+4.5
BJI				pmax	pmax		
	comp=Z,98nm,1.5s						
BJI				pmax	pmax		
	comp=Z,510nm,3.1s						
BJI				LR	LR		
	comp=N,2μm,13.2s,MS4.8						
BJI				LR	LR		
	comp=E,990nm,14.9s,MS4.8						
BJI				LR	LR		
	comp=Z,900nm,16.0s,MS4.2						
KTGM	**Kuala Trenggan**	**21.26**	**231**	P	**P**	**00 07 36.5**	**+1.0**
LZH	**Lanzhou**	**21.78**	**323**	*e*P	**P**	**00 07 42.0**	**+1.2**
LZH				pP		00 07 51.3	
LZH				sP	sP	00 07 55.3	+4.3
LZH				PP		00 08 03.5	
LZH				*e*S	**S**	**00 11 37.0**	**-3.4**
LZH				pmax	pmax		
	comp=Z,100nm,1.2s,mb5.1						
LZH				pmax	pmax		
	comp=Z,400nm,4.0s						
LZH				LR	LR		
	comp=N,3μm,12.4s						
LZH				LR	LR		
	comp=Z,3μm,14.2s,MS4.9						
CBIJ	**Chichi jima**	**22.08**	**65**	P	**P**	**00 07 43.4**	**-0.9**
	comp=Z,40nm,0.8s,mb4.9,baz=256,slow=18,SNR=3.2						
CBIJ				LR	LR	00 14 53.8	
	comp=Z,328nm,19.3s,MS3.8,baz=237,slow=33						
TTSI	**Tana Toraja**	**22.19**	**180**	P	**P**	**00 07 46.3**	**+0.9**
HHC	**Hu-ho-hao-te**	**22.59**	**344**	*e*P	**P**	**00 07 49.8**	**+0.4**
HHC				PP		00 08 18.5	
HHC				PcP	PcP	00 11 43.0	+0.8
HHC				S	**S**	**00 11 53.5**	**-2.5**
HHC				ScP	ScP	00 15 19.0	+0.7
HHC				PcS	PcS	00 15 20.8	-0.1
HHC				ScS	ScS	00 19 03.5	-0.1
HHC				pmax	pmax		
	comp=Z,48nm,1.2s,mb4.8						
HHC				pmax	pmax		
	comp=Z,470nm,4.8s						
JHJ	**Hachijo jima 2**	**22.65**	**49**	LR	LR	00 15 08.8	
	comp=Z,320nm,18.8s,MS3.8,baz=241,slow=33						
KBKI	**Kotabaru**	**22.71**	**189**	P	**P**	**00 07 50.3**	**-0.6**
SNY	**Shenyang**	**22.71**	**8**	⇓P	**P**	**00 07 49.8**	**-0.9**
SNY				pmax	pmax		
	comp=Z,44nm,1.8s,mb4.6						
SNY				pmax	pmax		
	comp=Z,450nm,6.2s						
SNY				LR	LR		
	comp=N,1μm,17.1s,MS4.6						
SNY				LR	LR		
	comp=E,1μm,14.3s,MS4.6						
SNY				LR	LR		
	comp=Z,2μm,14.7s,MS4.6						
BTO	**Baotou**	**22.80**	**341**	*e*P	**P**	**00 07 49.8**	**-1.9**
SPSI	**Sidrap Palu**	**23.11**	**180**	P	**P**	**00 07 54.8**	**-0.3**
KULM	**Kulim**	**23.17**	**236**	P	**P**	**00 07 57.7**	**+1.8**
KDI	**Kendari**	**23.28**	**173**	P	**P**	**00 07 57.2**	**+0.3**
	comp=Z,1μmcomp=Z,76nm,1.6s,mb4.9						
MYKOM	**Kota Tinggi**	**23.29**	**224**	P	**P**	**00 07 56.7**	**-0.4**
MYKOM	**Kota Tinggi**	**23.29**	**224**	P	**P**	**00 07 56.6**	**-0.4**
	comp=Z,48nm,1.1s,mb4.8						
IPM	**Ipoh**	**23.40**	**233**	P	**P**	**00 07 57.6**	**-0.6**
IPM	**Ipoh**	**23.40**	**233**	P	**P**	**00 07 56.8**	**-1.4**
	comp=Z,25nm,2.1s,mb4.3						
KGM	**Kluang**	**23.47**	**225**	P	**P**	**00 07 59.4**	**+0.5**
BNSI	**Bone**	**23.54**	**179**	P	**P**	**00 08 01.2**	**+1.7**
	comp=Z,1μmcomp=Z,60nm,1.1s,mb4.9						
NLAI	**Namlea**	**23.55**	**161**	P	**P**	**00 08 00.5**	**+0.9**
	comp=Z,4μmcomp=Z,401nm,1.3s,mb5.7						
MAJO	**Matsushiro**	**23.67**	**40**	*e*P	**P**	**00 07 59.7**	**-0.9**
MAJO				*e*		00 08 10.5	
MAJO				pmax	pmax		
	comp=Z,194nm,1.8s,mb5.2						
MAJO	**Matsushiro**	**23.67**	**40**	*e*P	**P**	**00 07 59.7**	**-0.9**
	comp=Z,194nm,1.8s,mb5.2						
MAJO				*e*		00 08 10.5	
MAT	**Matsushiro**	**23.67**	**40**	P	**P**	**00 07 59.6**	**-1.0**
MAT				S	**S**	**00 12 15.0**	**+1.2**
MJAR	**Matsushiro Arr**	**23.67**	**40**	P	**P**	**00 07 59.6**	**-1.0**
	comp=Z,20nm,1.1s,mb4.4,baz=228,slow=8.9,SNR=40						
MJAR				PcP	PcP	00 11 44.9	+0.3
	comp=Z,1.6nm,0.9s,baz=226,slow=2.6,SNR=4.9						
FRIM	**Kepong**	**23.78**	**230**	P	**P**	**00 08 01.8**	**0.0**
AAI	**Ambon**	**24.32**	**159**	P	**P**	**00 08 07.4**	**+0.7**
	comp=Z,4μmcomp=Z,267nm,1.4s,mb5.5						
BKSI	**Bulukumba**	**24.46**	**179**	P	**P**	**00 08 07.4**	**-0.5**
	comp=Z,720nmcomp=Z,48nm,1.2s,mb4.8						
GUMO	**Guam**	**24.81**	**99**	P	**P**	**00 08 10.9**	**-0.2**
	comp=Z,75nm,0.9s,mb5.2,baz=122,slow=2.9,SNR=3.8						
TPI	**Tanjungpandan**	**24.89**	**210**	P	**P**	**00 08 11.3**	**-0.6**
	comp=Z,859nmcomp=Z,60nm,1.7s,mb4.8						
CN2	**Changchun**	**24.92**	**10**	*e*P	**P**	**00 08 12.0**	**+0.1**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.6						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,1μm,16.0s,MS4.7						
CN2				LR	LR		
	comp=E,1μm,16.0s,MS4.7						
CN2				LR	LR		
	comp=Z,800nm,16.0s,MS4.3						
VLA	**Vladivostok**	**25.90**	**21⇑**	*e*P	**P**	**00 08 23.4**	**+2.6**
VLA				pmax	pmax		
	comp=Z,197nm,1.6s,mb5.4						
VLA	**Vladivostok**	**25.90**	**21⇑**	*e*P	**P**	**00 08 23.5**	**+2.7**
BAKI	**Biak**	**25.97**	**140**	P	**P**	**00 08 21.7**	**0.0**
	comp=Z,68nm,1.0s,mb5.1						
PSI	**Prapat**	**26.07**	**234**	LR	LR	00 18 35.6	
	comp=Z,529nm,18.4s,MS4.1,baz=111,slow=36						
BKNI	**Bangkinang**	**26.25**	**226**	P	**P**	**00 08 23.6**	**-0.6**
	comp=Z,93nm,1.1s,mb5.2						
SHL	**Shillong**	**26.40**	**289**	*e*PKP	**P**	**00 08 27.0**	**+1.4**
MDJ	**Mudanjiang**	**26.58**	**16**	P	**P**	**00 08 27.5**	**+0.6**
MD

SISI Saibi 28.78 227 P P 00 08 45.3 -1.6
comp=Z,66nm,1.3s,mb5.2
HIA Hailar 29.91 0⇑iP P 00 08 56.5 -0.1
ULN Ulaanbaatar 30.30 343 eP P 00 09 00.7 +0.7
ULN pmax pmax
comp=Z,27nm,1.2s,mb4.8
ULN Ulaanbaatar 30.30 343 eP P 00 09 00.7 +0.6
comp=Z,27nm,1.2s,mb4.8
ULN Ulaanbaatar 30.30 343 P P 00 09 01.0 +1.0
SNR=13
SONM Songino Array 30.46 342 P P 00 09 02.0 +0.6
comp=Z,8.3nm,1.0s,mb4.4,baz=163,slow=9.6,SNR=45
SONM PcP PcP 00 12 01.3 +0.8
comp=Z,1.0nm,0.9s,baz=126,slow=2.5,SNR=3.7
SONM LR LR 00 22 00.9
comp=Z,952nm,19.5s,MS4.5,baz=112,slow=38
SONM Songino Array 30.46 342 P P 00 09 02.0 +0.6
SONM 00 12 01.3
ASAJ Asahikawa 31.31 33 LR LR 00 22 07.4
comp=Z,370nm,21.9s,MS4.0,baz=196,slow=37
KLR Kul'dur 31.41 15 eP P 00 09 07.0 -2.9
KLR pmax pmax
comp=Z,50nm,2.0s,mb5.0
KLR MLR MLR
comp=N,1μm,12.5s
KLR MLR MLR
comp=Z,3μm,12.5s,MS5.2
YSS Yuzh-Sakhalins 33.44 29⇓eP P 00 09 28.0 +0.3
YSS e 00 09 38.8
YSS pmax pmax
comp=Z,60nm,1.1s,mb5.4
YSS MLR MLR
comp=E,400nm,16.0s
YSS MLR MLR
comp=Z,400nm,16.0s,MS4.2
YSS Yuzh-Sakhalins 33.44 29 eP P 00 09 28.7 +1.0
comp=Z,64nm,1.2s,mb5.4
ZAK Zakamensk 33.66 341⇓iP P 00 09 29.8 +0.3
ZAK e 00 12 05.2
ZAK pmax pmax
comp=Z,8.0nm,1.3s,mb4.5
KAKA Kakadu 34.19 157 eP P 00 09 32.7 -1.8
comp=Z,22nm,0.8s,mb5.1
KAKA epP pP 00 09 42.6 +0.6
KAKA Kakadu 34.19 157 eP P 00 09 32.4 -2.1
comp=Z,81nm,0.9s,mb5.7
KAKA Kakadu 34.19 157 P P 00 09 33.0 -1.5
TLY Talaya 34.70 342 eP P 00 09 39.4 +0.9
TLY e 00 11 10.1
TLY pmax pmax
comp=Z,20nm,1.1s,mb5.0
TLY MLR MLR
comp=Z,716nm,17.0s,MS4.5
TLY Talaya 34.70 342 eP P 00 09 39.5 +1.0
comp=Z,13nm,0.9s,mb4.8
TLY Talaya 34.70 342 P P 00 09 39.8 +1.3
SNR=6.1
IRK Irkutsk 35.03 343 eP P 00 09 42.0 +0.7
IRK e 00 09 53.6
IRK pmax pmax
comp=Z,55nm,2.1s,mb5.1
KNA Kununurra 35.95 165 P P 00 09 48.1 -1.5
comp=Z,821nmcomp=Z,107nm,1.0s,mb5.7
WMQ Urumqi 36.24 320 P P 00 09 53.3 +1.4
WMQ pP pP 00 10 03.0 +3.6
WMQ sP sP 00 10 07.0 +4.5
WMQ PP PP 00 11 17.0 +2.5
WMQ PcP PcP 00 12 18.0 +1.2
WMQ S S 00 15 31.3 +0.5
WMQ ScS ScS 00 20 05.3 -2.2
WMQ pmax pmax
comp=Z,16nm,1.4s,mb4.8
WMQ pmax pmax
comp=Z,120nm,4.2s
WMQ LR LR
comp=N,840nm,15.4s,MS4.7
WMQ LR LR
comp=E,480nm,16.0s,MS4.7
WMQ LR LR
comp=Z,740nm,15.6s,MS4.6
FITZ Fitzroy Crossi 37.61 171 eP P 00 10 01.9 -1.8
comp=Z,43nm,0.9s,mb5.2
FITZ epP pP 00 10 11.4 +0.1
FITZ Fitzroy Crossi 37.61 171 eP P 00 10 01.9 -1.8
comp=Z,31nm,1.0s,mb5.0
FITZ Fitzroy Crossi 37.61 171 P P 00 10 02.1 -1.6
comp=Z,73nm,1.2s,mb5.3
CLNS Chul'man 37.70 5 eP P 00 10 04.8 +0.8
CLNS pmax pmax
comp=Z,26nm,1.2s,mb4.8
CLNS pmax pmax
comp=E,12nm,0.9s
CLNS pmax pmax
comp=N,18nm,1.1s
CLNS MLR MLR
comp=N,293nm,14.0s,MS4.5
CLNS MLR MLR
comp=Z,370nm,12.0s,MS4.4
CLNS MLR MLR
comp=E,363nm,10.0s,MS4.5
PMG Port Moresby 39.33 134c iP P 00 10 18.2 -0.1
PMG pmax pmax
comp=Z,127nm,1.9s
PMG Port Moresby 39.33 134 eP P 00 10 14.8 -3.5
comp=Z,172nm,1.5s,mb5.6
PMG Port Moresby 39.33 134 P P 00 10 18.9 +0.6
comp=Z,68nm,1.2s,mb5.3
MBWA Marble Bar 40.20 180 eP P 00 10 23.5 -1.9
comp=Z,20nm,1.0s,mb4.8
MK31 Makanchi Array 41.04 321 eP P 00 10 33.2 +1.1
MK31 ePcP PcP 00 12 31.9 +0.2
MKAR Makanchi Array 41.04 321 P P 00 10 33.0 +0.9
comp=Z,25nm,1.0s,mb4.8,baz=113,slow=9.3,SNR=79
MKAR PcP PcP 00 12 31.4 -0.3
comp=Z,3.6nm,0.9s,baz=116,slow=5.5,SNR=4.7
MKAR ScP ScP 00 16 19.9 0.0
comp=Z,0.5nm,0.9s,baz=151,slow=2.8,SNR=4.1
MKAR LR LR 00 28 39.5
comp=Z,452nm,18.1s,MS4.4,baz=264,slow=38
MKAR Makanchi Array 41.04 321 P P 00 10 33.0 +0.9
MKAR 00 12 31.4
MKAR Makanchi Array 41.04 321 P P 00 10 33.0 +0.9
MKAR PcP PcP 00 12 31.4 -0.3
MKAR ScP ScP 00 16 19.9 0.0
MKAR LR LR 00 28 39.5
WRAB Tennant Creek 41.55 159 P P 00 10 35.3 -1.2
comp=Z,387nm,1.0s,mb6.0,SNR=22
WRAB Tennant Creek 41.55 159 eP P 00 10 34.0 -2.5
WRAB Tennant Creek 41.55 159 P P 00 10 36.5 0.0
comp=Z,74nm,1.1s,mb5.2
WRA Warramunga Arr 41.55 159 P P 00 10 35.0 -1.5
baz=342,slow=8.9
KSH Kashi 42.58 308 P P 00 10 48.3 +3.5
KSH pP pP 00 10 58.3 +5.8
KSH sP sP 00 11 02.5 +7.0
KSH PP PP 00 12 30.3 +6.6
KSH PcP PcP 00 12 39.3 +2.4
KSH ScP ScP 00 16 27.5 +1.2
KSH PcS PcS 00 16 31.0 +2.1
KSH S S 00 17 09.3 +3.2
KSH sS sS 00 17 26.3 +7.7
KSH SS SS 00 20 15.5 -0.9
KSH ScS ScS 00 20 44.5 -0.4
KSH pmax pmax
comp=Z,9.0nm,0.7s,mb4.6
KSH pmax pmax
comp=Z,190nm,6.6s
KSH LR LR
comp=N,650nm,13.5s,MS4.9
KSH LR LR
comp=E,1μm,14.4s,MS4.9
KSH LR LR
comp=Z,1μm,12.9s,MS5.0
ULHL Ulahol 43.17 312 P P 00 10 51.2 +1.6
SNR=16
YAK Yakutsk 43.27 7 eP P 00 10 49.7 -0.4
YAK e*PP pP 00 10 59.4 +1.7
YAK e 00 12 32.9
YAK e 00 12 38.6
YAK eS S 00 17 15.3 -0.3
YAK eSS SS 00 20 22.1 -7.2
YAK e 00 20 44.6
YAK pmax pmax
comp=Z,82nm,1.0s,mb5.4
YAK pmax pmax
comp=E,13nm,1.2s
YAK pmax pmax
comp=N,46nm,1.3s
YAK pmax pmax
comp=Z,7.0nm,0.6s,mb4.6
YAK smax
comp=N,74nm,11.8s
YAK smax
comp=E,51nm,11.8s
YAK MLR MLR
comp=N,316nm,15.0s
YAK MLR MLR
comp=N,627nm,14.0s
YAK MLR MLR
comp=Z,880nm,14.0s,MS4.8
YAK Yakutsk 43.27 7 eP P 00 10 50.2 +0.1
ZALV Zalesovo Beam 43.70 331 P P 00 10 53.7 0.0
comp=Z,23nm,0.9s,mb4.9,baz=116,slow=6.8,SNR=94
ZALV LR LR 00 29 19.8
comp=Z,271nm,19.5s,MS4.2,baz=205,slow=36
ZALV Zalesovo Beam 43.70 331 P P 00 10 53.7 0.0
ZALV LR LR 00 29 19.8
KZA Kyzart 43.83 311 P P 00 10 57.6 +2.7
SNR=6.5
KBK Karagaybulak 44.21 312 P P 00 10 59.9 +1.9
SNR=6.2
USP Ospenovka 44.71 313 P P 00 11 03.1 +1.1
SNR=11
PETK Petropavlovsk- 44.72 32 P P 00 11 02.5 +0.6
comp=Z,29nm,1.1s,mb5.0,baz=196,slow=3.8,SNR=41
PETK PcP PcP 00 12 43.6 -0.3
comp=Z,2.6nm,0.9s,baz=192,slow=5.7,SNR=2.9
PETK LR LR 00 32 14.9
comp=Z,192nm,18.7s,MS4.0,baz=236,slow=40
PETK Petropavlovsk- 44.72 32 P P 00 11 02.5 +0.6
PETK 00 12 43.6
PETK Petropavlovsk- 44.72 32 P P 00 11 02.5 +0.6
PETK PcP PcP 00 12 43.6 -0.3
PETK LR LR 00 32 14.9
ASAR Alice Springs 44.89 161 P P 00 11 02.5 -1.0
comp=Z,21nm,0.9s,mb5.0,baz=337,slow=7.0,SNR=56
ASAR PcP PcP 00 12 44.1 -0.8
comp=Z,0.6nm,0.4s,baz=352,slow=5.6,SNR=2.4
AML Almayashu 44.95 311 P P 00 11 06.4 +2.5
SNR=12
AML Almayashu 44.95 311 eP P 00 11 05.9 +2.0
comp=Z,25nm,1.2s,mb4.9
EKS2 Erkin-Say 45.04 312 eP P 00 11 05.7 +1.1
comp=Z,30nm,1.6s,mb4.9
KURK Kurchatov 45.07 324 P P 00 11 05.9 +1.3
comp=Z,334nm,1.0s,mb6.1,SNR=47
KURK Kurchatov 45.07 324d iP P 00 11 05.3 +0.7
KURK pmax pmax
comp=Z,97nm,1.2s,mb5.5
KURK Kurchatov 45.07 324 P P 00 11 05.6 +0.9
SNR=32
PET Petropavlovsk 45.16 32 eP P 00 11 05.7 +0.4
PET eS S 00 17 43.5 +0.2
PET pmax pmax
comp=Z,26nm,1.0s,mb5.0
PET pmax pmax
comp=Z,100nm,13.5s
PET MLR MLR
comp=Z,200nm,19.0s,MS4.1
PET smax
comp=E,20nm,0.7s
PET smax
comp=N,27nm,0.6s
PET Petropavlovsk 45.16 32 eP P 00 11 05.8 +0.5
comp=N,185nm,1.5s,mb5.7
CTA Charters Tower 47.01 145 eP P 00 11 20.7 +0.4
comp=N,20nm,1.1s,mb5.0
CTA epP pP 00 11 31.5 +3.5
CTAO Charters Tower 47.01 145 eP P 00 11 20.8 +0.5
CTAO pmax pmax
comp=Z,41nm,1.1s,mb5.3
CTAO Charters Tower 47.01 145 eP P 00 11 20.8 +0.5
comp=Z,41nm,1.1s,mb5.3
KBL Kabul 47.16 300 eP P 00 11 22.3 +0.9
KBL pmax pmax
comp=Z,20nm,1.3s,mb4.9
KBL Kabul 47.16 300 eP P 00 11 22.3 +0.9
comp=Z,20nm,1.3s,mb4.9
KK31 Karatay Array 47.47 311 i P P 00 11 23.8 +0.1
KK31 pmax pmax
comp=Z,18nm,1.0s,mb5.0
KK31 Karatay Array 47.47 311 i P P 00 11 23.9 +0.2
SEY Seymchan 49.04 19 i P P 00 11 36.6 +1.1
SEY Seymchan 49.04 19 i P P 00 11 36.6 +1.1
VOSK Vostochnaya 50.22 324 P P 00 11 44.5 -0.1
VOSK pmax pmax
comp=Z,6.0nm,1.2s,mb4.5
FORT Forrest 50.42 171 eP P 00 11 45.3 -1.1
comp=Z,53nm,0.8s,mb5.6
FORT epP pP 00 11 54.6 +0.5
FORT Forrest 50.42 171 eP P 00 11 45.2 -1.1
comp=Z,47nm,0.8s,mb5.6
KLBR Kellerberrin 50.62 182 eP P 00 11 46.8 -1.0
comp=Z,33nm,1.1s,mb5.2
KLBR epP pP 00 11 55.5 0.0
BVAR Borovoye Array 50.66 324 P P 00 11 48.7 +0.7
comp=Z,2.4nm,0.7s,mb4.2,baz=119,slow=9.0,SNR=17
BVAR PcP PcP 00 13 04.5 -0.6
comp=Z,6.8nm,0.8s,baz=143,slow=3.2,SNR=12
BRVK Borovoye 50.74 324 eP P 00 11 49.1 +0.6
BRVK e 00 13 05.1
BRVK pmax pmax
comp=Z,51nm,1.6s,mb5.2
BRVK Borovoye 50.74 324 eP P 00 11 49.1 +0.6
comp=Z,51nm,1.6s,mb5.2
BRVK ePcP PcP 00 13 05.1 -0.3
BRVK Borovoye 50.74 324 P P 00 11 49.6 +1.1
SNR=14
ZRNK Zerenda 51.42 323 i P P 00 11 53.9 +0.3
ZRNK pmax pmax
comp=Z,23nm,1.4s,mb4.9
TIXI Tiksi 52.65 4 eP P 00 12 01.7 -0.8
TIXI pmax pmax
comp=Z,37nm,1.3s,mb5.2
TIXI MLR MLR
comp=Z,736nm,12.0s,MS5.0
TIXI Tiksi 52.65 4 eP P 00 12 02.5 0.0
comp=Z,15nm,1.0s,mb4.9
STKA Stephens Creek 55.04 157 eP P 00 12 20.1 -0.4
comp=Z,15nm,0.9s,mb5.0
STKA epP pP 00 12 30.6 +2.3
STKA Stephens Creek 55.04 157 P P 00 12 20.2 -0.3
comp=Z,19nm,0.9s,mb5.1,baz=341,slow=7.2,SNR=20
STKA Stephens Creek 55.04 157 P P 00 12 20.2 -0.3
AB31 Akbulak array 55.94 317 i P P 00 12 27.0 +0.1
AB31 pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
ABKAR Akbulak array 55.94 317 eP P 00 12 27.1 +0.2
comp=Z,24nm,1.2s,mb5.1
ABKT Ailbek 56.17 303 P P 00 12 30.8 +2.1
comp=Z,186nm,1.0s,mb6.1,SNR=14
BILL Bilibino 56.75 19d iP P 00 12 33.2 +0.9
BILL pmax pmax
comp=Z,72nm,1.5s,mb5.5
BILL MLR MLR
comp=Z,300nm,15.0s,MS4.5
BILL Bilibino 56.75 19 eP P 00 12 33.0 +0.7
comp=Z,16nm,0.4s,mb5.4
SVE Sverdlovsk 57.22 326⇑eP P 00 12 36.5 +0.7
SVE ePPP 00 16 03.7
SVE eS S 00 20 34.7 +4.8
SVE eSS SS 00 24 21.5 +2.6
SVE eSSS 00 26 37.7
SVE pmax pmax
comp=Z,41nm,1.5s,mb5.2
SVE MLR MLR
comp=Z,326nm,14.0s,MS4.6
ARU Arti 58.23 325 P P 00 12 42.0 -0.9
comp=Z,94nm,1.1s,mb5.7,SNR=7.0
ARU Arti 58.23 325d iP P 00 12 42.7 -0.2
ARU e 00 14 52.5
ARU S S 00 20 44.8 +1.7
ARU SS SS 00 24 37.6 +2.8
ARU pmax pmax
comp=Z,34nm,1.7s,mb5.1
ARU Arti 58.23 325 eP P 00 12 42.8 -0.1
comp=Z,87nm,1.9s,mb5.5
IANJ Anjilo 59.59 300 eP P 00 12 53.2 +0.5
IGLO Ghaloghah 59.61 302 eP P 00 12 49.2 -3.6
SOKR Solikamsk 59.88 328 eP P 00 12 53.4 -0.9
SOKR pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
SOKR MLR MLR
comp=Z,570nm,22.0s,MS4.7
IFIR Firoozkooh 60.52 301 eP P 00 12 59.9 +0.8
ISFB Sefidab 61.03 299 eP P 00 13 02.5 -0.1
IZEF Zefreh 61.08 298 eP P 00 13 00.9 -2.1
CNB Canberra Magne 61.18 152 eP P 00 13 03.9 +0.5
CNB epP pP 00 13 14.6 +3.3
TOO Toolangi 61.56 157 eP P 00 13 06.8 +0.9
TOO epP pP 00 13 16.3 +2.5
IKLH Kolahrood 61.67 298 eP P 00 13 07.5 +0.6
IPIR Pirpir 62.30 297 eP P 00 13 10.5 -0.7
IVIS Veis 65.44 300 eP P 00 13 31.6 -0.3
DGRG David-gareji 65.88 308 P P 00 13 36.2 +1.7
MTA Mtatsminda 66.29 308 P P 00 13 37.5 +0.3
TBLG Delisi 66.33 308 eP P 00 13 38.4 +1.0
TBLG Delisi 66.33 308 P P 00 13 38.4 +0.9
GNI Garni 66.48 306d iP P 00 13 40.0 +1.6
GNI pmax pmax
comp=Z,51nm,1.3s
GNI Garni 66.48 306 eP P 00 13 39.5 +1.0
comp=Z,75nm,1.5s,mb5.5
ZEI Tsey 66.85 309 eP P 00 13 40.5 -0.3
ZEI pmax pmax
comp=Z,50nm,1.4s,mb5.3
KEH Kehvi 66.87 309 P P 00 13 40.1 -0.8
ONI Oni 67.20 309 P P 00 13 44.8 +1.8
KIV Kislovodsk 67.62 310 P P 00 13 46.0 +0.4
comp=Z,312nm,1.0s,mb6.3,SNR=13
KIV Kislovodsk 67.62 310d iP P 00 13 46.6 +1.0
KIV eS S 00 22 41.9 +0.7
KIV eSS SS 00 27 03.2 +1.2
KIV pmax pmax
comp=Z,50nm,0.9s,mb5.5
KIV pmax pmax
comp=Z,4.0nm,3.3s
KIV MLR MLR
comp=Z,378nm,18.0s,MS4.7
KIV Kislovodsk 67.62 310 eP P 00 13 46.4 +0.7
comp=Z,65nm,1.1s,mb5.6
KIV Kislovodsk 67.62 310 P P 00 13 47.0 +1.4
SNR=22
VRHR Novokhopersk 67.78 318 eP P 00 13 46.0 -0.5
VRHR pmax pmax
comp=Z,60nm,1.2s,mb5.5
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,80nm,1.2s
VORD Divnogorie 69.26 318 eP P 00 13 55.9 +0.2
VORD pmax pmax
comp=N,30nm,0.6s
VORD pmax pmax
comp=E,30nm,0.6s
VORD pmax pmax
comp=Z,20nm,0.6s,mb5.2
VORD MLR MLR
comp=N,200nm,16.0s,MS4.6
VORD MLR MLR
comp=E,190nm,16.0s,MS4.6
VORD MLR MLR
comp=Z,230nm,16.0s,MS4.5
VSR Storozhevoye 69.31 318 eP P 00 13 55.8 -0.3
VSR pmax pmax
comp=N,10.0nm,1.3s
VSR pmax pmax
comp=E,60nm,1.3s
VSR pmax pmax
comp=Z,60nm,1.3s,mb5.4
VSR MLR MLR
comp=N,250nm,17.0s,MS4.7
VSR MLR MLR
comp=E,310nm,17.0s,MS4.7
VSR MLR MLR
comp=Z,330nm,17.0s,MS4.6
SOC Sochi 69.80 310 eP P 00 13 59.2 0.0
SOC e*PP pP 00 14 06.6 -0.6
SOC eS S 00 23 01.2 -5.9
SOC pmax pmax
comp=Z,44nm,0.9s,mb5.4
SOC MLR MLR
comp=Z,527nm,19.0s,MS4.8
LVZ Lovozero 70.43 336 eP P 00 14 04.6 +2.0
LVZ pmax pmax
comp=Z,71nm,2.7s,mb5.1
LVZ MLR MLR
comp=Z,463nm,21.0s,MS4.7
TTA Tatalina 70.44 29 eP P 00 14 04.0 +1.2
OBN Obninsk 70.49 323d iP P 00 14 03.1 -0.1
OBN i 00 14 22.1
OBN pmax pmax
comp=Z,109nm,1.4s,mb5.6
OBN MLR MLR
comp=Z,300nm,17.0s,MS4.6
OBN Obninsk 70.49 323 eP P 00 14 03.4 +0.1
comp=Z,132nm,1.5s,mb5.7
APA Apatity 70.93 336⇑iP P 00 14 05.6 0.0
APA pmax pmax
comp=Z,39nm,1.0s,mb5.3
APA MLR MLR
comp=Z,1μm,16.0s,MS5.2
ANN Anapa 71.25 312 eP P 00 14 07.2 -0.9
ANN pmax pmax
comp=Z,65nm,1.3s,mb5.4
ANN MLR MLR
comp=Z,263nm,20.0s,MS4.5
PPLA Purkeypile 72.19 29 eP P 00 14 14.2 +0.9
comp=Z,55nm,1.5s,mb5.3
JOF Joensuu 72.28 331 eP P 00 14 12.9 -1.0
JOF pmax pmax
comp=Z,53nm,1.1s,mb5.4
JOF Joensuu 72.28 331 ep P 00 14 12.9 -1.0
comp=Z,53nm,1.1s,mb5.4
COLD Coldfoot 72.45 24 eP P 00 14 16.2 +1.4
comp=Z,14nm,1.2s,mb4.8
BPAW Bear Paw Mtn. 72.56 27 eP P 00 14 16.4 +0.9
comp=Z,66nm,1.2s,mb5.4
KDAK Kodiak Island 72.72 34 P P 00 14 16.9 +0.3
comp=Z,17nm,1.0s,mb4.9,baz=195,slow=2.1,SNR=6.2
KDAK Kodiak Island 72.72 34 i P P 00 14 17.6 +1.0
KEV Kevo 72.99 339 eP P 00 14 15.5 -2.5
KEV pmax pmax
comp=Z,27nm,0.9s,mb5.2
KEV Kevo 72.99 339 eP P 00 14 15.5 -2.5
comp=Z,27nm,0.9s,mb5.2
KEV Kevo 72.99 339 ep P 00 14 15.5 -2.5
comp=Z,27nm,0.9s,mb5.2
PUL Pulkovo 73.23 328⇑eP P 00 14 20.2 +0.6
PUL pmax pmax
comp=Z,83nm,1.4s,mb5.5
PUL MLR MLR
comp=Z,438nm,16.0s,MS4.8
PUL Pulkovo 73.23 328⇑eP P 00 14 20.3 +0.7
MCK McKinley 73.51 28 eP P 00 14 21.7 +0.5
MCK pmax pmax
comp=Z,56nm,1.1s,mb5.4
MCK McKinley 73.51 28 eP P 00 14 21.7 +0.6
comp=Z,56nm,1.1s,mb5.4
ARCES ARCESS Array B 73.55 339 P P 00 14 21.7 +0.4
comp=Z,18nm,0.9s,mb5.0,baz=60,slow=7.4,SNR=23
ARCES LR LR 00 49 51.9
comp=Z,226nm,19.2s,MS4.5,baz=232,slow=38
ARCES ARCESS Array B 73.55 339 P P 00 14 21.7 +0.4
ARCES LR LR 00 49 51.9
SIM Simferopol' 73.55 312d iP P 00 14 21.8 0.0
SIM eS S 00 23 54.0 +3.7
SIM pmax pmax
comp=Z,42nm,1.0s,mb5.3
COLA College 73.77 26 eP P 00 14 23.2 +0.5
COLA pmax pmax
comp=Z,14nm,0.9s,mb4.9
COLA College 73.77 26 eP P 00 14 23.2 +0.5
comp=Z,14nm,0.9s,mb4.9
PMR Palmer 73.81 30 eP P 00 14 22.7 -0.2
PMR pmax pmax
comp=Z,32nm,1.2s,mb5.1
PMR Palmer 73.81 30 eP P 00 14 22.7 -0.2
comp=Z,32nm,1.2s,mb5.1
ASF Jabal al Asfar 74.05 299 P P 00 14 26.2 +1.2
comp=Z,13nm,1.0s,mb4.8,baz=46,slow=0.8,SNR=14
ILAR Eielson Array 74.20 26 P P 00 14 23.9 -1.2
comp=Z,3.1nm,0.9s,mb4.3,baz=287,slow=5.0,SNR=24
ILAR LR LR 00 51 11.3
comp=Z,69nm,18.8s,MS4.0,baz=309,slow=39
ILAR Eielson Array 74.20 26 P P 00 14 23.9 -1.2
ILAR LR LR 00 51 11.3

KBS Kingsbay 74.54 349 *e*P **P 00 14 27.1 +0.1**
KBS pmax pmax
comp=Z,10.0nm,1.5s,mb4.5
KAF Kangasniemi 74.71 331 *e*P **P 00 14 27.1 -1.1**
KAF pmax pmax
comp=Z,39nm,0.9s,mb5.3
KAF Kangasniemi 74.71 331 *e*P **P 00 14 27.1 -1.1**
comp=Z,39nm,0.9s,mb5.3
KAF Kangasniemi 74.71 331 *e*p **P 00 14 27.1 -1.1**
comp=Z,39nm,0.9s,mb5.3,baz=75,slow=5.4
FINES FINESS Array B 74.96 330 P **P 00 14 29.8 +0.1**
comp=Z,28nm,0.9s,mb5.2,baz=76,slow=8.0,SNR=17
FINES LR LR 00 50 42.6
comp=Z,377nm,18.3s,MS4.7,baz=90,slow=38
FINES FINESS Array B 74.96 330 P **P 00 14 29.8 +0.1**
FINES LR LR 00 50 42.6
BR131 Keskin Array S 74.97 307 *e*P **P 00 14 30.3 +0.1**
comp=Z,11nm,1.2s,mb4.7
BRTR Keskin Array B 74.97 307 P **P 00 14 30.1 0.0**
comp=Z,4.5nm,1.0s,mb4.4,baz=128,slow=8.0,SNR=26
BRTR LR LR 00 52 30.1
comp=Z,142nm,20.2s,MS4.3,baz=66,slow=40
MMAI Mount Meron Ar 75.09 300 P **P 00 14 31.8 +0.8**
comp=Z,12nm,1.0s,mb4.8,baz=72,slow=14,SNR=5.3
MMAI LR LR 00 52 19.8
comp=Z,92nm,18.9s,MS4.1,baz=45,slow=40
VSU Vasula 75.29 327 *i* P **P 00 14 31.9 +0.3**
VSU pmax pmax
comp=Z,154nm,1.2s,mb5.8
DIV Divide 75.49 30 *e*P **P 00 14 33.6 +0.9**
comp=Z,60nm,1.5s,mb5.3
MICGM Minsk 75.55 323 *e*P **P 00 14 31.0 -2.2**
MNK Minsk 75.58 323 *e*P **P 00 14 31.0 -2.4**
AKASG Malin Array Be 75.60 319 P **P 00 14 33.0 -0.5**
comp=Z,22nm,0.9s,mb5.1,baz=64,slow=5.6,SNR=57
AKASG LR LR 00 52 10.4
comp=Z,216nm,19.1s,MS4.5,baz=70,slow=39
AKBB Malin Array Si 75.60 319 *e*P **P 00 14 33.2 -0.3**
KIEV Kiev 75.61 319 *e*P **P 00 14 33.1 -0.5**
KIEV pmax pmax
comp=Z,140nm,1.8s,mb5.6
KIEV Kiev 75.61 319 *e*P **P 00 14 33.0 -0.6**
comp=Z,140nm,1.8s,mb5.6
MENT Mentasta 75.98 28 P **P 00 14 35.4 -0.1**
IDID Didziasalis 76.01 324 *e*P **P 00 14 36.4 +0.6**
IDID AMB AMB 00 14 37.5
comp=Z,38nm,1.0s,mb5.3
BMRM Bremner River 76.08 30 *e*P **P 00 14 36.7 +0.7**
comp=Z,34nm,1.1s,mb5.2
NACGM Naroch 76.08 324 *e*P **P 00 14 34.0 -2.2**
IZAR Zarasai 76.18 324 *e*P **P 00 14 37.2 +0.4**
IZAR AMB AMB 00 14 38.5
comp=Z,26nm,1.0s,mb5.1
EIL Elat 76.27 297 P **P 00 14 38.3 +0.5**
comp=Z,24nm,1.1s,mb5.0,baz=88,slow=4.4,SNR=15
IIGN Ignalina 76.29 324 *e*P **P 00 14 37.9 +0.5**
IIGN AMB AMB 00 14 39.1
comp=Z,23nm,1.2s,mb5.0
KIP Kipapa 76.30 72 *e*P **P 00 14 38.1 0.0**
CSS Prodhromos 76.30 302 *e*P **P 00 14 37.2 -0.7**
comp=Z,22nm,1.0s,mb5.0
EGAK Eagle 76.58 26 *e*P **P 00 14 39.3 +0.4**
comp=Z,15nm,1.1s,mb4.8
TLCR 77.17 314 ⇓P **P 00 14 42.8 +0.3**
TLCR 77.17 314 ⇓*i*P **P 00 14 42.8 +0.3**
LEOM Leova 77.23 315 P **P 00 14 43.2 +0.3**
LEOM Leova 77.23 315 ⇓*i*P **P 00 14 43.0 +0.1**
DAWY Dawson 77.52 26 *e*P **P 00 14 44.7 +0.5**
TIRR Tirgusor 77.62 313 ⇓P **P 00 14 45.1 0.0**
TIRR Tirgusor 77.62 313 ⇓*i*P **P 00 14 45.1 0.0**
ISP Isparta 77.78 306 *i* P **P 00 14 45.5 -0.7**
PSN Preselentsi 77.98 312 *e*P **P 00 14 46.4 -0.8**
INK Inuvik 78.28 21 P **P 00 14 48.3 +0.1**
comp=Z,7.4nm,0.9s,mb4.6,baz=266,slow=4.6,SNR=8.5
INK Inuvik 78.28 21 *e*P **P 00 14 48.3 0.0**
INK pmax pmax
comp=Z,28nm,1.4s
INK Inuvik 78.28 21 *e*P **P 00 14 48.3 0.0**
comp=Z,28nm,1.4s,mb5.0
TESR 78.28 315 ⇓P **P 00 14 48.9 +0.2**
TESR 78.28 315 ⇓*i*P **P 00 14 48.9 +0.1**
AMRR Amara 78.33 313 P **P 00 14 50.6 +1.6**
SUW Suwalki 78.34 323 *e*P **P 00 14 48.7 -0.2**
SUW Suwalki 78.34 323 *e*P **P 00 14 48.7 -0.2**
comp=Z,129nm,1.0s,mb5.8
GRER 78.37 314 ⇓P **P 00 14 51.7 +2.5**
GRER 78.37 314 ⇓*i*P **P 00 14 51.7 +2.5**
VRI Vrincioaia 78.41 315 P **P 00 14 50.7 +1.3**
VRI Vrincioaia 78.41 315 ⇓P **P 00 14 50.6 +1.1**
VRI Vrincioaia 78.41 315 ⇓*i*P **P 00 14 50.6 +1.2**
PLOR Plostina 78.46 315 ⇓P **P 00 14 49.9 +0.1**
PLOR Plostina 78.46 315 ⇓*i*P **P 00 14 49.9 +0.1**
PGOR Pogoanele 78.49 314 ⇑*i*P **P 00 14 51.6 +1.7**
BURAR Bucovina Array 78.92 317 ⇓P **P 00 14 52.6 +0.4**
BURAR Bucovina Array 78.92 317 ⇓*i*P **P 00 14 52.6 +0.4**
BUR08 Bucovina Ar. S 78.92 317 *e*P **P 00 14 52.8 +0.5**
MLR Muntele Rosu 79.04 314 ⇓P **P 00 14 53.6 +0.7**
MLR Muntele Rosu 79.04 314 ⇓*i*P **P 00 14 53.6 +0.7**
LVV L'vov 79.05 319 *e*P **P 00 14 52.9 0.0**
SULR 79.05 314 ⇓P **P 00 14 53.7 +0.6**
SULR 79.05 314 ⇓*i*P **P 00 14 53.7 +0.7**
JMB Yambol 79.44 311 *e*P **P 00 14 55.0 -0.2**
VOIR 79.66 314 P **P 00 14 57.0 +0.7**
VOIR 79.66 314 ⇓P **P 00 14 56.3 0.0**
VOIR 79.66 314 ⇓*i*P **P 00 14 56.3 0.0**
SZH Strazhica 79.67 312 *e*P **P 00 14 56.0 -0.4**
KWP Kalwaria Pacla 79.92 319 *e*P **P 00 14 58.1 +0.5**
KWP Kalwaria Pacla 79.92 319 ⇓P **P 00 14 58.2 +0.5**
KWP Kalwaria Pacla 79.92 319 *e*P **P 00 14 58.1 +0.5**
comp=Z,94nm,1.1s,mb5.6
KWP Kalwaria Pacla 79.92 319 ⇓*i*P **P 00 14 58.2 +0.5**
BMR Baia Mare 80.02 317 P **P 00 14 59.6 +1.4**
PVL Pavlikeni 80.11 312 *e*P **P 00 14 59.0 +0.2**
DIM Dimitrovgrad 80.31 311 *e*P **P 00 15 00.0 +0.1**
OPO Ambohidratompo 80.46 247 P **P 00 14 59.8 -1.2**
comp=Z,6.5nm,0.9s,mb4.5,baz=30,slow=8.1,SNR=3.4
UZH Uzhgorod 80.49 318*c i*P **P 00 15 00.5 -0.2**
TRPA Tarpa 80.49 318 ⇓*i*P **P 00 15 01.1 +0.3**
KDZ Kurdzhali 80.51 311 *e*P **P 00 15 00.0 -1.0**
DRGR 80.80 316 ⇑P **P 00 15 02.8 +0.4**
DRGR 80.80 316 ⇑*i*P **P 00 15 02.8 +0.4**
PLD Plovdiv 80.88 311 *e*P **P 00 15 02.4 -0.6**
DAG Danmarks Havn 80.97 351 ⇑*e*P **P 00 15 03.0 +0.2**
DAG pmax pmax
comp=Z,22nm,1.2s,mb5.0
DAG Danmarks Havn 80.97 351 ⇑*i*P **P 00 15 03.0 +0.2**
comp=Z,22nm,1.2s,mb5.0
PGB Panagyurishte 81.13 312 *e*P **P 00 15 04.0 -0.3**
GZR Gura Zlata 81.19 315 ⇓P **P 00 15 04.4 -0.2**
GZR Gura Zlata 81.19 315 ⇓*i*P **P 00 15 04.3 -0.3**
NIE Niedzica 81.47 319 *e*P **P 00 15 07.0 +1.1**
MMB Musomiste 81.73 311 *e*P **P 00 15 06.0 -1.5**
VTS Vitosha 81.79 312 ⇓P **P 00 15 08.3 +0.5**
VTS Vitosha 81.79 312 *e*P **P 00 15 08.0 +0.2**
VTS Vitosha 81.79 312 ⇓*i*P **P 00 15 08.3 +0.5**
NB2 NORSAR Subarra 81.88 332 P **P 00 15 07.2 -0.7**
comp=Z,36nm,1.0s,mb5.3,baz=65,slow=5.6
NOA NORSAR Array B 81.88 332 P **P 00 15 07.2 -0.7**
comp=Z,21nm,1.0s,mb5.0,baz=65,slow=5.2,SNR=52
NOA PP PP 00 18 14.0 -0.9
comp=Z,1.3nm,0.9s,baz=67,slow=8.3,SNR=4.1
NOA LR LR 00 54 47.8
comp=Z,371nm,19.6s,MS4.8,baz=60,slow=38
NOA NORSAR Array B 81.88 332 P **P 00 15 07.2 -0.7**
NOA 00 18 14.0
BZS Buzias 81.89 315 ⇓P **P 00 15 07.9 -0.4**
BZS Buzias 81.89 315 ⇓*i*P **P 00 15 07.9 -0.4**
GKP Gorka Klasztor 81.93 324 *e*P **P 00 15 08.4 +0.1**
KKB Krupnik 82.11 311 *e*P **P 00 15 08.7 -0.8**
NAO01 NORSAR Array S 82.11 332 *e*P **P 00 15 08.4 -0.7**
comp=Z,13nm,0.9s,mb4.9
BSD Bornholm Skovb 82.50 326 *e*P **P 00 15 11.5 +0.3**
BSD pmax pmax
comp=Z,24nm,1.1s,mb5.1
BSD MLR MLR
comp=Z,540nm,18.0s,MS5.0
BSD Bornholm Skovb 82.50 326 *i* P **P 00 15 11.5 +0.3**
comp=Z,24nm,1.1s,mb5.1
BSD
comp=Z,540nm,18.0s
OKC Ostrava-Krasne 82.64 320 *e*P **P 00 15 12.0 -0.1**
OKC MLR MLR
comp=Z,200nm,13.5s,MS4.7
OKC Ostrava-Krasne 82.64 320⇓*e*P **P 00 15 12.0 -0.1**
OKC AMS AMS 00 54 20.0
comp=Z,200nm,13.5s
VAY Valandovo 82.64 311 *i* P **P 00 15 10.8 -1.5**
VYHS Vyhne 82.70 319 *e*P **P 00 15 13.3 +0.9**
VYHS pmax pmax
comp=Z,13nm,1.3s,mb4.8
VYHS Vyhne 82.70 319 *e*P **P 00 15 13.3 +0.9**
comp=Z,13nm,1.3s,mb4.8
VYHS Vyhne 82.70 319 *e*P **P 00 15 13.2 +0.8**
KOLL Kolacno 82.94 319 *e*P **P 00 15 14.6 +0.9**
KOLL Kolacno 82.94 319 *e*P **P 00 15 14.6 +0.9**
MORC Moravsky Berou 83.03 320 *e*P **P 00 15 14.4 +0.3**
MORC pmax pmax
comp=Z,11nm,1.2s,mb4.8
MORC Moravsky Berou 83.03 320 *e*P **P 00 15 14.4 +0.3**
comp=Z,11nm,1.2s,mb4.8
MORC Moravsky Berou 83.03 320⇓*i*P **P 00 15 14.5 +0.4**
KONO Kongsberg 83.21 331 *e*P **P 00 15 14.3 -0.5**
KONO pmax pmax
comp=Z,11nm,1.0s,mb4.8
KONO Kongsberg 83.21 331 *e*P **P 00 15 14.3 -0.5**
comp=Z,11nm,1.0s,mb4.8
KSP Ksiaz 83.38 322 *e*P **P 00 15 16.4 +0.6**
KSP Ksiaz 83.38 322⇓*i*P **P 00 15 16.3 +0.4**
DPC Dobruska-Polom 83.55 321⇓*i*P **P 00 15 17.3 +0.5**
DPC *e* 00 25 36.5
DPC MLR MLR
comp=Z,300nm,11.9s,MS4.9
DPC Dobruska-Polom 83.55 321⇓*i*P **P 00 15 17.3 +0.5**
DPC *e*S S 00 25 36.5 -0.6
DPC AMS AMS 00 56 00.0
comp=Z,300nm,11.9s
COP Copenhagen 83.57 327 *i* P **P 00 15 14.2 -2.5**
COP pmax pmax
comp=Z,22nm,0.9s,mb5.3
COP MLR MLR
comp=Z,190nm,17.0s,MS4.5
COP Copenhagen 83.57 327 *i* P **P 00 15 14.2 -2.5**
comp=Z,22nm,0.9s,mb5.3
COP
comp=Z,180nm,17.0s
PKSM Moragy 83.64 317 ⇑P **P 00 15 17.6 +0.3**
PKSM Moragy 83.64 317 ⇑*i*P **P 00 15 17.5 +0.2**
UPC Upice 83.67 321 *e*P **P 00 15 18.4 +1.0**
UPC Upice 83.67 321⇓*e*P **P 00 15 18.4 +1.0**
RES Resolute Bay 83.70 9 *e*P **P 00 15 17.6 +0.5**
RES pmax pmax
comp=Z,20nm,1.2s,mb5.1
RES Resolute Bay 83.70 9 *e*P **P 00 15 17.6 +0.5**
comp=Z,20nm,1.2s,mb5.1
VRAC Vranov 83.78 320 ⇓P **P 00 15 18.8 +0.8**
VRAC Vranov 83.78 320 ⇓*i*P **P 00 15 18.8 +0.8**
DLBC Dease Lake 83.87 30 P **P 00 15 19.7 +1.5**
comp=Z,8.8nm,1.0s,mb4.8,baz=277,slow=5.7,SNR=9.2
TREC Trest 84.45 320⇓*i*P **P 00 15 22.0 +0.6**
TREC MLR MLR
comp=Z,300nm,14.6s,MS4.8
TREC Trest 84.45 320⇓*i*P **P 00 15 22.0 +0.6**
TREC AMS AMS 00 57 30.0
comp=Z,300nm,14.6s
PVCC Panska Ves 84.51 322⇓*i*P **P 00 15 22.2 +0.5**
PVCC MLR MLR
comp=Z,300nm,15.4s,MS4.8
PVCC Panska Ves 84.51 322⇓*i*P **P 00 15 22.2 +0.5**
PVCC AMS AMS 00 56 40.0
comp=Z,300nm,15.4s
BRG Berggiesshubel 84.73 322 *e*P **P 00 15 22.9 +0.1**
comp=Z,37nm,1.2s,mb5.4
BRG Berggiesshubel 84.73 322⇓*e*P **P 00 15 23.1 +0.3**
comp=Z,37nm,1.2s,mb5.4
BRG
comp=N,182nm,13.5s
BRG
comp=E,281nm,13.8s
BRG
comp=Z,289nm,18.3s
BRG Berggiesshubel 84.73 322⇓*e*P **P 00 15 23.1 +0.3**
BRG pmax pmax
comp=Z,22nm,1.2s,mb5.2
BRG MLR MLR
comp=N,109nm,13.5s,MS4.7
BRG MLR MLR
comp=E,168nm,13.8s,MS4.7
BRG MLR MLR
comp=Z,173nm,18.3s,MS4.5
PRU Pruhonice 84.74 321⇓*i*P **P 00 15 23.7 +0.9**
PRU MLR MLR
comp=Z,300nm,14.1s,MS4.8
PRU Pruhonice 84.74 321⇓*i*P **P 00 15 23.7 +0.9**
PRU *e*S S 00 25 57.3 +8.2
PRU AMS AMS 00 55 30.0
comp=Z,300nm,14.1s
CONA Conrad Observa 84.76 319 *i* PcP **P 00 15 23.6 +0.7**
comp=Z,23nm,1.4s,mb5.1,SNR=12
MUD Monsted U'grnd 84.87 329 *i* P **P 00 15 22.7 -0.6**
MUD pmax pmax
comp=Z,25nm,1.0s,mb5.3
MUD MLR MLR
comp=Z,300nm,18.0s,MS4.7
MUD Monsted U'grnd 84.87 329 *i* P **P 00 15 22.7 -0.6**
comp=Z,25nm,1.0s,mb5.3
MUD
comp=Z,300nm,18.0s
KOGS Kog 85.09 318 *e*P **P 00 15 24.7 0.0**
CLL Collm 85.09 323 *e*P **P 00 15 24.3 -0.3**
comp=Z,35nm,1.1s,mb5.4
CLL Collm 85.09 323⇓*i*P **P 00 15 24.5 -0.1**
CLL *e*S S 00 25 53.0 +0.4
CLL pmax pmax
comp=Z,35nm,1.1s,mb5.4
CLL MLR MLR
comp=Z,200nm,19.3s,MS4.5
CLL Collm 85.09 323⇓*i*P **P 00 15 24.5 -0.1**
comp=Z,35nm,1.1s,mb5.4
CLL *e*S S 00 25 53.0 +0.4
CLL LR LR
comp=Z,200nm,19.3s,MS4.5
CLL Collm 85.09 323⇓*i*P **P 00 15 24.5 -0.1**
comp=Z,35nm,1.1s,mb5.4
CLL *e*S S 00 25 53.0 +0.4
CLL LV 00 56 00.0
comp=Z,200nm,19.3s
ARSA Arzberg 85.24 318 *i* P **P 00 15 25.6 +0.2**
comp=Z,12nm,1.1s,mb5.0,SNR=12
BSEG Bad Segeberg 85.43 326 *e*P **P 00 15 26.4 +0.2**
comp=Z,33nm,1.2s,mb5.3
BSEG Bad Segeberg 85.43 326 *e*P **P 00 15 26.4 +0.2**
BSEG pmax pmax
comp=Z,33nm,1.2s,mb5.3
KHC Kasperske Hory 85.67 321⇓*i*P **P 00 15 27.6 +0.1**
KHC *e* 00 26 01.2
KHC MLR MLR
comp=Z,300nm,13.0s,MS4.9
KHC Kasperske Hory 85.67 321 *e*P **P 00 15 27.5 0.0**
comp=Z,16nm,1.4s,mb5.1
KHC Kasperske Hory 85.67 321⇓*i*P **P 00 15 27.6 +0.1**
KHC *e*S S 00 26 01.2 +2.9
KHC AMS AMS 00 57 40.0
comp=Z,300nm,13.0s
GEC2 GERESS Array S 85.71 320 *e*P **P 00 15 27.8 +0.1**
comp=Z,19nm,1.2s,mb5.2
GEC2 GERESS Array S 85.71 320 *e*P **P 00 15 27.8 +0.1**
GEC2 pmax pmax
comp=Z,19nm,1.2s,mb5.2
SOKA Soboth 85.77 318 ⇑*i*P **P 00 15 27.9 -0.2**
comp=Z,13nm,0.9s,mb5.2
MOA Molln 85.78 319⇓*i*PcP **P 00 15 28.5 +0.4**
comp=Z,33nm,1.2s,mb5.4,SNR=25
TANN Tannenbergstha 85.78 322 *e*P **P 00 15 28.0 0.0**
comp=Z,18nm,1.3s,mb5.1
NKC Novy Kostel 85.87 322⇓*i*P **P 00 15 28.8 +0.3**
NKC pmax pmax
comp=Z,500nm,16.9s,MS5.0
NKC Novy Kostel 85.87 322⇓*i*P **P 00 15 28.8 +0.3**
NKC AMS AMS 00 57 30.0
comp=Z,500nm,16.9s
PDKS Podkum 86.04 318 *i* P **P 00 15 29.6 +0.2**
WET Wettzell 86.08 321 *e*P **P 00 15 29.9 +0.4**
comp=Z,17nm,1.4s,mb5.1
WET Wettzell 86.08 321 *e*P **P 00 15 29.9 +0.4**
WET pmax pmax
comp=Z,17nm,1.4s,mb5.1
OBKA Obir 86.14 318⇓*i*P **P 00 15 29.8 -0.1**
comp=Z,12nm,1.3s,mb5.0,SNR=8.0
MOX Moxa 86.17 323 *e*P **P 00 15 30.1 +0.1**
comp=Z,21nm,1.6s,mb5.1
MOX *e* 00 15 41.4
MOX
comp=Z,100nm,21.0s
MOX Moxa 86.17 323 *e*P **P 00 15 29.9 -0.1**
comp=Z,21nm,1.4s,mb5.2
MOX Moxa 86.17 323 *e*P **P 00 15 30.1 +0.1**
MOX *e* 00 15 41.4
MOX pmax pmax
comp=Z,21nm,1.6s,mb5.1
MOX MLR MLR
comp=Z,100nm,21.0s,MS4.2
NRDL Niedersach Rie 86.19 325 *e*P **P 00 15 29.2 -0.8**
comp=Z,22nm,1.4s,mb5.2
ROTZ Rotzenmuhle 86.21 322 *e*P **P 00 15 30.6 +0.4**
comp=Z,19nm,1.2s,mb5.2
CLZ Clausthal 86.34 324 *e*P **P 00 15 31.1 +0.3**
comp=Z,39nm,1.6s,mb5.4
CLZ Clausthal 86.34 324 *e*P **P 00 15 31.1 +0.3**
CLZ pmax pmax
comp=Z,39nm,1.6s,mb5.4
LJU Ljubljana 86.35 318 *i* P **P 00 15 31.0 +0.1**
SCO Scoresbysund 86.54 348 *i* P **P 00 15 34.3 +2.9**
SCO pmax pmax
comp=Z,7.0nm,0.9s,mb4.9
SCO MLR MLR
comp=Z,190nm,17.0s,MS4.6
RJOB Jochberg 86.72 320 *e*P **P 00 15 32.7 0.0**
comp=Z,11nm,1.1s,mb5.0
CADS Cadrg 86.77 318 *e*P **P 00 15 32.3 -0.7**
GRA1 Grafenberg Arr 86.82 322 *e*P **P 00 15 33.6 +0.5**
comp=Z,38nm,1.9s,mb5.3
GRA1 LR LR
comp=Z,400nm,18.4s,MS4.9
GRF Grafenberg Arr 86.82 322 *e*P **P 00 15 33.6 +0.5**
comp=Z,38nm,1.9s,mb5.3
GRF *e*L 00 57 23.7
comp=Z,450nm,18.4s
GRF Grafenberg Arr 86.82 322 *e*P **P 00 15 33.6 +0.5**
GRF pmax pmax
comp=Z,38nm,1.9s,mb5.3
GRF MLR MLR
comp=Z,400nm,18.4s,MS4.9
UBBA Unterbreizbach 87.01 323 *e*P **P 00 15 33.9 -0.2**
comp=Z,21nm,1.9s,mb5.0
SUMG Summit 87.19 354 *i* P **P 00 15 34.3 -0.2**
comp=Z,6.7nm,0.9s,mb4.9
SUMG
comp=Z,190nm,17.0s
ABTA Abfaltersbach 87.32 319 ⇑*i*P **P 00 15 35.1 -0.6**
comp=Z,14nm,1.2s,mb5.0
FUR Furstenfeldbru 87.46 321 *e*P **P 00 15 36.5 +0.2**
comp=Z,25nm,1.3s,mb5.3
FUR Furstenfeldbru 87.46 321 *e*P **P 00 15 36.5 +0.2**
FUR pmax pmax
comp=Z,25nm,1.3s,mb5.3
IBBN Ibbenburen 87.55 325 *e*P **P 00 15 36.4 -0.3**
comp=Z,15nm,1.0s,mb5.2
WTTA Wattenberg 87.64 320 ⇑*i*P **P 00 15 36.7 -0.5**
comp=Z,16nm,1.0s,mb5.2
MOTA Moosalm 87.93 320 ⇑*i*PcP **P 00 15 38.4 -0.2**
comp=Z,7.0nm,0.9s,mb4.9
YKA Yellowknife Ar 88.01 22 P **P 00 15 38.7 +0.1**
comp=Z,12nm,0.8s,mb5.2,baz=316,slow=4.8,SNR=41
YKA Yellowknife Ar 88.01 22 P **P 00 15 38.7 +0.1**
TNS Taunus Mts 88.17 323 *e*P **P 00 15 39.4 -0.2**
comp=Z,13nm,1.3s,mb5.0
TNS Taunus Mts 88.17 323 *e*P **P 00 15 39.4 -0.2**
TNS pmax pmax
comp=Z,13nm,1.3s,mb5.0
FETA Feichten 88.30 320⇓*i*PcP **P 00 15 40.2 -0.1**
comp=Z,14nm,1.2s,mb5.1
STU Stuttgart 88.42 322 *e*P **P 00 15 42.5 +1.6**
comp=Z,7.0nm,1.2s,mb4.8
CEL Celeste 88.55 310 *e*P **P 00 15 41.8 +0.1**
comp=Z,55nm,1.4s,mb5.7
AQU L'Aquila 88.61 315 *e*P **P 00 15 41.8 -0.1**
AQU pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
AQU L'Aquila 88.61 315 *e*P **P 00 15 41.8 -0.1**
comp=Z,8.0nm,0.9s,mb5.0
BFO Black Forest 89.13 322 *e*P **P 00 15 42.5 -1.7**
comp=Z,6.0nm,1.2s,mb4.8
BFO Black Forest 89.13 322 *e*P **P 00 15 42.5 -1.7**
BFO pmax pmax
comp=Z,6.0nm,1.2s,mb4.8
MEM Membach 89.34 324 P **P 00 15 44.9 -0.2**
comp=Z,5.8nm,1.4s,mb4.7
CDF Champ du Feu 89.71 322 *e*P **P 00 15 45.8 -1.1**
comp=Z,26nm,1.2s,mb5.1
CDF Champ du Feu 89.71 322 *e*P **P 00 15 45.8 -1.1**
CDF pmax pmax
comp=Z,13nm,1.2s,mb5.1
CDF Champ du Feu 89.71 322 *e*P **P 00 15 45.8 -1.1**
comp=Z,13nm,1.2s,mb5.1
WLF Walferdange 89.73 323 P **P 00 15 47.1 +0.1**
comp=Z,10nm,1.2s,mb5.0
WLF Walferdange 89.73 323 *e*P **P 00 15 47.1 +0.1**
comp=Z,23nm,1.2s,mb5.4
WLF Walferdange 89.73 323 *e*P **P 00 15 47.4 +0.4**
WLF pmax pmax
comp=Z,12nm,1.1s,mb5.1
WLF Walferdange 89.73 323 *e*P **P 00 15 47.4 +0.4**
comp=Z,12nm,1.1s,mb5.1
BCLA Clavier 89.83 324 P **P 00 15 47.4 0.0**
HINF Hinteralfeld 90.25 322 *e*P **P 00 15 47.9 -1.6**
comp=Z,33nm,1.5s,mb5.1
HINF Hinteralfeld 90.25 322 *e*P **P 00 15 47.9 -1.6**
HINF pmax pmax
comp=Z,16nm,1.5s,mb5.1
HINF Hinteralfeld 90.25 322 *e*P **P 00 15 47.9 -1.6**
comp=Z,16nm,1.5s,mb5.1
GIVF Givet 90.25 324 *e*P **P 00 15 48.3 -1.1**
SNF Seneffe 90.34 325 P **P 00 15 49.9 0.0**
comp=Z,5.5nm,1.5s,mb4.7
DOU Dourbes 90.38 324 P **P 00 15 49.3 -0.7**
HAU Haudompre 90.45 322 *e*P **P 00 15 48.9 -1.5**
HAU *e*MLR MLR
comp=Z,187nm,18.0s,MS4.3
HAU Haudompre 90.45 322 *e*P **P 00 15 48.9 -1.5**
HAU LR LR
comp=Z,190nm,18.0s,MS4.6
BAIF Baives 90.61 324 *e*P **P 00 15 50.0 -1.1**
comp=Z,19nm,1.5s,mb4.9
BAIF Baives 90.61 324 *e*P **P 00 15 50.0 -1.1**
BAIF pmax pmax
comp=Z,10.0nm,1.5s,mb4.9
BAIF Baives 90.61 324 *e*P **P 00 15 50.0 -1.1**
comp=Z,9.6nm,1.5s,mb4.9
MEZF Maizieres J'vi 90.95 323 *e*P **P 00 15 51.7 -1.0**
comp=Z,57nm,1.6s,mb5.3
MEZF Maizieres J'vi 90.95 323 *e*P **P 00 15 51.7 -1.0**
comp=Z,57nm,1.6s,mb5.7
CABF La Chapelle 91.30 321 *e*P **P 00 15 53.3 -1.1**
comp=Z,42nm,1.6s,mb5.2
CABF La Chapelle 91.30 321 *e*P **P 00 15 53.3 -1.1**
CABF pmax pmax
comp=Z,21nm,1.6s,mb5.2
CABF La Chapelle 91.30 321 *e*P **P 00 15 53.3 -1.1**
comp=Z,21nm,1.6s,mb5.2
ESK Eskdalemuir 91.36 331 *i* P **P 00 15 55.1 +0.6**
PGF Pioggiola 91.44 316 *e*P **P 00 15 54.2 -0.9**
comp=Z,70nm,1.1s,mb5.6
PGF Pioggiola 91.44 316 *e*P **P 00 15 54.2 -0.9**
PGF pmax pmax
comp=Z,35nm,1.1s,mb5.6
PGF Pioggiola 91.44 316 *e*P **P 00 15 54.2 -0.9**
comp=Z,35nm,1.1s,mb5.6
LPG La Plagne 91.45 320 *e*P **P 00 15 54.7 -0.4**
comp=Z,55nm,1.0s,mb5.5
LPG La Plagne 91.45 320 *e*P **P 00 15 54.7 -0.4**
LPG pmax pmax
comp=Z,27nm,1.0s,mb5.5
LPG La Plagne 91.45 320 *e*P **P 00 15 54.7 -0.4**
comp=Z,27nm,1.0s,mb5.5
LPL La Plagne 91.45 320 *e*P **P 00 15 54.6 -0.5**
comp=Z,54nm,1.0s,mb5.5
LPL La Plagne 91.45 320 *e*P **P 00 15 54.6 -0.5**
LPL pmax pmax
comp=Z,27nm,1.0s,mb5.5
LPL La Plagne 91.45 320 *e*P **P 00 15 54.6 -0.5**
comp=Z,27nm,1.0s,mb5.5
MBDF Montbardon 91.82 319 *e*P **P 00 15 56.5 -0.3**
comp=Z,14nm,1.0s,mb5.0
MBDF Montbardon 91.82 319 *e*P **P 00 15 56.5 -0.3**
MBDF pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
MBDF Montbardon 91.82 319 *e*P **P 00 15 56.5 -0.3**

comp=Z,6.9nm,1.0s,mb4.9
SBF Sospel 91.83 318 *e*P **P 00 15 55.5 -1.4**
comp=Z,58nm,1.0s,mb5.6
SBF Sospel 91.83 318 *e*P **P 00 15 55.5 -1.4**
SBF pmax pmax
comp=Z,29nm,1.0s,mb5.6
SBF Sospel 91.83 318 *e*P **P 00 15 55.5 -1.4**
comp=Z,29nm,1.0s,mb5.6
LOR Lormes 92.27 322 *e*P **P 00 15 57.3 -1.6**
comp=Z,28nm,1.6s,mb5.0
LOR *e*MLR MLR
comp=Z,313nm,18.2s,MS4.5
LOR Lormes 92.27 322 *e*P **P 00 15 57.3 -1.6**
LOR pmax pmax
comp=Z,14nm,1.6s,mb5.0
LOR MLR MLR
comp=Z,310nm,18.3s,MS4.8
LOR Lormes 92.27 322 *e*P **P 00 15 57.3 -1.6**
comp=Z,14nm,1.6s,mb5.0
LOR LR LR
comp=Z,310nm,18.3s,MS4.8
ORIF Oris-en-Rattie 92.27 319 *e*P **P 00 15 58.1 -0.8**
comp=Z,26nm,1.0s,mb5.2
ORIF *e*MLR MLR
comp=Z,218nm,20.8s,MS4.3
ORIF Oris-en-Rattie 92.27 319 *e*P **P 00 15 58.1 -0.8**
ORIF pmax pmax
comp=Z,13nm,1.0s,mb5.2
ORIF Oris-en-Rattie 92.27 319 *e*P **P 00 15 58.1 -0.8**
comp=Z,13nm,1.0s,mb5.2
FRF La Foret Royal 92.47 318 *e*P **P 00 15 58.7 -1.2**
comp=Z,33nm,1.2s,mb5.2
FRF La Foret Royal 92.47 318 *e*P **P 00 15 58.7 -1.2**
FRF pmax pmax
comp=Z,16nm,1.2s,mb5.2
FRF La Foret Royal 92.47 318 *e*P **P 00 15 58.7 -1.2**
comp=Z,16nm,1.2s,mb5.2
SSF Saint Saulge 92.59 322 *e*P **P 00 15 58.9 -1.4**
comp=Z,11nm,1.3s,mb4.8
SSF Saint Saulge 92.59 322 *e*P **P 00 15 58.9 -1.4**
SSF pmax pmax
comp=Z,5.0nm,1.3s,mb4.8
SSF Saint Saulge 92.59 322 *e*P **P 00 15 58.9 -1.4**
comp=Z,5.4nm,1.3s,mb4.8
SMF Signal de Mont 92.61 322 *e*P **P 00 15 59.1 -1.3**
comp=Z,26nm,1.4s,mb5.2
SMF Signal de Mont 92.61 322 *e*P **P 00 15 59.1 -1.3**
SMF pmax pmax
comp=Z,13nm,1.4s,mb5.2
SMF Signal de Mont 92.61 322 *e*P **P 00 15 59.1 -1.3**
comp=Z,13nm,1.4s,mb5.2
LMR La Mourre 92.67 318 *e*P **P 00 15 59.6 -1.2**
comp=Z,69nm,1.4s,mb5.6
LMR La Mourre 92.67 318 *e*P **P 00 15 59.6 -1.2**
LMR pmax pmax
comp=Z,35nm,1.4s,mb5.6
LMR La Mourre 92.67 318 *e*P **P 00 15 59.6 -1.2**
comp=Z,35nm,1.4s,mb5.6
AVF Avril sur Loir 92.82 322 *e*P **P 00 15 59.9 -1.5**
comp=Z,17nm,1.3s,mb5.0
AVF Avril sur Loir 92.82 322 *e*P **P 00 15 59.9 -1.5**
AVF pmax pmax
comp=Z,9.0nm,1.3s,mb5.0
AVF Avril sur Loir 92.82 322 *e*P **P 00 15 59.9 -1.5**
comp=Z,8.6nm,1.3s,mb5.0
SMRF Simiane la Rot 92.94 319 *e*P **P 00 16 01.3 -0.7**
comp=Z,23nm,1.2s,mb5.2
SMRF Simiane la Rot 92.94 319 *e*P **P 00 16 01.3 -0.7**
comp=Z,23nm,1.2s,mb5.5
VIVF Saint-Julien-I 93.05 320 *e*P **P 00 16 01.3 -1.2**
comp=Z,28nm,1.2s,mb5.3
VIVF Saint-Julien-I 93.05 320 *e*P **P 00 16 01.3 -1.2**
VIVF pmax pmax
comp=Z,14nm,1.2s,mb5.3
VIVF Saint-Julien-I 93.05 320 *e*P **P 00 16 01.3 -1.2**
comp=Z,14nm,1.2s,mb5.3
BGF Bois d'Agland 93.24 322 *e*P **P 00 16 01.9 -1.4**
JCW Jim Creek 93.25 36 *e*P **P 00 16 05.0 +1.7**
comp=Z,30nm,1.0s,mb5.7
TCF Toulx Ste Croi 93.76 322 *e*P **P 00 16 04.7 -1.0**
comp=Z,34nm,1.8s,mb5.2
TCF Toulx Ste Croi 93.76 322 *e*P **P 00 16 04.7 -1.0**
TCF pmax pmax
comp=Z,17nm,1.8s,mb5.2
TCF Toulx Ste Croi 93.76 322 *e*P **P 00 16 04.7 -1.0**
comp=Z,17nm,1.8s,mb5.2
LASF Ste Croix 93.95 319 *e*P **P 00 16 05.6 -1.1**
comp=Z,29nm,1.4s,mb5.2
ETW Entiat 94.47 36 *e*P **P 00 16 10.4 +1.5**
comp=Z,12nm,1.0s,mb5.3
EDM Edmonton 94.55 29 *e*P **P 00 16 10.2 +1.0**
CAF Calviac 94.58 321 *e*P **P 00 16 08.7 -0.8**
comp=Z,4.2nm,0.8s,mb4.6
CAF Calviac 94.58 321 *e*P **P 00 16 08.7 -0.8**
CAF pmax pmax
comp=Z,2.0nm,0.8s,mb4.6
CAF Calviac 94.58 321 *e*P **P 00 16 08.7 -0.8**
comp=Z,2.1nm,0.8s,mb4.6
RJF Les Rejaudoux 94.70 321 *e*P **P 00 16 09.4 -0.7**
comp=Z,13nm,1.1s,mb5.0
RJF *e*MLR MLR
comp=Z,151nm,17.2s,MS4.2
RJF Les Rejaudoux 94.70 321 *e*P **P 00 16 09.4 -0.7**
RJF pmax pmax
comp=Z,7.0nm,1.1s,mb5.0
RJF MLR MLR
comp=Z,150nm,17.3s,MS4.5
RJF Les Rejaudoux 94.70 321 *e*P **P 00 16 09.4 -0.7**
comp=Z,6.7nm,1.1s,mb5.0
RJF LR LR
comp=Z,150nm,17.3s,MS4.5
MFF Saint Martin d 94.94 323 *e*P **P 00 16 08.9 -2.2**
comp=Z,18nm,1.4s,mb5.0
MFF Saint Martin d 94.94 323 *e*P **P 00 16 08.9 -2.2**
MFF pmax pmax
comp=Z,9.0nm,1.4s,mb5.0
MFF Saint Martin d 94.94 323 *e*P **P 00 16 08.9 -2.2**
comp=Z,9.1nm,1.4s,mb5.0
MTLF Montolieu 95.35 319 *e*P **P 00 16 11.9 -1.2**
comp=Z,12nm,1.3s,mb4.8
MTLF Montolieu 95.35 319 *e*P **P 00 16 11.9 -1.2**
MTLF pmax pmax
comp=Z,6.0nm,1.3s,mb4.9
MTLF Montolieu 95.35 319 *e*P **P 00 16 11.9 -1.2**
comp=Z,5.9nm,1.3s,mb4.9
LFF La Frestale 95.36 321 *e*P **P 00 16 10.7 -2.4**
NVAR Mina Array Bea 100.97 43 P Pdif 00 16 40.2 +2.1
comp=Z,1.4nm,0.9s,baz=260,slow=5.8,SNR=8.6
NVAR Mina Array Bea 100.97 43 P Pdif 00 16 40.2 +2.1
PDAR Pinedale Array 103.42 35 PP PP 00 21 03.1 -1.2
comp=Z,0.3nm,0.7s,baz=320,slow=5.6,SNR=3.6
QSPA South Pole Qui 109.10 180 PKPdf PKiKP 00 21 14.4 -3.1
QSPA *e*PP PP 00 21 44.4 -1.7
TXAR Lajitas Array 116.10 42 PKP PKPdf 00 21 32.7 +0.3
comp=Z,1.8nm,0.9s,baz=233,slow=1.6,SNR=20
TXAR PP PP 00 22 34.9 -1.5
comp=Z,0.3nm,0.8s,baz=282,slow=6.3,SNR=4.0
TXAR Lajitas Array 116.10 42 PKP PKPdf 00 21 32.7 +0.3
TXAR PP PP 00 22 34.9 -1.5
WVT Waverly 119.05 25 *e*PKIKP PKPdf 00 21 37.1 -0.8
SDV Santo Domingo 150.22 21 *e*PKPdf PKPdf 00 22 36.2 +0.6
SDV *e*PKPbc PKPbc 00 22 40.8 +0.1
ROSC El Rosal 152.33 31 PKPbc PKPbc 00 22 46.8 +1.2
comp=Z,7.7nm,0.5s,baz=282,slow=9.3,SNR=11
OTAV Otavalo 153.68 45 *e*PKPdf PKPdf 00 22 38.8 -2.0
LPAZ La Paz 171.99 69 PKP PKPdf 00 22 59.5 +1.2
comp=Z,2.5nm,1.0s,baz=350,slow=2.5,SNR=8.4
LPAZ La Paz 171.99 69 PKP PKPdf 00 22 59.5 +1.2
CPUP Villa Florida 172.46 201 PKPab PKPab 00 24 18.0 -4.8
comp=Z,0.4nm,0.6s,baz=165,slow=16,SNR=2.9

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*NEIC **27** 00:03:02.3, 16°.13N×97°.96W, h22km, MD4.3(MEX), After MEX.*
MEX 27 00:03:02.3±0.6, **16°.13N**×**97°.96W, h22**km±17km, **MD4.0, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.31**	**329**	*i* P	Pb	00 03 08.3	-0.9
PNIG				*i* S	Sb	00 03 12.4	-1.6
PNIG	**Pinotepa**	**0.31**	**329**	*i* P	Pb	00 03 08.3	-0.9
PNIG				*i* S	Sb	00 03 12.4	-1.6
VHO	**Vista Hermosa**	**1.51**	**51**	*i* P	Pn	00 03 25.0	-3.0
VHO				*e*S	Sn	00 03 43.5	-3.4
VHO	**Vista Hermosa**	**1.51**	**51**	*i* P	Pn	00 03 25.0	-3.0
VHO				*e*S	Sn	00 03 43.5	-3.4
TPIG	**Tehuac#an**	**2.35**	**14**	*e*P	Pn	00 03 39.3	-0.3
TPIG				*i* S	Sn	00 04 05.4	-2.4
CAIG	**El Cayaco**	**2.39**	**293**	*i* P	Pn	00 03 37.7	-2.5
CAIG				*i* S	Sn	00 04 06.1	-2.8
CAIG	**El Cayaco**	**2.39**	**293**	*i* P	Pn	00 03 37.7	-2.5
CAIG				*i* S	Sn	00 04 06.1	-2.8
PLIG	**Platanillo**	**2.69**	**327**	*i* P	Pn	00 03 41.9	-2.4
PLIG				*i* S	Sn	00 04 12.4	-3.8
PLIG	**Platanillo**	**2.69**	**327**	*i* P	Pn	00 03 41.9	-2.4
PLIG				*i* S	Sn	00 04 12.4	-3.8
PPM	**Popocatepetl**	**2.99**	**348**	*e*P	Pn	00 03 51.2	+2.8
PPM	**Popocatepetl**	**2.99**	**348**	*e*P	Pn	00 03 51.2	+2.8
PCIG		**4.58**	**95**	*i* P	Pn	00 04 09.9	-0.4
PCIG				*i* S	Sn	00 04 58.7	-4.2

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*ISK **27** 00:13:08.4, 36°.96N×29°.22E, h13km, MD2.8*
*ISCJB **27** 00:13:09.2±0.6, 36°.94N±0°.04×29°.19E±0°.04, h10km, Error ellipse: s-maj=5.3km s-min=4.9km az=141.0*
*CSEM **27** 00:13:09.3±0.2, 36°.95N×29°.22E, h15km, MD2.8, Error ellipse: s-maj=4.7km s-min=4.0km az=7.0*
*DDA **27** 00:13:09.8, 36°.94N×29°.23E, h7km±3km, Md2.7*
ISC 27 00:13:09.5±0.6, **36°.94N**±0°.04×**29°.19E**±0°.05, **h11**km±8km, **n20**, σ0°**89**/30, **1D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.33**	**48**	*e*PG	**Pg**	**00 13 14.9**	**-1.2**
GLHS				*e*SG	**Sg**	**00 13 19.8**	**-0.9**
GLHS	**Glhisar (BURDU**	**0.33**	**48**	*e*Pg	**Pg**	**00 13 14.9**	**-1.2**
GLHS				*e*Sg	**Sg**	**00 13 19.8**	**-0.8**
GOLH	**Golhisar**	**0.42**	**45**	⇓*i*P	**Pg**	**00 13 17.4**	**-0.4**
GOLH				*i* S	**Sg**	**00 13 24.1**	**+0.6**
GOLH	**Golhisar**	**0.42**	**45**	*i* P	**Pg**	**00 13 17.4**	**-0.4**
GOLH				*i* S	**Sg**	**00 13 24.1**	**+0.6**
ELL	**Elmali**	**0.61**	**108**	*e*PG	**Pg**	**00 13 20.3**	**-1.0**
ELL	**Elmali**	**0.61**	**108**	*e*Pg	**Pg**	**00 13 20.3**	**-1.0**
YER	**Yerkesik**	**0.75**	**286**	*e*PG	**Pg**	**00 13 23.7**	**-0.2**
YER	**Yerkesik**	**0.75**	**286**	*e*Pg	**Pg**	**00 13 23.7**	**-0.3**
DNZL	**Cakiroluk**	**0.76**	**352**	*e*P	**Pg**	**00 13 25.1**	**+0.9**
DNZL				*e*S	**Sg**	**00 13 35.2**	**+1.0**
DNZL	**Cakiroluk**	**0.76**	**352**	*e*P	**Pg**	**00 13 25.1**	**+0.9**
DNZL				*e*S	**Sg**	**00 13 35.2**	**+1.0**
AKAS	**Kas**	**0.78**	**154**	*e*P	**Pg**	**00 13 25.3**	**+0.8**
AKAS				*e*S	**Sg**	**00 13 35.2**	**+0.7**
AKAS	**Kas**	**0.78**	**154**	*e*P	**Pg**	**00 13 25.3**	**+0.8**
AKAS				*e*S	**Sg**	**00 13 35.2**	**+0.6**
KORT	**Korkueli**	**0.94**	**86**	*e*P	**Pb**	**00 13 27.2**	**-0.5**
KORT				*e*S	**Sb**	**00 13 42.7**	**+2.6**
KORT	**Korkueli**	**0.94**	**86**	*e*P	**Pb**	**00 13 27.2**	**-0.5**
KORT				*e*S	**Sb**	**00 13 42.7**	**+2.6**
MLSB	**Milas**	**1.18**	**288**	*e*PN	**Pn**	**00 13 31.4**	**-0.5**
MLSB	**Milas**	**1.18**	**288**	*e*Pn	**Pn**	**00 13 31.4**	**-0.5**
DAT	**Datca**	**1.31**	**261**	*e*PN	**Pn**	**00 13 33.7**	**0.0**
DAT	**Datca**	**1.31**	**261**	*e*Pn	**Pn**	**00 13 33.7**	**+0.1**
BODT	**Bodrum**	**1.51**	**275**	*e*PN	**Pn**	**00 13 36.0**	**-0.4**
BODT	**Bodrum**	**1.51**	**275**	*e*Pn	**Pn**	**00 13 36.0**	**-0.4**

FUNV 27 00:35:10.8, 11°.20N×71°.23W, h132km**, MW3.7, 6C-4D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DABV	**Dabajuro**	**0.65**	**115**	⇓*e*P	Pn	00 35 30.9	0.0
DABV				*e*S	Sn	00 35 44.8	-1.4
IMOV	**Isla Los Monje**	**1.19**	**16**	*e*P	Pn	00 35 36.0	+0.2
IMOV				*e*S	Sn	00 35 52.8	-2.0
QARV	**Quebrada Arrib**	**1.21**	**145**	⇓*i*P	Pn	00 35 35.8	-0.1
QARV				*e*S	Sn	00 35 53.5	-1.6
VIRV	**Villa del Rosa**	**1.35**	**239**	⇓*i*P	Pn	00 35 36.5	-0.8
VIRV				*e*S	Sn	00 35 55.3	-2.2
MONV	**Montecano**	**1.45**	**59**	⇑*e*P	Pn	00 35 38.0	-0.5
MONV				*e*S	Sn	00 35 57.6	-1.9
SIQV	**Siquisique**	**1.50**	**111**	⇑*e*P	Pn	00 35 38.7	-0.4
SIQV				*e*S	Sn	00 35 59.1	-1.4
CURV	**Curarigua**	**1.72**	**133**	*e*P	Pn	00 35 40.7	-0.8
VIGV	**El Vigia**	**2.35**	**183**	⇑*i*P	Pn	00 35 49.0	-0.2
VIGV				*e*S	Sn	00 36 15.4	-3.3
JACV	**Jacura**	**2.36**	**93**	⇑*e*P	Pn	00 35 48.6	-0.8
JACV				*e*S	Sn	00 36 16.7	-2.2
SANV	**Sanarito**	**2.38**	**135**	⇑*e*P	Pn	00 35 49.5	-0.1
SOCV	**Socops**	**2.92**	**173**	⇑*e*P	Pn	00 35 56.0	-0.5
SOCV				*e*S	Sn	00 36 28.4	-3.4
MAPV	**Macapo**	**3.05**	**116**	*e*P	Pn	00 35 57.6	-0.5
TURV	**Turiamo**	**3.42**	**102**	*e*P	Pn	00 36 00.8	-2.1
CAPV	**Capacho**	**3.48**	**198**	*e*P	Pn	00 36 02.8	-1.0
CAPV				*e*S	Sn	00 36 42.0	-2.9
BAUV	**El Baul**	**3.86**	**125**	⇓*e*P	Pn	00 36 07.4	-1.4
ELOV	**Elorza**	**4.52**	**157**	*e*P	Pn	00 36 15.5	-2.1
ELOV				*e*S	Sn	00 37 04.2	-5.2
BIRV	**Birongo**	**4.93**	**98**	*e*P	Pn	00 36 20.3	-2.8
CUPV	**Cœpira**	**5.47**	**102**	*e*P	Pn	00 36 28.2	-2.1
CAOV	**Caicara del Or**	**6.19**	**128**	*e*P	Pn	00 36 37.3	-2.6
PCRV	**Puerto La Cruz**	**6.56**	**98**	*e*P	Pn	00 36 43.2	-1.7

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*ROM **27** 00:45:51.0±0.4, 43°.02N×16°.42E, h10km, Md2.9/6, Error ellipse: s-maj=6.7km s-min=2.7km az=89.0*
*ISCJB **27** 00:45:52.6±0.6, 42°.96N±0°.03×16°.03E±0°.06, h10km, Error ellipse: s-maj=6.1km s-min=4.3km az=177.7*
*CSEM **27** 00:45:53.7±0.5, 42°.89N×16°.00E, h10km, MD2.9/6, Error ellipse: s-maj=11.1km s-min=9.0km az=132.0*
ISC 27 00:45:54.0±0.7, **42°.96N**±0°.03×**16°.05E**±0°.06, **h10**km, **n15**, σ1**9**38/27, **Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STON	**Ston**	**1.22**	**94**	*e*Pg	**Pg**	**00 46 16.7**	**-0.6**
STON				Sg	**Sg**	**00 46 35.0**	**+1.9**
STON	**Ston**	**1.22**	**94**	*e*Pg	**Pg**	**00 46 16.7**	**-0.6**
STON				Sg	**Sg**	**00 46 34.9**	**+1.8**
SGRT	**San Giovanni R**	**1.23**	**191**	Pg	**Pg**	**00 46 15.7**	**-1.8**
SGRT				Sg	**Sg**	**00 46 33.8**	**+0.4**
SGRT	**San Giovanni R**	**1.23**	**191**	Pg	**Pg**	**00 46 15.7**	**-1.8**
SGRT				Sg	**Sg**	**00 46 33.8**	**+0.4**
MSAG	**Monte S. Angel**	**1.25**	**185**	Pg	**Pg**	**00 46 16.3**	**-1.7**
MSAG				Sg	**Sg**	**00 46 34.2**	**0.0**
MSAG	**Monte S. Angel**	**1.25**	**185**	Pg	**Pg**	**00 46 16.3**	**-1.7**
MSAG				Sg	**Sg**	**00 46 34.2**	**0.0**
RGNG	**Rignano Grg**	**1.33**	**195**	Pg	**Pg**	**00 46 17.5**	**-2.0**
RGNG				Sg	**Sg**	**00 46 37.6**	**+0.8**
RGNG	**Rignano Grg**	**1.33**	**195**	Pg	**Pg**	**00 46 17.5**	**-2.0**
RGNG				Sg	**Sg**	**00 46 37.6**	**+0.8**
CIGN	**Sant'Elia a Pi**	**1.56**	**213**	Pg	**Pn**	**00 46 22.1**	**+0.4**
CIGN				Sg	**Sn**	**00 46 45.2**	**+3.3**
CIGN	**Sant'Elia a Pi**	**1.56**	**213**	Pg	**Pn**	**00 46 22.1**	**+0.4**
CIGN				Sg	**Sn**	**00 46 45.2**	**+3.3**
NVLJ	**Novalja**	**1.82**	**332**	*e*Pn	**Pg**	**00 46 27.0**	**-1.9**
NVLJ				Sn	**Sg**	**00 46 52.9**	**+0.5**
NVLJ	**Novalja**	**1.82**	**332**	*e*Pn	**Pg**	**00 46 26.9**	**-2.0**
NVLJ				Sn	**Sg**	**00 46 52.8**	**+0.4**
FAGN	**Fagnano**	**1.95**	**250**	Pg	**Pn**	**00 46 29.1**	**+2.0**
FAGN	**Fagnano**	**1.95**	**250**	Pg	**Pn**	**00 46 29.1**	**+2.0**
NRCA	**Norcia**	**2.16**	**268**	Pg	**Pn**	**00 46 30.9**	**+0.9**

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*ISCJB **27** 01:04:52.6±0.9, 22°.95N±0°.08×93°.99E±0°.09, h33km±7km, mb3.9/26, MS3.0/2, Error ellipse: s-maj=17.0km s-min=7.2km az=136.0*
*LDG **27** 01:04:53.4±0.2, 22°.97N×93°.76E, h33km, Mb4.1/7, Ms2.9/1, Error ellipse: s-maj=10.3km s-min=9.3km az=63.0*
*BJI **27** 01:04:55.2, 23°.09N×93°.85E, h33km, mB4.5/1, mb4.1/3*
*NEIC **27** 01:04:55.2±0.6, 22°.97N×94°.01E, h40km±6km, mb4.0/8, Error ellipse: s-maj=13.4km s-min=5.3km az=223.0*
*IDC **27** 01:04:57.7±3.8, 23°.02N×94°.11E, h65km±35km, mb3.5/14, mb1 3.7/15, mb1mx3.5/25, mbtmp3.5/15, MS3.1/2, Ms1 3.1/2, ms1mx2.6/28, Error ellipse: s-maj=34.9km s-min=14.2km az=59.0*
ISC 27 01:04:55.6±0.7, **22°.97N**±0°.07×**94°.01E**±0°.09, **h42**km±6km, **n66**, σ0°**79**/67, **mb3.9**/26, **MS3.0**/2, **1C-2D, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**1.81**	**358**	*e*PKP	**Pn**	**01 05 29.0**	**+4.8**
IMP				*i* S	**Sn**	**01 05 34.0**	**-12**
IMP				*i* x	x	01 05 49.0	
AGT	**Agartala**	**2.69**	**290**	*i* x	x	01 05 46.0	
AGT				*i* x	x	01 06 31.0	
SHL	**Shillong**	**3.23**	**324**	⇓*i*x	**Pn**	**01 05 46.0**	**+2.2**
SHL				*ex*	**Sn**	**01 06 21.5**	**+0.4**
CHTO	**Chiang Mai**	**6.19**	**131**	*e*Pn	**Pn**	**01 06 23.8**	**-0.6**
6.2nm,0.6s							
CMAR	**Chiang Mai Arr**	**6.44**	**133**	P	**Pn**	**01 06 28.9**	**+1.0**
1.1nm,0.3s,baz=312,slow=13,SNR=8.1							
ODAN	**Odare**	**7.15**	**304**	*e*P	**Pn**	**01 06 38.0**	**+0.4**
47nm,0.5s							
LSA	**Lhasa**	**7.18**	**340**	Pn	**Pn**	**01 06 40.3**	**+2.3**
LSA				Sn	**Sn**	**01 07 55.0**	**-3.2**
LSA	**Lhasa**	**7.18**	**340**	*e*Pn	**Pn**	**01 06 37.9**	**-0.1**
11nm,0.4s							
LSA				*e*Sn	**Sn**	**01 07 57.2**	**-1.0**
TAPN	**Taplejung**	**7.18**	**309**	*e*P	**Pn**	**01 06 38.9**	**+0.9**
26nm,0.3s							
RAMN	**Ramite**	**7.80**	**302**	*e*P	**Pn**	**01 06 46.5**	**-0.1**
67nm,0.6s							
KMI	**Kunming**	**8.26**	**73**	P	**Pn**	**01 07 01.0**	**+8.1**
KMI				pmax	pmax		
comp=Z,7.0nm,1.3s							
JIRN	**Jiri**	**8.48**	**305**	*e*P	**Pn**	**01 06 55.3**	**-0.5**
comp=Z,27nm,0.2s							
GUN	**Gumba**	**8.84**	**305**	*e*P	**Pn**	**01 07 00.6**	**-0.2**
PKI	**Pulchoki**	**9.03**	**302**	*e*P	**Pn**	**01 07 03.0**	**-0.4**
comp=Z,16nm,0.4s							
PKI	**Pulchoki**	**9.03**	**302**	*e*P	**Pn**	**01 07 03.4**	**0.0**
comp=Z,19nm,0.3s							
PKIN	**Phulchoki**	**9.04**	**302**	*e*P	**Pn**	**01 07 03.4**	**-0.2**
comp=Z,19nm,0.3s							
KKN	**Kakani**	**9.24**	**303**	*e*P	**Pn**	**01 07 04.8**	**-1.4**
DMN	**Daman**	**9.29**	**302**	*e*P	**Pn**	**01 07 06.0**	**-0.9**
GKN	**Gorkha**	**9.84**	**303**	*e*P	**Pn**	**01 07 12.8**	**-1.6**
comp=Z,33nm,0.3s							
KBL	**Kabul**	**24.67**	**303**	*e*P	**P**	**01 10 13.7**	**+1.3**
comp=Z,4.7nm,0.7s,mb4.1							
TKM2	**Tokmak 2**	**25.09**	**327**	*e*P	**P**	**01 10 17.0**	**+0.9**
comp=Z,4.7nm,0.7s,mb4.1							
AAK	**Ala-Archa**	**25.46**	**325**	P	**P**	**01 10 21.3**	**+1.8**
comp=Z,1.2nm,0.3s,mb3.9,baz=151,slow=6.3,SNR=4.2							
AAK	**Ala-Archa**	**25.46**	**325**	*e*P	**P**	**01 10 20.9**	**+1.4**
comp=Z,2.2nm,0.6s,mb3.9							
AML	**Almayashu**	**25.55**	**323**	*e*P	**P**	**01 10 21.5**	**+1.2**
comp=Z,2.9nm,0.6s,mb4.0							
MK31	**Makanchi Array**	**25.58**	**341**	*e*P	**P**	**01 10 20.8**	**+0.2**
MKAR	**Makanchi Array**	**25.58**	**341**	P	**P**	**01 10 20.9**	**+0.3**
comp=Z,3.9nm,0.6s,mb4.1,baz=147,slow=10,SNR=23							
EKS2	**Erkin-Say**	**25.86**	**324**	*e*P	**P**	**01 10 24.7**	**+1.5**
comp=Z,3.1nm,0.7s,mb4.0							
SONM	**Songino Array**	**26.72**	**19**	P	**P**	**01 10 30.8**	**-0.1**
comp=Z,0.4nm,0.5s,mb3.2,baz=200,slow=10.0,SNR=3.7							
SONM				LR	LR	01 23 16.0	
comp=Z,40nm,18.3s,MS3.0,baz=270,slow=41							
KURK	**Kurchatov**	**30.19**	**340**	*e*P	**P**	**01 11 01.1**	**-0.6**
comp=Z,2.1nm,0.7s,mb4.0							
ZALV	**Zalesovo Beam**	**31.71**	**350**	*e*P	**P**	**01 11 14.9**	**-0.1**
comp=Z,0.4nm,0.3s,mb3.8,baz=177,slow=5.3,SNR=2.8							
ZALV				LR	LR	01 27 24.4	
comp=Z,28nm,19.1s,MS3.0,baz=128,slow=42							
BVAR	**Borovoye Array**	**34.99**	**335**	P	**P**	**01 11 42.9**	**-0.7**
comp=Z,0.5nm,0.5s,mb3.7,baz=117,slow=11,SNR=3.8							
ABKAR	**Akbulak array**	**37.50**	**323**	*e*P	**P**	**01 12 05.5**	**+0.4**
comp=Z,1.0nm,0.5s,mb3.8							
AKASG	**Malin Array Be**	**56.69**	**316**	P	**P**	**01 14 33.6**	**-1.0**
comp=Z,1.0nm,0.5s,mb4.1,baz=74,slow=7.4,SNR=4.6							
WRA	**Warramunga Arr**	**58.03**	**134**	P	**P**	**01 14 44.5**	**0.0**
comp=Z,1.1nm,0.6s,mb4.1,baz=324,slow=7.4,SNR=8.0							
MLR	**Muntele Rosu**	**58.81**	**310**	⇓*i*P	**P**	**01 14 50.9**	**+1.3**
BURAR	**Bucovina Array**	**59.25**	**313**	⇑*i*P	**P**	**01 14 53.2**	**+0.5**
FINES	**FINESS Array B**	**59.56**	**329**	P	**P**	**01 14 54.3**	**-0.3**
comp=Z,0.4nm,0.5s,mb3.7,baz=106,slow=6.8,SNR=5.3							
ASAR	**Alice Springs**	**60.43**	**137**	P	**P**	**01 15 00.2**	**-0.8**
comp=Z,0.7nm,0.4s,mb4.0,baz=319,slow=6.5,SNR=7.1							
ARCES	**ARCESS Array B**	**61.19**	**338**	P	**P**	**01 15 04.8**	**-0.7**
comp=Z,0.9nm,0.7s,mb4.0,baz=95,slow=7.4,SNR=6.3							
MORC	**Moravsky Berou**	**64.20**	**316**	*e*P	**P**	**01 15 25.4**	**-0.5**
comp=Z,1.3nm,0.7s,mb4.1							
NB2	**NORSAR Subarra**	**66.72**	**328**	P	**P**	**01 15 40.7**	**-1.3**
comp=Z,1.1nm,0.8s,mb3.9,baz=85,slow=6.2							
NOA	**NORSAR Array B**	**66.72**	**328**	P	**P**	**01 15 40.6**	**-1.4**
comp=Z,0.6nm,0.8s,mb3.7,baz=84,slow=6.4,SNR=4.5							
CDF	**Champ du Feu**	**71.08**	**315**	*e*P	**P**	**01 16 09.0**	**-0.3**
comp=Z,3.0nm,0.6s,mb4.1							
HAU	**Haudompre**	**71.78**	**315**	*e*P	**P**	**01 16 13.2**	**-0.4**
LPG	**La Plagne**	**72.13**	**312**	*e*P	**P**	**01 16 16.1**	**+0.3**
LPL	**La Plagne**	**72.14**	**312**	*e*P	**P**	**01 16 16.1**	**+0.3**
comp=Z,4.2nm,0.6s,mb4.2							
CABF	**La Chapelle**	**72.30**	**314**	*e*P	**P**	**01 16 16.6**	**-0.1**
MBDF	**Montbardon**	**72.32**	**312**	*e*P	**P**	**01 16 17.3**	**+0.4**
MEZF	**Maizieres J'vi**	**72.49**	**316**	*e*P	**P**	**01 16 17.8**	**0.0**
BAIF	**Baives**	**72.62**	**318**	*e*P	**P**	**01 16 18.4**	**-0.2**
LOR	**Lormes**	**73.59**	**315**	*e*P	**P**	**01 16 25.1**	**+0.7**
SMF	**Signal de Mont**	**73.78**	**314**	*e*P	**P**	**01 16 25.0**	**-0.5**
SSF	**Saint Saulge**	**73.88**	**315**	*e*P	**P**	**01 16 25.6**	**-0.5**
comp=Z,4.4nm,0.9s,mb4.1							
AVF	**Avril sur Loir**	**74.06**	**314**	*e*P	**P**	**01 16 26.7**	**-0.4**
TCF	**Toulx Ste Croi**	**74.96**	**314**	*e*P	**P**	**01 16 32.4**	**0.0**
comp=Z,1.4nm,0.7s,mb3.7							
RJF	**Les Rejaudoux**	**75.72**	**313**	*e*P	**P**	**01 16 36.6**	**-0.2**
comp=Z,3.6nm,0.9s,mb4.0							
LDF	**La Druitiere**	**75.76**	**317**	*e*P	**P**	**01 16 36.3**	**-0.6**
FLN	**La Foliniere**	**75.93**	**317**	*e*P	**P**	**01 16 37.3**	**-0.5**
SGMF	**Saint Gilles**	**77.40**	**317**	*e*P	**P**

DAT	Datca	1.27	256	*e*PN	Pn	01 07 35.2	+0.7
DAT	Datca	1.27	256	*e*Pn	Pn	01 07 35.3	+0.8
KHL	Karahalli	1.32	14	*e*PN	Pn	01 07 35.0	-0.3
KHL	Karahalli	1.32	14	*e*Pn	Pn	01 07 35.0	-0.3
BODT	Bodrum	1.44	271	*e*PN	Pn	01 07 38.0	+1.1
BODT	Bodrum	1.44	271	*e*Pn	Pn	01 07 38.0	+1.1
KULA	Kula-Manisa	1.52	347	*e*PN	Pn	01 07 37.8	-0.1
KULA	Kula-Manisa	1.52	347	*e*Pn	Pn	01 07 37.8	-0.1
IZM	Izmir	2.00	313	*e*PN	Pn	01 07 44.1	-0.4
AKS	Akhisar	2.10	331	*e*PN	Pn	01 07 45.7	-0.4
AKS	Akhisar	2.10	331	*e*Pn	Pn	01 07 45.7	-0.3
BLCB	Balcova	2.12	310	*e*PN	Pn	01 07 46.1	-0.1
BLCB	Balcova	2.12	310	*e*Pn	Pn	01 07 46.2	-0.1
ALT	Altintas	2.16	21	*e*PN	Pn	01 07 47.0	+0.2
ALT	Altintas	2.16	21	*e*Pn	Pn	01 07 47.0	+0.2

IDC ***27*** *01:17:58.7±1.2,23°.45S×115°.31W,h0km,mb4.0/7, mb1 4.4/7,mb1mx4.2/15,mbtmp4.0/7,MS4.1/10, Ms1 4.1/10,ms1mx4.0/17,Error ellipse: s-maj=42.5km s-min=25.9km az=42.0*

ISCJB ***27*** *01:18:00.3±0.7,23°.2S±0°.1×115°.0W±0°.1,h10km,mb4.5/41, MS4.3/15,Error ellipse: s-maj=21.4km s-min=10.5km az=147.5*

NEIC ***27*** *01:18:01.0±0.5,23°.40S×115°.21W,h10km,mb4.7/36, Error ellipse: s-maj=18.8km s-min=10.9km az=68.0*

BJI ***27*** *01:18:03.0,23°.40S×115°.20W,h10km,mB5.2/6,Ms5.0/7, Ms7 4.6/7*

GCMT ***27*** *01:18:05.3±0.3,23°.59S×115°.22W,h18km±1km,MW5.0, Moment Tensor Solution. s31,c37; s77,c106; Moment tensor: Scale 10^16^Nm; M_{rr}-0.24±.13; $M_{\theta\theta}$-1.21±.12; $M_{\phi\phi}$1.45±.12; $M_{r\theta}$-0.22±.25; $M_{\theta\phi}$3.11±.11; $M_{\phi r}$-0.49±.27; Best double couple: $M_0$3.40000×10^16^ NP1:ϕ_s259.00000°, δ83.00000°,λ4.00000°. NP2:ϕ_s168.00000°,δ86.00000°, λ173.00000°. Principal axes: T 3.5800, Plg8.0000°, Azm123.0000°; N -0.3100, Plg82.0000°, Azm315.0000°; P -3.2700, Plg2.0000°, Azm214.0000°; Data Used: II IU G CN IC.*

ISC 27 01:18:02.4±0.7,23°.3S±0°.1×115°.0W±0°.1,h10km,n217, σ0:65/183,mb4.5/41,MS4.3/15,69C-61D,Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	Rapa Nui	6.38	128	T		01 26 16.7	
RKT	Rikitea	18.38	267	*e*LR	LR	01 26 20.7	
	1μm,26.0s						
RKT				*e*T		01 40 29.5	
	3.6nm,0.3s						
TAOE	Nuku Hiva Isla	28.05	297	*e*LR	LR	01 30 40.6	
	2μm,25.4s,baz=127						
TIAR	Tiarei	32.66	274	*e*T		01 58 20.9	
	11nm,0.3s						
PPT	Papeete	32.87	273	*e*LR	LR	01 32 39.2	
	643nm,26.8s						
PPT	Papeete	32.87	273	LR	LR	01 33 19.9	
	comp=Z,430nm,19.9s,MS4.2,baz=63,slow=28						
LCO	Las Campanas	39.98	108	*e*P	P	01 25 38.9	+1.5
	22nm,1.1s,mb4.8						
PLCA	Paso Flores	41.01	126	LR	LR	01 38 24.6	
	comp=Z,757nm,20.7s,MS4.5,baz=80,slow=30						
OTAV	Otavalo	42.50	62	*e*P	P	01 25 56.0	-2.3
	3.6nm,1.0s,mb4.1						
LPAZ	La Paz	44.48	90	P	P	01 26 15.6	+1.4
	6.7nm,1.1s,mb4.3,baz=264,slow=6.5,SNR=14						
LPAZ				LR	LR	01 40 39.1	
	comp=Z,238nm,20.9s,MS4.1,baz=61,slow=30						
LPAZ	La Paz	44.48	90	*e*P	P	01 26 15.2	+1.1
	17nm,1.3s,mb4.6						
TRQA	Tornquist	47.30	121	*e*P	P	01 26 36.3	+0.1
	12nm,1.5s,mb4.6						
ROSC	El Rosal	48.54	60	LR	LR	01 42 26.3	
	comp=Z,126nm,21.6s,MS3.9,baz=350,slow=30						
CPUP	Villa Florida	52.05	106	P	P	01 27 12.1	-0.5
	1.0nm,0.6s,mb3.9,baz=255,slow=9.2,SNR=5.2						
CPUP				LR	LR	01 45 17.1	
	comp=Z,218nm,19.6s,MS4.2,baz=254,slow=31						
TXAR	Lajitas Array	53.44	12	P	P	01 27 22.0	-0.6
	0.4nm,0.7s,mb3.5,baz=185,slow=8.8,SNR=5.7						
TXAR				LR	LR	01 46 52.6	
	comp=Z,58nm,18.4s,MS3.7,baz=215,slow=32						
626A	Big Bend Ranch	53.56	12	⇓P	P	01 27 24.3	+0.7
	baz=54,SNR=8.1						
627A	Terlingua Ranc	53.61	13	⇓P	P	01 27 24.3	+0.4
	baz=54						
526A	Mary Lane Ranc	54.06	12	⇓P	P	01 27 27.3	+0.1
	baz=54						
527A	Woodward Ranch	54.24	12	⇓P	P	01 27 28.8	+0.3
	baz=55,SNR=5.8						
528A	Cox Ranch, San	54.42	13	⇓P	P	01 27 29.9	+0.2
	baz=55						
425A	Indio Mountain	54.61	11	P	P	01 27 31.3	+0.1
	baz=55,SNR=8.5						
318A	Bisbee	54.63	5	⇑P	P	01 27 31.5	+0.2
	baz=55						
319A	Douglas	54.63	6	⇑P	P	01 27 31.9	+0.7
	baz=55						
320A	Kipp Ranch, An	54.66	7	⇑P	P	01 27 32.2	+0.7
	baz=55						
426A	McDonald Obser	54.67	12	⇑P	P	01 27 31.6	0.0
	baz=55						
217A	Green Valley	54.90	4	⇓P	P	01 27 33.7	+0.5
	baz=55						
427A	Hayter Ranch,	54.96	12	⇓P	P	01 27 34.1	+0.4
	baz=55						
214A	Organ Pipe Nat	54.97	2	⇓P	P	01 27 34.1	+0.4
	baz=55						
428A	Kincaid Ranch,	54.99	13	⇓P	P	01 27 34.7	+0.8
	baz=55						
216A	Three Points,	55.08	4	⇑P	P	01 27 34.9	+0.4
	baz=56						
218A	Dragoon	55.15	5	⇑P	P	01 27 35.6	+0.6
	baz=56						
324A	Moseley Ranch,	55.17	10	⇓P	P	01 27 35.1	-0.1
	baz=56,SNR=8.8						
325A	Bean Ranch, Si	55.19	10	⇓P	P	01 27 35.5	+0.1
	baz=56,SNR=7.7						
219A	White Tail Can	55.25	6	⇑P	P	01 27 36.1	+0.4
	baz=56						
JCT	Junction City	55.41	16	*e*P	P	01 27 36.6	-0.3
	10nm,0.9s,mb4.9						
TUC	Tucson	55.43	4	*e*P	P	01 27 37.1	0.0
	18nm,2.1s,mb4.7						
MNTX	Cornudas Mount	55.44	10	*e*P	P	01 27 36.3	-0.8
	5.8nm,1.3s,mb4.5						
BAR	Barrett	55.68	358	*e*P	P	01 27 40.0	+1.2
	2.3nm,0.8s,mb4.3						
117A	Oracle	55.69	4	⇓P	P	01 27 39.4	+0.5
	baz=56						
224A	Cornudas Mount	55.79	10	⇑P	P	01 27 39.7	+0.1
	baz=56,SNR=14						
120A	U Bar Ranch, L	55.85	6	⇓P	P	01 27 40.6	+0.6
	baz=56						
121A	Cookes Peak, D	55.93	7	⇑P	P	01 27 41.4	+0.8
	baz=56						
225A	Deer Hill, Car	55.94	10	⇑P	P	01 27 40.4	-0.3
	baz=56						
226A	Malaga, Loving	56.01	11	⇑P	P	01 27 41.2	0.0
	baz=56						
124A	Stringfield Ra	56.41	10	⇓P	P	01 27 44.8	+0.7
	baz=57						
125A	Gardner Draw,	56.50	10	⇓P	P	01 27 44.6	-0.1
	baz=57,SNR=8.9						
Z21A	St. Cloud Mine	56.71	7	⇑P	P	01 27 47.1	+0.9
	baz=57,SNR=6.7						
Y16A	Circle Bar Ran	56.95	3	⇑P	P	01 27 48.1	+0.2
	baz=57						
Y15A	Casa Rosa Ranc	56.98	3	⇑P	P	01 27 48.3	+0.2
	baz=57						
Z24A	Sheeppen Canyo	57.04	10	⇓P	P	01 27 47.8	-0.7
	baz=58						
Z25A	Roswell	57.10	10	⇑P	P	01 27 48.2	-0.7
	baz=58,SNR=6.2						
Y19A	Nutrioso	57.19	6	⇓P	P	01 27 50.5	+0.9
	baz=58,SNR=5.9						
Z26A	Caprock	57.21	11	⇓P	P	01 27 49.2	-0.6
	baz=58						
Z27A	Tatum	57.39	12	⇓P	P	01 27 50.4	-0.7
	baz=58						
Y21A	Point of Rocks	57.40	7	⇑P	P	01 27 50.7	-0.4
	baz=58						
Y22A	Socorro	57.42	8	⇑P	P	01 27 50.6	-0.6
	baz=58						
X16A	Lo Mia Camp, P	57.48	3	⇑P	P	01 27 52.1	+0.5
	baz=58						
X15A	Humboldt	57.52	3	⇑P	P	01 27 52.3	+0.4
	baz=58						
Y23A	Lovelace Mesa,	57.53	9	⇑P	P	01 27 52.4	+0.4
	baz=58						
X13A	Yucca	57.57	1	⇓P	P	01 27 52.7	+0.5
	baz=58						
Y24A	Capitan	57.62	9	⇑P	P	01 27 52.6	+0.1
	baz=58,SNR=5.8						
X18A	Snowflake	57.70	5	⇓P	P	01 27 53.7	+0.6
	baz=58						
Y25A	Mesa, Roswell	57.73	10	P	P	01 27 53.5	+0.1
	baz=58,SNR=6.8						
X21A	Alamocita Cree	57.82	7	⇓P	P	01 27 54.8	+0.8
	baz=58,SNR=5.5						
X20A	Quemado	57.84	6	⇓P	P	01 27 54.5	+0.3
	baz=58						
LAZ	Ladron	57.85	8	*e*P	P	01 27 54.0	-0.2
	2.6nm,1.3s,mb4.1						
W14A	Seligman	58.21	2	⇓P	P	01 27 57.9	+1.2
	baz=59,SNR=12						
V14A	Boquillas Ranc	58.63	2	⇑P	P	01 28 00.3	+0.7
	baz=59						
V17A	Tonalea, Kykot	58.72	4	⇓P	P	01 28 00.2	-0.1
	baz=59						
W23A	Werner Place,	58.73	8	⇓P	P	01 28 00.2	-0.2
	baz=59						
V11A	Goodsprings	58.81	360	⇑P	P	01 28 01.7	+0.8
	baz=59						
V13A	Grand Canyon W	58.83	1	⇓P	P	01 28 01.7	+0.7
	baz=59,SNR=7.2						
V15A	Kaibab Nationa	58.84	3	⇑P	P	01 28 01.3	+0.2
	baz=59						
V18A	Ganado	58.87	5	⇑P	P	01 28 01.6	+0.3
	baz=59						
W24A	Lazy 6 Ranch,	58.88	9	⇑P	P	01 28 01.3	-0.1
	baz=59						
W25A	X Bar L Ranch,	59.03	10	⇑P	P	01 28 02.4	-0.1
	baz=60						
MPMC	Manual Prospec	59.07	358	⇑P	P	01 28 03.0	+0.2
	baz=60						
U16A	Tuba City	59.22	4	⇑P	P	01 28 04.2	+0.4
	baz=60						
U14A	Mt Trumbull	59.41	2	⇓P	P	01 28 05.6	+0.6
	baz=60						
U15A	North Rim	59.45	3	P	P	01 28 06.3	+1.0
	baz=60,SNR=6.4						
U18A	Rough Rock, Ch	59.58	5	⇑P	P	01 28 06.0	-0.3
	baz=60						
WMOK	Wichita Mounta	59.72	15	*e*P	P	01 28 06.1	-1.2
	2.3nm,1.0s,mb4.2						
U21A	Nageezi	59.79	7	⇓P	P	01 28 07.8	+0.1
	baz=60						
U23A	El Rito	59.87	8	⇓P	P	01 28 08.3	0.0
	baz=60,SNR=6.0						
T13A	Saint George	59.99	1	⇑P	P	01 28 09.4	+0.4
	baz=60,SNR=9.9						
T15A	Red Dirt Ranch	60.03	2	⇓P	P	01 28 09.9	+0.6
	baz=60						
T14A	Hurricane	60.05	2	⇑P	P	01 28 10.1	+0.6
	baz=60						
T19A	Beclabito	60.06	6	⇓P	P	01 28 09.9	+0.4
	baz=60						
U24A	Moreno Valley	60.08	9	⇑P	P	01 28 10.5	+0.8
	baz=60						
T17A	Navajo Res., N	60.09	4	⇑P	P	01 28 10.5	+0.8
	baz=60						
T11A	Corn Creek, Al	60.20	360	⇑P	P	01 28 11.4	+0.9
	baz=61						
T18A	Mexican Hat	60.29	5	⇑P	P	01 28 11.3	+0.2
	baz=61						
T22A	Edith	60.46	7	P	P	01 28 12.8	+0.5
	baz=61,SNR=6.0						
MVCO	Mesa Verde	60.48	6	*e*P	P	01 28 13.4	+1.0
	16nm,1.7s,mb4.8						
S13A	Holt Ranch, En	60.55	1	⇑P	P	01 28 13.6	+0.7
	baz=61,SNR=8.9						
S16A	Weppner Ranch,	60.77	3	⇓P	P	01 28 14.2	-0.2
	baz=61						
S18A	Hurst Farm, Bl	60.83	5	⇑P	P	01 28 14.8	0.0
	baz=61						
S10A	Tonopah Range,	60.90	359	⇓P	P	01 28 15.7	+0.4
	baz=61						
S20A	Disappointment	61.11	6	⇓P	P	01 28 16.8	+0.1
	baz=62						
S22A	4UR Ranch, Cre	61.19	7	⇑P	P	01 28 17.1	-0.1
	baz=62						
CMB	Columbia Colle	61.21	355	*e*P	P	01 28 17.4	+0.1
	8.4nm,1.4s,mb4.7						
R12A	Pony Springs,	61.29	0	⇓P	P	01 28 18.0	+0.1
	baz=62						
R11A	Troy Canyon, C	61.31	359	⇓P	P	01 28 18.3	+0.3
	baz=62						
SDCO	Great Sand Dun	61.36	9	*e*P	P	01 28 18.6	+0.2
	10.0nm,1.5s,mb4.7						
NVAR	Mina Array Bea	61.47	357	P	P	01 28 19.5	+0.4
	1.7nm,0.7s,mb4.3,baz=186,slow=7.5,SNR=13						
NVAR	Mina Array Bea	61.47	357	P	P	01 28 19.5	+0.4
R19A	Curley Farm, L	61.49	5	⇓P	P	01 28 19.3	+0.1
	baz=62						
Q11A	Duckwater	61.81	359	⇓P	P	01 28 22.1	+0.8
	baz=62,SNR=11						
R24A	Sanders Place,	61.89	9	⇑P	P	01 28 21.2	-0.7
	baz=62						
Q13A	Wheeler Ranch,	61.92	1	⇑P	P	01 28 22.4	+0.2
	baz=62						
Q14A	Sevier Lake (B	61.97	2	⇓P	P	01 28 22.8	+0.4
	baz=62						
Q16A	Castle Valley	61.98	3	⇑P	P	01 28 22.7	+0.1
	baz=62						
SRU	San Rafael	62.21	4	⇑P	P	01 28 24.1	+0.1
	baz=63						
SRU	San Rafael	62.21	4	*e*P	P	01 28 24.5	+0.4
	15nm,1.8s,mb4.8						
Q18A	Rafter H Ranch	62.23	4	⇑P	P	01 28 23.9	-0.2
	baz=63						
P13A	Bates Ranch, G	62.42	1	⇑P	P	01 28 25.3	-0.2
	baz=63						
P12A	McGill	62.43	0	⇑P	P	01 28 25.9	+0.3
	baz=63						
P22A	Eagle	63.02	7	⇑P	P	01 28 29.6	+0.1
	baz=64						
DUG	Dugway	63.19	2	*e*P	P	01 28 31.2	+0.6
	12nm,1.5s,mb4.8						
O12A	Currie	63.23	0	⇓P	P	01 28 31.1	+0.2
	baz=64						
ISCO	Idaho Springs	63.37	8	*e*P	P	01 28 33.1	+1.3
	4.6nm,1.2s,mb4.5						
O22A	Kremmling	63.61	7	⇓P	P	01 28 33.3	-0.1
	baz=64						
N12A	Clover Valley,	63.81	360	⇑P	P	01 28 35.0	+0.3
	baz=64						
N12A	Clover Valley,	63.81	360	*e*P	P	01 28 35.2	+0.6
	7.6nm,1.0s,mb4.7						
N14A	Grayback Hills	63.83	2	P	P	01 28 35.2	+0.4
	baz=64,SNR=9.4						
GOGA	Godfrey	63.88	29	*e*P	P	01 28 36.0	+0.6
	5.3nm,1.1s,mb4.5						
BGU	Big Grassy Mou	63.91	2	*e*P	P	01 28 35.2	-0.1
	18nm,1.7s,mb4.8						
WDC	Whiskeytown Da	63.93	354	*e*P	P	01 28 36.0	+0.5
	14nm,1.5s,mb4.8						
N20A	Spence Gulch,	64.10	6	⇑P	P	01 28 35.8	-0.8
	baz=65						
SPUT	South Promonto	64.31	2	*e*P	P	01 28 38.4	+0.4
	20nm,1.9s,mb4.8						
M13A	Montello	64.32	1	⇓P	P	01 28 37.6	-0.4
	baz=65						
M13A	Montello	64.32	1	*e*P	P	01 28 38.6	+0.5
	6.1nm,1.0s,mb4.6						
KHMM	Horse Mountain	64.35	353	*e*P	P	01 28 39.9	+1.7
	20nm,1.4s,mb5.0						
SWET	Sewanee	64.37	26	*e*P	P	01 28 37.7	-0.8
N23A	Red Feather La	64.40	8	⇑P	P	01 28 38.8	+0.2
	baz=65						
WVT	Waverly	64.43	24	*e*P	P	01 28 37.5	-1.3
	5.5nm,1.0s,mb4.5						
M10A	I.L. Ranch, Tu	64.50	359	⇓P	P	01 28 38.6	-0.5
	baz=65						
M20A	Sweetwater, Wa	64.75	6	⇓P	P	01 28 40.4	-0.5
	baz=65						
CCM	Cathedral Cave	64.97	21	*e*P	P	01 28 40.5	-1.8
L10A	Juniper Basin	65.05	359	⇑P	P	01 28 41.5	-1.2
	baz=66						
YBH	Yreka Blue Hor	65.08	354	P	P	01 28 42.5	-0.5
	1.4nm,0.9s,mb4.0,baz=189,slow=2.0,SNR=3.6						
YBH	Yreka Blue Hor	65.08	354	*e*P	P	01 28 42.4	-0.6
	42nm,2.8s,mb5.0						
L12A	House Creek Ra	65.10	360	⇑P	P	01 28 42.5	-0.6
	baz=66						
L11A	Cat Creek Ranc	65.13	359	⇓P	P	01 28 43.1	-0.1
	baz=66						
L20A	Wamsutter	65.25	5	⇓P	P	01 28 43.0	-1.1
	baz=66						
WVOR	Wild Horse Val	65.48	357	*e*P	P	01 28 44.7	-0.9
	8.1nm,1.4s,mb4.6						
K14A	Jones Ranch, D	65.52	1	⇑P	P	01 28 45.3	-0.5
	baz=66						
K15A	Arbon	65.68	2	⇑P	P	01 28 45.8	-1.1
	baz=66						
K18A	Toltan Ranch,	65.75	4	⇑P	P	01 28 46.5	-0.8
	baz=66						
K05A	Summer Lake	65.91	355	⇑P	P	01 28 48.9	+0.6
	baz=66						
BW06	Boulder Array	65.91	4	*e*P	P	01 28 46.9	-1.4
	7.1nm,1.5s,mb4.5						
PDAR	Pinedale Array	65.91	4	P	P	01 28 46.2	-2.1
	0.7nm,0.5s,mb4.0,baz=152,slow=6.7,SNR=6.3						
HUMO	Hull Mountain	65.98	354	*e*P	P	01 28 48.4	-0.3
	17nm,1.5s,mb4.9						
J14A	Carey	66.29	1	⇓P	P	01 28 50.8	0.0
	baz=67						
J13A	Cove Ranch, Pi	66.36	1	⇓P	P	01 28 51.2	0.0
	baz=67						
MFID	Camas Ranch	66.38	359	⇓P	P	01 28 51.0	-0.3
	baz=67						
J08A	Circle Bar Ran	66.39	357	⇑P	P	01 28 50.8	-0.5
	baz=67						
J15A	Blackfoot	66.40	2	⇓P	P	01 28 51.5	0.0
	baz=67						
HLID	Hailey	66.52	0	*e*P	P	01 28 52.5	+0.3
	17nm,1.6s,mb4.8						
TPAW	Teton Pass	66.55	3	*e*P	P	01 28 51.5	-0.9
	5.9nm,1.1s,mb4.5						
LOHW	Long Hollow	66.69	3	*e*P	P	01 28 53.9	+0.6
	12nm,1.8s,mb4.6						
I12A	Atlanta	66.75	360	⇑P	P	01 28 53.9	+0.2
	baz=67						
QSPA	South Pole Qui	66.86	180	*e*P	P	01 28 54.7	+0.6
	66nm,2.1s,mb5.3						
I13A	Wildhorse Cree	66.88	1	⇓P	P	01 28 53.3	-1.2
	baz=67						
I14A	Mackay	66.90	1	⇑P	P	01 28 54.3	-0.4
	baz=67						
I07A	Izee	67.17	356	⇓P	P	01 28 55.8	-0.6
	baz=68						
H13A	Challis	67.52	1	⇑P	P	01 28 58.1	-0.4
	baz=68						
H15A	Lima	67.61	2	⇑P	P	01 28 58.8	-0.3
	baz=68						
MCMT	McKenzie Canyo	67.81	2	*e*P	P	01 29 00.3	-0.1
	3.0nm,1.3s,mb4.2						
BMO	Blue Mountains	67.84	358	*e*P	P	01 29 00.2	-0.4
	6.8nm,1.4s,mb4.5						
G12A	Big Creek, Yel	68.08	360	⇓P	P	01 29 01.9	-0.2
	baz=68						
G08A	Pilot Rock	68.34	357	⇓P	P	01 29 03.5	-0.2
	baz=69						
G18A	Lazy EL Ranch,	68.45	4	⇑P	P	01 29 03.7	-0.7
	baz=69						
F12A	Elk City	68.71	360	⇑P	P	01 29 05.2	-0.8
	baz=69						
F13A	Darby	68.75	0	⇓P	P	01 29 05.4	-0.8
	baz=69						
ECSD	EROS Data Cent	68.79	14	*e*P	P	01 29 05.5	-1.0
	4.3nm,1.0s,mb4.3						
F10A	Beach Ranch, E	68.96	358	⇓P	P	01 29 07.0	-0.5
	baz=69						
E18A	Harlowton	69.67	4	⇓P	P	01 29 11.7	-0.2
	baz=70						
CHMT	Chamberlain Mo	69.89	1	*e*P	P	01 29 13.1	-0.2
D17A	Six Diamond Ra	70.22	3	⇑P	P	01 29 14.8	-0.4
	baz=71						
C13A	Hot Springs	70.64	0	⇑P	P	01 29 17.4	-0.5
	baz=71						
C17A	Wharram Farm,	70.69	3	⇑P	P	01 29 17.5	-0.7
	baz=71						
C14A	Swan Lake	70.73	1	⇓P	P	01 29 17.3	-1.1
	baz=71						
C11A	Tepee Creek (N	70.81	359	⇓P	P	01 29 18.3	-0.5
	baz=71						
BSMT	Bassoo Peak	70.81	0	*e*P	P	01 29 17.9	-1.0
C09A	Chrisman Ranch	70.82	358	⇑P	P	01 29 18.3	-0.6
	baz=71						
NEW	Newport	71.25	358	*e*P	P	01 29 20.6	-0.9
	9.4nm,1.4s,mb4.5						
DZM	Mont Dzumac	71.59	253	*e*LR	LR	01 51 05.1	
	134nm,26.2s						
A14A	Double T Ranch	71.94	1	⇑P	P	01 29 25.3	-0.4
	baz=72						
A16A	West Butte Ran	71.97	2	⇑P	P	01 29 25.5	-0.4
	baz=72						
A18A	Metzger Ranch,	72.02	4	⇓P	P	01 29 25.5	-0.7
	baz=72						
YKA	Yellowknife Ar	85.48	0	P	P	01 30 39.1	-0.8
	0.9nm,0.7s,mb4.0,baz=177,slow=5.5,SNR=5.6						
SCHQ	Schefferville	88.03	26	LR	LR	02 10 03.8	
	comp=Z,80nm,18.1s,MS4.2,baz=88,slow=35						
MAW	Mawson	89.37	179	LR	LR	02 06 60.0	
	comp=Z,210nm,21.3s,MS4.5,baz=66,slow=33						
CTA	Charters Tower	89.86	248	LR	LR	02 03 50.0	
	comp=Z,116nm,19.7s,MS4.3,baz=56,slow=31						
ILAR	Eielson Array	91.18	347	LR	LR	02 03 45.4	
	comp=Z,72nm,19.5s,MS4.1,baz=6.6,slow=30						
CN2	Changchun	126.85	308	*e*PKP	PKPdf	01 37 08.0	+1.6
NJ2	Nanjing	131.94	293	*e*PKP	PKPdf	01 37 12.3	-4.2
BJI	Beijing	134.00	304	PKP	PKPdf	01 37 19.3	-0.8
BJI				LR	LR		
	comp=N,92nm,22.8s,MS4.7						
BJI				LR	LR		
	comp=E,140nm,21.9s,MS4.7						
BJI				LR	LR		
	comp=Z,85nm,21.0s,MS4.4						
HHC	Hu-ho-hao-te	137.38	306	*e*PKP	PKPdf	01 37 25.8	-0.6
HHC				PP	PP	01 40 15.5	+3.5
HHC				PKS		01 41 00.5	
HHC				SKS	SKSdf	01 44 34.8	-2.4
HHC				SKKS	SKKSac	01 47 06.5	-0.1
HHC				SS	SS	01 58 21.8	+2.1
HHC				AMB	AMB		
	comp=Z,120nm,9.1s						
HHC				LR	LR		
	comp=N,100nm,20.2s,MS4.8						
HHC				LR	LR		
	comp=E,170nm,20.0s,MS4.8						
HHC				LR	LR		
	comp=Z,120nm,20.1s,MS4.6						
SONM	Songino Array	139.06	317	PKhKP	PKPpre	01 37 23.9	
	comp=Z,0.4nm,0.7s,baz=90,slow=1.4,SNR=2.3						
GYA	Guiyang	142.21	284	*e*PKP	PKPdf	01 37 34.0	-1.6
GYA				PP	PP	01 40 44.3	+2.1
GYA

BR131 Keskin Array S 148.83 51 *e*PKPbc PKPbc 01 37 48.7 -1.7
BRTR Keskin Array B 148.83 51 PKPbc PKPbc 01 37 48.7 -1.7
comp=Z,1.3nm,0.7s,baz=289,slow=1.7,SNR=9.2
BVAR Borovoye Array 150.03 354 PKPbc PKPbc 01 37 49.9 -3.0
comp=Z,0.4nm,0.3s,baz=21,slow=5.4,SNR=4.5
KURK Kurchatov 150.65 342 *e*PKPbc PKPbc 01 37 51.6 -2.9
WMQ Urumqi 152.30 323 *e*PKPbc PKPdf 01 37 50.0 -1.7
WMQ LR LR
comp=N,94nm,24.8s,MS4.8
WMQ LR LR
comp=E,170nm,26.0s,MS4.8
WMQ LR LR
comp=Z,140nm,24.0s,MS4.7
MK31 Makanchi Array 152.74 334 *e*PKPbc PKPbc 01 37 56.6 -2.8
MKAR Makanchi Array 152.74 334 PKPbc PKPbc 01 37 55.6 -3.8
comp=Z,0.9nm,0.7s,baz=21,slow=1.7,SNR=7.6
ABKAR Akbulak array 153.78 8 *e*PKPbc PKPbc 01 38 02.3 +0.8

*IDC **27** 01:24:43.4±1.8, 74°.28N×9°.27E, h0km, mb3.7/3, mb1 3.8/5, mb1mx3.4/23, mbtmp3.7/5, ML3.0/2, MS3.0/6, Ms1 3.0/6, ms1mx2.8/25, Error ellipse: s-maj=55.5km s-min=18.2km az=56.0*
*CSEM **27** 01:24:43.2±0.6, 74°.46N×10°.06E, h10km, ML2.0, Error ellipse: s-maj=21.2km s-min=6.3km az=78.0*
*ISCJB **27** 01:24:44.2±1.0, 74°.42N±0°.05×11°.6E±0°.4, h10km, mb3.5/3, MS3.1/3, Error ellipse: s-maj=17.6km s-min=4.8km az=163.8*
*BER **27** 01:24:44.6±2.0, 74°.38N×9°.61E, h10km, MD2.9, ML2.0, ML2.2(NAO)*
*NAO **27** 01:24:45.7±3.3, 74°.45N×10°.82E, ML2.2*
*HEL **27** 01:24:51.6±0.5, 74°.37N×12°.38E, h10km, ML2.6*

ISC 27 01:24:45.8±0.9, 74°.42N±0°.05×11°.2E±0°.4, h10km, n41, σ1°43/59, mb3.5/3, MS3.1/3, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJO	**Bjornoya**	**2.17**	**84**	*e*P	**Pn**	**01 25 24.4**	**+2.6**
BJO				*e*S	**Sn**	**01 25 52.7**	**+4.0**
BJO				AML	AML	01 25 56.6	
	comp=Z,22nm,0.4s						
BJO	**Bjornoya**	**2.17**	**84**	*e*P	**Pn**	**01 25 24.4**	**+2.6**
	SNR=50						
BJO				*e*S	**Sn**	**01 25 52.7**	**+4.1**
	comp=Z,22nm,0.4s,SNR=50						
HSP	**Hornsund**	**2.83**	**21**	*e*P	**Pn**	**01 25 30.3**	**-0.6**
SPA0	**Spitsbergen Ar**	**3.98**	**16**	Pn	**Pn**	**01 25 46.7**	**0.0**
	baz=197,slow=16						
SPA0				Sn	**Sn**	**01 26 32.5**	**-0.8**
	baz=207,slow=22						
SPA0	**Spitsbergen Ar**	**3.98**	**16**	Pn	**Pn**	**01 25 46.7**	**0.0**
	baz=197,slow=15,SNR=50						
SPA0				Sn	**Sn**	**01 26 32.5**	**-0.8**
	baz=207,slow=21,SNR=50						
KBS	**Kingsbay**	**4.54**	**2**	Pn	**Pn**	**01 25 51.4**	**-3.0**
KBS				Sn	**Sn**	**01 26 41.5**	**-5.6**
KBS	**Kingsbay**	**4.54**	**2**	*e*P	**Pn**	**01 25 51.4**	**-3.0**
KBS				*e*S	**Sn**	**01 26 41.8**	**-5.3**
KBS				AML	AML	01 26 49.9	
	comp=Z,7.5nm,0.4s						
KBS	**Kingsbay**	**4.54**	**2**	*e*P	**Pn**	**01 25 51.4**	**-3.0**
	SNR=49						
KBS				Sn	**Sn**	**01 26 41.5**	**-5.6**
KBS				*e*S	**Sn**	**01 26 41.8**	**-5.3**
	comp=Z,7.5nm,0.4s,SNR=49						
TRO	**Tromso**	**5.37**	**150**	*e*Pn	**Pn**	**01 26 05.1**	**-0.7**
TRO				*e*Sn	**Sn**	**01 27 05.5**	**-2.0**
TRO				AML	AML	01 27 08.7	
	comp=Z,3.1nm,0.7s						
TRO	**Tromso**	**5.37**	**150**	*e*Pn	**Pn**	**01 26 05.1**	**-0.7**
	SNR=50						
KIF	**Kilpisjarvi**	**6.22**	**146**	*e*P	**Pn**	**01 26 18.9**	**+1.5**
KIF				*e*S	**Sn**	**01 27 25.5**	**-2.9**
KIF				MSN		01 27 30.1	
	comp=Z,1.9nm,0.3s						
KIF	**Kilpisjarvi**	**6.22**	**146**	P	**Pn**	**01 26 18.9**	**+1.5**
ARA0	**ARCESS Array S**	**6.60**	**131**	Pn	**Pn**	**01 26 24.5**	**+1.8**
	baz=326,slow=10						
ARA0				Sn	**Sn**	**01 27 37.2**	**-0.6**
	baz=322,slow=22						
ARA0	**ARCESS Array S**	**6.60**	**131**	*e*P	**Pn**	**01 26 24.7**	**+2.0**
ARA0				*e*S	**Sn**	**01 27 33.8**	**-4.1**
ARA0	**ARCESS Array S**	**6.60**	**131**	Pn	**Pn**	**01 26 24.5**	**+1.8**
	baz=326,slow=9.8,SNR=50						
ARA0				Sn	**Sn**	**01 27 37.2**	**-0.7**
	baz=322,slow=21,SNR=50						
ARCES	**ARCESS Array B**	**6.60**	**131**	Pn	**Pn**	**01 26 24.6**	**+1.9**
	comp=Z,0.8nm,0.3s,baz=320,slow=13,SNR=26						
ARCES				Sn	**Sn**	**01 27 37.9**	**0.0**
	comp=Z,0.9nm,0.3s,baz=324,slow=20,SNR=8.8						
ARCES				LR	LR	01 29 34.8	
	comp=Z,103nm,21.6s,baz=217,slow=42						
KTK1	**Kautokeino**	**6.61**	**139**	*e*Sn	**Sn**	**01 27 38.5**	**+0.4**
KEV	**Kevo**	**6.75**	**126**	*e*P	**Pn**	**01 26 25.1**	**+0.5**
KEV				*e*S	**Sn**	**01 27 36.5**	**-4.9**
KEV				MSN		01 27 48.3	
	comp=Z,1.4nm,0.2s						
KEV	**Kevo**	**6.75**	**126**	P	**Pn**	**01 26 25.1**	**+0.5**
HEF	**Hetta**	**7.22**	**140**	*e*P	**Pn**	**01 26 33.0**	**+1.8**
HEF				*e*S	**Sn**	**01 27 49.6**	**-3.4**
HEF	**Hetta**	**7.22**	**140**	P	**Pn**	**01 26 32.9**	**+1.8**
LANU	**Lannavaara**	**7.27**	**146**	*e*P	**Pn**	**01 26 34.1**	**+2.2**
LANU				*e*S	**Sn**	**01 27 51.2**	**-3.2**
LANU	**Lannavaara**	**7.27**	**146**	P	**Pn**	**01 26 34.1**	**+2.2**
SGF	**Sodankyl**	**8.59**	**137**	*e*P	**Pn**	**01 26 51.1**	**+1.2**
SGF				*e*S	**Sn**	**01 28 22.7**	**-3.9**
SGF	**Sodankyl**	**8.59**	**137**	P	**Pn**	**01 26 51.0**	**+1.1**
VRF	**Varrio**	**8.93**	**129**	*e*P	**Pn**	**01 26 55.0**	**+0.4**
VRF				*e*S	**Sn**	**01 28 28.7**	**-6.4**
VRF	**Varrio**	**8.93**	**129**	P	**Pn**	**01 26 54.9**	**+0.3**
RNF	**Rovaniemi**	**9.24**	**140**	*e*P	**Pn**	**01 26 58.1**	**-0.7**
RNF				*e*S	**Sn**	**01 28 37.0**	**-5.6**
RNF				MSN		01 28 47.1	
	comp=Z,0.5nm,0.3s						
RNF	**Rovaniemi**	**9.24**	**140**	P	**Pn**	**01 26 58.1**	**-0.7**
MSF	**Maaselka**	**10.41**	**136**	*e*P	**Pn**	**01 27 15.7**	**+0.8**
MSF				*e*S	**Sn**	**01 29 05.2**	**-6.2**
MSF	**Maaselka**	**10.41**	**136**	P	**Pn**	**01 27 15.6**	**+0.7**
KUE	**Riekki**	**10.48**	**134**	*e*P	**Pn**	**01 27 16.2**	**+0.4**
KUE				*e*S	**Sn**	**01 29 05.4**	**-7.5**
KUE	**Riekki**	**10.48**	**134**	P	**Pn**	**01 27 16.1**	**+0.4**
NOA	**NORSAR Array B**	**13.44**	**180**	LR	LR	01 32 14.5	
	comp=Z,18nm,21.1s,baz=355,slow=34						
FINES	**FINESS Array B**	**14.11**	**149**	Pn	**Pn**	**01 28 04.3**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=337,slow=13,SNR=6.6						
FINES				LR	LR	01 34 38.2	
	comp=Z,44nm,18.6s,baz=152,slow=42						
AKASG	**Malin Array Be**	**24.98**	**152**	P	**P**	**01 30 10.0**	**+1.0**
	comp=Z,0.5nm,0.4s,mb3.4,baz=343,slow=9.4,SNR=3.1						
BVAR	**Borovoye Array**	**31.70**	**99**	P	**P**	**01 31 13.6**	**+4.6**
	comp=Z,0.8nm,0.7s,mb3.7,baz=343,slow=10.0,SNR=2.9						
ZALV	**Zalesovo Beam**	**34.77**	**84**	LR	LR	01 51 08.7	
	comp=Z,21nm,21.1s,MS2.9,baz=63,slow=45						
SCHQ	**Schefferville**	**35.13**	**280**	LR	LR	01 44 43.9	
	comp=Z,50nm,18.7s,MS3.3,baz=64,slow=35						
ILAR	**Eielson Array**	**40.32**	**346**	P	**P**	**01 32 21.2**	**-1.4**
	comp=Z,0.7nm,0.7s,mb3.5,baz=1.0,slow=7.2,SNR=11						
MKAR	**Makanchi Array**	**40.57**	**92**	LR	LR	01 50 24.6	
	comp=Z,37nm,20.9s,MS3.2,baz=353,slow=38						

*IDC **27** 01:30:34.2±1.9, 23°.44S×115°.58W, h0km, mb3.8/5, mb1 4.2/5, mb1mx4.0/14, mbtmp3.8/5, MS3.9/3, Ms1 3.9/3, ms1mx3.5/15, Error ellipse: s-maj=65.0km s-min=39.8km az=43.0*
*NEIC **27** 01:30:36.2±0.8, 23°.45S×115°.41W, h10km, mb4.4/10, Error ellipse: s-maj=28.1km s-min=20.6km az=70.0*

ISC 27 01:30:39.9±3.5, 22°.9S±0°.5×115°.1W±0°.4, h10km, n30, σ0°79/18, mb4.2/16, MS3.9/3, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**6.67**	**130**	T		01 38 40.3	
	6.7nm,0.3s,baz=102,slow=24,SNR=2.6						
PPT	**Papeete**	**32.75**	**273**	LR	LR	01 46 05.5	
	comp=Z,263nm,18.3s,MS4.0,baz=20,slow=29						
PLCA	**Paso Flores**	**41.30**	**126**	LR	LR	01 50 37.7	
	comp=Z,177nm,18.3s,MS4.0,baz=99,slow=29						
LPAZ	**La Paz**	**44.58**	**90**	P	**P**	**01 38 53.0**	**+0.6**
	1.0nm,0.6s,mb3.8,baz=310,slow=6.2,SNR=3.9						
LPAZ				LR	LR	01 53 14.0	
	comp=Z,94nm,20.5s,MS3.7,baz=287,slow=30						
TXAR	**Lajitas Array**	**53.12**	**12**	P	**P**	**01 39 57.5**	**-0.3**
	0.7nm,1.1s,mb3.5,baz=203,slow=8.2,SNR=4.3						
JCT	**Junction City**	**55.11**	**16**	*e*P	**P**	**01 40 13.0**	**+0.7**
	5.8nm,1.0s,mb4.6						
MNTX	**Cornudas Mount**	**55.12**	**10**	*e*P	**P**	**01 40 13.0**	**+0.7**
	17nm,2.2s,mb4.7						
WMOK	**Wichita Mounta**	**59.42**	**16**	*e*P	**P**	**01 40 42.7**	**0.0**
	1.9nm,1.1s,mb4.0						
NVAR	**Mina Array Bea**	**61.12**	**357**	P	**P**	**01 40 55.0**	**+0.7**
	1.5nm,0.8s,mb4.2,baz=183,slow=10,SNR=8.0						
BGU	**Big Grassy Mou**	**63.57**	**2**	*e*P	**P**	**01 41 11.1**	**+0.6**
	37nm,2.4s,mb5.0						
WVT	**Waverly**	**64.16**	**24**	*e*P	**P**	**01 41 13.0**	**-1.6**
	2.1nm,0.9s,mb4.2						
PDAR	**Pinedale Array**	**65.58**	**4**	P	**P**	**01 41 23.1**	**-0.6**
	0.5nm,0.8s,mb3.6,baz=140,slow=7.1,SNR=3.7						
HUMO	**Hull Mountain**	**65.62**	**354**	*e*P	**P**	**01 41 24.2**	**+0.2**
	77nm,2.8s,mb5.2						
HLID	**Hailey**	**66.18**	**1**	*e*P	**P**	**01 41 28.5**	**+1.0**
	2.3nm,1.1s,mb4.1						
TPAW	**Teton Pass**	**66.21**	**3**	*e*P	**P**	**01 41 27.4**	**-0.3**
	1.9nm,0.8s,mb4.2						
MCMT	**McKenzie Canyo**	**67.47**	**2**	*e*P	**P**	**01 41 35.7**	**0.0**
BMO	**Blue Mountains**	**67.50**	**358**	*e*P	**P**	**01 41 36.1**	**+0.2**
	1.1nm,0.9s,mb3.9						
ECSD	**EROS Data Cent**	**68.48**	**14**	*e*P	**P**	**01 41 41.1**	**-1.0**
	1.4nm,0.7s,mb4.1						
BSMT	**Bassoo Peak**	**70.47**	**0**	*e*P	**P**	**01 41 54.6**	**+0.4**
NEW	**Newport**	**70.90**	**359**	*e*P	**P**	**01 41 56.9**	**0.0**
	2.5nm,0.8s,mb4.2						
YKA	**Yellowknife Ar**	**85.14**	**0**	P	**P**	**01 43 12.6**	**-3.0**
	0.8nm,0.7s,mb4.0,baz=178,slow=4.4,SNR=5.0						
ZALV	**Zalesovo Beam**	**145.59**	**339**	PKPbc	PKPbc	01 50 15.8	-2.5
	0.8nm,0.5s,baz=321,slow=1.9,SNR=4.0						
ZALV	**Zalesovo Beam**	**145.59**	**339**	PKPbc	PKPbc	01 50 15.8	-2.5
BR131	**Keskin Array S**	**148.69**	**50**	*e*PKPdf	PKPdf	01 50 20.9	-2.9
BR131				*e*PKPbc	PKPbc	01 50 25.3	-2.2
BR131				*e*PKPab	PKPab	01 50 30.4	-0.7
BRTR	**Keskin Array B**	**148.69**	**50**	PKPbc	PKPbc	01 50 24.8	-2.8
	1.2nm,0.8s,baz=248,slow=1.3,SNR=8.4						
BVAR	**Borovoye Array**	**149.68**	**353**	PKPbc	PKPbc	01 50 26.6	-2.9
	0.5nm,0.6s,baz=112,slow=1.6,SNR=3.5						
KURK	**Kurchatov**	**150.29**	**342**	*e*PKPbc	PKPbc	01 50 28.1	-3.0
KURK				*e*PKPab	PKPab	01 50 34.1	-3.1
MK31	**Makanchi Array**	**152.39**	**334**	*e*PKPdf	PKPdf	01 50 27.9	-1.4
MKAR	**Makanchi Array**	**152.39**	**334**	PKPbc	PKPbc	01 50 31.8	-4.3
	0.6nm,0.8s,baz=0.0,slow=1.2,SNR=3.6						
MKAR	**Makanchi Array**	**152.39**	**334**	PKPbc	PKPbc	01 50 31.9	-4.3

*NIED **27** 01:42:00, 44°.50N×149°.40E, h20km, Mw3.5 Best double couple: M0=2.06000×10^14 NP1:φs=30.00000°, δ=60.00000°, λ=82.00000°. NP2:φs=227.00000°, δ=31.00000°, λ=104.00000°.*

IDC 27 01:42:52.8±3.6, 44°.53N×149°.52E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/20, mbtmp3.6/5, Error ellipse: s-maj=118.6km s-min=33.6km az=4.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**29.76**	**292**	P	P	01 49 01.1	+0.4
	0.3nm,0.4s,baz=94,slow=9.1,SNR=3.1						
MKAR	**Makanchi Array**	**45.73**	**298**	P	P	01 51 15.2	-0.2
	0.5nm,0.6s,baz=64,slow=9.1,SNR=5.2						
FINES	**FINESS Array B**	**64.94**	**334**	P	P	01 53 33.7	0.0
	0.7nm,0.7s,baz=37,slow=9.4,SNR=3.6						
NB2	**NORSAR Subarra**	**69.47**	**340**	P	P	01 54 02.4	0.0
	comp=Z,0.5nm,0.6s,baz=28,slow=6.5						
NOA	**NORSAR Array B**	**69.47**	**340**	P	P	01 54 02.6	+0.2
	comp=Z,0.7nm,0.5s,baz=30,slow=6.3,SNR=5.9						
TXAR	**Lajitas Array**	**80.79**	**58**	P	P	01 55 08.5	+0.2
	comp=Z,0.2nm,0.6s,baz=303,slow=11,SNR=3.2						
TXAR				pP		01 55 21.1	
	comp=Z,0.3nm,0.6s,baz=308,slow=4.4,SNR=4.7						

IDC 27 01:43:43.0±3.4, 7°.72S×123°.37E, h172km±37km, mb3.4/3, mb1 3.6/5, mb1mx3.3/19, mbtmp3.5/5, MS3.7/1, Ms1 3.6/1, ms1mx2.6/13, Error ellipse: s-maj=62.8km s-min=13.0km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.55**	**168**	P	Pn	01 46 11.1	+1.2
	0.5nm,0.3s,baz=1.9,slow=11,SNR=15						
FITZ				S	Sn	01 48 04.3	-2.8
	1.3nm,0.3s,baz=110,slow=7.8,SNR=10.0						
WRA	**Warramunga Arr**	**16.14**	**140**	S	S	01 50 15.2	-4.6
	baz=316,slow=24						
ASAR	**Alice Springs**	**18.80**	**149**	P	P	01 47 50.5	+1.0
	1.0nm,0.3s,baz=334,slow=12,SNR=40						
ASAR				S	S	01 51 15.3	+1.0
	0.2nm,0.3s,baz=317,slow=21,SNR=3.2						
STKA	**Stephens Creek**	**29.42**	**147**	P	P	01 49 29.8	-0.6
	0.9nm,0.3s,baz=323,slow=5.1,SNR=7.6						
STKA				LR	LR	02 02 31.8	
	comp=Z,137nm,18.4s,baz=205,slow=38						
MJAR	**Matsushiro Arr**	**46.18**	**17**	P	P	01 51 50.1	-0.4
	0.6nm,0.4s,baz=190,slow=8.7,SNR=5.4						
MKAR	**Makanchi Array**	**65.40**	**330**	P	P	01 54 07.3	+0.3
	0.4nm,0.6s,baz=131,slow=7.8,SNR=4.1						

*TRN **27** 01:51:29.4, 19°.11N×64°.56W, h3km*
*RSPR **27** 01:51:30.0, 19°.27N×64°.19W, h70km±12km, MD3.7/8*
*NEIC **27** 01:51:30.0, 19°.27N×64°.19W, h70km, MD3.7(RSPR), After RSPR.*

ISC 27 01:51:29.5±2.7, 19°.27N±0°.08×64°.3W±0°.3, h20km±40km, n19, σ0°37/31, 10C-8D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.91**	**200**	↑*e*P	**Pb**	**01 51 47.1**	**+0.4**
TBVI				*e*S	**Sb**	**01 51 58.3**	**-0.1**
TBVI	**Tortola**	**0.91**	**200**	↑*e*P	**Pb**	**01 51 47.9**	**+1.3**
TBVI				*e*S	**Sb**	**01 51 58.3**	**-0.1**
STVI	**Saint Thomas**	**1.12**	**215**	↓*e*P	**Pn**	**01 51 49.6**	**-0.4**
STVI				*e*S	**Sb**	**01 52 03.8**	**-0.5**
STVI	**Saint Thomas**	**1.12**	**215**	↓*e*P	**Pn**	**01 51 49.6**	**-0.4**
STVI				*e*S	**Sb**	**01 52 03.8**	**-0.5**
MTP	**Monte Pirata**	**1.68**	**226**	↑*e*P	**Pn**	**01 51 57.4**	**-0.4**
MTP				*e*S	**Sn**	**01 52 19.0**	**+0.2**
MTP	**Monte Pirata**	**1.68**	**226**	↑*e*P	**Pn**	**01 51 57.4**	**-0.4**
MTP				*e*S	**Sn**	**01 52 19.0**	**+0.2**
CBYP	**Canovanas**	**1.79**	**236**	↑*e*P	**Pn**	**01 51 59.6**	**+0.2**
CBYP	**Canovanas**	**1.79**	**236**	↑*e*P	**Pn**	**01 51 59.6**	**+0.2**
SJG	**San Juan**	**2.12**	**237**	↓*e*P	**Pn**	**01 52 03.5**	**-0.3**
SJG				*e*S	**Sn**	**01 52 30.0**	**+0.5**
SJG	**San Juan**	**2.12**	**237**	↓*e*P	**Pn**	**01 52 03.9**	**+0.1**
SJG				*e*S	**Sn**	**01 52 29.9**	**+0.3**
SJG	**San Juan**	**2.12**	**237**	↓*e*P	**Pn**	**01 52 03.5**	**-0.3**
SJG	**San Juan**	**2.12**	**237**	↑*e*P	**Pn**	**01 52 03.9**	**+0.1**
SJG				*e*S	**Sn**	**01 52 29.9**	**+0.3**
SJG				*e*S	**Sn**	**01 52 30.2**	**+0.7**
CELP	**Cerrillos**	**2.48**	**242**	↓*e*P	**Pn**	**01 52 08.8**	**0.0**
CELP				*e*S	**Sn**	**01 52 38.5**	**-0.1**
CELP	**Cerrillos**	**2.48**	**242**	↓*e*P	**Pn**	**01 52 08.8**	**0.0**
CELP				*e*S	**Sn**	**01 52 38.5**	**-0.1**
AOPR	**Arecibo Observ**	**2.52**	**249**	↑*e*P	**Pn**	**01 52 08.9**	**-0.4**
AOPR	**Arecibo Observ**	**2.52**	**249**	↑*e*P	**Pn**	**01 52 08.9**	**-0.4**
CRPR	**Cabo Rojo, PR**	**2.96**	**245**	↓*e*P	**Pn**	**01 52 15.5**	**0.0**
CRPR	**Cabo Rojo, PR**	**2.96**	**245**	↓*e*P	**Pn**	**01 52 15.5**	**0.0**
SDDR	**Presa de Saban**	**6.63**	**269**	*e*Pn	**Pn**	**01 53 06.1**	**+0.2**
	14nm,0.3s						

*IDC **27** 01:52:19.6±0.9, 23°.39S×115°.46W, h0km, mb4.0/7, mb1 4.3/7, mb1mx4.2/15, mbtmp4.0/7, MS3.6/5, Ms1 3.7/5, ms1mx3.5/12, Error ellipse: s-maj=35.6km s-min=23.0km az=68.0*
*NEIC **27** 01:52:21.7±0.8, 23°.41S×115°.13W, h10km, mb4.6/30, Error ellipse: s-maj=24.5km s-min=15.4km az=55.0*
*BJI **27** 01:52:28.7, 23°.40S×115°.10W, h10km, mB5.2/5, Ms5.1/5, Ms7 4.6/5*

ISC 27 01:52:21.3±0.9, 23°.6S±0°.1×114°.8W±0°.2, h10km, n181, σ0°71/165, mb4.4/37, MS4.1/7, 56C-65D, Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**6.06**	**127**	LR	LR	01 55 19.1	
	comp=Z,365nm,20.8s,baz=303,slow=27						
RPN				T		02 00 27.8	
	8.5nm,0.3s,baz=269,slow=23,SNR=9.6						
PLCA	**Paso Flores**	**40.70**	**126**	P	**P**	**02 00 08.1**	**+6.1**
	2.1nm,0.9s,mb3.8,baz=278,slow=12,SNR=1.7						
PLCA				LR	LR	02 12 55.2	
	comp=Z,203nm,19.9s,MS4.0,baz=110,slow=30						
OTAV	**Otavalo**	**42.46**	**61**	*e*P	**P**	**02 00 17.8**	**+1.1**
	2.1nm,0.9s,mb3.8						
LPAZ	**La Paz**	**44.28**	**89**	P	**P**	**02 00 37.0**	**+5.4**
	1.1nm,0.5s,mb3.9,baz=275,slow=5.6,SNR=19						
LPAZ				LR	LR	02 15 19.0	
	comp=Z,91nm,20.1s,MS3.7,baz=300,slow=31						
CPUP	**Villa Florida**	**51.79**	**106**	LR	LR	02 19 38.5	
	comp=Z,72nm,19.4s,MS3.7,baz=67,slow=31						
TXAR	**Lajitas Array**	**53.66**	**12**	P	**P**	**02 01 43.9**	**+0.8**
	0.8nm,0.9s,mb3.7,baz=206,slow=8.3,SNR=7.9						
TXAR				LR	LR	02 20 11.6	
	comp=Z,28nm,19.8s,MS3.3,baz=5.0,slow=31						
TXAR	**Lajitas Array**	**53.66**	**12**	P	**P**	**02 01 43.9**	**+0.8**
TXAR				LR	LR	02 20 11.6	
626A	**Big Bend Ranch**	**53.79**	**11**	↓P	**P**	**02 01 44.5**	**+0.4**
	baz=53,SNR=7.7						
627A	**Terlingua Ranc**	**53.83**	**12**	↑P	**P**	**02 01 44.3**	**0.0**
	baz=53,SNR=5.0						
526A	**Mary Lane Ranc**	**54.29**	**11**	↓P	**P**	**02 01 48.0**	**+0.3**
	baz=53						
527A	**Woodward Ranch**	**54.46**	**12**	↑P	**P**	**02 01 49.4**	**+0.5**
	baz=53						
528A	**Cox Ranch, San**	**54.64**	**13**	↓P	**P**	**02 01 50.4**	**+0.2**
	baz=54						
425A	**Indio Mountain**	**54.84**	**10**	↓P	**P**	**02 01 51.8**	**+0.1**
	baz=54						
319A	**Douglas**	**54.87**	**6**	↓P	**P**	**02 01 52.0**	**0.0**
	baz=54						
427A	**Hayter Ranch,**	**55.18**	**12**	↓P	**P**	**02 01 54.2**	**0.0**
	baz=54						
428A	**Kincaid Ranch,**	**55.20**	**13**	↓P	**P**	**02 01 54.1**	**-0.2**
	baz=54						
324A	**Moseley Ranch,**	**55.41**	**10**	↓P	**P**	**02 01 55.7**	**-0.1**
	baz=54,SNR=11						
325A	**Bean Ranch, Si**	**55.42**	**10**	↑P	**P**	**02 01 56.1**	**+0.3**
	baz=54,SNR=5.8						
219A	**White Tail Can**	**55.49**	**6**	↓P	**P**	**02 01 57.0**	**+0.6**
	baz=54						
JCT	**Junction City**	**55.62**	**16**	*e*P	**P**	**02 01 57.7**	**+0.4**
	11nm,0.9s,mb4.9						
MNTX	**Cornudas Mount**	**55.67**	**10**	*e*P	**P**	**02 01 57.3**	**-0.4**
	3.6nm,1.1s,mb4.3						
117A	**Oracle**	**55.95**	**4**	↑P	**P**	**02 02 00.4**	**+0.8**
	baz=55						
224A	**Cornudas Mount**	**56.02**	**9**	↑P	**P**	**02 01 59.8**	**-0.4**
	baz=55,SNR=18						
225A	**Deer Hill, Car**	**56.16**	**10**	↓P	**P**	**02 02 00.4**	**-0.8**
	baz=55						
121A	**Cookes Peak, D**	**56.17**	**7**	↓P	**P**	**02 02 01.1**	**-0.1**
	baz=55						
124A	**Stringfield Ra**	**56.64**	**9**	↓P	**P**	**02 02 04.6**	**0.0**
	baz=56,SNR=9.9						
125A	**Gardner Draw,**	**56.73**	**10**	↑P	**P**	**02 02 04.7**	**-0.5**
	baz=56,SNR=10						
Z21A	**St. Cloud Mine**	**56.95**	**7**	↑P	**P**	**02 02 07.7**	**+0.9**
	baz=56						
Z23A	**Rita Site, Whi**	**57.09**	**9**	↓P	**P**	**02 02 08.6**	**+0.9**
	baz=56						
Y15A	**Casa Rosa Ranc**	**57.24**	**2**	↓P	**P**	**02 02 08.7**	**-0.1**
	baz=56						
BELC	**Belle Mtn. Jos**	**57.25**	**359**	↑P	**P**	**02 02 08.6**	**-0.3**
	baz=56						
Z25A	**Roswell**	**57.33**	**10**	↓P	**P**	**02 02 09.4**	**-0.1**
	baz=56,SNR=6.1						
Y19A	**Nutrioso**	**57.44**	**5**	↓P	**P**	**02 02 10.4**	**+0.2**
	baz=56						
Z26A	**Caprock**	**57.44**	**11**	↑P	**P**	**02 02 09.1**	**-1.2**
	baz=56,SNR=5.4						
Y20A	**Horse Springs,**	**57.47**	**6**	↑P	**P**	**02 02 10.8**	**+0.3**
	baz=56						
Z27A	**Tatum**	**57.62**	**11**	↑P	**P**	**02 02 11.2**	**-0.3**
	baz=57						
Y21A	**Point of Rocks**	**57.64**	**7**	↓P	**P**	**02 02 12.3**	**+0.6**
	baz=57,SNR=5.3						
Y22A	**Socorro**	**57.66**	**8**	↓P	**P**	**02 02 11.1**	**-0.7**
	baz=57,SNR=5.8						
X14A	**Yava**	**57.73**	**2**	↑P	**P**	**02 02 13.4**	**+1.1**
	baz=57						
X16A	**Lo Mia Camp, P**	**57.74**	**3**	↑P	**P**	**02 02 13.5**	**+1.1**
	baz=57						
Y23A	**Lovelace Mesa,**	**57.77**	**9**	↓P	**P**	**02 02 12.9**	**+0.4**
	baz=57						
X15A	**Humboldt**	**57.77**	**2**	P	**P**	**02 02 13.6**	**+1.0**
	baz=57,SNR=5.3						
Y24A	**Capitan**	**57.85**	**9**	↓P	**P**	**02 02 12.8**	**-0.3**
	baz=57

NVAR	Mina Array Bea	61.75	357	P		P	02 02 39.0	-0.8
	3.1nm,0.9s,mb4.5,baz=184,slow=9.9,SNR=12							
R18A	Canyonlands Na	61.78	4	⇓P		P	02 02 40.4	+0.3
	baz=61							
MSU	Marysvale	61.79	2	eP		P	02 02 40.7	+0.6
	11nm,1.8s,mb4.7							
Q11A	Duckwater	62.08	359	⇓P		P	02 02 43.0	+0.9
	baz=61,SNR=5.6							
R24A	Sanders Place,	62.13	9	⇓P		P	02 02 42.4	0.0
	baz=61							
Q19A	Hogan Spring (	62.40	5	⇓P		P	02 02 44.3	+0.1
	baz=61							
SRU	San Rafael	62.47	4	⇓P		P	02 02 45.3	+0.6
	baz=62							
P13A	Bates Ranch, G	62.69	1	⇓P		P	02 02 45.9	-0.2
	baz=62,SNR=6.3							
P12A	McGill	62.70	360	⇓P		P	02 02 46.6	+0.4
	baz=62							
P22A	Eagle	63.27	7	⇑P		P	02 02 50.7	+0.7
	baz=62							
DUG	Dugway	63.45	2	eP		P	02 02 51.4	+0.2
	9.5nm,1.4s,mb4.7							
O12A	Currie	63.49	0	⇑P		P	02 02 52.4	+0.9
	baz=62							
O22A	Kremmling	63.85	7	⇓P		P	02 02 54.5	+0.6
	baz=63							
GOGA	Godfrey	64.02	29	eP		P	02 02 54.7	-0.4
	2.7nm,0.9s,mb4.3							
N12A	Clover Valley,	64.08	360	⇑P		P	02 02 55.8	+0.5
	baz=63							
N12A	Clover Valley,	64.08	360	eP		P	02 02 55.8	+0.5
	11nm,1.4s,mb4.7							
N14A	Grayback Hills	64.09	1	P		P	02 02 55.6	+0.1
	baz=63,SNR=7.2							
N15A	Stansbury Isla	64.15	2	⇓P		P	02 02 56.5	+0.7
	baz=63							
BGU	Big Grassy Mou	64.17	1	eP		P	02 02 55.5	-0.5
	5.3nm,1.3s,mb4.4							
WDC	Whiskeytown Da	64.22	353	eP		P	02 02 56.2	0.0
	16nm,1.5s,mb4.8							
N20A	Spence Gulch,	64.34	5	⇑P		P	02 02 57.1	0.0
	baz=63							
SWET	Sewanee	64.53	26	eP		P	02 02 58.3	-0.1
M13A	Montello	64.59	0	⇓P		P	02 02 58.4	-0.3
	baz=64							
M13A	Montello	64.59	0	eP		P	02 02 58.9	+0.3
	5.6nm,1.0s,mb4.5							
WVT	Waverly	64.60	24	eP		P	02 02 57.9	-1.0
	2.4nm,0.6s,mb4.4							
KHMM	Horse Mountain	64.64	352	eP		P	02 03 00.2	+1.2
	20nm,1.4s,mb5.0							
M11A	Holland Ranch,	64.66	359	⇑P		P	02 02 59.6	+0.5
	baz=64							
M14A	Sheep Mountain	64.74	1	⇓P		P	02 02 57.5	-2.1
	baz=64							
M10A	I.L. Ranch, Tu	64.77	359	⇓P		P	02 03 00.2	+0.4
	baz=64							
CCM	Cathedral Cave	65.15	20	eP		P	02 03 01.1	-1.3
	4.0nm,0.8s,mb4.5							
M21A	Separation Pea	65.19	6	⇑P		P	02 03 00.3	-2.3
	baz=64							
L15A	Malad City	65.27	2	⇓P		P	02 03 02.4	-0.6
	baz=64							
L10A	Juniper Basin	65.32	359	⇑P		P	02 03 04.2	+0.8
	baz=64							
MOD	Modoc	65.33	355	eP		P	02 03 04.3	+0.9
	4.9nm,0.9s,mb4.5							
L12A	House Creek Ra	65.37	360	⇑P		P	02 03 04.3	+0.6
	baz=64							
YBH	Yreka Blue Hor	65.37	353	eP		P	02 03 04.1	+0.3
	5.7nm,1.5s,mb4.4							
L11A	Cat Creek Ranc	65.40	359	⇓P		P	02 03 03.1	-0.8
	baz=64							
WVOR	Wild Horse Val	65.76	357	eP		P	02 03 06.0	-0.2
	7.9nm,1.4s,mb4.5							
K14A	Jones Ranch, D	65.79	1	⇓P		P	02 03 06.0	-0.4
	baz=65							
BW06	Boulder Array	66.17	4	eP		P	02 03 07.8	-1.1
	2.5nm,1.0s,mb4.2							
PDAR	Pinedale Array	66.17	4	P		P	02 03 07.4	-1.5
	0.6nm,0.7s,mb3.7,baz=124,slow=7.4,SNR=6.0							
K05A	Summer Lake	66.19	355	⇓P		P	02 03 08.8	-0.2
	baz=65							
HUMO	Hull Mountain	66.27	353	eP		P	02 03 09.2	-0.2
	5.3nm,1.0s,mb4.5							
J18A	Kendall Valley	66.58	4	⇓P		P	02 03 10.4	-1.1
	baz=66							
QSPA	South Pole Qui	66.59	180	P		P	02 03 12.1	+0.8
	1.7nm,1.0s,mb4.0,baz=126,slow=3.5,SNR=3.5							
J13A	Cove Ranch, Pi	66.62	0	⇑P		P	02 03 10.6	-1.2
	baz=66							
MFID	Camas Ranch	66.65	359	⇑P		P	02 03 11.9	0.0
	baz=66							
J15A	Blackfoot	66.66	2	⇓P		P	02 03 10.9	-1.0
	baz=66							
J08A	Circle Bar Ran	66.67	357	⇑P		P	02 03 12.1	+0.1
	baz=66							
HLID	Hailey	66.79	0	eP		P	02 03 13.3	+0.5
	4.3nm,0.9s,mb4.5							
TPAW	Teton Pass	66.81	3	eP		P	02 03 12.3	-0.6
	3.8nm,0.9s,mb4.4							
I12A	Atlanta	67.02	360	⇓P		P	02 03 14.3	0.0
	baz=66							
I13A	Wildhorse Cree	67.14	1	⇓P		P	02 03 14.6	-0.4
	baz=66							
I14A	Mackay	67.16	1	⇓P		P	02 03 15.4	+0.2
	baz=66							
IMW	Indian Meadow	67.21	3	eP		P	02 03 15.9	+0.4
	19nm,2.0s,mb4.8							
I07A	Izee	67.45	356	⇓P		P	02 03 16.7	-0.3
	baz=66							
H13A	Challis	67.79	0	⇓P		P	02 03 18.3	-0.8
	baz=67							
H15A	Lima	67.87	2	⇑P		P	02 03 19.7	0.0
	baz=67							
MCMT	McKenzie Canyo	68.08	1	eP		P	02 03 21.1	+0.1
	2.5nm,1.4s,mb4.0							
BMO	Blue Mountains	68.12	358	eP		P	02 03 21.3	+0.1
	22nm,2.3s,mb4.8							
G12A	Big Creek, Yel	68.36	360	⇓P		P	02 03 19.8	-2.9
	baz=67							
G15A	Dillon	68.42	2	⇓P		P	02 03 22.2	-0.9
	baz=68							
G08A	Pilot Rock	68.62	357	⇓P		P	02 03 23.1	-1.3
	baz=68							
G18A	Lazy EL Ranch,	68.71	4	⇑P		P	02 03 24.4	-0.4
	baz=68							
F12A	Elk City	68.98	360	⇓P		P	02 03 24.8	-1.8
	baz=68							
ECSD	EROS Data Cent	69.00	14	eP		P	02 03 25.5	-1.2
	11nm,1.6s,mb4.5							
F13A	Darby	69.02	0	⇓P		P	02 03 25.4	-1.4
	baz=68							
F17A	Fitzpatrick Pl	69.23	3	⇑P		P	02 03 27.4	-0.7
	baz=68							
F10A	Beach Ranch, E	69.23	358	⇓P		P	02 03 27.9	-0.2
	baz=68							
E12A	Beaver Dam Sad	69.64	359	⇑P		P	02 03 30.5	-0.2
	baz=69							
E13A	Victor	69.67	0	⇑P		P	02 03 30.8	0.0
	baz=69							
E15A	Deer Lodge	69.68	2	⇓P		P	02 03 30.8	-0.1
	baz=69							
E17A	Martinsdale	69.78	3	⇑P		P	02 03 31.8	+0.3
	baz=69							
CHMT	Chamberlain Mo	70.15	1	eP		P	02 03 34.0	+0.2
D13A	Huson	70.32	0	⇑P		P	02 03 34.2	-0.6
	baz=69							
D17A	Six Diamond Ra	70.47	3	⇓P		P	02 03 35.9	+0.2
	baz=70							
C14A	Swan Lake	71.00	1	⇓P		P	02 03 38.6	-0.3
	baz=70							
C11A	Tepee Creek (N	71.08	359	⇓P		P	02 03 39.0	-0.4
	baz=70							
C16A	Fuhringer Ranc	71.08	2	⇓P		P	02 03 39.5	+0.1
	baz=70							
NEW	Newport	71.52	358	eP		P	02 03 42.5	+0.4
	4.9nm,1.2s,mb4.3							
B14A	Marquette Ranc	71.60	1	⇓P		P	02 03 40.6	-1.9
	baz=71							
EDM	Edmonton	76.46	1	eP		P	02 04 10.8	-0.1
YKA	Yellowknife Ar	85.75	0	P		P	02 04 59.5	-0.6
	2.3nm,1.0s,mb4.4,baz=175,slow=4.1,SNR=7.2							
YKA	Yellowknife Ar	85.75	0	P		P	02 04 59.5	-0.6
CN2	Changchun	127.17	308	ePKP		PKiKP	02 11 35.8	+9.4
HHC	Hu-ho-hao-te	137.70	305	ePKP		PKiKP	02 11 52.0	+4.2
HHC				PP		PP	02 14 41.0	+8.2
HHC				PKS			02 15 26.0	
HHC				SKS		SKSdf	02 19 01.8	+5.1
HHC				SKKS		SKKSac	02 21 31.3	+4.0
HHC				SS		SS	02 32 47.0	+4.7
HHC				AMB		AMB		
	comp=Z,70nm,9.4s							
HHC				LR		LR		
	comp=N,130nm,20.6s,MS4.8							
HHC				LR		LR		
	comp=E,150nm,20.4s,MS4.8							
HHC				LR		LR		
	comp=Z,100nm,20.2s,MS4.5							
GYA	Guiyang	142.46	283	ePKP		PKiKP	02 12 03.0	+5.0
GYA				PP		PP	02 15 14.8	+12
GYA				AMB		AMB		
	comp=Z,70nm,7.6s							
LZH	Lanzhou	144.48	300	ePKP		PKiKP	02 12 02.8	+1.0
LZH				pPKP		pPKPdf	02 12 06.0	+4.4
LZH				sPKP			02 12 07.5	
CD2	Chengdu	145.10	291	PKP		PKiKP	02 12 08.5	+5.2
KMI	Kunming	145.86	280	PKPbc		PKiKP	02 12 09.5	+4.5
KMI				pPKP		pPKPdf	02 12 12.8	+8.5
KMI				sPKP			02 12 14.0	
KMI				PP		PP	02 15 35.8	+13
KMI				AMB		AMB		
	comp=Z,130nm,5.5s							
KMI				LR		LR		
	comp=N,120nm,15.3s							
KMI				LR		LR		
	comp=E,75nm,21.8s							
KMI				LR		LR		
	comp=Z,58nm,18.6s,MS4.4							
ZALV	Zalesovo Beam	146.26	339	PKPbc		PKPbc	02 11 59.8	-1.9
	comp=Z,0.8nm,0.5s,baz=46,slow=4.3,SNR=4.6							
GTA	Gaotai	146.78	307	eP		PKPdf	02 12 02.0	0.0
GTA				pP			02 12 06.3	
GTA				sP			02 12 09.8	
GTA				pmax		pmax		
	comp=Z,6.0nm,1.3s							
CMAR	Chiang Mai Arr	148.17	267	PKPbc		PKPbc	02 12 07.2	-1.0
	comp=Z,0.5nm,0.3s,baz=108,slow=1.7,SNR=5.8							
BR131	Keskin Array S	148.85	51	ePKPdf		PKPbc	02 12 09.8	+0.4
BRTR	Keskin Array B	148.85	51	PKPbc		PKPbc	02 12 08.7	-0.6
	comp=Z,1.8nm,0.9s,baz=306,slow=10,SNR=4.2							
BVAR	Borovoye Array	150.32	354	PKPbc		PKPbc	02 12 11.7	-0.8
	comp=Z,1.1nm,0.7s,baz=318,slow=2.0,SNR=6.0							
WMQ	Urumqi	152.63	323	ePKPbc		PKPbc	02 12 17.5	-0.6
WMQ				LR		LR		
	comp=N,110nm,22.0s,MS4.9							
WMQ				LR		LR		
	comp=E,190nm,22.2s,MS4.9							
WMQ				LR		LR		
	comp=Z,150nm,20.0s,MS4.8							
MKAR	Makanchi Array	153.06	334	PKPbc		PKPbc	02 12 17.3	-1.7
	comp=Z,0.2nm,0.6s,baz=101,slow=2.9,SNR=3.0							

*ISCJB **27** 01:54:46.1±4.7, 32°.22S±0°.08×178°.1W±0°.1, h8km±28km, mb4.4/15, Error ellipse: s-maj=20.4km s-min=10.1km az=32.4*
*IDC **27** 01:54:46.1±0.7, 32°.00S×177°.96W, h0km, mb4.3/9, mb1 4.4/10, mb1mx4.3/18, mbtmp4.2/10, ML4.0/1, MS4.1/1, Ms1 4.0/1, ms1mx3.3/16, Error ellipse: s-maj=28.7km s-min=22.0km az=146.0*
*NEIC **27** 01:54:51.4±0.4, 32°.09S×178°.07W, h35km, mb4.7/7, Error ellipse: s-maj=15.3km s-min=9.7km az=144.0*
ISC 27 01:54:49.5±6.0, 32°.14S±0°.08×178°.1W±0°.1, h19km±36km, n55, σ0°85/28, mb4.4/15, 2C-1D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	7.25	211	Pn	Pn	01 56 34.4	-0.1
	2.2nm,0.3s,baz=44,slow=8.1,SNR=6.0						
URZ				Sn	Sn	01 57 56.2	-0.2
	16nm,0.3s,baz=168,slow=18,SNR=12						
RPZ	Rata Peaks	14.36	213	Pn	Pn	01 58 08.1	-3.6
	0.6nm,0.3s,baz=56,slow=5.9,SNR=3.6						
RPZ				Sn	Sn	02 00 38.3	-12
	1.1nm,0.3s,baz=319,slow=18,SNR=8.4						
CTA	Charters Tower	34.02	282	eP	P	02 01 33.9	+1.4
	6.9nm,0.8s,mb4.6						
CTA	Charters Tower	34.02	282	P	P	02 01 34.3	+1.8
	11nm,0.9s,mb4.8,baz=103,slow=11,SNR=12						
CTAO	Charters Tower	34.02	282	eP	P	02 01 34.0	+1.6
	7.8nm,0.7s,mb4.8						
STKA	Stephens Creek	34.03	259	eP	P	02 01 34.2	+1.8
	3.7nm,0.8s,mb4.4						
STKA	Stephens Creek	34.03	259	P	P	02 01 34.2	+1.7
	4.2nm,0.8s,mb4.5,baz=109,slow=7.4,SNR=6.9						
STKA				LR	LR	02 14 15.6	
	comp=Z,281nm,18.1s,baz=174,slow=34						
STKA	Stephens Creek	34.03	259	P	P	02 01 34.2	+1.7
STKA				LR	LR	02 14 15.6	
ASAR	Alice Springs	42.95	269	P	P	02 02 47.3	-0.2
	1.7nm,0.4s,mb4.2,baz=115,slow=8.3,SNR=19						
WRAB	Tennant Creek	44.09	274	eP	P	02 02 55.7	-1.0
	18nm,1.0s,mb4.8						
FORT	Forrest	45.53	257	eP	P	02 03 07.7	-0.4
	14nm,0.7s,mb5.0						
FORT	Forrest	45.53	257	eP	P	02 03 07.7	-0.5
	19nm,0.8s,mb5.1						
FITZ	Fitzroy Crossi	52.28	271	eP	P	02 03 59.5	-0.5
	8.6nm,0.9s,mb4.7						
FITZ	Fitzroy Crossi	52.28	271	eP	P	02 03 59.1	-0.9
	3.0nm,0.8s,mb4.3						
CASY	Casey	53.57	208	eP	P	02 04 09.3	+0.4
CASY	Casey	53.57	208	eP	P	02 04 09.5	+0.7
	10.0nm,0.8s,mb4.8						
QSPA	South Pole Qui	57.98	180	P	P	02 04 41.8	+1.5
	1.9nm,0.7s,mb4.2,baz=65,slow=2.5,SNR=11						
QSPA	South Pole Qui	57.98	180	P	P	02 04 41.8	+1.5
SYO	Syowa Base	75.41	193	⇑eP	P	02 06 30.8	-0.8
KSRS	Korea Array	85.60	320	P	P	02 07 26.2	-0.4
	1.3nm,1.0s,mb4.1,baz=131,slow=6.2,SNR=3.3						
PETK	Petropavlovsk-	87.46	346	P	P	02 07 35.0	-0.3
	4.4nm,0.8s,mb4.7,baz=120,slow=7.8,SNR=6.5						
NVAR	Mina Array Bea	89.58	43	P	P	02 07 45.8	+0.1
	0.4nm,0.3s,mb4.2,baz=208,slow=8.1,SNR=4.1						
TUC	Tucson	90.27	51	eP	P	02 07 49.9	+0.7
	2.2nm,0.8s,mb4.5						
TXAR	Lajitas Array	93.41	57	P	P	02 08 03.4	-0.4
	0.4nm,1.0s,mb3.8,baz=194,slow=4.6,SNR=4.0						
HLID	Hailey	95.18	41	eP	P	02 08 11.1	-0.4
	1.1nm,0.9s,mb4.3						
PDAR	Pinedale Array	97.45	44	P	P	02 08 21.6	-0.3
	0.2nm,0.4s,mb3.9,baz=292,slow=5.6,SNR=2.5						
MKAR	Makanchi Array	118.80	309	PKP	PKPdf	02 13 34.7	-1.5
	0.6nm,0.8s,baz=104,slow=3.2,SNR=2.9						
TKM2	Tokmak 2	122.27	303	ePKPdf	PKPdf	02 13 42.3	-0.7
BVAR	Borovoye Array	127.56	315	PKP	PKPdf	02 13 51.8	-1.0
	0.6nm,0.5s,baz=90,slow=3.0,SNR=3.9						
BRVK	Borovoye	127.63	315	ePKPdf	PKPdf	02 13 52.3	-0.7
ABKAR	Abkulak array	133.95	309	ePKPdf	PKPdf	02 14 04.9	-0.2
ARCES	ARCESS Array B	140.26	347	PKhKP	PKPpre	02 14 09.2	
	4.1nm,1.1s,baz=46,slow=3.9,SNR=3.6						
JOF	Joensuu	143.98	338	epkp	PKPdf	02 14 23.1	+0.1
KAF	Kangasniemi	146.14	340	epkp	PKPdf	02 14 25.9	-0.8
	baz=39,slow=3.5						
OBN	Obninsk	146.52	324	ePKPbc	PKPbc	02 14 28.5	-0.5
FINES	FINESS Array B	146.73	339	PKPbc	PKPbc	02 14 28.1	-1.3
	10nm,0.8s,baz=46,slow=4.0,SNR=53						
NB2	NORSAR Subarra	150.44	351	PKP	PKPbc	02 14 37.4	-1.7
	comp=Z,1.8nm,0.8s,baz=18,slow=4.3						
NOA	NORSAR Array B	150.44	351	PKPbc	PKPbc	02 14 37.3	-1.8
	comp=Z,1.8nm,0.8s,baz=15,slow=4.2,SNR=13						
NAO01	NORSAR Array S	150.68	351	ePKPbc	PKPbc	02 14 38.0	-1.7
IZAR	Zarasai	150.88	331	eP	PKPbc	02 14 38.3	-2.0
IDID	Didziasalis	150.97	330	eP	PKPbc	02 14 41.0	+0.4
MICGM	Minsk	151.02	328	e	PKPbc	02 14 42.0	+1.4
IIGN	Ignalina	151.16	331	eP	PKPbc	02 14 40.9	0.0
MMAI	Mount Meron Ar	151.81	281	PKPbc	PKPbc	02 14 43.4	+0.2
	comp=Z,6.8nm,0.7s,baz=116,slow=1.9,SNR=4.9						
AKASG	Malin Array Be	152.59	321	PKPbc	PKPbc	02 14 42.9	-1.4
	comp=Z,1.0nm,0.5s,baz=56,slow=3.0,SNR=4.4						
AKBB	Malin Array Si	152.59	321	ePKPdf	PKPdf	02 14 36.9	-0.4
KIEV	Kiev	152.61	321	ePKPdf	PKPdf	02 14 36.8	-0.6
KIEV				ePKPbc	PKPbc	02 14 43.6	-0.8
KIEV				ePKPab	PKPab	02 14 53.4	-1.6
BR131	Keskin Array S	153.29	295	ePKPbc	PKPbc	02 14 45.9	-0.4
BR131				ePKPab	PKPab	02 14 57.6	-0.7
BRTR	Keskin Array B	153.29	295	PKPbc	PKPbc	02 14 45.6	-0.6
	comp=Z,1.6nm,0.9s,baz=145,slow=3.4,SNR=6.2						
KWP	Kalwaria Pacla	156.60	324	ePKPab	PKPab	02 15 10.0	-2.0
KWP	Kalwaria Pacla	156.60	324	⇓eP	PKPab	02 15 10.4	-1.6
DRGR		158.35	319	⇑eP	PKPab	02 15 18.7	-1.0
CLL	Collm	159.17	340	eP	PKPab	02 15 21.3	-1.7
	comp=Z,5.0nm,1.0s						
CLL				e		02 15 23.9	
	comp=Z,3.0nm,0.7s						
VYHS	Vyhne	159.24	327	ePKP	PKPab	02 15 22.5	-1.0
BRG	Berggiesshubel	159.26	338	eP	PKPab	02 15 22.0	-1.4
	comp=Z,5.7nm,1.1s						

*ISK **27** 01:56:34.3, 37°.03N×29°.22E, h10km, MD3.0*
*DDA **27** 01:56:34.5, 37°.01N×29°.18E, h7km±2km, Md2.9*
*NEIC **27** 01:56:34.0, 37°.04N×29°.20E, h9km, MD3.0(ISK), After ISK.*
*CSEM **27** 01:56:34.6±0.1, 37°.00N×29°.22E, h10km, MD3.0, Error ellipse: s-maj=3.6km s-min=2.8km az=2.0*
*ISCJB **27** 01:56:34.5±0.6, 37°.01N±0°.04×29°.20E±0°.03, h8km±6km, Error ellipse: s-maj=6.0km s-min=4.2km az=15.2*
*ATH **27** 01:56:36.6, 36°.71N×29°.18E, h79km*
ISC 27 01:56:34.9±0.5, 37°.00N±0°.03×29°.21E±0°.04, h10km±5km, n47, σ0°71/61, 2C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.28	56	PG	Pg	01 56 40.0	-0.6
GLHS				eSG	Sg	01 56 44.6	+0.2
GLHS	Glhisar (BURDU	0.28	56	i Pg	Pg	01 56 40.0	-0.6
GLHS				eSg	Sg	01 56 44.6	+0.3
GOLH	Golhisar	0.37	50	⇑iP	Pg	01 56 41.9	-0.3
GOLH				i S	Sg	01 56 48.4	+1.3
GOLH	Golhisar	0.37	50	i P	Pg	01 56 41.9	-0.3
GOLH				i S	Sg	01 56 48.4	+1.3
ELL	Elmali	0.61	114	PG	Pg	01 56 46.0	-0.9
ELL				eSG	Sg	01 56 56.0	+1.2
ELL	Elmali	0.61	114	i Pg	Pg	01 56 46.0	-0.8
ELL				eSg	Sg	01 56 56.0	+1.2
DNZL	Cakiroluk	0.70	349	⇑iP	Pg	01 56 47.5	-1.0
DNZL				i S	Sg	01 56 57.8	+0.1
DNZL	Cakiroluk	0.70	349	i P	Pg	01 56 47.5	-1.0
DNZL				i S	Sg	01 56 57.8	+0.1
YER	Yerkesik	0.76	281	ePG	Pg	01 56 49.5	0.0
YER				eSG	Sg	01 57 00.3	+0.9
YER	Yerkesik	0.76	281	ePg	Pg	01 56 49.5	0.0
YER				eSg	Sg	01 57 00.3	+0.9
DENT	Denizli	0.77	349	ePG	Pg	01 56 48.7	-1.0
DENT	Denizli	0.77	349	ePg	Pg	01 56 48.7	-1.1
AKAS	Kas	0.83	157	⇓iP	Pg	01 56 50.7	-0.2
AKAS				eS	Sg	01 57 07.6	+5.9
AKAS	Kas	0.83	157	i P	Pg	01 56 50.7	-0.2
KSL	Kastellorizon	0.90	160	eP	Pg	01 56 52.2	-0.1
KSL	Kastellorizon	0.90	160	eP	Pg	01 56 52.2	-0.1
KORT	Korkueli	0.91	90	eP	Pg	01 56 52.9	+0.4
KORT				eS	Sg	01 57 08.8	+4.4
KORT	Korkueli	0.91	90	eP	Pg	01 56 52.9	+0.4
ARG	Arkhangelos	1.17	229	eP	Pb	01 56 56.2	-1.0
ARG	Arkhangelos	1.17	229	eP	Pb	01 56 56.2	-1.0
ARG	Arkhangelos	1.17	229	eP	Pb	01 56 56.2	-1.0
MLSB	Milas	1.18	285	ePN	Pn	01 56 57.2	-0.2
MLSB	Milas	1.18	285	ePn	Pn	01 56 57.2	-0.3
BCK	Bucak	1.19	67	ePN	Pn	01 56 57.4	-0.2
BCK	Bucak	1.19	67	ePn	Pn	01 56 57.4	-0.2
ISP	Isparta	1.33	51	ePn	Pn	01 56 59.2	-0.3
ISP	Isparta	1.33	51	ePn	Pn	01 56 59.2	-0.3
DAT	Datca	1.34	259	ePN	Pn	01 57 00.0	+0.4
DAT	Datca	1.34	259	ePn	Pn	01 57 00.0	+0.4
BDRM	Kayabasi	1.42	273	eP	Pn	01 57 01.3	+0.6
BDRM				eS	Sn	01 57 20.1	+0.7
BDRM	Kayabasi	1.42	273	eP	Pn	01 57 01.3	+0.6
BDRM				eS	Sn	01 57 20.1	+0.8
BODT	Bodrum	1.52	273	ePN	Pn	01 57 02.5	+0.4
BODT	Bodrum	1.52	273	ePn	Pn	01 57 02.5	+0.4
KULA	Kula-Manisa	1.57	344	ePN	Pn	01 57 02.2	-0.7
KULA	Kula-Manisa	1.57	344	ePn	Pn	01 57 02.2	-0.7
IZM	Izmir	2.08	313	ePN	Pn	01 57 10.1	+0.2
IZM	Izmir	2.08	313	ePn	Pn	01 57 10.1	+0.2
AKS	Akhisar	2.18	330	ePN	Pn	01 57 11.2	+0.1
AKS	Akhisar	2.18	330	ePn	Pn	01 57 11.2	0.0
BLCB	Balcova	2.21	309	ePN	Pn	01 57 11.6	0.0
BLCB	Balcova	2.21	309	ePn	Pn	01 57 11.6	0.0
APE	Apeiranthos	2.95	272	eP	Pn	01 57 23.0	+1.3
APE	Apeiranthos	2.95	272	eP	Pn	01 57 23.0	+1.3
APE	Apeiranthos	2.95	272	eP	Pn	01 57 23.0	+1.3
ZKR	Zakros	3.07	233	eP	Pn	01 57 22.0	-1.4
ZKR	Zakros	3.07	233	eP	Pn	01 57 22.0	-1.4
ZKR	Zakros	3.07	233	eP	Pn	01 57 22.0	-1.4

IDC 27 02:02:38.6±1.1, 27°.70S×71°.92W, h0km, mb3.8/2, mb1 4.1/3, mb1mx3.8/13, mbtmp3.8/3, ML4.0/1, Error ellipse: s-maj=81.9km s-min=29.4km az=91.0, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	11.88	18	Pn	Pn	02 05 29.8	+0.3
	0.4nm,0.3s,baz=204,slow=9.3,SNR=14						
QSPA	South Pole Qui	62.52	180	P	P	02 13 03.9	+0.4
	2.2nm,0.9s,baz=187,slow=7.

0.1nm,0.3s,baz=80,slow=14,SNR=4.8
MK31 Makanchi Array 42.19 300 *e*P **P 02 13 15.7 -0.5**
MKAR Makanchi Array 42.19 300 P **P 02 13 15.6 -0.6**
0.4nm,0.5s,mb3.3,baz=84,slow=9.8,SNR=5.8
ILAR Eielson Array 47.98 33 P **P 02 14 02.4 +0.8**
0.2nm,0.7s,mb2.9,baz=270,slow=8.1,SNR=3.5
BVAR Borovoye Array 48.39 311 P **P 02 14 04.7 -0.3**
0.6nm,0.6s,mb3.4,baz=90,slow=8.6,SNR=3.8

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*ISCJB **27** 02:11:56.0±1.4, 19°.31N±0°.08×64°.54W±0°.05, h21km±11km, Error ellipse: s-maj=12.8km s-min=7.2km az=171.4*
*TRN **27** 02:11:56.2, 19°.14N×64°.55W, h19km, M5.9(FDF)*
*RSPR **27** 02:11:58.4, 19°.17N×64°.41W, h57km±15km, MD3.6/8*
*NEIC **27** 02:11:58.4, 19°.17N×64°.41W, h57km, MD3.7(RSPR), After RSPR.*

ISC 27 02:11:56.6±1.4, 19°.26N±0°.07×64°.59W±0°.05, h11km±7km, n35, σ0s71/54, 14C-14D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.84**	**182**	⇑*iP*	**Pg**	**02 12 12.7**	**-0.1**
TBVI	**Tortola**	**0.84**	**182**	⇑*iP*	**Pg**	**02 12 12.7**	**-0.1**
STVI	**Saint Thomas**	**0.97**	**201**	⇓*eP*	**Pg**	**02 12 14.7**	**-0.5**
STVI				*eS*	**Sg**	**02 12 28.1**	**+0.3**
STVI	**Saint Thomas**	**0.97**	**201**	⇓*eP*	**Pg**	**02 12 14.7**	**-0.5**
STVI				*eS*	**Sg**	**02 12 28.1**	**+0.3**
MTP	**Monte Pirata**	**1.48**	**218**	⇓*eP*	**Pn**	**02 12 22.4**	**-0.7**
MTP				*eS*	**Sn**	**02 12 41.9**	**-0.5**
MTP	**Monte Pirata**	**1.48**	**218**	⇓*eP*	**Pn**	**02 12 22.4**	**-0.7**
MTP				*eS*	**Sn**	**02 12 41.9**	**-0.5**
CBYP	**Canovanas**	**1.55**	**231**	⇓*eP*	**Pn**	**02 12 24.0**	**-0.1**
CBYP	**Canovanas**	**1.55**	**231**	⇓*eP*	**Pn**	**02 12 24.2**	**0.0**
HUMP	**Col San Antoni**	**1.63**	**227**	⇓*eP*	**Pn**	**02 12 24.6**	**-0.6**
HUMP				*eS*	**Sn**	**02 12 46.1**	**-0.2**
HUMP	**Col San Antoni**	**1.63**	**227**	⇓*eP*	**Pn**	**02 12 24.6**	**-0.6**
HUMP				*eS*	**Sn**	**02 12 46.6**	**+0.3**
SJG	**San Juan**	**1.87**	**233**	⇓*eP*	**Pn**	**02 12 27.9**	**-0.6**
SJG				*eS*	**Sn**	**02 12 52.1**	**0.0**
SJG	**San Juan**	**1.87**	**233**	⇑*eP*	**Pn**	**02 12 27.9**	**-0.6**
SJG				*eS*	**Sn**	**02 12 51.6**	**-0.5**
SJG	**San Juan**	**1.87**	**233**	⇓*eP*	**Pn**	**02 12 27.9**	**-0.6**
SJG	**San Juan**	**1.87**	**233**	⇑*eP*	**Pn**	**02 12 27.9**	**-0.6**
SJG				*eS*	**Sn**	**02 12 51.6**	**-0.5**
SJG				*eS*	**Sn**	**02 12 52.1**	**0.0**
CELP	**Cerrillos**	**2.23**	**238**	⇓*eP*	**Pn**	**02 12 33.2**	**-0.2**
CELP				*eS*	**Sn**	**02 13 00.9**	**-0.1**
CELP	**Cerrillos**	**2.23**	**238**	⇓*eP*	**Pn**	**02 12 33.2**	**-0.2**
CELP				*eS*	**Sn**	**02 13 00.9**	**-0.1**
AOPR	**Arecibo Observ**	**2.24**	**246**	⇑*eP*	**Pn**	**02 12 33.4**	**-0.3**
AOPR				*eS*	**Sn**	**02 13 01.5**	**+0.2**
AOPR	**Arecibo Observ**	**2.24**	**246**	⇑*eP*	**Pn**	**02 12 33.4**	**-0.3**
AOPR				*eS*	**Sn**	**02 13 01.5**	**+0.2**
OBIP	**Obispado Ponce**	**2.27**	**238**	⇑*eP*	**Pn**	**02 12 33.8**	**-0.1**
OBIP	**Obispado Ponce**	**2.27**	**238**	⇑*eP*	**Pn**	**02 12 33.8**	**-0.1**
ICM	**Isla Caja Muer**	**2.28**	**234**	⇑*eP*	**Pn**	**02 12 34.6**	**+0.4**
ICM				*eS*	**Sn**	**02 13 03.0**	**+0.6**
ICM	**Isla Caja Muer**	**2.28**	**234**	⇑*eP*	**Pn**	**02 12 34.6**	**+0.4**
ICM				*eS*	**Sn**	**02 13 03.0**	**+0.6**
LRS	**Lares**	**2.34**	**246**	⇑*iP*	**Pn**	**02 12 36.5**	**+1.5**
LRS				*eS*	**Sn**	**02 13 04.3**	**+0.5**
LRS	**Lares**	**2.34**	**246**	⇑*iP*	**Pn**	**02 12 36.5**	**+1.5**
LRS				*eS*	**Sn**	**02 13 04.3**	**+0.5**
AGPR	**Aguadilla, PR**	**2.52**	**252**	⇓*eP*	**Pn**	**02 12 37.1**	**-0.3**
AGPR	**Aguadilla, PR**	**2.52**	**252**	⇓*eP*	**Pn**	**02 12 37.6**	**+0.2**
GBPR	**Guanica, Bosqu**	**2.52**	**240**	⇑*eP*	**Pn**	**02 12 38.1**	**+0.6**
GBPR	**Guanica, Bosqu**	**2.52**	**240**	⇑*eP*	**Pn**	**02 12 38.6**	**+1.1**
CRPR	**Cabo Rojo, PR**	**2.70**	**243**	⇑*eP*	**Pn**	**02 12 40.1**	**+0.2**
CRPR	**Cabo Rojo, PR**	**2.70**	**243**	⇑*eP*	**Pn**	**02 12 40.1**	**+0.2**
SEG	**Port Louis**	**4.09**	**134**	*eP*	**Pn**	**02 12 58.1**	**-0.9**
LZG	**Guadaloupe-1**	**4.10**	**139**	*eP*	**Pn**	**02 12 58.8**	**-0.5**
BCG	**Bois Riant Cap**	**4.24**	**138**	*eP*	**Pn**	**02 13 01.0**	**-0.1**
HMG	**Houelmont**	**4.27**	**139**	*eP*	**Pn**	**02 13 03.4**	**+1.9**
SDDR	**Presa de Saban**	**6.34**	**269**	*e*Pn	**Pn**	**02 13 30.3**	**+0.3**
	72nm,0.4s						
SDDR				*e*Sn	**Sn**	**02 14 39.3**	**-3.1**

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*ISK **27** 02:28:18.0, 35°.89N×27°.10E, h20km, MD3.2*
*ATH **27** 02:28:19.9, 36°.09N×27°.05E, h31km±2km, MD2.9/4*
*NEIC **27** 02:28:19.9, 36°.09N×27°.05E, h31km, MD2.9(ATH), After ATH.*
*CSEM **27** 02:28:20.8±0.3, 36°.02N×27°.11E, h24km±3km, MD2.9, Error ellipse: s-maj=9.5km s-min=6.0km az=130.0*

ISC 27 02:28:21.1±1.1, 35°.96N±0°.06×27°.14E±0°.08, h62km±14km, n21, σ0s79/34, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.41**	**178**	*e*Pn	**Pn**	**02 28 31.1**	**-1.2**
KARP				*e*Sn	**Sn**	**02 28 40.2**	**-0.3**
KARP	**Karpathos**	**0.41**	**178**	*e*PN	**Pn**	**02 28 31.1**	**-1.2**
KARP				*e*SN	**Sn**	**02 28 40.2**	**-0.3**
KARP	**Karpathos**	**0.41**	**178**	*e*Pn	**Pn**	**02 28 31.1**	**-1.2**
KARP				*e*Sn	**Sn**	**02 28 40.2**	**-0.3**
ARG	**Arkhangelos**	**0.84**	**72**	*e*Pn	**Pn**	**02 28 37.5**	**+0.4**
ARG				*e*Sn	**Sn**	**02 28 49.7**	**+0.7**
ARG	**Arkhangelos**	**0.84**	**72**	*e*PN	**Pn**	**02 28 37.5**	**+0.4**
ARG				*e*SN	**Sn**	**02 28 49.7**	**+0.7**
ARG	**Arkhangelos**	**0.84**	**72**	*e*Pn	**Pn**	**02 28 37.5**	**+0.4**
ARG				*e*Sn	**Sn**	**02 28 49.7**	**+0.7**
DAT	**Datca**	**0.85**	**24**	*e*PG	**Pn**	**02 28 36.1**	**-1.2**
DAT				*e*SG	**Sn**	**02 28 50.0**	**+0.7**
DAT	**Datca**	**0.85**	**24**	*e*Pg	**Pn**	**02 28 36.1**	**-1.2**
DAT				*e*Sg	**Sn**	**02 28 50.0**	**+0.8**
BODT	**Bodrum**	**1.11**	**7**	*e*PN	**Pn**	**02 28 39.6**	**-1.0**
BODT				*e*SN	**Sn**	**02 28 55.6**	**+0.3**
BODT	**Bodrum**	**1.11**	**7**	*e*Pn	**Pn**	**02 28 39.6**	**-1.1**
BODT				*e*Sn	**Sn**	**02 28 55.6**	**+0.4**
NPS	**Neapolis**	**1.42**	**241**	*e*Pn	**Pn**	**02 28 45.6**	**+0.8**
NPS				*e*Sn	**Sn**	**02 29 03.6**	**+1.0**
NPS	**Neapolis**	**1.42**	**241**	*e*PN	**Pn**	**02 28 45.6**	**+0.8**
NPS				*e*SN	**Sn**	**02 29 03.6**	**+1.0**
NPS	**Neapolis**	**1.42**	**241**	*e*Pn	**Pn**	**02 28 45.6**	**+0.8**
NPS				*e*Sn	**Sn**	**02 29 03.6**	**+1.0**
YER	**Yerkesik**	**1.49**	**38**	*e*PN	**Pn**	**02 28 46.3**	**+0.6**
YER	**Yerkesik**	**1.49**	**38**	*e*Pn	**Pn**	**02 28 46.3**	**+0.6**
APE	**Apeiranthos**	**1.71**	**311**	*e*PN	**Pn**	**02 28 48.0**	**-0.6**
APE	**Apeiranthos**	**1.71**	**311**	*e*Pn	**Pn**	**02 28 47.5**	**-1.1**
APE	**Apeiranthos**	**1.71**	**311**	*e*PN	**Pn**	**02 28 47.5**	**-1.1**
APE	**Apeiranthos**	**1.71**	**311**	*e*Pn	**Pn**	**02 28 48.0**	**-0.6**
ELL	**Elmali**	**2.37**	**70**	*e*PN	**Pn**	**02 28 57.5**	**-0.1**
ELL	**Elmali**	**2.37**	**70**	*e*Pn	**Pn**	**02 28 57.5**	**-0.1**

IDC 27 02:31:18.5±3.5, 50°.15S×128°.23E, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.9/11, mbtmp4.0/3, MS3.7/1, Ms1 3.6/1, ms1mx3.2/10, Error ellipse: s-maj=119.1km s-min=39.0km az=132.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**20.80**	**34**	P	P	02 36 02.0	+0.9
	3.0nm,0.6s,baz=193,slow=9.9,SNR=4.2						
STKA				LR	LR	02 42 45.4	
	comp=Z,176nm,18.4s,baz=206,slow=33						
ASAR	**Alice Springs**	**26.80**	**12**	P	P	02 36 59.5	-0.6
	1.2nm,0.6s,baz=186,slow=8.6,SNR=8.4						
CMAR	**Chiang Mai Arr**	**73.04**	**331**	P	P	02 42 50.6	+0.6
	0.7nm,0.3s,baz=180,slow=4.4,SNR=4.3						
ESDC	**Sonseca Array**	**145.11**	**271**	PKPbc	PKPbc	02 50 55.8	-0.9
	2.4nm,0.8s,baz=110,slow=2.5,SNR=23						

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*ECX **27** 03:00:30.0±0.5, 32°.34N×115°.28W, h4km, MD3.1, ML3.2*

NEIC 27 03:00:29.0, 32°.25N×115°.32W, h16km, ML3.2(ECX), ML3.0(PAS), 8C-7D, After PAS., California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.17**	**5**	⇑*eP*	Pg	03 00 31.4	-1.9
CPBX				*e*S	Sg	03 00 33.5	-2.7
CPBX				⇑*e*		03 00 35.9	
	comp=N,40μm,0.4s						
CPBX	**Cerro Prieto**	**0.17**	**5**	⇑*eP*	Pg	03 00 31.4	-1.9
CPBX				*e*S	Sg	03 00 33.5	-2.7
EMX	**El Mayor**	**0.27**	**165**	⇓*eP*	Pg	03 00 36.5	+1.6
EMX				*e*S	Sg	03 00 41.5	+2.6
EMX				*e*		03 00 42.6	
	comp=E,2μm,0.3s						
EMX	**El Mayor**	**0.27**	**165**	⇓*eP*	Pg	03 00 36.5	+1.6
EMX				*e*S	Sg	03 00 41.5	+2.6
RDX	**Rancho Dawling**	**0.62**	**239**	⇑*eP*	Pg	03 00 42.4	+1.3
RDX				*e*S	Sg	03 00 52.2	+2.8
RDX				⇓*e*		03 00 53.3	
	comp=N,468nm,0.3s						
RDX	**Rancho Dawling**	**0.62**	**239**	⇑*eP*	Pg	03 00 42.4	+1.3
RDX				*e*S	Sg	03 00 52.2	+2.8
RMX	**La Rumorosa**	**0.73**	**299**	⇓*eP*	Pg	03 00 42.8	-0.5
ECBX	**El Chinero**	**0.81**	**163**	⇓*eP*	Pb	03 00 45.8	+1.1
ECBX				*e*S	Sb	03 00 57.6	+2.3
GLA	**Glamis**	**0.90**	**27**	*e*Pg	Pg	03 00 44.6	-1.9
CBX	**Cerro Bola**	**1.14**	**273**	⇑*eP*	Pn	03 00 51.0	+0.7
CBX				*e*S	Sb	03 01 06.2	+1.5
SPX	**San Pedro Mart**	**1.21**	**186**	⇑*eP*	Pn	03 00 52.6	+1.4
SPX				*e*S	Sb	03 01 10.2	+3.4
BAR	**Barrett**	**1.22**	**291**	*e*Pg	Pg	03 00 51.6	-0.9
BAR				*e*Sg	Sg	03 01 07.3	-1.2
ECNX	**Esteban Cantu**	**1.24**	**242**	⇓*eP*	Pn	03 00 52.9	+1.3
ECNX				⇓*eP*		03 00 52.2	
ECNX				*e*S	Sb	03 01 08.8	+1.2
ECNX				*e*S	Sb	03 01 10.7	+3.1
PBX	**Punta Banda**	**1.30**	**247**	⇑*eP*	Pn	03 00 53.8	+1.4
PBX				*e*S	Sb	03 01 12.0	+2.6
PFO	**Pinyon Flat Ob**	**1.66**	**325**	*e*Pn	Pn	03 00 55.5	-1.8
TUC	**Tucson**	**3.84**	**88**	Pn	Pn	03 01 26.9	-0.6
TUC				*e*Sg	Sg	03 02 26.6	-5.8
WUAZ	**Wupatki**	**4.62**	**44**	*e*Pn	Pn	03 01 38.9	+0.8
WUAZ				*e*Pg	Pg	03 01 57.5	0.0
CCUT	**Cedar City**	**5.53**	**16**	*e*Pg	Pg	03 02 14.9	+0.1

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*ISK **27** 03:04:15.7, 37°.02N×29°.14E, h12km, MD3.1*
*ISCJB **27** 03:04:16.3±0.6, 37°.03N±0°.03×29°.13E±0°.03, h10km±5km, Error ellipse: s-maj=5.6km s-min=4.0km az=1.4*
*CSEM **27** 03:04:16.3±0.1, 37°.02N×29°.15E, h12km, MD3.1, Error ellipse: s-maj=2.7km s-min=2.0km az=8.0*
*DDA **27** 03:04:16.5, 37°.01N×29°.17E, h7km±2km, Md2.9*

ISC 27 03:04:16.8±0.5, 37°.03N±0°.03×29°.15E±0°.03, h12km±4km, n49, σ0s88/61, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.31**	**65**	*e*PG	**Pg**	**03 04 21.7**	**-1.4**
GLHS				*e*SG	**Sg**	**03 04 27.9**	**+0.6**
GLHS	**Glhisar (BURDU**	**0.31**	**65**	*e*Pg	**Pg**	**03 04 21.7**	**-1.4**
GLHS				*e*Sg	**Sg**	**03 04 27.9**	**+0.6**
GOLH	**Golhisar**	**0.39**	**57**	⇑*iP*	**Pg**	**03 04 23.8**	**-0.8**
GOLH				*i* S	**Sg**	**03 04 30.6**	**+0.7**
GOLH	**Golhisar**	**0.39**	**57**	*i* P	**Pg**	**03 04 23.8**	**-0.8**
GOLH				*i* S	**Sg**	**03 04 30.5**	**+0.6**
DNZL	**Cakiroluk**	**0.67**	**353**	*e*P	**Pg**	**03 04 29.9**	**+0.1**
DNZL				*e*S	**Sg**	**03 04 39.7**	**+1.1**
DNZL	**Cakiroluk**	**0.67**	**353**	*e*P	**Pg**	**03 04 29.9**	**+0.1**
DNZL				*e*S	**Sg**	**03 04 39.7**	**+1.1**
ELL	**Elmali**	**0.67**	**114**	*e*PG	**Pg**	**03 04 29.2**	**-0.6**
ELL	**Elmali**	**0.67**	**114**	*e*Pg	**Pg**	**03 04 29.2**	**-0.6**
YER	**Yerkesik**	**0.70**	**279**	*e*PG	**Pg**	**03 04 30.4**	**+0.1**
YER				*e*SG	**Sg**	**03 04 39.6**	**0.0**
YER	**Yerkesik**	**0.70**	**279**	*e*Pg	**Pg**	**03 04 30.4**	**+0.1**
YER				*e*Sg	**Sg**	**03 04 39.6**	**+0.1**
DENT	**Denizli**	**0.73**	**353**	*e*PG	**Pg**	**03 04 30.9**	**-0.1**
DENT	**Denizli**	**0.73**	**353**	*e*Pg	**Pg**	**03 04 30.9**	**-0.1**
AKAS	**Kas**	**0.87**	**155**	*e*P	**Pg**	**03 04 33.2**	**-0.4**
AKAS				*e*S	**Sg**	**03 04 45.1**	**+0.2**
AKAS	**Kas**	**0.87**	**155**	*e*P	**Pg**	**03 04 33.2**	**-0.4**
AKAS				*e*S	**Sg**	**03 04 45.1**	**+0.1**
KORT	**Korkueli**	**0.96**	**91**	*e*P	**Pg**	**03 04 34.8**	**-0.5**
KORT				*e*S	**Sg**	**03 04 50.9**	**+3.0**
KORT	**Korkueli**	**0.96**	**91**	*e*P	**Pg**	**03 04 34.8**	**-0.6**
KORT				*e*S	**Sg**	**03 04 50.9**	**+3.0**
MLSB	**Milas**	**1.13**	**284**	*e*PN	**Pn**	**03 04 37.6**	**-0.7**
MLSB	**Milas**	**1.13**	**284**	*e*Pn	**Pn**	**03 04 37.6**	**-0.7**
ARG	**Arkhangelos**	**1.15**	**226**	*e*P	**Pb**	**03 04 36.5**	**-2.1**
ANTB	**Antalya**	**1.21**	**95**	*e*PN	**Pn**	**03 04 39.6**	**0.0**
ANTB	**Antalya**	**1.21**	**95**	*e*Pn	**Pn**	**03 04 39.6**	**+0.1**
BCK	**Bucak**	**1.23**	**69**	*e*PN	**Pn**	**03 04 39.4**	**-0.4**
BCK	**Bucak**	**1.23**	**69**	*e*Pn	**Pn**	**03 04 39.4**	**-0.4**
DAT	**Datca**	**1.29**	**257**	*e*PN	**Pn**	**03 04 40.0**	**-0.6**
DAT	**Datca**	**1.29**	**257**	*e*Pn	**Pn**	**03 04 40.1**	**-0.5**
KHL	**Karahalli**	**1.33**	**13**	*e*PN	**Pn**	**03 04 40.6**	**-0.5**
KHL	**Karahalli**	**1.33**	**13**	*e*Pn	**Pn**	**03 04 40.7**	**-0.4**
ISP	**Isparta**	**1.35**	**54**	*e*PN	**Pn**	**03 04 41.8**	**+0.3**
ISP	**Isparta**	**1.35**	**54**	*e*Pn	**Pn**	**03 04 41.8**	**+0.3**
BODT	**Bodrum**	**1.47**	**272**	*e*PN	**Pn**	**03 04 42.6**	**-0.5**
BODT	**Bodrum**	**1.47**	**272**	*e*Pn	**Pn**	**03 04 42.6**	**-0.4**
KULA	**Kula-Manisa**	**1.54**	**346**	*e*PN	**Pn**	**03 04 43.8**	**-0.1**
KULA	**Kula-Manisa**	**1.54**	**346**	*e*Pn	**Pn**	**03 04 43.8**	**-0.2**
SHUT	**Suhut-Afyon**	**1.89**	**36**	*e*PN	**Pn**	**03 04 48.8**	**0.0**
SHUT	**Suhut-Afyon**	**1.89**	**36**	*e*Pn	**Pn**	**03 04 48.8**	**0.0**
IZM	**Izmir**	**2.03**	**313**	*e*PN	**Pn**	**03 04 50.2**	**-0.5**
IZM	**Izmir**	**2.03**	**313**	*e*Pn	**Pn**	**03 04 50.3**	**-0.4**
AKS	**Akhisar**	**2.13**	**331**	*e*PN	**Pn**	**03 04 51.4**	**-0.8**
AKS	**Akhisar**	**2.13**	**331**	*e*Pn	**Pn**	**03 04 51.4**	**-0.7**
BLCB	**Balcova**	**2.15**	**310**	*e*PN	**Pn**	**03 04 52.4**	**0.0**
BLCB	**Balcova**	**2.15**	**310**	*e*Pn	**Pn**	**03 04 52.4**	**0.0**
ALT	**Altintas**	**2.17**	**20**	*e*PN	**Pn**	**03 04 52.4**	**-0.2**
ALT	**Altintas**	**2.17**	**20**	*e*Pn	**Pn**	**03 04 52.4**	**-0.2**
KARP	**Karpathos**	**2.18**	**228**	*e*P	**Pn**	**03 04 54.5**	**+1.7**
APE	**Apeiranthos**	**2.89**	**272**	*e*PN	**Pn**	**03 05 02.9**	**+0.2**
APE	**Apeiranthos**	**2.89**	**272**	*e*P	**Pn**	**03 05 04.0**	**+1.4**
APE	**Apeiranthos**	**2.89**	**272**	*e*Pn	**Pn**	**03 05 02.9**	**+0.3**
ZKR	**Zakros**	**3.04**	**232**	*e*P	**Pn**	**03 05 06.5**	**+1.8**
IDI	**Anoyia**	**3.86**	**245**	*e*P	**Pn**	**03 05 17.5**	**+1.6**

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*ISCJB **27** 03:34:15.1±1.9, 23°.5S±0°.3×115°.3W±0°.3, h10km, mb4.1/19, MS3.8/7, Error ellipse: s-maj=59.1km s-min=14.1km az=140.2*
*IDC **27** 03:34:15.7±1.3, 23°.44S×115°.26W, h0km, mb3.8/8, mb1 4.1/8, mb1mx4.0/15, mbtmp3.8/8, MS3.8/8, Ms1 3.8/8, ms1mx3.6/17, Error ellipse: s-maj=46.4km s-min=23.2km az=43.0*
*NEIC **27** 03:34:17.0±0.8, 23°.50S×115°.28W, h10km, mb4.4/11, Error ellipse: s-maj=25.7km s-min=12.0km az=53.0*

ISC 27 03:34:16.7±1.9, 23°.65±0°.3×115°.4W±0°.4, h10km, n37, σ0s89/24, mb4.1/19, MS3.8/7, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**6.52**	**124**	LR	LR	03 37 42.7	
	comp=Z,806nm,18.7s,baz=115,slow=32						
RPN				T		03 42 20.4	
	9.7nm,0.3s,baz=310,slow=21,SNR=4.7						
RKT	**Rikitea**	**17.99**	**268**	*e*LR	LR	03 42 33.8	
	371nm,27.2s						
RKT				*e*T		03 56 47.6	
	3.9nm,0.3s						
TAOE	**Nuku Hiva Isla**	**27.85**	**298**	*e*LR	LR	03 47 05.8	
	478nm,25.4s						
TIAR	**Tiarei**	**32.30**	**274**	*e*T		04 14 39.6	
	5.9nm,0.3s						
PPT	**Papeete**	**32.51**	**274**	*e*LR	LR	03 49 10.9	
	167nm,23.2s						
ATAH	**Atahualpa**	**39.08**	**71**	LR	LR	03 53 04.9	
	comp=Z,38nm,21.2s,MS3.2,baz=188,slow=29						
PLCA	**Paso Flores**	**41.16**	**125**	P	**P**	**03 42 01.1**	**-0.1**
	4.9nm,1.1s,mb4.0,baz=255,slow=11,SNR=2.7						
PLCA				LR	LR	03 54 30.0	
	comp=Z,231nm,20.6s,MS4.0,baz=275,slow=30						
LPAZ	**La Paz**	**44.86**	**90**	P	**P**	**03 42 32.5**	**+1.0**
	2.3nm,1.0s,mb4.0,baz=297,slow=6.1,SNR=4.8						
LPAZ				LR	LR	03 56 25.4	
	comp=Z,68nm,19.4s,MS3.6,baz=216,slow=30						
SIV	**San Ignacio**	**51.42**	**92**	P	**P**	**03 43 22.1**	**-0.2**
	1.6nm,0.9s,mb3.9,baz=243,slow=11,SNR=7.9						
CPUP	**Villa Florida**	**52.33**	**106**	P	**P**	**03 43 28.8**	**-0.2**
	0.9nm,0.7s,mb3.8,baz=243,slow=9.0,SNR=4.3						
CPUP				LR	LR	04 02 03.6	
	comp=Z,83nm,19.5s,MS3.8,baz=71,slow=32						
CPUP	**Villa Florida**	**52.33**	**106**	P	**P**	**03 43 28.8**	**-0.2**
CPUP				LR	LR	04 02 03.6	
TXAR	**Lajitas Array**	**53.80**	**13**	P	**P**	**03 43 40.1**	**+0.5**
	0.2nm,0.6s,mb3.2,baz=180,slow=11,SNR=3.4						
AFI	**Afiamalu**	**53.97**	**270**	LR	LR	03 59 33.5	
	comp=Z,88nm,21.6s,MS3.8,baz=147,slow=28						
JCT	**Junction City**	**55.79**	**16**	*e*P	**P**	**03 43 54.1**	**+0.2**
	8.6nm,1.0s,mb4.7						
MNTX	**Cornudas Mount**	**55.79**	**10**	*e*P	**P**	**03 43 53.0**	**-1.0**
	3.8nm,1.3s,mb4.3						
URZ	**Urewera**	**58.56**	**238**	LR	LR	04 03 12.9	
	comp=Z,209nm,18.8s,MS4.3,baz=194,slow=30						
CCUT	**Cedar City**	**60.83**	**2**	*e*P	**P**	**03 44 30.9**	**+1.8**
	4.0nm,1.0s,mb4.5						
NVAR	**Mina Array Bea**	**61.74**	**357**	P	**P**	**03 44 35.8**	**+0.6**
	0.7nm,0.6s,mb4.0,baz=184,slow=9.7,SNR=5.0						
BGU	**Big Grassy Mou**	**64.21**	**2**	*e*P	**P**	**03 44 49.3**	**-2.2**
	3.1nm,1.1s,mb4.2						
M13A	**Montello**	**64.61**	**1**	*e*P	**P**	**03 44 55.3**	**+1.1**
	5.2nm,1.1s,mb4.5						
WVT	**Waverly**	**64.85**	**24**	*e*P	**P**	**03 44 54.8**	**-1.1**
	2.0nm,0.8s,mb4.2						
YBH	**Yreka Blue Hor**	**65.33**	**354**	LR	LR	04 06 06.0	
	comp=Z,70nm,19.8s,MS3.9,baz=149,slow=29						
WVOR	**Wild Horse Val**	**65.75**	**357**	*e*P	**P**	**03 45 00.5**	**-1.0**
	3.1nm,1.1s,mb4.2						
HUMO	**Hull Mountain**	**66.22**	**354**	*e*P	**P**	**03 45 05.5**	**+0.9**
	6.9nm,1.2s,mb4.6						
PDAR	**Pinedale Array**	**66.23**	**5**	P	**P**	**03 45 03.6**	**-1.1**
	0.3nm,0.8s,mb3.4,baz=184,slow=2.4,SNR=2.9						
MCMT	**McKenzie Canyo**	**68.11**	**2**	*e*P	**P**	**03 45 17.2**	**+0.6**
BMO	**Blue Mountains**	**68.12**	**359**	*e*P	**P**	**03 45 16.9**	**+0.3**
	0.9nm,0.9s,mb3.8						
ECSD	**EROS Data Cent**	**69.16**	**14**	*e*P	**P**	**03 45 22.8**	**-0.4**
	1.1nm,0.6s,mb4.0						
CHMT	**Chamberlain Mo**	**70.18**	**2**	*e*P	**P**	**03 45 30.0**	**+0.6**
BSMT	**Bassoo Peak**	**71.10**	**0**	*e*P	**P**	**03 45 35.0**	**+0.1**
NEW	**Newport**	**71.53**	**359**	*e*P	**P**	**03 45 37.6**	**+0.1**
	2.5nm,0.9s,mb4.1						
YKA	**Yellowknife Ar**	**85.77**	**0**	P	**P**	**03 46 54.7**	**-0.9**
	0.6nm,0.8s,mb3.9,baz=169,slow=5.9,SNR=2.9						
YKA	**Yellowknife Ar**	**85.77**	**0**	P	**P**	**03 46 54.7**	**-0.9**
CMAR	**Chiang Mai Arr**	**147.60**	**268**	PKPbc	PKPbc	03 54 03.8	+1.8
	0.9nm,0.4s,baz=46,slow=2.6,SNR=4.9						
BRTR	**Keskin Array B**	**149.30**	**51**	PKPbc	PKPbc	03 54 05.7	-0.2
	1.3nm,0.9s,baz=194,slow=2.5,SNR=7.0						
BVAR	**Borovoye Array**	**150.27**	**353**	PKPbc	PKPbc	03 54 06.7	-1.1
	0.8nm,0.7s,baz=54,slow=7.5,SNR=4.0						
MKAR	**Makanchi Array**	**152.82**	**333**	PKPbc	PKPbc	03 54 14.3	+0.4
	0.5nm,0.7s,baz=90,slow=0.4,SNR=2.6						

TRN 27 03:45:22.2, 10°.96N×61°.69W, h22km, MD2.4, 1C-1D, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TCE	**Chacachacare**	**0.27**	**193**	⇓*iP*	Pb	03 45 28.4	-0.2
TCE				*e*S	Sb	03 45 34.0	+1.1
TRN	**Trinidad (W)**	**0.42**	**138**	⇑*eP*	Pb	03 45 30.7	-0.3
TRN				*e*S	Sb	03 45 37.2	+0.3
TBH	**Brigand Hill**	**0.77**	**128**	*e*P	Pb	03 45 37.8	+0.8
TBH				*e*S	Sb	03 45 48.3	+1.2
TPR	**Prospect**	**0.92**	**76**	*e*P	Pb	03 45 39.4	-0.2
TPR				*e*S	Sb	03 45 53.8	+2.4
BOT	**Bacolet**	**0.98**	**78**	*e*P

*ISCJB **27** 05:00:08.8±0.4, 38°.28N±0°.03×21°.92E±0°.03, h7km±3km, Error ellipse: s-maj=4.6km s-min=3.7km az=162.2*
*CSEM **27** 05:00:08.7±0.2, 38°.30N×21°.92E, h5km, ML2.5/7, Error ellipse: s-maj=4.7km s-min=3.8km az=137.0*
*THE **27** 05:00:08.6, 38°.28N×21°.91E, h8km, ML2.5/7, Error ellipse: s-maj=0.9km s-min=0.3km az=244.0*
*NEIC **27** 05:00:09.2, 38°.27N×21°.91E, h5km, MD2.9(ATH), After ATH.*
*ATH **27** 05:00:09.3, 38°.27N×21°.90E, h5km, MD2.9/5*
ISC 27 05:00:09.1±0.4, 38°.29N±0°.03×21°.91E±0°.03, h6km±4km, n33, σ0s66/60, Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LAKA	**Lakka**	**0.07**	**136**	P			**Pg**	**05 00 10.5**	**-0.4**
LAKA				S			**Sg**	**05 00 12.0**	**-0.1**
LAKA	**Lakka**	**0.07**	**136**	P			**Pg**	**05 00 10.5**	**-0.4**
LAKA				S			**Sg**	**05 00 12.0**	**-0.1**
UPR	**University Cam**	**0.10**	**264**	P			**Pg**	**05 00 10.8**	**-0.5**
UPR				S			**Sg**	**05 00 12.8**	**0.0**
UPR	**University Cam**	**0.10**	**264**	P			**Pg**	**05 00 10.8**	**-0.5**
UPR				S			**Sg**	**05 00 12.8**	**0.0**
EFP	**Efpalio**	**0.13**	**357**	P	e	G	**Pg**	**05 00 11.8**	**-0.1**
EFP				S	e	G	**Sg**	**05 00 14.6**	**+0.8**
EFP	**Efpalio**	**0.13**	**357**	P			**Pg**	**05 00 11.7**	**-0.2**
EFP				S			**Sg**	**05 00 14.3**	**+0.5**
EFP	**Efpalio**	**0.13**	**357**	P	e	g	**Pg**	**05 00 11.8**	**-0.1**
EFP				S			**Sg**	**05 00 14.3**	**+0.5**
TRIZ	**Trizonia**	**0.14**	**60**	P			**Pg**	**05 00 11.8**	**-0.3**
TRIZ				S			**Sg**	**05 00 14.6**	**+0.5**
TRIZ	**Trizonia**	**0.14**	**60**	P			**Pg**	**05 00 11.8**	**-0.3**
TRIZ				S			**Sg**	**05 00 14.6**	**+0.5**
KALE	**Kalithea**	**0.20**	**61**	P			**Pg**	**05 00 12.9**	**-0.3**
KALE				S			**Sg**	**05 00 16.3**	**+0.4**
KALE	**Kalithea**	**0.20**	**61**	P			**Pg**	**05 00 12.9**	**-0.3**
KALE				S			**Sg**	**05 00 16.3**	**+0.4**
RLS	**Riolos of Patr**	**0.42**	**236**	e	Pb		**Pg**	**05 00 18.0**	**+0.7**
RLS				e	Sb		**Sg**	**05 00 23.7**	**+0.8**
RLS	**Riolos of Patr**	**0.42**	**236**	e	PB		**Pg**	**05 00 18.0**	**+0.7**
RLS				e	SB		**Sg**	**05 00 23.7**	**+0.8**
RLS	**Riolos of Patr**	**0.42**	**236**	e	Pb		**Pg**	**05 00 18.0**	**+0.7**
RLS				e	Sb		**Sg**	**05 00 23.7**	**+0.8**
GUR	**Goura**	**0.49**	**136**	e	PB		**Pg**	**05 00 18.3**	**-0.3**
GUR				e	SB		**Sg**	**05 00 25.1**	**+0.1**
GUR	**Goura**	**0.49**	**136**	P			**Pg**	**05 00 18.1**	**-0.5**
GUR				S			**Sg**	**05 00 25.2**	**+0.2**
GUR	**Goura**	**0.49**	**136**	e	Pg		**Pg**	**05 00 18.3**	**-0.3**
GUR				e	Sb		**Sg**	**05 00 25.1**	**+0.1**
DSF	**Desfina**	**0.50**	**76**	P			**Pg**	**05 00 18.1**	**-0.6**
DSF				S			**Sg**	**05 00 25.6**	**+0.4**
DSF	**Desfina**	**0.50**	**76**	P			**Pg**	**05 00 18.1**	**-0.6**
DSF				S			**Sg**	**05 00 25.6**	**+0.4**
EVR	**Evrytania**	**0.63**	**353**	e	Pb		**Pb**	**05 00 22.0**	**-0.5**
EVR	**Evrytania**	**0.63**	**353**	e	PB		**Pb**	**05 00 22.0**	**-0.5**
EVR	**Evrytania**	**0.63**	**353**	e	Pb		**Pb**	**05 00 22.0**	**-0.5**
AGG	**Agios Georgios**	**0.80**	**24**	P			**Pg**	**05 00 23.7**	**-0.8**
AGG				S			**Sg**	**05 00 35.4**	**+0.6**
AGG	**Agios Georgios**	**0.80**	**24**	P			**Pg**	**05 00 23.7**	**-0.8**
AGG				S			**Sg**	**05 00 35.4**	**+0.6**
LKR	**Lokris**	**0.92**	**67**	e	Pn		**Pn**	**05 00 27.7**	**-0.9**
LKR				e	Sb		**Sb**	**05 00 41.1**	**+1.0**
LKR	**Lokris**	**0.92**	**67**	e	PN		**Pn**	**05 00 27.7**	**-0.9**
LKR				e	SB		**Sb**	**05 00 41.1**	**+1.0**
LKR	**Lokris**	**0.92**	**67**	e	Pn		**Pn**	**05 00 27.7**	**-0.9**
LKR				e	Sb		**Sb**	**05 00 41.1**	**+1.0**
VLS	**Valsamata**	**1.05**	**264**	e	Pb		**Pb**	**05 00 28.0**	**-1.7**
VLS				e	Sb		**Sb**	**05 00 44.6**	**+0.9**
VLS	**Valsamata**	**1.05**	**264**	e	PB		**Pb**	**05 00 28.0**	**-1.7**
VLS				e	SB		**Sb**	**05 00 44.6**	**+0.9**
VLS	**Valsamata**	**1.05**	**264**	e	Pb		**Pb**	**05 00 28.0**	**-1.7**
VLS				e	Sb		**Sb**	**05 00 44.6**	**+0.9**
ITM	**Ithomi**	**1.11**	**179**	e	Pb		**Pb**	**05 00 31.4**	**+0.7**
ITM	**Ithomi**	**1.11**	**179**	e	PB		**Pb**	**05 00 31.4**	**+0.7**
ITM	**Ithomi**	**1.11**	**179**	e	Pb		**Pb**	**05 00 31.4**	**+0.7**

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*ISCJB **27** 05:20:50.2±0.4, 38°.08N±0°.03×21°.56E±0°.02, h10km, Error ellipse: s-maj=4.1km s-min=2.7km az=169.6*
*CSEM **27** 05:20:50.6±0.2, 38°.10N×21°.56E, h12km, MD3.0, Error ellipse: s-maj=5.6km s-min=3.6km az=167.0*
*THE **27** 05:20:50.2, 38°.08N×21°.56E, h16km, ML2.4/7, Error ellipse: s-maj=0.7km s-min=0.3km az=145.0*
*ATH **27** 05:20:51.4, 38°.07N×21°.59E, h12km±3km, MD3.0/5*
*NEIC **27** 05:20:51.4, 38°.07N×21°.59E, h12km, MD3.0(ATH), After ATH.*
ISC 27 05:20:50.4±0.6, 38°.08N±0°.03×21°.56E±0°.03, h19km±6km, n37, σ0s59/64, 3C, Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.08**	**251**	⇑P	i	Pg	**Pg**	**05 20 54.0**	**+0.1**
RLS				e	Sg		**Sg**	**05 20 56.6**	**+0.3**
RLS	**Riolos of Patr**	**0.08**	**251**	⇑P	i	PG	**Pg**	**05 20 54.0**	**+0.1**
RLS				e	SG		**Sg**	**05 20 56.6**	**+0.3**
RLS	**Riolos of Patr**	**0.08**	**251**	⇑P	i	Pg	**Pg**	**05 20 54.0**	**+0.1**
RLS				e	Sg		**Sg**	**05 20 56.6**	**+0.3**
UPR	**University Cam**	**0.27**	**42**	P			**Pg**	**05 20 56.3**	**-0.2**
UPR	**University Cam**	**0.27**	**42**	P			**Pg**	**05 20 56.3**	**-0.2**
LAKA	**Lakka**	**0.37**	**64**	P			**Pg**	**05 20 57.7**	**-0.4**
LAKA				S			**Sg**	**05 21 03.3**	**0.0**
LAKA	**Lakka**	**0.37**	**64**	P			**Pg**	**05 20 57.7**	**-0.4**
LAKA				S			**Sg**	**05 21 03.3**	**0.0**
EFP	**Efpalio**	**0.44**	**38**	e	PG		**Pg**	**05 20 59.2**	**-0.2**
EFP				e	SB		**Sb**	**05 21 06.5**	**+0.8**
EFP	**Efpalio**	**0.44**	**38**	P			**Pg**	**05 20 59.0**	**-0.4**
EFP				S			**Sg**	**05 21 05.7**	**+0.2**
EFP	**Efpalio**	**0.44**	**38**	P			**Pg**	**05 20 59.0**	**-0.4**
EFP				S			**Sg**	**05 21 05.7**	**+0.2**
EFP				e	Sb		**Sb**	**05 21 06.5**	**+0.8**
TRIZ	**Trizonia**	**0.49**	**55**	P			**Pg**	**05 20 59.8**	**-0.6**
TRIZ				S			**Sg**	**05 21 07.3**	**+0.2**
TRIZ	**Trizonia**	**0.49**	**55**	P			**Pg**	**05 20 59.8**	**-0.6**
TRIZ				S			**Sg**	**05 21 07.3**	**+0.2**
KALE	**Kalithea**	**0.55**	**56**	P			**Pg**	**05 21 00.9**	**-0.5**
KALE				S			**Sg**	**05 21 09.5**	**+0.6**
KALE	**Kalithea**	**0.55**	**56**	P			**Pg**	**05 21 00.9**	**-0.5**
KALE				S			**Sg**	**05 21 09.5**	**+0.6**
KFL	**Anninata**	**0.61**	**273**	P			**Pg**	**05 21 01.9**	**-0.5**
KFL				S			**Sg**	**05 21 11.2**	**+0.6**
KFL	**Anninata**	**0.61**	**273**	P			**Pg**	**05 21 01.9**	**-0.5**
KFL				S			**Sg**	**05 21 11.2**	**+0.6**
GUR	**Goura**	**0.64**	**103**	e	PB		**Pg**	**05 21 02.2**	**-0.7**
GUR				e	SB		**Sg**	**05 21 11.8**	**+0.3**
GUR	**Goura**	**0.64**	**103**	P			**Pg**	**05 21 02.0**	**-0.9**
GUR				S			**Sg**	**05 21 11.9**	**+0.4**
GUR	**Goura**	**0.64**	**103**	e	Pb		**Pg**	**05 21 02.2**	**-0.7**
GUR				e	Sb		**Sg**	**05 21 11.8**	**+0.3**
VLS	**Valsamata**	**0.77**	**277**	P			**Pg**	**05 21 04.8**	**-0.7**
VLS				S			**Sg**	**05 21 16.2**	**+0.5**
VLS	**Valsamata**	**0.77**	**277**	P			**Pg**	**05 21 04.8**	**-0.7**
VLS				S			**Sg**	**05 21 16.2**	**+0.5**
DSF	**Desfina**	**0.83**	**66**	P			**Pg**	**05 21 05.9**	**-0.7**
DSF				S			**Sg**	**05 21 17.7**	**+0.1**
DSF	**Desfina**	**0.83**	**66**	P			**Pg**	**05 21 05.9**	**-0.7**
DSF				S			**Sg**	**05 21 17.7**	**+0.1**
EVR	**Evrytania**	**0.86**	**13**	e	Pb		**Pg**	**05 21 08.6**	**+1.5**
EVR	**Evrytania**	**0.86**	**13**	e	PB		**Pg**	**05 21 08.6**	**+1.5**
EVR	**Evrytania**	**0.86**	**13**	e	Pb		**Pg**	**05 21 08.6**	**+1.5**
ITM	**Ithomi**	**0.95**	**162**	e	Pb		**Pg**	**05 21 09.0**	**+0.2**
ITM				e	Sb		**Sg**	**05 21 22.3**	**+1.0**
ITM	**Ithomi**	**0.95**	**162**	e	PB		**Pg**	**05 21 09.0**	**+0.2**
ITM				e	SB		**Sg**	**05 21 22.3**	**+1.0**
ITM	**Ithomi**	**0.95**	**162**	e	Pb		**Pg**	**05 21 09.0**	**+0.2**
ITM				e	Sb		**Sg**	**05 21 22.3**	**+1.0**
LKD2	**Lefkada island**	**1.00**	**315**	P			**Pg**	**05 21 08.8**	**-1.0**
LKD2				S			**Sg**	**05 21 23.0**	**+0.1**
LKD2	**Lefkada island**	**1.00**	**315**	P			**Pg**	**05 21 08.8**	**-1.0**
LKD2				S			**Sg**	**05 21 23.0**	**+0.1**
LKR	**Lokris**	**1.27**	**63**	e	Pg		**Pg**	**05 21 14.7**	**-0.2**
LKR	**Lokris**	**1.27**	**63**	e	PG		**Pg**	**05 21 14.7**	**-0.2**
LKR	**Lokris**	**1.27**	**63**	e	Pg		**Pg**	**05 21 14.7**	**-0.2**
VLI	**Veliai**	**1.75**	**141**	e	Pn		**Pg**	**05 21 23.4**	**-0.6**
VLI	**Veliai**	**1.75**	**141**	e	PN		**Pg**	**05 21 23.4**	**-0.6**
VLI	**Veliai**	**1.75**	**141**	e	Pn		**Pg**	**05 21 23.4**	**-0.6**

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*IDC **27** 05:26:35.2±1.5, 29°.78N×99°.71E, h0km, mb3.7/5, mb1 3.7/6, mb1mx3.5/24, mbtmp3.7/6, ML3.5/1, Error ellipse: s-maj=41.1km s-min=23.2km az=48.0*
*BJI **27** 05:26:35.8, 29°.72N×99°.56E, h14km, ML3.4/10*
*NEIC **27** 05:26:41.3±1.1, 30°.32N×99°.65E, h10km, mb3.8/4, Error ellipse: s-maj=23.2km s-min=9.1km az=190.0*
ISC 27 05:26:37.7±1.1, 29°.9N±0°.1×99°.77E±0°.06, h10km, n16, σ0s93/17, mb3.7/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**3.59**	**72**	Pg			**Pb**	**05 27 39.8**	**-1.5**
CD2				Sn			**Sb**	**05 28 25.5**	**+0.5**
CD2				smax					
comp=N,150nm,1.4s									
LZH	**Lanzhou**	**7.07**	**28**	e	P		**Pg**	**05 28 53.8**	**+0.7**
LZH				p	P			05 29 10.5	
LZH				s	P			05 29 18.8	
LZH				pmax			pmax		
comp=Z,43nm,1.4s									
LZH				pmax			pmax		
comp=Z,210nm,5.0s									
ENH	**Enshi**	**8.43**	**85**	e	Pn		**Pn**	**05 28 44.5**	**+4.6**
comp=Z,14nm,0.6s									
SONM	**Songino Array**	**18.64**	**14**	P			**Pn**	**05 30 55.1**	**-0.7**
comp=Z,0.2nm,0.3s,baz=202,slow=7.3,SNR=3.9									
MK31	**Makanchi Array**	**21.67**	**326**	e	P		**P**	**05 31 27.3**	**-1.1**
MKAR	**Makanchi Array**	**21.67**	**326**	P			**P**	**05 31 26.8**	**-1.6**
comp=Z,1.2nm,0.5s,mb3.5,baz=130,slow=13,SNR=12									
TKM2	**Tokmak 2**	**23.31**	**311**	P			**P**	**05 31 45.7**	**-0.2**
comp=Z,0.9nm,0.4s,mb3.5									
UCH	**Uchtor**	**23.75**	**308**	e	P		**P**	**05 31 50.8**	**+0.5**
AAK	**Ala-Archa**	**23.93**	**309**	P			**P**	**05 31 52.4**	**+0.5**
comp=Z,1.3nm,0.3s,mb3.8,baz=25,slow=3.0,SNR=4.5									
AML	**Almayashu**	**24.28**	**307**	e	P		**P**	**05 31 56.4**	**+1.3**
comp=Z,1.5nm,0.8s,mb3.5									
EKS2	**Erkin-Say**	**24.42**	**309**	e	P		**P**	**05 31 57.6**	**+1.3**
comp=Z,2.8nm,0.7s,mb3.8									
KSRS	**Korea Array**	**24.55**	**65**	P			**P**	**05 31 57.9**	**+0.2**
comp=Z,0.5nm,0.4s,mb3.4,baz=258,slow=10.0,SNR=5.1									
KURK	**Kurchatov**	**26.16**	**329**	e	P		**P**	**05 32 11.4**	**-0.7**
comp=Z,6.6nm,0.6s,mb3.9									
ZALV	**Zalesovo Beam**	**26.39**	**340**	P			**P**	**05 32 14.0**	**-0.1**
comp=Z,1.6nm,0.8s,mb3.6,baz=148,slow=8.7,SNR=5.7									
ABKAR	**Akbulak array**	**35.76**	**314**	e	P		**P**	**05 33 37.1**	**+0.4**
ASAR	**Alice Springs**	**62.53**	**145**	P			**P**	**05 37 00.3**	**-1.4**
comp=Z,0.4nm,0.4s,mb3.9,baz=331,slow=5.8,SNR=5.3									

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*IDC **27** 05:42:27.6±2.7, 11°.66N×86°.60W, h26km±18km, mb4.2/17, mb1 4.3/19, mb1mx4.3/24, mbtmp4.2/19, ML3.8/2, MS4.4/15, Ms1 4.4/15, ms1mx4.3/24, Error ellipse: s-maj=26.0km s-min=11.0km az=50.0*
*ISCJB **27** 05:42:28.0±0.4, 11°.44N±0°.04×86°.89W±0°.04, h48km±3km, mb4.5/84, MS4.5/20, Error ellipse: s-maj=7.8km s-min=3.2km az=43.1*
*MOS **27** 05:42:27.6±1.4, 11°.41N×86°.80W, h45km, mb4.8/21, Error ellipse: s-maj=14.5km s-min=5.7km az=108.9*
*CASC **27** 05:42:28.0±2.5, 11°.40N×86°.95W, h37km±999km, MD4.5, mb4.7(NEIC)*
*GCMT **27** 05:42:29.8±0.3, 10°.98N×87°.29W, h21km, MW5.1, Moment Tensor Solution. s55,c72; s68,c119; Moment tensor: Scale 10^{16}Nm; M_{rr}4.20±.18; $M_{\theta\theta}$-2.85±.12; $M_{\phi\phi}$-1.35±.13; $M_{r\theta}$4.25±.28; $M_{\theta\phi}$2.24±.09; $M_{\phi r}$-2.20±.25; Best double couple: $M_0$6.50000×10^{16} NP1:ϕ_s313.00000°, δ22.00000°, λ102.00000°. NP2:ϕ_s119.00000°, δ69.00000°, λ85.00000°. Principal axes: T 6.3500, Plg66.0000°, Azm21.0000°; N 0.2100, Plg5.0000°, Azm121.0000°; P -6.5600, Plg24.0000°, Azm213.0000°; Data Used: II IU IC G CN.*
*NEIC **27** 05:42:29.4±0.3, 11°.38N×86°.84W, mb4.7/68 Error ellipse: s-maj=8.6km s-min=4.9km az=221.0*
ISC 27 05:42:29.4±0.4, 11°.43N±0°.04×86°.87W±0°.04, h45km±3km, h54km±2.8km: pP-P, n435, σ0s88/414, mb4.5/84, MS4.5/20, 112C-101D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NY14	**Universidad de**	**1.52**	**120**	i P			**Pn**	**05 42 52.3**	**-1.9**
BUEV	**Buena Vista**	**1.56**	**113**	i P			**Pn**	**05 42 53.0**	**-1.7**
GPS3	**Bodega del ICE**	**1.62**	**114**	i P			**Pn**	**05 42 54.0**	**-1.5**
GPS1	**Guardaparques**	**1.62**	**113**	i P			**Pn**	**05 42 54.5**	**-1.1**
LIM1	**Limonal**	**1.74**	**114**	i P			**Pn**	**05 42 56.8**	**-0.4**
LIM1				i S			**Sn**	**05 43 25.4**	**+7.1**
VCR	**Vista de Mar**	**1.77**	**137**	e	P		**Pn**	**05 42 58.9**	**+1.2**
CUI	**Cuipilapa**	**1.84**	**114**	i P			**Pn**	**05 42 58.5**	**0.0**
AMAS	**Alto Masis**	**2.01**	**114**	i P			**Pn**	**05 43 00.7**	**-0.2**
CNCH	**Conchagua**	**2.07**	**333**	e	P		**Pn**	**05 43 01.7**	**0.0**
CNCH				e	S		**Sn**	**05 43 26.1**	**-0.1**
JTS	**JuntasAbangare**	**2.19**	**121**	P			**Pn**	**05 43 01.2**	**-2.2**
18nm,0.3s,baz=315,slow=19,SNR=66									
JTS				P	g		**Pn**	**05 43 05.5**	**+2.1**
147nm,0.3s,baz=305,slow=13,SNR=144									
JTS				L	g			05 43 35.6	
176nm,0.3s,baz=349,slow=23,SNR=5.0									
JTS	**JuntasAbangare**	**2.19**	**121**	P			**Pn**	**05 43 01.1**	**-2.2**
JTS				L	g			05 43 35.6	
JTS				e	Sn		**Sn**	**05 43 38.6**	**+9.3**
JCR	**Jicaral**	**2.33**	**132**	e	P		**Pn**	**05 43 06.2**	**+0.9**
BLLM	**Bellamira**	**2.41**	**326**	e	P		**Pn**	**05 43 05.6**	**-0.8**
BLLM				e	S		**Sn**	**05 43 33.7**	**-0.9**
TGUH	**Tegucigalpa,Un**	**2.64**	**351**	e	Pn		**Pn**	**05 43 10.8**	**+1.2**
TGUH	**Tegucigalpa,Un**	**2.64**	**351**	e	P		**Pn**	**05 43 10.4**	**+0.9**
CAHU	**Cacacuatique**	**2.67**	**331**	e	P		**Pn**	**05 43 09.8**	**-0.1**
CGA2	**Cerro Gallo 2**	**2.75**	**121**	e	P		**Pn**	**05 43 11.6**	**+0.6**
PRS1	**Puriscal**	**2.89**	**119**	e	P		**Pn**	**05 43 12.8**	**-0.2**
LFRS	**El Faro**	**3.06**	**316**	e	P		**Pn**	**05 43 14.0**	**-1.3**
LFRS				e	S		**Sn**	**05 43 47.9**	**-2.7**
LAJ	**Bijagual**	**3.11**	**120**	e	P		**Pn**	**05 43 10.4**	**-5.6**
LBRS	**Las Brisas**	**3.13**	**317**	e	P		**Pn**	**05 43 15.2**	**-1.0**
LBRS				e	S		**Sn**	**05 43 49.5**	**-2.9**
SJS	**Escuela Geolog**	**3.13**	**118**	e	P		**Pn**	**05 43 16.1**	**-0.3**
QCR	**Quepos**	**3.32**	**127**	e	P		**Pn**	**05 43 17.9**	**-1.0**
URSC	**Urasca**	**3.42**	**117**	e	P		**Pn**	**05 43 20.6**	**+0.3**
BUS	**Buena Vista**	**3.58**	**121**	e	P		**Pn**	**05 43 23.8**	**+1.4**
BAR1		**4.12**	**122**	e	P		**Pn**	**05 43 29.9**	**+0.1**
ACR	**Cerro Adams**	**4.57**	**127**	e	P		**Pn**	**05 43 36.0**	**-0.1**
BCIP	**Isla Barro Col**	**7.27**	**107**	e	Pn		**Pn**	**05 44 15.5**	**+2.3**
TEIG	**Tepich**	**8.85**	**351**	e	Pn		**Pn**	**05 44 37.7**	**+2.9**
CMIG	**Matias Romero**	**9.60**	**307**	Pn			**Pn**	**05 44 44.9**	**-0.1**
1.6nm,0.3s,baz=122,slow=9.0,SNR=23									
CMIG				S	n		**Sn**	**05 46 32.8**	**+1.3**
0.5nm,0.3s,baz=125,slow=19,SNR=2.1									
OTAV	**Otavalo**	**13.91**	**142**	e	Pn		**Pn**	**05 45 47.2**	**+3.2**
ROSC	**El Rosal**	**14.02**	**117**	Pn			**Pn**	**05 45 55.8**	**+10**
1.8nm,0.3s,baz=52,slow=0.2,SNR=37									
ROSC				L	R		L R	05 51 16.3	
comp=Z,1μm,19.8s,baz=349,slow=38									
SDV	**Santo Domingo**	**16.18**	**97**	e	Pn		**Pn**	**05 46 15.9**	**+2.2**
24nm,0.5s									
BRAL	**Brewton**	**19.49**	**360**	e	Pn		**Pn**	**05 46 56.8**	**+2.5**
115nm,1.1s									
HKT	**Hockley**	**20.23**	**337**	e	P		**P**	**05 47 01.5**	**+0.7**
HKT				pmax			pmax		
comp=Z,68nm,1.4s									
HKT	**Hockley**	**20.23**	**337**	e	P		**P**	**05 47 01.5**	**+0.7**
comp=Z,68nm,1.4s									
ATAH	**Atahualpa**	**20.28**	**155**	P			**P**	**05 47 03.2**	**+1.8**
comp=Z,2.1nm,0.5s,baz=37,slow=10,SNR=2.3									
ATAH				L	R		L R	05 53 52.8	
comp=Z,2μm,20.4s,MS4.5,baz=192,slow=34									
VBMS	**Vicksburg**	**20.96**	**351**	e	P		**P**	**05 47 09.9**	**+1.3**
comp=Z,61nm,0.8s									
SJG	**San Juan**	**21.09**	**69**	P			**P**	**05 47 09.7**	**-0.5**
comp=Z,13nm,0.8s,mb4.3,baz=280,slow=13,SNR=3.3									
SJG	**San Juan**	**21.09**	**69**	P			**P**	**05 47 09.7**	**-0.5**
NATX	**Nacogdoches**	**21.48**	**342**	e	P		**P**	**05 47 14.8**	**+0.6**
comp=Z,66nm,1.0s,mb4.9									
LRAL	**Lakeview Retre**	**21.51**	**360**	e	P		**P**	**05 47 15.9**	**+1.4**
comp=Z,29nm,0.9s,mb4.7									
PCRV	**Puerto La Cruz**	**21.87**	**91**	P			**P**	**05 47 18.2**	**-0.4**
comp=Z,22nm,0.7s,mb4.7,baz=270,slow=5.6,SNR=9.5									
GOGA	**Godfrey**	**22.10**	**8**	e	P		**P**	**05 47 22.3**	**+1.4**
GOGA				pmax			pmax		
comp=Z,55nm,1.2s,mb4.9									
GOGA	**Godfrey**	**22.10**	**8**	e	P		**P**	**05 47 22.3**	**+1.5**
comp=Z,55nm,1.2s,mb4.9									
NHSC	**New Hope**	**22.43**	**15**	e	P		**P**	**05 47 25.7**	**+1.3**
NHSC				e	pP			05 47 38.6	
NHSC				e	pP			05 47 39.3	
NHSC				e	sP		sP	05 47 46.9	+6.0
JCT	**Junction City**	**22.44**	**330**	e	P		**P**	**05 47 24.9**	**+0.4**
JSC	**Jenkinsville**	**23.32**	**12**	e	P		**P**	**05 47 35.4**	**+1.7**
627A	**Terlingua Ranc**	**23.64**	**322**	⇑P			**P**	**05 47 36.2**	**-0.5**
baz=24,SNR=28									
SWET	**Sewanee**	**23.70**	**2**	e	P		**P**	**05 47 36.7**	**-0.5**
TXAR	**Lajitas Array**	**23.72**	**321**	P			**P**	**05 47 37.8**	**+0.3**
comp=Z,8.6nm,0.7s,mb4.3,baz=135,slow=10,SNR=92									
TXAR				P	cP		P cP	05 51 22.5	+1.9
comp=Z,4.3nm,0.9s,baz=141,slow=4.2,SNR=15									
TXAR				S	cP		S cP	05 55 02.5	+7.1
comp=Z,0.4nm,0.8s,baz=155,slow=6.6,SNR=4.7									
TXAR	**Lajitas Array**	**23.72**	**321**	P			**P**	**05 47 37.8**	**+0.3**
TXAR								05 51 22.5	
UALR	**University of**	**23.77**	**349**	e	P		**P**	**05 47 37.2**	**-0.6**
comp=Z,42nm,1.0s,mb4.8									
MIAR	**Mount Ida**	**23.81**	**346**	e	P		**P**	**05 47 37.6**	**-0.6**
MIAR				pmax			pmax		
comp=Z,23nm,0.8s,mb4.7									
MIAR	**Mount Ida**	**23.81**	**346**	e	P		**P**	**05 47 37.6**	**-0.6**
comp=Z,23nm,0.8s,mb4.7									
CPCT	**Cooper Cave**	**24.01**	**5**	e	P		**P**	**05 47 41.0**	**+1.0**
CPCT				e	pP			05 47 56.9	
428A	**Kincaid Ranch,**	**24.16**	**325**	⇑P			**P**	**05 47 41.7**	**+0.2**
baz=24,SNR=12									
626A	**Big Bend Ranch**	**24.17**	**321**	⇑P			**P**	**05 47 41.3**	**-0.2**
baz=24,SNR=25									
HBAR	**Harrisburg**	**24.27**	**352**	e	P		**P**	**05 47 41.9**	**-0.4**
527A	**Woodward Ranch**	**24.27**	**323**	⇓P			**P**	**05 47 41.9**	**-0.5**
baz=24,SNR=14									
TKL	**Tuckaleechee C**	**24.29**	**6**	P			**P**	**05 47 43.7**	**+1.2**
comp=Z,26nm,1.0s,mb4.6,baz=177,slow=8.6,SNR=21									
TKL	**Tuckaleechee C**	**24.29**	**6**	P			**P**	**05 47 43.7**	**+1.2**
TKL				pmax			pmax		
comp=Z,26nm,1.0s,mb4.6									
TKL	**Tuckaleechee C**	**24.29**	**6**	e	P		**P**	**05 47 42.4**	**-0.1**
HALT	**Halls**	**24.48**	**355**	e	P		**P**	**05 47 43.8**	**-0.5**
526A	**Mary Lane Ranc**	**24.50**	**322**	⇑P			**P**	**05 47 44.9**	**+0.4**
baz=24									
GNAR	**Gosnell**	**24.59**	**354**	e	P		**P**	**05 47 45.2**	**-0.1**
comp=Z,506nm,0.8s									
WVT	**Waverly**	**24.61**	**358**	e	P		**P**	**05 47 44.8**	**-0.6**
WVT				pmax			pmax		
comp=Z,8.0nm,0.8s,mb4.3									
WVT	**Waverly**	**24.61**	**358**	e	P		**P**	**05 47 44.8**	**-0.6**
comp=Z,7.6nm,0.8s,mb4.3									
427A	**Hayter Ranch,**	**24.66**	**324**	⇑P			**P**	**05 47 45.7**	**-0.3**
baz=25									
328A	**Wristen Ranch,**	**24.73**	**326**	P			**P**	**05 47 46.4**	**-0.2**
baz=25,SNR=19									
GLAT	**Glass**	**24.83**	**355**	e	P		**P**	**05 47 46.9**	**-0.6**
UTMT	**University of**	**24.87**	**356**	e	P		**P**	**05 47 47.5**	**-0.3**
comp=Z,46nm,0.8s,mb5.1									
426A	**McDonald Obser**	**24.90**	**323**	⇓P			**P**	**05 47 47.9**	**-0.2**
baz=25,SNR=12									
227A	**Bennet, Jal**	**25.48**	**326**	⇑P			**P**	**05 47 53.7**	**+0.3**
baz=26									
425A	**Indio Mountain**	**25.55**	**322**	⇑P			**P**	**05 47 54.0**	**-0.1**
ba

LAZ **Ladron** 29.40 324 eP P 05 48 31.2 +2.6
comp=Z,4.9nm,1.3s,mb4.1
W23A **Werner Place,** 29.41 327 ⇓P P 05 48 28.8 +0.1
baz=29,SNR=11
ANMO **Albuquerque** 29.42 326 P P 05 48 30.1 +1.4
comp=Z,2.8nm,0.8s,mb4.0,baz=150,slow=7.0,SNR=11
ANMO PcP PcP 05 51 35.7 +1.8
comp=Z,2.2nm,0.9s,baz=207,slow=8.5,SNR=4.5
ANMO **Albuquerque** 29.42 326 P P 05 48 30.1 +1.4
ANMO 05 51 35.7
ANMO pmax pmax
comp=Z,3.0nm,0.8s
ANMO pmax pmax
comp=Z,2.0nm,0.9s
ANMO **Albuquerque** 29.42 326 eP P 05 48 30.4 +1.6
comp=Z,4.9nm,0.8s,mb4.3
Y21A **Point of Rocks** 29.43 323 ⇓P P 05 48 29.5 +0.6
baz=29
U25A **Circle Dot Ran** 29.48 330 ⇓P P 05 48 29.3 0.0
baz=30
Y20A **Horse Springs,** 29.78 322 ⇑P P 05 48 31.9 0.0
baz=30
X21A **Alamocita Cree** 29.81 324 ⇓P P 05 48 31.4 -0.7
baz=30
V23A **Ortiz Mt. (NFS** 29.87 327 ⇓P P 05 48 31.9 -0.8
baz=30
MVL **Millersville** 29.94 16 eP P 05 48 34.5 +1.2
comp=Z,27nm,1.2s,mb4.9
T25A **Trinidad** 30.07 331 ⇑P P 05 48 34.5 +0.1
baz=30
X20A **Quemado** 30.29 323 ⇓P P 05 48 37.4 +1.0
baz=30
U23A **El Rito** 30.32 328 ⇓P P 05 48 37.3 +0.7
baz=30,SNR=24
Y19A **Nutrioso** 30.35 321 ⇓P P 05 48 37.5 +0.6
baz=30
V22A **San Miguel Ran** 30.39 327 ⇑P P 05 48 36.9 -0.3
baz=30,SNR=7.7
S25A **Robets Cordova** 30.51 332 ⇓P P 05 48 38.5 +0.2
baz=30
ALLY **Alegheny Colle** 30.68 10 eP P 05 48 40.0 +0.3
comp=Z,34nm,1.0s,mb5.1
X19A **St. Johns** 30.69 322 ⇑P P 05 48 41.1 +1.1
baz=31
U22A **Llaves** 30.70 327 ⇓P P 05 48 40.7 +0.7
baz=31
V21A **Milan** 30.70 326 ⇑P P 05 48 40.8 +0.7
baz=31
W20A **Ramah** 30.70 324 ⇑P P 05 48 39.9 -0.2
baz=31
Y18A **Canyon Day Jun** 30.72 320 ⇑P P 05 48 40.4 +0.2
baz=31
T23A **Casias Ranch,** 30.79 329 ⇑P P 05 48 40.3 -0.4
baz=31
S24A **Houchin Ranch,** 30.86 331 ⇓P P 05 48 41.4 0.0
baz=31
SCIA **State Center** 30.87 351 eP P 05 48 40.7 -0.7
AAM **Ann Arbor** 30.88 5 eP P 05 48 41.5 0.0
AAM pmax pmax
comp=Z,33nm,1.0s,mb5.1
AAM **Ann Arbor** 30.88 5 eP P 05 48 41.5 0.0
comp=Z,33nm,1.0s,mb5.1
116A **Eloy** 31.04 317 ⇓P P 05 48 44.1 +1.0
baz=31
SDCO **Great Sand Dun** 31.08 331 eP P 05 48 44.3 +1.0
ERPA **Erie** 31.16 10 eP P 05 48 44.2 +0.3
comp=Z,47nm,0.7s,mb5.4
X18A **Snowflake** 31.16 321 ⇑P P 05 48 43.7 -0.4
baz=31
U21A **Nageezi** 31.17 326 ⇑P P 05 48 43.2 -1.0
baz=31
T22A **Edith** 31.21 328 ⇓P P 05 48 44.5 0.0
baz=31
R24A **Sanders Place,** 31.28 332 ⇑P P 05 48 45.5 +0.4
baz=31
Q25A **Bedland, Calha** 31.45 333 ⇓P P 05 48 47.0 +0.4
baz=32
JFWS **Jewell Farm** 31.51 355 eP P 05 48 46.2 -0.8
JFWS pmax pmax
comp=Z,27nm,0.9s,mb5.1
JFWS **Jewell Farm** 31.51 355 eP P 05 48 46.2 -0.8
comp=Z,27nm,0.9s,mb5.1
T21A **Navajo Lake** 31.52 327 ⇓P P 05 48 48.0 +0.7
baz=32
X17A **Forest Lakes** 31.57 320 ⇑P P 05 48 47.1 -0.6
baz=32
U20A **Newcomb** 31.61 325 ⇓P P 05 48 47.1 -0.9
baz=32
S22A **4UR Ranch, Cre** 31.73 329 ⇓P P 05 48 49.1 0.0
baz=32,SNR=7.1
U19A **Dine' College,** 31.93 325 ⇑P P 05 48 51.0 +0.1
baz=32
V18A **Ganado** 31.95 323 ⇑P P 05 48 51.2 +0.2
baz=32
X16A **Lo Mia Camp, P** 32.02 320 ⇑P P 05 48 52.2 +0.5
baz=32
R22A **Saguache, Gunn** 32.07 330 ⇓P P 05 48 52.0 -0.1
baz=32
BINY **Binghamton** 32.10 15 eP P 05 48 52.0 -0.2
comp=Z,23nm,0.8s,mb5.0
MVCO **Mesa Verde** 32.20 326 eP P 05 48 54.2 +0.9
T19A **Beclabito** 32.22 325 ⇓P P 05 48 53.1 -0.2
baz=32
Y15A **Casa Rosa Ranc** 32.30 318 ⇓P P 05 48 53.1 -1.1
baz=32
V17A **Tonalea, Kykot** 32.40 322 ⇑P P 05 48 55.3 +0.3
baz=32,SNR=9.5
P23A **Jefferson** 32.54 332 ⇑P P 05 48 57.1 +0.9
baz=33,SNR=5.4
X15A **Humboldt** 32.57 319 ⇑P P 05 48 56.5 0.0
baz=33
R21A **Cimarron** 32.57 329 ⇑P P 05 48 56.9 +0.5
baz=33
S20A **Disappointment** 32.59 327 ⇑P P 05 48 57.9 +1.3
baz=33
Q22A **Crested Butte,** 32.64 330 ⇓P P 05 48 56.9 -0.1
baz=33,SNR=8.6
WUAZ **Wupatki** 32.69 321 eP P 05 48 58.7 +1.1
comp=Z,9.6nm,0.9s,mb4.7
Z13A **Yuma Proving G** 32.74 316 ⇑P P 05 48 57.2 -0.8
baz=33
ISCO **Idaho Springs** 32.78 333 eP P 05 49 00.2 +2.0
T18A **Mexican Hat** 32.91 325 ⇑P P 05 48 58.9 -0.6
baz=33
SMCO **Snowmass** 32.92 331 eP P 05 49 00.4 +0.9
comp=Z,7.7nm,0.9s,mb4.6
PV01 **Paradox Valley** 32.92 328 eP P 05 49 00.1 +0.5
comp=Z,536nm,1.0s
PV01 epP pP 05 49 13.5 +1.9
S19A **Harvey Farm, M** 32.94 326 ⇑P P 05 48 58.2 -1.5
baz=33,SNR=12
U16A **Tuba City** 32.96 322 ⇑P P 05 49 00.1 +0.3
baz=33,SNR=11
X14A **Yava** 32.98 318 ⇑P P 05 49 00.7 +0.5
baz=33
P22A **Eagle** 33.14 331 ⇑P P 05 49 01.8 +0.4
baz=33
LPAZ **La Paz** 33.19 146 P P 05 49 02.6 +0.5
comp=Z,0.7nm,0.8s,mb3.6,baz=283,slow=8.6,SNR=3.3
LPAZ PcP PcP 05 51 46.8 +2.5
comp=Z,0.8nm,0.4s,baz=357,slow=5.9,SNR=6.9
LPAZ LR LR 06 03 23.8
comp=Z,808nm,19.4s,MS4.4,baz=312,slow=38
LPAZ **La Paz** 33.19 146 P P 05 49 02.6 +0.5
LPAZ 05 51 46.8
Y13A **Salome** 33.22 316 ⇓P P 05 49 03.0 +0.8
baz=33
ECSD **EROS Data Cent** 33.27 347 eP P 05 49 01.0 -1.5
PV04 **Paradox Valley** 33.29 328 eP P 05 49 04.2 +1.4
GLMI **Grayling** 33.33 3 eP P 05 49 02.0 -1.0
T17A **Navajo Res., N** 33.34 324 ⇑P P 05 49 04.1 +0.9
baz=33
S18A **Hurst Farm, Bl** 33.37 325 ⇑P P 05 49 04.2 +0.8
baz=33,SNR=17
V15A **Kaibab Nationa** 33.38 321 ⇑P P 05 49 04.3 +0.8
baz=33,SNR=8.9
R19A **Curley Farm, L** 33.41 327 ⇓P P 05 49 02.4 -1.3
baz=33
O22A **Kremmling** 33.49 332 ⇓P P 05 49 03.5 -1.0
baz=34
X13A **Yucca** 33.68 318 ⇓P P 05 49 04.9 -1.3
baz=34
R18A **Canyonlands Na** 33.82 326 ⇓P P 05 49 06.9 -0.4
baz=34
U15A **North Rim** 33.85 322 ⇓P P 05 49 06.2 -1.5
baz=34
P20A **De Beque** 33.86 329 ⇓P P 05 49 07.3 -0.4
baz=34,SNR=8.1
SADO **Sadowa** 33.88 10 P P 05 49 07.3 -0.4
comp=Z,14nm,0.8s,mb4.9,baz=219,slow=8.0,SNR=9.1
SADO **Sadowa** 33.88 10 P P 05 49 07.3 -0.4
Q19A **Hogan Spring (** 33.90 328 ⇓P P 05 49 07.3 -0.7
baz=34,SNR=5.7
P19A **Cripple Cowboy** 34.26 329 ⇑P P 05 49 10.2 -1.0
baz=34
O20A **White River Ci** 34.27 330 ⇓P P 05 49 10.7 -0.6
baz=34,SNR=8.4
R17A **Hanksville Air** 34.29 326 ⇑P P 05 49 11.1 -0.3
baz=34,SNR=11
T15A **Red Dirt Ranch** 34.29 322 ⇓P P 05 49 10.9 -0.5
baz=34
S16A **Weppner Ranch,** 34.30 324 ⇓P P 05 49 12.0 +0.5
baz=34,SNR=6.2
IRM **Iron Mountain** 34.31 316 ⇑P P 05 49 11.3 -0.4
baz=34
U14A **Mt Trumbull** 34.39 321 ⇑P P 05 49 12.8 +0.5
baz=34
N21A **Black Mountain** 34.42 332 ⇓P P 05 49 13.1 +0.6
baz=34,SNR=5.1
Q18A **Rafter H Ranch** 34.46 327 ⇓P P 05 49 12.6 -0.4
baz=34
V13A **Grand Canyon W** 34.54 319 ⇑P P 05 49 13.6 -0.1
baz=34
COWI **Conover** 34.61 357 eP P 05 49 12.7 -1.4
comp=Z,26nm,0.7s,mb5.3
COWI epP pP 05 49 29.2 +3.1
R16A **Teasdale** 34.62 325 ⇓P P 05 49 14.3 0.0
baz=35,SNR=17
SRU **San Rafael** 34.68 327 ⇓P P 05 49 14.8 0.0
baz=35,SNR=10
SRU **San Rafael** 34.68 327 eP P 05 49 15.6 +0.8
S15A **Panguitch** 34.72 323 ⇑P P 05 49 15.8 +0.7
baz=35
LONY **Lake Ozonia** 34.72 15 eP P 05 49 14.9 -0.2
comp=Z,17nm,0.9s,mb5.0
T14A **Hurricane** 34.74 322 ⇑P P 05 49 16.4 +1.0
baz=35
BELC **Belle Mtn. Jos** 34.81 315 ⇑P P 05 49 15.8 -0.2
baz=35
N20A **Spence Gulch,** 34.83 331 ⇑P P 05 49 16.1 +0.1
baz=35,SNR=10.0
O19A **Miners Draw (B** 34.83 330 ⇓P P 05 49 16.2 +0.1
baz=35,SNR=7.3
Q16A **Castle Valley** 34.89 326 ⇓P P 05 49 17.0 +0.4
baz=35
P18A **Preston Nutter** 34.91 328 ⇑P P 05 49 17.1 +0.4
baz=35,SNR=9.2
PFO **Pinyon Flat Ob** 34.92 314 ⇑P P 05 49 18.4 +1.5
baz=35
L22A **Ellis Ranch, M** 34.96 334 ⇓P P 05 49 18.1 +1.0
baz=35
RWWY **Rawlins** 35.02 333 eP P 05 49 20.1 +2.4
M21A **Separation Pea** 35.02 333 ⇓P P 05 49 18.3 +0.7
baz=35
V12A **Nelson** 35.02 318 ⇑P P 05 49 18.6 +0.8
baz=35
R15A **Junction** 35.03 324 ⇓P P 05 49 18.7 +0.9
baz=35
P17A **Butcher Ranch,** 35.06 327 P P 05 49 18.8 +0.7
baz=35,SNR=10
MSU **Marysvale** 35.17 324 eP P 05 49 21.4 +2.3
TMUT **Trail Mountain** 35.18 326 eP P 05 49 22.9 +3.8
T13A **Saint George** 35.22 321 ⇑P P 05 49 20.2 +0.8
baz=35
CCUT **Cedar City** 35.23 322 eP P 05 49 21.7 +2.1
S14A **Cedar City** 35.25 323 ⇑P P 05 49 19.9 +0.2
baz=35
O18A **Roosevelt** 35.26 329 ⇑P P 05 49 19.5 -0.2
baz=35,SNR=9.0
L21A **Rawlins** 35.31 333 ⇓P P 05 49 20.3 +0.2
baz=35,SNR=7.9
N19A **John Jarvie Ra** 35.31 330 ⇑P P 05 49 20.3 +0.1
baz=35,SNR=5.9
S13A **Holt Ranch, En** 35.55 322 ⇓P P 05 49 22.8 +0.5
baz=36
O17A **Robinson Place** 35.58 328 ⇓P P 05 49 22.4 -0.1
baz=36
N18A **Larsen Ranch,** 35.62 330 ⇓P P 05 49 23.6 +0.7
baz=36
Q15A **Fillmore** 35.62 325 ⇓P P 05 49 23.4 +0.5
baz=36
RSSD **Black Hills** 35.78 339 eP P 05 49 24.9 +0.7
RSSD e 05 51 51.8
RSSD pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
RSSD **Black Hills** 35.78 339 eP P 05 49 24.9 +0.7
comp=Z,2.4nm,0.6s,mb4.3
RSSD ePcP PcP 05 51 51.8 +0.6
MPU **Maple Canyon** 35.92 327 eP P 05 49 27.0 +1.5
P15A **Leamington** 35.96 326 ⇓P P 05 49 26.3 +0.5
baz=36
O16A **Springville** 35.99 327 ⇑P P 05 49 25.8 -0.2
baz=36,SNR=8.9
R13A **O'Grain Ranch,** 36.00 322 ⇑P P 05 49 26.8 +0.6
baz=36
DAU **Daniels Canyon** 36.01 328 eP P 05 49 28.8 +2.6
BFSC **Mount Baldy Ra** 36.10 314 ⇓P P 05 49 27.9 +0.8
baz=36
Q14A **Sevier Lake (B** 36.13 324 ⇓P P 05 49 28.2 +0.9
baz=36,SNR=6.5
N17A **Moffit Pass** 36.18 329 ⇓P P 05 49 27.3 -0.3
baz=36
JLU **Jordanelle** 36.25 328 eP P 05 49 29.6 +1.3
K20A **Yellowstone Ra** 36.30 333 ⇑P P 05 49 27.0 -1.6
baz=36,SNR=5.6
L19A **Farson** 36.33 331 ⇓P P 05 49 28.4 -0.5
baz=36,SNR=6.3
P14A **Drum Mountains** 36.42 325 ⇓P P 05 49 30.5 +0.8
baz=36,SNR=10
R12A **Pony Springs,** 36.48 322 ⇓P P 05 49 31.6 +1.3
baz=36
M17A **Scullys Gap (B** 36.49 329 P P 05 49 30.3 0.0
baz=36,SNR=10
L18A **Fontenelle, Gr** 36.52 330 P P 05 49 30.8 +0.3
baz=36,SNR=10.0
Q13A **Wheeler Ranch,** 36.54 323 ⇑P P 05 49 31.3 +0.6
baz=36,SNR=8.5
EYMN **Ely** 36.61 355 eP P 05 49 28.8 -2.4
comp=Z,14nm,0.9s,mb4.8
K19A **Absolon Red Bu** 36.66 333 ⇓P P 05 49 31.5 -0.2
baz=37,SNR=6.8
DUG **Dugway** 36.69 326 eP P 05 49 32.6 +0.6
DUG e 05 51 55.1
DUG pmax pmax
comp=Z,4.0nm,1.0s,mb4.2
DUG **Dugway** 36.69 326 eP P 05 49 32.6 +0.6
comp=Z,4.3nm,1.0s,mb4.2
DUG ePcP PcP 05 51 55.1 +1.0
P13A **Bates Ranch, G** 36.87 324 ⇓P P 05 49 33.9 +0.4
baz=37,SNR=8.6
PKME **Peaks-Kenny Pk** 36.92 21 eP P 05 49 33.7 -0.2
comp=Z,12nm,0.9s,mb4.7
PDAR **Pinedale Array** 36.94 332 P P 05 49 33.9 -0.2
comp=Z,3.1nm,0.6s,mb4.3,baz=129,slow=11,SNR=41
PDAR PcP PcP 05 51 55.5 +0.8
comp=Z,1.4nm,0.7s,baz=126,slow=4.6,SNR=6.1
MPMC **Manual Prospec** 36.97 317 ⇓P P 05 49 33.7 -0.7
baz=37,SNR=6.2
HWUT **Hardware Ranch** 37.04 329 eP P 05 49 35.0 0.0
comp=Z,11nm,0.7s,mb4.8
L17A **Cokeville** 37.06 330 ⇓P P 05 49 34.5 -0.6
baz=37,SNR=10
K18A **Toltan Ranch,** 37.06 331 ⇓P P 05 49 35.5 +0.3
baz=37,SNR=15
R11A **Troy Canyon, C** 37.09 321 ⇑P P 05 49 35.8 +0.4
baz=37
L16A **Fish Haven** 37.27 329 ⇑P P 05 49 37.0 0.0
baz=37,SNR=9.7
BGU **Big Grassy Mou** 37.32 327 eP P 05 49 39.3 +1.9
comp=Z,9.9nm,1.2s,mb4.5
SIV **San Ignacio** 37.33 136 P P 05 49 37.4 -0.3
comp=Z,18nm,0.7s,mb5.0,baz=319,slow=8.9,SNR=92
SIV PcP PcP 05 51 58.0 +1.7
comp=Z,4.5nm,0.8s,baz=316,slow=1.8,SNR=5.0
N14A **Grayback Hills** 37.35 326 ⇑P P 05 49 37.5 -0.2
baz=37,SNR=6.6
J18A **Kendall Valley** 37.50 332 ⇓P P 05 49 38.6 -0.2
baz=38,SNR=18
AGMN **Agassiz Nation** 37.52 350 eP P 05 49 37.4 -1.5
K17A **Gardner Place,** 37.57 331 ⇑P P 05 49 39.7 +0.2
baz=38
AHID **Auburn Hatcher** 37.67 330 eP P 05 49 37.0 -3.3
comp=Z,7.3nm,0.6s,mb4.6
L15A **Malad City** 37.75 328 ⇓P P 05 49 40.2 -0.8
baz=38,SNR=6.8
I18A **Diamond G Ranc** 37.78 333 ⇑P P 05 49 41.2 -0.1
baz=38,SNR=5.5
HVU **Hansel Valley** 37.79 328 eP P 05 49 42.6 +1.3
HVU e*PP pP 05 49 55.2 +1.7
HVU pmax pmax
comp=Z,7.0nm,0.7s,mb4.5
HVU **Hansel Valley** 37.79 328 eP P 05 49 42.6 +1.3
comp=Z,6.5nm,0.7s,mb4.5
HVU epP pP 05 49 55.2 +1.8
M14A **Sheep Mountain** 37.90 327 ⇑P P 05 49 42.4 +0.2
baz=38,SNR=7.2
N13A **Wendover, West** 37.92 325 eP P 05 49 44.0 +1.6
comp=Z,25nm,0.8s,mb5.0
J17A **Brown Place, J** 37.94 331 ⇓P P 05 49 42.8 +0.3
baz=38,SNR=12
REDW **Red Top Meadow** 38.00 331 eP P 05 49 43.7 +0.6
comp=Z,2.6nm,1.3s,mb3.8
REDW epP pP 05 49 56.3 +1.0
SNOW **Snow King Moun** 38.03 331 eP P 05 49 43.6 +0.3
comp=Z,9.8nm,0.6s,mb4.7
LOHW **Long Hollow** 38.08 332 eP P 05 49 44.1 +0.4
comp=Z,3.9nm,0.6s,mb4.3
LOHW ePcP PcP 05 51 58.8 +0.6
TPAW **Teton Pass** 38.15 331 eP P 05 49 45.2 +1.0
comp=Z,9.4nm,0.7s,mb4.6
TPAW epP pP 05 50 01.0 +4.5
RRI2 **Red Ridge** 38.21 331 eP P 05 49 45.1 +0.3
comp=Z,6.6nm,0.6s,mb4.5
RRI2 ePcP PcP 05 51 59.9 +1.2
L14A **Malta** 38.21 328 ⇑P P 05 49 44.4 -0.5
baz=38,SNR=6.0
M13A **Montello** 38.24 326 ⇑P P 05 49 45.3 +0.2
baz=38
M13A **Montello** 38.24 326 eP P 05 49 45.3 +0.2
comp=Z,6.2nm,0.9s,mb4.3
J16A **Bone** 38.30 330 ⇑P P 05 49 45.7 +0.1
baz=38
K15A **Arbon** 38.32 329 ⇑P P 05 49 45.2 -0.5
baz=38,SNR=7.2
N12A **Clover Valley,** 38.38 325 ⇑P P 05 49 46.1 -0.2
baz=38
N12A **Clover Valley,** 38.38 325 eP P 05 49 47.3 +0.9
comp=Z,10nm,1.0s,mb4.5
IMW **Indian Meadow** 38.45 332 eP P 05 49 48.3 +1.5
comp=Z,3.9nm,0.6s,mb4.3
K14A **Jones Ranch, D** 38.55 328 ⇓P P 05 49 47.4 -0.2
baz=39,SNR=20
M12A **Wells** 38.69 326 ⇑P P 05 49 48.9 0.0
baz=39
J15A **Blackfoot** 38.79 330 ⇓P P 05 49 50.1 +0.4
baz=39,SNR=8.9
NVAR **Mina Array Bea** 38.84 319 P P 05 49 52.0 +1.7
comp=Z,1.3nm,0.6s,mb3.9,baz=132,slow=6.4,SNR=13
NVAR PcP PcP 05 52 02.6 +1.9
comp=Z,7.1nm,0.9s,baz=140,slow=3.8,SNR=14
G18A **Lazy EL Ranch,** 38.95 334 ⇓P P 05 49 51.7 +0.7
baz=39,SNR=8.4
H16A **Russell Place,** 39.21 332 ⇓P P 05 49 52.3 -0.9
baz=39
J14A **Carey** 39.28 329 ⇓P P 05 49 53.3 -0.5
baz=39,SNR=8.3
F18A **Big Timber** 39.48 335 ⇑P P 05 49 54.7 -0.8
baz=40,SNR=8.1
L11A **Cat Creek Ranc** 39.66 326 ⇑P P 05 49 55.9 -1.0
baz=40
I14A **Mackay** 39.68 330 ⇓P P 05 49 57.6 +0.4
baz=40,SNR=9.5
H15A **Lima** 39.80 331 ⇓P P 05 49 59.3 +1.3
baz=40,SNR=14
G16A **Moss Hill, Enn** 39.87 332 ⇓P P 05 49 59.5 +0.8
baz=40
F17A **Fitzpatrick Pl** 39.88 334 ⇑P P 05 49 58.3 -0.5
baz=40
HLID **Hailey** 39.91 328 eP P 05 49 59.4 +0.4
comp=Z,3.0nm,0.7s,mb4.1
I13A **Wildhorse Cree** 40.01 329 ⇓P P 05 50 00.5 +0.7
baz=40,SNR=7.7
MCMT **McKenzie Canyo** 40.05 331 eP P 05 50 01.1 +0.9
comp=Z,6.5nm,1.1s,mb4.3
E18A **Harlowton** 40.10 335 ⇑P P 05 50 00.5 0.0
baz=40
G15A **Dillon** 40.13 332 ⇑P P 05 50 00.9 0.0
baz=40,SNR=6.4
H14A **Leadore** 40.14 330 ⇓P P 05 50 00.8 -0.1
baz=40
DLMT **Dillon** 40.33 332 eP P 05 50 01.2 -1.3
comp=Z,12nm,1.2s,mb4.5
E17A **Martinsdale** 40.41 334 ⇑P P 05 50 03.0 -0.1
baz=40
I12A **Atlanta** 40.44 328 ⇑P P 05 50 03.7 +0.3
baz=40
H13A **Challis** 40.54 330 P P 05 50 04.5 +0.3
baz=41,SNR=9.5
D18A **Linhart Farms,** 40.56 336 ⇓P P 05 50 04.6 +0.2
baz=41
LRM **Limekiln Ridge** 40.61 332 eP P 05 50 05.3 +0.5
comp=Z,12nm,0.5s,mb4.8
LRM epP pP 05 50 18.1 +1.0
F15A **Butte** 40.65 332 ⇑P P 05 50 05.2 +0.1
baz=41,SNR=6.0
H12A **Diamond D Ranc** 40.83 329 ⇑P P 05 50 07.0 +0.4
baz=41
D17A **Six Diamond Ra** 40.88 335 ⇑P P 05 50 06.7 -0.4
baz=41
G13A **Cobalt** 40.91 330 ⇑P P 05 50 06.8 -0.5
baz=41
HRY **Holter Researc** 41.02 334 eP P 05 50 09.2 +1.1
comp=Z,4.6nm,0.6s,mb4.3
D16A **Dana Ranch, Ca** 41.15 334 ⇑P P 05 50 09.2 0.0
baz=41
E15A **Deer Lodge** 41.16 333 ⇓P P 05 50 09.3 0.0
baz=41,SNR=5.9
EGMT **Eagleton** 41.21 337 eP P 05 50 08.7 -1.1
comp=Z,6.1nm,1.0s,mb4.2
C17A **Wharram Farm,** 41.30 335 ⇓P P 05 50 11.0 +0.6
baz=41,SNR=6.0
WVOR **Wild Horse Val** 41.46 324 eP P 05 50 12.0 +0.1
WVOR e 05 52 08.1
WVOR pmax pmax
comp=Z,11nm,1.0s,mb4.4
WVOR **Wild Horse Val** 41.46 324 eP P 05 50 12.0 +0.1
comp=Z,11nm,1.0s,mb4.4
WVOR ePcP PcP 05 52 08.1 -0.9
F13A **Darby** 41.47 331 P P 05 50 11.8 0.0
baz=42,SNR=11
G12A **Big Creek, Yel** 41.48 329 ⇓P P 05 50 11.8 -0.2
baz=42
B18A **Beardsley Farm** 41.52 337 ⇓P P 05 50 11.9 -0.3
baz=42
E14A **Clinton** 41.54 332 ⇓P P 05 50 11.9 -0.5
baz=42
E13A **Victor** 41.88 332 ⇓P P 05 50 14.5 -0.7
baz=42,SNR=9.0
F12A **Elk City** 41.89 330 ⇑P P 05 50 14.5 -0.8
baz=42,SNR=25
J08A **Circle Bar Ran** 41.95 325 ⇓P P 05 50 15.8 0.0
baz=42
A18A **Metzger Ranch,** 41.98 337 ⇓P P 05 50 15.8 -0.2
baz=42
D14A **Greenough** 42.05 333 ⇓P P 05 50 16.9 +0.3
baz=42
MSO **Missoula** 42.05 332 eP P 05 50 16.0 -0.7
comp=Z,5.3nm,1.2s,mb4.0
MSO ePcP PcP 05 52 12.4 +1.6
BMO **Blue Mountains** 42.30 328 eP P 05 50 17.7 -1.0
comp=Z,4.6nm,1.0s,mb4.1
A17A **Triple J Farms** 42.33 337 ⇑P P 05 50 18.6 -0.3
baz=42,SNR=8.3
E12A **Beaver Dam Sad** 42.52 331 ⇓P P 05 50 19.6 -0.8
baz=42
B15A **Bradely Ranch,** 42.58 335 ⇑P P 05 50 20.3 -0.6
baz=43
C14A **Swan Lake** 42.67 333 ⇑P P 05 50 20.9 -0.7
baz=43
D12A **Red Ives Fores** 42.87 331 ⇑P P 05 50 22.4 -0.9
baz=43
I07A **Izee** 42.99 325 ⇓P P 05 50 23.7 -0.6
baz=43,SNR=6.1
F10A **Beach Ranch, E** 43.02 329 ⇑P P 05 50 23.9 -0.6
baz=43,SNR=9.1
A15A **Johnson Ranch,** 43.17 335 ⇑P P 05 50 23.9 -1.7
baz=43,SNR=13
C12B **Naegeli Ranch,** 43.41 332 ⇓P P 05 50 27.0 -0.5
baz=43
A14A **Double T Ranch** 43.45 335 ⇓P P 05 50 28.2 +0.3
baz=44,SNR=9.4
YBH **Yreka Blue Hor** 43.50 320 P P 05 50 27.3 -1.1
comp=Z,1.3nm,0.9s,mb3.6,baz=167,slow=6.4,SNR=4.1

YBH PcP PcP 05 52 15.7 -0.2
comp=Z,2.3nm,0.9s,baz=83,slow=4.7,SNR=6.2
A13A Flathead Natio 43.84 334 ⇓P **P 05 50 30.2 -0.9**
baz=44
C11A Tepee Creek (N 43.86 332 ⇓P **P 05 50 30.8 -0.5**
baz=44
RPN Rapa Nui 44.09 209 LR LR 06 03 48.8
comp=Z,671nm,20.8s,MS4.5,baz=225,slow=29
HAWA Hanford 44.49 328 *e*P **P 05 50 36.9 +0.6**
comp=Z,4.9nm,0.8s,mb4.3
NEW Newport 44.58 331 *e*P **P 05 50 36.9 0.0**
NEW *e**PP pP 05 50 50.2 +0.9
NEW *e* 05 52 19.2
D08A Wollman Farm, 44.62 329 ⇓P **P 05 50 36.6 -0.7**
baz=45
OD2 Odessa Site #2 44.74 329 *e*P **P 05 50 38.6 +0.3**
comp=Z,8.5nm,1.1s,mb4.5
OD2 *e*pP pP 05 50 50.9 +0.2
C09A Chrisman Ranch 44.80 330 ⇑P **P 05 50 37.9 -0.8**
baz=45
FFC Flin Flon 44.81 348 *e*P **P 05 50 38.1 -0.6**
FFC pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
FFC Flin Flon 44.81 348 *e*P **P 05 50 38.1 -0.6**
comp=Z,7.3nm,1.0s,mb4.5
H04A Detroit Lake 44.88 324 ⇓P **P 05 50 37.9 -1.5**
baz=45
B08A Colville Reser 45.70 330 ⇑P **P 05 50 44.9 -1.0**
baz=46
SCHQ Schefferville 46.09 16 P **P 05 50 47.3 -1.6**
comp=Z,7.9nm,0.8s,mb4.7,baz=240,slow=16,SNR=6.8
SCHQ LR LR 06 10 00.5
comp=Z,664nm,21.3s,MS4.6,baz=209,slow=36
EDM Edmonton 46.77 338 *e*P **P 05 50 53.2 -1.0**
CPUP Villa Florida 47.26 143 P **P 05 50 56.3 -2.0**
comp=Z,1.1nm,0.6s,mb4.0,baz=288,slow=15,SNR=5.5
CPUP LR LR 06 13 34.1
comp=Z,396nm,18.2s,MS4.4,baz=316,slow=40
PLCA Paso Flores 54.05 165 P **P 05 51 48.5 -0.8**
comp=Z,1.9nm,0.7s,mb4.2,baz=301,slow=8.7,SNR=3.9
PLCA LR LR 06 10 20.3
comp=Z,222nm,18.7s,MS4.2,baz=98,slow=31
PLCA Paso Flores 54.05 165 P **P 05 51 48.5 -0.8**
PLCA LR LR 06 10 20.3
YKA Yellowknife Ar 54.74 345 P **P 05 51 52.8 -1.3**
comp=Z,6.4nm,0.9s,mb4.7,baz=137,slow=7.5,SNR=25
YKA PcP PcP 05 52 55.5 -0.7
comp=Z,0.8nm,0.5s,baz=150,slow=4.0,SNR=6.2
YKA Yellowknife Ar 54.74 345 P **P 05 51 52.8 -1.3**
YKA PcP PcP 05 52 55.5 -0.7
TAOE Nuku Hiva Isla 56.69 251 *e*S **S 05 59 57.1 -1.5**
comp=Z,250nm,23.8s
TAOE *e*LR LR 06 08 33.5
comp=Z,416nm,25.1s
RKT Rikitea 58.27 234 *e*S **S 06 00 17.8 -1.3**
comp=Z,218nm,31.2s
RKT *e*LR LR 06 09 27.5
comp=Z,343nm,24.2s
INK Inuvik 64.34 343 *e*P **P 05 52 58.9 -1.2**
INK pmax pmax
comp=Z,10.0nm,1.0s
INK Inuvik 64.34 343 *e*P **P 05 52 58.9 -1.3**
comp=Z,10.0nm,1.0s,mb4.8
EGAK Eagle 64.97 337 *e*P **P 05 53 03.8 -0.5**
comp=Z,4.2nm,1.1s,mb4.4
ILAR Eielson Array 67.18 336 P **P 05 53 17.7 -0.8**
comp=Z,3.2nm,0.9s,mb4.3,baz=114,slow=5.0,SNR=27
ILAR LR LR 06 29 17.3
comp=Z,427nm,18.0s,MS4.7,baz=301,slow=42
KDAK Kodiak Island 67.53 328 *ce*P **P 05 53 22.0 +1.2**
PPT Papeete 68.30 246 *e*S S 06 02 22.7 -1.7
comp=Z,194nm,25.0s
PPT *e*LR LR 06 14 02.7
comp=Z,416nm,24.8s,baz=69
PPT Papeete 68.30 246 LR LR 06 16 52.3
comp=Z,483nm,20.5s,MS4.7,baz=157,slow=30
BPAW Bear Paw Mtn. 68.60 335 *e*P **P 05 53 26.1 -1.3**
comp=Z,12nm,1.2s,mb4.7
ESDC Sonseca Array 77.37 52 P **P 05 54 17.7 -2.1**
comp=Z,0.6nm,0.7s,mb3.6,baz=283,slow=5.3,SNR=5.6
DBIC Dimbokro 80.91 85 LR LR 06 25 35.9
NOA NORSAR Array B 83.98 29 P **P 05 54 52.6 -2.1**
comp=Z,0.6nm,0.8s,mb3.8,baz=286,slow=5.0,SNR=3.3
NOA LR LR 06 27 35.1
comp=Z,141nm,21.7s,MS4.3,baz=270,slow=32
BILL Bilibino 85.67 339 *e*P **P 05 55 03.3 +0.2**
BILL pmax pmax
comp=Z,15nm,1.6s,mb5.0
ARCES ARCESS Array B 86.96 19 P **P 05 55 07.2 -2.2**
comp=Z,3.0nm,1.1s,mb4.5,baz=258,slow=4.5,SNR=3.2
ARCES LR LR 06 36 23.5
comp=Z,164nm,19.2s,MS4.5,baz=124,slow=37
ARCES ARCESS Array B 86.96 19 P **P 05 55 07.2 -2.2**
ARCES LR LR 06 36 23.5
CLL Collm 87.26 38 *e*P **P 05 55 13.0 +1.8**
CLL *e*S S 06 05 52.0 +4.1
CLL MLR MLR
comp=Z,300nm,18.3s,MS4.7
CLL Collm 87.26 38 *e*P **P 05 55 13.0 +1.8**
CLL *e*(PP) 05 58 45.0
CLL *e*S S 06 05 52.0 +4.1
CLL *e*PS 06 06 56.0
CLL LmV 06 35 00.0
comp=Z,300nm,18.3s
BRG Berggiesshubel 87.95 39 S S 06 06 03.0 +8.5
BRG SS SS 06 12 10.0 +28
BRG
comp=N,132nm,21.2s
BRG
comp=E,124nm,21.7s
BRG
comp=Z,177nm,22.2s
FINES FINESS Array B 90.63 26 LR LR 06 38 39.3
comp=Z,217nm,18.2s,MS4.6,baz=27,slow=37
SEY Seymchan 93.11 337 *ce*P **P 05 55 39.0 +0.7**
PETK Petropavlovsk- 95.56 327 P **P 05 55 49.9 +0.2**
comp=Z,1.8nm,0.6s,mb4.7,baz=72,slow=4.7,SNR=4.3
PETK LR LR 06 36 21.6
comp=Z,76nm,21.0s,MS4.2,baz=179,slow=34
AKASG Malin Array Be 97.02 35 LR LR 06 36 36.5
comp=Z,185nm,21.3s,MS4.5,baz=285,slow=34
DZM Mont Dzumac 109.56 251 *e*LR LR 06 33 06.1
comp=Z,145nm,21.9s
ZALV Zalesovo Beam 114.50 5 PKP PKiKP 06 01 03.6 -0.9
comp=Z,0.6nm,0.5s,baz=4.4,slow=1.9,SNR=2.8
BOSA Boshof 114.73 116 PKP PKiKP 06 01 05.2 -0.4
comp=Z,1.5nm,0.7s,baz=315,slow=1.4,SNR=3.6
CN2 Changchun 117.66 334 *e*PKP PKPdf 06 01 13.3 +2.5
SONM Songino Array 119.83 350 PKP PKPdf 06 01 15.3 +0.4
comp=Z,0.8nm,0.6s,baz=28,slow=0.2,SNR=4.1
MKAR Makanchi Array 121.24 9 PKP PKPdf 06 01 17.1 -0.5
comp=Z,0.3nm,0.6s,baz=18,slow=5.0,SNR=3.6
KSRS Korea Array 121.44 328 PKP PKPdf 06 01 19.0 +0.7
comp=Z,4.4nm,0.8s,baz=8.6,slow=1.4,SNR=26
KSRS Korea Array 121.44 328 PKIKP PKPdf 06 01 19.0 +0.7
KSRS pmax pmax
comp=Z,4.0nm,0.8s
BJI Beijing 124.51 339 PKP PKPdf 06 01 24.5 +0.4
BJI PP PP 06 03 09.8 +0.3
BJI SKS SKSdf 06 08 33.5 +0.9
BJI LR LR
comp=N,250nm,20.4s,MS4.9
BJI LR LR
comp=E,130nm,19.1s,MS4.9
BJI LR LR
comp=Z,160nm,23.7s,MS4.6
WMQ Urumqi 124.80 5 *e*PKP PKPdf 06 01 24.5 -0.1
WMQ LR LR
comp=N,250nm,21.6s
WMQ LR LR
comp=Z,180nm,22.6s,MS4.7
HHC Hu-ho-hao-te 125.27 343 *e*PKP PKPdf 06 01 24.3 -1.3
HHC PP PP 06 03 17.3 +2.8
HHC PKS 06 04 59.3
HHC SKS SKSdf 06 08 30.0 -4.0
HHC SKKS SKKSac 06 10 04.8 -5.6
HHC SS SS 06 20 08.3 +0.4
HHC AMB AMB
comp=Z,86nm,9.3s
HHC LR LR
comp=N,150nm,20.6s,MS4.9
HHC LR LR
comp=E,200nm,20.5s,MS4.9
HHC LR LR
comp=Z,120nm,20.5s,MS4.5

CTAO Charters Tower 128.33 253 *e*PKIKP PKPdf 06 01 28.9 -3.0
GTA Gaotai 129.04 353 *e*PKP PKPdf 06 01 33.0 +0.2
NJ2 Nanjing 130.25 331 *e*P PKPdf 06 01 41.5 +6.2
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
LZH Lanzhou 131.67 348 *e*PKP PKPdf 06 01 40.5 +2.6
LZH sPKP 06 01 58.3
CD2 Chengdu 136.69 347 PKP PKPdf 06 01 47.3 -0.2
ASAR Alice Springs 139.41 247 PKhKP PKPpre 06 01 46.1
comp=Z,2.3nm,0.9s,baz=99,slow=3.9,SNR=4.6
ASAR PKP PKPdf 06 01 52.1 -0.4
comp=Z,1.8nm,0.7s,baz=110,slow=2.3,SNR=12
ASAR Alice Springs 139.41 247 PKHKP PKPpre 06 01 46.1
ASAR 06 01 52.2
ASAR pmax pmax
comp=Z,2.0nm,0.9s
ASAR pmax pmax
comp=Z,2.0nm,0.7s
GYA Guiyang 140.11 341 *e*Pdif Pdif 05 59 06.8 -1.2
GYA PKP PKPdf 06 01 53.3 -0.6
GYA sPKP 06 02 14.0
GYA PP PP 06 04 53.3 +3.6
GYA PKS 06 05 28.3
GYA SKKS SKKSac 06 11 38.0 -3.5
GYA AMB AMB
comp=Z,90nm,7.6s
GYA LR LR
comp=N,110nm,20.0s,MS4.7
GYA LR LR
comp=E,80nm,21.0s,MS4.7
GYA LR LR
comp=Z,90nm,22.2s,MS4.5
KMI Kunming 142.48 346 PKP PKPdf 06 01 57.3 -0.9
KMI pPKP pPKPdf 06 02 12.8 +0.7
KMI sPKP 06 02 18.3
KMI PP PP 06 05 08.0 +4.0
KMI SS SS 06 23 35.5 -0.2
KMI AMB AMB
comp=Z,100nm,7.5s
KMI LR LR
comp=N,170nm,21.3s,MS5.0
KMI LR LR
comp=E,200nm,19.5s,MS5.0
KMI LR LR
comp=Z,190nm,24.4s,MS4.8
CM31 Chiang Mai Arr 149.76 349 *e*PKPbc PKPbc 06 02 15.5 +0.1
CMAR Chiang Mai Arr 149.76 349 PKP PKPdf 06 02 10.7 +0.1
comp=Z,8.0nm,0.8s,baz=320,slow=3.1,SNR=18
CMAR PKPbc PKPbc 06 02 15.8 +0.5
comp=Z,8.3nm,0.8s,baz=342,slow=3.3,SNR=25

KRSC 27 07:04:51.5±0.6, 53°56N×161°68E, h10km±10km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**1.00**	**2**	*i* P	Pg	07 05 09.2	-1.5
MKZ				*e*S	Sg	07 05 22.7	-1.0
SPN	**Mys Shipunski**	**1.10**	**246**	P	Pb	07 05 12.4	-0.1
SPN				*e*S	Sg	07 05 27.2	+0.4
KII	**Karymskiy**	**1.41**	**291**	P	Pn	07 05 18.3	+1.2
KII				*e*S	Sn	07 05 38.2	+2.5
NLC	**Nalytchevo**	**1.45**	**255**	*e*P	Pn	07 05 17.5	-0.3
NLC				*e*S	Sn	07 05 36.8	0.0
AVH	**Avacha**	**1.79**	**262**	*e*P	Pn	07 05 23.5	+1.2
AVH				*e*S	Sn	07 05 47.1	+2.1
PET	**Petropavlovsk**	**1.90**	**255**	P	Pn	07 05 24.9	+1.1
PET				*e*S	Sn	07 05 48.9	+1.2
KMNR	**Kamenistaya**	**2.35**	**340**	P	Pn	07 05 31.9	+1.7
KMNR				S	Sn	07 06 01.2	+2.1
KPT	**Kopyto**	**2.56**	**341**	P	Pn	07 05 34.8	+1.9
KPT				S	Sn	07 06 05.6	+1.6
KOZ	**Kozyrevsk**	**2.71**	**338**	S	Sn	07 06 08.2	+0.3
KRSR	**Krestovskiy**	**2.74**	**347**	S	Sn	07 06 08.8	+0.2
KLY	**Klyuchi**	**2.82**	**348**	S	Sn	07 06 10.5	-0.1
SRDR	**Sredinnyy**	**2.99**	**339**	P	Pn	07 05 39.3	+0.5
MIPR	**Malaya Ipel'ka**	**3.25**	**249**	P	Pn	07 05 44.5	+2.1

*NNC **27** 07:22:55.4±0.3, 50°02N×78°89E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=8.2km s-min=1.6km az=66.0*
*ISCJB **27** 07:22:56.7±0.6, 50°03N±0°03×78°60E±0°09, h10km, Error ellipse: s-maj=8.7km s-min=3.0km az=164.7*
*IDC **27** 07:22:57.6±1.0, 50°04N×78°82E, h0km, mb1 3.0/3, mb1mx2.9/24, mbtmp3.0/3, ML3.0/3, Error ellipse: s-maj=23.0km s-min=9.0km az=44.0*
ISC 27 07:22:57.4±0.7, 50°06N±0°04×78°8E±0°1, h10km, n26, σ0s85/54, 7C-1D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR10	**Kurchatov Arra**	**0.50**	**338**	P	**Pg**	**07 23 06.4**	**-0.7**
KUR10				S	**Sg**	**07 23 14.4**	**+0.5**
KUR09	**Kurchatov Arra**	**0.52**	**339**	P	**Pg**	**07 23 07.0**	**-0.5**
KUR09				S	**Sg**	**07 23 15.0**	**+0.7**
KUR08	**Kurchatov Arra**	**0.54**	**341**	P	**Pg**	**07 23 07.1**	**-0.7**
KUR08				S	**Sg**	**07 23 15.1**	**+0.2**
KUR11	**Kurchatov Arra**	**0.55**	**353**	P	**Pg**	**07 23 07.5**	**-0.6**
KUR11				S	**Sg**	**07 23 16.0**	**+0.7**
KUR07	**Kurchatov Arra**	**0.55**	**342**	P	**Pg**	**07 23 07.5**	**-0.6**
KUR07				S	**Sg**	**07 23 15.9**	**+0.5**
KUR12	**Kurchatov Arra**	**0.56**	**351**	P	**Pg**	**07 23 07.6**	**-0.6**
KUR12				S	**Sg**	**07 23 15.8**	**+0.3**
KUR13	**Kurchatov Arra**	**0.56**	**349**	P	**Pg**	**07 23 07.5**	**-0.8**
KUR13				S	**Sg**	**07 23 16.0**	**+0.3**
KUR06	**Kurchatov Arra**	**0.57**	**343**	P	**Pg**	**07 23 07.9**	**-0.6**
KUR06				S	**Sg**	**07 23 16.6**	**+0.6**
KUR14	**Kurchatov Arra**	**0.57**	**347**	P	**Pg**	**07 23 07.9**	**-0.6**
KUR14				S	**Sg**	**07 23 16.5**	**+0.5**
KUR15	**Kurchatov Arra**	**0.58**	**345**	P	**Pg**	**07 23 07.9**	**-0.7**
KUR15				S	**Sg**	**07 23 16.9**	**+0.7**
KURBB	**Kurchatov Arra**	**0.59**	**344**	⇑P	**Pg**	**07 23 08.1**	**-0.7**
	4.5nm,0.3s						
KURBB				⇓S	**Sg**	**07 23 17.3**	**+0.7**
	19nm,0.6s						
KUR16	**Kurchatov Arra**	**0.60**	**342**	P	**Pg**	**07 23 08.2**	**-0.8**
KUR16				S	**Sg**	**07 23 17.5**	**+0.7**
KUR05	**Kurchatov Arra**	**0.61**	**345**	P	**Pg**	**07 23 08.4**	**-0.7**
KUR05				S	**Sg**	**07 23 16.4**	**-0.7**
KUR17	**Kurchatov Arra**	**0.61**	**340**	P	**Pg**	**07 23 08.5**	**-0.8**
KUR17				S	**Sg**	**07 23 16.9**	**-0.3**
KUR18	**Kurchatov Arra**	**0.62**	**339**	P	**Pg**	**07 23 08.7**	**-0.8**
KUR18				S	**Sg**	**07 23 19.9**	**+2.3**
KUR04	**Kurchatov Arra**	**0.62**	**345**	P	**Pg**	**07 23 08.9**	**-0.6**
KUR04				S	**Sg**	**07 23 17.7**	**0.0**
KUR19	**Kurchatov Arra**	**0.63**	**337**	P	**Pg**	**07 23 08.6**	**-1.0**
KUR19				S	**Sg**	**07 23 19.0**	**+1.1**
KUR03	**Kurchatov Arra**	**0.64**	**346**	P	**Pg**	**07 23 09.2**	**-0.7**
KUR03				S	**Sg**	**07 23 18.1**	**-0.2**
KUR20	**Kurchatov Arra**	**0.64**	**336**	P	**Pg**	**07 23 08.7**	**-1.2**
KUR20				S	**Sg**	**07 23 19.6**	**+1.3**
KUR02	**Kurchatov Arra**	**0.66**	**347**	P	**Pg**	**07 23 09.6**	**-0.6**
KUR02				S	**Sg**	**07 23 19.5**	**+0.6**
KURK	**Kurchatov**	**0.67**	**351**	⇑P	**Pg**	**07 23 09.5**	**-0.8**
	12nm,0.4s						
KURK				⇑S	**Sg**	**07 23 19.7**	**+0.6**
	24nm,0.7s						
KUR01	**Kurchatov Arra**	**0.68**	**348**	P	**Pg**	**07 23 10.1**	**-0.5**
KUR01				S	**Sg**	**07 23 18.6**	**-0.8**
MK31	**Makanchi Array**	**4.01**	**143**	⇑Pn	**Pn**	**07 24 00.6**	**+1.8**
	0.2nm,0.2s,baz=324,slow=10,SNR=45						
MK31				⇑Pg	**Pg**	**07 24 04.7**	**-9.5**
	0.6nm,0.2s,baz=323,slow=14,SNR=20						
MK31				⇑Sn	**Sn**	**07 24 50.2**	**+4.3**
	0.7nm,0.2s						
MK31				⇑Lg		07 25 00.5	
	7.3nm,0.6s,baz=343,slow=26,SNR=18						
MKAR	**Makanchi Array**	**4.01**	**143**	Pn	**Pn**	**07 24 00.6**	**+1.7**
	0.5nm,0.3s,baz=322,slow=10,SNR=60						
MKAR				Pg	**Pg**	**07 24 06.8**	**-7.4**
	1.0nm,0.3s,baz=337,slow=18,SNR=20						
MKAR				Sn	**Sn**	**07 24 50.9**	**+5.0**
	0.8nm,0.3s,baz=318,slow=23,SNR=3.9						
MKAR				Lg		07 25 00.6	
	1.2nm,0.3s,baz=330,slow=22,SNR=5.5						
ZALV	**Zalesovo Beam**	**5.39**	**41**	Pn	**Pn**	**07 24 20.9**	**+3.2**
	1.4nm,0.3s,baz=230,slow=15,SNR=15						
ZALV				Lg		07 25 47.1	
	0.2nm,0.3s,baz=221,slow=26,SNR=3.2						
BVAR	**Borovoye Array**	**6.02**	**303**	Pn	**Pn**	**07 24 27.3**	**+0.8**
	0.3nm,0.3s,baz=112,slow=14,SNR=5.1						
BVAR				Pg	**Pg**	**07 24 36.8**	**-16**
	0.5nm,0.3s,baz=106,slow=15,SNR=5.3						
BVAR				Sn	**Sn**	**07 25 36.2**	**+0.7**
	0.6nm,0.3s,baz=114,slow=23,SNR=6.4						
BVAR				Lg		07 26 07.4	
	0.3nm,0.3s,baz=110,slow=22,SNR=3.0						

*IDC **27** 07:28:09.9±5.2, 6°17S×130°34E, h80km±49km, mb3.7/8, mb1 3.8/10, mb1mx3.7/18, mbtmp3.8/10, ML4.2/2, Error ellipse: s-maj=45.1km s-min=17.6km az=57.0*
*ISCJB **27** 07:28:11.9±1.1, 6°32S±0°04×130°27E±0°09, h120km±12km, mb3.9/7, Error ellipse: s-maj=14.9km s-min=6.6km az=13.0*
*NEIC **27** 07:28:12.2±1.9, 6°19S×130°30E, h100km±19km, mb3.7/3, Error ellipse: s-maj=15.9km s-min=11.6km az=222.0*
*DJA **27** 07:28:16, 6°53S×130°69E, h141km, MLv4.8/3*
ISC 27 07:28:13.5±1.0, 6°34S±0°05×130°31E±0°09, h117km±12km, n25, σ1s07/27, mb3.9/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**2.51**	**74**	P	**Pn**	**07 28 54.2**	**+0.9**
TLE				S	**Sn**	**07 29 23.3**	**-0.6**
KAKA	**Kakadu**	**6.67**	**162**	*e*Pn	**Pn**	**07 29 50.3**	**+1.3**
	85nm,0.5s						
KAKA				*e*Sn	**Sn**	**07 31 02.0**	**-1.6**
KAKA	**Kakadu**	**6.67**	**162**	P	**Pn**	**07 29 50.2**	**+1.1**
	1.1nm3μm53nm,0.6s						
BAKI	**Biak**	**7.72**	**49**	P	**Pn**	**07 30 03.0**	**-0.2**
	0.3nm92nm,0.7s						
KNA	**Kununurra**	**9.48**	**189**	P	**Pn**	**07 30 28.5**	**+1.4**
KNA				S	**Sn**	**07 32 11.0**	**-0.7**
FITZ	**Fitzroy Crossi**	**12.55**	**201**	P	**Pn**	**07 31 06.7**	**-1.3**
	0.7nm,0.3s,baz=41,slow=10,SNR=23						
FITZ				S	**Sn**	**07 33 21.8**	**-4.4**
	1.4nm,0.3s,baz=195,slow=17,SNR=8.4						
WRAB	**Tennant Creek**	**14.07**	**164**	*e*Pn	**Pn**	**07 31 25.3**	**-2.4**
	4.0nm,0.4s						
COEN	**Coen**	**14.75**	**122**	*e*Pn	**Pn**	**07 31 37.0**	**+0.6**
ASAR	**Alice Springs**	**17.57**	**169**	P	**Pn**	**07 32 12.2**	**+1.1**
	1.4nm,0.3s,baz=356,slow=9.9,SNR=56						
ASAR				S	**S**	**07 35 22.0**	**-5.0**
	0.5nm,0.3s,baz=353,slow=27,SNR=6.0						
MBWA	**Marble Bar**	**17.95**	**214**	*e*P	**Pn**	**07 32 17.5**	**+1.8**
	1.1nm,0.5s						
CTA	**Charters Tower**	**20.65**	**133**	P	**P**	**07 32 45.3**	**+1.3**
	2.8nm,0.8s,baz=332,slow=12,SNR=3.9						
CTAO	**Charters Tower**	**20.65**	**133**	*e*P	**P**	**07 32 45.2**	**+1.2**
	2.3nm,0.6s						
STKA	**Stephens Creek**	**27.51**	**159**	P	**P**	**07 33 49.6**	**+0.6**
	1.1nm,0.5s,mb3.6,baz=343,slow=14,SNR=3.5						
CMAR	**Chiang Mai Arr**	**39.55**	**309**	P	**P**	**07 35 33.0**	**-0.4**
	1.2nm,0.7s,mb3.9,baz=135,slow=7.0,SNR=6.9						
SONM	**Songino Array**	**57.92**	**341**	P	**P**	**07 37 53.4**	**+0.2**
	0.3nm,0.3s,mb3.8,baz=132,slow=2.1,SNR=2.4						
PETK	**Petropavlovsk-**	**63.60**	**18**	P	**P**	**07 38 30.6**	**-1.1**
	0.9nm,0.6s,mb3.8,baz=160,slow=4.6,SNR=3.0						
MK31	**Makanchi Array**	**67.84**	**327**	*e*P	**P**	**07 38 59.4**	**+0.3**
MKAR	**Makanchi Array**	**67.84**	**327**	P	**P**	**07 38 59.4**	**+0.4**
	4.3nm,0.6s,mb4.4,baz=121,slow=8.1,SNR=49						
MKAR	**Makanchi Array**	**67.84**	**327**	P	**P**	**07 38 59.4**	**+0.3**
ZALV	**Zalesovo Beam**	**71.13**	**334**	P	**P**	**07 39 17.8**	**-1.3**
	1.3nm,0.6s,mb4.0,baz=127,slow=6.3,SNR=5.9						
ZALV	**Zalesovo Beam**	**71.13**	**334**	P	**P**	**07 39 17.8**	**-1.3**
BVAR	**Borovoye Array**	**77.67**	**328**	P	**P**	**07 39 56.8**	**-0.2**
	0.8nm,0.5s,mb3.7,baz=162,slow=5.8,SNR=6.4						
PLCA	**Paso Flores**	**129.39**	**160**	PKP	PKPdf	07 47 10.8	+2.1
	3.1nm,0.7s,baz=158,slow=5.4,SNR=4.3						
LPAZ	**La Paz**	**151.04**	**141**	PKPbc	PKPbc	07 47 55.2	+1.5
	0.7nm,0.4s,baz=176,slow=4.1,SNR=14						
LPAZ	**La Paz**	**151.04**	**141**	PKPbc	PKPbc	07 47 55.2	+1.5

CASC 27 07:34:38.0±2.2, 11°32N×87°02W, h45km±144km, MD3.9, ML3.1, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.95**	**26**	*e*P	Pn	07 34 55.0	+0.1
COPN				*e*S	Sn	07 35 08.6	+1.2
CRUN	**El Crucero**	**0.96**	**47**	*e*P	Pn	07 34 56.0	+0.9
CSAN		**1.04**	**34**	*e*P	Pn	07 34 56.2	0.0
TICN	**Ticuantepe**	**1.05**	**47**	*e*P	Pn	07 34 56.8	+0.5
XAVN	**Gruta Xavier**	**1.06**	**39**	*e*P	Pn	07 34 57.0	+0.5
LEON	**Leon**	**1.10**	**6**	*e*P	Pn	07 34 57.2	+0.3
TISN	**Laguna Tiscapa**	**1.10**	**42**	*e*P	Pn	07 34 57.0	+0.1
APON	**Apoyo**	**1.10**	**57**	*e*P	Pn	07 34 57.5	+0.5
MGAN	**Managua**	**1.11**	**42**	*e*P	Pn	07 34 57.2	+0.1
MGAN				*e*S	Sn	07 35 09.4	-1.9
MGAN				AML	AML	07 35 19.0	
	comp=E,405nm,0.4s						
SSN	**San Juan del S**	**1.14**	**91**	*e*P	Pn	07 34 56.3	-1.2
SSN				*e*S	Sn	07 35 12.1	+0.1
WILN	**Americas 2**	**1.17**	**44**	*e*P	Pn	07 34 58.1	+0.3
MOMN	**Momotombo**	**1.18**	**23**	*e*P	Pn	07 34 58.8	+0.8
CNGN	**Cerro Negro**	**1.21**	**15**	*e*P	Pn	07 34 59.0	+0.4
TELN	**Telica**	**1.29**	**8**	*e*P	Pn	07 35 00.7	+1.1
CRIN	**San Cristobal**	**1.37**	**359**	*e*P	Pn	07 35 01.2	+0.5
CNCH	**Conchagua**	**2.10**	**338**	*e*P	Pn	07 35 10.6	-0.1
CNCH				*e*S	Sn	07 35 36.6	+0.9
LFRS	**El Faro**	**3.04**	**319**	*e*P	Pn	07 35 23.4	-0.2
LFRS				*e*S	Sn	07 35 59.0	+0.2

IDC 27 07:44:55.1±2.8, 20°11S×178°48W, h440km±34km, mb2.7/3, mb1 3.1/5, mb1mx2.9/17, mbtmp3.0/5, Error ellipse: s-maj=41.2km s-min=19.8km az=137.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.89**	**47**	P	P	07 47 00.1	-0.1
	2.0nm,0.3s,baz=198,slow=9.6,SNR=4.5						
AFI				S	S	07 48 37.7	-5.2
	1.4nm,0.3s,baz=249,slow=22,SNR=4.0						
URZ	**Urewera**	**18.49**	**191**	P	P	07 48 42.4	-0.7
	0.9nm,0.3s,baz=293,slow=7.7,SNR=5.6						
ASAR	**Alice Springs**	**44.17**	**256**	P	P	07 52 24.2	+0.7
	0.3nm,0.4s,baz=92,slow=9.5,SNR=9.4						
ASAR				PcP	PcP	07 53 57.3	-2.0
	0.4nm,0.7s,baz=99,slow=4.8,SNR=4.4						
TXAR	**Lajitas Array**	**87.22**	**58**	P	P	07 56 55.4	+1.5
	0.1nm,0.4s,baz=206,slow=7.9,SNR=2.2						
ILAR	**Eielson Array**	**88.03**	**13**	P	P	07 56 55.9	-0.8
	0.4nm,0.8s,baz=216,slow=5.0,SNR=6.2						

*ISK **27** 07:52:44.7, 37°01N×29°20E, h5km, MD2.9*
*ISCJB **27** 07:52:45.8±0.7, 37°00N±0°04×29°16E±0°04, h2km±8km, Error ellipse: s-maj=6.5km s-min=4.6km az=34.6*
*CSEM **27** 07:52:45.9±0.3, 37°02N×29°17E, h8km, MD2.9, Error ellipse: s-maj=6.3km s-min=4.3km az=27.0*
*DDA **27** 07:52:46.2, 37°04N×29°17E, h7km±6km, Md2.8*
ISC 27 07:52:46.4±0.6, 37°02N±0°04×29°16E±0°04, h10km±7km, n26, σ1s08/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**63**	*e*PG	**Pg**	**07 52 51.0**	**-1.4**
GLHS				*e*SG	**Sg**	**07 52 56.5**	**0.0**
GLHS	**Glhisar (BURDU**	**0.30**	**63**	*e*Pg	**Pg**	**07 52 51.1**	**-1.4**
GLHS				*e*Sg	**Sg**	**07 52 56.5**	**0.0**
GOLH	**Golhisar**	**0.39**	**55**	*i* P	**Pg**	**07 52 52.9**	**-1.2**
GOLH				*i* S	**Sg**	**07 52 59.9**	**+0.7**
GOLH	**Golhisar**	**0.39**	**55**	*i* P	**Pg**	**07 52 52.9**	**-1.1**
GOLH				*i* S	**Sg**	**07 52 59.9**	**+0.7**
ELL	**Elmali**	**0.66**	**114**	*e*PG	**Pg**	**07 52 57.4**	**-1.7**
ELL				*e*SG	**Sg**	**07 53 08.0**	**+0.3**
ELL	**Elmali**	**0.66**	**114**	*e*Pg	**Pg**	**07 52 57.4**	**-1.7**
ELL				*e*Sg	**Sg**	**07 53 08.0**	**+0.3**
DNZL	**Cakiroluk**	**0.68**	**352**	*i* P	**Pg**	**07 52 58.3**	**-1.3**
DNZL				*i* S	**Sg**	**07 53 09.8**	**+1.4**
DNZL	**Cakiroluk**	**0.68**	**352**	*i* P	**Pg**	**07 52 58.3**	**-1.2**
DNZL		

KORT				*i* S		**Sg**	**07 53 19.0**	**+1.9**
KORT	**Korkueli**	**0.95**	**91**	*i* P		**Pg**	**07 53 04.1**	**-0.6**
KORT				*i* S		**Sg**	**07 53 19.0**	**+1.9**
MLSB	**Milas**	**1.14**	**284**	*e*PN		**Pn**	**07 53 07.5**	**-1.0**
MLSB	**Milas**	**1.14**	**284**	*e*Pn		**Pn**	**07 53 07.6**	**-0.9**
AYDN	**Tasoluk**	**1.21**	**303**	*i* P		**Pg**	**07 53 09.3**	**-0.3**
AYDN				*i* S		**Sg**	**07 53 26.9**	**+1.5**
AYDN	**Tasoluk**	**1.21**	**303**	*i* P		**Pg**	**07 53 09.3**	**-0.3**
AYDN				*i* S		**Sg**	**07 53 26.9**	**+1.6**
BCK	**Bucak**	**1.22**	**68**	*e*PN		**Pn**	**07 53 09.4**	**-0.2**
BCK	**Bucak**	**1.22**	**68**	*e*Pn		**Pn**	**07 53 09.4**	**-0.2**
KHL	**Karahalli**	**1.33**	**12**	*e*PN		**Pn**	**07 53 11.6**	**+0.5**
KHL	**Karahalli**	**1.33**	**12**	*e*Pn		**Pn**	**07 53 11.6**	**+0.4**
HDMB	**Hadim**	**2.66**	**90**	*e*PN		**Pn**	**07 53 30.2**	**+0.8**
HDMB	**Hadim**	**2.66**	**90**	*e*Pn		**Pn**	**07 53 30.2**	**+0.8**

*ATH **27** 08:09:32.8, 40°.76N×20°.82E, h11km, MD3.3/3*
*ISCJB **27** 08:09:45.6±0.9, 40°.42N±0°.04×21°.89E±0°.07, h5km±11km, Error ellipse: s-maj=9.6km s-min=6.7km az=4.5*
*CSEM **27** 08:09:45.7±0.2, 40°.40N×21°.88E, h10km, ML2.5/3, Error ellipse: s-maj=5.6km s-min=4.6km az=60.0*
*THE **27** 08:09:46.3, 40°.41N×21°.86E, h2km±15km, ML2.5/3, Error ellipse: s-maj=15.2km s-min=0.3km az=0.0*
ISC 27 08:09:45.9±0.7, 40°.41N±0°.04×21°.88E±0°.07, h11km±10km, n16, σ0s64/25, Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KZN	**Kozani**	**0.13**	**219**	*e*PG		**Pg**		**08 09 48.8**	**-0.2**
KZN				*e*SB		**Sg**		**08 10 01.3**	**+10**
KZN	**Kozani**	**0.13**	**219**	P		**Pg**		**08 09 48.7**	**-0.3**
KZN				S		**Sg**		**08 09 50.4**	**-0.9**
KZN	**Kozani**	**0.13**	**219**	*e*Pg		**Pg**		**08 09 48.8**	**-0.2**
KZN				S		**Sg**		**08 09 50.4**	**-0.9**
FNA	**Florina**	**0.54**	**315**	P		**Pg**		**08 09 56.2**	**-0.2**
FNA				S		**Sg**		**08 10 03.7**	**+0.2**
FNA	**Florina**	**0.54**	**315**	P		**Pg**		**08 09 56.2**	**-0.2**
FNA				S		**Sg**		**08 10 03.7**	**+0.2**
NEST	**Nestorio**	**0.63**	**271**	P		**Pg**		**08 09 58.1**	**-0.1**
NEST				S		**Sg**		**08 10 07.0**	**+0.5**
NEST	**Nestorio**	**0.63**	**271**	P		**Pg**		**08 09 58.1**	**-0.1**
NEST				S		**Sg**		**08 10 07.0**	**+0.5**
GRG	**Griva**	**0.68**	**36**	P		**Pg**		**08 09 59.1**	**0.0**
GRG	**Griva**	**0.68**	**36**	P		**Pg**		**08 09 59.1**	**0.0**
THL	**Klokotos Trika**	**0.85**	**173**	*e*PB		**Pb**		**08 10 01.2**	**-1.4**
THL	**Klokotos Trika**	**0.85**	**173**	P		**Pg**		**08 10 02.3**	**0.0**
THL				S		**Sg**		**08 10 14.6**	**+1.3**
THL	**Klokotos Trika**	**0.85**	**173**	*e*Pb		**Pb**		**08 10 01.3**	**-1.3**
THL	**Klokotos Trika**	**0.85**	**173**	P		**Pg**		**08 10 02.3**	**0.0**
THL				S		**Sg**		**08 10 14.6**	**+1.3**
VAY	**Valandovo**	**1.05**	**30**	*e*Pn		**Pn**		**08 10 00.1**	**-6.4**
PLG	**Polygyros**	**1.20**	**91**	*e*PN		**Pn**		**08 10 08.8**	**+0.3**
PLG	**Polygyros**	**1.20**	**91**	*e*Pn		**Pn**		**08 10 08.8**	**+0.3**

*ISCJB **27** 08:11:49.9±0.8, 39°.48N±0°.04×33°.18E±0°.07, h8km±5km, Error ellipse: s-maj=8.9km s-min=7.4km az=178.4*
*ISK **27** 08:11:49.3, 39°.52N×33°.22E, h9km, MD3.2*
*DDA **27** 08:11:50.6, 39°.58N×33°.19E, h7km±3km, Md3.0*
*CSEM **27** 08:11:50.1±0.2, 39°.55N×33°.19E, h8km, MD3.0, Error ellipse: s-maj=6.0km s-min=5.1km az=7.0*
ISC 27 08:11:50.2±0.8, 39°.49N±0°.05×33°.17E±0°.07, h9km±4km, n27, σ1s06/36, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BBAL	**Bala**	**0.07**	**328**	*i* P		**Pg**		**08 11 52.2**	**0.0**
BBAL				*i* S		**Sg**		**08 11 54.3**	**+0.7**
BBAL	**Bala**	**0.07**	**328**	*i* P		**Pg**		**08 11 52.2**	**0.0**
BBAL				*i* S		**Sg**		**08 11 54.3**	**+0.6**
LOD	**Lodumlu**	**0.51**	**322**	*e*PG		**Pg**		**08 11 59.2**	**-0.9**
LOD				*e*SG		**Sg**		**08 12 07.4**	**+0.6**
LOD	**Lodumlu**	**0.51**	**322**	*e*Pg		**Pg**		**08 11 59.2**	**-0.9**
LOD				*e*Sg		**Sg**		**08 12 07.4**	**+0.6**
ELDT	**Eldivan**	**1.02**	**11**	*i* P		**Pg**		**08 12 08.5**	**-1.3**
ELDT				*i* S		**Sg**		**08 12 24.1**	**+0.9**
ELDT	**Eldivan**	**1.02**	**11**	*i* P		**Pg**		**08 12 08.5**	**-1.4**
KIZT	**Kizilcal**	**1.17**	**239**	*e*PN		**Pn**		**08 12 13.2**	**+0.4**
KIZT	**Kizilcal**	**1.17**	**239**	*e*Pn		**Pn**		**08 12 13.2**	**+0.4**
CANT	**Cankiri**	**1.17**	**17**	*e*PN		**Pn**		**08 12 11.6**	**-1.2**
CANT				*e*SN		**Sn**		**08 12 27.8**	**-1.1**
SVRH	**Sivrihisar-ESK**	**1.27**	**269**	*e*PN		**Pn**		**08 12 14.6**	**+0.4**
SVRH	**Sivrihisar-ESK**	**1.27**	**269**	*e*Pn		**Pn**		**08 12 14.6**	**+0.4**
CORM	**Corum**	**1.32**	**58**	*e*PN		**Pn**		**08 12 13.5**	**-1.3**
CORM	**Corum**	**1.32**	**58**	*e*Pn		**Pn**		**08 12 13.5**	**-1.3**
AVNT	**Avonos**	**1.49**	**118**	*i* P		**Pn**		**08 12 18.9**	**+1.7**
AVNT				*i* S		**Sn**		**08 12 41.5**	**+4.8**
AVNT	**Avonos**	**1.49**	**118**	*i* P		**Pn**		**08 12 18.9**	**+1.8**
ILGA	**Ilgaz**	**1.62**	**15**	*i* P		**Pn**		**08 12 19.2**	**+0.3**
ILGA				*i* S		**Sn**		**08 12 42.1**	**+2.1**
ILGA	**Ilgaz**	**1.62**	**15**	*i* P		**Pn**		**08 12 19.2**	**+0.2**
YOZ	**Yozgat**	**1.67**	**84**	*e*PN		**Pn**		**08 12 19.2**	**-0.4**
YOZ	**Yozgat**	**1.67**	**84**	*e*Pn		**Pn**		**08 12 19.2**	**-0.4**
TOS	**Tosya**	**1.68**	**23**	*e*PN		**Pn**		**08 12 18.6**	**-1.2**
TOS	**Tosya**	**1.68**	**23**	*e*Pn		**Pn**		**08 12 18.6**	**-1.2**
CTKT	**Corum**	**1.69**	**47**	*i* P		**Pn**		**08 12 20.3**	**+0.5**
CTKT				*i* S		**Sn**		**08 12 43.7**	**+2.1**
CTKT	**Corum**	**1.69**	**47**	*i* P		**Pn**		**08 12 20.3**	**+0.5**
SAFT	**Safranbolu**	**1.79**	**348**	*e*PN		**Pn**		**08 12 20.8**	**-0.6**
SAFT	**Safranbolu**	**1.79**	**348**	*e*Pn		**Pn**		**08 12 20.8**	**-0.5**
SVSK	**Karacayir**	**2.98**	**80**	*e*PN		**Pn**		**08 12 36.9**	**-0.8**
SVSK	**Karacayir**	**2.98**	**80**	*e*Pn		**Pn**		**08 12 36.9**	**-0.8**

*CSEM **27** 08:14:50.9±0.2, 38°.39N×22°.37E, h15km, ML2.3/8, Error ellipse: s-maj=5.0km s-min=3.8km az=158.0*
*ISCJB **27** 08:14:51.1±0.4, 38°.37N±0°.03×22°.37E±0°.03, h8km±4km, Error ellipse: s-maj=5.4km s-min=3.2km az=164.2*
*ATH **27** 08:14:51.7, 38°.36N×22°.38E, h5km, MD2.9/5*
*THE **27** 08:14:51.4, 38°.40N×22°.36E, h10km±1km, ML2.3/8, Error ellipse: s-maj=1.2km s-min=0.2km az=187.0*
ISC 27 08:14:51.7±0.5, 38°.39N±0°.03×22°.37E±0°.03, h7km±8km, n26, σ0s45/49, Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DSF	**Desfina**	**0.13**	**78**	P		**Pg**		**08 14 54.3**	**-0.2**
DSF				S		**Sg**		**08 14 56.8**	**+0.4**
DSF	**Desfina**	**0.13**	**78**	P		**Pg**		**08 14 54.3**	**-0.2**
DSF				S		**Sg**		**08 14 56.8**	**+0.4**
KALE	**Kalithea**	**0.18**	**272**	P		**Pg**		**08 14 55.0**	**-0.3**
KALE				S		**Sg**		**08 14 57.9**	**+0.2**
KALE	**Kalithea**	**0.18**	**272**	P		**Pg**		**08 14 55.0**	**-0.3**
KALE				S		**Sg**		**08 14 57.9**	**+0.2**
TRIZ	**Trizonia**	**0.23**	**265**	P		**Pg**		**08 14 55.9**	**-0.3**
TRIZ				S		**Sg**		**08 14 59.4**	**0.0**
TRIZ	**Trizonia**	**0.23**	**265**	P		**Pg**		**08 14 55.9**	**-0.3**
TRIZ				S		**Sg**		**08 14 59.4**	**0.0**
LAKA	**Lakka**	**0.34**	**245**	P		**Pg**		**08 14 57.9**	**-0.3**
LAKA				S		**Sg**		**08 15 03.1**	**+0.4**
LAKA	**Lakka**	**0.34**	**245**	P		**Pg**		**08 14 57.9**	**-0.3**
LAKA				S		**Sg**		**08 15 03.1**	**+0.4**
EFP	**Efpalio**	**0.36**	**277**	*e*PG		**Pg**		**08 14 58.3**	**-0.4**
EFP				*e*SB		**Sg**		**08 15 04.7**	**+1.2**
EFP	**Efpalio**	**0.36**	**277**	P		**Pg**		**08 14 58.3**	**-0.4**
EFP				S		**Sg**		**08 15 03.7**	**+0.2**
EFP	**Efpalio**	**0.36**	**277**	P		**Pg**		**08 14 58.3**	**-0.4**
EFP				S		**Sg**		**08 15 03.7**	**+0.2**
GUR	**Goura**	**0.45**	**182**	*e*PB		**Pg**		**08 15 00.6**	**+0.3**
GUR				*e*SB		**Sg**		**08 15 06.0**	**-0.2**
GUR	**Goura**	**0.45**	**182**	*e*Pb		**Pg**		**08 15 00.6**	**+0.3**
GUR				*e*Sb		**Sg**		**08 15 06.0**	**-0.2**
LKR	**Lokris**	**0.56**	**62**	*e*PB		**Pg**		**08 15 02.0**	**-0.5**
LKR				*e*SB		**Sg**		**08 15 11.2**	**+1.3**
LKR	**Lokris**	**0.56**	**62**	P		**Pg**		**08 15 02.0**	**-0.5**
LKR				S		**Sg**		**08 15 10.3**	**+0.4**
LKR	**Lokris**	**0.56**	**62**	P		**Pg**		**08 15 02.0**	**-0.5**
LKR				S		**Sg**		**08 15 10.3**	**+0.4**
LKR				*e*Sb		**Sg**		**08 15 11.2**	**+1.3**
LTK	**Loutraki**	**0.60**	**127**	P		**Pg**		**08 15 03.1**	**0.0**
LTK	**Loutraki**	**0.60**	**127**	P		**Pg**		**08 15 03.1**	**0.0**
ATAL	**Atalanti**	**0.60**	**59**	P		**Pg**		**08 15 02.6**	**-0.6**
ATAL				S		**Sg**		**08 15 11.4**	**+0.4**
ATAL	**Atalanti**	**0.60**	**59**	P		**Pg**		**08 15 02.6**	**-0.6**
ATAL				S		**Sg**		**08 15 11.4**	**+0.4**
AGG	**Agios Georgios**	**0.64**	**358**	P		**Pg**		**08 15 03.0**	**-1.0**
AGG				S		**Sg**		**08 15 12.2**	**-0.1**
AGG	**Agios Georgios**	**0.64**	**358**	P		**Pg**		**08 15 03.0**	**-1.0**
AGG				S		**Sg**		**08 15 12.2**	**-0.1**
EVR	**Evrytania**	**0.69**	**321**	*e*PG		**Pg**		**08 15 05.2**	**+0.3**
EVR				*e*SB		**Sb**		**08 15 16.0**	**+0.4**
EVR	**Evrytania**	**0.69**	**321**	*e*Pg		**Pg**		**08 15 05.2**	**+0.3**
EVR				*e*Sb		**Sb**		**08 15 16.0**	**+0.4**
RLS	**Riolos of Patr**	**0.78**	**246**	*e*PB		**Pb**		**08 15 07.7**	**+0.2**
RLS	**Riolos of Patr**	**0.78**	**246**	*e*Pb		**Pb**		**08 15 07.7**	**+0.2**

*ISCJB **27** 08:31:59.6±0.8, 53°.8N±0°.1×168°.88E±0°.09, h33km, mb3.3/4, Error ellipse: s-maj=17.1km s-min=7.4km az=5.5*
*KRSC **27** 08:32:01.9±1.6, 53°.52N×168°.35E, h10km±10km, ML3.8*
*IDC **27** 08:32:04.3±7.7, 54°.14N×168°.69E, h66km±81km, mb3.0/4, mb1 3.4/5, mb1mx3.0/24, mbtmp3.0/5, ML3.2/1, Error ellipse: s-maj=100.1km s-min=23.7km az=148.0*
ISC 27 08:32:02.1±0.9, 53°.7N±0°.1×168°.87E±0°.09, h35km, n10, σ1s29/14, mb3.3/4, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BKI	**Bering**	**2.25**	**312**	*e*P		**Pn**		**08 32 40.6**	**+3.9**
BKI				*e*S		**Sn**		**08 33 08.8**	**+5.5**
MKZ	**Mys Kozlova**	**4.28**	**284**	*e*P		**Pn**		**08 33 05.6**	**+1.0**
MKZ				*e*S		**Sn**		**08 33 52.2**	**-1.1**
KBTR	**Krutoberegovo**	**4.29**	**308**	P		**Pn**		**08 33 06.0**	**+1.3**
KBTR				S		**Sn**		**08 33 52.9**	**-0.5**
SPN	**Mys Shipunski**	**5.33**	**267**	S		**Sn**		**08 34 16.9**	**-2.2**
SDLR	**Sedlovina**	**5.98**	**270**	P		**Pn**		**08 33 29.0**	**+1.1**
PETK	**Petropavlovsk-**	**6.71**	**269**	P		**Pn**		**08 33 39.8**	**+1.8**
	0.4nm,0.3s,baz=92,slow=19,SNR=7.3								
PETK				S		**Sn**		**08 34 52.8**	**-0.3**
	0.2nm,0.3s,baz=234,slow=21,SNR=3.9								
ILAR	**Eielson Array**	**24.62**	**46**	P		**P**		**08 37 15.6**	**-3.0**
	0.2nm,0.5s,mb2.9,baz=244,slow=7.7,SNR=7.1								
NVAR	**Mina Array Bea**	**50.53**	**76**	P		**P**		**08 40 55.9**	**-0.7**
	0.2nm,0.5s,mb3.3,baz=305,slow=6.4,SNR=2.6								
TXAR	**Lajitas Array**	**65.48**	**73**	P		**P**		**08 42 40.4**	**-1.0**
	0.2nm,0.4s,mb3.5,baz=296,slow=5.3,SNR=4.7								
ASAR	**Alice Springs**	**82.79**	**212**	P		**P**		**08 44 22.6**	**+0.4**
	0.3nm,0.8s,mb3.4,baz=18,slow=5.3,SNR=5.1								

*CSEM **27** 09:06:15.2, 26°.88N×53°.18E, h41km, ML3.3, After THR*
*IDC **27** 09:06:16.8±2.6, 27°.26N×53°.48E, h0km, mb3.7/3, mb1 3.7/3, mb1mx3.4/21, mbtmp3.7/3, MS2.9/1, Ms1 3.0/1, ms1mx2.4/25, Error ellipse: s-maj=63.2km s-min=27.3km az=158.0*
*TEH **27** 09:06:17.0, 26°.98N×53°.38E, h10km*
ISC 27 09:06:18.8±2.5, 27°.11N±0°.09×53°.40E±0°.06, h17km±13km, n20, σ0s75/23, mb3.6/4, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GHIR	**Ghir-Karzin**	**1.23**	**343**	*e*Pg		**Pg**		**09 06 41.1**	**-1.5**
GHIR				*e*Sg		**Sg**		**09 07 00.0**	**+1.3**
ISRV	**Sarvestan**	**2.28**	**354**	*e*Pn		**Pn**		**09 06 56.2**	**+0.6**
ISRV				*e*Sg		**Sg**		**09 07 31.9**	**-0.3**
ISRV				*e*				09 07 43.4	
	comp=Z,3μm,0.5s								
BNDS	**Bandar-Abbas**	**2.49**	**83**	*e*Pn		**Pn**		**09 06 58.1**	**-0.3**
IPAR	**Pars**	**2.74**	**354**	*e*Pn		**Pn**		**09 07 02.5**	**+0.5**
IPAR				*e*Sg		**Sg**		**09 07 46.6**	**-0.4**
IPAR				*e*				09 08 03.3	
	comp=Z,634nm,0.3s								
IBND	**Bandar-abas**	**2.82**	**82**	*e*Pn		**Pn**		**09 07 02.5**	**-0.5**
IBND				*e*				09 07 56.0	
	comp=Z,2μm,0.2s								
KRBR	**Kerman**	**4.12**	**45**	*e*Pn		**Pn**		**09 07 21.7**	**+0.8**
IMEH	**Mehriz**	**4.40**	**14**	*e*Pn		**Pn**		**09 07 25.2**	**+0.4**
IMEH				*e*				09 07 28.9	
	comp=Z,1μm,0.1s								
IBAF	**Bafgh**	**4.85**	**22**	*e*Pn		**Pn**		**09 07 30.9**	**-0.1**
IBAF				*e*				09 07 34.3	
	comp=Z,210nm,0.1s								
ICHK	**Chekchek**	**5.20**	**9**	*e*Pn		**Pn**		**09 07 35.9**	**+0.2**
ICHK				*e*				09 07 38.1	
	comp=Z,722nm,0.1s								
IGAR	**Gharneh**	**5.41**	**348**	*e*Pn		**Pn**		**09 07 39.0**	**+0.4**
IGAR				*e*				09 07 51.7	
	comp=Z,142nm,0.1s								
NASN	**Na'in**	**5.70**	**355**	*e*Pn		**Pn**		**09 07 42.3**	**-0.3**
NAY	**Al-Naaiem**	**5.84**	**293**	*e*P		**Pn**		**09 07 45.0**	**+0.4**
NAY				*e*S		**Sn**		**09 08 49.4**	**-1.6**
NAY				AML		AML		09 08 54.6	
	comp=Z,3.0nm,0.5s								
IZEF	**Zefreh**	**5.84**	**351**	*e*Pn		**Pn**		**09 07 44.4**	**-0.2**
IZEF				*e*				09 07 51.2	
	comp=Z,111nm,0.1s								
IPIR	**Pirpir**	**5.97**	**339**	*e*Pn		**Pn**		**09 07 47.0**	**+0.7**
IPIR				*e*				09 08 57.2	
	comp=Z,89nm,0.2s								
BRTR	**Keskin Array B**	**20.69**	**312**	P		**P**		**09 10 58.6**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=134,slow=9.5,SNR=3.7								
MKAR	**Makanchi Array**	**30.06**	**42**	P		**P**		**09 12 26.3**	**-0.6**
	comp=Z,0.2nm,0.5s,mb3.1,baz=228,slow=9.6,SNR=3.4								
ZALV	**Zalesovo Beam**	**35.39**	**32**	P		**P**		**09 13 12.6**	**-0.8**
	comp=Z,0.6nm,0.5s,mb3.8,baz=243,slow=9.5,SNR=3.3								
FINES	**FINESS Array B**	**38.92**	**339**	P		**P**		**09 13 42.5**	**-0.8**
	comp=Z,1.0nm,0.5s,mb3.8,baz=146,slow=12,SNR=7.0								
NOA	**NORSAR Array B**	**44.16**	**332**	LR		LR		09 36 13.9	
	comp=Z,13nm,19.1s,baz=80,slow=41								
TORD	**Torodi Ar. Bea**	**50.16**	**265**	P		**P**		**09 15 15.0**	**+1.3**
	comp=Z,0.6nm,0.6s,mb3.8,baz=65,slow=7.4,SNR=5.5								

*ISCJB **27** 09:43:56.6±2.4, 22°.0S±0°.1×176°.4W±0°.2, h112km±32km, mb4.4/7, Error ellipse: s-maj=38.6km s-min=16.1km az=24.2*
*IDC **27** 09:43:57.7±3.5, 21°.99S×176°.40W, h108km±32km, mb4.0/4, mb1 4.1/6, mb1mx3.7/18, mbtmp4.0/6, Error ellipse: s-maj=46.8km s-min=19.5km az=124.0*
ISC 27 09:43:58.0±2.0, 22°.0S±0°.1×176°.3W±0°.2, h114km±27km, n16, σ0s49/15, mb4.4/7, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.15**	**29**	P		**Pn**		**09 46 07.0**	**-0.1**
	1.2nm,0.3s,baz=3.9,slow=23,SNR=5.5								
AFI				S		**Sn**		**09 47 39.8**	**-8.4**
	2.0nm,0.3s,baz=72,slow=20,SNR=4.5								
RAR	**Rarotonga**	**15.39**	**90**	P		**Pn**		**09 47 36.7**	**+7.7**
	1.2nm,0.3s,baz=225,slow=16,SNR=2.9								
URZ	**Urewera**	**17.14**	**198**	P		**Pn**		**09 47 50.7**	**+0.3**
	0.8nm,0.3s,baz=313,slow=19,SNR=5.9								
URZ				S		**S**		**09 50 48.5**	**-13**
	0.9nm,0.3s,baz=298,slow=22,SNR=6.7								
RPZ	**Rata Peaks**	**24.04**	**203**	P		**P**		**09 49 02.3**	**0.0**
	4.0nm,0.5s,mb4.0,baz=10.0,slow=17,SNR=5.0								
CTA	**Charters Tower**	**34.94**	**266**	*e*P		**P**		**09 50 39.8**	**+0.7**
	5.5nm,0.4s,mb4.7								
CMSA	**Cobar Meteorol**	**35.08**	**246**	*e*P		**P**		**09 50 40.2**	**0.0**
QLP	**Quilpie**	**36.16**	**255**	*e*P		**P**		**09 50 50.1**	**+0.7**
MTSU	**Mount Surprise**	**37.12**	**269**	*e*P		**P**		**09 50 57.8**	**+0.1**
	12nm,0.6s,mb5.0								
STKA	**Stephens Creek**	**38.59**	**246**	*e*P		**P**		**09 51 09.9**	**0.0**
	5.1nm,0.6s,mb4.5								
STKA	**Stephens Creek**	**38.59**	**246**	P		**P**		**09 51 10.1**	**+0.1**
	5.8nm,0.6s,mb4.6,baz=92,slow=9.6,SNR=23								
BBOO	**Buckleboo**	**43.32**	**245**	*e*P		**P**		**09 51 47.6**	**-1.1**
	5.4nm,0.6s,mb4.5								
ASAR	**Alice Springs**	**45.73**	**258**	P		**P**		**09 52 07.3**	**-0.7**
	8.5nm,0.7s,mb4.6,baz=91,slow=7.9,SNR=71								
ASAR				PcP		PcP		09 53 42.8	-1.2
	0.8nm,0.6s,baz=108,slow=4.4,SNR=4.4								
ILAR	**Eielson Array**	**89.45**	**12**	P		**P**		**09 56 41.7**	**+0.3**
	0.2nm,0.3s,mb3.6,baz=216,slow=5.2,SNR=5.1								
ARCES	**ARCESS Array B**	**130.69**	**350**	PKP		PKPdf		10 02 56.2	+1.4
	2.5nm,0.9s,baz=318,slow=1.6,SNR=3.8								
AKASG	**Malin Array Be**	**145.11**	**331**	PKPbc		PKPbc		10 03 20.5	-1.0
	0.9nm,0.4s,baz=40,slow=3.9,SNR=6.2								
BRTR	**Keskin Array B**	**149.03**	**312**	PKPbc		PKPbc		10 03 32.9	0.0
	1.7nm,0.7s,baz=140,slow=5.1,SNR=10								

*ISCJB **27** 10:01:11.7±0.4, 6°.59S±0°.05×127°.50E±0°.06, h424km±5km, mb3.7/15, Error ellipse: s-maj=10.5km s-min=6.5km az=137.2*
*NEIC **27** 10:01:11.6±1.1, 6°.59S×127°.45E, h406km±14km, mb4.1/4, Error ellipse: s-maj=14.9km s-min=8.3km az=50.0*
*DJA **27** 10:01:11, 6°.37S×127°.60E, h448km, mb4.5/12*
*IDC **27** 10:01:12.4±3.2, 6°.61S×127°.44E, h414km±40km, mb3.4/13, mb1 3.4/15, mb1mx3.4/21, mbtmp3.4/15, Error ellipse: s-maj=27.7km s-min=13.1km az=58.0*
ISC 27 10:01:12.5±0.4, 6°.59S±0°.05×127°.54E±0°.06, h417km±5km, n48, σ0s73/51, mb3.7/15, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**3.35**	**352**	P		**P**		**10 02 20.5**	**+0.5**
NLAI				S		**S**		**10 03 14.5**	**-0.1**
TLE	**Tual**	**5.25**	**80**	P		**P**		**10 02 38.9**	**+0.9**
	2.0nm6μm213nm,0.7s								
TLE				S		**S**		**10 03 46.5**	**-1.0**
	2.0nm6μm213nm,0.7s								
KDI	**Kendari**	**5.55**	**298**	P		**P**		**10 02 41.4**	**+0.4**
	0.2nm51nm,0.9s								
LUWI	**Luwuk**	**7.28**	**319**	P		**P**		**10 02 54.7**	**-4.9**
	0.9nm4μm186nm,0.5s								
BKSI	**Bulukumba**	**7.48**	**279**	P		**P**		**10 03 02.2**	**+0.3**
	0.2nm524nm54nm,0.6s								
BNSI	**Bone**	**7.71**	**286**	P		**P**		**10 03 05.7**	**+1.3**
	0.2nm71nm,0.7s								
KAKA	**Kakadu**	**7.77**	**142**	*e*P		**P**		**10 03 05.3**	**+0.3**
	41nm,0.5s								
KAKA	**Kakadu**	**7.77**	**142**	*e*Pn		**P**		**10 03 04.9**	**-0.1**
	110nm,0.5s								
KAKA	**Kakadu**	**7.77**	**142**	P		**P**		**10 03 05.5**	**+0.5**
	0.4nm993nm106nm,0.6s								
SPSI	**Sidrap Palu**	**8.16**	**288**	P		**P**		**10 03 08.9**	**-0.5**
TTSI	**Tana Toraja**	**8.46**	**294**	P		**P**		**10 03 12.8**	**+0.1**
	33nm,0.8s								
MRSI	**Marisa**	**8.97**	**321**	P		**P**		**10 03 16.8**	**-1.6**
	21nm,0.6s								
KNA	**Kununurra**	**9.19**	**173**	*e*P		**P**		**10 03 21.3**	**+0.6**
	22nm,1.0s								
KNA	**Kununurra**	**9.19**	**173**	P		**P**		**10 03 21.5**	**+0.8**
	684nm84nm,0.9s								
PCI	**Palu**	**9.53**	**306**	P		**P**		**10 03 23.5**	**-1.1**
	28nm,0.7s								
FITZ	**Fitzroy Crossi**	**11.60**	**189**	*e*P		**P**		**10 03 47.3**	**0.0**
	3.6nm,1.5s								
FITZ	**Fitzroy Crossi**	**11.60**	**189**	P		**P**		**10 03 46.8**	**-0.5**
	0.3nm,0.3s,baz=133,slow=13,SNR=7.0								
FITZ	**Fitzroy Crossi**	**11.60**	**189**	*e*Pn		**P**		**10 03 47.4**	**+0.1**
WRAB	**Tennant Creek**	**14.82**	**154**	*e*Pn		**P**		**10 04 22.2**	**-0.4**
	14nm,0.6s								
WRAB	**Tennant Creek**	**14.82**	**154**	P		**P**		**10 04 23.3**	**+0.8**
	28nm,0.9s								
COEN	**Coen**	**17.03**	**117**	*e*P		**P**		**10 04 45.9**	**-0.3**
COEN	**Coen**	**17.03**	**117**	*e*P		**P**		**10 04 45.8**	**-0.4**
	100nm,0.3s								
COEN	**Coen**	**17.03**	**117**	P		**P**		**10 04 45.7**	**-0.5**
ASAR	**Alice Springs**	**18.05**	**161**	P		**P**		**10 04 56.8**	**0.0**
	2.4nm,0.3s,baz=352,slow=12,SNR=130								
ASAR				S		**S**		**10 08 00.6**	**-1.8**
	0.4nm,0.3s,baz=333,slow=16,SNR=11								
CTA	**Charters Tower**	**22.59**	**128**	*e*P		**P**		**10 05 40.6**	**+1.2**
	2.4nm,0.6s,mb3.8								
CTA	**Charters Tower**	**22.59**	**128**	P		**P**		**10 05 40.7**	**+1.3**
	3.3nm,0.7s,mb3.9,baz=303,slow=11,SNR=9.0								
CTA	**Charters Tower**

comp=N,410nm,1.8s
KMI smax
comp=E,670nm,1.3s
GYA Guiyang 3.72 98 Pn Pn 10 21 54.0 +0.5
GYA Sn **Sn 10 22 37.5 +0.4**
GYA smax
comp=N,150nm,1.3s
GYA smax
comp=E,110nm,1.1s
CD2 Chengdu 4.03 15 Pn Pn 10 22 00.0 +2.2
CD2 Sg **Sg 10 23 05.5 -0.4**
CD2 smax
comp=N,990nm,1.1s
CMAR Chiang Mai Arr 9.14 202 Pn Pn 10 23 14.0 +6.0
comp=N,0.0nm,0.3s,baz=9.3,slow=13,SNR=2.6
CMAR Pg Pn 10 23 52.5 +44
comp=N,0.2nm,0.3s,baz=6.2,slow=16,SNR=4.5
CMAR Lg 10 25 54.2
comp=N,0.1nm,0.3s,baz=8.1,slow=22,SNR=3.9
SONM Songino Array 21.01 7 P P 10 25 39.9 +0.4
comp=N,2.3nm,0.9s,mb3.5,baz=192,slow=11,SNR=7.6
SONM LR LR 10 34 36.0
comp=N,112nm,18.2s,MS3.3,baz=57,slow=39
KSRS Korea Array 23.79 58 P P 10 26 06.3 -2.5
comp=N,1.4nm,0.8s,mb3.5,baz=242,slow=10,SNR=7.0
PSI Prapat 24.32 189 LR LR 10 37 20.3
comp=N,56nm,18.4s,MS3.1,baz=322,slow=40
MKAR Makanchi Array 25.41 326 P P 10 26 24.6 +1.1
comp=N,1.7nm,0.7s,mb3.7,baz=127,slow=9.5,SNR=11
MKAR LR LR 10 37 32.3
comp=N,35nm,21.8s,MS2.8,baz=172,slow=39
ZALV Zalesovo Beam 29.93 339 P P 10 27 03.8 -0.1
comp=N,0.7nm,0.4s,mb3.7,baz=153,slow=9.7,SNR=2.6
ZALV LR LR 10 39 45.5
comp=N,42nm,19.5s,MS3.1,baz=26,slow=38
ASAR Alice Springs 58.78 146 P P 10 30 54.5 +0.1
comp=N,0.8nm,0.8s,mb3.8,baz=332,slow=6.5,SNR=9.9
AKASG Malin Array Be 59.25 315 P P 10 30 57.2 -0.2
comp=N,0.5nm,0.3s,mb4.0,baz=71,slow=6.5,SNR=3.6
FINES FINESS Array B 60.24 327 P P 10 31 04.1 +0.1
comp=N,1.3nm,0.7s,mb4.1,baz=111,slow=7.6,SNR=3.6
ARCES ARCESS Array B 60.45 337 P P 10 31 05.5 +0.2
comp=N,1.9nm,0.8s,mb4.2,baz=86,slow=7.1,SNR=7.2
NB2 NORSAR Subarra 67.39 328 P P 10 31 50.8 -0.3
comp=Z,0.6nm,0.6s,mb3.8,baz=74,slow=6.9
NOA NORSAR Array B 67.39 328 P P 10 31 50.6 -0.5
comp=Z,1.0nm,0.8s,mb3.9,baz=76,slow=6.3,SNR=7.9
STKA Stephens Creek 69.38 145 LR LR 11 02 46.2
comp=Z,84nm,19.1s,MS4.0,baz=25,slow=36
ILAR Eielson Array 74.11 25 P P 10 32 30.4 -1.6
comp=Z,0.1nm,0.3s,mb3.2,baz=293,slow=4.4,SNR=5.2

IDC 27 10:30:59.7±2.4, 21°.76S×178°.70W, h543km±28km, mb3.1/4, mb1 3.3/6, mb1mx3.0/19, mbtmp3.2/6, Error ellipse: s-maj=44.9km s-min=19.9km az=147.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**10.21**	**41**	P	P	10 33 20.2	+0.3
	1.5nm,0.3s,baz=131,slow=20,SNR=6.2						
URZ	**Urewera**	**16.84**	**191**	P	P	10 34 26.7	-0.4
	0.9nm,0.3s,baz=309,slow=9.5,SNR=9.7						
CTA	**Charters Tower**	**32.74**	**266**	P	P	10 36 48.2	+0.1
	1.9nm,0.4s,baz=88,slow=12,SNR=7.2						
ASAR	**Alice Springs**	**43.61**	**258**	P	P	10 38 16.4	+0.1
	2.1nm,0.6s,baz=88,slow=8.6,SNR=44						
ASAR				PcP	PcP	10 39 52.6	+0.9
	0.3nm,0.5s,baz=115,slow=4.8,SNR=5.8						
WRA	**Warramunga Arr**	**43.79**	**263**	P	P	10 38 17.2	-0.6
	0.9nm,0.4s,baz=98,slow=7.7,SNR=85						
ILAR	**Eielson Array**	**89.68**	**13**	P	P	10 42 59.3	-0.1
	0.1nm,0.4s,baz=216,slow=5.1,SNR=4.9						
ARCES	**ARCESS Array B**	**130.03**	**349**	PKP	PKPdf	10 49 06.8	-0.4
	1.9nm,1.0s,baz=29,slow=2.8,SNR=5.5						
AKASG	**Malin Array Be**	**143.78**	**330**	PKP	PKPdf	10 49 31.2	-1.7
	0.3nm,0.3s,baz=44,slow=5.5,SNR=5.5						
BRTR	**Keskin Array B**	**147.18**	**310**	PKPbc	PKPbc	10 49 41.8	-0.5
	0.5nm,0.5s,baz=134,slow=3.4,SNR=2.9						

*ATH **27** 11:09:18.3, 40°.73N×21°.15E, h10km±3km, MD3.2/4*
*ISCJB **27** 11:09:27.4±0.7, 40°.44N±0°.04×21°.89E±0°.05, h3km±12km, Error ellipse: s-maj=7.0km s-min=5.8km az=158.1*
*CSEM **27** 11:09:27.6±0.2, 40°.43N×21°.88E, h2km, ML2.4/3, Error ellipse: s-maj=4.8km s-min=4.7km az=43.0*
*THE **27** 11:09:28.1, 40°.44N×21°.86E, h0km±2km, ML2.4/3, Error ellipse: s-maj=2.4km s-min=0.5km az=61.0*
ISC 27 11:09:28.0±0.6, 40°.45N±0°.04×21°.89E±0°.05, h6km±13km, n20, σ0°.74/33, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZN	**Kozani**	**0.17**	**212**	*e*PG	**Pg**	**11 09 30.4**	**-0.9**
KZN				*e*SB	**Sg**	**11 09 39.7**	**+6.1**
KZN	**Kozani**	**0.17**	**212**	P	**Pg**	**11 09 30.6**	**-0.7**
KZN				S	**Sg**	**11 09 33.5**	**-0.1**
KZN	**Kozani**	**0.17**	**212**	*e*Pg	**Pg**	**11 09 30.4**	**-0.9**
KZN	**Kozani**	**0.17**	**212**	P	**Pg**	**11 09 30.6**	**-0.7**
KZN				S	**Sg**	**11 09 33.5**	**-0.1**
FNA	**Florina**	**0.51**	**311**	P	**Pg**	**11 09 37.6**	**-0.2**
FNA				S	**Sg**	**11 09 45.2**	**+0.7**
FNA	**Florina**	**0.51**	**311**	P	**Pg**	**11 09 37.6**	**-0.2**
FNA				S	**Sg**	**11 09 45.2**	**+0.7**
GRG	**Griva**	**0.64**	**38**	P	**Pg**	**11 09 40.6**	**+0.3**
GRG	**Griva**	**0.64**	**38**	P	**Pg**	**11 09 40.6**	**+0.3**
NEST	**Nestorio**	**0.64**	**267**	P	**Pg**	**11 09 39.6**	**-0.7**
NEST				S	**Sg**	**11 09 49.0**	**+0.4**
NEST	**Nestorio**	**0.64**	**267**	P	**Pg**	**11 09 39.6**	**-0.7**
NEST				S	**Sg**	**11 09 49.0**	**+0.4**
THL	**Klokotos Trika**	**0.89**	**174**	*e*PG	**Pg**	**11 09 43.2**	**-1.8**
THL				*e*SB	**Sb**	**11 10 02.0**	**+4.1**
THL	**Klokotos Trika**	**0.89**	**174**	P	**Pg**	**11 09 44.6**	**-0.4**
THL				S	**Sg**	**11 09 57.7**	**+1.2**
THL	**Klokotos Trika**	**0.89**	**174**	*e*Pg	**Pg**	**11 09 43.2**	**-1.8**
THL	**Klokotos Trika**	**0.89**	**174**	P	**Pg**	**11 09 44.6**	**-0.4**
THL				S	**Sg**	**11 09 57.7**	**+1.2**
THL				*e*Sb	**Sb**	**11 10 02.0**	**+4.1**
SOH	**Sokhos**	**1.18**	**71**	*e*PB	**Pb**	**11 09 49.9**	**-0.8**
SOH				*e*SB	**Sg**	**11 10 12.4**	**+6.6**
SOH	**Sokhos**	**1.18**	**71**	*e*Pb	**Pb**	**11 09 49.9**	**-0.8**
PLG	**Polygyros**	**1.19**	**93**	*e*PG	**Pg**	**11 09 51.4**	**+0.6**
PLG				*e*SN	**Sg**	**11 10 14.7**	**+8.4**
PLG	**Polygyros**	**1.19**	**93**	*e*Pg	**Pg**	**11 09 51.4**	**+0.6**
AGG	**Agios Georgios**	**1.47**	**166**	P	**Pn**	**11 09 55.2**	**+0.2**
AGG	**Agios Georgios**	**1.47**	**166**	P	**Pn**	**11 09 55.2**	**+0.2**

CASC 27 11:12:46.6±2.4, 11°.25N×86°.86W, h28km±26km, MD3.8, ML3.2, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.96**	**16**	*e*P	Pn	11 13 03.8	-0.5
COPN				*e*S	Sn	11 13 19.4	+2.4
SSN	**San Juan del S**	**0.99**	**87**	*e*P	Pn	11 13 04.3	-0.2
SSN				*e*S	Sn	11 13 18.8	+1.2
TICN	**Ticuantepe**	**0.99**	**38**	*e*P	Pn	11 13 05.6	+1.0
APON	**Apoyo**	**1.02**	**49**	*e*P	Pn	11 13 06.7	+1.6
CSAN		**1.02**	**25**	*e*P	Pn	11 13 04.5	-0.5
XAVN	**Gruta Xavier**	**1.03**	**30**	*e*P	Pn	11 13 05.6	+0.3
TISN	**Laguna Tiscapa**	**1.06**	**33**	*e*P	Pn	11 13 05.5	-0.1
MGAN	**Managua**	**1.07**	**34**	*e*P	Pn	11 13 05.5	-0.3
MGAN				*e*S	Sn	11 13 17.9	-1.8
MGAN				AML	AML	11 13 27.1	
	comp=E,534nm,0.4s						
WILN	**Americas 2**	**1.12**	**36**	*e*P	Pn	11 13 06.4	0.0
MOMN	**Momotombo**	**1.19**	**15**	*e*P	Pn	11 13 07.3	-0.1
CNGN	**Cerro Negro**	**1.25**	**7**	*e*P	Pn	11 13 07.7	-0.5
CRIN	**San Cristobal**	**1.45**	**353**	*e*P	Pn	11 13 10.1	-0.9
CNCH	**Conchagua**	**2.23**	**335**	*e*P	Pn	11 13 21.3	-0.4
CNCH				*e*S	Sn	11 13 50.3	+2.0
TGUH	**Tegucigalpa,Un**	**2.82**	**352**	*e*P	Pn	11 13 29.2	-0.6
CAHU	**Cacacuatique**	**2.83**	**332**	*e*P	Pn	11 13 30.5	+0.5
CAHU				*e*S	Sn	11 14 05.3	+2.1

*ISCJB **27** 11:18:15.8±0.2, 33°.28N±0°.02×92°.22E±0°.03, h10km, mb4.2/26, MS3.9/21, Error ellipse: s-maj=4.0km s-min=3.4km az=173.5*
*BJI **27** 11:18:15.7, 33°.16N×92°.09E, h13km, mB4.7/22, mb4.5/25, ML4.5/3, Ms4.5/29, Ms7 4.1/26*
*IDC **27** 11:18:15.7±0.7, 33°.25N×92°.07E, h0km, mb4.1/17, mb1 4.2/20, mb1mx4.1/27, mbtmp4.1/20, ML3.7/3, MS3.8/17, Ms1 3.8/17, ms1mx3.7/28, Error ellipse: s-maj=22.9km s-min=13.5km az=41.0*
*MOS **27** 11:18:20.6±1.2, 33°.23N×92°.18E, h53km, mb4.4/11, Error ellipse: s-maj=10.8km s-min=6.6km az=105.9*
*NEIC **27** 11:18:21.5±0.9, 33°.24N×92°.23E, h45km±10km, mb4.0/11, Error ellipse: s-maj=9.0km s-min=6.3km az=71.0*
ISC 27 11:18:18.0±0.2, 33°.31N±0°.02×92°.20E±0°.03, h10km, n99, σ1°.31/104, mb4.2/26, MS3.9/21, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.71**	**194**	Pg	**Pn**	**11 19 17.3**	**+1.9**
LSA				Sg	**Sb**	**11 20 08.3**	**-0.3**
LSA				smax			
	comp=N,370nm,1.0s						
LSA				smax			
	comp=E,530nm,1.2s						
LSA	**Lhasa**	**3.71**	**194**	*e*Pn	**Pn**	**11 19 17.8**	**+2.4**
LSA				*e*Sn	**Sn**	**11 20 04.8**	**+5.7**
TAPN	**Taplejung**	**7.09**	**214**	*e*P	**Pn**	**11 20 02.3**	**+0.4**
JIRN	**Jiri**	**7.65**	**224**	*e*P	**Pn**	**11 20 11.4**	**+1.8**
	comp=E,27nm,0.4s						
GUN	**Gumba**	**7.66**	**227**	*e*P	**Pn**	**11 20 10.5**	**+0.9**
ODAN	**Odare**	**7.66**	**214**	*e*P	**Pn**	**11 20 09.8**	**+0.2**
SHL	**Shillong**	**7.72**	**182**	*ex*	**Pn**	**11 20 08.5**	**-2.0**
SHL				*ex*	**Sn**	**11 21 38.0**	**0.0**
RAMN	**Ramite**	**7.98**	**219**	*e*P	**Pn**	**11 20 13.7**	**-0.3**
KKN	**Kakani**	**8.11**	**229**	*e*P	**Pn**	**11 20 17.3**	**+1.4**
	comp=E,57nm,0.7s						
KKN	**Kakani**	**8.11**	**229**	*e*P	**Pn**	**11 20 17.3**	**+1.4**
KKN				pmax	pmax		
	comp=Z,57nm,0.7s						
PKI	**Pulchoki**	**8.19**	**227**	*e*P	**Pn**	**11 20 17.1**	**+0.2**
	comp=Z,47nm,0.5s						
PKI	**Pulchoki**	**8.19**	**227**	*e*P	**Pn**	**11 20 18.3**	**+1.4**
PKI				pmax	pmax		
	comp=Z,110nm,0.7s						
PKI	**Pulchoki**	**8.19**	**227**	*e*P	**Pn**	**11 20 18.3**	**+1.4**
	comp=Z,110nm,0.7s						
PKIN	**Phulchoki**	**8.19**	**228**	*e*P	**Pn**	**11 20 18.3**	**+1.4**
	comp=Z,110nm,0.7s						
DMN	**Daman**	**8.35**	**229**	*e*P	**Pn**	**11 20 20.5**	**+1.4**
	comp=Z,33nm,0.4s						
GKN	**Gorkha**	**8.39**	**233**	*e*P	**Pn**	**11 20 19.4**	**-0.2**
	comp=Z,45nm,0.4s						
IMP	**Imphal**	**8.63**	**169**	*e*PKP	**Pn**	**11 20 25.0**	**+2.0**
IMP				*e*S	**Sn**	**11 21 58.0**	**-2.4**
GTA	**Gaotai**	**8.64**	**43**	*e*P	**Pn**	**11 20 26.0**	**+2.9**
GTA				pP		11 20 30.5	
GTA				sP		11 20 34.0	
GTA				S	**Sn**	**11 22 13.8**	**+13**
GTA				sS		11 22 17.5	
GTA				pmax	pmax		
	comp=Z,13nm,1.2s						
GTA				pmax	pmax		
	comp=Z,110nm,5.3s						
GTA				LR	LR		
	comp=N,2μm,11.9s						
GTA				LR	LR		
	comp=E,1μm,11.3s						
GTA				LR	LR		
	comp=Z,810nm,12.5s						
KOLN	**Koldanda**	**9.24**	**236**	*e*P	**Pn**	**11 20 30.7**	**-0.7**
	comp=Z,62nm,0.6s						
AGT	**Agartala**	**9.43**	**185**	*ex*	x	11 22 04.0	
LZH	**Lanzhou**	**9.98**	**71**	*e*P	**Pn**	**11 20 48.8**	**+7.4**
LZH				*e*S	**Sn**	**11 22 44.5**	**+11**
LZH				sS		11 22 50.0	
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
LZH				pmax	pmax		
	comp=Z,77nm,4.0s						
LZH				LR	LR		
	comp=N,1μm,11.0s						
LZH				LR	LR		
	comp=Z,1μm,14.9s						
CD2	**Chengdu**	**10.09**	**101**	P	**Pn**	**11 20 45.0**	**+2.0**
CD2				pP		11 20 48.0	
CD2				sP		11 20 51.0	
CD2				PP		11 20 53.3	
CD2				S	**Sn**	**11 22 38.5**	**+2.2**
CD2				SS		11 22 51.3	
CD2				pmax	pmax		
	comp=Z,20nm,1.0s						
CD2				pmax	pmax		
	comp=Z,180nm,6.3s						
CD2				LR	LR		
	comp=N,2μm,6.5s						
CD2				LR	LR		
	comp=Z,2μm,8.9s						
WMQ	**Urumqi**	**11.07**	**343**	P	**Pn**	**11 20 59.5**	**+3.2**
WMQ				pP		11 21 02.5	
WMQ				sP		11 21 06.0	
WMQ				PP		11 21 08.0	
WMQ				S	**Sn**	**11 23 04.5**	**+4.4**
WMQ				sS		11 23 09.5	
WMQ				SS		11 23 18.0	
WMQ				PcP	PcP	11 26 55.8	+2.1
WMQ				pmax	pmax		
	comp=Z,12nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,130nm,4.3s						
WMQ				LR	LR		
	comp=N,2μm,11.0s						
WMQ				LR	LR		
	comp=E,4μm,12.0s						
WMQ				LR	LR		
	comp=Z,1μm,9.0s						
KMI	**Kunming**	**12.29**	**129**	P	**Pn**	**11 21 14.3**	**+1.1**
KMI				pP		11 21 17.5	
KMI				sP		11 21 19.0	
KMI				PP		11 21 23.3	
KMI				S	**Sn**	**11 23 32.5**	**+2.2**
KMI				sS		11 23 36.0	
KMI				SS		11 23 47.0	
KMI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KMI				pmax	pmax		
	comp=Z,140nm,3.1s						
KMI				LR	LR		
	comp=N,1μm,14.4s						
KMI				LR	LR		
	comp=E,1μm,15.0s						
KMI				LR	LR		
	comp=Z,760nm,14.8s						
GYA	**Guiyang**	**14.28**	**115**	P	**Pn**	**11 21 38.3**	**-2.0**
GYA				S	**Sn**	**11 24 13.8**	**-5.0**
GYA				SS		11 24 36.3	
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,10.0nm,4.1s						
GYA				LR	LR		
	comp=N,1μm,12.5s						
GYA				LR	LR		
	comp=E,680nm,12.2s						
GYA				LR	LR		
	comp=Z,880nm,14.0s						
MK31	**Makanchi Array**	**15.44**	**334**	*e*P	**Pn**	**11 21 56.7**	**+1.0**
MKAR	**Makanchi Array**	**15.44**	**334**	Pn	**Pn**	**11 21 54.2**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=152,slow=15,SNR=24						
MKAR	**Makanchi Array**	**15.44**	**334**	Pn	**Pn**	**11 21 54.2**	**-1.5**
CHTO	**Chiang Mai**	**15.65**	**156**	*e*P	**Pn**	**11 21 56.6**	**-2.1**
CHTO				pmax	pmax		
	comp=Z,10.0nm,1.3s						
CHTO	**Chiang Mai**	**15.65**	**156**	*e*P	**Pn**	**11 21 56.6**	**-2.1**
	comp=Z,10nm,1.3s						
CM31	**Chiang Mai Arr**	**15.98**	**156**	*e*P	**Pn**	**11 22 02.5**	**-0.5**
	comp=Z,2.4nm,0.5s						
CMAR	**Chiang Mai Arr**	**15.98**	**156**	Pn	**Pn**	**11 21 59.9**	**-3.1**
	comp=Z,0.1nm,0.3s,baz=330,slow=12,SNR=14						
CMAR				LR	LR	11 28 46.7	
	comp=Z,170nm,21.4s,baz=336,slow=40						
TKM2	**Tokmak 2**	**16.18**	**311**	*e*P	**Pn**	**11 22 07.5**	**+2.1**
TKM2				pmax	pmax		
	comp=Z,12nm,1.1s						
TKM2	**Tokmak 2**	**16.18**	**311**	*e*P	**Pn**	**11 22 07.5**	**+2.1**
	comp=Z,12nm,1.1s						
AAK	**Ala-Archa**	**16.75**	**309**	Pn	**Pn**	**11 22 15.2**	**+2.5**
	comp=Z,0.7nm,0.3s,baz=35,slow=7.3,SNR=6.6						
AAK				LR	LR	11 29 58.9	
	comp=Z,566nm,20.9s,baz=107,slow=42						
AAK	**Ala-Archa**	**16.75**	**309**	Pn	**Pn**	**11 22 15.2**	**+2.5**
AAK				LR	LR	11 29 58.9	
FRU	**Bishkek**	**16.77**	**310**	*e*P	**Pn**	**11 22 13.0**	**+0.2**
FRU				pmax	pmax		
	comp=Z,90nm,2.6s						
HHC	**Hu-ho-hao-te**	**17.17**	**58**	*e*P	**Pn**	**11 22 16.0**	**-1.9**
HHC				PP		11 22 31.0	
HHC				S	**Sn**	**11 25 24.5**	**-4.3**
HHC				PcP	PcP	11 27 02.0	+0.2
HHC				ScS	ScS	11 34 13.5	-2.9
HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
HHC				pmax	pmax		
	comp=Z,59nm,5.2s						
HHC				LR	LR		
	comp=N,470nm,10.2s						
HHC				LR	LR		
	comp=E,440nm,10.9s						
HHC				LR	LR		
	comp=Z,490nm,10.9s						
EKS2	**Erkin-Say**	**17.23**	**308**	*e*P	**Pn**	**11 22 21.9**	**+3.2**
	comp=Z,6.9nm,0.7s						
SONM	**Songino Array**	**18.03**	**32**	P	**Pn**	**11 22 29.8**	**+1.2**
	comp=Z,0.9nm,0.3s,baz=217,slow=13,SNR=29						
SONM				LR	LR	11 30 32.1	
	comp=Z,345nm,20.4s,baz=359,slow=41						
ULN	**Ulaanbaatar**	**18.35**	**33**	*e*P	**Pn**	**11 22 33.6**	**+1.1**
ULN				pmax	pmax		
	comp=Z,24nm,1.4s						
ULN	**Ulaanbaatar**	**18.35**	**33**	*e*P	**Pn**	**11 22 33.6**	**+1.1**
	comp=Z,24nm,1.4s						
KBL	**Kabul**	**19.25**	**280**	*e*P	**Pn**	**11 22 43.4**	**-0.1**
KBL				pmax	pmax		
	comp=Z,26nm,0.7s						
KBL	**Kabul**	**19.25**	**280**	*e*P	**Pn**	**11 22 43.4**	**-0.1**
	comp=Z,26nm,0.7s						
KURK	**Kurchatov**	**20.05**	**334**	*e*P	**P**	**11 22 51.7**	**+0.6**
KURK				pmax	pmax		
	comp=Z,13nm,1.7s						
KURK	**Kurchatov**	**20.05**	**334**	*e*P	**P**	**11 22 51.6**	**+0.5**
	comp=Z,4.7nm,0.7s						
TLY	**Talaya**	**20.16**	**21**	*e*P	**P**	**11 22 55.4**	**+3.1**
TLY				*e*		11 23 14.4	
TLY				pmax	pmax		
	comp=Z,12nm,1.5s						
TLY				MLR	MLR		
	comp=Z,335nm,18.0s,MS3.7						
TLY	**Talaya**	**20.16**	**21**	*e*P	**P**	**11 22 53.9**	**+1.6**
	comp=Z,4.5nm,0.9s						
BJI	**Beijing**	**20.34**	**64**	P	**P**	**11 22 53.5**	**-0.9**
BJI				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BJI				pmax	pmax		
	comp=Z,120nm,4.5s						
BJI				LR	LR		
	comp=E,890nm,13.6s						
BJI				LR	LR		
	comp=Z,280nm,16.7s,MS3.7						
QIZ	**Qiongzhong**	**21.24**	**128**	P	**P**	**11 23 01.8**	**-2.5**
QIZ				S	**S**	**11 26 59.8**	**-0.6**
QIZ				pmax	pmax		
	comp=Z,10.0nm,1.9s,mb3.8						
QIZ				pmax	pmax		
	comp=Z,130nm,6.8s						
QIZ				LR	LR		
	comp=N,810nm,13.6s,MS4.3						
QIZ				LR	LR		
	comp=E,280nm,15.6s,MS4.3						
QIZ				LR	LR		
	comp=Z,550nm,17.2s,MS4.0						
ZAA0	**Zalesovo Array**	**21.29**	**348**	*e*P	**P**	**11 23 03.8**	**-0.7**
ZALV	**Zalesovo Beam**	**21.29**	**348**	P	**P**	**11 23 04.2**	**-0.3**
	comp=Z,3.9nm,0.7s,mb3.9,baz=162,slow=11,SNR=13						
ZALV				LR	LR	11 31 56.5	
	comp=Z,111nm,21.9s,MS3.2,baz=184,slow=38						
NVS	**Novosibirsk**	**22.43**	**346**	*i* P	**P**	**11 23 15.8**	**-0.9**
NJ2	**Nanjing**	**22.45**	**86**	*e*P	**P**	**11 23 17.8**	**+0.6**
NJ2				pP		11 23 22.0	
NJ2				sP	sP	11 23 24.8	+3.4
NJ2				PP		11 23 42.0	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.5						
NJ2				pmax	pmax		
	comp=Z,250nm,3.6s						
NJ2				LR	LR		
	comp=N,1μm,22.6s						
NJ2				LR	LR		
	comp=E,770nm,12.9s						
BVAR	**Borovoye Array**	**25.14**	**328**	P	**P**	**11 23 42.8**	**-0.3**
	comp=E,2.4nm,0.8s,mb3.8,baz=133,slow=14,SNR=12						
BRVK	**Borovoye**	**25.21**	**328**	*e*P	**P**	**11 23 43.8**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,14nm,1.6s,mb4.2						
BRVK	**Borovoye**	**25.21**	**328**	*e*P	**P**	**11 23 43.5**	**-0.2**
	comp=Z,10nm,1.0s,mb4.3						
CN2	**Changchun**	**27.86**	**58**	*e*P	**P**	**11 24 08.5**	**+0.8**
CN2				*e*S	**S**	**11 28 56.8**	**+5.9**
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=E,300nm,16.0s						
CN2				LR	LR		
	comp=Z,500nm,18.0s,MS4.1						
ABKAR	**Akbulak array**	**28.73**	**313**	*e*P	**P**	**11 24 14.8**	**-0.6**
	comp=Z,1.2nm,0.6s,mb3.8						
KSRS	**Korea Array**	**29.31**	**72**	P	**P**	**11 24 19.9**	**-0.7**
	comp=Z,0.6nm,0.6s,mb3.5,baz=289,slow=10,SNR=3.2						
KSRS				LR	LR	11 35 35.2	
	comp=Z,68nm,21.1s,MS3.2,baz=95,slow=35						
KSRS	**Korea Array**	**29.31**	**72**	P	**P**	**11 24 20.0**	**-0.7**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
KSRS				MLR	MLR		
	comp=Z,68nm,21.1s,MS3.2						
AKTK	**Aktyubinsk**	**30.32**	**315**	P	**P**	**11 24 28.9**	**-0.5**
AKTK				LR	LR	11 38 10.9	
AKTO	**Aktyubinsk**	**30.32**	**315**	P	**P**	**11 24 28.9**	**-0.5**
	comp=Z,0.7nm,0.4s,mb3.8,baz=135,slow=11,SNR=4.8						
AKTO				LR	LR	11 38 10.9	
	comp=Z,271nm,18.5s,MS3.9,baz=286,slow=40						
PSI	**Prapat**	**31.00**	**167**	LR	LR	11 38 52.3	
	comp=Z,194nm,18.2s,MS3.8,baz=163,slow=40						
ARU	**Arti**	**32.67**	**325**	*e*P	**P**	**11 24 49.7**	**-0.3**
ARU				pmax	pmax		
	comp=Z,11nm,1.7s,mb4.5						
KLR	**Kul'dur**	**33.28**	**50**	*e*P	**P**	**11 24 52.0**	**-3.5**
KLR				MLR	MLR		
	comp=E,500nm,12.5s						
KLR				MLR	MLR		
	comp=Z,2μm,12.5s,MS5.0						
GNI	**Garni**	**38.27**	**294**	*e*P	**P**	**11 25 42.3**	**+3.8**
GNI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
DAV	**Davao City (W)**	**40.46**	**123**	LR	LR	11 43 43.6	
	comp=Z,272nm,19.4s,MS4.1,baz=1.3,slow=38						
OBN	**Obninsk**	**44.03**	**317**	*e*P	**P**	**11 26 26.6**	**+1.0**
OBN				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
OBN				MLR	MLR		
	comp=Z,100nm,19.0s,MS3.8						
ASF	**Jabal al Asfar**	**46.06**	**284**	P	**P**	**11 26 40.3**	**-1.8**
	comp=Z,1.4nm,0.3s,mb4.3,baz=334,slow=4.5,SNR=3.1						
BR131	**Keskin Array S**	**46.78**	**295**	*e*P	**P**	**11 26 46.4**	**-1.2**
	comp=Z,2.3nm,0.7s,mb4.2						
BRTR	**Keskin Array B**	**46.78**	**295**	P	**P**	**11 26 46.5**	**-1.1**
	comp=Z,3.5nm,0.8s,mb4.4,baz=94,slow=7.9,SNR=12						
MMAI	**Mount Meron Ar**	**47.02**	**286**	LR	LR	11 51 37.2	
	comp=Z,61nm,18.8s,MS3.6,baz=220,slow=43						
AKASG	**Malin Array Be

BILL pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
BILL MLR MLR
comp=Z,100nm,17.0s,MS3.9
NB2 NORSAR Subarra 57.22 325 P **P** **11 28 03.9 -1.2**
comp=Z,2.8nm,1.0s,mb4.2,baz=80,slow=7.4
NOA NORSAR Array B 57.22 325 P **P** **11 28 03.8 -1.2**
comp=Z,1.1nm,0.7s,mb4.0,baz=80,slow=7.1,SNR=8.9
NOA LR LR 11 54 31.6
comp=Z,163nm,18.3s,MS4.2,baz=100,slow=38
NOA NORSAR Array B 57.22 325 P **P** **11 28 03.8 -1.3**
NOA pmax pmax
comp=Z,1.0nm,0.7s
NOA MLR MLR
comp=Z,163nm,18.3s
MBWA Marble Bar 60.20 150 *e*P **P** **11 28 25.5 -0.7**
comp=Z,14nm,0.7s,mb5.1
KMBO Kilima Mbogo 61.95 248 LR LR 11 56 04.3
comp=Z,52nm,19.1s,MS3.7,baz=275,slow=37
WRAB Tennant Creek 66.50 136 *e*P **P** **11 29 07.7 -0.3**
WRAB pmax pmax
comp=Z,14nm,0.8s,mb5.0
WRAB Tennant Creek 66.50 136 *e*P **P** **11 29 07.7 -0.3**
comp=Z,14nm,0.8s,mb5.1
ASAR Alice Springs 69.20 139 P **P** **11 29 24.2 -0.8**
comp=Z,6.6nm,0.6s,mb4.8,baz=326,slow=5.2,SNR=36
ASAR Alice Springs 69.20 139 P **P** **11 29 24.2 -0.8**
ASAR pmax pmax
comp=Z,7.0nm,0.6s
ILAR Eielson Array 71.97 23 P **P** **11 29 41.5 +0.1**
comp=Z,1.1nm,0.9s,mb3.8,baz=295,slow=4.9,SNR=11
ILAR Eielson Array 71.97 23 P **P** **11 29 41.5 +0.1**
ILAR pmax pmax
comp=Z,1.0nm,0.9s
ESDC Sonseca Array 73.85 307 P **P** **11 29 51.6 -1.3**
comp=Z,0.1nm,0.3s,mb3.2,baz=43,slow=5.8,SNR=4.1
ESDC LR LR 12 03 26.6
comp=Z,42nm,19.3s,MS3.7,baz=40,slow=37
CTA Charters Tower 74.02 128 P **P** **11 29 55.2 +1.2**
comp=Z,2.6nm,0.7s,mb4.2,baz=288,slow=6.4,SNR=6.5
CTA Charters Tower 74.02 128 P **P** **11 29 55.2 +1.1**
CTA pmax pmax
comp=Z,3.0nm,0.7s
STKA Stephens Creek 79.84 139 P **P** **11 30 26.6 0.0**
comp=Z,3.1nm,0.8s,mb4.3,baz=327,slow=9.3,SNR=4.8
YKA Yellowknife Ar 82.12 12 P **P** **11 30 37.4 -1.0**
comp=Z,0.8nm,0.8s,mb3.7,baz=332,slow=6.0,SNR=2.9
YKA Yellowknife Ar 82.12 12 P **P** **11 30 37.4 -1.1**
YKA pmax pmax
comp=Z,1.0nm,0.8s
SCHQ Schefferville 90.38 348 LR LR 12 14 47.2
comp=Z,60nm,19.7s,MS4.0,baz=75,slow=38
OTAV Otavalo 145.49 343 *e*PKPdf PKPdf 11 37 57.1 0.0

IDC 27 11:22:57.2±9.2, 22°.74S×66°.12W, h226km±81km, mb3.0/3, mb1 3.2/5, mb1mx3.1/14, mbtmp2.9/5, Error ellipse: s-maj=230.8km s-min=22.2km az=51.0, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**6.69**	**343**	P	Pn	11 24 34.9	+1.1
	1.4nm,0.3s,baz=156,slow=4.9,SNR=37						
LPAZ				S	S	11 25 51.9	+1.0
	0.2nm,0.3s,baz=48,slow=19,SNR=5.3						
CPUP	**Villa Florida**	**8.76**	**116**	P	Pn	11 25 00.0	-0.2
	0.3nm,0.3s,baz=266,slow=13,SNR=3.5						
TXAR	**Lajitas Array**	**63.14**	**323**	P	P	11 33 00.9	-0.2
	0.1nm,0.5s,baz=184,slow=5.4,SNR=2.9						
ANMO	**Albuquerque**	**68.97**	**325**	P	P	11 33 38.6	+0.5
	0.3nm,0.5s,baz=135,slow=2.9,SNR=4.1						
PDAR	**Pinedale Array**	**76.49**	**329**	P	P	11 34 22.9	+0.8
	0.2nm,0.6s,baz=141,slow=5.7,SNR=4.2						

BJI ***27*** *11:25:34.5, 7°.90S×122°.31E, h533km, mB4.7/22, mb4.6/34*
NEIC ***27*** *11:25:40.7±0.5, 7°.31S×121°.95E, h533km±7km, mb4.6/21, Error ellipse: s-maj=8.9km s-min=5.1km az=54.0*
ISCJB ***27*** *11:25:40.2±0.2, 7°.37S±0°.04×121°.90E±0°.04, h546km±3km, mb4.5/55, Error ellipse: s-maj=6.2km s-min=5.6km az=41.8*
DJA ***27*** *11:25:40, 7°.46S×121°.89E, h544km, mb4.9/28*
IDC ***27*** *11:25:40.5±1.2, 7°.28S×121°.93E, h526km±14km, mb3.9/16, mb1 3.9/18, mb1mx3.8/25, mbtmp3.9/18, Error ellipse: s-maj=15.3km s-min=8.9km az=70.0*
MOS ***27*** *11:25:41.3±0.8, 7°.22S×121°.98E, h557km, mb4.5/16, Error ellipse: s-maj=15.7km s-min=7.9km az=108.1*
ISC 27 11:25:40.8±0.2, 7°.40S±0°.04×121°.91E±0°.04, h538km±3km, h539km±2.3km: pP-P, n155, c0°91/148, mb4.5/55, 1C-2D, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**1.27**	**165**	P	**P**	**11 26 45.6**	**-1.1**
MMRI				S	**S**	**11 27 41.3**	**+1.1**
BKSI	**Bulukumba**	**2.72**	**319**	P	**P**	**11 26 53.6**	**+0.3**
WSI	**Waingapu**	**2.76**	**215**	P	**P**	**11 26 52.8**	**-0.6**
WSI				S	**S**	**11 27 51.0**	**-1.5**
BNSI	**Bone**	**3.48**	**329**	P	**P**	**11 27 00.4**	**+2.2**
KDI	**Kendari**	**3.50**	**12**	P	**P**	**11 26 58.6**	**+0.3**
KHKI	**Kahang-Kahang**	**6.31**	**261**	P	**P**	**11 27 21.0**	**-0.9**
	0.9nm2μm232nm,0.6s						
NLAI	**Namlea**	**6.62**	**52**	P	**P**	**11 27 25.3**	**+0.5**
	5.8nm2μm,0.7s						
SRBI	**Singaraja**	**6.67**	**264**	P	**P**	**11 27 25.4**	**+0.2**
	0.7nm1μm92nm,0.8s						
PCI	**Palu**	**6.78**	**342**	P	**P**	**11 27 27.2**	**+0.9**
	1.3nm4μm286nm,1.0s						
IGBI	**Denpasar**	**6.84**	**258**	P	**P**	**11 27 26.4**	**-0.5**
	7.8nm871nm,0.5s						
AAI	**Ambon**	**7.26**	**60**	P	**P**	**11 27 30.9**	**-0.1**
	1.6nm7μm268nm,0.8s						
NBBI	**Negara**	**7.28**	**262**	P	**P**	**11 27 32.1**	**+0.9**
	1.9nm7μm427nm,0.9s						
BYJI	**Banyuwangi**	**7.53**	**263**	P	**P**	**11 27 34.5**	**+0.9**
	4.8nm1μm,0.9s						
KMMI	**Kalianget**	**7.89**	**272**	P	**P**	**11 27 39.2**	**+2.0**
	1.9nm6μm699nm,0.9s						
GMJI	**Gumukmas**	**8.43**	**264**	P	**P**	**11 27 41.7**	**-0.9**
	0.6nm3μm93nm,0.9s						
MNI	**Manado**	**9.26**	**19**	P	**P**	**11 27 51.2**	**+0.1**
	3μm300nm,0.8s						
PWJI	**Pagerwojo**	**10.03**	**266**	P	**P**	**11 27 57.3**	**-1.7**
	129nm,0.6s						
SJI	**Sawahan**	**10.06**	**267**	P	**P**	**11 27 58.5**	**-0.8**
	5μm220nm,0.7s						
PCJI	**Pacitan**	**10.66**	**265**	P	**P**	**11 28 03.5**	**-2.0**
	227nm,0.6s						
KNA	**Kununurra**	**10.67**	**142**	P	**P**	**11 28 05.8**	**+0.2**
	4μm271nm,0.8s						
TLE	**Tual**	**10.90**	**81**	P	**P**	**11 28 08.4**	**+0.4**
	3μm277nm,0.8s						
PBKI	**Pangkalan Bun**	**11.21**	**294**	P	**P**	**11 28 13.0**	**+1.7**
	2μm150nm,1.3s						
FITZ	**Fitzroy Crossi**	**11.24**	**161**	P	**P**	**11 28 12.0**	**+0.6**
	6.1nm,0.3s,baz=354,slow=6.5,SNR=298						
FITZ				S	**S**	**11 30 15.2**	**-0.2**
	1.4nm,0.3s,baz=47,slow=0.5,SNR=5.8						
FITZ	**Fitzroy Crossi**	**11.24**	**161**	*e*Pn	**P**	**11 28 12.0**	**+0.5**
FITZ	**Fitzroy Crossi**	**11.24**	**161**	P	**P**	**11 28 11.7**	**+0.3**
	136nm,0.8s						
SGSI	**Sangihe**	**11.59**	**18**	P	**P**	**11 28 14.1**	**-1.1**
	5μm344nm,0.7s						
KAKA	**Kakadu**	**11.63**	**118**	*e*Pn	**P**	**11 28 15.3**	**-0.3**
BJII	**Banjamegara**	**12.10**	**270**	P	**P**	**11 28 22.2**	**+1.7**
	39nm,0.9s						
TSM	**Tawau**	**12.30**	**341**	P	**P**	**11 28 22.5**	**0.0**
MYLDM	**Lahad Datu**	**12.95**	**345**	P	**P**	**11 28 29.5**	**+0.2**
MYLDM	**Lahad Datu**	**12.95**	**345**	P	**P**	**11 28 30.5**	**+1.1**
	74nm,1.1s						
SBUM	**Sibu**	**13.76**	**315**	P	**P**	**11 28 36.2**	**-1.5**
MBWA	**Marble Bar**	**13.84**	**189**	*e*Pn	**P**	**11 28 38.6**	**+0.2**
LEM	**Lembang**	**14.19**	**271**	P	**P**	**11 28 41.3**	**-0.9**
	88nm,0.9s						
KKM	**Kota Kinabalu**	**14.52**	**337**	P	**P**	**11 28 44.9**	**-0.7**
KKM	**Kota Kinabalu**	**14.52**	**337**	*e*Pn	**P**	**11 28 44.3**	**-1.3**
KKM	**Kota Kinabalu**	**14.52**	**337**	P	**P**	**11 28 45.0**	**-0.6**
	2μm152nm,0.6s						
KSM	**Kuching**	**14.55**	**307**	*e*Pn	**P**	**11 28 46.0**	**0.0**
	24nm,0.8s						
TPI	**Tanjungpandan**	**14.93**	**287**	P	**P**	**11 28 49.9**	**+0.1**
	36nm,0.7s						
CBJI	**Citeko**	**14.98**	**273**	P	**P**	**11 28 47.3**	**-3.1**
	481nm,0.8s						
TBP	**Tagbilaran**	**17.09**	**7**	*e*P	**P**	**11 29 10.3**	**-0.8**
WRAB	**Tennant Creek**	**17.34**	**137**	*e*P	**P**	**11 29 14.1**	**+0.8**
WRAB				pmax	pmax		
	comp=Z,14nm,0.8s						
WRAB	**Tennant Creek**	**17.34**	**137**	*e*P	**P**	**11 29 14.1**	**+0.9**
	comp=Z,14nm,0.8s						
WRAB	**Tennant Creek**	**17.34**	**137**	P	**P**	**11 29 11.8**	**-1.5**
	comp=Z,18nm,0.9s						
SMPI	**Sarmi**	**17.58**	**73**	P	**P**	**11 29 16.6**	**+1.0**
	comp=Z,42nm,1.1s						
MDSI	**Maura Dua**	**17.87**	**278**	P	**P**	**11 29 17.6**	**-0.6**
ASAR	**Alice Springs**	**19.85**	**146**	P	**P**	**11 29 37.3**	**+1.2**
	comp=Z,1.6nm,0.3s,baz=342,slow=15,SNR=33						
TGY	**Tagaytay City**	**21.39**	**357**	P	**P**	**11 29 50.2**	**+0.1**
	comp=Z,193nm,0.5s,baz=198,slow=5.9,SNR=5.1						
PSI	**Prapat**	**25.07**	**293**	P	**P**	**11 30 22.8**	**-0.3**
	comp=Z,7.7nm,0.4s,mb4.7,baz=100,slow=4.8,SNR=11						
CTA	**Charters Tower**	**26.75**	**121**	ScP	ScP	11 36 31.7	-0.9
	comp=Z,3.1nm,0.8s,baz=358,slow=5.6,SNR=5.9						
QIZ	**Qiongzhong**	**28.83**	**336**	P	**P**	**11 30 55.5**	**-0.4**
QIZ				S	**S**	**11 35 10.5**	**+2.2**
QIZ				pmax	pmax		
	comp=Z,27nm,0.8s,mb4.9						
STKA	**Stephens Creek**	**30.49**	**146**	P	**P**	**11 31 11.5**	**+1.4**
	comp=Z,4.8nm,0.7s,mb4.1,baz=334,slow=10,SNR=30						
STKA				ScP	ScP	11 36 44.7	+0.4
	comp=Z,3.6nm,0.8s,baz=0.0,slow=3.0,SNR=4.0						
STKA	**Stephens Creek**	**30.49**	**146**	*e*P	**P**	**11 31 11.3**	**+1.2**
STKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
STKA	**Stephens Creek**	**30.49**	**146**	*e*P	**P**	**11 31 11.3**	**+1.1**
	comp=Z,0.8nm,0.8s						
STKA				*e*pP		11 32 37.8	
GUMO	**Guam**	**30.90**	**48**	P	**P**	**11 31 12.6**	**-1.3**
	comp=Z,33nm,0.7s,mb5.0,baz=270,slow=3.0,SNR=4.5						
CM31	**Chiang Mai Arr**	**34.26**	**319**	*e*P	**P**	**11 31 42.6**	**+0.3**
	comp=Z,1.9nm,0.4s,mb4.0						
CMAR	**Chiang Mai Arr**	**34.26**	**319**	P	**P**	**11 31 42.9**	**+0.5**
	comp=Z,5.9nm,0.6s,mb4.3,baz=147,slow=7.0,SNR=33						
CMAR				ScP	ScP	11 36 59.4	+1.8
	comp=Z,1.5nm,0.7s,baz=167,slow=2.7,SNR=7.3						
CHTO	**Chiang Mai**	**34.52**	**319**	*e*P	**P**	**11 31 44.6**	**+0.1**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.4						
CHTO	**Chiang Mai**	**34.52**	**319**	*e*P	**P**	**11 31 44.6**	**+0.2**
	comp=Z,6.8nm,0.6s,mb4.3						
GYA	**Guiyang**	**36.77**	**337**	P	**P**	**11 32 04.8**	**+1.8**
GYA				pP	pP	11 33 39.8	+3.7
GYA				PcP	PcP	11 34 13.0	+2.2
GYA				ScP	ScP	11 37 09.5	+2.8
GYA				S	**S**	**11 37 13.3**	**+4.5**
GYA				sS	sS	11 40 01.0	+0.9
GYA				ScS	ScS	11 41 16.8	+1.1
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.4						
KMI	**Kunming**	**37.33**	**331**	P	**P**	**11 32 09.3**	**+1.6**
KMI				pP	pP	11 33 43.3	+2.2
KMI				PP	PP	11 33 52.0	+1.7
KMI				sP	sP	11 34 44.0	+1.4
KMI				S	**S**	**11 37 21.8**	**+4.6**
KMI				SS	SS	11 40 27.8	-5.7
KMI				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.4						
KMI				pmax	pmax		
	comp=Z,120nm,5.5s						
WHN	**Wuhan**	**38.42**	**349**	*e*P	**P**	**11 32 16.8**	**+0.4**
NJ2	**Nanjing**	**39.34**	**356**	*e*P	**P**	**11 32 24.5**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.4						
CD2	**Chengdu**	**41.88**	**336**	∥*e*P	**P**	**11 32 43.8**	**-0.3**
CD2				pP	pP	11 34 21.8	+1.4
CD2				PP	PP	11 34 34.5	-0.2
CD2				sP	sP	11 35 20.8	-0.2
CD2				S	**S**	**11 38 24.3**	**+0.9**
CD2				sS	sS	11 41 18.8	-0.2
CD2				SS	SS	11 41 46.0	-3.9
CD2				pmax	pmax		
	comp=Z,50nm,0.5s,mb5.3						
CD2				pmax	pmax		
	comp=Z,200nm,5.1s						
XAN	**Xi'an**	**43.01**	**344**	P	**P**	**11 32 52.0**	**-1.0**
XAN				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.5						
XAN				pmax	pmax		
	comp=Z,20nm,5.7s						
KSRS	**Korea Array**	**44.97**	**7**	P	**P**	**11 33 07.5**	**-0.5**
	comp=Z,7.6nm,0.8s,mb4.2,baz=186,slow=8.5,SNR=40						
KSRS				PcP	PcP	11 34 38.8	+1.0
	comp=Z,1.5nm,0.7s,baz=193,slow=3.3,SNR=7.2						
KSRS				ScP	ScP	11 37 40.5	+1.4
	comp=Z,0.8nm,0.9s,baz=181,slow=4.1,SNR=3.6						
KSRS	**Korea Array**	**44.97**	**7**	P	**P**	**11 33 07.6**	**-0.5**
KSRS						11 34 38.8	
KSRS				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.2						
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.8						
KSRS				pmax	pmax		
	comp=N,1.0nm,0.9s						
MAJO	**Matsushiro**	**46.31**	**18**	*e*P	**P**	**11 33 16.9**	**-1.4**
MAJO				pmax	pmax		
	comp=Z,97nm,1.9s,mb5.0						
MAJO	**Matsushiro**	**46.31**	**18**	*e*P	**P**	**11 33 16.9**	**-1.4**
	comp=Z,97nm,1.9s,mb5.0						
MAT	**Matsushiro**	**46.31**	**18**	P	**P**	**11 33 17.2**	**-1.1**
MJAR	**Matsushiro Arr**	**46.31**	**18**	P	**P**	**11 33 16.9**	**-1.4**
	comp=Z,6.6nm,0.5s,mb4.4,baz=245,slow=4.9,SNR=47						
LZH	**Lanzhou**	**46.47**	**340**	*e*P	**P**	**11 33 20.3**	**+0.8**
LZH				pmax	pmax		
	comp=Z,26nm,1.0s,mb4.7						
LZH				pmax	pmax		
	comp=Z,140nm,4.3s						
LSA	**Lhasa**	**47.28**	**323**	P	**P**	**11 33 26.0**	**+0.3**
LSA	**Lhasa**	**47.28**	**323**	*e*P	**P**	**11 33 27.0**	**+1.3**
LSA				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.6						
LSA	**Lhasa**	**47.28**	**323**	*e*P	**P**	**11 33 27.0**	**+1.2**
	comp=Z,12nm,0.6s,mb4.6						
BJT	**Baijiatuau**	**47.48**	**354**	*e*P	**P**	**11 33 26.3**	**-0.7**
BJT				pmax	pmax		
	comp=Z,45nm,0.5s						
BJT	**Baijiatuau**	**47.48**	**354**	*e*P	**P**	**11 33 26.3**	**-0.7**
	comp=Z,45nm,0.5s,mb5.3						
BJI	**Beijing**	**47.50**	**354**	P	**P**	**11 33 26.0**	**-1.2**
BJI				pP	pP	11 35 07.8	+0.8
BJI				PP	PP	11 35 27.5	+1.8
BJI				sP	sP	11 36 06.8	+0.3
BJI				S	**S**	**11 39 46.5**	**+4.2**
BJI				sS	sS	11 42 44.3	+1.4
BJI				SS	SS	11 43 26.5	+6.8
BJI				pmax	pmax		
	comp=Z,54nm,0.6s,mb5.2						
ODAN	**Odare**	**47.74**	**317**	*e*P	**P**	**11 33 29.5**	**+0.2**
	comp=Z,26nm,0.6s,mb4.9						
TAPN	**Taplejung**	**47.84**	**318**	*e*P	**P**	**11 33 30.5**	**+0.5**
	comp=Z,40nm,0.4s,mb5.3						
RAMN	**Ramite**	**48.34**	**316**	*e*P	**P**	**11 33 34.5**	**+0.8**
	comp=Z,55nm,0.6s,mb5.3						
HHC	**Hu-ho-hao-te**	**48.95**	**350**	*e*P	**P**	**11 33 38.0**	**0.0**
HHC				PcP	PcP	11 34 52.0	0.0
HHC				pP	pP	11 35 18.5	-0.1
HHC				PP	PP	11 35 40.0	+1.2
HHC				sP	sP	11 36 16.8	-1.1
HHC				ScP	ScP	11 37 55.0	-0.8
HHC				PcS	PcS	11 38 47.5	-1.7
HHC				S	**S**	**11 40 02.8**	**+0.6**
HHC				ScS	ScS	11 42 30.0	-2.0
HHC				sS	sS	11 43 02.0	-2.0
HHC				SS	SS	11 43 43.5	+1.0
HHC				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.6						
HHC				pmax	pmax		
	comp=Z,250nm,6.3s						
JIRN	**Jiri**	**49.07**	**317**	*e*P	**P**	**11 33 39.5**	**+0.4**
	comp=Z,16nm,0.3s,mb5.0						
GUN	**Gumba**	**49.44**	**317**	*e*P	**P**	**11 33 42.4**	**+0.5**
	comp=Z,36nm,0.4s,mb5.2						
PKI	**Pulchoki**	**49.55**	**316**	*e*P	**P**	**11 33 42.7**	**0.0**
	comp=Z,23nm,0.5s,mb4.9						
PKI	**Pulchoki**	**49.55**	**316**	*e*P	**P**	**11 33 43.2**	**+0.5**
PKI				pmax	pmax		
	comp=Z,21nm,0.6s,mb4.7						
PKI	**Pulchoki**	**49.55**	**316**	*e*P	**P**	**11 33 43.2**	**+0.5**
	comp=Z,21nm,0.6s,mb4.8						
PKIN	**Phulchoki**	**49.56**	**316**	*e*P	**P**	**11 33 43.2**	**+0.4**
	comp=Z,21nm,0.6s,mb4.8						
KKN	**Kakani**	**49.77**	**316**	*e*P	**P**	**11 33 44.4**	**+0.1**
	comp=Z,15nm,0.5s,mb4.7						
KKN	**Kakani**	**49.77**	**316**	*e*P	**P**	**11 33 44.4**	**+0.1**
KKN				pmax	pmax		
	comp=Z,15nm,0.5s,mb4.7						
DMN	**Daman**	**49.78**	**316**	*e*P	**P**	**11 33 44.4**	**0.0**
GKN	**Gorkha**	**50.35**	**316**	*e*P	**P**	**11 33 48.5**	**0.0**
	comp=Z,25nm,0.6s,mb4.8						
GTA	**Gaotai**	**50.88**	**338**	P	**P**	**11 33 53.0**	**+0.9**
GTA				pmax	pmax		
	comp=Z,19nm,0.9s,mb4.4						
KOLN	**Koldanda**	**50.93**	**315**	*e*P	**P**	**11 33 52.9**	**+0.1**
CN2	**Changchun**	**51.06**	**3**	*e*P	**P**	**11 33 56.3**	**+2.9**
VLA	**Vladivostok**	**51.09**	**9**	*e*P	**P**	**11 33 52.7**	**-1.0**
VLA				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.3						
MDJ	**Mudanjiang**	**52.24**	**7**	P	**P**	**11 34 01.5**	**-0.4**
MDJ				PcP	PcP	11 35 00.3	-4.0
MDJ				pP	pP	11 35 43.5	-1.0
MDJ				PP	PP	11 36 09.5	+1.4
MDJ				sP	sP	11 36 41.5	-1.7
MDJ				ScP	ScP	11 38 06.3	-3.6
MDJ				PcS	PcS	11 39 00.5	-2.9
MDJ				S	**S**	**11 40 50.0**	**+3.5**
MDJ				ScS	ScS	11 42 56.5	+1.7
MDJ				pmax	pmax		
	comp=Z,38nm,1.0s,mb4.7						
MDJ				pmax	pmax		
	comp=Z,100nm,6.1s						
MDJ	**Mudanjiang**	**52.24**	**7**	*e*P	**P**	**11 34 01.6**	**-0.2**
	comp=Z,24nm,0.8s,mb4.6						
ERM	**Erimo**	**52.88**	**20**	*e*P	**P**	**11 34 06.8**	**+0.3**
ERM				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2						
ERM	**Erimo**	**52.88**	**20**	*e*P	**P**	**11 34 06.8**	**+0.3**
	comp=Z,9.6nm,0.7s,mb4.2						
ULN	**Ulaanbaatar**	**56.57**	**348**	*e*P	**P**	**11 34 32.3**	**+0.1**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb3.7						
ULN	**Ulaanbaatar**	**56.57**	**348**	*e*P	**P**	**11 34 32.3**	**0.0**
	comp=Z,3.3nm,0.6s,mb3.7						
SONM	**Songino Array**	**56.68**	**348**	P	**P**	**11 34 33.0**	**0.0**
	comp=Z,13nm,0.6s,mb4.3,baz=165,slow=8.4,SNR=48						
YSS	**Yuzh-Sakhalins**	**57.20**	**17**	*e*P	**P**	**11 34 36.4**	**-0.2**
YSS				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.2						
YSS	**Yuzh-Sakhalins**	**57.20**	**17**	*e*P	**P**	**11 34 36.3**	**-0.2**
	comp=Z,15nm,0.7s,mb4.3						
WMQ	**Urumqi**	**59.65**	**332**	*e*P	**P**	**11 34 53.5**	**+0.4**
WMQ				PcP	PcP	11 35 34.0	+0.6
WMQ				pP	pP	11 36 41.5	+1.8
WMQ				PP	PP	11 37 15.5	+1.9
WMQ				sP	sP	11 37 37.8	+0.6
WMQ				pmax	pmax		
	comp=Z,24nm,0.6s,mb4.7						
WMQ				pmax	pmax		
	comp=Z,210nm,6.4s						
ZAK	**Zakamensk**	**59.78**	**346**	*e*P	**P**	**11 34 53.0**	**-0.9**
ZAK				*e*		11 35 34.2	
ZAK				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.5						
TLY	**Talaya**	**60.91**	**347**	*e*P	**P**	**11 35 00.5**	**-0.8**
TLY				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.0						
TLY	**Talaya**	**60.91**	**347**	*e*P	**P**	**11 35 01.4**	**+0.1**
	comp=Z,5.7nm,0.8s,mb4.0						
KSH	**Kashi**	**63.10**	**321**	P	**P**	**11 35 16.5**	**+0.7**
KSH				PcP	PcP	11 35 48.3	+0.7
KSH				pP	pP	11 37 05.5	+1.4
KSH				PP	PP	11 37 45.3	+1.5
KSH				ScP		11 38 58.5	
KSH				PcS		11 39 50.3	
KSH				S	**S**	**11 43 04.5**	**-0.6**
KSH				ScS	ScS	11 44 12.3	-3.2
KSH				sS	sS	11 46 16.5	-2.0
KSH				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.1						
KSH				pmax	pmax		
	comp=Z,160nm,5.3s						
MK31	**Makanchi Array**	**64.41**	**331**	*e*P	**P**	**11 35 24.4**	**+0.4**
MKAR	**Makanchi Array**	**64.41**	**331**	P	**P**	**11 35 24.3**	**+0.3**
	comp=Z,17nm,0.6s,mb4.7,baz=136,slow=7.0,SNR=139						
KBL	**Kabul**	**65.04**	**313**	*e*P	**P**	**11 35 28.4**	**+0.1**
KBL				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.3						
KBL	**Kabul**	**65.04**	**313**	*e*P	**P**	**11 35 28.4**	**+0.1**
	comp=Z,6.6nm,0.5s,mb4.3						
AAK	**Ala-Archa**	**65.86**	**323**	P	**P**	**11 35 33.9**	**+0.6**
	comp=Z,5.3nm,0.6s,mb4.2,baz=131,slow=2.4,SNR=8.5						
AAK	**Ala-Archa**	**65.86**	**323**	P	**P**	**11 35 33.9**	**+0.6**
PETK	**Petropavlovsk-**	**67.49**	**22**	P	**P**	**11 35 43.8**	**+0.7**
	comp=Z,11nm,0.7s,mb4.5,baz=196,slow=4.4,SNR=28						
ZAA0	**Zalesovo Array**	**68.63**	**337**	*e*P	**P**	**11 35 48.8**	**-1.2**
ZALV	**Zalesovo Beam**	**68.63**	**337**	P	**P**	**11 35 49.0**	**-1.0**
	comp=Z,16nm,0.3s,mb5.0,baz=133,slow=4.7,SNR=76						
ZALV	**Zalesovo Beam**	**68.63**	**337**	P	**P**	**11 35 49.0**	**-1.0**
KURK	**Kurchatov**	**68.89**	**332**	*e*P	**P**	**11 35 51.4**	**-0.2**
KURK				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.5						
KURK	**Kurchatov**	**68.89**	**332**	*e*P	**P**	**11 35 51.4**	**-0.3**
	comp=Z,14nm,1.0s,mb4.4						
YAK	**Yakutsk**	**69.49**	**4**	*e*P	**P**	**11 35 53.8**	**-1.2**
YAK				pmax	pmax		
	comp=Z,31nm,0.9s,mb4.8						
YAK				pmax	pmax		
	comp=N,12nm,1.1s						
YAK	**Yakutsk**	**69.49**	**4**	*e*P	**P**	**11 35 54.8**	**-0.2**
	comp=N,44nm,0.7s,mb5.1						
MAW	**Mawson**	**71.72**	**200**	P	**P**	**11 36 09.6**	**+1.5**
	comp=N,2.7nm,0.5s,mb4.0,baz=57,slow=4.9,SNR=7.0						
MAW	**Mawson**	**71.72**	**200**	P	**P**	**11 36 09.6**	**+1.5**
MAW				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MAW	**Mawson**	**71.72**	**200**	*e*P	**P**	**11 36 09.

comp=N,0.9nm,0.6s,baz=180,slow=2.0,SNR=5.2
LPAZ La Paz 154.45 157 PKP2 PKPab 11 44 59.7 +1.3
LPAZ pmax pmax
comp=Z,1.0nm,0.6s

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*IDC **27** 11:41:16.9±1.1, 54.°17N×161.°37E, h0km, mb3.5/7, mb1 3.8/8, mb1mx3.6/24, mbtmp3.5/8, ML3.3/1, Error ellipse: s-maj=38.3km s-min=17.6km az=156.0*
*ISCJB **27** 11:41:19.5±0.9, 53.°83N±0.°03×161.°58E±0.°07, h29km±7km, mb3.5/7, Error ellipse: s-maj=7.4km s-min=3.4km az=26.0*
*MOS **27** 11:41:19.2±1.2, 53.°87N×161.°66E, h27km, mb4.0/3, Error ellipse: s-maj=17.7km s-min=9.5km az=72.1*
*KRSC **27** 11:41:20.1±0.4, 53.°88N×161.°39E, h24km±23km, ML4.4*
ISC 27 11:41:19.1±0.9, 53.°84N±0.°03×161.°51E±0.°07, h14km±6km, n39, σ1°27/59, mb3.5/7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.73**	**10**	*i* P	**Pg**	**11 41 32.2**	**-1.0**
MKZ				*e*S	**Sg**	**11 41 41.2**	**-1.6**
SPN	**Mys Shipunski**	**1.16**	**230**	S	**Sb**	**11 41 54.0**	**-1.8**
KII	**Karymskiy**	**1.23**	**280**	*e*P	**Pn**	**11 41 41.2**	**-0.7**
KII				*e*S	**Sb**	**11 41 55.6**	**-2.3**
NLC	**Nalytchevo**	**1.46**	**243**	*e*P	**Pn**	**11 41 43.8**	**-1.2**
NLC				*e*S	**Sn**	**11 42 01.1**	**-2.8**
AVH	**Avacha**	**1.75**	**252**	*i* P	**Pn**	**11 41 49.2**	**+0.1**
AVH				*e*S	**Sn**	**11 42 10.3**	**-0.8**
PET	**Petropavlovsk**	**1.89**	**245**	*e*P	**Pn**	**11 41 50.7**	**-0.3**
PET				*e*S	**Sn**	**11 42 13.0**	**-1.7**
PET	**Petropavlovsk**	**1.89**	**245**	*e*PN	**Pn**	**11 41 50.4**	**-0.6**
PET				*e*S	**Sn**	**11 42 13.5**	**-1.2**
PET				pmax	pmax		
	comp=Z,115nm,0.4s						
PET				smax			
	comp=E,582nm,0.4s						
PET				smax			
	comp=E,500nm,0.5s						
PET				smax			
	comp=N,700nm,0.4s						
PET				smax			
	comp=N,1μm,0.5s						
KMNR	**Kamenistaya**	**2.05**	**340**	*e*P	**Pn**	**11 41 54.4**	**+1.2**
KMNR				*e*S	**Sn**	**11 42 19.3**	**+0.7**
GNL	**Ganaly**	**2.12**	**267**	*i* P	**Pn**	**11 41 55.2**	**+1.1**
GNL				*e*S	**Sn**	**11 42 20.6**	**+0.3**
BZGR	**Bezymyannyi-Gr**	**2.15**	**348**	*e*P	**Pn**	**11 41 55.5**	**+0.9**
BZGR				*e*S	**Sn**	**11 42 21.1**	**0.0**
ZLN	**Zelenaya**	**2.22**	**350**	*e*P	**Pn**	**11 41 56.2**	**+0.7**
ZLN				*e*S	**Sn**	**11 42 22.0**	**-0.6**
KPT	**Kopyto**	**2.25**	**341**	*i* P	**Pn**	**11 41 56.8**	**+0.8**
KPT				*e*S	**Sn**	**11 42 22.8**	**-0.7**
PETK	**Petropavlovsk-**	**2.39**	**254**	Pn	**Pn**	**11 41 58.9**	**+1.1**
	comp=N,7.1nm,0.3s,baz=76,slow=19,SNR=72						
PETK				Sn	**Sn**	**11 42 29.3**	**+2.4**
	comp=N,25nm,0.3s,baz=79,slow=19,SNR=13						
PETK	**Petropavlovsk-**	**2.39**	**254**	PN	**Pn**	**11 41 58.9**	**+1.0**
PETK						11 42 29.3	
PETK				pmax	pmax		
	comp=Z,7.0nm,0.3s						
PETK				smax			
	comp=N,25nm,0.3s						
KOZ	**Kozyrevsk**	**2.41**	**338**	*e*P	**Pn**	**11 41 58.9**	**+0.8**
KOZ				*e*S	**Sn**	**11 42 27.9**	**+0.5**
KOZR	**Kozyr**	**2.41**	**338**	PN	**Pn**	**11 41 58.9**	**+0.7**
KOZR				S	**Sn**	**11 42 27.9**	**+0.4**
GRL	**Gorelyy**	**2.44**	**239**	*e*P	**Pn**	**11 41 59.5**	**+1.0**
GRL				*e*S	**Sn**	**11 42 27.6**	**-0.5**
KRSR	**Krestovskiy**	**2.44**	**348**	P	**Pn**	**11 41 59.0**	**+0.5**
KRSR				*e*S	**Sn**	**11 42 28.3**	**+0.2**
KBTR	**Krutoberegovo**	**2.49**	**17**	*i* P	**Pn**	**11 41 58.9**	**-0.3**
KBTR				*e*S	**Sn**	**11 42 26.9**	**-2.4**
KLY	**Klyuchi**	**2.52**	**349**	*e*P	**Pn**	**11 41 59.9**	**+0.2**
KLY				*e*S	**Sn**	**11 42 28.9**	**-1.3**
SRDR	**Sredinnyy**	**2.68**	**338**	*e*P	**Pn**	**11 42 03.3**	**+1.4**
SRDR				*e*S	**Sn**	**11 42 35.2**	**+1.0**
SRKR	**Sorokina**	**2.82**	**356**	P	**Pn**	**11 42 05.4**	**+1.6**
SRKR				S	**Sn**	**11 42 38.2**	**+0.6**
MIPR	**Malaya Ipel'ka**	**3.27**	**243**	P	**Pn**	**11 42 12.1**	**+2.2**
SKR	**Severo-Kuril's**	**4.58**	**228**	*e*PN	**Pn**	**11 42 30.7**	**+2.8**
SKR				pmax	pmax		
	comp=Z,20nm,0.5s						
ALID	**Alaid**	**4.71**	**233**	P	**Pn**	**11 42 32.1**	**+2.4**
ASAJ	**Asahikawa**	**15.73**	**239**	Pn	**Pn**	**11 45 04.0**	**+3.9**
	comp=Z,0.3nm,0.3s,baz=360,slow=19,SNR=3.4						
ERM	**Erimo**	**17.00**	**233**	*e*P	**Pn**	**11 45 13.7**	**-2.7**
ERM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MAJO	**Matsushiro**	**23.68**	**232**	*e*P	**P**	**11 46 30.3**	**+0.1**
MJAR	**Matsushiro Arr**	**23.68**	**232**	P	**P**	**11 46 31.0**	**+0.7**
	comp=Z,1.1nm,0.8s,mb3.4,baz=24,slow=12,SNR=4.5						
MJAR	**Matsushiro Arr**	**23.68**	**232**	P	**P**	**11 46 31.0**	**+0.8**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ILAR	**Eielson Array**	**27.69**	**46**	P	**P**	**11 47 04.6**	**-1.7**
	comp=Z,0.3nm,0.7s,mb3.0,baz=257,slow=7.8,SNR=6.1						
MKAR	**Makanchi Array**	**48.59**	**296**	P	**P**	**11 49 58.7**	**-3.1**
	comp=Z,0.1nm,0.4s,mb3.2,baz=37,slow=7.7,SNR=2.7						
NVAR	**Mina Array Bea**	**54.70**	**71**	P	**P**	**11 50 48.3**	**+0.7**
	comp=Z,0.4nm,0.7s,mb3.5,baz=302,slow=7.4,SNR=4.0						
FINES	**FINESS Array B**	**59.76**	**337**	P	**P**	**11 51 21.2**	**-1.8**
	comp=Z,2.0nm,0.9s,mb4.1,baz=39,slow=9.0,SNR=3.6						
FINES	**FINESS Array B**	**59.76**	**337**	P	**P**	**11 51 21.2**	**-1.8**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NOA	**NORSAR Array B**	**63.05**	**344**	P	**P**	**11 51 43.3**	**-1.9**
	comp=Z,0.2nm,0.4s,mb3.6,baz=22,slow=6.8,SNR=3.0						
TXAR	**Lajitas Array**	**69.57**	**68**	P	**P**	**11 52 26.9**	**-0.7**
	comp=Z,0.6nm,0.6s,mb3.7,baz=301,slow=4.7,SNR=11						
TXAR	**Lajitas Array**	**69.57**	**68**	P	**P**	**11 52 26.9**	**-0.6**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ESK	**Eskdalemuir**	**70.48**	**351**	*i* P	**P**	**11 52 33.5**	**+0.8**

IDC 27 11:46:13.7±2.1, 6.°74S×129.°85E, h0km, mb4.4/1, mb1 4.4/3, mb1mx3.7/18, mbtmp4.2/3, ML4.2/2, Error ellipse: s-maj=139.9km s-min=30.6km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.83**	**162**	Pn	Pn	11 49 31.4	+0.2
	1.0nm,0.3s,baz=345,slow=13,SNR=28						
WRA				Sn	Sn	11 51 53.8	-12
	0.6nm,0.3s,baz=328,slow=24,SNR=7.0						
ASAR	**Alice Springs**	**17.28**	**167**	P	Pn	11 50 16.4	0.0
	0.9nm,0.3s,baz=339,slow=9.4,SNR=46						
MKAR	**Makanchi Array**	**67.92**	**327**	P	P	11 57 14.4	+0.1
	2.1nm,0.5s,baz=121,slow=7.8,SNR=28						

MAN 27 11:56:56, 5.°81N×124.°45E, h33km, mb4.0, ML2.8, MS2.5, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**0.56**	**61**	⇑*e*P	Pb	11 57 12.5	+4.9
GSPH				*e*S	Sb	11 57 23.6	+8.0
BUKP	**Musuan**	**2.14**	**16**	*e*P	Pn	11 57 30.8	+1.4
PAGZ	**Pagadian**	**2.29**	**332**	*e*P	Pn	11 57 32.9	+1.5
PAGZ				*e*S	Sn	11 57 44.5	-14
IPIL	**Ipil**	**2.71**	**317**	*e*P	Pn	11 57 38.9	+1.7

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*NEIC **27** 12:04:38.1, 31.°96S×71.°15W, h61km, MD4.0(GUC), After GUC.*
GUC 27 12:04:38.1±0.7, 31.°96S×71.°15W, h61km±5km, MD3.6, ML3.6, 3C-8D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHNG	**Los Chungos**	**0.30**	**285**	⇓*i*P	Pn	12 04 48.2	-0.1
CHNG				*i* S	Sn	12 04 56.3	+0.6
CMCH	**Combarbala**	**0.80**	**9**	⇓*i*P	Pn	12 04 53.9	+0.4
CMCH				*i* S	Sn	12 05 06.1	+1.2
CMCH	**Combarbala**	**0.80**	**9**	⇓*i*P	Pn	12 04 53.9	+0.4
CMCH				*i* S	Sn	12 05 06.1	+1.2
CMCH				AML	AML	12 05 08.2	
	comp=E,7μm,0.7s						
JACH	**Jahuel**	**0.86**	**147**	⇑*i*P	Pn	12 04 55.0	+0.7
JACH				*i* S	Sn	12 05 07.6	+1.3
JACH	**Jahuel**	**0.86**	**147**	⇑*i*P	Pn	12 04 55.0	+0.7
JACH				*i* S	Sn	12 05 07.6	+1.3
PEL	**Peldehue**	**1.24**	**162**	⇑*i*P	Pn	12 04 59.9	+0.5
PEL				*i* S	Sn	12 05 16.1	+0.9
PEL				AML	AML	12 05 21.8	
	comp=E,2μm,0.3s						
OVCH	**Ovalle**	**1.35**	**358**	*e*P	Pn	12 05 01.5	+0.8
OVCH				*e*S	Sn	12 05 18.9	+1.1
OVCH	**Ovalle**	**1.35**	**358**	*e*P	Pn	12 05 01.5	+0.8
OVCH				*e*S	Sn	12 05 18.9	+1.1
CLCH	**Cerro Calan**	**1.52**	**160**	⇓*i*P	Pn	12 05 03.7	+0.6
CLCH				*i* S	Sn	12 05 23.1	+1.2
CLCH				AML	AML	12 05 30.0	
	comp=E,856nm,0.3s						
FCH	**Farellones**	**1.54**	**152**	*i* P	Pn	12 04 59.5	-3.8
FCH				*i* S	Sn	12 05 19.2	-3.2
FCH				AML	AML	12 05 24.0	
	comp=E,731nm,0.1s						
TACH	**Talagante**	**1.70**	**174**	*e*P	Pn	12 05 05.8	+0.4
TACH				*i* S	Sn	12 05 27.0	+0.9
TACH	**Talagante**	**1.70**	**174**	*e*P	Pn	12 05 05.8	+0.4
TACH				*i* S	Sn	12 05 27.0	+0.9
PCH	**Pirque**	**1.74**	**162**	*e*P	Pn	12 05 06.7	+0.7
PCH	**Pirque**	**1.74**	**162**	*e*P	Pn	12 05 06.7	+0.7
TLL	**Tololo Astrono**	**1.81**	**10**	⇓*i*P	Pn	12 05 08.3	+1.2
TLL				*i* S	Sn	12 05 31.1	+2.1
TLL	**Tololo Astrono**	**1.81**	**10**	⇓*i*P	Pn	12 05 08.3	+1.2
TLL				*i* S	Sn	12 05 31.1	+2.1
TLL				AML	AML	12 05 34.3	
	comp=E,625nm,0.3s						
CHCH	**Chadas Angostu**	**2.01**	**168**	*e*P	Pn	12 05 10.3	+0.6
CHCH	**Chadas Angostu**	**2.01**	**168**	*e*P	Pn	12 05 10.3	+0.6
LMEL	**Las Melosas**	**2.04**	**157**	*e*P	Pn	12 05 11.5	+1.4
LMEL				*e*S	Sn	12 05 36.2	+1.7
LMEL	**Las Melosas**	**2.04**	**157**	*e*P	Pn	12 05 11.5	+1.4
LMEL				*e*S	Sn	12 05 36.2	+1.7
LMEL				AML	AML	12 05 39.3	
	comp=N,589nm,0.2s						
CACH	**El Canelo**	**2.20**	**168**	⇓*i*P	Pn	12 05 13.3	+1.1
CACH	**El Canelo**	**2.20**	**168**	⇓*i*P	Pn	12 05 13.3	+1.1
LCO	**Las Campanas**	**2.97**	**8**	*e*P	Pn	12 05 23.5	+0.8
LCO				*e*S	Sn	12 05 58.4	+1.2
LCO	**Las Campanas**	**2.97**	**8**	*e*P	Pn	12 05 23.5	+0.8
LCO				*e*S	Sn	12 05 58.4	+1.2
LCO				AML	AML	12 06 05.3	
	comp=E,148nm,0.4s						

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*BJI **27** 12:15:47.6, 36.°64N×70.°94E, h240km, mB4.8/1*
*ISCJB **27** 12:15:48.7±0.3, 36.°54N±0.°02×71.°12E±0.°04, h233km±4km, mb3.8/27, Error ellipse: s-maj=5.3km s-min=3.7km az=165.5*
*MOS **27** 12:15:49.0±0.6, 36.°52N×71.°11E, h239km, mb3.8/14, Error ellipse: s-maj=10.0km s-min=6.4km az=109.7*
*NEIC **27** 12:15:49.9±0.5, 36.°55N×71.°07E, h226km±6km, mb4.1/25, Error ellipse: s-maj=6.3km s-min=4.8km az=49.0*
*IDC **27** 12:15:51.8±2.2, 36.°63N×71.°19E, h248km±20km, mb3.5/8, mb1 3.6/13, mb1mx3.4/26, mbtmp3.6/13, Error ellipse: s-maj=23.2km s-min=12.6km az=141.0*
*NNC **27** 12:15:56.3±2.5, 37.°12N×71.°19E, h250km±17km, mb3.2, mpv4.5, Error ellipse: s-maj=27.8km s-min=12.5km az=35.0*
ISC 27 12:15:49.7±0.3, 36.°58N±0.°02×71.°15E±0.°04, h226km±4km, n131, σ0°92/148, mb3.8/27, 23C-8D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.66**	**221**	*e*Pn	**Pn**	**12 16 37.3**	**+0.2**
KBL				*e*Sn	**S**	**12 17 13.5**	**-0.7**
CEP	**Cherat**	**2.82**	**167**	P	**Pn**	**12 16 40.2**	**+1.4**
CEP				S	**S**	**12 17 17.0**	**-0.3**
CHCP	**Chirah Chowk**	**3.39**	**149**	P	**Pn**	**12 16 46.7**	**+1.5**
KSH	**Kashi**	**4.81**	**51**	⇓*i*P	**Pn**	**12 16 58.8**	**-3.5**
KSH				S	**S**	**12 17 49.3**	**-11**
KSH				smax			
	comp=N,340nm,0.4s						
KSH				smax			
	comp=E,270nm,0.4s						
THN	**Thein Dam**	**5.59**	**136**	*e*PKP	**Pn**	**12 17 11.8**	**-0.5**
THN				*e*S	**S**	**12 18 15.7**	**-2.1**
AML	**Almayashu**	**5.89**	**19**	*e*Pn	**Pn**	**12 17 17.0**	**+1.2**
AML				*e*Sn	**S**	**12 18 23.2**	**-1.1**
UCH	**Uchtor**	**6.21**	**24**	*e*Pn	**Pn**	**12 17 21.5**	**+1.6**
	comp=E,28nm,0.7s						
UCH				*e*Sn	**S**	**12 18 31.0**	**-0.9**
EKS2	**Erkin-Say**	**6.41**	**18**	*e*Pn	**Pn**	**12 17 23.2**	**+0.8**
	comp=E,41nm,0.6s						
EKS2				*e*Sn	**S**	**12 18 34.8**	**-1.6**
KK31	**Karatay Array**	**6.54**	**356**	⇓P	**Pn**	**12 17 24.6**	**+0.5**
	comp=E,12nm,0.5s,baz=182,slow=12,SNR=195						
KK31				⇓S	**S**	**12 18 35.0**	**-4.4**
	comp=E,22nm,0.4s,baz=176,slow=15,SNR=20						
AAK	**Ala-Archa**	**6.58**	**22**	P	**Pn**	**12 17 26.0**	**+1.5**
	comp=E,12nm,0.3s,baz=190,slow=5.8,SNR=43						
AAK				S	**S**	**12 18 40.5**	**+0.2**
	comp=E,6.5nm,0.3s,baz=314,slow=23,SNR=5.5						
AAK	**Ala-Archa**	**6.58**	**22**	*e*Pn	**Pn**	**12 17 25.8**	**+1.2**
AAK				S	**S**	**12 18 40.5**	**+0.2**
BHK	**Bhakra**	**6.75**	**138**	*ex*	x	12 18 28.6	
SDNR	**Sundarnagar**	**7.00**	**135**	*e*PKP	**Pn**	**12 17 29.5**	**-0.6**
TKM2	**Tokmak 2**	**7.20**	**27**	⇓P	**Pn**	**12 17 33.5**	**+1.0**
	comp=E,40nm,0.7s						
TKM2	**Tokmak 2**	**7.20**	**27**	*e*PN	**Pn**	**12 17 33.4**	**+0.9**
TKM2				pmax	pmax		
	comp=Z,35nm,0.6s						
TKM2	**Tokmak 2**	**7.20**	**27**	*e*Pn	**Pn**	**12 17 33.4**	**+0.9**
	comp=Z,35nm,0.6s						
SMLA	**Simla**	**7.39**	**136**	*e*PKP	**Pn**	**12 17 35.0**	**-0.1**
SMLA				*i* P		12 17 35.2	
SMLA				*i* S	**S**	**12 18 55.5**	**-3.8**
SMLA						12 18 57.1	
	comp=N,1μm,0.3s						
SMLA						12 18 57.8	
	comp=E,1μm,0.2s						
KLP	**Kalpa**	**7.75**	**128**	*e*PKP	**Pn**	**12 17 40.6**	**+0.9**
KLP				*e*S	**S**	**12 19 03.5**	**-4.3**
KLP				AML	AML	12 19 05.3	
	comp=E,144nm,0.3s						
KLP				AML	AML	12 19 07.4	
	comp=N,168nm,0.4s						
JOSI	**Joshimath**	**9.23**	**128**	*e*PKP	**Pn**	**12 17 52.7**	**-6.0**
JOSI				*e*S	**S**	**12 19 29.4**	**-13**
JOSI				AML	AML	12 19 43.6	
	comp=N,133nm,0.5s						
JOSI				AML	AML	12 19 47.0	
	comp=E,264nm,0.5s						
KHET	**Khetri**	**9.35**	**154**	*e*PKP	**Pn**	**12 17 59.4**	**-0.9**
KHET				*e*S	**S**	**12 19 38.9**	**-6.6**
KHET				AML	AML	12 19 42.6	
	comp=N,22nm,0.3s						
KHET				AML	AML	12 19 43.5	
	comp=E,26nm,0.5s						
AYAN	**Aya Nagar**	**9.52**	**146**	*e*S	**S**	**12 19 42.3**	**-7.2**
JASL	**Jaisalmer**	**9.63**	**181**	*ex*	x	12 20 25.2	
SONA	**Sohna**	**9.70**	**147**	*e*PKP	**Pn**	**12 18 02.8**	**-1.9**
SONA				*e*S	**S**	**12 19 45.1**	**-8.6**
AGRA	**Agra**	**10.96**	**146**	*e*S	**S**	**12 20 15.5**	**-8.0**
AGRA				AML	AML	12 20 22.6	
	comp=N,44nm,0.4s						
AGRA				AML	AML	12 20 22.6	
	comp=E,54nm,0.2s						
MK31	**Makanchi Array**	**13.16**	**36**	⇓P	**Pn**	**12 18 48.0**	**-0.1**
	comp=E,2.0nm,0.3s,baz=218,slow=12,SNR=126						
MK31	**Makanchi Array**	**13.16**	**36**	*e*Pn	**Pn**	**12 18 48.1**	**0.0**
MKAR	**Makanchi Array**	**13.16**	**36**	P	**Pn**	**12 18 47.9**	**-0.2**
	comp=E,1.1nm,0.3s,baz=214,slow=16,SNR=44						
KOLN	**Koldanda**	**13.71**	**126**	*e*P	**Pn**	**12 18 55.5**	**+0.4**
	comp=E,11nm,0.3s						
GKN	**Gorkha**	**14.24**	**123**	*e*P	**Pn**	**12 19 01.1**	**-0.5**
	comp=E,27nm,0.4s						
DMN	**Daman**	**14.81**	**123**	*e*P	**Pn**	**12 19 08.8**	**+0.2**
KKN	**Kakani**	**14.81**	**122**	*e*P	**Pn**	**12 19 08.7**	**+0.1**
	comp=E,34nm,0.4s						
KKN	**Kakani**	**14.81**	**122**	*e*P	**Pn**	**12 19 08.7**	**+0.1**
KKN				pmax	pmax		
	comp=Z,34nm,0.4s						
KURBB	**Kurchatov Arra**	**15.01**	**18**	⇓P	**Pn**	**12 19 09.8**	**-0.9**
	comp=Z,1.5nm,0.6s						
PKIN	**Phulchoki**	**15.03**	**123**	*e*P	**Pn**	**12 19 11.9**	**+0.7**
	comp=Z,19nm,0.4s						
PKI	**Pulchoki**	**15.04**	**123**	*e*P	**Pn**	**12 19 11.2**	**-0.2**
AB31	**Akbulak array**	**15.07**	**331**	⇑P	**Pn**	**12 19 10.3**	**-1.1**
	comp=Z,1.7nm,0.5s,baz=174,slow=9.8,SNR=43						
AB31				⇑S	**S**	**12 21 54.4**	**-3.7**
	comp=Z,4.4nm,1.1s,baz=166,slow=26,SNR=6.2						
ABKAR	**Akbulak array**	**15.07**	**331**	*e*P	**Pn**	**12 19 10.9**	**-0.6**
	comp=Z,2.1nm,0.4s						
KURK	**Kurchatov**	**15.12**	**18**	⇓P	**Pn**	**12 19 10.9**	**-1.1**
	comp=Z,5.7nm,0.6s						
KURK	**Kurchatov**	**15.12**	**18**	*e*P	**Pn**	**12 19 11.6**	**-0.4**
KURK	**Kurchatov**	**15.12**	**18**	*e*P	**Pn**	**12 19 11.2**	**-0.8**
	comp=Z,9.6nm,0.8s						
JIRN	**Jiri**	**15.52**	**121**	*e*P	**Pn**	**12 19 17.6**	**+0.5**
BVAR	**Borovoye Array**	**16.45**	**358**	P	**P**	**12 19 28.7**	**+2.0**
	comp=Z,2.0nm,0.3s,baz=157,slow=10,SNR=22						
BVAR				S	**S**	**12 22 25.1**	**-1.9**
	baz=179,slow=22,SNR=2.4						
BRVK	**Borovoye**	**16.49**	**358**	⇓P	**P**	**12 19 27.4**	**+0.3**
	comp=Z,6.4nm,0.4s						
BRVK	**Borovoye**	**16.49**	**358**	*e*P	**P**	**12 19 30.0**	**+3.0**
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.4s						
BRVK	**Borovoye**	**16.49**	**358**	*e*P	**P**	**12 19 30.0**	**+2.9**
	comp=Z,8.7nm,0.4s						
AKTK	**Aktyubinsk**	**16.77**	**330**	P	**P**	**12 19 31.4**	**+1.2**
AKTO	**Aktyubinsk**	**16.77**	**330**	P	**P**	**12 19 31.4**	**+1.2**
	comp=Z,2.4nm,0.3s,baz=139,slow=10,SNR=45						
TAPN	**Taplejung**	**16.78**	**119**	*e*P	**P**	**12 19 33.1**	**+2.6**
	comp=Z,12nm,0.3s						
ODAN	**Odare**	**16.85**	**120**	*e*P	**P**	**12 19 34.5**	**+3.2**
	comp=Z,12nm,0.5s						
LSA	**Lhasa**	**18.08**	**107**	P	**P**	**12 19 48.3**	**+3.6**
LSA	**Lhasa**	**18.08**	**107**	*e*P	**P**	**12 19 48.6**	**+3.9**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.4s						
LSA	**Lhasa**	**18.08**	**107**	*e*P	**P**	**12 19 48.6**	**+4.0**
	comp=Z,6.5nm,0.4s						
ZAA0	**Zalesovo Array**	**19.79**	**24**	*e*P	**P**	**12 20 02.7**	**-0.1**
ZALV	**Zalesovo Beam**	**19.79**	**24**	P	**P**	**12 20 03.0**	**+0.2**
	comp=Z,4.4nm,0.3s,baz=215,slow=11,SNR=43						
ZALV				S	**S**	**12 23 30.9**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=202,slow=7.4,SNR=4.0						
NVS	**Novosibirsk**	**20.07**	**21**	*e*P	**P**	**12 20 06.1**	**+0.4**
SONM	**Songino Array**	**28.19**	**55**	P	**P**	**12 21 22.9**	**+1.8**
	comp=Z,0.8nm,0.5s,mb3.6,baz=268,slow=9.5,SNR=4.9						
BRTR	**Keskin Array B**	**29.53**	**288**	P	**P**	**12 21 33.8**	**+0.7**
	comp=Z,0.9nm,0.6s,mb3.6,baz=99,slow=9.6,SNR=5.9						
HHC	**Hu-ho-hao-te**	**31.62**	**70**	*e*P	**P**	**12 21 52.0**	**+0.6**
HHC				S	**S**	**12 26 43.3**	**-0.1**
HHC				pmax	pmax		
	comp=Z,160nm,5.8s						
AKASG	**Malin Array Be**	**32.99**	**309**	P	**P**	**12 22 03.1**	**-0.1**
	comp=Z,1.7nm,0.4s,mb4.0,baz=82,slow=7.7,SNR=8.3						
JOF	**Joensuu**	**35.86**	**330**	*e*P	**P**	**12 22 27.9**	**+0.3**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.3						
JOF	**Joensuu**	**35.86**	**330**	*e*p	**P**	**12 22 27.9**	**+0.3**
	comp=Z,3.2nm,0.3s,mb4.3						
FINES	**FINESS Array B**	**37.49**	**326**	P	**P**	**12 22 41.7**	**+0.4**
	comp=Z,1.4nm,0.3s,mb3.9,baz=125,slow=9.9,SNR=14						
KAF	**Kangasniemi**	**37.63**	**327**	*e*P	**P**	**12 22 43.5**	**+1.0**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.8						
KAF	**Kangasniemi**	**37.63**	**327**	*e*p	**P**	**12 22 43.5**	**+1.0**
	comp=Z,0.6nm,0.3s,mb3.6						
VYHS	**Vyhne**	**39.61**	**304**	*e*P	**P**	**12 23 05.5**	**+6.4**
VYHS	**Vyhne**	**39.61**	**304**	*e*P	**P**	**12 23 05.5**	**+6.4**
KEV	**Kevo**	**40.77**	**338**	*e*P	**P**	**12 23 08.4**	**0.0**
KEV	**Kevo**	**40.77**	**338**	*e*p	**P**	**12 23 08.4**	**0.0**
ARCES	**ARCESS Array B**	**41.12**	**338**	P	**P**	**12 23 11.8**	**+0.7**
	comp=Z,1.1nm,0.4s,mb3.7,baz=115,slow=8.8,SNR=21						
ARCES	**ARCESS Array B**	**41.12**	**338**	P	**P**	**12 23 11.8**	**+0.7**
NB2	**NORSAR Subarra**	**44.39**	**323**	P	**P**	**12 23 37.0**	**-0.5**
	comp=Z,1.1nm,0.4s,mb3.5,baz=99,slow=7.9						
NOA	**NORSAR Array B**	**44.39**	**323**	P	**P**	**12 23 37.2**	**-0.3**
	comp=Z,1.6nm,0.5s,mb3.6,baz=97,slow=7.7,SNR=15						
NOA	**NORSAR Array B**	**44.39**	**323**	P	**P**	**12 23 37.2**	**-0.3**
CDF	**Champ du Feu**	**47.27**	**305**	*e*P	**P**	**12 24 00.4**	**+0.3**
PGF	**Pioggiola**	**47.34**	**297**	*e*P	**P**	**12 24 00.1**	**-0.7**
HINF	**Hinteralfeld**	**47.65**	**305**	*e*P	**P**	**12 24 02.8**	**-0.3**
HAU	**Haudompre**	**47.95**	**305**	*e*P	**P**	**12 24 05.2**	**-0.2**
	comp=Z,4.1nm,0.5s,mb3.7						
HAU	**Haudompre**	**47.95**	**305**	*e*P	**P**	**12 24 05.2**	**-0.2**
HAU				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.7						
HAU	**Haudompre**	**47.95**	**305**	*e*P	**P**	**12 24 05.2**	**-0.2**
	comp=Z,2.0nm,0.5s,mb3.7						
SBF	**Sospel**	**48.12**	**299**	*e*P	**P**	**12 24 06.7**	**0.0**
MBDF	**Montbardon**	**48.38**	**301**	⇑*i*

MTLF pmax pmax
comp=Z,2.0nm,0.7s,mb3.7
MTLF Montolieu 51.91 300 *e*P **P 12 24 35.0 -0.2**
comp=Z,1.9nm,0.7s,mb3.6
LDF La Druitiere 52.03 307 *e*P **P 12 24 35.3 -0.6**
comp=Z,2.3nm,0.4s,mb3.7
FLN La Foliniere 52.22 307 *e*P **P 12 24 36.7 -0.6**
LFF La Frestale 52.46 302 *e*P **P 12 24 39.2 +0.1**
comp=Z,4.5nm,0.4s,mb3.9
GRR Gorron 52.55 307 *e*P **P 12 24 39.2 -0.6**
comp=Z,5.8nm,0.7s,mb3.8
GRR Gorron 52.55 307 *e*P **P 12 24 39.2 -0.6**
GRR pmax pmax
comp=Z,3.0nm,0.7s,mb3.8
GRR Gorron 52.55 307 *e*P **P 12 24 39.2 -0.6**
comp=Z,2.9nm,0.7s,mb3.8
SGMF Saint Gilles 53.68 307 *e*P **P 12 24 47.7 -0.3**
ETSF Etsaut 53.98 300⇑ *i*P **P 12 24 50.3 0.0**
comp=Z,9.2nm,0.5s,mb4.3
ETSF Etsaut 53.98 300⇑ *i*P **P 12 24 50.3 0.0**
ETSF pmax pmax
comp=Z,5.0nm,0.5s,mb4.3
ETSF Etsaut 53.98 300⇑ *i*P **P 12 24 50.3 0.0**
comp=Z,4.6nm,0.5s,mb4.3
ROSF Rostrenen 54.12 308 *e*P **P 12 24 50.7 -0.4**
ESDC Sonseca Array 57.53 298 P **P 12 25 15.1 -0.4**
comp=Z,0.9nm,0.5s,mb3.7,baz=55,slow=7.8,SNR=16
BOSA Boshof 77.88 220 P **P 12 27 21.2 -1.1**
comp=Z,2.9nm,0.9s,mb3.9,baz=35,slow=1.9,SNR=3.6

*ISCJB **27** 12:19:11.8±0.7, 38°.27N±0°.03×26°.54E±0°.04, h7km±5km,*
Error ellipse: s-maj=5.7km s-min=4.3km az=138.2
*ISK **27** 12:19:11.8, 38°.20N×26°.61E, h6km, MD2.9*
*DDA **27** 12:19:12.3, 38°.25N×26°.61E, h7km±3km, Md2.9*
*CSEM **27** 12:19:12.0±0.2, 38°.25N×26°.55E, h5km, MD3.1, Error*
ellipse: s-maj=3.7km s-min=3.2km az=51.0
*ATH **27** 12:19:14.9, 38°.39N×26°.07E, h35km±1km, MD3.1/3*
ISC 27 12:19:12.3±0.5, 38°.26N±0°.03×26°.55E±0°.03, h8km±4km,
n35, σ0s67/56, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.11**	**19**	*i* P	**Pg**	**12 19 14.4**	**-0.3**
URLA				*i* S	**Sg**	**12 19 16.9**	**+0.5**
URLA	**Izmir**	**0.11**	**19**	*i* P	**Pg**	**12 19 14.4**	**-0.3**
URLA				*i* S	**Sg**	**12 19 16.9**	**+0.5**
BLCB	**Balcova**	**0.41**	**72**	*e*PG	**Pg**	**12 19 19.9**	**-0.2**
BLCB				*e*SG	**Sg**	**12 19 24.7**	**-0.7**
BLCB	**Balcova**	**0.41**	**72**	*e*Pg	**Pg**	**12 19 19.9**	**-0.2**
BLCB				*e*Sg	**Sg**	**12 19 24.7**	**-0.8**
CHOS	**Chios island**	**0.41**	**288**	*e*PB	**Pg**	**12 19 20.4**	**+0.1**
CHOS				*e*SB	**Sg**	**12 19 25.5**	**-0.2**
CHOS	**Chios island**	**0.41**	**288**	*e*Pb	**Pg**	**12 19 20.4**	**+0.1**
CHOS				*e*Sb	**Sg**	**12 19 25.5**	**-0.2**
IZM	**Izmir**	**0.57**	**76**	*e*PG	**Pg**	**12 19 23.1**	**-0.2**
IZM				*e*SG	**Sg**	**12 19 31.3**	**+0.5**
KDAG	**Bornova**	**0.58**	**76**	*i* P	**Pg**	**12 19 23.0**	**-0.4**
KDAG				*i* S	**Sg**	**12 19 31.7**	**+0.7**
KDAG	**Bornova**	**0.58**	**76**	*i* P	**Pg**	**12 19 23.0**	**-0.4**
KDAG				*i* S	**Sg**	**12 19 31.7**	**+0.7**
GCAM	**G?zelcaml?**	**0.78**	**136**	*i* P	**Pg**	**12 19 27.0**	**-0.2**
GCAM				*i* S	**Sg**	**12 19 37.6**	**+0.4**
GCAM	**G?zelcaml?**	**0.78**	**136**	*i* P	**Pg**	**12 19 27.0**	**-0.2**
GCAM				*i* S	**Sg**	**12 19 37.6**	**+0.4**
PRK	**Paraskevi**	**1.01**	**348**	*e*PN	**Pb**	**12 19 31.4**	**-0.6**
PRK				*e*SN	**Sn**	**12 19 44.4**	**-2.8**
PRK	**Paraskevi**	**1.01**	**348**	*e*Pb	**Pb**	**12 19 31.4**	**-0.6**
PRK				*e*Sn	**Sn**	**12 19 45.8**	**-1.4**
AKS	**Akhisar**	**1.17**	**58**	*e*PN	**Pn**	**12 19 34.6**	**-0.3**
AKS	**Akhisar**	**1.17**	**58**	*e*Pn	**Pn**	**12 19 34.6**	**-0.3**
AYDN	**Tasoluk**	**1.21**	**119**	*i* P	**Pb**	**12 19 34.9**	**-0.5**
AYDN				*i* S	**Sg**	**12 19 50.6**	**-0.4**
AYDN	**Tasoluk**	**1.21**	**119**	*i* P	**Pb**	**12 19 34.9**	**-0.5**
AYDN				*i* S	**Sg**	**12 19 50.6**	**-0.5**
BODT	**Bodrum**	**1.34**	**153**	*e*PN	**Pn**	**12 19 36.5**	**-0.8**
BODT	**Bodrum**	**1.34**	**153**	*e*Pn	**Pn**	**12 19 36.5**	**-0.8**
BDRM	**Kayabasi**	**1.39**	**149**	*e*P	**Pn**	**12 19 38.8**	**+0.9**
BDRM				*e*S	**Sb**	**12 19 56.2**	**-0.1**
BDRM	**Kayabasi**	**1.39**	**149**	*e*P	**Pn**	**12 19 38.8**	**+0.9**
BDRM				*e*S	**Sb**	**12 19 56.2**	**-0.1**
APE	**Apeiranthos**	**1.44**	**215**	*e*PN	**Pn**	**12 19 38.0**	**-0.7**
APE	**Apeiranthos**	**1.44**	**215**	*e*PN	**Pn**	**12 19 40.1**	**+1.4**
APE				*e*SN	**Sn**	**12 19 58.1**	**+0.3**
APE	**Apeiranthos**	**1.44**	**215**	*e*Pn	**Pn**	**12 19 38.0**	**-0.7**
APE				*e*Sn	**Sn**	**12 19 58.1**	**+0.3**
EZN	**Ezine**	**1.57**	**354**	*e*PN	**Pn**	**12 19 42.0**	**+1.5**
EZN	**Ezine**	**1.57**	**354**	*e*Pn	**Pn**	**12 19 42.1**	**+1.6**
KULA	**Kula-Manisa**	**1.68**	**81**	*e*PN	**Pn**	**12 19 42.6**	**+0.7**
KULA	**Kula-Manisa**	**1.68**	**81**	*e*Pn	**Pn**	**12 19 42.6**	**+0.7**
BALY	**Balya**	**1.70**	**29**	*e*P	**Pn**	**12 19 42.2**	**0.0**
BALY				*i* S	**Sn**	**12 20 04.2**	**+0.1**
BALY	**Balya**	**1.70**	**29**	*e*P	**Pn**	**12 19 42.2**	**0.0**
BALY				*i* S	**Sn**	**12 20 04.2**	**+0.1**
YER	**Yerkesik**	**1.77**	**129**	*e*PN	**Pn**	**12 19 42.9**	**-0.4**
YER	**Yerkesik**	**1.77**	**129**	*e*Pn	**Pn**	**12 19 42.9**	**-0.4**
GONE	**Gonen-Balikesi**	**1.99**	**26**	*e*PN	**Pn**	**12 19 47.4**	**+1.1**
GONE	**Gonen-Balikesi**	**1.99**	**26**	*e*Pn	**Pn**	**12 19 47.4**	**+1.2**
ARG	**Arkhangelos**	**2.40**	**148**	*e*PN	**Pn**	**12 19 58.7**	**+6.9**

*ISCJB **27** 12:19:48.5±0.9, 48°.39N±0°.07×154°.5E±0°.1, h56km±6km,*
mb4.3/34, MS3.5/6, Error ellipse: s-maj=16.4km
s-min=5.3km az=136.3
*MOS **27** 12:19:48.4±0.9, 48°.35N×154°.48E, h57km, mb4.7/18, Error*
ellipse: s-maj=13.1km s-min=7.6km az=75.5
*NEIC **27** 12:19:50.1±0.8, 48°.35N×154°.46E, h58km±6km, mb4.4/18,*
Error ellipse: s-maj=11.4km s-min=5.7km az=144.0
*IDC **27** 12:19:51.2±2.8, 48°.43N×154°.42E, h67km±25km, mb3.7/15,*
mb1 3.9/17, mb1mx3.8/25, mbtmp3.8/17, MS3.2/7,
Ms1 3.2/7, ms1mx3.0/27, Error ellipse: s-maj=21.8km
s-min=12.9km az=156.0
ISC 27 12:19:51.1±0.8, 48°.45N±0°.08×154°.4E±0°.1, h62km±5km,
n95, σ0s71/96, mb4.3/34, 1C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.49**	**25**	*e*PN	**Pn**	**12 20 29.4**	**+0.2**
SKR				*e*S	**Sn**	**12 20 57.0**	**-1.4**
SKR				pmax	pmax		
	comp=Z,360nm,1.0s						
SKR				pmax	pmax		
	comp=N,100nm,0.4s						
SKR				pmax	pmax		
	comp=E,250nm,1.0s						
SKR				pmax	pmax		
	comp=E,800nm,2.0s						
SKR				pmax	pmax		
	comp=Z,1μm,2.0s						
SKR				smax			
	comp=N,510nm,0.3s						
SKR				smax			
	comp=E,260nm,0.3s						
SKR				smax			
	comp=N,1μm,2.0s						
SKR				smax			
	comp=E,1μm,2.0s						
SKR				MLR	MLR		
	comp=Z,1μm,12.0s						
PETK	**Petropavlovsk-**	**5.10**	**23**	P	**Pn**	**12 21 05.7**	**+0.8**
	comp=Z,1.5nm,0.3s,baz=182,slow=12,SNR=29						
PETK				LR	LR	12 23 18.3	
	comp=Z,160nm,20.2s,baz=314,slow=40						
PET	**Petropavlovsk**	**5.30**	**29**	*e*PN	**Pn**	**12 21 06.3**	**-1.3**
PET				*e*S	**Sn**	**12 22 08.4**	**+1.1**
PET				pmax	pmax		
	comp=Z,20nm,0.7s						
PET				smax			
	comp=E,125nm,0.9s						
PET				smax			
	comp=N,115nm,0.9s						
PET	**Petropavlovsk**	**5.30**	**29**	*e*Pn	**Pn**	**12 21 06.5**	**-1.2**
	comp=N,14nm,0.6s						
KUR	**Kuril'sk**	**5.54**	**237**	*e*PN	**Pn**	**12 21 11.0**	**+0.1**
KUR				*e*S	**Sn**	**12 22 14.0**	**+0.9**
KUR				pmax	pmax		
	comp=E,40nm,0.7s						
KUR				pmax	pmax		
	comp=Z,140nm,0.7s						
KUR				smax			
	comp=N,270nm,0.8s						
KUR				smax			
	comp=E,130nm,0.8s						
YSS	**Yuzh-Sakhalins**	**8.03**	**264⇑**	*e*PN	**Pn**	**12 21 46.9**	**+2.0**
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
YSS	**Yuzh-Sakhalins**	**8.03**	**264**	*e*Pn	**Pn**	**12 21 46.4**	**+1.5**
	comp=Z,9.7nm,0.6s						
ASAJ	**Asahikawa**	**9.27**	**247**	P	**Pn**	**12 22 02.6**	**+0.7**
	comp=Z,1.4nm,0.3s,baz=78,slow=13,SNR=14						
ASAJ				LR	LR	12 25 32.0	
	comp=Z,53nm,19.9s,baz=354,slow=37						
ASAJ	**Asahikawa**	**9.27**	**247**	PN	**Pn**	**12 22 02.6**	**+0.7**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,53nm,19.9s						
ERM	**Erimo**	**10.23**	**235**	*e*PN	**Pn**	**12 22 13.4**	**-1.6**
KLR	**Kul'dur**	**14.96**	**282**	*e*P	**Pn**	**12 23 26.0**	**+7.4**
MJAR	**Matsushiro Arr**	**16.84**	**231**	P	**Pn**	**12 23 39.1**	**-3.4**
	comp=Z,0.1nm,0.3s,baz=27,slow=12,SNR=4.3						
YAK	**Yakutsk**	**19.43**	**324**	*i* P	pP	12 24 25.3	0.0
YAK				pmax	pmax		
	comp=Z,16nm,0.9s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.1s						
KSRS	**Korea Array**	**22.19**	**250**	P	**P**	**12 24 41.0**	**-0.9**
	comp=E,2.6nm,0.6s,mb3.8,baz=49,slow=10.0,SNR=16						
KSRS	**Korea Array**	**22.19**	**250**	P	**P**	**12 24 41.1**	**-0.9**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb3.9						
HHC	**Hu-ho-hao-te**	**31.10**	**272**	*e*P	**P**	**12 26 04.0**	**+0.7**
HHC				S	**S**	**12 31 03.5**	**-0.7**
HHC				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.9						
HHC				pmax	pmax		
	comp=Z,83nm,5.8s						
SONM	**Songino Array**	**31.65**	**287**	LR	LR	12 40 15.5	
	comp=Z,66nm,19.1s,baz=60,slow=39						
COLA	**College**	**34.25**	**40**	*e*P	**P**	**12 26 30.6**	**+0.1**
COLA				pmax	pmax		
	comp=Z,12nm,1.4s,mb4.6						
COLA	**College**	**34.25**	**40**	*e*P	**P**	**12 26 30.6**	**+0.1**
	comp=Z,12nm,1.4s,mb4.6						
ILAR	**Eielson Array**	**34.66**	**40**	P	**P**	**12 26 33.8**	**-0.3**
	comp=Z,0.6nm,0.7s,mb3.7,baz=263,slow=8.5,SNR=10						
ZAA0	**Zalesovo Array**	**42.37**	**305**	*e*P	**P**	**12 27 37.5**	**-1.2**
ZALV	**Zalesovo Beam**	**42.37**	**305**	P	**P**	**12 27 37.7**	**-1.1**
	comp=Z,2.1nm,0.4s,mb4.1,baz=56,slow=6.8,SNR=13						
ZALV				PcP	PcP	12 29 30.6	-0.3
	comp=Z,1.0nm,0.8s,baz=90,slow=3.2,SNR=4.2						
ZALV				LR	LR	12 45 20.1	
	comp=Z,32nm,18.7s,baz=59,slow=36						
ZALV	**Zalesovo Beam**	**42.37**	**305**	P	**P**	**12 27 37.7**	**-1.1**
ZALV				PcP	PcP	12 29 30.6	-0.3
MK31	**Makanchi Array**	**46.97**	**297**	*e*P	**P**	**12 28 14.2**	**-1.3**
MKAR	**Makanchi Array**	**46.97**	**297**	P	**P**	**12 28 14.8**	**-0.7**
	comp=Z,1.5nm,0.6s,mb4.1,baz=66,slow=8.4,SNR=13						
MKAR				LR	LR	12 49 11.4	
	comp=Z,33nm,20.9s,baz=266,slow=38						
KURK	**Kurchatov**	**47.19**	**303**	*e*P	**P**	**12 28 16.6**	**-0.5**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
KURK	**Kurchatov**	**47.19**	**303**	*e*P	**P**	**12 28 16.6**	**-0.5**
	comp=Z,6.3nm,0.6s,mb4.7						
RES	**Resolute Bay**	**48.94**	**19**	P	**P**	**12 28 30.1**	**-0.2**
	comp=Z,1.9nm,0.6s,mb4.3,baz=315,slow=4.3,SNR=4.0						
RES	**Resolute Bay**	**48.94**	**19**	P	**P**	**12 28 30.1**	**-0.2**
RES				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
BVAR	**Borovoye Array**	**50.48**	**309**	P	**P**	**12 28 42.0**	**-0.3**
	comp=Z,3.1nm,0.5s,mb4.6,baz=59,slow=7.4,SNR=20						
BVAR				PcP	PcP	12 29 59.4	-0.1
	comp=Z,0.8nm,0.4s,baz=44,slow=4.5,SNR=3.6						
CMAR	**Chiang Mai Arr**	**53.65**	**256**	P	**P**	**12 29 06.6**	**+0.4**
	comp=Z,1.4nm,0.7s,mb4.0,baz=30,slow=7.2,SNR=6.9						
NVAR	**Mina Array Bea**	**60.87**	**64**	P	**P**	**12 29 57.2**	**+0.4**
	comp=Z,0.9nm,0.7s,mb4.0,baz=289,slow=7.1,SNR=10						
FINES	**FINESS Array B**	**62.88**	**335**	P	**P**	**12 30 09.5**	**-0.6**
	comp=Z,1.0nm,0.5s,mb4.2,baz=47,slow=8.4,SNR=6.3						
FINES				LR	LR	13 03 41.8	
	comp=Z,39nm,20.6s,baz=155,slow=42						
BW06	**Boulder Array**	**63.03**	**55**	*e*P	**P**	**12 30 11.2**	**-0.1**
	comp=Z,2.1nm,1.0s,mb4.2						
PDAR	**Pinedale Array**	**63.03**	**55**	P	**P**	**12 30 11.4**	**+0.1**
	comp=Z,1.1nm,0.8s,mb4.0,baz=307,slow=3.2,SNR=9.9						
NB2	**NORSAR Subarra**	**66.91**	**342**	P	**P**	**12 30 36.2**	**0.0**
	comp=Z,0.6nm,0.6s,mb3.8,baz=26,slow=6.5						
NOA	**NORSAR Array B**	**66.91**	**342**	P	**P**	**12 30 35.8**	**-0.4**
	comp=Z,0.8nm,0.6s,mb3.9,baz=26,slow=6.3,SNR=5.8						
NOA				LR	LR	13 04 18.1	
	comp=Z,12nm,18.9s,baz=90,slow=40						
ASAR	**Alice Springs**	**74.11**	**200**	P	**P**	**12 31 19.6**	**-0.8**
	comp=Z,0.6nm,0.5s,mb3.8,baz=15,slow=5.2,SNR=8.3						
CLL	**Collm**	**75.28**	**336**	*i* P	**P**	**12 31 26.7**	**-0.3**
TXAR	**Lajitas Array**	**75.89**	**62**	P	**P**	**12 31 30.7**	**-0.2**
	comp=Z,0.8nm,0.7s,mb3.8,baz=298,slow=4.6,SNR=11						
TXAR	**Lajitas Array**	**75.89**	**62**	P	**P**	**12 31 30.7**	**-0.2**
BRTR	**Keskin Array B**	**77.76**	**317**	P	**P**	**12 31 41.1**	**-0.1**
	comp=Z,1.5nm,0.8s,mb4.0,baz=49,slow=4.0,SNR=7.1						
BAIF	**Baives**	**78.58**	**341**	*e*P	**P**	**12 31 45.5**	**-0.1**
	comp=Z,8.4nm,1.1s,mb4.3						
BAIF	**Baives**	**78.58**	**341**	*e*P	**P**	**12 31 45.5**	**-0.1**
BAIF				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
BAIF	**Baives**	**78.58**	**341**	*e*P	**P**	**12 31 45.5**	**-0.1**
	comp=Z,4.2nm,1.1s,mb4.3						
CDF	**Champ du Feu**	**79.42**	**338**	*e*P	**P**	**12 31 50.1**	**0.0**
	comp=Z,6.2nm,0.9s,mb4.2						
CDF	**Champ du Feu**	**79.42**	**338**	*e*P	**P**	**12 31 50.1**	**0.0**
CDF				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
CDF	**Champ du Feu**	**79.42**	**338**	*e*P	**P**	**12 31 50.1**	**0.0**
	comp=Z,3.1nm,0.9s,mb4.2						
MEZF	**Maizieres J'vi**	**79.86**	**340**	*e*P	**P**	**12 31 52.8**	**+0.3**
FLN	**La Foliniere**	**80.77**	**343**	*e*P	**P**	**12 31 57.3**	**-0.1**
	comp=Z,7.4nm,0.8s,mb4.4						
FLN	**La Foliniere**	**80.77**	**343**	*e*P	**P**	**12 31 57.3**	**-0.1**
FLN				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
FLN	**La Foliniere**	**80.77**	**343**	*e*P	**P**	**12 31 57.3**	**-0.1**
	comp=Z,3.7nm,0.8s,mb4.4						
LDF	**La Druitiere**	**80.86**	**343**	*e*P	**P**	**12 31 58.4**	**+0.5**
GRR	**Gorron**	**81.20**	**344**	*e*P	**P**	**12 31 59.8**	**+0.1**
	comp=Z,11nm,0.8s,mb4.5						
GRR	**Gorron**	**81.20**	**344**	*e*P	**P**	**12 31 59.8**	**+0.1**
GRR				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
GRR	**Gorron**	**81.20**	**344**	*e*P	**P**	**12 31 59.8**	**+0.1**
	comp=Z,5.6nm,0.8s,mb4.5						
LOR	**Lormes**	**81.29**	**340**	*e*P	**P**	**12 32 00.1**	**-0.1**
	comp=Z,9.1nm,0.9s,mb4.4						
LOR	**Lormes**	**81.29**	**340**	*e*P	**P**	**12 32 00.1**	**-0.1**
LOR				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
LOR	**Lormes**	**81.29**	**340**	*e*P	**P**	**12 32 00.1**	**-0.1**
	comp=Z,4.6nm,0.9s,mb4.4						
CABF	**La Chapelle**	**81.39**	**339**	*e*P	**P**	**12 32 01.0**	**+0.2**
	comp=Z,3.7nm,0.6s,mb4.2						
CABF	**La Chapelle**	**81.39**	**339**	*e*P	**P**	**12 32 01.0**	**+0.2**
CABF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
CABF	**La Chapelle**	**81.39**	**339**	*e*P	**P**	**12 32 01.0**	**+0.2**
	comp=Z,1.9nm,0.6s,mb4.2						
SSF	**Saint Saulge**	**81.57**	**340**	*e*P	**P**	**12 32 02.4**	**+0.7**
	comp=Z,6.9nm,0.9s,mb4.3						
SSF	**Saint Saulge**	**81.57**	**340**	*e*P	**P**	**12 32 02.4**	**+0.7**
SSF				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
SSF	**Saint Saulge**	**81.57**	**340**	*e*P	**P**	**12 32 02.4**	**+0.7**
	comp=Z,3.5nm,0.9s,mb4.3						
SGMF	**Saint Gilles**	**81.64**	**345**	*e*P	**P**	**12 32 02.2**	**+0.2**
ROSF	**Rostrenen**	**81.68**	**345**	*e*P	**P**	**12 32 02.5**	**+0.2**
	comp=Z,26nm,1.2s,mb4.7						
ROSF	**Rostrenen**	**81.68**	**345**	*e*P	**P**	**12 32 02.5**	**+0.2**
ROSF				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7						
ROSF	**Rostrenen**	**81.68**	**345**	*e*P	**P**	**12 32 02.5**	**+0.2**
	comp=Z,13nm,1.2s,mb4.7						
AVF	**Avril sur Loir**	**81.86**	**340**	*e*P	**P**	**12 32 03.3**	**+0.1**
	comp=Z,6.7nm,0.7s,mb4.4						
AVF	**Avril sur Loir**	**81.86**	**340**	*e*P	**P**	**12 32 03.3**	**+0.1**
AVF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
AVF	**Avril sur Loir**	**81.86**	**340**	*e*P	**P**	**12 32 03.3**	**+0.1**
	comp=Z,3.3nm,0.7s,mb4.4						
SMF	**Signal de Mont**	**81.89**	**340**	*e*P	**P**	**12 32 03.4**	**0.0**
	comp=Z,5.7nm,0.8s,mb4.3						
SMF	**Signal de Mont**	**81.89**	**340**	*e*P	**P**	**12 32 03.4**	**0.0**
SMF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
SMF	**Signal de Mont**	**81.89**	**340**	*e*P	**P**	**12 32 03.4**	**0.0**
	comp=Z,2.8nm,0.8s,mb4.2						
LPG	**La Plagne**	**82.27**	**338**	*e*P	**P**	**12 32 06.5**	**+1.1**
	comp=Z,9.6nm,0.7s,mb4.5						
LPG	**La Plagne**	**82.27**	**338**	*e*P	**P**	**12 32 06.5**	**+1.1**
LPG				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
LPG	**La Plagne**	**82.27**	**338**	*e*P	**P**	**12 32 06.5**	**+1.1**
	comp=Z,4.8nm,0.7s,mb4.5						
MMAI	**Mount Meron Ar**	**82.35**	**312**	P	**P**	**12 32 06.6**	**+0.5**
	comp=Z,3.3nm,0.5s,mb4.5,baz=41,slow=8.3,SNR=5.0						
TCF	**Toulx Ste Croi**	**82.59**	**341**	*e*P	**P**	**12 32 07.3**	**+0.3**
	comp=Z,8.9nm,0.9s,mb4.5						
TCF	**Toulx Ste Croi**	**82.59**	**341**	*e*P	**P**	**12 32 07.3**	**+0.3**
TCF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
TCF	**Toulx Ste Croi**	**82.59**	**341**	*e*P	**P**	**12 32 07.3**	**+0.3**
	comp=Z,4.4nm,0.9s,mb4.5						
MFF	**Saint Martin d**	**82.78**	**343**	*e*P	**P**	**12 32 08.2**	**+0.2**
	comp=Z,4.5nm,0.6s,mb4.4						
MFF	**Saint Martin d**	**82.78**	**343**	*e*P	**P**	**12 32 08.2**	**+0.2**
MFF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
MFF	**Saint Martin d**	**82.78**	**343**	*e*P	**P**	**12 32 08.2**	**+0.2**
	comp=Z,2.3nm,0.6s,mb4.4						
ORIF	**Oris-en-Rattie**	**83.03**	**338**	*e*P	**P**	**12 32 10.2**	**+0.9**
	comp=Z,7.5nm,0.8s,mb4.5						
ORIF	**Oris-en-Rattie**	**83.03**	**338**	*e*P	**P**	**12 32 10.2**	**+0.9**
ORIF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
ORIF	**Oris-en-Rattie**	**83.03**	**338**	*e*P	**P**	**12 32 10.2**	**+0.9**
	comp=Z,3.8nm,0.8s,mb4.5						
VIVF	**Saint-Julien-l**	**83.38**	**339**	*e*P	**P**	**12 32 11.7**	**+0.5**
	comp=Z,7.0nm,1.0s,mb4.4						
VIVF	**Saint-Julien-l**	**83.38**	**339**	*e*P	**P**	**12 32 11.7**	**+0.5**
VIVF				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
VIVF	**Saint-Julien-l**	**83.38**	**339**	*e*P	**P**	**12 32 11.7**	**+0.5**
	comp=Z,3.5nm,1.0s,mb4.3						
RJF	**Les Rejaudoux**	**83.67**	**341**	*e*P	**P**	**12 32 13.0**	**+0.3**
CAF	**Calviac**	**83.91**	**341**	*e*P	**P**	**12 32 14.8**	**+0.9**
LFF	**La Frestale**	**84.19**	**342**	*e*P	**P**	**12 32 15.6**	**+0.3**
ATD	**Arta Tunnel**	**95.28**	**294**	LR	LR	13 17 10.8	
	comp=Z,133nm,18.4s,baz=286,slow=36						

*IDC **27** 12:20:07.6±1.6, 3°.92S×100°.93E, h0km, mb4.1/12,*
mb1 4.2/12, mb1mx4.0/22, mbtmp4.1/12, MS3.6/2,
Ms1 3.6/2, ms1mx2.9/22, Error ellipse: s-maj=56.3km
s-min=14.4km az=57.0
*BJI **27** 12:20:09.9, 4°.00S×100°.80E, h35km, mB5.1/3, mb4.5/4*
*NEIC **27** 12:20:11.9±0.7, 4°.04S×100°.81E, h35km, mb4.4/5, Error*
ellipse: s-maj=27.0km s-min=7.5km az=57.0
*ISCJB **27** 12:20:12.3±1.4, 3°.8S±0°.1×101°.0E±0°.1, h49km±9km,*
mb4.2/17, Error ellipse: s-maj=25.4km s-min=6.4km
az=140.8
*DJA **27** 12:20:17, 3°.46S×101°.35E, h73km, MLv4.1/7*
ISC 27 12:20:13.6±1.4, 3°.8S±0°.1×101°.0E±0°.1, h40km±9km, n38,
σ0s94/33, mb4.2/17, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.59**	**84**	P	**Pn**	**12 20 40.1**	**+0.9**
KRJI	**Kerinci**	**1.78**	**15**	P	**Pn**	**12 20 40.9**	**-1.0**
MNAI	**Manna**	**2.01**	**105**	P	**Pn**	**12 20 45.7**	**+0.7**
SDSI	**Sungai Dareh**	**2.91**	**8**	P	**Pn**	**12 20 54.7**	**-2.7**
PDSI	**Padang**	**2.95**	**349**	P	**Pn**	**12 20 57.3**	**-0.7**
PDSI				S	**Sn**	**12 21 31.0**	**-1.2**
SISI	**Saibi**	**3.14**	**322**	P	**Pn**	**12 21 00.6**	**0.0**
SISI				S	**Sn**	**12 21 41.3**	**+4.4**
MDSI	**Maura Dua**	**3.23**	**102**	P	**Pn**	**12 21 02.4**	**+0.7**
LWLI	**Liwa**	**3.26**	**111**	P	**Pn**	**12 21 01.6**	**-0.6**
PPI	**Padang Panjang**	**3.41**	**350**	P	**Pn**	**12 21 04.2**	**0.0**
KLSI		**3.81**	**103**	P	**Pn**	**12 21 10.0**	**+0.3**
MNSI	**Mandailing Nat**	**4.81**	**343**	P	**Pn**	**12 21 25.4**	**+1.8**
PSI	**Prapat**	**6.91**	**342**	LR	LR	12 25 25.5	
	comp=Z,427nm,18.4s,baz=147,slow=46						
KULM	**Kulim**	**9.07**	**358**	*e*Pn	**Pn**	**12 22 22.8**	**+0.8**
CMAR	**Chiang Mai Arr**	**22.24**	**355**	P	**P**	**12 25 07.8**	**+0.8**
	3.9nm,0.8s,mb3.9,baz

SKI				*e*S	Sn	12 40 53.5	-0.1
SEUS	**St. Eustatius**	**0.86**	**240**⇑	*e*P	Pn	12 40 44.2	+0.4
SEUS				*e*S	Sn	12 40 55.4	+0.1
SEUS	**St. Eustatius**	**0.86**	**240**⇑	*e*P	Pn	12 40 44.2	+0.4
SEUS				*e*S	Sn	12 40 55.4	+0.1
SABA	**Saba**	**1.03**	**253**⇑	*e*P	Pn	12 40 46.6	+0.5
SABA				*e*S	Sn	12 40 59.6	0.0
SABA	**Saba**	**1.03**	**253**⇑	*e*P	Pn	12 40 46.6	+0.5
SABA				*e*S	Sn	12 40 59.6	0.0
SEG	**Port Louis**	**1.66**	**156**	*e*P	Pn	12 40 54.5	-0.1
LZG	**Guadaloupe-1**	**1.82**	**167**	*e*P	Pn	12 40 56.3	-0.6
BCG	**Bois Riant Cap**	**1.91**	**163**	*e*P	Pn	12 40 58.1	-0.1
DEG	**La Desirade**	**1.94**	**146**	*e*P	Pn	12 40 58.3	-0.2
SCG	**Saint Claude**	**1.95**	**165**	*e*P	Pn	12 40 58.2	-0.5
PHG	**Guadaloupe-2**	**1.98**	**164**	*e*P	Pn	12 40 59.1	+0.1
HMG	**Houelmont**	**1.99**	**166**	*e*P	Pn	12 40 59.5	+0.2
TBG	**Guadaloupe-3**	**2.13**	**165**	*e*P	Pn	12 41 00.8	-0.3
MGG	**Marie-Galante**	**2.17**	**157**	*e*P	Pn	12 41 01.7	+0.1
TBVI	**Tortola**	**2.34**	**282**⇓	*e*P	Pn	12 41 03.9	-0.1
TBVI				*e*S	Sn	12 41 30.4	-1.2
TBVI	**Tortola**	**2.34**	**282**⇓	*e*P	Pn	12 41 03.9	-0.1
TBVI				*e*S	Sn	12 41 30.4	-1.2
STVI	**Saint Thomas**	**2.65**	**280**⇑	*e*P	Pn	12 41 08.2	0.0
STVI				*e*S	Sn	12 41 38.1	-1.0
STVI	**Saint Thomas**	**2.65**	**280**⇑	*e*P	Pn	12 41 08.2	0.0
STVI				*e*S	Sn	12 41 38.1	-1.0
MTP	**Monte Pirata**	**3.19**	**274**⇓	*e*P	Pn	12 41 15.9	+0.3
MTP				*e*S	Sn	12 41 52.0	-0.5
MTP	**Monte Pirata**	**3.19**	**274**⇓	*e*P	Pn	12 41 15.9	+0.3
MTP				*e*S	Sn	12 41 52.0	-0.5
CBYP	**Canovanas**	**3.49**	**276**⇑	*e*P	Pn	12 41 20.7	+0.9
CBYP				*e*S	Sn	12 41 59.1	-0.7
CBYP	**Canovanas**	**3.49**	**276**⇑	*e*P	Pn	12 41 20.7	+0.9
CBYP				*e*S	Sn	12 41 59.1	-0.7
SJG	**San Juan**	**3.76**	**273**⇑	*e*P	Pn	12 41 23.9	+0.5
SJG				*e*S	Sn	12 42 06.8	+0.3
SJG	**San Juan**	**3.76**	**273**⇑	*e*P	Pn	12 41 23.9	+0.5
SJG				*e*S	Sn	12 42 06.8	+0.3
CELP	**Cerrillos**	**4.17**	**273**⇓	*e*P	Pn	12 41 29.6	+0.6
CELP				*e*S	Sn	12 42 17.5	+1.0
CELP	**Cerrillos**	**4.17**	**273**⇓	*e*P	Pn	12 41 29.6	+0.6
CELP				*e*S	Sn	12 42 17.5	+1.0

JMA ***27*** *12:48:48.3±0.3, 34°.50N×128°.05E, h0km, M2.5*
ISCJB ***27*** *12:48:49.8±0.3, 34°.51N±0°.02×128°.04E±0°.02, h10km, Error ellipse: s-maj=2.8km s-min=2.2km az=9.2*
KMA ***27*** *12:48:49.1, 34°.48N×128°.04E, ML2.3*
ISC 27 12:48:49.4±0.5, 34°.50N±0°.02×128°.06E±0°.02, h1km±4km, n35, σ0°80/56, South Korea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSNAH	**Namhae**	**0.34**	**342**	P	**Pg**	**12 48 57.2**	**+1.3**
KSTOY	**TONGYEONG**	**0.47**	**42**	P	**Pg**	**12 48 59.3**	**+0.8**
KSTOY				S	**Sg**	**12 49 05.8**	**+1.3**
KSNAJ	**Naju**	**0.54**	**349**	P	**Sg**	**12 49 11.0**	**+4.2**
KSHAD	**HADONG**	**0.63**	**338**	P	**Pg**	**12 49 02.1**	**+0.6**
KSKOH	**Goheung**	**0.66**	**280**	P	**Pg**	**12 49 02.6**	**+0.6**
KSJIN	**Jinju**	**0.66**	**358**	P	**Pg**	**12 49 02.6**	**+0.5**
KSJIN				S	**Sg**	**12 49 11.7**	**+0.9**
KSYSU	**YEOSU**	**0.71**	**328**	P	**Pg**	**12 49 03.7**	**+0.6**
KSYSU				S	**Sg**	**12 49 13.3**	**+1.0**
KSMAS	**Masan**	**0.80**	**32**	P	**Pg**	**12 49 04.9**	**+0.2**
KSSCH	**SUNCHEON**	**0.88**	**310**	P	**Pg**	**12 49 06.6**	**+0.3**
KSSAC	**SANCHEONG**	**0.92**	**351**	P	**Pg**	**12 49 07.1**	**+0.1**
KSJAH	**Jangheung**	**0.96**	**282**	P	**Pg**	**12 49 07.8**	**0.0**
KSJAH				S	**Sg**	**12 49 20.4**	**+0.3**
KSBSA	**Busan_acc**	**1.01**	**53**	S	**Sg**	**12 49 21.6**	**-0.2**
KSNAW	**Namwon**	**1.08**	**327**	P	**Pg**	**12 49 10.0**	**-0.1**
KSNAW				S	**Sg**	**12 49 24.6**	**+0.5**
KSKWJ	**Gwangju**	**1.10**	**307**	P	**Pg**	**12 49 10.3**	**-0.2**
KSKWJ				S	**Sg**	**12 49 24.8**	**+0.1**
KSCHR	**CHANGNYEONG**	**1.10**	**19**	P	**Pg**	**12 49 10.3**	**-0.3**
JTU	**Tsushima**	**1.11**	**88**	P	**Pg**	**12 49 10.0**	**-0.7**
JTU				S	**Sg**	**12 49 24.8**	**-0.3**
KSMOK	**Mokpo**	**1.12**	**284**	S	**Sg**	**12 49 25.3**	**-0.1**
KSKCH	**Geochang**	**1.12**	**354**	P	**Pg**	**12 49 10.5**	**-0.4**
KSWAN	**Wando**	**1.12**	**265**	P	**Pg**	**12 49 10.4**	**-0.6**
KSWAN				S	**Sg**	**12 49 25.3**	**-0.2**
KSBUS	**Busan**	**1.15**	**49**	P	**Pg**	**12 49 11.0**	**-0.4**
KSBUS				S	**Sg**	**12 49 26.0**	**-0.3**
KSGWJ	**Gwangju-acc**	**1.17**	**306**	S	**Sg**	**12 49 27.3**	**+0.2**
KSHAN	**Haenam**	**1.23**	**274**	P	**Pg**	**12 49 12.4**	**-0.6**
KSHAN				S	**Sg**	**12 49 28.9**	**-0.1**
KSJEU	**Jeongeup**	**1.36**	**317**	P	**Pg**	**12 49 14.6**	**-0.9**
KSJEU				S	**Sg**	**12 49 32.6**	**-0.4**
KSJDO	**Jindo**	**1.44**	**269**	P	**Pg**	**12 49 15.6**	**-1.0**
KSJDO				S	**Sg**	**12 49 34.5**	**-1.1**
KSDAG	**Daegu**	**1.44**	**28**	P	**Pn**	**12 49 16.0**	**-0.7**
KSDAG				S	**Sb**	**12 49 35.0**	**-1.0**
KSUSN	**Ulsan**	**1.49**	**36**	P	**Pn**	**12 49 16.8**	**-0.5**
KSUSN				S	**Sb**	**12 49 36.4**	**-0.8**
JII	**Iki**	**1.56**	**116**	P	**Pn**	**12 49 16.6**	**-1.6**
JII				S	**Sn**	**12 49 37.8**	**-1.2**
KSJEO	**Jeonju**	**1.57**	**337**	P	**Pn**	**12 49 18.2**	**-0.2**
KSJEO				S	**Sn**	**12 49 39.0**	**-0.4**
KSJJU	**Jeju**	**1.64**	**230**	P	**Pn**	**12 49 19.5**	**+0.1**
KSJJU				S	**Sn**	**12 49 40.9**	**-0.3**
KSCPR	**CHUPUNGNYEONG**	**1.72**	**358**	P	**Pn**	**12 49 20.6**	**+0.1**
KSCPR				S	**Sn**	**12 49 44.1**	**+1.0**
JFU	**Fukue jima 2**	**1.93**	**162**	P	**Pn**	**12 49 23.1**	**-0.2**
JFU				*e*S	**Sn**	**12 49 49.0**	**+0.8**
JUR	**Ureshino**	**2.11**	**131**	P	**Pn**	**12 49 27.3**	**+1.5**
JUR				*e*S	**Sn**	**12 49 53.4**	**+0.7**
KSHUK	**Heuksando**	**2.16**	**276**	S	**Sn**	**12 49 56.2**	**+2.3**
JFI	**Itaya**	**2.21**	**118**	P	**Pn**	**12 49 27.6**	**+0.3**
JFI				*e*S	**Sn**	**12 49 56.9**	**+1.6**
KSCEA	**Cheonan**	**2.41**	**345**	S	**Sg**	**12 50 04.8**	**-2.1**

ISCJB ***27*** *13:03:03.4±0.3, 25°.14N±0°.05×123°.77E±0°.04, h130km±4km, mb3.6/11, Error ellipse: s-maj=9.9km s-min=4.4km az=151.5*
NEIC ***27*** *13:03:04.7±2.3, 25°.16N×123°.74E, h128km±18km, mb3.9/1, Error ellipse: s-maj=34.1km s-min=10.1km az=68.0*
JMA ***27*** *13:03:05.4±0.2, 25°.09N×123°.73E, h117km±3km, M4.0*
IDC ***27*** *13:03:07.3±4.5, 25°.16N×123°.67E, h148km±43km, mb3.4/10, mb1 3.5/11, mb1mx3.3/25, mbtmp3.4/11, Error ellipse: s-maj=35.0km s-min=12.4km az=67.0*
ISC 27 13:03:04.5±0.3, 25°.14N±0°.05×123°.75E±0°.04, h124km±4km, n36, σ0°94/49, mb3.7/11, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.80**	**181**	P	**Pn**	**13 03 24.8**	**-0.3**
IRIF				S	**Sn**	**13 03 39.7**	**-1.0**
JIJ	**Ishigaki jima**	**0.85**	**155**	P	**Pn**	**13 03 25.2**	**-0.3**
JIJ				S	**Sn**	**13 03 40.3**	**-1.1**
JKRS	**Kuro-shima**	**0.93**	**165**	P	**Pn**	**13 03 26.4**	**+0.2**
JKRS				*e*S	**Sn**	**13 03 42.5**	**-0.1**
YOJ	**Yonaguni jima**	**0.95**	**225**	P	**Pn**	**13 03 26.6**	**+0.2**
YOJ				*e*S	**Sn**	**13 03 42.3**	**-0.7**
JTJ	**Tarama**	**1.00**	**120**	P	**Pn**	**13 03 27.4**	**+0.6**
JTJ				*e*S	**Sn**	**13 03 43.8**	**0.0**
HATJ	**Hateruma jima**	**1.08**	**177**	P	**Pn**	**13 03 27.8**	**+0.1**
HATJ				*e*S	**Sn**	**13 03 45.1**	**-0.1**
JMJ	**Miyako jima 2**	**1.44**	**103**	P	**Pn**	**13 03 32.3**	**+0.8**
JMJ				*e*S	**Sn**	**13 03 52.5**	**+0.5**
JOGS	**Gusukube**	**1.55**	**104**	P	**Pn**	**13 03 33.7**	**+0.9**
JOGS				*e*S	**Sn**	**13 03 55.5**	**+1.2**
TATO	**Taipei**	**2.06**	**266**	*e*P	**Pn**	**13 03 40.1**	**+1.3**
YHNB	**Yeheng**	**2.21**	**258**	*e*P	**Pn**	**13 03 42.2**	**+1.4**
SSLB	**Suanglung**	**2.88**	**243**	*e*P	**Pn**	**13 03 49.3**	**-0.1**
JKE	**Kume jima 2**	**2.98**	**66**	P	**Pn**	**13 03 51.6**	**+0.9**
JKE				*e*S	**Sn**	**13 04 28.0**	**+1.7**
TWG	**Pinlang**	**3.37**	**227**	*e*P	**Pn**	**13 03 54.1**	**-1.6**
TPUB	**Ta-pu**	**3.39**	**238**	*e*P	**Pn**	**13 03 56.5**	**+0.5**
JAGN	**Aguni-jima**	**3.46**	**65**	P	**Pn**	**13 03 57.4**	**+0.4**
JAGN				*e*S	**Sn**	**13 04 37.8**	**+0.3**
NAH1	**Naha**	**3.71**	**73**	P	**Pn**	**13 04 00.9**	**+0.6**
JJT2	**Tamagusuku 2**	**3.74**	**74**	P	**Pn**	**13 04 01.3**	**+0.6**
JIH	**Iheya**	**4.24**	**63**	P	**Pn**	**13 04 07.1**	**-0.2**
JOW	**Kunigami**	**4.41**	**67**	P	**Pn**	**13 04 08.9**	**-0.6**
JOW				*e*S	**Sn**	**13 04 58.2**	**-1.9**
JTK	**Tokunoshima**	**5.35**	**59**	P	**Pn**	**13 04 20.9**	**-1.4**
JTK				*e*S	**Sn**	**13 05 21.8**	**-1.0**
JAM	**Amami Oshima**	**6.17**	**57**	P	**Pn**	**13 04 31.6**	**-1.6**
JMZ	**Minamidaito 2**	**6.79**	**83**	P	**Pn**	**13 04 38.8**	**-2.8**
JMZ				*e*S	**Sn**	**13 05 47.6**	**-10**
KSRS	**Korea Array**	**12.78**	**15**	P	**Pn**	**13 06 04.5**	**+2.9**
	0.2nm,0.3s,baz=186,slow=11,SNR=5.7						
CMAR	**Chiang Mai Arr**	**23.95**	**259**	P	**P**	**13 08 08.2**	**+0.8**
	0.7nm,0.6s,mb3.2,baz=57,slow=8.1,SNR=4.9						
SONM	**Songino Array**	**26.48**	**333**	P	**P**	**13 08 30.1**	**+0.1**
	0.5nm,0.5s,mb3.2,baz=151,slow=10,SNR=3.6						
MKAR	**Makanchi Array**	**39.32**	**314**	P	**P**	**13 10 21.0**	**-0.3**
	0.7nm,0.3s,mb3.9,baz=97,slow=9.0,SNR=22						
MKAR				PcP	PcP	13 12 27.6	+0.1
	0.3nm,0.9s,baz=151,slow=3.3,SNR=2.3						
MKAR	**Makanchi Array**	**39.32**	**314**	P	**P**	**13 10 21.0**	**-0.3**
MKAR				PcP	PcP	13 12 27.6	+0.1
ZALV	**Zalesovo Beam**	**40.75**	**325**	P	**P**	**13 10 31.6**	**-1.4**
	0.7nm,0.3s,mb4.0,baz=100,slow=7.3,SNR=4.9						
FITZ	**Fitzroy Crossi**	**43.02**	**177**	P	**P**	**13 10 51.4**	**-0.4**
	1.0nm,0.6s,mb3.7,baz=352,slow=7.5,SNR=5.6						
WRAB	**Tennant Creek**	**45.97**	**166**	*e*P	**P**	**13 11 15.7**	**+0.4**
	1.3nm,0.5s,mb3.9						
WRA	**Warramunga Arr**	**45.98**	**166**	P	**P**	**13 11 15.5**	**+0.2**
	1.6nm,0.5s,mb4.0,baz=348,slow=8.9,SNR=11						
WRA	**Warramunga Arr**	**45.98**	**166**	P	**P**	**13 11 15.5**	**+0.2**
BVAR	**Borovoye Array**	**48.44**	**320**	P	**P**	**13 11 34.0**	**0.0**
	0.5nm,0.3s,mb3.8,baz=153,slow=9.7,SNR=4.0						
BVAR				PcP	PcP	13 12 58.3	-0.1
	0.6nm,0.4s,baz=57,slow=5.3,SNR=3.4						
ASAR	**Alice Springs**	**49.50**	**168**	P	**P**	**13 11 43.5**	**+1.1**
	0.4nm,0.3s,mb3.8,baz=0.9,slow=6.4,SNR=14						
ASAR				PcP	PcP	13 13 02.5	-0.1
	0.4nm,0.6s,baz=345,slow=2.8,SNR=4.0						
FINES	**FINESS Array B**	**71.80**	**330**	P	**P**	**13 14 13.2**	**0.0**
	0.9nm,0.8s,mb3.7,baz=100,slow=9.9,SNR=3.4						
AKASG	**Malin Array Be**	**73.71**	**319**	P	**P**	**13 14 23.6**	**-1.0**
	0.4nm,0.3s,mb3.6,baz=65,slow=5.6,SNR=3.1						

ISCJB ***27*** *13:12:41.2±1.4, 13°.2N±0°.3×51°.2E±0°.1, h10km, mb3.8/5, MS3.2/5, Error ellipse: s-maj=39.4km s-min=10.4km az=21.0*
IDC ***27*** *13:12:41.5±1.8, 13°.00N×51°.34E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.5/21, mbtmp3.7/5, MS3.2/5, Ms1 3.3/5, ms1mx2.9/23, Error ellipse: s-maj=49.9km s-min=31.1km az=16.0*
ISC 27 13:12:42.6±1.5, 13°.1N±0°.3×51°.1E±0°.1, h10km, n11, σ1°11/7, mb3.8/5, MS3.2/5, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MUKL	**Al Mukalla**	**2.41**	**304**	*i* P	**Pn**	**13 13 22.4**	**+0.3**
MUKL				*e*		13 13 22.8	
	baz=104,slow=5.9						
MUKL				*i* S	**Sn**	**13 13 50.6**	**-1.1**
MUKL				AML	AML	13 13 51.7	
	comp=N,296nm,0.4s						
EIL	**Elat**	**22.25**	**320**	LR	LR	13 25 47.5	
	comp=N,70nm,19.1s,MS3.1,baz=95,slow=35						
ASF	**Jabal al Asfar**	**23.00**	**328**	LR	LR	13 25 42.8	
	comp=N,40nm,19.4s,MS2.9,baz=43,slow=34						
GNI	**Garni**	**27.49**	**349**	LR	LR	13 31 21.2	
	comp=N,93nm,20.3s,MS3.4,baz=249,slow=40						
MKAR	**Makanchi Array**	**42.56**	**32**	P	**P**	**13 20 39.2**	**+0.7**
	comp=N,0.2nm,0.5s,mb3.1,baz=225,slow=10.0,SNR=2.9						
CMAR	**Chiang Mai Arr**	**46.24**	**77**	P	**P**	**13 21 07.0**	**-1.4**
	comp=N,0.8nm,0.5s,mb3.9,baz=278,slow=8.8,SNR=5.0						
ZALV	**Zalesovo Beam**	**48.62**	**26**	P	**P**	**13 21 26.6**	**+0.2**
	comp=N,0.6nm,0.5s,mb3.9,baz=248,slow=7.6,SNR=3.5						
ESDC	**Sonseca Array**	**54.97**	**309**	P	**P**	**13 22 16.4**	**+2.3**
	comp=N,1.6nm,0.8s,mb4.1,baz=93,slow=6.9,SNR=13						
NOA	**NORSAR Array B**	**55.88**	**338**	LR	LR	13 50 01.1	
	comp=N,12nm,19.5s,MS3.0,baz=245,slow=40						
ARCES	**ARCESS Array B**	**58.65**	**350**	LR	LR	13 50 43.2	
	comp=N,43nm,20.6s,MS3.5,baz=191,slow=39						
ASAR	**Alice Springs**	**88.75**	**115**	P	**P**	**13 25 36.5**	**-0.5**
	comp=N,0.6nm,0.9s,mb3.9,baz=286,slow=4.1,SNR=5.0						

ISCJB ***27*** *14:12:54.3±0.7, 28°.9S±0°.1×61°.8E±0°.2, h10km, mb4.2/9, MS3.6/5, Error ellipse: s-maj=23.0km s-min=18.2km az=168.0*
IDC ***27*** *14:12:55.0±1.1, 28°.86S×61°.92E, h0km, mb4.1/7, mb1 4.2/7, mb1mx3.9/23, mbtmp4.1/7, MS3.6/5, Ms1 3.6/5, ms1mx3.3/26, Error ellipse: s-maj=42.2km s-min=22.7km az=93.0*
NEIC ***27*** *14:12:56.2±0.6, 28°.84S×61°.76E, h10km, mb4.4/3, Error ellipse: s-maj=20.7km s-min=16.2km az=77.0*
ISC 27 14:12:56.2±0.7, 28°.8S±0°.1×61°.8E±0°.2, h10km, n17, σ0°62/11, mb4.2/9, MS3.6/5, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**31.93**	**261**	LR	LR	14 29 40.6	
	comp=Z,52nm,20.7s,MS3.2,baz=182,slow=31						
LSZ	**Lusaka**	**33.77**	**286**	*e*P	**P**	**14 19 37.9**	**-0.5**
	5.3nm,0.8s,mb4.5						
KMBO	**Kilima Mbogo**	**36.13**	**315**	LR	LR	14 31 54.9	
	comp=Z,86nm,19.9s,MS3.5,baz=92,slow=31						
MAW	**Mawson**	**38.81**	**179**	P	**P**	**14 20 21.2**	**+0.3**
	1.9nm,0.2s,mb4.4,baz=352,slow=9.1,SNR=4.9						
MAW				LR	LR	14 31 45.8	
	comp=Z,162nm,20.9s,MS3.8,baz=172,slow=29						
FITZ	**Fitzroy Crossi**	**58.97**	**95**	P	**P**	**14 22 55.9**	**-0.4**
	3.2nm,1.0s,mb4.3,baz=164,slow=7.6,SNR=5.4						
CMAR	**Chiang Mai Arr**	**59.16**	**42**	LR	LR	14 44 32.3	
	comp=Z,29nm,18.6s,MS3.4,baz=250,slow=32						
QSPA	**South Pole Qui**	**61.33**	**180**	P	**P**	**14 23 11.5**	**0.0**
	2.0nm,0.8s,mb4.3,baz=290,slow=3.1,SNR=14						
QSPA	**South Pole Qui**	**61.33**	**180**	*e*P	**P**	**14 23 11.6**	**+0.1**
	4.0nm,1.0s,mb4.5						
ASAR	**Alice Springs**	**64.02**	**104**	P	**P**	**14 23 30.2**	**-0.1**
	1.2nm,0.8s,mb4.0,baz=236,slow=5.6,SNR=9.5						
GNI	**Garni**	**70.42**	**346**	LR	LR	14 51 14.6	
	comp=Z,62nm,19.8s,MS3.9,baz=89,slow=33						
MKAR	**Makanchi Array**	**77.52**	**14**	P	**P**	**14 24 52.8**	**+1.0**
	0.7nm,0.8s,mb3.6,baz=176,slow=5.6,SNR=5.1						
ABKAR	**Akbulak array**	**77.74**	**359**	*e*P	**P**	**14 24 52.8**	**-0.1**
	0.8nm,0.6s,mb3.8						
ZAA0	**Zalesovo Array**	**84.81**	**13**	*e*P	**P**	**14 25 30.9**	**+0.5**
ZALV	**Zalesovo Beam**	**84.81**	**13**	P	**P**	**14 25 31.0**	**+0.6**
	3.7nm,0.8s,mb4.5,baz=199,slow=5.3,SNR=14						
SONM	**Songino Array**	**86.20**	**28**	P	**P**	**14 25 36.1**	**-1.4**
	0.4nm,0.7s,mb3.8,baz=216,slow=7.1,SNR=2.6						
YKA	**Yellowknife Ar**	**146.24**	**357**	PKPbc	PKPbc	14 32 38.0	+1.9
	2.0nm,0.8s,baz=347,slow=3.8,SNR=4.5						
YKA	**Yellowknife Ar**	**146.24**	**357**	PKPbc	PKPbc	14 32 38.0	+1.8

SZGRF ***27*** *14:41:20.2, 34°.85N×73°.12E, h33km, mb5.0, Pakistan*
BJI ***27*** *14:41:43.7, 36°.79N×70°.94E, h160km, mB4.8/14, mb4.6/21*
ISCJB ***27*** *14:41:47.7±0.3, 36°.67N±0°.02×71°.51E±0°.03, h172km±3km, mb4.5/166, Error ellipse: s-maj=3.8km s-min=3.1km az=151.9*
NEIC ***27*** *14:41:48.8±0.5, 36°.71N×71°.53E, h167km±5km, mb4.6/94, Error ellipse: s-maj=4.7km s-min=3.3km az=212.0*
MOS ***27*** *14:41:48.5±0.9, 36°.74N×71°.50E, h175km, mb4.6/70, Error ellipse: s-maj=6.8km s-min=3.5km az=129.1*
IDC ***27*** *14:41:51.1±0.6, 36°.76N×71°.52E, h186km±5km, mb4.0/17, mb1 4.1/22, mb1mx4.0/26, mbtmp4.0/22, MS3.0/2, Ms1 3.0/2, ms1mx2.5/33, Error ellipse: s-maj=11.1km s-min=9.6km az=10.0*
NNC ***27*** *14:41:55.5±6.6, 37°.31N×71°.20E, h228km±59km, mb3.9, mpv5.4, Error ellipse: s-maj=61.0km s-min=30.4km az=11.0*
BGS ***27*** *14:42:03.5±1.5, 37°.77N×69°.21E, h167km, mb4.6*
ISC 27 14:41:48.6±0.3, 36°.68N±0°.02×71°.51E±0°.03, h163km±3km, h178km±3.8km; pP-P, n497, σ0°87/521, mb4.5/166, 142C-10D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.87**	**173**	⇑P	**Pn**	**14 42 36.6**	**+1.7**
KBL	**Kabul**	**2.93**	**224**	*e*PN	**Pn**	**14 42 35.8**	**+0.1**
CHCP	**Chirah Chowk**	**3.34**	**154**	P	**Pn**	**14 42 43.2**	**+2.4**
SRNI	**Srinagar**	**3.75**	**132**	*ex*	x	14 43 15.0	
SRNI				*ex*	**Sn**	**14 43 31.5**	**+0.8**
KSH	**Kashi**	**4.52**	**50**	⇑*i*P	**Pn**	**14 42 53.0**	**-2.8**
KSH				sP		14 43 28.8	
KSH				S	**Sn**	**14 43 39.5**	**-8.8**
KSH				smax			
	comp=N,7μm,0.6s						
KSH				smax			
	comp=E,4μm,0.6s						
JMU	**Jammu**	**4.84**	**144**	*e*PKP	**Pn**	**14 43 00.0**	**-0.2**
JMU				*e*S	**Sn**	**14 43 52.5**	**-3.6**
DLH	**Dalhousie**	**5.53**	**137**	*e*PKP	**Pn**	**14 43 12.0**	**+2.8**
DLH				*e*S	**Sn**	**14 44 12.0**	**-0.3**
AML	**Almayashu**	**5.70**	**17**	P	**Pn**	**14 43 11.9**	**+0.7**
	SNR=1178						
UCH	**Uchtor**	**6.00**	**22**	P	**Pn**	**14 43 16.4**	**+1.0**
	SNR=47						
KZA	**Kyzart**	**6.12**	**27**	P	**Pn**	**14 43 17.5**	**+0.7**
	SNR=46						
EKS2	**Erkin-Say**	**6.22**	**16**	P	**Pn**	**14 43 18.8**	**+0.6**
	SNR=234						
AAK	**Ala-Archa**	**6.37**	**20**	P	**Pn**	**14 43 21.3**	**+1.1**
	comp=E,30nm,0.3s,baz=141,slow=1.7,SNR=100						
AAK				S	**Sn**	**14 44 30.7**	**-1.5**
	comp=E,13nm,0.3s,baz=279,slow=4.5,SNR=3.6						
AAK				LR	LR	14 45 51.5	
	comp=E,95nm,20.4s,baz=41,slow=38						
AAK	**Ala-Archa**	**6.37**	**20**	PN	**Pn**	**14 43 21.3**	**+1.1**
AAK				S	**Sn**	**14 44 30.7**	**-1.5**
KK31	**Karatay Array**	**6.46**	**353**	⇓P	**Pn**	**14 43 21.4**	**+0.1**
	comp=E,195nm,0.6s,baz=177,slow=13						
KK31				⇓S	**Sn**	**14 44 29.5**	**-4.7**
	comp=E,120nm,0.5s,baz=179,slow=19						
KK31	**Karatay Array**	**6.46**	**353**	PN	**Pn**	**14 43 21.3**	**0.0**
KK31				pmax	pmax		
	comp=Z,74nm,0.2s						
KBK	**Karagaybulak**	**6.53**	**23**	P	**Pn**	**14 43 23.0**	**+0.8**
	SNR=68						
FRU	**Bishkek**	**6.59**	**20**	⇓*i*PN	**Pn**	**14 43 24.0**	**+0.9**
FRU				*e*S	**Sn**	**14 44 38.0**	**+0.6**
FRU				pmax	pmax		
	comp=Z,140nm,1.6s						
FRU				pmax	pmax		
	comp=E,1μm,1.9s						
BHK	**Bhakra**	**6.65**	**141**	*ex*	**Pn**	**14 43 19.8**	**-4.2**
BHK				*e*S	**Sn**	**14 44 33.0**	**-5.9**
ULHL	**Ulahol**	**6.65**	**32**	P	**Pn**	**14 43 24.1**	**+0.2**
	SNR=6.7						
CHMS	**Chumysh**	**6.78**	**21**	P	**Pn**	**14 43 25.9**	**+0.3**
	SNR=78						
SDNR	**Sundarnagar**	**6.87**	**137**	*e*PKP	**Pn**	**14 43 26.5**	**-0.5**
SDNR				*ex*	x	14 44 36.5	
USP	**Ospenovka**	**6.96**	**18**	P	**Pn**	**14 43 28.1**	**0.0**
	SNR=40						
TKM2	**Tokmak 2**	**6.98**	**26**	P	**Pn**	**14 43 28.2**	**0.0**
	SNR=118						
SMLA	**Simla**	**7.27**	**138**	*i* P	**Pn**	**14 43 32.5**	**+0.3**
SMLA				*i* x	x	14 44 50.9	
SMLA				⇓		14 44 53.8	
	comp=N,12μm,0.3s						
SMLA						14 44 53.9	
	comp=E,14μm,0.2s						
KNDC	**Almaty**	**7.75**	**31**	⇑P	**Pn**	**14 43 39.7**	**+1.1**
	comp=E,225nm,0.8s						
KNDC				⇑S	**Sn**	**14 45 04.4**	**-0.7**
	comp=E,177nm,0.9s						
KKR	**Kurukshetra**	**8.04**	**145**	*e*PKP	**Pn**	**14 43 42.6**	**+0.1**
DDI	**Dehra Dun**	**8.37**	**137**	*e*PKP	**Pn**	**14 43 44.5**	**-2.4**
DDI				*ex*	x	14 45 05.0	
JOSI	**Joshimath**	**9.08**	**130**	*e*PKP	**Pn**	**14 43 56.6**	**+0.4**
JOSI				*ex*	x	14 44 50.1	
JOSI				AML	AML	14 45 05.1	
	comp=N,440nm,0.8s						
JOSI				AML	AML	14 45 08.1	
	comp=E,232nm,0.6s						
NDI	**New Delhi**	**9.31**	**147**	*ex*	**Pn**	**14 43 55.5**	**-3.8**
NDI				*e*S	**Sn**	**14 45 33.0**	**-10**
KHET	**Khetri**	**9.32**	**156**	⇓*i*P	**Pn**	**14 43 57.6**	**-1.9**
AYAN	**Aya Nagar**	**9.45**	**148**	*e*PKP	**Pn**	**14 43 59.5**	**-

comp=E,37nm,1.2s
NVS smax
comp=N,14nm,1.7s
NVS smax
comp=E,29nm,1.7s
HYB Hyderabad 20.18 160 *eP* **P 14 46 13.0 +2.5**
HYB *e* 14 46 34.0
HYB *eS* **S 14 49 50.0 +1.9**
HYB Hyderabad 20.18 160 *i P* **P 14 46 13.0 +2.5**
HYB *e* 14 46 34.0
HYB *eS* **S 14 49 50.0 +1.9**
SHL Shillong 20.62 117 *ex* **P 14 46 18.0 +2.8**
SHL *ex* **S 14 49 58.0 +1.4**
DGRG David-gareji 20.81 291 P **P 14 46 18.4 +1.3**
UMR Umm Al-Rimmam 21.13 257 *eP* **P 14 46 20.2 -0.4**
GNI Garni 21.23 288 P **P 14 46 23.3 +1.8**
comp=E,8.4nm,0.4s,mb4.4,baz=216,slow=6.6,SNR=18
GNI Garni 21.23 288 *ceP* **P 14 46 23.7 +2.2**
GNI pmax pmax
comp=Z,121nm,1.9s
GNI Garni 21.23 288 *eP* **P 14 46 23.1 +1.6**
comp=Z,77nm,1.1s,mb4.9
MTA Mtatsminda 21.26 292 P **P 14 46 22.0 +0.1**
TBLG Delisi 21.31 292 P **P 14 46 23.0 +0.7**
TBLG Delisi 21.31 292 P **P 14 46 23.0 +0.6**
KBD Kabd 21.31 256 *eP* **P 14 46 22.8 +0.2**
KBD AMb AMB 14 46 24.9
comp=Z,55nm,0.8s,mb4.9
QRN Al-Qurain 21.33 255 *eP* **P 14 46 22.3 -0.5**
SVE Sverdlovsk 21.43 344 *eP* **P 14 46 23.9 +0.4**
SVE *eS* **S 14 50 17.5 +6.4**
SVE pmax pmax
comp=Z,19nm,0.8s,mb4.5
RDF Al-Radifah 21.54 256 *eP* **P 14 46 24.9 0.0**
RDF AMb AMB 14 46 26.9
comp=Z,73nm,1.1s,mb5.0
ARU Arti 21.59 340 *d iP* **P 14 46 25.6 +0.4**
ARU PPP 14 47 02.6
ARU S **S 14 50 13.9 +0.1**
ARU pmax pmax
comp=Z,45nm,1.7s,mb4.6
ARU Arti 21.59 340 *eP* **P 14 46 25.2 0.0**
comp=Z,39nm,1.0s,mb4.8
NAY Al-Naaiem 21.63 257 *eP* **P 14 46 25.2 -0.7**
NAY AMb AMB 14 46 26.9
comp=Z,39nm,1.1s,mb4.8
GOR Gori 21.80 292 P **P 14 46 29.6 +2.1**
KEH Kehvi 21.96 293 P **P 14 46 28.3 -0.9**
ZEI Tsey 22.03 295 *eP* **P 14 46 31.3 +1.3**
ZEI pmax pmax
comp=Z,36nm,0.9s,mb4.8
ONI Oni 22.34 294 P **P 14 46 33.8 +0.9**
GTA Gaotai 22.42 74 *eP* **P 14 46 36.5 +2.8**
GTA pP 14 47 09.8
GTA sP sP 14 47 30.0 +6.5
GTA pmax pmax
comp=Z,3.0nm,1.0s,mb3.7
KIV Kislovodsk 23.07 297 *eP* **P 14 46 39.3 -0.3**
KIV *e*PP 14 47 10.6
KIV *eS* **S 14 50 36.9 -1.0**
KIV pmax pmax
comp=Z,21nm,1.0s,mb4.5
KIV MLR MLR
comp=Z,27nm,14.0s
KIV Kislovodsk 23.07 297 *eP* **P 14 46 39.8 +0.2**
comp=Z,27nm,0.9s,mb4.7
VRHR Novokhopersk 25.69 314 *eP* **P 14 47 03.1 -0.2**
VRHR pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
VRHR pmax pmax
comp=N,8.0nm,0.5s
VRHR pmax pmax
comp=E,10.0nm,0.9s
ZAK Zakamensk 26.56 49 *eP* **P 14 47 12.3 +1.2**
ZAK *e* pP 14 47 45.9 +1.1
ZAK pmax pmax
comp=Z,1.0nm,1.0s,mb3.4
VSR Storozhevoye 27.18 313 *eP* **P 14 47 16.4 -0.2**
VSR pmax pmax
comp=N,4.0nm,0.4s
VSR pmax pmax
comp=Z,6.0nm,0.4s,mb4.6
VSR pmax pmax
comp=E,10.0nm,0.9s
CD2 Chengdu 27.33 93 P **P 14 47 19.5 +1.3**
CD2 pP pP 14 47 52.8 +0.7
CD2 sP sP 14 48 11.5 +0.6
CD2 PP PP 14 48 14.3 -8.8
CD2 S **S 14 51 45.5 -0.3**
CD2 sS sS 14 52 44.0 -1.9
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.7
CD2 pmax pmax
comp=Z,1µm,6.5s
SONM Songino Array 27.89 55 P **P 14 47 24.4 +1.4**
comp=Z,1.9nm,0.8s,mb3.9,baz=259,slow=9.9,SNR=12
SONM pP pP 14 48 02.5 +5.6
comp=Z,2.9nm,1.0s,baz=256,slow=12,SNR=6.1
KMI Kunming 29.05 105 P **P 14 47 35.5 +2.0**
KMI pP pP 14 48 08.5 +1.0
KMI sP sP 14 48 27.5 +1.2
KMI PP PP 14 48 36.0 -6.2
KMI S **S 14 52 14.5 +1.6**
KMI sS sS 14 53 12.5 -0.5
KMI pmax pmax
comp=Z,4.0nm,1.5s,mb3.9
KMI pmax pmax
comp=Z,120nm,4.0s
KMI LR LR
comp=N,110nm,15.6s
KMI LR LR
comp=E,210nm,16.0s
KMI LR LR
comp=Z,150nm,8.8s
BR131 Keskin Array S 29.77 288 *eP* **P 14 47 40.2 +0.5**
comp=Z,3.2nm,0.6s,mb4.2
BRTR Keskin Array B 29.77 288 P **P 14 47 41.0 +1.2**
comp=Z,3.4nm,0.5s,mb4.3,baz=96,slow=9.2,SNR=19
BRTR pP pP 14 48 19.3 +5.5
comp=Z,0.6nm,0.6s,baz=38,slow=42,SNR=2.2
OBN Obninsk 30.07 319 *c iP* **P 14 47 42.2 +0.1**
OBN pmax pmax
comp=Z,21nm,1.0s,mb4.8
CMAR Chiang Mai Arr 30.19 120 P **P 14 47 45.2 +1.7**
comp=Z,0.8nm,0.5s,mb3.7,baz=307,slow=8.3,SNR=5.2
CMAR pP pP 14 48 21.8 +4.0
comp=Z,0.7nm,0.7s,baz=320,slow=11,SNR=2.2
HHC Hu-ho-hao-te 31.32 70 *eP* **P 14 47 53.0 -0.3**
HHC pP pP 14 48 26.0 -1.5
HHC sP sP 14 48 44.0 -2.3
HHC PP PP 14 49 03.0 -4.2
HHC PcP PcP 14 50 43.5 +0.2
HHC S **S 14 52 46.3 -1.8**
HHC ScP ScP 14 54 10.0 -0.9
HHC PcS PcS 14 54 27.0 -0.6
HHC ScS ScS 14 58 06.3 -2.3
HHC pmax pmax
comp=Z,18nm,0.6s,mb5.0
HHC pmax pmax
comp=Z,150nm,6.0s
HHC LR LR
comp=N,200nm,13.2s
HHC LR LR
comp=E,190nm,13.1s
HHC LR LR
comp=Z,180nm,13.4s
GYA Guiyang 31.49 99 P **P 14 47 56.0 +1.0**
GYA pP pP 14 48 31.0 +1.8
GYA sP sP 14 48 49.5 +1.6
GYA PP PP 14 49 06.3 -3.0
GYA PcP PcP 14 50 44.8 +0.8
GYA S **S 14 52 51.3 +0.3**
GYA sS sS 14 53 50.5 -0.9
GYA ScP ScP 14 54 12.5 +0.8
GYA PcS PcS 14 54 29.0 +0.3
GYA ScS ScS 14 58 09.0 -0.9
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
TLCR 33.03 298 ⇑P **P 14 48 08.9 +0.7**
TLCR 33.03 298 ⇑*iP* **P 14 48 08.9 +0.7**
KIS Kishinev 33.06 302 *e*UNK **P 14 48 07.0 -1.5**
AKASG Malin Array Be 33.15 309 P **P 14 48 09.0 -0.2**
comp=Z,7.8nm,0.6s,mb4.6,baz=79,slow=7.3,SNR=33
AKBB Malin Array Si 33.15 309 *eP* **P 14 48 08.9 -0.3**

KIEV Kiev 33.16 309 *eP* **P 14 48 08.8 -0.4**
KIEV pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
KIEV Kiev 33.16 309 *eP* **P 14 48 08.8 -0.5**
comp=Z,10nm,0.8s,mb4.6
CFR Carcaliu 33.51 298 ⇑P **P 14 48 13.1 +0.7**
CFR Carcaliu 33.51 298 ⇑*iP* **P 14 48 13.1 +0.7**
TESR 34.54 301 ⇑P **P 14 48 21.9 +0.6**
TESR 34.54 301 ⇑*iP* **P 14 48 21.9 +0.7**
PLOR Plostina 34.55 300 ⇑P **P 14 48 23.0 +1.7**
PLOR Plostina 34.55 300 ⇑*iP* **P 14 48 23.0 +1.7**
MLR Muntele Rosu 35.05 299 ⇑P **P 14 48 27.6 +2.0**
MLR Muntele Rosu 35.05 299 ⇑*iP* **P 14 48 27.6 +2.0**
DOPR Dopca 35.42 300 ⇑*iP* **P 14 48 30.3 +1.5**
IDID Didziasalis 35.48 316 *eP* **P 14 48 29.4 +0.2**
IDID AMB AMB 14 48 30.2
comp=Z,6.4nm,0.8s,mb4.3
IDID Didziasalis 35.48 316 *eP* **P 14 48 29.1 -0.1**
IDID AMB AMB 14 48 30.2
comp=Z,6.3nm,0.8s,mb4.3
BURAR Bucovina Array 35.53 303 ⇑P **P 14 48 30.5 +0.8**
BURAR Bucovina Array 35.53 303 ⇑*iP* **P 14 48 30.5 +0.8**
BUR08 Bucovina Ar. S 35.54 303 *eP* **P 14 48 30.1 +0.3**
VOIR 35.68 299 ⇑P **P 14 48 32.1 +1.1**
VOIR 35.68 299 ⇑*iP* **P 14 48 32.1 +1.1**
IIGN Ignalina 35.78 316 *eP* **P 14 48 32.0 +0.3**
IIGN AMB AMB 14 48 32.9
comp=Z,7.5nm,0.7s,mb4.4
IIGN Ignalina 35.78 316 *eP* **P 14 48 31.6 -0.1**
IIGN AMB AMB 14 48 32.9
comp=Z,7.5nm,0.7s,mb4.4
IZAR Zarasai 35.85 317 *eP* **P 14 48 32.5 +0.2**
IZAR AMB AMB 14 48 33.4
comp=Z,7.5nm,0.9s,mb4.3
IZAR Zarasai 35.85 317 *eP* **P 14 48 32.2 -0.1**
IZAR AMB AMB 14 48 33.4
comp=Z,7.2nm,0.8s,mb4.3
JOF Joensuu 35.91 330 *eP* **P 14 48 32.6 -0.1**
JOF pmax pmax
comp=Z,6.0nm,0.4s,mb4.6
JOF Joensuu 35.91 330 *ep* **P 14 48 32.6 -0.1**
comp=Z,6.3nm,0.4s,mb4.6
APE Apeiranthos 36.50 285 ⇓P **P 14 48 39.0 +0.9**
APE Apeiranthos 36.50 285 ⇓*iP* **P 14 48 39.0 +0.9**
DRGR 37.25 301 ⇑P **P 14 48 45.5 +1.2**
DRGR 37.25 301 ⇑*iP* **P 14 48 45.5 +1.2**
VTS Vitosha 37.25 294 ⇑P **P 14 48 45.3 +1.0**
VTS Vitosha 37.25 294 ⇑*iP* **P 14 48 45.3 +1.0**
TRPA Tarpa 37.33 304 ⇑*iP* **P 14 48 45.3 +0.4**
UZH Uzhgorod 37.49 304 *c iP* **P 14 48 46.9 +0.6**
FINES FINESS Array B 37.56 326 P **P 14 48 47.0 +0.4**
comp=Z,3.8nm,0.4s,mb4.4,baz=117,slow=12,SNR=18
FINES LR LR 15 06 50.4
comp=Z,25nm,20.6s,baz=267,slow=40
APA Apatity 37.62 337 ⇑*eP* **P 14 48 55.0 +7.9**
APA pmax pmax
comp=Z,38nm,1.4s,mb4.8
KAF Kangasniemi 37.69 327 *eP* **P 14 48 47.7 -0.1**
KAF pmax pmax
comp=Z,4.0nm,0.5s,mb4.3
KAF Kangasniemi 37.69 327 *eP* **P 14 48 47.7 -0.1**
comp=Z,4.2nm,0.5s,mb4.3
KAF Kangasniemi 37.69 327 *ep* **P 14 48 47.7 -0.1**
comp=Z,4.2nm,0.5s,mb4.3,baz=111,slow=8.4
BZS Buzias 38.08 299 ⇑P **P 14 48 52.3 +1.1**
BZS Buzias 38.08 299 ⇑*iP* **P 14 48 52.3 +1.1**
NIE Niedzica 38.79 306 *eP* **P 14 48 59.0 +1.9**
NJ2 Nanjing 39.05 82 *eP* **P 14 49 00.3 +0.8**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.7
VYHS Vyhne 39.79 304 *eP* **P 14 49 06.3 +0.9**
VYHS pmax pmax
comp=Z,6.0nm,1.3s,mb4.1
VYHS Vyhne 39.79 304 *eP* **P 14 49 06.3 +0.9**
comp=Z,5.9nm,1.3s,mb4.1
VYHS Vyhne 39.79 304 *eP* **P 14 49 06.2 +0.8**
PKSM Moragy 40.09 301 ⇑P **P 14 49 08.5 +0.6**
PKSM Moragy 40.09 301 ⇑*iP* **P 14 49 08.5 +0.6**
OKC Ostrava-Krasne 40.19 306 *eP* **P 14 49 09.5 +0.8**
OKC Ostrava-Krasne 40.19 306 ⇑*eP* **P 14 49 09.5 +0.8**
MORC Moravsky Berou 40.58 306 *eP* **P 14 49 11.9 0.0**
MORC pmax pmax
comp=Z,19nm,1.0s,mb4.7
MORC Moravsky Berou 40.58 306 *eP* **P 14 49 11.9 0.0**
comp=Z,19nm,1.0s,mb4.7
MORC Moravsky Berou 40.58 306 ⇑*iP* **P 14 49 12.6 +0.7**
KEV Kevo 40.78 338 *eP* **P 14 49 12.8 -0.5**
KEV pmax pmax
comp=Z,14nm,1.0s,mb4.5
KEV Kevo 40.78 338 *eP* **P 14 49 12.8 -0.5**
comp=Z,14nm,1.0s,mb4.5
KEV Kevo 40.78 338 *ep* **P 14 49 12.8 -0.5**
comp=Z,14nm,1.0s,mb4.5
ARCES ARCESS Array B 41.13 337 P **P 14 49 16.9 +0.7**
comp=Z,8.2nm,0.8s,mb4.4,baz=114,slow=8.6,SNR=22
CN2 Changchun 41.16 63 *eP* **P 14 49 16.8 +0.1**
VRAC Vranov 41.22 306 ⇑P **P 14 49 18.2 +1.0**
VRAC Vranov 41.22 306 ⇑*iP* **P 14 49 18.2 +1.0**
DPC Dobruska-Polom 41.34 307 ⇑*iP* **P 14 49 19.1 +1.0**
DPC Dobruska-Polom 41.34 307 ⇑*iP* **P 14 49 19.1 +1.0**
UPC Upice 41.54 307 ⇑*iP* **P 14 49 20.4 +0.7**
UPC Upice 41.54 307 ⇑*iP* **P 14 49 20.4 +0.7**
KOGS Kog 41.71 301 *eP* **P 14 49 21.5 +0.3**
CONA Conrad Observa 41.82 304 *i P* **P 14 49 22.8 +0.8**
comp=Z,27nm,1.0s,mb4.8,SNR=30
TREC Trest 41.95 306 ⇑*iP* **P 14 49 23.9 +0.9**
TREC Trest 41.95 306 ⇑*iP* **P 14 49 23.9 +0.9**
ARSA Arzberg 42.12 303 ⇑*iP* **P 14 49 24.8 +0.4**
comp=Z,5.3nm,0.8s,mb4.2
GROS Grobnik 42.23 301 *i P* **P 14 49 25.7 +0.4**
PVCC Panska Ves 42.46 308 *eP* **P 14 49 27.8 +0.7**
PVCC Panska Ves 42.46 308 ⇑*eP* **P 14 49 27.8 +0.7**
PRU Pruhonice 42.51 307 *eP* **P 14 49 28.6 +1.0**
PRU Pruhonice 42.51 307 ⇑*eP* **P 14 49 28.6 +1.0**
SOKA Soboth 42.52 302 ⇑*iP* **P 14 49 28.4 +0.7**
comp=Z,17nm,0.7s,mb4.8
BRG Berggiesshubel 42.83 308 *eP* **P 14 49 30.7 +0.6**
comp=Z,21nm,0.9s,mb4.8
BRG Berggiesshubel 42.83 308 *i P* **P 14 49 30.8 +0.7**
comp=Z,21nm,0.9s,mb4.7
BRG Berggiesshubel 42.83 308 *i P* **P 14 49 30.8 +0.7**
BRG pmax pmax
comp=Z,12nm,0.9s,mb4.5
MOA Molln 42.89 304 ⇑*iP* **P 14 49 31.0 +0.3**
comp=Z,18nm,0.9s,mb4.7,SNR=11
LJU Ljubljana 42.95 301 *eP* **P 14 49 32.0 +0.8**
MOZS Mozjanca 42.98 301 *i P* **P 14 49 32.1 +0.8**
KNDS Knezji Dol 43.13 300 *i P* **P 14 49 33.0 +0.3**
GEC2 GERESS Array S 43.16 305 *eP* **P 14 49 33.3 +0.5**
comp=Z,5.0nm,0.9s,mb4.1
GEC2 GERESS Array S 43.16 305 *eP* **P 14 49 33.3 +0.5**
GEC2 pmax pmax
comp=Z,5.0nm,0.9s,mb4.1
GEC2 GERESS Array S 43.16 305 *eP* **P 14 49 33.3 +0.5**
comp=Z,5.0nm,0.9s,mb4.1
KHC Kasperske Hory 43.21 306 ⇑*iP* **P 14 49 33.6 +0.4**
KHC Kasperske Hory 43.21 306 ⇑*iP* **P 14 49 33.6 +0.4**
CLL Collm 43.39 309 *eP* **P 14 49 34.6 -0.1**
comp=Z,13nm,0.9s,mb4.6
CLL Collm 43.39 309 ⇑*iP* **P 14 49 34.9 +0.2**
CLL pmax pmax
comp=Z,13nm,0.9s,mb4.6
CLL Collm 43.39 309 ⇑*iP* **P 14 49 34.9 +0.2**
comp=Z,13nm,0.9s,mb4.6
CLL *i* 14 49 36.9
CLL Collm 43.39 309 ⇑*iP* **P 14 49 34.9 +0.2**
comp=Z,13nm,0.9s,mb4.6
CLL *i* 14 49 36.9
CADS Cadrg 43.47 301 *i P* **P 14 49 35.5 +0.1**
YAK Yakutsk 43.58 36 *eP* **P 14 49 35.9 -0.1**
YAK pmax pmax
comp=Z,11nm,1.2s,mb4.4
WET Wettzell 43.66 306 *eP* **P 14 49 37.3 +0.4**
comp=Z,14nm,1.8s,mb4.3
WET Wettzell 43.66 306 *eP* **P 14 49 37.3 +0.4**
WET pmax pmax
comp=Z,14nm,1.8s,mb4.3
WET Wettzell 43.66 306 *eP* **P 14 49 37.3 +0.4**
comp=Z,14nm,1.8s,mb4.3
TANN Tannenbergstha 43.81 308 *eP* **P 14 49 38.6 +0.6**
comp=Z,9.0nm,1.1s,mb4.3
NKC Novy Kostel 43.83 307 *eP* **P 14 49 39.5 +1.3**
NKC Novy Kostel 43.83 307 ⇑*eP* **P 14 49 39.5 +1.3**
RJOB Jochberg 43.89 304 *eP* **P 14 49 38.8 +0.1**

comp=Z,11nm,0.8s,mb4.5
ROTZ Rotzenmuhle 44.03 307 *eP* **P 14 49 40.8 +1.0**
comp=Z,13nm,1.1s,mb4.5
ABTA Abfaltersbach 44.23 302 ⇑*iP* **P 14 49 40.8 -0.5**
comp=Z,5.4nm,1.0s,mb4.2
MOX Moxa 44.32 308 *eP* **P 14 49 42.8 +0.7**
comp=Z,13nm,1.1s,mb4.5
MOX Moxa 44.32 308 *eP* **P 14 49 42.5 +0.4**
comp=Z,11nm,1.1s,mb4.4
MOX Moxa 44.32 308 *eP* **P 14 49 42.8 +0.7**
MOX pmax pmax
comp=Z,13nm,1.1s,mb4.5
KSRS Korea Array 44.43 71 P **P 14 49 44.1 +1.0**
comp=Z,0.6nm,0.7s,mb3.4,baz=271,slow=6.8,SNR=5.3
KSRS pP pP 14 50 23.8 +4.7
comp=Z,1.2nm,0.9s,baz=281,slow=6.2,SNR=3.9
KSRS Korea Array 44.43 71 P **P 14 49 44.2 +1.0**
KSRS *PP pP 14 50 23.8 +4.7
KSRS pmax pmax
comp=Z,1.0nm,0.7s,mb3.5
KSRS pmax pmax
comp=Z,1.0nm,0.9s,mb3.5
NB2 NORSAR Subarra 44.48 323 P **P 14 49 42.6 -0.6**
comp=Z,17nm,0.7s,mb4.8,baz=95,slow=7.9
NOA NORSAR Array B 44.48 323 P **P 14 49 42.7 -0.5**
comp=Z,14nm,0.7s,mb4.7,baz=96,slow=7.8,SNR=88
NOA NORSAR Array B 44.48 323 P **P 14 49 42.7 -0.5**
NAO01 NORSAR Array S 44.62 323 *eP* **P 14 49 43.4 -0.9**
comp=Z,10nm,0.9s,mb4.5
GRA1 Grafenberg Arr 44.68 307 *eP* **P 14 49 46.2 +1.3**
comp=Z,24nm,1.2s,mb4.7
GRF Grafenberg Arr 44.68 307 *eP* **P 14 49 46.2 +1.3**
comp=Z,24nm,1.2s,mb4.7
GRF Grafenberg Arr 44.68 307 *eP* **P 14 49 46.2 +1.3**
GRF pmax pmax
comp=Z,24nm,1.2s,mb4.7
WTTA Wattenberg 44.74 303 ⇑*iP* **P 14 49 45.2 -0.2**
comp=Z,15nm,1.0s,mb4.6
FUR Furstenfeldbru 44.84 305 *eP* **P 14 49 46.8 +0.6**
comp=Z,44nm,1.3s,mb4.9
FUR Furstenfeldbru 44.84 305 *eP* **P 14 49 46.8 +0.6**
FUR pmax pmax
comp=Z,44nm,1.3s,mb4.9
FUR Furstenfeldbru 44.84 305 *eP* **P 14 49 46.8 +0.6**
comp=Z,44nm,1.3s,mb4.9
BSEG Bad Segeberg 44.87 313 *eP* **P 14 49 47.0 +0.7**
comp=Z,19nm,0.9s,mb4.7
BSEG Bad Segeberg 44.87 313 *eP* **P 14 49 47.0 +0.7**
BSEG pmax pmax
comp=Z,19nm,0.9s,mb4.7
BSEG Bad Segeberg 44.87 313 *eP* **P 14 49 47.0 +0.7**
CLZ Clausthal 44.99 310 *eP* **P 14 49 47.9 +0.6**
comp=Z,26nm,1.4s,mb4.7
CLZ Clausthal 44.99 310 *eP* **P 14 49 47.9 +0.6**
CLZ pmax pmax
comp=Z,26nm,1.4s,mb4.7
CLZ Clausthal 44.99 310 *eP* **P 14 49 47.9 +0.6**
comp=Z,26nm,1.4s,mb4.7
MOTA Moosalm 45.08 303 ⇑*iP* **P 14 49 47.5 -0.6**
comp=Z,8.4nm,0.7s,mb4.5
NRDL Niedersach Rie 45.09 311 *eP* **P 14 49 47.7 -0.4**
comp=Z,16nm,1.0s,mb4.6
KONO Kongsberg 45.20 321 *eP* **P 14 49 48.2 -0.7**
KONO pmax pmax
comp=Z,14nm,0.9s,mb4.6
KONO Kongsberg 45.20 321 *eP* **P 14 49 48.2 -0.6**
comp=Z,14nm,0.9s,mb4.6
UBBA Unterbreizbach 45.33 308 *eP* **P 14 49 50.4 +0.4**
comp=Z,5.0nm,0.7s,mb4.2
FETA Feichten 45.39 303 ⇓*iP* **P 14 49 50.0 -0.5**
comp=Z,7.7nm,0.7s,mb4.4,SNR=8.3
DAVA Damuels 45.91 303 ⇑*iP* **P 14 49 54.6 -0.1**
comp=Z,46nm,0.9s,mb5.1
DAVOX Davos/Dischmat 46.00 303 P **P 14 49 55.0 -0.4**
comp=Z,9.7nm,0.7s,mb4.5,baz=96,slow=7.8,SNR=18
STU Stuttgart 46.12 306 *eP* **P 14 49 56.5 +0.2**
comp=Z,14nm,0.9s,mb4.6
TNS Taunus Mts 46.38 308 *eP* **P 14 49 58.8 +0.5**
comp=Z,11nm,0.7s,mb4.6
TNS Taunus Mts 46.38 308 *eP* **P 14 49 58.8 +0.5**
TNS pmax pmax
comp=Z,11nm,0.7s,mb4.6
TNS Taunus Mts 46.38 308 *eP* **P 14 49 58.8 +0.5**
comp=Z,11nm,0.7s,mb4.6
SPAK Spaichingen-Ko 46.50 305 *eP* **P 14 49 59.2 0.0**
IBBN Ibbenburen 46.55 311 *eP* **P 14 49 59.8 +0.3**
comp=Z,24nm,1.0s,mb4.8
BFO Black Forest 46.76 305 *eP* **P 14 50 00.9 -0.3**
comp=Z,8.0nm,1.2s,mb4.2
BFO Black Forest 46.76 305 *eP* **P 14 50 00.9 -0.3**
BFO pmax pmax
comp=Z,8.0nm,1.2s,mb4.2
BFO Black Forest 46.76 305 *eP* **P 14 50 00.9 -0.3**
comp=Z,8.0nm,1.2s,mb4.2
LANF Langenberg 46.99 306 *eP* **P 14 50 03.5 +0.5**
FELD Feldberg im Sc 47.06 305 *eP* **P 14 50 03.3 -0.2**
RUP Ruppelstein 47.35 307 *eP* **P 14 50 06.1 +0.3**
CDF Champ du Feu 47.44 305 ⇑*iP* **P 14 50 06.7 +0.2**
comp=Z,11nm,0.8s,mb4.2
CDF Champ du Feu 47.44 305 ⇑*iP* **P 14 50 06.7 +0.2**
CDF pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
CDF Champ du Feu 47.44 305 ⇑*iP* **P 14 50 06.7 +0.2**
comp=Z,5.5nm,0.8s,mb4.2
BBS Basel-Blauen 47.46 304 *eP* **P 14 50 05.9 -0.8**
PGF Pioggiola 47.55 297 *eP* **P 14 50 06.9 -0.5**
comp=Z,17nm,0.9s,mb4.4
PGF Pioggiola 47.55 297 *eP* **P 14 50 06.9 -0.5**
PGF pmax pmax
comp=Z,9.0nm,0.9s,mb4.4
PGF Pioggiola 47.55 297 *eP* **P 14 50 06.9 -0.5**
comp=Z,8.5nm,0.9s,mb4.4
ECH Echery 47.55 305 *eP* **P 14 50 07.3 -0.1**
ECH pmax pmax
comp=Z,4.0nm,0.8s,mb4.1
ECH Echery 47.55 305 *eP* **P 14 50 07.3 0.0**
comp=Z,4.2nm,0.8s,mb4.1
MOF Molkenrain 47.64 305 *eP* **P 14 50 07.6 -0.4**
HINF Hinteralfeld 47.83 305 ⇑*iP* **P 14 50 09.2 -0.3**
comp=Z,24nm,0.8s,mb4.6
HINF Hinteralfeld 47.83 305 ⇑*iP* **P 14 50 09.2 -0.3**
HINF pmax pmax
comp=Z,12nm,0.8s,mb4.6
HINF Hinteralfeld 47.83 305 ⇑*iP* **P 14 50 09.2 -0.3**
comp=Z,12nm,0.8s,mb4.6
MEM Membach 47.87 309 P **P 14 50 10.5 +0.7**
comp=Z,8.4nm,1.0s,mb4.3
WLF Walferdange 47.94 307 P **P 14 50 11.4 +1.1**
comp=Z,15nm,1.1s,mb4.5
WLF Walferdange 47.94 307 *eP* **P 14 50 11.0 +0.7**
comp=Z,24nm,0.9s,mb4.8
WLF Walferdange 47.94 307 *eP* **P 14 50 08.9 -1.4**
WLF pmax pmax
comp=Z,20nm,0.8s,mb4.8
WLF Walferdange 47.94 307 *eP* **P 14 50 08.9 -1.4**
comp=Z,20nm,0.8s,mb4.8
HAU Haudompre 48.12 305 ⇑*iP* **P 14 50 11.6 -0.2**
comp=Z,23nm,0.8s,mb4.5
HAU Haudompre 48.12 305 ⇑*iP* **P 14 50 11.6 -0.2**
HAU pmax pmax
comp=Z,11nm,0.8s,mb4.5
HAU Haudompre 48.12 305 ⇑*iP* **P 14 50 11.6 -0.2**
comp=Z,11nm,0.8s,mb4.5
SAOF Saorge 48.21 300 *eP* **P 14 50 12.6 +0.1**
AUTN L'Aution 48.29 300 *eP* **P 14 50 13.5 +0.4**
THEF They Montfort 48.32 305 *eP* **P 14 50 13.3 +0.1**
SBF Sospel 48.32 299 *eP* **P 14 50 13.4 +0.1**
comp=Z,60nm,1.1s,mb4.8
SBF Sospel 48.32 299 *eP* **P 14 50 13.4 +0.1**
SBF pmax pmax
comp=Z,30nm,1.1s,mb4.8
SBF Sospel 48.32 299 *eP* **P 14 50 13.4 +0.1**
comp=Z,30nm,1.1s,mb4.8
BCLA Clavier 48.34 308 P **P 14 50 13.7 +0.3**
LPG La Plagne 48.40 302 ⇑*iP* **P 14 50 14.3 +0.4**
comp=Z,23nm,0.9s,mb4.5
LPG La Plagne 48.40 302 ⇑*iP* **P 14 50 14.3 +0.4**
LPG pmax pmax
comp=Z,11nm,0.9s,mb4.5
LPG La Plagne 48.40 302 ⇑*iP* **P 14 50 14.3 +0.4**
comp=Z,11nm,0.9s,mb4.5
LPL La Plagne 48.41 302 ⇑*iP* **P 14 50 14.3 +0.3**
comp=Z,39nm,1.2s,mb4.6
LPL La Plagne 48.41 302 ⇑*iP* **P 14 50 14.3 +0.3**
LPL pmax pmax
comp=Z,19nm,1.2s,mb4.6
LPL La Plagne 48.41 302 ⇑*iP* **P 14 50 14.3 +0.3**

comp=Z,19nm,1.2s,mb4.6
TOUF Mont Tournerai 48.41 300 *eP* **P 14 50 14.1 0.0**
MVIF Mont Vial 48.51 300 *eP* **P 14 50 15.0 +0.2**
MBDF Montbardon 48.57 301 *eP* **P 14 50 14.9 -0.3**
comp=Z,12nm,0.5s,mb4.5
MBDF Montbardon 48.57 301 *eP* **P 14 50 14.9 -0.3**
MBDF pmax pmax
comp=Z,6.0nm,0.5s,mb4.5
MBDF Montbardon 48.57 301 *eP* **P 14 50 14.9 -0.3**
comp=Z,6.1nm,0.5s,mb4.5
CABF La Chapelle 48.59 303 *eP* **P 14 50 15.4 0.0**
comp=Z,22nm,0.8s,mb4.6
CABF La Chapelle 48.59 303 *eP* **P 14 50 15.4 0.0**
CABF pmax pmax
comp=Z,11nm,0.8s,mb4.5
CABF La Chapelle 48.59 303 *eP* **P 14 50 15.4 0.0**
comp=Z,11nm,0.8s,mb4.5
GIVF Givet 48.70 308 *eP* **P 14 50 16.8 +0.6**
MEZF Maizieres J'vi 48.87 306⇑ *iP* **P 14 50 17.8 +0.3**
comp=Z,42nm,1.0s,mb4.7
MEZF Maizieres J'vi 48.87 306⇑ *iP* **P 14 50 17.8 +0.3**
comp=Z,42nm,1.0s,mb5.0
FRF La Foret Royal 48.95 299 *eP* **P 14 50 17.7 -0.5**
comp=Z,40nm,1.0s,mb4.7
FRF La Foret Royal 48.95 299 *eP* **P 14 50 17.7 -0.5**
FRF pmax pmax
comp=Z,20nm,1.0s,mb4.7
FRF La Foret Royal 48.95 299 *eP* **P 14 50 17.7 -0.5**
comp=Z,20nm,1.0s,mb4.7
SNF Seneffe 48.97 309 P **P 14 50 18.6 +0.4**
comp=Z,8.1nm,1.1s,mb4.3
BAIF Baives 49.10 308⇑ *iP* **P 14 50 19.7 +0.5**
comp=Z,44nm,1.0s,mb4.7
BAIF Baives 49.10 308⇑ *iP* **P 14 50 19.7 +0.5**
BAIF pmax pmax
comp=Z,22nm,1.0s,mb4.7
BAIF Baives 49.10 308⇑ *iP* **P 14 50 19.7 +0.5**
comp=Z,22nm,1.0s,mb4.7
LMR La Mourre 49.11 299 *eP* **P 14 50 19.4 +0.1**
comp=Z,26nm,1.0s,mb4.5
LMR La Mourre 49.11 299 *eP* **P 14 50 19.4 +0.1**
LMR pmax pmax
comp=Z,13nm,1.0s,mb4.5
LMR La Mourre 49.11 299 *eP* **P 14 50 19.4 +0.1**
comp=Z,13nm,1.0s,mb4.5
ORIF Oris-en-Rattie 49.14 301 *eP* **P 14 50 19.1 -0.4**
KMBO Kilima Mbogo 49.26 228 P **P 14 50 21.9 +1.1**
comp=Z,2.8nm,0.9s,mb3.9,baz=359,slow=24,SNR=5.4
KMBO Kilima Mbogo 49.26 228 P **P 14 50 21.9 +1.1**
SMRF Simiane la Rot 49.59 300 *eP* **P 14 50 23.1 +0.1**
comp=Z,11nm,0.9s,mb4.2
SMRF Simiane la Rot 49.59 300 *eP* **P 14 50 23.1 +0.1**
comp=Z,11nm,0.9s,mb4.5
LOR Lormes 49.93 305⇑ *iP* **P 14 50 25.1 -0.4**
comp=Z,16nm,1.1s,mb4.2
LOR Lormes 49.93 305⇑ *iP* **P 14 50 25.1 -0.4**
LOR pmax pmax
comp=Z,8.0nm,1.1s,mb4.3
LOR Lormes 49.93 305⇑ *iP* **P 14 50 25.1 -0.4**
comp=Z,8.1nm,1.1s,mb4.3
VIVF Saint-Julien-l 49.98 301⇑ *iP* **P 14 50 25.9 0.0**
comp=Z,22nm,0.7s,mb4.6
VIVF Saint-Julien-l 49.98 301⇑ *iP* **P 14 50 25.9 0.0**
VIVF pmax pmax
comp=Z,11nm,0.7s,mb4.6
VIVF Saint-Julien-l 49.98 301⇑ *iP* **P 14 50 25.9 0.0**
comp=Z,11nm,0.7s,mb4.6
SMF Signal de Mont 50.09 304⇑ *iP* **P 14 50 26.5 -0.2**
comp=Z,33nm,0.7s,mb4.8
SMF Signal de Mont 50.09 304⇑ *iP* **P 14 50 26.5 -0.2**
SMF pmax pmax
comp=Z,16nm,0.7s,mb4.8
SMF Signal de Mont 50.09 304⇑ *iP* **P 14 50 26.5 -0.2**
comp=Z,16nm,0.7s,mb4.8
SSF Saint Saulge 50.21 304⇑ *iP* **P 14 50 27.2 -0.4**
comp=Z,23nm,1.1s,mb4.4
SSF Saint Saulge 50.21 304⇑ *iP* **P 14 50 27.2 -0.4**
SSF pmax pmax
comp=Z,12nm,1.1s,mb4.4
SSF Saint Saulge 50.21 304⇑ *iP* **P 14 50 27.2 -0.4**
comp=Z,12nm,1.1s,mb4.4
AVF Avril sur Loir 50.38 304⇑ *iP* **P 14 50 28.6 -0.3**
comp=Z,32nm,0.8s,mb4.7
AVF Avril sur Loir 50.38 304⇑ *iP* **P 14 50 28.6 -0.3**
AVF pmax pmax
comp=Z,16nm,0.8s,mb4.7
AVF Avril sur Loir 50.38 304⇑ *iP* **P 14 50 28.6 -0.3**
comp=Z,16nm,0.8s,mb4.7
PLDF La Plantade 50.41 303 *eP* **P 14 50 28.9 -0.2**
LRW Lerwick 50.60 322 P **P 14 50 30.0 -0.4**
LRW AMb AMB 14 50 30.7
comp=Z,36nm,1.6s,mb4.8
LRW Lerwick 50.60 322 *eP* **P 14 50 30.0 -0.4**
LRW AMb AMB 14 50 30.7
comp=Z,36nm,1.6s,mb4.8
AGO Saint Agoulin 50.72 303 *eP* **P 14 50 31.5 +0.1**
LASF Ste Croix 50.76 301 *eP* **P 14 50 31.9 +0.1**
comp=Z,45nm,1.1s,mb4.7
BGF Bois d'Agland 50.78 304 *eP* **P 14 50 31.0 -0.9**
comp=Z,11nm,0.7s,mb4.3
BGF Bois d'Agland 50.78 304 *eP* **P 14 50 31.0 -0.9**
BGF pmax pmax
comp=Z,6.0nm,0.7s,mb4.3
BGF Bois d'Agland 50.78 304 *eP* **P 14 50 31.0 -0.9**
comp=Z,5.5nm,0.7s,mb4.3
LBL Lubilhac 50.86 302 *eP* **P 14 50 32.6 +0.1**
TCF Toulx Ste Croi 51.27 304⇑ *iP* **P 14 50 35.7 +0.1**
comp=Z,17nm,0.6s,mb4.5
TCF Toulx Ste Croi 51.27 304⇑ *iP* **P 14 50 35.7 +0.1**
TCF pmax pmax
comp=Z,9.0nm,0.6s,mb4.6
TCF Toulx Ste Croi 51.27 304⇑ *iP* **P 14 50 35.7 +0.1**
comp=Z,8.6nm,0.6s,mb4.6
CAF Calviac 51.75 302⇑ *iP* **P 14 50 39.3 +0.2**
comp=Z,12nm,0.8s,mb4.3
CAF Calviac 51.75 302⇑ *iP* **P 14 50 39.3 +0.2**
CAF pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
CAF Calviac 51.75 302⇑ *iP* **P 14 50 39.3 +0.2**
comp=Z,6.2nm,0.8s,mb4.3
CWF Charnwood Fore 51.93 312 P **P 14 50 39.1 -1.2**
CWF Charnwood Fore 51.93 312 *eP* **P 14 50 39.1 -1.2**
MME1 Meikle Cairn 51.95 318 P **P 14 50 39.3 -1.1**
MME1 Meikle Cairn 51.95 318 *eP* **P 14 50 39.3 -1.1**
RJF Les Rejaudoux 52.01 303⇑ *iP* **P 14 50 41.3 +0.2**
comp=Z,8.4nm,0.7s,mb4.2
RJF Les Rejaudoux 52.01 303⇑ *iP* **P 14 50 41.3 +0.2**
RJF pmax pmax
comp=Z,4.0nm,0.7s,mb4.2
RJF Les Rejaudoux 52.01 303⇑ *iP* **P 14 50 41.3 +0.2**
comp=Z,4.2nm,0.7s,mb4.2
ESY Stoneypath 52.02 317 P **P 14 50 40.0 -0.9**
ESY Stoneypath 52.02 317 *eP* **P 14 50 40.0 -0.9**
MCD Coleburn Disti 52.05 319 P **P 14 50 41.1 0.0**
MCD Coleburn Disti 52.05 319⇑ *eP* **P 14 50 41.1 0.0**
MTLF Montolieu 52.11 300⇑ *iP* **P 14 50 41.7 -0.1**
comp=Z,8.0nm,0.8s,mb4.1
MTLF Montolieu 52.11 300⇑ *iP* **P 14 50 41.7 -0.1**
MTLF pmax pmax
comp=Z,4.0nm,0.8s,mb4.1
MTLF Montolieu 52.11 300⇑ *iP* **P 14 50 41.7 -0.1**
comp=Z,4.0nm,0.8s,mb4.1
LDF La Druitiere 52.19 307⇑ *iP* **P 14 50 41.7 -0.6**
comp=Z,6.8nm,0.6s,mb4.2
LDF La Druitiere 52.19 307⇑ *iP* **P 14 50 41.7 -0.6**
LDF pmax pmax
comp=Z,3.0nm,0.6s,mb4.1
LDF La Druitiere 52.19 307⇑ *iP* **P 14 50 41.7 -0.6**
comp=Z,3.4nm,0.6s,mb4.2
EDI Edinburgh 52.33 317 P **P 14 50 42.2 -1.0**
EDI AMb AMB 14 50 43.3
comp=Z,20nm,1.5s,mb4.5
EDI Edinburgh 52.33 317 *eP* **P 14 50 42.2 -1.0**
EDI AMb AMB 14 50 43.3
comp=Z,20nm,1.5s,mb4.5
FLN La Foliniere 52.38 307⇑ *iP* **P 14 50 43.1 -0.6**
comp=Z,23nm,0.8s,mb4.6
FLN La Foliniere 52.38 307⇑ *iP* **P 14 50 43.1 -0.6**
FLN pmax pmax
comp=Z,12nm,0.8s,mb4.6
FLN La Foliniere 52.38 307⇑ *iP* **P 14 50 43.1 -0.6**
comp=Z,12nm,0.8s,mb4.6
EBH Black Hill 52.44 317 P **P 14 50 43.2 -0.9**
EBH Black Hill 52.44 317 *eP* **P 14 50 43.2 -0.9**
CFON Fontmartina 52.45 298 P **P 14 50 44.6 +0.3**
comp=Z,18nm,0.8s,mb4.8
ECK Cauldkaine Hil 52.45 316 P **P 14 50 43.3 -0.9**
ECK Cauldkaine Hil 52.45 316 *eP* **P 14 50 43.3 -0.9**
ESK Eskdalemuir 52.47 316 P **P 14 50 43.4 -0.8**
ESK AMb AMB 14 50 44.8
comp=Z,26nm,1.1s,mb4.8
ESK Eskdalemuir 52.47 316 *eP* **P 14 50 43.4 -0.8**
ESK AMb AMB 14 50 44.8
comp=Z,26nm,1.1s,mb4.8
ESK Eskdalemuir 52.47 316 *iP* **P 14 50 44.9 +0.6**
MVH1 Achvaich 52.48 319 P **P 14 50 43.9 -0.4**
MVH1 Achvaich 52.48 319 *eP* **P 14 50 43.9 -0.4**
MJAR Matsushiro Arr 52.51 69 pP pP 14 51 26.6 +4.7
comp=Z,1.0nm,0.8s,baz=293,slow=9.1,SNR=3.7
CLLI Llivia 52.54 299 P **P 14 50 44.4 -0.6**
LFF La Frestale 52.64 302⇑ *iP* **P 14 50 45.8 +0.1**
comp=Z,16nm,0.7s,mb4.6
LFF La Frestale 52.64 302⇑ *iP* **P 14 50 45.8 +0.1**
LFF pmax pmax
comp=Z,8.0nm,0.7s,mb4.6
LFF La Frestale 52.64 302⇑ *iP* **P 14 50 45.8 +0.1**
comp=Z,8.1nm,0.7s,mb4.6
MDO Dochfour 52.67 319 P **P 14 50 45.2 -0.5**
MDO Dochfour 52.67 319⇑ *eP* **P 14 50 45.2 -0.5**
GRR Gorron 52.72 307⇑ *iP* **P 14 50 45.6 -0.6**
comp=Z,36nm,0.9s,mb4.8
GRR Gorron 52.72 307⇑ *iP* **P 14 50 45.6 -0.6**
GRR pmax pmax
comp=Z,18nm,0.9s,mb4.8
GRR Gorron 52.72 307⇑ *iP* **P 14 50 45.6 -0.6**
comp=Z,18nm,0.9s,mb4.8
MFF Saint Martin d 52.75 305⇑ *iP* **P 14 50 45.8 -0.7**
comp=Z,24nm,1.1s,mb4.5
MFF Saint Martin d 52.75 305⇑ *iP* **P 14 50 45.8 -0.7**
MFF pmax pmax
comp=Z,12nm,1.1s,mb4.5
MFF Saint Martin d 52.75 305⇑ *iP* **P 14 50 45.8 -0.7**
comp=Z,12nm,1.1s,mb4.5
RSC Scourie 52.91 320 P **P 14 50 47.0 -0.4**
RSC Scourie 52.91 320 *eP* **P 14 50 47.0 -0.4**
EAB Aberfoyle 52.91 317 P **P 14 50 46.6 -0.8**
EAB Aberfoyle 52.91 317 *eP* **P 14 50 46.6 -0.8**
HLM1 Long Mynd 52.91 312 P **P 14 50 46.6 -1.0**
HLM1 Long Mynd 52.91 312 *eP* **P 14 50 46.6 -1.0**
PGBU Glenifferbraes 53.07 317 P **P 14 50 48.1 -0.5**
PGBU AMb AMB 14 50 48.9
comp=Z,26nm,1.0s,mb4.9
PGBU Glenifferbraes 53.07 317 *eP* **P 14 50 48.1 -0.5**
PGBU AMb AMB 14 50 48.9
comp=Z,26nm,1.0s,mb4.9
MCH1 Michaelchurch 53.11 312 P **P 14 50 48.3 -0.7**
MCH1 AMb AMB 14 50 49.4
comp=Z,28nm,0.9s,mb5.0
MCH1 Michaelchurch 53.11 312 *eP* **P 14 50 48.3 -0.7**
MCH1 AMb AMB 14 50 49.4
comp=Z,28nm,0.9s,mb5.0
KAC Achnashellach 53.15 319 P **P 14 50 48.8 -0.5**
KAC Achnashellach 53.15 319⇑ *eP* **P 14 50 48.8 -0.5**
CSOR Sort 53.17 299 P **P 14 50 48.6 -1.0**
comp=Z,6.7nm,0.6s,mb4.5
HTR Trewern Hill 53.25 312 P **P 14 50 49.2 -0.9**
HTR Trewern Hill 53.25 312 *eP* **P 14 50 49.2 -0.9**
WPM1 Penmaenmawr 53.34 314 P **P 14 50 50.2 -0.5**
WPM1 Penmaenmawr 53.34 314 *eP* **P 14 50 50.2 -0.5**
RRR Rubha Reidh 53.34 319 P **P 14 50 49.5 -1.2**
RRR Rubha Reidh 53.34 319 *eP* **P 14 50 49.5 -1.2**
KPL Plockton 53.37 319 P **P 14 50 50.5 -0.3**
KPL AMb AMB 14 50 52.0
comp=Z,28nm,1.3s,mb4.8
KPL Plockton 53.37 319 *eP* **P 14 50 50.5 -0.3**
KPL AMb AMB 14 50 52.0
comp=Z,28nm,1.3s,mb4.8
GAL1 Galloway 53.41 316 P **P 14 50 50.2 -1.0**
GAL1 AMb AMB 14 50 51.4
comp=Z,29nm,1.0s,mb5.0
GAL1 Galloway 53.41 316⇑ *eP* **P 14 50 50.2 -1.0**
GAL1 AMb AMB 14 50 51.4
comp=Z,29nm,1.0s,mb5.0
EPF Esparros 53.51 300 *eP* **P 14 50 51.0 -1.1**
comp=Z,5.6nm,0.6s,mb4.2
EPF Esparros 53.51 300 *eP* **P 14 50 51.0 -1.1**
EPF pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
EPF Esparros 53.51 300 *eP* **P 14 50 51.0 -1.1**
comp=Z,2.8nm,0.6s,mb4.2
EPOB Poblet 53.54 298 P **P 14 50 51.5 -0.9**
comp=Z,19nm,1.0s,mb4.8
EBIE Bielsa 53.76 300 P **P 14 50 54.8 +0.9**
comp=Z,2.4nm,0.4s,mb4.3
SGMF Saint Gilles 53.84 307⇑ *iP* **P 14 50 54.1 -0.3**
comp=Z,16nm,0.8s,mb4.5
SGMF Saint Gilles 53.84 307⇑ *iP* **P 14 50 54.1 -0.3**
SGMF pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
SGMF Saint Gilles 53.84 307⇑ *iP* **P 14 50 54.1 -0.3**
comp=Z,8.2nm,0.8s,mb4.5
ETSF Etsaut 54.17 300⇑ *iP* **P 14 50 57.0 +0.1**
comp=Z,14nm,0.5s,mb4.6
ETSF Etsaut 54.17 300⇑ *iP* **P 14 50 57.0 +0.1**
ETSF pmax pmax
comp=Z,7.0nm,0.5s,mb4.7
ETSF Etsaut 54.17 300⇑ *iP* **P 14 50 57.0 +0.1**
comp=Z,6.8nm,0.5s,mb4.6
ERTA Horta de San J 54.21 298 P **P 14 50 57.1 -0.1**
comp=Z,4.2nm,0.5s,mb4.4
ROSF Rostrenen 54.28 308⇑ *iP* **P 14 50 57.1 -0.5**
comp=Z,21nm,0.8s,mb4.6
ROSF Rostrenen 54.28 308⇑ *iP* **P 14 50 57.1 -0.5**
ROSF pmax pmax
comp=Z,11nm,0.8s,mb4.6
ROSF Rostrenen 54.28 308⇑ *iP* **P 14 50 57.1 -0.5**
comp=Z,11nm,0.8s,mb4.6
QUIF Quistinic 54.34 307⇑ *iP* **P 14 50 57.4 -0.6**
comp=Z,16nm,0.7s,mb4.5
QUIF Quistinic 54.34 307⇑ *iP* **P 14 50 57.4 -0.6**
QUIF pmax pmax
comp=Z,8.0nm,0.7s,mb4.6
QUIF Quistinic 54.34 307⇑ *iP* **P 14 50 57.4 -0.6**
comp=Z,8.1nm,0.7s,mb4.6
ESAC San Caprasio 54.51 299 P **P 14 50 58.9 -0.5**
comp=Z,27nm,0.8s,mb5.0
SJPF Ste Jean 54.56 301 *eP* **P 14 50 59.0 -0.7**
EALK Alkurruntz 54.72 301 P **P 14 51 00.1 -0.7**
comp=Z,2.9nm,0.5s,mb4.3
EMOS Mosqueruela 54.99 297 P **P 14 51 01.8 -1.1**
comp=Z,9.9nm,0.7s,mb4.7
ECHE Chera 55.63 297 P **P 14 51 07.5 +0.1**
ECHE pmax pmax
comp=Z,4.0nm,0.4s,mb4.6
ECHE Chera 55.63 297 P **P 14 51 07.5 +0.1**
comp=Z,3.5nm,0.4s,mb4.5
ELAN Lanestosa 56.04 302 P **P 14 51 10.1 -0.2**
comp=Z,16nm,0.7s,mb5.0
ETOB Tobarra 56.40 296 P **P 14 51 13.1 +0.2**
comp=Z,5.3nm,0.6s,mb4.5
EARI Arriondas 57.23 302 P **P 14 51 18.1 -0.6**
comp=Z,26nm,1.1s,mb5.0
EHUE Huescar 57.48 295 P **P 14 51 20.3 -0.2**
EHUE pmax pmax
comp=Z,4.0nm,0.6s,mb4.4
EHUE Huescar 57.48 295 P **P 14 51 20.3 -0.2**
comp=Z,4.3nm,0.6s,mb4.5
GUD Guadarrama 57.49 299 P **P 14 51 20.6 0.0**
GUD pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
GUD Guadarrama 57.49 299 P **P 14 51 20.6 0.0**
comp=Z,9.9nm,0.6s,mb4.8
ESDC Sonseca Array 57.73 298 P **P 14 51 22.2 0.0**
comp=Z,6.5nm,0.7s,mb4.5,baz=61,slow=7.2,SNR=55
ESDC Sonseca Array 57.73 298 P **P 14 51 21.9 -0.4**
comp=Z,6.7nm,0.6s,mb4.7
EQES Quesada 57.83 296 P **P 14 51 21.8 -1.1**
comp=Z,6.6nm,0.5s,mb4.7
PAB San Pablo 58.06 298 *eP* **P 14 51 23.9 -0.6**
PAB pmax pmax
comp=Z,11nm,1.2s,mb4.6
PAB San Pablo 58.06 298 *eP* **P 14 51 23.9 -0.6**
comp=Z,11nm,1.2s,mb4.6
EBER Berja 58.07 295 P **P 14 51 22.9 -1.7**
comp=Z,10nm,0.7s,mb4.8
EBAN Banos Encina 58.20 296 P **P 14 51 25.3 -0.3**
EBAN pmax pmax
comp=Z,3.0nm,0.4s,mb4.5
EBAN Banos Encina 58.20 296 P **P 14 51 25.3 -0.3**
comp=Z,2.7nm,0.4s,mb4.4
BILL Bilibino 58.26 26 *eP* **P 14 51 25.6 +0.1**
BILL pmax pmax
comp=Z,3.0nm,1.0s,mb4.1
ERON Agron 58.69 295 P **P 14 51 27.6 -1.3**
comp=Z,4.0nm,0.4s,mb4.6
EADA Adamuz 58.77 297 P **P 14 51 28.1 -1.4**
comp=Z,8.9nm,0.7s,mb4.7
ECAL Calabor 58.78 301 P **P 14 51 29.3 -0.2**
comp=Z,4.6nm,0.5s,mb4.6
ELUQ Luque 58.80 296 P **P 14 51 28.7 -1.0**
ELUQ pmax pmax
comp=Z,7.0nm,0.6s,mb4.7
ELUQ Luque 58.80 296 P **P 14 51 28.7 -1.0**
comp=Z,6.6nm,0.6s,mb4.6
EPLA Plasencia 59.07 299 P **P 14 51 31.3 -0.2**
EPLA pmax pmax
comp=Z,20nm,0.9s,mb5.0
EPLA Plasencia 59.07 299 P **P 14 51 31.3 -0.3**
comp=Z,20nm,0.9s,mb4.9
MVO Moncorvo 59.29 301 *eP* **P 14 51 33.3 +0.3**
comp=Z,16nm,1.0s,mb4.8
ECAB El Cabril 59.42 297 P **P 14 51 32.8 -1.1**
comp=Z,1.2nm,0.8s,mb3.8
ELOB Lobios 59.72 302 P **P 14 51 35.5 -0.5**
comp=Z,16nm,0.7s,mb5.0
MTE Manteigas 59.96 300 *eP* **P 14 51 37.9 +0.3**
comp=Z,31nm,1.1s,mb5.0
PVIS Viseu 60.07 300 *eP* **P 14 51 38.9 +0.5**
comp=Z,28nm,1.1s,mb5.0
PCBR Castelo Branco 60.15 299 *eP* **P 14 51 39.0 +0.1**
comp=Z,16nm,1.8s,mb4.5
PMRV Marv??o 60.26 299 *eP* **P 14 51 39.7 +0.1**
comp=Z,12nm,1.4s,mb4.5
EBAD Badajoz 60.27 298 P **P 14 51 39.2 -0.5**
comp=Z,14nm,0.5s,mb5.0
EMIN Mina Concepcio 60.45 297 P **P 14 51 39.5 -1.4**
comp=Z,6.6nm,0.7s,mb4.6
PBAR Barrancos 60.53 297 *eP* **P 14 51 41.5 0.0**
comp=Z,23nm,1.2s,mb4.9
PESTR Estremoz 60.63 298 *eP* **P 14 51 42.1 -0.1**
comp=Z,14nm,1.8s,mb4.5
PTOM Tomar 60.89 299 *eP* **P 14 51 44.3 +0.4**
comp=Z,25nm,1.3s,mb4.9
SUMG Summit 61.02 341 *eP* **P 14 51 45.3 +1.0**
comp=Z,15nm,1.0s,mb4.8
SUMG Summit 61.02 341 *iP* **P 14 51 45.0 +0.8**
comp=Z,11nm,0.8s,mb4.7
EGRO El Granado 61.13 297 P **P 14 51 44.8 -0.8**
comp=Z,6.6nm,0.6s,mb4.6
PBEJ Beja 61.19 298 *eP* **P 14 51 46.3 +0.4**
comp=Z,13nm,1.2s,mb4.6
PVAQ Vaqueiros 61.35 297 *eP* **P 14 51 46.6 -0.4**
comp=Z,21nm,1.7s,mb4.7
PBDV Barranco-do-Ve 61.57 297 *eP* **P 14 51 48.9 +0.4**
comp=Z,33nm,1.5s,mb4.9
INK Inuvik 73.66 9 P **P 14 53 03.6 -0.1**
comp=Z,3.5nm,0.7s,mb4.2,baz=11,slow=6.2,SNR=4.9
BPAW Bear Paw Mtn. 74.09 18 *eP* **P 14 53 05.6 -0.7**
comp=Z,3.9nm,1.0s,mb4.1
COLA College 74.19 16 *eP* **P 14 53 06.6 -0.2**
COLA pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
COLA College 74.19 16 *eP* **P 14 53 06.6 -0.2**
comp=Z,6.5nm,0.8s,mb4.4
ILAR Eielson Array 74.49 16 P **P 14 53 08.0 -0.6**
comp=Z,2.0nm,0.9s,mb3.9,baz=317,slow=4.5,SNR=23
ILAR pP pP 14 53 51.9 +3.7
comp=Z,1.4nm,0.8s,baz=319,slow=4.7,SNR=6.7
PPLA Purkeypile 74.78 19 *eP* **P 14 53 10.2 0.0**
DAWY Dawson 76.65 13 *eP* **P 14 53 20.4 -0.4**
BOSA Boshof 78.15 220 P **P 14 53 28.8 -0.9**
comp=Z,1.7nm,0.5s,mb4.0,baz=335,slow=16,SNR=4.4
KDAK Kodiak Island 78.87 22 P **P 14 53 31.9 -1.4**
comp=Z,9.9nm,1.0s,mb4.4,baz=355,slow=4.9,SNR=6.6
KDAK Kodiak Island 78.87 22 *eP* **P 14 53 33.4 +0.1**
KDAK pmax pmax
comp=Z,9.0nm,1.0s,mb4.3
KDAK Kodiak Island 78.87 22 *eP* **P 14 53 33.4 +0.1**
comp=Z,9.0nm,1.0s,mb4.3
YKA Yellowknife Ar 81.04 3 P **P 14 53 44.5 -0.3**
comp=Z,3.8nm,0.8s,mb4.1,baz=345,slow=4.9,SNR=11
YKA pP pP 14 54 30.1 +5.1
comp=Z,1.6nm,0.8s,baz=354,slow=5.7,SNR=2.6
YKA Yellowknife Ar 81.04 3 P **P 14 53 44.5 -0.3**
YKA pP pP 14 54 30.1 +5.1
WRAB Tennant Creek 81.74 122 *eP* **P 14 53 47.5 -1.6**
SCHQ Schefferville 82.09 337 P **P 14 53 50.1 -0.3**
comp=Z,5.4nm,1.0s,mb4.1,baz=220,slow=10.0,SNR=3.5
ASAR Alice Springs 84.03 125 P **P 14 53 59.8 -1.0**
comp=Z,2.0nm,0.7s,mb4.0,baz=311,slow=4.8,SNR=17
ASAR pP pP 14 54 46.5 +5.3
comp=Z,0.9nm,0.6s,baz=313,slow=4.6,SNR=3.9
FFC Flin Flon 88.79 356 *eP* **P 14 54 23.2 -0.3**
FFC pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
FFC Flin Flon 88.79 356 *eP* **P 14 54 23.2 -0.3**
comp=Z,4.6nm,1.0s,mb4.4
CPUP Villa Florida 135.63 268 PKP PKPdf 15 00 48.9 -0.7
comp=Z,0.5nm,0.6s,baz=17,slow=10,SNR=3.2
PLCA Paso Flores 150.27 250 PKPbc PKPbc 15 01 18.6 -1.5
comp=Z,4.2nm,1.0s,baz=163,slow=4.2,SNR=5.3

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*ISCJB **27** 15:08:10.7±0.5,20.0S±0.1×66.3E±0.1,h10km,mb4.1/23, MS4.0/14,Error ellipse: s-maj=16.5km s-min=12.5km az=42.9*

*IDC **27** 15:08:10.9±0.6,20.06S×66.31E,h0km,mb4.1/16, mb1 4.1/16,mb1mx4.0/22,mbtmp4.1/16,MS3.9/14, Ms1 3.9/14,ms1mx3.7/33,Error ellipse: s-maj=21.0km s-min=17.4km az=118.0*

*NEIC **27** 15:08:12.4±0.4,20.07S×66.31E,h10km,mb4.3/9,Error ellipse: s-maj=12.2km s-min=9.9km az=128.0*

ISC 27 15:08:12.6±0.5,20.04S±0.10×66.3E±0.1,h10km,n40, σ0.76/33,mb4.1/23,MS4.0/14,Mauritius - Reunion region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMBO	**Kilima Mbogo**	**34.05**	**300**	LR	LR	15 26 08.7	
	comp=Z,206nm,18.5s,MS3.9,baz=90,slow=32						
LSZ	**Lusaka**	**36.56**	**271**	*eP*		**P 15 15 19.0**	**+0.2**
	4.9nm,1.0s,mb4.3						
LBTB	**Lobatse**	**37.81**	**255**	P		**P 15 15 28.7**	**-0.7**
	5.9nm,1.0s,mb4.3,baz=97,slow=9.5,SNR=5.6						
LBTB	**Lobatse**	**37.81**	**255**	P		**P 15 15 29.0**	**-0.5**
	7.4nm,1.1s,mb4.3						
BOSA	**Boshof**	**38.20**	**249**	P		**P 15 15 31.8**	**-0.9**
	3.6nm,1.1s,mb4.0,baz=88,slow=21,SNR=3.1						
BOSA				LR	LR	15 28 37.6	
	comp=Z,231nm,19.1s,MS4.0,baz=153,slow=32						
BOSA	**Boshof**	**38.20**	**249**	P		**P 15 15 32.1**	**-0.5**
	0.9nm,0.6s,mb3.7						
BOSA				LR	LR	15 28 37.6	
MAW	**Mawson**	**47.61**	**182**	P		**P 15 16 49.0**	**+0.7**
	3.2nm,0.7s,mb4.5,baz=281,slow=16,SNR=6.5						
MAW				LR	LR	15 33 09.7	
	comp=Z,81nm,19.4s,MS3.7,baz=181,slow=32						
MAW	**Mawson**	**47.61**	**182**	*eP*		**P 15 16 48.9**	**+0.6**
	0.8nm,0.7s,mb3.9						
MAW				LR	LR	15 33 09.7	
CMAR	**Chiang Mai Arr**	**49.89**	**42**	P		**P 15 17 07.6**	**+1.1**
	1.5nm,1.0s,mb4.0,baz=239,slow=8.8,SNR=5.9						
CMAR				LR	LR	15 37 10.5	
	comp=Z,223nm,18.0s,MS4.2,baz=214,slow=35						
EIL	**Elat**	**57.91**	**328**	LR	LR	15 38 41.9	
	comp=Z,75nm,19.6s,MS3.8,baz=279,slow=32						
KSH	**Kashi**	**59.93**	**9**	*eP*		**P 15 18 17.0**	**-1.8**
KSH				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
ASAR	**Alice Springs**	**62.34**	**107**	P		**P 15 18 34.4**	**-1.3**
	comp=Z,1.2nm,0.9s,mb4.0,baz=262,slow=4.9,SNR=8.7						
BR131	**Keskin Array S**	**66.81**	**333**	*eP*		**P 15 19 04.9**	**+0.5**
	comp=Z,2.3nm,0.8s,mb4.3						
BRTR	**Keskin Array B**	**66.81**	**333**	P		**P 15 19 05.0**	**+0.5**
	comp=Z,2.4nm,0.8s,mb4.3,baz=159,slow=8.2,SNR=16						
BRTR				LR	LR	15 45 27.2	
	comp=Z,38nm,19.2s,MS3.6,baz=342,slow=34						
GTA	**Gaotai**	**66.93**	**28**	*eP*		**P 15 19 06.0**	**+0.8**
GTA				pP	pP	15 19 10.3	+1.9
GTA				sP	sP	15 19 13.3	+3.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.2						
STKA	**Stephens Creek**	**67.55**	**117**	LR	LR	15 46 42.6	
	comp=Z,112nm,20.3s,MS4.1,baz=207,slow=34						
MKAR	**Makanchi Array**	**68.07**	**12**	P		**P 15 19 11.8**	**-0.4**
	comp=Z,0.8nm,0.8s,mb3.8,baz=218,slow=7.7,SNR=7.9						
MKAR				LR	LR	15 47 37.0	
	comp=Z,71nm,20.4s,MS3.9,baz=197,slow=35						

ABKAR Akbulak array 69.21 356 *eP* **P 15 19 18.2 -1.0**
comp=Z,2.6nm,0.8s,mb4.2
QSPA South Pole Qui 70.07 180 P **P 15 19 24.6 +0.3**
comp=Z,3.6nm,1.1s,mb4.2,baz=214,slow=1.3,SNR=6.1
QSPA South Pole Qui 70.07 180 *eP* **P 15 19 23.9 -0.4**
BVAR Borovoye Array 72.84 3 P **P 15 19 41.5 +0.3**
comp=Z,1.0nm,0.7s,mb3.9,baz=151,slow=6.8,SNR=8.2
DBIC Dimbokro 74.78 283 P **P 15 19 54.8 +1.3**
comp=Z,9.3nm,1.0s,mb4.7,baz=123,slow=5.0,SNR=3.9
DBIC LR LR 15 50 44.7
comp=Z,152nm,18.1s,MS4.3,baz=108,slow=34
ZALV Zalesovo Beam 75.39 11 P **P 15 19 55.8 -0.3**
comp=Z,1.8nm,0.7s,mb4.1,baz=206,slow=5.4,SNR=6.9
ZALV LR LR 15 49 47.3
comp=Z,37nm,18.4s,MS3.7,baz=232,slow=33
SONM Songino Array 76.53 27 P **P 15 20 02.8 0.0**
comp=Z,1.3nm,1.0s,mb3.8,baz=229,slow=6.8,SNR=7.4
SONM LR LR 15 53 00.1
comp=Z,74nm,19.4s,MS4.0,baz=61,slow=35
AKASG Malin Array Be 77.63 337 P **P 15 20 08.5 -0.3**
comp=Z,2.7nm,0.7s,mb4.3,baz=147,slow=5.0,SNR=12
AKBB Malin Array Si 77.63 337 *eP* **P 15 20 08.2 -0.6**
KECS Kecovo 79.52 331 *eP* **P 15 20 19.7 +0.3**
comp=Z,1.8nm,0.8s,mb4.0
KECS Kecovo 79.52 331 *eP* **P 15 20 19.7 +0.3**
STHS Stebnicka Huta 79.87 332 *eP* **P 15 20 25.3 +4.1**
comp=Z,1.8nm,0.8s,mb4.0
STHS Stebnicka Huta 79.87 332 *ep*P pP 15 20 25.3 +0.8
VYHS Vyhne 80.29 330 *eP* **P 15 20 24.2 +0.7**
comp=Z,7.8nm,1.8s,mb4.3
VYHS Vyhne 80.29 330 *eP* **P 15 20 24.2 +0.7**
VYHS *ep*P pP 15 20 29.3 +2.5
KSRS Korea Array 81.42 45 P **P 15 20 30.0 +0.2**
comp=Z,0.8nm,0.8s,mb3.7,baz=75,slow=35,SNR=4.8
KSRS LR LR 15 56 08.3
comp=Z,121nm,19.4s,MS4.3,baz=63,slow=35
MJAR Matsushiro Arr 88.10 50 P **P 15 21 04.2 +0.6**
comp=Z,1.0nm,1.1s,mb4.0,baz=229,slow=5.6,SNR=2.8
MJAR Matsushiro Arr 88.10 50 P **P 15 21 04.2 +0.6**
ESDC Sonseca Array 88.36 313 P **P 15 21 04.8 +0.1**
comp=Z,0.6nm,0.6s,mb4.0,baz=103,slow=4.2,SNR=4.4
ESDC Sonseca Array 88.36 313 P **P 15 21 04.8 +0.1**
ARCES ARCESS Array B 93.92 347 LR LR 16 01 33.5
comp=Z,45nm,21.5s,MS3.9,baz=155,slow=34
ASAJ Asahikawa 94.36 45 LR LR 16 02 09.5
comp=Z,70nm,18.1s,MS4.2,baz=348,slow=34
TXAR Lajitas Array 167.01 317 PKPab PKPab 15 29 23.7 +0.9
comp=Z,0.7nm,0.8s,baz=60,slow=5.3,SNR=9.0

DDA ***27*** *15:32:18.9, 38.°75N×26.°62E, h7km±5km, Md2.9*
ISCJB ***27*** *15:32:19.4±0.6, 38.°74N±0.°03×26.°59E±0.°04, h10km±5km, Error ellipse: s-maj=5.9km s-min=3.6km az=142.7*
CSEM ***27*** *15:32:19.3±0.1, 38.°74N×26.°59E, h12km, MD2.9, Error ellipse: s-maj=2.8km s-min=1.9km az=58.0*
THE ***27*** *15:32:19.3, 38.°73N×26.°58E, h4km, ML3.0/5, Error ellipse: s-maj=0.9km s-min=0.3km az=205.0*
ISC 27 15:32:19.7±0.5, 38.°74N±0.°03×26.°60E±0.°04, h14km±4km, n22, σ0°60/44, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.38**	**180**	*i* P		**Pg**	**15 32 26.5**	**-0.7**
URLA				*i* S		**Sg**	**15 32 33.9**	**+1.6**
URLA	**Izmir**	**0.38**	**180**	*i* P		**Pg**	**15 32 26.5**	**-0.8**
URLA				*i* S		**Sg**	**15 32 33.9**	**+1.6**
BLCB	**Balcova**	**0.49**	**135**	P		**Pg**	**15 32 29.1**	**-0.4**
BLCB				S		**Sg**	**15 32 36.4**	**+0.3**
BLCB	**Balcova**	**0.49**	**135**	P		**Pg**	**15 32 29.1**	**-0.4**
BLCB				S		**Sg**	**15 32 36.4**	**+0.3**
CHOS	**Chios island**	**0.55**	**231**	P		**Pg**	**15 32 30.0**	**-0.5**
CHOS				S		**Sg**	**15 32 37.8**	**0.0**
CHOS	**Chios island**	**0.55**	**231**	P		**Pg**	**15 32 30.0**	**-0.5**
CHOS				S		**Sg**	**15 32 37.8**	**0.0**
PRK	**Paraskevi**	**0.57**	**334**	P		**Pg**	**15 32 30.1**	**-0.8**
PRK				S		**Sg**	**15 32 38.9**	**+0.5**
PRK	**Paraskevi**	**0.57**	**334**	P		**Pg**	**15 32 30.1**	**-0.8**
PRK				S		**Sg**	**15 32 38.9**	**+0.5**
SIGR	**SIGRI**	**0.75**	**310**	P		**Pg**	**15 32 33.5**	**-0.7**
SIGR				S		**Sg**	**15 32 44.4**	**+0.3**
SIGR	**SIGRI**	**0.75**	**310**	P		**Pg**	**15 32 33.5**	**-0.7**
SIGR				S		**Sg**	**15 32 44.4**	**+0.3**
AKHS	**Akhisar**	**0.96**	**81**	*i* P		**Pb**	**15 32 37.6**	**-0.6**
AKHS				*i* S		**Sg**	**15 32 51.4**	**+0.5**
AKHS	**Akhisar**	**0.96**	**81**	*i* P		**Pb**	**15 32 37.6**	**-0.6**
AKHS				*i* S		**Sg**	**15 32 51.4**	**+0.5**
GCAM	**G?zelcaml?**	**1.15**	**154**	*i* P		**Pb**	**15 32 41.2**	**-0.2**
GCAM				*i* S		**Sb**	**15 32 56.8**	**+0.7**
GCAM	**G?zelcaml?**	**1.15**	**154**	*i* P		**Pb**	**15 32 41.2**	**-0.2**
GCAM				*i* S		**Sb**	**15 32 56.8**	**+0.7**
BALY	**Balya**	**1.28**	**38**	*i* P		**Pn**	**15 32 43.0**	**-0.2**
BALY				*i* S		**Sb**	**15 33 00.2**	**+0.2**
BALY	**Balya**	**1.28**	**38**	*i* P		**Pn**	**15 32 43.0**	**-0.2**
BALY				*i* S		**Sb**	**15 33 00.2**	**+0.3**
AYDN	**Tasoluk**	**1.47**	**136**	*i* P		**Pn**	**15 32 45.6**	**-0.3**
AYDN				*i* S		**Sn**	**15 33 04.2**	**-0.8**
AYDN	**Tasoluk**	**1.47**	**136**	*i* P		**Pn**	**15 32 45.6**	**-0.3**
AYDN				*i* S		**Sn**	**15 33 04.2**	**-0.8**
LIA	**Limnos Island**	**1.60**	**317**	P		**Pn**	**15 32 47.3**	**-0.3**
LIA				S		**Sn**	**15 33 08.8**	**+0.8**
LIA	**Limnos Island**	**1.60**	**317**	P		**Pn**	**15 32 47.3**	**-0.3**
LIA				S		**Sn**	**15 33 08.8**	**+0.8**
ALN	**Alexandroupoli**	**2.20**	**349**	P		**Pn**	**15 32 55.6**	**-0.3**
ALN				S		**Sn**	**15 33 23.6**	**+0.7**
ALN	**Alexandroupoli**	**2.20**	**349**	P		**Pn**	**15 32 55.6**	**-0.3**
ALN				S		**Sn**	**15 33 23.6**	**+0.7**

NIED ***27*** *15:53:00, 28.°20N×140.°20E, h520km, Mw4.7 Best double couple: M0 1.20000×10^16 NP1:φs328.00000°, δ72.00000°, λ-54.00000°. NP2:φs81.00000°, δ40.00000°, λ-151.00000°.*
JMA ***27*** *15:53:56.4±0.2, 28.°17N×140.°21E, h513km±3km, M4.4*
ISCJB ***27*** *15:53:56.0±0.3, 28.°02N±0.°03×139.°53E±0.°03, h489km±2km, mb4.4/112, Error ellipse: s-maj=4.2km s-min=3.5km az=177.6*
MOS ***27*** *15:53:56.2±0.8, 28.°03N×139.°51E, h497km, mb4.5/34, Error ellipse: s-maj=10.3km s-min=5.9km az=106.8*
IDC ***27*** *15:53:56.2±0.5, 28.°02N×139.°58E, h485km±5km, mb3.9/26, mb1 4.0/30, mb1mx4.0/33, mbtmp3.9/30, Error ellipse: s-maj=8.2km s-min=7.7km az=109.0*
BJI ***27*** *15:53:58.0, 28.°00N×139.°49E, h522km, mB4.8/24, mb4.9/53*
NEIC ***27*** *15:53:59.0±0.2, 28.°10N×139.°47E, mb4.4/56, Error ellipse: s-maj=5.7km s-min=3.5km az=161.0*
ISC 27 15:53:56.9±0.3, 28.°03N±0.°03×139.°58E±0.°03, h488km±2km, h512km±2.3km; pP-P, n389, σ0°80/425, mb4.4/112, 70C-81D, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.49**	**111**	P		**P**	**15 55 03.2**	**-0.4**
280nm,0.3s,baz=280,slow=3.8,SNR=97								
CBIJ				S		**S**	**15 55 55.7**	**-2.1**
1μm,0.3s,baz=298,slow=22,SNR=30								
CBIJ	**Chichi jima**	**2.49**	**111**	P		**P**	**15 55 03.2**	**-0.5**
CBIJ				S		**S**	**15 55 57.1**	**-0.7**
JHHJ	**Haha-jima-NKT**	**2.70**	**120**	P		**P**	**15 55 04.8**	**-0.2**
JHHJ				S		**S**	**15 55 59.4**	**-0.8**
JHJ2	**Mitsune**	**5.07**	**2**	P		**P**	**15 55 24.8**	**+1.0**
JHJ2				S		**S**	**15 56 33.8**	**-1.0**
JWZ	**Kozaga**	**6.42**	**330**	P		**P**	**15 55 40.4**	**+3.7**
BSO1	**Boso 1**	**6.71**	**10**	P		**P**	**15 55 40.2**	**+0.5**
BSO1				S		**S**	**15 56 59.7**	**-4.2**
BSO3	**Boso 3**	**6.80**	**6**	P		**P**	**15 55 41.0**	**+0.5**
BSO3				S		**S**	**15 57 03.9**	**-1.6**
JIE	**Ise**	**6.81**	**340**	P		**P**	**15 55 43.6**	**+3.0**
JIE				*eS*		**S**	**15 57 07.6**	**+2.0**
JKN2	**Miekihoku**	**6.81**	**336**	P		**P**	**15 55 43.7**	**+3.1**
JKN2				*eS*		**S**	**15 57 06.0**	**+0.3**
BSO4	**Boso 4**	**6.97**	**5**	P		**P**	**15 55 44.0**	**+1.7**
BSO4				*eS*		**S**	**15 57 07.7**	**-1.0**
HMMJ	**Hamamatsu 2**	**6.99**	**347**	P		**P**	**15 55 44.0**	**+1.5**
HMMJ				*eS*		**S**	**15 57 09.3**	**+0.3**
JOD2	**Odawara 2**	**7.23**	**357**	P		**P**	**15 55 44.9**	**0.0**
JOD2				*eS*		**S**	**15 57 10.6**	**-2.8**
JNY	**Yasuok**	**7.46**	**349**	P		**P**	**15 55 48.5**	**+1.3**
JNY				*eS*		**S**	**15 57 17.4**	**-0.3**
JAO	**Obara**	**7.49**	**345**	P		**P**	**15 55 49.3**	**+1.8**
JAO				*eS*		**S**	**15 57 19.6**	**+1.3**
JHU	**Hanno**	**7.81**	**358**	P		**P**	**15 55 50.2**	**-0.6**
JHU				S		**S**	**15 57 20.4**	**-4.0**
JRY	**Ryogami san**	**7.99**	**356**	P		**P**	**15 55 53.1**	**+0.4**
JRY				*eS*		**S**	**15 57 25.4**	**-2.5**
JYT	**Yasato**	**8.20**	**3**	P		**P**	**15 55 54.7**	**-0.2**
JYT				*eS*		**S**	**15 57 27.6**	**-4.2**
JAG	**Ashikaga**	**8.38**	**359**	P		**P**	**15 55 55.1**	**-1.7**
JAG				*eS*		**S**	**15 57 30.1**	**-5.2**
MJAR	**Matsushiro Arr**	**8.57**	**353**	P		**P**	**15 55 58.7**	**-0.2**
4.7nm,0.3s,baz=212,slow=8.4,SNR=81								
MJAR				S		**S**	**15 57 37.7**	**-1.3**
2.4nm,0.3s,baz=60,slow=13,SNR=8.5								
MJAR	**Matsushiro Arr**	**8.57**	**353**	P		**P**	**15 55 58.7**	**-0.2**
MJAR				S		**S**	**15 57 37.7**	**-1.3**
MAJO	**Matsushiro**	**8.57**	**353**	*eP*		**P**	**15 55 58.6**	**-0.2**
MAJO				pmax		pmax		
comp=Z,36nm,0.6s								
MAJO	**Matsushiro**	**8.57**	**353**	*eP*		**P**	**15 55 58.6**	**-0.2**
comp=Z,36nm,0.6s								
MAT	**Matsushiro**	**8.57**	**353**	P		**P**	**15 55 58.4**	**-0.4**
MAT				S		**S**	**15 57 33.8**	**-5.3**
MAT	**Matsushiro**	**8.57**	**353**	P		**P**	**15 55 59.2**	**+0.4**
MAT				*eS*		**S**	**15 57 37.0**	**-2.1**
JHO	**Hitachi**	**8.60**	**5**	P		**P**	**15 55 59.4**	**+0.2**
JHO				*eS*		**S**	**15 57 36.0**	**-3.6**
JHS	**Saijyo**	**8.87**	**323**	P		**P**	**15 56 05.1**	**+3.0**
JHS				S		**S**	**15 57 48.0**	**+3.1**
JFK	**Kawauchi**	**9.38**	**6**	P		**P**	**15 56 08.7**	**+1.3**
JFK				*eS*		**S**	**15 57 52.2**	**-2.5**
JMK	**Ichinoseki**	**10.98**	**7**	P		**P**	**15 56 25.7**	**+1.3**
JMK				*eS*		**S**	**15 58 21.0**	**-5.0**
KSRS	**Korea Array**	**13.58**	**317**	P		**P**	**15 56 51.9**	**-0.3**
comp=Z,0.5nm,0.3s,baz=133,slow=11,SNR=38								
KSRS				S		**S**	**15 59 18.3**	**+1.7**
baz=126,slow=21,SNR=4.1								
KSRS				ScP		ScP	16 04 25.2	-0.8
comp=Z,0.1nm,0.3s,baz=109,slow=1.1,SNR=12								
ERM	**Erimo**	**14.26**	**11**	*d P*		**P**	**15 57 00.3**	**+1.0**
ERM	**Erimo**	**14.26**	**11**	*eP*		**P**	**15 56 60.0**	**+0.7**
comp=Z,28nm,0.8s								
INCN	**Inchon**	**14.39**	**314**	P		**P**	**15 56 58.9**	**-1.9**
comp=Z,33nm,0.6s								
ASAJ	**Asahikawa**	**16.24**	**8**	P		**P**	**15 57 20.9**	**+0.8**
comp=Z,2.2nm,0.3s,baz=223,slow=14,SNR=27								
ASAJ				ScP		ScP	16 04 29.6	-1.2
comp=Z,0.2nm,0.3s,baz=69,slow=5.3,SNR=5.7								
VLA	**Vladivostok**	**16.30**	**340**	*eP*		**P**	**15 57 21.2**	**+0.6**
VLA				pmax		pmax		
comp=Z,1.0nm,21.3s								
SSLB	**Suanglung**	**17.28**	**260**	*eP*		**P**	**15 57 31.1**	**0.0**
comp=Z,179nm,1.0s								
MDJ	**Mudanjiang**	**18.38**	**337**	P		**P**	**15 57 41.5**	**+0.3**
MDJ				sP		sP	15 59 48.0	+1.2
MDJ				S		**S**	**16 00 43.0**	**-1.1**
MDJ				PcP		PcP	16 01 45.5	-0.7
MDJ				ScP		ScP	16 04 33.0	-2.2
MDJ				PcS		PcS	16 05 22.5	-0.6
MDJ				ScS		ScS	16 08 12.5	-4.0
MDJ				pmax		pmax		
comp=Z,9.0nm,1.2s								
MDJ				pmax		pmax		
comp=Z,110nm,7.1s								
NJ2	**Nanjing**	**18.38**	**288**	*eP*		**P**	**15 57 41.0**	**-0.4**
NJ2				pmax		pmax		
comp=Z,40nm,0.8s								
DL2	**Dalian**	**18.46**	**311**	P		**P**	**15 57 41.5**	**-0.5**
DL2				pmax		pmax		
comp=Z,40nm,1.0s								
YSS	**Yuzh-Sakhalins**	**19.06**	**7**	⇑*eP*		**P**	**15 57 47.0**	**-0.3**
YSS				pmax		pmax		
comp=Z,30nm,1.0s								
YSS	**Yuzh-Sakhalins**	**19.06**	**7**	*eP*		**P**	**15 57 47.4**	**+0.1**
comp=Z,17nm,0.6s								
CN2	**Changchun**	**19.42**	**328**	*eP*		**P**	**15 57 51.0**	**+0.4**
CN2				*es*P		sP	15 59 59.3	+1.0
CN2				*eS*		**S**	**16 00 55.5**	**-5.5**
CN2				pmax		pmax		
comp=Z,10.0nm,1.1s								
CN2				pmax		pmax		
comp=Z,200nm,4.0s								
HABR	**Khabarovsk**	**20.72**	**351**	*eP*		**P**	**15 58 01.7**	**-0.7**
HABR				*e**SP		sP	16 00 12.1	-0.5
HABR				*eS*		**S**	**16 01 23.3**	**+1.6**
HABR				*e*			16 01 47.7	
HABR				*e*			16 08 21.8	
HABR				pmax		pmax		
comp=N,11nm,1.0s								
HABR				pmax		pmax		
comp=Z,41nm,2.3s								
HABR				pmax		pmax		
comp=E,26nm,2.7s								
HABR				MLR		MLR		
comp=Z,58nm,17.0s								
KLR	**Kul'dur**	**22.02**	**346**	*eP*		**P**	**15 58 11.0**	**-3.1**
WHN	**Wuhan**	**22.14**	**283**	⇓P		**P**	**15 58 16.0**	**+0.5**
BJT	**Baijiatuau**	**22.72**	**308**	*eP*		**P**	**15 58 19.7**	**-0.9**
BJT				pmax		pmax		
comp=Z,17nm,0.6s								
BJT	**Baijiatuau**	**22.72**	**308**	*eP*		**P**	**15 58 19.7**	**-0.9**
comp=Z,17nm,0.6s,mb4.7								
BJI	**Beijing**	**22.73**	**308**	P		**P**	**15 58 20.0**	**-0.7**
BJI				sP		sP	16 00 38.3	+3.6
BJI				S		**S**	**16 01 52.0**	**-1.8**
BJI				pmax		pmax		
comp=Z,18nm,1.3s,mb4.3								
BJI				pmax		pmax		
comp=Z,88nm,3.5s								
HHC	**Hu-ho-hao-te**	**26.29**	**306**	*eP*		**P**	**15 58 51.5**	**-0.8**
HHC				sP		sP	16 01 16.0	+4.1
HHC				PcP		PcP	16 02 02.5	-0.2
HHC				S		**S**	**16 02 47.5**	**-2.3**
HHC				ScP		ScP	16 04 53.5	-2.5
HHC				PcS		PcS	16 05 43.0	-1.2
HHC				ScS		ScS	16 08 42.8	-4.1
HHC				pmax		pmax		
comp=Z,25nm,0.6s,mb4.8								
HHC				pmax		pmax		
comp=Z,100nm,5.9s								
ENH	**Enshi**	**26.34**	**282**	*eP*		**P**	**15 58 52.8**	**-0.2**
comp=Z,98nm,0.8s,mb5.3								
XAN	**Xi'an**	**26.89**	**291**	P		**P**	**15 58 57.8**	**+0.1**
XAN				pmax		pmax		
comp=Z,9.0nm,0.7s,mb4.3								
PETK	**Petropavlovsk-**	**28.42**	**23**	P		**P**	**15 59 10.8**	**-0.1**
comp=Z,2.5nm,0.4s,mb4.0,baz=190,slow=4.4,SNR=30								
PETK				ScP		ScP	16 04 59.4	-2.9
comp=Z,1.7nm,0.8s,baz=162,slow=3.6,SNR=6.1								
QIZ	**Qiongzhong**	**28.64**	**258**	P		**P**	**15 59 13.0**	**-0.2**
QIZ				sP		sP	16 01 38.0	+4.6
QIZ				S		**S**	**16 03 24.5**	**-2.5**
QIZ				pmax		pmax		
comp=Z,15nm,1.3s,mb4.3								
PET	**Petropavlovsk**	**28.70**	**24**	*eP*		**P**	**15 59 13.8**	**+0.6**
PET				*e**SP		sP	16 01 33.6	-0.1
PET				*eS*		**S**	**16 03 27.4**	**+0.4**
PET				pmax		pmax		
comp=Z,23nm,0.7s,mb4.7								
PET				MLR		MLR		
comp=Z,100nm,17.0s								
PET	**Petropavlovsk**	**28.70**	**24**	*eP*		**P**	**15 59 13.6**	**+0.4**
comp=Z,13nm,0.6s,mb4.5								
GYA	**Guiyang**	**29.26**	**275**	*eP*		**P**	**15 59 18.0**	**-0.6**
GYA				PcP		PcP	16 02 10.5	+0.1
GYA				S		**S**	**16 03 33.3**	**-3.3**
GYA				ScP		ScP	16 05 03.8	-1.7
GYA				ScS		ScS	16 08 57.5	-3.6
GYA				pmax		pmax		
comp=Z,10.0nm,0.7s,mb4.3								
LZH	**Lanzhou**	**31.20**	**294**	⇓P		**P**	**15 59 35.8**	**+0.5**
LZH				sP		sP	16 02 06.0	+10
LZH				pmax		pmax		
comp=Z,40nm,1.0s,mb4.8								
LZH				pmax		pmax		
comp=Z,200nm,4.7s								
CD2	**Chengdu**	**31.24**	**284**	P		**P**	**15 59 35.8**	**+0.1**
CD2				PP		PP	16 01 05.3	-10
CD2				sP		sP	16 02 01.5	+4.9
CD2				S		**S**	**16 04 05.0**	**-2.0**
CD2				SS		SS	16 06 45.5	-6.1
CD2				pmax		pmax		
comp=Z,140nm,0.8s,mb5.4								
CD2				pmax		pmax		
comp=Z,460nm,6.5s								
ULN	**Ulaanbaatar**	**32.06**	**317**	*eP*		**P**	**15 59 43.0**	**+0.5**
ULN				pmax		pmax		
comp=Z,23nm,0.9s,mb4.6								
ULN	**Ulaanbaatar**	**32.06**	**317**	*eP*		**P**	**15 59 43.0**	**+0.5**
comp=Z,23nm,0.9s,mb4.6								
SONM	**Songino Array**	**32.45**	**317**	P		**P**	**15 59 46.1**	**+0.4**
comp=Z,8.9nm,0.9s,mb4.2,baz=131,slow=9.3,SNR=37								
SONM				PcP		PcP	16 02 18.1	-0.6
comp=Z,0.8nm,0.7s,baz=108,slow=4.7,SNR=3.3								
SONM				ScP		ScP	16 05 14.5	-1.3
comp=Z,2.3nm,0.5s,baz=140,slow=3.4,SNR=13								
SONM	**Songino Array**	**32.45**	**317**	P		**P**	**15 59 46.1**	**+0.4**
SONM							16 02 18.1	
KMI	**Kunming**	**33.00**	**274**	P		**P**	**15 59 51.5**	**+0.8**
KMI				sP		sP	16 02 19.0	+6.8
KMI				S		**S**	**16 04 31.8**	**-2.2**
KMI				SS		SS	16 07 19.8	-6.4
KMI				pmax		pmax		
comp=Z,34nm,1.1s,mb4.7								
KMI				pmax		pmax		
comp=Z,170nm,3.6s								
YAK	**Yakutsk**	**34.64**	**352**	*eP*		**P**	**15 59 59.1**	**-4.9**
YAK				*e*			16 02 20.3	
YAK				*eS*		**S**	**16 04 51.4**	**-6.5**
YAK				*e*SS		SS	16 07 46.5	-11
YAK				*e*			16 09 20.4	
YAK				pmax		pmax		
comp=Z,6.0nm,0.9s,mb4.0								
YAK				pmax		pmax		
comp=N,3.0nm,1.1s								
YAK				smax				
comp=E,76nm,2.2s								
YAK				smax				
comp=N,92nm,1.6s								
GTA	**Gaotai**	**34.72**	**300**	P		**P**	**16 00 05.0**	**-0.1**
GTA				sP		sP	16 02 40.5	+13
GTA				pmax		pmax		
comp=Z,41nm,1.1s,mb4.8								
ZAK	**Zakamensk**	**35.39**	**319**	*eP*		**P**	**16 00 10.7**	**+0.2**
ZAK				pmax		pmax		
comp=Z,8.0nm,1.0s,mb4.1								
TLY	**Talaya**	**35.77**	**321**	*eP*		**P**	**16 00 14.7**	**+1.1**
TLY				pmax		pmax		
comp=Z,6.0nm,0.6s,mb4.2								
CHRT	**Chiangrai**	**37.14**	**266**	⇓P		**P**	**16 00 26.0**	**+0.6**
comp=Z,132nm,0.9s,mb5.4								
CHG	**Chiang Mai**	**38.25**	**265**	⇓P		**P**	**16 00 34.5**	**-0.1**
comp=Z,26nm,0.9s,mb4.7								
CHTO	**Chiang Mai**	**38.25**	**265**	*eP*		**P**	**16 00 34.5**	**-0.1**
CHTO				pmax		pmax		
comp=Z,23nm,0.9s,mb4.6								
CHTO	**Chiang Mai**	**38.25**	**265**	*eP*		**P**	**16 00 34.5**	**-0.1**
comp=Z,23nm,0.9s,mb4.6								
CM31	**Chiang Mai Arr**	**38.38**	**265**	*eP*		**P**	**16 00 35.6**	**-0.1**
comp=Z,3.4nm,0.6s,mb4.0								
CMAR	**Chiang Mai Arr**	**38.38**	**265**	P		**P**	**16 00 35.8**	**+0.1**
comp=Z,8.4nm,0.9s,mb4.2,baz=52,slow=8.7,SNR=33								
CMAR				PcP		PcP	16 02 37.0	+0.1
comp=Z,0.5nm,0.3s,baz=120,slow=1.2,SNR=4.1								
CMAR				ScP		ScP	16 05 37.4	-0.8
comp=Z,0.4nm,0.3s,baz=107,slow=5.8,SNR=2.9								
CMAR				S		**S**	**16 05 56.1**	**+1.1**
comp=Z,0.6nm,0.3s,baz=205,slow=27,SNR=5.8								
CMAR	**Chiang Mai Arr**	**38.38**	**265**	P		**P**	**16 00 35.8**	**+0.1**
CMAR							16 02 37.1	
CMAR				S		**S**	**16 05 56.1**	**+1.1**
KAKA	**Kakadu**	**41.08**	**191**	*eP*		**P**	**16 00 57.1**	**-0.3**
comp=Z,7.2nm,0.8s,mb4.2								
LSA	**Lhasa**	**42.20**	**284**	P		**P**	**16 01 06.3**	**+0.1**
LSA	**Lhasa**	**42.20**	**284**	*eP*		**P**	**16 01 07.4**	**+1.2**
LSA				pmax		pmax		
comp=Z,7.0nm,0.8s,mb4.1								
LSA	**Lhasa**	**42.20**	**284**	*eP*		**P**	**16 01 07.4**	**+1.2**
comp=Z,7.4nm,0.8s,mb4.2								
SHL	**Shillong**	**42.44**	**278**	*e*PKP		**P**	**16 01 09.5**	**+1.4**
BILL	**Bilibino**	**43.10**	**14**	*c iP*		**P**	**16 01 12.8**	**+0.2**
BILL				pmax		pmax		
comp=Z,56nm,1.2s,mb4.9								
BILL	**Bilibino**	**43.10**	**14**	*eP*		**P**	**16 01 12.9**	**+0.2**
comp=Z,26nm,0.7s,mb4.8								
KULM	**Kulim**	**43.31**	**246**	*eP*		**P**	**16 01 15.5**	**+0.4**
comp=Z,26nm,1.1s,mb4.6								
TIXI	**Tiksi**	**44.07**	**355**	*eP*		**P**	**16 01 18.4**	**-1.8**
TIXI				pmax		pmax		
comp=Z,25nm,1.7s,mb4.4								
WMQ	**Urumqi**	**44.15**	**305**	*eP*		**P**	**16 01 22.0**	**+0.8**
WMQ				pP		pP	16 02 56.8	+4.7
WMQ				PP		PP	16 03 15.0	+1.3
WMQ				sP		sP	16 03 52.3	+5.3
WMQ				pmax		pmax		
comp=Z,53nm,1.0s,mb4.9								
WMQ				pmax		pmax		
comp=Z,140nm,4.6s								
KNA	**Kununurra**	**44.76**	**195**	*eP*		**P**	**16 01 25.5**	**-0.7**
comp=Z,6.3nm,0.8s,mb4.1								
TAPN	**Taplejung**	**45.64**	**282**	*eP*		**P**	**16 01 34.0**	**+1.0**
ODAN	**Odare**	**46.04**	**281**	*eP*		**P**	**16 01 36.7**	**+0.7**
PSI	**Prapat**	**46.17**	**244**	P		**P**	**16 01 37.2**	**0.0**
comp=Z,24nm,0.9s,mb4.6,baz=28,slow=2.5,SNR=17								
PSI				PcP		PcP	16 03 03.3	0.0
comp=Z,3.9nm,0.3s,baz=236,slow=12,SNR=4.1								
RAMN	**Ramite**	**46.70**	**282**	*eP*		**P**	**16 01 41.8**	**+0.7**
comp=Z,57nm,0.7s,mb5.1								
JIRN	**Jiri**	**46.88**	**283**	*e*Pn		**P**	**16 01 43.6**	**+1.1**
comp=Z,110nm,0.6s,mb5.4								
GUN	**Gumba**	**47.09**	**283**	*e*Pn

ASAR 16 03 23.7
ULHL Ulahol 52.58 303 P **P 16 02 25.2 +0.9**
SNR=6.1
TKM2 Tokmak 2 52.99 304 P **P 16 02 28.2 +1.1**
SNR=18
KSH Kashi 53.12 300 P **P 16 02 32.0 +3.9**
KSH PcP PcP 16 03 31.5 +2.8
KSH pP pP 16 04 11.3 +7.6
KSH PP PP 16 04 41.5 +7.0
KSH sP sP 16 05 05.5 +8.4
KSH ScP ScP 16 06 39.5 +0.4
KSH PcS PcS 16 07 29.5 +1.2
KSH S **S 16 09 23.5 +2.3**
KSH ScS ScS 16 11 25.5 -0.6
KSH sS sS 16 12 21.0 +8.1
KSH SS SS 16 13 15.5 +6.4
KSH pmax pmax
comp=Z,30nm,1.0s,mb4.6
KSH pmax pmax
comp=Z,180nm,3.9s
KZA Kyzart 53.33 303 P **P 16 02 31.5 +1.9**
SNR=15
KBK Karagaybulak 53.49 304 P **P 16 02 31.7 +0.9**
SNR=22
CHMS Chumysh 53.60 304 P **P 16 02 31.9 +0.4**
SNR=6.6
USP Ospenovka 53.75 305 P **P 16 02 33.0 +0.4**
SNR=14
TTA Tatalina 53.82 31 *e*P **P 16 02 32.3 -0.4**
AAK Ala-Archa 53.83 304 P **P 16 02 33.1 0.0**
comp=Z,5.2nm,0.4s,mb4.2,baz=110,slow=6.8,SNR=14
EIDS Eidsvold 54.23 167 *e*P **P 16 02 35.8 -0.3**
EKS2 Erkin-Say 54.35 304 P **P 16 02 37.4 +0.6**
SNR=9.8
AML Almayashu 54.48 303 P **P 16 02 39.2 +1.4**
SNR=6.9
KDAK Kodiak Island 55.02 37 P **P 16 02 41.0 -0.2**
comp=Z,12nm,0.5s,mb4.5,baz=273,slow=4.4,SNR=21
PPLA Purkeypile 55.55 31 *e*P **P 16 02 46.1 +1.2**
comp=Z,10nm,0.7s,mb4.3
BVAR Borovoye Array 55.79 317 P **P 16 02 46.8 +0.1**
comp=Z,27nm,0.4s,mb4.9,baz=90,slow=7.0,SNR=216
BVAR ScP ScP 16 06 48.2 -2.4
comp=Z,1.3nm,0.6s,baz=84,slow=4.7,SNR=5.1
BVAR S **S 16 09 54.0 -1.9**
comp=Z,1.8nm,0.8s,baz=91,slow=12,SNR=9.2
BRVK Borovoye 55.85 317 *d i*P **P 16 02 47.0 -0.2**
BRVK pmax pmax
comp=Z,41nm,0.7s,mb4.9
BRVK pmax pmax
comp=Z,42nm,1.0s,mb4.7
BRVK Borovoye 55.85 317 *e*P **P 16 02 46.8 -0.4**
comp=Z,44nm,0.9s,mb4.8
BPAW Bear Paw Mtn. 56.20 30 *e*P **P 16 02 49.9 +0.5**
comp=Z,9.7nm,0.5s,mb4.4
RC01 Rabbit Creek A 56.59 33 *e*P **P 16 02 51.9 -0.3**
comp=Z,7.5nm,0.5s,mb4.3
KK31 Karatay Array 56.66 305 *i*P **P 16 02 52.9 -0.1**
KK31 pmax pmax
comp=Z,18nm,0.4s,mb4.8
COLD Coldfoot 56.84 26 *e*P **P 16 02 54.5 +0.8**
comp=Z,4.5nm,0.8s,mb3.9
COLA College 57.61 29 *e*P **P 16 02 59.2 +0.2**
COLA pmax pmax
comp=Z,10.0nm,0.6s,mb4.3
COLA College 57.61 29 *e*P **P 16 02 59.2 +0.1**
comp=Z,10nm,0.6s,mb4.3
ILAR Eielson Array 58.02 29 P **P 16 03 00.8 -1.0**
comp=Z,4.4nm,0.4s,mb4.1,baz=248,slow=5.7,SNR=123
ILAR pP pP 16 04 42.9 +3.3
comp=Z,0.7nm,0.7s,baz=273,slow=7.8,SNR=4.2
PAX Paxson 58.63 31 *e*P **P 16 03 06.1 +0.1**
PAX pmax pmax
comp=Z,11nm,1.0s,mb4.1
PAX Paxson 58.63 31 *e*P **P 16 03 06.1 +0.1**
comp=Z,11nm,1.0s,mb4.2
BMRM Bremner River 59.09 33 *e*P **P 16 03 09.5 +0.4**
comp=Z,21nm,0.7s,mb4.6
MENT Mentasta 59.43 31 *e*P **P 16 03 11.7 +0.3**
FORT Forrest 59.50 192 *e*P **P 16 03 11.6 -0.7**
comp=Z,41nm,0.6s,mb4.9
KBL Kabul 59.54 295 *e*P **P 16 03 12.8 +0.1**
KBL pmax pmax
comp=Z,28nm,0.9s,mb4.7
KBL Kabul 59.54 295 *e*P **P 16 03 12.8 +0.1**
comp=Z,28nm,0.9s,mb4.7
STKA Stephens Creek 59.60 178 *e*P **P 16 03 12.3 -0.6**
comp=Z,4.9nm,0.8s,mb4.0
STKA Stephens Creek 59.60 178 P **P 16 03 12.4 -0.5**
comp=Z,5.1nm,0.7s,mb4.1,baz=343,slow=6.7,SNR=9.7
EGAK Eagle 60.47 29 *e*P **P 16 03 17.8 -0.5**
comp=Z,11nm,0.6s,mb4.5
BBOO Buckleboo 60.59 183 *e*P **P 16 03 18.7 -0.8**
comp=Z,6.3nm,0.5s,mb4.3
SVE Sverdlovsk 61.08 322⇑ *e*P **P 16 03 22.4 0.0**
SVE pmax pmax
comp=Z,21nm,1.2s,mb4.4
MORW Morawa 61.08 204 *e*P **P 16 03 21.8 -1.0**
DAWY Dawson 61.29 30 *e*P **P 16 03 24.0 +0.3**
ARU Arti 62.27 322 *d i*P **P 16 03 29.8 -0.5**
ARU *e* 16 05 51.1
ARU S **S 16 11 18.2 +0.6**
ARU SS SS 16 15 29.9 -1.6
ARU pmax pmax
comp=Z,31nm,1.2s,mb4.6
ARU Arti 62.27 322 *e*P **P 16 03 29.4 -0.9**
comp=Z,30nm,0.9s,mb4.7
SOKR Solikamsk 62.69 325 *e*P **P 16 03 33.5 +0.6**
SOKR pmax pmax
comp=Z,9.0nm,0.6s,mb4.5
AB31 Akbulak array 62.79 314 *ce*P **P 16 03 33.0 -0.8**
AB31 pmax pmax
comp=Z,6.0nm,0.3s,mb4.6
ABKAR Akbulak array 62.79 314 *e*P **P 16 03 33.0 -0.8**
comp=Z,13nm,0.5s,mb4.7
INK Inuvik 63.15 25 P **P 16 03 35.5 -0.3**
comp=Z,2.9nm,0.4s,mb4.1,baz=302,slow=4.6,SNR=4.9
INK Inuvik 63.15 25 P **P 16 03 35.5 -0.3**
AKTK Aktyubinsk 63.75 315 P **P 16 03 39.2 -0.7**
AKTO Aktyubinsk 63.75 315 P **P 16 03 39.2 -0.7**
comp=Z,9.8nm,0.7s,mb4.5,baz=74,slow=14,SNR=35
DLBC Dease Lake 66.78 35 P **P 16 03 59.9 +1.1**
comp=Z,4.2nm,0.6s,mb4.2,baz=280,slow=6.9,SNR=8.2
KEV Kevo 71.33 340 *e*P **P 16 04 24.5 -1.6**
KEV pmax pmax
comp=Z,8.0nm,0.8s,mb4.3
KEV Kevo 71.33 340 *e*P **P 16 04 24.5 -1.6**
comp=Z,7.7nm,0.8s,mb4.3
KEV Kevo 71.33 340 *e*p **P 16 04 24.5 -1.6**
comp=Z,7.7nm,0.8s,mb4.3
RES Resolute Bay 71.69 13 P **P 16 04 27.8 -0.4**
comp=Z,7.4nm,0.7s,mb4.3,baz=333,slow=5.2,SNR=10
ARCES ARCESS Array B 71.90 340 P **P 16 04 29.7 +0.3**
comp=Z,3.3nm,0.6s,mb4.0,baz=71,slow=7.7,SNR=22
YKA Yellowknife Ar 72.42 28 P **P 16 04 32.1 -0.5**
comp=Z,6.2nm,0.5s,mb4.4,baz=297,slow=6.1,SNR=28
JOF Joensuu 73.22 333 *e*P **P 16 04 36.1 -1.1**
JOF pmax pmax
comp=Z,10.0nm,0.5s,mb4.6
JOF Joensuu 73.22 333 *e*p **P 16 04 36.1 -1.1**
comp=Z,10nm,0.5s,mb4.6
OBN Obninsk 74.44 324 *e*P **P 16 04 44.2 -0.1**
OBN *e* 16 04 55.0
OBN *e*S S 16 13 35.9 -3.1
OBN pmax pmax
comp=Z,14nm,1.1s,mb4.4
HDW Hoodsport 74.47 44 P **P 16 04 45.9 +1.3**
VDB Vedder Mountai 74.47 43 P **P 16 04 44.8 +0.2**
A05A Maple Falls 74.50 43⇑P **P 16 04 45.2 +0.5**
baz=74
E03A Lebam 74.61 45⇑P **P 16 04 46.1 +0.7**
baz=74
CMW Cultus Mountai 74.72 43 P **P 16 04 47.0 +1.0**
VSR Storozhevoye 74.76 320 *e*P **P 16 04 45.7 -0.5**
VSR pmax pmax
comp=N,10.0nm,1.1s
VSR pmax pmax
comp=Z,20nm,1.1s,mb4.6
VSR pmax pmax
comp=E,20nm,1.0s
VORD Divnogorie 74.80 320 *e*P **P 16 04 45.9 -0.5**
VORD pmax pmax
comp=Z,10.0nm,0.9s,mb4.3
VORD pmax pmax
comp=N,3.0nm,0.4s
VORD pmax pmax
comp=E,10.0nm,0.9s
D05A Enumclaw 75.32 44⇓P **P 16 04 49.5 0.0**
baz=75
TDL Tradedollar La 75.54 45 P **P 16 04 51.7 +1.1**
F04A Amboy 75.59 46⇓P **P 16 04 50.7 -0.3**
baz=75
LON Longmire 75.62 45 *e*P **P 16 04 51.2 +0.1**
LON pmax pmax
comp=Z,2.0nm,0.7s,mb3.8
LON Longmire 75.62 45 *e*P **P 16 04 51.2 +0.1**
comp=Z,2.4nm,0.7s,mb3.8
KAF Kangasniemi 75.63 334 *e*P **P 16 04 49.5 -1.3**
KAF pmax pmax
comp=Z,10.0nm,0.5s,mb4.6
KAF Kangasniemi 75.63 334 *e*P **P 16 04 49.5 -1.3**
comp=Z,10.0nm,0.5s,mb4.6
KAF Kangasniemi 75.63 334 *e*p **P 16 04 49.5 -1.3**
comp=Z,10.0nm,0.5s,mb4.6,baz=55,slow=5.2
KIV Kislovodsk 75.72 312 *e*P **P 16 04 51.6 -0.1**
KIV pmax pmax
comp=Z,11nm,0.9s,mb4.4
GNI Garni 75.94 308 *e*P **P 16 04 52.8 -0.2**
GNI pmax pmax
comp=Z,9.0nm,1.2s
FINES FINESS Array B 76.08 333 P **P 16 04 52.7 -0.6**
comp=Z,14nm,0.5s,mb4.8,baz=70,slow=5.0,SNR=172
FINES FINESS Array B 76.08 333 P **P 16 04 52.7 -0.6**
H04A Detroit Lake 76.28 47⇓P **P 16 04 54.7 0.0**
baz=76
WTV Waterville 76.34 43 P **P 16 04 55.4 +0.3**
B08A Colville Reser 76.42 42⇑P **P 16 04 55.5 +0.1**
baz=76
HUMO Hull Mountain 76.67 49 *e*P **P 16 04 57.3 +0.3**
comp=Z,6.7nm,1.3s,mb4.0
G06A Carlson Farm, 77.02 46⇑P **P 16 04 58.2 -0.6**
baz=77
YBH Yreka Blue Hor 77.22 50 P **P 16 05 00.5 +0.4**
comp=Z,4.0nm,0.7s,mb4.0,baz=106,slow=7.3,SNR=17
YBH pP pP 16 06 50.3 +5.0
comp=Z,1.5nm,0.8s,baz=118,slow=1.9,SNR=5.6
YBH Yreka Blue Hor 77.22 50 P **P 16 05 00.5 +0.5**
YBH *PP pP 16 06 50.3 +5.0
YBH pmax pmax
comp=Z,4.0nm,0.7s
YBH pmax pmax
comp=Z,2.0nm,0.8s
YBH Yreka Blue Hor 77.22 50 *e*P **P 16 05 00.4 +0.4**
comp=Z,2.3nm,0.6s,mb3.9
OD2 Odessa Site #2 77.23 43 P **P 16 04 60.0 0.0**
D08A Wollman Farm, 77.26 43⇑P **P 16 04 59.6 -0.5**
baz=77
VIPM Ingram Point 77.36 46 P **P 16 05 01.5 +0.8**
E09A Wood Farm, Sta 77.98 44⇓P **P 16 05 02.3 -1.8**
baz=78
K05A Summer Lake 77.99 48⇑P **P 16 05 04.5 +0.3**
baz=78
G08A Pilot Rock 78.05 45⇓P **P 16 05 04.3 -0.1**
baz=78
I07A Izee 78.27 46⇓P **P 16 05 05.1 -0.5**
baz=78
QRN Al-Qurain 78.40 296 *e*P **P 16 05 06.0 -0.6**
QRN AMb AMB 16 05 07.0
comp=Z,75nm,1.2s,mb5.0
C11A Tepee Creek (N 78.48 42⇓P **P 16 05 05.3 -1.4**
baz=78
RDF Al-Radifah 78.61 297 *e*P **P 16 05 07.7 -0.1**
RDF AMb AMB 16 05 09.1
comp=Z,33nm,0.8s,mb4.9
NAY Al-Naaiem 78.72 297 *e*P **P 16 05 07.5 -0.9**
NAY AMb AMB 16 05 09.4
comp=Z,37nm,1.2s,mb4.8
MOD Modoc 78.75 49 *e*P **P 16 05 08.6 +0.3**
comp=Z,3.0nm,0.7s,mb3.9
F10A Beach Ranch, E 78.80 44⇓P **P 16 05 07.4 -1.0**
baz=79
WALA Waterton Lakes 79.23 40 *e*P **P 16 05 11.1 +0.4**
comp=Z,0.1nm,0.6s
B13A Whitefish 79.26 41⇓P **P 16 05 11.2 +0.4**
baz=79,SNR=5.8
J08A Circle Bar Ran 79.27 47⇑P **P 16 05 11.5 +0.5**
baz=79
BMO Blue Mountains 79.29 45 *e*P **P 16 05 11.2 +0.2**
comp=Z,2.9nm,0.7s,mb3.9
BSMT Bassoo Peak 79.34 41 *e*P **P 16 05 11.9 +0.6**
comp=Z,1.7nm,0.7s,mb3.7
D12A Red Ives Fores 79.40 42⇑P **P 16 05 11.1 -0.5**
baz=79
C13A Hot Springs 79.55 41⇓P **P 16 05 11.1 -1.3**
baz=79
A14A Double T Ranch 79.56 40⇑P **P 16 05 12.5 +0.1**
baz=79
E12A Beaver Dam Sad 79.59 43⇑P **P 16 05 12.9 +0.3**
baz=79,SNR=9.6
WVOR Wild Horse Val 79.60 47 *e*P **P 16 05 13.1 +0.3**
WVOR pmax pmax
comp=Z,3.0nm,0.6s,mb4.0
WVOR Wild Horse Val 79.60 47 *e*P **P 16 05 13.1 +0.3**
comp=Z,3.0nm,0.6s,mb4.0
A15A Jonson Ranch, 79.94 40⇓P **P 16 05 13.6 -0.8**
baz=80,SNR=5.4
B14A Marquette Ranc 79.95 40⇓P **P 16 05 14.7 +0.2**
baz=80,SNR=7.1
SWMT Swartz Lake 79.97 41 *e*P **P 16 05 14.7 0.0**
comp=Z,4.2nm,0.9s,mb4.0
C14A Swan Lake 79.98 41⇓P **P 16 05 14.3 -0.4**
baz=80,SNR=6.7
F12A Elk City 80.11 43⇓P **P 16 05 15.3 0.0**
baz=80,SNR=15
G12A Big Creek, Yel 80.38 44⇑P **P 16 05 15.8 -1.0**
baz=80
B15A Bradely Ranch, 80.39 40⇑P **P 16 05 16.5 -0.2**
baz=80
D14A Greenough 80.48 42⇑P **P 16 05 16.0 -1.3**
baz=80
AKASG Malin Array Be 80.49 323 P **P 16 05 16.3 -1.0**
comp=Z,3.3nm,0.5s,mb4.1,baz=50,slow=5.6,SNR=16
KIEV Kiev 80.51 323 *e*P **P 16 05 16.2 -1.1**
KIEV pmax pmax
comp=Z,7.0nm,0.9s,mb4.2
KIEV Kiev 80.51 323 *e*P **P 16 05 16.2 -1.2**
comp=Z,7.4nm,0.9s,mb4.2
A16A West Butte Ran 80.60 39⇑P **P 16 05 17.5 -0.3**
baz=80,SNR=12
C15A Salmond Ranch, 80.64 41⇓P **P 16 05 17.4 -0.7**
baz=80
F13A Darby 80.65 43⇓P **P 16 05 17.6 -0.6**
baz=80,SNR=8.1
B16A M & M Farms, S 80.82 40⇓P **P 16 05 18.3 -0.7**
baz=81
E14A Clinton 80.83 42⇑P **P 16 05 18.4 -0.7**
baz=81
MFID Camas Ranch 80.92 46⇑P **P 16 05 19.6 0.0**
baz=81
H12A Diamond D Ranc 80.96 44⇓P **P 16 05 19.1 -0.7**
baz=81,SNR=7.2
G13A Cobalt 81.06 44⇓P **P 16 05 19.5 -0.8**
baz=81
A17A Triple J Farms 81.10 39⇑P **P 16 05 19.6 -0.9**
baz=81
I12A Atlanta 81.17 45⇑P **P 16 05 21.0 +0.1**
baz=81,SNR=9.8
H13A Challis 81.32 44⇓P **P 16 05 21.3 -0.4**
baz=81,SNR=13
E15A Deer Lodge 81.33 42⇑P **P 16 05 21.8 +0.1**
baz=81,SNR=9.3
B17A L&G Farms, Che 81.39 40⇑P **P 16 05 22.0 0.0**
baz=81
M10A I.L. Ranch, Tu 81.41 47⇑P **P 16 05 22.0 -0.3**
baz=81
A18A Metzger Ranch, 81.58 39⇓P **P 16 05 22.2 -0.8**
baz=81,SNR=11
L11A Cat Creek Ranc 81.59 47⇓P **P 16 05 23.9 +0.7**
baz=81,SNR=16
D16A Dana Ranch, Ca 81.64 41⇓P **P 16 05 23.8 +0.4**
baz=81,SNR=6.7
HRY Holter Researc 81.65 41 *e*P **P 16 05 23.7 +0.3**
comp=Z,6.8nm,0.6s,mb4.3
HLID Hailey 81.73 45 *e*P **P 16 05 24.4 +0.6**
comp=Z,3.3nm,0.6s,mb4.0
I13A Wildhorse Cree 81.74 45⇓P **P 16 05 24.8 +0.9**
baz=82,SNR=7.9
NVAR Mina Array Bea 81.75 51 P **P 16 05 24.6 +0.6**
comp=Z,4.2nm,0.6s,mb4.1,baz=299,slow=5.7,SNR=48
NVAR pP pP 16 07 15.7 +4.9
comp=Z,1.5nm,0.6s,baz=283,slow=6.1,SNR=8.1
LRM Limekiln Ridge 81.76 42 *e*P **P 16 05 24.3 +0.4**
comp=Z,40nm,0.6s,mb5.1
NB2 NORSAR Subarra 81.88 337 P **P 16 05 22.9 -1.3**
comp=Z,5.8nm,0.7s,mb4.2,baz=46,slow=4.8
NOA NORSAR Array B 81.88 337 P **P 16 05 23.2 -1.1**
comp=Z,5.1nm,0.6s,mb4.2,baz=47,slow=5.0,SNR=32
NOA NORSAR Array B 81.88 337 P **P 16 05 23.2 -1.1**
B18A Beardsley Farm 81.91 39⇑P **P 16 05 24.7 +0.1**
baz=82,SNR=9.4
DLMT Dillon 81.91 43 *e*P **P 16 05 24.7 -0.1**
comp=Z,1.4nm,0.5s,mb3.8
J13A Cove Ranch, Pi 81.97 45⇑P **P 16 05 25.3 +0.2**
baz=82
D17A Six Diamond Ra 82.08 40⇓P **P 16 05 25.2 -0.4**
baz=82,SNR=8.9
G15A Dillon 82.08 43⇑P **P 16 05 25.4 -0.2**
baz=82,SNR=5.7
I14A Mackay 82.14 44⇓P **P 16 05 26.4 +0.5**
baz=82,SNR=27
F16A Kennard Place, 82.27 42⇓P **P 16 05 26.8 +0.3**
baz=82,SNR=5.2
E17A Martinsdale 82.35 41⇑P **P 16 05 27.4 +0.4**
baz=82,SNR=9.0
K13A Stover Farm, H 82.41 46⇓P **P 16 05 28.0 +0.7**
baz=82
J14A Carey 82.42 45⇓P **P 16 05 28.0 +0.7**
baz=82
G16A Moss Hill, Enn 82.46 42⇓P **P 16 05 27.3 -0.2**
baz=82,SNR=6.5
M12A Wells 82.52 47 P **P 16 05 29.1 +1.3**
baz=82,SNR=13
D18A Linhart Farms, 82.56 40⇑P **P 16 05 28.0 +0.1**
baz=82
O11A Cowboy Ranch, 82.68 48⇓P **P 16 05 28.5 -0.3**
baz=82,SNR=5.7
N12A Clover Valley, 82.72 48 *e*P **P 16 05 29.6 +0.7**
comp=Z,3.4nm,0.7s,mb4.0
F17A Fitzpatrick Pl 82.77 41⇓P **P 16 05 28.8 -0.2**
baz=83,SNR=5.2
L13A Double Diamond 82.79 46⇑P **P 16 05 30.0 +0.7**
baz=83,SNR=12
E18A Harlowton 82.84 41⇑P **P 16 05 29.7 +0.3**
baz=83,SNR=12
Q10A Clear Creek Ra 82.85 50⇓P **P 16 05 29.6 0.0**
baz=83
M13A Montello 83.03 47⇑P **P 16 05 29.9 -0.5**
baz=83
K14A Jones Ranch, D 83.04 45⇑P **P 16 05 31.0 +0.5**
baz=83,SNR=5.8
J15A Blackfoot 83.05 44⇓P **P 16 05 31.0 +0.5**
baz=83
H16A Russell Place, 83.07 43⇓P **P 16 05 31.0 +0.3**
baz=83
GRAC Grapevine Rang 83.09 52⇑P **P 16 05 30.1 -0.8**
baz=83
S10A Tonopah Range, 83.17 51⇑P **P 16 05 31.1 -0.1**
baz=83,SNR=12
O12A Currie 83.22 48 P **P 16 05 32.1 +0.7**
baz=83,SNR=6.1
L14A Malta 83.27 46 P **P 16 05 32.8 +1.2**
baz=83,SNR=11
F18A Big Timber 83.32 41⇑P **P 16 05 31.7 -0.2**
baz=83,SNR=6.9
K15A Arbon 83.37 45⇑P **P 16 05 32.7 +0.5**
baz=83
I16A Newdale 83.38 44⇑P **P 16 05 31.0 -1.1**
baz=83
MPMC Manual Prospec 83.48 53⇑P **P 16 05 32.4 -0.4**
baz=83
M14A Sheep Mountain 83.48 46⇓P **P 16 05 32.9 +0.2**
baz=83,SNR=16
P12A McGill 83.52 49⇑P **P 16 05 33.3 +0.3**
baz=83,SNR=5.7
R11A Troy Canyon, C 83.64 50⇓P **P 16 05 33.0 -0.6**
baz=84,SNR=10
BR131 Keskin Array S 83.67 312 *e*P **P 16 05 32.8 -0.9**
comp=Z,1.1nm,0.5s,mb3.6
BRTR Keskin Array B 83.67 312 P **P 16 05 32.1 -1.6**
comp=Z,2.0nm,0.7s,mb3.8,baz=104,slow=3.8,SNR=11
HVU Hansel Valley 83.70 46 *e*P **P 16 05 34.3 +0.5**
HVU pmax pmax
comp=Z,9.0nm,0.6s,mb4.5
HVU Hansel Valley 83.70 46 *e*P **P 16 05 34.3 +0.5**
comp=Z,9.3nm,0.6s,mb4.5
IMW Indian Meadow 83.70 43 *e*P **P 16 05 35.1 +1.3**
comp=Z,4.7nm,0.7s,mb4.1
EDW2 Edwards Air Fo 83.71 54⇑P **P 16 05 34.0 0.0**
baz=84
FURC Furnace Creek, 83.71 52⇓P **P 16 05 33.9 -0.1**
baz=84
L15A Malad City 83.82 45⇑P **P 16 05 34.5 0.0**
baz=84,SNR=6.9
K16A Soda Springs 83.88 44⇓P **P 16 05 34.9 +0.3**
baz=84,SNR=5.5
MOOW Moose Ponds 83.89 43 *e*P **P 16 05 35.6 +0.9**
comp=Z,1.4nm,0.7s,mb3.6
N14A Grayback Hills 83.92 47⇓P **P 16 05 34.8 -0.1**
baz=84
RLMT Red Lodge 84.02 42 *e*P **P 16 05 36.3 +1.0**
comp=Z,3.6nm,0.5s,mb4.2
LOHW Long Hollow 84.06 43 *e*P **P 16 05 36.2 +0.7**
comp=Z,0.8nm,0.6s,mb3.4
M15A Larsen Ranch, 84.07 46⇑P **P 16 05 35.5 -0.1**
baz=84
U10A Ash Meadows, A 84.11 52⇓P **P 16 05 35.0 -1.0**
baz=84
P13A Bates Ranch, G 84.12 48⇑P **P 16 05 35.9 0.0**
baz=84
R12A Pony Springs, 84.31 50⇑P **P 16 05 37.2 +0.3**
baz=84
N15A Stansbury Isla 84.33 46⇑P **P 16 05 36.9 0.0**
baz=84
GSC Goldstone 84.34 53⇓P **P 16 05 36.9 -0.3**
baz=84,SNR=6.2
GSC Goldstone 84.34 53 *e*P **P 16 05 37.2 +0.1**
GSC *e*PP pP 16 07 31.8 +7.1
GSC pmax pmax
comp=Z,4.0nm,0.6s,mb4.1
GSC Goldstone 84.34 53 *e*P **P 16 05 37.2 +0.1**
comp=Z,3.7nm,0.6s,mb4.1
GSC *e*pP pP 16 07 31.8 +7.1
Q13A Wheeler Ranch, 84.37 49⇓P **P 16 05 37.5 +0.3**
baz=84
BUR08 Bucovina Ar. S 84.40 322 *e*P **P 16 05 36.7 -0.5**
L16A Fish Haven 84.42 45⇑P **P 16 05 37.6 +0.2**
baz=84,SNR=5.6
T11A Corn Creek, Al 84.45 51⇓P **P 16 05 36.8 -0.8**
baz=84
S12A Delamar Landin 84.52 50⇑P **P 16 05 38.2 +0.2**
baz=84
P14A Drum Mountains 84.67 48⇓P **P 16 05 38.5 -0.2**
baz=84,SNR=8.7
L17A Cokeville 84.72 45⇓P **P 16 05 39.3 +0.5**
baz=84
Q14A Sevier Lake (B 84.85 48⇑P **P 16 05 40.1 +0.5**
baz=85,SNR=5.6
V11A Goodsprings 85.03 52⇑P **P 16 05 40.5 0.0**
baz=85
M17A Scullys Gap (B 85.19 45⇓P **P 16 05 41.2 0.0**
baz=85
S13A Holt Ranch, En 85.20 50⇓P **P 16 05 41.4 +0.1**
baz=85
L18A Fontenelle, Gr 85.33 45⇓P **P 16 05 42.3 +0.4**
baz=85
DAU Daniels Canyon 85.40 46 *e*P **P 16 05 43.1 +0.9**
DAU *e*PP pP 16 07 36.4 +6.3
DAU pmax pmax
comp=Z,2.0nm,0.7s,mb3.9
DAU Daniels Canyon 85.40 46 *e*P **P 16 05 43.1 +0.9**
comp=Z,1.8nm,0.7s,mb3.8
DAU *e*pP pP 16 07 36.4 +6.2
GMRC Granite Mounta 85.41 53⇑P **P 16 05 41.8 -0.6**
baz=85
PFO Pinyon Flat Ob 85.44 54⇑P **P 16 05 41.9 -0.6**
baz=85
BELC Belle Mtn. Jos 85.57 54⇓P **P 16 05 42.6 -0.5**
baz=85
L19A Farson 85.66 44⇑P **P 16 05 43.0 -0.4**
baz=86
MONP Monument Peak 85.83 55⇑P **P 16 05 44.3 -0.1**
baz=86
BC3 Big Chuckawall 86.14 54⇓P **P 16 05 45.1 -0.8**
baz=86
DVTC Desert V Tower 86.18 55⇑P **P 16 05 45.8 -0.3**
baz=86
SRU San Rafael 86.58 47⇓P **P 16 05 46.1 -1.7**
baz=86
N20A Spence Gulch, 87.05 45⇓P **P 16 05 49.6 -0.5**
baz=87
DPC Dobruska-Polom 87.23 328 *e*P **P 16 05 49.3 -1.4**
DPC Dobruska-Polom 87.23 328 *e*P **P 16 05 49.3 -1.4**

UPC	Upice	87.27	328	*e*P		P	16 05 49.9	-1.0
UPC	Upice	87.27	328	*e*P		P	16 05 49.9	-1.0
CLL	Collm	88.10	330	*e*P		P	16 05 53.0	-1.7
CLL	Collm	88.10	330	*e*P		P	16 05 53.0	-1.7
V17A	Tonalea, Kykot	88.33	50	⇓P		P	16 05 56.1	0.0
	baz=88							
TREC	Trest	88.34	327	*e*P		P	16 05 55.7	-0.2
TREC	Trest	88.34	327	*e*P		P	16 05 55.7	-0.2
R20A	Redvale	88.49	47	⇑P		P	16 05 56.9	0.0
	baz=88							
O22A	Kremmling	88.51	45	⇓P		P	16 05 56.3	-0.6
	baz=88							
P22A	Eagle	88.71	45	⇓P		P	16 05 57.8	0.0
	baz=88							
S20A	Disappointment	88.71	47	⇑P		P	16 05 57.6	-0.2
	baz=88							
V18A	Ganado	88.87	50	⇓P		P	16 05 58.0	-0.7
	baz=89							
Q22A	Crested Butte,	89.04	46	⇑P		P	16 05 60.0	+0.6
	baz=89							
KHC	Kasperske Hory	89.36	328	*e*P		P	16 05 59.5	-1.2
KHC	Kasperske Hory	89.36	328	*e*P		P	16 05 59.5	-1.2
U20A	Newcomb	89.43	48	⇑P		P	16 06 00.7	-0.6
	baz=89							
W19A	Sanders	89.57	50	⇑P		P	16 06 01.7	-0.2
	baz=89							
X19A	St. Johns	90.02	50	⇓P		P	16 06 04.4	+0.3
	baz=90							
T22A	Edith	90.13	47	⇑P		P	16 06 04.7	+0.3
	baz=90							
X20A	Quemado	90.50	50	⇓P		P	16 06 06.2	0.0
	baz=90							
R24A	Sanders Place,	90.55	45	⇑P		P	16 06 07.3	+0.9
	baz=90							
118A	Homack Ranch,	90.56	52	⇑P		P	16 06 07.3	+0.7
	baz=90							
SDCO	Great Sand Dun	90.59	46	*e*P		P	16 06 07.3	+0.7
	comp=Z,1.0nm,0.6s,mb3.9							
V22A	San Miguel Ran	90.77	48	⇓P		P	16 06 07.0	-0.4
	baz=91							
S24A	Houchin Ranch,	90.84	46	⇓P		P	16 06 09.0	+1.2
	baz=91							
218A	Dragoon	90.88	53	⇓P		P	16 06 08.5	+0.5
	baz=91							
Y20A	Horse Springs,	90.94	50	⇓P		P	16 06 08.6	+0.3
	baz=91							
U23A	El Rito	90.99	47	⇓P		P	16 06 09.2	+0.7
	baz=91							
X21A	Alamocita Cree	91.03	50	⇑P		P	16 06 08.9	+0.2
	baz=91							
318A	Bisbee	91.21	53	⇑P		P	16 06 09.6	0.0
	baz=91							
Z20A	Nine Sixteen R	91.25	51	⇓P		P	16 06 10.2	+0.5
	baz=91							
Y21A	Point of Rocks	91.36	50	⇓P		P	16 06 11.1	+0.9
	baz=91							
219A	White Tail Can	91.42	52	⇓P		P	16 06 11.2	+0.7
	baz=91							
ANMO	Albuquerque	91.63	49	*e*P		P	16 06 12.4	+1.0
ANMO					pmax	pmax		
	comp=Z,3.0nm,0.7s							
ANMO	Albuquerque	91.63	49	*e*P		P	16 06 12.4	+1.0
	comp=Z,3.0nm,0.7s,mb4.3							
W23A	Werner Place,	91.71	48	⇓P		P	16 06 11.7	-0.1
	baz=92							
Y22A	Socorro	91.88	50	⇑P		P	16 06 13.1	+0.4
	baz=92							
U25A	Circle Dot Ran	92.10	47	⇓P		P	16 06 14.1	+0.5
	baz=92							
121A	Cookes Peak, D	92.14	51	⇓P		P	16 06 13.8	0.0
	baz=92							
W24A	Lazy 6 Ranch,	92.17	48	⇓P		P	16 06 14.5	+0.6
	baz=92							
Z22A	Elephant Butte	92.28	50	⇓P		P	16 06 15.0	+0.5
	baz=92							
V25A	Rancho No Teng	92.31	47	⇑P		P	16 06 14.4	-0.1
	baz=92							
Y23A	Lovelace Mesa,	92.50	49	⇓P		P	16 06 16.2	+0.8
	baz=92							
U26A	Atchley Ranch,	92.53	46	⇑P		P	16 06 16.4	+0.9
	baz=92							
W25A	X Bar L Ranch,	92.78	47	⇓P		P	16 06 17.2	+0.5
	baz=93							
TXAR	Lajitas Array	96.87	52	P		P	16 06 35.5	+0.1
	comp=Z,0.6nm,0.6s,mb4.0,baz=156,slow=6.4,SNR=3.7							
TXAR				pP		pP	16 08 30.7	+5.6
	comp=Z,1.0nm,0.7s,baz=299,slow=2.6,SNR=10							
TXAR	Lajitas Array	96.87	52	P		P	16 06 35.5	+0.1
TXAR				pP		pP	16 08 30.7	+5.6
BOSA	Boshof	122.88	253	PKP		PKPdf	16 11 57.2	-0.1
	comp=Z,2.9nm,1.0s,baz=81,slow=6.5,SNR=3.8							
BOSA	Boshof	122.88	253	PKP		PKPdf	16 11 57.2	-0.2
DBIC	Dimbokro	131.33	310	SKPbc		SKPbc	16 14 51.3	-1.8
	comp=Z,8.8nm,0.8s,baz=72,slow=2.1,SNR=14							
LPAZ	La Paz	151.87	71	PKPbc		PKPbc	16 12 58.0	+1.3
	comp=Z,1.0nm,0.6s,baz=272,slow=4.4,SNR=7.6							
LPAZ				PKPab		PKPab	16 13 08.0	-0.1
	comp=Z,1.0nm,0.7s,baz=344,slow=7.3,SNR=3.7							
LPAZ				pPKPbc		pPKPbc	16 14 56.3	+4.1
	comp=Z,1.8nm,0.9s,baz=339,slow=6.4,SNR=4.6							
LPAZ	La Paz	151.87	71	PKPbc		PKPbc	16 12 58.0	+1.3
LPAZ				PKPab		PKPab	16 13 08.0	-0.1
LPAZ				pPKPbc		pPKPbc	16 14 56.3	+4.1
CPUP	Villa Florida	164.85	88	PKPab		PKPab	16 14 03.9	-0.5
	comp=Z,0.3nm,0.4s,baz=315,slow=4.3,SNR=2.5							

*ISK **27** 15:54:40.7, 39°.55N×28°.04E, h4km, MD3.0*
*DDA **27** 15:54:40.9, 39°.56N±28°.05E, h18km±2km, Md3.2*
*ISCJB **27** 15:54:41.1±0.5, 39°.56N±0°.02×28°.06E±0°.03, h2km±4km, Error ellipse: s-maj=3.9km s-min=3.2km az=144.3*
*CSEM **27** 15:54:41.3±0.1, 39°.56N×28°.04E, h2km, MD3.0, Error ellipse: s-maj=2.4km s-min=2.1km az=61.0*

ISC 27 15:54:41.6±0.4, 39°.57N±0°.02×28°.05E±0°.03, h4km±4km, n72, σ0°67/92, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	Balikesir	0.15	299	PG	Pg	15 54 45.3	+0.8
BALB				*e*SG	Sg	15 54 48.2	+1.7
BALB	Balikesir	0.15	299	*i* Pg	Pg	15 54 45.3	+0.7
BALB				*e*Sg	Sg	15 54 48.2	+1.6
BALY	Balya	0.38	298	*i* P	Pg	15 54 48.6	-0.2
BALY				*i* S	Sg	15 54 54.2	+0.5
BALY	Balya	0.38	298	*i* P	Pg	15 54 48.6	-0.2
BALY				*i* S	Sg	15 54 54.2	+0.5
GONE	Gonen-Balikesi	0.56	330	PG	Pg	15 54 52.5	+0.1
GONE				*e*SG	Sg	15 55 00.2	+0.6
GONE	Gonen-Balikesi	0.56	330	*i* Pg	Pg	15 54 52.5	+0.2
GONE				*e*Sg	Sg	15 55 00.2	+0.7
AKHS	Akhisar	0.71	195	*i* P	Pg	15 54 54.7	-0.6
AKHS				*i* S	Sg	15 55 05.3	+0.9
AKHS	Akhisar	0.71	195	*i* P	Pg	15 54 54.7	-0.6
AKHS				*i* S	Sg	15 55 05.3	+0.8
AKS	Akhisar	0.71	195	*e*PG	Pg	15 54 54.5	-0.8
AKS	Akhisar	0.71	195	*e*Pg	Pg	15 54 54.5	-0.8
DEMI	Demirci	0.73	135	*i* P	Pg	15 54 55.7	0.0
DEMI				*i* S	Sg	15 55 05.4	+0.1
DEMI	Demirci	0.73	135	*i* P	Pg	15 54 55.7	0.0
DEMI				*i* S	Sg	15 55 05.4	+0.1
KCTX	Karacabey (Bur	0.74	19	*e*PG	Pg	15 54 55.7	-0.1
KCTX	Karacabey (Bur	0.74	19	*e*Pg	Pg	15 54 55.7	-0.1
EDC	Edincik	0.79	350	*e*PG	Pg	15 54 56.2	-0.6
EDC	Edincik	0.79	350	*e*Pg	Pg	15 54 56.2	-0.6
BNT	Bandirma	0.80	353	*e*PG	Pg	15 54 56.7	-0.2
BNT	Bandirma	0.80	353	*e*Pg	Pg	15 54 56.7	-0.2
KRBG	Karabiga-Canak	1.01	325	*e*PG	Pg	15 55 00.7	-0.2
KRBG	Karabiga-Canak	1.01	325	*e*Pg	Pg	15 55 00.7	-0.3
ULDT	Uludag	1.01	55	*i* P	Pg	15 55 01.1	0.0
ULDT				*i* S	Sg	15 55 14.3	+0.1
ULDT	Uludag	1.01	55	*i* P	Pg	15 55 01.1	0.0
ULDT				*i* S	Sg	15 55 14.3	0.0
MDNY	Mudanya-Bursa	1.03	38	*e*PG	Pg	15 55 01.5	+0.2
MDNY	Mudanya-Bursa	1.03	38	*e*Pg	Pg	15 55 01.5	+0.2
AYVA	Ayvalik	1.08	257	*i* P	Pg	15 55 01.8	-0.6
AYVA				*i* S	Sg	15 55 16.4	-0.1
AYVA	Ayvalik	1.08	257	*i* P	Pg	15 55 01.8	-0.6
AYVA				*i* S	Sg	15 55 16.4	-0.1
KULA	Kula-Manisa	1.15	155	*e*PN	Pn	15 55 03.2	-1.3
KULA	Kula-Manisa	1.15	155	*e*Pn	Pn	15 55 03.3	-1.3
ARMT	Armutlu	1.18	32	*e*PN	Pn	15 55 03.8	-1.2
ARMT	Armutlu	1.18	32	*e*Pn	Pn	15 55 03.8	-1.1
GDZ	Gediz	1.21	113	*i* P	Pg	15 55 04.6	-0.2
GDZ				*i* S	Sg	15 55 20.4	-0.1
GDZ	Gediz	1.21	113	*i* P	Pg	15 55 04.6	-0.2
GDZ				*i* S	Sg	15 55 20.4	0.0
LPK	Lapseki	1.28	310	*e*PN	Pn	15 55 05.5	-0.8
LPK	Lapseki	1.28	310	*e*Pn	Pn	15 55 05.5	-0.8
RKY	Sarkoy-Tekirda	1.30	329	*e*PN	Pn	15 55 06.3	-0.4
RKY	Sarkoy-Tekirda	1.30	329	*e*Pn	Pn	15 55 06.3	-0.4
SART	Tekirdag	1.30	330	*i* P	Pg	15 55 05.7	-0.9
SART				*i* S	Sg	15 55 23.3	-0.3
SART	Tekirdag	1.30	330	*i* P	Pg	15 55 05.7	-0.9
SART				*i* S	Sg	15 55 23.3	-0.3
IZM	Izmir	1.32	208	*e*PN	Pn	15 55 05.7	-1.2
IZM	Izmir	1.32	208	*e*Pn	Pn	15 55 05.7	-1.1
MFT	Murefte	1.35	334	*e*PN	Pn	15 55 07.2	-0.1
MFT	Murefte	1.35	334	*e*Pn	Pn	15 55 07.2	-0.1
EZN	Ezine	1.35	282	*e*PN	Pn	15 55 06.7	-0.7
EZN	Ezine	1.35	282	*e*Pn	Pn	15 55 06.7	-0.7
BLCB	Balcova	1.42	214	*e*PN	Pn	15 55 07.8	-0.4
BLCB	Balcova	1.42	214	*e*Pn	Pn	15 55 07.8	-0.4
YLV	Yalova	1.42	45	*e*PN	Pn	15 55 08.2	-0.2
YLV	Yalova	1.42	45	*e*Pn	Pn	15 55 08.2	-0.1
GELI	Tayfur-Gelibol	1.47	305	*e*PN	Pn	15 55 08.9	0.0
GELI	Tayfur-Gelibol	1.47	305	*e*Pn	Pn	15 55 08.9	0.0
CAVI	Cavuskoy	1.52	65	*e*PN	Pn	15 55 09.6	0.0
CAVI	Cavuskoy	1.52	65	*e*Pn	Pn	15 55 09.6	0.0
ADVT	Abdulvahap	1.56	56	*e*PN	Pn	15 55 10.6	+0.4
ADVT	Abdulvahap	1.56	56	*e*Pn	Pn	15 55 10.6	+0.4
ERIK	Erikli-Kesan	1.61	314	*e*PN	Pn	15 55 10.6	-0.4
ERIK	Erikli-Kesan	1.61	314	*e*Pn	Pn	15 55 10.6	-0.3
CTKS	Kestanelik-??a	1.70	12	*e*PN	Pn	15 55 12.7	+0.5
CTKS	Kestanelik-??a	1.70	12	*e*Pn	Pn	15 55 12.7	+0.5
HRT	Hereke	1.76	44	*e*PN	Pn	15 55 13.6	+0.7
HRT	Hereke	1.76	44	*e*Pn	Pn	15 55 13.6	+0.6
GADA	Gvkgeada	1.77	291	*e*PN	Pn	15 55 13.3	+0.3
GADA	Gvkgeada	1.77	291	*e*Pn	Pn	15 55 13.3	+0.3
KLYT	Kilyos	1.85	24	*e*PN	Pn	15 55 15.0	+0.9
KLYT	Kilyos	1.85	24	*e*Pn	Pn	15 55 15.0	+0.9
ENEZ	Enez	1.86	309	*e*PN	Pn	15 55 13.8	-0.6
ENEZ	Enez	1.86	309	*e*Pn	Pn	15 55 13.8	-0.6
AYDN	Tasoluk	1.91	184	*i* P	Pn	15 55 16.0	+1.1
AYDN				*i* S	Sn	15 55 41.3	+1.9
AYDN	Tasoluk	1.91	184	*i* P	Pn	15 55 16.0	+1.1
AYDN				*i* S	Sn	15 55 41.3	+1.9
GULT	Gulveren	2.08	65	*e*PN	Pn	15 55 18.4	+1.0
GULT	Gulveren	2.08	65	*e*Pn	Pn	15 55 18.4	+1.0
EDRB	Edirne	2.48	337	*e*PN	Pn	15 55 23.4	+0.5
EDRB	Edirne	2.48	337	*e*Pn	Pn	15 55 23.4	+0.5

IDC 27 16:32:51.9±6.5, 11°.24N×92°.36E, h0km, mb3.3/3, mb1 3.4/3, mb1mx3.1/21, mbtmp3.3/3, Error ellipse: s-maj=406.1km s-min=29.5km az=59.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	36.45	348	P	P	16 39 58.0	-0.4
	0.5nm,0.6s,baz=175,slow=7.5,SNR=5.5						
BVAR	Borovoye Array	45.26	341	P	P	16 41 11.3	+0.3
	0.2nm,0.4s,baz=116,slow=3.4,SNR=2.3						
ASAR	Alice Springs	53.41	131	P	P	16 42 13.8	0.0
	0.2nm,0.8s,baz=303,slow=7.0,SNR=4.2						

*ISCJB **27** 17:47:23.5±1.3, 20°.1S±0°.2×44°.4E±0°.1, h10km, mb3.6/4, Error ellipse: s-maj=34.7km s-min=15.4km az=4.3*
*IDC **27** 17:47:23.1±1.5, 20°.24S×44°.52E, h0km, mb3.7/4, mb1 3.7/4, mb1mx3.4/20, mbtmp3.7/4, Error ellipse: s-maj=57.8km s-min=46.7km az=71.0*
*NEIC **27** 17:47:24.7±0.8, 20°.21S×44°.42E, h10km, mb4.3/1, Error ellipse: s-maj=21.8km s-min=11.0km az=181.0*

ISC 27 17:47:24.8±1.3, 20°.2S±0°.2×44°.4E±0°.1, h10km, n10, σ0°44/8, mb3.6/4, Madagascar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABPO	Ambohimpanom	2.90	66	*e*Pn	Pn	17 48 11.7	+0.7
LSZ	Lusaka	16.22	285	P	Pn	17 51 13.6	+0.6
KMBO	Kilima Mbogo	20.22	339	*e*P	P	17 51 59.7	-0.5
	3.3nm,0.2s						
MK31	Makanchi Array	74.94	26	*e*P	P	17 59 05.5	-0.4
MKAR	Makanchi Array	74.94	26	P	P	17 59 06.2	+0.3
	0.6nm,0.7s,mb3.6,baz=214,slow=5.8,SNR=7.3						
BVAR	Borovoye Array	76.33	16	P	P	17 59 13.6	-0.1
	0.4nm,0.5s,mb3.6,baz=212,slow=5.1,SNR=3.1						
ZALV	Zalesovo Beam	81.61	23	P	P	17 59 42.6	-0.1
	0.4nm,0.4s,mb3.8,baz=197,slow=2.4,SNR=3.1						
ASAR	Alice Springs	81.67	112	P	P	17 59 43.4	-0.4
	0.4nm,0.8s,mb3.4,baz=236,slow=4.4,SNR=6.4						
PDAR	Pinedale Array	148.63	322	PKPbc	PKPbc	18 07 11.9	-0.3
	0.5nm,0.7s,baz=80,slow=5.6,SNR=4.2						
TXAR	Lajitas Array	149.72	294	PKPbc	PKPbc	18 07 15.6	+0.2
	0.4nm,0.8s,baz=156,slow=4.7,SNR=4.9						

*ISCJB **27** 18:24:17.8±2.0, 20°.0S±0°.3×178°.2W±0°.3, h604km±22km, mb3.2/5, Error ellipse: s-maj=52.1km s-min=30.6km az=139.0*
*NEIC **27** 18:24:18.2±1.7, 19°.97S×178°.14W, h596km±18km, mb3.6/1, Error ellipse: s-maj=42.0km s-min=24.8km az=139.0*
*IDC **27** 18:24:19.3±9.3, 19°.99S×178°.19W, h608km±113km, mb2.7/4, mb1 3.0/4, mb1mx2.8/16, mbtmp2.7/4, Error ellipse: s-maj=46.2km s-min=31.3km az=127.0*

ISC 27 18:24:18.6±2.0, 19°.9S±0°.3×178°.2W±0°.3, h597km±21km, n6, σ1°22/6, mb3.2/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.20	301	*e*P	P	18 25 45.2	-0.1
ASAR	Alice Springs	44.49	256	P	P	18 31 38.4	0.0
	0.9nm,0.7s,mb3.4,baz=86,slow=8.9,SNR=19						
ASAR				PcP	PcP	18 33 08.4	-0.1
	0.8nm,1.1s,baz=107,slow=5.1,SNR=4.7						
WRAB	Tennant Creek	44.51	262	*e*P	P	18 31 39.1	+0.5
	0.7nm,0.4s,mb3.5						
QSPA	South Pole Qui	70.12	180	P	P	18 34 31.1	-0.3
	0.8nm,0.9s,mb3.2,baz=53,slow=14,SNR=2.9						
NVAR	Mina Array Bea	80.73	43	P	P	18 35 31.9	+1.1
	0.3nm,0.6s,mb2.9,baz=217,slow=4.3,SNR=3.2						
ILAR	Eielson Array	87.81	13	P	P	18 36 03.5	-1.2
	0.3nm,0.5s,mb3.3,baz=206,slow=6.4,SNR=5.6						

*NIED **27** 18:56:00, 46°.70N×141°.60E, h5km, Mw3.7 Best double couple: M0=4.36000×10^14 NP1:φ=187.00000°, δ=68.00000°, λ=95.00000°. NP2:φ=353.00000°, δ=22.00000°, λ=77.00000°.*
*JMA **27** 18:56:17.8±0.3, 46°.71N×141°.64E, h0km, M3.7*
*ISCJB **27** 18:56:18.2±1.0, 46°.76N±0°.04×141°.65E±0°.07, h9km±8km, mb3.3/6, Error ellipse: s-maj=8.1km s-min=5.5km az=153.6*
*SKHL **27** 18:56:19.2±0.6, 46°.83N×141°.61E, h12km±2km, mb3.8/5*
SKHL Felt (III-IV) at Kholmsk, (III) at Nevel'sk.
*IDC **27** 18:56:19.6±1.0, 46°.54N×142°.34E, h0km, mb3.4/6, mb1 3.7/6, mb1mx3.5/21, mbtmp3.4/6, MS2.8/3, Ms1 2.8/3, ms1mx2.5/23, Error ellipse: s-maj=35.2km s-min=24.7km az=149.0*
*MOS **27** 18:56:21.1±2.8, 46°.93N×141°.97E, h10km, mb3.8/1, Error ellipse: s-maj=29.6km s-min=25.5km az=98.8*
MOS Felt (III-IV) at Kholmsk; (III) at Nevel'sk.
*NEIC **27** 18:56:24.1±2.4, 46°.58N×142°.32E, h30km±15km, Error ellipse: s-maj=29.9km s-min=17.6km az=165.0*

ISC 27 18:56:20.1±1.1, 46°.69N±0°.04×141°.76E±0°.07, h9km±9km, n23, σ1°14/27, mb3.3/6, 2C, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YSS	Yuzh-Sakhalins	0.73	69	↑*i*PN	Pg	18 56 34.0	-0.2
YSS				*i*		18 56 42.8	
YSS				pmax	pmax		
	comp=Z,100nm,0.8s						
YSS				smax			
	comp=N,2μm,0.8s						
YSS				smax			
	comp=E,1μm,0.8s						
YSS	Yuzh-Sakhalins	0.73	69	*e*P	Pg	18 56 34.1	-0.1
YSS	Yuzh-Sakhalins	0.73	69	↑*i*Pg	Pg	18 56 34.0	-0.2
YSS				AMB	AMB	18 56 35.6	
	comp=E,100nm,0.8s						
YSS				sP		18 56 42.8	
YSS				*i* Sg	Sg	18 56 45.0	+1.2
YSS				A		18 56 46.1	
	comp=E,2μm,0.8s						
YSS				A		18 56 46.1	
	comp=E,1μm,0.8s						
YSS				AMS	AMS	18 56 57.0	
	comp=E,2μm,6.0s						
JWK2	Keihoku	1.38	176	P	Pn	18 56 44.4	-1.1
JWK2				*e*S	Sb	18 57 03.5	-0.2
JRR	Rishiri	1.58	192	P	Pn	18 56 47.4	-0.9
JRR				*e*S	Sn	18 57 09.5	+0.6
JSE	Soyaes	1.83	161	P	Pn	18 56 51.9	+0.3
JSE				*e*S	Sn	18 57 15.0	+0.2
JYG	Yagishiri	2.28	186	P	Pn	18 56 57.7	-0.1
UGL	Uglegorsk	2.40	5	*e*Pg	Pg	18 57 04.0	-2.0
UGL				AMB	AMB	18 57 07.0	
	comp=E,60nm,0.8s						
UGL				sP		18 57 09.5	
UGL				*e*Sg	Sg	18 57 35.0	-2.1
UGL				A		18 57 35.5	
	comp=E,74nm,0.7s						
UGL				A		18 57 35.5	
	comp=E,214nm,0.7s						
ASAJ	Asahikawa	2.64	167	P	Pn	18 57 03.9	+1.1
JKK2	Kamakawa 2	2.90	166	P	Pn	18 57 07.3	+0.9
JTKR	Abashiri--Toko	3.12	150	P	Pn	18 57 08.1	-1.2
TYV	Tymovskoe	4.22	8	*e*Pg	Pg	18 57 40.5	-0.3
TYV				AMB	AMB	18 57 42.0	
	comp=E,13nm,0.8s						
TYV				*e*Sg	Sg	18 58 38.0	+2.6
TYV				A		18 58 44.0	
	comp=E,15nm,0.8s						
TYV				A		18 58 44.0	
	comp=E,12nm,0.8s						
ERM	Erimo	4.78	167	*e*PN	Pn	18 57 39.8	+7.6
GRNR	Gornyy	5.39	321	*e*P	Pn	18 57 39.2	-1.4
GRNR				AMB	AMB	18 57 40.2	
	comp=E,21nm,1.0s						
GRNR				AMB	AMB	18 57 40.2	
	comp=E,8.0nm,1.0s						
GRNR				AMB	AMB	18 57 40.2	
	comp=E,13nm,1.0s						
GRNR				*e*Sg	Sg	18 59 15.0	+1.8
EKMR	Ekimchan	8.55	322	*e*Pg	Px	19 00 07.9	
EKMR				AMB	AMB	19 00 09.2	
	comp=E,3.0nm,0.5s						
EKMR				*e*Sg	Sx	19 00 58.5	
EKMR				A		19 01 14.5	
	comp=E,13nm,1.0s						
EKMR				A		19 01 14.5	
	comp=E,4.0nm,1.0s						
PETK	Petropavlovsk-	12.11	52	LR	LR	19 04 10.5	
	comp=E,23nm,20.7s,baz=190,slow=40						
KSRS	Korea Array	13.79	233	LR	LR	19 03 49.2	
	comp=E,20nm,19.2s,baz=180,slow=32						
SONM	Songino Array	23.90	286	P	P	19 01 39.9	+5.9
	comp=E,0.4nm,0.6s,mb3.0,baz=70,slow=9.4,SNR=3.6						
MKAR	Makanchi Array	39.89	293	P	P	19 03 57.3	+3.4
	comp=E,0.3nm,0.8s,mb3.1,baz=78,slow=9.0,SNR=3.0						
MKAR				LR	LR	19 22 52.4	
	comp=E,32nm,18.0s,baz=139,slow=40						
ILAR	Eielson Array	41.44	38	P	P	19 04 06.8	+0.3
	comp=E,1.0nm,0.6s,mb3.6,baz=281,slow=8.3,SNR=20						
ASAR	Alice Springs	70.38	188	P	P	19 07 34.8	+0.7
	comp=E,0.5nm,1.0s,mb3.4,baz=342,slow=5.0,SNR=3.1						
PDAR	Pinedale Array	70.83	48	P	P	19 07 37.1	+0.2
	comp=E,0.2nm,0.6s,mb3.2,baz=296,slow=2.9,SNR=2.8						
TXAR	Lajitas Array	84.06	53	P	P	19 08 50.1	-1.0
	comp=E,0.3nm,0.8s,mb3.5,baz=328,slow=4.5,SNR=3.6						

*BJI **27** 19:05:20.7, 21°.70N×94°.15E, h67km, mB4.8/7, mb4.6/23, ML4.4/1, Ms4.1/2, Ms7 3.6/1*
*ISCJB **27** 19:05:21.5±0.6, 21°.81N±0°.05×94°.28E±0°.05, h67km±6km, mb4.2/30, Error ellipse: s-maj=9.6km s-min=5.2km az=37.6*
*NEIC **27** 19:05:23.1±0.5, 21°.79N×94°.27E, h68km±5km, mb4.4/10, Error ellipse: s-maj=10.5km s-min=4.8km az=222.0*
*IDC **27** 19:05:25.2±2.0, 21°.75N×94°.34E, h91km±17km, mb3.8/17, mb1 3.9/19, mb1mx3.8/26, mbtmp3.8/19, MS3.8/3, Ms1 3.8/3, ms1mx2.9/33, Error ellipse: s-maj=20.0km s-min=12.6km az=53.0*

ISC 27 19:05:23.3±0.5, 21°.80N±0°.05×94°.31E±0°.05, h68km±5km, n74, σ0°98/73, mb4.2/30, 1D, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	Imphal	2.98	353	*ex*	Pn	19 06 15.0	+6.7
IMP				*ex*	Sn	19 06 49.0	+6.1
AGT	Agartala	3.50	307	*i x*	Pn	19 06 24.0	+8.7
AGT				*i x*	Sn	19 07 01.0	+5.5
SHL	Shillong	4.36	330	*e*PN	Pn	19 06 29.0	+2.0
SHL				*e*SN	Sn	19 07 17.0	+0.5
CHG	Chiang Mai	5.27	124	⇓P	Pn	19 06 39.9	+0.4
	72nm,0.6s						
CHTO	Chiang Mai	5.27	124	*e*P	Pn	19 06 39.9	+0.3
	48nm,0.5s						
CHRT	Chiangrai	5.47	110	PG	Pn	19 06 43.0	+0.8
CM31	Chiang Mai Arr	5.48	127	*e*P	Pn	19 06 42.8	+0.4
	24nm,0.4s						
CMAR	Chiang Mai Arr	5.48	127	P	Pn	19 06 43.0	+0.6
	5.2nm,0.3s,baz=302,slow=13,SNR=192						
ODAN	Odare	8.07	310	*e*P	Pn	19 07 17.5	-0.3
	108nm,0.3s						
TAPN	Taplejung	8.16	314	*e*P	Pn	19 07 19.3	+0.3
	82nm,0

AML	**Almayashu**	**26.64**	**324**	*eP*	**P**	**19 10 56.4**	**+0.8**
	comp=Z,5.9nm,0.9s,mb4.1						
MK31	**Makanchi Array**	**26.77**	**341**	*eP*	**P**	**19 10 57.3**	**+0.6**
MKAR	**Makanchi Array**	**26.77**	**341**	P	**P**	**19 10 57.6**	**+0.9**
	comp=Z,2.5nm,0.4s,mb4.1,baz=136,slow=14,SNR=83						
MKAR				ScP	ScP	19 17 49.6	-2.9
	comp=Z,0.7nm,0.7s,baz=136,slow=1.6,SNR=6.2						
EKS2	**Erkin-Say**	**26.96**	**325**	*eP*	**P**	**19 11 00.3**	**+1.9**
	comp=Z,5.3nm,0.8s,mb4.1						
SONM	**Songino Array**	**27.73**	**18**	P	**P**	**19 11 04.9**	**-0.3**
	comp=Z,1.0nm,0.4s,mb3.7,baz=196,slow=9.0,SNR=12						
SONM				PcP	PcP	19 14 19.9	-0.6
	comp=Z,0.3nm,0.5s,baz=184,slow=4.8,SNR=4.0						
SONM				ScP	ScP	19 17 52.1	-3.3
	comp=Z,0.5nm,0.4s,baz=186,slow=4.2,SNR=5.7						
KURK	**Kurchatov**	**31.37**	**341**	*eP*	**P**	**19 11 37.6**	**+0.2**
	comp=Z,5.4nm,0.6s,mb4.5						
ZAA0	**Zalesovo Array**	**32.90**	**350**	*eP*	**P**	**19 11 51.5**	**+0.7**
ZALV	**Zalesovo Beam**	**32.90**	**350**	P	**P**	**19 11 51.2**	**+0.4**
	comp=Z,7.3nm,0.5s,mb4.8,baz=174,slow=8.6,SNR=38						
KSRS	**Korea Array**	**32.91**	**54**	P	**P**	**19 11 50.5**	**-0.7**
	comp=Z,0.6nm,0.5s,mb3.7,baz=248,slow=8.1,SNR=5.1						
BVAR	**Borovoye Array**	**36.15**	**335**	P	**P**	**19 12 19.4**	**+0.5**
	comp=Z,1.1nm,0.5s,mb4.1,baz=140,slow=9.1,SNR=5.4						
ABKAR	**Akbulak array**	**38.59**	**324**	*eP*	**P**	**19 12 40.4**	**+0.7**
	comp=Z,3.8nm,0.5s,mb4.5						
AKTK	**Aktyubinsk**	**40.28**	**324**	P	**P**	**19 12 54.1**	**+0.5**
AKTO	**Aktyubinsk**	**40.28**	**324**	P	**P**	**19 12 54.1**	**+0.5**
	comp=Z,8.8nm,0.3s,mb4.5,baz=125,slow=8.5,SNR=14						
MJAR	**Matsushiro Arr**	**40.69**	**59**	P	**P**	**19 12 58.2**	**+1.0**
	comp=Z,0.6nm,0.6s,mb3.6,baz=273,slow=9.8,SNR=5.7						
MJAR				LR	LR	19 32 15.4	
	comp=Z,28nm,19.3s,baz=40,slow=40						
QRN	**Al-Qurain**	**42.31**	**289**	*eP*	**P**	**19 13 10.7**	**0.0**
QRN				AMb	AMB	19 13 11.8	
	comp=Z,57nm,1.5s,mb5.1						
KBD	**Kabd**	**42.50**	**290**	*eP*	**P**	**19 13 12.4**	**+0.3**
KBD				AMb	AMB	19 13 12.8	
	comp=Z,28nm,0.7s,mb5.1						
RDF	**Al-Radifah**	**42.63**	**289**	*eP*	**P**	**19 13 14.3**	**+1.1**
RDF				AMb	AMB	19 13 15.9	
	comp=Z,42nm,0.7s,mb5.3						
YAK	**Yakutsk**	**46.93**	**22**	*eP*	**P**	**19 13 46.9**	**0.0**
	comp=Z,3.1nm,0.6s,mb4.2						
BRTR	**Keskin Array B**	**54.12**	**304**	P	**P**	**19 14 40.6**	**-0.8**
	comp=Z,0.9nm,0.6s,mb4.0,baz=104,slow=6.1,SNR=7.2						
WRAB	**Tennant Creek**	**57.03**	**134**	P	**P**	**19 15 03.3**	**+0.8**
AKASG	**Malin Array Be**	**57.73**	**317**	P	**P**	**19 15 06.0**	**-1.1**
	comp=Z,0.7nm,0.3s,mb4.1,baz=89,slow=6.2,SNR=5.2						
AKASG	**Malin Array Be**	**57.73**	**317**	P	**P**	**19 15 06.0**	**-1.1**
ASAR	**Alice Springs**	**59.39**	**137**	P	**P**	**19 15 18.5**	**-0.4**
	comp=Z,1.5nm,0.6s,mb4.2,baz=322,slow=6.0,SNR=27						
FINES	**FINESS Array B**	**60.70**	**329**	P	**P**	**19 15 26.8**	**-0.6**
	comp=Z,1.8nm,0.6s,mb4.3,baz=117,slow=5.5,SNR=9.4						
FINES	**FINESS Array B**	**60.70**	**329**	P	**P**	**19 15 26.8**	**-0.6**
ARCES	**ARCESS Array B**	**62.36**	**338**	P	**P**	**19 15 37.8**	**-0.6**
	comp=Z,2.0nm,0.8s,mb4.2,baz=96,slow=8.4,SNR=7.8						
CTA	**Charters Tower**	**65.65**	**126**	LR	LR	19 45 47.8	
	comp=Z,232nm,19.8s,baz=123,slow=37						
NB2	**NORSAR Subarra**	**67.85**	**329**	P	**P**	**19 16 12.9**	**-1.2**
	comp=Z,0.8nm,0.5s,mb3.8,baz=85,slow=6.5						
NOA	**NORSAR Array B**	**67.85**	**329**	P	**P**	**19 16 13.2**	**-0.9**
	comp=Z,0.8nm,0.5s,mb3.8,baz=86,slow=6.3,SNR=8.3						
BPAW	**Bear Paw Mtn.**	**80.72**	**24**	*eP*	**P**	**19 17 27.7**	**-1.2**
	comp=Z,1.0nm,0.5s,mb3.9						
BORG	**Borgarnes**	**80.73**	**337**	LR	LR	19 53 37.6	
	comp=Z,62nm,19.3s,baz=333,slow=36						
ILAR	**Eielson Array**	**81.85**	**22**	P	**P**	**19 17 32.9**	**-1.9**
	comp=Z,1.1nm,0.5s,mb4.0,baz=286,slow=5.0,SNR=29						
BOSA	**Boshof**	**83.33**	**236**	P	**P**	**19 17 42.6**	**-0.5**
	comp=Z,1.9nm,0.8s,mb4.0,baz=40,slow=4.8,SNR=4.1						
YKA	**Yellowknife Ar**	**92.90**	**13**	P	**P**	**19 18 26.4**	**-2.1**
	comp=Z,0.6nm,0.5s,mb4.2,baz=335,slow=4.8,SNR=4.2						
YKA	**Yellowknife Ar**	**92.90**	**13**	P	**P**	**19 18 26.4**	**-2.1**
NVAR	**Mina Array Bea**	**112.72**	**27**	PKiKP	PKiKP	19 23 51.8	-0.8
	comp=Z,0.2nm,0.5s,baz=352,slow=1.8,SNR=3.8						
TXAR	**Lajitas Array**	**126.29**	**20**	PKP	PKPdf	19 24 18.2	-0.6
	comp=Z,0.4nm,0.6s,baz=82,slow=0.4,SNR=7.1						
CPUP	**Villa Florida**	**153.74**	**254**	PKPbc	PKPbc	19 25 13.7	-1.5
	comp=Z,0.4nm,0.4s,baz=96,slow=4.0,SNR=3.4						

GUC 27 19:06:39.1±0.3, 22°.93S×69°.95W, h43km±1km, ML3.7, 2C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**0.51**	**207**	*eP*	Pn	19 06 53.2	+3.1
CEN1				*eS*	Sn	19 07 02.5	+4.5
MACH	**Maria Elena**	**0.75**	**14**	↑*iP*	Pn	19 06 54.0	+0.7
MACH				*i* S	Sn	19 07 05.2	+1.6
PB04	**Plate Boundary**	**0.79**	**33**	||*eP*	Pn	19 06 52.6	-1.2
PB04				*i* S	Sn	19 07 02.7	-1.7
PB04				AML	AML	19 07 03.5	
	comp=E,4μm,0.4s						
ANCH	**Antofagasta**	**0.86**	**209**	↑*iP*	Pn	19 06 53.1	-1.6
ANCH				*i* S	Sn	19 07 05.3	-0.9
ANCH				AML	AML	19 07 07.7	
	comp=E,5μm,0.1s						
PB01	**Plate Boundary**	**1.93**	**13**	*eP*	Pn	19 07 10.7	+1.3
PB01				*eS*	Sn	19 07 34.7	+2.3
PB01				AML	AML	19 07 39.9	
	comp=E,1μm,0.3s						
HMBC	**Humberston**	**2.64**	**1**	*eP*	Pn	19 07 20.0	+0.8
PSGC	**Pisagua**	**3.32**	**357**	*eP*	Pn	19 07 27.9	-0.6
MNMC	**Miæe Miæ**	**3.79**	**5**	*eP*	Pn	19 07 35.8	+0.7

MOS ***27*** *19:30:46.0±1.1, 7°.28S×126°.46E, h275km, mb4.9/29, Error ellipse: s-maj=10.7km s-min=6.2km az=112.3*
BJI ***27*** *19:30:48.6, 7°.40S×126°.75E, h318km, mB4.7/30, mb4.6/53*
NEIC ***27*** *19:30:50.8±0.6, 7°.36S×126°.49E, h314km±5km, mb4.9/52, Error ellipse: s-maj=5.6km s-min=3.1km az=52.0*
ISCJB ***27*** *19:30:50.2±0.3, 7°.46S±0°.02×126°.47E±0°.03, h325km±3km, mb4.8/92, Error ellipse: s-maj=4.7km s-min=3.7km az=151.6*
IDC ***27*** *19:30:51.2±1.3, 7°.38S×126°.49E, h318km±12km, mb4.6/20, mb1 4.7/21, mb1mx4.6/25, mbtmp4.6/21, Error ellipse: s-maj=13.4km s-min=6.7km az=65.0*
DJA ***27*** *19:30:51, 7°.55S×126°.48E, h288km, mb5.5/31*
GCMT ***27*** *19:30:53.3±0.5, 7°.33S×126°.45E, h328km±3km, MW5.2, Moment Tensor Solution. s39,c55; Moment tensor: Scale 10^16Nm; Mrr-1.35±.35; Mθθ4.78±.47; Mφφ-3.43±.61; Mrθ-1.58±.50; Mφφ4.63±.47; Mφr1.53±.52; Best double couple: M0 6.70000×10^16 NP1:φ=203.00000°, δ70.00000°, λ-168.00000°. NP2:φ=109.00000°, δ79.00000°, λ-20.00000°. Principal axes: T 6.9500, Plg6.0000°, Azm157.0000°; N -0.5900, Plg67.0000°, Azm261.0000°; P -6.3600, Plg22.0000°, Azm64.0000°; Data Used: II IU IC G CN.*

ISC 27 19:30:51.5±0.3, 7°.46S±0°.02×126°.50E±0°.03, h322km±3km, h320km±2.0km: pP-P, n485, σ1°05/270, mb4.8/92, 86C-91D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**4.11**	**24**	P	**Pn**	**19 32 00.5**	**+0.4**
NLAI	**Namlea**	**4.24**	**8**	P	**Pn**	**19 32 02.3**	**+0.9**
MMRI	**Maumere**	**4.37**	**254**	P	**Pn**	**19 32 00.5**	**-2.4**
KDI	**Kendari**	**5.19**	**312**	P	**Pn**	**19 32 11.1**	**-1.0**
	1.5nm8μm478nm,1.1s						
TLE	**Tual**	**6.46**	**74**	P	**Pn**	**19 32 25.7**	**-1.2**
	33nm9μm,0.7s						
WSI	**Waingapu**	**6.51**	**250**	P	**Pn**	**19 32 23.6**	**-3.8**
	33nm7μm,0.8s						
BKSI	**Bulukumba**	**6.68**	**288**	P	**Pn**	**19 32 28.4**	**-1.1**
	2.2nm5μm655nm,0.8s						
BNSI	**Bone**	**7.04**	**295**	P	**Pn**	**19 32 34.2**	**+0.4**
	1.2nm4μm347nm,0.9s						
LUWI	**Luwuk**	**7.38**	**330**	P	**Pn**	**19 32 37.7**	**-0.1**
	5.2nm2μm,1.6s						
SPSI	**Sidrap Palu**	**7.54**	**297**	P	Px	19 32 52.0	
KAKA	**Kakadu**	**7.84**	**132**	*eP*	**Pn**	**19 32 43.3**	**-0.1**
	2μm,0.6s						
KAKA				*eS*	**S**	**19 34 00.0**	**-14**
KAKA	**Kakadu**	**7.84**	**132**	*ePn*	**Pn**	**19 32 43.2**	**-0.2**
	7.5nm,0.7s						
TNTI	**Ternate**	**8.22**	**6**	P	**Pn**	**19 32 47.5**	**-0.5**
	2.3nm7μm700nm,1.1s						
KNA	**Kununurra**	**8.53**	**165**	P	**Pn**	**19 32 51.0**	**-0.7**
	17nm5μm,0.7s						
MNI	**Manado**	**9.00**	**349**	P	**Pn**	**19 32 57.5**	**+0.1**
	2μm,1.1s						
PCI	**Palu**	**9.30**	**314**	P	**Pn**	**19 33 02.2**	**+1.1**
	4μm426nm,1.1s						
FITZ	**Fitzroy Crossi**	**10.61**	**184**	*eP*	**Pn**	**19 33 16.0**	**-0.9**
	1μm,0.6s						
FITZ	**Fitzroy Crossi**	**10.61**	**184**	P	**Pn**	**19 33 16.0**	**-0.8**
	16nm,0.3s,baz=20,slow=10,SNR=485						
FITZ				S	**S**	**19 35 12.9**	**-3.2**
	16nm,0.3s,baz=61,slow=19,SNR=5.9						
FITZ	**Fitzroy Crossi**	**10.61**	**184**	*ePn*	**Pn**	**19 33 15.9**	**-1.0**
	264nm,0.6s						
FITZ	**Fitzroy Crossi**	**10.61**	**184**	P	**Pn**	**19 33 15.6**	**-1.3**
	1μm,0.9s						
KHKI	**Kahang-Kahang**	**10.82**	**265**	P	**Pn**	**19 33 16.3**	**-3.2**
	2μm163nm,0.7s						
KBKI	**Kotabaru**	**11.08**	**291**	P	**Pn**	**19 33 28.3**	**+5.6**
SRBI	**Singaraja**	**11.20**	**266**	P	**Pn**	**19 33 21.2**	**-2.8**
	2μm218nm,0.8s						
IGBI	**Denpasar**	**11.32**	**262**	P	**Pn**	**19 33 23.1**	**-2.4**
	783nm,0.6s						
BAKI	**Biak**	**11.43**	**57**	P	**Pn**	**19 33 26.7**	**-0.1**
	3μm,0.8s						
BYJI	**Banyuwangi**	**12.05**	**266**	P	**Pn**	**19 33 37.0**	**+2.7**
	6μm293nm,0.8s						
KMMI	**Kalianget**	**12.44**	**271**	P	**Pn**	**19 33 39.4**	**+0.4**
	2μm205nm,1.0s						
GMJI	**Gumukmas**	**12.95**	**266**	P	**Pn**	**19 33 43.9**	**-1.3**
	171nm,0.8s						
SMPI	**Sampi**	**13.33**	**67**	P	**Pn**	**19 33 48.7**	**-0.9**
	1μm,0.6s						
GSPH	**General Santos**	**13.54**	**353**	||*eP*	**Pn**	**19 33 51.6**	**-0.5**
MMPI	**Merauke**	**13.79**	**95**	P	**Pn**	**19 33 55.6**	**+0.5**
	6μm,0.8s						
KRKI	**Karangkates**	**13.93**	**266**	P	**Pn**	**19 33 56.0**	**-0.7**
	554nm,0.7s						
MATI	**Mati**	**14.31**	**359**	*eP*	**P**	**19 34 00.7**	**+0.7**
KCP	**Kidapawan**	**14.44**	**354**	||*eP*	**P**	**19 34 03.7**	**+2.3**
DAV	**Davao City (W)**	**14.46**	**356**	P	**P**	**19 34 03.1**	**+1.5**
	57nm,0.3s,baz=168,slow=0.9,SNR=15						
DAV				S	**S**	**19 36 40.4**	**+1.0**
	17nm,0.3s,baz=234,slow=19,SNR=4.8						
DAV	**Davao City (W)**	**14.46**	**356**	*eP*	**P**	**19 34 00.9**	**-0.7**
	747nm,0.8s						
DAV	**Davao City (W)**	**14.46**	**356**	P	**P**	**19 34 02.7**	**+1.0**
	SNR=14						
DMPH	**Davao City--Mi**	**14.48**	**356**	↑*eP*	**P**	**19 34 03.0**	**+1.1**
DMPH				*eS*	Px	19 34 13.3	
TSM	**Tawau**	**14.50**	**323**	P	**P**	**19 34 04.8**	**+2.6**
WRAB	**Tennant Creek**	**14.55**	**149**	*eP*	**P**	**19 34 04.0**	**+1.4**
WRAB				pmax	pmax		
	comp=Z,544nm,0.6s						
WRAB	**Tennant Creek**	**14.55**	**149**	*eP*	**P**	**19 34 04.0**	**+1.5**
	comp=Z,544nm,0.6s						
WRAB	**Tennant Creek**	**14.55**	**149**	P	**P**	**19 34 03.7**	**+1.1**
	comp=Z,1μm,0.7s						
PWJI	**Pagerwojo**	**14.57**	**267**	P	**P**	**19 34 02.3**	**-0.5**
	comp=Z,3μmcomp=Z,264nm,0.7s						
SJI	**Sawahan**	**14.60**	**268**	P	**P**	**19 34 02.9**	**-0.3**
	comp=Z,7μmcomp=Z,386nm,0.8s						
CTBH	**Cotabato--PC H**	**14.76**	**351**	||*eP*	**P**	**19 34 05.1**	**+0.2**
MYLDM	**Lahad Datu**	**14.88**	**327**	P	**P**	**19 34 08.1**	**+1.9**
MYLDM	**Lahad Datu**	**14.88**	**327**	P	**P**	**19 34 08.4**	**+2.2**
	comp=Z,5μmcomp=Z,589nm,1.1s						
NGJI	**Ngawi**	**14.91**	**269**	P	**P**	**19 34 09.6**	**+3.0**
	comp=Z,175nm,1.0s						
JAY	**Jayapura**	**14.98**	**72**	P	**P**	**19 34 07.4**	**0.0**
	comp=Z,2μm,0.8s						
MBWA	**Marble Bar**	**15.11**	**205**	*eP*	**P**	**19 34 08.7**	**+0.1**
MBWA	**Marble Bar**	**15.11**	**205**	P	**P**	**19 34 09.2**	**+0.6**
	SNR=19						
PCJI	**Pacitan**	**15.19**	**266**	P	**P**	**19 34 09.3**	**-0.4**
	comp=Z,5μmcomp=Z,518nm,1.1s						
BUKP	**Musuan**	**15.30**	**355**	*eP*	**P**	**19 34 11.4**	**+0.6**
PAGZ	**Pagadian**	**15.52**	**348**	*eP*	**P**	**19 34 14.2**	**+0.9**
IPIL	**Ipil**	**15.64**	**345**	*eP*	**P**	**19 34 15.5**	**+0.9**
UGM	**Wanagama**	**15.84**	**267**	P	Px	19 34 28.7	
CGP	**Cagayan de Oro**	**15.91**	**353**	||*iP*	**P**	**19 34 18.9**	**+1.4**
SMRI	**Semarang**	**15.93**	**270**	P	**P**	**19 34 23.2**	**+5.5**
	comp=Z,112nm,0.9s						
SDKM	**Sandakan**	**15.98**	**324**	P	**P**	**19 34 19.6**	**+1.3**
BUTP	**Butuan**	**16.34**	**357**	*eP*	**P**	**19 34 23.3**	**+1.1**
BJII	**Banjamegara**	**16.65**	**269**	P	**P**	**19 34 27.7**	**+2.2**
	comp=Z,69nm,1.0s						
STKI	**Sintang**	**16.74**	**296**	P	**P**	**19 34 27.5**	**+1.0**
BTM	**Bintulu**	**17.07**	**308**	P	**P**	**19 34 31.3**	**+1.2**
KDM	**Kudat**	**17.23**	**326**	P	**P**	**19 34 33.3**	**+1.6**
TBP	**Tagbilaran**	**17.24**	**351**	*eP*	**P**	**19 34 32.1**	**+0.3**
SBUM	**Sibu**	**17.31**	**304**	P	**P**	**19 34 33.6**	**+0.9**
ASAR	**Alice Springs**	**17.61**	**157**	P	**P**	**19 34 37.0**	**+1.2**
	comp=Z,224nm,0.3s,baz=335,slow=11						
ASAR				S	**S**	**19 37 42.5**	**+0.5**
	comp=Z,12nm,0.3s,baz=336,slow=19,SNR=7.2						
BATP	**Bataraza**	**18.33**	**332**	*eP*	**P**	**19 34 44.9**	**+1.4**
KSM	**Kuching**	**18.43**	**298**	P	**P**	**19 34 44.5**	**-0.1**
KSM	**Kuching**	**18.43**	**298**	*eP*	**P**	**19 34 43.9**	**-0.7**
	comp=Z,32nm,0.8s						
TNG	**Tangerang**	**19.75**	**272**	P	Px	19 36 49.5	
ENPP	**El Nido**	**19.83**	**339**	*eP*	**P**	**19 34 59.6**	**+0.1**
CNP	**Catarman**	**19.92**	**355**	*eP*	**P**	**19 35 00.6**	**+0.2**
BUSP	**Coron**	**20.32**	**342**	*eP*	**P**	**19 35 04.3**	**-0.3**
PMG	**Port Moresby**	**20.53**	**97**	*eP*	**P**	**19 35 06.6**	**0.0**
PMG				pmax	pmax		
	comp=Z,316nm,0.8s						
PMG	**Port Moresby**	**20.53**	**97**	*eP*	**P**	**19 35 06.6**	**+0.1**
	comp=Z,316nm,0.8s						
AUQP	**San Andres**	**20.99**	**350**	*eP*	**P**	**19 35 19.8**	**+9.0**
PVCP	**Virac**	**21.05**	**354**	*eP*	**P**	**19 35 11.4**	**+0.2**
BOAC	**Boac**	**21.29**	**347**	*eP*	**P**	**19 35 15.1**	**+1.6**
TGY	**Tagaytay City**	**22.12**	**346**	P	**P**	**19 35 20.7**	**-0.3**
	comp=Z,267nm,0.8s,mb5.5,baz=162,slow=19						
MDSI	**Maura Dua**	**22.39**	**276**	P	Px	19 36 37.4	
LWLI	**Liwa**	**22.43**	**275**	P	Px	19 36 49.0	
CTA	**Charters Tower**	**22.90**	**125**	*eP*	**P**	**19 35 29.3**	**+1.2**
	comp=Z,49nm,0.5s,mb5.0						
CTA				*eS*	**S**	**19 39 26.0**	**+12**
CTA	**Charters Tower**	**22.90**	**125**	P	**P**	**19 35 29.3**	**+1.3**
	comp=Z,64nm,0.5s,mb5.1,baz=304,slow=11,SNR=98						
CTAO	**Charters Tower**	**22.90**	**125**	*eP*	**P**	**19 35 29.3**	**+1.2**
CTAO				pmax	pmax		
	comp=Z,113nm,0.8s,mb5.2						
CTAO	**Charters Tower**	**22.90**	**125**	*eP*	**P**	**19 35 29.3**	**+1.2**
	comp=Z,113nm,0.8s,mb5.2						
FORT	**Forrest**	**23.25**	**177**	*eP*	**P**	**19 35 31.1**	**0.0**
	comp=Z,645nm,0.5s						
FORT	**Forrest**	**23.25**	**177**	*eP*	**P**	**19 35 31.0**	**-0.1**
BALP	**Baler**	**23.56**	**348**	*eP*	**P**	**19 35 33.2**	**-0.9**
KSI	**Kapahiang**	**24.08**	**278**	P	Px	19 36 52.4	
MYKOM	**Kota Tinggi**	**24.39**	**291**	P	**P**	**19 35 42.0**	**+0.3**
MYKOM	**Kota Tinggi**	**24.39**	**291**	P	PP	19 36 47.7	+3.1
KLBR	**Kellerberrin**	**25.36**	**198**	*eP*	**P**	**19 35 49.8**	**-0.3**
	comp=Z,16nm,0.2s,mb4.9						
SDSI	**Sungai Dareh**	**25.81**	**283**	P	pP	19 36 54.4	+1.5
	comp=Z,169nm,1.5s						
BKNI	**Bangkinang**	**26.54**	**286**	P	PP	19 37 05.9	-2.6
	comp=Z,94nm,1.2s,comp=Z,0.3nm						
KTGM	**Kuala Trenggan**	**26.55**	**298**	P	**P**	**19 36 00.2**	**-0.8**
PDSI	**Padang**	**26.75**	**283**	P	pP	19 37 06.1	+3.1
	comp=Z,49nm,1.1s,comp=Z,0.3nm						
NWAO	**Narrogin (SRO)**	**26.76**	**197**	*eP*	**P**	**19 36 02.2**	**-0.4**
NWAO				pmax	pmax		
	comp=Z,26nm,0.8s						
NWAO	**Narrogin (SRO)**	**26.76**	**197**	*eP*	**P**	**19 36 02.2**	**-0.3**
	comp=Z,26nm,0.8s,mb4.5						
PPI	**Padang Panjang**	**26.93**	**284**	P	pP	19 37 03.7	-1.1
	comp=Z,77nm,1.1s,comp=Z,2μmcomp=Z,0.3nm						
FRIM	**Kepong**	**27.00**	**292**	P	**P**	**19 36 04.6**	**-0.3**
GUMO	**Guam**	**27.75**	**41**	P	**P**	**19 36 10.0**	**-1.5**
	comp=Z,41nm,0.4s,mb5.0,baz=231,slow=11,SNR=12						
IPM	**Ipoh**	**28.05**	**294**	P	**P**	**19 36 13.2**	**-1.0**
MNSI	**Mandailing Nat**	**28.07**	**286**	P	pP	19 37 18.2	+3.0
STKA	**Stephens Creek**	**28.08**	**152**	*eP*	**P**	**19 36 15.4**	**+1.2**
	comp=Z,107nm,0.4s,mb5.4						
STKA				*eS*	**S**	**19 40 35.7**	**+0.8**
STKA	**Stephens Creek**	**28.08**	**152**	P	**P**	**19 36 15.5**	**+1.2**
	comp=Z,128nm,0.4s,mb5.5,baz=325,slow=9.0,SNR=518						
STKA				S	**S**	**19 40 35.8**	**+0.8**
	comp=Z,32nm,0.8s,baz=248,slow=11,SNR=4.0						
KULM	**Kulim**	**28.73**	**295**	P	**P**	**19 36 19.8**	**-0.5**
KULM	**Kulim**	**28.73**	**295**	*eP*	**P**	**19 36 19.4**	**-0.9**
	comp=Z,16nm,0.6s,mb4.4						
PSI	**Prapat**	**29.34**	**289**	P	**P**	**19 36 24.5**	**-1.2**
	comp=Z,33nm,1.0s,mb4.5,baz=102,slow=7.4,SNR=21						
QIZ	**Qiongzhong**	**31.02**	**328**	P	**P**	**19 36 39.0**	**-1.2**
QIZ				pP	pP	19 37 40.3	-1.4
QIZ				sP	sP	19 38 16.5	-2.5
QIZ				S	**S**	**19 41 23.3**	**+2.2**
QIZ				sS	sS	19 43 12.3	-0.6
QIZ				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb3.8						
QIZ				LR	LR		
	comp=N,270nm,6.5s						
QIZ				LR	LR		
	comp=Z,290nm,8.5s						
ARMA	**Armidale**	**32.81**	**137**	*eP*	**P**	**19 36 57.5**	**+1.9**
ARMA	**Armidale**	**32.81**	**137**	*eP*	**P**	**19 36 57.7**	**+2.0**
	comp=Z,16nm,0.7s,mb4.3						
HNR	**Honiara**	**33.14**	**96**	*eP*	**P**	**19 36 58.3**	**-0.4**
HNR				pmax	pmax		
	comp=Z,222nm,0.9s,mb5.4						
HNR	**Honiara**	**33.14**	**96**	*eP*	**P**	**19 36 58.2**	**-0.5**
	comp=Z,222nm,0.9s,mb5.4						
YNG	**Young**	**33.48**	**146**	*eP*	**P**	**19 37 03.5**	**+2.1**
	comp=Z,48nm,0.4s,mb5.1						
CAN	**Canberra**	**34.57**	**147**	*eP*	**P**	**19 37 13.0**	**+2.3**
CAN				pmax	pmax		
	comp=Z,46nm,0.9s,mb4.7						
CAN	**Canberra**	**34.57**	**147**	*eP*	**P**	**19 37 13.0**	**+2.3**
	comp=Z,46nm,0.9s,mb4.7						
TOO	**Toolangi**	**34.58**	**153**	*eP*	**P**	**19 37 13.3**	**+2.6**
CM31	**Chiang Mai Arr**	**37.45**	**314**	*eP*	**P**	**19 37 35.3**	**+0.2**
	comp=Z,10.0nm,0.7s,mb4.2						
CMAR	**Chiang Mai Arr**	**37.45**	**314**	P	**P**	**19 37 34.9**	**-0.2**
	comp=Z,12nm,0.7s,mb4.2,baz=142,slow=6.9,SNR=74						
CMAR				pP	pP	19 38 38.9	+0.7
	comp=Z,4.7nm,0.7s,baz=136,slow=5.8,SNR=3.2						
CMAR				ScP	ScP	19 43 01.9	-0.5
	comp=Z,3.5nm,1.0s,baz=165,slow=3.3,SNR=5.4						
CHTO	**Chiang Mai**	**37.68**	**314**	*eP*	**P**	**19 37 37.2**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,35nm,1.1s,mb4.5						
CHTO	**Chiang Mai**	**37.68**	**314**	*eP*	**P**	**19 37 37.2**	**+0.2**
	comp=Z,36nm,1.1s,mb4.5						
CHTO	**Chiang Mai**	**37.68**	**314**	P	**P**	**19 37 37.9**	**+0.9**
	SNR=6.9						
GYA	**Guiyang**	**38.82**	**331**	P	**P**	**19 37 46.3**	**-0.1**
GYA				pP	pP	19 38 51.0	+1.1
GYA				sP	sP	19 39 27.5	+0.8
GYA				PcP	PcP	19 39 51.8	+1.4
GYA				ScP	ScP	19 43 09.5	+2.0
GYA				S	**S**	**19 43 22.8**	**+3.1**
GYA				sS	sS	19 45 13.3	-0.9
GYA				SS	SS	19 46 22.0	-4.4
GYA				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.3						
GYA				pmax	pmax		
	comp=Z,120nm,4.9s						
GYA				LR	LR		
	comp=N,530nm,17.5s						
GYA				LR	LR		
	comp=E,460nm,18.2s						
GYA				LR	LR		
	comp=Z,490nm,17.0s						
WHN	**Wuhan**	**39.54**	**343**	P	**P**	**19 37 51.5**	**-0.7**
KMI	**Kunming**	**39.80**	**325**	P	**P**	**19 37 56.0**	**+1.6**
KMI				pP	pP	19 38 59.8	+1.5
KMI				sP	sP	19 39 35.5	+0.6
KMI				S	**S**	**19 43 37.0**	**+2.8**
KMI				sS	sS	19 45 30.5	+1.4
KMI				SS	SS	19 46 40.8	-4.7
KMI				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.2						
KMI				pmax	pmax		
	comp=Z,140nm,3.7s						
KMI				LR	LR		
	comp=N,440nm,5.4s						
KMI				LR	LR		
	comp=E,280nm,8.4s						
KMI				LR	LR		
	comp=

LSA Lhasa 50.19 319 *e*P **P 19 39 15.6 +0.1**
LSA pmax pmax
comp=Z,34nm,0.7s,mb4.7
LSA Lhasa 50.19 319 *e*P **P 19 39 15.6 0.0**
comp=Z,34nm,0.7s,mb4.7
VLA Vladivostok 50.58 5 *e*P **P 19 39 15.3 -2.8**
VLA pmax pmax
comp=Z,23nm,1.2s,mb4.3
ODAN Odare 50.99 314 *e*P **P 19 39 21.3 -0.2**
comp=Z,26nm,0.6s,mb4.6
CN2 Changchun 51.03 359 *e*P **P 19 39 19.0 -2.4**
CN2 *ep*P pP 19 40 26.0 -2.8
CN2 *es*P sP 19 41 00.5 -4.0
CN2 *e*S **S 19 46 11.8 -1.5**
CN2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.1
CN2 pmax pmax
comp=Z,200nm,6.0s
TAPN Taplejung 51.05 314 *e*P **P 19 39 22.0 +0.1**
MSVF Nonsavu 51.19 107 P **P 19 39 25.0 +1.8**
comp=Z,245nm,0.8s,mb5.5,SNR=5.6
MSVF Nonsavu 51.19 107 *e*P **P 19 39 24.2 +1.0**
MSVF pmax pmax
comp=Z,47nm,1.0s,mb4.7
MSVF Nonsavu 51.19 107 *e*P **P 19 39 24.2 +1.0**
comp=Z,47nm,1.0s,mb4.7
RAMN Ramite 51.61 313 *e*P **P 19 39 26.2 +0.1**
comp=Z,73nm,0.6s,mb5.2
MDJ Mudanjiang 51.91 3 P **P 19 39 28.0 +0.1**
MDJ pP pP 19 40 33.0 -2.5
MDJ PcP PcP 19 40 36.0 +0.4
MDJ sP sP 19 41 07.8 -3.4
MDJ PP PP 19 41 29.0 -0.8
MDJ ScP ScP 19 44 02.0 +0.8
MDJ PcS PcS 19 44 34.8 +0.7
MDJ S **S 19 46 26.5 +1.2**
MDJ sS sS 19 48 21.5 -4.2
MDJ ScS ScS 19 48 44.8 +1.2
MDJ SS SS 19 50 05.0 -2.3
MDJ pmax pmax
comp=Z,33nm,0.8s,mb4.7
MDJ pmax pmax
comp=Z,80nm,5.9s
MDJ Mudanjiang 51.91 3 *e*P **P 19 39 27.8 -0.1**
comp=Z,29nm,0.9s,mb4.6
JIRN Jiri 52.32 314 *e*P **P 19 39 31.4 +0.1**
comp=Z,41nm,0.6s,mb4.9
GUN Gumba 52.69 314 *e*P **P 19 39 33.8 -0.1**
comp=Z,84nm,0.6s,mb5.2
GTA Gaotai 52.78 334 P **P 19 39 34.8 +0.4**
GTA pP pP 19 40 40.5 -1.7
GTA sP sP 19 41 18.0 +0.2
GTA PP PP 19 41 40.5 +2.8
GTA S **S 19 46 36.3 -0.9**
GTA sS sS 19 48 35.3 -2.7
GTA SS SS 19 50 20.5 -0.7
GTA pmax pmax
comp=Z,24nm,0.8s,mb4.6
GTA pmax pmax
comp=Z,130nm,7.1s
GTA LR LR
comp=N,200nm,6.8s
GTA LR LR
comp=E,130nm,8.0s
GTA LR LR
comp=Z,120nm,8.3s
PKI Pulchoki 52.83 313 *e*P **P 19 39 35.0 0.0**
comp=Z,34nm,0.6s,mb4.9
PKI Pulchoki 52.83 313 *e*P **P 19 39 35.0 0.0**
PKI pmax pmax
comp=Z,29nm,0.6s,mb4.8
PKIN Phulchoki 52.85 313 *e*P **P 19 39 35.0 -0.1**
comp=Z,29nm,0.6s,mb4.8
RPZ Rata Peaks 53.05 140 P **P 19 39 36.9 +0.6**
comp=Z,33nm,0.4s,mb5.0,baz=299,slow=2.9,SNR=38
RPZ Rata Peaks 53.05 140 *e*P **P 19 39 37.6 +1.3**
KKN Kakani 53.05 313 *e*P **P 19 39 36.2 -0.4**
comp=Z,36nm,0.7s,mb4.8
KKN Kakani 53.05 313 *e*P **P 19 39 36.2 -0.4**
KKN pmax pmax
comp=Z,36nm,0.7s,mb4.8
DMN Daman 53.08 313 *e*P **P 19 39 36.6 -0.1**
comp=Z,49nm,0.8s,mb4.9
GKN Gorkha 53.64 313 *e*P **P 19 39 40.6 -0.2**
comp=Z,36nm,0.3s,mb5.2
KHZ Kahutara 54.05 138 *e*P **P 19 39 44.1 +0.5**
KOLN Koldanda 54.27 312 *e*P **P 19 39 45.9 +0.6**
URZ Urewera 54.91 132 P **P 19 39 48.6 -1.2**
comp=Z,28nm,1.0s,mb4.5,baz=305,slow=19,SNR=5.4
YSS Yuzh-Sakhalins 56.07 13⇑ *i*P **P 19 39 57.0 -0.7**
YSS pmax pmax
comp=Z,20nm,0.7s,mb4.6
YSS Yuzh-Sakhalins 56.07 13 *e*P **P 19 39 57.5 -0.2**
comp=Z,14nm,0.5s,mb4.6
HABR Khabarovsk 56.20 7 *e*P **P 19 39 57.2 -1.4**
HABR *e* 19 40 52.3
HABR 19 42 02.6
HABR *e*S **S 19 47 15.8 -6.5**
HABR *e*'SS sS 19 49 15.6 -8.9
HABR *e*SSS 19 53 42.1
HABR pmax pmax
comp=Z,33nm,1.2s,mb4.5
HABR pmax pmax
comp=E,5.0nm,0.8s
HABR pmax pmax
comp=N,9.0nm,1.1s
HABR MLR MLR
comp=Z,71nm,16.0s
KLR Kul'dur 56.64 4 *e*P **P 19 39 56.9 -4.7**
KLR *e* 19 40 49.0
HIA Hailar 56.80 355 *e*P **P 19 40 03.0 +0.3**
HIA pmax pmax
comp=Z,13nm,1.0s
HIA Hailar 56.80 355 *e*P **P 19 40 03.0 +0.3**
comp=Z,13nm,1.0s,mb4.2
ULN Ulaanbaatar 57.70 345 *e*P **P 19 40 08.9 -0.2**
ULN pmax pmax
comp=Z,16nm,0.8s,mb4.4
ULN Ulaanbaatar 57.70 345 *e*P **P 19 40 08.9 -0.2**
comp=Z,16nm,0.8s,mb4.4
ULN Ulaanbaatar 57.70 345 P **P 19 40 09.6 +0.6**
SNR=9.4
SONM Songino Array 57.85 344 P **P 19 40 09.6 -0.4**
comp=Z,8.8nm,0.8s,mb4.1,baz=161,slow=8.5,SNR=54
SONM PKPPKP 20 09 51.5
comp=Z,0.3nm,0.6s,baz=300,slow=4.9,SNR=5.7
CASY Casey 59.76 187 *e*P **P 19 40 23.3 +0.5**
comp=Z,14nm,0.9s,mb4.4
AFI Afiamalu 60.86 102 P **P 19 40 31.4 +0.2**
comp=Z,22nm,0.7s,mb4.7,baz=337,slow=13,SNR=3.2
SDNR Sundarnagar 61.13 312 *e*PKP **P 19 40 34.5 +1.8**
WMQ Urumqi 61.94 329 P **P 19 40 37.5 -0.3**
WMQ PcP PcP 19 41 15.5 +0.3
WMQ pP pP 19 41 48.0 -0.1
WMQ sP sP 19 42 22.0 -1.1
WMQ PP PP 19 43 00.5 +1.8
WMQ pmax pmax
comp=Z,32nm,0.8s,mb4.9
WMQ pmax pmax
comp=Z,200nm,4.3s
TLY Talaya 62.09 344 *e*P **P 19 40 39.1 +0.5**
TLY *e* 19 48 49.3
TLY pmax pmax
comp=Z,4.0nm,0.6s,mb4.1
MOY Mondy 62.84 342 *e*P **P 19 40 44.7 +1.2**
SKR Severo-Kuril's 63.33 21 *e*P **P 19 40 48.5 +1.8**
PETK Petropavlovsk- 65.89 20 P **P 19 41 03.4 +0.3**
comp=Z,40nm,0.8s,mb5.2,baz=191,slow=5.1,SNR=73
PETK Petropavlovsk- 65.89 20 P **P 19 41 03.4 +0.3**
KSH Kashi 66.05 319 P **P 19 41 05.0 +0.5**
KSH PcP PcP 19 41 33.5 +1.3
KSH pP pP 19 42 16.8 +1.0
KSH sP sP 19 42 50.3 -0.2
KSH PP PP 19 43 37.5 +2.8
KSH ScP 19 45 04.5
KSH PcS 19 45 36.8
KSH S S 19 49 26.3 +0.1
KSH ScS ScS 19 50 26.8 -2.0
KSH sS sS 19 51 30.8 -1.7
KSH SS SS 19 53 49.8 +0.9
KSH pmax pmax
comp=Z,26nm,1.5s,mb4.7
KSH pmax pmax
comp=Z,95nm,4.6s
KSH LR LR
comp=N,160nm,6.7s
KSH LR LR
comp=E,120nm,6.6s
KSH LR LR
comp=Z,180nm,7.7s
PET Petropavlovsk 66.15 21 *e*P **P 19 41 05.5 +0.7**
PET *e* 19 41 32.6
PET *e*S S 19 49 29.4 +2.6
PET pmax pmax
comp=Z,200nm,6.9s
PET pmax pmax
comp=Z,58nm,1.1s,mb5.2
PET MLR MLR
comp=Z,100nm,19.0s
PET Petropavlovsk 66.15 21 *e*P **P 19 41 05.2 +0.5**
comp=Z,95nm,1.4s,mb5.3
MK31 Makanchi Array 66.75 329 *e*P **P 19 41 08.4 -0.3**
MKAR Makanchi Array 66.75 329 P **P 19 41 08.3 -0.4**
comp=Z,13nm,0.7s,mb4.8,baz=130,slow=8.0,SNR=152
KZA Kyzart 67.91 321 P **P 19 41 17.3 +1.2**
SNR=13
KBK Karagaybulak 68.42 322 P **P 19 41 20.4 +1.2**
SNR=8.6
KBL Kabul 68.43 312 *e*P **P 19 41 19.6 +0.2**
KBL pmax pmax
comp=Z,14nm,0.7s,mb4.8
KBL Kabul 68.43 312 *e*P **P 19 41 19.6 +0.1**
comp=Z,14nm,0.7s,mb4.8
AAK Ala-Archa 68.68 321 *e*P **P 19 41 21.4 +0.6**
AAK pmax pmax
comp=Z,12nm,0.7s,mb4.7
AAK Ala-Archa 68.68 321 *e*P **P 19 41 21.4 +0.6**
comp=Z,12nm,0.7s,mb4.7
AML Almayashu 68.91 321 P **P 19 41 23.2 +1.0**
SNR=22
AML Almayashu 68.91 321 *e*P **P 19 41 22.9 +0.7**
AML pmax pmax
comp=Z,17nm,0.8s,mb4.8
AML Almayashu 68.91 321 *e*P **P 19 41 22.9 +0.7**
comp=Z,17nm,0.8s,mb4.8
USP Ospenovka 69.03 322 P **P 19 41 22.9 0.0**
SNR=14
EKS2 Erkin-Say 69.14 321 P **P 19 41 24.4 +0.8**
SNR=16
EKS2 Erkin-Say 69.14 321 *e*P **P 19 41 24.1 +0.5**
EKS2 pmax pmax
comp=Z,16nm,1.1s,mb4.7
EKS2 Erkin-Say 69.14 321 *e*P **P 19 41 24.1 +0.4**
comp=Z,16nm,1.1s,mb4.7
YAK Yakutsk 69.33 2 *e*P **P 19 41 23.8 -0.5**
YAK pmax pmax
comp=Z,67nm,1.0s,mb5.3
YAK Yakutsk 69.33 2 *e*P **P 19 41 23.9 -0.4**
comp=Z,52nm,0.6s,mb5.4
ZAA0 Zalesovo Array 70.50 335 *e*P **P 19 41 30.1 -1.4**
ZALV Zalesovo Beam 70.50 335 P **P 19 41 30.4 -1.1**
comp=Z,36nm,0.8s,mb5.2,baz=130,slow=4.8,SNR=136
ZALV Zalesovo Beam 70.50 335 P **P 19 41 30.4 -1.2**
KURK Kurchatov 71.14 330 P **P 19 41 35.7 +0.2**
comp=Z,220nm,1.2s,mb5.8,SNR=28
KURK Kurchatov 71.14 330 *ce*P **P 19 41 34.9 -0.6**
KURK pmax pmax
comp=Z,34nm,0.9s,mb5.1
KURK Kurchatov 71.14 330 *e*P **P 19 41 34.6 -0.8**
comp=Z,48nm,1.1s,mb5.1
KURK Kurchatov 71.14 330 P **P 19 41 35.1 -0.4**
SNR=15
NVS Novosibirsk 71.79 335⇑ *i*P **P 19 41 37.7 -1.5**
NVS *i* S S 19 50 26.8 -5.7
NVS *e*'SS SKSac 19 51 14.5 +3.3
NVS pmax pmax
comp=Z,29nm,1.0s,mb5.0
NVS pmax pmax
comp=N,13nm,0.8s
NVS pmax pmax
comp=E,13nm,0.8s
NVS smax
comp=N,48nm,2.0s
NVS smax
comp=E,49nm,1.7s
SEY Seymchan 72.94 12 *de*P **P 19 41 45.9 +0.1**
MAW Mawson 73.26 201 *e*P **P 19 41 48.4 +0.7**
comp=E,5.1nm,0.4s,mb4.6
MAW Mawson 73.26 201 P **P 19 41 48.4 +0.7**
comp=E,6.1nm,0.5s,mb4.6,baz=74,slow=4.6,SNR=25
MAW Mawson 73.26 201 *e*P **P 19 41 48.4 +0.7**
MAW pmax pmax
comp=Z,1.0nm,0.4s
MAW Mawson 73.26 201 *e*P **P 19 41 48.4 +0.7**
comp=Z,0.8nm,0.4s,mb3.8
BVAR Borovoye Array 76.63 329 P **P 19 42 06.6 -0.4**
comp=Z,18nm,0.6s,mb5.0,baz=138,slow=7.1,SNR=126
BRVK Borovoye 76.70 329 P **P 19 42 07.6 +0.2**
comp=Z,228nm,1.0s,mb5.9,SNR=26
BRVK Borovoye 76.70 329 *ce*P **P 19 42 07.0 -0.4**
BRVK pmax pmax
comp=Z,36nm,0.9s,mb5.1
BRVK Borovoye 76.70 329 *e*P **P 19 42 06.8 -0.7**
comp=Z,31nm,0.8s,mb5.1
BRVK Borovoye 76.70 329 P **P 19 42 07.5 +0.1**
SNR=14
TIXI Tiksi 78.96 1 *e*P **P 19 42 20.4 +1.0**
TIXI pmax pmax
comp=Z,34nm,1.7s,mb4.8
TIXI Tiksi 78.96 1 *e*P **P 19 42 18.4 -1.0**
comp=Z,13nm,0.4s,mb5.0
BILL Bilibino 80.38 14 *c i*P **P 19 42 28.6 +1.5**
BILL pmax pmax
comp=Z,28nm,2.5s,mb4.5
ABKAR Akbulak array 80.73 322 *e*P **P 19 42 28.5 -0.8**
comp=Z,3.5nm,0.7s,mb4.2
SYO Syowa Base 81.97 201⇑ *e*P **P 19 42 34.6 -0.9**
SYO Syowa Base 81.97 201⇑ *e*PcP PcP 19 42 40.4 +0.3
QSPA South Pole Qui 82.52 180 *e*P **P 19 42 38.3 +0.2**
comp=Z,6.6nm,0.8s,mb4.5
SVE Sverdlovsk 83.38 330⇑ *e*P **P 19 42 42.2 -0.6**
SVE pmax pmax
comp=Z,23nm,0.8s,mb5.1
ARU Arti 84.28 329 *d i*P **P 19 42 46.4 -0.9**
ARU S SKSac 19 52 34.8 -4.6
ARU pmax pmax
comp=Z,12nm,1.0s,mb4.7
ARU Arti 84.28 329 *e*P **P 19 42 46.7 -0.7**
comp=Z,9.1nm,0.8s,mb4.7
SDPT Sand Point 86.59 33 *e*P **P 19 42 58.3 -0.4**
comp=Z,117nm,0.7s,mb5.8
GNI Garni 88.50 311 *e*P **P 19 43 10.7 +2.6**
GNI pmax pmax
comp=Z,11nm,1.0s
TTA Tatalina 90.94 27 *e*P **P 19 43 18.9 0.0**
OHAK Old Harbor 90.95 32 *e*P **P 19 43 18.8 -0.2**
comp=Z,24nm,0.8s,mb5.2
KDAK Kodiak Island 91.44 32 P **P 19 43 21.0 -0.3**
comp=Z,153nm,0.7s,SNR=6.1
KDAK Kodiak Island 91.44 32 P **P 19 43 20.7 -0.6**
comp=Z,17nm,0.7s,mb5.1,baz=255,slow=1.8,SNR=13
KDAK Kodiak Island 91.44 32 *i* P **P 19 43 20.8 -0.5**
KDAK Kodiak Island 91.44 32 P **P 19 43 20.7 -0.6**
RSO Redoubt South 91.89 29 *e*P **P 19 43 22.3 -1.1**
PPLA Purkeypile 92.64 27 *e*P **P 19 43 26.0 -0.7**
comp=Z,12nm,1.0s,mb4.9
BPAW Bear Paw Mtn. 93.39 26 *e*P **P 19 43 28.7 -1.5**
comp=Z,6.6nm,0.8s,mb4.7
SEW Seward 93.45 30 *e*P **P 19 43 29.6 -0.9**
comp=Z,24nm,0.9s,mb5.2
RC01 Rabbit Creek A 93.46 29 *e*P **P 19 43 29.4 -1.1**
comp=Z,36nm,0.8s,mb5.5
PMR Palmer 93.83 28 *e*P **P 19 43 30.8 -1.4**
COLD Coldfoot 94.23 23 *e*P **P 19 43 33.3 -0.6**
comp=Z,23nm,1.1s,mb5.1
ILAR Eielson Array 95.25 25 P **P 19 43 36.3 -2.3**
comp=Z,3.5nm,0.8s,mb4.5,baz=267,slow=4.4,SNR=46
ILAR PKKPbc PKKPbc 20 00 29.6 -4.3
comp=Z,0.4nm,0.8s,baz=77,slow=1.8,SNR=5.5
DIV Divide 95.38 29 *e*P **P 19 43 38.5 -0.9**
comp=Z,39nm,0.8s,mb5.5
PAX Paxson 95.69 27 *e*P **P 19 43 40.2 -0.5**
PAX pmax pmax
comp=Z,16nm,1.2s,mb5.0
PAX Paxson 95.69 27 *e*P **P 19 43 40.2 -0.5**
comp=Z,16nm,1.2s,mb5.0
BMRM Bremner River 95.93 29 *e*P **P 19 43 41.4 -0.5**
comp=Z,24nm,0.9s,mb5.3
MENT Mentasta 96.49 27 *e*P **P 19 43 43.3 -1.0**
BRTR Keskin Array B 96.90 309 P **P 19 43 48.0 +1.3**
comp=Z,0.5nm,0.8s,mb3.7,baz=79,slow=3.1,SNR=3.7
APA Apatity 98.03 337⇑ *e*P **P 19 43 51.0 -0.1**
APA pmax pmax
comp=Z,22nm,1.3s,mb5.2
ARCES ARCESS Array B 100.79 339 P Pdif 19 44 02.1 -1.7
comp=Z,1.9nm,0.8s,baz=81,slow=6.5,SNR=6.1
ARCES PKKPbc PKKPbc 20 00 14.8 -3.9
comp=Z,0.9nm,0.7s,baz=243,slow=1.4,SNR=5.9
ARCES ARCESS Array B 100.79 339 P Pdif 19 44 02.1 -1.7
ARCES PKKPbc PKKPbc 20 00 14.8 -3.9
NVAR Mina Array Bea 114.30 51 Pdiff Pdif 19 45 07.2 +3.4
comp=Z,0.5nm,0.7s,baz=251,slow=4.5,SNR=3.1
NVAR PKP PKiKP 19 48 54.4 +1.0
comp=Z,1.5nm,0.7s,baz=234,slow=2.8,SNR=10
NVAR PP PP 19 50 00.5 +6.1
comp=Z,1.6nm,0.9s,baz=261,slow=7.2,SNR=3.7
MFID Camas Ranch 115.09 45⇑P PKiKP 19 48 55.3 +0.5
baz=115
EDW2 Edwards Air Fo 115.13 55⇓P PKiKP 19 48 55.6 +0.5
baz=115
MPMC Manual Prospec 115.34 54⇓P PKPdf 19 48 55.7 +0.2
baz=115
L11A Cat Creek Ranc 115.44 47⇑P PKPdf 19 48 56.4 +1.0
baz=115
I12A Atlanta 115.48 45⇑P PKPdf 19 48 55.8 +0.3
baz=115
S10A Tonopah Range, 115.71 52⇓P PKPdf 19 48 57.1 +0.9
baz=116
FURC Furnace Creek, 115.77 53⇓P PKPdf 19 48 57.5 +1.2
baz=116
H13A Challis 115.89 44⇑P PKPdf 19 48 56.5 +0.3
baz=116
O11A Cowboy Ranch, 115.97 49⇑P PKPdf 19 48 57.6 +1.0
baz=116
L12A House Creek Ra 115.98 47⇑P PKPdf 19 48 56.6 0.0
baz=116
GSC Goldstone 116.02 54⇑P PKPdf 19 48 57.8 +1.0
baz=116
GSC Goldstone 116.02 54 *e*P PKPdf 19 48 57.9 +1.1
HLID Hailey 116.04 45 *e*P PKPdf 19 48 57.8 +1.2
I13A Wildhorse Cree 116.16 45⇑P PKPdf 19 48 57.2 +0.4
baz=116
M12A Wells 116.23 47⇑P PKPdf 19 48 57.2 +0.2
baz=116
J13A Cove Ranch, Pi 116.26 45⇑P PKPdf 19 48 57.7 +0.7
baz=116
R11A Troy Canyon, C 116.41 51⇓P PKPdf 19 48 57.6 +0.1
baz=116
PFO Pinyon Flat Ob 116.58 56⇓P PKPdf 19 48 58.7 +0.8
baz=116
PFO Pinyon Flat Ob 116.58 56 *e*PKPdf PKPdf 19 48 58.9 +0.9
I14A Mackay 116.61 44⇓P PKPdf 19 48 57.8 +0.1
baz=117
O12A Currie 116.62 49⇑P PKPdf 19 48 58.0 +0.1
baz=117
MONP Monument Peak 116.72 57⇑P PKPdf 19 48 58.7 +0.4
baz=117
LRM Limekiln Ridge 116.74 42 *e*PKPdf PKPdf 19 48 58.3 +0.4
MCMT McKenzie Canyo 116.77 43 *e*PKPdf PKPdf 19 48 58.8 +0.8
M13A Montello 116.79 47⇓P PKPdf 19 48 58.3 +0.2
baz=117
M13A Montello 116.79 47 *e*PKPdf PKPdf 19 48 58.8 +0.7
BELC Belle Mtn. Jos 116.89 56⇑P PKPdf 19 48 59.5 +1.0
baz=117
T11A Corn Creek, Al 116.92 52⇑P PKPdf 19 48 59.2 +0.7
baz=117
H15A Lima 116.97 43⇓P PKPdf 19 48 59.3 +0.9
baz=117
DVTC Desert V Tower 117.02 57⇑P PKPdf 19 48 59.6 +0.8
baz=117
GMRC Granite Mounta 117.03 55⇓P PKPdf 19 48 59.9 +1.1
baz=117
S12A Delamar Landin 117.13 52⇑P PKPdf 19 49 00.4 +1.5
baz=117
L14A Malta 117.28 46⇑P PKPdf 19 48 57.9 -1.1
baz=117
F16A Kennard Place, 117.30 42⇑P PKPdf 19 48 59.4 +0.4
baz=117
M14A Sheep Mountain 117.35 47⇓P PKPdf 19 48 58.7 -0.5
baz=117
P13A Bates Ranch, G 117.36 49⇑P PKPdf 19 49 00.2 +0.9
baz=117,SNR=5.1
BC3 Big Chuckawall 117.40 56⇓P PKPdf 19 49 00.3 +0.8
baz=117
J15A Blackfoot 117.47 45⇑P PKPdf 19 49 00.6 +1.2
baz=117
V12A Nelson 117.51 54⇑P PKPdf 19 49 00.8 +1.2
baz=118
K15A Arbon 117.61 46⇓P PKPdf 19 49 01.0 +1.3
baz=118
U12A Valley of Fire 117.62 53⇓P PKPdf 19 49 01.2 +1.3
baz=118
N14A Grayback Hills 117.63 48⇓P PKPdf 19 49 00.5 +0.8
baz=118
F17A Fitzpatrick Pl 117.90 42 P PKPdf 19 49 00.9 +0.9
baz=118,SNR=5.6
S13A Holt Ranch, En 117.91 51⇑P PKPdf 19 49 01.9 +1.5
baz=118
T13A Saint George 117.99 52⇑P PKPdf 19 49 01.9 +1.3
baz=118
P14A Drum Mountains 118.04 49⇓P PKPdf 19 49 01.2 +0.6
baz=118,SNR=6.3
DUG Dugway 118.08 48 *e*PKIKP PKPdf 19 49 01.1 +0.5
N15A Stansbury Isla 118.11 47⇑P PKPdf 19 49 01.5 +0.8
baz=118
V13A Grand Canyon W 118.17 53⇓P PKPdf 19 49 00.8 -0.2
baz=118
W13A Hualapai Mount 118.41 54⇑P PKPdf 19 49 01.7 +0.3
baz=118
F18A Big Timber 118.52 41⇓P PKPdf 19 49 02.0 +0.7
baz=118
X13A Yucca 118.55 55⇓P PKPdf 19 49 02.5 +0.8
baz=118
REDW Red Top Meadow 118.59 44 *e*PKPdf PKPdf 19 49 02.2 +0.7
HWUT Hardware Ranch 118.60 46 *e*PKPdf PKPdf 19 49 01.9 +0.3
SNOW Snow King Moun 118.62 44 *e*PKPdf PKPdf 19 49 02.9 +1.3
LOHW Long Hollow 118.68 44 *e*PKPdf PKPdf 19 49 02.5 +0.8
J17A Brown Place, J 118.68 44⇓P PKPdf 19 49 02.7 +1.0
baz=119
U14A Mt Trumbull 118.69 53⇓P PKPdf 19 49 02.3 +0.3
baz=119
V14A Boquillas Ranc 118.92 53⇑P PKPdf 19 49 03.7 +1.3
baz=119
Z13A Yuma Proving G 118.95 56⇓P PKPdf 19 49 03.3 +0.7
baz=119
L17A Cokeville 118.95 46⇑P PKPdf 19 49 03.1 +0.8
baz=119
MSU Marysvale 118.98 50 *e*PKIKP PKPdf 19 49 04.1 +1.7
W14A Seligman 119.03 54⇓P PKPdf 19 49 03.2 +0.6
baz=119
FFC Flin Flon 119.11 30 *i* PKIKP PKPdf 19 49 02.8 +0.7
M17A Scullys Gap (B 119.29 46⇑P PKPdf 19 49 02.6 -0.4
baz=119
N17A Moffit Pass 119.32 47⇓P PKPdf 19 49 04.1 +1.1
baz=119
Y14A Wickenburg 119.35 55⇑P PKPdf 19 49 03.5 +0.3
baz=119
K18A Toltan Ranch, 119.38 45 P PKPdf 19 49 04.4 +1.3
baz=119,SNR=7.1
U15A North Rim 119.39 52⇓P PKPdf 19 49 04.7 +1.5
baz=119
TMUT Trail Mountain 119.50 49 *e*PKPdf PKPdf 19 49 04.6 +1.2
R16A Teasdale 119.56 50 P PKPdf 19 49 05.1 +1.6
baz=120,SNR=5.3
L18A Fontenelle, Gr 119.60 46⇓P PKPdf 19 49 04.0 +0.5
baz=120
O17A Robinson Place 119.61 48⇓P PKPdf 19 49 03.7 +0.1
baz=120
S16A Weppner Ranch, 119.62 51 P PKPdf 19 49 04.8 +1.1
baz=120,SNR=7.8
V15A Kaibab Nationa 119.62 53⇑P PKPdf 19 49 04.4 +0.6
baz=120
Q16A Castle Valley 119.63 49⇑P PKPdf 19 49 04.9 +1.2
baz=120
PDAR Pinedale Array 119.67 45 PKP PKPdf 19 49 04.0 +0.3
comp=Z,2.6nm,0.7s,baz=303,slow=1.0,SNR=22
114A Black Gap (USA 119.68 57⇓P PKPdf 19 49 05.0 +1.1
baz=120
X15A Humboldt 119.86 54⇑P PKPdf 19 49 04.2 -0.1
baz=120
SRU San Rafael 120.07 49⇑P PKPdf 19 49 04.3 -0.2
baz=120
R17A Hanksville Air 120.11 50 P PKPdf 19 49 05.6 +1.0
baz=120,SNR=7.0
P18A Preston Nutter 120.13 48⇑P PKPdf 19 49 04.7 +0.1
baz=120
K19A Absolon Red Bu 120.15 44⇓P PKPdf 19 49 04.1 -0.4
baz=120,SNR=7.5
115A Sonoran Desert 120.23 57⇓P PKPdf 19 49 05.6 +0.6
baz=120

S17A	Black Ridge (B baz=120	120.25	51	⇓P	PKPdf	19 49 05.2 +0.3
Q18A	Rafter H Ranch baz=120	120.36	49	⇓P	PKPdf	19 49 05.3 +0.2
U16A	Tuba City baz=120	120.37	52	⇑P	PKPdf	19 49 06.4 +1.2
T17A	Navajo Res., N baz=120,SNR=11	120.41	51	⇓P	PKPdf	19 49 06.5 +1.2
X16A	Lo Mia Camp, P baz=120	120.52	54	⇑P	PKPdf	19 49 07.1 +1.6
K20A	Yellowstone Ra baz=120,SNR=8.8	120.56	44	⇓P	PKPdf	19 49 04.8 -0.5
116A	Eloy baz=121	120.69	57	⇓P	PKPdf	19 49 06.9 +1.0
R18A	Canyonlands Na baz=121,SNR=11	120.74	50	⇓P	PKPdf	19 49 06.4 +0.6
V17A	Tonalea, Kykot baz=121	120.76	53	⇑P	PKPdf	19 49 06.6 +0.7
Z16A	Peralta Trail, baz=121	120.76	56	⇑P	PKPdf	19 49 06.1 +0.1
L20A	Wamsutter baz=121	120.77	45	⇑P	PKPdf	19 49 05.5 -0.3
S18A	Hurst Farm, Bl baz=121,SNR=8.4	120.85	50	⇑P	PKPdf	19 49 06.5 +0.4
216A	Three Points, baz=121	121.00	57	⇓P	PKPdf	19 49 06.8 +0.3
M20A	Sweetwater, Wa baz=121	121.05	46	⇑P	PKPdf	19 49 06.6 +0.2
Q19A	Hogan Spring (baz=121,SNR=6.8	121.05	49	P	PKPdf	19 49 07.0 +0.6
P19A	Cripple Cowboy baz=121	121.06	48	⇓P	PKPdf	19 49 07.7 +1.3
T18A	Mexican Hat baz=121,SNR=8.6	121.09	51	⇑P	PKPdf	19 49 07.3 +0.8
N20A	Spence Gulch, baz=121,SNR=9.0	121.21	46	⇑P	PKPdf	19 49 06.5 -0.2
U18A	Rough Rock, Ch baz=121,SNR=7.6	121.28	52	⇑P	PKPdf	19 49 07.0 +0.1
O20A	White River Ci baz=121,SNR=11	121.45	47	⇓P	PKPdf	19 49 07.6 +0.5
L21A	Rawlins baz=121,SNR=6.2	121.47	45	⇑P	PKPdf	19 49 07.3 +0.2
117A	Oracle baz=122	121.48	56	⇑P	PKPdf	19 49 07.9 +0.4
217A	Green Valley baz=122	121.58	57	⇓P	PKPdf	19 49 08.2 +0.5
M21A	Separation Pea baz=122,SNR=8.8	121.60	45	⇑P	PKPdf	19 49 07.2 -0.2
RWWY	Rawlins	121.68	45	ePKPdf	PKPdf	19 49 08.0 +0.5
N21A	Black Mountain baz=122,SNR=7.3	121.77	46	⇓P	PKPdf	19 49 07.9 +0.2
Q20A	Ridgley Place, baz=122,SNR=9.3	121.77	49	⇓P	PKPdf	19 49 08.4 +0.6
Y18A	Canyon Day Jun baz=122	121.80	55	⇑P	PKPdf	19 49 09.1 +1.1
R20A	Redvale baz=122,SNR=6.3	121.94	49	⇑P	PKPdf	19 49 09.4 +1.2
O21A	Pagoda baz=122	121.98	47	⇓P	PKPdf	19 49 09.0 +0.9
S20A	Disappointment baz=122,SNR=9.0	122.06	50	⇑P	PKPdf	19 49 09.3 +0.9
118A	Homack Ranch, baz=122	122.10	56	⇓P	PKPdf	19 49 08.9 +0.3
MVCO	Mesa Verde	122.13	51	ePKPdf	PKPdf	19 49 09.7 +1.2
P21A	Newcastle baz=122	122.22	48	⇓P	PKPdf	19 49 09.9 +1.3
318A	Bisbee baz=122	122.34	58	⇑P	PKPdf	19 49 09.6 +0.5
Q21A	Lamborn Mesa, baz=122	122.35	48	⇑P	PKPdf	19 49 10.4 +1.5
Y19A	Nutrioso baz=122	122.39	54	⇑P	PKPdf	19 49 10.5 +1.4
N22A	Wattenberg Ran baz=122	122.52	46	⇓P	PKPdf	19 49 10.3 +1.1
V20A	Brimhall baz=122,SNR=5.2	122.54	52	⇑P	PKPdf	19 49 10.3 +0.9
119A	Ashpeak Ranch, baz=123	122.62	56	⇓P	PKPdf	19 49 11.0 +1.4
W20A	Ramah baz=123,SNR=12	122.70	53	P	PKPdf	19 49 11.1 +1.4
Q22A	Crested Butte, baz=123,SNR=8.2	122.83	48	P	PKPdf	19 49 11.4 +1.6
219A	White Tail Can baz=123	122.83	57	⇓P	PKPdf	19 49 10.6 +0.5
N23A	Red Feather La baz=123	122.85	46	⇓P	PKPdf	19 49 10.5 +0.7
X20A	Quemado baz=123	122.85	54	⇑P	PKPdf	19 49 10.4 +0.5
RSSD	Black Hills	122.92	41	ePKIKP	PKPdf	19 49 09.6 -0.2
T21A	Navajo Lake baz=123	122.93	51	⇓P	PKPdf	19 49 10.8 +0.8
319A	Douglas baz=123,SNR=5.9	122.95	57	⇓P	PKPdf	19 49 10.0 -0.3
U21A	Nageezi baz=123,SNR=14	123.00	51	⇓P	PKPdf	19 49 11.2 +1.0
O23A	Lake Granby, G baz=123	123.10	46	⇓P	PKPdf	19 49 10.9 +0.6
Z20A	Nine Sixteen R baz=123,SNR=7.3	123.12	55	⇓P	PKPdf	19 49 11.8 +1.2
R22A	Saguache, Gunn baz=123	123.14	49	⇓P	PKPdf	19 49 12.3 +1.9
120A	U Bar Ranch, L baz=123,SNR=8.1	123.22	56	⇑P	PKPdf	19 49 11.8 +1.1
S22A	4UR Ranch, Cre baz=123,SNR=14	123.24	49	⇓P	PKPdf	19 49 11.8 +1.1
T22A	Edith baz=123,SNR=5.8	123.41	50	⇑P	PKPdf	19 49 12.8 +1.9
X21A	Alamocita Cree baz=123,SNR=12	123.44	54	P	PKPdf	19 49 12.7 +1.5
220A	Playas Peak, P baz=123,SNR=10	123.46	57	⇑P	PKPdf	19 49 12.2 +0.9
320A	Kipp Ranch, An baz=124,SNR=11	123.58	57	⇓P	PKPdf	19 49 12.8 +1.3
U22A	Llaves baz=124,SNR=10	123.63	51	⇓P	PKPdf	19 49 13.3 +1.8
Y21A	Point of Rocks baz=124,SNR=6.3	123.64	54	⇓P	PKPdf	19 49 12.9 +1.4
V22A	San Miguel Ran baz=124,SNR=6.9	123.73	52	⇓P	PKPdf	19 49 13.3 +1.7
121A	Cookes Peak, D baz=124,SNR=9.3	123.92	56	⇓P	PKPdf	19 49 13.4 +1.3
X22A	Bernardo baz=124	124.04	53	⇓P	PKPdf	19 49 14.1 +1.8
T23A	Casias Ranch, baz=124	124.06	50	⇑P	PKPdf	19 49 14.1 +1.8
U23A	El Rito baz=124,SNR=6.9	124.16	51	⇑P	PKPdf	19 49 14.1 +1.7
Y22A	Socorro baz=124,SNR=10.0	124.23	54	⇑P	PKPdf	19 49 13.9 +1.2
SDCO	Great Sand Dun	124.24	49	ePKPdf	PKPdf	19 49 13.6 +1.0
V23A	Ortiz Mt. (NFS baz=124,SNR=10	124.34	52	⇓P	PKPdf	19 49 14.9 +2.1
ANMO	Albuquerque comp=Z,6.3nm,0.8s,baz=270,slow=5.1,SNR=17	124.35	53	PKP	PKPdf	19 49 14.3 +1.4
ANMO	Albuquerque	124.35	53	PKIKP	PKPdf	19 49 14.3 +1.4
ANMO	comp=Z,6.0nm,0.8s			pmax	pmax	
ANMO	Albuquerque	124.35	53	ePKPdf	PKPdf	19 49 13.9 +1.0
ANMO				PKP	PKPdf	19 49 14.3 +1.4
R24A	Sanders Place, baz=124	124.37	48	⇓P	PKPdf	19 49 13.7 +0.9
BNM	Barren Site	124.44	54	ePKPdf	PKPdf	19 49 14.2 +1.2
S24A	Houchin Ranch, baz=124	124.49	49	⇑P	PKPdf	19 49 14.7 +1.7
P25A	Willow Gulch B baz=124	124.61	47	⇑P	PKPdf	19 49 14.0 +0.8
Y23A	Lovelace Mesa, baz=125,SNR=6.9	124.96	54	P	PKPdf	19 49 15.3 +1.3
Z23A	Rita Site, Whi baz=125	125.00	54	⇓P	PKPdf	19 49 15.3 +1.2
V24A	Rampart Ranch, baz=125	125.05	51	⇓P	PKPdf	19 49 15.8 +1.7
S25A	Robets Cordova baz=125	125.06	49	⇓P	PKPdf	19 49 14.1 -0.1
W24A	Lazy 6 Ranch, baz=125	125.10	52	⇓P	PKPdf	19 49 15.1 +0.8
T25A	Trinidad baz=125	125.26	49	⇓P	PKPdf	19 49 15.5 +1.0
Y24A	Capitan baz=125,SNR=24	125.46	53	⇑P	PKPdf	19 49 15.8 +0.8
U25A	Circle Dot Ran baz=125	125.50	50	⇑P	PKPdf	19 49 15.9 +0.8
V25A	Rancho No Teng baz=126	125.52	51	⇓P	PKPdf	19 49 15.4 +0.3
Z24A	Sheeppen Canyo baz=126,SNR=16	125.68	54	⇑P	PKPdf	19 49 16.5 +1.0
124A	Stringfield Ra baz=126,SNR=12	125.78	55	⇓P	PKPdf	19 49 16.7 +1.0
W25A	X Bar L Ranch, baz=126	125.84	52	⇓P	PKPdf	19 49 16.1 +0.4
224A	Cornudas Mount baz=126,SNR=7.9	125.89	56	⇓P	PKPdf	19 49 16.6 +0.7
U26A	Atchley Ranch, baz=126	126.01	50	⇓P	PKPdf	19 49 16.7 +0.7
Y25A	Mesa, Roswell baz=126,SNR=14	126.05	53	⇓P	PKPdf	19 49 16.5 +0.4
324A	Moseley Ranch, baz=126,SNR=13	126.09	56	⇓P	PKPdf	19 49 16.5 +0.2
MNTX	Cornudas Mount	126.11	56	ePKPdf	PKPdf	19 49 16.8 +0.5
125A	Gardner Draw, baz=126	126.44	55	⇑P	PKPdf	19 49 17.8 +0.9
225A	Deer Hill, Car baz=126	126.45	55	⇓P	PKPdf	19 49 17.3 +0.3
325A	Bean Ranch, Si baz=126,SNR=8.5	126.53	56	⇓P	PKPdf	19 49 17.4 +0.3
X26A	CR and CF Fran baz=126	126.56	52	⇓P	PKPdf	19 49 17.5 +0.4
425A	Indio Mountain baz=127,SNR=13	126.67	57	⇑P	PKPdf	19 49 18.1 +0.7
126A	Clayton Basin, baz=127	126.96	55	⇑P	PKPdf	19 49 18.2 +0.3
226A	Malaga, Loving baz=127	127.06	55	⇑P	PKPdf	19 49 18.3 +0.2
Y27A	Causey baz=127	127.27	53	⇓P	PKPdf	19 49 19.0 +0.5
Z27A	Tatum baz=127	127.41	54	⇑P	PKPdf	19 49 19.9 +1.1
426A	McDonald Obser baz=128	127.49	57	⇓P	PKPdf	19 49 19.8 +0.8
MSTX	Muleshoe baz=128	127.55	53	⇓P	PKPdf	19 49 19.8 +0.8
526A	Mary Lane Ranc baz=128,SNR=6.3	127.60	58	⇓P	PKPdf	19 49 19.7 +0.5
626A	Big Bend Ranch baz=128,SNR=5.9	127.69	58	P	PKPdf	19 49 20.2 +0.8
ECSD	EROS Data Cent	127.85	39	ePKPdf	PKPdf	19 49 18.6 -0.7
427A	Hayter Ranch, baz=128,SNR=8.5	127.97	57	⇑P	PKPdf	19 49 20.8 +0.9
527A	Woodward Ranch baz=128,SNR=9.8	127.98	57	⇓P	PKPdf	19 49 20.2 +0.3
TXAR	Lajitas Array comp=Z,2.7nm,0.6s,baz=242,slow=1.9,SNR=26	128.14	58	PKP	PKPdf	19 49 21.3 +1.0
328A	Wristen Ranch, baz=128	128.31	56	⇑P	PKPdf	19 49 20.0 -0.5
627A	Terlingua Ranc baz=128,SNR=10	128.34	58	⇓P	PKPdf	19 49 21.0 +0.4
428A	Kincaid Ranch, baz=128,SNR=9.5	128.59	56	⇑P	PKPdf	19 49 22.2 +1.1
PLCA	Paso Flores comp=Z,3.7nm,0.9s,baz=198,slow=5.0,SNR=4.4	129.54	163	SKPbc		19 52 12.9
WMOK	Wichita Mounta	130.38	50	ePKIKP	PKPdf	19 49 24.0 -0.4
JCT	Junction City	131.04	56	ePKIKP	PKPdf	19 49 25.9 +0.2
SCHQ	Schefferville comp=Z,4.6nm,0.6s,baz=299,slow=2.8,SNR=4.4	131.57	10	SKPbc	SKPbc	19 52 19.1 -1.7
DBIC	Dimbokro comp=Z,9.2nm,1.1s,baz=357,slow=13,SNR=3.1	131.73	272	SKPbc	SKPbc	19 52 20.8 -1.9
JFWS	Jewell Farm	132.17	36	ePKIKP	PKPdf	19 49 26.5 -1.0
MIAR	Mount Ida	134.37	48	ePKIKP	PKPdf	19 49 32.5 +0.6
CMIG	Matias Romero comp=Z,2.0nm,0.5s,baz=259,slow=4.3,SNR=6.5	138.53	73	PKhKP	PKPpre	19 49 31.3
CMIG				SKPbc	SKPbc	19 52 44.5 +0.6
TKL	comp=Z,8.2nm,0.3s,baz=239,slow=6.8,SNR=60 Tuckaleechee C	140.56	40	PKhKP	PKPpre	19 49 36.6
BLA	comp=Z,7.7nm,0.9s,baz=135,slow=5.6,SNR=13 Blacksburg	141.59	36	ePKHKP	PKPpre	19 49 38.9
GOGA	Godfrey	142.12	43	ePKHKP	PKPpre	19 49 41.3
JSC	Jenkinsville	143.03	40	ePKHKP	PKPpre	19 49 44.6
TEIG	Tepich	144.03	66	ePKPpre	PKPdf	19 49 48.7 -1.1
CNNC	Cliffs of the	144.43	36	ePKPbc	PKPdf	19 49 49.1 -1.0
NHSC	New Hope	144.48	40	ePKPdf	PKPdf	19 49 50.2 -0.1
CPUP	Villa Florida comp=Z,8.1nm,0.6s,baz=174,slow=1.8,SNR=30	146.21	174	PKPbc	PKPbc	19 49 54.8 -0.2
CPUP				SKPbc	SKPbc	19 53 02.5 -0.2
TGUH	comp=Z,2.1nm,0.6s,baz=194,slow=4.2,SNR=2.9 Tegucigalpa,Un	146.21	76	ePKPbc	PKPbc	19 49 55.9 +0.5
DWPF	Disney	146.56	49	ePKPbc	PKPbc	19 49 56.1 +0.1
JTS	JuntasAbangare comp=Z,67nm,0.8s,baz=292,slow=4.6,SNR=12	148.81	82	PKPbc	PKPbc	19 50 02.0 -0.3
JTS	JuntasAbangare	148.81	82	ePKPbc	PKPbc	19 50 02.0 -0.3
LPAZ	La Paz comp=Z,2.6nm,1.0s,baz=210,slow=20,SNR=8.9	152.32	149	PKP	PKPdf	19 50 04.5 +1.2
LPAZ				PKPbc	PKPbc	19 50 11.6 +1.2
ROSC	comp=Z,4.6nm,0.5s,baz=203,slow=1.9,SNR=23 El Rosal	159.14	96	PKP	PKPdf	19 50 13.6 +1.1
ROSC	comp=Z,4.4nm,0.4s,baz=279,slow=19,SNR=4.0			PKPab	PKPab	19 50 52.3 +1.0
	comp=Z,5.8nm,0.5s,baz=282,slow=19,SNR=5.9					

*ISCJB **27** 19:39:20.1±0.5, 79°.36N±0°.07×97°.2W±0°.9, h10km, mb3.9/13, MS3.1/6, Error ellipse: s-maj=25.5km s-min=9.8km az=11.1*

*IDC **27** 19:39:20.4±0.8, 79°.40N×97°.99W, h0km, mb3.8/9, mb1 4.1/10, mb1mx3.8/24, mbtmp3.8/10, ML4.3/1, MS3.1/8, Ms1 3.1/8, ms1mx2.9/35, Error ellipse: s-maj=31.5km s-min=16.2km az=107.0*

*NEIC **27** 19:39:21.6±0.5, 79°.35N×96°.33W, h10km, mb4.1/5, Error ellipse: s-maj=18.9km s-min=10.3km az=112.0*

ISC 27 19:39:21.9±0.5, 79°.37N±0°.08×97°.7W±1°.0, h10km, n32, σ0s87/29, mb3.9/13, MS3.2/5, Queen Elizabeth Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RES	Resolute Bay	4.75	171		Pn	Pn	19 40 28.4	-5.0
	4.3nm,0.3s,baz=10.0,slow=13,SNR=130							
RES					Sn	Sn	19 41 19.7	-8.7
	18nm,0.3s,baz=291,slow=20,SNR=10.0							
RES	Resolute Bay	4.75	171		Pn	Pn	19 40 28.4	-5.0
RES					Sn	Sn	19 41 19.7	-8.8
INK	Inuvik	14.50	240		Pn	Pn	19 42 40.6	-6.0
	0.8nm,0.3s,baz=358,slow=14,SNR=10.0							
INK					Sn	Sn	19 45 14.6	-12
	0.3nm,0.3s,baz=307,slow=18,SNR=3.6							
INK					LR	LR	19 48 30.6	
	comp=Z,37nm,19.4s,baz=11,slow=38							
SUMG	Summit	15.09	84	eP	Pn	Pn	19 42 49.1	-5.5
	13nm,0.5s							
SUMG	Summit	15.09	84	i P	Pn	Pn	19 42 49.0	-5.6
SUMG				i S	Sn	Sn	19 45 29.5	-12
YKA	Yellowknife Ar	17.68	206		Pn	Pn	19 43 19.7	-8.0
	0.4nm,0.3s,baz=2.6,slow=12,SNR=13							
YKA					Sn	x	19 46 22.9	
	0.3nm,0.3s,baz=13,slow=22,SNR=6.8							
SPITS	Spitsbergen Ar	18.94	35		LR	LR	19 49 34.4	
	comp=Z,43nm,20.9s,baz=355,slow=32							
EGAK	Eagle	18.98	245	eP	Pn	Pn	19 43 37.1	-6.6
	6.7nm,0.7s							
DAWY	Dawson	19.35	242	eP	Pn	Pn	19 43 41.1	-6.9
ILAR	Eielson Array	19.98	252		LR	LR	19 53 23.4	
	comp=Z,35nm,20.9s,baz=104,slow=42							
JMIC	Jan Mayen	21.69	62		LR	LR	19 52 38.8	
	comp=Z,40nm,20.1s,MS2.8,baz=248,slow=37							
FFC	Flin Flon	24.80	186	eP	P	19 44 42.6	-0.8	
SCHQ	Schefferville	26.66	139		LR	LR	19 56 06.6	
	comp=Z,111nm,18.5s,MS3.4,baz=92,slow=38							
EDM	Edmonton	26.79	201		P	P	19 45 00.7	-0.9
BBB	Bella Bella	29.20	220		LR	LR	19 58 05.1	
	comp=Z,73nm,19.3s,MS3.3,baz=47,slow=38							
NOA	NORSAR Array B	34.00	55		LR	LR	19 59 54.5	
	comp=Z,25nm,18.9s,MS3.0,baz=340,slow=36							
RSSD	Black Hills	35.45	188	eP	P	19 46 18.5	+0.7	
	3.3nm,0.8s,mb4.3							
FINES	FINESS Array B	35.70	43		P	P	19 46 21.1	+1.3
	1.9nm,1.0s,mb4.0,baz=352,slow=8.1,SNR=4.4							
HLID	Hailey	36.48	201	eP	P	19 46 27.5	+0.9	
	3.4nm,1.0s,mb4.2							
PDAR	Pinedale Array	37.00	195		P	P	19 46 32.3	+1.2
	0.6nm,0.7s,mb3.5,baz=23,slow=8.0,SNR=6.3							
PV01	Paradox Valley	41.58	193	eP	P	19 47 10.8	+1.5	
SDCO	Great Sand Dun	41.86	189	eP	P	19 47 12.4	+0.9	
	1.5nm,1.0s,mb3.6							
NVAR	Mina Array Bea	41.86	204		P	P	19 47 12.1	+0.5
	1.8nm,0.8s,mb3.8,baz=9.9,slow=4.8,SNR=12							
NVAR	Mina Array Bea	41.86	204		P	P	19 47 12.1	+0.5
TKL	Tuckaleechee C	44.19	164		LR	LR	20 07 08.6	
	comp=Z,35nm,21.7s,MS3.2,baz=223,slow=38							
WMOK	Wichita Mounta	44.74	181	eP	P	19 47 34.1	-0.8	
	2.9nm,1.1s,mb4.0							
ZALV	Zalesovo Beam	46.93	358		P	P	19 47 51.8	-0.1
	1.4nm,0.6s,mb4.1,baz=12,slow=7.4,SNR=5.0							
TXAR	Lajitas Array	50.20	187		P	P	19 48 17.4	+0.1
	0.7nm,0.7s,mb3.8,baz=7.3,slow=5.4,SNR=9.7							
ESDC	Sonseca Array	52.02	78		P	P	19 48 30.3	-0.6
	0.2nm,0.4s,mb3.4,baz=347,slow=9.3,SNR=4.4							
SONM	Songino Array	52.27	340		P	P	19 48 33.2	+0.5
	1.6nm,0.7s,mb4.0,baz=351,slow=6.5,SNR=10							
MKAR	Makanchi Array	54.10	360		P	P	19 48 45.4	-0.8
	0.9nm,0.7s,mb3.8,baz=4.1,slow=5.1,SNR=5.1							
CMAR	Chiang Mai Arr	81.93	344		P	P	19 51 40.4	-0.9
	0.7nm,0.9s,mb3.6,baz=346,slow=5.5,SNR=3.3							

CSEM 27 20:20:19.6±0.4, 27°.19N×55°.96E, h2km, ML3.5, Error ellipse: s-maj=12.6km s-min=4.1km az=163.0, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	0.28	41	ePg	Pg	Pg	20 20 24.6	-0.5
KRBR	Kerman	2.87	14	ePn	Pn	Pn	20 21 06.9	+0.5
ZHSF	Zahedan	4.88	59	ePn	Pn	Pn	20 21 34.7	+0.7
NASN	Na'in	6.23	335	ePn	Pn	Pn	20 21 52.8	+0.3
RDF	Al-Radifah	7.63	285	eP	Pn	Pn	20 22 11.8	0.0
NAY	Al-Naaiem	7.96	287	eP	Pn	Pn	20 22 15.9	-0.4
MIB	Mutribah	8.02	291	eP	Pn	Pn	20 22 16.9	-0.3
GHVR	GHOM	8.30	332	ePn	Pn	Pn	20 22 21.6	+0.6
ASAO	Ashtian	8.93	327	ePn	Pn	Pn	20 22 30.0	+0.3

*IDC **27** 20:28:46.7±2.5, 20°.52S×177°.57W, h421km±25km, mb3.2/6, mb1 3.5/8, mb1mx3.3/17, mbtmp3.3/8, Error ellipse: s-maj=25.6km s-min=12.9km az=122.0*

*ISCJB **27** 20:28:51.1±1.6, 20°.6S±0°.2×177°.7W±0°.1, h476km±16km, mb3.7/9, Error ellipse: s-maj=27.0km s-min=15.8km az=142.1*

*NEIC **27** 20:28:51.2±1.3, 20°.65S×177°.66W, h473km±12km, mb3.7/2, Error ellipse: s-maj=20.8km s-min=12.7km az=141.0*

ISC 27 20:28:51.7±1.7, 20°.5S±0°.1×177°.7W±0°.1, h471km±18km, n31, σ0s83/25, mb3.7/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.87	304	eP	P	P	20 30 16.6	+0.6
AFI	Afiamalu	8.68	42	P	P	P	20 30 47.3	-7.6
	2.0nm,0.3s,baz=219,slow=6.5,SNR=3.1							
AFI				S		S	20 32 23.1	-13
	2.4nm,0.3s,baz=342,slow=20,SNR=4.0							
URZ	Urewera	18.23	193	P	P	P	20 32 33.1	-2.5
	1.6nm,0.3s,baz=0.0,slow=10,SNR=6.7							
URZ				S		S	20 35 39.6	+1.1
	0.8nm,0.3s,baz=162,slow=20,SNR=5.0							
URZ	Urewera	18.23	193	eP	P	P	20 32 33.1	-2.5
URZ				S		S	20 35 39.6	+1.1
EIDS	Eidsvold	29.10	255	eP	P	P	20 34 13.5	+0.4
EIDS	Eidsvold	29.10	255	eP	P	P	20 34 13.6	+0.5
CTA	Charters Tower	33.75	264	eP	P	P	20 34 53.2	0.0
	4.3nm,0.4s,mb4.2							
CTAO	Charters Tower	33.75	264	eP	P	P	20 34 53.2	+0.1
	3.9nm,0.4s,mb4.2							
CMSA	Cobar Meteorol	34.52	244	eP	P	P	20 35 00.4	+0.9
PMG	Port Moresby	35.61	283	P	P	P	20 35 08.8	-0.1
MTSU	Mount Surprise	35.86	267	eP	P	P	20 35 10.8	-0.1
	14nm,0.5s,mb4.6							
STKA	Stephens Creek	38.02	244	eP	P	P	20 35 29.5	+0.9
	3.1nm,0.9s,mb3.7							
STKA	Stephens Creek	38.02	244	P	P	P	20 35 28.5	-0.1
	3.5nm,0.7s,mb3.9,baz=88,slow=11,SNR=9.7							
STKA	Stephens Creek	38.02	244	eP	P	P	20 35 29.4	+0.8
	0.7nm,0.7s,mb3.2							
BBOO	Buckleboo	42.78	244	eP	P	P	20 36 07.1	+0.3
	5.6nm,0.4s,mb4.3							
ASAR	Alice Springs	44.77	257	P	P	P	20 36 22.2	-0.3
	5.5nm,0.8s,mb4.0,baz=94,slow=7.9,SNR=51							
ASAR				PcP	PcP		20 37 55.2	+0.4
	1.6nm,0.5s,baz=104,slow=3.6,SNR=11							
WRAB	Tennant Creek	44.85	262	eP	P	P	20 36 21.9	-1.2
MBWA	Marble Bar	58.11	257	eP	P	P	20 37 58.9	-0.6
NVAR	Mina Array Bea	80.86	43	P	P	P	20 40 16.4	+0.6
	0.5nm,0.8s,mb3.1,baz=243,slow=5.8,SNR=3.1							
TXAR	Lajitas Array	86.84	57	P	P	P	20 40 46.3	+0.6
	0.1nm,0.5s,mb2.8,baz=229,slow=8.2,SNR=3.9							
ILAR	Eielson Array	88.28	13	P	P	P	20 40 50.5	-1.0
	0.5nm,0.6s,mb3.5,baz=224,slow=6.1,SNR=9.4							
PDAR	Pinedale Array	88.80	43	P	P	P	20 40 54.8	+0.3
	0.2nm,0.4s,mb3.3,baz=225,slow=5.0,SNR=2.8							
ZALV	Zalesovo Beam	110.68	321	PKiKP	PKiKP	PKiKP	20 46 28.9	-1.0
	0.4nm,0.5s,baz=119,slow=1.8,SNR=2.4							
MKAR	Makanchi Array	111.41	313	PKiKP	PKiKP	PKiKP	20 46 30.8	-0.7
	0.2nm,0.6s,baz=168,slow=1.1,SNR=3.6							
MKAR	Makanchi Array	111.41	313	PKPdf	PKiKP	PKiKP	20 46 30.8	-0.7
BVAR	Borovoye Array	119.27	320	PKP	PKPdf	PKPdf	20 46 45.3	-1.1
	0.8nm,0.4s,baz=94,slow=3.1,SNR=8.7							
AKASG	Malin Array Be	143.16	331	PKhKP			20 47 27.9	
	0.5nm,0.3s,baz=42,slow=4.2,SNR=8.4							
BR131	Keskin Array S	147.05	312	ePKPbc	PKPbc	PKPbc	20 47 40.7	-0.5
BRTR	Keskin Array B	147.05	312	PKPbc	PKPbc	PKPbc	20 47 40.9	-0.3
	1.1nm,0.5s,baz=144,slow=5.0,SNR=8.1							
MMAI	Mount Meron Ar	148.06	300	PKPbc	PKPbc	PKPbc	20 47 44.5	+0.5
	3.5nm,0.5s,baz=84,slow=5.0,SNR=12							
CLL	Collm	148.15	347	i PKPbc	PKPbc	PKPbc	20 47 43.7	+0.1

*IDC **27** 20:50:27.4±1.7, 41°.92N×78°.53E, h0km, mb3.3/2, mb1 3.7/7, mb1mx3.5/26, mbtmp3.7/7, ML3.7/4, MS2.6/1, Ms1 2.6/1, ms1mx1.9/29, Error ellipse: s-maj=20.1km s-min=11.9km az=159.0*

*NNC **27** 20:50:30.8±1.9, 42°.33N×78°.56E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=16.6km s-min=6.0km az=178.0*

*MOS **27** 20:50:31.2±1.6, 42°.34N×78°.54E, h10km, mb3.6/1, Error ellipse: s-maj=14.9km s-min=9.3km az=96.1*

*BJI **27** 20:50:33.4, 42°.06N×79°.05E, h14km, mB4.4/1, mb4.2/3, ML3.8/9*

*NEIC **27** 20:50:33.1±7.1, 42°.27N×78°.52E, h10km±46km, Error ellipse: s-maj=31.4km s-min=9.8km az=153.0*

ISC 27 20:50:34.2±1.7, 42°.35N±0°.06×78°.48E±0°.05, h13km±15km, n43, σ1s34/55, mb3.4/3, 8C-7D, Lake Issyk-Kul region

| Code | Station Name | Δ

comp=E,11nm,0.3s,baz=210,slow=29,SNR=6.2
MKAR Makanchi Array 5.21 30 PN **Pn 20 51 53.2 +1.5**
MKAR 20 52 56.5
KK31 Karatay Array 5.92 280 ⇑Pg **Pb 20 52 17.5 +0.4**
comp=E,27nm,0.8s,baz=92,slow=15,SNR=12
KK31 ⇓Lg 20 53 33.8
comp=E,48nm,0.7s
WMQ Urumqi 6.91 75 *e*Pn **Pn 20 52 14.5 -0.5**
WMQ smax
comp=N,55nm,0.6s
WMQ smax
comp=E,55nm,0.7s
KURBB Kurchatov Arra 8.28 0 ⇑Pn **Pn 20 52 34.9 +1.1**
comp=E,1.0nm,0.7s
KURBB ⇓Lg 20 54 58.7
comp=E,13nm,0.8s
KURK Kurchatov 8.37 1 ⇑Pn **Pn 20 52 36.5 +1.5**
comp=E,4.7nm,0.6s
KURK ⇑Lg 20 54 58.9
comp=E,80nm,1.1s
KURK Kurchatov 8.37 1 Pn **Pn 20 52 34.3 -0.7**
comp=E,0.2nm,0.3s,baz=186,slow=12,SNR=18
KURK Sn **Sn 20 54 12.3 +3.0**
comp=E,0.4nm,0.3s,baz=172,slow=14,SNR=4.1
KURK Lg 20 54 58.0
comp=E,0.7nm,0.3s,baz=183,slow=29,SNR=8.4
KURK Kurchatov 8.37 1 *e*P **Pn 20 52 34.4 -0.6**
KURK 20 54 12.4
KURK Kurchatov 8.37 1 *e*Pn **Pn 20 52 34.4 -0.6**
KURK Sn **Sn 20 54 12.3 +3.0**
KURK Lg 20 54 58.0
BVAR Borovoye Array 11.98 336 Pn **Pn 20 53 23.4 -1.0**
comp=E,0.3nm,0.3s,baz=146,slow=14,SNR=11
BVAR Sn **Sn 20 55 35.8 -2.1**
comp=E,0.3nm,0.3s,baz=155,slow=21,SNR=4.3
BVAR Lg 20 56 53.3
comp=E,0.6nm,0.3s,baz=133,slow=32,SNR=3.7
BVAR Borovoye Array 11.98 336 P **Pn 20 53 23.4 -1.1**
BVAR 20 55 35.8
BRVK Borovoye 12.04 336 ⇓Pn **Pn 20 53 23.7 -1.7**
comp=E,14nm,1.2s
BRVK ⇓Sn **Sn 20 55 36.6 -2.8**
comp=E,5.6nm,0.8s
BRVK ⇓Lg 20 56 55.5
BRVK Borovoye 12.04 336 *e*P **Pn 20 53 23.6 -1.7**
BRVK pmax pmax
comp=Z,7.0nm,0.8s
BRVK Borovoye 12.04 336 *e*Pn **Pn 20 53 23.6 -1.7**
comp=Z,6.7nm,0.8s
ZAA0 Zalesovo Array 12.35 18 *e*Pn **Pn 20 53 31.1 +1.6**
ZALV Zalesovo Beam 12.35 18 Pn **Pn 20 53 30.0 +0.5**
comp=Z,0.4nm,0.3s,baz=210,slow=13,SNR=9.4
ZALV Lg 20 57 02.5
comp=Z,0.2nm,0.3s,baz=193,slow=33,SNR=3.6
ZALV LR LR 20 58 07.8
comp=Z,27nm,18.7s,baz=259,slow=36
NVS Novosibirsk 12.89 12 *e*P **Pn 20 53 46.1 +9.3**
NVS *e*S **Sn 20 56 00.9 +0.9**
AB31 Akbulak array 14.64 304 Pn **Pn 20 53 59.5 -1.3**
comp=Z,1.8nm,0.9s,baz=96,slow=15,SNR=6.0
AB31 ⇓Sn **Sn 20 56 47.1 +4.3**
comp=Z,1.2nm,0.8s
AB31 ⇑Lg 20 58 20.5
comp=Z,3.5nm,0.9s,baz=123,slow=25,SNR=4.2
AKTK Aktyubinsk 16.23 307 Pn **Pn 20 54 22.0 +0.3**
AKTK Lg 20 58 58.6
AKTO Aktyubinsk 16.23 307 Pn **Pn 20 54 22.0 +0.3**
comp=Z,0.1nm,0.3s,baz=100,slow=11,SNR=2.4
AKTO Lg 20 58 58.6
comp=Z,0.1nm,0.3s,baz=338,slow=19,SNR=2.9
ZAK Zakamensk 18.84 56 *e*P **Pn 20 54 52.0 -2.1**
ZAK pmax pmax
comp=Z,1.0nm,1.0s
ARU Arti 19.05 325 P **Pn 20 54 56.9 +0.4**
SONM Songino Array 20.40 65 P **P 20 55 08.9 -1.7**
comp=Z,2.0nm,0.7s,baz=267,slow=11,SNR=13
BRTR Keskin Array B 33.63 281 P **P 20 57 16.6 +2.3**
comp=Z,1.6nm,0.7s,mb4.1,baz=88,slow=7.7,SNR=9.9
NB2 NORSAR Subarra 43.47 319 P **P 20 58 35.8 -0.8**
comp=Z,0.4nm,0.6s,mb3.3,baz=86,slow=8.6
NOA NORSAR Array B 43.47 319 P **P 20 58 38.5 +2.0**
comp=Z,0.1nm,0.4s,mb2.9,baz=84,slow=8.0,SNR=3.9
ILAR Eielson Array 67.47 19 P **P 21 01 26.8 -2.3**
comp=Z,0.1nm,0.6s,mb3.0,baz=325,slow=4.4,SNR=3.3

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*ISCJB **27** 21:01:59.0±0.6,33°.19N±0°.04×91°.9E±0°.1,h10km,mb3.5/4, Error ellipse: s-maj=14.3km s-min=6.3km az=2.2*
*IDC **27** 21:02:00.3±1.7,33°.16N×92°.10E,h0km,mb3.2/4, mb1 3.4/6,mb1mx3.2/24,mbtmp3.3/6,ML2.6/1,Error ellipse: s-maj=59.3km s-min=26.9km az=60.0*
*NEIC **27** 21:02:01.6±0.8,33°.33N×91°.91E,h10km,mb3.5/3,Error ellipse: s-maj=16.2km s-min=12.4km az=79.0*
ISC 27 21:02:00.9±0.6,33°.21N±0°.04×91°.9E±0°.1,h10km,n15,σ1§07/17,mb3.5/4,Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.56**	**190**	Pg	**Pb**	**21 03 03.0**	**-1.0**
LSA				Sg	**Sg**	**21 03 56.0**	**+0.8**
LSA				smax			
comp=E,40nm,0.8s							
LSA	**Lhasa**	**3.56**	**190**	*e*Pn	**Pn**	**21 03 00.5**	**+4.3**
LSA				*e*Sg	**Sg**	**21 03 55.9**	**+0.7**
MK31	**Makanchi Array**	**15.41**	**334**	*e*Pn	**Pn**	**21 05 38.1**	**-0.3**
MKAR	**Makanchi Array**	**15.41**	**334**	Pn	**Pn**	**21 05 39.5**	**+1.2**
comp=E,0.0nm,0.3s,baz=145,slow=12,SNR=3.1							
AML	**Almayashu**	**16.91**	**307**	*e*Pn	**Pn**	**21 05 57.9**	**+0.3**
comp=E,0.7nm,0.3s							
SONM	**Songino Array**	**18.25**	**33**	P	**Pn**	**21 06 14.7**	**+0.4**
comp=E,0.1nm,0.3s,baz=214,slow=12,SNR=4.7							
KBL	**Kabul**	**19.02**	**280**	*e*P	**Pn**	**21 06 22.7**	**-0.9**
comp=E,1.5nm,0.6s							
KURK	**Kurchatov**	**20.03**	**335**	P	**P**	**21 06 35.6**	**+1.9**
comp=E,0.4nm,0.5s,baz=145,slow=12,SNR=5.2							
KURK	**Kurchatov**	**20.03**	**335**	P	**P**	**21 06 33.9**	**+0.1**
BVAR	**Borovoye Array**	**25.09**	**329**	P	**P**	**21 07 27.1**	**+1.6**
comp=E,0.4nm,0.7s,mb3.0,baz=146,slow=10,SNR=3.0							
BRVK	**Borovoye**	**25.16**	**328**	P	**P**	**21 07 24.3**	**-1.9**
YAK	**Yakutsk**	**37.52**	**28**	*e*P	**P**	**21 09 12.7**	**-2.0**
GNI	**Garni**	**38.08**	**294**	*e*P	**P**	**21 09 19.3**	**-0.5**
comp=E,6.6nm,1.0s,mb4.3							
ASAR	**Alice Springs**	**69.30**	**139**	P	**P**	**21 13 08.8**	**+0.3**
comp=E,0.3nm,0.5s,mb3.5,baz=337,slow=5.2,SNR=4.6							
ILAR	**Eielson Array**	**72.16**	**23**	P	**P**	**21 13 26.0**	**+0.6**
comp=E,0.3nm,0.9s,mb3.2,baz=302,slow=5.2,SNR=3.3							

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*BGS **27** 21:15:24.2±1.2,2°.58S×18°.39W,h10km,mb5.6,MS5.3, mb5.7(NEIC)*
*ISCJB **27** 21:15:38.1±0.5,0°.21S±0°.02×18°.24W±0°.02,h0km±2km, mb5.8/385,MS5.3/244,Error ellipse: s-maj=4.0km s-min=2.3km az=154.2*
*IDC **27** 21:15:40.0±0.4,0°.15S×18°.28W,h0km,mb5.3/38, mb1 5.4/38,mb1mx5.4/38,mbtmp5.3/38,MS5.4/29, Ms1 5.4/29,ms1mx5.3/32,Error ellipse: s-maj=13.2km s-min=11.5km az=139.0*
*MOS **27** 21:15:39.7±0.9,0°.18S×18°.23W,h10km,mb6.1/115, MS5.3/85,Error ellipse: s-maj=6.4km s-min=2.8km az=67.0*
*BJI **27** 21:15:40.4,0°.09S×18°.51W,h22km,mB5.9/24,mb5.8/4, Ms5.8/28,Ms7 5.5/26*
*NEIC **27** 21:15:42.4±0.1,0°.25S×18°.29W,h17km,mb5.8/245, ME6.5,MS5.3/165,MW5.8,MW5.8,Error ellipse: s-maj=3.4km s-min=1.9km az=154.0,Moment Tensor Solution. s97 Moment tensor: Scale 10^17^Nm; Mrr0.08; Mθθ2.40; Mφφ-2.48; Mrθ0.83; Mθφ-4.75; Mφr-1.54; Best double couple: M0=5.60000×10^17^ NP1:φs167.00000°, δ86.00000°,λ17.00000°. NP2:φs76.00000°,δ73.00000°, λ176.00000°. Principal axes: T 5.7100, Plg15.0000°, Azm32.0000°; N -0.1800, Plg72.0000°, Azm179.0000°; P -5.5200, Plg9.0000°, Azm300.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*
*GCMT **27** 21:15:47.7±0.1,0°.01S×18°.16W,h23km,MW5.9,Moment Tensor Solution. s94,c199; s76,c101; Moment tensor: Scale 10^17^Nm; Mrr0.07±.07; Mθθ3.11±.06; Mφφ-3.18±.07; Mrθ0.77±.11; Mθφ-7.28±.06; Mφr-0.98±.11; Best double couple: M0=8.00000×10^17^ NP1:φs78.00000°,δ82.00000°,*
λ176.00000°. NP2:φs169.00000°,δ86.00000°,λ8.00000°. Principal axes: T 8.0700, Plg8.0000°, Azm34.0000°; N -0.0800, Plg81.0000°, Azm195.0000°; P -7.9900, Plg3.0000°, Azm303.0000°; Data Used: II IU IC G CN. Surface waves: sta=109, comp=237, per= 50.
*SZGRF **27** 21:15:54.9,0°.83N×16°.93W,h33km,mb6.0,MS5.3,North of Ascension Island*
ISC 27 21:15:42.2±0.5,0°.25S±0°.02×18°.30W±0°.02,h16km±3km, h26km±5.8km:pP-P,n1638,σ0§73/1633,mb5.7/385, MS5.3/244,602C-217D,Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIC	**Lamto**	**14.72**	**64**	*e*P	**Pn**	**21 19 07.4**	**-2.5**
2μm,0.5s							
LIC	**Lamto**	**14.72**	**64**	⇑*i*Pn	**Pn**	**21 19 06.5**	**-3.4**
baz=254							
LIC				*e*Sn	**Sn**	**21 21 40.6**	**-12**
766nm,0.7s							
LIC				*e*MLR	MLR		
comp=Z,23μm,17.5s							
TIC	**Toumodi**	**14.91**	**62**	*e*P	**Pn**	**21 19 08.9**	**-3.7**
comp=Z,312nm,0.3s							
TIC	**Toumodi**	**14.91**	**62**	*e*P	**Pn**	**21 19 08.9**	**-3.7**
TIC				pmax	pmax		
comp=Z,312nm,0.3s							
KIC	**Kosan Boka**	**15.04**	**64**	*e*P	**Pn**	**21 19 10.9**	**-3.3**
comp=Z,400nm,0.3s							
DBIC	**Dimbokro**	**15.07**	**63**	Pn	**Pn**	**21 19 11.2**	**-3.4**
comp=Z,491nm,0.3s,baz=238,slow=15,SNR=889							
DBIC				Sn	**Sn**	**21 21 45.3**	**-16**
comp=Z,19nm,0.3s,baz=148,slow=19,SNR=5.3							
DBIC				LR	LR	21 23 52.6	
comp=Z,17μm,18.9s,baz=221,slow=33							
DBIC	**Dimbokro**	**15.07**	**63**	⇑*i*P	**Pn**	**21 19 11.3**	**-3.4**
DBIC				pmax	pmax		
comp=Z,2μm,1.0s							
DBIC	**Dimbokro**	**15.07**	**63**	⇑*i*Pn	**Pn**	**21 19 11.2**	**-3.4**
comp=Z,2μm,1.0s							
DBIC				*e*Sn	**Sn**	**21 21 45.8**	**-16**
DBIC	**Dimbokro**	**15.07**	**63**	⇓*i*P	**Pn**	**21 19 11.9**	**-2.8**
SACV	**Santiago Islan**	**16.01**	**341**	Pn	**Pn**	**21 19 23.4**	**-3.5**
comp=Z,1μm,0.7s,SNR=7.1							
SACV	**Santiago Islan**	**16.01**	**341**	Pn	**Pn**	**21 19 22.3**	**-4.6**
comp=Z,1μm,0.7s,SNR=7.1							
RCBR	**Riachuelo**	**18.43**	**252**	*e*P	**Pn**	**21 19 56.8**	**-0.5**
comp=Z,92nm,0.8s							
RCBR				Sn	**Sn**	**21 23 24.2**	**+1.2**
SHEL	**Horse Pasture**	**19.93**	**142**	*e*P	**Pn**	**21 20 15.5**	**+0.3**
SHEL				pmax	pmax		
comp=Z,162nm,0.8s							
SHEL	**Horse Pasture**	**19.93**	**142**	*e*P	**Pn**	**21 20 15.5**	**+0.3**
comp=Z,162nm,0.8s							
SHEL				*e*PcP	PcP	21 24 31.1	+0.7
TORD	**Torodi Ar. Bea**	**23.87**	**55**	P	**P**	**21 20 53.3**	**-2.0**
comp=Z,822nm,1.0s,mb6.1,baz=240,slow=8.2,SNR=629							
TORD				S	**S**	**21 25 04.3**	**-6.7**
comp=Z,52nm,1.0s,baz=280,slow=16,SNR=2.6							
CHIE	**El Hierro**	**27.82**	**1**	P	**P**	**21 21 30.8**	**-0.1**
comp=Z,663nm,1.6s,mb6.0							
EOSO	**Osorio**	**28.28**	**5**	P	**P**	**21 21 34.5**	**-0.5**
comp=Z,347nm,1.9s,mb5.7							
CCAN	**Las Canadas**	**28.36**	**3**	P	**P**	**21 21 39.3**	**+3.6**
comp=Z,81nm,1.0s,mb5.3							
EHIG	**Higuera**	**28.65**	**1**	P	**P**	**21 21 38.7**	**+0.4**
comp=Z,194nm,1.6s,mb5.6							
EBAJ	**Bajamar**	**28.69**	**4**	P	**P**	**21 21 38.2**	**-0.4**
comp=Z,517nm,2.1s,mb5.9							
CFTV	**Fuerteventura**	**28.78**	**8**	P	**P**	**21 21 39.0**	**-0.5**
comp=Z,112nm,1.2s,mb5.5							
EFAM	**Famara**	**29.56**	**8**	P	**P**	**21 21 45.9**	**-0.5**
comp=Z,936nm,2.6s,mb6.1							
MSKU	**Masuku**	**31.93**	**93**	P	**P**	**21 22 06.4**	**-1.2**
comp=Z,18nm,0.4s,mb5.2,baz=276,slow=11,SNR=13							
MSKU				LR	LR	21 31 56.8	
comp=Z,8μm,19.4s,MS5.4,baz=270,slow=31							
MSKU	**Masuku**	**31.93**	**93**	P	**P**	**21 22 06.4**	**-1.2**
MSKU				LR	LR	21 31 56.8	
TAM	**Tamanrasset**	**32.59**	**44**	⇑*i*P	**P**	**21 22 13.8**	**+0.6**
TAM				*e*S	**S**	**21 27 33.1**	**+4.7**
TAM				pmax	pmax		
comp=Z,837nm,1.5s,mb6.5							
TAM				MLR	MLR		
comp=Z,12μm,20.0s,MS5.6							
TAM	**Tamanrasset**	**32.59**	**44**	⇑*i*P	**P**	**21 22 13.8**	**+0.6**
comp=Z,837nm,1.5s,mb6.5							
TAM				*e*S	**S**	**21 27 33.1**	**+4.7**
TAM				LR	LR		
comp=Z,12μm,20.0s,MS5.6							
MDT	**Midelt**	**35.33**	**20**	P	**P**	**21 22 37.5**	**+0.7**
comp=Z,102nm,0.9s,mb5.8,baz=211,slow=9.9,SNR=130							
MDT				S	**S**	**21 28 09.6**	**-1.0**
comp=Z,9.8nm,0.8s,baz=172,slow=14,SNR=1.9							
MDT				LR	LR	21 36 13.4	
comp=Z,9μm,20.0s,MS5.5,baz=213,slow=35							
PSMN	**Pico do Norte,**	**37.59**	**351**	*e*T		22 01 55.0	
PSMA	**Santa Maria**	**37.59**	**351**	*e*T		22 01 54.5	
PFVI	**Vila Bisbo**	**38.21**	**12**	*i*P	**P**	**21 23 01.7**	**+0.3**
comp=Z,189nm,1.4s,mb5.6							
PFVI	**Vila Bisbo**	**38.21**	**12**	*i*PP	PP	21 24 27.6	-1.3
PFVI				*i*S	**S**	**21 28 57.3**	**+2.8**
PFVI				*e*LQ		21 31 45.5	
PFVI				*e*LR	LR	21 34 10.8	
comp=Z,5μm,23.9s							
PFVI	**Vila Bisbo**	**38.21**	**12**	⇑P	**P**	**21 23 01.5**	**+0.1**
SFS	**San Fernando**	**38.22**	**16**	*e*P	**P**	**21 23 00.2**	**-1.2**
SFS				*e*		21 24 27.8	
SFS				*e*S	**S**	**21 28 55.0**	**+0.5**
SFS				MLR	MLR		
comp=Z,10μm,19.0s,MS5.7							
BART	**Pico Bartolome**	**38.37**	**351**	*e*T		22 03 01.6	
EJIF	**Jimena Fronter**	**38.41**	**17**	P	**P**	**21 23 04.2**	**+1.2**
EJIF				pmax	pmax		
comp=Z,828nm,1.6s,mb6.2							
EJIF	**Jimena Fronter**	**38.41**	**17**	P	**P**	**21 23 04.2**	**+1.1**
comp=Z,828nm,1.6s,mb6.2							
GRON	**Grota Negra**	**38.41**	**351**	*e*T		22 03 01.1	
PDA	**Ponta Delgada**	**38.41**	**351**	*e*T		22 03 05.6	
MORF	**Marmelete**	**38.42**	**12**	*i*P	**P**	**21 23 03.6**	**+0.5**
comp=Z,243nm,2.0s,mb5.6							
MORF	**Marmelete**	**38.42**	**12**	*i*PP	PP	21 24 29.6	-1.6
MORF				*i*S	**S**	**21 28 59.8**	**+2.2**
MORF				*e*LQ		21 31 52.0	
MORF				*e*LR	LR	21 34 34.4	
comp=Z,5μm,17.7s							
MORF	**Marmelete**	**38.42**	**12**	*e*P	**P**	**21 23 03.0**	**-0.1**
MORF				*e*		21 24 30.9	
MORF				*e*S	**S**	**21 28 56.2**	**-1.4**
PSET	**Sete Cidades**	**38.50**	**351**	*e*T		22 03 04.3	
PBDV	**Barranco-do-Ve**	**38.52**	**13**	*i*P	**P**	**21 23 04.7**	**+0.8**
comp=Z,479nm,1.6s,mb6.0							
PBDV	**Barranco-do-Ve**	**38.52**	**13**	*e*PP	PP	21 24 32.0	-0.3
PBDV				*i*S	**S**	**21 29 01.3**	**+2.2**
PBDV				*e*LQ		21 31 50.3	
PBDV				*e*LR	LR	21 34 08.0	
comp=Z,4μm,18.7s							
PTEO	**Sao Teotonio**	**38.63**	**12**	*e*P	**P**	**21 23 05.8**	**+0.9**
ESPR	**Espera**	**38.69**	**16**	⇑P	**P**	**21 23 06.2**	**+0.8**
comp=Z,894nm,1.6s,mb6.2							
EALB	**Alboran**	**38.71**	**20**	⇑P	**P**	**21 23 05.7**	**+0.1**
comp=Z,1μm,1.6s,mb6.4							
EMIJ	**Mijas**	**38.72**	**18**	⇑P	**P**	**21 23 05.6**	**0.0**
comp=Z,801nm,1.6s,mb6.2							
PVAQ	**Vaqueiros**	**38.72**	**14**	*i*P	**P**	**21 23 06.5**	**+0.9**
comp=Z,471nm,1.8s,mb5.9							
PVAQ	**Vaqueiros**	**38.72**	**14**	*e*PP	PP	21 24 34.1	-0.4
PVAQ				*i*S	**S**	**21 29 04.5**	**+2.3**
PVAQ				*e*LQ		21 31 56.3	
PVAQ				*e*LR	LR	21 34 17.7	
comp=Z,4μm,19.9s							
PCVE	**Castro Verde**	**38.87**	**13**	*i*P	**P**	**21 23 07.6**	**+0.8**
comp=Z,341nm,1.9s,mb5.8							
PCVE	**Castro Verde**	**38.87**	**13**	*i*PP	PP	21 24 35.8	-0.3
PCVE				*i*S	**S**	**21 29 06.9**	**+2.6**
PCVE				*e*LQ		21 31 59.1	
PCVE				*e*LR	LR	21 34 27.2	
comp=Z,3μm,19.7s							
EGRO	**El Granado**	**38.90**	**14**	⇑P	**P**	**21 23 07.8**	**+0.7**
comp=Z,774nm,1.7s,mb6.2							
MESJ	**Messejana**	**39.02**	**13**	*e*P	**P**	**21 23 08.2**	**0.0**
MESJ				AMb	AMB	21 23 10.9	
comp=Z,300nm,0.9s,mb6.0							
MESJ				*e*PP	PP	21 24 37.5	-0.3
MESJ				*e*S	**S**	**21 29 05.2**	**-1.5**
MESJ				*e*S	**S**	**21 29 05.2**	**-1.5**
MESJ	**Messejana**	**39.02**	**13**	*e*P	**P**	**21 23 08.2**	**0.0**
comp=Z,300nm,0.9s,mb6.0							
MESJ	**Messejana**	**39.02**	**13**	*e*P	**P**	**21 23 08.1**	**-0.1**
MESJ				*e*		21 24 37.5	
MESJ				*e*S	**S**	**21 29 05.2**	**-1.5**
PBEJ	**Beja**	**39.28**	**13**	*i*P	**P**	**21 23 11.3**	**+1.0**
PBEJ	**Beja**	**39.28**	**13**	*i*PP	PP	21 24 34.9	-5.7
EMIN	**Mina Concepcio**	**39.32**	**15**	⇑P	**P**	**21 23 11.0**	**+0.3**
comp=Z,772nm,2.3s,mb6.0							
EGUA	**Guajares**	**39.34**	**19**	P	**P**	**21 23 09.8**	**-1.1**
EGUA				pmax	pmax		
comp=Z,299nm,1.1s,mb5.9							
EGUA	**Guajares**	**39.34**	**19**	P	**P**	**21 23 09.8**	**-1.1**
comp=Z,299nm,1.1s,mb5.9							
USTO	**Oran**	**39.43**	**23**	P	**P**	**21 23 14.0**	**+2.4**
ERON	**Agron**	**39.44**	**18**	P	**P**	**21 23 12.0**	**+0.3**
comp=Z,227nm,1.3s,mb5.7							
ELOJ	**Sierra Loja**	**39.45**	**18**	⇑P	**P**	**21 23 12.2**	**+0.5**
ELOJ				pmax	pmax		
comp=Z,214nm,1.5s,mb5.7							
ELOJ	**Sierra Loja**	**39.45**	**18**	⇑P	**P**	**21 23 12.2**	**+0.5**
comp=Z,214nm,1.5s,mb5.7							
PID	**Ribeirinha**	**39.55**	**348**	*e*T		22 04 22.7	
ADH	**Angra Heroismo**	**39.58**	**349**	*e*T		22 04 27.8	
PBAR	**Barrancos**	**39.62**	**14**	*i*P	**P**	**21 23 13.6**	**+0.5**
comp=Z,224nm,1.4s,mb5.7							
PBAR	**Barrancos**	**39.62**	**14**	*i*PP	PP	21 24 42.0	-2.3
PBAR				*i*S	**S**	**21 29 19.6**	**+4.0**
PBAR				*e*LQ		21 32 15.5	
PBAR				*e*LR	LR	21 34 33.5	
comp=Z,5μm,20.3s							
EBER	**Berja**	**39.62**	**20**	⇑P	**P**	**21 23 13.3**	**+0.2**
comp=Z,1μm,2.9s,mb6.2							
PCAN	**Candelaria**	**39.65**	**347**	*e*T		22 04 32.5	
LIS	**Lisbon**	**39.68**	**11**	*e*P	**P**	**21 23 13.5**	**-0.1**
LIS				AMb	AMB	21 23 18.3	
comp=Z,276nm,2.7s,mb5.5							
LIS				*e*S	**S**	**21 29 15.4**	**-1.1**
LIS				*e*S	**S**	**21 29 15.8**	**-0.7**
LIS	**Lisbon**	**39.68**	**11**	*e*P	**P**	**21 23 13.5**	**-0.1**
comp=Z,276nm,2.7s,mb5.5							
LIS				*e*S	**S**	**21 29 15.4**	**-1.1**
EVOP	**Sao Brissos**	**39.71**	**13**	*e*P	**P**	**21 23 14.1**	**+0.2**
EVOP				AMb	AMB	21 23 18.1	
comp=Z,378nm,1.7s,mb5.9							
EVOP				*e*PP	PP	21 24 45.4	+0.1
EVOP				*e*S	**S**	**21 29 15.0**	**-1.9**
EVOP				*e*S	**S**	**21 29 15.2**	**-1.7**
EVOP	**Sao Brissos**	**39.71**	**13**	*e*P	**P**	**21 23 14.0**	**+0.1**
EVOP				*e*		21 24 45.3	
EVOP				*e*S	**S**	**21 29 15.0**	**-1.9**
PMAN	**Manadas**	**39.73**	**348**	*e*T		22 04 39.5	
EVO	**Evora**	**39.73**	**13**	⇑*i*P	**P**	**21 23 14.8**	**+0.7**
comp=Z,721nm,1.3s,mb5.9							
EVO				*e*MLR	MLR		
comp=Z,7μm,21.0s,MS5.2							
EVO	**Evora**	**39.73**	**13**	*i*P	**P**	**21 23 14.9**	**+0.8**
comp=Z,395nm,0.8s,mb6.2							
EVO	**Evora**	**39.73**	**13**	*e*PP	PP	21 24 45.4	-0.1
ECOG	**Cogollos-Vega**	**39.75**	**18**	⇓P	**P**	**21 23 14.8**	**+0.6**
ECOG				pmax	pmax		
comp=Z,228nm,0.7s,mb6.0							
ECOG	**Cogollos-Vega**	**39.75**	**18**	⇓P	**P**	**21 23 14.8**	**+0.6**
comp=Z,228nm,0.7s,mb6.0							
ELUQ	**Luque**	**39.79**	**18**	⇑P	**P**	**21 23 14.7**	**+0.1**
ELUQ				pmax	pmax		
comp=Z,213nm,0.9s,mb5.9							
ELUQ	**Luque**	**39.79**	**18**	⇑P	**P**	**21 23 14.7**	**+0.1**
comp=Z,213nm,0.9s,mb5.9							
ROSA	**Rosais**	**39.84**	**348**	*e*T		22 04 40.3	
PMAFR	**Mafra**	**39.88**	**11**	*i*P	**P**	**21 23 16.6**	**+1.3**
comp=Z,461nm,1.9s,mb5.9							
PMAFR				*i*S	**S**	**21 29 23.6**	**+4.0**
PMAFR				*e*LQ		21 32 00.1	
PMAFR				*e*LR	LR	21 34 46.2	
comp=Z,6μm,13.4s							
ETRT	**Tiaret**	**39.89**	**25**	P	**P**	**21 23 15.8**	**+0.3**
TSUM	**Tsumeb**	**39.90**	**120**	P	**P**	**21 23 16.6**	**+0.8**
comp=Z,53nm,1.1s,mb5.2,baz=287,slow=9.3,SNR=29							
TSUM				S	**S**	**21 29 07.7**	**-13**
comp=Z,2.1nm,0.8s,baz=96,slow=12,SNR=1.7							
TSUM				LR	LR	21 36 24.2	
comp=Z,3μm,19.1s,MS5.2,baz=288,slow=31							
TSUM	**Tsumeb**	**39.90**	**120**	*e*P	**P**	**21 23 16.7**	**+0.9**
comp=Z,14nm,1.0s,mb4.6							
TSUM				*e*PP	PP	21 24 47.9	+0.2
TSUM				*e*S	**S**	**21 29 21.6**	**+1.2**
TSUM				LR	LR		
comp=Z,3μm,22.0s,MS5.1							
ECAB	**El Cabril**	**39.94**	**16**	⇑P	**P**	**21 23 16.3**	**+0.5**
comp=Z,690nm,2.0s,mb6.0							
PESTR	**Estremoz**	**40.15**	**13**	*i*P	**P**	**21 23 17.9**	**+0.4**
comp=Z,188nm,2.0s,mb5.5							
PESTR	**Estremoz**	**40.15**	**13**	*e*PP	PP	21 24 49.3	-0.8
PESTR				*i*S	**S**	**21 29 26.9**	**+3.3**
PESTR				*e*LQ		21 32 23.7	
PESTR				*e*LR	LR	21 35 33.2	
comp=Z,5μm,23.4s							
EBAD	**Badajoz**	**40.17**	**14**	P	**P**	**21 23 18.5**	**+0.8**
comp=Z,770nm,2.3s,mb6.0							
ALMR	**Almeirim**	**40.21**	**12**	*e*P	**P**	**21 23 18.0**	**-0.1**
EADA	**Adamuz**	**40.26**	**17**	⇑P	**P**	**21 23 18.9**	**+0.5**
comp=Z,854nm,1.8s,mb6.2							
EANR	**'Ain N'Sour**	**40.29**	**25**	P	**P**	**21 23 19.8**	**+1.1**
EQES	**Quesada**	**40.39**	**19**	⇑P	**P**	**21 23 19.3**	**-0.2**
comp=Z,37nm,0.6s,mb5.3							
EBAN	**Banos Encina**	**40.49**	**18**	⇑P	**P**	**21 23 20.5**	**+0.1**
EBAN				pmax	pmax		
comp=Z,203nm,0.9s,mb5.8							
EBAN	**Banos Encina**	**40.49**	**18**	⇑P	**P**	**21 23 20.5**	**+0.1**
comp=Z,203nm,0.9s,mb5.8							
EHUE	**Huescar**	**40.55**	**19**	⇑P	**P**	**21 23 20.6**	**-0.3**
EHUE				pmax	pmax		
comp=Z,221nm,1.7s,mb5.5							
EHUE	**Huescar**	**40.55**	**19**	⇑P	**P**	**21 23 20.6**	**-0.3**
comp=Z,221nm,1.7s,mb5.5							
ECHA	**Ech Chlef**	**40.57**	**25**	P	**P**	**21 23 22.5**	**+1.4**
PTOM	**Tomar**	**40.69**	**12**	*i*P	**P**	**21 23 23.2**	**+1.2**
**PTO

MTE *e*PP PP 21 25 04.1 -2.0
MTE *e*PcP PcP 21 25 27.9 +1.3
MTE *e*S **S** **21 29 48.0 +2.5**
MTE LR LR
comp=Z,6µm,20.0s,MS5.4
ATAF Djebel Tarf 41.63 28 P **P 21 23 28.2 -1.6**
EPLA Plasencia 41.64 14 ⇑P **P 21 23 30.9 +1.1**
EPLA pmax pmax
comp=Z,666nm,1.2s,mb6.1
EPLA Plasencia 41.64 14 ⇑P **P 21 23 30.9 +1.0**
comp=Z,666nm,1.2s,mb6.1
ETOB Tobarra 41.65 20 ⇑P **P 21 23 30.2 +0.2**
comp=Z,107nm,1.0s,mb5.4
ABA Alger-Bouzarea 41.83 26 P **P 21 23 31.0 -0.5**
ESDC Sonseca Array 41.84 17 P **P 21 23 32.0 +0.6**
comp=Z,51nm,1.1s,mb5.1,baz=202,slow=6.9,SNR=136
ESDC PP PP 21 25 01.8 -6.6
comp=Z,13nm,0.8s,baz=200,slow=11,SNR=4.2
ESDC S **S** **21 29 46.4 -2.3**
comp=Z,0.4nm,0.7s,baz=186,slow=16,SNR=2.5
ESDC LR LR 21 40 49.1
comp=Z,4µm,19.2s,MS5.3,baz=200,slow=36
ESLA Sonseca Array 41.84 17⇑*i*P **P 21 23 31.9 +0.5**
ESLA *e*PP PP 21 25 06.1 -2.3
ESLA *e*S **S** **21 29 48.8 +0.1**
ESLA LR LR
comp=Z,29µm,20.0s,MS6.2
PVIS Viseu 41.86 12 *i*P **P 21 23 32.2 +0.6**
EBEN Beniarda 42.17 21 ⇑P **P 21 23 34.7 +0.5**
comp=Z,484nm,2.2s,mb5.7
CKHR Kef el Ahmar 42.34 29 P **P 21 23 36.9 +1.3**
AKF Akfadou 42.38 28 P **P 21 23 35.2 -0.8**
SET Setif 42.43 29 P **P 21 23 38.0 +1.7**
PVRL Vila Real 42.43 12 *e*P **P 21 23 36.7 +0.4**
MVO Moncorvo 42.47 13 *i*P **P 21 23 37.4 +0.8**
comp=Z,352nm,1.9s,mb5.7
MVO Moncorvo 42.47 13 *e*PP PP 21 25 12.8 -2.4
MVO *i*S **S** **21 30 02.4 +4.4**
MVO *e*LQ 21 32 42.1
MVO *e*LR LR 21 36 05.0
comp=Z,5µm,17.1s
MVO Moncorvo 42.47 13 ⇑P **P 21 23 37.5 +0.9**
GUD Guadarrama 42.69 16 ⇑P **P 21 23 39.8 +1.5**
GUD pmax pmax
comp=Z,1µm,1.5s,mb6.4
GUD Guadarrama 42.69 16 ⇑P **P 21 23 39.8 +1.5**
comp=Z,1µm,1.5s,mb6.4
ECHE Chera 42.70 20 ⇑P **P 21 23 39.5 +1.0**
ECHE pmax pmax
comp=Z,247nm,0.9s,mb5.9
ECHE Chera 42.70 20 ⇑P **P 21 23 39.5 +1.0**
comp=Z,247nm,0.9s,mb5.9
PCAB Cabril 42.79 11 *e*P **P 21 23 39.4 +0.3**
PCAB Cabril 42.79 11 *e*PP PP 21 25 17.2 -1.4
CTEI Djebel Teioual 42.81 30 P **P 21 23 40.1 +0.6**
ELOB Lobios 42.93 11 P **P 21 23 40.5 +0.2**
comp=Z,636nm,2.3s,mb5.9
DFRA Djebel Bou Aff 42.94 29 P **P 21 23 41.2 +0.8**
BBGH Gun Hill 43.01 290 *e*P **P 21 23 41.9 +0.5**
BBGH LR LR
comp=Z,3µm,19.0s,MS5.3
CASM Ain Smara 43.01 30 P **P 21 23 41.8 +0.8**
EIBI Ibiza 43.04 23 ⇑P **P 21 23 42.2 +1.0**
comp=Z,974nm,1.6s,mb6.3
EZAM Zamans 43.09 10 P **P 21 23 42.6 +1.1**
EZAM pmax pmax
comp=Z,70nm,0.6s,mb5.6
EZAM Zamans 43.09 10 P **P 21 23 42.6 +1.0**
comp=Z,70nm,0.6s,mb5.6
PBRG Braganca 43.15 13 *i*P **P 21 23 42.8 +0.8**
comp=Z,219nm,1.8s,mb5.6
PBRG Braganca 43.15 13 *i*PP PP 21 25 21.6 -0.9
CKFL Kef-Lekhel 43.23 30 P **P 21 23 43.2 +0.3**
ECAL Calabor 43.28 13 ⇑P **P 21 23 44.2 +1.1**
comp=Z,970nm,1.9s,mb6.2
ETOR Torete 43.46 18 ⇑P **P 21 23 45.0 +0.4**
ETOR pmax pmax
comp=Z,62nm,1.1s,mb5.2
ETOR Torete 43.46 18 ⇑P **P 21 23 45.0 +0.4**
comp=Z,62nm,1.1s,mb5.2
ABSA Djebel Ababsia 43.52 31 P **P 21 23 45.2 0.0**
EMOS Mosqueruela 43.56 20 ⇑P **P 21 23 46.7 +1.3**
comp=Z,1µm,1.8s,mb6.3
CAEH 'Ain El Ouahch 43.60 30 P **P 21 23 46.2 +0.4**
ERUA La Rua 43.62 12 P **P 21 23 47.1 +1.2**
ERUA pmax pmax
comp=Z,38nm,0.8s,mb5.2
ERUA La Rua 43.62 12 P **P 21 23 47.1 +1.2**
comp=Z,38nm,0.8s,mb5.2
CMAH Djebel Manchou 43.76 30 P **P 21 23 47.0 -0.1**
EMAZ Mazaricos 43.81 10 ⇑P **P 21 23 47.8 +0.4**
comp=Z,340nm,1.2s,mb6.0
STS Santiago 43.83 10 ⇑P **P 21 23 47.9 +0.4**
STS pmax pmax
comp=Z,35nm,1.2s,mb5.0
STS Santiago 43.83 10 ⇑P **P 21 23 47.9 +0.3**
comp=Z,35nm,1.2s,mb5.0
ETOS Mallorca 44.25 23 ⇑P **P 21 23 51.4 +0.4**
comp=Z,626nm,1.9s,mb6.0
ERTA Horta de San J 44.37 20 ⇑P **P 21 23 52.7 +0.8**
comp=Z,1µm,1.5s,mb6.3
EPON Pontenova 44.52 12 ⇑P **P 21 23 53.7 +0.7**
comp=Z,961nm,1.9s,mb6.3
GRGR Grenville 44.75 288 *e*P **P 21 23 55.7 +0.3**
comp=Z,278nm,1.1s,mb6.0
GRGR *e*PP PP 21 25 40.4 +0.3
GRGR *e*S **S** **21 30 32.5 +0.3**
GRGR LR LR
comp=Z,1µm,20.0s,MS4.8
ESAC San Caprasio 44.78 19 ⇑P **P 21 23 55.8 +0.6**
comp=Z,624nm,1.0s,mb6.4
FDF Fort de France 44.91 291⇓*e*P **P 21 23 57.5 +0.8**
FDF *e* 21 25 40.5
FDF *e*S **S** **21 30 34.4 0.0**
FDF pmax pmax
comp=Z,326nm,1.1s,mb6.1
FDF MLR MLR
comp=Z,2µm,19.0s,MS5.0
FDF Fort de France 44.91 291⇓*e*P **P 21 23 57.5 +0.9**
comp=Z,326nm,1.1s,mb6.1
FDF *e*PP PP 21 25 40.5 -1.3
FDF *e*S **S** **21 30 34.4 0.0**
FDF LR LR
comp=Z,2µm,19.0s,MS5.0
EARI Arriondas 44.91 14 ⇑P **P 21 23 57.8 +1.6**
comp=Z,1µm,1.7s,mb6.4
EPOB Poblet 44.98 21 ⇑P **P 21 23 57.5 +0.7**
comp=Z,1µm,1.8s,mb6.4
KOMG Komaggas 44.98 134 *e*P **P 21 23 58.5 +1.5**
KOMG AMb AMB 21 24 07.6
comp=Z,124nm,2.0s,mb5.4
ELAN Lanestosa 45.29 15 ⇑P **P 21 24 00.5 +1.3**
comp=Z,496nm,1.0s,mb6.3
EMIR Miracle 45.63 21 ⇑P **P 21 24 02.5 +0.5**
comp=Z,1µm,2.3s,mb6.4
CPUP Villa Florida 45.65 232 P **P 21 24 02.9 +0.5**
comp=Z,18nm,0.9s,mb5.0,baz=58,slow=9.3,SNR=25
CPUP LR LR 21 42 26.0
comp=Z,6µm,18.0s,MS5.6,baz=50,slow=35
ELIZ Elizondo 45.76 17 P **P 21 24 03.8 +0.9**
ELIZ pmax pmax
comp=Z,213nm,1.0s,mb6.0
ELIZ Elizondo 45.76 17 P **P 21 24 03.8 +0.8**
comp=Z,213nm,1.0s,mb6.0
SJPF Ste Jean 45.81 17⇑*i*P **P 21 24 04.1 +0.8**
comp=Z,271nm,0.8s,mb5.9
SJPF Ste Jean 45.81 17⇑*i*P **P 21 24 04.1 +0.8**
SJPF pmax pmax
comp=Z,136nm,0.8s,mb5.9
SJPF Ste Jean 45.81 17⇑*i*P **P 21 24 04.1 +0.8**
comp=Z,136nm,0.8s,mb5.9
LARF Larrau 45.81 18⇑*e*P **P 21 24 04.3 +1.0**
ETSF Etsaut 45.81 18⇑*i*P **P 21 24 04.2 +0.8**
comp=Z,277nm,0.9s,mb5.9
ETSF Etsaut 45.81 18⇑*i*P **P 21 24 04.2 +0.8**
ETSF pmax pmax
comp=Z,139nm,0.9s,mb5.9
ETSF Etsaut 45.81 18⇑*i*P **P 21 24 04.2 +0.8**
comp=Z,139nm,0.9s,mb5.9
EALK Alkurruntz 45.82 17 P **P 21 24 03.7 +0.3**
comp=Z,720nm,2.1s,mb6.2
CFON Fontmartina 45.83 22 P **P 21 24 04.1 +0.6**
comp=Z,1µm,2.2s,mb6.4
EBIE Bielsa 45.85 19 ⇑P **P 21 24 04.5 +0.8**
comp=Z,912nm,2.1s,mb6.3
CSOR Sort 45.90 20 ⇑P **P 21 24 04.4 +0.3**
comp=Z,966nm,1.6s,mb6.5
OSSF Osses 45.92 17 *e*P **P 21 24 04.8 +0.6**
ORDF Ordiarp 45.98 18 *e*P **P 21 24 05.6 +0.9**
VIEF Viey 45.99 19 *e*P **P 21 24 05.5 +0.8**
RESF Ens 46.02 19 *e*P **P 21 24 05.8 +0.8**
REYF Montagne du Re 46.02 18 *e*P **P 21 24 06.2 +1.2**
LABF Labassere 46.15 19⇑*e*P **P 21 24 07.0 +1.0**
MELF Melles 46.22 19⇑*e*P **P 21 24 07.5 +1.0**
EPF Esparros 46.22 19⇑*i*P **P 21 24 07.4 +0.8**
comp=Z,1µm,1.8s,mb6.2
EPF Esparros 46.22 19⇑*i*P **P 21 24 07.4 +0.8**
EPF pmax pmax
comp=Z,602nm,1.8s,mb6.2
EPF Esparros 46.22 19⇑*i*P **P 21 24 07.4 +0.8**
comp=Z,602nm,1.8s,mb6.2
VALF Valcebollere 46.23 21 *e*P **P 21 24 07.4 +0.7**
CLLI Llivia 46.29 21 ⇑P **P 21 24 07.5 +0.5**
ANWB Willy Bob 46.34 295⇓*e*P **P 21 24 08.2 +0.3**
comp=Z,422nm,1.1s,mb6.3
ANWB *e*S **S** **21 30 55.4 +0.4**
ANWB LR LR
comp=Z,2µm,21.0s,MS5.1
CARF Carcanieres 46.54 21⇑*e*P **P 21 24 09.8 +0.7**
FILF Fillols 46.57 21⇑*e*P **P 21 24 09.4 +0.1**
EJON La Jonquera 46.59 22 ⇑P **P 21 24 09.9 +0.4**
comp=Z,1µm,2.4s,mb6.3
LRDF Laroque-de-Fa 46.89 21⇑*e*P **P 21 24 12.0 +0.2**
VSL Villasalto 46.96 29⇑*i*P **P 21 24 13.0 +0.5**
comp=Z,143nm,1.0s,mb5.9
VSL *e*PP PP 21 25 58.8 -4.2
VSL *e*S **S** **21 31 03.2 0.0**
VSL LR LR
comp=Z,8µm,20.0s,MS5.7
UPI Upington 47.03 130⇓*i*P **P 21 24 13.6 +0.4**
UPI AMb AMB 21 24 36.6
comp=Z,100nm,1.9s,mb5.4
MTLF Montolieu 47.13 20⇑*i*P **P 21 24 13.5 -0.2**
comp=Z,234nm,1.3s,mb5.7
MTLF Montolieu 47.13 20⇑*i*P **P 21 24 13.5 -0.2**
MTLF pmax pmax
comp=Z,117nm,1.3s,mb5.7
MTLF Montolieu 47.13 20⇑*i*P **P 21 24 13.5 -0.2**
comp=Z,117nm,1.3s,mb5.7
WDD Wield Dalam 47.15 37⇓*e*P **P 21 24 14.1 +0.1**
comp=Z,284nm,0.9s,mb6.2
WDD *e*PP PP 21 26 02.4 -2.7
WDD *e*S **S** **21 31 05.6 -0.4**
WDD LR LR
comp=Z,9µm,19.0s,MS5.7
PCRV Puerto La Cruz 47.24 284 LR LR 21 43 17.2
comp=Z,2µm,19.0s,MS5.1,baz=300,slow=35
CVNA Calvinia 47.55 134 *e*P **P 21 24 18.8 +1.6**
CVNA AMb AMB 21 24 33.3
comp=Z,150nm,1.6s,mb5.8
LFF La Frestale 48.06 18⇑*i*P **P 21 24 21.5 +0.6**
comp=Z,2µm,1.7s,mb6.5
LFF La Frestale 48.06 18⇑*i*P **P 21 24 21.5 +0.6**
LFF pmax pmax
comp=Z,774nm,1.7s,mb6.5
LFF La Frestale 48.06 18⇑*i*P **P 21 24 21.5 +0.6**
comp=Z,774nm,1.7s,mb6.5
VAE Valguarnera 48.18 35 P **P 21 24 22.7 +0.8**
comp=Z,48nm,1.0s,mb5.5,baz=113,slow=8.8,SNR=14
VAE LR LR 21 46 34.7
comp=Z,15µm,18.3s,MS6.0,baz=296,slow=39
LSZ Lusaka 48.27 110 *e*P **P 21 24 24.1 +1.1**
LSZ 21 26 18.5
LSZ *e*S **S** **21 31 23.3 +0.8**
LSZ pmax pmax
comp=Z,114nm,0.9s,mb5.9
LSZ MLR MLR
comp=Z,3µm,22.0s,MS5.2
LSZ Lusaka 48.27 110 *e*P **P 21 24 24.1 +1.1**
comp=Z,28nm,0.9s,mb5.3
LSZ PP PP 21 26 18.5 +2.9
LSZ *e*S **S** **21 31 23.3 +0.8**
LSZ LR LR
comp=Z,3µm,22.0s,MS5.2
LSZ Lusaka 48.27 110 P **P 21 24 24.5 +1.5**
SNR=23
LASF Ste Croix 48.35 21⇑*i*P **P 21 24 23.4 +0.2**
comp=Z,788nm,1.6s,mb6.2
CAF Calviac 48.47 19⇑*i*P **P 21 24 24.3 +0.2**
comp=Z,596nm,1.5s,mb6.1
CAF Calviac 48.47 19⇑*i*P **P 21 24 24.3 +0.2**
CAF pmax pmax
comp=Z,298nm,1.5s,mb6.1
CAF Calviac 48.47 19⇑*i*P **P 21 24 24.3 +0.2**
comp=Z,298nm,1.5s,mb6.1
RJF Les Rejaudoux 48.63 19⇑*i*P **P 21 24 25.5 +0.2**
comp=Z,762nm,1.6s,mb6.2
RJF *e*MLR MLR
comp=Z,7µm,18.0s,MS5.4
RJF Les Rejaudoux 48.63 19⇑*i*P **P 21 24 25.5 +0.2**
RJF pmax pmax
comp=Z,381nm,1.6s,mb6.2
RJF MLR MLR
comp=Z,7µm,18.0s,MS5.7
RJF Les Rejaudoux 48.63 19⇑*i*P **P 21 24 25.5 +0.2**
comp=Z,381nm,1.6s,mb6.2
RJF LR LR
comp=Z,7µm,18.0s,MS5.7
LMR La Mourre 48.75 24⇑*i*P **P 21 24 26.5 +0.3**
comp=Z,381nm,1.2s,mb6.0
LMR La Mourre 48.75 24⇑*i*P **P 21 24 26.5 +0.3**
LMR pmax pmax
comp=Z,191nm,1.2s,mb6.0
LMR La Mourre 48.75 24⇑*i*P **P 21 24 26.5 +0.3**
comp=Z,191nm,1.2s,mb6.0
SUR Sutherland 48.79 135 P **P 21 24 28.2 +1.5**
comp=Z,33nm,0.7s,mb5.5,baz=295,slow=9.2,SNR=41
SUR Sutherland 48.79 135 *e*P **P 21 24 28.4 +1.7**
comp=Z,87nm,0.8s,mb5.8
SUR *e*S **S** **21 31 31.3 +1.9**
SUR LR LR
comp=Z,2µm,20.0s,MS5.2
SUR Sutherland 48.79 135 P **P 21 24 28.1 +1.4**
comp=Z,662nm,0.7s,mb6.8,SNR=15
SUR Sutherland 48.79 135 *e*P **P 21 24 28.1 +1.4**
SUR AMb AMB 21 24 34.4
comp=Z,107nm,0.9s,mb5.8
PKA Prieska 48.82 131 *e*P **P 21 24 27.6 +0.5**
SMRF Simiane la Rot 48.91 23⇑*i*P **P 21 24 28.4 +0.9**
comp=Z,436nm,1.8s,mb5.9
SMRF Simiane la Rot 48.91 23⇑*i*P **P 21 24 28.4 +0.9**
comp=Z,436nm,1.8s,mb6.2
FRF La Foret Royal 48.99 24⇑*i*P **P 21 24 28.2 +0.1**
comp=Z,133nm,1.0s,mb5.6
FRF La Foret Royal 48.99 24⇑*i*P **P 21 24 28.2 +0.1**
FRF pmax pmax
comp=Z,67nm,1.0s,mb5.6
FRF La Foret Royal 48.99 24⇑*i*P **P 21 24 28.2 +0.1**
comp=Z,67nm,1.0s,mb5.6
LBTB Lobatse 49.03 124 *e*P **P 21 24 29.6 +0.8**
LBTB *e* 21 25 53.2
LBTB *e*S **S** **21 31 34.6 +1.5**
LBTB pmax pmax
comp=Z,57nm,0.8s,mb5.7
LBTB MLR MLR
comp=Z,2µm,20.0s,MS5.1
LBTB Lobatse 49.03 124 *e*P **P 21 24 29.6 +0.8**
comp=Z,57nm,0.8s,mb5.7
LBTB *e*PcP PcP 21 25 53.2 +0.6
LBTB *e*S **S** **21 31 34.6 +1.5**
LBTB LR LR
comp=Z,2µm,20.0s,MS5.1
LBTB Lobatse 49.03 124⇓*i*P **P 21 24 29.1 +0.4**
LBTB AMb AMB 21 24 30.7
comp=Z,74nm,1.8s,mb5.4
MBAR Mbarara 49.03 91 *c i*P **P 21 24 29.3 +0.3**
MBAR Mbarara 49.03 91 *e*P **P 21 24 29.9 +0.9**
CDVI St. Croix 49.08 294 *e*P **P 21 24 30.3 +1.1**
comp=Z,215nm,0.9s,mb6.2
LBL Lubilhac 49.14 20 *e*P **P 21 24 29.8 +0.6**
PGF Pioggiola 49.17 27⇑*i*P **P 21 24 29.6 +0.1**
comp=Z,503nm,1.5s,mb6.0
PGF Pioggiola 49.17 27⇑*i*P **P 21 24 29.6 +0.1**
PGF pmax pmax
comp=Z,251nm,1.5s,mb6.0
PGF Pioggiola 49.17 27⇑*i*P **P 21 24 29.6 +0.1**
comp=Z,251nm,1.5s,mb6.0
CALN Calern 49.25 24⇑*e*P **P 21 24 30.8 +0.7**
MFF Saint Martin d 49.30 16⇑*i*P **P 21 24 30.6 +0.2**
comp=Z,702nm,1.5s,mb6.2
MFF Saint Martin d 49.30 16⇑*i*P **P 21 24 30.6 +0.2**
MFF pmax pmax
comp=Z,351nm,1.5s,mb6.2
MFF Saint Martin d 49.30 16⇑*i*P **P 21 24 30.6 +0.2**
comp=Z,351nm,1.5s,mb6.2
OCF Saint Nazaire 49.32 22 *e*P **P 21 24 31.7 +1.1**
OG26 St.-Nazaire-De 49.32 22 *e*P **P 21 24 31.7 +1.1**
VIVF Saint-Julien-l 49.32 21⇑*i*P **P 21 24 30.9 +0.3**
comp=Z,172nm,1.1s,mb5.7
VIVF Saint-Julien-l 49.32 21⇑*i*P **P 21 24 30.9 +0.3**
VIVF pmax pmax
comp=Z,86nm,1.1s,mb5.7
VIVF Saint-Julien-l 49.32 21⇑*i*P **P 21 24 30.9 +0.3**
comp=Z,86nm,1.1s,mb5.7
STVI Saint Thomas 49.42 295 *e*P **P 21 24 32.2 +0.4**
comp=Z,102nm,1.0s,mb5.8
REVF Revere 49.43 24⇑*e*P **P 21 24 32.1 +0.6**
OG25 Le Caire 49.44 23 *e*P **P 21 24 32.7 +1.2**
MVIF Mont Vial 49.47 24⇑*e*P **P 21 24 32.4 +0.6**
PYM Petit Puy Mans 49.51 20⇑*e*P **P 21 24 33.1 +1.0**
COLF Collangettes 49.54 20 *e*P **P 21 24 32.7 +0.4**
LUCF Luceram 49.55 24⇑*e*P **P 21 24 33.1 +0.7**
SBF Sospel 49.56 24⇑*i*P **P 21 24 32.8 +0.3**
comp=Z,651nm,1.3s,mb6.2
SBF Sospel 49.56 24⇑*i*P **P 21 24 32.8 +0.3**
SBF pmax pmax
comp=Z,325nm,1.3s,mb6.2
SBF Sospel 49.56 24⇑*i*P **P 21 24 32.8 +0.3**
comp=Z,325nm,1.3s,mb6.2
CEL Celeste 49.57 36⇑*i*P **P 21 24 32.7 0.0**
comp=Z,238nm,1.0s,mb6.2
CEL *e*PP PP 21 26 26.6 -0.6
CEL S **S** **21 31 41.0 +0.8**
CEL LR LR
comp=Z,7µm,19.0s,MS5.7
TOUF Mont Tournerai 49.61 24⇑*e*P **P 21 24 33.9 +1.1**
SSB Saint Sauveur 49.64 21 *e*P **P 21 24 33.5 +0.5**
AUTN L'Aution 49.67 24⇑*e*P **P 21 24 34.4 +1.1**
SWZ Schweizer 49.70 126⇓*i*P **P 21 24 34.2 +0.3**
SWZ AMb AMB 21 24 50.0
comp=Z,102nm,0.7s,mb6.0
SAOF Saorge 49.71 24⇑*e*P **P 21 24 34.2 +0.6**
TCF Toulx Ste Croi 49.73 19⇑*i*P **P 21 24 34.2 +0.5**
comp=Z,834nm,1.9s,mb6.1
TCF Toulx Ste Croi 49.73 19⇑*i*P **P 21 24 34.2 +0.5**
TCF pmax pmax
comp=Z,417nm,1.9s,mb6.1
TCF Toulx Ste Croi 49.73 19⇑*i*P **P 21 24 34.2 +0.5**
comp=Z,417nm,1.9s,mb6.1
QUIF Quistinic 49.75 13⇑*i*P **P 21 24 33.8 0.0**
comp=Z,475nm,1.7s,mb5.9
QUIF Quistinic 49.75 13⇑*i*P **P 21 24 33.8 0.0**
QUIF pmax pmax
comp=Z,238nm,1.7s,mb6.0
QUIF Quistinic 49.75 13⇑*i*P **P 21 24 33.8 0.0**
comp=Z,238nm,1.7s,mb6.0
AGO Saint Agoulin 49.82 19⇑*e*P **P 21 24 35.4 +1.0**
SURF Saint Ours 49.82 23 *e*P **P 21 24 35.8 +1.4**
ORIF Oris-en-Rattie 49.82 22⇑*i*P **P 21 24 35.5 +1.1**
comp=Z,675nm,1.7s,mb6.1
ORIF *e*MLR MLR
comp=Z,5µm,19.2s,MS5.3
ORIF Oris-en-Rattie 49.82 22⇑*i*P **P 21 24 35.5 +1.1**
ORIF pmax pmax
comp=Z,338nm,1.7s,mb6.1
ORIF Oris-en-Rattie 49.82 22⇑*i*P **P 21 24 35.5 +1.1**
comp=Z,338nm,1.7s,mb6.1
MTP Monte Pirata 49.89 294⇓*i*P **P 21 24 35.6 +0.2**
comp=Z,239nm,1.1s,mb6.1
MTP PcP PcP 21 25 51.3 -4.5
MTP *e*PP PP 21 26 31.5 +1.1
BST Brest 49.91 12⇑*e*P **P 21 24 35.6 +0.6**
PLDF La Plantade 49.91 20⇑*e*P **P 21 24 35.9 +0.8**
MBDF Montbardon 50.01 23⇑*i*P **P 21 24 37.0 +1.2**
comp=Z,423nm,1.2s,mb6.0
MBDF Montbardon 50.01 23⇑*i*P **P 21 24 37.0 +1.2**
MBDF pmax pmax
comp=Z,212nm,1.2s,mb6.0
MBDF Montbardon 50.01 23⇑*i*P **P 21 24 37.0 +1.2**
comp=Z,212nm,1.2s,mb6.0
ROSF Rostrenen 50.12 13⇑*i*P **P 21 24 36.7 +0.1**
comp=Z,134nm,1.0s,mb5.6
ROSF Rostrenen 50.12 13⇑*i*P **P 21 24 36.7 +0.1**
ROSF pmax pmax
comp=Z,67nm,1.0s,mb5.6
ROSF Rostrenen 50.12 13⇑*i*P **P 21 24 36.7 +0.1**
comp=Z,67nm,1.0s,mb5.6
GDM Grand'Maison 50.16 22 *e*P **P 21 24 38.2 +1.3**
OG22 Abries 50.16 23 *e*P **P 21 24 38.2 +1.2**
BGF Bois d'Agland 50.17 19⇑*i*P **P 21 24 37.7 +0.7**
comp=Z,943nm,1.9s,mb6.2
BGF Bois d'Agland 50.17 19⇑*i*P **P 21 24 37.7 +0.7**
BGF pmax pmax
comp=Z,471nm,1.9s,mb6.2
BGF Bois d'Agland 50.17 19⇑*i*P **P 21 24 37.7 +0.7**
comp=Z,471nm,1.9s,mb6.2
HUMP Col San Antoni 50.18 294 *e*P **P 21 24 38.1 +0.5**
comp=Z,155nm,1.2s,mb5.9
SGMF Saint Gilles 50.20 14⇑*i*P **P 21 24 37.5 +0.2**
comp=Z,280nm,1.1s,mb5.9
SGMF Saint Gilles 50.20 14⇑*i*P **P 21 24 37.5 +0.2**
SGMF pmax pmax
comp=Z,140nm,1.1s,mb5.9
SGMF Saint Gilles 50.20 14⇑*i*P **P 21 24 37.5 +0.2**
comp=Z,140nm,1.1s,mb5.9
CBYP Canovanas 50.22 294 *e*P **P 21 24 38.2 +0.3**
comp=Z,71nm,1.0s,mb5.7
CBYP *e*PP PP 21 26 32.3 -1.0
BOSA Boshof 50.26 128 P **P 21 24 38.1 0.0**
comp=Z,14nm,0.5s,mb5.2,baz=298,slow=8.2,SNR=48
BOSA LR LR 21 41 04.3
comp=Z,2µm,20.9s,MS5.0,baz=297,slow=30
BOSA Boshof 50.26 128 *e*P **P 21 24 38.5 +0.4**
BOSA *e* 21 26 34.9
BOSA pmax pmax
comp=Z,56nm,1.1s,mb5.5
BOSA MLR MLR
comp=Z,2µm,19.0s,MS5.1
BOSA Boshof 50.26 128 *e*P **P 21 24 38.5 +0.4**
comp=Z,56nm,1.1s,mb5.5
BOSA *e*PP PP 21 26 34.9 +1.3
BOSA LR LR
comp=Z,2µm,19.0s,MS5.1
BOSA Boshof 50.26 128⇓*i*P **P 21 24 38.5 +0.4**
BOSA AMb AMB 21 24 39.1
comp=Z,80nm,1.5s,mb5.5
KSR Koster 50.44 124⇓*i*P **P 21 24 38.8 -0.7**
KSR AMb AMB 21 26 42.2
comp=Z,44nm,1.6s,mb5.2
SJG San Juan 50.44 294 LR LR 21 41 14.4
comp=Z,4µm,21.0s,MS5.4,baz=105,slow=30
SJG San Juan 50.44 294⇓*i*P **P 21 24 39.6 0.0**
SJG *e* 21 26 00.9
SJG *e* 21 26 35.9
SJG *e*S **S** **21 31 54.5 +1.5**
SJG pmax pmax
comp=Z,193nm,1.6s
SJG MLR MLR
comp=Z,3µm,21.0s
SJG San Juan 50.44 294⇓*i*P **P 21 24 39.6 0.0**
comp=Z,193nm,1.6s,mb5.9
SJG *e*PcP PcP 21 26 00.9 +3.0
SJG *e*PP PP 21 26 35.9 +0.5
SJG *e*S **S** **21 31 54.5 +1.5**
SJG LR LR
comp=Z,3µm,21.0s,MS5.3
AVF Avril sur Loir 50.54 19⇑*i*P **P 21 24 40.3 +0.5**
comp=Z,316nm,1.4s,mb5.8
AVF Avril sur Loir 50.54 19⇑*i*P **P 21 24 40.3 +0.5**
AVF pmax pmax
comp=Z,158nm,1.4s,mb5.8
AVF Avril sur Loir 50.54 19⇑*i*P **P 21 24 40.3 +0.5**
comp=Z,158nm,1.4s,mb5.8
LPA La Plata 50.55 223 *c e*P **P 21 24 46.0 +5.8**
LPA *e*S **S** **21 31 55.0 +1.0**
LPA
comp=Z,3µm,20.0s
SMF Signal de Mont 50.58 20⇑*i*P **P 21 24 40.5 +0.4**
comp=Z,234nm,1.4s,mb5.6
SMF Signal de Mont 50.58 20⇑*i*P **P 21 24 40.5 +0.4**
SMF pmax pmax
comp=Z,117nm,1.4s,mb5.6
SMF Signal de Mont 50.58 20⇑*i*P **P 21 24 40.5 +0.4**
comp=Z,117nm,1.4s,mb5.6
LPG La Plagne 50.65 23⇑*i*P **P 21 24 41.9 +1.3**
comp=Z,340nm,1.1s,mb5.9
LPG La Plagne 50.65 23⇑*i*P **P 21 24 41.9 +1.3**
LPG pmax pmax

comp=Z,170nm,1.1s,mb5.9
LPG La Plagne 50.65 23⇑*i*P P 21 24 41.9 +1.3
comp=Z,170nm,1.1s,mb5.9
LPL La Plagne 50.65 23⇑*i*P P 21 24 41.8 +1.1
comp=Z,249nm,1.0s,mb5.8
LPL La Plagne 50.65 23⇑*i*P P 21 24 41.8 +1.1
LPL pmax pmax
comp=Z,124nm,1.0s,mb5.8
LPL La Plagne 50.65 23⇑*i*P P 21 24 41.8 +1.1
comp=Z,124nm,1.0s,mb5.8
HYF Humbligny 50.73 18⇑*i*P P 21 24 41.7 +0.4
GRR Gorron 50.75 15⇑*i*P P 21 24 41.5 +0.1
comp=Z,910nm,1.6s,mb6.2
GRR Gorron 50.75 15⇑*i*P P 21 24 41.5 +0.1
GRR pmax pmax
comp=Z,455nm,1.6s,mb6.2
GRR Gorron 50.75 15⇑*i*P P 21 24 41.5 +0.1
comp=Z,455nm,1.6s,mb6.2
CELP Cerrillos 50.83 294 *e*P P 21 24 42.7 +0.2
SSF Saint Saulge 50.83 19⇑*i*P P 21 24 42.5 +0.5
comp=Z,852nm,1.6s,mb6.1
SSF Saint Saulge 50.83 19⇑*i*P P 21 24 42.5 +0.5
SSF pmax pmax
comp=Z,426nm,1.6s,mb6.1
SSF Saint Saulge 50.83 19⇑*i*P P 21 24 42.5 +0.5
comp=Z,426nm,1.6s,mb6.1
OBIP Obispado Ponce 50.84 294 *e*P P 21 24 43.1 +0.5
comp=Z,69nm,1.0s,mb5.5
AOPR Arecibo Observ 51.06 294 *e*P P 21 24 44.4 +0.2
comp=Z,67nm,0.9s,mb5.6
VLC Villacollemand 51.06 26⇑*i*P P 21 24 43.8 -0.1
comp=Z,142nm,1.1s,mb5.8
VLC PcP PcP 21 26 03.3 +3.7
VLC *e*PP PP 21 26 36.2 -4.4
VLC *e*S **S 21 32 00.4 -0.4**
VLC LR LR
comp=Z,2μm,20.0s,MS5.2
AQU L'Aquila 51.11 30⇑*i*P P 21 24 44.7 +0.5
AQU *e* 21 26 40.8
AQU *e*S **S 21 32 02.8 +1.3**
AQU pmax pmax
comp=Z,288nm,1.1s,mb6.1
AQU MLR MLR
comp=Z,12μm,20.0s,MS5.9
AQU L'Aquila 51.11 30⇑*i*P P 21 24 44.7 +0.5
comp=Z,288nm,1.1s,mb6.1
AQU *e*PP PP 21 26 40.8 -0.3
AQU *e*S **S 21 32 02.8 +1.3**
AQU LR LR
comp=Z,12μm,20.0s,MS5.9
AQU L'Aquila 51.11 30⇑*i*P P 21 24 44.9 +0.7
LRS Lares 51.13 294 *e*P P 21 24 44.9 +0.1
LOR Lormes 51.13 19⇑*i*P P 21 24 44.5 +0.3
comp=Z,279nm,1.2s,mb5.8
LOR *e*MLR MLR
comp=Z,4μm,20.5s,MS5.2
LOR Lormes 51.13 19⇑*i*P P 21 24 44.5 +0.3
LOR pmax pmax
comp=Z,140nm,1.2s,mb5.8
LOR MLR MLR
comp=Z,4μm,20.5s,MS5.5
LOR Lormes 51.13 19⇑*i*P P 21 24 44.5 +0.3
comp=Z,140nm,1.2s,mb5.8
LOR LR LR
comp=Z,4μm,20.5s,MS5.5
LDF La Druitiere 51.13 15⇑*i*P P 21 24 44.3 +0.1
comp=Z,95nm,1.2s,mb5.3
LDF La Druitiere 51.13 15⇑*i*P P 21 24 44.3 +0.1
LDF pmax pmax
comp=Z,47nm,1.2s,mb5.3
LDF La Druitiere 51.13 15⇑*i*P P 21 24 44.3 +0.1
comp=Z,47nm,1.2s,mb5.3
JSA Saint Aubin 51.17 14 P P 21 24 44.2 -0.3
JSA 21 31 56.6
JSA AMS AMS 21 44 12.1
comp=Z,2μm,21.6s
JSA Saint Aubin 51.17 14⇑*i*P P 21 24 44.2 -0.3
JSA *e* 21 31 56.6
JSA AMS AMS 21 44 12.1
comp=Z,2μm,21.6s,MS5.2
FLN La Foliniere 51.19 15⇑*i*P P 21 24 44.6 -0.1
comp=Z,455nm,1.4s,mb5.9
FLN *e*MLR MLR
comp=Z,8μm,19.2s,MS5.4
FLN La Foliniere 51.19 15⇑*i*P P 21 24 44.6 -0.1
FLN pmax pmax
comp=Z,228nm,1.4s,mb5.9
FLN MLR MLR
comp=Z,8μm,19.3s,MS5.7
FLN La Foliniere 51.19 15⇑*i*P P 21 24 44.6 -0.1
comp=Z,228nm,1.4s,mb5.9
FLN LR LR
comp=Z,8μm,19.3s,MS5.7
KLOF Kloof 51.22 124 *e*P P 21 24 46.3 +0.9
KLOF AMb AMB 21 24 47.2
comp=Z,87nm,1.3s,mb5.5
PRYS Parys 51.24 125⇓*i*P P 21 24 44.6 -0.9
PRYS AMb AMB 21 25 02.8
comp=Z,58nm,1.5s,mb5.3
SALAN Lac Salanfe 51.27 22⇑*e*P P 21 24 45.9 +0.6
CRPR Cabo Rojo, PR 51.29 293⇓*e*P P 21 24 46.3 +0.2
comp=Z,40nm,0.8s,mb5.4
CRPR *e*PcP PcP 21 25 56.3 -4.7
LSP Las Mesas 51.32 294 *e*P P 21 24 46.7 +0.5
CABF La Chapelle 51.34 21⇑*i*P P 21 24 45.9 +0.1
comp=Z,410nm,1.3s,mb5.9
CABF La Chapelle 51.34 21⇑*i*P P 21 24 45.9 +0.1
CABF pmax pmax
comp=Z,205nm,1.3s,mb5.9
CABF La Chapelle 51.34 21⇑*i*P P 21 24 45.9 +0.1
comp=Z,205nm,1.3s,mb5.9
GIMEL St. Georges / 51.34 22⇑*e*P P 21 24 46.1 +0.3
HVD Gariep Dam 51.35 130⇓*i*P P 21 24 47.1 +0.8
HVD AMb AMB 21 24 57.5
comp=Z,116nm,1.6s,mb5.6
MPR Mayaguez 51.38 294 *e*P P 21 24 46.9 +0.3
DIX Grande Dixence 51.38 23⇑*e*P P 21 24 46.8 +0.6
GRYON Gryon 51.41 22⇑*e*P P 21 24 46.8 +0.4
AIGLE Aigle 51.43 22⇑*e*P P 21 24 47.0 +0.5
AGP Aguadilla 51.43 294 *e*P P 21 24 47.9 +0.9
CCA1 Carnmenellis 51.47 11 P P 21 24 47.1 +0.3
CCA1 AMb AMB 21 24 48.1
comp=Z,129nm,1.8s,mb5.6
CCA1 21 32 02.4
CCA1 AMS AMS 21 44 48.8
comp=Z,2μm,20.3s
CCA1 Carnmenellis 51.47 11⇑*e*P P 21 24 47.1 +0.3
CCA1 AMb AMB 21 24 48.1
comp=Z,129nm,1.8s,mb5.6
CCA1 *e* 21 32 02.4
CCA1 AMS AMS 21 44 48.8
comp=Z,2μm,20.3s,MS5.0
SLR Silverton 51.55 123⇑*i*P P 21 24 48.1 +0.3
SLR AMb AMB 21 24 48.8
comp=Z,135nm,1.7s,mb5.6
MMK Mattmark 51.58 23⇑*e*P P 21 24 48.1 +0.5
SENIN Lac Senin/Sane 51.58 22⇑*e*P P 21 24 48.2 +0.6
LPAZ La Paz 51.64 249 P P 21 24 49.2 +0.6
comp=Z,9.4nm,0.6s,mb4.9,baz=71,slow=7.0,SNR=42
LPAZ LR LR 21 45 10.3
comp=Z,3μm,18.1s,MS5.4,baz=88,slow=34
LPAZ La Paz 51.64 249⇓*e*P P 21 24 49.1 +0.5
LPAZ pmax pmax
comp=Z,20nm,0.8s
LPAZ MLR MLR
comp=Z,4μm,20.0s
LPAZ La Paz 51.64 249⇓*e*P P 21 24 49.1 +0.5
comp=Z,20nm,0.8s,mb5.1
LPAZ LR LR
comp=Z,4μm,20.0s,MS5.5
LKBD Leukerbad 51.72 23⇑*e*P P 21 24 48.9 +0.2
ERPM east rand prop 51.74 124 *e*P P 21 24 49.7 +0.4
ERPM AMb AMB 21 24 50.1
comp=Z,101nm,1.7s,mb5.5
TORNY Torny/Romont 51.79 22⇑*e*P P 21 24 49.0 -0.2
MSNA Messina 51.88 118 *e*P P 21 24 50.4 +0.1
MSNA AMb AMB 21 26 54.0
comp=Z,88nm,1.5s,mb5.5
MUGIO Muggio 51.90 24⇑*e*P P 21 24 49.6 -0.5
WIMIS Wimmis 51.95 22⇑*e*P P 21 24 50.5 +0.1
DYA Yadsworthy 51.96 12 P P 21 24 50.5 0.0
DYA AMb AMB 21 24 51.6
comp=Z,115nm,1.8s,mb5.5
DYA AMS AMS 21 52 28.8
comp=Z,2μm,14.1s
DYA Yadsworthy 51.96 12⇑*e*P P 21 24 50.5 0.0
DYA AMb AMB 21 24 51.6
comp=Z,115nm,1.8s,mb5.5
DYA AMS AMS 21 52 28.8
comp=Z,2μm,14.1s,MS5.2
SEK Senekal 52.02 127 *e*P P 21 24 50.6 -0.7
SEK AMb AMB 21 24 53.4
comp=Z,96nm,1.7s,mb5.5
FUSIO Fusio 52.19 23⇑*e*P P 21 24 51.8 -0.4
LOMF Lomont 52.23 21 *e*P P 21 24 52.6 +0.1
PYL PYLOS 52.32 41 *e*P P 21 24 53.0 -0.4
PYL PYLOS 52.32 41 P P 21 24 52.2 -1.2
VLS Valsamata 52.35 39 P P 21 24 51.7 -1.9
VLS Valsamata 52.35 39 *e*P P 21 24 53.0 -0.6
VLS Valsamata 52.35 39 P P 21 24 51.7 -1.9
HTL Hartland 52.39 11 P P 21 24 53.5 -0.1
HTL AMb AMB 21 24 55.0
comp=Z,126nm,1.9s,mb5.5
HTL AMS AMS 21 45 26.5
comp=Z,2μm,19.3s
HTL Hartland 52.39 11⇑*e*P P 21 24 53.5 -0.1
HTL AMb AMB 21 24 55.0
comp=Z,126nm,1.9s,mb5.5
HTL AMS AMS 21 45 26.5
comp=Z,2μm,19.3s,MS5.1
SOE Somerset East 52.40 132 *e*P P 21 24 53.2 -0.8
SOE AMb AMB 21 25 10.7
comp=Z,117nm,2.3s,mb5.4
BOURR Bourrignon 52.41 22⇑*e*P P 21 24 53.7 -0.2
BNALP Bannalp 52.43 23⇑*e*P P 21 24 53.8 -0.2
VAL Valentia 52.44 6 *e*P P 21 24 52.9 -1.1
VAL Valentia 52.44 6 *e*P P 21 24 52.9 -1.1
VAL *i*S **S 21 32 20.0 +0.5**
VDL Val di Lei 52.52 24⇑*e*P P 21 24 53.9 -0.8
BALST Balsthal 52.54 22⇑*e*P P 21 24 54.8 0.0
BBS Basel-Blauen 52.58 22 *e*P P 21 24 55.2 +0.1
HEX Exmoor 52.59 11 P P 21 24 55.4 +0.3
HEX Exmoor 52.59 11⇑*i*P P 21 24 55.4 +0.3
MUO Muotathal 52.60 23⇑*e*P P 21 24 54.9 -0.3
MEZF Maizieres J'vi 52.60 19⇑*i*P P 21 24 55.5 +0.3
comp=Z,723nm,1.4s,mb6.1
MEZF Maizieres J'vi 52.60 19⇑*i*P P 21 24 55.5 +0.3
comp=Z,723nm,1.4s,mb6.4
ITM Ithomi 52.61 40 *e*P P 21 24 55.5 0.0
ITM Ithomi 52.61 40 P P 21 24 49.8 -5.7
HAU Haudompre 52.61 21⇑*i*P P 21 24 55.2 -0.1
comp=Z,400nm,1.2s,mb5.9
HAU *e*MLR MLR
comp=Z,2μm,19.8s,MS4.9
HAU Haudompre 52.61 21⇑*i*P P 21 24 55.2 -0.1
HAU pmax pmax
comp=Z,200nm,1.2s,mb5.9
HAU MLR MLR
comp=Z,2μm,19.8s,MS5.2
HAU Haudompre 52.61 21⇑*i*P P 21 24 55.2 -0.1
comp=Z,200nm,1.2s,mb5.9
HAU LR LR
comp=Z,2μm,19.8s,MS5.2
HINF Hinteralfeld 52.63 21⇑*i*P P 21 24 55.1 -0.4
comp=Z,526nm,1.7s,mb5.9
HINF Hinteralfeld 52.63 21⇑*i*P P 21 24 55.1 -0.4
HINF pmax pmax
comp=Z,263nm,1.7s,mb5.9
HINF Hinteralfeld 52.63 21⇑*i*P P 21 24 55.1 -0.4
comp=Z,263nm,1.7s,mb5.9
LLS Linth-Limmern 52.64 23⇑*e*P P 21 24 55.1 -0.5
THEF They Montfort 52.68 20 *e*P P 21 24 55.9 +0.1
BERNI Berninapass 52.70 24⇑*e*P P 21 24 55.7 -0.3
GVD Gavdhos 52.76 44⇑*e*P P 21 24 56.5 -0.2
comp=Z,815nm,1.2s,mb6.5
GVD *e*PcP PcP 21 26 06.3 +0.1
MOF Molkenrain 52.77 21 *e*P P 21 24 56.1 -0.3
LKD2 Lefkada island 52.77 38 P P 21 24 56.6 0.0
KEK Kerkira 52.82 37 *e*P P 21 24 57.0 0.0
KYTH Kithira 52.83 42 *e*P P 21 24 57.5 +0.3
RLS Riolos of Patr 52.83 39 *e*P P 21 24 58.0 +0.9
SULZ Cheisacher 52.86 22⇑*e*P P 21 24 57.0 -0.1
ZUR Degenried 52.90 23⇑*e*P P 21 24 57.1 -0.4
SDV Santo Domingo 52.91 281⇓*e*P P 21 24 58.4 +0.3
comp=Z,17nm,0.9s,mb5.0
SDV *e*PcP PcP 21 26 07.8 +0.6
SDV *e*PP PP 21 26 58.0 +0.1
SDV LR LR
comp=Z,620nm,20.0s,MS4.7
DAVOX Davos/Dischmat 52.94 24⇑*e*P P 21 24 57.2 -0.5
DAVOX Davos/Dischmat 52.94 24 P P 21 24 56.5 -1.3
comp=Z,85nm,0.9s,mb5.7,baz=204,slow=6.8,SNR=105
DAVOX PP PP 21 26 57.5 0.0
comp=Z,35nm,1.0s,baz=227,slow=11,SNR=4.3
DAVOX LR LR 21 46 53.7
comp=Z,4μm,21.1s,MS5.5,baz=224,slow=36
DAVOX Davos/Dischmat 52.94 24 P P 21 24 56.5 -1.2
DAVOX 21 26 57.5
KARN Karanos 52.95 43 *e*P P 21 24 58.0 0.0
KARN Karanos 52.95 43 P P 21 24 57.3 -0.7
PLONS Plons/SG 52.95 23⇑*e*P P 21 24 57.5 -0.4
FUORN Ofenpass-Fuorn 52.97 24⇑*e*P P 21 24 57.5 -0.5
VLI Veliai 53.01 42 *e*P P 21 24 59.5 +1.0
VLX Vlachokerasia 53.01 41 *e*P P 21 24 59.0 +0.5
VLX Vlachokerasia 53.01 41 P P 21 24 59.0 +0.5
IGT Igoumenitsa 53.03 37 P P 21 24 58.2 -0.4
IGT Igoumenitsa 53.03 37 P P 21 24 58.2 -0.4
SRN Sarande 53.05 37 *e*PN P 21 24 58.8 +0.1
SRN Sarande 53.05 37 *e*Pn P 21 24 58.8 +0.1
FLACH Flaach 53.07 23⇑*e*P P 21 24 58.4 -0.3
WILA Wila 53.07 23⇑*e*P P 21 24 58.4 -0.3
ECH Echery 53.08 21 *e*P P 21 24 58.7 -0.1
ECH Echery 53.08 21⇑*i*P P 21 24 58.6 -0.2
ECH *e* 21 26 56.9
ECH *e*S **S 21 32 24.8 -3.5**
ECH pmax pmax
comp=Z,215nm,1.5s,mb5.9
ECH MLR MLR
comp=Z,3μm,19.0s,MS5.3
ECH Echery 53.08 21⇑*i*P P 21 24 58.6 -0.2
comp=Z,215nm,1.5s,mb5.9
ECH *e*PP PP 21 26 56.9 -1.9
ECH *e*S **S 21 32 24.8 -3.5**
ECH LR LR
comp=Z,3μm,19.0s,MS5.3
FELD Feldberg im Sc 53.11 22 *e*P P 21 24 58.9 -0.1
VAM Vamos 53.14 44 *e*P P 21 24 59.5 0.0
UPR University Cam 53.17 39 *e*P P 21 25 00.0 +0.4
LIBD Limburg 53.19 21 *e*P P 21 24 59.6 0.0
WEIN Weingarten 53.19 23⇑*e*P P 21 24 59.3 -0.3
SLE Schleitheim 53.20 22⇑*e*P P 21 24 59.3 -0.3
LAKA Lakka 53.26 39 P P 21 25 01.1 +0.8
CDF Champ du Feu 53.29 21⇑*i*P P 21 25 00.1 -0.2
comp=Z,985nm,1.8s,mb6.1
CDF Champ du Feu 53.29 21⇑*i*P P 21 25 00.1 -0.2
CDF pmax pmax
comp=Z,492nm,1.8s,mb6.1
CDF Champ du Feu 53.29 21⇑*i*P P 21 25 00.1 -0.2
comp=Z,492nm,1.8s,mb6.1
GUR Goura 53.32 40 *e*P P 21 25 01.0 +0.3
GUR Goura 53.32 40 P P 21 25 01.1 +0.4
EFP Efpalio 53.33 39 *e*P P 21 25 01.5 +0.7
EFP Efpalio 53.33 39 P P 21 25 00.8 0.0
HGH Gray Hill 53.33 12 P P 21 24 59.9 -0.7
HGH Gray Hill 53.33 12⇑*e*P P 21 24 59.9 -0.7
DAVA Damuels 53.35 24 *i*P P 21 25 00.3 -0.5
comp=Z,537nm,1.4s,mb6.3,SNR=156
SIVA Sivas 53.36 44 P P 21 25 01.0 -0.1
SIVA Sivas 53.36 44 *e*P P 21 25 01.0 -0.1
SIVA Sivas 53.36 44 P P 21 25 01.0 -0.1
WOL Wolverton 53.37 13 P P 21 25 00.7 -0.2
WOL AMb AMB 21 25 03.0
comp=Z,309nm,2.5s,mb5.8
WOL 21 32 14.8
WOL AMS AMS 21 45 28.1
comp=Z,2μm,24.1s
WOL Wolverton 53.37 13⇑*i*P P 21 25 00.7 -0.2
WOL AMb AMB 21 25 03.0
comp=Z,309nm,2.5s,mb5.8
WOL *e* 21 32 14.8
WOL AMS AMS 21 45 28.1
comp=Z,2μm,24.1s,MS5.0
GRM Grahamstown 53.38 133 *e*P P 21 24 59.8 -1.5
GRM AMb AMB 21 25 18.0
comp=Z,210nm,1.8s,mb5.8
TRIZ Trizonia 53.40 39 P P 21 25 01.6 +0.3
JAN Janina 53.42 37 *e*P P 21 25 02.5 +1.1
SWN1 Swindon 53.43 13 P P 21 25 01.6 +0.3
SWN1 AMb AMB 21 25 03.6
comp=Z,373nm,1.6s,mb6.1
SWN1 AMS AMS 21 50 44.9
comp=Z,2μm,13.6s
SWN1 Swindon 53.43 13⇑*e*P P 21 25 01.6 +0.3
SWN1 AMb AMB 21 25 03.6
comp=Z,373nm,1.6s,mb6.1
SWN1 AMS AMS 21 50 44.9
comp=Z,2μm,13.6s,MS5.2
MOPA Mopani 53.45 119⇑*i*P P 21 25 01.9 -0.1
MOPA AMb AMB 21 25 22.1
comp=Z,60nm,1.3s,mb5.4
KALE Kalithea 53.45 39 P P 21 25 02.1 +0.4
FETA Feichten 53.48 24 *i*P P 21 25 01.1 -0.6
comp=Z,402nm,1.6s,mb6.1,SNR=101
EVR Evrytania 53.56 39 *e*P P 21 25 03.5 +1.0
SPAK Spaichingen-Ko 53.59 22 *e*P P 21 25 02.4 -0.1
BFO Black Forest 53.60 22 *e*P P 21 25 02.4 -0.2
comp=Z,273nm,1.3s,mb6.0
BFO *e*PP PP 21 27 00.6 -2.9
BFO *e*S **S 21 32 34.2 -1.3**
BFO Black Forest 53.60 22 *e*P P 21 25 02.4 -0.2
BFO *e* 21 27 00.6
BFO *e*S **S 21 32 34.2 -1.3**
BFO pmax pmax
comp=Z,273nm,1.3s,mb6.0
MCH1 Michaelchurch 53.63 12 P P 21 25 02.3 -0.5
MCH1 AMb AMB 21 25 03.5
comp=Z,133nm,1.9s,mb5.5
MCH1 AMS AMS 21 46 58.8
comp=Z,1μm,15.0s
MCH1 Michaelchurch 53.63 12⇑*e*P P 21 25 02.3 -0.5
MCH1 AMb AMB 21 25 03.5
comp=Z,133nm,1.9s,mb5.5
MCH1 AMS AMS 21 46 58.8
comp=Z,1μm,15.0s,MS5.2
DID Didima 53.65 41 *e*P P 21 25 02.5 -0.7
DID Didima 53.65 41 P P 21 25 02.2 -1.0
HTR Trewern Hill 53.66 11 P P 21 25 02.6 -0.4
HTR Trewern Hill 53.66 11⇑*i*P P 21 25 02.6 -0.4
BAIF Baives 53.69 18⇑*i*P P 21 25 02.8 -0.4
comp=Z,880nm,1.5s,mb6.2
BAIF Baives 53.69 18⇑*i*P P 21 25 02.8 -0.4
BAIF pmax pmax
comp=Z,440nm,1.5s,mb6.2
BAIF Baives 53.69 18⇑*i*P P 21 25 02.8 -0.4
comp=Z,440nm,1.5s,mb6.2
DSF Desfina 53.71 40 P P 21 25 03.4 -0.2
LTK Loutraki 53.77 40 *e*P P 21 25 03.5 -0.6
LTK Loutraki 53.77 40 P P 21 25 03.5 -0.6
TRI Trieste 53.79 27⇑*i*P P 21 25 04.0 0.0
TRI *e*S **S 21 32 38.0 -0.1**
TRI pmax pmax
comp=Z,974nm,1.8s,mb6.4
TRI MLR MLR
comp=Z,3μm,22.0s,MS5.3
TRI Trieste 53.79 27⇑*i*P P 21 25 04.0 -0.1
comp=Z,974nm,1.8s,mb6.4
TRI *e*S **S 21 32 38.0 0.0**
TRI LR LR
comp=Z,3μm,22.0s,MS5.3
ELSH Elham, Standar 53.80 15 P P 21 25 04.0 0.0
ELSH AMb AMB 21 25 04.9
comp=Z,206nm,1.8s,mb5.8
ELSH Elham, Standar 53.80 15⇑*i*P P 21 25 04.0 0.0
ELSH AMb AMB 21 25 04.9
comp=Z,206nm,1.8s,mb5.8
DOU Dourbes 53.84 18 P P 21 25 04.2 -0.2
HCY Herceg Novi 53.86 33⇑*i*P P 21 25 04.8 +0.2
HCY Herceg Novi 53.86 33⇑*i*P P 21 25 04.8 +0.2
RETA Reutte 53.87 24 *i*P P 21 25 03.7 -0.9
comp=Z,544nm,1.9s,mb6.2,SNR=98
MOTA Moosalm 53.89 24 *i*P P 21 25 03.9 -0.8
comp=Z,220nm,1.4s,mb5.9,SNR=67
TIR Tirane 53.90 35⇑*i*P P 21 25 05.6 +0.7
TIR *e* 21 27 06.3
TIR *e*S **S 21 32 37.0 -2.8**
TIR pmax pmax
comp=Z,122nm,0.9s,mb5.8
TIR MLR MLR
comp=Z,4μm,20.0s,MS5.4
TIR Tirane 53.90 35⇑*i*P P 21 25 05.6 +0.7
comp=Z,122nm,0.9s,mb5.8
TIR *e*PP PP 21 27 06.3 -0.1
TIR *e*S **S 21 32 37.0 -2.7**
TIR LR LR
comp=Z,4μm,20.0s,MS5.4
LAST Lasithi 53.90 45 P P 21 25 03.5 -1.6
LAST Lasithi 53.90 45 *e*P P 21 25 04.5 -0.6
LAST Lasithi 53.90 45 P P 21 25 03.5 -1.6
GIVF Givet 53.92 18⇑*i*P P 21 25 04.4 -0.5
comp=Z,759nm,1.5s,mb6.1
GIVF Givet 53.92 18⇑*i*P P 21 25 04.4 -0.5
GIVF pmax pmax
comp=Z,379nm,1.5s,mb6.1
GIVF Givet 53.92 18⇑*i*P P 21 25 04.4 -0.5
comp=Z,379nm,1.5s,mb6.1
KNDS Knezji Dol 53.94 28 *i*P P 21 25 05.3 +0.1
AGG Agios Georgios 53.95 39 P P 21 25 01.9 -3.4
AGG Agios Georgios 53.95 39 P P 21 25 01.9 -3.4
ULC Ulcinj 53.95 34⇑*i*P P 21 25 06.0 +0.7
ULC Ulcinj 53.95 34⇑*i*P P 21 25 06.0 +0.7
LANF Langenberg 53.96 21 *e*P P 21 25 05.4 +0.2
WLF Walferdange 53.97 19 P P 21 25 05.3 +0.1
comp=Z,120nm,2.1s,mb5.5
WLF Walferdange 53.97 19 *e*P P 21 25 05.4 +0.1
comp=Z,288nm,1.7s,mb5.9
WLF *e*S **S 21 32 40.3 0.0**
WLF Walferdange 53.97 19⇑*i*P P 21 25 05.1 -0.1
WLF *e* 21 27 03.7
WLF *e*S **S 21 32 40.1 -0.2**
WLF pmax pmax
comp=Z,272nm,1.6s,mb5.9
WLF MLR MLR
comp=Z,2μm,20.0s,MS5.2
WLF Walferdange 53.97 19⇑*i*P P 21 25 05.1 -0.1
comp=Z,272nm,1.6s,mb5.9
WLF *e*PP PP 21 27 03.6 -3.1
WLF *e*S **S 21 32 40.1 -0.2**
WLF LR LR
comp=Z,2μm,20.0s,MS5.2
BUM Brajici-Budva 53.98 34⇓*i*P P 21 25 06.9 +1.4
BUM Brajici-Budva 53.98 34⇓*i*P P 21 25 06.9 +1.4
KBN Korca 53.98 36 *e*PN P 21 25 06.5 +1.0
KBN Korca 53.98 36 *e*Pn P 21 25 06.5 +1.0
NEST Nestorio 54.01 37 P P 21 25 06.8 +1.1
ABTA Abfaltersbach 54.02 26 *i*P P 21 25 05.8 +0.1
comp=Z,841nm,2.0s,mb6.3,SNR=70
NPS Neapolis 54.05 45 *e*P P 21 25 06.5 +0.4
WTTA Wattenberg 54.05 25 *i*P P 21 25 05.2 -0.7
comp=Z,666nm,1.8s,mb6.3,SNR=77
WATA Walderalm 54.08 25⇑*i*P P 21 25 05.4 -0.8
comp=Z,129nm,1.2s,mb5.7,SNR=28
VOY Vojsko 54.09 27⇑*e*P P 21 25 06.4 +0.2
VOY *e* 21 27 04.7
SNF Seneffe 54.11 18 P P 21 25 06.0 -0.3
comp=Z,62nm,2.2s,mb5.2
HLM1 Long Mynd 54.15 12 P P 21 25 06.2 -0.4
HLM1 Long Mynd 54.15 12⇑*i*P P 21 25 06.2 -0.4
LKR Lokris 54.15 40 P P 21 25 06.5 -0.3
LKR Lokris 54.15 40 *e*P P 21 25 06.5 -0.3
LKR Lokris 54.15 40 P P 21 25 06.5 -0.3
CADS Cadrg 54.17 27 *i*P P 21 25 06.9 +0.1
BRY Bratogost 54.19 33⇑*i*P P 21 25 07.2 +0.2
BRY Bratogost 54.19 33⇑*i*P P 21 25 07.2 +0.2
VLY Voula,Athens 54.21 41 *e*P P 21 25 07.0 -0.3
DSB Dublin 54.23 9 *e*P P 21 25 07.3 +0.2
comp=Z,50nm,1.0s,mb5.4
ATH Athens Observa 54.23 41 P P 21 25 07.5 +0.1
ATH Athens Observa 54.23 41 *e*P P 21 25 07.5 +0.1
DLF Lyons Farm 54.25 9 *e*P P 21 25 06.0 -1.3
TTG Podgorica 54.27 34⇑*i*P P 21 25 08.1 +0.5
TTG Podgorica 54.27 34⇑*i*P P 21 25 08.2 +0.6
ATHU Athens Univers 54.27 41 P P 21 25 07.5 -0.2
STU Stuttgart 54.29 22 *e*P P 21 25 07.0 -0.7
comp=Z,167nm,1.2s,mb5.8
STU *e*S **S 21 32 43.3 -1.5**
STU Stuttgart 54.29 22⇑*i*P P 21 25 07.0 -0.7
STU *e* 21 26 11.4
STU *e*S **S 21 32 44.8 0.0**
STU pmax pmax
comp=Z,142nm,1.1s,mb5.8
STU Stuttgart 54.29 22⇑*i*P P 21 25 07.0 -0.7
comp=Z,142nm,1.1s,mb5.8
STU *e*PcP PcP 21 26 11.3 -0.3

STU *e*S **S** **21 32 44.8 0.0**
OHR Ohrid 54.30 36⇑*i*P **P** **21 25 08.0 +0.2**
OHR *i* 21 27 07.1
OHR *i*S **S** **21 32 53.1 +8.1**
RUP Ruppelstein 54.30 20 *e*P **P** **21 25 07.8 +0.1**
BOJS Bojanci 54.34 29 *i*P **P** **21 25 08.4 +0.4**
KTD Kalmit 54.34 21 *e*P **P** **21 25 08.2 +0.2**
BCLA Clavier 54.35 18 P **P** **21 25 07.7 -0.3**
comp=Z,100nm,2.0s,mb5.4
PUK Puka 54.37 35 *e*PN **P** **21 25 09.1 +0.8**
PUK Puka 54.37 35 *e*Pn **P** **21 25 09.1 +0.8**
PTL Penteli 54.37 41 *e*P **P** **21 25 08.5 +0.1**
NKY Niksic 54.38 33⇓*i*P **P** **21 25 08.5 +0.1**
KZN Kozani 54.38 37 P **P** **21 25 08.1 -0.3**
KZN Kozani 54.38 37 *e*P **P** **21 25 08.5 +0.1**
KZN Kozani 54.38 37 P **P** **21 25 08.1 -0.3**
LJU Ljubljana 54.39 28 *i*P **P** **21 25 08.8 +0.3**
LJU *e*S **S** **21 32 47.6 +1.4**
ZKR Zakros 54.40 45 P **P** **21 25 07.7 -1.0**
ZKR Zakros 54.40 45 *e*P **P** **21 25 08.5 -0.2**
ZKR Zakros 54.40 45 P **P** **21 25 07.7 -1.0**
MYKA Terra Mystica 54.43 27⇑*i*P **P** **21 25 09.1 +0.5**
comp=Z,767nm,2.0s,mb6.3
FNA Florina 54.43 37 P **P** **21 25 08.8 0.0**
FNA Florina 54.43 37 P **P** **21 25 08.8 0.0**
BBSR BB Station 54.46 311 *e*P **P** **21 25 10.1 +0.9**
BBSR *e*S **S** **21 32 48.1 +0.5**
BBSR LR LR
comp=Z,2μm,22.0s,MS5.1
THR5 Thira Island, 54.47 43 P **P** **21 25 07.8 -1.4**
THR5 Thira Island, 54.47 43 P **P** **21 25 07.8 -1.4**
THR3 Thira Island, 54.50 43 P **P** **21 25 08.6 -0.8**
THR3 Thira Island, 54.50 43 P **P** **21 25 08.6 -0.8**
THR1 Thera Island 54.52 43 P **P** **21 25 08.0 -1.6**
BIA Bitola 54.55 36 *i*P **P** **21 25 09.3 -0.4**
BIA *i* 21 27 09.9
UPM Unac-Piva 54.59 33⇑*i*P **P** **21 25 10.7 +0.8**
UPM Unac-Piva 54.59 33⇑*i*P **P** **21 25 10.7 +0.8**
WLF1 Llynfaes 54.60 10 P **P** **21 25 09.6 -0.1**
WLF1 AMb AMB 21 25 10.6
comp=Z,358nm,1.8s,mb6.1
WLF1 21 32 42.6
WLF1 AMS AMS 21 46 42.7
comp=Z,7μm,19.1s
WLF1 Llynfaes 54.60 10⇑*e*P **P** **21 25 09.6 -0.1**
WLF1 AMb AMB 21 25 10.6
comp=Z,358nm,1.8s,mb6.1
WLF1 *e* 21 32 42.6
WLF1 AMS AMS 21 46 42.7
comp=Z,7μm,19.1s,MS5.8
FUR Furstenfeldbru 54.62 24 *e*P **P** **21 25 09.7 -0.3**
comp=Z,582nm,1.3s,mb6.5
FUR *e*PP PP 21 27 08.3 -4.3
FUR *e*S **S** **21 32 45.7 -3.4**
FUR Furstenfeldbru 54.62 24 *e*P **P** **21 25 09.7 -0.3**
FUR *e* 21 27 08.3
FUR *e*S **S** **21 32 45.7 -3.4**
FUR pmax pmax
comp=Z,582nm,1.3s,mb6.5
ABH Alteburg 54.63 20 *e*P **P** **21 25 10.2 +0.2**
KBA Koelnbreinsper 54.64 26 *i*P **P** **21 25 10.0 -0.2**
comp=Z,655nm,2.5s,mb6.2,SNR=30
BCI Bajram Curri 54.68 34 *e*PN **P** **21 25 11.7 +1.1**
BCI Bajram Curri 54.68 34 *e*Pn **P** **21 25 11.7 +1.1**
NEO Neokhori 54.68 39 *e*P **P** **21 25 10.5 -0.1**
CWF Charnwood Fore 54.68 13 P **P** **21 25 09.8 -0.6**
CWF AMb AMB 21 25 10.9
comp=Z,115nm,1.8s,mb5.6
CWF 21 32 26.7
CWF AMS AMS 21 49 37.5
comp=Z,1μm,14.8s
CWF Charnwood Fore 54.68 13⇑*i*P **P** **21 25 09.8 -0.6**
CWF AMb AMB 21 25 10.9
comp=Z,115nm,1.8s,mb5.6
CWF *e* 21 32 26.7
CWF AMS AMS 21 49 37.5
comp=Z,1μm,14.8s,MS5.2
XOR Xorichti 54.69 39 P **P** **21 25 10.8 +0.1**
XOR Xorichti 54.69 39 P **P** **21 25 10.8 +0.1**
KRUS Krusevo 54.72 36 *i*P **P** **21 25 10.4 -0.5**
MEM Membach 54.73 19 P **P** **21 25 11.1 +0.3**
comp=Z,112nm,2.1s,mb5.5
OBKA Obir 54.75 27 *i*P **P** **21 25 11.1 +0.1**
comp=Z,873nm,3.0s,SNR=19
PVY Plav 54.77 34⇑*i*P **P** **21 25 12.4 +1.1**
CESS Cesta pri Krsk 54.78 28 *e*P **P** **21 25 11.4 +0.2**
ARE Arequipa 54.83 250 *e*P **P** **21 25 12.0 -0.1**
TOD Tromm 54.84 21 *e*P **P** **21 25 11.5 -0.1**
HGN Heimansgroeve 54.84 19⇑*i*P **P** **21 25 11.9 +0.3**
comp=Z,288nm,1.6s,mb6.1
HGN Heimansgroeve 54.84 19 *e*S **S** **21 32 48.3 -3.8**
RJOB Jochberg 54.91 25 *e*P **P** **21 25 11.1 -1.1**
comp=Z,168nm,1.0s,mb6.0
RJOB *e*S **S** **21 32 50.1 -3.0**
IVA Berane 54.91 34⇑*i*P **P** **21 25 13.3 +1.0**
IVA Berane 54.91 34⇑*i*P **P** **21 25 13.3 +1.1**
POGA Pongola 54.92 124 *e*P **P** **21 25 13.4 +0.8**
POGA AMb AMB 21 25 14.6
comp=Z,156nm,2.1s,mb5.7
PLE Pljevlja 54.94 33⇑*i*P **P** **21 25 13.1 +0.7**
PLE Pljevlja 54.94 33⇑*i*P **P** **21 25 13.1 +0.7**
APE Apeiranthos 54.94 43⇑P **P** **21 25 11.9 -0.6**
APE Apeiranthos 54.94 43 *e*P **P** **21 25 12.0 -0.6**
APE Apeiranthos 54.94 43 P **P** **21 25 11.5 -1.1**
APE Apeiranthos 54.94 43⇑*i*P **P** **21 25 11.9 -0.7**
TRQA Tornquist 55.00 222 *e*P **P** **21 25 13.6 +0.5**
comp=Z,46nm,1.2s,mb5.4
TRQA LR LR
comp=Z,4μm,21.0s,MS5.4
SOKA Soboth 55.10 27⇑*i*P **P** **21 25 13.6 +0.1**
comp=Z,472nm,1.6s,mb6.3
PERS Pernice 55.11 28 *i*P **P** **21 25 13.6 0.0**
PERS *e*S **S** **21 32 56.5 +0.7**
KBI1 Birley Grange 55.12 12 P **P** **21 25 13.4 -0.1**
KBI1 Birley Grange 55.12 12⇑*i*P **P** **21 25 13.4 -0.1**
GRG Griva 55.15 37 P **P** **21 25 11.6 -2.4**
GRG Griva 55.15 37 P **P** **21 25 11.6 -2.4**
AEU East Anglia Un 55.17 14 P **P** **21 25 13.2 -0.8**
AEU East Anglia Un 55.17 14 *e*P **P** **21 25 13.2 -0.8**
SKO Skopje 55.21 35⇑*i*P **P** **21 25 15.2 +0.8**
SKO *i* 21 27 18.0
SKO *i*S **S** **21 32 59.4 +2.0**
TNS Taunus Mts 55.23 21 *e*P **P** **21 25 14.4 0.0**
comp=Z,364nm,1.1s,mb6.3
TNS *e*PP PP 21 27 15.0 -3.0
TNS *e*S **S** **21 32 57.5 +0.2**
TNS Taunus Mts 55.23 21 *e*P **P** **21 25 14.4 0.0**
TNS *e* 21 27 15.0
TNS *e*S **S** **21 32 57.5 +0.2**
TNS pmax pmax
comp=Z,364nm,1.1s,mb6.3
GMM Mts of Mourne 55.26 9 P **P** **21 25 14.1 -0.4**
GMM Mts of Mourne 55.26 9⇑*i*P **P** **21 25 14.1 -0.4**
KARP Karpathos 55.28 45 *e*P **P** **21 25 15.0 -0.1**
THE Thessaloniki 55.30 38 P **P** **21 25 14.5 -0.6**
THE Thessaloniki 55.30 38 P **P** **21 25 14.5 -0.6**
HORT Hortiatis 55.36 38 P **P** **21 25 15.0 -0.6**
HORT Hortiatis 55.36 38 P **P** **21 25 15.0 -0.6**
SDDR Presa de Saban 55.38 293⇓*e*P **P** **21 25 16.5 +0.4**
comp=Z,240nm,0.9s,mb6.2
SDDR *e*S **S** **21 33 00.9 +0.6**
SDDR LR LR
comp=Z,2μm,22.0s,MS5.2
ABA1 Baconsthorpe 55.39 14 P **P** **21 25 15.2 -0.3**
ABA1 Baconsthorpe 55.39 14⇑*e*P **P** **21 25 15.2 -0.3**
AWI1 Witton 55.41 14 P **P** **21 25 14.8 -0.9**
AWI1 Witton 55.41 14⇑*e*P **P** **21 25 14.8 -0.9**
PLG Polygyros 55.44 38 P **P** **21 25 15.6 -0.5**
PLG Polygyros 55.44 38 *e*P **P** **21 25 16.0 -0.1**
PLG Polygyros 55.44 38 P **P** **21 25 15.6 -0.5**
VAY Valandovo 55.47 37 P **P** **21 25 15.0 -1.4**
VAY Valandovo 55.47 37⇑*i*P **P** **21 25 15.9 -0.4**
VAY *i* 21 27 19.8
VAY *i*S **S** **21 33 06.0 +5.1**
VAY Valandovo 55.47 37 P **P** **21 25 15.0 -1.4**
KOGS Kog 55.50 28 *i*P **P** **21 25 16.4 0.0**
KOGS *e* 21 27 19.5
KMBO Kilima Mbogo 55.55 91 P **P** **21 25 19.2 +1.8**
comp=Z,30nm,1.0s,mb5.3,baz=290,slow=7.6,SNR=45
KMBO LR LR 21 46 57.4
comp=Z,7μm,19.2s,MS5.8,baz=267,slow=34
KMBO Kilima Mbogo 55.55 91⇑*i*P **P** **21 25 19.5 +2.1**
KMBO *e* 21 26 16.1
KMBO *e* 21 27 22.5
KMBO *e*S **S** **21 33 04.6 +1.7**
KMBO pmax pmax
comp=Z,83nm,1.3s
KMBO MLR MLR
comp=Z,6μm,20.0s
KMBO Kilima Mbogo 55.55 91⇑*i*P **P** **21 25 19.5 +2.1**
comp=Z,83nm,1.3s,mb5.6
KMBO *e*PcP PcP 21 26 16.1 -1.3
KMBO *e*PP PP 21 27 22.5 +0.8
KMBO *e*ScP ScP 21 30 13.2 -2.7
KMBO *e*S **S** **21 33 04.6 +1.7**
KMBO LR LR
comp=Z,6μm,20.0s,MS5.7
KMBO Kilima Mbogo 55.55 91⇑*i*P **P** **21 25 19.8 +2.4**
KMBO Kilima Mbogo 55.55 91 P **P** **21 25 20.1 +2.7**
SNR=16
KNT Kendrikon 55.58 37 P **P** **21 25 16.9 -0.2**
KNT Kendrikon 55.58 37 P **P** **21 25 16.9 -0.2**
MOA Molln 55.63 26 *i*P **P** **21 25 16.3 -1.1**
comp=Z,327nm,1.6s,mb6.1,SNR=109
SOH Sokhos 55.65 38 P **P** **21 25 17.7 +0.1**
SOH Sokhos 55.65 38 P **P** **21 25 17.7 +0.1**
ARSA Arzberg 55.75 27 *i*P **P** **21 25 17.8 -0.4**
comp=Z,452nm,2.0s,mb6.2,SNR=52
OUR Ouranopolis 55.75 38 P **P** **21 25 18.0 -0.4**
OUR Ouranopolis 55.75 38 P **P** **21 25 18.0 -0.4**
HPK Haverah Park 55.76 12 P **P** **21 25 17.4 -0.8**
HPK AMS AMS 21 47 21.4
comp=Z,1μm,15.5s
HPK Haverah Park 55.76 12 *e*P **P** **21 25 17.4 -0.8**
HPK AMS AMS 21 47 21.4
comp=Z,1μm,15.5s,MS5.2
DIVS Divibare 55.77 33 P **P** **21 25 18.6 +0.2**
GRA1 Grafenberg Arr 55.82 23 *e*P **P** **21 25 18.2 -0.4**
comp=Z,268nm,1.4s,mb6.1
GRA1 *e*S **S** **21 33 04.1 -1.1**
GRA1 LR LR
comp=Z,3μm,19.0s,MS5.3
GRF Grafenberg Arr 55.82 23 *e*P **P** **21 25 18.2 -0.4**
comp=Z,268nm,1.4s,mb6.1
GRF *e*S **S** **21 33 04.1 -1.1**
GRF *e*L 21 49 40.2
comp=Z,3μm,19.0s
GRF Grafenberg Arr 55.82 23 *e*P **P** **21 25 18.2 -0.4**
GRF *e*S **S** **21 33 04.1 -1.1**
GRF pmax pmax
comp=Z,268nm,1.4s,mb6.1
GRF MLR MLR
comp=Z,3μm,19.0s,MS5.3
BUG Bochum--Univer 55.86 19 *e*P **P** **21 25 19.0 +0.1**
comp=Z,200nm,1.3s,mb6.0
BUG *e*S **S** **21 33 06.7 +1.0**
GRTK Grand Turk 55.88 296⇓*e*P **P** **21 25 20.1 +0.5**
comp=Z,52nm,0.9s,mb5.6
GRTK *e*PcP PcP 21 26 18.2 -0.2
GRTK LR LR
comp=Z,1μm,21.0s,MS4.9
XDE Dent Fell 55.92 10 P **P** **21 25 19.2 -0.1**
XDE Dent Fell 55.92 10⇑*e*P **P** **21 25 19.2 -0.1**
SRS Serrai 55.97 37 P **P** **21 25 19.6 -0.3**
SRS Serrai 55.97 37 P **P** **21 25 19.6 -0.3**
CHOS Chios island 55.99 42 P **P** **21 25 19.4 -0.8**
WET Wettzell 56.04 24 *e*P **P** **21 25 19.9 -0.4**
comp=Z,322nm,1.2s,mb6.2
WET *e*PP PP 21 27 22.8 -2.5
WET *e*S **S** **21 33 06.0 -2.2**
WET Wettzell 56.04 24 *e*P **P** **21 25 19.9 -0.4**
WET *e* 21 27 22.8
WET *e*S **S** **21 33 06.0 -2.2**
WET pmax pmax
comp=Z,322nm,1.2s,mb6.2
GAL1 Galloway 56.06 9 P **P** **21 25 19.9 -0.4**
GAL1 AMb AMB 21 25 21.0
comp=Z,92nm,1.8s,mb5.5
GAL1 21 32 28.4
GAL1 AMS AMS 21 48 11.6
comp=Z,2μm,19.1s
GAL1 Galloway 56.06 9⇑*i*P **P** **21 25 19.9 -0.4**
GAL1 AMb AMB 21 25 21.0
comp=Z,92nm,1.8s,mb5.5
GAL1 *e* 21 32 28.4
GAL1 AMS AMS 21 48 11.6
comp=Z,2μm,19.1s,MS5.1
KKB Krupnik 56.11 36 P **P** **21 25 21.7 +0.8**
GEC2 GERESS Array S 56.15 25 *e*P **P** **21 25 20.7 -0.4**
comp=Z,488nm,1.8s,mb6.2
GEC2 *e*PP PP 21 27 23.3 -3.0
GEC2 *e*S **S** **21 33 06.8 -2.9**
GEC2 GERESS Array S 56.15 25 *e*P **P** **21 25 20.7 -0.4**
GEC2 *e* 21 27 23.3
GEC2 *e*S **S** **21 33 06.8 -2.9**
GEC2 pmax pmax
comp=Z,488nm,1.8s,mb6.2
WTSB Winterswijk 56.16 18⇑*i*P **P** **21 25 21.3 +0.3**
comp=Z,449nm,1.6s,mb6.3
GCD Castle Douglas 56.18 10 P **P** **21 25 20.6 -0.5**
GCD Castle Douglas 56.18 10⇑*i*P **P** **21 25 20.6 -0.5**
ROSC El Rosal 56.20 276 P **P** **21 25 23.0 +1.0**
comp=Z,18nm,0.6s,mb5.3,baz=103,slow=9.8,SNR=21
ROSC LR LR 21 46 29.7
comp=Z,4μm,21.4s,MS5.5,baz=146,slow=33
LIA Limnos Island 56.26 40 P **P** **21 25 22.1 +0.1**
LIA Limnos Island 56.26 40 *e*P **P** **21 25 22.5 +0.5**
LIA Limnos Island 56.26 40 P **P** **21 25 22.1 +0.1**
ROTZ Rotzenmuhle 56.26 23 *e*P **P** **21 25 21.5 -0.3**
comp=Z,307nm,1.6s,mb6.1
ROTZ *e*PP PP 21 27 24.4 -2.9
ROTZ *e*S **S** **21 33 10.3 -0.8**
NVR Nevrokopi 56.27 37 *e*P **P** **21 25 22.5 +0.4**
ARG Arkhangelos 56.30 45 P **P** **21 25 20.9 -1.4**
ARG Arkhangelos 56.30 45 *e*P **P** **21 25 21.0 -1.3**
ARG Arkhangelos 56.30 45 P **P** **21 25 20.9 -1.4**
SIGR SIGRI 56.31 41 P **P** **21 25 22.5 +0.1**
SIGR SIGRI 56.31 41 P **P** **21 25 22.5 +0.1**
KHC Kasperske Hory 56.32 25⇑*i*P **P** **21 25 21.6 -0.7**
KHC *e* 21 26 17.5
KHC *e*S **S** **21 33 11.3 -0.6**
KHC pmax pmax
comp=Z,322nm,1.7s,mb6.1
KHC Kasperske Hory 56.32 25⇑*i*P **P** **21 25 21.6 -0.7**
comp=Z,322nm,1.7s,mb6.1
KHC *e*PcP PcP 21 26 17.5 -2.0
KHC *e*PP PP 21 27 19.1 -8.7
KHC *e*S **S** **21 33 11.3 -0.6**
KHC Kasperske Hory 56.32 25⇑*i*P **P** **21 25 21.5 -0.8**
KHC *e*x x 21 25 36.8
KHC *e*PP PP 21 27 20.1 -7.7
KHC *e*x x 21 28 32.2
KHC *e*S **S** **21 33 09.2 -2.7**
KHC AMS AMS 21 48 40.0
comp=Z,3μm,21.2s
MMB Musomiste 56.33 37 P **P** **21 25 22.8 +0.3**
CONA Conrad Observa 56.40 27 *i*P **P** **21 25 22.6 -0.3**
comp=Z,627nm,1.9s,mb6.3,SNR=80
KAVA Kavala 56.46 38 P **P** **21 25 23.1 -0.3**
PKSM Moragy 56.50 30 P **P** **21 25 23.8 +0.2**
PKSM Moragy 56.50 30⇑P **P** **21 25 23.2 -0.4**
PKSM Moragy 56.50 30⇑*i*P **P** **21 25 23.2 -0.4**
PRK Paraskevi 56.60 41 P **P** **21 25 24.9 +0.4**
PRK Paraskevi 56.60 41 *e*P **P** **21 25 24.5 0.0**
PRK Paraskevi 56.60 41 P **P** **21 25 24.9 +0.4**
VTS Vitosha 56.62 36⇑P **P** **21 25 25.3 +0.7**
VTS Vitosha 56.62 36 P **P** **21 25 24.7 +0.1**
VTS Vitosha 56.62 36 P **P** **21 25 25.6 +1.0**
VTS Vitosha 56.62 36⇑*i*P **P** **21 25 25.3 +0.7**
ECK Cauldkaine Hil 56.63 10 P **P** **21 25 23.6 -0.7**
ECK Cauldkaine Hil 56.63 10⇑*i*P **P** **21 25 23.6 -0.7**
BLCB Balcova 56.65 42 P **P** **21 25 24.4 -0.4**
BLCB Balcova 56.65 42 P **P** **21 25 24.4 -0.4**
NKC Novy Kostel 56.73 23⇑*i*P **P** **21 25 24.7 -0.4**
NKC *e* 21 27 25.7
NKC *e*S **S** **21 33 18.0 +0.8**
NKC MLR MLR
comp=Z,2μm,19.1s,MS5.3
NKC Novy Kostel 56.73 23⇑*i*P **P** **21 25 24.7 -0.4**
NKC *e*PP PP 21 27 25.7 -5.7
NKC *e*S **S** **21 33 18.0 +0.8**
NKC AMS AMS 21 51 10.0
comp=Z,2μm,19.1s
MOX Moxa 56.73 22α*i*P **P** **21 25 24.9 -0.3**
comp=Z,498nm,2.0s,mb6.2
MOX *e* 21 27 29.0
MOX *e* 21 28 54.0
MOX
comp=Z,2μm,20.0s
MOX Moxa 56.73 22 *e*P **P** **21 25 25.0 -0.2**
comp=Z,237nm,1.4s,mb6.0
MOX *e*S **S** **21 33 17.7 +0.4**
MOX Moxa 56.73 22⇑*i*P **P** **21 25 24.9 -0.3**
MOX *e* 21 27 29.0
MOX *e* 21 28 54.0
MOX pmax pmax
comp=Z,498nm,2.0s,mb6.2
MOX MLR MLR
comp=Z,2μm,20.0s,MS5.2
MOX Moxa 56.73 22 *i*P **P** **21 25 24.9 -0.3**
comp=Z,498nm,2.0s,mb6.2
MOX *e* 21 27 29.0
MOX *e* 21 28 54.0
MOX LR LR
comp=Z,2μm,20.0s,MS5.2
ESK Eskdalemuir 56.74 10 P **P** **21 25 24.3 -0.9**
ESK AMb AMB 21 25 25.8
comp=Z,107nm,1.8s,mb5.6
ESK AMS AMS 21 47 37.2
comp=Z,2μm,17.3s
ESK Eskdalemuir 56.74 10⇑*e*P **P** **21 25 24.3 -0.9**
ESK AMb AMB 21 25 25.8
comp=Z,107nm,1.8s,mb5.6
ESK AMS AMS 21 47 37.2
comp=Z,2μm,17.3s,MS5.2
ESK Eskdalemuir 56.74 10⇑*e*P **P** **21 25 24.8 -0.4**
ESK *e* 21 27 30.3
ESK pmax pmax
comp=Z,83nm,1.1s,mb5.7
ESK MLR MLR
comp=Z,2μm,20.0s,MS5.2
ESK Eskdalemuir 56.74 10⇑*e*P **P** **21 25 24.8 -0.4**
comp=Z,83nm,1.1s,mb5.7
ESK *e*PP PP 21 27 30.3 -1.2
ESK LR LR
comp=Z,2μm,20.0s,MS5.2
IBBN Ibbenburen 56.76 19 *e*P **P** **21 25 25.6 +0.3**
comp=Z,262nm,1.4s,mb6.1
IBBN *e*PP PP 21 27 30.1 -1.6
IBBN *e*S **S** **21 33 20.1 +2.6**
EKA Eskdalemuir Ar 56.77 10 P **P** **21 25 24.9 -0.4**
comp=Z,23nm,0.9s,mb5.2,baz=194,slow=6.5,SNR=71
GUNZ Gunzen 56.78 23 *e*P **P** **21 25 25.2 -0.3**
comp=Z,172nm,1.3s,mb5.9
GUNZ *e*PP PP 21 27 29.7 -2.2
WERD Werda 56.84 23 *e*P **P** **21 25 25.6 -0.3**
comp=Z,234nm,1.5s,mb6.0
WIT Witteveen 56.85 18⇑*e*P **P** **21 25 26.6 +0.7**
comp=Z,671nm,1.2s,mb6.5
TANN Tannenbergstha 56.88 23 *e*P **P** **21 25 25.9 -0.3**
comp=Z,214nm,1.2s,mb6.0
TANN *e*PP PP 21 27 30.4 -2.4
TANN *e*S **S** **21 33 19.5 +0.3**
RZN Rozhen 56.99 38 P **P** **21 25 27.7 +0.5**
PGBU Glenifferbraes 57.00 9 P **P** **21 25 26.6 -0.4**
PGBU AMb AMB 21 25 27.6
comp=Z,112nm,1.9s,mb5.6
PGBU AMS AMS 21 47 32.0
comp=Z,2μm,19.4s
PGBU Glenifferbraes 57.00 9⇑*e*P **P** **21 25 26.6 -0.4**
PGBU AMb AMB 21 25 27.6
comp=Z,112nm,1.9s,mb5.6
PGBU AMS AMS 21 47 32.0
comp=Z,2μm,19.4s,MS5.2
PGB Panagyurishte 57.16 36 P **P** **21 25 28.9 +0.5**
EAU Auchinoon 57.21 10 P **P** **21 25 27.8 -0.6**
EAU Auchinoon 57.21 10⇑*e*P **P** **21 25 27.8 -0.6**
EBL Broad Law 57.21 10 P **P** **21 25 27.7 -0.7**
EBL Broad Law 57.21 10⇑*e*P **P** **21 25 27.7 -0.7**
PLD Plovdiv 57.22 37 P **P** **21 25 28.5 -0.3**
PLD Plovdiv 57.22 37 P **P** **21 25 28.5 -0.3**
PLD Plovdiv 57.22 37 P **P** **21 25 29.3 +0.5**
CLZ Clausthal 57.25 21 *e*P **P** **21 25 28.9 +0.1**
comp=Z,124nm,1.6s,mb5.7
CLZ *e*PP PP 21 27 33.4 -2.7
CLZ *e*S **S** **21 33 26.2 +2.1**
CLZ Clausthal 57.25 21 *e*P **P** **21 25 28.9 +0.1**
CLZ *e* 21 27 33.4
CLZ *e*S **S** **21 33 26.2 +2.1**
CLZ pmax pmax
comp=Z,124nm,1.6s,mb5.7
TREC Trest 57.26 26⇑*i*P **P** **21 25 28.3 -0.6**
TREC *e*S **S** **21 33 23.1 -1.2**
TREC MLR MLR
comp=Z,2μm,16.6s,MS5.4
TREC Trest 57.26 26⇑*i*P **P** **21 25 28.3 -0.6**
TREC *e*x x 21 25 42.7
TREC *e*S **S** **21 33 23.1 -1.2**
TREC AMS AMS 21 54 10.0
comp=Z,2μm,16.6s
KSL Kastellorizon 57.30 46 *e*P **P** **21 25 29.0 -0.5**
EDI Edinburgh 57.33 10 P **P** **21 25 27.9 -1.3**
EDI AMb AMB 21 25 29.8
comp=Z,116nm,2.0s,mb5.6
EDI AMS AMS 21 47 53.6
comp=Z,2μm,16.1s
EDI Edinburgh 57.33 10⇑*e*P **P** **21 25 27.9 -1.3**
EDI AMb AMB 21 25 29.8
comp=Z,116nm,2.0s,mb5.6
EDI AMS AMS 21 47 53.6
comp=Z,2μm,16.1s,MS5.3
ALN Alexandroupoli 57.36 39 P **P** **21 25 28.5 -1.3**
ALN Alexandroupoli 57.36 39 P **P** **21 25 28.5 -1.3**
PRU Pruhonice 57.38 25⇑*i*P **P** **21 25 29.6 -0.2**
PRU *e* 21 28 52.5
PRU *e*S **S** **21 33 22.8 -3.1**
PRU MLR MLR
comp=Z,3μm,19.9s,MS5.4
PRU Pruhonice 57.38 25⇑*i*P **P** **21 25 29.6 -0.2**
PRU *e*x x 21 25 46.7
PRU *e*x x 21 27 24.2
PRU *e*x x 21 28 52.5
PRU *e*S **S** **21 33 22.8 -3.1**
PRU AMS AMS 21 50 40.0
comp=Z,3μm,19.9s
EAB Aberfoyle 57.39 9 P **P** **21 25 29.1 -0.6**
EAB Aberfoyle 57.39 9⇑*i*P **P** **21 25 29.1 -0.6**
KDZ Kurdzhali 57.40 38 P **P** **21 25 29.6 -0.4**
PRA Prague 57.40 24⇑P **P** **21 25 29.0 -0.9**
PRA PP PP 21 27 34.0 -3.4
PRA S **S** **21 33 26.0 -0.1**
PRA AMS AMS 21 50 45.0
ESY Stoneypath 57.42 10 P **P** **21 25 29.6 -0.3**
ESY Stoneypath 57.42 10⇑*i*P **P** **21 25 29.6 -0.3**
TIM Timisoara 57.51 32 P **P** **21 25 31.7 +1.0**
LCO Las Campanas 57.56 235 *e*P **P** **21 25 32.2 +0.8**
comp=Z,50nm,1.1s,mb5.5
LCO PcP PcP 21 26 25.4 +0.5
LCO LR LR
comp=Z,5μm,19.0s,MS5.6
EBH Black Hill 57.58 10 P **P** **21 25 30.3 -0.7**
EBH Black Hill 57.58 10⇑*e*P **P** **21 25 30.3 -0.7**
DIM Dimitrovgrad 57.70 38 P **P** **21 25 32.3 +0.1**
VRAC Vranov 57.75 26 P **P** **21 25 31.0 -1.4**
comp=Z,81nm,1.1s,mb5.7,baz=224,slow=7.0,SNR=120
VRAC PP PP 21 27 35.6 -5.0
comp=Z,30nm,1.0s,baz=227,slow=12,SNR=6.6
VRAC Vranov 57.75 26 P **P** **21 25 31.0 -1.4**
VRAC 21 27 35.6
VRAC pmax pmax
comp=Z,81nm,1.1s
VRAC pmax pmax
comp=Z,30nm,1.0s
VRAC Vranov 57.75 26⇓P **P** **21 25 31.5 -0.9**
VRAC Vranov 57.75 26⇓*i*P **P** **21 25 31.5 -0.9**
CLL Collm 57.79 23 *e*P **P** **21 25 32.3 -0.3**
comp=Z,203nm,1.4s,mb6.0
CLL *e*PP PP 21 27 37.6 -3.3
CLL *e*S **S** **21 33 30.3 -0.9**
CLL Collm 57.79 23⇑*i*P **P** **21 25 32.1 -0.5**
CLL *i* 21 27 37.6
CLL *e*S **S** **21 33 30.0 -1.2**
CLL pmax pmax
comp=Z,203nm,1.4s,mb6.0
CLL pmax pmax
comp=Z,92nm,1.3s,mb5.7
CLL MLR MLR
comp=Z,2μm,18.9s,MS5.3
CLL Collm 57.79 23⇑*i*P **P** **21 25 32.1 -0.5**

comp=Z,203nm,1.4s,mb6.0
CLL *i* PP PP 21 27 37.6 -3.3
CLL *e*S **S** **21 33 30.0 -1.2**
CLL LR LR
comp=Z,2μm,18.9s,MS5.3
CLL Collm 57.79 23⇑*i*P P 21 25 32.1 -0.5
comp=Z,203nm,1.4s,mb6.0
CLL *i* PP PP 21 27 37.6 -3.3
comp=Z,92nm,1.3s
CLL *e*PPP 21 28 55.0
CLL *e*S **S** **21 33 30.0 -1.2**
comp=N,2μm,25.7s
CLL *e*S **S** **21 33 30.0 -1.2**
comp=E,2μm,24.0s
CLL *e* 21 34 48.0
CLL *e*SSS 21 39 30.0
CLL Lm 21 50 00.0
comp=Z,2μm,18.9s
PVCC Panska Ves 57.81 24⇑*i*P P 21 25 32.6 -0.2
PVCC *e*S **S** **21 33 29.3 -2.1**
PVCC MLR MLR
comp=Z,3μm,17.2s,MS5.5
PVCC Panska Ves 57.81 24⇑*i*P P 21 25 32.6 -0.2
PVCC *e*PP PP 21 27 34.4 -6.6
PVCC *e*S **S** **21 33 29.3 -2.1**
PVCC AMS AMS 21 49 40.0
comp=Z,3μm,17.2s
BRG Berggiesshubel 57.82 24 *e*P P 21 25 32.3 -0.5
comp=Z,148nm,1.3s,mb5.9
BRG *e*PP PP 21 27 38.2 -3.0
BRG *e*S **S** **21 33 30.3 -1.3**
BRG Berggiesshubel 57.82 24⇑*i*P P 21 25 32.3 -0.6
comp=Z,149nm,1.3s,mb5.9
BRG *i* 21 26 21.4
comp=Z,45nm,1.5s
BRG PP PP 21 27 38.0 -3.2
BRG S **S** **21 33 35.0 +3.4**
BRG
comp=N,2μm,14.6s
BRG
comp=E,2μm,18.0s
BRG
comp=Z,2μm,19.7s
BRG Berggiesshubel 57.82 24⇑*i*P P 21 25 32.3 -0.5
BRG *i* 21 26 21.4
BRG 21 27 38.0
BRG S **S** **21 33 35.0 +3.4**
BRG pmax pmax
comp=Z,89nm,1.3s,mb5.6
BRG pmax pmax
comp=Z,27nm,1.5s,mb5.1
BRG MLR MLR
comp=N,1μm,14.6s,MS5.3
BRG MLR MLR
comp=E,1μm,18.0s,MS5.3
BRG MLR MLR
comp=Z,1μm,19.7s,MS5.1
BRG Berggiesshubel 57.82 24⇑*i*P P 21 25 32.3 -0.6
comp=Z,89nm,1.3s,mb5.6
BRG *i* 21 26 21.4
BRG PP PP 21 27 38.0 -3.2
BRG S **S** **21 33 35.0 +3.4**
BRG LR LR
comp=Z,1μm,19.7s,MS5.1
KAR1 Arisaig 57.87 8 P P 21 25 32.2 -0.9
KAR1 Arisaig 57.87 8⇑*e*P P 21 25 32.2 -0.9
CRAR CRAIOVA 58.02 35 P P 21 25 35.2 +0.8
KOLL Kolacno 58.05 28 *e*P P 21 25 34.2 -0.3
KOLL *e*SP 21 25 47.6
KOLL *e*PP PP 21 27 41.7 -1.5
KOLL Kolacno 58.05 28 *e*P P 21 25 34.2 -0.3
KOLL *e*sP sP 21 25 47.6 +6.2
KOLL *e*PP PP 21 27 41.7 -1.5
GZR Gura Zlata 58.12 33 P P 21 25 35.6 +0.5
GZR 21 25 36.1
GZR Gura Zlata 58.12 33 P P 21 25 35.6 +0.5
GZR Gura Zlata 58.12 33⇓*i*P P 21 25 36.1 +1.0
VYHS Vyhne 58.19 28 *e*P P 21 25 35.3 -0.2
comp=Z,189nm,1.3s,mb6.0
VYHS *e*SP 21 25 50.5
VYHS *e*PP PP 21 27 39.6 -4.9
VYHS *e*S **S** **21 33 33.3 -3.2**
VYHS *e*SS SS 21 37 26.1 -2.4
VYHS LR LR
comp=Z,2μm,22.3s,MS5.2
VYHS Vyhne 58.19 28 *e*P P 21 25 35.3 -0.2
VYHS *e*sP sP 21 25 50.5 +8.1
VYHS *e*PP PP 21 27 39.6 -4.9
VYHS *e*S **S** **21 33 33.3 -3.2**
VYHS *e*SS SS 21 37 26.1 -2.4
KSB Sheil Bridge 58.21 8 P P 21 25 35.3 -0.1
KSB Sheil Bridge 58.21 8⇑*e*P P 21 25 35.3 -0.1
PVL Pavlikeni 58.25 36 P P 21 25 35.0 -1.0
KSK Scoval 58.28 7 P P 21 25 36.1 +0.1
KSK Scoval 58.28 7⇑*i*P P 21 25 36.1 +0.1
KPL Plockton 58.30 8 P P 21 25 35.1 -1.0
KPL AMb AMB 21 25 36.7
comp=Z,134nm,2.0s,mb5.6
KPL AMS AMS 21 48 26.9
comp=Z,2μm,18.8s
KPL Plockton 58.30 8⇑*e*P P 21 25 35.1 -1.0
KPL AMb AMB 21 25 36.7
comp=Z,134nm,2.0s,mb5.6
KPL AMS AMS 21 48 26.9
comp=Z,2μm,18.8s,MS5.2
UPC Upice 58.39 25⇑*i*P P 21 25 36.4 -0.5
UPC *e* 21 27 41.9
UPC Upice 58.39 25⇑*i*P P 21 25 36.4 -0.5
UPC *e*x x 21 25 50.6
UPC *e*PP PP 21 27 41.9 -4.3
HLG Helgoland 58.40 18 *e*S S 21 33 41.5 +2.4
DPC Dobruska-Polom 58.41 25⇑*i*P P 21 25 36.5 -0.5
DPC *e*S **S** **21 33 37.6 -1.7**
DPC MLR MLR
comp=Z,3μm,16.7s,MS5.4
DPC Dobruska-Polom 58.41 25⇑*i*P P 21 25 36.5 -0.5
DPC *e*x x 21 25 50.4
DPC *e*x x 21 27 34.8
DPC *e*S **S** **21 33 37.6 -1.7**
DPC AMS AMS 21 52 50.0
comp=Z,3μm,16.7s
KAC Achnashellach 58.51 8 P P 21 25 36.5 -1.0
KAC Achnashellach 58.51 8⇑*i*P P 21 25 36.5 -1.0
MORC Moravsky Berou 58.52 26⇑*i*P P 21 25 37.2 -0.5
MORC *e* 21 27 43.2
MORC *e*S **S** **21 33 42.8 +2.1**
MORC pmax pmax
comp=Z,245nm,1.3s,mb6.1
MORC Moravsky Berou 58.52 26⇑*i*P P 21 25 37.2 -0.5
comp=Z,245nm,1.3s,mb6.1
MORC *e*PP PP 21 27 43.1 -4.2
MORC *e*S **S** **21 33 42.8 +2.1**
MORC Moravsky Berou 58.52 26⇑*i*P P 21 25 37.4 -0.3
JMB Yambol 58.57 38 P P 21 25 38.1 -0.2
JMB Yambol 58.57 38 P P 21 25 38.1 -0.2
JMB Yambol 58.57 38 P P 21 25 38.3 0.0
MDO Dochfour 58.59 9 P P 21 25 37.4 -0.7
MDO Dochfour 58.59 9⇑*i*P P 21 25 37.4 -0.7
SZH Strazhica 58.64 37 P P 21 25 38.9 +0.2
DESE Dese 58.65 77 *e*P P 21 25 39.6 +0.3
DESE *e*S **S** **21 33 55.8 +12**
MME1 Meikle Cairn 58.69 10 P P 21 25 37.6 -1.2
MME1 Meikle Cairn 58.69 10⇑*e*P P 21 25 37.6 -1.2
LIKS Likavka 58.71 28 *e*P P 21 25 41.2 +2.1
LIKS pmax pmax
comp=Z,62nm,1.1s,mb5.5
LIKS Likavka 58.71 28 *e*P P 21 25 41.2 +2.1
comp=Z,62nm,1.1s,mb5.5
LIKS Likavka 58.71 28 *e*P P 21 25 41.2 +2.1
RRH Rhenigidale 58.73 7 P P 21 25 38.0 -1.1
RRH Rhenigidale 58.73 7⇑*e*P P 21 25 38.0 -1.1
EIL Elat 58.76 55 P P 21 25 39.6 -0.2
comp=Z,66nm,1.0s,mb5.6,baz=268,slow=4.5,SNR=45
KSP Ksiaz 58.76 25 *e*P P 21 25 39.1 -0.3
comp=Z,700nm,1.8s,mb6.4
KSP *e*PP PP 21 27 45.9 -3.6
KSP *e*S **S** **21 33 40.3 -3.6**
KSP LMZ 21 50 01.4
comp=Z,6μm,21.0s
KSP Ksiaz 58.76 25⇑*e*P P 21 25 39.1 -0.3
KSP *e* 21 27 45.7
KSP *e*S **S** **21 33 40.0 -3.9**
KSP MLR MLR
comp=Z,7μm,21.0s,MS5.8
KSP Ksiaz 58.76 25⇑*e*P P 21 25 39.1 -0.3
KSP *e*PP PP 21 27 45.7 -3.8
KSP *e*PPP 21 29 03.3
KSP *e*S **S** **21 33 40.0 -3.9**
KSP LR LR
comp=Z,7μm,21.0s,MS5.8
RRR Rubha Reidh 58.78 8 P P 21 25 38.6 -0.9
RRR Rubha Reidh 58.78 8⇑*i*P P 21 25 38.6 -0.9
OKC Ostrava-Krasne 58.83 27⇑*i*P P 21 25 39.4 -0.5
OKC *e*S **S** **21 33 43.4 -1.4**
OKC MLR MLR
comp=Z,2μm,15.6s,MS5.3
OKC Ostrava-Krasne 58.83 27⇑*i*P P 21 25 39.4 -0.5
OKC *e*x x 21 25 54.7
OKC *e*S **S** **21 33 43.4 -1.4**
OKC AMS AMS 21 55 00.0
comp=Z,2μm,15.6s
MCD Coleburn Disti 58.90 9 P P 21 25 39.6 -0.6
MCD Coleburn Disti 58.90 9⇑*i*P P 21 25 39.6 -0.6
BSEG Bad Segeberg 58.96 19 *e*P P 21 25 40.7 -0.1
comp=Z,235nm,1.1s,mb6.1
BSEG *e*PP PP 21 27 48.9 -2.3
BSEG *e*S **S** **21 33 48.1 +1.7**
BSEG Bad Segeberg 58.96 19 *e*P P 21 25 40.7 -0.1
BSEG *e* 21 27 48.9
BSEG *e*S **S** **21 33 48.1 +1.7**
BSEG pmax pmax
comp=Z,235nm,1.1s,mb6.1
KECS Kecovo 58.97 29 *e*P P 21 25 41.2 +0.2
KECS pmax pmax
comp=Z,62nm,1.2s,mb5.5
KECS Kecovo 58.97 29 *e*P P 21 25 41.2 +0.2
comp=Z,62nm,1.2s,mb5.5
KECS *e*PP pP 21 25 51.2 +5.2
KECS *e*SP 21 25 56.3
KECS *e*PP PP 21 27 48.2 -3.2
KECS Kecovo 58.97 29 *e*P P 21 25 41.2 +0.2
KECS *e*pP pP 21 25 51.2 +5.2
KECS *e*sP sP 21 25 56.3 +8.4
KECS *e*PP PP 21 27 48.2 -3.2
DRGR 58.98 32 ⇑P P 21 25 41.0 0.0
DRGR 21 25 41.3
DRGR 58.98 32 ⇑P P 21 25 41.0 0.0
DRGR 58.98 32⇑*i*P P 21 25 41.0 0.0
RUE Ruedersdorf 59.01 22 *e*P P 21 25 41.2 +0.1
comp=Z,355nm,1.2s,mb6.3
RUE *e*PP PP 21 27 48.2 -3.5
RUE *e*S **S** **21 33 46.5 -0.6**
RUE Ruedersdorf 59.01 22⇑*i*P P 21 25 41.1 0.0
comp=Z,302nm,1.2s,mb6.2
RUE *e*PP PP 21 27 46.3 -5.4
RUE *e*S **S** **21 33 46.3 -0.8**
RAC Raciborz 59.03 27 *e*P P 21 25 41.6 +0.3
RAC *e*S **S** **21 33 43.0 -4.4**
RAC MLR MLR
comp=Z,1μm,16.0s,MS5.0
ALFC Alevga 59.05 48 P P 21 25 40.9 -0.8
comp=Z,1.9nm,0.7s,mb4.2
MVH1 Achvaich 59.08 9 P P 21 25 40.5 -1.0
MVH1 Achvaich 59.08 9⇑*i*P P 21 25 40.5 -1.0
GTBY Guantanamo Bay 59.10 293⇓*e*P P 21 25 43.0 +0.6
comp=Z,104nm,1.0s,mb5.8
GTBY *e*PP PP 21 27 54.1 +1.0
GTBY *e*S **S** **21 33 50.1 +0.7**
GTBY LR LR
comp=Z,820nm,20.0s,MS4.8
NNA Nana 59.24 256 LR LR 21 50 10.3
comp=Z,6μm,18.0s,MS5.8,baz=73,slow=35
BUC1 Bucharest 59.32 36 P P 21 25 44.4 +1.0
RSC Scourie 59.34 8 P P 21 25 42.1 -1.2
RSC Scourie 59.34 8⇑*e*P P 21 25 42.1 -1.2
VOIR 59.41 34 ⇑P P 21 25 44.1 +0.1
VOIR 21 25 44.2
VOIR 59.41 34 ⇑P P 21 25 44.1 +0.1
VOIR 59.41 34⇑*i*P P 21 25 44.1 +0.1
MDB Medias 59.46 33 P P 21 25 45.2 +0.8
MDB 21 25 45.5
MDB Medias 59.46 33 ⇑P P 21 25 45.5 +1.1
MDB Medias 59.46 33⇑*i*P P 21 25 45.5 +1.1
CSS Prodhromos 59.51 48 P P 21 25 44.2 -0.7
comp=Z,0.7nm,0.8s
MAMC Mammari 59.51 48 P P 21 25 45.4 +0.4
NIE Niedzica 59.53 28 *e*P P 21 25 45.2 +0.4
NIE *e*PP PP 21 27 55.1 -1.3
SULR 59.64 35 ⇑P P 21 25 45.2 -0.5
SULR 59.64 35⇑*i*P P 21 25 45.2 -0.5
ORE Reay 59.74 9 P P 21 25 45.5 -0.5
ORE Reay 59.74 9 *e*P P 21 25 45.5 -0.5
TRPA Tarpa 59.76 30⇑*i*P P 21 25 45.3 -1.1
DOPR Dopca 59.91 34⇑*i*P P 21 25 48.0 +0.5
MLR Muntele Rosu 59.94 35 P P 21 25 47.4 -0.3
comp=Z,293nm,1.2s,mb6.2,baz=256,slow=5.7,SNR=138
MLR PP PP 21 27 58.2 -1.9
comp=Z,108nm,1.2s,baz=257,slow=5.4,SNR=5.4
MLR Muntele Rosu 59.94 35 ⇑P P 21 25 47.4 -0.3
MLR 21 25 47.6
MLR Muntele Rosu 59.94 35 ⇑P P 21 25 47.4 -0.3
MLR Muntele Rosu 59.94 35⇑*i*P P 21 25 47.4 -0.3
BMR Baia Mare 59.95 31 P P 21 25 47.5 -0.2
BMR 21 25 47.9
BMR Baia Mare 59.95 31 ⇓P P 21 25 47.9 +0.2
BMR Baia Mare 59.95 31⇓*i*P P 21 25 47.9 +0.2
UZH Uzhgorod 59.96 30*c* *i*P P 21 25 47.9 +0.1
UZH *e* 21 26 31.1
UZH *e*PPP 21 29 21.9
UZH *i*S **S** **21 33 55.1 -4.4**
UZH *i*PS 21 34 14.5
UZH *e* 21 35 39.5
UZH *e*SS SS 21 37 59.7 +3.4
UZH MLR MLR
comp=N,1μm,19.0s,MS5.2
UZH MLR MLR
comp=E,1μm,19.0s,MS5.2
UZH MLR MLR
comp=Z,900nm,19.0s,MS4.9
UZH Uzhgorod 59.96 30 *i*P P 21 25 48.0 +0.2
STHS Stebnicka Huta 59.98 29 *e*P P 21 25 48.0 +0.1
STHS pmax pmax
comp=Z,17nm,1.2s,mb5.0
STHS Stebnicka Huta 59.98 29 *e*P P 21 25 48.0 +0.1
comp=Z,17nm,1.2s,mb5.0
STHS *e*PP pP 21 25 58.9 +6.0
STHS *e*PP PP 21 28 01.9 +1.6
STHS Stebnicka Huta 59.98 29 *e*P P 21 25 48.0 +0.1
STHS *e*pP pP 21 25 58.9 +6.0
STHS *e*PP PP 21 28 01.9 +1.6
PHNC Paralimni 60.05 49 P P 21 25 49.4 +0.7
comp=Z,2.3nm,0.8s
OTAV Otavalo 60.16 270⇓*e*P P 21 25 49.9 0.0
OTAV *e*PP PP 21 28 03.7 +1.1
OTAV *e*S **S** **21 34 05.3 +2.0**
OTAV LR LR
comp=Z,2μm,22.0s,MS5.2
PGOR Pogoanele 60.20 36⇑*i*P P 21 25 50.0 +0.5
PSN Preselentsi 60.22 37 P P 21 25 48.4 -1.3
AMRR Amara 60.23 36 ⇑P P 21 25 49.4 -0.4
AMRR Amara 60.23 36⇑*i*P P 21 25 49.4 -0.3
ATAH Atahualpa 60.32 262 LR LR 21 50 10.0
comp=Z,8μm,21.0s,MS5.8,baz=245,slow=34
MMAI Mount Meron Ar 60.33 51 P P 21 25 51.2 +0.6
comp=Z,26nm,0.9s,mb5.3,baz=243,slow=7.4,SNR=15
MMAI LR LR 21 53 51.8
comp=Z,3μm,19.6s,MS5.4,baz=250,slow=38
GRER 60.47 35 P P 21 25 52.1 +0.8
RGN Rugen 60.49 21 *e*P P 21 25 51.5 +0.2
comp=Z,271nm,1.3s,mb6.1
RGN *e*PP PP 21 28 03.1 -1.6
RGN *e*S **S** **21 34 09.4 +3.4**
PLOR Plostina 60.55 35 ⇓P P 21 25 50.8 -1.1
PLOR Plostina 60.55 35⇓*i*P P 21 25 50.8 -1.1
KSDI Kefar Szold 60.59 51 *e*P P 21 25 53.0 +0.6
VRI Vrincioaia 60.61 35 ⇓P P 21 25 51.1 -1.2
VRI 21 25 51.6
VRI Vrincioaia 60.61 35 ⇓P P 21 25 51.1 -1.1
VRI Vrincioaia 60.61 35⇓*i*P P 21 25 51.1 -1.2
MUD Monsted U'grnd 60.73 17⇑*i*P P 21 25 52.9 +0.1
MUD *i* S **S** **21 34 05.1 -3.9**
MUD pmax pmax
comp=Z,70nm,1.1s,mb5.7
MUD MLR MLR
comp=Z,3μm,19.0s,MS5.4
MUD Monsted U'grnd 60.73 17⇑*i*P P 21 25 52.9 +0.1
comp=Z,70nm,1.1s,mb5.7
MUD *i* S **S** **21 34 05.1 -3.9**
MUD
comp=Z,3μm,19.0s
TIRR Tirgusor 60.79 37⇑*i*P P 21 25 52.3 -1.2
TIRR *e* 21 28 06.3
TIRR pmax pmax
comp=Z,179nm,1.4s,mb6.0
TIRR Tirgusor 60.79 37⇑*i*P P 21 25 52.3 -1.2
comp=Z,179nm,1.4s,mb6.0
TIRR *e*PP PP 21 28 06.3 -1.4
TIRR Tirgusor 60.79 37⇓*i*P P 21 25 52.3 -1.2
BURAR Bucovina Array 60.82 32 ⇓P P 21 25 53.7 0.0
BURAR 21 25 54.2
BURAR Bucovina Array 60.82 32 ⇓P P 21 25 53.7 0.0
BURAR Bucovina Array 60.82 32⇓*i*P P 21 25 53.7 0.0
KWP Kalwaria Pacla 60.83 29 *e*P P 21 25 53.5 -0.2
comp=Z,400nm,1.6s,mb6.3
KWP *e*PP PP 21 28 06.3 -1.5
KWP *e*S **S** **21 34 11.8 +1.2**
KWP LMZ 21 52 03.4
comp=Z,4μm,23.2s
KWP Kalwaria Pacla 60.83 29⇑*e*P P 21 25 53.5 -0.2
KWP *e* 21 28 06.3
KWP *e*S **S** **21 34 11.8 +1.2**
KWP pmax pmax
comp=Z,400nm,1.6s,mb6.3
KWP MLR MLR
comp=Z,4μm,23.2s,MS5.5
KWP Kalwaria Pacla 60.83 29⇑*i*P P 21 25 53.5 -0.2
comp=Z,198nm,1.3s,mb6.1
KWP *e*PcP PcP 21 26 38.0 +0.6
KWP *e*PP PP 21 28 06.5 -1.3
KWP *e*S **S** **21 34 10.6 0.0**
KWP LR LR
comp=Z,3μm,20.0s,MS5.5
KWP Kalwaria Pacla 60.83 29⇓*i*P P 21 25 53.5 -0.2
BUR08 Bucovina Ar. S 60.83 32⇑*i*P P 21 25 53.8 0.0
BUR08 PcP PcP 21 26 35.5 -1.9
BUR08 *e*PP PP 21 28 06.3 -1.6
BUR08 *e*S **S** **21 34 11.5 +0.8**
BHL Bhannes 60.85 50 *e*P P 21 25 54.4 +0.2
TESR 60.94 34 ⇑P P 21 25 53.4 -1.1
TESR 60.94 34⇑*i*P P 21 25 53.4 -1.1
GKP Gorka Klasztor 60.97 24 *e*P P 21 25 54.8 +0.2
comp=Z,700nm,1.2s,mb6.7
GKP *e*PP PP 21 28 06.4 -2.6
GKP *e*S **S** **21 34 12.8 +0.6**
GKP LMZ 21 50 45.5
comp=Z,2μm,19.3s
GKP Gorka Klasztor 60.97 24⇑*e*P P 21 25 54.8 +0.3
GKP *e* 21 28 06.4
GKP *e*S **S** **21 34 12.8 +0.6**
GKP pmax pmax
comp=Z,700nm,1.2s,mb6.7
GKP MLR MLR
comp=Z,2μm,19.3s,MS5.2
GKP Gorka Klasztor 60.97 24⇑*e*P P 21 25 54.8 +0.3
comp=Z,0.7nm,1.2s
GKP *e*PP PP 21 28 06.4 -2.6
GKP *e*S **S** **21 34 12.8 +0.6**
GKP LR LR
comp=Z,2μm,19.3s,MS5.2
MTDJ Mount Denham 61.00 291 *e*P P 21 25 56.7 +1.3
comp=Z,97nm,1.1s,mb5.8
MTDJ LR LR
comp=Z,1μm,20.0s,MS5.0
CFR Carcaliu 61.02 36 P P 21 25 54.3 -0.8
CFR 21 25 54.5
CFR Carcaliu 61.02 36 P P 21 25 54.3 -0.8
CFR Carcaliu 61.02 36⇓*i*P P 21 25 54.5 -0.6
COP Copenhagen 61.10 19⇑*i*P P 21 25 55.7 +0.3
COP *i* S **S** **21 34 14.2 +0.4**
COP pmax pmax
comp=Z,23nm,0.9s,mb5.3
COP MLR MLR
comp=Z,2μm,19.0s,MS5.2
COP Copenhagen 61.10 19⇑*i*P P 21 25 55.7 +0.3
comp=Z,23nm,0.9s,mb5.3
COP *i* S **S** **21 34 14.2 +0.4**
COP LR LR
comp=Z,2μm,19.0s,MS5.2
COP Copenhagen 61.10 19⇑*i*P P 21 25 55.7 +0.3
comp=Z,23nm,0.9s,mb5.3
COP *i* S **S** **21 34 14.2 +0.4**
COP
comp=Z,2μm,19.0s
ASF Jabal al Asfar 61.20 53 P P 21 25 57.2 +0.6
comp=Z,75nm,0.9s,mb5.8,baz=114,slow=6.3,SNR=83
HWQ Hawqa 61.22 50 *e*P P 21 25 57.0 +0.4
TLCR 61.43 36 ⇓P P 21 25 57.8 -0.1
TLCR 61.43 36⇓*i*P P 21 25 57.8 -0.1
BSD Bornholm Skovb 61.50 21⇑*i*P P 21 25 57.2 -0.9
BSD pmax pmax
comp=Z,24nm,1.0s,mb5.3
BSD MLR MLR
comp=Z,2μm,20.0s,MS5.3
BSD Bornholm Skovb 61.50 21⇑*i*P P 21 25 57.2 -0.9
comp=Z,24nm,1.0s,mb5.3
BSD Bornholm Skovb 61.50 21⇑*i*P P 21 25 57.2 -0.9
comp=Z,24nm,1.0s,mb5.3
BSD
comp=Z,2μm,20.0s
LVV L'vov 61.60 30 *e*P P 21 25 58.1 -0.8
LVV *i* S **S** **21 34 17.2 -3.2**
LVV *i* PS 21 34 35.6
LVV *i* SS SS 21 38 27.8 +5.8
LVV MLR MLR
comp=N,1μm,20.0s,MS5.3
LVV MLR MLR
comp=E,2μm,20.0s,MS5.3
LVV MLR MLR
comp=Z,2μm,20.0s,MS5.3
LVV L'vov 61.60 30 *e*P P 21 25 58.0 -0.9
LRW Lerwick 61.67 10 P P 21 25 57.8 -1.4
LRW AMb AMB 21 25 59.5
comp=Z,118nm,2.1s,mb5.6
LRW AMS AMS 21 50 31.5
comp=Z,2μm,16.1s
LRW Lerwick 61.67 10⇑*e*P P 21 25 57.8 -1.4
LRW AMb AMB 21 25 59.5
comp=Z,118nm,2.1s,mb5.6
LRW AMS AMS 21 50 31.5
comp=Z,2μm,16.1s,MS5.3
WAL1 Walls 61.71 9 P P 21 25 58.2 -1.3
WAL1 Walls 61.71 9⇑*e*P P 21 25 58.2 -1.3
BR131 Keskin Array S 61.79 44⇑*e*P P 21 26 00.2 -0.2
BR131 *e*PcP PcP 21 26 41.6 +0.1
BR131 *e*PP PP 21 28 16.4 -0.2
BR131 LR LR
comp=Z,2μm,19.0s,MS5.4
BRTR Keskin Array B 61.79 44 P P 21 25 59.8 -0.6
comp=Z,39nm,0.9s,mb5.5,baz=237,slow=5.7,SNR=196
BRTR PP PP 21 28 15.6 -1.0
comp=Z,7.8nm,0.8s,baz=234,slow=6.9,SNR=2.6
BRTR LR LR 21 55 57.3
comp=Z,3μm,19.8s,MS5.4,baz=65,slow=39
BRTR Keskin Array B 61.79 44 P P 21 25 59.8 -0.6
BRTR 21 28 15.6
SNART Snartemo 61.81 15 *e*P P 21 25 59.8 -0.4
WAR Warsaw 61.82 26 *e*P P 21 26 00.6 +0.3
comp=Z,800nm,1.8s,mb6.5
WAR *e*S **S** **21 34 22.9 -0.1**
WAR LMZ 21 50 05.0
comp=Z,2μm,26.4s
WAR Warsaw 61.82 26⇑*e*P P 21 26 00.6 +0.3
WAR *e*S **S** **21 34 22.9 -0.1**
WAR pmax pmax
comp=Z,800nm,1.8s,mb6.5
WAR MLR MLR
comp=Z,2μm,26.4s,MS5.2
WAR Warsaw 61.82 26⇑*e*P P 21 26 00.6 +0.3
comp=Z,0.8nm,1.8s
WAR *e*S **S** **21 34 22.9 -0.1**
WAR LR LR
comp=Z,2μm,26.4s,MS5.2
LEOM Leova 61.82 35 ⇓P P 21 25 59.3 -1.2
LEOM Leova 61.82 35⇑*i*P P 21 25 59.8 -0.7
STAV Stavanger 61.96 14 *e*P P 21 26 00.7 -0.5
STAV AMb AMB 21 26 02.4
comp=Z,153nm,1.8s,mb5.8
STAV Stavanger 61.96 14 *e*P P 21 26 00.7 -0.5

comp=Z,153nm,1.8s,mb5.8
BCIP Isla Barro Col 61.98 280 PFAKE 21 26 10.0 +7.8
BCIP LR LR
comp=Z,2μm,22.0s,MS5.2
PLCA Paso Flores 62.10 223 P **P** **21 26 02.9 +0.4**
comp=Z,1.9nm,0.8s,mb4.3,baz=60,slow=9.0,SNR=1.7
PLCA LR LR 21 49 40.1
comp=Z,3μm,19.9s,MS5.4,baz=63,slow=33
KMY Karmoy 62.10 13⇑ *i*P **P** **21 26 01.3 -0.8**
KMY AMb AMB 21 26 03.1
comp=Z,113nm,1.6s,mb5.8
KMY Karmoy 62.10 13⇑ *i*P **P** **21 26 01.3 -0.8**
comp=Z,113nm,1.6s,mb5.8
KIS Kishinev 62.44 34 *i* P **P** **21 26 02.0 -2.6**
comp=Z,1μm,7.0s
KIS Kishinev 62.44 34 *i* PP PP 21 28 18.0 -4.1
KIS *e*S **S** **21 34 24.0 -7.1**
KIS Kishinev 62.44 34α *i*P **P** **21 26 02.0 -2.6**
KIS *i* 21 28 18.0
KIS *e* 21 29 58.0
KIS *e*S **S** **21 34 24.0 -7.1**
KIS pmax pmax
comp=Z,600nm,1.6s,mb6.5
KIS pmax pmax
comp=N,270nm,2.0s
KIS pmax pmax
comp=E,470nm,1.8s
KIS pmax pmax
comp=Z,1μm,7.0s
KIS pmax pmax
comp=Z,1μm,7.0s
KIS MLR MLR
comp=N,2μm,18.0s,MS5.5
KIS MLR MLR
comp=E,2μm,18.0s,MS5.5
KIS MLR MLR
comp=Z,3μm,18.0s,MS5.4
KIS MLR MLR
comp=Z,3μm,18.0s
KIS Kishinev 62.44 34 P **P** **21 26 02.6 -2.0**
BLS5 Blasjo 62.58 14⇑ *i*P **P** **21 26 05.0 -0.3**
BLS5 AMb AMB 21 26 06.8
comp=Z,83nm,1.8s,mb5.6
BLS5 Blasjo 62.58 14⇑ *i*P **P** **21 26 05.0 -0.3**
comp=Z,83nm,1.8s,mb5.6
ODD1 Odda 63.05 14 *e*P **P** **21 26 08.7 +0.2**
ODD1 AMb AMB 21 26 10.4
comp=Z,121nm,1.8s,mb5.7
ODD1 Odda 63.05 14 *e*P **P** **21 26 08.7 +0.2**
comp=Z,121nm,1.8s,mb5.7
BER Bergen 63.17 13⇑ *i*P **P** **21 26 08.3 -0.9**
BER AMb AMB 21 26 10.9
comp=Z,105nm,1.8s,mb5.7
BER *e*S **S** **21 34 41.4 +1.6**
BER AMS AMS 21 54 06.6
comp=Z,2μm,19.3s,MS5.3
BER Bergen 63.17 13⇑ *i*P **P** **21 26 08.4 -0.8**
BER pmax pmax
comp=Z,105nm,1.8s,mb5.7
BER MLR MLR
comp=Z,2μm,19.3s,MS5.3
BER Bergen 63.17 13⇑ *i*P **P** **21 26 08.3 -0.9**
comp=Z,105nm,1.8s,mb5.7
BER LR LR
comp=Z,2μm,19.3s,MS5.3
ASK Askoy 63.23 13 *e*P **P** **21 26 09.8 +0.1**
KONO Kongsberg 63.57 15⇑ *i*P **P** **21 26 11.0 -0.8**
KONO AMb AMB 21 26 13.6
comp=Z,118nm,1.7s,mb5.6
KONO *e*S **S** **21 34 45.4 +0.6**
KONO AMS AMS 21 55 07.9
comp=Z,2μm,19.9s,MS5.4
KONO Kongsberg 63.57 15⇑ *i*P **P** **21 26 11.3 -0.6**
KONO 21 28 30.3
KONO pmax pmax
comp=Z,221nm,1.6s,mb5.9
KONO MLR MLR
comp=Z,3μm,19.0s,MS5.5
KONO Kongsberg 63.57 15⇑ *i*P **P** **21 26 11.3 -0.5**
comp=Z,221nm,1.6s,mb5.9
KONO PP PP 21 28 30.3 -1.5
KONO LR LR
comp=Z,3μm,19.0s,MS5.5
PKME Peaks-Kenny Pk 63.80 322 PFAKE 21 26 20.0 +6.3
PKME LR LR
comp=Z,1μm,19.0s,MS5.1
SUW Suwalki 63.98 26 *e*P **P** **21 26 13.8 -0.8**
comp=Z,800nm,1.5s,mb6.5
SUW *e*PP PP 21 28 29.9 -5.7
SUW *e*S **S** **21 34 48.2 -1.8**
SUW *e*SS SS 21 38 54.1 -4.9
SUW LMZ 21 51 30.9
comp=Z,2μm,27.1s
SUW Suwalki 63.98 26⇑ *e*P **P** **21 26 13.8 -0.9**
SUW *e* 21 28 29.8
SUW *e*S **S** **21 34 48.3 -1.8**
SUW *e*SS SS 21 38 54.1 -4.9
SUW pmax pmax
comp=Z,800nm,1.5s,mb6.5
SUW MLR MLR
comp=Z,2μm,27.1s,MS5.2
SUW Suwalki 63.98 26⇑ *i*P **P** **21 26 14.1 -0.6**
SUW *e*PP PP 21 28 29.1 -6.4
HYA Hoyanger 64.06 13⇑ *i*P **P** **21 26 16.2 +1.1**
HYA AMb AMB 21 26 17.9
comp=Z,105nm,1.8s,mb5.6
HYA Hoyanger 64.06 13⇑ *i*P **P** **21 26 16.2 +1.1**
comp=Z,105nm,1.8s,mb5.6
OSL Oslo 64.12 16 *e*P **P** **21 26 15.2 -0.3**
OSL AMb AMB 21 26 17.0
comp=Z,104nm,1.8s,mb5.6
OSL Oslo 64.12 16 *e*P **P** **21 26 15.2 -0.3**
comp=Z,104nm,1.8s,mb5.6
FOO Floro 64.20 12⇑ *i*P **P** **21 26 14.7 -1.2**
FOO AMb AMB 21 26 17.1
comp=Z,139nm,1.4s,mb5.8
FOO *e*S **S** **21 34 53.4 +0.8**
FOO AMS AMS 21 55 30.9
comp=Z,2μm,16.8s,MS5.3
FOO Floro 64.20 12⇑ *i*P **P** **21 26 14.7 -1.2**
comp=Z,139nm,1.4s,mb5.8
FOO LR LR
comp=Z,2μm,16.8s,MS5.3
SIM Simferopol' 64.53 39*c i*P **P** **21 26 17.1 -1.4**
SIM *i* S **S** **21 34 54.0 -3.2**
SIM pmax pmax
comp=Z,40nm,1.0s,mb5.4
SIM MLR MLR
comp=Z,2μm,19.0s,MS5.4
KIEV Kiev 64.77 31⇑ *i*P **P** **21 26 18.7 -1.2**
KIEV *e* 21 28 37.3
KIEV *e*S **S** **21 34 54.7 -5.3**
KIEV pmax pmax
comp=Z,361nm,1.4s,mb6.2
KIEV MLR MLR
comp=Z,3μm,22.0s,MS5.4
KIEV Kiev 64.77 31⇑ *i*P **P** **21 26 18.7 -1.2**
comp=Z,361nm,1.4s,mb6.2
KIEV *e*PP PP 21 28 37.3 -5.2
KIEV *e*S **S** **21 34 54.7 -5.2**
KIEV LR LR
comp=Z,3μm,22.0s,MS5.4
AKASG Malin Array Be 64.78 31 P **P** **21 26 18.5 -1.5**
comp=Z,139nm,1.1s,mb5.9,baz=234,slow=7.1,SNR=151
AKASG PP PP 21 28 38.3 -4.4
comp=Z,23nm,1.1s,baz=234,slow=9.6,SNR=4.7
AKASG LR LR 21 56 56.6
comp=Z,3μm,18.5s,MS5.5,baz=245,slow=38
AKASG Malin Array Be 64.78 31 P **P** **21 26 18.5 -1.5**
AKASG 21 28 38.3
AKASG Malin Array Be 64.78 31 P **P** **21 26 18.5 -1.5**
AKASG PP PP 21 28 38.3 -4.4
AKASG LR LR 21 56 56.6
AKBB Malin Array Si 64.78 31⇑ *i*P **P** **21 26 18.7 -1.3**
AKBB *e* 21 28 38.1
AKBB *e*S **S** **21 34 53.9 -6.2**
PAL Palisades 64.87 316 *e*P **P** **21 26 21.5 +0.7**
PAL pmax pmax
comp=Z,28nm,1.0s,mb5.2
PAL Palisades 64.87 316 *e*P **P** **21 26 21.5 +0.7**
comp=Z,28nm,1.0s,mb5.2
BORG Borgarnes 64.88 359 P **P** **21 26 20.6 +0.3**
comp=Z,18nm,0.8s,mb5.1,baz=180,slow=3.0,SNR=2.9
NAO01 NORSAR Array S 64.93 15⇑ *e*P **P** **21 26 20.3 -0.5**
comp=Z,32nm,0.9s,mb5.3
NAO01 *e*PcP PcP 21 26 51.9 -1.9
NAO01 *e*PP PP 21 28 40.1 -3.6
NAO01 LR LR
comp=Z,2μm,20.0s,MS5.3
HNH Hanover 64.95 320 *e*P **P** **21 26 22.3 +1.1**
LBNH Lisbon 64.96 320⇓ *e*P **P** **21 26 21.7 +0.4**
LBNH *e*S **S** **21 35 00.5 -2.1**
LBNH pmax pmax
comp=Z,36nm,1.1s,mb5.3
LBNH MLR MLR
comp=Z,2μm,20.0s,MS5.2
LBNH Lisbon 64.96 320⇓ *e*P **P** **21 26 21.7 +0.4**
comp=Z,36nm,1.1s,mb5.3
LBNH *e*S **S** **21 35 00.5 -2.1**
LBNH LR LR
comp=Z,2μm,20.0s,MS5.2
HFS Hagfors 65.12 17 P **P** **21 26 21.5 -0.5**
comp=Z,43nm,0.9s,mb5.5,baz=208,slow=5.0,SNR=70
HFS PP PP 21 28 41.1 -4.3
comp=Z,40nm,0.8s,baz=208,slow=8.4,SNR=7.1
NB2 NORSAR Subarra 65.18 15 P **P** **21 26 22.1 -0.3**
comp=Z,134nm,1.2s,mb5.8,baz=211,slow=6.9
NOA NORSAR Array B 65.18 15 P **P** **21 26 21.6 -0.8**
comp=Z,44nm,1.1s,mb5.4,baz=211,slow=6.6,SNR=74
NOA LR LR 21 56 11.6
comp=Z,2μm,20.6s,MS5.2,baz=210,slow=37
MDV Middlebury 65.66 320 *e*P **P** **21 26 26.2 +0.4**
CNNC Cliffs of the 65.68 309 *e*P **P** **21 26 26.4 +0.2**
CNNC *e*S S 21 35 12.7 +0.9
CNNC LR LR
comp=Z,1μm,20.0s,MS5.2
ACCN Adirondack Com 65.71 319 *e*P **P** **21 26 26.4 +0.1**
comp=Z,34nm,1.3s,mb5.2
NACGM Naroch 66.15 27 *e*P **P** **21 26 26.0 -2.8**
IIGN Ignalina 66.19 26 *e*P **P** **21 26 28.8 -0.2**
IIGN AMB AMB 21 26 29.6
comp=Z,64nm,1.5s,mb5.4
CBN Corbin 66.28 312 *e*P **P** **21 26 29.4 -0.6**
comp=Z,50nm,1.0s,mb5.5
CBN *e*PcP PcP 21 26 59.7 -0.3
CBN *e*S S 21 35 17.7 -1.3
CBN LR LR
comp=Z,2μm,22.0s,MS5.3
FRNY Flat Rock 66.29 320 *e*P **P** **21 26 30.1 +0.2**
comp=Z,16nm,1.0s,mb5.0
SDMD Soldier's Deli 66.33 314 *e*P **P** **21 26 31.3 +1.0**
comp=Z,53nm,1.0s,mb5.5
MNK Minsk 66.38 27*ce*P **P** **21 26 26.0 -4.2**
MNK *e* 21 27 00.0
MNK *e*PS 21 35 26.0
MNK *e* 21 36 20.0
MNK pmax pmax
comp=Z,1μm,2.0s,mb6.6
MNK pmax pmax
comp=Z,540nm,1.5s,mb6.4
MNK pmax pmax
comp=N,340nm,1.5s
MNK pmax pmax
comp=E,380nm,1.5s
MNK MLR MLR
comp=E,3μm,12.0s
MNK MLR MLR
comp=Z,7μm,16.0s,MS6.0
IDID Didziasalis 66.39 26 *e*P **P** **21 26 30.0 -0.3**
IDID AMB AMB 21 26 30.8
comp=Z,59nm,1.6s,mb5.4
MICGM Minsk 66.40 27⇑ *i*P **P** **21 26 26.0 -4.4**
IZAR Zarasai 66.46 26 *e*P **P** **21 26 29.2 -1.5**
IZAR AMB AMB 21 26 30.2
comp=Z,52nm,1.5s,mb5.3
JSRW J. Sargeant Re 66.48 312 *e*P **P** **21 26 31.7 +0.4**
ANN Anapa 66.56 40*c i*P **P** **21 26 29.5 -2.1**
ANN *e*PPP 21 30 28.8
ANN *e*S S 21 35 17.2 -4.9
ANN *e*SS SS 21 39 31.9 -7.6
ANN pmax pmax
comp=Z,384nm,1.7s,mb6.2
ANN MLR MLR
comp=Z,2μm,24.0s,MS5.3
DWPF Disney 66.60 301⇓ *e*P **P** **21 26 33.0 +0.7**
comp=Z,117nm,1.1s,mb5.8
DWPF *e*PcP PcP 21 27 01.7 +0.2
DWPF *e*S S 21 35 23.7 +0.4
DWPF LR LR
comp=Z,502nm,21.0s,MS4.7
BINY Binghamton 66.78 317⇓ *e*P **P** **21 26 33.8 +0.7**
BINY *e*PP PP 21 28 54.7 -5.6
BINY LR LR
comp=Z,1μm,21.0s,MS5.0
ABPO Ambohimpanom 66.83 111 *e*P **P** **21 26 34.5 +0.6**
ABPO pmax pmax
comp=Z,41nm,1.1s,mb5.4
ABPO MLR MLR
comp=Z,2μm,19.0s,MS5.4
ABPO Ambohimpanom 66.83 111 *e*P **P** **21 26 34.5 +0.6**
comp=Z,41nm,1.1s,mb5.4
ABPO LR LR
comp=Z,2μm,19.0s,MS5.4
LONY Lake Ozonia 66.84 320 PFAKE 21 26 40.0 +6.6
LONY LR LR
comp=Z,1μm,20.0s,MS5.1
NHSC New Hope 66.84 306⇓ *e*P **P** **21 26 33.8 +0.1**
comp=Z,250nm,1.0s,mb6.2
NHSC LR LR
comp=Z,2μm,21.0s,MS5.2
JTS JuntasAbangare 67.10 281 LR LR 21 55 42.7
comp=Z,1μm,19.8s,MS5.1,baz=282,slow=36
JTS JuntasAbangare 67.10 281 PFAKE 21 26 50.0 +14
JTS LR LR
comp=Z,1μm,20.0s,MS5.2
BHD Baghdad 67.53 54 *ex* **P** **21 26 36.0 -2.0**
BHD *ex* S 21 35 33.0 -1.3
BHD *ex* SKSac 21 36 32.0 -3.7
SOC Sochi 67.54 42*c i*P **P** **21 26 37.0 -0.9**
SOC *e**PP pP 21 26 45.6 +2.6
SOC *e* 21 27 03.3
SOC *e* 21 29 03.0
SOC *e*PPP 21 30 40.1
SOC *e*S S 21 35 30.7 -3.3
SOC *e* 21 36 30.3
SOC pmax pmax
comp=Z,128nm,1.1s,mb5.9
SOC MLR MLR
comp=Z,2μm,20.0s,MS5.3
SCHQ Schefferville 67.69 332 P **P** **21 26 38.9 +0.3**
comp=Z,11nm,0.9s,mb4.9,baz=129,slow=10,SNR=6.9
SCHQ Schefferville 67.69 332 *e*P **P** **21 26 39.4 +0.8**
SCHQ LR LR
comp=Z,3μm,22.0s,MS5.4
JSC Jenkinsville 68.04 307 *e*P **P** **21 26 41.6 +0.3**
BLA Blacksburg 68.24 311⇓ *e*P **P** **21 26 43.0 +0.5**
BLA *e* 21 29 13.3
BLA pmax pmax
comp=Z,44nm,1.0s,mb5.4
BLA MLR MLR
comp=Z,2μm,20.0s,MS5.3
BLA Blacksburg 68.24 311⇓ *e*P **P** **21 26 43.0 +0.5**
comp=Z,44nm,1.0s,mb5.4
BLA *e*PP PP 21 29 13.3 +0.1
BLA LR LR
comp=Z,2μm,20.0s,MS5.3
NSS Namsos 68.31 14⇑ *i*P **P** **21 26 40.4 -1.9**
NSS AMb AMB 21 26 43.6
comp=Z,77nm,2.1s,mb5.3
NSS Namsos 68.31 14⇑ *i*P **P** **21 26 40.4 -1.9**
comp=Z,77nm,2.1s,mb5.4
VSU Vasula 68.42 24 *i* P **P** **21 26 43.4 +0.3**
VSU MLR MLR
comp=Z,2μm,18.0s,MS5.4
ELN Prospectdale 68.50 310 *e*P **P** **21 26 44.1 +0.1**
RDF Al-Radifah 69.11 59 *e*P **P** **21 26 48.3 +0.3**
RDF AMb AMB 21 26 50.7
comp=Z,206nm,1.3s,mb5.9
KBD Kabd 69.28 59 *e*P **P** **21 26 49.1 0.0**
KBD AMb AMB 21 26 50.8
comp=Z,121nm,1.4s,mb5.7
QRN Al-Qurain 69.38 59 *e*P **P** **21 26 50.0 +0.2**
QRN AMb AMB 21 26 51.6
comp=Z,257nm,1.5s,mb5.9
ALLY Alegheny Colle 69.47 315 *e*P **P** **21 26 50.4 +0.4**
comp=Z,62nm,1.0s,mb5.5
ERPA Erie 69.52 316 PFAKE 21 27 00.0 +10
ERPA LR LR
comp=Z,1μm,20.0s,MS5.2
GOGA Godfrey 69.58 306 *e*P **P** **21 26 51.6 +0.7**
GOGA MLR MLR
comp=Z,2μm,21.0s,MS5.2
KIV Kislovodsk 69.67 42 P **P** **21 26 51.5 +0.3**
comp=Z,715nm,1.3s,mb6.4,SNR=20
KIV Kislovodsk 69.67 42*c i*P **P** **21 26 50.8 -0.4**
KIV *e* 21 27 16.8
KIV *e* 21 29 23.3
KIV *e*PPP 21 31 02.4
KIV *e*S S 21 35 56.4 -3.0
KIV *e*SS SS 21 40 25.3 -2.5
KIV pmax pmax
comp=Z,135nm,1.0s,mb5.8
KIV pmax pmax
comp=Z,183nm,3.5s
KIV MLR MLR
comp=Z,1μm,19.0s,MS5.1
KIV Kislovodsk 69.67 42 *e*P **P** **21 26 50.9 -0.3**
KIV LR LR
comp=Z,1μm,20.0s,MS5.1
KIV Kislovodsk 69.67 42 P **P** **21 26 51.4 +0.2**
SNR=27
TGUH Tegucigalpa,Un 69.69 285 *e*P **P** **21 26 52.3 +0.4**
TGUH LR LR
comp=Z,1μm,21.0s,MS5.1
ONI Oni 69.72 44 P **P** **21 26 51.1 -0.4**
GNI Garni 69.83 47 P **P** **21 26 52.2 -0.1**
comp=Z,61nm,1.0s,mb5.5,baz=190,slow=3.6,SNR=26
GNI PP PP 21 29 25.3 -1.6
comp=Z,30nm,1.1s,baz=137,slow=20,SNR=4.2
GNI Garni 69.83 47*ce*P **P** **21 26 52.2 -0.1**
GNI pmax pmax
comp=Z,222nm,1.4s
GNI MLR MLR
comp=Z,1μm,18.0s
GNI Garni 69.83 47⇑ *e*P **P** **21 26 52.2 -0.1**
comp=Z,427nm,1.6s,mb6.1
GNI *e*PP PP 21 29 25.7 -1.1
GNI LR LR
comp=Z,1μm,21.0s,MS5.2
GNI Garni 69.83 47 P **P** **21 26 52.5 +0.2**
SNR=14
KEH Kehvi 69.96 44 P **P** **21 26 50.3 -2.7**
GOR Gori 69.97 45 P **P** **21 26 53.8 +0.7**
ZEI Tsey 70.09 44 *e*P **P** **21 26 51.9 -1.9**
ZEI pmax pmax
comp=Z,179nm,1.9s,mb5.7
FINES FINESS Array B 70.14 21 P **P** **21 26 53.5 -0.2**
comp=Z,49nm,0.7s,mb5.6,baz=207,slow=3.8,SNR=131
FINES LR LR 21 59 30.2
comp=Z,4μm,19.2s,MS5.7,baz=237,slow=38
MOR8 Moi Rana 70.26 13⇑ *i*P **P** **21 26 55.2 +0.9**
GOF Gofitskoye 70.31 41 *e*P pP 21 27 05.6 +5.4
GOF pmax pmax
comp=Z,220nm,1.3s,mb5.9
TBLG Delisi 70.33 45 P **P** **21 26 55.1 -0.2**
TBLG Delisi 70.33 45 P **P** **21 26 55.1 -0.3**
MTA Mtatsminda 70.36 45 P **P** **21 26 55.0 -0.5**
VORD Divnogorie 70.39 35 *e*P **P** **21 26 54.3 -1.2**
VORD *e* 21 29 26.1
VORD *e*S S 21 36 01.8 -5.7
VORD pmax pmax
comp=N,40nm,1.1s
VORD pmax pmax
comp=E,130nm,1.1s
VORD pmax pmax
comp=Z,140nm,1.1s,mb5.8
VORD pmax pmax
comp=Z,170nm,1.8s,mb5.7
VORD pmax pmax
comp=N,50nm,0.9s
VORD pmax pmax
comp=E,70nm,0.9s
VORD smax
comp=N,430nm,4.4s
VORD smax
comp=E,530nm,4.4s
VORD smax
comp=Z,180nm,4.4s
VORD MLR MLR
comp=Z,3μm,19.0s,MS5.5
VORD MLR MLR
comp=N,720nm,19.0s,MS5.4
VORD MLR MLR
comp=E,2μm,19.0s,MS5.4
TKL Tuckaleechee C 70.40 308⇓ *e*P **P** **21 26 56.1 +0.3**
VSR Storozhevoye 70.43 34*c i*P **P** **21 26 54.3 -1.4**
VSR *i* PPP 21 31 10.8
VSR *e*S S 21 36 02.3 -5.7
VSR pmax pmax
comp=Z,90nm,0.5s,mb6.0
VSR pmax pmax
comp=N,80nm,1.0s
VSR pmax pmax
comp=E,130nm,1.0s
VSR pmax pmax
comp=N,120nm,1.5s
VSR pmax pmax
comp=Z,170nm,1.5s,mb5.8
VSR pmax pmax
comp=E,80nm,0.8s
VSR smax
comp=N,360nm,3.5s
VSR smax
comp=Z,110nm,3.5s
VSR smax
comp=E,60nm,1.2s
VSR MLR MLR
comp=N,2μm,22.0s,MS5.5
VSR MLR MLR
comp=E,1μm,22.0s,MS5.5
VSR MLR MLR
comp=Z,3μm,22.0s,MS5.5
VNA1 Neumayer--Stat 70.59 176 *e*P **P** **21 26 56.1 -0.2**
VNA1 *e* pP 21 26 59.4 -2.0
SCO Scoresbysund 70.65 359⇑ *i*P **P** **21 26 57.7 +1.0**
SCO pmax pmax
comp=Z,14nm,0.9s,mb4.9
SCO MLR MLR
comp=Z,830nm,19.0s,MS5.0
SCO Scoresbysund 70.65 359⇑ *i*P **P** **21 26 57.7 +1.0**
comp=Z,14nm,0.9s,mb4.9
SCO LR LR
comp=Z,840nm,19.0s,MS5.0
SCO Scoresbysund 70.65 359⇑ *i*P **P** **21 26 57.7 +1.0**
comp=Z,14nm,0.9s,mb4.9
SCO
comp=Z,830nm,19.0s
KAF Kangasniemi 70.67 20 *e*P **P** **21 26 56.0 -0.9**
KAF pmax pmax
comp=Z,120nm,1.2s,mb5.7
KAF Kangasniemi 70.67 20 *e*P **P** **21 26 56.0 -0.9**
comp=Z,120nm,1.2s,mb5.7
KAF Kangasniemi 70.67 20 *e*p **P** **21 26 56.0 -0.9**
comp=Z,120nm,1.2s,mb5.7,baz=226,slow=6.0
VOR Voronezh 70.68 34 *e*P **P** **21 26 58.0 +0.8**
VOR pmax pmax
comp=Z,300nm,2.0s,mb5.9
DGRG David-gareji 70.69 46 P **P** **21 26 57.9 +0.3**
OBN Obninsk 70.91 30 P **P** **21 26 57.3 -1.2**
comp=Z,577nm,1.2s,mb6.4,SNR=10
OBN Obninsk 70.91 30*c i*P **P** **21 26 57.1 -1.4**
OBN *i* 21 29 31.6
OBN *i* S S 21 36 04.7 -8.6
OBN pmax pmax
comp=Z,170nm,1.3s,mb5.8
OBN MLR MLR
comp=Z,3μm,16.0s,MS5.6
OBN Obninsk 70.91 30 *e*P **P** **21 26 57.3 -1.2**
OBN LR LR
comp=Z,3μm,19.0s,MS5.6
CPCT Cooper Cave 70.94 308 *e*P **P** **21 26 60.0 +0.9**
ACSO Alum Creek Sta 71.06 313 *e*P **P** **21 27 00.5 +0.7**
ACSO LR LR
comp=Z,2μm,20.0s,MS5.3
TEIG Tepich 71.34 291 *e*P **P** **21 27 01.8 -0.1**
TEIG LR LR
comp=Z,1μm,22.0s,MS5.1
JMIC Jan Mayen 71.40 3⇑ *i*P **P** **21 27 02.4 +1.1**
JMIC *e*S S 21 36 22.0 +3.4
JMIC Jan Mayen 71.40 3 P **P** **21 27 02.6 +1.4**
comp=Z,36nm,1.0s,mb5.3,baz=173,slow=5.1,SNR=6.6
MOS Moscow 71.74 30*c i*P **P** **21 27 02.8 -0.7**
MOS *e* 21 27 17.6
MOS *e* 21 29 38.1
MOS *e*PPP 21 31 24.2
MOS *i* S S 21 36 19.7 -3.2
MOS *i* 21 36 46.0

MOS pmax pmax
comp=Z,523nm,1.5s,mb6.2
MOS pmax pmax
comp=Z,1μm,1.8s,mb6.4
MOS smax
comp=N,800nm,3.9s
MOS MLR MLR
comp=Z,3μm,20.0s,MS5.6
MOS MLR MLR
comp=E,2μm,19.0s,MS5.5
MOS MLR MLR
comp=N,1μm,16.0s,MS5.5
VRHR Novokhopersk 71.78 35 *e*P **P 21 27 03.3 -0.6**
VRHR *e* 21 27 17.4
VRHR *e* 21 29 41.0
VRHR *e*S S 21 36 17.9 -5.7
VRHR *e* 21 36 44.9
VRHR pmax pmax
comp=N,40nm,1.5s
VRHR pmax pmax
comp=E,80nm,1.5s
VRHR pmax pmax
comp=Z,100nm,1.5s,mb5.5
VRHR pmax pmax
comp=N,90nm,1.2s
VRHR pmax pmax
comp=E,100nm,1.2s
VRHR pmax pmax
comp=Z,130nm,1.2s,mb5.7
VRHR smax
comp=N,70nm,1.9s
VRHR smax
comp=E,60nm,1.9s
VRHR smax
comp=Z,20nm,1.9s
PAYG Puerto Ayora 71.99 269 PFAKE 21 27 20.0 +14
PAYG LR LR
comp=Z,3μm,22.0s,MS5.5
SWET Sewanee 72.00 307 *e*P **P 21 27 06.1 +0.5**
BRAL Brewton 72.01 303 *e*P **P 21 27 04.9 -0.8**
comp=Z,200nm,1.5s,mb5.8
BRAL LR LR
comp=Z,1μm,22.0s,MS5.1
AAM Ann Arbor 72.16 315 *e*P **P 21 27 07.0 +0.6**
AAM MLR MLR
comp=Z,1μm,20.0s,MS5.2
PMSA Palmer Station 72.37 199 PFAKE 21 27 20.0 +13
PMSA LR LR
comp=Z,1μm,20.0s,MS5.2
LRAL Lakeview Retre 72.38 305 *e*P **P 21 27 08.0 +0.1**
LRAL LR LR
comp=Z,909nm,19.0s,MS5.1
MAK Makhachkala 72.66 45 *e*P **P 21 27 07.8 -1.6**
MAK *e* 21 29 50.2
MAK *e*PPP 21 31 32.8
MAK *e*S S 21 36 31.0 -3.1
MAK *e* 21 37 14.3
MAK pmax pmax
comp=Z,816nm,2.6s,mb6.2
MAK MLR MLR
comp=Z,2μm,18.0s,MS5.4
JOF Joensuu 72.98 21 *e*P **P 21 27 10.0 -0.8**
JOF pmax pmax
comp=Z,133nm,0.9s,mb5.9
JOF Joensuu 72.98 21 *e*p **P 21 27 10.0 -0.8**
comp=Z,133nm,0.9s,mb5.9
WCI Wyandotte Cave 73.00 310 *e*P **P 21 27 11.7 +0.2**
WCI MLR MLR
comp=Z,315nm,20.0s,MS4.6
MAIT Maitri 73.09 170 *e*P **P 21 27 17.3 +6.0**
BLO Bloomington 73.40 311 *e*P **P 21 27 14.1 +0.3**
WVT Waverly 73.71 308 *e*P **P 21 27 15.2 -0.5**
WVT MLR MLR
comp=Z,1μm,22.0s,MS5.2
MSEY Mahe Island 73.81 95 PFAKE 21 27 30.0 +13
MSEY LR LR
comp=Z,2μm,21.0s,MS5.4
SUMG Summit 73.82 354 *e*P **P 21 27 16.8 +1.2**
comp=Z,50nm,1.0s,mb5.4
SUMG *e*PcP PcP 21 27 30.5 -0.6
SUMG Summit 73.82 354⇑*i*P **P 21 27 16.9 +1.3**
comp=Z,36nm,1.0s,mb5.3
TRO Tromso 74.05 13⇑*i*P **P 21 27 17.1 +0.1**
TRO *e*S S 21 36 49.6 +0.7
TRO AMS AMS 21 59 52.4
comp=Z,2μm,19.0s,MS5.5
OLIL Olney 74.50 310 *e*P **P 21 27 19.0 -1.2**
UTMT University of 74.57 308 *e*P **P 21 27 19.3 -1.4**
KTK1 Kautokeino 74.59 14 *e*P **P 21 27 20.1 -0.1**
KTK1 *e*S S 21 36 53.7 -1.2
OXF Oxford 74.64 306⇓*e*P **P 21 27 19.7 -1.5**
OXF pmax pmax
comp=Z,100nm,1.2s,mb5.6
OXF MLR MLR
comp=Z,1μm,22.0s,MS5.2
OXF Oxford 74.64 306⇓*e*P **P 21 27 19.7 -1.5**
comp=Z,100nm,1.2s,mb5.6
OXF LR LR
comp=Z,1μm,22.0s,MS5.2
SIUC Southern Illin 75.13 309 *e*P **P 21 27 23.3 -0.6**
VBMS Vicksburg 75.14 303 *e*P **P 21 27 25.1 +1.0**
VBMS LR LR
comp=Z,990nm,20.0s,MS5.1
ASUD Al Ashush, Dub 75.24 65 P **P 21 27 25.2 +0.4**
SNR=14
GNAR Gosnell 75.41 307 *e*P **P 21 27 25.4 -0.1**
ARCES ARCESS Array B 75.53 15 P **P 21 27 25.5 -0.1**
comp=Z,30nm,0.9s,mb5.2,baz=224,slow=3.3,SNR=51
ARCES PP PP 21 30 06.8 -8.1
comp=Z,8.6nm,0.9s,baz=224,slow=3.3,SNR=4.5
ARCES LR LR 21 59 11.9
comp=Z,2μm,21.9s,MS5.3,baz=287,slow=35
ARE0 ARCESS Array S 75.53 15 *e*P **P 21 27 26.7 +1.1**
ARE0 *e*PcP PcP 21 27 38.2 -0.3
NAZ Nazwa, Dubai 75.58 64 P **P 21 27 26.8 0.0**
SNR=13
HDIL Hopedale 75.80 312 *e*P **P 21 27 26.9 -0.8**
HDIL LR LR
comp=Z,2μm,22.0s,MS5.3
HBAR Harrisburg 75.84 307 *e*P **P 21 27 28.5 +0.4**
ASHO Ashiyiah 75.90 65 P **P 21 27 28.7 +0.1**
SNR=11
HATD Hatta, Dubai 75.99 64 P **P 21 27 29.2 +0.1**
SNR=15
KEV Kevo 76.07 15 *e*P **P 21 27 28.1 -0.5**
KEV pmax pmax
comp=Z,96nm,1.2s,mb5.6
KEV Kevo 76.07 15 *e*P **P 21 27 28.1 -0.5**
comp=Z,96nm,1.2s,mb5.6
KEV Kevo 76.07 15 *e*p **P 21 27 28.1 -0.5**
comp=Z,96nm,1.2s,mb5.6
SLM Saint Louis 76.11 310 *e*P **P 21 27 28.3 -1.2**
SLM pmax pmax
comp=Z,26nm,0.6s,mb5.3
SLM Saint Louis 76.11 310 *e*P **P 21 27 28.3 -1.2**
comp=Z,26nm,0.6s,mb5.3
FVM French Village 76.12 309 *e*P **P 21 27 28.7 -0.9**
ARQ Araqi 76.17 66 P **P 21 27 30.7 +0.5**
SNR=30
BANOM Banah 76.27 63 P **P 21 27 30.3 -0.4**
SNR=7.8
APA Apatity 76.47 18⇓*i*P **P 21 27 30.4 -0.6**
APA *i*S S 21 37 16.0 +0.2
APA *i*SS SS 21 42 08.0 -2.6
APA pmax pmax
comp=Z,190nm,1.4s,mb5.8
APA pmax pmax
comp=Z,800nm,8.4s
APA MLR MLR
comp=Z,2μm,21.0s,MS5.4
BSY Bisya 76.73 67 P **P 21 27 33.1 -0.2**
SNR=12
CCM Cathedral Cave 76.77 309 *e*P **P 21 27 31.9 -1.4**
CCM MLR MLR
comp=Z,234nm,20.0s,MS4.5
HOQ Hoqain 76.92 66 P **P 21 27 34.1 -0.3**
SNR=18
DAG Danmarks Havn 76.93 360⇑*e*P **P 21 27 34.4 +1.0**
DAG pmax pmax
comp=Z,15nm,1.0s,mb4.9
DAG Danmarks Havn 76.93 360⇑*e*P **P 21 27 34.4 +1.0**
comp=Z,15nm,1.0s,mb4.9
DAG Danmarks Havn 76.93 360⇑*i*P **P 21 27 34.4 +1.0**
comp=Z,15nm,1.0s,mb4.9
COWI Conover 76.98 318⇓*e*P **P 21 27 33.5 -0.8**
comp=Z,31nm,0.9s,mb5.2
COWI LR LR
comp=Z,2μm,22.0s,MS5.3
JFWS Jewell Farm 77.02 314 *e*P **P 21 27 34.2 -0.4**
JFWS MLR MLR
comp=Z,2μm,21.0s,MS5.3
UALR University of 77.07 306 *e*P **P 21 27 34.7 -0.3**
JMDO Jabal Madar 77.52 67 P **P 21 27 37.1 -0.7**
SNR=6.2
SMDO Samad 77.54 66 P **P 21 27 37.4 -0.5**
SNR=32
MIAR Mount Ida 78.03 305 *e*P **P 21 27 40.2 -0.2**
MIAR MLR MLR
comp=Z,1μm,21.0s,MS5.2
WBK Wadi Bani Khal 78.34 67 P **P 21 27 42.7 +0.3**
SNR=6.3
NATX Nacogdoches 78.55 302 *e*P **P 21 27 43.5 +0.1**
NATX LR LR
comp=Z,778nm,21.0s,MS5.0
SYO Syowa Base 78.72 162⇓*e*P **P 21 27 43.4 -0.1**
SYO Syowa Base 78.72 162⇓*e*P **P 21 27 46.0 +2.5**
SCIA State Center 78.97 313 PFAKE 21 28 00.0 +15
SCIA LR LR
comp=Z,2μm,20.0s,MS5.4
EYMN Ely 78.98 319 *e*P **P 21 27 43.7 -1.7**
EYMN LR LR
comp=Z,1μm,20.0s,MS5.3
HKT Hockley 79.33 300 *e*P **P 21 27 47.5 -0.2**
HKT *e* 21 30 46.4
HKT pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
HKT MLR MLR
comp=Z,261nm,19.0s,MS4.6
HKT Hockley 79.33 300 *e*P **P 21 27 47.5 -0.2**
comp=Z,5.9nm,0.8s,mb4.6
HKT *e*PP PP 21 30 46.4 -1.4
HKT LR LR
comp=Z,261nm,19.0s,MS4.6
ABKT Ailbek 79.45 51 P **P 21 27 47.4 -0.8**
comp=Z,257nm,1.1s,mb6.1,SNR=24
KBS Kingsbay 80.63 6⇑*i*P **P 21 27 55.2 +1.5**
KBS *e*S S 21 38 02.1 +2.1
KBS Kingsbay 80.63 6*c e*P **P 21 27 54.7 +1.0**
KBS pmax pmax
comp=Z,47nm,1.7s,mb5.1
KBS Kingsbay 80.63 6 *e*P **P 21 27 49.9 -3.8**
comp=Z,24nm,0.9s,mb5.1
KBS LR LR
comp=Z,909nm,19.0s,MS5.1
KVTX Kingsville 80.89 298 PFAKE 21 28 10.0 +14
KVTX LR LR
comp=Z,908nm,21.0s,MS5.1
KSU1 Kansas State U 81.09 310 *e*P **P 21 27 56.2 -0.8**
KSU1 LR LR
comp=Z,1μm,19.0s,MS5.3
AKTK Aktyubinsk 81.49 39 P **P 21 27 58.6 -0.2**
AKTK PP PP 21 31 04.8 -0.3
AKTO Aktyubinsk 81.49 39 P **P 21 27 58.6 -0.2**
comp=Z,47nm,1.1s,mb5.3,baz=250,slow=5.1,SNR=90
AKTO PP PP 21 31 04.8 -0.3
comp=Z,15nm,1.1s,baz=285,slow=7.1,SNR=4.5
ECSD EROS Data Cent 81.73 314⇓*e*P **P 21 27 59.5 -0.8**
ECSD LR LR
comp=Z,1μm,21.0s,MS5.3
AGMN Agassiz Nation 81.92 319⇓*e*P **P 21 28 00.7 -0.5**
AGMN LR LR
comp=Z,1μm,22.0s,MS5.2
WMOK Wichita Mounta 82.32 305⇓*i*P **P 21 28 02.9 -0.7**
WMOK pmax pmax
comp=Z,43nm,1.0s,mb5.3
WMOK MLR MLR
comp=Z,1μm,20.0s,MS5.3
WMOK Wichita Mounta 82.32 305⇓*i*P **P 21 28 02.9 -0.7**
comp=Z,43nm,1.0s,mb5.3
WMOK LR LR
comp=Z,1μm,20.0s,MS5.3
ABKAR Akbulak array 82.51 40⇑*e*P **P 21 28 03.9 -0.3**
comp=Z,61nm,1.0s,mb5.6
ABKAR *e*PP PP 21 31 14.2 +0.6
SOKR Solikamsk 82.69 30*c i*P **P 21 28 05.0 +0.1**
SOKR 21 31 18.7
SOKR S S 21 38 21.1 -0.8
SOKR SS SS 21 43 47.9 +3.9
SOKR pmax pmax
comp=Z,90nm,1.0s,mb5.8
SOKR MLR MLR
comp=Z,2μm,16.0s,MS5.6
JCT Junction City 82.80 301⇓*e*P **P 21 28 06.3 +0.1**
JCT *e* 21 31 14.0
JCT MLR MLR
comp=Z,693nm,20.0s,MS5.0
FCC Fort Churchill 82.86 329 *e*P **P 21 28 06.7 +0.9**
ARU Arti 82.95 33 P **P 21 28 06.4 +0.1**
comp=Z,428nm,0.8s,mb6.5,SNR=36
ARU Arti 82.95 33*c i*P **P 21 28 05.9 -0.4**
ARU 21 31 13.4
ARU PPP 21 33 06.5
ARU S S 21 38 21.0 -3.7
ARU SSS 21 47 11.6
ARU pmax pmax
comp=Z,167nm,1.7s,mb5.8
ARU MLR MLR
comp=Z,2μm,18.0s,MS5.6
ARU Arti 82.95 33⇑*i*P **P 21 28 06.0 -0.3**
comp=Z,104nm,1.1s,mb5.8
ARU *e*PP PP 21 31 15.7 -1.3
ARU *e*S S 21 38 22.3 -2.4
ARU LR LR
comp=Z,2μm,20.0s,MS5.5
CBKS Cedar Bluff 83.48 309⇓*e*P **P 21 28 09.3 -0.2**
CBKS 21 31 19.4
CBKS MLR MLR
comp=Z,1μm,19.0s,MS5.4
SVE Sverdlovsk 84.15 33⇓*e*P **P 21 28 12.4 -0.1**
SVE *e* 21 31 22.2
SVE *e*PPP 21 33 18.7
SVE *e*S S 21 38 29.5 -7.3
SVE pmax pmax
comp=Z,74nm,1.4s,mb5.6
SVE MLR MLR
comp=Z,2μm,18.0s,MS5.6
AMTX Amarillo 84.71 305⇓*e*P **P 21 28 15.7 -0.2**
AMTX LR LR
comp=Z,1μm,21.0s,MS5.3
428A Kincaid Ranch, 85.30 301 ⇓P **P 21 28 19.2 +0.3**
baz=85,SNR=204
528A Cox Ranch, San 85.36 300 ⇑P **P 21 28 19.3 +0.1**
baz=85
628A Black Gap, Mar 85.41 299 ⇑P **P 21 28 19.3 -0.2**
baz=85
OGNE Ogallala 85.42 311⇓*e*P **P 21 28 19.4 +0.2**
OGNE LR LR
comp=Z,2μm,20.0s,MS5.4
328A Wristen Ranch, 85.44 301 P **P 21 28 19.7 +0.1**
baz=86,SNR=27
MSTX Muleshoe 85.55 304 ⇑P **P 21 28 19.9 -0.2**
baz=86,SNR=59
627A Terlingua Ranc 85.84 299 ⇓P **P 21 28 21.9 +0.3**
baz=86,SNR=50
W27A Bowe Ranch, En 85.85 305 ⇓P **P 21 28 21.9 +0.4**
baz=86
X27A F and S Farms, 85.86 305 ⇑P **P 21 28 22.0 +0.4**
baz=86,SNR=12
Y27A Causey 85.87 304 ⇑P **P 21 28 21.6 -0.1**
baz=86,SNR=58
227A Bennet, Jal 85.88 302 ⇓P **P 21 28 21.9 +0.1**
baz=86,SNR=14
Z27A Tatum 85.88 303 P **P 21 28 22.1 +0.3**
baz=86,SNR=43
427A Hayter Ranch, 85.92 301 ⇑P **P 21 28 22.2 +0.2**
baz=86,SNR=27
127A Arkansas Junct 85.97 303 ⇓P **P 21 28 21.9 -0.3**
baz=86
QUE Quetta 86.01 60⇓*i*P **P 21 28 17.0 -5.5**
QUE *e*S S 21 38 54.0 -2.3
527A Woodward Ranch 86.07 300 ⇓P **P 21 28 22.8 +0.1**
baz=86,SNR=132
TXAR Lajitas Array 86.08 299 P **P 21 28 23.3 +0.5**
comp=Z,29nm,0.9s,mb5.5,baz=120,slow=6.3,SNR=200
TXAR LR LR 22 04 10.5
comp=Z,602nm,20.3s,MS5.0,baz=0.0,slow=34
MAW Mawson 86.40 158 *e*P **P 21 28 25.8 +2.3**
comp=Z,19nm,1.0s,mb5.3
MAW Mawson 86.40 158 P **P 21 28 25.8 +2.3**
comp=Z,14nm,0.8s,mb5.2,baz=279,slow=7.1,SNR=8.2
MAW LR LR 21 59 32.2
comp=Z,763nm,18.3s,MS5.1,baz=291,slow=30
MAW Mawson 86.40 158 *e*P **P 21 28 24.0 +0.5**
MAW pmax pmax
comp=Z,9.0nm,1.2s
MAW Mawson 86.40 158 *e*P **P 21 28 24.0 +0.4**
comp=Z,9.4nm,1.2s,mb4.9
Y26A Elida 86.42 304 ⇓P **P 21 28 24.6 +0.2**
baz=86,SNR=21
W26A Owens Ranch, T 86.43 305 ⇑P **P 21 28 24.5 +0.1**
baz=86
326A Caldwell Ranch 86.44 301 ⇑P **P 21 28 24.5 0.0**
baz=86,SNR=12
X26A CR and CF Fran 86.44 304 ⇓P **P 21 28 24.9 +0.4**
baz=86,SNR=60
426A McDonald Obser 86.45 301 ⇓P **P 21 28 24.4 -0.2**
baz=86
426A ⇓PcP PcP 21 28 25.9 -1.2
baz=86,SNR=43
U26A Atchley Ranch, 86.47 306 ⇑P **P 21 28 24.9 +0.3**
baz=86
526A Mary Lane Ranc 86.48 300 ⇑P **P 21 28 24.8 0.0**
baz=86
526A ⇓PcP PcP 21 28 26.1 -1.2
baz=86,SNR=54
626A Big Bend Ranch 86.50 299 ⇓P **P 21 28 25.2 +0.3**
baz=86,SNR=195
Z26A Caprock 86.52 303 ⇑P **P 21 28 25.1 +0.2**
baz=86,SNR=26
126A Clayton Basin, 86.53 303 ⇓P **P 21 28 25.4 +0.4**
baz=86,SNR=21
FFC Flin Flon 86.54 325 *e*P **P 21 28 23.4 -1.1**
FFC MLR MLR
comp=Z,1μm,21.0s,MS5.3
RES Resolute Bay 86.71 345 *e*P **P 21 28 26.9 +1.9**
GDL2 Guadalupe Moun 86.80 302 *e*P **P 21 28 27.0 +0.7**
O25A Wiggins 86.96 310 ⇑P **P 21 28 27.2 +0.3**
baz=87,SNR=7.5
P25A Willow Gulch B 86.97 309 ⇓P **P 21 28 27.5 +0.5**
baz=87,SNR=13
Q25A Bedland, Calha 87.00 309 ⇓PcP PcP 21 28 28.4 -0.9
baz=87,SNR=39
W25A X Bar L Ranch, 87.00 305 ⇑P **P 21 28 27.4 +0.2**
baz=87,SNR=13
U25A Circle Dot Ran 87.01 306 ⇓P **P 21 28 27.5 +0.3**
baz=87,SNR=20
T25A Trinidad 87.05 307 ⇓P **P 21 28 27.0 -0.3**
baz=87,SNR=19
T25A ⇓PcP PcP 21 28 28.5 -1.0
baz=87
125A Gardner Draw, 87.06 303 ⇑P **P 21 28 27.1 -0.5**
baz=87,SNR=30
S25A Robets Cordova 87.09 308 ⇓P **P 21 28 27.6 0.0**
baz=87
S25A ⇓PcP PcP 21 28 28.8 -0.9
baz=87,SNR=23
RSSD Black Hills 87.11 314 PFAKE 21 28 40.0 +12
RSSD LR LR
comp=Z,417nm,20.0s,MS4.8
Z25A Roswell 87.14 303 ⇓P **P 21 28 28.3 +0.3**
baz=87,SNR=61
X25A Clemmons Ranch 87.14 304 ⇓P **P 21 28 28.3 +0.4**
baz=87
Y25A Mesa, Roswell 87.14 304 ⇑P **P 21 28 28.3 +0.4**
baz=87,SNR=20
V25A Rancho No Teng 87.16 306 ⇑P **P 21 28 28.3 +0.3**
baz=87,SNR=15
225A Deer Hill, Car 87.19 302 ⇑P **P 21 28 28.2 +0.1**
baz=87
425A Indio Mountain 87.28 301 ⇓P **P 21 28 28.6 -0.1**
baz=87,SNR=74
325A Bean Ranch, Si 87.28 301 ⇓P **P 21 28 28.7 +0.1**
baz=87,SNR=53
N24A Carr 87.57 311 ⇓P **P 21 28 29.5 -0.3**
baz=88
R24A Sanders Place, 87.64 308 ⇓P **P 21 28 30.2 -0.1**
baz=88
R24A ⇓PcP PcP 21 28 31.6 -0.6
baz=88,SNR=16
MNTX Cornudas Mount 87.65 302 *e*P **P 21 28 28.6 -1.8**
comp=Z,8.9nm,1.0s,mb5.0
MNTX *e*PP PP 21 31 53.5 -2.3
MNTX LR LR
comp=Z,660nm,21.0s,MS5.0
Z24A Sheeppen Canyo 87.68 303 ⇓P **P 21 28 30.8 +0.3**
baz=88,SNR=16
V24A Rampart Ranch, 87.68 306 ⇑P **P 21 28 30.8 +0.2**
baz=88,SNR=24
O24A Longmont 87.69 310 ⇑P **P 21 28 30.8 +0.4**
baz=88,SNR=9.4
Q24A Divide 87.70 309 ⇓P **P 21 28 30.4 -0.1**
baz=88
Q24A ⇓PcP PcP 21 28 32.0 -0.4
baz=88,SNR=44
S24A Houchin Ranch, 87.70 308 ⇓PcP PcP 21 28 32.0 -0.4
baz=88,SNR=29
U24A Moreno Valley 87.71 306 ⇓P **P 21 28 30.3 -0.4**
baz=88,SNR=18
324A Moseley Ranch, 87.72 301 ⇑P **P 21 28 30.3 -0.5**
baz=88,SNR=18
124A Stringfield Ra 87.74 303 ⇓P **P 21 28 30.9 +0.1**
baz=88,SNR=18
Y24A Capitan 87.76 304 ⇑P **P 21 28 31.2 +0.3**
baz=88,SNR=38
224A Cornudas Mount 87.78 302 ⇑P **P 21 28 30.5 -0.6**
baz=88,SNR=33
W24A Lazy 6 Ranch, 87.78 305 ⇑P **P 21 28 31.3 +0.4**
baz=88,SNR=44
X24A Lazy VL Ranch, 87.78 304 ⇓P **P 21 28 31.0 0.0**
baz=88,SNR=8.6
SDCO Great Sand Dun 87.94 308 *e*P **P 21 28 32.6 +0.9**
comp=Z,39nm,1.0s,mb5.6
SDCO LR LR
comp=Z,1μm,20.0s,MS5.3
KBL Kabul 87.94 56 *e*P **P 21 28 30.7 -1.1**
KBL *e* 21 31 56.9
KBL pmax pmax
comp=Z,64nm,1.3s,mb5.7
KBL Kabul 87.94 56 *e*P **P 21 28 30.7 -1.1**
comp=Z,64nm,1.3s,mb5.7
KBL *e*PP PP 21 31 56.9 -1.2
PHWY Pilot Hill 88.03 311 *e*P **P 21 28 32.8 +0.8**
ISCO Idaho Springs 88.09 310 *e*P **P 21 28 33.2 +0.8**
ISCO pmax pmax
comp=Z,39nm,1.2s,mb5.5
ISCO MLR MLR
comp=Z,2μm,21.0s,MS5.5
ISCO Idaho Springs 88.09 310 *e*P **P 21 28 33.2 +0.9**
comp=Z,39nm,1.2s,mb5.5
ISCO LR LR
comp=Z,2μm,21.0s,MS5.5
P23A Jefferson 88.25 309 ⇑P **P 21 28 33.3 +0.1**
baz=88
P23A ⇑PcP PcP 21 28 34.5 -0.4
baz=88,SNR=48
Y23A Lovelace Mesa, 88.28 304 ⇑P **P 21 28 33.4 +0.1**
baz=88,SNR=20
O23A Lake Granby, G 88.34 310 ⇑PcP PcP 21 28 34.9 -0.3
baz=88,SNR=35
T23A Casias Ranch, 88.34 307 ⇓PcP PcP 21 28 34.7 -0.5
baz=88,SNR=8.0
N23A Red Feather La 88.38 311 ⇑P **P 21 28 34.1 +0.4**
baz=88,SNR=61
W23A Werner Place, 88.38 305 ⇑P **P 21 28 33.6 -0.2**
baz=88,SNR=15
W23A ⇓PcP PcP 21 28 35.2 -0.3
baz=88
X23A Hourglass Bar 88.40 304 ⇓PcP PcP 21 28 35.0 -0.6
baz=88,SNR=36
Z23A Rita Site, Whi 88.41 303 ⇑P **P 21 28 33.8 -0.2**
baz=88,SNR=22
Z23A ⇓PcP PcP 21 28 35.2 -0.5
baz=88
V23A Ortiz Mt. (NFS 88.43 306 ⇑P **P 21 28 33.9 -0.2**
baz=88,SNR=11
V23A ⇓PcP PcP 21 28 35.2 -0.5
baz=88
U23A El Rito 88.45 306 ⇑P **P 21 28 34.0 -0.1**
baz=88,SNR=9.6
ANMO Albuquerque 88.63 305 *e*P **P 21 28 36.0 +1.0**
ANMO MLR MLR
comp=Z,2μm,20.0s
BNM Barren Site 88.75 304 *e*P **P 21 28 36.3 +0.7**
comp=Z,30nm,1.2s,mb5.5
LPM Los Pinos Moun 88.76 304 *e*P **P 21 28 36.8 +1.2**
N22A Wattenberg Ran 88.76 311 ⇑P **P 21 28 35.1 -0.4**
baz=89
N22A ⇑PcP PcP 21 28 36.5 -0.6
baz=89,SNR=17
O22A Kremmling 88.82 310 ⇓P **P 21 28 35.7 -0.1**

baz=89
O22A ⇓PcP PcP 21 28 36.8 -0.5
baz=89,SNR=63
PAF Port-aux-Franc 88.84 139 PFAKE 21 28 50.0 +14
PAF LR LR
comp=Z,3µm,20.0s,MS5.7
R22A Saguache, Gunn 88.94 308 ⇓P **P** **21 28 36.5 +0.1**
baz=89,SNR=20
P22A Eagle 88.97 309 ⇓PcP PcP 21 28 37.6 -0.4
baz=89,SNR=45
U22A Llaves 88.98 306 ⇑PcP PcP 21 28 37.8 -0.3
baz=89,SNR=19
S22A 4UR Ranch, Cre 88.99 308 ⇑PcP PcP 21 28 37.9 -0.3
baz=89,SNR=40
V22A San Miguel Ran 89.02 306 ⇑P **P** **21 28 36.5 -0.4**
baz=89
V22A ⇓PcP PcP 21 28 37.8 -0.6
baz=89,SNR=22
Z22A Elephant Butte 89.02 303 ⇓PcP PcP 21 28 37.9 -0.5
baz=89,SNR=5.2
Y22A Socorro 89.03 304 ⇑P **P** **21 28 36.3 -0.6**
baz=89,SNR=17
Y22A ⇓PcP PcP 21 28 38.0 -0.4
baz=89
T22A Edith 89.03 307 ⇓PcP PcP 21 28 38.1 -0.2
baz=89,SNR=33
LENM Lemitar 89.04 304 P **P** **21 28 37.4 +0.4**
comp=Z,45nm,0.9s,mb5.8
Q22A Crested Butte, 89.07 309 ⇑PcP PcP 21 28 38.3 -0.2
baz=89,SNR=14
222A Williams Famil 89.12 302 ⇑PcP PcP 21 28 38.7 -0.1
baz=89,SNR=7.0
SMCO Snowmass 89.13 309 *e*P **P** **21 28 38.7 +1.4**
LAZ Ladron 89.18 304 *e*P **P** **21 28 38.2 +0.6**
comp=Z,16nm,1.4s,mb5.2
BRVK Borovoye 89.34 37 ⇑*i*P **P** **21 28 37.8 -0.1**
BRVK *e*S S 21 39 25.9 -1.3
BRVK pmax pmax
comp=Z,49nm,1.3s,mb5.7
BRVK MLR MLR
comp=Z,2µm,20.0s,MS5.4
BRVK Borovoye 89.34 37 ⇑*i*P **P** **21 28 37.8 -0.1**
comp=Z,49nm,1.3s,mb5.7
BRVK *e*PP PP 21 32 00.6 -8.2
BRVK *e*S S 21 39 25.9 -1.4
BRVK LR LR
comp=Z,2µm,20.0s,MS5.4
BRVK Borovoye 89.34 37 P **P** **21 28 38.4 +0.5**
SNR=18
RWWY Rawlins 89.35 312 *e*P **P** **21 28 39.4 +1.2**
BVAR Borovoye Array 89.40 37 P **P** **21 28 38.3 +0.1**
comp=Z,18nm,0.8s,mb5.4,baz=264,slow=3.0,SNR=67
BVAR PP PP 21 32 07.9 -1.3
comp=Z,12nm,1.2s,baz=260,slow=8.6,SNR=4.1
M21A Separation Pea 89.47 311 ⇑P **P** **21 28 38.8 0.0**
baz=90,SNR=9.6
M21A ⇓PcP PcP 21 28 39.7 -0.4
baz=90
L21A Rawlins 89.47 312 ⇓P **P** **21 28 38.7 -0.1**
baz=90,SNR=12
P21A Newcastle 89.50 309 ⇓P **P** **21 28 39.1 +0.1**
baz=90
O21A Pagoda 89.53 310 ⇓PcP PcP 21 28 40.4 0.0
baz=90
T21A Navajo Lake 89.54 307 ⇓P **P** **21 28 39.3 +0.1**
baz=90
T21A ⇓PcP PcP 21 28 40.2 -0.4
baz=90
R21A Cimarron 89.57 308 ⇓P **P** **21 28 39.5 +0.2**
baz=90
R21A ⇑PcP PcP 21 28 40.3 -0.4
baz=90
N21A Black Mountain 89.57 311 ⇑P **P** **21 28 39.6 +0.3**
baz=90,SNR=55
N21A ⇑PcP PcP 21 28 40.6 0.0
baz=90
Q21A Lamborn Mesa, 89.59 309 ⇑PcP PcP 21 28 40.5 -0.3
baz=90
Z21A St. Cloud Mine 89.61 303 ⇓P **P** **21 28 39.5 -0.1**
baz=90
Z21A ⇑PcP PcP 21 28 40.5 -0.5
baz=90,SNR=10
Y21A Point of Rocks 89.62 304 ⇑PcP PcP 21 28 40.9 -0.2
baz=90,SNR=22
U21A Nageezi 89.63 306 ⇓PcP PcP 21 28 40.6 -0.4
baz=90,SNR=42
121A Cookes Peak, D 89.70 302 ⇑P **P** **21 28 39.9 -0.2**
baz=90,SNR=12
X21A Alamocita Cree 89.72 304 ⇓P **P** **21 28 39.9 -0.3**
baz=90,SNR=18
QSPA South Pole Qui 89.82 180 *e*P **P** **21 28 40.5 +0.9**
comp=Z,40nm,0.9s,mb5.8
QSPA LR LR
comp=Z,715nm,20.0s,MS5.1
M20A Sweetwater, Wa 90.08 311 ⇑PcP PcP 21 28 42.8 -0.1
baz=90,SNR=13
O20A White River Ci 90.12 310 ⇑PcP PcP 21 28 42.7 -0.4
baz=90,SNR=7.9
N20A Spence Gulch, 90.14 311 ⇑PcP PcP 21 28 42.8 -0.3
baz=90,SNR=20
Q20A Ridgley Place, 90.16 309 ⇓PcP PcP 21 28 43.3 0.0
baz=90,SNR=19
L20A Wamsutter 90.20 312 ⇓PcP PcP 21 28 43.2 -0.2
baz=90
K20A Yellowstone Ra 90.20 312 ⇑P **P** **21 28 42.3 +0.1**
baz=90,SNR=24
S20A Disappointment 90.20 308 ⇓PcP PcP 21 28 43.6 +0.1
baz=90,SNR=15
Y20A Horse Springs, 90.20 304 ⇑P **P** **21 28 41.9 -0.5**
baz=90
R20A Redvale 90.22 308 ⇓P **P** **21 28 42.2 -0.1**
baz=90,SNR=25
R20A ⇓PcP PcP 21 28 43.2 -0.3
baz=90
P20A De Beque 90.23 309 ⇓PcP PcP 21 28 43.2 -0.4
baz=90
V20A Brimhall 90.28 306 ⇑PcP PcP 21 28 43.2 -0.7
baz=90,SNR=5.3
X20A Quemado 90.31 304 ⇓PcP PcP 21 28 43.7 -0.3
baz=90,SNR=5.7
W20A Ramah 90.31 305 ⇓PcP PcP 21 28 43.8 -0.3
baz=90,SNR=5.9
MVCO Mesa Verde 90.31 307 ⇓*e*P **P** **21 28 44.0 +1.1**
comp=Z,45nm,1.0s,mb5.8
MVCO LR LR
comp=Z,1µm,22.0s,MS5.3
220A Playas Peak, P 90.33 302 ⇑P **P** **21 28 42.7 -0.3**
baz=90,SNR=12
220A ⇓PcP PcP 21 28 43.6 -0.6
baz=90
320A Kipp Ranch, An 90.33 301 ⇑P **P** **21 28 42.7 -0.3**
baz=90,SNR=10
U20A Newcomb 90.33 306 ⇓P **P** **21 28 43.2 +0.3**
baz=90,SNR=6.1
U20A ⇓PcP PcP 21 28 43.7 -0.4
baz=90
PV01 Paradox Valley 90.37 308 *e*P **P** **21 28 44.0 +0.9**
comp=Z,3µm,1.2s
Z20A Nine Sixteen R 90.38 303 ⇑PcP PcP 21 28 43.9 -0.5
baz=90,SNR=18
120A U Bar Ranch, L 90.42 302 ⇑PcP PcP 21 28 44.4 -0.2
baz=90,SNR=14
K19A Absolon Red Bu 90.57 313 ⇓P **P** **21 28 43.7 -0.2**
baz=91,SNR=13
PV04 Paradox Valley 90.63 308 *e*P **P** **21 28 45.6 +1.3**
P19A Cripple Cowboy 90.69 309 ⇑PcP PcP 21 28 45.1 -0.5
baz=91,SNR=31
T19A Beclabito 90.73 307 ⇑PcP PcP 21 28 45.4 -0.5
baz=91,SNR=12
O19A Miners Draw (B 90.79 310 ⇓P **P** **21 28 45.0 0.0**
baz=91,SNR=15
M19A Rock Springs 90.81 311 ⇓P **P** **21 28 44.5 -0.6**
baz=91
RPN Rapa Nui 90.81 243 P **P** **21 28 45.4 0.0**
RPN MLR MLR
comp=Z,2µm,19.0s,MS5.6
S19A Harvey Farm, M 90.82 308 ⇓PcP PcP 21 28 46.1 -0.1
baz=91,SNR=22
N19A John Jarvie Ra 90.83 311 ⇓PcP PcP 21 28 45.8 -0.4
baz=91,SNR=9.0
RLMT Red Lodge 90.86 315 *e*P **P** **21 28 45.0 -0.3**
comp=Z,30nm,1.0s,mb5.6
RLMT *e*PP PP 21 32 21.2 +0.1
RLMT LR LR
comp=Z,1µm,20.0s,MS5.3
U19A Dine' College, 90.88 306 ⇓PcP PcP 21 28 46.4 -0.2
baz=91,SNR=14
Q19A Hogan Spring (90.91 309 ⇑PcP PcP 21 28 46.3 -0.3
baz=91,SNR=32
R19A Curley Farm, L 90.91 308 ⇓PcP PcP 21 28 46.4 -0.2
baz=91,SNR=21
Y19A Nutrioso 90.93 304 ⇑PcP PcP 21 28 46.7 -0.1
baz=91,SNR=22
219A White Tail Can 90.95 302 ⇑P **P** **21 28 45.6 -0.3**
baz=91
L19A Farson 90.96 312 ⇑PcP PcP 21 28 46.4 -0.3
baz=91,SNR=27
319A Douglas 90.97 301 ⇓PcP PcP 21 28 46.5 -0.6
baz=91,SNR=7.2
119A Ashpeak Ranch, 90.98 303 ⇓PcP PcP 21 28 46.7 -0.4
baz=91,SNR=6.4
W19A Sanders 91.04 305 ⇓PcP PcP 21 28 46.9 -0.3
baz=91,SNR=12
BW06 Boulder Array 91.10 313 *e*P **P** **21 28 46.2 -0.2**
comp=Z,5.6nm,0.6s,mb5.1
BW06 LR LR
comp=Z,2µm,21.0s,MS5.5
PDAR Pinedale Array 91.10 313 P **P** **21 28 46.3 -0.1**
comp=Z,8.5nm,0.9s,mb5.1,baz=98,slow=5.6,SNR=45
PDAR LR LR 22 04 02.8
comp=Z,1µm,21.6s,MS5.4,baz=94,slow=32
GCMT Greycliff 91.14 316 *e*P **P** **21 28 46.2 -0.2**
comp=Z,13nm,1.0s,mb5.2
EGMT Eagleton 91.16 318 *e*P **P** **21 28 46.4 -0.1**
comp=Z,26nm,1.3s,mb5.4
EGMT LR LR
comp=Z,1µm,20.0s,MS5.4
F18A Big Timber 91.17 316 ⇑P **P** **21 28 46.2 -0.4**
baz=91,SNR=13
N18A Larsen Ranch, 91.20 311 ⇑P **P** **21 28 46.4 -0.5**
baz=91,SNR=17
D18A Linhart Farms, 91.21 317 ⇓PcP PcP 21 28 47.4 -0.4
baz=91,SNR=6.3
A18A Metzger Ranch, 91.21 319 ⇓P **P** **21 28 45.7 -1.1**
baz=91,SNR=7.3
I18A Diamond G Ranc 91.27 314 ⇑P **P** **21 28 46.9 -0.3**
baz=91,SNR=19
E18A Harlowton 91.30 316 ⇓P **P** **21 28 47.0 -0.2**
baz=91,SNR=14
R18A Canyonlands Na 91.41 308 ⇑PcP PcP 21 28 48.4 -0.4
baz=91,SNR=15
T18A Mexican Hat 91.41 307 ⇑PcP PcP 21 28 48.5 -0.4
baz=91,SNR=29
U18A Rough Rock, Ch 91.42 306 ⇓PcP PcP 21 28 48.6 -0.3
baz=91,SNR=15
NIL Nilore 91.43 57 PFAKE 21 29 00.0 +12
NIL LR LR
comp=Z,111nm,21.0s,MS4.3
J18A Kendall Valley 91.43 313 ⇓P **P** **21 28 47.8 -0.1**
baz=91,SNR=9.3
K18A Toltan Ranch, 91.45 312 ⇓P **P** **21 28 47.5 -0.5**
baz=92,SNR=5.9
O18A Roosevelt 91.47 310 ⇓P **P** **21 28 46.3 -1.9**
baz=92,SNR=13
V18A Ganado 91.48 306 ⇑P **P** **21 28 46.5 -1.8**
baz=92,SNR=5.4
M18A Lyman 91.50 311 ⇑P **P** **21 28 47.5 -0.8**
baz=92,SNR=15
S18A Hurst Farm, Bl 91.50 308 ⇑P **P** **21 28 48.0 -0.4**
baz=92,SNR=19
X18A Snowflake 91.51 304 ⇓PcP PcP 21 28 49.0 -0.3
baz=92,SNR=11
118A Homack Ranch, 91.55 302 ⇑PcP PcP 21 28 49.2 -0.4
baz=92
318A Bisbee 91.58 301 ⇓P **P** **21 28 48.3 -0.6**
baz=92
Q18A Rafter H Ranch 91.58 309 ⇓P **P** **21 28 48.5 -0.2**
baz=92,SNR=12
Y18A Canyon Day Jun 91.58 304 ⇓P **P** **21 28 48.1 -0.8**
baz=92,SNR=7.5
Z18A Geronimo 91.60 303 ⇓PcP PcP 21 28 49.3 -0.5
baz=92
218A Dragoon 91.62 302 ⇑PcP PcP 21 28 50.0 +0.1
baz=92
AML Almayashu 91.64 48 P **P** **21 28 49.7 +0.8**
SNR=22
AML Almayashu 91.64 48 ⇑*e*P **P** **21 28 49.4 +0.4**
comp=Z,82nm,1.6s,mb5.8
AML *e*PP PP 21 32 29.1 +1.8
P18A Preston Nutter 91.66 309 ⇑P **P** **21 28 48.9 -0.2**
baz=92,SNR=20
LKWY Lake 91.68 314 PFAKE 21 29 00.0 +11
LKWY LR LR
comp=Z,3µm,20.0s,MS5.7
EKS2 Erkin-Say 91.70 48 P **P** **21 28 49.5 +0.4**
SNR=21
EKS2 Erkin-Say 91.70 48 *e*P **P** **21 28 49.3 +0.2**
comp=Z,37nm,1.3s,mb5.5
EKS2 *e*S PP 21 32 25.5 -2.3
A17A Triple J Farms 91.77 319 P **P** **21 28 49.5 +0.2**
baz=92,SNR=11
D17A Six Diamond Ra 91.81 317 ⇓P **P** **21 28 49.1 -0.4**
baz=92,SNR=11
F17A Fitzpatrick Pl 91.83 316 ⇓P **P** **21 28 49.2 -0.5**
baz=92,SNR=6.8
LOHW Long Hollow 91.85 313 *e*P **P** **21 28 50.0 +0.1**
comp=Z,14nm,1.0s,mb5.2
C17A Wharram Farm, 91.85 317 P **P** **21 28 49.5 -0.3**
baz=92,SNR=6.4
B17A L & Farms, Che 91.86 318 ⇑P **P** **21 28 49.3 -0.4**
baz=92
SRU San Rafael 91.89 309 ⇑P **P** **21 28 50.0 -0.1**
baz=92,SNR=10.0
SRU San Rafael 91.89 309 *e*P **P** **21 28 50.4 +0.3**
SRU pmax pmax
comp=Z,13nm,1.0s,mb5.2
SRU San Rafael 91.89 309 *e*P **P** **21 28 50.4 +0.3**
comp=Z,13nm,1.0s,mb5.2
J17A Brown Place, J 91.93 313 ⇓P **P** **21 28 50.2 0.0**
baz=92,SNR=24
M17A Scullys Gap (B 91.94 311 ⇓P **P** **21 28 50.2 -0.2**
baz=92,SNR=28
MOOW Moose Ponds 91.94 314 *e*P **P** **21 28 50.0 -0.2**
comp=Z,5.9nm,1.0s,mb4.9
E17A Martinsdale 91.95 316 ⇓P **P** **21 28 50.3 0.0**
baz=92,SNR=15
Z17A San Carlos Hig 91.96 303 ⇑P **P** **21 28 50.7 +0.1**
baz=92,SNR=6.1
SNOW Snow King Moun 91.96 313 *e*P **P** **21 28 50.9 +0.6**
O17A Robinson Place 92.03 310 ⇓P **P** **21 28 51.0 +0.2**
baz=92
REDW Red Top Meadow 92.03 313 *e*P **P** **21 28 49.9 -0.8**
comp=Z,8.5nm,0.7s,mb5.2
R17A Hanksville Air 92.05 308 ⇑P **P** **21 28 50.8 -0.1**
baz=92,SNR=14
IMW Indian Meadow 92.08 314 *e*P **P** **21 28 51.7 +0.8**
L17A Cokeville 92.08 312 ⇑P **P** **21 28 50.3 -0.7**
baz=92,SNR=8.3
N17A Moffit Pass 92.08 311 ⇑PcP PcP 21 28 51.6 -0.2
baz=92,SNR=6.5
K17A Gardner Place, 92.10 313 ⇑P **P** **21 28 50.9 -0.1**
baz=92,SNR=15
TPAW Teton Pass 92.10 313 *e*P **P** **21 28 51.2 +0.2**
T17A Navajo Res., N 92.16 307 ⇓P **P** **21 28 51.6 +0.2**
baz=92,SNR=14
V17A Tonalea, Kykot 92.18 305 ⇑P **P** **21 28 52.1 +0.5**
baz=92,SNR=15
117A Oracle 92.20 302 ⇑P **P** **21 28 52.0 +0.3**
baz=92,SNR=7.9
USP Ospenovka 92.21 47 P **P** **21 28 51.1 -0.4**
SNR=20
X17A Forest Lakes 92.22 304 ⇑P **P** **21 28 52.4 +0.7**
baz=92
AAK Ala-Archa 92.22 48 P **P** **21 28 52.4 +0.8**
comp=Z,220nm,0.8s,mb6.5,SNR=9.2
AAK Ala-Archa 92.22 48 P **P** **21 28 50.0 -1.6**
SNR=14
AAK Ala-Archa 92.22 48 P **P** **21 28 51.9 +0.3**
comp=Z,14nm,0.6s,mb5.4,baz=229,slow=5.4,SNR=47
AAK Ala-Archa 92.22 48 *e*P **P** **21 28 52.1 +0.5**
AAK pmax pmax
comp=Z,58nm,1.2s,mb5.8
AAK Ala-Archa 92.22 48 *e*P **P** **21 28 52.1 +0.5**
comp=Z,58nm,1.2s,mb5.8
AHID Auburn Hatcher 92.23 313 *e*P **P** **21 28 51.6 -0.1**
comp=Z,12nm,0.6s,mb5.4
AHID LR LR
comp=Z,2µm,19.0s,MS5.5
TUC Tucson 92.24 302 *e*P **P** **21 28 52.0 +0.1**
TUC pmax pmax
comp=Z,4.0nm,0.8s,mb4.8
TUC Tucson 92.24 302 *e*P **P** **21 28 52.0 +0.1**
comp=Z,4.4nm,0.8s,mb4.8
Y17A Roosevelt 92.26 304 ⇑P **P** **21 28 51.1 -0.9**
baz=92
217A Green Valley 92.28 302 ⇓P **P** **21 28 52.4 +0.3**
baz=92,SNR=16
FRU Bishkek 92.31 47 ⇑*i*P **P** **21 28 52.0 0.0**
FRU pmax pmax
comp=Z,170nm,2.2s,mb6.0
A16A West Butte Ran 92.36 319 ⇑P **P** **21 28 51.8 -0.3**
baz=92,SNR=10
RRI2 Red Ridge 92.38 313 *e*P **P** **21 28 53.0 +0.8**
Q16A Castle Valley 92.40 309 ⇑P **P** **21 28 51.7 -0.8**
baz=92
D16A Dana Ranch, Ca 92.41 317 ⇑P **P** **21 28 51.1 -1.3**
baz=92,SNR=17
TMUT Trail Mountain 92.42 309 *e*P **P** **21 28 53.7 +1.2**
DAU Daniels Canyon 92.42 310 *e*P **P** **21 28 53.4 +0.8**
B16A M & M Farms, S 92.46 318 ⇑P **P** **21 28 51.8 -0.7**
baz=92
I16A Newdale 92.48 314 ⇑P **P** **21 28 52.3 -0.4**
baz=92,SNR=6.0
L16A Fish Haven 92.50 312 ⇓P **P** **21 28 52.5 -0.4**
baz=92,SNR=5.8
C16A Fuhringer Ranc 92.51 318 ⇓P **P** **21 28 52.5 -0.3**
baz=92,SNR=7.1
E16A East Helena 92.51 316 ⇑P **P** **21 28 52.7 -0.1**
baz=92
KBK Karagaybulak 92.56 47 P **P** **21 28 53.9 +0.8**
SNR=9.5
JLU Jordanelle 92.56 310 *e*P **P** **21 28 54.2 +1.0**
K16A Soda Springs 92.59 313 ⇑P **P** **21 28 53.2 -0.1**
baz=93,SNR=12
J16A Bone 92.59 313 ⇓P **P** **21 28 53.4 +0.1**
baz=93
HRY Holter Researc 92.61 317 *e*P **P** **21 28 53.8 +0.5**
HWUT Hardware Ranch 92.61 311 *e*P **P** **21 28 53.0 -0.5**
comp=Z,11nm,0.9s,mb5.3
HWUT LR LR
comp=Z,2µm,19.0s,MS5.5
O16A Springville 92.61 310 ⇑P **P** **21 28 53.1 -0.3**
baz=93
G16A Moss Hill, Enn 92.65 315 ⇓P **P** **21 28 53.7 +0.2**
baz=93,SNR=8.6
WUAZ Wupatki 92.65 305 PFAKE 21 29 00.0 +6.2
WUAZ LR LR
comp=Z,1µm,20.0s,MS5.3
R16A Teasdale 92.66 308 ⇑P **P** **21 28 52.8 -0.9**
baz=93
T16A Glen Canyon Da 92.72 307 ⇑P **P** **21 28 53.2 -0.8**
baz=93
MPU Maple Canyon 92.72 310 *e*P **P** **21 28 54.4 +0.5**
comp=Z,12nm,1.0s,mb5.3
MPU *e*PP PP 21 32 34.8 -1.1
X16A Lo Mia Camp, P 92.74 304 ⇓P **P** **21 28 53.6 -0.6**
baz=93
P16A Fountain Green 92.75 309 ⇑P **P** **21 28 53.7 -0.4**
baz=93
Z16A Peralta Trail, 92.76 303 ⇓P **P** **21 28 54.5 +0.2**
baz=93,SNR=6.2
S16A Weppner Ranch, 92.77 308 ⇑P **P** **21 28 53.5 -0.8**
baz=93,SNR=5.4
Y16A Circle Bar Ran 92.78 304 ⇑P **P** **21 28 54.1 -0.3**
baz=93,SNR=5.0
CTU Camp Tracy 92.79 311 *e*P **P** **21 28 55.0 +0.8**
W16A Flagstaff 92.80 305 ⇑P **P** **21 28 54.7 +0.3**
baz=93,SNR=11
KZA Kyzart 92.80 48 P **P** **21 28 55.5 +1.2**
SNR=16
216A Three Points, 92.82 302 ⇓P **P** **21 28 54.5 -0.1**
baz=93,SNR=8.6
116A Eloy 93.01 302 ⇑P **P** **21 28 55.5 0.0**
baz=93,SNR=7.0
B15A Bradely Ranch, 93.03 318 ⇑P **P** **21 28 54.7 -0.5**
baz=93
NLU North Lily Min 93.06 310 *e*P **P** **21 28 54.1 -1.4**
comp=Z,11nm,1.0s,mb5.2
D15A Lincoln 93.07 317 ⇓P **P** **21 28 55.6 +0.2**
baz=93
NOQ North Oquirrh 93.07 311 *e*P **P** **21 28 56.3 +0.8**
LRM Limekiln Ridge 93.08 316 *e*P **P** **21 28 56.2 +0.8**
C15A Salmond Ranch, 93.09 318 ⇑P **P** **21 28 55.1 -0.3**
baz=93
A15A Johnson Ranch, 93.11 319 ⇑P **P** **21 28 54.8 -0.7**
baz=93
G15A Dillon 93.14 315 ⇓P **P** **21 28 55.6 -0.1**
baz=93,SNR=12
YKA Yellowknife Ar 93.14 332 P **P** **21 28 55.5 +0.1**
comp=Z,14nm,0.9s,mb5.4,baz=84,slow=5.3,SNR=52
YKA Yellowknife Ar 93.14 332 P **P** **21 28 55.5 +0.1**
E15A Deer Lodge 93.18 316 ⇓P **P** **21 28 55.5 -0.4**
baz=93
J15A Blackfoot 93.18 313 ⇑P **P** **21 28 56.1 +0.1**
baz=93
MSU Marysvale 93.20 308 *e*P **P** **21 28 56.8 +0.6**
MSU pmax pmax
comp=Z,6.0nm,1.0s,mb5.0
MSU Marysvale 93.20 308 *e*P **P** **21 28 56.8 +0.6**
comp=Z,6.3nm,1.0s,mb5.0
DLMT Dillon 93.21 315 *e*P **P** **21 28 56.3 +0.2**
comp=Z,12nm,1.0s,mb5.3
L15A Malad City 93.21 312 ⇓P **P** **21 28 55.8 -0.3**
baz=93,SNR=11
EDM Edmonton 93.23 323 *e*P **P** **21 28 55.9 -0.1**
P15A Leamington 93.23 309 ⇑P **P** **21 28 56.5 +0.2**
baz=93,SNR=13
H15A Lima 93.28 314 ⇑P **P** **21 28 56.9 +0.5**
baz=93,SNR=7.1
M15A Larsen Ranch, 93.28 311 ⇓P **P** **21 28 55.9 -0.7**
baz=93
SPUT South Promonto 93.29 311 *e*P **P** **21 28 56.5 -0.1**
V15A Kaibab Nationa 93.30 306 ⇑P **P** **21 28 56.7 0.0**
baz=93
Q15A Fillmore 93.34 309 ⇑P **P** **21 28 57.5 +0.7**
baz=93,SNR=5.7
O15A The Old Anders 93.35 310 ⇓P **P** **21 28 57.5 +0.7**
baz=93
N15A Stansbury Isla 93.36 311 ⇑P **P** **21 28 56.7 -0.2**
baz=93
U15A North Rim 93.37 306 ⇓P **P** **21 28 56.8 -0.2**
baz=93
Z15A Gila River Ind 93.37 303 ⇑P **P** **21 28 56.9 -0.2**
baz=93
X15A Humboldt 93.39 304 ⇓P **P** **21 28 56.8 -0.4**
baz=93
MCMT McKenzie Canyo 93.41 315 *e*P **P** **21 28 57.6 +0.6**
comp=Z,2.9nm,0.9s,mb4.7
KSH Kashi 93.46 51 P **P** **21 28 56.5 -0.9**
KSH pP pP 21 29 01.5 -1.1
KSH sP sP 21 29 03.5 -1.0
KSH PP PP 21 32 42.8 +1.1
KSH SKS 21 39 28.5
KSH S S 21 39 59.5 -5.7
KSH SS SS 21 46 17.0 -5.0
KSH pmax pmax
comp=Z,44nm,0.9s,mb5.9
KSH pmax pmax
comp=Z,280nm,4.6s
KSH LR LR
comp=N,2µm,17.9s,MS5.7
KSH LR LR
comp=E,1µm,17.4s,MS5.7
KSH LR LR
comp=Z,2µm,22.8s
B14A Marquette Ranc 93.50 318 ⇓P **P** **21 28 55.5 -1.9**
baz=94
HVU Hansel Valley 93.51 312 *e*P **P** **21 28 57.6 0.0**
ULHL Ulahol 93.53 48 P **P** **21 28 58.3 +0.6**
SNR=11
A14A Double T Ranch 93.56 319 ⇓P **P** **21 28 57.0 -0.6**
baz=94
CHMT Chamberlain Mo 93.58 317 *e*P **P** **21 28 58.0 +0.3**
DUG Dugway 93.62 310 *e*P **P** **21 28 58.2 +0.1**
DUG *e* 21 32 40.9
DUG pmax pmax
comp=Z,13nm,1.0s,mb5.3
DUG MLR MLR
comp=Z,1µm,21.0s,MS5.4
DUG Dugway 93.62 310 *e*P **P** **21 28 58.2 +0.1**
comp=Z,13nm,1.0s,mb5.3
DUG *e*PP PP 21 32 40.9 -2.0
DUG LR LR
comp=Z,1µm,21.0s,MS5.4
F14A Wisdom 93.72 316 ⇑P **P** **21 28 57.6 -0.8**
baz=94
D14A Greenough 93.74 317 ⇑P **P** **21 28 58.3 -0.2**
baz=94
BGU Big Grassy Mou 93.75 311 *e*P **P** **21 28 57.8 -0.9**
comp=Z,8.0nm,1.1s,mb5.1
K14A Jones Ranch, D 93.77 312 P **P** **21 28 58.9 +0.2**
baz=94,SNR=18
P14A Drum Mountains 93.84 309 ⇑P **P** **21 28 59.6 +0.5**

baz=94,SNR=16
L14A Malta 93.85 312 ⇓P P 21 28 58.6 -0.5
baz=94,SNR=13
C14A Swan Lake 93.86 318 ⇓P P 21 28 58.8 -0.2
baz=94
N14A Grayback Hills 93.87 311 ⇓P P 21 28 58.8 -0.4
baz=94
WALA Waterton Lakes 93.88 319 *e*P P 21 28 59.2 +0.1
M14A Sheep Mountain 93.96 311 P P 21 28 59.2 -0.4
baz=94,SNR=7.4
J14A Carey 93.98 313 ⇓P P 21 28 59.8 +0.2
baz=94
T14A Hurricane 93.98 307 ⇑P P 21 28 59.6 -0.2
baz=94
114A Black Gap (USA 94.00 303 ⇑P P 21 29 00.7 +0.7
baz=94,SNR=5.8
S14A Cedar City 94.01 308 ⇓P P 21 28 59.2 -0.7
baz=94
Q14A Sevier Lake (B 94.04 309 ⇓P P 21 29 00.6 +0.5
baz=94,SNR=15
SWMT Swartz Lake 94.05 317 *e*P P 21 28 59.9 0.0
Y14A Wickenburg 94.05 304 ⇓P P 21 29 00.3 +0.1
baz=94
MSO Missoula 94.05 317 *e*P P 21 29 00.2 +0.3
comp=Z,8.7nm,0.9s,mb5.2
MSO LR LR
comp=Z,714nm,19.0s,MS5.2
V14A Boquillas Ranc 94.06 306 ⇓P P 21 28 59.7 -0.5
baz=94
W14A Seligman 94.06 305 ⇑P P 21 28 59.8 -0.4
baz=94
U14A Mt Trumbull 94.08 306 ⇑P P 21 28 59.7 -0.6
baz=94
CCUT Cedar City 94.18 307 *e*P P 21 29 01.2 +0.5
comp=Z,7.0nm,0.9s,mb5.1
A13A Flathead Natio 94.22 319 ⇑P P 21 29 00.1 -0.6
baz=94
E13A Victor 94.25 316 ⇓P P 21 29 00.4 -0.5
baz=94,SNR=12
B13A Whitefish 94.30 318 ⇓P P 21 29 01.3 +0.3
baz=94,SNR=7.7
L13A Double Diamond 94.37 312 ⇓P P 21 29 01.4 -0.1
baz=94
I13A Wildhorse Cree 94.38 314 ⇑P P 21 29 01.9 +0.4
baz=94,SNR=22
G13A Cobalt 94.38 315 ⇑P P 21 29 01.1 -0.4
baz=94,SNR=9.2
D13A Huson 94.39 317 ⇑P P 21 29 00.9 -0.5
baz=94
F13A Darby 94.40 316 ⇑P P 21 29 01.3 -0.2
baz=94,SNR=9.8
C13A Hot Springs 94.42 318 ⇑P P 21 29 01.0 -0.6
baz=94,SNR=10.0
H13A Challis 94.43 315 ⇑P P 21 29 01.0 -0.7
baz=94
J13A Cove Ranch, Pi 94.45 313 ⇑P P 21 29 01.6 -0.3
baz=94
BSMT Bassoo Peak 94.55 318 *e*P P 21 29 02.5 +0.3
S13A Holt Ranch, En 94.57 308 ⇓P P 21 29 02.6 +0.1
baz=95,SNR=6.5
M13A Montello 94.58 311 ⇑P P 21 29 01.9 -0.6
baz=95
M13A Montello 94.58 311 *e*P P 21 29 01.0 -1.4
comp=Z,9.4nm,1.0s,mb5.2
M13A PP PP 21 32 53.0 +2.6
KURK Kurchatov 94.58 39 *e*P P 21 29 01.7 -0.6
KURK pmax pmax
comp=Z,16nm,1.2s,mb5.3
KURK MLR MLR
comp=Z,2μm,21.0s,MS5.5
KURK Kurchatov 94.58 39 *e*P P 21 29 01.6 -0.6
comp=Z,16nm,1.2s,mb5.3
KURK LR LR
comp=Z,2μm,21.0s,MS5.5
KURK Kurchatov 94.58 39 P P 21 29 02.3 0.0
SNR=6.0
P13A Bates Ranch, G 94.58 309 ⇑P P 21 29 02.1 -0.4
baz=95,SNR=6.1
HLID Hailey 94.61 314 *e*P P 21 29 02.7 +0.2
comp=Z,7.1nm,0.9s,mb5.1
HLID *e*PP PP 21 32 48.6 -2.0
HLID LR LR
comp=Z,2μm,20.0s,MS5.5
Q13A Wheeler Ranch, 94.62 309 ⇑P P 21 29 02.1 -0.6
baz=95
R13A O'Grain Ranch, 94.62 308 ⇑P P 21 29 01.7 -1.0
baz=95
Z13A Yuma Proving G 94.63 303 ⇑P P 21 29 01.9 -1.0
baz=95
T13A Saint George 94.64 307 ⇓P P 21 29 02.2 -0.7
baz=95
N13A Wendover, West 94.64 311 *e*P P 21 29 02.8 +0.1
comp=Z,17nm,0.9s,mb5.5
X13A Yucca 94.70 305 ⇓P P 21 29 02.2 -1.0
baz=95
W13A Hualapai Mount 94.72 305 ⇓P P 21 29 02.3 -1.0
baz=95
H12A Diamond D Ranc 94.86 315 ⇑P P 21 29 03.5 -0.2
baz=95,SNR=14
D12A Red Ives Fores 95.00 317 ⇑P P 21 29 03.7 -0.6
baz=95
C12B Naegeli Ranch, 95.03 318 ⇓P P 21 29 03.8 -0.6
baz=95
F12A Elk City 95.04 316 ⇓P P 21 29 03.9 -0.6
baz=95,SNR=15
O12A Currie 95.09 310 ⇓P P 21 29 04.3 -0.6
baz=95,SNR=6.9
R12A Pony Springs, 95.11 308 ⇑P P 21 29 04.6 -0.4
baz=95
I12A Atlanta 95.12 314 ⇓P P 21 29 04.3 -0.6
baz=95
M12A Wells 95.14 311 ⇑P P 21 29 05.3 +0.3
baz=95,SNR=7.6
G12A Big Creek, Yel 95.15 315 ⇑P P 21 29 04.4 -0.6
baz=95,SNR=13
L12A House Creek Ra 95.16 312 ⇑P P 21 29 05.2 +0.1
baz=95,SNR=13
E12A Beaver Dam Sad 95.21 316 ⇑P P 21 29 04.7 -0.5
baz=95
Q12A Willow Creek R 95.24 309 ⇑P P 21 29 05.6 0.0
baz=95,SNR=7.1
P12A McGill 95.27 309 ⇓P P 21 29 05.9 +0.2
baz=95
N12A Clover Valley, 95.27 311 ⇑P P 21 29 06.2 +0.5
baz=95,SNR=5.9
N12A Clover Valley, 95.27 311 *e*P P 21 29 06.0 +0.3
comp=Z,18nm,1.0s,mb5.4
S12A Delamar Landin 95.35 308 ⇑P P 21 29 06.5 +0.4
baz=95
C11A Tepee Creek (N 95.54 318 ⇑P P 21 29 05.2 -1.5
baz=96
DDI Dehra Dun 95.61 60 *e*PKP P 21 29 06.5 -1.0
MFID Camas Ranch 95.65 313 ⇓P P 21 29 07.5 +0.2
baz=96
T11A Corn Creek, Al 95.67 307 ⇑P P 21 29 07.3 -0.3
baz=96
L11A Cat Creek Ranc 95.70 312 ⇓P P 21 29 07.2 -0.4
baz=96,SNR=8.6
M11A Holland Ranch, 95.79 311 ⇑P P 21 29 07.6 -0.4
baz=96
O11A Cowboy Ranch, 95.80 310 ⇑P P 21 29 07.9 -0.1
baz=96,SNR=6.8
R11A Troy Canyon, C 95.88 308 ⇓P P 21 29 08.3 -0.2
baz=96,SNR=11
Q11A Duckwater 95.89 309 ⇓P P 21 29 07.9 -0.6
baz=96
V11A Goodsprings 95.94 306 ⇑P P 21 29 08.9 +0.1
baz=96,SNR=5.7
S11A Rachel 96.06 308 ⇓P P 21 29 09.1 -0.3
baz=96,SNR=5.9
NEW Newport 96.07 318 *e*P P 21 29 07.3 -1.8
NEW *e* 21 32 59.5
NEW pmax pmax
comp=Z,6.0nm,0.8s
NEW MLR MLR
comp=Z,1μm,19.0s
NEW Newport 96.07 318 *e*P P 21 29 07.3 -1.8
comp=Z,5.9nm,0.8s,mb5.1
NEW *e*PP PP 21 32 59.5 -2.2
NEW LR LR
comp=Z,1μm,19.0s,MS5.4
L10A Juniper Basin 96.24 312 ⇓P P 21 29 10.6 +0.5
baz=96,SNR=5.7
M10A I.L. Ranch, Tu 96.35 312 ⇑P P 21 29 09.9 -0.6
baz=96
F10A Beach Ranch, E 96.39 316 ⇑P P 21 29 10.1 -0.5
baz=96
R10A Warm Springs 96.45 308 ⇓P P 21 29 10.4 -0.6
baz=96
BMO Blue Mountains 96.57 315 *e*P P 21 29 11.0 -0.5
BMO pmax pmax
comp=Z,13nm,0.9s,mb5.4
BMO MLR MLR
comp=Z,669nm,20.0s,MS5.1
BMO Blue Mountains 96.57 315 *e*P P 21 29 11.0 -0.5
comp=Z,13nm,0.9s,mb5.3
BMO LR LR
comp=Z,669nm,20.0s,MS5.1
S10A Tonopah Range, 96.71 308 ⇓P P 21 29 11.1 -1.2
baz=97
NVS Novosibirsk 96.84 35 ⇑*i*P P 21 29 11.6 -0.9
NVS *e* 21 39 50.7
NVS pmax pmax
comp=Z,77nm,2.0s,mb5.8
NVS pmax pmax
comp=N,11nm,1.5s
NVS pmax pmax
comp=E,18nm,2.0s
PFO Pinyon Flat Ob 96.94 304 PFAKE 21 29 20.0 +6.6
PFO LR LR
comp=Z,782nm,19.0s,MS5.2
BMN Battle Mountai 96.96 311 *e*P P 21 29 14.3 +0.9
BMN pmax pmax
comp=Z,12nm,1.0s,mb5.3
BMN MLR MLR
comp=Z,1μm,20.0s,MS5.4
BMN Battle Mountai 96.96 311 *e*P P 21 29 14.3 +1.0
comp=Z,12nm,1.0s,mb5.3
BMN LR LR
comp=Z,1μm,20.0s,MS5.4
GSC Goldstone 97.10 305 *e*P P 21 29 14.1 0.0
GSC pmax pmax
comp=Z,5.0nm,1.1s,mb4.9
GSC Goldstone 97.10 305 *e*P P 21 29 14.1 +0.1
comp=Z,5.0nm,1.1s,mb4.9
LNOR Lincton Mounta 97.14 316 *e*P P 21 29 12.8 -1.2
LNOR pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
LNOR Lincton Mounta 97.14 316 *e*P P 21 29 12.8 -1.2
comp=Z,4.8nm,0.8s,mb5.0
TPH Tonopah 97.19 308 PFAKE 21 29 20.0 +5.6
TPH LR LR
comp=Z,1μm,22.0s,MS5.3
OD2 Odessa Site #2 97.24 318 *e*P P 21 29 13.3 -1.1
comp=Z,19nm,0.8s,mb5.6
D08A Wollman Farm, 97.42 317 ⇑P P 21 29 14.6 -0.7
baz=97
MK31 Makanchi Array 97.43 43 *e*P P 21 29 14.1 -1.2
MKAR Makanchi Array 97.43 43 P P 21 29 14.1 -1.2
comp=Z,2.2nm,0.6s,mb4.8,baz=274,slow=4.0,SNR=34
MKAR PP PP 21 33 10.2 -2.1
comp=Z,14nm,1.2s,baz=282,slow=6.1,SNR=5.4
MKAR LR LR 22 16 18.1
comp=Z,1μm,20.7s,MS5.3,baz=282,slow=37
MKAR Makanchi Array 97.43 43 P P 21 29 14.1 -1.2
MKAR 21 33 10.2
B08A Colville Reser 97.52 319 ⇓P P 21 29 14.6 -1.1
baz=98
J08A Circle Bar Ran 97.58 314 ⇑P P 21 29 16.0 -0.1
baz=98,SNR=23
MPMC Manual Prospec 97.58 306 ⇑P P 21 29 15.5 -0.8
baz=98
DAC Darwin (Calif) 97.65 306 PFAKE 21 29 30.0 +13
DAC LR LR
comp=Z,1μm,22.0s,MS5.3
G08A Pilot Rock 97.68 316 ⇓P P 21 29 15.5 -1.0
baz=98
WVOR Wild Horse Val 97.81 313 *e*P P 21 29 16.9 -0.2
WVOR *e* 21 33 14.1
WVOR pmax pmax
comp=Z,10.0nm,1.1s,mb5.3
WVOR MLR MLR
comp=Z,2μm,20.0s,MS5.5
WVOR Wild Horse Val 97.81 313 *e*P P 21 29 16.9 -0.2
comp=Z,10nm,1.1s,mb5.3
WVOR *e*PP PP 21 33 14.1 -1.3
WVOR LR LR
comp=Z,2μm,20.0s,MS5.5
ZAA0 Zalesovo Array 97.91 36 *e*P P 21 29 16.9 -0.4
ZALV Zalesovo Beam 97.91 36 P P 21 29 17.0 -0.3
comp=Z,1.4nm,0.7s,mb4.6,baz=282,slow=7.1,SNR=8.9
ZALV PP PP 21 33 16.0 +0.3
comp=Z,17nm,1.1s,baz=280,slow=8.1,SNR=4.9
ZALV LR LR 22 18 58.1
comp=Z,1μm,18.5s,MS5.5,baz=288,slow=39
ZALV Zalesovo Beam 97.91 36 P P 21 29 17.0 -0.3
ZALV 21 33 16.0
NVAR Mina Array Bea 98.00 309 P P 21 29 18.5 +0.4
comp=Z,3.1nm,0.9s,mb4.8,baz=95,slow=4.5,SNR=16
NVAR PP PP 21 33 14.1 -2.8
comp=Z,2.2nm,1.0s,baz=84,slow=5.9,SNR=4.9
NVAR PKKP PKKPbc 21 46 02.4 +10
comp=Z,0.4nm,0.6s,baz=215,slow=2.0,SNR=4.1
I07A Izee 98.23 314 ⇓P P 21 29 18.2 -0.8
baz=98
G06A Carlson Farm, 98.86 316 ⇑P P 21 29 21.2 -0.6
baz=99
MOD Modoc 99.10 312 *e*P P 21 29 22.8 -0.2
comp=Z,9.3nm,0.9s,mb5.3
MOD LR LR
comp=Z,697nm,20.0s,MS5.2
JCW Jim Creek 99.26 319 *e*P P 21 29 21.0 -2.5
comp=Z,13nm,1.0s,mb5.4
K05A Summer Lake 99.42 313 ⇑P P 21 29 24.4 +0.1
baz=99
LON Longmire 99.43 317 *e*P P 21 29 23.8 -0.5
LON pmax pmax
comp=Z,8.0nm,0.9s,mb5.2
LON Longmire 99.43 317 *e*P P 21 29 23.8 -0.5
comp=Z,8.4nm,0.9s,mb5.3
CMB Columbia Colle 99.67 308 *e*P Pdif 21 29 25.4 +0.2
CMB MLR MLR
comp=Z,1μm,20.0s,MS5.3
SAO San Andreas Ge 100.68 307 PFAKE 21 29 40.0 +10
SAO LR LR
comp=Z,967nm,22.0s,MS5.3
NLWA Neilton Lookou 100.69 318 PFAKE 21 29 40.0 +10
NLWA LR LR
comp=Z,2μm,21.0s,MS5.6
COR Corvallis 100.84 315 PFAKE 21 29 40.0 +10
COR LR LR
comp=Z,232nm,20.0s,MS4.7
YBH Yreka Blue Hor 100.91 312 PFAKE 21 29 40.0 +9.4
YBH LR LR
comp=Z,2μm,20.0s,MS5.5
HUMO Hull Mountain 100.94 313 PFAKE 21 29 40.0 +9.2
HUMO LR LR
comp=Z,1μm,19.0s,MS5.4
WDC Whiskeytown Da 100.97 311 PFAKE 21 29 40.0 +9.1
WDC LR LR
comp=Z,1μm,19.0s,MS5.5
DLBC Dease Lake 101.44 330 *e*Pdif Pdif 21 29 33.6 +0.5
MCCM Marconi Confer 101.61 309 PFAKE 21 29 40.0 +6.3
MCCM LR LR
comp=Z,1μm,20.0s,MS5.4
HOPS Hopland 101.62 310 PFAKE 21 29 40.0 +6.2
HOPS LR LR
comp=Z,2μm,19.0s,MS5.6
WMQ Urumqi 101.68 45 P Pdif 21 29 34.3 +0.2
WMQ pP 21 29 39.0
WMQ PP PP 21 33 47.0 +2.3
WMQ SKS 21 40 11.8
WMQ S Sdif 21 41 10.8 -3.9
WMQ SS SS 21 48 16.8 -0.6
WMQ pmax pmax
comp=Z,22nm,1.2s
WMQ pmax pmax
comp=Z,180nm,6.0s
WMQ LR LR
comp=N,1μm,19.6s,MS5.5
WMQ LR LR
comp=E,900nm,18.4s,MS5.5
WMQ LR LR
comp=Z,1μm,20.0s,MS5.4
SBA Scott Base 101.93 181 PFAKE 21 29 40.0 +4.8
SBA LR LR
comp=Z,683nm,20.0s,MS5.2
EGAK Eagle 103.67 338 PFAKE 21 29 50.0 +7.1
EGAK LR LR
comp=Z,1μm,19.0s,MS5.4
CASY Casey 104.46 161 PFAKE 21 30 00.0 +14
CASY LR LR
comp=Z,1μm,22.0s,MS5.4
TIXI Tiksi 105.68 10 PFAKE 21 34 10.0 +5.6
TIXI LR LR
comp=Z,918nm,19.0s,MS5.3
ILAR Eielson Array 105.74 340 Pdiff Pdif 21 29 53.7 +1.6
comp=Z,0.6nm,0.8s,baz=41,slow=2.9,SNR=8.5
ILAR PP PP 21 34 13.2 -1.0
comp=Z,1.8nm,1.2s,baz=75,slow=2.5,SNR=4.4
COLA College 106.01 340 PFAKE 21 34 20.0 +15
COLA LR LR
comp=Z,2μm,19.0s,MS5.6
TLY Talaya 109.44 34 *e*PKiKP PKiKP 21 34 12.7 +0.7
TLY LR LR
comp=Z,2μm,19.0s,MS5.7
DRV Dumont d'Urvil 111.48 171 SP SP 21 44 29.0 +3.9
DRV L 22 02 00.0
DRV R 22 10 00.0
KDAK Kodiak Island 112.19 336 PFAKE 21 34 30.0 +13
KDAK LR LR
comp=Z,2μm,19.0s,MS5.7
BILL Bilibino 112.27 358 PFAKE 21 34 30.0 +13
BILL LR LR
comp=Z,1μm,19.0s,MS5.5
SONM Songino Array 112.75 37 PKiKP PKiKP 21 34 18.9 +0.5
comp=Z,2.2nm,0.9s,baz=275,slow=3.9,SNR=3.8
SONM PKKP PKKPbc 21 45 33.0 +25
comp=Z,0.4nm,0.7s,baz=207,slow=1.3,SNR=3.8
ULN Ulaanbaatar 113.13 37 PFAKE 21 34 30.0 +11
ULN LR LR
comp=Z,2μm,20.0s,MS5.6
YAK Yakutsk 113.80 16 PFAKE 21 34 30.0 +10
YAK LR LR
comp=Z,951nm,20.0s,MS5.4
RKT Rikitea 114.31 245 *e*PS PS 21 44 55.6 -0.5
comp=Z,385nm,30.2s
RKT *e*SS SS 21 51 08.0 -1.5
comp=Z,854nm,33.5s
RKT *e*LR LR 22 08 49.9
comp=Z,1μm,25.0s
LZH Lanzhou 115.69 50 *e*PKP PKPdf 21 34 24.8 +0.4
LZH sPKP 21 34 31.5
LZH AMB AMB
comp=Z,310nm,8.5s
LZH LR LR
comp=E,2μm,18.3s
LZH LR LR
comp=Z,2μm,19.9s,MS5.8
CHTO Chiang Mai 115.78 69 PFAKE 21 34 40.0 +15
CHTO LR LR
comp=Z,610nm,20.0s,MS5.2
CM31 Chiang Mai Arr 115.84 70 PFAKE 21 34 40.0 +15
CM31 LR LR
comp=Z,294nm,19.0s,MS4.9
CMAR Chiang Mai Arr 115.84 70 PKP PKPdf 21 34 25.1 0.0
comp=Z,1.5nm,1.0s,baz=275,slow=2.9,SNR=6.1
CD2 Chengdu 117.28 55 PKP PKPdf 21 34 28.3 +0.7
CD2 PP PP 21 35 42.5 +4.3
CD2 PKS 21 38 03.8
CD2 SKKS SKKSac 21 42 35.5 -3.5
CD2 SS SS 21 51 47.3 -0.5
CD2 AMB AMB
comp=Z,480nm,7.1s
CD2 LR LR
comp=N,1μm,16.6s
CD2 LR LR
comp=Z,1μm,20.8s,MS5.5
KMI Kunming 117.98 62 PKP PKPdf 21 34 29.0 -0.1
KMI sPKP 21 34 33.5
KMI PP PP 21 35 47.5 +4.2
KMI SKKS SKKSac 21 42 39.8 -4.1
KMI SS SS 21 51 56.0 -1.4
KMI AMB AMB
comp=Z,160nm,6.9s
KMI LR LR
comp=N,690nm,20.3s,MS5.5
KMI LR LR
comp=E,750nm,19.4s,MS5.5
KMI LR LR
comp=Z,770nm,19.4s,MS5.3
KULM Kulim 118.84 84 PFAKE 21 34 40.0 +8.9
KULM LR LR
comp=Z,1μm,21.0s,MS5.5
HHC Hu-ho-hao-te 119.28 42 *e*PKP PKPdf 21 34 27.0 -4.1
HHC PP PP 21 35 51.3 -0.2
HHC PKS 21 38 02.0
HHC SKS SKSdf 21 41 38.3 -4.5
HHC SKKS SKKSac 21 42 43.3 -8.5
HHC SS SS 21 52 09.0 -3.7
HHC AMB AMB
comp=Z,240nm,9.2s
HHC LR LR
comp=N,940nm,20.7s,MS5.5
HHC LR LR
comp=E,920nm,20.9s,MS5.5
HHC LR LR
comp=Z,890nm,20.7s,MS5.4
GYA Guiyang 121.04 59 Pdif Pdif 21 31 01.3 +1.2
GYA PKP PKPdf 21 34 34.8 -0.1
GYA PP PP 21 36 06.0 +1.7
GYA PKS 21 38 10.0
GYA SKKS SKKSac 21 42 58.5 -5.5
GYA SS SS 21 52 33.5 -3.1
GYA AMB AMB
comp=Z,150nm,6.4s
GYA LR LR
comp=N,480nm,20.3s,MS5.2
GYA LR LR
comp=E,370nm,21.3s,MS5.2
GYA LR LR
comp=Z,570nm,20.0s,MS5.2
TAOE Nuku Hiva Isla 121.39 260 *e*LR LR 22 12 02.4
comp=Z,799nm,23.8s
ENH Enshi 122.15 54 *e*PKPdf PKPdf 21 34 37.4 +0.4
BJI Beijing 122.72 41 PKP PKPdf 21 34 37.5 -0.3
BJI PP PP 21 36 14.3 -0.7
BJI SS SS 21 52 57.5 +0.7
BJI AMB AMB
comp=Z,220nm,12.6s
BJI LR LR
comp=N,860nm,24.7s
BJI LR LR
comp=E,1μm,19.6s
BJI LR LR
comp=Z,1μm,22.1s,MS5.4
KLR Kul'dur 124.84 24 *e*PKIKP PKPdf 21 34 37.7 -3.9
KLR pmax pmax
comp=Z,42nm,1.8s
QIZ Qiongzhong 125.85 67 PKP PKPdf 21 34 41.0 -3.3
QIZ PP PP 21 36 39.0 +2.0
QIZ AMB AMB
comp=Z,280nm,10.4s
QIZ LR LR
comp=N,500nm,18.6s
QIZ LR LR
comp=Z,870nm,23.8s
CN2 Changchun 125.93 32 *e*PKP PKPdf 21 34 44.5 +0.7
CN2 PP PP 21 36 39.0 +2.8
CN2 SS SS 21 53 30.0 -6.7
CN2 AMB AMB
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,2μm,20.0s,MS5.8
CN2 LR LR
comp=E,700nm,20.0s,MS5.8
CN2 LR LR
comp=Z,1μm,21.0s,MS5.5
HABR Khabarovsk 126.72 22 *i* PKIKP PKPdf 21 34 44.0 -1.2
HABR *e* 21 36 38.9
HABR *e*PPP 21 39 20.7
HABR 21 41 52.0
HABR *e*PS PS 21 46 41.8 -3.8
HABR *e*SS SS 21 53 41.8 -4.2
HABR *e*SSS 21 58 22.1
HABR pmax pmax
comp=Z,45nm,2.2s
HABR pmax pmax
comp=N,12nm,1.1s
HABR pmax pmax
comp=E,39nm,1.7s
HABR MLR MLR
comp=Z,513nm,24.0s,MS5.1
PETK Petropavlovsk- 127.22 3 PKP PKPdf 21 34 47.6 +1.6
comp=Z,1.3nm,0.6s,baz=132,slow=2.1,SNR=4.0
PETK Petropavlovsk- 127.22 3 PKP PKPdf 21 34 47.6 +1.6
PET Petropavlovsk 127.35 2 PFAKE 21 35 00.0 +14
PET LR LR
comp=Z,592nm,20.0s,MS5.3

MDJ	**Mudanjiang**	**127.44**	**29**	PKP	PKPdf	21 34 46.3	-0.4
MDJ				sPKP		21 34 51.0	
MDJ				PP	PP	21 36 44.0	-2.1
MDJ				PKS		21 38 19.3	
MDJ				SKS	SKSdf	21 41 53.3	-4.7
MDJ				SS	SS	21 53 52.5	-2.8
MDJ				AMB	AMB		
	comp=Z,230nm,11.3s						
MDJ				LR	LR		
	comp=N,800nm,19.1s,MS5.5						
MDJ				LR	LR		
	comp=E,470nm,19.1s,MS5.5						
MDJ				LR	LR		
	comp=Z,1μm,20.3s,MS5.6						
KSM	**Kuching**	**128.60**	**88**	PFAKE		21 35 00.0	+10
KSM				LR	LR		
	comp=Z,846nm,19.0s,MS5.5						
NJ2	**Nanjing**	**128.67**	**48**	*e*PKP	PKPdf	21 34 45.3	-4.1
NJ2				sPKP		21 34 59.5	
NJ2				PP	PP	21 36 55.0	+0.1
NJ2				SKS	SKSdf	21 41 51.0	-10
NJ2				LR	LR		
	comp=N,3μm,22.4s						
NJ2				LR	LR		
	comp=E,2μm,37.6s						
NJ2				LR	LR		
	comp=Z,2μm,25.6s,MS5.6						
PPT	**Papeete**	**128.91**	**247**	*e*LQ		22 09 45.0	
	comp=Z,3μm,30.2s						
PPT				*e*LR	LR	22 15 39.3	
	comp=Z,1μm,24.2s						
INCN	**Inchon**	**130.82**	**37**	PFAKE		21 35 00.0	+6.7
INCN				LR	LR		
	comp=Z,1μm,19.0s,MS5.7						
SSE	**Sheshan**	**130.87**	**47**	PKP	PKPdf	21 34 50.0	-3.6
SSE				PP	PP	21 37 11.8	+2.5
SSE				PKS		21 38 21.0	
SSE				SS	SS	21 54 37.5	-1.5
SSE				AMB	AMB		
	comp=Z,570nm,5.8s						
SSE				LR	LR		
	comp=N,310nm,27.5s,MS5.2						
SSE				LR	LR		
	comp=E,590nm,27.3s,MS5.2						
SSE				LR	LR		
	comp=Z,480nm,34.6s						
KSRS	**Korea Array**	**131.61**	**36**	PKP	PKPdf	21 34 54.7	-0.2
	comp=Z,1.1nm,1.0s,baz=205,slow=2.6,SNR=8.1						
KSRS				PP	PP	21 36 55.0	-19
	comp=Z,0.8nm,0.6s,baz=325,slow=4.6,SNR=5.1						
KSRS	**Korea Array**	**131.61**	**36**	PKIKP	PKPdf	21 34 54.7	-0.1
KSRS				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MBWA	**Marble Bar**	**133.82**	**120**	*e*PKPdf	PKPdf	21 35 00.1	+0.6
MBWA				LR	LR		
	comp=Z,759nm,21.0s,MS5.4						
POHA	**Pohakuloa**	**133.86**	**298**	PFAKE		21 35 10.0	+10
POHA				LR	LR		
	comp=Z,644nm,19.0s,MS5.4						
YUK	**Yuzh-Kuril'sk**	**134.17**	**16**	*i* PKHKP	PKPpre	21 34 32.8	
YUK				*i* PPP		21 40 32.0	
NACB	**Ninganchiao**	**134.45**	**56**	*e*PKPdf	PKPdf	21 35 00.8	+0.3
MAJO	**Matsushiro**	**137.82**	**29**	PFAKE		21 35 20.0	+14
MAJO				LR	LR		
	comp=Z,1μm,20.0s,MS5.6						
MJAR	**Matsushiro Arr**	**137.83**	**29**	PKhKP	PKPpre	21 34 58.8	
	comp=Z,1.3nm,0.7s,baz=324,slow=1.4,SNR=5.4						
MJAR				PKP	PKPdf	21 35 05.9	-0.6
	comp=Z,1.5nm,0.7s,baz=308,slow=1.2,SNR=5.4						
MJAR				PP	PP	21 37 51.9	-0.7
	comp=Z,7.7nm,1.2s,baz=309,slow=7.2,SNR=11						
FITZ	**Fitzroy Crossi**	**140.13**	**119**	*e*PKP	PKPpre	21 35 02.0	
	comp=Z,12nm,0.8s						
FITZ	**Fitzroy Crossi**	**140.13**	**119**	*e*PKPdf	PKPdf	21 35 11.6	+0.4
STKA	**Stephens Creek**	**142.81**	**151**	*e*PKP	PKPpre	21 35 11.2	
	comp=Z,11nm,0.9s						
STKA	**Stephens Creek**	**142.81**	**151**	PKhKP	PKPpre	21 35 11.0	
	comp=Z,6.0nm,0.8s,baz=166,slow=1.3,SNR=16						
STKA	**Stephens Creek**	**142.81**	**151**	*e*PKPdf	PKPpre	21 35 11.3	
ASAR	**Alice Springs**	**144.03**	**133**	PKP	PKPdf	21 35 15.8	-2.2
	comp=Z,8.0nm,0.6s,baz=228,slow=2.9,SNR=67						
MIDW	**Midway**	**145.72**	**326**	PFAKE		21 35 30.0	+9.2
MIDW				LR	LR		
	comp=Z,546nm,19.0s,MS5.3						
WRAB	**Tennant Creek**	**146.53**	**128**	*e*PKP2	PKPbc	21 35 22.9	-0.9
ARMA	**Armidale**	**148.03**	**163**	*e*PKP	PKPab	21 35 29.2	-1.1
ARMA	**Armidale**	**148.03**	**163**	*e*PKPdf	PKPdf	21 35 25.4	+0.8
KAKA	**Kakadu**	**148.25**	**115**	*e*PKP	PKPbc	21 35 28.3	-0.4
	comp=Z,56nm,1.0s						
KAKA	**Kakadu**	**148.25**	**115**	*e*PKPbc	PKPbc	21 35 29.0	+0.3
AFI	**Afiamalu**	**150.21**	**241**	PKIKP	PKPdf	21 35 29.5	+1.0
AFI				*e*		21 35 39.5	
EIDS	**Eidsvold**	**152.54**	**159**	*e*PKPbc	PKPbc	21 35 38.9	+0.2
CTA	**Charters Tower**	**154.75**	**144**	*e*PKP	PKPbc	21 35 41.7	-2.0
	comp=Z,5.0nm,0.8s						
CTAO	**Charters Tower**	**154.75**	**144**	*e*PKPdf	PKPdf	21 35 35.5	+0.4
CTAO				*e*PKPbc	PKPbc	21 35 44.4	+0.7
DZM	**Mont Dzumac**	**157.34**	**191**	*e*SS	SS	21 59 51.1	+10
	comp=Z,1μm,27.8s						
DZM				*e*LR	LR	22 28 51.4	
	comp=Z,2μm,30.1s						

*NEIC **27** 21:30:33.2, 19°.11N×67°.73W, h68km, MD3.5(RSPR), After RSPR.*

RSPR 27 21:30:33.2, 19°.11N×67°.73W, h68km±12km, MD3.5/7, 4C-4D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.86**	**137**	↓*e*P	Pn	21 30 46.3	-3.6
AGPR				*e*S	Sn	21 31 00.9	-1.4
LSP	**Las Mesas**	**1.11**	**146**	↓*e*P	Pn	21 30 50.7	-2.3
LRS	**Lares**	**1.17**	**134**	↑*e*P	Pn	21 30 51.3	-2.4
LRS				*e*S	Sn	21 31 08.9	-0.2
AOPR	**Arecibo Observ**	**1.19**	**129**	↓*e*P	Pn	21 30 53.4	-0.6
AOPR				*e*S	Sn	21 31 09.3	-0.3
CRPR	**Cabo Rojo, PR**	**1.24**	**152**	↓*e*P	Pn	21 30 54.5	-0.2
CELP	**Cerrillos**	**1.50**	**133**	↑*e*P	Pn	21 30 57.2	-0.8
CELP				*e*S	Sn	21 31 17.1	+0.3
SJG	**San Juan**	**1.79**	**123**	↑*e*P	Pn	21 31 01.8	-0.3
SJG				*e*S	Sn	21 31 24.0	+0.1
MTP	**Monte Pirata**	**2.29**	**116**	↑*e*P	Pn	21 31 08.5	-0.3

*ISCJB **27** 21:42:10.7±0.5, 10°.45N±0°.03×62°.71W±0°.02, h20km±5km, mb3.4/5, Error ellipse: s-maj=5.1km s-min=3.3km az=164.4*
*FUNV **27** 21:42:10.3, 10°.46N×62°.64W, h2km, MW3.5*
*NEIC **27** 21:42:10.3, 10°.46N×62°.64W, h2km, MD3.5(CAR), MD3.4(TRN), After CAR.*
*TRN **27** 21:42:12.1, 10°.59N×62°.54W, h4km, MD3.4*
*IDC **27** 21:42:16.8±9.7, 10°.59N×62°.76W, h78km±74km, mb3.2/5, mb1 3.6/5, mb1mx3.3/21, mbtmp3.2/5, Error ellipse: s-maj=116.0km s-min=21.9km az=70.0*

ISC 27 21:42:10.6±0.6, 10°.47N±0°.03×62°.68W±0°.02, h10km±4km, n29, σ1°.04/51, mb3.4/5, 3C, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUNV	**Guanoco**	**0.40**	**220**	↑*i* P	Pg	21 42 18.3	-0.3
GUNV				*e*S	Sg	21 42 24.4	+0.4
GUIV	**Guiria**	**0.48**	**69**	↑*i* P	Pg	21 42 19.8	-0.2
GUIV				*e*S	Sg	21 42 25.9	-0.4
CRUV	**Carupano**	**0.58**	**290**	*e*P	Pg	21 42 21.3	-0.6
CRUV				*e*S	Sg	21 42 29.5	-0.1
ITEV	**Isla Los Testi**	**0.98**	**333**	↑*i* P	Pg	21 42 29.4	-0.2
ITEV				*e*S	Sg	21 42 42.8	+0.4
TPP	**Pointe-a-Pierr**	**1.22**	**97**	*e*P	Pn	21 42 34.1	+0.5
TPP				*e*S	Sb	21 42 51.7	+2.2
TPP	**Pointe-a-Pierr**	**1.22**	**97**	*e*P	Pn	21 42 34.1	+0.5
TPP				*e*S	Sb	21 42 49.9	+0.5
TRN	**Trinidad (W)**	**1.27**	**82**	*e*P	Pn	21 42 33.3	-1.0
TRN				*e*S	Sb	21 42 49.9	-1.0
TRN	**Trinidad (W)**	**1.27**	**82**	*e*P	Pn	21 42 33.3	-1.0
TRN				*e*S	Sb	21 42 49.9	-1.0
ORIV	**Oritupano**	**1.57**	**207**	*i* P	Pn	21 42 39.1	+0.6
ORIV				*e*S	Sn	21 43 00.0	+1.2
TBH	**Brigand Hill**	**1.58**	**89**	*e*P	Pn	21 42 39.8	+1.0
TBH				*e*S	Sn	21 42 58.9	-0.4
TBH	**Brigand Hill**	**1.58**	**89**	*e*P	Pn	21 42 39.8	+1.0
TBH				*e*S	Sn	21 42 58.9	-0.4
GRGR	**Grenville**	**1.93**	**31**	*e*Pn	Pn	21 42 44.3	+0.8
GRGR				*e*Sn	Sn	21 43 10.1	+2.2
PCRV	**Puerto La Cruz**	**1.95**	**261**	P	Pn	21 42 46.6	+2.8
	36nm,0.3s,baz=93,slow=8.3,SNR=87						
GRW	**Mount Saint Ca**	**1.95**	**31**	*e*P	Pn	21 42 44.1	+0.3
GRW				*e*S	Sn	21 43 07.5	-0.8
GRW	**Mount Saint Ca**	**1.95**	**31**	*e*P	Pn	21 42 44.1	+0.3
GRW				*e*S	Sn	21 43 07.5	-0.8
TPR	**Prospect**	**2.00**	**69**	*e*P	Pn	21 42 44.5	+0.1
TPR				*e*S	Sn	21 43 10.0	+0.5
TPR	**Prospect**	**2.00**	**69**	*e*P	Pn	21 42 44.5	+0.1
TPR				*e*S	Sn	21 43 09.1	-0.3
RIOV	**Rio Grande**	**2.54**	**160**	*e*P	Pn	21 42 51.0	-0.8
RIOV				*e*S	Sn	21 43 22.2	-0.6
CUPV	**Cœpira**	**3.09**	**263**	*e*P	Pn	21 43 00.1	+0.7
CUPV				*e*S	Sn	21 43 36.5	+0.1
BIRV	**Birongo**	**3.53**	**270**	*e*P	Pn	21 43 06.2	+0.7
BIRV				*e*S	Sn	21 43 46.1	-1.2
CAOV	**Caicara del Or**	**4.77**	**229**	*e*P	Pn	21 43 22.2	-0.3
CAOV				*e*S	Sn	21 44 14.7	-3.2
BAUV	**El Baul**	**5.50**	**254**	*e*P	Pn	21 43 32.0	-0.6
BAUV				*e*S	Sn	21 44 32.1	-3.9
SDV	**Santo Domingo**	**8.00**	**259**	*e*Pn	Pn	21 44 08.2	+1.2
	7.0nm,0.6s						
SDV				Sn	Sn	21 45 38.2	+0.7
SIV	**San Ignacio**	**26.34**	**177**	P	P	21 47 46.4	-0.5
	0.7nm,0.7s,mb3.3,baz=18,slow=13,SNR=4.2						
LPAZ	**La Paz**	**27.13**	**192**	P	P	21 47 54.7	+0.7
	0.7nm,0.6s,mb3.4,baz=353,slow=9.8,SNR=3.6						
LPAZ	**La Paz**	**27.13**	**192**	P	P	21 47 54.7	+0.7
TXAR	**Lajitas Array**	**42.58**	**302**	P	P	21 50 04.2	-2.7
	0.3nm,0.7s,mb3.1,baz=122,slow=8.6,SNR=3.1						
PDAR	**Pinedale Array**	**51.88**	**317**	P	P	21 51 15.9	-3.4
	0.3nm,0.5s,mb3.5,baz=114,slow=11,SNR=3.6						
ILAR	**Eielson Array**	**78.13**	**334**	P	P	21 54 06.5	-3.1
	0.5nm,0.7s,mb3.6,baz=92,slow=4.2,SNR=11						

CSEM 27 21:52:39.4±0.1, 32°.38N×47°.38E, h2km, ML5.4, Error ellipse: s-maj=4.2km s-min=2.1km az=109.0, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**1.23**	**102**	*e*Pg	Pg	21 53 03.0	0.0
SHGR				*e*Sg	Sg	21 53 19.7	+0.8
MIB	**Mutribah**	**2.57**	**181**	*e*P	Pn	21 53 21.8	-0.2
UMR	**Umm Al-Rimmam**	**2.83**	**174**	*e*P	Pn	21 53 25.5	-0.1
ASAO	**Ashtian**	**3.09**	**45**	*e*Pn	Pn	21 53 29.9	+0.7
NAY	**Al-Naaiem**	**3.12**	**182**	*e*P	Pn	21 53 29.8	+0.2
KBD	**Kabd**	**3.20**	**175**	*e*P	Pn	21 53 30.9	+0.2
THKV	**Tehran--Karaj**	**4.57**	**38**	*e*Pn	Pn	21 53 49.8	+0.3
NASN	**Na'in**	**4.60**	**83**	*e*Pn	Pn	21 53 49.9	0.0
CHTH	**Charan**	**4.69**	**40**	*e*Pn	Pn	21 53 51.7	+0.5
DAMV	**Damavand**	**5.00**	**48**	*e*Pn	Pn	21 53 55.5	0.0
GRMI	**Germi**	**6.43**	**4**	*e*Pn	Pn	21 54 15.0	-0.1
MRVT	**Maraveh tapeh**	**8.87**	**51**	*e*Pn	Pn	21 54 49.2	+0.6
BJRD	**Bojnurd**	**9.78**	**54**	*e*Pn	Pn	21 55 01.5	+0.4

*ISCJB **27** 21:54:10.4±0.8, 38°.50N±0°.06×27°.57E±0°.06, h2km±12km, Error ellipse: s-maj=11.0km s-min=5.7km az=146.5*
*CSEM **27** 21:54:10.6±0.1, 38°.53N×27°.55E, h2km, MD2.6, Error ellipse: s-maj=3.1km s-min=1.1km az=166.0*
*DDA **27** 21:54:10.5, 38°.48N×27°.58E, h8km±4km, Md2.7*
*ISK **27** 21:54:10.0, 38°.47N×27°.56E, h9km, MD2.6*

ISC 27 21:54:10.8±0.6, 38°.48N±0°.05×27°.58E±0°.04, h2km±7km, n23, σ0°.73/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IZM	**Izmir**	**0.26**	**252**	*e*PG	Pg	21 54 15.4	-0.4
IZM				*e*SG	Sg	21 54 19.1	-0.1
BLCB	**Balcova**	**0.43**	**258**	*e*PG	Pg	21 54 18.5	-0.6
BLCB				*e*SG	Sg	21 54 24.5	-0.2
BLCB	**Balcova**	**0.43**	**258**	*e*Pg	Pg	21 54 18.5	-0.6
BLCB				*e*Sg	Sg	21 54 24.5	-0.2
AKS	**Akhisar**	**0.44**	**24**	*e*PG	Pg	21 54 19.5	+0.3
AKS	**Akhisar**	**0.44**	**24**	*e*Pg	Pg	21 54 19.5	+0.3
URLA	**Izmir**	**0.78**	**262**	*i* P	Pg	21 54 25.6	-0.1
URLA				*i* S	Sg	21 54 37.4	+1.5
URLA	**Izmir**	**0.78**	**262**	*i* P	Pg	21 54 25.6	-0.2
URLA				*i* S	Sg	21 54 37.4	+1.5
KULA	**Kula-Manisa**	**0.85**	**87**	*e*PG	Pg	21 54 26.8	-0.2
KULA	**Kula-Manisa**	**0.85**	**87**	*e*Pg	Pg	21 54 26.8	-0.2
DEMI	**Demirci**	**1.05**	**57**	*i* P	Pg	21 54 30.8	-0.1
DEMI				*i* S	Sg	21 54 43.5	-1.0
DEMI	**Demirci**	**1.05**	**57**	*i* P	Pg	21 54 30.8	-0.1
DEMI				*i* S	Sg	21 54 43.5	-1.0
MLSB	**Milas**	**1.19**	**173**	*e*PN	Pn	21 54 33.2	-1.3
MLSB	**Milas**	**1.19**	**173**	*e*Pn	Pn	21 54 33.2	-1.3
DNZL	**Cakiroluk**	**1.40**	**124**	*i* P	Pn	21 54 37.8	+0.5
DNZL				*i* S	Sg	21 54 56.6	+0.9
DNZL	**Cakiroluk**	**1.40**	**124**	*i* P	Pn	21 54 37.8	+0.5
DNZL				*i* S	Sg	21 54 56.6	+0.9
YER	**Yerkesik**	**1.45**	**157**	*e*PN	Pn	21 54 37.0	-1.1
YER	**Yerkesik**	**1.45**	**157**	*e*Pn	Pn	21 54 37.0	-1.0
KHAL	**Karahalli**	**1.50**	**94**	*i* P	Pn	21 54 39.5	+0.7
KHAL	**Karahalli**	**1.50**	**94**	*i* P	Pn	21 54 39.5	+0.7
KHL	**Karahalli**	**1.53**	**95**	*e*PN	Pn	21 54 39.5	+0.4
KHL	**Karahalli**	**1.53**	**95**	*e*Pn	Pn	21 54 39.6	+0.4
GDZ	**Gediz**	**1.60**	**67**	*i* P	Pn	21 54 41.2	+1.1
GDZ				*i* S	Sn	21 55 01.1	-0.3
GDZ	**Gediz**	**1.60**	**67**	*i* P	Pn	21 54 41.2	+1.1
GDZ				*i* S	Sn	21 55 01.1	-0.3

DJA 27 22:34:03, 4°.30S×102°.58E, h27km, MLv3.5/3, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.38**	**99**	P	Pb	22 34 11.3	-0.1
MNAI				S	Sb	22 34 17.8	+0.7
KSI	**Kapahiang**	**0.64**	**1**	P	Pb	22 34 15.3	-0.4
MDSI	**Maura Dua**	**1.60**	**97**	P	Pn	22 34 29.3	-0.3
MDSI				S	Sn	22 34 49.1	-0.3
LWLI	**Liwa**	**1.64**	**116**	P	Pn	22 34 36.2	+6.2
KLSI		**2.18**	**100**	P	Pn	22 34 40.2	+2.7
KLSI				S	Sn	22 35 06.1	+2.5

*SZGRF **27** 22:41:54.9, 22°.48N×94°.66E, h116km, mb5.6, Myanmar*
*TEH **27** 22:42:04.8, 23°.57N×94°.76E, h112km*
*NEIC **27** 22:42:05.5±0.3, 23°.58N×94°.64E, h94km±2km, mb5.2/136, Error ellipse: s-maj=4.2km s-min=2.5km az=219.0*
*BJI **27** 22:42:05.0, 23°.53N×94°.50E, h110km, mB5.1/20, mb5.1/46*
*MOS **27** 22:42:06.3±0.9, 23°.59N×94°.66E, h115km, mb5.2/84, Error ellipse: s-maj=8.4km s-min=3.3km az=128.8*
*ISCJB **27** 22:42:06.0±0.1, 23°.59N±0°.02×94°.60E±0°.02, h112km, mb5.2/278, Error ellipse: s-maj=3.1km s-min=2.0km az=34.7*
*IDC **27** 22:42:07.4±0.6, 23°.57N×94°.83E, h112km±4km, mb4.9/19, mb1 5.0/20, mb1mx4.9/22, mbtmp4.9/20, Error ellipse: s-maj=10.9km s-min=7.6km az=66.0*
*LDG **27** 22:42:08.9±0.4, 23°.75N×94°.09E, h112km, Mb5.1/43, Error ellipse: s-maj=26.7km s-min=16.9km az=13.0*
*DJA **27** 22:42:09, 23°.36N×94°.46E, h113km, mb5.6/52*
*BGS **27** 22:42:11.5±1.2, 24°.05N×93°.28E, h90km, mb5.1*

ISC 27 22:42:08.0±0.1, 23°.60N±0°.02×94°.63E±0°.02, h114km, h114km±8km: pP-P, n917, σ0°.92/938, mb5.2/278, 53C-268D, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**1.34**	**332**	*i* P	Pn	22 42 32.0	-1.1
IMP				*ex*	Sn	22 42 52.0	-0.3
IMP				*i* x	x	22 43 03.0	
AGT	**Agartala**	**3.11**	**276**	*i* P	Pn	22 42 50.0	-5.5
AGT				*i* x	x	22 43 20.0	
SHL	**Shillong**	**3.18**	**309**	↑*i* P	Pn	22 42 55.0	-1.4
SHL				*i* S	Sn	22 43 28.0	-5.8
CHRT	**Chiangrai**	**6.06**	**127**	PG	Pn	22 43 35.0	-0.1
CHG	**Chiang Mai**	**6.23**	**139**	↑P	Pn	22 43 35.8	-1.7
	125nm,0.9s						
CHTO	**Chiang Mai**	**6.23**	**139**	↑*e*Pn	Pn	22 43 36.0	-1.6
CHTO				*e*Sn	Sn	22 44 46.1	-1.3
CHTO	**Chiang Mai**	**6.23**	**139**	Pn	Pn	22 43 36.3	-1.3
	SNR=14						
SLGI	**Shiliguri**	**6.42**	**300**	*i* P	Pn	22 43 37.7	-2.3
SLGI				*i* x	x	22 44 41.5	
CM31	**Chiang Mai Arr**	**6.51**	**141**	*e*Pn	Pn	22 43 39.6	-1.6
CMAR	**Chiang Mai Arr**	**6.51**	**141**	P	Pn	22 43 39.0	-2.2
	9.0nm,0.3s,baz=319,slow=13,SNR=256						
CMAR				ScP	ScP	22 53 47.0	-0.7
	0.3nm,0.3s,baz=270,slow=1.4,SNR=6.7						
GTK	**Gangtok**	**6.59**	**306**	*e*PKP	Pn	22 43 40.5	-1.7
GTK				*ex*	x	22 44 24.5	
LSA	**Lhasa**	**6.83**	**334**	P	Pn	22 43 46.0	+0.5
LSA				S	Sn	22 44 57.0	-4.8
LSA				smax			
	comp=E,3μm,0.6s						
LSA	**Lhasa**	**6.83**	**334**	↓*e*P	Pn	22 43 46.2	+0.7
LSA						22 44 55.6	
LSA				pmax	pmax		
	comp=Z,334nm,0.6s						
LSA	**Lhasa**	**6.83**	**334**	↓*e*Pn	Pn	22 43 46.2	+0.7
	comp=Z,334nm,0.6s						
LSA				Sn	Sn	22 44 55.6	-6.1
TAPN	**Taplejung**	**7.28**	**302**	*e*Pn	Pn	22 43 49.6	-2.1
ODAN	**Odare**	**7.32**	**298**	*e*Pn	Pn	22 43 49.9	-2.3
ODAN				*e*Sn	Sn	22 45 06.7	-6.9
	comp=Z,6μm,0.5s						
KMI	**Kunming**	**7.55**	**77**	⇑P	Pn	22 43 58.8	+3.5
KMI				sP		22 44 23.8	
KMI				S	Sn	22 45 20.0	+0.7
KMI				pmax	pmax		
	comp=Z,85nm,0.9s						
KMI				pmax	pmax		
	comp=Z,330nm,4.6s						
KMI				LR	LR		
	comp=N,910nm,6.6s						
KMI				LR	LR		
	comp=E,270nm,8.3s						
KMI				LR	LR		
	comp=Z,480nm,9.9s						
RAMN	**Ramite**	**8.00**	**296**	*e*Pn	Pn	22 43 59.1	-2.3
JIRN	**Jiri**	**8.62**	**300**	*e*Pn	Pn	22 44 07.2	-2.7
JIRN				*e*Sn	Sn	22 45 38.0	-7.4
	comp=Z,3μm,0.3s						
GUN	**Gumba**	**8.98**	**300**	*e*Pn	Pn	22 44 12.2	-2.5
GUN				*e*Sn	Sn	22 45 47.9	-6.1
	comp=Z,8μm,0.9s						
PKI	**Pulchoki**	**9.22**	**297**	*e*Pn	Pn	22 44 15.1	-2.8
PKI				*e*Sn	Sn	22 45 52.4	-7.4
	comp=Z,1μm,0.6s						
PKI	**Pulchoki**	**9.22**	**297**	*e*Pn	Pn	22 44 15.3	-2.6
PKI				*e*Sn	Sn	22 45 52.8	-7.0
PKIN	**Phulchoki**	**9.23**	**297**	*e*Pn	Pn	22 44 15.3	-2.8
PKIN				*e*Sn	Sn	22 45 52.8	-7.3
	comp=Z,1μm,0.4s						
KKN	**Kakani**	**9.41**	**298**	*e*Pn	Pn	22 44 17.2	-3.3
KKN				*e*Sn	Sn	22 45 56.2	-8.2
DMN	**Daman**	**9.48**	**297**	*e*Pn	Pn	22 44 18.1	-3.4
DMN				*e*Sn	Sn	22 45 57.9	-8.2
	comp=Z,1μm,0.6s						
GKN	**Gorkha**	**10.02**	**298**	*e*Pn	Pn	22 44 25.4	-3.4
KOLN	**Koldanda**	**10.78**	**295**	*e*Pn	Pn	22 44 35.2	-3.8
KOLN				*e*Sn	Sn	22 46 27.7	-10
	comp=Z,795nm,0.4s						
CD2	**Chengdu**	**10.90**	**46**	P	Pn	22 44 40.0	-0.7
CD2				S	Sn	22 46 40.5	-0.2
CD2				PcP	PcP	22 50 29.8	-0.2
CD2				ScP	ScP	22 53 51.0	-1.2
CD2				PcS	PcS	22 54 02.3	-1.6
CD2				pmax	pmax		
	comp=Z,70nm,0.5s						
CD2				pmax	pmax		
	comp=Z,510nm,7.1s						
CD2				LR	LR		
	comp=N,960nm,5.3s						
CD2				LR	LR		
	comp=Z,430nm,7.7s						
GYA	**Guiyang**	**11.28**	**73**	P	Pn	22 44 45.0	-0.7
GYA				sP		22 45 14.5	
GYA				S	Sn	22 46 49.0	-0.8
GYA				PcP	PcP	22 50 32.3	+1.8
GYA				ScP	ScP	22 53 53.5	+0.7
GYA				ScS	ScS	22 57 27.5	-0.9
GYA				pmax	pmax		
	comp=Z,50nm,0.9s						
GYA				pmax	pmax		
	comp=Z,290nm,4.8s						
GYA				LR	LR		
	comp=N,2μm,12.3s						
GYA				LR	LR		
	comp=E,3μm,13.4s						
GYA				LR	LR		
	comp=Z,4μm,11.0s						
ALBI	**Allahabad**	**11.80**	**281**	*ex*	Pn	22 44 46.5	-6.2
ALBI				*ex*	x	22 45 28.0	
VIS	**Vishakhapatnam**	**12.08**	**243**	*e*PKP	Pn	22 44 54.1	-2.3
VIS				*i* P		22 44 54.6	
VIS				AMb	AMB	22 45 09.5	
	comp=Z,50nm,1.4s						
VIS				*i* S	Sn	22 46 55.3	-14
PTH	**Pithoragarh**	**14.19**	**298**	*ex*	Pn	22 45 19.8	-3.9
PTH				*ex*	x	22 47 50.2	
LZH	**Lanzhou**	**14.78**	**31**	P	Pn	22 45 30.3	-0.9
LZH				sP	sP	22 46 00.3	-8.9
LZH				*e*S	Sn	22 48 16.3	+1.9
LZH				pmax	pmax		
	comp=Z,69nm,1.2s						
ENH	**Enshi**	**14.82**	**60**	*e*Pn	Pn	22 45 29.7	-2.0
	comp=Z,117nm,0.7s						
ENH				*e*Sn	Sn	22 48 13.2	-2.2
QIZ	**Qiongzhong**	**14.88**	**105**	P	Pn	22 45 32.8	+0.2
JOSI	**Joshimath**	**15.10**	**301**	*e*PKP	Pn	22 45 32.3	-2.9
JOSI				AMb	AMB	22 45 41.5	
	comp=Z,897nm,0.5s						
AGRA	**Agra**	**15.50**	**287**	*e*PKP	Pn	22

KULM Kulim 19.10 161 P **P** **22 46 22.5 +0.6**
KULM Kulim 19.10 161 *e*P **P** **22 46 21.5 -0.4**
comp=Z,250nm,1.1s
KULM Kulim 19.10 161 P **P** **22 46 22.4 +0.4**
comp=Z,2μmcomp=Z,199nm,1.2s
KTGM Kuala Trenggan 19.93 154 P **P** **22 46 32.4 +1.5**
IPM Ipoh 19.98 161 P **P** **22 46 30.9 -0.6**
IPM Ipoh 19.98 161 P **P** **22 46 30.6 -0.9**
comp=Z,435nm,0.8s
IPM Ipoh 19.98 161 P **P** **22 46 30.2 -1.3**
comp=Z,3μmcomp=Z,436nm,0.8s
POO Poona 20.03 259 *e*PKP **P** **22 46 32.0 0.0**
POO AMb AMB 22 46 37.8
comp=Z,112nm,0.9s
KAD Karad 20.14 256 *e*PKP **P** **22 46 33.1 -0.1**
KAD AMb AMB 22 46 47.5
comp=Z,102nm,1.4s
TPTI 20.37 173 P **P** **22 46 33.7 -1.9**
comp=Z,58nm,1.2s
TPTI 20.37 173 P **P** **22 46 33.8 -1.8**
comp=Z,58nm,1.2s
WMQ Urumqi 20.96 346 P **P** **22 46 43.0 +1.2**
WMQ pP 22 47 05.3
WMQ PP 22 47 11.5
WMQ sP sP 22 47 19.3 +1.9
WMQ S **S** **22 50 25.5 -3.4**
WMQ PcP PcP 22 50 46.8 +2.1
WMQ sS sS 22 51 00.3 -4.1
WMQ SS 22 51 06.5
WMQ pmax pmax
comp=Z,250nm,0.9s
WMQ pmax pmax
comp=Z,350nm,4.0s
PALK Pallekele 21.03 222 *e*P **P** **22 46 42.6 -0.2**
PALK pmax pmax
comp=Z,13nm,0.6s,mb4.4
PALK Pallekele 21.03 222 *e*P **P** **22 46 42.6 -0.1**
comp=Z,13nm,0.6s,mb4.4
PSI Prapat 21.09 168 P **P** **22 46 42.9 -0.5**
comp=Z,82nm,0.8s,mb5.1,baz=1.9,slow=11,SNR=22
PSI S **S** **22 50 33.6 +1.9**
comp=Z,1.0nm,0.3s,baz=323,slow=20,SNR=5.2
PSI ScP ScP 22 54 10.8 -1.2
comp=Z,15nm,0.8s,baz=302,slow=3.8,SNR=13
PSI Prapat 21.09 168 P **P** **22 46 42.9 -0.5**
PSI S **S** **22 50 33.6 +1.8**
PSI Prapat 21.09 168 P **P** **22 46 42.9 -0.5**
PSI S **S** **22 50 33.6 +1.9**
PSI ScP ScP 22 54 10.8 -1.2
CHCP Chirah Chowk 21.23 303 P **P** **22 46 44.6 -0.1**
FRIM Kepong 21.34 160 P **P** **22 46 46.7 +0.7**
THW Thamme Wali 22.12 300 P **P** **22 46 49.9 -4.3**
HHC Hu-ho-hao-te 22.32 36 *e*P **P** **22 46 55.3 -0.9**
HHC pP 22 47 18.8
HHC PP 22 47 27.5
HHC sP sP 22 47 31.5 -0.5
HHC S **S** **22 50 48.5 -4.9**
HHC sS sS 22 51 26.5 -4.9
HHC SS 22 51 38.0
HHC ScP ScP 22 54 14.5 -0.1
HHC PcS PcS 22 54 26.0 -0.1
HHC pmax pmax
comp=Z,12nm,0.5s,mb4.5
HHC pmax pmax
comp=Z,190nm,5.4s
HHC LR LR
comp=N,3μm,11.4s
HHC LR LR
comp=E,3μm,11.8s
HHC LR LR
comp=Z,4μm,11.7s
GSI Gunungsitoli 22.34 172 P **P** **22 46 54.9 -1.8**
comp=Z,242nm,0.9s,mb5.5
GSI Gunungsitoli 22.34 172 P **P** **22 46 54.9 -1.8**
comp=Z,242nm,0.9s,mb5.5
KSH Kashi 22.39 319 P **P** **22 46 57.0 0.0**
KSH pP 22 47 19.5
KSH PP 22 47 29.8
KSH sP sP 22 47 33.3 +0.5
KSH S **S** **22 50 50.8 -3.9**
KSH sS sS 22 51 29.5 -3.5
KSH SS 22 51 41.5
KSH ScP ScP 22 54 16.0 +1.2
KSH PcS PcS 22 54 27.0 +0.6
KSH ScS ScS 22 57 59.5 -0.5
KSH pmax pmax
comp=Z,180nm,0.7s,mb5.5
KSH LR LR
comp=N,310nm,9.6s
KSH LR LR
comp=E,150nm,7.3s
KSH LR LR
comp=Z,170nm,7.5s
KGM Kluang 23.05 157 P **P** **22 47 03.6 +0.1**
TIA Tai'an 23.14 52 P **P** **22 47 03.5 -0.7**
MNSI Mandailing Nat 23.17 167 P **P** **22 47 02.7 -1.9**
comp=Z,136nm,1.0s,mb5.2
MNSI Mandailing Nat 23.17 167 P **P** **22 47 02.7 -1.9**
comp=Z,1μmcomp=Z,136nm,1.0s,mb5.2
MYKOM Kota Tinggi 23.45 156 P **P** **22 47 07.4 +0.2**
MYKOM Kota Tinggi 23.45 156 P **P** **22 47 08.0 +0.8**
comp=Z,368nm,0.8s,mb5.8
MYKOM Kota Tinggi 23.45 156 P **P** **22 47 07.4 +0.2**
comp=Z,3μmcomp=Z,368nm,0.8s,mb5.8
BKNI Bangkinang 23.95 164 P **P** **22 47 11.6 -0.2**
comp=Z,3μmcomp=Z,312nm,1.0s,mb5.6
ULHL Ulahol 24.08 325 P **P** **22 47 14.7 +2.1**
SNR=18
YHNB Yeheng 24.42 82 P **P** **22 47 14.7 -1.3**
BJT Baijiatuau 24.46 43 *e*P **P** **22 47 15.7 -0.5**
BJT pmax pmax
comp=Z,14nm,0.7s
BJT Baijiatuau 24.46 43 *e*P **P** **22 47 15.7 -0.5**
comp=Z,14nm,0.7s,mb4.4
BJI Beijing 24.48 43 P **P** **22 47 16.3 0.0**
BJI pP 22 47 39.5
BJI sP sP 22 47 53.3 -0.9
BJI S **S** **22 51 29.3 +1.0**
BJI sS sS 22 52 11.3 +0.1
BJI pmax pmax
comp=Z,19nm,0.8s,mb4.5
KZA Kyzart 24.49 323 P **P** **22 47 18.5 +2.0**
SNR=46
PPI Padang Panjang 24.56 166 P **P** **22 47 16.1 -1.2**
comp=Z,51nm,1.0s,mb4.9
PPI Padang Panjang 24.56 166 P **P** **22 47 16.1 -1.2**
comp=Z,51nm,1.0s,mb4.9
SSE Sheshan 24.70 67 P **P** **22 47 20.0 +1.5**
SSE pmax pmax
comp=Z,28nm,0.9s,mb4.7
KBL Kabul 24.81 302 *e*P **P** **22 47 20.9 +1.4**
KBL S **S** **22 51 34.7 +0.9**
KBL pmax pmax
comp=Z,152nm,0.6s,mb5.6
KBL Kabul 24.81 302 *e*P **P** **22 47 20.9 +1.4**
comp=Z,152nm,0.6s,mb5.6
KBL S **S** **22 51 34.7 +0.9**
RGRI Rengat 24.95 161 P **P** **22 47 22.2 +1.3**
comp=Z,194nm,0.9s,mb5.5
UCH Uchtor 25.00 323 P **P** **22 47 23.6 +2.5**
SNR=12
UCH Uchtor 25.00 323⇑ *e*P **P** **22 47 23.5 +2.4**
comp=Z,16nm,0.6s,mb4.6
PDSI Padang 25.01 166 P **P** **22 47 19.6 -1.8**
PDSI Padang 25.01 166 P **P** **22 47 19.4 -2.0**
comp=Z,160nm,1.2s,mb5.3
KBK Karagaybulak 25.05 324 P **P** **22 47 23.7 +2.2**
SNR=94
SISI Saibi 25.15 169 P **P** **22 47 22.8 +0.1**
SISI Saibi 25.15 169 P **P** **22 47 22.8 +0.1**
comp=Z,4μmcomp=Z,352nm,1.2s,mb5.7
MK31 Makanchi Array 25.18 340⇓ *i*P **P** **22 47 23.9 +1.2**
MKAR Makanchi Array 25.18 340 P **P** **22 47 24.0 +1.3**
comp=Z,296nm,0.7s,mb5.8,baz=155,slow=8.6,SNR=1021
MKAR PcP PcP 22 50 54.1 +0.6
comp=Z,3.0nm,0.6s,baz=167,slow=2.1,SNR=4.6
MKAR S **S** **22 51 43.5 +4.1**
comp=Z,1.0nm,0.7s,baz=178,slow=15,SNR=2.2
MKAR ScP ScP 22 54 22.0 -0.2
comp=Z,7.2nm,0.9s,baz=143,slow=4.2,SNR=13
MKAR Makanchi Array 25.18 340 P **P** **22 47 24.0 +1.3**
MKAR 22 50 54.1
MKAR S **S** **22 51 43.5 +4.1**
MKAR Makanchi Array 25.18 340 P **P** **22 47 24.0 +1.3**
MKAR PcP PcP 22 50 54.1 +0.6
MKAR S **S** **22 51 43.5 +4.1**
MKAR ScP ScP 22 54 22.0 -0.2
AAK Ala-Archa 25.28 323 P **P** **22 47 25.9 +2.3**
SNR=44
AAK Ala-Archa 25.28 323 P **P** **22 47 25.8 +2.2**
comp=Z,42nm,0.6s,mb5.0,baz=130,slow=6.4,SNR=110
AAK ScP ScP 22 54 23.5 +0.9
comp=Z,7.2nm,0.7s,baz=171,slow=6.2,SNR=7.5
AAK Ala-Archa 25.28 323⇓ *e*P **P** **22 47 25.7 +2.1**
AAK pmax pmax
comp=Z,72nm,0.7s,mb5.2
AAK Ala-Archa 25.28 323⇓ *e*P **P** **22 47 25.7 +2.1**
comp=Z,72nm,0.7s,mb5.2
FRU Bishkek 25.35 324⇓ *i*P **P** **22 47 25.5 +1.3**
FRU pmax pmax
comp=Z,110nm,1.6s,mb5.0
AML Almayashu 25.40 322 P **P** **22 47 26.8 +2.2**
SNR=95
AML Almayashu 25.40 322⇓ *e*P **P** **22 47 26.5 +1.9**
comp=Z,54nm,0.6s,mb5.2
AML *e*pP pP 22 47 48.3 -1.0
EKS2 Erkin-Say 25.70 323 P **P** **22 47 29.4 +2.0**
SNR=87
EKS2 Erkin-Say 25.70 323⇓ *e*P **P** **22 47 29.2 +1.9**
comp=Z,67nm,0.8s,mb5.1
EKS2 *e*pP pP 22 47 51.7 -0.3
USP Ospenovka 25.71 325 P **P** **22 47 28.8 +1.3**
SNR=36
SONM Songino Array 25.94 18 P **P** **22 47 29.1 -0.4**
comp=Z,7.1nm,0.5s,mb4.4,baz=200,slow=9.6,SNR=29
SONM pP pP 22 47 54.0 -0.2
comp=Z,17nm,0.7s,baz=202,slow=11,SNR=9.4
SONM ScP ScP 22 54 23.7 -0.7
comp=Z,12nm,0.9s,baz=203,slow=2.9,SNR=33
SONM Songino Array 25.94 18 P **P** **22 47 29.1 -0.4**
SONM *PP pP 22 47 54.0 -0.2
ULN Ulaanbaatar 26.16 19 *e*P **P** **22 47 31.4 -0.1**
ULN *e* pP 22 47 57.6 +1.4
ULN pmax pmax
comp=Z,19nm,0.8s,mb4.6
ULN Ulaanbaatar 26.16 19 *e*P **P** **22 47 31.4 -0.1**
comp=Z,19nm,0.8s,mb4.6
ULN *e* pP 22 47 57.6 +1.4
KSM Kuching 26.73 143 *e*P **P** **22 47 37.2 +0.3**
comp=Z,31nm,1.0s,mb4.8
KSM *e*pP pP 22 47 59.7 -2.1
KDM Kudat 27.02 124 P **P** **22 47 42.1 +2.5**
SBUM Sibu 27.05 138 P **P** **22 47 36.6 -3.3**
SDKM Sandakan 28.12 126 P **P** **22 47 50.0 +0.7**
STKI Sintang 28.54 143 P **P** **22 47 54.3 +1.2**
comp=Z,46nm,0.9s,mb5.1
TLY Talaya 28.89 12 *e*P **P** **22 47 55.7 0.0**
TLY pmax pmax
comp=Z,8.0nm,0.8s,mb4.4
TLY Talaya 28.89 12 *e*P **P** **22 47 55.7 -0.1**
comp=Z,7.5nm,0.8s,mb4.4
TPI Tanjungpandan 29.10 152 P **P** **22 47 58.6 +0.5**
comp=Z,47nm,1.0s,mb5.1
MYLDM Lahad Datu 29.40 125 P **P** **22 48 02.8 +2.1**
MDSI Maura Dua 29.43 160 P **P** **22 47 58.5 -2.4**
comp=Z,61nm,0.9s,mb5.2
TSM Tawau 29.52 127 P **P** **22 48 02.3 +0.5**
KLSI 29.79 159 P **P** **22 48 02.8 -1.3**
comp=Z,54nm,1.0s,mb5.2
KURK Kurchatov 29.79 339 P **P** **22 48 03.7 -0.1**
comp=Z,34nm,0.4s,mb5.3,baz=149,slow=9.7,SNR=176
KURK PcP PcP 22 51 04.5 -0.1
comp=Z,12nm,0.6s,baz=157,slow=2.3,SNR=6.9
KURK ScP ScP 22 54 35.7 -0.5
comp=Z,19nm,0.6s,baz=154,slow=2.8,SNR=34
KURK Kurchatov 29.79 339⇓ *i*P **P** **22 48 04.4 +0.6**
KURK *e**PP pP 22 48 27.4 -1.4
KURK pmax pmax
comp=Z,74nm,1.0s,mb5.3
KURK Kurchatov 29.79 339⇓ *i*P **P** **22 48 04.4 +0.6**
comp=Z,74nm,1.0s,mb5.3
KURK *e*pP pP 22 48 27.4 -1.3
KURK Kurchatov 29.79 339 P **P** **22 48 04.8 +1.0**
SNR=21
LWLI Liwa 29.89 161 P **P** **22 48 03.3 -1.7**
comp=Z,185nm,0.7s,mb5.8
ZAAO Zalesovo Array 31.20 349⇓ *i*P **P** **22 48 16.4 +0.3**
ZALV Zalesovo Beam 31.20 349 P **P** **22 48 16.7 +0.6**
comp=Z,31nm,0.4s,mb5.4,baz=173,slow=8.4,SNR=234
ZALV PcP PcP 22 51 07.4 -0.8
comp=Z,2.5nm,0.3s,baz=175,slow=4.5,SNR=5.2
ZALV ScP ScP 22 54 39.3 -1.5
comp=Z,5.3nm,0.7s,baz=168,slow=2.5,SNR=13
ZALV Zalesovo Beam 31.20 349 P **P** **22 48 16.7 +0.6**
ZALV 22 51 07.4
KSRS Korea Array 31.65 56 P **P** **22 48 18.0 -2.3**
comp=Z,0.8nm,0.5s,mb3.7,baz=254,slow=8.8,SNR=4.1
KSRS S **S** **22 53 17.8 -3.5**
comp=Z,0.4nm,0.3s,baz=260,slow=13,SNR=4.4
KSRS ScP ScP 22 54 41.0 -1.7
comp=Z,1.6nm,0.6s,baz=246,slow=3.8,SNR=12
IMYA Miami 32.32 301 *e*P **P** **22 48 27.5 +1.3**
HIA Hailar 32.34 31 *e*P **P** **22 48 24.8 -1.4**
NVS Novosibirsk 32.34 348 *i*P **P** **22 48 26.4 +0.3**
NVS *i* *PP pP 22 48 52.4 +1.2
NVS pmax pmax
comp=N,65nm,0.5s
NVS pmax pmax
comp=E,34nm,0.5s
NVS pmax pmax
comp=Z,67nm,0.5s,mb5.6
IKOO Kooshah 32.54 294 *e*P **P** **22 48 29.8 +1.6**
ITEG Tejag 32.81 294 *e*P **P** **22 48 31.6 +1.1**
IMOG Moghan 32.87 300 *e*P **P** **22 48 32.7 +1.7**
IPAY Payeh 33.22 301 *e*P **P** **22 48 35.2 +1.2**
IAKL Akhelmad 33.44 301 *e*P **P** **22 48 36.8 +0.8**
SMDO Samad 33.54 277 P **P** **22 48 38.6 +1.6**
SNR=6.3
IKRD Kardeh 33.66 301 *e*P **P** **22 48 32.7 -5.2**
IEMG Emamgholi 33.70 303 *e*P **P** **22 48 38.9 +0.6**
BJII Banjamegara 34.09 153 P **P** **22 48 43.0 +1.2**
comp=Z,1μmcomp=Z,113nm,0.7s,mb5.8
SMRI Semarang 34.15 151 P **P** **22 48 44.0 +1.7**
comp=Z,360nm,0.7s,mb6.3
ABKT Ailbek 34.24 303 P **P** **22 48 44.0 +1.1**
comp=Z,208nm,0.8s,mb6.0,SNR=28
BSY Bisya 34.36 276 P **P** **22 48 45.9 +1.8**
SNR=6.8
PCI Palu 34.55 131 P **P** **22 48 50.7 +4.9**
comp=Z,47nm,1.2s,mb5.2
BVAR Borovoye Array 34.66 334 P **P** **22 48 47.0 +0.7**
comp=Z,56nm,0.7s,mb5.5,baz=140,slow=11,SNR=135
BVAR PP PP 22 50 10.7 +3.7
comp=Z,3.9nm,0.8s,baz=112,slow=10,SNR=3.7
BVAR PcP PcP 22 51 18.4 +0.5
comp=Z,3.1nm,0.5s,baz=147,slow=2.9,SNR=4.0
BVAR ScP ScP 22 54 52.8 -0.1
comp=Z,6.1nm,0.7s,baz=146,slow=4.4,SNR=13
BVAR Borovoye Array 34.66 334 P **P** **22 48 47.0 +0.7**
BVAR 22 50 10.7
BVAR 22 51 18.4
BRVK Borovoye 34.73 334 *ce*P **P** **22 48 47.4 +0.5**
BRVK pmax pmax
comp=Z,42nm,0.8s,mb5.3
BRVK Borovoye 34.73 334⇓ *e*P **P** **22 48 47.2 +0.4**
comp=Z,41nm,0.9s,mb5.3
BRVK Borovoye 34.73 334 P **P** **22 48 47.9 +1.0**
SNR=19
MRSI Marisa 35.08 127 P **P** **22 48 51.8 +1.5**
comp=Z,110nm,0.8s,mb5.7
MDJ Mudanjiang 35.36 45 P **P** **22 48 52.0 -0.4**
MDJ pP pP 22 49 16.3 -1.5
MDJ sP sP 22 49 29.5 -1.4
MDJ PP PP 22 50 14.8 0.0
MDJ PcP PcP 22 51 19.8 -0.3
MDJ S **S** **22 54 19.0 +0.6**
MDJ ScP ScP 22 54 54.5 -1.0
MDJ PcS PcS 22 55 07.0 -0.1
MDJ ScS ScS 22 58 59.3 -0.7
MDJ pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
MDJ pmax pmax
comp=Z,160nm,13.5s
MDJ LR LR
comp=N,75nm,30.4s
MDJ LR LR
comp=E,120nm,22.5s
MDJ LR LR
comp=Z,180nm,21.4s
SJI Sawahan 35.36 150 P **P** **22 48 53.5 +0.8**
comp=Z,5μmcomp=Z,103nm,0.9s,mb5.6
IBAF Bafgh 35.38 292 *e*P **P** **22 48 52.6 -0.2**
KMMI Kalianget 35.84 146 P **P** **22 48 58.7 +1.9**
comp=Z,3μmcomp=Z,372nm,0.6s,mb6.5
TTSI Tana Toraja 36.10 134 P **P** **22 49 00.5 +1.4**
comp=Z,1μmcomp=Z,113nm,0.9s,mb5.8
IMEH Mehriz 36.18 291 *e*P **P** **22 49 00.3 +0.7**
ICHK Chekchek 36.40 293 *e*P **P** **22 49 02.0 +0.5**
KMSI Cibinong 36.53 125 P **P** **22 49 06.1 +3.4**
comp=Z,327nm,0.9s,mb6.2
MNI Manado 36.63 123 P **P** **22 49 05.3 +1.7**
comp=Z,168nm,1.1s,mb5.9
LUWI Luwuk 36.72 128 P **P** **22 49 04.7 +0.4**
comp=Z,2μmcomp=Z,193nm,0.9s,mb6.0
SPSI Sidrap Palu 36.76 135 P **P** **22 49 06.0 +1.4**
comp=Z,1μmcomp=Z,83nm,1.1s,mb5.6
ISAD Sadrabad 36.99 292 *e*P **P** **22 49 07.5 +1.0**
IANJ Anjilo 37.11 298 *e*P **P** **22 49 08.3 +0.9**
BNSI Bone 37.30 135 P **P** **22 49 10.6 +1.3**
comp=Z,67nm,1.0s,mb5.5
IGLO Ghaloghah 37.32 300 *e*P **P** **22 49 11.2 +2.0**
ABKAR Akbulak array 37.35 322⇓ *i*P **P** **22 49 10.1 +0.8**
comp=Z,39nm,0.4s,mb5.7
SRBI Singaraja 37.37 145 P **P** **22 49 11.7 +1.9**
comp=Z,96nm,0.9s,mb5.7
IKIA Kiasar 37.39 299 *e*P **P** **22 49 10.6 +0.8**
IPAR Pars 37.51 289 *e*P **P** **22 49 11.6 +0.7**
ISHM Shahmirzad 37.65 298 *e*P **P** **22 49 13.7 +1.7**
ILAS Lasjerd 37.87 298 *e*P **P** **22 49 15.0 +1.1**
IGBI Denpasar 37.95 146 P **P** **22 49 16.0 +1.3**
comp=Z,233nm,0.7s,mb6.2
BKSI Bulukumba 38.01 136 P **P** **22 49 15.6 +0.4**
comp=Z,46nm,1.1s,mb5.2
IFIR Firoozkooh 38.07 298 *e*P **P** **22 49 17.1 +1.6**
IZEF Zefreh 38.19 294 *e*P **P** **22 49 17.4 +0.8**
ISFB Sefidab 38.36 296 *e*P **P** **22 49 19.2 +1.2**
IGAR Gharneh 38.41 293 *e*P **P** **22 49 19.7 +1.3**
IPRN Peran 38.48 299 *e*P **P** **22 49 20.0 +1.1**
IDMV Damavand 38.65 298 *e*P **P** **22 49 21.8 +1.5**
KDI Kendari 38.66 131 P **P** **22 49 21.2 +0.5**
comp=Z,52nm,0.8s,mb5.4
IKLH Kolahrood 38.84 294 *e*P **P** **22 49 23.8 +1.8**
IPIR Pirpir 39.39 293 *e*P **P** **22 49 28.9 +2.3**
MAJO Matsushiro 39.54 61 *e*P **P** **22 49 26.5 -1.3**
MAT Matsushiro 39.54 61 P **P** **22 49 26.3 -1.5**
MJAR Matsushiro Arr 39.54 61 P **P** **22 49 26.9 -0.9**
comp=Z,2.7nm,0.8s,mb4.1,baz=275,slow=9.4,SNR=6.9
MJAR pP pP 22 49 50.7 -2.9
comp=Z,4.1nm,0.6s,baz=271,slow=9.2,SNR=4.7
MJAR ScP ScP 22 55 09.0 -2.4
comp=Z,4.0nm,0.9s,baz=259,slow=3.8,SNR=8.7
MJAR Matsushiro Arr 39.54 61 P **P** **22 49 26.9 -0.9**
MJAR *PP pP 22 49 50.7 -2.9
IRAZ Razeghan 40.34 297 *e*P **P** **22 49 35.7 +1.3**
SVE Sverdlovsk 41.35 332⇑ *e*P **P** **22 49 43.5 +1.1**
SVE *e*S **S** **22 55 53.8 +5.5**
SVE pmax pmax
comp=Z,154nm,0.6s,mb6.0
SVE MLR MLR
comp=Z,292nm,19.0s
NLAI Namlea 41.38 126 P **P** **22 49 44.6 +1.5**
comp=Z,86nm,0.8s,mb5.7
WSI Waingapu 41.51 140 P **P** **22 49 42.6 -1.6**
comp=Z,7μmcomp=Z,700nm,0.8s,mb6.4
WSI ScP ScP 22 55 21.3 +1.9
comp=Z,7μmcomp=Z,700nm,0.8s
MMRI Maumere 41.89 137 P **P** **22 49 46.5 -0.8**
comp=Z,2μmcomp=Z,149nm,0.6s,mb5.9
ARU Arti 42.02 331 P **P** **22 49 48.0 +0.2**
comp=Z,705nm,0.5s,mb6.7,SNR=48
ARU Arti 42.02 331 *d i*P **P** **22 49 48.4 +0.6**
ARU *e**PP pP 22 50 13.6 -0.2
ARU *e* 22 51 28.4
ARU *e* 22 51 40.0
ARU S **S** **22 56 01.1 +3.0**
ARU pmax pmax
comp=Z,88nm,1.0s,mb5.4
ARU Arti 42.02 331⇓ *e*P **P** **22 49 48.5 +0.6**
comp=Z,86nm,0.4s,mb5.8
ARU *e*pP pP 22 50 13.0 -0.8
QRN Al-Qurain 42.03 287 *e*P **P** **22 49 49.2 +0.9**
QRN AMb AMB 22 49 49.7
comp=Z,76nm,0.5s,mb5.7
KBD Kabd 42.20 288 *e*P **P** **22 49 50.5 +0.7**
KBD AMb AMB 22 49 52.0
comp=Z,82nm,0.8s,mb5.5
IKOM Komasi 42.26 295 *e*P **P** **22 49 50.2 +0.1**
RDF Al-Radifah 42.34 288 *e*P **P** **22 49 52.2 +1.3**
RDF AMb AMB 22 49 53.2
comp=Z,282nm,0.6s,mb6.2
ISRB Sarab 42.37 301 *e*P **P** **22 49 51.8 +0.9**
IVIS Veis 42.82 296 *e*P **P** **22 49 55.0 +0.4**
IHRS Heris 42.91 301 *e*P **P** **22 49 55.9 +0.6**
IMRD Marand 43.99 302 *e*P **P** **22 50 05.1 +1.1**
ISHB Shabestar 44.02 301 *e*P **P** **22 50 05.3 +1.1**
DGRG David-gareji 44.55 306 P **P** **22 50 10.9 +2.5**
DGRG David-gareji 44.55 306 P **P** **22 50 13.8 +5.4**
SOKR Solikamsk 44.65 334 *d i*P **P** **22 50 09.0 +0.1**
SOKR pmax pmax
comp=Z,90nm,0.6s,mb5.7
GNI Garni 44.87 304 *de*P **P** **22 50 13.5 +2.5**
GNI pmax pmax
comp=Z,53nm,1.7s
GNI Garni 44.87 304 *e*P **P** **22 50 10.4 -0.6**
comp=Z,59nm,1.4s,mb5.1
MTA Mtatsminda 45.02 306 P **P** **22 50 13.4 +1.3**
GOR Gori 45.56 306 P **P** **22 50 18.1 +1.7**
KEH Kehvi 45.73 307 P **P** **22 50 17.8 0.0**
ZEI Tsey 45.82 307 *e*P **P** **22 50 19.7 +1.3**
ZEI pmax pmax
comp=Z,165nm,0.8s,mb5.8
ONI Oni 46.12 307 P **P** **22 50 23.0 +2.2**
KIV Kislovodsk 46.87 309 P **P** **22 50 27.9 +1.3**
comp=Z,1μm,0.7s,mb6.7,SNR=30
KIV Kislovodsk 46.87 309 *d i*P **P** **22 50 27.7 +1.1**
KIV *e*S **S** **22 57 09.3 +0.7**
KIV pmax pmax
comp=Z,153nm,1.0s,mb5.7
KIV pmax pmax
comp=Z,24nm,4.1s
KIV Kislovodsk 46.87 309⇓ *e*P **P** **22 50 27.4 +0.8**
comp=Z,128nm,0.8s,mb5.7
KIV *e*pP pP 22 50 52.0 -1.0
KIV Kislovodsk 46.87 309 P **P** **22 50 28.5 +1.9**
SNR=16
TLE Tual 47.19 123 P **P** **22 50 30.9 +1.4**
comp=Z,244nm,0.8s,mb6.0
BAKI Biak 47.24 116 P **P** **22 50 29.9 0.0**
comp=Z,1μmcomp=Z,90nm,0.9s,mb5.5
VRHR Novokhopersk 48.93 318 *e*P **P** **22 50 42.0 -0.3**
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,40nm,0.7s
VRHR pmax pmax
comp=Z,120nm,0.7s,mb5.9
SOC Sochi 48.96 308 *e*P **P** **22 50 43.2 +0.5**
SOC pmax pmax
comp=Z,82nm,0.4s,mb6.0
SMPI Sarmi 49.84 115 P **P** **22 50 50.0 +0.2**
comp=Z,3μmcomp=Z,90nm,0.9s,mb5.7
VSR Storozhevoye 50.46 318 *d i*P **P** **22 50 53.5 -0.5**
VSR pmax pmax
comp=N,4.0nm,0.5s
VSR pmax pmax
comp=E,10.0nm,0.5s
VSR pmax pmax
comp=Z,30nm,0.5s,mb5.5
ANN Anapa 50.70 309 *e*P **P** **22 50 55.1 -0.8**
ANN *e**PP pP 22 51 21.1 -1.6
ANN *e*S **S** **22 58 02.3 -0.1**
ANN pmax pmax
comp=Z,61nm,1.1s,mb5.5
MBWA Marble Bar 50.76 149⇑ *e*P **P** **22 50 56.0 -0.5**
comp=Z,69nm,0.7s,mb5.8
MBWA *e*pP pP 22 51 20.4 -3.0
FITZ Fitzroy Crossi 51.32 141⇑ *i*P **P** **22 51 00.3 -0.5**
comp=Z,56nm,1.0s,mb5.5
FITZ Fitzroy Crossi 51.32 141⇑ *e*P **P** **22 51 00.2 -0.6**
comp=Z,30nm,0.8s,mb5.4
FITZ *e*pP pP 22 51 25.1 -2.6
FITZ Fitzroy Crossi 51.32 141 P **P** **22 51 00.3 -0.5**
comp=Z,99nm,1.1s,mb5.8
KNA Kununurra 51.41 136 P **P** **22 51 00.8 -0.6**
comp=Z,3μmcomp=Z,295nm,0.8s,mb6.4
KAKA Kakadu 51.67 130⇑ *i*P **P** **22 51 02.6 -0.8**

comp=Z,13nm,0.6s,mb5.1
KAKA Kakadu 51.67 130 *e*P **P 22 51 02.4 -1.0**
comp=Z,26nm,0.5s,mb5.5
KAKA Kakadu 51.67 130 P **P 22 51 02.8 -0.6**
comp=Z,368nmcomp=Z,40nm,0.7s,mb5.6
TIXI Tiksi 51.85 13 *i* P **P 22 51 03.0 -1.0**
TIXI pmax pmax
comp=Z,18nm,0.5s,mb5.4
TIXI Tiksi 51.85 13⇑ *e*P **P 22 51 02.6 -1.3**
comp=Z,30nm,0.5s,mb5.6
MOS Moscow 52.35 323 *e*P **P 22 51 06.9 -1.1**
MOS pmax pmax
comp=Z,116nm,0.9s,mb5.9
MMAI Mount Meron Ar 52.40 294 P **P 22 51 10.3 +1.6**
comp=Z,22nm,0.7s,mb5.3,baz=69,slow=9.3,SNR=26
OBN Obninsk 52.80 322 P **P 22 51 11.2 -0.1**
comp=Z,589nm,0.5s,SNR=5.2
OBN Obninsk 52.80 322 *d i*P **P 22 51 11.2 -0.1**
OBN *i* pP 22 51 39.3 +1.0
OBN pmax pmax
comp=Z,31nm,0.6s,mb5.5
OBN Obninsk 52.80 322⇓ *e*P **P 22 51 10.9 -0.4**
comp=Z,62nm,0.5s,mb5.9
OBN *e*pP pP 22 51 38.4 +0.1
SIM Simferopol' 53.07 309 *d i*P **P 22 51 13.6 +0.2**
EIL Elat 53.20 290 *e*P pP 22 51 41.5 -0.2
BR131 Keskin Array S 53.38 303 ⇓ *i*P **P 22 51 16.0 +0.2**
BR131 *e*pP pP 22 51 42.6 -0.3
BRTR Keskin Array B 53.38 303 P **P 22 51 16.3 +0.5**
comp=Z,20nm,0.7s,mb5.3,baz=106,slow=6.5,SNR=135
BRTR SCP SCP 22 56 07.8 -1.2
comp=Z,2.9nm,0.8s,baz=121,slow=5.9,SNR=9.8
CSS Prodhromos 53.92 297⇓ *e*P **P 22 51 18.9 -1.0**
comp=Z,23nm,0.6s,mb5.4
AKASG Malin Array Be 56.63 316 P **P 22 51 38.4 -0.7**
comp=Z,59nm,0.6s,mb5.8,baz=84,slow=6.2,SNR=197
AKBB Malin Array Si 56.63 316 ⇓ *i*P **P 22 51 38.2 -0.8**
AKBB *e**PP pP 22 52 05.6 -0.8
KIEV Kiev 56.64 316 ⇓ *i*P **P 22 51 37.7 -1.4**
KIEV pmax pmax
comp=Z,78nm,0.8s,mb5.8
KIEV Kiev 56.64 316 ⇓ *i*P **P 22 51 37.7 -1.4**
comp=Z,78nm,0.8s,mb5.8
KIS Kishinev 56.81 312 ⇓ *i*UNK **P 22 51 39.0 -1.3**
KIS Kishinev 56.81 312 *e*P **P 22 51 39.0 -1.3**
KIS *e* pP 22 52 06.0 -1.7
KIS *e* 22 52 20.0
KIS Kishinev 56.81 312 P **P 22 51 39.9 -0.4**
TLCR 56.83 310 ⇑P **P 22 51 40.7 +0.2**
TLCR 56.83 310 ⇑ *i*P **P 22 51 40.7 +0.2**
TIRR Tirgusor 57.13 309 *e*P **P 22 51 42.4 -0.2**
TIRR Tirgusor 57.13 309 ⇓ *i*P **P 22 51 42.4 -0.2**
LEOM Leova 57.20 311 P **P 22 51 43.3 +0.2**
LEOM Leova 57.20 311 ⇑ *i*P **P 22 51 43.1 0.0**
CFR Carcaliu 57.30 310 P **P 22 51 44.3 +0.4**
CFR Carcaliu 57.30 310 ⇑P **P 22 51 43.9 0.0**
CFR 43.3 P 22 51 44.3
CFR Carcaliu 57.30 310 ⇑ *i*P **P 22 51 43.8 -0.1**
PSN Preselentsi 57.32 308 P **P 22 51 44.6 +0.6**
CVD Cernavoda 57.41 309 ⇑P **P 22 51 44.6 0.0**
CVD Cernavoda 57.41 309 ⇑ *i*P **P 22 51 44.6 0.0**
APA Apatity 57.52 336 ⇑ *i*P **P 22 51 45.0 0.0**
APA *i* *PP pP 22 52 15.0 +2.6
APA pmax pmax
comp=Z,68nm,0.5s,mb5.9
APA MLR MLR
comp=Z,400nm,15.0s
AMRR Amara 57.89 309 ⇑P **P 22 51 48.4 +0.4**
AMRR Amara 57.89 309 ⇑ *i*P **P 22 51 48.4 +0.4**
WRAB Tennant Creek 58.06 135 *e*P **P 22 51 48.8 -0.6**
WRAB *e**PP pP 22 52 14.8 -2.1
WRAB pmax pmax
comp=Z,54nm,0.7s,mb5.7
WRAB Tennant Creek 58.06 135 *e*P **P 22 51 48.8 -0.7**
comp=Z,54nm,0.7s,mb5.7
WRAB *e*pP pP 22 52 14.8 -2.1
VRI Vrincioaia 58.27 310 P **P 22 51 51.8 +1.2**
VRI Vrincioaia 58.27 310 ⇓P **P 22 51 51.6 +1.0**
VRI P 22 51 51.8
VRI Vrincioaia 58.27 310 ⇓ *i*P **P 22 51 51.6 +1.0**
TESR 58.30 311 ⇑P **P 22 51 50.7 -0.1**
TESR P 22 51 51.2
TESR 58.30 311 ⇑ *i*P **P 22 51 50.7 -0.1**
PLOR Plostina 58.33 310 P **P 22 51 52.4 +1.4**
PLOR Plostina 58.33 310 ⇑ *i*P **P 22 51 52.1 +1.1**
NACGM Naroch 58.35 321 *e* **P 22 51 49.0 -2.0**
IDID Didziasalis 58.40 322 *e*P **P 22 51 51.7 +0.4**
IDID AMB AMB 22 51 52.6
comp=Z,18nm,0.8s,mb5.1
JMB Yambol 58.57 306 P **P 22 51 53.8 +1.1**
JMB Yambol 58.57 306 P **P 22 51 53.7 +1.0**
SULR 58.66 309 ⇑P **P 22 51 53.4 0.0**
SULR P 22 51 54.4
SULR 58.66 309 ⇑ *i*P **P 22 51 53.4 +0.1**
IIGN Ignalina 58.70 322 *e*P **P 22 51 53.9 +0.5**
IIGN AMB AMB 22 51 54.8
comp=Z,39nm,0.7s,mb5.5
IZAR Zarasai 58.71 322 *e*P **P 22 51 53.9 +0.4**
IZAR AMB AMB 22 51 54.6
comp=Z,30nm,0.6s,mb5.5
MLR Muntele Rosu 58.84 310 P **P 22 51 55.9 +1.4**
MLR Muntele Rosu 58.84 310 ⇑P **P 22 51 55.6 +1.1**
MLR P 22 51 55.9
MLR Muntele Rosu 58.84 310 ⇑ *i*P **P 22 51 55.6 +1.1**
KARP Karpathos 58.87 298 *e*P **P 22 51 54.5 -0.4**
SZH Strazhica 58.98 307 P **P 22 51 55.5 -0.1**
ALN Alexandroupoli 59.10 305 P **P 22 51 56.5 +0.1**
KLBR Kellerberrin 59.17 157 *e*P **P 22 51 55.8 -1.1**
comp=Z,17nm,0.7s,mb5.2
DOPR Dopca 59.20 311 ⇓ *i*P **P 22 51 57.6 +0.6**
BURAR Bucovina Array 59.25 313 ⇓P **P 22 51 57.5 +0.2**
BURAR Bucovina Array 59.25 313 ⇓ *i*P **P 22 51 57.5 +0.2**
BUR08 Bucovina Ar. S 59.26 313 ⇓ *i*P **P 22 51 57.5 +0.1**
FINES FINESS Array B 59.32 329 P **P 22 51 57.6 0.0**
comp=Z,28nm,0.6s,mb5.5,baz=87,slow=5.9,SNR=159
CHOS Chios island 59.37 302 P **P 22 51 59.0 +0.7**
DIM Dimitrovgrad 59.38 306 P **P 22 51 58.5 +0.2**
PVL Pavlikeni 59.42 307 P **P 22 51 59.7 +1.1**
VOIR 59.47 310 P **P 22 51 59.1 +0.2**
VOIR 59.47 310 ⇑P **P 22 51 59.0 +0.1**
VOIR 59.47 310 ⇑ *i*P **P 22 51 59.0 +0.1**
KDZ Kurdzhali 59.50 306 P **P 22 51 59.5 +0.3**
ZKR Zakros 59.69 298 *e*P **P 22 52 00.5 -0.1**
APE Apeiranthos 59.96 300 ⇑P **P 22 52 00.9 -1.5**
APE Apeiranthos 59.96 300 *e*P **P 22 52 01.5 -0.9**
APE Apeiranthos 59.96 300 ⇑ *i*P **P 22 52 00.9 -1.5**
LVV L'vov 59.96 315 *i*P **P 22 52 01.8 -0.4**
PLD Plovdiv 59.99 306 P **P 22 52 02.6 +0.1**
RZN Rozhen 60.02 306 P **P 22 52 03.1 +0.4**
THR1 Thera Island 60.11 300 P **P 22 52 02.8 -0.7**
THR3 Thira Island, 60.16 300 P **P 22 52 04.0 +0.2**
NPS Neapolis 60.16 298 *e*P **P 22 52 03.5 -0.3**
NWAO Narrogin (SRO) 60.20 158 *e*P **P 22 52 03.1 -0.8**
NWAO pmax pmax
comp=Z,16nm,0.6s
NWAO Narrogin (SRO) 60.20 158 *e*P **P 22 52 03.1 -0.8**
comp=Z,16nm,0.6s,mb5.2
LAST Lasithi 60.28 298 *e*P **P 22 52 05.0 +0.3**
LAST Lasithi 60.28 298 P **P 22 52 04.5 -0.2**
PGB Panagyurishte 60.34 307 P **P 22 52 05.4 +0.5**
KEV Kevo 60.35 338 *e*P **P 22 52 05.0 +0.5**
KEV pmax pmax
comp=Z,38nm,0.8s,mb5.5
KEV Kevo 60.35 338 *e*P **P 22 52 05.0 +0.6**
comp=Z,38nm,0.8s,mb5.5
SUW Suwalki 60.42 320 *e*P **P 22 52 04.7 -0.6**
SUW Suwalki 60.42 320 *e*P **P 22 52 04.2 -1.1**
SUW pmax pmax
comp=Z,125nm,1.0s,mb5.9
SUW Suwalki 60.42 320 *e*P **P 22 52 04.2 -1.0**
comp=Z,125nm,1.0s,mb5.9
ASAR Alice Springs 60.51 138 P **P 22 52 06.3 +0.1**
comp=Z,32nm,0.6s,mb5.5,baz=321,slow=6.7,SNR=330
ASAR pP pP 22 52 32.0 -1.8
comp=Z,8.2nm,0.8s,baz=315,slow=6.2,SNR=4.2
ASAR PKP2bc 23 21 33.5
comp=Z,0.8nm,0.8s,baz=116,slow=5.7,SNR=4.9
ASAR Alice Springs 60.51 138 P **P 22 52 06.3 +0.1**
ASAR *PP pP 22 52 32.1 -1.8
ASAR Alice Springs 60.51 138 P **P 22 52 06.3 +0.1**
ASAR pP pP 22 52 32.0 -1.8
ASAR ⇑ *e* 23 21 33.5
OUR Ouranopolis 60.73 304 P **P 22 52 07.1 -0.5**

ARCES ARCESS Array B 60.82 338 P **P 22 52 08.2 +0.5**
comp=Z,37nm,0.6s,mb5.6,baz=95,slow=7.5,SNR=312
ARCES SCP SCP 22 56 41.1 -0.1
comp=Z,2.6nm,0.7s,baz=94,slow=3.9,SNR=4.4
ARE0 ARCESS Array S 60.82 338 ⇓ *e*P **P 22 52 08.2 +0.6**
KWP Kalwaria Pacla 60.82 315 *e*P **P 22 52 08.3 +0.3**
KWP Kalwaria Pacla 60.82 315 ⇓ *i*P **P 22 52 08.2 +0.2**
KWP *e**PP pP 22 52 34.8 -0.9
KWP pmax pmax
comp=Z,143nm,0.6s,mb6.2
KWP Kalwaria Pacla 60.82 315 ⇓ *i*P **P 22 52 08.2 +0.2**
comp=Z,143nm,0.6s,mb6.2
KWP *e*pP pP 22 52 34.8 -0.9
KWP Kalwaria Pacla 60.82 315 ⇓ *i*P **P 22 52 08.2 +0.2**
SIVA Sivas 60.85 298 *e*P **P 22 52 08.5 0.0**
KMBO Kilima Mbogo 60.88 255 P **P 22 52 09.8 +0.8**
comp=Z,13nm,0.7s,mb5.1,baz=180,slow=24,SNR=63
KMBO Kilima Mbogo 60.88 255 ⇓ *e*P **P 22 52 09.7 +0.8**
KMBO *e*pP pP 22 52 36.4 -0.3
PMG Port Moresby 60.92 116 *c e*P **P 22 52 09.9 +0.7**
PMG pmax pmax
comp=Z,17nm,1.0s
PMG Port Moresby 60.92 116 *e*P **P 22 52 08.2 -1.0**
PMG *e*pP pP 22 52 36.0 -0.8
PMG Port Moresby 60.92 116 P **P 22 52 10.0 +0.8**
comp=Z,46nm,1.0s,mb5.5
SRS Serrai 60.92 305 P **P 22 52 07.8 -1.1**
DEV Deva 60.94 311 ⇓P **P 22 52 09.6 +0.7**
DEV Deva 60.94 311 ⇓ *i*P **P 22 52 09.6 +0.7**
DRGR 61.00 312 P **P 22 52 10.1 +0.8**
DRGR 61.00 312 ⇓P **P 22 52 09.7 +0.4**
DRGR P 22 52 10.1
DRGR 61.00 312 ⇓ *i*P **P 22 52 09.7 +0.4**
PAIG Paliouri 61.01 304 P **P 22 52 09.4 -0.1**
TRPA Tarpa 61.02 313 ⇓ *i*P **P 22 52 09.4 0.0**
VTS Vitosha 61.04 307 ⇓P **P 22 52 10.0 +0.4**
VTS Vitosha 61.04 307 P **P 22 52 09.7 +0.1**
VTS Vitosha 61.04 307 P **P 22 52 09.9 +0.3**
VTS Vitosha 61.04 307 ⇓ *i*P **P 22 52 10.0 +0.4**
GZR Gura Zlata 61.07 310 ⇑P **P 22 52 10.2 +0.4**
GZR Gura Zlata 61.07 310 P **P 22 52 10.1 +0.3**
GZR Gura Zlata 61.07 310 ⇑ *i*P **P 22 52 10.2 +0.4**
PLG Polygyros 61.13 304 *e*P **P 22 52 10.0 -0.3**
PLG Polygyros 61.13 304 P **P 22 52 09.8 -0.5**
UZH Uzhgorod 61.15 314 *c i*P **P 22 52 09.9 -0.4**
VLY Voula,Athens 61.21 301 *e*P **P 22 52 09.5 -1.4**
KKB Krupnik 61.21 306 P **P 22 52 10.3 -0.5**
VAM Vamos 61.28 299 *e*P **P 22 52 11.5 +0.1**
KNT Kendrikon 61.44 305 P **P 22 52 11.7 -0.7**
NEO Neokhori 61.44 303 *e*P **P 22 52 11.5 -0.9**
GVD Gavdhos 61.46 298 *e*P **P 22 52 12.2 -0.4**
comp=Z,136nm,0.8s,mb6.0
KARN Karanos 61.50 299 *e*P **P 22 52 12.5 -0.4**
KARN Karanos 61.50 299 P **P 22 52 11.7 -1.2**
STHS Stebnicka Huta 61.79 315 *e*P **P 22 52 14.8 +0.2**
STHS pmax pmax
comp=Z,12nm,0.6s,mb5.1
STHS Stebnicka Huta 61.79 315 *e*P **P 22 52 14.8 +0.2**
comp=Z,12nm,0.6s,mb5.1
STHS Stebnicka Huta 61.79 315 *e*P **P 22 52 14.8 +0.2**
GRG Griva 61.84 305 P **P 22 52 14.3 -0.7**
BZS Buzias 61.86 310 ⇑P **P 22 52 14.9 -0.2**
BZS Buzias 61.86 310 ⇑ *i*P **P 22 52 14.9 -0.2**
VLI Veliai 62.06 300 *e*P **P 22 52 12.0 -4.6**
AGG Agios Georgios 62.17 303 P **P 22 52 15.7 -1.6**
GUR Goura 62.33 302 *e*P **P 22 52 16.5 -1.9**
GUR Goura 62.33 302 P **P 22 52 16.8 -1.6**
KECS Kecovo 62.36 314 *e*P **P 22 52 18.7 +0.3**
KECS pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
KECS Kecovo 62.36 314 *e*P **P 22 52 18.7 +0.3**
comp=Z,7.5nm,0.9s,mb4.7
KECS Kecovo 62.36 314 *e*P **P 22 52 18.7 +0.3**
NIE Niedzica 62.39 315 *i*P **P 22 52 19.2 +0.6**
NIE *e*pP pP 22 52 48.6 +2.2
VLX Vlachokerasia 62.40 301 *e*P **P 22 52 17.5 -1.3**
VLX Vlachokerasia 62.40 301 P **P 22 52 17.2 -1.6**
KZN Kozani 62.40 304 *e*P **P 22 52 18.0 -0.8**
KZN Kozani 62.40 304 P **P 22 52 17.7 -1.1**
KALE Kalithea 62.41 302 P **P 22 52 17.0 -2.0**
TRIZ Trizonia 62.47 302 P **P 22 52 17.3 -2.0**
LAKA Lakka 62.56 302 P **P 22 52 18.4 -1.6**
EVR Evrytania 62.59 303 *e*P **P 22 52 19.0 -1.1**
EFP Efpalio 62.59 302 *e*P **P 22 52 18.5 -1.6**
FNA Florina 62.63 305 P **P 22 52 19.2 -1.1**
ITM Ithomi 62.78 301 *e*P **P 22 52 20.0 -1.4**
ITM Ithomi 62.78 301 P **P 22 52 20.1 -1.3**
FORT Forrest 62.85 148 *e*P **P 22 52 21.7 -0.1**
comp=Z,13nm,0.7s,mb5.0
NEST Nestorio 62.93 305 P **P 22 52 21.2 -1.2**
PYL PYLOS 62.98 301 *e*P **P 22 52 21.0 -1.7**
RLS Riolos of Patr 62.99 302 *e*P **P 22 52 21.5 -1.3**
TRO Tromso 63.12 338 ⇓ *i*P **P 22 52 23.1 +0.1**
DIVS Divibare 63.19 309 P **P 22 52 23.6 -0.3**
PVY Plav 63.41 307 ⇓ *i*P **P 22 52 25.4 0.0**
PVY Plav 63.41 307 ⇓ *i*P **P 22 52 25.4 0.0**
IVA Berane 63.42 308 ⇓ *i*P **P 22 52 25.5 0.0**
IVA Berane 63.42 308 ⇓ *i*P **P 22 52 25.6 +0.1**
VYHS Vyhne 63.45 314 *e*P **P 22 52 25.7 +0.1**
VYHS pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
VYHS Vyhne 63.45 314 *e*P **P 22 52 25.7 +0.1**
comp=Z,8.4nm,0.7s,mb4.8
VYHS *e*PP PP 22 54 47.9 +1.7
VYHS Vyhne 63.45 314 *e*P **P 22 52 25.7 +0.1**
VYHS *e*PP PP 22 54 47.9 +1.7
VLS Valsamata 63.65 302 *e*P **P 22 52 25.5 -1.6**
VLS Valsamata 63.65 302 P **P 22 52 25.2 -1.9**
PLE Pljevlja 63.72 308 ⇓ *i*P **P 22 52 28.3 +0.8**
PLE Pljevlja 63.72 308 ⇓ *i*P **P 22 52 28.3 +0.8**
KOLL Kolacno 63.73 314 *e*P **P 22 52 27.5 +0.1**
KOLL Kolacno 63.73 314 *e*P **P 22 52 27.5 +0.1**
OKC Ostrava-Krasne 63.76 315 ⇓ *i*P **P 22 52 27.9 +0.3**
OKC Ostrava-Krasne 63.76 315 ⇓ *i*P **P 22 52 27.9 +0.3**
PKSM Moragy 63.85 311 ⇓P **P 22 52 28.0 -0.3**
PKSM Moragy 63.85 311 ⇓ *i*P **P 22 52 28.0 -0.3**
TTG Podgorica 63.95 307 ⇑P **P 22 52 28.2 -0.8**
TTG Podgorica 63.95 307 ⇑ *i*P **P 22 52 28.3 -0.7**
GKP Gorka Klasztor 63.99 319 *e*P **P 22 52 28.7 -0.3**
ULC Ulcinj 64.03 307 ⇑ *i*P **P 22 52 28.5 -1.1**
ULC Ulcinj 64.03 307 ⇑ *i*P **P 22 52 28.5 -1.0**
NKY Niksic 64.08 308 ⇓ *i*P **P 22 52 27.9 -2.0**
NKY Niksic 64.08 308 ⇓ *i*P **P 22 52 28.0 -1.9**
UPM Unac-Piva 64.09 308 ⇑ *i*P **P 22 52 28.3 -1.6**
UPM Unac-Piva 64.09 308 ⇑ *i*P **P 22 52 28.3 -1.6**
MORC Moravsky Berou 64.15 315 *e**PP pP 22 52 55.5 -2.6
MORC *e* 22 54 52.8
MORC pmax pmax
comp=Z,27nm,0.8s,mb5.1
MORC Moravsky Berou 64.15 315 *e*pP pP 22 52 55.5 -2.6
MORC *e*PP PP 22 54 52.8 +0.4
BUM Brajici-Budva 64.24 307 ⇓ *i*P **P 22 52 30.4 -0.5**
STEI Steigen 64.38 336 *e*P **P 22 52 31.2 -0.1**
BRY Bratogost 64.40 308 ⇓ *i*P **P 22 52 30.4 -1.5**
BRY Bratogost 64.40 308 ⇓ *i*P **P 22 52 30.4 -1.5**
HCY Herceg Novi 64.51 307 ⇓ *i*P **P 22 52 31.8 -0.8**
HCY Herceg Novi 64.51 307 ⇓ *i*P **P 22 52 31.9 -0.8**
MOR8 Moi Rana 64.71 334 ⇓ *i*P **P 22 52 32.8 -0.7**
MOR8 AMb AMB 22 52 33.3
comp=Z,77nm,0.7s,mb5.7
MOR8 Moi Rana 64.71 334 ⇓ *i*P **P 22 52 32.8 -0.7**
comp=Z,77nm,0.7s,mb5.6
VRAC Vranov 64.82 315 P **P 22 52 35.3 +0.7**
VRAC Vranov 64.82 315 ⇑P **P 22 52 35.2 +0.6**
VRAC P 22 52 35.3
VRAC Vranov 64.82 315 ⇑ *i*P **P 22 52 35.2 +0.6**
KSP Ksiaz 64.83 317 *e*P **P 22 52 35.0 +0.5**
KSP Ksiaz 64.83 317 ⇓ *i*P **P 22 52 34.9 +0.4**
DPC Dobruska-Polom 64.87 316 ⇓ *i*P **P 22 52 35.5 +0.7**
DPC *e* 22 55 00.2
DPC Dobruska-Polom 64.87 316 ⇓ *i*P **P 22 52 35.5 +0.7**
DPC *e*PP PP 22 55 00.2 +1.6
LOF Lofoten 65.02 336 *e*P **P 22 52 34.9 -0.6**
LOF AMB AMB 22 52 35.4
comp=Z,83nm,0.6s,mb5.8
UPC Upice 65.04 316 ⇓ *i*P **P 22 52 36.5 +0.5**
UPC Upice 65.04 316 ⇓ *i*P **P 22 52 36.5 +0.5**
FLOS Flostrand 65.14 334 ⇓ *i*P **P 22 52 36.2 -0.1**
BSD Bornholm Skovb 65.17 321 ⇓ *i*P **P 22 52 35.7 -1.0**
BSD pmax pmax
comp=Z,34nm,0.8s,mb5.2

BSD Bornholm Skovb 65.17 321 ⇓ *i*P **P 22 52 35.7 -1.0**
comp=Z,34nm,0.8s,mb5.2
KONS Konsvik 65.23 334 *e*P **P 22 52 36.8 -0.1**
KOGS Kog 65.46 312 *i*P **P 22 52 38.6 -0.2**
CONA Conrad Observa 65.50 314 *i*P **P 22 52 39.0 +0.1**
comp=Z,36nm,1.2s,mb5.1,SNR=33
TREC Trest 65.54 315 ⇓ *i*P **P 22 52 39.6 +0.4**
TREC *e* 22 55 05.3
TREC Trest 65.54 315 ⇓ *i*P **P 22 52 39.6 +0.4**
TREC *e*PP PP 22 55 05.3 +0.8
KBS Kingsbay 65.60 348 *e*P **P 22 52 39.2 +0.1**
NSS Namsos 65.82 332 ⇓ *i*P **P 22 52 39.3 -1.4**
NSS AMb AMB 22 52 39.8
comp=Z,32nm,1.3s,mb5.0
NSS Namsos 65.82 332 ⇓ *i*P **P 22 52 39.3 -1.4**
comp=Z,32nm,1.3s,mb5.0
ARSA Arzberg 65.83 313 *i*P **P 22 52 41.0 -0.1**
comp=Z,18nm,0.7s,mb5.0,SNR=27
PVCC Panska Ves 65.95 316 ⇓ *i*P **P 22 52 42.4 +0.6**
PVCC Panska Ves 65.95 316 ⇓ *i*P **P 22 52 42.4 +0.6**
DOBS Dobrina 66.04 312 *i*P **P 22 52 42.5 0.0**
PRU Pruhonice 66.05 316 ⇓ *i*P **P 22 52 43.5 +1.0**
PRU *e* 22 55 08.6
PRU Pruhonice 66.05 316 ⇓ *i*P **P 22 52 43.5 +1.0**
PRU *e*PP PP 22 55 08.6 -0.3
PRA Prague 66.11 316 ⇓P **P 22 52 43.0 +0.2**
PRA pP pP 22 53 15.0 +4.1
RGN Rugen 66.16 321 P **P 22 52 42.4 -0.6**
RUE Ruedersdorf 66.16 319 ⇓ *e*P **P 22 52 43.1 0.0**
comp=Z,81nm,0.8s,mb5.6
PERS Pernice 66.20 312 *i*P **P 22 52 43.4 -0.1**
SOKA Soboth 66.25 312 ⇓ *i*P **P 22 52 43.8 0.0**
comp=Z,18nm,0.6s,mb5.1
BRG Berggiesshubel 66.30 317 *e*P **P 22 52 44.2 +0.2**
comp=Z,38nm,0.6s,mb5.4
BRG Berggiesshubel 66.30 317 *i*P **P 22 52 44.1 +0.1**
comp=Z,38nm,0.6s,mb5.4
BRG *i* 22 52 55.1
comp=Z,8.7nm,0.9s
BRG *i* 22 53 01.2
comp=Z,7.5nm,0.7s
BRG Berggiesshubel 66.30 317 *i*P **P 22 52 44.1 +0.1**
BRG pmax pmax
comp=Z,23nm,0.6s,mb5.2
BRG pmax pmax
comp=Z,5.0nm,1.0s,mb4.3
BRG pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
BOJS Bojanci 66.30 311 *i*P **P 22 52 44.2 0.0**
MBAR Mbarara 66.45 258 *e*P **P 22 52 46.1 +0.5**
CTA Charters Tower 66.46 127 ⇑ *i*P **P 22 52 45.0 -0.5**
comp=Z,10nm,1.0s,mb4.6
CTAO Charters Tower 66.46 127 *e*P **P 22 52 44.5 -1.0**
CTAO *e**PP pP 22 53 09.9 -3.7
CTAO *e* 22 55 07.5
CTAO pmax pmax
comp=Z,29nm,1.3s,mb5.0
CTAO Charters Tower 66.46 127 *e*P **P 22 52 44.5 -1.0**
comp=Z,29nm,1.3s,mb5.0
CTAO *e*pP pP 22 53 09.9 -3.7
CTAO *e*PP PP 22 55 07.5 -5.9
NB2 NORSAR Subarra 66.49 328 P **P 22 52 44.4 -0.6**
comp=Z,67nm,0.9s,mb5.5,baz=84,slow=6.5
NOA NORSAR Array B 66.49 328 P **P 22 52 44.7 -0.4**
comp=Z,43nm,0.8s,mb5.3,baz=85,slow=6.4,SNR=261
NOA pP pP 22 53 13.9 +0.8
comp=Z,10nm,0.8s,baz=84,slow=6.5,SNR=4.9
NOA NORSAR Array B 66.49 328 P **P 22 52 44.7 -0.4**
NOA pP pP 22 53 13.9 +0.8
COP Copenhagen 66.51 322 *e*P **P 22 52 45.7 +0.4**
COP pmax pmax
comp=Z,10.0nm,0.9s,mb4.7
COP Copenhagen 66.51 322 *i*P **P 22 52 45.7 +0.4**
comp=Z,9.5nm,0.9s,mb4.6
MOA Molln 66.57 314 *i*P **P 22 52 45.6 -0.2**
comp=Z,32nm,0.5s,mb5.4,SNR=69
OBKA Obir 66.61 312 ⇓ *i*P **P 22 52 46.1 0.0**
comp=Z,17nm,0.8s,mb4.9,SNR=7.4
NAO01 NORSAR Array S 66.67 328 ⇓ *e*P **P 22 52 45.7 -0.5**
comp=Z,18nm,0.5s,mb5.2
NAO01 *e*pP pP 22 53 13.8 -0.5
NAO01 *e*PP PP 22 55 13.8 -0.2
LJU Ljubljana 66.71 312 *e*P **P 22 52 46.9 +0.2**
NVLJ Novalja 66.74 310 P **P 22 52 45.7 -1.2**
GEC2 GERESS Array S 66.77 315 *e*P **P 22 52 47.4 +0.3**
comp=Z,41nm,0.6s,mb5.4
GEC2 GERESS Array S 66.77 315 *e*P **P 22 52 47.4 +0.3**
GEC2 pmax pmax
comp=Z,41nm,0.6s,mb5.4
KHC Kasperske Hory 66.81 315 *e*P **P 22 52 47.4 +0.1**
comp=Z,24nm,1.1s,mb4.9
KHC *e*pP pP 22 53 14.9 -0.5
KHC *e*PP PP 22 55 15.2 -0.3
KHC Kasperske Hory 66.81 315 ⇓ *i*P **P 22 52 47.4 +0.1**
KHC *e*PP PP 22 55 14.8 -0.7
CLL Collm 66.81 318 *e*P **P 22 52 47.1 -0.2**
comp=Z,19nm,0.8s,mb5.0
CLL Collm 66.81 318 ⇓ *i*P **P 22 52 47.1 -0.2**
CLL pmax pmax
comp=Z,40nm,1.3s,mb5.1
CLL Collm 66.81 318 ⇓ *i*P **P 22 52 47.1 -0.2**
comp=Z,40nm,1.3s,mb5.1
CLL Collm 66.81 318 ⇓ *i*P **P 22 52 47.1 -0.2**
comp=Z,40nm,1.3s,mb5.1
OSL Oslo 66.86 327 *e*P **P 22 52 47.7 +0.3**
OSL AMb AMB 22 52 49.0
comp=Z,106nm,1.0s,mb5.6
OSL Oslo 66.86 327 *e*P **P 22 52 47.7 +0.3**
comp=Z,106nm,1.0s,mb5.6
VOY Vojsko 67.14 312 *e*P **P 22 52 49.1 -0.4**
CADS Cadrg 67.21 312 *i*P **P 22 52 49.4 -0.5**
WET Wettzell 67.26 315 *e*P **P 22 52 50.5 +0.4**
comp=Z,23nm,0.7s,mb5.1
WET Wettzell 67.26 315 *e*P **P 22 52 50.5 +0.4**
WET pmax pmax
comp=Z,23nm,0.7s,mb5.1
CEL Celeste 67.26 303 ⇓ *e*P **P 22 52 50.1 -0.3**
comp=Z,59nm,1.0s,mb5.4
CEL *e*PcP PcP 22 53 17.3 -0.1
TRI Trieste 67.29 311 ⇓ *e*P **P 22 52 49.8 -0.6**
TRI pmax pmax
comp=Z,46nm,0.7s,mb5.4
TRI Trieste 67.29 311 ⇓ *e*P **P 22 52 49.8 -0.6**
comp=Z,46nm,0.7s,mb5.4
TANN Tannenbergstha 67.30 317 *e*P **P 22 52 50.7 +0.3**
comp=Z,22nm,0.7s,mb5.1
TANN *e*pP pP 22 53 19.4 +0.9
KBA Koelnbreinsper 67.32 313 *i*P **P 22 52 50.3 -0.3**
comp=Z,19nm,0.5s,mb5.2,SNR=11
NKC Novy Kostel 67.34 316 ⇓ *i*P **P 22 52 51.0 +0.4**
NKC Novy Kostel 67.34 316 ⇓ *i*P **P 22 52 51.0 +0.4**
KONO Kongsberg 67.47 327 ⇓ *i*P **P 22 52 50.9 -0.3**
KONO AMb AMB 22 52 51.7
comp=Z,2.5nm,1.1s,mb3.9
KONO Kongsberg 67.47 327 *e*P **P 22 52 51.0 -0.2**
KONO *e* pP 22 53 17.9 -1.5
KONO *e* 22 55 20.7
KONO pmax pmax
comp=Z,24nm,0.8s,mb5.1
KONO Kongsberg 67.47 327 *e*P **P 22 52 51.0 -0.2**
comp=Z,24nm,0.8s,mb5.1
KONO *e*PcP PcP 22 53 17.9 0.0
KONO *e*PP PP 22 55 20.7 -0.3
RJOB Jochberg 67.56 314 *e*P **P 22 52 52.0 -0.1**
comp=Z,20nm,0.9s,mb5.0
ROTZ Rotzenmuhle 67.58 316 *e*P **P 22 52 53.0 +0.9**
comp=Z,75nm,0.6s,mb5.7
MOX Moxa 67.79 317 ⇓ *i*P **P 22 52 53.5 0.0**
comp=Z,40nm,1.2s,mb5.1
MOX *e* pP 22 53 21.3 -0.4
MOX Moxa 67.79 317 *e*P **P 22 52 53.6 +0.1**
comp=Z,36nm,1.2s,mb5.1
MOX *e*pP pP 22 53 22.7 +1.0
MOX Moxa 67.79 317 ⇓ *i*P **P 22 52 53.5 0.0**
MOX *e* pP 22 53 21.3 -0.4
MOX pmax pmax
comp=Z,40nm,1.2s,mb5.1
ABTA Abfaltersbach 67.94 313 ⇓ *i*P **P 22 52 53.3 -1.2**
comp=Z,15nm,0.8s,mb4.9,SNR=12
BSEG Bad Segeberg 67.99 321 *e*P **P 22 52 55.3 +0.6**
comp=Z,74nm,0.9s,mb5.5
BSEG *e*pP pP 22 53 24.0 +1.1
BSEG Bad Segeberg 67.99 321 *e*P **P 22 52 55.3 +0.6**
BSEG *e**PP pP 22 53 24.0 +1.1
BSEG pmax pmax

comp=Z,74nm,0.9s,mb5.5
MUD Monsted U'grnd 68.20 323⇓iP P 22 52 56.5 +0.6
MUD pmax pmax
comp=Z,24nm,0.7s,mb5.1
MUD Monsted U'grnd 68.20 323⇓iP P 22 52 56.5 +0.6
comp=Z,24nm,0.7s,mb5.1
GRA1 Grafenberg Arr 68.22 316 *e*P **P 22 52 56.9 +0.7**
comp=Z,44nm,1.0s,mb5.2
GRA1 *e*PP PP 22 55 24.8 -3.0
GRF Grafenberg Arr 68.22 316 *e*P **P 22 52 56.9 +0.7**
comp=Z,44nm,1.0s,mb5.2
GRF *e*PP PP 22 55 24.9 -2.9
GRF Grafenberg Arr 68.22 316 *e*P **P 22 52 56.9 +0.7**
GRF *e* 22 55 24.8
GRF pmax pmax
comp=Z,44nm,1.0s,mb5.2
AQU L'Aquila 68.23 308 ⇓P P 22 52 56.2 -0.2
AQU L'Aquila 68.23 308⇓eP P 22 52 56.1 -0.3
AQU L'Aquila 68.23 308⇓iP P 22 52 56.2 -0.2
CLZ Clausthal 68.34 318 *e*P **P 22 52 57.3 +0.4**
comp=Z,50nm,0.7s,mb5.5
CLZ *e*pP pP 22 53 26.1 +1.0
CLZ Clausthal 68.34 318 *e*P **P 22 52 57.3 +0.4**
CLZ *e**PP pP 22 53 26.1 +1.0
CLZ pmax pmax
comp=Z,50nm,0.7s,mb5.5
WTTA Wattenberg 68.43 313⇑iP P 22 52 56.9 -0.6
comp=Z,30nm,0.6s,mb5.3,SNR=28
WATA Walderalm 68.45 313⇓iP P 22 52 56.9 -0.8
comp=Z,18nm,0.6s,mb5.1,SNR=22
FUR Furstenfeldbru 68.48 314 *e*P **P 22 52 58.1 +0.3**
comp=Z,28nm,0.6s,mb5.3
FUR Furstenfeldbru 68.48 314 *e*P **P 22 52 58.1 +0.3**
FUR pmax pmax
comp=Z,28nm,0.6s,mb5.3
MOTA Moosalm 68.77 314 *i*P **P 22 52 58.8 -0.8**
comp=Z,31nm,0.7s,mb5.2,SNR=46
HYA Hoyanger 68.89 329⇓iP P 22 53 01.4 +1.3
SNART Snartemo 68.90 326 *e*P **P 22 53 00.4 +0.2**
RETA Reutte 68.96 314⇓iP P 22 53 00.4 -0.5
comp=Z,40nm,0.5s,mb5.5,SNR=46
FETA Feichten 69.08 313 *i*P **P 22 53 01.0 -0.6**
comp=Z,22nm,0.7s,mb5.1,SNR=15
FOO Floro 69.34 329 *e*P **P 22 53 01.7 -1.2**
ASK Askoy 69.50 328 *e*P **P 22 53 03.1 -0.8**
STAV Stavanger 69.56 326 *e*P **P 22 53 04.2 0.0**
SUE Sulen 69.59 329 *e*P **P 22 53 04.6 +0.2**
DAVA Damuels 69.59 314 *i*P **P 22 53 04.4 -0.3**
comp=Z,39nm,0.9s,mb5.2,SNR=28
STU Stuttgart 69.71 315 *e*P **P 22 53 05.6 +0.2**
comp=Z,59nm,0.6s,mb5.6
STU *e*pP pP 22 53 34.3 +0.6
STU Stuttgart 69.71 315⇓eP P 22 53 05.5 +0.1
KMY Karmoy 69.73 327⇓iP P 22 53 05.2 -0.2
KMY AMb AMB 22 53 05.9
comp=Z,34nm,1.2s,mb5.1
KMY Karmoy 69.73 327⇓iP P 22 53 05.2 -0.2
comp=Z,34nm,1.2s,mb5.0
IBBN Ibbenburen 69.83 319 *e*P **P 22 53 06.3 +0.3**
comp=Z,36nm,1.1s,mb5.1
TNS Taunus Mts 69.86 317 *e*P **P 22 53 06.5 +0.2**
comp=Z,60nm,0.9s,mb5.4
TNS *e*pP pP 22 53 35.3 +0.7
TNS Taunus Mts 69.86 317 *e*P **P 22 53 06.5 +0.2**
TNS *e**PP pP 22 53 35.3 +0.7
TNS pmax pmax
comp=Z,60nm,0.9s,mb5.4
VLC Villacollemand 69.97 310 *e*P **P 22 53 07.0 0.0**
SPAK Spaichingen-Ko 70.13 315 *e*P **P 22 53 07.7 -0.3**
BFO Black Forest 70.37 315 *e*P **P 22 53 09.1 -0.3**
comp=Z,14nm,0.7s,mb4.9
BFO Black Forest 70.37 315 *e*P **P 22 53 09.1 -0.3**
BFO pmax pmax
comp=Z,14nm,0.7s,mb4.9
LANF Langenberg 70.55 316 *e*P **P 22 53 10.3 -0.3**
FELD Feldberg im Sc 70.69 315 *e*P **P 22 53 11.3 -0.1**
RUP Ruppelstein 70.86 317 *e*P **P 22 53 12.6 +0.2**
CDF Champ du Feu 71.03 315⇓iP P 22 53 13.3 -0.2
comp=Z,51nm,0.5s,mb5.3
CDF *e*pP pP 22 53 41.6 -0.3
CDF Champ du Feu 71.03 315⇓iP P 22 53 13.3 -0.2
CDF *e**PP pP 22 53 41.6 -0.3
CDF pmax pmax
comp=Z,26nm,0.5s,mb5.3
CDF Champ du Feu 71.03 315⇓iP P 22 53 13.3 -0.2
comp=Z,26nm,0.5s,mb5.3
CDF *e*pP pP 22 53 41.6 -0.3
STKA Stephens Creek 71.13 139⇑iP P 22 53 13.1 -1.1
comp=Z,5.6nm,0.8s,mb4.5
STKA Stephens Creek 71.13 139 P **P 22 53 13.6 -0.6**
comp=Z,6.6nm,0.7s,mb4.6,baz=323,slow=5.5,SNR=13
STKA Stephens Creek 71.13 139 *e*P **P 22 53 13.7 -0.5**
comp=Z,2.6nm,1.0s,mb4.0
STKA *e*PcP PcP 22 53 31.8 -1.8
STKA *e*pP pP 22 53 41.6 -1.0
STKA *e*sP sP 22 53 53.2 -1.7
ECH Echery 71.16 315 *e*P **P 22 53 13.7 -0.5**
ECH Echery 71.16 315⇓eP P 22 53 13.8 -0.4
ECH pmax pmax
comp=Z,9.0nm,0.6s,mb4.8
ECH Echery 71.16 315⇓eP P 22 53 13.8 -0.4
comp=Z,9.3nm,0.6s,mb4.8
MOF Molkenrain 71.27 315 *e*P **P 22 53 14.6 -0.3**
MEM Membach 71.29 318 P **P 22 53 15.0 0.0**
comp=Z,13nm,1.1s,mb4.7
PGF Pioggiola 71.35 309⇓iP P 22 53 15.4 -0.1
comp=Z,54nm,0.7s,mb5.2
PGF Pioggiola 71.35 309⇓iP P 22 53 15.4 -0.1
PGF pmax pmax
comp=Z,27nm,0.7s,mb5.2
PGF Pioggiola 71.35 309⇓iP P 22 53 15.4 -0.1
comp=Z,27nm,0.7s,mb5.2
WLF Walferdange 71.43 317 P **P 22 53 16.5 +0.7**
comp=Z,62nm,1.2s,mb5.3
WLF Walferdange 71.43 317 *e*P **P 22 53 16.7 +0.8**
comp=Z,103nm,1.0s,mb5.6
WLF *e*pP pP 22 53 45.3 +1.0
WLF Walferdange 71.43 317⇓eP P 22 53 16.3 +0.5
HINF Hinteralfeld 71.46 315⇓iP P 22 53 15.5 -0.5
comp=Z,17nm,0.5s,mb4.8
HINF Hinteralfeld 71.46 315⇓iP P 22 53 15.5 -0.5
HINF pmax pmax
comp=Z,8.0nm,0.5s,mb4.8
HINF Hinteralfeld 71.46 315⇓iP P 22 53 15.5 -0.5
comp=Z,8.4nm,0.5s,mb4.8
HAU Haudompre 71.74 315⇓iP P 22 53 17.4 -0.3
comp=Z,47nm,0.7s,mb5.2
HAU Haudompre 71.74 315⇓iP P 22 53 17.4 -0.3
HAU pmax pmax
comp=Z,23nm,0.7s,mb5.1
HAU Haudompre 71.74 315⇓iP P 22 53 17.4 -0.3
comp=Z,23nm,0.7s,mb5.1
BCLA Clavier 71.77 318 P **P 22 53 17.9 +0.1**
comp=Z,12nm,1.4s,mb4.5
VSL Villasalto 71.89 306⇓eP P 22 53 18.6 -0.1
comp=Z,54nm,1.4s,mb5.2
THEF They Montfort 71.91 315 *e*P **P 22 53 18.5 -0.2**
SAOF Saorge 71.98 311 *e*P **P 22 53 19.3 0.0**
AUTN L'Aution 72.07 311 *e*P **P 22 53 20.1 +0.3**
SBF Sospel 72.10 311⇓iP P 22 53 19.7 -0.3
comp=Z,41nm,0.7s,mb5.0
SBF *e*pP pP 22 53 48.0 -0.5
SBF Sospel 72.10 311⇓iP P 22 53 19.7 -0.3
SBF *e**PP pP 22 53 48.0 -0.5
SBF pmax pmax
comp=Z,20nm,0.7s,mb5.1
SBF Sospel 72.10 311⇓iP P 22 53 19.7 -0.3
comp=Z,20nm,0.7s,mb5.1
SBF *e*pP pP 22 53 48.0 -0.5
LPG La Plagne 72.13 312⇓iP P 22 53 20.6 +0.5
comp=Z,70nm,0.6s,mb5.3
LPG La Plagne 72.13 312⇓iP P 22 53 20.6 +0.5
LPG pmax pmax
comp=Z,35nm,0.6s,mb5.4
LPG La Plagne 72.13 312⇓iP P 22 53 20.6 +0.5
comp=Z,35nm,0.6s,mb5.4
LPL La Plagne 72.14 312⇓iP P 22 53 20.6 +0.4
comp=Z,92nm,0.5s,mb5.5
LPL La Plagne 72.14 312⇓iP P 22 53 20.6 +0.4
LPL pmax pmax
comp=Z,46nm,0.5s,mb5.6
LPL La Plagne 72.14 312⇓iP P 22 53 20.6 +0.4
comp=Z,46nm,0.5s,mb5.6
GIVF Givet 72.15 317 *e*P **P 22 53 20.2 +0.1**
comp=Z,41nm,0.9s,mb5.0
GIVF *e*pP pP 22 53 48.5 -0.1
GIVF Givet 72.15 317 *e*P **P 22 53 20.2 +0.1**
GIVF *e**PP pP 22 53 48.5 -0.1
GIVF pmax pmax
comp=Z,20nm,0.9s,mb5.0
GIVF Givet 72.15 317 *e*P **P 22 53 20.2 +0.1**
comp=Z,20nm,0.9s,mb5.0
GIVF *e*pP pP 22 53 48.5 -0.1
LUCF Luceram 72.16 311 *e*P **P 22 53 20.3 0.0**
TOUF Mont Tournerai 72.19 311 *e*P **P 22 53 20.6 +0.1**
CABF La Chapelle 72.28 314⇓iP P 22 53 21.0 0.0
comp=Z,38nm,0.5s,mb5.2
CABF La Chapelle 72.28 314⇓iP P 22 53 21.0 0.0
CABF pmax pmax
comp=Z,19nm,0.5s,mb5.2
CABF La Chapelle 72.28 314⇓iP P 22 53 21.0 0.0
comp=Z,19nm,0.5s,mb5.2
MVIF Mont Vial 72.29 311 *e*P **P 22 53 20.9 -0.2**
DOU Dourbes 72.29 317 P **P 22 53 20.9 0.0**
MBDF Montbardon 72.33 312⇓iP P 22 53 20.5 -0.8
comp=Z,48nm,0.6s,mb5.2
MBDF Montbardon 72.33 312⇓iP P 22 53 20.5 -0.8
MBDF pmax pmax
comp=Z,24nm,0.6s,mb5.2
MBDF Montbardon 72.33 312⇓iP P 22 53 20.5 -0.8
comp=Z,24nm,0.6s,mb5.2
SNF Seneffe 72.38 318 P **P 22 53 21.4 0.0**
comp=Z,14nm,1.5s,mb4.6
MEZF Maizieres J'vi 72.44 316⇓iP P 22 53 22.0 +0.1
comp=Z,107nm,0.5s,mb5.6
MEZF Maizieres J'vi 72.44 316⇓iP P 22 53 22.0 +0.1
comp=Z,107nm,0.5s,mb5.9
CALN Calern 72.51 311 *e*P **P 22 53 22.0 -0.4**
BAIF Baives 72.54 317⇓iP P 22 53 22.6 +0.1
comp=Z,60nm,1.1s,mb5.0
BAIF *e*pP pP 22 53 51.0 0.0
BAIF Baives 72.54 317⇓iP P 22 53 22.6 +0.1
BAIF *e**PP pP 22 53 51.0 0.0
BAIF pmax pmax
comp=Z,30nm,1.1s,mb5.0
BAIF Baives 72.54 317⇓iP P 22 53 22.6 +0.1
comp=Z,30nm,1.1s,mb5.0
BAIF *e*pP pP 22 53 51.0 0.0
LRW Lerwick 72.65 329 P **P 22 53 22.8 -0.1**
LRW AMb AMB 22 53 36.2
comp=Z,33nm,1.8s,mb4.9
LRW Lerwick 72.65 329⇓iP P 22 53 22.8 -0.1
LRW AMb AMB 22 53 36.2
comp=Z,33nm,1.8s,mb4.9
FRF La Foret Royal 72.73 310⇓iP P 22 53 23.4 -0.3
comp=Z,40nm,0.8s,mb5.0
FRF La Foret Royal 72.73 310⇓iP P 22 53 23.4 -0.3
FRF pmax pmax
comp=Z,20nm,0.8s,mb5.0
FRF La Foret Royal 72.73 310⇓iP P 22 53 23.4 -0.3
comp=Z,20nm,0.8s,mb5.0
WAL1 Walls 72.83 329 P **P 22 53 24.1 +0.1**
WAL1 Walls 72.83 329⇓iP P 22 53 24.1 +0.1
ORIF Oris-en-Rattie 72.88 312⇓iP P 22 53 24.1 -0.5
comp=Z,29nm,0.5s,mb5.0
ORIF Oris-en-Rattie 72.88 312⇓iP P 22 53 24.1 -0.5
ORIF pmax pmax
comp=Z,14nm,0.5s,mb5.0
ORIF Oris-en-Rattie 72.88 312⇓iP P 22 53 24.1 -0.5
comp=Z,14nm,0.5s,mb5.1
LMR La Mourre 72.89 310⇓iP P 22 53 24.4 -0.3
comp=Z,49nm,0.8s,mb5.1
LMR *e*pP pP 22 53 52.9 -0.3
LMR La Mourre 72.89 310⇓iP P 22 53 24.4 -0.3
LMR *e**PP pP 22 53 52.9 -0.3
LMR pmax pmax
comp=Z,25nm,0.8s,mb5.1
LMR La Mourre 72.89 310⇓iP P 22 53 24.4 -0.3
comp=Z,24nm,0.8s,mb5.1
LMR *e*pP pP 22 53 52.9 -0.3
SMRF Simiane la Rot 73.36 311⇓iP P 22 53 27.5 +0.1
comp=Z,32nm,0.8s,mb4.9
SMRF Simiane la Rot 73.36 311⇓iP P 22 53 27.5 +0.1
comp=Z,32nm,0.8s,mb5.2
LOR Lormes 73.56 315⇓iP P 22 53 28.0 -0.5
comp=Z,31nm,0.7s,mb4.9
LOR Lormes 73.56 315⇓iP P 22 53 28.0 -0.5
LOR pmax pmax
comp=Z,15nm,0.7s,mb4.8
LOR Lormes 73.56 315⇓iP P 22 53 28.0 -0.5
comp=Z,15nm,0.7s,mb4.8
VIVF Saint-Julien-l 73.72 312⇓iP P 22 53 29.3 -0.2
comp=Z,39nm,0.7s,mb5.0
VIVF Saint-Julien-l 73.72 312⇓iP P 22 53 29.3 -0.2
VIVF pmax pmax
comp=Z,20nm,0.7s,mb5.0
VIVF Saint-Julien-l 73.72 312⇓iP P 22 53 29.3 -0.2
comp=Z,20nm,0.7s,mb5.0
SMF Signal de Mont 73.75 314⇓iP P 22 53 29.4 -0.2
comp=Z,81nm,0.6s,mb5.4
SMF Signal de Mont 73.75 314⇓iP P 22 53 29.4 -0.2
SMF pmax pmax
comp=Z,41nm,0.6s,mb5.3
SMF Signal de Mont 73.75 314⇓iP P 22 53 29.4 -0.2
comp=Z,40nm,0.6s,mb5.3
SSF Saint Saulge 73.85 315⇓iP P 22 53 30.0 -0.2
comp=Z,62nm,0.6s,mb5.2
SSF *e*pP pP 22 53 58.4 -0.4
SSF Saint Saulge 73.85 315⇓iP P 22 53 30.0 -0.2
SSF *e**PP pP 22 53 58.4 -0.4
SSF pmax pmax
comp=Z,31nm,0.6s,mb5.2
SSF Saint Saulge 73.85 315⇓iP P 22 53 30.0 -0.2
comp=Z,31nm,0.6s,mb5.2
SSF *e*pP pP 22 53 58.4 -0.4
AVF Avril sur Loir 74.03 314⇓iP P 22 53 30.9 -0.4
comp=Z,48nm,0.7s,mb5.1
AVF *e*pP pP 22 53 59.4 -0.5
AVF Avril sur Loir 74.03 314⇓iP P 22 53 30.9 -0.4
AVF *e**PP pP 22 53 59.4 -0.5
AVF pmax pmax
comp=Z,24nm,0.7s,mb5.0
AVF Avril sur Loir 74.03 314⇓iP P 22 53 30.9 -0.4
comp=Z,24nm,0.7s,mb5.0
AVF *e*pP pP 22 53 59.4 -0.5
PLDF La Plantade 74.10 314 *e*P **P 22 53 31.6 -0.1**
ELSH Elham, Standar 74.10 319 P **P 22 53 31.3 -0.3**
ELSH AMb AMB 22 53 32.2
comp=Z,60nm,0.9s,mb5.3
ELSH Elham, Standar 74.10 319 *e*P **P 22 53 31.3 -0.3**
ELSH AMb AMB 22 53 32.2
comp=Z,60nm,0.9s,mb5.3
HYF Humbligny 74.35 315⇓iP P 22 53 33.6 +0.5
AGO Saint Agoulin 74.40 314 *e*P **P 22 53 33.7 +0.3**
ORE Reay 74.41 327 P **P 22 53 33.8 +0.6**
ORE Reay 74.41 327⇓iP P 22 53 33.8 +0.6
MME1 Meikle Cairn 74.42 326 P **P 22 53 33.1 -0.2**
MME1 Meikle Cairn 74.42 326⇓iP P 22 53 33.1 -0.2
BGF Bois d'Agland 74.43 314⇓iP P 22 53 33.4 -0.2
comp=Z,32nm,0.6s,mb4.9
BGF Bois d'Agland 74.43 314⇓iP P 22 53 33.4 -0.2
BGF pmax pmax
comp=Z,16nm,0.6s,mb4.9
BGF Bois d'Agland 74.43 314⇓iP P 22 53 33.4 -0.2
comp=Z,16nm,0.6s,mb4.9
MCD Coleburn Disti 74.48 326 P **P 22 53 34.0 +0.4**
MCD Coleburn Disti 74.48 326⇓iP P 22 53 34.0 +0.4
LASF Ste Croix 74.52 312⇓iP P 22 53 34.3 +0.2
comp=Z,55nm,0.8s,mb5.0
LBL Lubilhac 74.57 313 *e*P **P 22 53 34.7 +0.2**
PYM Petit Puy Mans 74.57 313 *e*P **P 22 53 34.6 +0.2**
ESY Stoneypath 74.70 325 P **P 22 53 34.5 -0.4**
ESY Stoneypath 74.70 325⇓iP P 22 53 34.5 -0.4
HPK Haverah Park 74.81 323 P **P 22 53 35.7 +0.1**
HPK AMb AMB 22 53 36.4
comp=Z,35nm,1.0s,mb5.0
HPK Haverah Park 74.81 323⇓iP P 22 53 35.7 +0.1
HPK AMb AMB 22 53 36.4
comp=Z,35nm,1.0s,mb5.0
MVH1 Achvaich 74.83 327 P **P 22 53 35.4 -0.3**
MVH1 Achvaich 74.83 327⇓eP P 22 53 35.4 -0.3
XAL Allendale 74.84 324 P **P 22 53 35.8 +0.1**
XAL Allendale 74.84 324 *e*P **P 22 53 35.8 +0.1**
TCF Toulx Ste Croi 74.94 314⇓iP P 22 53 36.7 +0.2
comp=Z,64nm,0.6s,mb5.2
TCF *e*pP pP 22 54 05.2 0.0
TCF Toulx Ste Croi 74.94 314⇓iP P 22 53 36.7 +0.2
TCF *e**PP pP 22 54 05.2 0.0
TCF pmax pmax
comp=Z,32nm,0.6s,mb5.2
TCF Toulx Ste Croi 74.94 314⇓iP P 22 53 36.7 +0.2
comp=Z,32nm,0.6s,mb5.2
TCF *e*pP pP 22 54 05.2 0.0
EBL Broad Law 74.98 325 P **P 22 53 36.8 +0.2**
EBL Broad Law 74.98 325⇓iP P 22 53 36.8 +0.2
KBI1 Birley Grange 74.99 322 P **P 22 53 36.4 -0.3**
KBI1 Birley Grange 74.99 322⇓eP P 22 53 36.4 -0.3
EDI Edinburgh 75.00 325 P **P 22 53 36.7 0.0**
EDI AMb AMB 22 53 37.4
comp=Z,48nm,0.8s,mb5.3
EDI Edinburgh 75.00 325⇓eP P 22 53 36.7 0.0
EDI AMb AMB 22 53 37.4
comp=Z,48nm,0.8s,mb5.3
CWF Charnwood Fore 75.03 321 P **P 22 53 36.5 -0.4**
CWF AMb AMB 22 53 37.1
comp=Z,16nm,0.8s,mb4.8
CWF Charnwood Fore 75.03 321⇓iP P 22 53 36.5 -0.4
CWF AMb AMB 22 53 37.1
comp=Z,16nm,0.8s,mb4.8
EBH Black Hill 75.06 325 P **P 22 53 37.1 +0.1**
EBH Black Hill 75.06 325⇓iP P 22 53 37.1 +0.1
MDO Dochfour 75.09 326 P **P 22 53 37.1 0.0**
MDO Dochfour 75.09 326⇓iP P 22 53 37.1 0.0
EAU Auchinoon 75.17 325 P **P 22 53 38.1 +0.5**
EAU Auchinoon 75.17 325⇓iP P 22 53 38.1 +0.5
RSC Scourie 75.17 327 P **P 22 53 38.2 +0.5**
RSC Scourie 75.17 327⇓iP P 22 53 38.2 +0.5
ESK Eskdalemuir 75.22 324 P **P 22 53 38.1 +0.1**
ESK AMb AMB 22 53 38.7
comp=Z,40nm,0.8s,mb5.2
ESK Eskdalemuir 75.22 324⇓iP P 22 53 38.1 +0.1
ESK AMb AMB 22 53 38.7
comp=Z,40nm,0.8s,mb5.2
ESK Eskdalemuir 75.22 324 *i*P **P 22 53 38.3 +0.3**
ESK Eskdalemuir 75.22 324⇓eP P 22 53 38.1 +0.1
ECK Cauldkaine Hil 75.22 324 P **P 22 53 38.0 0.0**
ECK Cauldkaine Hil 75.22 324⇓iP P 22 53 38.0 0.0
WOL Wolverton 75.45 320 P **P 22 53 39.3 -0.1**
WOL AMb AMB 22 53 40.1
comp=Z,60nm,0.9s,mb5.3
WOL Wolverton 75.45 320⇓iP P 22 53 39.3 -0.1
WOL AMb AMB 22 53 40.1
comp=Z,60nm,0.9s,mb5.3
CAF Calviac 75.47 313⇓iP P 22 53 39.9 +0.3
comp=Z,45nm,0.8s,mb5.0
CAF *e*pP pP 22 54 08.3 0.0
CAF Calviac 75.47 313⇓iP P 22 53 39.9 +0.3
CAF *e**PP pP 22 54 08.3 0.0
CAF pmax pmax
comp=Z,22nm,0.8s,mb4.9
CAF Calviac 75.47 313⇓iP P 22 53 39.9 +0.3
comp=Z,22nm,0.8s,mb5.0
CAF *e*pP pP 22 54 08.3 0.0
EAB Aberfoyle 75.52 325 P **P 22 53 39.8 +0.1**
EAB Aberfoyle 75.52 325⇓iP P 22 53 39.8 +0.1
KAC Achnashellach 75.54 327 P **P 22 53 39.8 +0.1**
KAC Achnashellach 75.54 327⇓iP P 22 53 39.8 +0.1
LSZ Lusaka 75.54 246 *e*P **P 22 53 40.9 +0.5**
LSZ *e**PP pP 22 54 11.5 +2.3
LSZ pmax pmax
comp=Z,29nm,0.6s,mb5.2
LSZ Lusaka 75.54 246 *e*P **P 22 53 40.9 +0.4**
comp=Z,29nm,0.6s,mb5.2
LSZ *e*pP pP 22 54 11.5 +2.3
XDE Dent Fell 75.66 323 P **P 22 53 40.7 +0.2**
XDE Dent Fell 75.66 323⇓eP P 22 53 40.7 +0.2
RRR Rubha Reidh 75.67 327 P **P 22 53 40.6 +0.2**
RRR Rubha Reidh 75.67 327⇓iP P 22 53 40.6 +0.2
LDF La Druitiere 75.69 317⇓iP P 22 53 40.5 -0.3
comp=Z,34nm,0.5s,mb5.0
LDF *e*pP pP 22 54 09.8 +0.3
LDF La Druitiere 75.69 317⇓iP P 22 53 40.5 -0.3
LDF *e**PP pP 22 54 09.8 +0.3
LDF pmax pmax
comp=Z,17nm,0.5s,mb5.0
LDF La Druitiere 75.69 317⇓iP P 22 53 40.5 -0.3
comp=Z,17nm,0.5s,mb5.0
LDF *e*pP pP 22 54 09.8 +0.3
RJF Les Rejaudoux 75.71 313⇓iP P 22 53 41.5 +0.5
comp=Z,66nm,0.7s,mb5.2
RJF Les Rejaudoux 75.71 313⇓iP P 22 53 41.5 +0.5
RJF pmax pmax
comp=Z,33nm,0.7s,mb5.2
RJF Les Rejaudoux 75.71 313⇓iP P 22 53 41.5 +0.5
comp=Z,33nm,0.7s,mb5.2
KSB Sheil Bridge 75.71 326 P **P 22 53 40.6 -0.1**
KSB Sheil Bridge 75.71 326⇓iP P 22 53 40.6 -0.1
PGBU Glenifferbraes 75.73 325 P **P 22 53 40.9 0.0**
PGBU AMb AMB 22 53 41.9
comp=Z,48nm,0.8s,mb5.3
PGBU Glenifferbraes 75.73 325⇓eP P 22 53 40.9 0.0
PGBU AMb AMB 22 53 41.9
comp=Z,48nm,0.8s,mb5.3
GCD Castle Douglas 75.78 324 P **P 22 53 41.3 +0.2**
GCD Castle Douglas 75.78 324⇓eP P 22 53 41.3 +0.2
KPL Plockton 75.78 327 P **P 22 53 41.0 -0.1**
KPL AMb AMB 22 53 47.5
comp=Z,38nm,1.2s,mb5.0
KPL Plockton 75.78 327⇓iP P 22 53 41.0 -0.1
KPL AMb AMB 22 53 47.5
comp=Z,38nm,1.2s,mb5.0
FLN La Foliniere 75.86 317⇓iP P 22 53 41.3 -0.4
comp=Z,21nm,0.6s,mb4.8
FLN La Foliniere 75.86 317⇓iP P 22 53 41.3 -0.4
FLN pmax pmax
comp=Z,11nm,0.6s,mb4.8
FLN La Foliniere 75.86 317⇓iP P 22 53 41.3 -0.4
comp=Z,11nm,0.6s,mb4.8
MTLF Montolieu 75.88 311⇓iP P 22 53 41.9 0.0
comp=Z,33nm,0.7s,mb4.9
MTLF *e*pP pP 22 54 10.5 -0.2
MTLF Montolieu 75.88 311⇓iP P 22 53 41.9 0.0
MTLF *e**PP pP 22 54 10.5 -0.2
MTLF pmax pmax
comp=Z,16nm,0.7s,mb4.9
MTLF Montolieu 75.88 311⇓iP P 22 53 41.9 0.0
comp=Z,16nm,0.7s,mb4.9
MTLF *e*pP pP 22 54 10.5 -0.2
HLM1 Long Mynd 76.01 321 P **P 22 53 42.5 0.0**
HLM1 Long Mynd 76.01 321⇓iP P 22 53 42.5 0.0
KAR1 Arisaig 76.02 326 P **P 22 53 43.1 +0.6**
KAR1 Arisaig 76.02 326⇓iP P 22 53 43.1 +0.6
RRH Rhenigidale 76.08 327 P **P 22 53 43.3 +0.5**
RRH Rhenigidale 76.08 327⇓iP P 22 53 43.3 +0.5
GAL1 Galloway 76.19 324 P **P 22 53 43.7 +0.2**
GAL1 AMb AMB 22 53 44.4
comp=Z,23nm,0.8s,mb5.0
GAL1 Galloway 76.19 324⇓iP P 22 53 43.7 +0.2
GAL1 AMb AMB 22 53 44.4
comp=Z,23nm,0.8s,mb5.0
GRR Gorron 76.22 317⇓iP P 22 53 43.6 -0.2
comp=Z,34nm,0.6s,mb5.0
GRR *e*pP pP 22 54 12.1 -0.5
GRR Gorron 76.22 317⇓iP P 22 53 43.6 -0.2
GRR *e**PP pP 22 54 12.1 -0.5
GRR pmax pmax
comp=Z,17nm,0.6s,mb5.0
GRR Gorron 76.22 317⇓iP P 22 53 43.6 -0.2
comp=Z,17nm,0.6s,mb5.0
GRR *e*pP pP 22 54 12.1 -0.5
CFON Fontmartina 76.24 310 P **P 22 53 43.1 -1.0**
comp=Z,16nm,1.1s,mb4.7
MCH1 Michaelchurch 76.26 321 P **P 22 53 43.4 -0.5**
MCH1 AMb AMB 22 53 44.9
comp=Z,16nm,0.9s,mb4.7
MCH1 Michaelchurch 76.26 321⇓eP P 22 53 43.4 -0.5
MCH1 AMb AMB 22 53 44.9
comp=Z,16nm,0.9s,mb4.7
KSK Scoval 76.26 327 P **P 22 53 44.8 +1.0**
KSK Scoval 76.26 327⇓iP P 22 53 44.8 +1.0
SCO Scoresbysund 76.30 342 *i*P **P 22 53 44.6 +0.8**
SCO pmax pmax
comp=Z,6.0nm,1.0s,mb4.3
SCO Scoresbysund 76.30 342 *i*P **P 22 53 44.6 +0.8**
comp=Z,6.2nm,1.0s,mb4.3
VALF Valcebollere 76.32 310 *e*P **P 22 53 44.7 +0.2**
CLLI Llivia 76.33 310 ⇓P **P 22 53 44.7 +0.2**
LFF La Frestale 76.35 313⇓iP P 22 53 45.0 +0.4
comp=Z,65nm,0.7s,mb5.2
LFF La Frestale 76.35 313⇓iP P 22 53 45.0 +0.4
LFF pmax pmax
comp=Z,32nm,0.7s,mb5.2
LFF La Frestale 76.35 313⇓iP P 22 53 45.0 +0.4
comp=Z,32nm,0.7s,mb5.2

MFF Saint Martin d 76.37 315⇓iP P 22 53 44.4 -0.3
comp=Z,32nm,0.9s,mb4.8
MFF Saint Martin d 76.37 315⇓iP P 22 53 44.4 -0.3
MFF pmax pmax
comp=Z,16nm,0.9s,mb4.8
MFF Saint Martin d 76.37 315⇓iP P 22 53 44.4 -0.3
comp=Z,16nm,0.9s,mb4.8
WLF1 Llynfaes 76.59 322 P P 22 53 46.0 +0.2
WLF1 AMb AMB 22 53 46.7
comp=Z,123nm,0.8s,mb5.7
WLF1 Llynfaes 76.59 322⇓iP P 22 53 46.0 +0.2
WLF1 AMb AMB 22 53 46.7
comp=Z,123nm,0.8s,mb5.7
ETOS Mallorca 76.63 308 P P 22 53 46.9 +0.6
comp=Z,47nm,1.7s,mb4.9
ARMA Armidale 76.64 132⇑iP P 22 53 46.7 +0.4
JSA Saint Aubin 76.75 318 P P 22 53 46.4 -0.4
JSA AMb AMB 22 53 47.0
comp=Z,19nm,1.0s,mb4.8
JSA Saint Aubin 76.75 318⇓iP P 22 53 46.4 -0.4
JSA AMb AMB 22 53 47.0
comp=Z,19nm,1.0s,mb4.8
MLS Moulis 76.78 311 eP P 22 53 46.5 -0.6
EMIR Miracle 76.83 310 P P 22 53 47.2 -0.2
comp=Z,28nm,0.8s,mb5.0
CSOR Sort 76.95 311 P P 22 53 48.0 0.0
comp=Z,30nm,1.0s,mb5.0
HEX Exmoor 77.06 320 P P 22 53 48.1 -0.4
HEX Exmoor 77.06 320⇓eP P 22 53 48.1 -0.4
GMM Mts of Mourne 77.09 324 P P 22 53 48.9 +0.3
GMM Mts of Mourne 77.09 324⇓iP P 22 53 48.9 +0.3
EPF Esparros 77.27 311⇓iP P 22 53 49.0 -0.8
comp=Z,9.6nm,0.8s,mb4.3
EPF Esparros 77.27 311⇓iP P 22 53 49.0 -0.8
EPF pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
EPF Esparros 77.27 311⇓iP P 22 53 49.0 -0.8
comp=Z,4.8nm,0.8s,mb4.3
SGMF Saint Gilles 77.33 317⇓iP P 22 53 50.2 +0.2
comp=Z,54nm,0.5s,mb5.2
SGMF Saint Gilles 77.33 317⇓iP P 22 53 50.2 +0.2
SGMF pmax pmax
comp=Z,27nm,0.5s,mb5.2
SGMF Saint Gilles 77.33 317⇓iP P 22 53 50.2 +0.2
comp=Z,27nm,0.5s,mb5.2
EPOB Poblet 77.34 310 P P 22 53 50.0 -0.2
comp=Z,29nm,1.1s,mb4.9
RESF Ens 77.35 311 eP P 22 53 50.7 +0.4
DYA Yadsworthy 77.37 320 P P 22 53 50.0 -0.2
DYA AMb AMB 22 53 51.1
comp=Z,19nm,1.0s,mb4.8
DYA Yadsworthy 77.37 320⇓iP P 22 53 50.0 -0.2
DYA AMb AMB 22 53 51.1
comp=Z,19nm,1.0s,mb4.8
TOO Toolangi 77.38 141 eP P 22 53 50.3 0.0
HTL Hartland 77.49 320 P P 22 53 51.1 +0.2
HTL AMb AMB 22 53 51.7
comp=Z,37nm,0.8s,mb5.1
HTL Hartland 77.49 320⇓iP P 22 53 51.1 +0.2
HTL AMb AMB 22 53 51.7
comp=Z,37nm,0.8s,mb5.1
EBIE Bielsa 77.53 311 P P 22 53 51.6 +0.3
comp=Z,19nm,0.9s,mb4.8
VIEF Viey 77.54 311 eP P 22 53 51.7 +0.4
ROSF Rostrenen 77.74 317⇓iP P 22 53 52.5 +0.2
comp=Z,58nm,0.5s,mb5.2
ROSF Rostrenen 77.74 317⇓iP P 22 53 52.5 +0.2
ROSF pmax pmax
comp=Z,29nm,0.5s,mb5.3
ROSF Rostrenen 77.74 317⇓iP P 22 53 52.5 +0.2
comp=Z,29nm,0.5s,mb5.3
REYF Montagne du Re 77.76 312 eP P 22 53 53.1 +0.6
QUIF Quistinic 77.83 317⇓iP P 22 53 52.6 -0.2
comp=Z,17nm,0.5s,mb4.8
QUIF epP pP 22 54 21.2 -0.5
QUIF Quistinic 77.83 317⇓iP P 22 53 52.6 -0.2
QUIF e*PP pP 22 54 21.2 -0.5
QUIF pmax pmax
comp=Z,8.0nm,0.5s,mb4.7
QUIF Quistinic 77.83 317⇓iP P 22 53 52.6 -0.2
comp=Z,8.4nm,0.5s,mb4.7
QUIF epP pP 22 54 21.2 -0.5
ETSF Etsaut 77.94 312⇓iP P 22 53 54.0 +0.5
comp=Z,37nm,0.6s,mb5.0
ETSF epP pP 22 54 22.5 +0.1
ETSF Etsaut 77.94 312⇓iP P 22 53 54.0 +0.5
ETSF e*PP pP 22 54 22.5 +0.1
ETSF pmax pmax
comp=Z,19nm,0.6s,mb5.0
ETSF Etsaut 77.94 312⇓iP P 22 53 54.0 +0.5
comp=Z,18nm,0.6s,mb5.0
ETSF epP pP 22 54 22.5 +0.1
ERTA Horta de San J 78.00 309 P P 22 53 53.8 -0.1
comp=Z,41nm,1.4s,mb5.0
LARF Larrau 78.18 312 eP P 22 53 55.2 +0.3
CNB Canberra Magne 78.22 137 eP P 22 53 54.7 -0.3
CCA1 Carnmenellis 78.23 320 P P 22 53 54.5 -0.5
CCA1 AMb AMB 22 54 08.1
comp=Z,28nm,1.0s,mb5.0
CCA1 Carnmenellis 78.23 320 eP P 22 53 54.5 -0.5
CCA1 AMb AMB 22 54 08.1
comp=Z,28nm,1.0s,mb5.0
ESAC San Caprasio 78.30 310 P P 22 53 55.5 0.0
comp=Z,23nm,0.7s,mb5.0
SJPF Ste Jean 78.31 312⇓iP P 22 53 55.8 +0.2
comp=Z,28nm,0.8s,mb4.8
SJPF Ste Jean 78.31 312⇓iP P 22 53 55.8 +0.2
SJPF pmax pmax
comp=Z,14nm,0.8s,mb4.7
SJPF Ste Jean 78.31 312⇓iP P 22 53 55.8 +0.2
comp=Z,14nm,0.8s,mb4.7
EALK Alkurruntz 78.47 312 P P 22 53 57.0 +0.5
comp=Z,66nm,1.1s,mb5.3
EMOS Mosqueruela 78.79 309 P P 22 53 58.9 +0.6
comp=Z,30nm,1.0s,mb5.1
BPAW Bear Paw Mtn. 78.97 24 eP P 22 53 57.8 -1.0
comp=Z,5.2nm,0.9s,mb4.4
SUMG Summit 79.00 347 eP P 22 53 59.2 +0.4
comp=Z,48nm,0.9s,mb5.3
SUMG epP pP 22 54 27.7 -0.1
SUMG Summit 79.00 347⇓iP P 22 53 59.3 +0.5
comp=Z,28nm,0.8s,mb5.2
ECRI Cripan 79.38 312 P P 22 54 02.0 +0.6
ECRI pmax pmax
comp=Z,36nm,0.8s,mb5.2
ECRI Cripan 79.38 312 P P 22 54 02.0 +0.6
comp=Z,36nm,0.8s,mb5.2
ECHE Chera 79.43 309 P P 22 54 02.5 +0.7
ECHE pmax pmax
comp=Z,4.0nm,0.4s,mb4.6
ECHE Chera 79.43 309 P P 22 54 02.5 +0.7
comp=Z,4.3nm,0.4s,mb4.6
COLA College 79.69 23 eP P 22 54 02.0 -0.7
ETOR Torete 79.74 310 P P 22 54 03.2 -0.2
ETOR pmax pmax
comp=Z,8.0nm,0.7s,mb4.7
ETOR Torete 79.74 310 P P 22 54 03.2 -0.2
comp=Z,8.4nm,0.7s,mb4.7
ELAN Lanestosa 79.77 313 P P 22 54 03.5 0.0
comp=Z,33nm,0.9s,mb5.2
ILAR Eielson Array 80.09 22 P P 22 54 02.5 -2.3
comp=Z,0.6nm,0.5s,mb3.7,baz=284,slow=4.4,SNR=12
CART Cartagena 80.20 307 eP P 22 54 05.7 -0.3
comp=Z,42nm,1.0s,mb5.2
CART epP pP 22 54 34.2 -0.8
ETOB Tobarra 80.20 308 P P 22 54 05.5 -0.5
comp=Z,15nm,0.7s,mb4.9
EMUR La Murta 80.28 307 P P 22 54 05.5 -0.9
comp=Z,15nm,0.9s,mb4.8
TAM Tamanrasset 80.42 291 eP P 22 54 08.3 +0.9
TAM pmax pmax
comp=Z,11nm,1.0s,mb4.6
TAM Tamanrasset 80.42 291 eP P 22 54 08.3 +0.9
comp=Z,11nm,1.0s,mb4.7
EVIA Vianos 80.89 308 P P 22 54 09.8 +0.2
EVIA pmax pmax
comp=Z,20nm,0.8s,mb5.0
EVIA Vianos 80.89 308 P P 22 54 09.8 +0.2
comp=Z,20nm,0.8s,mb5.0
EARI Arriondas 80.94 313 P P 22 54 10.0 +0.2
comp=Z,16nm,0.8s,mb4.9
PMR Palmer 81.05 26 eP P 22 54 09.6 -0.4
EHUE Huescar 81.28 307 P P 22 54 11.6 -0.1
EHUE pmax pmax
comp=Z,13nm,0.8s,mb4.8
EHUE Huescar 81.28 307 P P 22 54 11.6 -0.1
comp=Z,13nm,0.8s,mb4.8
GUD Guadarrama 81.28 310 P P 22 54 11.7 +0.1
GUD pmax pmax
comp=Z,39nm,0.6s,mb5.4
GUD Guadarrama 81.28 310 P P 22 54 11.7 0.0
comp=Z,39nm,0.6s,mb5.4
ESDC Sonseca Array 81.53 310 P P 22 54 12.9 0.0
comp=Z,8.8nm,0.9s,mb4.6,baz=55,slow=5.4,SNR=40
ESDC pP pP 22 54 42.5 +0.4
comp=Z,2.0nm,0.7s,baz=47,slow=4.4,SNR=4.3
ESLA Sonseca Array 81.53 310 eP P 22 54 12.6 -0.4
comp=Z,6.1nm,1.2s,mb4.3
ESLA epP pP 22 54 42.4 +0.3
KDAK Kodiak Island 81.62 30 eP P 22 54 14.1 +1.0
EQES Quesada 81.63 307 P P 22 54 13.5 0.0
comp=Z,25nm,0.9s,mb5.0
RES Resolute Bay 81.76 3 eP P 22 54 13.3 -0.3
RES e*PP pP 22 54 42.2 -0.5
EBER Berja 81.85 307 P P 22 54 15.2 +0.4
comp=Z,28nm,1.2s,mb5.0
PAB San Pablo 81.85 310 eP P 22 54 14.7 0.0
PAB e*PP pP 22 54 43.2 -0.6
PAB pmax pmax
comp=Z,14nm,1.1s,mb4.7
PAB San Pablo 81.85 310 eP P 22 54 14.7 0.0
comp=Z,14nm,1.1s,mb4.7
PAB epP pP 22 54 43.2 -0.6
EBAN Banos Encina 82.00 308 P P 22 54 15.6 +0.1
EBAN pmax pmax
comp=Z,8.0nm,0.6s,mb4.7
EBAN Banos Encina 82.00 308 P P 22 54 15.6 +0.1
comp=Z,7.9nm,0.6s,mb4.7
EGUA Guajares 82.38 307 P P 22 54 17.0 -0.5
EGUA pmax pmax
comp=Z,81nm,1.0s,mb5.5
EGUA Guajares 82.38 307 P P 22 54 17.0 -0.5
comp=Z,81nm,1.0s,mb5.5
LBTB Lobatse 82.50 239 eP P 22 54 18.6 +0.4
LBTB e*PP pP 22 54 46.6 -0.8
LBTB pmax pmax
comp=Z,30nm,1.0s,mb5.1
LBTB Lobatse 82.50 239 eP P 22 54 18.6 +0.4
comp=Z,30nm,1.0s,mb5.1
LBTB epP pP 22 54 46.6 -0.8
EADA Adamuz 82.57 308 P P 22 54 18.4 -0.1
comp=Z,29nm,1.2s,mb5.0
ELUQ Luque 82.60 308 P P 22 54 17.5 -1.1
ELOJ Sierra Loja 82.68 307 P P 22 54 18.7 -0.4
ELOJ pmax pmax
comp=Z,3.0nm,0.5s,mb4.4
ELOJ Sierra Loja 82.68 307 P P 22 54 18.7 -0.4
comp=Z,2.7nm,0.5s,mb4.3
EPLA Plasencia 82.86 311 P P 22 54 20.2 +0.3
EPLA pmax pmax
comp=Z,19nm,1.3s,mb4.8
EPLA Plasencia 82.86 311 P P 22 54 20.2 +0.3
comp=Z,19nm,1.3s,mb4.8
MVO Moncorvo 83.05 312 eP P 22 54 21.2 +0.3
comp=Z,27nm,1.1s,mb5.0
MVO iP pP 22 54 51.4 +1.3
MVO Moncorvo 83.05 312 P P 22 54 21.1 +0.3
BMRM Bremner River 83.19 25 eP P 22 54 20.3 -0.9
comp=Z,8.4nm,0.7s,mb4.7
BMRM epP pP 22 54 48.2 -2.1
ECAB El Cabril 83.22 309 P P 22 54 21.9 +0.1
comp=Z,16nm,0.7s,mb5.0
STS Santiago 83.33 314 P P 22 54 23.0 +0.7
STS pmax pmax
comp=Z,23nm,0.8s,mb5.1
STS Santiago 83.33 314 P P 22 54 23.0 +0.7
comp=Z,23nm,0.8s,mb5.1
PVRL Vila Real 83.47 312 eP P 22 54 23.8 +0.8
PCAB Cabril 83.49 313 eP P 22 54 23.3 +0.2
MTE Mateigas 83.73 311 eP P 22 54 25.1 +0.7
comp=Z,22nm,1.2s,mb4.9
MTE iP pP 22 54 52.8 -0.8
PVIS Viseu 83.83 312 eP P 22 54 25.5 +0.6
comp=Z,22nm,1.4s,mb4.8
PVIS iP pP 22 54 55.5 +1.4
PCBR Castelo Branco 83.92 311 eP P 22 54 26.0 +0.6
comp=Z,22nm,1.1s,mb4.9
PCBR iP pP 22 54 54.2 -0.4
ESPR Espera 84.04 308 P P 22 54 24.9 -1.1
comp=Z,14nm,1.2s,mb4.7
PMRV Marv??o 84.04 310 eP P 22 54 26.3 +0.3
comp=Z,20nm,1.5s,mb4.7
PMRV iP pP 22 54 54.6 -0.6
EBAD Badajoz 84.07 310 P P 22 54 26.4 +0.3
comp=Z,11nm,1.5s,mb4.5
EMIN Mina Concepcio 84.25 309 P P 22 54 27.1 0.0
comp=Z,12nm,1.2s,mb4.6
PBAR Barrancos 84.33 309 eP P 22 54 27.9 +0.4
comp=Z,28nm,1.0s,mb5.0
PBAR iP pP 22 54 58.8 +2.0
PESTR Estremoz 84.42 310 eP P 22 54 27.0 -0.9
comp=Z,16nm,1.6s,mb4.6
BOSA Boshof 84.58 236 P P 22 54 28.8 0.0
comp=Z,15nm,0.8s,mb5.0,baz=61,slow=4.2,SNR=22
BOSA Boshof 84.58 236 eP P 22 54 28.7 0.0
BOSA e*PP pP 22 54 58.1 +0.1
BOSA pmax pmax
comp=Z,69nm,1.1s,mb5.5
BOSA Boshof 84.58 236 eP P 22 54 28.7 0.0
comp=Z,69nm,1.1s,mb5.5
BOSA epP pP 22 54 58.1 +0.1
PTOM Tomar 84.67 311 eP P 22 54 29.7 +0.5
comp=Z,24nm,1.0s,mb5.1
EVO Evora 84.87 310⇓iP P 22 54 30.9 +0.7
comp=Z,35nm,1.1s,mb4.9
EVO Evora 84.87 310 eP P 22 54 30.5 +0.3
comp=Z,16nm,1.1s,mb4.9
EVO iP pP 22 54 58.8 -0.7
EGRO El Granado 84.93 309 P P 22 54 31.0 +0.5
comp=Z,16nm,1.1s,mb4.9
PBEJ Beja 84.98 309 eP P 22 54 31.2 +0.4
comp=Z,25nm,1.1s,mb5.1
PBEJ iP pP 22 55 01.2 +1.1
PVAQ Vaqueiros 85.15 309 eP P 22 54 32.3 +0.7
comp=Z,48nm,1.1s,mb5.3
PVAQ iP pP 22 55 03.2 +2.3
PCVE Castro Verde 85.28 309 eP P 22 54 32.8 +0.5
comp=Z,14nm,0.8s,mb5.0
PBDV Barranco-do-Ve 85.38 309 eP P 22 54 33.4 +0.7
comp=Z,39nm,1.2s,mb5.2
PBDV iP pP 22 55 03.3 +1.2
PTEO Sao Teotonio 85.81 309 eP P 22 54 35.4 +0.5
MORF Marmelete 85.86 309 eP P 22 54 36.1 +1.0
PFVI Vila Bisbo 86.06 309 eP P 22 54 36.2 +0.1
comp=Z,42nm,0.9s,mb5.4
PFVI iP pP 22 55 07.5 +2.0
PFVI Vila Bisbo 86.06 309 P P 22 54 36.8 +0.7
TSUM Tsumeb 86.32 247 eP P 22 54 37.5 -0.1
TORD Torodi Ar. Bea 87.47 283 P P 22 54 43.9 +0.6
comp=Z,16nm,0.5s,mb5.2,baz=69,slow=4.5,SNR=25
TORD Torodi Ar. Bea 87.47 283 P P 22 54 43.9 +0.6
DLBC Dease Lake 90.27 22 eP P 22 54 55.4 -0.2
YKA Yellowknife Ar 91.10 13 P P 22 54 57.9 -1.5
comp=Z,0.4nm,0.5s,mb3.8,baz=335,slow=5.1,SNR=4.7
DBIC Dimbokro 95.98 280 P P 22 55 22.9 +0.1
comp=Z,7.1nm,0.6s,mb5.3,baz=46,slow=5.1,SNR=22
DBIC Dimbokro 95.98 280 eP P 22 55 23.1 +0.2
DBIC pmax pmax
comp=Z,6.0nm,0.5s
DBIC Dimbokro 95.98 280 eP P 22 55 23.1 +0.2
comp=Z,6.0nm,0.5s,mb5.3
PDAR Pinedale Array 110.30 19 SKP SKPdf 23 03 50.6 -1.1
comp=Z,0.9nm,0.8s,baz=38,slow=2.6,SNR=5.2
NVAR Mina Array Bea 111.00 27 SKP SKPdf 23 03 53.5 +0.3
comp=Z,0.7nm,0.6s,baz=319,slow=1.3,SNR=5.8
ANMO Albuquerque 118.43 20 SKP SKPdf 23 04 07.4 -0.2
comp=Z,0.3nm,0.3s,baz=138,slow=1.9,SNR=6.8
WVT Waverly 120.55 2 ePKIKP PKPdf 23 00 45.6 -0.9
WMOK Wichita Mounta 120.61 13 ePKIKP PKPdf 23 00 46.2 -0.5
MIAR Mount Ida 121.66 8 ePKIKP PKPdf 23 00 48.2 -0.5
JCT Junction City 124.48 15 ePKIKP PKPdf 23 00 54.1 -0.1
TXAR Lajitas Array 124.51 19 PKP PKPdf 23 00 54.3 0.0
comp=Z,0.7nm,0.5s,baz=128,slow=1.0,SNR=12
TXAR SKP 23 04 19.5
comp=Z,1.2nm,0.6s,baz=180,slow=0.9,SNR=8.2
TXAR Lajitas Array 124.51 19 PKP PKPdf 23 00 54.3 0.0
TXAR SKP 23 04 19.5
SJG San Juan 134.50 334 ePKIKP PKPdf 23 01 13.6 +0.1
CMIG Matias Romero 138.51 14 SKPbc SKPbc 23 04 43.5 -1.8
comp=Z,6.1nm,0.9s,baz=350,slow=5.3,SNR=8.5
SDV Santo Domingo 144.65 334 ePKPdf PKPdf 23 01 30.9 -1.1
SDV epPKPdf pPKPdf 23 02 00.2 -2.7
ROSC El Rosal 149.74 338 PKPbc PKPbc 23 01 46.3 +0.9
comp=Z,63nm,0.6s,baz=236,slow=15,SNR=3.6
CPUP Villa Florida 154.45 258 PKPbc PKPbc 23 01 54.6 -1.1
comp=Z,5.1nm,0.5s,baz=105,slow=2.3,SNR=24
CPUP PKPab PKPab 23 02 10.3 -0.1
comp=Z,3.0nm,0.7s,baz=69,slow=4.4,SNR=5.5
OTAV Otavalo 155.37 343 PKPdf PKPdf 23 01 48.9 +0.1
OTAV ePKPab PKPab 23 02 14.8 +0.4
LPAZ La Paz 162.25 291 PKP PKPdf 23 01 57.0 +0.2
comp=Z,0.9nm,0.7s,baz=351,slow=11,SNR=5.6
LPAZ PKPab PKPab 23 02 43.3 -1.1
comp=Z,3.8nm,0.9s,baz=51,slow=2.0,SNR=7.3
LPAZ La Paz 162.25 291 PKP PKPdf 23 01 57.0 +0.2
LPAZ PKPab PKPab 23 02 43.3 -1.1

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*ISCJB **27** 22:50:31.6±0.2, 46°.18N±0°.01×6°.69E±0°.02, h9km±3km,*
Error ellipse: s-maj=2.6km s-min=2.4km az=166.1
*CSEM **27** 22:50:32.8±0.1, 46°.18N×6°.75E, h10km, ML2.0/27, Error ellipse: s-maj=1.6km s-min=1.6km az=71.0*
*LDG **27** 22:50:33.5±0.0, 46°.20N×6°.80E, h2km, Md2.1/3, Ml2.0/20, Error ellipse: s-maj=0.7km s-min=0.4km az=80.0*
*ZUR **27** 22:50:34.0, 46°.20N×6°.81E, h1km±2km, ML1.5/9*
*ROM **27** 22:50:34.2±0.1, 46°.15N×6°.85E, h9km, Md2.0/3, Ml1.5/1, Error ellipse: s-maj=1.6km s-min=0.8km az=123.0*
ISC 27 22:50:32.9±0.2, 46.19N±0°.01×6.74E±0°.02, h12km±3km, n91, σ0.67/152, 8C-14D, Switzerland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EMV	**Vieux Emosson**	**0.16**	**138**	⇓iPg	**Pg**	**22 50 37.0**	**+0.4**
	433nm,0.4s						
EMV	**Vieux Emosson**	**0.16**	**138**	Pg	**Pg**	**22 50 37.0**	**+0.4**
EMV				Sg	**Sg**	**22 50 39.2**	**0.0**
EMV	**Vieux Emosson**	**0.16**	**138**	⇓iPg	**Pg**	**22 50 37.0**	**+0.4**
	433nm,0.4s						
EMV				Sg	**Sg**	**22 50 39.2**	**0.0**
SALAN	**Lac Salanfe**	**0.17**	**105**	⇓iPg	**Pg**	**22 50 36.7**	**+0.1**
	98nm,0.2s						
SALAN				*i* Sg	**Sg**	**22 50 38.7**	**-0.5**
SALAN	**Lac Salanfe**	**0.17**	**105**	⇓iPg	**Pg**	**22 50 36.7**	**+0.1**
	98nm,0.2s						
SALAN				*i* Sg	**Sg**	**22 50 38.7**	**-0.5**
AIGLE	**Aigle**	**0.21**	**43**	⇑iPg	**Pg**	**22 50 37.6**	**+0.1**
	152nm,0.4s						
AIGLE	**Aigle**	**0.21**	**43**	⇑iPg	**Pg**	**22 50 37.6**	**+0.1**
	152nm,0.4s						
GRYON	**Gryon**	**0.26**	**76**	⇓iPg	**Pg**	**22 50 38.5**	**+0.2**
	67nm,0.3s						
GRYON				*i* Sg	**Sg**	**22 50 41.6**	**-0.4**
	67nm,0.3s						
GRYON	**Gryon**	**0.26**	**76**	⇓iPg	**Pg**	**22 50 38.5**	**+0.2**
	67nm,0.3s						
GRYON				*i* Sg	**Sg**	**22 50 41.6**	**-0.4**
	67nm,0.3s						
SENIN	**Lac Senin/Sane**	**0.42**	**65**	⇑iPg	**Pg**	**22 50 41.5**	**+0.2**
	125nm,0.4s						
SENIN				*e*Sg	**Sg**	**22 50 47.0**	**0.0**
	125nm,0.4s						
SENIN	**Lac Senin/Sane**	**0.42**	**65**	⇑iPg	**Pg**	**22 50 41.5**	**+0.2**
	125nm,0.4s						
SENIN				*e*Sg	**Sg**	**22 50 47.0**	**0.0**
	125nm,0.4s						
MRGE	**Morge**	**0.47**	**152**	Pg	**Pg**	**22 50 42.9**	**+0.8**
MRGE				Sg	**Sg**	**22 50 49.2**	**+0.8**
	35nm,0.3s						
MRGE	**Morge**	**0.47**	**152**	Pg	**Pg**	**22 50 42.9**	**+0.8**
MRGE				Sg	**Sg**	**22 50 49.2**	**+0.8**
	35nm,0.3s						
DIX	**Grande Dixence**	**0.47**	**103**	⇓iPg	**Pg**	**22 50 42.6**	**+0.4**
	62nm,0.2s						
DIX				*i* Sg	**Sg**	**22 50 48.6**	**+0.1**
	62nm,0.2s						
DIX	**Grande Dixence**	**0.47**	**103**	Pg	**Pg**	**22 50 42.6**	**+0.4**
DIX				Sg	**Sg**	**22 50 48.6**	**+0.1**
DIX	**Grande Dixence**	**0.47**	**103**	⇓iPg	**Pg**	**22 50 42.6**	**+0.4**
	62nm,0.2s						
DIX				*i* Sg	**Sg**	**22 50 48.6**	**+0.1**
	62nm,0.2s						
GIMEL	**St. Georges /**	**0.48**	**317**	*e*P	**Pg**	**22 50 44.1**	**+1.8**
	31nm,0.2s						
GIMEL	**St. Georges /**	**0.48**	**317**	*e*P	**Pg**	**22 50 44.1**	**+1.8**
	31nm,0.2s						
TORNY	**Torny/Romont**	**0.61**	**14**	⇓iPg	**Pg**	**22 50 45.8**	**+1.1**
	138nm,0.2s						
TORNY	**Torny/Romont**	**0.61**	**14**	⇓iPg	**Pg**	**22 50 45.8**	**+1.1**
	138nm,0.2s						
CABF	**La Chapelle**	**0.62**	**313**	*e*Pg	**Pg**	**22 50 46.4**	**+1.4**
CABF				*e*Sg	**Sg**	**22 50 54.1**	**+1.0**
	8.1nm,0.5s						
CABF	**La Chapelle**	**0.62**	**313**	*e*Pg	**Pg**	**22 50 46.4**	**+1.4**
CABF				*e*Sg	**Sg**	**22 50 54.1**	**+1.0**
	4.1nm,0.5s						
LKBD2	**Leukerbad 2**	**0.65**	**73**	⇑iPg	**Pg**	**22 50 46.0**	**+0.4**
	6.5nm,0.1s						
LKBD2	**Leukerbad 2**	**0.65**	**73**	⇑iPg	**Pg**	**22 50 46.0**	**+0.4**
	6.5nm,0.1s						
LPL	**La Plagne**	**0.67**	**181**	*e*Pg	**Pg**	**22 50 46.5**	**+0.6**
LPL				*e*Sg	**Sg**	**22 50 55.1**	**+0.4**
	5.7nm,0.3s						
LPL	**La Plagne**	**0.67**	**181**	*e*Pg	**Pg**	**22 50 46.5**	**+0.6**
LPL				*e*Sg	**Sg**	**22 50 55.1**	**+0.4**
	2.8nm,0.3s						
LPG	**La Plagne**	**0.69**	**179**	*e*Pg	**Pg**	**22 50 47.2**	**+1.0**
LPG				*e*Sg	**Sg**	**22 50 55.8**	**+0.5**
	9.1nm,0.3s						
LPG	**La Plagne**	**0.69**	**179**	*e*Pg	**Pg**	**22 50 47.2**	**+1.0**
LPG				*e*Sg	**Sg**	**22 50 55.8**	**+0.5**
	4.6nm,0.3s						
ORIF	**Oris-en-Rattie**	**1.41**	**206**	*e*Pg	**Pg**	**22 51 00.2**	**+0.3**
ORIF				*e*Sg	**Sg**	**22 51 18.5**	**+0.4**
	7.4nm,0.3s						
ORIF	**Oris-en-Rattie**	**1.41**	**206**	*e*Pg	**Pg**	**22 51 00.2**	**+0.3**
ORIF				*e*Sg	**Sg**	**22 51 18.5**	**+0.4**
	3.7nm,0.3s						
MBDF	**Montbardon**	**1.46**	**179**	*e*Pg	**Pg**	**22 51 01.1**	**+0.2**
MBDF				*e*Sg	**Sg**	**22 51 20.0**	**+0.2**
	3.1nm,0.4s						
MBDF	**Montbardon**	**1.46**	**179**	*e*Pg	**Pg**	**22 51 01.1**	**+0.2**
MBDF				*e*Sg	**Sg**	**22 51 20.0**	**+0.2**
	1.5nm,0.4s						
HINF	**Hinteralfeld**	**1.63**	**3**	*e*Pg	**Pg**	**22 51 03.8**	**-0.4**
HINF				*e*Sg	**Sg**	**22 51 25.1**	**-0.3**
	4.8nm,0.3s						
HINF	**Hinteralfeld**	**1.63**	**3**	*e*Pg	**Pg**	**22 51 03.8**	**-0.4**
HINF				*e*Sg	**Sg**	**22 51 25.1**	**-0.3**
	2.4nm,0.3s						
HAU	**Haudompre**	**1.84**	**352**	*e*Pg	**Pg**	**22 51 07.7**	**-0.5**
HAU				*e*Sg	**Sg**	**22 51 31.2**	**-0.8**
	5.1nm,0.3s						
HAU	**Haudompre**	**1.84**	**352**	*e*Pg	**Pg**	**22 51 07.7**	**-0.5**
HAU				*e*Sg	**Sg**	**22 51 31.2**	**-0.8**
	2.5nm,0.3s						
VIVF	**Saint-Julien-I**	**1.97**	**228**	*e*Pn	**Pn**	**22 51 06.9**	**+0.8**
VIVF	**Saint-Julien-I**	**1.97**	**228**	*e*Pg	**Pg**	**22 51 10.9**	**+0.2**
VIVF				*e*Sg	**Sg**	**22 51 36.9**	**+0.7**
	3.0nm,0.2s						
VIVF	**Saint-Julien-I**	**1.97**	**228**	*e*Pn	**Pn**	**22 51 06.9**	**+0.8**
VIVF	**Saint-Julien-I**	**1.97**	**228**	*e*Pg	**Pg**	**22 51 10.9**	**+0.2**
VIVF				*e*Sg	**Sg**	**22 51 36.9**	**+0.7**
	1.5nm,0.2s						
SMF	**Signal de Mont**	**2.06**	**284**	*e*Pn	**Pn**	**22 51 08.3**	**+1.0**
SMF	**Signal de Mont**	**2.06**	**284**	*e*Pg	**Pg**	**22 51 12.4**	**0.0**
SMF				*e*Sn	**Sn**	**22 51 32.9**	**0.0**
SMF				*e*Sg	**Sg**	**22 51 39.4**	**+0.4**
	3.6nm,0.2s						
SMF	**Signal de Mont**	**2.06**	**284**	*e*Pn	**Pn**	**22 51 08.3**	**+1.0**
SMF	**Signal de Mont**	**2.06**	**284**	*e*Pg	**Pg**	**22 51 12.4**	**0.0**
SMF				*e*Sn	**Sn**	**22 51 32.9**	**0.0**
SMF				*e*Sg	**Sg**	**22 51 39.4**	**+0.4**
	1.8nm,0.2s						
CDF	**Champ du Feu**	**2.26**	**9**	*e*Pn	**Pn**	**22 51 09.8**	**-0.2**
CDF	**Champ du Feu**	**2.26**	**9**	*e*Pg	**Pg**	**22 51 15.1**	**-1.0**
CDF				*e*Sg	**Sg**	**22 51 43.9**	**-1.5**
	1.4nm,0.3s						
CDF	**Champ du Feu**	**2.26**	**9**	*e*Pn	**Pn**	**22 51 09.8**	**-0.2**
CDF	**Champ du Feu**	**2.26**	**9**	*e*Pg	**Pg**	**22 51 15.1**	**-1.0**
CDF				*e*Sg	**Sg**	**22 51 43.9**	**-1.5**
	0.7nm,0.3s						
LOR	**Lormes**	**2.26**	**300**	*e*Pn	**Pn**	**22 51 10.3**	**+0.2**
LOR	**Lormes**	**2.26**	**300**	*e*Pg	**Pg**	**22 51 16.1**	**-0.1**
LOR				*e*Sg	**Sg**	**22 51 45.5**	**0.0**
	0.9nm,0.2s						

LOR	**Lormes**	**2.26 300**	*e*Pn	**Pn**	**22 51 10.3**	**+0.2**
LOR	**Lormes**	**2.26 300**	*e*Pg	**Pg**	**22 51 16.1**	**-0.1**
LOR			*e*Sg	**Sg**	**22 51 45.5**	**0.0**
	0.4nm,0.2s					
SMRF	**Simiane la Rot**	**2.36 201**	*e*Pg	**Pg**	**22 51 17.8**	**-0.3**
SMRF			*e*Sg	**Sg**	**22 51 48.8**	**+0.1**
	1.3nm,0.5s					
SMRF	**Simiane la Rot**	**2.36 201**	*e*Pg	**Pg**	**22 51 17.8**	**-0.3**
SMRF			*e*Sg	**Sg**	**22 51 48.8**	**+0.1**
	0.6nm,0.5s					
SBF	**Sospel**	**2.38 168**	*e*Pg	**Pg**	**22 51 17.8**	**-0.6**
SBF			*e*Sg	**Sg**	**22 51 48.3**	**-0.9**
	1.1nm,0.3s					
SBF	**Sospel**	**2.38 168**	*e*Pg	**Pg**	**22 51 17.8**	**-0.6**
SBF			*e*Sg	**Sg**	**22 51 48.3**	**-0.9**
	0.6nm,0.3s					
SSF	**Saint Saulge**	**2.40 293**	*e*Pn	**Pn**	**22 51 12.4**	**+0.5**
SSF	**Saint Saulge**	**2.40 293**	*e*Pg	**Pg**	**22 51 18.4**	**-0.4**
SSF			*e*Sg	**Sg**	**22 51 49.8**	**-0.1**
	1.5nm,0.4s					
SSF	**Saint Saulge**	**2.40 293**	*e*Pn	**Pn**	**22 51 12.4**	**+0.5**
SSF	**Saint Saulge**	**2.40 293**	*e*Pg	**Pg**	**22 51 18.4**	**-0.4**
SSF			*e*Sg	**Sg**	**22 51 49.8**	**-0.1**
	0.8nm,0.4s					
AVF	**Avril sur Loir**	**2.42 286**	*e*Pg	**Pg**	**22 51 19.0**	**-0.2**
AVF			*e*Sn	**Sn**	**22 51 41.4**	**-0.4**
AVF			*e*Sg	**Sg**	**22 51 50.5**	**-0.1**
	1.0nm,0.2s					
AVF	**Avril sur Loir**	**2.42 286**	*e*Pg	**Pg**	**22 51 19.0**	**-0.2**
AVF			*e*Sn	**Sn**	**22 51 41.4**	**-0.4**
AVF			*e*Sg	**Sg**	**22 51 50.5**	**-0.1**
	0.5nm,0.2s					
FRF	**La Foret Royal**	**2.63 182**	*e*Pg	**Pg**	**22 51 22.5**	**-0.7**
FRF			*e*Sg	**Sg**	**22 51 56.4**	**-0.8**
	3.2nm,0.5s					
FRF	**La Foret Royal**	**2.63 182**	*e*Pg	**Pg**	**22 51 22.5**	**-0.7**
FRF			*e*Sg	**Sg**	**22 51 56.4**	**-0.8**
	1.6nm,0.5s					
BGF	**Bois d'Agland**	**2.72 279**	*e*Pn	**Pn**	**22 51 16.9**	**+0.5**
BGF	**Bois d'Agland**	**2.72 279**	*e*Pg	**Pg**	**22 51 24.5**	**-0.6**
BGF			*e*Sg	**Sg**	**22 52 00.3**	**0.0**
	2.7nm,0.3s					
BGF	**Bois d'Agland**	**2.72 279**	*e*Pn	**Pn**	**22 51 16.9**	**+0.5**
BGF	**Bois d'Agland**	**2.72 279**	*e*Pg	**Pg**	**22 51 24.5**	**-0.6**
BGF			*e*Sg	**Sg**	**22 52 00.3**	**0.0**
	1.4nm,0.3s					
LMR	**La Mourre**	**2.86 183**	*e*Pg	**Pg**	**22 51 26.7**	**-0.9**
LMR			*e*Sg	**Sg**	**22 52 03.7**	**-0.9**
	1.0nm,0.4s					
LMR	**La Mourre**	**2.86 183**	*e*Pg	**Pg**	**22 51 26.7**	**-0.9**
LMR			*e*Sg	**Sg**	**22 52 03.7**	**-0.9**
	0.5nm,0.4s					
LASF	**Ste Croix**	**2.94 225**	*e*Pn	**Pn**	**22 51 20.0**	**+0.6**
LASF	**Ste Croix**	**2.94 225**	*e*Pg	**Pg**	**22 51 28.7**	**-0.4**
LASF			*e*Sg	**Sg**	**22 52 06.9**	**-0.3**
	1.2nm,0.3s					
LASF	**Ste Croix**	**2.94 225**	*e*Pn	**Pn**	**22 51 20.0**	**+0.6**
LASF	**Ste Croix**	**2.94 225**	*e*Pg	**Pg**	**22 51 28.7**	**-0.4**
LASF			*e*Sg	**Sg**	**22 52 06.9**	**-0.3**
	0.6nm,0.3s					
TCF	**Toulx Ste Croi**	**3.15 273**	*e*Pn	**Pn**	**22 51 22.7**	**+0.4**
TCF			*e*Sn	**Sn**	**22 51 59.1**	**-0.7**
	0.4nm,0.2s					
TCF	**Toulx Ste Croi**	**3.15 273**	*e*Pn	**Pn**	**22 51 22.7**	**+0.4**
TCF			*e*Sn	**Sn**	**22 51 59.1**	**-0.7**
	0.2nm,0.2s					
CAF	**Calviac**	**3.52 251**	*e*Pn	**Pn**	**22 51 27.9**	**+0.5**
CAF			*e*Sg	**Sg**	**22 52 25.1**	**-0.8**
	0.6nm,0.3s					
CAF	**Calviac**	**3.52 251**	*e*Pn	**Pn**	**22 51 27.9**	**+0.5**
CAF			*e*Sg	**Sg**	**22 52 25.1**	**-0.8**
	0.3nm,0.3s					
MTLF	**Montolieu**	**4.30 230**	*e*Pn	**Pn**	**22 51 38.3**	**+0.2**
MTLF	**Montolieu**	**4.30 230**	*e*Pg	**Pg**	**22 51 53.7**	**-1.5**
MTLF			*e*Sg	**Sg**	**22 52 49.4**	**-1.4**
	0.4nm,0.3s					
MTLF	**Montolieu**	**4.30 230**	*e*Pn	**Pn**	**22 51 38.3**	**+0.2**
MTLF	**Montolieu**	**4.30 230**	*e*Pg	**Pg**	**22 51 53.7**	**-1.5**
MTLF			*e*Sg	**Sg**	**22 52 49.4**	**-1.4**
	0.2nm,0.3s					
PKS9	**Tamasi**	**7.99 83⇑**	*e*P	**Pn**	**22 52 29.6**	**+0.9**
RHK3	**Tenkes**	**8.02 88⇓**	*e*P	**Pn**	**22 52 29.8**	**+0.7**
MORC	**Moravsky Berou**	**8.09 60⇓**	*i*P	**Pn**	**22 52 30.4**	**+0.3**
MORC	**Moravsky Berou**	**8.09 60**	*e*P	**Pn**	**22 52 30.5**	**+0.4**
MORC	**Moravsky Berou**	**8.09 60⇓**	*e*P	**Pn**	**22 52 30.2**	**+0.1**
MORC	**Moravsky Berou**	**8.09 60⇓**	*e*P	**Pn**	**22 52 30.2**	**+0.1**
	27nm,0.8s					
PKSG		**8.09 77⇑**	*e*P	**Pn**	**22 52 28.5**	**-1.6**
STON	**Ston**	**8.50 109**	P	**Pn**	**22 52 34.8**	**-1.0**
STON	**Ston**	**8.50 109**	*i*P	**Pn**	**22 52 34.8**	**-1.0**

NIC ***27*** *22:56:55.7±0.2, 35°.98N×30°.95E, h36km, mb4.1, ML3.8, MW3.4*
NEIC ***27*** *22:57:01.0, 35°.39N×31°.38E, h8km, ML3.8(NIC), ML3.6(ISK), After ISK.*
ISK ***27*** *22:57:02.4, 35°.43N×31°.37E, h8km, ML3.4*
CSEM ***27*** *22:57:03.1±0.2, 35°.44N×31°.39E, h2km, Mw3.4, Error ellipse: s-maj=6.0km s-min=3.5km az=49.0*
IDC ***27*** *22:57:03.4±2.6, 35°.48N×31°.66E, h0km, mb3.6/4, mb1 3.5/9, mb1mx3.4/25, mbtmp3.5/9, ML3.3/5, Error ellipse: s-maj=52.7km s-min=17.6km az=68.0*
ISCJB ***27*** *22:57:04.8±0.5, 35°.37N±0°.04×31°.36E±0°.04, h42km±8km, mb3.5/4, Error ellipse: s-maj=7.1km s-min=3.9km az=39.2*
DDA ***27*** *22:57:08.9, 36°.49N×31°.41E, h6km±7km, Md3.4*
ISC 27 22:57:06.5±0.5, 35°.41N±0°.04×31°.34E±0°.04, h37km±9km, n101, σ1°07/118, mb3.5/4, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPCY	**Paphos**	**0.97**	**122**	P	**Pn**	**22 57 21.6**	**-2.0**
PPCY	**Paphos**	**0.97**	**122**	P	**Pn**	**22 57 21.6**	**-2.0**
ALFC	**Alevga**	**1.06**	**103**	P	**Pn**	**22 57 21.1**	**-3.7**
	17nm,0.4s						
ALFC				S	**Sn**	**22 57 41.1**	**+2.8**
ALFC	**Alevga**	**1.06**	**103**	P	**Pn**	**22 57 21.1**	**-3.7**
	17nm,0.4s						
ALFC				S	**Sn**	**22 57 41.1**	**+2.8**
GAZI	**Gazipasa**	**1.14**	**43**	*i* P	**Pn**	**22 57 22.0**	**-4.0**
GAZI				*i* S	**Sn**	**22 57 35.5**	**-5.0**
GAZI	**Gazipasa**	**1.14**	**43**	*i* P	**Pn**	**22 57 22.0**	**-4.0**
GAZI				*i* S	**Sn**	**22 57 35.5**	**-5.0**
LEF	**Lefka**	**1.30**	**102**	*e*PN	**Pn**	**22 57 26.0**	**-2.1**
LEF				*e*SN	**Sn**	**22 57 44.8**	**+0.5**
LEF	**Lefka**	**1.30**	**102**	*e*Pn	**Pn**	**22 57 26.0**	**-2.1**
LEF				*e*Sn	**Sn**	**22 57 44.8**	**+0.6**
MAMC	**Mammari**	**1.55**	**98**	P	**Pn**	**22 57 27.9**	**-3.7**
MAMC	**Mammari**	**1.55**	**98**	P	**Pn**	**22 57 27.9**	**-3.7**
ANTB	**Antalya**	**1.59**	**340**	*e*PN	**Pn**	**22 57 31.5**	**-0.7**
ANTB				*e*SN	**Sn**	**22 57 51.9**	**+0.4**
ANTB	**Antalya**	**1.59**	**340**	*e*Pn	**Pn**	**22 57 31.5**	**-0.7**
ANTB				*e*Sn	**Sn**	**22 57 51.9**	**+0.3**
AKAS	**Kas**	**1.64**	**301**	*i* P	**Pn**	**22 57 36.9**	**+4.1**
AKAS	**Kas**	**1.64**	**301**	*i* P	**Pn**	**22 57 36.9**	**+4.1**
CSS	**Prodhromos**	**1.69**	**105**	P	**Pn**	**22 57 30.0**	**-3.5**
	2.5nm,0.3s						
CSS				S	**Sn**	**22 57 56.8**	**+3.0**
CSS	**Prodhromos**	**1.69**	**105**	P	**Pn**	**22 57 30.0**	**-3.5**
	2.5nm,0.3s						
CSS				S	**Sn**	**22 57 56.8**	**+3.0**
ERMK	**Ermenek**	**1.77**	**45**	*i* P	**Pn**	**22 57 33.0**	**-1.7**
ERMK	**Ermenek**	**1.77**	**45**	*i* P	**Pn**	**22 57 33.0**	**-1.7**
ELL	**Elmali**	**1.77**	**319**	*e*PN	**Pn**	**22 57 34.5**	**-0.2**
ELL	**Elmali**	**1.77**	**319**	*e*Pn	**Pn**	**22 57 34.5**	**-0.2**
LFK	**Lefkose**	**1.79**	**93**	*e*PN	**Pn**	**22 57 33.8**	**-1.1**
LFK	**Lefkose**	**1.79**	**93**	*e*Pn	**Pn**	**22 57 33.8**	**-1.1**
HDMB	**Hadim**	**1.81**	**30**	*e*PN	**Pn**	**22 57 33.8**	**-1.4**
HDMB	**Hadim**	**1.81**	**30**	*e*Pn	**Pn**	**22 57 33.8**	**-1.4**
IKL	**Isikli**	**2.08**	**66**	*e*PN	**Pn**	**22 57 38.0**	**-0.9**
IKL	**Isikli**	**2.08**	**66**	*e*Pn	**Pn**	**22 57 38.0**	**-0.8**
BCK	**Bucak**	**2.14**	**344**	*e*PN	**Pn**	**22 57 40.0**	**+0.3**
BCK	**Bucak**	**2.14**	**344**	*e*Pn	**Pn**	**22 57 40.0**	**+0.3**
PHNC	**Paralimni**	**2.24**	**100**	P	**Pn**	**22 57 43.5**	**+2.5**
PHNC	**Paralimni**	**2.24**	**100**	P	**Pn**	**22 57 43.5**	**+2.5**
GLHS	**Glhisar (BURDU**	**2.30**	**320**	*e*PN	**Pn**	**22 57 41.4**	**-0.5**
GLHS	**Glhisar (BURDU**	**2.30**	**320**	*e*Pn	**Pn**	**22 57 41.4**	**-0.5**
EREN	**Erenkoy**	**2.31**	**86**	*e*PN	**Pn**	**22 57 41.4**	**-0.7**
EREN	**Erenkoy**	**2.31**	**86**	*e*Pn	**Pn**	**22 57 41.4**	**-0.7**
KONT	**Konya--Tatoy**	**2.66**	**18**	*e*PN	**Pn**	**22 57 46.4**	**-0.5**
KONT	**Konya--Tatoy**	**2.66**	**18**	*e*Pn	**Pn**	**22 57 46.4**	**-0.5**
LADK	**Ladik-KONYA**	**2.91**	**16**	*e*PN	**Pn**	**22 57 50.6**	**+0.3**
LADK	**Ladik-KONYA**	**2.91**	**16**	*e*Pn	**Pn**	**22 57 50.6**	**+0.3**
DNZL	**Cakiroluk**	**2.94**	**322**	*i* P	**Pn**	**22 57 52.5**	**+1.8**
DNZL	**Cakiroluk**	**2.94**	**322**	*i* P	**Pn**	**22 57 52.5**	**+1.8**
MERS	**Mersin**	**2.96**	**59**	*e*PN	**Pn**	**22 57 50.7**	**-0.3**
MERS	**Mersin**	**2.96**	**59**	*e*Pn	**Pn**	**22 57 50.7**	**-0.3**
DENT	**Denizli**	**2.99**	**322**	*e*PN	**Pn**	**22 57 51.6**	**+0.1**
DENT	**Denizli**	**2.99**	**322**	*e*Pn	**Pn**	**22 57 51.6**	**+0.2**
YER	**Yerkesik**	**3.02**	**306**	*e*PN	**Pn**	**22 57 52.6**	**+0.9**
YER	**Yerkesik**	**3.02**	**306**	*e*Pn	**Pn**	**22 57 52.6**	**+0.8**
SHUT	**Suhut-Afyon**	**3.21**	**349**	*e*PN	**Pn**	**22 57 54.7**	**+0.3**
SHUT	**Suhut-Afyon**	**3.21**	**349**	*e*Pn	**Pn**	**22 57 54.7**	**+0.3**
KHL	**Karahalli**	**3.26**	**334**	*e*PN	**Pn**	**22 57 55.2**	**+0.1**
KHL	**Karahalli**	**3.26**	**334**	*e*Pn	**Pn**	**22 57 55.2**	**+0.1**
SULT	**Sultanhani-AKS**	**3.29**	**31**	*e*PN	**Pn**	**22 57 55.2**	**-0.3**
SULT	**Sultanhani-AKS**	**3.29**	**31**	*e*Pn	**Pn**	**22 57 55.2**	**-0.3**
DAT	**Datca**	**3.33**	**295**	*e*PN	**Pn**	**22 57 56.3**	**+0.3**
DAT	**Datca**	**3.33**	**295**	*e*Pn	**Pn**	**22 57 56.3**	**+0.3**
GULE	**Gulek**	**3.35**	**55**	*i* P	**Pn**	**22 57 58.5**	**+2.2**
GULE				*i* S	**Sn**	**22 58 37.8**	**+3.0**
GULE	**Gulek**	**3.35**	**55**	*i* P	**Pn**	**22 57 58.5**	**+2.2**
GULE				*i* S	**Sn**	**22 58 37.8**	**+3.0**
MLSB	**Milas**	**3.44**	**304**	*e*PN	**Pn**	**22 57 57.9**	**+0.2**
MLSB	**Milas**	**3.44**	**304**	*e*Pn	**Pn**	**22 57 57.9**	**+0.3**
KRTS	**Karatas**	**3.47**	**69**	*e*PN	**Pn**	**22 57 57.5**	**-0.5**
KRTS	**Karatas**	**3.47**	**69**	*e*Pn	**Pn**	**22 57 57.5**	**-0.5**
KIZT	**Kizilcal**	**3.50**	**7**	*e*PN	**Pn**	**22 57 58.4**	**0.0**
KIZT	**Kizilcal**	**3.50**	**7**	*e*Pn	**Pn**	**22 57 58.4**	**+0.1**
KARA	**Karaisali**	**3.52**	**57**	*e*PN	**Pn**	**22 57 59.0**	**+0.3**
KARA	**Karaisali**	**3.52**	**57**	*e*Pn	**Pn**	**22 57 59.0**	**+0.3**
BODT	**Bodrum**	**3.66**	**298**	*e*PN	**Pn**	**22 58 00.7**	**+0.1**
BODT	**Bodrum**	**3.66**	**298**	*e*Pn	**Pn**	**22 58 00.7**	**+0.1**
ALT	**Altintas**	**3.77**	**345**	*e*PN	**Pn**	**22 58 02.5**	**+0.3**
ALT	**Altintas**	**3.77**	**345**	*e*Pn	**Pn**	**22 58 02.5**	**+0.3**
KULA	**Kula-Manisa**	**3.77**	**326**	*e*PN	**Pn**	**22 58 02.5**	**+0.3**
KULA	**Kula-Manisa**	**3.77**	**326**	*e*Pn	**Pn**	**22 58 02.5**	**+0.3**
CEYT	**Ceyhan**	**3.91**	**64**	*e*PN	**Pn**	**22 58 04.1**	**+0.2**
CEYT	**Ceyhan**	**3.91**	**64**	*e*Pn	**Pn**	**22 58 04.1**	**+0.1**
HTY	**Hatay**	**3.96**	**78**	*e*PN	**Pn**	**22 58 05.3**	**+0.5**
HTY	**Hatay**	**3.96**	**78**	*e*Pn	**Pn**	**22 58 05.3**	**+0.5**
SVRH	**Sivrihisar-ESK**	**4.04**	**2**	*e*PN	**Pn**	**22 58 06.0**	**+0.2**
SVRH	**Sivrihisar-ESK**	**4.04**	**2**	*e*Pn	**Pn**	**22 58 06.0**	**+0.2**
MMAI	**Mount Meron Ar**	**4.12**	**124**	Pn	**Pn**	**22 58 06.5**	**-0.4**
	15nm,0.3s,baz=311,slow=12,SNR=69						
MMAI				Sn	**Sn**	**22 58 55.3**	**+1.4**
	5.2nm,0.3s,baz=303,slow=21,SNR=3.4						
KOZT	**Kozan**	**4.17**	**59**	*e*PN	**Pn**	**22 58 07.8**	**+0.2**
BRTR	**Keskin Array B**	**4.68**	**22**	Pn	**Pn**	**22 58 14.3**	**-0.3**
	0.2nm,0.3s,baz=188,slow=15,SNR=5.6						
BRTR				Sn	**Sn**	**22 59 07.0**	**-0.7**
	0.3nm,0.3s,baz=177,slow=27,SNR=3.9						
BRTR	**Keskin Array B**	**4.68**	**22**	Pn	**Pn**	**22 58 14.3**	**-0.3**
BRTR				Sn	**Sn**	**22 59 07.0**	**-0.7**
BRTR	**Keskin Array B**	**4.68**	**22**	Sn	**Sn**	**22 59 07.0**	**-0.7**
BRTR	**Keskin Array B**	**4.68**	**22**	Pn	**Pn**	**22 58 14.3**	**-0.3**
KMRS	**Kahramanmaras**	**4.95**	**63**	*e*PN	**Pn**	**22 58 18.8**	**+0.6**
KMRS	**Kahramanmaras**	**4.95**	**63**	*e*Pn	**Pn**	**22 58 18.8**	**+0.5**
GAZ	**Gaziantep**	**5.06**	**68**	*e*PN	**Pn**	**22 58 20.5**	**+0.7**
GAZ	**Gaziantep**	**5.06**	**68**	*e*Pn	**Pn**	**22 58 20.5**	**+0.7**
ASF	**Jabal al Asfar**	**5.64**	**123**	Pn	**Pn**	**22 58 26.8**	**-1.0**
	0.5nm,0.3s,baz=199,slow=3.5,SNR=6.0						
EIL	**Elat**	**6.48**	**151**	Pn	**Pn**	**22 58 38.6**	**-0.7**
	1.0nm,0.3s,baz=332,slow=9.2,SNR=7.0						
EIL				Sn	**Sn**	**22 59 52.8**	**+0.8**
	0.2nm,0.3s,baz=300,slow=20,SNR=2.4						
EIL	**Elat**	**6.48**	**151**	Pn	**Pn**	**22 58 38.7**	**-0.7**
EIL				Sn	**Sn**	**22 59 52.8**	**+0.8**
AKASG	**Malin Array Be**	**15.37**	**355**	Pn	**Pn**	**23 00 40.4**	**0.0**
	0.2nm,0.3s,baz=173,slow=8.6,SNR=2.7						
AKASG	**Malin Array Be**	**15.37**	**355**	Pn	**Pn**	**23 00 40.4**	**0.0**
GRA1	**Grafenberg Arr**	**20.49**	**320**	*e*P	**P**	**23 01 39.5**	**-1.6**
FINES	**FINESS Array B**	**26.27**	**354**	P	**P**	**23 02 40.1**	**+2.1**
	0.6nm,0.5s,mb3.4,baz=169,slow=11,SNR=4.6						
FINES	**FINESS Array B**	**26.27**	**354**	P	**P**	**23 02 40.1**	**+2.1**
FINES	**FINESS Array B**	**26.27**	**354**	P	**P**	**23 02 40.1**	**+2.1**
KURK	**Kurchatov**	**37.10**	**51**	P	**P**	**23 04 12.3**	**-0.8**
	0.2nm,0.5s,mb3.2,baz=287,slow=11,SNR=2.9						
KURK	**Kurchatov**	**37.10**	**51**	P	**P**	**23 04 12.3**	**-0.8**
MKAR	**Makanchi Array**	**39.40**	**57**	P	**P**	**23 04 32.4**	**-0.2**
	0.9nm,0.6s,mb3.7,baz=274,slow=7.8,SNR=7.6						
MKAR	**Makanchi Array**	**39.40**	**57**	P	**P**	**23 04 32.3**	**-0.2**
SONM	**Songino Array**	**55.38**	**52**	P	**P**	**23 06 36.7**	**+0.1**
	0.5nm,0.5s,mb3.8,baz=280,slow=7.4,SNR=5.3						
SONM	**Songino Array**	**55.38**	**52**	P	**P**	**23 06 36.7**	**0.0**

ISCJB ***27*** *23:00:29.9±0.3, 38°.30N±0°.02×22°.74E±0°.02, h10km, Error ellipse: s-maj=2.5km s-min=2.2km az=27.3*
CSEM ***27*** *23:00:30.0±0.1, 38°.30N×22°.74E, h10km, ML2.6/11, Error ellipse: s-maj=1.7km s-min=1.5km az=21.0*
THE ***27*** *23:00:30.4, 38°.30N×22°.74E, h10km, ML2.6/11, Error ellipse: s-maj=0.9km s-min=0.2km az=244.0*
ATH ***27*** *23:00:30.1, 38°.29N×22°.71E, h5km±3km, ML2.1*
ISC 27 23:00:30.3±0.5, 38°.30N±0°.02×22°.73E±0°.02, h17km±7km, n50, σ0°62/89, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSF	**Desfina**	**0.19**	**304**	P	**Pg**	**23 00 34.6**	**-0.4**
DSF				S	**Sg**	**23 00 37.9**	**-0.4**
DSF	**Desfina**	**0.19**	**304**	P	**Pg**	**23 00 34.6**	**-0.4**
DSF				S	**Sg**	**23 00 37.9**	**-0.4**
LTK	**Loutraki**	**0.34**	**146**	*e*PB	**Pg**	**23 00 36.8**	**-0.5**
LTK				*e*SB	**Sg**	**23 00 41.8**	**-0.5**
LTK	**Loutraki**	**0.34**	**146**	P	**Pg**	**23 00 36.9**	**-0.4**
LTK				S	**Sg**	**23 00 42.0**	**-0.1**
LTK	**Loutraki**	**0.34**	**146**	*e*Pb	**Pg**	**23 00 36.8**	**-0.5**
LTK				S	**Sg**	**23 00 42.0**	**-0.1**
LKR	**Lokris**	**0.41**	**31**	*e*PG	**Pg**	**23 00 38.0**	**-0.6**
LKR				*e*SB	**Sg**	**23 00 44.6**	**+0.3**
LKR	**Lokris**	**0.41**	**31**	P	**Pg**	**23 00 38.0**	**-0.6**
LKR				S	**Sg**	**23 00 44.0**	**-0.3**
LKR	**Lokris**	**0.41**	**31**	P	**Pg**	**23 00 38.0**	**-0.6**
LKR				S	**Sg**	**23 00 44.0**	**-0.3**
LKR				*e*Sb	**Sg**	**23 00 44.6**	**+0.3**
ATAL	**Atalanti**	**0.45**	**30**	P	**Pg**	**23 00 38.7**	**-0.8**
ATAL				S	**Sg**	**23 00 45.6**	**0.0**
ATAL	**Atalanti**	**0.45**	**30**	P	**Pg**	**23 00 38.7**	**-0.8**
ATAL				S	**Sg**	**23 00 45.6**	**0.0**
KALE	**Kalithea**	**0.47**	**281**	P	**Pg**	**23 00 39.3**	**-0.5**
KALE				S	**Sg**	**23 00 46.5**	**+0.3**
KALE	**Kalithea**	**0.47**	**281**	P	**Pg**	**23 00 39.3**	**-0.5**
KALE				S	**Sg**	**23 00 46.5**	**+0.3**
GUR	**Goura**	**0.48**	**220**	*e*PB	**Pg**	**23 00 39.6**	**-0.3**
GUR				*e*SB	**Sg**	**23 00 45.4**	**-0.9**
GUR	**Goura**	**0.48**	**220**	P	**Pg**	**23 00 39.5**	**-0.4**
GUR				S	**Sg**	**23 00 46.7**	**+0.4**
GUR	**Goura**	**0.48**	**220**	*e*Pb	**Pg**	**23 00 39.6**	**-0.3**
GUR				*e*Sb	**Sg**	**23 00 45.4**	**-0.9**
GUR				S	**Sg**	**23 00 46.7**	**+0.4**
TRIZ	**Trizonia**	**0.52**	**277**	P	**Pg**	**23 00 40.1**	**-0.6**
TRIZ				S	**Sg**	**23 00 48.2**	**+0.5**
TRIZ	**Trizonia**	**0.52**	**277**	P	**Pg**	**23 00 40.1**	**-0.6**
TRIZ				S	**Sg**	**23 00 48.2**	**+0.5**
LAKA	**Lakka**	**0.59**	**264**	P	**Pg**	**23 00 41.7**	**-0.3**
LAKA				S	**Sg**	**23 00 50.7**	**+0.7**
LAKA	**Lakka**	**0.59**	**264**	P	**Pg**	**23 00 41.7**	**-0.3**
LAKA				S	**Sg**	**23 00 50.7**	**+0.7**
EFP	**Efpalio**	**0.66**	**281**	*e*PB	**Pg**	**23 00 43.0**	**-0.3**
EFP	**Efpalio**	**0.66**	**281**	P	**Pg**	**23 00 43.0**	**-0.3**
EFP				S	**Sg**	**23 00 52.9**	**+0.8**
EFP	**Efpalio**	**0.66**	**281**	P	**Pg**	**23 00 43.0**	**-0.3**
EFP				S	**Sg**	**23 00 52.9**	**+0.8**
AGG	**Agios Georgios**	**0.78**	**337**	*e*PB	**Pg**	**23 00 45.6**	**0.0**
AGG	**Agios Georgios**	**0.78**	**337**	P	**Pg**	**23 00 45.1**	**-0.5**
AGG				S	**Sg**	**23 00 56.4**	**+0.4**
AGG	**Agios Georgios**	**0.78**	**337**	P	**Pg**	**23 00 45.1**	**-0.5**
AGG	**Agios Georgios**	**0.78**	**337**	*e*Pb	**Pg**	**23 00 45.6**	**0.0**
AGG				S	**Sg**	**23 00 56.4**	**+0.4**
NAIG	**Nisos Aigina**	**0.81**	**132**	*e*PB	**Pg**	**23 00 46.3**	**+0.3**
NAIG	**Nisos Aigina**	**0.81**	**132**	*e*Pb	**Pg**	**23 00 46.3**	**+0.3**
ATH	**Athens Observa**	**0.84**	**113**	*e*PB	**Pg**	**23 00 46.5**	**-0.2**
ATH				*e*SB	**Sg**	**23 00 58.5**	**+0.6**
ATH	**Athens Observa**	**0.84**	**113**	*e*Pb	**Pg**	**23 00 46.5**	**-0.2**
ATH				*e*Sb	**Sg**	**23 00 58.5**	**+0.6**
DID	**Didima**	**0.89**	**153**	*e*PB	**Pg**	**23 00 47.3**	**-0.3**
DID	**Didima**	**0.89**	**153**	P	**Pg**	**23 00 47.2**	**-0.4**
DID				S	**Sg**	**23 01 00.0**	**+0.7**
DID	**Didima**	**0.89**	**153**	*e*Pb	**Pg**	**23 00 47.3**	**-0.3**
PTL	**Penteli**	**0.93**	**105**	*e*PB	**Pg**	**23 00 47.9**	**-0.4**
PTL				*e*SB	**Sg**	**23 01 01.3**	**+0.7**
PTL	**Penteli**	**0.93**	**105**	*e*Pb	**Pg**	**23 00 47.9**	**-0.4**
PTL				*e*Sb	**Sg**	**23 01 01.3**	**+0.7**
EVR	**Evrytania**	**0.95**	**311**	*e*PG	**Pg**	**23 00 48.1**	**-0.6**
EVR				*e*SB	**Sg**	**23 01 02.5**	**+1.3**
EVR	**Evrytania**	**0.95**	**311**	*e*Pg	**Pg**	**23 00 48.1**	**-0.6**
EVR				*e*Sb	**Sg**	**23 01 02.5**	**+1.3**
VLY	**Voula,Athens**	**0.95**	**118**	*e*PG	**Pg**	**23 00 48.0**	**-0.8**
VLY				*e*SB	**Sg**	**23 01 02.2**	**+0.9**
VLY	**Voula,Athens**	**0.95**	**118**	*e*Pg	**Pg**	**23 00 48.0**	**-0.8**
VLY				*e*Sb	**Sg**	**23 01 02.2**	**+0.9**
VLX	**Vlachokerasia**	**0.97**	**197**	P	**Pg**	**23 00 48.6**	**-0.5**
VLX				S	**Sg**	**23 01 02.9**	**+1.0**
VLX	**Vlachokerasia**	**0.97**	**197**	P	**Pg**	**23 00 48.6**	**-0.5**
VLX				S	**Sg**	**23 01 02.9**	**+1.0**
RLS	**Riolos of Patr**	**1.02**	**257**	*e*PN	**Pg**	**23 00 49.6**	**-0.5**
RLS	**Riolos of Patr**	**1.02**	**257**	*e*Pn	**Pg**	**23 00 49.6**	**-0.5**
NEO	**Neokhori**	**1.07**	**21**	*e*PG	**Pg**	**23 00 50.3**	**-0.8**
NEO				*e*SB	**Sg**	**23 01 06.7**	**+1.5**
NEO	**Neokhori**	**1.07**	**21**	*e*Sb	**Sg**	**23 01 06.7**	**+1.5**
NEO	**Neokhori**	**1.07**	**21**	*e*Pg	**Pg**	**23 00 50.3**	**-0.8**
XOR	**Xorichti**	**1.12**	**19**	P	**Pg**	**23 00 51.4**	**-0.6**
XOR				S	**Sg**	**23 01 07.2**	**+0.5**
XOR	**Xorichti**	**1.12**	**19**	P	**Pg**	**23 00 51.4**	**-0.6**
XOR				S	**Sg**	**23 01 07.2**	**+0.5**
AOS	**Alonnisos**	**1.25**	**46**	P	**Pn**	**23 00 52.9**	**0.0**
AOS	**Alonnisos**	**1.25**	**46**	P	**Pn**	**23 00 52.9**	**0.0**

IDC 27 23:04:00.7±4.1, 24°.68N×109°.07W, h0km, mb3.1/1, mb1 3.5/5, mb1mx3.4/20, mbtmp3.1/5, ML3.3/4, Error ellipse: s-maj=55.2km s-min=24.4km az=154.0, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**6.69**	**45**	Pn	Pn	23 05 41.2	+1.1
	0.1nm,0.3s,baz=229,slow=13,SNR=3.2						
TXAR				Sn	Sn	23 06 55.5	-1.6
	0.

comp=Z,82nm,19.9s,baz=267,slow=41
ZALV Zalesovo Beam 5.15 314 PN **Pn 00 02 45.7 +0.8**
ZALV 00 03 47.3
ZALV 00 04 05.7
ZALV Zalesovo Beam 5.15 314 Pn **Pn 00 02 45.7 +0.7**
ZALV Sn **Sn 00 03 47.2 +2.9**
ZALV Lg 00 04 05.7
ZALV LR LR 00 04 59.2
MOY Mondy 6.31 76 *e*P* **Pb 00 03 22.0 +4.2**
MOY pmax pmax
comp=Z,31nm,0.8s
NVS Novosibirsk 6.43 315 *e*PN **Pn 00 03 03.0 +0.5**
NVS *e* 00 03 26.0
NVS *e* 00 04 18.7
NVS *e* 00 04 46.1
NVS Novosibirsk 6.43 315 *e*Pn **Pn 00 03 03.0 +0.5**
NVS *e*Pg **Pg 00 03 26.0 -4.9**
NVS *e*Sn **Sn 00 04 18.7 +2.8**
NVS *e*Sg **Sg 00 04 46.1 -8.0**
MK31 Makanchi Array 6.96 241 ⇑Pn **Pn 00 03 09.9 +0.1**
MK31 ⇓Pg **Pg 00 03 37.5 -3.6**
comp=Z,14nm,0.5s,baz=67,slow=16,SNR=11
MK31 ⇑Lg 00 05 06.4
comp=Z,77nm,0.8s,baz=53,slow=30,SNR=7.6
MK31 Makanchi Array 6.96 241 *e*Pn **Pn 00 03 10.0 +0.2**
MK31 Sn **Sn 00 04 25.1 -3.8**
MKAR Makanchi Array 6.96 241 Pn **Pn 00 03 10.2 +0.4**
comp=Z,1.6nm,0.3s,baz=52,slow=16,SNR=75
MKAR Lg 00 05 03.7
comp=Z,8.9nm,0.3s,baz=55,slow=30,SNR=9.9
MKAR LR LR 00 06 06.3
comp=Z,111nm,18.6s,baz=229,slow=40
WMQ Urumqi 7.14 200 *e*Pg **Pb 00 03 34.0 +2.2**
WMQ Sg **Sg 00 05 12.0 -4.8**
WMQ smax
comp=N,120nm,1.0s
WMQ smax
comp=E,150nm,1.0s
KURK Kurchatov 7.95 276 ⇓Pn **Pn 00 03 26.5 +3.1**
comp=E,7.8nm,0.7s
KURK ⇓Lg 00 05 34.9
comp=E,154nm,0.8s
KURK Kurchatov 7.95 276 Pn **Pn 00 03 23.1 -0.3**
comp=E,0.4nm,0.3s,baz=89,slow=14,SNR=7.9
KURK Lg 00 05 35.5
comp=E,1.7nm,0.3s,baz=80,slow=33,SNR=8.0
KURK Kurchatov 7.95 276 *e*P **Pn 00 03 23.1 -0.4**
KURK 00 04 54.0
KURK Kurchatov 7.95 276 *e*Pn **Pn 00 03 23.1 -0.3**
KURK Sn **Sn 00 04 54.0 +0.6**
KURK Lg 00 05 35.5
TLY Talaya 7.96 77 Pn **Pn 00 03 22.7 -0.9**
TLY Sn **Sn 00 04 50.6 -2.9**
KURBB Kurchatov Arra 8.02 275 ⇑Pn **Pn 00 03 25.3 +0.9**
comp=E,1.4nm,0.6s
KURBB ⇑Lg 00 05 37.7
comp=E,48nm,0.8s
SONM Songino Array 10.36 99 Pn **Pn 00 03 54.3 -2.2**
comp=E,0.1nm,0.3s,baz=101,slow=32,SNR=2.2
SONM Pg Pn 00 04 34.8 +38
comp=E,0.0nm,0.3s,baz=291,slow=12,SNR=2.4
SONM Lg 00 06 54.7
comp=E,0.4nm,0.3s,baz=289,slow=33,SNR=12
SONM LR LR 00 08 09.4
comp=E,84nm,21.7s,baz=233,slow=39
ULN Ulaanbaatar 10.77 98 P **Pn 00 03 58.8 -3.2**
BVAR Borovoye Array 13.06 289 Pn **Pn 00 04 31.7 -1.7**
comp=E,0.6nm,0.3s,baz=81,slow=12,SNR=18
BVAR Sn **Sn 00 06 55.8 -2.8**
comp=E,0.6nm,0.3s,baz=77,slow=22,SNR=3.7
BRVK Borovoye 13.13 289 ⇓Pn **Pn 00 04 31.9 -2.3**
comp=E,2.9nm,0.5s
BRVK ⇓Sn **Sn 00 07 07.5 +7.3**
comp=E,4.6nm,0.6s
BRVK Borovoye 13.13 289 *e*Pn **Pn 00 04 32.3 -2.0**
BRVK *e*Sn **Sn 00 06 56.3 -3.9**
AAK Ala-Archa 13.89 242 *e*Pn **Pn 00 04 40.2 -4.5**
AAK *e*Sn **Sn 00 07 27.9 +9.0**
UCH Uchtor 14.15 240 *e*Pn **Pn 00 04 47.9 -0.3**
EKS2 Erkin-Say 14.28 243 Pn **Pn 00 04 51.3 +1.3**
comp=E,14nm,0.8s
AML Almayashu 14.67 242 *e*Pn **Pn 00 04 55.6 +0.3**
comp=E,2.5nm,0.7s
KK31 Karatay Array 15.92 250 ⇓Pn **Pn 00 05 13.5 +1.6**
comp=E,2.8nm,0.6s
KK31 ⇑Lg 00 09 46.7
comp=E,7.4nm,0.8s
AB31 Akbulak array 20.05 278 Pn **P 00 06 01.1 +0.1**
comp=E,1.0nm,0.5s,baz=74,slow=11,SNR=16
ABKAR Akbulak array 20.05 278 *e*P **P 00 06 00.9 0.0**
comp=E,0.9nm,0.4s
ARU Arti 20.11 300 *d i*P **P 00 06 03.3 +1.8**
ARU 00 06 21.3
ARU S **S 00 09 48.0 +0.9**
ARU pmax pmax
comp=Z,14nm,1.7s
ARU Arti 20.11 300 *e*P **P 00 06 01.7 +0.2**
comp=Z,3.4nm,0.5s
LSA Lhasa 20.84 180 *e*P **P 00 06 11.7 +2.1**
LSA pmax pmax
comp=Z,6.0nm,0.8s
LSA Lhasa 20.84 180 *e*P **P 00 06 11.7 +2.1**
comp=Z,5.9nm,0.8s
AKTK Aktyubinsk 20.97 283 P **P 00 06 10.5 -0.4**
AKTO Aktyubinsk 20.97 283 P **P 00 06 10.5 -0.4**
comp=Z,5.8nm,0.7s,baz=85,slow=14,SNR=13
KBL Kabul 22.69 234 *e*P **P 00 06 28.5 -0.9**
KBL pmax pmax
comp=Z,2.0nm,0.4s,mb3.9
KBL Kabul 22.69 234 *e*P **P 00 06 28.5 -0.9**
comp=Z,1.5nm,0.4s,mb3.8
YAK Yakutsk 23.88 47 P **P 00 06 41.5 +0.2**
KSRS Korea Array 29.21 102 LR LR 00 19 54.0
comp=Z,26nm,18.6s,baz=210,slow=38
ARCES ARCESS Array B 35.55 327 P **P 00 08 24.9 +0.2**
comp=Z,1.5nm,0.8s,mb4.0,baz=67,slow=9.3,SNR=5.4
FINES FINESS Array B 36.41 313 P **P 00 08 32.4 +0.2**
comp=Z,1.7nm,0.7s,mb4.1,baz=89,slow=14,SNR=8.2
AKASG Malin Array Be 38.24 295 P **P 00 08 47.0 -0.7**
comp=Z,0.7nm,0.5s,mb3.7,baz=62,slow=7.9,SNR=3.3
AKASG Malin Array Be 38.24 295 P **P 00 08 47.0 -0.7**
BRTR Keskin Array B 41.00 278 P **P 00 09 12.1 +1.2**
comp=Z,1.2nm,0.8s,mb3.6,baz=70,slow=8.0,SNR=6.3
NB2 NORSAR Subarra 43.35 316 P **P 00 09 29.5 -0.2**
comp=Z,1.0nm,0.6s,mb3.7,baz=66,slow=8.6
NOA NORSAR Array B 43.35 316 P **P 00 09 29.7 0.0**
comp=Z,0.8nm,0.5s,mb3.7,baz=66,slow=7.8,SNR=18
CLL Collm 47.00 303 ⇑*i*P **P 00 09 59.0 +0.1**
CLL *e*(pP) pP 00 10 04.0 +2.0
ILAR Eielson Array 56.56 26 P **P 00 11 10.7 +0.7**
comp=Z,0.7nm,0.6s,mb3.9,baz=321,slow=5.3,SNR=14
ESDC Sonseca Array 63.51 301 P **P 00 11 58.2 +0.1**
comp=Z,0.1nm,0.4s,mb3.2,baz=42,slow=7.5,SNR=4.3
ESDC Sonseca Array 63.51 301 P **P 00 11 58.2 +0.1**
ASAR Alice Springs 83.00 141 P **P 00 13 52.1 -1.0**
comp=Z,0.2nm,0.5s,mb3.4,baz=314,slow=41,SNR=3.7

*ISCJB **28** 00:13:05.0±0.6, 22°.55N±0°.09×124°.02E±0°.09, h10km, mb4.0/9, Error ellipse: s-maj=13.9km s-min=10.3km az=42.6*
*NEIC **28** 00:13:06.8±0.5, 22°.55N×123°.98E, h10km, mb4.2/4, Error ellipse: s-maj=12.4km s-min=9.2km az=225.0*
*IDC **28** 00:13:08.2±4.4, 22°.40N×124°.66E, h0km, mb3.5/3, mb1 3.5/3, mb1mx3.3/21, mbtmp3.5/3, Error ellipse: s-maj=326.3km s-min=29.0km az=65.0*
ISC 28 00:13:06.9±0.6, 22°.56N±0°.09×123°.98E±0°.09, h10km, n18, σ0°.91/18, mb4.0/9, Southeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**2.70**	**276**	*e*Pn	**Pn**	**00 13 51.1**	**+0.7**
SSLB	**Suanglung**	**3.04**	**294**	Pn	**Pn**	**00 13 53.5**	**-1.5**
YHNB	**Yeheng**	**3.18**	**312**	Pn	**Pn**	**00 13 56.8**	**-0.1**
MAJO	**Matsushiro**	**18.61**	**38**	Pn	**Pn**	**00 17 24.0**	**-0.6**
PET	**Petropavlovsk**	**40.25**	**32**	*e*P	**P**	**00 20 44.4**	**+0.7**
	9.9nm,0.3s,mb5.0						
FITZ	**Fitzroy Crossi**	**40.44**	**178**	*e*P	**P**	**00 20 43.6**	**-2.0**
	6.7nm,1.4s,mb4.2						
MKAR	**Makanchi Array**	**41.29**	**316**	P	**P**	**00 20 60.0**	**+7.6**
	0.4nm,0.6s,mb3.2,baz=97,slow=9.9,SNR=3.8						
MKAR	**Makanchi Array**	**41.29**	**316**	P	**P**	**00 20 60.0**	**+7.6**
ZALV	**Zalesovo Beam**	**43.00**	**327**	P	**P**	**00 21 12.8**	**+6.6**
	0.4nm,0.5s,mb3.4,baz=138,slow=8.8,SNR=2.5						
WRAB	**Tennant Creek**	**43.43**	**166**	*e*P	**P**	**00 21 10.9**	**+0.8**
	1.2nm,0.6s,mb3.8						
PALK	**Pallekele**	**44.31**	**257**	P	**P**	**00 21 17.1**	**-0.3**
KURK	**Kurchatov**	**44.98**	**320**	*e*P	**P**	**00 21 21.5**	**-0.7**
	4.3nm,1.4s,mb4.1						
AAK	**Ala-Archa**	**45.53**	**308**	P	**P**	**00 21 28.2**	**+1.6**
ASAR	**Alice Springs**	**46.95**	**168**	P	**P**	**00 21 38.6**	**+0.6**
	0.3nm,0.4s,mb3.5,baz=346,slow=6.9,SNR=4.5						
CTAO	**Charters Tower**	**47.64**	**151**	P	**P**	**00 21 43.2**	**-0.2**
KBL	**Kabul**	**49.18**	**297**	P	**P**	**00 21 55.9**	**+0.6**
ARU	**Arti**	**57.94**	**323**	*e*P	**P**	**00 22 58.8**	**-0.4**
	2.3nm,0.4s,mb4.6						
KIV	**Kislovodsk**	**68.60**	**310**	*e*P	**P**	**00 24 10.7**	**+0.6**
	3.8nm,0.6s,mb4.5						

TAP 28 00:13:11.4, 24°.07N×122°.68E, h18km±1km, ML3.2, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.93**	**293**	*e*P	Pb	00 13 28.7	-0.3
	baz=302						
TWC	**Suao**	**0.93**	**305**	*i* P	Pb	00 13 28.7	-0.3
	baz=307						
TWC				S	Sb	00 13 41.7	+0.6
	baz=307						
TWE	**Neicheng**	**1.13**	**305**	P	Pn	00 13 32.7	+0.3
	baz=306						
TWE				S	Sb	00 13 48.0	+1.2
	baz=306						
ENTT	**Nioudou**	**1.16**	**299**	P	Pn	00 13 33.5	+0.6
	baz=301						
NWF	**Wu-fen Shan**	**1.29**	**321**	*e*P	Pn	00 13 34.7	+0.1
	baz=323						
NSK	**Sanguang**	**1.35**	**297**	*e*P	Pn	00 13 36.0	+0.6
	baz=299						
TWA	**Mucha**	**1.35**	**312**	*e*P	Pn	00 13 36.0	+0.6
	baz=329						
TWS1	**Kuangyinshan**	**1.54**	**312**	*e*P	Pn	00 13 39.2	+1.2
	baz=329						
TPUB	**Ta-pu**	**2.03**	**248**	*e*Pn	Pn	00 13 46.2	+1.4

*ISCJB **28** 00:17:51.1±0.6, 50°.24N±0°.04×18°.74E±0°.04, h0km, Error ellipse: s-maj=5.5km s-min=2.8km az=27.2*
*IPEC **28** 00:17:52.0±0.4, 50°.22N×18°.83E, h4km±2km, ML1.8/3, Error ellipse: s-maj=2.6km s-min=1.0km az=54.0*
*PRU **28** 00:17:52.8, 50°.22N×18°.76E, h0km*
*CSEM **28** 00:17:52.2±0.3, 50°.23N×18°.76E, h2km, ML2.7/7, Error ellipse: s-maj=5.8km s-min=3.3km az=26.0*
ISC 28 00:17:52.2±0.6, 50°.20N±0°.03×18°.77E±0°.04, h0km, n31, σ1°.19/50, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.54**	**228**	*e*PG	**Pg**	**00 18 03.7**	**+1.2**
OKC				*e*SG	**Sg**	**00 18 10.4**	**+0.9**
	comp=Z,14nm,0.3s						
OKC	**Ostrava-Krasne**	**0.54**	**228**	*e*Pg	**Pg**	**00 18 03.6**	**+1.1**
	baz=49						
OKC				Sg	**Sg**	**00 18 10.4**	**+0.9**
	comp=Z,14nm,0.3s						
MORC	**Moravsky Berou**	**0.90**	**243**	*e*Pg	**Pg**	**00 18 09.7**	**+0.3**
MORC				*e*Sg	**Sg**	**00 18 23.1**	**+2.1**
	comp=Z,18nm,0.4s,baz=62						
LIKS	**Likavka**	**1.17**	**169**	*e*SG	**Sg**	**00 18 31.8**	**+2.1**
LIKS	**Likavka**	**1.17**	**169**	*e*Sg	**Sg**	**00 18 31.8**	**+2.1**
NIE	**Niedzica**	**1.27**	**127**	*e*Pg	**Pg**	**00 18 15.0**	**-1.5**
NIE				*e*Sg	**Sg**	**00 18 32.4**	**-0.5**
JAVC	**Velka Javorina**	**1.52**	**209**	*e*Pn	**Pn**	**00 18 21.2**	**+0.6**
	baz=29						
DPC	**Dobruska-Polom**	**1.58**	**277**	*e*PG	**Pg**	**00 18 21.0**	**-1.5**
DPC				*e*SG	**Sg**	**00 18 42.6**	**-0.3**
	comp=Z,16nm,0.4s						
DPC	**Dobruska-Polom**	**1.58**	**277**	*e*Pn	**Pn**	**00 18 20.7**	**-0.7**
	baz=94						
DPC	**Dobruska-Polom**	**1.58**	**277**	Pg	**Pg**	**00 18 21.0**	**-1.5**
DPC				Sg	**Sg**	**00 18 42.6**	**-0.3**
	comp=Z,16nm,0.4s						
KOLL	**Kolacno**	**1.64**	**189**	*e*PN	**Pn**	**00 18 23.8**	**+1.6**
KOLL				*e*SN	**Sn**	**00 18 44.6**	**+0.6**
KOLL	**Kolacno**	**1.64**	**189**	*e*Pn	**Pn**	**00 18 23.8**	**+1.6**
KOLL				*e*Sn	**Sn**	**00 18 44.6**	**+0.6**
VRAC	**Vranov**	**1.67**	**239**	*e*Pn	**Pn**	**00 18 23.1**	**+0.4**
VRAC				*e*Sg	**Sg**	**00 18 45.3**	**-0.5**
	comp=Z,13nm,0.3s,baz=57						
VYHS	**Vyhne**	**1.70**	**179**	*e*PN	**Pn**	**00 18 22.2**	**-1.0**
VYHS				*e*SN	**Sn**	**00 18 45.5**	**-0.1**
VYHS	**Vyhne**	**1.70**	**179**	*e*Pn	**Pn**	**00 18 22.0**	**-1.2**
VYHS				*e*Sg	**Sg**	**00 18 45.1**	**-1.8**
VYHS				*e*Sn	**Sn**	**00 18 45.5**	**-0.1**
KSP	**Ksiaz**	**1.71**	**293**	*e*Pn	**Pn**	**00 18 24.5**	**+1.3**
KSP				*e*Sn	**Sn**	**00 18 48.0**	**+2.2**
KSP	**Ksiaz**	**1.71**	**293**	*e*Pg	**Pg**	**00 18 24.5**	**-0.5**
KSP				*e*Sg	**Sg**	**00 18 48.0**	**+0.9**
KSP	**Ksiaz**	**1.71**	**293**	*e*Pn	**Pn**	**00 18 24.1**	**+0.9**
	baz=110						
KSP	**Ksiaz**	**1.71**	**293**	*e*Pg	**Pg**	**00 18 24.5**	**-0.5**
KSP				*e*Sg	**Sg**	**00 18 46.1**	**-1.0**
	baz=110						
STHS	**Stebnicka Huta**	**1.78**	**115**	*e*PN	**Pn**	**00 18 24.2**	**0.0**
STHS				*e*SN	**Sn**	**00 18 47.8**	**+0.2**
STHS	**Stebnicka Huta**	**1.78**	**115**	*e*Pn	**Pn**	**00 18 24.2**	**0.0**
STHS				*e*Sn	**Sn**	**00 18 47.8**	**+0.2**
UPC	**Upice**	**1.79**	**281**	*e*SG	**Sg**	**00 18 49.8**	**0.0**
UPC	**Upice**	**1.79**	**281**	Sg	**Sg**	**00 18 49.8**	**0.0**
KRUC	**Moravsky**	**1.92**	**235**	*e*Pn	**Pn**	**00 18 26.5**	**+0.4**
	baz=53						
KRUC				*e*Sg	**Sg**	**00 18 52.8**	**-1.0**
	comp=Z,4.3nm,0.3s,baz=53						
KECS	**Kecovo**	**2.05**	**146**	*e*	**Pn**	**00 18 29.9**	**+2.0**
KECS	**Kecovo**	**2.05**	**146**	*e*SN	**Sn**	**00 18 51.9**	**-2.2**
PRU	**Pruhonice**	**2.73**	**267**	*e*SG	**Sg**	**00 19 18.2**	**-1.7**
	comp=Z,3.1nm,0.3s						
PRU	**Pruhonice**	**2.73**	**267**	Sg	**Sg**	**00 19 18.2**	**-1.7**
	comp=Z,3.1nm,0.3s						
BRG	**Berggiesshubel**	**3.15**	**284**	SG	**Sg**	**00 19 32.6**	**-0.9**
	comp=Z,3.5nm,0.5s						
KHC	**Kasperske Hory**	**3.54**	**254**	*e*PG	**Pg**	**00 18 56.2**	**-3.8**
KHC				*e*SG	**Sg**	**00 19 44.2**	**-1.6**
	comp=Z,6.7nm,0.6s						
CLL	**Collm**	**3.83**	**289**	*e*Sg	**Sg**	**00 19 56.0**	**+0.9**

*ISCJB **28** 00:20:15.9±0.6, 38°.28N±0°.03×21°.86E±0°.05, h9km±3km, Error ellipse: s-maj=6.4km s-min=4.7km az=155.1*
*CSEM **28** 00:20:15.8±0.1, 38°.31N×21°.87E, h8km, MD2.8/5, Error ellipse: s-maj=4.0km s-min=3.0km az=99.0*
*ATH **28** 00:20:16.2, 38°.29N×21°.89E, h5km±2km, MD2.8/5*
ISC 28 00:20:15.9±0.7, 38°.30N±0°.03×21°.86E±0°.05, h11km±4km, n23, σ0°.44/41, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.06**	**257**	*e*PG	**Pg**	**00 20 17.3**	**-0.8**
UPR				*e*SG	**Sg**	**00 20 19.3**	**-0.4**
UPR	**University Cam**	**0.06**	**257**	P	**Pg**	**00 20 18.0**	**-0.1**
UPR				S	**Sg**	**00 20 19.7**	**0.0**
UPR	**University Cam**	**0.06**	**257**	*e*Pg	**Pg**	**00 20 17.3**	**-0.8**
UPR	**University Cam**	**0.06**	**257**	P	**Pg**	**00 20 18.0**	**-0.1**
UPR				S	**Sg**	**00 20 19.7**	**0.0**
LAKA	**Lakka**	**0.11**	**121**	P	**Pg**	**00 20 18.8**	**+0.1**
LAKA				S	**Sg**	**00 20 20.5**	**-0.2**
LAKA	**Lakka**	**0.11**	**121**	P	**Pg**	**00 20 18.8**	**+0.1**
LAKA				S	**Sg**	**00 20 20.5**	**-0.2**
EFP	**Efpalio**	**0.14**	**16**	*e*PG	**Pg**	**00 20 18.6**	**-0.5**
EFP				*e*SG	**Sg**	**00 20 21.3**	**-0.1**
EFP	**Efpalio**	**0.14**	**16**	P	**Pg**	**00 20 19.2**	**+0.1**
EFP				S	**Sg**	**00 20 21.4**	**0.0**
EFP	**Efpalio**	**0.14**	**16**	*e*Pg	**Pg**	**00 20 18.6**	**-0.5**
EFP	**Efpalio**	**0.14**	**16**	P	**Pg**	**00 20 19.2**	**+0.1**
EFP				S	**Sg**	**00 20 21.4**	**0.0**
TRIZ	**Trizonia**	**0.18**	**68**	P	**Pg**	**00 20 20.5**	**+0.6**
TRIZ				S	**Sg**	**00 20 23.0**	**+0.4**
TRIZ	**Trizonia**	**0.18**	**68**	P	**Pg**	**00 20 20.5**	**+0.6**
TRIZ				S	**Sg**	**00 20 23.0**	**+0.4**
KALE	**Kalithea**	**0.24**	**67**	P	**Pg**	**00 20 20.2**	**-0.7**
KALE	**Kalithea**	**0.24**	**67**	P	**Pg**	**00 20 20.2**	**-0.7**
RLS	**Riolos of Patr**	**0.39**	**232**	*e*PB	**Pg**	**00 20 24.5**	**+0.9**
RLS	**Riolos of Patr**	**0.39**	**232**	*e*Pb	**Pg**	**00 20 24.5**	**+0.9**
GUR	**Goura**	**0.53**	**133**	*e*PB	**Pb**	**00 20 26.4**	**-0.7**
GUR				*e*SB	**Sg**	**00 20 33.6**	**+0.5**
GUR	**Goura**	**0.53**	**133**	P	**Pg**	**00 20 26.2**	**+0.1**
GUR				S	**Sg**	**00 20 33.1**	**0.0**
GUR	**Goura**	**0.53**	**133**	P	**Pg**	**00 20 26.2**	**+0.1**
GUR				S	**Sg**	**00 20 33.1**	**0.0**
GUR				*e*Sb	**Sg**	**00 20 33.6**	**+0.5**
EVR	**Evrytania**	**0.62**	**356**	*e*PB	**Pb**	**00 20 28.4**	**-0.4**
EVR				*e*SB	**Sb**	**00 20 37.7**	**+0.2**
EVR	**Evrytania**	**0.62**	**356**	*e*Pb	**Pb**	**00 20 28.4**	**-0.4**
EVR				*e*Sb	**Sb**	**00 20 37.7**	**+0.2**
AGG	**Agios Georgios**	**0.81**	**27**	*e*PB	**Pb**	**00 20 32.1**	**0.0**
AGG				*e*SB	**Sb**	**00 20 43.2**	**+0.1**
AGG	**Agios Georgios**	**0.81**	**27**	*e*Pb	**Pb**	**00 20 32.1**	**0.0**
AGG				*e*Sb	**Sb**	**00 20 43.3**	**+0.2**

*ISCJB **28** 00:27:27.1±0.3, 16°.86N±0°.05×93°.88W±0°.03, h155km±4km, mb3.6/8, Error ellipse: s-maj=8.6km s-min=4.6km az=9.8*
*IDC **28** 00:27:27.6±1.0, 16°.85N×93°.69W, h142km±13km, mb3.5/8, mb1 3.8/10, mb1mx3.5/21, mbtmp3.5/10, Error ellipse: s-maj=35.3km s-min=15.6km az=52.0*
*NEIC **28** 00:27:29.9, 17°.04N×93°.80W, h135km, mb3.6/4, MD4.1(MEX), After MEX.*
*MEX **28** 00:27:30.1±1.4, 16°.80N×93°.95W, h150km±15km, MD4.1*
ISC 28 00:27:28.2±0.3, 16°.85N±0°.05×93°.88W±0°.03, h151km±4km, n35, σ1°.15/48, mb3.6/8, 1C, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**0.73**	**96**	*e*P	**Pn**	**00 27 51.8**	**+0.8**
TGIG				*i* S	**Sn**	**00 28 08.5**	**+0.2**
CMIG	**Matias Romero**	**0.99**	**284**	P	**Pn**	**00 27 53.5**	**+0.5**
	431nm,0.3s,baz=255,slow=21,SNR=3374						
CMIG				S	**Sn**	**00 28 12.6**	**+0.8**
	371nm,0.3s,baz=252,slow=22,SNR=48						
PCIG		**1.30**	**151**	*e*P	**Pn**	**00 27 56.2**	**+0.4**
PCIG				*e*S	**Sn**	**00 28 16.6**	**-0.4**
HUIG	**Huatulco**	**2.39**	**244**	*i* P	**Pn**	**00 28 06.1**	**-2.0**
HUIG				*i* S	**Sn**	**00 28 37.5**	**-1.2**
THIG		**2.48**	**141**	*e*P	**Pn**	**00 28 09.5**	**+0.4**
THIG				*e*S	**Sn**	**00 28 41.8**	**+1.1**
VHO	**Vista Hermosa**	**2.74**	**275**	*e*P	**Pn**	**00 28 13.6**	**+1.3**
VHO				*e*S	**Sn**	**00 28 46.6**	**+0.3**
VHO	**Vista Hermosa**	**2.74**	**275**	*e*P	**Pn**	**00 28 13.6**	**+1.3**
VHO				*e*S	**Sn**	**00 28 46.6**	**+0.3**
TPIG	**Tehuac#an**	**3.67**	**296**	*e*P	**Pn**	**00 28 25.7**	**+1.6**
TPIG				*i* S	**Sn**	**00 29 07.6**	**+0.1**
PNIG	**Pinotepa**	**4.10**	**264**	*i* P	**Pn**	**00 28 28.5**	**-1.2**
PNIG				*i* S	**Sn**	**00 29 16.0**	**-1.6**
YAIG	**Yautepec**	**5.33**	**293**	*i* P	**Pn**	**00 28 48.3**	**+2.3**
YAIG				*i* S	**Sn**	**00 29 45.9**	**-0.9**
CAIG	**El Cayaco**	**6.12**	**273**	*i* P	**Pn**	**00 28 56.5**	**0.0**
CAIG	**El Cayaco**	**6.12**	**273**	*i* S	**Sn**	**00 30 04.1**	**-1.4**
CAIG	**El Cayaco**	**6.12**	**273**	*i* P	**Pn**	**00 28 56.5**	**0.0**
CAIG				*i* S	**Sn**	**00 30 04.1**	**-1.4**
TEIG	**Tepich**	**6.29**	**57⇑**	*e*Pn	**Pn**	**00 28 57.4**	**-1.3**
	34nm,0.4s						
TEIG				Sn	**Sn**	**00 30 08.0**	**-1.7**
JTS	**JuntasAbangare**	**10.85**	**126**	P	**Pn**	**00 29 57.8**	**-1.8**
	1.0nm,0.3s,baz=313,slow=17,SNR=3.8						
JTS	**JuntasAbangare**	**10.85**	**126**	*e*Pn	**Pn**	**00 30 02.2**	**+2.6**
TXAR	**Lajitas Array**	**15.33**	**326**	P	**Pn**	**00 30 58.9**	**+2.2**
	0.1nm,0.3s,baz=150,slow=14,SNR=13						
TXAR	**Lajitas Array**	**15.33**	**326**	P	**Pn**	**00 30 58.9**	**+2.2**
DWPF	**Disney**	**16.05**	**44**	*e*Pn	**Pn**	**00 31 05.1**	**-0.4**
	4.9nm,0.6s						
MIAR	**Mount Ida**	**17.62**	**1**	*e*P	**Pn**	**00 31 23.5**	**-0.9**
	1.9nm,0.6s						
WMOK	**Wichita Mounta**	**18.34**	**347**	*e*P	**P**	**00 31 31.1**	**0.0**
	2.5nm,0.6s						
SWET	**Sewanee**	**19.62**	**20**	*e*P	**P**	**00 31 44.4**	**-0.6**
WVT	**Waverly**	**19.94**	**14**	*e*P	**P**	**00 31 47.8**	**-0.6**
TKL	**Tuckaleechee C**	**20.78**	**24**	P	**P**	**00 31 57.8**	**+0.3**
	0.6nm,0.3s,baz=211,slow=17,SNR=3.7						
SIUC	**Southern Illin**	**21.19**	**10**	*e*P	**P**	**00 32 00.7**	**-1.0**
OTAV	**Otavalo**	**22.44**	**136**	P	**P**	**00 32 19.0**	**+4.0**
SDCO	**Great Sand Dun**	**23.19**	**336**	*e*P	**P**	**00 32 23.5**	**+1.9**
	0.4nm,0.6s,mb3.0						
PV01	**Paradox Valley**	**24.82**	**332**	P	**P**	**00 32 39.2**	**+2.8**
NVAR	**Mina Array Bea**	**30.33**	**320**	P	**P**	**00 33 28.7**	**+3.2**
	1.3nm,0.7s,mb3.8,baz=137,slow=9.3,SNR=8.8						
LPAZ	**La Paz**	**41.58**	**141**	P	**P**	**00 35 01.3**	**-0.1**
	2.0nm,0.7s,mb3.8,baz=338,slow=6.0,SNR=10						
YKA	**Yellowknife Ar**	**47.85**	**347**	P	**P**	**00 35 49.9**	**-0.6**
	1.6nm,0.6s,mb3.9,baz=152,slow=7.2,SNR=13						
ILAR	**Eielson Array**	**59.52**	**337**	P	**P**	**00 37 15.9**	**+0.7**
	0.3nm,0.7s,mb3.2,baz=93,slow=4.0,SNR=6.3						
NB2	**NORSAR Subarra**	**82.51**	**28**	P	**P**	**00 39 33.5**	**-0.3**
	comp=Z,0.8nm,0.6s,mb3.6,baz=293,slow=5.1						
NOA	**NORSAR Array B**	**82.51**	**28**	P	**P**	**00 39 33.9**	**+0.1**
	comp=Z,1.1nm,0.7s,mb3.7,baz=293,slow=5.1,SNR=10						
ARCES	**ARCESS Array B**	**84.01**	**18**	P	**P**	**00 39 40.9**	**-0.4**
	comp=Z,1.7nm,0.6s,mb4.0,baz=298,slow=4.4,SNR=18						
FINES	**FINESS Array B**	**88.69**	**25**	P	**P**	**00 40 03.6**	**-0.6**
	comp=Z,1.4nm,1.1s,mb3.8,baz=289,slow=4.3,SNR=3.1						

*NEIC **28** 00:37:05.9, 38°.15S×175°.96E, h174km, MG3.9(WEL), After WEL.*
WEL 28 00:37:06.0±0.5, 38°.14S×175°.96E, h172km±3km, ML3.9/15, 5C, Error ellipse: s-maj=3.6km s-min=2.8km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.91**	**98**	⇑PN	Pn	00 37 32.1	-0.1
URZ				SN	Sn	00 37 51.6	-0.8
URZ	**Urewera**	**0.91**	**98**	P	Pn	00 37 32.1	-0.1
TWVZ	**Taurewa**	**1.02**	**204**	⇑PN	Pn	00 37 33.4	+0.4
TWVZ				SN	Sn	00 37 54.2	+0.3
TWVZ	**Taurewa**	**1.02**	**204**	P	Pn	00 37 33.4	+0.4
TWVZ				S	Sn	00 37 54.2	+0.3
WTVZ	**West Tongariro**	**1.02**	**197**	PN	Pn	00 37 33.3	+0.3
NGZ	**Ngauruhoe**

OGWZ	Otaki Gorge	2.74	193	PN	Pn	00 37 48.9 -2.2
HOWZ	Holdsworth Sta	2.78	187	PN	Pn	00 37 49.0 -2.5
KIW	Kapiti Island	2.84	196	PN	Pn	00 37 49.6 -2.6
KIW	Kapiti Island	2.84	196	P	Pn	00 37 49.6 -2.6
TMWZ	Te Maipa	2.96	181	PN	Pn	00 37 51.1 -2.6
MTW	Mount Morrison	3.04	187	PN	Pn	00 37 51.7 -3.0
MTW	Mount Morrison	3.04	187	P	Pn	00 37 51.7 -2.9
DUWZ	D'Urville Isla	3.09	210	PN	Pn	00 37 52.7 -2.6
TRWZ	Traveller	3.26	184	PN	Pn	00 37 54.5 -3.0
PAWZ	Paruwai Farm	3.26	187	PN	Pn	00 37 54.4 -3.0
MSWZ	Moikau Station	3.32	189	PN	Pn	00 37 54.8 -3.3
MSWZ	Moikau Station	3.32	189	P	Pn	00 37 54.8 -3.3
TCW	Tory Channel	3.33	202	PN	Pn	00 37 55.3 -3.0
PLWZ	Palliser	3.47	189	PN	Pn	00 37 56.5 -3.5
TUWZ	Tuamarina	3.64	205	PN	Pn	00 37 58.9 -3.2
QRZ	Quartz Range	3.78	224	PN	Pn	00 38 00.5 -3.4
KHZ	Kahutara	4.66	203	PN	Pn	00 38 11.6 -3.6
KHZ	Kahutara	4.66	203	P	Pn	00 38 11.6 -3.6
LTZ	Lake Taylor	5.42	210	PN	Pn	00 38 21.0 -4.2
LTZ	Lake Taylor	5.42	210	P	Pn	00 38 21.0 -4.2

GUC 28 01:04:42.8±2.4, 22°.31S×70°.21W, h38km±7km, MD3.6, ML2.4, 1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACH	Maria Elena	0.43	75	eP	Pn	01 04 52.6	0.0
MACH				eS	Sn	01 05 00.0	+0.6
PB04	Plate Boundary	0.67	86	||iP	Pn	01 04 48.6	-7.2
PB04				i S	Sn	01 04 53.2	-12
PB04				AML	AML	01 04 53.7	
	comp=E,2μm,0.2s						
CEN1	Los Morros	1.07	180	eP	Pn	01 05 04.1	+2.8
CEN1				eS	Sn	01 05 19.0	+3.9
CEN1				AML	AML	01 05 21.7	
	comp=E,65nm,0.5s						
ANCH	Antofagasta	1.38	188	eP	Pn	01 05 03.0	-2.5
ANCH				eS	Sn	01 05 20.4	-2.2
PB01	Plate Boundary	1.43	28	eP	Pn	01 05 07.6	+1.3
PB01				eS	Sn	01 05 26.3	+2.6
PB01				AML	AML	01 05 28.5	
	comp=E,110nm,0.5s						
HMBC	Humberston	2.04	8	eP	Pn	01 05 17.0	+2.3

*IDC **28** 01:20:47.0±5.1, 8°.25S×121°.19E, h142km±50km, mb3.5/4, mb1 3.7/6, mb1mx3.4/21, mbtmp3.6/6, Error ellipse: s-maj=105.0km s-min=22.3km az=64.0*
*NEIC **28** 01:20:48.5±2.5, 8°.25S×121°.18E, h157km±25km, mb4.0/3, Error ellipse: s-maj=31.3km s-min=14.4km az=67.0*
*ISCJB **28** 01:20:51.1±0.6, 8°.51S±0°.08×121°.2E±0°.1, h205km±7km, mb3.5/4, Error ellipse: s-maj=22.7km s-min=8.0km az=149.5*
*DJA **28** 01:20:53, 8°.52S×121°.32E, h179km, MLv4.1/4*
ISC 28 01:20:51.7±0.6, 8°.58S±0°.09×121°.3E±0°.1, h202km±7km, n18, σ1°.21/21, mb3.5/4, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	Maumere	0.93	94	P	Pn	01 21 20.9	-0.4
WSI	Waingapu	1.47	222	P	Pn	01 21 25.2	-0.2
BKSI	Bulukumba	3.44	340	P	Pn	01 21 46.0	-0.7
BNSI	Bone	4.31	344	P	Pn	01 21 58.2	+0.6
KNA	Kununurra	10.20	135	P	Pn	01 23 13.5	-0.1
	2μm65nm,0.7s						
FITZ	Fitzroy Crossi	10.37	156	P	Pn	01 23 18.4	+2.7
	1.0nm,0.3s,baz=352,slow=8.5,SNR=28						
FITZ				S	Sn	01 25 09.9	-1.7
	1.5nm,0.3s,baz=104,slow=14,SNR=6.8						
FITZ	Fitzroy Crossi	10.37	156	ePn	Pn	01 23 17.7	+2.0
FITZ				S	Sn	01 25 09.9	-1.7
FITZ	Fitzroy Crossi	10.37	156	P	Pn	01 23 18.3	+2.6
KAKA	Kakadu	11.69	112	ePn	Pn	01 23 33.1	+0.4
	19nm,0.4s						
KAKA				eS	S	01 25 35.2	-8.2
WRAB	Tennant Creek	16.94	133	eP	P	01 24 39.0	+3.1
	4.0nm,0.6s						
WRAB				eS	S	01 27 40.7	-1.5
ASAR	Alice Springs	19.26	143	P	P	01 25 05.0	+3.9
	1.2nm,0.3s,baz=332,slow=11,SNR=36						
STKA	Stephens Creek	29.89	144	P	P	01 26 43.9	+3.4
	1.4nm,0.3s,mb4.0,baz=316,slow=9.0,SNR=5.3						
STKA	Stephens Creek	29.89	144	eP	P	01 26 44.5	+4.0
	0.2nm,0.4s,mb3.1						
SONM	Songino Array	57.69	348	P	P	01 30 20.4	-0.6
	0.4nm,0.5s,mb3.3,baz=152,slow=6.5,SNR=3.1						
MKAR	Makanchi Array	65.14	332	P	P	01 31 11.2	+0.3
	0.4nm,0.5s,mb3.3,baz=149,slow=7.6,SNR=4.7						
ZALV	Zalesovo Beam	69.48	338	P	P	01 31 36.8	-1.2
	0.9nm,0.4s,mb3.7,baz=132,slow=4.1,SNR=1.7						
ZALV	Zalesovo Beam	69.48	338	P	P	01 31 36.8	-1.2
CPUP	Villa Florida	145.28	182	PKPbc	PKPbc	01 40 09.1	+2.9
	0.7nm,0.6s,baz=180,slow=5.1,SNR=4.1						

*IDC **28** 01:26:55.5±2.2, 2°.48N×95°.55E, h20km±6km, mb3.8/5, mb1 3.9/7, mb1mx3.6/23, mbtmp3.8/7, ML3.4/1, Error ellipse: s-maj=56.7km s-min=24.3km az=47.0*
*NEIC **28** 01:26:57.7±1.0, 2°.50N×95°.62E, h35km, Error ellipse: s-maj=19.8km s-min=11.2km az=213.0*
*ISCJB **28** 01:26:59.2±2.7, 2°.63N±0°.09×95°.8E±0°.2, h61km±25km, mb4.0/5, Error ellipse: s-maj=37.8km s-min=14.9km az=171.9*
*DJA **28** 01:27:03, 2°.61N×96°.13E, h41km, MLv3.8/5*
ISC 28 01:27:00.6±2.7, 2°.63N±0°.09×95°.8E±0°.2, h55km±26km, h17km±4.6km: pP-P, n17, σ0°.57/17, mb4.0/5, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		1.48	65	P	Pn	01 27 23.8	-1.1
GSI	Gunungsitoli	2.18	127	P	Pn	01 27 33.8	-0.7
TSI	Tuntungan	2.86	72	P	Pn	01 27 37.1	-6.6
PSI	Prapat	3.09	87	Pn	Pn	01 27 47.5	+0.6
	3.5nm,0.3s,baz=346,slow=4.9,SNR=11						
SISI	Saibi	5.10	140	P	Pn	01 28 15.3	+0.7
KULM	Kulim	5.48	61	ePn	Pn	01 28 19.7	0.0
	30nm,0.9s						
KULM	Kulim	5.48	61	P	Pn	01 28 19.9	+0.2
IPM	Ipoh	5.49	70	P	Pn	01 28 19.9	0.0
	0.1nm26nm,1.0s						
CMAR	Chiang Mai Arr	16.02	11	Pn	Pn	01 30 43.5	+1.1
	baz=198,slow=12,SNR=12						
ASAR	Alice Springs	45.34	127	P	P	01 35 13.7	+0.1
	0.4nm,0.7s,mb3.3,baz=284,slow=9.3,SNR=3.9						
MK31	Makanchi Array	45.54	347	eP	P	01 35 14.6	-0.2
MKAR	Makanchi Array	45.54	347	P	P	01 35 14.8	0.0
	1.7nm,0.5s,mb4.2,baz=155,slow=8.9,SNR=25						
MKAR				pP	pP	01 35 20.8	-8.4
	1.6nm,0.6s,baz=168,slow=7.5,SNR=11						
MKAR	Makanchi Array	45.54	347	P	P	01 35 14.8	0.0
MKAR				pP	pP	01 35 20.8	-8.4
SONM	Songino Array	45.94	10	P	P	01 35 18.1	+0.1
	0.9nm,0.5s,mb3.9,baz=191,slow=9.3,SNR=6.4						
SONM				pP	pP	01 35 24.6	-7.8
	0.8nm,0.6s,baz=194,slow=7.8,SNR=4.2						
ZALV	Zalesovo Beam	51.95	352	P	P	01 36 03.7	-0.1
	1.7nm,0.4s,mb4.3,baz=179,slow=6.3,SNR=6.5						
ZALV				pP	pP	01 36 09.9	-8.6
	1.1nm,0.4s,baz=188,slow=9.0,SNR=2.4						
ZALV	Zalesovo Beam	51.95	352	P	P	01 36 03.7	-0.1
ZALV				pP	pP	01 36 09.9	-8.6
BVAR	Borovoye Array	54.46	341	P	P	01 36 21.7	-0.6
	1.1nm,0.6s,mb3.9,baz=145,slow=9.1,SNR=7.8						

*KRSC **28** 01:42:32.9±1.9, 51°.35N×151°.91E, h581km±41km, ML4.8*
*ISCJB **28** 01:42:38.7±0.7, 51°.9N±0°.2×151°.6E±0°.2, h512km±11km, mb3.4/10, Error ellipse: s-maj=26.3km s-min=15.9km az=154.9*
*MOS **28** 01:42:38.5±0.9, 51°.94N×151°.61E, h515km, mb3.8/4, Error ellipse: s-maj=23.1km s-min=18.7km az=105.8*
*IDC **28** 01:42:39.8±1.9, 51°.86N×151°.52E, h512km±23km, mb2.8/8, mb1 3.0/9, mb1mx2.7/22, mbtmp2.8/9, Error ellipse: s-maj=25.5km s-min=16.9km az=168.0*
*NEIC **28** 01:42:39.7±0.8, 51°.87N×151°.52E, h512km±11km, mb3.8/2, Error ellipse: s-maj=18.8km s-min=11.4km az=166.0*
ISC 28 01:42:39.6±0.7, 51°.9N±0°.2×151°.6E±0°.2, h508km±11km, n25, σ0°.82/27, mb3.3/10, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	Alaid	2.67	110	eP	P	01 43 48.9	-0.1
MIPR	Malaya Ipel'ka	3.21	81	eP	P	01 43 53.1	+0.7
PETK	Petropavlovsk-	3.93	69	P	P	01 43 58.5	+0.8
	0.6nm,0.3s,baz=223,slow=3.5,SNR=6.1						
PETK	Petropavlovsk-	3.93	69	P	P	01 43 58.5	+0.7
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SDLR	Sedlovina	4.67	69	P	P	01 44 05.2	+1.4
SDLR				S	S	01 45 11.2	-1.6
NLC	Nalytchevo	4.91	72	S	S	01 45 15.0	-1.7
SRDR	Sredinnyy	6.53	44	P	P	01 44 23.2	+2.1
KPT	Kopyto	6.54	48	P	P	01 44 21.1	-0.1
MKZ	Mys Kozlova	6.66	62	eP	P	01 44 22.2	-0.1
MKZ				eS	S	01 45 40.5	-6.2
COLD	Coldfoot	31.80	39	eP	P	01 48 21.8	+0.4
	comp=Z,2.2nm,0.8s,mb3.6						
ILAR	Eielson Array	33.33	43	P	P	01 48 34.8	+0.5
	comp=Z,0.5nm,0.6s,mb3.1,baz=278,slow=11,SNR=13						
ZALV	Zalesovo Beam	38.98	300	P	P	01 49 20.8	-0.4
	comp=Z,0.4nm,0.3s,mb3.4,baz=52,slow=5.7,SNR=2.5						
KURK	Kurchatov	43.86	299	eP	P	01 50 00.2	+0.3
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.7						
KURK	Kurchatov	43.86	299	eP	P	01 50 00.2	+0.3
	comp=Z,1.7nm,0.6s,mb3.6						
MK31	Makanchi Array	43.90	292	eP	P	01 49 59.7	-0.6
MKAR	Makanchi Array	43.90	292	P	P	01 50 00.3	0.0
	comp=Z,0.8nm,0.3s,mb3.6,baz=57,slow=6.4,SNR=17						
MKAR	Makanchi Array	43.90	292	P	P	01 50 00.3	0.0
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BVAR	Borovoye Array	46.96	305	P	P	01 50 23.1	-0.5
	comp=Z,0.8nm,0.4s,mb3.5,baz=51,slow=9.7,SNR=6.1						
BVAR	Borovoye Array	46.96	305	P	P	01 50 23.1	-0.5
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
YKA	Yellowknife Ar	47.49	39	P	P	01 50 27.4	0.0
	comp=Z,0.6nm,0.5s,mb3.2,baz=305,slow=7.2,SNR=4.9						
YKA	Yellowknife Ar	47.49	39	P	P	01 50 27.4	0.0
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA	Yellowknife Ar	47.49	39	P	P	01 50 27.4	0.0
FINES	FINESS Array B	59.01	333	P	P	01 51 49.2	-0.2
	comp=Z,0.4nm,0.3s,mb3.2,baz=28,slow=7.0,SNR=7.7						
NOA	NORSAR Array B	63.07	340	P	P	01 52 15.7	-0.4
	comp=Z,0.1nm,0.5s,mb2.6,baz=228,slow=7.3,SNR=2.8						
ASAR	Alice Springs	76.79	197	P	P	01 53 38.1	-0.1
	comp=Z,0.4nm,0.3s,mb3.4,baz=15,slow=4.8,SNR=4.6						

*IDC **28** 01:58:12.2±3.6, 35°.97N×21°.92E, h0km, mb3.7/8, mb1 3.6/10, mb1mx3.5/27, mbtmp3.6/10, ML2.8/2, Error ellipse: s-maj=65.4km s-min=26.7km az=18.0*
*ATH **28** 01:58:19.8, 36°.25N×21°.90E, h42km±2km, ML3.2*
*NEIC **28** 01:58:19.2, 36°.18N×21°.83E, h5km, ML3.4(ATH), After ATH.*
*THE **28** 01:58:19.8, 36°.18N×21°.88E, h26km±1km, ML4.4/3, Error ellipse: s-maj=2.1km s-min=0.9km az=245.0*
*ISCJB **28** 01:58:20.3±0.4, 36°.25N±0°.03×21°.86E±0°.04, h64km±5km, mb3.5/8, Error ellipse: s-maj=6.4km s-min=4.0km az=144.0*
*CSEM **28** 01:58:21.4±0.2, 36°.26N×21°.91E, h30km, ML3.2, Error ellipse: s-maj=5.5km s-min=3.7km az=61.0*
ISC 28 01:58:21.7±0.4, 36°.27N±0°.03×21°.90E±0°.04, h57km±5km, n143, σ0°.98/172, mb3.5/8, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.64	348	eP	Pn	01 58 33.2	-1.9
PYL				eS	Sn	01 58 44.1	-0.7
PYL	PYLOS	0.64	348	P	Pn	01 58 33.4	-1.7
PYL				S	Sn	01 58 44.2	-0.6
PYL	PYLOS	0.64	348	P	Pn	01 58 33.4	-1.7
PYL				eS	Sn	01 58 44.1	-0.7
ITM	Ithomi	0.91	1	eP	Pn	01 58 37.4	-1.1
ITM				eS	Sn	01 58 50.9	+0.1
ITM	Ithomi	0.91	1	eP	Pn	01 58 37.4	-1.1
ITM				eS	Sn	01 58 50.9	+0.1
ITM	Ithomi	0.91	1	P	Pn	01 58 37.3	-1.2
ITM				S	Sn	01 58 51.1	+0.3
ITM	Ithomi	0.91	1	eP	Pn	01 58 37.4	-1.1
ITM				eS	Sn	01 58 50.9	+0.1
KYTH	Kithira	0.92	89	eP	Pn	01 58 37.8	-0.7
KYTH	Kithira	0.92	89	eP	Pn	01 58 37.8	-0.7
KYTH	Kithira	0.92	89	eP	Pn	01 58 37.8	-0.7
VLI	Veliai	0.95	61	eP	Pn	01 58 37.4	-1.5
VLI				eS	Sn	01 58 51.7	+0.1
VLI	Veliai	0.95	61	eP	Pn	01 58 37.4	-1.5
VLI				eS	Sn	01 58 51.7	+0.1
VLI	Veliai	0.95	61	eP	Pn	01 58 37.4	-1.5
VLI				eS	Sn	01 58 51.7	+0.1
VLX	Vlachokerasia	1.17	19	eP	Pn	01 58 40.8	-1.0
VLX				eS	Sn	01 58 57.1	+0.3
VLX	Vlachokerasia	1.17	19	P	Pn	01 58 40.9	-0.9
VLX				S	Sn	01 58 57.8	+1.0
VLX	Vlachokerasia	1.17	19	P	Pn	01 58 40.9	-0.9
VLX				S	Sn	01 58 57.8	+1.0
DID	Didima	1.64	40	eP	Pn	01 58 48.3	+0.2
DID	Didima	1.64	40	P	Pn	01 58 47.2	-0.9
DID				S	Sn	01 59 09.1	+1.0
DID	Didima	1.64	40	eP	Pn	01 58 48.3	+0.2
DID				S	Sn	01 59 09.1	+1.0
GUR	Goura	1.70	12	eP	Pn	01 58 49.4	+0.3
GUR	Goura	1.70	12	P	Pn	01 58 49.8	+0.7
GUR	Goura	1.70	12	eP	Pn	01 58 49.4	+0.3
RLS	Riolos of Patr	1.82	349	eP	Pn	01 58 51.0	+0.3
RLS	Riolos of Patr	1.82	349	eP	Pn	01 58 51.0	+0.3
RLS	Riolos of Patr	1.82	349	eP	Pn	01 58 51.0	+0.3
LTK	Loutraki	1.95	26	eP	Pn	01 58 51.5	-0.9
LTK	Loutraki	1.95	26	P	Pn	01 58 51.9	-0.5
LTK				S	Sn	01 59 16.7	+1.0
LTK	Loutraki	1.95	26	P	Pn	01 58 51.9	-0.5
LTK				S	Sn	01 59 16.7	+1.0
NAIG	Nisos Aigina	1.96	40	eP	Pn	01 58 52.3	-0.2
NAIG	Nisos Aigina	1.96	40	eP	Pn	01 58 52.3	-0.2
NAIG	Nisos Aigina	1.96	40	eP	Pn	01 58 52.3	-0.2
LAKA	Lakka	1.97	2	P	Pn	01 58 54.4	+1.7
LAKA	Lakka	1.97	2	P	Pn	01 58 54.4	+1.7
VAM	Vamos	2.05	114	eP	Pn	01 58 54.3	+0.5
VAM	Vamos	2.05	114	eP	Pn	01 58 54.3	+0.5
VAM	Vamos	2.05	114	eP	Pn	01 58 54.3	+0.5
TRIZ	Trizonia	2.10	4	P	Pn	01 58 55.2	+0.7
TRIZ	Trizonia	2.10	4	P	Pn	01 58 55.2	+0.7
KALE	Kalithea	2.13	5	P	Pn	01 58 54.9	0.0
KALE	Kalithea	2.13	5	P	Pn	01 58 54.9	0.0
EFP	Efpalio	2.16	0	eP	Pn	01 58 55.1	-0.1
EFP	Efpalio	2.16	0	P	Pn	01 58 57.3	+2.0
EFP	Efpalio	2.16	0	eP	Pn	01 58 55.1	-0.1
VLS	Valsamata	2.18	332	eP	Pn	01 58 55.3	-0.2
VLS	Valsamata	2.18	332	eP	Pn	01 58 55.3	-0.2
VLS	Valsamata	2.18	332	eP	Pn	01 58 55.3	-0.2
VLY	Voula,Athens	2.19	43	eP	Pn	01 58 55.0	-0.7
VLY	Voula,Athens	2.19	43	eP	Pn	01 58 55.0	-0.7
VLY	Voula,Athens	2.19	43	eP	Pn	01 58 55.0	-0.7
DSF	Desfina	2.20	13	P	Pn	01 58 55.3	-0.5
DSF	Desfina	2.20	13	P	Pn	01 58 55.3	-0.5
ATH	Athens Observa	2.24	40	eP	Pn	01 58 56.4	+0.1
ATH	Athens Observa	2.24	40	eP	Pn	01 58 56.4	+0.1
ATH	Athens Observa	2.24	40	eP	Pn	01 58 56.4	+0.1
ATHU	Athens Univers	2.27	41	P	Pn	01 58 56.8	+0.1
ATHU	Athens Univers	2.27	41	P	Pn	01 58 56.8	+0.1
GVD	Gavdhos	2.28	128	ePn	Pn	01 58 56.1	-0.8
GVD	Gavdhos	2.28	128	ePn	Pn	01 58 56.1	-0.8
PTL	Penteli	2.37	41	P	Pn	01 59 00.4	+2.2
PTL	Penteli	2.37	41	P	Pn	01 59 00.4	+2.2
LKR	Lokris	2.54	20	P	Pn	01 59 01.1	+0.7
LKR	Lokris	2.54	20	P	Pn	01 58 59.3	-1.1
LKR	Lokris	2.54	20	P	Pn	01 59 01.1	+0.7
ATAL	Atalanti	2.58	20	P	Pn	01 58 59.9	-1.1
ATAL	Atalanti	2.58	20	P	Pn	01 58 59.9	-1.1
IDI	Anoyia	2.62	111	ePn	Pn	01 59 01.8	+0.3
IDI	Anoyia	2.62	111	eP	Pn	01 59 01.7	+0.2
IDI	Anoyia	2.62	111	eP	Pn	01 59 01.7	+0.2
SIVA	Sivas	2.67	117	P	Pn	01 59 03.9	+1.6
SIVA	Sivas	2.67	117	P	Pn	01 59 03.9	+1.6
AGG	Agios Georgios	2.77	7	eP	Pn	01 59 03.7	+0.1
AGG	Agios Georgios	2.77	7	eP	Pn	01 59 03.7	+0.1
AGG	Agios Georgios	2.77	7	P	Pn	01 59 04.6	+1.0
AGG	Agios Georgios	2.77	7	eP	Pn	01 59 03.7	+0.1
THR5	Thira Island,	2.78	86	P	Pn	01 59 02.9	-0.9
THR5	Thira Island,	2.78	86	P	Pn	01 59 02.9	-0.9
THR3	Thira Island,	2.83	86	P	Pn	01 59 03.5	-0.9
THR3	Thira Island,	2.83	86	P	Pn	01 59 03.5	-0.9
APE	Apeiranthos	3.02	74	eP	Pn	01 59 06.5	-0.6
APE	Apeiranthos	3.02	74	eP	Pn	01 59 06.5	-0.6
APE	Apeiranthos	3.02	74	eP	Pn	01 59 06.5	-0.6
LAST	Lasithi	3.11	110	P	Pn	01 59 09.3	+1.0
LAST	Lasithi	3.11	110	P	Pn	01 59 09.3	+1.0
NPS	Neapolis	3.18	107	eP	Pn	01 59 08.7	-0.5
NPS	Neapolis	3.18	107	eP	Pn	01 59 08.7	-0.5
NPS	Neapolis	3.18	107	eP	Pn	01 59 08.7	-0.5
NEO	Neokhori	3.21	19	eP	Pn	01 59 10.2	+0.6
NEO	Neokhori	3.21	19	eP	Pn	01 59 10.2	+0.6
NEO	Neokhori	3.21	19	eP	Pn	01 59 10.2	+0.6
JAN	Janina	3.49	346	P	Pn	01 59 14.4	+1.0
JAN	Janina	3.49	346	P	Pn	01 59 14.4	+1.0
IGT	Igoumenitsa	3.49	340	P	Pn	01 59 13.4	-0.1
IGT	Igoumenitsa	3.49	340	P	Pn	01 59 13.6	+0.1
IGT	Igoumenitsa	3.49	340	P	Pn	01 59 13.6	+0.1
KEK	Kerkira	3.82	335	eP	Pn	01 59 17.9	-0.1
KEK	Kerkira	3.82	335	eP	Pn	01 59 17.9	-0.1
KEK	Kerkira	3.82	335	eP	Pn	01 59 17.9	-0.1
SRN	Sarande	3.91	338	i PN	Pn	01 59 16.4	-2.8
SRN				i SN	Sn	01 59 43.9	-20
SRN	Sarande	3.91	338	i Pn	Pn	01 59 16.4	-2.8
KZN	Kozani	4.04	359	eP	Pn	01 59 21.6	+0.7
KZN	Kozani	4.04	359	eP	Pn	01 59 21.6	+0.7
KZN	Kozani	4.04	359	eP	Pn	01 59 21.6	+0.7
NEST	Nestorio	4.20	351	P	Pn	01 59 24.3	+1.2
NEST	Nestorio	4.20	351	P	Pn	01 59 24.3	+1.2
HORT	Hortiatis	4.43	12	P	Pn	01 59 28.8	+2.5
HORT	Hortiatis	4.43	12	P	Pn	01 59 28.8	+2.5
KBN	Korca	4.44	349	i PN	Pn	01 59 29.3	+2.9
KBN				i SN	Sn	02 00 07.9	-8.9
KBN	Korca	4.44	349	i Pn	Pn	01 59 29.3	+2.9
LTBQ	Tobruq	4.52	158	i P	Pn	01 59 29.2	+1.6
	SNR=23						
LTBQ				eS	Sn	02 00 17.8	-1.1
	14nm,0.8s,SNR=23						
FNA	Florina	4.53	355	P	Pn	01 59 27.8	+0.1
FNA	Florina	4.53	355	P	Pn	01 59 27.8	+0.1
FNA	Florina	4.53	355	P	Pn	01 59 27.8	+0.1
SOH	Sokhos	4.69	14	P	Pn	01 59 32.4	+2.5
SOH	Sokhos	4.69	14	P	Pn	01 59 32.4	+2.5
GRG	Griva	4.70	5	P	Pn	01 59 30.3	+0.3
GRG	Griva	4.70	5	P	Pn	01 59 30.3	+0.3
BIA	Bitola	4.77	355	i Pn	Pn	01 59 30.7	-0.3
BIA				i Sn	Sn	02 00 23.8	-1.1
OHR	Ohrid	4.92	350	i Pn	Pn	01 59 33.3	+0.3
OHR				i Sn	Sn	02 00 27.5	-1.0
KRUS	Krusevo	5.12	354	i Pn	Pn	01 59 35.5	-0.3
KRUS				i Sn	Sn	02 00 28.6	-4.9
CEL	Celeste	5.19	294	ePn	Pn	01 59 37.1	+0.4
CEL				eS	Sn	02 00 35.1	-0.1
CEL	Celeste	5.19	294	ePn	Pn	01 59 37.1	+0.3
CEL				eS	Sn	02 00 35.1	-0.2
TIR	Tirane	5.32	343	ePn	Pn	01 59 39.3	+0.8
TIR	Tirane	5.32	343	ePn	Pn	01 59 39.3	+0.8
LJBD	Adjabya	5.53	195	i P	Pn	01 59 42.7	+1.3
	SNR=23						
TAR1	Taranto	5.59	321	ePn	Pn	01 59 41.8	-0.4
PUK	Puka	5.98	345	i PN	Pn	01 59 47.2	-0.3
PUK				i SN	Sn	02 00 38.9	-16
PUK	Puka	5.98	345	i Pn	Pn	01 59 47.2	-0.3
BCI	Bajram Curri	6.26	347	i PN	Pn	01 59 51.7	+0.4
BCI				i SN	Sn	02 00 47.2	-14
BCI	Bajram Curri	6.26	347	i Pn	Pn	01 59 51.7	+0.4
STON	Ston	7.35	335	ePn	Pn	02 00 04.0	-2.3
STON				Sn	Sn	02 01 21.6	-6.7
MLR	Muntele Rosu	9.71	17	Pn	Pn	02 00 38.8	+0.2
	0.0nm,0.3s,baz=15,slow=20,SNR=2.0						
MLR	Muntele Rosu	9.71	17	Pn	Pn	02 00 38.8	+0.2
NVLJ	Novalja	9.87	329	ePn	Pn	02 00 39.9	-0.8
NVLJ				Sn	Sn	02 02 21.5	-8.4
NVLJ	Novalja	9.87	329	ePn	Pn	02 00 39.9	-0.8
BRTR	Keskin Array B	9.88	66	Pn	Pn	02 00 37.9	-3.1
	0.0nm,0.3s,baz=289,slow=3.8,SNR=4.0						
HFS	Hagfors	24.46	350	P	P	02 03 34.5	-0.5
	1.4nm,0.9s,mb3.4,baz=148,slow=12,SNR=6.3						
FINES	FINESS Array B	25.34	5	P	P	02 03 42.4	-0.5
	1.2nm,0.8s,mb3.5,baz=164,slow=36,SNR=4.7						
EKA	Eskdalemuir Ar	25.63	326	P	P	02 03 46.5	+0.9
	0.5nm,0.6s,mb3.2,baz=133,slow=9.3,SNR=7.4						
NOA	NORSAR Array B

EMIJ S Sn 02 17 02.9 -0.9
EMIJ Mijas 0.67 359 ⇑P Pn 02 16 51.2 -0.4
9.2nm,0.1s,SNR=18
EMIJ S Sn 02 17 02.9 -0.9
33nm,0.1s,SNR=19
EMIJ Mijas 0.67 359 ⇑P Pn 02 16 51.2 -0.4
9.2nm,0.1s,SNR=18
EMIJ S Sn 02 17 02.9 -0.9
33nm,0.1s,SNR=19
EJIF Jimena Fronter 0.80 314 ⇑P Pn 02 16 55.2 +2.2
EJIF S Sn 02 17 09.5 +3.4
EJIF Jimena Fronter 0.80 314 ⇑P Pn 02 16 55.2 +2.2
19nm,0.1s,SNR=18
EJIF S Sn 02 17 09.5 +3.4
4.6nm,0.2s,SNR=4.0
EJIF Jimena Fronter 0.80 314 ⇑P Pn 02 16 55.2 +2.2
19nm,0.1s,SNR=18
EJIF S Sn 02 17 09.5 +3.4
4.6nm,0.2s,SNR=4.0
EJIF Jimena Fronter 0.80 314 P Pn 02 16 55.2 +2.2
19nm,0.1s,SNR=18
EJIF S Sn 02 17 09.5 +3.4
4.6nm,0.2s,SNR=4.0
EMAL Malaga-Limoner 0.91 17 eP Pn 02 16 53.7 -0.4
EMAL i S Sn 02 17 07.4 -0.7
LIJA Lijar 1.14 333 P Pn 02 16 58.0 +1.3
LIJA S Sn 02 17 14.0 +1.2
LIJA Lijar 1.14 333 P Pn 02 16 58.0 +1.3
LIJA S Sn 02 17 14.0 +1.2
LIJA Lijar 1.14 333 i P Pn 02 16 58.0 +1.3
LIJA eS Sn 02 17 14.0 +1.2
ESPR Espera 1.32 318 P Pn 02 17 00.6 +1.7
ESPR S Sn 02 17 19.3 +2.7
ESPR Espera 1.32 318 P Pn 02 17 00.6 +1.7
5.7nm,0.1s,SNR=29
ESPR S Sn 02 17 19.3 +2.7
21nm,0.2s,SNR=5.2
ESPR Espera 1.32 318 P Pn 02 17 00.6 +1.7
5.7nm,0.1s,SNR=29
ESPR S Sn 02 17 19.3 +2.7
21nm,0.2s,SNR=5.2
ESPR Espera 1.32 318 P Pn 02 17 00.6 +1.7
5.7nm,0.1s,SNR=29
ESPR S Sn 02 17 19.3 +2.7
21nm,0.2s,SNR=5.2
RSA Sarsar 1.34 221 P Pn 02 16 58.5 -0.7
RSA S Sn 02 17 14.0 -3.1
RSA Sarsar 1.34 221 P Pn 02 16 58.5 -0.7
RSA S Sn 02 17 14.0 -3.1
EGUA Guajares 1.34 45 P Pn 02 16 58.1 -1.1
EGUA S Sn 02 17 15.3 -1.9
EGUA Guajares 1.34 45 P Pn 02 16 58.1 -1.1
7.6nm,0.1s,SNR=7.9
EGUA S Sn 02 17 15.3 -1.9
14nm,0.1s,SNR=7.9
EGUA Guajares 1.34 45 P Pn 02 16 58.1 -1.1
7.6nm,0.1s,SNR=7.9
EGUA S Sn 02 17 15.3 -1.9
14nm,0.1s,SNR=7.9
ELOJ Sierra Loja 1.34 21 P Pn 02 16 59.3 +0.1
ELOJ S Sn 02 17 19.6 +2.4
ELOJ Sierra Loja 1.34 21 P Pn 02 16 59.3 +0.1
1.9nm,0.3s,SNR=7.3
ELOJ S Sn 02 17 19.6 +2.4
11nm,0.3s,SNR=10.0
ELOJ Sierra Loja 1.34 21 P Pn 02 16 59.3 +0.1
1.9nm,0.3s,SNR=7.3
ELOJ S Sn 02 17 19.6 +2.4
11nm,0.3s,SNR=10.0
ELOJ Sierra Loja 1.34 21 P Pn 02 16 59.3 +0.1
1.9nm,0.3s,SNR=7.3
ELOJ S Sn 02 17 19.6 +2.4
11nm,0.3s,SNR=10.0
ERON Agron 1.36 34 P Pn 02 16 59.2 -0.2
ERON Agron 1.36 34 P Pn 02 16 59.2 -0.2
3.0nm,0.2s,SNR=7.9
ERON Agron 1.36 34 P Pn 02 16 59.2 -0.2
3.0nm,0.2s,SNR=7.9
ERON Agron 1.36 34 P Pn 02 16 59.2 -0.2
3.0nm,0.2s,SNR=7.9
EALB Alboran 1.40 88 P Pn 02 16 57.6 -2.3
EALB S Sn 02 17 14.4 -4.0
EALB Alboran 1.40 88 P Pn 02 16 57.6 -2.3
2.1nm,0.1s,SNR=7.3
EALB S Sn 02 17 14.4 -4.0
16nm,0.2s
EALB Alboran 1.40 88 P Pn 02 16 57.6 -2.3
2.1nm,0.1s,SNR=7.3
EALB S Sn 02 17 14.4 -4.0
16nm,0.2s
ECOG Cogollos-Vega 1.68 34 P Pn 02 17 04.9 +1.5
ECOG S Sn 02 17 28.3 +3.5
ECOG Cogollos-Vega 1.68 34 P Pn 02 17 04.9 +1.5
0.8nm,0.1s,SNR=7.9
ECOG S Sn 02 17 28.3 +3.5
2.7nm,0.1s,SNR=8.4
ECOG Cogollos-Vega 1.68 34 P Pn 02 17 04.9 +1.5
0.8nm,0.1s,SNR=7.9
ECOG S Sn 02 17 28.3 +3.5
2.7nm,0.1s,SNR=8.4
ECOG Cogollos-Vega 1.68 34 P Pn 02 17 04.9 +1.4
0.8nm,0.1s,SNR=7.9
EQUE Quentar 1.69 39 P Pn 02 17 05.0 +1.5
0.6nm,0.1s,SNR=7.2
EQUE S Sn 02 17 26.2 +1.4
5.3nm,0.3s
EQUE Quentar 1.69 39 P Pn 02 17 05.0 +1.5
0.6nm,0.1s,SNR=7.2
EQUE S Sn 02 17 26.2 +1.4
5.3nm,0.3s
EQUE Quentar 1.69 39 P Pn 02 17 05.0 +1.5
0.6nm,0.1s,SNR=7.2
EQUE S Sn 02 17 26.2 +1.4
5.3nm,0.3s
ELUQ Luque 1.71 13 P Pn 02 17 05.2 +1.4
ELUQ S Sn 02 17 27.0 +1.6
ELUQ Luque 1.71 13 P Pn 02 17 05.2 +1.4
5.0nm,0.2s,SNR=7.9
ELUQ S Sn 02 17 27.0 +1.6
SNR=7.9
ELUQ Luque 1.71 13 P Pn 02 17 05.2 +1.4
5.0nm,0.2s,SNR=7.9
ELUQ S Sn 02 17 27.0 +1.6
SNR=7.9
ELUQ Luque 1.71 13 P Pn 02 17 05.2 +1.4
5.0nm,0.2s,SNR=7.9
ELUQ S Sn 02 17 27.0 +1.6
SNR=7.9
EBER Berja 1.81 56 P Pn 02 17 04.2 -0.9
EBER S Sn 02 17 26.0 -1.7
EBER Berja 1.81 56 P Pn 02 17 04.2 -0.9
1.6nm,0.1s,SNR=11
EBER S Sn 02 17 26.0 -1.7
8.7nm,0.3s
EBER Berja 1.81 56 P Pn 02 17 04.2 -0.9
1.6nm,0.1s,SNR=11
EBER S Sn 02 17 26.0 -1.7
8.7nm,0.3s
TZK Tazeka 1.86 165 P Pn 02 17 02.0 -3.8
TZK S Sn 02 17 18.0 -11
TZK Tazeka 1.86 165 P Pn 02 17 02.0 -3.8
TZK S Sn 02 17 18.0 -11
ECAB El Cabril 2.24 347 P Pn 02 17 11.6 +0.8
ECAB S Sn 02 17 38.0 +0.2
ECAB El Cabril 2.24 347 P Pn 02 17 11.6 +0.8
5.0nm,0.1s,SNR=9.3
ECAB S Sn 02 17 38.0 +0.1
16nm,0.0s,SNR=24
ECAB El Cabril 2.24 347 P Pn 02 17 11.6 +0.8
5.0nm,0.1s,SNR=9.3
ECAB S Sn 02 17 38.0 +0.1
16nm,0.0s,SNR=24
ECAB El Cabril 2.24 347 P Pn 02 17 11.6 +0.8
5.0nm,0.1s,SNR=9.3
ECAB S Sn 02 17 38.0 +0.1
16nm,0.0s,SNR=24
EADA Adamuz 2.27 4 ⇑P Pn 02 17 12.2 +1.0
EADA S Sn 02 17 39.8 +1.1
EADA Adamuz 2.27 4 ⇑P Pn 02 17 12.2 +1.0
4.2nm,0.0s,SNR=18
EADA S Sn 02 17 39.8 +1.1
22nm,0.1s,SNR=7.9
EADA Adamuz 2.27 4 ⇑P Pn 02 17 12.2 +1.0
4.2nm,0.0s,SNR=18
EADA S Sn 02 17 39.8 +1.1
22nm,0.1s,SNR=7.9
EADA Adamuz 2.27 4 P Pn 02 17 12.2 +1.0
4.2nm,0.0s,SNR=18
EADA S Sn 02 17 39.8 +1.1
22nm,0.1s,SNR=7.9
EQES Quesada 2.34 35 P Pn 02 17 13.8 +1.7
EQES S Sn 02 17 40.2 +0.1
EQES Quesada 2.34 35 P Pn 02 17 13.7 +1.7
0.6nm,0.1s,SNR=7.9
EQES S Sn 02 17 40.2 +0.1
3.8nm,0.1s,SNR=7.9
EQES Quesada 2.34 35 P Pn 02 17 13.7 +1.7
0.6nm,0.1s,SNR=7.9
EQES S Sn 02 17 40.2 +0.1
3.8nm,0.1s,SNR=7.9
EQES Quesada 2.34 35 P Pn 02 17 13.7 +1.7
0.6nm,0.1s,SNR=7.9
EQES S Sn 02 17 40.2 +0.1
3.8nm,0.1s,SNR=7.9
EBAN Banos Encina 2.40 19 P Pn 02 17 13.4 +0.6
EBAN S Sn 02 17 40.6 -0.9
EBAN Banos Encina 2.40 19 P Pn 02 17 13.4 +0.6
2.0nm,0.1s,SNR=7.9
EBAN S Sn 02 17 40.6 -0.9
7.9nm,0.1s,SNR=7.9
EBAN Banos Encina 2.40 19 P Pn 02 17 13.4 +0.6
2.0nm,0.1s,SNR=7.9
EBAN S Sn 02 17 40.6 -0.9
7.9nm,0.1s,SNR=7.9
EBAN Banos Encina 2.40 19 P Pn 02 17 13.4 +0.6
2.0nm,0.1s,SNR=7.9
EBAN S Sn 02 17 40.6 -0.9
7.9nm,0.1s,SNR=7.9
EMIN Mina Concepcio 2.42 321 P Pn 02 17 13.9 +0.8
EMIN S Sn 02 17 41.6 -0.5
EMIN Mina Concepcio 2.42 321 P Pn 02 17 13.9 +0.8
11nm,0.1s,SNR=7.9
EMIN S Sn 02 17 41.7 -0.5
8.0nm,0.1s,SNR=7.9
EMIN Mina Concepcio 2.42 321 P Pn 02 17 13.9 +0.8
11nm,0.1s,SNR=7.9
EMIN S Sn 02 17 41.7 -0.5
8.0nm,0.1s,SNR=7.9
EMIN Mina Concepcio 2.42 321 P Pn 02 17 13.9 +0.7
11nm,0.1s,SNR=7.9
EMIN S Sn 02 17 41.7 -0.4
8.0nm,0.1s,SNR=7.9
EHUE Huescar 2.59 41 P Pn 02 17 16.7 +1.3
EHUE S Sn 02 17 46.2 +0.2
EHUE Huescar 2.59 41 P Pn 02 17 16.7 +1.3
0.3nm,0.1s,SNR=7.9
EHUE S Sn 02 17 46.3 +0.2
1.2nm,0.1s,SNR=7.9
EHUE Huescar 2.59 41 P Pn 02 17 16.7 +1.3
0.3nm,0.1s,SNR=7.9
EHUE S Sn 02 17 46.3 +0.2
1.2nm,0.1s,SNR=7.9
EHUE Huescar 2.59 41 P Pn 02 17 16.7 +1.3
0.3nm,0.1s,SNR=7.9
EHUE S Sn 02 17 46.3 +0.3
1.2nm,0.1s,SNR=7.9
EGRO El Granado 2.74 308 ⇑P Pn 02 17 18.0 +0.6
EGRO S Sn 02 17 49.0 -0.7
EGRO El Granado 2.74 308 ⇑P Pn 02 17 18.0 +0.6
23nm,0.1s,SNR=18
EGRO S Sn 02 17 49.0 -0.7
15nm,0.1s,SNR=7.9
EGRO El Granado 2.74 308 ⇑P Pn 02 17 18.0 +0.6
23nm,0.1s,SNR=18
EGRO S Sn 02 17 49.0 -0.7
15nm,0.1s,SNR=7.9
EGRO El Granado 2.74 308 P Pn 02 17 18.0 +0.6
23nm,0.1s,SNR=18
EGRO S Sn 02 17 49.0 -0.6
15nm,0.1s,SNR=7.9
PVAQ Vaqueiros 2.82 303 eP Pn 02 17 18.8 +0.3
PVAQ eS Sn 02 17 51.1 -0.5
PVAQ A 02 17 52.4
22nm,0.2s
PVAQ Vaqueiros 2.82 303 P Pn 02 17 18.8 +0.3
PVAQ S Sn 02 17 51.1 -0.5
22nm,0.2s
PVAQ Vaqueiros 2.82 303 P Pn 02 17 18.8 +0.3
PVAQ S Sn 02 17 51.1 -0.5
22nm,0.2s
CZD Col de Zad 2.86 185 P Pn 02 17 16.0 -3.1
CZD S Sn 02 17 43.0 -10
CZD Col de Zad 2.86 185 P Pn 02 17 16.0 -3.1
CZD S Sn 02 17 43.0 -10
PBDV Barranco-do-Ve 2.89 299 eP Pn 02 17 19.8 +0.4
PBDV eS Sn 02 17 52.8 -0.5
PBDV A 02 17 54.6
7.1nm,0.2s
PBDV Barranco-do-Ve 2.89 299 P Pn 02 17 19.8 +0.4
PBDV S Sn 02 17 52.8 -0.5
7.1nm,0.2s
PBDV Barranco-do-Ve 2.89 299 P Pn 02 17 19.8 +0.4
PBDV S Sn 02 17 52.8 -0.5
7.1nm,0.2s
PBAR Barrancos 2.92 322 eP Pn 02 17 20.7 +0.9
PBAR eS Sn 02 17 53.4 -0.6
PBAR A 02 17 56.0
13nm,0.1s
PBAR Barrancos 2.92 322 P Pn 02 17 20.7 +0.9
PBAR S Sn 02 17 53.4 -0.6
13nm,0.1s
PBAR Barrancos 2.92 322 P Pn 02 17 20.7 +0.9
PBAR S Sn 02 17 53.4 -0.6
13nm,0.1s
PBAR Barrancos 2.92 322 eP Pn 02 17 20.7 +0.9
PBAR eS Sn 02 17 53.4 -0.6
13nm,0.1s
PCVE Castro Verde 3.16 304 eP Pn 02 17 23.5 +0.5
PCVE eS Sn 02 17 58.7 -1.0
PCVE A 02 18 00.6
9.1nm,0.3s
PCVE Castro Verde 3.16 304 P Pn 02 17 23.5 +0.5
PCVE S Sn 02 17 58.7 -1.0
9.1nm,0.3s
PCVE Castro Verde 3.16 304 P Pn 02 17 23.5 +0.5
PCVE S Sn 02 17 58.7 -1.0
9.1nm,0.3s
EVIA Vianos 3.28 33 P Pn 02 17 25.3 +0.7
EVIA S Sn 02 18 01.0 -1.6
EVIA Vianos 3.28 33 P Pn 02 17 25.3 +0.7
0.8nm,0.1s,SNR=7.9
EVIA S Sn 02 18 01.0 -1.6
4.0nm,0.1s,SNR=7.9
EVIA Vianos 3.28 33 P Pn 02 17 25.3 +0.7
0.8nm,0.1s,SNR=7.9
EVIA S Sn 02 18 01.0 -1.6
4.0nm,0.1s,SNR=7.9
EVIA Vianos 3.28 33 P Pn 02 17 25.3 +0.7
0.8nm,0.1s,SNR=7.9
EVIA S Sn 02 18 01.0 -1.6
4.0nm,0.1s,SNR=7.9
PBEJ Beja 3.28 311 eP Pn 02 17 25.4 +0.8
PBEJ eS Sn 02 18 02.1 -0.6
PBEJ A 02 18 03.4
7.1nm,0.1s
PBEJ Beja 3.28 311 P Pn 02 17 25.4 +0.8
PBEJ S Sn 02 18 02.1 -0.6
3.6nm,0.1s
PBEJ Beja 3.28 311 P Pn 02 17 25.4 +0.8
PBEJ S Sn 02 18 02.1 -0.6
3.6nm,0.1s
PBEJ Beja 3.28 311 eP Pn 02 17 25.4 +0.8
PBEJ eS Sn 02 18 02.1 -0.6
7.1nm,0.1s
EBAD Badajoz 3.38 328 P Pn 02 17 27.0 +1.0
EBAD S Sn 02 18 05.0 0.0
EBAD Badajoz 3.38 328 P Pn 02 17 27.0 +1.0
3.5nm,0.1s,SNR=7.9
EBAD S Sn 02 18 05.1 0.0
10nm,0.0s,SNR=7.9
EBAD Badajoz 3.38 328 P Pn 02 17 27.0 +1.0
3.5nm,0.1s,SNR=7.9
EBAD S Sn 02 18 05.1 0.0
10nm,0.0s,SNR=7.9
EBAD Badajoz 3.38 328 P Pn 02 17 27.0 +1.0
3.5nm,0.1s,SNR=7.9
EBAD S Sn 02 18 05.1 0.0
10nm,0.0s,SNR=7.9
MESJ Messejana 3.39 306 eP Pn 02 17 26.5 +0.3
MESJ eS Sn 02 18 04.1 -1.3
MESJ eS Sn 02 18 04.1 -1.2
MESJ Messejana 3.39 306 P Pn 02 17 26.5 +0.3
MESJ S Sn 02 18 04.1 -1.3
MESJ Messejana 3.39 306 P Pn 02 17 26.5 +0.3
MESJ S Sn 02 18 04.1 -1.3
MESJ Messejana 3.39 306 eP Pn 02 17 26.5 +0.3
MESJ eS Sn 02 18 04.1 -1.3
MORF Marmelete 3.44 295 eP Pn 02 17 27.0 +0.2
MORF eS Sn 02 18 05.0 -1.5
MORF A 02 18 07.2
13nm,0.1s
MORF Marmelete 3.44 295 P Pn 02 17 27.0 +0.2
MORF S Sn 02 18 04.4 -2.1
MORF Marmelete 3.44 295 P Pn 02 17 27.0 +0.2
MORF S Sn 02 18 04.4 -2.1
PFVI Vila Bisbo 3.51 292 eP Pn 02 17 28.1 +0.4
PFVI eS Sn 02 18 07.1 -1.1
PFVI A 02 18 08.6
6.4nm,0.3s
PFVI Vila Bisbo 3.51 292 P Pn 02 17 28.0 +0.3
PFVI S Sn 02 18 07.1 -1.1
PFVI Vila Bisbo 3.51 292 P Pn 02 17 28.0 +0.3
1.7nm,0.1s,SNR=7.9
PFVI S Sn 02 18 07.1 -1.1
5.2nm,0.1s,SNR=7.9
PFVI Vila Bisbo 3.51 292 P Pn 02 17 28.0 +0.3
1.7nm,0.1s,SNR=7.9
PFVI S Sn 02 18 07.1 -1.1
5.2nm,0.1s,SNR=7.9
PFVI Vila Bisbo 3.51 292 P Pn 02 17 28.0 +0.3
1.7nm,0.1s,SNR=7.9
PFVI eS Sn 02 18 07.1 -1.1
6.4nm,0.3s
PTEO Sao Teotonio 3.59 299 eP Pn 02 17 29.6 +0.8
PTEO eS Sn 02 18 09.7 -0.5
PTEO A 02 18 13.3
6.3nm,0.3s
PTEO Sao Teotonio 3.59 299 P Pn 02 17 29.6 +0.8
PTEO S Sn 02 18 09.7 -0.5
3.2nm,0.3s
PTEO Sao Teotonio 3.59 299 P Pn 02 17 29.6 +0.8
PTEO S Sn 02 18 09.7 -0.5
3.2nm,0.3s
PTEO Sao Teotonio 3.59 299 eP Pn 02 17 29.6 +0.8
PTEO eS Sn 02 18 09.7 -0.5
6.3nm,0.3s
PAB San Pablo 3.66 5 ePn Pn 02 17 30.6 +0.8
PAB eS Sn 02 18 06.9 -5.0
PAB San Pablo 3.66 5 ePn Pn 02 17 30.6 +0.8
PAB eS Sn 02 18 06.9 -5.0
EVO Evora 3.70 316 ePn Pn 02 17 32.0 +1.6
EVO eSn Sn 02 18 13.7 +0.8
12nm,0.2s
EVO Evora 3.70 316 eP Pn 02 17 31.6 +1.2
EVO eS Sn 02 18 12.4 -0.5
EVO A 02 18 15.2
15nm,0.1s
EVO Evora 3.70 316 P Pn 02 17 31.6 +1.2
EVO S Sn 02 18 12.4 -0.5
15nm,0.1s
EVO Evora 3.70 316 P Pn 02 17 31.6 +1.2
EVO S Sn 02 18 12.4 -0.5
15nm,0.1s
EVO Evora 3.70 316 eP Pn 02 17 31.6 +1.2
EVO eS Sn 02 18 12.4 -0.5
15nm,0.1s
PESTR Estremoz 3.73 324 eP Pn 02 17 32.0 +1.3
PESTR eS Sn 02 18 13.3 -0.3
PESTR A 02 18 15.4
9.6nm,0.2s
PESTR Estremoz 3.73 324 P Pn 02 17 32.0 +1.3
PESTR S Sn 02 18 13.3 -0.3
9.6nm,0.2s
PESTR Estremoz 3.73 324 P Pn 02 17 32.0 +1.3
PESTR S Sn 02 18 13.3 -0.3
9.6nm,0.2s
PESTR Estremoz 3.73 324 eP Pn 02 17 32.0 +1.3
PESTR eS Sn 02 18 13.3 -0.3
9.6nm,0.2s
ETOB Tobarra 3.75 42 P Pn 02 17 31.1 0.0
ETOB S Sn 02 18 12.2 -2.0
ETOB Tobarra 3.75 42 P Pn 02 17 31.1 0.0
0.2nm,0.1s,SNR=7.9
ETOB S Sn 02 18 12.2 -2.0
0.6nm,0.1s,SNR=7.9
ETOB Tobarra 3.75 42 P Pn 02 17 31.1 0.0
0.2nm,0.1s,SNR=7.9
ETOB S Sn 02 18 12.2 -2.0
0.6nm,0.1s,SNR=7.9
ETOB Tobarra 3.75 42 P Pn 02 17 31.1 0.0
0.2nm,0.1s,SNR=7.9
ETOB S Sn 02 18 12.2 -2.0
0.6nm,0.1s,SNR=7.9
EVOP Sao Brissos 3.76 315 ePn Pn 02 17 32.0 +0.8
EVOP eSn Sn 02 18 13.7 -0.7
5.8nm,0.2s
ESDC Sonseca Array 3.83 9 S Sn 02 18 14.0 -2.0
6.8nm,0.1s,baz=189,slow=23,SNR=34
ESDC Sonseca Array 3.83 9 S Sn 02 18 14.0 -2.0
6.8nm,0.1s,baz=189,slow=23,SNR=34
ESDC Sonseca Array 3.83 9 S Sn 02 18 14.0 -1.9
6.8nm,0.1s,baz=189,slow=23,SNR=34
ESLA Sonseca Array 3.83 9 Pn Pn 02 17 32.0 -0.1
ESLA Sonseca Array 3.83 9 Pn Pn 02 17 32.0 -0.1
ZFT Errachidia 3.86 175 P Pn 02 17 30.0 -2.6
ZFT S Sn 02 18 08.0 -8.9
ZFT Errachidia 3.86 175 P Pn 02 17 30.0 -2.6
ZFT S Sn 02 18 08.0 -8.9
MOE Montemor 3.89 314 eS Sn 02 18 17.2 -0.3
MOE Montemor 3.89 314 S Sn 02 18 17.2 -0.3
MOE Montemor 3.89 314 S Sn 02 18 17.2 -0.3
MOE Montemor 3.89 314 eS Sn 02 18 17.2 -0.3
PMRV Marv??o 4.10 330 eP Pn 02 17 37.0 +1.2
PMRV eS Sn 02 18 21.6 -1.0
PMRV A 02 18 35.3
4.7nm,0.1s
PMRV Marv??o 4.10 330 P Pn 02 17 37.0 +1.2
PMRV S Sn 02 18 21.6 -1.0
4.7nm,0.1s
PMRV Marv??o 4.10 330 P Pn 02 17 37.0 +1.2
PMRV S Sn 02 18 21.6 -1.0
4.7nm,0.1s
PMRV Marv??o 4.10 330 eP Pn 02 17 37.0 +1.2
PMRV eS Sn 02 18 21.6 -1.0
4.7nm,0.1s
EPLA Plasencia 4.29 346 P Pn 02 17 39.1 +0.8
EPLA S Sn 02 18 26.1 -1.2
EPLA Plasencia 4.29 346 P Pn 02 17 39.1 +0.8
1.1nm,0.0s,SNR=11
EPLA S Sn 02 18 26.1 -1.2
3.7nm,0.1s,SNR=7.9
EPLA Plasencia 4.29 346 P Pn 02 17 39.1 +0.8
1.1nm,0.0s,SNR=11
EPLA S Sn 02 18 26.1 -1.2
3.7nm,0.1s,SNR=7.9
EPLA Plasencia 4.29 346 P Pn 02 17 39.1 +0.7
1.1nm,0.0s,SNR=11
EPLA S Sn 02 18 26.1 -1.2
3.7nm,0.1s,SNR=7.9
PCBR Castelo Branco 4.49 332 eP Pn 02 17 42.1 +1.0
PCBR eS Sn 02 18 30.7 -1.4
PCBR A 02 18 30.9
3.7nm,0.2s
PCBR Castelo Branco 4.49 332 P Pn 02 17 42.1 +1.0
PCBR S Sn 02 18 30.7 -1.4
1.9nm,0.2s
PCBR Castelo Branco 4.49 332 P Pn 02 17 42.1 +1.0
PCBR S Sn 02 18 30.7 -1.4
1.9nm,0.2s
PCBR Castelo Branco 4.49 332 eP Pn 02 17 42.1 +1.0
PCBR eS Sn 02 18 30.7 -1.4
3.7nm,0.2s
PTOM Tomar 4.71 323 eP Pn 02 17 45.4 +1.3
PTOM eS Sn 02 18 36.0 -1.5
PTOM A 02 18 40.6
4.6nm,0.1s
PTOM Tomar 4.71 323 P Pn 02 17 45.4 +1.3
PTOM S Sn 02 18 36.0 -1.5
2.3nm,0.1s
PTOM Tomar 4.71 323 P Pn 02 17 45.4 +1.3
PTOM S Sn 02 18 36.0 -1.5
2.3nm,0.1s
PTOM Tomar 4.71 323 eP Pn 02 17 45.4 +1.3
PTOM eS Sn 02 18 36.0 -1.5
4.6nm,0.1s
GUD Guadarrama 4.77 6 P Pn 02 17 45.7 +0.9
GUD S Sn 02 18 37.0 -1.7

GUD Guadarrama 4.77 6 P Pn 02 17 45.7 +0.9
0.5nm,0.2s,SNR=7.9
GUD S Sn 02 18 37.0 -1.7
1.1nm,0.1s,SNR=7.9
GUD Guadarrama 4.77 6 P Pn 02 17 45.7 +0.9
0.5nm,0.2s,SNR=7.9
GUD S Sn 02 18 37.0 -1.7
1.1nm,0.1s,SNR=7.9
GUD Guadarrama 4.77 6 P Pn 02 17 45.7 +0.9
0.5nm,0.2s,SNR=7.9
GUD S Sn 02 18 37.0 -1.8
1.1nm,0.1s,SNR=7.9
MTE Manteigas 5.01 335 eP Pn 02 17 49.6 +1.5
MTE eS Sn 02 18 42.9 -1.7
MTE A 02 18 46.6
3.0nm,0.3s
MTE Manteigas 5.01 335 Pn Pn 02 17 49.4 +1.3
MTE eS Sn 02 18 36.7 -7.9
MTE Manteigas 5.01 335 P Pn 02 17 49.6 +1.5
MTE S Sn 02 18 42.9 -1.7
1.5nm,0.3s
MTE Manteigas 5.01 335 P Pn 02 17 49.6 +1.5
MTE S Sn 02 18 42.9 -1.7
1.5nm,0.3s
MTE Manteigas 5.01 335 Pn Pn 02 17 49.4 +1.3
MTE eS Sn 02 18 42.9 -1.7
3.0nm,0.3s
ETOR Torete 5.36 23 P Pn 02 17 53.4 +0.5
ETOR S Sn 02 18 49.2 -3.9
ETOR Torete 5.36 23 P Pn 02 17 53.4 +0.5
2.2nm,0.1s,SNR=6.8
ETOR S Sn 02 18 49.3 -3.9
8.4nm,0.2s,SNR=7.9
ETOR Torete 5.36 23 P Pn 02 17 53.4 +0.5
2.2nm,0.1s,SNR=6.8
ETOR S Sn 02 18 49.3 -3.9
8.4nm,0.2s,SNR=7.9
ETOR Torete 5.36 23 P Pn 02 17 53.3 +0.5
ETOR Torete 5.36 23 P Pn 02 17 53.4 +0.6
2.2nm,0.1s,SNR=6.8
ETOR S Sn 02 18 49.2 -3.9
PVIS Viseu 5.41 334 eP Pn 02 17 54.4 +0.8
PVIS eS Sn 02 18 53.7 -0.8
PVIS Viseu 5.41 334 P Pn 02 17 54.4 +0.8
PVIS S Sn 02 18 53.7 -0.8
PVIS Viseu 5.41 334 P Pn 02 17 54.4 +0.8
PVIS S Sn 02 18 53.7 -0.8
PVIS Viseu 5.41 334 eP Pn 02 17 54.4 +0.8
PVIS eS Sn 02 18 53.7 -0.8
MVO Moncorvo 5.56 342 eP Pn 02 17 57.0 +1.5
MVO eS Sn 02 18 56.5 -1.5
MVO A 02 18 59.2
2.5nm,0.3s
MVO Moncorvo 5.56 342 P Pn 02 17 56.7 +1.1
MVO S Sn 02 18 56.6 -1.4
MVO Moncorvo 5.56 342 P Pn 02 17 56.7 +1.1
0.7nm,0.0s,SNR=16
MVO S Sn 02 18 56.6 -1.4
0.8nm,0.1s,SNR=29
MVO Moncorvo 5.56 342 P Pn 02 17 56.7 +1.1
0.7nm,0.0s,SNR=16
MVO S Sn 02 18 56.6 -1.4
0.8nm,0.1s,SNR=29
MVO Moncorvo 5.56 342 P Pn 02 17 56.7 +1.2
0.7nm,0.0s,SNR=16
MVO S Sn 02 18 56.6 -1.4
0.8nm,0.1s,SNR=29
EMOS Mosqueruela 5.60 36 S Sn 02 18 56.7 -2.3
0.1nm,0.1s,SNR=7.9
EMOS Mosqueruela 5.60 36 S Sn 02 18 56.7 -2.3
0.1nm,0.1s,SNR=7.9
EMOS Mosqueruela 5.60 36 S Sn 02 18 56.7 -2.3
0.1nm,0.1s,SNR=7.9
PVRL Vila Real 5.85 338 eP Pn 02 18 01.2 +1.6
PVRL eS Sn 02 19 03.0 -2.2
PVRL A 02 19 08.3
13nm,0.1s
PVRL Vila Real 5.85 338 P Pn 02 18 01.2 +1.6
PVRL S Sn 02 19 03.0 -2.2
6.4nm,0.1s
PVRL Vila Real 5.85 338 P Pn 02 18 01.2 +1.6
PVRL S Sn 02 19 03.0 -2.2
6.4nm,0.1s
PVRL Vila Real 5.85 338 eP Pn 02 18 01.2 +1.6
PVRL eS Sn 02 19 03.0 -2.2
13nm,0.1s
ECAL Calabor 6.24 346 P Pn 02 18 06.9 +2.1
ECAL S Sn 02 19 13.6 -0.9
ECAL Calabor 6.24 346 P Pn 02 18 06.9 +2.1
0.2nm,0.1s,SNR=7.9
ECAL S Sn 02 19 13.6 -0.9
1.4nm,0.2s,SNR=7.9
ECAL Calabor 6.24 346 P Pn 02 18 06.9 +2.1
0.2nm,0.1s,SNR=7.9
ECAL S Sn 02 19 13.6 -0.9
1.4nm,0.2s,SNR=7.9
ECAL Calabor 6.24 346 P Pn 02 18 06.9 +2.2
0.2nm,0.1s,SNR=7.9
ECAL S Sn 02 19 13.6 -0.9
1.4nm,0.2s,SNR=7.9
PCAB Cabril 6.35 337 eP Pn 02 18 08.0 +1.7
PCAB eS Sn 02 19 14.8 -2.4
PCAB A 02 19 16.6
2.6nm,0.1s
PCAB Cabril 6.35 337 P Pn 02 18 08.0 +1.7
PCAB S Sn 02 19 14.8 -2.4
1.3nm,0.1s
PCAB Cabril 6.35 337 P Pn 02 18 08.0 +1.7
PCAB S Sn 02 19 14.8 -2.4
1.3nm,0.1s
PCAB Cabril 6.35 337 eP Pn 02 18 08.0 +1.7
PCAB eS Sn 02 19 14.8 -2.4
2.6nm,0.1s
ELOB Lobios 6.50 338 P Pn 02 18 09.8 +1.4
ELOB S Sn 02 19 18.9 -2.1
ELOB Lobios 6.50 338 P Pn 02 18 09.8 +1.4
0.3nm,0.0s,SNR=7.2
ELOB S Sn 02 19 18.9 -2.1
0.3nm,0.1s,SNR=7.9
ELOB Lobios 6.50 338 P Pn 02 18 09.8 +1.4
0.3nm,0.0s,SNR=7.2
ELOB S Sn 02 19 18.9 -2.1
0.3nm,0.1s,SNR=7.9
ELOB Lobios 6.50 338 P Pn 02 18 09.8 +1.4
0.3nm,0.0s,SNR=7.2
ELOB S Sn 02 19 18.9 -2.1
0.3nm,0.1s,SNR=7.9
ELAN Lanestosa 7.40 8 P Pn 02 18 22.9 +2.3
ELAN S Sn 02 19 39.4 -3.6
ELAN Lanestosa 7.40 8 P Pn 02 18 22.9 +2.3
0.0nm,0.1s,SNR=7.9
ELAN S Sn 02 19 39.4 -3.6
0.6nm,0.2s,SNR=7.9
ELAN Lanestosa 7.40 8 P Pn 02 18 22.9 +2.3
0.0nm,0.1s,SNR=7.9
ELAN S Sn 02 19 39.4 -3.6
0.6nm,0.2s,SNR=7.9
ELAN Lanestosa 7.40 8 P Pn 02 18 22.9 +2.3
SNR=7.9
ELAN S Sn 02 19 39.4 -3.5
0.6nm,0.2s,SNR=7.9
EARI Arriondas 7.41 357 S Sn 02 19 40.2 -2.9
0.3nm,0.2s,SNR=7.9
EARI Arriondas 7.41 357 S Sn 02 19 40.2 -2.9
0.3nm,0.2s,SNR=7.9
EARI Arriondas 7.41 357 S Sn 02 19 40.2 -2.9
0.3nm,0.2s,SNR=7.9
SJPF Ste Jean 7.71 20 ePn Pn 02 18 24.9 +0.1
SJPF eSn Sn 02 19 46.9 -3.6
0.8nm,0.2s
SJPF Ste Jean 7.71 20 P Pn 02 18 24.9 +0.1
SJPF S Sn 02 19 46.9 -3.6
0.4nm,0.2s
SJPF Ste Jean 7.71 20 P Pn 02 18 24.9 +0.1
SJPF S Sn 02 19 46.9 -3.6
0.4nm,0.2s
SJPF Ste Jean 7.71 20 ePn Pn 02 18 24.9 +0.1
ETSF Etsaut 7.71 24 ePn Pn 02 18 25.3 +0.4
ETSF eSn Sn 02 19 46.4 -4.2
0.6nm,0.4s
ETSF Etsaut 7.71 24 P Pn 02 18 25.3 +0.4
ETSF S Sn 02 19 46.4 -4.2
0.3nm,0.4s
ETSF Etsaut 7.71 24 P Pn 02 18 25.3 +0.4
ETSF S Sn 02 19 46.4 -4.2
0.3nm,0.4s
ETSF Etsaut 7.71 24 ePn Pn 02 18 25.3 +0.4
EALK Alkurruntz 7.74 18 S Sn 02 19 48.1 -3.0
0.2nm,0.1s,SNR=7.9
EALK Alkurruntz 7.74 18 S Sn 02 19 48.1 -3.0
0.2nm,0.1s,SNR=7.9
EALK Alkurruntz 7.74 18 S Sn 02 19 48.1 -3.0
0.2nm,0.1s,SNR=7.9
EPF Esparros 8.14 27 ePn Pn 02 18 30.9 +0.2
EPF eSn Sn 02 19 57.1 -4.0
1.1nm,0.4s
EPF Esparros 8.14 27 P Pn 02 18 30.9 +0.2
EPF S Sn 02 19 57.1 -4.0
0.6nm,0.4s
EPF Esparros 8.14 27 P Pn 02 18 30.9 +0.2
EPF S Sn 02 19 57.1 -4.0
0.6nm,0.4s
EPF Esparros 8.14 27 ePn Pn 02 18 30.9 +0.2

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*NEIC **28** 02:17:38.5, 38°.14N×24°.02E, h20km, ML2.9(ATH), After ATH.*
*ATH **28** 02:17:38.5, 38°.14N×24°.01E, h20km±1km, MD2.7/4, ML2.9*
*ISCJB **28** 02:17:39.1±1.0, 38°.12N±0°.04×24°.04E±0°.06, h12km±6km, Error ellipse: s-maj=8.5km s-min=5.3km az=29.2*
*CSEM **28** 02:17:39.2±0.2, 38°.16N×24°.01E, h12km, ML2.9/7, Error ellipse: s-maj=5.3km s-min=3.6km az=100.0*
*THE **28** 02:17:39.7, 38°.15N×23°.99E, h7km, ML2.9/7, Error ellipse: s-maj=1.1km s-min=0.6km az=292.0*
ISC 28 02:17:39.2±0.8, 38°.15N±0°.03×24°.03E±0°.06, h10km±4km, n39, σ0§47/57, Aegean Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PTL Penteli 0.17 233 ePb Pg 02 17 42.6 -0.2
PTL eSb Sg 02 17 44.8 -0.5
PTL Penteli 0.17 233 ePB Pg 02 17 42.6 -0.2
PTL eSB Sg 02 17 45.2 -0.1
PTL Penteli 0.17 233 ePb Pg 02 17 42.6 -0.2
PTL eSb Sg 02 17 44.8 -0.5
ATHU Athens Univers 0.27 227 P Pg 02 17 44.9 +0.3
ATHU S Sg 02 17 48.5 +0.2
ATHU Athens Univers 0.27 227 P Pg 02 17 44.9 +0.3
ATHU S Sg 02 17 48.5 +0.2
ATH Athens Observa 0.31 235 ePb Pg 02 17 45.2 -0.1
ATH eSb Sg 02 17 49.6 +0.2
ATH Athens Observa 0.31 235 ePB Pg 02 17 45.2 -0.1
ATH eSB Sg 02 17 49.6 +0.2
ATH Athens Observa 0.31 235 ePb Pg 02 17 45.2 -0.1
ATH eSb Sg 02 17 49.6 +0.2
NAIG Nisos Aigina 0.58 228 ePn Pg 02 17 50.2 -0.2
NAIG Nisos Aigina 0.58 228 ePN Pg 02 17 50.2 -0.2
NAIG Nisos Aigina 0.58 228 ePn Pg 02 17 50.2 -0.2
LTK Loutraki 0.85 262 P Pg 02 17 55.5 -0.1
LTK S Sg 02 18 07.4 +0.7
LTK Loutraki 0.85 262 P Pg 02 17 55.5 -0.1
LTK S Sg 02 18 07.4 +0.7
DID Didima 0.90 225 P Pg 02 17 56.1 -0.4
DID S Sg 02 18 08.7 +0.5
DID Didima 0.90 225 P Pg 02 17 56.1 -0.4
DID S Sg 02 18 08.7 +0.5
LKR Lokris 0.95 302 ePn Pg 02 17 56.6 -0.9
LKR Lokris 0.95 302 ePN Pg 02 17 56.6 -0.9
LKR Lokris 0.95 302 P Pg 02 17 56.6 -0.9
LKR Lokris 0.95 302 ePn Pg 02 17 56.6 -0.9
ATAL Atalanti 0.96 305 P Pg 02 17 57.0 -0.7
ATAL Atalanti 0.96 305 P Pg 02 17 57.0 -0.7
AOS Alonnisos 1.02 353 P Pg 02 17 58.7 -0.2
AOS S Sg 02 18 13.3 +1.1
AOS Alonnisos 1.02 353 P Pg 02 17 58.7 -0.2
AOS S Sg 02 18 13.3 +1.1
DSF Desfina 1.21 283 P Pn 02 18 02.0 -0.1
DSF Desfina 1.21 283 P Pn 02 18 02.0 -0.1
GUR Goura 1.35 261 P Pn 02 18 04.0 0.0
GUR S Sb 02 18 22.5 +0.6
GUR Goura 1.35 261 P Pn 02 18 04.0 0.0
GUR S Sb 02 18 22.5 +0.6
XOR Xorichti 1.38 332 P Pn 02 18 04.2 -0.2
XOR Xorichti 1.38 332 P Pn 02 18 04.2 -0.2
VLX Vlachokerasia 1.52 240 P Pn 02 18 05.7 -0.7
VLX S Sn 02 18 26.0 -0.3
VLX Vlachokerasia 1.52 240 P Pn 02 18 05.7 -0.7
VLX S Sn 02 18 26.0 -0.3
APE Apeiranthos 1.61 132 P Pn 02 18 08.1 +0.6
APE Apeiranthos 1.61 132 P Pn 02 18 08.1 +0.6
VLI Veliai 1.68 212 ePn Pn 02 18 08.5 0.0
VLI Veliai 1.68 212 ePN Pn 02 18 08.5 0.0
VLI Veliai 1.68 212 ePn Pn 02 18 08.5 0.0
KYTH Kithira 2.03 203 ePn Pn 02 18 13.6 +0.3
KYTH Kithira 2.03 203 ePN Pn 02 18 13.6 +0.3
KYTH Kithira 2.03 203 ePn Pn 02 18 13.6 +0.3

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*TRN **28** 02:17:53.5, 18°.10N×64°.77W, h17km*
*ISCJB **28** 02:17:55.4±1.0, 18°.11N±0°.04×64°.73W±0°.07, h13km±6km, Error ellipse: s-maj=12.2km s-min=6.7km az=166.8*
*RSPR **28** 02:17:55.5, 18°.08N×64°.59W, h14km±7km, MD3.1/8*
*NEIC **28** 02:17:55.5, 18°.08N×64°.59W, h14km, MD3.2(RSPR), After RSPR.*
ISC 28 02:17:55.8±0.9, 18°.11N±0°.04×64°.75W±0°.06, h12km±5km, n26, σ0§87/40, 12C-4D, Virgin Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
STVI Saint Thomas 0.31 322⇑eP Pg 02 18 02.4 +0.2
STVI eS Sg 02 18 07.1 +0.7
STVI Saint Thomas 0.31 322⇑eP Pg 02 18 02.4 +0.2
STVI eS Sg 02 18 07.1 +0.7
TBVI Tortola 0.34 22⇓iP Pg 02 18 02.1 -0.5
TBVI Tortola 0.34 22⇓iP Pg 02 18 02.1 -0.5
CDVI St. Croix 0.35 182⇑eP Pg 02 18 02.9 0.0
CDVI eS Sg 02 18 08.3 +0.6
CDVI St. Croix 0.35 182⇑eP Pg 02 18 02.9 0.0
CDVI eS Sg 02 18 08.3 +0.6
MTP Monte Pirata 0.76 270⇑eP Pg 02 18 10.1 -0.5
MTP Monte Pirata 0.76 270 ePg Pg 02 18 10.0 -0.6
MTP eS Sg 02 18 20.2 -0.4
MTP Monte Pirata 0.76 270⇑eP Pg 02 18 10.7 +0.1
HUMP Col San Antoni 1.05 272⇑eP Pb 02 18 14.8 -1.1
HUMP eS Sb 02 18 29.2 -0.3
HUMP Col San Antoni 1.05 272⇑eP Pb 02 18 14.8 -1.1
HUMP eS Sb 02 18 29.2 -0.3
CBYP Canovanas 1.06 279⇑eP Pb 02 18 15.7 -0.5
CBYP Canovanas 1.06 279 eS Sb 02 18 30.9 +0.9
CBYP Canovanas 1.06 279 ePn Pn 02 18 15.9 -0.6
CBYP eS Sb 02 18 30.6 +0.6
CBYP Canovanas 1.06 279⇑eP Pb 02 18 15.7 -0.5
CBYP eS Sb 02 18 30.9 +0.9
SJG San Juan 1.33 270⇑eP Pn 02 18 18.9 -1.2
SJG San Juan 1.33 270 eS Sb 02 18 37.7 0.0
SJG San Juan 1.33 270⇓eP Pn 02 18 19.3 -0.9
SJG eS Sb 02 18 36.8 -0.9
SJG San Juan 1.33 270 ePn Pn 02 18 19.8 -0.4
SJG eS Sb 02 18 36.9 -0.8
SJG San Juan 1.33 270⇑eP Pn 02 18 18.9 -1.2
SJG San Juan 1.33 270⇓eP Pn 02 18 19.3 -0.9
SJG eS Sb 02 18 36.8 -0.9
SJG eS Sb 02 18 37.7 0.0
CELP Cerrillos 1.74 269 eS Sn 02 18 47.6 -0.3
CELP Cerrillos 1.74 269 eS Sn 02 18 47.6 -0.3
LRS Lares 2.00 276 eS Sn 02 18 53.9 -0.4
LRS Lares 2.00 276 eS Sn 02 18 53.9 -0.4
AGPR Aguadilla, PR 2.27 279 ePn Pn 02 18 35.1 +2.0
AGPR eS Sn 02 19 03.6 +2.5

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*NNC **28** 02:25:06.3±7.8, 50°.59N×91°.26E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=78.7km s-min=60.1km az=61.0*
*MOS **28** 02:25:08.0±1.7, 50°.29N×91°.03E, h10km, mb4.0/2, Error ellipse: s-maj=16.6km s-min=11.0km az=122.4*
*IDC **28** 02:25:09.2±1.2, 50°.57N×91°.03E, h0km, mb3.5/5, mb1 3.6/10, mb1mx3.4/28, mbtmp3.4/10, ML3.4/5, Error ellipse: s-maj=19.8km s-min=13.8km az=163.0*
*ISCJB **28** 02:25:10.5±0.8, 50°.66N±0°.04×90°.69E±0°.07, h10km, mb3.6/4, Error ellipse: s-maj=6.9km s-min=5.8km az=26.3*
*NEIC **28** 02:25:12.1±2.9, 50°.58N×91°.04E, h21km±25km, Error ellipse: s-maj=15.8km s-min=9.2km az=184.0*
*ASRS **28** 02:25:14.1±1.1, 50°.63N×90°.81E, h15km, Ms2.9/4*
ISC 28 02:25:11.1±0.6, 50°.60N±0°.03×90°.84E±0°.06, h10km, n34, σ1§17/50, mb3.6/4, 2C-3D, Tuva-Buryatia-Mongolia border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CERR Cheremushki 2.28 9 i PN Pg 02 25 54.2 -0.6
CERR i 02 26 25.0
CERR Cheremushki 2.28 9 i Pg Pg 02 25 54.2 -0.6
CERR i Sg Sg 02 26 25.0 +0.7
ARTR Artybash 2.54 299 ePN Pb 02 25 56.4 -0.3
ARTR e 02 26 01.1
ARTR e 02 26 28.8
ARTR Artybash 2.54 299 ePn Pb 02 25 56.4 -0.3
ARTR ePg Pg 02 26 01.1 +1.4
ARTR eSg Sg 02 26 28.8 -3.8
TASR Tashtagol 2.84 321 ePN Pb 02 26 00.9 -0.9
TASR i 02 26 05.9
TASR i 02 26 42.5
TASR Tashtagol 2.84 321 ePn Pb 02 26 00.9 -0.9
TASR i Pg Pg 02 26 05.9 +0.4
TASR i Sg Sg 02 26 42.5 +0.3
UKR Ust'-Kan 3.87 277 ePN Pg 02 26 23.4 -1.7
UKR e 02 27 14.5
UKR Ust'-Kan 3.87 277 ePg Pg 02 26 23.4 -1.7
UKR eSg Sg 02 27 14.5 -0.7
ELT Yel'tsovka 3.90 315 i PN Pn 02 26 14.3 +3.3
ELT e 02 26 24.2
ELT e 02 27 15.0
ELT Yel'tsovka 3.90 315 i Pn Pn 02 26 14.3 +3.3
ELT ePg Pg 02 26 24.2 -1.5
ELT eSg Sg 02 27 15.0 -1.2
ZALV Zalesovo Beam 4.99 314 Pn Pn 02 26 27.9 +2.0
1.6nm,0.3s,baz=143,slow=12,SNR=12
ZALV Pg Pb 02 26 38.8 +0.4
1.9nm,0.3s,baz=138,slow=13,SNR=10.0
ZALV Lg 02 27 49.1
8.2nm,0.3s,baz=123,slow=23,SNR=7.0
ZALV Zalesovo Beam 4.99 314 Pn Pn 02 26 27.9 +2.0
ZALV Pg Pb 02 26 38.8 +0.4
NVS Novosibirsk 6.27 315 ePN Pb 02 27 05.9 +5.6
NVS i 02 28 27.9
NVS Novosibirsk 6.27 315 ePg Pg 02 27 07.9 -3.2
NVS eSg Sg 02 28 27.9 -4.4
MK31 Makanchi Array 6.82 239 Pn Pn 02 26 52.6 +1.5
0.4nm,0.2s,baz=49,slow=16,SNR=45
MK31 Pg Pg 02 27 20.3 -1.4
7.1nm,0.6s,baz=67,slow=17,SNR=11
MK31 ⇓Lg 02 28 50.0
29nm,0.8s,baz=51,slow=29,SNR=7.2
MK31 Makanchi Array 6.82 239 ePn Pn 02 26 52.3 +1.2
MK31 ePg Pg 02 27 20.4 -1.2
MK31 eSg Sg 02 28 45.7 -4.3
MKAR Makanchi Array 6.82 239 Pn Pn 02 26 52.6 +1.5
1.0nm,0.3s,baz=51,slow=17,SNR=43
MKAR Lg 02 28 48.3
3.7nm,0.3s,baz=56,slow=31,SNR=9.7
WMQ Urumqi 7.12 199 ePn Pg 02 27 26.3 -1.0
WMQ Sg Sg 02 28 54.5 -4.9
WMQ smax
comp=N,41nm,0.7s
WMQ smax
comp=E,36nm,0.8s
KURK Kurchatov 7.77 276 ⇑Pn Pn 02 27 05.7 +1.6
comp=E,3.5nm,0.6s
KURK ⇓Lg 02 29 15.0
comp=E,63nm,0.8s
KURK Kurchatov 7.77 276 Pn Pn 02 27 06.2 +2.1
comp=E,0.2nm,0.3s,baz=90,slow=14,SNR=17
KURK Lg 02 29 18.2
comp=E,0.4nm,0.3s,baz=86,slow=34,SNR=7.7
KURK Kurchatov 7.77 276 eP Pn 02 27 06.4 +2.3
KURK pmax pmax
comp=Z,6.0nm,0.6s
KURK Kurchatov 7.77 276 ePn Pn 02 27 06.4 +2.3
comp=Z,5.5nm,0.6s
KURK eS Sb 02 29 11.0 +13
KURBB Kurchatov Arra 7.84 275 ⇓Pn Pn 02 27 05.8 +0.7
comp=Z,0.6nm,0.7s
KURBB ⇑Lg 02 29 19.6
comp=Z,21nm,0.9s
SONM Songino Array 10.54 99 Pn Pn 02 27 40.2 -2.0
comp=Z,0.1nm,0.3s,baz=294,slow=15,SNR=2.6
SONM Lg 02 30 39.2
comp=Z,0.3nm,0.3s,baz=287,slow=32,SNR=8.7
BVAR Borovoye Array 12.88 289 Pn Pn 02 28 13.9 -0.1
comp=Z,0.3nm,0.3s,baz=76,slow=13,SNR=4.7
AKTK Aktyubinsk 20.79 282 P P 02 29 52.9 +0.8
AKTO Aktyubinsk 20.79 282 P P 02 29 52.9 +0.8
comp=Z,1.2nm,0.5s,baz=99,slow=9.8,SNR=6.9
AKTO Aktyubinsk 20.79 282 P P 02 29 52.9 +0.8
AKTO pmax pmax
comp=Z,1.0nm,0.5s
FINES FINESS Array B 36.25 313 P P 02 32 14.0 +0.1
comp=Z,2.8nm,1.1s,mb4.1,baz=89,slow=12,SNR=3.5
FINES FINESS Array B 36.25 313 P P 02 32 14.0 +0.1
FINES pmax pmax
comp=Z,3.0nm,1.1s
NB2 NORSAR Subarra 43.19 316 P P 02 33 11.3 -0.3
comp=Z,0.4nm,0.5s,mb3.4,baz=80,slow=7.4
NOA NORSAR Array B 43.19 316 P P 02 33 12.0 +0.3
comp=Z,0.4nm,0.5s,mb3.5,baz=80,slow=7.6,SNR=8.5
ILAR Eielson Array 56.60 26 P P 02 34 53.0 -0.4
comp=Z,0.3nm,0.6s,mb3.5,baz=318,slow=4.5,SNR=6.3
ESDC Sonseca Array 63.33 301 P P 02 35 40.2 +0.2
comp=Z,0.2nm,0.5s,mb3.5,baz=44,slow=6.9,SNR=2.9

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*IDC **28** 03:17:10.9±1.3, 15°.01S×167°.16E, h0km, mb4.0/11, mb1 4.2/11, mb1mx4.1/16, mbtmp4.0/11, MS3.7/1, Ms1 3.6/1, ms1mx3.0/18, Error ellipse: s-maj=47.3km s-min=21.2km az=140.0*
*LDG **28** 03:17:12.6±0.1, 14°.90S×168°.50E, h10km, Error ellipse: s-maj=27.3km s-min=3.6km az=101.0*
*ISCJB **28** 03:17:14.7±0.7, 14°.94S±0°.06×167°.0E±0°.1, h33km, mb3.9/10, Error ellipse: s-maj=20.0km s-min=8.7km az=5.2*
*NEIC **28** 03:17:16.5±0.7, 15°.02S×167°.07E, h35km, mb4.1/1, Error ellipse: s-maj=21.1km s-min=12.8km az=123.0*
ISC 28 03:17:16.8±0.7, 14°.89S±0°.06×167°.0E±0°.1, h35km, n46, σ1§21/14, mb3.9/10, Vanuatu Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
DZM Mont Dzumac 7.17 184 ePn Pn 03 18 57.8 -1.4
DZM eSn Sn 03 20 20.9 +1.5
CTA Charters Tower 20.46 252 P P 03 21 50.2 -1.4
7.1nm,0.8s,baz=81,slow=13,SNR=10
CTAO Charters Tower 20.46 252 eP P 03 21 50.6 -1.0
9.0nm,0.9s
STKA Stephens Creek 28.71 230 P P 03 23 09.3 -1.5
1.2nm,0.5s,mb3.9,baz=70,slow=14,SNR=3.3
STKA LR LR 03 33 27.8
comp=Z,148nm,20.3s,baz=203,slow=34
ASAR Alice Springs 32.39 249 P P 03 23 43.9 +0.4
2.3nm,0.8s,mb4.0,baz=77,slow=9.8,SNR=17
KSRS Korea Array 63.73 326 P P 03 27 44.6 -0.5
0.6nm,0.5s,mb3.9,baz=139,slow=7.3,SNR=3.6
PETK Petropavlovsk- 68.19 354 P P 03 28 14.4 +1.0
3.5nm,0.7s,mb4.5,baz=128,slow=9.6,SNR=7.4
CMAR Chiang Mai Arr 74.79 294 P P 03 28 55.3 +1.3
0.5nm,0.3s,mb3.9,baz=134,slow=3.9,SNR=4.3
SONM Songino Array 82.48 324 P P 03 29 36.4 +0.8
0.1nm,0.3s,mb3.2,baz=110,slow=6.3,SNR=2.7
ILAR Eielson Array 86.75 18 P P 03 29 55.9 -1.0
0.8nm,0.6s,mb4.1,baz=241,slow=4.5,SNR=9.9
NVAR Mina Array Bea 87.56 49 P P 03 30 01.7 +0.3
0.1nm,0.4s,mb3.4,baz=215,slow=7.6,SNR=3.1
MKAR Makanchi Array 97.15 316 P P 03 30 47.6 +2.0
0.4nm,0.7s,mb4.0,baz=107,slow=4.8,SNR=4.2
YKA Yellowknife Ar 97.80 27 P P 03 30 46.4 -1.7
0.4nm,0.8s,mb4.0,baz=256,slow=5.2,SNR=3.2
ARCES ARCESS Array B 120.34 345 PKP PKPdf 03 36 04.5 +0.8
1.3nm,0.8s,baz=79,slow=1.9,SNR=8.3
HAU Haudompre 143.31 338 ePKP1 PKPdf 03 36 48.3 +0.8
CABF La Chapelle 144.58 337 ePKP1 PKPdf 03 36 50.5 +0.8
11nm,1.0s
FLN La Foliniere 144.69 346 ePKP1 PKPdf 03 36 49.4 -0.5
5.9nm,0.8s
LDF La Druitiere 144.76 345 ePKP1 PKPdf 03 36 50.3 +0.3
3.3nm,0.6s
SSF Saint Saulge 145.10 340 ePKP1 PKPbc 03 36 50.7 +0.6
18nm,1.0s
GRR Gorron 145.13 346 ePKP1 PKPbc 03 36 50.3 +0.2
14nm,0.7s
HYF Humbligny 145.19 341 ePKP1 PKPbc 03 36 51.1 +0.7

LPL	La Plagne	145.24	335	eP	KP1	PKPbc	03 36 51.5 +0.9
	11nm,0.9s						
LPG	La Plagne	145.24	335	eP	KP1	PKPbc	03 36 51.6 +1.0
	6.3nm,0.8s						
SMF	Signal de Mont	145.35	339	eP	KP1	PKPbc	03 36 51.3 +0.4
	11nm,0.9s						
AVF	Avril sur Loir	145.39	340	eP	KP1	PKPbc	03 36 51.3 +0.3
	12nm,0.9s						
SGMF	Saint Gilles	145.63	348	eP	KP1	PKPbc	03 36 51.9 +0.1
	15nm,0.8s						
ROSF	Rostrenen	145.70	348	eP	KP1	PKPbc	03 36 52.1 +0.1
	26nm,1.0s						
BGF	Bois d'Agland	145.76	340	eP	KP1	PKPbc	03 36 52.6 +0.4
	18nm,1.0s						
MBDF	Montbardon	145.86	335	eP	KP1	PKPbc	03 36 52.8 +0.2
	17nm,1.0s						
ORIF	Oris-en-Rattie	146.07	336	eP	KP1	PKPbc	03 36 53.8 +0.6
	17nm,0.9s						
QUIF	Quistinic	146.08	348	eP	KP1	PKPbc	03 36 53.2 +0.1
TCF	Toulx Ste Croi	146.20	341	eP	KP1	PKPbc	03 36 54.0 +0.4
	24nm,1.4s						
SBF	Sospel	146.28	333	eP	KP1	PKPbc	03 36 53.7 -0.2
	22nm,0.8s						
PGF	Pioggiola	146.57	330	eP	KP1	PKPbc	03 36 54.8 0.0
	23nm,1.0s						
VIVF	Saint-Julien-l	146.59	337	eP	KP1	PKPbc	03 36 55.3 +0.5
	12nm,1.0s						
MFF	Saint Martin d	146.61	344	eP	KP1	PKPbc	03 36 55.1 +0.4
	18nm,1.0s						
FRF	La Foret Royal	146.86	333	eP	KP1	PKPbc	03 36 55.6 0.0
	18nm,0.9s						
SMRF	Simiane la Rot	146.97	335	eP	KP1	PKPbc	03 36 56.5 +0.6
	15nm,1.1s						
LMR	La Mourre	147.10	333	eP	KP1	PKPbc	03 36 56.3 0.0
	19nm,1.0s						
RJF	Les Rejaudoux	147.30	341	eP	KP1	PKPbc	03 36 57.3 +0.5
	7.5nm,0.7s						
CAF	Calviac	147.46	340	eP	KP1	PKPbc	03 36 57.9 +0.7
	9.6nm,1.0s						
LASF	Ste Croix	147.56	337	eP	KP1	PKPbc	03 36 58.0 +0.5
	21nm,1.1s						
LFF	La Frestale	147.87	342	eP	KP1	PKPbc	03 36 58.8 +0.5
	6.9nm,0.7s						
MTLF	Montolieu	148.80	338	eP	KP1	PKPbc	03 37 01.2 +0.4
	6.8nm,0.9s						
EPF	Esparros	149.71	340	eP	KP1	PKPbc	03 37 03.8 +0.7
	6.7nm,0.9s						
ETSF	Etsaut	150.11	342	eP	KP1	PKPbc	03 37 05.0 +0.9
	17nm,1.2s						

*IDC **28** 03:42:55.4±0.6,24°.60S×176°.03W,h0km,mb4.6/13, mb1 4.7/14,mb1mx4.7/18,mbtmp4.6/14,ML4.0/1,MS4.8/11, Ms1 4.8/11,ms1mx4.6/18,Error ellipse: s-maj=22.5km s-min=16.2km az=125.0*

*ISCJB **28** 03:42:59.3±1.7,24°.79S±0°.06×176°.06W±0°.05, h36km±15km,mb4.9/54,MS5.0/30,Error ellipse: s-maj=10.4km s-min=6.4km az=156.2*

*GCMT **28** 03:43:01.1±0.2,24°.71S×175°.42W,h22km,MW5.3, Moment Tensor Solution. s66,c108; s89,c155; Moment tensor: Scale 10^{17}Nm; M_{rr}1.00±.03; $M_{\theta\theta}$-0.04±.02; $M_{\phi\phi}$-0.96±.02; $M_{r\theta}$0.29±.03; $M_{r\phi}$-0.20±.01; $M_{\theta\phi}$0.73±.03; Best double couple: $M_0$1.30000×10^{17} NP1:ϕ_s186.00000°, δ26.00000°,λ79.00000°. NP2:ϕ_s18.00000°,δ64.00000°, λ95.00000°. Principal axes: T 1.2800, Plg70.0000°, Azm299.0000°; N -0.0100, Plg5.0000°, Azm195.0000°; P -1.2600, Plg19.0000°, Azm104.0000°; Data Used: II IU IC G CN.*

*BJI **28** 03:43:01.5,24°.57S×175°.97W,h49km,mB5.6/22, mb5.3/29,Ms5.2/19,Ms7 5.0/19*

*MOS **28** 03:43:02.9±1.5,24°.60S×176°.23W,h59km,mb5.2/16, MS4.9/13,Error ellipse: s-maj=12.7km s-min=11.1km az=133.2*

*NEIC **28** 03:43:03.5±1.5,24°.77S×176°.13W,h58km±13km,mb4.9/31, Error ellipse: s-maj=10.1km s-min=7.3km az=132.0*

ISC 28 03:43:02.2±1.4,**24°.80S**±0°.06×**176°.03W**±0°.05, **h47**km±12km,**h43**km±.8km:**pP-P,n384**,σ0**70**/282,**mb4.9**/54, **MS5.0**/30,**101C-87D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	8.93	321	eP	Pn	03 45 09.9	+1.3
MSVF				pmax	pmax		
	comp=Z,182nm,0.8s						
MSVF	Nonsavu	8.93	321	ePn	Pn	03 45 09.9	+1.3
	comp=Z,182nm,0.8s						
AFI	Afiamalu	11.55	21	Pn	Pn	03 45 34.0	-10
	comp=Z,7.2nm,0.3s,baz=17,slow=3.7,SNR=13						
AFI				Sn	Sn	03 47 33.5	-19
	comp=Z,6.8nm,0.3s,baz=66,slow=19,SNR=5.1						
AFI	Afiamalu	11.55	21	ePn	Pn	03 45 34.8	-10
AFI				eS	Sn	03 47 32.3	-20
URZ	Urewera	14.63	202	Pn	Pn	03 46 25.2	-1.0
	comp=Z,0.7nm,0.3s,baz=343,slow=19,SNR=2.8						
URZ				Sn	Sn	03 48 58.1	-8.9
	comp=Z,0.6nm,0.3s,baz=342,slow=20,SNR=3.2						
RAR	Rarotonga	15.39	80	Pn	Pn	03 46 24.3	-12
	comp=Z,17nm,0.3s,baz=251,slow=7.8,SNR=20						
RAR				Sn	Sn	03 48 54.5	-31
	comp=Z,2.0nm,0.3s,baz=127,slow=20,SNR=3.3						
DZM	Mont Dzumac	16.31	276	eP	Pn	03 46 54.9	+6.9
DZM				eLR	LR	03 51 07.8	
	comp=Z,7μm,22.1s,baz=116						
NOUC	Port Laguerre	16.43	276	eP	Pn	03 46 58.5	+9.0
SNZO	South Karori	18.19	203	eP	Pn	03 47 10.5	-0.5
RPZ	Rata Peaks	21.63	206	P	P	03 47 50.0	+1.7
	comp=Z,4.2nm,0.5s,mb4.2,baz=66,slow=20,SNR=4.2						
RPZ				LR	LR	03 56 12.8	
	comp=Z,3μm,18.9s,MS4.7,baz=22,slow=37						
PPT	Papeete	25.67	79	eLR	LR	03 54 15.8	
	comp=Z,5μm,27.5s,baz=250						
PPT	Papeete	25.67	79	LR	LR	03 55 24.3	
	comp=Z,2μm,19.7s,MS4.6,baz=253,slow=29						
EIDS	Eidsvold	29.75	262	P	P	03 49 03.8	-0.5
CTA	Charters Tower	35.10	270	eP	P	03 49 50.8	-0.3
	comp=Z,7.9nm,0.6s,mb4.8						
CTA	Charters Tower	35.10	270	P	P	03 49 50.7	-0.4
	comp=Z,9.9nm,0.5s,mb5.0,baz=106,slow=10.0,SNR=10						
CTA	Charters Tower	35.10	270	P	P	03 49 50.7	-0.4
CTAO	Charters Tower	35.10	270	eP	P	03 49 50.8	-0.3
CTAO				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.0						
CTAO	Charters Tower	35.10	270	eP	P	03 49 50.8	-0.2
	comp=Z,11nm,0.6s,mb5.0						
RKT	Rikitea	37.46	96	eLR	LR	03 59 46.1	
	comp=Z,2μm,28.2s,baz=260						
TAOE	Nuku Hiva Isla	37.67	71	eLR	LR	03 59 46.5	
	comp=Z,2μm,28.6s,baz=252						
STKA	Stephens Creek	37.77	249	eP	P	03 50 14.3	+0.5
	comp=Z,5.3nm,1.6s,mb4.0						
STKA	Stephens Creek	37.77	249	P	P	03 50 13.3	-0.5
	comp=Z,1.7nm,0.5s,mb4.1,baz=79,slow=12,SNR=8.9						
STKA				LR	LR	04 04 54.1	
	comp=Z,5μm,18.7s,MS5.3,baz=81,slow=35						
STKA	Stephens Creek	37.77	249	P	P	03 50 13.3	-0.5
STKA				LR	LR	04 04 54.1	
PMG	Port Moresby	38.21	287	eP	P	03 50 15.3	-2.3
PMG				pmax	pmax		
	comp=Z,32nm,0.8s						
PMG	Port Moresby	38.21	287	eP	P	03 50 16.3	-1.4
	comp=Z,27nm,0.8s,mb5.0						
ASAR	Alice Springs	45.46	261	P	P	03 51 16.2	-0.6
	comp=Z,3.3nm,0.7s,mb4.3,baz=98,slow=6.7,SNR=17						
ASAR				PcP	PcP	03 52 56.9	+1.6
	comp=Z,2.2nm,0.7s,baz=112,slow=4.2,SNR=5.0						
ASAR				S	S	03 57 54.8	-0.5
	comp=Z,0.6nm,0.8s,baz=92,slow=16,SNR=3.8						
WRAB	Tennant Creek	45.95	266	eP	P	03 51 19.7	-1.0
WRAB				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
WRAB	Tennant Creek	45.95	266	eP	P	03 51 19.7	-1.0
	comp=Z,13nm,0.9s,mb4.9						
WRA	Warramunga Arr	45.95	266	P	P	03 51 19.7	-1.0
	baz=103,slow=8.3						
KAKA	Kakadu	49.99	274	eP	P	03 51 49.8	-2.2
	comp=Z,7.0nm,0.7s,mb4.8						
SBA	Scott Base	53.74	184	eP	P	03 52 21.7	+2.7
SBA				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
SBA	Scott Base	53.74	184	eP	P	03 52 21.7	+2.7
	comp=Z,13nm,1.0s,mb4.8						
FITZ	Fitzroy Crossi	54.36	265	eP	P	03 52 24.1	-0.4
	comp=Z,8.8nm,0.7s,mb4.8						
KLBR	Kellerberrin	57.98	247	eP	P	03 52 49.0	-1.1
	comp=Z,49nm,1.5s,mb5.3						
MBWA	Marble Bar	58.77	259	eP	P	03 52 55.6	-0.2
	comp=Z,4.5nm,0.8s,mb4.5						
CASY	Casey	60.91	206	eP	P	03 53 11.0	+1.3
	comp=Z,18nm,0.8s,mb5.2						
QSPA	South Pole Qui	65.29	180	P	P	03 53 40.5	+1.9
	comp=Z,18nm,0.9s,mb5.1,baz=44,slow=2.2,SNR=26						
QSPA	South Pole Qui	65.29	180	eP	P	03 53 40.4	+1.8
	comp=Z,26nm,0.9s,mb5.3						
MJAR	Matsushiro Arr	74.73	323	P	P	03 54 36.0	-0.9
	comp=Z,3.2nm,0.7s,mb4.4,baz=162,slow=5.8,SNR=9.1						
MJAR				LR	LR	04 22 16.3	
	comp=Z,519nm,21.6s,MS4.8,baz=150,slow=32						
MJAR	Matsushiro Arr	74.73	323	P	P	03 54 36.0	-1.0
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MAT	Matsushiro	74.73	323	P	P	03 54 36.0	-1.0
MAT				S	S	04 04 10.0	+0.2
YUK	Yuzh-Kuril'sk	76.88	333	⇑iP	P	03 54 46.4	-2.7
YUK				pmax	pmax		
	comp=E,120nm,8.3s						
YUK				pmax	pmax		
	comp=Z,160nm,8.3s						
MAW	Mawson	78.15	200	P	P	03 54 57.4	+1.4
	comp=Z,3.1nm,0.6s,mb4.4,baz=74,slow=4.2,SNR=8.0						
MAW				LR	LR	04 30 16.2	
	comp=Z,863nm,18.8s,MS5.1,baz=118,slow=36						
MAW	Mawson	78.15	200	P	P	03 54 57.4	+1.4
MAW				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MAW				MLR	MLR		
	comp=Z,863nm,18.8s						
MAW	Mawson	78.15	200	eP	P	03 54 56.9	+0.9
	comp=Z,2.7nm,1.1s,mb4.1						
SKR	Severo-Kuril's	79.08	342	eP	P	03 54 54.0	-7.1
SKR				e		04 05 09.0	
YSS	Yuzh-Sakhalins	80.53	333	αiP	P	03 55 09.2	+0.1
YSS				eS	S	04 05 17.0	+5.0
YSS				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.3						
YSS	Yuzh-Sakhalins	80.53	333	P	P	03 55 09.7	+0.7
	comp=Z,22nm,0.5s,mb5.3						
PET	Petropavlovsk	80.56	345	αiP	P	03 55 08.8	-0.3
PET				e		03 58 14.9	
PET				ePPP		04 00 00.6	
PET				eS	S	04 05 13.3	+1.2
PET				eSS	SS	04 10 30.7	+4.6
PET				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.3						
PET				pmax	pmax		
	comp=Z,200nm,13.7s						
PET				pmax	pmax		
	comp=Z,100nm,17.4s						
PET				MLR	MLR		
	comp=Z,500nm,17.0s,MS4.9						
PET				MLR	MLR		
	comp=Z,400nm,17.0s						
MONP	Monument Peak	80.71	47	⇓P	P	03 55 10.3	-0.1
	baz=81						
VES	Vestal, Richgr	80.81	44	⇓P	P	03 55 10.8	-0.1
	baz=81						
PETK	Petropavlovsk-	80.87	344	P	P	03 55 10.1	-0.6
	comp=Z,17nm,0.8s,mb5.0,baz=127,slow=9.0,SNR=17						
PETK				LR	LR	04 28 02.8	
	comp=Z,504nm,19.3s,MS4.9,baz=172,slow=34						
EDW2	Edwards Air Fo	80.90	45	⇓P	P	03 55 11.4	0.0
	baz=81						
ISA	Isabella	81.09	44	⇑P	P	03 55 11.8	-0.5
	baz=81						
ISA	Isabella	81.09	44	eP	P	03 55 13.0	+0.7
PFO	Pinyon Flat Ob	81.12	47	⇓P	P	03 55 12.3	-0.3
	baz=81						
KSRS	Korea Array	81.29	318	P	P	03 55 13.7	+0.3
	comp=Z,8.5nm,1.1s,mb4.6,baz=129,slow=5.6,SNR=18						
KSRS				LR	LR	04 29 26.2	
	comp=Z,431nm,18.0s,MS4.8,baz=117,slow=34						
CMB	Columbia Colle	81.42	41	eP	P	03 55 13.2	-0.9
CMB				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.8						
CMB	Columbia Colle	81.42	41	eP	P	03 55 13.2	-0.8
	comp=Z,16nm,1.4s,mb4.8						
BELC	Belle Mtn. Jos	81.66	47	⇓P	P	03 55 15.4	-0.1
	baz=82						
BC3	Big Chuckawall	81.82	47	⇑P	P	03 55 15.7	-0.6
	baz=82						
CWC	Cottonwood Cre	81.82	44	⇑P	P	03 55 16.1	-0.1
	baz=82						
GSC	Goldstone	81.93	45	⇑P	P	03 55 16.8	0.0
	baz=82						
GSC	Goldstone	81.93	45	eP	P	03 55 16.4	-0.4
GSC				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.8						
GSC	Goldstone	81.93	45	eP	P	03 55 16.4	-0.4
	comp=Z,16nm,1.4s,mb4.8						
HEC	Hector,Ludlow	81.95	46	⇑P	P	03 55 16.8	-0.1
	baz=82						
MPMC	Manual Prospec	81.96	44	⇓P	P	03 55 16.9	0.0
	baz=82,SNR=11						
MTUM	Tungsten Hills	82.10	43	eP	P	03 55 18.6	+1.0
WAKR	Walker	82.30	41	eP	P	03 55 18.6	0.0
GMRC	Granite Mounta	82.36	46	⇑P	P	03 55 18.6	-0.4
	baz=83						
YBH	Yreka Blue Hor	82.54	37	eP	P	03 55 20.3	+0.5
YBH				pmax	pmax		
	comp=Z,9.0nm,1.2s						
YBH	Yreka Blue Hor	82.54	37	eP	P	03 55 20.2	+0.4
	comp=Z,8.5nm,1.2s,mb4.7						
FURC	Furnace Creek,	82.61	44	⇑P	P	03 55 20.4	+0.1
	baz=83						
U10A	Ash Meadows, A	82.92	45	⇓P	P	03 55 22.3	+0.3
	baz=83						
NVAR	Mina Array Bea	82.94	42	P	P	03 55 22.0	0.0
	comp=Z,2.6nm,0.7s,mb4.4,baz=221,slow=7.6,SNR=17						
SYO	Syowa Base	82.94	192	⇑eP	P	03 55 20.6	-1.0
PAHR	Pah Rah Range	83.10	40	eP	P	03 55 25.6	+2.8
V12A	Nelson	83.45	46	⇓P	P	03 55 24.9	+0.2
	baz=84						
X13A	Yucca	83.46	47	⇓P	P	03 55 24.8	0.0
	baz=84						
Y14A	Wickenburg	83.63	48	⇑P	P	03 55 25.3	-0.4
	baz=84						
S10A	Tonopah Range,	83.67	43	⇑P	P	03 55 25.3	-0.5
	baz=84,SNR=9.8						
W13A	Hualapai Mount	83.72	47	⇓P	P	03 55 25.8	-0.2
	baz=84						
217A	Green Valley	83.92	51	⇓P	P	03 55 26.6	-0.6
	baz=84						
MOD	Modoc	84.00	38	eP	P	03 55 28.5	+1.1
	comp=Z,7.9nm,0.9s,mb4.8						
NJ2	Nanjing	84.00	309	eP	P	03 55 29.3	+1.7
NJ2				pP	pP	03 55 41.8	+0.3
NJ2				sP	sP	03 55 47.3	+0.5
NJ2				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.2						
X14A	Yava	84.01	48	⇑P	P	03 55 28.0	+0.3
	baz=84						
S11A	Rachel	84.03	44	⇓P	P	03 55 27.7	+0.1
	baz=84						
U12A	Valley of Fire	84.08	45	⇑P	P	03 55 28.0	+0.2
	baz=84						
R10A	Warm Springs	84.08	43	⇓P	P	03 55 28.2	+0.4
	baz=84						
V13A	Grand Canyon W	84.09	46	⇑P	P	03 55 28.0	0.0
	baz=84						
Y15A	Casa Rosa Ranc	84.09	49	⇑P	P	03 55 28.1	+0.1
	baz=84						
K05A	Summer Lake	84.21	37	⇑P	P	03 55 28.4	0.0
	baz=84						
QIZ	Qiongzhong	84.26	294	P	P	03 55 29.3	+0.1
QIZ				pP	pP	03 55 41.5	-1.6
QIZ				sP	sP	03 55 46.5	-1.9
QIZ				PP	PP	03 58 44.0	-0.5
QIZ				S	S	04 05 52.0	+0.6
QIZ				SS	SS	04 11 23.0	+0.8
QIZ				LR	LR		
	comp=N,230nm,7.1s						
QIZ				LR	LR		
	comp=E,250nm,14.8s						
QIZ				LR	LR		
	comp=Z,530nm,16.4s,MS5.0						
W14A	Seligman	84.31	47	⇓P	P	03 55 29.2	+0.1
	baz=84						
117A	Oracle	84.42	50	⇑P	P	03 55 30.0	+0.3
	baz=85						
VNA1	Neumayer--Stat	84.43	176	eP	P	03 55 27.1	-2.1
VNA1				e		03 55 33.5	
VNA1				e	pP	03 55 38.4	-4.7
VNA1				e		03 55 46.1	
X15A	Humboldt	84.47	48	⇓P	P	03 55 30.2	+0.3
	baz=85						
V14A	Boquillas Ranc	84.55	47	⇓P	P	03 55 30.5	+0.2
	baz=85						
R11A	Troy Canyon, C	84.56	43	⇓P	P	03 55 29.8	-0.5
	baz=85						
S12A	Delamar Landin	84.58	44	⇑P	P	03 55 31.0	+0.6
	baz=85						
Y16A	Circle Bar Ran	84.64	49	⇑P	P	03 55 31.3	+0.5
	baz=85						
319A	Douglas	84.79	52	⇑P	P	03 55 32.1	+0.4
	baz=85						
Q11A	Duckwater	84.82	43	⇓P	P	03 55 31.9	+0.3
	baz=85						
H04A	Detroit Lake	84.82	35	⇑P	P	03 55 31.6	+0.2
	baz=85						
T13A	Saint George	84.83	45	⇑P	P	03 55 32.0	+0.3
	baz=85						
U14A	Mt Trumbull	84.95	46	⇑P	P	03 55 32.4	+0.1
	baz=85,SNR=14						
X16A	Lo Mia Camp, P	84.97	49	⇑P	P	03 55 32.6	+0.2
	baz=85,SNR=7.6						
Y17A	Roosevelt	84.97	49	⇑P	P	03 55 32.5	0.0
	baz=85						
118A	Homack Ranch,	84.99	51	⇓P	P	03 55 32.9	+0.2
	baz=85						
PLCA	Paso Flores	85.03	133	LR	LR	04 24 39.0	
	comp=Z,370nm,20.4s,MS4.8,baz=65,slow=29						
HABR	Khabarovsk	85.06	330	eP	P	03 55 31.2	-1.3
HABR				eS	S	04 05 51.8	-6.3
HABR				eSS	SS	04 11 29.4	-3.5
HABR				SSS		04 15 00.6	
HABR				MLR	MLR		
	comp=Z,243nm,22.0s,MS4.5						
MDJ	Mudanjiang	85.06	324	P	P	03 55 33.0	+0.4
MDJ				pP	pP	03 55 45.0	-1.6
MDJ				sP	sP	03 55 49.5	-2.4
MDJ				PP	PP	03 58 49.3	-1.3
MDJ				S	S	04 06 00.5	+2.3
MDJ				sS	sS	04 06 21.8	+0.1
MDJ				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.9						
MDJ				pmax	pmax		
	comp=Z,280nm,7.7s						
MDJ				LR	LR		
	comp=N,180nm,17.8s,MS4.8						
MDJ				LR	LR		
	comp=E,300nm,19.4s,MS4.8						
MDJ				LR	LR		
	comp=Z,470nm,18.6s,MS4.9						
MDJ	Mudanjiang	85.06	324	eP	P	03 55 33.5	+0.8
	comp=Z,11nm,0.7s,mb5.1						
219A	White Tail Can	85.15	52	⇓P	P	03 55 33.0	-0.4
	baz=85						
R12A	Pony Springs,	85.16	44	⇑P	P	03 55 33.0	-0.3
	baz=85						
S13A	Holt Ranch, En	85.19	45	⇑P	P	03 55 33.6	+0.2
	baz=85,SNR=7.9						
V15A	Kaibab Nationa	85.27	47	⇓P	P	03 55 33.8	-0.1
	baz=86						
W16A	Flagstaff	85.29	48	⇓P	P	03 55 33.7	-0.3
	baz=86						
320A	Kipp Ranch, An	85.31	52	⇓P	P	03 55 34.0	-0.2
	baz=86						
X17A	Forest Lakes	85.36	49	⇑P	P	03 55 34.4	0.0
	baz=86						
T14A	Hurricane	85.39	46	⇑P	P	03 55 34.5	0.0
	baz=86						
R13A	O'Grain Ranch,	85.48	44	⇓P	P	03 55 35.1	+0.2
	baz=86						
CCUT	Cedar City	85.50	45	eP	P	03 55 35.3	+0.3
	comp=Z,4.1nm,1.1s,mb4.5						
119A	Ashpeak Ranch,	85.53	51	⇑P	P	03 55 35.3	0.0
	baz=86						
U15A	North Rim	85.54	47	⇓P	P	03 55 35.6	+0.4
	baz=86,SNR=11						
Y18A	Canyon Day Jun	85.58	50	⇑P	P	03 55 35.6	+0.1
	baz=86						
O11A	Cowboy Ranch,	85.60	42	⇓P	P	03 55 35.6	+0.1
	baz=86						
220A	Playas Peak, P	85.62	52	⇓P	P	03 55 35.7	-0.1
	baz=86						
WUAZ	Wupatki	85.63	48	eP	P	03 55 36.4	+0.6
	comp=Z,17nm,1.3s,mb5.1						
S14A	Cedar City	85.74	45	⇑P	P	03 55 36.7	+0.5
	baz=86						
T15A	Red Dirt Ranch	85.82	46	⇓P	P	03 55 37.2	+0.6
	baz=86						
I07A	Izee	85.86	37	⇓P	P	03 55 36.9	+0.2
	baz=86						
120A	U Bar Ranch, L	85.89	51	⇑P	P	03 55 37.0	0.0
	baz=86						
M10A	I.L. Ranch, Tu	85.93	40	⇑P	P	03 55 37.3	+0.3
	baz=86						
J08A	Circle Bar Ran	85.97	38	⇓P	P	03 55 37.4	+0.2
	baz=86						
V17A	Tonalea, Kykot	86.08	48	⇑P	P	03 55 37.9	-0.1
	baz=86,SNR=14						
U16A	Tuba City	86.15	47	⇓P	P	03 55 38.5	+0.2
	baz=86						
P13A	Bates Ranch, G	86.20	43	⇑P	P	03 55 38.4	-0.1
	baz=86						
Y19A	Nutrioso	86.22	50	⇓P	P	03 55 38.8	+0.1
	baz=86						
Z20A	Nine Sixteen R	86.22	51	⇓P	P	03 55 38.7	0.0
	baz=86						
Q14A	Sevier Lake (B	86.39	44	⇑P	P	03 55 39.7	+0.3
	baz=87						
WHN	Wuhan	86.43	306	P	P	03 55 38.8	-1.0
X19A	St. Johns	86.45	50	⇑P	P	03 55 40.3	+0.5
	baz=87						
121A	Cookes Peak, D	86.48	52	⇓P	P	03 55 39.9	-0.1
	baz=87						
W18A	Petrified Fore	86.52	49	⇑P	P	03 55 40.2	0.0
	baz=87						
D05A	Enumclaw	86.62	34	⇓P	P	03 55 40.7	+0.4
	baz=87						
V18A	Ganado	86.72	48	⇓P	P	03 55 41.2	+0.2
	baz=87						
U17A	Shonto	86.72	47	⇓P	P	03 55 41.2	+0.2
	baz=87						
S16A	Weppner Ranch,	86.74	46	⇑P	P	03 55 41.2	+0.1
	baz=87						
CN2	Changchun	86.79	322	eP	P	03 55 41.5	+0.3
CN2				epP	pP	03 55 54.5	-0.7
CN2				eS	S	04 06 14.5	-0.7
CN2				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.3						
Y20A	Horse Springs,	86.80	50	⇓P	P	03 55 41.9	+0.3
	baz=87						
MSU	Marysvale	86.81	45	eP	P	03 55 43.0	+1.5
P14A	Drum Mountains	86.88	44	⇓P	P	03 55 41.5	-0.2
	baz=87						
G08A	Pilot Rock	86.94	36	⇑P	P	03 55 41.8	-0.1
	baz=87						
Z21A	St. Cloud Mine	86.98	51	⇑P	P	03 55 42.1	-0.3

V20A	**Brimhall**	87.76	49	⇑P		P	03 55 46.5	+0.4
	baz=88							
MNTX	**Cornudas Mount**	87.79	54	*e*P		P	03 55 45.6	-0.8
	comp=Z,8.1nm,1.3s,mb4.8							
Y22A	**Socorro**	87.81	51	⇑P		P	03 55 46.4	0.0
	baz=88							
M14A	**Sheep Mountain**	87.83	42	⇑P		P	03 55 46.1	-0.2
	baz=88							
TXAR	**Lajitas Array**	87.87	56	P		P	03 55 46.1	-0.6
	comp=Z,1.9nm,0.9s,mb4.3,baz=217,slow=7.2,SNR=16							
TXAR				LR		LR	04 29 34.4	
	comp=Z,388nm,18.4s,MS4.8,baz=70,slow=32							
224A	**Cornudas Mount**	87.88	53	⇓P		P	03 55 46.4	-0.4
	baz=88							
TMUT	**Trail Mountain**	87.88	45	*e*P		P	03 55 47.6	+1.0
	comp=Z,10nm,0.8s,mb5.1							
526A	**Mary Lane Ranc**	87.92	56	⇑P		P	03 55 46.6	-0.4
	baz=88							
325A	**Bean Ranch, Si**	87.92	54	⇑P		P	03 55 46.9	-0.1
	baz=88							
LAZ	**Ladron**	87.93	51	*e*P		P	03 55 47.9	+0.9
	comp=Z,5.7nm,1.5s,mb4.6							
I12A	**Atlanta**	88.14	39	⇑P		P	03 55 47.3	-0.4
	baz=88							
627A	**Terlingua Ranc**	88.14	56	⇓P		P	03 55 47.7	-0.4
	baz=88							
BNM	**Barren Site**	88.16	51	P		P	03 55 49.2	+1.2
	comp=Z,18nm,1.7s,mb5.0							
E09A	**Wood Farm, Sta**	88.16	36	⇓P		P	03 55 47.7	0.0
	baz=88							
L14A	**Malta**	88.20	42	⇑P		P	03 55 48.0	-0.1
	baz=88							
R18A	**Canyonlands Na**	88.22	46	⇑P		P	03 55 47.9	-0.3
	baz=88							
124A	**Stringfield Ra**	88.25	53	⇑P		P	03 55 48.4	-0.1
	baz=88							
426A	**McDonald Obser**	88.27	55	⇓P		P	03 55 48.3	-0.3
	baz=88							
527A	**Woodward Ranch**	88.32	56	⇓P		P	03 55 48.5	-0.4
	baz=88							
S19A	**Harvey Farm, M**	88.37	47	⇓P		P	03 55 48.7	-0.2
	baz=89							
Y23A	**Lovelace Mesa,**	88.45	51	⇓P		P	03 55 49.3	-0.1
	baz=89							
J13A	**Cove Ranch, Pi**	88.46	40	⇓P		P	03 55 48.9	-0.3
	baz=89							
U21A	**Nageezi**	88.65	49	⇓P		P	03 55 50.3	0.0
	baz=89							
O17A	**Robinson Place**	88.69	44	⇑P		P	03 55 50.0	-0.4
	baz=89							
ANMO	**Albuquerque**	88.70	50	*e*P		P	03 55 50.6	0.0
ANMO				pmax		pmax		
	comp=Z,4.0nm,1.2s							
ANMO	**Albuquerque**	88.70	50	*e*P		P	03 55 50.6	0.0
	comp=Z,4.3nm,1.2s,mb4.7							
B08A	**Colville Reser**	88.73	34	⇓P		P	03 55 50.0	-0.4
	baz=89							
H12A	**Diamond D Ranc**	88.76	39	⇓P		P	03 55 50.2	-0.4
	baz=89							
GDL2	**Guadalupe Moun**	88.79	54	*e*P		P	03 55 50.2	-0.9
125A	**Gardner Draw,**	88.81	53	⇓P		P	03 55 50.6	-0.5
	baz=89							
427A	**Hayter Ranch,**	88.82	55	⇑P		P	03 55 50.8	-0.5
	baz=89							
G12A	**Big Creek, Yel**	88.84	38	⇑P		P	03 55 51.0	0.0
	baz=89							
TTA	**Tatalina**	88.86	9	*e*P		P	03 55 50.8	+0.2
TTA				pmax		pmax		
	comp=Z,16nm,1.2s,mb5.2							
TTA	**Tatalina**	88.86	9	*e*P		P	03 55 50.8	+0.2
	comp=Z,16nm,1.2s,mb5.2							
Y24A	**Capitan**	88.89	52	⇑P		P	03 55 51.1	-0.4
	baz=89							
PV01	**Paradox Valley**	88.95	47	*e*P		P	03 55 54.0	+2.3
Z25A	**Roswell**	89.08	53	⇑P		P	03 55 52.2	-0.1
	baz=89							
H13A	**Challis**	89.11	39	⇓P		P	03 55 52.0	-0.3
	baz=89							
BMRM	**Bremner River**	89.19	15	*e*P		P	03 55 51.6	-0.6
	comp=Z,16nm,1.1s,mb5.2							
F12A	**Elk City**	89.26	38	⇓P		P	03 55 52.8	-0.1
	baz=90							
428A	**Kincaid Ranch,**	89.30	56	⇓P		P	03 55 53.3	-0.2
	baz=90							
V23A	**Ortiz Mt. (NFS**	89.30	50	⇑P		P	03 55 53.2	-0.2
	baz=90							
Y25A	**Mesa, Roswell**	89.42	52	⇑P		P	03 55 53.6	-0.4
	baz=90							
G13A	**Cobalt**	89.44	39	⇑P		P	03 55 53.8	0.0
	baz=90							
E12A	**Beaver Dam Sad**	89.49	37	⇓P		P	03 55 53.8	-0.2
	baz=90							
W24A	**Lazy 6 Ranch,**	89.57	51	⇓P		P	03 55 54.2	-0.5
	baz=90							
Q20A	**Ridgley Place,**	89.58	46	⇓P		P	03 55 53.9	-0.7
	baz=90							
F13A	**Darby**	89.80	38	⇑P		P	03 55 55.2	-0.2
	baz=90							
S22A	**4UR Ranch, Cre**	89.91	48	⇓P		P	03 55 56.3	+0.1
	baz=90							
V24A	**Rampart Ranch,**	89.93	50	⇑P		P	03 55 56.2	-0.1
	baz=90							
ENH	**Enshi**	89.93	304	*e*P		P	03 55 57.5	+1.0
	comp=Z,28nm,1.0s,mb5.5							
C11A	**Tepee Creek (N**	90.00	36	⇑P		P	03 55 56.3	-0.1
	baz=90							
D12A	**Red Ives Fores**	90.00	37	⇑P		P	03 55 56.4	0.0
	baz=90							
H15A	**Lima**	90.07	40	⇑P		P	03 55 56.4	-0.3
	baz=90							
MCMT	**McKenzie Canyo**	90.07	39	*e*P		P	03 55 59.7	+3.0
	comp=Z,3.0nm,1.2s,mb4.5							
T23A	**Casias Ranch,**	90.08	49	⇓P		P	03 55 56.4	-0.5
	baz=90							
BJI	**Beijing**	90.20	315	P		P	03 55 58.5	+1.0
BJI				pP		pP	03 56 10.8	-0.7
BJI				sP		sP	03 56 15.5	-1.3
BJI				S		S	04 06 38.5	-9.2
BJI				SS		SS	04 12 46.3	-2.1
BJI				pmax		pmax		
	comp=Z,12nm,0.9s,mb5.2							
BJI				pmax		pmax		
	comp=Z,360nm,6.6s							
BJI				LR		LR		
	comp=N,590nm,21.1s,MS5.1							
BJI				LR		LR		
	comp=E,360nm,20.6s,MS5.1							
BJI				LR		LR		
	comp=Z,410nm,18.6s,MS4.9							
R22A	**Saguache, Gunn**	90.21	47	⇑P		P	03 55 57.5	-0.1
	baz=90							
W25A	**X Bar L Ranch,**	90.24	51	⇑P		P	03 55 57.3	-0.5
	baz=90							
I16A	**Newdale**	90.32	41	⇑P		P	03 55 57.6	-0.3
	baz=90							
GYA	**Guiyang**	90.33	299	*e*P		P	03 55 59.0	+0.6
GYA				pP		pP	03 56 12.5	0.0
GYA				sP		sP	03 56 19.3	+1.6
GYA				PP		PP	03 59 36.5	+3.2
GYA				SKS			04 06 24.8	
GYA				S		S	04 06 49.3	-0.2
GYA				sS		sS	04 07 10.0	-3.1
GYA				SS		SS	04 12 52.0	+1.2
GYA				pmax		pmax		
	comp=Z,20nm,1.0s,mb5.4							
GYA				pmax		pmax		
	comp=Z,120nm,5.7s							
GYA				LR		LR		
	comp=N,540nm,19.3s,MS5.1							
GYA				LR		LR		
	comp=E,470nm,20.4s,MS5.1							
GYA				LR		LR		
	comp=Z,510nm,19.0s,MS5.0							
Q22A	**Crested Butte,**	90.44	47	⇑P		P	03 55 58.2	-0.5
	baz=91							
V25A	**Rancho No Teng**	90.44	50	⇓P		P	03 55 58.3	-0.5
	baz=91							
K18A	**Toltan Ranch,**	90.49	42	⇑P		P	03 55 58.7	-0.1
	baz=91							
D13A	**Huson**	90.51	37	⇑P		P	03 55 58.3	-0.5
	baz=91							
DLMT	**Dillon**	90.53	39	*e*P		P	03 55 59.3	+0.5
	comp=Z,11nm,1.4s,mb5.0							
E14A	**Clinton**	90.64	38	⇓P		P	03 55 59.2	-0.1
	baz=91							
IMW	**Indian Meadow**	90.66	41	*e*P		P	03 56 02.6	+3.1
LOHW	**Long Hollow**	90.70	41	*e*P		P	03 55 59.3	-0.4
	comp=Z,2.5nm,1.1s,mb4.5							
SDCO	**Great Sand Dun**	90.81	48	*e*P		P	03 55 60.0	-0.4
	comp=Z,5.3nm,1.3s,mb4.7							
J18A	**Kendall Valley**	90.83	42	⇓P		P	03 56 00.2	-0.1
	baz=91							
U25A	**Circle Dot Ran**	90.87	50	⇓P		P	03 56 00.5	-0.2
	baz=91							
G16A	**Moss Hill, Enn**	90.91	40	⇓P		P	03 56 00.5	-0.2
	baz=91							
X27A	**F and S Farms,**	90.92	52	⇓P		P	03 56 00.6	-0.4
	baz=91							
SEY	**Seymchan**	90.95	346	*c*e*c*P		P	03 55 59.5	-0.9
D14A	**Greenough**	91.03	37	⇑P		P	03 56 01.1	0.0
	baz=91							
T25A	**Trinidad**	91.25	49	⇑P		P	03 56 01.5	-0.9
	baz=91							
R24A	**Sanders Place,**	91.32	48	⇓P		P	03 56 02.6	-0.2
	baz=92							
U26A	**Atchley Ranch,**	91.33	50	⇓P		P	03 56 02.6	-0.2
	baz=92							
O22A	**Kremmling**	91.37	46	⇑P		P	03 56 02.8	-0.1
	baz=92							
P23A	**Jefferson**	91.42	47	⇑P		P	03 56 03.3	+0.1
	baz=92							
S25A	**Robets Cordova**	91.49	49	⇓P		P	03 56 03.5	-0.1
	baz=92							
O23A	**Lake Granby, G**	91.80	46	⇓P		P	03 56 04.8	-0.1
	baz=92							
B14A	**Marquette Ranc**	91.91	36	⇓P		P	03 56 05.3	+0.1
	baz=92							
F17A	**Fitzpatrick Pl**	91.95	39	⇓P		P	03 56 05.5	+0.1
	baz=92							
COLA	**College**	92.01	12	*e*P		P	03 56 06.3	+1.0
COLA				pmax		pmax		
	comp=Z,16nm,1.4s,mb5.2							
COLA	**College**	92.01	12	*e*P		P	03 56 06.3	+1.0
	comp=Z,16nm,1.4s,mb5.2							
D16A	**Dana Ranch, Ca**	92.09	38	⇓P		P	03 56 05.5	-0.5
	baz=92							
ILAR	**Eielson Array**	92.10	12	P		P	03 56 04.8	-0.9
	comp=Z,2.9nm,1.1s,mb4.5,baz=219,slow=4.4,SNR=11							
ILAR				PP		PP	03 59 45.5	-1.0
	comp=Z,0.3nm,0.8s,baz=226,slow=7.2,SNR=3.1							
A14A	**Double T Ranch**	92.19	36	⇑P		P	03 56 06.1	-0.3
	baz=92							
B15A	**Bradely Ranch,**	92.27	37	⇑P		P	03 56 06.8	0.0
	baz=92							
G18A	**Lazy EL Ranch,**	92.27	40	⇑P		P	03 56 06.8	-0.1
	baz=92							
C16A	**Fuhringer Ranc**	92.42	37	⇓P		P	03 56 07.2	-0.4
	baz=93							
F18A	**Big Timber**	92.50	40	⇓P		P	03 56 07.4	-0.6
	baz=93							
A15A	**Johnson Ranch,**	92.56	36	⇓P		P	03 56 07.8	-0.4
	baz=93							
D17A	**Six Diamond Ra**	92.64	38	⇓P		P	03 56 08.6	0.0
	baz=93							
E18A	**Harlowton**	92.75	39	⇓P		P	03 56 09.1	-0.1
	baz=93							
C17A	**Wharram Farm,**	92.87	38	⇑P		P	03 56 08.9	-0.8
	baz=93							
KMI	**Kunming**	92.89	296	P		P	03 56 11.8	+1.5
KMI				pP		pP	03 56 25.0	+0.6
KMI				sP		sP	03 56 30.0	+0.3
KMI				PP		PP	03 59 56.5	+2.9
KMI				SKS			04 06 41.0	
KMI				S		S	04 07 10.8	-1.9
KMI				sS		sS	04 07 33.0	-3.4
KMI				SS		SS	04 13 29.0	+1.3
KMI				pmax		pmax		
	comp=Z,11nm,1.5s,mb5.1							
KMI				pmax		pmax		
	comp=Z,260nm,4.7s							
KMI				LR		LR		
	comp=N,520nm,22.8s,MS5.1							
KMI				LR		LR		
	comp=E,540nm,20.9s,MS5.1							
KMI				LR		LR		
	comp=Z,570nm,22.8s,MS5.0							
CHRT	**Chiangrai**	93.11	290	⇑P		P	03 56 13.0	+1.6
A16A	**West Butte Ran**	93.16	37	⇑P		P	03 56 10.6	-0.4
	baz=93							
B17A	**L&G Farms, Che**	93.22	37	⇑P		P	03 56 11.7	+0.5
	baz=93							
CMAR	**Chiang Mai Arr**	93.23	289	P		P	03 56 13.6	+1.6
	comp=Z,5.5nm,0.8s,mb5.0,baz=134,slow=3.3,SNR=19							
CMAR				LR		LR	04 35 57.9	
	comp=Z,233nm,18.7s,MS4.7,baz=303,slow=34							
CHG	**Chiang Mai**	93.38	289	⇑P		P	03 56 13.0	+0.3
	comp=Z,13nm,0.9s,mb5.4							
CHTO	**Chiang Mai**	93.38	289	*e*P		P	03 56 14.6	+1.9
CHTO				pmax		pmax		
	comp=Z,14nm,1.0s,mb5.3							
CHTO	**Chiang Mai**	93.38	289	*e*P		P	03 56 14.6	+1.9
	comp=Z,14nm,1.0s,mb5.3							
BILL	**Bilibino**	93.48	353	*e*P		P	03 56 14.3	+2.3
BILL				*e*			03 59 58.4	
BILL				*e*PS		PS	04 08 28.8	-7.0
BILL				pmax		pmax		
	comp=Z,4.0nm,1.0s,mb4.8							
BILL				MLR		MLR		
	comp=Z,600nm,18.0s,MS5.1							
HHC	**Hu-ho-hao-te**	93.63	314	*e*P		P	03 56 15.0	+1.7
HHC				sP		sP	03 56 30.0	-2.7
HHC				PP		PP	04 00 03.0	+3.9
HHC				SKS			04 06 45.0	
HHC				S		S	04 07 18.5	0.0
HHC				sS		sS	04 07 36.8	-5.4
HHC				SS		SS	04 13 40.5	+2.8
HHC				pmax		pmax		
	comp=Z,20nm,0.8s,mb5.6							
HHC				pmax		pmax		
	comp=Z,190nm,7.2s							
HHC				LR		LR		
	comp=N,350nm,18.8s,MS5.1							
HHC				LR		LR		
	comp=E,490nm,18.1s,MS5.1							
HHC				LR		LR		
	comp=Z,490nm,18.5s,MS5.0							
A17A	**Triple J Farms**	93.64	37	⇑P		P	03 56 13.4	+0.2
	baz=94							
B18A	**Beardsley Farm**	93.84	38	⇓P		P	03 56 14.6	+0.4
	baz=94							
CD2	**Chengdu**	94.61	302	P		P	03 56 19.0	+0.9
CD2				pP		pP	03 56 32.5	+0.3
CD2				sP		sP	03 56 37.8	+0.4
CD2				PP		PP	04 00 09.5	+2.6
CD2				SKS			04 06 49.0	
CD2				S		S	04 07 25.3	-2.2
CD2				sS		sS	04 07 48.3	-3.0
CD2				SS		SS	04 13 53.0	+0.9
CD2				pmax		pmax		
	comp=Z,10.0nm,0.5s,mb5.5							
CD2				pmax		pmax		
	comp=Z,320nm,6.5s							
CD2				LR		LR		
	comp=N,940nm,7.1s							
CD2				LR		LR		
	comp=Z,550nm,14.3s,MS5.2							
RSSD	**Black Hills**	94.99	43	*e*P		P	03 56 19.3	-0.2
LZH	**Lanzhou**	96.79	307	*e*P		P	03 56 29.3	+1.4
LZH				pP		pP	03 56 41.8	-0.2
LZH				sP		sP	03 56 47.8	+0.5
LZH				pmax		pmax		
	comp=Z,13nm,1.0s,mb5.3							
LZH				pmax		pmax		
	comp=Z,110nm,4.0s							
LZH				LR		LR		
	comp=N,630nm,14.7s							
LZH				LR		LR		
	comp=Z,830nm,16.0s,MS5.3							
LPAZ	**La Paz**	98.75	112	LR		LR	04 33 20.5	
	comp=Z,213nm,18.7s,MS4.7,baz=173,slow=31							
SONM	**Songino Array**	100.16	318	P		Pdif	03 56 43.5	+0.6
	comp=Z,1.1nm,1.0s,baz=131,slow=5.9,SNR=2.7							
WMQ	**Urumqi**	111.08	310	*e*PKP		PKiKP	04 01 30.0	-0.3
WMQ				PP		PP	04 02 13.3	+3.3
WMQ				PKS			04 05 05.0	
WMQ				SKS		SKSdf	04 08 33.5	-4.9
WMQ				SKKS		SKKSac	04 08 59.0	-9.2
WMQ				SS		SS	04 17 35.0	-3.8
WMQ				AMB		AMB		
	comp=Z,140nm,4.6s							
WMQ				LR		LR		
	comp=N,160nm,18.7s,MS4.9							
WMQ				LR		LR		
	comp=E,270nm,20.0s,MS4.9							
WMQ				LR		LR		
	comp=Z,270nm,18.4s,MS4.9							
ZALV	**Zalesovo Beam**	114.95	320	PKP		PKiKP	04 01 37.0	-0.3
	comp=Z,1.4nm,0.6s,baz=120,slow=1.2,SNR=3.1							
MK31	**Makanchi Array**	115.43	312	PKIKP		PKPdf	04 01 37.7	-0.8
MKAR	**Makanchi Array**	115.43	312	PKP		PKPdf	04 01 37.6	-1.0
	comp=Z,2.0nm,0.8s,baz=80,slow=2.8,SNR=9.9							
KURK	**Kurchatov**	118.35	316	PKP		PKPdf	04 01 42.7	-1.3
	comp=Z,2.7nm,0.8s,baz=97,slow=1.7,SNR=12							
KURK	**Kurchatov**	118.35	316	*c i* PKIKP		PKPdf	04 01 42.1	-1.9
KURK				pmax		pmax		
	comp=Z,4.0nm,0.8s							
KBL	**Kabul**	123.47	296	*e*PKIKP		PKPdf	04 01 55.0	+0.6
BVAR	**Borovoye Array**	123.50	318	PKP		PKPdf	04 01 53.4	-0.5
	comp=Z,2.2nm,0.6s,baz=64,slow=3.4,SNR=8.3							
BRVK	**Borovoye**	123.56	318	*c i* PKIKP		PKPdf	04 01 51.8	-2.2
BRVK				pmax		pmax		
	comp=Z,6.0nm,1.2s							
ARU	**Arti**	129.74	324	PKIKP		PKPdf	04 02 04.1	-1.6
ARU	**Arti**	129.74	324	*e*PKPdf		PKPdf	04 02 05.6	-0.1
AKTK	**Aktyubinsk**	131.44	316	PKP		PKPdf	04 02 09.2	+0.1
AKTO	**Aktyubinsk**	131.44	316	PKP		PKPdf	04 02 09.2	+0.1
	comp=Z,1.9nm,0.7s,baz=31,slow=6.2,SNR=4.2							
ARCES	**ARCESS Array B**	133.45	350	PKP		PKPdf	04 02 12.2	-0.1
	comp=Z,2.7nm,0.7s,baz=29,slow=2.1,SNR=10							
FINES	**FINESS Array B**	140.39	344	PKhKP		PKPpre	04 02 19.3	
	comp=Z,1.1nm,0.7s,baz=35,slow=3.4,SNR=3.4							
FINES				PKP		PKPdf	04 02 27.0	+1.7
	comp=Z,2.5nm,0.8s,baz=180,slow=3.0,SNR=5.5							
FINES	**FINESS Array B**	140.39	344	PKP		PKPpre	04 02 19.3	
FINES				PKP		PKPdf	04 02 27.0	+1.7
VSR	**Storozhevoye**	142.31	324	*e*PKIKP		PKPdf	04 02 28.0	-1.1
VSR				pmax		pmax		
	comp=Z,7.0nm,1.0s							
VSR				pmax		pmax		
	comp=N,4.0nm,0.5s							
VSR				pmax		pmax		
	comp=E,10.0nm,1.0s							
KIV	**Kislovodsk**	143.19	311	*i* PKIKP		PKPdf	04 02 38.3	+7.4
KIV				pmax		pmax		
	comp=Z,12nm,1.1s							
NB2	**NORSAR Subarra**	143.43	354	PKP		PKPpre	04 02 27.8	
	comp=Z,1.1nm,0.7s,baz=17,slow=2.6							
NOA	**NORSAR Array B**	143.43	354	PKhKP		PKPpre	04 02 27.3	
	comp=Z,0.6nm,0.7s,baz=32,slow=3.1,SNR=6.7							
KONO	**Kongsberg**	144.95	355	*e*PKIKP		PKPdf	04 02 32.1	-1.4
SOC	**Sochi**	145.34	312	*i* PKIKP		PKPdf	04 02 33.4	-1.3
SOC				*e*PPP			04 09 08.6	
SOC				pmax		pmax		
	comp=Z,43nm,1.0s							
ANN	**Anapa**	146.37	315	*i* PKP2		PKPab	04 02 36.9	-1.8
ANN				pmax		pmax		
	comp=Z,41nm,0.8s							
ANN				pmax		pmax		
	comp=Z,410nm,7.3s							
SUW	**Suwalki**	147.48	339	*e*PKP		PKPdf	04 02 39.8	+1.8
AKASG	**Malin Array Be**	147.63	330	PKPbc		PKPbc	04 02 40.2	-0.8
	comp=Z,8.2nm,0.6s,baz=44,slow=4.0,SNR=9.8							
AKBB	**Malin Array Si**	147.63	330	*e*PKP2		PKPbc	04 02 40.5	-0.6
KIEV	**Kiev**	147.64	330	*e*PKP2		PKPbc	04 02 40.5	-0.6
MUD	**Monsted U'grnd**	148.15	355	*i* PKHKP		PKPdf	04 02 37.0	-2.0
MUD				MLR		MLR		
	comp=Z,390nm,20.0s,MS5.2							
MUD	**Monsted U'grnd**	148.15	355	*i* P		PKPdf	04 02 37.0	-2.0
MUD								
	comp=Z,380nm,20.0s							
SIM	**Simferopol'**	148.40	317	PKP2		PKPdf	04 02 41.8	+2.0
SIM				pmax		pmax		
	comp=Z,14nm,0.8s							
SIM				pmax		pmax		
	comp=Z,150nm,10.0s							
BSD	**Bornholm Skovb**	148.65	348	*i* PKP2		PKPbc	04 02 44.8	+1.2
BSD				MLR		MLR		
	comp=Z,250nm,20.0s,MS5.0							
BSD	**Bornholm Skovb**	148.65	348	*i* P		PKPbc	04 02 44.8	+1.2
BSD								
	comp=Z,250nm,20.0s							
ESK	**Eskdalemuir**	149.06	8	*e*PKP2		PKPbc	04 02 44.2	-0.4
ASF	**Jabal al Asfar**	150.22	292	PKPbc		PKPbc	04 02 49.1	+0.8
	comp=Z,7.1nm,0.8s,baz=243,slow=1.4,SNR=10							
KIS	**Kishinev**	150.29	325	*e*PKP		PKPbc	04 02 48.0	+0.1
KIS	**Kishinev**	150.29	325	*e*PP		PP	04 06 24.0	+0.7
KIS				*e*L			05 03 10.0	
KIS				LRM			05 10 52.0	
	comp=Z,300nm,20.0s							
KIS	**Kishinev**	150.29	325	*e*PKIKP		PKPbc	04 02 48.0	+0.1
KIS				*e*			04 02 52.0	
KIS				*e*			04 06 24.0	
LVV	**L'vov**	150.54	333	*e*PKIKP		PKPbc	04 02 50.2	+1.7
BR131	**Keskin Array S**	150.99	308	*e*PKPbc		PKPbc	04 02 49.8	-0.1
BRTR	**Keskin Array B**	150.99	308	PKPbc		PKPbc	04 02 49.4	-0.5
	comp=Z,5.9nm,0.8s,baz=134,slow=3.7,SNR=27							
KWP	**Kalwaria Pacla**	151.22	334	*e*PKP		PKPbc	04 02 49.8	-0.2
KWP	**Kalwaria Pacla**	151.22	334	*e*PKIKP		PKPbc	04 02 49.8	-0.3
KWP	**Kalwaria Pacla**	151.22	334	⇑*i* P		PKPbc	04 02 50.1	0.0
MMAI	**Mount Meron Ar**	151.37	294	PKPbc		PKPbc	04 02 52.1	+1.1
	comp=Z,19nm,0.8s,baz=75,slow=3.5,SNR=11							
MMAI				PKPab		PKPab	04 02 59.4	+0.1
	comp=Z,11nm,0.7s,baz=81,slow=5.2,SNR=5.8							
TLCR		151.42	322	⇓*i* P		PKPdf	04 02 45.9	+1.4
BUR08	**Bucovina Ar. S**	151.66	329	*e*PKPbc		PKPbc	04 02 51.7	+0.5
BURAR	**Bucovina Array**	151.67	329	⇓*i* P		PKPbc	04 02 52.0	+0.8
STHS	**Stebnicka Huta**	151.96	336	*e*PKIKP		PKPbc	04 02 52.8	+1.0
STHS	**Stebnicka Huta**	151.96	336	*e*PKP		PKPbc	04 02 52.8	+1.0
UZH	**Uzhgorod**	152.18	333	*e*PKIKP		PKPbc	04 02 55.0	+2.7
UZH				*e*			04 02 59.7	
UZH				*e*			04 03 11.0	
NIE	**Niedzica**	152.30	337	*e*PKP		PKPbc	04 02 53.4	+0.9
KSP	**Ksiaz**	152.31	343	*e*PKP		PKPdf	04 02 46.2	+0.5
CLL	**Collm**	152.63	348	*i* PKIKP		PKPbc	04 02 53.0	-0.2
CLL				*i*			04 03 00.8	
CLL				*i*			04 03 06.7	
CLL				MLR		MLR		
	comp=Z,300nm

comp=E,165nm,21.1s
BRG
comp=Z,257nm,18.8s
BRG Berggiesshubel 152.85 346 *e*PKIKP PKPbc 04 02 53.5 -0.2
BRG 04 03 05.0
BRG 04 06 35.0
BRG SS SS 04 26 07.0 +2.0
BRG pmax pmax
comp=Z,4.0nm,1.0s
BRG MLR MLR
comp=N,123nm,20.3s,MS4.8
BRG MLR MLR
comp=E,99nm,21.1s,MS4.8
BRG MLR MLR
comp=Z,154nm,18.8s,MS4.8
KECS Kecovo 153.01 335 *e*PKP PKPab 04 03 05.9 +0.3
KECS Kecovo 153.01 335 *e*PKP PKPab 04 03 05.9 +0.3
PVCC Panska Ves 153.03 345 *e*PKIKP PKPbc 04 02 54.5 +0.4
PVCC MLR MLR
comp=Z,400nm,21.2s,MS5.2
PVCC Panska Ves 153.03 345⇑ *e*PKP PKPbc 04 02 54.5 +0.4
PVCC AMS AMS 05 14 50.0
comp=Z,400nm,21.2s
MOX Moxa 153.53 349 *e*(PKP) 04 02 50.5
MOX *e* 04 03 18.0
MOX *e* 04 06 42.0
MOX
comp=Z,200nm,21.0s
PRU Pruhonice 153.54 345 AMS AMS 05 12 40.0
comp=Z,400nm,21.0s
VYHS Vyhne 153.60 337 *e*PKP2 PKPab 04 03 07.7 -0.4
VYHS Vyhne 153.60 337 *e*PKP PKPab 04 03 07.7 -0.4
NKC Novy Kostel 153.77 348 AMS AMS 05 12 40.0
comp=Z,300nm,25.1s
TREC Trest 153.94 343 AMS AMS 05 18 30.0
comp=Z,500nm,20.8s
BCLA Clavier 154.40 358 PKPab PKPab 04 03 10.6 -0.7
KHC Kasperske Hory 154.57 345 *e*PKIKP PKPbc 04 02 55.9 -1.6
KHC *e* 04 03 08.1
KHC MLR MLR
comp=Z,500nm,21.3s,MS5.3
KHC Kasperske Hory 154.57 345 *e*PKPbc PKPbc 04 02 56.2 -1.3
KHC Kasperske Hory 154.57 345⇑ *e*PKP PKPbc 04 02 55.9 -1.6
KHC *e*PKPAB PKPab 04 03 08.1 -4.0
KHC AMS AMS 05 17 10.0
comp=Z,500nm,21.3s
GIVF Givet 154.73 359 *e*PKP2 PKPab 04 03 12.3 -0.4
DOU Dourbes 154.74 359 PKPab PKPab 04 03 12.1 -0.7
BAIF Baives 154.78 360 *e*PKP2 PKPab 04 03 12.7 -0.3
comp=Z,8.9nm,0.6s
KDZ Kurdzhali 155.52 319 P PKPab 04 03 17.4 +0.9
PGB Panagyurishte 155.69 322 P PKPab 04 03 18.0 +0.8
FLN La Foliniere 155.82 7 *e*PKP2 PKPab 04 03 17.0 -0.5
RZN Rozhen 155.91 319 P PKPab 04 03 19.5 +1.3
LDF La Druitiere 156.03 7 *e*PKP2 PKPab 04 03 17.3 -1.1
GRR Gorron 156.15 8 *e*PKP2 PKPab 04 03 18.4 -0.5
comp=Z,5.3nm,0.7s
VTS Vitosha 156.19 323 P PKPab 04 03 19.7 +0.4
QUIF Quistinic 156.24 12 *e*PKP2 PKPab 04 03 18.3 -1.0
SOKA Soboth 156.44 341⇑ *i*PKPab PKPab 04 03 20.4 +0.2
comp=Z,6.4nm,1.0s
MMB Musomiste 156.55 320 P PKPab 04 03 22.3 +1.4
LOR Lormes 157.57 0 *e*PKP2 PKPab 04 03 24.6 -0.4
comp=Z,8.5nm,1.0s
SSF Saint Saulge 157.78 1 *e*PKP2 PKPab 04 03 24.9 -1.0
comp=Z,11nm,0.9s
MFF Saint Martin d 157.99 8 *e*PKP2 PKPab 04 03 26.4 -0.5
comp=Z,15nm,1.1s
AVF Avril sur Loir 158.05 1 *e*PKP2 PKPab 04 03 25.8 -1.3
comp=Z,7.1nm,0.8s
SMF Signal de Mont 158.20 0 *e*PKP2 PKPab 04 03 26.7 -1.0
comp=Z,20nm,1.2s
TCF Toulx Ste Croi 158.51 3 *e*PKP2 PKPab 04 03 29.2 +0.1
comp=Z,10nm,1.1s
LPG La Plagne 159.22 354 *e*PKP2 PKPab 04 03 32.5 +0.3
comp=Z,19nm,1.2s
LFF La Frestale 159.73 7 *e*PKP2 PKPab 04 03 33.5 -1.0
ESDC Sonseca Array 163.73 22 PKP PKPdf 04 02 56.7 -3.3
comp=Z,0.5nm,0.7s,baz=355,slow=1.9,SNR=2.5
ESDC PKPab PKPab 04 03 51.5 -0.6
comp=Z,0.4nm,0.6s,baz=325,slow=3.2,SNR=3.1

*BJI **28** 03:55:56.9, 36°.83N×71°.04E, h232km, mb4.6/1*
*ISCJB **28** 03:55:56.1±0.3, 36°.63N±0°.03×71°.10E±0°.05, h207km±5km, mb3.6/8, Error ellipse: s-maj=6.9km s-min=3.9km az=163.5*
*MOS **28** 03:55:56.9±1.2, 36°.59N×71°.11E, h216km, mb4.1/4, Error ellipse: s-maj=13.4km s-min=8.5km az=89.3*
*NEIC **28** 03:55:57.6±0.6, 36°.62N×71°.17E, h202km±6km, mb4.4/5, Error ellipse: s-maj=9.0km s-min=5.0km az=61.0*
*IDC **28** 03:55:58.2±3.7, 36°.56N×71°.10E, h215km±31km, mb3.4/7, mb1 3.5/13, mb1mx3.3/26, mbtmp3.4/13, Error ellipse: s-maj=29.6km s-min=15.2km az=46.0*
*NNC **28** 03:56:03.2±6.7, 37°.59N×70°.42E, h0km, mb4.4, mpv4.1, Error ellipse: s-maj=51.8km s-min=49.3km az=24.0*

ISC 28 03:55:57.2±0.3, 36°.63N±0°.03×71°.14E±0°.05, h199km±4km, n76, σ1°.06/93, mb3.6/8, 5C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.69**	**220**	*e*PN	**Pn**	**03 56 44.1**	**+0.9**
KBL				*e*S	**Sn**	**03 57 18.9**	**-0.2**
CEP	**Cherat**	**2.87**	**167**	⇑P	**Pn**	**03 56 46.8**	**+1.6**
CEP				S	**Sn**	**03 57 23.0**	**+0.3**
CHCP	**Chirah Chowk**	**3.43**	**149**	⇑P	**Pn**	**03 56 53.8**	**+1.8**
THW	**Thamme Wali**	**3.86**	**172**	⇑P	**Pn**	**03 56 55.1**	**-2.0**
KSH	**Kashi**	**4.78**	**51**	⇓*i*P	**Pn**	**03 57 05.0**	**-3.6**
KSH				S	**Sn**	**03 57 55.8**	**-9.2**
KSH				smax			
	comp=N,140nm,0.3s						
KSH				smax			
	comp=E,140nm,0.5s						
THN	**Thein Dam**	**5.63**	**137**	*e*PKP	**Pn**	**03 57 19.8**	**+0.1**
THN				*e*S	**Sn**	**03 58 21.7**	**-3.1**
AML	**Almayashu**	**5.84**	**19**	P	**Pn**	**03 57 23.1**	**+0.8**
	SNR=122						
AML	**Almayashu**	**5.84**	**19**	*e*Pn	**Pn**	**03 57 22.9**	**+0.6**
	comp=E,64nm,0.6s						
UCH	**Uchtor**	**6.17**	**24**	P	**Pn**	**03 57 27.6**	**+1.1**
	SNR=8.8						
UCH	**Uchtor**	**6.17**	**24**	*e*Pn	**Pn**	**03 57 27.4**	**+0.9**
	comp=E,16nm,0.6s						
UCH				*e*S	**Sn**	**03 58 35.5**	**-1.7**
KZA	**Kyzart**	**6.30**	**29**	P	**Pn**	**03 57 28.6**	**+0.4**
	SNR=11						
EKS2	**Erkin-Say**	**6.36**	**18**	P	**Pn**	**03 57 30.4**	**+1.5**
	SNR=9.5						
EKS2	**Erkin-Say**	**6.36**	**18**	*e*Pn	**Pn**	**03 57 29.7**	**+0.8**
	comp=E,8.4nm,0.6s						
EKS2				*e*S	**Sn**	**03 58 25.6**	**-16**
KK31	**Karatay Array**	**6.49**	**356**	⇑Pn	**Pn**	**03 57 30.2**	**-0.3**
	comp=E,3.1nm,0.3s,baz=177,slow=12,SNR=74						
KK31				⇓Sn	**Sn**	**03 58 37.2**	**-7.5**
	comp=E,20nm,0.5s,baz=186,slow=22,SNR=17						
AAK	**Ala-Archa**	**6.53**	**22**	P	**Pn**	**03 57 32.5**	**+1.3**
	SNR=8.1						
AAK	**Ala-Archa**	**6.53**	**22**	P	**Pn**	**03 57 32.9**	**+1.7**
	comp=E,3.5nm,0.3s,baz=173,slow=4.6,SNR=15						
AAK				S	**Sn**	**03 58 43.9**	**-1.8**
	comp=E,3.7nm,0.3s,baz=19,slow=22,SNR=20						
AAK	**Ala-Archa**	**6.53**	**22**	*e*Pn	**Pn**	**03 57 31.9**	**+0.7**
AAK				*e*S	**Sn**	**03 58 39.2**	**-6.5**
ULHL	**Ulahol**	**6.86**	**34**	P	**Pn**	**03 57 36.4**	**+1.0**
	SNR=8.1						
USP	**Ospenovka**	**7.11**	**20**	P	**Pn**	**03 57 39.7**	**+1.0**
	SNR=5.2						
TKM2	**Tokmak 2**	**7.16**	**27**	⇓Pn	**Pn**	**03 57 40.2**	**+0.9**
	comp=E,34nm,0.8s						
TKM2				⇑Sn	**Sn**	**03 58 58.9**	**-1.6**
	comp=E,11nm,0.7s						
TKM2	**Tokmak 2**	**7.16**	**27**	P	**Pn**	**03 57 40.2**	**+0.9**
	SNR=50						
TKM2	**Tokmak 2**	**7.16**	**27**	*e*PN	**Pn**	**03 57 40.0**	**+0.7**
TKM2				pmax	pmax		
	comp=Z,30nm,0.7s						
TKM2	**Tokmak 2**	**7.16**	**27**	*e*Pn	**Pn**	**03 57 40.0**	**+0.7**
	comp=Z,30nm,0.7s						
SMLA	**Simla**	**7.43**	**136**	*i*P	**Pn**	**03 57 41.3**	**-1.7**
SMLA				*i*S	**Sn**	**03 59 00.4**	**-6.6**
SMLA						03 59 05.7	
	comp=N,588nm,0.3s						
SMLA						03 59 05.9	
	comp=E,767nm,0.4s						
KLP	**Kalpa**	**7.78**	**129**	*e*PKP	**Pn**	**03 57 48.1**	**+0.6**
KLP				*e*S	**Sn**	**03 59 08.8**	**-6.5**
KLP				AML	AML	03 59 12.8	
	comp=E,214nm,0.4s						
KLP				AML	AML	03 59 14.0	
	comp=E,234nm,0.5s						
KLP				AML	AML	03 59 20.6	
	comp=N,251nm,0.5s						
DDI	**Dehra Dun**	**8.53**	**135**	*ex*	**Pn**	**03 57 56.0**	**-1.4**
JOSI	**Joshimath**	**9.27**	**128**	*e*PKP	**Pn**	**03 58 08.1**	**+1.2**
JOSI				*e*S	**Sn**	**03 59 43.8**	**-6.9**
JOSI				AML	AML	03 59 53.9	
	comp=E,162nm,0.8s						
JOSI				AML	AML	03 59 54.4	
	comp=N,82nm,0.6s						
KHET	**Khetri**	**9.39**	**154**	*ex*	**Pn**	**03 58 07.0**	**-1.5**
KHET				*e*S	**Sn**	**03 59 44.3**	**-9.5**
NDI	**New Delhi**	**9.43**	**145**	*e*PKP	**Pn**	**03 58 08.0**	**-1.0**
SONA	**Sohna**	**9.74**	**147**	*e*S	**Sn**	**03 59 53.9**	**-8.1**
MK31	**Makanchi Array**	**13.12**	**36**	*e*P	**Pn**	**03 58 56.4**	**+0.4**
MKAR	**Makanchi Array**	**13.12**	**36**	P	**Pn**	**03 58 56.2**	**+0.3**
	comp=N,0.3nm,0.3s,baz=210,slow=8.6,SNR=21						
MKAR				S	**Sn**	**04 01 27.2**	**+4.9**
	comp=N,0.0nm,0.3s,baz=219,slow=24,SNR=2.6						
KOLN	**Koldanda**	**13.74**	**126**	*e*P	**Pn**	**03 59 03.6**	**-0.4**
	comp=N,17nm,0.3s						
GKN	**Gorkha**	**14.28**	**123**	*e*P	**Pn**	**03 59 10.7**	**+0.2**
	comp=N,34nm,0.3s						
DMN	**Daman**	**14.85**	**123**	*e*P	**Pn**	**03 59 17.7**	**+0.2**
	comp=N,28nm,0.5s						
KKN	**Kakani**	**14.85**	**122**	*e*P	**Pn**	**03 59 17.5**	**-0.1**
	comp=N,44nm,0.7s						
KKN	**Kakani**	**14.85**	**122**	*e*P	**Pn**	**03 59 17.5**	**-0.1**
KKN				pmax	pmax		
	comp=Z,44nm,0.7s						
AB31	**Akbulak array**	**15.03**	**331**	⇓Pn	**Pn**	**03 59 17.9**	**-1.6**
	comp=Z,2.9nm,0.5s,baz=181,slow=9.5,SNR=8.4						
AB31				⇓Sn	**Sn**	**04 01 58.4**	**-9.2**
	comp=Z,1.4nm,0.5s,baz=174,slow=24,SNR=5.3						
ABKAR	**Akbulak array**	**15.03**	**331**	*e*Pn	**Pn**	**03 59 18.0**	**-1.5**
ABKAR				*e*S	**S**	**04 01 58.4**	**-7.9**
PKIN	**Phulchoki**	**15.06**	**123**	*e*P	**Pn**	**03 59 20.4**	**+0.2**
	comp=Z,40nm,0.6s						
KURK	**Kurchatov**	**15.07**	**19**	P	**Pn**	**03 59 19.1**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=204,slow=11,SNR=7.8						
PKI	**Pulchoki**	**15.07**	**123**	*e*P	**Pn**	**03 59 20.4**	**+0.1**
PKI				pmax	pmax		
	comp=Z,41nm,0.6s						
PKI	**Pulchoki**	**15.07**	**123**	*e*P	**Pn**	**03 59 20.4**	**+0.1**
	comp=Z,40nm,0.6s						
GUN	**Gumba**	**15.18**	**121**	*e*P	**Pn**	**03 59 22.0**	**+0.4**
	comp=Z,41nm,0.6s						
JIRN	**Jiri**	**15.55**	**121**	*e*P	**Pn**	**03 59 26.5**	**+0.4**
	comp=Z,22nm,0.3s						
RAMN	**Ramite**	**16.28**	**122**	*e*P	**Pn**	**03 59 35.2**	**+0.3**
	comp=Z,33nm,0.6s						
BVAR	**Borovoye Array**	**16.41**	**358**	P	**Pn**	**03 59 37.2**	**+1.1**
	comp=Z,0.7nm,0.3s,baz=154,slow=8.5,SNR=7.9						
BVAR	**Borovoye Array**	**16.41**	**358**	P	**Pn**	**03 59 37.2**	**+1.1**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTK	**Aktyubinsk**	**16.73**	**330**	P	**Pn**	**03 59 39.6**	**-0.4**
AKTO	**Aktyubinsk**	**16.73**	**330**	P	**Pn**	**03 59 39.6**	**-0.4**
	comp=Z,0.8nm,0.3s,baz=141,slow=9.0,SNR=20						
AKTO	**Aktyubinsk**	**16.73**	**330**	P	**Pn**	**03 59 39.6**	**-0.4**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TAPN	**Taplejung**	**16.80**	**119**	*e*P	**Pn**	**03 59 41.5**	**+0.3**
	comp=Z,20nm,0.3s						
ODAN	**Odre**	**16.88**	**121**	*e*P	**Pn**	**03 59 42.4**	**+0.3**
	comp=Z,9.6nm,0.3s						
ZALV	**Zalesovo Beam**	**19.75**	**24**	P	**P**	**04 00 12.0**	**+0.4**
	comp=Z,1.0nm,0.3s,baz=223,slow=11,SNR=16						
ZALV	**Zalesovo Beam**	**19.75**	**24**	P	**P**	**04 00 12.0**	**+0.4**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM	**Songino Array**	**28.17**	**55**	P	**P**	**04 01 32.0**	**+1.2**
	comp=Z,1.3nm,0.7s,mb3.7,baz=256,slow=8.6,SNR=6.3						
SONM	**Songino Array**	**28.17**	**55**	P	**P**	**04 01 32.0**	**+1.2**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**30.41**	**119**	P	**P**	**04 01 52.5**	**+1.6**
	comp=Z,0.9nm,0.3s,mb3.9,baz=304,slow=8.0,SNR=5.7						
CMAR	**Chiang Mai Arr**	**30.41**	**119**	P	**P**	**04 01 52.6**	**+1.7**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NACGM	**Naroch**	**35.20**	**316**	*e*	**P**	**04 02 32.0**	**-0.1**
KECS	**Kecovo**	**38.48**	**304**	*e*P	**P**	**04 03 01.2**	**+1.4**
KECS	**Kecovo**	**38.48**	**304**	*e*	**P**	**04 03 01.2**	**+1.4**
ARCES	**ARCESS Array B**	**41.07**	**337**	P	**P**	**04 03 21.4**	**+0.6**
	comp=Z,0.8nm,0.7s,mb3.3,baz=110,slow=7.4,SNR=7.0						
ARCES	**ARCESS Array B**	**41.07**	**337**	P	**P**	**04 03 21.4**	**+0.6**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
IPM	**Ipoh**	**42.14**	**132**	P	**P**	**04 03 37.9**	**+7.8**
FRIM	**Kepong**	**43.49**	**133**	P	**P**	**04 03 42.8**	**+1.8**
NB2	**NORSAR Subarra**	**44.35**	**323**	P	**P**	**04 03 46.7**	**-0.5**
	comp=Z,1.1nm,0.4s,mb3.5,baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.35**	**323**	P	**P**	**04 03 47.0**	**-0.2**
	comp=Z,0.3nm,0.4s,mb3.0,baz=104,slow=7.3,SNR=8.0						
ILAR	**Eielson Array**	**74.63**	**16**	P	**P**	**04 07 13.5**	**-0.5**
	comp=Z,0.7nm,0.8s,mb3.4,baz=309,slow=4.3,SNR=9.5						
ILAR	**Eielson Array**	**74.63**	**16**	P	**P**	**04 07 13.5**	**-0.5**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**81.11**	**3**	P	**P**	**04 07 49.8**	**0.0**
	comp=Z,0.4nm,0.4s,mb3.4,baz=350,slow=5.6,SNR=3.4						
WRA	**Warramunga Arr**	**81.96**	**122**	P	**P**	**04 07 53.0**	**-1.9**
	baz=324,slow=4.8						
WRAB	**Tennant Creek**	**81.96**	**122**	*e*P	**P**	**04 07 53.4**	**-1.4**
WRAB				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.1						
WRAB	**Tennant Creek**	**81.96**	**122**	*e*P	**P**	**04 07 53.4**	**-1.4**
	comp=Z,5.2nm,1.0s,mb4.1						
ASAR	**Alice Springs**	**84.23**	**125**	P	**P**	**04 08 05.1**	**-1.3**
	comp=Z,1.3nm,0.7s,mb3.8,baz=309,slow=5.5,SNR=15						
ASAR	**Alice Springs**	**84.23**	**125**	P	**P**	**04 08 05.1**	**-1.3**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						

TAP 28 04:08:19.8, 22°.07N×121°.09E, h29km, ML3.8, 4C, B, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**0.25**	**226**	*i*P	Pb	04 08 27.2	+0.8
	baz=235						
TSEB				*i*S	Sb	04 08 32.7	+1.7
	baz=235						
TWK1	**Hengchun**	**0.29**	**244**⇑	*i*P	Pb	04 08 27.2	+0.2
	baz=241						
TWK1				*i*S	Sb	04 08 32.3	+0.3
	baz=241						
HEN	**Hengchun**	**0.33**	**258**	*i*P	Pb	04 08 28.0	+0.4
	baz=257						
HEN				*i*S	Sb	04 08 33.9	+1.0
	baz=257						
TAW	**Tawu**	**0.34**	**328**⇑	*i*P	Pb	04 08 27.8	+0.1
	baz=337						
TAW				*i*S	Sb	04 08 33.4	+0.4
	baz=337						
EAST	**Anshuo**	**0.38**	**324**⇑	*i*P	Pb	04 08 28.4	+0.1
	baz=333						
EAST				*e*S	Sb	04 08 34.4	+0.2
	baz=333						
LAY	**Lan-yu**	**0.43**	**94**	*e*P	Pb	04 08 29.9	+0.9
	baz=85						
LAY				*e*S	Sb	04 08 36.3	+0.9
	baz=85						
SCZT	**Fangliau**	**0.53**	**304**⇑	*i*P	Pb	04 08 31.0	+0.4
	baz=311						
SCZT				S	Sb	04 08 38.8	+0.8
	baz=311						
ECL	**Taimali**	**0.54**	**347**	P	Pb	04 08 30.2	-0.6
	baz=358						
ECL				S	Sb	04 08 37.3	-0.9
	baz=358						
TTN	**Taitung**	**0.68**	**5**	*e*S	Sb	04 08 43.6	+1.3
	baz=7.0						
TWG	**Pinlang**	**0.74**	**359**	*e*P	Pb	04 08 32.9	-1.3
	baz=1.0						
TWG				*e*S	Sb	04 08 42.9	-1.2
	baz=1.0						
SSD	**Sandimen**	**0.79**	**328**	*e*P	Pn	04 08 34.9	-0.1
	baz=333						
SSD				*e*S	Sb	04 08 44.6	-0.9
	baz=333						
TWM1	**Shoushan**	**0.97**	**321**	P	Pn	04 08 39.1	+1.7
	baz=322						
SGST	**Jiashian**	**1.11**	**335**	*e*P	Pn	04 08 40.4	+1.0
	baz=338						
SGST				*e*S	Sn	04 08 56.5	+2.9
	baz=338						
ELDTW	**Lidau**	**1.11**	**357**	P	Pn	04 08 38.5	-0.9
	baz=3.0						
STYT	**Tauyuan**	**1.13**	**344**	*e*P	Pn	04 08 40.1	+0.5
	baz=347						
STYT				*e*S	Sn	04 08 56.6	+2.5
	baz=347						
CHN3	**Shinhua**	**1.20**	**326**	*e*P	Pn	04 08 43.1	+2.5
	baz=327						
WTP	**Ta-pu**	**1.25**	**339**	*e*P	Pn	04 08 42.2	+0.9
	baz=341						
TWK	**Hsinying**	**1.31**	**335**	*e*P	Pn	04 08 43.7	+1.6
	baz=337						
CHN4	**Tsaushan**	**1.35**	**340**	*e*P	Pn	04 08 44.2	+1.5
	baz=343						
CHN4				*e*S	Sn	04 09 02.5	+2.8
	baz=343						
CHN5	**Tsauling**	**1.56**	**346**	*e*P	Pn	04 08 46.7	+1.0
	baz=334						
CHN5				*e*S	Sn	04 09 07.2	+2.3
	baz=334						
SMLT	**Sun Moon Lake**	**1.81**	**355**	P	Pn	04 08 50.8	+1.8
	baz=357						
SMLT				*e*S	Sn	04 09 13.6	+2.6
	baz=357						
TYC	**Yuchr**	**1.83**	**353**	*e*P	Pn	04 08 51.3	+1.9
	baz=11						
TYC				*e*S	Sn	04 09 14.5	+2.9
	baz=11						
WNT	**Mingjian**	**1.83**	**348**	*e*P	Pn	04 08 51.8	+2.4
	baz=335						
WHF	**Hehuan Shan**	**2.07**	**4**	*e*P	Pn	04 08 53.5	+1.0
	baz=18						
WHF				*e*S	Sn	04 09 17.7	+0.3
	baz=18						
TWQ1	**Liyutan**	**2.28**	**353**	P	Pn	04 08 57.2	+1.7
	baz=342						
TWQ1				*e*S	Sn	04 09 26.0	+3.3
	baz=342						
NSY	**Sanyi**	**2.35**	**353**	*e*P	Pn	04 08 58.3	+1.8
	baz=343						
NSY				*e*S	Sn	04 09 27.0	+2.6
	baz=343						
NSTT	**Nanjuang**	**2.55**	**358**	*e*P	Pn	04 09 02.3	+3.2
	baz=360						
NSTT				*e*S	Sn	04 09 31.2	+2.0
	baz=360						

IDC 28 04:14:20.6±10.0, 17°.67S×178°.76W, h644km±142km, mb2.9/8, mb1 3.1/8, mb1mx3.0/16, mbtmp2.9/8, Error ellipse: s-maj=51.8km s-min=42.4km az=168.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.16**	**260**	P	P	04 20 07.0	0.0
	1.9nm,0.6s,baz=75,slow=7.7,SNR=3.8						
STKA	**Stephens Creek**	**38.45**	**241**	P	P	04 20 50.3	+0.1
	2.0nm,0.5s,baz=78,slow=9.3,SNR=6.8						
WRA	**Warramunga Arr**	**44.35**	**259**	P	P	04 21 36.4	-0.1
	baz=95,slow=7.3						
ASAR	**Alice Springs**	**44.53**	**254**	P	P	04 21 38.2	+0.3
	5.0nm,0.6s,baz=84,slow=8.6,SNR=76						
FITZ	**Fitzroy Crossi**	**52.74**	**260**	P	P	04 22 38.2	0.0
	0.8nm,0.7s,baz=90,slow=5.1,SNR=3.9						
PETK	**Petropavlovsk-**	**73.36**	**345**	P	P	04 24 49.4	+0.6
	0.7nm,0.5s,baz=101,slow=7.5,SNR=3.0						
NVAR	**Mina Array Bea**	**79.48**	**44**	P	P	04 25 22.7	+0.3
	0.5nm,0.8s,baz=238,slow=8.4,SNR=3.6						
ILAR	**Eielson Array**	**85.73**	**13**	P	P	04 25 52.4	-0.6
	0.3nm,0.4s,baz=226,slow=4.9,SNR=8.6						
TXAR	**Lajitas Array**	**86.15**	**58**	P	P	04 25 56.5	+0.7
	0.4nm,0.8s,baz=214,slow=6.3,SNR=4.9						

*IDC **28** 04:15:50.7±2.8, 0°.11N×96°.42E, h0km, mb3.9/8, mb1 3.9/10, mb1mx3.8/21, mbtmp3.8/10, ML3.8/2, MS2.8/1, Ms1 2.8/1, ms1mx2.4/22, Error ellipse: s-maj=67.0km s-min=37.6km az=150.0*
*ISCJB **28** 04:15:54.1±2.5, 0°.31N±0°.05×96°.64E±0°.05, h31km±19km, mb3.9/9, Error ellipse: s-maj=9.6km s-min=8.0km az=148.0*
*DJA **28** 04:15:55, 0°.38N×96°.68E, h59km, MLv4.0/5*
*NEIC **28** 04:15:55.8±1.2, 0°.16N×96°.58E, h35km, mb4.1/1, Error ellipse: s-maj=29.2km s-min=11.7km az=153.0*

ISC 28 04:15:55.4±2.6, 0°.33N±0°.05×96°.68E±0°.05, h26km±19km, n21, σ0°.96/26, mb3.9/9, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.32**	**43**	P	**Pn**	**04 16 18.2**	**0.0**
GSI				S	**Sn**	**04 16 34.1**	**-0.9**
SISI	**Saibi**	**2.92**	**124**	P	**Pn**	**04 16 39.4**	**-0.8**
SISI				S	**Sn**	**04 17 14.5**	**0.0**
MNSI	**Mandailing Nat**	**2.94**	**81**	P	**Pn**	**04 16 38.7**	**-1.8**
MNSI				S	**Sn**	**04 17 15.7**	**+0.7**
TPTI		**2.96**	**10**	P	**Pn**	**04 16 39.5**	**-1.2**
TPTI				S	**Sn**	**04 17 13.7**	**-1.7**
PSI	**Prapat**	**3.33**	**42**	Pn	**Pn**	**04 16 47.0**	**+1.1**
	1.3nm,0.3s,baz=231,slow=21,SNR=4.2						
PSI				Sn	**Sn**	**04 17 25.1**	**+0.5**
	1.3nm,0.3s,baz=326,slow=11,SNR=4.1						
PSI				LR	LR	04 18 02.2	
	comp=Z,123nm,20.3s,baz=288,slow=37						
PSI	**Prapat**	**3.33**	**42**	Pn	**Pn**	**04 16 47.0**	**+1.1**
PSI				Sn	**Sn**	**04 17 25.1**	**+0.5**
PPI	**Padang Panjang**	**3.80**	**102**	P	**Pn**	**04 16 51.7**	**-0.6**
SDSI	**Sungai Dareh**	**4.92**	**105**	P	**Pn**	**04 17 08.1**	**+0.5**
KULM	**Kulim**	**6.33**	**39**	*e*Pn	**Pn**	**04 17 29.3**	**+2.2**
CMAR	**Chiang Mai Arr**	**18.15**	**7**	P	**Pn**	**04 20 07.1**	**+1.3**
	0.5nm,0.3s,baz=198,slow=11,SNR=3.0						
MKAR	**Makanchi Array**	**47.96**	**347**	P	**P**	**04 24 33.1**	**+1.3**
	1.6nm,0.7s,mb4.2,baz=159,slow=7.9,SNR=12						
SONM	**Songino Array**	**48.07**	**9**	P	**P**	**04 24 33.3**	**+0.7**
	0.4nm,0.5s,mb3.7,baz=197,slow=4.5,SNR=2.7						
ZALV	**Zalesovo Beam**	**54.33**	**351**	P	**P**	**04 25 20.4**	**+0.9**
	3.1nm,0.6s,mb4.4,baz=183,slow=6.1,SNR=9.0						
ZALV	**Zalesovo Beam**	**54.33**	**351**	P	**P**	**04 25 20.4**	**+0.9**
BVAR	**Borovoye Array**	**56.90**	**341**	P	**P**	**04 25 37.5**	**-0.5**
	0.3nm,0.4s,mb3.6,baz=177,slow=7.2,SNR=2.8						
ABKAR	**Akbulak array**	**58.04**	**332**	*e*P	**P**	**04 25 45.7**	**-0.4**
	1.3nm,0.8s,mb4.0

IHLA				S	Sg	04 49 06.8	-1.4
IGIL	**Gilhagi**	**0.73**	**131**	P	Pg	04 48 58.4	-1.8
IGIL				S	Sg	04 49 08.3	-1.6
IKVO	**Krokottuvotn**	**0.92**	**158**	P	Pb	04 49 01.6	-1.8
IKVO				S	Sb	04 49 13.4	-2.0
IREN	**Reynihlio**	**0.98**	**160**	P	Pb	04 49 02.4	-2.1
IREN				S	Sb	04 49 15.1	-2.0
IHRN	**Hraun**	**1.08**	**246**	P	Pb	04 49 03.5	-2.7
IHRN				S	Sb	04 49 17.0	-3.0
IGRS	**Grimsstaoir**	**1.13**	**145**	P	Pb	04 49 04.9	-2.2
IGRS				S	Sb	04 49 20.0	-1.6
ISVA	**Svartarkot**	**1.25**	**171**	P	Pn	04 49 06.7	-2.0
ISVA				S	Sb	04 49 22.9	-2.0
IADA	**Aoalbol**	**1.79**	**150**	P	Pn	04 49 15.6	-0.4
IADA				S	Sn	04 49 37.7	-0.7
IHVA	**Hvannstoosfjol**	**1.79**	**154**	P	Pn	04 49 16.6	-0.5
IBRU	**Bruarjokull**	**1.87**	**158**	P	Pn	04 49 16.7	-0.5
IHVE	**Hveravellir**	**1.87**	**205**	P	Pn	04 49 16.9	-0.3
IKRE	**Kreppuhraun**	**1.87**	**162**	P	Pn	04 49 16.5	-0.8
ISKR	**Skrokkalda**	**2.04**	**188**	P	Pn	04 49 18.9	-0.6
SCO	**Scoresbysund**	**4.23**	**340**	*i* P	Pn	04 49 50.5	+0.8
SCO				*i* LG		04 50 16.0	

CSEM ***28*** *04:49:02.3, 66°.55N×17°.70W, h12km, ML3.8, After REY*
REY 28 04:49:02.3, 66°.55N×17°.70W, h12km, ML3.8, ML4.2, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGRI	**Grimsey**	**0.12**	**266**	P	Pg	04 49 05.4	-0.1
IGRI				S	Sg	04 49 07.7	0.0
IFLA	**Flatey**	**0.40**	**189**	S	Sg	04 49 15.6	+0.2
IBRE	**Brettingsstaoi**	**0.44**	**191**	P	Pg	04 49 10.4	-0.5
IBRE				S	Sg	04 49 16.6	-0.1
IHED	**Heoinshofoi**	**0.50**	**161**	S	Sg	04 49 17.7	-0.9
ILEI	**Leirhofn**	**0.51**	**106**	P	Pg	04 49 11.4	-0.8
ILEI				S	Sg	04 49 18.4	-0.5
IGRA	**Granastaoir**	**0.64**	**176**	S	Sg	04 49 21.8	-1.2
ISIG	**Siglufjorour**	**0.65**	**230**	S	Sg	04 49 21.6	-1.7
IHLA	**Hella**	**0.67**	**205**	P	Pg	04 49 14.0	-1.3
IHLA				S	Sg	04 49 22.8	-1.2
IGIL	**Gilhagi**	**0.72**	**130**	P	Pg	04 49 14.8	-1.5
IGIL				S	Sg	04 49 24.3	-1.4
IKVO	**Krokottuvotn**	**0.90**	**158**	S	Sg	04 49 29.5	-2.0
IREN	**Reynihlio**	**0.96**	**160**	S	Sg	04 49 31.1	-2.3
IHRN	**Hraun**	**1.07**	**247**	S	Sb	04 49 33.0	-3.7
IGRS	**Grimsstaoir**	**1.12**	**144**	S	Sb	04 49 36.1	-1.8
ISVA	**Svartarkot**	**1.23**	**171**	S	Sb	04 49 39.1	-2.1

ISCJB ***28*** *04:58:07.7±0.5, 51°.88N±0°.10×179°.13W±0°.06, h10km, mb3.7/6, Error ellipse: s-maj=14.3km s-min=4.7km az=169.0*
IDC ***28*** *04:58:08.4±2.1, 51°.92N×178°.92W, h0km, mb3.5/6, mb1 3.8/7, mb1mx3.6/23, mbtmp3.6/7, ML3.7/1, Error ellipse: s-maj=54.2km s-min=26.8km az=5.0*
NEIC ***28*** *04:58:08.4, 51°.71N×179°.12W, h5km, ML3.9(PMR), ML3.8(AEIC), After AEIC.*
ISC 28 04:58:08.6±0.6, 51°.7N±0°.1×179°.09W±0°.06, h10km, n16, σ0°.98/20, mb3.6/7, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**1.05**	**253**	P	**Pg**	**04 58 28.1**	**-0.7**
AMKA				S	**Sg**	**04 58 42.2**	**-0.3**
ADK	**Adak**	**1.51**	**82**	*e*Pn	**Pn**	**04 58 35.2**	**-0.4**
ADK				*e*S	**Sn**	**04 58 54.4**	**-0.9**
GSTR	**Great Sitkin T**	**1.92**	**77**	*e*Pn	**Pn**	**04 58 41.8**	**+0.5**
ATKA	**Atka Island**	**3.07**	**78**	P	**Pn**	**04 58 58.0**	**+0.9**
ATKA				S	**Sn**	**04 59 34.5**	**+0.7**
SMY	**Shemya**	**4.32**	**287**	*e*Pn	**Pn**	**04 59 14.8**	**+0.5**
SMY				*e*S	**Sn**	**05 00 08.6**	**+4.0**
FX1	**Attu Island--F**	**4.90**	**287**	P	**Pn**	**04 59 21.9**	**-0.4**
SPIA	**Saint Paul Isl**	**7.53**	**40**	P	**Pn**	**04 59 58.4**	**0.0**
KDAK	**Kodiak Island**	**16.41**	**58**	Pn	**Pn**	**05 01 56.1**	**-2.6**
	0.3nm,0.3s,baz=254,slow=7.4,SNR=2.4						
ILAR	**Eielson Array**	**21.12**	**39**	P	**P**	**05 02 53.0**	**0.0**
	0.7nm,0.8s,mb3.1,baz=247,slow=9.2,SNR=14						
EGAK	**Eagle**	**23.43**	**41**	*e*P	**P**	**05 03 18.3**	**+0.6**
	7.1nm,0.8s,mb4.2						
YKA	**Yellowknife Ar**	**35.15**	**47**	P	**P**	**05 05 00.9**	**-1.1**
	0.3nm,0.5s,mb3.5,baz=284,slow=7.6,SNR=3.6						
NVAR	**Mina Array Bea**	**43.69**	**83**	P	**P**	**05 06 14.6**	**+1.2**
	0.5nm,0.6s,mb3.4,baz=287,slow=7.2,SNR=4.5						
SONM	**Songino Array**	**46.35**	**296**	P	**P**	**05 06 36.8**	**+2.3**
	0.3nm,0.6s,mb3.4,baz=46,slow=6.2,SNR=2.6						
ARCES	**ARCESS Array B**	**57.76**	**350**	P	**P**	**05 07 57.9**	**-1.1**
	1.6nm,0.9s,mb4.0,baz=32,slow=8.6,SNR=3.8						
TXAR	**Lajitas Array**	**58.78**	**81**	P	**P**	**05 08 06.7**	**-0.1**
	0.3nm,0.5s,mb3.6,baz=306,slow=4.6,SNR=5.6						
TXAR	**Lajitas Array**	**58.78**	**81**	P	**P**	**05 08 06.7**	**-0.1**

CSEM ***28*** *05:02:52.9, 66°.56N×17°.72W, h15km, ML3.4, After REY*
REY 28 05:02:52.9, 66°.56N×17°.72W, h15km, ML3.4, ML3.5, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGRI	**Grimsey**	**0.12**	**260**	P	Pg	05 02 56.2	-0.2
IGRI				S	Sg	05 02 58.4	-0.3
IFLA	**Flatey**	**0.41**	**188**	P	Pg	05 03 00.6	-0.5
IFLA				S	Sg	05 03 06.4	-0.2
IBRE	**Brettingsstaoi**	**0.45**	**190**	P	Pg	05 03 01.2	-0.7
IBRE				S	Sg	05 03 07.4	-0.5
IHED	**Heoinshofoi**	**0.51**	**161**	P	Pg	05 03 01.9	-1.1
IHED				S	Sg	05 03 08.6	-1.2
ILEI	**Leirhofn**	**0.52**	**107**	P	Pg	05 03 02.1	-1.0
ILEI				S	Sg	05 03 09.2	-0.8
ISIG	**Siglufjorour**	**0.65**	**229**	P	Pg	05 03 04.1	-1.5
ISIG				S	Sg	05 03 12.4	-1.8
IGRA	**Granastaoir**	**0.65**	**175**	P	Pg	05 03 04.3	-1.3
IGRA				S	Sg	05 03 12.6	-1.6
IHLA	**Hella**	**0.68**	**204**	P	Pg	05 03 04.7	-1.4
IHLA				S	Sg	05 03 13.6	-1.5
IGIL	**Gilhagi**	**0.74**	**131**	P	Pg	05 03 05.3	-1.9
IGIL				S	Sg	05 03 15.2	-1.7
IKVO	**Krokottuvotn**	**0.92**	**158**	P	Pb	05 03 08.4	-2.0
IKVO				S	Sb	05 03 20.1	-2.3
IREN	**Reynihlio**	**0.98**	**160**	P	Pb	05 03 09.4	-2.0
IREN				S	Sb	05 03 22.0	-2.1
IHRN	**Hraun**	**1.07**	**246**	P	Pb	05 03 10.4	-2.7
IHRN				S	Sb	05 03 23.9	-3.0
IGRS	**Grimsstaoir**	**1.13**	**144**	P	Pb	05 03 12.0	-2.1
IGRS				S	Sb	05 03 26.6	-2.0
ISVA	**Svartarkot**	**1.25**	**171**	P	Pn	05 03 13.8	-1.9
ISVA				S	Sb	05 03 30.0	-1.8
IADA	**Aoalbol**	**1.78**	**149**	P	Pn	05 03 22.7	-0.4
IBRU	**Bruarjokull**	**1.87**	**158**	P	Pn	05 03 24.1	-0.1

ISCJB ***28*** *05:08:51.4±0.4, 39°.81N±0°.02×30°.47E±0°.04, h4km±4km, Error ellipse: s-maj=4.7km s-min=3.6km az=176.8*
CSEM ***28*** *05:08:51.4±0.1, 39°.82N×30°.48E, h5km, MD2.8, Error ellipse: s-maj=1.5km s-min=1.0km az=65.0*
DDA ***28*** *05:08:51.1, 39°.79N×30°.51E, h4km±3km, Md2.8*
ISK ***28*** *05:08:51.0, 39°.82N×30°.49E, h8km, MD2.8*
ISC 28 05:08:51.8±0.4, 39°.82N±0°.02×30°.49E±0°.04, h7km±4km, n42, σ0°.62/62, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORA	**Eskisehir**	**0.07**	**336**	*i* P	**Pg**	**05 08 53.2**	**-0.2**
BORA				*i* S	**Sg**	**05 08 54.6**	**-0.1**
BORA	**Eskisehir**	**0.07**	**336**	*i* P	**Pg**	**05 08 53.2**	**-0.3**
BORA				*i* S	**Sg**	**05 08 54.6**	**-0.1**
ESKT	**Eskisehir**	**0.41**	**137**	PG	**Pg**	**05 08 59.5**	**-0.2**
ESKT				*e*SG	**Sg**	**05 09 05.6**	**+0.5**
ESKT	**Eskisehir**	**0.41**	**137**	*i* P	**Pg**	**05 08 59.5**	**-0.3**
ESKT				*i* S	**Sg**	**05 09 05.6**	**+0.5**
ESKT	**Eskisehir**	**0.41**	**137**	*i* Pg	**Pg**	**05 08 59.5**	**-0.2**
ESKT				*e*Sg	**Sg**	**05 09 05.6**	**+0.5**
SEYT	**Eskypehyr**	**0.41**	**137**	*i* P	**Pg**	**05 08 59.5**	**-0.2**
SEYT				*i* S	**Sg**	**05 09 05.6**	**+0.5**
GPA	**Golpazari**	**0.49**	**344**	*e*PG	**Pg**	**05 09 00.8**	**-0.4**
GPA	**Golpazari**	**0.49**	**344**	*e*Pg	**Pg**	**05 09 00.8**	**-0.4**
GULT	**Gulveren**	**0.61**	**2**	*e*PG	**Pg**	**05 09 03.3**	**-0.2**
GULT				*e*SG	**Sg**	**05 09 12.3**	**+0.8**
GULT	**Gulveren**	**0.61**	**2**	*e*Pg	**Pg**	**05 09 03.3**	**-0.3**
GULT				*e*Sg	**Sg**	**05 09 12.4**	**+0.9**
ALT	**Altintas**	**0.82**	**201**	*e*PG	**Pg**	**05 09 07.0**	**-0.5**
ALT				*e*SG	**Sg**	**05 09 19.1**	**+1.0**
ALT	**Altintas**	**0.82**	**201**	*e*Pg	**Pg**	**05 09 07.0**	**-0.5**
ALT				*e*Sg	**Sg**	**05 09 19.1**	**+1.0**
SPNC	**Sapanca-Adapaz**	**0.88**	**351**	*e*PG	**Pg**	**05 09 08.5**	**-0.1**
SPNC	**Sapanca-Adapaz**	**0.88**	**351**	*e*Pg	**Pg**	**05 09 08.5**	**-0.1**
SVRH	**Sivrihisar-ESK**	**0.88**	**115**	*e*PG	**Pg**	**05 09 08.5**	**-0.2**
SVRH	**Sivrihisar-ESK**	**0.88**	**115**	*e*Pg	**Pg**	**05 09 08.5**	**-0.2**
GDZ	**Gediz**	**1.07**	**227**	*i* P	**Pg**	**05 09 12.4**	**+0.1**
GDZ				*i* S	**Sg**	**05 09 25.8**	**-0.3**
GDZ	**Gediz**	**1.07**	**227**	*i* P	**Pg**	**05 09 12.4**	**+0.1**
GDZ				*i* S	**Sg**	**05 09 25.8**	**-0.3**
ULDT	**Uludag**	**1.09**	**288**	*i* P	**Pg**	**05 09 12.3**	**-0.3**
ULDT				*i* S	**Sg**	**05 09 28.6**	**+1.8**
ULDT	**Uludag**	**1.09**	**288**	*i* P	**Pg**	**05 09 12.3**	**-0.3**
ULDT				*i* S	**Sg**	**05 09 28.6**	**+1.9**
YLV	**Yalova**	**1.13**	**311**	*e*PN	**Pg**	**05 09 12.9**	**-0.6**
YLV	**Yalova**	**1.13**	**311**	*e*Pn	**Pg**	**05 09 12.9**	**-0.6**
BOLV	**Bolvadin**	**1.16**	**162**	*i* P	**Pg**	**05 09 13.8**	**-0.2**
BOLV				*i* S	**Sg**	**05 09 28.7**	**-0.3**
BOLV	**Bolvadin**	**1.16**	**162**	*i* P	**Pg**	**05 09 13.8**	**-0.2**
BOLV				*i* S	**Sg**	**05 09 28.7**	**-0.3**
HRT	**Hereke**	**1.18**	**328**	*e*PN	**Pn**	**05 09 13.5**	**-1.3**
HRT	**Hereke**	**1.18**	**328**	*e*Pn	**Pn**	**05 09 13.5**	**-1.2**
SHUT	**Suhut-Afyon**	**1.27**	**178**	*e*PN	**Pn**	**05 09 15.7**	**-0.3**
SHUT	**Suhut-Afyon**	**1.27**	**178**	*e*Pn	**Pn**	**05 09 15.7**	**-0.2**
SGKT	**Sivrigoynuk**	**1.42**	**57**	*i* P	**Pn**	**05 09 18.0**	**0.0**
SGKT				*i* S	**Sb**	**05 09 38.2**	**+1.4**
SGKT	**Sivrigoynuk**	**1.42**	**57**	*i* P	**Pn**	**05 09 18.0**	**0.0**
SGKT				*i* S	**Sb**	**05 09 38.2**	**+1.4**
KIZT	**Kizilcal**	**1.43**	**131**	*e*PN	**Pn**	**05 09 17.9**	**-0.3**
KIZT	**Kizilcal**	**1.43**	**131**	*e*Pn	**Pn**	**05 09 17.9**	**-0.3**
ARMT	**Armutlu**	**1.45**	**301**	*e*PN	**Pn**	**05 09 18.1**	**-0.3**
ARMT	**Armutlu**	**1.45**	**301**	*e*Pn	**Pn**	**05 09 18.1**	**-0.3**
SILT	**Sile**	**1.48**	**334**	*e*PN	**Pn**	**05 09 18.1**	**-0.7**
SILT	**Sile**	**1.48**	**334**	*e*Pn	**Pn**	**05 09 18.1**	**-0.7**
KHAL	**Karahalli**	**1.64**	**208**	*i* P	**Pn**	**05 09 21.4**	**+0.3**
KHAL				*i* S	**Sn**	**05 09 42.6**	**+0.2**
KHAL	**Karahalli**	**1.64**	**208**	*i* P	**Pn**	**05 09 21.4**	**+0.3**
KHAL				*i* S	**Sn**	**05 09 42.6**	**+0.1**
ISK	**Istanbul-Kandi**	**1.65**	**319**	*e*PN	**Pn**	**05 09 21.2**	**0.0**
ISK	**Istanbul-Kandi**	**1.65**	**319**	*e*Pn	**Pn**	**05 09 21.2**	**0.0**
KCTX	**Karacabey (Bur**	**1.69**	**286**	*e*PN	**Pn**	**05 09 22.6**	**+0.8**
KCTX	**Karacabey (Bur**	**1.69**	**286**	*e*Pn	**Pn**	**05 09 22.6**	**+0.8**

NEIC ***28*** *05:16:05.8, 16°.43N×94°.64W, h92km, MD3.8(MEX), After MEX.*
MEX 28 05:16:04.8±0.7, 16°.54N×94°.71W, h106km±11km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.58**	**343**	*e*P	Pn	05 16 20.3	-1.5
CMIG				*e*S	Sn	05 16 32.9	-1.7
CMIG	**Matias Romero**	**0.58**	**343**	*e*P	Pn	05 16 20.3	-1.5
CMIG				*e*S	Sn	05 16 32.9	-1.7
TGIG		**1.54**	**81**	*e*P	Pn	05 16 30.7	-1.2
TGIG				*i* S	Sn	05 16 50.9	-1.6
HUIG	**Huatulco**	**1.55**	**241**	*e*P	Pn	05 16 29.9	-2.0
HUIG				*e*S	Sn	05 16 51.6	-0.9
HUIG	**Huatulco**	**1.55**	**241**	*i* P	Pn	05 16 30.3	-1.7
HUIG				*e*S	Sn	05 16 51.6	-0.9
PCIG		**1.66**	**120**	*e*P	Pn	05 16 32.4	-0.9
PCIG				*i* S	Sn	05 16 53.2	-1.8
VHO	**Vista Hermosa**	**2.01**	**286**	*e*P	Pn	05 16 40.1	+2.4
VHO				*e*S	Sn	05 17 05.0	+2.0
VHO	**Vista Hermosa**	**2.01**	**286**	*i* P	Pn	05 16 36.1	-1.6
VHO				*i* S	Sn	05 17 03.1	+0.2
PNIG	**Pinotepa**	**3.28**	**268**	*e*P	Pn	05 16 54.0	-0.4
PNIG				*e*S	Sn	05 17 33.1	+0.2
PNIG	**Pinotepa**	**3.28**	**268**	*e*P	Pn	05 16 54.0	-0.4
PNIG				*e*S	Sn	05 17 33.1	+0.2

BJI ***28*** *05:34:07.6, 43°.91N×87°.17E, h29km, ML2.9/6*
NNC 28 05:34:09.1±4.0, 43°.95N×87°.40E, h21km±28km, mb3.4, mpv3.0,6C-2D, Error ellipse: s-maj=65.2km s-min=29.8km az=39.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**0.25**	**122**	⇓*i*Pg	Pb	05 34 11.5	-3.5
WMQ				Sg	Sb	05 34 18.8	-0.3
MK31	**Makanchi Array**	**4.59**	**310**	⇑Pn	Pn	05 35 19.9	+2.8
	1.9nm,0.5s,baz=129,slow=14,SNR=37						
MK31				⇓Sn	Sn	05 36 15.9	+6.2
	3.9nm,0.5s,baz=121,slow=32,SNR=5.1						
MK31				⇑Lg		05 36 37.5	
	7.1nm,0.6s,baz=118,slow=30,SNR=4.1						
KURBB	**Kurchatov Arra**	**8.99**	**321**	⇑Pn	Pn	05 36 16.4	-1.2
	0.2nm,0.5s						
KURBB				⇑Lg		05 38 51.1	
	2.4nm,1.1s						
KURK	**Kurchatov**	**9.01**	**322**	⇑Pn	Pn	05 36 19.5	+1.6
	2.0nm,1.1s						
KURK				⇑Lg		05 38 50.6	
	6.1nm,1.0s						

ISK ***28*** *05:38:52.3, 39°.17N×41°.67E, h3km, MD3.6*
DDA ***28*** *05:38:52.7, 39°.14N×41°.65E, h22km±1km, Md3.5*
TEH ***28*** *05:38:52.7, 39°.15N×41°.64E, h2km*
ISCJB ***28*** *05:38:53.6±0.3, 39°.15N±0°.02×41°.68E±0°.02, h10km, Error ellipse: s-maj=2.9km s-min=2.5km az=158.9*
CSEM ***28*** *05:38:53.0±0.2, 39°.16N×41°.70E, h2km, MD3.5, Error ellipse: s-maj=4.9km s-min=3.6km az=13.0*
ISC 28 05:38:53.2±0.4, 39°.14N±0°.02×41°.67E±0°.02, h1km±4km, n63, σ0°.95/85, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNGL	**BINGOL**	**0.44**	**245**	*i* P	**Pg**	**05 39 01.3**	**-0.4**
BNGL				*i* S	**Sg**	**05 39 08.2**	**+0.8**
TATV	**Tatvan**	**0.79**	**143**	*i* P	**Pg**	**05 39 07.6**	**-0.8**
TATV				*i* S	**Sg**	**05 39 18.1**	**-0.4**
TATV	**Tatvan**	**0.79**	**143**	*i* P	**Pg**	**05 39 07.6**	**-0.7**
TATV				*i* S	**Sg**	**05 39 18.1**	**-0.4**
EZM	**Erzurum**	**0.80**	**343**	PG	**Pg**	**05 39 08.0**	**-0.5**
HOMI	**Horasan**	**0.92**	**12**	*i* P	**Pg**	**05 39 10.5**	**-0.4**
HOMI				*i* S	**Sg**	**05 39 24.2**	**+1.3**
TUTA	**Tutak**	**0.93**	**73**	*i* P	**Pg**	**05 39 10.3**	**-0.7**
TUTA				*i* S	**Sg**	**05 39 24.3**	**+1.2**
TUTA	**Tutak**	**0.93**	**73**	*i* P	**Pg**	**05 39 10.3**	**-0.7**
TUTA				*i* S	**Sg**	**05 39 24.3**	**+1.2**
AGRB	**Hanur-Agry**	**1.12**	**67**	*e*PN	**Pg**	**05 39 13.6**	**-1.0**
AGRB				*e*SN	**Sg**	**05 39 29.8**	**+0.7**
AGRB	**Hanur-Agry**	**1.12**	**67**	*e*Pn	**Pg**	**05 39 13.6**	**-1.0**
AGRB				*e*Sn	**Sg**	**05 39 29.8**	**+0.7**
KOPT	**Kop Dagi**	**1.26**	**315**	*i* P	**Pg**	**05 39 16.2**	**-1.1**
KOPT				*i* S	**Sg**	**05 39 34.5**	**+0.9**
KOPT	**Kop Dagi**	**1.26**	**315**	*i* P	**Pg**	**05 39 16.2**	**-1.1**
KOPT				*i* S	**Sg**	**05 39 34.5**	**+0.8**
BEST	**Besiri**	**1.29**	**194**	*i* P	**Pg**	**05 39 17.2**	**-0.6**
BEST				*i* S	**Sg**	**05 39 35.5**	**+1.0**
VANT	**Van**	**1.44**	**119**	*e*PN	**Pb**	**05 39 20.6**	**-0.3**
VANB	**Van**	**1.45**	**112**	*e*PN	**Pb**	**05 39 20.9**	**-0.1**
VANB	**Van**	**1.45**	**112**	*e*Pn	**Pb**	**05 39 21.0**	**-0.1**
TVAN	**Van**	**1.49**	**114**	*i* P	**Pn**	**05 39 20.8**	**-0.4**
TVAN				*i* S	**Sg**	**05 39 42.5**	**+1.3**
TVAN	**Van**	**1.49**	**114**	*i* P	**Pn**	**05 39 20.8**	**-0.4**
DYDN	**Diyadin**	**1.62**	**75**	*i* P	**Pn**	**05 39 22.4**	**-0.6**
DYDN				*i* S	**Sn**	**05 39 44.1**	**-0.4**
DYDN	**Diyadin**	**1.62**	**75**	*i* P	**Pn**	**05 39 22.4**	**-0.6**
DYDN				*i* S	**Sn**	**05 39 44.1**	**-0.4**
DIYA	**Diyarbakir**	**1.72**	**225**	*i* P	**Pn**	**05 39 24.4**	**+0.1**
DIYA				*i* S	**Sn**	**05 39 46.0**	**-0.8**
DIYA	**Diyarbakir**	**1.72**	**225**	*i* P	**Pn**	**05 39 24.4**	**+0.1**
DIYA				*i* S	**Sn**	**05 39 46.0**	**-0.8**
CLDR	**Caldiran**	**1.75**	**89**	*e*PN	**Pn**	**05 39 24.4**	**-0.4**
CLDR	**Caldiran**	**1.75**	**89**	*e*Pn	**Pn**	**05 39 24.4**	**-0.4**
DDEM	**Demirkent**	**1.75**	**2**	*i* P	**Pb**	**05 39 25.1**	**-1.1**
DDEM	**Demirkent**	**1.75**	**2**	*i* P	**Pb**	**05 39 25.0**	**-1.2**
PTK	**Pertek**	**1.79**	**263**	*e*PN	**Pn**	**05 39 24.2**	**-1.0**
PTK	**Pertek**	**1.79**	**263**	*e*Pn	**Pn**	**05 39 24.2**	**-1.1**
KARS	**Kars**	**1.84**	**36**	*e*PN	**Pn**	**05 39 25.3**	**-0.7**
KARS	**Kars**	**1.84**	**36**	*e*Pn	**Pn**	**05 39 25.3**	**-0.7**
EZC	**Erzincan**	**1.89**	**290**	*e*PN	**Pn**	**05 39 26.3**	**-0.4**
DAGI	**Agillar**	**1.94**	**6**	*i* P	**Pb**	**05 39 27.8**	**-1.7**
DAGI				*i* S	**Sb**	**05 39 55.8**	**+1.6**
MARD	**Mardin**	**1.95**	**201**	*i* P	**Pn**	**05 39 26.5**	**-1.0**
MARD				*i* S	**Sn**	**05 39 52.5**	**-0.1**
SVRC	**Sivrice-ELAZID**	**2.00**	**248**	*e*PN	**Pn**	**05 39 27.8**	**-0.4**
SVRC	**Sivrice-ELAZID**	**2.00**	**248**	*e*Pn	**Pn**	**05 39 27.8**	**-0.3**
ARTV	**Artvin**	**2.05**	**6**	*i* P	**Pb**	**05 39 29.1**	**-2.2**
ARTV				*i* S	**Sb**	**05 39 58.3**	**+1.0**
ARTV	**Artvin**	**2.05**	**6**	*i* P	**Pn**	**05 39 29.1**	**+0.2**
PZAR	**Pazar-Rize**	**2.12**	**344**	*e*PN	**Pn**	**05 39 30.2**	**+0.4**
PZAR	**Pazar-Rize**	**2.12**	**344**	*e*Pn	**Pn**	**05 39 30.2**	**+0.4**
GUMT	**Gumushane**	**2.14**	**309**	*e*PN	**Pn**	**05 39 30.5**	**+0.4**
GUMT	**Gumushane**	**2.14**	**309**	*e*Pn	**Pn**	**05 39 30.5**	**+0.4**
HAKT	**HAKKARI**	**2.25**	**134**	*i* P	**Pb**	**05 39 34.6**	**-0.2**
HAKT				*i* S	**Sb**	**05 40 05.9**	**+2.8**
BCA	**Borcka**	**2.30**	**359**	*e*PN	**Pn**	**05 39 32.1**	**-0.2**
BCA	**Borcka**	**2.30**	**359**	*e*Pn	**Pn**	**05 39 32.2**	**-0.1**
KTUT	**Trabzon**	**2.35**	**322**	*e*PN	**Pn**	**05 39 33.5**	**+0.5**
KTUT	**Trabzon**	**2.35**	**322**	*e*Pn	**Pn**	**05 39 33.5**	**+0.5**
CUKT	**Cukurca**	**2.43**	**140**	*e*PN	**Pn**	**05 39 34.7**	**+0.6**
CUKT	**Cukurca**	**2.43**	**140**	*e*Pn	**Pn**	**05 39 34.7**	**+0.6**
KEMA	**Kemaliye**	**2.47**	**274**	*i* P	**Pb**	**05 39 36.6**	**-1.8**
KEMA				*i* S	**Sb**	**05 40 10.7**	**+1.4**
KEMA	**Kemaliye**	**2.47**	**274**	*i* P	**Pn**	**05 39 36.6**	**+2.0**
GNI	**Garni**	**2.58**	**66**	*e*PN	**Pn**	**05 39 35.5**	**-0.6**
GNI	**Garni**	**2.58**	**66**	*e*Pn	**Pn**	**05 39 35.5**	**-0.7**
MYA	**Malataya**	**2.66**	**253**	*e*PN	**Pn**	**05 39 37.3**	**0.0**
MYA	**Malataya**	**2.66**	**253**	*e*Pn	**Pn**	**05 39 37.3**	**0.0**
URFA	**Urfa**	**2.81**	**234**	*e*PN	**Pn**	**05 39 40.1**	**+0.8**
URFA	**Urfa**	**2.81**	**234**	*e*Pn	**Pn**	**05 39 40.1**	**+0.8**
AKCD	**Akcadag**	**3.05**	**255**	*i* P	**Pb**	**05 39 47.5**	**-0.8**
AKCD				*i* S	**Sg**	**05 40 31.8**	**+0.7**
IMRD	**Marand**	**3.18**	**96**	*e*Pn	**Pb**	**05 39 50.3**	**-0.2**
IMRD	**Marand**	**3.18**	**96**	*e*Pn	**Pb**	**05 39 50.3**	**-0.2**
ISHB	**Shabestar**	**3.21**	**104**	*e*Pn	**Pb**	**05 39 50.9**	**-0.1**
ISHB				*e*		05 40 04.5	
	comp=Z,537nm,0.3s						
IAZR	**Azarshahr**	**3.69**	**112**	*e*Pn	**Pb**	**05 40 01.1**	**+1.9**
IAZR	**Azarshahr**	**3.69**	**112**	*e*Pn	**Pb**	**05 40 01.1**	**+1.9**
SVSK	**Karacayir**	**3.69**	**284**	*e*PN	**Pn**	**05 39 52.8**	**+1.4**
SVSK	**Karacayir**	**3.69**	**284**	*e*Pn	**Pn**	**05 39 52.8**	**+1.4**

NEIC ***28*** *05:47:57.8, 31°.18S×68°.93W, h111km, MD3.9(GUC), After GUC.*
GUC 28 05:47:57.8±0.7, 31°.18S×68°.93W, h111km±58km, MD3.9, ML3.7, 1C-2D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**1.77**	**270**	⇓*i*P	Pn	05 48 28.6	+0.6
CMCH				*i* S	Sn	05 48 51.9	+1.0
CMCH	**Combarbala**	**1.77**	**270**	⇓*i*P	Pn	05 48 28.6	+0.6
CMCH				*i* S	Sn	05 48 51.9	+1.0
CMCH				AML	AML	05 48 52.7	
	comp=N,3μm,0.4s						
TLL	**Tololo Astrono**	**1.90**	**302**	*e*P	Pn	05 48 30.8	+1.2
TLL				*e*S	Sn	05 48 55.2	+1.4
TLL	**Tololo Astrono**	**1.90**	**302**	*e*P	Pn	05 48 30.8	+1.2
TLL				*e*S	Sn	05 48 55.2	+1.4
TLL				AML	AML	05 48 59.0	
	comp=E,342nm,0.5s						

SYVR				pmax	pmax		
	comp=Z,364nm,0.5s						
SYVR				smax			
	comp=N,540nm,0.6s						
SYVR	**Suvo**	**1.96**	**183**	⇓iPn	**Pn**	**05 49 47.1**	**+3.5**
	comp=N,130nm,0.9s						
SYVR				⇓iPn	**Pn**	**05 49 47.1**	**+3.5**
	comp=N,61nm,0.9s						
SYVR				⇑iPn	**Pn**	**05 49 47.1**	**+3.5**
	comp=N,193nm,0.9s						
SYVR				ePg	**Pg**	**05 49 48.4**	**+0.5**
SYVR				e		05 49 50.7	
SYVR				eSg	**Sg**	**05 50 15.5**	**+2.3**
SYVR				max			
	comp=N,97nm,0.6s						
SYVR				Smax			
	comp=N,631nm,1.4s						
OGRR	**Ongureny**	**2.48**	**219**	ePN	**Pn**	**05 49 53.3**	**+2.5**
OGRR				e		05 49 57.0	
OGRR				e		05 50 28.9	
OGRR				pmax	pmax		
	comp=Z,76nm,0.6s						
OGRR				smax			
	comp=E,455nm,1.4s						
OGRR	**Ongureny**	**2.48**	**219**	⇑iPn	**Pn**	**05 49 53.3**	**+2.5**
OGRR				ePg	**Pg**	**05 49 56.1**	**-1.8**
OGRR				eSn	**Sn**	**05 50 23.3**	**+2.2**
OGRR				i Sg	**Sg**	**05 50 28.9**	**-1.1**
OGRR				Pmax			
	comp=E,64nm,0.4s						
OGRR				Smax			
	comp=E,452nm,1.4s						
MXMB	**Maximikha**	**2.50**	**200**	⇓ePg	**Pg**	**05 49 56.7**	**-1.5**
MXMB				eSg	**Sg**	**05 50 31.6**	**+1.1**
MXMB				Pmax			
	comp=E,165nm,0.6s						
MXMB				Smax			
	comp=E,493nm,0.6s						
NLYR	**Nelyaty**	**3.21**	**72**	eSg	**Sg**	**05 50 49.4**	**-4.1**
NLYR				eSgSg		05 50 56.9	
NLYR				max			
	comp=E,186nm,0.5s						
ZRHB	**Zarechye**	**3.55**	**212**	e	**Pn**	**05 50 10.8**	**+5.4**
ZRHB				Pg	**Pg**	**05 50 15.4**	**-2.9**
ZRHB				eSg	**Sg**	**05 51 02.4**	**-1.8**
ZRHB				Pmax			
	comp=E,78nm,0.7s						
ZRHB				Smax			
	comp=E,344nm,1.1s						
TRG	**Tyrgan**	**3.64**	**220**	ePN	**Pn**	**05 50 09.6**	**+2.9**
TRG				eS	**Sn**	**05 50 51.9**	**+2.3**
TRG				eS	**Sb**	**05 51 03.6**	**+4.7**
TRG				smax			
	comp=E,160nm,0.3s						
TRG	**Tyrgan**	**3.64**	**220**	⇑iPn	**Pn**	**05 50 09.7**	**+3.0**
TRG				e		05 50 14.0	
TRG				eSn	**Sn**	**05 50 53.2**	**+3.6**
TRG				i Sg	**Sg**	**05 51 04.4**	**-2.8**
TRG				max			
	comp=E,68nm,0.3s						
TRG				Smax			
	comp=E,177nm,0.8s						
UUDB	**Ulan-Yde**	**4.04**	**203**	⇑iPg	**Pg**	**05 50 23.5**	**-4.2**
UUDB				e		05 50 53.8	
UUDB				eSg	**Sg**	**05 51 18.4**	**-1.5**
UUDB				Pmax			
	comp=E,39nm,0.6s						
UUDB				Smax			
	comp=E,149nm,1.1s						
CIT	**Chita**	**4.11**	**150**	ePg	**Pg**	**05 50 25.9**	**-3.1**
CIT				eSg	**Sg**	**05 51 20.8**	**-1.4**
CIT				e		05 51 25.6	
CIT				Pmax			
	comp=E,74nm,0.1s						
CIT				Smax			
	comp=E,273nm,0.3s						
KAB	**Kabansk**	**4.14**	**212**	eSg	**Sg**	**05 51 21.4**	**-1.7**
KAB				Smax			
	comp=E,397nm,1.2s						
IRK	**Irkutsk**	**4.86**	**229**	eSg	**Sg**	**05 51 44.3**	**-2.0**
IRK				Smax			
	comp=E,383nm,0.5s						
LSTR	**Listvyanka**	**4.92**	**223**	⇓iPn	**Pn**	**05 50 24.4**	**+0.2**
LSTR				⇓iPn	**Pn**	**05 50 26.9**	**+2.7**
LSTR				ePg	**Pg**	**05 50 38.8**	**-5.7**
LSTR				eSn	**Sn**	**05 51 21.3**	**+0.2**
LSTR				i Sg	**Sg**	**05 51 43.2**	**-4.9**
LSTR				Pmax			
	comp=E,14nm,0.5s						
LSTR				Smax			
	comp=E,264nm,1.4s						
TLY	**Talaya**	**5.54**	**227**	ePN	**Pn**	**05 50 33.3**	**+0.6**
TLY				e		05 50 49.4	
TLY				eS	**Sn**	**05 51 34.9**	**-1.5**
TLY	**Talaya**	**5.54**	**227**	ePn	**Pn**	**05 50 34.3**	**+1.6**
TLY				e		05 50 42.7	
TLY				ePg	**Pg**	**05 50 50.7**	**-5.6**
TLY				e		05 51 19.0	
TLY				eSn	**Sn**	**05 51 35.2**	**-1.2**
TLY				eSg	**Sg**	**05 52 02.1**	**-5.9**
TLY				Pmax			
	comp=E,9.0nm,0.8s						
TLY				Smax			
	comp=E,78nm,1.2s						
TLY	**Talaya**	**5.54**	**227**	ePn	**Pn**	**05 50 33.8**	**+1.1**
	comp=E,8.2nm,0.3s						
TLY				eSn	**Sn**	**05 51 36.1**	**-0.3**
TUP	**Tupik**	**5.74**	**98**	ePN	**Pn**	**05 50 39.6**	**+4.1**
TUP				e		05 50 56.5	
TUP				e		05 52 10.2	
TUP				pmax	pmax		
	comp=Z,7.0nm,0.4s						
TUP				smax			
	comp=N,123nm,1.0s						
TUP	**Tupik**	**5.74**	**98**	ePn	**Pn**	**05 50 36.6**	**+1.1**
TUP				Pg	**Pg**	**05 50 54.6**	**-5.6**
TUP				eSn	**Sn**	**05 51 41.2**	**-0.1**
TUP				eSg	**Sg**	**05 52 10.2**	**-4.2**
TUP				Pmax			
	comp=N,5.0nm,0.5s						
TUP				Smax			
	comp=N,81nm,0.8s						
ARS	**Arshan**	**5.91**	**234**	⇑iPn	**Pn**	**05 50 39.4**	**+1.6**
ARS				e		05 50 42.2	
ARS				ePg	**Pg**	**05 50 57.1**	**-6.3**
ARS				eSn	**Sn**	**05 51 43.0**	**-2.4**
ARS				eSg	**Sg**	**05 52 14.7**	**-5.1**
ARS				e		05 52 20.1	
ARS				Pmax			
	comp=N,21nm,0.5s						
ARS				Smax			
	comp=N,548nm,0.7s						
KPC	**Khapcheranga**	**6.06**	**166**	ePN	**Pn**	**05 50 42.5**	**+2.6**
KPC				e		05 51 01.6	
KPC				e		05 52 21.4	
KPC				pmax	pmax		
	comp=Z,17nm,0.6s						
KPC				smax			
	comp=E,65nm,0.8s						
KPC	**Khapcheranga**	**6.06**	**166**	ePn	**Pn**	**05 50 42.1**	**+2.2**
KPC				e		05 50 53.0	
KPC				⇑iPg	**Pg**	**05 51 02.2**	**-4.2**
KPC				eSn	**Sn**	**05 51 49.2**	**-0.1**
KPC				i Sg	**Sg**	**05 52 21.3**	**-3.5**
KPC				Pmax			
	comp=E,9.0nm,0.5s						
KPC				Smax			
	comp=E,66nm,1.1s						
ZAK	**Zakamensk**	**6.69**	**221**	ePN	**Pn**	**05 50 51.3**	**+2.7**
ZAK				eS	**Sn**	**05 52 04.2**	**-0.6**
ZAK				eS	**Sb**	**05 52 37.2**	**+11**
ZAK				smax			
	comp=E,46nm,1.1s						
ZAK	**Zakamensk**	**6.69**	**221**	ePn	**Pn**	**05 50 51.7**	**+3.1**
ZAK				Pg	**Pg**	**05 51 12.6**	**-5.8**
ZAK				e		05 52 06.8	
ZAK				eSg	**Sg**	**05 52 40.5**	**-4.5**
ZAK				Pmax			
	comp=E,5.0nm,0.3s						
ZAK				Smax			
	comp=E,46nm,1.1s						
MOY	**Mondy**	**6.75**	**238**	ePN	**Pn**	**05 50 52.6**	**+3.3**
MOY				e		05 51 12.1	
MOY				eS	**Sn**	**05 52 06.3**	**+0.2**
MOY	**Mondy**	**6.75**	**238**	⇑iPn	**Pn**	**05 50 52.6**	**+3.3**
MOY				e		05 51 01.3	
MOY				eSn	**Sn**	**05 52 07.0**	**+0.9**
MOY				eSg	**Sg**	**05 52 40.0**	**-6.7**
MOY				max			
	comp=E,21nm,0.9s						
MOY				Smax			
	comp=E,92nm,1.7s						
ORL	**Orlik**	**6.84**	**248**	ePN	**Pn**	**05 50 53.0**	**+2.4**
ORL				e		05 51 14.6	
ORL				eS	**Sn**	**05 52 08.5**	**+0.1**
ORL				e		05 52 41.9	
ORL				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ORL				smax			
	comp=N,69nm,1.5s						
ORL	**Orlik**	**6.84**	**248**	⇑iPn	**Pn**	**05 50 52.9**	**+2.3**
ORL				e		05 50 58.8	
ORL				ePg	**Pg**	**05 51 15.1**	**-6.1**
ORL				eSn	**Sn**	**05 52 08.4**	**0.0**
ORL				eSg	**Sg**	**05 52 43.4**	**-6.3**
ORL				e		05 52 52.6	
ORL				Pmax			
	comp=N,9.0nm,0.8s						
ORL				Smax			
	comp=N,67nm,0.9s						
ULN	**Ulaanbaatar**	**8.00**	**195**	e	**Sn**	**05 52 50.3**	**+13**
ULN				e		05 53 10.7	
ULN				eSg	Sn	05 53 22.7	+46
SONM	**Songino Array**	**8.13**	**198**	Pn	**Pn**	**05 51 11.4**	**+3.1**
	comp=N,0.4nm,0.3s,baz=12,slow=13,SNR=6.1						
SONM				Pg	**Pb**	**05 51 39.3**	**+8.1**
	comp=N,0.6nm,0.3s,baz=14,slow=17,SNR=6.0						
SONM				Lg		05 53 28.7	
	comp=N,1.0nm,0.3s,baz=14,slow=29,SNR=7.7						
TDJR	**Todzha**	**8.90**	**255**	ePn	**Pn**	**05 51 23.3**	**+4.4**
TDJR				e		05 52 14.0	
TDJR				e		05 53 06.7	
TDJR				eSg	Sx	05 53 47.4	
ZALV	**Zalesovo Beam**	**14.71**	**274**	Pn	**Pn**	**05 52 38.7**	**+0.5**
	comp=N,0.5nm,0.3s,baz=67,slow=11,SNR=4.1						
ZALV	**Zalesovo Beam**	**14.71**	**274**	P	**Pn**	**05 52 38.7**	**+0.5**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KURK	**Kurchatov**	**19.45**	**269**	P	**Pn**	**05 53 38.4**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=69,slow=12,SNR=11						
KURK	**Kurchatov**	**19.45**	**269**	eP	**Pn**	**05 53 38.0**	**0.0**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KURK	**Kurchatov**	**19.45**	**269**	eP	**Pn**	**05 53 38.0**	**+0.1**
	comp=Z,0.9nm,0.4s						
MK31	**Makanchi Array**	**19.47**	**255**	eP	**Pn**	**05 53 38.5**	**+0.3**
MKAR	**Makanchi Array**	**19.47**	**255**	P	**Pn**	**05 53 38.1**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=58,slow=11,SNR=7.6						
BVAR	**Borovoye Array**	**23.14**	**280**	P	**P**	**05 54 16.7**	**+0.2**
	comp=Z,0.7nm,0.5s,mb3.4,baz=64,slow=13,SNR=4.1						
BVAR	**Borovoye Array**	**23.14**	**280**	P	**P**	**05 54 16.7**	**+0.2**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARU	**Arti**	**28.32**	**293**	P	**P**	**05 55 03.9**	**+0.1**
ARU				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.6						
ARU	**Arti**	**28.32**	**293**	P	**P**	**05 55 03.9**	**+0.1**
	comp=Z,1.3nm,0.6s,mb3.7						
ABKAR	**Akbulak array**	**30.71**	**279**	P	**P**	**05 55 25.1**	**+0.1**
	comp=Z,0.1nm,0.2s,mb3.3						
ILAR	**Eielson Array**	**46.40**	**35**	P	**P**	**05 57 37.7**	**+1.3**
	comp=Z,0.3nm,0.8s,mb3.3,baz=311,slow=7.0,SNR=4.9						

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*IDC **28** 06:37:19.7±2.3, 8.°28S×116.°89E, h0km, mb4.0/5, mb1 4.0/5, mb1mx3.8/19, mbtmp4.0/5, MS3.0/1, Ms1 3.0/1, ms1mx2.7/25, Error ellipse: s-maj=179.8km s-min=20.5km az=57.0*
*ISCJB **28** 06:37:20.3±0.6, 7.°94S±0.°09×117.°31E±0.°05, h10km, mb4.0/5, Error ellipse: s-maj=14.2km s-min=6.3km az=19.1*
*NEIC **28** 06:37:25.7±1.2, 8.°07S×117.°20E, h35km, mb3.8/1, Error ellipse: s-maj=88.6km s-min=9.6km az=55.0*
*DJA **28** 06:37:44, 8.°06S×115.°74E, h18km, MLv3.4/9*
ISC 28 06:37:22.4±0.6**, 8.°02S**±0.°10×**117.°25E**±0.°06**, h10**km**, n18,** σ**1.ˢ02**/20**, mb4.0**/5**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHKI	**Kahang-Kahang**	**1.66**	**258**	P	**Pn**	**06 37 50.6**	**-0.9**
KHKI				S	**Sn**	**06 37 59.3**	**-14**
SRBI	**Singaraja**	**2.02**	**268**	P	**Pn**	**06 37 53.7**	**-2.8**
SRBI				S	**Sn**	**06 38 04.8**	**-17**
IGBI	**Denpasar**	**2.23**	**249**	P	**Pn**	**06 38 00.3**	**+1.0**
NBBI	**Negara**	**2.62**	**262**	P	**Pn**	**06 38 04.2**	**-0.6**
KMMI	**Kalianget**	**3.39**	**286**	P	**Pn**	**06 38 17.7**	**+2.3**
WSI	**Waingapu**	**3.43**	**119**	P	**Sn**	**06 38 56.4**	**-0.2**
GMJI	**Gumukmas**	**3.77**	**266**	P	**Pn**	**06 38 21.0**	**+0.3**
BKSI	**Bulukumba**	**3.92**	**47**	P	**Sn**	**06 39 00.6**	**-8.1**
PWJI	**Pagerwojo**	**5.39**	**270**	P	**Pn**	**06 38 43.6**	**+0.7**
FITZ	**Fitzroy Crossi**	**12.92**	**142**	ePn	**Pn**	**06 40 27.9**	**+1.6**
FITZ				eSn	**Sn**	**06 42 43.4**	**-6.9**
DAV	**Davao City (W)**	**17.14**	**29**	LR	LR	06 47 39.7	
	comp=Z,49nm,19.9s,baz=316,slow=35						
WRAB	**Tennant Creek**	**20.36**	**127**	eP	**P**	**06 41 59.2**	**0.0**
	4.5nm,0.9s						
ASAR	**Alice Springs**	**22.29**	**136**	P	**P**	**06 42 19.8**	**-0.2**
	1.8nm,0.5s,mb3.7,baz=312,slow=10,SNR=37						
STKA	**Stephens Creek**	**32.81**	**140**	P	**P**	**06 43 55.1**	**-1.0**
	1.0nm,0.5s,mb4.0,baz=313,slow=12,SNR=6.2						
SONM	**Songino Array**	**56.44**	**351**	P	**P**	**06 47 04.8**	**+0.7**
	0.8nm,0.7s,mb3.9,baz=159,slow=8.6,SNR=3.4						
MK31	**Makanchi Array**	**62.81**	**334**	eP	**P**	**06 47 48.2**	**+0.1**
MKAR	**Makanchi Array**	**62.81**	**334**	P	**P**	**06 47 48.0**	**-0.1**
	1.5nm,0.7s,mb4.2,baz=157,slow=7.8,SNR=12						
ZALV	**Zalesovo Beam**	**67.53**	**340**	P	**P**	**06 48 17.6**	**-1.0**
	0.8nm,0.4s,mb4.1,baz=90,slow=3.0,SNR=4.2						

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*IDC **28** 06:49:18.4±0.8, 24.°62S×176.°08W, h0km, mb4.0/9, mb1 4.2/10, mb1mx4.1/17, mbtmp4.1/10, ML3.7/1, MS4.1/1, Ms1 4.0/1, ms1mx3.2/13, Error ellipse: s-maj=28.8km s-min=23.0km az=137.0*
*NEIC **28** 06:49:22.0±3.8, 24.°72S×175.°85W, h27km±26km, mb4.2/3, Error ellipse: s-maj=21.1km s-min=13.0km az=115.0*
ISC 28 06:49:16.9±4.6**, 24.°8S**±0.°1×**175.°5W**±0.°1**, h3**km±31km**, n23,** σ**1.ˢ51**/21**, mb4.0**/11**, South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**9.25**	**318**	ePn	**Pn**	**06 51 32.5**	**+1.2**
	32nm,0.8s						
AFI	**Afiamalu**	**11.42**	**19**	Pn	**Pn**	**06 51 57.3**	**-3.8**
	5.5nm,0.3s,baz=359,slow=22,SNR=9.7						
AFI				Sn	**Sn**	**06 53 57.3**	**-12**
	3.1nm,0.3s,baz=17,slow=19,SNR=3.0						
AFI	**Afiamalu**	**11.42**	**19**	Pn	**Pn**	**06 52 01.6**	**+0.6**
AFI				Sn	**Sn**	**06 53 57.3**	**-12**
URZ	**Urewera**	**14.78**	**203**	Pn	**Pn**	**06 52 48.6**	**+1.8**
	0.3nm,0.3s,baz=38,slow=19,SNR=2.1						
RAR	**Rarotonga**	**14.95**	**79**	Pn	**Pn**	**06 52 47.5**	**-1.6**
	3.8nm,0.3s,baz=255,slow=5.7,SNR=12						
RAR				Sn	**Sn**	**06 55 21.3**	**-14**
	1.0nm,0.3s,baz=351,slow=19,SNR=2.9						
CTA	**Charters Tower**	**35.55**	**270**	P	**P**	**06 56 11.8**	**-3.8**
	1.0nm,0.3s,mb4.2,baz=100,slow=6.1,SNR=2.9						
STKA	**Stephens Creek**	**38.19**	**249**	LR	LR	07 10 37.5	
	comp=Z,238nm,18.1s,baz=171,slow=34						
STKA	**Stephens Creek**	**38.19**	**249**	eP	**P**	**06 56 38.5**	**+0.6**
	2.3nm,1.4s,mb3.7						
ASAR	**Alice Springs**	**45.90**	**260**	P	**P**	**06 57 39.0**	**-2.0**
	0.7nm,0.4s,mb3.9,baz=91,slow=6.4,SNR=12						
WRAB	**Tennant Creek**	**46.40**	**266**	eP	**P**	**06 57 43.0**	**-2.0**
	2.9nm,0.8s,mb4.3						
WRA	**Warramunga Arr**	**46.41**	**266**	P	**P**	**06 57 43.0**	**-2.0**
	baz=102,slow=8.3						
QSPA	**South Pole Qui**	**65.26**	**180**	P	**P**	**07 00 03.9**	**+4.5**
	2.9nm,0.7s,mb4.4,baz=340,slow=1.3,SNR=9.0						
QSPA	**South Pole Qui**	**65.26**	**180**	eP	**P**	**07 00 03.9**	**+4.6**
	3.7nm,0.9s,mb4.4						
MJAR	**Matsushiro Arr**	**75.03**	**323**	P	**P**	**07 00 59.4**	**-0.4**
	1.1nm,0.4s,mb4.1,baz=154,slow=3.6,SNR=3.0						
PETK	**Petropavlovsk-**	**81.03**	**344**	P	**P**	**07 01 33.7**	**+1.0**
	3.4nm,0.8s,mb4.3,baz=126,slow=7.7,SNR=5.0						
KSRS	**Korea Array**	**81.62**	**318**	P	**P**	**07 01 37.0**	**+0.8**
	0.8nm,0.8s,mb3.7,baz=147,slow=7.1,SNR=5.3						
NVAR	**Mina Array Bea**	**82.66**	**42**	P	**P**	**07 01 45.5**	**+3.8**
	0.4nm,0.6s,mb3.6,baz=221,slow=8.5,SNR=4.5						
TXAR	**Lajitas Array**	**87.51**	**56**	P	**P**	**07 02 08.1**	**+1.8**
	0.4nm,0.8s,mb3.7,baz=206,slow=7.4,SNR=5.1						
ILAR	**Eielson Array**	**92.03**	**12**	P	**P**	**07 02 28.0**	**+1.4**
	0.3nm,0.8s,mb3.7,baz=217,slow=4.2,SNR=2.9						
MKAR	**Makanchi Array**	**115.79**	**312**	PKP	PKPdf	07 08 00.8	+0.2
	0.3nm,0.7s,baz=147,slow=3.4,SNR=3.9						
AKASG	**Malin Array Be**	**147.89**	**330**	PKPbc	PKPbc	07 09 03.8	+0.6
	0.7nm,0.5s,baz=45,slow=4.3,SNR=2.9						
EKA	**Eskdalemuir Ar**	**149.01**	**8**	PKPbc	PKPab	07 09 10.2	+0.1
	0.7nm,0.8s,baz=305,slow=3.1,SNR=3.1						
BRTR	**Keskin Array B**	**151.37**	**308**	PKPbc	PKPbc	07 09 12.2	+0.1
	0.8nm,0.6s,baz=75,slow=1.4,SNR=4.1						

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*ISCJB **28** 07:09:54.5±0.5, 66.°53N±0.°03×17.°70W±0.°06, h10km, mb3.3/2, Error ellipse: s-maj=4.0km s-min=3.3km az=12.7*
*REY **28** 07:09:55.1, 66.°58N×17.°70W, h16km, ML3.8, ML4.5*
*CSEM **28** 07:09:55.1, 66.°58N×17.°70W, h16km, ML3.8, After REY*
*IDC **28** 07:09:55.8±1.3, 66.°44N×17.°84W, h0km, mb3.4/2, mb1 3.8/5, mb1mx3.5/26, mbtmp3.7/5, ML3.2/3, MS3.2/5, Ms1 3.2/5, ms1mx2.9/23, Error ellipse: s-maj=30.0km s-min=22.0km az=153.0*
ISC 28 07:09:55.2±0.6**, 66.°51N**±0.°03×**17.°67W**±0.°06**, h7**km±4km**, n27,** σ**1.ˢ08**/39**, mb3.3**/2**, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGRI	**Grimsey**	**0.14**	**282**	P	**Pg**	**07 09 58.5**	**+0.4**
IGRI				S	**Sg**	**07 10 01.0**	**+1.0**
IFLA	**Flatey**	**0.36**	**191**	P	**Pg**	**07 10 03.2**	**+1.0**
IFLA				S	**Sg**	**07 10 09.1**	**+2.2**
IBRE	**Brettingsstaoi**	**0.40**	**194**	P	**Pg**	**07 10 03.6**	**+0.6**
IBRE				S	**Sg**	**07 10 10.1**	**+1.8**
IHED	**Heoinshofoi**	**0.46**	**161**	P	**Pg**	**07 10 04.3**	**+0.3**
IHED				S	**Sg**	**07 10 11.1**	**+1.1**
ILEI	**Leirhofn**	**0.49**	**102**	P	**Pg**	**07 10 04.4**	**-0.2**
ILEI				S	**Sg**	**07 10 11.7**	**+0.8**
IGRA	**Granastaoir**	**0.60**	**176**	P	**Pg**	**07 10 06.8**	**+0.1**
IGRA				S	**Sg**	**07 10 15.2**	**+0.7**
ISIG	**Siglufjorour**	**0.63**	**233**	P	**Pg**	**07 10 06.6**	**-0.7**
ISIG				S	**Sg**	**07 10 15.0**	**-0.5**
IHLA	**Hella**	**0.64**	**207**	P	**Pg**	**07 10 07.3**	**-0.2**
IHLA				S	**Sg**	**07 10 16.3**	**+0.5**
IGIL	**Gilhagi**	**0.69**	**129**	P	**Pg**	**07 10 07.7**	**-0.8**
IGIL				S	**Sg**	**07 10 17.7**	**+0.3**
IKVO	**Krokottuvotn**	**0.86**	**158**	P	**Pg**	**07 10 10.9**	**-0.9**
IKVO				S	**Sg**	**07 10 23.1**	**+0.1**
IREN	**Reynihlio**	**0.92**	**160**	P	**Pg**	**07 10 12.0**	**-0.9**
IREN				S	**Sg**	**07 10 24.7**	**-0.2**
IHRN	**Hraun**	**1.07**	**249**	P	**Pg**	**07 10 13.0**	**-2.7**
IHRN				S	**Sg**	**07 10 26.4**	**-3.1**
IGRS	**Grimsstaoir**	**1.08**	**144**	P	**Pg**	**07 10 14.2**	**-1.7**
IGRS				S	**Sg**	**07 10 29.0**	**-0.9**
ISVA	**Svartarkot**	**1.19**	**172**	P	**Pg**	**07 10 16.3**	**-1.8**
ISVA				S	**Sg**	**07 10 32.5**	**-1.0**
IADA	**Aoalbol**	**1.73**	**149**	P	**Pn**	**07 10 24.9**	**-0.8**
IHVA	**Hvannstoosfjol**	**1.73**	**154**	P	**Pn**	**07 10 25.0**	**-0.7**
IBRU	**Bruarjokull**	**1.81**	**158**	P	**Pn**	**07 10 26.4**	**-0.4**
IHVE	**Hveravellir**	**1.83**	**206**	P	**Pn**	**07 10 26.5**	**-0.5**
BORG	**Borgarnes**	**2.33**	**222**	Pn	**Pn**	**07 10 33.6**	**-0.3**
	21nm,0.3s,baz=43,slow=9.8,SNR=81						
BORG				Sn	**Sn**	**07 11 03.5**	**+0.7**
	30nm,0.3s,baz=218,slow=23,SNR=21						
SCO	**Scoresbysund**	**4.29**	**340**	i P	**Pn**	**07 10 59.5**	**-1.3**
SCO				i LG		07 11 29.3	
NOA	**NORSAR Array B**	**13.80**	**100**	LR	LR	07 18 21.7	
	comp=Z,42nm,18.4s,baz=305,slow=36						
HFS	**Hagfors**	**15.32**	**100**	LR	LR	07 18 59.1	
	comp=Z,79nm,19.3s,baz=354,slow=35						
ARCES	**ARCESS Array B**	**16.17**	**60**	Pn	**Pn**	**07 13 44.1**	**+1.5**
	0.1nm,0.3s,baz=275,slow=12,SNR=6.5						
ARCES				LR	LR	07 18 46.6	
	comp=Z,66nm,18.1s,baz=314,slow=33						
FINES	**FINESS Array B**	**19.51**	**84**	P	**Pn**	**07 14 24.1**	**+0.2**
	0.2nm,0.3s,baz=321,slow=18,SNR=4.9						
FINES				LR	LR	07 21 28.6	
	comp=Z,88nm,20.8s,baz=11,slow=35						
FRB	**Frobisher Bay**	**21.08**	**286**	LR	LR	07 22 17.3	
	comp=Z,90nm,19.7s,baz=35,slow=35						
BRTR	**Keskin Array B**	**39.07**	**107**	P	**P**	**07 17 24.9**	**+2.4**
	1.0nm,0.8s,mb3.6,baz=354,slow=10,SNR=3.5						
ILAR	**Eielson Array**	**44.02**	**331**	P	**P**	**07 18 04.5**	**+1.8**
	0.2nm,0.7s,mb3.0,baz=29,slow=7.7,SNR=4.2						

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*BJI **28** 07:09:56.5, 1.°94S×99.°84E, h90km, mB5.1/32, mb4.9/44, Ms4.9/32, Ms7 4.5/31*
*MOS **28** 07:09:59.8±1.0, 1.°06S×99.°82E, h55km, mb5.4/52, MS4.4/13, Error ellipse: s-maj=9.9km s-min=4.9km az=117.3*
*ISCJB **28** 07:10:01.6±0.4, 1.°13S±0.°03×99.°69E±0.°03, h72km±3km, mb5.0/133, Error ellipse: s-maj=5.2km s-min=3.4km az=137.0*
*DJA **28** 07:10:02.5±0.3, 1.°S±3.°×10.°0E±.°, h61km±3km, mb5.4/34, mB5.9/25, MLv5.8/17, Mw(mB)5.6/25*
*IDC **28** 07:10:02.0±1.3, 1.°05S×99.°85E, h63km±10km, mb4.6/22, mb1 4.6/24, mb1mx4.6/25, mbtmp4.5/24, MS4.4/20, Ms1 4.4/20, ms1mx4.3/26, Error ellipse: s-maj=15.5km s-min=8.4km az=62.0*
*GCMT **28** 07:10:03.5±0.2, 1.°07S×99.°65E, h71km±1km, MW5.3, Moment Tensor Solution. s67,c104; s77,c130; Moment tensor: Scale 10^{17}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{\phi r}$0.00; Best double couple: $M_0$1.00000×10^{17} NP1:ϕ_s84.00000°,δ55.00000°, λ-175.00000°. NP2:ϕ_s351.00000°,δ86.00000°, λ-35.00000°. Principal axes: T 0.9600, Plg21.0000°, Azm43.0000°; N 0.1500, Plg54.0000°, Azm165.0000°; P -1.1100, Plg27.0000°, Azm302.0000°; Data Used: IU II IC G CN.*
*NEIC **28** 07:10:04.6±0.9, 1.°07S×99.°79E, h84km±7km, mb5.1/58 Error ellipse: s-maj=7.3km s-min=4.2km az=48.0*
NEIC Felt [IV] at Padang and [II] at Padangpanjang, Sumatra. Also felt at Bukittinggi and Pariaman.
*SZGRF **28** 07:10:04.5, 0.°48S×98.°61E, h33km, mb5.3, MS4.5, Southern Sumatera, Indonesia*
*TEH **28** 07:10:05.0, 1.°10S×99.°77E, h95km*
ISC 28 07:10:03.6±0.4**, 1.°10S**±0.°03×**99.°74E**±0.°03**, h74**km±3km**, h85**km±3.9km**:pP-P, n403,** σ**1.ˢ08**/383**, mb5.0**/133**, 16C-22D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**0.69**	**251**	P	**Pn**	**07 10 14.0**	**-4.7**
PDSI	**Padang**	**0.75**	**75**	P	**Pn**	**07 10 17.6**	**-1.7**
PPI	**Padang Panjang**	**0.92**	**46**	P	**Pn**	**07 10 20.0**	**-1.3**
SDSI	**Sungai Dareh**	**1.70**	**84**	P	**Pn**	**07 10 31.4**	**+0.1**
MNSI	**Mandailing Nat**	**1.89**	**355**	P	**Pn**	**07 10 34.0**	**+0.1**
BKNI	**Bangkinang**	**1.93**	**42**	P	**Pn**	**07 10 34.5**	**+0.2**
KRJI	**Kerinci**	**1.98**	**120**	P	**Pn**	**07 10 34.9**	**-0.2**
RGRI	**Rengat**	**2.70**	**74**	P	**Pn**	**07 10 44.7**	**-0.1**
GSI	**Gunungsitoli**	**3.22**	**318**	P	**Pn**	**07 10 49.3**	**-2.6**
KSI	**Kapahiang**	**3.81**	**132**	P	**Pn**	**07 10 59.1**	**-0.8**
PSI	**Prapat**	**3.96**	**348**	P	**Pn**	**07 10 59.3**	**-2.7**
	82nm,0.3s,baz=163,slow=12,SNR=68						
PSI				LR	LR	07 12 55.9	
	comp=Z,5μm,18.8s,baz=176,slow=45						
MNAI	**Manna**	**4.56**	**135**	P	**Pn**	**07 11 08.5**	**-1.6**
FRIM	**Kepong**	**4.71**	**24**	P	**Pn**	**07 11 12.6**	**+0.5**
TSI	**Tuntungan**	**4.72**	**346**	P	**Pn**	**07 11 11.5**	**-0.8**
KGM	**Kluang**	**4.73**	**49**	P	**Pn**	**07 11 13.0**	**+0.5**
TPTI		**5.03**	**329**	P	**Pn**	**07 11 16.4**	**-0.2**
MDSI	**Maura Dua**	**5.56**	**127**	P	**Pn**	**07 11 23.2**	**-0.6**
	3.9nm844nm,1.2s						
IPM	**Ipoh**	**5.69**	**13**	P	**Pn**	**07 11 27.2**	**+1.6**
LWLI	**Liwa**	**5.81**	**132**	P	**Pn**	**07 11 27.1**	**-0.1**
	19nm4μm,0.7s						
KLSI		**6.13**	**126**	P	**Pn**	**07 11 31.8**	**+0.3**
	5.2nm1μm,1.1s						
KLI	**Kotabumi**	**6.33**	**126**	P	**Pn**	**07 11 36.0**	**+1.7**
	7.6nm1μm,1.0s						
KULM	**Kulim**	**6.42**	**8**	P	**Pn**	**07 11 35.7**	**+0.2**
KULM	**Kulim**	**6.42**	**8**	ePn	**Pn**	**07 11 35.5**	**0.0**
	162nm,0.4s						
KASI	**Kota Agung**	**6.47**	**133**	P	**Pn**	**07 11 33.8**	**-2.4**
	6.0nm823nm,1.0s						
BLSI	**Bandar Lampung**	**6.94**	**128**	P	**Pn**	**07 11 43.6**	**+0.9**
KTGM	**Kuala Trenggan**	**7.23**	**28**	P	**Pn**	**07 11 47.9**	**+1.3**
RBSI	**Rajabasa**	**7.62**	**128**	P	**Pn**	**07 11 56.6**	**+4.6**
	1.9nm5μm576nm,1.1s						

TPI	**Tanjungpandan**	8.08	102	P		**Pn**	07 11 59.9 +1.7
	2μm144nm,1.5s						
SBJI	**Serang**	8.09	128	P		**Pn**	07 12 05.5 +7.1
	345nm,1.4s						
TNG	**Tangerang**	8.54	126	P		**Pn**	07 12 09.8 +5.3
TNG				P			07 12 09.5
	1μm,1.1s						
SKJI	**Sukabumi**	8.98	131	P		**Pn**	07 12 09.8 -0.7
	5μm373nm,1.3s						
LEM	**Lembang**	9.70	126	P		**Pn**	07 12 20.3 -0.1
	3μm229nm,1.4s						
KSM	**Kuching**	10.87	76	P		**Pn**	07 12 39.4 +3.0
KSM	**Kuching**	10.87	76	*e*Pn		**Pn**	07 12 39.2 +2.8
BJII	**Banjamegara**	11.71	122	P		**Pn**	07 12 46.1 -1.7
	4μm95nm,1.9s						
STKI	**Sintang**	11.79	84	P		**Pn**	07 12 51.9 +2.9
	121nm,1.2s						
SMRI	**Semarang**	12.20	119	P		**Pn**	07 12 54.1 -0.3
	287nm,1.1s						
UGM	**Wanagama**	12.70	123	P		**Pn**	07 13 01.1 -0.2
	4μm222nm,1.7s						
SBUM	**Sibu**	12.97	74	P		**Pn**	07 13 07.5 +2.6
PCJI	**Pacitan**	13.40	122	P		**Pn**	07 13 06.8 -3.8
SJI	**Sawahan**	13.68	119	P		**Pn**	07 13 15.1 +0.8
	116nm,1.1s						
PWJI	**Pagerwojo**	13.85	120	P		**Pn**	07 13 15.9 -0.6
	2μm93nm,1.6s						
BTM	**Bintulu**	14.01	72	P		**Pn**	07 13 21.4 +2.7
KMMI	**Kalianget**	15.37	113	P		**Pn**	07 13 35.5 -0.7
	2μm135nm,1.2s						
GMJI	**Gumukmas**	15.40	118	P		Px	07 13 44.8
	56nm,0.9s						
KBKI	**Kotabaru**	16.56	98	P		**Pn**	07 13 51.0 -0.3
	2μm153nm,1.1s						
SRBI	**Singaraja**	16.90	115	P		Px	07 14 04.2
	157nm,1.1s,1μm						
KHKI	**Kahang-Kahang**	17.37	115	P		**Pn**	07 14 03.0 +1.7
	1μm97nm,1.0s						
KKM	**Kota Kinabalu**	17.92	66	P		**Pn**	07 14 09.4 +1.5
KKM	**Kota Kinabalu**	17.92	66	*e*P		**Pn**	07 14 09.1 +1.2
	145nm,1.3s						
BDT	**Bhumibol Dam**	18.25	358	P		**Pn**	07 14 13.0 +1.2
SDKM	**Sandakan**	18.68	69	P		**Pn**	07 14 17.7 +0.6
KDM	**Kudat**	18.83	65	P		**Pn**	07 14 19.5 +0.6
TSM	**Tawau**	18.90	73	P		**Pn**	07 14 20.0 +0.3
CM31	**Chiang Mai Arr**	19.45	358	*e*P		**Pn**	07 14 25.6 -0.6
	7.0nm,0.3s						
CMAR	**Chiang Mai Arr**	19.45	358	P		**Pn**	07 14 24.1 -2.1
	2.0nm,0.3s,baz=187,slow=10,SNR=28						
CMAR				S		**S**	07 18 11.6 +11
	0.9nm,0.3s,baz=178,slow=12,SNR=5.1						
CMAR				ScP		ScP	07 22 14.8 +2.2
	0.7nm,0.3s,baz=255,slow=3.8,SNR=6.9						
CMAR				LR		LR	07 22 19.9
	comp=Z,765nm,18.6s,baz=181,slow=38						
MYLDM	**Lahad Datu**	19.75	71	P		**Pn**	07 14 29.3 -0.5
CHTO	**Chiang Mai**	19.81	358	*e*P		**Pn**	07 14 29.1 -1.3
CHTO				pmax		pmax	
	comp=Z,11nm,0.8s						
CHTO	**Chiang Mai**	19.81	358	*e*P		**Pn**	07 14 29.1 -1.3
	comp=Z,11nm,0.8s						
TTSI	**Tana Toraja**	20.16	96	P		**P**	07 14 33.2 +1.1
	comp=Z,2μmcomp=Z,181nm,0.9s						
SPSI	**Sidrap Palu**	20.21	98	P		**P**	07 14 35.7 +3.0
BNSI	**Bone**	20.60	100	P		**P**	07 14 37.4 +0.5
	comp=Z,5μmcomp=Z,502nm,1.1s						
PALK	**Pallekele**	20.73	294	P		**P**	07 14 39.2 +0.9
	comp=Z,360nm,1.3s,SNR=7.1						
PALK	**Pallekele**	20.73	294	*e*P		**P**	07 14 39.1 +0.8
PALK				pmax		pmax	
	comp=Z,203nm,1.5s						
PALK	**Pallekele**	20.73	294	*e*P		**P**	07 14 39.1 +0.8
	comp=Z,202nm,1.5s						
BKSI	**Bulukumba**	20.77	102	P		**P**	07 14 38.4 -0.3
	comp=Z,2μmcomp=Z,173nm,1.4s						
CHRT	**Chiangrai**	20.84	0	P		**P**	07 14 42.0 +2.6
	comp=Z,132nm,1.0s						
QIZ	**Qiongzhong**	22.33	26	P		**P**	07 14 54.0 -1.3
QIZ				pP			07 15 11.5
QIZ				sP		sP	07 15 25.8 +5.7
QIZ				S		**S**	07 18 57.0 +0.8
QIZ				sS		sS	07 19 28.5 +5.8
QIZ				pmax		pmax	
	comp=Z,19nm,1.6s,mb4.2						
QIZ				pmax		pmax	
	comp=Z,310nm,5.9s						
QIZ				LR		LR	
	comp=N,1μm,20.2s						
QIZ				LR		LR	
	comp=E,410nm,22.9s						
QIZ				LR		LR	
	comp=Z,1μm,20.9s						
QIZ	**Qiongzhong**	22.33	26	*e*P		**P**	07 14 55.1 -0.2
	comp=Z,33nm,1.2s,mb4.5						
LUWI	**Luwuk**	23.03	90	P		**P**	07 15 02.9 +0.2
	comp=Z,341nm,1.3s,mb5.5						
KDI	**Kendari**	23.03	97	P		**P**	07 15 03.1 +0.4
	comp=Z,2μmcomp=Z,165nm,1.2s,mb5.2						
MMRI	**Maumere**	23.62	109	P		**P**	07 15 03.4 -4.7
	comp=Z,67nm,1.1s,mb4.9						
MNI	**Manado**	25.23	84	P		**P**	07 15 25.0 +2.2
	comp=Z,6μmcomp=Z,358nm,1.3s,mb5.6						
TGY	**Tagaytay City**	25.87	54	LR		LR	07 26 22.1
	comp=Z,6.9nm,19.0s,baz=272,slow=38						
SGSI	**Sangihe**	26.21	79	P		**P**	07 15 32.0 +0.3
	comp=Z,8μmcomp=Z,167nm,1.6s,mb5.2						
KMI	**Kunming**	26.23	6	P		**P**	07 15 35.0 +3.3
KMI				pP		pP	07 15 55.5 +6.4
KMI				sP		sP	07 16 06.5 +8.6
KMI				PP			07 16 21.0
KMI				S		**S**	07 19 58.0 -0.7
KMI				sS		sS	07 20 34.5 +5.7
KMI				pmax		pmax	
	comp=Z,11nm,1.7s,mb4.0						
KMI				pmax		pmax	
	comp=Z,300nm,6.1s						
KMI				LR		LR	
	comp=N,1μm,13.8s						
KMI				LR		LR	
	comp=E,670nm,12.8s						
KMI				LR		LR	
	comp=Z,930nm,20.0s						
IMP	**Imphal**	26.34	348	*e*PKP		pP	07 15 51.0 +0.9
DAV	**Davao City (W)**	27.03	72	LR		LR	07 28 48.4
	comp=Z,593nm,19.7s,baz=353,slow=42						
MBWA	**Marble Bar**	27.89	137	*e*P		**P**	07 15 46.5 -0.1
MBWA	**Marble Bar**	27.89	137	*e*P		**P**	07 15 46.8 +0.1
	comp=Z,92nm,1.6s,mb5.1						
GYA	**Guiyang**	28.20	13	P		**P**	07 15 51.8 +2.5
GYA				pP		pP	07 16 13.5 +6.6
GYA				sP		sP	07 16 25.0 +9.4
GYA				PP		PP	07 16 45.3 -9.1
GYA				S		**S**	07 20 30.5 +0.7
GYA				sS		sS	07 21 08.0 +8.0
GYA				SS		SS	07 22 02.5 -29
GYA				ScP		ScP	07 22 33.5 -2.7
GYA				ScS		ScS	07 26 26.0 -3.1
GYA				pmax		pmax	
	comp=Z,30nm,0.8s,mb4.9						
GYA				pmax		pmax	
	comp=Z,140nm,4.6s						
GYA				LR		LR	
	comp=N,840nm,15.3s						
GYA				LR		LR	
	comp=E,770nm,16.4s						
GYA				LR		LR	
	comp=Z,910nm,13.0s						
ODAN	**Odare**	30.24	338	*e*P		**P**	07 16 08.0 +0.6
	comp=Z,52nm,0.4s,mb5.5						
FITZ	**Fitzroy Crossi**	30.53	125	*e*P		**P**	07 16 08.4 -1.7
	comp=Z,32nm,1.2s,mb4.9						
FITZ	**Fitzroy Crossi**	30.53	125	*e*P		**P**	07 16 08.6 -1.5
	comp=Z,12nm,0.7s,mb4.7						
TAPN	**Taplejung**	30.57	339	*e*P		**P**	07 16 11.4 +1.1
	comp=Z,85nm,0.5s,mb5.8						
RAMN	**Ramite**	30.63	337	*e*P		**P**	07 16 11.9 +1.1
	comp=Z,36nm,0.5s,mb5.3						
MEEK	**Meekatharra**	31.21	146	*e*P		**P**	07 16 17.6 +1.7
JIRN	**Jiri**	31.43	337	*e*P		**P**	07 16 18.8 +1.0
	comp=Z,16nm,0.3s,mb5.3						
PKI	**Pulchoki**	31.66	335	*e*P		**P**	07 16 20.4 +0.4
	comp=Z,30nm,0.7s,mb5.1						
PKI	**Pulchoki**	31.66	335	*e*P		**P**	07 16 20.8 +0.8
PKI				pmax		pmax	
	comp=Z,25nm,0.5s,mb5.2						
PKI	**Pulchoki**	31.66	335	*e*P		**P**	07 16 20.8 +0.8
	comp=Z,25nm,0.5s,mb5.2						
PKIN	**Phulchoki**	31.68	335	*e*P		**P**	07 16 20.8 +0.7
	comp=Z,25nm,0.5s,mb5.2						
LSA	**Lhasa**	31.71	346	P		**P**	07 16 21.3 +1.0
LSA				LR		LR	
	comp=E,1μm,38.9s						
LSA				LR		LR	
	comp=Z,760nm,26.8s						
LSA	**Lhasa**	31.71	346	*e*P		**P**	07 16 20.5 +0.2
LSA				pmax		pmax	
	comp=Z,27nm,0.5s,mb5.2						
LSA	**Lhasa**	31.71	346	*e*P		**P**	07 16 20.5 +0.2
	comp=Z,27nm,0.5s,mb5.2						
GUN	**Gumba**	31.77	336	*e*P		**P**	07 16 21.9 +1.0
	comp=Z,126nm,0.3s,mb6.1						
DMN	**Daman**	31.83	335	*e*P		**P**	07 16 21.9 +0.5
	comp=Z,12nm,0.3s,mb5.1						
KKN	**Kakani**	31.91	335	*e*P		**P**	07 16 22.5 +0.4
	comp=Z,36nm,0.4s,mb5.5						
KKN	**Kakani**	31.91	335	*e*P		**P**	07 16 22.5 +0.4
KKN				pmax		pmax	
	comp=Z,36nm,0.4s,mb5.5						
CD2	**Chengdu**	32.06	7	P		**P**	07 16 25.8 +2.4
CD2				pP		pP	07 16 47.8 +6.7
CD2				sP		sP	07 16 59.5 +10
CD2				PP		PP	07 17 36.5 -0.7
CD2				S		**S**	07 21 30.5 +0.3
CD2				sS		sS	07 22 07.0 +6.5
CD2				pmax		pmax	
	comp=Z,10.0nm,0.5s,mb4.8						
CD2				pmax		pmax	
	comp=Z,430nm,5.1s						
CD2				LR		LR	
	comp=N,1μm,9.5s						
CD2				LR		LR	
	comp=Z,1μm,7.1s						
GKN	**Gorkha**	32.37	335	*e*P		**P**	07 16 26.6 +0.5
	comp=Z,35nm,0.4s,mb5.4						
ENH	**Enshi**	32.55	16	*e*P		**P**	07 16 25.8 -2.0
	comp=Z,18nm,0.4s,mb5.3						
KOLN	**Koldanda**	32.63	333	*e*P		**P**	07 16 29.2 +0.8
	comp=Z,51nm,0.6s,mb5.6						
KAKA	**Kakadu**	34.39	111	*e*P		**P**	07 16 41.0 -3.0
	comp=Z,10nm,0.6s,mb4.8						
KAKA	**Kakadu**	34.39	111	*e*P		**P**	07 16 41.0 -3.0
	comp=Z,26nm,0.6s,mb5.2						
KLBR	**Kellerberrin**	34.78	152	*e*P		pP	07 16 59.5 -5.3
	comp=Z,19nm,1.1s						
NWAO	**Narrogin (SRO)**	35.68	154	P		**P**	07 16 54.6 -0.1
	comp=Z,18nm,1.0s,mb5.0,baz=296,slow=11,SNR=5.4						
PTH	**Pithoragarh**	35.73	330	*e*x		**P**	07 16 56.0 +0.7
XAN	**Xi'an**	36.01	13	P		**P**	07 16 55.8 -1.7
XAN				pP		pP	07 17 18.5 +3.1
XAN				sP		sP	07 17 28.5 +4.5
XAN				PcP		PcP	07 19 21.3 -1.4
XAN				S		**S**	07 22 27.0 -4.0
XAN				ScS		ScS	07 27 01.8 -6.4
XAN				pmax		pmax	
	comp=Z,6.0nm,0.6s,mb4.7						
XAN				pmax		pmax	
	comp=Z,100nm,5.2s						
XAN				LR		LR	
	comp=N,520nm,17.5s						
XAN				LR		LR	
	comp=E,470nm,17.5s						
XAN				LR		LR	
	comp=Z,310nm,12.6s						
BAKI	**Biak**	36.36	91	P		**P**	07 16 59.8 -1.1
	comp=Z,974nmcomp=Z,63nm,1.3s,mb5.4						
LZH	**Lanzhou**	37.20	6	*e*P		**P**	07 17 09.0 +1.4
LZH				pP		pP	07 17 31.0 +5.5
LZH				sP		sP	07 17 41.5 +7.3
LZH				*e*S		**S**	07 22 50.0 +0.9
LZH				sS		sS	07 23 27.3 +7.5
LZH				pmax		pmax	
	comp=Z,22nm,1.2s,mb5.0						
LZH				pmax		pmax	
	comp=Z,170nm,5.0s						
NJ2	**Nanjing**	37.62	27	*e*P		**P**	07 17 09.5 -1.7
NJ2				pmax		pmax	
	comp=Z,10.0nm,0.8s,mb4.7						
WRA	**Warramunga Arr**	38.67	121	P		**P**	07 17 18.6 -1.7
	baz=302,slow=9.5						
WRAB	**Tennant Creek**	38.68	121	P		**P**	07 17 18.0 -2.4
	comp=Z,478nm,0.5s,SNR=50						
WRAB	**Tennant Creek**	38.68	121	*e*P		**P**	07 17 18.7 -1.7
WRAB				pmax		pmax	
	comp=Z,41nm,0.6s,mb5.4						
WRAB	**Tennant Creek**	38.68	121	*e*P		**P**	07 17 18.7 -1.6
	comp=Z,41nm,0.6s,mb5.4						
WRAB	**Tennant Creek**	38.68	121	P		**P**	07 17 19.7 -0.7
	comp=Z,68nm,0.9s,mb5.5						
SMPI	**Sarmi**	38.97	92	P		**P**	07 17 22.5 -0.4
FORT	**Forrest**	39.89	140	*e*P		**P**	07 17 31.9 +1.6
	comp=Z,67nm,0.8s,mb5.5						
ASAR	**Alice Springs**	39.99	127	P		**P**	07 17 29.9 -1.3
	comp=Z,50nm,0.9s,mb5.3,baz=304,slow=7.3,SNR=229						
ASAR				PcP		PcP	07 19 35.9 +0.6
	comp=Z,3.3nm,0.4s,baz=309,slow=2.5,SNR=4.1						
ASAR				ScP		ScP	07 23 19.5 +1.6
	comp=Z,4.5nm,0.8s,baz=301,slow=4.0,SNR=12						
ASAR				S		**S**	07 23 29.6 -1.9
	comp=Z,3.1nm,0.8s,baz=298,slow=13,SNR=9.2						
ASAR	**Alice Springs**	39.99	127	P		**P**	07 17 30.0 -1.3
ASAR							07 19 35.9
ASAR				S		**S**	07 23 29.7 -1.9
GTA	**Gaotai**	40.32	0	*e*P		**P**	07 17 33.5 -0.2
GTA				pP		pP	07 17 56.3 +4.5
GTA				sP		sP	07 18 07.8 +7.4
GTA				PP		PP	07 19 12.0 +4.1
GTA				PcP		PcP	07 19 35.5 -0.4
GTA				S		**S**	07 23 36.3 +0.3
GTA				sS		sS	07 24 15.0 +8.1
GTA				SS		SS	07 26 37.3 -0.1
GTA				pmax		pmax	
	comp=Z,8.0nm,1.5s,mb4.3						
GTA				pmax		pmax	
	comp=Z,96nm,5.4s						
GTA				LR		LR	
	comp=N,490nm,18.9s						
GTA				LR		LR	
	comp=E,710nm,17.1s						
GTA				LR		LR	
	comp=Z,540nm,22.5s						
THN	**Thein Dam**	40.35	328	*e*x		**P**	07 17 32.1 -2.0
HHC	**Hu-ho-hao-te**	43.12	13	*e*P		**P**	07 17 56.8 +0.3
HHC				pP		pP	07 18 18.5 +3.7
HHC				sP		sP	07 18 30.3 +6.9
HHC				PP		PP	07 19 41.3 +3.2
HHC				PcP		PcP	07 19 44.5 -0.6
HHC				ScP		ScP	07 23 25.5 -4.5
HHC				PcS		PcS	07 23 36.3 -1.3
HHC				S		**S**	07 24 16.5 -0.9
HHC				sS		sS	07 24 55.5 +7.0
HHC				ScS		ScS	07 27 44.0 -5.8
HHC				pmax		pmax	
	comp=Z,11nm,0.6s,mb4.8						
HHC				pmax		pmax	
	comp=Z,98nm,6.4s						
HHC				LR		LR	
	comp=N,730nm,15.0s						
HHC				LR		LR	
	comp=E,670nm,16.0s						
HHC				LR		LR	
	comp=Z,500nm,15.7s						
BJT	**Baijiatuau**	43.59	18	*e*P		**P**	07 18 00.0 -0.4
BJT				pmax		pmax	
	comp=Z,9.0nm,0.5s						
BJT	**Baijiatuau**	43.59	18	*e*P		**P**	07 18 00.0 -0.4
	comp=Z,9.3nm,0.5s,mb4.8						
BJI	**Beijing**	43.62	18	P		**P**	07 18 00.0 -0.6
BJI				pP		pP	07 18 23.0 +4.1
BJI				sP		sP	07 18 33.5 +6.1
BJI				PP		PP	07 19 48.5 +5.1
BJI				S		**S**	07 24 24.0 -0.6
BJI				pmax		pmax	
	comp=Z,27nm,1.0s,mb4.9						
BJI				pmax		pmax	
	comp=Z,140nm,7.8s						
BJI				LR		LR	
	comp=N,400nm,20.4s						
BJI				LR		LR	
	comp=E,680nm,21.5s						
BJI				LR		LR	
	comp=Z,380nm,21.3s						
KBL	**Kabul**	45.66	324	*e*P		**P**	07 18 17.4 +0.5
KBL				pmax		pmax	
	comp=Z,4.0nm,0.5s,mb4.4						
KBL	**Kabul**	45.66	324	*e*P		**P**	07 18 17.4 +0.5
	comp=Z,3.9nm,0.5s,mb4.4						
KSH	**Kashi**	45.92	334	P		**P**	07 18 17.5 -1.4
KSH				pP		pP	07 18 40.5 +3.2
KSH				sP		sP	07 18 51.5 +5.7
KSH				PcP		PcP	07 19 55.0 +0.2
KSH				PP		PP	07 20 06.5 -1.4
KSH				ScP		ScP	07 23 37.5 -4.0
KSH				PcS		PcS	07 23 48.0 -1.1
KSH				S		**S**	07 24 51.5 -6.5
KSH				sS		sS	07 25 32.8 +3.4
KSH				ScS		ScS	07 28 01.8 -5.9
KSH				pmax		pmax	
	comp=Z,13nm,0.8s,mb4.7						
KSH				pmax		pmax	
	comp=Z,230nm,4.1s						
KSH				LR		LR	
	comp=N,490nm,11.3s						
KSH				LR		LR	
	comp=E,610nm,14.1s						
KSH				LR		LR	
	comp=Z,200nm,7.3s						
WMQ	**Urumqi**	46.01	348	P		**P**	07 18 20.3 +0.8
WMQ				pP		pP	07 18 43.3 +5.4
WMQ				sP		sP	07 18 54.8 +8.4
WMQ				PcP		PcP	07 19 56.0 +1.0
WMQ				PP		PP	07 20 10.0 +1.3
WMQ				*e*S		**S**	07 24 57.3 -1.8
WMQ				ScS		ScS	07 28 03.5 -4.5
WMQ				pmax		pmax	
	comp=Z,67nm,0.7s,mb5.5						
WMQ				pmax		pmax	
	comp=Z,310nm,4.0s						
WMQ				LR		LR	
	comp=N,310nm,24.0s						
WMQ				LR		LR	
	comp=Z,250nm,21.4s						
KSRS	**Korea Array**	46.39	31	P		**P**	07 18 21.8 -0.8
	comp=Z,11nm,0.7s,mb4.7,baz=224,slow=8.4,SNR=49						
KSRS				LR		LR	07 36 59.7
	comp=Z,464nm,21.8s,baz=224,slow=35						
BSY	**Bisya**	47.72	302	P		**P**	07 18 34.5 +1.2
	SNR=5.3						
PMG	**Port Moresby**	47.88	102	*e*P		**P**	07 18 33.6 -1.1
PMG				pmax		pmax	
	comp=Z,8.0nm,0.5s						
PMG	**Port Moresby**	47.88	102	*e*P		**P**	07 18 33.5 -1.1
	comp=Z,7.9nm,0.5s,mb4.8						
ULHL	**Ulahol**	48.09	337	P		**P**	07 18 36.0 +0.3
	SNR=7.2						
KZA	**Kyzart**	48.35	336	P		**P**	07 18 39.8 +2.1
	SNR=6.6						
TKM2	**Tokmak 2**	48.91	337	P		**P**	07 18 42.7 +0.7
	SNR=39						
TKM2	**Tokmak 2**	48.91	337	*e*P		**P**	07 18 42.6 +0.6
TKM2				pmax		pmax	
	comp=Z,19nm,0.4s,mb5.4						
TKM2	**Tokmak 2**	48.91	337	*e*P		**P**	07 18 42.6 +0.6
	comp=Z,20nm,0.4s,mb5.4						
KBK	**Karagaybulak**	48.95	336	P		**P**	07 18 44.0 +1.7
	SNR=6.7						
AML	**Almayashu**	49.05	334	P		**P**	07 18 44.1 +1.0
	SNR=11						
SONM	**Songino Array**	49.08	6	P		**P**	07 18 43.5 +0.2
	comp=Z,5.6nm,0.4s,mb4.9,baz=186,slow=8.9,SNR=48						
SONM				ScP		ScP	07 23 56.5 +1.9
	comp=Z,1.8nm,0.8s,baz=190,slow=5.0,SNR=4.9						
AAK	**Ala-Archa**	49.12	335	P		**P**	07 18 45.9 +2.2
	comp=Z,58nm,0.5s,mb5.8,SNR=6.2						
AAK	**Ala-Archa**	49.12	335	LR		LR	07 40 54.5
	comp=Z,375nm,19.3s,baz=144,slow=38						
AAK	**Ala-Archa**	49.12	335	*e*P		**P**	07 18 44.9 +1.2
AAK				pmax		pmax	
	comp=Z,20nm,0.9s,mb5.0						
AAK	**Ala-Archa**	49.12	335	*e*P		**P**	07 18 44.9 +1.3
	comp=Z,20nm,0.9s,mb5.0						
ULN	**Ulaanbaatar**	49.18	7	*e*P		**P**	07 18 44.3 +0.3
ULN				pmax		pmax	
	comp=Z,10.0nm,0.8s,mb4.8						
ULN	**Ulaanbaatar**	49.18	7	*e*P		**P**	07 18 44.3 +0.2
	comp=Z,9.5nm,0.8s,mb4.8						
ULN	**Ulaanbaatar**	49.18	7	P		**P**	07 18 44.6 +0.6
	SNR=6.3						
CTA	**Charters Tower**	49.22	116	*e*P		**P**	07 18 43.8 -1.0
	comp=Z,21nm,1.0s,mb5.0						
CTAO	**Charters Tower**	49.22	116	*e*P		**P**	07 18 43.9 -0.9
EKS2	**Erkin-Say**	49.45	335	P		**P**	07 18 47.1 +0.9
	SNR=19						
EKS2	**Erkin-Say**	49.45	335	*e*P		**P**	07 18 47.0 +0.8
	comp=Z,30nm,0.8s,mb5.3						
USP	**Ospenovka**	49.64	336	P		**P**	07 18 48.0 +0.3
	SNR=14						
STKA	**Stephens Creek**	49.94	132	*e*P		**P**	07 18 49.8 -0.3
	comp=Z,14nm,0.5s,mb5.1						
STKA	**Stephens Creek**	49.94	132	P		**P**	07 18 49.5 -0.6
	comp=Z,14nm,0.4s,mb5.2,baz=301,slow=7.1,SNR=44						
STKA				LR		LR	07 39 25.4
	comp=Z,550nm,19.7s,baz=298,slow=35						
STKA	**Stephens Creek**	49.94	132	*e*P		**P**	07 18 49.9 -0.2
	comp=Z,37nm,1.8s,mb5.0						
MK31	**Makanchi Array**	50.10	344	*i*P		**P**	07 18 51.1 +0.1
MK31				pmax		pmax	
	comp=Z,15nm,0.3s,mb5.4						
MK31	**Makanchi Array**	50.10	344	*e*P		**P**	07 18 51.1 +0.1
MKAR	**Makanchi Array**	50.10	344	P		**P**	07 18 51.1 +0.1
	comp=Z,8.9nm,0.4s,mb5.1,baz=155,slow=8.3,SNR=93						
MKAR				S		**S**	07 25 59.5 +2.7
	comp=Z,4.9nm,1.1s,baz=158,slow=13,SNR=9.2						
ZAK	**Zakamensk**	51.38	3	*e*P		**P**	07 18 59.7 -0.8
ZAK				pmax		pmax	
	comp=Z,5.0nm,1.7s,mb4.3						
MAT	**Matsushiro**	51.75	40	P		**P**	07 19 02.1 -1.5
MAT				S		**S**	07 26 11.0 -9.0
MJAR	**Matsushiro Arr**	51.75	40	P		**P**	07 19 02.5 -1.1
	comp=Z,2.8nm,0.5s,mb4.5,baz=219,slow=6.7,SNR=7.4						
MJAR				LR		LR	07 40 29.3
	comp=Z,220nm,21.2s,baz=245,slow=35						
VLA	**Vladivostok**	52.64	29	*e*P		**P**	07 19 10.0 -0.1
VLA				pmax		pmax	
	comp=Z,97nm,2.5s,mb5.4						
TLY	**Talaya**	52.69	3	*e*P		**P**	07 19 10.8 +0.5
TLY				*e*S		**S**	07 26 26.7 -5.7
TLY				*e*			07 28 49.5
TLY				*e*SSS			07 31 59.6
TLY				pmax		pmax	
	comp=Z,10.0nm,1.2s,mb4.7						
TLY				MLR		MLR	
	comp=Z,299nm,18.0s						
TLY	**Talaya**	52.69	3	*e*P		**P**	07 19 10.7 +0.4
	comp=Z,2.7nm,0.6s,mb4.5						
MDJ	**Mudanjiang**	52.70	27	P		**P**	07 19 09.5 -1.0
MDJ				pP		pP	07 19 31.3 +2.0
MDJ				sP		sP	07 19 41.5 +3.7
MDJ				ScP		ScP	07 24 07.0 -3.3
MDJ				PcS		PcS	07 24 16.8 -1.1
MDJ				S		**S**	07 26 30.3 -2.5

comp=Z,49nm,0.8s,mb5.6,baz=174,slow=5.6,SNR=132
ZALV S **S** **07 27 20.2 +0.1**
comp=Z,11nm,0.9s,baz=160,slow=14,SNR=17
ZALV LR LR 07 47 00.3
comp=Z,144nm,20.8s,baz=298,slow=40
ZALV Zalesovo Beam 56.24 349 P **P** **07 19 35.8 -0.2**
ZALV S **S** **07 27 20.2 +0.2**
ZALV Zalesovo Beam 56.24 349 P **P** **07 19 35.8 -0.2**
ZALV S **S** **07 27 20.2 +0.1**
ZALV LR LR 07 47 00.3
IPIR Pirpir 57.00 311 *e*P **P** **07 19 41.0 -0.8**
IFIR Firoozkooh 57.01 315 *e*P **P** **07 19 41.8 0.0**
ARMA Armidale 57.13 126 *e*P **P** **07 19 43.4 +0.6**
ARMA Armidale 57.13 126 *e*P **P** **07 19 44.1 +1.3**
comp=Z,36nm,1.4s,mb5.2
KLR Kul'dur 57.23 24 *e*P **P** **07 19 39.0 -4.1**
KLR pmax pmax
comp=E,35nm,1.6s
KLR pmax pmax
comp=Z,50nm,1.6s,mb5.3
KLR MLR MLR
comp=N,600nm,13.0s
KLR MLR MLR
comp=E,500nm,13.0s
KLR MLR MLR
comp=Z,2μm,13.0s
NVS Novosibirsk 57.39 349 *e*P **P** **07 19 43.5 -0.6**
NVS pmax pmax
comp=N,4.0nm,0.6s
NVS pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
NVS pmax pmax
comp=E,8.0nm,0.8s
IVRN Varamin 57.44 314 *e*P **P** **07 19 42.4 -2.4**
IDMV Damavand 57.49 314 *e*P **P** **07 19 43.9 -1.3**
QRN Al-Qurain 57.76 305 *e*P **P** **07 19 46.6 -0.6**
QRN AMb AMB 07 19 48.3
comp=Z,87nm,0.5s,mb6.0
HABR Khabarovsk 58.08 27 *e*P **P** **07 19 46.4 -2.7**
HABR *e**PP pP 07 20 04.4 -3.8
HABR *e**SP sP 07 20 12.6 -3.9
HABR *e* 07 20 37.5
HABR *e* 07 21 55.4
HABR *e*S **S** **07 27 42.5 -1.9**
HABR *e* 07 29 29.2
HABR *e*SS SS 07 31 35.7 -1.3
HABR pmax pmax
comp=N,35nm,2.4s
HABR pmax pmax
comp=E,76nm,2.5s
HABR pmax pmax
comp=Z,46nm,2.5s,mb5.1
HABR MLR MLR
comp=Z,576nm,20.0s
KBD Kabd 58.10 306 *e*P **P** **07 19 49.1 -0.4**
KBD AMb AMB 07 19 50.8
comp=Z,62nm,0.8s,mb5.7
RDF Al-Radifah 58.12 305 *e*P **P** **07 19 49.7 -0.1**
RDF AMb AMB 07 19 53.0
comp=Z,130nm,1.6s,mb5.7
IR3 Iran Long-Peri 58.17 314 *e*P **P** **07 19 49.3 -0.7**
NAY Al-Naaiem 58.49 306 *e*P **P** **07 19 51.5 -0.9**
NAY AMb AMB 07 19 53.2
comp=Z,53nm,0.9s,mb5.6
IRAZ Razeghan 58.93 313 *e*P **P** **07 19 54.0 -1.3**
BVAR Borovoye Array 59.26 340 P **P** **07 19 56.2 -1.0**
comp=Z,8.5nm,0.5s,mb5.1,baz=143,slow=8.7,SNR=28
BVAR S **S** **07 27 58.1 -1.4**
comp=Z,0.4nm,0.6s,baz=105,slow=9.1,SNR=3.8
BRVK Borovoye 59.32 340 P **P** **07 19 56.6 -1.0**
comp=Z,209nm,0.4s,SNR=7.8
BRVK Borovoye 59.32 340 *e*P **P** **07 19 56.7 -0.9**
BRVK pmax pmax
comp=Z,16nm,0.4s,mb5.4
BRVK Borovoye 59.32 340 *e*P **P** **07 19 56.7 -0.9**
comp=Z,16nm,0.4s,mb5.4
BRVK Borovoye 59.32 340 P **P** **07 19 56.8 -0.8**
SNR=7.6
HNR Honiara 60.45 100 *e*P **P** **07 20 05.7 -0.4**
HNR pmax pmax
comp=Z,140nm,1.0s,mb6.0
HNR Honiara 60.45 100 *e*P **P** **07 20 05.7 -0.4**
comp=Z,140nm,1.0s,mb6.0
AB31 Akbulak array 60.73 331 *i*P **P** **07 20 06.2 -1.1**
AB31 pmax pmax
comp=Z,16nm,0.5s,mb5.3
ABKAR Akbulak array 60.73 331 *e*P **P** **07 20 06.2 -1.1**
comp=Z,11nm,0.6s,mb5.1
YSS Yuzh-Sakhalins 60.87 32⇑ *e*P **P** **07 20 07.6 -0.7**
YSS Yuzh-Sakhalins 60.87 32 *e*P **P** **07 20 08.3 0.0**
comp=Z,20nm,0.8s,mb5.2
ILIN Lien 60.91 312 *e*P **P** **07 20 07.2 -1.7**
IGHG Ghaleghazi 60.97 311 *e*P **P** **07 20 07.8 -1.5**
KMBO Kilima Mbogo 62.47 269 P **P** **07 20 20.6 +0.8**
comp=Z,3.5nm,0.8s,mb4.5,baz=0.4,slow=24,SNR=8.6
KMBO LR LR 07 42 31.5
comp=Z,576nm,21.1s,baz=90,slow=31
KMBO Kilima Mbogo 62.47 269 P **P** **07 20 21.7 +2.0**
SNR=5.4
GNI Garni 64.70 316⇑ *e*P **P** **07 20 35.4 +1.5**
GNI pmax pmax
comp=Z,17nm,1.2s
GNI Garni 64.70 316 *e*P **P** **07 20 34.0 +0.1**
comp=Z,5.9nm,0.4s,mb4.8
DGRG David-gareji 64.83 318 P **P** **07 20 35.3 +0.5**
MTA Mtatsminda 65.33 318 P **P** **07 20 37.9 -0.1**
TBLG Delisi 65.38 318 *e*P **P** **07 20 39.4 +1.1**
TBLG Delisi 65.38 318 P **P** **07 20 39.4 +1.1**
CASY Casey 65.49 175 *e*P **P** **07 20 40.6 +2.1**
comp=Z,17nm,1.5s,mb4.7
SVE Sverdlovsk 65.76 338 *e*P **P** **07 20 39.9 -0.5**
SVE *e* 07 23 14.8
SVE *e*S S 07 29 18.2 -2.7
SVE *e* 07 30 23.0
SVE pmax pmax
comp=Z,39nm,1.0s,mb5.2
SVE MLR MLR
comp=Z,417nm,23.0s
KEH Kehvi 66.17 318 P **P** **07 20 42.1 -1.3**
ARU Arti 66.29 336 *d i*P **P** **07 20 42.8 -1.0**
ARU *PP pP 07 21 00.1 -3.2
ARU 07 21 11.7
ARU PPP 07 24 45.8
ARU S S 07 29 26.9 -0.4
ARU 07 30 32.3
ARU pmax pmax
comp=Z,36nm,1.7s,mb4.9
ARU Arti 66.29 336 *e*P **P** **07 20 43.0 -0.8**
comp=Z,10nm,0.5s,mb4.9
ZEI Tsey 66.39 318 *e*P **P** **07 20 44.9 +0.1**
ZEI pmax pmax
comp=Z,17nm,0.5s,mb5.1
ONI Oni 66.61 318 P **P** **07 20 46.4 +0.2**
YAK Yakutsk 66.95 15 *e*P **P** **07 20 42.4 -5.5**
YAK *e* pP 07 21 01.5 -5.9
YAK pmax pmax
comp=Z,17nm,0.9s,mb4.9
YAK pmax pmax
comp=N,11nm,1.1s
YAK pmax pmax
comp=E,4.0nm,1.4s
YAK Yakutsk 66.95 15⇑ *i*P **P** **07 20 46.5 -1.4**
KIV Kislovodsk 67.70 319 *e*P **P** **07 20 52.6 -0.4**
KIV *e*S S 07 29 45.0 +0.2
KIV pmax pmax
comp=Z,25nm,1.0s,mb5.0
KIV MLR MLR
comp=Z,113nm,18.0s
KIV Kislovodsk 67.70 319 *e*P **P** **07 20 54.0 +1.0**
comp=Z,7.0nm,0.3s,mb5.0
KIV Kislovodsk 67.70 319 P **P** **07 20 53.7 +0.7**
SNR=6.1
GOF Gofitskoye 67.94 320 *e*P **P** **07 21 03.6 +9.0**
GOF pmax pmax
comp=Z,20nm,0.8s,mb5.0
MBAR Mbarara 68.99 270⇑ *i*P **P** **07 21 02.3 +0.5**
SOKR Solikamsk 69.14 338 *c i*P **P** **07 21 02.6 +0.9**
SOKR S S 07 30 01.1 -0.3
SOKR pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
SOKR MLR MLR
comp=Z,200nm,18.0s
MMAI Mount Meron Ar 69.30 306 P **P** **07 21 04.0 +0.8**
comp=Z,3.5nm,0.6s,mb4.4,baz=123,slow=6.1,SNR=5.4
MMAI LR LR 07 53 06.9
comp=Z,312nm,19.0s,baz=115,slow=37
SOC Sochi 69.52 318 *e*P **P** **07 21 03.7 -0.7**
SOC *e**PP pP 07 21 21.0 -3.0
SOC *e* pP 07 21 24.8 +0.8
SOC *e**SP sP 07 21 29.0 -3.2
SOC *e* 07 23 41.3
SOC *e*S S 07 30 04.2 -2.2
SOC *e**SS sS 07 30 45.2 +5.4
SOC *e* 07 30 59.6
SOC *e*SS SS 07 34 38.0 +2.5
SOC pmax pmax
comp=Z,53nm,0.9s,mb5.4
MAW Mawson 71.08 194 P **P** **07 21 15.0 +1.5**
comp=Z,3.0nm,0.7s,mb4.3,baz=53,slow=12,SNR=6.8
MAW LR LR 07 45 52.9
comp=Z,319nm,22.0s,baz=30,slow=30
MAW Mawson 71.08 194 P **P** **07 21 15.0 +1.5**
MAW *e*P 07 21 15.3
MAW LR LR 07 45 52.9
VRHR Novokhopersk 71.45 326 *e*P **P** **07 21 14.8 -1.2**
VRHR pmax pmax
comp=Z,10.0nm,0.4s,mb5.0
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.7s
ANN Anapa 71.50 318 *e*P **P** **07 21 08.1 -8.3**
ANN *e**PP pP 07 21 26.5 -10
ANN pmax pmax
comp=Z,79nm,1.3s,mb5.4
LSZ Lusaka 71.92 254 *e*P **P** **07 21 18.5 -1.0**
LSZ *e* pP 07 21 36.7 -2.5
LSZ pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
LSZ Lusaka 71.92 254 *e*P **P** **07 21 18.5 -1.0**
comp=Z,3.6nm,0.9s,mb4.2
LSZ *e*PcP PcP 07 21 36.7 -1.2
PETK Petropavlovsk- 72.27 32 P **P** **07 21 19.0 -1.9**
comp=Z,2.8nm,0.6s,mb4.3,baz=198,slow=4.4,SNR=7.9
PETK LR LR 07 57 41.4
comp=Z,108nm,18.6s,baz=236,slow=40
BR131 Keskin Array S 72.53 312 *e*P **P** **07 21 21.5 -1.2**
comp=Z,3.5nm,0.5s,mb4.5
BRTR Keskin Array B 72.53 312 P **P** **07 21 21.4 -1.3**
comp=Z,3.8nm,0.5s,mb4.5,baz=148,slow=7.2,SNR=20
BRTR LR LR 07 52 50.4
comp=Z,89nm,18.7s,baz=104,slow=35
VSR Storozhevoye 72.90 325 *e*P **P** **07 21 23.6 -1.0**
VSR pmax pmax
comp=Z,30nm,0.8s,mb5.2
VSR pmax pmax
comp=N,4.0nm,0.4s
VSR pmax pmax
comp=E,7.0nm,0.4s
SEY Seymchan 74.90 22⇑ *e*P **P** **07 21 36.0 -0.1**
TIXI Tiksi 75.02 9 *i*P **P** **07 21 35.2 -1.4**
TIXI pmax pmax
comp=Z,23nm,1.7s,mb4.6
TIXI Tiksi 75.02 9 *e*P **P** **07 21 35.3 -1.3**
comp=Z,8.0nm,0.4s,mb4.8
MOS Moscow 75.60 329 *e*P **P** **07 21 37.8 -2.4**
MOS *e*S S 07 31 12.4 -2.9
MOS pmax pmax
comp=Z,39nm,0.8s,mb5.2
BOSA Boshof 75.86 241 P **P** **07 21 42.0 -0.4**
comp=Z,7.2nm,0.8s,mb4.4,baz=60,slow=6.0,SNR=8.4
BOSA LR LR 07 48 43.9
comp=Z,588nm,19.3s,baz=82,slow=31
OBN Obninsk 75.90 328 *d i*P **P** **07 21 41.2 -0.8**
OBN *e* 07 21 54.3
OBN *i*S S 07 31 16.0 -2.6
OBN pmax pmax
comp=Z,84nm,1.6s,mb5.2
OBN MLR MLR
comp=Z,200nm,21.0s
OBN Obninsk 75.90 328 *e*P **P** **07 21 41.2 -0.8**
OBN LR LR
comp=Z,200nm,21.0s
KIS Kishinev 77.89 319 *e*UNK **P** **07 21 52.0 -1.3**
AKASG Malin Array Be 78.62 322 P **P** **07 21 56.1 -1.2**
comp=Z,3.2nm,0.6s,mb4.3,baz=88,slow=4.8,SNR=20
AKASG LR LR 08 00 56.7
comp=Z,171nm,21.3s,baz=145,slow=39
KIEV Kiev 78.63 322 *e*P **P** **07 21 56.3 -1.0**
KIEV pmax pmax
comp=Z,3.0nm,0.4s,mb4.5
KIEV Kiev 78.63 322 *e*P **P** **07 21 56.3 -1.0**
comp=Z,2.9nm,0.4s,mb4.5
SYO Syowa Base 78.63 199⇓ *e*P **P** **07 21 57.0 0.0**
SYO Syowa Base 78.63 199⇑ *e*X PcP 07 22 02.1 -3.6
VRI Vrincioaia 79.02 317 P **P** **07 22 00.2 +0.6**
VRI Vrincioaia 79.02 317 ⇓ P **P** **07 22 00.1 +0.5**
VRI Vrincioaia 79.02 317 ⇓ *i*P **P** **07 22 00.1 +0.5**
PLOR Plostina 79.07 317 P **P** **07 22 01.4 +1.5**
PLOR Plostina 79.07 317⇑ *i*P **P** **07 22 01.9 +2.0**
TESR 79.22 318 ⇓ P **P** **07 22 00.7 0.0**
TESR P 07 22 00.8
TESR 79.22 318 ⇓ *i*P **P** **07 22 00.7 0.0**
URZ Urewera 79.40 129 LR LR 07 56 54.4
comp=Z,262nm,18.7s,baz=89,slow=35
MLR Muntele Rosu 79.47 317 P **P** **07 22 02.6 +0.5**
MLR Muntele Rosu 79.47 317 ⇓ P **P** **07 22 02.1 +0.1**
MLR P 07 22 02.6
MLR Muntele Rosu 79.47 317 ⇓ *i*P **P** **07 22 02.1 0.0**
VOIR 80.08 316 ⇓ P **P** **07 22 03.9 -1.4**
VOIR 80.08 316 ⇓ *i*P **P** **07 22 03.9 -1.4**
BURAR Bucovina Array 80.42 319 ⇓ P **P** **07 22 07.9 +0.8**
BURAR Bucovina Array 80.42 319 ⇓ *i*P **P** **07 22 07.9 +0.8**
BUR08 Bucovina Ar. S 80.44 319 *e*P **P** **07 22 07.8 +0.6**
MICGM Minsk 80.44 326 *e* **P** **07 22 05.0 -2.1**
MNK Minsk 80.47 326 *e*P **P** **07 22 05.0 -2.2**
VTS Vitosha 80.85 313 ⇑ P **P** **07 22 07.3 -2.2**
VTS Vitosha 80.85 313 ⇑ *i*P **P** **07 22 07.3 -2.2**
JOF Joensuu 81.30 334 *e*P **P** **07 22 10.5 -1.0**
JOF pmax pmax
comp=Z,6.0nm,0.4s,mb4.8
JOF Joensuu 81.30 334 *e*p **P** **07 22 10.5 -1.0**
comp=Z,5.8nm,0.4s,mb4.8
GZR Gura Zlata 81.64 316 P **P** **07 22 14.1 +0.4**
LVV L'vov 81.64 321 *e*P **P** **07 22 13.6 0.0**
LVZ Lovozero 81.86 340 P **P** **07 22 14.2 -0.1**
comp=Z,164nm,1.0s,mb5.8,SNR=13
LVZ Lovozero 81.86 340⇑ *e*P **P** **07 22 15.4 +1.1**
LVZ pmax pmax
comp=Z,54nm,1.7s,mb5.1
DRGR 81.93 317 P **P** **07 22 15.9 +0.7**
VSU Vasula 82.11 330⇓ *e*P **P** **07 22 16.5 +0.7**
VSU pmax pmax
comp=Z,17nm,0.8s,mb4.9
APA Apatity 82.16 339⇑ *i*P **P** **07 22 17.0 +1.1**
APA *i* pP 07 22 36.0 -0.1
APA *i*S S 07 32 24.0 -0.7
APA pmax pmax
comp=Z,12nm,0.8s,mb4.8
APA MLR MLR
comp=Z,500nm,23.0s
TSUM Tsumeb 82.23 251 *e*P **P** **07 22 18.4 +1.1**
comp=Z,6.2nm,0.8s,mb4.5
BZS Buzias 82.48 316 P **P** **07 22 18.1 0.0**
FINES FINESS Array B 83.20 332 P **P** **07 22 21.4 -0.1**
comp=Z,9.0nm,0.4s,mb4.9,baz=108,slow=5.4,SNR=82
FINES LR LR 08 02 53.9
comp=Z,271nm,21.7s,baz=1.5,slow=38
KAF Kangasniemi 83.27 333 *e*P **P** **07 22 21.5 -0.3**
KAF pmax pmax
comp=Z,13nm,0.4s,mb5.1
KAF Kangasniemi 83.27 333 *e*p **P** **07 22 21.5 -0.3**
comp=Z,13nm,0.4s,mb5.1,baz=100,slow=4.8
STHS Stebnicka Huta 83.35 320 *e*P **P** **07 22 23.1 +0.6**
STHS pmax pmax
comp=Z,12nm,1.2s,mb4.6
STHS Stebnicka Huta 83.35 320 *e*P **P** **07 22 23.1 +0.6**
comp=Z,12nm,1.2s,mb4.6
STHS Stebnicka Huta 83.35 320 *e*P **P** **07 22 23.0 +0.5**
KECS Kecovo 83.70 319 *e*P **P** **07 22 25.6 +1.3**
KECS pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
KECS Kecovo 83.70 319 *e*P **P** **07 22 25.6 +1.3**
comp=Z,4.3nm,0.7s,mb4.4
KECS Kecovo 83.70 319 *e*P **P** **07 22 25.6 +1.3**
VYHS Vyhne 84.79 319 *e*P **P** **07 22 30.0 +0.2**
VYHS pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
VYHS Vyhne 84.79 319 *e*P **P** **07 22 30.0 +0.2**
comp=Z,9.5nm,1.4s,mb4.5
VYHS Vyhne 84.79 319 *e*P **P** **07 22 30.0 +0.2**
KEV Kevo 85.10 341 *e*P **P** **07 22 30.5 -0.4**
KEV pmax pmax
comp=Z,5.0nm,0.4s,mb4.8
KEV Kevo 85.10 341 *e*p **P** **07 22 30.5 -0.4**
comp=Z,4.9nm,0.4s,mb4.8
OKC Ostrava-Krasne 85.41 320 *e*P **P** **07 22 33.5 +0.6**
OKC Ostrava-Krasne 85.41 320 *e*P **P** **07 22 33.5 +0.6**
ARCES ARCESS Array B 85.55 340 P **P** **07 22 33.3 +0.2**
comp=Z,14nm,0.4s,mb5.2,baz=103,slow=5.9,SNR=263
ARCES LR LR 08 06 21.7
comp=Z,203nm,21.7s,baz=283,slow=40
ARE0 ARCESS Array S 85.55 340 *e*P **P** **07 22 33.3 +0.1**
MORC Moravsky Berou 85.79 320 *e*P **P** **07 22 35.2 +0.4**
MORC pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
MORC Moravsky Berou 85.79 320 *e*P **P** **07 22 35.2 +0.4**
comp=Z,9.7nm,1.3s,mb4.6
MORC Moravsky Berou 85.79 320⇑ *i*P **P** **07 22 33.3 -1.5**
DPC Dobruska-Polom 86.63 320 *e*P **P** **07 22 39.6 +0.7**
DPC *e* 07 26 05.9
DPC Dobruska-Polom 86.63 320 *e*P **P** **07 22 39.6 +0.7**
CONA Conrad Observa 86.70 318⇓ *i*PcP PcP 07 22 40.5 -1.1
comp=Z,8.4nm,1.7s
UPC Upice 86.84 321 *e*P **P** **07 22 40.6 +0.7**
UPC *e* 07 26 06.2
UPC Upice 86.84 321 *e*P **P** **07 22 40.6 +0.7**
ARSA Arzberg 86.87 317⇑ *i*PcP PcP 07 22 41.4 -0.9
comp=Z,14nm,1.2s
BOJS Bojanci 86.91 315 *e*P **P** **07 22 40.5 +0.1**
TREC Trest 87.07 319 *e*P **P** **07 22 42.1 +1.0**
TREC MLR MLR
comp=Z,300nm,33.8s
TREC Trest 87.07 319 *e*P **P** **07 22 42.1 +1.0**
TREC AMS AMS 07 57 40.0
comp=Z,300nm,33.8s
PERS Pernice 87.09 317 *e*P **P** **07 22 41.4 +0.2**
SOKA Soboth 87.15 317⇓ *i*P **P** **07 22 42.1 +0.6**
comp=Z,20nm,1.1s,mb5.0
VISS Visnje 87.22 316 *i*P **P** **07 22 41.9 0.0**
LJU Ljubljana 87.45 316 *i*P **P** **07 22 43.5 +0.5**
PRU Pruhonice 87.74 320 *e*P **P** **07 22 46.2 +1.9**
PRU MLR MLR
comp=Z,200nm,24.7s
PRU Pruhonice 87.74 320 *e*P **P** **07 22 46.2 +1.9**
PRU AMS AMS 07 56 00.0
comp=Z,200nm,24.7s
PVCC Panska Ves 87.76 320 *e*P **P** **07 22 45.5 +1.1**
PVCC *e* 07 26 09.6
PVCC MLR MLR
comp=Z,300nm,38.3s
PVCC Panska Ves 87.76 320 *e*P **P** **07 22 45.5 +1.1**
PVCC AMS AMS 07 56 00.0
comp=Z,300nm,38.3s
CADS Cadrg 88.02 316 *i*P **P** **07 22 45.6 -0.1**
BRG Berggiesshubel 88.19 321 *i*P **P** **07 22 47.4 +1.1**
comp=Z,33nm,1.4s,mb5.2
BRG S SKSac 07 33 11.0 +2.5
BRG
comp=N,182nm,21.3s
BRG
comp=E,99nm,19.7s
BRG
comp=Z,182nm,23.3s
BRG Berggiesshubel 88.19 321 *i*P **P** **07 22 47.4 +1.1**
BRG S SKSac 07 33 11.0 +2.5
BRG pmax pmax
comp=Z,20nm,1.5s,mb4.9
BRG MLR MLR
comp=N,109nm,21.3s
BRG MLR MLR
comp=E,59nm,19.7s
BRG MLR MLR
comp=Z,109nm,23.3s
MAIT Maitri 88.31 199 *e*P **P** **07 22 48.7 +2.2**
KHC Kasperske Hory 88.31 319 *e*P **P** **07 22 47.1 +0.1**
KHC *e* 07 33 31.9
KHC MLR MLR
comp=Z,200nm,23.6s
KHC Kasperske Hory 88.31 319 *e*P **P** **07 22 47.4 +0.4**
comp=Z,4.0nm,1.1s,mb4.4
KHC Kasperske Hory 88.31 319 *e*P **P** **07 22 47.1 +0.1**
KHC *e*S S 07 33 31.9 +5.9
KHC AMS AMS 07 58 30.0
comp=Z,200nm,23.6s
RUE Ruedersdorf 88.40 322 *e*P **P** **07 22 47.9 +0.6**
comp=Z,98nm,1.4s,mb5.7
WET Wettzell 88.77 319 *e*P **P** **07 22 49.5 +0.4**
comp=Z,24nm,1.3s,mb5.1
WET Wettzell 88.77 319 *e*P **P** **07 22 49.5 +0.4**
WET pmax pmax
comp=Z,24nm,1.3s,mb5.1
CLL Collm 88.81 321⇓ *i*P **P** **07 22 49.1 -0.2**
CLL *e**PP pP 07 23 07.0 -2.6
CLL *e*S S 07 33 30.0 -0.6
CLL pmax pmax
comp=Z,18nm,1.2s,mb5.0
CLL Collm 88.81 321⇓ *i*P **P** **07 22 49.1 -0.2**
comp=Z,18nm,1.2s,mb5.0
CLL *e*pP pP 07 23 07.0 -2.6
CLL *e*S S 07 33 30.0 -0.6
CLL Collm 88.81 321⇓ *i*P **P** **07 22 49.1 -0.2**
comp=Z,18nm,1.2s,mb5.0
CLL *e*pP pP 07 23 07.0 -2.6
CLL *e*sP sP 07 23 15.0 -2.7
CLL *e*S S 07 33 30.0 -0.6
CLL *e*PS PS 07 34 39.0 -5.2
CLL *e*SSS 07 43 06.0
CLL *e*SSSS 07 45 54.0
CLL LmV 08 08 00.0
comp=Z,100nm,20.7s
QSPA South Pole Qui 88.85 180 *e*P **P** **07 22 50.1 +1.2**
comp=Z,4.5nm,0.9s,mb4.5
HFS Hagfors 88.97 330 P **P** **07 22 50.2 +0.3**
comp=Z,2.5nm,0.4s,mb4.6,baz=145,slow=3.6,SNR=30
NKC Novy Kostel 89.10 320 *e*P **P** **07 22 51.8 +1.1**
NKC Novy Kostel 89.10 320 *e*P **P** **07 22 51.8 +1.1**
TANN Tannenbergstha 89.10 320 *e*P **P** **07 22 51.2 +0.5**
comp=Z,16nm,1.4s,mb4.9
GUNZ Gunzen 89.18 320 *e*P **P** **07 22 51.7 +0.7**
comp=Z,20nm,1.3s,mb5.0
WERD Werda 89.20 320 *e*P **P** **07 22 51.5 +0.4**
comp=Z,16nm,1.2s,mb4.9
WTTA Wattenberg 89.51 317⇓ *i*P **P** **07 22 52.6 -0.1**
comp=Z,22nm,1.3s,mb5.1
MOX Moxa 89.65 320 *e*P **P** **07 22 54.3 +1.1**
comp=Z,29nm,1.5s,mb5.2
MOX
comp=Z,100nm,22.0s
MOX Moxa 89.65 320 *e*P **P** **07 22 53.9 +0.7**
comp=Z,26nm,1.5s,mb5.1
MOX Moxa 89.65 320 *e*P **P** **07 22 54.3 +1.1**
MOX pmax pmax
comp=Z,29nm,1.5s,mb5.2
MOX MLR MLR
comp=Z,100nm,22.0s
SPITS Spitsbergen Ar 89.71 348 P **P** **07 22 52.5 -0.5**
comp=Z,2.3nm,0.4s,mb4.6,baz=108,slow=5.4,SNR=14
SPITS Spitsbergen Ar 89.71 348 P **P** **07 22 52.5 -0.5**
FETA Feichten 90.12 317⇓ *i*PcP PcP 07 22 56.7 +0.1
comp=Z,12nm,1.2s
NB2 NORSAR Subarra 90.24 331 P **P** **07 22 55.4 -0.3**
comp=Z,8.2nm,1.2s,mb4.7,baz=85,slow=6.5
NOA NORSAR Array B 90.24 331 P **P** **07 22 55.4 -0.4**
comp=Z,2.1nm,0.9s,mb4.2,baz=89,slow=5.4,SNR=6.3
NOA LR LR 08 08 00.7
comp=Z,146nm,21.0s,baz=90,slow=38
CLZ Clausthal 90.47 322 *e*P **P** **07 22 57.5 +0.5**
comp=Z,25nm,1.3s,mb5.2
CLZ Clausthal 90.47 322 *e*P **P** **07 22 57.5 +0.5**
CLZ pmax pmax
comp=Z,25nm,1.3s,mb5.2
BSEG Bad Segeberg 90.54 324 *e*P **P** **07 22 58.1 +0.8**
comp=Z,28nm,1.6s,mb5.1
BSEG Bad Segeberg 90.54 324 *e*P **P** **07 22 58.1 +0.8**
BSEG pmax pmax
comp=Z,28nm,1.6s,mb5.1
DAVA Damuels 90.71 317⇓ *i*PcP PcP 07 22 58.7 -0.6
comp=Z,30nm,1.2s
KONO Kongsberg 91.02 329 *i*P **P** **07 23 00.8 +1.4**
BFO Black Forest 91.76 318 P **P** **07 22 59.2 -3.9**
comp=Z,86nm,0.3s,SNR=5.5
ECH Echery 92.54 318 *e*P **P** **07 23 06.7 0.0**
ECH pmax pmax
comp=Z,2.0nm,0.8s,mb4.5

ECH	**Echery**	**92.54**	**318**	*e*P	**P**	**07 23 06.7**	**0.0**
	comp=Z,2.3nm,0.8s,mb4.6						
LPG	**La Plagne**	**92.88**	**315**	*e*P	**P**	**07 23 07.9**	**-0.4**
	comp=Z,10nm,0.7s,mb5.0						
LPG	**La Plagne**	**92.88**	**315**	*e*P	**P**	**07 23 07.9**	**-0.4**
LPG				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb5.0						
LPG	**La Plagne**	**92.88**	**315**	*e*P	**P**	**07 23 07.9**	**-0.4**
	comp=Z,5.2nm,0.6s,mb5.0						
LPL	**La Plagne**	**92.89**	**315**	*e*P	**P**	**07 23 07.9**	**-0.5**
	comp=Z,8.8nm,0.5s,mb5.0						
LPL	**La Plagne**	**92.89**	**315**	*e*P	**P**	**07 23 07.9**	**-0.5**
LPL				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb5.0						
LPL	**La Plagne**	**92.89**	**315**	*e*P	**P**	**07 23 07.9**	**-0.5**
	comp=Z,4.4nm,0.5s,mb5.0						
WLF	**Walferdange**	**93.16**	**319**	*e*P	**P**	**07 23 10.3**	**+0.8**
	comp=Z,16nm,1.4s,mb5.2						
WLF				*e*L		08 09 05.1	
	comp=Z,185nm,21.8s						
ORIF	**Oris-en-Rattie**	**93.51**	**315**	*e*P	**P**	**07 23 10.8**	**-0.5**
TORD	**Torodi Ar. Bea**	**98.08**	**283**	LR	LR	08 05 58.7	
	comp=Z,130nm,18.5s,baz=215,slow=34						
EKA	**Eskdalemuir Ar**	**98.23**	**326**	P	**P**	**07 23 32.2**	**-0.2**
	comp=Z,1.1nm,0.8s,mb4.5,baz=99,slow=4.9,SNR=4.8						
EKA				PP	PP	07 27 32.9	+0.1
	comp=Z,0.3nm,0.7s,baz=57,slow=7.7,SNR=2.8						
BPAW	**Bear Paw Mtn.**	**99.33**	**25**	*e*P	**P**	**07 23 38.0**	**+0.8**
	comp=Z,15nm,1.4s,mb5.3						
ILAR	**Eielson Array**	**100.79**	**24**	P	Pdif	07 23 43.6	-0.3
	comp=Z,0.3nm,0.6s,baz=286,slow=4.2,SNR=3.9						
ILAR				PP	PP	07 27 46.5	-5.4
	comp=Z,0.5nm,1.0s,baz=279,slow=6.5,SNR=4.3						
ILAR				PKKPbc	PKKPbc	07 39 56.2	-3.2
	comp=Z,0.3nm,0.6s,baz=142,slow=2.6,SNR=6.0						
YKA	**Yellowknife Ar**	**113.59**	**17**	PKiKP	PKiKP	07 28 32.3	-0.7
	comp=Z,0.6nm,0.8s,baz=356,slow=1.1,SNR=5.7						
EDM	**Edmonton**	**121.26**	**23**	*e*PKIKP	PKPdf	07 28 47.5	-0.5
SCHQ	**Schefferville**	**125.33**	**351**	PKP	PKPdf	07 28 55.8	0.0
	comp=Z,3.8nm,0.7s,baz=3.8,slow=1.1,SNR=9.8						
CHMT	**Chamberlain Mo**	**126.07**	**28**	*e*PKPdf	PKPdf	07 28 57.6	+0.1
DLMT	**Dillon**	**127.53**	**28**	*e*PKPdf	PKPdf	07 29 01.3	+1.0
NVAR	**Mina Array Bea**	**129.07**	**39**	PKP	PKPdf	07 29 04.8	+1.4
	comp=Z,0.8nm,0.6s,baz=270,slow=2.2,SNR=9.9						
DUG	**Dugway**	**131.13**	**33**	*e*PKPdf	PKPdf	07 29 08.2	+0.9
DUG				*e*SKPbc	SKPbc	07 32 28.7	+3.1
RSSD	**Black Hills**	**132.24**	**23**	*e*PKIKP	PKPdf	07 29 09.8	+0.5
MSU	**Marysvale**	**132.66**	**34**	*e*PKIKP	PKPdf	07 29 11.9	+1.6
ECSD	**EROS Data Cent**	**135.12**	**17**	*e*PKPdf	PKPdf	07 29 14.5	-0.2
ECSD				*e*SKPbc	SKPbc	07 32 40.2	+1.1
WCI	**Wyandotte Cave**	**142.64**	**8**	*e*PKIKP	PKPdf	07 29 28.6	0.0
TXAR	**Lajitas Array**	**144.15**	**36**	PKP	PKPdf	07 29 30.3	-1.2
	comp=Z,5.6nm,0.5s,baz=188,slow=0.8,SNR=114						
TXAR				SKPbc	SKPbc	07 33 05.9	+1.8
	comp=Z,5.5nm,1.0s,baz=255,slow=1.9,SNR=10						
WVT	**Waverly**	**144.45**	**11**	*e*PKIKP	PKPdf	07 29 29.7	-2.2
MIAR	**Mount Ida**	**144.48**	**19**	*e*PKIKP	PKPdf	07 29 30.6	-1.4
UALR	**University of**	**144.65**	**17**	*e*PKPdf	PKPdf	07 29 30.6	-1.7
CPUP	**Villa Florida**	**144.88**	**217**	PKP	PKPdf	07 29 32.4	-0.5
	comp=Z,26nm,0.8s,baz=110,slow=3.2,SNR=68						
JCT	**Junction City**	**145.39**	**31**	*e*PKIKP	PKPdf	07 29 33.8	+0.1
TKL	**Tuckaleechee C**	**145.47**	**5**	*e*PKIKP	PKPdf	07 29 33.0	-0.6
CPCT	**Cooper Cave**	**145.60**	**6**	*e*PKPdf	PKPdf	07 29 33.9	0.0
SWET	**Sewanee**	**145.65**	**8**	*e*PKPdf	PKPdf	07 29 33.0	-1.0
OXF	**Oxford**	**145.68**	**13**	*e*PKP2	PKPab	07 29 33.7	-1.1
JSC	**Jenkinsville**	**146.98**	**2**	*e*PKP2	PKPab	07 29 37.6	-2.2
LRAL	**Lakeview Retre**	**147.61**	**11**	*e*PKPdf	PKPdf	07 29 37.3	-0.1
LRAL				*e*PKPbc	PKPbc	07 29 39.2	-0.9
HKT	**Hockley**	**147.72**	**26**	*e*PKIKP	PKPdf	07 29 37.2	-0.4
HKT				*e*		07 29 40.4	
HKT	**Hockley**	**147.72**	**26**	*e*PKPdf	PKPdf	07 29 37.2	-0.4
HKT				*e*PKPbc	PKPbc	07 29 40.4	-0.1
HKT				*e*PKPab	PKPab	07 29 42.8	0.0
GOGA	**Godfrey**	**147.72**	**5**	*e*PKP2	PKPbc	07 29 40.1	-0.2
LPAZ	**La Paz**	**158.98**	**214**	PKP	PKPdf	07 29 56.2	+2.2
	comp=Z,1.6nm,0.9s,baz=204,slow=2.2,SNR=6.1						
LPAZ				PKPab	PKPab	07 30 31.9	+1.4
	comp=Z,2.3nm,0.8s,baz=222,slow=2.8,SNR=7.8						
LPAZ	**La Paz**	**158.98**	**214**	PKP	PKPdf	07 29 56.2	+2.2
LPAZ				PKPab	PKPab	07 30 31.9	+1.4

*CSEM **28** 07:12:51.2, 66°.56N×17°.73W, h16km, ML3.3, After REY*
REY 28 07:12:51.2, 66°.56N×17°.73W, h16km, ML3.3, ML3.6, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGRI	**Grimsey**	**0.11**	**261**	P	Pg	07 12 54.5	-0.1
IGRI				S	Sg	07 12 56.8	-0.2
IFLA	**Flatey**	**0.40**	**187**	P	Pg	07 12 58.8	-0.5
IFLA				S	Sg	07 13 04.5	-0.3
IBRE	**Brettingsstaoi**	**0.44**	**189**	P	Pg	07 12 59.4	-0.7
IBRE				S	Sg	07 13 05.5	-0.6
IHED	**Heoinshofoi**	**0.51**	**160**	P	Pg	07 13 00.1	-1.2
IHED				S	Sg	07 13 07.3	-0.8
ILEI	**Leirhofn**	**0.52**	**106**	P	Pg	07 13 00.6	-0.9
ILEI				S	Sg	07 13 07.7	-0.8
ISIG	**Siglufjorour**	**0.64**	**229**	P	Pg	07 13 02.4	-1.3
ISIG				S	Sg	07 13 10.6	-1.6
IGRA	**Granastaoir**	**0.65**	**174**	P	Pg	07 13 02.5	-1.3
IGRA				S	Sg	07 13 11.0	-1.4
IHLA	**Hella**	**0.67**	**203**	P	Pg	07 13 03.0	-1.3
IHLA				S	Sg	07 13 11.8	-1.4
IGIL	**Gilhagi**	**0.74**	**130**	P	Pg	07 13 03.9	-1.7
IGIL				S	Sg	07 13 13.6	-1.7
IKVO	**Krokottuvotn**	**0.92**	**157**	P	Pb	07 13 06.8	-1.9
IKVO				S	Sb	07 13 18.5	-2.1
IREN	**Reynihlio**	**0.98**	**159**	P	Pb	07 13 07.8	-1.9
IREN				S	Sb	07 13 20.2	-2.1
IHRN	**Hraun**	**1.06**	**246**	P	Pb	07 13 08.8	-2.4
IHRN				S	Sb	07 13 22.1	-2.8
IGRS	**Grimsstaoir**	**1.13**	**144**	P	Pn	07 13 10.4	-2.0
IGRS				S	Sb	07 13 25.2	-1.6
ISVA	**Svartarkot**	**1.24**	**171**	P	Pn	07 13 12.2	-1.7
ISVA				S	Sb	07 13 28.2	-1.8
IADA	**Aoalbol**	**1.79**	**149**	P	Pn	07 13 21.0	-0.3
IADA				S	Sn	07 13 43.1	-0.5
IHVA	**Hvannstoosfjol**	**1.79**	**154**	P	Pn	07 13 20.8	-0.5
IBRU	**Bruarjokull**	**1.87**	**158**	P	Pn	07 13 22.3	-0.1
IKRE	**Kreppuhraun**	**1.87**	**162**	P	Pn	07 13 22.3	-0.2

*ISCJB **28** 07:14:17.8±0.7, 37°.01N±0°.05×29°.17E±0°.04, h4km±7km, Error ellipse: s-maj=7.8km s-min=5.4km az=178.0*
*ISK **28** 07:14:17.9, 37°.02N×29°.20E, h6km, MD3.2*
*CSEM **28** 07:14:17.9, 37°.02N×29°.20E, h6km, MD3.2, After ISK*
ISC 28 07:14:18.2±0.6, 37°.01N±0°.05×29°.17E±0°.04, h3km±7km, n29, σ0°66/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**61**	*e*PG	**Pg**	**07 14 23.9**	**-0.1**
GLHS				*e*SG	**Sg**	**07 14 28.1**	**+0.2**
GLHS	**Glhisar (BURDU**	**0.30**	**61**	*e*Pg	**Pg**	**07 14 23.9**	**-0.1**
GLHS				*e*Sg	**Sg**	**07 14 28.1**	**+0.1**
ELL	**Elmali**	**0.65**	**113**	*e*PG	**Pg**	**07 14 30.3**	**-0.3**
ELL				*e*SG	**Sg**	**07 14 39.6**	**+0.6**
ELL	**Elmali**	**0.65**	**113**	*e*Pg	**Pg**	**07 14 30.3**	**-0.3**
ELL				*e*Sg	**Sg**	**07 14 39.6**	**+0.6**
YER	**Yerkesik**	**0.72**	**280**	*e*PG	**Pg**	**07 14 32.8**	**+0.8**
YER	**Yerkesik**	**0.72**	**280**	*e*Pg	**Pg**	**07 14 32.8**	**+0.8**
DENT	**Denizli**	**0.75**	**352**	*e*PG	**Pg**	**07 14 32.4**	**-0.2**
DENT	**Denizli**	**0.75**	**352**	*e*Pg	**Pg**	**07 14 32.4**	**-0.2**
KSL	**Kastellorizon**	**0.92**	**159**	*e*P	**Pg**	**07 14 36.0**	**+0.2**
MLSB	**Milas**	**1.15**	**285**	*e*PN	**Pg**	**07 14 40.7**	**+0.5**
MLSB	**Milas**	**1.15**	**285**	*e*Pn	**Pg**	**07 14 40.7**	**+0.5**
ARG	**Arkhangelos**	**1.15**	**227**	*e*P	**Pg**	**07 14 38.5**	**-1.8**
BCK	**Bucak**	**1.22**	**68**	*e*PN	**Pn**	**07 14 40.9**	**-1.3**
BCK	**Bucak**	**1.22**	**68**	*e*Pn	**Pn**	**07 14 40.9**	**-1.2**
DAT	**Datca**	**1.30**	**258**	*e*PN	**Pn**	**07 14 43.7**	**+0.4**
DAT	**Datca**	**1.30**	**258**	*e*Pn	**Pn**	**07 14 43.7**	**+0.4**
KHL	**Karahalli**	**1.34**	**12**	*e*PN	**Pn**	**07 14 44.1**	**+0.3**
KHL	**Karahalli**	**1.34**	**12**	*e*Pn	**Pn**	**07 14 44.1**	**+0.3**
BODT	**Bodrum**	**1.49**	**273**	*e*PN	**Pn**	**07 14 45.8**	**0.0**
BODT	**Bodrum**	**1.49**	**273**	*e*Pn	**Pn**	**07 14 45.8**	**0.0**
KULA	**Kula-Manisa**	**1.56**	**345**	*e*PN	**Pn**	**07 14 45.8**	**-1.0**
KULA	**Kula-Manisa**	**1.56**	**345**	*e*Pn	**Pn**	**07 14 45.8**	**-0.9**
KARP	**Karpathos**	**2.18**	**229**	*e*P	**Pn**	**07 14 56.0**	**+0.7**
HDMB	**Hadim**	**2.66**	**90**	*e*PN	**Pn**	**07 15 02.0**	**+0.1**
HDMB	**Hadim**	**2.66**	**90**	*e*Pn	**Pn**	**07 15 02.0**	**+0.1**
KONT	**Konya--Tatoy**	**2.71**	**69**	*e*PN	**Pn**	**07 15 02.9**	**+0.3**
KONT	**Konya--Tatoy**	**2.71**	**69**	*e*Pn	**Pn**	**07 15 02.9**	**+0.3**
KIZT	**Kizilcal**	**2.84**	**48**	*e*PN	**Pn**	**07 15 04.9**	**+0.5**
KIZT	**Kizilcal**	**2.84**	**48**	*e*Pn	**Pn**	**07 15 04.9**	**+0.4**

*IDC **28** 07:42:43.5±1.3, 3°.31S×145°.94E, h0km, mb4.1/10, mb1 4.2/10, mb1mx4.1/16, mbtmp4.1/10, MS3.7/5, Ms1 3.7/5, ms1mx3.4/16, Error ellipse: s-maj=44.0km s-min=17.1km az=99.0*
*ISCJB **28** 07:42:47.0±0.7, 3°.37S±0°.05×145°.8E±0°.1, h33km, mb4.0/10, MS3.8/4, Error ellipse: s-maj=18.0km s-min=7.2km az=170.3*
*NEIC **28** 07:42:48.9±0.8, 3°.33S×145°.85E, h35km, mb4.5/5, Error ellipse: s-maj=22.3km s-min=9.9km az=87.0*
ISC 28 07:42:49.3±0.7, 3°.36S±0°.05×145°.8E±0°.1, h35km, n29, σ1°20/28, mb4.0/10, MS3.8/4, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.17**	**167**	*e*Pn	**Pn**	**07 44 15.9**	**-2.1**
	15nm,0.6s						
PMG				*e*Sn	**Sn**	**07 45 27.4**	**+0.2**
COEN	**Coen**	**10.83**	**193**	*e*P	**Pn**	**07 45 22.7**	**+0.7**
COEN	**Coen**	**10.83**	**193**	*e*Pn	**Pn**	**07 45 22.8**	**+0.9**
	132nm,0.7s						
KAKA	**Kakadu**	**16.11**	**234**	*e*P	**Pn**	**07 46 33.8**	**+0.5**
	14nm,0.5s						
KAKA	**Kakadu**	**16.11**	**234**	*e*Pn	**Pn**	**07 46 34.1**	**+0.7**
	38nm,0.5s						
CTA	**Charters Tower**	**16.63**	**178**	*e*P	**Pn**	**07 46 42.2**	**+2.3**
	6.9nm,1.0s						
CTA	**Charters Tower**	**16.63**	**178**	Pn	**Pn**	**07 46 41.9**	**+2.0**
	0.4nm,0.3s,baz=353,slow=13,SNR=7.5						
CTAO	**Charters Tower**	**16.63**	**178**	*e*Pn	**Pn**	**07 46 39.8**	**-0.1**
	15nm,1.1s						
GUMO	**Guam**	**16.86**	**357**	LR	LR	07 51 31.4	
	comp=Z,99nm,18.1s,baz=176,slow=31						
WRAB	**Tennant Creek**	**19.88**	**213**	*e*P	**Pn**	**07 47 17.8**	**-1.7**
	66nm,1.0s						
WRA	**Warramunga Arr**	**19.89**	**213**	P	**Pn**	**07 47 18.6**	**-1.1**
	baz=38,slow=12						
EIDS	**Eidsvold**	**22.47**	**167**	*e*P	**P**	**07 47 46.4**	**+0.8**
ASAR	**Alice Springs**	**23.21**	**209**	P	**P**	**07 47 52.9**	**-0.5**
	9.7nm,0.9s,mb4.2,baz=40,slow=9.0,SNR=58						
FITZ	**Fitzroy Crossi**	**24.55**	**232**	*e*P	**P**	**07 48 05.2**	**-0.8**
	20nm,0.6s,mb4.8						
FITZ	**Fitzroy Crossi**	**24.55**	**232**	P	**P**	**07 48 05.6**	**-0.4**
	14nm,0.7s,mb4.6,baz=50,slow=9.0,SNR=44						
FITZ				LR	LR	07 59 01.2	
	comp=Z,219nm,19.7s,MS3.6,baz=54,slow=40						
FITZ	**Fitzroy Crossi**	**24.55**	**232**	*e*P	**P**	**07 48 05.8**	**-0.2**
	22nm,1.0s,mb4.6						
FITZ				LR	LR	07 59 01.2	
STKA	**Stephens Creek**	**28.63**	**187**	*e*P	**P**	**07 48 45.1**	**+2.5**
	3.8nm,0.8s,mb4.2						
STKA	**Stephens Creek**	**28.63**	**187**	P	**P**	**07 48 44.4**	**+1.8**
	3.0nm,0.6s,mb4.2,baz=1.7,slow=8.9,SNR=7.6						
STKA	**Stephens Creek**	**28.63**	**187**	*e*P	**P**	**07 48 45.2**	**+2.6**
	1.1nm,0.8s,mb3.6						
KSRS	**Korea Array**	**43.86**	**339**	P	**P**	**07 50 52.1**	**-0.1**
	2.8nm,0.8s,mb4.0,baz=157,slow=9.2,SNR=13						
KSRS				LR	LR	08 05 59.4	
	comp=Z,80nm,19.5s,MS3.6,baz=271,slow=32						
CMAR	**Chiang Mai Arr**	**50.93**	**297**	P	**P**	**07 51 48.2**	**+0.5**
	0.7nm,0.4s,mb4.0,baz=128,slow=5.8,SNR=2.9						
SONM	**Songino Array**	**61.51**	**331**	P	**P**	**07 53 03.5**	**+0.8**
	0.3nm,0.5s,mb3.7,baz=115,slow=6.8,SNR=2.9						
SONM				LR	LR	08 17 40.2	
	comp=Z,88nm,18.0s,MS4.0,baz=81,slow=34						
MK31	**Makanchi Array**	**74.69**	**320**	*e*P	**P**	**07 54 24.5**	**-0.8**
MKAR	**Makanchi Array**	**74.69**	**320**	P	**P**	**07 54 24.6**	**-0.8**
	1.0nm,1.0s,mb3.7,baz=133,slow=6.1,SNR=6.9						
ZALV	**Zalesovo Beam**	**76.13**	**328**	P	**P**	**07 54 35.4**	**+1.9**
	0.7nm,0.6s,mb3.8,baz=116,slow=3.4,SNR=3.1						
ZALV				LR	LR	08 26 26.2	
	comp=Z,48nm,18.8s,MS3.8,baz=61,slow=34						
ZALV	**Zalesovo Beam**	**76.13**	**328**	P	**P**	**07 54 35.4**	**+1.9**
ZALV				LR	LR	08 26 26.2	
ILAR	**Eielson Array**	**83.57**	**23**	P	**P**	**07 55 11.2**	**-2.3**
	0.5nm,0.7s,mb3.8,baz=253,slow=4.5,SNR=9.5						
BVAR	**Borovoye Array**	**83.92**	**324**	P	**P**	**07 55 16.2**	**+0.6**
	0.4nm,0.4s,mb3.9,baz=132,slow=4.1,SNR=2.8						
TORD	**Torodi Ar. Bea**	**143.18**	**287**	PKP	PKPdf	08 02 19.7	-1.1
	0.4nm,0.6s,baz=81,slow=2.6,SNR=2.5						

DJA 28 07:46:14.1±89S×100°.43E, h26km, MLv3.5/6, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**0.97**	**2**	P	Pn	07 46 31.3	-0.7
PDSI				S	Sb	07 46 44.2	-0.5
KRJI	**Kerinci**	**1.05**	**101**	P	Pn	07 46 32.4	-0.7
SDSI	**Sungai Dareh**	**1.38**	**46**	P	Pn	07 46 38.5	+0.9
SDSI				S	Sn	07 46 56.5	+1.5
PPI	**Padang Panjang**	**1.42**	**359**	P	Pn	07 46 38.2	0.0
PPI				S	Sn	07 46 56.7	+0.6
SISI	**Saibi**	**1.45**	**293**	P	Pn	07 46 40.5	+1.9
SISI				S	Sn	07 46 56.9	+0.1
MNAI	**Manna**	**3.52**	**134**	P	Pn	07 47 09.2	+2.2
MNAI				S	Sn	07 47 50.7	+2.9

*ISCJB **28** 08:13:38.4±1.1, 19°.6S±0°.1×67°.2W±0°.2, h231km±11km, Error ellipse: s-maj=24.6km s-min=16.2km az=166.7*
*IDC **28** 08:13:38.9±2.1, 19°.55S×67°.19W, h220km±15km, mb3.3/1, mb1 3.5/3, mb1mx3.2/12, mbtmp3.2/3, Error ellipse: s-maj=31.2km s-min=20.9km az=43.0*
*NEIC **28** 08:13:39.1±1.0, 19°.60S×67°.14W, h225km±11km, Error ellipse: s-maj=20.1km s-min=14.7km az=92.0*
ISC 28 08:13:39.2±1.1, 19°.6S±0°.1×67°.2W±0°.2, h223km±12km, n8, σ0°64/11, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.41**	**344**	P	**Pn**	**08 14 35.6**	**+0.8**
	1.8nm,0.3s,baz=157,slow=8.5,SNR=85						
LPAZ				S	**S**	**08 15 18.2**	**-0.5**
	0.3nm,0.3s,baz=326,slow=20,SNR=8.9						
LPAZ	**La Paz**	**3.41**	**344**	*e*Pn	**Pn**	**08 14 35.7**	**+0.8**
LPAZ				*e*Sn	**S**	**08 15 18.3**	**-0.5**
SIV	**San Ignacio**	**6.81**	**59**	P	**Pn**	**08 15 17.0**	**-0.2**
	1.3nm,0.3s,baz=263,slow=9.1,SNR=50						
CFAA	**Coronel Fontan**	**12.01**	**184**	P	**Pn**	**08 16 23.2**	**-0.2**
	0.0nm,0.3s,baz=17,slow=14,SNR=7.0						
CFAA				S	**S**	**08 18 27.4**	**-10**
	0.0nm,0.3s,baz=123,slow=18,SNR=5.3						
TXAR	**Lajitas Array**	**60.05**	**323**	P	**P**	**08 23 23.4**	**+0.6**
	0.1nm,0.3s,baz=149,slow=7.6,SNR=4.3						
TORD	**Torodi Ar. Bea**	**75.17**	**70**	P	**P**	**08 24 58.0**	**+0.5**
	216nm,0.5s,baz=263,slow=5.6,SNR=1.2						
YKA	**Yellowknife Ar**	**89.95**	**340**	P	**P**	**08 26 11.4**	**-1.1**
	0.3nm,0.4s,baz=131,slow=4.7,SNR=12						
YKA	**Yellowknife Ar**	**89.95**	**340**	P	**P**	**08 26 11.4**	**-1.1**

*MOS **28** 08:17:01.5±1.2, 55°.69N×110°.18E, h10km, mb4.2/1, Error ellipse: s-maj=36.1km s-min=18.2km az=59.7*
BYKL 28 08:17:01.8±0.5, 55°.68N×110°.16E, h9km±7km, 6C-5D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIZ	**Nizh Angarsk**	**0.36**	**285**	*e*PG	Pg	08 17 08.1	-0.8
NIZ				*e*		08 17 13.5	
NIZ				pmax	pmax		
	comp=Z,128nm,0.3s						
NIZ				smax			
	comp=N,1μm,0.3s						
NIZ	**Nizh Angarsk**	**0.36**	**285**	⇑*i*Pg	Pg	08 17 08.3	-0.6
NIZ				*e*Sg	Sg	08 17 14.0	+0.3
NIZ				Pmax			
	comp=N,119nm,0.2s						
NIZ				Smax			
	comp=N,1μm,0.2s						
KMO	**Kumora**	**0.62**	**70**	⇑*i*Pg	Pg	08 17 12.1	-1.7
KMO				*e*Sg	Sg	08 17 20.3	-1.7
KMO				*e*Sb	Sb	08 17 22.4	-1.3
KMO				Pmax			
	comp=N,90nm,0.3s						
KMO				max			
	comp=N,539nm,0.9s						
YLYR	**Ulyunkhan**	**0.99**	**144**	⇓*i*Pg	Pg	08 17 19.0	-1.8
	comp=N,90nm,0.6s						
YLYR				⇑*i*Pg	Pg	08 17 19.0	-1.8
	comp=N,53nm,0.6s						
YLYR				⇑*i*Pg	Pg	08 17 19.0	-1.8
	comp=N,105nm,0.6s						
YLYR				*e*Pb	Pb	08 17 20.0	-1.0
YLYR				*e*		08 17 29.5	
YLYR				*e*Sg	Sg	08 17 32.1	-1.5
YLYR				*e*Sb	Sb	08 17 34.5	+0.3
YLYR				max			
	comp=N,109nm,0.2s						
YLYR				max			
	comp=N,344nm,0.2s						
YOA	**Uoyan**	**0.99**	**62**	*e*PG	Pg	08 17 19.7	-1.1
YOA				*i*		08 17 33.0	
YOA				pmax	pmax		
	comp=Z,229nm,0.2s						
YOA				smax			
	comp=E,778nm,0.4s						
YOA	**Uoyan**	**0.99**	**62**	*e*Sg	Sg	08 17 34.2	+0.5
YOA				Smax			
	comp=E,779nm,0.6s						
SYVR	**Suvo**	**2.03**	**183**	*e*PN	Pn	08 17 37.6	+1.5
SYVR				*e*		08 18 05.5	
SYVR				pmax	pmax		
	comp=Z,205nm,0.6s						
SYVR				smax			
	comp=N,308nm,0.6s						
SYVR	**Suvo**	**2.03**	**183**	⇑*i*Pn	Pn	08 17 37.7	+1.6
SYVR				*e*Pg	Pg	08 17 39.1	-1.5
SYVR				*i* Sg	Sg	08 18 06.3	-0.6
SYVR				Pmax			
	comp=N,202nm,0.6s						
SYVR				Smax			
	comp=N,301nm,0.7s						
OGRR	**Ongureny**	**2.53**	**217**	*e*PN	Pn	08 17 44.1	+1.2
OGRR				*e*		08 17 47.8	
OGRR				*e*		08 18 19.8	
OGRR				pmax	pmax		
	comp=Z,42nm,0.2s						
OGRR				smax			
	comp=E,224nm,1.0s						
OGRR	**Ongureny**	**2.53**	**217**	⇓*i*Pn	Pn	08 17 39.5	-3.4
OGRR				⇓*i*Pg	Pg	08 17 46.3	-3.9
OGRR				*e*		08 17 49.3	
OGRR				*e*Sn	Sn	08 18 15.9	+2.1
OGRR				*e*Sg	Sg	08 18 19.9	-3.0
OGRR				Pmax			
	comp=E,36nm,0.4s						
OGRR				Smax			
	comp=E,240nm,1.0s						
MXMB	**Maximikha**	**2.56**	**199**	⇓*i*Pg	Pg	08 17 47.0	-3.8
MXMB				*e*		08 17 49.7	
MXMB				*e*Sn	Sn	08 18 15.9	+1.3
MXMB				*e*Sg	Sg	08 18 22.2	-1.7
MXMB				*e*		08 18 25.0	
MXMB				max			
	comp=E,79nm,0.6s						
MXMB				max			
	comp=E,340nm,1.0s						
NLYR	**Nelyaty**	**3.21**	**73**	*e*Sg	Sg	08 18 41.7	-3.1
NLYR				Smax			
	comp=E,108nm,0.8s						
ZRHB	**Zarechye**	**3.60**	**211**	Pg	Pg	08 18 06.9	-3.8
ZRHB				*e*Sg	Sg	08 18 54.5	-2.7
ZRHB				Pmax			
	comp=E,67nm,0.8s						
ZRHB				Smax			
	comp=E,264nm,1.2s						
TRG	**Tyrgan**	**3.68**	**219**	⇓*i*Pn	Pn	08 18 00.3	+1.5
TRG				*e*Sn	Sn	08 18 43.6	+1.3
TRG				*e*Sg	Sg	08 18 54.9	-5.1
TRG				max			
	comp=E,30nm,0.3s						
TRG				Smax			
	comp=E,99nm,0.8s						
UUDB	**Ulan-Yde**	**4.10**	**202**	*e*Pg	Pg	08 18 15.6	-4.6
UUDB				*e*		08 18 43.8	
UUDB				*i* Sg	Sg	08 19 08.9	-4.4
UUDB				*e*		08 19 17.7	
UUDB				Pmax			
	comp=E,21nm,0.8s						
UUDB				max			
	comp=E,74nm,1.1s						
CIT	**Chita**	**4.18**	**150**	*e*Sg	Sg	08 19 09.6	-6.3
CIT				Smax			
	comp=E,143nm,0.2s						
KAB	**Kabansk**	**4.19**	**211**	*e*Sg	Sg	08 19 11.2	-4.9
KAB				Smax			
	comp=E,263nm,0.7s						
CRS	**Chara**	**4.68**	**72**	*e*PN	Pg	08 18 27.2	-4.2
CRS				*e*		08 19 25.4	
CRS				pmax	pmax		
	comp=Z,21

MOY smax
comp=E,51nm,1.4s
MOY Mondy 6.77 237 *e*Pn Pn 08 18 43.9 +2.7
MOY *e* 08 18 47.7
MOY *e*Sn Sn 08 19 56.5 -1.8
MOY *e*Sg Sg 08 20 30.6 -8.2
MOY max
comp=E,9.0nm,0.8s
MOY Smax
comp=E,51nm,1.3s
ULN Ulaanbaatar 8.06 195 *e*Sg Sn 08 21 13.5 +43
ULN *e* Sn 08 21 16.0 +46

MAN 28 08:28:24,12.83N×123.67E,h23km,mb4.3,ML3.2,MS3.0, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVCP	**Virac**	**0.90**	**32**	*e*P	Pb	08 28 40.6	-0.3
PVCP				*e*S	Sb	08 28 48.6	-3.9
CNP	**Cataman**	**1.02**	**108**	*e*P	Pn	08 28 42.5	-0.4
CNP				*e*S	Sb	08 28 56.7	+0.8
AUQP	**San Andres**	**1.09**	**297**	*e*P	Pn	08 28 43.0	-0.8
AUQP				*e*S	Sb	08 28 58.8	+0.9
GQP	**Guinayangan**	**1.60**	**312**	*e*P	Pn	08 29 01.6	+11
GQP				*e*S	Sn	08 29 23.5	+13

IDC 28 08:34:02.0±1.6,16.52S×178.42W,h0km,mb3.9/5, mb1 4.2/5,mb1mx4.0/14,mbtmp3.9/5,Error ellipse: s-maj=114.2km s-min=23.5km az=147.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.31**	**240**	P	P	08 41 32.9	+0.1
	1.7nm,0.5s,baz=79,slow=9.2,SNR=8.0						
ASAR	**Alice Springs**	**45.17**	**253**	P	P	08 42 20.8	-0.1
	8.4nm,0.6s,baz=86,slow=8.4,SNR=137						
NVAR	**Mina Array Bea**	**78.43**	**44**	P	P	08 46 06.5	+1.7
	0.4nm,0.7s,baz=223,slow=8.9,SNR=4.7						
ILAR	**Eielson Array**	**84.54**	**13**	P	P	08 46 36.0	-0.5
	0.1nm,0.4s,baz=224,slow=5.1,SNR=6.2						
TXAR	**Lajitas Array**	**85.26**	**58**	P	P	08 46 40.2	-0.7
	0.3nm,0.6s,baz=221,slow=6.8,SNR=6.1						

MAN 28 08:41:03,18.43N×120.66E,h78km,mb4.2,ML3.0,MS2.8, Luzon

DJA 28 08:42:21,5.89S×122.09E,h14km,MLv3.9/6,Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDI	**Kendari**	**1.99**	**15**	P	Pn	08 42 55.4	+1.1
KDI				S	Sn	08 43 20.5	+1.5
BKSI	**Bulukumba**	**2.04**	**286**	P	Pn	08 42 55.0	+0.1
BKSI				S	Sn	08 43 22.3	+2.1
BNSI	**Bone**	**2.47**	**307**	P	Pn	08 43 01.6	+0.8
BNSI				S	Sn	08 43 32.3	+1.5
MMRI	**Maumere**	**2.73**	**177**	P	Pn	08 43 05.3	+0.8
MMRI				S	Sn	08 43 26.8	-11
SPSI	**Sidrap Palu**	**3.00**	**309**	P	Pn	08 43 10.4	+2.2
SPSI				S	Sn	08 43 49.0	+5.0
TTSI	**Tana Toraja**	**3.62**	**321**	P	Pn	08 43 16.3	-0.4
APSI	**Ampana**	**4.97**	**355**	P	Pn	08 43 36.3	+1.1

*KISR **28** 09:01:33.3±0.5,29.43N×49.20E,h9km±2km,MD3.5,ML3.2*
*CSEM **28** 09:01:34.9±0.5,29.79N×49.08E,h2km,ML3.2,Error ellipse: s-maj=21.7km s-min=7.1km az=130.0*
*ISCJB **28** 09:01:36.4±0.5,29.68N±0.05×49.07E±0.04,h10km,Error ellipse: s-maj=8.3km s-min=3.3km az=146.3*
*TEH **28** 09:01:48.1,30.45N×49.44E,h10km*
ISC 28 09:01:36.9±0.5,29.58N±0.05×49.11E±0.04,h10km,n18, σ1.25/28,Persian Gulf

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBD	**Kabd**	**1.30**	**252**	*e*P	**Pn**	**09 02 00.2**	**-1.0**
KBD				*e*S	**Sb**	**09 02 20.0**	**+1.6**
KBD				AML	AML	09 02 22.9	
comp=Z,539nm,0.3s							
KBD	**Kabd**	**1.30**	**252**	*e*P	**Pn**	**09 02 00.2**	**-1.0**
KBD				*e*S	**Sb**	**09 02 20.0**	**+1.7**
QRN	**Al-Qurain**	**1.34**	**232**	*e*P	**Pn**	**09 01 59.3**	**-2.3**
QRN				*e*S	**Sb**	**09 02 19.2**	**-0.1**
QRN				AML	AML	09 02 20.4	
comp=Z,443nm,0.2s							
RDF	**Al-Radifah**	**1.52**	**245**	*e*P	**Pn**	**09 02 03.6**	**-0.5**
RDF				*e*S	**Sn**	**09 02 26.1**	**+2.3**
RDF				AML	AML	09 02 30.0	
comp=Z,384nm,0.3s							
RDF	**Al-Radifah**	**1.52**	**245**	*e*P	**Pn**	**09 02 03.6**	**-0.5**
RDF				*e*S	**Sn**	**09 02 26.1**	**+2.2**
comp=Z,103nm,0.4s							
NAY	**Al-Naaiem**	**1.67**	**259**	*e*P	**Pn**	**09 02 06.0**	**-0.2**
NAY				*e*S	**Sg**	**09 02 30.7**	**+0.2**
NAY				AML	AML	09 02 34.0	
comp=Z,103nm,0.4s							
NAY	**Al-Naaiem**	**1.67**	**259**	*e*P	**Pn**	**09 02 06.0**	**-0.2**
NAY				*e*S	**Sg**	**09 02 30.7**	**+0.2**
SHGR	**Shooshtar-Gavs**	**2.53**	**354**	*e*Pg	**Pb**	**09 02 19.3**	**-3.2**
IPAR	**Pars**	**3.43**	**85**	*e*Pn	**Pb**	**09 02 38.1**	**+0.3**
IPAR				*e*		09 03 51.2	
comp=Z,391nm,0.4s							
IPIR	**Pirpir**	**3.45**	**26**	*e*Pn	**Pn**	**09 02 30.0**	**-0.7**
IPIR				*e*		09 03 44.1	
comp=Z,336nm,0.3s							
ISRV	**Sarvestan**	**3.49**	**92**	*e*Pn	**Pb**	**09 02 40.7**	**+1.8**
ISRV				*e*		09 03 41.4	
comp=Z,1μm,0.6s							
GHIR	**Ghir-Karzin**	**3.63**	**110**	*e*Pn	**Pb**	**09 02 41.4**	**+0.1**
IGAR	**Gharneh**	**3.77**	**41**	*e*Pn	**Pn**	**09 02 34.9**	**-0.2**
IGAR				*e*		09 03 25.3	
comp=Z,338nm,0.1s							
IKLH	**Kolahrood**	**4.28**	**29**	*e*Pn	**Pn**	**09 02 41.1**	**-1.0**
IKLH				*e*Sg	**Sn**	**09 03 33.9**	**+1.8**
IKLH				*e*		09 03 39.0	
comp=N,414nm,0.2s							
IZEF	**Zefreh**	**4.30**	**39**	*e*Pn	**Pn**	**09 02 41.3**	**-1.1**
IZEF				*e*		09 02 45.0	
comp=Z,181nm,0.2s							
IZEF				*e*Sg	**Sn**	**09 03 34.5**	**+1.9**
NASN	**Na'in**	**4.50**	**44**	*e*Pn	**Pn**	**09 02 43.2**	**-2.0**
NASN				*e*Sg	**Sn**	**09 03 38.4**	**+0.7**
ISAD	**Sadrabad**	**4.57**	**58**	*e*Pn	**Pn**	**09 02 45.4**	**-0.7**
IVIS	**Veis**	**5.29**	**339**	*e*Pn	**Pn**	**09 02 56.5**	**+0.5**
IVIS				*e*		09 04 02.5	
comp=Z,238nm,0.1s							

DJA 28 10:00:57,9.41S×115.15E,h28km,MLv3.6/8,South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGBI	**Denpasar**	**0.59**	**360**	P	Pb	10 01 09.1	+0.3
IGBI				S	Sb	10 01 19.0	+2.2
KHKI	**Kahang-Kahang**	**1.13**	**24**	P	Pn	10 01 17.1	+0.1
KHKI				S	Sn	10 01 31.9	+0.3
NBBI	**Negara**	**1.16**	**333**	P	Pn	10 01 17.5	+0.1
NBBI				S	Sn	10 01 33.3	+1.0
SRBI	**Singaraja**	**1.32**	**3**	P	Pn	10 01 19.6	0.0
SRBI				S	Sn	10 01 36.6	+0.4
BYJI	**Banyuwangi**	**1.42**	**326**	P	Pn	10 01 22.2	+1.2
GMJI	**Gumukmas**	**2.03**	**304**	P	Pn	10 01 29.2	-0.1
KMMI	**Kalianget**	**2.62**	**333**	P	Pn	10 01 38.5	+1.0
PWJI	**Pagerwojo**	**3.58**	**292**	P	Pn	10 01 51.2	+0.5
SJI	**Sawahan**	**3.74**	**296**	P	Pn	10 01 54.2	+1.4
PCJI	**Pacitan**	**4.11**	**287**	P	Pn	10 01 58.1	+0.1

*ISCJB **28** 10:15:51.7±5.2,59.6S±0.1×26.2W±0.2,h45km±48km, mb4.5/18,MS4.1/14,Error ellipse: s-maj=18.3km s-min=11.8km az=21.6*
*IDC **28** 10:15:55.3±4.1,59.58S×26.31W,h60km±35km,mb4.3/14, mb1 4.3/14,mb1mx4.3/18,mbtmp4.3/14,MS4.1/15, Ms1 4.0/15,ms1mx4.0/16,Error ellipse: s-maj=17.5km s-min=13.8km az=19.0*

*NEIC **28** 10:15:57.3±2.2,59.59S×26.32W,h81km±19km,mb4.9/4, Error ellipse: s-maj=11.2km s-min=7.4km az=192.0*
*BJI **28** 10:15:59.3,59.60S×26.30W,h81km*
ISC 28 10:15:54.5±3.8,59.65S±0.1×26.2W±0.1,h55km±37km,n71, σ0.90/21,mb4.5/18,MS4.1/14,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**18.15**	**238**	LR	LR	10 26 15.6	
comp=Z,654nm,18.1s,baz=263,slow=34							
MAIT	**Maitri**	**19.02**	**141**	*e*P	**Pn**	**10 20 11.1**	**-1.6**
MAIT				*e*		10 20 19.2	
USHA	**Ushuaia**	**23.03**	**263**	P	**P**	**10 20 55.3**	**+0.8**
46nm,0.8s,mb5.0,baz=81,slow=7.9,SNR=20							
USHA				LR	LR	10 27 47.9	
comp=Z,584nm,21.3s,MS4.0,baz=86,slow=31							
QSPA	**South Pole Qui**	**30.60**	**180**	P	**P**	**10 22 03.8**	**+1.3**
14nm,0.6s,mb5.0,baz=209,slow=3.2,SNR=93							
QSPA				PcP	PcP	10 25 00.3	+0.9
7.2nm,0.7s,baz=189,slow=2.2,SNR=5.2							
TRQA	**Tornquist**	**31.32**	**298**	*e*P	**P**	**10 22 09.7**	**+0.4**
12nm,0.7s,mb4.8							
PLCA	**Paso Flores**	**33.27**	**285**	P	**P**	**10 22 26.3**	**0.0**
7.6nm,0.8s,mb4.7,baz=178,slow=11,SNR=9.0							
PLCA				LR	LR	10 34 12.8	
comp=Z,260nm,18.2s,MS4.0,baz=111,slow=33							
MAW	**Mawson**	**37.00**	**140**	P	**P**	**10 22 57.9**	**-0.1**
4.8nm,1.0s,mb4.3,baz=234,slow=12,SNR=3.5							
MAW				PcP	PcP	10 25 18.5	+0.8
2.4nm,0.6s,baz=307,slow=5.1,SNR=3.7							
MAW				LR	LR	10 36 23.6	
comp=Z,276nm,21.8s,MS4.0,baz=230,slow=33							
CFAA	**Coronel Fontan**	**39.53**	**296**	P	**P**	**10 23 19.4**	**-0.2**
1.5nm,0.7s,mb3.9,baz=153,slow=8.7,SNR=18							
CFAA				LR	LR	10 38 19.2	
comp=Z,32nm,20.7s,MS3.1,baz=167,slow=34							
CPUP	**Villa Florida**	**39.61**	**313**	P	**P**	**10 23 19.4**	**-1.0**
2.2nm,0.5s,mb4.1,baz=136,slow=7.6,SNR=12							
CPUP				LR	LR	10 37 09.3	
comp=Z,123nm,20.1s,MS3.7,baz=150,slow=32							
CPUP	**Villa Florida**	**39.61**	**313**	P	**P**	**10 23 19.4**	**-1.0**
CPUP				LR	LR	10 37 09.3	
SUR	**Sutherland**	**41.24**	**70**	P	**P**	**10 23 35.9**	**+2.1**
5.1nm,0.9s,mb4.2,baz=219,slow=18,SNR=3.2							
BOSA	**Boshof**	**46.49**	**72**	P	**P**	**10 24 16.1**	**+0.1**
1.7nm,0.6s,mb4.2,baz=240,slow=15,SNR=6.0							
BOSA				PcP	PcP	10 25 50.5	+0.9
3.8nm,0.8s,baz=135,slow=2.2,SNR=3.7							
BOSA				LR	LR	10 40 46.5	
comp=Z,160nm,18.2s,MS4.0,baz=46,slow=32							
LBTB	**Lobatse**	**49.68**	**69**	P	**P**	**10 24 40.3**	**-0.3**
3.3nm,0.8s,mb4.4,baz=231,slow=19,SNR=4.3							
TSUM	**Tsumeb**	**51.10**	**57**	P	**P**	**10 24 52.6**	**+1.2**
2.7nm,0.6s,mb4.3,baz=209,slow=12,SNR=6.3							
LPAZ	**La Paz**	**52.90**	**306**	P	**P**	**10 25 05.5**	**+0.8**
5.4nm,0.7s,mb4.6,baz=146,slow=7.1,SNR=28							
LPAZ				LR	LR	10 45 25.8	
comp=Z,108nm,21.8s,MS3.9,baz=163,slow=34							
LSZ	**Lusaka**	**59.29**	**66**	*e*P	**P**	**10 25 50.4**	**0.0**
8.5nm,0.7s,mb4.9							
DBIC	**Dimbokro**	**68.25**	**23**	P	**P**	**10 26 47.7**	**-1.6**
6.9nm,0.9s,mb4.7,baz=190,slow=8.8,SNR=3.1							
DBIC				LR	LR	10 49 15.1	
comp=Z,86nm,19.6s,MS4.0,baz=137,slow=29							
DBIC	**Dimbokro**	**68.25**	**23**	P	**P**	**10 26 47.7**	**-1.6**
DBIC				LR	LR	10 49 15.1	
KMBO	**Kilima Mbogo**	**75.91**	**67**	LR	LR	10 57 39.4	
comp=Z,294nm,20.1s,MS4.6,baz=0.2,slow=33							
TORD	**Torodi Ar. Bea**	**75.97**	**28**	LR	LR	10 55 13.1	
comp=Z,121nm,21.2s,MS4.2,baz=140,slow=31							
SDV	**Santo Domingo**	**76.91**	**315**	*e*P	**P**	**10 27 39.9**	**-0.8**
9.6nm,0.8s,mb4.8							
STKA	**Stephens Creek**	**88.27**	**170**	P	**P**	**10 28 39.6**	**0.0**
5.2nm,0.7s,mb4.9,baz=164,slow=3.0,SNR=13							
STKA				LR	LR	11 08 15.8	
comp=Z,165nm,21.9s,MS4.4,baz=205,slow=36							
ATD	**Arta Tunnel**	**89.62**	**66**	LR	LR	11 05 01.1	
comp=Z,95nm,18.6s,MS4.2,baz=239,slow=33							
PPT	**Papeete**	**90.45**	**233**	LR	LR	11 02 58.0	
comp=Z,244nm,21.6s,MS4.6,baz=172,slow=31							
MDT	**Midelt**	**93.84**	**18**	LR	LR	11 05 19.5	
comp=Z,79nm,19.2s,MS4.2,baz=159,slow=32							
TEIG	**Tepich**	**94.15**	**304**	*e*P	**P**	**10 29 06.4**	**-0.4**
4.7nm,0.8s,mb5.0							
ASAR	**Alice Springs**	**95.41**	**162**	P	**P**	**10 29 12.3**	**-0.5**
0.6nm,0.6s,mb4.2,baz=187,slow=4.1,SNR=12							
ASAR				PKiKP	PKiKP	10 33 52.6	-0.3
0.3nm,0.7s,baz=188,slow=2.1,SNR=4.3							
SCHQ	**Schefferville**	**118.64**	**335**	PKP	PKPdf	10 34 33.4	-1.4
3.7nm,0.9s,baz=259,slow=5.2,SNR=3.0							
AKASG	**Malin Array Be**	**118.79**	**37**	PKP	PKPdf	10 34 34.0	-1.2
1.3nm,0.6s,baz=252,slow=1.1,SNR=4.4							
DUG	**Dugway**	**122.04**	**296**	*e*PKPdf	PKPdf	10 34 41.7	0.0
NVAR	**Mina Array Bea**	**123.20**	**290**	PKP	PKPdf	10 34 44.5	+0.4
0.7nm,0.6s,baz=123,slow=3.3,SNR=9.0							
CMAR	**Chiang Mai Arr**	**123.29**	**112**	PKP	PKPdf	10 34 45.4	+0.5
4.4nm,0.6s,baz=229,slow=3.7,SNR=14							
LOHW	**Long Hollow**	**123.77**	**300**	*e*PKPdf	PKPdf	10 34 44.9	-0.1
NB2	**NORSAR Subarra**	**123.79**	**21**	PKPdf	PKPdf	10 34 44.2	-0.2
comp=Z,0.5nm,0.6s,baz=204,slow=1.8							
NOA	**NORSAR Array B**	**123.79**	**21**	PKP	PKPdf	10 34 44.5	+0.1
comp=Z,1.5nm,0.9s,baz=197,slow=1.7,SNR=6.2							
MOOW	**Moose Ponds**	**123.94**	**300**	*e*PKPdf	PKPdf	10 34 45.4	+0.1
FINES	**FINESS Array B**	**127.31**	**29**	PKP	PKPdf	10 34 51.1	-0.1
comp=Z,3.6nm,0.6s,baz=169,slow=1.9,SNR=12							
KAF	**Kangasniemi**	**127.95**	**28**	*e*P	PKPdf	10 34 51.5	-0.9
KAF	**Kangasniemi**	**127.95**	**28**	*e*p	PKPdf	10 34 51.5	-0.9
comp=Z,73nm,0.7s							
LSA	**Lhasa**	**128.90**	**97**	*e*PKPdf	PKPdf	10 34 56.4	+1.2
ABKAR	**Abkulak array**	**128.94**	**57**	*e*PKPdf	PKPdf	10 34 54.7	0.0
JOF	**Joensuu**	**129.87**	**30**	*e*P	PKPdf	10 34 55.8	-0.2
JOF	**Joensuu**	**129.87**	**30**	*e*p	PKPdf	10 34 55.8	-0.2
comp=Z,38nm,0.9s							
ARCES	**ARCESS Array B**	**134.08**	**23**	PKP	PKPdf	10 35 04.1	+0.3
comp=Z,1.9nm,0.5s,baz=163,slow=2.6,SNR=17							
ARCES	**ARCESS Array B**	**134.08**	**23**	PKP	PKPdf	10 35 04.1	+0.3
KEV	**Kevo**	**134.56**	**23**	*e*P	PKPdf	10 35 02.5	-2.2
KEV	**Kevo**	**134.56**	**23**	*e*p	PKPdf	10 35 02.5	-2.2
BVAR	**Borovoye Array**	**136.21**	**60**	PKP	PKPdf	10 35 09.8	+1.6
comp=Z,3.8nm,0.7s,baz=236,slow=2.7,SNR=9.4							
MKAR	**Makanchi Array**	**137.46**	**74**	PKhKP	PKPpre	10 34 59.8	
comp=Z,0.5nm,0.6s,baz=204,slow=2.7,SNR=6.8							
MKAR				PKP	PKPdf	10 35 08.8	-2.0
comp=Z,1.7nm,0.8s,baz=256,slow=2.4,SNR=10							
MKAR	**Makanchi Array**	**137.46**	**74**	PKP	PKPpre	10 34 59.8	
MKAR				PKP	PKPdf	10 35 08.8	-2.0
YKA	**Yellowknife Ar**	**139.13**	**315**	PKP	PKPdf	10 35 12.9	-0.4
comp=Z,1.5nm,0.6s,baz=130,slow=2.3,SNR=14							
YKA	**Yellowknife Ar**	**139.13**	**315**	PKP	PKPdf	10 35 12.9	-0.4
GTA	**Gaotai**	**140.92**	**97**	*e*PKP	PKPdf	10 35 21.0	+3.7
ZAA0	**Zalesovo Array**	**143.38**	**68**	*e*PKPdf	PKPpre	10 35 17.4	
ZALV	**Zalesovo Beam**	**143.38**	**68**	PKhKP	PKPpre	10 35 17.8	
comp=Z,2.5nm,0.5s,baz=242,slow=3.2,SNR=13							
BJI	**Beijing**	**149.43**	**113**	PKPbc	PKPbc	10 35 35.8	-0.6
DAWY	**Dawson**	**149.48**	**307**	*e*PKPbc	PKPbc	10 35 34.5	-1.3
SONM	**Songino Array**	**150.26**	**92**	PKP	PKPdf	10 35 33.3	+0.4
comp=Z,13nm,1.4s,baz=215,slow=1.8,SNR=3.8							
SONM				PKPbc	PKPbc	10 35 38.6	+0.4
comp=Z,14nm,0.7s,baz=219,slow=2.6,SNR=66							
EGAK	**Eagle**	**150.46**	**308**	*e*PKPbc	PKPbc	10 35 37.0	-1.1
ULN	**Ulaanbaatar**	**150.62**	**93**	*e*PKPbc	PKPbc	10 35 38.6	-0.4
MENT	**Mentasta**	**150.83**	**304**	*e*PKPbc	PKPbc	10 35 39.1	+0.1
TLY	**Talaya**	**151.26**	**84**	*e*PKPbc	PKPbc	10 35 40.5	+0.2
SEW	**Seward**	**152.24**	**296**	*e*PKPbc	PKPbc	10 35 41.7	-0.6
KSRS	**Korea Array**	**152.31**	**132**	PKP	PKPdf	10 35 36.4	-0.1
comp=Z,3.6nm,0.7s,baz=216,slow=1.4,SNR=4.1							
KSRS				PKPbc	PKPbc	10 35 43.6	+0.4
comp=Z,3.5nm,0.7s,baz=204,slow=1.9,SNR=20							
ILAR	**Eielson Array**	**152.78**	**306**	PKP	PKPdf	10 35 36.8	+0.6
comp=Z,0.3nm,0.8s,baz=90,slow=1.1,SNR=4.3							
ILAR				PKPbc	PKPbc	10 35 42.7	-0.7
comp=Z,2.6nm,0.7s,baz=148,slow=2.0,SNR=17							
COLA	**College**	**153.20**	**306**	*e*PKPbc	PKPbc	10 35 43.3	-1.1
RSO	**Redoubt South**	**153.89**	**295**	*e*PKPdf	PKPdf	10 35 37.9	0.0
BPAW	**Bear Paw Mtn.**	**154.29**	**304**	*e*PKPdf	PKPdf	10 35 38.1	-0.3
BPAW				*e*PKPbc	PKPbc	10 35 46.2	-0.5
PPLA	**Purkeypile**	**154.46**	**301**	*e*PKPdf	PKPdf	10 35 36.5	-2.2
PPLA				*e*PKPbc	PKPbc	10 35 44.2	-2.9
PETK	**Petropavlovsk-**	**173.10**	**200**	PKP	PKPdf	10 35 59.3	+3.3
comp=Z,1.5nm,0.5s,baz=270,slow=2.7,SNR=3.7							
PETK				PKPab	PKPab	10 37 23.7	-0.1
comp=Z,2.8nm,0.7s,baz=130,slow=7.6,SNR=6.1							
PETK	**Petropavlovsk-**	**173.10**	**200**	PKP	PKPdf	10 35 59.3	+3.3
PETK				PKPab	PKPab	10 37 23.7	-0.1

*ISCJB **28** 10:19:52.8±2.5,41.7N±0.2×71.6E±0.2,h10km,Error ellipse: s-maj=34.0km s-min=8.0km az=25.6*
*NNC **28** 10:19:55.0±2.2,41.93N×71.79E,h0km,mb3.4,mpv3.3, Error ellipse: s-maj=27.6km s-min=7.9km az=27.0*
ISC 28 10:19:55.9±2.6,41.9N±0.2×71.7E±0.2,h10km,n11, σ0.83/12,3C-1D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**1.52**	**326**	P	**Pn**	**10 20 22.1**	**-1.1**
17nm,0.4s,baz=137,slow=17,SNR=507							
KK31				⇓S	**Sn**	**10 20 43.3**	**+0.3**
31nm,0.3s,baz=138,slow=30,SNR=20							
AML	**Almayashu**	**1.53**	**79**	P	**Pn**	**10 20 19.4**	**-3.9**
SNR=113							
EKS2	**Erkin-Say**	**1.76**	**62**	P	**Pn**	**10 20 24.9**	**-1.6**
SNR=24							
UCH	**Uchtor**	**2.15**	**79**	P	**Pn**	**10 20 31.3**	**-0.5**
SNR=11							
USP	**Ospenovka**	**2.52**	**55**	P	**Pn**	**10 20 37.5**	**+0.6**
SNR=29							
CHMS	**Chumysh**	**2.55**	**62**	P	**Pn**	**10 20 37.7**	**+0.4**
SNR=13							
KBK	**Karagaybulak**	**2.56**	**71**	P	**Pn**	**10 20 38.4**	**+0.9**
SNR=13							
KZA	**Kyzart**	**2.67**	**84**	P	**Pn**	**10 20 39.6**	**+0.5**
SNR=31							
TKM2	**Tokmak 2**	**3.10**	**68**	⇑Pn	**Pn**	**10 20 44.6**	**-0.3**
4.7nm,0.5s							
TKM2				⇑Lg		10 21 28.6	
36nm,0.5s							
TKM2	**Tokmak 2**	**3.10**	**68**	P	**Pn**	**10 20 44.9**	**0.0**
SNR=16							
AB31	**Akbulak array**	**11.06**	**316**	⇑Pn	**Pn**	**10 22 34.7**	**+0.7**
0.2nm,0.3s,baz=125,slow=14,SNR=6.4							

*IDC **28** 10:57:36.2±3.5,12.97N×124.33E,h0km,mb3.5/3, mb1 3.7/3,mb1mx3.3/22,mbtmp3.5/3,Error ellipse: s-maj=290.7km s-min=26.8km az=64.0*
*MAN **28** 10:57:37,12.75N×123.61E,h1km,mb4.5,ML3.4,MS3.3*
*ISCJB **28** 10:57:38.8±0.8,12.68N±0.05×123.54E±0.05,h15km±9km, mb3.5/3,Error ellipse: s-maj=9.2km s-min=6.4km az=135.9*
ISC 28 10:57:38.6±0.7,12.72N±0.04×123.58E±0.04,h7km±6km, n14,σ1.18/21,mb3.5/3,1C-1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.36**	**173**	⇓*e*P	**Pg**	**10 57 45.1**	**-0.6**
MMPH				*e*S	**Sg**	**10 57 51.1**	**+0.7**
PVCP	**Virac**	**1.04**	**33**	*e*P	**Pg**	**10 57 56.6**	**-1.9**
AUQP	**San Andres**	**1.07**	**304**	*e*P	**Pg**	**10 57 57.8**	**-1.3**
AUQP				*e*S	**Sg**	**10 58 16.3**	**+3.4**
CNP	**Cataman**	**1.08**	**101**	*e*P	**Pg**	**10 57 58.4**	**-0.9**
CNP				*e*S	**Sg**	**10 58 15.1**	**+1.7**
OTRP	**Odiongan**	**1.56**	**257**	*e*P	**Pn**	**10 58 06.7**	**-0.1**
GQP	**Guinayangan**	**1.61**	**317**	⇓*e*P	**Pn**	**10 58 17.0**	**+10**
GQP				*i* S	**Sn**	**10 58 28.2**	**-0.3**
OCLP	**Ormoc**	**1.94**	**149**	*e*P	**Pn**	**10 58 11.8**	**-0.2**
BESP	**Borongan**	**2.13**	**121**	*e*P	**Pn**	**10 58 15.4**	**+0.8**
BESP				*e*S	**Sn**	**10 58 44.2**	**+2.9**
GUIM	**Jordan**	**2.29**	**205**	*e*P	**Pn**	**10 58 16.5**	**-0.4**
GUIM				*e*S	**Sn**	**10 58 51.3**	**+5.9**
POLP	**Polilio Island**	**2.55**	**322**	*e*P	**Pn**	**10 58 22.1**	**+1.7**
POLP				*e*S	**Sn**	**10 58 57.3**	**+5.5**
BUSP	**Coron**	**3.38**	**258**	*e*P	**Pn**	**10 58 31.1**	**-0.6**
WRA	**Warramunga Arr**	**34.14**	**162**	P	**P**	**11 04 22.5**	**-1.9**
0.5nm,0.9s,mb3.5,baz=343,slow=9.3							
ASAR	**Alice Springs**	**37.55**	**164**	P	**P**	**11 04 53.4**	**-0.2**
0.3nm,0.6s,mb3.2,baz=346,slow=7.4,SNR=7.1							
MKAR	**Makanchi Array**	**48.49**	**323**	P	**P**	**11 06 22.6**	**+0.6**
0.9nm,0.8s,mb3.9,baz=104,slow=10,SNR=6.2							

*ISK **28** 11:01:55.2,35.73N×35.86E,h13km,MD3.0*
*CSEM **28** 11:01:56.5±0.2,35.79N×35.75E,h5km,MD3.3,Error ellipse: s-maj=5.1km s-min=3.4km az=74.0*
*ISCJB **28** 11:01:56.8±0.7,35.79N±0.02×35.82E±0.04,h10km±4km, Error ellipse: s-maj=6.1km s-min=3.6km az=158.1*
*DDA **28** 11:01:56.7,35.86N×35.72E,h8km±3km,Md3.3*
*GRAL **28** 11:01:56.2±1.8,36.06N×36.10E,h68km±96km,MD3.3*
*NSSC **28** 11:01:59,35.81N×36.08E,h9km±5km*
ISC 28 11:01:57.2±0.6,35.79N±0.02×35.83E±0.05,h12km±4km, n39,σ1.04/60,6D,Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YAYL	**Yayladag**	**0.33**	**43**	*i* P	**Pg**	**11 02 04.0**	**+0.1**
YAYL				*i* S	**Sg**	**11 02 09.8**	**+1.4**
YAYL	**Yayladag**	**0.33**	**43**	*i* P	**Pg**	**11 02 04.0**	**+0.1**
YAYL				*i* S

DEG	**La Desirade**	**0.71 316**	*e*P	**Pb**	**11 08 51.6**	**-0.8**
DEG			*e*S	**Sb**	**11 09 00.8**	**-1.0**
MGG	**Marie-Galante**	**0.75 279**	*e*P	**Pb**	**11 08 52.8**	**-0.2**
DWS	**Wesley**	**0.77 253**	*e*P	**Pb**	**11 08 53.9**	**+0.5**
DWS			*e*S	**Sb**	**11 09 05.0**	**+1.5**
DWS	**Wesley**	**0.77 253**	*e*P	**Pb**	**11 08 53.9**	**+0.5**
DWS			*e*S	**Sb**	**11 09 05.0**	**+1.5**
DLPL	**La Plaine**	**0.82 235**	*e*P	**Pb**	**11 08 52.7**	**-1.6**
DLPL			*e*S	**Sb**	**11 09 05.6**	**+0.7**
TBG	**Guadaloupe-3**	**1.06 273**	*e*P	**Pn**	**11 08 57.3**	**-0.4**
BCG	**Bois Riant Cap**	**1.07 285**	*e*P	**Pn**	**11 08 58.0**	**+0.1**
PHG	**Guadaloupe-2**	**1.07 282**	*e*P	**Pn**	**11 08 57.9**	**-0.1**
SEG	**Port Louis**	**1.10 303**	*e*P	**Pn**	**11 08 58.0**	**-0.3**
FDF	**Fort de France**	**1.21 209**	*e*Pn	**Pn**	**11 08 59.4**	**-0.4**
FDF			*e*Sn	**Sn**	**11 09 13.1**	**-2.3**
FDF	**Fort de France**	**1.21 209**‖	*e*P	**Pn**	**11 08 60.0**	**+0.1**
FDF		‖	*e*S	**Sn**	**11 09 14.9**	**-0.4**
LZG	**Guadaloupe-1**	**1.23 286**	*e*P	**Pn**	**11 09 00.2**	**+0.1**
MVM	**Montagne Vaucl**	**1.28 195**	*e*P	**Pn**	**11 09 00.8**	**-0.1**
MVM			*e*S	**Sn**	**11 09 16.5**	**-0.7**
BIM	**Bigot**	**1.37 202**	*e*P	**Pn**	**11 09 02.0**	**-0.1**
BIM			*e*S	**Sn**	**11 09 19.2**	**-0.2**
MCLT	**Moule a Chique**	**2.11 190**	*e*P	**Pn**	**11 09 14.3**	**+2.0**
MCLT			*e*S	**Sn**	**11 09 37.8**	**+0.1**
MCLT	**Moule a Chique**	**2.11 190**	*e*P	**Pn**	**11 09 12.2**	**-0.1**
MCLT			*e*S	**Sn**	**11 09 37.8**	**+0.1**
ANWB	**Willy Bob**	**2.20 328**	Pn	**Pn**	**11 09 15.9**	**+2.4**
SVB	**Belmont**	**2.60 195**	*e*P	**Pn**	**11 09 21.9**	**+2.8**
SVB			*e*S	**Sn**	**11 09 50.5**	**+0.7**
SVB	**Belmont**	**2.60 195**	*e*P	**Pn**	**11 09 20.5**	**+1.4**
SVB			*e*S	**Sn**	**11 09 48.6**	**-1.2**

MAN 28 11:12:32,12°.74N×123°.53E,h1km,mb4.3,ML3.1,MS2.9, 1C-1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.39 167**‖		*e*P	Pg	11 12 39.9	+0.4
MMPH				*e*S	Sg	11 12 45.4	+1.0
AUQP	**San Andres**	**1.02 305**		*e*P	Pg	11 12 53.0	+1.4
AUQP				*e*S	Sg	11 13 11.3	+6.5
PVCP	**Virac**	**1.05**	**35**	*e*P	Pg	11 12 51.0	-1.1
PVCP				*e*S	Sg	11 13 09.4	+3.7
CNP	**Catarman**	**1.12 101**		*e*P	Pg	11 12 52.8	-0.8
CNP				*e*S	Sg	11 13 09.4	+1.2
OTRP	**Odiongan**	**1.52 256**		*e*P	Pn	11 12 58.8	-1.5
GQP	**Guinayangan**	**1.57 318**‖		*e*P	Pn	11 13 11.5	+10
GQP				*i* S	Sn	11 13 35.6	+14
BESP	**Borongan**	**2.18 121**		*e*P	Pn	11 13 08.8	-0.5
BESP				*e*S	Sn	11 13 38.4	+1.4
GUIM	**Jordan**	**2.29 204**		*e*P	Pn	11 13 12.3	+1.4
GUIM				*e*S	Sn	11 13 45.6	+5.8

DJA 28 11:14:11,2°.05S×120°.48E,h20km,MLv3.7/5,Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTSI	**Tana Toraja**	**1.19 214**		P	Pn	11 14 30.0	-2.5
TTSI				S	Sb	11 14 47.5	-0.3
PCI	**Palu**	**1.31 330**		P	Pn	11 14 35.4	+1.3
APSI	**Ampana**	**1.63**	**46**	P	Pn	11 14 38.1	-0.4
SPSI	**Sidrap Palu**	**2.03 200**		P	Pn	11 14 43.0	-1.1
SPSI				S	Sn	11 15 10.8	+1.9
LUWI	**Luwuk**	**2.50**	**66**	P	Pn	11 14 47.3	-3.3
KDI	**Kendari**	**2.85 132**		P	Pn	11 14 57.6	+2.2
MRSI	**Marisa**	**2.90**	**30**	P	Pn	11 14 54.6	-1.5
BKSI	**Bulukumba**	**3.27 186**		P	Pn	11 15 01.0	-0.2

NIED ***28*** *11:38:00,32°.70N×142°.50E,h5km,Mw3.7 Best double couple: M₀3.88000×10¹⁴ NP1:φs21.00000°,δ48.00000°, λ-67.00000°. NP2:φs169.00000°,δ47.00000°, λ-114.00000°.*
IDC ***28*** *11:38:31.4±0.9,32°.55N×142°.65E,h0km,mb3.7/10, mb1 3.9/13,mb1mx3.8/22,mbtmp3.7/13,ML3.8/3,Error ellipse: s-maj=25.4km s-min=21.2km az=38.0*
ISCJB ***28*** *11:38:35.5±1.3,32°.79N±0°.07×142°.66E±0°.08, h33km±10km,mb3.7/12,Error ellipse: s-maj=12.8km s-min=10.4km az=21.5*
JMA ***28*** *11:38:36.0±0.3,32°.66N×142°.47E,h63km,M4.1*
NEIC ***28*** *11:38:36.0,32°.66N×142°.48E,h63km,MG4.1(JMA),After JMA.*

ISC 28 11:38:36.8±1.9,32°.73N±0°.06×142°.63E±0°.07,h32km±14km, n33,σ1§02/44,mb3.7/12,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**2.36 325**		P	**Pn**	**11 39 13.3**	**-0.1**
BSO1				S	**Sn**	**11 39 40.3**	**-1.0**
JHJ2	**Mitsune**	**2.40 280**		P	**Pn**	**11 39 12.1**	**-1.7**
JHJ2				S	**Sn**	**11 39 40.0**	**-2.1**
BSO3	**Boso 3**	**2.72 320**		P	**Pn**	**11 39 18.3**	**0.0**
BSO4	**Boso 4**	**2.95 320**		P	**Pn**	**11 39 21.9**	**+0.4**
BSO4				*e*S	**Sn**	**11 39 56.8**	**+1.0**
JOD2	**Odawara 2**	**3.88 312**		P	**Pn**	**11 39 33.8**	**-0.4**
JYN	**Shimob**	**4.37 310**		P	**Pn**	**11 39 41.4**	**+0.4**
JRY	**Ryogami san**	**4.50 318**		P	**Pn**	**11 39 44.1**	**+1.3**
JRY				S	**Sn**	**11 40 34.2**	**+0.2**
JAG	**Ashikaga**	**4.52 325**		P	**Pn**	**11 39 43.0**	**-0.1**
JAG				S	**Sn**	**11 40 34.8**	**+0.2**
MJAR	**Matsushiro Arr**	**5.27 317**		Pn	**Pn**	**11 39 53.3**	**0.0**
	3.2nm,0.3s,baz=27,slow=11,SNR=24						
MJAR				Sn	**Sn**	**11 40 54.5**	**+1.6**
	3.4nm,0.3s,baz=173,slow=6.6,SNR=7.9						
MAJO	**Matsushiro**	**5.27 317**		*e*Pn	**Pn**	**11 39 53.9**	**+0.5**
	16nm,0.6s						
MAT	**Matsushiro**	**5.27 317**		P	**Pn**	**11 39 53.3**	**0.0**
MAT				S	**Sn**	**11 40 53.2**	**+0.3**
MAT	**Matsushiro**	**5.27 317**		P	**Pn**	**11 39 54.3**	**+1.0**
MAT				S	**Sn**	**11 40 53.0**	**+0.1**
JMM	**Marumori**	**5.34 344**		P	**Pn**	**11 39 54.4**	**+0.1**
JMM				S	**Sn**	**11 40 51.5**	**-3.2**
JMK	**Ichinoseki**	**6.32 350**		P	**Pn**	**11 40 06.2**	**-1.5**
JMK				S	**Sn**	**11 41 14.5**	**-4.2**
ERM	**Erimo**	**9.28**	**2**	*e*Pn	**Pn**	**11 40 48.5**	**+0.2**
ERM				*e*Sn	**Sn**	**11 42 25.0**	**-6.5**
ASAJ	**Asahikawa**	**11.37 360**		Pn	**Pn**	**11 41 15.7**	**-1.2**
	1.4nm,0.3s,baz=231,slow=9.2,SNR=13						
KSRS	**Korea Array**	**12.93 295**		Pn	**Pn**	**11 41 39.8**	**+1.5**
	0.2nm,0.3s,baz=116,slow=13,SNR=4.8						
SONM	**Songino Array**	**31.16 310**		P	**P**	**11 44 54.0**	**+1.4**
	0.5nm,0.5s,mb3.6,baz=111,slow=8.1,SNR=6.3						
ZALV	**Zalesovo Beam**	**45.62 316**		P	**P**	**11 46 54.0**	**+0.1**
	0.6nm,0.5s,mb3.8,baz=96,slow=7.5,SNR=3.7						
MKAR	**Makanchi Array**	**47.35 306**		P	**P**	**11 47 08.1**	**+0.5**
	0.3nm,0.4s,mb3.6,baz=85,slow=8.2,SNR=4.5						
MKAR				PcP	PcP	11 48 38.2	+0.2
	0.2nm,0.4s,baz=85,slow=6.1,SNR=2.4						
KURK	**Kurchatov**	**49.45 311**		P	**P**	**11 47 21.1**	**-2.5**
	2.6nm,0.7s,mb4.4						
ILAR	**Eielson Array**	**52.64**	**31**	P	**P**	**11 47 48.1**	**+0.7**
	0.3nm,0.6s,mb3.4,baz=262,slow=6.1,SNR=7.0						
ASAR	**Alice Springs**	**56.69 190**		P	**P**	**11 48 14.9**	**-2.3**
	0.1nm,0.3s,mb3.3,baz=360,slow=6.8,SNR=7.4						
DLBC	**Dease Lake**	**61.43**	**37**	*e*P	**P**	**11 48 49.1**	**-0.6**
ABKAR	**Akbulak array**	**61.52 312**		*e*P	**P**	**11 48 50.2**	**-0.3**
	0.7nm,0.4s,mb4.1						
YKA	**Yellowknife Ar**	**67.04**	**29**	P	**P**	**11 49 26.6**	**+0.2**
	0.4nm,0.6s,mb3.7,baz=301,slow=6.6,SNR=4.4						
YKA	**Yellowknife Ar**	**67.04**	**29**	P	**P**	**11 49 26.6**	**+0.2**
FINES	**FINESS Array B**	**73.09 333**		P	**P**	**11 50 03.9**	**+0.4**
	1.4nm,0.5s,mb4.1,baz=61,slow=9.0,SNR=4.5						
FINES	**FINESS Array B**	**73.09 333**		P	**P**	**11 50 03.9**	**+0.4**
NVAR	**Mina Array Bea**	**76.78**	**53**	P	**P**	**11 50 26.7**	**+1.4**
	0.5nm,0.6s,mb3.6,baz=302,slow=5.0,SNR=4.7						
NVAR	**Mina Array Bea**	**76.78**	**53**	P	**P**	**11 50 26.7**	**+1.4**
NOA	**NORSAR Array B**	**78.54 338**		P	**P**	**11 50 34.9**	**+0.2**
	0.6nm,0.8s,mb3.6,baz=43,slow=4.9,SNR=3.7						
TXAR	**Lajitas Array**	**91.93**	**53**	P	**P**	**11 51 42.8**	**+0.4**
	0.3nm,0.6s,mb3.8,baz=306,slow=3.9,SNR=7.5						

DJA 28 12:02:34,7°.91S×113°.56E,h5km,MLv3.6/11,Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**0.38 198**		P	Pg	12 02 42.5	+1.2
GMJI				S	Sg	12 02 47.5	+1.2
BYJI	**Banyuwangi**	**0.84 111**		P	Pg	12 02 50.8	+0.6
KMMI	**Kalianget**	**0.94**	**25**	P	Pg	12 02 51.0	-1.2
KMMI				S	Sg	12 03 05.6	+1.2
KRKI	**Karangkates**	**1.12 257**		P	Pg	12 02 55.5	-0.1
NBBI	**Negara**	**1.15 114**		P	Pg	12 02 55.5	-0.5
NBBI				S	Sg	12 03 11.7	+0.8
GRJI	**Gresik**	**1.46 313**		P	Pn	12 03 00.0	-1.0
GRJI				S	Sb	12 03 21.2	+0.7
SRBI	**Singaraja**	**1.65**	**96**	P	Pn	12 03 03.0	-0.6
SRBI				S	Sn	12 03 26.5	+1.3
PWJI	**Pagerwojo**	**1.74 266**		P	Pn	12 03 04.5	-0.4
PWJI				S	Sn	12 03 28.8	+1.3
SJI	**Sawahan**	**1.79 275**		P	Pn	12 03 05.0	-0.5
KHKI	**Kahang-Kahang**	**2.08 103**		P	Pn	12 03 08.1	-1.4
KHKI				S	Sn	12 03 37.1	+1.3
NGJI	**Ngawi**	**2.15 284**		P	Pn	12 03 11.6	+1.1
PCJI	**Pacitan**	**2.38 263**		P	Pn	12 03 14.6	+0.9
PCJI				S	Sn	12 03 44.8	+1.6
UGM	**Wanagama**	**3.01 270**		P	Pn	12 03 22.8	+0.5
SMRI	**Semarang**	**3.21 285**		P	Pn	12 03 24.2	-0.9

NIED ***28*** *12:13:00,25°.20N×128°.10E,h5km,Mw4.6 Best double couple: M₀9.53000×10¹⁵ NP1:φs231.00000°,δ57.00000°, λ-69.00000°. NP2:φs15.00000°,δ39.00000°, λ-119.00000°.*
MOS ***28*** *12:13:34.8±1.3,25°.13N×128°.18E,h26km,mb4.7/21,Error ellipse: s-maj=11.8km s-min=6.9km az=104.8*
ISCJB ***28*** *12:13:35.9±0.3,25°.18N±0°.02×128°.10E±0°.03,h32km, mb4.6/50,MS3.9/20,Error ellipse: s-maj=4.4km s-min=3.2km az=14.4*
JMA ***28*** *12:13:35.8±0.2,25°.18N×128°.05E,h62km±4km,M4.0*
IDC ***28*** *12:13:37.9±0.6,25°.15N×128°.12E,h34km±4km,mb4.0/17, mb1 4.1/19,mb1mx4.1/23,mbtmp4.0/19,ML3.3/2,MS3.8/18, Ms1 3.8/18,ms1mx3.6/30,Error ellipse: s-maj=17.5km s-min=13.3km az=83.0*
NEIC ***28*** *12:13:37.8±0.3,25°.09N×128°.08E,mb4.8/14,MS4.5/1, MW4.6(NIED),Error ellipse: s-maj=7.9km s-min=7.2km az=110.0*
BJI ***28*** *12:13:41.4,25°.34N×127°.57E,h35km,mB4.7/11,mb4.5/19, Ms4.4/10,Ms7 4.1/10*

ISC 28 12:13:38.1±0.3,25°.22N±0°.02×128°.06E±0°.04,h33km, h33km±1.4km:pP-P,n140,σ1§26/148,mb4.6/50,MS3.9/20, 6C-2D,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT2	**Tamagusuku 2**	**0.96 343**		P	**Pn**	**12 13 54.2**	**-1.0**
JJT2				S	**Sn**	**12 14 07.6**	**-0.1**
NAH1	**Naha**	**1.03 341**		P	**Pn**	**12 13 55.0**	**-1.3**
NAH1				S	**Sn**	**12 14 09.4**	**-0.2**
JAGN	**Aguni-jima**	**1.55 332**		P	**Pn**	**12 14 02.4**	**-1.0**
JAGN				S	**Sn**	**12 14 21.6**	**-0.7**
JKE	**Kume jima 2**	**1.59 314**		P	**Pn**	**12 14 02.7**	**-1.2**
JKE				S	**Sn**	**12 14 22.8**	**-0.5**
JOW	**Kunigami**	**1.62**	**7**	P	**Pn**	**12 14 03.2**	**-1.1**
JOW				S	**Sn**	**12 14 22.8**	**-1.2**
JIH	**Iheya**	**1.81 357**		P	**Pn**	**12 14 06.1**	**-0.8**
JIH				S	**Sn**	**12 14 27.9**	**-0.8**
JOGS	**Gusukube**	**2.45 260**		P	**Pn**	**12 14 14.3**	**-1.4**
JMJ	**Miyako jima 2**	**2.54 261**		P	**Pn**	**12 14 14.7**	**-2.3**
JMJ				*e*S	**Sn**	**12 14 44.9**	**-1.8**
JTK	**Tokunoshima**	**2.68**	**17**	P	**Pn**	**12 14 18.7**	**-0.2**
JTK				S	**Sn**	**12 14 49.7**	**-0.5**
JMZ	**Minamidaito 2**	**2.92**	**78**	P	**Pn**	**12 14 18.4**	**-3.8**
JMZ				S	**Sn**	**12 14 51.6**	**-4.6**
JTJ	**Tarama**	**3.10 260**		P	**Pn**	**12 14 22.1**	**-2.6**
JTJ				*e*S	**Sn**	**12 14 56.0**	**-4.6**
JAM	**Amami Oshima**	**3.47**	**23**	P	**Pn**	**12 14 29.6**	**-0.1**
JAM				S	**Sn**	**12 15 06.4**	**-3.2**
JZK	**Kikaishima**	**3.53**	**29**	P	**Pn**	**12 14 30.4**	**-0.2**
JZK				S	**Sn**	**12 15 10.2**	**-0.9**
JIJ	**Ishigaki jima**	**3.66 257**		P	**Pn**	**12 14 29.2**	**-3.2**
JIJ				S	**Sn**	**12 15 07.6**	**-6.8**
JNN	**Nakanoshima**	**4.88**	**19**	P	**Pn**	**12 14 48.3**	**-0.8**
JNN				*e*S	**Sn**	**12 15 44.1**	**-0.3**
YHNB	**Yeheng**	**6.09 266**		*e*Pn	**Pn**	**12 15 05.0**	**-0.8**
SSLB	**Suanglung**	**6.62 259**		*e*Pn	**Pn**	**12 15 10.8**	**-2.4**
NJ2	**Nanjing**	**10.56 312**		*e*P	**Pn**	**12 16 07.5**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,20nm,0.7s						
KSRS	**Korea Array**	**12.20 359**		Pn	**Pn**	**12 16 29.7**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=182,slow=14,SNR=5.7						
KSRS				LR	LR	12 21 15.5	
	comp=Z,236nm,20.5s,baz=180,slow=37						
CBIJ	**Chichi jima**	**12.83**	**79**	LR	LR	12 20 40.4	
	comp=Z,94nm,20.1s,baz=54,slow=33						
MAT	**Matsushiro**	**14.25**	**35**	P	**Pn**	**12 16 58.4**	**+0.9**
MJAR	**Matsushiro Arr**	**14.25**	**35**	Pn	**Pn**	**12 16 57.4**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=216,slow=36,SNR=3.6						
BJT	**Baijiatuau**	**17.81 329**		*e*P	**Pn**	**12 17 43.8**	**+0.5**
BJT				pmax	pmax		
	comp=Z,61nm,1.1s						
BJT	**Baijiatuau**	**17.81 329**		*e*Pn	**Pn**	**12 17 43.8**	**+0.6**
	comp=Z,61nm,1.1s						
DAV	**Davao City (W)**	**18.20 188**		LR	LR	12 23 06.1	
	comp=Z,273nm,19.9s,baz=1.4,slow=31						
CN2	**Changchun**	**18.66 354**		*e*P	**Pn**	**12 17 53.3**	**-0.3**
CN2				*e*S	**Sn**	**12 21 15.0**	**-6.3**
CN2				pmax	pmax		
	comp=Z,30nm,0.8s						
CN2				LR	LR		
	comp=N,500nm,13.0s						
CN2				LR	LR		
	comp=E,500nm,13.0s						
CN2				LR	LR		
	comp=Z,500nm,15.0s						
XAN	**Xi'an**	**18.79 302**		P	**Pn**	**12 18 04.8**	**+9.5**
XAN				pmax	pmax		
	comp=Z,6.0nm,1.3s						
GUMO	**Guam**	**19.60 123**		LR	LR	12 23 37.3	
	comp=Z,171nm,19.1s,baz=95,slow=31						
ERM	**Erimo**	**20.89**	**33**	*c*eP	**P**	**12 18 15.7**	**-1.8**
CD2	**Chengdu**	**22.16 290**‖		*i*P	**P**	**12 18 31.0**	**-0.2**
CD2				pmax	pmax		
	comp=Z,50nm,1.1s,mb4.9						
CD2				pmax	pmax		
	comp=Z,710nm,4.9s						
ASAJ	**Asahikawa**	**22.26**	**29**	P	**P**	**12 18 31.1**	**-1.0**
	comp=Z,4.1nm,0.7s,mb4.0,baz=38,slow=31,SNR=4.6						
ASAJ	**Asahikawa**	**22.26**	**29**	P	**P**	**12 18 31.2**	**-0.9**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KMI	**Kunming**	**22.91 275**		P	**P**	**12 18 41.8**	**+2.6**
KMI				pP		12 18 50.5	
KMI				pmax	pmax		
	comp=Z,66nm,1.3s,mb4.9						
KMI				LR	LR		
	comp=N,430nm,6.4s						
KMI				LR	LR		
	comp=E,690nm,5.3s						
KMI				LR	LR		
	comp=Z,460nm,7.1s						
LZH	**Lanzhou**	**23.42 303**		P	**P**	**12 18 43.8**	**-0.6**
LZH				pP		12 18 54.3	
LZH				sP	sP	12 18 57.8	+0.1
LZH				pmax	pmax		
	comp=Z,49nm,1.0s,mb4.9						
LZH				pmax	pmax		
	comp=Z,210nm,4.2s						
HABR	**Khabarovsk**	**23.85**	**12**	*e*P	**P**	**12 18 49.2**	**+0.9**
HABR				*e**PP		12 18 58.2	
HABR				PPP		12 19 25.3	
HABR						12 22 33.7	
HABR				*e*S	**S**	**12 23 01.8**	**-0.1**
HABR				*e**SS	sS	12 23 18.0	+0.3
HABR				*e*SSS		12 23 55.5	
HABR				*e*		12 29 55.9	
HABR				pmax	pmax		
	comp=Z,35nm,2.2s,mb4.4						
HABR				pmax	pmax		
	comp=E,26nm,2.5s						
HABR				pmax	pmax		
	comp=N,19nm,2.3s						
HABR				MLR	MLR		
	comp=Z,95nm,18.0s,MS3.3						
KLR	**Kul'dur**	**24.14**	**6**	*e*P	**P**	**12 18 47.6**	**-3.3**
KLR				pmax	pmax		
	comp=Z,70nm,2.2s,mb4.7						
TNTI	**Ternate**	**24.31 182**		P	**P**	**12 18 53.1**	**+0.4**
	comp=Z,0.3nmcomp=Z,91nm,1.2s,mb5.1						
YSS	**Yuzh-Sakhalins**	**24.65**	**25**	*e*P	**P**	**12 18 57.0**	**+1.5**
YSS				*e*		12 19 08.0	
YSS				*e*S	**S**	**12 23 11.0**	**-3.7**
YSS	**Yuzh-Sakhalins**	**24.65**	**25**	*e*P	**P**	**12 18 57.2**	**+1.7**
	comp=Z,237nm,1.4s,mb5.5						
SBUM	**Sibu**	**27.30 216**		P	**P**	**12 19 22.6**	**+2.8**
	comp=Z,14nm,1.3s,mb4.4						
GTA	**Gaotai**	**27.61 308**		*e*P	**P**	**12 19 22.5**	**+0.1**
GTA	**Gaotai**	**27.61 308**		*e*P	**P**	**12 19 31.3**	**+8.9**
GTA				pP	pP	12 19 32.0	0.0
GTA				sP	sP	12 19 36.5	+0.4
GTA				pP	pP	12 19 38.5	+6.5
GTA				sP	sP	12 19 42.8	+6.7
GTA				S	**S**	**12 24 16.5**	**+15**
GTA				sS	sS	12 24 28.5	+11
GTA				SS		12 25 42.5	
GTA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.5						
GTA				pmax	pmax		
	comp=Z,17nm,1.4s,mb4.5						
GTA				pmax	pmax		
	comp=Z,87nm,5.7s						
GTA				LR	LR		
	comp=N,310nm,20.4s,MS4.0						
GTA				LR	LR		
	comp=E,300nm,19.8s,MS4.0						
GTA				LR	LR		
	comp=Z,340nm,21.9s,MS3.9						
CHTO	**Chiang Mai**	**27.70 263**		*e*P	**P**	**12 19 23.5**	**+0.1**
CHTO				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.5						
CHTO	**Chiang Mai**	**27.70 263**		*e*P	**P**	**12 19 23.5**	**+0.2**
	comp=Z,14nm,1.1s,mb4.5						
CMAR	**Chiang Mai Arr**	**27.81 262**		P	**P**	**12 19 25.9**	**+1.5**
	comp=Z,1.2nm,0.8s,mb3.6,baz=61,slow=7.5,SNR=8.9						
CMAR				LR	LR	12 32 14.1	
	comp=Z,81nm,20.4s,MS3.3,baz=90,slow=40						
CMAR	**Chiang Mai Arr**	**27.81 262**		P	**P**	**12 19 25.9**	**+1.5**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
CMAR				MLR	MLR		
	comp=Z,81nm,20.4s						
ULN	**Ulaanbaatar**	**28.03 329**		*e*P	**P**	**12 19 25.0**	**-1.1**
ULN				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.5						
ULN	**Ulaanbaatar**	**28.03 329**		*e*P	**P**	**12 19 25.0**	**-1.0**
	comp=Z,14nm,1.0s,mb4.6						
SONM	**Songino Array**	**28.32 328**		P	**P**	**12 19 29.5**	**+0.9**
	comp=Z,0.8nm,0.4s,mb3.7,baz=144,slow=9.2,SNR=3.5						
SONM				LR	LR	12 32 20.2	
	comp=Z,255nm,19.6s,MS3.8,baz=63,slow=40						
SONM	**Songino Array**	**28.32 328**		P	**P**	**12 19 29.5**	**+0.9**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SONM				MLR	MLR		
	comp=Z,255nm,19.6s						
KSM	**Kuching**	**29.17 219**		*e*P	**P**	**12 19 36.0**	**-0.4**
	comp=Z,14nm,1.0s,mb4.6						
KSM	**Kuching**	**29.17 219**		P	**P**	**12 19 36.4**	**-0.1**
	comp=Z,17nm,1.1s,mb4.7						
ZAK	**Zakamensk**	**31.57 329**		*e*P	**P**	**12 20 06.8**	**+9.5**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.6s						
TLY	**Talaya**	**32.31 331**		*e*P	**P**	**12 20 13.7**	**+10**
TLY				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
TLY				MLR	MLR		
	comp=Z,194nm,19.0s,MS3.8						
SHL	**Shillong**	**32.62 279**		*e*PKP	sP	12 20 18.0	-2.6
PETK	**Petropavlovsk-**	**35.64**	**31**	P	**P**	**12 20 33.0**	**+0.3**
	comp=Z,0.6nm,0.4s,mb3.8,baz=172,slow=40,SNR=1.9						
PETK				LR	LR	12 37 36.0	
	comp=Z,29nm,18.6s,MS3.1,baz=250,slow=40						
PETK	**Petropavlovsk-**	**35.64**	**31**	P	**P**	**12 20 33.0**	**+0.3**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
PETK				MLR	MLR		
	comp=Z,29nm,18.6s,MS3.1						
YAK	**Yakutsk**	**36.82**	**1**	*e*P	**P**	**12 20 44.7**	**+2.1**
YAK				*e*	pP	12 20 51.9	-0.5
YAK				pmax	pmax		
	comp=Z,32nm,1.2s,mb5.0						
YAK				pmax	pmax		
	comp=N,36nm,1.5s						
YAK				pmax	pmax		
	comp=E,14nm,1.6s						
KAKA	**Kakadu**	**37.94 173**		*e*P	**P**	**12 20 50.7**	**-1.9**
	comp=E,9.0nm,1.0s,mb4.5						
LWLI	**Liwa**	**38.04 221**		P	**P**	**12 20 58.9**	**+5.3**
	comp=E,99nm,0.5s						
PMG	**Port Moresby**	**39.13 149**		*e*P	**P**	**12 20 59.6**	**-3.0**
KNA	**Kununurra**	**40.73 179**		*e*P	**P**	**12 21 14.3**	**-1.6**
	comp=E,32nm,0.8s,mb5.0						
KNA	**Kununurra**	**40.73 179**		P	**P**	**12 21 14.1**	**-1.8**
	comp=E,983nmcomp=E,124nm,0.8s,mb5.6						
COEN	**Coen**	**41.63 158**		*e*P	**P**	**12 21 22.5**	**-0.9**
MK31	**Makanchi Array**	**42.10 313**		*e*P	**P**	**12 21 26.7**	**-0.2**
MKAR	**Makanchi Array**	**42.10 313**		P	**P**	**12 21 26.6**	**-0.3**
	comp=E,3.3nm,0.4s,mb4.3,baz=96,slow=9.8,SNR=50						
MKAR				pP	pP	12 21 37.4	+0.7
	comp=E,3.5nm,0.4s,baz=99,slow=10.0,SNR=15						
MKAR				LR	LR	12 40 32.0	
	comp=E,83nm,20.5s,MS3.6,baz=151,slow=38						
MKAR	**Makanchi Array**	**42.10 313**		P	**P**	**12 21 26.6**	**-0.3**
MKAR				*PP	pP	12 21 37.4	+0.6
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.4s						
MKAR				pmax	pmax		

comp=Z,4.5nm,0.8s,mb4.5,baz=360,slow=8.2,SNR=45
ASAR PcP PcP 12 23 43.8 -1.3
comp=Z,1.3nm,0.8s,baz=1.4,slow=3.1,SNR=5.4
ASAR Alice Springs 48.92 173 P P 12 22 20.3 -0.8
ASAR 12 23 43.8
ASAR pmax pmax
comp=Z,5.0nm,0.8s
ASAR pmax pmax
comp=Z,1.0nm,0.8s
BVAR Borovoye Array 50.93 319 P P 12 22 35.5 -0.5
comp=Z,0.8nm,0.5s,mb3.9,baz=233,slow=37,SNR=5.7
BVAR Borovoye Array 50.93 319 P P 12 22 35.5 -0.5
BVAR pmax pmax
comp=Z,1.0nm,0.5s
BRVK Borovoye 50.99 319 *eP* **P 12 22 38.6 +2.1**
BRVK pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
BRVK Borovoye 50.99 319 *eP* **P 12 22 38.2 +1.7**
comp=Z,20nm,1.1s,mb5.0
KBL Kabul 51.38 295 *eP* **P 12 22 41.6 +1.9**
KBL *e**PP pP 12 22 50.5 +0.7
KBL pmax pmax
comp=Z,66nm,1.5s,mb5.3
KBL Kabul 51.38 295 *eP* **P 12 22 41.6 +1.9**
comp=Z,66nm,1.5s,mb5.3
KBL *e*pP pP 12 22 50.5 +0.6
SVE Sverdlovsk 56.96 323 *eP* **P 12 23 29.6 +10**
ABKAR Akbulak array 57.23 314 *eP* **P 12 23 22.8 +0.8**
comp=Z,11nm,0.9s,mb4.9
ARU Arti 58.09 322 *d iP* **P 12 23 30.6 +2.6**
ARU *e* 12 25 35.9
ARU S **S 12 31 29.5 +3.0**
ARU SS SS 12 35 18.4 +0.6
ARU pmax pmax
comp=Z,6.0nm,1.2s,mb4.5
ARU Arti 58.09 322 *eP* **P 12 23 27.1 -0.9**
comp=Z,16nm,1.3s,mb4.9
STKA Stephens Creek 58.23 166 P **P 12 23 27.6 -1.6**
comp=Z,5.1nm,0.8s,mb4.6,baz=326,slow=8.5,SNR=7.1
STKA LR LR 12 45 23.6
comp=Z,135nm,21.3s,MS4.0,baz=25,slow=33
RSO Redoubt South 63.11 33 *eP* **P 12 24 01.6 -0.5**
ILAR Eielson Array 65.40 28 P **P 12 24 16.9 -0.1**
comp=Z,0.4nm,0.7s,mb3.6,baz=257,slow=5.0,SNR=8.5
ILAR pP pP 12 24 26.8 -0.6
comp=Z,0.6nm,0.6s,baz=255,slow=4.4,SNR=5.4
ILAR Eielson Array 65.40 28 P **P 12 24 16.9 -0.1**
ILAR *PP pP 12 24 26.8 -0.6
ILAR pmax pmax
comp=Z,1.0nm,0.6s
MENT Mentasta 67.07 30 *eP* **P 12 24 28.9 +1.2**
VRHR Novokhopersk 68.63 317 *eP* **P 12 24 39.4 +1.6**
VRHR *e* pP 12 24 48.4 +0.2
VRHR pmax pmax
comp=N,10.0nm,1.1s
VRHR pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
VRHR pmax pmax
comp=E,3.0nm,0.6s
GOF Gofitskoye 69.23 311 *eP* **P 12 24 42.5 +0.8**
ZEI Tsey 69.23 308 *eP* **P 12 24 40.1 -1.6**
ZEI pmax pmax
comp=Z,13nm,0.4s,mb5.2
KIV Kislovodsk 69.76 310 *eP* **P 12 24 47.1 +2.1**
KIV pmax pmax
comp=Z,23nm,1.1s,mb5.0
KIV MLR MLR
comp=Z,65nm,18.0s,MS3.9
MOS Moscow 69.78 323 *eP* **P 12 24 45.0 +0.1**
MOS pmax pmax
comp=Z,39nm,1.2s,mb5.2
VSR Storozhevoye 70.09 318 *eP* **P 12 24 48.7 +1.8**
VSR *e* pP 12 24 57.4 +0.1
VSR pmax pmax
comp=N,9.0nm,1.1s
VSR pmax pmax
comp=E,7.0nm,1.1s
VSR pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
OBN Obninsk 70.53 322 *d iP* **P 12 24 51.0 +1.5**
OBN *i* pP 12 25 00.1 +0.2
OBN *i* 12 25 07.2
OBN pmax pmax
comp=Z,25nm,1.2s,mb5.0
OBN MLR MLR
comp=Z,100nm,14.0s,MS4.2
ARCES ARCESS Array B 70.89 339 P **P 12 24 52.0 +0.6**
comp=Z,2.7nm,0.9s,mb4.2,baz=68,slow=7.5,SNR=8.6
ARCES LR LR 13 02 25.9
comp=Z,70nm,18.7s,MS3.9,baz=108,slow=41
ARCES ARCESS Array B 70.89 339 P **P 12 24 52.0 +0.6**
ARCES LR LR 13 02 25.9
FINES FINESS Array B 73.66 331 P **P 12 25 08.6 +0.5**
comp=Z,1.2nm,0.4s,mb4.2,baz=77,slow=4.1,SNR=10
FINES pP pP 12 25 19.4 +0.8
comp=Z,6.2nm,0.8s,baz=64,slow=5.0,SNR=7.2
FINES LR LR 13 01 40.7
comp=Z,200nm,18.9s,MS4.4,baz=21,slow=39
FINES FINESS Array B 73.66 331 P **P 12 25 08.6 +0.5**
FINES *PP pP 12 25 19.4 +0.8
FINES pmax pmax
comp=Z,1.0nm,0.4s
FINES pmax pmax
comp=Z,6.0nm,0.8s
FINES MLR MLR
comp=Z,200nm,18.9s
FINES FINESS Array B 73.66 331 P **P 12 25 08.6 +0.5**
FINES pP pP 12 25 19.4 +0.8
FINES LR LR 13 01 40.7
VSU Vasula 74.51 328 *cePP* **P 12 25 14.1 +1.0**
VSU pmax pmax
comp=Z,22nm,1.2s,mb5.0
BR131 Keskin Array S 77.53 308 *eP* **P 12 25 30.7 0.0**
comp=Z,11nm,1.1s,mb4.7
BRTR Keskin Array B 77.53 308 P **P 12 25 31.1 +0.5**
comp=Z,2.6nm,0.9s,mb4.1,baz=93,slow=4.9,SNR=9.2
BRTR pP pP 12 25 42.4 +1.2
comp=Z,6.3nm,1.0s,baz=105,slow=2.8,SNR=7.2
BRTR LR LR 13 02 22.7
comp=Z,31nm,19.6s,MS3.6,baz=293,slow=38
BRTR Keskin Array B 77.53 308 P **P 12 25 31.2 +0.5**
BRTR *PP pP 12 25 42.4 +1.2
BRTR pmax pmax
comp=Z,3.0nm,1.0s
BRTR pmax pmax
comp=Z,6.0nm,1.0s
BRTR MLR MLR
comp=Z,31nm,19.6s
YKA Yellowknife Ar 79.50 25 P **P 12 25 41.8 +0.7**
comp=Z,1.1nm,0.7s,mb3.9,baz=300,slow=5.1,SNR=6.6
YKA pP pP 12 25 52.5 +0.9
comp=Z,1.7nm,0.8s,baz=300,slow=5.6,SNR=7.5
YKA Yellowknife Ar 79.50 25 P **P 12 25 41.8 +0.7**
YKA *PP pP 12 25 52.5 +0.9
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA pmax pmax
comp=Z,2.0nm,0.8s
YKA Yellowknife Ar 79.50 25 P **P 12 25 41.8 +0.7**
YKA pP pP 12 25 52.5 +0.9
BUR08 Bucovina Ar. S 79.87 318 *eP* **P 12 25 44.0 +0.7**
NB2 NORSAR Subarra 80.15 334 P **P 12 25 44.5 -0.1**
comp=Z,0.6nm,0.5s,mb3.8,baz=57,slow=5.1
NOA NORSAR Array B 80.15 334 P **P 12 25 44.9 +0.3**
comp=Z,3.1nm,1.0s,mb4.2,baz=52,slow=5.2,SNR=5.9
NOA pP pP 12 25 55.0 -0.1
comp=Z,1.5nm,0.7s,baz=55,slow=5.1,SNR=5.1
NOA LR LR 13 04 45.6
comp=Z,102nm,19.6s,MS4.2,baz=55,slow=38
NOA NORSAR Array B 80.15 334 P **P 12 25 44.9 +0.3**
NOA *PP pP 12 25 55.0 -0.2
NOA pmax pmax
comp=Z,3.0nm,1.0s
NOA pmax pmax
comp=Z,2.0nm,0.7s
NOA MLR MLR
comp=Z,102nm,19.6s
SUMG Summit 82.03 356 *eP* **P 12 25 55.7 +1.3**
comp=Z,18nm,1.2s,mb4.9
VYHS Vyhne 83.22 321 *eP* sP 12 26 17.0 +1.5
DPC Dobruska-Polom 83.66 323 *eP* **P 12 26 05.9 +2.6**
UPC Upice 83.74 323 *eP* **P 12 26 06.2 +2.5**
PVCC Panska Ves 84.50 324 *eP* **P 12 26 09.6 +2.0**
BRG Berggiesshubel 84.64 324 *eP* sP 12 26 22.8 +0.1
comp=Z,8.0nm,1.2s
BRG
comp=N,97nm,13.3s
BRG
comp=E,87nm,10.2s
BRG
comp=Z,202nm,16.1s
CLL Collm 84.89 325 *eP* **P 12 26 10.0 +0.5**
CLL *e* 12 26 14.0
CLL MLR MLR
comp=Z,200nm,21.8s,MS4.5
CLL Collm 84.89 325 *eP* **P 12 26 10.0 +0.5**
CLL *e* 12 26 14.0
CLL *e* 12 26 29.0
CLL LR LR
comp=Z,200nm,21.8s,MS4.5
CLL Collm 84.89 325 *eP* **P 12 26 10.0 +0.5**
CLL *e*PcP PcP 12 26 14.0 +1.2
CLL *e* 12 26 29.0
CLL Lm 13 07 00.0
comp=Z,200nm,21.8s
KHC Kasperske Hory 85.81 323 *eP* **P 12 26 16.1 +1.9**
PPT Papeete 90.71 109 LR LR 13 05 03.2
comp=Z,61nm,18.1s,MS4.1,baz=212,slow=34
NVAR Mina Array Bea 91.32 46 P **P 12 26 41.9 +1.3**
comp=Z,0.9nm,0.8s,mb4.2,baz=256,slow=5.8,SNR=7.9

*IDC **28** 12:30:44.6±1.7,43.°64N×130.°18W,h0km,mb3.7/8,*
mb1 3.9/10,mb1mx3.7/25,mbtmp3.7/10,ML3.0/2,MS3.5/1,
Ms1 3.5/1,ms1mx2.9/29,Error ellipse: s-maj=57.5km
s-min=16.8km az=44.0
*ISCJB **28** 12:30:47.3±0.8,44.°25N±0.°06×129.°5W±0.°1,h10km,*
mb3.8/8,Error ellipse: s-maj=11.1km s-min=8.4km
az=154.0
*NEIC **28** 12:30:47.7±0.8,44.°26N×129.°68W,h10km,mb4.2/8,Error*
ellipse: s-maj=10.4km s-min=8.1km az=70.0
ISC 28 12:30:47.9±0.9,44.°25N±0.°06×129.°7W±0.°1,h10km,n45,
σ0§98/44,mb3.8/8,Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLWA	**Neilton Lookou** 7.5nm,0.4s	**5.13**	**50**	*e*Pn	**Pn**	**12 32 02.3**	**-2.4**
YBH	**Yreka Blue Hor** 0.1nm,0.3s,baz=285,slow=7.3,SNR=7.6	**5.69**	**114**	Pn	**Pn**	**12 32 13.3**	**+0.9**
GNW	**Green Mountain** 4.8nm,0.4s	**5.81**	**53**	*e*Pn	**Pn**	**12 32 12.5**	**-1.6**
LON	**Longmire** 6.8nm,0.6s	**6.06**	**63**	*e*Pn	**Pn**	**12 32 16.4**	**-1.1**
JCW	**Jim Creek** 21nm,0.4s	**6.66**	**51**	*e*Pn	**Pn**	**12 32 25.2**	**-0.5**
RPW	**Rockport** 15nm,0.3s	**7.03**	**50**	*e*Pn	**Pn**	**12 32 30.9**	**0.0**
ETW	**Entiat** 6.6nm,0.5s	**7.32**	**59**	*e*Pn	**Pn**	**12 32 34.9**	**0.0**
CMB	**Columbia Colle** 5.0nm,1.2s	**9.35**	**128**	*e*Pn	**Pn**	**12 33 02.2**	**-0.5**
NVAR	**Mina Array Bea** 0.1nm,0.3s,baz=289,slow=14,SNR=6.8	**10.33**	**120**	Pn	**Pn**	**12 33 16.3**	**+0.2**
BSMT	**Bassoo Peak** 2.9nm,0.8s	**10.95**	**66**	*e*Pn	**Pn**	**12 33 25.2**	**+0.7**
HLID	**Hailey** 8.4nm,1.1s	**11.03**	**88**	*e*Pn	**Pn**	**12 33 26.6**	**+0.9**
MSO	**Missoula** 1.8nm,0.9s	**11.33**	**71**	*e*Pn	**Pn**	**12 33 31.1**	**+1.4**
SLMT	**Seeley Lake** 12nm,1.1s	**11.69**	**69**	*e*Pn	**Pn**	**12 33 35.2**	**+0.5**
DLMT	**Dillon** 3.4nm,1.0s	**12.18**	**79**	*e*Pn	**Pn**	**12 33 41.7**	**+0.4**
LRM	**Limekiln Ridge** 5.6nm,0.8s	**12.28**	**77**	*e*Pn	**Pn**	**12 33 43.2**	**+0.4**
GSC	**Goldstone** 4.0nm,1.0s	**13.31**	**128**	*e*Pn	**Pn**	**12 33 56.8**	**-0.1**
YMR	**Madison River**	**13.37**	**82**	*e*Pn	**Pn**	**12 33 53.7**	**-3.9**
IMW	**Indian Meadow** 9.4nm,1.3s	**13.47**	**85**	*e*Pn	**Pn**	**12 33 59.4**	**+0.4**
HWUT	**Hardware Ranch** 11nm,1.5s	**13.53**	**95**	*e*Pn	**Pn**	**12 33 58.5**	**-1.2**
TPAW	**Teton Pass** 7.6nm,1.2s	**13.53**	**87**	*e*Pn	**Pn**	**12 34 00.2**	**+0.4**
REDW	**Red Top Meadow** 8.8nm,1.5s	**13.62**	**87**	*e*Pn	**Pn**	**12 34 02.0**	**+0.9**
MOOW	**Moose Ponds** 11nm,1.6s	**13.63**	**86**	*e*Pn	**Pn**	**12 34 01.3**	**+0.1**
LOHW	**Long Hollow** 7.2nm,1.3s	**13.76**	**86**	*e*Pn	**Pn**	**12 34 03.1**	**+0.2**
GCMT	**Greycliff** 10nm,1.0s	**14.23**	**77**	*e*Pn	**Pn**	**12 34 10.4**	**+1.0**
MSU	**Marysvale** 21nm,1.7s	**14.32**	**108**	*e*Pn	**Pn**	**12 34 13.2**	**+2.7**
RLMT	**Red Lodge** 6.0nm,0.9s	**14.54**	**79**	*e*Pn	**Pn**	**12 34 15.2**	**+1.6**
SRU	**San Rafael** 26nm,1.4s	**15.19**	**103**	*e*Pn	**Pn**	**12 34 22.0**	**-0.4**
PV01	**Paradox Valley** 845nm,1.3s	**16.99**	**104**	*e*Pn	**Pn**	**12 34 44.4**	**-1.2**
MVCO	**Mesa Verde** 50nm,1.8s	**17.49**	**106**	*e*Pn	**Pn**	**12 34 51.7**	**-0.1**
ISCO	**Idaho Springs** 4.2nm,1.0s	**18.39**	**96**	*e*P	**Pn**	**12 35 02.2**	**-0.7**
SDCO	**Great Sand Dun** 3.4nm,1.1s	**19.32**	**101**	*e*P	**Pn**	**12 35 12.9**	**-1.3**
ANMO	**Albuquerque** 1.1nm,0.8s,baz=320,slow=8.7,SNR=3.7	**20.09**	**110**	P	**P**	**12 35 22.4**	**+0.9**
ANMO	**Albuquerque**	**20.09**	**110**	P	**P**	**12 35 22.4**	**+0.9**
YKA	**Yellowknife Ar** 1.0nm,0.8s,baz=207,slow=10,SNR=5.2	**20.27**	**20**	P	**P**	**12 35 27.7**	**+4.5**
BNM	**Barren Site** 9.2nm,1.5s	**20.44**	**112**	*e*P	**P**	**12 35 25.7**	**+0.3**
FFC	**Flin Flon** 21nm,1.5s	**20.68**	**50**	*e*P	**P**	**12 35 27.1**	**-0.6**
ILAR	**Eielson Array** 1.6nm,1.1s,mb3.4,baz=162,slow=8.1,SNR=9.4	**22.71**	**341**	P	**P**	**12 35 53.6**	**+4.2**
AGMN	**Agassiz Nation** 9.4nm,1.2s,mb4.1	**23.60**	**68**	*e*P	**P**	**12 35 57.5**	**-1.4**
TXAR	**Lajitas Array** 1.9nm,1.2s,mb3.5,baz=302,slow=7.2,SNR=6.6	**25.45**	**117**	P	**P**	**12 36 14.7**	**-1.2**
WMOK	**Wichita Mounta** 13nm,1.4s,mb4.3	**25.53**	**101**	*e*P	**P**	**12 36 15.8**	**-0.8**
ROSC	**El Rosal** comp=Z,38nm,19.5s,baz=337,slow=40	**62.24**	**112**	LR	LR	13 12 03.4	
BVAR	**Borovoye Array** 0.7nm,0.6s,mb3.8,baz=64,slow=6.8,SNR=4.5	**81.58**	**348**	P	**P**	**12 43 06.4**	**+0.9**
LPAZ	**La Paz** 1.3nm,0.8s,mb3.9,baz=331,slow=8.0,SNR=4.2	**82.23**	**122**	P	**P**	**12 43 08.2**	**-1.2**
KURK	**Kurchatov** 1.1nm,0.8s,mb3.8,baz=21,slow=4.8,SNR=5.6	**82.27**	**342**	P	**P**	**12 43 10.4**	**+1.2**
MKAR	**Makanchi Array** 0.2nm,0.7s,mb3.4,baz=21,slow=7.8,SNR=3.5	**85.05**	**339**	P	**P**	**12 43 23.9**	**+0.4**

*BJI **28** 12:32:24.1,44.°40N×129.°10W,h5km,mB5.1/7,mb4.7/10,*
Ms5.2/3,Ms7 4.8/3
*IDC **28** 12:32:24.1±1.7,44.°20N×129.°32W,h0km,mb3.8/9,*
mb1 4.0/11,mb1mx3.8/24,mbtmp3.8/11,ML3.5/2,MS3.5/6,
Ms1 3.5/6,ms1mx3.3/27,Error ellipse: s-maj=54.8km
s-min=16.3km az=45.0
*ISCJB **28** 12:32:26.9±0.4,44.°42N±0.°04×129.°13W±0.°05,h10km,*
mb4.2/16,MS3.5/4,Error ellipse: s-maj=5.6km
s-min=4.5km az=34.3
*NEIC **28** 12:32:29.1±0.8,44.°39N×129.°13W,h10km,mb4.2/16,*
Error ellipse: s-maj=10.2km s-min=5.9km az=58.0
ISC 28 12:32:28.3±0.4,44.°40N±0.°04×129.°23W±0.°05,h10km,
(h14km±1.5km:pP-P),n103,σ1§29/106,mb4.2/16,MS3.5/4,
Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RNO	**Roman Nose**	**3.98**	**95**	P	**Pn**	**12 33 26.8**	**-2.6**
MPOR	**Mary's Peak**	**4.07**	**87**	P	**Pn**	**12 33 28.1**	**-2.4**
COR	**Corvallis**	**4.25**	**85**	*e*Pn	**Pn**	**12 33 31.7**	**-1.3**
COR				*e*Sn	**Sn**	**12 34 19.9**	**-2.6**
KMOR	**Kings Mountain**	**4.25**	**71**	P	**Pn**	**12 33 31.2**	**-1.9**
BMW	**Boistfort Moun**	**4.71**	**62**	P	**Pn**	**12 33 37.4**	**-1.9**
NLWA	**Neilton Lookou**	**4.79**	**50**	*e*Pn	**Pn**	**12 33 39.9**	**-0.5**
NLWA				*e*Sn	**Sn**	**12 34 36.1**	**+0.2**
OOW	**Octopus West**	**4.84**	**45**	P	**Pn**	**12 33 40.7**	**-0.4**
RVW	**Rose Valley**	**4.90**	**67**	P	**Pn**	**12 33 41.0**	**-0.9**
HUMO	**Hull Mountain**	**4.91**	**109**	*e*Pn	**Pn**	**12 33 39.3**	**-2.7**
LVP	**Lakeview Peak**	**5.10**	**69**	P	**Pn**	**12 33 44.3**	**-0.4**
FL2	**Flat Top 2**	**5.18**	**67**	P	**Pn**	**12 33 45.1**	**-0.6**
TDH	**Tom, Dick, Har**	**5.37**	**78**	P	**Pn**	**12 33 47.6**	**-0.7**
HDW	**Hoodsport**	**5.39**	**51**	P	**Pn**	**12 33 48.0**	**-0.6**
GNW	**Green Mountain** 19nm,0.3s	**5.47**	**52**	*e*Pn	**Pn**	**12 33 49.0**	**-0.8**
YBH	**Yreka Blue Hor** 0.3nm,0.3s,baz=301,slow=11,SNR=4.9	**5.47**	**117**	Pn	**Pn**	**12 33 46.9**	**-2.9**
YBH				Sn	**Sn**	**12 34 49.3**	**-3.5**
BLN	**Blyn Mountain** 0.2nm,0.3s,baz=155,slow=18,SNR=2.4	**5.65**	**48**	P	**Pn**	**12 33 52.6**	**+0.4**
ASR	**Mount Adams--S**	**5.67**	**69**	P	**Pn**	**12 33 52.3**	**-0.2**
LON	**Longmire**	**5.71**	**63**	*e*Pn	**Pn**	**12 33 52.5**	**-0.6**
PGC	**Sidney**	**5.83**	**41**	*e*Pn	**Pn**	**12 33 53.9**	**-0.8**
PGC				*e*Sn	**Sn**	**12 35 00.9**	**-0.6**
FMW	**Mount Fremont**	**5.87**	**62**	P	**Pn**	**12 33 55.0**	**-0.3**
VIPM	**Ingram Point**	**6.17**	**86**	P	**Pn**	**12 33 58.2**	**-1.1**
JCW	**Jim Creek**	**6.32**	**51**	*e*Pn	**Pn**	**12 34 01.6**	**+0.1**
CMW	**Cultus Mountai**	**6.35**	**48**	P	**Pn**	**12 34 02.7**	**+0.8**
RPW	**Rockport**	**6.69**	**50**	*e*Pn	**Pn**	**12 34 06.8**	**+0.3**
WRW	**Wenatchee Ridg**	**6.75**	**56**	P	**Pn**	**12 34 07.4**	**0.0**
ETW	**Entiat**	**6.98**	**60**	*e*Pn	**Pn**	**12 34 10.3**	**-0.2**
RSW	**Rattlesnake Hi**	**7.07**	**70**	*e*Pn	**Pn**	**12 34 11.7**	**0.0**
HAWA	**Hanford**	**7.11**	**70**	*e*Pn	**Pn**	**12 34 12.0**	**-0.3**
BBB	**Bella Bella** 0.4nm,0.3s,baz=42,slow=15,SNR=9.7	**7.82**	**5**	Pn	**Pn**	**12 34 25.4**	**+3.4**
BBB				LR	LR	12 36 44.8	
OD2	**Odessa Site #2** comp=Z,216nm,19.7s,baz=324,slow=32	**7.92**	**64**	*e*Pn	**Pn**	**12 34 22.9**	**-0.5**
BMO	**Blue Mountains**	**8.52**	**83**	*e*Pn	**Pn**	**12 34 30.2**	**-1.4**
CMB	**Columbia Colle**	**9.21**	**131**	*e*Pn	**Pn**	**12 34 41.1**	**0.0**
NEW	**Newport**	**9.22**	**61**	*e*Pn	**Pn**	**12 34 42.4**	**+1.1**
NVAR	**Mina Array Bea** 0.1nm,0.3s,baz=290,slow=14,SNR=5.7	**10.14**	**122**	Pn	**Pn**	**12 34 56.1**	**+2.2**
BSMT	**Bassoo Peak**	**10.60**	**66**	*e*Pn	**Pn**	**12 35 01.1**	**+1.0**
JTMT	**Jette**	**10.91**	**67**	*e*Pn	**Pn**	**12 35 05.3**	**+0.9**
MSO	**Missoula**	**10.98**	**72**	*e*Pn	**Pn**	**12 35 05.1**	**-0.3**
SWMT	**Swartz Lake**	**11.05**	**68**	*e*Pn	**Pn**	**12 35 08.1**	**+1.8**
SLMT	**Seeley Lake**	**11.35**	**70**	*e*Pn	**Pn**	**12 35 10.0**	**-0.3**
CHMT	**Chamberlain Mo**	**11.46**	**72**	*e*Pn	**Pn**	**12 35 13.6**	**+1.7**
WALA	**Waterton Lakes**	**11.49**	**61**	*e*Pn	**Pn**	**12 35 15.5**	**+3.2**
MCMT	**McKenzie Canyo** 4.5nm,1.3s	**11.69**	**82**	*e*Pn	**Pn**	**12 35 16.6**	**+1.6**
LRM	**Limekiln Ridge**	**11.95**	**77**	*e*Pn	**Pn**	**12 35 19.8**	**+1.3**
RRI2	**Red Ridge**	**12.97**	**88**	*e*Pn	**Pn**	**12 35 34.0**	**+1.5**
IMW	**Indian Meadow**	**13.15**	**86**	*e*Pn	**Pn**	**12 35 37.2**	**+2.2**
YFT	**Old Faithful**	**13.15**	**83**	*e*Pn	**Pn**	**12 35 35.9**	**+0.9**
GSC	**Goldstone** 3.3nm,0.9s	**13.17**	**129**	*e*Pn	**Pn**	**12 35 35.7**	**+0.4**
TPAW	**Teton Pass**	**13.21**	**88**	*e*Pn	**Pn**	**12 35 37.6**	**+1.8**
HWUT	**Hardware Ranch**	**13.23**	**96**	*e*Pn	**Pn**	**12 35 37.1**	**+1.0**
REDW	**Red Top Meadow**	**13.30**	**88**	*e*Pn	**Pn**	**12 35 39.2**	**+2.1**
MOOW	**Moose Ponds**	**13.31**	**86**	*e*Pn	**Pn**	**12 35 39.3**	**+2.1**
LOHW	**Long Hollow**	**13.44**	**87**	*e*Pn	**Pn**	**12 35 40.9**	**+2.1**
ARUT	**Antelope Range** 12nm,1.3s	**13.61**	**114**	*e*Pn	**Pn**	**12 35 41.9**	**+0.6**
EDM	**Edmonton**	**13.66**	**44**	*e*Pn	**Pn**	**12 35 42.5**	**+0.6**
CCUT	**Cedar City**	**13.79**	**114**	*e*Pn	**Pn**	**12 35 45.5**	**+1.7**
EGMT	**Eagleton**	**13.96**	**68**	*e*Pn	**Pn**	**12 35 46.1**	**+0.1**
MSU	**Marysvale**	**14.07**	**109**	*e*Pn	**Pn**	**12 35 49.3**	**+1.7**
RLMT	**Red Lodge**	**14.21**	**80**	*e*Pn	**Pn**	**12 35 50.0**	**+0.7**
BW06	**Boulder Array**	**14.36**	**90**	*e*Pn	**Pn**	**12 36 00.8**	**+9.4**
SRU	**San Rafael**	**14.92**	**104**	*e*Pn	**Pn**	**12 36 00.1**	**+1.0**
WUAZ	**Wupatki** 26nm,1.4s	**16.29**	**117**	*e*Pn	**Pn**	**12 36 18.3**	**+1.3**
RWWY	**Rawlins** 22nm,1.4s	**16.32**	**92**	*e*P	**Pn**	**12 36 20.5**	**+3.1**
PV04	**Paradox Valley**	**16.38**	**104**	*e*Pn	**Pn**	**12 36 17.7**	**-0.4**
PV01	**Paradox Valley** 2μm,1.5s	**16.73**	**105**	*e*Pn	**Pn**	**12 36 21.6**	**-1.0**
MVCO	**Mesa Verde** 98nm,2.0s	**17.24**	**107**	*e*Pn	**Pn**	**12 36 28.6**	**-0.5**
SMCO	**Snowmass** 23nm,1.7s	**17.38**	**100**	*e*Pn	**Pn**	**12 36 32.2**	**+1.4**
PHWY	**Pilot Hill** 18nm,1.7s	**17.69**	**92**	*e*Pn	**Pn**	**12 36 34.0**	**-0.6**
ISCO	**Idaho Springs** 45nm,2.1s	**18.10**	**97**	*e*Pn	**Pn**	**12 36 40.1**	**+0.4**
SDCO	**Great Sand Dun** 19nm,1.7s	**19.05**	**102**	*e*P	**Pn**	**12 36 50.7**	**-0.6**
LAZ	**Ladron** 1.9nm,1.2s	**19.73**	**113**	*e*P	**Pn**	**12 36 58.3**	**-1.0**
ANMO	**Albuquerque** 0.1nm,0.3s,baz=320,slow=7.9,SNR=1.8	**19.86**	**111**	P	**Pn**	**12 36 57.7**	**-3.2**
ANMO				LR	LR	12 44 47.4	
ANMO	**Albuquerque** comp=Z,171nm,20.4s,baz=308,slow=38	**19.86**	**111**	P	**Pn**	**12 36 57.7**	**-3.2**
ANMO				*e*Pn	**Pn**	**12 37 03.6**	**+2.7**
ANMO				LR	LR	12 44 47.4	
YKA	**Yellowknife Ar** 5.8nm,1.3s,baz=208,slow=11,SNR=9.3	**20.02**	**20**	P	**P**	**12 37 00.1**	**-0.7**
YKA	**Yellowknife Ar**	**20.02**	**20**	P	**P**	**12 37 00.1**	**-0.7**
OGNE	**Ogallala** 16nm,1.0s	**20.26**	**90**	*e*Pn	**P**	**12 37 05.2**	**+1.6**
FFC	**Flin Flon** 40nm,1.3s	**20.34**	**50**	*e*P	**P**	**12 37 04.1**	**-0.4**
MENT	**Mentasta**	**20.36**	**341**	*e*P	**P**	**12 37 06.9**	**+2.3**
DAWY	**Dawson**	**20.53**	**347**	*e*Pn	**P**	**12 37 10.7**	**+4.3**
PMR	**Palmer** 17nm,1.4s	**20.82**	**333**	*e*P	**P**	**12 37 10.4**	**+0.9**
EGAK	**Eagle** 10nm,1.3s,mb4.0	**21.48**	**346**	*e*P	**P**	**12 37 20.1**	**+3.4**
ILAR	**Eielson Array** 4.1nm,1.1s,mb3.8,baz=153,slow=7.3,SNR=14	**22.67**	**340**	P	**P**	**12 37 29.8**	**+0.4**
ILAR				LR	LR	12 44 48.5	
AGMN	**Agassiz Nation** 22nm,1.3s,mb4.4	**23.25**	**68**	*e*P	**P**	**12 37 34.0**	**-1.6**
ECSD	**EROS Data Cent** 60nm,2.1s,mb4.7	**23.37**	**80**	*e*P	**P**	**12 37 35.4**	**-1.5**
TXAR	**Lajitas Array** 0.4nm,0.8s,baz=286,slow=4.7,SNR=5.1	**25.25**	**118**	P	**P**	**12 37 52.5**	**-1.9**
TXAR				LR	LR	12 48 27.6	
WMOK	**Wichita Mounta** 11nm,1.3s,mb4.2	**25.26**	**102**	*e*P	**P**	**12 37 53.4**	**-1.1**
FCC	**Fort Churchill** 2.0nm,1.7s,mb3.4	**25.77**	**44**	*e*P	**P**	**12 38 00.1**	**+1.3**
EYMN	**Ely**	**26.20**	**69**	*e*P	**P**	**12 38 02.5**	**-0.4**
JTS	**JuntasAbangare** comp=Z,53nm,19.4s,MS3.6,baz=261,slow=40	**51.04**	**118**	LR	LR	13 06 47.1	
MDJ	**Mudanjiang**	**67.12**	**310**	P	**P**	**12 43 19.0**	**-2.8**
MDJ				pmax	pmax		
MDJ	comp=Z,5.0nm,0.9s,mb4.5			pmax	pmax		
CN2	**Changchun** comp=Z,38nm,4.0s	**69.89**	**312**	*e*P	**P**	**12 43 39.5**	**+0.3**
NOA	**NORSAR Array B** comp=Z,0.9nm,0.8s,mb3.7,baz=332,slow=5.9,SNR=2.1	**70.11**	**19**	P	**P**	**12 43 39.3**	**-0.9**
FINES	**FINESS Array B** comp=Z,4.0nm,1.0s,mb4.3,baz=284,slow=7.7,SNR=5.2	**72.63**	**12**	P	**P**	**12 43 53.1**	**-2.3**
GUMO	**Guam** comp=Z,58nm,20.1s,MS3.9,baz=83,slow=30	**77.72**	**277**	LR	LR	13 11 35.9	
ZALV	**Zalesovo Beam** comp=Z,0.4nm,0.4s,mb3.7,baz=22,slow=4.7,SNR=3.5	**77.80**	**340**	P	**P**	**12 44 23.9**	**-1.4**
HHC	**Hu-ho-hao-te**	**79.11**	**318**	*e*P	**P**	**12 44 32.3**	**-0.5**
HHC				sP	sP	12 44 37.8	+0.5
HHC				PP	PP	12 47 32.3	+0.9
HHC				S	S	12 54 28.5	-3.5
HHC				SKS		12 54 42.3	
HHC				ScS	ScS	12 54 49.5	-5.7
HHC	comp=Z,11nm,0.7s,mb4.9			pmax	pmax		
HHC	comp=Z,130nm,6.8s			pmax	pmax		
BVAR	**Borovoye Array** comp=Z,1.2nm,0.9s,mb3.8,baz=64,slow=3.4,SNR=5.5	**81.50**	**348**	P	**P**	**12 44 43.6**	**-1.8**
LPAZ	**La Paz** comp=Z,0.7nm,0.8s,mb3.7,baz=6.0,slow=9.2,SNR=3.6	**82.05**	**122**	P	**P**	**12 44 46.0**	**-2.8**
KURK	**Kurchatov** comp=Z,2.2nm,1.1s,mb4.0,baz=18,slow=4.9,SNR=9.4	**82.22**	**343**	P	**P**	**12 44 48.2**	**-1.1**
WMQ	**Urumqi**	**86.20**	**334**	*e*P	**P**	**12 45 11.0**	**+1.4**
WMQ				pP	pP	12 45 16.0	+3.0
WMQ				sP	sP	12 45 18.0	+3.8
WMQ				pmax	pmax		
WMQ	comp=Z,5

CD2				S	S	12 56 25.8	-2.8
CD2				sS	sS	12 56 33.5	-0.7
CD2				SS	SS	13 02 30.5	+0.8
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,270nm,6.5s						
CD2				LR	LR		
	comp=N,1μm,5.9s						
CD2				LR	LR		
	comp=Z,760nm,6.5s						
GYA	**Guiyang**	**92.94**	**312**	*e*P	**P**	**12 45 42.0**	**+0.3**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						

KRSC 28 12:33:09.5±0.3, 49°.35N×155°.42E, h112km±111km, ML3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**1.52**	**3**	P	Pn	12 33 39.3	+2.7
ALID				*i* S	Sn	12 34 00.3	+3.0
MIPR	**Malaya Ipel'ka**	**3.05**	**16**	P	Pn	12 33 59.9	+3.8
MIPR				*i* S	Sn	12 34 36.8	+4.7
GRL	**Gorelyy**	**3.62**	**27**	P	Pn	12 34 09.7	+6.0
PET	**Petropavlovsk**	**4.20**	**28**	P	Pn	12 34 16.3	+4.8
SDLR	**Sedlovina**	**4.49**	**28**	P	Pn	12 34 20.3	+4.9
SPN	**Mys Shipunski**	**4.74**	**36**	P	Pn	12 34 23.3	+4.6
SPN				*i* S	Sn	12 35 18.4	+5.9
MKZ	**Mys Kozlova**	**6.51**	**34**	*e*P	Pn	12 34 45.8	+3.2
MKZ				*e*S	Sn	12 35 58.7	+3.4
KBTR	**Krutoberegovo**	**8.20**	**30**	P	Pn	12 35 07.6	+2.1

*IDC **28** 12:34:59.1±1.2, 4°.38S×101°.92E, h0km, mb4.1/12, mb1 4.1/12, mb1mx4.0/20, mbtmp4.1/12, MS4.0/2, Ms1 4.0/2, ms1mx2.9/25, Error ellipse: s-maj=51.4km s-min=16.3km az=54.0*
*NEIC **28** 12:35:04.7±0.7, 4°.26S×102°.10E, h35km, mb4.3/1, Error ellipse: s-maj=35.1km s-min=8.7km az=54.0*
*ISCJB **28** 12:35:06.1±1.1, 4°.30S±0°.09×102°.11E±0°.09, h67km±8km, mb4.0/13, Error ellipse: s-maj=19.9km s-min=6.0km az=135.3*
*DJA **28** 12:35:07, 4°.28S×102°.17E, h33km, MLv4.2/8*
ISC 28 12:35:07.3±1.1, 4°.27S±0°.08×102°.12E±0°.09, h58km±9km, n29, σ0°.85/33, mb4.1/13, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**0.77**	**38**	P	**Pn**	**12 35 21.8**	**-0.5**
KSI				S	**Sn**	**12 35 32.9**	**-0.4**
MNAI	**Manna**	**0.83**	**97**	P	**Pn**	**12 35 21.9**	**-1.3**
MNAI				S	**Sn**	**12 35 33.9**	**-0.9**
MDSI	**Maura Dua**	**2.06**	**96**	P	**Pn**	**12 35 39.5**	**-0.1**
MDSI				S	**Sn**	**12 36 05.4**	**+1.2**
LWLI	**Liwa**	**2.07**	**111**	P	**Pn**	**12 35 41.2**	**+1.5**
LWLI				S	**Sn**	**12 36 04.2**	**-0.2**
KLSI		**2.63**	**99**	P	**Pn**	**12 35 48.5**	**+1.1**
KLSI				S	**Sn**	**12 36 23.1**	**+4.9**
KASI	**Kota Agung**	**2.67**	**118**	P	**Pn**	**12 35 47.7**	**-0.3**
KASI				S	**Sn**	**12 36 19.2**	**0.0**
PPI	**Padang Panjang**	**4.16**	**335**	P	**Pn**	**12 36 11.6**	**+3.3**
PPI				S	**Sn**	**12 36 59.2**	**+3.5**
SISI	**Saibi**	**4.21**	**314**	P	**Pn**	**12 36 09.1**	**+0.1**
PSI	**Prapat**	**7.71**	**335**	LR	LR	12 40 09.0	
	comp=Z,143nm,20.0s,baz=356,slow=40						
UGM	**Wanagama**	**9.10**	**114**	P	**Pn**	**12 37 16.2**	**+0.1**
CMAR	**Chiang Mai Arr**	**22.80**	**352**	P	**P**	**12 40 03.6**	**-1.7**
	0.8nm,0.5s,mb3.4,baz=193,slow=10,SNR=4.9						
FITZ	**Fitzroy Crossi**	**26.80**	**123**	P	**P**	**12 40 41.3**	**-0.9**
	1.8nm,0.7s,mb3.7,baz=325,slow=7.3,SNR=7.3						
ASAR	**Alice Springs**	**36.22**	**125**	P	**P**	**12 42 04.7**	**-0.2**
	1.2nm,0.9s,mb3.8,baz=298,slow=8.7,SNR=10						
STKA	**Stephens Creek**	**46.07**	**131**	P	**P**	**12 43 26.1**	**+0.4**
	1.7nm,0.8s,mb4.1,baz=268,slow=22,SNR=3.5						
KSRS	**Korea Array**	**47.95**	**28**	P	**P**	**12 43 41.2**	**+1.0**
	0.9nm,0.7s,mb3.9,baz=220,slow=8.6,SNR=5.8						
SONM	**Songino Array**	**52.02**	**4**	P	**P**	**12 44 11.8**	**+0.9**
	1.8nm,0.5s,mb4.2,baz=181,slow=10.0,SNR=11						
MK31	**Makanchi Array**	**53.78**	**343**	*e*P	**P**	**12 44 24.0**	**+0.1**
MKAR	**Makanchi Array**	**53.78**	**343**	P	**P**	**12 44 24.2**	**+0.3**
	3.0nm,0.7s,mb4.4,baz=146,slow=8.1,SNR=35						
MKAR	**Makanchi Array**	**53.78**	**343**	P	**P**	**12 44 24.2**	**+0.3**
KURK	**Kurchatov**	**58.38**	**343**	P	**P**	**12 44 55.6**	**-0.9**
	1.5nm,0.8s,mb4.1,baz=162,slow=7.0,SNR=4.6						
KURK	**Kurchatov**	**58.38**	**343**	P	**P**	**12 44 55.6**	**-0.9**
ZAA0	**Zalesovo Array**	**59.79**	**348**	*e*P	**P**	**12 45 05.9**	**-0.4**
ZALV	**Zalesovo Beam**	**59.79**	**348**	P	**P**	**12 45 05.9**	**-0.4**
	4.6nm,0.4s,mb4.9,baz=169,slow=5.1,SNR=20						
BVAR	**Borovoye Array**	**63.03**	**339**	P	**P**	**12 45 27.7**	**-0.5**
	0.9nm,0.4s,mb4.3,baz=126,slow=7.5,SNR=5.2						
ABKAR	**Akbulak array**	**64.64**	**331**	*e*P	**P**	**12 45 38.5**	**-0.4**
	1.5nm,0.5s,mb4.3						
PETK	**Petropavlovsk-**	**73.68**	**31**	LR	LR	13 15 35.9	
	comp=Z,829nm,21.3s,baz=92,slow=33						
BRTR	**Keskin Array B**	**76.41**	**312**	P	**P**	**12 46 50.8**	**-0.1**
	0.7nm,0.6s,mb3.8,baz=148,slow=8.1,SNR=4.1						
ARCES	**ARCESS Array B**	**89.31**	**340**	P	**P**	**12 47 57.6**	**+0.7**
	1.3nm,0.8s,mb4.3,baz=81,slow=7.5,SNR=4.8						
TXAR	**Lajitas Array**	**145.09**	**42**	PKPbc	PKPbc	12 54 39.3	+0.8
	2.6nm,0.5s,baz=285,slow=0.6,SNR=57						

MEX 28 12:47:22.6±0.6, 17°.18N×101°.28W, h16km±17km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.46**	**337**	*e*P	Pg	12 47 30.9	-1.0
ZIIG				*e*S	Sg	12 47 36.0	-2.1
CAIG	**El Cayaco**	**0.97**	**98**	*e*P	Pb	12 47 37.6	-3.5
CAIG				*e*S	Sb	12 47 49.2	-4.6
ACX	**Acapulco**	**1.39**	**103**	*i* P	Pn	12 47 44.0	-3.4
ACX				*i* S	Sn	12 48 02.2	-3.2
MEIG	**Mezcala**	**1.75**	**65**	*i* P	Pn	12 47 49.1	-3.2
MEIG				*i* S	Sn	12 48 08.7	-5.5
PLIG	**Platanillo**	**2.08**	**54**	*i* P	Pn	12 47 54.1	-2.7
PLIG				*i* S	Sn	12 48 18.7	-3.7
UTMO	**Huajuapan**	**3.38**	**78**	*e*P	Pn	12 48 11.6	-3.1
UTMO				*e*S	Sn	12 48 51.6	-2.9

*IDC **28** 12:47:47.2±3.7, 7°.33S×128°.41E, h118km±35km, mb3.8/10, mb1 4.0/12, mb1mx3.9/18, mbtmp3.9/12, Error ellipse: s-maj=29.5km s-min=13.8km az=65.0*
*ISCJB **28** 12:47:48.7±1.2, 7°.39S±0°.05×128°.35E±0°.08, h153km±12km, mb3.9/13, Error ellipse: s-maj=13.3km s-min=8.4km az=173.0*
*NEIC **28** 12:47:48.9±1.6, 7°.39S×128°.41E, h138km±17km, mb4.6/3, Error ellipse: s-maj=17.3km s-min=9.9km az=224.0*
*DJA **28** 12:48:00, 6°.79S×128°.91E, h140km, MLv4.1/4*
ISC 28 12:47:50.9±1.0, 7°.50S±0°.05×128°.42E±0°.08, h163km±11km, n41, σ1°.10/38, mb3.9/13, 1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**3.79**	**357**	P	Px	12 48 49.9	
AAI	**Ambon**	**3.79**	**357**	P	Px	12 48 51.9	
NLAI	**Namlea**	**4.43**	**343**	P	Px	12 49 00.2	
NLAI	**Namlea**	**4.43**	**343**	P	Px	12 49 00.3	
	89nm,0.8s,1μm0.3nm						
TLE	**Tual**	**4.68**	**67**	P	**Pn**	**12 49 00.3**	**0.0**
TLE				S	**Sn**	**12 49 48.2**	**-6.3**
TLE	**Tual**	**4.68**	**67**	P	**Sn**	**12 49 53.7**	**-0.8**
	199nm,0.8s						
KAKA	**Kakadu**	**6.52**	**143**	⇓*i*P	**Pn**	**12 49 24.9**	**+0.3**
	506nm,0.8s						
KAKA				*e*S	**Sn**	**12 50 33.4**	**-4.8**
KAKA	**Kakadu**	**6.52**	**143**	*e*Pn	**Pn**	**12 49 24.6**	**0.0**
	901nm,0.6s						
KAKA				*e*Sn	**Sn**	**12 50 33.7**	**-4.5**
KNA	**Kununurra**	**8.21**	**178**	P	**Pn**	**12 49 47.0**	**0.0**
	563nm,0.7s						
FITZ	**Fitzroy Crossi**	**10.88**	**194**	*e*P	**Pn**	**12 50 21.0**	**-1.2**
	36nm,0.3s						
FITZ				*e*S	Sx	12 52 16.3	
FITZ	**Fitzroy Crossi**	**10.88**	**194**	P	**Pn**	**12 50 21.0**	**-1.2**
	6.1nm,0.3s,baz=27,slow=9.1,SNR=164						
FITZ				S	Sx	12 52 16.1	
	2.4nm,0.3s,baz=31,slow=9.9,SNR=4.4						
FITZ	**Fitzroy Crossi**	**10.88**	**194**	*e*Pn	**Pn**	**12 50 20.7**	**-1.5**
WRAB	**Tennant Creek**	**13.63**	**156**	*e*Pn	**Pn**	**12 50 55.6**	**-2.1**
	31nm,0.7s						
WRAB				*e*Sn	Sx	12 53 19.6	
WRAB	**Tennant Creek**	**13.63**	**156**	P	**Pn**	**12 50 57.2**	**-0.5**
	45nm,1.0s						
COEN	**Coen**	**15.85**	**115**	*e*Pn	**Pn**	**12 51 25.4**	**+0.1**
	748nm,0.5s						
ASAR	**Alice Springs**	**16.91**	**162**	P	**Pn**	**12 51 40.0**	**+1.8**
	4.4nm,0.3s,baz=333,slow=10,SNR=406						
ASAR				S	**S**	**12 54 43.4**	**-2.2**
	1.8nm,0.3s,baz=322,slow=16,SNR=5.7						
MTSU	**Mount Surprise**	**18.75**	**126**	*e*P	**P**	**12 51 59.2**	**+1.7**
	11nm,0.3s						
MTSU				*e*S	Sx	12 55 17.2	
KSM	**Kuching**	**20.14**	**296**	*e*P	**P**	**12 52 12.9**	**+0.2**
	18nm,0.8s						
CTA	**Charters Tower**	**21.34**	**128**	P	**P**	**12 52 26.9**	**+1.5**
	1.6nm,0.6s,mb3.5,baz=322,slow=12,SNR=3.3						
CTAO	**Charters Tower**	**21.34**	**128**	*e*P	**P**	**12 52 26.1**	**+0.8**
QLP	**Quilpie**	**24.21**	**143**	*e*P	**P**	**12 52 56.3**	**+3.7**
STKA	**Stephens Creek**	**27.19**	**155**	*e*P	**P**	**12 53 20.5**	**+1.2**
	3.6nm,1.2s,mb3.9						
STKA	**Stephens Creek**	**27.19**	**155**	P	**P**	**12 53 20.6**	**+1.2**
	2.6nm,0.7s,mb4.0,baz=145,slow=22,SNR=4.5						
STKA	**Stephens Creek**	**27.19**	**155**	*e*P	**P**	**12 53 20.8**	**+1.4**
CMAR	**Chiang Mai Arr**	**38.87**	**312**	P	**P**	**12 55 00.5**	**-0.1**
	1.0nm,0.6s,mb3.6,baz=154,slow=8.9,SNR=5.1						
KSRS	**Korea Array**	**44.72**	**359**	P	**P**	**12 55 46.5**	**-1.3**
	0.6nm,0.5s,mb3.5,baz=182,slow=9.5,SNR=5.1						
MJAR	**Matsushiro Arr**	**44.76**	**11**	P	**P**	**12 55 46.4**	**-1.8**
	1.8nm,0.7s,mb3.8,baz=198,slow=9.8,SNR=3.6						
SONM	**Songino Array**	**58.43**	**343**	P	**P**	**12 57 30.8**	**+1.4**
	1.7nm,0.6s,mb4.1,baz=162,slow=8.1,SNR=13						
PETK	**Petropavlovsk-**	**65.30**	**19**	P	**P**	**12 58 15.4**	**+0.3**
	6.8nm,0.7s,mb4.6,baz=181,slow=4.5,SNR=26						
MK31	**Makanchi Array**	**67.79**	**328**	*e*P	**P**	**12 58 31.5**	**+0.3**
MKAR	**Makanchi Array**	**67.79**	**328**	P	**P**	**12 58 31.6**	**+0.5**
	2.9nm,0.6s,mb4.2,baz=124,slow=8.1,SNR=34						
AML	**Almayashu**	**70.16**	**320**	*e*P	**P**	**12 58 47.5**	**+1.6**
ZAA0	**Zalesovo Array**	**71.34**	**335**	*e*P	**P**	**12 58 52.2**	**-0.5**
ZALV	**Zalesovo Beam**	**71.34**	**335**	P	**P**	**12 58 52.6**	**-0.2**
	4.0nm,0.6s,mb4.3,baz=134,slow=5.6,SNR=15						
KURK	**Kurchatov**	**72.13**	**329**	*e*P	**P**	**12 58 57.2**	**-0.3**
	9.9nm,1.1s,mb4.5						
BVAR	**Borovoye Array**	**77.65**	**328**	P	**P**	**12 59 29.6**	**+0.4**
	1.2nm,0.7s,mb3.7,baz=119,slow=5.2,SNR=6.1						
ABKAR	**Akbulak array**	**81.93**	**322**	*e*P	**P**	**12 59 52.0**	**-0.3**
	0.8nm,0.4s,mb3.7						
ILAR	**Eielson Array**	**94.47**	**25**	P	**P**	**13 00 50.2**	**-2.0**
	0.3nm,0.8s,mb3.5,baz=267,slow=5.4,SNR=5.1						
TXAR	**Lajitas Array**	**126.53**	**59**	PKP	PKPdf	13 06 36.6	+1.3
	0.2nm,0.4s,baz=195,slow=3.7,SNR=5.4						
CPUP	**Villa Florida**	**145.91**	**171**	PKPbc	PKPbc	13 07 13.4	+1.4
	0.7nm,0.4s,baz=181,slow=3.4,SNR=4.8						
LPAZ	**La Paz**	**151.25**	**145**	PKPbc	PKPbc	13 07 28.5	+2.4
	0.9nm,0.4s,baz=351,slow=2.3,SNR=6.1						
LPAZ				PKPab	PKPab	13 07 37.2	+2.9
	2.4nm,0.6s,baz=201,slow=3.1,SNR=8.2						

*ISCJB **28** 12:59:36.9±0.6, 14°.15N±0°.08×91°.38W±0°.05, h105km±5km, mb3.7/5, Error ellipse: s-maj=15.4km s-min=3.8km az=27.5*
*MEX **28** 12:59:36.4±1.1, 13°.88N×91°.29W, h72km±37km, MD4.0*
*NEIC **28** 12:59:36.9±0.9, 14°.11N×91°.34W, h72km±20km, mb3.6/1, Error ellipse: s-maj=21.0km s-min=8.8km az=207.0*
*CASC **28** 12:59:37.4±1.7, 14°.20N×91°.39W, h88km±12km, MD4.0, ML3.7, mb3.6(NEIC)*
*IDC **28** 12:59:39.7±1.8, 14°.66N×90°.98W, h84km±22km, mb3.5/4, mb1 3.8/7, mb1mx3.6/19, mbtmp3.6/7, MS3.1/2, Ms1 3.1/2, ms1mx2.7/16, Error ellipse: s-maj=57.6km s-min=12.5km az=34.0*
ISC 28 12:59:38.2±0.6, 14°.18N±0°.08×91°.36W±0°.05, h95km±5km, n39, σ1°.20/50, mb3.7/5, 1C-4D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.30**	**297**	⇑*e*P	**Pn**	**12 59 51.2**	**-1.0**
FUG	**Fuego 3**	**0.57**	**62**	⇓*i*P	**Pn**	**12 59 52.8**	**-1.2**
FG6		**0.60**	**51**	*e*P	**Pn**	**12 59 53.4**	**-0.9**
TP2	**Tecpan 2**	**0.68**	**28**	⇓*i*P	**Pn**	**12 59 54.7**	**-0.3**
PCG	**Pacaya**	**0.76**	**74**	*e*P	**Pn**	**12 59 55.2**	**-0.5**
NBG	**Las Nubes**	**1.06**	**67**	⇓*e*P	**Pn**	**12 59 58.9**	**0.0**
THIG		**1.14**	**310**	*e*P	**Pn**	**12 59 59.1**	**-0.7**
THIG				*i* S	**Sn**	**13 00 15.3**	**-0.8**
RBDL	**Robledal**	**1.62**	**92**	*e*P	**Pn**	**13 00 04.7**	**-1.1**
SBLS	**San Blas**	**1.72**	**101**	*e*P	**Pn**	**13 00 06.5**	**-0.4**
SBLS				*e*S	**Sn**	**13 00 29.6**	**+0.7**
SBLS				AML	AML	13 00 40.2	
	comp=Z,858nm,0.4s						
MRL	**Marmol**	**1.84**	**61**	⇓*e*P	**Pn**	**13 00 08.8**	**+0.3**
MTO2	**Montecristo 2**	**1.95**	**83**	*e*P	**Pn**	**13 00 08.7**	**-1.2**
BOQS	**Boqueron**	**2.06**	**102**	*e*P	**Pn**	**13 00 11.3**	**-0.1**
BOQS				*e*S	**Sn**	**13 00 39.6**	**+2.7**
BOQS				AML	AML	13 00 45.6	
	comp=Z,785nm,0.5s						
SNET	**Serv Nac Est T**	**2.12**	**103**	*e*P	**Pn**	**13 00 12.4**	**+0.2**
LFRS	**El Faro**	**2.30**	**104**	*e*P	**Pn**	**13 00 14.5**	**0.0**
LFRS				*e*S	**Sn**	**13 00 43.7**	**+1.4**
PCIG		**2.35**	**310**	*e*P	**Pn**	**13 00 15.0**	**-0.2**
PCIG				*e*S	**Sn**	**13 00 46.8**	**+3.2**
SNVI	**San Vicente**	**2.51**	**103**	*e*P	**Pn**	**13 00 16.8**	**-0.5**
SNVI				*e*S	**Sn**	**13 00 49.0**	**+1.6**
CAHU	**Cacacuatique**	**3.08**	**97**	*e*P	**Pn**	**13 00 24.5**	**-0.5**
VSM	**San Miguel**	**3.09**	**104**	*e*P	**Pn**	**13 00 26.0**	**+1.0**
TGIG		**3.09**	**327**	*e*P	**Pn**	**13 00 25.1**	**0.0**
TGIG				*i* S	**Sn**	**13 01 04.5**	**+3.3**
BLLM	**Bellamira**	**3.12**	**103**	*e*P	**Pn**	**13 00 26.0**	**+0.6**
CNCH	**Conchagua**	**3.54**	**104**	*e*P	**Pn**	**13 00 31.7**	**+0.6**
CNCH				*e*S	**Sn**	**13 01 14.9**	**+2.9**
TGUH	**Tegucigalpa,Un**	**3.96**	**91**	*e*Pn	**Pn**	**13 00 34.1**	**-2.8**
CMIG	**Matias Romero**	**4.46**	**311**	P	**Pn**	**13 00 43.3**	**-0.3**
	comp=Z,7.8nm,0.3s,baz=126,slow=11,SNR=58						
CMIG				S	**Sn**	**13 01 36.3**	**+1.9**
	comp=Z,15nm,0.3s,baz=21,slow=18,SNR=11						
HUIG	**Huatulco**	**4.86**	**290**	*e*P	**Pn**	**13 00 47.4**	**-1.6**
HUIG				*e*S	**Sn**	**13 01 46.6**	**+2.6**
HUIG	**Huatulco**	**4.86**	**290**	*e*P	**Pn**	**13 00 47.4**	**-1.6**
HUIG				*e*S	**Sn**	**13 01 46.6**	**+2.6**
TEIG	**Tepich**	**6.70**	**26**	*e*Pn	**Pn**	**13 01 13.7**	**-0.2**
	comp=Z,187nm,0.6s						
JTS	**JuntasAbangare**	**7.36**	**121**	P	**Pn**	**13 01 24.8**	**+1.7**
	comp=Z,2.4nm,0.3s,baz=293,slow=19,SNR=9.8						
JTS				S	**Sn**	**13 02 46.2**	**+1.2**
	comp=Z,0.7nm,0.3s,baz=258,slow=17,SNR=1.8						
JTS	**JuntasAbangare**	**7.36**	**121**	*e*Pn	**Pn**	**13 01 22.1**	**-0.9**
JTS				*e*Sn	**Sn**	**13 02 43.8**	**-1.1**
BCIP	**Isla Barro Col**	**12.33**	**113**	Pn	**Pn**	**13 02 28.9**	**-1.6**
TXAR	**Lajitas Array**	**18.90**	**325**	P	**Pn**	**13 03 53.4**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=144,slow=10,SNR=21						
TXAR	**Lajitas Array**	**18.90**	**325**	P	**Pn**	**13 03 53.4**	**+0.5**
MNTX	**Cornudas Mount**	**21.66**	**326**	*e*P	**P**	**13 04 21.4**	**+0.4**
	comp=Z,3.5nm,1.4s,mb3.5						
TKL	**Tuckaleechee C**	**22.45**	**16**	LR	LR	13 13 39.3	
	comp=Z,33nm,19.4s,baz=249,slow=38						
ATAH	**Atahualpa**	**24.78**	**148**	LR	LR	13 12 49.4	
	comp=Z,64nm,20.7s,baz=173,slow=32						
NVAR	**Mina Array Bea**	**33.93**	**320**	P	**P**	**13 06 15.2**	**+3.0**
	comp=Z,1.8nm,0.6s,mb4.1,baz=135,slow=8.0,SNR=19						
NVAR				PcP	PcP	13 08 50.9	+2.2
	comp=Z,0.8nm,0.7s,baz=131,slow=2.5,SNR=5.2						
SCHQ	**Schefferville**	**44.84**	**20**	P	**P**	**13 07 40.8**	**-1.9**
	comp=Z,1.4nm,0.4s,mb4.0,baz=230,slow=13,SNR=3.7						
YKA	**Yellowknife Ar**	**51.00**	**346**	P	**P**	**13 08 29.1**	**-0.9**
	comp=Z,0.3nm,0.4s,mb3.6,baz=150,slow=7.8,SNR=5.6						
YKA	**Yellowknife Ar**	**51.00**	**346**	P	**P**	**13 08 29.1**	**-0.9**
ILAR	**Eielson Array**	**62.92**	**337**	P	**P**	**13 09 53.9**	**-0.3**
	comp=Z,0.3nm,0.6s,mb3.4,baz=172,slow=4.6,SNR=8.7						

*SZGRF **28** 13:06:36.1, 51°.25N×179°.90E, h33km, mb5.0, Rat Islands, Aleutian Islands, United States*
*NEIC **28** 13:06:41.0±0.2, 51°.35N×179°.04W, h35km, mb5.0/193, MS4.5/5, ML5.1(PMR), ML5.0(AEIC), Error ellipse: s-maj=5.6km s-min=2.3km az=2.0*
*MOS **28** 13:06:40.9±0.9, 51°.37N×178°.97W, h49km, mb5.3/112, MS4.3/31, Error ellipse: s-maj=6.8km s-min=4.5km az=94.0*
*IDC **28** 13:06:40.6±1.9, 51°.43N×178°.98W, h31km±12km, mb4.5/26, mb1 4.7/28, mb1mx4.7/30, mbtmp4.6/28, ML4.6/2, MS4.3/21, Ms1 4.3/21, ms1mx4.3/25, Error ellipse: s-maj=17.1km s-min=9.5km az=165.0*
*ISCJB **28** 13:06:41.3±0.5, 51°.30N±0°.04×178°.99W±0°.02, h54km±4km, mb5.0/273, MS4.3/54, Error ellipse: s-maj=5.9km s-min=2.0km az=5.9*
*GCMT **28** 13:06:42.2±0.3, 51°.16N×178°.85W, h35km, MW5.1, Moment Tensor Solution. s51,c74; s76,c124; Moment tensor: Scale 10^{16}Nm; M_{rr}4.88±.20; $M_{\theta\theta}$-5.34±.15; $M_{\phi\phi}$0.46±.13; $M_{r\theta}$2.76±.17; $M_{r\phi}$-0.75±.09; $M_{\theta r}$1.14±.14; Best double couple: $M_0$6.00000×10^{16} NP1:ϕ_s272.00000°, δ31.00000°, λ105.00000°. NP2:ϕ_s75.00000°, δ60.00000°, λ81.00000°. Principal axes: T 5.7400, Plg73.0000°, Azm322.0000°; N 0.4500, Plg8.0000°, Azm79.0000°; P -6.1900, Plg15.0000°, Azm171.0000°; Data Used: II IC IU CN G.*
*BJI **28** 13:06:43.8, 51°.53N×179°.59W, h58km, mB5.2/28, mb5.2/47, Ms4.8/30, Ms7 4.5/30*
ISC 28 13:06:44.4±0.5, 51°.38N±0°.03×178°.98W±0°.02, h65km±4km, h60km±1.6km: pP-P, n953, σ0°.69/947, mb4.9/272, 248C-178D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**1.07**	**271**	*e*P	**Pn**	**13 06 59.0**	**-4.5**
AMKA				S	**Sn**	**13 07 13.2**	**-4.6**
GSTR	**Great Sitkin T**	**1.96**	**67**	*e*Pn	**Pn**	**13 07 13.6**	**-1.7**
ATKA	**Atka Island**	**3.09**	**73**	P	**Pn**	**13 07 28.8**	**-1.9**
ATKA				S	**Sn**	**13 08 05.5**	**-0.8**
SMY	**Shemya**	**4.48**	**290**	P	**Pn**	**13 07 49.5**	**-0.1**
SMY				S	**Sn**	**13 08 41.3**	**+0.9**
FX1	**Attu Island--F**	**5.07**	**290**	P	**Pn**	**13 07 56.2**	**-1.5**
NIKO	**Nikolski**	**6.43**	**72**	P	**Pn**	**13 08 15.9**	**-0.5**
SPIA	**Saint Paul Isl**	**7.74**	**38**	P	**Pn**	**13 08 35.6**	**+1.5**
UNV	**Unalaska Valle**	**7.99**	**67**	P	**Pn**	**13 08 38.3**	**+0.6**
AKGG	**Akutan Green G**	**8.37**	**65**	P	**Pn**	**13 08 43.9**	**+1.1**
AKLV	**Akutan Long Va**	**8.38**	**65**	P	**Pn**	**13 08 43.8**	**+0.9**
AKUT	**Akutan**	**8.48**	**66**	*e*Pn	**Pn**	**13 08 45.2**	**+0.9**
	387nm,1.2s						
SDPT	**Sand Point**	**11.74**	**63**	*e*P	**Pn**	**13 09 26.3**	**-2.5**
	27nm,0.3s						
GAMB	**Gambell**	**13.02**	**14**	*e*P	**Pn**	**13 09 47.6**	**+1.4**
CHGN	**Chignik**	**13.09**	**60**	*e*P	**Pn**	**13 09 45.0**	**-2.2**
PETK	**Petropavlovsk-**	**14.38**	**286**	Pn	**Pn**	**13 10 03.6**	**-0.6**
	0.9nm,0.3s,baz=97,slow=16,SNR=27						
PETK				Sn	**Sn**	**13 12 43.1**	**+1.0**
	0.3nm,0.3s,baz=131,slow=6.7,SNR=3.4						
PETK	**Petropavlovsk-**	**14.38**	**286**	P	**Pn**	**13 10 03.7**	**-0.6**
PETK						13 12 43.2	
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SKR	**Severo-Kuril's**	**15.66**	**277**	*e*P	**Pn**	**13 10 24.0**	**+3.1**
SKR				S	**Sn**	**13 13 06.5**	**-6.8**
SKR				pmax	pmax		
	comp=N,110nm,1.0s						
SKR				pmax	pmax		
	comp=Z,110nm,1.0s						
SKR				pmax	pmax		
	comp=Z,800nm,4.0s						
SKR				MLR	MLR		
	comp=E,1μm,18.0s						
SKR				MLR	MLR		
	comp=Z,1μm,18.0s						
OHAK	**Old Harbor**	**16.04**	**59**	*e*P	**Pn**	**13 10 20.3**	**-5.3**
	comp=Z,48nm,0.6s						
KDAK	**Kodiak Island**	**16.52**	**57**	Pn	**Pn**	**13 10 28.1**	**-3.5**
	comp=Z,253nm,0.4s,SNR=17						
KDAK	**Kodiak Island**	**16.52**	**57**	Pn	**Pn**	**13 10 29.0**	**-2.6**
	comp=Z,7.1nm,0.3s,baz=261,slow=7.1,SNR=45						
KDAK				Sn	**Sn**	**13 13 33.9**	**-0.1**
	comp=Z,0.8nm,0.3s,baz=340,slow=22,SNR=5.8						
KDAK	**Kodiak Island**	**16.52**	**57**	P	**Pn**	**13 10 29.0**	**-2.6**
KDAK						13 13 33.9	
KDAK				pmax	pmax		
	comp=Z,7.0nm,0.3s						
KDAK				smax			
	comp=N,1.0nm,0.3s						
KDAK	**Kodiak Island**	**16.52**	**57**	*e*P	**Pn**	**13 10 28.1**	**-3.5**
	comp=N,31nm,0.6s						
TTA	**Tatalina**	**16.89**	**38**	*e*P	**Pn**	**13 10 37.6**	**+1.5**
TTA				pmax	pmax		
	comp=Z,52nm,1.0s						
TTA	**Tatalina**	**16.89**	**38**	*e*P	**Pn**	**13 10 37.5**	**+1

INK Inuvik 27.53 35 P P 13 12 23.5 -0.9
comp=Z,4.2nm,0.6s,mb4.2,baz=253,slow=8.1,SNR=16
INK PcP PcP 13 15 41.0 +0.4
comp=Z,3.0nm,0.6s,baz=224,slow=4.2,SNR=5.2
INK ScP ScP 13 19 18.4 +3.1
comp=Z,1.8nm,0.8s,baz=69,slow=29,SNR=5.2
INK LR LR 13 24 41.1
comp=Z,657nm,18.0s,baz=243,slow=39
INK Inuvik 27.53 35 *e*P **P 13 12 24.0 -0.4**
comp=Z,17nm,1.0s,mb4.5
DLBC Dease Lake 28.46 56 P **P 13 12 33.8 +1.1**
comp=Z,1.0nm,0.5s,mb3.6,baz=328,slow=18,SNR=4.7
YAK Yakutsk 29.33 311 *e*P **P 13 12 39.4 -1.1**
YAK *e**PP pP 13 12 55.9 -0.3
YAK *e* 13 13 37.3
YAK *e* 13 15 44.7
YAK *e*S **S 13 17 28.0 -0.9**
YAK pmax pmax
comp=Z,12nm,1.3s,mb4.4
YAK pmax pmax
comp=N,2.0nm,1.1s
YAK pmax pmax
comp=E,7.0nm,1.3s
YAK pmax pmax
comp=Z,7.0nm,0.8s,mb4.3
YAK pmax pmax
comp=N,13nm,1.4s
YAK pmax pmax
comp=E,16nm,1.1s
YAK smax
comp=N,13nm,1.6s
YAK smax
comp=E,19nm,1.6s
YAK MLR MLR
comp=N,440nm,21.0s
YAK MLR MLR
comp=Z,798nm,26.0s
YAK MLR MLR
comp=E,563nm,22.0s
HABR Khabarovsk 29.36 283 *c i*P **P 13 12 40.6 -0.3**
HABR *e**PP pP 13 12 54.4 -2.2
HABR *e**SP sP 13 13 01.7 -2.5
HABR *e* 13 13 36.3
HABR *e* 13 15 44.0
HABR *e*S **S 13 17 31.8 +2.2**
HABR *e**SS sS 13 17 56.4 0.0
HABR *e*SS SS 13 19 04.9 -31
HABR 13 23 17.5
HABR pmax pmax
comp=Z,44nm,1.5s,mb4.9
HABR pmax pmax
comp=N,21nm,1.9s
HABR pmax pmax
comp=E,33nm,1.3s
HABR MLR MLR
comp=Z,272nm,17.0s
KLR Kul'dur 31.07 286 ⇓ *i*P **P 13 12 52.0 -4.0**
KLR pmax pmax
comp=E,64nm,1.2s
KLR pmax pmax
comp=Z,77nm,1.2s,mb5.3
KLR MLR MLR
comp=E,500nm,14.0s
KLR MLR MLR
comp=Z,900nm,14.0s
MJAR Matsushiro Arr 33.67 261 P **P 13 13 18.6 -0.3**
comp=Z,3.1nm,0.6s,mb4.3,baz=49,slow=7.1,SNR=13
MJAR PcP PcP 13 15 57.9 +0.6
comp=Z,2.8nm,0.9s,baz=39,slow=1.8,SNR=5.2
MJAR LR LR 13 25 05.7
comp=Z,371nm,21.3s,baz=70,slow=33
MAJO Matsushiro 33.67 261 P **P 13 13 17.2 -1.7**
MAJO pmax pmax
comp=Z,39nm,1.1s,mb5.2
MAJO Matsushiro 33.67 261 P **P 13 13 17.2 -1.7**
comp=Z,39nm,1.1s,mb5.2
MAT Matsushiro 33.67 261 P **P 13 13 18.6 -0.3**
MAT S **S 13 18 37.0 0.0**
OZB Mount Ozzard 33.72 73 P **P 13 13 20.5 +1.4**
VLA Vladivostok 33.80 276 ⇑ *i*P **P 13 13 19.6 -0.3**
VLA pmax pmax
comp=Z,66nm,1.7s,mb5.2
MDJ Mudanjiang 34.46 279 P **P 13 13 24.3 -1.3**
MDJ pP pP 13 13 39.0 -2.4
MDJ sP sP 13 13 46.0 -3.0
MDJ PP PP 13 14 42.3 -2.2
MDJ S **S 13 18 47.5 -1.6**
MDJ sS sS 13 19 13.0 -3.1
MDJ ScP ScP 13 19 38.0 -0.7
MDJ PcS PcS 13 19 45.3 -0.5
MDJ pmax pmax
comp=Z,22nm,1.1s,mb4.9
MDJ pmax pmax
comp=Z,130nm,6.0s
MDJ LR LR
comp=N,180nm,30.3s
MDJ LR LR
comp=E,320nm,26.4s
MDJ LR LR
comp=Z,380nm,23.5s
MDJ Mudanjiang 34.46 279 *e*P **P 13 13 24.3 -1.3**
comp=Z,13nm,0.8s,mb4.8
OBC Olympics--Boni 34.97 73 P **P 13 13 32.2 +2.3**
OOW Octopus West 35.03 74 P **P 13 13 32.5 +2.0**
OSR Olympics--Salm 35.28 74 P **P 13 13 35.2 +2.6**
YKA Yellowknife Ar 35.32 46 P **P 13 13 31.7 -1.0**
comp=Z,3.6nm,0.4s,mb4.6,baz=277,slow=9.5,SNR=47
YKA PcP PcP 13 16 01.9 +0.3
comp=Z,0.9nm,0.3s,baz=281,slow=3.0,SNR=10
YKA ScP ScP 13 19 44.7 +3.3
comp=Z,0.7nm,0.5s,baz=284,slow=3.7,SNR=7.0
YKA Yellowknife Ar 35.32 46 P **P 13 13 31.7 -1.1**
YKA 13 16 01.9
YKA pmax pmax
comp=Z,4.0nm,0.4s
YKA Yellowknife Ar 35.32 46 P **P 13 13 31.8 -1.0**
YKA PcP PcP 13 16 01.9 +0.3
YKA ScP ScP 13 19 44.7 +3.3
NLWA Neilton Lookou 35.38 74 *e*P **P 13 13 34.6 +1.1**
comp=Z,14nm,0.6s,mb5.0
MCW Mount Constitu 35.43 72 P **P 13 13 34.9 +1.0**
VDB Vedder Mountai 35.71 71 P **P 13 13 36.4 +0.1**
A05A Maple Falls 35.73 71 ⇓P **P 13 13 36.8 +0.4**
baz=36,SNR=8.3
HDW Hoodsport 35.76 73 P **P 13 13 38.4 +1.7**
GNW Green Mountain 35.93 73 P **P 13 13 39.3 +1.1**
CMW Cultus Mountai 35.97 72 P **P 13 13 40.1 +1.7**
E03A Lebam 35.97 75 ⇑P **P 13 13 39.4 +0.9**
baz=36
JCW Jim Creek 36.18 72 P **P 13 13 41.8 +1.4**
F03A Seaside 36.27 76 ⇓P **P 13 13 42.2 +1.1**
baz=36
B06A Marblemount 36.30 71 ⇓P **P 13 13 41.6 +0.2**
baz=36
RPW Rockport 36.31 71 *e*P **P 13 13 41.7 +0.2**
comp=Z,9.8nm,0.8s,mb4.8
D05A Enumclaw 36.61 74 ⇑P **P 13 13 45.2 +1.2**
baz=36,SNR=14
LON Longmire 36.93 74 *e*P **P 13 13 47.6 +0.9**
LON pmax pmax
comp=Z,15nm,0.6s,mb5.1
LON Longmire 36.93 74 *e*P **P 13 13 47.5 +0.8**
comp=Z,15nm,0.6s,mb5.1
F04A Amboy 36.96 76 ⇓P **P 13 13 47.4 +0.5**
baz=37,SNR=20
COR Corvallis 37.10 78 *e*P **P 13 13 49.8 +1.6**
COR pmax pmax
comp=Z,33nm,0.9s,mb5.3
COR Corvallis 37.10 78 *e*P **P 13 13 49.8 +1.6**
comp=Z,33nm,0.9s,mb5.3
G04A Mulino 37.29 77 ⇑P **P 13 13 50.3 +0.6**
baz=37,SNR=9.1
ETW Entiat 37.41 72 *e*P **P 13 13 51.1 +0.4**
comp=Z,66nm,0.9s,mb5.6
CN2 Changchun 37.44 281 *e*P **P 13 13 50.0 -1.0**
CN2 *e*pP pP 13 14 05.0 -2.0
CN2 *e*S **S 13 19 33.0 -1.6**
CN2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
CN2 LR LR
comp=N,400nm,20.0s
CN2 LR LR
comp=E,300nm,20.0s
CN2 LR LR
comp=Z,300nm,20.0s
B08A Colville Reser 37.65 70 ⇓P **P 13 13 53.1 +0.3**
baz=38,SNR=21
H04A Detroit Lake 37.73 77 ⇓P **P 13 13 53.9 +0.3**
baz=38,SNR=22
HIA Hailar 38.18 292 *e*P **P 13 13 56.5 -0.7**
HIA pmax pmax
comp=Z,41nm,1.4s
HIA Hailar 38.18 292 *e*P **P 13 13 56.5 -0.7**
comp=Z,42nm,1.4s,mb5.1
E07A Sunnyside 38.20 73 ⇑P **P 13 13 57.7 +0.3**
baz=38
G06A Carlson Farm, 38.39 76 ⇑P **P 13 13 59.0 0.0**
baz=38,SNR=6.5
RSW Rattlesnake Hi 38.44 73 *e*P **P 13 14 00.4 +1.0**
comp=Z,50nm,0.5s,mb5.6
HAWA Hanford 38.47 73 *e*P **P 13 14 00.1 +0.3**
comp=Z,25nm,0.5s,mb5.3
OD2 Odessa Site #2 38.48 72 *e*P **P 13 13 59.5 -0.3**
comp=Z,85nm,1.3s,mb5.4
F07A Phinny Hill Vi 38.48 74 ⇑P **P 13 14 00.5 +0.7**
baz=38,SNR=10
D08A Wollman Farm, 38.51 72 ⇓P **P 13 13 60.0 -0.1**
baz=38,SNR=18
C09A Chrisman Ranch 38.54 71 ⇑P **P 13 14 00.0 -0.2**
baz=38,SNR=9.1
E08A Dider Farm, El 38.71 73 ⇓P **P 13 14 01.8 +0.1**
baz=39,SNR=11
EDM Edmonton 38.91 61 P **P 13 14 03.3 0.0**
NEW Newport 38.99 69 *e*P **P 13 14 03.9 -0.2**
NEW pmax pmax
comp=Z,24nm,0.7s
NEW Newport 38.99 69 *e*P **P 13 14 03.9 -0.2**
comp=Z,24nm,0.7s,mb5.1
YBH Yreka Blue Hor 38.99 82 *e*P **P 13 14 05.9 +1.7**
YBH pmax pmax
comp=Z,5.0nm,0.7s
YBH Yreka Blue Hor 38.99 82 *e*P **P 13 14 05.9 +1.8**
comp=Z,5.3nm,0.7s,mb4.5
E09A Wood Farm, Sta 39.24 72 ⇓P **P 13 14 05.7 -0.5**
baz=39,SNR=15
G08A Pilot Rock 39.38 75 ⇓P **P 13 14 07.2 -0.1**
baz=39,SNR=7.2
LNOR Lincton Mounta 39.49 73 *e*P **P 13 14 09.0 +0.8**
LNOR pmax pmax
comp=Z,5.0nm,0.5s,mb4.6
LNOR Lincton Mounta 39.49 73 *e*P **P 13 14 09.0 +0.8**
comp=Z,4.9nm,0.5s,mb4.6
KSRS Korea Array 39.52 271 P **P 13 14 09.0 +0.4**
comp=Z,14nm,0.9s,mb4.8,baz=58,slow=8.2,SNR=62
KSRS PcP PcP 13 16 16.0 +1.1
comp=Z,3.8nm,0.9s,baz=57,slow=3.3,SNR=11
KSRS LR LR 13 28 04.6
comp=Z,198nm,21.2s,baz=53,slow=32
A12A Yaak River Ran 39.53 68 ⇓P **P 13 14 08.8 +0.3**
baz=39
K05A Summer Lake 39.57 79 ⇓P **P 13 14 09.4 +0.5**
baz=39,SNR=13
I07A Izee 39.68 76 ⇓P **P 13 14 10.0 +0.2**
baz=40,SNR=32
B12A Libby 39.79 68 ⇑P **P 13 14 10.8 +0.1**
baz=40
F10A Beach Ranch, E 40.07 73 ⇓P **P 13 14 12.8 -0.2**
baz=40,SNR=12
C12B Naegeli Ranch, 40.23 69 ⇓P **P 13 14 14.2 -0.1**
baz=40,SNR=16
MOD Modoc 40.39 80 *e*P **P 13 14 16.4 +0.7**
comp=Z,10nm,0.8s,mb4.7
WALA Waterton Lakes 40.48 67 *e*P **P 13 14 16.2 -0.1**
comp=Z,0.9nm,1.2s
B13A Whitefish 40.49 68 ⇓P **P 13 14 16.2 -0.3**
baz=40
BSMT Bassoo Peak 40.56 69 *e*P **P 13 14 17.1 0.0**
comp=Z,22nm,0.8s,mb5.0
BMO Blue Mountains 40.61 74 *e*P **P 13 14 17.4 -0.1**
comp=Z,7.0nm,0.9s,mb4.5
J08A Circle Bar Ran 40.70 77 ⇓P **P 13 14 18.6 +0.3**
baz=41,SNR=19
C13A Hot Springs 40.77 69 ⇑P **P 13 14 18.9 +0.1**
baz=41,SNR=15
A14A Double T Ranch 40.80 67 ⇑P **P 13 14 18.6 -0.4**
baz=41,SNR=22
JTMT Jette 40.91 69 *e*P **P 13 14 19.6 -0.4**
comp=Z,25nm,1.2s,mb4.9
WVOR Wild Horse Val 41.12 78 *e*P **P 13 14 22.0 +0.3**
WVOR pmax pmax
comp=Z,24nm,1.0s,mb5.0
WVOR Wild Horse Val 41.12 78 *e*P **P 13 14 22.0 +0.3**
comp=Z,24nm,1.0s,mb5.0
D13A Huson 41.14 70 ⇑P **P 13 14 21.3 -0.5**
baz=41,SNR=11
B14A Marquette Ranc 41.19 67 ⇑P **P 13 14 22.1 -0.1**
baz=41,SNR=14
A15A Johnson Ranch, 41.20 66 ⇓P **P 13 14 21.5 -0.8**
baz=41,SNR=13
SWMT Swartz Lake 41.20 69 P **P 13 14 21.2 -1.1**
comp=Z,5.1nm,0.8s,mb4.4
F12A Elk City 41.36 72 ⇑P **P 13 14 23.5 -0.1**
baz=41,SNR=52
MSO Missoula 41.58 70 *e*P **P 13 14 25.0 -0.4**
comp=Z,36nm,1.3s,mb4.9
B15A Bradely Ranch, 41.62 67 ⇓P **P 13 14 24.6 -1.1**
baz=42,SNR=21
SLMT Seeley Lake 41.63 69 *e*P **P 13 14 25.2 -0.6**
comp=Z,44nm,1.2s,mb5.1
E13A Victor 41.63 70 ⇓P **P 13 14 25.5 -0.4**
baz=42
D14A Greenough 41.70 69 ⇑P **P 13 14 25.8 -0.6**
baz=42,SNR=34
A16A West Butte Ran 41.86 66 ⇓P **P 13 14 26.4 -1.3**
baz=42,SNR=23
F13A Darby 41.89 71 ⇑P **P 13 14 27.9 -0.1**
baz=42,SNR=19
CHMT Chamberlain Mo 41.94 69 *e*P **P 13 14 27.9 -0.5**
comp=Z,12nm,1.1s,mb4.5
E14A Clinton 42.06 70 ⇑P **P 13 14 29.1 -0.3**
baz=42,SNR=6.6
B16A M & M Farms, S 42.07 67 ⇑P **P 13 14 28.4 -1.0**
baz=42
WCN Washoe City 42.24 83 ⇓P **P 13 14 31.1 +0.2**
baz=42
H12A Diamond D Ranc 42.24 73 ⇑P **P 13 14 30.6 -0.2**
baz=42,SNR=22
MFID Camas Ranch 42.28 75 ⇑P **P 13 14 31.0 -0.2**
baz=42,SNR=9.7
G13A Cobalt 42.32 72 ⇓P **P 13 14 31.3 -0.2**
baz=42,SNR=50
C16A Fuhringer Ranc 42.36 67 ⇓P **P 13 14 30.8 -0.9**
baz=42,SNR=29
A17A Triple J Farms 42.37 65 ⇓P **P 13 14 30.9 -1.0**
baz=42,SNR=44
F14A Wisdom 42.45 71 ⇓P **P 13 14 32.3 -0.3**
baz=42,SNR=9.2
I12A Atlanta 42.49 74 ⇑P **P 13 14 33.0 +0.1**
baz=42,SNR=34
E15A Deer Lodge 42.55 70 ⇓P **P 13 14 33.0 -0.4**
baz=42,SNR=18
H13A Challis 42.59 73 ⇑P **P 13 14 33.5 -0.2**
baz=42,SNR=18
L10A Juniper Basin 42.64 77 ⇓P **P 13 14 34.4 +0.3**
baz=42,SNR=9.8
B17A L&G Farms, Che 42.65 66 ⇑P **P 13 14 33.3 -0.8**
baz=42,SNR=6.9
G14A Jackson 42.70 71 ⇑P **P 13 14 34.2 -0.4**
baz=43
D16A Dana Ranch, Ca 42.87 68 ⇑P **P 13 14 35.5 -0.4**
baz=43,SNR=13
A18A Metzger Ranch, 42.87 65 ⇓P **P 13 14 34.5 -1.4**
baz=43
HRY Holter Researc 42.88 69 *e*P **P 13 14 35.6 -0.4**
comp=Z,20nm,0.6s,mb5.0
M10A I.L. Ranch, Tu 42.92 78 ⇑P **P 13 14 36.6 +0.2**
baz=43
LRM Limekiln Ridge 42.98 70 *e*P **P 13 14 36.4 -0.5**
comp=Z,72nm,1.1s,mb5.3
C17A Wharram Farm, 43.01 67 ⇑P **P 13 14 36.4 -0.7**
baz=43,SNR=20
L11A Cat Creek Ranc 43.03 77 ⇑P **P 13 14 37.6 +0.3**
baz=43,SNR=54
I13A Wildhorse Cree 43.03 73 ⇑P **P 13 14 37.3 0.0**
baz=43,SNR=40
HLID Hailey 43.05 74 *e*P **P 13 14 37.7 +0.2**
comp=Z,13nm,0.8s,mb4.7
E16A East Helena 43.06 69 ⇑P **P 13 14 37.3 -0.2**
baz=43,SNR=9.2
H14A Leadore 43.10 72 ⇓P **P 13 14 37.9 +0.1**
baz=43,SNR=10
BMN Battle Mountai 43.14 80 P **P 13 14 39.1 +0.9**
BMN pmax pmax
comp=Z,15nm,1.0s,mb4.7
BMN Battle Mountai 43.14 80 P **P 13 14 39.1 +0.9**
comp=Z,15nm,1.0s,mb4.7
DLMT Dillon 43.15 71 *e*P **P 13 14 37.9 -0.3**
comp=Z,25nm,1.4s,mb4.8
B18A Beardsley Farm 43.18 66 ⇓P **P 13 14 37.6 -0.8**
baz=43,SNR=16
J13A Cove Ranch, Pi 43.29 74 ⇓P **P 13 14 39.7 +0.4**
baz=43,SNR=26
MCMT McKenzie Canyo 43.29 72 *e*P **P 13 14 39.0 -0.3**
comp=Z,12nm,0.6s,mb4.8
D17A Six Diamond Ra 43.31 68 ⇑P **P 13 14 38.9 -0.5**
baz=43
G15A Dillon 43.32 71 ⇓P **P 13 14 39.2 -0.4**
baz=43,SNR=12
EGMT Eagleton 43.39 66 *e*P **P 13 14 39.8 -0.3**
comp=Z,15nm,0.7s,mb4.8
N10A Dunphy 43.41 79 ⇑P **P 13 14 40.9 +0.6**
baz=43
I14A Mackay 43.43 73 ⇓P **P 13 14 40.8 +0.4**
baz=43,SNR=42
M11A Holland Ranch, 43.43 77 ⇓P **P 13 14 41.1 +0.5**
baz=43,SNR=9.4
F16A Kennard Place, 43.49 70 ⇑P **P 13 14 40.4 -0.5**
baz=43,SNR=9.9
L12A House Creek Ra 43.49 76 ⇓P **P 13 14 41.4 +0.4**
baz=43,SNR=34
H15A Lima 43.53 72 ⇑P **P 13 14 41.0 -0.3**
baz=43,SNR=15
E17A Martinsdale 43.58 69 ⇑P **P 13 14 41.7 +0.1**
baz=43,SNR=22
O10A Cortez Mining, 43.66 79 ⇑P **P 13 14 43.1 +0.7**
baz=44
NVAR Mina Array Bea 43.67 83 P **P 13 14 43.4 +0.9**
comp=Z,2.6nm,0.6s,mb4.2,baz=292,slow=8.4,SNR=21
NVAR ScP ScP 13 20 19.9 +5.7
comp=Z,2.0nm,1.0s,baz=328,slow=4.7,SNR=5.5
G16A Moss Hill, Enn 43.69 71 ⇓P **P 13 14 41.9 -0.6**
baz=44,SNR=32
J14A Carey 43.73 74 ⇓P **P 13 14 43.3 +0.4**
baz=44,SNR=11
K13A Stover Farm, H 43.77 75 ⇓P **P 13 14 43.7 +0.5**
baz=44
D18A Linhart Farms, 43.80 67 ⇑P **P 13 14 43.2 -0.2**
baz=44
N11A Elko Archery C 43.82 78 ⇑P **P 13 14 43.9 +0.2**
baz=44
MLAC Mammoth Lakes 43.83 84 ⇓P **P 13 14 44.9 +1.1**
baz=44
I15A Monteview 43.97 72 ⇓P **P 13 14 45.0 +0.2**
baz=44
M12A Wells 43.98 77 ⇓P **P 13 14 45.7 +0.8**
baz=44,SNR=15
F17A Fitzpatrick Pl 43.99 69 ⇑P **P 13 14 44.6 -0.4**
baz=44,SNR=21
E18A Harlowton 44.07 68 ⇑P **P 13 14 45.7 +0.1**
baz=44,SNR=41
ELK Elko 44.17 78 *e*P **P 13 14 46.9 +0.4**
ELK pmax pmax
comp=Z,13nm,0.9s
ELK Elko 44.17 78 *e*P **P 13 14 46.9 +0.4**
comp=Z,13nm,0.9s,mb4.7
L13A Double Diamond 44.17 76 ⇑P **P 13 14 46.7 +0.3**
baz=44,SNR=15
N12A Clover Valley, 44.23 78 ⇑P **P 13 14 47.5 +0.5**
baz=44,SNR=15
N12A Clover Valley, 44.23 78 *e*P **P 13 14 47.9 +0.9**
comp=Z,27nm,1.0s,mb4.9
G17A Pierce Place, 44.27 70 ⇑P **P 13 14 47.4 +0.2**
baz=44,SNR=9.4
H16A Russell Place, 44.31 71 ⇓P **P 13 14 47.4 -0.2**
baz=44,SNR=30
J15A Blackfoot 44.34 73 ⇑P **P 13 14 48.4 +0.6**
baz=44,SNR=17
M13A Montello 44.47 77 ⇓P **P 13 14 48.7 -0.1**
baz=44,SNR=25
M13A Montello 44.47 77 *e*P **P 13 14 49.0 +0.2**
comp=Z,19nm,0.9s,mb4.8
YMR Madison River 44.49 71 *e*P **P 13 14 49.0 0.0**
comp=Z,77nm,1.2s,mb5.3
F18A Big Timber 44.55 69 ⇑P **P 13 14 49.1 -0.3**
baz=44,SNR=16
SMMC Simmler 44.56 87 ⇑P **P 13 14 50.1 +0.4**
baz=44
P11A Circle Ranch, 44.56 80 ⇓P **P 13 14 49.9 +0.3**
baz=44
Q10A Clear Creek Ra 44.61 81 ⇓P **P 13 14 50.3 +0.3**
baz=44,SNR=8.8
I16A Newdale 44.63 72 ⇑P **P 13 14 50.3 +0.2**
baz=44,SNR=6.5
L14A Malta 44.63 75 ⇓P **P 13 14 50.8 +0.6**
baz=44,SNR=27
GCMT Greycliff 44.64 69 *e*P **P 13 14 49.9 -0.2**
comp=Z,25nm,1.1s,mb4.9
YNR Norris Junctio 44.64 71 *e*P **P 13 14 51.4 +1.3**
comp=Z,31nm,0.9s,mb5.0
K15A Arbon 44.69 74 ⇑P **P 13 14 51.4 +0.9**
baz=44,SNR=35
YFT Old Faithful 44.69 71 *e*P **P 13 14 52.2 +1.6**
comp=Z,33nm,0.9s,mb5.1
N13A Wendover, West 44.74 77 ⇑P **P 13 14 51.1 +0.2**
baz=45
N13A Wendover, West 44.74 77 *e*P **P 13 14 51.7 +0.7**
comp=Z,18nm,0.9s,mb4.8
O12A Currie 44.76 78 ⇑P **P 13 14 51.1 -0.1**
baz=45,SNR=35
VES Vestal, Richgr 44.80 86 ⇓P **P 13 14 51.5 0.0**
baz=45
H17A Grant Village 44.88 71 ⇑P **P 13 14 53.1 +1.1**
baz=45,SNR=31
M14A Sheep Mountain 44.88 76 ⇑P **P 13 14 52.5 +0.4**
baz=45,SNR=7.6
LKWY Lake 44.89 71 *e*P **P 13 14 53.2 +1.1**
LKWY pmax pmax
comp=Z,25nm,1.1s,mb4.9
LKWY Lake 44.89 71 *e*P **P 13 14 53.2 +1.1**
comp=Z,25nm,1.1s,mb4.8
J16A Bone 44.90 73 ⇑P **P 13 14 53.0 +0.7**
baz=45
IMW Indian Meadow 44.95 72 *e*P **P 13 14 53.0 +0.4**
comp=Z,19nm,1.0s,mb4.8
G18A Lazy EL Ranch, 44.96 69 ⇑P **P 13 14 52.4 -0.3**
baz=45,SNR=8.1
R10A Warm Springs 45.00 81 ⇑P **P 13 14 52.9 -0.2**
baz=45,SNR=7.7
RRI2 Red Ridge 45.03 73 *e*P **P 13 14 54.6 +1.3**
comp=Z,45nm,1.2s,mb5.1
S10A Tonopah Range, 45.04 82 ⇑P **P 13 14 53.4 0.0**
baz=45,SNR=9.6
Q11A Duckwater 45.06 80 ⇑P **P 13 14 53.6 +0.1**
baz=45,SNR=18
HVU Hansel Valley 45.06 75 *e*P **P 13 14 53.9 +0.3**
HVU pmax pmax
comp=Z,23nm,0.6s,mb5.1
HVU Hansel Valley 45.06 75 *e*P **P 13 14 53.9 +0.3**
comp=Z,23nm,0.6s,mb5.1
GRAC Grapevine Rang 45.13 84 ⇑P **P 13 14 54.6 +0.4**
baz=45
P12A McGill 45.13 79 ⇓P **P 13 14 54.2 +0.1**
baz=45,SNR=16
MOOW Moose Ponds 45.15 72 *e*P **P 13 14 54.3 +0.2**
comp=Z,14nm,1.2s,mb4.6
I17A Pilgrim Ck. 45.15 71 ⇑P **P 13 14 54.9 +0.7**
baz=45
K16A Soda Springs 45.17 73 ⇓P **P 13 14 55.2 +0.9**
baz=45,SNR=21
L15A Malad City 45.17 75 ⇑P **P 13 14 54.3 -0.1**
baz=45,SNR=9.6
TPAW Teton Pass 45.17 72 *e*P **P 13 14 55.0 +0.6**
comp=Z,24nm,1.2s,mb4.8
RLMT Red Lodge 45.24 69 *e*P **P 13 14 55.0 0.0**
comp=Z,88nm,1.2s,mb5.4
BJI Beijing 45.26 282 P **P 13 14 55.5 +0.3**
BJI pP pP 13 15 09.5 -2.0
BJI sP sP 13 15 16.5 -2.5
BJI PP PP 13 16 40.5 -1.3
BJI sS sS 13 21 56.8 -1.4
BJI pmax pmax
comp=Z,34nm,0.7s,mb5.2
BJI pmax pmax
comp=Z,210nm,5.1s
BJI LR LR
comp=N,160nm,15.5s
BJI LR LR
comp=E,350nm,16.3s
BJI LR LR
comp=Z,220nm,25.6s
BJT Baijiatuau 45.28 282 *e*P **P 13 14 55.3 0.0**
BJT pmax pmax

comp=Z,35nm,0.8s
BJT Baijiatuau 45.28 282 eP P 13 14 55.3 0.0
comp=Z,35nm,0.8s,mb5.1
SBC Santa Barbara 45.30 88 ⇓P P 13 14 55.7 +0.2
baz=45
REDW Red Top Meadow 45.30 72 eP P 13 14 55.6 +0.2
comp=Z,39nm,1.5s,mb4.9
SNOW Snow King Moun 45.30 72 eP P 13 14 56.7 +1.3
comp=Z,8.2nm,0.6s,mb4.6
O13A Hicks Ranch, I 45.31 78 ⇑P P 13 14 55.9 +0.4
baz=45
LOHW Long Hollow 45.31 72 eP P 13 14 55.6 +0.2
comp=Z,7.5nm,0.7s,mb4.5
IRK Irkutsk 45.34 303 eP P 13 14 55.4 -0.2
IRK e pP 13 15 13.0 +1.0
IRK e 13 16 34.4
IRK pmax pmax
comp=Z,28nm,1.2s,mb4.9
N14A Grayback Hills 45.36 77 ⇓P P 13 14 56.1 +0.2
baz=45,SNR=17
J17A Brown Place, J 45.39 72 ⇑P P 13 14 56.3 +0.2
baz=45
R11A Troy Canyon, C 45.40 81 ⇓P P 13 14 56.2 0.0
baz=45,SNR=22
BGU Big Grassy Mou 45.41 76 eP P 13 14 56.5 +0.2
comp=Z,16nm,1.0s,mb4.7
Q12A Willow Creek R 45.45 80 ⇓P P 13 14 56.4 -0.2
baz=45
M15A Larsen Ranch, 45.45 75 ⇑P P 13 14 56.7 +0.1
baz=45,SNR=6.5
K17A Gardner Place, 45.62 73 ⇑P P 13 14 58.3 +0.4
baz=46
P13A Bates Ranch, G 45.69 79 ⇑P P 13 14 58.6 +0.1
baz=46,SNR=15
I18A Diamond G Ranc 45.72 71 ⇓P P 13 14 59.3 +0.6
baz=46
S11A Rachel 45.74 82 ⇓P P 13 14 59.3 +0.3
baz=46,SNR=8.4
N15A Stansbury Isla 45.74 76 ⇑P P 13 14 59.0 0.0
baz=46
FURC Furnace Creek, 45.78 84 ⇓P P 13 14 59.6 +0.3
baz=46
J18A Kendall Valley 45.89 72 ⇑P P 13 14 59.9 -0.1
baz=46,SNR=16
HWUT Hardware Ranch 45.90 75 eP P 13 15 00.3 +0.2
comp=Z,10nm,0.8s,mb4.6
LRMC Laurel Mountai 45.90 85 ⇓P P 13 15 00.1 -0.2
baz=46
TLY Talaya 45.97 302 eP P 13 15 00.8 +0.2
TLY pmax pmax
comp=Z,12nm,1.7s,mb4.3
TLY MLR MLR
comp=Z,260nm,19.0s
TLY Talaya 45.97 302 eP P 13 15 00.6 +0.1
comp=Z,3.9nm,0.6s,mb4.3
DUG Dugway 45.98 77 eP P 13 15 01.0 +0.2
DUG pmax pmax
comp=Z,44nm,1.1s,mb5.1
DUG Dugway 45.98 77 eP P 13 15 01.0 +0.1
comp=Z,44nm,1.1s,mb5.1
Q13A Wheeler Ranch, 46.00 79 ⇓P P 13 15 00.9 -0.1
baz=46,SNR=13
R12A Pony Springs, 46.02 80 ⇑P P 13 15 01.0 -0.2
baz=46,SNR=9.3
EDW2 Edwards Air Fo 46.10 86 ⇑P P 13 15 01.8 0.0
baz=46
NOQ North Oquirrh 46.13 76 eP P 13 15 02.7 +0.7
comp=Z,36nm,1.0s,mb5.0
O15A The Old Anders 46.14 77 ⇓P P 13 15 02.2 +0.2
baz=46
U10A Ash Meadows, A 46.15 83 ⇑P P 13 15 02.1 -0.1
baz=46
ULN Ulaanbaatar 46.16 296 eP P 13 15 02.4 +0.3
ULN pmax pmax
comp=Z,24nm,0.9s,mb4.9
ULN Ulaanbaatar 46.16 296 eP P 13 15 02.4 +0.3
comp=Z,24nm,0.9s,mb4.9
P14A Drum Mountains 46.19 78 ⇓P P 13 15 02.7 +0.2
baz=46,SNR=20
K18A Toltan Ranch, 46.21 73 ⇓P P 13 15 02.9 +0.4
baz=46,SNR=23
S12A Delamar Landin 46.32 81 ⇓P P 13 15 03.7 +0.2
baz=46,SNR=15
N16A Rees Ranch, Co 46.40 75 ⇑P P 13 15 04.3 +0.1
baz=46
Q14A Sevier Lake (B 46.43 79 ⇓P P 13 15 04.7 +0.3
baz=46
R13A O'Grain Ranch, 46.51 80 ⇓P P 13 15 05.3 +0.3
baz=46,SNR=7.0
SHOC Shoshone 46.51 84 ⇓P P 13 15 04.9 -0.1
baz=46
M17A Scullys Gap (B 46.52 74 ⇑P P 13 15 04.8 -0.2
baz=46,SNR=8.6
SONM Songino Array 46.55 297 P P 13 15 05.8 +0.7
comp=Z,18nm,1.0s,mb4.8,baz=56,slow=9.5,SNR=79
SONM PcP PcP 13 16 38.4 +0.1
comp=Z,1.8nm,0.7s,baz=77,slow=2.7,SNR=3.5
SONM ScP ScP 13 20 28.8 +2.9
comp=Z,1.6nm,0.8s,baz=61,slow=2.4,SNR=6.5
SONM LR LR 13 35 24.7
comp=Z,798nm,20.5s,baz=58,slow=37
SONM Songino Array 46.55 297 P P 13 15 05.8 +0.7
SONM PcP PcP 13 16 38.4 +0.1
SONM ScP ScP 13 20 28.8 +2.9
SONM LR LR 13 35 24.7
GSC Goldstone 46.56 85 ⇓P P 13 15 05.4 -0.1
baz=46,SNR=12
GSC Goldstone 46.56 85 eP P 13 15 05.7 +0.2
GSC pmax pmax
comp=Z,6.0nm,0.4s,mb4.7
GSC Goldstone 46.56 85 eP P 13 15 05.7 +0.3
comp=Z,6.0nm,0.4s,mb4.7
JLU Jordanelle 46.57 76 eP P 13 15 06.2 +0.8
comp=Z,16nm,0.9s,mb4.7
NLU North Lily Min 46.58 77 eP P 13 15 05.8 +0.3
comp=Z,18nm,1.1s,mb4.7
L18A Fontenelle, Gr 46.63 73 ⇓P P 13 15 05.9 0.0
baz=46
P15A Leamington 46.69 77 ⇓P P 13 15 06.4 0.0
baz=47,SNR=13
BFSC Mount Baldy Ra 46.72 87 ⇓P P 13 15 06.5 -0.2
baz=47
U11A Corn Creek 46.73 83 ⇓P P 13 15 07.0 +0.2
baz=47
N17A Moffit Pass 46.74 75 ⇓P P 13 15 06.4 -0.4
baz=47,SNR=6.7
O16A Springville 46.77 76 ⇑P P 13 15 07.1 0.0
baz=47
DAU Daniels Canyon 46.80 76 eP P 13 15 07.8 +0.6
DAU pmax pmax
comp=Z,22nm,1.0s,mb4.8
DAU Daniels Canyon 46.80 76 eP P 13 15 07.8 +0.6
comp=Z,22nm,1.0s,mb4.8
K19A Absolon Red Bu 46.81 72 ⇑P P 13 15 06.6 -0.7
baz=47,SNR=62
MPU Maple Canyon 46.81 76 eP P 13 15 07.7 +0.4
comp=Z,7.6nm,0.6s,mb4.6
ZAK Zakamensk 46.86 301 ⇑iP P 13 15 07.7 +0.2
ZAK e 13 16 39.5
ZAK pmax pmax
comp=Z,8.0nm,1.5s,mb4.2
M18A Lyman 46.91 74 ⇑P P 13 15 07.7 -0.4
baz=47,SNR=8.6
L19A Farson 46.93 73 ⇓P P 13 15 08.1 -0.1
baz=47,SNR=19
S13A Holt Ranch, En 46.95 81 ⇓P P 13 15 08.4 0.0
baz=47,SNR=12
Q15A Fillmore 46.98 78 ⇑P P 13 15 08.4 -0.2
baz=47,SNR=10.0
TUQ Turquoise Moun 47.03 84 ⇑P P 13 15 08.8 -0.2
baz=47
ARUT Antelope Range 47.08 80 eP P 13 15 09.2 -0.2
ARUT pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
ARUT Antelope Range 47.08 80 eP P 13 15 09.2 -0.2
comp=Z,6.1nm,0.7s,mb4.4
V11A Goodsprings 47.08 83 ⇑P P 13 15 09.5 0.0
baz=47
BBRC Big Bear Solar 47.17 86 ⇓P P 13 15 10.5 +0.3
baz=47
K20A Yellowstone Ra 47.21 72 ⇓P P 13 15 10.0 -0.4
baz=47
O17A Robinson Place 47.25 76 ⇑P P 13 15 10.9 +0.1
baz=47,SNR=6.8
U12A Valley of Fire 47.25 82 ⇑P P 13 15 11.0 +0.2
baz=47
S14A Cedar City 47.26 80 ⇓P P 13 15 10.8 -0.1
baz=47
T13A Saint George 47.27 81 ⇑P P 13 15 10.8 -0.2
baz=47,SNR=8.9
CCUT Cedar City 47.27 80 eP P 13 15 11.7 +0.7
comp=Z,3.6nm,0.6s,mb4.3
MSU Marysvale 47.40 78 eP P 13 15 12.5 +0.5
MSU pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
MSU Marysvale 47.40 78 eP P 13 15 12.5 +0.6
comp=Z,6.0nm,0.7s,mb4.4
M19A Rock Springs 47.41 73 ⇓P P 13 15 11.3 -0.6
baz=47,SNR=6.7
V12A Nelson 47.51 83 ⇓P P 13 15 13.1 +0.3
baz=47
TMUT Trail Mountain 47.51 77 eP P 13 15 13.7 +0.9
comp=Z,25nm,0.7s,mb5.2
R15A Junction 47.53 79 ⇓P P 13 15 12.7 -0.2
baz=47
HHC Hu-ho-hao-te 47.58 286 eP P 13 15 13.3 0.0
HHC pP pP 13 15 27.3 -2.5
HHC sP sP 13 15 35.3 -1.9
HHC PcP PcP 13 16 43.8 +1.7
HHC PP PP 13 17 04.5 -0.5
HHC ScP ScP 13 20 30.5 +0.1
HHC PcS PcS 13 20 38.0 +0.5
HHC S S 13 22 01.8 -1.8
HHC sS sS 13 22 27.8 -3.7
HHC ScS ScS 13 24 58.3 -2.2
HHC SS SS 13 25 23.8 -8.0
HHC pmax pmax
comp=Z,24nm,0.6s,mb5.2
HHC pmax pmax
comp=Z,150nm,6.4s
HHC LR LR
comp=N,470nm,16.4s
HHC LR LR
comp=E,750nm,16.7s
HHC LR LR
comp=Z,440nm,16.3s
L20A Wamsutter 47.60 72 ⇓P P 13 15 12.9 -0.5
baz=47,SNR=5.4
GMRC Granite Mounta 47.62 85 ⇑P P 13 15 13.4 -0.2
baz=48
O18A Roosevelt 47.65 75 ⇓P P 13 15 14.4 +0.6
baz=48,SNR=5.2
P17A Butcher Ranch, 47.69 76 ⇑P P 13 15 14.2 0.0
baz=48,SNR=9.2
T14A Hurricane 47.75 81 ⇑P P 13 15 14.8 +0.1
baz=48
N19A John Jarvie Ra 47.77 74 ⇑P P 13 15 14.2 -0.5
baz=48,SNR=10
Q16A Castle Valley 47.77 77 ⇑P P 13 15 15.1 +0.3
baz=48,SNR=10
W12A Cal Nev Ari 47.77 84 ⇓P P 13 15 14.9 0.0
baz=48
P18A Preston Nutter 47.89 76 ⇑P P 13 15 15.9 +0.1
baz=48,SNR=28
V13A Grand Canyon W 47.97 82 ⇑P P 13 15 16.1 -0.3
baz=48,SNR=12
R16A Teasdale 47.97 78 ⇓P P 13 15 16.7 +0.3
baz=48,SNR=23
M20A Sweetwater, Wa 48.00 73 ⇑P P 13 15 16.1 -0.4
baz=48,SNR=20
SRU San Rafael 48.04 77 ⇑P P 13 15 16.8 -0.1
baz=48,SNR=41
SRU San Rafael 48.04 77 eP P 13 15 16.8 -0.1
SRU pmax pmax
comp=Z,27nm,0.6s,mb5.2
SRU San Rafael 48.04 77 eP P 13 15 16.8 -0.1
comp=Z,27nm,0.6s,mb5.3
U14A Mt Trumbull 48.10 81 ⇓P P 13 15 17.5 +0.1
baz=48
O19A Miners Draw (B 48.16 75 ⇑P P 13 15 17.7 -0.1
baz=48,SNR=43
L21A Rawlins 48.20 72 ⇓P P 13 15 17.8 -0.3
baz=48,SNR=31
T15A Red Dirt Ranch 48.22 80 ⇓P P 13 15 18.5 +0.2
baz=48,SNR=6.8
S16A Weppner Ranch, 48.25 79 ⇑P P 13 15 18.7 +0.2
baz=48,SNR=15
Q18A Rafter H Ranch 48.29 76 ⇓P P 13 15 18.4 -0.3
baz=48,SNR=16
IRM Iron Mountain 48.34 85 ⇓P P 13 15 19.0 -0.3
baz=48
N20A Spence Gulch, 48.35 73 ⇓P P 13 15 19.1 -0.1
baz=48,SNR=25
R17A Hanksville Air 48.36 78 ⇓P P 13 15 19.1 -0.2
baz=48,SNR=22
MONP Monument Peak 48.39 87 ⇓P P 13 15 19.6 -0.1
baz=48
M21A Separation Pea 48.42 72 ⇓P P 13 15 19.5 -0.3
baz=48,SNR=5.1
RWWY Rawlins 48.46 72 eP P 13 15 19.4 -0.7
comp=Z,18nm,0.7s,mb5.0
W13A Hualapai Mount 48.52 83 ⇓P P 13 15 20.7 +0.1
baz=48
U15A North Rim 48.65 81 ⇓P P 13 15 21.9 +0.3
baz=48,SNR=26
V14A Boquillas Ranc 48.65 82 ⇑P P 13 15 21.9 +0.2
baz=48,SNR=5.3
BTO Baotou 48.66 286 eP P 13 15 21.5 -0.1
P19A Cripple Cowboy 48.66 75 ⇓P P 13 15 21.3 -0.4
baz=48,SNR=54
NJ2 Nanjing 48.70 272 eP P 13 15 21.5 -0.5
NJ2 pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
L22A Ellis Ranch, M 48.72 71 ⇑P P 13 15 22.0 0.0
baz=49,SNR=36
T16A Glen Canyon Da 48.78 80 ⇓P P 13 15 22.0 -0.5
baz=49
O20A White River Ci 48.79 74 ⇓P P 13 15 22.4 -0.2
baz=49,SNR=20
S17A Black Ridge (B 48.80 78 ⇓P P 13 15 22.7 -0.1
baz=49,SNR=33
N21A Black Mountain 48.84 73 ⇑P P 13 15 22.5 -0.5
baz=49,SNR=18
RSSD Black Hills 48.87 67 eP P 13 15 21.7 -1.5
RSSD pmax pmax
comp=Z,14nm,0.6s,mb5.1
RSSD Black Hills 48.87 67 eP P 13 15 21.7 -1.5
comp=Z,14nm,0.6s,mb5.1
R18A Canyonlands Na 48.88 77 ⇓P P 13 15 22.6 -0.7
baz=49,SNR=35
X13A Yucca 48.88 84 ⇓P P 13 15 23.2 -0.2
baz=49
Q19A Hogan Spring (48.91 76 ⇓P P 13 15 22.8 -0.7
baz=49,SNR=40
W14A Seligman 48.94 82 ⇓P P 13 15 24.0 +0.1
baz=49
P20A De Beque 49.10 75 ⇑P P 13 15 24.5 -0.5
baz=49,SNR=20
V15A Kaibab Nationa 49.11 81 ⇓P P 13 15 25.5 +0.4
baz=49,SNR=19
T17A Navajo Res., N 49.20 79 ⇑P P 13 15 25.4 -0.4
baz=49,SNR=14
O21A Pagoda 49.21 74 ⇓P P 13 15 25.6 -0.3
baz=49,SNR=20
S18A Hurst Farm, Bl 49.26 78 ⇑P P 13 15 25.9 -0.3
baz=49,SNR=36
GLA Glamis 49.27 86 ⇑P P 13 15 26.3 -0.2
baz=49
GLA Glamis 49.27 86 eP P 13 15 26.4 0.0
GLA pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
GLA Glamis 49.27 86 eP P 13 15 26.4 -0.1
comp=Z,6.2nm,0.6s,mb4.7
R19A Curley Farm, L 49.33 77 ⇓P P 13 15 26.2 -0.6
baz=49,SNR=15
N22A Wattenberg Ran 49.45 72 ⇓P P 13 15 27.7 0.0
baz=49,SNR=17
PV04 Paradox Valley 49.48 76 eP P 13 15 27.7 -0.2
Q20A Ridgley Place, 49.50 75 ⇑P P 13 15 27.3 -0.7
baz=49,SNR=9.3
U17A Shonto 49.54 79 ⇓P P 13 15 28.0 -0.4
baz=49
X14A Yava 49.55 83 ⇓P P 13 15 28.2 -0.2
baz=49,SNR=10
U16A Tuba City 49.55 80 ⇓P P 13 15 28.6 +0.1
baz=49
P21A Newcastle 49.65 74 ⇓P P 13 15 29.1 -0.1
baz=50,SNR=19
T18A Mexican Hat 49.68 78 ⇓P P 13 15 28.8 -0.7
baz=50,SNR=26
N23A Red Feather La 49.70 72 ⇑P P 13 15 29.4 -0.1
baz=50,SNR=24
PHWY Pilot Hill 49.74 71 eP P 13 15 29.6 -0.2
comp=Z,8.7nm,0.5s,mb4.9
S19A Harvey Farm, M 49.75 77 ⇑P P 13 15 29.4 -0.6
baz=50,SNR=39
KBS Kingsbay 49.80 357 eP P 13 15 30.2 +0.4
KBS pmax pmax
comp=Z,31nm,0.9s,mb5.2
KBS Kingsbay 49.80 357 eP P 13 15 30.2 +0.4
comp=Z,31nm,0.9s,mb5.2
O22A Kremmling 49.80 73 ⇑P P 13 15 30.2 -0.1
baz=50,SNR=12
WUAZ Wupatki 49.80 81 eP P 13 15 30.6 +0.2
comp=Z,6.7nm,0.6s,mb4.8
Y14A Wickenburg 49.83 84 ⇑P P 13 15 30.3 -0.3
baz=50
PV01 Paradox Valley 49.85 76 eP P 13 15 30.4 -0.3
comp=Z,2μm,0.5s
Z13A Yuma Proving G 49.91 85 ⇓P P 13 15 30.7 -0.6
baz=50
R20A Redvale 49.93 76 ⇓P P 13 15 31.1 -0.2
baz=50,SNR=11
X15A Humboldt 49.94 83 ⇓P P 13 15 31.7 +0.3
baz=50
W16A Flagstaff 49.98 81 ⇑P P 13 15 32.1 +0.4
baz=50
Q21A Lamborn Mesa, 50.01 75 ⇑P P 13 15 31.8 -0.1
baz=50,SNR=10.0
P22A Eagle 50.02 74 ⇓P P 13 15 32.0 0.0
baz=50,SNR=6.1
V17A Tonalea, Kykot 50.09 80 ⇓P P 13 15 32.7 +0.1
baz=50,SNR=13
O23A Lake Granby, G 50.14 73 ⇑P P 13 15 33.4 +0.5
baz=50,SNR=30
U18A Rough Rock, Ch 50.15 79 ⇑P P 13 15 32.7 -0.3
baz=50,SNR=7.1
SMCO Snowmass 50.16 74 eP P 13 15 32.8 -0.3
comp=Z,9.1nm,0.5s,mb5.0
S20A Disappointment 50.17 77 ⇑P P 13 15 32.8 -0.3
baz=50,SNR=52
N24A Carr 50.38 71 ⇑P P 13 15 34.6 0.0
baz=50,SNR=7.9
Q22A Crested Butte, 50.39 75 ⇑P P 13 15 34.5 -0.4
baz=50
T19A Beclabito 50.40 78 ⇓P P 13 15 34.7 -0.2
baz=50,SNR=54
MVCO Mesa Verde 50.48 77 eP P 13 15 35.8 +0.3
comp=Z,13nm,0.7s,mb5.0
V18A Ganado 50.57 80 ⇓P P 13 15 36.2 0.0
baz=50,SNR=8.5
ISCO Idaho Springs 50.58 73 eP P 13 15 37.1 +0.9
ISCO pmax pmax
comp=Z,12nm,1.0s,mb4.9
ISCO Idaho Springs 50.58 73 eP P 13 15 37.0 +0.8
comp=Z,12nm,1.0s,mb4.9
U19A Dine' College, 50.64 79 ⇓P P 13 15 36.5 -0.2
baz=50
114A Black Gap (USA 50.69 85 ⇓P P 13 15 37.1 -0.1
baz=51
P23A Jefferson 50.72 73 ⇓P P 13 15 37.7 +0.5
baz=51,SNR=8.8
Y16A Circle Bar Ran 50.81 83 ⇓P P 13 15 38.2 +0.1
baz=51
R22A Saguache, Gunn 50.89 75 ⇑P P 13 15 39.1 +0.5
baz=51,SNR=17
AGMN Agassiz Nation 50.94 59 eP P 13 15 37.6 -1.2
comp=Z,16nm,1.2s,mb4.9
U20A Newcomb 51.00 78 ⇓P P 13 15 39.8 +0.3
baz=51
W18A Petrified Fore 51.08 80 ⇓P P 13 15 40.3 +0.2
baz=51
V19A Window Rock 51.11 79 ⇓P P 13 15 40.5 +0.2
baz=51
S22A 4UR Ranch, Cre 51.15 76 ⇓P P 13 15 40.7 +0.2
baz=51,SNR=28
214A Organ Pipe Nat 51.27 85 ⇑P P 13 15 42.0 +0.5
baz=51
O25A Wiggins 51.28 72 ⇓P P 13 15 42.1 +0.6
baz=51
W19A Sanders 51.30 80 ⇑P P 13 15 42.0 +0.4
baz=51
Y17A Roosevelt 51.33 82 ⇑P P 13 15 42.1 +0.2
baz=51,SNR=9.5
X18A Snowflake 51.33 81 ⇓P P 13 15 42.3 +0.4
baz=51
Q24A Divide 51.39 73 ⇓P P 13 15 42.6 +0.3
baz=51,SNR=6.7
V20A Brimhall 51.41 79 ⇑P P 13 15 42.5 0.0
baz=51
U21A Nageezi 51.50 78 ⇑P P 13 15 43.4 +0.2
baz=51,SNR=27
116A Eloy 51.55 84 ⇓P P 13 15 43.9 +0.3
baz=51
T22A Edith 51.58 76 ⇑P P 13 15 43.8 +0.1
baz=51,SNR=24
P25A Willow Gulch B 51.63 72 ⇑P P 13 15 44.6 +0.5
baz=52,SNR=20
Y18A Canyon Day Jun 51.78 82 ⇓P P 13 15 45.8 +0.5
baz=52
X19A St. Johns 51.81 81 ⇑P P 13 15 45.5 0.0
baz=52,SNR=7.1
Z17A San Carlos Hig 51.83 82 ⇓P P 13 15 46.2 +0.5
baz=52
W20A Ramah 51.83 79 ⇑P P 13 15 45.7 0.0
baz=52
R24A Sanders Place, 51.88 74 ⇓P P 13 15 46.0 0.0
baz=52,SNR=7.8
V21A Milan 51.92 78 ⇓P P 13 15 46.1 -0.2
baz=52
SDCO Great Sand Dun 51.96 75 eP P 13 15 46.2 -0.3
comp=Z,16nm,0.9s,mb5.0
Q25A Bedland, Calha 51.96 73 ⇑P P 13 15 46.5 -0.1
baz=52,SNR=6.3
OGNE Ogallala 51.98 70 eP P 13 15 47.5 +0.7
comp=Z,58nm,1.0s,mb5.6
U22A Llaves 52.02 77 ⇑P P 13 15 47.1 +0.1
baz=52,SNR=17
T23A Casias Ranch, 52.09 76 ⇑P P 13 15 47.9 +0.3
baz=52,SNR=7.9
Y19A Nutrioso 52.14 81 ⇑P P 13 15 48.0 0.0
baz=52
117A Oracle 52.15 83 ⇑P P 13 15 47.8 -0.2
baz=52
S24A Houchin Ranch, 52.20 75 ⇑P P 13 15 48.8 +0.4
baz=52,SNR=14
X20A Quemado 52.22 80 ⇓P P 13 15 48.8 +0.2
baz=52,SNR=12
Z18A Geronimo 52.24 82 ⇑P P 13 15 48.6 -0.1
baz=52
U23A El Rito 52.46 77 ⇑P P 13 15 50.7 +0.4
baz=52,SNR=28
WHN Wuhan 52.54 274 P P 13 15 51.0 0.0
Z19A T-Link Ranch, 52.58 82 ⇑P P 13 15 51.6 +0.4
baz=52
S25A Robets Cordova 52.66 74 ⇑P P 13 15 51.6 -0.1
baz=52,SNR=27
Y20A Horse Springs, 52.72 80 ⇓P P 13 15 52.7 +0.5
baz=53
X21A Alamocita Cree 52.72 79 ⇑P P 13 15 52.5 +0.2
baz=53,SNR=20
V23A Ortiz Mt. (NFS 52.85 77 ⇑P P 13 15 53.7 +0.6
baz=53
W22A Albuquerque 52.87 78 ⇑P P 13 15 53.5 +0.1
baz=53
U24A Moreno Valley 52.96 76 ⇓P P 13 15 54.6 +0.6
baz=53
218A Dragoon 52.98 83 ⇓P P 13 15 54.4 +0.2
baz=53
T25A Trinidad 53.01 75 ⇑P P 13 15 54.1 -0.2
baz=53,SNR=30
Y21A Point of Rocks 53.08 80 ⇓P P 13 15 55.2 +0.2
baz=53
Z20A Nine Sixteen R 53.12 81 ⇓P P 13 15 55.3 +0.2
baz=53
LAZ Ladron 53.15 79 eP P 13 15 56.2 +0.8
comp=Z,9.7nm,1.1s,mb4.8
X22A Bernardo 53.16 79 ⇑P P 13 15 56.0 +0.5
baz=53
ANMO Albuquerque 53.20 78 P P 13 15 56.5 +0.7
comp=Z,1.9nm,0.6s,mb4.3,baz=312,slow=10.0,SNR=6.8
ANMO Albuquerque 53.20 78 eP P 13 15 56.7 +0.9
ANMO pmax pmax
comp=Z,7.0nm,1.1s
ANMO Albuquerque 53.20 78 eP P 13 15 56.7 +0.9
comp=Z,6.6nm,1.1s,mb4.6
W23A Werner Place, 53.25 78 ⇓P P 13 15 56.4 +0.2
baz=53
SUMG Summit 53.33 14 eP P 13 15 56.1 -0.1
comp=Z,14nm,0.9s,mb5.0
SUMG Summit 53.33 14 iP P 13 15 56.2 0.0
comp=Z,13nm,0.9s,mb5.0
ECSD EROS Data Cent 53.34 64 eP P 13 15 55.1 -1.5

comp=Z,5.5nm,0.5s,mb4.8
318A Bisbee 53.38 84 ⇑P **P 13 15 57.1 0.0**
baz=53
V24A Rampart Ranch, 53.42 77 ⇓P **P 13 15 57.6 +0.2**
baz=53,SNR=13
219A White Tail Can 53.46 83 ⇓P **P 13 15 57.8 +0.1**
baz=53
EYMN Ely 53.47 57 *eP* **P 13 15 56.7 -0.9**
comp=Z,18nm,1.2s,mb5.0
120A U Bar Ranch, L 53.47 82 ⇓P **P 13 15 57.6 -0.2**
baz=53
U25A Circle Dot Ran 53.50 75 ⇓P **P 13 15 58.0 +0.1**
baz=53,SNR=21
XAN Xi'an 53.55 281 P **P 13 15 58.3 0.0**
XAN pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
Z21A St. Cloud Mine 53.55 80 ⇓P **P 13 15 58.7 +0.3**
baz=53
Y22A Socorro 53.57 79 ⇑P **P 13 15 58.7 +0.2**
baz=53,SNR=9.7
X23A Hourglass Bar 53.62 78 ⇓P **P 13 15 58.9 +0.1**
baz=54
BNM Barren Site 53.63 79 *eP* **P 13 15 59.2 +0.2**
comp=Z,15nm,1.1s,mb5.0
W24A Lazy 6 Ranch, 53.67 77 ⇑P **P 13 15 59.2 0.0**
baz=54,SNR=14
V25A Rancho No Teng 53.74 76 ⇑P **P 13 15 59.8 +0.1**
baz=54,SNR=13
319A Douglas 53.87 83 ⇑P **P 13 16 00.7 0.0**
baz=54
U26A Atchley Ranch, 53.90 75 ⇓P **P 13 16 01.0 +0.1**
baz=54
ZALV Zalesovo Beam 53.95 313 P **P 13 16 01.6 +0.7**
comp=Z,0.6nm,0.3s,mb4.1,baz=35,slow=5.4,SNR=4.6
ZALV PcP PcP 13 17 05.9 +0.4
comp=Z,11nm,0.8s,baz=33,slow=3.9,SNR=24
ZALV ScP ScP 13 20 59.1 +1.6
comp=Z,0.5nm,0.4s,baz=40,slow=7.7,SNR=3.7
ZALV LR LR 13 40 44.1
comp=Z,202nm,18.0s,baz=64,slow=38
220A Playas Peak, P 53.98 82 ⇓P **P 13 16 01.2 -0.3**
baz=54,SNR=13
121A Cookes Peak, D 54.01 81 ⇓P **P 13 16 01.9 +0.2**
baz=54
Z22A Elephant Butte 54.03 80 ⇓P **P 13 16 02.1 +0.3**
baz=54
X24A Lazy VL Ranch, 54.09 78 ⇑P **P 13 16 02.6 +0.3**
baz=54
Y23A Lovelace Mesa, 54.13 79 ⇑P **P 13 16 02.8 +0.2**
baz=54,SNR=20
W25A X Bar L Ranch, 54.25 76 ⇓P **P 13 16 03.1 -0.3**
baz=54,SNR=25
320A Kipp Ranch, An 54.36 83 ⇓P **P 13 16 04.3 0.0**
baz=54
221A Mesquite Ranch 54.37 82 ⇑P **P 13 16 04.3 -0.1**
baz=54
122A Conniff Cattle 54.38 81 ⇓P **P 13 16 05.0 +0.5**
baz=54
Z23A Rita Site, Whi 54.48 79 ⇓P **P 13 16 05.4 +0.3**
baz=54
Y24A Capitan 54.52 78 ⇓P **P 13 16 05.4 0.0**
baz=54,SNR=21
X25A Clemmons Ranch 54.59 77 ⇑P **P 13 16 06.2 +0.3**
baz=54
CBKS Cedar Bluff 54.71 70 *eP* **P 13 16 06.7 0.0**
CBKS pmax pmax
comp=Z,47nm,0.6s,mb5.7
CBKS Cedar Bluff 54.71 70 *eP* **P 13 16 06.7 0.0**
comp=Z,47nm,0.6s,mb5.7
222A Williams Famil 54.72 81 ⇑P **P 13 16 07.1 +0.2**
baz=55
W26A Owens Ranch, T 54.76 76 ⇓P **P 13 16 07.0 -0.2**
baz=55
Y25A Mesa, Roswell 54.97 78 ⇑P **P 13 16 08.4 -0.3**
baz=55
X26A CR and CF Fran 55.09 77 ⇓P **P 13 16 09.3 -0.3**
baz=55
W27A Bowe Ranch, En 55.20 76 ⇑P **P 13 16 09.7 -0.7**
baz=55
LZH Lanzhou 55.27 286 ⇓P **P 13 16 12.3 +1.5**
LZH pP pP 13 16 25.3 -2.4
LZH sP sP 13 16 31.8 -3.2
LZH PcP PcP 13 17 12.3 +1.4
LZH PP PP 13 18 17.5 +2.8
LZH *e*S **S 13 23 48.8 -0.8**
LZH sS sS 13 24 16.0 -2.1
LZH SS SS 13 27 32.0 -2.2
LZH pmax pmax
comp=Z,64nm,1.1s,mb5.6
LZH pmax pmax
comp=Z,430nm,5.2s
LZH LR LR
comp=N,760nm,16.9s
LZH LR LR
comp=Z,900nm,17.7s
124A Stringfield Ra 55.34 79 ⇑P **P 13 16 11.2 -0.1**
baz=55
Z25A Roswell 55.40 78 ⇓P **P 13 16 11.6 -0.1**
baz=55
GTA Gaotai 55.46 292 ⇑P **P 13 16 12.8 +0.7**
GTA pP pP 13 16 28.8 -0.2
GTA sP sP 13 16 35.8 -0.5
GTA PP PP 13 18 19.3 +3.0
GTA S **S 13 23 53.3 +1.3**
GTA pmax pmax
comp=Z,37nm,1.5s,mb5.2
GTA pmax pmax
comp=Z,180nm,7.5s
GTA LR LR
comp=N,330nm,17.4s
GTA LR LR
comp=E,250nm,18.0s
GTA LR LR
comp=Z,400nm,16.2s
Y26A Elida 55.51 77 ⇑P **P 13 16 12.4 -0.1**
baz=55
224A Cornudas Mount 55.72 80 ⇓P **P 13 16 13.6 -0.5**
baz=56,SNR=7.0
Z26A Caprock 55.85 78 ⇓P **P 13 16 14.6 -0.4**
baz=56,SNR=15
Y27A Causey 55.94 77 ⇑P **P 13 16 15.0 -0.6**
baz=56,SNR=17
MNTX Cornudas Mount 56.06 80 *eP* **P 13 16 16.3 -0.3**
comp=Z,6.8nm,0.9s,mb4.7
CPRX Cap Rock 56.09 78 P **P 13 16 16.9 +0.2**
comp=Z,7.0nm,0.7s,mb4.8
MSTX Muleshoe 56.12 76 ⇑P **P 13 16 16.5 -0.4**
baz=56
AMTX Amarillo 56.16 75 *eP* **P 13 16 17.1 -0.1**
comp=Z,20nm,0.5s,mb5.4
GDL2 Guadalupe Moun 56.35 79 *eP* **P 13 16 18.6 0.0**
comp=Z,4.8nm,0.8s,mb4.6
KSU1 Kansas State U 56.35 68 *eP* **P 13 16 17.5 -1.0**
comp=Z,36nm,0.8s,mb5.5
325A Bean Ranch, Si 56.54 80 ⇑P **P 13 16 19.5 -0.4**
baz=56,SNR=8.3
226A Malaga, Loving 56.60 79 ⇑P **P 13 16 20.1 -0.3**
baz=56
425A Indio Mountain 56.94 81 ⇑P **P 13 16 22.4 -0.4**
baz=57,SNR=10
326A Caldwell Ranch 57.19 80 ⇓P **P 13 16 24.5 -0.1**
baz=57,SNR=6.1
JFWS Jewell Farm 57.40 61 *eP* **P 13 16 24.3 -1.5**
JFWS pmax pmax
comp=Z,8.0nm,0.5s,mb5.0
JFWS Jewell Farm 57.40 61 *eP* **P 13 16 24.3 -1.6**
comp=Z,8.4nm,0.5s,mb5.0
426A McDonald Obser 57.61 80 ⇓P **P 13 16 26.8 -0.7**
baz=58
KEV Kevo 57.70 350 *eP* **P 13 16 27.0 -0.6**
KEV Kevo 57.70 350 *ep* **P 13 16 27.0 -0.6**
328A Wristen Ranch, 57.87 79 ⇓P **P 13 16 28.4 -0.9**
baz=58,SNR=13
427A Hayter Ranch, 57.87 80 ⇓P **P 13 16 28.9 -0.4**
baz=58
526A Mary Lane Ranc 58.00 81 ⇑P **P 13 16 29.8 -0.4**
baz=58,SNR=8.3
WMOK Wichita Mounta 58.01 73 *eP* **P 13 16 29.6 -0.6**
WMOK pmax pmax
comp=Z,13nm,0.6s,mb5.1
WMOK Wichita Mounta 58.01 73 *eP* **P 13 16 29.6 -0.6**
comp=Z,13nm,0.6s,mb5.1
ARCES ARCESS Array B 58.08 350 P **P 13 16 29.2 -1.0**
comp=Z,3.5nm,0.4s,mb4.7,baz=21,slow=8.0,SNR=51
ARCES PcP PcP 13 17 21.0 -0.3
comp=Z,2.9nm,0.6s,baz=1.1,slow=6.1,SNR=3.8
ARCES LR LR 13 45 51.9
comp=Z,257nm,19.2s,baz=264,slow=40
ARCES ARCESS Array B 58.08 350 P **P 13 16 29.2 -1.0**
ARCES 13 17 21.0
ARCES pmax pmax
comp=Z,4.0nm,0.4s
ARCES MLR MLR
comp=Z,257nm,19.2s
ARCES ARCESS Array B 58.08 350 P **P 13 16 29.2 -1.0**
ARCES PcP PcP 13 17 21.0 -0.3
ARCES LR LR 13 45 51.9
ARE0 ARCESS Array S 58.08 350 *eP* **P 13 16 29.1 -1.1**
527A Woodward Ranch 58.23 80 ⇓P **P 13 16 31.6 -0.3**
baz=58
626A Big Bend Ranch 58.33 81 ⇑P **P 13 16 32.0 -0.5**
baz=58,SNR=12
428A Kincaid Ranch, 58.40 79 ⇑P **P 13 16 32.7 -0.3**
baz=58,SNR=6.6
TXAR Lajitas Array 58.77 81 P **P 13 16 34.9 -0.7**
comp=Z,3.2nm,0.6s,mb4.5,baz=305,slow=5.6,SNR=33
TXAR LR LR 13 40 27.7
comp=Z,129nm,19.2s,baz=10.0,slow=34
627A Terlingua Ranc 58.86 81 ⇑P **P 13 16 35.8 -0.4**
baz=59,SNR=9.4
CD2 Chengdu 58.86 282 P **P 13 16 36.0 -0.2**
CD2 pP pP 13 16 52.0 -1.2
CD2 sP sP 13 16 59.0 -1.5
CD2 PcP PcP 13 17 25.3 +0.3
CD2 PP PP 13 18 48.0 +1.3
CD2 S **S 13 24 34.5 -2.4**
CD2 sS sS 13 25 01.8 -3.9
CD2 SS SS 13 28 29.8 -1.0
CD2 pmax pmax
comp=Z,50nm,0.9s,mb5.5
CD2 pmax pmax
comp=Z,440nm,5.4s
CD2 LR LR
comp=N,990nm,5.9s
CD2 LR LR
comp=Z,760nm,6.5s
KURK Kurchatov 58.94 314 P **P 13 16 35.1 -1.4**
comp=Z,70nm,0.9s,mb5.7,SNR=9.5
KURK Kurchatov 58.94 314 *eP* **P 13 16 35.6 -0.9**
KURK pmax pmax
comp=Z,14nm,0.9s,mb5.0
KURK Kurchatov 58.94 314 *eP* **P 13 16 35.6 -0.9**
comp=Z,14nm,0.9s,mb5.0
WMQ Urumqi 59.25 303 P **P 13 16 40.3 +1.6**
WMQ pP pP 13 16 56.3 +0.6
WMQ sP sP 13 17 03.3 +0.3
WMQ PP PP 13 18 47.5 -2.2
WMQ ScS ScS 13 26 20.3 -2.3
WMQ pmax pmax
comp=Z,21nm,0.7s,mb5.3
WMQ pmax pmax
comp=Z,180nm,7.0s
WMQ LR LR
comp=N,330nm,21.6s
WMQ LR LR
comp=E,260nm,20.8s
WMQ LR LR
comp=Z,420nm,21.6s
HDIL Hopedale 59.52 62 *eP* **P 13 16 39.7 -1.0**
comp=Z,48nm,0.6s,mb5.7
MK31 Makanchi Array 59.95 308 *ceP* **P 13 16 42.6 -0.9**
MK31 pmax pmax
comp=Z,2.0nm,0.3s,mb4.6
MK31 Makanchi Array 59.95 308 *eP* **P 13 16 42.2 -1.3**
MKAR Makanchi Array 59.95 308 P **P 13 16 42.5 -1.0**
comp=Z,3.3nm,0.3s,mb4.8,baz=48,slow=6.9,SNR=83
MKAR PcP PcP 13 17 29.1 0.0
comp=Z,3.3nm,0.7s,baz=62,slow=5.6,SNR=3.8
MKAR LR LR 13 43 49.9
comp=Z,191nm,19.6s,baz=39,slow=37
MKAR Makanchi Array 59.95 308 P **P 13 16 42.5 -1.0**
MKAR 13 17 29.1
MKAR pmax pmax
comp=Z,3.0nm,0.3s
MKAR MLR MLR
comp=Z,191nm,19.6s
SCHQ Schefferville 60.08 38 P **P 13 16 43.2 -1.0**
comp=Z,5.3nm,0.5s,mb4.9,baz=327,slow=7.9,SNR=11
SCHQ LR LR 13 44 24.3
comp=Z,544nm,18.4s,baz=314,slow=38
SCHQ Schefferville 60.08 38 *eP* **P 13 16 43.0 -1.2**
comp=Z,20nm,1.1s,mb5.0
CCM Cathedral Cave 60.14 65 *eP* **P 13 16 43.1 -1.9**
CCM pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
CCM Cathedral Cave 60.14 65 *eP* **P 13 16 43.1 -1.9**
comp=Z,9.4nm,0.6s,mb5.0
GYA Guiyang 60.21 276 ⇓*iP* **P 13 16 45.5 -0.1**
GYA pP pP 13 17 01.5 -1.1
GYA sP sP 13 17 08.5 -1.4
GYA PcP PcP 13 17 30.8 +0.3
GYA PP PP 13 19 00.0 +1.3
GYA ScP ScP 13 21 25.0 -0.6
GYA S **S 13 24 50.5 -3.9**
GYA sS sS 13 25 19.0 -4.2
GYA SS SS 13 28 50.0 -2.1
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,170nm,5.7s
GYA LR LR
comp=N,310nm,18.8s
GYA LR LR
comp=E,330nm,19.5s
GYA LR LR
comp=Z,380nm,17.9s
JCT Junction City 60.34 77 *eP* **P 13 16 45.8 -0.6**
JCT pmax pmax
comp=Z,14nm,0.6s,mb5.2
JCT Junction City 60.34 77 *eP* **P 13 16 45.8 -0.6**
comp=Z,14nm,0.6s,mb5.2
FVM French Village 60.66 65 *eP* **P 13 16 47.3 -1.2**
FVM pmax pmax
comp=Z,22nm,0.6s,mb5.4
FVM French Village 60.66 65 *eP* **P 13 16 47.3 -1.2**
comp=Z,22nm,0.6s,mb5.4
BVAR Borovoye Array 60.82 320 P **P 13 16 48.5 -0.8**
comp=Z,6.2nm,0.3s,mb5.0,baz=53,slow=7.7,SNR=30
BVAR PcP PcP 13 17 32.4 -0.1
comp=Z,4.9nm,0.5s,baz=58,slow=3.6,SNR=7.5
BVAR Borovoye Array 60.82 320 P **P 13 16 48.5 -0.8**
BVAR 13 17 32.4
BVAR pmax pmax
comp=Z,6.0nm,0.4s
BRVK Borovoye 60.84 320 ⇓*eP* **P 13 16 48.1 -1.3**
BRVK pmax pmax
comp=Z,19nm,1.7s,mb4.8
BRVK Borovoye 60.84 320 *eP* **P 13 16 48.9 -0.5**
comp=Z,8.5nm,0.6s,mb5.0
MIAR Mount Ida 61.23 70 *eP* **P 13 16 51.7 -0.7**
MIAR pmax pmax
comp=Z,38nm,1.1s,mb5.3
MIAR Mount Ida 61.23 70 *eP* **P 13 16 51.6 -0.8**
comp=Z,38nm,1.1s,mb5.3
ZRNK Zerenda 61.43 320 *iP* **P 13 16 54.7 +1.2**
ZRNK pmax pmax
comp=Z,7.0nm,0.3s,mb5.2
OLIL Olney 61.45 63 *eP* **P 13 16 53.1 -0.7**
comp=Z,40nm,0.6s,mb5.6
SIUC Southern Illin 61.53 64 *eP* **P 13 16 53.1 -1.3**
comp=Z,22nm,0.5s,mb5.4
SADO Sadowa 61.93 53 P **P 13 16 56.4 -0.6**
comp=Z,3.3nm,0.4s,mb4.7,baz=328,slow=9.4,SNR=3.9
BLO Bloomington 62.01 62 *eP* **P 13 16 56.8 -0.8**
BLO pmax pmax
comp=Z,27nm,0.6s,mb5.5
BLO Bloomington 62.01 62 *eP* **P 13 16 56.8 -0.8**
comp=Z,27nm,0.6s,mb5.5
ARU Arti 62.55 328 *ciP* **P 13 17 00.2 -0.7**
ARU *e* 13 17 38.0
ARU *e* 13 19 15.0
ARU S **S 13 25 24.7 +1.5**
ARU SS SS 13 29 26.7 -0.5
ARU pmax pmax
comp=Z,15nm,2.5s,mb4.5
ARU MLR MLR
comp=Z,394nm,21.0s
ARU Arti 62.55 328 *eP* **P 13 16 60.0 -0.9**
comp=Z,4.9nm,0.6s,mb4.6
HALT Halls 62.73 66 *eP* **P 13 17 02.0 -0.4**
WCI Wyandotte Cave 62.81 62 *eP* **P 13 17 02.3 -0.6**
WCI pmax pmax
comp=Z,19nm,0.5s,mb5.3
WCI Wyandotte Cave 62.81 62 *eP* **P 13 17 02.3 -0.6**
comp=Z,19nm,0.5s,mb5.3
HKT Hockley 63.13 75 *eP* **P 13 17 05.8 +0.6**
HKT pmax pmax
comp=Z,17nm,1.2s,mb4.8
HKT Hockley 63.13 75 *eP* **P 13 17 05.8 +0.6**
comp=Z,17nm,1.2s,mb4.8
WVT Waverly 63.44 65 *eP* **P 13 17 06.5 -0.6**
WVT pmax pmax
comp=Z,37nm,1.1s,mb5.2
WVT Waverly 63.44 65 *eP* **P 13 17 06.5 -0.6**
comp=Z,37nm,1.1s,mb5.2
JOF Joensuu 63.57 345 *eP* **P 13 17 06.5 -1.1**
JOF pmax pmax
comp=Z,160nm,0.4s,mb6.2
JOF Joensuu 63.57 345 *ep* **P 13 17 06.5 -1.1**
comp=Z,160nm,0.4s,mb6.2
KMI Kunming 63.61 278 P **P 13 17 08.3 -0.1**
KMI pP pP 13 17 25.0 -0.6
KMI sP sP 13 17 32.3 -0.5
KMI PP PP 13 19 27.8 -0.9
KMI S **S 13 25 34.8 -2.6**
KMI sS sS 13 26 03.5 -2.9
KMI SKS 13 26 52.0
KMI SS SS 13 29 42.5 -2.8
KMI pmax pmax
comp=Z,24nm,1.1s,mb4.9
KMI pmax pmax
comp=Z,370nm,5.0s
KMI LR LR
comp=Z,130nm,25.7s
QIZ Qiongzhong 63.65 268 P **P 13 17 07.8 -0.9**
QIZ PP PP 13 19 28.3 -0.8
QIZ S **S 13 25 37.5 -0.4**
QIZ SS SS 13 29 46.5 +0.4
QIZ LR LR
comp=N,86nm,23.9s
QIZ LR LR
comp=E,20nm,24.1s
QIZ LR LR
comp=Z,97nm,20.4s
OXF Oxford 63.69 67 *eP* **P 13 17 08.5 -0.3**
OXF pmax pmax
comp=Z,144nm,1.0s,mb5.8
OXF Oxford 63.69 67 *eP* **P 13 17 08.5 -0.2**
comp=Z,144nm,1.0s,mb5.8
VBMS Vicksburg 64.68 70 P **P 13 17 13.8 -1.5**
KAF Kangasniemi 65.09 347 *eP* **P 13 17 16.2 -1.3**
KAF pmax pmax
comp=Z,105nm,0.3s,mb6.1
KAF Kangasniemi 65.09 347 *eP* **P 13 17 16.2 -1.3**
comp=Z,105nm,0.3s,mb6.1
KAF Kangasniemi 65.09 347 *ep* **P 13 17 16.2 -1.3**
comp=Z,105nm,0.3s,mb6.1,baz=15,slow=5.9
SWET Sewanee 65.17 64 *eP* **P 13 17 17.4 -1.0**
BINY Binghamton 65.37 53 P **P 13 17 18.7 -0.9**
comp=Z,44nm,1.3s,mb5.1
FINES FINESS Array B 65.76 347 P **P 13 17 21.6 -0.2**
comp=Z,6.7nm,0.3s,mb5.0,baz=5.1,slow=7.2,SNR=54
FINES LR LR 13 51 49.7
comp=Z,225nm,19.2s,baz=170,slow=41
CPCT Cooper Cave 65.79 63 *eP* **P 13 17 21.9 -0.5**
TKM2 Tokmak 2 66.03 309 P **P 13 17 25.3 +1.4**
SNR=16
TKM2 Tokmak 2 66.03 309 P **P 13 17 24.1 +0.2**
TKM2 pmax pmax
comp=Z,18nm,1.0s,mb4.9
TKM2 Tokmak 2 66.03 309 P **P 13 17 24.1 +0.3**
comp=Z,18nm,1.0s,mb4.9
TKL Tuckaleechee C 66.06 63 P **P 13 17 23.8 -0.4**
comp=Z,20nm,0.7s,mb5.0,baz=273,slow=1.6,SNR=18
TKL Tuckaleechee C 66.06 63 P **P 13 17 23.8 -0.4**
TKL pmax pmax
comp=Z,20nm,0.7s,mb5.1
TKL Tuckaleechee C 66.06 63 *eP* **P 13 17 23.3 -0.8**
LRAL Lakeview Retre 66.14 67 *eP* **P 13 17 23.3 -1.4**
comp=Z,9.8nm,0.6s,mb4.8
ULHL Ulahol 66.22 308 P **P 13 17 25.2 +0.1**
SNR=7.5
USP Ospenovka 66.30 310 P **P 13 17 27.0 +1.4**
SNR=18
KBK Karagaybulak 66.54 309 P **P 13 17 28.5 +1.4**
SNR=6.3
ELN Prospectdale 66.56 59 *eP* **P 13 17 26.7 -0.6**
FRU Bishkek 66.57 310 *eP* **P 13 17 28.5 +1.2**
AAK Ala-Archa 66.78 310 P **P 13 17 30.6 +1.9**
SNR=6.6
KZA Kyzart 66.83 309 P **P 13 17 30.9 +1.9**
SNR=7.1
EKS2 Erkin-Say 67.10 310 P **P 13 17 32.1 +1.4**
SNR=17
EKS2 Erkin-Say 67.10 310 *eP* **P 13 17 31.8 +1.1**
comp=Z,17nm,0.7s,mb5.0
LSA Lhasa 67.33 289 P **P 13 17 33.8 +1.4**
LSA Lhasa 67.33 289 *eP* **P 13 17 34.5 +2.1**
LSA pmax pmax
comp=Z,23nm,0.6s,mb5.2
LSA Lhasa 67.33 289 *eP* **P 13 17 34.5 +2.1**
comp=Z,23nm,0.6s,mb5.2
AML Almayashu 67.55 310 P **P 13 17 35.6 +2.1**
SNR=14
AML Almayashu 67.55 310 *eP* **P 13 17 35.3 +1.8**
comp=Z,22nm,0.9s,mb5.0
NB2 NORSAR Subarra 67.64 355 P **P 13 17 33.5 -0.3**
comp=Z,4.0nm,0.6s,mb4.4,baz=7.1,slow=6.5
NOA NORSAR Array B 67.64 355 P **P 13 17 32.9 -0.9**
comp=Z,4.1nm,0.6s,mb4.4,baz=7.1,slow=6.3,SNR=24
NOA PcP PcP 13 18 00.3 0.0
comp=Z,1.0nm,0.8s,baz=342,slow=4.6,SNR=4.0
NOA LR LR 13 48 09.9
comp=Z,127nm,19.8s,baz=350,slow=37
NOA NORSAR Array B 67.64 355 P **P 13 17 32.9 -0.9**
NOA 13 18 00.3
NOA pmax pmax
comp=Z,4.0nm,0.6s
NOA MLR MLR
comp=Z,127nm,19.8s
NOA NORSAR Array B 67.64 355 P **P 13 17 32.9 -0.9**
NOA PcP PcP 13 18 00.3 0.0
NOA LR LR 13 48 09.9
AB31 Akbulak array 67.87 323 *ceP* **P 13 17 34.5 -0.9**
AB31 pmax pmax
comp=Z,2.0nm,0.5s,mb4.2
ABKAR Akbulak array 67.87 323 *eP* **P 13 17 34.8 -0.7**
comp=Z,1.2nm,0.4s,mb4.1
GOGA Godfrey 67.88 64 *eP* **P 13 17 34.7 -1.0**
GOGA pmax pmax
comp=Z,43nm,1.1s,mb5.2
GOGA Godfrey 67.88 64 *eP* **P 13 17 34.7 -1.0**
comp=Z,43nm,1.1s,mb5.2
KK31 Karatay Array 68.30 312 *ceP* **P 13 17 39.1 +0.9**
KK31 pmax pmax
comp=Z,5.0nm,0.4s,mb4.7
KSH Kashi 68.41 307 P **P 13 17 43.8 +4.8**
KSH pP pP 13 18 00.5 +4.2
KSH sP sP 13 18 07.0 +3.5
KSH PcP PcP 13 18 08.0 +4.0
KSH PP PP 13 20 18.5 +8.4
KSH ScP 13 22 05.0
KSH PcS 13 22 11.3
KSH S S 13 26 42.0 +6.7
KSH sS sS 13 27 09.5 +4.8
KSH ScS ScS 13 27 34.3 +1.6
KSH SS SS 13 31 08.8 +10
KSH pmax pmax
comp=Z,23nm,0.6s,mb5.2
KSH pmax pmax
comp=Z,110nm,4.9s
KSH LR LR
comp=N,220nm,7.9s
KSH LR LR
comp=E,170nm,5.7s
KSH LR LR
comp=Z,430nm,23.0s
JSC Jenkinsville 68.46 62 *eP* **P 13 17 39.2 -0.2**
VSU Vasula 68.53 346 ⇓*eP* **P 13 17 38.8 -0.6**
VSU pmax pmax
comp=Z,39nm,1.2s,mb5.1
TAOE Nuku Hiva Isla 68.69 138 *e*LR LR 13 38 08.7
comp=Z,582nm,22.4s
MOS Moscow 69.02 339 *eP* **P 13 17 41.7 -0.8**
MOS pmax pmax
comp=Z,55nm,0.9s,mb5.4
OBN Obninsk 69.83 339 ⇓*iP* **P 13 17 47.3 -0.2**
OBN *e* 13 18 09.5

OBN pmax pmax
comp=Z,42nm,1.0s,mb5.2
OBN MLR MLR
comp=Z,400nm,18.0s
OBN Obninsk 69.83 339 *e*P **P 13 17 47.5 -0.1**
comp=Z,21nm,0.4s,mb5.3
SHL Shillong 69.94 286⇑*i*P **P 13 17 49.0 +0.3**
CHTO Chiang Mai 70.63 276 *e*P **P 13 17 51.9 -1.0**
CHTO pmax pmax
comp=Z,17nm,1.1s,mb4.8
CHTO Chiang Mai 70.63 276 *e*P **P 13 17 51.9 -1.1**
comp=Z,17nm,1.1s,mb4.8
CM31 Chiang Mai Arr 70.90 276 P **P 13 17 54.2 -0.4**
comp=Z,2.6nm,0.5s,mb4.3
CMAR Chiang Mai Arr 70.90 276 P **P 13 17 54.8 +0.2**
comp=Z,8.6nm,0.8s,mb4.6,baz=26,slow=6.7,SNR=32
CMAR LR LR 13 52 45.1
comp=Z,147nm,18.7s,baz=247,slow=39
CMAR Chiang Mai Arr 70.90 276 P **P 13 17 54.8 +0.2**
CMAR pmax pmax
comp=Z,9.0nm,0.8s
CMAR MLR MLR
comp=Z,147nm,18.7s
TAPN Taplejung 71.10 290 *e*P **P 13 17 56.8 +1.1**
comp=Z,103nm,0.7s,mb5.7
ODAN Odare 71.66 290 *e*P **P 13 17 59.6 +0.6**
comp=Z,29nm,0.6s,mb5.3
GUN Gumba 71.75 292 *e*P **P 13 18 00.9 +1.3**
comp=Z,146nm,0.4s,mb6.1
JIRN Jiri 71.76 291 *e*P **P 13 18 01.1 +1.4**
comp=Z,110nm,0.6s,mb5.9
RAMN Ramite 72.05 291 *e*P **P 13 18 02.3 +0.9**
comp=Z,126nm,0.4s,mb6.1
KKN Kakani 72.19 292 *e*P **P 13 18 03.4 +1.2**
comp=Z,59nm,0.5s,mb5.6
KKN Kakani 72.19 292 *e*P **P 13 18 03.4 +1.2**
KKN pmax pmax
comp=Z,59nm,0.5s,mb5.7
VRHR Novokhopersk 72.26 334 *e*P **P 13 18 00.9 -1.4**
VRHR pmax pmax
comp=N,10.0nm,1.0s
VRHR pmax pmax
comp=Z,20nm,1.0s,mb4.9
VRHR pmax pmax
comp=E,10.0nm,0.5s
PKI Pulchoki 72.28 292 *e*P **P 13 18 03.7 +0.9**
comp=E,59nm,0.6s,mb5.6
PKI Pulchoki 72.28 292 *e*P **P 13 18 03.7 +0.9**
PKI pmax pmax
comp=Z,59nm,0.6s,mb5.6
PKIN Phulchoki 72.28 292 *e*P **P 13 18 03.6 +0.8**
comp=Z,68nm,0.6s,mb5.7
GKN Gorkha 72.40 293 *e*P **P 13 18 04.3 +0.8**
comp=Z,44nm,0.4s,mb5.7
DMN Daman 72.43 292 *e*P **P 13 18 04.5 +0.8**
comp=Z,24nm,0.3s,mb5.4
VSR Storozhevoye 72.80 336 *e*P **P 13 18 04.8 -0.7**
VSR pmax pmax
comp=N,10.0nm,1.0s
VSR pmax pmax
comp=E,8.0nm,1.0s
VSR pmax pmax
comp=Z,20nm,1.0s,mb4.9
VSR MLR MLR
comp=N,450nm,22.0s
VSR MLR MLR
comp=E,120nm,22.0s
VSR MLR MLR
comp=Z,380nm,22.0s
VORD Divnogorie 72.99 336 *e*P **P 13 18 06.0 -0.6**
VORD pmax pmax
comp=N,6.0nm,0.4s
VORD pmax pmax
comp=E,10.0nm,0.4s
VORD pmax pmax
comp=Z,9.0nm,0.4s,mb5.0
VORD MLR MLR
comp=N,110nm,20.0s
VORD MLR MLR
comp=E,130nm,20.0s
VORD MLR MLR
comp=Z,170nm,20.0s
KOLN Koldanda 73.18 293 *e*P **P 13 18 08.7 +0.6**
comp=Z,64nm,0.9s,mb5.5
KLP Kalpa 73.31 300 *e*PKP **P 13 18 09.7 +0.9**
PPT Papeete 73.31 151 *e*LR LR 13 40 06.0
comp=Z,482nm,28.2s
PPT Papeete 73.31 151 LR LR 13 45 35.2
comp=Z,267nm,19.5s,baz=353,slow=32
JOSI Joshimath 73.34 298 *e*PKP **P 13 18 09.8 +0.8**
ESK Eskdalemuir 73.62 3 *i* P **P 13 18 11.6 +1.4**
SDNR Sundarnagar 74.03 300 *e*PKP **P 13 18 13.5 +0.5**
DZM Mont Dzumac 74.24 194 *e*LR LR 13 41 09.4
comp=Z,518nm,23.6s
DDI Dehra Dun 74.34 299 *e*PKP **P 13 18 14.0 -0.9**
BSEG Bad Segeberg 74.77 354 *e*P **P 13 18 17.0 0.0**
comp=Z,24nm,1.0s,mb4.9
BSEG Bad Segeberg 74.77 354 *e*P **P 13 18 17.0 0.0**
BSEG pmax pmax
comp=Z,24nm,1.0s,mb4.9
TEIG Tepich 74.90 77 *e*P **P 13 18 18.8 +0.5**
comp=Z,14nm,1.0s,mb4.7
KIEV Kiev 75.53 342 *e*P **P 13 18 20.2 -1.1**
KIEV pmax pmax
comp=Z,41nm,1.0s,mb5.1
KIEV Kiev 75.53 342 *e*P **P 13 18 20.2 -1.1**
comp=Z,41nm,1.0s,mb5.1
KBL Kabul 75.75 308 *e*P **P 13 18 21.3 -1.6**
KBL pmax pmax
comp=Z,29nm,0.9s,mb5.0
KBL Kabul 75.75 308 *e*P **P 13 18 21.3 -1.6**
comp=Z,29nm,0.9s,mb5.0
AYAN Aya Nagar 76.28 298 *e*PKP **P 13 18 26.1 +0.1**
KAKA Kakadu 76.45 229 *e*P **P 13 18 26.2 -0.8**
comp=Z,18nm,0.9s,mb4.8
KAKA Kakadu 76.45 229 *e*P **P 13 18 26.0 -1.0**
comp=Z,41nm,0.8s,mb5.2
SONA Sohna 76.48 298 *e*PKP **P 13 18 27.2 +0.1**
IBBN Ibbenburen 76.54 356 *e*P **P 13 18 27.0 -0.1**
comp=Z,42nm,1.0s,mb5.1
AGRA Agra 76.80 297 *e*PKP **P 13 18 28.4 -0.6**
CLZ Clausthal 76.86 354 *e*P **P 13 18 29.1 +0.2**
comp=Z,23nm,1.0s,mb4.9
CLZ Clausthal 76.86 354 *e*P **P 13 18 29.1 +0.2**
CLZ pmax pmax
comp=Z,23nm,1.0s,mb4.9
KSM Kuching 76.89 256 *e*P **P 13 18 27.5 -2.0**
comp=Z,13nm,1.2s,mb4.5
WTSB Winterswijk 76.92 356 *e*P **P 13 18 29.7 +0.5**
comp=Z,18nm,1.7s,mb4.5
CLL Collm 77.19 352 *i* P **P 13 18 30.0 -0.8**
CLL pmax pmax
comp=Z,11nm,1.1s,mb4.5
CLL Collm 77.19 352 *i* P **P 13 18 30.0 -0.8**
comp=Z,11nm,1.1s,mb4.5
CLL Collm 77.19 352 *i* P **P 13 18 30.0 -0.8**
comp=Z,11nm,1.1s,mb4.5
LVV L'vov 77.29 345 *e*P **P 13 18 30.2 -1.2**
KHET Khetri 77.32 299 *e*PKP **P 13 18 31.1 -0.8**
KHET AMb AMB 13 18 33.6
comp=Z,40nm,1.0s,mb5.1
CTA Charters Tower 77.41 213 *e*P **P 13 18 31.8 -0.5**
comp=Z,4.3nm,0.9s,mb4.2
BRG Berggiesshubel 77.54 352 *e*P **P 13 18 32.0 -0.7**
comp=Z,7.3nm,0.8s,mb4.4
BRG Berggiesshubel 77.54 352 *e*P **P 13 18 32.0 -0.7**
BRG pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
KWP Kalwaria Pacla 77.69 346 *e*P **P 13 18 34.1 +0.6**
KWP pmax pmax
comp=Z,63nm,0.5s,mb5.6
KWP Kalwaria Pacla 77.69 346 *e*P **P 13 18 34.1 +0.6**
comp=Z,63nm,0.5s,mb5.6
UPC Upice 77.70 350 *e*P **P 13 18 33.9 +0.3**
UPC Upice 77.70 350 *e*P **P 13 18 33.9 +0.3**
DPC Dobruska-Polom 77.82 350 *e*P **P 13 18 34.8 +0.5**
DPC MLR MLR
comp=Z,300nm,16.6s
DPC Dobruska-Polom 77.82 350 *e*P **P 13 18 34.8 +0.5**
DPC AMS AMS 13 59 30.0
comp=Z,300nm,16.6s
PVCC Panska Ves 77.82 351 *e*P **P 13 18 36.5 +2.2**
PVCC MLR MLR
comp=Z,200nm,15.8s
PVCC Panska Ves 77.82 351 *e*P **P 13 18 36.5 +2.2**
PVCC AMS AMS 13 59 30.0
comp=Z,200nm,15.8s

MOX Moxa 77.96 353 *e*P **P 13 18 35.2 +0.1**
comp=Z,22nm,1.4s,mb4.7
MOX
comp=Z,100nm,21.0s
MOX Moxa 77.96 353 *e*P **P 13 18 34.5 -0.6**
comp=Z,22nm,1.4s,mb4.7
MOX Moxa 77.96 353 *e*P **P 13 18 35.2 +0.1**
MOX pmax pmax
comp=Z,22nm,1.4s,mb4.7
MOX MLR MLR
comp=Z,100nm,21.0s
WERD Werda 78.10 353 *e*P **P 13 18 35.4 -0.4**
comp=Z,10.0nm,1.2s,mb4.4
OKC Ostrava-Krasne 78.11 349 *e*P **P 13 18 36.2 +0.3**
OKC MLR MLR
comp=Z,400nm,28.5s
OKC Ostrava-Krasne 78.11 349 *e*P **P 13 18 36.2 +0.3**
OKC AMS AMS 13 56 40.0
comp=Z,400nm,28.5s
STHS Stebnicka Huta 78.11 347 *e*P **P 13 18 36.8 +0.9**
STHS pmax pmax
comp=Z,12nm,1.1s,mb4.5
STHS Stebnicka Huta 78.11 347 *e*P **P 13 18 36.8 +0.9**
comp=Z,12nm,1.1s,mb4.5
STHS Stebnicka Huta 78.11 347 *e*P **P 13 18 36.8 +0.9**
TANN Tannenbergstha 78.12 353 *e*P **P 13 18 35.7 -0.3**
comp=Z,14nm,1.5s,mb4.5
HGN Heimansgroeve 78.15 357 *e*P **P 13 18 36.5 +0.3**
comp=Z,25nm,1.2s,mb4.8
GUNZ Gunzen 78.18 353 *e*P **P 13 18 35.9 -0.4**
comp=Z,10.0nm,1.0s,mb4.5
NKC Novy Kostel 78.30 353 *e*P **P 13 18 37.2 +0.2**
NKC MLR MLR
comp=Z,200nm,17.9s
NKC Novy Kostel 78.30 353 *e*P **P 13 18 37.2 +0.2**
NKC AMS AMS 14 01 00.0
comp=Z,200nm,17.9s
MEM Membach 78.31 357 P **P 13 18 36.9 -0.1**
comp=Z,12nm,1.1s,mb4.5
PRU Pruhonice 78.36 351 *e*P **P 13 18 38.1 +0.8**
PRU MLR MLR
comp=Z,200nm,17.5s
PRU Pruhonice 78.36 351 *e*P **P 13 18 38.1 +0.8**
PRU AMS AMS 13 59 50.0
comp=Z,200nm,17.5s
KIV Kislovodsk 78.42 331 *e*P **P 13 18 38.1 +0.4**
KIV pmax pmax
comp=Z,20nm,1.0s,mb4.8
KIV MLR MLR
comp=Z,273nm,20.0s
KIV Kislovodsk 78.42 331 *e*P **P 13 18 37.6 -0.1**
comp=Z,16nm,1.0s,mb4.7
MENF Mencas 78.44 359⇑*e*P **P 13 18 37.4 -0.3**
SNF Seneffe 78.46 358 P **P 13 18 38.2 +0.4**
comp=Z,9.6nm,1.2s,mb4.4
BCLA Clavier 78.52 357 P **P 13 18 38.0 -0.1**
comp=Z,9.0nm,1.3s,mb4.4
UZH Uzhgorod 78.72 346 *e*P **P 13 18 32.5 -6.8**
VRAC Vranov 78.82 350 P **P 13 18 40.7 +0.9**
GIVF Givet 78.85 358 *e*P **P 13 18 39.9 -0.1**
comp=Z,16nm,0.7s,mb4.7
GIVF Givet 78.85 358 *e*P **P 13 18 39.9 -0.1**
GIVF pmax pmax
comp=Z,8.0nm,0.7s,mb4.7
GIVF Givet 78.85 358 *e*P **P 13 18 39.9 -0.1**
comp=Z,8.1nm,0.7s,mb4.7
DOU Dourbes 78.86 358 P **P 13 18 40.6 +0.6**
comp=Z,8.7nm,1.4s,mb4.4
BAIF Baives 78.91 358 *e*P **P 13 18 40.6 +0.3**
comp=Z,69nm,1.1s,mb5.1
BAIF Baives 78.91 358 *e*P **P 13 18 40.6 +0.3**
BAIF pmax pmax
comp=Z,34nm,1.1s,mb5.1
BAIF Baives 78.91 358 *e*P **P 13 18 40.6 +0.3**
comp=Z,34nm,1.1s,mb5.1
TREC Trest 78.95 350 AMS AMS 14 00 40.0
comp=Z,300nm,19.0s
ZEI Tsey 79.11 329 *e*P **P 13 18 40.6 -0.9**
ZEI pmax pmax
comp=Z,18nm,0.4s,mb5.2
KIS Kishinev 79.13 341⇓*i*P **P 13 18 41.0 -0.6**
KIS *e*L 13 52 40.0
KIS LRM 13 58 44.0
comp=Z,600nm,17.0s
KECS Kecovo 79.13 347 *e*P **P 13 18 42.0 +0.4**
KECS pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
KECS Kecovo 79.13 347 *e*P **P 13 18 42.0 +0.4**
comp=Z,6.5nm,1.0s,mb4.4
KECS Kecovo 79.13 347 *e*P **P 13 18 42.0 +0.4**
RUP Ruppelstein 79.17 356 *e*P **P 13 18 41.7 0.0**
TRPA Tarpa 79.17 346⇑*i*P **P 13 18 41.6 -0.2**
BUR08 Bucovina Ar. S 79.20 344 *e*P **P 13 18 41.8 -0.1**
AJM Ajmer 79.21 299 *e*PKP **P 13 18 42.3 -0.1**
BURAR Bucovina Array 79.22 344⇑P **P 13 18 42.2 +0.1**
BURAR Bucovina Array 79.22 344⇑*i*P **P 13 18 42.2 +0.1**
WLF Walferdange 79.24 357 P **P 13 18 42.5 +0.4**
comp=Z,13nm,1.3s,mb4.6
WLF Walferdange 79.24 357 *e*P **P 13 18 42.2 +0.1**
comp=Z,20nm,1.1s,mb4.9
KHC Kasperske Hory 79.30 352 *e*P **P 13 18 42.6 +0.2**
KHC pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
KHC Kasperske Hory 79.30 352 *e*P **P 13 18 42.6 +0.2**
comp=Z,9.7nm,1.0s,mb4.6
KHC Kasperske Hory 79.30 352 *e*P **P 13 18 43.0 +0.6**
KHC AMS AMS 14 00 30.0
comp=Z,200nm,18.1s
VYHS Vyhne 79.35 348 *e*P **P 13 18 42.8 +0.1**
VYHS pmax pmax
comp=Z,8.0nm,1.3s,mb4.4
VYHS Vyhne 79.35 348 *e*P **P 13 18 42.8 +0.1**
comp=Z,8.0nm,1.3s,mb4.4
VYHS Vyhne 79.35 348 *e*P **P 13 18 42.8 +0.1**
WET Wettzell 79.35 352 *e*P **P 13 18 42.4 -0.3**
comp=Z,12nm,1.4s,mb4.5
WET Wettzell 79.35 352 *e*P **P 13 18 42.4 -0.3**
WET pmax pmax
comp=Z,12nm,1.4s,mb4.5
LEOM Leova 79.75 341⇑P **P 13 18 46.0 +1.1**
LEOM Leova 79.75 341⇑*i*P **P 13 18 46.0 +1.1**
LANF Langenberg 79.86 355 *e*P **P 13 18 45.4 -0.1**
STU Stuttgart 79.99 355 *e*P **P 13 18 46.1 -0.1**
comp=Z,21nm,1.0s,mb4.9
TESR 80.03 342⇑P **P 13 18 47.1 +0.7**
TESR 80.03 342⇑*i*P **P 13 18 47.1 +0.7**
BHPL Bhopal 80.20 295 *e*PKP **P 13 18 47.6 -0.1**
FLN La Foliniere 80.23 1 *e*P **P 13 18 47.1 -0.4**
comp=Z,71nm,1.0s,mb5.1
FLN *e*MLR MLR
comp=Z,180nm,21.2s
FLN La Foliniere 80.23 1 *e*P **P 13 18 47.1 -0.4**
FLN pmax pmax
comp=Z,36nm,1.0s,mb5.2
FLN MLR MLR
comp=Z,180nm,21.3s
FLN La Foliniere 80.23 1 *e*P **P 13 18 47.1 -0.4**
comp=Z,36nm,1.0s,mb5.2
FLN LR LR
comp=Z,180nm,21.3s
CONA Conrad Observa 80.26 350⇑*i*P **P 13 18 48.2 +0.5**
comp=Z,8.7nm,0.7s,mb4.7
LDF La Druitiere 80.41 1 *e*P **P 13 18 48.0 -0.4**
comp=Z,18nm,0.4s,mb4.9
LDF La Druitiere 80.41 1 *e*P **P 13 18 48.0 -0.4**
LDF pmax pmax
comp=Z,9.0nm,0.4s,mb5.0
LDF La Druitiere 80.41 1 *e*P **P 13 18 48.0 -0.4**
comp=Z,9.1nm,0.4s,mb5.0
MEZF Maizieres J'vi 80.44 357 *e*P **P 13 18 48.9 +0.3**
DRGR 80.45 345⇑P **P 13 18 49.4 +0.7**
DRGR 80.45 345⇑*i*P **P 13 18 49.4 +0.7**
BFO Black Forest 80.48 355 *e*P **P 13 18 48.3 -0.5**
comp=Z,14nm,1.3s,mb4.6
BFO Black Forest 80.48 355 *e*P **P 13 18 48.3 -0.5**
BFO pmax pmax
comp=Z,14nm,1.3s,mb4.6
ROSF Rostrenen 80.60 3 *e*P **P 13 18 49.5 0.0**
GRR Gorron 80.60 1 *e*P **P 13 18 49.4 -0.1**
comp=Z,49nm,0.9s,mb5.0
GRR Gorron 80.60 1 *e*P **P 13 18 49.4 -0.1**
GRR pmax pmax
comp=Z,25nm,0.9s,mb5.0
GRR Gorron 80.60 1 *e*P **P 13 18 49.4 -0.1**
comp=Z,25nm,0.9s,mb5.0
VRI Vrincioaia 80.63 342⇑P **P 13 18 50.8 +1.1**

VRI Vrincioaia 80.63 342⇑*i*P **P 13 18 50.8 +1.1**
ECH Echery 80.65 356 *e*P **P 13 18 49.5 -0.2**
ECH Echery 80.65 356 *e*P **P 13 18 49.3 -0.4**
ECH pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
ECH Echery 80.65 356 *e*P **P 13 18 49.3 -0.5**
comp=Z,7.0nm,1.0s,mb4.5
SPAK Spaichingen-Ko 80.68 355 *e*P **P 13 18 49.5 -0.4**
THEF They Montfort 80.69 357 *e*P **P 13 18 49.7 -0.2**
SGMF Saint Gilles 80.70 2 *e*P **P 13 18 50.1 +0.1**
comp=Z,44nm,0.7s,mb5.1
SGMF Saint Gilles 80.70 2 *e*P **P 13 18 50.1 +0.1**
SGMF pmax pmax
comp=Z,22nm,0.7s,mb5.1
SGMF Saint Gilles 80.70 2 *e*P **P 13 18 50.1 +0.1**
comp=Z,22nm,0.7s,mb5.1
TLCR 80.86 340⇑P **P 13 18 51.8 +0.9**
TLCR 80.86 340⇑*i*P **P 13 18 51.8 +0.9**
JASL Jaisalmer 80.88 302 *e*PKP **P 13 18 51.3 -0.1**
HAU Haudompre 80.89 356 *e*P **P 13 18 50.8 -0.3**
comp=Z,22nm,0.8s,mb4.7
HAU *e*MLR MLR
comp=Z,223nm,20.5s
HAU Haudompre 80.89 356 *e*P **P 13 18 50.8 -0.3**
HAU pmax pmax
comp=Z,11nm,0.8s,mb4.7
HAU MLR MLR
comp=Z,220nm,20.5s
HAU Haudompre 80.89 356 *e*P **P 13 18 50.8 -0.3**
comp=Z,11nm,0.8s,mb4.7
HAU LR LR
comp=Z,220nm,20.5s
NGP Nagpur 80.90 292 *e*PKP **P 13 18 50.8 -0.7**
FELD Feldberg im Sc 80.95 355 *e*P **P 13 18 51.2 -0.1**
ARSA Arzberg 80.97 350⇑*i*P **P 13 18 52.0 +0.6**
comp=Z,10nm,1.0s,mb4.6
MOF Molkenrain 81.02 356 *e*P **P 13 18 51.2 -0.5**
QUIF Quistinic 81.02 3 *e*P **P 13 18 51.6 -0.1**
GRER 81.05 342⇑P **P 13 18 54.3 +2.3**
GRER 81.05 342⇑*i*P **P 13 18 54.3 +2.4**
HINF Hinteralfeld 81.06 356 *e*P **P 13 18 51.5 -0.4**
MLR Muntele Rosu 81.14 343 P **P 13 18 54.1 +1.7**
MLR Muntele Rosu 81.14 343⇑P **P 13 18 53.6 +1.2**
MLR Muntele Rosu 81.14 343⇑*i*P **P 13 18 53.6 +1.2**
WTTA Wattenberg 81.32 353⇑*i*P **P 13 18 53.8 +0.5**
comp=Z,32nm,1.1s,mb5.1
KBA Koelnbreinsper 81.36 352⇑*i*P **P 13 18 54.3 +0.8**
comp=Z,52nm,1.0s,mb5.3
VOIR 81.36 343 P **P 13 18 54.9 +1.3**
VOIR 81.36 343⇓P **P 13 18 54.7 +1.2**
VOIR 81.36 343⇓*i*P **P 13 18 54.7 +1.1**
LOMF Lomont 81.53 356 *e*P **P 13 18 54.5 +0.1**
SOKA Soboth 81.58 350⇑*i*P **P 13 18 55.1 +0.3**
comp=Z,36nm,1.2s,mb5.1
PERS Pernice 81.62 350 *e*P **P 13 18 55.0 +0.1**
FETA Feichten 81.63 353⇑*i*P **P 13 18 55.2 +0.2**
comp=Z,20nm,1.0s,mb4.9
LOR Lormes 81.71 358⇑*i*P **P 13 18 55.2 -0.2**
comp=Z,18nm,0.8s,mb4.6
LOR *e*MLR MLR
comp=Z,215nm,20.8s
LOR Lormes 81.71 358⇑*i*P **P 13 18 55.2 -0.2**
LOR pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
LOR MLR MLR
comp=Z,210nm,20.8s
LOR Lormes 81.71 358⇑*i*P **P 13 18 55.2 -0.2**
comp=Z,8.8nm,0.8s,mb4.6
LOR LR LR
comp=Z,210nm,20.8s
ABTA Abfaltersbach 81.76 352⇑*i*P **P 13 18 55.7 +0.1**
comp=Z,19nm,1.0s,mb4.9
MYKA Terra Mystica 81.77 351⇑*i*P **P 13 18 55.3 -0.4**
GZR Gura Zlata 81.80 345⇑P **P 13 18 56.8 +0.9**
GZR Gura Zlata 81.80 345 P **P 13 18 56.7 +0.8**
GZR Gura Zlata 81.80 345⇑*i*P **P 13 18 56.8 +0.9**
OBKA Obir 81.80 351⇑*i*P **P 13 18 55.9 +0.1**
comp=Z,17nm,1.1s,mb4.8
SULR 81.86 342⇑P PcP 13 19 08.2 +6.4
SULR 81.86 342⇑*i*P PcP 13 19 08.2 +6.4
SSF Saint Saulge 81.92 358⇑*i*P **P 13 18 56.4 -0.1**
comp=Z,29nm,1.0s,mb4.8
SSF Saint Saulge 81.92 358⇑*i*P **P 13 18 56.4 -0.1**
SSF pmax pmax
comp=Z,15nm,1.0s,mb4.8
SSF Saint Saulge 81.92 358⇑*i*P **P 13 18 56.4 -0.1**
comp=Z,15nm,1.0s,mb4.8
WRA Warramunga Arr 81.93 224 P **P 13 18 55.9 -0.9**
baz=32,slow=6.1
CADS Cadrg 82.16 351 *e*P **P 13 18 56.8 -1.0**
AVF Avril sur Loir 82.19 358⇑*i*P **P 13 18 57.8 -0.1**
comp=Z,22nm,0.8s,mb4.7
AVF Avril sur Loir 82.19 358⇑*i*P **P 13 18 57.8 -0.1**
AVF pmax pmax
comp=Z,11nm,0.8s,mb4.7
AVF Avril sur Loir 82.19 358⇑*i*P **P 13 18 57.8 -0.1**
comp=Z,11nm,0.8s,mb4.7
CABF La Chapelle 82.30 356 *e*P **P 13 18 58.7 +0.2**
comp=Z,20nm,0.7s,mb4.7
CABF La Chapelle 82.30 356 *e*P **P 13 18 58.7 +0.2**
CABF pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
CABF La Chapelle 82.30 356 *e*P **P 13 18 58.7 +0.2**
comp=Z,9.9nm,0.7s,mb4.8
SMF Signal de Mont 82.33 358⇑*i*P **P 13 18 58.6 -0.1**
comp=Z,51nm,0.9s,mb5.0
SMF Signal de Mont 82.33 358⇑*i*P **P 13 18 58.6 -0.1**
SMF pmax pmax
comp=Z,26nm,0.9s,mb5.1
SMF Signal de Mont 82.33 358⇑*i*P **P 13 18 58.6 -0.1**
comp=Z,26nm,0.9s,mb5.0
MFF Saint Martin d 82.40 1 *e*P **P 13 18 59.0 0.0**
comp=Z,43nm,1.0s,mb5.0
MFF Saint Martin d 82.40 1 *e*P **P 13 18 59.0 0.0**
MFF pmax pmax
comp=Z,21nm,1.0s,mb4.9
MFF Saint Martin d 82.40 1 *e*P **P 13 18 59.0 0.0**
comp=Z,21nm,1.0s,mb4.9
AKL Akola 82.42 294 *e*PKP **P 13 19 00.2 +0.7**
AKL AMb AMB 13 19 02.2
comp=Z,56nm,1.7s,mb5.1
BGF Bois d'Agland 82.44 359 *e*P **P 13 18 59.2 0.0**
comp=Z,41nm,1.1s,mb4.8
BGF Bois d'Agland 82.44 359 *e*P **P 13 18 59.2 0.0**
BGF pmax pmax
comp=Z,20nm,1.1s,mb4.9
BGF Bois d'Agland 82.44 359 *e*P **P 13 18 59.2 0.0**
comp=Z,20nm,1.1s,mb4.9
TCF Toulx Ste Croi 82.71 359 *e*P **P 13 19 00.5 -0.1**
comp=Z,20nm,0.9s,mb4.6
TCF Toulx Ste Croi 82.71 359 *e*P **P 13 19 00.5 -0.1**
TCF pmax pmax
comp=Z,10.0nm,0.9s,mb4.7
TCF Toulx Ste Croi 82.71 359 *e*P **P 13 19 00.5 -0.1**
comp=Z,10nm,0.9s,mb4.7
BOJS Bojanci 82.72 350 *i* P **P 13 19 00.5 -0.2**
AGO Saint Agoulin 82.94 359⇑*e*P **P 13 19 02.0 +0.2**
PLDF La Plantade 83.01 358⇑*e*P **P 13 19 02.6 +0.4**
LPL La Plagne 83.36 356⇑*i*P **P 13 19 05.0 +1.0**
LPG La Plagne 83.38 356⇑*i*P **P 13 19 05.3 +1.2**
comp=Z,29nm,1.1s,mb4.7
LPG La Plagne 83.38 356⇑*i*P **P 13 19 05.3 +1.2**
LPG pmax pmax
comp=Z,15nm,1.1s,mb4.7
LPG La Plagne 83.38 356⇑*i*P **P 13 19 05.3 +1.2**
comp=Z,15nm,1.1s,mb4.7
RKT Rikitea 83.64 140 *e*LR LR 13 44 39.6
comp=Z,364nm,27.2s
RJF Les Rejaudoux 83.70 360 *e*P **P 13 19 05.5 -0.3**
comp=Z,42nm,1.1s,mb4.9
RJF *e*MLR MLR
comp=Z,249nm,20.5s
RJF Les Rejaudoux 83.70 360 *e*P **P 13 19 05.5 -0.3**
RJF pmax pmax
comp=Z,21nm,1.1s,mb4.9
RJF MLR MLR
comp=Z,250nm,20.5s
RJF Les Rejaudoux 83.70 360 *e*P **P 13 19 05.5 -0.3**
comp=Z,21nm,1.1s,mb4.9
RJF LR LR
comp=Z,250nm,20.5s
LBL Lubilhac 83.75 358 *e*P **P 13 19 06.6 +0.6**
ORIF Oris-en-Rattie 84.00 357⇑*i*P **P 13 19 08.0 +0.7**
comp=Z,32nm,1.0s,mb4.8
ORIF *e*MLR MLR
comp=Z,143nm,21.8s

ORIF Oris-en-Rattie 84.00 357⇑*iP* P 13 19 08.0 +0.7
ORIF pmax pmax
comp=Z,16nm,1.0s,mb4.8
ORIF Oris-en-Rattie 84.00 357⇑*iP* P 13 19 08.0 +0.7
comp=Z,16nm,1.0s,mb4.8
LFF La Frestale 84.07 0 *eP* P 13 19 07.7 +0.1
comp=Z,104nm,1.1s,mb5.3
LFF La Frestale 84.07 0 *eP* P 13 19 07.7 +0.1
LFF pmax pmax
comp=Z,52nm,1.1s,mb5.3
LFF La Frestale 84.07 0 *eP* P 13 19 07.7 +0.1
comp=Z,52nm,1.1s,mb5.3
CAF Calviac 84.08 359⇑*iP* P 13 19 07.9 +0.2
comp=Z,30nm,0.9s,mb4.8
CAF Calviac 84.08 359⇑*iP* P 13 19 07.9 +0.2
CAF pmax pmax
comp=Z,15nm,0.9s,mb4.8
CAF Calviac 84.08 359⇑*iP* P 13 19 07.9 +0.2
comp=Z,15nm,0.9s,mb4.8
VIVF Saint-Julien-l 84.10 357 *eP* P 13 19 08.1 +0.3
comp=Z,26nm,1.1s,mb4.7
VIVF Saint-Julien-l 84.10 357 *eP* P 13 19 08.1 +0.3
VIVF pmax pmax
comp=Z,13nm,1.1s,mb4.7
VIVF Saint-Julien-l 84.10 357 *eP* P 13 19 08.1 +0.3
comp=Z,13nm,1.1s,mb4.7
HYB Hyderabad 84.11 290 *eP* P 13 19 08.5 +0.2
HYB Hyderabad 84.11 290 *iP* P 13 19 08.5 +0.2
FITZ Fitzroy Crossi 84.37 232 *eP* P 13 19 08.9 -0.5
comp=Z,30nm,1.0s,mb5.1
FITZ Fitzroy Crossi 84.37 232 *eP* P 13 19 08.9 -0.4
comp=Z,20nm,1.0s,mb4.9
VTS Vitosha 84.44 344 ⇓P P 13 19 09.0 -0.6
VTS Vitosha 84.44 344⇓*iP* P 13 19 09.0 -0.6
OG25 Le Caire 84.54 356 *eP* P 13 19 10.5 +0.5
TOUF Mont Tournerai 84.84 355⇑*eP* P 13 19 11.8 +0.3
SAOF Saorge 84.85 355⇑*eP* P 13 19 11.3 -0.3
LASF Ste Croix 84.90 358⇑*iP* P 13 19 12.1 +0.3
comp=Z,22nm,1.0s,mb4.8
BRTR Keskin Array B 84.90 335 P P 13 19 11.8 -0.1
comp=Z,15nm,0.8s,mb5.0,baz=44,slow=2.8,SNR=62
BRTR LR LR 14 03 41.9
comp=Z,83nm,19.1s,baz=171,slow=40
SMRF Simiane la Rot 84.95 357⇑*iP* P 13 19 12.9 +0.8
comp=Z,57nm,1.1s,mb5.1
SMRF Simiane la Rot 84.95 357⇑*iP* P 13 19 12.9 +0.8
comp=Z,57nm,1.1s,mb5.4
LUCF Luceram 84.95 355 *eP* P 13 19 12.0 -0.1
MVIF Mont Vial 84.96 356 *eP* P 13 19 11.7 -0.5
SBF Sospel 84.98 355⇑*iP* P 13 19 12.1 -0.2
comp=Z,81nm,0.9s,mb5.3
SBF Sospel 84.98 355⇑*iP* P 13 19 12.1 -0.2
SBF pmax pmax
comp=Z,41nm,0.9s,mb5.4
SBF Sospel 84.98 355⇑*iP* P 13 19 12.1 -0.2
comp=Z,41nm,0.9s,mb5.4
REVF Revere 85.11 355 *eP* P 13 19 12.6 -0.3
CALN Calern 85.12 356 *eP* P 13 19 13.0 +0.1
FRF La Foret Royal 85.32 356⇑*iP* P 13 19 13.7 -0.3
comp=Z,41nm,0.9s,mb5.0
FRF La Foret Royal 85.32 356⇑*iP* P 13 19 13.7 -0.3
FRF pmax pmax
comp=Z,21nm,0.9s,mb5.1
FRF La Foret Royal 85.32 356⇑*iP* P 13 19 13.7 -0.3
comp=Z,20nm,0.9s,mb5.1
ASAR Alice Springs 85.41 222 P P 13 19 13.8 -0.6
comp=Z,4.4nm,0.8s,mb4.4,baz=25,slow=5.9,SNR=32
ASAR Alice Springs 85.41 222 P P 13 19 13.8 -0.6
ASAR pmax pmax
comp=Z,4.0nm,0.8s
LMR La Mourre 85.55 356⇑*iP* P 13 19 15.1 0.0
comp=Z,25nm,0.8s,mb4.9
LMR La Mourre 85.55 356⇑*iP* P 13 19 15.1 0.0
LMR pmax pmax
comp=Z,13nm,0.8s,mb4.9
LMR La Mourre 85.55 356⇑*iP* P 13 19 15.1 0.0
comp=Z,13nm,0.8s,mb4.9
MTLF Montolieu 85.66 359 *eP* P 13 19 15.8 +0.2
comp=Z,63nm,1.2s,mb5.1
MTLF Montolieu 85.66 359 *eP* P 13 19 15.8 +0.2
MTLF pmax pmax
comp=Z,31nm,1.2s,mb5.1
MTLF Montolieu 85.66 359 *eP* P 13 19 15.8 +0.2
comp=Z,31nm,1.2s,mb5.1
SJPF Ste Jean 85.87 2 *eP* P 13 19 16.2 -0.5
comp=Z,11nm,0.6s,mb4.7
SJPF Ste Jean 85.87 2 *eP* P 13 19 16.2 -0.5
SJPF pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
SJPF Ste Jean 85.87 2 *eP* P 13 19 16.2 -0.5
comp=Z,5.7nm,0.6s,mb4.7
POO Poona 85.95 295 *e*PKP P 13 19 17.5 0.0
EPF Esparros 85.97 0 *eP* P 13 19 16.6 -0.6
comp=Z,11nm,0.6s,mb4.6
EPF Esparros 85.97 0 *eP* P 13 19 16.6 -0.6
EPF pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
EPF Esparros 85.97 0 *eP* P 13 19 16.6 -0.6
comp=Z,5.3nm,0.6s,mb4.7
AQU L'Aquila 86.03 351 *eP* P 13 19 18.1 +0.6
AQU pmax pmax
comp=Z,31nm,1.0s,mb5.2
AQU L'Aquila 86.03 351 *eP* P 13 19 18.1 +0.6
comp=Z,31nm,1.0s,mb5.2
AQU L'Aquila 86.03 351⇑*iP* P 13 19 18.6 +1.1
ETSF Etsaut 86.10 1⇑*iP* P 13 19 18.3 +0.5
comp=Z,16nm,0.7s,mb4.7
ETSF Etsaut 86.10 1⇑*iP* P 13 19 18.3 +0.5
ETSF pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
ETSF Etsaut 86.10 1⇑*iP* P 13 19 18.3 +0.5
comp=Z,7.8nm,0.7s,mb4.8
PGF Pioggiola 86.20 354⇑*iP* P 13 19 18.2 -0.1
comp=Z,118nm,1.1s,mb5.4
PGF Pioggiola 86.20 354⇑*iP* P 13 19 18.2 -0.1
PGF pmax pmax
comp=Z,59nm,1.1s,mb5.4
PGF Pioggiola 86.20 354⇑*iP* P 13 19 18.2 -0.1
comp=Z,59nm,1.1s,mb5.4
MVO Moncorvo 87.57 6 *eP* P 13 19 24.7 -0.3
comp=Z,20nm,1.4s,mb5.0
PVIS Viseu 87.96 7 *eP* P 13 19 26.5 -0.4
comp=Z,20nm,1.1s,mb5.1
CMSA Cobar Meteorol 88.22 210 *eP* P 13 19 27.0 -0.9
MTE Manteigas 88.30 7 *eP* P 13 19 27.8 -0.7
comp=Z,17nm,1.2s,mb5.0
MTE *e*LR LR 13 50 18.4
comp=Z,86nm,20.0s
GOA Goa 88.38 293 *ex* x 13 19 06.9
PCBR Castelo Branco 88.86 7 *eP* P 13 19 30.6 -0.5
comp=Z,15nm,1.6s,mb4.8
ESDC Sonseca Array 89.22 4 P P 13 19 32.5 -0.4
comp=Z,4.0nm,0.7s,mb4.6,baz=356,slow=4.3,SNR=18
ESDC LR LR 14 01 46.8
comp=Z,94nm,18.2s,baz=315,slow=37
ESDC Sonseca Array 89.22 4 P P 13 19 32.5 -0.4
ESDC LR LR 14 01 46.8
ESLA Sonseca Array 89.22 4 *eP* P 13 19 31.9 -0.9
comp=Z,6.4nm,1.3s,mb4.5
PMRV Marv??o 89.28 7 *eP* P 13 19 32.4 -0.7
comp=Z,14nm,2.0s,mb4.7
URZ Urewera 89.33 183 LR LR 13 54 14.3
comp=Z,226nm,19.5s,baz=330,slow=32
PMAFR Mafra 89.60 8 *e*LR LR 13 49 48.0
comp=Z,105nm,22.0s
CEL Celeste 89.79 348 *eP* P 13 19 33.5 -2.0
comp=Z,15nm,1.0s,mb5.1
MTP Monte Pirata 89.80 61 *eP* P 13 19 36.1 +0.2
comp=Z,16nm,0.8s,mb5.2
PESTR Estremoz 89.82 7 *e*LR LR 13 48 57.6
comp=Z,82nm,18.0s
STKA Stephens Creek 89.86 213 *eP* P 13 19 35.9 +0.3
comp=Z,9.1nm,0.8s,mb5.0
STKA Stephens Creek 89.86 213 P P 13 19 36.1 +0.5
comp=Z,14nm,0.9s,mb5.1,baz=355,slow=5.1,SNR=15
PBAR Barrancos 90.55 6 *eP* P 13 19 38.1 -1.0
comp=Z,22nm,1.3s,mb5.1
PBAR *e*LR LR 13 49 57.7
comp=Z,102nm,18.0s
MMAI Mount Meron Ar 90.69 332 P P 13 19 39.8 0.0
comp=Z,6.3nm,0.8s,mb4.8,baz=0.0,slow=2.8,SNR=5.0
MMAI LR LR 14 06 38.9
comp=Z,133nm,18.1s,baz=10.0,slow=40
PVAQ Vaqueiros 91.26 7 *e*LR LR 13 50 04.7
comp=Z,78nm,20.0s
MORF Marmelete 91.29 8 *e*LR LR 13 53 35.0
comp=Z,199nm,22.0s

PBDV Barranco-do-Ve 91.41 7 *e*LR LR 13 51 10.9
comp=Z,108nm,20.0s
PFVI Vila Bisbo 91.44 8 *e*LR LR 13 51 39.1
comp=Z,157nm,22.0s
RPZ Rata Peaks 95.10 187 LR LR 13 56 17.7
comp=Z,316nm,20.2s,baz=22,slow=31
ROSC El Rosal 95.31 76 LR LR 14 07 40.2
comp=Z,48nm,18.8s,baz=220,slow=38
DBIC Dimbokro 121.97 7 PKP PKPdf 13 25 30.9 -0.6
comp=Z,4.5nm,0.3s,baz=340,slow=3.2,SNR=20
DBIC Dimbokro 121.97 7 PKIKP PKPdf 13 25 30.9 -0.6
DBIC pmax pmax
comp=Z,5.0nm,0.4s
DBIC Dimbokro 121.97 7 PKP PKPdf 13 25 30.9 -0.6
TSUM Tsumeb 145.34 332 *e*PKP PKPdf 13 26 15.1 +0.4
MAW Mawson 146.41 218 PKPbc PKPbc 13 26 16.5 +0.1
comp=Z,9.8nm,0.9s,baz=18,slow=1.7,SNR=10
LBTB Lobatse 147.65 315 *e*PKP2 PKPab 13 26 21.7 -1.9
BOSA Boshof 150.89 312 PKPbc PKPbc 13 26 29.7 +0.4
comp=Z,8.3nm,0.5s,baz=358,slow=1.3,SNR=26
BOSA PKPab PKPab 13 26 37.8 +1.1
comp=Z,6.2nm,0.6s,baz=69,slow=5.3,SNR=6.9
BOSA Boshof 150.89 312 *e*PKPbc PKPbc 13 26 29.4 +0.2
SYO Syowa Base 154.61 212⇑*ep*PKPdf PKPab 13 26 49.0 -2.3

DJA 28 13:14:05.0±61.1N×122.2±49.6E,h24km,MLv3.8/5,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.56**	**256**	P	Pb	13 14 16.8	+0.5
KMSI	**Cibinong**	**1.49**	**91**	P	Pn	13 14 29.9	-0.4
KMSI				S	Sn	13 14 50.1	+1.1
KMSI	**Cibinong**	**1.49**	**91**	P	Pn	13 14 29.9	-0.4
LUWI	**Luwuk**	**1.67**	**170**	P	Pn	13 14 31.5	-1.2
LUWI				S	Sn	13 14 50.9	-2.4
LUWI	**Luwuk**	**1.67**	**170**	P	Pn	13 14 31.0	-1.7
APSI	**Ampana**	**1.73**	**209**	P	Pn	13 14 35.1	+1.5
APSI	**Ampana**	**1.73**	**209**	P	Pn	13 14 34.2	+0.6
MYLDM	**Lahad Datu**	**6.04**	**319**	P	Pn	13 15 32.6	-0.3
MYLDM	**Lahad Datu**	**6.04**	**319**	P	Pn	13 15 32.6	-0.3

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*BJI **28** 13:19:31.2,40.6±4N×79.7±67E,h27km,ML3.0/6*
NNC 28 13:19:34.0±4.3,41.02N×79.48E,h0km,mb3.2,mpv2.9, 2C-4D,Error ellipse: s-maj=42.5km s-min=18.2km az=152.0,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**3.08**	**242**	Pg	Pg	13 20 32.0	-0.9
KSH				Sn	Sb	13 21 11.3	+3.8
KSH				smax			
	comp=N,34nm,0.7s						
KSH				smax			
	comp=E,33nm,0.5s						
TKM2	**Tokmak 2**	**3.47**	**305**	⇑Pn	Pn	13 20 30.2	+1.0
	comp=E,2.6nm,0.5s						
TKM2				⇓Lg		13 21 25.2	
	comp=E,7.3nm,0.5s						
MK31	**Makanchi Array**	**6.12**	**18**	⇓Pn	Pn	13 21 07.6	+2.1
	comp=E,0.2nm,0.3s,baz=206,slow=14,SNR=7.6						
MK31				⇑Sn	Sn	13 22 23.2	+6.9
	comp=E,0.2nm,0.3s,baz=203,slow=24,SNR=4.8						
KK31	**Karatay Array**	**7.00**	**290**	⇓Pg	Pb	13 21 40.4	+4.1
	comp=E,0.6nm,0.6s,baz=122,slow=14,SNR=4.5						
KK31				⇓Lg		13 23 12.6	
	comp=E,2.1nm,0.9s,baz=99,slow=28,SNR=3.5						

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*IDC **28** 13:57:24.0±7.8,29.85S×178.44W,h236km±82km,mb3.2/3, mb1 3.4/5,mb1mx3.3/15,mbtmp3.3/5,Error ellipse: s-maj=66.1km s-min=38.2km az=167.0*
ISC 28 13:57:28.6±1.4,30.3S±0.1×178.2W±0.3,h295km±17km, n21,σ1.9±34/26,mb3.3/3,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**8.25**	**200**	PN	**Pn**	**13 59 23.2**	**-1.9**
PUZ				SN	**S**	**14 01 00.8**	**+1.1**
MWZ	**Matawai**	**8.72**	**203**	*e*PN	**Pn**	**13 59 29.1**	**-1.8**
MWZ				SN	**S**	**14 01 14.1**	**+3.9**
URZ	**Urewera**	**8.80**	**205**	P	**Pn**	**13 59 31.9**	**0.0**
	0.3nm,0.3s,baz=143,slow=18,SNR=6.7						
URZ				S	**S**	**14 01 14.7**	**+2.7**
	7.8nm,0.3s,baz=214,slow=6.2,SNR=24						
URZ	**Urewera**	**8.80**	**205**	PN	**Pn**	**13 59 31.7**	**-0.1**
URZ				SN	**S**	**14 01 14.0**	**+2.0**
PXZ	**Pawanui**	**10.48**	**201**	SN	**S**	**14 01 48.2**	**-1.9**
BFZ	**Birch Farm**	**11.27**	**202**	PN	**Pn**	**14 00 01.3**	**-0.8**
BFZ				SN	**S**	**14 02 06.9**	**-1.0**
MRZ	**Mangatainoka R**	**11.48**	**204**	PN	**Pn**	**14 00 03.0**	**-1.6**
KIW	**Kapiti Island**	**11.90**	**206**	PN	**Pn**	**14 00 10.5**	**+0.6**
CAW	**Cannon Point**	**12.05**	**205**	PN	**Pn**	**14 00 11.9**	**+0.2**
TUWZ	**Tuamarina**	**12.76**	**208**	PN	**Pn**	**14 00 21.5**	**+1.2**
NNZ	**Nelson**	**12.82**	**210**	PN	**Pn**	**14 00 22.0**	**+1.0**
QRZ	**Quartz Range**	**12.89**	**213**	PN	**Pn**	**14 00 24.9**	**+3.1**
BSWZ	**Blackbirch Sta**	**13.03**	**207**	PN	**Pn**	**14 00 26.9**	**+3.4**
THZ	**Tophouse**	**13.47**	**210**	PN	**Pn**	**14 00 28.9**	**+0.1**
KHZ	**Kahutara**	**13.76**	**207**	PN	**Pn**	**14 00 30.3**	**-1.9**
LTZ	**Lake Taylor**	**14.58**	**209**	PN	**Pn**	**14 00 42.7**	**+0.7**
RPZ	**Rata Peaks**	**15.85**	**210**	P	**Pn**	**14 00 58.1**	**+1.1**
	0.4nm,0.3s,baz=0.0,slow=2.0,SNR=3.4						
RPZ				S	**S**	**14 03 46.3**	**-0.3**
	0.5nm,0.3s,baz=122,slow=22,SNR=8.9						
ASAR	**Alice Springs**	**42.94**	**267**	P	**P**	**14 04 58.7**	**-0.5**
	0.4nm,0.8s,mb2.7,baz=101,slow=6.7,SNR=5.3						
PETK	**Petropavlovsk-**	**85.71**	**346**	P	**P**	**14 09 33.0**	**-1.1**
	0.8nm,0.6s,mb3.7,baz=111,slow=8.7,SNR=6.6						
NVAR	**Mina Array Bea**	**88.31**	**43**	P	**P**	**14 09 48.5**	**+1.6**
	0.6nm,0.7s,mb3.5,baz=217,slow=7.4,SNR=4.9						
FINES	**FINESS Array B**	**145.03**	**340**	PKP	PKPdf	14 16 30.1	+0.1
	1.3nm,0.4s,baz=70,slow=4.6,SNR=8.4						

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*ISCJB **28** 14:32:03.1±1.0,24.04S±0.05×67.0W±0.1,h180km±13km, mb3.6/5,Error ellipse: s-maj=16.8km s-min=8.2km az=3.2*
*IDC **28** 14:32:04.7±1.6,23.95S×66.85W,h182km±16km,mb3.5/4, mb1 3.6/8,mb1mx3.6/15,mbtmp3.4/8,Error ellipse: s-maj=21.5km s-min=12.6km az=88.0*
*NEIC **28** 14:32:04.7±0.8,24.05S×66.81W,h185km±8km,mb4.1/2, Error ellipse: s-maj=13.9km s-min=7.6km az=91.0*
ISC 28 14:32:04.1±1.0,24.03S±0.05×66.9W±0.1,h174km±12km, n21,σ1.9±01/20,mb3.6/5,Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**7.64**	**189**	P	**Pn**	**14 33 52.8**	**+0.3**
	0.1nm,0.3s,baz=12,slow=12,SNR=6.9						
CFAA				S	**Sn**	**14 35 11.5**	**-6.7**
	0.3nm,0.3s,baz=142,slow=15,SNR=8.1						
LPAZ	**La Paz**	**7.79**	**351**	P	**Pn**	**14 33 56.1**	**+1.5**
	0.9nm,0.3s,baz=171,slow=8.6,SNR=22						
LPAZ				S	**Sn**	**14 35 19.2**	**-2.8**
	0.1nm,0.3s,baz=111,slow=22,SNR=2.9						
LPAZ	**La Paz**	**7.79**	**351**	*e*Pn	**Pn**	**14 33 55.8**	**+1.2**
LPAZ				S	**Sn**	**14 35 19.2**	**-2.8**
CPUP	**Villa Florida**	**8.98**	**107**	P	**Pn**	**14 34 11.3**	**+1.0**
	0.5nm,0.3s,baz=261,slow=11,SNR=8.1						
CPUP	**Villa Florida**	**8.98**	**107**	*e*P	**Pn**	**14 34 10.5**	**+0.3**
SIV	**San Ignacio**	**9.70**	**36**	P	**Pn**	**14 34 19.6**	**-0.2**
	2.1nm,0.3s,baz=227,slow=13,SNR=21						
SIV				S	**Sn**	**14 36 08.3**	**+0.6**
	0.1nm,0.3s,baz=117,slow=21,SNR=3.4						
TRQA	**Tornquist**	**14.61**	**164**	*e*P	**Pn**	**14 35 21.4**	**-1.0**
	10nm,0.8s						
PLCA	**Paso Flores**	**16.93**	**190**	P	**Pn**	**14 35 50.4**	**-0.4**
	0.3nm,0.3s,baz=34,slow=20,SNR=3.9						
PLCA	**Paso Flores**	**16.93**	**190**	*e*P	**Pn**	**14 35 50.6**	**-0.2**
PMSA	**Palmer Station**	**40.78**	**178**	P	**P**	**14 39 28.8**	**+1.0**
	26nm,0.4s,baz=6.0,slow=9.3,SNR=15						
PMSA	**Palmer Station**	**40.78**	**178**	*e*P	**P**	**14 39 27.1**	**-0.7**
TXAR	**Lajitas Array**	**63.74**	**324**	P	**P**	**14 42 17.3**	**0.0**
	0.2nm,0.7s,mb3.1,baz=152,slow=8.2,SNR=4.8						
DBIC	**Dimbokro**	**67.74**	**71**	P	**P**	**14 42 41.6**	**-1.7**
	1.1nm,0.3s,mb4.0,baz=231,slow=6.5,SNR=3.2						
NVAR	**Mina Array Bea**	**78.61**	**321**	P	**P**	**14 43 47.1**	**+0.7**
	0.5nm,0.7s,mb3.3,baz=149,slow=5.0,SNR=4.0						
HLID	**Hailey**	**80.15**	**327**	*e*P	**P**	**14 43 56.0**	**+1.3**
	2.1nm,1.0s,mb3.7						
YKA	**Yellowknife Ar**	**94.18**	**340**	P	**P**	**14 45 02.1**	**-0.4**
	0.6nm,0.5s,mb4.0,baz=130,slow=3.9,SNR=6.3						
ASAR	**Alice Springs**	**128.46**	**205**	PKP	PKPdf	14 50 49.7	-1.0
	0.6nm,0.6s,baz=134,slow=1.8,SNR=15						

PETK Petropavlovsk- 135.68 323 PKP PKPdf 14 51 03.6 +0.3
0.7nm,0.6s,baz=46,slow=6.4,SNR=4.3
ZALV Zalesovo Beam 143.38 28 PKP PKPdf 14 51 14.9 -2.4
1.1nm,0.6s,baz=315,slow=3.0,SNR=6.0
MK31 Makanchi Array 146.50 40 *e*PKPbc PKPbc 14 51 24.3 -0.3
MKAR Makanchi Array 146.50 40 PKPbc PKPbc 14 51 23.4 -1.2
1.6nm,0.7s,baz=298,slow=3.2,SNR=12

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*ISK **28** 14:53:03.9,37.00N×29.18E,h8km,MD3.4*
*CSEM **28** 14:53:04.2±0.1,36.94N×29.19E,h2km,MD3.4,Error ellipse: s-maj=3.7km s-min=3.1km az=157.0*
*DDA **28** 14:53:04.5,36.97N×29.19E,h7km±4km,Md3.2*
*ISCJB **28** 14:53:04.0±0.4,36.93N±0.02×29.20E±0.03,h8km±3km, mb3.8/2,Error ellipse: s-maj=3.9km s-min=3.2km az=143.5*
*IDC **28** 14:53:04.0±2.8,36.90N×29.20E,h0km,mb3.2/1, mb1 3.7/5,mb1mx3.4/25,mbtmp3.6/5,ML3.5/4,MS2.9/2, Ms1 2.9/2,ms1mx2.4/22,Error ellipse: s-maj=47.0km s-min=22.7km az=63.0*
*ATH **28** 14:53:05.8,36.92N×29.16E,h37km±12km,MD3.5/5*
*NEIC **28** 14:53:08.3±0.4,36.86N×29.17E,h38km±11km, MD3.5(ATH),MD3.2(ISK),Error ellipse: s-maj=5.8km s-min=4.9km az=146.0*
ISC 28 14:53:04.7±0.5,36.95N±0.02×29.18E±0.02,h4km±3km, n107,σ0.97/137,mb3.8/2,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.33**	**51**	*e*PG	**Pg**	**14 53 10.2**	**-1.0**
GLHS				*e*SG	**Sg**	**14 53 15.6**	**+0.2**
GLHS	**Glhisar (BURDU**	**0.33**	**51**	*e*Pg	**Pg**	**14 53 10.2**	**-0.9**
GLHS				*e*Sg	**Sg**	**14 53 15.6**	**+0.1**
GOLH	**Golhisar**	**0.42**	**46**	*i* P	**Pg**	**14 53 12.5**	**-0.4**
GOLH				*i* S	**Sg**	**14 53 19.5**	**+1.2**
GOLH	**Golhisar**	**0.42**	**46**	*i* P	**Pg**	**14 53 12.5**	**-0.4**
GOLH				*i* S	**Sg**	**14 53 19.5**	**+1.1**
ELL	**Elmali**	**0.62**	**108**	*e*PG	**Pg**	**14 53 16.3**	**-0.3**
ELL	**Elmali**	**0.62**	**108**	*e*Pg	**Pg**	**14 53 16.3**	**-0.3**
YER	**Yerkesik**	**0.74**	**285**	*e*PG	**Pg**	**14 53 18.8**	**-0.1**
YER	**Yerkesik**	**0.74**	**285**	*e*Pg	**Pg**	**14 53 18.8**	**-0.1**
DNZL	**Cakiroluk**	**0.75**	**352**	*i* P	**Pg**	**14 53 18.3**	**-0.8**
DNZL				*i* S	**Sg**	**14 53 29.5**	**+0.6**
DNZL	**Cakiroluk**	**0.75**	**352**	*i* P	**Pg**	**14 53 18.3**	**-0.8**
DNZL				*i* S	**Sg**	**14 53 29.5**	**+0.6**
AKAS	**Kas**	**0.79**	**154**	*i* P	**Pg**	**14 53 20.4**	**+0.5**
AKAS				*i* S	**Sg**	**14 53 38.3**	**+8.2**
AKAS	**Kas**	**0.79**	**154**	*i* P	**Pg**	**14 53 20.4**	**+0.5**
DENT	**Denizli**	**0.81**	**352**	*e*PG	**Pg**	**14 53 18.6**	**-1.8**
DENT	**Denizli**	**0.81**	**352**	*e*Pg	**Pg**	**14 53 18.6**	**-1.8**
KSL	**Kastellorizon**	**0.86**	**158**	*e*Pn	**Pg**	**14 53 22.4**	**+1.2**
KSL	**Kastellorizon**	**0.86**	**158**	*e*PN	**Pg**	**14 53 22.4**	**+1.2**
KORT	**Korkueli**	**0.94**	**86**	*i* P	**Pg**	**14 53 22.3**	**-0.5**
KORT	**Korkueli**	**0.94**	**86**	*i* P	**Pg**	**14 53 22.3**	**-0.5**
ARG	**Arkhangelos**	**1.12**	**230**	*e*Pn	**Pg**	**14 53 26.0**	**-0.1**
ARG				*e*Sn	**Sg**	**14 53 41.6**	**+1.0**
ARG	**Arkhangelos**	**1.12**	**230**	*e*PN	**Pg**	**14 53 26.0**	**-0.1**
ARG				*e*SN	**Sg**	**14 53 41.6**	**+1.0**
ARG	**Arkhangelos**	**1.12**	**230**	*e*Pn	**Pg**	**14 53 26.0**	**-0.1**
ARG				*e*Sn	**Sg**	**14 53 41.6**	**+1.0**
MLSB	**Milas**	**1.17**	**288**	*e*PN	**Pn**	**14 53 26.4**	**-1.5**
MLSB	**Milas**	**1.17**	**288**	*e*Pn	**Pn**	**14 53 26.4**	**-1.5**
ANTB	**Antalya**	**1.18**	**92**	*e*PN	**Pn**	**14 53 26.6**	**-1.4**
ANTB	**Antalya**	**1.18**	**92**	*e*Pn	**Pn**	**14 53 26.6**	**-1.4**
BCK	**Bucak**	**1.24**	**65**	*e*PN	**Pn**	**14 53 27.9**	**-0.9**
BCK	**Bucak**	**1.24**	**65**	*e*Pn	**Pn**	**14 53 27.9**	**-0.9**
AYDN	**Tasoluk**	**1.26**	**305**	*i* P	**Pg**	**14 53 28.6**	**-0.3**
AYDN				*i* S	**Sg**	**14 53 45.6**	**+0.5**
AYDN				*i* S	**Sg**	**14 53 47.4**	**+2.2**
AYDN	**Tasoluk**	**1.26**	**305**	*i* P	**Pg**	**14 53 28.6**	**-0.2**
AYDN				*i* S	**Sg**	**14 53 45.6**	**+0.4**
DAT	**Datca**	**1.30**	**261**	*e*PN	**Pn**	**14 53 29.2**	**-0.4**
DAT	**Datca**	**1.30**	**261**	*e*Pn	**Pn**	**14 53 29.2**	**-0.5**
BDRM	**Kayabasi**	**1.39**	**275**	*i* P	**Pn**	**14 53 31.4**	**+0.5**
BDRM				*i* S	**Sb**	**14 53 51.1**	**+1.7**
BDRM	**Kayabasi**	**1.39**	**275**	*i* P	**Pn**	**14 53 31.5**	**+0.6**
BDRM				*i* S	**Sb**	**14 53 51.1**	**+1.7**
KHL	**Karahalli**	**1.40**	**11**	*e*PN	**Pn**	**14 53 29.4**	**-1.6**
KHL	**Karahalli**	**1.40**	**11**	*e*Pn	**Pn**	**14 53 29.5**	**-1.5**
KHAL	**Karahalli**	**1.44**	**10**	*i* P	**Pn**	**14 53 30.4**	**-1.2**
KHAL				*i* S	**Sb**	**14 53 52.4**	**+1.5**
KHAL	**Karahalli**	**1.44**	**10**	*i* P	**Pn**	**14 53 30.4**	**-1.2**
KHAL				*i* S	**Sb**	**14 53 52.4**	**+1.5**
BODT	**Bodrum**	**1.50**	**275**	*e*PN	**Pn**	**14 53 31.9**	**-0.5**
BODT	**Bodrum**	**1.50**	**275**	*e*Pn	**Pn**	**14 53 31.9**	**-0.5**
KULA	**Kula-Manisa**	**1.62**	**345**	*e*PN	**Pn**	**14 53 33.2**	**-0.8**
KULA	**Kula-Manisa**	**1.62**	**345**	*e*Pn	**Pn**	**14 53 33.2**	**-0.8**
SHUT	**Suhut-Afyon**	**1.94**	**34**	*e*PN	**Pn**	**14 53 37.1**	**-1.3**
SHUT	**Suhut-Afyon**	**1.94**	**34**	*e*Pn	**Pn**	**14 53 37.1**	**-1.3**
IZM	**Izmir**	**2.10**	**314**	*e*PN	**Pn**	**14 53 40.1**	**-0.6**
IZM	**Izmir**	**2.10**	**314**	*e*Pn	**Pn**	**14 53 40.1**	**-0.5**
DEMI	**Demirci**	**2.12**	**350**	*i* P	**Pn**	**14 53 40.9**	**-0.1**
DEMI				*i* S	**Sn**	**14 54 17.3**	**+10**
DEMI	**Demirci**	**2.12**	**350**	*i* P	**Pn**	**14 53 40.9**	**-0.1**
KARP	**Karpathos**	**2.15**	**230**	*e*Pn	**Pn**	**14 53 40.7**	**-0.6**
KARP	**Karpathos**	**2.15**	**230**	*e*PN	**Pn**	**14 53 40.7**	**-0.6**
KARP	**Karpathos**	**2.15**	**230**	*e*Pn	**Pn**	**14 53 40.7**	**-0.6**
GDZ	**Gediz**	**2.15**	**6**	*i* P	**Pn**	**14 53 41.6**	**+0.2**
GDZ				*i* S	**Sn**	**14 54 09.9**	**+1.4**
GDZ	**Gediz**	**2.15**	**6**	*i* P	**Pn**	**14 53 41.6**	**+0.2**
GDZ				*i* S	**Sn**	**14 54 09.9**	**+1.4**
AKS	**Akhisar**	**2.21**	**331**	*e*PN	**Pn**	**14 53 41.1**	**-1.0**
AKS	**Akhisar**	**2.21**	**331**	*e*Pn	**Pn**	**14 53 41.1**	**-1.1**
BLCB	**Balcova**	**2.22**	**311**	*e*PN	**Pn**	**14 53 42.2**	**-0.1**
BLCB	**Balcova**	**2.22**	**311**	*e*Pn	**Pn**	**14 53 42.2**	**-0.1**
ALT	**Altintas**	**2.23**	**19**	*e*PN	**Pn**	**14 53 41.1**	**-1.4**
ALT	**Altintas**	**2.23**	**19**	*e*Pn	**Pn**	**14 53 41.1**	**-1.3**
BOLV	**Bolvadin**	**2.26**	**38**	*i* P

TIRR	Tirgusor	7.53 356	*eP*	Pn	14 54 55.9	+0.8
TIRR	Tirgusor	7.53 356	*eP*	Pn	14 54 55.9	+0.7
EIL	Elat	8.71 145	Pn	Pn	14 55 10.7	-0.9
	0.6nm,0.3s,baz=348,slow=14,SNR=3.3					
EIL			Sn	Sn	14 56 46.0	-4.2
	0.5nm,0.3s,baz=155,slow=12,SNR=2.9					
EIL	Elat	8.71 145	Pn	Pn	14 55 10.7	-0.8
MLR	Muntele Rosu	8.88 345	Pn	Pn	14 55 15.8	+2.1
	0.1nm,0.3s,baz=240,slow=11,SNR=4.1					
MLR	Muntele Rosu	8.88 345	Pn	Pn	14 55 15.8	+2.1
DAVOX	Davos/Dischmat	17.37 310	LR	LR	15 04 15.0	
	comp=Z,39nm,19.9s,baz=264,slow=38					
HFS	Hagfors	25.24 342	LR	LR	15 10 16.5	
	comp=Z,30nm,18.6s,baz=298,slow=41					
TKM2	Tokmak 2	35.73 66	*eP*	P	15 00 03.8	-0.6
	2.0nm,0.5s,mb4.3					
TKM2	Tokmak 2	35.73 66	*eP*	P	15 00 03.8	-0.6
	2.0nm,0.5s,mb4.3					
MKAR	Makanchi Array	40.07 59	P	P	15 00 40.3	-0.7
	0.2nm,0.4s,mb3.2,baz=287,slow=5.4,SNR=2.6					
MKAR	Makanchi Array	40.07 59	P	P	15 00 40.3	-0.7

*NEIC **28** 14:55:24.4±1.0, 18°.76N×145°.86E, h584km±11km, mb4.0/1, Error ellipse: s-maj=33.8km s-min=10.6km az=88.0*
*ISCJB **28** 14:55:25.1±0.8, 18°.72N±0°.09×145°.4E±0°.2, h589km±12km, mb3.6/14, Error ellipse: s-maj=30.4km s-min=13.4km az=177.4*
*IDC **28** 14:55:25.7±1.2, 18°.70N×145°.54E, h584km±15km, mb3.2/12, mb1 3.3/14, mb1mx3.1/23, mbtmp3.2/14, Error ellipse: s-maj=26.2km s-min=12.8km az=86.0*

ISC 28 14:55:25.5±0.9, 18°.71N±0°.09×145°.5E±0°.2, h580km±12km, n23, σ0.84/25, mb3.6/14, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	5.12	187	P		14 56 59.5	+1.2
	12nm,0.3s,baz=337,slow=2.6,SNR=12						
GUMO				S		14 58 13.0	-0.8
	27nm,0.3s,baz=57,slow=16,SNR=9.8						
GUMO	Guam	5.12	187	*eP*		14 56 58.2	-0.1
GUMO				S		14 58 13.0	-0.8
MJAR	Matsushiro Arr	18.89	342	P		14 59 09.7	-0.2
	0.9nm,0.3s,baz=165,slow=10,SNR=6.7						
MAJO	Matsushiro	18.89	342	*eP*		14 59 08.8	-1.1
MAT	Matsushiro	18.89	342	P		14 59 10.0	+0.1
KSRS	Korea Array	24.19	324	P		14 59 57.6	+0.2
	4.0nm,0.8s,mb4.1,baz=145,slow=9.5,SNR=23						
ASAJ	Asahikawa	25.45	355	P		15 00 10.3	+1.9
	2.9nm,0.6s,mb4.1,baz=129,slow=31,SNR=4.5						
FITZ	Fitzroy Crossi	41.45	209	P		15 02 23.3	+0.5
	1.2nm,0.8s,mb3.5,baz=192,slow=14,SNR=7.6						
SONM	Songino Array	43.00	321	P		15 02 35.6	+1.0
	2.9nm,0.6s,mb4.0,baz=124,slow=6.2,SNR=18						
ASAR	Alice Springs	43.60	195	P		15 02 39.8	+0.3
	0.2nm,0.8s,mb2.7,baz=22,slow=7.0,SNR=2.8						
CMAR	Chiang Mai Arr	44.01	277	P		15 02 43.9	+1.0
	2.4nm,0.8s,mb3.8,baz=68,slow=6.3,SNR=12						
ZALV	Zalesovo Beam	57.88	323	P		15 04 22.4	-0.2
	1.4nm,0.5s,mb3.4,baz=111,slow=8.3,SNR=7.7						
MK31	Makanchi Array	58.30	314	*eP*		15 04 26.0	+0.4
MKAR	Makanchi Array	58.30	314	P		15 04 26.1	+0.5
	1.6nm,0.4s,mb3.5,baz=90,slow=8.3,SNR=16						
KURK	Kurchatov	61.12	318	*eP*		15 04 44.1	-0.1
	6.2nm,0.8s,mb3.9						
BVAR	Borovoye Array	66.33	320	P		15 05 17.2	-0.1
	2.1nm,0.4s,mb3.9,baz=95,slow=7.6,SNR=18						
BRVK	Borovoye	66.40	320	*eP*		15 05 17.6	-0.1
AKTK	Aktyubinsk	74.22	318	P		15 06 02.8	-1.1
AKTO	Aktyubinsk	74.22	318	P		15 06 02.8	-1.1
	0.8nm,0.6s,mb3.5,baz=102,slow=9.3,SNR=3.0						
ARCES	ARCESS Array B	82.42	342	P		15 06 46.8	-0.5
	1.5nm,0.7s,mb3.6,baz=78,slow=7.6,SNR=5.8						
NVAR	Mina Array Bea	83.30	52	P		15 06 53.1	+0.8
	0.5nm,0.7s,mb3.2,baz=246,slow=5.4,SNR=5.0						
NVAR	Mina Array Bea	83.30	52	P		15 06 53.1	+0.8
FINES	FINESS Array B	86.79	335	P		15 07 06.8	-1.9
	0.6nm,0.4s,mb3.7,baz=73,slow=6.4,SNR=5.8						

KRSC 28 14:57:25.9±0.9, 51°.69N×159°.26E, h11km±10km, ML3.9, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	Gorelyy	1.13	320	*eS*	Sb	14 58 03.5	+1.4
PET	Petropavlovsk	1.39	345	P	Pn	14 57 51.1	-0.1
PET				*eS*	Sn	14 58 09.6	+0.1
NLC	Nalytchevo	1.48	2	S	Sn	14 58 11.1	-0.8
SPN	Mys Shipunski	1.49	18	P	Pn	14 57 53.9	+1.4
SPN				*eS*	Sn	14 58 14.5	+2.6
AVH	Avacha	1.61	349	*eP*	Pn	14 57 56.0	+1.8
AVH				*eS*	Sn	14 58 17.7	+2.8
MIPR	Malaya Ipel'ka	1.66	292	P	Pn	14 57 55.7	+0.9
MIPR				S	Sn	14 58 17.2	+1.2
ALID	Alaid	2.47	252	P	Pn	14 58 06.4	+0.4
ALID				*eS*	Sn	14 58 36.5	+0.3
MKZ	Mys Kozlova	3.23	26	P	Pn	14 58 17.1	+0.6
KBTR	Krutoberegovo	4.99	23	P	Pn	14 58 41.9	+1.3

*NIED **28** 14:59:00, 27°.20N×126°.90E, h5km, Mw3.7 Best double couple: M0=4.15000×10^14 NP1:φs=38.00000°, δ=77.00000°, λ=115.00000°. NP2:φs=153.00000°, δ=28.00000°, λ=28.00000°.*

JMA 28 14:59:45.4±0.3, 27°.16N×126°.94E, h13km±4km, M3.5, Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGN	Aguni-jima	0.63	155	P	Pg	14 59 57.5	-0.2
JAGN				S	Sg	15 00 05.6	-0.4
JKE	Kume jima 2	0.84	189	P	Pg	15 00 01.2	-0.5
JKE				S	Sg	15 00 12.2	-0.5
JIH	Iheya	0.92	98	P	Pg	15 00 02.5	-0.8
JIH				S	Sg	15 00 15.2	-0.1
NAH1	Naha	1.17	145	P	Pb	15 00 07.0	-0.4
NAH1				S	Sb	15 00 21.9	-0.5
JOW	Kunigami	1.23	105	P	Pn	15 00 07.5	-0.8
JOW				S	Sb	15 00 23.9	-0.5
JJT2	Tamagusuku 2	1.25	144	P	Pn	15 00 08.8	+0.3
JJT2				S	Sb	15 00 25.1	+0.3
JTK	Tokunoshima	1.89	70	P	Pn	15 00 18.6	+1.2

IDC 28 15:16:51.4±2.7, 11°.00S×164°.15E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.8/15, mbtmp3.9/5, MS3.7/5, Ms1 3.6/5, ms1mx3.3/22, Error ellipse: s-maj=111.6km s-min=26.5km az=123.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	29.42	222	P	P	15 22 57.3	+0.7
	2.2nm,1.0s,baz=60,slow=14,SNR=2.9						
STKA				LR	LR	15 34 53.3	
	comp=Z,110nm,18.9s,baz=205,slow=37						
GUMO	Guam	31.02	321	LR	LR	15 33 59.6	
	comp=Z,88nm,20.9s,baz=268,slow=33						
ASAR	Alice Springs	31.42	242	P	P	15 23 13.8	-0.7
	1.0nm,0.7s,baz=63,slow=9.4,SNR=16						
RPZ	Rata Peaks	33.14	171	LR	LR	15 33 27.0	
	comp=Z,160nm,18.6s,baz=69,slow=30						
PETK	Petropavlovsk-	64.09	356	P	P	15 27 27.6	+0.6
	2.5nm,0.9s,baz=138,slow=7.1,SNR=5.7						
SONM	Songino Array	77.71	324	LR	LR	16 03 08.2	
	comp=Z,36nm,21.1s,baz=90,slow=36						
ILAR	Eielson Array	83.97	19	P	P	15 29 22.0	-1.1
	0.5nm,0.8s,baz=231,slow=5.7,SNR=4.6						
DLBC	Dease Lake	87.12	29	LR	LR	15 59 45.2	
	comp=Z,52nm,21.5s,slow=30						
MKAR	Makanchi Array	92.42	317	P	P	15 30 05.1	+1.0
	0.3nm,0.6s,baz=114,slow=5.7,SNR=3.8						

IDC 28 15:29:11.0±2.3, 15°.36S×173°.08W, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.7/16, mbtmp3.6/4, Error ellipse: s-maj=127.3km s-min=19.4km az=140.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	1.92	41	Pn	Pn	15 29 43.8	-1.1
	10nm,0.3s,baz=224,slow=17,SNR=23						
AFI				Sn	Sn	15 30 09.1	-0.7
	24nm,0.3s,baz=256,slow=20,SNR=7.2						
STKA	Stephens Creek	44.32	240	P	P	15 37 22.3	-0.7
	1.2nm,0.8s,baz=78,slow=14,SNR=2.9						
ASAR	Alice Springs	50.41	252	P	P	15 38 10.3	-0.3
	0.8nm,0.6s,baz=84,slow=8.6,SNR=18						
NVAR	Mina Array Bea	74.09	42	P	P	15 40 49.9	+0.8
	0.3nm,0.7s,baz=219,slow=9.3,SNR=2.8						
ILAR	Eielson Array	82.35	11	P	P	15 41 35.5	+1.2
	0.2nm,0.6s,baz=225,slow=6.2,SNR=5.9						

*NEIC **28** 15:51:51.2, 40°.17S×173°.47E, h186km, MG3.9(WEL), After WEL.*

WEL 28 15:51:52.3±0.3, 40°.18S×173°.49E, h175km±2km, ML3.8/19, 2C-1D, Error ellipse: s-maj=1.9km s-min=0.9km az=90.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUWZ	D'Urville Isla	0.70	153	⇑Pn	Pn	15 52 17.6	+0.2
DUWZ				SN	Sn	15 52 36.1	-0.8
NWEZ	Newall Road	0.95	18	PN	Pn	15 52 19.0	-0.1
DFE	Dawson Falls	0.97	29	PN	Pn	15 52 19.3	+0.1
DFE	Dawson Falls	0.97	29	P	Pn	15 52 19.3	0.0
QRZ	Quartz Range	0.98	228	⇑Pn	Pn	15 52 18.9	-0.3
QRZ				SN	Sn	15 52 38.7	-1.4
QRZ	Quartz Range	0.98	228	P	Pn	15 52 18.9	-0.4
NEZ	North Egmont	1.02	27	PN	Pn	15 52 19.5	-0.1
NEZ	North Egmont	1.02	27	P	Pn	15 52 19.5	-0.1
NNZ	Nelson	1.04	185	PN	Pn	15 52 19.6	-0.1
NNZ				SN	Sn	15 52 39.9	-1.2
NNZ	Nelson	1.04	185	P	Pn	15 52 19.6	-0.1
DREZ	Durham Road	1.13	29	⇓Pn	Pn	15 52 20.5	0.0
DREZ				SN	Sn	15 52 42.1	0.0
RAEZ	Rainy Point	1.13	38	PN	Pn	15 52 20.5	+0.1
RAEZ	Rainy Point	1.13	38	P	Pn	15 52 20.5	0.0
TCW	Tory Channel	1.19	150	PN	Pn	15 52 21.5	+0.5
TCW	Tory Channel	1.19	150	P	Pn	15 52 21.5	+0.5
WAZ	Wanganui	1.22	70	PN	Pn	15 52 21.5	+0.3
WAZ				SN	Sn	15 52 44.5	+1.0
WAZ	Wanganui	1.22	70	P	Pn	15 52 21.5	+0.3
WAZ				S	Sn	15 52 45.1	+1.6
MHEZ	Mangahewa	1.27	30	PN	Pn	15 52 21.8	+0.1
KIW	Kapiti Island	1.28	123	PN	Pn	15 52 21.8	+0.1
KIW				SN	Sn	15 52 42.3	-2.1
KIW	Kapiti Island	1.28	123	P	Pn	15 52 21.8	+0.1
TUWZ	Tuamarina	1.30	165	PN	Pn	15 52 22.1	+0.2
OGWZ	Otaki Gorge	1.43	117	PN	Pn	15 52 23.3	+0.2
VRZ	Vera Road	1.43	43	PN	Pn	15 52 22.4	-0.8
SNZO	South Karori	1.46	141	PN	Pn	15 52 23.4	+0.1
SNZO	South Karori	1.46	141	P	Pn	15 52 23.4	+0.1
WEL	Wellington	1.47	139	PN	Pn	15 52 23.8	+0.3
WEL	Wellington	1.47	139	P	Pn	15 52 23.8	+0.3
CAW	Cannon Point	1.52	128	PN	Pn	15 52 24.2	+0.3
CAW	Cannon Point	1.52	128	P	Pn	15 52 24.2	+0.3
BSWZ	Blackbirch Sta	1.56	169	PN	Pn	15 52 24.7	+0.4
BSWZ	Blackbirch Sta	1.56	169	P	Pn	15 52 24.7	+0.3
BHW	Baring Head	1.61	140	PN	Pn	15 52 24.8	0.0
BHW				SN	Sn	15 52 47.9	-2.2
BHW	Baring Head	1.61	140	P	Pn	15 52 24.8	-0.1
BHW				S	Sn	15 52 47.9	-2.2
THZ	Tophouse	1.65	196	PN	Pn	15 52 24.9	-0.3
THZ	Tophouse	1.65	196	P	Pn	15 52 24.9	-0.3
MRZ	Mangatainoka R	1.66	108	PN	Pn	15 52 25.3	-0.1
MRZ	Mangatainoka R	1.66	108	P	Pn	15 52 25.3	-0.1
PKVZ	Pokaka	1.68	59	PN	Pn	15 52 25.1	-0.5
HOWZ	Holdsworth Sta	1.70	116	PN	Pn	15 52 25.7	-0.1
MTVZ	Mangateitei	1.72	63	PN	Pn	15 52 25.5	-0.4
POWZ	Post Office Ro	1.75	98	PN	Pn	15 52 26.2	-0.1
TRVZ	Turoa	1.81	62	PN	Pn	15 52 26.8	-0.2
MTW	Mount Morrison	1.81	123	PN	Pn	15 52 26.9	0.0
MSWZ	Moikau Station	1.82	133	PN	Pn	15 52 27.0	+0.1
WNVZ	Wahianoa	1.83	63	PN	Pn	15 52 26.8	-0.3
WNVZ	Wahianoa	1.83	63	P	Pn	15 52 26.8	-0.3
DRZ	Dome Shelter	1.83	61	PN	Pn	15 52 27.3	+0.1
DRZ	Dome Shelter	1.83	61	P	Pn	15 52 27.3	+0.1
FWVZ	Far West T-bar	1.83	61	PN	Pn	15 52 26.8	-0.4
FWVZ	Far West T-bar	1.83	61	P	Pn	15 52 26.8	-0.4
WPVZ	Whakapapa	1.86	59	PN	Pn	15 52 26.9	-0.5
TWVZ	Taurewa	1.86	54	PN	Pn	15 52 26.7	-0.8
TWVZ	Taurewa	1.86	54	P	Pn	15 52 26.7	-0.8
TSZ	Takapari Road	1.90	87	PN	Pn	15 52 27.5	-0.3
TSZ	Takapari Road	1.90	87	P	Pn	15 52 27.5	-0.3
PAWZ	Paruwai Farm	1.90	130	PN	Pn	15 52 27.8	0.0
TUVZ	Tukino	1.90	62	PN	Pn	15 52 27.6	-0.3
TUVZ	Tukino	1.90	62	P	Pn	15 52 27.6	-0.3
MOVZ	Moawhango	1.90	67	PN	Pn	15 52 27.1	-0.9
MOVZ	Moawhango	1.90	67	P	Pn	15 52 27.1	-0.8
NGZ	Ngauruhoe	1.91	59	PN	Pn	15 52 27.4	-0.6
NGZ	Ngauruhoe	1.91	59	P	Pn	15 52 27.4	-0.6
TIWZ	Tintock	1.92	109	PN	Pn	15 52 28.0	-0.1
PLWZ	Palliser	1.93	137	PN	Pn	15 52 27.9	-0.2
WTVZ	West Tongariro	1.93	57	PN	Pn	15 52 27.6	-0.7
OTVZ	Oturere	1.96	60	PN	Pn	15 52 28.1	-0.4
HIZ	Hauiti	1.97	33	PN	Pn	15 52 27.7	-1.0
HIZ	Hauiti	1.97	33	P	Pn	15 52 27.7	-1.0
KRVZ	Karewarewa	1.98	58	PN	Pn	15 52 28.0	-0.7
DSZ	Denniston Nort	2.02	219	PN	Pn	15 52 28.7	-0.5
DSZ	Denniston Nort	2.02	219	P	Pn	15 52 28.7	-0.5
TMWZ	Te Maipa	2.05	118	PN	Pn	15 52 29.3	-0.1
DVHZ	Dannevirke	2.05	94	PN	Pn	15 52 29.0	-0.5
TRWZ	Traveller	2.06	127	PN	Pn	15 52 29.6	0.0
KATZ	Kakaramea	2.08	55	PN	Pn	15 52 29.3	-0.6
KATZ	Kakaramea	2.08	55	P	Pn	15 52 29.3	-0.6
PNHZ	Pukenui	2.09	84	PN	Pn	15 52 29.6	-0.3
BFZ	Birch Farm	2.16	104	PN	Pn	15 52 30.4	-0.3
RATZ	Rangitukua	2.19	54	PN	Pn	15 52 30.9	-0.3
RATZ	Rangitukua	2.19	54	P	Pn	15 52 30.9	-0.2
KHZ	Kahutara	2.24	179	PN	Pn	15 52 31.3	-0.3
KHZ	Kahutara	2.24	179	P	Pn	15 52 31.3	-0.3
WPHZ	Waipukurau	2.26	88	PN	Pn	15 52 31.5	-0.3
WATZ	Wairara	2.27	50	PN	Pn	15 52 31.5	-0.5
WATZ	Wairara	2.27	50	P	Pn	15 52 31.5	-0.5
HATZ	Hinemaiaia	2.38	58	PN	Pn	15 52 31.4	-1.9
PRHZ	Porangahau	2.41	93	PN	Pn	15 52 33.3	-0.2
BKZ	Black Stump Fm	2.52	67	PN	Pn	15 52 33.6	-1.3
BKZ	Black Stump Fm	2.52	67	P	Pn	15 52 33.6	-1.3
MCHZ	McNeill Hill	2.57	74	PN	Pn	15 52 35.1	-0.5
PXZ	Pawanui	2.59	88	PN	Pn	15 52 35.0	-0.6
KAHZ	Kahuranaki	2.63	83	PN	Pn	15 52 35.7	-0.4
LTZ	Lake Taylor	2.76	199	PN	Pn	15 52 36.8	-0.9
LTZ	Lake Taylor	2.76	199	P	Pn	15 52 36.8	-0.9
NMHZ	Naumai	2.77	68	PN	Pn	15 52 37.6	-0.4
RAHZ	Arahi	3.05	67	PN	Pn	15 52 40.1	-1.2
URZ	Urewera	3.40	57	PN	Pn	15 52 43.0	-2.6
URZ	Urewera	3.40	57	P	Pn	15 52 43.0	-2.6
KNZ	Kokohu	3.43	72	PN	Pn	15 52 44.4	-1.6
KNZ	Kokohu	3.43	72	P	Pn	15 52 44.4	-1.6
CRLZ	Canterbury Las	3.46	191	PN	Pn	15 52 44.3	-2.0
CRLZ	Canterbury Las	3.46	191	P	Pn	15 52 44.3	-2.0
MHGZ	Mahia Peninsul	3.56	75	PN	Pn	15 52 46.3	-1.2
WVZ	Waitaha Valley	3.56	215	PN	Pn	15 52 44.6	-2.9
MQZ	McQueen's Vall	3.58	190	PN	Pn	15 52 45.5	-2.3
MQZ	McQueen's Vall	3.58	190	P	Pn	15 52 45.5	-2.3
PRGZ	Paritu Road	3.62	71	PN	Pn	15 52 46.7	-1.6
MWZ	Matawai	3.63	61	PN	Pn	15 52 46.1	-2.4
MWZ	Matawai	3.63	61	P	Pn	15 52 46.1	-2.4
RPZ	Rata Peaks	3.98	206	PN	Pn	15 52 50.6	-2.2
RPZ	Rata Peaks	3.98	206	P	Pn	15 52 50.6	-2.2
CNGZ	Carnagh Statio	4.03	67	PN	Pn	15 52 51.8	-1.7
PUZ	Puketiti	4.26	62	PN	Pn	15 52 53.6	-3.0
PUZ	Puketiti	4.26	62	P	Pn	15 52 53.6	-2.9
FOZ	Fox Glacier	4.42	219	PN	Pn	15 52 54.9	-3.5
FOZ	Fox Glacier	4.42	219	P	Pn	15 52 54.9	-3.6
LBZ	Lake Benmore	4.87	209	PN	Pn	15 53 01.7	-2.6
LBZ	Lake Benmore	4.87	209	P	Pn	15 53 01.7	-2.6
JCZ	Jackson Bay	5.25	221	PN	Pn	15 53 06.9	-2.4
JCZ	Jackson Bay	5.25	221	P	Pn	15 53 06.9	-2.4
ODZ	Otahua Downs	5.30	202	PN	Pn	15 53 07.7	-2.2
ODZ	Otahua Downs	5.30	202	P	Pn	15 53 07.7	-2.2
WKZ	Wanaka	5.70	214	PN	Pn	15 53 11.6	-3.6
WKZ	Wanaka	5.70	214	P	Pn	15 53 11.6	-3.6
EAZ	Earnscleugh	5.92	210	PN	Pn	15 53 14.4	-3.5
EAZ	Earnscleugh	5.92	210	P	Pn	15 53 14.4	-3.6
WHZ	Wether Hill Ro	7.01	214	PN	Pn	15 53 28.8	-3.6

*ISCJB **28** 15:55:13.7±0.6, 36°.58N±0°.04×70°.97E±0°.07, h180km±8km, mb3.6/4, Error ellipse: s-maj=9.8km s-min=4.9km az=157.4*
*IDC **28** 15:55:13.1±7.3, 36°.34N×70°.95E, h173km±63km, mb3.4/5, mb1 3.4/8, mb1mx3.1/24, mbtmp3.3/8, Error ellipse: s-maj=61.1km s-min=19.2km az=39.0*
*NEIC **28** 15:55:15.0±0.6, 36°.52N×70°.90E, h185km±7km, mb4.5/10, Error ellipse: s-maj=9.4km s-min=5.0km az=61.0*
*NNC **28** 15:55:19.1±5.5, 37°.38N×70°.40E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=43.1km s-min=41.9km az=76.0*

ISC 28 15:55:14.5±0.6, 36°.57N±0°.04×70°.98E±0°.07, h172km±8km, n41, σ1.18/48, mb3.6/4, 5C, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.57	219	*eP*	Pn	15 55 58.0	+0.4
KSH	Kashi	4.92	52	Pn	Pn	15 56 24.8	-2.3
KSH				Sn	Sn	15 57 17.0	-7.1
KSH				smax			
	comp=N,68nm,0.5s						
KSH				smax			
	comp=E,60nm,0.2s						
THN	Thein Dam	5.68	135	*e*PKP	Pn	15 56 36.1	-1.1
THN				*e*S	Sn	15 57 39.7	-2.4
AML	Almayashu	5.94	20	*eP*	Pn	15 56 41.7	+1.2
AML				*e*S	Sn	15 57 46.9	-1.2
KK31	Karatay Array	6.54	357	⇑Pn	Pn	15 56 48.9	+0.5
	comp=E,4.5nm,0.3s,baz=176,slow=12,SNR=67						
KK31				⇑Sn	Sn	15 57 58.4	-3.9
	comp=E,8.4nm,0.3s,baz=185,slow=21,SNR=8.6						
AAK	Ala-Archa	6.64	23	P	Pn	15 56 51.4	+1.7
	comp=E,1.7nm,0.3s,baz=154,slow=4.2,SNR=5.0						
AAK				S	Sn	15 58 03.3	-1.4
	comp=E,0.9nm,0.3s,baz=212,slow=8.5,SNR=3.6						
SDNR	Sundarnagar	7.09	134	*ex*	x	15 57 03.5	
SDNR				*ex*	x	15 58 52.5	
TKM2	Tokmak 2	7.27	28	⇑Pn	Pn	15 56 59.0	+0.9
TKM2				⇑Sn	Sn	15 58 19.3	-0.5
	comp=E,4.0nm,0.8s						
TKM2	Tokmak 2	7.27	28	*eP*	Pn	15 56 59.2	+1.2
	comp=E,2.4nm,0.6s						
KLP	Kalpa	7.84	128	*e*PKP	Pn	15 57 06.4	+0.6
KLP				*e*S	Sn	15 58 29.7	-4.0
JOSI	Joshimath	9.33	128	*e*S	Sn	15 59 03.5	-5.7
JOSI				AML	AML	15 59 07.3	
	comp=E,104nm,0.6s						
JOSI				AML	AML	15 59 08.2	
	comp=N,146nm,0.5s						
KHET	Khetri	9.40	153	*e*S	Sn	15 59 02.1	-8.8
SONA	Sohna	9.76	146	*e*S	Sn	15 59 10.2	-9.3
AGRA	Agra	11.02	146	*e*S	Sn	15 59 41.7	-8.2
AGRA				AML	AML	16 01 08.1	
	comp=N,112nm,0.4s						
AGRA				AML	AML	16 01 09.2	
	comp=E,78nm,0.4s						
MKAR	Makanchi Array	13.24	36	P	Pn	15 58 17.2	+1.3
	comp=E,0.1nm,0.3s,baz=228,slow=15,SNR=3.5						
KOLN	Koldanda	13.81	126	*eP*	Pn	15 58 23.0	-0.2
	comp=E,6.5nm,0.3s						
GKN	Gorkha	14.35	123	*eP*	Pn	15 58 30.4	+0.5
	comp=E,14nm,0.3s						
DMN	Daman	14.92	123	*eP*	Pn	15 58 37.9	+0.9
	comp=E,6.9nm,0.3s						
KKN	Kakani	14.92	122	*eP*	Pn	15 58 38.0	+1.0
AB31	Akbulak array	15.02	331	⇑Pn	Pn	15 58 36.6	-1.3
	comp=E,1.3nm,0.5s,baz=160,slow=12,SNR=28						
AB31				Sn	Sn	16 01 16.7	-8.5
	comp=E,1.3nm,0.5s,baz=160,slow=23,SNR=7.2						
ABKAR	Akbulak array	15.02	331	*eP*	Pn	15 58 36.6	-1.4
	comp=E,1.4nm,0.4s						
PKIN	Phulchoki	15.14	122	*eP*	Pn	15 58 40.9	+1.3
	comp=E,20nm,0.5s						
PKI	Pulchoki	15.15	122	*eP*	Pn	15 58 41.0	+1.2
	comp=E,31nm,0.7s						
KURK	Kurchatov	15.17	19	P	Pn	15 58 40.4	+0.6
	comp=E,0.1nm,0.3s,baz=210,slow=11,SNR=5.5						
KURK	Kurchatov	15.17	19	P	Pn	15 58 40.4	+0.6
GUN	Gumba	15.26	120	*eP*	Pn	15 58 42.9	+1.7
	comp=E,21nm,0.6s						
JIRN	Jiri	15.63	120	*eP*	Pn	15 58 47.5	+1.8
	comp=E,21nm,0.4s						
BVAR	Borovoye Array	16.46	359	P	Pn	15 58 56.5	+1.0
	comp=E,0.4nm,0.3s,baz=164,slow=12,SNR=5.0						
BRVK	Borovoye	16.50	359	P	Pn	15 58 56.5	+0.5
	comp=E,1.8nm,0.4s						
AKTK	Aktyubinsk	16.72	330	P	Pn	15 58 58.8	+0.3
AKTO	Aktyubinsk	16.72	330	P	Pn	15

0.5nm,0.5s,mb3.9,baz=0.0,slow=6.9,SNR=12
FINES FINESS Array B 66.94 332 P **P** **16 06 07.0 -0.8**
1.1nm,0.7s,mb4.0,baz=40,slow=7.3,SNR=3.3
NOA NORSAR Array B 72.27 337 P **P** **16 06 40.4 -0.3**
0.7nm,0.7s,mb3.7,baz=37,slow=6.1,SNR=4.2
NVAR Mina Array Bea 74.17 53 P **P** **16 06 52.5 +0.2**
0.2nm,0.5s,mb3.3,baz=293,slow=5.8,SNR=3.0

CASC 28 16:35:24.4±1.7, 12°.22N×88°.16W, h89km±64km, MD4.1, 1C-1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**1.10**	**17**	*e*P	Pn	16 35 45.3	+0.1
VSM	**San Miguel**	**1.21**	**355**	*e*P	Pn	16 35 46.7	+0.2
BLLM	**Bellamira**	**1.22**	**357**	*e*P	Pn	16 35 46.8	+0.1
COPN	**Copaltepe**	**1.54**	**91**	*e*P	Pn	16 35 49.5	-1.1
SNVI	**San Vicente**	**1.54**	**335**	*e*P	Pn	16 35 52.0	+1.5
CAHU	**Cacacuatique**	**1.55**	**358**	*e*P	Pn	16 35 52.0	+1.3
BOQS	**Boqueron**	**1.86**	**324**	*e*P	Pn	16 35 55.1	+0.3
TICN	**Ticuantepe**	**1.90**	**95**	*e*P	Pn	16 35 54.8	-0.4
SBLS	**San Blas**	**2.15**	**319**	*e*P	Pn	16 35 58.9	+0.3
SBLS				*e*S	Sn	16 36 27.1	+2.4
SNJE	**San Jose**	**2.16**	**320**	*e*P	Pn	16 35 58.9	+0.1
RTR	**El Retiro**	**2.21**	**319**	*e*P	Pn	16 35 59.7	+0.4
RBDL	**Robledal**	**2.40**	**322**	*e*P	Pn	16 36 02.5	+0.6
PRS1	**Puriscal**	**4.38**	**120**	*e*P	Pn	16 36 31.0	+2.4
LAJ	**Bijagual**	**4.60**	**120**	*e*P	Pn	16 36 28.7	-2.9
QCR	**Quepos**	**4.81**	**125**	*e*P	Pn	16 36 34.6	+0.2
URSC	**Urasca**	**4.91**	**118**	⇓*i*P	Pn	16 36 38.4	+2.6
URSC				*e*S	Sn	16 37 34.7	+3.2
BUS	**Buena Vista**	**5.07**	**121**	⇑*e*P	Pn	16 36 39.3	+1.3
BUS				*e*S	Sn	16 37 33.0	-2.3
BAR1		**5.61**	**121**	*e*P	Pn	16 36 46.0	+0.7
BAR1				*e*S	Sn	16 37 43.6	-4.9

NIED ***28*** *16:41:00, 25°.20N×128°.10E, h5km, Mw4.1 Best double couple: M0=1.78000×10^15 NP1:φ=220.00000°, δ=63.00000°, λ=-86.00000°. NP2:φ=32.00000°, δ=28.00000°, λ=-97.00000°.*
IDC ***28*** *16:41:31.5±0.8, 25°.07N×127°.99E, h0km, mb3.9/16, mb1 4.0/17, mb1mx3.9/23, mbtmp3.9/17, MS3.3/6, Ms1 3.3/6, ms1mx2.8/32, Error ellipse: s-maj=26.2km s-min=17.9km az=74.0*
MOS ***28*** *16:41:33.2±1.1, 25°.11N×127°.94E, h21km, mb4.1/15, Error ellipse: s-maj=22.2km s-min=11.3km az=100.9*
ISCJB ***28*** *16:41:33.6±1.3, 25°.15N±0°.04×128°.07E±0°.05, h26km±8km, mb4.0/23, MS3.5/3, Error ellipse: s-maj=8.0km s-min=5.5km az=39.5*
JMA ***28*** *16:41:34.5±0.2, 25°.17N×128°.05E, h65km, M3.7*
BJI ***28*** *16:41:35.0, 25°.04N×128°.18E, h38km, mB4.8/4, mb4.2/12*
NEIC ***28*** *16:41:36.7±0.6, 25°.00N×127°.89E, h35km, mb4.3/4, Error ellipse: s-maj=14.9km s-min=13.4km az=119.0*
ISC 28 16:41:35.3±1.3, 25°.20N±0°.04×128°.00E±0°.05, h22km±8km, n64, σ1=15/73, mb4.0/23, MS3.5/3, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT2	**Tamagusuku 2**	**0.96**	**347**	P	**Pb**	**16 41 53.1**	**-0.2**
JJT2				S	**Sb**	**16 42 06.9**	**+1.3**
NAH1	**Naha**	**1.04**	**345**	P	**Pn**	**16 41 54.0**	**-0.6**
NAH1				S	**Sb**	**16 42 08.1**	**+0.3**
JAGN	**Aguni-jima**	**1.54**	**334**	P	**Pn**	**16 42 01.3**	**-0.2**
JAGN				S	**Sn**	**16 42 20.5**	**-0.4**
JKE	**Kume jima 2**	**1.57**	**316**	P	**Pn**	**16 42 01.6**	**-0.2**
JKE				S	**Sn**	**16 42 21.6**	**+0.2**
JOW	**Kunigami**	**1.65**	**9**	P	**Pn**	**16 42 01.9**	**-1.0**
JOW				S	**Sn**	**16 42 21.6**	**-1.9**
JIH	**Iheya**	**1.83**	**359**	P	**Pn**	**16 42 04.9**	**-0.6**
JIH				S	**Sn**	**16 42 26.8**	**-1.2**
JMJ	**Miyako jima 2**	**2.48**	**262**	P	**Pn**	**16 42 13.8**	**-0.6**
JMJ				S	**Sn**	**16 42 43.0**	**-1.0**
JTK	**Tokunoshima**	**2.72**	**18**	P	**Pn**	**16 42 16.9**	**-0.7**
JTK				*e*S	**Sn**	**16 42 49.4**	**-0.5**
JMZ	**Minamidaito 2**	**2.98**	**77**	P	**Pn**	**16 42 17.1**	**-4.2**
JMZ				S	**Sn**	**16 42 50.3**	**-6.0**
JTJ	**Tarama**	**3.04**	**260**	P	**Pn**	**16 42 21.0**	**-1.1**
JTJ				*e*S	**Sn**	**16 42 55.2**	**-2.6**
JAM	**Amami Oshima**	**3.51**	**24**	P	**Pn**	**16 42 28.3**	**-0.2**
JAM				S	**Sn**	**16 43 05.8**	**-3.6**
JZK	**Kikaishima**	**3.57**	**29**	*e*S	**Sn**	**16 43 09.4**	**-1.6**
JIJ	**Ishigaki jima**	**3.60**	**257**	P	**Pn**	**16 42 28.3**	**-1.4**
JIJ				S	**Sn**	**16 43 07.3**	**-4.3**
TWG	**Pinlang**	**6.76**	**251**	*e*P	**Pn**	**16 43 09.2**	**-3.9**
KSRS	**Korea Array**	**12.22**	**360**	Pn	**Pn**	**16 44 29.1**	**+1.0**
	baz=179,slow=15,SNR=3.8						
KSRS				LR	LR	16 49 11.0	
	comp=Z,50nm,19.7s,baz=158,slow=37						
BJI	**Beijing**	**17.81**	**329**	P	**Pn**	**16 45 44.5**	**+2.8**
BJI				pP	pP	16 45 54.5	+6.1
BJI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
DAV	**Davao City (W)**	**18.17**	**188**	LR	LR	16 51 51.4	
	comp=Z,75nm,21.7s,baz=254,slow=34						
GUMO	**Guam**	**19.64**	**123**	LR	LR	16 52 47.9	
	comp=Z,33nm,18.2s,baz=35,slow=35						
CD2	**Chengdu**	**22.11**	**290**	P	**P**	**16 46 32.5**	**+3.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.2						
ASAJ	**Asahikawa**	**22.31**	**29**	P	**P**	**16 46 33.0**	**+1.7**
	comp=Z,3.1nm,0.7s,mb3.9,baz=218,slow=9.8,SNR=5.5						
ASAJ	**Asahikawa**	**22.31**	**29**	P	**P**	**16 46 33.0**	**+1.8**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KMI	**Kunming**	**22.85**	**275**	P	**P**	**16 46 39.0**	**+1.8**
KMI				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.3						
LZH	**Lanzhou**	**23.38**	**303**	*e*P	**P**	**16 46 46.3**	**+3.7**
LZH				pP		16 46 52.0	
LZH				sP	sP	16 46 55.0	+3.4
LZH				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.4						
YSS	**Yuzh-Sakhalins**	**24.69**	**25**	*e*P	**P**	**16 46 56.4**	**+1.8**
YSS				*e*		16 47 07.9	
YSS	**Yuzh-Sakhalins**	**24.69**	**25**	*e*P	**P**	**16 46 56.9**	**+2.3**
	comp=Z,41nm,1.2s,mb4.8						
GTA	**Gaotai**	**27.58**	**308**	*e*P	**P**	**16 47 21.0**	**+0.2**
GTA				pP	pP	16 47 31.8	+4.5
GTA				sP	sP	16 47 36.0	+6.0
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
SONM	**Songino Array**	**28.31**	**328**	P	**P**	**16 47 27.2**	**0.0**
	comp=Z,0.5nm,0.5s,mb3.4,baz=156,slow=4.6,SNR=3.0						
SONM				LR	LR	17 00 37.5	
	comp=Z,58nm,18.9s,MS3.2,baz=194,slow=40						
SONM	**Songino Array**	**28.31**	**328**	P	**P**	**16 47 27.2**	**0.0**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM				MLR	MLR		
	comp=Z,58nm,18.9s						
PETK	**Petropavlovsk-**	**35.69**	**31**	P	**P**	**16 48 31.6**	**-0.2**
	comp=Z,0.7nm,0.8s,mb3.7,baz=182,slow=5.5,SNR=2.4						
PETK	**Petropavlovsk-**	**35.69**	**31**	P	**P**	**16 48 31.7**	**-0.1**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.8						
MKAR	**Makanchi Array**	**42.07**	**313**	P	**P**	**16 49 25.5**	**+0.1**
	comp=Z,1.6nm,0.5s,mb3.9,baz=99,slow=10,SNR=26						
MKAR				PcP	PcP	16 51 20.3	+0.4
	comp=Z,0.5nm,0.7s,baz=103,slow=4.6,SNR=3.4						
MKAR	**Makanchi Array**	**42.07**	**313**	P	**P**	**16 49 25.5**	**+0.1**
MKAR						16 51 20.3	
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**42.07**	**313**	P	**P**	**16 49 25.5**	**+0.1**
MKAR				PcP	PcP	16 51 20.3	+0.4
ZALV	**Zalesovo Beam**	**42.94**	**324**	P	**P**	**16 49 31.5**	**-0.9**
	comp=Z,1.3nm,0.6s,mb3.9,baz=108,slow=8.1,SNR=6.1						
ZALV				PcP	PcP	16 51 23.4	+0.7
	comp=Z,0.3nm,0.3s,baz=101,slow=3.7,SNR=2.5						
ZALV				LR	LR	17 08 01.4	
	comp=Z,32nm,20.6s,MS3.2,baz=62,slow=37						
ZALV	**Zalesovo Beam**	**42.94**	**324**	P	**P**	**16 49 31.5**	**-0.9**
ZALV						16 51 23.4	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
ZALV				MLR	MLR		
	comp=Z,32nm,20.6s,MS3.2						
ZALV	**Zalesovo Beam**	**42.94**	**324**	P	**P**	**16 49 31.5**	**-0.9**
ZALV				PcP	PcP	16 51 23.4	+0.7
ZALV				LR	LR	17 08 01.4	
KURK	**Kurchatov**	**45.43**	**317**	P	**P**	**16 49 52.8**	**+0.5**
	comp=Z,0.9nm,0.4s,mb3.9,baz=104,slow=8.3,SNR=4.6						
KURK	**Kurchatov**	**45.43**	**317**	P	**P**	**16 49 52.8**	**+0.5**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.0						
KURK	**Kurchatov**	**45.43**	**317**	*e*P	**P**	**16 49 53.5**	**+1.2**
	comp=Z,4.3nm,1.1s,mb4.2						
TKM2	**Tokmak 2**	**46.10**	**306**	*e*P	**P**	**16 49 59.5**	**+1.7**
TKM2				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
TKM2	**Tokmak 2**	**46.10**	**306**	*e*P	**P**	**16 49 59.5**	**+1.7**
	comp=Z,3.0nm,1.0s,mb4.2						
ASAR	**Alice Springs**	**48.91**	**173**	P	**P**	**16 50 18.8**	**-0.9**
	comp=Z,1.8nm,0.8s,mb4.2,baz=358,slow=11,SNR=22						
ASAR	**Alice Springs**	**48.91**	**173**	P	**P**	**16 50 18.8**	**-0.9**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BVAR	**Borovoye Array**	**50.91**	**319**	P	**P**	**16 50 35.7**	**+1.0**
	comp=Z,0.8nm,0.6s,mb3.8,baz=96,slow=9.2,SNR=5.0						
BVAR	**Borovoye Array**	**50.91**	**319**	P	**P**	**16 50 35.7**	**+1.1**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ABKAR	**Akbulak array**	**57.20**	**314**	*e*P	**P**	**16 51 21.8**	**+1.2**
	comp=Z,2.7nm,0.8s,mb4.3						
STKA	**Stephens Creek**	**58.22**	**166**	P	**P**	**16 51 25.8**	**-2.1**
	comp=Z,2.0nm,0.7s,mb4.2,baz=351,slow=11,SNR=3.8						
STKA	**Stephens Creek**	**58.22**	**166**	*e*P	**P**	**16 51 26.4**	**-1.4**
ILAR	**Eielson Array**	**65.45**	**28**	P	**P**	**16 52 15.9**	**-0.2**
	comp=Z,0.2nm,0.6s,mb3.4,baz=266,slow=7.0,SNR=4.1						
ARCES	**ARCESS Array B**	**70.89**	**339**	P	**P**	**16 52 51.4**	**+1.1**
	comp=Z,0.6nm,0.6s,mb3.7,baz=61,slow=7.3,SNR=3.5						
ARCES	**ARCESS Array B**	**70.89**	**339**	P	**P**	**16 52 51.4**	**+1.2**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	**FINESS Array B**	**73.66**	**331**	P	**P**	**16 53 07.6**	**+0.7**
	comp=Z,1.5nm,0.7s,mb4.0,baz=57,slow=7.0,SNR=5.8						
FINES	**FINESS Array B**	**73.66**	**331**	P	**P**	**16 53 07.6**	**+0.7**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKASG	**Malin Array Be**	**76.18**	**320**	P	**P**	**16 53 21.8**	**+0.2**
	comp=Z,1.4nm,0.6s,mb4.1,baz=64,slow=6.3,SNR=4.2						
AKASG	**Malin Array Be**	**76.18**	**320**	P	**P**	**16 53 21.8**	**+0.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	**Keskin Array B**	**77.50**	**308**	P	**P**	**16 53 30.4**	**+1.1**
	comp=Z,0.8nm,0.7s,mb3.8,baz=131,slow=3.4,SNR=5.3						
BRTR	**Keskin Array B**	**77.50**	**308**	P	**P**	**16 53 30.5**	**+1.1**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**79.55**	**25**	P	**P**	**16 53 40.9**	**+0.7**
	comp=Z,0.5nm,0.7s,mb3.6,baz=325,slow=6.3,SNR=2.8						
YKA	**Yellowknife Ar**	**79.55**	**25**	P	**P**	**16 53 40.9**	**+0.7**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**79.55**	**25**	P	**P**	**16 53 40.9**	**+0.7**
NB2	**NORSAR Subarra**	**80.14**	**334**	P	**P**	**16 53 43.3**	**-0.1**
	comp=Z,0.6nm,0.6s,mb3.7,baz=55,slow=5.3						
NOA	**NORSAR Array B**	**80.14**	**334**	P	**P**	**16 53 43.6**	**+0.1**
	comp=Z,0.8nm,0.7s,mb3.8,baz=56,slow=5.2,SNR=4.3						
NOA	**NORSAR Array B**	**80.14**	**334**	P	**P**	**16 53 43.6**	**+0.2**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
VAE	**Valguarnera**	**91.83**	**313**	LR	LR	17 44 53.9	
	comp=Z,87nm,19.4s,MS4.2,baz=132,slow=41						

IDC ***28*** *17:37:02.7±1.2, 35°.47N×22°.79E, h0km, mb4.0/15, mb1 4.1/21, mb1mx4.0/33, mbtmp3.9/21, ML3.9/6, MS3.1/6, Ms1 3.1/6, ms1mx2.7/35, Error ellipse: s-maj=27.1km s-min=15.8km az=31.0*
MOS ***28*** *17:37:05.5±1.4, 35°.35N×22°.59E, h33km, mb4.2/19, Error ellipse: s-maj=8.4km s-min=4.2km az=89.6*
ATH ***28*** *17:37:07.6, 35°.44N×22°.66E, h29km±1km, ML3.6*
NEIC ***28*** *17:37:07.6, 35°.44N×22°.66E, h29km, mb4.1/6, ML4.0(THE), ML3.6(ATH), After ATH.*
CSEM ***28*** *17:37:08.1±0.3, 35°.29N×22°.62E, h53km±2km, mb3.9/21, Error ellipse: s-maj=9.2km s-min=3.5km az=38.0*
THE ***28*** *17:37:08.9, 35°.38N×22°.66E, h80km±3km, ML4.6/10, Error ellipse: s-maj=3.9km s-min=0.6km az=176.0*
ISCJB ***28*** *17:37:09.0±0.5, 35°.49N±0°.04×22°.67E±0°.04, h72km±3km, mb4.0/28, Error ellipse: s-maj=8.1km s-min=3.1km az=40.3*
ISC 28 17:37:09.7±0.5, 35°.43N±0°.04×22°.65E±0°.04, h61km±4km, n335, σ0=96/359, mb4.1/28, 15C-10D, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.91**	**20**	*e*Pn	**Pn**	**17 37 25.4**	**-1.2**
KYTH				*e*Sn	**Sn**	**17 37 37.9**	**-1.1**
KYTH	**Kithira**	**0.91**	**20**	*e*PN	**Pn**	**17 37 25.4**	**-1.2**
KYTH				*e*SN	**Sn**	**17 37 37.9**	**-1.1**
KYTH	**Kithira**	**0.91**	**20**	*e*Pn	**Pn**	**17 37 25.4**	**-1.2**
KYTH				*e*Sn	**Sn**	**17 37 37.9**	**-1.1**
KARN	**Karanos**	**1.04**	**91**	P	**Pn**	**17 37 27.9**	**-0.4**
KARN				S	**Sn**	**17 37 43.1**	**+1.1**
KARN	**Karanos**	**1.04**	**91**	P	**Pn**	**17 37 27.9**	**-0.4**
KARN				S	**Sn**	**17 37 43.1**	**+1.1**
VAM	**Vamos**	**1.27**	**91**	*e*Pn	**Pn**	**17 37 31.0**	**-0.3**
VAM				*e*Sn	**Sn**	**17 37 48.6**	**+1.2**
VAM	**Vamos**	**1.27**	**91**	*e*PN	**Pn**	**17 37 31.0**	**-0.3**
VAM				*e*SN	**Sn**	**17 37 48.6**	**+1.2**
VAM	**Vamos**	**1.27**	**91**	*e*Pn	**Pn**	**17 37 31.0**	**-0.3**
VAM				*e*Sn	**Sn**	**17 37 48.6**	**+1.2**
VLI	**Veliai**	**1.31**	**10**	*e*Pn	**Pn**	**17 37 31.5**	**-0.3**
VLI				*e*Sn	**Sn**	**17 37 49.1**	**+0.7**
VLI	**Veliai**	**1.31**	**10**	*e*PN	**Pn**	**17 37 31.5**	**-0.3**
VLI				*e*SN	**Sn**	**17 37 49.1**	**+0.7**
VLI	**Veliai**	**1.31**	**10**	*e*Pn	**Pn**	**17 37 31.5**	**-0.3**
VLI				*e*Sn	**Sn**	**17 37 49.1**	**+0.7**
GVD	**Gavdhos**	**1.32**	**116**	*e*P	**Pn**	**17 37 30.5**	**-1.5**
GVD	**Gavdhos**	**1.32**	**116**	P	**Pn**	**17 37 30.8**	**-1.2**
GVD				S	**Sn**	**17 37 49.1**	**+0.5**
GVD	**Gavdhos**	**1.32**	**116**	P	**Pn**	**17 37 30.8**	**-1.2**
GVD				S	**Sn**	**17 37 49.1**	**+0.5**
PYL	**PYLOS**	**1.64**	**334**	*e*PB	**Pn**	**17 37 35.9**	**-0.4**
PYL				*e*SN	**Sn**	**17 37 57.3**	**+1.0**
PYL	**PYLOS**	**1.64**	**334**	P	**Pn**	**17 37 36.0**	**-0.3**
PYL	**PYLOS**	**1.64**	**334**	P	**Pn**	**17 37 36.0**	**-0.3**
PYL				*e*Sn	**Sn**	**17 37 57.3**	**+1.0**
SIVA	**Sivas**	**1.82**	**102**	P	**Pn**	**17 37 38.2**	**-0.5**
SIVA				S	**Sn**	**17 38 01.1**	**+0.4**
SIVA	**Sivas**	**1.82**	**102**	P	**Pn**	**17 37 38.2**	**-0.5**
SIVA				S	**Sn**	**17 38 01.1**	**+0.4**
IDI	**Anoyia**	**1.84**	**94**	P	**Pn**	**17 37 38.5**	**-0.5**
IDI	**Anoyia**	**1.84**	**94**	P	**Pn**	**17 37 38.5**	**-0.5**
ITM	**Ithomi**	**1.84**	**342**	*e*Pb	**Pn**	**17 37 39.6**	**+0.6**
ITM				*e*Sn	**Sn**	**17 38 02.4**	**+1.1**
ITM	**Ithomi**	**1.84**	**342**	*e*PB	**Pn**	**17 37 39.6**	**+0.6**
ITM				*e*SN	**Sn**	**17 38 02.4**	**+1.1**
ITM	**Ithomi**	**1.84**	**342**	P	**Pn**	**17 37 39.6**	**+0.6**
ITM	**Ithomi**	**1.84**	**342**	P	**Pn**	**17 37 39.6**	**+0.6**
ITM				*e*Sn	**Sn**	**17 38 02.4**	**+1.1**
VLX	**Vlachokerasia**	**1.95**	**354**	*e*PB	**Pn**	**17 37 40.8**	**+0.3**
VLX	**Vlachokerasia**	**1.95**	**354**	P	**Pn**	**17 37 42.8**	**+2.3**
VLX	**Vlachokerasia**	**1.95**	**354**	P	**Pn**	**17 37 42.8**	**+2.3**
DID	**Didima**	**2.13**	**13**	*e*PN	**Pn**	**17 37 43.3**	**+0.4**
DID	**Didima**	**2.13**	**13**	P	**Pn**	**17 37 43.2**	**+0.3**
DID	**Didima**	**2.13**	**13**	P	**Pn**	**17 37 43.2**	**+0.3**
LAST	**Lasithi**	**2.33**	**96**	P	**Pn**	**17 37 45.7**	**0.0**
LAST				S	**Sn**	**17 38 13.3**	**+0.1**
LAST	**Lasithi**	**2.33**	**96**	P	**Pn**	**17 37 45.7**	**0.0**
LAST				S	**Sn**	**17 38 13.3**	**+0.1**
THR5	**Thira Island,**	**2.40**	**65**	P	**Pn**	**17 37 46.1**	**-0.6**
THR5	**Thira Island,**	**2.40**	**65**	P	**Pn**	**17 37 46.1**	**-0.6**
NAIG	**Nisos Aigina**	**2.42**	**16**	*e*Pn	**Pn**	**17 37 47.3**	**+0.4**
NAIG	**Nisos Aigina**	**2.42**	**16**	*e*PN	**Pn**	**17 37 47.3**	**+0.4**
NAIG	**Nisos Aigina**	**2.42**	**16**	*e*Pn	**Pn**	**17 37 47.3**	**+0.4**
NPS	**Neapolis**	**2.43**	**93**	*e*P	**Pn**	**17 37 47.3**	**+0.3**
NPS	**Neapolis**	**2.43**	**93**	*e*PN	**Pn**	**17 37 47.3**	**+0.3**
NPS	**Neapolis**	**2.43**	**93**	*e*Pn	**Pn**	**17 37 47.3**	**+0.3**
THR3	**Thira Island,**	**2.44**	**66**	P	**Pn**	**17 37 46.6**	**-0.6**
THR3	**Thira Island,**	**2.44**	**66**	P	**Pn**	**17 37 46.6**	**-0.6**
THR1	**Thera Island**	**2.47**	**67**	P	**Pn**	**17 37 47.1**	**-0.5**
THR1	**Thera Island**	**2.47**	**67**	P	**Pn**	**17 37 47.1**	**-0.5**
GUR	**Goura**	**2.51**	**354**	*e*PN	**Pn**	**17 37 48.2**	**0.0**
GUR	**Goura**	**2.51**	**354**	P	**Pn**	**17 37 49.8**	**+1.6**
GUR	**Goura**	**2.51**	**354**	*e*Pn	**Pn**	**17 37 48.2**	**0.0**
GUR	**Goura**	**2.51**	**354**	P	**Pn**	**17 37 49.8**	**+1.6**
VLY	**Voula,Athens**	**2.59**	**21**	*e*Pn	**Pn**	**17 37 49.0**	**-0.2**
VLY	**Voula,Athens**	**2.59**	**21**	*e*PN	**Pn**	**17 37 49.0**	**-0.2**
VLY	**Voula,Athens**	**2.59**	**21**	*e*Pn	**Pn**	**17 37 49.0**	**-0.2**
LTK	**Loutraki**	**2.60**	**6**	*e*PN	**Pn**	**17 37 49.7**	**+0.3**
LTK	**Loutraki**	**2.60**	**6**	P	**Pn**	**17 37 49.8**	**+0.4**
LTK	**Loutraki**	**2.60**	**6**	*e*Pn	**Pn**	**17 37 49.7**	**+0.3**
ATH	**Athens Observa**	**2.68**	**18**	*e*P	**Pn**	**17 37 50.7**	**+0.3**
ATH	**Athens Observa**	**2.68**	**18**	*e*PN	**Pn**	**17 37 50.7**	**+0.3**
ATH	**Athens Observa**	**2.68**	**18**	*e*Pn	**Pn**	**17 37 50.7**	**+0.3**
ATHU	**Athens Univers**	**2.69**	**20**	P	**Pn**	**17 37 50.9**	**+0.3**
ATHU	**Athens Univers**	**2.69**	**20**	P	**Pn**	**17 37 50.9**	**+0.3**
RLS	**Riolos of Patr**	**2.79**	**340**	*e*Pn	**Pn**	**17 37 52.6**	**+0.7**
RLS	**Riolos of Patr**	**2.79**	**340**	*e*PN	**Pn**	**17 37 52.6**	**+0.7**
RLS	**Riolos of Patr**	**2.79**	**340**	*e*Pn	**Pn**	**17 37 52.6**	**+0.7**
PTL	**Penteli**	**2.79**	**20**	*e*Pn	**Pn**	**17 37 52.3**	**+0.3**
PTL	**Penteli**	**2.79**	**20**	*e*PN	**Pn**	**17 37 52.3**	**+0.3**
PTL	**Penteli**	**2.79**	**20**	*e*Pn	**Pn**	**17 37 52.3**	**+0.3**
APE	**Apeiranthos**	**2.85**	**54**	*e*P	**Pn**	**17 37 53.1**	**+0.4**
APE	**Apeiranthos**	**2.85**	**54**	*e*PN	**Pn**	**17 37 53.1**	**+0.4**
APE	**Apeiranthos**	**2.85**	**54**	P	**Pn**	**17 37 52.1**	**-0.6**
APE	**Apeiranthos**	**2.85**	**54**	P	**Pn**	**17 37 52.1**	**-0.6**
APE	**Apeiranthos**	**2.85**	**54**	*e*Pn	**Pn**	**17 37 53.1**	**+0.4**
LAKA	**Lakka**	**2.86**	**349**	P	**Pn**	**17 37 54.3**	**+1.4**
LAKA	**Lakka**	**2.86**	**349**	P	**Pn**	**17 37 54.3**	**+1.4**
ZKR	**Zakros**	**2.94**	**95**	P	**Pn**	**17 37 54.0**	**0.0**
ZKR	**Zakros**	**2.94**	**95**	P	**Pn**	**17 37 54.0**	**0.0**
TRIZ	**Trizonia**	**2.97**	**351**	P	**Pn**	**17 37 55.4**	**+1.0**
TRIZ	**Trizonia**	**2.97**	**351**	P	**Pn**	**17 37 55.4**	**+1.0**
DSF	**Desfina**	**2.98**	**358**	P	**Pn**	**17 37 55.0**	**+0.5**
DSF	**Desfina**	**2.98**	**358**	P	**Pn**	**17 37 55.0**	**+0.5**
KALE	**Kalithea**	**2.98**	**352**	P	**Pn**	**17 37 55.5**	**+0.9**
KALE	**Kalithea**	**2.98**	**352**	P	**Pn**	**17 37 55.5**	**+0.9**
EFP	**Efpalio**	**3.05**	**349**	*e*PN	**Pn**	**17 37 56.3**	**+0.8**
EFP	**Efpalio**	**3.05**	**349**	P	**Pn**	**17 37 56.9**	**+1.4**
EFP	**Efpalio**	**3.05**	**349**	*e*Pn	**Pn**	**17 37 56.3**	**+0.8**
EFP	**Efpalio**	**3.05**	**349**	P	**Pn**	**17 37 56.9**	**+1.4**
VLS	**Valsamata**	**3.20**	**330**	*e*P	**Pn**	**17 37 57.5**	**-0.1**
VLS	**Valsamata**	**3.20**	**330**	*e*PN	**Pn**	**17 37 57.5**	**-0.1**
VLS	**Valsamata**	**3.20**	**330**	P	**Pn**	**17 37 57.4**	**-0.2**
VLS	**Valsamata**	**3.20**	**330**	*e*Pn	**Pn**	**17 37 57.5**	**-0.1**
LKR	**Lokris**	**3.23**	**5**	*e*Pn	**Pn**	**17 37 58.8**	**+0.9**
LKR	**Lokris**	**3.23**	**5**	*e*PN	**Pn**	**17 37 58.8**	**+0.9**
LKR	**Lokris**	**3.23**	**5**	P	**Pn**	**17 37 58.6**	**+0.7**
LKR	**Lokris**	**3.23**	**5**	P	**Pn**	**17 37 58.6**	**+0.7**
ATAL	**Atalanti**	**3.27**	**5**	P	**Pn**	**17 37 59.0**	**+0.5**
ATAL	**Atalanti**	**3.27**	**5**	P	**Pn**	**17 37 59.0**	**+0.5**
EVR	**Evrytania**	**3.54**	**349**	*e*Pn	**Pn**	**17 38 03.3**	**+1.0**
EVR	**Evrytania**	**3.54**	**349**	*e*PN	**Pn**	**17 38 03.2**	**+0.9**
EVR	**Evrytania**	**3.54**	**349**	*e*Pn	**Pn**	**17 38 03.3**	**+1.0**
AGG	**Agios Georgios**	**3.59**	**356**	P	**Pn**	**17 38 03.5**	**+0.6**
AGG	**Agios Georgios**	**3.59**	**356**	P	**Pn**	**17 38 03.5**	**+0.6**
KARP	**Karpathos**	**3.69**	**87**	P	**Pn**	**17 38 03.3**	**-0.9**
KARP	**Karpathos**	**3.69**	**87**	P	**Pn**	**17 38 03.3**	**-0.9**
AOS	**Alonnisos**	**

NVLJ Sn **Sn** **17 41 33.8 -9.2**
NVLJ Novalja 10.89 329 *e*Pn **Pn** **17 39 41.2 -1.5**
PKSM Moragy 11.19 346 ⇑P **Pn** **17 39 41.9 -4.9**
PKSM Moragy 11.19 346 ⇑*i*P **Pn** **17 39 41.9 -4.9**
DRGR 11.35 0 ⇓P **Pn** **17 39 47.7 -1.3**
DRGR 11.35 0 ⇓*i*P **Pn** **17 39 47.7 -1.3**
DRGR 11.35 0 P **Pn** **17 39 47.7 -1.3**
EIL Elat 11.86 116 Pn **Pn** **17 39 51.5 -4.5**
0.9nm,0.3s,baz=322,slow=12,SNR=14
EIL Sn **Sn** **17 41 55.8 -11**
1.5nm,0.3s,baz=300,slow=20,SNR=6.2
BURAR Bucovina Array 12.32 8 ⇑P **Pn** **17 40 11.8 +10**
BURAR Bucovina Array 12.32 8 ⇑*i*P **Pn** **17 40 11.8 +10**
SOKA Soboth 12.61 335 ⇓*i*Pn **Pn** **17 40 02.4 -3.8**
SOKA Soboth 12.61 335 Sn **Sn** **17 42 14.8 -10**
OBKA Obir 12.64 334 ⇑*i*Pn **Pn** **17 40 03.2 -3.3**
OBKA Obir 12.64 334 Sn **Sn** **17 42 16.0 -9.4**
ARSA Arzberg 12.96 338 ⇑*i*Pn **Pn** **17 40 07.4 -3.5**
VYHS Vyhne 13.36 349 *e*P **Pn** **17 40 13.8 -2.5**
VYHS Vyhne 13.36 349 *e*PN **Pn** **17 40 13.8 -2.5**
MOA Molln 13.89 336 ⇓*i*Pn **Pn** **17 40 19.6 -3.8**
MOA Molln 13.89 336 Sn **Sn** **17 42 44.8 -11**
STHS Stebnicka Huta 14.02 356 *e*P **Pn** **17 40 27.8 +2.7**
STHS Stebnicka Huta 14.02 356 *e*PN **Pn** **17 40 27.8 +2.7**
STHS Stebnicka Huta 14.02 356 *e*Pn **Pn** **17 40 27.8 +2.7**
VRAC Vranov 14.57 344 Pn **Pn** **17 40 29.0 -3.3**
0.3nm,0.3s,baz=107,slow=11,SNR=3.5
OKC Ostrava-Krasne 14.77 349 *e*P **Pn** **17 40 41.6 +6.6**
OKC MLR MLR
comp=Z,100nm,19.0s
OKC Ostrava-Krasne 14.77 349 *e*P **Pn** **17 40 41.6 +6.6**
OKC AMS AMS 17 47 40.0
comp=Z,100nm,19.0s
OKC Ostrava-Krasne 14.77 349 *e*P **Pn** **17 40 41.6 +6.6**
comp=Z,100nm,19.0s
MORC Moravsky Berou 14.82 347 *e*P **Pn** **17 40 41.6 +6.0**
TREC Trest 14.82 341 *e*P **Pn** **17 40 41.9 +6.3**
TREC MLR MLR
comp=Z,100nm,23.7s
TREC Trest 14.82 341 *e*P **Pn** **17 40 41.9 +6.3**
TREC AMS AMS 17 47 00.0
comp=Z,100nm,23.7s
TREC Trest 14.82 341 *e*P **Pn** **17 40 41.9 +6.3**
comp=Z,100nm,23.7s
DAVOX Davos/Dischmat 14.85 324 Pn **Pn** **17 40 36.2 +0.1**
comp=Z,0.1nm,0.3s,baz=105,slow=18,SNR=2.4
DAVOX Davos/Dischmat 14.85 324 Pn **Pn** **17 40 36.2 +0.2**
KHC Kasperske Hory 15.23 337 *e*P **Pn** **17 40 46.9 +6.0**
KHC MLR MLR
comp=Z,200nm,22.9s
KHC Kasperske Hory 15.23 337 *e*P **Pn** **17 40 46.9 +6.0**
KHC AMS AMS 17 47 20.0
comp=Z,200nm,22.9s
KHC Kasperske Hory 15.23 337 *e*P **Pn** **17 40 46.9 +6.0**
comp=Z,200nm,22.9s
DPC Dobruska-Polom 15.61 345 *e*P **Pn** **17 40 50.1 +4.4**
DPC MLR MLR
comp=Z,100nm,10.5s
DPC Dobruska-Polom 15.61 345 *e*P **Pn** **17 40 50.1 +4.4**
DPC AMS AMS 17 47 50.0
comp=Z,100nm,10.5s
DPC Dobruska-Polom 15.61 345 *e*P **Pn** **17 40 50.1 +4.4**
comp=Z,100nm,10.5s
PRU Pruhonice 15.71 340 AMS AMS 17 47 40.0
comp=Z,100nm,12.1s
AKASG Malin Array Be 15.99 15 Pn **Pn** **17 40 47.4 -3.2**
comp=Z,1.0nm,0.3s,baz=207,slow=11,SNR=3.5
AKASG Malin Array Be 15.99 15 P **Pn** **17 40 47.4 -3.2**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
NKC Novy Kostel 16.55 336 AMS AMS 17 48 20.0
comp=Z,200nm,18.0s
BRG Berggiesshubel 16.67 340 *e*(P) pP 17 41 16.0 +2.5
comp=Z,1.8nm,0.6s
CDF Champ du Feu 17.25 323 *e*P **Pn** **17 41 07.1 +0.7**
CDF Champ du Feu 17.25 323 *e*P **Pn** **17 41 07.1 +0.7**
CLL Collm 17.32 339 *e*P **Pn** **17 41 09.0 +1.8**
CLL *e*(PPP) 17 41 32.0
CLL Lm 17 48 00.0
comp=Z,100nm,19.1s
GNI Garni 18.07 68⇑*e*P **Pn** **17 41 12.4 -4.1**
GNI pmax pmax
comp=Z,11nm,1.7s
BAIF Baives 19.85 323 *e*P **Pn** **17 41 36.5 -1.1**
comp=Z,6.5nm,0.6s
BAIF Baives 19.85 323 *e*P **Pn** **17 41 36.5 -1.1**
BAIF pmax pmax
comp=Z,3.0nm,0.6s
BAIF Baives 19.85 323 *e*P **Pn** **17 41 36.5 -1.1**
comp=Z,3.3nm,0.6s
BAIF Baives 19.85 323 *e*P **Pn** **17 41 36.5 -1.1**
comp=Z,3.2nm,0.6s
BSD Bornholm Skovb 20.40 347 *i*P **P** **17 41 40.2 -1.2**
BSD Bornholm Skovb 20.40 347 *i*P **P** **17 41 40.2 -1.2**
BSD Bornholm Skovb 20.40 347 *i*P **P** **17 41 40.2 -1.2**
MFF Saint Martin d 20.43 310 *e*P **P** **17 41 42.8 +1.0**
comp=Z,8.2nm,0.5s
MFF Saint Martin d 20.43 310 *e*P **P** **17 41 42.8 +1.0**
MFF pmax pmax
comp=Z,4.0nm,0.5s
MFF Saint Martin d 20.43 310 *e*P **P** **17 41 42.8 +1.0**
comp=Z,4.1nm,0.5s
MFF Saint Martin d 20.43 310 *e*P **P** **17 41 42.8 +1.0**
comp=Z,4.1nm,0.5s
LDF La Druitiere 21.33 315 *e*P **P** **17 41 52.0 +0.5**
comp=Z,8.5nm,0.5s,mb4.0
LDF La Druitiere 21.33 315 *e*P **P** **17 41 52.0 +0.5**
LDF pmax pmax
comp=Z,4.0nm,0.5s,mb4.0
LDF La Druitiere 21.33 315 *e*P **P** **17 41 52.0 +0.5**
comp=Z,4.3nm,0.5s,mb4.0
LDF La Druitiere 21.33 315 *e*P **P** **17 41 52.0 +0.5**
comp=Z,4.2nm,0.5s,mb4.0
ESDC Sonseca Array 21.49 289 P **P** **17 41 54.6 +1.4**
comp=Z,0.7nm,0.5s,mb3.2,baz=96,slow=11,SNR=4.5
ESDC Sonseca Array 21.49 289 P **P** **17 41 54.7 +1.4**
MIB Mutribah 21.52 98 *e*P **P** **17 41 52.7 -1.0**
MIB AMb AMB 17 41 53.4
comp=Z,20nm,0.5s,mb4.8
FLN La Foliniere 21.62 315 *e*P **P** **17 41 54.1 -0.5**
comp=Z,24nm,0.8s,mb4.4
FLN La Foliniere 21.62 315 *e*P **P** **17 41 54.1 -0.5**
FLN pmax pmax
comp=Z,12nm,0.8s,mb4.4
FLN La Foliniere 21.62 315 *e*P **P** **17 41 54.1 -0.5**
comp=Z,12nm,0.8s,mb4.4
FLN La Foliniere 21.62 315 *e*P **P** **17 41 54.1 -0.5**
comp=Z,12nm,0.8s,mb4.4
NAY Al-Naaiem 21.65 100 *e*P **P** **17 41 54.1 -1.0**
NAY AMb AMB 17 41 58.5
comp=Z,11nm,0.6s,mb4.5
GRR Gorron 21.66 314 *e*P **P** **17 41 55.4 +0.4**
GRR Gorron 21.66 314 *e*P **P** **17 41 55.4 +0.4**
OBN Obninsk 21.91 22 *e*P **P** **17 41 57.1 -0.5**
OBN pmax pmax
comp=Z,6.0nm,1.0s,mb4.0
OBN Obninsk 21.91 22 *e*P **P** **17 41 57.1 -0.5**
comp=Z,6.0nm,1.0s,mb4.0
UMR Umm Al-Rimmam 21.91 98 *e*P **P** **17 41 57.4 -0.6**
UMR AMb AMB 17 41 58.3
comp=Z,45nm,0.4s,mb5.3
HFS Hagfors 25.39 350 P **P** **17 42 31.3 +0.2**
comp=Z,2.5nm,0.4s,mb4.1,baz=156,slow=11,SNR=32
HFS LR LR 17 53 21.3
comp=Z,13nm,19.4s,baz=174,slow=39
HFS Hagfors 25.39 350 P **P** **17 42 31.3 +0.2**
HFS pmax pmax
comp=Z,3.0nm,0.4s
HFS MLR MLR
comp=Z,13nm,19.4s
HFS Hagfors 25.39 350 P **P** **17 42 31.3 +0.2**
comp=Z,13nm,19.4s
FINES FINESS Array B 26.13 4 P **P** **17 42 37.3 -0.4**
comp=Z,1.2nm,0.3s,mb4.0,baz=176,slow=8.8,SNR=20
FINES LR LR 17 54 17.9
comp=Z,69nm,18.5s,baz=348,slow=40
FINES FINESS Array B 26.13 4 P **P** **17 42 37.3 -0.4**
FINES pmax pmax
comp=Z,1.0nm,0.3s
FINES MLR MLR
comp=Z,69nm,18.5s
FINES FINESS Array B 26.13 4 P **P** **17 42 37.3 -0.4**
comp=Z,69nm,18.5s
NAO01 NORSAR Array S 26.53 347 *e*P **P** **17 42 41.5 +0.2**
comp=Z,2.6nm,0.5s,mb4.0
NAO01 NORSAR Array S 26.53 347 *e*P **P** **17 42 41.5 +0.1**
comp=Z,2.6nm,0.5s,mb4.0
NB2 NORSAR Subarra 26.65 348 P **P** **17 42 42.6 +0.1**
comp=Z,1.4nm,0.4s,mb3.8,baz=156,slow=9.3
NB2 NORSAR Subarra 26.65 348 P **P** **17 42 42.6 +0.1**
comp=Z,1.4nm,0.4s,mb3.8,SNR=2.2
NOA NORSAR Array B 26.65 348 P **P** **17 42 42.6 +0.1**
comp=Z,1.3nm,0.5s,mb3.8,baz=156,slow=8.7,SNR=12
NOA LR LR 17 53 21.1
comp=Z,11nm,18.5s,baz=130,slow=37
NOA NORSAR Array B 26.65 348 P **P** **17 42 42.6 +0.1**
NOA pmax pmax
comp=Z,1.0nm,0.5s
NOA MLR MLR
comp=Z,11nm,18.5s
NOA NORSAR Array B 26.65 348 P **P** **17 42 42.6 +0.1**
comp=Z,11nm,18.5s
EKA Eskdalemuir Ar 26.66 326 P **P** **17 42 42.8 +0.2**
comp=Z,2.8nm,0.7s,mb3.9,baz=124,slow=9.0,SNR=16
EKA Eskdalemuir Ar 26.66 326 P **P** **17 42 42.8 +0.2**
EKA pmax pmax
comp=Z,3.0nm,0.7s
EKA Eskdalemuir Ar 26.66 326 P **P** **17 42 42.8 +0.2**
comp=Z,3.0nm,0.7s,mb3.9
KAF Kangasniemi 26.80 4 *e*P **P** **17 42 44.9 +1.1**
KAF pmax pmax
comp=Z,22nm,0.5s,mb4.9
KAF Kangasniemi 26.80 4 *e*P **P** **17 42 44.9 +1.1**
comp=Z,22nm,0.5s,mb5.0
KAF Kangasniemi 26.80 4 *e*p **P** **17 42 44.9 +1.1**
comp=Z,22nm,0.5s,mb5.0
KAF Kangasniemi 26.80 4 *e*P **P** **17 42 44.9 +1.1**
comp=Z,22nm,0.5s,mb5.0
JOF Joensuu 28.04 8 *e*P **P** **17 42 53.6 -1.3**
JOF pmax pmax
comp=Z,9.0nm,0.3s,mb4.9
JOF Joensuu 28.04 8 *e*p **P** **17 42 53.6 -1.3**
comp=Z,8.7nm,0.3s,mb4.9
JOF Joensuu 28.04 8 *e*P **P** **17 42 53.6 -1.3**
comp=Z,9.0nm,0.3s,mb4.9
AKTK Aktyubinsk 29.59 49 P **P** **17 43 08.5 -0.3**
AKTK Aktyubinsk 29.59 49 P **P** **17 43 08.5 -0.3**
comp=Z,1.0nm,0.5s,mb3.8
AKTO Aktyubinsk 29.59 49 P **P** **17 43 08.5 -0.3**
comp=Z,1.2nm,0.5s,mb3.9,baz=260,slow=10.0,SNR=6.0
AKTO Aktyubinsk 29.59 49 P **P** **17 43 08.5 -0.3**
AKTO pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
ARCES ARCESS Array B 34.20 2 P **P** **17 43 48.6 -0.3**
comp=Z,0.6nm,0.3s,mb4.0,baz=177,slow=9.9,SNR=19
ARCES PcP PcP 17 46 25.4 +1.1
comp=Z,0.4nm,0.4s,baz=178,slow=2.7,SNR=5.2
ARCES LR LR 17 59 16.7
comp=Z,46nm,18.1s,baz=95,slow=39
ARCES ARCESS Array B 34.20 2 P **P** **17 43 48.6 -0.3**
ARCES 17 46 25.4
ARCES pmax pmax
comp=Z,1.0nm,0.3s
ARCES MLR MLR
comp=Z,46nm,18.2s
ARCES ARCESS Array B 34.20 2 P **P** **17 43 48.6 -0.3**
comp=Z,1.0nm,0.3s,mb4.2
ARCES ARCESS Array B 34.20 2 PcP PcP 17 46 25.4 +1.1
comp=Z,46nm,18.2s
BRVK Borovoye 37.60 47⇑*e*P **P** **17 44 18.3 +0.1**
BRVK pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
BRVK Borovoye 37.60 47 *e*P **P** **17 44 18.3 +0.1**
comp=Z,2.0nm,0.8s,mb3.9
BVAR Borovoye Array 37.66 47 P **P** **17 44 18.8 +0.1**
comp=Z,0.5nm,0.6s,mb3.4,baz=282,slow=7.2,SNR=5.0
BVAR Borovoye Array 37.66 47 P **P** **17 44 18.8 +0.1**
BVAR pmax pmax
comp=Z,1.0nm,0.6s
BVAR Borovoye Array 37.66 47 P **P** **17 44 18.8 +0.1**
comp=Z,1.0nm,0.6s,mb3.7
KURK Kurchatov 42.61 51⇑*e*P **P** **17 44 59.0 -0.7**
KURK pmax pmax
comp=Z,4.0nm,1.6s,mb3.9
KURK Kurchatov 42.61 51 *e*P **P** **17 44 59.0 -0.7**
comp=Z,4.0nm,1.6s,mb3.9
MK31 Makanchi Array 45.34 56 *e*P **P** **17 45 21.3 -0.4**
MK31 Makanchi Array 45.34 56 *e*P **P** **17 45 21.3 -0.4**
MKAR Makanchi Array 45.34 56 P **P** **17 45 21.5 -0.1**
comp=Z,2.9nm,0.5s,mb4.4,baz=268,slow=7.6,SNR=49
MKAR PcP PcP 17 47 02.1 +1.8
comp=Z,0.6nm,0.6s,baz=282,slow=3.4,SNR=2.5
MKAR Makanchi Array 45.34 56 P **P** **17 45 21.5 -0.2**
MKAR 17 47 02.1
MKAR pmax pmax
comp=Z,3.0nm,0.5s
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 45.34 56 P **P** **17 45 21.5 -0.1**
MKAR PcP PcP 17 47 02.1 +1.8
ZALV Zalesovo Beam 46.30 46 P **P** **17 45 28.4 -0.7**
comp=Z,1.9nm,0.4s,mb4.4,baz=274,slow=7.4,SNR=6.9
ZALV LR LR 18 08 29.3
comp=Z,13nm,20.6s,baz=63,slow=41
ZALV Zalesovo Beam 46.30 46 P **P** **17 45 28.5 -0.6**
ZALV pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
ZALV MLR MLR
comp=Z,13nm,20.6s
ZALV Zalesovo Beam 46.30 46 P **P** **17 45 28.5 -0.6**
comp=Z,13nm,20.6s
ZAK Zakamensk 58.10 48 *e*P **P** **17 46 57.3 +0.6**
ZAK pmax pmax
comp=Z,1.0nm,0.9s,mb3.9
ZAK Zakamensk 58.10 48 *e*P **P** **17 46 57.3 +0.6**
comp=Z,1.0nm,0.9s,mb3.9
SONM Songino Array 60.90 50 P **P** **17 47 16.8 +0.8**
comp=Z,1.4nm,0.6s,mb4.3,baz=287,slow=6.5,SNR=8.3
SONM Songino Array 60.90 50 P **P** **17 47 16.8 +0.8**
SONM pmax pmax
comp=Z,1.0nm,0.6s
SONM Songino Array 60.90 50 P **P** **17 47 16.8 +0.8**
comp=Z,1.0nm,0.6s,mb4.1
BOSA Boshof 63.75 177 LR LR 18 16 21.6
comp=Z,56nm,18.3s,baz=159,slow=37
CMAR Chiang Mai Arr 68.58 82 P **P** **17 48 06.8 +0.4**
comp=Z,0.5nm,0.7s,mb3.5,baz=280,slow=5.9,SNR=3.5
CMAR Chiang Mai Arr 68.58 82 P **P** **17 48 06.8 +0.4**
CMAR pmax pmax
comp=Z,1.0nm,0.7s
CMAR Chiang Mai Arr 68.58 82 P **P** **17 48 06.8 +0.4**
comp=Z,1.0nm,0.7s,mb3.9
YKA Yellowknife Ar 76.55 341 P **P** **17 48 54.8 +1.8**
comp=Z,0.8nm,0.6s,mb3.9,baz=34,slow=5.5,SNR=5.7
YKA Yellowknife Ar 76.55 341 P **P** **17 48 54.8 +1.8**
YKA pmax pmax
comp=Z,1.0nm,0.6s
YKA Yellowknife Ar 76.55 341 P **P** **17 48 54.8 +1.8**
comp=Z,1.0nm,0.6s,mb3.9
KSRS Korea Array 79.73 51 P **P** **17 49 11.9 +0.8**
comp=Z,1.1nm,0.5s,mb4.0,baz=310,slow=4.9,SNR=9.7
KSRS Korea Array 79.73 51 P **P** **17 49 12.0 +0.8**
KSRS pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
KSRS Korea Array 79.73 51 P **P** **17 49 12.0 +0.8**
comp=Z,1.0nm,0.5s,mb4.0
ILAR Eielson Array 79.79 355 P **P** **17 49 12.9 +2.0**
comp=Z,0.5nm,0.7s,mb3.5,baz=2.4,slow=3.6,SNR=5.7
ILAR Eielson Array 79.79 355 P **P** **17 49 13.0 +2.1**
ILAR pmax pmax
comp=Z,1.0nm,0.7s
ILAR Eielson Array 79.79 355 P **P** **17 49 12.9 +2.0**
ASAR Alice Springs 120.12 99 PKP PKPdf 17 55 54.8 +0.8
comp=Z,0.2nm,0.6s,baz=318,slow=1.4,SNR=5.4

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*ISCJB **28** 17:40:48.2±0.9, 3°.63N×126°.54E, h0km, mb3.7/9, mb1 3.8/9, mb1mx3.7/23, mbtmp3.7/9, Error ellipse: s-maj=53.7km s-min=16.2km az=70.0*
*NEIC **28** 17:40:53.1±0.6, 3°.63N×126°.63E, h35km, mb3.9/1, Error ellipse: s-maj=35.3km s-min=7.4km az=68.0*
*ISCJB **28** 17:40:55.9±1.8, 3°.67N±0°.10×126°.8E±0°.1, h84km±18km, mb3.6/10, Error ellipse: s-maj=20.6km s-min=11.2km az=139.9*
*DJA **28** 17:40:58, 3°.51N×126°.81E, h33km, MLv4.0/3*
ISC 28 17:40:57.5±1.7, 3°.64N±0°.10×126°.8E±0°.1, h80km±17km, n21, σ0s74/23, mb3.6/10, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.90**	**169**	P	**Pn**		**17 41 41.2**	**-0.4**
TNTI				S	**Sn**		**17 42 15.1**	**-0.4**
MNI	**Manado**	**2.95**	**222**	P	**Pn**		**17 41 42.3**	**+0.1**
MNI				S	**Sn**		**17 42 17.2**	**+0.6**
KMSI	**Cibinong**	**4.17**	**223**	P	**Pn**		**17 41 59.1**	**+0.4**
MRSI	**Marisa**	**5.81**	**237**	P	**Pn**		**17 42 19.6**	**-1.5**
26nm,0.6s								
LUWI	**Luwuk**	**6.17**	**221**	P	**Pn**		**17 42 27.6**	**+1.5**
FITZ	**Fitzroy Crossi**	**21.64**	**183**	P	**P**		**17 45 40.4**	**-1.0**
0.9nm,0.5s,mb3.3,baz=1.4,slow=10,SNR=5.1								
WRAB	**Tennant Creek**	**24.57**	**163**	*e*P	**P**		**17 46 09.6**	**-0.5**
ASAR	**Alice Springs**	**28.01**	**166**	P	**P**		**17 46 41.8**	**+0.8**
0.3nm,0.4s,mb3.2,baz=349,slow=13,SNR=18								
ASAR				PcP	PcP		17 49 56.5	+2.2
0.1nm,0.3s,baz=348,slow=2.2,SNR=4.3								
CMAR	**Chiang Mai Arr**	**31.00**	**300**	P	**P**		**17 47 06.0**	**-1.5**
0.8nm,0.7s,mb3.5,baz=104,slow=6.8,SNR=5.2								
KSRS	**Korea Array**	**33.66**	**2**	P	**P**		**17 47 31.3**	**+0.7**
0.8nm,0.8s,mb3.6,baz=186,slow=9.7,SNR=4.8								
STKA	**Stephens Creek**	**38.02**	**159**	P	**P**		**17 48 08.4**	**+0.5**
1.3nm,0.6s,mb3.9,baz=159,slow=22,SNR=4.9								
STKA	**Stephens Creek**	**38.02**	**159**	*e*P	**P**		**17 48 08.4**	**+0.5**
SONM	**Songino Array**	**47.41**	**341**	P	**P**		**17 49 23.9**	**+0.2**
0.6nm,0.7s,mb3.5,baz=162,slow=8.8,SNR=3.4								
MK31	**Makanchi Array**	**57.68**	**325**	*e*P	**P**		**17 50 38.8**	**-0.9**
MKAR	**Makanchi Array**	**57.68**	**325**	P	**P**		**17 50 39.0**	**-0.6**
0.9nm,0.5s,mb4.1,baz=119,slow=7.4,SNR=24								
KURK	**Kurchatov**	**61.86**	**327**	*e*P	**P**		**17 51 09.0**	**+0.8**
BVAR	**Borovoye Array**	**67.44**	**327**	P	**P**		**17 51 44.8**	**+0.3**
0.7nm,0.6s,mb3.6,baz=132,slow=11,SNR=4.7								
BRVK	**Borovoye**	**67.52**	**327**	*e*P	**P**		**17 51 45.2**	**+0.2**
ABKAR	**Akbulak array**	**72.28**	**321**	*e*P	**P**		**17 52 14.3**	**+0.1**
0.8nm,0.6s,mb3.7								
AKTK	**Aktyubinsk**	**73.79**	**322**	P	**P**		**17 52 23.3**	**+0.2**
AKTO	**Aktyubinsk**	**73.79**	**322**	P	**P**		**17 52 23.3**	**+0.2**
0.4nm,0.5s,mb3.5,baz=114,slow=6.4,SNR=3.9								

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*ISCJB **28** 17:43:29.3±1.0, 20°.9S±0°.1×178°.1W±0°.1, h570km±12km, mb3.6/10, Error ellipse: s-maj=26.9km s-min=12.7km az=137.4*
*IDC **28** 17:43:30.1±2.1, 20°.87S×178°.21W, h556km±26km, mb3.2/10, mb1 3.4/12, mb1mx3.4/18, mbtmp3.3/12, Error ellipse: s-maj=28.5km s-min=14.8km az=141.0*
*NEIC **28** 17:43:30.2±0.8, 20°.95S×178°.06W, h569km±8km, mb4.2/1, Error ellipse: s-maj=18.8km s-min=10.3km az=139.0*
ISC 28 17:43:30.6±1.1, 21°.05±0°.1×178°.2W±0°.2, h566km±12km, n22, σ0s83/18, mb3.6/10, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.81**	**311**	*e*P	**P**		**17 45 00.5**	**+0.6**
AFI	**Afiamalu**	**9.27**	**42**	P	**P**		**17 45 40.8**	**-0.8**
4.4nm,0.3s,baz=21,slow=4.2,SNR=6.5								
AFI				S	**S**		**17 47 22.9**	**-6.0**
1.6nm,0.3s,baz=294,slow=20,SNR=3.0								
URZ	**Urewera**	**17.73**	**192**	P	**P**		**17 47 04.6**	**-0.4**
1.8nm,0.3s,baz=334,slow=4.5,SNR=10								
CTA	**Charters Tower**	**33.31**	**265**	P	**P**		**17 49 22.1**	**-0.4**
12nm,1.2s,mb4.3,baz=72,slow=13,SNR=5.3								
CTAO	**Charters Tower**	**33.31**	**265**	*e*P	**P**		**17 49 22.5**	**0.0**
4.3nm,0.7s,mb4.1								
STKA	**Stephens Creek**	**37.47**	**245**	P	**P**		**17 49 57.0**	**+0.2**
1.5nm,0.5s,mb3.8,baz=83,slow=13,SNR=6.5								
ASAR	**Alice Springs**	**44.28**	**257**	P	**P**		**17 50 50.9**	**0.0**
2.0nm,0.4s,mb4.0,baz=91,slow=7.9,SNR=99								
ASAR				S	**S**		**17 56 41.2**	**-3.1**
1.0nm,0.8s,baz=91,slow=18,SNR=5.4								
WRAB	**Tennant Creek**	**44.39**	**263**	*e*P	**P**		**17 50 52.1**	**+0.3**
FITZ	**Fitzroy Crossi**	**52.83**	**263**	P	**P**		**17 51 54.4**	**+0.1**
1.0nm,0.5s,mb3.4,baz=86,slow=7.2,SNR=9.7								
MBWA	**Marble Bar**	**57.62**	**258**	*e*P	**P**		**17 52 27.4**	**-0.2**
MJAR	**Matsushiro Arr**	**70.49**	**324**	P	**P**		**17 53 47.5**	**-1.3**
1.2nm,0.7s,mb3.6,baz=158,slow=6.5,SNR=3.5								
PETK	**Petropavlovsk-**	**76.67**	**345**	P	**P**		**17 54 23.1**	**-0.4**
1.7nm,0.6s,mb3.6,baz=127,slow=6.1,SNR=4.8								
KSRS	**Korea Array**	**77.13**	**319**	P	**P**		**17 54 26.5**	**+0.1**
0.8nm,0.7s,mb3.3,baz=138,slow=4.9,SNR=4.8								
NVAR	**Mina Array Bea**	**81.45**	**43**	P	**P**		**17 54 51.5**	**+2.3**
1.0nm,0.9s,mb3.3,baz=226,slow=8.2,SNR=5.3								
ILAR	**Eielson Array**	**88.78**	**13**	P	**P**		**17 55 23.6**	**-0.4**
0.4nm,0.5s,mb3.5,baz=226,slow=5.8,SNR=7.2								
CMAR	**Chiang Mai Arr**	**90.13**	**290**	P	**P**		**17 55 32.5**	**+1.1**
1.2nm,0.9s,mb3.7,baz=103,slow=2.0,SNR=6.2								
ARCES	**ARCESS Array B**	**129.34**	**349**	PKP	PKPdf		18 01 33.8	-0.6
1.5nm,0.8s,baz=15,slow=3.7,SNR=3.7								
HFS	**Hagfors**	**139.96**	**351**	PKhKP			18 01 46.5	
0.5nm,0.5s,baz=52,slow=5.7,SNR=4.1								
AKASG	**Malin Array Be**	**143.34**	**331**	PKP	PKPdf		18 01 58.4	-2.4
1.7nm,0.6s,baz=45,slow=1.4,SNR=16								
EKA	**Eskdalemuir Ar**	**145.46**	**5**	PKPbc	PKPbc		18 02 05.7	+0.1
1.8nm,0.9s,baz=320,slow=3.7,SNR=4.8								
BRTR	**Keskin Array B**	**147.03**	**312**	PKPbc	PKPbc		18 02 10.5	0.0
0.5nm,0.8s,baz=42,slow=2.8,SNR=3.4								
CLL	**Collm**	**148.47**	**347**	*e*PKPbc	PKPbc		18 02 14.4	+0.7
comp=Z,4.0nm,0.9s								
CLL				*e*PKPab	PKPab		18 02 19.0	-0.3

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*ISCJB **28** 18:18:37.7±1.3, 14°.22S±0°.08×71°.26W±0°.09, h35km±12km, mb4.6/26, MS3.4/3, Error ellipse: s-maj=17.6km s-min=8.1km az=141.5*
*IDC **28** 18:18:39.8±3.1, 14°.24S×71°.29W, h35km±25km, mb4.2/8, mb1 4.2/14, mb1mx4.2/19, mbtmp4.0/14, ML3.9/6, MS3.4/7, Ms1 3.4/7, ms1mx3.3/18, Error ellipse: s-maj=26.2km s-min=15.3km az=39.0*
*NEIC **28** 18:18:40.9±1.0, 14°.24S×71°.30W, h47km±9km, mb4.7/19, Error ellipse: s-maj=14.4km s-min=7.1km az=51.0*
NEIC Felt [II] at Sicuani.
*BJI **28** 18:18:41.9, 14°.20S×71°.30W, h47km, mB5.0/4, Ms5.0/4, Ms7 4.7/5*
ISC 28 18:18:40.4±1.0, 14°.25S±0°.07×71°.27W±0°.09, h42km±9km, n60, σ1s02/42, mb4.6/26, MS3.4/3, Central Peru

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.64**	**124**	Pn	**Pn**		**18 19 36.5**	**+2.2**
8.3nm,0.3s,baz=308,slow=12,SNR=33								
LPAZ	**La Paz**	**3.64**	**124**	*e*P	**Pn**		**18 19 38.4**	**+4.1**
NNA	**Nana**	**5.88**	**292**	Pn	**Pn**		**18 20 04.2**	**-0.8**
2.7nm,0.3s,baz=158,slow=12,SNR=8.7								
NNA				Sn	**Sn**		**18 21 17.5**	**+6.3**
2.3nm,0.3s,baz=0.0,slow=11,SNR=2.7								
NNA	**Nana**	**5.88**	**292**	Pn	**Pn**		**18 20 04.2**	**-0.8**
NNA				Sn	**Sn**		**18 21 17.5**	**+6.3**
ATAH	**Atahualpa**	**9.95**	**315**	Pn	**Pn**		**18 21 00.7**	**-0.2**
0.3nm,0.3s,baz=167,slow=13,SNR=7.9								
ATAH				LR	LR		18 25 04.8	
comp=Z,517nm,18.9s,baz=329,slow=39								
SIV	**San Ignacio**	**9.99**	**101**	Pn	**Pn**		**18 21 01.4**	**-0.1**
0.9nm,0.3s,baz=289,slow=12,SNR=30								
SIV				Lg			18 23 55.9	
1.7nm,0.3s,baz=198,slow=19,SNR=2.6								
OTAV	**Otavalo**	**16.05**	**333**	P	**Pn**		**18 22 23.9**	**+0.6**
CFAA	**Coronel Fontan**	**17.50**	**171**	P	**Pn**		**18 22 41.6**	**+0.4**
0.1nm,0.3s,baz=336,slow=13,SNR=7.2								
CFAA				LR	LR		18 29 25.5	
comp=Z,15nm,21.8s,baz=0.5,slow=37								
CPUP	**Villa Florida**	**17.74**	**135**	P	**Pn**		**18 22 44.4**	**+0.1**
0.4nm,0.3s,baz=298,slow=10,SNR=4.3								
CPUP				LR	LR		18 31 01.5	
comp=Z,271nm,18.4s,baz=306,slow=42								
CPUP	**Villa Florida**	**17.74**	**135**	P	**Pn**		**18 22 44.4**	**+0.1**
CPUP				LR	LR		18 31 01.5	
ROSC	**El Rosal**	**19.22**	**351**	P	**Pn**		**18 23 03.9**	**+1.6**
0.6nm,0.3s,baz=66,slow=20,SNR=1.8								
ROSC				LR	LR		18 31 32.7	
comp=Z,87nm,18.1s,baz=212,slow=40								
SDV	**Santo Domingo**	**22.99**	**2**	P	**P**		**18 23 39.9**	**-1.8**
10nm,0.8s,mb4.3								
TRQA	**Tornquist**	**25.11**	**163**	*e*P	**P**		**18 23 59.9**	**-1.3**
5.0nm,0.8s,mb4.1

1.0nm,0.9s,mb3.7,baz=146,slow=9.1,SNR=8.3
SIUC Southern Illin 54.37 342 eP P 18 28 02.2 -0.8
40nm,0.9s,mb5.3
FVM French Village 54.98 342 eP P 18 28 06.8 -0.6
41nm,1.3s,mb5.3
CCM Cathedral Cave 55.30 341 eP P 18 28 08.5 -1.2
10nm,1.2s,mb4.7
JFWS Jewell Farm 59.49 344 eP P 18 28 37.9 -1.2
11nm,0.9s,mb4.9
SDCO Great Sand Dun 60.90 329 eP P 18 28 49.3 +0.4
12nm,1.6s,mb4.8
WUAZ Wupatki 62.38 324 eP P 18 28 59.6 +0.6
2.7nm,0.3s,mb4.8
PV01 Paradox Valley 62.75 327 eP P 18 29 02.5 +1.2
296nm,1.0s
EYMN Ely 64.49 345 eP P 18 29 11.0 -1.6
5.5nm,0.9s,mb4.6
MSU Marysvale 64.96 325 eP P 18 29 17.5 +1.6
4.8nm,1.1s,mb4.4
DAU Daniels Canyon 65.84 327 eP P 18 29 23.1 +1.5
9.2nm,1.2s,mb4.7
AGMN Agassiz Nation 66.00 342 eP P 18 29 22.0 -0.5
12nm,0.8s,mb5.0
NVAR Mina Array Bea 68.43 322 P P 18 29 38.7 +0.7
1.2nm,0.8s,mb4.0,baz=145,slow=6.5,SNR=4.2
NVAR PcP PcP 18 30 02.7 -0.5
1.2nm,0.8s,baz=144,slow=5.6,SNR=4.7
DBIC Dimbokro 69.07 77 P P 18 29 42.4 -0.2
6.0nm,0.7s,mb4.6,baz=232,slow=6.2,SNR=7.1
HLID Hailey 69.74 328 eP P 18 29 47.4 +1.4
4.3nm,1.1s,mb4.3
MOD Modoc 71.83 324 eP P 18 30 00.0 +1.2
6.0nm,0.9s,mb4.5
OD2 Odessa Site #2 74.57 329 eP P 18 30 16.3 +1.5
9.0nm,1.0s,mb4.7
EDM Edmonton 76.27 335 eP P 18 30 24.6 +0.1
ESDC Sonseca Array 82.34 46 P P 18 30 59.0 +1.1
1.5nm,0.7s,mb4.0,baz=262,slow=5.3,SNR=7.0
YKA Yellowknife Ar 83.64 341 P P 18 31 04.0 0.0
11nm,0.8s,mb5.0,baz=135,slow=5.2,SNR=51
TSUM Tsumeb 84.36 108 eP P 18 31 08.7 -0.1
10nm,0.9s,mb5.0
BOSA Boshof 88.87 119 P P 18 31 30.6 -0.1
5.7nm,0.9s,mb4.9,baz=220,slow=2.5,SNR=4.3
ILAR Eielson Array 96.76 335 P P 18 32 06.2 +0.1
0.8nm,1.1s,mb4.1,baz=147,slow=5.7,SNR=4.2
NOA NORSAR Array B 98.73 29 LR LR 19 11 28.3
comp=Z,15nm,20.2s,MS3.5,baz=195,slow=32
ASAR Alice Springs 134.99 213 PKP PKPdf 18 37 55.8 0.0
1.6nm,1.0s,baz=151,slow=2.1,SNR=4.6
ZAA0 Zalesovo Array 136.15 20 ePKPdf PKPdf 18 37 57.3 +0.3
ZALV Zalesovo Beam 136.15 20 PKP PKPdf 18 37 57.0 0.0
3.5nm,0.8s,baz=318,slow=2.0,SNR=11
WMQ Urumqi 145.47 27 ePKPbc PKPbc 18 38 13.3 -0.8
MJAR Matsushiro Arr 145.57 316 PKPbc PKPbc 18 38 13.9 -0.7
6.4nm,0.9s,baz=76,slow=1.8,SNR=13
MAJO Matsushiro 145.57 316 ePKPdf PKPdf 18 38 14.7 +0.3
MAT Matsushiro 145.57 316 PKP PKPdf 18 38 14.7 +0.2
ULN Ulaanbaatar 146.45 2 ePKPdf PKPdf 18 38 16.6 +1.0
SONM Songino Array 146.46 3 PKPbc PKPbc 18 38 16.3 -0.7
2.6nm,0.9s,baz=328,slow=2.7,SNR=11
CN2 Changchun 147.26 337 ePKPbc PKPdf 18 38 14.0 -3.1
KSRS Korea Array 151.27 327 PKP PKPdf 18 38 24.3 +0.6
0.6nm,0.7s,baz=22,slow=1.4,SNR=4.3
KSRS PKPbc PKPbc 18 38 30.4 +0.7
4.5nm,0.8s,baz=27,slow=1.4,SNR=13
HHC Hu-ho-hao-te 153.38 355 ePKPbc PKPdf 18 38 24.0 -2.8
HHC PKS 18 41 57.3
HHC AMB AMB
comp=Z,100nm,9.4s
HHC LR LR
comp=N,170nm,20.8s
HHC LR LR
comp=E,170nm,21.4s
HHC LR LR
comp=Z,110nm,21.7s
GTA Gaotai 153.73 16 ePKPbc PKPbc 18 38 32.3 -2.8
LZH Lanzhou 157.81 11 ePKP PKPdf 18 38 36.5 +3.7
LZH pPKP pPKPdf 18 38 51.3 +5.2
LZH sPKP 18 38 58.0
CD2 Chengdu 162.80 15 PKP PKPdf 18 38 37.5 -1.0
GYA Guiyang 167.70 9 ePKP PKPdf 18 38 42.0 -0.8
GYA PKPab PKPab 18 39 49.0 +0.1
GYA PKS 18 42 14.8
GYA PP PP 18 43 38.5 +2.4
GYA SKKS SKKSac 18 50 17.3 -4.2
GYA AMB AMB
comp=Z,90nm,7.9s
GYA LR LR
comp=N,120nm,22.8s
GYA LR LR
comp=E,90nm,23.5s
GYA LR LR
comp=Z,110nm,20.9s
KMI Kunming 167.80 27 PKP PKPdf 18 38 44.0 +1.1

ISCJB 28 18:29:26.1±0.7, 36.81N±0.05×7.17W±0.04, h61km±9km, Error ellipse: s-maj=7.9km s-min=4.6km az=13.5
MDD 28 18:29:27.9±0.8, 36.78N×7.20W, h37km±16km, mb3.8/3, Error ellipse: s-maj=8.6km s-min=4.7km az=15.0
NEIC 28 18:29:28.0, 36.82N×7.21W, h48km, MG3.5(MDD), After MDD.
CSEM 28 18:29:27.3±0.2, 36.80N×7.20W, h40km, ML1.8, Error ellipse: s-maj=4.8km s-min=2.5km az=12.0
INMG 28 18:29:28.2±1.2, 36.77N×7.22W, h31km±11km, ML1.8, Error ellipse: s-maj=5.5km s-min=2.9km az=21.0
LDG 28 18:29:28.1±0.2, 36.80N×7.22W, h25km, Ml2.8/5, Error ellipse: s-maj=4.4km s-min=2.6km az=8.0
ISC 28 18:29:27.3±0.7, 36.81N±0.04×7.18W±0.04, h39km±42km, n77, σ0.75/143, Strait of Gibraltar

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
PVAQ Vaqueiros 0.73 324 eP Pn 18 29 41.3 +0.2
PVAQ eS Sn 18 29 51.2 +0.1
PVAQ A 18 29 51.6
71nm,0.4s
PVAQ Vaqueiros 0.73 324 P Pn 18 29 41.3 +0.2
PVAQ S Sn 18 29 51.2 +0.1
71nm,0.4s
PVAQ Vaqueiros 0.73 324 P Pn 18 29 41.3 +0.2
PVAQ S Sn 18 29 51.2 +0.1
71nm,0.4s
PVAQ Vaqueiros 0.73 324 eP Pn 18 29 41.3 +0.2
PVAQ eS Sn 18 29 51.2 +0.1
71nm,0.4s
PBDV Barranco-do-Ve 0.74 306 eP Pn 18 29 41.3 0.0
PBDV eS Sn 18 29 50.6 -0.7
PBDV A 18 29 52.6
12nm,0.3s
PBDV Barranco-do-Ve 0.74 306 P Pn 18 29 41.3 0.0
PBDV S Sn 18 29 50.6 -0.7
12nm,0.3s
PBDV Barranco-do-Ve 0.74 306 P Pn 18 29 41.3 0.0
PBDV S Sn 18 29 50.6 -0.7
12nm,0.3s
PBDV Barranco-do-Ve 0.74 306 eP Pn 18 29 41.3 0.0
PBDV eS Sn 18 29 50.6 -0.7
12nm,0.3s
EGRO El Granado 0.76 341 P Pn 18 29 41.9 +0.4
EGRO S Sn 18 29 52.1 +0.3
EGRO El Granado 0.76 341 P Pn 18 29 41.9 +0.4
2.5nm,0.1s,SNR=29
EGRO S Sn 18 29 52.1 +0.3
14nm,0.1s,SNR=22
EGRO El Granado 0.76 341 P Pn 18 29 41.9 +0.4
2.5nm,0.1s,SNR=29
EGRO S Sn 18 29 52.1 +0.3
14nm,0.1s,SNR=22
EGRO El Granado 0.76 341 P Pn 18 29 41.9 +0.4
2.5nm,0.1s,SNR=29
EGRO S Sn 18 29 52.1 +0.3
14nm,0.1s,SNR=22
EMIN Mina Concepcio 1.03 23 P Pn 18 29 46.3 +1.0
EMIN S Sn 18 29 57.4 -1.2
EMIN Mina Concepcio 1.03 23 P Pn 18 29 46.3 +1.0
1.3nm,0.1s,SNR=32
EMIN S Sn 18 29 57.4 -1.2
3.6nm,0.1s,SNR=11
EMIN Mina Concepcio 1.03 23 P Pn 18 29 46.3 +1.0
1.3nm,0.1s,SNR=32
EMIN S Sn 18 29 57.4 -1.2
3.6nm,0.1s,SNR=11
EMIN Mina Concepcio 1.03 23 P Pn 18 29 46.3 +1.0
1.3nm,0.1s,SNR=32
EMIN S Sn 18 29 57.4 -1.2
3.6nm,0.1s,SNR=11
ESPR Espera 1.06 87 P Pn 18 29 45.9 +0.2
ESPR S Sn 18 29 59.3 +0.1
ESPR Espera 1.06 87 P Pn 18 29 45.9 +0.2
7.8nm,0.1s,SNR=14
ESPR S Sn 18 29 59.3 +0.1
22nm,0.2s,SNR=4.8
ESPR Espera 1.06 87 P Pn 18 29 45.9 +0.2
7.8nm,0.1s,SNR=14
ESPR S Sn 18 29 59.3 +0.1
22nm,0.2s,SNR=4.8
ESPR Espera 1.06 87 P Pn 18 29 45.9 +0.2
7.8nm,0.1s,SNR=14
ESPR S Sn 18 29 59.3 +0.1
22nm,0.2s,SNR=4.8
PCVE Castro Verde 1.07 320 eP Pn 18 29 46.4 +0.6
PCVE eS Sn 18 30 00.1 +0.7
PCVE A 18 30 02.9
4.8nm,0.1s
PCVE Castro Verde 1.07 320 P Pn 18 29 46.4 +0.6
PCVE S Sn 18 30 00.1 +0.7
4.8nm,0.1s
PCVE Castro Verde 1.07 320 P Pn 18 29 46.4 +0.6
PCVE S Sn 18 30 00.1 +0.7
4.8nm,0.1s
PCVE Castro Verde 1.07 320 eP Pn 18 29 46.4 +0.6
PCVE eS Sn 18 30 00.1 +0.7
4.8nm,0.1s
MORF Marmelete 1.28 293 eP Pn 18 29 48.5 -0.1
MORF eS Sn 18 30 03.6 -0.9
MORF A 18 30 04.3
14nm,0.1s
MORF Marmelete 1.28 293 P Pn 18 29 48.5 -0.1
MORF S Sn 18 30 03.6 -0.9
14nm,0.1s
MORF Marmelete 1.28 293 P Pn 18 29 48.5 -0.1
MORF S Sn 18 30 03.6 -0.9
14nm,0.1s
MORF Marmelete 1.28 293 eP Pn 18 29 48.5 -0.1
MORF eS Sn 18 30 03.6 -0.9
14nm,0.1s
PBEJ Beja 1.33 336 eS Sn 18 30 05.6 -0.2
PBEJ A 18 30 12.0
6.3nm,0.3s
PBEJ Beja 1.33 336 S Sn 18 30 05.6 -0.2
3.2nm,0.3s
PBEJ Beja 1.33 336 S Sn 18 30 05.6 -0.2
3.2nm,0.3s
PBEJ Beja 1.33 336 eS Sn 18 30 05.6 -0.2
6.3nm,0.3s
PFVI Vila Bisbo 1.36 284 eP Pn 18 29 49.4 -0.3
PFVI eS Sn 18 30 05.1 -1.4
PFVI A 18 30 06.0
4.6nm,0.1s
PFVI Vila Bisbo 1.36 284 P Pn 18 29 49.1 -0.6
PFVI S Sn 18 30 04.9 -1.6
PFVI Vila Bisbo 1.36 284 P Pn 18 29 49.1 -0.6
1.1nm,0.1s,SNR=7.9
PFVI S Sn 18 30 04.9 -1.6
10nm,0.1s,SNR=7.9
PFVI Vila Bisbo 1.36 284 P Pn 18 29 49.1 -0.6
1.1nm,0.1s,SNR=7.9
PFVI S Sn 18 30 04.9 -1.6
10nm,0.1s,SNR=7.9
PFVI Vila Bisbo 1.36 284 P Pn 18 29 49.1 -0.6
1.1nm,0.1s,SNR=7.9
PFVI eS Sn 18 30 05.1 -1.4
4.6nm,0.1s
PBAR Barrancos 1.36 5 eP Pn 18 29 50.3 +0.5
PBAR eS Sn 18 30 08.3 +1.6
PBAR A 18 30 15.0
3.9nm,0.3s
PBAR Barrancos 1.36 5 P Pn 18 29 50.3 +0.5
PBAR S Sn 18 30 08.3 +1.6
3.9nm,0.3s
PBAR Barrancos 1.36 5 P Pn 18 29 50.3 +0.5
PBAR S Sn 18 30 08.3 +1.6
3.9nm,0.3s
PBAR Barrancos 1.36 5 eP Pn 18 29 50.3 +0.5
PBAR eS Sn 18 30 08.3 +1.6
3.9nm,0.3s
EVO Evora 1.84 339 ePn Pn 18 29 57.2 +0.8
EVO eSn Sn 18 30 18.6 +0.2
3.2nm,0.2s
EVOP Sao Brissos 1.87 337 ePn Pn 18 29 57.2 +0.4
EVOP eSn Sn 18 30 18.6 -0.5
1.6nm,0.2s
ECAB El Cabril 1.88 47 P Pn 18 29 57.0 +0.1
ECAB S Sn 18 30 17.6 -1.9
ECAB El Cabril 1.88 47 P Pn 18 29 57.0 +0.1
0.3nm,0.1s,SNR=7.9
ECAB S Sn 18 30 17.6 -1.9
0.7nm,0.1s,SNR=7.9
ECAB El Cabril 1.88 47 P Pn 18 29 57.0 +0.1
0.3nm,0.1s,SNR=7.9
ECAB S Sn 18 30 17.6 -1.9
0.7nm,0.1s,SNR=7.9
ECAB El Cabril 1.88 47 P Pn 18 29 57.0 0.0
0.3nm,0.1s,SNR=7.9
ECAB S Sn 18 30 17.6 -1.9
0.7nm,0.1s,SNR=7.9
EBAD Badajoz 1.94 4 P Pn 18 29 58.1 +0.3
EBAD S Sn 18 30 19.5 -1.4
EBAD Badajoz 1.94 4 P Pn 18 29 58.1 +0.3
0.8nm,0.1s,SNR=7.9
EBAD S Sn 18 30 19.5 -1.4
1.2nm,0.1s,SNR=7.9
EBAD Badajoz 1.94 4 P Pn 18 29 58.1 +0.3
0.8nm,0.1s,SNR=7.9
EBAD S Sn 18 30 19.5 -1.4
1.2nm,0.1s,SNR=7.9
EBAD Badajoz 1.94 4 P Pn 18 29 58.1 +0.3
0.8nm,0.1s,SNR=7.9
EBAD S Sn 18 30 19.5 -1.5
1.2nm,0.1s,SNR=7.9
MOE Montemor 1.94 332 eS Sn 18 30 21.2 +0.2
MOE Montemor 1.94 332 S Sn 18 30 21.2 +0.2
MOE Montemor 1.94 332 S Sn 18 30 21.2 +0.2
MOE Montemor 1.94 332 eS Sn 18 30 21.2 +0.2
PESTR Estremoz 2.08 351 ePn Pn 18 29 59.9 +0.3
PESTR eSn Sn 18 30 24.8 +0.6
PESTR A 18 30 38.1
3.3nm,0.2s
PESTR Estremoz 2.08 351 P Pn 18 29 59.9 +0.3
PESTR S Sn 18 30 24.8 +0.6
1.7nm,0.2s
PESTR Estremoz 2.08 351 P Pn 18 29 59.9 +0.3
PESTR S Sn 18 30 24.8 +0.6
1.7nm,0.2s
PESTR Estremoz 2.08 351 ePn Pn 18 29 59.9 +0.3
PESTR eSn Sn 18 30 24.8 +0.6
3.3nm,0.2s
EADA Adamuz 2.47 56 P Pn 18 30 05.9 +0.8
EADA S Sn 18 30 32.2 -1.7
EADA Adamuz 2.47 56 P Pn 18 30 05.9 +0.8
0.2nm,0.1s,SNR=7.9
EADA S Sn 18 30 32.2 -1.7
2.5nm,0.3s,SNR=7.9
EADA Adamuz 2.47 56 P Pn 18 30 05.9 +0.8
0.2nm,0.1s,SNR=7.9
EADA S Sn 18 30 32.2 -1.7
2.5nm,0.3s,SNR=7.9
EADA Adamuz 2.47 56 P Pn 18 30 05.9 +0.9
0.2nm,0.1s,SNR=7.9
EADA S Sn 18 30 32.2 -1.8
2.5nm,0.3s,SNR=7.9
PMRV Marv??o 2.62 356 ePn Pn 18 30 07.5 +0.5
PMRV eSn Sn 18 30 37.9 +0.4
PMRV A 18 30 53.3
1.3nm,0.2s
PMRV Marv??o 2.62 356 P Pn 18 30 07.5 +0.5
PMRV S Sn 18 30 37.9 +0.4
1.3nm,0.2s
PMRV Marv??o 2.62 356 P Pn 18 30 07.5 +0.5
PMRV S Sn 18 30 37.9 +0.4
1.3nm,0.2s
PMRV Marv??o 2.62 356 ePn Pn 18 30 07.5 +0.5
PMRV eSn Sn 18 30 37.9 +0.4
1.3nm,0.2s
EQUE Quentar 3.02 81 P Pn 18 30 13.3 +0.7
0.3nm,0.2s,SNR=7.9
EQUE S Sn 18 30 47.5 +0.1
0.7nm,0.3s,SNR=7.9
EQUE Quentar 3.02 81 P Pn 18 30 13.3 +0.7
0.3nm,0.2s,SNR=7.9
EQUE S Sn 18 30 47.5 +0.1
0.7nm,0.3s,SNR=7.9
EQUE Quentar 3.02 81 P Pn 18 30 13.3 +0.8
0.3nm,0.2s,SNR=7.9
EQUE S Sn 18 30 47.5 +0.1
0.7nm,0.3s,SNR=7.9
SJPF Ste Jean 7.78 34 ePn Pn 18 31 17.7 -0.1
SJPF eSn Sn 18 32 39.9 -4.6
2.2nm,0.5s
SJPF Ste Jean 7.78 34 ePn Pn 18 31 17.7 -0.1
ETSF Etsaut 7.93 38 ePn Pn 18 31 19.9 0.0
ETSF eSn Sn 18 32 43.6 -4.6
1.0nm,0.6s
ETSF Etsaut 7.93 38 ePn Pn 18 31 19.9 0.0
EPF Esparros 8.48 41 ePn Pn 18 31 27.3 -0.2
EPF eSn Sn 18 32 56.7 -5.1
0.7nm,0.2s
MTLF Montolieu 9.71 45 ePn Pn 18 31 43.8 -0.5
MTLF eSn Sn 18 33 25.9 -6.1
1.8nm,0.6s
MTLF Montolieu 9.71 45 ePn Pn 18 31 43.8 -0.5

ISCJB 28 19:40:47.9±0.6, 30.1N±0.1×42.5W±0.1, h10km, mb4.0/14, MS3.7/13, Error ellipse: s-maj=17.6km s-min=11.5km az=150.1
IDC 28 19:40:47.9±0.8, 30.09N×42.41W, h0km, mb3.9/11, mb1 4.1/11, mb1mx3.8/26, mbtmp3.9/11, MS3.7/13, Ms1 3.7/13, ms1mx3.4/33, Error ellipse: s-maj=22.0km s-min=19.3km az=136.0
NEIC 28 19:40:49.6±0.5, 30.06N×42.50W, h10km, mb4.5/5, Error ellipse: s-maj=15.9km s-min=10.7km az=150.0
ISC 28 19:40:49.9±0.6, 30.1N±0.1×42.5W±0.1, h10km, n34, σ0.92/26, mb4.0/14, MS3.7/13, Northern Mid-Atlantic Ridge

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SJG San Juan 24.61 246 LR LR 19 53 30.3
comp=Z,98nm,21.8s,MS3.3,baz=84,slow=31
SCHQ Schefferville 30.26 332 P P 19 47 00.6 -0.2
5.0nm,0.9s,mb4.3,baz=123,slow=7.5,SNR=5.0
SCHQ LR LR 19 57 54.3
comp=Z,100nm,18.5s,MS3.5,baz=267,slow=34
SCHQ Schefferville 30.26 332 eP P 19 47 00.3 -0.5
11nm,1.1s,mb4.5
SCHQ LR LR 19 57 54.3
MDT Midelt 32.32 75 LR LR 19 57 04.5
comp=Z,53nm,21.2s,MS3.2,baz=331,slow=30
LFF La Frestale 36.91 54 eP P 19 47 59.0 +0.2
13nm,0.9s,mb4.5
LFF La Frestale 36.91 54 eP P 19 47 59.0 +0.2
6.3nm,0.9s,mb4.5
TCF Toulx Ste Croi 38.13 52 eP P 19 48 09.5 +0.4
AVF Avril sur Loir 38.99 52 eP P 19 48 16.6 +0.3
SMF Signal de Mont 39.30 52 eP P 19 48 19.5 +0.6
13nm,0.8s,mb4.4
SMF Signal de Mont 39.30 52 eP P 19 48 19.5 +0.6
6.6nm,0.8s,mb4.4
LOR Lormes 39.41 51 eP P 19 48 20.1 +0.3
VIVF Saint-Julien-l 39.67 55 eP P 19 48 20.9 -1.1
MEZF Maizieres J'vi 40.40 49 eP P 19 48 29.4 +1.4
19nm,0.8s,mb4.5
MEZF Maizieres J'vi 40.40 49 eP P 19 48 29.4 +1.4
19nm,0.8s,mb4.9
HAU Haudompre 41.18 50 eP P 19 48 34.8 +0.3
HINF Hinterafeld 41.49 51 eP P 19 48 38.1 +1.1
DBIC Dimbokro 42.33 116 P P 19 48 42.2 -2.1
4.5nm,0.6s,mb4.2,baz=304,slow=10,SNR=6.1
DBIC LR LR 20 03 43.5
comp=Z,124nm,18.3s,MS3.8,baz=300,slow=32
DBIC Dimbokro 42.33 116 eP P 19 48 41.9 -2.4
6.6nm,0.8s,mb4.3
DBIC LR LR 20 03 43.5
NOA NORSAR Array B 46.73 33 P P 19 49 19.9 +1.0
1.5nm,1.0s,mb3.9,baz=253,slow=8.2,SNR=2.8
SIV San Ignacio 49.19 204 P P 19 49 39.0 +0.7
1.5nm,0.9s,mb4.0,baz=53,slow=5.1,SNR=6.0
LPAZ La Paz 52.31 212 P P 19 50 02.6 +0.7
1.2nm,0.7s,mb3.9,baz=30,slow=8.0,SNR=4.7
LPAZ LR LR 20 10 05.6
comp=Z,72nm,21.2s,MS3.7,baz=77,slow=34
TXAR Lajitas Array 52.55 286 P P 19 50 03.8 0.0
0.2nm,0.7s,mb3.2,baz=95,slow=11,SNR=3.2
FINES FINESS Array B 53.87 34 P P 19 50 11.2 -1.7
1.8nm,0.8s,mb4.1,baz=242,slow=4.1,SNR=4.1
FINES LR LR 20 09 42.9
comp=Z,25nm,21.9s,MS3.2,baz=343,slow=32
ARCES ARCESS Array B 54.47 24 P P 19 50 17.3 +0.1
0.9nm,0.7s,mb3.8,baz=247,slow=8.7,SNR=3.5
CPUP Villa Florida 57.87 196 LR LR 20 13 30.6
comp=Z,46nm,18.7s,MS3.6,baz=1.1,slow=34
BRTR Keskin Array B 61.46 58 P P 19 51 05.5 -1.2
1.4nm,0.8s,mb4.2,baz=270,slow=4.9,SNR=7.0
NVAR Mina Array Bea 61.60 300 P P 19 51 07.7 0.0
0.4nm,0.7s,mb3.7,baz=86,slow=6.5,SNR=2.2
NVAR Mina Array Bea 61.60 300 P P 19 51 07.7 0.0
INK Inuvik 62.79 335 LR LR 20 17 19.8
comp=Z,131nm,18.9s,MS4.1,baz=71,slow=35
DLBC Dease Lake 63.65 324 LR LR 20 17 52.8
comp=Z,111nm,19.6s,MS4.0,baz=120,slow=35
BBB Bella Bella 64.29 317 LR LR 20 20 11.4
comp=Z,51nm,19.4s,MS3.7,baz=294,slow=37
ILAR Eielson Array 69.00 334 P P 19 51 54.0 -1.2
0.8nm,0.9s,mb3.7,baz=66,slow=4.1,SNR=7.9
ILAR LR LR 20 21 42.5
comp=Z,90nm,18.7s,MS4.0,baz=38,slow=36
KMBO Kilima Mbogo 81.69 96 LR LR 20 29 51.9
comp=Z,114nm,19.0s,MS4.2,baz=90,slow=36
PETK Petropavlovsk- 95.31 348 LR LR 20 36 15.1
comp=Z,26nm,18.1s,MS3.7,baz=174,slow=35

IDC 28 19:46:10.9±15.0, 10.67S×165.84E, h159km±149km, mb3.7/6, mb1 3.8/6, mb1mx3.4/17, mbtmp3.7/6, Error ellipse: s-maj=78.8km s-min=46.9km az=142.0, Santa Cruz Islands

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DZM Mont Dzumac 11.36 177 eP Pn 19 48 44.8 -3.8
CTA Charters Tower 21.06 241 P P 19 50 43.1 +0.4
9.4nm,0.7s,baz=71,slow=11,SNR=8.7
STKA Stephens Creek 30.78 223 P P 19 52 12.6 +1.1
1.1nm,0.6s,baz=29,slow=12,SNR=3.1
WRA Warramunga Arr 31.70 249 P P 19 52 19.6 -0.2
baz=82,slow=9.2
ASAR Alice Springs 33.05 243 P P 19 52 30.9 -0.5
1.6nm,0.8s,baz=72,slow=10,SNR=12
FITZ Fitzroy Crossi 39.57 255 P P 19 53 26.7 -0.2
6.3nm,0.6s,baz=102,slow=7.2,SNR=40
ILAR Eielson Array 83.12 18 P P 19 58 18.4 -0.1
0.4nm,0.7s,baz=225,slow=5.5,SNR=7.5
MKAR Makanchi Array 93.31 317 P P 19 59 08.3 +0.6
0.4nm,0.6s,baz=83,slow=6.0,SNR=4.2

MOS 28 19:49:38.7±1.2, 53.00N×158.47E, h107km, mb4.0/1, Error ellipse: s-maj=35.8km s-min=16.1km az=61.1
ISCJB 28 19:49:39.4±0.6, 52.84N±0.06×158.8E±0.1, h104km±4km, mb3.4/4, Error ellipse: s-maj=13.9km s-min=5.3km az=44.9
KRSC 28 19:49:39.2±0.6, 52.75N×158.95E, h98km±38km, ML4.2
IDC 28 19:49:40.8±1.1, 52.99N×158.39E, h109km±6km, mb3.1/4, mb1 3.4/4, mb1mx3.0/22, mbtmp3.1/4, Error ellipse: s-maj=28.1km s-min=21.9km az=142.0
ISC 28 19:49:40.5±0.6, 52.84N±0.06×158.8E±0.1, h99km±4km, n20, σ0.81/32, mb3.4/4, 1C, Near east coast of Kamchatka Peninsula

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
PET Petropavlovsk 0.21 330 iP Pn 19 49 54.0 -0.6
PET iS Sn 19 50 04.2 -0.9
PET Petropavlovsk 0.21 330 ⇑iPN Pn 19 49 55.0 +0.4
PET eS Sn 19 50 04.0 -1.1
PET pmax pmax
comp=Z,3.0nm,0.5s
PET smax
comp=E,2.0nm,0.5s
PET smax
comp=N,2.0nm,0.6s
AVH Avacha 0.43 353 iP Pn 19 49 56.0 +0.4

AVH *i* S **Sn** **19 50 07.8 +0.8**
NLC Nalytchevo 0.46 43 *i* P **Pn** **19 49 55.6 -0.2**
NLC *i* S **Sn** **19 50 06.8 -0.5**
GRL Gorelyy 0.54 238 *i* P **Pn** **19 49 56.3 -0.1**
GRL *i* S **Sn** **19 50 08.5 +0.1**
PETK Petropavlovsk- 0.73 292 P **Pn** **19 49 57.7 -0.4**
comp=N,103nm,0.3s,baz=105,slow=15,SNR=766
PETK S **Sn** **19 50 11.3 0.0**
comp=N,24nm,0.3s,baz=242,slow=6.1,SNR=11
PETK Petropavlovsk- 0.73 292 PN **Pn** **19 49 57.7 -0.4**
PETK S **Sn** **19 50 11.3 0.0**
PETK pmax pmax
comp=Z,103nm,0.3s
PETK smax
comp=N,24nm,0.3s
SPN Mys Shipunski 0.77 70 *eP* **Pn** **19 49 58.1 -0.3**
SPN *i* S **Sn** **19 50 11.2 -0.6**
KII Karymskiy 1.25 17 *eP* **Pn** **19 50 03.4 -0.3**
KII *i* S **Sn** **19 50 21.9 +0.7**
MIPR Malaya Ipel'ka 1.38 247 *i* P **Pn** **19 50 05.2 0.0**
MKZ Mys Kozlova 2.44 44 *i* P **Pn** **19 50 18.6 0.0**
MKZ *i* S **Sn** **19 50 47.5 -0.4**
SKR Severo-Kuril's 2.74 219 *e*PN **Pn** **19 50 23.1 +0.5**
SKR *e*S **Sn** **19 50 56.0 +0.9**
SKR pmax pmax
comp=Z,50nm,0.5s
SKR smax
comp=N,130nm,0.5s
SKR smax
comp=E,120nm,0.5s
SKR smax
comp=Z,40nm,0.5s
ALID Alaid 2.83 227 P **Pn** **19 50 23.5 -0.4**
KMNR Kamenistaya 3.04 15 P **Pn** **19 50 28.3 +1.7**
KBTR Krutoberegovo 4.10 33 *eP* **Pn** **19 50 41.7 +0.9**
KBTR *i* S **Sn** **19 51 27.5 -0.2**
ILAR Eielson Array 29.54 45 P **P** **19 55 35.0 -0.1**
comp=Z,0.3nm,0.6s,mb3.1,baz=260,slow=7.1,SNR=4.7
MKAR Makanchi Array 47.57 295 P **P** **19 58 02.6 -3.1**
comp=Z,0.1nm,0.4s,mb3.0,baz=57,slow=7.2,SNR=5.4
BVAR Borovoye Array 49.95 308 P **P** **19 58 20.8 -2.9**
comp=Z,0.7nm,0.4s,mb3.9,baz=67,slow=8.5,SNR=5.0
BVAR Borovoye Array 49.95 308 P **P** **19 58 20.8 -2.9**
BVAR pmax pmax
comp=Z,1.0nm,0.4s
TXAR Lajitas Array 71.44 66 P **P** **20 00 50.9 +1.0**
comp=Z,0.4nm,0.6s,mb3.4,baz=298,slow=4.6,SNR=5.6

*IDC **28** 20:07:18.0±2.2, 54.°85N×162.°50E, h0km, mb3.6/3, mb1 3.6/4, mb1mx3.3/24, mbtmp3.6/4, ML3.4/1, Error ellipse: s-maj=54.7km s-min=30.6km az=115.0*
*MOS **28** 20:07:21.0±0.3, 54.°88N×162.°49E, h31km, mb4.4/1, Error ellipse: s-maj=74.6km s-min=35.7km az=59.3*
*ISCJB **28** 20:07:24.0±0.5, 54.°55N±0.°03×162.°36E±0.°06, h45km±8km, mb3.6/3, Error ellipse: s-maj=6.4km s-min=4.3km az=19.9*
*KRSC **28** 20:07:24.3±0.8, 54.°54N×162.°29E, h31km±15km, ML4.0*
ISC 28 20:07:24.6±0.8, 54.°56N±0.°03×162.°36E±0.°06, h31km±6km, n26, σ0.°79/43, mb3.6/3, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.37**	**270**	*i* P	**Pb**	**20 07 32.7**	**-0.4**
MKZ				*i* S	**Sb**	**20 07 38.4**	**-0.4**
KBTR	**Krutoberegovo**	**1.67**	**9**	*eP*	**Pn**	**20 07 51.5**	**-0.2**
KBTR				*i* S	**Sn**	**20 08 11.5**	**-0.6**
BZGR	**Bezymyannyi-Gr**	**1.68**	**326**	*eP*	**Pn**	**20 07 52.1**	**+0.3**
BZGR				*i* S	**Sn**	**20 08 12.4**	**+0.2**
KMNR	**Kamenistaya**	**1.71**	**315**	*i* P	**Pn**	**20 07 52.5**	**+0.3**
KMNR				*i* S	**Sn**	**20 08 13.1**	**+0.2**
ZLN	**Zelenaya**	**1.71**	**329**	*eP*	**Pn**	**20 07 52.6**	**+0.4**
ZLN				*i* S	**Sn**	**20 08 13.4**	**+0.4**
KII	**Karymskiy**	**1.79**	**254**	*eP*	**Pn**	**20 07 53.3**	**+0.1**
KII				*i* S	**Sn**	**20 08 14.5**	**-0.3**
KPT	**Kopyto**	**1.87**	**320**	*i* P	**Pn**	**20 07 54.7**	**+0.3**
KPT				*i* S	**Sn**	**20 08 17.2**	**+0.4**
KRSR	**Krestovskiy**	**1.95**	**329**	*eP*	**Pn**	**20 07 55.6**	**+0.1**
KRSR				*i* S	**Sn**	**20 08 18.6**	**-0.3**
KLY	**Klyuchi**	**2.01**	**332**	*i* P	**Pn**	**20 07 55.9**	**-0.4**
KLY				*i* S	**Sn**	**20 08 19.2**	**-1.1**
KOZ	**Kozyrevsk**	**2.07**	**318**	*eP*	**Pn**	**20 07 58.0**	**+0.9**
KOZ				*i* S	**Sn**	**20 08 22.7**	**+0.9**
BKI	**Bering**	**2.19**	**71**	*i* P	**Pn**	**20 07 59.1**	**+0.4**
BKI				*i* S	**Sn**	**20 08 24.9**	**+0.2**
SRKR	**Sorokina**	**2.21**	**343**	*eP*	**Pn**	**20 07 59.6**	**+0.6**
SRKR				*i* S	**Sn**	**20 08 25.3**	**+0.1**
NLC	**Nalytchevo**	**2.26**	**233**	*eP*	**Pn**	**20 07 59.4**	**-0.4**
NLC				*i* S	**Sn**	**20 08 25.2**	**-1.4**
SRDR	**Sredinnyy**	**2.32**	**321**	*eP*	**Pn**	**20 08 00.7**	**+0.2**
SRDR				*e*S	**Sn**	**20 08 27.1**	**-0.8**
AVH	**Avacha**	**2.50**	**240**	*i* P	**Pn**	**20 08 04.3**	**+1.2**
AVH				*i* S	**Sn**	**20 08 33.4**	**+0.9**
PET	**Petropavlovsk**	**2.68**	**237**	P	**Pn**	**20 08 04.3**	**-1.3**
PET				*i* S	**Sn**	**20 08 32.9**	**-4.1**
PET	**Petropavlovsk**	**2.68**	**237**	*e*PN	**Pn**	**20 08 06.2**	**+0.6**
PET				pmax	pmax		
comp=Z,47nm,0.4s							
PETK	**Petropavlovsk-**	**3.12**	**244**	Pn	**Pn**	**20 08 12.6**	**+1.0**
comp=Z,3.9nm,0.3s,baz=76,slow=20,SNR=14							
PETK				Sn	**Sn**	**20 08 51.1**	**+3.4**
comp=Z,3.8nm,0.3s,baz=285,slow=20,SNR=6.8							
PETK	**Petropavlovsk-**	**3.12**	**244**	PN	**Pn**	**20 08 12.6**	**+1.0**
PETK						20 08 51.2	
PETK				pmax	pmax		
comp=Z,4.0nm,0.3s							
PETK				smax			
comp=N,4.0nm,0.3s							
GRL	**Gorelyy**	**3.25**	**234**	P	**Pn**	**20 08 14.0**	**+0.6**
MIPR	**Malaya Ipel'ka**	**4.06**	**238**	P	**Pn**	**20 08 24.1**	**-0.4**
ALID	**Alaid**	**5.55**	**231**	P	**Pn**	**20 08 44.6**	**-0.3**
KURK	**Kurchatov**	**48.10**	**302**	P	**P**	**20 15 58.4**	**-2.5**
comp=N,0.2nm,0.4s,mb3.5,baz=56,slow=8.1,SNR=4.2							
FINES	**FINESS Array B**	**59.30**	**337**	P	**P**	**20 17 19.4**	**-3.3**
comp=N,1.6nm,0.7s,mb4.2,baz=32,slow=8.6,SNR=7.5							
FINES	**FINESS Array B**	**59.30**	**337**	P	**P**	**20 17 19.4**	**-3.3**
FINES				pmax	pmax		
comp=Z,2.0nm,0.7s							
ASAR	**Alice Springs**	**81.66**	**206**	P	**P**	**20 19 39.1**	**-0.2**
comp=Z,0.1nm,0.4s,mb3.1,baz=23,slow=5.1,SNR=4.4							

*NEIC **28** 20:18:59.9±0.7, 53.°22S×134.°95W, h10km, mb4.5/2, Error ellipse: s-maj=34.7km s-min=24.6km az=125.0*
IDC 28 20:18:58.5±0.9, 53.°30S×135.°00W, h0km, mb4.0/4, mb1 4.3/4, mb1mx4.1/12, mbtmp4.0/4, MS4.0/7, Ms1 4.0/7, ms1mx3.7/18, Error ellipse: s-maj=40.1km s-min=29.5km az=139.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKT	**Rikitea**	**30.13**	**0**	*e*LR	LR	20 33 09.6	
521nm,26.8s							
QSPA	**South Pole Qui**	**36.88**	**180**	P	P	20 26 09.3	+1.4
2.1nm,0.8s,baz=119,slow=3.7,SNR=6.6							
PPT	**Papeete**	**37.43**	**337**	*e*LR	LR	20 36 35.1	
688nm,26.2s							
PLCA	**Paso Flores**	**44.22**	**101**	LR	LR	20 40 06.3	
comp=Z,169nm,20.7s,baz=106,slow=29							
TAOE	**Nuku Hiva Isla**	**44.51**	**353**	*e*LR	LR	20 39 48.4	
386nm,25.3s							
DZM	**Mont Dzumac**	**53.90**	**282**	*e*LR	LR	20 44 04.2	
130nm,29.9s							
MAW	**Mawson**	**58.68**	**188**	LR	LR	20 53 23.8	
comp=Z,174nm,21.9s,baz=27,slow=35							
STKA	**Stephens Creek**	**61.38**	**254**	LR	LR	20 51 28.1	
comp=Z,141nm,19.2s,baz=209,slow=32							
CPUP	**Villa Florida**	**62.10**	**97**	LR	LR	20 50 49.4	
comp=Z,117nm,21.2s,baz=196,slow=31							
LPAZ	**La Paz**	**63.29**	**81**	P	P	20 29 28.7	-0.3
1.8nm,0.9s,baz=208,slow=7.2,SNR=5.6							
LPAZ				LR	LR	20 50 02.6	
comp=Z,105nm,20.5s,baz=227,slow=30							
LPAZ	**La Paz**	**63.29**	**81**	*eP*	P	20 29 28.7	-0.3
3.4nm,1.1s							
LPAZ				LR	LR	20 50 02.6	
ASAR	**Alice Springs**	**72.02**	**255**	P	P	20 30 23.4	-0.7
1.3nm,0.9s,baz=128,slow=3.8,SNR=9.6							
TXAR	**Lajitas Array**	**86.68**	**27**	P	P	20 31 44.9	+1.3
0.8nm,0.8s,baz=184,slow=8.2,SNR=7.9							
TXAR	**Lajitas Array**	**86.68**	**27**	P	P	20 31 44.9	+1.3
JCT	**Junction City**	**88.86**	**30**	P	P	20 31 51.8	-2.3
4.2nm,1.2s							
ANMO	**Albuquerque**	**91.31**	**23**	LR	LR	21 06 10.5	
comp=Z,54nm,18.8s,baz=59,slow=31							
BOSA	**Boshof**	**96.64**	**163**	LR	LR	21 16 55.9	
comp=Z,80nm,18.7s,baz=38,slow=36							
ILAR	**Eielson Array**	**118.09**	**354**	PKP	PKPdf	20 37 46.0	+0.3
0.5nm,0.9s,baz=214,slow=3.1,SNR=3.5							
PETK	**Petropavlovsk-**	**119.90**	**320**	PKP	PKPdf	20 37 50.4	+0.9
2.9nm,0.9s,baz=123,slow=5.5,SNR=3.9							
CMAR	**Chiang Mai Arr**	**125.95**	**251**	PKP	PKPdf	20 38 02.4	+0.1
1.1nm,0.9s,baz=204,slow=2.0,SNR=2.9							
SONM	**Songino Array**	**141.69**	**287**	PKP	PKPdf	20 38 30.1	-0.6
0.4nm,0.9s,baz=107,slow=1.7,SNR=3.7							
BRTR	**Keskin Array B**	**164.36**	**146**	PKP	PKPdf	20 39 00.8	-2.3
0.6nm,0.9s,baz=146,slow=0.5,SNR=3.7							

*IDC **28** 20:34:23.6±0.6, 32.°23N×85.°10E, h0km, mb4.2/17, mb1 4.3/21, mb1mx4.2/26, mbtmp4.2/21, ML3.8/4, MS3.4/9, Ms1 3.4/9, ms1mx3.2/29, Error ellipse: s-maj=18.7km s-min=14.1km az=38.0*
*ISCJB **28** 20:34:23.3±0.2, 32.°24N±0.°05×85.°17E±0.°04, h10km, mb4.6/106, MS3.7/21, Error ellipse: s-maj=7.3km s-min=3.8km az=29.3*
*LDG **28** 20:34:24.4±0.1, 32.°46N×84.°86E, h10km, Mb4.8/29, Ms3.5/5, Error ellipse: s-maj=4.6km s-min=2.7km az=94.0*
*NEIC **28** 20:34:26.5±2.4, 32.°29N×85.°17E, h17km±14km, mb4.7/62, Error ellipse: s-maj=8.0km s-min=4.9km az=207.0*
*BJI **28** 20:34:26.0, 32.°24N×85.°06E, h25km, mB4.9/8, mb4.2/13, Ms4.1/9, Ms7 4.1/8*
*MOS **28** 20:34:27.1±0.9, 32.°31N×85.°18E, h33km, mb4.8/58, MS3.7/19, Error ellipse: s-maj=10.2km s-min=4.1km az=126.6*
*SZGRF **28** 20:34:40.6, 33.°81N×84.°06E, h33km, mb4.8, MS3.8, Xizang*
ISC 28 20:34:25.5±0.2, 32.°30N±0.°04×85.°21E±0.°04, h10km, n284, σ0.°89/287, mb4.6/106, MS3.7/21, 14C-19D, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTH	**Pithoragarh**	**5.09**	**239**	*e*PKP	**Pn**	**20 35 48.0**	**+6.2**
LSA	**Lhasa**	**5.72**	**115**	Pn	**Pn**	**20 35 55.8**	**+5.3**
LSA				Sg	**Sg**	**20 37 29.8**	**+0.7**
LSA				LR	LR		
comp=E,2μm,10.6s							
LSA				LR	LR		
comp=Z,3μm,10.0s							
DDI	**Dehra Dun**	**6.43**	**254**	*ex*	**Pn**	**20 36 07.0**	**+6.7**
DDI				*ex*	**Sg**	**20 38 05.7**	**+14**
SHL	**Shillong**	**8.89**	**137**	*ex*	**Pn**	**20 36 36.0**	**+1.9**
SHL				*ex*	**Sn**	**20 38 14.0**	**-0.4**
CHCP	**Chirah Chowk**	**10.13**	**281**	P	**Pn**	**20 36 50.9**	**-0.1**
KSH	**Kashi**	**10.39**	**316**	P	**Pn**	**20 36 55.8**	**+1.3**
KSH				S	**Sn**	**20 38 45.5**	**-5.5**
CEP	**Cherat**	**11.27**	**281**	P	**Pn**	**20 37 06.1**	**-0.5**
CEP				S	**Sn**	**20 39 14.0**	**+1.5**
THW	**Thamme Wali**	**11.38**	**276**	P	**Pn**	**20 37 04.1**	**-4.0**
AAK	**Ala-Archa**	**13.36**	**324**	Pn	**Pn**	**20 37 37.4**	**+2.3**
comp=Z,0.3nm,0.3s,baz=107,slow=3.4,SNR=9.2							
AAK				LR	LR	20 43 58.9	
comp=Z,79nm,19.4s,baz=232,slow=43							
AML	**Almayashu**	**13.43**	**320**	*eP*	**Pn**	**20 37 36.0**	**-0.1**
FRU	**Bishkek**	**13.45**	**324**	*i*P	**Pn**	**20 37 38.0**	**+1.6**
FRU				pmax	pmax		
comp=Z,60nm,2.0s							
KBL	**Kabul**	**13.69**	**284**	*eP*	**Pn**	**20 37 37.2**	**-2.5**
KBL				*e*		20 40 06.7	
KBL				pmax	pmax		
comp=Z,21nm,0.7s							
KBL	**Kabul**	**13.69**	**284**	*e*Pn	**Pn**	**20 37 37.2**	**-2.5**
comp=Z,21nm,0.7s							
KBL				*e*Sn	**Sn**	**20 40 06.7**	**-5.2**
EKS2	**Erkin-Say**	**13.75**	**322**	*eP*	**Pn**	**20 37 43.1**	**+2.6**
comp=Z,3μm,0.4s							
MK31	**Makanchi Array**	**14.65**	**352**	*eP*	**Pn**	**20 37 52.7**	**0.0**
MKAR	**Makanchi Array**	**14.65**	**352**	Pn	**Pn**	**20 37 51.0**	**-1.8**
comp=Z,0.1nm,0.3s,baz=174,slow=13,SNR=6.1							
MKAR				LR	LR	20 44 30.0	
comp=Z,232nm,18.2s,baz=170,slow=41							
KK31	**Karatay Array**	**15.84**	**317**	*ce*P	**Pn**	**20 38 10.4**	**+1.9**
KMI	**Kunming**	**16.95**	**110**	P	**Pn**	**20 38 23.5**	**+0.7**
KMI				pP	pP	20 38 31.8	+4.3
KMI				pmax	pmax		
comp=Z,11nm,0.7s							
CHTO	**Chiang Mai**	**18.24**	**134**	*eP*	**Pn**	**20 38 39.6**	**+0.7**
CHTO				pmax	pmax		
comp=Z,14nm,1.0s							
CHTO	**Chiang Mai**	**18.24**	**134**	*eP*	**Pn**	**20 38 39.6**	**+0.7**
comp=Z,14nm,1.0s							
CMAR	**Chiang Mai Arr**	**18.52**	**135**	P	**Pn**	**20 38 42.0**	**-0.2**
comp=Z,0.8nm,0.3s,baz=306,slow=12,SNR=25							
CMAR				PcP	PcP	20 43 13.0	+1.1
comp=Z,0.1nm,0.3s,baz=315,slow=2.1,SNR=4.2							
KURK	**Kurchatov**	**19.04**	**347**	P	**Pn**	**20 38 46.5**	**-1.9**
comp=Z,0.3nm,0.3s,baz=165,slow=10,SNR=47							
KURK				LR	LR	20 45 38.0	
comp=Z,30nm,21.4s,baz=160,slow=36							
KURK	**Kurchatov**	**19.04**	**347**	*d*P	**Pn**	**20 38 46.6**	**-1.7**
KURK				pmax	pmax		
comp=Z,31nm,1.7s							
KURK	**Kurchatov**	**19.04**	**347**	*eP*	**Pn**	**20 38 46.7**	**-1.6**
KURK				LR	LR	20 45 38.0	
GYA	**Guiyang**	**19.57**	**102**	P	**Pn**	**20 38 55.0**	**+0.1**
GYA				pmax	pmax		
comp=Z,20nm,0.8s							
ENH	**Enshi**	**20.84**	**89**	*eP*	**P**	**20 39 06.2**	**-1.2**
comp=Z,9.4nm,0.8s							
ZAA0	**Zalesovo Array**	**21.64**	**359**	*eP*	**P**	**20 39 14.5**	**-1.3**
ZALV	**Zalesovo Beam**	**21.64**	**359**	P	**P**	**20 39 15.3**	**-0.5**
comp=Z,15nm,0.7s,mb4.5,baz=180,slow=11,SNR=27							
ZALV				LR	LR	20 49 21.4	
comp=Z,82nm,18.1s,MS3.2,baz=163,slow=41							
ZALV	**Zalesovo Beam**	**21.64**	**359**	P	**P**	**20 39 15.3**	**-0.5**
ZALV				pmax	pmax		
comp=Z,15nm,0.7s,mb4.5							
ZALV				MLR	MLR		
comp=Z,82nm,18.1s,MS3.2							
SONM	**Songino Array**	**22.34**	**40**	P	**P**	**20 39 25.0**	**+1.7**
comp=Z,4.7nm,0.9s,mb3.9,baz=226,slow=9.1,SNR=26							
SONM	**Songino Array**	**22.34**	**40**	P	**P**	**20 39 25.0**	**+1.7**
SONM				pmax	pmax		
comp=Z,5.0nm,0.9s							
NVS	**Novosibirsk**	**22.58**	**357**	*eP*	**P**	**20 39 24.5**	**-1.3**
NVS				pmax	pmax		
comp=N,14nm,1.3s							
NVS				pmax	pmax		
comp=Z,16nm,1.3s,mb4.3							
NVS				pmax	pmax		
comp=E,9.0nm,1.3s							
ULN	**Ulaanbaatar**	**22.71**	**40**	*eP*	**P**	**20 39 28.4**	**+1.1**
ULN				pmax	pmax		
comp=Z,13nm,1.1s,mb4.3							
ULN	**Ulaanbaatar**	**22.71**	**40**	*eP*	**P**	**20 39 28.4**	**+1.1**
comp=Z,13nm,1.1s,mb4.3							
BVAR	**Borovoye Array**	**23.32**	**337**	P	**P**	**20 39 33.0**	**-0.7**
comp=Z,1.0nm,0.6s,mb3.4,baz=143,slow=13,SNR=8.3							
BVAR	**Borovoye Array**	**23.32**	**337**	P	**P**	**20 39 33.0**	**-0.6**
BVAR				pmax	pmax		
comp=Z,1.0nm,0.6s							
BRVK	**Borovoye**	**23.38**	**337**	*eP*	**P**	**20 39 33.2**	**-1.1**
BRVK				pmax	pmax		
comp=Z,4.0nm,0.9s,mb3.9							
BRVK	**Borovoye**	**23.38**	**337**	*eP*	**P**	**20 39 33.2**	**-1.1**
comp=Z,4.4nm,0.9s,mb3.9							
TLY	**Talaya**	**23.61**	**29**	*eP*	**P**	**20 39 39.1**	**+2.5**
TLY				pmax	pmax		
comp=Z,4.0nm,0.5s,mb4.1							
TLY				MLR	MLR		
comp=Z,76nm,14.0s,MS3.3							
ZRNK	**Zerenda**	**23.73**	**335**	*i* P	**P**	**20 39 36.2**	**-1.5**
ZRNK				pmax	pmax		
comp=Z,11nm,1.0s,mb4.2							
AB31	**Akbulak array**	**25.38**	**319**	*ce*P	**P**	**20 39 53.1**	**+0.3**
AB31				pmax	pmax		
comp=Z,1.0nm,0.2s,mb4.0							
ABKAR	**Akbulak array**	**25.38**	**319**	*eP*	**P**	**20 39 53.4**	**+0.6**
comp=Z,16nm,0.9s,mb4.5							
QIZ	**Qiongzhong**	**25.76**	**115**	P	**P**	**20 39 54.5**	**-2.0**
QIZ				S	**S**	**20 44 22.5**	**-3.2**
QIZ				LR	LR		
comp=N,300nm,5.0s							
QIZ				LR	LR		
comp=Z,220nm,7.5s							
AKTK	**Aktyubinsk**	**27.06**	**320**	P	**P**	**20 40 08.1**	**+0.1**
AKTK				LR	LR	20 51 27.2	
AKTO	**Aktyubinsk**	**27.06**	**320**	P	**P**	**20 40 08.1**	**+0.1**
comp=Z,8.6nm,0.9s,mb4.3,baz=142,slow=8.2,SNR=6.1							
AKTO				LR	LR	20 51 27.2	
comp=Z,93nm,19.9s,MS3.4,baz=11,slow=38							
AKTO	**Aktyubinsk**	**27.06**	**320**	P	**P**	**20 40 08.1**	**+0.1**
AKTO				pmax	pmax		
comp=Z,9.0nm,0.9s,mb4.3							
AKTO				MLR	MLR		
comp=Z,93nm,19.9s,MS3.4							
HIA	**Hailar**	**30.82**	**46**	*e*P	**P**	**20 40 41.1**	**-0.3**
GNI	**Garni**	**33.35**	**295**	*de*P	**P**	**20 41 05.8**	**+2.1**
GNI				pmax	pmax		
comp=Z,16nm,1.2s							
KIV	**Kislovodsk**	**35.06**	**302**	*eP*	**P**	**20 41 19.5**	**+1.0**
KIV				pmax	pmax		
comp=Z,8.0nm,1.0s,mb4.6							
KIV				MLR	MLR		
comp=Z,65nm,15.0s,MS3.5							
KIV	**Kislovodsk**	**35.06**	**302**	*eP*	**P**	**20 41 19.6**	**+1.1**
comp=Z,7.9nm,0.9s,mb4.6							
KSRS	**Korea Array**	**35.20**	**69**	P	**P**	**20 41 20.4**	**+0.7**
comp=Z,1.5nm,0.7s,mb4.1,baz=270,slow=9.5,SNR=9.7							
KSRS	**Korea Array**	**35.20**	**69**	P	**P**	**20 41 20.5**	**+0.7**
KSRS				pmax	pmax		
comp=Z,2.0nm,0.7s,mb4.2							
VRHR	**Novokhopersk**	**36.92**	**314**	*eP*	**P**	**20 41 34.2**	**-0.1**
VRHR				pmax	pmax		
comp=Z,20nm,0.7s,mb5.1							
VRHR				pmax	pmax		
comp=N,4.0nm,0.3s							
VRHR				pmax	pmax		
comp=E,10.0nm,0.7s							
VORD	**Divnogorie**	**38.33**	**313**	*eP*	**P**	**20 41 46.4**	**+0.1**
VORD				pmax	pmax		
comp=Z,20nm,1.0s,mb4.8							
VORD				pmax	pmax		
comp=N,30nm,1.0s							
VORD				pmax	pmax		
comp=E,10.0nm,0.5s							
VORD				MLR	MLR		
comp=Z,130nm,14.0s,MS3.9							
VORD				MLR	MLR		
comp=N,30nm,7.0s							
VORD				MLR	MLR		
comp=E,90nm,14.0s							
VSR	**Storozhevoye**	**38.45**	**313**	*eP*	**P**	**20 41 47.0**	**-0.3**
VSR				pmax	pmax		
comp=N,10.0nm,0.9s							
VSR				pmax	pmax		
comp=E,10.0nm,0.9s							
VSR				pmax	pmax		
comp=Z,10.0nm,0.9s,mb4.5							
VSR				MLR	MLR		
comp=Z,190nm,15.0s,MS4.0							
VSR				MLR	MLR		
comp=N,200nm,15.0s,MS4.3							
VSR				MLR	MLR		
comp=E,250nm,15.0s,MS4.3							
OBN	**Obninsk**	**40.82**	**319**	*c i*P	**P**	**20 42 07.4**	**+0.4**
OBN				*e*		20 44 07.8	
OBN				pmax	pmax		
comp=Z,10.0nm,0.7s,mb4.5							
OBN				MLR	MLR		
comp=Z,100nm,16.0s,MS3.8							
YAK	**Yakutsk**	**41.08**	**30**	*eP*	**P**	**20 42 08.4**	**-0.6**
YAK				pmax	pmax		
comp=Z,13nm,1.7s,mb4.3							
BRTR	**Keskin Array B**	**41.89**	**295**	P	**P**	**20 42 16.1**	**+0.1**
comp=Z,1.3nm,0.8s,mb3.6,baz=108,slow=8.0,SNR=8.4							
BRTR				LR	LR	21 02 03.5	
comp=Z,31nm,18.1s,MS3.2,baz=236,slow=40							
BRTR	**Keskin Array B**	**41.89**	**295**	P	**P**	**20 42 16.1**	**+0.1**
BRTR				pmax	pmax		
comp=Z,1.0nm,0.8s							
BRTR				MLR	MLR		
comp=Z,31nm,18.1s							
MJAR	**Matsushiro Arr**	**43.47**	**69**	P	**P**	**20 42 29.8**	**+0.9**
comp=Z,1.7nm,0.8s,mb3.8,baz=279,slow=8.6,SNR=4.1							
MJAR	**Matsushiro Arr**	**43.47**	**69**	P	**P**	**20 42 29.8**	**+0.9**
MJAR				pmax	pmax		
comp=Z,2.0nm,0.8s							
AKASG	**Malin Array Be**	**44.63**	**311**	P	**P**	**20 42 37.2**	**-0.8**
comp=Z,4.8nm,0.6s,mb4.5,baz=83,slow=7.3,SNR=15							
AKASG	**Malin Array Be**	**44.63**	**311**	P	**P**	**20 42 37.2**	**-0.8**
AKASG				pmax	pmax		
comp=Z,5.0nm,0.6s							
KIEV	**Kiev**	**44.64**	**311**	*eP*	**P**	**20 42 37.5**	**-0.6**
KIEV				pmax	pmax		
comp=Z,4.0nm,0.6s,mb4.4							
KIEV	**Kiev**	**44.64**	**311**	*eP*	**P**	**20 42 37.5**	**-0.6**
comp=Z,3.8nm,0.6s,mb4.4							
LEOM	**Leova**	**45.30**	**305**	⇓P	**P**	**20 42 44.4**	**+1.0**
LEOM	**Leova**	**45.30**	**305**	⇓*i*P	**P**	**20 42 44.4**	**+1.0**
TIRR	**Tirgusor**	**45.31**	**303**	⇓*i*P	Px	20 42 58.2	
JOF	**Joensuu**	**45.48**	**329**	*eP*	**P**	**20 42 45.0**	**+0.4**
JOF				pmax	pmax		
comp=Z,44nm,0.4s,mb5.6							
JOF	**Joensuu**	**45.48**	**329**	*ep*	**P**	**20 42 45.0**	**+0.4**
comp=Z,44nm,0.4s,mb5.7							
TIXI	**Tiksi**	**45.70**	**18**	*eP*	**P**	**20 42 45.7**	**-0.5**
TIXI				pmax	pmax		
comp=Z,13nm,1.3s,mb4.7							
VRI	**Vrincioaia**	**46.39**	**305**	⇑P	**P**	**20 42 52.7**	**+0.7**
VRI	**Vrincioaia**	**46.39**	**305**	⇑*i*P	**P**	**20 42 52.7**	**+0.7**
IDID	**Didziasalis**	**46.41**	**318**	*eP*	**P**	**20 42 52.4**	**+0.4**
IDID				AMB	AMB	20 42 53.5	
comp=Z,4.4nm,1.2s,mb4.3							
PLOR	**Plostina**	**46.45**	**305**	⇓P	**P**	**20 42 54.2**	**+1.8**
PLOR	**Plostina**	**46.45**	**305**	⇓*i*P	**P**	**20 42 54.2**	**+1.8**
IIGN	**Ignalina**	**46.71**	**318**	*eP*	**P**	**20 42 54.9**	**+0.5**
IIGN				AMB	AMB	20 42 56.1	
comp=Z,6.0nm,1.3s,mb4.4							
IZAR	**Zarasai**	**46.73**	**318**	*eP*	**P**	**20 42 55.1**	**+0.6**
IZAR				AMB	AMB	20 42 56.1	
comp=Z,7.4nm,0.6s,mb4.8							
VSU	**Vasula**	**46.76**	**322**	⇑*eP*	**P**	**20 42 55.0**	**+0.3**
VSU				pmax

SEY Seymchan 51.46 33⇑ eP P 20 43 31.0 +0.4
VYHS Vyhne 51.48 309 eP P 20 43 30.7 -0.3
VYHS pmax pmax
comp=Z,8.0nm,2.0s,mb4.3
VYHS Vyhne 51.48 309 eP P 20 43 30.7 -0.3
comp=Z,7.8nm,2.0s,mb4.3
VYHS Vyhne 51.48 309 eP P 20 43 30.7 -0.3
OKC Ostrava-Krasne 51.76 311 eP P 20 43 34.0 +0.9
OKC MLR MLR
comp=Z,100nm,6.3s
OKC Ostrava-Krasne 51.76 311 eP P 20 43 34.0 +0.9
OKC AMS AMS 21 09 40.0
comp=Z,100nm,6.3s
MORC Moravsky Berou 52.16 311 ⇑P P 20 43 36.8 +0.8
MORC Moravsky Berou 52.16 311 ⇑iP P 20 43 36.8 +0.8
VRAC Vranov 52.84 310 ⇓P P 20 43 42.0 +0.9
VRAC Vranov 52.84 310 ⇓iP P 20 43 42.0 +0.9
DPC Dobruska-Polom 52.86 311 eP P 20 43 41.9 +0.6
DPC MLR MLR
comp=Z,100nm,16.8s,MS3.9
DPC Dobruska-Polom 52.86 311 eP P 20 43 41.9 +0.6
DPC AMS AMS 21 08 10.0
comp=Z,100nm,16.8s
UPC Upice 53.04 312 eP P 20 43 43.6 +1.0
UPC Upice 53.04 312 eP P 20 43 43.6 +1.0
CONA Conrad Observa 53.53 309 ⇓iP P 20 43 46.9 +0.7
comp=Z,10nm,1.2s,mb4.7
TREC Trest 53.55 310 eP P 20 43 47.3 +0.9
TREC MLR MLR
comp=Z,100nm,9.7s
TREC Trest 53.55 310 eP P 20 43 47.3 +0.9
TREC AMS AMS 21 08 40.0
comp=Z,100nm,9.7s
PVCC Panska Ves 53.95 312 eP P 20 43 50.2 +1.0
PVCC MLR MLR
comp=Z,100nm,17.2s,MS3.9
PVCC Panska Ves 53.95 312 eP P 20 43 50.2 +1.0
PVCC AMS AMS 21 08 40.0
comp=Z,100nm,17.2s
PRU Pruhonice 54.05 311 eP P 20 43 51.4 +1.4
PRU MLR MLR
comp=Z,100nm,13.8s,MS4.0
PRU Pruhonice 54.05 311 eP P 20 43 51.4 +1.4
PRU AMS AMS 21 08 50.0
comp=Z,100nm,13.8s
BRG Berggiesshubel 54.29 312 eP P 20 43 52.3 +0.6
comp=Z,10nm,1.1s,mb4.7
BRG Berggiesshubel 54.29 312 eP P 20 43 52.3 +0.6
BRG pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
SOKA Soboth 54.31 307⇑ iP P 20 43 52.0 0.0
comp=Z,12nm,1.3s,mb4.7
MOA Molln 54.60 309⇑ iP P 20 43 54.3 +0.2
comp=Z,5.7nm,0.8s,mb4.6
NB2 NORSAR Subarra 54.68 325 P P **20 43 54.0 -0.4**
comp=Z,11nm,0.9s,mb4.9,baz=86,slow=7.4
NOA NORSAR Array B 54.68 325 P P **20 43 54.1 -0.2**
comp=Z,6.3nm,0.9s,mb4.7,baz=87,slow=7.1,SNR=20
NOA LR LR 21 08 49.6
comp=Z,49nm,18.7s,MS3.6,baz=70,slow=38
NOA NORSAR Array B 54.68 325 P P **20 43 54.2 -0.2**
NOA pmax pmax
comp=Z,6.0nm,0.9s
NOA MLR MLR
comp=Z,49nm,18.7s
GEC2 GERESS Array S 54.79 310 eP P 20 43 55.6 +0.2
comp=Z,8.0nm,0.9s,mb4.8
GEC2 GERESS Array S 54.79 310 eP P 20 43 55.6 +0.2
GEC2 pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
CLL Collm 54.80 313 eP P 20 43 55.7 +0.3
comp=Z,8.0nm,1.4s,mb4.6
CLL Collm 54.80 313 eP P 20 43 55.0 -0.4
CLL pmax pmax
comp=Z,8.0nm,1.4s,mb4.6
CLL Collm 54.80 313 eP P 20 43 55.0 -0.4
comp=Z,8.0nm,1.4s,mb4.6
CLL Collm 54.80 313 eP P 20 43 55.0 -0.4
comp=Z,8.0nm,1.4s,mb4.6
KHC Kasperske Hory 54.81 310 eP P 20 43 55.9 +0.3
KHC MLR MLR
comp=Z,100nm,14.9s,MS4.0
KHC Kasperske Hory 54.81 310 eP P 20 43 55.9 +0.3
KHC AMS AMS 21 09 20.0
comp=Z,100nm,14.9s
WET Wettzell 55.26 310 eP P 20 43 59.2 +0.4
comp=Z,7.0nm,1.0s,mb4.7
WET Wettzell 55.26 310 eP P 20 43 59.2 +0.4
WET pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
TANN Tannenbergstha 55.30 312 eP P 20 43 59.7 +0.7
comp=Z,4.0nm,1.0s,mb4.4
NKC Novy Kostel 55.34 312 AMS AMS 21 09 40.0
comp=Z,100nm,12.4s
GUNZ Gunzen 55.39 312 eP P 20 44 00.2 +0.5
comp=Z,6.0nm,0.9s,mb4.6
WERD Werda 55.39 312 eP P 20 43 59.9 +0.2
comp=Z,5.0nm,0.8s,mb4.6
MOX Moxa 55.78 312 eP P 20 44 02.5 0.0
comp=Z,6.0nm,1.0s,mb4.6
BSEG Bad Segeberg 55.99 316 eP P 20 44 04.6 +0.7
comp=Z,12nm,0.8s,mb5.0
BSEG Bad Segeberg 55.99 316 eP P 20 44 04.6 +0.7
BSEG pmax pmax
comp=Z,12nm,0.8s,mb5.0
GRA1 Grafenberg Arr 56.22 311 eP P 20 44 06.0 +0.4
comp=Z,38nm,1.6s,mb5.2
GRA1 LR LR
comp=Z,100nm,19.7s,MS3.9
GRF Grafenberg Arr 56.22 311 eP P 20 44 06.0 +0.4
comp=Z,38nm,1.6s,mb5.2
GRF eL 21 10 20.8
comp=Z,84nm,19.7s
GRF Grafenberg Arr 56.22 311 eP P 20 44 06.0 +0.4
GRF pmax pmax
comp=Z,38nm,1.6s,mb5.2
GRF MLR MLR
comp=Z,100nm,19.7s,MS3.9
CLZ Clausthal 56.33 314 eP P 20 44 06.8 +0.4
comp=Z,14nm,1.3s,mb4.8
CLZ Clausthal 56.33 314 eP P 20 44 06.8 +0.4
CLZ pmax pmax
comp=Z,14nm,1.3s,mb4.8
NRDL Niedersach Rie 56.37 315 eP P 20 44 06.2 -0.5
comp=Z,20nm,1.3s,mb5.0
FUR Furstenfeldbru 56.50 310 eP P 20 44 08.2 +0.5
comp=Z,14nm,0.9s,mb5.0
FUR Furstenfeldbru 56.50 310 eP P 20 44 08.2 +0.5
FUR pmax pmax
comp=Z,14nm,0.9s,mb5.0
MOTA Moosalm 56.80 309⇑ iP P 20 44 09.4 -0.5
comp=Z,5.9nm,0.8s,mb4.7
FETA Feichten 57.12 308⇑ iP P 20 44 11.0 -1.1
comp=Z,3.5nm,0.8s,mb4.4
DAVA Damuels 57.62 309 ⇓iP P 20 44 15.6 -0.1
comp=Z,10nm,1.0s,mb4.8
STU Stuttgart 57.72 311 eP P 20 44 17.1 +0.8
comp=Z,12nm,0.7s,mb5.0
DAVOX Davos/Dischmat 57.75 308 LR LR 21 12 47.0
comp=Z,47nm,18.7s,MS3.6,baz=88,slow=40
TNS Taunus Mts 57.85 312 eP P 20 44 17.9 +0.7
comp=Z,14nm,1.1s,mb4.9
TNS Taunus Mts 57.85 312 eP P 20 44 17.9 +0.7
TNS pmax pmax
comp=Z,14nm,1.1s,mb4.9
CDF Champ du Feu 59.04 311 eP P 20 44 24.8 -0.7
comp=Z,14nm,1.1s,mb4.6
CDF Champ du Feu 59.04 311 eP P 20 44 24.8 -0.7
CDF pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
CDF Champ du Feu 59.04 311 eP P 20 44 24.8 -0.7
comp=Z,7.2nm,1.1s,mb4.6
HINF Hinteralfeld 59.47 310 eP P 20 44 27.7 -0.8
comp=Z,18nm,1.0s,mb4.7
HINF Hinteralfeld 59.47 310 eP P 20 44 27.7 -0.8
HINF pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
HINF Hinteralfeld 59.47 310 eP P 20 44 27.7 -0.8
comp=Z,8.9nm,1.0s,mb4.8
PGF Pioggiola 59.51 304 eP P 20 44 27.6 -1.3
comp=Z,20nm,1.2s,mb4.7
PGF Pioggiola 59.51 304 eP P 20 44 27.6 -1.3
PGF pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
PGF Pioggiola 59.51 304 eP P 20 44 27.6 -1.3
comp=Z,9.9nm,1.2s,mb4.7

HAU Haudompre 59.74 310 eP P 20 44 29.7 -0.7
comp=Z,12nm,0.9s,mb4.6
HAU eMLR MLR
comp=Z,82nm,20.8s,MS3.5
HAU Haudompre 59.74 310 eP P 20 44 29.7 -0.7
HAU pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
HAU MLR MLR
comp=Z,80nm,20.8s,MS3.8
HAU Haudompre 59.74 310 eP P 20 44 29.7 -0.7
comp=Z,6.2nm,0.9s,mb4.6
HAU LR LR
comp=Z,80nm,20.8s,MS3.8
LPG La Plagne 60.19 307 eP P 20 44 33.3 -0.2
comp=Z,17nm,0.8s,mb4.8
LPG La Plagne 60.19 307 eP P 20 44 33.3 -0.2
LPG pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
LPG La Plagne 60.19 307 eP P 20 44 33.3 -0.2
comp=Z,8.4nm,0.8s,mb4.8
LPL La Plagne 60.20 307 eP P 20 44 33.3 -0.3
comp=Z,24nm,1.0s,mb4.9
LPL La Plagne 60.20 307 eP P 20 44 33.3 -0.3
LPL pmax pmax
comp=Z,12nm,1.0s,mb4.9
LPL La Plagne 60.20 307 eP P 20 44 33.3 -0.3
comp=Z,12nm,1.0s,mb4.9
SBF Sospel 60.21 305 eP P 20 44 32.9 -0.8
comp=Z,11nm,0.7s,mb4.7
SBF Sospel 60.21 305 eP P 20 44 32.9 -0.8
SBF pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
SBF Sospel 60.21 305 eP P 20 44 32.9 -0.8
comp=Z,5.4nm,0.7s,mb4.7
CABF La Chapelle 60.31 309 eP P 20 44 33.6 -0.7
comp=Z,14nm,1.0s,mb4.6
CABF La Chapelle 60.31 309 eP P 20 44 33.6 -0.7
CABF pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
CABF La Chapelle 60.31 309 eP P 20 44 33.6 -0.7
comp=Z,6.9nm,1.0s,mb4.6
MEZF Maizieres J'vi 60.44 311 eP P 20 44 34.7 -0.5
comp=Z,21nm,0.9s,mb4.9
MEZF Maizieres J'vi 60.44 311 eP P 20 44 34.7 -0.5
comp=Z,21nm,0.9s,mb5.2
BAIF Baives 60.53 313 eP P 20 44 35.4 -0.4
FRF La Foret Royal 60.84 305 eP P 20 44 36.8 -1.2
ORIF Oris-en-Rattie 60.95 307 eP P 20 44 38.3 -0.4
ORIF eMLR MLR
comp=Z,98nm,20.0s,MS3.6
LMR La Mourre 61.01 305 eP P 20 44 38.0 -1.1
comp=Z,19nm,1.2s,mb4.8
LMR La Mourre 61.01 305 eP P 20 44 38.0 -1.1
LMR pmax pmax
comp=Z,9.0nm,1.2s,mb4.8
LMR La Mourre 61.01 305 eP P 20 44 38.0 -1.1
comp=Z,9.4nm,1.2s,mb4.8
SMRF Simiane la Rot 61.45 306 eP P 20 44 41.5 -0.6
comp=Z,9.6nm,1.1s,mb4.5
SMRF Simiane la Rot 61.45 306 eP P 20 44 41.5 -0.6
comp=Z,9.6nm,1.1s,mb4.8
LOR Lormes 61.57 310 eP P 20 44 41.5 -1.4
comp=Z,17nm,1.2s,mb4.8
LOR eMLR MLR
comp=Z,41nm,18.2s,MS3.3
LOR Lormes 61.57 310 eP P 20 44 41.5 -1.4
LOR pmax pmax
comp=Z,9.0nm,1.2s,mb4.8
LOR MLR MLR
comp=Z,40nm,18.3s,MS3.6
LOR Lormes 61.57 310 eP P 20 44 41.5 -1.4
comp=Z,8.6nm,1.2s,mb4.8
LOR LR LR
comp=Z,40nm,18.3s,MS3.6
SMF Signal de Mont 61.77 309 eP P 20 44 43.2 -1.1
comp=Z,20nm,1.0s,mb4.9
SMF Signal de Mont 61.77 309 eP P 20 44 43.2 -1.1
SMF pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
SMF Signal de Mont 61.77 309 eP P 20 44 43.2 -1.1
comp=Z,9.9nm,1.0s,mb4.9
VIVF Saint-Julien-l 61.78 307 eP P 20 44 43.4 -1.0
comp=Z,12nm,1.1s,mb4.6
VIVF Saint-Julien-l 61.78 307 eP P 20 44 43.4 -1.0
VIVF pmax pmax
comp=Z,6.0nm,1.1s,mb4.6
VIVF Saint-Julien-l 61.78 307 eP P 20 44 43.4 -1.0
comp=Z,5.9nm,1.1s,mb4.6
SSF Saint Saulge 61.86 310 eP P 20 44 43.7 -1.1
comp=Z,20nm,1.1s,mb4.8
SSF Saint Saulge 61.86 310 eP P 20 44 43.7 -1.1
SSF pmax pmax
comp=Z,10.0nm,1.1s,mb4.9
SSF Saint Saulge 61.86 310 eP P 20 44 43.7 -1.1
comp=Z,9.8nm,1.1s,mb4.8
AVF Avril sur Loir 62.05 310 eP P 20 44 45.0 -1.1
comp=Z,22nm,1.3s,mb4.8
AVF Avril sur Loir 62.05 310 eP P 20 44 45.0 -1.1
AVF pmax pmax
comp=Z,11nm,1.3s,mb4.8
AVF Avril sur Loir 62.05 310 eP P 20 44 45.0 -1.1
comp=Z,11nm,1.3s,mb4.8
LASF Ste Croix 62.59 307 eP P 20 44 49.1 -0.7
comp=Z,18nm,1.2s,mb4.8
TCF Toulx Ste Croi 62.96 309 eP P 20 44 51.6 -0.6
comp=Z,23nm,1.0s,mb5.0
TCF Toulx Ste Croi 62.96 309 eP P 20 44 51.6 -0.6
TCF pmax pmax
comp=Z,12nm,1.0s,mb5.0
TCF Toulx Ste Croi 62.96 309 eP P 20 44 51.6 -0.6
comp=Z,12nm,1.0s,mb5.0
ESK Eskdalemuir 63.28 320 *i* P **P 20 44 54.3 +0.2**
CAF Calviac 63.51 308 eP P 20 44 55.3 -0.6
comp=Z,11nm,0.9s,mb4.5
CAF Calviac 63.51 308 eP P 20 44 55.3 -0.6
CAF pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
CAF Calviac 63.51 308 eP P 20 44 55.3 -0.6
comp=Z,5.3nm,0.9s,mb4.6
LDF La Druitiere 63.68 312 eP P 20 44 55.9 -1.0
comp=Z,14nm,0.9s,mb4.7
LDF La Druitiere 63.68 312 eP P 20 44 55.9 -1.0
LDF pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
LDF La Druitiere 63.68 312 eP P 20 44 55.9 -1.0
comp=Z,6.8nm,0.9s,mb4.7
RJF Les Rejaudoux 63.74 309 eP P 20 44 57.1 -0.3
comp=Z,35nm,1.3s,mb4.9
RJF eMLR MLR
comp=Z,68nm,20.0s,MS3.5
RJF Les Rejaudoux 63.74 309 eP P 20 44 57.1 -0.3
RJF pmax pmax
comp=Z,18nm,1.3s,mb4.9
RJF MLR MLR
comp=Z,70nm,20.0s,MS3.8
RJF Les Rejaudoux 63.74 309 eP P 20 44 57.1 -0.3
comp=Z,18nm,1.3s,mb4.9
RJF LR LR
comp=Z,70nm,20.0s,MS3.8
FLN La Foliniere 63.85 313 eP P 20 44 57.1 -0.9
FLN eMLR MLR
comp=Z,77nm,22.5s,MS3.5
FLN La Foliniere 63.85 313 eP P 20 44 57.1 -0.9
FLN LR LR
comp=Z,80nm,22.5s,MS3.9
MTLF Montolieu 63.96 306 eP P 20 44 58.1 -0.8
GRR Gorron 64.21 312 eP P 20 44 59.4 -1.0
comp=Z,8.7nm,0.6s,mb4.7
GRR Gorron 64.21 312 eP P 20 44 59.4 -1.0
GRR pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
GRR Gorron 64.21 312 eP P 20 44 59.4 -1.0
comp=Z,4.3nm,0.6s,mb4.7
MFF Saint Martin d 64.38 310 eP P 20 45 00.5 -1.1
LFF La Frestale 64.39 308 eP P 20 45 01.2 -0.5
comp=Z,7.0nm,0.6s,mb4.5
LFF La Frestale 64.39 308 eP P 20 45 01.2 -0.5
LFF pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
LFF La Frestale 64.39 308 eP P 20 45 01.2 -0.5
comp=Z,3.5nm,0.6s,mb4.6
ETOS Mallorca 64.84 302 P **P 20 45 05.5 +0.8**
comp=Z,41nm,1.2s,mb5.3
EMIR Miracle 64.95 305 P **P 20 45 05.4 0.0**
comp=Z,6.7nm,0.8s,mb4.7
CSOR Sort 65.05 306 P **P 20 45 05.7 -0.3**
comp=Z,2.4nm,0.7s,mb4.3

SGMF Saint Gilles 65.32 313 eP P 20 45 06.3 -1.4
EPOB Poblet 65.47 305 P **P 20 45 08.0 -0.7**
comp=Z,2.4nm,0.6s,mb4.4
EBIE Bielsa 65.61 306 P **P 20 45 09.7 +0.1**
comp=Z,1.1nm,0.5s,mb4.1
ROSF Rostrenen 65.73 313 eP P 20 45 09.6 -0.7
comp=Z,23nm,0.8s,mb4.9
ROSF Rostrenen 65.73 313 eP P 20 45 09.6 -0.7
ROSF pmax pmax
comp=Z,12nm,0.8s,mb5.0
ROSF Rostrenen 65.73 313 eP P 20 45 09.6 -0.7
comp=Z,12nm,0.8s,mb5.0
QUIF Quistinic 65.82 313 eP P 20 45 09.8 -1.1
ETSF Etsaut 66.01 307 eP P 20 45 11.7 -0.5
comp=Z,6.9nm,0.7s,mb4.5
ETSF Etsaut 66.01 307 eP P 20 45 11.7 -0.5
ETSF pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
ETSF Etsaut 66.01 307 eP P 20 45 11.7 -0.5
comp=Z,3.5nm,0.7s,mb4.5
ERTA Horta de San J 66.14 304 P **P 20 45 12.7 -0.5**
comp=Z,4.3nm,0.8s,mb4.5
SJPF Ste Jean 66.38 307 eP P 20 45 13.3 -1.3
EMOS Mosqueruela 66.94 304 P **P 20 45 18.2 0.0**
comp=Z,5.3nm,0.9s,mb4.6
ECHE Chera 67.60 303 P **P 20 45 23.5 +1.1**
ECHE pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
ECHE Chera 67.60 303 P **P 20 45 23.5 +1.1**
comp=Z,3.2nm,0.6s,mb4.5
ELAN Lanestosa 67.82 308 P **P 20 45 23.1 -0.7**
comp=Z,6.2nm,0.8s,mb4.7
ETOB Tobarra 68.39 303 P **P 20 45 27.7 +0.2**
comp=Z,4.6nm,0.6s,mb4.7
EARI Arriondas 68.97 309 P **P 20 45 31.1 +0.2**
comp=Z,4.0nm,0.7s,mb4.5
EVIA Vianos 69.08 303 P **P 20 45 31.7 0.0**
EVIA pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
EVIA Vianos 69.08 303 P **P 20 45 31.6 0.0**
comp=Z,7.1nm,0.6s,mb4.8
GUD Guadarrama 69.38 306 P **P 20 45 33.3 -0.2**
GUD pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
GUD Guadarrama 69.38 306 P **P 20 45 33.3 -0.2**
comp=Z,4.6nm,0.6s,mb4.6
EHUE Huescar 69.49 302 P **P 20 45 34.5 +0.2**
EHUE pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
EHUE Huescar 69.49 302 P **P 20 45 34.5 +0.2**
comp=Z,1.8nm,0.7s,mb4.1
ESDC Sonseca Array 69.66 305 P **P 20 45 34.8 -0.6**
comp=Z,3.5nm,0.9s,mb4.3,baz=61,slow=6.2,SNR=12
ESDC Sonseca Array 69.66 305 P **P 20 45 35.0 -0.3**
comp=Z,1.8nm,0.6s,mb4.2
EQES Quesada 69.84 302 P **P 20 45 36.1 -0.3**
comp=Z,6.0nm,0.8s,mb4.6
WRAB Tennant Creek 70.06 131 eP P 20 45 40.0 +2.1
EBER Berja 70.10 302 P **P 20 45 37.9 -0.1**
comp=Z,4.3nm,0.7s,mb4.5
EADA Adamuz 70.75 303 P **P 20 45 41.6 -0.4**
comp=Z,2.9nm,0.8s,mb4.3
EPLA Plasencia 70.96 306 P **P 20 45 43.6 +0.4**
EPLA pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
EPLA Plasencia 70.96 306 P **P 20 45 43.6 +0.4**
comp=Z,8.3nm,0.9s,mb4.7
MVO Moncorvo 71.11 307 P **P 20 45 43.6 -0.5**
EBAD Badajoz 72.19 305 P **P 20 45 50.4 -0.3**
comp=Z,5.5nm,0.8s,mb4.5
EMIN Mina Concepcio 72.41 304 P **P 20 45 51.8 -0.2**
comp=Z,3.5nm,0.8s,mb4.3
ASAR Alice Springs 72.52 134 P **P 20 45 52.8 +0.1**
comp=Z,1.8nm,0.7s,mb4.1,baz=317,slow=5.8,SNR=18
ASAR Alice Springs 72.52 134 P **P 20 45 52.8 +0.1**
ASAR pmax pmax
comp=Z,2.0nm,0.7s
COLA College 74.72 21 eP P 20 46 05.5 +0.4
ILAR Eielson Array 75.08 20 P **P 20 46 06.7 -0.5**
comp=Z,1.5nm,0.8s,mb4.0,baz=305,slow=4.6,SNR=17
ILAR Eielson Array 75.08 20 P **P 20 46 06.7 -0.5**
ILAR pmax pmax
comp=Z,2.0nm,0.8s
TORD Torodi Ar. Bea 77.68 278 P **P 20 46 22.2 -0.6**
comp=Z,1.9nm,0.5s,mb4.3,baz=48,slow=4.4,SNR=13
BOSA Boshof 83.14 230 P **P 20 46 50.5 -1.3**
comp=Z,2.2nm,0.8s,mb4.2,baz=121,slow=5.9,SNR=3.2
BOSA Boshof 83.14 230 P **P 20 46 50.5 -1.2**
BOSA pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
YKA Yellowknife Ar 84.20 9 P **P 20 46 55.8 -0.9**
comp=Z,1.0nm,0.8s,mb4.0,baz=345,slow=4.9,SNR=3.7
YKA Yellowknife Ar 84.20 9 P **P 20 46 55.8 -1.0**
YKA pmax pmax
comp=Z,1.0nm,0.8s
LPAZ La Paz 151.06 297 PKP PKPdf 20 54 14.1 +0.5
comp=Z,2.0nm,0.9s,baz=242,slow=3.1,SNR=3.7
LPAZ PKPbc PKPbc 20 54 17.6 -1.7
comp=Z,2.0nm,0.8s,baz=31,slow=3.6,SNR=7.7

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*ISK **28** 20:49:18.5, 38°.63N×39°.68E, h5km, MD3.3*
*ISCJB **28** 20:49:19.9±0.3, 38°.61N±0°.02×39°.68E±0°.03, h10km, Error ellipse: s-maj=3.4km s-min=2.8km az=1.5*
*CSEM **28** 20:49:19.7±0.3, 38°.63N×39°.67E, h5km, MD3.3, Error ellipse: s-maj=6.0km s-min=5.4km az=160.0*
*DDA **28** 20:49:19.0, 38°.61N×39°.69E, h16km±2km, Md3.0*
ISC 28 20:49:20.1±0.5, 38°.61N±0°.02×39°.69E±0°.03, h5km±4km, n34, σ1°12/53, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTK	**Pertek**	**0.37**	**321**	PG	**Pg**	**20 49 26.7**	**-0.5**
PTK				*e*SG	**Sg**	**20 49 32.4**	**+0.3**
PTK	**Pertek**	**0.37**	**321**	*i* Pg	**Pg**	**20 49 26.7**	**-0.6**
PTK				*e*Sg	**Sg**	**20 49 32.4**	**+0.3**
SVRC	**Sivrice-ELAZID**	**0.38**	**233**	*e*PG	**Pg**	**20 49 27.1**	**-0.3**
SVRC				*e*SG	**Sg**	**20 49 33.8**	**+1.4**
SVRC	**Sivrice-ELAZID**	**0.38**	**233**	*e*Pg	**Pg**	**20 49 27.1**	**-0.3**
SVRC				*e*Sg	**Sg**	**20 49 33.8**	**+1.4**
ELZG	**Elazig**	**0.57**	**259**	*i* P	**Pg**	**20 49 30.0**	**-1.0**
ELZG				*i* S	**Sg**	**20 49 40.1**	**+1.8**
ELZG	**Elazig**	**0.57**	**259**	*i* P	**Pg**	**20 49 30.0**	**-1.0**
ELZG				*i* S	**Sg**	**20 49 40.2**	**+1.8**
BINT	**Bingol**	**0.68**	**66**	*e*PG	**Pg**	**20 49 32.2**	**-1.0**
BINT				*e*SG	**Sg**	**20 49 43.6**	**+1.7**
BINT	**Bingol**	**0.68**	**66**	*e*Pg	**Pg**	**20 49 32.2**	**-1.0**
BINT				*e*Sg	**Sg**	**20 49 43.7**	**+1.7**
DIYA	**Diyarbakir**	**0.76**	**154**	*i* P	**Pg**	**20 49 34.5**	**-0.2**
DIYA				*i* S	**Sg**	**20 49 44.4**	**-0.2**
DIYA	**Diyarbakir**	**0.76**	**154**	*i* P	**Pg**	**20 49 34.5**	**-0.2**
DIYA				*i* S	**Sg**	**20 49 44.4**	**-0.2**
MYA	**Malataya**	**1.03**	**255**	*e*PG	**Pg**	**20 49 38.5**	**-1.4**
MYA	**Malataya**	**1.03**	**255**	*e*Pg	**Pg**	**20 49 38.5**	**-1.5**
KEMA	**Kemaliye**	**1.15**	**306**	*i* P	**Pg**	**20 49 40.0**	**-2.1**
KEMA				*i* S	**Sg**	**20 49 56.2**	**-0.8**
KEMA	**Kemaliye**	**1.15**	**306**	*i* P	**Pg**	**20 49 40.0**	**-2.1**
KEMA				*i* S	**Sg**	**20 49 56.2**	**-0.8**
EZC	**Erzincan**	**1.17**	**347**	*e*PN	**Pn**	**20 49 41.1**	**-2.2**
BNGL	**BINGOL**	**1.19**	**73**	*i* P	**Pg**	**20 49 41.8**	**-1.1**
BNGL				*i* S	**Sg**	**20 49 60.0**	**+1.6**
URFA	**Urfa**	**1.35**	**211**	*e*PN	**Pn**	**20 49 45.2**	**-0.5**
URFA	**Urfa**	**1.35**	**211**	*e*Pn	**Pn**	**20 49 45.2**	**-0.5**
BEST	**Besiri**	**1.43**	**119**	*i* P	**Pn**	**20 49 45.5**	**-1.2**
BEST				*i* S	**Sb**	**20 50 06.1**	**+0.2**
DARE	**Darende-Malaty**	**1.52**	**284**	*e*PN	**Pn**	**20 49 50.7**	**+2.7**
MARD	**Mardin**	**1.55**	**146**	*i* P	**Pn**	**20 49 47.4**	**-1.1**
MARD				*i* S	**Sn**	**20 50 08.2**	**-0.8**
KELT	**Kelkit**	**1.58**	**348**	*i* P	**Pn**	**20 49 48.8**	**0.0**
KELT				*i* S	**Sn**	**20 50 10.9**	**+1.3**
KELT	**Kelkit**	**1.58**	**348**	*i* P	**Pn**	**20 49 48.8**	**0.0**
KELT				*i* S	**Sn**	**20 50 10.9**	**+1.3**
EZM	**Erzurum**	**1.83**	**44**	*e*PN	**Pn**	**20 49 52.2**	**-0.1**
GUMT	**Gumushane**	**1.86**	**355**	*e*PN	**Pn**	**20 49 52.6**	**0.0**
GZT	**Gaziantep**	**2.10**	**234**	*i* P	**Pn**	**20 49 55.6**	**-0.3**
GZT				*i* S	**Sg**	**20 50 30.2**	**+2.8**
ESPY	**Espiye-Giresun**	**2.42**	**342**	*e*PN	**Pn**	**20 50 00.3**	**-0.1**
GAZ	**Gaziantep**	**2.43**	**235**	*e*PN	**Pn**	**20 50 01.1**	**+0.5**
GAZ	**Gaziantep**	**2.43**	**235**	*e*Pn	**Pn**	**20 50 01.1**	**+0.6**
KMRS	**Kahramanmaras**	**2.46**	**244**	*e*PN	**Pn**	**20 50 01.7**	**+0.7**
KMRS	**Kahramanmaras**	**2.46**	**244**	*e*Pn	**Pn**	**20 50 01.7**	**+0.7**
SVSK	**Karacayir**	**2.47**	**303**	*e*PN	**Pn**	**20 50 01.2**	**+0.1**
TUTA	**Tutak**	**2.56**	**71**	*i* P	**Pn**	**20 50 03.7**	**+1.5**
TUTA				*i* S	**Sg**	**20 50 42.8**	**+0.5**

TUTA	Tutak	2.56	71	*i* P		Pn	20 50 03.7	+1.4

*IDC **28** 21:02:26.5±1.1, 12°.50N×120°.48E, h0km, mb4.0/11, mb1 4.0/11, mb1mx3.8/23, mbtmp4.0/11, MS3.0/1, Ms1 3.0/1, ms1mx2.5/39, Error ellipse: s-maj=30.3km s-min=14.4km az=104.0*
*ISCJB **28** 21:02:29.5±0.9, 12°.54N±0°.04×120°.36E±0°.04, h28km±8km, mb4.1/18, Error ellipse: s-maj=6.9km s-min=6.8km az=40.0*
*MAN **28** 21:02:29, 12°.50N×120°.38E, h18km, mb4.9, ML3.8, MS3.9*
*NEIC **28** 21:02:32.1±0.7, 12°.53N×120°.50E, h38km±6km, mb4.4/8, Error ellipse: s-maj=6.0km s-min=5.1km az=116.0*

ISC 28 21:02:30.3±1.2, 12°.50N±0°.04×120°.41E±0°.04, h22km±10km, n51, σ0s74/53, mb4.1/18, 1C-2D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUSP	**Coron**	**0.54**	**203**	*e*P	**Pb**	**21 02 40.2**	**-0.9**
BUSP				*e*S	**Sb**	**21 02 47.6**	**-0.8**
LUBP	**Lubang**	**1.24**	**352**	*e*P	**Pn**	**21 02 50.7**	**-1.7**
LUBP				*e*S	**Sn**	**21 03 03.3**	**-5.0**
OTRP	**Odiongan**	**1.58**	**95**	*e*P	**Pn**	**21 02 57.6**	**+0.6**
OTRP				*e*S	**Sn**	**21 03 17.6**	**+0.8**
ENPP	**El Nido**	**1.61**	**217**	*e*P	**Pn**	**21 02 57.2**	**-0.2**
TGY	**Tagaytay City**	**1.67**	**18**	Pg	**Pn**	**21 02 58.4**	**0.0**
	509nm,0.3s,baz=213,slow=3.4,SNR=45						
TGY				Lg		21 03 18.3	
	439nm,0.3s,baz=333,slow=20,SNR=6.5						
TGY	**Tagaytay City**	**1.67**	**18‖**	*e*P	**Pn**	**21 03 00.1**	**+1.8**
BOAC	**Boac**	**1.69**	**56**	*e*P	**Pn**	**21 02 58.8**	**+0.3**
CUYO	**Cuyo Island**	**1.75**	**160**	*e*P	**Pn**	**21 02 59.1**	**-0.2**
AUQP	**San Andres**	**2.35**	**69**	*e*P	**Pn**	**21 03 13.3**	**+5.6**
GQP	**Guinayangan**	**2.42**	**55‖**	*e*P	**Pn**	**21 03 15.9**	**+7.2**
GQP				*i* S	**Sn**	**21 03 45.5**	**+7.9**
POLP	**Polilio Island**	**2.66**	**34**	*e*P	**Pn**	**21 03 17.7**	**+5.7**
GUIM	**Jordan**	**2.83**	**131**	*e*P	**Pn**	**21 03 15.2**	**+0.8**
PPR	**Puerto Princes**	**3.17**	**212**	*i* P	**Pn**	**21 03 19.2**	**+0.2**
BALP	**Baler**	**3.41**	**19**	*e*P	**Pn**	**21 03 23.6**	**+1.3**
TWG	**Pinlang**	**10.28**	**3**	*e*Pn	**Pn**	**21 04 56.6**	**-0.1**
QIZ	**Qiongzhong**	**12.06**	**304**	*e*Pn	**Pn**	**21 05 22.2**	**+1.1**
KSM	**Kuching**	**14.84**	**223**	*e*Pn	**Pn**	**21 06 00.0**	**+0.9**
KULM	**Kulim**	**20.79**	**252**	*e*P	**P**	**21 07 11.4**	**+1.1**
	2.8nm,0.8s						
CM31	**Chiang Mai Arr**	**21.51**	**289**	*e*P	**P**	**21 07 18.6**	**+0.6**
CMAR	**Chiang Mai Arr**	**21.51**	**289**	P	**P**	**21 07 19.7**	**+1.6**
	1.7nm,0.9s,mb3.5,baz=101,slow=9.4,SNR=7.4						
CHTO	**Chiang Mai**	**21.59**	**290**	P	**P**	**21 07 19.3**	**+0.4**
GUMO	**Guam**	**23.85**	**85**	P	**P**	**21 07 42.0**	**-0.4**
KSRS	**Korea Array**	**25.74**	**14**	LR	LR	21 17 24.4	
	comp=Z,39nm,22.0s,baz=195,slow=35						
BJT	**Baijiatuau**	**27.66**	**353**	*e*P	**P**	**21 08 16.1**	**-0.5**
	4.3nm,0.3s,mb4.6						
MDJ	**Mudanjiang**	**32.96**	**12**	P	**P**	**21 09 02.6**	**-0.7**
WRAB	**Tennant Creek**	**35.03**	**157**	*e*P	**P**	**21 09 21.4**	**-0.2**
	2.9nm,0.7s,mb4.3						
HIA	**Hailar**	**36.66**	**359**	P	**P**	**21 09 34.8**	**-0.5**
ULN	**Ulaanbaatar**	**36.98**	**345**	*e*P	**P**	**21 09 37.1**	**-0.9**
	1.4nm,0.5s,mb4.0						
SONM	**Songino Array**	**37.12**	**344**	P	**P**	**21 09 39.1**	**-0.2**
	3.5nm,0.6s,mb4.4,baz=164,slow=10,SNR=35						
ASAR	**Alice Springs**	**38.29**	**160**	P	**P**	**21 09 49.2**	**-0.2**
	0.5nm,0.7s,mb3.3,baz=338,slow=5.4,SNR=5.8						
YSS	**Yuzh-Sakhalins**	**39.15**	**24**	*e*P	**P**	**21 09 55.2**	**-1.2**
	7.0nm,0.6s,mb4.6						
TLY	**Talaya**	**41.37**	**344**	*e*P	**P**	**21 10 14.3**	**-0.4**
MKAR	**Makanchi Array**	**46.83**	**324**	P	**P**	**21 10 58.8**	**+0.2**
	0.7nm,0.7s,mb3.7,baz=134,slow=6.9,SNR=9.3						
MKAR				PcP	PcP	21 12 31.3	-0.1
	0.3nm,0.6s,baz=149,slow=3.0,SNR=2.8						
MKAR	**Makanchi Array**	**46.83**	**324**	P	**P**	**21 10 58.8**	**+0.2**
MKAR				PcP	PcP	21 12 31.3	-0.1
UCH	**Uchtor**	**49.55**	**315**	*e*P	**P**	**21 11 19.7**	**0.0**
ZALV	**Zalesovo Beam**	**49.99**	**333**	P	**P**	**21 11 22.4**	**-0.4**
	2.4nm,0.4s,mb4.6,baz=119,slow=6.6,SNR=14						
AML	**Almayashu**	**50.08**	**315**	*e*P	**P**	**21 11 24.6**	**+0.9**
KURK	**Kurchatov**	**51.03**	**327**	*e*P	**P**	**21 11 31.6**	**+0.9**
	5.0nm,0.8s,mb4.5						
KBL	**Kabul**	**51.34**	**304**	*e*P	**P**	**21 11 33.7**	**+0.4**
BVAR	**Borovoye Array**	**56.60**	**326**	P	**P**	**21 12 10.9**	**-0.6**
	0.8nm,0.4s,mb4.1,baz=125,slow=8.1,SNR=8.4						
BRVK	**Borovoye**	**56.68**	**326**	*e*P	**P**	**21 12 12.1**	**+0.1**
	1.7nm,0.6s,mb4.2						
ABKAR	**Akbulak array**	**61.45**	**320**	*e*P	**P**	**21 12 45.3**	**+0.1**
	2.7nm,0.8s,mb4.4						
AKTK	**Aktyubinsk**	**62.95**	**320**	P	**P**	**21 12 55.0**	**-0.2**
AKTO	**Aktyubinsk**	**62.95**	**320**	P	**P**	**21 12 55.0**	**-0.2**
	0.8nm,0.5s,mb4.1,baz=105,slow=12,SNR=3.7						
ARCES	**ARCESS Array B**	**80.10**	**339**	P	**P**	**21 14 38.0**	**-0.2**
	1.8nm,0.9s,mb4.0,baz=86,slow=7.4,SNR=6.6						
ARCES	**ARCESS Array B**	**80.10**	**339**	P	**P**	**21 14 38.0**	**-0.2**
FINES	**FINESS Array B**	**81.19**	**331**	P	**P**	**21 14 44.1**	**-0.1**
	0.6nm,0.5s,mb3.8,baz=71,slow=5.3,SNR=13						
HFS	**Hagfors**	**87.39**	**331**	P	**P**	**21 15 14.8**	**-0.9**
	0.5nm,0.5s,mb4.0,baz=142,slow=5.1,SNR=4.6						
NB2	**NORSAR Subarra**	**88.19**	**333**	P	**P**	**21 15 18.2**	**-1.3**
	comp=Z,1.0nm,0.8s,mb4.1,baz=68,slow=5.1						
NOA	**NORSAR Array B**	**88.19**	**333**	P	**P**	**21 15 18.1**	**-1.4**
	comp=Z,0.9nm,0.8s,mb4.0,baz=66,slow=4.9,SNR=3.6						
FCC	**Fort Churchill**	**103.64**	**18**	Pdif	Pdif	21 16 29.9	-0.1

*ISCJB **28** 21:03:34.0±0.5, 12°.25N±0°.04×88°.10W±0°.04, h55km±4km, mb4.2/21, MS3.1/3, Error ellipse: s-maj=8.6km s-min=3.7km az=43.8*
*CASC **28** 21:03:33.6±2.0, 12°.18N×88°.19W, h55km±100km, MD4.1, ML3.4, mb4.4(NEIC)*
*IDC **28** 21:03:34.9±2.7, 12°.34N×87°.96W, h43km±24km, mb4.0/7, mb1 4.2/9, mb1mx3.9/21, mbtmp4.0/9, ML3.5/2, MS3.2/4, Ms1 3.3/4, ms1mx3.0/28, Error ellipse: s-maj=31.2km s-min=22.9km az=50.0*
*NEIC **28** 21:03:35.2±0.8, 12°.33N×87°.95W, h48km±8km, mb4.4/15, Error ellipse: s-maj=10.7km s-min=6.1km az=68.0*

ISC 28 21:03:35.2±0.4, 12°.30N±0°.04×88°.07W±0°.04, h45km±4km, n78, σ0s97/81, mb4.2/21, MS3.1/3, 1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.99**	**13**	*e*P	**Pn**	**21 03 54.3**	**+1.5**
CNCH				*e*S	**Sn**	**21 04 08.8**	**+3.2**
CRIN	**San Cristobal**	**1.07**	**68**	*e*P	**Pn**	**21 03 54.7**	**+0.9**
VSM	**San Miguel**	**1.14**	**350**	*e*P	**Pn**	**21 03 55.9**	**+1.1**
BLLM	**Bellamira**	**1.14**	**352**	*e*P	**Pn**	**21 03 55.8**	**+0.9**
LEON	**Leon**	**1.15**	**84**	*e*P	**Pn**	**21 03 54.2**	**-0.7**
CNGN	**Cerro Negro**	**1.35**	**82**	*e*P	**Pn**	**21 03 57.3**	**-0.4**
CNGN				AML	AML	21 04 41.1	
	comp=E,494nm,0.8s						
COPN	**Copaltepe**	**1.45**	**95**	*e*P	**Pn**	**21 03 58.4**	**-0.6**
CAHU	**Cacacuatique**	**1.47**	**355**	*e*P	**Pn**	**21 04 00.9**	**+1.7**
MOMN	**Momotombo**	**1.50**	**86**	*i* P	**Pn**	**21 03 59.7**	**+0.1**
SNVI	**San Vicente**	**1.50**	**330**	*e*P	**Pn**	**21 03 59.9**	**+0.1**
CSAN		**1.61**	**94**	*e*P	**Pn**	**21 04 00.7**	**-0.5**
LFRS	**El Faro**	**1.63**	**324**	*e*P	**Pn**	**21 03 59.9**	**-1.7**
XAVN	**Gruta Xavier**	**1.71**	**95**	*e*P	**Pn**	**21 04 01.9**	**-0.7**
TISN	**Laguna Tiscapa**	**1.77**	**95**	*e*P	**Pn**	**21 04 03.1**	**-0.2**
MGAN	**Managua**	**1.79**	**95**	*e*P	**Pn**	**21 04 02.9**	**-0.7**
TICN	**Ticuantepe**	**1.81**	**98**	*e*P	**Pn**	**21 04 03.7**	**-0.3**
BOQS	**Boqueron**	**1.85**	**320**	*e*P	**Pn**	**21 04 03.6**	**-0.9**
TGUH	**Tegucigalpa,Un**	**1.91**	**24**	*e*Pn	**Pn**	**21 04 04.3**	**-1.0**
TGUH				*e*S	**Sn**	**21 04 28.5**	**+0.4**
SBLS	**San Blas**	**2.15**	**315**	*e*P	**Pn**	**21 04 07.4**	**-1.2**
SBLS				*e*S	**Sn**	**21 04 34.6**	**+0.5**
SNJE	**San Jose**	**2.16**	**316**	*e*P	**Pn**	**21 04 07.3**	**-1.5**
SNJE				*e*S	**Sn**	**21 04 34.9**	**+0.6**
RBDL	**Robledal**	**2.39**	**319**	*e*P	**Pn**	**21 04 11.3**	**-0.6**
MTO2	**Montecristo 2**	**2.44**	**329**	*e*P	**Pn**	**21 04 13.2**	**+0.7**
VCR	**Vista de Mar**	**3.22**	**132**	*e*P	**Pn**	**21 04 33.9**	**+11**
JTS	**JuntasAbangare**	**3.65**	**123**	P	**Pn**	**21 04 28.0**	**-1.3**
	comp=E,2.5nm,0.3s,baz=337,slow=17,SNR=6.5						
JTS				LR	LR	21 06 03.7	
	comp=E,261nm,21.8s,baz=207,slow=42						
JTS	**JuntasAbangare**	**3.65**	**123**	*e*Pn	**Pn**	**21 04 28.3**	**-1.0**
JTS				*e*Sn	**Sn**	**21 05 05.8**	**-5.3**
JTS				LR	LR	21 06 03.7	
PRS1	**Puriscal**	**4.35**	**122**	*e*P	**Pn**	**21 04 39.5**	**+0.7**
PRS1				*e*S	**Sn**	**21 05 30.7**	**+2.4**
LAJ	**Bijagual**	**4.57**	**122**	*e*P	**Pn**	**21 04 37.4**	**-4.5**
QCR	**Quepos**	**4.78**	**126**	*e*P	**Pn**	**21 04 43.4**	**-1.4**
URSC	**Urasca**	**4.87**	**120‖**	*e*P	**Pn**	**21 04 47.1**	**+1.0**
URSC				*e*S	**Sn**	**21 05 43.7**	**+2.5**
BAR1		**5.58**	**123**	*e*P	**Pn**	**21 04 54.7**	**-1.0**
BAR1				*e*S	**Sn**	**21 05 46.5**	**-12**
TEIG	**Tepich**	**7.88**	**359**	*e*Pn	**Pn**	**21 05 27.5**	**+0.2**
	comp=E,13nm,0.8s						
TEIG				*e*Sn	**Sn**	**21 06 53.8**	**-1.4**
CMIG	**Matias Romero**	**8.13**	**307**	P	**Pn**	**21 05 30.3**	**-0.5**
	comp=E,1.0nm,0.3s,baz=101,slow=12,SNR=8.8						
CMIG	**Matias Romero**	**8.13**	**307**	P	**Pn**	**21 05 30.3**	**-0.5**
PAYG	**Puerto Ayora**	**13.08**	**190**	*e*Pn	**Pn**	**21 06 39.0**	**+0.5**
OTAV	**Otavalo**	**15.32**	**141**	*e*Pn	**Pn**	**21 07 08.3**	**-0.3**
LRAL	**Lakeview Retre**	**20.66**	**3**	*e*P	**P**	**21 08 12.0**	**+0.8**
	comp=E,28nm,1.1s						
JCT	**Junction City**	**21.10**	**331**	*e*P	**P**	**21 08 16.1**	**+0.1**
	comp=E,13nm,0.7s,mb4.4						
JCT				*e*S	**S**	**21 12 08.7**	**+0.3**
ATAH	**Atahualpa**	**21.57**	**153**	LR	LR	21 15 44.1	
	comp=E,94nm,20.9s,MS3.2,baz=190,slow=34						
TXAR	**Lajitas Array**	**22.31**	**322**	P	**P**	**21 08 29.5**	**+0.5**
	comp=E,5.2nm,0.7s,mb4.1,baz=143,slow=11,SNR=65						
TXAR				PcP	PcP	21 12 25.9	+2.3
	comp=E,0.8nm,1.1s,baz=134,slow=5.4,SNR=3.5						
MIAR	**Mount Ida**	**22.70**	**348**	*e*P	**P**	**21 08 33.9**	**+0.9**
	comp=E,36nm,0.8s,mb4.8						
UALR	**University of**	**22.71**	**351**	*e*P	**P**	**21 08 33.6**	**+0.5**
	comp=E,17nm,0.8s,mb4.5						
TKL	**Tuckaleechee C**	**23.57**	**9**	P	**P**	**21 08 42.1**	**+0.3**
	comp=E,12nm,0.8s,mb4.4,baz=185,slow=13,SNR=8.9						
TKL				LR	LR	21 18 55.0	
	comp=E,59nm,19.5s,MS3.1,baz=75,slow=39						
WMOK	**Wichita Mounta**	**24.36**	**338**	*e*P	**P**	**21 08 49.0**	**-0.1**
	comp=E,15nm,1.1s,mb4.3						
MNTX	**Cornudas Mount**	**25.04**	**323**	*e*P	**P**	**21 08 54.7**	**-0.5**
	comp=E,4.7nm,1.0s,mb4.0						
CCM	**Cathedral Cave**	**25.80**	**354**	*e*P	**P**	**21 09 01.1**	**-1.0**
	comp=E,8.4nm,0.6s,mb4.5						
BNM	**Barren Site**	**27.54**	**325**	*e*P	**P**	**21 09 18.6**	**+0.8**
	comp=E,6.5nm,1.3s,mb4.1						
BBGH	**Gun Hill**	**27.82**	**85**	*e*P	**P**	**21 09 17.5**	**-3.0**
	comp=E,291nm,0.9s						
ANMO	**Albuquerque**	**28.05**	**327**	*e*P	**P**	**21 09 22.7**	**+0.4**
	comp=E,2.2nm,1.1s,mb3.7						
SDCO	**Great Sand Dun**	**29.75**	**331**	*e*P	**P**	**21 09 37.9**	**+0.5**
	comp=E,2.6nm,0.9s,mb4.0						
PV01	**Paradox Valley**	**31.56**	**328**	P	**P**	**21 09 53.9**	**+0.5**
ECSD	**EROS Data Cent**	**32.17**	**348**	*e*P	**P**	**21 09 57.5**	**-1.2**
	comp=E,8.3nm,1.1s,mb4.5						
ECSD				*e*PP	PP	21 11 10.2	-1.8
SADO	**Sadowa**	**33.24**	**12**	P	**P**	**21 10 08.0**	**-0.1**
	comp=E,7.8nm,0.7s,mb4.8,baz=218,slow=9.0,SNR=6.7						
SADO	**Sadowa**	**33.24**	**12**	P	**P**	**21 10 08.0**	**-0.1**
RSSD	**Black Hills**	**34.55**	**340**	*e*P	**P**	**21 10 20.3**	**+0.8**
LPAZ	**La Paz**	**34.58**	**145**	LR	LR	21 23 57.0	
	comp=E,52nm,21.7s,MS3.2,baz=279,slow=35						
LPAZ	**La Paz**	**34.58**	**145**	P	**P**	**21 10 20.6**	**+0.7**
AGMN	**Agassiz Nation**	**36.47**	**351**	*e*P	**P**	**21 10 35.2**	**-0.6**
	comp=E,19nm,0.9s,mb5.0						
NVAR	**Mina Array Bea**	**37.42**	**319**	P	**P**	**21 10 46.0**	**+2.0**
	comp=E,0.8nm,0.8s,mb3.6,baz=116,slow=8.1,SNR=3.8						
NVAR				PcP	PcP	21 13 03.9	+1.8
	comp=E,0.9nm,0.6s,baz=136,slow=3.8,SNR=5.5						
CMB	**Columbia Colle**	**38.55**	**317**	P	**P**	**21 10 53.8**	**+0.3**
HLID	**Hailey**	**38.55**	**329**	*e*P	**P**	**21 10 53.4**	**-0.1**
MCMT	**McKenzie Canyo**	**38.72**	**332**	*e*P	**P**	**21 10 55.9**	**+0.9**
	comp=E,2.1nm,0.8s,mb3.9						
WALA	**Waterton Lakes**	**42.43**	**335**	*e*P	**P**	**21 11 25.9**	**+0.4**
	comp=E,0.1nm,0.9s						
WALA				*e*PcP	PcP	21 13 18.8	+0.9
RPN	**Rapa Nui**	**44.30**	**208**	P	**P**	**21 11 42.4**	**+1.6**
EDM	**Edmonton**	**45.53**	**339**	*e*P	**P**	**21 11 49.3**	**-1.0**
SCHQ	**Schefferville**	**45.59**	**17**	P	**P**	**21 11 49.9**	**-0.8**
	comp=E,7.4nm,0.7s,mb4.7,baz=220,slow=8.7,SNR=12						
SCHQ	**Schefferville**	**45.59**	**17**	*e*P	**P**	**21 11 49.8**	**-0.9**
	comp=E,5.7nm,0.5s,mb4.8						
FCC	**Fort Churchill**	**46.59**	**356**	*e*P	**P**	**21 11 57.8**	**-0.7**
	comp=E,0.2nm,0.6s,mb3.2						
YKA	**Yellowknife Ar**	**53.59**	**345**	P	**P**	**21 12 50.5**	**-1.0**
	comp=E,2.8nm,0.8s,mb4.3,baz=138,slow=7.7,SNR=16						
YKA				PcP	PcP	21 13 57.5	-0.1
	comp=E,1.4nm,0.7s,baz=144,slow=4.1,SNR=8.1						
YKA	**Yellowknife Ar**	**53.59**	**345**	P	**P**	**21 12 50.5**	**-1.1**
YKA				PcP	PcP	21 13 57.5	-0.1
EGAK	**Eagle**	**63.72**	**338**	P	**P**	**21 14 00.7**	**-1.2**
ILAR	**Eielson Array**	**65.91**	**336**	P	**P**	**21 14 15.2**	**-1.0**
	comp=E,0.9nm,1.0s,mb3.8,baz=133,slow=3.9,SNR=6.5						
ILAR	**Eielson Array**	**65.91**	**336**	P	**P**	**21 14 15.2**	**-1.0**
SUMG	**Summit**	**66.88**	**14**	*e*P	**P**	**21 14 22.7**	**+0.4**
	comp=E,12nm,1.2s,mb4.8						
WRA	**Warramunga Arr**	**138.65**	**254**	PKP	PKPdf	21 22 54.8	-2.3
	baz=87,slow=1.7						
ASAR	**Alice Springs**	**138.66**	**248**	PKP	PKPdf	21 22 57.5	+0.4
	comp=E,0.5nm,1.0s,baz=90,slow=2.5,SNR=3.0						
FITZ	**Fitzroy Crossi**	**147.00**	**256**	PKPbc	PKPbc	21 23 13.4	-0.5
	comp=E,2.0nm,1.0s,baz=139,slow=5.5,SNR=4.4						
FITZ	**Fitzroy Crossi**	**147.00**	**256**	*e*PKP	PKPbc	21 23 14.4	+0.5
CMAR	**Chiang Mai Arr**	**148.66**	**347**	PKPbc	PKPbc	21 23 15.7	-2.7
	comp=E,2.8nm,0.7s,baz=343,slow=3.4,SNR=14						

*ISCJB **28** 21:11:13.9±0.5, 38°.12N±0°.02×20°.07E±0°.02, h1km±3km, mb3.6/7, Error ellipse: s-maj=4.2km s-min=2.6km az=30.4*
*NEIC **28** 21:11:13.3, 37°.99N×20°.06E, h5km, ML3.8(ATH), After ATH.*
*ATH **28** 21:11:13.3, 37°.99N×20°.06E, h5km±1km, MD3.7/23, ML3.5*
*CSEM **28** 21:11:15.2±0.2, 38°.07N×20°.14E, h2km, ML4.3/14, Error ellipse: s-maj=4.8km s-min=2.5km az=33.0*
*THE **28** 21:11:16.4, 38°.06N×20°.26E, h3km±1km, ML4.3/14, Error ellipse: s-maj=1.8km s-min=1.0km az=29.0*
*BEO **28** 21:11:17.1±0.9, 38°.23N×20°.17E, h0km, ML4.3/3*
*PDG **28** 21:11:18.1±0.7, 38°.15N×20°.14E, h28km±4km, MD4.1/1, ML4.0/9, Error ellipse: s-maj=1.6km s-min=1.9km az=0.0*
*IDC **28** 21:11:20.2±4.9, 38°.60N×21°.11E, h0km, mb3.6/7, mb1 3.7/8, mb1mx3.5/26, mbtmp3.6/8, ML3.4/1, MS2.7/1, Ms1 2.7/1, ms1mx2.1/30, Error ellipse: s-maj=93.3km s-min=27.4km az=24.0*

ISC 28 21:11:15.3±0.6, 38°.11N±0°.02×20°.13E±0°.02, h2km±4km, n252, σ1s28/353, mb3.5/7, 26C-14D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.37**	**80**	*e*Pb	**Pg**	**21 11 21.9**	**-0.5**
VLS	**Valsamata**	**0.37**	**80**	*e*PB	**Pg**	**21 11 21.9**	**-0.5**
VLS	**Valsamata**	**0.37**	**80**	P	**Pg**	**21 11 21.8**	**-0.6**
VLS				S	**Sg**	**21 11 26.3**	**-0.9**
VLS	**Valsamata**	**0.37**	**80**	*e*Pb	**Pg**	**21 11 21.9**	**-0.5**
VLS				S	**Sg**	**21 11 26.3**	**-0.9**
KFL	**Anninata**	**0.52**	**90**	P	**Pg**	**21 11 24.4**	**-0.9**
KFL				S	**Sg**	**21 11 30.9**	**-1.2**
KFL	**Anninata**	**0.52**	**90**	P	**Pg**	**21 11 24.4**	**-0.9**
KFL				S	**Sg**	**21 11 30.9**	**-1.2**
LKD2	**Lefkada island**	**0.79**	**31**	P	**Pg**	**21 11 31.4**	**+0.8**
LKD2	**Lefkada island**	**0.79**	**31**	P	**Pg**	**21 11 31.4**	**+0.8**
RLS	**Riolos of Patr**	**1.06**	**93**	*e*Pb	**Pg**	**21 11 34.5**	**-1.1**
RLS				*e*Sb	**Sg**	**21 11 50.2**	**+0.9**
RLS	**Riolos of Patr**	**1.06**	**93**	*e*PB	**Pg**	**21 11 34.5**	**-1.1**
RLS				*e*SB	**Sg**	**21 11 50.2**	**+0.9**
RLS	**Riolos of Patr**	**1.06**	**93**	*e*Pb	**Pg**	**21 11 34.5**	**-1.1**
RLS				*e*Sb	**Sg**	**21 11 50.2**	**+0.9**
UPR	**University Cam**	**1.32**	**82**	*e*PB	**Pb**	**21 11 39.8**	**-1.0**
UPR	**University Cam**	**1.32**	**82**	P	**Pg**	**21 11 39.2**	**-1.4**
UPR	**University Cam**	**1.32**	**82**	P	**Pg**	**21 11 39.2**	**-1.4**
UPR	**University Cam**	**1.32**	**82**	*e*Pb	**Pb**	**21 11 39.8**	**-1.0**
EFP	**Efpalio**	**1.43**	**77**	*e*PG	**Pg**	**21 11 41.6**	**-1.2**
EFP				*e*SB	**Sb**	**21 12 02.8**	**+1.3**
EFP	**Efpalio**	**1.43**	**77**	P	**Pn**	**21 11 40.5**	**-1.9**
EFP				S	**Sb**	**21 12 00.5**	**-1.0**
EFP	**Efpalio**	**1.43**	**77**	P	**Pn**	**21 11 40.5**	**-1.9**
EFP	**Efpalio**	**1.43**	**77**	*e*Pg	**Pg**	**21 11 41.6**	**-1.2**
EFP				S	**Sb**	**21 12 00.5**	**-1.0**
EFP				*e*Sb	**Sb**	**21 12 02.8**	**+1.3**
LAKA	**Lakka**	**1.46**	**84**	P	**Pn**	**21 11 41.1**	**-1.7**
LAKA				S	**Sb**	**21 12 01.3**	**-1.1**
LAKA	**Lakka**	**1.46**	**84**	P	**Pn**	**21 11 41.1**	**-1.7**
LAKA				S	**Sb**	**21 12 01.3**	**-1.1**
EVR	**Evrytania**	**1.54**	**58**	*e*Pb	**Pb**	**21 11 45.3**	**+0.6**
EVR				*e*Sb	**Sb**	**21 12 06.8**	**+2.1**
EVR	**Evrytania**	**1.54**	**58**	*e*PB	**Pb**	**21 11 45.3**	**+0.6**
EVR				*e*SB	**Sb**	**21 12 06.8**	**+2.1**
EVR	**Evrytania**	**1.54**	**58**	*e*Pb	**Pb**	**21 11 45.3**	**+0.6**
EVR				*e*Sb	**Sb**	**21 12 06.8**	**+2.1**
TRIZ	**Trizonia**	**1.55**	**80**	P	**Pn**	**21 11 42.3**	**-1.7**
TRIZ	**Trizonia**	**1.55**	**80**	P	**Pn**	**21 11 42.3**	**-1.7**
KALE	**Kalithea**	**1.61**	**79**	P	**Pn**	**21 11 43.2**	**-1.6**
KALE	**Kalithea**	**1.61**	**79**	P	**Pn**	**21 11 43.2**	**-1.6**
KEK	**Kerkira**	**1.62**	**351**	*e*Pg	**Pg**	**21 11 45.3**	**-1.1**
KEK				*e*Sn	**Sn**	**21 12 09.8**	**+3.4**
KEK	**Kerkira**	**1.62**	**351**	*e*PG	**Pg**	**21 11 45.3**	**-1.1**
KEK				*e*SN	**Sn**	**21 12 09.8**	**+3.4**
KEK	**Kerkira**	**1.62**	**351**	P	**Pn**	**21 11 45.7**	**+0.8**
KEK	**Kerkira**	**1.62**	**351**	*e*Pg	**Pg**	**21 11 45.3**	**-1.1**
KEK	**Kerkira**	**1.62**	**351**	P	**Pn**	**21 11 45.7**	**+0.8**
KEK				*e*Sn	**Sn**	**21 12 09.8**	**+3.4**
JAN	**Janina**	**1.64**	**20**	*e*Pn	**Pn**	**21 11 47.3**	**+2.0**
JAN				*e*Sn	**Sn**	**21 12 11.1**	**+4.1**
JAN	**Janina**	**1.64**	**20**	*e*PN	**Pn**	**21 11 47.2**	**+1.9**
JAN				*e*SN	**Sn**	**21 12 11.1**	**+4.1**
JAN	**Janina**	**1.64**	**20**	*e*Pn	**Pn**	**21 11 47.3**	**+2.0**
JAN				*e*Sn	**Sn**	**21 12 11.1**	**+4.1**
ITM	**Ithomi**	**1.70**	**123**	*e*Pb	**Pb**	**21 11 45.1**	**-2.3**
ITM	**Ithomi**	**1.70**	**123**	*e*PB	**Pb**	**21 11 45.1**	**-2.3**
ITM	**Ithomi**	**1.70**	**123**	P	**Pn**	**21 11 45.4**	**-0.7**
ITM	**Ithomi**	**1.70**	**123**	*e*Pb	**Pb**	**21 11 45.1**	**-2.3**
ITM	**Ithomi**	**1.70**	**123**	P	**Pn**	**21 11 45.4**	**-0.7**
GUR	**Goura**	**1.76**	**95**	*e*PG	**Pg**	**21 11 47.0**	**-2.0**
GUR				*e*SN	**Sn**	**21 12 12.5**	**+2.7**
GUR	**Goura**	**1.76**	**95**	P	**Pn**	**21 11 45.7**	**-1.1**
GUR	**Goura**	**1.76**	**95**	P	**Pn**	**21 11 45.7**	**-1.1**
GUR	**Goura**	**1.76**	**95**	*e*Pg	**Pg**	**21 11 47.0**	**-2.0**
GUR				*e*Sn	**Sn**	**21 12 12.5**	**+2.7**
PYL	**PYLOS**	**1.77**	**133**	*e*PN	**Pn**	**21 11 46.0**	**-0.9**
PYL	**PYLOS**	**1.77**	**133**	P	**Pn**	**21 11 46.1**	**-0.8**
PYL	**PYLOS**	**1.77**	**133**	P	**Pn**	**21 11 46.1**	**-0.8**
SRN	**Sarande**	**1.77**	**357**	*e*PN	**Pn**	**21 11 47.3**	**+0.3**
SRN				*i* SN	**Sn**	**21 12 11.6**	**+1.5**
SRN	**Sarande**	**1.77**	**357**	*e*Pn	**Pn**	**21 11 47.3**	**+0.3**
SRN				*i* Sn	**Sn**	**21 12 11.6**	**+1.5**
DSF	**Desfina**	**1.91**	**80**	P	**Pn**	**21 11 48.1**	**-0.9**
DSF				S	**Sn**	**21 12 12.8**	**-0.8**
DSF	**Desfina**	**1.91**	**80**	P	**Pn**	**21 11 48.1**	**-0.9**
DSF				S	**Sn**	**21

OUR Ouranopolis 3.73 52 P Pn 21 12 14.8 +0.9
OUR Ouranopolis 3.73 52 P Pn 21 12 14.8 +0.9
SG1 Sgolgore (BA) 3.81 317 *e*Pn Pn 21 12 16.3 +1.2
SG1 *e*Sn Sn 21 13 00.8 +0.3
BAI Bari 3.90 321 *e*Pn Pn 21 12 17.3 +1.0
BAI *e*Sn Sn 21 13 01.9 -0.8
ULC Ulcinj 3.91 350⇓*i*Pn Pn 21 12 16.9 +0.5
ULC *e*Sn Sn 21 13 01.4 -1.4
ULC Ulcinj 3.91 350⇓*i*Pn Pn 21 12 16.9 +0.5
ULC *e*Sn Sn 21 13 01.4 -1.4
PUK Puka 3.93 357 *i* PN Pn 21 12 17.2 +0.5
PUK *i* SN Sn 21 13 03.9 +0.5
PUK Puka 3.93 357 *i* Pn Pn 21 12 17.2 +0.5
PUK *i* Sn Sn 21 13 03.9 +0.5
SRS Serrai 4.02 41 P Pn 21 12 18.5 +0.6
SRS Serrai 4.02 41 P Pn 21 12 18.5 +0.6
KARN Karanos 4.07 130 P Pn 21 12 18.1 -0.5
KARN Karanos 4.07 130 P Pn 21 12 18.1 -0.5
VAM Vamos 4.24 128 *e*Pn Pn 21 12 21.7 +0.7
VAM Vamos 4.24 128 *e*PN Pn 21 12 21.7 +0.7
VAM Vamos 4.24 128 *e*Pn Pn 21 12 21.7 +0.7
BCI Bajram Curri 4.25 359 *i* PN Pn 21 12 21.8 +0.7
BCI *i* SN Sn 21 13 12.9 +1.6
BCI Bajram Curri 4.25 359 *i* Pn Pn 21 12 21.8 +0.7
BCI *i* Sn Sn 21 13 12.9 +1.6
BUM Brajici-Budva 4.29 348⇑*i*Pn Pn 21 12 21.6 0.0
BUM *e*Sn Sn 21 13 10.7 -1.5
BUM Brajici-Budva 4.29 348⇑*i*Pn Pn 21 12 21.6 0.0
BUM *e*Sn Sn 21 13 10.7 -1.5
NVR Nevrokopi 4.33 41 *e*Pn Pn 21 12 24.4 +2.2
NVR Nevrokopi 4.33 41 *e*PN Pn 21 12 24.4 +2.2
NVR Nevrokopi 4.33 41 *e*Pn Pn 21 12 24.4 +2.2
PDG Podgorica 4.36 352⇑*i*Pn Pn 21 12 23.6 +0.9
PDG *e*Sn Sn 21 13 12.5 -1.6
TTG Podgorica 4.36 352⇑*i*Pn Pn 21 12 23.6 +0.9
TTG *e*Sn Sn 21 13 12.5 -1.6
TTG Podgorica 4.36 352⇑*i*Pn Pn 21 12 23.6 +0.9
TTG *e*Sn Sn 21 13 12.5 -1.6
PVY Plav 4.48 359⇑*i*Pn Pn 21 12 25.2 +1.0
PVY *e*Sn Sn 21 13 15.6 -1.3
PVY Plav 4.48 359⇑*i*Pn Pn 21 12 25.2 +1.0
PVY *e*Sn Sn 21 13 15.6 -1.3
HCY Herceg Novi 4.51 344⇑*i*Pn Pn 21 12 24.5 -0.1
HCY *e*Sn Sn 21 13 15.6 -2.0
HCY Herceg Novi 4.51 344⇑*i*Pn Pn 21 12 24.5 -0.1
HCY *e*Sn Sn 21 13 15.6 -2.0
VAE Valguarnera 4.57 264 LR LR 21 14 54.5
comp=Z,76nm,20.2s,baz=76,slow=39
BEY Berane 4.76 358⇑*i*Pn Pn 21 12 29.1 +1.0
BEY *e*Sn Sn 21 13 22.0 -1.8
IVA Berane 4.76 358⇑*i*Pn Pn 21 12 29.1 +1.0
IVA *e*Sn Sn 21 13 22.0 -1.8
IVA Berane 4.76 358⇑*i*Pn Pn 21 12 29.1 +1.0
IVA *e*Sn Sn 21 13 22.0 -1.8
NKY Niksic 4.77 350⇓*i*Pn Pn 21 12 28.5 +0.2
NKY *e*Sn Sn 21 13 22.2 -2.0
NKY Niksic 4.77 350⇓*i*Pn Pn 21 12 28.5 +0.2
NKY *e*Sn Sn 21 13 22.2 -2.0
MS1 Monte Sant'Ang 4.82 319 *e*Pn Pn 21 12 29.5 +0.6
MS1 *e*Sn Sn 21 13 22.7 -2.6
BARS Barje 4.87 15 *e*Pn Pn 21 12 29.5 -0.1
BARS *e*Sn Sn 21 13 23.2 -3.4
BRY Bratogost 4.93 346 *e*Pn Pn 21 12 30.5 0.0
BRY *e*Sn Sn 21 13 25.7 -2.4
BRY Bratogost 4.93 346 *e*Pn Pn 21 12 30.5 0.0
BRY *e*Sn Sn 21 13 25.7 -2.4
WDD Wield Dalam 5.01 245 *e*Pn Pn 21 12 32.0 +0.4
WDD *e*Sn Sn 21 13 29.4 -0.8
WDD Wield Dalam 5.01 245 *e*Pn Pn 21 12 32.0 +0.4
WDD *e*Sn Sn 21 13 29.4 -0.7
VTS Vitosha 5.05 27 *e*Pn Pn 21 12 31.9 -0.3
VTS Vitosha 5.05 27 ⇑P Pn 21 12 37.6 +5.5
VTS Vitosha 5.05 27⇑*i*P Pn 21 12 37.7 +5.5
VTS Vitosha 5.05 27 *e*Pn Pn 21 12 31.9 -0.3
STON Ston 5.10 339 *i* Pn Pn 21 12 32.1 -0.7
STON Sn Sn 21 13 28.6 -3.6
STON Ston 5.10 339 *i* Pn Pn 21 12 32.1 -0.7
SJES Sjenica 5.15 359 *e*Sn Sn 21 13 29.4 -3.9
UPM Unac-Piva 5.17 350⇑*i*Pn Pn 21 12 34.7 +1.0
UPM *e*Sn Sn 21 13 31.8 -2.1
UPM Unac-Piva 5.17 350⇑*i*Pn Pn 21 12 34.7 +1.0
UPM *e*Sn Sn 21 13 31.8 -2.1
PLE Pljevlja 5.24 354⇑*i*Pn Pn 21 12 35.8 +1.1
PLE *e*Sn Sn 21 13 34.6 -1.1
PLE Pljevlja 5.24 354⇑*i*Pn Pn 21 12 35.8 +1.1
PLE *e*Sn Sn 21 13 34.6 -1.1
ZAPS Zavoj 5.50 19 *e*Pn Pn 21 12 38.6 +0.4
ZAPS *e*Sn Sn 21 13 39.9 -2.1
BBLS Lazići 5.78 355 *e*Pn Pn 21 12 41.7 -0.3
BBLS *e*Sn Sn 21 13 47.1 -1.7
BBLS Lazići 5.78 355 *e*Pn Pn 21 12 41.7 -0.3
DIVS Divibare 5.98 359 *e*Pn Pn 21 12 44.2 -0.7
DIVS *e*Sn Sn 21 13 49.4 -4.5
DIVS Divibare 5.98 359 *e*Pn Pn 21 12 44.2 -0.7
AQU L'Aquila 6.67 312 ⇓P Pn 21 12 58.4 +4.2
AQU L'Aquila 6.67 312⇓*i*P Pn 21 12 58.4 +4.1
BLY Banja Luka 6.99 342 *e*Pn Pn 21 12 57.9 -0.8
BLY *e*Sn Sn 21 14 15.8 -3.0
BLY Banja Luka 6.99 342 *e*Pn Pn 21 12 57.9 -0.8
FGSL Fruska Gora 7.04 358 *e*Pn Pn 21 12 58.0 -1.4
FRGS Fruska Gora 7.04 358 *e*Pn Pn 21 12 58.0 -1.5
FRGS *e*Sn Sn 21 14 14.4 -5.7
NVLJ Novalja 7.56 330 *e*Pn Pn 21 13 05.5 -1.1
NVLJ Sn Sn 21 14 28.3 -4.5
NVLJ Novalja 7.56 330 *e*Pn Pn 21 13 05.4 -1.1
BZS Buzias 7.58 8 *e*Pn Pn 21 13 06.5 -0.3
BZS *e*Sn Sn 21 14 26.9 -6.4
BZS Buzias 7.58 8 ⇓P Pn 21 13 06.8 0.0
BZS Buzias 7.58 8⇓*i*P Pn 21 13 06.8 0.0
BZS Buzias 7.58 8 *e*Pn Pn 21 13 06.5 -0.3
BZS Buzias 7.58 8 ⇓P Pn 21 13 06.8 0.0
PKSM Moragy 8.17 353 ⇑P Pn 21 13 12.2 -2.6
PKSM Moragy 8.17 353⇑*i*P Pn 21 13 12.3 -2.6
VOIR 8.19 25 ⇓P Pn 21 13 17.4 +2.2
VOIR 8.19 25⇓*i*P Pn 21 13 17.4 +2.2
VOIR 8.19 25 ⇓P Pn 21 13 17.4 +2.2
BOJS Bojanci 8.23 335 *i* Pn Pn 21 13 16.2 +0.5
BOJS Bojanci 8.23 335 *i* Pn Pn 21 13 16.2 +0.4
CRES Cresnjev 8.46 337 *i* Pn Pn 21 13 18.4 -0.4
CRES Cresnjev 8.46 337 *i* Pn Pn 21 13 18.5 -0.3
MLR Muntele Rosu 8.55 29 Pn Pn 21 13 22.8 +2.7
0.1nm,0.3s,baz=331,slow=12,SNR=4.9
MLR Muntele Rosu 8.55 29 ⇑P Pn 21 13 24.3 +4.1
MLR Muntele Rosu 8.55 29⇑*i*P Pn 21 13 24.3 +4.1
SKDS Skadanscina 8.71 330 *i* Pn Pn 21 13 21.9 -0.4
VOY Vojsko 9.17 332 *e*Pn Pn 21 13 29.6 +1.0
VOY *e*Sn Sn 21 15 08.2 -4.1
VOY Vojsko 9.17 332 *e*Pn Pn 21 13 29.6 +1.0
OBKA Obir 9.35 336⇑*i*Pn Pn 21 13 30.9 -0.2
OBKA ⇑*i*Sn Sn 21 15 12.8 -3.9
OBKA Obir 9.35 336 Pn Pn 21 13 30.9 -0.2
SOKA Soboth 9.35 338⇑*i*Pn Pn 21 13 30.7 -0.4
SOKA ⇓*i*Sn Sn 21 15 10.6 -6.1
SOKA Soboth 9.35 338 Pn Pn 21 13 30.7 -0.4
ARSA Arzberg 9.74 341⇑*i*Pn Pn 21 13 35.3 -1.1
ARSA ⇓*i*Sn Sn 21 15 19.0 -7.4
ARSA Arzberg 9.74 341 Pn Pn 21 13 35.3 -1.1
KECS Kecovo 10.37 1 *e*SG Sn 21 15 35.1 -6.7
DAVOX Davos/Dischmat 11.49 322 Pn Pn 21 14 05.6 +5.2
0.2nm,0.3s,baz=328,slow=19,SNR=3.6
HFS Hagfors 22.42 352 P P 21 16 16.5 +1.5
4.3nm,0.8s,mb3.9,baz=152,slow=10,SNR=6.9
HFS Hagfors 22.42 352 P P 21 16 16.5 +1.5
EKA Eskdalemuir Ar 23.30 325 P P 21 16 30.4 +6.0
0.9nm,0.8s,mb3.2,baz=128,slow=10.0,SNR=3.3
EKA Eskdalemuir Ar 23.30 325 P P 21 16 30.4 +6.0
NB2 NORSAR Subarra 23.62 349 P P 21 16 27.9 +0.2
comp=Z,1.2nm,0.9s,mb3.3,baz=159,slow=9.3
NB2 NORSAR Subarra 23.62 349 P P 21 16 27.9 +0.2
comp=Z,1.2nm,0.9s,mb3.3,SNR=4.1
NOA NORSAR Array B 23.62 349 P P 21 16 28.9 +1.2
comp=Z,0.5nm,0.6s,mb3.1,baz=164,slow=10,SNR=3.7
NOA NORSAR Array B 23.62 349 P P 21 16 28.9 +1.2
FINES FINESS Array B 23.65 7 P P 21 16 26.8 -1.1
comp=Z,0.7nm,0.5s,mb3.4,baz=178,slow=9.5,SNR=5.4
FINES FINESS Array B 23.65 7 P P 21 16 26.8 -1.1
ARCES ARCESS Array B 31.62 4 P P 21 17 41.0 +1.8
comp=Z,0.4nm,0.6s,mb3.4,baz=180,slow=12,SNR=3.5
ARCES ARCESS Array B 31.62 4 P P 21 17 41.0 +1.8
MKAR Makanchi Array 45.60 58 P P 21 19 34.3 -2.5
comp=Z,0.3nm,0.4s,mb3.6,baz=276,slow=7.5,SNR=8.3
ZALV Zalesovo Beam 45.97 48 P P 21 19 37.4 -2.2
comp=Z,0.5nm,0.4s,mb3.8,baz=281,slow=9.7,SNR=3.1
ZALV Zalesovo Beam 45.97 48 P P 21 19 37.4 -2.2

CASC 28 21:31:02.8±1.5**, 13.11N×89.35W, h35**^{km}±999^{km}**, MD3.6, ML3.6, 1C, El Salvador**

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

LFRS El Faro 0.58 29 *i* P Pn 21 31 14.9 +0.3
SNET Serv Nac Est T 0.59 12 *e*P Pn 21 31 14.8 +0.1
SNET *e*S Sn 21 31 24.1 +1.1
SNET AML AML 21 31 27.2
comp=Z,4µm,0.3s
BOQS Boqueron 0.63 7 *e*P Pn 21 31 15.6 +0.4
BOQS ⇑*i*P 21 31 15.6
BOQS *e*S Sn 21 31 25.3 +1.3
LFU La Fuente 0.68 20 *e*P Pn 21 31 16.3 +0.4
SNVI San Vicente 0.71 45 *e*P Pn 21 31 16.3 0.0
SNVI *e*S Sn 21 31 26.6 +0.6
SBLS San Blas 0.77 340 *e*P Pn 21 31 17.5 +0.3
SNJE San Jose 0.79 342 *e*P Pn 21 31 17.4 -0.1
RBDL Robledal 1.05 342 *e*P Pn 21 31 20.9 -0.1
VSM San Miguel 1.10 73 *e*P Pn 21 31 22.3 +0.6
VSM *e*S Sn 21 31 37.1 +1.5
BLLM Bellamira 1.14 73 *e*P Pn 21 31 22.5 +0.3
BLLM *e*S Sn 21 31 37.8 +1.3
MTO2 Montecristo 2 1.28 360 *e*P Pn 21 31 23.8 -0.5
CAHU Cacacuatique 1.29 59 *e*P Pn 21 31 24.3 0.0
CAHU *e*S Sn 21 31 41.8 +1.3
CAHU AML AML 21 31 43.6
comp=Z,1µm,0.4s
CNCH Conchagua 1.49 83 *e*P Pn 21 31 27.3 +0.2
CNCH *e*S Sn 21 31 46.2 +0.9
IXG Ixpaco 1.50 315 *e*P Pn 21 31 27.9 +0.7
IXG *e*S Sn 21 31 46.9 +1.2
FUG Fuego 3 1.96 313 *e*P Pn 21 31 35.3 +1.7
FUG *e*S Sn 21 31 57.6 +0.5
MRL Marmol 1.97 350 *e*P Pn 21 31 34.5 +0.7
FG6 2.07 314 *e*S Sn 21 32 01.5 +1.8
TP2 Tecpan 2 2.32 316 *e*P Pn 21 31 40.0 +1.5
TP2 *e*S Sn 21 32 09.1 +3.2
CNGN Cerro Negro 2.66 103 *e*P Pn 21 31 42.6 -0.6
CNGN AML AML 21 32 18.2
comp=E,138nm,0.3s
COPN Copaltepe 2.85 109 *e*P Pn 21 31 44.9 -0.9

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*ISCJB **28** 21:36:16.6±1.0, 34.89N±0.05×1.91W±0.09, h10^{km}, Error ellipse: s-maj=10.6km s-min=6.9km az=9.3*
*MDD **28** 21:36:19.3±1.9, 34.80N×1.87W, h26^{km}±20^{km}, mbLg1.8/5, Error ellipse: s-maj=13.1km s-min=7.9km az=132.0*
*CSEM **28** 21:36:19.4±0.6, 34.85N×1.96W, h30^{km}, MD3.5, Error ellipse: s-maj=17.4km s-min=7.8km az=111.0*
*CNRM **28** 21:36:20.5, 34.73N×1.82W, h30^{km}, MD3.5*
ISC 28 21:36:17.7±0.9**, 34.89N**±0.05×**1.95W**±0.09**, h10**^{km}**, n45, σ1**^{s}**02**/64**, Northern Algeria**

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

ZAI Zaio 0.66 277 P Pg 21 36 33.0 +2.6
ZAI S Sg 21 36 43.5 +4.5
ZAI Zaio 0.66 277 P Pg 21 36 33.0 +2.6
ZAI S Sg 21 36 43.5 +4.5
ZAI Zaio 0.66 277 *i* P Pg 21 36 33.0 +2.6
ZAI *i* S Sg 21 36 43.5 +4.5
EALB Alboran 1.37 320 P Pn 21 36 42.6 -0.2
2.3nm,0.1s,SNR=7.9
EALB S Sb 21 37 00.9 -0.1
2.5nm,0.2s,SNR=7.9
EALB Alboran 1.37 320 P Pn 21 36 42.6 -0.2
2.3nm,0.1s,SNR=7.9
EALB S Sb 21 37 00.9 -0.1
2.5nm,0.2s,SNR=7.9
EALB Alboran 1.37 320 P Pn 21 36 42.6 -0.2
2.3nm,0.1s,SNR=7.9
ENIJ Nijar 2.09 354 P Pn 21 36 53.4 +0.7
80nm,0.2s,SNR=4.0
ENIJ Nijar 2.09 354 P Pn 21 36 53.4 +0.7
80nm,0.2s,SNR=4.0
ENIJ Nijar 2.09 354 P Pn 21 36 53.4 +0.7
80nm,0.2s,SNR=4.0
EBER Berja 2.14 339 P Pn 21 36 53.3 -0.2
0.2nm,0.1s,SNR=4.8
EBER S Sn 21 37 18.6 -1.5
1.6nm,0.3s,SNR=7.9
EBER Berja 2.14 339 P Pn 21 36 53.3 -0.2
0.2nm,0.1s,SNR=4.8
EBER S Sn 21 37 18.6 -1.5
1.6nm,0.3s,SNR=7.9
EBER Berja 2.14 339 P Pn 21 36 53.3 -0.2
0.2nm,0.1s,SNR=4.8
EBER S Sn 21 37 18.6 -1.5
1.6nm,0.3s,SNR=7.9
EGUA Guajares 2.34 326 P Pn 21 36 55.2 -1.0
5.0nm,0.2s,SNR=7.9
EGUA Guajares 2.34 326 P Pn 21 36 55.2 -1.0
5.0nm,0.2s,SNR=7.9
EGUA Guajares 2.34 326 P Pn 21 36 55.2 -1.0
5.0nm,0.2s,SNR=7.9
EQUE Quentar 2.60 333 P Pn 21 37 00.2 +0.4
0.6nm,0.2s,SNR=5.7
EQUE Quentar 2.60 333 P Pn 21 37 00.2 +0.4
0.6nm,0.2s,SNR=5.7
EQUE Quentar 2.60 333 P Pn 21 37 00.2 +0.4
0.6nm,0.2s,SNR=5.7
EMIJ Mijas 2.84 307 S Sn 21 37 37.6 +0.4
3.2nm,0.5s,SNR=7.9
EMIJ Mijas 2.84 307 S Sn 21 37 37.6 +0.4
3.2nm,0.5s,SNR=7.9
EMIJ Mijas 2.84 307 S Sn 21 37 37.6 +0.4
3.2nm,0.5s,SNR=7.9
ELOJ Sierra Loja 2.87 322 P Pn 21 37 01.7 -1.8
1.3nm,0.1s,SNR=7.9
ELOJ Sierra Loja 2.87 322 P Pn 21 37 01.7 -1.8
1.3nm,0.1s,SNR=7.9
ELOJ Sierra Loja 2.87 322 P Pn 21 37 01.7 -1.8
1.3nm,0.1s,SNR=7.9
EHUE Huescar 2.96 350 P Pn 21 37 05.9 +1.1
0.5nm,0.2s,SNR=7.9
EHUE Huescar 2.96 350 P Pn 21 37 05.9 +1.1
0.5nm,0.2s,SNR=7.9
EHUE Huescar 2.96 350 P Pn 21 37 05.9 +1.1
0.5nm,0.2s,SNR=7.9
EMUR La Murta 3.00 11 P Pn 21 37 05.1 -0.1
0.6nm,0.2s,SNR=7.9
EMUR La Murta 3.00 11 P Pn 21 37 05.1 -0.1
0.6nm,0.2s,SNR=7.9
EMUR La Murta 3.00 11 P Pn 21 37 05.1 -0.2
0.6nm,0.2s,SNR=7.9
EQES Quesada 3.04 343 P Pn 21 37 07.6 +1.7
0.3nm,0.1s,SNR=7.9
EQES S Sn 21 37 42.2 -0.1
1.8nm,0.6s,SNR=7.9
EQES Quesada 3.04 343 P Pn 21 37 07.6 +1.7
0.3nm,0.1s,SNR=7.9
EQES S Sn 21 37 42.2 -0.1
1.8nm,0.6s,SNR=7.9
EQES Quesada 3.04 343 P Pn 21 37 07.6 +1.7
0.3nm,0.1s,SNR=7.9
EQES S Sn 21 37 42.2 -0.1
1.8nm,0.6s,SNR=7.9
CZD Col de Zad 3.17 235 P Pn 21 37 07.5 -0.1
CZD S Sn 21 37 41.0 -4.4
CZD Col de Zad 3.17 235 P Pn 21 37 07.5 -0.1
CZD S Sn 21 37 41.0 -4.4
CZD Col de Zad 3.17 235 *e*P Pn 21 37 07.5 -0.1
CZD *e*S Sn 21 37 41.0 -4.4
ZFT Errachidia 3.48 216 P Pn 21 37 11.0 -0.9
ZFT S Sn 21 37 47.0 -6.2
ZFT Errachidia 3.48 216 P Pn 21 37 11.0 -0.9
ZFT S Sn 21 37 47.0 -6.2
ZFT Errachidia 3.48 216 *e*P Pn 21 37 11.0 -0.9
ETOB Tobarra 3.76 5 P Pn 21 37 16.3 +0.6
1.5nm,0.3s,SNR=21
ETOB S Sn 21 37 59.0 -1.0
85nm,3.1s,SNR=6.1
ETOB Tobarra 3.76 5 P Pn 21 37 16.3 +0.6
1.5nm,0.3s,SNR=21
ETOB S Sn 21 37 59.0 -1.0
85nm,3.1s,SNR=6.1
ETOB Tobarra 3.76 5 P Pn 21 37 16.3 +0.6
1.5nm,0.3s,SNR=21
ETOB S Sn 21 37 59.0 -1.0
85nm,3.1s,SNR=6.1
EADA Adamuz 3.89 328 P Pn 21 37 18.7 +1.1
0.8nm,0.4s,SNR=7.9
EADA Adamuz 3.89 328 P Pn 21 37 18.7 +1.1
0.8nm,0.4s,SNR=7.9
EADA Adamuz 3.89 328 P Pn 21 37 18.7 +1.2
0.8nm,0.4s,SNR=7.9

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*DJA **28** 21:37:30, 10.91S×164.05E, h33^{km}, mb5.5/20*
*NEIC **28** 21:37:32.6±0.1, 10.61S×163.16E, h10^{km}, mb5.7/115, MS6.1/4, Error ellipse: s-maj=5.5km s-min=4.2km az=160.0*
*IDC **28** 21:37:33.0±0.7, 10.56S×163.30E, h18^{km}±3^{km}, mb4.9/17, mb1 5.1/18, mb1mx5.1/19, mbtmp4.9/18, MS5.6/5, Ms1 5.6/5, ms1mx5.1/18, Error ellipse: s-maj=22.4km s-min=16.1km az=117.0*
*ISCJB **28** 21:37:34.7±0.1, 10.61S±0.03×163.11E±0.02, h33^{km}, mb5.5/183, MS5.8/58, Error ellipse: s-maj=4.5km s-min=3.3km az=165.9*
*MOS **28** 21:37:36.4±1.1, 10.41S×163.11E, h41^{km}, mb5.8/52, MS5.8/26, Error ellipse: s-maj=7.2km s-min=6.9km az=79.2*
*GCMT **28** 21:37:36.2±0.1, 10.50S×163.37E, h18^{km}, MW5.9, Moment Tensor Solution. s91,c186; s68,c97; Moment tensor: Scale 10^{17}Nm; M_{rr}-2.07±.10; $M_{\theta\theta}$3.56±.11; $M_{\phi\phi}$-1.49±.12; $M_{r\theta}$0.66±.25; $M_{\theta\phi}$8.22±.10; $M_{\phi r}$-1.51±.26; Best double couple: $M_0$8.80000×10^{17} NP1:ϕ_s278.00000°, δ78.00000°, λ-10.00000°. NP2:ϕ_s10.00000°, δ81.00000°, λ-168.00000°. Principal axes: T 9.6500, Plg2.0000°, Azm143.0000°; N -1.6500, Plg75.0000°, Azm47.0000°; P -8.0000, Plg15.0000°, Azm234.0000°; Data Used: II IU IC G CN. Surface waves: sta=101, comp=208, per= 50.*
*BJI **28** 21:37:41.3, 9.93S×163.25E, h68^{km}, mB5.8/47, mb5.4/55, Ms5.9/56, Ms7 5.6/52*
ISC 28 21:37:33.5±1.5**, 10.60S**±0.03×**163.17E**±0.02**, h14**^{km}±9^{km}**, h60**^{km}±2.1^{km}**:pP-P, n765, σ1**^{s}**02**/443**, mb5.5**/183**, MS5.8**/58**, 48C-42D, Bougainville - Solomon Islands region**

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

HNR Honiara 3.38 290⇑*i*Pn Pn 21 38 28.1 +2.3
HNR Sn Sn 21 39 07.8 +2.1
NOUC Port Laguerre 11.83 166 *e*P Pn 21 40 20.6 -1.1
NOUC *e*S Sn 21 42 27.4 -6.3
DZM Mont Dzumac 11.83 165 *e*P Pn 21 40 25.6 +3.7
959nm,1.4s
DZM Mont Dzumac 11.83 165 *e*P Pn 21 40 20.9 -1.0
DZM *e*S Sn 21 42 27.2 -6.5
DZM Mont Dzumac 11.83 165 *e*Pn Pn 21 40 21.5 -0.3
748nm,1.4s
PMG Port Moresby 15.81 273 *e*P Pn 21 41 18.7 +2.9
PMG pmax pmax
comp=Z,2µm,2.8s
PMG Port Moresby 15.81 273 *e*Pn Pn 21 41 18.7 +2.8
comp=Z,2µm,2.8s
PMG Port Moresby 15.81 273 P Pn 21 41 21.5 +5.7
comp=Z,6µmcomp=Z,188nm,2.4s
FUNA Funafuti 15.94 84 Pn Pn 21 41 16.2 -1.3
MSVF Nonsavu 16.07 118 *e*Pn Pn 21 41 16.8 -2.4
comp=Z,400nm,1.5s
MSVF Nonsavu 16.07 118 Pn Pn 21 41 19.9 +0.7
comp=Z,667nm,1.5s,SNR=6.5
EIDS Eidsvold 18.63 216⇓*i*Pn Pn 21 41 53.6 +2.5
comp=Z,1µm,1.8s
CTA Charters Tower 18.83 238 *e*P Pn 21 41 55.5 +2.0
comp=Z,131nm,1.2s
CTA Charters Tower 18.83 238 P Pn 21 41 55.6 +2.1
baz=62,slow=14
CTAO Charters Tower 18.83 238⇓*e*P Pn 21 41 55.5 +2.0
CTAO pmax pmax
comp=Z,1µm,1.7s
CTAO Charters Tower 18.83 238⇓*e*Pn Pn 21 41 55.5 +2.0
comp=Z,1µm,1.7s
KWAJ Kwajalein Atol 19.77 13⇑*e*P Pn 21 42 01.3 -3.6
comp=Z,331nm,0.8s
COEN Coen 19.82 258⇓*e*P Pn 21 42 05.1 -0.3
COEN Coen 19.82 258 P Pn 21 42 07.0 +1.6
comp=Z,710nm,1.9s
COEN Coen 19.82 258 P Pn 21 42 06.7 +1.3
comp=Z,710nm,1.9s
ARMA Armidale 22.45 207 *e*P P 21 42 32.6 +0.4
ARMA Armidale 22.45 207⇓*e*P P 21 42 33.5 +1.4
comp=Z,133nm,1.1s,mb5.3
AFI Afiamalu 24.70 100 P P 21 42 57.1 +2.7
comp=Z,145nm,1.2s,mb5.4,baz=275,slow=19,SNR=4.4
AFI Afiamalu 24.70 100 *e*P P 21 42 56.2 +1.8
AFI pmax pmax
comp=Z,110nm,1.0s,mb5.3
AFI Afiamalu 24.70 100 *e*P P 21 42 56.2 +1.8
comp=Z,110nm,1.0s,mb5.3
SMPI Sarmi 25.75 288 P P 21 43 03.5 -0.4
comp=Z,5µmcomp=Z,235nm,1.5s,mb5.5
SMPI Sarmi 25.75 288 P P 21 43 04.4 +0.5
comp=Z,5µmcomp=Z,235nm,1.5s,mb5.5
OUZ Omahuta 26.29 160 *e*P P 21 43 08.8 +0.3
YNG Young 27.18 208 *e*P P 21 43 16.6 -0.1
comp=Z,31nm,0.8s,mb4.9
CNB Canberra Magne 27.63 205 *e*P P 21 43 20.9 +0.3
BAKI Biak 28.46 287 P P 21 43 33.2 +4.8
comp=Z,2µmcomp=Z,89nm,1.6s,mb5.1
STKA Stephens Creek 29.09 220 *e*P P 21 43 33.2 -0.5
comp=Z,13nm,0.6s,mb4.8
STKA Stephens Creek 29.09 220 P P 21 43 33.4 -0.3
comp=Z,19nm,1.0s,mb4.8,baz=30,slow=9.1,SNR=13
STKA LR LR 21 54 19.9
comp=Z,19µm,19.2s,MS5.7,baz=170,slow=34
STKA Stephens Creek 29.09 220 *e*P P 21 43 33.9 +0.2
comp=Z,45nm,1.9s,mb4.9
WRAB Tennant Creek 29.27 248 P P 21 43 34.0 -1.4
comp=Z,353nm,0.9s,mb6.1,SNR=24
WRAB Tennant Creek 29.27 248⇓*e*P P 21 43 35.2 -0.2
WRAB pmax pmax
comp=Z,63nm,1.0s,mb5.3
WRAB Tennant Creek 29.27 248⇓*e*P P 21 43 35.2 -0.2
comp=Z,63nm,1.0s,mb5.3
WRAB Tennant Creek 29.27 248 P P 21 43 34.6 -0.8
comp=Z,159nm,0.6s,mb5.9,SNR=24
WRAB Tennant Creek 29.27 248 P P 21 43 34.8 -0.6
WRAB Tennant Creek 29.27 248 P P 21 43 35.0 -0.4
comp=Z,81nm,1.4s,mb5.3
KAKA Kakadu 30.16 263 *e*P P 21 43 42.8 -0.6
comp=Z,17nm,0.7s,mb4.9
KAKA Kakadu 30.16 263 *e*P P 21 43 42.8 -0.6
comp=Z,99nm,0.8s,mb5.6
KAKA Kakadu 30.16 263 P P 21 43 44.1 +0.7
comp=Z,457nmcomp=Z,45nm,0.8s,mb5.3
KAKA Kakadu 30.16 263 P P 21 43 45.3 +1.9
comp=Z,457nmcomp=Z,45nm,0.8s,mb5.3
URZ Urewera 30.25 158 *e*P P 21 43 43.6 -0.3
ASAR Alice Springs 30.76 241 P P 21 43 47.2 -1.3
comp=Z,31nm,0.6s,mb5.3,baz=62,slow=9.9,SNR=257
TOO Toolangi 31.21 208 *e*P P 21 43 52.7 +0.3
KHZ Kahutara 32.97 166 *e*P P 21 44 07.7 -0.1
RPZ Rata Peaks 33.70 170 P P 21 44 17.0 +2.9
comp=Z,36nm,0.9s,mb5.3,baz=330,slow=3.3,SNR=9.9
RPZ Rata Peaks 33.70 170 *e*P P 21 44 13.8 -0.3
comp=Z,28nm,0.8s,mb5.2
KNA Kununurra 33.86 258 *e*P P 21 44 14.6 -1.3
comp=Z,46nm,0.7s,mb5.5
KNA Kununurra 33.86 258 P P 21 44 15.2 -0.7
comp=Z,2µmcomp=Z,212nm,0.9s,mb6.1
KNA Kununurra 33.86 258 P P 21 44 15.1 -0.8
comp=Z,2µmcomp=Z,212nm,0.9s,mb6.1
MOO Moorlands 34.66 201 *e*P P 21 44 23.4 +0.9
ODZ Otahua Downs 34.92 171 *e*P P 21 44 24.8 0.0
NLAI Namlea 36.51 279 P P 21 44 39.3 +0.5
comp=Z,2µmcomp=Z,110nm,1.8s,mb5.4
NLAI Namlea 36.51 279 P P 21 44 39.7 +0.9
comp=Z,2µmcomp=Z,110nm,1.8s,mb5.4
FITZ Fitzroy Crossi 37.06 254 *e*P P 21 44 41.8 -1.6
comp=Z,63nm,0.6s,mb5.6
FITZ Fitzroy Crossi 37.06 254 *e*P P 21 44 42.0 -1.4
FITZ Fitzroy Crossi 37.06 254 P P 21 44 42.0 -1.4
comp=Z,110nm,1.1s,mb5.6
FITZ Fitzroy Crossi 37.06 254 P P 21 44 42.5 -0.9
comp=Z,110nm,1.1s,mb5.6
RAR Rarotonga 37.08 111 LR LR 21 56 49.7
comp=Z,5µm,20.7s,MS5.3,baz=279,slow=31
TNTI Ternate 37.36 285 P P 21 44 47.0 +1.0
comp=Z,2µmcomp=Z,73nm,1.8s,mb5.2
FORT Forrest 38.26 233 *e*P P 21 44 53.2 -0.2

comp=Z,83nm,0.8s,mb5.5
FORT Forrest 38.26 233 *e*P **P 21 44 53.9 +0.5**
comp=Z,226nm,1.2s,mb5.8
JOHN Johnston Islan 38.30 45 *e*P **P 21 44 53.8 0.0**
MNI Manado 39.96 285 P **P 21 45 08.3 +0.4**
comp=Z,2μmcomp=Z,105nm,1.0s,mb5.5
MNI Manado 39.96 285 P **P 21 45 10.1 +2.2**
comp=Z,2μmcomp=Z,105nm,1.0s,mb5.5
MMRI Maumere 40.38 269 P **P 21 45 09.9 -1.5**
comp=Z,2μmcomp=Z,96nm,1.3s,mb5.4
KMSI Cibinong 40.52 283 P **P 21 45 16.7 +4.2**
comp=Z,5μmcomp=Z,378nm,1.6s,mb5.8
XMAS Kiritimati 41.16 74 P **P 21 45 17.3 -0.5**
LUWI Luwuk 41.24 281 P **P 21 45 21.6 +3.1**
BKSI Bulukumba 42.92 274 P **P 21 45 31.9 -0.3**
comp=Z,1μmcomp=Z,26nm,1.3s,mb4.8
MBWA Marble Bar 42.95 250⇓*e*P **P 21 45 31.2 -1.2**
comp=Z,46nm,0.8s,mb5.3
SPSI Sidrap Palu 43.51 275 P **P 21 45 36.3 -0.7**
TTSI Tana Toraja 43.65 277 P **P 21 45 38.3 +0.2**
comp=Z,1μmcomp=Z,38nm,2.0s,mb4.8
PCI Palu 44.12 280 P **P 21 45 42.6 +0.8**
comp=Z,2μmcomp=Z,114nm,1.0s,mb5.6
PPT Papeete 46.26 104 *e*S **S 21 52 48.7 +3.2**
PPT *e*LR LR 21 59 02.7
comp=Z,8μm,24.5s
KLBR Kellerberrin 46.83 236 *e*P **P 21 46 02.2 -0.9**
comp=Z,37nm,1.1s,mb5.2
KHKI Kahang-Kahang 46.93 268 P **P 21 46 09.2 +5.1**
comp=Z,46nm,1.1s,mb5.3
KBKI Kotabaru 47.17 275 P **P 21 46 05.6 -0.4**
comp=Z,55nm,1.3s,mb5.3
IGBI Denpasar 47.33 268 P **P 21 46 08.1 +0.8**
comp=Z,3μmcomp=Z,237nm,1.2s,mb6.0
SRBI Singaraja 47.35 269 P **P 21 46 06.8 -0.6**
comp=Z,2μmcomp=Z,69nm,1.0s,mb5.5
NWAO Narrogin (SRO) 47.63 235 *e*P **P 21 46 09.0 -0.3**
GMJI Gumukmas 49.07 268 P **P 21 46 18.4 -2.3**
comp=Z,1μmcomp=Z,42nm,1.7s,mb5.2
KKM Kota Kinabalu 49.59 287 *e*P **P 21 46 24.4 -0.3**
KIP Kipapa 49.66 50 *e*P **P 21 46 24.9 -0.1**
KHU Kahuku 50.29 54 *e*P **P 21 46 30.4 +0.5**
PUH Pauahi 50.68 54 P **P 21 46 32.5 -0.3**
PWJI Pagerwojo 50.71 268 P **P 21 46 31.7 -1.5**
comp=Z,2μmcomp=Z,64nm,1.6s,mb5.3
STCH Steam Cracks 50.76 54 P **P 21 46 33.6 +0.2**
JOD2 Odawara 2 50.98 335 P **P 21 46 34.6 -0.2**
PCJI Pacitan 51.30 268 P **P 21 46 37.5 -0.2**
comp=Z,3μmcomp=Z,183nm,1.7s,mb5.7
JIE Ise 51.31 332 P **P 21 46 37.6 +0.3**
JRY Ryogami san 51.71 335 P **P 21 46 40.1 -0.1**
JMN Monobe 52.15 329 P **P 21 46 44.0 +0.4**
MJAR Matsushiro Arr 52.45 335 P **P 21 46 43.5 -2.2**
comp=Z,5.5nm,0.8s,mb4.5,baz=167,slow=8.7,SNR=14
MAJO Matsushiro 52.45 335 *e*P **P 21 46 44.8 -0.9**
MAJO pmax pmax
comp=Z,33nm,1.0s,mb5.2
MAJO Matsushiro 52.45 335 *e*P **P 21 46 44.8 -0.9**
comp=Z,33nm,1.0s,mb5.2
MAT Matsushiro 52.45 335 P **P 21 46 43.7 -2.0**
MAT S **S 21 54 03.0 -8.6**
MAT Matsushiro 52.45 335 P **P 21 46 43.9 -1.8**
JMM Marumori 52.56 338 P **P 21 46 46.9 +0.3**
JWT Wachi 52.65 331 P **P 21 46 47.0 -0.3**
BJII Banjamegara 52.85 269 P **P 21 46 48.7 -0.5**
comp=Z,2μmcomp=Z,62nm,2.3s,mb5.1
TWG Pinlang 52.94 309 P **P 21 46 50.3 +0.6**
JNU Nakatsue 53.27 326 P **P 21 46 51.0 -0.9**
NACB Ninganchiao 53.32 311 *e*P **P 21 46 53.5 +1.1**
comp=Z,146nm,1.3s,mb5.8
TPUB Ta-pu 53.55 309 P **P 21 46 52.3 -1.8**
SSLB Suanglung 53.58 310 *e*P **P 21 46 54.7 +0.4**
YHNB Yeheng 53.77 311 *e*P **P 21 46 56.9 +1.2**
KSM Kuching 53.93 280 *e*P **P 21 46 55.6 -1.6**
comp=Z,108nm,1.4s,mb5.6
LEM Lembang 54.98 269 P **P 21 47 04.0 -0.8**
comp=Z,3μmcomp=Z,186nm,1.7s,mb5.8
ERM Erimo 55.49 342 *e*P **P 21 47 07.2 -0.7**
TPI Tanjungpandan 55.61 274 P **P 21 47 09.2 -0.2**
comp=Z,1μmcomp=Z,62nm,1.5s,mb5.4
TAOE Nuku Hiva Isla 55.83 94 *e*S **S 21 54 45.7 -13**
comp=Z,3μm,26.3s
TAOE *e*LR LR 22 03 12.6
comp=Z,5μm,25.3s
SKJI Sukabumi 56.00 269 P **P 21 47 12.8 +0.7**
QZH Quanzhou 56.00 310 P **P 21 47 14.8 +2.9**
QZH S **S 21 55 00.5 +0.4**
QZH pmax pmax
comp=Z,890nm,8.7s
YUK Yuzh-Kuril'sk 56.60 345⇑*i*P **P 21 47 13.1 -2.7**
YUK *i* 21 49 17.3
YUK *i*S **S 21 55 04.6 -2.7**
YUK pmax pmax
comp=N,700nm,4.0s
YUK pmax pmax
comp=Z,700nm,4.0s
YUK pmax pmax
comp=E,100nm,1.0s
YUK smax
comp=N,2μm,7.3s
YUK smax
comp=E,900nm,7.3s
YUK MLR MLR
comp=N,6μm,21.0s,MS5.8
YUK MLR MLR
comp=E,5μm,21.0s,MS5.8
YUK MLR MLR
comp=Z,7μm,21.0s,MS5.7
CGJI Cibinong 56.90 269 P **P 21 47 20.2 +1.6**
comp=Z,2μmcomp=Z,203nm,1.0s,mb6.1
JSH Shimam 57.05 340 P **P 21 47 19.4 +0.4**
ASAJ Asahikawa 57.57 343 P **P 21 47 22.1 -0.6**
comp=Z,36nm,0.7s,mb5.5,baz=212,slow=8.1,SNR=32
ASAJ Asahikawa 57.57 343 P **P 21 47 22.5 -0.2**
KSRS Korea Array 58.11 327 P **P 21 47 25.9 -0.6**
comp=Z,6.2nm,1.0s,mb4.6,baz=145,slow=6.9,SNR=19
KLSI 58.15 271 P **P 21 47 33.1 +5.7**
comp=Z,43nm,2.0s,mb5.1
DRV Dumont d'Urvil 58.15 191 P **P 21 47 28.0 +1.6**
DRV S **S 21 55 31.0 +3.8**
DRV SS SS 21 58 49.0 -30
DRV L 22 02 00.0
DRV R 22 05 00.0
MDSI Maura Dua 58.72 271 P **P 21 47 28.9 -2.5**
comp=Z,33nm,1.6s,mb5.1
NJ2 Nanjing 59.94 317 *e*P **P 21 47 39.5 +0.1**
NJ2 pP pP 21 47 55.5 +12
NJ2 sP sP 21 48 02.0 +16
NJ2 PP PP 21 49 54.0 +2.1
NJ2 S **S 21 55 42.0 -9.4**
NJ2 sS sS 21 56 10.5 +12
NJ2 pmax pmax
comp=Z,60nm,1.2s,mb5.5
NJ2 pmax pmax
comp=Z,1μm,6.7s
NJ2 LR LR
comp=N,3μm,14.3s,MS5.8
NJ2 LR LR
comp=E,4μm,14.5s,MS5.8
NJ2 LR LR
comp=Z,2μm,12.8s,MS5.4
RKT Rikitea 60.12 111 *e*S **S 21 55 55.0 +0.9**
comp=Z,2μm,24.8s
RKT *e*LR LR 22 05 56.2
comp=Z,13μm,26.0s
YSS Yuzh-Sakhalins 60.13 344*ce*P **P 21 47 40.2 -0.2**
YSS *e*S **S 21 55 55.0 +1.8**
YSS *e*PS 21 56 06.0
YSS pmax pmax
comp=Z,80nm,1.2s,mb5.6
YSS MLR MLR
comp=Z,8μm,19.0s,MS5.9
YSS MLR MLR
comp=N,6μm,18.0s,MS6.0
YSS MLR MLR
comp=E,6μm,16.0s,MS6.0
YSS Yuzh-Sakhalins 60.13 344 *e*P **P 21 47 40.8 +0.5**
comp=E,12nm,0.6s,mb5.1
QIZ Qiongzhong 60.24 299 P **P 21 47 42.3 +0.6**
QIZ PP PP 21 49 55.3 +0.5
QIZ pmax pmax
comp=Z,42nm,1.1s,mb5.4
QIZ LR LR
comp=N,2μm,24.2s,MS5.3
QIZ LR LR
comp=E,2μm,22.2s,MS5.3
QIZ LR LR
comp=Z,7μm,25.4s,MS5.7
QIZ Qiongzhong 60.24 299 *e*P **P 21 47 42.7 +0.9**
comp=Z,175nm,1.5s,mb5.9
VLA Vladivostok 60.60 334*de*P **P 21 47 44.5 +0.8**
VLA pmax pmax
comp=Z,68nm,1.2s,mb5.7
VLA Vladivostok 60.60 334 *e*P **P 21 47 44.5 +0.8**
SKR Severo-Kuril's 61.33 355 *e*P **P 21 47 48.0 -0.5**
SKR *e* 21 48 26.0
SKR *e* 21 50 08.0
SKR *e* 21 51 30.0
SKR *e*S **S 21 56 08.0 -0.5**
SKR pmax pmax
comp=Z,80nm,1.0s,mb5.8
SKR pmax pmax
comp=N,1μm,6.0s
SKR pmax pmax
comp=E,1μm,6.0s
SKR pmax pmax
comp=Z,1μm,6.0s
SKR smax
comp=N,2μm,10.0s
SKR smax
comp=E,2μm,10.0s
SKR MLR MLR
comp=Z,6μm,18.0s,MS5.8
SKR MLR MLR
comp=N,5μm,14.0s,MS6.1
SKR MLR MLR
comp=E,8μm,14.0s,MS6.1
SDSI Sungai Dareh 62.07 275 P **P 21 47 53.1 -1.2**
comp=E,1μmcomp=E,46nm,1.8s,mb5.3
WHN Wuhan 62.22 313 P **P 21 48 00.8 +5.9**
WHN S **S 21 56 21.5 +1.0**
WHN pmax pmax
comp=Z,840nm,2.3s,mb6.5
WHN LR LR
comp=N,6μm,13.8s,MS6.0
WHN LR LR
comp=E,6μm,17.2s,MS6.0
WHN LR LR
comp=Z,10μm,18.2s,MS6.0
DL2 Dalian 62.62 324⇓*i*P **P 21 48 04.3 +6.9**
DL2 S **S 21 56 28.8 +3.6**
DL2 sS sS 21 56 57.5 +25
DL2 pmax pmax
comp=Z,30nm,1.0s,mb5.4
DL2 pmax pmax
comp=Z,330nm,6.5s
DL2 LR LR
comp=N,2μm,22.3s,MS5.3
DL2 LR LR
comp=E,1μm,23.3s,MS5.3
DL2 LR LR
comp=Z,3μm,25.6s,MS5.4
BKNI Bangkinang 62.70 276 P **P 21 47 58.3 -0.2**
comp=Z,2μmcomp=Z,146nm,1.2s,mb6.0
MDJ Mudanjiang 62.80 334 P **P 21 47 58.8 +0.3**
MDJ PP PP 21 50 16.3 -0.6
MDJ pmax pmax
comp=Z,36nm,1.6s,mb5.2
MDJ pmax pmax
comp=Z,280nm,3.5s
MDJ LR LR
comp=N,5μm,26.0s,MS5.7
MDJ LR LR
comp=E,4μm,22.1s,MS5.7
MDJ LR LR
comp=Z,6μm,32.4s
MDJ Mudanjiang 62.80 334 *e*P **P 21 47 58.4 -0.1**
comp=Z,108nm,1.4s,mb5.8
PPI Padang Panjang 63.17 275 P **P 21 48 00.0 -1.7**
comp=Z,36nm,1.1s,mb5.4
PET Petropavlovsk 63.48 357*c i*P **P 21 47 59.7 -3.2**
PET *e*S **S 21 56 30.3 -5.2**
PET pmax pmax
comp=Z,35nm,0.8s,mb5.5
PET pmax pmax
comp=Z,400nm,12.3s
PET MLR MLR
comp=Z,3μm,17.0s,MS5.5
PET Petropavlovsk 63.48 357 *e*P **P 21 48 02.9 0.0**
SNY Shenyang 63.59 328⇑P **P 21 48 03.5 -0.3**
SNY S **S 21 56 34.8 -2.4**
SNY pmax pmax
comp=Z,810nm,6.3s
SNY LR LR
comp=N,7μm,17.7s
SNY LR LR
comp=Z,6μm,19.4s,MS5.8
PETK Petropavlovsk- 63.62 356 P **P 21 48 02.2 -1.6**
comp=Z,21nm,1.0s,mb5.1,baz=122,slow=7.2,SNR=22
SMY Shemya 63.77 7 *e*P **P 21 48 04.6 -0.1**
HABR Khabarovsk 63.85 340*ce*P **P 21 48 04.8 -0.6**
HABR *e**PP pP 21 48 23.1 +13
HABR *e* 21 48 39.3
HABR *e* 21 50 26.0
HABR *e*S **S 21 56 36.2 -4.1**
HABR *e**SS sS 21 57 08.0 +20
HABR *e* 21 57 51.8
HABR *e*SS SS 22 00 47.1 -1.9
HABR pmax pmax
comp=Z,232nm,2.0s,mb5.9
HABR pmax pmax
comp=N,75nm,2.1s
HABR pmax pmax
comp=E,86nm,2.1s
HABR MLR MLR
comp=Z,9μm,21.0s,MS5.9
CN2 Changchun 64.08 330 *e*P **P 21 48 07.3 +0.3**
CN2 *e*pP pP 21 48 23.5 +12
CN2 *e*S **S 21 56 38.5 -4.8**
CN2 pmax pmax
comp=Z,40nm,1.0s,mb5.4
CN2 pmax pmax
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,4μm,20.0s,MS5.7
CN2 LR LR
comp=E,3μm,20.0s,MS5.7
CN2 LR LR
comp=Z,4μm,20.0s,MS5.5
KULM Kulim 64.21 281 *e*P **P 21 48 07.2 -1.3**
comp=Z,48nm,1.1s,mb5.4
MNSI Mandailing Nat 64.23 276 P **P 21 48 07.0 -1.6**
comp=Z,68nm,1.0s,mb5.6
PTCN Pitcairn Islan 64.59 113 *e*P **P 21 48 10.4 -0.4**
ATKA Atka Island 65.52 15 *e*P **P 21 48 15.0 -1.1**
comp=Z,96nm,1.4s,mb5.6
ENH Enshi 65.66 310 *e*P **P 21 48 18.6 +1.0**
comp=Z,106nm,1.1s,mb5.8
KLR Kul'dur 65.67 338 *e*P **P 21 48 12.8 -4.4**
KLR *e*S S 21 56 52.5 -10
KLR pmax pmax
comp=E,56nm,1.8s
KLR pmax pmax
comp=Z,120nm,1.8s,mb5.6
CASY Casey 65.89 201 *e*P **P 21 48 17.1 -1.4**
CASY Casey 65.89 201 *e*P **P 21 48 16.9 -1.6**
comp=Z,33nm,1.1s,mb5.3
GYA Guiyang 66.08 305 P **P 21 48 22.0 +1.6**
GYA PcP PcP 21 48 52.8 +2.0
GYA PP PP 21 50 51.0 +4.9
GYA pmax pmax
comp=Z,60nm,1.0s,mb5.6
GYA pmax pmax
comp=Z,730nm,6.9s
GYA LR LR
comp=N,2μm,21.1s,MS5.6
GYA LR LR
comp=E,3μm,22.3s,MS5.6
GYA LR LR
comp=Z,4μm,21.7s,MS5.6
GSI Gunungsitoli 66.29 276 P **P 21 48 20.9 -1.1**
BJT Baijiatuau 66.55 322 *e*P **P 21 48 23.7 +0.6**
BJT pmax pmax
comp=Z,56nm,1.4s
BJT Baijiatuau 66.55 322 *e*P **P 21 48 23.7 +0.5**
comp=Z,56nm,1.4s,mb5.4
BJI Beijing 66.56 322 P **P 21 48 23.3 +0.1**
BJI pP pP 21 48 41.5 +14
BJI sP sP 21 48 48.5 +19
BJI PP PP 21 50 46.8 -3.2
BJI S S 21 57 12.3 -1.6
BJI pmax pmax
comp=Z,23nm,2.3s,mb4.8
BJI pmax pmax
comp=Z,930nm,6.5s
BJI LR LR
comp=N,4μm,24.5s,MS5.7
BJI LR LR
comp=E,5μm,24.1s,MS5.7
BJI LR LR
comp=Z,6μm,33.1s
SBA Scott Base 67.27 179 *e*P **P 21 48 27.5 +0.4**
SBA pmax pmax
comp=Z,82nm,1.2s,mb5.6
SBA Scott Base 67.27 179 *e*P **P 21 48 27.5 +0.3**
comp=Z,82nm,1.2s,mb5.6
TIY Taiyuan 67.53 318 *e*P **P 21 48 30.5 +1.1**
TIY S S 21 57 23.0 -2.6
TIY LR LR
comp=N,2μm,16.1s,MS5.7
TIY LR LR
comp=E,3μm,17.0s,MS5.7
TIY LR LR
comp=Z,8μm,24.9s
XAN Xi'an 67.96 313 P **P 21 48 32.5 +0.3**
XAN S S 21 57 25.0 -6.0
XAN pmax pmax
comp=Z,8.0nm,1.6s,mb4.5
XAN pmax pmax
comp=Z,230nm,6.9s
XAN LR LR
comp=N,1μm,17.5s,MS5.3
XAN LR LR
comp=E,1μm,21.9s,MS5.3
XAN LR LR
comp=Z,1μm,25.1s,MS5.1
KMI Kunming 68.73 302⇓P **P 21 48 38.8 +1.6**
KMI pP pP 21 48 57.5 +16
KMI PcP PcP 21 49 03.0 +1.0
KMI sP sP 21 49 05.0 +21
KMI PP PP 21 51 13.5 +4.3
KMI ScP 21 52 59.3
KMI PcS 21 53 06.5
KMI S S 21 57 36.3 -4.2
KMI sS sS 21 58 07.5 +19
KMI SKS 21 58 27.8
KMI ScS ScS 21 58 29.0 -8.5
KMI SS SS 22 02 04.0 -1.7
KMI pmax pmax
comp=Z,110nm,1.5s,mb5.6
KMI pmax pmax
comp=Z,1μm,5.6s
KMI LR LR
comp=N,2μm,16.0s,MS5.7
KMI LR LR
comp=E,3μm,17.8s,MS5.7
KMI LR LR
comp=Z,5μm,24.2s
UNV Unalaska Valle 69.17 19 *e*P **P 21 48 39.1 -0.1**
comp=Z,49nm,1.0s,mb5.4
CHRT Chiangrai 69.34 296⇓P **P 21 48 41.5 +0.4**
comp=Z,263nm,1.0s,mb6.1
CM31 Chiang Mai Arr 69.62 294 *e*P **P 21 48 44.5 +1.7**
CMAR Chiang Mai Arr 69.62 294 P **P 21 48 43.4 +0.6**
comp=Z,34nm,1.0s,mb5.2,baz=113,slow=4.3,SNR=66
CHG Chiang Mai 69.73 295⇓P **P 21 48 43.4 -0.1**
comp=Z,46nm,1.0s,mb5.4
CHTO Chiang Mai 69.73 295⇓*e*P **P 21 48 43.8 +0.3**
CHTO pmax pmax
comp=Z,102nm,1.5s,mb5.5
CHTO Chiang Mai 69.73 295⇓*e*P **P 21 48 43.8 +0.3**
comp=Z,102nm,1.5s,mb5.5
HHC Hu-ho-hao-te 69.87 321 *e*P **P 21 48 44.5 +0.6**
HHC PcP PcP 21 49 07.0 +0.6
HHC PP PP 21 51 20.8 +2.1
HHC S S 21 57 53.8 +0.5
HHC pmax pmax
comp=Z,27nm,1.0s,mb5.1
HHC pmax pmax
comp=Z,860nm,6.8s
HHC LR LR
comp=N,3μm,17.4s,MS5.9
HHC LR LR
comp=E,5μm,17.7s,MS5.9
HHC LR LR
comp=Z,4μm,17.7s,MS5.8
CD2 Chengdu 70.33 308 P **P 21 48 48.0 +1.0**
CD2 pP pP 21 49 06.0 +14
CD2 sP sP 21 49 14.0 +21
CD2 S S 21 57 53.0 -6.1
CD2 sS sS 21 58 24.5 +18
CD2 SKS 21 58 39.0
CD2 SS SS 22 02 26.0 -4.1
CD2 pmax pmax
comp=Z,70nm,0.7s,mb5.7
CD2 pmax pmax
comp=Z,1μm,6.4s
CD2 LR LR
comp=N,4μm,22.6s
CD2 LR LR
comp=Z,4μm,25.0s,MS5.6
BTO Baotou 70.70 320 *e*P **P 21 48 50.0 +1.0**
HIA Hailar 70.75 332 *e*P **P 21 48 49.5 +0.4**
HIA pmax pmax
comp=Z,125nm,1.1s
HIA Hailar 70.75 332 *e*P **P 21 48 49.5 +0.4**
comp=Z,125nm,1.1s,mb5.8
SDPT Sand Point 72.41 21 *e*P **P 21 48 59.7 +0.7**
comp=Z,83nm,1.4s,mb5.5
MIR Mirnyy 72.48 203⇑*i*P **P 21 48 59.4 +0.1**
MIR *e* 21 49 16.0
MIR *e*S S 21 58 28.0 +5.2
MIR *e*PS 21 58 51.0
MIR *e* 21 59 06.0
MIR pmax pmax
comp=Z,193nm,1.2s,mb5.9
MIR pmax pmax
comp=Z,1μm,7.0s
MIR smax
comp=N,980nm,10.0s
MIR smax
comp=E,1μm,9.0s
MIR MLR MLR
comp=N,3μm,18.0s,MS5.8
MIR MLR MLR
comp=E,3μm,18.0s,MS5.8
MIR MLR MLR
comp=Z,7μm,18.0s,MS6.0
LZH Lanzhou 72.59 313⇓P **P 21 49 02.5 +2.0**
LZH pP pP 21 49 19.3 +14
LZH sP sP 21 49 28.5 +22
LZH PP PP 21 51 47.0 +4.7
LZH S S 21 58 21.5 -3.6
LZH sS sS 21 58 52.3 +20
LZH pmax pmax
comp=Z,200nm,1.6s,mb5.8
LZH pmax pmax
comp=Z,1μm,5.1s
LZH LR LR
comp=E,4μm,17.0s
LZH LR LR
comp=Z,4μm,17.7s,MS5.7
SEY Seymchan 73.78 355*d i*P **P 21 49 06.6 -0.3**
SEY Seymchan 73.78 355 *i*P **P 21 49 06.7 -0.2**
CHGN Chignik 73.88 21 P **P 21 49 06.8 -0.8**
CLNS Chul'man 74.24 339 *e*P **P 21 49 08.9 -0.9**
CLNS pmax pmax
comp=N,33nm,1.4s
CLNS pmax pmax
comp=E,9.0nm,1.0s
CLNS pmax pmax
comp=Z,566nm,11.4s
CIT Chita 75.52 331 *e*P **P 21 49 18.0 +0.7**
CIT *e* 21 49 29.6
CIT *e* 21 49 36.2
CIT pmax pmax
comp=Z,263nm,1.4s,mb6.0
IMP Imphal 76.07 299 *e*PKP **P 21 49 21.0 -0.1**
IMP *ex* x 21 52 35.0
OHAK Old Harbor 76.45 23 *e*P **P 21 49 21.7 -0.8**
ULN Ulaanbaatar 76.47 325⇑*e*P **P 21 49 23.0 +0.2**
ULN pmax pmax
comp=Z,63nm,1.0s,mb5.5
ULN Ulaanbaatar 76.47 325⇑*e*P **P 21 49 22.9 +0.2**
comp=Z,63nm,1.0s,mb5.5
SONM Songino Array 76.82 325 P **P 21 49 24.8 0.0**
comp=Z,15nm,0.8s,mb5.0,baz=135,slow=2.9,SNR=84

GTA Gaotai 76.94 315 ⇓P **P** **21 49 27.5 +1.9**
GTA pP pP 21 49 44.5 +14
GTA sP sP 21 49 51.5 +20
GTA PP PP 21 52 23.8 +4.8
GTA S S 21 59 11.5 -1.9
GTA SKS 21 59 30.0
GTA sS sS 21 59 39.5 +18
GTA pmax pmax
comp=Z,32nm,1.4s,mb5.1
GTA pmax pmax
comp=Z,1μm,8.7s
GTA LR LR
comp=N,3μm,20.4s,MS5.8
GTA LR LR
comp=E,3μm,19.8s,MS5.8
GTA LR LR
comp=Z,4μm,19.2s,MS5.8
YAK Yakutsk 76.97 345 *e*P **P** **21 49 24.7 -0.6**
YAK *e* 21 49 34.7
YAK *e* 21 52 21.4
YAK *e*S S 21 59 11.4 -1.5
YAK *e* 21 59 40.5
YAK pmax pmax
comp=Z,74nm,1.3s,mb5.5
YAK pmax pmax
comp=E,11nm,1.1s
YAK pmax pmax
comp=N,24nm,1.4s
YAK pmax pmax
comp=Z,20nm,0.6s,mb5.2
YAK pmax pmax
comp=N,9.0nm,0.9s
YAK pmax pmax
comp=E,2.0nm,0.4s
YAK smax
comp=E,570nm,5.6s
YAK smax
comp=N,454nm,6.4s
YAK MLR MLR
comp=Z,3μm,23.0s,MS5.6
YAK MLR MLR
comp=N,3μm,28.0s
YAK MLR MLR
comp=E,1μm,17.0s
YAK Yakutsk 76.97 345 *e*P **P** **21 49 25.5 +0.2**
comp=E,124nm,1.1s,mb5.8
KDAK Kodiak Island 77.12 23 *e*P **P** **21 49 25.9 -0.3**
SHL Shillong 78.08 299 *e*PKP **P** **21 49 30.0 -2.3**
BILL Bilibino 78.47 1*c i*P **P** **21 49 32.2 -1.3**
BILL *e* 21 49 42.1
BILL pmax pmax
comp=Z,158nm,2.5s,mb5.5
BILL MLR MLR
comp=Z,4μm,19.0s,MS5.8
BILL Bilibino 78.47 1 *e*P **P** **21 49 33.5 0.0**
comp=Z,89nm,1.0s,mb5.7
SVW2 Sparrevohn 78.50 19 *e*P **P** **21 49 34.2 +0.4**
comp=Z,2.8nm,1.7s
RSO Redoubt South 78.97 21 *e*P **P** **21 49 33.6 -2.9**
QSPA South Pole Qui 79.40 180 *e*P **P** **21 49 37.2 -1.4**
comp=Z,38nm,1.1s,mb5.2
TTA Tatalina 79.75 18 *e*P **P** **21 49 40.9 +0.2**
ZAK Zakamensk 79.90 326 *e*P **P** **21 49 42.2 +0.5**
ZAK pmax pmax
comp=Z,2.0nm,1.4s
SEW Seward 79.90 22 *e*P **P** **21 49 41.2 -0.3**
comp=Z,36nm,1.0s,mb5.2
LSA Lhasa 79.98 303 P **P** **21 49 43.5 +0.8**
LSA PP PP 21 52 44.3 -0.4
LSA S S 21 59 35.8 -11
LSA LR LR
comp=E,3μm,28.4s
LSA LR LR
comp=Z,3μm,26.5s,MS5.5
IRK Irkutsk 80.32 328 *e*P **P** **21 49 43.4 -0.6**
IRK *e*S S 21 59 50.3 +1.2
IRK pmax pmax
comp=Z,56nm,2.2s,mb5.1
CAL Calcutta 80.32 295 *e*x x 21 49 36.2
CAL *e*x x 21 59 59.0
TLY Talaya 80.36 327 P **P** **21 49 44.1 -0.1**
comp=Z,171nm,1.0s,mb5.9,SNR=7.3
TLY Talaya 80.36 327 *e*P **P** **21 49 44.4 +0.2**
TLY *e* 21 52 52.1
TLY *e*S S 21 59 50.5 +0.9
TLY pmax pmax
comp=Z,37nm,1.0s,mb5.3
TLY Talaya 80.36 327 *e*P **P** **21 49 44.4 +0.2**
comp=Z,30nm,1.0s,mb5.2
TLY Talaya 80.36 327 P **P** **21 49 44.1 -0.1**
comp=Z,171nm,1.0s,mb5.9,SNR=7.3
RC01 Rabbit Creek A 80.47 21 *e*P **P** **21 49 44.0 -0.6**
PPLA Purkeypile 80.91 19 *e*P **P** **21 49 47.5 +0.6**
comp=Z,55nm,1.5s,mb5.3
PMR Palmer 81.03 21 *e*P **P** **21 49 45.9 -1.7**
PMR pmax pmax
comp=Z,62nm,1.5s,mb5.3
PMR Palmer 81.03 21 *e*P **P** **21 49 45.9 -1.7**
comp=Z,62nm,1.5s,mb5.3
MOY Mondy 81.79 326 *e*P **P** **21 49 52.1 +0.3**
MOY pmax pmax
comp=Z,101nm,3.4s
DIV Divide 81.94 22 *e*P **P** **21 49 52.2 -0.2**
BPAW Bear Paw Mtn. 82.15 19 *e*P **P** **21 49 52.3 -1.2**
comp=Z,20nm,1.2s,mb4.9
TAPN Taplejung 82.18 300 *e*P **P** **21 49 54.9 +0.5**
comp=Z,281nm,1.3s,mb6.0
BMRM Bremner River 82.29 23 *e*P **P** **21 49 53.3 -0.9**
comp=Z,39nm,1.1s,mb5.2
ODAN Odare 82.32 299 *e*P **P** **21 49 55.5 +0.3**
comp=Z,446nm,1.5s,mb6.2
RAMN Ramite 83.02 299 *e*P **P** **21 49 59.1 +0.3**
comp=Z,203nm,1.3s,mb6.0
RPN Rapa Nui 83.04 116 P **P** **21 49 58.7 -0.3**
JIRN Jiri 83.56 300 *e*P **P** **21 50 02.3 +0.7**
comp=Z,421nm,1.4s,mb6.4
PNL Peninsula 83.62 25 *e*P **P** **21 50 01.1 0.0**
comp=Z,51nm,1.1s,mb5.6
COLA College 83.67 19 *e*P **P** **21 50 00.1 -1.2**
COLA pmax pmax
comp=Z,42nm,0.9s,mb5.6
COLA College 83.67 19 *e*P **P** **21 50 00.1 -1.2**
comp=Z,42nm,0.9s,mb5.6
VIS Vishakhapatnam 83.68 289 *e*PKP **P** **21 50 02.1 -0.4**
VIS AMb AMB 21 50 04.5
comp=Z,69nm,1.1s,mb5.7
MENT Mentasta 83.83 22 *e*P **P** **21 50 02.0 -0.2**
GUN Gumba 83.89 300 *e*P **P** **21 50 03.7 +0.4**
comp=Z,452nm,1.1s,mb6.5
ILAR Eielson Array 83.91 19 P **P** **21 50 00.7 -1.9**
comp=Z,14nm,1.0s,mb5.0,baz=233,slow=4.9,SNR=48
PALK Pallekele 83.98 279 P **P** **21 50 04.6 +0.5**
KCPM Cahto Peak 84.12 48 *e*P **P** **21 50 05.2 +1.0**
comp=Z,46nm,1.2s,mb5.5
MAW Mawson 84.18 202 *e*P **P** **21 50 03.2 -0.8**
comp=Z,22nm,1.0s,mb5.2
MAW Mawson 84.18 202 P **P** **21 50 03.7 -0.3**
comp=Z,24nm,1.1s,mb5.2,baz=98,slow=6.5,SNR=7.4
MAW LR LR 22 24 22.5
comp=Z,3μm,20.1s,MS5.6,baz=96,slow=33
MAW Mawson 84.18 202 *e*P **P** **21 50 02.8 -1.2**
MAW pmax pmax
comp=Z,11nm,1.2s
MAW Mawson 84.18 202 *e*P **P** **21 50 02.8 -1.2**
comp=Z,11nm,1.2s,mb4.9
PKI Pulchoki 84.21 299 *e*P **P** **21 50 05.1 +0.2**
comp=Z,344nm,1.2s,mb6.4
PKI Pulchoki 84.21 299 *e*P **P** **21 50 05.1 +0.2**
PKI pmax pmax
comp=Z,345nm,1.2s,mb6.4
PKIN Phulchoki 84.22 299 *e*P **P** **21 50 04.8 -0.2**
comp=Z,106nm,0.7s,mb6.1
HOPS Hopland 84.28 49 *e*P **P** **21 50 06.2 +1.2**
comp=Z,115nm,1.4s,mb5.8
KKN Kakani 84.37 299 *e*P **P** **21 50 06.0 +0.2**
comp=Z,284nm,1.3s,mb6.2
KKN Kakani 84.37 299 *e*P **P** **21 50 06.0 +0.2**
KKN pmax pmax
comp=Z,284nm,1.3s,mb6.2
KHMM Horse Mountain 84.40 47 *e*P **P** **21 50 07.5 +1.9**
comp=Z,45nm,1.1s,mb5.5
DMN Daman 84.48 299 *e*P **P** **21 50 06.7 +0.4**
comp=Z,589nm,1.0s,mb6.7
COLD Coldfoot 84.58 17 *e*P **P** **21 50 06.2 +0.3**
comp=Z,16nm,1.0s,mb5.1
SAO San Andreas Ge 84.82 51 *e*P **P** **21 50 10.0 +2.2**
SAO pmax pmax
comp=Z,37nm,1.1s,mb5.4
SAO San Andreas Ge 84.82 51 *e*P **P** **21 50 10.0 +2.2**
comp=Z,37nm,1.1s,mb5.4
GKN Gorkha 84.98 300 *e*P **P** **21 50 08.5 -0.3**
comp=Z,315nm,1.0s,mb6.4
HYT Haines Junctio 85.04 25 *e*P **P** **21 50 09.0 +0.7**
WDC Whiskeytown Da 85.16 47 *e*P **P** **21 50 10.9 +1.5**
WDC pmax pmax
comp=Z,50nm,1.4s,mb5.5
WDC Whiskeytown Da 85.16 47 *e*P **P** **21 50 10.9 +1.5**
comp=Z,50nm,1.4s,mb5.5
TIXI Tiksi 85.19 350 *e*P **P** **21 50 07.4 -1.5**
TIXI *e*S S 22 00 25.0 -13
TIXI *e*SSS 22 09 34.0
TIXI pmax pmax
comp=Z,81nm,2.2s,mb5.5
TIXI Tiksi 85.19 350 *e*P **P** **21 50 08.5 -0.4**
comp=Z,116nm,1.5s,mb5.8
SKAG Skagway 85.27 27 *e*P **P** **21 50 12.3 +2.8**
comp=Z,0.4nm,0.3s
YBH Yreka Blue Hor 85.40 46 *e*P **P** **21 50 10.5 -0.1**
YBH pmax pmax
comp=Z,59nm,1.2s
YBH Yreka Blue Hor 85.40 46 *e*P **P** **21 50 10.5 -0.1**
comp=Z,58nm,1.2s,mb5.6
BSC Santa Cruz Isl 85.45 54 ⇑P **P** **21 50 10.5 -0.6**
baz=85
HUMO Hull Mountain 85.51 45 *e*P **P** **21 50 10.8 -0.3**
comp=Z,58nm,1.2s,mb5.7
SBC Santa Barbara 85.51 54 ⇑P **P** **21 50 10.6 -0.8**
baz=86
SMMC Simmler 85.53 53 ⇓P **P** **21 50 11.6 +0.3**
baz=86
BBB Bella Bella 85.66 35 LR LR 22 23 51.6
comp=Z,2μm,18.4s,MS5.5,baz=76,slow=32
KOLN Koldanda 85.81 299 *e*P **P** **21 50 12.4 -0.6**
comp=Z,67nm,0.9s,mb5.9
EGAK Eagle 85.84 21⇑*e*P **P** **21 50 11.5 -0.8**
comp=Z,66nm,0.9s,mb5.9
COR Corvallis 85.91 43 *e*P **P** **21 50 13.8 +0.7**
COR pmax pmax
comp=Z,32nm,1.0s,mb5.5
COR Corvallis 85.91 43 *e*P **P** **21 50 13.8 +0.7**
comp=Z,32nm,1.0s,mb5.5
BLG Laguna Peak 85.94 54 ⇑P **P** **21 50 13.8 +0.3**
baz=86
CMB Columbia Colle 86.00 50 *e*P **P** **21 50 12.6 -1.1**
CMB pmax pmax
comp=Z,93nm,1.6s,mb5.8
CMB Columbia Colle 86.00 50 *e*P **P** **21 50 12.6 -1.1**
comp=Z,93nm,1.6s,mb5.8
DAWY Dawson 86.07 22 *e*P **P** **21 50 13.6 +0.2**
F03A Seaside 86.18 42 ⇓P **P** **21 50 14.2 -0.1**
baz=86
OSI Osito Adit 86.34 54 ⇑P **P** **21 50 15.1 -0.3**
baz=86
OSI Osito Adit 86.34 54 P **P** **21 50 15.1 -0.3**
E03A Lebam 86.38 41 ⇑P **P** **21 50 15.1 -0.2**
baz=86,SNR=23
VES Vestal, Richgr 86.39 53 ⇑P **P** **21 50 14.9 -0.8**
baz=86
ARVC Arvin 86.40 53 ⇑P **P** **21 50 15.6 -0.1**
baz=86
NLWA Neilton Lookou 86.47 41 ⇓P **P** **21 50 15.7 0.0**
baz=86
NLWA Neilton Lookou 86.47 41⇑*e*P **P** **21 50 15.1 -0.6**
comp=Z,43nm,1.3s,mb5.5
PASC Pasadena Art C 86.66 55 *e*P **P** **21 50 17.0 0.0**
comp=Z,59nm,0.4s,mb6.2
G04A Mulino 86.66 43 ⇑P **P** **21 50 16.8 +0.1**
baz=87
H04A Detroit Lake 86.69 44 ⇑P **P** **21 50 16.7 -0.2**
baz=87
MWC Mount Wilson 86.77 54 *e*P **P** **21 50 17.5 -0.1**
MWC pmax pmax
comp=Z,122nm,1.4s,mb5.9
MWC Mount Wilson 86.77 54 *e*P **P** **21 50 17.5 -0.1**
comp=Z,122nm,1.4s,mb5.9
ISA Isabella 86.82 53 ⇓P **P** **21 50 17.6 -0.2**
baz=87,SNR=12
ISA Isabella 86.82 53 *e*P **P** **21 50 19.5 +1.7**
ISA pmax pmax
comp=Z,46nm,1.3s,mb5.5
ISA Isabella 86.82 53 *e*P **P** **21 50 19.5 +1.7**
comp=Z,46nm,1.3s,mb5.5
WCN Washoe City 86.83 49 ⇑P **P** **21 50 17.5 -0.2**
baz=87
WAKR Walker 86.84 50 *e*P **P** **21 50 17.6 -0.2**
K05A Summer Lake 86.99 46 ⇑P **P** **21 50 18.5 +0.1**
baz=87
WMQ Urumqi 86.99 315 P **P** **21 50 18.5 +0.1**
WMQ pP pP 21 50 37.3 +14
WMQ sP sP 21 50 44.8 +20
WMQ PP PP 21 53 44.0 +2.2
WMQ SKS 22 00 36.8
WMQ S S 22 00 49.0 -7.9
WMQ SS SS 22 06 34.8 -5.3
WMQ pmax pmax
comp=Z,41nm,1.2s,mb5.5
WMQ pmax pmax
comp=Z,570nm,6.0s
WMQ LR LR
comp=N,3μm,18.0s
WMQ LR LR
comp=E,3μm,27.0s
WMQ LR LR
comp=Z,3μm,28.0s
EDW2 Edwards Air Fo 87.00 54 ⇓P **P** **21 50 18.2 -0.5**
baz=87,SNR=31
BFSC Mount Baldy Ra 87.10 55 ⇓P **P** **21 50 18.5 -0.6**
baz=87,SNR=6.6
PGC Sidney 87.15 40 *e*P **P** **21 50 19.2 +0.1**
comp=Z,3.8nm,1.2s,mb4.5
MOD Modoc 87.17 47 *e*P **P** **21 50 19.0 -0.3**
comp=Z,42nm,1.1s,mb5.6
GNW Green Mountain 87.19 41 P **P** **21 50 21.1 +1.8**
MTUM Tungsten Hills 87.20 51 *e*P **P** **21 50 19.5 -0.1**
TDL Tradedollar La 87.20 42 P **P** **21 50 21.8 +2.4**
109C Camp Elliot, M 87.20 56 ⇓P **P** **21 50 19.0 -0.7**
baz=87
PAHR Pah Rah Range 87.22 49 *e*P **P** **21 50 19.4 -0.3**
comp=Z,66nm,1.2s,mb5.7
DLBC Dease Lake 87.23 29 LR LR 22 27 18.2
comp=Z,5μm,18.4s,MS6.0,baz=250,slow=34
DLBC Dease Lake 87.23 29 *e*P **P** **21 50 20.3 +1.0**
MURC Murrieta 87.31 55 ⇑P **P** **21 50 19.7 -0.5**
baz=87
CWC Cottonwood Cre 87.33 52 ⇑P **P** **21 50 19.9 -0.3**
baz=87
TIN Tinemaha 87.38 52 ⇓P **P** **21 50 20.1 -0.3**
baz=87
LRMC Laurel Mountai 87.39 53 ⇓P **P** **21 50 20.0 -0.5**
baz=87
BAR Barrett 87.51 56 *e*P **P** **21 50 20.8 -0.4**
comp=Z,47nm,1.3s,mb5.6
LON Longmire 87.59 42 *e*P **P** **21 50 19.9 -1.3**
LON pmax pmax
comp=Z,43nm,1.6s,mb5.4
LON Longmire 87.59 42 *e*P **P** **21 50 19.9 -1.3**
comp=Z,43nm,1.6s,mb5.4
CROR Criterion Ridg 87.60 44 P **P** **21 50 20.2 -1.1**
D05A Enumclaw 87.61 41 ⇑P **P** **21 50 20.9 -0.5**
baz=88
NVAR Mina Array Bea 87.68 50 P **P** **21 50 20.6 -1.3**
comp=Z,19nm,1.0s,mb5.3,baz=237,slow=6.1,SNR=27
MPMC Manual Prospec 87.69 53 ⇓P **P** **21 50 21.4 -0.6**
baz=88,SNR=15
VIPM Ingram Point 87.71 44 P **P** **21 50 21.4 -0.5**
PFO Pinyon Flat Ob 87.91 55 ⇓P **P** **21 50 22.4 -0.7**
baz=88,SNR=16
PFO Pinyon Flat Ob 87.91 55 *e*P **P** **21 50 24.5 +1.4**
PFO pmax pmax
comp=Z,128nm,1.8s,mb5.8
PFO Pinyon Flat Ob 87.91 55 *e*P **P** **21 50 24.5 +1.4**
comp=Z,128nm,1.8s,mb5.8
G06A Carlson Farm, 87.91 43 ⇓P **P** **21 50 21.8 -1.0**
baz=88
JCW Jim Creek 87.96 40 *e*P **P** **21 50 23.0 0.0**
GSC Goldstone 88.04 54 *e*P **P** **21 50 25.8 +2.1**
GSC pmax pmax
comp=Z,414nm,2.6s,mb6.2
GSC Goldstone 88.04 54 *e*P **P** **21 50 25.8 +2.1**
comp=Z,414nm,2.6s,mb6.2
HYB Hyderabad 88.07 288 *e*P **P** **21 50 24.5 +0.3**
HYB *e*S S 22 01 08.0 -0.2
HYB Hyderabad 88.07 288 *i*P **P** **21 50 24.5 +0.3**
HYB *e*S S 22 01 08.0 -0.2
NGP Nagpur 88.37 292 *e*PKP **P** **21 50 25.0 -0.5**
WVOR Wild Horse Val 88.51 46 *e*P **P** **21 50 24.2 -1.5**
WVOR pmax pmax
comp=Z,49nm,1.2s,mb5.7
WVOR Wild Horse Val 88.51 46 *e*P **P** **21 50 24.2 -1.5**
comp=Z,49nm,1.2s,mb5.7
ETW Entiat 88.81 41 *e*P **P** **21 50 28.7 +1.7**
RSW Rattlesnake Hi 88.95 42 *e*P **P** **21 50 30.0 +2.3**
HAWA Hanford 88.98 42 *e*P **P** **21 50 28.4 +0.5**
comp=Z,57nm,1.4s,mb5.7
BMN Battle Mountai 89.01 49 *e*P **P** **21 50 28.3 +0.2**
BMN pmax pmax
comp=Z,157nm,1.9s,mb6.0
BMN Battle Mountai 89.01 49 *e*P **P** **21 50 28.3 +0.1**
comp=Z,157nm,1.9s,mb6.0
GLA Glamis 89.10 56⇑*e*P **P** **21 50 28.3 -0.4**
GLA pmax pmax
comp=Z,122nm,1.2s,mb6.1
GLA Glamis 89.10 56⇑*e*P **P** **21 50 28.3 -0.4**
comp=Z,122nm,1.2s,mb6.1
LNOR Lincton Mounta 89.67 43 *e*P **P** **21 50 31.3 +0.2**
OD2 Odessa Site #2 89.80 42 P **P** **21 50 33.8 +2.1**
BMO Blue Mountains 90.08 44 *e*P **P** **21 50 32.6 -0.4**
BMO pmax pmax
comp=Z,80nm,1.6s,mb5.8
BMO Blue Mountains 90.08 44 *e*P **P** **21 50 32.6 -0.4**
comp=Z,80nm,1.6s,mb5.8
AKL Akola 90.14 291 *e*PKP **P** **21 50 31.4 -2.5**
BHPL Bhopal 90.26 293 *e*PKP **P** **21 50 34.0 -0.3**
INK Inuvik 90.31 19 P **P** **21 50 32.6 -1.0**
baz=238,slow=6.6
INK Inuvik 90.31 19 *e*P **P** **21 50 34.1 +0.5**
INK pmax pmax
comp=Z,94nm,1.8s
INK Inuvik 90.31 19 *e*P **P** **21 50 34.1 +0.6**
comp=Z,94nm,1.8s,mb5.8
ELK Elko 90.55 49 *e*P **P** **21 50 35.9 +0.6**
ELK pmax pmax
comp=Z,123nm,1.6s
ELK Elko 90.55 49 *e*P **P** **21 50 35.9 +0.5**
comp=Z,122nm,1.6s,mb6.0
N12A Clover Valley, 90.72 49 *e*P **P** **21 50 36.1 0.0**
comp=Z,180nm,1.4s,mb6.2
NEW Newport 91.06 41 *e*P **P** **21 50 37.9 +0.4**
NEW pmax pmax
comp=Z,30nm,1.2s
NEW Newport 91.06 41 *e*P **P** **21 50 37.9 +0.4**
comp=Z,30nm,1.2s,mb5.5
DDI Dehra Dun 91.11 300 *e*PKP **P** **21 50 36.0 -2.2**
DDI *e*x x 21 53 50.2
ARUT Antelope Range 91.25 52 *e*P **P** **21 50 38.5 -0.2**
ARUT pmax pmax
comp=Z,23nm,1.1s,mb5.4
ARUT Antelope Range 91.25 52 *e*P **P** **21 50 38.5 -0.1**
comp=Z,23nm,1.1s,mb5.4
CCUT Cedar City 91.26 52 *e*P **P** **21 50 38.1 -0.6**
comp=Z,77nm,1.4s,mb5.8
N13A Wendover, West 91.34 49 *e*P **P** **21 50 38.9 -0.1**
comp=Z,32nm,0.8s,mb5.7
MK31 Makanchi Array 91.47 317 *e*P **P** **21 50 39.1 -0.3**
MKAR Makanchi Array 91.47 317 P **P** **21 50 39.0 -0.4**
comp=Z,12nm,0.8s,mb5.3,baz=96,slow=6.0,SNR=102
MKAR Makanchi Array 91.47 317 *i*P **P** **21 50 39.0 -0.4**
MKAR pmax pmax
comp=Z,12nm,0.8s
NDI New Delhi 91.50 299 *e*PKP **P** **21 50 39.0 -1.0**
ZAA0 Zalesovo Array 91.72 325 *e*P **P** **21 50 39.2 -1.2**
ZALV Zalesovo Beam 91.72 325 P **P** **21 50 39.1 -1.3**
comp=Z,9.4nm,1.0s,mb5.1,baz=108,slow=4.8,SNR=32
HLID Hailey 91.79 46 *e*P **P** **21 50 41.1 +0.1**
comp=Z,84nm,1.5s,mb5.8
BGU Big Grassy Mou 92.22 49 *e*P **P** **21 50 42.4 -0.7**
comp=Z,24nm,1.2s,mb5.4
DUG Dugway 92.23 50 *e*P **P** **21 50 43.6 +0.5**
DUG pmax pmax
comp=Z,55nm,1.4s,mb5.7
DUG Dugway 92.23 50 *e*P **P** **21 50 43.5 +0.4**
comp=Z,55nm,1.4s,mb5.7
SDNR Sundarnagar 92.25 301 *e*PKP **P** **21 50 42.5 -0.9**
MSU Marysvale 92.38 51 *e*P **P** **21 50 44.5 +0.7**
WUAZ Wupatki 92.42 54 *e*P **P** **21 50 43.2 -0.9**
comp=Z,43nm,1.2s,mb5.7
BSMT Bassoo Peak 92.49 42 *e*P **P** **21 50 44.5 +0.4**
HVU Hansel Valley 92.59 48 *e*P **P** **21 50 45.4 +0.7**
HVU pmax pmax
comp=Z,134nm,1.4s,mb6.2
HVU Hansel Valley 92.59 48 *e*P **P** **21 50 45.4 +0.6**
comp=Z,134nm,1.4s,mb6.2
SPUT South Promonto 92.73 49 *e*P **P** **21 50 46.5 +1.1**
comp=Z,273nm,2.4s,mb6.3
NLU North Lily Min 92.74 50 *e*P **P** **21 50 48.3 +2.8**
comp=Z,411nm,2.8s,mb6.4
JTMT Jette 92.80 42 *e*P **P** **21 50 46.4 +0.9**
MSO Missoula 92.83 43 *e*P **P** **21 50 52.9 +7.2**
comp=Z,32nm,1.7s,mb5.5
NVS Novosibirsk 92.84 325⇓*i*P **P** **21 50 45.0 -0.6**
NVS *e* 22 01 06.9
NVS pmax pmax
comp=Z,48nm,1.3s,mb5.8
NVS pmax pmax
comp=N,12nm,1.5s
NVS pmax pmax
comp=E,68nm,2.2s
NOQ North Oquirrh 92.85 49 *e*P **P** **21 50 45.8 -0.2**
SWMT Swartz Lake 92.93 42 *e*P **P** **21 50 50.5 +4.3**
YBMT Yellow Bay 93.00 42 *e*P **P** **21 50 45.1 -1.4**
comp=E,1.6nm,0.4s,mb4.8
MPU Maple Canyon 93.09 50 *e*P **P** **21 50 50.8 +3.7**
comp=E,120nm,1.8s,mb6.0
CTU Camp Tracy 93.13 49 *e*P **P** **21 50 47.9 +0.6**
comp=E,42nm,1.2s,mb5.8
MCMT McKenzie Canyo 93.16 45 *e*P **P** **21 50 47.1 -0.2**
comp=E,9.2nm,1.1s,mb5.1
SLMT Seeley Lake 93.21 43 *e*P **P** **21 50 47.0 -0.5**
TMUT Trail Mountain 93.27 51 *e*P **P** **21 50 48.0 +0.1**
CHMT Chamberlain Mo 93.31 43 *e*P **P** **21 50 49.9 +2.0**
WALA Waterton Lakes 93.32 41 *e*P **P** **21 50 47.8 -0.1**
comp=E,2.1nm,1.5s,mb4.3
JLU Jordanelle 93.34 49 *e*P **P** **21 50 51.2 +3.0**
comp=E,327nm,2.7s,mb6.3
DLMT Dillon 93.44 45 *e*P **P** **21 50 48.5 0.0**
comp=E,102nm,1.3s,mb6.1
HWUT Hardware Ranch 93.44 48 *e*P **P** **21 50 50.8 +2.1**
comp=E,80nm,1.9s,mb5.8
DAU Daniels Canyon 93.44 50 *e*P **P** **21 50 51.8 +3.1**
THN Thein Dam 93.47 302 *e*PKP **P** **21 50 46.6 -2.4**
THN *e*x x 21 54 00.8
LRM Limekiln Ridge 93.63 44 *e*P **P** **21 50 49.5 +0.1**
RRI2 Red Ridge 93.95 47 *e*P **P** **21 50 54.0 +3.0**
comp=E,49nm,1.5s,mb5.7
DCID1 Drake Creek 94.09 47 P **P** **21 50 52.1 +0.5**
HRY Holter Researc 94.22 43 *e*P **P** **21 50 54.7 +2.6**
REDW Red Top Meadow 94.29 47 *e*P **P** **21 50 52.8 +0.2**
IMW Indian Meadow 94.32 46 *e*P **P** **21 50 56.4 +3.7**
comp=E,48nm,1.5s,mb5.7
SNOW Snow King Moun 94.37 47 *e*P **P** **21 50 54.1 +1.1**
MOOW Moose Ponds 94.43 46 *e*P **P** **21 50 55.9 +2.7**
comp=E,36nm,1.6s,mb5.5
YMR Madison River 94.44 46 *e*P **P** **21 50 53.8 +0.5**
KSH Kashi 94.51 309 *e*P **P** **21 50 55.0 +1.4**
KSH pP pP 21 51 14.5 +16
KSH sP sP 21 51 19.5 +19
KSH PP PP 21 54 45.5 +4.0
KSH SKS 22 01 23.8
KSH S S 22 01 59.5 -6.4
KSH sS sS 22 02 28.5 +15
KSH SS SS 22 08 26.3 -2.6
KSH pmax pmax
comp=Z,47nm,2.0s,mb5.6
KSH pmax pmax
comp=Z,310nm,5.9s
KSH LR LR
comp=N,1μm,14.3s,MS5.7
KSH LR LR
comp=E,2μm,19.3s,MS5.7
KSH LR LR
comp=Z,3μm,20.0s,MS5.7
LOHW Long Hollow 94.51 47 *e*P **P** **21 50 56.1 +2.6**
comp=Z,45nm,1.7s,mb5.6
EDM Edmonton 94.53 37 *e*P **P** **21 50 52.7 -0.7**
YNR Norris Junctio 94.65 46 *e*P **P** **21 50 54.9 +0.7**
KURK Kurchatov 94.68 321 P **P** **21 50 53.4 -0.8**
comp=Z,5.6nm,1.1s,mb4.9,baz=101,slow=3.2,SNR=23
KURK Kurchatov 94.68 321 *e*P **P** **21 50 53.3 -0.9**

KURK pmax pmax
comp=Z,102nm,1.7s,mb6.0
KURK Kurchatov 94.68 321 *e*P **P 21 50 53.3 -0.9**
comp=Z,102nm,1.7s,mb6.0
PV10 Paradox Valley 94.77 52 *e*P **P 21 50 55.2 +0.3**
comp=Z,172nm,0.9s,mb6.5
PV04 Paradox Valley 94.88 52 *e*P **P 21 50 55.9 +0.6**
PV04 *e*P pP 21 51 01.8 +1.7
MVCO Mesa Verde 95.00 53 *e*P **P 21 50 56.7 +0.7**
PV01 Paradox Valley 95.10 52 *e*P **P 21 50 56.0 -0.4**
comp=Z,690nm,1.0s
BW06 Boulder Array 95.12 48 *e*P **P 21 50 55.8 -0.6**
comp=Z,12nm,1.2s,mb5.2
LAZ Ladron 95.65 56 *e*P **P 21 50 59.2 +0.3**
comp=Z,2.5nm,1.1s,mb4.6
RLMT Red Lodge 95.71 45 *e*P **P 21 50 58.5 -0.5**
NIL Nilore 95.72 303 P **P 21 50 59.0 -0.3**
YKA Yellowknife Ar 95.75 28 P **P 21 50 57.1 -1.6**
comp=Z,3.3nm,1.0s,mb4.7,baz=253,slow=4.7,SNR=9.1
BNM Barren Site 96.03 57 *e*P **P 21 51 00.9 +0.2**
comp=Z,9.5nm,1.1s,mb5.1
UCH Uchtor 96.04 312 *e*P **P 21 51 01.0 +0.4**
FRU Bishkek 96.06 312⇑ *e*P **P 21 51 05.0 +4.4**
FRU pmax pmax
comp=Z,70nm,2.1s,mb5.7
FRU pmax pmax
comp=Z,140nm,2.2s,mb6.0
FRU MLR MLR
comp=Z,2μm,23.0s,MS5.6
AAK Ala-Archa 96.11 312 P **P 21 51 01.1 +0.2**
comp=Z,1.0nm,0.3s,mb4.8,baz=244,slow=3.5,SNR=4.4
AAK Ala-Archa 96.11 312 *e*P **P 21 51 00.7 -0.2**
AAK pmax pmax
comp=Z,31nm,1.5s,mb5.5
AAK Ala-Archa 96.11 312 *e*P **P 21 51 00.7 -0.2**
comp=Z,31nm,1.5s,mb5.5
ANMO Albuquerque 96.28 56 *e*P **P 21 51 03.4 +1.5**
ANMO pmax pmax
comp=Z,8.0nm,1.0s
ANMO Albuquerque 96.28 56 *e*P **P 21 51 03.4 +1.5**
comp=Z,7.7nm,1.0s,mb5.1
SMCO Snowmass 96.49 51 *e*P **P 21 51 03.2 +0.5**
AML Almayashu 96.63 312 *e*P **P 21 51 03.1 -0.2**
comp=Z,7.5nm,0.8s,mb5.2
EKS2 Erkin-Say 96.64 312 *e*P **P 21 51 03.3 0.0**
comp=Z,17nm,1.5s,mb5.3
RWWY Rawlins 96.67 49 *e*P **P 21 51 03.1 -0.4**
MNTX Cornudas Mount 96.70 59 *e*P **P 21 51 01.9 -1.9**
comp=Z,9.4nm,1.3s,mb5.1
ISCO Idaho Springs 97.62 51 *e*P **P 21 51 08.2 +0.4**
TXAR Lajitas Array 97.84 62 P **P 21 51 08.5 -0.6**
comp=Z,0.9nm,1.0s,baz=225,slow=7.5,SNR=2.5
RSSD Black Hills 99.28 47 *e*P **P 21 51 15.1 0.0**
KBL Kabul 99.29 303 *e*P **P 21 51 15.1 -0.3**
KBL pmax pmax
comp=Z,12nm,1.2s,mb5.3
KBL Kabul 99.29 303 *e*P **P 21 51 15.1 -0.4**
comp=Z,12nm,1.2s,mb5.3
BVAR Borovoye Array 100.05 322 P Pdif 21 51 16.9 -1.5
comp=Z,5.2nm,0.9s,baz=107,slow=5.1,SNR=22
BRVK Borovoye 100.11 322 *c i*P Pdif 21 51 17.3 -1.3
BRVK pmax pmax
comp=Z,23nm,2.5s
BRVK Borovoye 100.11 322 *e*Pdif Pdif 21 51 17.6 -1.1
AMTX Amarillo 100.17 56 Pdif Pdif 21 51 19.2 +0.3
QUE Quetta 100.58 299 *e*P Pdif 21 51 14.0 -6.7
JCT Junction City 101.31 61 P Pdif 21 51 24.7 +0.7
ECSD EROS Data Cent 104.61 47 *e*P Pdif 21 51 39.2 +0.5
ABKAR Akbulak array 106.58 318 *e*Pdif Pdif 21 51 49.1 +1.7
comp=Z,2.2nm,1.0s
EYMN Ely 108.06 43 PKiKP PKiKP 21 56 01.5 +0.5
CCM Cathedral Cave 108.71 53 PKiKP PKiKP 21 56 02.9 +0.5
HBAR Harrisburg 109.22 56 PKiKP PKiKP 21 56 02.3 -1.2
KBS Kingsbay 110.24 354 *e*PP PP 21 56 46.6 +8.2
KBS AMS AMS 22 34 17.8
comp=Z,2μm,27.0s,MS5.6
SIUC Southern Illin 110.32 54 PKiKP PKiKP 21 56 05.6 +0.1
ABPO Ambohimpanom 110.35 245 PKIKP PKiKP 21 56 06.3 +0.2
UTMT University of 110.65 55 PKiKP PKiKP 21 56 06.2 0.0
BJO Bjornoya 112.94 350 AMS AMS 22 51 09.8
comp=Z,2μm,25.1s,MS5.7
APA Apatity 114.21 341⇑ *e*PKIKP PKiKP 21 56 10.2 -1.8
APA *e* 21 57 09.0
APA pmax pmax
comp=Z,18nm,1.2s
APA MLR MLR
comp=Z,5μm,25.0s,MS6.0
KEV Kevo 114.72 345 *e*PKIKP PKiKP 21 56 11.6 -1.4
KEV pmax pmax
comp=Z,276nm,0.7s
KEV Kevo 114.72 345 *e*p PKiKP 21 56 11.6 -1.4
comp=Z,276nm,0.7s
ARCES ARCESS Array B 115.25 345 PKP PKiKP 21 56 12.7 -1.3
comp=Z,3.1nm,0.6s,baz=108,slow=2.9,SNR=29
ARE0 ARCESS Array S 115.25 345 *e*PKPdf PKiKP 21 56 13.1 -0.9
TRQA Tornquist 115.80 142 PKPdf PKPdf 21 56 15.6 -0.4
MAK Makhachkala 115.89 313 *i*PKIKP PKPdf 21 56 17.4 +1.4
MAK *i* 21 57 20.4
MAK *i*PS PS 22 07 00.3 -1.0
MAK *e*SS SS 22 13 10.8 -10
MAK *e*SSS 22 17 40.7
MAK pmax pmax
comp=Z,46nm,1.5s
KTK1 Kautokeino 116.20 345 AMS AMS 22 47 29.4
comp=Z,2μm,26.1s,MS5.7
SUMG Summit 116.72 7 PKPdf PKPdf 21 56 17.3 +0.5
TRO Tromso 116.77 347 *e* SP 22 07 01.5 -3.7
JOF Joensuu 117.56 337 *e*PKIKP PKPdf 21 56 17.1 -1.5
JOF pmax pmax
comp=Z,106nm,0.8s
JOF Joensuu 117.56 337 *e*p PKPdf 21 56 17.1 -1.5
comp=Z,106nm,0.8s
DGRG David-gareji 117.72 311 P PP 21 57 35.7 +3.1
VRHR Novokhopersk 117.78 323 *e*PKIKP PKPdf 21 56 23.5 +4.1
VRHR *e* 21 57 32.0
VRHR pmax pmax
comp=Z,8.0nm,0.4s
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,7.0nm,0.4s
VRHR pmax pmax
comp=Z,10.0nm,3.3s
VRHR pmax pmax
comp=N,6.0nm,3.4s
VRHR pmax pmax
comp=E,1.0nm,1.7s
MTA Mtatsminda 118.10 312 P PP 21 57 36.7 +1.4
OBN Obninsk 119.10 328 *c i*PKIKP PKPdf 21 56 20.5 -1.3
OBN *e* 21 57 41.4
OBN *i*PS PS 22 07 27.6 -2.2
OBN pmax pmax
comp=Z,27nm,1.6s
OBN Obninsk 119.10 328⇑ *e*PKP PKPdf 21 56 20.6 -1.2
OBN LR LR
comp=Z,3μm,17.0s,MS5.9
KIV Kislovodsk 119.11 315 *e*P Pdif 21 52 41.3 -1.8
KIV *i* 21 56 21.1
KIV *e* 21 57 42.1
KIV *e*PPP 22 00 13.8
KIV *e*PS PS 22 07 29.8 -0.7
KIV *e*SS SS 22 13 58.7 -4.0
KIV pmax pmax
comp=Z,9.0nm,1.1s
KIV MLR MLR
comp=Z,2μm,20.0s,MS5.7
KIV Kislovodsk 119.11 315 *e*PKPdf PKPdf 21 56 21.5 -0.7
VSR Storozhevoye 119.20 323 *e*PKIKP PKPdf 21 56 20.1 -2.0
VSR *e* 21 57 42.7
VSR *e*SP SP 22 07 30.8 +2.6
VSR pmax pmax
comp=Z,10.0nm,0.9s
VSR pmax pmax
comp=N,5.0nm,0.4s
VSR pmax pmax
comp=E,9.0nm,0.9s
VSR pmax pmax
comp=Z,210nm,3.3s
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,60nm,3.3s
VORD Divnogorie 119.21 323 *e*PKIKP PKPdf 21 56 20.8 -1.3
VORD *e* 21 57 44.0
VORD *e*SP SP 22 07 26.0 -2.3
VORD pmax pmax
comp=Z,90nm,4.3s
VORD pmax pmax
comp=N,10.0nm,0.7s
VORD pmax pmax
comp=E,10.0nm,0.9s
VORD pmax pmax
comp=Z,370nm,6.0s
VORD pmax pmax
comp=N,20nm,0.9s
VORD pmax pmax
comp=E,250nm,6.0s
JMIC Jan Mayen 119.44 357 *e*PP PP 21 57 45.5 +2.3
JMIC AMS AMS 22 38 38.1
comp=Z,2μm,30.0s,MS5.5
KAF Kangasniemi 119.91 338 *e*PKIKP PKPdf 21 56 20.8 -2.3
KAF pmax pmax
comp=Z,100nm,0.8s
KAF Kangasniemi 119.91 338 *e*p PKPdf 21 56 20.8 -2.3
comp=Z,100nm,0.8s
MVL Millersville 120.01 50 *e*PKPdf PKPdf 21 56 28.2 +4.2
LONY Lake Ozonia 120.17 44 *e*PKPdf PKPdf 21 56 28.5 +4.4
FINES FINESS Array B 120.42 338 PKP PKPdf 21 56 22.3 -1.9
comp=Z,3.3nm,0.7s,baz=135,slow=2.3,SNR=8.8
FINES pPKP pPKPdf 21 56 29.2 +0.2
comp=Z,9.4nm,0.8s,baz=108,slow=6.2,SNR=10
FINES FINESS Array B 120.42 338 PKP PKPdf 21 56 22.3 -1.9
FINES pPKP pPKPdf 21 56 29.2 +0.2
SCHQ Schefferville 120.97 31 PKP PKPdf 21 56 22.3 -3.1
comp=Z,3.9nm,0.9s,baz=21,slow=4.9,SNR=2.7
SCHQ Schefferville 120.97 31 *e*PKPdf PKPdf 21 56 24.9 -0.5
SOC Sochi 121.29 315 *i* PKIKP PKPdf 21 56 24.0 -2.4
SOC *e* 21 56 40.6
SOC *e* 21 57 52.5
SOC MLR MLR
comp=Z,4μm,21.0s,MS6.1
MDV Middlebury 121.31 45 *e*PKPdf PKPdf 21 56 25.3 -1.1
PAL Palisades 121.59 48 *e*PKIKP PKPdf 21 56 31.4 +4.4
LPAZ La Paz 122.65 117 PKP PKPdf 21 56 29.4 -0.4
comp=Z,0.5nm,0.5s,baz=162,slow=8.1,SNR=2.7
LPAZ pPKP pPKPdf 21 56 35.1 +0.6
comp=Z,2.3nm,0.8s,baz=199,slow=1.8,SNR=7.4
LPAZ La Paz 122.65 117 PKP PKPdf 21 56 29.4 -0.4
LPAZ *e*PKPdf PKPdf 21 56 35.2 +5.5
BOSA Boshof 123.67 225 PKP PKPdf 21 56 30.1 -1.4
comp=Z,2.2nm,0.9s,baz=108,slow=3.2,SNR=3.1
MICGM Minsk 123.78 330 *e* PKPdf 21 56 28.0 -2.8
MNK Minsk 123.80 330 *e*PKIKP PKPdf 21 56 28.0 -2.8
IZAR Zarasai 123.83 332 *e*P PKPdf 21 56 29.2 -1.7
IZAR AMB AMB 21 56 37.5
comp=Z,7.6nm,0.9s
IDID Didziasalis 123.86 332 *e*P PKPdf 21 56 29.8 -1.1
IDID AMB AMB 21 56 37.6
comp=Z,8.6nm,0.9s
IIGN Ignalina 124.08 332 *e*P PKPdf 21 56 30.3 -1.0
IIGN AMB AMB 21 56 37.2
comp=Z,10nm,0.9s
NACGM Naroch 124.08 331 *e* PKPdf 21 56 29.0 -2.4
SIM Simferopol' 124.65 318 *i* PKIKP PKPdf 21 56 25.0 -7.8
SIM 21 58 17.3
SIM pmax pmax
comp=Z,38nm,10.0s
AKASG Malin Array Be 125.09 326 PKP PKPdf 21 56 31.4 -2.0
comp=Z,6.2nm,0.9s,baz=63,slow=1.7,SNR=22
AKASG pPKP pPKPdf 21 56 37.5 -0.8
comp=Z,9.9nm,0.9s,baz=58,slow=1.7,SNR=10.0
AKASG Malin Array Be 125.09 326 PKP PKPdf 21 56 31.4 -2.0
AKASG pPKP pPKPdf 21 56 37.5 -0.8
NB2 NORSAR Subarra125.59 344 PKPdf PKPdf 21 56 32.5 -1.6
comp=Z,10nm,1.0s,baz=31,slow=1.9
NB2 NORSAR Subarra125.59 344 PKPdf PKPdf 21 56 32.5 -1.6
baz=31,slow=1.9
NOA NORSAR Array B125.59 344 PKP PKPdf 21 56 32.4 -1.7
comp=Z,4.5nm,0.9s,baz=33,slow=1.9,SNR=9.1
NOA pPKP pPKPdf 21 56 38.6 -0.3
comp=Z,6.5nm,0.9s,baz=31,slow=1.8,SNR=16
HFS Hagfors 125.60 342 PKP PKPdf 21 56 31.9 -2.2
comp=Z,5.8nm,0.9s,baz=260,slow=0.9,SNR=9.3
HFS pPKP pPKPdf 21 56 38.1 -0.8
comp=Z,12nm,0.9s,baz=119,slow=1.9,SNR=14
ASF Jabal al Asfar 126.16 302 PKP PKPdf 21 56 35.8 -0.3
comp=Z,4.6nm,1.1s,baz=47,slow=2.6,SNR=4.6
CPUP Villa Florida 126.18 134 pPKP pPKPdf 21 56 41.4 +0.2
comp=Z,1.9nm,0.8s,baz=167,slow=3.5,SNR=3.5
SUW Suwalki 126.29 332 *e*PKP PKPdf 21 56 33.9 -1.8
SUW Suwalki 126.29 332 *e*PKPdf PKPdf 21 56 35.2 -0.4
FOO Floro 126.64 347 *e*PP PP 21 58 31.4 -0.6
FOO AMS AMS 22 49 04.1
comp=Z,2μm,24.0s,MS5.8
BR131 Keskin Array S 126.79 312 *e*PKPdf PKPdf 21 56 36.3 -0.8
BRTR Keskin Array B 126.79 312 PKP PKPdf 21 56 35.8 -1.3
comp=Z,4.5nm,1.1s,baz=95,slow=1.4,SNR=14
KIS Kishinev 127.13 322 *e*PKP PKPdf 21 56 37.0 -0.5
KIS Kishinev 127.13 322 *e*PP PP 21 58 36.0 0.0
KIS *e*SKSP 22 08 20.0
KIS Kishinev 127.13 322 *e*PS PS 22 08 31.0 -10
KIS LRM 22 52 52.0
comp=Z,1μm,20.0s
KIS Kishinev 127.13 322 *e*PKIKP PKPdf 21 56 37.0 -0.5
KIS *e* 21 58 36.0
KIS *e*PS PS 22 08 31.0 -10
KIS MLR MLR
comp=Z,2μm,19.0s,MS5.8
KIS MLR MLR
comp=N,800nm,18.0s,MS5.7
KIS MLR MLR
comp=E,1μm,20.0s,MS5.7
KONO Kongsberg 127.19 344 *e*PP PP 21 58 37.7 +2.0
KONO AMS AMS 22 46 33.2
comp=Z,2μm,21.6s,MS5.8
KONO Kongsberg 127.19 344⇑ *e*PKIKP PKPdf 21 56 35.5 -1.7
MMAI Mount Meron Ar 127.23 303 PKP PKPdf 21 56 39.0 +0.9
comp=Z,5.2nm,1.0s,baz=79,slow=7.5,SNR=4.0
BER Bergen 127.65 346 *e* PKPdf 21 56 43.5 +5.5
BER AMS AMS 22 49 38.0
comp=Z,2μm,28.0s,MS5.6
EIL Elat 128.27 299 PKP PKPdf 21 56 39.3 -0.9
comp=Z,6.0nm,0.9s,baz=118,slow=4.9,SNR=4.8
LVV L'vov 128.38 327 *e*PKIKP PKPdf 21 56 38.8 -0.9
BURAR Bucovina Array 128.94 324 ⇑PKIKP PKPdf 21 56 42.3 +1.4
BURAR Bucovina Array 128.94 324 ⇑*i*P PKPdf 21 56 42.3 +1.4
GKP Gorka Klasztor 129.44 334 *e*PKP PKPdf 21 56 41.4 -0.2
MLR Muntele Rosu 129.60 322 PKP PKPdf 21 56 41.5 -0.7
comp=Z,5.1nm,1.1s,baz=333,slow=7.2,SNR=5.1
MLR Muntele Rosu 129.60 322 ⇓P PKPdf 21 56 41.5 -0.7
MLR Muntele Rosu 129.60 322 ⇓*i*P PKPdf 21 56 41.5 -0.7
UZH Uzhgorod 129.99 327 *d i*PKIKP PKPdf 21 56 42.0 -0.9
UZH *e* 21 56 53.2
STHS Stebnicka Huta 130.08 328 *e*PKIKP PKPdf 21 56 43.0 0.0
STHS Stebnicka Huta 130.08 328 *e*PKP PKPdf 21 56 43.0 0.0
DRGR 130.82 325 ⇓PKIKP PKPdf 21 56 44.3 -0.2
DRGR 130.82 325 ⇓*i*P PKPdf 21 56 44.3 -0.2
OKC Ostrava-Krasne 131.36 330 *e*PKIKP PKPdf 21 56 45.9 +0.5
OKC MLR MLR
comp=Z,3μm,19.6s,MS6.0
OKC Ostrava-Krasne 131.36 330 *e*PKPdf PKPdf 21 56 45.9 +0.5
OKC *e*pPKP pPKPdf 21 56 51.2 +0.9
OKC *e*SS SS 22 16 42.4 +6.9
OKC AMS AMS 23 00 20.0
comp=Z,3μm,19.6s
RUE Ruedersdorf 131.46 335 *e*PKPdf PKPdf 21 56 44.5 -1.0
KSP Ksiaz 131.56 332 *e*PKIKP PKPdf 21 56 45.6 -0.1
KSP *e* 21 59 02.5
BSEG Bad Segeberg 131.66 339 *e*PKPdf PKPdf 21 56 45.1 -0.7
MORC Moravsky Berou 131.70 331 ⇓PKIKP PKPdf 21 56 47.9 +1.8
MORC Moravsky Berou 131.70 331 ⇓*i*P PKPdf 21 56 47.9 +1.8
SJG San Juan 131.76 75 *e*PKIKP PKPdf 21 56 45.6 -1.5
DPC Dobruska-Polom 131.88 332 *e*PKIKP PKPdf 21 56 46.1 -0.3
DPC *e* 21 59 12.2
DPC *e*SS SS 22 16 43.5 +1.7
DPC MLR MLR
comp=Z,3μm,21.1s,MS6.0
DPC Dobruska-Polom 131.88 332 *e*PKPdf PKPdf 21 56 46.1 -0.3
DPC *e*pPKP pPKPdf 21 56 51.8 +0.6
DPC *e*PP PP 21 59 12.2 +5.6
DPC *e*SS SS 22 16 43.5 +1.7
DPC AMS AMS 22 58 30.0
comp=Z,3μm,21.1s
VYHS Vyhne 131.89 329 *e*PKIKP PKPdf 21 56 45.5 -1.0
VYHS Vyhne 131.89 329 *e*PKP PKPdf 21 56 45.5 -1.0
UPC Upice 131.92 332 *e*PKIKP PKPdf 21 56 47.8 +1.4
UPC Upice 131.92 332 *e*PKPdf PKPdf 21 56 47.8 +1.4
UPC *e*pPKP pPKPdf 21 56 53.3 +2.0
HUMP Col San Antoni 132.04 75 *e*PKPdf PKPdf 21 56 46.3 -1.3
KOLL Kolacno 132.06 329 *e*PKIKP PKPdf 21 56 47.2 +0.4
KOLL Kolacno 132.06 329 *e*PKP PKPdf 21 56 47.2 +0.4
BZS Buzias 132.11 324 ⇓PKIKP PKPdf 21 56 47.8 +0.8
BZS Buzias 132.11 324 ⇓*i*P PKPdf 21 56 47.8 +0.8
VRAC Vranov 132.47 331 PKP PKPdf 21 56 47.0 -0.5
comp=Z,3.0nm,0.9s,baz=223,slow=20,SNR=3.9
VRAC Vranov 132.47 331 PKP PKPdf 21 56 47.0 -0.5
VRAC ⇑P 21 56 52.5
VRAC Vranov 132.47 331 ⇑*i*P PKPdf 21 56 52.5 +5.0
PVCC Panska Ves 132.55 333 *e*PKIKP PKPdf 21 56 47.6 0.0
PVCC MLR MLR
comp=Z,4μm,22.5s,MS6.1
PVCC Panska Ves 132.55 333 *e*PKPdf PKPdf 21 56 47.6 0.0
PVCC *e*pPKP pPKPdf 21 56 52.9 +0.4
PVCC *e*x x 22 17 04.5
PVCC AMS AMS 22 54 40.0
comp=Z,4μm,22.5s
BRG Berggiesshubel 132.58 334 *e*PDIF Pdif 21 53 38.5 -4.4
comp=Z,5.5nm,1.6s
BRG Berggiesshubel 132.58 334 *e*PKP PKPdf 21 56 47.0 -0.6
comp=Z,4.0nm,0.9s
BRG *e* 21 56 52.8
comp=Z,22nm,1.2s
BRG *e* 21 57 10.9
comp=Z,6.7nm,1.2s
BRG PP PP 21 59 15.0 +4.0
BRG
comp=N,6μm,23.9s
BRG
comp=E,4μm,24.4s
BRG
comp=Z,6μm,24.4s
BRG Berggiesshubel 132.58 334 *e*PKIKP PKPdf 21 56 47.0 -0.7
BRG 21 59 15.0
BRG pmax pmax
comp=Z,2.0nm,1.0s
BRG pmax pmax
comp=Z,13nm,1.3s
BRG pmax pmax
comp=Z,4.0nm,1.2s
BRG MLR MLR
comp=N,3μm,23.9s,MS6.0
BRG MLR MLR
comp=E,2μm,24.4s,MS6.0
BRG MLR MLR
comp=Z,4μm,24.4s,MS6.0
CLL Collm 132.66 335 *e*PKPdf PKPdf 21 56 47.0 -0.8
CLL Collm 132.66 335 *e*PKIKP PKPdf 21 56 49.0 +1.2
CLL pmax pmax
comp=Z,8.0nm,1.3s
CLL Collm 132.66 335 *e*PKP PKPdf 21 56 49.0 +1.2
CLL *i* 21 56 52.9
CLL *e*PKS 22 00 24.0
CLL Collm 132.66 335 *e*PKPdf PKPdf 21 56 49.0 +1.2
comp=Z,8.0nm,1.3s
CLL *i* pPKPdf pPKPdf 21 56 52.9 +0.3
comp=Z,14nm,1.2s
CLL *e* 21 57 07.0
CLL *e*PP PP 21 59 12.0 +0.6
CLL *e*PKSdf 22 00 24.0
CLL *e*SKKSac SKKSac 22 06 18.0 +10
CLL *e*Sdif Sdif 22 07 30.0 +5.2
CLL *e*PS PS 22 09 32.0 +3.3
CLL *e*PPS 22 11 18.0
CLL *e*SS SS 22 16 48.0 -3.0
CLL *e*(SSS) 22 21 12.0
CLL *e*SSSS 22 25 30.0
VTS Vitosha 132.77 320 ⇓PKIKP PKPdf 21 56 53.3 +5.0
VTS Vitosha 132.77 320 *i* P PKPdf 21 56 47.4 -0.9
VTS Vitosha 132.77 320 ⇓*i*P PKPdf 21 56 53.3 +5.0
NRDL Niedersach Rie 132.88 338 *e*PKPdf PKPdf 21 56 46.5 -1.7
MMB Musomiste 132.93 318 *i* P PKPdf 21 56 47.2 -1.4
PRA Prague 132.94 333 PKPdf PKPdf 21 56 48.0 -0.4
PRU Pruhonice 132.95 333 *e*PKIKP PKPdf 21 56 48.3 -0.1
PRU MLR MLR
comp=Z,4μm,24.3s,MS6.0
PRU Pruhonice 132.95 333 *e*PKPdf PKPdf 21 56 48.3 -0.1
PRU *e*pPKP pPKPdf 21 56 54.1 +0.9
PRU *e*SS SS 22 17 00.2 +5.5
PRU AMS AMS 22 54 10.0
comp=Z,4μm,24.3s
TREC Trest 133.01 331 *e*PKIKP PKPdf 21 56 49.0 +0.5
TREC *e*SS SS 22 17 13.6 +18
TREC MLR MLR
comp=Z,4μm,19.0s,MS6.2
TREC Trest 133.01 331 *e*PKPdf PKPdf 21 56 49.0 +0.5
TREC *e*x x 22 17 13.6
TREC AMS AMS 23 01 30.0
comp=Z,4μm,19.0s
KKB Krupnik 133.22 319 *i* P PKPdf 21 56 48.4 -0.8
CLZ Clausthal 133.30 337 *e*PKPdf PKPdf 21 56 48.5 -0.5
PKSM Moragy 133.43 326 ⇑PKIKP PKPdf 21 56 49.3 -0.1
PKSM Moragy 133.43 326 ⇑*i*P PKPdf 21 56 49.3 -0.1
TANN Tannenbergstha 133.55 334 *e*PKPdf PKPdf 21 56 49.0 -0.5
WERD Werda 133.59 335 *e*PKPdf PKPdf 21 56 49.0 -0.6
GUNZ Gunzen 133.65 334 *e*PKPdf PKPdf 21 56 49.3 -0.4
NKC Novy Kostel 133.69 334 *e*pPKP pPKPdf 21 56 55.5 +0.9
NKC *e*SS SS 22 17 16.1 +13
NKC AMS AMS 22 56 10.0
comp=Z,5μm,24.1s
MOX Moxa 133.73 335 *e*(PKP) PKPdf 21 56 55.1 +5.2
comp=Z,18nm,1.5s
MOX *e* PP 21 59 19.0 +0.7
MOX
comp=Z,2μm,21.0s
MOX Moxa 133.73 335 *e*PKPdf PKPdf 21 56 49.1 -0.8
MOX Moxa 133.73 335 PKIKP PKPdf 21 56 55.1 +5.2
MOX *e* PP 21 59 19.0 +0.7
MOX MLR MLR
comp=Z,2μm,21.0s,MS5.9
MOX Moxa 133.73 335 PKP PKPdf 21 56 55.1 +5.2
MOX *e* 21 59 19.0
MOX LR LR
comp=Z,2μm,21.0s,MS5.9
CSNA Conrad Observa 133.77 330 ⇑*i*PKPdf PKPdf 21 56 48.0 -2.0
comp=Z,17nm,1.5s
IBBN Ibbenburen 133.88 339 *e*PKPdf PKPdf 21 56 49.3 -0.8
KHC Kasperske Hory 134.00 332 *e*PKIKP PKPdf 21 56 50.6 +0.2
KHC MLR MLR
comp=Z,6μm,23.8s,MS6.2
KHC Kasperske Hory 134.00 332 ⇑*i*PKP PKPdf 21 56 49.8 -0.6
KHC Kasperske Hory 134.00 332 *e*PKPdf PKPdf 21 56 50.6 +0.2
KHC *e*pPKP pPKPdf 21 56 56.2 +0.9
KHC *e*PP PP 21 59 14.6 -5.5
KHC *e*SS SS 22 17 14.5 +7.0
KHC AMS AMS 22 54 50.0
comp=Z,6μm,23.8s
EKA Eskdalemuir Ar 134.09 349 PKP PKPdf 21 56 50.0 -0.4
comp=Z,4.3nm,0.9s,baz=35,slow=3.1,SNR=5.7
EKA pPKP pPKPdf 21 56 56.5 +1.3
comp=Z,4.4nm,0.9s,baz=17,slow=2.7,SNR=9.1
GEC2 GERESS Array S 134.16 332 *e*PKPdf PKPdf 21 56 49.9 -0.8
WET Wettzell 134.31 333 *e*PKPdf PKPdf 21 56 50.7 -0.3
GRA1 Grafenberg Arr 134.62 335 *e*PKPdf PKPdf 21 56 50.8 -0.8
GRA1 *e* 21 56 57.6
GRF Grafenberg Arr 134.62 335 *e*PKPdf PKPdf 21 56 50.8 -0.8
GRF *e* 21 56 57.6
PERS Pernice 135.01 329 *e*PKPdf PKPdf 21 56 51.2 -1.1
PERS *e* 21 56 59.0
PERS *e*PP PP 21 59 31.4 +4.8
SOKA Soboth 135.03 329 ⇑*i*PKPdf PKPdf 21 56 47.4 -5.0
comp=Z,8.0nm,1.1s
TNS Taunus Mts 135.32 337 *e*PKPdf PKPdf 21 56 52.4 -0.5
KBA Koelnbreinsper 135.58 331 ⇑*i*PKPdf PKPdf 21 56 49.4 -4.0
comp=Z,16nm,1.1s
BOJS Bojanci 135.70 328 *e*PKPdf PKPdf 21 56 53.4 -0.3
BOJS *e*PP PP 21 59 35.4 +4.4
LJU Ljubljana 135.72 329 *e*PKPdf PKPdf 21 56 52.1 -1.6
MEM Membach 135.90 339 PKP PKPdf 21 56 55.3 +1.4
MEM APKP 21 57 01.1
STU Stuttgart 136.18 335 *e*PKPdf PKPdf 21 56 53.7 -0.8
ABTA Abfaltersbach 136.22 331 ⇑*i*PKPdf PKPdf 21 56 53.0 -1.6
comp=Z,13nm,1.0s
BCLA Clavier 136.31 340 PKP PKPdf 21 56 54.8 +0.2
MOTA Moosalm 136.44 332 ⇑*i*PKPdf PKPdf 21 56 49.4 -5.7
comp=Z,11nm,0.8s
LANF Langenberg 136.57 336 PKP PKPdf 21 56 54.9 -0.3
WLF Walferdange 136.64 338 PKP PKPdf 21 56 56.8 +1.5
WLF Walferdange 136.64 338 PKPdf PKPdf 21 56 55.4 +0.1
GIVF Givet 136.74 340 *e*PKIKP PKPdf 21 56 48.5 -7.0
comp=Z,57nm,1.1s
DOU Dourbes 136.82 340 PKP PKPdf 21 56 56.1 +0.4
DOU APKP 21 57 02.8

FETA	Feichten	136.85	332	P	PKPdf	21 56 49.6	-6.2
	comp=Z,16nm,1.0s						
BFO	Black Forest	136.88	335	ePKPdf	PKPdf	21 56 55.9	+0.1
BAIF	Baives	136.98	340	ePKIKP	PKPdf	21 56 50.0	-5.9
	comp=Z,32nm,1.2s						
CDF	Champ du Feu	137.24	336	ePKIKP	PKPdf	21 56 50.3	-6.2
	comp=Z,27nm,1.2s						
FELD	Feldberg im Sc	137.37	335	PKP	PKPdf	21 56 55.5	-1.2
DAVOX	Davos/Dischmat	137.42	333	PKP	PKPdf	21 56 56.4	-0.4
	comp=Z,7.5nm,1.0s,baz=161,slow=5.7,SNR=7.6						
ECH	Echery	137.44	336	PKP	PKPdf	21 56 56.8	-0.1
HINF	Hinteralfeld	137.89	336	ePKIKP	PKPdf	21 56 51.6	-6.1
	comp=Z,53nm,1.4s						
HAU	Haudompre	137.93	337	ePKIKP	PKPdf	21 56 51.7	-6.1
HAU				eMLR	MLR		
	comp=Z,4μm,20.8s,MS5.8						
HAU	Haudompre	137.93	337	ePKPdf	PKPdf	21 56 51.7	-6.1
HAU				LR	LR		
	comp=Z,4μm,20.8s,MS6.1						
MEZF	Maizieres J'vi	138.01	338	ePKIKP	PKPdf	21 56 51.4	-6.5
	comp=Z,51nm,1.1s						
LOMF	Lomont	138.27	336	PKP	PKPdf	21 56 55.8	-2.6
CABF	La Chapelle	139.17	336	ePKIKP	PKPdf	21 56 53.3	-6.8
	comp=Z,49nm,1.1s						
LOR	Lormes	139.48	338	ePKIKP	PKPdf	21 56 54.6	-6.0
	comp=Z,15nm,0.9s						
LOR				eMLR	MLR		
	comp=Z,5μm,20.8s,MS5.9						
LOR	Lormes	139.48	338	ePKPdf	PKPdf	21 56 54.6	-6.0
LOR				LR	LR		
	comp=Z,5μm,20.8s,MS6.2						
FLN	La Foliniere	139.57	343	ePKIKP	PKPdf	21 56 53.7	-7.0
	comp=Z,144nm,1.7s						
FLN				eMLR	MLR		
	comp=Z,4μm,21.2s,MS5.8						
FLN	La Foliniere	139.57	343	ePKPdf	PKPdf	21 56 53.7	-7.0
FLN				LR	LR		
	comp=Z,4μm,21.3s,MS6.1						
LPL	La Plagne	139.78	334	ePKIKP	PKPdf	21 56 54.1	-7.1
	comp=Z,21nm,1.1s						
LPG	La Plagne	139.78	334	ePKIKP	PKPdf	21 56 54.3	-6.9
SMF	Signal de Mont	140.01	338	ePKIKP	PKPdf	21 56 54.7	-6.9
	comp=Z,49nm,1.3s						
GRR	Gorron	140.02	343	ePKIKP	PKPdf	21 56 54.9	-6.7
	comp=Z,78nm,1.6s						
AVF	Avril sur Loir	140.07	338	ePKIKP	PKPdf	21 56 55.5	-6.2
	comp=Z,20nm,1.2s						
MBDF	Montbardon	140.38	333	ePKIKP	PKPdf	21 56 54.9	-7.5
BGF	Bois d'Agland	140.45	339	ePKIKP	PKPdf	21 56 55.5	-6.9
	comp=Z,40nm,1.2s						
SGMF	Saint Gilles	140.60	345	ePKIKP	PKPdf	21 56 55.6	-7.0
	comp=Z,49nm,1.2s						
ORIF	Oris-en-Rattie	140.62	334	ePKIKP	PKPdf	21 56 56.7	-6.1
ORIF				eMLR	MLR		
	comp=Z,4μm,22.0s,MS5.9						
ROSF	Rostrenen	140.70	346	ePKIKP	PKPdf	21 56 56.0	-6.8
TOUF	Mont Tournerai	140.73	332	PKP	PKPdf	21 57 00.8	-2.2
SBF	Sospel	140.76	332	ePKIKP	PKPdf	21 56 56.0	-7.1
	comp=Z,83nm,1.4s						
AGO	Saint Agoulin	140.78	338	PKP	PKPdf	21 56 59.3	-3.7
LUCF	Luceram	140.78	332	PKP	PKPdf	21 57 03.1	0.0
SSB	Saint Sauveur	140.88	336	ePKIKP	PKPdf	21 57 02.7	-0.5
REVF	Revere	140.88	332	PKP	PKPdf	21 56 58.8	-4.5
TCF	Toulx Ste Croi	140.91	339	ePKIKP	PKPdf	21 56 55.3	-7.9
	comp=Z,22nm,1.0s						
PGF	Pioggiola	140.99	329	ePKIKP	PKPdf	21 56 57.5	-6.0
	comp=Z,132nm,1.3s						
QUIF	Quistinic	141.06	345	ePKIKP	PKPdf	21 56 56.7	-6.8
VIVF	Saint-Julien-l	141.17	335	ePKIKP	PKPdf	21 56 56.8	-7.0
	comp=Z,36nm,1.2s						
FRF	La Foret Royal	141.35	332	ePKIKP	PKPdf	21 56 57.4	-6.7
	comp=Z,95nm,1.6s						
MFF	Saint Martin d	141.42	341	ePKIKP	PKPdf	21 56 57.2	-7.0
	comp=Z,49nm,1.2s						
LBL	Lubilhac	141.43	337	PKP	PKPdf	21 56 59.7	-4.5
SMRF	Simiane la Rot	141.50	334	ePKIKP	PKPdf	21 56 58.7	-5.7
	comp=Z,69nm,1.3s						
LMR	La Mourre	141.59	332	ePKIKP	PKPdf	21 56 58.4	-6.2
	comp=Z,62nm,1.2s						
RJF	Les Rejaudoux	142.00	339	ePKIKP	PKPdf	21 56 59.5	-5.7
	comp=Z,74nm,1.5s						
RJF				eMLR	MLR		
	comp=Z,3μm,21.2s,MS5.7						
RJF	Les Rejaudoux	142.00	339	ePKPdf	PKPdf	21 56 59.5	-5.7
RJF				LR	LR		
	comp=Z,3μm,21.3s,MS6.0						
CAF	Calviac	142.13	338	ePKIKP	PKPdf	21 56 57.3	-8.2
	comp=Z,19nm,1.1s						
LASF	Ste Croix	142.15	335	ePKIKP	PKPdf	21 56 58.8	-6.7
	comp=Z,57nm,1.3s						
LFF	La Frestale	142.59	339	ePKIKP	PKPdf	21 56 59.6	-6.7
	comp=Z,52nm,1.2s						
VSL	Villasalto	142.97	325	ePKPdf	PKPdf	21 57 02.4	-4.7
VSL				ePKPdf	PKPdf	21 57 03.4	-3.8
MTLF	Montolieu	143.42	336	ePKIKP	PKPdf	21 57 00.1	-7.7
	comp=Z,155nm,1.3s						
FILF	Fillols	143.93	335	PKP	PKPdf	21 57 06.3	-2.4
CARF	Carcanieres	143.99	336	PKP	PKPdf	21 57 06.3	-2.5
MLS	Moulis	144.18	337	PKP	PKPdf	21 57 07.0	-2.2
CLLI	Llivia	144.24	336	PKP	PKPdf	21 57 08.8	-0.5
CLLI				PP	PP	22 00 24.8	+1.6
VALF	Valcebollere	144.28	336	PKP	PKPdf	21 57 08.0	-1.4
SALF	Salau	144.31	337	PKP	PKPdf	21 57 06.0	-3.4
EPF	Esparros	144.39	338	ePKIKP	PKPdf	21 57 00.9	-8.6
	comp=Z,60nm,1.3s						
LABF	Labassere	144.48	338	PKP	PKPdf	21 57 07.8	-1.9
RESF	Ens	144.59	338	PKP	PKPdf	21 57 09.3	-0.6
REYF	Montagne du Re	144.62	339	PKP	PKPdf	21 57 08.5	-1.4
VIEF	Viey	144.64	338	PKP	PKPdf	21 57 09.5	-0.5
CFON	Fontmartina	144.65	335	PKP	PKPdf	21 57 08.8	-1.2
CFON				PP	PP	22 00 22.9	-2.8
CSOR	Sort	144.66	337	PKP	PKPdf	21 57 09.1	-0.9
CSOR				PP	PP	22 00 23.3	-2.4
EBIE	Bielsa	144.76	338	PKP	PKPdf	21 57 10.1	-0.1
EBIE				PP	PP	22 00 24.4	-1.9
ETSF	Etsaut	144.83	339	ePKIKP	PKPdf	21 57 03.3	-7.0
	comp=Z,229nm,1.2s						
EALK	Alkurruntz	144.87	340	PKP	PKPdf	21 57 10.2	-0.2
EALK				PP	PP	22 00 24.7	-2.2
SJPF	Ste Jean	144.87	340	ePKIKP	PKPdf	21 57 03.1	-7.3
	comp=Z,133nm,1.4s						
EMIR	Miracle	144.89	336	PKP	PKPdf	21 57 09.5	-0.9
EMIR				PP	PP	22 00 22.9	-4.2
ELIZ	Elizondo	144.93	340	PKIKP	PKPdf	21 57 09.0	-1.5
ELIZ						22 00 28.2	
ELAN	Lanestosa	145.46	343	PKP	PKPdf	21 57 11.2	-0.2
ELAN				PP	PP	22 00 29.4	-0.9
EPOB	Poblet	145.55	336	PKP	PKPdf	21 57 11.5	-0.1
EPOB				PP	PP	22 00 29.6	-1.5
ESAC	San Caprasio	145.83	338	PKP	PKPdf	21 57 12.1	0.0
ESAC				PP	PP	22 00 32.7	+0.1
EARI	Arriondas	145.89	345	PKP	PKPdf	21 57 13.7	+1.6
EARI				PP	PP	22 00 28.4	-4.4
CMAH	Djebel Manchou	146.06	324	P	PKPdf	21 57 12.8	+0.2
ETOS	Mallorca	146.11	332	PKP	PKPdf	21 57 13.6	+1.0
ETOS				PP	PP	22 00 27.2	-7.3
ERTA	Horta de San J	146.18	336	PKP	PKPdf	21 57 13.3	+0.6
ERTA				PP	PP	22 00 32.0	-2.8
ABSA	Djebel Ababsia	146.27	323	P	PKPdf	21 57 12.8	-0.2
CAEH	'Ain El Ouahch	146.28	324	P	PKPdf	21 57 13.2	+0.2
EPON	Pontenova	146.32	347	PKP	PKPdf	21 57 13.3	+0.4
EPON				PP	PP	22 00 28.6	-6.7
CKFL	Kef-Lekhel	146.63	324	P	PKPdf	21 57 14.9	+1.3
CASM	Ain Smara	146.86	324	P	PKPdf	21 57 14.9	+0.9
EMOS	Mosqueruela	147.00	337	PKP	PKPdf	21 57 17.9	+3.8
EMOS				PP	PP	22 00 33.3	-6.3
DFRA	Djebel Bou Aff	147.00	325	P	PKPdf	21 57 16.2	+2.0
STS	Santiago	147.03	349	PKP	PKPdf	21 57 15.4	+1.4
STS				PP	PP	22 00 32.9	-6.6
CTEI	Djebel Teioual	147.04	324	P	PKPdf	21 57 15.8	+1.5
EMAZ	Mazaricos	147.05	349	PKP	PKPdf	21 57 15.5	+1.4
EMAZ				PP	PP	22 00 35.3	-4.3
ETOR	Torete	147.19	339	PKP	PKPbc	21 57 16.6	0.0
ETOR				PP	PP	22 00 31.9	-8.8
ERUA	La Rua	147.21	347	PKP	PKPbc	21 57 16.4	-0.1
ERUA				PP	PP	22 00 31.8	-8.8
EIBI	Ibiza	147.37	333	PKP	PKPab	21 57 21.1	+2.1
SET	Setif	147.52	325	P	PKPab	21 57 19.0	-0.7
ECAL	Calabor	147.55	346	PKP	PKPbc	21 57 17.1	-0.4
ECAL				PP	PP	22 00 36.5	-6.1
PBRG	Braganca	147.68	346	ePKPbc	PKPbc	21 57 17.3	-0.6
ECHE	Chera	147.86	337	PKP2	PKPab	21 57 19.4	-1.5
ECHE						22 00 40.5	
ELOB	Lobios	147.91	348	PKP	PKPbc	21 57 18.3	-0.2
ELOB				PP	PP	22 00 36.8	-7.9
GUD	Guadarrama	148.04	342	PKP	PKPdf	21 57 15.8	-0.1
GUD				PP	PP	22 00 32.0	-14
PCAB	Cabril	148.06	347	ePKPdf	PKPdf	21 57 14.6	-1.2
EBEN	Beniarda	148.32	335	PKP	PKPbc	21 57 19.6	-0.2
MVO	Moncorvo	148.35	346	ePKPbc	PKPbc	21 57 18.9	-0.8
MVO				eP		21 57 25.2	
MVO	Moncorvo	148.35	346	PKP	PKPbc	21 57 19.5	-0.2
MVO				PP	PP	22 00 34.2	-13
PVRL	Vila Real	148.41	347	ePKPbc	PKPbc	21 57 19.6	-0.2
PVRL				eP		21 57 25.3	
PTO	Porto	148.73	348	ePKPbc	PKPbc	21 57 20.7	0.0
EMHD	Djebel Mahouad	148.84	328	P	PKPbc	21 57 21.5	+0.4
ESDC	Sonseca Array	148.86	341	PKP	PKPdf	21 57 16.6	-0.6
	comp=Z,7.9nm,1.1s,baz=13,slow=2.8,SNR=12						
ESDC				PKPbc	PKPbc	21 57 20.5	-0.6
	comp=Z,7.7nm,1.1s,baz=1.8,slow=3.6,SNR=19						
ESDC	Sonseca Array	148.86	341	PKP	PKPdf	21 57 16.6	-0.5
ESDC				PKPbc	PKPbc	21 57 20.5	-0.6
ESDC				PKP	PKPbc	21 57 20.7	-0.4
ESDC				PP	PP	22 00 38.0	-12
ESLA	Sonseca Array	148.86	341	ePKPdf	PKPdf	21 57 16.7	-0.5
ESLA				ePKPab	PKPab	21 57 25.3	+0.4
ETOB	Tobarra	148.90	336	PKP	PKPbc	21 57 20.1	-1.1
PVIS	Viseu	148.98	347	ePKPbc	PKPbc	21 57 21.0	-0.3
PVIS	Viseu	148.98	347	ePKPab	PKPab	21 57 26.4	+1.1
PAB	San Pablo	149.10	341	ePKIKP	PKPdf	21 57 17.9	+0.3
PAB				e		21 57 26.8	
EPLA	Plasencia	149.14	344	PKP2	PKPbc	21 57 21.7	-0.1
MTE	Manteigas	149.20	346	ePKPdf	PKPdf	21 57 17.9	+0.2
MTE	Manteigas	149.20	346	ePKPbc	PKPbc	21 57 20.8	-1.1
MTE				eP		21 57 27.5	
MTE	Manteigas	149.20	346	ePKPdf	PKPdf	21 57 17.0	-0.7
EVIA	Vianos	149.28	338	PKP	PKPbc	21 57 22.0	-0.1
EVIA				PP	PP	22 00 37.3	-16
EMUR	La Murta	149.47	335	PKP	PKPbc	21 57 22.0	-0.7
EMUR				PP	PP	22 00 36.1	-18
EBNR	Beni Rached	149.49	330	P	PKPbc	21 57 23.0	+0.2
CART	Cartagena	149.59	335	ePKPdf	PKPdf	21 57 18.3	-0.1
CART				ePKPbc	PKPbc	21 57 22.5	-0.4
ECHA	Ech Chlef	149.68	330	P	PKPbc	21 57 23.3	+0.1
PCBR	Castelo Branco	149.71	346	ePKPbc	PKPbc	21 57 23.0	-0.2
EANR	'Ain N'Sour	149.97	330	P	PKPbc	21 57 23.5	-0.5
EHUE	Huescar	150.03	337	PKP	PKPdf	21 57 23.9	+4.8
EHUE				PP	PP	22 00 38.3	-19
PMRV	Marv??o	150.08	345	ePKPbc	PKPbc	21 57 23.3	-0.8
PMRV	Marv??o	150.08	345	ePKPab	PKPab	21 57 29.4	-0.5
PTOM	Tomar	150.14	347	ePKPbc	PKPbc	21 57 23.7	-0.6
PTOM	Tomar	150.14	347	ePKPab	PKPab	21 57 29.5	-0.6
EBAN	Banos Encina	150.16	339	PKP	PKPbc	21 57 24.0	-0.3
EBAN				PP	PP	22 00 39.3	-19
EQES	Quesada	150.22	338	PKP	PKPbc	21 57 24.2	-0.3
EQES				PP	PP	22 00 38.5	-20
ETRT	Tiaret	150.32	329	P	PKPbc	21 57 25.3	+0.5
EADA	Adamuz	150.43	340	PKP	PKPbc	21 57 24.9	0.0
EADA				PP	PP	22 00 39.2	-20
EBAD	Badajoz	150.62	344	PKP	PKPbc	21 57 24.7	-0.8
EBAD				PP	PP	22 00 39.0	-21
PESTR	Estremoz	150.66	345	ePKPbc	PKPbc	21 57 25.1	-0.4
PESTR	Estremoz	150.66	345	ePKPab	PKPab	21 57 30.6	-1.7
ECAB	El Cabril	150.78	341	PKP	PKPbc	21 57 25.9	+0.1
ECAB				PP	PP	22 00 36.8	-25
ECOG	Cogollos-Vega	150.87	338	PKIKP	PKPbc	21 57 25.0	-1.1
ELUQ	Luque	150.87	339	PKP	PKPbc	21 57 25.4	-0.6
ELUQ				PP	PP	22 00 40.1	-22
EBER	Berja	150.95	337	PKP	PKPbc	21 57 27.1	+0.8
EBER				PP	PP	22 00 40.0	-23
EVO	Evora	151.09	346	i PKP1	PKPbc	21 57 25.9	-0.6
	comp=Z,147nm,1.2s						
EVO				eMLR	MLR		
	comp=Z,5μm,21.8s,MS5.9						
EVO	Evora	151.09	346	ePKPbc	PKPbc	21 57 25.9	-0.6
EVO	Evora	151.09	346	ePKPab	PKPab	21 57 31.9	-2.1
PBAR	Barrancos	151.17	344	ePKPbc	PKPbc	21 57 25.8	-0.9
PBAR	Barrancos	151.17	344	ePKPab	PKPab	21 57 32.1	-2.3
ERON	Agron	151.19	338	PKP	PKPbc	21 57 25.8	-1.0
ERON				PP	PP	22 00 39.2	-25
ELOJ	Sierra Loja	151.20	339	PKP	PKPbc	21 57 26.3	-0.5
ELOJ				PP	PP	22 00 40.9	-23
EGUA	Guajares	151.26	337	PKP	PKPbc	21 57 25.4	-1.6
EGUA				PP	PP	22 00 40.3	-24
SHEL	Horse Pasture	151.42	203	ePKIKP	PKPdf	21 57 21.9	0.0
EMIN	Mina Concepcio	151.45	343	PKP	PKPbc	21 57 27.3	-0.1
EMIN				PP	PP	22 00 41.5	-24
PBEJ	Beja	151.53	345	ePKPbc	PKPbc	21 57 27.4	-0.2
PBEJ	Beja	151.53	345	ePKPab	PKPab	21 57 33.2	-2.7
EALB	Alboran	151.84	336	PKP	PKPbc	21 57 27.4	-0.9
EALB				PP	PP	22 00 41.6	-26
EGRO	El Granado	151.89	344	PKP	PKPbc	21 57 28.6	+0.2
EGRO				PP	PP	22 00 42.2	-25
EMIJ	Mijas	151.94	339	PKP	PKPbc	21 57 27.6	-1.0
EMIJ				PP	PP	22 00 48.7	-19
PCVE	Castro Verde	151.94	345	ePKPbc	PKPbc	21 57 27.7	-0.8
PCVE	Castro Verde	151.94	345	ePKPab	PKPab	21 57 34.3	-3.3
ESPR	Espera	152.03	341	PKP	PKPbc	21 57 28.4	-0.4
ESPR				PP	PP	22 00 43.0	-26
PVAQ	Vaqueiros	152.08	344	ePKPbc	PKPbc	21 57 28.1	-0.7
EJIF	Jimena Fronter	152.28	340	PKP	PKPbc	21 57 27.9	-1.4
EJIF				PP	PP	22 00 42.9	-27
PBDV	Barranco-do-Ve	152.28	345	ePKPbc	PKPbc	21 57 28.1	-1.2
PBDV	Barranco-do-Ve	152.28	345	ePKPab	PKPab	21 57 35.4	-3.6
MORF	Marmelete	152.41	346	ePKPbc	PKPbc	21 57 29.9	+0.3
MORF	Marmelete	152.41	346	ePKPab	PKPab	21 57 35.0	-4.5
PFVI	Vila Bisbo	152.61	346	PKP	PKPbc	21 57 27.6	-2.5
MDT	Midelt	155.19	335	PKP	PKPdf	21 57 26.3	-0.5
	comp=Z,4.4nm,1.1s,baz=41,slow=5.5,SNR=3.8						
TAM	Tamanrasset	155.44	302	ePKIKP	PKPdf	21 57 26.8	-0.7

*ISK **28** 21:38:24.5, 36.°95N×43.°43E, h7km, MD3.7*
*CSEM **28** 21:38:24.4±1.1, 36.°90N×43.°50E, h5km, MD3.7, Error ellipse: s-maj=27.6km s-min=7.4km az=135.0*
*DDA **28** 21:38:25.5, 37.°02N×43.°33E, h7km±2km, Md3.0*
ISC 28 21:38:25.4±1.5, 36.°93N±0.°07×43.°51E±0.°10, h7km±8km, n35, σ0°85/46, Iraq

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUKT	Cukurca	0.32	13	PG	Pg	21 38 31.7	0.0
CUKT				eSG	Sg	21 38 36.2	+0.2
CUKT	Cukurca	0.32	13	i Pg	Pg	21 38 31.7	0.0
CUKT				eSg	Sg	21 38 36.2	+0.2
HAKT	HAKKARI	0.64	14	i P	Pg	21 38 37.6	-0.2
HAKT				i S	Sg	21 38 46.4	+0.2
HAKT	HAKKARI	0.64	14	i P	Pg	21 38 37.6	-0.2
HAKT				i S	Sg	21 38 46.4	+0.2
VANT	Van	1.50	353	ePN	Pn	21 38 52.3	-0.4
VANT				eSN	Sn	21 39 12.2	-0.4
VANB	Van	1.66	357	ePN	Pn	21 38 55.1	+0.1
VANB	Van	1.66	357	ePn	Pn	21 38 55.1	+0.1
TATV	Tatvan	1.86	328	i P	Pn	21 38 56.7	-1.0
TATV				i S	Sn	21 39 20.8	-0.6
TATV	Tatvan	1.86	328	i P	Pn	21 38 56.7	-1.0
TATV				i S	Sn	21 39 20.8	-0.6
BEST	Besiri	2.03	299	i P	Pn	21 39 00.2	+0.2
BEST				i S	Sn	21 39 26.7	+1.2
MARD	Mardin	2.22	281	i P	Pn	21 39 03.6	+1.0
MARD				i S	Sn	21 39 31.2	+0.9
CLDR	Caldiran	2.23	8	ePN	Pn	21 39 02.9	+0.1
CLDR	Caldiran	2.23	8	ePn	Pn	21 39 02.9	+0.1
TUTA	Tutak	2.53	348	i P	Pn	21 39 08.4	+1.5
TUTA	Tutak	2.53	348	i P	Pn	21 39 08.4	+1.5
AGRB	Hanur-Agry	2.67	351	ePN	Pn	21 39 08.6	-0.2
AGRB	Hanur-Agry	2.67	351	ePn	Pn	21 39 08.6	-0.3
BNGL	BINGOL	2.75	318	i P	Pn	21 39 11.1	+1.1
BNGL				i S	Sn	21 39 48.4	+4.9
DIYA	Diyarbakir	2.88	291	i P	Pn	21 39 13.5	+1.8
DIYA				i S	Sn	21 39 45.3	-1.2
DIYA	Diyarbakir	2.88	291	i P	Pn	21 39 13.5	+1.8
DIYA				i S	Sn	21 39 45.3	-1.2
BINT	Bingol	3.08	310	ePN	Pn	21 39 14.7	+0.2
BINT	Bingol	3.08	310	ePn	Pn	21 39 14.7	+0.2
EZM	Erzurum	3.42	331	ePN	Pn	21 39 18.9	-0.2
SVRC	Sivrice-ELAZID	3.64	295	ePN	Pn	21 39 21.6	-0.6
SVRC	Sivrice-ELAZID	3.64	295	ePn	Pn	21 39 21.6	-0.5
BHD	Baghdad	3.72	169	ex	x	21 39 29.0	
BHD				ex	x	21 40 15.0	
URFA	Urfa	3.78	279	ePN	Pn	21 39 23.1	-1.0
URFA	Urfa	3.78	279	ePn	Pn	21 39 23.2	-0.9
PTK	Pertek	3.80	302	ePn	Pn	21 39 23.9	-0.5
PTK	Pertek	3.80	302	ePn	Pn	21 39 23.9	-0.5
ELZG	Elazig	3.92	295	i P	Pb	21 39 34.2	-0.6
KEMA	Kemaliye	4.60	302	i P	Pb	21 39 46.3	-0.1
GZT	Gaziantep	4.77	277	i P	Pn	21 39 42.0	+4.2
KUZU	Kuzuini	5.17	270	i P	Pn	21 39 40.1	-3.1
KUZU	Kuzuini	5.17	270	i P	Pn	21 39 40.1	-3.0

*TAP **28** 21:40:30.6, 24.°62N×122.°91E, h86km±1km, ML3.2, C*
JMA 28 21:40:30.4±0.1, 24.°62N×122.°94E, h90km±1km, M2.7, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.17	158	P	Pn	21 40 43.3	0.0
YOJ				S	Sn	21 40 52.9	+0.1
IRIF	Iriomote-Funau	0.77	111	P	Pn	21 40 47.6	0.0
IRIF				S	Sn	21 41 00.7	+0.2
HATJ	Hateruma jima	0.97	125	P	Pn	21 40 49.8	+0.1
HATJ				eS	Sn	21 41 04.8	+0.6
TWC	Suao	0.99	270	P	Pn	21 40 49.5	-0.5
	baz=268						
TWC				eS	Sn	21 41 03.3	-1.4
	baz=268						
JKRS	Kuro-shima	1.05	111	P	Pn	21 40 51.0	+0.4
JKRS				S	Sn	21 41 06.1	+0.3
ENA	Nanau	1.11	260	eP	Pn	21 40 51.2	-0.2
	baz=259						
ENA				S	Sn	21 41 06.2	-0.9
	baz=259						
JIJ	Ishigaki jima	1.12	103	P	Pn	21 40 51.7	+0.2
JIJ				S	Sn	21 41 06.9	-0.5
TWE	Neicheng	1.16	275	P	Pn	21 40 52.1	+0.1
	baz=279						
TWE				S	Sn	21 41 07.3	-0.9
	baz=279						
ENTT	Nioudou	1.25	271	eP	Pn	21 40 53.3	+0.3
	baz=264						
ENTT				S	Sn	21 41 09.9	-0.2
	baz=264						
NNS	Nan Shan	1.44	263	eP	Pn	21 40 55.0	-0.3
	baz=252						
NNS				eS	Sn	21 41 13.3	-1.0
	baz=252						
NSK	Sanguang	1.44	273	eP	Pn	21 40 55.7	+0.3
	baz=263						
NSK				S	Sn	21 41 14.2	-0.1
	baz=263						
TWS1	Kuangyinshan	1.46	289	eP	Pn	21 40 56.7	+1.0
	baz=288						
TWS1				eS	Sn	21 41 15.2	+0.4
	baz=288						
JTJ	Tarama	1.60	89	P	Pn	21 40 58.1	+0.7
JTJ				S	Sn	21 41 18.8	+0.8
NSTT	Nanjuang	1.77	271	eP	Pn	21 40 59.9	+0.4
	baz=269						
NSTT				eS	Sn	21 41 21.2	-0.4
	baz=269						
TWQ1	Liyutan	1.99	263	eP	Pn	21 41 03.3	+0.8
	baz=260						
TWQ1				eS	Sn	21 41 27.0	0.0
	baz=260						
SMLT	Sun Moon Lake	2.00	249	eP	Pn	21 41 02.3	-0.3
	baz=242						
SMLT				S	Sn	21 41 26.4	-0.8
	baz=242						
TYC	Yuchr	2.03	250	eP	Pn	21 41 02.9	-0.1
	baz=243						
TYC				S	Sn	21 41 27.1	-0.8
	baz=243						
ELDTW	Lidau	2.26	231	eP	Pn	21 41 04.1	-1.9
	baz=224						
ELDTW				eS	Sn	21 41 29.7	-3.7
	baz=224						
TWG	Pinlang	2.48	224	eP	Pn	21 41 07.0	-1.9
	baz=229						
TWG				eS	Sn	21 41 33.7	-4.7
	baz=229						

*IDC **28** 21:40:44.8±0.5, 10.°50S×163.°31E, h0km, mb5.1/23, mb1 5.2/24, mb1mx5.1/25, mbtmp5.1/24, ML5.5/1, MS5.8/12, Ms1 5.8/12, ms1mx5.6/21, Error ellipse: s-maj=18.6km s-min=14.0km az=89.0*
*NEIC **28** 21:40:47.4±0.1, 10.°58S×163.°10E, h10km, mb5.9/71, MS5.8/127, Error ellipse: s-maj=5.1km s-min=3.9km az=157.0*
*GCMT **28** 21:40:49.2±0.1, 10.°50S×163.°43E, h17km, MW6.0, Moment Tensor Solution. s88,c181; s84,c125; Moment tensor: Scale 10^{18}

QLP Quilpie 23.88 226 *e*P **P 21 46 02.2 +0.6**
AFI Afiamalu 24.73 100 P **P 21 46 11.5 +2.0**
comp=Z,131nm,1.0s,mb5.4,baz=117,slow=12,SNR=6.1
AFI LR LR 21 53 41.0
comp=Z,24μm,19.4s,MS5.7,baz=275,slow=32
AFI Afiamalu 24.73 100 *e*P **P 21 46 09.1 -0.4**
AFI pmax pmax
comp=Z,186nm,1.1s,mb5.5
AFI MLR MLR
comp=Z,24μm,19.0s,MS5.7
AFI Afiamalu 24.73 100 *e*P **P 21 46 09.1 -0.4**
comp=Z,186nm,1.1s,mb5.5
AFI LR LR
comp=Z,24μm,19.0s,MS5.7
OUZ Omahuta 26.28 160 *e*P **P 21 46 22.8 -0.5**
comp=Z,1μm,2.3s,mb6.0
YNG Young 27.15 207 *e*P **P 21 46 31.3 +0.1**
comp=Z,68nm,0.8s,mb5.2
CNB Canberra Magne 27.60 205 *e*P **P 21 46 34.7 -0.4**
CAN Canberra 27.75 205 *e*P **P 21 46 37.6 +1.1**
CAN 21 49 53.8
CAN MLR MLR
comp=Z,13μm,22.0s,MS5.5
BAKI Biak 28.43 287 P **P 21 46 43.2 +0.3**
comp=Z,6μmcomp=Z,203nm,1.6s,mb5.5
STKA Stephens Creek 29.05 220 *e*P **P 21 46 48.7 +0.6**
comp=Z,42nm,0.9s,mb5.2
STKA Stephens Creek 29.05 220 P **P 21 46 48.6 +0.5**
comp=Z,34nm,0.8s,mb5.1,baz=14,slow=8.3,SNR=8.0
STKA Stephens Creek 29.05 220 *e*P **P 21 46 48.8 +0.7**
comp=Z,76nm,1.8s,mb5.1
STKA *e*PP PP 21 47 53.3 -0.5
STKA *e*S **S 21 51 39.7 +0.2**
WRAB Tennant Creek 29.23 248⇓*e*P **P 21 46 49.9 0.0**
WRAB *e*S **S 21 51 43.0 +0.5**
WRAB MLR MLR
comp=Z,47μm,19.0s,MS6.1
WRAB Tennant Creek 29.23 248⇓*e*P **P 21 46 49.9 0.0**
WRAB *e*S **S 21 51 43.0 +0.5**
WRAB LR LR
comp=Z,47μm,19.0s,MS6.1
WRAB Tennant Creek 29.23 248 P **P 21 46 49.7 -0.2**
comp=Z,651nm,0.9s,mb6.4,SNR=7.1
WRAB Tennant Creek 29.23 248 P **P 21 46 50.6 +0.7**
comp=Z,4μmcomp=Z,180nm,1.1s,mb5.7
GUMO Guam 30.11 323 P **P 21 46 58.3 +0.7**
comp=Z,38nm,0.7s,mb5.3,baz=38,slow=21,SNR=5.4
GUMO LR LR 21 57 34.3
comp=Z,24μm,21.0s,MS5.8,baz=130,slow=34
GUMO Guam 30.11 323 *e*P **P 21 46 58.5 +0.8**
GUMO *e* 21 50 01.6
GUMO *e*S **S 21 51 56.4 0.0**
GUMO pmax pmax
comp=Z,959nm,2.0s,mb6.2
GUMO MLR MLR
comp=Z,23μm,22.0s,MS5.8
GUMO Guam 30.11 323 *e*P **P 21 46 58.5 +0.8**
comp=Z,959nm,2.0s,mb6.2
GUMO *e*PcP PcP 21 50 01.6 +2.3
GUMO *e*S **S 21 51 56.4 0.0**
GUMO LR LR
comp=Z,23μm,22.0s,MS5.8
KAKA Kakadu 30.12 263 *e*P **P 21 46 58.2 +0.4**
comp=Z,25nm,0.6s,mb5.1
KAKA Kakadu 30.12 263 *e*P **P 21 46 58.4 +0.6**
KAKA Kakadu 30.12 263 P **P 21 46 57.7 -0.1**
comp=Z,696nmcomp=Z,94nm,1.1s,mb5.4
URZ Urewera 30.25 158 P **P 21 46 58.8 +0.2**
comp=Z,3.8nm,0.6s,baz=39,slow=14,SNR=2.5
URZ LR LR 21 55 38.3
comp=Z,14μm,20.8s,MS5.6,baz=162,slow=30
ASAR Alice Springs 30.72 241 P **P 21 47 01.9 -1.2**
comp=Z,60nm,0.8s,mb5.5,baz=63,slow=9.6,SNR=42
ASAR Alice Springs 30.72 241 P **P 21 47 01.9 -1.1**
ASAR pmax pmax
comp=Z,61nm,0.8s
TOO Toolangi 31.18 208 *e*P **P 21 47 07.3 +0.4**
RPZ Rata Peaks 33.69 170 P **P 21 47 28.2 -0.6**
comp=Z,37nm,0.8s,mb5.3,baz=160,slow=2.0,SNR=6.2
RPZ LR LR 21 59 04.2
comp=Z,32μm,20.8s,MS6.0,baz=338,slow=33
KNA Kununurra 33.82 258 *e*P **P 21 47 29.5 -0.8**
comp=Z,90nm,0.8s,mb5.8
KNA Kununurra 33.82 258 P **P 21 47 29.9 -0.4**
comp=Z,3μmcomp=Z,406nm,0.9s,mb6.3
NLAI Namlea 36.48 279 P **P 21 47 53.0 -0.3**
comp=Z,4μmcomp=Z,206nm,1.8s,mb5.8
FITZ Fitzroy Crossi 37.02 254 *e*P **P 21 47 56.7 -1.2**
comp=Z,100nm,0.7s,mb5.8
FITZ Fitzroy Crossi 37.02 254⇓*e*P **P 21 47 56.7 -1.2**
FITZ Fitzroy Crossi 37.02 254 P **P 21 47 56.7 -1.2**
comp=Z,228nm,0.9s,mb6.0
TNTI Ternate 37.32 285 P **P 21 47 59.4 -1.1**
comp=Z,4μmcomp=Z,153nm,1.8s,mb5.5
FORT Forrest 38.22 233 *e*P **P 21 48 07.3 -0.5**
comp=Z,164nm,0.8s,mb5.8
FORT Forrest 38.22 233 *e*P **P 21 48 07.5 -0.4**
comp=Z,242nm,0.9s,mb5.9
FORT *e*PP PP 21 49 35.1 -0.2
JOHN Johnston Islan 38.34 45 PFAKE 21 48 20.0 +11
JOHN LR LR
comp=Z,10μm,19.0s,MS5.6
MNI Manado 39.93 285 P **P 21 48 21.9 -0.5**
comp=Z,5μmcomp=Z,344nm,1.2s,mb6.0
MMRI Maumere 40.34 269 P **P 21 48 23.7 -2.2**
comp=Z,5μmcomp=Z,190nm,1.5s,mb5.6
KMSI Cibinong 40.49 284 P **P 21 48 32.1 +5.0**
KDI Kendari 40.69 276 P **P 21 48 27.8 -0.9**
comp=Z,48nm,1.9s,mb4.8
XMAS Kiritimati 41.20 74 *e*P **P 21 48 32.9 -0.1**
XMAS *e*S **S 21 54 45.5 -1.2**
XMAS LR LR
comp=Z,11μm,20.0s,MS5.7
LUWI Luwuk 41.21 281 P **P 21 48 33.0 0.0**
comp=Z,6μmcomp=Z,285nm,1.7s,mb5.6
LUWI Luwuk 41.21 281 P **P 21 48 32.7 -0.3**
DAV Davao City (W) 41.31 294 PFAKE 21 48 40.0 +6.2
DAV LR LR
comp=Z,2μm,20.0s,MS5.1
MRSI Marisa 42.41 282 P **P 21 48 42.8 -0.1**
comp=Z,2μmcomp=Z,65nm,1.3s,mb5.1
CBIJ Chichi jima 42.64 332 P **P 21 48 41.4 -3.1**
comp=Z,75nm,0.8s,mb5.5,baz=273,slow=19,SNR=3.2
CBIJ LR LR 22 04 12.0
comp=Z,11μm,21.1s,MS5.7,baz=152,slow=33
BKSI Bulukumba 42.88 274 P **P 21 48 45.4 -1.3**
comp=Z,81nm,1.6s,mb5.2
MBWA Marble Bar 42.91 250 *e*P **P 21 48 46.4 -0.4**
MBWA Marble Bar 42.91 250 *e*P **P 21 48 46.7 -0.1**
MBWA PcP PcP 21 50 37.9 +0.3
MBWA *e*S **S 21 55 13.0 +1.2**
MBWA LR LR
comp=Z,24μm,22.0s,MS6.0
MBWA Marble Bar 42.91 250 P **P 21 48 47.1 +0.3**
SNR=7.0
MIDW Midway 42.97 26 *e*P **P 21 48 46.5 -0.6**
comp=Z,250nm,1.4s,mb5.8
MIDW *e*S **S 21 55 11.8 -0.4**
MIDW LR LR
comp=Z,6μm,19.0s,MS5.5
SPSI Sidrap Palu 43.48 275 P **P 21 48 50.4 -1.1**
comp=Z,112nm,1.4s,mb5.4
TTSI Tana Toraja 43.61 277 P **P 21 48 51.8 -0.8**
comp=Z,84nm,1.5s,mb5.2
PCI Palu 44.08 280 P **P 21 48 57.0 +0.6**
comp=Z,4μmcomp=Z,318nm,1.4s,mb5.8
CNP Catarman 44.58 300 *e*P **P 21 49 00.8 +0.6**
GUIM Jordan 45.50 296 *e*P **P 21 49 08.0 +0.4**
PVCP Virac 45.54 301 *e*P **P 21 49 09.3 +1.4**
PPT Papeete 46.29 104 *e*P **P 21 49 14.4 +0.5**
comp=Z,43nm,1.3s,mb5.2
PPT *e*LR LR 22 02 24.8
comp=Z,16μm,24.0s
PPT Papeete 46.29 104 LR LR 22 04 28.9
comp=Z,8μm,18.0s,MS5.7,baz=277,slow=31
TIAR Tiarei 46.51 104 *e*P **P 21 49 16.3 +0.7**
comp=Z,63nm,1.1s,mb5.5
AUQP San Andres 46.66 300 *e*P **P 21 49 20.2 +3.4**
OTRP Odiongan 46.78 298 *e*P **P 21 49 18.8 +1.1**
KLBR Kellerberrin 46.78 236 *e*P **P 21 49 17.2 -0.4**
comp=Z,54nm,1.0s,mb5.4
KHKI Kahang-Kahang 46.89 268 P **P 21 49 17.2 -1.4**
comp=Z,110nm,0.9s,mb5.8
CUYO Cuyo Island 46.98 296 *e*P **P 21 49 20.6 +1.3**
MYLDM Lahad Datu 47.12 287 P **P 21 49 22.2 +1.7**
IGBI Denpasar 47.29 268 P **P 21 49 20.6 -1.2**
comp=Z,514nm,1.1s,mb6.4
SRBI Singaraja 47.31 269 P **P 21 49 21.0 -0.9**
comp=Z,150nm,1.1s,mb5.8
TSM Tawau 47.43 286 P **P 21 49 22.8 0.0**
NWAO Narrogin (SRO) 47.59 235 PFAKE 21 49 40.0 +16
NWAO LR LR
comp=Z,16μm,19.0s,MS6.0
PMOR Pomariorio Ree 47.88 101 *e*P **P 21 49 28.3 +2.0**
comp=Z,109nm,1.2s,mb5.8
BYJI Baruwangi 48.14 268 P **P 21 49 28.6 +0.2**
comp=Z,456nm,1.6s,mb6.3
BUSP Coron 48.20 297 *e*P **P 21 49 29.5 +0.7**
TGY Tagaytay City 48.52 300 LR LR 22 07 01.1
comp=Z,26nm,20.6s,baz=280,slow=32
PPR Puerto Princes 48.59 293⇓*e*P **P 21 49 32.3 +0.5**
BALP Baler 48.77 302 *e*P **P 21 49 34.2 +1.1**
GMJI Gumukmas 49.03 268 P **P 21 49 34.4 -0.8**
comp=Z,87nm,1.1s,mb5.7
BATP Bataraza 49.05 291 *e*P **P 21 49 35.8 +0.4**
CAUP Cauayan 49.17 303 *e*P **P 21 49 39.1 +2.9**
KKM Kota Kinabalu 49.55 287 P **P 21 49 39.5 +0.3**
KKM Kota Kinabalu 49.55 287 *e*P **P 21 49 38.9 -0.3**
comp=Z,202nm,1.1s,mb6.1
KKM *e*PcP PcP 21 51 01.5 +0.4
KKM *e*S **S 21 56 47.7 +0.4**
KKM LR LR
comp=Z,5μm,22.0s,MS5.5
KIP Kipapa 49.70 50 P **P 21 49 39.5 -0.6**
KIP *e*S **S 21 56 46.3 -2.8**
KIP MLR MLR
comp=Z,10μm,20.0s,MS5.8
APYP Conner 50.11 304 *e*P **P 21 49 44.9 +1.6**
KHU Kahuku 50.33 54 P **P 21 49 45.7 +0.7**
PWJI Pagerwojo 50.67 268 P **P 21 49 46.6 -1.1**
comp=Z,3μmcomp=Z,90nm,2.2s,mb5.3
POHA Pohakuloa 50.67 54 P **P 21 49 48.0 +0.5**
POHA *e*S **S 21 57 02.7 0.0**
POHA LR LR
comp=Z,11μm,20.0s,MS5.8
PCJI Pacitan 51.27 268 P **P 21 49 51.2 -1.0**
comp=Z,399nm,1.6s,mb6.1
BTM Bintulu 51.67 283 P **P 21 49 55.6 +0.4**
UGM Wanagama 51.94 268 P **P 21 49 56.9 -0.4**
comp=Z,202nm,2.0s,mb5.7
SMRI Semarang 52.14 269 P **P 21 49 58.8 +0.1**
comp=Z,6μmcomp=Z,226nm,1.6s,mb5.8
YOGI Yogyakarta 52.18 268 P **P 21 49 59.1 +0.1**
comp=Z,693nm,1.6s,mb6.3
SBUM Sibu 52.30 281 P **P 21 50 00.2 +0.3**
MJAR Matsushiro Arr 52.45 335 P **P 21 49 58.0 -2.5**
comp=Z,14nm,1.0s,mb4.8,baz=167,slow=8.3,SNR=16
MJAR LR LR 22 08 44.4
comp=Z,7μm,20.3s,MS5.7,baz=150,slow=32
MJAR Matsushiro Arr 52.45 335 P **P 21 49 58.0 -2.5**
MJAR pmax pmax
comp=Z,14nm,1.0s
MJAR MLR MLR
comp=Z,7μm,20.3s
MJAR Matsushiro Arr 52.45 335 P **P 21 49 58.0 -2.5**
MJAR LR LR 22 08 44.4
MAJO Matsushiro 52.45 335 *e*P **P 21 50 01.3 +0.8**
MAJO *e*S **S 21 57 25.5 -1.2**
MAJO pmax pmax
comp=Z,48nm,1.0s,mb5.4
MAJO MLR MLR
comp=Z,8μm,20.0s,MS5.8
MAJO Matsushiro 52.45 335 *e*P **P 21 50 01.2 +0.7**
comp=Z,48nm,1.0s,mb5.4
MAJO *e*S **S 21 57 25.5 -1.2**
MAJO LR LR
comp=Z,8μm,20.0s,MS5.8
MAT Matsushiro 52.45 335 P **P 21 49 58.1 -2.4**
MAT S **S 21 57 26.0 -0.7**
BJII Banjamegara 52.82 269 P **P 21 50 03.6 -0.2**
comp=Z,4μmcomp=Z,169nm,1.9s,mb5.7
TWG Pinlang 52.92 309 *e*P **P 21 50 04.2 -0.1**
TWG *e*PP PP 21 52 04.5 +0.4
TWG *e*S **S 21 57 33.7 0.0**
NACB Ninganchiao 53.30 311 *e*P **P 21 50 08.4 +1.2**
comp=Z,466nm,1.5s,mb6.2
NACB *e*S **S 21 57 40.1 +1.3**
TPUB Ta-pu 53.53 309 *e*P **P 21 50 09.3 +0.5**
comp=Z,216nm,1.0s,mb6.0
TPUB *e*S **S 21 57 42.1 +0.3**
SSLB Suanglung 53.56 310 *e*P **P 21 50 11.1 +2.1**
comp=Z,351nm,1.6s,mb6.0
SSLB *e*S **S 21 57 42.1 -0.2**
YHNB Yeheng 53.75 311 *e*P **P 21 50 11.2 +0.8**
comp=Z,1μm,2.1s,mb6.5
YHNB *e*S **S 21 57 43.8 -1.0**
TATO Taipei 53.85 312 *e*P **P 21 50 10.8 -0.3**
KSM Kuching 53.90 280 P **P 21 50 11.2 -0.5**
KSM Kuching 53.90 280⇓*e*P **P 21 50 10.2 -1.5**
comp=Z,156nm,1.3s,mb5.8
KSM *e*S **S 21 57 48.0 +0.7**
KSM LR LR
comp=Z,3μm,22.0s,MS5.3
LEM Lembang 54.94 269 P **P 21 50 18.8 -0.5**
comp=Z,6μmcomp=Z,345nm,1.8s,mb6.1
ERM Erimo 55.49 342 *e*P **P 21 50 22.9 +0.2**
ERM *e* 21 52 26.7
ERM *e*S **S 21 58 07.6 -0.1**
TPI Tanjungpandan 55.58 274 P **P 21 50 23.6 -0.3**
comp=Z,2μmcomp=Z,113nm,1.7s,mb5.6
TAOE Nuku Hiva Isla 55.87 94 *e*S **S 21 57 57.4 -16**
comp=Z,3μm,26.9s
TAOE *e*LR LR 22 06 03.5
comp=Z,10μm,26.9s
TAOE Nuku Hiva Isla 55.87 94 *e*P **P 21 50 25.6 -0.4**
QZH Quanzhou 55.99 310⇑*i*P **P 21 50 28.0 +1.4**
QZH S **S 21 58 14.0 -0.9**
QZH pmax pmax
comp=Z,890nm,1.8s,mb6.5
QZH pmax pmax
comp=Z,6μm,7.2s
QZH LR LR
comp=N,6μm,13.6s
QZH LR LR
comp=E,10μm,19.4s
QZH LR LR
comp=Z,16μm,25.2s
YUK Yuzh-Kuril'sk 56.61 345⇑*i*P **P 21 50 24.6 -6.1**
YUK *i*S **S 21 58 14.6 -7.9**
YUK pmax pmax
comp=Z,2μm,8.3s
YUK pmax pmax
comp=N,1μm,4.2s
YUK pmax pmax
comp=E,800nm,4.2s
YUK smax
comp=N,800nm,4.1s
YUK smax
comp=E,2μm,8.1s
YUK MLR MLR
comp=N,7μm,22.0s
YUK MLR MLR
comp=Z,8μm,22.0s,MS5.8
CGJI Cibinong 56.87 269 P **P 21 50 31.2 -1.9**
comp=Z,3μmcomp=Z,199nm,1.0s,mb6.1
ASAJ Asahikawa 57.58 343 P **P 21 50 36.1 -1.4**
comp=Z,48nm,0.9s,mb5.5,baz=200,slow=10,SNR=9.3
ASAJ Asahikawa 57.58 343 P **P 21 50 36.2 -1.3**
ASAJ pmax pmax
comp=Z,49nm,0.9s
SSE Sheshan 57.77 317 *e*P **P 21 50 37.8 -1.4**
SSE pP pP 21 50 53.8 +11
SSE sP sP 21 51 01.3 +17
SSE PcP PcP 21 51 30.5 -1.4
SSE S **S 21 58 31.0 -7.3**
SSE sS sS 21 58 59.8 +15
SSE ScS ScS 22 00 23.5 -5.5
SSE pmax pmax
comp=Z,24nm,0.8s,mb5.3
SSE pmax pmax
comp=Z,150nm,3.9s
SSE LR LR
comp=N,3μm,20.9s,MS5.5
SSE LR LR
comp=E,3μm,20.9s,MS5.5
SSE LR LR
comp=Z,5μm,18.6s,MS5.6
HKC Hong Kong Obse 58.08 305⇑*i*P **P 21 50 46.0 +4.5**
KSRS Korea Array 58.10 327 P **P 21 50 40.9 -0.5**
comp=Z,9.0nm,0.9s,mb4.8,baz=145,slow=6.9,SNR=10.0
KSRS LR LR 22 10 58.6
comp=Z,6μm,20.8s,MS5.7,baz=135,slow=31
KSRS Korea Array 58.10 327 P **P 21 50 40.9 -0.4**
KSRS pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
KSRS MLR MLR
comp=Z,6μm,20.8s,MS5.7
KLSI 58.11 271 P **P 21 50 39.3 -2.6**
comp=Z,58nm,1.9s,mb5.3
MDSI Maura Dua 58.69 271 P **P 21 50 43.0 -2.9**
comp=Z,2μmcomp=Z,62nm,1.7s,mb5.3
GZH Guangzhou 59.13 305 P **P 21 50 51.5 +2.7**
GZH S **S 21 58 59.0 +2.8**
GZH pmax pmax
comp=Z,4μm,6.8s
NJ2 Nanjing 59.93 317 *e*P **P 21 50 55.8 +1.6**
NJ2 pP pP 21 51 11.5 +14
NJ2 sP sP 21 51 17.0 +18
NJ2 PP PP 21 53 07.5 +0.9
NJ2 S **S 21 59 01.5 -4.8**
NJ2 pmax pmax
comp=Z,20nm,0.6s,mb5.3
NJ2 pmax pmax
comp=Z,2μm,6.1s
NJ2 LR LR
comp=N,6μm,23.9s
NJ2 LR LR
comp=E,4μm,17.0s
NJ2 LR LR
comp=Z,8μm,22.2s,MS5.8
YSS Yuzh-Sakhalins 60.13 344 *e*P **P 21 50 54.0 -1.2**
YSS *e* 21 54 36.0
YSS *e* 21 59 10.0
YSS Yuzh-Sakhalins 60.13 344 *e*P **P 21 50 54.7 -0.5**
comp=Z,122nm,1.3s,mb5.8
RKT Rikitea 60.15 111 *e*LR LR 22 06 25.6
comp=Z,13μm,26.0s
QIZ Qiongzhong 60.22 299 P **P 21 50 56.5 +0.1**
QIZ S **S 21 59 11.8 +1.4**
QIZ SS SS 22 03 10.0 +2.0
QIZ pmax pmax
comp=Z,100nm,1.7s,mb5.6
QIZ pmax pmax
comp=Z,2μm,7.3s
QIZ LR LR
comp=N,2μm,19.9s,MS5.3
QIZ LR LR
comp=E,2μm,23.2s,MS5.3
QIZ LR LR
comp=Z,7μm,25.3s,MS5.7
QIZ Qiongzhong 60.22 299⇓*e*P **P 21 50 57.2 +0.8**
comp=Z,348nm,1.4s,mb6.2
QIZ *e*S **S 21 59 10.7 +0.2**
QIZ LR LR
comp=Z,6μm,22.0s,MS5.7
MYKOM Kota Tinggi 60.24 278 P **P 21 50 56.4 -0.3**
VLA Vladivostok 60.60 334 *ce*P **P 21 50 59.8 +1.3**
VLA pmax pmax
comp=Z,147nm,1.7s,mb5.8
KGM Kluang 60.81 278 P **P 21 51 00.8 +0.2**
SKR Severo-Kuril's 61.34 355 *e*P **P 21 51 04.0 +0.6**
SKR pmax pmax
comp=N,70nm,1.0s
SKR pmax pmax
comp=E,100nm,1.0s
SKR pmax pmax
comp=Z,110nm,1.0s,mb5.9
SKR pmax pmax
comp=N,1μm,6.0s
SKR pmax pmax
comp=E,1μm,6.0s
SKR pmax pmax
comp=Z,2μm,6.0s
KTGM Kuala Trenggan 61.79 282 P **P 21 51 07.3 0.0**
SDSI Sungai Dareh 62.03 275 P **P 21 51 07.5 -1.4**
comp=Z,2μmcomp=Z,91nm,1.7s,mb5.6
WHN Wuhan 62.20 313⇓P **P 21 51 13.0 +3.4**
WHN S **S 21 59 29.5 -5.8**
WHN pmax pmax
comp=Z,2μm,3.1s
WHN LR LR
comp=N,4μm,11.5s
WHN LR LR
comp=E,16μm,20.8s
WHN LR LR
comp=Z,16μm,20.8s
DL2 Dalian 62.61 324⇑*i*P **P 21 51 14.3 +2.1**
DL2 S **S 21 59 42.3 +2.1**
DL2 sS sS 22 00 03.8 +17
DL2 pmax pmax
comp=Z,40nm,1.0s,mb5.5
DL2 pmax pmax
comp=Z,640nm,6.6s
DL2 LR LR
comp=N,2μm,20.2s,MS5.6
DL2 LR LR
comp=E,4μm,20.1s,MS5.6
DL2 LR LR
comp=Z,6μm,24.1s,MS5.7
BKNI Bangkinang 62.67 276 P **P 21 51 13.3 +0.2**
comp=Z,3μmcomp=Z,244nm,1.2s,mb6.2
FRIM Kepong 62.74 279 P **P 21 51 14.3 +0.7**
MDJ Mudanjiang 62.80 334 P **P 21 51 12.3 -1.0**
MDJ PP PP 21 53 29.3 -2.4
MDJ S **S 21 59 40.5 -1.8**
MDJ pmax pmax
comp=Z,12nm,1.3s,mb4.9
MDJ pmax pmax
comp=Z,2μm,6.8s
MDJ LR LR
comp=N,6μm,26.5s,MS5.8
MDJ LR LR
comp=E,6μm,24.4s,MS5.8
MDJ LR LR
comp=Z,6μm,25.8s,MS5.6
MDJ Mudanjiang 62.80 334 *e*P **P 21 51 12.5 -0.8**
comp=Z,89nm,1.3s,mb5.7
MDJ *e*S **S 21 59 43.8 +1.5**
UBT Ubonrachathani 63.03 293⇑P **P 21 51 16.5 +1.1**
PPI Padang Panjang 63.14 275 P **P 21 51 15.0 -1.2**
comp=Z,2μmcomp=Z,86nm,1.3s,mb5.7
PET Petropavlovsk 63.50 357 *e*P **P 21 51 15.8 -2.0**
PET *e*S **S 21 59 45.7 -5.0**
PET *e*SS SS 22 03 52.0 -6.3
PET *e*SSS 22 06 43.2
PET pmax pmax
comp=Z,21nm,1.0s,mb5.2
PET pmax pmax
comp=Z,500nm,11.6s
PET MLR MLR
comp=Z,3μm,16.0s,MS5.6
PET Petropavlovsk 63.50 357 *e*P **P 21 51 15.6 -2.2**
comp=Z,94nm,1.3s,mb5.8
PET *e*S **S 21 59 50.0 -0.7**
PET LR LR
comp=Z,8μm,22.0s,MS5.9
IPM Ipoh 63.62 280 P **P 21 51 19.2 -0.2**
PEA0B Petropavlovsk- 63.64 356 *e*P **P 21 51 16.6 -2.0**
PETK Petropavlovsk- 63.64 356 P **P 21 51 16.6 -2.1**
comp=Z,21nm,0.9s,mb5.2,baz=142,slow=5.1,SNR=12
PETK LR LR 22 14 32.3
comp=Z,6μm,21.0s,MS5.8,baz=184,slow=32
PETK Petropavlovsk- 63.64 356 P **P 21 51 16.6 -2.1**
PETK pmax pmax
comp=Z,21nm,1.0s,mb5.1
PETK MLR MLR
comp=Z,6μm,21.0s,MS5.8
SMY Shemya 63.79 7 *e*P **P 21 51 19.2 -0.5**
HABR Khabarovsk 63.86 340 *i*P **P 21 51 19.4 -0.8**
HABR *e**SP sP 21 51 40.9 +15
HABR 21 51 53.4
HABR *e*S **S 21 59 51.6 -3.7**
HABR *e**SS sS 22 00 17.5 +16
HABR *e* 22 01 06.3
HABR *e*SS SS 22 04 00.3 -3.7
HABR *e*SSS 22 06 54.5
HABR pmax pmax
comp=N,94nm,1.7s
HABR pmax pmax
comp=Z,267nm,1.6s,mb6.0
HABR pmax pmax
comp=E,75nm,1.8s
HABR MLR MLR
comp=Z,3μm,17.0s,MS5.6
HABR MLR MLR
comp=E,4μm,20.0s,MS5.7
HABR MLR MLR

comp=N,2μm,19.0s,MS5.7
CN2 Changchun 64.08 331 *e*P **P** **21 51 21.3 -0.5**
CN2 *e*pP pP 21 51 34.0 +8.3
CN2 *e*S **S** **21 59 53.0 -5.3**
CN2 pmax pmax
comp=Z,50nm,1.2s,mb5.4
CN2 pmax pmax
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,5μm,20.0s,MS5.9
CN2 LR LR
comp=E,7μm,20.0s,MS5.9
CN2 LR LR
comp=Z,6μm,22.0s,MS5.8
KULM Kulim 64.18 281 P **P** **21 51 22.8 -0.3**
KULM Kulim 64.18 281 *e*P **P** **21 51 22.4 -0.7**
comp=Z,97nm,1.2s,mb5.7
KULM LR LR
comp=Z,3μm,22.0s,MS5.4
MNSI Mandailing Nat 64.19 276 P **P** **21 51 22.0 -1.2**
comp=Z,2μmcomp=Z,117nm,0.9s,mb5.9
SISI Saibi 64.25 274 P **P** **21 51 22.7 -0.9**
comp=Z,60nm,1.8s,mb5.3
COCO West Island 64.86 261 *e*P **P** **21 51 25.7 -1.8**
COCO *e*S **S** **22 00 09.1 0.0**
COCO MLR MLR
comp=Z,4μm,22.0s,MS5.5
ATKA Atka Island 65.54 15 *e*P **P** **21 51 32.4 +1.2**
comp=Z,264nm,1.7s,mb6.0
ENH Enshi 65.64 310 *e*P **P** **21 51 32.6 +0.3**
comp=Z,183nm,1.2s,mb6.0
ENH *e*S S 22 00 19.1 +1.0
ENH LR LR
comp=Z,6μm,21.0s,MS5.8
KLR Kul'dur 65.67 338 *e*P **P** **21 51 28.0 -4.0**
KLR *e*S S 22 00 09.5 -8.2
KLR *e* 22 04 29.5
KLR pmax pmax
comp=Z,210nm,1.8s,mb5.9
KLR pmax pmax
comp=Z,3μm,9.0s
CASY Casey 65.86 201 *e*P **P** **21 51 31.4 -1.7**
CASY Casey 65.86 201 *e*P **P** **21 51 31.3 -1.8**
CASY *e*S S 22 00 19.7 0.0
CASY LR LR
comp=Z,4μm,21.0s,MS5.5
GYA Guiyang 66.06 305 P **P** **21 51 35.5 +0.4**
GYA PP PP 21 54 02.3 +1.6
GYA S S 22 00 28.3 +5.0
GYA SKS 22 01 28.5
GYA pmax pmax
comp=Z,70nm,1.0s,mb5.7
GYA pmax pmax
comp=Z,1μm,6.9s
GYA LR LR
comp=N,2μm,20.8s,MS5.5
GYA LR LR
comp=E,2μm,20.2s,MS5.5
GYA LR LR
comp=Z,3μm,18.9s,MS5.5
GSI Gunungsitoli 66.26 276 P **P** **21 51 35.4 -1.2**
BJT Baijiatuau 66.54 322⇓*e*P **P** **21 51 37.5 -0.4**
BJT *e*S S 22 00 26.4 -2.3
BJT pmax pmax
comp=Z,61nm,1.3s
BJT MLR MLR
comp=Z,6μm,20.0s
BJT Baijiatuau 66.54 322⇓*e*P **P** **21 51 37.5 -0.3**
comp=Z,61nm,1.3s,mb5.5
BJT *e*S S 22 00 26.4 -2.2
BJT LR LR
comp=Z,6μm,20.0s,MS5.8
BJI Beijing 66.55 322 P **P** **21 51 37.5 -0.4**
BJI S S 22 00 30.5 +1.7
BJI SS SS 22 04 47.8 +1.4
BJI pmax pmax
comp=Z,15nm,1.2s,mb4.9
BJI pmax pmax
comp=Z,2μm,6.7s
BJI LR LR
comp=N,2μm,24.8s,MS5.7
BJI LR LR
comp=E,5μm,20.1s,MS5.7
BJI LR LR
comp=Z,7μm,28.1s
SBA Scott Base 67.25 179⇓*e*P **P** **21 51 41.7 -0.1**
SBA *e*S S 22 00 35.7 -0.5
SBA pmax pmax
comp=Z,241nm,1.7s,mb6.0
SBA MLR MLR
comp=Z,4μm,21.0s,MS5.6
SBA Scott Base 67.25 179⇓*e*P **P** **21 51 41.7 -0.2**
comp=Z,241nm,1.7s,mb6.0
SBA *e*S S 22 00 35.7 -0.6
SBA LR LR
comp=Z,4μm,21.0s,MS5.6
TIY Taiyuan 67.52 318 *e*P **P** **21 51 44.0 -0.1**
TIY S S 22 00 45.0 +4.5
TIY LR LR
comp=N,4μm,18.6s
TIY LR LR
comp=E,1μm,12.8s
TIY LR LR
comp=Z,8μm,24.9s
XAN Xi'an 67.95 313 P **P** **21 51 48.0 +1.1**
XAN S S 22 00 45.0 -0.8
XAN pmax pmax
comp=Z,14nm,1.4s,mb4.8
XAN pmax pmax
comp=Z,500nm,7.8s
XAN LR LR
comp=N,3μm,20.0s,MS5.6
XAN LR LR
comp=E,1μm,18.1s,MS5.6
XAN LR LR
comp=Z,1μm,20.8s,MS5.2
KMI Kunming 68.71 302⇑P **P** **21 51 53.8 +1.9**
KMI pP pP 21 52 11.8 +16
KMI sP sP 21 52 19.0 +22
KMI PP PP 21 54 28.8 +5.0
KMI S S 22 00 51.8 -3.5
KMI sS sS 22 01 22.5 +21
KMI SKS 22 01 43.3
KMI SS SS 22 05 20.3 0.0
KMI pmax pmax
comp=Z,270nm,1.6s,mb5.9
KMI pmax pmax
comp=Z,3μm,7.0s
KMI LR LR
comp=N,2μm,15.1s,MS5.7
KMI LR LR
comp=E,3μm,18.4s,MS5.7
KMI LR LR
comp=Z,5μm,23.7s
UNV Unalaska Valle 69.20 19 P **P** **21 51 54.4 +0.1**
CHRT Chiangrai 69.31 296⇓P **P** **21 51 55.5 -0.2**
comp=Z,690nm,1.2s,mb6.5
CM31 Chiang Mai Arr 69.59 294⇓*e*P **P** **21 51 57.7 +0.3**
CM31 *e*S S 22 01 15.0 +9.1
CM31 LR LR
comp=Z,2μm,20.0s,MS5.4
CMAR Chiang Mai Arr 69.59 294 P **P** **21 51 57.8 +0.3**
comp=Z,39nm,1.0s,mb5.3,baz=118,slow=4.5,SNR=20
CMAR Chiang Mai Arr 69.59 294 P **P** **21 51 57.8 +0.3**
CMAR pmax pmax
comp=Z,39nm,1.0s
AKUT Akutan 69.67 19 *e*P **P** **21 51 56.9 -0.3**
CHTO Chiang Mai 69.71 295⇓*e*P **P** **21 51 58.0 -0.2**
CHTO *e*S S 22 01 07.6 +0.4
CHTO pmax pmax
comp=Z,238nm,1.4s,mb5.9
CHTO MLR MLR
comp=Z,3μm,19.0s,MS5.5
CHTO Chiang Mai 69.71 295⇓*e*P **P** **21 51 58.0 -0.1**
comp=Z,238nm,1.4s,mb5.9
CHTO *e*S S 22 01 07.6 +0.4
CHTO LR LR
comp=Z,3μm,19.0s,MS5.5
CHTO Chiang Mai 69.71 295 P **P** **21 51 59.0 +0.8**
SNR=19
HHC Hu-ho-hao-te 69.86 321 *e*P **P** **21 51 59.8 +1.1**
HHC PcP PcP 21 52 22.3 +1.2
HHC PP PP 21 54 36.0 +2.6
HHC S S 22 01 07.8 -0.4
HHC ScS ScS 22 01 58.0 -2.7
HHC SS SS 22 05 38.8 +1.3
HHC pmax pmax
comp=Z,23nm,0.8s,mb5.2
HHC pmax pmax
comp=Z,2μm,7.1s
HHC LR LR
comp=N,5μm,17.4s,MS5.9
HHC LR LR
comp=E,5μm,17.6s,MS5.9
HHC LR LR
comp=Z,6μm,17.2s,MS5.9
CD2 Chengdu 70.31 308 P **P** **21 52 02.8 +1.1**
CD2 pP pP 21 52 17.5 +12
CD2 sP sP 21 52 23.5 +17
CD2 PP PP 21 54 41.0 +3.5
CD2 sS sS 22 01 35.0 +15
CD2 SKS 22 01 55.5
CD2 SS SS 22 05 42.8 -2.0
CD2 pmax pmax
comp=Z,210nm,1.0s,mb6.0
CD2 pmax pmax
comp=Z,2μm,6.2s
CD2 LR LR
comp=N,3μm,17.8s
CD2 LR LR
comp=Z,3μm,17.8s,MS5.6
HIA Hailar 70.75 332⇓*e*P **P** **21 52 03.4 -0.5**
comp=Z,127nm,1.1s,mb5.8
HIA LR LR
comp=Z,6μm,19.0s,MS5.8
SDPT Sand Point 72.44 21 *e*P **P** **21 52 13.4 -0.6**
comp=Z,101nm,1.3s,mb5.6
LZH Lanzhou 72.58 313⇑P **P** **21 52 17.0 +1.7**
LZH pP pP 21 52 29.3 +10
LZH sP sP 21 52 36.8 +16
LZH PP PP 21 55 00.0 +3.1
LZH S S 22 01 40.0 0.0
LZH sS sS 22 01 59.3 +13
LZH SS SS 22 06 18.3 -1.1
LZH pmax pmax
comp=Z,260nm,1.7s,mb5.9
LZH pmax pmax
comp=Z,1μm,4.4s
LZH LR LR
comp=E,4μm,17.0s
LZH LR LR
comp=Z,5μm,17.7s,MS5.8
SEY Seymchan 73.79 355⇓*e*P **P** **21 52 20.9 -0.9**
SEY Seymchan 73.79 355⇓*e*P **P** **21 52 20.0 -1.8**
CIT Chita 75.52 331 *e*P **P** **21 52 34.2 +2.1**
CIT *e* 21 52 48.4
CIT *e* 21 52 54.2
CIT pmax pmax
comp=Z,342nm,2.0s,mb5.9
ULN Ulaanbaatar 76.46 325 *e*P **P** **21 52 37.7 +0.2**
ULN *e*S S 22 02 23.3 +0.4
ULN MLR MLR
comp=Z,6μm,21.0s,MS5.9
ULN Ulaanbaatar 76.46 325 P **P** **21 52 41.2 +3.6**
SNR=17
OHAK Old Harbor 76.48 23 *e*P **P** **21 52 37.1 -0.3**
comp=Z,128nm,1.4s,mb5.7
SONM Songino Array 76.82 325 P **P** **21 52 40.0 +0.5**
comp=Z,30nm,0.9s,mb5.2,baz=142,slow=5.5,SNR=15
SONM LR LR 22 24 43.0
comp=Z,7μm,21.2s,MS6.0,baz=120,slow=34
SONM Songino Array 76.82 325 P **P** **21 52 40.0 +0.4**
SONM pmax pmax
comp=Z,30nm,0.9s
SONM MLR MLR
comp=Z,7μm,21.2s
GTA Gaotai 76.92 315⇓P **P** **21 52 43.8 +3.4**
GTA pP pP 21 52 57.5 +13
GTA sP sP 21 53 02.3 +17
GTA PP PP 21 55 39.8 +6.1
GTA S S 22 02 28.5 +0.2
GTA SKS 22 02 47.5
GTA sS sS 22 02 50.3 +15
GTA SS SS 22 07 30.0 +4.6
GTA pmax pmax
comp=Z,67nm,1.9s,mb5.2
GTA pmax pmax
comp=Z,2μm,7.5s
GTA LR LR
comp=N,3μm,21.0s,MS5.8
GTA LR LR
comp=E,4μm,19.5s,MS5.8
GTA LR LR
comp=Z,5μm,18.3s,MS5.8
YAK Yakutsk 76.98 345 *e*P **P** **21 52 38.0 -2.1**
YAK *e* 21 52 56.1
YAK *e*S S 22 02 20.1 -7.9
YAK *e* 22 02 52.8
YAK pmax pmax
comp=Z,75nm,1.6s,mb5.4
YAK pmax pmax
comp=N,34nm,1.6s
YAK pmax pmax
comp=E,24nm,1.8s
YAK pmax pmax
comp=Z,9.0nm,0.4s,mb5.0
YAK pmax pmax
comp=N,5.0nm,0.5s
YAK smax
comp=N,266nm,5.8s
YAK smax
comp=E,580nm,6.0s
YAK MLR MLR
comp=Z,4μm,19.0s,MS5.8
YAK MLR MLR
comp=N,3μm,21.0s,MS5.7
YAK MLR MLR
comp=E,2μm,21.0s,MS5.7
YAK Yakutsk 76.98 345 *e*P **P** **21 52 40.7 +0.5**
comp=E,56nm,0.8s,mb5.5
YAK *e*S S 22 02 28.2 +0.2
YAK LR LR
comp=Z,4μm,19.0s,MS5.8
KDAK Kodiak Island 77.15 23 P **P** **21 52 39.2 -2.0**
comp=Z,23nm,1.1s,mb5.0,baz=178,slow=4.3,SNR=3.9
KDAK Kodiak Island 77.15 23 P **P** **21 52 39.2 -2.0**
KDAK pmax pmax
comp=Z,23nm,1.1s,mb5.0
SHL Shillong 78.06 299 *e*PKP **P** **21 52 49.0 +2.0**
SHL *e*S S 22 02 45.0 +3.8
AGT Agartala 78.10 297 *i* P **P** **21 52 45.0 -2.3**
AGT *i* x x 21 54 27.0
BILL Bilibino 78.48 1 *e*P **P** **21 52 46.6 -1.8**
BILL *i* 21 52 59.9
BILL *e* 21 55 45.6
BILL pmax pmax
comp=Z,176nm,1.6s,mb5.7
BILL Bilibino 78.48 1⇑*e*P **P** **21 52 46.3 -2.1**
comp=Z,198nm,1.4s,mb5.8
BILL *e*S S 22 02 43.8 -0.3
BILL LR LR
comp=Z,5μm,20.0s,MS5.8
RSO Redoubt South 79.00 21 *e*P **P** **21 52 51.8 +0.3**
QSPA South Pole Qui 79.39 180 *e*P **P** **21 52 53.9 +0.6**
QSPA *e*S S 22 02 55.0 +1.4
QSPA LR LR
comp=Z,5μm,19.0s,MS5.8
TTA Tatalina 79.78 18 *e*P **P** **21 52 53.1 -2.5**
ZAK Zakamensk 79.89 326 *e*P **P** **21 52 56.1 -0.4**
ZAK *e* 21 55 59.2
ZAK pmax pmax
comp=Z,28nm,1.4s,mb5.0
IRK Irkutsk 80.31 328 *e*P **P** **21 52 57.7 -1.0**
IRK *e*S S 22 03 00.7 -3.4
IRK pmax pmax
comp=Z,133nm,2.3s,mb5.5
TLY Talaya 80.35 327 P **P** **21 53 00.7 +1.7**
comp=Z,212nm,0.9s,mb6.1,SNR=6.0
TLY Talaya 80.35 327 *e*P **P** **21 53 01.2 +2.2**
TLY *e*S S 22 03 10.3 +5.7
TLY pmax pmax
comp=Z,57nm,1.1s,mb5.4
TLY Talaya 80.35 327 *e*P **P** **21 52 58.6 -0.4**
TLY *e*S S 22 03 08.3 +3.7
TLY LR LR
comp=Z,5μm,22.0s,MS5.8
TLY Talaya 80.35 327 P **P** **21 53 01.7 +2.7**
SNR=12
RC01 Rabbit Creek A 80.50 21 *e*P **P** **21 52 59.4 -0.1**
PMR Palmer 81.06 21 *e*P **P** **21 53 01.8 -0.7**
DIV Divide 81.97 22⇑*e*P **P** **21 53 08.9 +1.5**
TAPN Taplejung 82.16 300 *e*P **P** **21 53 09.0 -0.1**
comp=Z,756nm,1.6s,mb6.4
BPAW Bear Paw Mtn. 82.18 19 *e*P **P** **21 53 07.3 -1.1**
ODAN Odare 82.29 299 *e*P **P** **21 53 09.8 -0.1**
comp=Z,896nm,1.5s,mb6.5
BMRM Bremner River 82.32 23 *e*P **P** **21 53 09.0 -0.2**
comp=Z,94nm,1.5s,mb5.5
RAMN Ramite 83.00 299 *e*P **P** **21 53 13.3 -0.2**
comp=Z,845nm,1.6s,mb6.5
RPN Rapa Nui 83.07 116 *e*P **P** **21 53 14.3 +0.3**
RPN MLR MLR
comp=Z,4μm,22.0s,MS5.7
PAX Paxson 83.26 21 *e*P **P** **21 53 14.3 +0.3**
JIRN Jiri 83.54 300 *e*P **P** **21 53 16.5 +0.2**
comp=Z,901nm,1.8s,mb6.6
PNL Peninsula 83.65 26 *e*P **P** **21 53 15.8 -0.3**
comp=Z,63nm,1.2s,mb5.6
VIS Vishakhapatnam 83.65 289 *e*PKP **P** **21 53 16.1 -1.0**
VIS AMb AMB 21 53 27.1
comp=Z,207nm,1.4s,mb6.1
COLA College 83.70 19⇓*e*P **P** **21 53 15.6 -0.7**
COLA *e*S S 22 03 37.5 -1.0
COLA pmax pmax
comp=Z,41nm,0.9s,mb5.6
COLA MLR MLR
comp=Z,3μm,20.0s,MS5.7
COLA College 83.70 19⇓*e*P **P** **21 53 15.6 -0.7**
comp=Z,41nm,0.9s,mb5.6
COLA *e*S S 22 03 37.5 -1.0
COLA LR LR
comp=Z,3μm,20.0s,MS5.7
GUN Gumba 83.87 300 *e*P **P** **21 53 18.3 +0.3**
comp=Z,2μm,1.8s,mb6.9
PAF Port-aux-Franc 83.93 221 *e*P **P** **21 53 18.0 +0.1**
PAF MLR MLR
comp=Z,8μm,20.0s,MS6.1
ILAR Eielson Array 83.94 19 P **P** **21 53 15.2 -2.3**
comp=Z,16nm,1.1s,mb5.1,baz=247,slow=4.3,SNR=9.8
ILAR LR 22 26 03.4
comp=Z,5μm,19.3s,MS5.9,baz=237,slow=32
ILAR Eielson Array 83.94 19 P **P** **21 53 15.3 -2.2**
ILAR pmax pmax
comp=Z,17nm,1.2s
ILAR MLR MLR
comp=Z,5μm,19.3s
PALK Pallekele 83.94 279 *e*P **P** **21 53 18.8 +0.1**
PALK pmax pmax
comp=Z,244nm,1.9s,mb6.0
PALK Pallekele 83.94 279 *e*P **P** **21 53 18.8 +0.1**
comp=Z,244nm,1.9s,mb6.0
MAW Mawson 84.15 202 *e*P **P** **21 53 17.8 -0.9**
comp=Z,32nm,1.1s,mb5.4
MAW Mawson 84.15 202 P **P** **21 53 17.8 -0.9**
comp=Z,22nm,1.1s,mb5.2,baz=75,slow=5.2,SNR=5.1
MAW Mawson 84.15 202⇓*e*P **P** **21 53 17.2 -1.4**
MAW *e*PP PP 21 56 32.0 -0.6
MAW *e*S S 22 03 43.5 +0.3
PKI Pulchoki 84.18 299 *e*P **P** **21 53 19.4 -0.2**
comp=Z,595nm,1.3s,mb6.6
PKI Pulchoki 84.18 299 *e*P **P** **21 53 19.4 -0.2**
PKI pmax pmax
comp=Z,595nm,1.3s,mb6.6
MCCM Marconi Confer 84.19 50 *e*P **P** **21 53 19.2 -0.2**
MCCM LR LR
comp=Z,5μm,19.0s,MS5.9
PKIN Phulchoki 84.19 299 *e*P **P** **21 53 19.3 -0.4**
comp=Z,233nm,1.0s,mb6.2
HOPS Hopland 84.31 49⇓*e*P **P** **21 53 20.1 +0.1**
HOPS *e*PP PP 21 56 33.8 -1.3
HOPS *e*S S 22 03 45.4 -0.4
HOPS LR LR
comp=Z,6μm,19.0s,MS6.0
KKN Kakani 84.35 300 *e*P **P** **21 53 20.1 -0.4**
comp=Z,2μm,2.1s,mb6.9
KKN Kakani 84.35 300 *e*P **P** **21 53 20.1 -0.4**
KKN pmax pmax
comp=Z,2μm,2.1s,mb6.9
DMN Daman 84.45 299 *e*P **P** **21 53 20.7 -0.3**
comp=Z,2μm,1.7s,mb7.0
COLD Coldfoot 84.60 17 *e*P **P** **21 53 20.7 -0.2**
comp=Z,111nm,1.0s,mb6.0
SAO San Andreas Ge 84.86 51⇑*e*P **P** **21 53 22.4 -0.4**
SAO *e*S S 22 03 48.5 -2.8
SAO LR LR
comp=Z,11μm,20.0s,MS6.2
GKN Gorkha 84.95 300 *e*P **P** **21 53 22.7 -0.8**
comp=Z,1μm,1.6s,mb6.8
HYT Haines Junctio 85.07 25 *e*P **P** **21 53 23.7 +0.4**
TIXI Tiksi 85.19 350 *e*P **P** **21 53 24.4 +0.7**
TIXI *e*S S 22 03 43.6 -10
TIXI *e*SS SS 22 09 25.0 -2.5
TIXI pmax pmax
comp=Z,96nm,1.6s,mb5.7
TIXI Tiksi 85.19 350⇑*e*P **P** **21 53 25.2 +1.5**
TIXI *e*S S 22 03 50.2 -3.0
TIXI LR LR
comp=Z,4μm,20.0s,MS5.8
WDC Whiskeytown Da 85.20 47 *e*P **P** **21 53 24.7 +0.2**
WDC *e*PP PP 21 56 41.5 -0.7
WDC *e*S S 22 03 52.3 -2.2
WDC LR LR
comp=Z,6μm,19.0s,MS6.0
SKAG Skagway 85.30 27⇑*e*P **P** **21 53 24.7 +0.2**
SKAG *e*PP PP 21 56 45.2 +2.7
YBH Yreka Blue Hor 85.44 46 P **P** **21 53 24.2 -1.4**
comp=Z,13nm,1.0s,mb5.0,baz=215,slow=4.5,SNR=12
YBH Yreka Blue Hor 85.44 46 *e*P **P** **21 53 25.1 -0.5**
YBH *e*PP PP 21 56 45.3 +1.2
YBH S S 22 03 55.5 -1.3
YBH LR LR
comp=Z,4μm,22.0s,MS5.8
HUMO Hull Mountain 85.55 45 *e*P **P** **21 53 24.6 -1.5**
HUMO *e*S S 22 03 56.1 -1.7
HUMO LR LR
comp=Z,5μm,20.0s,MS5.9
OHCM Honcut 85.59 49 *e*P **P** **21 53 26.5 +0.1**
KOLN Koldanda 85.79 299 *e*P **P** **21 53 27.2 -0.5**
comp=Z,228nm,1.3s,mb6.2
EGAK Eagle 85.87 21 *e*P **P** **21 53 27.8 +0.6**
EGAK *e*S S 22 04 00.9 +0.8
EGAK LR LR
comp=Z,3μm,21.0s,MS5.7
COR Corvallis 85.95 43 *e*P **P** **21 53 28.3 +0.2**
COR *e*S S 22 04 02.4 +0.7
COR pmax pmax
comp=Z,237nm,1.8s,mb6.1
COR MLR MLR
comp=Z,3μm,22.0s,MS5.7
COR Corvallis 85.95 43 *e*P **P** **21 53 28.3 +0.3**
comp=Z,237nm,1.8s,mb6.1
COR *e*S S 22 04 02.4 +0.7
COR LR LR
comp=Z,3μm,22.0s,MS5.7
CMB Columbia Colle 86.03 50 *e*P **P** **21 53 27.1 -1.6**
CMB *e*S S 22 04 04.5 +1.7
CMB MLR MLR
comp=Z,7μm,19.0s,MS6.1
DAWY Dawson 86.10 22 *e*P **P** **21 53 29.3 +0.9**
OSI Osito Adit 86.39 54 *e*P **P** **21 53 30.0 -0.5**
OSI *e*PP PP 21 56 55.8 +3.8
NLWA Neilton Lookou 86.50 41 *e*P **P** **21 53 30.5 -0.2**
NLWA *e*S S 22 04 07.0 0.0
NLWA LR LR
comp=Z,4μm,19.0s,MS5.8
OBC Olympics--Boni 86.59 40 P **P** **21 53 32.7 +1.6**
PASC Pasadena Art C 86.70 55 *e*P **P** **21 53 30.4 -1.6**
comp=Z,146nm,0.9s,mb6.2
PASC *e*PP PP 21 56 50.8 -3.7
MWC Mount Wilson 86.81 54⇑*e*P **P** **21 53 32.2 -0.4**
ISA Isabella 86.86 53 *e*P **P** **21 53 31.9 -0.9**
WAKR Walker 86.88 50 *e*P **P** **21 53 32.6 -0.3**
WMQ Urumqi 86.98 315 P **P** **21 53 32.0 -1.2**
WMQ pP pP 21 53 47.0 +10
WMQ sP sP 21 53 53.0 +14
WMQ PP PP 21 56 58.3 +1.8
WMQ SKS 22 03 52.0
WMQ S S 22 04 05.0 -6.8
WMQ SS SS 22 09 51.5 -3.4
WMQ pmax pmax
comp=Z,65nm,1.3s,mb5.7
WMQ pmax pmax
comp=Z,1μm,5.8s
WMQ LR LR
comp=N,4μm,22.0s,MS5.9

WMQ LR LR
comp=E,5µm,24.2s,MS5.9
WMQ LR LR
comp=Z,5µm,25.0s,MS5.9
PGC Sidney 87.19 40 *e*P **P 21 53 35.1 +1.0**
MOD Modoc 87.21 47 *e*P **P 21 53 32.8 -1.6**
MOD *e*PP PP 21 56 59.7 +1.3
MOD LR LR
comp=Z,5µm,22.0s,MS5.8
GNW Green Mountain 87.23 41 *e*P **P 21 53 34.4 +0.1**
comp=Z,24nm,1.3s,mb5.3
MTUM Tungsten Hills 87.24 51 *e*P **P 21 53 34.0 -0.5**
PAHR Pah Rah Range 87.26 49 *e*P **P 21 53 35.7 +1.0**
DLBC Dease Lake 87.27 29 *e*P **P 21 53 34.2 0.0**
VFP Flag Point 87.42 43 P **P 21 53 34.3 -0.9**
BAR Barrett 87.55 56 *e*P **P 21 53 35.8 -0.4**
LON Longmire 87.63 42 *e*P **P 21 53 36.9 +0.7**
DAC Darwin (Calif) 87.71 53 PFAKE 21 53 50.0 +13
DAC LR LR
comp=Z,13µm,20.0s,MS6.3
NVAR Mina Array Bea 87.72 50 P **P 21 53 36.1 -0.8**
comp=Z,21nm,1.0s,mb5.3,baz=238,slow=7.3,SNR=11
VIPM Ingram Point 87.75 44 P **P 21 53 37.0 +0.1**
PFO Pinyon Flat Ob 87.95 55⇑ *e*P **P 21 53 37.3 -0.8**
PFO MLR MLR
comp=Z,6µm,22.0s,MS6.0
JCW Jim Creek 88.00 40 *e*P **P 21 53 38.3 +0.3**
HYB Hyderabad 88.04 288 *e*P **P 21 53 34.0 -4.8**
HYB *e*S S 22 04 24.0 +1.0
HYB Hyderabad 88.04 288 *i* P **P 21 53 34.0 -4.8**
HYB *e*S S 22 04 24.0 +1.0
GSC Goldstone 88.08 54⇓ *e*P **P 21 53 39.1 +0.4**
NGP Nagpur 88.34 292 *e*PKP **P 21 53 39.1 -1.1**
NGP AMb AMB 21 53 47.1
comp=Z,74nm,1.8s,mb5.6
RPW Rockport 88.34 40 *e*P **P 21 53 40.0 +0.4**
TPH Tonopah 88.45 51 PFAKE 21 53 50.0 +10
TPH LR LR
comp=Z,7µm,19.0s,MS6.1
WVOR Wild Horse Val 88.55 46⇑ *e*P **P 21 53 40.4 -0.3**
WVOR MLR MLR
comp=Z,5µm,20.0s,MS5.9
ETW Entiat 88.85 41 *e*P **P 21 53 42.5 +0.5**
TPNV Topopah Spring 88.92 52 *e*P **P 21 53 42.9 +0.3**
RSW Rattlesnake Hi 88.98 42 *e*P **P 21 53 44.1 +1.5**
HAWA Hanford 89.02 42 *e*P **P 21 53 44.0 +1.2**
HAWA LR LR
comp=Z,3µm,22.0s,MS5.6
BMN Battle Mountai 89.05 49 *e*P **P 21 53 44.4 +1.3**
GLA Glamis 89.14 56⇓ *e*P **P 21 53 43.0 -0.7**
DGAR Diego Garcia 89.32 263 PFAKE 21 54 00.0 +15
DGAR LR LR
comp=Z,3µm,19.0s,MS5.8
LNOR Lincton Mounta 89.71 43 *e*P **P 21 53 46.5 +0.4**
OD2 Odessa Site #2 89.84 42 *e*P **P 21 53 46.8 +0.1**
AKL Akola 90.11 291 *e*PKP **P 21 53 48.4 -0.1**
BMO Blue Mountains 90.11 44 *e*P **P 21 53 47.9 -0.1**
BMO MLR MLR
comp=Z,3µm,20.0s,MS5.7
BHPL Bhopal 90.23 293 *e*PKP **P 21 53 49.1 0.0**
BHPL AMb AMB 21 53 57.7
comp=Z,57nm,1.4s,mb5.7
INK Inuvik 90.34 19 P **P 21 53 49.5 +1.0**
comp=Z,11nm,1.2s,mb5.1,baz=233,slow=9.2,SNR=6.7
INK Inuvik 90.34 19 P **P 21 53 49.5 +1.0**
INK pmax pmax
comp=Z,11nm,1.2s
INK Inuvik 90.34 19 *e*P **P 21 53 49.5 +1.0**
ELK Elko 90.59 49 *e*P **P 21 53 50.3 0.0**
ELK pmax pmax
comp=Z,89nm,1.5s
ELK MLR MLR
comp=Z,3µm,19.0s
ELK Elko 90.59 49 *e*P **P 21 53 50.3 0.0**
comp=Z,89nm,1.5s,mb5.9
ELK LR LR
comp=Z,3µm,19.0s,MS5.7
N12A Clover Valley, 90.76 49 *e*P **P 21 53 50.8 -0.3**
comp=Z,183nm,1.4s,mb6.2
NEW Newport 91.10 41 *e*P **P 21 53 53.2 +0.7**
NEW MLR MLR
comp=Z,3µm,20.0s
ARUT Antelope Range 91.29 52 *e*P **P 21 53 53.0 -0.7**
ARUT pmax pmax
comp=Z,16nm,0.8s,mb5.4
ARUT Antelope Range 91.29 52 *e*P **P 21 53 53.0 -0.7**
comp=Z,16nm,0.8s,mb5.4
CCUT Cedar City 91.30 52 *e*P **P 21 53 53.3 -0.5**
N13A Wendover, West 91.38 49 *e*P **P 21 53 54.9 +0.9**
MK31 Makanchi Array 91.46 317 *e*P **P 21 53 53.1 -1.1**
MKAR Makanchi Array 91.46 317 P **P 21 53 53.7 -0.5**
comp=Z,8.0nm,0.7s,mb5.2,baz=92,slow=4.1,SNR=22
MKAR Makanchi Array 91.46 317 *i* P **P 21 53 53.7 -0.5**
MKAR pmax pmax
comp=Z,8.0nm,0.7s
MKAR Makanchi Array 91.46 317 P **P 21 53 53.7 -0.5**
M13A Montello 91.52 48⇑ *e*P **P 21 53 54.9 +0.3**
comp=Z,108nm,1.3s,mb6.0
ZAA0 Zalesovo Array 91.71 325 *e*P **P 21 53 53.5 -1.8**
ZAA0 *e*PP PP 21 57 30.1 -3.9
ZALV Zalesovo Beam 91.71 325 P **P 21 53 53.4 -1.8**
comp=Z,24nm,1.1s,mb5.4,baz=116,slow=5.4,SNR=13
ZALV Zalesovo Beam 91.71 325 P **P 21 53 53.4 -1.8**
ZALV pmax pmax
comp=Z,24nm,1.1s,mb5.4
HLID Hailey 91.83 46 *e*P **P 21 53 55.0 -1.0**
HLID LR LR
comp=Z,4µm,21.0s,MS5.9
KAD Karad 92.11 287 *e*PKP **P 21 53 57.3 -0.6**
KAD AMb AMB 21 53 59.0
comp=Z,68nm,1.0s,mb5.9
BGU Big Grassy Mou 92.26 49 *e*P **P 21 53 58.4 +0.4**
comp=Z,66nm,1.5s,mb5.7
DUG Dugway 92.28 50 *e*P **P 21 53 57.6 -0.6**
DUG *e* 21 57 43.7
DUG pmax pmax
comp=Z,99nm,1.8s,mb5.8
DUG Dugway 92.28 50 *e*P **P 21 53 57.6 -0.5**
comp=Z,99nm,1.8s,mb5.8
DUG *e*PP PP 21 57 43.7 +4.8
MSU Marysvale 92.42 51 *e*P **P 21 53 59.3 +0.5**
WUAZ Wupatki 92.46 54 *e*P **P 21 54 00.6 +1.4**
WUAZ LR LR
comp=Z,5µm,20.0s,MS5.9
BSMT Bassoo Peak 92.53 42 *e*P **P 21 54 00.1 +1.0**
HVU Hansel Valley 92.63 48 *e*P **P 21 53 59.9 +0.2**
POO Poona 92.64 288 *e*PKP **P 21 53 59.7 -0.6**
POO AMb AMB 21 54 09.1
comp=Z,140nm,1.9s,mb6.1
SPUT South Promonto 92.77 49 *e*P **P 21 54 01.0 +0.6**
NLU North Lily Min 92.78 50 *e*P **P 21 54 02.0 +1.5**
JTMT Jette 92.83 42 *e*P **P 21 54 01.8 +1.3**
MSO Missoula 92.86 43 *e*P **P 21 54 01.1 +0.4**
MSO LR LR
comp=Z,1µm,20.0s,MS5.4
NOQ North Oquirrh 92.89 49 *e*P **P 21 54 01.0 0.0**
comp=Z,263nm,1.9s,mb6.3
SWMT Swartz Lake 92.97 42 *e*P **P 21 54 01.6 +0.4**
YBMT Yellow Bay 93.04 42 *e*P **P 21 54 02.9 +1.4**
MPU Maple Canyon 93.13 50 *e*P **P 21 54 02.6 +0.5**
MCMT McKenzie Canyo 93.19 45 *e*P **P 21 54 01.0 -1.3**
SLMT Seeley Lake 93.25 43 *e*P **P 21 54 02.9 +0.4**
TMUT Trail Mountain 93.31 51 *e*P **P 21 54 03.8 +0.8**
AJM Ajmer 93.32 296 *e*PKP **P 21 54 03.1 -0.2**
AJM AMb AMB 21 54 11.6
comp=Z,140nm,1.3s,mb6.2
CHMT Chamberlain Mo 93.34 43 *e*P **P 21 54 02.9 0.0**
WALA Waterton Lakes 93.36 41 *e*P **P 21 54 03.7 +0.7**
JLU Jordanelle 93.38 49 *e*P **P 21 54 04.5 +1.3**
DLMT Dillon 93.48 45 *e*P **P 21 54 03.1 -0.4**
HWUT Hardware Ranch 93.48 48 *e*P **P 21 54 03.8 +0.1**
HWUT LR LR
comp=Z,3µm,20.0s,MS5.8
DAU Daniels Canyon 93.48 50 *e*P **P 21 54 04.6 +0.9**
LRM Limekiln Ridge 93.67 44 *e*P **P 21 54 03.6 -0.8**
SRU San Rafael 93.80 51 *e*P **P 21 54 06.5 +1.3**
RRI2 Red Ridge 93.99 47 *e*P **P 21 54 06.7 +0.7**
comp=Z,40nm,1.4s,mb5.7
AHID Auburn Hatcher 94.04 47 P **P 21 54 05.4 -0.8**
AHID LR LR
comp=Z,3µm,19.0s,MS5.8
HRY Holter Researc 94.26 43 *e*P **P 21 54 07.7 +0.6**
TPAW Teton Pass 94.28 47 *e*P **P 21 54 07.3 0.0**
REDW Red Top Meadow 94.33 47 *e*P **P 21 54 07.7 +0.1**
comp=Z,30nm,1.4s,mb5.5
IMW Indian Meadow 94.36 46 *e*P **P 21 54 08.8 +1.1**
MOOW Moose Ponds 94.47 46 *e*P **P 21 54 08.8 +0.6**
KSH Kashi 94.49 309 P **P 21 54 09.3 +0.9**
KSH pP pP 21 54 24.5 +12
KSH sP sP 21 54 33.3 +20
KSH SKS 22 04 37.3
KSH S S 22 05 15.0 -5.9
KSH sS sS 22 05 43.5 +16
KSH pmax pmax
comp=Z,59nm,1.9s,mb5.7
KSH pmax pmax
comp=Z,690nm,4.9s
KSH LR LR
comp=N,2µm,19.2s,MS5.8
KSH LR LR
comp=E,3µm,21.2s,MS5.8
KSH LR LR
comp=Z,3µm,20.0s,MS5.7
YFT Old Faithful 94.53 46 *e*P **P 21 54 09.7 +1.2**
LOHW Long Hollow 94.55 47 *e*P **P 21 54 09.8 +1.3**
EDM Edmonton 94.56 37 *e*P **P 21 54 08.8 +0.4**
FLWY Flagg Ranch 94.56 46 *e*P **P 21 54 12.1 +3.5**
KURK Kurchatov 94.67 321 P **P 21 54 07.2 -1.8**
comp=Z,2.7nm,0.8s,mb4.7,baz=99,slow=3.0,SNR=6.0
KURK PP PP 21 57 52.9 -4.4
comp=Z,5.0nm,1.1s,baz=106,slow=6.2,SNR=4.3
KURK Kurchatov 94.67 321 P **P 21 54 07.2 -1.7**
KURK 21 57 52.9
KURK pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
KURK pmax pmax
comp=Z,5.0nm,1.1s,mb4.9
KURK Kurchatov 94.67 321 P **P 21 54 08.0 -1.0**
SNR=13
YNR Norris Junctio 94.69 46 *e*P **P 21 54 10.3 +1.2**
MVCO Mesa Verde 95.04 53 *e*P **P 21 54 09.4 -1.5**
MVCO LR LR
comp=Z,7µm,20.0s,MS6.1
PV01 Paradox Valley 95.14 52 *e*P **P 21 54 11.4 0.0**
BW06 Boulder Array 95.16 48 *e*P **P 21 54 11.9 +0.6**
BW06 LR LR
comp=Z,3µm,20.0s,MS5.8
LAZ Ladron 95.69 56 P **P 21 54 15.0 +1.0**
comp=Z,7.6nm,1.6s,mb4.9
RLMT Red Lodge 95.75 45 *e*P **P 21 54 13.9 -0.1**
comp=Z,30nm,1.7s,mb5.5
RLMT LR LR
comp=Z,5µm,20.0s,MS5.9
YKA Yellowknife Ar 95.78 28 P **P 21 54 10.1 -3.6**
comp=Z,5.5nm,1.0s,mb5.0,baz=258,slow=4.4,SNR=10
YKA Yellowknife Ar 95.78 28 P **P 21 54 10.1 -3.6**
YKA pmax pmax
comp=Z,6.0nm,1.0s
EGMT Eagleton 95.88 42 *e*P **P 21 54 14.4 -0.1**
EGMT LR LR
comp=Z,2µm,19.0s,MS5.7
UCH Uchtor 96.02 312 P **P 21 54 15.7 +0.4**
comp=Z,13µm,1.2s
UCH LR LR
comp=Z,2µm,22.0s,MS5.5
BNM Barren Site 96.07 57 *e*P **P 21 54 16.2 +0.5**
comp=Z,14nm,1.3s,mb5.2
AAK Ala-Archa 96.10 312 P **P 21 54 16.0 +0.4**
comp=Z,45nm,0.9s,mb5.9,SNR=5.1
AAK Ala-Archa 96.10 312 P **P 21 54 15.8 +0.2**
comp=Z,1.3nm,0.3s,mb4.8,baz=178,slow=5.3,SNR=5.8
AAK Ala-Archa 96.10 312 *e*P **P 21 54 15.0 -0.6**
AAK pmax pmax
comp=Z,132nm,2.3s,mb6.0
AAK MLR MLR
comp=Z,3µm,19.0s,MS5.8
AAK Ala-Archa 96.10 312 *e*P **P 21 54 15.0 -0.7**
comp=Z,132nm,2.3s,mb6.0
AAK LR LR
comp=Z,3µm,19.0s,MS5.8
ANMO Albuquerque 96.32 56 *e*P **P 21 54 18.3 +1.5**
NVL N'lazarevskaya 96.49 189 *i* P **P 21 54 08.0 -8.9**
NVL *e* 22 07 04.9
NVL *e*SSS SS 22 12 15.1 +5.7
NVL MLR MLR
comp=Z,15µm,20.0s,MS6.5
SMCO Snowmass 96.53 51 *e*P **P 21 54 18.2 +0.5**
AML Almayashu 96.61 312 *e*P **P 21 54 18.3 +0.3**
comp=Z,233nm,1.1s,mb6.5
AML LR LR
comp=Z,2µm,21.0s,MS5.6
EKS2 Erkin-Say 96.62 312 *e*P **P 21 54 17.2 -0.8**
comp=Z,49nm,1.8s,mb5.6
EKS2 LR LR
comp=Z,3µm,19.0s,MS5.8
RWWY Rawlins 96.71 49 *e*P **P 21 54 18.4 -0.1**
comp=Z,51nm,1.8s,mb5.7
MNTX Cornudas Mount 96.75 59 *e*P **P 21 54 19.0 +0.2**
comp=Z,6.7nm,1.2s,mb5.0
MNTX LR LR
comp=Z,4µm,19.0s,MS6.0
SDCO Great Sand Dun 97.48 53 *e*P **P 21 54 22.9 +0.8**
comp=Z,6.1nm,1.5s,mb4.8
ISCO Idaho Springs 97.66 51 *e*P **P 21 54 23.2 +0.4**
ISCO MLR MLR
comp=Z,10µm,20.0s,MS6.3
TXAR Lajitas Array 97.88 62 P **P 21 54 20.6 -3.5**
comp=Z,0.3nm,0.9s,baz=282,slow=4.5,SNR=3.3
TXAR PP PP 21 58 15.5 -7.3
comp=Z,0.5nm,1.0s,baz=35,slow=4.8,SNR=3.4
TXAR PKKPbc PKKPbc 22 10 58.1 -0.9
comp=Z,0.1nm,0.6s,baz=104,slow=3.8,SNR=3.0
KBL Kabul 99.27 303⇑ *e*P **P 21 54 29.4 -0.8**
KBL Kabul 99.27 303 *e*PcP PcP 21 54 29.4 -0.7
RSSD Black Hills 99.32 47 PFAKE 21 54 40.0 +10
RSSD LR LR
comp=Z,2µm,19.0s,MS5.6
BVAR Borovoye Array 100.03 322 P Pdif 21 54 31.4 -1.7
comp=Z,10nm,0.9s,baz=97,slow=6.0,SNR=11
BVAR Borovoye Array 100.03 322 P Pdif 21 54 31.4 -1.7
BVAR pmax pmax
comp=Z,10.0nm,1.0s
BRVK Borovoye 100.10 322 *c*eP Pdif 21 54 30.9 -2.5
BRVK pmax pmax
comp=Z,53nm,2.5s
BRVK Borovoye 100.10 322⇑ *e*P Pdif 21 54 30.9 -2.5
BRVK Pdif Pdif 21 54 34.0 +0.6
BRVK LR LR
comp=Z,5µm,20.0s,MS6.0
BRVK Borovoye 100.10 322 Pdiff Pdif 21 54 36.0 +2.5
SNR=9.0
AMTX Amarillo 100.21 56 *e*Pdif Pdif 21 54 34.8 +0.9
comp=Z,12nm,0.8s
AMTX LR LR
comp=Z,3µm,20.0s,MS5.8
OGNE Ogallala 100.50 50 PFAKE 21 54 50.0 +15
OGNE LR LR
comp=Z,4µm,21.0s,MS5.9
JCT Junction City 101.35 61 PFAKE 21 54 50.0 +11
JCT LR LR
comp=Z,6µm,20.0s,MS6.1
FFC Flin Flon 101.40 36 *e*P Pdif 21 54 38.5 -0.7
FFC MLR MLR
comp=Z,4µm,19.0s,MS5.9
CBKS Cedar Bluff 102.10 52 PFAKE 21 54 50.0 +7.7
CBKS LR LR
comp=Z,6µm,22.0s,MS6.1
WMOK Wichita Mounta 102.58 57 *e*P Pdif 21 54 44.7 +0.3
WMOK MLR MLR
comp=Z,4µm,20.0s,MS6.0
KVTX Kingsville 102.73 64 PFAKE 21 55 00.0 +15
KVTX LR LR
comp=Z,2µm,20.0s,MS5.5
KSU1 Kansas State U 104.55 52 PFAKE 21 55 00.0 +6.8
KSU1 LR LR
comp=Z,6µm,20.0s,MS6.2
ECSD EROS Data Cent 104.65 48 *e*Pdif Pdif 21 54 53.8 +0.2
ECSD LR LR
comp=Z,3µm,20.0s,MS5.9
HKT Hockley 104.73 62 P Pdif 21 54 54.0 0.0
HKT MLR MLR
comp=Z,4µm,22.0s,MS6.0
NATX Nacogdoches 105.84 60 PFAKE 21 59 20.0 +7.8
NATX LR LR
comp=Z,5µm,21.0s,MS6.0
MSEY Mahe Island 106.40 262 PFAKE 21 59 30.0 +16
MSEY LR LR
comp=Z,4µm,20.0s,MS5.9
ABKAR Akbulak array 106.57 318 *e*Pdif Pdif 21 55 01.3 -0.8
comp=Z,2.9nm,1.1s
MIAR Mount Ida 106.86 57 PFAKE 21 59 30.0 +16
MIAR LR LR
comp=Z,5µm,20.0s,MS6.0
SCIA State Center 107.16 49 PFAKE 21 59 30.0 +16
SCIA LR LR
comp=Z,4µm,22.0s,MS5.9
EYMN Ely 108.10 43 PFAKE 21 59 30.0 +14
EYMN LR LR
comp=Z,3µm,20.0s,MS5.8
CCM Cathedral Cave 108.75 53 PFAKE 21 59 30.0 +13
CCM LR LR
comp=Z,2µm,19.0s,MS5.6
PLCA Paso Flores 108.88 140 PFAKE 21 59 30.0 +12
PLCA LR LR
comp=Z,2µm,21.0s,MS5.7
JFWS Jewell Farm 109.32 48 PFAKE 21 59 30.0 +12
JFWS LR LR
comp=Z,2µm,21.0s,MS5.7
HDIL Hopedale 110.17 51 PFAKE 21 59 30.0 +10
HDIL LR LR
comp=Z,9µm,20.0s,MS6.3
KBS Kingsbay 110.25 354 PFAKE 21 59 30.0 +11
KBS LR LR
comp=Z,3µm,22.0s,MS5.8
OXF Oxford 110.29 57 PFAKE 21 59 30.0 +10
OXF LR LR
comp=Z,4µm,20.0s,MS6.0
ABPO Ambohimpanom 110.31 245 PFAKE 21 59 30.0 +9.1
ABPO LR LR
comp=Z,3µm,19.0s,MS5.9
TEIG Tepich 110.93 72 PFAKE 21 59 30.0 +8.0
TEIG LR LR
comp=Z,1µm,20.0s,MS5.5
TGUH Tegucigalpa,Un 111.36 79 PFAKE 21 59 30.0 +7.1
TGUH LR LR
comp=Z,4µm,21.0s,MS6.0
WVT Waverly 111.54 55 PFAKE 21 59 30.0 +7.3
WVT LR LR
comp=Z,2µm,22.0s,MS5.8
BRAL Brewton 112.33 61 PFAKE 21 59 40.0 +16
BRAL LR LR
comp=Z,2µm,19.0s,MS5.8
LRAL Lakeview Retre 112.33 59 PFAKE 21 59 40.0 +16
LRAL LR LR
comp=Z,5µm,20.0s,MS6.1
WCI Wyandotte Cave 112.64 53 PFAKE 21 59 40.0 +15
WCI LR LR
comp=Z,2µm,19.0s,MS5.7
JTS JuntasAbangare 113.18 83 PFAKE 21 59 40.0 +14
JTS LR LR
comp=Z,3µm,19.0s,MS5.9
LVZ Lovozero 113.64 341 PFAKE 21 59 40.0 +14
LVZ LR LR
comp=Z,3µm,20.0s,MS5.9
AAM Ann Arbor 114.22 48 PFAKE 21 59 40.0 +12
AAM LR LR
comp=Z,4µm,20.0s,MS6.0
KEV Kevo 114.72 345 *e*PKIKP PKiKP 21 59 25.5 -2.3
KEV Kevo 114.72 345 *e*p PKiKP 21 59 25.5 -2.3
LCO Las Campanas 114.83 129 PFAKE 21 59 40.0 +11
LCO LR LR
comp=Z,2µm,21.0s,MS5.8
TKL Tuckaleechee C 114.85 56 *e*PKIKP PKiKP 21 59 29.7 +0.6
ACSO Alum Creek Sta 115.00 51 PFAKE 21 59 40.0 +11
ACSO LR LR
comp=Z,8µm,20.0s,MS6.3
ARCES ARCESS Array B 115.26 345 PKP PKiKP 21 59 27.0 -1.8
comp=Z,4.8nm,0.7s,baz=112,slow=1.8,SNR=22
ARCES ARCESS Array B 115.26 345 PKIKP PKiKP 21 59 27.0 -1.8
ARCES pmax pmax
comp=Z,5.0nm,0.7s
ARCES ARCESS Array B 115.26 345 PKP PKiKP 21 59 27.0 -1.8
GOGA Godfrey 115.27 58 PFAKE 21 59 40.0 +10
GOGA LR LR
comp=Z,5µm,20.0s,MS6.1
MAK Makhachkala 115.87 313 *i* PKIKP PKPdf 21 59 32.9 +2.1
MAK *i* 22 00 37.5
MAK *i* 22 03 11.4
MAK *i* PS PS 22 10 16.0 +0.1
MAK *e*SS SS 22 16 33.0 -2.8
MAK pmax pmax
comp=Z,13nm,0.2s
NNA Nana 116.33 109 PFAKE 21 59 40.0 +7.5
NNA LR LR
comp=Z,2µm,20.0s,MS5.7
ERPA Erie 116.94 48 *e*PKPdf PKPdf 21 59 34.0 +1.1
DWPF Disney 117.31 64 PFAKE 21 59 50.0 +16
DWPF LR LR
comp=Z,3µm,21.0s,MS5.8
MCWV Mont Chateau 117.46 51 PFAKE 21 59 50.0 +16
MCWV LR LR
comp=Z,6µm,19.0s,MS6.3
JOF Joensuu 117.56 337 *e*PKIKP PKPdf 21 59 30.7 -2.7
JOF pmax pmax
comp=Z,76nm,0.7s
JOF Joensuu 117.56 337 *e*p PKPdf 21 59 30.7 -2.7
comp=Z,76nm,0.7s
VRHR Novokhopersk 117.78 323 *e*PKIKP PKPdf 21 59 32.5 -1.7
VRHR *e* 22 00 47.2
VRHR pmax pmax
comp=N,10.0nm,0.9s
VRHR pmax pmax
comp=E,30nm,0.9s
VRHR pmax pmax
comp=Z,20nm,0.9s
VRHR pmax pmax
comp=N,10.0nm,4.6s
VRHR pmax pmax
comp=E,20nm,4.6s
VRHR pmax pmax
comp=Z,50nm,4.6s
OTAV Otavalo 117.95 95 PFAKE 21 59 50.0 +14
OTAV LR LR
comp=Z,2µm,20.0s,MS5.8
NHSC New Hope 118.05 58 PFAKE 21 59 50.0 +15
NHSC LR LR
comp=Z,5µm,20.0s,MS6.2
GNI Garni 118.41 310 PKIKP PKPdf 21 59 36.9 +1.1
GNI MLR MLR
comp=Z,1µm,22.0s
OBN Obninsk 119.09 328⇓ *i* PKIKP PKPdf 21 59 34.7 -1.9
OBN *i* 22 01 05.4
OBN *i* PS PS 22 10 45.7 +1.2
OBN pmax pmax
comp=Z,10.0nm,1.1s
OBN Obninsk 119.09 328⇓ *e*PKP PKPdf 21 59 34.7 -1.9
OBN LR LR
comp=Z,3µm,19.0s,MS5.9
KIV Kislovodsk 119.10 315 *i* PKIKP PKPdf 21 59 36.3 -0.7
KIV *e* 22 00 58.6
KIV *e* 22 06 26.7
KIV *e*PS PS 22 10 47.8 +2.7
KIV *e*SS SS 22 17 14.8 -2.8
KIV pmax pmax
comp=Z,14nm,1.1s
KIV Kislovodsk 119.10 315⇓ *e*PKP PKPdf 21 59 36.4 -0.6
VSR Storozhevoye 119.19 323 *e*PKIKP PKPdf 21 59 38.2 +1.3
VSR *e* 22 00 57.6
VSR *e* 22 10 44.4
VSR pmax pmax
comp=N,10.0nm,1.0s
VSR pmax pmax
comp=Z,10.0nm,1.0s
VSR pmax pmax
comp=E,2.0nm,0.5s
VSR pmax pmax
comp=N,90nm,4.4s
VSR pmax pmax
comp=E,280nm,4.4s
VSR pmax pmax
comp=Z,540nm,4.4s
VORD Divnogorie 119.20 323 *e*PKIKP PKPdf 21 59 34.5 -2.4
VORD *e* 22 00 55.9
VORD pmax pmax
comp=Z,10.0nm,1.3s
VORD pmax pmax
comp=N,8.0nm,0.7s
VORD pmax pmax
comp=E,9.0nm,0.7s
VORD pmax pmax
comp=N,210nm,6.0s
VORD pmax pmax
comp=E,270nm,6.0s
VORD pmax pmax
comp=Z,630nm,6.0s

CBN	Corbin	119.61	52	PFAKE		21 59 50.0	+12
CBN				LR	LR		
	comp=Z,6μm,19.0s,MS6.3						
CNNC	Cliffs of the	119.67	56	ePKPdf	PKPdf	21 59 39.9	+1.5
CNNC				LR	LR		
	comp=Z,3μm,20.0s,MS5.8						
BINY	Binghamton	119.83	47	ePKPdf	PKPdf	21 59 39.7	+1.3
BINY				LR	LR		
	comp=Z,7μm,20.0s,MS6.3						
KAF	Kangasniemi	119.91 338		ePKIKP	PKPdf	21 59 34.8	-3.2
KAF				pmax	pmax		
	comp=Z,45nm,0.7s						
KAF	Kangasniemi	119.91 338		ep	PKPdf	21 59 34.8	-3.2
	comp=Z,45nm,0.7s						
LONY	Lake Ozonia	120.21	44	PKPdf	PKPdf	21 59 35.2	-3.8
LONY				LR	LR		
	comp=Z,3μm,20.0s,MS5.9						
FINES	FINESS Array B	120.42 338		PKP	PKPdf	21 59 36.2	-2.7
	comp=Z,9.4nm,1.0s,baz=134,slow=5.5,SNR=10						
FINES	FINESS Array B	120.42 338		PKIKP	PKPdf	21 59 36.2	-2.8
FINES				pmax	pmax		
	comp=Z,9.0nm,1.0s						
FINES	FINESS Array B	120.42 338		PKP	PKPdf	21 59 36.2	-2.7
LBNH	Lisbon	122.14	44	ePKIKP	PKPdf	21 59 40.4	-2.4
ANN	Anapa	122.47 317		i PKIKP	PKPdf	21 59 44.8	+1.4
ANN				pmax	pmax		
	comp=Z,31nm,1.7s						
LPAZ	La Paz	122.67 117		PKP	PKPdf	21 59 45.2	+0.6
	comp=Z,2.0nm,0.9s,baz=307,slow=2.4,SNR=5.7						
LPAZ	La Paz	122.67 117		PKIKP	PKPdf	21 59 45.3	+0.7
LPAZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
LPAZ	La Paz	122.67 117		ePKPdf	PKPdf	21 59 44.8	+0.1
LPAZ				PKP	PKPdf	21 59 45.2	+0.6
GTBY	Guantanamo Bay	123.29	73	PFAKE		22 00 00.0	+14
GTBY				LR	LR		
	comp=Z,1μm,19.0s,MS5.5						
PKME	Peaks-Kenny Pk	123.57	42	ePKPdf	PKPdf	21 59 43.7	-1.8
PKME				LR	LR		
	comp=Z,3μm,20.0s,MS6.0						
IZAR	Zarasai	123.83 332		eP	PKPdf	21 59 44.2	-1.5
IZAR				AMB	AMB	21 59 51.3	
	comp=Z,8.7nm,0.9s						
IDID	Didziasalis	123.86 332		eP	PKPdf	21 59 44.1	-1.6
IDID				AMB	AMB	21 59 51.3	
	comp=Z,10nm,1.0s						
IIGN	Ignalina	124.07 332		eP	PKPdf	21 59 44.8	-1.3
IIGN				AMB	AMB	21 59 51.9	
	comp=Z,13nm,1.1s						
SUR	Sutherland	124.11 219		PFAKE		22 00 00.0	+13
SUR				LR	LR		
	comp=Z,5μm,19.0s,MS6.2						
KMBO	Kilima Mbogo	124.92 261		PFAKE		22 00 00.0	+11
KMBO				LR	LR		
	comp=Z,3μm,22.0s,MS5.9						
AKASG	Malin Array Be	125.08 326		PKP	PKPdf	21 59 45.5	-2.7
	comp=Z,4.9nm,0.8s,baz=61,slow=2.1,SNR=12						
AKASG	Malin Array Be	125.08 326		PKIKP	PKPdf	21 59 45.5	-2.7
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AKBB	Malin Array Si	125.08 326		ePKIKP	PKPdf	21 59 46.5	-1.7
LBTB	Lobatse	125.52 229		PKIKP	PKPdf	21 59 50.4	+0.5
NOA	NORSAR Array B	125.59 344		PKP	PKPdf	21 59 46.8	-2.1
	comp=Z,3.1nm,0.7s,baz=30,slow=1.8,SNR=16						
NOA	NORSAR Array B	125.59 344		PKIKP	PKPdf	21 59 46.8	-2.1
NOA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HFS	Hagfors	125.60 342		PKP	PKPdf	21 59 46.3	-2.6
	comp=Z,6.7nm,0.8s,baz=134,slow=4.3,SNR=12						
HFS	Hagfors	125.60 342		PKIKP	PKPdf	21 59 46.3	-2.6
HFS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ASF	Jabal al Asfar	126.14 302		PKP	PKPdf	21 59 50.5	-0.4
	comp=Z,2.7nm,1.0s,baz=290,slow=1.3,SNR=3.5						
ASF	Jabal al Asfar	126.14 302		PKIKP	PKPdf	21 59 50.5	-0.4
ASF				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CPUP	Villa Florida	126.20 134		PKP	PKPdf	21 59 49.8	-1.4
	comp=Z,0.6nm,0.4s,baz=302,slow=11,SNR=2.9						
CPUP	Villa Florida	126.20 134		PKIKP	PKPdf	21 59 49.8	-1.4
CPUP				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SUW	Suwalki	126.29 332		ePKP	PKPdf	21 59 49.2	-1.2
SUW				ePP	PP	22 01 47.4	+2.6
SUW				LMZ		22 52 28.1	
	comp=Z,5μm,21.9s						
SUW	Suwalki	126.29 332		ePKPdf	PKPdf	21 59 49.9	-0.6
BR131	Keskin Array S	126.78 312		ePKPdf	PKPdf	21 59 50.5	-1.4
BR131				LR	LR		
	comp=Z,1μm,20.0s,MS5.6						
BRTR	Keskin Array B	126.78 312		PKP	PKPdf	21 59 49.8	-2.0
	comp=Z,2.3nm,1.0s,baz=64,slow=2.9,SNR=5.0						
BRTR				PP	PP	22 01 47.0	-1.8
	comp=Z,3.0nm,1.0s,baz=64,slow=2.9,SNR=5.0						
BRTR	Keskin Array B	126.78 312		PKIKP	PKPdf	21 59 49.8	-2.0
BRTR						22 01 47.0	
BRTR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BRTR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SDV	Santo Domingo	127.04	87	ePKPdf	PKPdf	21 59 52.8	-0.2
KIS	Kishinev	127.12 322		ePKP	PKPdf	21 59 48.0	-4.3
KIS	Kishinev	127.12 322		ePP	PP	22 01 46.0	-4.7
KIS	Kishinev	127.12 322		ePS	PS	22 11 44.0	-12
KIS				LRM		22 58 26.0	
	comp=Z,2μm,18.0s						
KIS	Kishinev	127.12 322		ePKIKP	PKPdf	21 59 48.0	-4.3
KIS				e	PP	22 01 46.0	-4.7
KIS				ePPP		22 44 33.0	
KIS				e	SKSac	22 06 46.0	-12
KIS				ePS	PS	22 11 44.0	-12
KONO	Kongsberg	127.20 343		ePKIKP	PKPdf	21 59 49.8	-2.2
MMAI	Mount Meron Ar	127.20 303		PKP	PKPdf	21 59 52.3	-0.6
	comp=Z,3.7nm,0.9s,baz=42,slow=8.8,SNR=3.6						
EIL	Elat	128.24 299		PKP	PKPdf	21 59 53.9	-1.1
	comp=Z,3.4nm,0.5s,baz=125,slow=9.8,SNR=4.7						
LVV	L'vov	128.37 327		ePKIKP	PKPdf	21 59 52.6	-2.0
LVV				MLR	MLR		
	comp=N,3μm,22.0s,MS6.2						
LVV				MLR	MLR		
	comp=E,4μm,22.0s,MS6.2						
LVV				MLR	MLR		
	comp=Z,5μm,22.0s,MS6.2						
CSS	Prodhromos	128.41 306		PFAKE		22 00 10.0	+15
CSS				LR	LR		
	comp=Z,2μm,20.0s,MS5.8						
LSZ	Lusaka	128.49 241		ePKIKP	PKPdf	21 59 55.0	-0.8
TESR		128.66 322		⇓P	Pdif	21 56 50.6	+10
BUR08	Bucovina Ar. S	128.93 324		ePKPdf	PKPdf	21 59 55.7	+0.1
VRI	Vrincioaia	128.93 322		P	Pdif	21 56 53.5	+12
VRI	Vrincioaia	128.93 322		⇑P	Pdif	21 56 53.5	+12
VRI	Vrincioaia	128.93 322		⇑i P	Pdif	21 56 53.5	+12
GKP	Gorka Klasztor	129.44 334		ePKP	PKPdf	21 59 55.8	-0.7
GKP				LMZ		22 54 18.8	
	comp=Z,5μm,23.4s						
UZH	Uzhgorod	129.99 327		ePKIKP	PKPdf	21 59 55.5	-2.2
RGN	Rugen	130.08 337		ePP	PP	22 02 06.6	-2.9
OKC	Ostrava-Krasne	131.36 330		ePKIKP	PKPdf	22 00 06.2	+6.0
OKC	Ostrava-Krasne	131.36 330		ePKPdf	PKPdf	22 00 06.2	+6.0
RUE	Ruedersdorf	131.46 335		ePP	PP	22 02 14.8	-3.7
BSEG	Bad Segeberg	131.66 339		ePP	PP	22 02 17.1	-2.6
KDZ	Kurdzhali	131.78 317		i P	Pdif	21 56 52.0	-2.2
DPC	Dobruska-Polom	131.88 332		ePKIKP	PKPdf	22 00 01.0	-0.2
DPC	Dobruska-Polom	131.88 332		ePKPdf	PKPdf	22 00 01.0	-0.2
DPC				ex	x	22 02 42.5	
VYHS	Vyhne	131.89 329		ePKIKP	PKPdf	22 00 00.5	-0.8
VYHS	Vyhne	131.89 329		ePKP	PKPdf	22 00 00.5	-0.8
UPC	Upice	131.91 332		ePKIKP	PKPdf	22 00 00.5	-0.8
UPC	Upice	131.91 332		ePKPdf	PKPdf	22 00 00.5	-0.8
UPC				ex	x	22 02 33.2	
HLG	Helgoland	132.28 341		ePP	PP	22 02 20.8	-2.9
VRAC	Vranov	132.47 331		PKP	PKPdf	22 00 00.9	-1.5
	comp=Z,3.5nm,0.8s,baz=85,slow=4.2,SNR=4.1						
VRAC	Vranov	132.47 331		PKIKP	PKPdf	22 00 00.9	-1.5
VRAC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PVCC	Panska Ves	132.55 333		ePKIKP	PKPdf	22 00 03.0	+0.5
PVCC	Panska Ves	132.55 333		ePKPdf	PKPdf	22 00 03.0	+0.5
BRG	Berggiesshubel	132.58 334		i PKP	PKPdf	22 00 01.7	-0.8
	comp=Z,24nm,1.4s						
BRG	Berggiesshubel	132.58 334		i PKIKP	PKPdf	22 00 01.7	-0.8
BRG				pmax	pmax		
	comp=Z,14nm,1.4s						
CLL	Collm	132.66 335		ePKPdf	PKPdf	22 00 05.2	+2.6
CLL				ePP	PP	22 02 22.8	-3.5
CLL	Collm	132.66 335		ePKIKP	PKPdf	22 00 02.0	-0.6
CLL				e		22 00 19.0	
CLL				pmax	pmax		
	comp=Z,48nm,2.2s						
CLL				MLR	MLR		
	comp=Z,2μm,20.9s,MS5.9						
CLL	Collm	132.66 335		ePKP	PKPdf	22 00 02.0	-0.6
CLL				i		22 00 08.0	
CLL				e		22 00 19.0	
CLL				i PKS		22 03 32.3	
CLL				LR	LR		
	comp=Z,2μm,20.9s,MS5.9						
CLL	Collm	132.66 335		ePKPdf	PKPdf	22 00 02.0	-0.6
CLL				i		22 00 08.0	
	comp=Z,254nm,3.2s						
CLL				e		22 00 19.0	
CLL				ePP	PP	22 02 27.0	+0.7
CLL				i PKSbc		22 03 32.3	
	comp=Z,48nm,2.2s						
CLL				e(SKSP)		22 12 06.0	
CLL				ePPS		22 14 42.0	
CLL				eSS	SS	22 20 12.0	+6.0
CLL				eSKSSKSac		22 22 30.0	
CLL				eSSS		22 25 18.0	
CLL				LmV		23 01 00.0	
	comp=Z,2μm,20.9s						
NRDL	Niedersach Rie	132.88 338		ePKPdf	PKPdf	22 00 05.2	+2.2
NRDL				ePP	PP	22 02 23.3	-4.3
PRA	Prague	132.94 333		PKPdf	PKPdf	22 00 03.0	-0.2
PRA				PP	PP	22 02 29.0	+0.8
PRU	Pruhonice	132.95 333		ePKIKP	PKPdf	22 00 03.8	+0.6
PRU	Pruhonice	132.95 333		ePKPdf	PKPdf	22 00 03.8	+0.6
PRU				ex	x	22 02 47.2	
NEUB	Neuenburg	133.24 336		ePKPdf	PKPdf	22 00 06.8	+3.1
NEUB				ePP	PP	22 02 26.5	-3.5
CLZ	Clausthal	133.30 337		ePKPdf	PKPdf	22 00 08.3	+4.5
CLZ				ePP	PP	22 02 27.5	-2.8
TANN	Tannenbergstha	133.55 334		ePP	PP	22 02 29.0	-3.0
WERD	Werda	133.59 335		ePP	PP	22 02 33.3	+1.0
GUNZ	Gunzen	133.64 334		ePP	PP	22 02 33.7	+1.1
NKC	Novy Kostel	133.69 334		ePKIKP	PKPdf	22 00 04.4	-0.2
NKC	Novy Kostel	133.69 334		ePKPdf	PKPdf	22 00 04.4	-0.2
MOX	Moxa	133.73 335		ePKPdf	PKPdf	22 00 09.3	+4.6
MOX				ePP	PP	22 02 30.0	-3.1
MOX	Moxa	133.73 335		e	PKPdf	22 00 07.8	+3.1
MOX	Moxa	133.73 335		e	PKPdf	22 00 07.8	+3.1
IBBN	Ibbenburen	133.88 339		ePP	PP	22 02 30.7	-3.3
KHC	Kasperske Hory	134.00 332		ePKPdf	PKPdf	22 00 04.7	-0.5
KHC				ePP	PP	22 02 35.0	+0.1
KHC	Kasperske Hory	134.00 332		ePKPdf	PKPdf	22 00 04.6	-0.6
KHC				ePP	PP	22 02 44.1	+9.2
EKA	Eskdalemuir Ar	134.10 349		PKP	PKPdf	22 00 04.5	-0.8
	comp=Z,3.4nm,0.9s,baz=24,slow=4.7,SNR=6.3						
EKA	Eskdalemuir Ar	134.10 349		PKIKP	PKPdf	22 00 04.5	-0.7
EKA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GEC2	GERESS Array S	134.15 332		ePKPdf	PKPdf	22 00 08.3	+2.8
GEC2				ePP	PP	22 02 33.4	-2.5
UBBA	Unterbreizbach	134.25 336		ePKPdf	PKPdf	22 00 09.0	+3.3
UBBA				ePP	PP	22 02 33.1	-3.3
WET	Wettzell	134.31 333		ePKPdf	PKPdf	22 00 09.0	+3.2
WET				ePP	PP	22 02 34.4	-2.5
GRA1	Grafenberg Arr	134.62 335		ePKPdf	PKPdf	22 00 09.3	+2.9
GRA1				ePP	PP	22 02 35.9	-2.9
GRF	Grafenberg Arr	134.62 335		ePKPdf	PKPdf	22 00 09.3	+2.9
GRF				ePP	PP	22 02 35.9	-2.9
TSUM	Tsumeb	134.93 229		PKPdf	PKPdf	22 00 07.9	0.0
PERS	Pernice	135.01 329		ePKPdf	PKPdf	22 00 07.6	+0.4
PERS				ePP	PP	22 02 43.5	+2.1
PERS				e		22 03 42.6	
TNS	Taunus Mts	135.33 337		ePKPdf	PKPdf	22 00 11.7	+4.0
TNS				ePP	PP	22 02 40.1	-3.1
KBA	Koelnbreinsper	135.58 331		P	PKPdf	22 00 00.8	-7.5
	comp=Z,23nm,0.9s						
BOJS	Bojanci	135.70 328		ePKPdf	PKPdf	22 00 07.0	-1.5
BOJS				ePP	PP	22 02 47.7	+1.9
BOJS				e		22 03 45.8	
FUR	Furstenfeldbru	135.75 333		ePP	PP	22 02 42.6	-3.4
MEM	Membach	135.91 339		PKP	PKPdf	22 00 10.0	+1.2
VOY	Vojsko	136.04 329		ePKPdf	PKPdf	22 00 05.3	-3.9
VOY				e		22 00 09.6	
VOY				e		22 00 12.4	
GRGR	Grenville	136.11	84	PFAKE		22 00 20.0	+10
GRGR				LR	LR		
	comp=Z,1μm,22.0s,MS5.6						
STU	Stuttgart	136.18 335		ePP	PP	22 02 51.9	+3.3
STU	Stuttgart	136.18 335		ePKIKP	PKPdf	22 00 09.0	-0.3
BCLA	Clavier	136.31 340		PKP	PKPdf	22 00 10.5	+1.0
BCLA				APKP		22 00 14.2	
TRI	Trieste	136.33 329		ePKIKP	PKPdf	22 00 09.4	-0.3
MOTA	Moosalm	136.44 332		⇓i PKPdf	PKPdf	22 00 07.6	-2.3
	comp=Z,9.0nm,0.9s						
WLF	Walferdange	136.64 338		ePKIKP	PKPdf	22 00 09.3	-0.9
WLF				MLR	MLR		
	comp=Z,3μm,21.0s,MS6.0						
DOU	Dourbes	136.82 340		PKP	PKPdf	22 00 10.7	+0.2
BFO	Black Forest	136.88 335		ePKPdf	PKPdf	22 00 14.2	+3.6
BFO				ePP	PP	22 02 49.7	-3.3
BFO	Black Forest	136.88 335		ePKPdf	PKPdf	22 00 10.1	-0.5
BFO				ePKPdf	PKPdf	22 00 14.2	+3.6
BFO				ePP	PP	22 02 49.7	-3.3
BFO				ePP	PP	22 02 53.6	+0.6
BAIF	Baives	136.99 340		ePKIKP	PKPdf	22 00 04.2	-6.6
	comp=Z,18nm,0.9s						
CDF	Champ du Feu	137.24 336		ePKIKP	PKPdf	22 00 04.4	-6.9
	comp=Z,56nm,1.6s						
DAVOX	Davos/Dischmat	137.41 333		PKP	PKPdf	22 00 11.2	-0.5
	comp=Z,5.3nm,0.7s,baz=75,slow=12,SNR=6.6						
ECH	Echery	137.44 336		ePKIKP	PKPdf	22 00 12.0	+0.3
ECH				e		22 02 56.5	
HINF	Hinteralfeld	137.89 336		ePKIKP	PKPdf	22 00 05.6	-6.9
	comp=Z,46nm,1.4s						
HAU	Haudompre	137.93 337		ePKIKP	PKPdf	22 00 05.4	-7.2
	comp=Z,42nm,1.3s						
MEZF	Maizieres J'vi	138.01 338		ePKIKP	PKPdf	22 00 05.1	-7.6
	comp=Z,53nm,1.2s						
AQU	L'Aquila	138.78 325		ePKIKP	PKPdf	22 00 13.3	-1.0
VLC	Villacollemand	139.12 330		PKPdf	PKPdf	22 00 16.6	+1.7
VLC				ePP	PP	22 03 10.7	+3.6
CABF	La Chapelle	139.17 336		ePKIKP	PKPdf	22 00 07.3	-7.6
	comp=Z,73nm,1.1s						
LOR	Lormes	139.48 338		ePKIKP	PKPdf	22 00 08.5	-7.0
FLN	La Foiniere	139.58 343		ePKIKP	PKPdf	22 00 07.3	-8.3
LPL	La Plagne	139.78 334		ePKIKP	PKPdf	22 00 08.2	-7.9
	comp=Z,51nm,1.5s						
LPG	La Plagne	139.78 334		ePKIKP	PKPdf	22 00 08.0	-8.1
	comp=Z,32nm,1.2s						
SSF	Saint Saulge	139.78 338		ePKIKP	PKPdf	22 00 09.2	-6.8
	comp=Z,43nm,1.2s						
CEL	Celeste	139.79 319		ePKPdf	PKPdf	22 00 12.9	-3.4
CEL				ePKPdf	PP	22 03 12.7	+1.0
SMF	Signal de Mont	140.01 338		ePKIKP	PKPdf	22 00 08.6	-7.9
AVF	Avril sur Loir	140.07 338		ePKIKP	PKPdf	22 00 09.3	-7.2
	comp=Z,37nm,1.3s						
MBDF	Montbardon	140.38 333		ePKIKP	PKPdf	22 00 08.8	-8.4
	comp=Z,23nm,1.1s						
BGF	Bois d'Agland	140.45 339		ePKIKP	PKPdf	22 00 09.5	-7.7
SGMF	Saint Gilles	140.60 345		ePKIKP	PKPdf	22 00 09.1	-8.4
	comp=Z,76nm,1.3s						
ORIF	Oris-en-Rattie	140.62 334		ePKIKP	PKPdf	22 00 10.3	-7.3
	comp=Z,29nm,1.0s						
ROSF	Rostrenen	140.71 346		ePKIKP	PKPdf	22 00 09.7	-8.0
SBF	Sospel	140.76 332		ePKIKP	PKPdf	22 00 10.0	-7.9
	comp=Z,61nm,1.1s						
TCF	Toulx Ste Croi	140.91 339		ePKIKP	PKPdf	22 00 09.1	-9.0
	comp=Z,51nm,1.3s						
PGF	Pioggiola	140.99 329		ePKIKP	PKPdf	22 00 11.6	-6.7
	comp=Z,105nm,1.1s						
QUIF	Quistinic	141.07 345		ePKIKP	PKPdf	22 00 10.4	-7.9
	comp=Z,100nm,1.5s						
VIVF	Saint-Julien-l	141.17 335		ePKIKP	PKPdf	22 00 10.8	-7.8
	comp=Z,50nm,1.2s						
FRF	La Foret Royal	141.35 332		ePKIKP	PKPdf	22 00 11.4	-7.6
	comp=Z,51nm,1.4s						
MFF	Saint Martin d	141.42 341		ePKIKP	PKPdf	22 00 10.9	-8.1
	comp=Z,63nm,1.3s						
SMRF	Simiane la Rot	141.50 334		ePKIKP	PKPdf	22 00 12.3	-6.9
	comp=Z,95nm,1.4s						
LMR	La Mourre	141.59 332		ePKIKP	PKPdf	22 00 12.1	-7.3
	comp=Z,88nm,1.3s						
RJF	Les Rejaudoux	142.00 339		ePKIKP	PKPdf	22 00 13.5	-6.6
CAF	Calviac	142.13 338		ePKIKP	PKPdf	22 00 11.7	-8.6
	comp=Z,54nm,1.6s						
LASF	Ste Croix	142.15 335		ePKIKP	PKPdf	22 00 12.5	-7.9
	comp=Z,87nm,1.5s						
LFF	La Frestale	142.59 339		ePKIKP	PKPdf	22 00 12.9	-8.2
	comp=Z,59nm,1.3s						
VSL	Villasalto	142.96 325		ePKPdf	PKPdf	22 00 22.2	+0.2
MTLF	Montolieu	143.42 336		ePKIKP	PKPdf	22 00 14.1	-8.6
	comp=Z,222nm,1.4s						
EPF	Esparros	144.40 338		ePKIKP	PKPdf	22 00 14.8	-10
	comp=Z,115nm,1.3s						
ETSF	Etsaut	144.83 339		ePKIKP	PKPdf	22 00 17.0	-8.1
	comp=Z,481nm,1.6s						
SJPF	Ste Jean	144.87 340		ePKIKP	PKPdf	22 00 16.8	-8.4
	comp=Z,233nm,1.4s						
CMAH	Djebel Manchou	146.06 324		P	PKPdf	22 00 26.6	-0.8
ABSA	Djebel Ababsia	146.26 323		P	PKPdf	22 00 27.2	-0.6
CAEH	'Ain El Ouahch	146.28 324		P	PKPdf	22 00 27.4	-0.4
CKFL	Kef-Lekhel	146.62 324		P	PKPdf	22 00 28.0	-0.4
CASM	Ain Smara	146.85 324		P	PKPdf	22 00 29.8	+1.0
DFRA	Djebel Bou Aff	147.00 325		P	PKPab	22 00 31.0	-1.4
CTEI	Djebel Teioual	147.03 324		P	PKPab	22 00 30.2	-2.4
SET	Setif	147.51 325		P	PKPab	22 00 33.0	-1.5
PBRG	Braganca	147.68 346		ePKPab	PKPab	22 00 37.6	+2.7
PCAB	Cabril	148.07 347		ePKPab	PKPbc	22 00 32.9	-0.9
PCAB	Cabril	148.07 347		ePKPbc	PKPab	22 00 35.8	-0.6
MVO	Moncorvo	148.36 346		ePKPbc	PKPbc	22 00 33.0	-1.6
MVO	Moncorvo	148.36 346		ePKPab	PKPab	22 00 39.0	+1.4
PVRL	Vila Real	148.41 347		ePKPbc	PKPbc	22 00 34.0	-0.7
EMHD	Djebel Mahouad	148.84 328		P	PKPdf	22 00 32.0	-0.1
ESDC	Sonseca Array	148.87 341		PKP	PKPdf	22 00 31.9	-0.2
	comp=Z,5.7nm,0.9s,baz=22,slow=2.6,SNR=7.4						
ESDC				PKPbc	PKPbc	22 00 34.8	-1.1
	comp=Z,6.5nm,0.9s,baz=18,slow=2.1,SNR=8.3						
ESLA	Sonseca Array	148.87 341		ePKPdf	PKPdf	22 00 31.7	-0.3
ESLA				ePKPab	PKPab	22 00 39.9	+0.1
PVIS	Viseu	148.99 347		ePKPbc	PKPbc	22 00 35.3	-0.9
PVIS	Viseu	148.99 347		ePKPab	PKPab	22 00 41.4	+1.2
PAB	San Pablo	149.11 341		ePKIKP	PKPdf	22 00 33.4	+1.0
MTE	Manteigas	149.21 346		ePKPbc	PKPbc	22 00 35.4	-1.4
MTE	Manteigas	149.21 346		ePKPab	PKPab	22 00 41.3	+0.2
MTE	Manteigas	149.21 346		ePKPdf	PKPdf	22 00 34.0	+1.5
MTE				ePKPab	PKPab	22 00 40.8	-0.3
EBNR	Beni Rached	149.49 330		P	PKPab	22 00 44.0	+1.6
CART	Cartagena	149.59 335		ePKPdf	PKPdf	22 00 34.1	+0.8
CART				ePKPab	PKPab	22 00 42.9	+0.1
ECHA	Ech Chlef	149.68 330		P	PKPbc	22 00 37.0	-1.1
PCBR	Castelo Branco	149.72 346		ePKPdf	PKPdf	22 00 32.8	-0.6
PCBR	Castelo Branco	149.72 346		ePKPbc	PKPbc	22 00 37.1	-0.9
PCBR	Castelo Branco	149.72 346		ePKPab	PKPab	22 00 43.3	+0.1
EANR	'Ain N'Sour	149.97 330		P	PKPbc	22 00 37.9	-0.9
PMRV	Marv??o	150.09 345		ePKPbc	PKPbc	22 00 37.5	-1.5
PMRV	Marv??o	150.09 345		ePKPab	PKPab	22 00 43.9	-0.8
PTOM	Tomar	150.15 347		ePKPbc	PKPbc	22 00 37.9	-1.2
ETRT	Tiaret	150.31 329		P	PKPbc	22 00 40.0	+0.4
PESTR	Estremoz	150.67 345		ePKPbc	PKPbc	22 00 38.7	-1.7
PESTR	Estremoz	150.67 345		ePKPab	PKPab	22 00 45.0	-2.1
PMAFR	Mafra	150.98 348		ePKPbc	PKPbc	22 00 41.1	0.0
PMAFR	Mafra	150.98 348		ePKPab	PKPab	22 00 45.8	-2.6
EVO	Evora	151.09 346		ePKP1	PKPbc	22 00 39.7	-1.7
	comp=Z,169nm,1.3s						
EVO	Evora	151.09 346		ePKPbc	PKPbc	22 00 39.5	-1.9
EVO	Evora	151.09 346		ePKPab	PKPab	22 00 46.1	-2.8
PBAR	Barrancos	151.18 344		ePKPbc	PKPbc	22 00 40.6	-1.0
PBAR	Barrancos	151.18 344		ePKPab	PKPab	22 00 46.2	-3.0
PBEJ	Beja	151.53 345		ePKPbc	PKPbc	22 00 40.8	-1.6
PBEJ	Beja	151.53 345		ePKPab	PKPab	22 00 47.9	-2.8
PCVE	Castro Verde	151.95 345		ePKPbc	PKPbc	22 00 41.1	-2.3
PVAQ	Vaqueiros	152.08 344		ePKPbc	PKPbc	22 00 41.7	-2.0
PTEO	Sao Teotonio	152.20 346		ePKPbc	PKPbc	22 00 42.6	-1.3
PBDV	Barranco-do-Ve	152.29 345		ePKPbc	PKPbc	22 00 42.8	-1.4
MORF	Marmelete	152.41 346		ePKPbc	PKPbc	22 00 42.6	-1.8
PFVI	Vila Bisbo	152.62 346		ePKPdf	PKPdf	22 00 36.8	-1.1
PFVI	Vila Bisbo	152.62 346		ePKPbc	PKPbc	22 00 43.0	-1.9
MDT	Midelt	155.19 335		PKPbc	PKPdf	22 00 46.6	+4.9
	comp=Z,7.0nm,1.1s,baz=360,slow=4.4,SNR=3.8						

comp=N,3µm,0.2s
BIA eLg 21 49 43.2
comp=E,3µm,0.2s
BIA Bitola 0.53 307 P Pg 21 49 34.3 -0.9
BIA S Sg 21 49 42.6 +0.6
BIA Bitola 0.53 307 P Pg 21 49 34.3 -0.9
BIA S Sg 21 49 42.6 +0.6
NEST Nestorio 0.70 246 P Pg 21 49 37.9 -0.5
NEST S Sg 21 49 48.4 +0.9
NEST Nestorio 0.70 246 P Pg 21 49 37.9 -0.5
NEST S Sg 21 49 48.4 +0.9
LIT Litokhoron 0.76 142 P Pg 21 49 38.8 -0.9
LIT Litokhoron 0.76 142 P Pg 21 49 38.8 -0.9
VAY Valandovo 0.81 40 *i* Pg **Pg 21 49 39.6 -1.0**
VAY *i* Sg **Sg 21 49 51.3 +0.3**
VAY eLg 21 49 54.1
comp=N,2µm,0.8s
VAY eLg 21 49 54.4
comp=E,2µm,0.8s
VAY Valandovo 0.81 40 P Pg 21 49 39.7 -0.8
VAY S Sg 21 49 52.0 +1.0
VAY Valandovo 0.81 40 P Pg 21 49 39.7 -0.8
VAY S Sg 21 49 52.0 +1.0
KRUS Krusevo 0.82 324 *i* Pg **Pg 21 49 39.2 -1.5**
KRUS *i* Sg **Sg 21 49 50.5 -0.9**
KRUS eLg 21 49 50.7
comp=N,871nm,0.2s
KRUS eLg 21 49 51.2
comp=E,655nm,0.2s
THE Thessaloniki 0.83 95 P Pg 21 49 40.0 -0.9
THE Thessaloniki 0.83 95 P Pg 21 49 40.2 -0.7
THE S Sg 21 49 52.1 +0.4
THE Thessaloniki 0.83 95 P Pg 21 49 40.2 -0.7
THE S Sg 21 49 52.1 +0.4
KNT Kendrikon 0.90 59 P Pg 21 49 41.8 -0.4
KNT S Sg 21 49 54.7 +0.8
KNT Kendrikon 0.90 59 P Pg 21 49 41.8 -0.4
KNT S Sg 21 49 54.7 +0.8
OHR Ohrid 0.92 297 *i* Pg **Pg 21 49 40.8 -1.8**
OHR *i* Sg **Sg 21 49 55.4 +0.9**
OHR eLg 21 49 56.1
comp=E,2µm,0.4s
OHR eLg 21 49 56.2
comp=N,2µm,0.4s
OHR Ohrid 0.92 297 P Pg 21 49 41.8 -0.8
OHR S Sg 21 49 55.3 +0.8
OHR Ohrid 0.92 297 P Pg 21 49 41.8 -0.8
OHR S Sg 21 49 55.3 +0.8
HORT Hortiatis 0.93 96 P Pg 21 49 41.9 -1.1
HORT Hortiatis 0.93 96 P Pg 21 49 42.1 -0.9
HORT S Sg 21 49 55.8 +0.7
HORT Hortiatis 0.93 96 P Pg 21 49 42.1 -0.9
HORT S Sg 21 49 55.8 +0.7
SOH Sokhos 1.12 84 P Pg 21 49 45.6 -1.0
SOH Sokhos 1.12 84 P Pg 21 49 45.6 -1.0
SOH S Sg 21 50 02.2 +1.0
SOH Sokhos 1.12 84 P Pg 21 49 45.6 -1.0
SOH S Sg 21 50 02.2 +1.0
THL Klokotos Trika 1.14 175 *e*PN **Pg 21 49 46.1 -0.9**
THL Klokotos Trika 1.14 175 P Pg 21 49 45.8 -1.2
THL S Sg 21 50 02.7 +0.9
THL Klokotos Trika 1.14 175 P Pg 21 49 45.8 -1.2
THL Klokotos Trika 1.14 175 *e*Pn **Pg 21 49 46.1 -0.9**
THL S Sg 21 50 02.7 +0.9
PLG Polygyros 1.24 105 *e*Pn **Pn 21 49 47.7 -1.2**
PLG *e*Sn **Sn 21 50 04.3 -1.7**
PLG Polygyros 1.24 105 *e*PN **Pn 21 49 47.7 -1.2**
PLG *e*SN **Sn 21 50 04.2 -1.8**
PLG Polygyros 1.24 105 P Pg 21 49 47.5 -1.3
PLG S Sg 21 50 06.2 +1.4
PLG Polygyros 1.24 105 *e*Pn **Pg 21 49 47.7 -1.2**
PLG *e*Sn **Sn 21 50 04.3 -1.7**
PLG S Sg 21 50 06.2 +1.4
SKO Skopje 1.31 345 ⇓*i*Pg **Pg 21 49 50.0 -0.2**
SKO *i* Sg **Sg 21 50 06.2 -1.0**
SKO eLg 21 50 07.4
comp=E,995nm,0.6s
SKO eLg 21 50 07.9
comp=N,896nm,0.4s
SKO Skopje 1.31 345 P Pn 21 49 49.8 -0.1
SKO S Sg 21 50 07.2 +0.1
SKO Skopje 1.31 345 P Pn 21 49 49.8 -0.1
SKO S Sg 21 50 07.2 +0.1
JAN Janina 1.31 217 *e*Pn **Pn 21 49 49.4 -0.6**
JAN Janina 1.31 217 *e*PN **Pn 21 49 49.4 -0.6**
JAN Janina 1.31 217 *e*Pn **Pn 21 49 49.4 -0.6**
SRS Serrai 1.36 72 P Pn 21 49 49.8 -0.8
SRS S Sb 21 50 08.8 +0.2
SRS Serrai 1.36 72 P Pn 21 49 49.8 -0.8
SRS S Sb 21 50 08.8 +0.2
PHP Peshkopia 1.46 312 *e*PN **Pn 21 49 50.8 -1.2**
PHP *i* SN **Sn 21 50 14.2 +2.7**
PHP Peshkopia 1.46 312 *e*Pn **Pn 21 49 50.8 -1.2**
PHP *i* Sn **Sn 21 50 14.2 +2.7**
KKB Krupnik 1.47 38 *i* P **Pn 21 49 51.9 -0.3**
KKB Krupnik 1.47 38 *i* P **Pn 21 49 51.9 -0.3**
PAIG Paliouri 1.58 119 P Pn 21 49 52.6 -1.1
PAIG Paliouri 1.58 119 P Pn 21 49 52.6 -1.1
PAIG Paliouri 1.58 119 P Pn 21 49 52.6 -1.1
NVR Nevrokopi 1.63 66 *e*Pb **Pb 21 49 53.8 -1.8**
NVR *e*Sn **Sn 21 50 16.3 +0.6**
NVR Nevrokopi 1.63 66 *e*PB **Pb 21 49 53.8 -1.8**
NVR *e*SN **Sn 21 50 16.3 +0.6**
OUR Ouranopolis 1.64 102 P Pn 21 49 53.9 -0.6
OUR Ouranopolis 1.64 102 P Pn 21 49 54.0 -0.5
OUR S Sn 21 50 16.1 +0.1
OUR Ouranopolis 1.64 102 P Pn 21 49 54.0 -0.5
OUR S Sn 21 50 16.1 +0.1
MMB Musomiste 1.65 57 *i* P **Pn 21 49 54.1 -0.5**
MMB Musomiste 1.65 57 *i* P **Pn 21 49 54.1 -0.5**
TIR Tirane 1.65 293 P Pn 21 49 56.0 +1.3
TIR Tirane 1.65 293 P Pn 21 49 54.2 -0.5
TIR S Sn 21 50 17.3 +1.0
TIR Tirane 1.65 293 P Pn 21 49 54.2 -0.5
TIR S Sn 21 50 17.3 +1.0
SRN Sarande 1.66 241 *e*PN **Pn 21 49 56.2 +1.5**
SRN *i* SN **Sn 21 50 19.8 +3.5**
SRN Sarande 1.66 241 *e*Pn **Pn 21 49 56.2 +1.5**
SRN *i* Sn **Sn 21 50 19.8 +3.5**
XOR Xorichti 1.67 143 P Pn 21 49 53.7 -1.2
XOR Xorichti 1.67 143 P Pn 21 49 54.1 -0.8
XOR Xorichti 1.67 143 P Pn 21 49 54.1 -0.8
AGG Agios Georgios 1.72 168 P Pn 21 49 54.8 -0.7
AGG Agios Georgios 1.72 168 P Pn 21 49 55.2 -0.3
AGG S Sn 21 50 18.4 +0.6
AGG Agios Georgios 1.72 168 P Pn 21 49 55.2 -0.3
AGG S Sn 21 50 18.4 +0.6
NEO Neokhori 1.74 143 *e*Pn **Pn 21 49 54.9 -0.9**
NEO *e*Sn **Sn 21 50 17.3 -1.0**
NEO Neokhori 1.74 143 *e*PN **Pn 21 49 54.9 -0.9**
NEO *e*SN **Sn 21 50 17.3 -1.0**
NEO Neokhori 1.74 143 *e*Pn **Pn 21 49 54.9 -0.9**
NEO *e*Sn **Sn 21 50 17.3 -1.0**
EVR Evrytania 1.79 182 *e*Pn **Pn 21 49 56.6 +0.1**
EVR Evrytania 1.79 182 *e*PN **Pn 21 49 56.6 +0.1**
EVR Evrytania 1.79 182 *e*Pn **Pn 21 49 56.6 +0.1**
KEK Kerkira 1.88 239 *e*Pn **Pn 21 49 58.2 +0.5**
KEK Kerkira 1.88 239 *e*PN **Pn 21 49 58.2 +0.5**
KEK Kerkira 1.88 239 P Pn 21 49 58.9 +1.2
KEK Kerkira 1.88 239 *e*Pn **Pn 21 49 58.2 +0.5**
KEK Kerkira 1.88 239 P Pn 21 49 58.9 +1.2
PUK Puka 2.01 312 *e*Pn **Pn 21 50 00.2 +0.7**
PUK *i* SN **Sn 21 50 30.5 +5.5**
PUK Puka 2.01 312 *e*Pn **Pn 21 50 00.2 +0.7**
KAVA Kavala 2.02 81 P Pn 21 49 58.9 -0.8
KAVA S Sn 21 50 25.0 -0.3
KAVA Kavala 2.02 81 P Pn 21 49 58.9 -0.8
KAVA S Sn 21 50 25.0 -0.3
BARS Barje 2.11 359 ⇓*i*Pn **Pn 21 50 00.8 -0.2**
VTS Vitosha 2.13 27 P Pn 21 50 01.4 +0.2
VTS Vitosha 2.13 27 P Pn 21 50 01.7 +0.5
VTS S Sn 21 50 28.2 +0.1
VTS Vitosha 2.13 27 *i* P **Pn 21 50 02.5 +1.3**
VTS Vitosha 2.13 27 ⇓*i*P **Pn 21 50 01.5 +0.3**
VTS Vitosha 2.13 27 P Pn 21 50 01.4 +0.2
VTS S Sn 21 50 28.2 +0.1
LKD2 Lefkada island 2.13 207 P Pn 21 50 02.6 +1.3
LKD2 Lefkada island 2.13 207 P Pn 21 50 02.6 +1.3
BCI Bajram Curri 2.15 321 *i* PN **Pn 21 50 01.9 +0.5**
BCI *i* SN **Sn 21 50 36.5 +8.0**
BCI Bajram Curri 2.15 321 *i* Pn **Pn 21 50 01.9 +0.5**
AOS Alonnisos 2.17 134 P Pn 21 50 00.6 -1.2
AOS S Sn 21 50 29.6 +0.6
AOS Alonnisos 2.17 134 P Pn 21 50 00.6 -1.2
AOS S Sn 21 50 29.6 +0.6
ATAL Atalanti 2.19 156 P Pn 21 50 01.5 -0.6
ATAL Atalanti 2.19 156 P Pn 21 50 01.5 -0.6
LKD Levkas 2.21 206 P Pn 21 50 02.8 +0.5
LKD Levkas 2.21 206 P Pn 21 50 02.8 +0.5
LKR Lokris 2.23 157 *e*Pn **Pn 21 50 01.9 -0.6**
LKR *e*Sn **Sn 21 50 29.1 -1.3**
LKR Lokris 2.23 157 *e*PN **Pn 21 50 01.9 -0.6**
LKR *e*SN **Sn 21 50 29.1 -1.3**
LKR Lokris 2.23 157 P Pn 21 50 01.9 -0.6
LKR Lokris 2.23 157 P Pn 21 50 01.9 -0.6
LKR *e*Sn **Sn 21 50 29.1 -1.3**
EFP Efpalio 2.27 180 P Pn 21 50 03.6 +0.4
EFP Efpalio 2.27 180 P Pn 21 50 03.6 +0.4
KALE Kalithea 2.32 175 P Pn 21 50 04.1 +0.3
KALE Kalithea 2.32 175 P Pn 21 50 04.1 +0.3
TRIZ Trizonia 2.34 176 P Pn 21 50 04.3 +0.2
TRIZ Trizonia 2.34 176 P Pn 21 50 04.3 +0.2
DSF Desfina 2.34 167 P Pn 21 50 03.5 -0.7
DSF Desfina 2.34 167 P Pn 21 50 03.5 -0.7
ULC Ulcinj 2.35 303 *e*Pn **Pn 21 50 05.2 +1.0**
ULC *e*Sn **Sn 21 50 36.5 +3.2**
ULC Ulcinj 2.35 303 *e*Pn **Pn 21 50 05.2 +1.0**
ULC *e*Sn **Sn 21 50 36.5 +3.2**
RZN Rozhen 2.35 64 *i* P **Pn 21 50 04.8 +0.5**
RZN Rozhen 2.35 64 *i* P **Pn 21 50 04.8 +0.5**
PVY Plav 2.37 324 ⇓*i*Pn **Pn 21 50 05.3 +0.8**
PVY *e*Sn **Sn 21 50 37.1 +3.2**
PVY Plav 2.37 324 ⇓*i*Pn **Pn 21 50 05.3 +0.8**
PVY *e*Sn **Sn 21 50 37.1 +3.2**
LAKA Lakka 2.46 178 P Pn 21 50 06.7 +0.9
LAKA Lakka 2.46 178 P Pn 21 50 06.7 +0.9
PGB Panagyurishte 2.52 42 *i* P **Pn 21 50 06.7 +0.2**
PGB Panagyurishte 2.52 42 *i* P **Pn 21 50 06.7 +0.2**
PLD Plovdiv 2.54 56 P Pn 21 50 07.3 +0.4
PLD Plovdiv 2.54 56 P Pn 21 50 09.1 +2.2
PLD Plovdiv 2.54 56 P Pn 21 50 07.3 +0.4
PDG Podgorica 2.61 312 ⇑*i*Pn **Pn 21 50 09.3 +1.4**
PDG *e*Sn **Sn 21 50 42.1 +2.1**
TTG Podgorica 2.61 312 ⇑*i*Pn **Pn 21 50 09.3 +1.4**
TTG *e*Sn **Sn 21 50 42.1 +2.1**
TTG Podgorica 2.61 312 ⇑*i*Pn **Pn 21 50 09.3 +1.4**
TTG *e*Sn **Sn 21 50 42.1 +2.1**
BEY Berane 2.62 326 ⇑*i*Pn **Pn 21 50 09.2 +1.2**
BEY *e*Sn **Sn 21 50 43.6 +3.4**
IVA Berane 2.62 326 ⇑*i*Pn **Pn 21 50 09.2 +1.2**
IVA *e*Sn **Sn 21 50 43.6 +3.4**
IVA Berane 2.62 326 ⇑*i*Pn **Pn 21 50 09.2 +1.2**
IVA *e*Sn **Sn 21 50 43.6 +3.4**
RLS Riolos of Patr 2.66 187 P Pn 21 50 11.2 +2.7
RLS Riolos of Patr 2.66 187 P Pn 21 50 11.2 +2.7
VLS Valsamata 2.71 202 *e*Pn **Pn 21 50 09.3 0.0**
VLS Valsamata 2.71 202 *e*PN **Pn 21 50 09.3 0.0**
VLS Valsamata 2.71 202 P Pn 21 50 09.3 0.0
VLS Valsamata 2.71 202 P Pn 21 50 09.3 0.0
KFL Anninata 2.73 198 P Pn 21 50 11.0 +1.6
KFL Anninata 2.73 198 P Pn 21 50 11.0 +1.6
BUM Brajici-Budva 2.75 306 ⇑*i*Pn **Pn 21 50 10.4 +0.7**
BUM *e*Sn **Sn 21 50 45.7 +2.4**
BUM Brajici-Budva 2.75 306 ⇑*i*Pn **Pn 21 50 10.4 +0.7**
BUM *e*Sn **Sn 21 50 45.7 +2.4**
GUR Goura 2.79 172 P Pn 21 50 10.1 -0.2
GUR Goura 2.79 172 P Pn 21 50 10.1 -0.2
LTK Loutraki 2.81 162 P Pn 21 50 10.5 0.0
LTK Loutraki 2.81 162 P Pn 21 50 10.5 0.0
KDZ Kurdzhali 2.83 69 *i* P **Pn 21 50 09.9 -1.0**
KDZ Kurdzhali 2.83 69 *i* P **Pn 21 50 09.9 -1.0**
NKY Niksic 3.01 315 ⇑*i*Pn **Pn 21 50 14.3 +0.9**
NKY *e*Sn **Sn 21 50 52.4 +2.6**
NKY Niksic 3.01 315 ⇑*i*Pn **Pn 21 50 14.3 +0.9**
NKY *e*Sn **Sn 21 50 52.4 +2.6**
PTL Penteli 3.07 149 P Pn 21 50 13.9 -0.2
PTL Penteli 3.07 149 P Pn 21 50 13.9 -0.2
HCY Herceg Novi 3.08 306 ⇑*i*Pn **Pn 21 50 14.8 +0.6**
HCY *e*Sn **Sn 21 50 54.4 +3.0**
HCY Herceg Novi 3.08 306 ⇑*i*Pn **Pn 21 50 14.8 +0.6**
HCY *e*Sn **Sn 21 50 54.4 +3.0**
ATH Athens Observa 3.08 152 *e*Pn **Pn 21 50 14.1 -0.2**
ATH Athens Observa 3.08 152 *e*PN **Pn 21 50 14.1 -0.2**
ATH Athens Observa 3.08 152 *e*Pn **Pn 21 50 14.1 -0.2**
ATHU Athens Univers 3.11 151 P Pn 21 50 15.1 +0.4
ATHU Athens Univers 3.11 151 P Pn 21 50 15.1 +0.4
BOLS Boljevac 3.12 1 ⇓*i*Pn **Pn 21 50 13.9 -1.0**
ALN Alexandroupoli 3.17 85 P Pn 21 50 14.9 -0.6
ALN Alexandroupoli 3.17 85 P Pn 21 50 14.8 -0.7
ALN Alexandroupoli 3.17 85 P Pn 21 50 14.9 -0.6
NAIG Nisos Aigina 3.20 156 *e*Pn **Pn 21 50 16.0 +0.1**
NAIG Nisos Aigina 3.20 156 *e*PN **Pn 21 50 16.0 +0.1**
NAIG Nisos Aigina 3.20 156 *e*Pn **Pn 21 50 16.0 +0.1**
PLE Pljevlja 3.21 326 ⇑*i*Pn **Pn 21 50 17.1 +1.0**
PLE *e*Sn **Sn 21 50 57.7 +3.0**
PLE Pljevlja 3.21 326 ⇑*i*Pn **Pn 21 50 17.1 +1.0**
PLE *e*Sn **Sn 21 50 57.7 +3.0**
VLY Voula,Athens 3.21 152 P Pn 21 50 15.9 -0.2
VLY Voula,Athens 3.21 152 P Pn 21 50 15.9 -0.2
GRUS Gruza 3.30 345 ⇑*i*Pn **Pn 21 50 16.6 -0.7**
BRY Bratogost 3.32 312 ⇓*i*Pn **Pn 21 50 18.8 +1.2**
BRY *e*Sn **Sn 21 50 59.3 +1.9**
BRY Bratogost 3.32 312 ⇓*i*Pn **Pn 21 50 18.8 +1.2**
BRY *e*Sn **Sn 21 50 59.3 +1.9**
UPM Unac-Piva 3.34 319 ⇓*i*Pn **Pn 21 50 20.1 +2.3**
UPM *e*Sn **Sn 21 51 02.5 +4.7**
UPM Unac-Piva 3.34 319 ⇓*i*Pn **Pn 21 50 20.1 +2.3**
UPM *e*Sn **Sn 21 51 02.5 +4.7**
VLX Vlachokerasia 3.35 173 P Pn 21 50 18.6 +0.6
VLX Vlachokerasia 3.35 173 P Pn 21 50 18.6 +0.6
DID Didima 3.36 161 P Pn 21 50 18.0 -0.2
DID Didima 3.36 161 P Pn 21 50 18.0 -0.2
PE1 Pezze di Greco 3.39 273 *i* Pn **Pn 21 50 17.3 -1.2**
PE1 *e*Sn **Sn 21 50 58.3 -0.7**
SIGR SIGRI 3.40 115 P Pn 21 50 19.0 +0.3
SIGR SIGRI 3.40 115 P Pn 21 50 19.0 +0.3
TAR1 Taranto 3.50 269 *e*Pn **Pn 21 50 19.2 -0.9**
ITM Ithomi 3.52 179 *e*Pn **Pn 21 50 20.8 +0.5**
ITM Ithomi 3.52 179 *e*PN **Pn 21 50 20.8 +0.5**
ITM Ithomi 3.52 179 P Pn 21 50 23.0 +2.7
ITM Ithomi 3.52 179 *e*Pn **Pn 21 50 20.8 +0.5**
ITM Ithomi 3.52 179 P Pn 21 50 23.0 +2.7
BBLS Lazići 3.65 331 *e*Pn **Pn 21 50 23.3 +1.1**
DIVS Divibare 3.67 338 P Pn 21 50 22.4 0.0
DIVS Divibare 3.67 338 P Pn 21 50 22.4 0.0
PRK Paraskevi 3.67 112 *e*Pn **Pn 21 50 22.9 +0.4**
PRK Paraskevi 3.67 112 *e*PN **Pn 21 50 22.9 +0.4**
PRK Paraskevi 3.67 112 *e*Pn **Pn 21 50 22.9 +0.4**
TRUS Trudelj 3.68 343 *e*Pn **Pn 21 50 21.2 -1.3**
STON Ston 3.80 306 *e*Pn **Pn 21 50 22.6 -1.5**
STON Sn **Sn 21 51 06.0 -3.3**
STON Ston 3.80 306 *e*Pn **Pn 21 50 22.6 -1.6**
STON Sn **Sn 21 51 05.9 -3.3**
PYL PYLOS 3.81 182 P Pn 21 50 25.5 +1.2
PYL PYLOS 3.81 182 P Pn 21 50 25.5 +1.2
BAI Bari 3.81 278 *i* Pn **Pn 21 50 23.5 -0.8**
BAI *e*Sn **Sn 21 51 07.8 -1.7**
JMB Yambol 3.94 62 P Pn 21 50 26.4 +0.3
JMB Yambol 3.94 62 P Pn 21 50 26.4 +0.3
AYVA Ayvalik 3.95 109 *i* P **Pn 21 50 25.6 -0.6**
AYVA Ayvalik 3.95 109 *i* P **Pn 21 50 25.6 -0.6**
SG1 Sgolgore (BA) 3.95 274 *e*Pn **Pn 21 50 25.2 -1.1**
SG1 *e*Sn **Sn 21 51 12.7 -0.3**
SZH Strazhica 3.96 48 *i* P **Pn 21 50 27.7 +1.3**
SZH Strazhica 3.96 48 *i* P **Pn 21 50 27.7 +1.3**
CHOS Chios island 3.97 124 P Pn 21 50 27.2 +0.7
CHOS Chios island 3.97 124 P Pn 21 50 27.2 +0.7
VLI Veliai 4.07 168 P Pn 21 50 27.5 -0.3
VLI Veliai 4.07 168 P Pn 21 50 27.5 -0.3
BALY Balya 4.50 101 *i* P **Pn 21 50 34.2 +0.4**
BALY Balya 4.50 101 *i* P **Pn 21 50 34.2 +0.4**
BALY *i* S **Sn 21 51 23.5 -2.9**
MS1 Monte Sant'Ang 4.59 285 *e*Pn **Pn 21 50 33.8 -1.2**
MS1 *e*Sn **Sn 21 51 25.6 -3.1**
APE Apeiranthos 4.61 141 ⇑P **Pn 21 50 36.0 +0.7**
APE Apeiranthos 4.61 141 ⇑P **Pn 21 50 36.0 +0.6**
APE Apeiranthos 4.61 141 ⇑P **Pn 21 50 36.0 +0.6**
FGSL Fruska Gora 4.70 342 *e*Pn **Pn 21 50 36.1 -0.5**
GZR Gura Zlata 4.73 8 ⇓P **Pn 21 50 36.5 -0.5**
GZR Gura Zlata 4.73 8 ⇓*i*P **Pn 21 50 36.5 -0.5**
GZR Gura Zlata 4.73 8 ⇓P **Pn 21 50 36.5 -0.5**
BZS Buzias 4.91 358 ⇑P **Pn 21 50 39.4 -0.1**
BZS Buzias 4.91 358 ⇑*i*P **Pn 21 50 39.4 -0.1**
BZS Buzias 4.91 358 ⇑P **Pn 21 50 39.4 -0.1**
SULR 5.11 38 ⇑P **Pn 21 50 43.2 +1.0**
SULR 5.11 38 ⇑*i*P **Pn 21 50 43.2 +1.0**
SULR 5.11 38 ⇑P **Pn 21 50 43.2 +1.0**
CEL Celeste 5.24 244 P Pn 21 50 44.4 +0.5
CEL Celeste 5.24 244 P Pn 21 50 44.4 +0.5
VOIR 5.27 25 ⇓P **Pn 21 50 44.4 +0.1**
VOIR 5.27 25 ⇓*i*P **Pn 21 50 44.4 +0.1**
VOIR 5.27 25 ⇓P **Pn 21 50 44.4 +0.1**
DEMI Demirci 5.51 105 *i* P **Pn 21 50 48.9 +1.2**
DEMI Demirci 5.51 105 *i* P **Pn 21 50 48.9 +1.2**
KARN Karanos 5.53 162 P Pn 21 50 50.0 +2.0
KARN Karanos 5.53 162 P Pn 21 50 50.0 +2.0
MLR Muntele Rosu 5.63 31 Pn **Pn 21 50 50.4 +1.0**
comp=N,2.0nm,0.3s,baz=247,slow=5.0,SNR=34
MLR Sn **Sn 21 51 57.6 +3.3**
comp=N,1.3nm,0.3s,baz=340,slow=16,SNR=3.6
MLR Muntele Rosu 5.63 31 ⇑P **Pn 21 50 50.2 +0.9**
MLR Muntele Rosu 5.63 31 ⇑*i*P **Pn 21 50 50.2 +0.9**
MLR Muntele Rosu 5.63 31 ⇑P **Pn 21 50 50.2 +0.9**
RHK3 Tenkes 5.82 334 *e*P **Pn 21 50 51.8 -0.1**
DOPR Dopca 5.85 25 ⇑*i*P **Pn 21 50 54.4 +2.1**
DOPR Dopca 5.85 25 ⇑*i*P **Pn 21 50 54.4 +2.1**
PKSM Moragy 5.99 338 ⇑P **Pn 21 50 53.7 -0.5**
PKSM Moragy 5.99 338 ⇑*i*P **Pn 21 50 53.7 -0.5**
PKSM Moragy 5.99 338 ⇑P **Pn 21 50 53.7 -0.5**
DRGR 6.11 5 ⇑P **Pn 21 50 55.6 -0.3**
DRGR 6.11 5 ⇑*i*P **Pn 21 50 55.7 -0.2**
DRGR 6.11 5 ⇑P **Pn 21 50 55.7 -0.2**
PLOR Plostina 6.21 32 ⇑*i*P **Pn 21 50 59.0 +1.7**
PLOR Plostina 6.21 32 ⇑*i*P **Pn 21 50 59.0 +1.7**
VRI Vrincioaia 6.25 33 ⇓P **Pn 21 50 59.5 +1.6**
VRI Vrincioaia 6.25 33 ⇓*i*P **Pn 21 50 59.5 +1.6**
VRI Vrincioaia 6.25 33 ⇓P **Pn 21 50 59.5 +1.6**
DNZL Cakiroluk 6.33 116 *i* P **Pn 21 51 00.6 +1.7**
DNZL Cakiroluk 6.33 116 *i* P **Pn 21 51 00.6 +1.7**
KHAL Karahalli 6.33 109 *i* P **Pn 21 51 00.3 +1.3**
KHAL Karahalli 6.33 109 *i* P **Pn 21 51 00.3 +1.4**
NVLJ Novalja 6.45 309 *e*Pn **Pn 21 50 59.6 -0.9**
NVLJ Sn **Sn 21 52 11.1 -3.4**
NVLJ Novalja 6.45 309 *e*Pn **Pn 21 50 59.6 -0.9**
BORA Eskisehir 6.61 94 *i* P **Pn 21 50 49.7 -13**
TLCR 6.78 46 ⇓P **Pn 21 51 06.4 +1.4**
TLCR 6.78 46 ⇓*i*P **Pn 21 51 06.4 +1.4**
TLCR 6.78 46 ⇓P **Pn 21 51 06.4 +1.4**
CRES Cresnjev 6.94 320 *i* Pn **Pn 21 51 07.5 +0.3**
CRES Cresnjev 6.94 320 *i* Pn **Pn 21 51 07.6 +0.3**
PKSG 7.14 341 ⇓*e*P **Pn 21 51 10.7 +0.7**
BURAR Bucovina Array 7.31 18 ⇑P **Pn 21 51 12.6 +0.2**
BURAR Bucovina Array 7.31 18 ⇑*i*P **Pn 21 51 12.6 +0.2**
BURAR Bucovina Array 7.31 18 ⇑P **Pn 21 51 12.6 +0.2**
BUR08 Bucovina Ar. S 7.33 18 *e*Pn **Pn 21 51 12.8 +0.1**
BUR08 *e*Sn **Sn 21 52 33.9 -2.4**
BUR08 Bucovina Ar. S 7.33 18 *e*Pn **Pn 21 51 12.8 +0.1**
BUR08 *e*Sn **Sn 21 52 33.9 -2.4**
SOKA Soboth 7.76 323 ⇑*i*Pn **Pn 21 51 18.3 -0.3**
SOKA ⇓*i*Sn **Sn 21 52 43.9 -2.8**
SOKA Soboth 7.76 323 Pn **Pn 21 51 18.3 -0.2**
KECS Kecovo 7.84 353 *e*Pn **Pn 21 51 21.9 +2.3**
KECS Kecovo 7.84 353 *e*PN **Pn 21 51 21.9 +2.3**
OBKA Obir 7.87 320 ⇑*i*Pn **Pn 21 51 19.9 -0.1**
OBKA ⇓*i*Sn **Sn 21 52 47.2 -2.2**
OBKA Obir 7.87 320 Pn **Pn 21 51 19.9 -0.1**
OBKA Sn **Sn 21 52 47.2 -2.2**
VOY Vojsko 7.88 315 *e*Pn **Pn 21 51 20.4 +0.2**
VOY *e*Sn **Sn 21 52 45.1 -4.7**
VOY Vojsko 7.88 315 *e*Pn **Pn 21 51 20.4 +0.2**
ARSA Arzberg 7.99 327 ⇑*i*Pn **Pn 21 51 20.7 -1.0**
ARSA ⇑*i*Sn **Sn 21 52 47.2 -5.1**
ARSA Arzberg 7.99 327 Pn **Pn 21 51 20.7 -0.9**
VYHS Vyhne 8.08 345 *e*Pn **Pn 21 51 23.5 +0.5**
VYHS *e*Sn **Sn 21 52 43.0 -12**
VYHS Vyhne 8.08 345 *e*PN **Pn 21 51 23.5 +0.5**
VYHS *e*SN **Sn 21 52 43.0 -12**
VYHS Vyhne 8.08 345 *e*Pn **Pn 21 51 23.5 +0.5**
KOLL Kolacno 8.25 344 *e*Pn **Pn 21 51 26.5 +1.2**
KOLL Kolacno 8.25 344 *e*PN **Pn 21 51 26.5 +1.2**
KOLL Kolacno 8.25 344 *e*Pn **Pn 21 51 26.5 +1.2**
MOA Molln 8.99 325 ⇓*i*Pn **Pn 21 51 35.0 -0.4**
MOA ⇓*i*Sn **Sn 21 53 13.6 -3.3**
MOA Molln 8.99 325 Pn **Pn 21 51 35.0 -0.4**
BR131 Keskin Array S 9.05 92 *e*Pn **Pn 21 51 36.3 +0.1**
BR131 Keskin Array S 9.05 92 *e*Pn **Pn 21 51 36.3 0.0**
BRTR Keskin Array B 9.05 92 Pn **Pn 21 51 37.1 +0.9**
comp=N,0.3nm,0.3s,baz=264,slow=13,SNR=12
BRTR Keskin Array B 9.05 92 Pn **Pn 21 51 37.2 +0.9**
ABTA Abfaltersbach 9.08 315 ⇓*i*Pn **Pn 21 51 36.9 +0.3**
ABTA ⇓*i*Sn **Sn 21 53 16.3 -2.8**
ABTA Abfaltersbach 9.08 315 Pn **Pn 21 51 36.9 +0.3**
VRAC Vranov 9.38 338 Pn **Pn 21 51 41.7 +1.0**
comp=N,0.1nm,0.3s,baz=172,slow=14,SNR=3.5
VRAC Vranov 9.38 338 Pn **Pn 21 51 41.7 +1.0**
WTTA Wattenberg 9.87 315 ⇑*i*Pn **Pn 21 51 47.9 +0.5**
WTTA ⇑*i*Sn **Sn 21 53 36.4 -2.1**
WTTA Wattenberg 9.87 315 Pn **Pn 21 51 47.9 +0.5**
WTTA Sn **Sn 21 53 36.4 -2.1**
MOTA Moosalm 10.21 314 ⇓*i*Pn **Pn 21 51 52.0 0.0**
MOTA Moosalm 10.21 314 Pn **Pn 21 51 52.0 -0.1**
KHC Kasperske Hory 10.27 328 *e*P **Pn 21 51 53.5 +0.6**
KHC *e*S **Sn 21 53 54.0 +5.6**
KHC Kasperske Hory 10.27 328 P **Pn 21 51 53.5 +0.6**
DAVOX Davos/Dischmat 10.59 309 Pn **Pn 21 51 57.3 0.0**
comp=N,1.3nm,0.3s,baz=143,slow=20,SNR=13
DAVOX Davos/Dischmat 10.59 309 Pn **Pn 21 51 57.3 0.0**
FRF La Foret Royal 11.67 289 *e*P **Pn 21 52 12.3 +0.2**
FRF La Foret Royal 11.67 289 *e*P **Pn 21 52 12.3 +0.2**
LPG La Plagne 12.05 298 *e*P **Pn 21 52 15.7 -1.6**
comp=N,3.3nm,0.5s
LPG La Plagne 12.05 298 *e*P **Pn 21 52 15.7 -1.6**
comp=N,1.6nm,0.5s
LPG La Plagne 12.05 298 *e*P **Pn 21 52 15.7 -1.6**
comp=N,1.6nm,0.5s
LPL La Plagne 12.07 298 *e*P **Pn 21 52 16.1 -1.4**
comp=N,5.6nm,0.7s
LPL La Plagne 12.07 298 *e*P **Pn 21 52 16.1 -1.4**
comp=N,2.8nm,0.7s
LPL La Plagne 12.07 298 *e*P **Pn 21 52 16.1 -1.4**
comp=N,2.8nm,0.7s
LOR Lormes 14.52 303 *e*P **Pn 21 52 47.5 -3.5**
LDF La Druitiere 17.49 304 *e*P **Pn 21 53 26.1 -3.4**
SGMF Saint Gilles 18.95 302 *e*P **Pn 21 53 45.2 -2.2**
SGMF Saint Gilles 18.95 302 *e*P **Pn 21 53 45.2 -2.2**
ROSF Rostrenen 19.43 302 *e*P **Pn 21 53 50.4 -2.8**
ROSF Rostrenen 19.43 302 *e*P **Pn 21 53 50.4 -2.8**
HFS Hagfors 20.11 348 P **P 21 53 57.8 -1.6**
comp=N,0.8nm,0.4s,baz=148,slow=8.5,SNR=3.9
HFS Hagfors 20.11 348 P **P 21 53 57.8 -1.5**
FINES FINESS Array B 20.93 6 P **P 21 54 07.6 -0.6**
comp=N,1.1nm,0.7s,baz=178,slow=13,SNR=5.3
FINES FINESS Array B 20.93 6 P **P 21 54 07.6 -0.6**
FINES FINESS Array B 20.93 6 P **P 21 54 07.6 -0.6**
NB2 NORSAR Subarra 21.39 346 P **P 21 54 12.1 -1.1**
comp=Z,0.9nm,0.5s,mb3.4,baz=158,slow=10
NB2 NORSAR Subarra 21.39 346 P **P 21 54 12.1 -1.1**
comp=Z,0.9nm,0.5s,mb3.4,SNR=1.8
NOA NORSAR Array B 21.39 346 P **P 21 54 12.0 -1.2**
comp=Z,1.7nm,

ILAR	Eielson Array	74.49	355	P	P	22 01 02.1	-1.9
	comp=Z,0.3nm,0.6s,mb3.4,baz=350,slow=4.7,SNR=5.6						
ILAR	Eielson Array	74.49	355	P	P	22 01 02.1	-1.8
TXAR	Lajitas Array	93.97	315	P	P	22 02 42.3	-1.8
	comp=Z,0.3nm,0.6s,mb3.9,baz=75,slow=4.5,SNR=3.8						
TXAR	Lajitas Array	93.97	315	P	P	22 02 42.3	-1.8

MOS ***28*** *22:16:59.1±1.2,4°.76N×127°.60E,h46km,mb5.1/24, Error ellipse: s-maj=11.9km s-min=6.4km az=115.5*
ISCJB ***28*** *22:17:09.5±0.6,4°.68N±0°.03×127°.61E±0°.05,h145km±5km, mb4.7/59, Error ellipse: s-maj=8.9km s-min=4.3km az=166.0*
NEIC ***28*** *22:17:11.8±0.9,4°.74N×127°.65E,h152km±9km,mb4.8/26, Error ellipse: s-maj=8.0km s-min=4.9km az=64.0*
IDC ***28*** *22:17:13.3±1.4,4°.67N×127°.39E,h163km±12km,mb4.1/17, mb1 4.2/18,mb1mx4.1/25,mbtmp4.2/18, Error ellipse: s-maj=22.6km s-min=9.6km az=76.0*
BJI ***28*** *22:17:15.6,5°.29N×127°.19E,h151km,mB5.0/7,mb4.7/18*
DJA ***28*** *22:17:15,4°.27N×127°.49E,h171km,MLv4.9/3*

ISC 28 22:17:10.7±0.6,4°.67N±0°.03×127°.61E±0°.05,h139km±5km, n136,σ1§02/143,mb4.7/59,7C-7D,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	Mati	2.63	329	eP	Pn	22 17 52.2	-0.8
GSPH	General Santos	3.00	298	⇑iP	Pn	22 17 55.5	-2.2
GSPH				eS	Sn	22 18 27.1	-6.9
DAV	Davao City (W)	3.12	320	P	Pn	22 18 00.2	+0.9
	154nm,0.3s,baz=253,slow=4.7,SNR=13						
DAV				S	Sn	22 18 38.6	+1.8
	104nm,0.3s,baz=59,slow=23,SNR=12						
DAV	Davao City (W)	3.12	320	ePn	Pn	22 18 00.3	+1.0
DAV				eSn	Sn	22 18 37.5	+0.6
KCP	Kidapawan	3.42	313	⇓iP	Pn	22 18 06.2	+3.1
KCP				iS	Sn	22 18 46.3	+2.6
TNTI	Ternate	3.88	184	P	Pn	22 18 10.3	+1.1
TNTI				S	Sn	22 18 52.6	-1.9
BUKP	Musuan	4.07	322	eP	Pn	22 18 11.6	-0.1
MNI	Manado	4.23	221	P	Pn	22 18 13.7	-0.1
MNI				S	Sn	22 19 01.3	-1.5
KMSI	Cibinong	5.45	222	P	Pn	22 18 30.2	+0.2
KMSI				S	Sn	22 19 30.3	-1.5
LUWI	Luwuk	7.45	221	P	Pn	22 18 58.5	+1.6
NLAI	Namlea	7.87	184	P	Pn	22 19 00.4	-2.1
KAKA	Kakadu	17.92	165	eP	Pn	22 21 11.2	-0.1
	49nm,0.6s						
KAKA	Kakadu	17.92	165	eP	Pn	22 21 10.6	-0.7
	143nm,0.6s						
GUMO	Guam	19.19	61	P	P	22 21 23.1	-0.8
KNA	Kununurra	20.32	177	eP	P	22 21 37.2	+1.2
	61nm,0.7s						
QIZ	Qiongzhong	22.46	311	P	P	22 21 51.3	-7.3
FITZ	Fitzroy Crossi	22.71	185	eP	P	22 22 01.4	+0.5
	38nm,1.5s,mb4.6						
FITZ	Fitzroy Crossi	22.71	185	P	P	22 22 01.4	+0.6
	9.3nm,0.5s,mb4.5,baz=24,slow=7.8,SNR=46						
FITZ	Fitzroy Crossi	22.71	185	eP	P	22 22 01.9	+1.0
WRAB	Tennant Creek	25.33	165	eP	P	22 22 26.1	+1.4
WRAB				pmax	pmax		
	comp=Z,32nm,0.6s,mb5.0						
WRAB	Tennant Creek	25.33	165	eP	P	22 22 26.1	+1.3
	comp=Z,32nm,0.6s,mb5.0						
MBWA	Marble Bar	26.80	196	eP	P	22 22 38.8	+0.8
	comp=Z,18nm,1.2s,mb4.6						
ASAR	Alice Springs	28.82	168	P	P	22 22 56.5	+0.6
	comp=Z,3.1nm,0.5s,mb4.3,baz=351,slow=7.9,SNR=70						
ENH	Enshi	30.68	328	eP	P	22 23 11.7	-0.5
	comp=Z,11nm,0.7s,mb4.7						
CTAO	Charters Tower	30.68	144	eP	P	22 23 11.9	-0.5
CTAO				pmax	pmax		
	comp=Z,28nm,1.5s,mb4.8						
CTAO	Charters Tower	30.68	144	eP	P	22 23 11.9	-0.4
	comp=Z,28nm,1.5s,mb4.8						
CM31	Chiang Mai Arr	31.18	298	eP	P	22 23 17.4	+0.6
CMAR	Chiang Mai Arr	31.18	298	P	P	22 23 17.0	+0.2
	comp=Z,0.5nm,0.5s,baz=122,slow=7.6,SNR=4.9						
CHTO	Chiang Mai	31.31	299	eP	P	22 23 17.9	-0.1
CHTO				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.2						
CHTO	Chiang Mai	31.31	299	eP	P	22 23 17.9	-0.1
	comp=Z,1.6nm,0.4s,mb4.1						
MEEK	Meekatharra	32.32	195	eP	P	22 23 26.5	-0.2
KSRS	Korea Array	32.63	0	P	P	22 23 29.4	+0.2
	comp=Z,3.0nm,0.6s,mb4.2,baz=178,slow=10,SNR=16						
KSRS	Korea Array	32.63	0	P	P	22 23 29.5	+0.2
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
XAN	Xi'an	33.99	332	P	P	22 23 41.0	-0.2
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
COCO	West Island	34.88	241	eP	P	22 23 49.5	+0.4
QLP	Quilpie	34.99	153	eP	P	22 23 50.3	+0.5
HNR	Honiara	35.14	114	eP	P	22 23 49.0	-2.3
HNR				pmax	pmax		
	comp=Z,289nm,0.6s						
HNR	Honiara	35.14	114	eP	P	22 23 49.0	-2.3
	comp=Z,289nm,0.6s						
FORT	Forrest	35.25	179	eP	P	22 23 52.7	+0.7
	comp=Z,20nm,0.6s,mb4.9						
BJT	Baijiatuau	36.67	345	eP	P	22 24 03.4	-0.6
BJT				pmax	pmax		
	comp=Z,9.0nm,0.5s						
BJT	Baijiatuau	36.67	345	eP	P	22 24 03.4	-0.6
	comp=Z,9.3nm,0.5s,mb4.7						
BJI	Beijing	36.69	345	P	P	22 24 03.5	-0.7
BJI				pmax	pmax		
	comp=Z,26nm,0.8s,mb4.9						
KLBR	Kellerberrin	37.26	194	eP	P	22 24 09.4	+0.3
	comp=Z,48nm,1.7s,mb4.8						
BBOO	Buckleboo	38.13	168	eP	P	22 24 16.9	+0.6
	comp=Z,14nm,0.3s,mb5.1						
LZH	Lanzhou	38.16	328	⇑P	P	22 24 18.0	+1.4
LZH				pmax	pmax		
	comp=Z,41nm,1.2s,mb4.9						
LZH				pmax	pmax		
	comp=Z,150nm,4.3s						
NWAO	Narrogin (SRO)	38.66	194	P	P	22 24 20.7	-0.1
	comp=Z,12nm,0.9s,mb4.5,baz=30,slow=9.8,SNR=3.7						
STKA	Stephens Creek	38.71	161	eP	P	22 24 22.1	+0.9
	comp=Z,22nm,0.8s,mb4.8						
STKA	Stephens Creek	38.71	161	P	P	22 24 22.1	+0.9
	comp=Z,28nm,0.7s,mb5.0,baz=337,slow=7.8,SNR=48						
STKA	Stephens Creek	38.71	161	eP	P	22 24 22.0	+0.8
STKA				e		22 25 52.0	
STKA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
STKA	Stephens Creek	38.71	161	eP	P	22 24 22.0	+0.8
	comp=Z,4.6nm,0.6s,mb4.3						
STKA				ePP	PP	22 25 52.0	-0.9
MDJ	Mudanjiang	39.82	2	eP	P	22 24 30.3	+0.1
CMSA	Cobar Meteorol	39.92	156	eP	P	22 24 31.9	+0.6
SHL	Shillong	40.04	305	ePKP	P	22 24 34.0	+1.6
ARMA	Armidale	41.78	148	eP	P	22 24 48.0	+1.5
LSA	Lhasa	42.49	310	P	P	22 24 52.5	+0.1
GTA	Gaotai	42.76	328	⇓eP	P	22 24 55.3	+0.9
GTA				pmax	pmax		
	comp=Z,22nm,1.0s,mb4.7						
ARPS	Mount Arapiles	43.31	163	eP	P	22 25 00.4	+1.6
	comp=Z,43nm,0.7s,mb5.2						
HABR	Khabarovsk	44.10	7	eP	P	22 25 03.0	-2.0
HABR				e		22 26 47.6	
HABR				S	S	22 31 34.1	+7.0
HABR				e*SS	sS	22 31 50.6	-31
HABR				e		22 34 58.6	
HABR				pmax	pmax		
	comp=N,10.0nm,1.0s						
HABR				pmax	pmax		
	comp=Z,18nm,0.6s,mb4.9						
HABR				pmax	pmax		
	comp=E,27nm,1.2s						
HABR				MLR	MLR		
	comp=Z,1μm,16.0s						
TAPN	Taplejung	44.18	305	eP	P	22 25 06.1	+0.1
	comp=Z,28nm,0.7s,mb5.0						
ODAN	Odare	44.26	304	eP	P	22 25 06.7	+0.1
	comp=Z,48nm,0.8s,mb5.2						
HIA	Hailar	44.94	353	P	P	22 25 10.7	-0.9
RAMN	Ramite	44.94	304	eP	P	22 25 11.7	-0.3
JIRN	Jiri	45.55	305	eP	P	22 25 17.0	+0.2
	comp=Z,32nm,0.7s,mb5.0						
GUN	Gumba	45.90	305	eP	P	22 25 19.8	+0.3
	comp=Z,60nm,0.9s,mb5.2						
KKN	Kakani	46.34	304	eP	P	22 25 22.5	-0.5
DMN	Daman	46.42	304	eP	P	22 25 23.1	-0.5
	comp=Z,17nm,0.8s,mb4.8						
ULN	Ulaanbaatar	46.51	341	eP	P	22 25 24.2	+0.2
ULN				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb4.7						
ULN	Ulaanbaatar	46.51	341	eP	P	22 25 24.2	+0.2
	comp=Z,9.0nm,0.5s,mb4.7						
SONM	Songino Array	46.70	340	P	P	22 25 25.8	+0.3
	comp=Z,3.7nm,0.5s,mb4.3,baz=155,slow=8.7,SNR=22						
SONM				PcP	PcP	22 26 56.6	-0.2
	comp=Z,1.2nm,0.6s,baz=166,slow=4.5,SNR=4.6						
PALK	Pallekele	46.71	276	eP	P	22 25 28.2	+2.1
GKN	Gorkha	46.95	304	eP	P	22 25 27.2	-0.6
	comp=Z,24nm,1.1s,mb4.7						
KOLN	Koldanda	47.72	304	eP	P	22 25 33.8	+0.1
	comp=Z,45nm,0.7s,mb5.2						
ZAK	Zakamensk	49.94	340	eP	P	22 25 51.4	+1.2
ZAK				e		22 27 08.5	
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.4s						
TLY	Talaya	50.92	341	eP	P	22 25 58.2	+0.6
TLY				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.0						
TLY	Talaya	50.92	341	eP	P	22 25 57.9	+0.3
PETK	Petropavlovsk-	54.24	22	P	P	22 26 22.9	+1.0
	comp=Z,26nm,0.6s,mb5.1,baz=183,slow=4.7,SNR=60						
PET	Petropavlovsk	54.53	22	eP	P	22 26 24.1	0.0
PET				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.7						
YAK	Yakutsk	57.25	1	eP	P	22 26 43.4	+0.1
YAK				pmax	pmax		
	comp=Z,28nm,0.6s,mb5.3						
YAK	Yakutsk	57.25	1	eP	P	22 26 42.4	-0.9
	comp=Z,35nm,0.6s,mb5.4						
MK31	Makanchi Array	57.30	325	eP	P	22 26 44.0	+0.2
MKAR	Makanchi Array	57.30	325	P	P	22 26 44.2	+0.3
	comp=Z,10nm,0.4s,mb5.0,baz=113,slow=7.9,SNR=215						
MKAR	Makanchi Array	57.30	325	P	P	22 26 44.2	+0.3
KZA	Kyzart	59.52	317	P	P	22 27 01.0	+1.6
	SNR=15						
KBK	Karagaybulak	59.96	317	P	P	22 27 03.4	+1.0
	SNR=5.7						
UCH	Uchtor	60.09	317	eP	P	22 27 04.9	+1.6
ZAA0	Zalesovo Array	60.16	332	eP	P	22 26 59.9	-3.6
ZALV	Zalesovo Beam	60.16	332	P	P	22 27 01.9	-1.6
	comp=Z,1.9nm,0.3s,mb4.3,baz=104,slow=6.3,SNR=15						
ZALV	Zalesovo Beam	60.16	332	P	P	22 27 01.9	-1.6
AAK	Ala-Archa	60.26	317	eP	P	22 27 04.4	-0.1
AAK				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.5						
AAK	Ala-Archa	60.26	317	eP	P	22 27 04.3	-0.1
	comp=Z,3.7nm,0.5s,mb4.5						
USP	Ospenovka	60.51	318	P	P	22 27 06.6	+0.5
	SNR=22						
AML	Almayashu	60.61	316	P	P	22 27 08.2	+1.4
	SNR=24						
AML	Almayashu	60.61	316	eP	P	22 27 07.7	+0.8
AML				e		22 27 49.2	
AML				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.9						
AML	Almayashu	60.61	316	eP	P	22 27 07.7	+0.9
	comp=Z,15nm,0.8s,mb4.9						
AML				ePcP	PcP	22 27 49.2	-0.6
EKS2	Erkin-Say	60.76	317	P	P	22 27 08.6	+0.8
	SNR=25						
EKS2	Erkin-Say	60.76	317	eP	P	22 27 08.4	+0.6
EKS2				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.9						
EKS2	Erkin-Say	60.76	317	eP	P	22 27 08.4	+0.5
	comp=Z,16nm,0.8s,mb4.9						
SEY	Seymchan	60.93	13	⇑eP	P	22 27 10.2	+1.6
KURK	Kurchatov	61.43	327	eP	P	22 27 11.8	-0.4
KURK				e	pP	22 27 49.5	+4.0
KURK				pmax	pmax		
	comp=Z,24nm,0.6s,mb5.2						
KURK	Kurchatov	61.43	327	eP	P	22 27 11.8	-0.4
	comp=Z,24nm,0.6s,mb5.2						
KURK				e	pP	22 27 49.5	+4.0
NVS	Novosibirsk	61.44	333	eP	P	22 27 10.8	-1.4
NVS				pmax	pmax		
	comp=N,5.0nm,1.1s						
NVS				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.4						
NVS				pmax	pmax		
	comp=E,7.0nm,1.3s						
KBL	Kabul	61.66	307	eP	P	22 27 13.4	-0.7
KBL				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
KBL	Kabul	61.66	307	eP	P	22 27 13.4	-0.7
	comp=Z,5.7nm,0.8s,mb4.5						
KK31	Karatay Array	63.15	316	ceP	P	22 27 23.4	-0.4
KK31				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.7						
TIXI	Tiksi	66.90	0	eP	P	22 27 47.8	+0.3
TIXI				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.8						
BVAR	Borovoye Array	67.02	327	P	P	22 27 48.3	-0.3
	comp=Z,12nm,0.9s,mb4.8,baz=127,slow=7.7,SNR=73						
BRVK	Borovoye	67.09	327	deP	P	22 27 48.8	-0.3
BRVK				pmax	pmax		
	comp=Z,23nm,1.2s,mb4.9						
BRVK	Borovoye	67.09	327	eP	P	22 27 48.5	-0.5
	comp=Z,14nm,0.8s,mb4.9						
ZRNK	Zerenda	67.75	326	iP	P	22 27 52.5	-0.7
ZRNK				pmax	pmax		
	comp=Z,13nm,0.5s,mb4.9						
CASY	Casey	71.85	187	P	P	22 28 19.2	+1.3
AB31	Akbulak array	71.98	320	ceP	P	22 28 18.5	-0.7
AB31				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.5						
ABKAR	Akbulak array	71.98	320	eP	P	22 28 18.5	-0.7
	comp=Z,6.7nm,0.7s,mb4.5						
SVE	Sverdlovsk	73.63	328	⇓eP	P	22 28 28.5	-0.2
SVE				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.7						
ARU	Arti	74.62	327	diP	P	22 28 33.3	-1.2
ARU						22 31 17.6	
ARU				S	S	22 38 06.3	+7.6
ARU				SS	SS	22 42 51.0	+2.3
ARU				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.5						
ARU	Arti	74.62	327	eP	P	22 28 33.0	-1.4
	comp=Z,8.9nm,0.6s,mb4.6						
KDAK	Kodiak Island	80.63	32	P	P	22 29 09.0	+1.2
	comp=Z,4.8nm,0.6s,mb4.3,baz=341,slow=18,SNR=6.3						
KDAK	Kodiak Island	80.63	32	iP	P	22 29 09.1	+1.3
KIV	Kislovodsk	83.13	314	eP	P	22 29 22.3	+1.1
KIV				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
KIV	Kislovodsk	83.13	314	eP	P	22 29 21.1	-0.1
	comp=Z,4.2nm,0.8s,mb4.2						
COLA	College	83.48	25	P	P	22 29 21.8	-0.7
VRHR	Novokhopersk	83.87	321	eP	P	22 29 23.5	-1.3
VRHR				pmax	pmax		
	comp=N,7.0nm,0.6s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.6s						
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
ILAR	Eielson Array	83.88	25	P	P	22 29 25.1	+0.5
	comp=Z,1.0nm,0.5s,mb3.8,baz=248,slow=5.3,SNR=16						
VSR	Storozhevoye	85.42	321	eP	P	22 29 31.7	-0.9
VSR				eS	S	22 39 57.8	+5.8
VSR				pmax	pmax		
	comp=N,4.0nm,0.6s						
VSR				pmax	pmax		
	comp=E,5.0nm,0.6s						
VSR				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.6						
VSR				smax			
	comp=Z,140nm,7.0s						
VSR				smax			
	comp=N,1μm,13.9s						
VSR				smax			
	comp=E,460nm,13.9s						
OBN	Obninsk	86.80	325	eP	P	22 29 38.3	-1.0
OBN				eS	S	22 40 17.3	+12
OBN				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.7						
OBN	Obninsk	86.80	325	eP	P	22 29 37.8	-1.5
ARCES	ARCESS Array B	89.87	340	P	P	22 29 51.9	-1.6
	comp=Z,2.8nm,0.6s,mb4.4,baz=86,slow=5.9,SNR=24						
BR131	Keskin Array S	90.10	310	eP	P	22 29 54.9	-0.3
BRTR	Keskin Array B	90.10	310	P	P	22 29 53.7	-1.5
	comp=Z,0.3nm,0.5s,baz=158,slow=4.7,SNR=4.3						
BRTR	Keskin Array B	90.10	310	iP	P	22 29 56.4	+1.2
FINES	FINESS Array B	91.42	332	P	P	22 29 58.9	-1.9
	comp=Z,1.2nm,0.5s,mb4.2,baz=78,slow=4.1,SNR=14						
AKASG	Malin Array Be	91.72	321	P	P	22 30 00.6	-1.9
	comp=Z,2.4nm,0.5s,mb4.5,baz=68,slow=5.1,SNR=10.0						
VRI	Vrincioaia	94.22	317	⇑iP	P	22 30 14.0	-0.1
PLOR	Plostina	94.28	317	⇑iP	P	22 30 12.8	-1.6
MLR	Muntele Rosu	94.83	316	⇓iP	P	22 30 16.3	-0.6
BURAR	Bucovina Array	94.89	318	⇓iP	P	22 30 16.2	-0.9
SCHQ	Schefferville	119.50	10	PKP	PKPdf	22 35 43.1	-0.7
	comp=Z,0.7nm,0.4s,baz=259,slow=5.2,SNR=4.9						

IDC 28 22:24:12.5±1.9,10°.99S×163°.47E,h0km,mb3.8/5, mb1 4.0/5,mb1mx3.8/15,mbtmp3.8/5,Error ellipse: s-maj=73.0km s-min=32.2km az=144.0,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	30.83	242	P	P	22 30 30.4	0.0
	0.3nm,0.3s,baz=63,slow=10.0,SNR=3.4						
SONM	Songino Array	77.31	325	P	P	22 36 10.3	+1.4
	0.2nm,0.3s,baz=129,slow=6.1,SNR=2.9						
ILAR	Eielson Array	84.18	19	P	P	22 36 44.7	-0.6
	0.5nm,0.8s,baz=248,slow=3.8,SNR=4.0						
NVAR	Mina Array Bea	87.70	50	P	P	22 37 04.0	+0.7
	1.4nm,1.0s,baz=243,slow=6.1,SNR=7.2						
MKAR	Makanchi Array	91.96	317	P	P	22 37 21.8	-1.3
	0.3nm,0.8s,baz=80,slow=7.5,SNR=4.2						

ISCJB ***28*** *23:02:49.7±0.6,23°.59N±0°.06×94°.39E±0°.05,h101km±6km, mb3.8/14, Error ellipse: s-maj=11.3km s-min=5.3km az=35.2*
NEIC ***28*** *23:02:49.7±0.5,23°.58N×94°.60E,h87km±7km,mb3.9/6, Error ellipse: s-maj=12.1km s-min=4.5km az=219.0*
IDC ***28*** *23:02:50.3±3.8,23°.60N×94°.57E,h90km±38km,mb3.6/8, mb1 3.6/9,mb1mx3.4/25,mbtmp3.5/9, Error ellipse: s-maj=54.7km s-min=15.1km az=66.0*

ISC 28 23:02:50.6±0.5,23°.60N±0°.05×94°.45E±0°.05,h91km±6km, n36,σ1§46/52,mb3.8/14,1C,Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	Imphal	1.27	338	ePKP	Pn	23 03 15.0	+1.4
IMP				eS	Sn	23 03 31.0	0.0
SHL	Shillong	3.05	311	⇑iPN	Pn	23 03 40.0	+3.1
SHL				eSN	Sn	23 04 13.5	+1.0
CHTO	Chiang Mai	6.34	138	ePn	Pn	23 04 18.6	-2.9
CHTO				eSn	Sn	23 05 33.5	+1.0
CM31	Chiang Mai Arr	6.61	140	ePn	Pn	23 04 22.5	-2.7
CMAR	Chiang Mai Arr	6.61	140	P	Pn	23 04 23.4	-1.8
	0.4nm,0.3s,baz=314,slow=14,SNR=6.9						
LSA	Lhasa	6.76	335	Pg	Pn	23 04 29.3	+2.1
LSA				Sg	Sn	23 05 41.0	-1.7
LSA				smax			
	comp=E,60nm,0.7s						
TAPN	Taplejung	7.15	303	ePn	Pn	23 04 34.0	+1.5
TAPN				eSn	Sn	23 05 51.2	-1.0
	comp=E,104nm,0.5s						
ODAN	Odare	7.17	298	ePn	Pn	23 04 33.9	+1.1
ODAN				eSn	Sn	23 05 50.7	-2.1
	comp=E,160nm,0.5s						
RAMN	Ramite	7.85	297	ePn	Pn	23 04 42.8	+0.7
RAMN				eSn	Sn	23 06 06.7	-2.7
	comp=E,59nm,0.3s						
JIRN	Jiri	8.48	300	ePn	Pn	23 04 52.3	+1.6
JIRN				eSn	Sn	23 06 21.9	-2.8
	comp=E,77nm,0.3s						
GUN	Gumba	8.84	301	ePn	Pn	23 04 57.6	+2.0
GUN				eSn	Sn	23 06 31.4	-2.1
	comp=E,100nm,0.4s						
PKI	Pulchoki	9.07	298	ePn	Pn	23 04 59.6	+0.9
PKI				eSn	Sn	23 06 36.1	-3.0
	comp=E,30nm,0.4s						
PKI	Pulchoki	9.07	298	ePn	Pn	23 04 59.8	+1.1
PKI				eSn	Sn	23 06 36.8	-2.3
PKIN	Phulchoki	9.08	298	ePn	Pn	23 04 59.8	+0.9
PKIN				eSn	Sn	23 06 36.8	-2.6
	comp=E,38nm,0.4s						
KKN	Kakani	9.27	299	ePn	Pn	23 05 02.1	+0.8
KKN				eSn	Sn	23 06 40.2	-3.6
	comp=E,44nm,0.3s						
DMN	Daman	9.33	297	ePn	Pn	23 05 03.8	+1.5
DMN				eSn	Sn	23 06 41.2	-4.3
	comp=E,62nm,0.7s						
GKN	Gorkha	9.87	298	ePn	Pn	23 05 09.7	+0.1
GKN				eSn	Sn	23 06 54.3	-4.3
	comp=E,94nm,0.4s						
KOLN	Koldanda	10.63	295	ePn	Pn	23 05 19.9	-0.1
KOLN				eSn	Sn	23 07 12.9	-4.2
	comp=E,41nm,0.4s						
ENH	Enshi	14.96	60	ePn	Pn	23 06 16.0	-1.2
PSI	Prapat	21.12	168	P	P	23 07 29.0	+0.9
	comp=E,2.5nm,0.4s,mb3.9,baz=160,slow=15,SNR=4.8						
BJT	Baijiatuau	24.57	43	eP	P	23 07 60.0	-2.0
	comp=E,4.9nm,0.3s,mb4.4						
KBL	Kabul	24.68	302	eP	P	23 08 05.2	+2.2
	comp=E,2.6nm,0.4s,mb4.0						
UCH	Uchtor	24.90	323	eP	P	23 08 06.4	+1.5
	comp=E,1.6nm,0.4s,mb3.8						
MK31	Makanchi Array	25.13	340	eP	P	23 08 07.7	+0.7
MK31				e		23 08 34.4	
MKAR	Makanchi Array	25.13	340	P	P	23 08 07.9	+0.9
	comp=E,5.5nm,0.9s,mb4.0,baz=147,slow=9.5,SNR=35						
AML	Almayashu	25.30	322	eP	P	23 08 09.0	+0.4
	comp=E,0.9nm,0.5s,mb3.5						
EKS2	Erkin-Say	25.60	323	P	P	23 08 10.0	-1.2
	comp=E,1.2nm,0.6s,mb3.5						
KURK	Kurchatov	29.74	340	P	P	23 08 48.0	-0.2
	comp=E,0.3nm,0.3s,mb3.3,baz=156,slow=7.3,SNR=3.9						
KURK	Kurchatov	29.74	340	P	P	23 08 48.1	0.0
BVAR	Borovoye Array	34.60	334	P	P	23 09 31.0	+0.5
	comp=E,0.7nm,0.5s,mb3.7,baz=142,slow=12,SNR=4.5						
BRVK	Borovoye	34.66	334	eP	P	23 09 30.7	-0.5
	comp=E,0.9nm,0.3s,mb4.1						
ASAR	Alice Springs	60.62	138	P	P	23 12 51.5	-0.6
	comp=E,1.3nm,0.5s,mb4.2,baz=320,slow=7.0,SNR=19

1.0nm,1.1s,mb3.9,baz=236,slow=5.3,SNR=5.0
NVAR Mina Array Bea 87.38 50 P **P 23 19 26.0 +0.2**
0.6nm,0.8s,mb3.9,baz=224,slow=5.2,SNR=4.4
NVAR Mina Array Bea 87.38 50 P **P 23 19 26.0 +0.2**
MKAR Makanchi Array 91.68 317 P **P 23 19 45.2 -0.6**
0.8nm,0.7s,mb4.2,baz=109,slow=6.5,SNR=6.4

NIED ***28*** *23:07:00,25˚.20N×128˚.10E,h8km,Mw4.1 Best double couple: M₀1.80000×10¹⁵ NP1:φ=244.00000°,δ55.00000°, λ-84.00000°. NP2:φ=54.00000°,δ36.00000°,λ-98.00000°.*
ISCJB ***28*** *23:07:24.2±0.4,25˚.15N±0˚.03×128˚.02E±0˚.04,h40km, mb4.1/21,Error ellipse: s-maj=5.5km s-min=3.7km az=31.8*
MOS ***28*** *23:07:24.1±0.8,25˚.12N×127˚.90E,h33km,mb4.3/12,Error ellipse: s-maj=36.4km s-min=9.9km az=119.5*
JMA ***28*** *23:07:24.1±0.2,25˚.17N×128˚.05E,h66km±4km,M4.1*
IDC ***28*** *23:07:26.7±0.9,25˚.17N×127˚.97E,h38km±6km,mb3.7/13, mb1 3.8/13,mb1mx3.7/22,mbtmp3.7/13,Error ellipse: s-maj=38.9km s-min=13.2km az=65.0*
BJI ***28*** *23:07:26.3,25˚.34N×128˚.10E,h35km,mB4.6/1,mb4.2/7, Ms4.0/1*
NEIC ***28*** *23:07:26.5±0.4,25˚.03N×127˚.72E,h35km,mb4.3/9,Error ellipse: s-maj=11.0km s-min=6.5km az=67.0*
ISC 28 23:07:26.4±0.4,25˚.21N±0˚.03×127˚.96E±0˚.04,h42km, h42km±2.2km:pP-P,n67,σ1ˢ19/81,mb4.1/21,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT2	**Tamagusuku 2**	**0.95**	**348**	P	**Pn**	**23 07 42.7**	**-0.5**
JJT2				eS	**Sn**	**23 07 56.7**	**+1.2**
NAH1	**Naha**	**1.02**	**346**	P	**Pn**	**23 07 43.6**	**-0.6**
NAH1				eS	**Sn**	**23 07 57.6**	**+0.2**
JAGN	**Aguni-jima**	**1.52**	**335**	P	**Pn**	**23 07 50.9**	**-0.2**
JAGN				eS	**Sn**	**23 08 10.1**	**+0.5**
JKE	**Kume jima 2**	**1.54**	**317**	P	**Pn**	**23 07 51.2**	**-0.1**
JKE				eS	**Sn**	**23 08 11.3**	**+1.2**
JOW	**Kunigami**	**1.64**	**10**	P	**Pn**	**23 07 51.5**	**-1.2**
JOW				eS	**Sn**	**23 08 11.5**	**-1.1**
JIH	**Iheya**	**1.82**	**0**	P	**Pn**	**23 07 54.7**	**-0.5**
JIH				eS	**Sn**	**23 08 16.6**	**-0.4**
JOGS	**Gusukube**	**2.36**	**260**	P	**Pn**	**23 08 02.4**	**-0.2**
JOGS				eS	**Sn**	**23 08 29.6**	**-0.8**
JMJ	**Miyako jima 2**	**2.45**	**261**	P	**Pn**	**23 08 03.4**	**-0.5**
JMJ				eS	**Sn**	**23 08 32.2**	**-0.4**
JTK	**Tokunoshima**	**2.72**	**19**	P	**Pn**	**23 08 06.2**	**-1.3**
JTK				eS	**Sn**	**23 08 37.1**	**-2.0**
JMZ	**Minamidaito 2**	**3.01**	**78**	P	**Pn**	**23 08 06.9**	**-4.6**
JMZ				eS	**Sn**	**23 08 39.7**	**-6.6**
JTJ	**Tarama**	**3.01**	**260**	P	**Pn**	**23 08 10.7**	**-0.9**
JTJ				eS	**Sn**	**23 08 44.3**	**-2.1**
JAM	**Amami Oshima**	**3.51**	**24**	P	**Pn**	**23 08 17.7**	**-0.7**
JAM				eS	**Sn**	**23 08 55.4**	**-3.3**
JIJ	**Ishigaki jima**	**3.57**	**257**	P	**Pn**	**23 08 17.7**	**-1.5**
JIJ				eS	**Sn**	**23 08 56.8**	**-3.4**
JZK	**Kikaishima**	**3.58**	**30**	P	**Pn**	**23 08 18.6**	**-0.7**
JZK				eS	**Sn**	**23 08 58.3**	**-2.1**
JKRS	**Kuro-shima**	**3.72**	**256**	P	**Pn**	**23 08 20.1**	**-1.2**
IRIF	**Iriomote-Funau**	**3.94**	**258**	P	**Pn**	**23 08 23.5**	**-0.9**
YOJ	**Yonaguni jima**	**4.56**	**262**	P	**Pn**	**23 08 31.2**	**-1.6**
JNN	**Nakanoshima**	**4.92**	**20**	P	**Pn**	**23 08 36.5**	**-1.2**
SSLB	**Suanglung**	**6.54**	**259**	ePn	**Pn**	**23 08 56.5**	**-3.5**
TWG	**Pinlang**	**6.73**	**251**	ePn	**Pn**	**23 08 58.7**	**-3.9**
72nm,0.3s							
TWG				Sn	**Sn**	**23 10 11.2**	**-6.9**
BJT	**Baijiatuau**	**17.77**	**329**	eP	**Pn**	**23 11 31.9**	**+1.4**
BJT				pmax	pmax		
comp=Z,7.0nm,0.3s							
BJT	**Baijiatuau**	**17.77**	**329**	ePn	**Pn**	**23 11 31.9**	**+1.4**
comp=Z,7.1nm,0.3s							
BJI	**Beijing**	**17.79**	**329**	P	**Pn**	**23 11 33.8**	**+3.1**
BJI				pmax	pmax		
comp=Z,10.0nm,0.6s							
KMI	**Kunming**	**22.82**	**275**	P	**P**	**23 12 32.5**	**+6.7**
KMI				pP		23 12 39.5	
KMI				pmax	pmax		
comp=Z,13nm,1.1s,mb4.3							
LZH	**Lanzhou**	**23.35**	**303**	eP	**P**	**23 12 33.3**	**+2.1**
LZH				pP		23 12 38.0	
LZH				pmax	pmax		
comp=Z,19nm,1.4s,mb4.3							
SONM	**Songino Array**	**28.29**	**328**	P	**P**	**23 13 16.0**	**+0.3**
comp=Z,0.4nm,0.3s,mb3.5,baz=143,slow=8.5,SNR=3.7							
SONM				pP	pP	23 13 26.8	-0.3
comp=Z,1.6nm,0.8s,baz=144,slow=9.9,SNR=4.3							
SONM	**Songino Array**	**28.29**	**328**	P	**P**	**23 13 16.0**	**+0.3**
SONM				*PP	pP	23 13 26.8	-0.2
SONM				pmax	pmax		
comp=Z,2.0nm,0.8s							
TLY	**Talaya**	**32.28**	**331**	eP	**P**	**23 13 52.3**	**+1.3**
MK31	**Makanchi Array**	**42.04**	**313**	eP	**P**	**23 15 14.8**	**+1.0**
MK31				e	pP	23 15 25.8	+0.4
MKAR	**Makanchi Array**	**42.04**	**313**	P	**P**	**23 15 14.8**	**+1.0**
comp=Z,2.0nm,0.5s,mb4.0,baz=97,slow=9.5,SNR=29							
MKAR				pP	pP	23 15 25.8	+0.4
comp=Z,1.9nm,0.5s,baz=100,slow=10,SNR=12							
MKAR	**Makanchi Array**	**42.04**	**313**	P	**P**	**23 15 14.8**	**+1.0**
MKAR				*PP	pP	23 15 25.8	+0.4
MKAR				pmax	pmax		
comp=Z,2.0nm,0.5s							
MKAR				pmax	pmax		
comp=Z,2.0nm,0.5s							
MKAR	**Makanchi Array**	**42.04**	**313**	P	**P**	**23 15 14.8**	**+1.0**
MKAR				pP	pP	23 15 25.8	+0.4
ZALV	**Zalesovo Beam**	**42.92**	**324**	P	**P**	**23 15 22.2**	**+1.4**
comp=Z,0.8nm,0.3s,mb3.9,baz=114,slow=9.4,SNR=5.7							
ZALV	**Zalesovo Beam**	**42.92**	**324**	P	**P**	**23 15 22.2**	**+1.4**
ZALV				pmax	pmax		
comp=Z,1.0nm,0.3s,mb4.0							
FITZ	**Fitzroy Crossi**	**43.11**	**183**	eP	**P**	**23 15 21.9**	**-0.7**
comp=Z,2.2nm,0.6s,mb4.1							
WRAB	**Tennant Creek**	**45.30**	**172**	eP	**P**	**23 15 40.8**	**+0.6**
WRAB				pmax	pmax		
comp=Z,4.0nm,0.8s,mb4.3							
WRAB	**Tennant Creek**	**45.30**	**172**	eP	**P**	**23 15 40.8**	**+0.6**
comp=Z,4.0nm,0.8s,mb4.3							
KURK	**Kurchatov**	**45.40**	**317**	P	**P**	**23 15 41.4**	**+0.7**
comp=Z,0.8nm,0.5s,mb3.8,baz=105,slow=8.9,SNR=4.9							
KURK				pP	pP	23 15 52.9	+0.5
comp=Z,0.9nm,0.4s,baz=104,slow=8.3,SNR=6.9							
KURK	**Kurchatov**	**45.40**	**317**	eP	**P**	**23 15 42.1**	**+1.4**
KURK				e	pP	23 15 51.6	-0.8
KURK				pmax	pmax		
comp=Z,4.0nm,1.0s,mb4.2							
KURK	**Kurchatov**	**45.40**	**317**	eP	**P**	**23 15 42.1**	**+1.4**
comp=Z,4.3nm,1.0s,mb4.2							
KURK				e	pP	23 15 51.5	-0.9
CTA	**Charters Tower**	**48.41**	**157**	P	**P**	**23 16 04.6**	**+0.1**
comp=Z,3.2nm,0.7s,mb4.5,baz=333,slow=14,SNR=3.1							
CTA	**Charters Tower**	**48.41**	**157**	P	**P**	**23 16 04.6**	**+0.1**
CTA				pmax	pmax		
comp=Z,3.0nm,0.7s							
CTAO	**Charters Tower**	**48.41**	**157**	eP	**P**	**23 16 04.7**	**+0.2**
CTAO				pmax	pmax		
comp=Z,1.0nm,0.4s,mb4.2							
CTAO	**Charters Tower**	**48.41**	**157**	eP	**P**	**23 16 04.7**	**+0.2**
comp=Z,1.5nm,0.4s,mb4.4							
ASAR	**Alice Springs**	**48.92**	**173**	P	**P**	**23 16 08.7**	**+0.3**
comp=Z,1.4nm,0.7s,mb4.1,baz=1.4,slow=9.3,SNR=14							
ASAR				pP	pP	23 16 20.4	+0.2
comp=Z,0.9nm,0.8s,baz=3.6,slow=7.9,SNR=3.9							
ASAR	**Alice Springs**	**48.92**	**173**	P	**P**	**23 16 08.7**	**+0.3**
ASAR				*PP	pP	23 16 20.4	+0.2
ASAR				pmax	pmax		
comp=Z,1.0nm,0.7s							
ASAR				pmax	pmax		
comp=Z,1.0nm,0.8s							
BVAR	**Borovoye Array**	**50.88**	**319**	P	**P**	**23 16 23.5**	**+0.6**
comp=Z,0.8nm,0.6s,mb3.9,baz=81,slow=9.6,SNR=5.1							
BVAR				pP	pP	23 16 35.2	+0.3
comp=Z,0.8nm,0.5s,baz=101,slow=8.0,SNR=4.8							
BVAR	**Borovoye Array**	**50.88**	**319**	P	**P**	**23 16 23.5**	**+0.5**
BVAR				*PP	pP	23 16 35.2	+0.4
BVAR				pmax	pmax		
comp=Z,1.0nm,0.6s							
BVAR				pmax	pmax		
comp=Z,1.0nm,0.5s							
BRVK	**Borovoye**	**50.95**	**319**	eP	**P**	**23 16 24.1**	**+0.6**
BRVK				pmax	pmax		
comp=Z,2.0nm,0.7s,mb4.2							
BRVK	**Borovoye**	**50.95**	**319**	eP	**P**	**23 16 24.1**	**+0.6**
comp=Z,2.2nm,0.7s,mb4.2							
KBL	**Kabul**	**51.31**	**295**	eP	**P**	**23 16 25.9**	**-0.6**
KBL				pmax	pmax		
comp=Z,14nm,1.4s,mb4.7							
KBL	**Kabul**	**51.31**	**295**	eP	**P**	**23 16 25.9**	**-0.6**
comp=Z,14nm,1.4s,mb4.7							
ABKAR	**Akbulak array**	**57.17**	**314**	eP	**P**	**23 17 11.2**	**+2.3**
comp=Z,2.9nm,0.8s,mb4.4							
ABKAR				e	pP	23 17 21.6	+0.6
ARU	**Arti**	**58.05**	**322**	P	**P**	**23 17 16.5**	**+1.5**
ARU	**Arti**	**58.05**	**322**	P	**P**	**23 17 16.5**	**+1.6**
STKA	**Stephens Creek**	**58.24**	**166**	P	**P**	**23 17 16.5**	**0.0**
comp=Z,2.7nm,0.7s,mb4.4,baz=342,slow=9.6,SNR=3.5							
ILAR	**Eielson Array**	**65.45**	**28**	P	**P**	**23 18 05.7**	**+1.1**
comp=Z,0.3nm,0.7s,mb3.5,baz=278,slow=8.8,SNR=3.7							
KIV	**Kislovodsk**	**69.70**	**310**	eP	sP	23 18 45.5	-3.5
KIV				pmax	pmax		
comp=Z,9.0nm,1.2s,mb4.6							
KIV	**Kislovodsk**	**69.70**	**310**	eP	**P**	**23 18 31.7**	**-0.2**
comp=Z,10nm,1.1s,mb4.7							
KIV				e	pP	23 18 45.5	+1.3
ARCES	**ARCESS Array B**	**70.87**	**339**	P	**P**	**23 18 40.0**	**+1.5**
comp=Z,1.0nm,0.8s,mb3.8,baz=72,slow=9.6,SNR=3.4							
ARCES	**ARCESS Array B**	**70.87**	**339**	P	**P**	**23 18 40.0**	**+1.5**
ARCES				pmax	pmax		
comp=Z,1.0nm,0.8s							
FINES	**FINESS Array B**	**73.63**	**331**	P	**P**	**23 18 57.1**	**+1.9**
comp=Z,0.6nm,0.4s,mb3.9,baz=57,slow=7.0,SNR=7.8							
FINES	**FINESS Array B**	**73.63**	**331**	P	**P**	**23 18 57.1**	**+1.9**
FINES				pmax	pmax		
comp=Z,1.0nm,0.4s							
BRTR	**Keskin Array B**	**77.47**	**308**	P	**P**	**23 19 19.3**	**+1.7**
comp=Z,1.1nm,0.9s,mb3.8,baz=69,slow=9.4,SNR=2.5							
BRTR	**Keskin Array B**	**77.47**	**308**	P	**P**	**23 19 19.3**	**+1.7**
BRTR				pmax	pmax		
comp=Z,1.0nm,0.9s							
NB2	**NORSAR Subarra**	**80.12**	**334**	P	**P**	**23 19 32.8**	**+1.1**
comp=Z,1.6nm,1.1s,mb3.9,baz=54,slow=5.6							
NOA	**NORSAR Array B**	**80.12**	**334**	P	**P**	**23 19 32.4**	**+0.6**
comp=Z,0.3nm,0.6s,mb3.4,baz=52,slow=5.5,SNR=3.2							

THE ***28*** *23:16:34.3,38˚.14N×21˚.36E,h17km±1km,ML2.9/5,Error ellipse: s-maj=3.0km s-min=0.5km az=348.0*
ISCJB ***28*** *23:16:35.0±0.5,38˚.21N±0˚.05×21˚.37E±0˚.03,h10km,Error ellipse: s-maj=6.9km s-min=3.4km az=172.4*
CSEM ***28*** *23:16:39.6±0.3,38˚.26N×21˚.72E,h7km±2km,MD3.1,Error ellipse: s-maj=7.1km s-min=5.3km az=93.0*
ATH ***28*** *23:16:40.2,38˚.29N×21˚.69E,h8km±2km,MD3.1/8*
NEIC ***28*** *23:16:40.2,38˚.29N×21˚.69E,h8km,MD3.1(ATH),After ATH.*
ISC 28 23:16:35.4±0.6,38˚.18N±0˚.05×21˚.37E±0˚.03,h10km,n45, σ1ˢ14/65,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.34**	**72**	ePG	**Pg**	**23 16 42.8**	**+0.6**
UPR				eSG	**Sg**	**23 16 43.7**	**-3.1**
UPR	**University Cam**	**0.34**	**72**	P	**Pg**	**23 16 42.2**	**0.0**
UPR				S	**Sg**	**23 16 48.0**	**+1.2**
UPR	**University Cam**	**0.34**	**72**	P	**Pg**	**23 16 42.2**	**0.0**
UPR	**University Cam**	**0.34**	**72**	ePg	**Pg**	**23 16 42.8**	**+0.6**
UPR				eSg	**Sg**	**23 16 43.7**	**-3.1**
UPR				S	**Sg**	**23 16 48.0**	**+1.2**
KFL	**Anninata**	**0.46**	**262**	P	**Pg**	**23 16 43.6**	**-0.9**
LAKA	**Lakka**	**0.48**	**82**	P	**Pg**	**23 16 43.8**	**-1.0**
LAKA				S	**Sg**	**23 16 51.5**	**+0.3**
LAKA	**Lakka**	**0.48**	**82**	P	**Pg**	**23 16 43.8**	**-1.0**
LAKA				S	**Sg**	**23 16 51.5**	**+0.3**
EFP	**Efpalio**	**0.49**	**59**	ePG	**Pg**	**23 16 44.4**	**-0.5**
EFP				eSG	**Sg**	**23 16 48.0**	**-3.4**
EFP	**Efpalio**	**0.49**	**59**	P	**Pg**	**23 16 44.3**	**-0.6**
EFP				S	**Sg**	**23 16 52.0**	**+0.6**
EFP	**Efpalio**	**0.49**	**59**	ePg	**Pg**	**23 16 44.4**	**-0.5**
EFP				eSg	**Sg**	**23 16 48.0**	**-3.4**
EFP				S	**Sg**	**23 16 52.0**	**+0.6**
TRIZ	**Trizonia**	**0.58**	**71**	P	**Pg**	**23 16 45.7**	**-1.0**
TRIZ				S	**Sg**	**23 16 54.6**	**+0.2**
TRIZ	**Trizonia**	**0.58**	**71**	P	**Pg**	**23 16 45.7**	**-1.0**
TRIZ				S	**Sg**	**23 16 54.6**	**+0.2**
VLS	**Valsamata**	**0.61**	**270**	ePb	**Sg**	**23 16 57.1**	**+1.7**
VLS	**Valsamata**	**0.61**	**270**	ePB	**Sg**	**23 16 57.1**	**+1.7**
VLS	**Valsamata**	**0.61**	**270**	P	**Sg**	**23 16 45.9**	**-1.4**
VLS				S	**Sg**	**23 16 55.1**	**-0.3**
VLS	**Valsamata**	**0.61**	**270**	ePb	**Sg**	**23 16 57.1**	**+1.7**
KALE	**Kalithea**	**0.64**	**70**	P	**Pg**	**23 16 46.8**	**-1.0**
KALE				S	**Sg**	**23 16 57.0**	**+0.8**
KALE	**Kalithea**	**0.64**	**70**	P	**Pg**	**23 16 46.8**	**-1.0**
GUR	**Goura**	**0.80**	**107**	P	**Pg**	**23 16 48.8**	**-2.1**
GUR				S	**Sg**	**23 17 01.8**	**+0.4**
GUR	**Goura**	**0.80**	**107**	P	**Pg**	**23 16 48.8**	**-2.1**
GUR				S	**Sg**	**23 17 01.8**	**+0.4**
EVR	**Evrytania**	**0.81**	**25**	ePb	**Pg**	**23 16 52.6**	**+1.5**
EVR	**Evrytania**	**0.81**	**25**	ePB	**Pg**	**23 16 52.6**	**+1.5**
EVR	**Evrytania**	**0.81**	**25**	ePb	**Pg**	**23 16 52.6**	**+1.5**
DSF	**Desfina**	**0.94**	**75**	P	**Pg**	**23 16 51.7**	**-1.8**
DSF				S	**Sg**	**23 17 05.9**	**+0.2**
DSF	**Desfina**	**0.94**	**75**	P	**Pg**	**23 16 51.7**	**-1.8**
ITM	**Ithomi**	**1.09**	**156**	ePg	**Pg**	**23 17 00.7**	**+4.4**
ITM				eSb	**Sg**	**23 17 17.1**	**+6.6**
ITM	**Ithomi**	**1.09**	**156**	ePG	**Pg**	**23 17 00.7**	**+4.4**
ITM				eSB	**Sg**	**23 17 17.1**	**+6.6**
ITM	**Ithomi**	**1.09**	**156**	ePg	**Pg**	**23 17 00.7**	**+4.4**
ITM				eSb	**Sg**	**23 17 17.1**	**+6.6**
AGG	**Agios Georgios**	**1.13**	**41**	ePb	**Pg**	**23 16 57.3**	**+0.2**
AGG	**Agios Georgios**	**1.13**	**41**	ePB	**Pg**	**23 16 57.3**	**+0.2**
AGG	**Agios Georgios**	**1.13**	**41**	ePb	**Pg**	**23 16 57.3**	**+0.2**
VLX	**Vlachokerasia**	**1.14**	**135**	ePB	**Pg**	**23 17 00.4**	**+3.2**
VLX	**Vlachokerasia**	**1.14**	**135**	ePb	**Pg**	**23 17 00.4**	**+3.2**
LTK	**Loutraki**	**1.27**	**96**	ePN	**Pn**	**23 17 00.4**	**+1.2**
LTK	**Loutraki**	**1.27**	**96**	ePn	**Pn**	**23 17 00.4**	**+1.2**
LKR	**Lokris**	**1.36**	**69**	ePg	**Pg**	**23 17 00.3**	**-1.3**
LKR	**Lokris**	**1.36**	**69**	ePG	**Pg**	**23 17 00.3**	**-1.3**
LKR	**Lokris**	**1.36**	**69**	ePg	**Pg**	**23 17 00.3**	**-1.3**
THL	**Klokotos Trika**	**1.47**	**20**	ePG	**Pg**	**23 17 04.3**	**+0.6**
THL	**Klokotos Trika**	**1.47**	**20**	ePg	**Pg**	**23 17 04.3**	**+0.6**
DID	**Didima**	**1.62**	**114**	ePG	**Pg**	**23 17 06.7**	**+0.2**
DID	**Didima**	**1.62**	**114**	ePg	**Pg**	**23 17 06.7**	**+0.2**
NEO	**Neokhori**	**1.84**	**52**	ePb	**Pb**	**23 17 10.3**	**+1.2**
NEO	**Neokhori**	**1.84**	**52**	ePB	**Pb**	**23 17 10.3**	**+1.2**
NEO	**Neokhori**	**1.84**	**52**	ePb	**Pb**	**23 17 10.3**	**+1.2**

ISCJB ***28*** *23:22:35.7±0.7,37˚.98N±0˚.05×21˚.39E±0˚.03,h11km±6km, Error ellipse: s-maj=8.2km s-min=4.3km az=168.0*
ATH ***28*** *23:22:35.9,37˚.99N×21˚.33E,h14km±2km,MD3.0/7*
THE ***28*** *23:22:36.1,38˚.01N×21˚.40E,h14km±1km,ML2.4/5,Error ellipse: s-maj=3.7km s-min=0.6km az=346.0*
CSEM ***28*** *23:22:36.0±0.2,38˚.00N×21˚.39E,h18km±2km,MD3.0, Error ellipse: s-maj=6.1km s-min=3.7km az=166.0*
ISC 28 23:22:36.1±0.8,38˚.00N±0˚.05×21˚.39E±0˚.03,h17km±6km, n31,σ0ˢ69/51,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.09**	**45**	ePG	**Pg**	**23 22 39.9**	**+0.4**
RLS	**Riolos of Patr**	**0.09**	**45**	ePg	**Pg**	**23 22 39.9**	**+0.4**
UPR	**University Cam**	**0.42**	**47**	ePB	**Pg**	**23 22 45.5**	**+0.8**
UPR				eSB	**Sb**	**23 22 51.2**	**0.0**
UPR	**University Cam**	**0.42**	**47**	P	**Pg**	**23 22 44.5**	**-0.2**
UPR				S	**Sg**	**23 22 50.5**	**0.0**
UPR	**University Cam**	**0.42**	**47**	P	**Pg**	**23 22 44.5**	**-0.2**
UPR	**University Cam**	**0.42**	**47**	ePb	**Pg**	**23 22 45.5**	**+0.8**
UPR				S	**Sg**	**23 22 50.5**	**0.0**
UPR				eSb	**Sb**	**23 22 51.2**	**0.0**
KFL	**Anninata**	**0.49**	**284**	P	**Pg**	**23 22 46.3**	**+0.4**
KFL	**Anninata**	**0.49**	**284**	P	**Pg**	**23 22 46.3**	**+0.4**
LAKA	**Lakka**	**0.52**	**62**	P	**Pg**	**23 22 46.1**	**-0.4**
LAKA				S	**Sg**	**23 22 54.0**	**+0.4**
LAKA	**Lakka**	**0.52**	**62**	P	**Pg**	**23 22 46.1**	**-0.4**
LAKA				S	**Sg**	**23 22 54.0**	**+0.4**
EFP	**Efpalio**	**0.59**	**43**	ePB	**Pg**	**23 22 46.9**	**-0.9**
EFP				eSB	**Sb**	**23 22 56.2**	**+0.2**
EFP	**Efpalio**	**0.59**	**43**	P	**Pg**	**23 22 46.6**	**-1.2**
EFP				S	**Sg**	**23 22 55.6**	**-0.1**
EFP	**Efpalio**	**0.59**	**43**	P	**Pg**	**23 22 46.6**	**-1.2**
EFP	**Efpalio**	**0.59**	**43**	ePb	**Pg**	**23 22 46.9**	**-0.9**
EFP				S	**Sg**	**23 22 55.6**	**-0.1**
EFP				eSb	**Sb**	**23 22 56.2**	**+0.2**
TRIZ	**Trizonia**	**0.65**	**55**	P	**Pg**	**23 22 47.9**	**-1.0**
TRIZ				S	**Sg**	**23 22 57.6**	**0.0**
TRIZ	**Trizonia**	**0.65**	**55**	P	**Pg**	**23 22 47.9**	**-1.0**
TRIZ				S	**Sg**	**23 22 57.6**	**0.0**
VLS	**Valsamata**	**0.66**	**286**	ePB	**Pg**	**23 22 48.0**	**-1.0**
VLS	**Valsamata**	**0.66**	**286**	P	**Pg**	**23 22 48.0**	**-1.0**
VLS				S	**Sg**	**23 22 58.6**	**+0.9**
VLS	**Valsamata**	**0.66**	**286**	P	**Pg**	**23 22 48.0**	**-1.0**
VLS				S	**Sg**	**23 22 58.6**	**+0.9**
KALE	**Kalithea**	**0.71**	**56**	P	**Pg**	**23 22 48.8**	**-1.2**
KALE				S	**Sg**	**23 22 59.9**	**+0.5**
KALE	**Kalithea**	**0.71**	**56**	P	**Pg**	**23 22 48.8**	**-1.2**
KALE				S	**Sg**	**23 22 59.9**	**+0.5**
GUR	**Goura**	**0.76**	**94**	ePB	**Pg**	**23 22 51.1**	**+0.3**
GUR				eSB	**Sg**	**23 23 02.3**	**+1.4**
GUR	**Goura**	**0.76**	**94**	ePb	**Pg**	**23 22 51.1**	**+0.3**
GUR				eSb	**Sg**	**23 23 02.3**	**+1.4**
ITM	**Ithomi**	**0.92**	**152**	ePB	**Pg**	**23 22 53.7**	**-0.3**
ITM	**Ithomi**	**0.92**	**152**	ePb	**Pg**	**23 22 53.7**	**-0.3**
EVR	**Evrytania**	**0.98**	**20**	ePN	**Pg**	**23 22 55.4**	**+0.4**
EVR	**Evrytania**	**0.98**	**20**	ePn	**Pg**	**23 22 55.4**	**+0.4**
DSF	**Desfina**	**0.99**	**65**	P	**Pg**	**23 22 54.0**	**-1.2**
DSF				S	**Sg**	**23 23 08.5**	**+0.3**
DSF	**Desfina**	**0.99**	**65**	P	**Pg**	**23 22 54.0**	**-1.2**
DSF				S	**Sg**	**23 23 08.5**	**+0.3**
THL	**Klokotos Trika**	**1.64**	**17**	ePB	**Pb**	**23 23 06.7**	**+0.9**
THL	**Klokotos Trika**	**1.64**	**17**	ePb	**Pb**	**23 23 06.7**	**+0.9**

ISCJB ***28*** *23:25:54.1±0.3,41˚.50N±0˚.02×14˚.32E±0˚.02,h11km±2km, Error ellipse: s-maj=3.9km s-min=2.5km az=34.6*
ROM ***28*** *23:25:54.0±0.1,41˚.50N×14˚.32E,h9km±1km,Ml3.0/16, Error ellipse: s-maj=1.3km s-min=0.9km az=49.0*
CSEM ***28*** *23:25:54.3±0.1,41˚.50N×14˚.32E,h2km,ML3.5/11,Error ellipse: s-maj=2.9km s-min=2.1km az=25.0*
ISC 28 23:25:54.7±0.3,41˚.49N±0˚.02×14˚.31E±0˚.02,h7km±3km, n82,σ0ˢ98/114,8C,Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAGA	**Valle Agricola**	**0.10**	**217**	Pg	**Pg**	**23 25 56.9**	**0.0**
VAGA				Sg	**Sg**	**23 25 59.0**	**+0.6**
26µm,0.5s							
VAGA	**Valle Agricola**	**0.10**	**217**	Pg	**Pg**	**23 25 56.9**	**0.0**
VAGA				Sg	**Sg**	**23 25 59.0**	**+0.6**
26µm,0.5s							
SGG	**Gregorio Mates**	**0.12**	**154**	Pg	**Pg**	**23 25 57.3**	**+0.1**
SGG				Sg	**Sg**	**23 25 59.9**	**+0.9**
14µm,0.3s							
SGG	**Gregorio Mates**	**0.12**	**154**	Pg	**Pg**	**23 25 57.3**	**+0.1**
SGG				Sg	**Sg**	**23 25 59.9**	**+0.9**
14µm,0.3s							
MIDA	**Miranda**	**0.15**	**344**	⇑iPg	**Pg**	**23 25 57.8**	**-0.1**
MIDA				Sg	**Sg**	**23 26 00.8**	**+0.7**
3µm,0.2s							
MIDA	**Miranda**	**0.15**	**344**	⇑iPg	**Pg**	**23 25 57.8**	**-0.1**
MIDA				Sg	**Sg**	**23 26 00.8**	**+0.7**
3µm,0.2s							
BSSO	**Busso**	**0.22**	**76**	Pg	**Pg**	**23 25 59.2**	**+0.1**
3µm,0.5s							
BSSO	**Busso**	**0.22**	**76**	Pg	**Pg**	**23 25 59.2**	**+0.1**
3µm,0.5s							
RNI2	**Rionero Sannit**	**0.24**	**330**	Pg	**Pg**	**23 25 59.6**	**+0.1**
RNI2				Sg	**Sg**	**23 26 03.2**	**+0.5**
3µm,0.4s							
RNI2	**Rionero Sannit**	**0.24**	**330**	Pg	**Pg**	**23 25 59.6**	**+0.1**
RNI2				Sg	**Sg**	**23 26 03.2**	**+0.5**
3µm,0.4s							
CERA	**Filignano**	**0.24**	**296**	⇑iPg	**Pg**	**23 25 59.7**	**+0.2**
CERA				Sg	**Sg**	**23 26 04.6**	**+1.8**
7µm,0.7s							
CERA	**Filignano**	**0.24**	**296**	⇑iPg	**Pg**	**23 25 59.7**	**+0.2**
CERA				Sg	**Sg**	**23 26 04.6**	**+1.8**
7µm,0.7s							
RFI	**Roccamonfina**	**0.31**	**232**	Pg	**Pg**	**23 26 01.2**	**+0.4**
323nm,1.3s							
RFI	**Roccamonfina**	**0.31**	**232**	Pg	**Pg**	**23 26 01.2**	**+0.4**
323nm,1.3s							
SACR	**S. Croce

MSAG	Monte S. Angel	1.22	79	Pg	Pg	23 26 17.1	-1.0
MS1	Monte Sant'Ang	1.24	80	*e*Pg	Pg	23 26 18.7	+0.2
MS1				*e*Sg	Sg	23 26 35.9	+1.3
CDRU	Civita di Ruta	1.25	143	Pg	Pn	23 26 17.2	-1.4
CDRU	Civita di Ruta	1.25	143	Pg	Pn	23 26 17.2	-1.4
MTCE	Montecelio	1.29	295	Pg	Pn	23 26 17.6	-1.5
MTCE	Montecelio	1.29	295	Pg	Pn	23 26 17.6	-1.5
SG1	Sgolgore (BA)	1.90	109	*e*Pn	Pn	23 26 27.3	-0.2
SG1				*e*Sn	Sn	23 26 52.5	+0.8
BAI	Bari	1.97	100	*e*Pn	Pn	23 26 28.8	+0.3
BAI				*e*Sn	Sn	23 26 54.7	+1.3
PE1	Pezze di Greco	2.45	105	*e*Pn	Pn	23 26 35.3	+0.3
PE1				*e*Sn	Sn	23 27 07.6	+2.4
TAR1	Taranto	2.45	112	*e*Pn	Pn	23 26 35.8	+0.8
STON	Ston	2.87	60	*e*Pn	Pn	23 26 40.9	0.0
STON				Sn	Sn	23 27 12.8	-2.8
STON	Ston	2.87	60	*e*Pn	Pn	23 26 40.8	0.0
STON				Sn	Sn	23 27 12.7	-2.9
NVLJ	Novalja	3.10	7	*i* Pn	Pn	23 26 42.7	-1.2
NVLJ				Sn	Sn	23 27 14.8	-6.3
BBLS	Lazići	4.44	56	*e*Pn	Pn	23 27 03.5	+1.1
DIVS	Divibare	4.92	56	*e*Pn	Pn	23 27 08.4	-0.6
TRUS	Trudelj	5.25	57	⇑*i*Pn	Pn	23 27 17.7	+4.2
ABTA	Abfaltersbach	5.41	347	Pn	Pn	23 27 16.8	+1.0
ABTA				Sn	Sn	23 28 13.7	-4.5
ABTA	Abfaltersbach	5.41	347	Pn	Pn	23 27 16.8	+1.1
BARS	Barje	5.73	74	⇑*i*Pn	Pn	23 27 21.0	+0.8
ZAPS	Zavoj	6.42	71	*e*Pn	Pn	23 27 31.4	+1.9

IDC 28 23:36:22.3±7.4, 4°.62S×129°.91E, h0km, mb3.7/1, mb1 3.8/2, mb1mx3.4/17, mbtmp3.7/2, ML3.8/1, Error ellipse: s-maj=685.7km s-min=29.2km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.83	165	Pn	Pn	23 40 08.2	+1.5
WRA				Sn	Sn	23 42 49.4	-13
ASAR	Alice Springs	19.32	169	P	Pn	23 40 48.7	-1.5
	0.3nm,0.3s,baz=350,slow=11,SNR=16						
MKAR	Makanchi Array	66.20	326	P	P	23 47 12.1	+0.1
	0.5nm,0.6s,baz=114,slow=8.0,SNR=7.3						

*IDC **28** 23:52:05.9±0.6, 31°.25N×103°.95E, h0km, mb4.2/18, mb1 4.3/19, mb1mx4.3/23, mbtmp4.2/19, ML3.2/1, Error ellipse: s-maj=20.8km s-min=14.4km az=54.0*

*BJI **28** 23:52:08.9, 31°.35N×103°.96E, h15km, mB4.6/9, mb4.4/15, ML4.2/22, Ms4.3/11, Ms7 4.1/10*

*ISCJB **28** 23:52:08.2±0.8, 31°.28N±0°.03×103°.92E±0°.04, h25km±5km, mb4.5/73, Error ellipse: s-maj=5.1km s-min=4.5km az=163.0*

*NEIC **28** 23:52:08.1±0.2, 31°.27N×103°.83E, h10km, mb4.6/49, Error ellipse: s-maj=5.3km s-min=4.5km az=172.0*

*MOS **28** 23:52:09.0±0.8, 31°.33N×103°.98E, h29km, mb4.7/48, Error ellipse: s-maj=9.9km s-min=5.5km az=113.1*

*SZGRF **28** 23:52:24.5, 33°.72N×103°.20E, h33km, mb4.7, Gansu, China*

ISC 28 23:52:09.4±0.7, 31°.28N±0°.02×103°.89E±0°.03, h18km±4km, n203, σ0.93/213, mb4.5/73, 1C-3D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.39	197	Pg	Pg	23 52 16.8	-0.7
CD2				Sg	Sg	23 52 23.8	+0.9
CD2				smax			
	comp=N,31μm,0.6s						
LZH	Lanzhou	4.79	360	Pn	Pn	23 53 22.3	+1.7
LZH				Sn	Sn	23 54 17.0	+1.3
LZH				Sg	Sg	23 54 43.0	-0.2
LZH				smax			
	comp=N,410nm,1.0s						
LZH				smax			
	comp=E,360nm,1.0s						
LZH				LR	LR		
	comp=E,4μm,6.1s						
LZH				LR	LR		
	comp=Z,4μm,8.8s						
ENH	Enshi	4.92	100	*e*Pn	Pn	23 53 23.6	+1.2
ENH				*e*Sn	Sn	23 54 18.2	-0.7
XAN	Xi'an	5.05	56	Pn	Pn	23 53 23.3	-1.0
XAN				Sn	Sn	23 54 19.5	-2.7
XAN				Sg	Sb	23 54 41.5	+3.8
XAN				smax			
	comp=N,350nm,0.9s						
XAN				smax			
	comp=E,190nm,0.8s						
GYA	Guiyang	5.39	152	Pn	Pn	23 53 32.5	+3.6
GYA				Pg	Pb	23 53 45.5	+2.5
GYA				Sn	Sn	23 54 30.3	-0.1
GYA				smax			
	comp=N,580nm,1.0s						
GYA				smax			
	comp=E,510nm,1.0s						
KMI	Kunming	6.22	190	Pn	Pn	23 53 41.5	+1.2
KMI				Sn	Sn	23 54 50.3	-0.6
KMI				smax			
	comp=N,130nm,0.9s						
KMI				smax			
	comp=E,92nm,0.8s						
KMI				LR	LR		
	comp=N,1μm,6.7s						
KMI				LR	LR		
	comp=E,920nm,7.0s						
KMI				LR	LR		
	comp=Z,920nm,7.3s						
GTA	Gaotai	8.77	339	*e*P	Pn	23 54 15.5	+0.3
GTA				pP		23 54 19.5	
GTA				sP		23 54 21.5	
GTA				S	Sn	23 55 55.0	+1.5
GTA				pmax	pmax		
	comp=Z,160nm,6.6s						
GTA				LR	LR		
	comp=N,1μm,11.7s						
GTA				LR	LR		
	comp=E,870nm,11.7s						
GTA				LR	LR		
	comp=Z,1μm,14.1s						
WHN	Wuhan	9.02	92	P	Pn	23 54 30.8	+12
WHN				S	Sn	23 55 53.8	-5.9
WHN				LR	LR		
	comp=Z,4μm,6.3s						
HHC	Hu-ho-hao-te	11.38	31	*e*P	Pn	23 54 43.8	-7.2
HHC				S	Sn	23 56 52.3	-5.4
HHC				pmax	pmax		
	comp=Z,12nm,0.5s						
HHC				pmax	pmax		
	comp=Z,89nm,4.7s						
CHTO	Chiang Mai	13.20	201	*e*P	Pn	23 55 19.0	+3.1
BJT	Baijiatuan	13.24	45	*e*P	Pn	23 55 15.3	-1.1
QIZ	Qiongzhong	13.33	155	P	Pn	23 55 17.5	-0.3
CMAR	Chiang Mai Arr	13.53	200	Pn	Pn	23 55 22.5	+2.0
	comp=Z,0.3nm,0.3s,baz=8.4,slow=11,SNR=12						
ODAN	Odare	15.08	257	*e*P	Pn	23 55 40.4	-1.2
	comp=Z,32nm,0.8s						
GUN	Gumba	16.02	262	*e*P	Pn	23 55 52.6	-1.2
	comp=Z,53nm,0.7s						
PKI	Pulchoki	16.52	262	*e*P	Pn	23 55 58.6	-1.6
	comp=Z,47nm,0.6s						
PKI	Pulchoki	16.52	262	*e*P	Pn	23 55 58.6	-1.6
PKI				pmax	pmax		
	comp=Z,47nm,0.6s						
PKIN	Phulchoki	16.53	262	*e*P	Pn	23 55 58.4	-1.9
	comp=Z,49nm,0.5s						
KKN	Kakani	16.57	263	*e*P	Pn	23 55 58.4	-2.4
	comp=Z,55nm,0.6s						
KKN	Kakani	16.57	263	*e*P	Pn	23 55 58.4	-2.4
KKN				pmax	pmax		
	comp=Z,55nm,0.6s						
SONM	Songino Array	16.64	6	Pn	Pn	23 56 01.3	-0.3
	comp=Z,0.1nm,0.3s,baz=187,slow=14,SNR=12						
ULN	Ulaanbaatar	16.74	7	*e*P	Pn	23 56 02.6	-0.2
ULN				pmax	pmax		
	comp=Z,30nm,2.2s						
ULN	Ulaanbaatar	16.74	7	*e*Pn	Pn	23 56 02.6	-0.2
	comp=Z,30nm,2.2s						
DMN	Daman	16.77	262	*e*Pn	Pn	23 56 01.2	-2.1
	comp=Z,50nm,0.8s						
YHNB	Yeheng	16.78	109	*e*Pn	Pn	23 56 03.4	-0.1
GKN	Gorkha	17.05	264	*e*P	Pn	23 56 04.4	-2.5
	comp=Z,69nm,0.9s						
KOLN	Koldanda	18.00	264	*e*P	Pn	23 56 15.6	-3.1
	comp=Z,30nm,0.8s						
ZAK	Zakamensk	19.09	359	*e*P	Pn	23 56 33.1	+1.4
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
TLY	Talaya	20.38	360	*e*P	P	23 56 49.7	+4.7
TLY				pmax	pmax		
	comp=Z,9.0nm,1.8s						
TLY				MLR	MLR		
	comp=Z,343nm,19.0s						
TLY	Talaya	20.38	360	*e*P	P	23 56 44.2	-0.7
MOY	Mondy	20.48	355	*e*P	P	23 56 50.7	+4.7
KSRS	Korea Array	20.74	66	P	P	23 56 48.9	-0.1
	comp=Z,6.6nm,0.7s,baz=260,slow=10,SNR=19						
KSRS	Korea Array	20.74	66	P	P	23 56 48.9	-0.1
KSRS				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HIA	Hailar	21.58	29	*e*P	P	23 56 57.0	-0.9
MK31	Makanchi Array	22.73	319	*e*P	P	23 57 11.1	+0.9
MKAR	Makanchi Array	22.73	319	P	P	23 57 11.1	+0.9
	comp=Z,13nm,1.1s,mb4.3,baz=125,slow=10,SNR=52						
MKAR				ScP	ScP	00 04 38.6	0.0
	comp=Z,0.2nm,0.7s,baz=116,slow=3.4,SNR=2.3						
MDJ	Mudanjiang	24.13	49	*e*P	P	23 57 25.3	+1.2
	comp=Z,20nm,1.1s,mb4.5						
UCH	Uchtor	25.83	303	*e*P	P	23 57 39.1	-0.4
AAK	Ala-Archa	25.95	304	*e*P	P	23 57 41.2	+0.5
AML	Almayashu	26.39	303	*e*P	P	23 57 45.7	+1.0
	comp=Z,2.4nm,0.8s,mb3.8						
EKS2	Erkin-Say	26.47	304	*e*P	P	23 57 45.9	+0.6
	comp=Z,3.2nm,0.9s,mb3.9						
ZALV	Zalesovo Beam	26.48	334	P	P	23 57 45.3	-0.1
	comp=Z,10nm,0.9s,mb4.3,baz=134,slow=8.6,SNR=41						
ZALV	Zalesovo Beam	26.48	334	P	P	23 57 45.3	0.0
ZALV				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.4						
KURK	Kurchatov	26.99	323	P	P	23 57 50.1	+0.1
	comp=Z,11nm,0.9s,mb4.4,baz=131,slow=9.1,SNR=47						
KURK				PcP	PcP	00 01 10.2	-1.0
	comp=Z,1.0nm,0.7s,baz=113,slow=2.2,SNR=3.6						
KURK	Kurchatov	26.99	323	*e*P	P	23 57 50.4	+0.4
KURK				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.4						
KURK	Kurchatov	26.99	323	*e*P	P	23 57 50.4	+0.4
	comp=Z,14nm,1.1s,mb4.4						
PSI	Prapat	28.71	190	P	P	23 58 06.0	+0.3
	comp=Z,1.8nm,0.6s,mb4.0,baz=252,slow=6.4,SNR=2.8						
PSI	Prapat	28.71	190	P	P	23 58 06.0	+0.3
PSI				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
KBL	Kabul	29.35	286	*e*P	P	23 58 12.9	+1.7
KBL				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.5						
KBL	Kabul	29.35	286	*e*P	P	23 58 12.9	+1.7
	comp=Z,11nm,1.1s,mb4.5						
BVAR	Borovoye Array	32.54	322	P	P	23 58 39.7	+0.6
	comp=Z,1.5nm,0.7s,mb4.1,baz=126,slow=10.0,SNR=6.8						
BVAR	Borovoye Array	32.54	322	P	P	23 58 39.7	+0.6
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRVK	Borovoye	32.61	322	*e*P	P	23 58 39.4	-0.3
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.6						
BRVK	Borovoye	32.61	322	*e*P	P	23 58 39.4	-0.3
	comp=Z,2.5nm,0.4s,mb4.5						
YSS	Yuzh-Sakhalins	33.58	51	*e*P	P	23 58 46.5	-1.8
YSS				pmax	pmax		
	comp=Z,24nm,1.7s,mb4.8						
ABKAR	Akbulak array	37.42	312	*e*P	P	23 59 21.1	-0.2
	comp=Z,3.7nm,0.8s,mb4.3						
SVE	Sverdlovsk	39.25	323	⇓*e*P	P	23 59 36.8	+0.3
SVE				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.7						
ARU	Arti	40.18	322	*c i*P	P	23 59 44.5	+0.2
ARU				*e*		00 01 15.7	
ARU				S	S	00 05 52.1	+2.1
ARU				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.7						
ARU	Arti	40.18	322	*e*P	P	23 59 43.9	-0.4
	comp=Z,12nm,0.9s,mb4.6						
SOKR	Solikamsk	42.15	326	*d i*P	P	00 00 01.3	+0.9
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.5						
PETK	Petropavlovsk-	44.19	44	P	P	00 00 16.7	-0.4
	comp=Z,1.3nm,0.7s,mb3.8,baz=113,slow=3.4,SNR=4.5						
PETK	Petropavlovsk-	44.19	44	P	P	00 00 16.7	-0.3
PETK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.6						
PETK	Petropavlovsk-	44.19	44	P	P	00 00 16.7	-0.4
GNI	Garni	48.06	298	*e*P	P	00 00 49.0	+1.3
GNI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GNI	Garni	48.06	298	*e*P	P	00 00 49.0	+1.3
	comp=Z,4.4nm,0.8s,mb4.5						
KIV	Kislovodsk	49.06	303	*e*P	P	00 00 56.5	+1.1
KIV				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
KIV	Kislovodsk	49.06	303	*e*P	P	00 00 57.0	+1.6
	comp=Z,8.4nm,1.1s,mb4.7						
VSR	Storozhevoye	50.83	313	*e*P	P	00 01 08.0	-0.7
VSR				pmax	pmax		
	comp=N,6.0nm,0.8s						
VSR				pmax	pmax		
	comp=E,8.0nm,0.8s						
VSR				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
OBN	Obninsk	52.23	318	*i* P	P	00 01 18.4	-0.6
OBN				pmax	pmax		
	comp=Z,8.0nm,1.7s,mb4.4						
OBN	Obninsk	52.23	318	*e*P	P	00 01 19.2	+0.2
	comp=Z,3.1nm,0.4s,mb4.6						
FITZ	Fitzroy Crossi	53.36	154	*e*P	P	00 01 27.8	0.0
	comp=Z,3.3nm,1.1s,mb4.2						
JOF	Joensuu	54.78	328	*e*P	P	00 01 36.9	-0.8
JOF				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.9						
JOF	Joensuu	54.78	328	*ep*	P	00 01 36.9	-0.8
	comp=Z,8.8nm,0.7s,mb4.9						
BR131	Keskin Array S	56.49	299	*e*P	P	00 01 50.9	+0.5
BRTR	Keskin Array B	56.49	299	P	P	00 01 50.4	0.0
	comp=Z,1.4nm,0.8s,mb4.0,baz=79,slow=6.4,SNR=9.3						
BRTR	Keskin Array B	56.49	299	P	P	00 01 50.4	0.0
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KEV	Kevo	56.49	336	*e*P	P	00 01 49.0	-0.9
KEV				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
KEV	Kevo	56.49	336	*e*P	P	00 01 49.9	0.0
	comp=Z,7.2nm,0.7s,mb4.8						
KEV	Kevo	56.49	336	*ep*	P	00 01 49.0	-0.9
	comp=Z,11nm,0.8s,mb5.0						
ARCES	ARCESS Array B	57.02	336	P	P	00 01 53.5	-0.1
	comp=Z,4.5nm,0.8s,mb4.6,baz=87,slow=7.4,SNR=18						
ARCES				PcP	PcP	00 02 48.4	-0.2
	comp=Z,1.0nm,0.5s,baz=83,slow=4.8,SNR=8.6						
ARCES	ARCESS Array B	57.02	336	P	P	00 01 53.6	0.0
ARCES						00 02 48.4	
ARCES				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MMAI	Mount Meron Ar	57.05	291	P	P	00 01 55.1	+0.7
	comp=Z,1.1nm,0.6s,mb4.1,baz=44,slow=12,SNR=3.5						
AKASG	Malin Array Be	57.13	313	P	P	00 01 53.7	-1.0
	comp=Z,1.1nm,0.5s,mb4.2,baz=71,slow=7.1,SNR=7.2						
AKASG	Malin Array Be	57.13	313	P	P	00 01 53.7	-1.0
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KAF	Kangasniemi	57.14	327	*e*P	P	00 01 53.3	-1.3
KAF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
KAF	Kangasniemi	57.14	327	*ep*	P	00 01 53.3	-1.3
	comp=Z,4.3nm,0.7s,mb4.6,baz=84,slow=6.7						
FINES	FINESS Array B	57.32	326	P	P	00 01 55.7	-0.1
	comp=Z,6.0nm,0.8s,mb4.7,baz=92,slow=9.9,SNR=17						
FINES	FINESS Array B	57.32	326	P	P	00 01 55.7	-0.1
FINES				pmax	pmax		
	comp=Z,6.0nm,0.8s						
VSU	Vasula	57.34	323	⇓*i*P	P	00 01 55.7	-0.4
VSU				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.2						
CSS	Prodhromos	58.08	294	*e*P	P	00 02 00.5	-1.1
	comp=Z,7.9nm,0.7s,mb4.8						
WRAB	Tennant Creek	58.72	146	*e*P	P	00 02 07.6	+1.5
WRAB				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.1						
WRAB	Tennant Creek	58.72	146	*e*P	P	00 02 07.6	+1.4
	comp=Z,16nm,0.8s,mb5.1						
KWP	Kalwaria Pacla	61.45	313	*e*P	P	00 02 24.2	-0.4
KWP				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.1						
KWP	Kalwaria Pacla	61.45	313	*e*P	P	00 02 24.2	-0.4
	comp=Z,17nm,1.1s,mb5.1						
ASAR	Alice Springs	61.74	149	P	P	00 02 25.9	-0.9
	comp=Z,1.1nm,0.5s,mb4.3,baz=341,slow=6.7,SNR=10.0						
ASAR	Alice Springs	61.74	149	P	P	00 02 25.9	-0.8
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
VYHS	Vyhne	64.22	313	*e*P	P	00 02 42.4	-0.7
VYHS				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb4.0						
VYHS	Vyhne	64.22	313	*e*P	P	00 02 42.4	-0.7
	comp=Z,2.3nm,1.2s,mb4.1						
NB2	NORSAR Subarra	64.41	327	P	P	00 02 43.0	-1.1
	comp=Z,5.6nm,1.0s,mb4.5,baz=74,slow=6.9						
NOA	NORSAR Array B	64.41	327	P	P	00 02 43.2	-0.9
	comp=Z,2.5nm,0.7s,mb4.4,baz=74,slow=6.5,SNR=15						
NOA	NORSAR Array B	64.41	327	P	P	00 02 43.2	-0.9
NOA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KOLL	Kolacno	64.47	313	*e*P	P	00 02 45.2	+0.5
MORC	Moravsky Berou	64.61	314	P	P	00 02 45.6	0.0
GVD	Gavdhos	65.26	297	P	P	00 02 51.2	+1.1
BRG	Berggiesshubel	66.41	316	*e*P	P	00 02 56.9	-0.3
	comp=Z,4.0nm,0.8s,mb4.5						
CLL	Collm	66.80	317	*e*P	P	00 02 59.2	-0.5
	comp=Z,3.0nm,1.0s,mb4.3						
CLL	Collm	66.80	317	*e*P	P	00 02 59.0	-0.7
GEC2	GERESS Array S	67.29	314	*e*P	P	00 03 02.9	0.0
	comp=Z,4.0nm,1.0s,mb4.4						
GEC2	GERESS Array S	67.29	314	*e*P	P	00 03 02.9	0.0
GEC2				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
GEC2	GERESS Array S	67.29	314	*e*P	P	00 03 02.9	0.0
	comp=Z,4.0nm,1.0s,mb4.4						
BSEG	Bad Segeberg	67.35	320	*e*P	P	00 03 03.4	+0.3
	comp=Z,7.0nm,0.9s,mb4.7						
BSEG	Bad Segeberg	67.35	320	*e*P	P	00 03 03.4	+0.3
BSEG				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
TANN	Tannenbergstha	67.45	316	*e*P	P	00 03 03.7	-0.1
	comp=Z,3.0nm,1.0s,mb4.3						
WERD	Werda	67.53	316	*e*P	P	00 03 04.1	-0.3
	comp=Z,2.0nm,0.7s,mb4.3						
WET	Wettzell	67.68	315	*e*P	P	00 03 05.5	+0.2
	comp=Z,6.0nm,1.2s,mb4.5						
WET	Wettzell	67.68	315	*e*P	P	00 03 05.5	+0.2
WET				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.5						
WET	Wettzell	67.68	315	*e*P	P	00 03 05.5	+0.2
	comp=Z,6.0nm,1.2s,mb4.5						
MOX	Moxa	67.86	317	*e*P	P	00 03 05.9	-0.5
	comp=Z,4.0nm,1.2s,mb4.3						
NRDL	Niedersach Rie	68.02	319	*e*P	P	00 03 06.7	-0.7
	comp=Z,7.0nm,0.9s,mb4.7						
CLZ	Clausthal	68.12	318	*e*P	P	00 03 08.2	+0.2
	comp=Z,10.0nm,1.0s,mb4.8						
CLZ	Clausthal	68.12	318	*e*P	P	00 03 08.2	+0.2
CLZ				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
CLZ	Clausthal	68.12	318	*e*P	P	00 03 08.2	+0.2
	comp=Z,10.0nm,1.0s,mb4.8						
FUR	Furstenfeldbru	69.04	314	*e*P	P	00 03 14.2	+0.3
	comp=Z,15nm,0.9s,mb4.9						
FUR	Furstenfeldbru	69.04	314	*e*P	P	00 03 14.2	+0.3
FUR				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
FUR	Furstenfeldbru	69.04	314	*e*P	P	00 03 14.2	+0.3
	comp=Z,15nm,0.9s,mb4.9						
ILAR	Eielson Array	69.75	26	P	P	00 03 16.8	-1.2
	comp=Z,1.7nm,1.0s,mb3.9,baz=282,slow=6.8,SNR=11						
ILAR	Eielson Array	69.75	26	P	P	00 03 16.8	-1.2
ILAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
STU	Stuttgart	70.06	315	*e*P	P	00 03 20.3	+0.2
	comp=Z,7.0nm,0.9s,mb4.6						
KMBO	Kilima Mbogo	70.77	256	P	P	00 03 25.9	+0.9
CDF	Champ du Feu	71.36	316	*e*P	P	00 03 27.9	-0.2
	comp=Z,10nm,0.8s,mb4.5						
CDF	Champ du Feu	71.36	316	*e*P	P	00 03 27.9	-0.2
CDF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
CDF	Champ du Feu	71.36	316	*e*P	P	00 03 27.9	-0.2
	comp=Z,5.2nm,0.8s,mb4.5						
WLF	Walferdange	71.47	317	*e*P	P	00 03 28.6	-0.1
WLF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
WLF	Walferdange	71.47	317	*e*P	P	00 03 28.6	-0.1
	comp=Z,8.1nm,0.8s,mb4.7						
HINF	Hinteralfeld	71.88	315	*e*P	P	00 03 30.8	-0.4
	comp=Z,8.0nm,1.0s,mb4.3						
HINF	Hinteralfeld	71.88	315	*e*P	P	00 03 30.8	-0.4
HINF				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
HINF	Hinteralfeld	71.88	315	*e*P	P	00 03 30.8	-0.4
	comp=Z,4.0nm,1.0s,mb4.3						
STKA	Stephens Creek	72.26	147	P	P	00 03 33.0	-0.5
	comp=Z,1.9nm,0.6s,mb4.2,baz=327,slow=20,SNR=4.4						
STKA	Stephens Creek	72.26	147	P	P	00 03 33.0	-0.5
PGF	Pioggiola	72.89	310	*e*P	P	00 03 37.6	+0.3
	comp=Z,12nm,0.9s,mb4.5						
PGF	Pioggiola	72.89	310	*e*P	P	00 03 37.6	+0.3
PGF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
PGF	Pioggiola	72.89	310	*e*P	P	00 03 37.6	+0.3
	comp=Z,5.9nm,0.9s,mb4.5						
LPG	La Plagne	72.99	313	*e*P	P	00 03 38.6	+0.7
	comp=Z,16nm,0.8s,mb4.7						
LPG	La Plagne	72.99	313	*e*P	P	00 03 38.6	+0.7
LPG				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
LPG	La Plagne	72.99	313	*e*P	P	00 03 38.6	+0.7
	comp=Z,8.3nm,0.8s,mb4.7						
LPL	La Plagne	73.00	313	*e*P	P	00 03 38.5	+0.6
	comp=Z,16nm,0.8s,mb4.7						
LPL	La Plagne	73.00	313	*e*P	P	00 03 38.5	+0.6
LPL				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
LPL	La Plagne	73.00	313	*e*P	P	00 03 38.5	+0.6
	comp=Z,7.8nm,0.8s,mb4.7						
SBF	Sospel	73.31	311	*e*P

comp=Z,13nm,1.0s,mb4.5
GRR Gorron 76.12 318 *e*P **P 00 03 55.7 -0.3**
comp=Z,16nm,1.0s,mb4.6
GRR Gorron 76.12 318 *e*P **P 00 03 55.7 -0.3**
GRR pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
GRR Gorron 76.12 318 *e*P **P 00 03 55.7 -0.3**
comp=Z,8.1nm,1.0s,mb4.6
CAF Calviac 76.17 314 *e*P **P 00 03 56.7 +0.3**
comp=Z,10nm,1.0s,mb4.4
CAF Calviac 76.17 314 *e*P **P 00 03 56.7 +0.3**
CAF pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
CAF Calviac 76.17 314 *e*P **P 00 03 56.7 +0.3**
comp=Z,5.2nm,1.0s,mb4.4
RJF Les Rejaudoux 76.31 315 *e*P **P 00 03 57.5 +0.3**
comp=Z,11nm,1.0s,mb4.5
RJF Les Rejaudoux 76.31 315 *e*P **P 00 03 57.5 +0.3**
RJF pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
RJF Les Rejaudoux 76.31 315 *e*P **P 00 03 57.5 +0.3**
comp=Z,5.6nm,1.0s,mb4.5
MFF Saint Martin d 76.64 317 *e*P **P 00 03 58.9 -0.1**
comp=Z,5.1nm,0.7s,mb4.3
MFF Saint Martin d 76.64 317 *e*P **P 00 03 58.9 -0.1**
MFF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
MFF Saint Martin d 76.64 317 *e*P **P 00 03 58.9 -0.1**
comp=Z,2.5nm,0.7s,mb4.2
MTLF Montolieu 76.88 313 *e*P **P 00 04 00.4 0.0**
comp=Z,22nm,1.4s,mb4.6
MTLF Montolieu 76.88 313 *e*P **P 00 04 00.4 0.0**
MTLF pmax pmax
comp=Z,11nm,1.4s,mb4.6
MTLF Montolieu 76.88 313 *e*P **P 00 04 00.4 0.0**
comp=Z,11nm,1.4s,mb4.6
LFF La Frestale 76.97 315 *e*P **P 00 04 01.2 +0.3**
comp=Z,21nm,1.0s,mb4.7
LFF La Frestale 76.97 315 *e*P **P 00 04 01.2 +0.3**
LFF pmax pmax
comp=Z,11nm,1.0s,mb4.7
LFF La Frestale 76.97 315 *e*P **P 00 04 01.2 +0.3**
comp=Z,11nm,1.0s,mb4.7
ETSF Etsaut 78.84 314 *e*P **P 00 04 11.9 +0.6**
comp=Z,6.8nm,0.9s,mb4.3
ETSF Etsaut 78.84 314 *e*P **P 00 04 11.9 +0.6**
ETSF pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
ETSF Etsaut 78.84 314 *e*P **P 00 04 11.9 +0.6**
comp=Z,3.4nm,0.9s,mb4.3
SJPF Ste Jean 79.14 314 *e*P **P 00 04 13.8 +0.8**
comp=Z,3.8nm,0.6s,mb4.2
SJPF Ste Jean 79.14 314 *e*P **P 00 04 13.8 +0.8**
SJPF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
SJPF Ste Jean 79.14 314 *e*P **P 00 04 13.8 +0.8**
comp=Z,1.9nm,0.6s,mb4.2
YKA Yellowknife Ar 81.58 17 P **P 00 04 25.2 -0.4**
comp=Z,2.1nm,0.6s,mb4.2,baz=330,slow=5.3,SNR=16
YKA Yellowknife Ar 81.58 17 P **P 00 04 25.2 -0.5**
YKA pmax pmax
comp=Z,2.0nm,0.6s
ESDC Sonseca Array 82.76 312 P **P 00 04 32.3 -0.1**
comp=Z,0.7nm,0.7s,mb3.8,baz=24,slow=7.4,SNR=4.5
ESLA Sonseca Array 82.76 312 P **P 00 04 32.1 -0.2**
EDM Edmonton 89.83 21 *e*P **P 00 05 07.7 +0.9**
FFC Flin Flon 91.49 15 *i*P **P 00 05 15.2 +0.7**
TSUM Tsumeb 96.71 252 P **P 00 05 39.5 +0.5**
TXAR Lajitas Array 114.26 26 PKiKP PKiKP 00 10 47.9 -0.4
comp=Z,0.1nm,0.5s,baz=33,slow=2.2,SNR=3.0
TXAR Lajitas Array 114.26 26 *i*PKIKP PKiKP 00 10 47.9 -0.3
TXAR Lajitas Array 114.26 26 PKPdf PKiKP 00 10 47.9 -0.4

*ISCJB **29** 00:13:31.5±1.2, 46°.89N±0°.09×152°.7E±0°.1, h75km±10km, mb3.6/12, Error ellipse: s-maj=19.3km s-min=9.1km az=44.1*
*NEIC **29** 00:13:31.6±1.1, 46°.90N×152°.61E, h54km±10km, mb4.0/2, Error ellipse: s-maj=12.4km s-min=7.1km az=122.0*
*MOS **29** 00:13:31.5±1.1, 46°.90N×152°.62E, h74km, mb4.3/7, Error ellipse: s-maj=15.2km s-min=10.5km az=65.4*
*IDC **29** 00:13:31.6±3.2, 46°.90N×152°.65E, h54km±27km, mb3.5/10, mb1 3.6/12, mb1mx3.5/23, mbtmp3.5/12, ML3.4/2, Error ellipse: s-maj=28.5km s-min=19.1km az=137.0*
ISC 29 00:13:33.1±1.1, 46°.88N±0°.09×152°.7E±0°.1, h72km±9km, n34, σ0°79/36, mb3.6/12, 1C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
KUR	**Kuril'sk**	**3.72**	**245**	*e*PN		**Pn**	**00 14 27.9**	**-0.2**
KUR				*e*S		**Sn**	**00 15 14.5**	**+3.9**
KUR				pmax		pmax		
	comp=Z,80nm,0.5s							
KUR				smax				
	comp=N,150nm,0.7s							
KUR				smax				
	comp=E,240nm,0.7s							
SKR	**Severo-Kuril's**	**4.44**	**30**	*e*PN		**Pn**	**00 14 39.0**	**+1.1**
SKR				*e*S		**Sn**	**00 15 23.0**	**-5.2**
SKR				smax				
	comp=N,800nm,0.4s							
SKR				smax				
	comp=E,80nm,0.5s							
SKR				smax				
	comp=Z,50nm,0.5s							
YSS	**Yuzh-Sakhalins**	**6.78**	**274**	*e*PN		**Pn**	**00 15 12.3**	**+2.4**
PETK	**Petropavlovsk-**	**7.03**	**26**	P		**Pn**	**00 15 11.9**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=187,slow=10,SNR=7.2							
ASAJ	**Asahikawa**	**7.59**	**252**	P		**Pn**	**00 15 20.0**	**-0.9**
	comp=Z,1.0nm,0.3s,baz=74,slow=17,SNR=6.1							
ASAJ	**Asahikawa**	**7.59**	**252**	PN		**Pn**	**00 15 20.0**	**-0.9**
ASAJ				pmax		pmax		
	comp=Z,1.0nm,0.3s							
MAJO	**Matsushiro**	**14.91**	**231**	P		**Pn**	**00 16 58.8**	**-1.0**
KSRS	**Korea Array**	**20.54**	**252**	P		**P**	**00 18 05.1**	**-0.4**
	comp=Z,0.6nm,0.3s,baz=59,slow=9.6,SNR=6.2							
KSRS	**Korea Array**	**20.54**	**252**	P		**P**	**00 18 05.1**	**-0.4**
KSRS				pmax		pmax		
	comp=Z,1.0nm,0.3s							
TATO	**Taipei**	**33.05**	**239**	*e*P		**P**	**00 20 01.4**	**-0.2**
GUMO	**Guam**	**33.82**	**194**	*e*P		**P**	**00 20 08.7**	**+0.3**
ILAR	**Eielson Array**	**36.64**	**39**	P		**P**	**00 20 31.6**	**-0.5**
	comp=Z,0.1nm,0.6s,mb3.0,baz=269,slow=8.1,SNR=4.5							
MKAR	**Makanchi Array**	**46.60**	**297**	P		**P**	**00 21 54.1**	**+0.4**
	comp=Z,0.3nm,0.5s,mb3.3,baz=72,slow=9.4,SNR=5.4							
MKAR				PcP		PcP	00 23 27.4	+0.9
	comp=Z,0.4nm,0.7s,baz=49,slow=2.4,SNR=3.0							
KURK	**Kurchatov**	**47.03**	**303**	*e*P		**P**	**00 21 56.8**	**-0.2**
KURK				pmax		pmax		
	comp=Z,10.0nm,5.0s							
KURK	**Kurchatov**	**47.03**	**303**	*e*P		**P**	**00 21 56.7**	**-0.2**
	comp=Z,1.0nm,0.7s,mb3.6							
BVAR	**Borovoye Array**	**50.53**	**309**	P		**P**	**00 22 23.8**	**0.0**
	comp=Z,0.2nm,0.4s,mb3.5,baz=51,slow=11,SNR=3.1							
BVAR				PcP		PcP	00 23 41.3	+0.6
	comp=Z,0.4nm,0.5s,baz=38,slow=2.6,SNR=3.1							
CHTO	**Chiang Mai**	**51.84**	**256**	P		**P**	**00 22 33.9**	**-0.1**
AML	**Almayashu**	**54.27**	**296**	*e*P		**P**	**00 22 51.7**	**+0.2**
ARU	**Arti**	**54.70**	**317**	*e*P		**P**	**00 22 54.1**	**-0.4**
ARU				pmax		pmax		
	comp=Z,1.0nm,0.4s,mb4.2							
ARU	**Arti**	**54.70**	**317**	*e*P		**P**	**00 22 54.1**	**-0.3**
	comp=Z,0.7nm,0.4s,mb4.0							
ARCES	**ARCESS Array B**	**57.63**	**341**	P		**P**	**00 23 14.7**	**-0.4**
	comp=Z,0.8nm,0.9s,mb3.8,baz=49,slow=10,SNR=4.6							
ARCES	**ARCESS Array B**	**57.63**	**341**	P		**P**	**00 23 14.7**	**-0.4**
ARCES				pmax		pmax		
	comp=Z,1.0nm,0.9s							
FINES	**FINESS Array B**	**63.79**	**335**	P		**P**	**00 23 57.6**	**+0.5**
	comp=Z,1.4nm,0.4s,mb4.1,baz=32,slow=8.2,SNR=17							
FINES	**FINESS Array B**	**63.79**	**335**	P		**P**	**00 23 57.6**	**+0.6**
FINES				pmax		pmax		
	comp=Z,1.0nm,0.4s							
OBN	**Obninsk**	**65.03**	**325**	*e*P		**P**	**00 24 04.0**	**-1.2**
OBN				*e*			00 24 31.3	
OBN				pmax		pmax		
	comp=Z,2.0nm,1.0s,mb3.9							
NB2	**NORSAR Subarra**	**68.00**	**341**	P		**P**	**00 24 24.3**	**+0.2**
	comp=Z,1.2nm,0.6s,mb3.9,baz=28,slow=6.5							
NOA	**NORSAR Array B**	**68.00**	**341**	P		**P**	**00 24 24.6**	**+0.5**
	comp=Z,1.2nm,0.6s,mb3.9,baz=28,slow=6.3,SNR=9.2							
NOA	**NORSAR Array B**	**68.00**	**341**	P		**P**	**00 24 24.6**	**+0.5**
NOA				pmax		pmax		
	comp=Z,1.0nm,0.6s							
AKASG	**Malin Array Be**	**71.27**	**326**	P		**P**	**00 24 44.5**	**+0.2**
	comp=Z,1.1nm,0.4s,mb4.1,baz=31,slow=6.1,SNR=7.4							
AKASG	**Malin Array Be**	**71.27**	**326**	P		**P**	**00 24 44.5**	**+0.2**
AKASG				pmax		pmax		
	comp=Z,1.0nm,0.4s							
AKASG	**Malin Array Be**	**71.27**	**326**	P		**P**	**00 24 44.5**	**+0.2**
ASAR	**Alice Springs**	**72.23**	**198**	P		**P**	**00 24 51.0**	**+0.7**
	comp=Z,0.4nm,0.8s,mb3.3,baz=13,slow=5.4,SNR=4.7							
TXAR	**Lajitas Array**	**77.70**	**60**	P		**P**	**00 25 22.9**	**+0.9**
	comp=Z,0.1nm,0.5s,mb2.8,baz=308,slow=4.5,SNR=4.1							
TXAR	**Lajitas Array**	**77.70**	**60**	P		**P**	**00 25 22.9**	**+0.9**

*ISCJB **29** 00:14:36.9±0.8, 26°.42S±0°.02×27°.42E±0°.03, h10km±5km, mb3.9/6, Error ellipse: s-maj=4.3km s-min=3.4km az=42.1*
*PRE **29** 00:14:37.1±0.9, 26°.42S×27°.43E, h2km, ML3.6*
*IDC **29** 00:14:37.1±0.9, 26°.48S×27°.38E, h0km, mb3.9/6, mb1 4.2/11, mb1mx4.0/25, mbtmp4.1/11, ML4.2/4, Error ellipse: s-maj=15.7km s-min=12.0km az=98.0*
ISC 29 00:14:37.6±0.5, 26°.42S±0°.02×27°.42E±0°.02, h4km±3km, n34, σ0°95/58, mb3.9/6, South Africa

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
PRYS	**Parys**	**0.51**	**186**	*e*P		**Pg**	**00 14 47.5**	**+0.2**
PRYS				*e*S		**Sg**	**00 14 54.0**	**0.0**
PRYS				AML		AML	00 14 59.0	
	comp=Z,4μm,0.5s							
BFSD	**Buffelsfontein**	**0.72**	**232**	*e*P		**Pg**	**00 14 51.8**	**+0.4**
BFSD				*e*S		**Sg**	**00 15 00.5**	**-0.3**
BFSD				AML		AML	00 15 07.8	
	comp=Z,846nm,0.5s							
KSR	**Koster**	**0.73**	**320**	*e*P		**Pg**	**00 14 51.3**	**-0.4**
KSR				*e*S		**Sg**	**00 15 01.2**	**+0.1**
KSR				AML		AML	00 15 08.8	
	comp=Z,1μm,0.6s							
ERPM	**east rand prop**	**0.74**	**84**	*e*P		**Pg**	**00 14 52.0**	**+0.3**
ERPM				*e*S		**Sg**	**00 15 01.6**	**+0.2**
ERPM				AML		AML	00 15 10.8	
	comp=Z,567nm,0.2s							
MOAB	**Moab Khotsong**	**0.79**	**224**	*e*P		**Pg**	**00 14 53.3**	**+0.5**
MOAB				*e*S		**Sg**	**00 15 03.0**	**-0.1**
MOAB				AML		AML	00 15 10.2	
	comp=Z,641nm,0.3s							
SLR	**Silverton**	**1.03**	**49**	*e*P		**Pg**	**00 14 56.5**	**-0.8**
SLR				*e*S		**Sg**	**00 15 10.6**	**-0.1**
SLR				AML		AML	00 15 17.3	
	comp=Z,1μm,0.2s							
SEK	**Senekal**	**1.91**	**175**	*e*P		**Pn**	**00 15 11.5**	**+0.6**
SEK				*e*S		**Sn**	**00 15 36.1**	**+0.9**
SEK				AML		AML	00 15 38.1	
	comp=Z,998nm,0.2s							
LBTB	**Lobatse**	**2.16**	**310**	Pn		**Pn**	**00 15 16.0**	**+1.7**
	comp=Z,180nm,0.3s,baz=145,slow=13,SNR=1141							
LBTB				Pg		**Pg**	**00 15 17.1**	**-1.8**
	comp=Z,179nm,0.3s,baz=142,slow=16,SNR=1124							
LBTB				Lg			00 15 45.2	
	comp=Z,425nm,0.3s,baz=233,slow=19,SNR=81							
LBTB				Rg			00 15 52.1	
	comp=Z,188nm,0.3s,baz=230,slow=3.8,SNR=13							
LBTB	**Lobatse**	**2.16**	**310**	*e*P		**Pn**	**00 15 14.6**	**+0.4**
LBTB				*e*S		**Sn**	**00 15 42.6**	**+1.2**
LBTB				AML		AML	00 15 45.9	
	comp=Z,2μm,0.8s							
BOSA	**Boshof**	**2.91**	**221**	Pn		**Pn**	**00 15 24.8**	**+0.1**
	comp=Z,16nm,0.3s,baz=44,slow=13,SNR=431							
BOSA				Pg		**Pg**	**00 15 30.0**	**-3.4**
	comp=Z,22nm,0.3s,baz=45,slow=16,SNR=32							
BOSA				Lg			00 16 06.0	
	comp=Z,124nm,0.3s,baz=328,slow=20,SNR=26							
BOSA				Rg			00 16 23.0	
	comp=Z,52nm,0.3s,baz=289,slow=19,SNR=3.8							
BOSA	**Boshof**	**2.91**	**221**	*e*P		**Pn**	**00 15 24.9**	**+0.3**
BOSA				*e*S		**Sn**	**00 16 00.8**	**+0.7**
BOSA				AML		AML	00 16 06.6	
	comp=Z,308nm,0.3s							
POGA	**Pongola**	**3.86**	**105**	*e*P		**Pn**	**00 15 38.7**	**+1.0**
POGA				*e*S		**Sn**	**00 16 24.0**	**+0.5**
POGA				AML		AML	00 16 46.6	
	comp=Z,162nm,0.5s							
KSD	**Kokstad**	**4.47**	**157**	*e*P		**Pn**	**00 15 46.2**	**+0.2**
KSD				*e*S		**Sn**	**00 16 36.8**	**-1.7**
KSD				AML		AML	00 17 05.6	
	comp=Z,94nm,0.4s							
HVD	**Gariep Dam**	**4.50**	**202**	*e*P		**Pn**	**00 15 47.0**	**+0.5**
HVD				*e*S		**Sn**	**00 16 38.2**	**-1.0**
HVD				AML		AML	00 17 11.3	
	comp=Z,76nm,0.4s							
MOPA	**Mopani**	**4.62**	**52**	*e*P		**Pn**	**00 15 48.3**	**+0.2**
MOPA				*e*S		**Sn**	**00 16 40.5**	**-1.8**
MOPA				AML		AML	00 17 11.1	
	comp=Z,631nm,0.4s							
MSNA	**Messina**	**4.70**	**31**	*e*P		**Pn**	**00 15 48.3**	**-0.9**
MSNA				*e*S		**Sn**	**00 16 40.7**	**-3.5**
MSNA				AML		AML	00 17 12.9	
	comp=Z,102nm,0.3s							
PKA	**Prieska**	**5.24**	**231**	*e*P		**Pn**	**00 15 57.0**	**+0.3**
PKA				*e*S		**Sn**	**00 16 56.2**	**-1.3**
PKA				AML		AML	00 17 26.1	
	comp=Z,176nm,0.4s							
UPI	**Upington**	**5.81**	**249**	*e*P		**Pn**	**00 16 05.5**	**+0.9**
UPI				*e*S		**Sn**	**00 17 09.9**	**-1.8**
UPI				AML		AML	00 17 41.4	
	comp=Z,108nm,0.4s							
GRM	**Grahamstown**	**6.92**	**186**	*e*P		**Pn**	**00 16 20.6**	**+1.0**
GRM				*e*S		**Sn**	**00 17 36.2**	**-2.6**
GRM				AML		AML	00 18 21.9	
	comp=Z,38nm,0.5s							
SUR	**Sutherland**	**8.28**	**223**	Pn		**Pn**	**00 16 38.0**	**-0.4**
	comp=Z,4.6nm,0.3s,baz=53,slow=15,SNR=44							
SUR				Sn		**Sn**	**00 18 07.5**	**-4.7**
	comp=Z,3.1nm,0.3s,baz=323,slow=22,SNR=6.0							
SUR				Lg			00 18 56.2	
	comp=Z,11nm,0.3s,baz=132,slow=22,SNR=9.4							
SUR	**Sutherland**	**8.28**	**223**	*e*P		**Pn**	**00 16 38.9**	**+0.6**
SUR				*e*S		**Sn**	**00 18 08.5**	**-3.8**
SUR				AML		AML	00 18 56.7	
	comp=Z,39nm,0.5s							
KOMG	**Komaggas**	**9.40**	**247**	*e*P		**Pn**	**00 16 54.9**	**+1.2**
KOMG				*e*S		**Sn**	**00 18 35.7**	**-4.1**
KOMG				AML		AML	00 19 26.8	
	comp=Z,18nm,0.6s							
LSZ	**Lusaka**	**11.11**	**4**	Pn		**Pn**	**00 17 16.5**	**-0.7**
	comp=Z,1.8nm,0.3s,baz=186,slow=13,SNR=46							
LSZ				Sn		**Sn**	**00 19 17.9**	**-4.1**
	comp=Z,1.6nm,0.3s,baz=44,slow=16,SNR=3.8							
LSZ				Lg			00 20 21.3	
	comp=Z,0.1nm,0.3s,baz=253,slow=20,SNR=4.5							
TSUM	**Tsumeb**	**11.56**	**306**	Pn		**Pn**	**00 17 23.5**	**0.0**
	comp=Z,2.2nm,0.3s,baz=116,slow=11,SNR=51							
TSUM				Sn		**Sn**	**00 19 37.5**	**+4.4**
	comp=Z,0.6nm,0.3s,baz=234,slow=19,SNR=5.1							
TSUM				Lg			00 20 37.2	
	comp=Z,1.0nm,0.3s,baz=50,slow=16,SNR=5.6							
TORD	**Torodi Ar. Bea**	**46.61**	**324**	P		**P**	**00 23 06.7**	**-0.3**
QSPA	**South Pole Qui**	**63.77**	**180**	P		**P**	**00 25 10.0**	**-0.1**
	comp=Z,0.8nm,0.5s,mb4.0,baz=313,slow=2.1,SNR=6.7							
BRTR	**Keskin Array B**	**66.06**	**5**	P		**P**	**00 25 25.8**	**+0.5**
	comp=Z,0.5nm,0.8s,mb3.6,baz=212,slow=5.1,SNR=3.3							
BRTR	**Keskin Array B**	**66.06**	**5**	P		**P**	**00 25 25.8**	**+0.5**
ESDC	**Sonseca Array**	**71.97**	**335**	P		**P**	**00 26 02.9**	**+0.8**
	comp=Z,0.8nm,0.5s,mb3.9,baz=153,slow=5.6,SNR=10							
ESDC	**Sonseca Array**	**71.97**	**335**	P		**P**	**00 26 02.9**	**+0.8**
BVAR	**Borovoye Array**	**87.49**	**24**	P		**P**	**00 27 26.7**	**+0.7**
	comp=Z,0.3nm,0.3s,mb3.9,baz=225,slow=3.1,SNR=3.5							
FINES	**FINESS Array B**	**87.55**	**359**	P		**P**	**00 27 27.3**	**+1.2**
	comp=Z,1.4nm,0.9s,mb4.2,baz=134,slow=8.2,SNR=5.1							
MKAR	**Makanchi Array**	**88.11**	**34**	P		**P**	**00 27 29.7**	**+0.6**
	comp=Z,0.3nm,0.4s,mb3.9,baz=230,slow=4.8,SNR=5.0							

*IDC **29** 00:28:49.3±2.8, 35°.11N×81°.00E, h0km, mb3.4/3, mb1 3.6/7, mb1mx3.4/24, mbtmp3.5/7, ML3.4/4, Error ellipse: s-maj=39.5km s-min=34.3km az=32.0*
*ISCJB **29** 00:28:51.7±1.1, 35°.46N±0°.08×81°.12E±0°.09, h10km, mb3.6/4, Error ellipse: s-maj=12.2km s-min=10.4km az=155.8*
*BJI **29** 00:28:52.4, 35°.29N×81°.43E, h22km, mb3.9/1, ML3.6/6*
*NEIC **29** 00:28:52.6±1.3, 35°.32N×81°.20E, h10km, mb3.4/4, Error ellipse: s-maj=18.6km s-min=11.0km az=163.0*
ISC 29 00:28:52.9±1.1, 35°.35N±0°.08×81°.22E±0°.09, h10km, n21, σ1°02/26, mb3.6/4, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
KSH	**Kashi**	**5.89**	**316**	Pn		**Pn**	**00 30 24.5**	**+4.4**
KSH				Sn		**Sn**	**00 31 37.5**	**+10**
KSH				smax				
	comp=N,34nm,0.9s							
KSH				smax				
	comp=E,57nm,1.1s							
TKM2	**Tokmak 2**	**8.72**	**332**	*e*Pn		**Pn**	**00 30 58.9**	**-0.1**
AAK	**Ala-Archa**	**8.95**	**326**	Pg		Px	00 31 34.1	
	comp=E,0.3nm,0.3s,baz=151,slow=10,SNR=3.2							
AAK				Lg			00 33 38.2	
	comp=E,0.7nm,0.3s,baz=221,slow=19,SNR=2.9							
AAK	**Ala-Archa**	**8.95**	**326**	*e*Pn		**Pn**	**00 31 03.0**	**+0.8**
AAK				*e*Sn		**Sn**	**00 32 36.1**	**-6.9**
AML	**Almayashu**	**8.96**	**321**	*e*Pn		**Pn**	**00 31 04.7**	**+2.5**
	comp=E,4.9nm,0.7s							
AML				*e*Sn		**Sn**	**00 32 43.5**	**+0.4**
EKS2	**Erkin-Say**	**9.31**	**324**	*e*Pn		**Pn**	**00 31 07.4**	**+0.3**
KBL	**Kabul**	**10.03**	**269**	*e*Pn		**Pn**	**00 31 17.1**	**+0.1**
MK31	**Makanchi Array**	**11.46**	**4**	*e*Pn		**Pn**	**00 31 36.5**	**0.0**
MK31				Sn		**Sn**	**00 33 44.5**	**+0.1**
MKAR	**Makanchi Array**	**11.46**	**4**	Pn		**Pn**	**00 31 36.6**	**+0.1**
	comp=E,0.3nm,0.3s,baz=178,slow=12,SNR=9.7							
MKAR				Sn		**Sn**	**00 33 40.5**	**-3.9**
	comp=E,0.1nm,0.3s,baz=182,slow=25,SNR=2.7							
MKAR				Lg			00 35 03.2	
	comp=E,0.1nm,0.3s,baz=188,slow=29,SNR=2.1							
MKAR	**Makanchi Array**	**11.46**	**4**	Pn		**Pn**	**00 31 36.6**	**+0.1**
MKAR				Sn		**Sn**	**00 33 40.5**	**-3.9**
MKAR				Lg			00 35 03.2	
KURK	**Kurchatov**	**15.47**	**354**	Pn		**Pn**	**00 32 27.8**	**-3.2**
	comp=E,0.0nm,0.3s,baz=173,slow=11,SNR=4.4							
KURK	**Kurchatov**	**15.47**	**354**	*e*Pn		**Pn**	**00 32 29.9**	**-1.0**
	comp=E,1.6nm,0.8s							
ZALV	**Zalesovo Beam**	**18.76**	**7**	P		**Pn**	**00 33 11.7**	**-0.6**
	comp=E,0.2nm,0.3s,baz=200,slow=12,SNR=6.6							
BVAR	**Borovoye Array**	**19.26**	**340**	P		**Pn**	**00 33 17.7**	**-0.5**
	comp=E,0.2nm,0.3s,baz=153,slow=10.0,SNR=8.6							
BRVK	**Borovoye**	**19.32**	**340**	*e*P		**Pn**	**00 33 18.0**	**-1.0**
	comp=E,1.5nm,0.5s							
ABKAR	**Akbulak array**	**20.89**	**318**	*e*P		**P**	**00 33 36.0**	**+0.9**
	comp=E,0.8nm,0.6s							
SONM	**Songino Array**	**22.47**	**49**	P		**P**	**00 33 54.1**	**+2.0**
	comp=E,0.3nm,0.4s,mb3.1,baz=230,slow=11,SNR=2.3							
ULN	**Ulaanbaatar**	**22.89**	**49**	P		**P**	**00 33 56.7**	**+0.2**
GNI	**Garni**	**29.10**	**290**	*e*P		**P**	**00 34 53.1**	**-0.5**
	comp=E,1.8nm,0.4s,mb4.2							
FINES	**FINESS Array B**	**43.14**	**325**	P		**P**	**00 36 52.6**	**-0.6**
	comp=E,1.6nm,0.9s,mb3.8,baz=110,slow=11,SNR=4.6							
NOA	**NORSAR Array B**	**50.26**	**324**	P		**P**	**00 37 46.7**	**-2.2**
	comp=E,0.3nm,0.7s,mb3.4,baz=87,slow=7.6,SNR=2.9							

*IDC **29** 01:10:49.7±1.2, 32°.69N×105°.52E, h0km, mb3.5/5, mb1 3.6/7, mb1mx3.4/22, mbtmp3.5/7, ML3.5/2, Error ellipse: s-maj=39.3km s-min=22.3km az=50.0*
*ISCJB **29** 01:10:50.1±0.5, 32°.74N±0°.04×105°.49E±0°.05, h10km, mb3.5/5, Error ellipse: s-maj=6.3km s-min=5.0km az=34.0*
*BJI **29** 01:10:51.3, 32°.77N×105°.53E, h14km, mB4.3/3, mb4.2/3, ML3.8/14, Ms3.7/6, Ms7 3.6/5*
ISC 29 01:10:51.8±0.5, 32°.71N±0°.04×105°.53E±0°.05, h10km, n12, σ0°83/21, mb3.5/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
CD2	**Chengdu**	**2.34**	**220**	Pg		**Pb**	**01 11 34.5**	**+0.4**
CD2				Sg		**Sb**	**01 12 02.0**	**-1.1**
CD2				smax				
	comp=N,1μm,0.8s							
XAN	**Xi'an**	**3.13**	**64**	Pn		**Pn**	**01 11 41.8**	**+0.6**
XAN				Pg		**Pb**	**01 11 48.0**	**+0.4**
XAN				Sn		**Sn**	**01 12 17.0**	**-1.7**
XAN				Sg		**Sb**	**01 12 26.5**	**+0.7**
XAN				smax				
	comp=N,340nm,0.7s							
XAN				smax				
	comp=E,170nm,0.6s							
LZH	**Lanzhou**	**3.64**	**338**	Pn		**Pn**	**01 11 49.8**	**+1.6**
LZH				Sg		**Sg**	**01 12 44.0**	**-4.7**
LZH				smax				
	comp=N,380nm,1.0s							
LZH				smax				
	comp=E,310nm,0.8s							
LZH				LR		LR		
	comp=E,820nm,6.8s							
LZH				LR		LR		
	comp=Z,970nm,7.3s							
GYA	**Guiyang**	**6.31**	**171**	Pn		**Pn**	**01 12 26.0**	**+1.1**
GYA				Pg		**Pg**	**01 12 48.3**	**-4.4**
GYA				Sn		**Sn**	**01 13 37.5**	**+0.5**
GYA				Sg		**Sg**	**01 14 07.3**	**-7.1**
GYA				smax				
	comp=N,70nm,1.0s							
GYA				smax				
	comp=E,50nm,0.8s							
GTA	**Gaotai**	**8.12**	**327**	*e*P		**Pn**	**01 12 50.0**	**+0.3**
GTA				pP			01 12 54.0	
GTA				sP			01 12 56.0	
GTA				S		**Sn**	**01 14 21.8**	**+0.2**
GTA				pmax		pmax		
	comp=Z,4.0nm,1.3s							
GTA				pmax		pmax		
	comp=Z,26nm,4.2s							
GTA				LR		LR		
	comp=N,87nm,8.4s							
GTA				LR		LR		
	comp=E,140nm,7.5s							
GTA				LR		LR		
	comp=Z,150nm,8.4s							
SONM	**Songino Array**	**15.12**	**2**	Pn		**Pn**	**01 14 24.3**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=172,slow=11,SNR=2.4							
SONM			

ellipse: s-maj=12.3km s-min=5.1km az=58.0
*ATH **29** 02:06:11.0, 38°.03N×20°.90E, h5km, MD3.4/6*
ISC 29 02:06:02.9±1.0, 38°.07N±0°.03×20°.27E±0°.06, h6km±5km, n53, σ0°.98/70, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	Valsamata	0.28	67	P	Pg	02 06 08.3	0.0
VLS				S	Sg	02 06 12.4	+0.4
VLS	Valsamata	0.28	67	P	Pg	02 06 08.3	0.0
VLS				S	Sg	02 06 12.4	+0.4
KFL	Anninata	0.41	85	P	Pg	02 06 10.8	-0.1
KFL				S	Sg	02 06 17.9	+1.6
KFL	Anninata	0.41	85	P	Pg	02 06 10.8	-0.1
LKD2	Lefkada island	0.78	23	P	Pg	02 06 16.7	-1.2
LKD2				S	Sg	02 06 27.5	-0.5
LKD2	Lefkada island	0.78	23	P	Pg	02 06 16.7	-1.2
LKD2				S	Sg	02 06 27.5	-0.5
RLS	Riolos of Patr	0.95	90	*e*PB	Pg	02 06 20.6	-0.5
RLS	Riolos of Patr	0.95	90	*e*Pb	Pg	02 06 20.6	-0.5
EFP	Efpalio	1.34	74	*e*PG	Pn	02 06 27.2	-0.8
EFP	Efpalio	1.34	74	P	Pn	02 06 26.8	-1.2
EFP	Efpalio	1.34	74	P	Pn	02 06 26.8	-1.2
EFP	Efpalio	1.34	74	*e*Pg	Pn	02 06 27.2	-0.8
LAKA	Lakka	1.36	82	P	Pn	02 06 27.5	-0.8
LAKA	Lakka	1.36	82	P	Pn	02 06 27.5	-0.8
TRIZ	Trizonia	1.45	78	P	Pn	02 06 28.6	-1.0
TRIZ				S	Sn	02 06 49.4	+0.5
TRIZ	Trizonia	1.45	78	P	Pn	02 06 28.6	-1.0
KALE	Kalithea	1.51	77	P	Pn	02 06 29.6	-0.8
KALE	Kalithea	1.51	77	P	Pn	02 06 29.6	-0.8
ITM	Ithomi	1.59	123	*e*PB	Pb	02 06 33.5	+0.9
ITM	Ithomi	1.59	123	P	Pn	02 06 32.2	+0.7
ITM	Ithomi	1.59	123	P	Pn	02 06 32.2	+0.7
ITM	Ithomi	1.59	123	*e*Pb	Pb	02 06 33.5	+0.9
GUR	Goura	1.65	94	*e*PG	Pn	02 06 32.3	0.0
GUR	Goura	1.65	94	P	Pn	02 06 32.2	-0.1
GUR	Goura	1.65	94	P	Pn	02 06 32.2	-0.1
PYL	PYLOS	1.66	135	*e*PG	Pg	02 06 35.5	+0.8
PYL	PYLOS	1.66	135	*e*Pg	Pg	02 06 35.5	+0.8
SRN	Sarande	1.82	354	*e*PN	Pg	02 06 38.2	+0.5
SRN				*i* SN	Sg	02 07 04.2	+2.9
SRN	Sarande	1.82	354	*e*Pn	Pg	02 06 38.2	+0.5
AGG	Agios Georgios	1.88	59	P	Pb	02 06 36.8	-0.7
AGG	Agios Georgios	1.88	59	P	Pb	02 06 36.8	-0.7
THL	Klokotos Trika	2.02	42	P	Pb	02 06 39.0	-1.0
THL				S	Sg	02 07 06.7	-1.2
THL	Klokotos Trika	2.02	42	P	Pb	02 06 39.0	-1.0
LTK	Loutraki	2.13	90	*e*PB	Pb	02 06 42.2	+0.3
LTK	Loutraki	2.13	90	*e*Pb	Pb	02 06 42.2	+0.3
NEST	Nestorio	2.42	14	P	Pn	02 06 44.4	+1.5
NEST	Nestorio	2.42	14	P	Pn	02 06 44.4	+1.5
DID	Didima	2.42	103	*e*PN	Pn	02 06 47.5	+4.6
DID	Didima	2.42	103	*e*Pn	Pn	02 06 47.5	+4.6
VLI	Veliai	2.52	122	*e*PG	Pg	02 06 50.1	-1.1
VLI	Veliai	2.52	122	*e*Pg	Pg	02 06 50.1	-1.1
BIA	Bitola	3.06	15	*e*Pn	Pn	02 06 53.1	+1.5
OHR	Ohrid	3.06	8	*e*Pn	Pn	02 06 53.0	+1.3
KRUS	Krusevo	3.38	13	*e*Pn	Pn	02 06 56.5	+0.5
KRUS				*e*Sn	Sn	02 07 36.6	+0.2
PHP	Peshkopia	3.61	2	*e*PN	Pn	02 06 59.5	+0.2
PHP				*i* SN	Sn	02 07 42.8	+0.6
PHP	Peshkopia	3.61	2	*e*Pn	Pn	02 06 59.5	+0.2
PHP				*i* Sn	Sn	02 07 42.8	+0.6
PUK	Puka	3.98	356	*e*PN	Pn	02 07 04.4	+0.1
PUK				*i* SN	Sn	02 07 51.2	0.0
PUK	Puka	3.98	356	*e*Pn	Pn	02 07 04.4	+0.1
PUK				*i* Sn	Sn	02 07 51.2	0.0
BCI	Bajram Curri	4.29	358	*e*PN	Pn	02 07 09.9	+1.3
BCI				*i* SN	Sn	02 07 58.4	-0.6
BCI	Bajram Curri	4.29	358	*e*Pn	Pn	02 07 09.9	+1.3
BCI				*i* Sn	Sn	02 07 58.4	-0.6
STON	Ston	5.18	339	*e*Pn	Pn	02 07 18.4	-2.4
STON				Sn	Sn	02 08 15.2	-5.6
STON	Ston	5.18	339	*e*Pn	Pn	02 07 18.3	-2.5
NVLJ	Novalja	7.65	330	*e*Pn	Pn	02 07 53.0	-1.8
NVLJ				Sn	Sn	02 09 15.5	-6.1

PGC 29 02:07:56.9±0.9, 50°.70N×130°.47W, h10km, ML2.9/9, Mw3.5, 5D, 215km west of Pt. Hardy, Bc Vancouver Island region, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	Holberg	1.49	92	⇓Pn	Pn	02 08 21.6	-2.1
HOLB				⇑Sn	Sn	02 08 38.7	-4.4
PHC	Port Hardy	1.93	89	Pn	Pn	02 08 27.9	-1.8
PHC				⇓Sn	Sn	02 08 50.6	-3.4
BNB	Barry Inlet	2.04	337	⇑Pn	Pn	02 08 29.3	-1.9
BBB	Bella Bella	2.09	44	Pn	Pn	02 08 30.1	-1.9
BBB				⇓Sn	Sn	02 08 54.6	-3.4
MAYB	Maynard	2.12	97	Pn	Pn	02 08 30.8	-1.6
MAYB				⇑Sn	Sn	02 08 55.3	-3.5
EDB	Eliza Dome	2.30	110	Pn	Pn	02 08 33.0	-1.8
EDB				⇓Sn	Sn	02 08 58.3	-4.9
WOSB	Woss	2.55	101	Pn	Pn	02 08 37.2	-1.0
MOBC	Moresby Island	2.62	340	⇑Pn	Pn	02 08 37.0	-2.1
GDR	Gold River	2.99	106	⇑Pn	Pn	02 08 42.9	-1.4
BTB	Buttle Lake	3.42	109	⇑Pn	Pn	02 08 49.3	-0.8
BTB				⇓Sn	Sn	02 09 27.1	-3.6
OZB	Mount Ozzard	3.66	117	Pn	Pn	02 08 52.3	-1.2

*NNC **29** 02:24:43.6±3.1, 39°.32N×72°.75E, h7km±13km, mb4.0, mpv3.7, Error ellipse: s-maj=25.0km s-min=16.7km az=1.0*
*IDC **29** 02:24:44.6±1.9, 39°.55N×72°.79E, h0km, mb3.6/5, mb1 3.6/10, mb1mx3.5/25, mbtmp3.5/10, ML3.3/5, Error ellipse: s-maj=27.1km s-min=14.9km az=158.0*
*NEIC **29** 02:24:55.8±3.5, 40°.17N×72°.36E, h47km±23km, Error ellipse: s-maj=43.1km s-min=14.1km az=179.0*
ISC 29 02:24:47.2±2.1, 39°.65N±0°.07×72°.28E±0°.06, h11km±15km, n35, σ0°.99/45, mb3.5/6, 8C-3D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	2.70	23	P	Pn	02 25 31.3	+0.7
SNR=150							
AML	Almayashu	2.70	23	*e*Pn	Pn	02 25 31.1	+0.6
AML				*e*Sg	Sb	02 26 09.4	+0.7
KSH	Kashi	2.86	91	Pn	Pn	02 25 23.8	-8.9
KSH				Sn	Sn	02 25 56.8	-10
KSH				smax			
comp=N,430nm,0.4s							
KSH				smax			
comp=E,250nm,0.6s							
UCH	Uchtor	3.08	33	*e*Pn	Pn	02 25 35.5	-0.3
UCH				*e*S	Sn	02 26 13.6	+0.9
EKS2	Erkin-Say	3.22	20	P	Pn	02 25 39.6	+2.0
SNR=14							
EKS2	Erkin-Say	3.22	20	*e*Pn	Pn	02 25 39.2	+1.6
KZA	Kyzart	3.31	42	P	Pn	02 25 38.2	-0.7
SNR=15							
AAK	Ala-Archa	3.42	29	Pn	Pn	02 25 41.7	+1.3
comp=E,8.3nm,0.3s,baz=171,slow=6.2,SNR=27							
AAK				Pg	Pb	02 25 46.3	-1.5
comp=E,9.8nm,0.3s,baz=198,slow=8.2,SNR=34							
AAK				Lg		02 26 25.4	
comp=E,7.5nm,0.3s,baz=145,slow=23,SNR=9.5							
AAK	Ala-Archa	3.42	29	*e*Pn	Pn	02 25 40.9	+0.5
KBK	Karagaybulak	3.62	33	P	Pn	02 25 49.7	+6.6
SNR=6.5							
KK31	Karatay Array	3.70	340	Pn	Pn	02 25 47.8	+3.6
comp=E,9.4nm,0.5s,baz=154,slow=12,SNR=168							
KK31				Pg	Pb	02 25 59.1	+6.5
comp=E,13nm,0.6s,baz=152,slow=12,SNR=9.3							
KK31				⇑Sn	Sb	02 26 37.4	0.0
comp=E,26nm,0.5s,baz=154,slow=22,SNR=7.2							
CHMS	Chumysh	3.83	28	P	Pn	02 25 46.6	+0.5
SNR=7.6							
ULHL	Ulahol	3.97	48	P	Pn	02 25 46.3	-1.7
SNR=6.8							
USP	Osenovka	3.98	24	P	Pn	02 25 48.6	+0.4
SNR=9.1							
TKM2	Tokmak 2	4.12	36	⇓Pn	Pn	02 25 48.9	-1.1
comp=E,2.2nm,0.3s							
TKM2				⇑Pg	Pb	02 26 00.7	+1.1
comp=E,14nm,0.6s							
TKM2				⇑Lg		02 26 56.4	
comp=E,29nm,0.6s							
TKM2	Tokmak 2	4.12	36	P	Pn	02 25 50.0	0.0
SNR=7.9							
TKM2	Tokmak 2	4.12	36	*e*Pn	Pn	02 25 49.5	-0.4
MKAR	Makanchi Array	10.21	42	Pn	Pn	02 27 12.0	-1.6
comp=E,0.1nm,0.3s,baz=226,slow=13,SNR=3.5							
MKAR				Lg		02 30 03.5	
comp=E,0.1nm,0.3s,baz=223,slow=25,SNR=4.2							
KURBB	Kurchatov Arra	11.82	20	⇑Lg		02 31 05.2	
comp=E,1.1nm,0.8s							
AB31	Akbulak array	13.02	322	⇓Pn	Pn	02 27 52.1	+0.2
comp=E,1.1nm,0.5s							
AB31				⇑Sn	Sn	02 30 17.3	+0.6
comp=E,0.7nm,0.4s,baz=131,slow=26,SNR=4.4							
ABKAR	Akbulak array	13.02	322	*e*Pn	Pn	02 27 51.9	0.0
comp=E,1.4nm,0.5s							
ABKAR				*e*S	Sn	02 30 16.1	-0.7
VOSK	Vostochnaya	13.11	357	⇑Pn	Pn	02 27 54.4	+1.2
comp=E,2.2nm,0.9s							
VOSK				⇑Lg		02 31 50.5	
comp=E,8.9nm,1.8s							
BVAR	Borovoye Array	13.45	355	Pn	Pn	02 27 56.3	-1.4
comp=E,0.3nm,0.3s,baz=161,slow=14,SNR=6.6							
ZRNK	Zerenda	13.50	351	⇓Pn	Pn	02 27 56.9	-1.6
comp=E,1.1nm,0.5s							
ZRNK				⇑Lg		02 32 07.1	
comp=E,5.4nm,1.1s							
AKTK	Aktyubinsk	14.74	322	Pn	Pn	02 28 16.1	+0.7
AKTK				Sn	Sn	02 30 57.6	-0.9
AKTO	Aktyubinsk	14.74	322	Pn	Pn	02 28 16.1	+0.7
comp=E,0.2nm,0.3s,baz=132,slow=14,SNR=4.7							
AKTO				Sn	Sn	02 30 57.6	-0.9
comp=E,0.1nm,0.3s,baz=0.0,slow=20,SNR=3.4							
ZALV	Zalesovo Beam	16.64	27	Pn	Pn	02 28 39.2	-1.1
comp=E,0.2nm,0.3s,baz=226,slow=10,SNR=4.1							
ZALV	Zalesovo Beam	16.64	27	Pn	Pn	02 28 39.2	-1.1
GTA	Gaotai	21.21	82	*e*P	P	02 29 27.5	-5.3
GTA				pP		02 29 31.3	
GTA				sP	sP	02 29 32.5	-4.8
GTA				pmax	pmax		
comp=Z,6.0nm,1.4s,mb3.7							
SONM	Songino Array	25.80	60	P	P	02 30 13.4	-4.7
comp=Z,0.4nm,0.5s,mb3.2,baz=280,slow=8.9,SNR=3.7							
BRTR	Keskin Array B	29.58	283	P	P	02 30 56.9	+4.8
comp=Z,0.2nm,0.4s,mb3.2,baz=107,slow=9.2,SNR=2.8							
FINES	FINESS Array B	35.50	323	P	P	02 31 44.0	+0.5
comp=Z,0.9nm,0.6s,mb3.9,baz=116,slow=9.9,SNR=6.2							
ARCES	ARCESS Array B	38.66	336	P	P	02 32 10.3	+0.1
comp=Z,0.6nm,0.5s,mb3.6,baz=113,slow=8.8,SNR=9.0							
ARCES	ARCESS Array B	38.66	336	P	P	02 32 10.3	+0.1
NOA	NORSAR Array B	42.53	321	P	P	02 32 43.6	+1.3
comp=Z,0.3nm,0.7s,mb3.1,baz=93,slow=7.2,SNR=2.6							

*ISCJB **29** 02:38:21.2±0.8, 50°.17N±0°.06×19°.09E±0°.04, h0km, Error ellipse: s-maj=8.2km s-min=3.4km az=14.9*
*IPEC **29** 02:38:21.9±0.5, 50°.23N×19°.15E, h0km±1km, ML1.8/3, Error ellipse: s-maj=3.9km s-min=2.4km az=142.0*
*CSEM **29** 02:38:22.2±0.4, 50°.17N×19°.10E, h2km, ML2.5/5, Error ellipse: s-maj=9.7km s-min=4.1km az=15.0*
*PRU **29** 02:38:22.9, 50°.14N×19°.12E, h0km*
ISC 29 02:38:21.9±0.8, 50°.16N±0°.06×19°.12E±0°.04, h0km, n22, σ1°.14/37, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.70	243	*e*PG	Pg	02 38 36.7	+1.3
OKC				*e*SG	Sg	02 38 43.9	-0.6
comp=Z,12nm,0.4s							
OKC	Ostrava-Krasne	0.70	243	*e*Pg	Pg	02 38 36.6	+1.2
baz=58							
OKC				*e*Sg	Sg	02 38 45.7	+1.2
baz=58							
NIE	Niedzica	1.07	133	*e*Pg	Pg	02 38 41.2	-1.2
NIE				*e*Sg	Sg	02 38 56.4	+0.1
MORC	Moravsky Berou	1.09	250	*e*Pg	Pg	02 38 43.8	+1.1
MORC				*e*Sg	Sg	02 38 57.6	+0.8
comp=Z,16nm,0.3s,baz=66							
STHS	Stebnicka Huta	1.56	117	*e*PN	Pn	02 38 51.9	+1.0
STHS				*e*SN	Sn	02 39 13.2	+1.3
STHS	Stebnicka Huta	1.56	117	*e*Pn	Pn	02 38 51.9	+1.0
STHS				*e*Sn	Sn	02 39 13.2	+1.3
JAVC	Velka Javorina	1.61	217	*e*Pn	Pn	02 38 53.1	+1.6
KOLL	Kolacno	1.65	197	*e*PN	Pn	02 38 52.8	+0.7
KOLL				*e*SN	Sn	02 39 14.2	+0.3
KOLL	Kolacno	1.65	197	*e*Pn	Pn	02 38 52.8	+0.7
KOLL				*e*Sn	Sn	02 39 14.2	+0.3
VYHS	Vyhne	1.68	186	*e*PN	Pn	02 38 51.7	-0.8
VYHS				*e*SN	Sn	02 39 12.9	-1.7
DPC	Dobruska-Polom	1.81	277	*e*PG	Pg	02 38 56.4	-0.1
DPC				*e*SG	Sg	02 39 19.2	-0.7
comp=Z,5.2nm,0.4s							
DPC	Dobruska-Polom	1.81	277	*e*Pn	Pn	02 38 54.5	+0.2
baz=93							
DPC	Dobruska-Polom	1.81	277	Pg	Pg	02 38 56.4	-0.1
DPC				Sg	Sg	02 39 19.2	-0.7
comp=Z,5.2nm,0.4s							
VRAC	Vranov	1.84	244	*e*Pn	Pn	02 38 55.5	+0.7
baz=60							
VRAC				*e*Sg	Sg	02 39 21.2	0.0
comp=Z,7.1nm,0.6s,baz=60							
KECS	Kecovo	1.90	151	*e*PN	Pn	02 38 53.9	-1.6
KECS				*e*SN	Sn	02 39 17.0	-3.1
UPC	Upice	2.02	281	*e*SG	Sg	02 39 26.3	-0.5
UPC	Upice	2.02	281	Sg	Sg	02 39 26.3	-0.5
KRUC	Moravsky	2.08	239	*e*Sn	Sn	02 39 27.2	+2.5
comp=Z,3.6nm,0.3s,baz=56							
PRU	Pruhonice	2.95	268	*e*SG	Sg	02 39 55.4	-1.4
comp=Z,2.2nm,0.5s							
PRU	Pruhonice	2.95	268	Sg	Sg	02 39 55.4	-1.4
comp=Z,2.2nm,0.5s							
KHC	Kasperske Hory	3.74	256	*e*PG	Pg	02 39 32.0	-1.7
KHC				*e*SG	Sg	02 40 21.6	-0.5
comp=Z,3.0nm,0.7s							
KHC	Kasperske Hory	3.74	256	Pg	Pg	02 39 32.0	-1.7
KHC				Sg	Sg	02 40 21.6	-0.5
comp=Z,3.0nm,0.7s							

IDC 29 02:50:46.7±5.3, 22°.08S×68°.45W, h0km, mb3.8/1, mb1 3.6/2, mb1mx3.4/12, mbtmp3.6/2, ML3.3/1, Error ellipse: s-maj=159.9km s-min=55.5km az=71.0, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	5.77	3	Pn	Pn	02 52 14.3	+0.6
0.5nm,0.3s,baz=186,slow=7.4,SNR=16							
TORD	Toroidi Ar. Bea	77.15	70	P	P	03 02 42.9	+0.1
0.6nm,0.7s,baz=247,slow=4.9,SNR=6.0							
MKAR	Makanchi Array	145.85	37	PKPbc	PKPbc	03 10 27.1	-0.8
0.4nm,0.7s,baz=308,slow=4.4,SNR=4.4							

*ISCJB **29** 03:03:39.3±0.5, 50°.04N±0°.03×18°.40E±0°.03, h0km, Error ellipse: s-maj=4.6km s-min=2.8km az=21.7*
*WAR **29** 03:03:39.9, 50°.06N×18°.43E*
*IPEC **29** 03:03:39.5±0.3, 50°.09N×18°.43E, h1km±1km, ML1.9/4, Error ellipse: s-maj=2.1km s-min=1.8km az=87.0*
*CSEM **29** 03:03:40.1±0.3, 50°.09N×18°.31E, h2km, ML2.8/6, Error ellipse: s-maj=6.9km s-min=4.0km az=15.0*
*PRU **29** 03:03:40.8, 50°.07N×18°.33E, h0km*
*VIE **29** 03:03:42.6±0.7, 49°.69N×18°.29E, h0km, mb1.2/2, ML2.1/3, Error ellipse: s-maj=4.7km s-min=2.5km az=105.0 17 km S of Ostrava Suspected Mining induced.*
ISC 29 03:03:40.1±0.5, 50°.07N±0°.03×18°.39E±0°.03, h0km, n28, σ1°.08/52, 1C-2D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	Raciborz	0.13	278	⇓*i*Pg	Pg	03 03 43.6	+1.0
RAC				*e*Sg	Sg	03 03 46.7	+2.5
OKC	Ostrava-Krasne	0.28	214	*e*PG	Pg	03 03 45.9	+0.5
OKC				*e*SG	Sg	03 03 49.9	+0.9
comp=Z,66nm,0.5s							
OKC	Ostrava-Krasne	0.28	214	*e*Pg	Pg	03 03 45.7	+0.3
baz=36							
OKC				*e*Sg	Sg	03 03 49.4	+0.4
baz=36							
MORC	Moravsky Berou	0.62	242	*e*Pg	Pg	03 03 51.9	-0.1
MORC				*e*Sg	Sg	03 03 59.8	-0.2
comp=Z,24nm,0.2s,baz=61							
JAVC	Velka Javorina	1.30	201	*e*Pg	Pg	03 04 04.9	-0.1
JAVC				*e*Sg	Sg	03 04 23.0	+1.3
comp=Z,12nm,0.3s							
DPC	Dobruska-Polom	1.36	283	*e*PG	Pg	03 04 05.4	-0.8
DPC				*e*SG	Sg	03 04 22.8	-0.9
comp=Z,22nm,0.5s							
DPC	Dobruska-Polom	1.36	283	Pg	Pg	03 04 05.4	-0.8
DPC				Sg	Sg	03 04 22.8	-0.9
comp=Z,22nm,0.5s							
VRAC	Vranov	1.39	238	*e*Pg	Pg	03 04 05.9	-0.9
VRAC				*e*Sg	Sg	03 04 24.3	-0.5
NIE	Niedzica	1.41	117	*e*Pg	Pg	03 04 06.6	-0.5
NIE				*e*Sg	Sg	03 04 26.5	+1.2
NIE	Niedzica	1.41	117	*e*Pg	Pg	03 04 06.6	-0.5
NIE				*e*Sg	Sg	03 04 26.5	+1.2
KOLL	Kolacno	1.49	180	*e*PN	Pn	03 04 08.8	+0.7
KOLL	Kolacno	1.49	180	*e*Pn	Pn	03 04 08.8	+0.7
KSP	Ksiaz	1.55	301	*e*Pn	Pn	03 04 07.7	-1.2
KSP				*e*Sn	Sn	03 04 30.3	+0.6
KSP	Ksiaz	1.55	301	*e*Pg	Pn	03 04 07.7	-1.2
KSP				*e*Sg	Sn	03 04 30.3	+0.6
UPC	Upice	1.59	287	*e*PG	Pg	03 04 08.8	-1.7
UPC				*e*SG	Sg	03 04 30.5	-0.6
UPC	Upice	1.59	287	Pg	Pg	03 04 08.8	-1.7
UPC				Sg	Sg	03 04 30.5	-0.6
VYHS	Vyhne	1.60	169	*e*PG	Pg	03 04 08.8	-2.0
VYHS				*e*SG	Sg	03 04 30.6	-0.9
VYHS	Vyhne	1.60	169	*e*Pg	Pg	03 04 08.8	-2.0
VYHS				*e*Sg	Sg	03 04 30.6	-0.9
KRUC	Moravsky	1.64	233	*e*Pn	Pn	03 04 09.8	-0.4
baz=52							
KRUC				*e*Sg	Sg	03 04 32.2	-0.6
comp=Z,7.5nm,0.2s,baz=52							
STHS	Stebnicka Huta	1.96	108	*e*PN	Pg	03 04 17.2	-0.5
STHS				*e*SG	Sg	03 04 44.6	+1.4
STHS	Stebnicka Huta	1.96	108	*e*Pn	Pg	03 04 17.2	-0.5
STHS				*e*Sg	Sg	03 04 44.6	+1.4
PRU	Pruhonice	2.48	270	*e*PG	Pb	03 04 24.9	-0.7
PRU				*e*SG	Sb	03 04 57.3	+0.7
comp=Z,4.1nm,0.3s							
PRU	Pruhonice	2.48	270	Pg	Pb	03 04 24.9	-0.7
PRU				Sg	Sb	03 04 57.3	+0.7
comp=Z,4.1nm,0.3s							
BRG	Berggiesshubel	2.95	288	PG	Pb	03 04 33.9	+0.3
BRG				SG	Sb	03 05 12.4	+2.2
comp=Z,3.0nm,0.3s							
KHC	Kasperske Hory	3.27	255	*e*SG	Sb	03 05 22.4	+3.2
comp=Z,4.5nm,0.4s							
KHC	Kasperske Hory	3.27	255	Sg	Sb	03 05 22.4	+3.2
comp=Z,4.5nm,0.4s							
MOA	Molln	3.51	232	⇓*i*Pn	Pn	03 04 34.9	-1.0
MOA				⇑*i*Sg	Sb	03 05 29.8	+3.7
comp=Z,2.8nm,0.5s							
MOA	Molln	3.51	232	Pn	Pn	03 04 34.9	-0.9
MOA				Sg	Sb	03 05 29.8	+3.7
comp=Z,2.8nm,0.5s							

*ATH **29** 03:05:49.3, 37°.87N×19°.94E, h14km±2km, MD3.4/8*
*ISCJB **29** 03:05:50.3±1.1, 38°.06N±0°.07×19°.90E±0°.06, h10km, Error ellipse: s-maj=10.8km s-min=5.8km az=30.3*
*CSEM **29** 03:05:51.6±0.4, 38°.06N×20°.02E, h5km, ML3.1/2, Error ellipse: s-maj=8.9km s-min=5.1km az=31.0*
*THE **29** 03:05:54.7, 38°.11N×20°.21E, h4km, ML3.1/2, Error ellipse: s-maj=1.4km s-min=0.8km az=43.0*
ISC 29 03:05:51.1±1.5, 38°.06N±0°.07×19°.99E±0°.07, h3km±6km, n31, σ0°.82/50, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	Valsamata	0.49	75	*e*PG	Pg	03 06 00.7	+0.3
VLS				*e*SB	Sg	03 06 10.0	+3.3
VLS	Valsamata	0.49	75	P	Pg	03 06 00.7	+0.3
VLS				S	Sg	03 06 05.0	-1.7
VLS	Valsamata	0.49	75	P	Pg	03 06 00.7	+0.3
VLS				S	Sg	03 06 05.0	-1.7
KFL	Anninata	0.63	85	P	Pg	03 06 03.3	+0.2
KFL				S	Sg	03 06 10.3	-1.0
KFL	Anninata	0.63	85	P	Pg	03 06 03.3	+0.2
KFL				S	Sg	03 06 10.3	-1.0
LKD2	Lefkada island	0.90	35	P	Pg	03 06 09.2	+0.9
LKD2				S	Sg	03 06 20.2	+0.2
LKD2	Lefkada island	0.90	35	P	Pg	03 06 09.2	+0.9
LKD2				S	Sg	03 06 20.2	+0.2
RLS	Riolos of Patr	1.16	89	*e*PB	Pb	03 06 13.0	-0.8
RLS				*e*SB	Sb	03 06 28.9	-0.3
RLS	Riolos of Patr	1.16	89	*e*Pb	Pb	03 06 13.0	-0.8
RLS				*e*Sb	Sb	03 06 28.9	-0.3
EFP	Efpalio	1.55	76	*e*PB	Pb	03 06 19.9	-0.5
EFP				*e*SB	Sb	03 06 41.8	+1.4
EFP	Efpalio	1.55	76	P	Pn	03 06 19.4	-0.1
EFP	Efpalio	1.55	76	P	Pn	03 06 19.4	-0.1
EFP	Efpalio	1.55	76	*e*Pb	Pb	03 06 19.9	-0.5
EFP				*e*Sb	Sb	03 06 41.8	+1.4
LAKA	Lakka	1.58	83	P	Pn	03 06 20.0	+0.2
LAKA				S	Sn	03 06 40.1	-0.6
LAKA	Lakka	1.58	83	P	Pn	03 06 20.0	+0.2
LAKA				S	Sn	03 06 40.1	-0.6
TRIZ	Trizonia	1.67	79	P	Pn	03 06 21.2	+0.1
TRIZ				S	Sn	03 06 42.3	-0.7
TRIZ	Trizonia	1.67	79	P	Pn	03 06 21.2	+0.1
TRIZ				S	Sn	03 06 42.3	-0.7
KALE	Kalithea	1.72	78	P	Pn	03 06 22.4	+0.5
KALE	Kalithea	1.72	78	P	Pn	03 06 22.4	+0.5

NLAI S **Sn** **03 10 23.0 +1.4**
0.5nm2μm124nm,0.5s
BAKI Biak 6.85 35 P **Pn** **03 09 21.0 -0.1**
0.3nm2μm74nm,0.9s
BAKI S **Sn** **03 10 31.2 -6.6**
0.3nm2μm74nm,0.9s
SMPI Sarmi 8.11 54 P **Pn** **03 09 41.6 +3.3**
74nm,0.3s
SMPI S **Sn** **03 11 03.7 -5.0**
74nm,0.3s
KNA Kununurra 9.46 200 P **Pn** **03 09 56.7 -0.1**
4μm430nm,0.7s
APSI Ampana 12.04 299 P **Pn** **03 10 33.4 +1.2**
WSI Waingapu 12.08 256 P **Pn** **03 10 34.0 +1.2**
414nm,0.5s
FITZ Fitzroy Crossi 12.88 209 *e*P **Pn** **03 10 39.2 -4.4**
26nm,0.5s
FITZ *e*S **Sn** **03 12 55.1 -10**
FITZ Fitzroy Crossi 12.88 209 Pn **Pn** **03 10 41.3 -2.2**
3.8nm,0.3s,baz=39,slow=11,SNR=71
FITZ Sn **Sn** **03 12 56.5 -9.0**
4.4nm,0.3s,baz=41,slow=20,SNR=6.2
FITZ Fitzroy Crossi 12.88 209 *e*Pn **Pn** **03 10 41.4 -2.2**
14nm,0.6s
FITZ *e*Sn **Sn** **03 12 53.2 -12**
FITZ Fitzroy Crossi 12.88 209 P **Pn** **03 10 40.5 -3.1**
46nm,0.9s
COEN Coen 12.92 124 *e*Pn **Pn** **03 10 44.6 +0.4**
COEN Coen 12.92 124 P **Pn** **03 10 44.0 -0.2**
74nm,1.1s
WRAB Tennant Creek 13.18 171 *e*Pn **Pn** **03 10 46.1 -1.6**
30nm,0.5s
WRAB *e*S **Sn** **03 13 07.1 -5.9**
WRAB Tennant Creek 13.18 171 P **Pn** **03 10 46.3 -1.4**
57nm,0.6s
PMG Port Moresby 15.05 101 *e*Pn **Pn** **03 11 13.8 +0.8**
17nm,0.7s
PMG Port Moresby 15.05 101 P **Pn** **03 11 15.1 +2.2**
829nm27nm,1.1s
ASAR Alice Springs 16.81 175 P **Pn** **03 11 33.8 -1.6**
6.1nm,0.3s,baz=348,slow=8.9,SNR=159
ASAR S **S** **03 14 35.2 -15**
1.9nm,0.3s,baz=0.2,slow=28,SNR=9.3
MBWA Marble Bar 18.64 219 *e*P **Pn** **03 11 55.9 -1.9**
18nm,0.8s
MBWA Marble Bar 18.64 219 P **Pn** **03 11 57.6 -0.2**
CTA Charters Tower 18.97 135 *e*P **Pn** **03 12 05.3 +3.4**
6.5nm,0.7s
CTA Charters Tower 18.97 135 P **Pn** **03 12 05.2 +3.4**
0.5nm,0.3s,baz=313,slow=13,SNR=8.8
CTAO Charters Tower 18.97 135 P **Pn** **03 12 05.7 +3.9**
FORT Forrest 24.12 189 *e*P **P** **03 12 56.2 +1.5**
70nm,0.8s,mb5.1
FORT Forrest 24.12 189 *e*P **P** **03 12 56.0 +1.2**
74nm,0.8s,mb5.2
STKA Stephens Creek 26.41 162 *e*P **P** **03 13 17.9 +2.4**
11nm,1.2s,mb4.3
STKA Stephens Creek 26.41 162 P **P** **03 13 18.0 +2.4**
3.9nm,0.7s,mb4.1,baz=329,slow=9.3,SNR=10
STKA LR LR 03 25 19.3
comp=Z,118nm,19.3s,baz=224,slow=40
STKA Stephens Creek 26.41 162 *e*P **P** **03 13 18.2 +2.6**
0.3nm,0.4s,mb3.2
STKA LR LR 03 25 19.3
KLBR Kellerberrin 28.07 207 *e*P **P** **03 13 31.5 +1.1**
30nm,1.1s,mb4.8
NWAO Narrogin (SRO) 29.43 206 P **P** **03 13 43.2 +0.7**
20nm,1.1s,mb4.7,baz=309,slow=15,SNR=5.7
NWAO Narrogin (SRO) 29.43 206 P **P** **03 13 43.2 +0.7**
TOO Toolangi 32.90 160 *e*P **P** **03 14 17.1 +4.1**
CMAR Chiang Mai Arr 41.31 308 P **P** **03 15 21.6 -2.9**
1.5nm,0.4s,mb4.0,baz=146,slow=8.1,SNR=5.2
MJAR Matsushiro Arr 43.52 7 P **P** **03 15 41.3 -1.0**
1.0nm,0.5s,mb3.8,baz=197,slow=8.5,SNR=3.3
SONM Songino Array 59.00 340 P **P** **03 17 36.9 -1.2**
0.2nm,0.5s,mb3.4,baz=167,slow=11,SNR=3.2
MK31 Makanchi Array 69.29 326 *e*P **P** **03 18 44.8 -0.8**
MKAR Makanchi Array 69.29 326 P **P** **03 18 44.4 -1.2**
1.4nm,0.6s,mb4.1,baz=111,slow=8.9,SNR=19
ZALV Zalesovo Beam 72.41 333 P **P** **03 19 02.8 -1.6**
0.6nm,0.3s,mb3.9,baz=110,slow=8.3,SNR=3.2
QSPA South Pole Qui 83.13 180 *e*P **P** **03 20 05.5 +1.9**
3.2nm,0.7s,mb4.5
SYO Syowa Base 84.59 201⇓*e*P **P** **03 20 12.9 +1.6**
ILAR Eielson Array 92.29 25 P **P** **03 20 48.3 +0.3**
0.3nm,0.8s,mb3.6,baz=267,slow=4.5,SNR=3.0
CPUP Villa Florida 145.76 165 PKPbc PKPbc 03 27 19.4 +1.5
0.3nm,0.4s,baz=304,slow=3.6,SNR=4.3
LPAZ La Paz 149.47 139 PKPbc PKPbc 03 27 30.1 +1.7
0.9nm,0.8s,baz=242,slow=3.2,SNR=3.3

ISCJB ***29*** *03:11:20.6±0.2, 42°.47N±0°.02×13°.31E±0°.02, h12km±2km, Error ellipse: s-maj=3.0km s-min=2.7km az=41.9*
NEIC ***29*** *03:11:21.0, 42°.48N×13°.36E, h10km, ML3.2(ROM), ML2.7(LDG), After ROM.*
CSEM ***29*** *03:11:21.0±0.1, 42°.48N×13°.32E, h5km, ML3.5/5, Error ellipse: s-maj=2.4km s-min=1.9km az=54.0*
VIE ***29*** *03:11:21.8±0.2, 42°.49N×13°.37E, h10km, mb2.9/6, ML3.0/6, Error ellipse: s-maj=4.4km s-min=1.8km az=80.0 99 km NE of Rome*
ROM ***29*** *03:11:21.4±0.1, 42°.47N×13°.35E, h11km, Md3.2/38, Ml2.9/37, Error ellipse: s-maj=0.8km s-min=0.4km az=49.0*
LDG ***29*** *03:11:23.1±0.1, 42°.41N×13°.34E, h10km, Ml2.7/4, Error ellipse: s-maj=4.6km s-min=2.8km az=55.0*

ISC 29 03:11:21.4±0.3, 42°.47N±0°.02×13°.32E±0°.02, h6km±2km, n134, σ0°89/170, 2C-3D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.13**	**151**	*e*Pg	**Pg**	**03 11 24.9**	**+0.7**
AQU				*e*Sg	**Sg**	03 11 27.2	+1.2
AQU	**L'Aquila**	**0.13**	**151**	Pg	**Pg**	**03 11 25.0**	**+0.8**
AQU				Sg	**Sg**	03 11 27.5	+1.5
11μm,0.3s							
AQU	**L'Aquila**	**0.13**	**151**	*e*Pg	**Pg**	**03 11 24.9**	**+0.7**
AQU				*e*Sg	**Sg**	03 11 27.2	+1.2
FIAM	**Fiamignano**	**0.25**	**216**	Pg	**Pg**	**03 11 27.4**	**+1.1**
FIAM				Sg	**Sg**	03 11 31.9	+2.3
1μm,0.2s							
FIAM	**Fiamignano**	**0.25**	**216**	Pg	**Pg**	**03 11 27.4**	**+1.1**
FIAM				Sg	**Sg**	03 11 31.9	+2.3
1μm,0.2s							
TERO	**Teramo**	**0.26**	**55**	Pg	**Pg**	**03 11 26.5**	**0.0**
TERO				Sg	**Sg**	03 11 30.2	+0.2
3μm,0.3s							
TERO	**Teramo**	**0.26**	**55**	Pg	**Pg**	**03 11 26.5**	**0.0**
TERO				Sg	**Sg**	03 11 30.2	+0.2
3μm,0.3s							
NRCA	**Norcia**	**0.39**	**338**	Pg	**Pg**	**03 11 29.3**	**+0.3**
86nm,0.4s							
NRCA	**Norcia**	**0.39**	**338**	Pg	**Pg**	**03 11 29.3**	**+0.3**
86nm,0.4s							
MNS	**Montasola**	**0.48**	**260**	Pg	**Pg**	**03 11 31.0**	**+0.4**
MNS				Sg	**Sg**	03 11 38.7	+1.9
1μm,0.6s							
MNS	**Montasola**	**0.48**	**260**	Pg	**Pg**	**03 11 31.0**	**+0.4**
MNS				Sg	**Sg**	03 11 38.7	+1.9
1μm,0.6s							
OFFI	**Offida**	**0.54**	**30**	Pg	**Pg**	**03 11 32.3**	**+0.5**
2μm,0.7s							
OFFI	**Offida**	**0.54**	**30**	Pg	**Pg**	**03 11 32.3**	**+0.5**
2μm,0.7s							
TRTR	**Tortoreto Alta**	**0.56**	**53**	Pg	**Pg**	**03 11 32.7**	**+0.6**
TRTR	**Tortoreto Alta**	**0.56**	**53**	Pg	**Pg**	**03 11 32.7**	**+0.6**
CERT	**Cerreto**	**0.58**	**205**	Pg	**Pg**	**03 11 32.9**	**+0.4**
2μm,0.5s							
CERT	**Cerreto**	**0.58**	**205**	Pg	**Pg**	**03 11 32.9**	**+0.4**
2μm,0.5s							
FDMO	**Fiordimonte**	**0.59**	**344**	Pg	**Pg**	**03 11 33.5**	**+0.8**
FDMO				Sg	**Sg**	03 11 42.9	+2.5
733nm,0.2s							
FDMO	**Fiordimonte**	**0.59**	**344**	Pg	**Pg**	**03 11 33.5**	**+0.8**
CESI	**CESI - Serrava**	**0.61**	**331**	Pg	**Pg**	**03 11 33.1**	**-0.1**
CESI				Sg	**Sg**	03 11 42.6	+1.4
542nm,0.3s							
CESI	**CESI - Serrava**	**0.61**	**331**	Pg	**Pg**	**03 11 33.1**	**-0.1**
CESI				Sg	**Sg**	03 11 42.6	+1.4
542nm,0.3s							
MTCE	**Montecelio**	**0.62**	**224**	Pg	**Pg**	**03 11 33.5**	**+0.2**
387nm,0.4s							
MTCE	**Montecelio**	**0.62**	**224**	Pg	**Pg**	**03 11 33.5**	**+0.2**
387nm,0.4s							
VVLD	**Villa Vallelon**	**0.64**	**159**	Pg	**Pg**	**03 11 33.2**	**-0.5**
1μm,0.6s							
VVLD	**Villa Vallelon**	**0.64**	**159**	Pg	**Pg**	**03 11 33.2**	**-0.5**
1μm,0.6s							
LPEL	**Lama dei Pelig**	**0.77**	**123**	Pg	**Pg**	**03 11 35.1**	**-1.1**
LPEL				Sg	**Sg**	03 11 46.3	+0.1
1μm,0.2s							
LPEL	**Lama dei Pelig**	**0.77**	**123**	Pg	**Pg**	**03 11 35.1**	**-1.1**
LPEL				Sg	**Sg**	03 11 46.3	+0.1
1μm,0.2s							
CAFR	**Castel Frentan**	**0.80**	**107**	Pg	**Pg**	**03 11 36.3**	**-0.5**
891nm,0.4s							
CAFR	**Castel Frentan**	**0.80**	**107**	Pg	**Pg**	**03 11 36.3**	**-0.5**
891nm,0.4s							
POFI	**Posta Fibreno**	**0.81**	**158**	Pg	**Pg**	**03 11 36.4**	**-0.5**
821nm,1.2s							
POFI	**Posta Fibreno**	**0.81**	**158**	Pg	**Pg**	**03 11 36.4**	**-0.5**
821nm,1.2s							
SDI	**San Donato**	**0.85**	**154**	Pg	**Pg**	**03 11 36.8**	**-0.8**
SDI	**San Donato**	**0.85**	**154**	Pg	**Pg**	**03 11 36.8**	**-0.8**
CING	**Cingoli**	**0.91**	**354**	Pg	**Pg**	**03 11 38.1**	**-0.7**
383nm,0.4s							
CING	**Cingoli**	**0.91**	**354**	Pg	**Pg**	**03 11 38.1**	**-0.7**
383nm,0.4s							
GIUL	**Giuliano Di Ro**	**0.91**	**183**	Pg	**Pg**	**03 11 38.8**	**-0.1**
329nm,0.6s							
GIUL	**Giuliano Di Ro**	**0.91**	**183**	Pg	**Pg**	**03 11 38.8**	**-0.1**
329nm,0.6s							
MURB	**Monte Urbino**	**0.98**	**324**	Pg	**Pg**	**03 11 39.8**	**-0.4**
932nm,0.3s							
MURB	**Monte Urbino**	**0.98**	**324**	Pg	**Pg**	**03 11 39.8**	**-0.4**
932nm,0.3s							
MGAB	**Montegabbione**	**0.99**	**297**	Pg	**Pg**	**03 11 40.2**	**-0.2**
681nm,0.3s							
MGAB	**Montegabbione**	**0.99**	**297**	Pg	**Pg**	**03 11 40.2**	**-0.2**
681nm,0.3s							
RNI2	**Rionero Sannit**	**0.99**	**141**	Pg	**Pg**	**03 11 39.7**	**-0.7**
571nm,0.6s							
RNI2	**Rionero Sannit**	**0.99**	**141**	Pg	**Pg**	**03 11 39.7**	**-0.7**
571nm,0.6s							
CERA	**Filignano**	**1.02**	**149**	Pg	**Pg**	**03 11 39.9**	**-1.0**
479nm,0.6s							
CERA	**Filignano**	**1.02**	**149**	Pg	**Pg**	**03 11 39.9**	**-1.0**
479nm,0.6s							
TOLF	**Tolfa**	**1.06**	**248**	Pg	**Pg**	**03 11 41.6**	**-0.1**
200nm,0.7s							
TOLF	**Tolfa**	**1.06**	**248**	Pg	**Pg**	**03 11 41.6**	**-0.1**
200nm,0.7s							
ARVD	**Arcevia**	**1.06**	**345**	Pg	**Pg**	**03 11 40.8**	**-1.0**
374nm,0.9s							
ARVD	**Arcevia**	**1.06**	**345**	Pg	**Pg**	**03 11 40.8**	**-1.0**
374nm,0.9s							
MIDA	**Miranda**	**1.08**	**140**	Pg	**Pg**	**03 11 40.7**	**-1.5**
290nm,0.6s							
MIDA	**Miranda**	**1.08**	**140**	Pg	**Pg**	**03 11 40.7**	**-1.5**
290nm,0.6s							
AOI	**Ancona**	**1.10**	**11**	Pg	**Pg**	**03 11 41.8**	**-0.7**
247nm,0.7s							
AOI	**Ancona**	**1.10**	**11**	Pg	**Pg**	**03 11 41.8**	**-0.7**
247nm,0.7s							
SACS	**San Casciano d**	**1.10**	**290**	Pg	**Pg**	**03 11 42.4**	**-0.2**
204nm,0.8s							
LATE	**Laterza**	**1.13**	**278**	Pg	**Pg**	**03 11 42.9**	**-0.1**
31nm,0.4s							
LATE	**Laterza**	**1.13**	**278**	Pg	**Pg**	**03 11 42.9**	**-0.1**
31nm,0.4s							
PIEI	**Pieia**	**1.21**	**332**	Pg	**Pg**	**03 11 43.4**	**-1.2**
191nm,0.4s							
PIEI	**Pieia**	**1.21**	**332**	Pg	**Pg**	**03 11 43.4**	**-1.2**
191nm,0.4s							
VAGA	**Valle Agricola**	**1.26**	**147**	Pg	**Pg**	**03 11 44.4**	**-1.1**
163nm,0.6s							
VAGA	**Valle Agricola**	**1.26**	**147**	Pg	**Pg**	**03 11 44.4**	**-1.1**
163nm,0.6s							
FSSB	**Fossombrone**	**1.28**	**342**	Pg	**Pg**	**03 11 44.8**	**-1.2**
597nm,0.4s							
FSSB	**Fossombrone**	**1.28**	**342**	Pg	**Pg**	**03 11 44.8**	**-1.2**
597nm,0.4s							
BADI	**Badiali**	**1.30**	**323**	Pg	**Pg**	**03 11 45.5**	**-0.9**
116μm,22.0s							
BADI	**Badiali**	**1.30**	**323**	Pg	**Pg**	**03 11 45.5**	**-0.9**
116μm,22.0s							
CAFI	**Castiglion Fio**	**1.31**	**311**	Pg	**Pg**	**03 11 45.7**	**-0.8**
166nm,0.8s							
CAFI	**Castiglion Fio**	**1.31**	**311**	Pg	**Pg**	**03 11 45.7**	**-0.8**
166nm,0.8s							
PARC	**Parchiule**	**1.42**	**327**	Pg	**Pn**	**03 11 47.6**	**-0.1**
211nm,0.5s							
PARC	**Parchiule**	**1.42**	**327**	Pg	**Pn**	**03 11 47.6**	**-0.1**
211nm,0.5s							
CIGN	**Sant'Elia a Pi**	**1.44**	**124**	Pg	**Pn**	**03 11 47.3**	**-0.7**
120nm,1.0s							
CIGN	**Sant'Elia a Pi**	**1.44**	**124**	Pg	**Pn**	**03 11 47.3**	**-0.7**
120nm,1.0s							
CRE	**Caprese Michel**	**1.52**	**319**	Pg	**Pn**	**03 11 49.1**	**0.0**
CRE	**Caprese Michel**	**1.52**	**319**	Pg	**Pn**	**03 11 49.1**	**0.0**
MAON	**Monte Argentar**	**1.62**	**269**	Pg	**Pn**	**03 11 50.3**	**-0.1**
MAON				Sg	**Sg**	03 12 11.6	-1.8
30nm,0.3s							
MAON	**Monte Argentar**	**1.62**	**269**	Pg	**Pn**	**03 11 50.3**	**-0.1**
MAON				Sg	**Sg**	03 12 11.6	-1.8
30nm,0.3s							
CASP	**Castiglione de**	**1.84**	**281**	Pg	**Pn**	**03 11 53.5**	**+0.1**
29nm,1.0s							
MS1	**Monte Sant'Ang**	**2.10**	**111**	*e*Pn	**Pn**	**03 12 00.9**	**+3.8**
NVLJ	**Novalja**	**2.38**	**28**	*e*Pn	**Pn**	**03 12 00.7**	**-0.2**
NVLJ				Sn	**Sn**	03 12 29.4	-0.9
NVLJ	**Novalja**	**2.38**	**28**	*e*Pn	**Pn**	**03 12 00.6**	**-0.3**
NVLJ				Sn	**Sn**	03 12 29.4	-0.9
MAIM	**Mastiano**	**2.52**	**306**	Pg	**Pn**	**03 12 03.6**	**+0.8**
MAIM				Sg	**Sn**	03 12 33.5	-0.3
21nm,0.5s							
BDI	**Bagni Di Lucca**	**2.54**	**310**	Pg	**Pn**	**03 12 03.1**	**-0.1**
42nm,0.8s							
VLC	**Villacollemand**	**2.72**	**309**	*e*Pn	**Pn**	**03 12 06.5**	**+0.9**
VLC				*e*Sn	**Sn**	03 12 40.7	+1.8
VLC	**Villacollemand**	**2.72**	**309**	*e*Pn	**Pn**	**03 12 06.5**	**+0.9**
VLC				*e*Sn	**Sn**	03 12 40.7	+1.8
GSCL	**Gusciola**	**2.73**	**314**	Pg	**Pn**	**03 12 06.7**	**+0.9**
5.0nm,0.4s							
SG1	**Sgolgore (BA)**	**3.00**	**122**	*e*Pn	**Pn**	**03 12 10.5**	**+1.0**
SG1				*e*Sn	**Sn**	03 12 48.1	+2.4
SKDS	**Skadanscina**	**3.12**	**9**	*i* Pn	**Pn**	**03 12 11.0**	**0.0**
PGF	**Pioggiola**	**3.19**	**273**	*e*Pn	**Pn**	**03 12 12.8**	**+0.7**
PGF				*e*Sn	**Sn**	03 12 48.6	-1.8
2.8nm,0.4s							
PGF	**Pioggiola**	**3.19**	**273**	*e*Pn	**Pn**	**03 12 12.8**	**+0.7**
PGF				*e*Sn	**Sn**	03 12 48.6	-1.8
1.4nm,0.4s							
STON	**Ston**	**3.26**	**81**	*e*Pn	**Pn**	**03 12 11.6**	**-1.4**
STON				Sn	**Sn**	03 12 52.3	+0.2
STON	**Ston**	**3.26**	**81**	*e*Pn	**Pn**	**03 12 11.6**	**-1.4**
STON				Sn	**Sn**	03 12 52.2	+0.1
BOJS	**Bojanci**	**3.34**	**24**	*i* Pn	**Pn**	**03 12 15.0**	**+0.9**
BOJS	**Bojanci**	**3.34**	**24**	*i* Pn	**Pn**	**03 12 15.0**	**+0.9**
TAR1	**Taranto**	**3.56**	**122**	*e*Pn	**Pn**	**03 12 19.4**	**+2.3**
VOJS	**Vojsko**	**3.58**	**6**	*i* Pn	**Pn**	**03 12 17.0**	**-0.5**
VOJS	**Vojsko**	**3.58**	**6**	*i* Pn	**Pn**	**03 12 17.0**	**-0.5**
VOY	**Vojsko**	**3.58**	**6**	*e*Sn	**Sn**	**03 13 00.2**	**+0.1**
CTI	**Castel Tesino**	**3.77**	**342**	Pg	**Pn**	**03 12 20.6**	**+0.6**
4μm,19.0s							
OBKA	**Obir**	**4.13**	**12**	⇓*i* Pn	**Pn**	**03 12 25.5**	**+0.5**
OBKA	**Obir**	**4.13**	**12**	Pn	**Pn**	**03 12 25.5**	**+0.5**
VSL	**Villasalto**	**4.21**	**226**	*e*Pn	**Pn**	**03 12 27.5**	**+1.5**
VSL				*e*S	**Sn**	03 13 14.1	-1.4
VSL	**Villasalto**	**4.21**	**226**	*e*Pn	**Pn**	**03 12 27.5**	**+1.4**
VSL				*e*S	**Sn**	03 13 14.1	-1.4
ABTA	**Abfaltersbach**	**4.31**	**353**	⇑*i* Pn	**Pn**	**03 12 27.9**	**+0.5**
ABTA				⇓*i* Sn	**Sn**	03 13 19.1	+1.0
ABTA	**Abfaltersbach**	**4.31**	**353**	Pn	**Pn**	**03 12 27.9**	**+0.4**
ABTA				Sn	**Sn**	03 13 19.1	+1.0
SBF	**Sospel**	**4.52**	**290**	*e*Pn	**Pn**	**03 12 30.3**	**0.0**
SBF	**Sospel**	**4.52**	**290**	*e*Pn	**Pn**	**03 12 30.3**	**0.0**
KBA	**Koelnbreinsper**	**4.61**	**0**	⇓*i* Pn	**Pn**	**03 12 31.7**	**+0.2**
KBA				⇑*i* Sn	**Sn**	03 13 25.0	-0.2
KBA	**Koelnbreinsper**	**4.61**	**0**	Pn	**Pn**	**03 12 31.7**	**+0.2**
KBA				Sn	**Sn**	03 13 25.0	-0.3
FRF	**La Foret Royal**	**5.01**	**285**	*e*Pn	**Pn**	**03 12 36.9**	**-0.2**
FRF				*e*Sn	**Sn**	03 13 32.1	-3.1
0.8nm,0.4s							
FRF	**La Foret Royal**	**5.01**	**285**	*e*Pn	**Pn**	**03 12 36.9**	**-0.2**
FRF				*e*Sn	**Sn**	03 13 32.1	-3.1
0.4nm,0.4s							
LMR	**La Mourre**	**5.07**	**282**	*e*Pn	**Pn**	**03 12 38.0**	**+0.1**
LMR	**La Mourre**	**5.07**	**282**	*e*Pn	**Pn**	**03 12 38.0**	**+0.1**
MBDF	**Montbardon**	**5.26**	**298**	*e*Pn	**Pn**	**03 12 40.8**	**+0.3**
MBDF	**Montbardon**	**5.26**	**298**	*e*Pn	**Pn**	**03 12 40.8**	**+0.3**
LPG	**La Plagne**	**5.62**	**305**	*e*Pn	**Pn**	**03 12 45.6**	**+0.2**
LPG	**La Plagne**	**5.62**	**305**	*e*Pn	**Pn**	**03 12 45.6**	**+0.2**
LPL	**La Plagne**	**5.64**	**305**	*e*Pn	**Pn**	**03 12 45.7**	**0.0**
LPL	**La Plagne**	**5.64**	**305**	*e*Pn	**Pn**	**03 12 45.7**	**0.0**
SMRF	**Simiane la Rot**	**5.85**	**288**	*e*Pn	**Pn**	**03 12 48.3**	**-0.3**
SMRF	**Simiane la Rot**	**5.85**	**288**	*e*Pn	**Pn**	**03 12 48.3**	**-0.3**
ORIF	**Oris-en-Rattie**	**5.92**	**297**	*e*Pn	**Pn**	**03 12 49.5**	**0.0**
ORIF	**Oris-en-Rattie**	**5.92**	**297**	*e*Pn	**Pn**	**03 12 49.5**	**0.0**
CABF	**La Chapelle**	**6.62**	**311**	*e*Pn	**Pn**	**03 12 58.9**	**-0.2**
CABF	**La Chapelle**	**6.62**	**311**	*e*Pn	**Pn**	**03 12 58.9**	**-0.2**
VIVF	**Saint-Julien-l**	**6.71**	**294**	*e*Pn	**Pn**	**03 13 00.0**	**-0.3**
VIVF	**Saint-Julien-l**	**6.71**	**294**	*e*Pn	**Pn**	**03 13 00.0**	**-0.3**
HINF	**Hinteralfeld**	**7.03**	**322**	*e*Pn	**Pn**	**03 13 04.4**	**-0.4**
HINF	**Hinteralfeld**	**7.03**	**322**	*e*Pn	**Pn**	**03 13 04.4**	**-0.4**
LASF	**Ste Croix**	**7.09**	**286**	*e*Pn	**Pn**	**03 13 05.3**	**-0.3**
LASF	**Ste Croix**	**7.09**	**286**	*e*Pn	**Pn**	**03 13 05.3**	**-0.3**
CDF	**Champ du Feu**	**7.30**	**327**	*e*Pn	**Pn**	**03 13 08.0**	**-0.5**
CDF	**Champ du Feu**	**7.30**	**327**	*e*Pn	**Pn**	**03 13 08.0**	**-0.5**
HAU	**Haudompre**	**7.40**	**321**	*e*Pn	**Pn**	**03 13 09.5**	**-0.4**
HAU				*e*Sn	**Sn**	03 14 29.2	-4.9
4.0nm,0.5s							
HAU	**Haudompre**	**7.40**	**321**	*e*Pn	**Pn**	**03 13 09.5**	**-0.4**
LOR	**Lormes**	**8.25**	**309**	*e*Pn	**Pn**	**03 13 21.0**	**-0.5**
LOR				*e*Sn	**Sn**	03 14 49.5	-5.5
0.8nm,0.3s							
LOR	**Lormes**	**8.25**	**309**	*e*Pn	**Pn**	**03 13 21.0**	**-0.5**

CASC 29 03:38:52.2±2.3, 9°.37N×84°.76W, h10km, MD4.0, ML2.9, 3C-2D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCR	**Jicaral**	**0.59**	**324**	*e*P	Pg	03 39 02.9	-0.8
QCR	**Quepos**	**0.59**	**85**	⇑*e*P	Pg	03 39 03.9	+0.2
QCR				*e*S	Sg	03 39 13.5	+2.1
CGA2	**Cerro Gallo 2**	**0.70**	**24**	*e*P	Pg	03 39 04.9	-0.9
CGA2				*e*S	Sg	03 39 16.6	+1.5
PRS1	**Puriscal**	**0.75**	**36**	⇓*e*P	Pg	03 39 03.9	-2.9
LAJ	**Bijagual**	**0.80**	**52**	⇑*i* P	Pg	03 38 59.3	-8.3
SJS	**Escuela Geolog**	**0.90**	**51**	*e*P	Pg	03 39 09.1	-0.4
SJS				*e*S	Sg	03 39 22.8	+1.6
JTS	**JuntasAbangare**	**0.93**	**348**	*e*P	Pg	03 39 08.2	-2.0
JTS				*e*S	Sg	03 39 21.9	-0.5
BUS	**Buena Vista**	**1.00**	**79**	*e*P	Pg	03 39 11.4	-0.2
URSC	**Urasca**	**1.07**	**64**	⇑*e*P	Pg	03 39 11.9	-0.9
URSC				*e*S	Sg	03 39 27.4	+0.5
VCR	**Vista de Mar**	**1.14**	**311**	*e*P	Pb	03 39 13.6	-0.5
LIM1	**Limonal**	**1.41**	**340**	*i* P	Pn	03 39 15.7	-2.2
BAR1		**1.44**	**95**	⇓*e*P	Pn	03 39 17.5	-0.8
BAR1				*e*S	Sn	03 39 36.8	-0.4
NY14	**Universidad de**	**1.48**	**329**	*i* P	Pn	03 39 17.6	-1.3
NY14				*i* S	Sn	03 39 39.8	+1.5
GPS3	**Bodega del ICE**	**1.50**	**337**	*i* P	Pn	03 39 18.0	-1.1
LAPC	**Finca la Perla**	**1.54**	**335**	*i* P	Pn	03 39 18.0	-1.7
ACR	**Cerro Adams**	**1.73**	**114**	*e*P	Pn	03 39 21.1	-1.2
SSN	**San Juan del S**	**2.20**	**331**	*e*P	Pn	03 39 30.2	+1.4
CONN	**Concepcion**	**2.34**	**339**	*e*P	Pn	03 39 33.0	+2.3

CASC 29 03:52:48.7±1.6, 12°.43N×87°.83W, h54km±28km, MD3.8, ML3.6, 2D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.81**	**70**	*e*P	Pn	03 53 04.6	+0.6
CRIN				*e*S	Sn	03 53 16.8	+1.5
CRIN				AML	AML	03 53 21.2	
comp=N,4μm,0.3s							
CNCH	**Conchagua**	**0.84**	**360**	⇓*i* P	Pn	03 53 04.9	+0.4
CNCH				*e*S	Sn	03 53 16.9	+0.8
LEON	**Leon**	**0.92**	**91**	*e*P	Pn	03 53 04.8	-0.6
TELN	**Telica**	**0.99**	**80**	*e*P	Pn	03 53 06.8	+0.4
BLLM	**Bellamira**	**1.08**	**339**	*e*P	Pn	03 53 07.9	+0.2
CNGN	**Cerro Negro**	**1.11**	**86**	*e*P	Pn	03 53 07.6	-0.4
CNGN				*e*S	Sn	03 53 22.8	+0.4
CNGN				AML	AML	03 53 30.1	
comp=E,590nm,0.0s							
COPN	**Copaltepe**	**1.24**	**101**	*e*P	Pn	03 53 09.5	-0.2
MOMN	**Momotombo**	**1.26**	**91**	*e*P	Pn	03 53 10.2	+0.2
CAHU	**Cacacuatique**	**1.39**	**345**	*e*P	Pn	03 53 12.8	+1.0
CAHU				*e*S	Sn	03 53 30.4	+1.4
CSAN		**1.40**	**100**	*e*P	Pn	03 53 12.2	+0.3
XAVN	**Gruta Xavier**	**1.50**	**100**	*e*P	Pn	03 53 12.8	-0.4
TISN	**Laguna Tiscapa**	**1.55**	**100**	*e*P	Pn	03 53 14.0	0.0
CRUN	**El Crucero**	**1.56**	**106**	*e*P	Pn	03 53 14.9	+0.8
MGAN	**Managua**	**1.57**	**100**	*e*P

BOSA				LR	LR	04 40 27.9	
	comp=Z,62nm,18.3s,MS3.6,baz=163,slow=32						
LPAZ	**La Paz**	**53.34**	**303**	P	**P**	**04 26 16.1**	**+0.5**
	1.3nm,0.7s,mb3.9,baz=159,slow=3.6,SNR=5.9						
LPAZ				LR	LR	04 47 57.2	
	comp=Z,40nm,20.7s,MS3.5,baz=114,slow=35						
KMBO	**Kilima Mbogo**	**74.18**	**65**	LR	LR	04 56 51.2	
	comp=Z,89nm,18.6s,MS4.1,baz=90,slow=32						
TORD	**Torodi Ar. Bea**	**74.29**	**26**	P	**P**	**04 28 33.4**	**-0.2**
	3.1nm,0.8s,mb4.3,baz=204,slow=5.3,SNR=21						
ASAR	**Alice Springs**	**96.08**	**159**	P	**P**	**04 30 22.4**	**-1.5**
	0.8nm,0.9s,mb4.2,baz=216,slow=4.0,SNR=5.2						
NVAR	**Mina Array Bea**	**124.08**	**289**	PKP	PKPdf	04 35 54.9	+0.8
	0.4nm,0.7s,baz=114,slow=2.4,SNR=3.9						
FINES	**FINESS Array B**	**125.63**	**27**	PKP	PKPdf	04 35 55.4	-0.9
	1.0nm,0.5s,baz=116,slow=6.3,SNR=3.4						
AKTK	**Aktyubinsk**	**127.22**	**53**	PKP	PKPdf	04 35 58.4	-1.3
AKTO	**Aktyubinsk**	**127.22**	**53**	PKP	PKPdf	04 35 58.4	-1.3
	0.8nm,0.5s,baz=237,slow=17,SNR=3.6						
ARCES	**ARCESS Array B**	**132.47**	**21**	PKP	PKPdf	04 36 08.3	-0.8
	2.8nm,1.1s,baz=204,slow=2.7,SNR=4.1						
ARCES	**ARCESS Array B**	**132.47**	**21**	PKP	PKPdf	04 36 08.3	-0.8
MKAR	**Makanchi Array**	**135.80**	**71**	PKP	PKPdf	04 36 14.7	-1.3
	0.7nm,0.9s,baz=273,slow=2.1,SNR=4.4						
YKA	**Yellowknife Ar**	**139.26**	**315**	PKP	PKPdf	04 36 21.7	-0.1
	0.7nm,0.7s,baz=135,slow=2.5,SNR=3.6						
SONM	**Songino Array**	**148.90**	**88**	PKPbc	PKPbc	04 36 42.7	-0.4
	3.5nm,0.9s,baz=218,slow=2.7,SNR=14						
DAWY	**Dawson**	**149.83**	**308**	PKPbc	PKPbc	04 36 45.1	+0.2
KSRS	**Korea Array**	**151.99**	**126**	PKPbc	PKPbc	04 36 50.3	-0.6
	0.4nm,0.3s,baz=201,slow=2.3,SNR=4.6						
ILAR	**Eielson Array**	**153.15**	**308**	PKPbc	PKPbc	04 36 52.3	-0.2
	2.4nm,0.9s,baz=131,slow=1.5,SNR=20						

DJA 29 04:27:44.7°±28.5S×106°±27.6E, h5km, MLv3.1/6, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.39**	**46**	P	Pg	04 27 52.3	+0.7
SKJI	**Sukabumi**	**0.39**	**46**	P	Sg	04 28 03.3	+6.5
	730nm,0.6s,3.6nm						
CGJI	**Cibinong**	**0.88**	**319**	P	Pg	04 27 59.5	-1.3
CGJI				S	Sg	04 28 12.2	0.0
CBJI	**Citeko**	**1.03**	**34**	P	Pg	04 27 59.4	-4.4
CBJI				S	Sg	04 28 13.2	-4.0
SBJI	**Serang**	**1.16**	**353**	P	Pg	04 28 05.8	-0.5
SBJI				S	Sg	04 28 22.1	+0.7
LEM	**Lembang**	**1.41**	**71**	P	Pn	04 28 09.2	-1.2
LEM	**Lembang**	**1.41**	**71**	P	Sn	04 28 32.5	+3.1
RBSI	**Rajabasa**	**1.52**	**340**	P	Pn	04 28 12.8	+0.9
RBSI				S	Sn	04 28 32.0	0.0
KASI	**Kota Agung**	**2.48**	**315**	P	Pn	04 28 26.6	+1.5

CASC 29 05:16:10.1±2.1, 13°.70N×91°.68W, h14km±21km, MD3.9, 1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.61**	**4**	⇓*iP*	Pg	05 16 22.6	+0.4
FUG	**Fuego 3**	**1.10**	**48**	*eP*	Pb	05 16 30.2	-0.8
FG6		**1.15**	**42**	*eP*	Pb	05 16 31.2	-0.7
PCG	**Pacaya**	**1.25**	**56**	*eP*	Pn	05 16 33.3	+0.1
TP2	**Tecpan 2**	**1.25**	**31**	*eP*	Pn	05 16 32.2	-1.0
NBG	**Las Nubes**	**1.57**	**56**	*eP*	Pn	05 16 38.8	+1.3
RBDL	**Robledal**	**1.98**	**78**	*eP*	Pn	05 16 43.1	-0.1
RTR	**El Retiro**	**1.99**	**84**	*eP*	Pn	05 16 43.7	+0.4
SBLS	**San Blas**	**2.00**	**86**	*eP*	Pn	05 16 43.6	+0.1
SBLS				*eS*	Sn	05 17 09.3	+0.8
SNJE	**San Jose**	**2.02**	**85**	*eP*	Pn	05 16 44.5	+0.7
MRL	**Marmol**	**2.36**	**55**	*eP*	Pn	05 16 49.9	+1.4
LFRS	**El Faro**	**2.55**	**91**	*eP*	Pn	05 16 50.8	-0.2
LFRS				*eS*	Sn	05 17 22.2	+0.3
LBRS	**Las Brisas**	**2.56**	**89**	*eP*	Pn	05 16 51.1	-0.2

NIED ***29*** *05:20:00.25°.20N×128°.00E, h5km, Mw4.0 Best double couple: M0 9.90000×10^14 NP1:φ0 14.00000°, δ50.00000°, λ58.00000°. NP2:φ0 239.00000°, δ50.00000°, λ123.00000°.*
ISCJB ***29*** *05:20:33.6±1.6, 25°.12N±0°.03×128°.06E±0°.04, h28km±13km, mb3.9/13, MS3.4/4, Error ellipse: s-maj=6.8km s-min=5.3km az=24.9*
MOS ***29*** *05:20:34.6±1.1, 25°.24N×128°.11E, h33km, mb4.1/6, Error ellipse: s-maj=26.2km s-min=12.5km az=98.7*
JMA ***29*** *05:20:35.1±0.2, 25°.16N×128°.04E, h64km, M3.6*
NEIC ***29*** *05:20:36.8±0.6, 25°.11N×127°.91E, h35km, mb4.5/3, MW3.9(NIED), Error ellipse: s-maj=13.2km s-min=11.2km az=103.0*
IDC ***29*** *05:20:37.4±0.9, 25°.20N×128°.10E, h37km±5km, mb3.6/9, mb1 3.8/11, mb1mx3.7/21, mbtmp3.7/11, MS3.3/5, Ms1 3.3/5, ms1mx2.8/28, Error ellipse: s-maj=27.9km s-min=17.8km az=65.0*
ISC 29 05:20:35.5±1.4, 25°.17N±0°.03×128°.02E±0°.04, h27km±10km, h39km±1.1km: pP-P, n44, σ0s 97/53, mb3.9/13, MS3.4/4, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT2	**Tamagusuku 2**	**0.99**	**346**	P	**Pn**	**05 20 53.8**	**+0.2**
JJT2				S	**Sb**	**05 21 07.7**	**+1.0**
NAH1	**Naha**	**1.07**	**344**	P	**Pn**	**05 20 54.6**	**-0.1**
NAH1				S	**Sn**	**05 21 08.8**	**+0.1**
JAGN	**Aguni-jima**	**1.58**	**334**	P	**Pn**	**05 21 02.0**	**+0.4**
JAGN				S	**Sn**	**05 21 20.7**	**-0.5**
JKE	**Kume jima 2**	**1.60**	**316**	P	**Pn**	**05 21 02.1**	**+0.1**
JKE				S	**Sn**	**05 21 22.4**	**+0.6**
JOW	**Kunigami**	**1.67**	**8**	P	**Pn**	**05 21 02.7**	**-0.2**
JOW				*eS*	**Sn**	**05 21 22.8**	**-0.7**
JIH	**Iheya**	**1.86**	**359**	P	**Pn**	**05 21 05.9**	**+0.4**
JIH				S	**Sn**	**05 21 27.3**	**-0.8**
JOGS	**Gusukube**	**2.41**	**261**	P	**Pn**	**05 21 13.7**	**+0.6**
JOGS				S	**Sn**	**05 21 41.1**	**-0.6**
JMJ	**Miyako jima 2**	**2.50**	**262**	P	**Pn**	**05 21 13.1**	**-1.2**
JTK	**Tokunoshima**	**2.73**	**18**	P	**Pn**	**05 21 17.3**	**-0.3**
JTK				S	**Sn**	**05 21 47.0**	**-2.7**
JMZ	**Minamidaito 2**	**2.96**	**77**	P	**Pn**	**05 21 17.9**	**-2.8**
JMZ				S	**Sn**	**05 21 49.0**	**-6.4**
JTJ	**Tarama**	**3.06**	**261**	P	**Pn**	**05 21 21.8**	**-0.2**
JTJ				S	**Sn**	**05 21 56.2**	**-1.6**
JAM	**Amami Oshima**	**3.52**	**23**	P	**Pn**	**05 21 28.8**	**+0.4**
JAM				S	**Sn**	**05 22 05.7**	**-3.5**
JZK	**Kikaishima**	**3.58**	**29**	P	**Pn**	**05 21 30.0**	**+0.7**
SSLB	**Suanglung**	**6.58**	**259**	*e*Pn	**Pn**	**05 22 09.4**	**-1.1**
TWG	**Pinlang**	**6.77**	**251**	*e*Pn	**Pn**	**05 22 09.6**	**-3.4**
	70nm,0.3s						
KSRS	**Korea Array**	**12.25**	**360**	Pn	**Pn**	**05 23 27.9**	**-0.1**
	baz=181,slow=17,SNR=3.2						
KSRS				LR	LR	05 28 50.8	
	comp=Z,59nm,19.8s,baz=185,slow=40						
MJAR	**Matsushiro Arr**	**14.31**	**35**	Pn	**Pn**	**05 23 56.4**	**+0.2**
	baz=213,slow=10,SNR=2.8						
KLR	**Kul'dur**	**24.19**	**6**	*eP*	**P**	**05 25 45.9**	**-3.6**
YSS	**Yuzh-Sakhalins**	**24.71**	**25**	*eP*	**P**	**05 25 59.0**	**+4.8**
YSS				*e*		05 26 06.8	
YSS	**Yuzh-Sakhalins**	**24.71**	**25**	*eP*	**P**	**05 25 50.9**	**-3.3**
	8.6nm,0.5s,mb4.5						
GTA	**Gaotai**	**27.61**	**308**	*eP*	**P**	**05 26 22.0**	**+1.4**
GTA				pP	pP	05 26 32.5	+4.0
GTA				sP	sP	05 26 36.5	+4.6
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.0						
SONM	**Songino Array**	**28.34**	**328**	P	**P**	**05 26 27.5**	**+0.5**
	comp=Z,0.3nm,0.3s,mb3.4,baz=139,slow=11,SNR=3.6						
SONM				pP	pP	05 26 38.9	+3.9
	comp=Z,1.2nm,0.6s,baz=144,slow=10,SNR=7.4						
SONM				LR	LR	05 39 09.7	
	comp=Z,49nm,19.2s,MS3.1,baz=134,slow=39						
SONM	**Songino Array**	**28.34**	**328**	P	**P**	**05 26 27.5**	**+0.5**
SONM				*PP	pP	05 26 38.9	+3.9
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SONM				MLR	MLR		
	comp=Z,49nm,19.2s						
MK31	**Makanchi Array**	**42.10**	**313**	*eP*	**P**	**05 28 25.7**	**+0.6**
MKAR	**Makanchi Array**	**42.10**	**313**	P	**P**	**05 28 25.9**	**+0.7**
	comp=Z,0.9nm,0.5s,mb3.7,baz=95,slow=10,SNR=18						
MKAR				pP	pP	05 28 36.8	+3.5
	comp=Z,2.5nm,0.5s,baz=97,slow=10,0,SNR=15						
MKAR	**Makanchi Array**	**42.10**	**313**	P	**P**	**05 28 25.9**	**+0.8**
MKAR				*PP	pP	05 28 36.8	+3.5
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ZALV	**Zalesovo Beam**	**42.98**	**324**	P	**P**	**05 28 32.6**	**+0.5**
	comp=Z,0.8nm,0.5s,mb3.7,baz=93,slow=8.7,SNR=2.8						
ZALV				pP	pP	05 28 43.5	+3.2
	comp=Z,1.5nm,0.5s,baz=104,slow=9.3,SNR=4.6						
ZALV				LR	LR	05 48 00.1	
	comp=Z,36nm,18.1s,MS3.3,baz=84,slow=38						
ZALV	**Zalesovo Beam**	**42.98**	**324**	P	**P**	**05 28 32.6**	**+0.5**
ZALV				*PP	pP	05 28 43.5	+3.2
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.1						
ZALV				MLR	MLR		
	comp=Z,36nm,18.1s,MS3.3						
FITZ	**Fitzroy Crossi**	**43.07**	**183**	*eP*	**P**	**05 28 32.8**	**-0.4**
	comp=Z,5.2nm,0.9s,mb4.3						
WRAB	**Tennant Creek**	**45.25**	**172**	*eP*	**P**	**05 28 50.7**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
WRAB	**Tennant Creek**	**45.25**	**172**	*eP*	**P**	**05 28 50.7**	**+0.1**
	comp=Z,5.9nm,0.8s,mb4.5						
AAK	**Ala-Archa**	**46.92**	**306**	LR	LR	05 51 19.9	
	comp=Z,48nm,19.0s,MS3.5,baz=231,slow=39						
ASAR	**Alice Springs**	**48.88**	**173**	P	**P**	**05 29 19.8**	**+0.9**
	comp=Z,1.8nm,0.8s,mb4.2,baz=213,slow=8.2,SNR=16						
ASAR	**Alice Springs**	**48.88**	**173**	P	**P**	**05 29 19.8**	**+0.9**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BVAR	**Borovoye Array**	**50.94**	**319**	P	**P**	**05 29 34.7**	**+0.4**
	comp=Z,0.5nm,0.6s,mb3.6,baz=109,slow=7.8,SNR=3.7						
BVAR				pP	pP	05 29 46.1	+3.5
	comp=Z,1.0nm,0.6s,baz=79,slow=9.5,SNR=3.8						
BVAR	**Borovoye Array**	**50.94**	**319**	P	**P**	**05 29 34.7**	**+0.4**
BVAR				*PP	pP	05 29 46.1	+3.5
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
STKA	**Stephens Creek**	**58.19**	**166**	P	**P**	**05 30 27.1**	**0.0**
	comp=Z,3.8nm,1.0s,mb4.4,baz=341,slow=12,SNR=3.2						
ILAR	**Eielson Array**	**65.46**	**28**	P	**P**	**05 31 16.2**	**+0.6**
	comp=Z,0.2nm,0.7s,mb3.2,baz=191,slow=11,SNR=2.9						
ILAR				pP	pP	05 31 27.1	+3.0
	comp=Z,0.4nm,0.7s,baz=292,slow=6.9,SNR=4.8						
FINES	**FINESS Array B**	**73.69**	**331**	pP	pP	05 32 17.5	+2.4
	comp=Z,2.7nm,0.9s,baz=98,slow=8.1,SNR=3.7						
BRTR	**Keskin Array B**	**77.53**	**308**	P	**P**	**05 32 31.3**	**+2.4**
	comp=Z,1.0nm,0.8s,mb3.8,baz=100,slow=5.5,SNR=4.4						
BRTR	**Keskin Array B**	**77.53**	**308**	P	**P**	**05 32 31.3**	**+2.3**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NB2	**NORSAR Subarra**	**80.18**	**334**	P	**P**	**05 32 44.1**	**+1.1**
	comp=Z,1.2nm,0.7s,mb3.9,baz=54,slow=5.6						
NOA	**NORSAR Array B**	**80.18**	**334**	P	**P**	**05 32 43.8**	**+0.8**
	comp=Z,1.0nm,0.9s,mb3.7,baz=50,slow=5.4,SNR=3.2						
NOA				pP	pP	05 32 55.0	+3.4
	comp=Z,1.3nm,0.7s,baz=52,slow=5.3,SNR=6.2						
NOA				LR	LR	06 11 34.2	
	comp=Z,29nm,18.2s,MS3.7,baz=50,slow=38						
NOA	**NORSAR Array B**	**80.18**	**334**	P	**P**	**05 32 43.8**	**+0.8**
NOA				*PP	pP	05 32 55.1	+3.4
NOA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA				MLR	MLR		
	comp=Z,29nm,18.2s						

CASC 29 05:47:18.0±3.1, 11°.73N×88°.51W, h36km±999km, MD3.8, ML3.5, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**1.67**	**23**	*eP*	Pn	05 47 44.5	-0.3
CNCH				*eS*	Sn	05 48 04.0	-1.1
VSM	**San Miguel**	**1.70**	**8**	*eP*	Pn	05 47 46.0	+0.7
SNVI	**San Vicente**	**1.90**	**350**	*eP*	Pn	05 47 46.6	-1.3
COPN	**Copaltepe**	**1.93**	**76**	*eP*	Pn	05 47 48.4	+0.1
LFRS	**El Faro**	**1.96**	**344**	*eP*	Pn	05 47 50.6	+1.9
LFRS				*eS*	Sn	05 48 13.2	+1.2
CAHU	**Cacacuatique**	**2.05**	**8**	*eP*	Pn	05 47 51.0	+1.0
SBLS	**San Blas**	**2.36**	**333**	*eP*	Pn	05 47 54.4	+0.1
TGUH	**Tegucigalpa,Un**	**2.61**	**27**	*eP*	Pn	05 47 57.4	-0.3
TGUH				*eS*	Sn	05 48 31.2	+3.0
TGUH				AML	AML	05 48 34.7	
	comp=N,287nm,0.6s						

IDC ***29*** *06:03:00.6±1.7, 43°.04S×74°.32W, h0km, mb3.8/4, mb1 4.0/5, mb1mx3.9/12, mbtmp3.8/5, ML3.8/1, MS3.3/4, Ms1 3.4/4, ms1mx3.2/17, Error ellipse: s-maj=39.1km s-min=35.6km az=60.0*
ISCJB ***29*** *06:03:05.7±2.4, 42°.8S±0°.1×74°.2W±0°.2, h42km±18km, mb3.7/4, Error ellipse: s-maj=24.3km s-min=21.6km az=161.4*
GUC ***29*** *06:03:05.6±0.6, 42°.66S×74°.30W, h28km±10km, ML4.2*
NEIC ***29*** *06:03:05.6, 42°.66S×74°.30W, h28km, ML4.2(GUC), After GUC.*
NEIC Felt [III] at Castro, Palena, Puerto Cardenas and Quellon.
ISC 29 06:03:06.9±3.2, 42°.8S±0°.1×74°.2W±0°.1, h34km±24km, n17, σ0s 96/18, mb3.7/4, 2C-1D, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILCA	**Isla Las Cabra**	**1.46**	**61**	⇓*iP*	**Pn**	**06 03 30.1**	**-0.7**
ILCA				*i S*	**Sn**	**06 03 49.0**	**+0.4**
ILCA				AML	AML	06 03 52.8	
	comp=N,3μm,0.7s						
HOCH	**HornopirØn**	**1.62**	**58**	*eP*	**Pn**	**06 03 32.5**	**-0.5**
HOCH				*i S*	**Sn**	**06 03 53.1**	**+0.5**
HOCH				AML	AML	06 03 58.3	
	comp=E,6μm,0.5s						
PMCH	**Puerto Montt**	**1.63**	**38**	⇑*iP*	**Pn**	**06 03 32.4**	**-0.8**
PMCH				*eS*	**Sn**	**06 03 52.1**	**-0.9**
PMCH	**Puerto Montt**	**1.63**	**38**	⇑*iP*	**Pn**	**06 03 32.4**	**-0.8**
PMCH				*eS*	**Sn**	**06 03 52.1**	**-0.9**
PMCH				AML	AML	06 04 06.2	
	comp=E,5μm,0.5s						
PUYE	**Entre Lagos**	**2.43**	**31**	*eP*	**Pn**	**06 03 43.5**	**-0.6**
PUYE				AML	AML	06 04 37.1	
	comp=N,3μm,0.5s						
PLCA	**Paso Flores**	**3.44**	**55**	Pn	**Pn**	**06 04 00.1**	**+2.1**
	comp=N,2.0nm,0.3s,baz=226,slow=12,SNR=24						
PLCA				Lg		06 04 48.3	
	comp=N,16nm,0.3s,baz=140,slow=21,SNR=6.1						
PLCA				LR	LR	06 05 39.9	
	comp=N,709nm,18.5s,baz=282,slow=44						
PLCA	**Paso Flores**	**3.44**	**55**	Pn	**Pn**	**06 04 00.1**	**+2.1**
PLCA				Lg		06 04 48.3	
TRQA	**Tornquist**	**10.47**	**67**	*e*Pn	**Pn**	**06 05 35.4**	**+0.9**
CFAA	**Coronel Fontan**	**12.13**	**25**	LR	LR	06 10 57.9	
	comp=N,26nm,18.1s,baz=199,slow=38						
USHA	**Ushuaia**	**12.65**	**164**	LR	LR	06 11 20.1	
	comp=N,312nm,18.8s,baz=50,slow=40						
CPUP	**Villa Florida**	**21.46**	**46**	P	**P**	**06 07 51.6**	**-0.7**
	comp=N,2.6nm,0.4s,mb3.9,baz=208,slow=11,SNR=27						
CPUP				LR	LR	06 16 52.7	
	comp=N,144nm,20.4s,baz=194,slow=38						
CPUP	**Villa Florida**	**21.46**	**46**	*eP*	**P**	**06 07 51.5**	**-0.8**
LPAZ	**La Paz**	**26.92**	**13**	P	**P**	**06 08 46.4**	**+1.5**
	comp=N,0.4nm,0.4s,mb3.3,baz=213,slow=13,SNR=4.6						
TXAR	**Lajitas Array**	**76.69**	**334**	P	**P**	**06 14 54.8**	**+0.5**
	comp=N,0.1nm,0.3s,mb3.2,baz=160,slow=8.6,SNR=2.5						
BOSA	**Boshof**	**77.55**	**117**	P	**P**	**06 14 58.2**	**-1.2**
	comp=N,1.5nm,0.4s,mb4.3,baz=206,slow=7.4,SNR=5.5						
BOSA	**Boshof**	**77.55**	**117**	P	**P**	**06 14 58.2**	**-1.2**
MKAR	**Makanchi Array**	**162.88**	**68**	PKPab	PKPab	06 23 53.8	-0.6
	comp=N,0.3nm,0.5s,baz=262,slow=3.7,SNR=5.5						

IDC 29 06:18:27.8±1.8, 10°.86S×163°.67E, h0km, mb4.1/6, mb1 4.3/6, mb1mx4.1/15, mbtmp4.1/6, MS3.3/2, Ms1 3.3/2, ms1mx3.1/13, Error ellipse: s-maj=66.3km s-min=29.6km az=147.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**31.06**	**242**	P	P	06 24 47.9	+0.1
	3.7nm,0.9s,baz=72,slow=9.7,SNR=17						
KSRS	**Korea Array**	**58.59**	**327**	LR	LR	06 52 54.6	
	comp=Z,33nm,18.1s,baz=159,slow=35						
PETK	**Petropavlovsk-**	**63.91**	**356**	LR	LR	06 57 27.0	
	comp=Z,18nm,18.9s,baz=74,slow=37						
CMAR	**Chiang Mai Arr**	**70.17**	**294**	P	P	06 29 42.9	0.0
	0.6nm,0.3s,baz=111,slow=4.9,SNR=4.5						
SONM	**Songino Array**	**77.32**	**324**	P	P	06 30 25.5	+1.3
	0.9nm,0.8s,baz=152,slow=5.1,SNR=6.3						
ILAR	**Eielson Array**	**84.00**	**19**	P	P	06 30 58.9	-0.8
	0.7nm,0.8s,baz=230,slow=8.1,SNR=7.5						
NVAR	**Mina Array Bea**	**87.47**	**50**	P	P	06 31 18.5	+0.9
	0.4nm,0.6s,baz=221,slow=8.0,SNR=1.8						
MKAR	**Makanchi Array**	**91.99**	**317**	P	P	06 31 37.8	-0.8
	0.8nm,0.7s,baz=92,slow=6.2,SNR=6.7						

MAN 29 06:20:40.8°.56N×126°.77E, h51km, mb4.5, ML3.3, MS3.2, 3C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**1.21**	**290**	*eP*	Pn	06 21 00.9	+0.4
BUTP				*eS*	Sn	06 21 17.7	+1.7
MATI	**Mati**	**1.68**	**198**	*eP*	Pn	06 21 03.8	-3.2
SCPH	**Surigao**	**1.76**	**314**	⇑*eP*	Pn	06 21 10.1	+2.1
BUKP	**Musuan**	**1.82**	**248**	*eP*	Pn	06 21 09.8	+1.6
BUKP				*eS*	Sn	06 21 29.7	-1.2
DMPH	**Davao City--Mi**	**1.93**	**221**	⇑*eP*	Pn	06 21 12.0	+1.6
DMPH				*eS*	Sn	06 21 35.6	+2.2
CGP	**Cagayan de Oro**	**2.06**	**267**	⇓*eP*	Pn	06 21 13.1	+0.9
CGP				*eS*	Sn	06 21 36.1	-0.5
TBP	**Tagbilaran**	**3.09**	**292**	⇑*eP*	Pn	06 21 28.1	+1.9
TBP				*eS*	Sn	06 22 04.8	+2.9

IDC ***29*** *06:57:30.8±2.3, 5°.04N×94°.91E, h0km, mb4.0/6, mb1 4.0/7, mb1mx3.7/22, mbtmp4.0/7, ML3.3/1, MS3.2/1, Ms1 3.2/1, ms1mx2.5/28, Error ellipse: s-maj=121.3km s-min=21.5km az=52.0*
NEIC ***29*** *06:57:33.0±1.0, 4°.49N×94°.69E, h35km, mb4.2/2, Error ellipse: s-maj=23.4km s-min=10.2km az=212.0*
ISC 29 06:57:33.4±1.3, 4°.5N±0°.2×94°.7E±0°.1, h35km, n14, σ0s 76/14, mb4.0/8, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**4.55**	**112**	Pn	**Pn**	**06 58 40.1**	**+0.2**
	1.4nm,0.3s,baz=300,slow=14,SNR=3.6						
KULM	**Kulim**	**5.98**	**83**	*e*Pn	**Pn**	**06 58 59.1**	**-0.4**
KULM				*e*Sn	**Sn**	**06 59 57.9**	**-8.9**
CMAR	**Chiang Mai Arr**	**14.45**	**16**	Pn	**Pn**	**07 00 56.4**	**+0.9**
	0.4nm,0.3s,baz=211,slow=11,SNR=11						
TKM2	**Tokmak 2**	**41.82**	**339**	P	**P**	**07 05 23.5**	**+3.7**
	SNR=6.6						
MK31	**Makanchi Array**	**43.45**	**348**	*eP*	**P**	**07 05 32.0**	**-0.9**
MKAR	**Makanchi Array**	**43.45**	**348**	P	**P**	**07 05 32.4**	**-0.6**
	0.7nm,0.3s,mb3.8,baz=166,slow=8.0,SNR=17						
ASAR	**Alice Springs**	**47.39**	**128**	P	**P**	**07 06 09.3**	**+4.7**
	0.4nm,0.5s,mb3.6,baz=299,slow=8.6,SNR=4.0						
ZALV	**Zalesovo Beam**	**49.92**	**352**	P	**P**	**07 06 22.4**	**-1.1**
	0.8nm,0.4s,mb4.2,baz=189,slow=8.4,SNR=4.2						
BVAR	**Borovoye Array**	**52.31**	**342**	P	**P**	**07 06 41.6**	**+0.2**
	2.5nm,0.7s,mb4.3,baz=153,slow=10.0,SNR=12						
BRVK	**Borovoye**	**52.37**	**342**	*eP*	**P**	**07 06 41.7**	**-0.3**
	3.1nm,0.6s,mb4.4						
ABKAR	**Akbulak array**	**53.42**	**332**	*eP*	**P**	**07 06 50.9**	**+1.2**
	0.5nm,0.4s,mb3.8						
AKTO	**Aktyubinsk**	**55.14**	**332**	LR	LR	07 31 57.8	
	comp=Z,20nm,18.1s,baz=9.5,slow=38						
FINES	**FINESS Array B**	**75.91**	**333**	P	**P**	**07 09 16.4**	**+0.2**
	1.7nm,0.8s,mb4.0,baz=82,slow=4.0,SNR=3.7						
ARCES	**ARCESS Array B**	**78.58**	**340**	P	**P**	**07 09 31.1**	**+0.1**
	0.9nm,0.6s,mb3.9,baz=90,slow=5.5,SNR=8.7						

ISC 29 07:04:15.9±1.0, 40°.90N±0°.06×74°.1E±0°.1, h10km, n10, σ1s 25/12, 1C-2D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**1.26**	**347**	P	**Pn**	**07 04 40.4**	**+0.8**
	SNR=16						
KZA	**Kyzart**	**1.48**	**37**	P	**Pn**	**07 04 38.9**	**-3.7**
	SNR=23						
AAK	**Ala-Archa**	**1.76**	**10**	P	**Pn**	**07 04 45.0**	**-1.5**
	SNR=7.2						
EKS2	**Erkin-Say**	**1.77**	**353**	P	**Pn**	**07 04 49.2**	**+2.6**
	SNR=6.9						
KBK	**Karagaybulak**	**1.88**	**20**	P	**Pn**	**07 04 48.2**	**+0.2**
	SNR=5.4						
KSH	**Kashi**	**2.01**	**133**	Pg	**Pg**	**07 04 54.3**	**-0.1**
KS

ellipse: s-maj=20.0km s-min=12.9km az=122.0
JMA ***29*** *07:27:32.9, 39.′06N×140.′86E, h10km±1km, M4.3*
JMA Felt II J1.
BJI ***29*** *07:27:34.6, 38.′84N×140.′32E, h9km, mB4.8/16, mb4.5/24, Ms4.3/16, Ms7 3.7/16*
MOS ***29*** *07:27:36.6±0.8, 39.′24N×140.′49E, h33km, mb4.6/31, Error ellipse: s-maj=10.0km s-min=6.5km az=90.6*
ISC 29 07:27:33.3±0.4, 39.′06N±0.′02×140.′80E±0.′03, h8km±2km, h15km±1.7km: pP-P, n140, σ1§16/157, mb4.5/55, MS3.9/4, 4C-6D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.34**	**108**	⇓P	**Pg**	**07 27 38.7**	**-1.3**
JMK				S	**Sg**	**07 27 42.9**	**-1.6**
JRG	**Rokugo**	**0.36**	**339**	⇓P	**Pg**	**07 27 40.5**	**+0.1**
JRG				S	**Sg**	**07 27 46.1**	**+0.9**
JYK	**Kaneyama**	**0.37**	**248**	⇓P	**Pg**	**07 27 41.2**	**+0.7**
JYK				S	**Sg**	**07 27 46.7**	**+1.3**
JOM	**Ohasama**	**0.56**	**42**	⇓P	**Pg**	**07 27 43.1**	**-1.1**
JOM				S	**Sg**	**07 27 50.3**	**-1.2**
JOU	**Okura**	**0.70**	**189**	⇑P	**Pg**	**07 27 46.6**	**-0.1**
JOU				S	**Sg**	**07 27 56.2**	**+0.4**
JIO	**Ouri**	**0.74**	**144**	⇓P	**Pg**	**07 27 46.2**	**-1.3**
JIO				S	**Sg**	**07 27 56.0**	**-1.1**
JYA	**Atsumi**	**0.97**	**242**	⇑P	**Pg**	**07 27 52.0**	**+0.1**
JYA				S	**Sg**	**07 28 06.3**	**+1.9**
MAJO	**Matsushiro**	**3.24**	**220**	*e*P	**Pn**	**07 28 25.4**	**+0.9**
MAT	**Matsushiro**	**3.24**	**220**	P	**Pn**	**07 28 26.2**	**+1.7**
MAT				*e*S	**Sn**	**07 29 07.9**	**+4.6**
MJAR	**Matsushiro Arr**	**3.24**	**220**	Pn	**Pn**	**07 28 26.2**	**+1.7**
	5.8nm,0.3s,baz=29,slow=13,SNR=64						
MJAR				Pg	**Pg**	**07 28 31.7**	**-3.8**
	12nm,0.3s,baz=25,slow=14,SNR=33						
MJAR				Lg		07 29 17.6	
	3.5nm,0.3s,baz=21,slow=26,SNR=6.3						
ERM	**Erimo**	**3.46**	**31**	*e*P	**Pn**	**07 28 28.2**	**+0.8**
ASAJ	**Asahikawa**	**5.23**	**14**	Pn	**Pn**	**07 28 52.5**	**+0.7**
	3.8nm,0.3s,baz=249,slow=14,SNR=9.5						
ASAJ	**Asahikawa**	**5.23**	**14**	P	**Pn**	**07 28 52.5**	**+0.7**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**6.25**	**36**	P	**Pn**	**07 29 08.4**	**+2.5**
YUK				MLR	MLR		
	comp=N,300nm,18.0s						
YUK				MLR	MLR		
	comp=Z,200nm,18.0s						
YSS	**Yuzh-Sakhalins**	**8.02**	**10**	*e*P	**Pn**	**07 29 30.6**	**+0.5**
KSRS	**Korea Array**	**10.26**	**265**	Pn	**Pn**	**07 30 01.8**	**+1.0**
	comp=Z,1.7nm,0.3s,baz=79,slow=14,SNR=7.8						
KSRS				Sn	**Sn**	**07 32 01.5**	**+5.6**
	comp=Z,1.5nm,0.3s,baz=74,slow=24,SNR=16						
KSRS	**Korea Array**	**10.26**	**265**	P	**Pn**	**07 30 01.8**	**+1.0**
KSRS						07 32 01.5	
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KSRS				smax			
	comp=N,2.0nm,0.3s						
KLR	**Kul'dur**	**12.06**	**330**	*e*P	**Pn**	**07 30 26.2**	**+0.8**
CN2	**Changchun**	**12.46**	**297**	*e*P	**Pn**	**07 30 30.8**	**0.0**
CN2				*es*P		07 30 36.0	
CN2				*e*S	**Sn**	**07 32 47.8**	**-2.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,11.0s						
CN2				LR	LR		
	comp=E,300nm,11.0s						
CN2				LR	LR		
	comp=Z,300nm,13.0s						
BJI	**Beijing**	**19.01**	**281**	P	**Pn**	**07 31 54.8**	**-1.3**
BJI				S	**Sn**	**07 35 24.5**	**-4.5**
BJI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BJI				pmax	pmax		
	comp=Z,140nm,5.0s						
BJI				LR	LR		
	comp=N,420nm,15.7s						
BJI				LR	LR		
	comp=E,190nm,12.9s						
BJI				LR	LR		
	comp=Z,98nm,27.2s						
NJ2	**Nanjing**	**19.15**	**255**	*e*P	**Pn**	**07 31 56.3**	**-1.6**
NJ2				pP	pP	07 32 04.8	+5.6
NJ2				sP	sP	07 32 08.8	+8.6
NJ2				PP		07 32 12.5	
NJ2				S	Sn	07 35 12.5	-20
NJ2				sS	sS	07 35 28.0	-10
NJ2				pmax	pmax		
	comp=Z,530nm,4.5s						
NJ2				LR	LR		
	comp=N,450nm,14.6s						
NJ2				LR	LR		
	comp=E,450nm,16.4s						
NJ2				LR	LR		
	comp=Z,1μm,13.6s						
HHC	**Hu-ho-hao-te**	**22.44**	**284**	*e*P	**P**	**07 32 29.5**	**-3.1**
HHC				PP		07 32 56.5	
HHC				PcP	PcP	07 36 26.5	-0.5
HHC				S	**S**	**07 36 28.8**	**-11**
HHC				SS		07 37 08.0	
HHC				ScP	ScP	07 40 02.5	-2.3
HHC				PcS	PcS	07 40 03.8	-1.8
HHC				pmax	pmax		
	comp=Z,13nm,0.5s,mb4.6						
HHC				pmax	pmax		
	comp=Z,61nm,5.1s						
HHC				LR	LR		
	comp=N,360nm,11.6s,MS4.2						
HHC				LR	LR		
	comp=E,370nm,12.2s,MS4.2						
HHC				LR	LR		
	comp=Z,390nm,11.3s,MS4.1						
SEY	**Seymchan**	**24.91**	**13**	*e*P	**P**	**07 32 59.0**	**+2.5**
SONM	**Songino Array**	**26.30**	**301**	P	**P**	**07 33 08.0**	**-1.2**
	comp=Z,1.0nm,0.8s,mb3.4,baz=95,slow=7.3,SNR=4.0						
SONM	**Songino Array**	**26.30**	**301**	P	**P**	**07 33 08.0**	**-1.2**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
LZH	**Lanzhou**	**29.31**	**276**	*e*P	**P**	**07 33 39.0**	**+2.7**
LZH				pP	pP	07 33 44.3	+5.7
LZH				sP	sP	07 33 46.3	+6.7
LZH				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.8						
LZH				pmax	pmax		
	comp=Z,87nm,4.5s						
GYA	**Guiyang**	**31.15**	**257**	P	**P**	**07 33 53.8**	**+1.1**
GYA				PP	PP	07 34 55.8	-7.1
GYA				PcP	PcP	07 36 50.0	+2.3
GYA				S	**S**	**07 38 57.5**	**-1.2**
GYA				ScP	ScP	07 40 31.3	+0.4
GYA				ScS	ScS	07 44 27.5	-0.7
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
GYA				pmax	pmax		
	comp=Z,70nm,4.9s						
GYA				LR	LR		
	comp=N,440nm,16.8s,MS4.3						
GYA				LR	LR		
	comp=E,350nm,17.2s,MS4.3						
GYA				LR	LR		
	comp=Z,430nm,18.9s,MS4.1						
BILL	**Bilibino**	**32.24**	**18**	*e*P	**P**	**07 34 04.3**	**+2.6**
BILL				*e*		07 35 10.8	
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.1						
QIZ	**Qiongzhong**	**33.38**	**242**	*e*P	**P**	**07 34 12.0**	**-0.3**
QIZ				*e*S	**S**	**07 39 33.3**	**-0.3**
QIZ				LR	LR		
	comp=N,220nm,4.1s						
QIZ				LR	LR		
	comp=Z,170nm,5.8s						
KMI	**Kunming**	**34.85**	**258**	P	**P**	**07 34 26.0**	**+1.0**
KMI				pP	pP	07 34 29.0	+1.7
KMI				sP	sP	07 34 30.3	+2.1
KMI				PP	PP	07 35 43.0	-0.9
KMI				S	**S**	**07 39 54.8**	**-1.4**
KMI				sS	sS	07 39 59.8	-0.2
KMI				SS	SS	07 42 06.3	-21
KMI				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
KMI				pmax	pmax		
	comp=Z,100nm,3.1s						
KMI				LR	LR		
	comp=N,310nm,18.8s,MS4.2						
KMI				LR	LR		
	comp=E,250nm,18.8s,MS4.2						
KMI				LR	LR		
	comp=Z,120nm,14.8s,MS3.8						
WMQ	**Urumqi**	**39.53**	**295**	*e*P	**P**	**07 35 04.0**	**-0.5**
WMQ				pP	pP	07 35 08.5	+1.6
WMQ				sP	sP	07 35 11.0	+3.2
WMQ				PP	PP	07 36 38.5	+3.4
WMQ				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.6						
WMQ				pmax	pmax		
	comp=Z,150nm,4.8s						
WMQ				LR	LR		
	comp=N,77nm,21.8s						
WMQ				LR	LR		
	comp=Z,44nm,18.0s,MS3.3						
ZALV	**Zalesovo Beam**	**40.21**	**311**	P	**P**	**07 35 09.4**	**-0.7**
	comp=Z,3.1nm,0.7s,mb4.2,baz=88,slow=8.0,SNR=6.2						
ZALV				PcP	PcP	07 37 12.7	-1.3
	comp=Z,1.1nm,0.4s,baz=92,slow=4.5,SNR=3.2						
ZALV	**Zalesovo Beam**	**40.21**	**311**	P	**P**	**07 35 09.4**	**-0.7**
ZALV						07 37 12.7	
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
CMAR	**Chiang Mai Arr**	**41.59**	**253**	P	**P**	**07 35 21.5**	**-0.3**
	comp=Z,0.8nm,0.6s,mb3.5,baz=24,slow=5.3,SNR=3.0						
CMAR	**Chiang Mai Arr**	**41.59**	**253**	P	**P**	**07 35 21.5**	**-0.3**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MK31	**Makanchi Array**	**42.66**	**300**	*i* P	**P**	**07 35 29.7**	**-0.5**
MK31				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
MK31	**Makanchi Array**	**42.66**	**300**	*e*P	**P**	**07 35 29.8**	**-0.4**
MKAR	**Makanchi Array**	**42.66**	**300**	P	**P**	**07 35 29.8**	**-0.4**
	comp=Z,3.5nm,0.7s,mb4.2,baz=85,slow=9.5,SNR=27						
MKAR	**Makanchi Array**	**42.66**	**300**	P	**P**	**07 35 29.8**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KURK	**Kurchatov**	**44.33**	**306**	⇑*i*P	**P**	**07 35 42.6**	**-1.0**
KURK				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.5						
KURK	**Kurchatov**	**44.33**	**306**	*e*P	**P**	**07 35 42.8**	**-0.9**
	comp=Z,7.4nm,0.6s,mb4.6						
GUN	**Gumba**	**46.51**	**273**	*e*P	**P**	**07 36 00.7**	**-0.6**
	comp=Z,34nm,0.7s,mb5.4						
KKN	**Kakani**	**47.04**	**274**	*e*P	**P**	**07 36 05.4**	**0.0**
	comp=Z,32nm,0.7s,mb5.4						
KKN	**Kakani**	**47.04**	**274**	*e*P	**P**	**07 36 05.4**	**0.0**
KKN				pmax	pmax		
	comp=Z,32nm,0.7s,mb5.4						
DMN	**Daman**	**47.26**	**274**	*e*P	**P**	**07 36 07.1**	**0.0**
PMR	**Palmer**	**47.31**	**38**	*e*P	**P**	**07 36 08.5**	**+1.5**
PMR				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
PMR	**Palmer**	**47.31**	**38**	*e*P	**P**	**07 36 08.5**	**+1.5**
	comp=Z,2.2nm,0.6s,mb4.3						
GKN	**Gorkha**	**47.44**	**274**	*e*P	**P**	**07 36 08.4**	**-0.1**
	comp=Z,31nm,0.9s,mb5.3						
ILAR	**Eielsen Array**	**48.06**	**33**	P	**P**	**07 36 12.7**	**-0.1**
	comp=Z,2.3nm,0.9s,mb4.2,baz=264,slow=5.9,SNR=23						
ILAR	**Eielson Array**	**48.06**	**33**	P	**P**	**07 36 12.7**	**-0.1**
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KOLN	**Koldanda**	**48.35**	**275**	*e*P	**P**	**07 36 15.7**	**+0.1**
	comp=Z,9.4nm,0.6s,mb5.0						
BVAR	**Borovoye Array**	**48.87**	**311**	P	**P**	**07 36 18.9**	**-0.3**
	comp=Z,1.5nm,0.6s,mb4.2,baz=77,slow=7.4,SNR=8.8						
BVAR				PcP	PcP	07 37 43.5	-0.1
	comp=Z,1.4nm,0.8s,baz=81,slow=3.8,SNR=6.4						
BVAR	**Borovoye Array**	**48.87**	**311**	P	**P**	**07 36 18.9**	**-0.3**
BVAR						07 37 43.5	
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BRVK	**Borovoye**	**48.92**	**311**	*i* P	**P**	**07 36 19.0**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,8.0nm,2.5s,mb4.3						
BRVK	**Borovoye**	**48.92**	**311**	*e*P	**P**	**07 36 19.0**	**-0.6**
	comp=Z,1.8nm,0.6s,mb4.3						
AAK	**Ala-Archa**	**49.13**	**297**	P	**P**	**07 36 20.9**	**-0.4**
	comp=Z,1.0nm,0.3s,mb4.3,baz=229,slow=10,SNR=3.8						
AAK	**Ala-Archa**	**49.13**	**297**	P	**P**	**07 36 20.9**	**-0.5**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
AAK	**Ala-Archa**	**49.13**	**297**	P	**P**	**07 36 20.9**	**-0.4**
KSH	**Kashi**	**49.17**	**292**	*e*P	**P**	**07 36 27.5**	**+5.8**
KSH				pP	pP	07 36 31.3	+7.2
KSH				sP	sP	07 36 34.5	+9.5
KSH				PcP	PcP	07 37 49.3	+4.4
KSH				PP	PP	07 38 21.3	+6.1
KSH				ScP	ScP	07 41 43.8	+3.4
KSH				PcS	PcS	07 41 44.8	+3.5
KSH				S	**S**	**07 43 33.0**	**+5.7**
KSH				sS	sS	07 43 39.3	+8.1
KSH				SS	SS	07 47 00.5	+2.3
KSH				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.2						
KSH				pmax	pmax		
	comp=Z,68nm,4.4s						
KSH				LR	LR		
	comp=N,110nm,6.8s						
KSH				LR	LR		
	comp=E,94nm,6.3s						
KSH				LR	LR		
	comp=Z,130nm,5.5s						
ARU	**Arti**	**54.53**	**317**	*d i*P	**P**	**07 37 01.2**	**-0.3**
ARU						07 39 03.0	
ARU				S	**S**	**07 44 40.4**	**-0.2**
ARU				SS	SS	07 48 17.6	-5.0
ARU				pmax	pmax		
	comp=Z,17nm,1.7s,mb4.8						
ARU	**Arti**	**54.53**	**317**	*e*P	**P**	**07 37 01.1**	**-0.3**
	comp=Z,3.9nm,0.4s,mb4.8						
KBL	**Kabul**	**56.26**	**289**	*e*P	**P**	**07 37 14.6**	**+0.3**
KBL				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
KBL	**Kabul**	**56.26**	**289**	*e*P	**P**	**07 37 14.6**	**+0.3**
	comp=Z,7.5nm,0.8s,mb4.8						
AB31	**Akbulak array**	**56.28**	**309**	*ce*P	**P**	**07 37 13.5**	**-0.7**
AB31				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.6						
ABKAR	**Akbulak array**	**56.28**	**309**	*e*P	**P**	**07 37 13.3**	**-0.8**
	comp=Z,4.1nm,0.5s,mb4.7						
AKTK	**Aktyubinsk**	**56.98**	**311**	P	**P**	**07 37 18.0**	**-1.1**
AKTK				PcP	PcP	07 38 13.9	-0.4
AKTO	**Aktyubinsk**	**56.98**	**311**	P	**P**	**07 37 18.0**	**-1.1**
	comp=Z,2.8nm,0.7s,mb4.4,baz=73,slow=12,SNR=8.9						
AKTO				PcP	PcP	07 38 13.9	-0.4
	comp=Z,0.9nm,0.6s,baz=46,slow=7.2,SNR=3.6						
AKTO	**Aktyubinsk**	**56.98**	**311**	P	**P**	**07 37 18.0**	**-1.1**
AKTO						07 38 13.9	
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
WRAB	**Tennant Creek**	**58.99**	**187**	*e*P	**P**	**07 37 32.5**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
WRAB	**Tennant Creek**	**58.99**	**187**	*e*P	**P**	**07 37 32.5**	**-0.9**
	comp=Z,4.0nm,0.7s,mb4.6						
ARCES	**ARCESS Array B**	**61.94**	**339**	P	**P**	**07 37 52.3**	**-0.8**
	comp=Z,1.7nm,0.9s,mb4.2,baz=51,slow=6.4,SNR=5.5						
ARCES	**ARCESS Array B**	**61.94**	**339**	P	**P**	**07 37 52.3**	**-0.8**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
YKA	**Yellowknife Ar**	**62.31**	**30**	P	**P**	**07 37 56.8**	**+1.2**
	comp=Z,0.5nm,0.6s,mb3.8,baz=302,slow=5.8,SNR=2.8						
YKA	**Yellowknife Ar**	**62.31**	**30**	P	**P**	**07 37 56.8**	**+1.2**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**62.73**	**187**	P	**P**	**07 37 58.5**	**-0.3**
	comp=Z,2.0nm,0.7s,mb4.3,baz=2.3,slow=4.9,SNR=17						
ASAR	**Alice Springs**	**62.73**	**187**	P	**P**	**07 37 58.5**	**-0.3**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
JOF	**Joensuu**	**63.96**	**331**	*e*P	**P**	**07 38 05.1**	**-1.5**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
JOF	**Joensuu**	**63.96**	**331**	*ep*	**P**	**07 38 05.1**	**-1.5**
	comp=Z,3.2nm,0.6s,mb4.5						
KAF	**Kangasniemi**	**66.29**	**332**	*e*P	**P**	**07 38 20.4**	**-1.4**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
KAF	**Kangasniemi**	**66.29**	**332**	*ep*	**P**	**07 38 20.4**	**-1.4**
	comp=Z,1.3nm,0.4s,mb4.3						
FINES	**FINESS Array B**	**66.81**	**332**	P	**P**	**07 38 24.1**	**-0.9**
	comp=Z,4.3nm,0.7s,mb4.6,baz=56,slow=7.1,SNR=12						
FINES	**FINESS Array B**	**66.81**	**332**	P	**P**	**07 38 24.1**	**-0.9**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SUMG	**Summit**	**68.66**	**360**	*e*P	**P**	**07 38 37.2**	**+0.6**
	comp=Z,11nm,1.1s,mb4.7						
KIV	**Kislovodsk**	**69.23**	**310**	*e*P	**P**	**07 38 40.8**	**+0.2**
KIV				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.1						
SOC	**Sochi**	**71.20**	**311**	*e*P	**P**	**07 38 50.4**	**-2.3**
SOC				*e*		07 41 31.1	
SOC				*e*S	S	07 47 56.9	-13
SOC				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
NB2	**NORSAR Subarra**	**72.14**	**337**	P	**P**	**07 38 57.0**	**-1.0**
	comp=Z,2.2nm,0.6s,mb4.3,baz=40,slow=6.2						
NOA	**NORSAR Array B**	**72.14**	**337**	P	**P**	**07 38 57.4**	**-0.6**
	comp=Z,3.1nm,0.8s,mb4.3,baz=39,slow=6.1,SNR=11						
NOA	**NORSAR Array B**	**72.14**	**337**	P	**P**	**07 38 57.4**	**-0.6**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NOA	**NORSAR Array B**	**72.14**	**337**	P	**P**	**07 38 57.4**	**-0.6**
AKASG	**Malin Array Be**	**72.41**	**322**	P	**P**	**07 38 58.9**	**-1.0**
	comp=Z,2.6nm,0.6s,mb4.3,baz=48,slow=5.8,SNR=11						
AKASG	**Malin Array Be**	**72.41**	**322**	P	**P**	**07 38 58.9**	**-0.9**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
HRY	**Holter Researc**	**72.82**	**43**	*e*P	**P**	**07 39 03.6**	**+1.3**
LRM	**Limekiln Ridge**	**73.04**	**44**	*e*P	**P**	**07 39 06.0**	**+2.3**
CMB	**Columbia Colle**	**73.09**	**55**	*e*P	**P**	**07 39 06.0**	**+1.9**
CMB				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
CMB	**Columbia Colle**	**73.09**	**55**	*e*P	**P**	**07 39 06.0**	**+1.9**
	comp=Z,2.6nm,0.9s,mb4.2						
DLMT	**Dillon**	**73.25**	**45**	*e*P	**P**	**07 39 07.3**	**+2.4**
	comp=Z,2.7nm,0.7s,mb4.3						
IMW	**Indian Meadow**	**75.09**	**45**	*e*P	**P**	**07 39 18.6**	**+2.9**
	comp=Z,1.5nm,0.8s,mb4.0						
DUG	**Dugway**	**76.40**	**49**	*e*P	**P**	**07 39 25.6**	**+2.4**
DUG				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
DUG	**Dugway**	**76.40**	**49**	*e*P	**P**	**07 39 25.6**	**+2.4**
	comp=Z,3.7nm,1.0s,mb4.3						
BUR08	**Bucovina Ar. S**	**76.42**	**321**	*e*P	**P**	**07 39 23.4**	**+0.2**
BRTR	**Keskin Array B**	**77.16**	**311**	P	**P**	**07 39 27.4**	**-0.2**
	comp=Z,1.1nm,0.7s,mb3.9,baz=72,slow=4.0,SNR=6.4						
BRTR	**Keskin Array B**	**77.16**	**311**	P	**P**	**07 39 27.4**	**-0.1**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CCUT	**Cedar City**	**77.76**	**51**	*e*P	**P**	**07 39 33.6**	**+2.6**
	comp=Z,2.5nm,1.3s,mb4.0						
MORC	**Moravsky Berou**	**78.41**	**326**	*e*P	**P**	**07 39 34.5**	**+0.2**
MORC				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
MORC	**Moravsky Berou**	**78.41**	**326**	*e*P	**P**	**07 39 34.5**	**+0.2**
	comp=Z,1.6nm,0.6s,mb4.1						
CLL	**Collm**	**79.11**	**330**	*e*P	**P**	**07 39 37.0**	**-1.1**
CLL	**Collm**	**79.11**	**330**	*e*P	**P**	**07 39 37.0**	**-1.1**
PV10	**Paradox Valley**	**79.80**	**49**	*e*P	**P**	**07 39 43.2**	**+1.1**
	comp=Z,127nm,0.9s						
PV01	**Paradox Valley**	**80.24**	**48**	*e*P	**P**	**07 39 46.2**	**+1.7**
SMCO	**Snowmass**	**80.45**	**47**	*e*P	**P**	**07 39 48.0**	**+2.4**
	comp=Z,4.1nm,1.4s,mb4.2						
KHC	**Kasperske Hory**	**80.57**	**328**	*e*P	**P**	**07 39 45.0**	**-1.1**
KHC	**Kasperske Hory**	**80.57**	**328**	*e*P	**P**	**07 39 45.0**	**-1.1**
ANMO	**Albuquerque**	**83.65**	**50**	*e*P	**P**	**07 40 04.1**	**+1.6**
ANMO				pmax	pmax		
	comp=Z,31nm,2.7s						
ANMO	**Albuquerque**	**83.65**	**50**	*e*P	**P**	**07 40 04.1**	**+1.6**
	comp=Z,31nm,2.7s,mb5.0						
CABF	**La Chapelle**	**85.59**	**331**	*e*P	**P**	**07 40 11.3**	**-0.8**
LOR	**Lormes**	**85.87**	**332**	*e*P	**P**	**07 40 12.5**	**-1.0**
	comp=Z,11nm,0.9s,mb4.8						
LOR	**Lormes**	**85.87**	**332**	*e*P	**P**	**07 40 12.5**	**-1.0**
LOR				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.8						
LOR	**Lormes**	**85.87**	**332**	*e*P	**P**	**07 40 12.5**	**-1.0**
	comp=Z,5.7nm,0.9s,mb4.8						
SSF	**Saint Saulge**	**86.17**	**332**	*e*P	**P**	**07 40 14.2**	**-0.8**
	comp=Z,14nm,1.1s,mb4.8						
SSF	**Saint Saulge**	**86.17**	**332**	*e*P	**P**	**07 40 14.2**	**-0.8**
SSF				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.8						
SSF	**Saint Saulge**	**86.17**	**332**	*e*P	**P**	**07 40 14.2**	**-0.8**
	comp=Z,7.2nm,1.1s,mb4.8						
LPL	**La Plagne**	**86.25**	**330**	*e*P	**P**	**07 40 14.7**	**-0.7**
LPG	**La Plagne**	**86.25**	**330**	*e*P	**P**	**07 40 15.0**	**-0.4**
	comp=Z,7.3nm,0.7s,mb4.7						
LPG	**La Plagne**	**86.25**	**330**	*e*P	**P**	**07 40 15.0**	**-0.4**
LPG				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.8						
LPG	**La Plagne**	**86.25**	**330**	*e*P	**P**	**07 40 15.0**	**-0.4**
	comp=Z,3.7nm,0.7s,mb4.7						
SMF	**Signal de Mont**	**86.40**	**332**	*e*P	**P**	**07 40 15.1**	**-1.0**
AVF	**Avril sur Loir**	**86.45**	**332**	*e*P	**P**	**07 40 15.6**	**-0.8**
	comp=Z,13nm,0.9s,mb4.9						
AVF	**Avril sur Loir**	**86.45**	**332**	*e*P	**P**	**07 40 15.6**	**-0.8**
AVF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.8						
AVF	**Avril sur Loir**	**86.45**	**332**	*e*P	**P**	**07 40 15.6**	**-0.8**
	comp=Z,6.4nm,0.9s,mb4.8						
GRR	**Gorron**	**86.52**	**336**	*e*P	**P**	**07 40 15.9**	**-0.8**
TCF	**Toulx Ste Croi**	**87.30**	**333**	*e*P	**P**	**07 40 19.9**	**-0.6**
MFF	**Saint Martin d**	**87.84**	**334**	*e*P	**P**	**07 40 22.5**	**-0.6**
CAF	**Calviac**	**88.52**	**332**	*e*P	**P**	**07 40 26.1**	**-0.2**
	comp=Z,7.8nm,0.8s,mb4.8						
CAF	**Calviac**	**88.52**	**332**	*e*P	**P**	**07 40 26.1**	**-0.2**
CAF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.8						
CAF	**Calviac**	**88.52**	**332**	*e*P	**P**	**07 40 26.1**	**-0.2**
	comp=Z,3.9nm,0.8s,mb4.8						
TXAR	**Lajitas Array**	**89.27**	**52**	P	**P**	**07 40 30.4**	**+0.3**
	comp=Z,0.6nm,0.8s,mb4.0,baz=306,slow=4.2,SNR=7.7			

Honshu, Japan
ISC 29 07:35:53.8±0.5, 39°09'N±0°02×140°69E±0°02, h6km±3km, h24km±1.9km: pP-P, n460, σ0.74/481, mb4.7/109, MS3.5/14, 97C-110D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.31**	**237**	⇑P	**Pg**	**07 36 01.3**	**+1.5**
JYK				*e*S	**Sg**	**07 36 07.0**	**+3.2**
JRG	**Rokugo**	**0.31**	**352**	⇓P	**Pg**	**07 36 00.5**	**+0.6**
JRG				S	**Sg**	**07 36 06.8**	**+2.8**
JMK	**Ichinoseki**	**0.43**	**108**	⇓P	**Pg**	**07 35 58.8**	**-3.3**
JMK				S	**Sg**	**07 36 02.8**	**-5.0**
JOM	**Ohasama**	**0.61**	**50**	⇑P	**Pg**	**07 36 03.1**	**-2.3**
JOM				*e*S	**Sg**	**07 36 10.5**	**-2.8**
JOU	**Okura**	**0.72**	**182**	⇓P	**Pg**	**07 36 06.8**	**-0.8**
JOU				S	**Sg**	**07 36 16.2**	**-0.7**
JIO	**Ouri**	**0.81**	**141**	⇓P	**Pg**	**07 36 06.3**	**-3.1**
JIO				*e*S	**Sg**	**07 36 16.7**	**-3.3**
JYA	**Atsumi**	**0.91**	**237**	⇑P	**Pg**	**07 36 12.1**	**+0.9**
JYA				*e*S	**Sg**	**07 36 26.6**	**+3.6**
MAJO	**Matsushiro**	**3.21**	**219**	*e*Pn	**Pn**	**07 36 46.3**	**+1.6**
MAT	**Matsushiro**	**3.21**	**219**	P	**Pn**	**07 36 46.2**	**+1.5**
MAT				S	**Sn**	**07 37 27.2**	**+4.0**
MJAR	**Matsushiro Arr**	**3.21**	**218**	Pn	**Pn**	**07 36 46.4**	**+1.7**
	8.4nm,0.3s,baz=28,slow=13,SNR=94						
MJAR				Pg	**Pg**	**07 36 52.0**	**-3.3**
	15nm,0.3s,baz=27,slow=14,SNR=46						
MJAR				Lg		07 37 37.7	
	1.2nm,0.3s,baz=119,slow=46,SNR=3.3						
ERM	**Erimo**	**3.48**	**32**	*e*P	**Pn**	**07 36 48.7**	**+0.4**
ASAJ	**Asahikawa**	**5.22**	**15**	Pn	**Pn**	**07 37 12.5**	**+0.2**
	5.4nm,0.3s,baz=248,slow=15,SNR=16						
ASAJ	**Asahikawa**	**5.22**	**15**	P	**Pn**	**07 37 12.5**	**+0.2**
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**6.28**	**36**	⇑*i*P	**Pn**	**07 37 25.6**	**-1.2**
YUK				*e*S	**Sn**	**07 38 34.4**	**-4.5**
YUK				pmax	pmax		
	comp=Z,130nm,0.5s						
YUK				pmax	pmax		
	comp=N,60nm,0.3s						
YUK				pmax	pmax		
	comp=E,90nm,0.5s						
YUK				pmax	pmax		
	comp=Z,300nm,1.3s						
YUK				smax			
	comp=N,200nm,0.4s						
YUK				smax			
	comp=E,110nm,0.4s						
YUK				smax			
	comp=N,200nm,1.2s						
YUK				smax			
	comp=E,600nm,1.2s						
YUK				MLR	MLR		
	comp=N,500nm,14.0s						
YUK				MLR	MLR		
	comp=Z,400nm,14.0s						
YUK				MLR	MLR		
	comp=E,400nm,16.0s						
YSS	**Yuzh-Sakhalins**	**8.01**	**10**	*e*P	**Pn**	**07 37 51.5**	**+1.0**
YSS				*e*S	**Sn**	**07 39 22.0**	**+0.7**
YSS				MLR	MLR		
	comp=N,300nm,13.0s						
YSS				MLR	MLR		
	comp=Z,300nm,13.0s						
KUR	**Kuril'sk**	**8.13**	**39**	P	**Pn**	**07 37 52.0**	**-0.2**
KUR				S	**Sn**	**07 39 19.0**	**-5.3**
KUR				pmax	pmax		
	comp=Z,140nm,0.9s						
KUR				smax			
	comp=N,130nm,1.0s						
MDJ	**Mudanjiang**	**9.95**	**307**	P	**Pn**	**07 38 21.5**	**+4.4**
MDJ				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MDJ				pmax	pmax		
	comp=Z,72nm,4.4s						
KSRS	**Korea Array**	**10.17**	**265**	Pn	**Pn**	**07 38 23.1**	**+2.9**
	comp=Z,2.1nm,0.3s,baz=78,slow=14,SNR=41						
KSRS				Sn	**Sn**	**07 40 22.6**	**+8.0**
	comp=Z,2.7nm,0.3s,baz=71,slow=23,SNR=20						
KSRS				LR	LR	07 41 53.9	
	comp=Z,194nm,19.0s,baz=252,slow=35						
KSRS	**Korea Array**	**10.17**	**265**	P	**Pn**	**07 38 23.2**	**+3.0**
KSRS						07 40 22.6	
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KSRS				smax			
	comp=N,3.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,194nm,19.0s						
HABR	**Khabarovsk**	**10.23**	**338**	*e*P	**Pn**	**07 38 26.0**	**+5.1**
HABR						07 40 12.2	
HABR				pmax	pmax		
	comp=N,25nm,1.5s						
HABR				pmax	pmax		
	comp=E,23nm,1.5s						
HABR				pmax	pmax		
	comp=Z,72nm,1.4s						
HABR				MLR	MLR		
	comp=Z,130nm,18.0s						
KLR	**Kul'dur**	**11.99**	**331**	*e*P	**Pn**	**07 38 45.0**	**0.0**
KLR				pmax	pmax		
	comp=E,43nm,1.4s						
KLR				pmax	pmax		
	comp=Z,38nm,1.4s						
CBIJ	**Chichi jima**	**12.02**	**174**	LR	LR	07 42 27.6	
	comp=Z,122nm,18.7s,baz=350,slow=33						
CN2	**Changchun**	**12.37**	**297**	*e*P	**Pn**	**07 38 51.3**	**+1.1**
CN2				*es*P		07 39 00.3	
CN2				*e*S	**Sn**	**07 41 07.5**	**-0.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,300nm,13.0s						
CN2				LR	LR		
	comp=E,400nm,13.0s						
CN2				LR	LR		
	comp=Z,400nm,14.0s						
PETK	**Petropavlovsk-**	**18.26**	**34**	P	**Pn**	**07 40 06.6**	**-0.9**
	baz=13,slow=21,SNR=3.0						
PETK				LR	LR	07 48 15.2	
	comp=Z,79nm,18.4s,baz=231,slow=41						
BJI	**Beijing**	**18.91**	**281**	P	**Pn**	**07 40 15.3**	**-0.3**
BJI				S	**Sn**	**07 43 44.5**	**-3.0**
BJI				pmax	pmax		
	comp=Z,19nm,0.7s						
BJI				pmax	pmax		
	comp=Z,160nm,4.3s						
BJI				LR	LR		
	comp=N,210nm,10.2s						
BJI				LR	LR		
	comp=E,190nm,11.4s						
BJI				LR	LR		
	comp=Z,98nm,28.5s						
BJT	**Baijiatuau**	**18.92**	**281**	*e*P	**Pn**	**07 40 15.4**	**-0.3**
BJT				pmax	pmax		
	comp=Z,116nm,2.0s						
BJT	**Baijiatuau**	**18.92**	**281**	*e*Pn	**Pn**	**07 40 15.4**	**-0.3**
	comp=Z,116nm,2.0s						
NJ2	**Nanjing**	**19.08**	**255**	*e*P	**Pn**	**07 40 16.3**	**-1.3**
NJ2				pP	pP	07 40 24.8	+6.1
NJ2				sP	sP	07 40 28.8	+9.3
NJ2				PP		07 40 32.5	
NJ2				S	**Sn**	**07 43 42.5**	**-9.0**
NJ2				sS	sS	07 43 58.0	+1.6
NJ2				pmax	pmax		
	comp=Z,610nm,4.2s						
NJ2				LR	LR		
	comp=N,520nm,13.4s						
NJ2				LR	LR		
	comp=E,420nm,15.2s						
NJ2				LR	LR		
	comp=Z,1μm,15.8s						
HHC	**Hu-ho-hao-te**	**22.35**	**284**	*e*P	**P**	**07 40 51.3**	**-0.9**
HHC				sP	sP	07 41 00.8	+5.9
HHC				PP		07 41 18.0	
HHC				PcP	PcP	07 44 48.5	+1.1
HHC				S	**S**	**07 44 49.3**	**-9.0**
HHC				sS	sS	07 44 59.5	-1.7
HHC				ScS	ScS	07 52 06.5	-3.8
HHC				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.5						
HHC				pmax	pmax		
	comp=Z,170nm,5.2s						
HHC				LR	LR		
	comp=N,300nm,12.7s,MS4.1						
HHC				LR	LR		
	comp=E,290nm,12.3s,MS4.1						
HHC				LR	LR		
	comp=Z,230nm,12.2s,MS3.8						
YAK	**Yakutsk**	**23.95**	**347**	*e*P	**P**	**07 41 06.0**	**-2.3**
YAK				*e**PP		07 41 13.0	
YAK				*e*PPP		07 41 44.0	
YAK				*e*		07 44 48.5	
YAK				*e*S	**S**	**07 45 18.3**	**-6.6**
YAK				*e*SSS		07 46 09.1	
YAK				*e*		07 52 09.6	
YAK				pmax	pmax		
	comp=Z,43nm,1.1s,mb4.8						
YAK				pmax	pmax		
	comp=N,10.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.4s						
YAK				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.4						
YAK				pmax	pmax		
	comp=N,9.0nm,0.9s						
YAK				smax			
	comp=E,83nm,2.3s						
YAK				smax			
	comp=N,151nm,2.8s						
YAK				MLR	MLR		
	comp=Z,84nm,14.0s,MS3.4						
YAK				MLR	MLR		
	comp=E,69nm,17.0s						
YAK	**Yakutsk**	**23.95**	**347**	*e*P	**P**	**07 41 06.5**	**-1.9**
	comp=E,38nm,0.9s,mb4.8						
SEY	**Seymchan**	**24.90**	**13**	*e*P	**P**	**07 41 17.8**	**+0.8**
GUMO	**Guam**	**25.66**	**171**	LR	LR	07 51 36.0	
	comp=E,33nm,18.6s,MS2.9,baz=0.9,slow=37						
ULN	**Ulaanbaatar**	**25.77**	**301**	*e*P	**P**	**07 41 24.4**	**-0.7**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.1						
ULN	**Ulaanbaatar**	**25.77**	**301**	*e*P	**P**	**07 41 24.4**	**-0.6**
	comp=Z,4.5nm,0.7s,mb4.1						
SONM	**Songino Array**	**26.21**	**301**	P	**P**	**07 41 28.5**	**-0.5**
	comp=Z,2.2nm,0.9s,mb3.7,baz=105,slow=12,SNR=8.8						
SONM				LR	LR	07 52 04.0	
	comp=Z,66nm,18.3s,MS3.2,baz=116,slow=37						
SONM	**Songino Array**	**26.21**	**301**	P	**P**	**07 41 28.5**	**-0.5**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SONM				MLR	MLR		
	comp=Z,66nm,18.3s						
SONM	**Songino Array**	**26.21**	**301**	P	**P**	**07 41 28.5**	**-0.5**
SONM				LR	LR	07 52 04.0	
ENH	**Enshi**	**27.02**	**261**	*e*P	**P**	**07 41 36.8**	**+0.3**
	comp=Z,15nm,0.6s,mb4.7						
ZAK	**Zakamensk**	**28.58**	**306**	*e*P	**P**	**07 41 48.6**	**-1.7**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.5						
TLY	**Talaya**	**28.58**	**308**	*e*P	**P**	**07 41 51.4**	**+1.1**
TLY				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
TLY				MLR	MLR		
	comp=Z,72nm,17.0s,MS3.3						
LZH	**Lanzhou**	**29.23**	**276**	*e*P	**P**	**07 41 59.5**	**+3.3**
LZH				pP	pP	07 42 03.0	+4.9
LZH				sP	sP	07 42 04.5	+5.6
LZH				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.8						
GYA	**Guiyang**	**31.07**	**256**	P	**P**	**07 42 12.8**	**+0.2**
GYA				PP	PP	07 43 15.5	-7.2
GYA				PcP	PcP	07 45 09.0	+0.8
GYA				S	**S**	**07 47 15.5**	**-2.8**
GYA				ScP	ScP	07 48 49.8	-1.6
GYA				ScS	ScS	07 52 45.0	-3.6
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
GYA				pmax	pmax		
	comp=Z,70nm,4.9s						
GYA				LR	LR		
	comp=N,410nm,15.8s,MS4.3						
GYA				LR	LR		
	comp=E,380nm,16.2s,MS4.3						
GYA				LR	LR		
	comp=Z,450nm,17.9s,MS4.2						
CD2	**Chengdu**	**31.17**	**266**	P	**P**	**07 42 14.5**	**+1.1**
CD2				pP	pP	07 42 21.8	+6.4
CD2				sP	sP	07 42 25.3	+9.1
CD2				PP	PP	07 43 17.8	-5.8
CD2				S	**S**	**07 47 17.5**	**-2.2**
CD2				sS	sS	07 47 29.5	+6.6
CD2				SS	SS	07 49 04.5	-28
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.9						
CD2				pmax	pmax		
	comp=Z,360nm,5.2s						
CD2				LR	LR		
	comp=N,570nm,7.1s						
CD2				LR	LR		
	comp=Z,290nm,6.5s						
GTA	**Gaotai**	**31.47**	**284**	*e*P	**P**	**07 42 17.0**	**+1.0**
GTA				pP	pP	07 42 23.0	+5.1
GTA				sP	sP	07 42 26.0	+7.3
GTA				S	**S**	**07 47 25.0**	**+0.8**
GTA				sS	sS	07 47 34.8	+7.4
GTA				SS	SS	07 49 16.0	-23
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.3						
GTA				pmax	pmax		
	comp=Z,49nm,4.2s						
GTA				LR	LR		
	comp=N,300nm,18.0s,MS4.1						
GTA				LR	LR		
	comp=E,130nm,16.2s,MS4.1						
GTA				LR	LR		
	comp=Z,210nm,15.3s,MS3.9						
BILL	**Bilibino**	**32.23**	**18**	*e*P	**P**	**07 42 23.6**	**+1.2**
BILL				*e**PP	pP	07 42 31.9	+7.6
BILL				*e*S	**S**	**07 47 34.2**	**-1.4**
BILL				*e*SS	SS	07 49 30.7	-23
BILL				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.4						
TIXI	**Tiksi**	**33.19**	**353**	*e*P	**P**	**07 42 30.9**	**+0.2**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
QIZ	**Qiongzhong**	**33.32**	**242**	*e*P	**P**	**07 42 32.0**	**-0.4**
QIZ				*e*S	**S**	**07 47 52.3**	**-1.0**
QIZ				LR	LR		
	comp=N,220nm,4.2s						
QIZ				LR	LR		
	comp=Z,180nm,5.8s						
KMI	**Kunming**	**34.77**	**258**	P	**P**	**07 42 45.5**	**+0.6**
KMI				pP	pP	07 42 52.0	+5.1
KMI				sP	sP	07 42 55.0	+7.3
KMI				PP	PP	07 44 03.0	-0.7
KMI				S	**S**	**07 48 13.5**	**-2.2**
KMI				sS	sS	07 48 24.8	+5.8
KMI				SS	SS	07 50 26.0	-20
KMI				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
KMI				pmax	pmax		
	comp=Z,61nm,4.8s						
KMI				LR	LR		
	comp=N,180nm,23.3s						
KMI				LR	LR		
	comp=E,250nm,17.5s						
KMI				LR	LR		
	comp=Z,230nm,19.1s,MS3.9						
WMQ	**Urumqi**	**39.44**	**294**	*e*P	**P**	**07 43 25.5**	**+1.1**
WMQ				pP	pP	07 43 32.8	+6.4
WMQ				sP	sP	07 43 36.3	+9.1
WMQ				PP	PP	07 45 00.5	+5.8
WMQ				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.5						
WMQ				pmax	pmax		
	comp=Z,140nm,4.3s						
WMQ				LR	LR		
	comp=N,100nm,20.0s						
WMQ				LR	LR		
	comp=Z,120nm,19.5s,MS3.7						
ZAA0	**Zalesovo Array**	**40.13**	**311**	*e*P	**P**	**07 43 29.5**	**-0.5**
ZALV	**Zalesovo Beam**	**40.13**	**311**	P	**P**	**07 43 29.6**	**-0.4**
	comp=Z,9.2nm,0.8s,mb4.6,baz=87,slow=7.6,SNR=28						
ZALV				PcP	PcP	07 45 33.7	-0.7
	comp=Z,1.2nm,0.4s,baz=96,slow=3.0,SNR=4.2						
ZALV				LR	LR	08 00 37.1	
	comp=Z,34nm,18.9s,MS3.2,baz=241,slow=37						
ZALV	**Zalesovo Beam**	**40.13**	**311**	P	**P**	**07 43 29.6**	**-0.4**
ZALV						07 45 33.7	
ZALV				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
ZALV				MLR	MLR		
	comp=Z,34nm,18.9s,MS3.2						
ZALV	**Zalesovo Beam**	**40.13**	**311**	P	**P**	**07 43 29.6**	**-0.4**
ZALV				PcP	PcP	07 45 33.7	-0.7
ZALV				LR	LR	08 00 37.1	
NVS	**Novosibirsk**	**41.03**	**312**	*e*P	**P**	**07 43 36.3**	**-1.1**
NVS				pmax	pmax		
	comp=Z,11nm,1.4s,mb4.3						
NVS				pmax	pmax		
	comp=N,12nm,1.1s						
CHTO	**Chiang Mai**	**41.30**	**253**	*e*P	**P**	**07 43 40.3**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,37nm,2.1s,mb4.7						
CHTO	**Chiang Mai**	**41.30**	**253**	*e*P	**P**	**07 43 40.2**	**+0.2**
	comp=Z,37nm,2.1s,mb4.7						
CMAR	**Chiang Mai Arr**	**41.52**	**252**	P	**P**	**07 43 42.2**	**+0.4**
	comp=Z,1.4nm,0.6s,mb3.7,baz=47,slow=6.1,SNR=8.1						
CMAR				PcP	PcP	07 45 38.4	-1.0
	comp=Z,1.2nm,0.7s,baz=16,slow=2.4,SNR=5.5						
CMAR				LR	LR	08 02 35.8	
	comp=Z,45nm,19.8s,MS3.3,baz=60,slow=38						
CMAR	**Chiang Mai Arr**	**41.52**	**252**	P	**P**	**07 43 42.3**	**+0.4**
CMAR						07 45 38.4	
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CMAR				MLR	MLR		
	comp=Z,45nm,19.8s						
CMAR	**Chiang Mai Arr**	**41.52**	**252**	P	**P**	**07 43 42.2**	**+0.4**
CMAR				PcP	PcP	07 45 38.4	-1.0
CMAR				LR	LR	08 02 35.8	
MK31	**Makanchi Array**	**42.57**	**300**	*i*P	**P**	**07 43 50.0**	**-0.2**
MK31				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.7						
MK31	**Makanchi Array**	**42.57**	**300**	*e*P	**P**	**07 43 50.1**	**-0.1**
MKAR	**Makanchi Array**	**42.57**	**300**	P	**P**	**07 43 50.0**	**-0.1**
	comp=Z,8.0nm,0.8s,mb4.5,baz=86,slow=9.6,SNR=70						
MKAR				LR	LR	08 01 39.3	
	comp=Z,41nm,20.4s,MS3.3,baz=87,slow=36						
MKAR	**Makanchi Array**	**42.57**	**300**	P	**P**	**07 43 50.0**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MKAR				MLR	MLR		
	comp=Z,41nm,20.5s						
KURK	**Kurchatov**	**44.24**	**306***c*	*i*P	**P**	**07 44 02.9**	**-0.7**
KURK				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.0						
KURK	**Kurchatov**	**44.24**	**306**	*e*P	**P**	**07 44 03.0**	**-0.5**
	comp=Z,20nm,0.8s,mb4.9						
ODAN	**Odare**	**45.76**	**271**	*e*P	**P**	**07 44 16.6**	**+0.6**
	comp=Z,23nm,0.9s,mb5.1						
KDAK	**Kodiak Island**	**45.98**	**43**	P	**P**	**07 44 15.9**	**-1.3**
	comp=Z,4.9nm,0.5s,mb4.7,baz=222,slow=3.3,SNR=4.9						
KDAK	**Kodiak Island**	**45.98**	**43**	P	**P**	**07 44 15.9**	**-1.4**
KDAK				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
RAMN	**Ramite**	**46.33**	**272**	*e*P	**P**	**07 44 20.5**	**0.0**
	comp=Z,54nm,1.0s,mb5.5						
GUN	**Gumba**	**46.42**	**273**	*e*P	**P**	**07 44 22.0**	**+0.8**
	comp=Z,93nm,0.8s,mb5.8						
KKN	**Kakani**	**46.95**	**274**	*e*P	**P**	**07 44 25.9**	**+0.6**
	comp=Z,77nm,0.8s,mb5.7						
KKN	**Kakani**	**46.95**	**274**	*e*P	**P**	**07 44 25.9**	**+0.6**
KKN				pmax	pmax		
	comp=Z,77nm,0.8s,mb5.7						
PKI	**Pulchoki**	**46.95**	**273**	*e*P	**P**	**07 44 25.5**	**+0.1**
DMN	**Daman**	**47.17**	**273**	*e*P	**P**	**07 44 26.6**	**-0.5**
PMR	**Palmer**	**47.34**	**38**	*e*P	**P**	**07 44 27.6**	**-0.3**
PMR				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
PMR	**Palmer**	**47.34**	**38**	*e*P	**P**	**07 44 27.6**	**-0.3**
	comp=Z,4.3nm,0.9s,mb4.4						
GKN	**Gorkha**	**47.35**	**274**	*e*P	**P**	**07 44 28.6**	**+0.2**
	comp=Z,59nm,0.9s,mb5.5						
ILAR	**Eielson Array**	**48.08**	**33**	P	**P**	**07 44 33.0**	**-0.7**
	comp=Z,2.7nm,0.8s,mb4.3,baz=273,slow=6.2,SNR=30						
ILAR	**Eielson Array**	**48.08**	**33**	P	**P**	**07 44 33.0**	**-0.6**
ILAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TKM2	**Tokmak 2**	**48.18**	**297**	P	**P**	**07 44 36.0**	**+1.3**
	SNR=14						
KOLN	**Koldanda**	**48.26**	**274**	*e*P	**P**	**07 44 36.1**	**+0.6**
	comp=Z,16nm,0.7s,mb5.2						
KZA	**Kyzart**	**48.70**	**296**	P	**P**	**07 44 40.3**	**+1.6**
	SNR=8.9						
KBK	**Karagaybulak**	**48.72**	**296**	P	**P**	**07 44 39.9**	**+1.1**
	SNR=11						
BVAR	**Borovoye Array**	**48.78**	**311**	P	**P**	**07 44 38.9**	**-0.3**
	comp=Z,3.1nm,0.6s,mb4.5,baz=78,slow=8.4,SNR=20						
BVAR				PcP	PcP	07 46 03.6	-0.4
	comp=Z,3.3nm,0.8s,baz=83,slow=4.6,SNR=9.0						
BVAR	**Borovoye Array**	**48.78**	**311**	P	**P**	**07 44 38.9**	**-0.3**
BVAR						07 46 03.6	
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
USP	**Ospenovka**	**48.83**	**297**	P	**P**	**07 44 40.2**	**+0.6**
	SNR=8.2						
BRVK	**Borovoye**	**48.84**	**311**	*e*P	**P**	**07 44 39.0**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
BRVK	**Borovoye**	**48.84**	**311**	*e*P	**P**	**07 44 39.0**	**-0.6**
	comp=Z,4.2nm,0.8s,mb4.5						
AAK	**Ala-Archa**	**49.04**	**297**	P	**P**	**07 44 41.9**	**+0.6**
	comp=Z,1.1nm,0.3s,mb4.3,baz=19,slow=4.1,SNR=9.1						
AAK	**Ala-Archa**	**49.04**	**297**	P	**P**	**07 44 41.9**	**+0.6**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
KSH	**Kashi**	**49.08**	**292**	P	**P**	**07 44 46.3**	**+4.7**
KSH				pP	pP	07 44 53.5	+10
KSH				sP	sP	07 44 56.8	+12
KSH				PcP	PcP	07 46 08.8	+3.5
KSH				PP	PP	07 46 41.0	+6.0
KSH				ScP	ScP	07 50 00.5	-0.3
KSH				PcS	PcS	07 50 03.3	+1.7
KSH				S	**S**	**07 51 50.5**	**+3.7**
KSH				sS	sS	07 52 02.8	+13
KSH				ScS	ScS	07 54 33.5	-0.9
KSH				SS	SS	07 55 18.3	+0.8
KSH				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.8						
KSH				pmax	pmax		
	comp=Z,57nm,5.8s						
KSH				LR	LR		
	comp=N,180nm,6.0s						
KSH				LR	LR		
	comp=E,100nm,6.0s						
KSH				LR	LR		
	comp=Z,120nm,5.8s						
EKS2	**Erkin-Say**	**49.53**	**297**	P	**P**	**07 44 45.6**	**+0.6**
	SNR=5.6						
MENT	**Mentasta**	**49.69**	**36**	*e*P	**P**	**07 44 46.0**	**+0.1**
AML	**Almayashu**	**49.77**	**296**	P	**P**	**07 44 48.1**	**+1.2**
	SNR=13						
KAKA	**Kakadu**	**52.10**	**190**	*e*P	**P**	**07 45 04.3**	**-0.3**
HYT	**Haines Junctio**	**53.01**	**37**	*e*P	**P**	**07 45 12.5**	**+1.6**
SVE	**Sverdlovsk**	**53.24**	**317**‖	*e*P	**P**	**07 45 12.7**	**0.0**
SVE				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.1						
ARU	**Arti**	**54.45**	**317***d*	*i*P	**P**	**07 45 21.4**	**-0.2**
ARU						07 47 21.9	
ARU				S	**S**	**07 53 00.2**	**-0.1**
ARU				SS	SS	07 56 43.8	+1.7
ARU				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
ARU	**Arti**	**54.45**	**317**	*e*P	**P**	**07 45 21.1**	**-0.4**
	comp=Z,15nm,0.6s,mb5.1						
KBL	**Kabul**	**56.17**	**289**	*e*P	**P**	**07 45 34.3**	**0.0**
KBL				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.2						
KBL	**Kabul**	**56.17**	**289**	*e*P	**P**	**07 45 34.3**	**+0.1**
	comp=Z,24nm,1.0s,mb5.2						
AB31	**Akbulak array**	**56.20**	**309**	*i*P	**P**	**07 45 33.7**	**-0.5**
AB31				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb5.0						
ABKAR	**Akbulak array**	**56.20**	**309**	*e*P	**P**	**07 45 33.3**	**-0.9**
	comp=Z,8.2nm,0.6s,mb4.9						
AKTK	**Aktyubinsk**	**56.89**	**311**	P	**P**	**07 45 38.6**	**-0.6**
AKTK				PcP	PcP	07 46 33.9	-0.7
AKTO	**Aktyubinsk**	**56.89**	**311**	P	**P**	**07 45 38.6**	**-0.6**
	comp

AKTO PcP PcP 07 46 33.9 -0.7
comp=Z,3.1nm,0.8s,baz=57,slow=3.9,SNR=3.9
AKTO Aktyubinsk 56.89 311 P P 07 45 38.6 -0.6
AKTO 07 46 33.9
AKTO pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
FITZ Fitzroy Crossi 58.61 197 eP P 07 45 51.0 -0.4
comp=Z,10nm,1.1s,mb4.8
WRAB Tennant Creek 59.01 187 eP P 07 45 52.2 -2.0
WRAB pmax pmax
comp=Z,20nm,1.3s,mb5.0
WRAB Tennant Creek 59.01 187 eP P 07 45 52.2 -2.0
comp=Z,20nm,1.3s,mb5.0
KEV Kevo 61.33 339 eP P 07 46 07.8 -1.8
KEV pmax pmax
comp=Z,7.0nm,0.7s,mb4.9
KEV Kevo 61.33 339 eP P 07 46 07.8 -1.8
comp=Z,7.0nm,0.7s,mb4.9
KEV Kevo 61.33 339 ep P 07 46 07.8 -1.8
comp=Z,7.0nm,0.7s,mb4.9
ARCES ARCESS Array B 61.88 339 P P 07 46 12.9 -0.4
comp=Z,3.0nm,0.9s,mb4.4,baz=40,slow=8.5,SNR=7.0
ARCES LR LR 08 19 01.6
comp=Z,21nm,19.2s,MS3.3,baz=129,slow=42
YKA Yellowknife Ar 62.33 30 P P 07 46 16.2 -0.2
comp=Z,1.1nm,0.9s,mb4.0,baz=300,slow=7.1,SNR=3.7
YKA Yellowknife Ar 62.33 30 P P 07 46 16.2 -0.2
YKA pmax pmax
comp=Z,1.0nm,0.9s
YKA Yellowknife Ar 62.33 30 P P 07 46 16.2 -0.2
ASAR Alice Springs 62.74 187 P P 07 46 18.4 -1.1
comp=Z,3.2nm,0.7s,mb4.5,baz=5.9,slow=5.4,SNR=27
ASAR Alice Springs 62.74 187 P P 07 46 18.5 -1.1
ASAR pmax pmax
comp=Z,3.0nm,0.7s
JOF Joensuu 63.89 331 eP P 07 46 25.1 -1.7
JOF pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
JOF Joensuu 63.89 331 ep P 07 46 25.1 -1.7
comp=Z,8.5nm,0.9s,mb4.8
VRHR Novokhopersk 65.79 317 eP P 07 46 35.2 -4.2
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,9.0nm,0.7s
VRHR pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
OBN Obninsk 66.12 322 eP P 07 46 41.0 -0.4
OBN *e* 07 47 11.0
OBN *e* 07 49 06.6
OBN *e*S S 07 55 27.3 -2.6
OBN pmax pmax
comp=Z,9.0nm,1.3s,mb4.6
KAF Kangasniemi 66.23 332 eP P 07 46 40.1 -1.9
KAF pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
KAF Kangasniemi 66.23 332 eP P 07 46 40.1 -1.9
comp=Z,5.9nm,0.6s,mb4.8
KAF Kangasniemi 66.23 332 ep P 07 46 40.1 -1.9
comp=Z,5.9nm,0.6s,mb4.8,baz=48,slow=6.2
FINES FINESS Array B 66.74 332 P P 07 46 44.6 -0.7
comp=Z,10.0nm,0.7s,mb4.9,baz=55,slow=7.2,SNR=29
FINES FINESS Array B 66.74 332 P P 07 46 44.6 -0.7
FINES pmax pmax
comp=Z,10.0nm,0.7s
VSR Storozhevoye 67.02 318 eP P 07 46 46.6 -0.7
VSR pmax pmax
comp=N,4.0nm,0.4s
VSR pmax pmax
comp=Z,6.0nm,0.4s,mb5.0
VSR pmax pmax
comp=E,2.0nm,0.2s
VORD Divnogorie 67.09 318 eP P 07 46 46.8 -0.9
VORD pmax pmax
comp=N,5.0nm,0.4s
VORD pmax pmax
comp=E,10.0nm,0.4s
VORD pmax pmax
comp=Z,10.0nm,0.4s,mb5.2
B08A Colville Reser 67.79 45 ⇑P P 07 46 52.4 +0.2
baz=68
H04A Detroit Lake 68.21 50 ⇓P P 07 46 55.3 +0.4
baz=68
SUMG Summit 68.64 360 eP P 07 46 56.9 -0.2
comp=Z,15nm,1.1s,mb4.8
SUMG Summit 68.64 360 *i* P P 07 46 57.0 -0.1
comp=Z,7.9nm,1.0s,mb4.6
D08A Wollman Farm, 68.76 46 ⇓P P 07 46 58.8 +0.5
baz=68
NEW Newport 69.06 44 eP P 07 47 01.9 +1.8
ZEI Tsey 69.08 308 eP P 07 46 59.0 -1.3
ZEI pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
KIV Kislovodsk 69.14 310 eP P 07 47 01.3 +0.6
KIV pmax pmax
comp=Z,53nm,1.0s,mb5.4
KIV Kislovodsk 69.14 310 eP P 07 47 02.0 +1.3
comp=Z,40nm,0.8s,mb5.4
E09A Wood Farm, Sta 69.51 46 ⇑P P 07 47 03.3 +0.4
baz=69
G08A Pilot Rock 69.75 48 ⇓P P 07 47 05.0 +0.5
baz=70
C11A Tepee Creek (N 69.78 44 ⇓P P 07 47 04.7 +0.1
baz=70
GNI Garni 70.03 306 eP P 07 47 06.4 +0.1
GNI pmax pmax
comp=Z,12nm,1.3s
K05A Summer Lake 70.09 51 ⇓P P 07 47 06.9 +0.3
baz=70
I07A Izee 70.14 49 ⇓P P 07 47 07.6 +0.8
baz=70
B13A Whitefish 70.42 43 ⇑P P 07 47 08.5 0.0
baz=70
STKA Stephens Creek 70.61 179 P P 07 47 08.8 -0.8
comp=Z,5.3nm,1.0s,mb4.4,baz=40,slow=5.3,SNR=2.8
A14A Double T Ranch 70.61 42 ⇓P P 07 47 10.2 +0.6
baz=70
C13A Hot Springs 70.79 44 ⇑P P 07 47 10.6 -0.2
baz=70
A15A Johnson Ranch, 70.97 42 ⇑P P 07 47 11.8 -0.1
baz=71
B14A Marquette Ranc 71.06 43 ⇑P P 07 47 12.6 +0.2
baz=71
SOC Sochi 71.11 311 eP P 07 47 10.6 -2.2
SOC *e* 07 49 55.8
SOC *e*S S 07 56 27.0 -2.7
SOC pmax pmax
comp=Z,21nm,0.9s,mb5.1
C14A Swan Lake 71.18 43 ⇓P P 07 47 13.3 +0.2
baz=71
D13A Huson 71.20 44 ⇓P P 07 47 13.4 +0.1
baz=71
B15A Bradely Ranch, 71.47 42 ⇑P P 07 47 14.6 -0.2
baz=71
F12A Elk City 71.58 46 ⇑P P 07 47 15.8 +0.2
baz=71
SLMT Seeley Lake 71.64 44 eP P 07 47 15.2 -0.7
ANN Anapa 71.71 313 eP P 07 47 14.4 -2.0
ANN pmax pmax
comp=Z,25nm,1.3s,mb5.0
D14A Greenough 71.73 44 ⇑P P 07 47 16.2 -0.3
baz=72
B16A M & M Farms, S 71.85 42 ⇓P P 07 47 16.7 -0.4
baz=72
A17A Triple J Farms 72.04 41 ⇑P P 07 47 18.2 0.0
baz=72
NB2 NORSAR Subarra 72.08 337 P P 07 47 17.5 -0.8
comp=Z,7.5nm,0.8s,mb4.7,baz=38,slow=6.2
NOA NORSAR Array B 72.08 337 P P 07 47 17.6 -0.7
comp=Z,5.6nm,0.8s,mb4.6,baz=39,slow=6.0,SNR=22
NOA LR LR 08 21 36.7
comp=Z,22nm,20.5s,MS3.4,baz=25,slow=38
NOA NORSAR Array B 72.08 337 P P 07 47 17.6 -0.7
NOA pmax pmax
comp=Z,6.0nm,0.8s
NOA MLR MLR
comp=Z,23nm,20.5s
AKASG Malin Array Be 72.33 322 P P 07 47 19.1 -0.9
comp=Z,6.6nm,0.7s,mb4.7,baz=47,slow=5.8,SNR=23
AKASG Malin Array Be 72.33 322 P P 07 47 19.1 -0.9
AKASG pmax pmax
comp=Z,7.0nm,0.7s
B17A L&G Farms, Che 72.40 42 ⇑P P 07 47 20.3 -0.2
baz=72
E15A Deer Lodge 72.60 44 ⇓P P 07 47 22.1 +0.4
baz=72
WCN Washoe City 72.79 53 ⇑P P 07 47 23.6 +0.7
baz=73
D16A Dana Ranch, Ca 72.81 43 ⇓P P 07 47 23.1 +0.2
baz=73
I12A Atlanta 72.84 47 ⇑P P 07 47 23.7 +0.5
baz=73
HRY Holter Researc 72.86 43 eP P 07 47 23.3 +0.1
H13A Challis 72.87 46 ⇑P P 07 47 23.6 +0.3
baz=73
E16A East Helena 73.05 43 ⇓P P 07 47 24.9 +0.6
baz=73
LRM Limekiln Ridge 73.08 44 eP P 07 47 24.7 +0.2
CMB Columbia Colle 73.14 55 eP P 07 47 24.1 -1.0
CMB pmax pmax
comp=Z,7.0nm,1.4s,mb4.4
CMB Columbia Colle 73.14 55 eP P 07 47 24.1 -1.0
comp=Z,6.9nm,1.4s,mb4.4
D17A Six Diamond Ra 73.18 43 ⇓P P 07 47 25.9 +0.8
baz=73
DLMT Dillon 73.29 45 eP P 07 47 26.0 +0.2
comp=Z,8.1nm,1.3s,mb4.5
I13A Wildhorse Cree 73.35 47 ⇑P P 07 47 27.0 +0.8
baz=73
HLID Hailey 73.39 47 ⇓P P 07 47 27.3 +0.8
baz=73
M10A I.L. Ranch, Tu 73.41 50 ⇓P P 07 47 27.2 +0.6
baz=73
G15A Dillon 73.47 45 ⇓P P 07 47 26.9 0.0
baz=73
L11A Cat Creek Ranc 73.48 49 ⇑P P 07 47 27.3 +0.4
baz=73
E17A Martinsdale 73.53 43 ⇓P P 07 47 27.6 +0.4
baz=73
F16A Kennard Place, 73.55 44 ⇓P P 07 47 27.5 +0.2
baz=73
J13A Cove Ranch, Pi 73.63 47 ⇑P P 07 47 28.3 +0.5
baz=73
I14A Mackay 73.71 46 ⇑P P 07 47 28.8 +0.5
baz=74
G16A Moss Hill, Enn 73.81 45 ⇑P P 07 47 29.0 +0.2
baz=74
M11A Holland Ranch, 73.91 50 ⇑P P 07 47 29.8 +0.2
baz=74
L12A House Creek Ra 73.92 49 ⇓P P 07 47 30.1 +0.5
baz=74
E18A Harlowton 73.97 43 ⇓P P 07 47 30.2 +0.4
baz=74
F17A Fitzpatrick Pl 74.00 43 ⇓P P 07 47 30.1 +0.2
baz=74
J14A Carey 74.06 47 ⇑P P 07 47 30.5 +0.2
baz=74
G17A Pierce Place, 74.33 44 ⇓P P 07 47 31.6 -0.3
baz=74
M12A Wells 74.44 49 ⇓P P 07 47 32.3 -0.3
baz=74
H16A Russell Place, 74.45 45 ⇓P P 07 47 32.5 -0.1
baz=74
F18A Big Timber 74.50 43 ⇓P P 07 47 32.8 0.0
baz=74
L13A Double Diamond 74.58 48 ⇑P P 07 47 34.0 +0.6
baz=74
J15A Blackfoot 74.62 46 ⇑P P 07 47 33.8 +0.2
baz=74
N12A Clover Valley, 74.72 50 ⇑P P 07 47 35.0 +0.7
baz=74
N12A Clover Valley, 74.72 50 eP P 07 47 35.6 +1.4
comp=Z,4.8nm,1.2s,mb4.3
K14A Jones Ranch, D 74.74 47 ⇓P P 07 47 34.9 +0.6
baz=74
O11A Cowboy Ranch, 74.79 51 ⇑P P 07 47 35.2 +0.5
baz=75
I16A Newdale 74.85 46 ⇑P P 07 47 35.1 +0.2
baz=75
M13A Montello 74.91 49 ⇑P P 07 47 35.7 +0.4
baz=75
H17A Grant Village 75.01 45 ⇓P P 07 47 36.8 +0.9
baz=75
K15A Arbon 75.02 47 ⇑P P 07 47 36.5 +0.6
baz=75
L14A Malta 75.03 48 ⇓P P 07 47 36.3 +0.3
baz=75
IMW Indian Meadow 75.14 45 eP P 07 47 36.9 +0.3
comp=Z,2.0nm,0.6s,mb4.2
Q10A Clear Creek Ra 75.15 52 ⇓P P 07 47 37.6 +0.8
baz=75
RLMT Red Lodge 75.25 43 ⇓P P 07 47 37.4 +0.2
baz=75
O12A Currie 75.25 50 ⇑P P 07 47 37.7 +0.3
baz=75
M14A Sheep Mountain 75.30 48 ⇑P P 07 47 38.3 +0.7
baz=75
MOOW Moose Ponds 75.34 45 eP P 07 47 39.0 +1.3
comp=Z,3.8nm,1.1s,mb4.2
K16A Soda Springs 75.46 46 ⇑P P 07 47 39.2 +0.7
baz=75
SNOW Snow King Moun 75.52 45 eP P 07 47 40.5 +1.7
comp=Z,4.9nm,1.2s,mb4.3
R10A Warm Springs 75.55 52 ⇑P P 07 47 39.6 +0.5
baz=75
S10A Tonopah Range, 75.59 53 ⇓P P 07 47 39.2 -0.1
baz=75,SNR=6.3
Q11A Duckwater 75.60 52 ⇑P P 07 47 39.6 +0.3
baz=75
J17A Brown Place, J 75.61 46 ⇓P P 07 47 39.8 +0.4
baz=75
P12A McGill 75.66 51 ⇓P P 07 47 39.9 +0.3
baz=75
N14A Grayback Hills 75.81 49 ⇑P P 07 47 40.2 -0.3
baz=76
M15A Larsen Ranch, 75.85 48 ⇓P P 07 47 40.7 0.0
baz=76
R11A Troy Canyon, C 75.95 52 ⇑P P 07 47 41.1 -0.3
baz=76,SNR=7.5
Q12A Willow Creek R 75.97 51 ⇑P P 07 47 41.9 +0.4
baz=76
J18A Kendall Valley 76.09 45 ⇓P P 07 47 42.4 +0.3
baz=76
MPMC Manual Prospec 76.18 55 ⇓P P 07 47 43.1 +0.3
baz=76
HWUT Hardware Ranch 76.26 47 eP P 07 47 43.8 +0.7
comp=Z,1.3nm,0.6s,mb4.0
S11A Rachel 76.29 53 ⇓P P 07 47 43.4 +0.1
baz=76
FURC Furnace Creek, 76.33 54 ⇑P P 07 47 43.6 0.0
baz=76
BUR08 Bucovina Ar. S 76.34 321 eP P 07 47 43.5 +0.1
DUG Dugway 76.44 49 ⇓P P 07 47 44.1 0.0
baz=76
DUG Dugway 76.44 49 eP P 07 47 44.5 +0.3
DUG pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
DUG Dugway 76.44 49 eP P 07 47 44.5 +0.3
comp=Z,5.5nm,1.1s,mb4.4
K18A Toltan Ranch, 76.45 46 ⇑P P 07 47 44.1 -0.1
baz=76
R12A Pony Springs, 76.56 51 ⇓P P 07 47 44.7 -0.2
baz=76
BW06 Boulder Array 76.64 45 ⇓P P 07 47 44.4 -0.8
baz=76
BW06 Boulder Array 76.64 45 eP P 07 47 44.9 -0.3
comp=Z,7.7nm,1.4s,mb4.4
P14A Drum Mountains 76.68 50 ⇑P P 07 47 45.4 -0.1
baz=76
U10A Ash Meadows, A 76.69 54 ⇓P P 07 47 45.8 +0.2
baz=76
T11A Corn Creek, Al 76.87 53 ⇓P P 07 47 46.5 -0.1
baz=77
L18A Fontenelle, Gr 76.92 46 ⇑P P 07 47 46.6 -0.2
baz=77
Q14A Sevier Lake (B 76.94 50 ⇓P P 07 47 47.0 0.0
baz=77
STHS Stebnicka Huta 76.96 324 eP P 07 47 47.0 +0.1
STHS pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
STHS Stebnicka Huta 76.96 324 eP P 07 47 47.0 +0.1
comp=Z,4.8nm,1.0s,mb4.4
STHS Stebnicka Huta 76.96 324 eP P 07 47 47.0 +0.1
NLU North Lily Min 77.03 49 eP P 07 47 47.7 +0.2
comp=Z,8.0nm,1.3s,mb4.5
N17A Moffit Pass 77.11 47 ⇓P P 07 47 48.0 +0.1
baz=77
Q15A Fillmore 77.47 50 ⇓P P 07 47 50.2 +0.2
baz=77
S13A Holt Ranch, En 77.49 52 ⇑P P 07 47 50.2 +0.1
baz=77,SNR=8.6
TUQ Turquoise Moun 77.57 54 ⇑P P 07 47 50.4 -0.2
baz=77
V11A Goodsprings 77.62 54 ⇓P P 07 47 50.9 0.0
baz=77
O17A Robinson Place 77.66 48 ⇑P P 07 47 51.0 +0.1
baz=77
N18A Larsen Ranch, 77.75 47 ⇓P P 07 47 51.7 +0.2
baz=78
CCUT Cedar City 77.81 51 eP P 07 47 53.6 +1.7
comp=Z,1.4nm,0.9s,mb3.9
T13A Saint George 77.82 52 ⇑P P 07 47 52.0 0.0
baz=78
OKC Ostrava-Krasne 78.03 326 eP P 07 47 53.1 +0.3
OKC Ostrava-Krasne 78.03 326 eP P 07 47 53.1 +0.3
P17A Butcher Ranch, 78.13 49 ⇓P P 07 47 53.6 0.0
baz=78
GMRC Granite Mounta 78.15 55 ⇑P P 07 47 53.7 -0.1
baz=78
Q16A Castle Valley 78.24 49 ⇓P P 07 47 54.6 +0.3
baz=78
P18A Preston Nutter 78.31 48 ⇓P P 07 47 54.3 -0.3
baz=78
MORC Moravsky Berou 78.33 326 eP P 07 47 54.9 +0.3
MORC pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
MORC Moravsky Berou 78.33 326 eP P 07 47 54.9 +0.4
comp=Z,7.6nm,0.9s,mb4.6
S15A Panguitch 78.34 51 ⇑P P 07 47 55.3 +0.5
baz=78
PFO Pinyon Flat Ob 78.38 56 ⇓P P 07 47 55.4 +0.3
baz=78
L21A Rawlins 78.38 45 ⇓P P 07 47 54.6 -0.3
baz=78
DPC Dobruska-Polom 78.42 327 eP P 07 47 55.7 +0.7
DPC Dobruska-Polom 78.42 327 eP P 07 47 55.7 +0.7
BELC Belle Mtn. Jos 78.42 56 ⇑P P 07 47 55.2 -0.2
baz=78
UPC Upice 78.43 328 eP P 07 47 55.4 +0.3
UPC Upice 78.43 328 eP P 07 47 55.4 +0.3
R16A Teasdale 78.47 50 ⇑P P 07 47 55.9 +0.4
baz=78
SRU San Rafael 78.49 49 ⇓P P 07 47 55.3 -0.3
baz=78
N20A Spence Gulch, 78.64 46 ⇑P P 07 47 56.1 -0.3
baz=78
U14A Mt Trumbull 78.65 52 ⇓P P 07 47 57.0 +0.5
baz=78
VYHS Vyhne 78.72 325 eP P 07 47 56.6 -0.1
VYHS pmax pmax
comp=Z,2.0nm,1.2s,mb3.9
VYHS Vyhne 78.72 325 eP P 07 47 56.6 -0.1
comp=Z,2.3nm,1.2s,mb4.0
VYHS Vyhne 78.72 325 eP P 07 47 56.6 -0.1
T15A Red Dirt Ranch 78.75 51 ⇓P P 07 47 57.3 +0.2
baz=78
S16A Weppner Ranch, 78.77 50 ⇑P P 07 47 57.5 +0.4
baz=78
R17A Hanksville Air 78.84 49 ⇓P P 07 47 57.6 +0.1
baz=79
MONP Monument Peak 78.86 57 ⇓P P 07 47 57.7 -0.1
baz=79
BRG Berggiesshubel 79.00 329 eP P 07 47 57.8 -0.4
comp=Z,4.0nm,0.8s,mb4.4
BRG Berggiesshubel 79.00 329 eP P 07 47 57.8 -0.4
comp=Z,4.5nm,0.7s,mb4.5
BRG Berggiesshubel 79.00 329 eP P 07 47 57.8 -0.4
BRG pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
CLL Collm 79.04 330 eP P 07 47 58.0 -0.4
comp=Z,9.0nm,1.3s,mb4.5
CLL Collm 79.04 330⇓*i*P P 07 47 58.0 -0.4
CLL pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
CLL Collm 79.04 330⇓*i*P P 07 47 58.0 -0.4
comp=Z,9.0nm,1.3s,mb4.5
CLL Collm 79.04 330⇓*i*P P 07 47 58.0 -0.4
comp=Z,9.0nm,1.3s,mb4.5
P19A Cripple Cowboy 79.04 48 ⇓P P 07 47 58.7 +0.1
baz=79
W13A Hualapai Mount 79.06 54 ⇑P P 07 47 58.8 -0.1
baz=79
N21A Black Mountain 79.11 46 ⇓P P 07 47 58.8 -0.2
baz=79
U15A North Rim 79.19 52 ⇑P P 07 47 59.9 +0.3
baz=79,SNR=5.8
V14A Boquillas Ranc 79.21 53 ⇓P P 07 47 59.9 +0.3
baz=79
S17A Black Ridge (B 79.30 50 ⇓P P 07 47 59.8 -0.3
baz=79
Q19A Hogan Spring (79.33 48 ⇓P P 07 47 59.8 -0.4
baz=79
R18A Canyonlands Na 79.34 49 ⇓P P 07 47 59.9 -0.4
baz=79
X13A Yucca 79.42 54 ⇑P P 07 48 00.2 -0.6
baz=79
W14A Seligman 79.49 53 ⇓P P 07 48 01.2 0.0
baz=79
V15A Kaibab Nationa 79.66 52 ⇑P P 07 48 02.2 +0.1
baz=79
N22A Wattenberg Ran 79.67 45 ⇓P P 07 48 02.2 +0.2
baz=79
T17A Navajo Res., N 79.72 50 ⇓P P 07 48 02.7 +0.3
baz=80
S18A Hurst Farm, Bl 79.74 50 ⇑P P 07 48 02.6 +0.1
baz=80
R19A Curley Farm, L 79.77 49 ⇓P P 07 48 02.6 -0.1
baz=80
PV10 Paradox Valley 79.85 49 eP P 07 48 03.7 +0.7
comp=Z,141nm,0.9s,mb5.9
N23A Red Feather La 79.89 45 ⇓P P 07 48 03.5 +0.3
baz=80
P21A Newcastle 79.99 47 ⇑P P 07 48 04.2 +0.4
baz=80
WERD Werda 79.99 329 eP P 07 48 03.5 -0.1
comp=Z,3.0nm,0.8s,mb4.3
O22A Kremmling 80.06 46 ⇑P P 07 48 04.3 +0.2
baz=80
U16A Tuba City 80.09 51 ⇓P P 07 48 04.8 +0.4
baz=80,SNR=8.1
X14A Yava 80.10 54 ⇓P P 07 48 04.9 +0.4
baz=80
NKC Novy Kostel 80.10 329 eP P 07 48 04.1 -0.1
NKC Novy Kostel 80.10 329 eP P 07 48 04.1 -0.1
MOX Moxa 80.10 330 eP P 07 48 03.2 -1.0
T18A Mexican Hat 80.18 50 ⇑P P 07 48 04.6 -0.3
baz=80
S19A Harvey Farm, M 80.21 49 ⇑P P 07 48 04.7 -0.3
baz=80
PV01 Paradox Valley 80.28 48 eP P 07 48 06.5 +1.1
comp=Z,354nm,1.3s
MMAI Mount Meron Ar 80.32 305 P P 07 48 06.2 +0.5
comp=Z,7.2nm,0.8s,mb4.7,baz=30,slow=12,SNR=5.9
P22A Eagle 80.33 46 ⇑P P 07 48 05.6 -0.1
baz=80
R20A Redvale 80.36 48 ⇓P P 07 48 06.1 +0.3
baz=80
Y14A Wickenburg 80.37 54 ⇓P P 07 48 06.1 +0.1
baz=80
O23A Lake Granby, G 80.38 45 ⇓P P 07 48 06.2 +0.3
baz=80
Z13A Yuma Proving G 80.44 55 ⇑P P 07 48 06.5 +0.2
baz=80
CONA Conrad Observa 80.46 326⇓*i*pP P 07 48 06.6 +0.5
comp=Z,4.3nm,0.8s,mb4.5
SMCO Snowmass 80.49 47 eP P 07 48 07.3 +0.8
comp=Z,3.6nm,1.0s,mb4.3
X15A Humboldt 80.49 53 ⇑P P 07 48 07.0 +0.4
baz=80
KHC Kasperske Hory 80.50 328 eP P 07 48 06.5 +0.1
KHC Kasperske Hory 80.50 328 eP P 07 48 06.5 +0.1
W16A Flagstaff 80.53 52 ⇑P P 07 48 06.9 +0.1
baz=80
V17A Tonalea, Kykot 80.63 52 ⇑P P 07 48 07.7 +0.4
baz=80
U18A Rough Rock, Ch 80.66 50 ⇑P P 07 48 07.7 +0.2
baz=80,SNR=5.2
GEC2 GERESS Array S 80.67 328 eP P 07 48 07.1 -0.2
comp=Z,3.0nm,1.0s,mb4.2
GEC2 GERESS Array S 80.67 328 eP P 07 48 07.1 -0.2
GEC2 pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
GEC2 GERESS Array S 80.67 328 eP P 07 48 07.1 -0.2
comp=Z,3.0nm,1.0s,mb4.2
Q22A Crested Butte, 80.74 47 ⇑P P 07 48 08.3 +0.5
baz=80
WET Wettzell 80.78 328 eP P 07 48 07.8 -0.1
comp=Z,6.0nm,1.0s,mb4.5
WET Wettzell 80.78 328 eP P 07 48 07.8 -0.1
WET pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
WET Wettzell 80.78 328 eP P 07 48 07.8 -0.1

comp=Z,6.0nm,1.0s,mb4.5
Y15A Casa Rosa Ranc 80.78 54 ⇓P P 07 48 08.4 +0.3
baz=81
T19A Beclabito 80.89 50 ⇓P P 07 48 08.8 +0.1
baz=81
MVCO Mesa Verde 80.95 49 ⇓P P 07 48 09.3 +0.3
baz=81
GRA1 Grafenberg Arr 81.01 329 *eP* **P 07 48 09.0 -0.1**
comp=Z,16nm,1.0s,mb4.9
GRF Grafenberg Arr 81.01 329 *eP* **P 07 48 09.0 -0.1**
GRF pmax pmax
comp=Z,16nm,1.0s,mb4.9
X16A Lo Mia Camp, P 81.03 53 ⇑P P 07 48 10.1 +0.6
baz=81
V18A Ganado 81.10 51 ⇓P P 07 48 09.8 0.0
baz=81
U19A Dine' College, 81.14 50 ⇓P P 07 48 10.1 0.0
baz=81,SNR=8.4
R22A Saguache, Gunn 81.27 47 ⇓P P 07 48 10.5 -0.2
baz=81
Y16A Circle Bar Ran 81.36 53 ⇑P P 07 48 11.3 0.0
baz=81
S22A 4UR Ranch, Cre 81.55 48 ⇓P P 07 48 12.3 0.0
baz=81
TNS Taunus Mts 81.65 331 *eP* **P 07 48 12.4 -0.1**
comp=Z,8.0nm,0.6s,mb4.8
TNS Taunus Mts 81.65 331 *eP* **P 07 48 12.4 -0.1**
TNS pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
TNS Taunus Mts 81.65 331 *eP* **P 07 48 12.4 -0.1**
comp=Z,8.0nm,0.6s,mb4.8
GROS Grobnik 81.74 325 *i P* **P 07 48 12.5 -0.5**
SOKA Soboth 81.78 326 ⇑*i*P **P 07 48 13.0 -0.2**
comp=Z,10nm,1.1s,mb4.7
W19A Sanders 81.83 51 ⇓P P 07 48 13.8 +0.1
baz=82
X18A Snowflake 81.88 52 ⇑P P 07 48 14.6 +0.6
baz=82
U21A Nageezi 81.97 49 ⇓P P 07 48 14.3 -0.2
baz=82
CRES Cresnjev 82.25 325 *i P* **P 07 48 14.7 -1.0**
PDKS Podkum 82.27 325 *eP* **P 07 48 15.1 -0.7**
SDCO Great Sand Dun 82.32 47 *eP* **P 07 48 16.5 +0.3**
comp=Z,3.3nm,1.3s,mb4.1
Y18A Canyon Day Jun 82.33 52 ⇓P P 07 48 16.4 0.0
baz=82
X19A St. Johns 82.35 52 ⇓P P 07 48 16.6 +0.1
baz=82
U22A Llaves 82.48 49 ⇑P P 07 48 17.5 +0.4
baz=82
S24A Houchin Ranch, 82.55 47 ⇑P P 07 48 17.1 -0.3
baz=82
ECSD EROS Data Cent 82.66 38 *eP* **P 07 48 17.1 -0.7**
comp=Z,5.6nm,1.1s,mb4.5
X20A Quemado 82.75 51 ⇑P P 07 48 18.5 0.0
baz=82
V22A San Miguel Ran 82.77 49 ⇑P P 07 48 18.7 +0.1
baz=82
U23A El Rito 82.90 48 ⇑P P 07 48 19.8 +0.5
baz=83,SNR=5.4
RETA Reutte 82.95 328 ⇓*i*P **P 07 48 19.3 -0.1**
comp=Z,9.2nm,0.8s,mb4.9
217A Green Valley 83.18 54 ⇓P P 07 48 21.2 +0.4
baz=83
BFO Black Forest 83.24 330 *eP* **P 07 48 20.6 -0.2**
comp=Z,10.0nm,1.2s,mb4.7
BFO Black Forest 83.24 330 *eP* **P 07 48 20.6 -0.2**
BFO pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
BFO Black Forest 83.24 330 *eP* **P 07 48 20.6 -0.2**
comp=Z,10.0nm,1.2s,mb4.7
X21A Alamocita Cree 83.25 51 ⇑P P 07 48 21.2 +0.1
baz=83
V23A Ortiz Mt. (NFS 83.31 49 ⇓P P 07 48 21.7 +0.3
baz=83
FETA Feichten 83.34 328 ⇑*i*P **P 07 48 21.2 -0.2**
comp=Z,4.6nm,0.7s,mb4.6
T25A Trinidad 83.36 47 ⇓P P 07 48 21.6 -0.1
baz=83
DAVA Damuels 83.47 329 ⇑*i*P **P 07 48 21.6 -0.5**
comp=Z,9.5nm,0.8s,mb4.9
Y21A Point of Rocks 83.61 51 ⇑P P 07 48 23.4 +0.3
baz=83
Z20A Nine Sixteen R 83.67 52 ⇓P P 07 48 23.5 +0.2
baz=84
ANMO Albuquerque 83.69 50 *eP* **P 07 48 23.9 +0.5**
ANMO pmax pmax
comp=Z,2.0nm,0.9s
ANMO Albuquerque 83.69 50 *eP* **P 07 48 23.9 +0.4**
comp=Z,1.6nm,0.9s,mb4.2
W23A Werner Place, 83.73 49 ⇑P P 07 48 24.2 +0.5
baz=84
V24A Rampart Ranch, 83.85 48 ⇓P P 07 48 24.8 +0.5
baz=84
U25A Circle Dot Ran 83.88 47 ⇓P P 07 48 24.9 +0.5
baz=84
318A Bisbee 83.92 54 ⇑P P 07 48 24.7 0.0
baz=84
219A White Tail Can 84.01 53 ⇑P P 07 48 25.2 +0.1
baz=84
Z21A St. Cloud Mine 84.09 51 ⇓P P 07 48 25.7 +0.2
baz=84
W24A Lazy 6 Ranch, 84.13 49 ⇑P P 07 48 25.9 +0.2
baz=84,SNR=5.2
V25A Rancho No Teng 84.16 48 ⇑P P 07 48 26.2 +0.4
baz=84
HINF Hinteralfeld 84.23 331 *eP* **P 07 48 24.6 -1.3**
HAU Haudompre 84.26 331 *eP* **P 07 48 24.9 -1.2**
comp=Z,8.2nm,0.9s,mb4.6
HAU Haudompre 84.26 331 *eP* **P 07 48 24.9 -1.2**
HAU pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
HAU Haudompre 84.26 331 *eP* **P 07 48 24.9 -1.2**
comp=Z,4.1nm,0.9s,mb4.6
U26A Atchley Ranch, 84.26 47 ⇓P P 07 48 26.6 +0.3
baz=84
319A Douglas 84.41 54 ⇑P P 07 48 27.4 +0.2
baz=84
220A Playas Peak, P 84.53 53 ⇑P P 07 48 27.7 0.0
baz=84
Z22A Elephant Butte 84.56 51 ⇑P P 07 48 27.8 -0.1
baz=84
Y23A Lovelace Mesa, 84.64 50 ⇑P P 07 48 28.1 -0.2
baz=84
W25A X Bar L Ranch, 84.68 48 ⇓P P 07 48 28.5 0.0
baz=84,SNR=9.3
W26A Owens Ranch, T 85.17 48 ⇓P P 07 48 31.3 +0.4
baz=85
Z24A Sheeppen Canyo 85.47 50 ⇓P P 07 48 32.6 +0.2
baz=85
CABF La Chapelle 85.52 331 *eP* **P 07 48 31.5 -0.9**
comp=Z,4.7nm,0.7s,mb4.5
CABF La Chapelle 85.52 331 *eP* **P 07 48 31.5 -0.9**
CABF pmax pmax
comp=Z,2.0nm,0.7s,mb4.5
CABF La Chapelle 85.52 331 *eP* **P 07 48 31.5 -0.9**
comp=Z,2.3nm,0.7s,mb4.5
X26A CR and CF Fran 85.53 48 ⇑P P 07 48 32.7 0.0
baz=85
W27A Bowe Ranch, En 85.60 48 ⇓P P 07 48 33.0 0.0
baz=85
LOR Lormes 85.80 332 *eP* **P 07 48 32.7 -1.1**
comp=Z,37nm,1.2s,mb5.2
LOR Lormes 85.80 332 *eP* **P 07 48 32.7 -1.1**
LOR pmax pmax
comp=Z,18nm,1.2s,mb5.2
LOR Lormes 85.80 332 *eP* **P 07 48 32.7 -1.1**
comp=Z,18nm,1.2s,mb5.2
124A Stringfield Ra 85.86 51 ⇓P P 07 48 33.9 -0.5
baz=86
Z25A Roswell 85.89 50 ⇑P P 07 48 34.9 +0.4
baz=86
FLN La Foliniere 86.01 335 *eP* **P 07 48 33.7 -1.1**
LDF La Druitiere 86.04 335 *eP* **P 07 48 33.6 -1.3**
SSF Saint Saulge 86.10 332 *eP* **P 07 48 34.3 -1.0**
comp=Z,15nm,1.0s,mb4.9
SSF Saint Saulge 86.10 332 *eP* **P 07 48 34.3 -1.0**
SSF pmax pmax
comp=Z,8.0nm,1.0s,mb4.9
SSF Saint Saulge 86.10 332 *eP* **P 07 48 34.3 -1.0**
comp=Z,7.6nm,1.0s,mb4.9
LPL La Plagne 86.18 330 *eP* **P 07 48 35.1 -0.6**
comp=Z,19nm,0.9s,mb5.0
LPL La Plagne 86.18 330 *eP* **P 07 48 35.1 -0.6**
LPL pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
LPL La Plagne 86.18 330 *eP* **P 07 48 35.1 -0.6**
comp=Z,9.6nm,0.9s,mb5.0
LPG La Plagne 86.18 329 *eP* **P 07 48 35.2 -0.5**
comp=Z,13nm,0.7s,mb5.0
LPG La Plagne 86.18 329 *eP* **P 07 48 35.2 -0.5**
LPG pmax pmax
comp=Z,7.0nm,0.7s,mb5.0
LPG La Plagne 86.18 329 *eP* **P 07 48 35.2 -0.5**
comp=Z,6.7nm,0.7s,mb5.0
SMF Signal de Mont 86.33 332 *eP* **P 07 48 35.6 -0.8**
Z26A Caprock 86.33 49 ⇑P **P 07 48 36.2 -0.5**
baz=86
125A Gardner Draw, 86.36 50 ⇓P P 07 48 36.9 0.0
baz=86
AVF Avril sur Loir 86.39 332 *eP* **P 07 48 35.9 -0.8**
comp=Z,29nm,0.9s,mb5.2
AVF Avril sur Loir 86.39 332 *eP* **P 07 48 35.9 -0.8**
AVF pmax pmax
comp=Z,15nm,0.9s,mb5.2
AVF Avril sur Loir 86.39 332 *eP* **P 07 48 35.9 -0.8**
comp=Z,15nm,0.9s,mb5.2
GRR Gorron 86.46 335 *eP* **P 07 48 36.2 -0.8**
comp=Z,28nm,0.8s,mb5.2
GRR Gorron 86.46 335 *eP* **P 07 48 36.2 -0.8**
GRR pmax pmax
comp=Z,14nm,0.8s,mb5.2
GRR Gorron 86.46 335 *eP* **P 07 48 36.2 -0.8**
comp=Z,14nm,0.8s,mb5.2
Z27A Tatum 86.75 49 ⇑P **P 07 48 38.2 -0.6**
baz=86
MBDF Montbardon 86.81 329 *eP* **P 07 48 38.2 -0.6**
comp=Z,4.2nm,0.6s,mb4.5
MBDF Montbardon 86.81 329 *eP* **P 07 48 38.2 -0.6**
MBDF pmax pmax
comp=Z,2.0nm,0.6s,mb4.5
MBDF Montbardon 86.81 329 *eP* **P 07 48 38.2 -0.6**
comp=Z,2.1nm,0.6s,mb4.5
SGMF Saint Gilles 87.11 336 *eP* **P 07 48 39.5 -0.7**
TCF Toulx Ste Croi 87.23 333 *eP* **P 07 48 40.1 -0.7**
comp=Z,18nm,1.1s,mb4.9
TCF Toulx Ste Croi 87.23 333 *eP* **P 07 48 40.1 -0.7**
TCF pmax pmax
comp=Z,9.0nm,1.1s,mb4.9
TCF Toulx Ste Croi 87.23 333 *eP* **P 07 48 40.1 -0.7**
comp=Z,9.2nm,1.1s,mb4.9
ROSF Rostrenen 87.26 337 *eP* **P 07 48 40.4 -0.6**
MFF Saint Martin d 87.78 334 *eP* **P 07 48 42.8 -0.7**
comp=Z,49nm,1.3s,mb5.3
MFF Saint Martin d 87.78 334 *eP* **P 07 48 42.8 -0.7**
MFF pmax pmax
comp=Z,24nm,1.3s,mb5.3
MFF Saint Martin d 87.78 334 *eP* **P 07 48 42.8 -0.7**
comp=Z,24nm,1.3s,mb5.3
SMRF Simiane la Rot 87.92 329 *eP* **P 07 48 42.9 -1.3**
CAF Calviac 88.45 332 *eP* **P 07 48 46.5 -0.2**
comp=Z,11nm,1.0s,mb4.8
CAF Calviac 88.45 332 *eP* **P 07 48 46.5 -0.2**
CAF pmax pmax
comp=Z,5.0nm,1.0s,mb4.7
CAF Calviac 88.45 332 *eP* **P 07 48 46.5 -0.2**
comp=Z,5.4nm,1.0s,mb4.7
TXAR Lajitas Array 89.31 52 P **P 07 48 49.4 -1.6**
comp=Z,0.9nm,0.8s,mb4.1,baz=316,slow=3.5,SNR=7.3
TXAR Lajitas Array 89.31 52 P **P 07 48 49.4 -1.7**
TXAR pmax pmax
comp=Z,1.0nm,0.8s
TXAR Lajitas Array 89.31 52 P **P 07 48 49.4 -1.6**
CCM Cathedral Cave 89.62 38 *eP* **P 07 48 51.3 -1.0**
CCM pmax pmax
comp=Z,6.0nm,0.9s,mb4.9
CCM Cathedral Cave 89.62 38 *eP* **P 07 48 51.3 -1.1**
comp=Z,5.5nm,0.9s,mb4.9
SJPF Ste Jean 91.20 333 *eP* **P 07 48 57.9 -1.7**
VNA1 Neumayer--Stat 144.52 197 *e* PKPdf 07 55 28.4 -1.4
LPAZ La Paz 146.09 56 PKPbc PKPbc 07 55 34.6 -0.3
comp=Z,4.0nm,0.8s,baz=348,slow=4.9,SNR=12
LPAZ La Paz 146.09 56 PKP2 PKPbc 07 55 34.7 -0.2
LPAZ pmax pmax
comp=Z,4.0nm,0.9s

JMA 29 07:36:26.9, 39°.06N×140°.85E, h9km±1km, M3.5, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.31**	**110**	S	Sg	07 36 36.9	-0.2
JRG	**Rokugo**	**0.38**	**334**	P	Pg	07 36 34.5	+0.2
JRG				*e*S	Sg	07 36 40.7	+1.4
JOU	**Okura**	**0.71**	**192**	S	Sg	07 36 49.8	0.0
JIO	**Ouri**	**0.72**	**147**	*e*S	Sg	07 36 49.8	-0.3

PGC ***29*** *08:09:58.9±2.9, 47°.66N×120°.22W, h1km, ML2.6/4, 158km east of Seattle, Wa Washington*

NEIC 29 08:09:59.6, 47°.69N×120°.20W, h4km, MD2.8(SEA), 8D, After SEA., Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETW	**Entiat**	**0.12**	**227**	⇓P	Pg	08 10 01.7	-0.3
CBSW	**Chelan Butte S**	**0.16**	**43**	⇓P	Pg	08 10 02.5	-0.2
CBSW				S	Sg	08 10 05.0	+0.2
WTV	**Waterville**	**0.17**	**86**	⇓P	Pg	08 10 02.6	-0.2
SLFW	**Sugar Loaf**	**0.23**	**288**	P	Pg	08 10 03.8	-0.2
NLW	**Nelson Butte**	**0.40**	**347**	⇓P	Pg	08 10 06.9	-0.4
DHW2	**Dyer Hill 2**	**0.42**	**44**	⇓P	Pg	08 10 07.1	-0.4
WRW	**Wenatchee Ridg**	**0.49**	**291**	P	Pg	08 10 08.9	-0.1
EPH	**Ephrata**	**0.53**	**129**	P	Pg	08 10 09.8	0.0
LTY	**Liberty**	**0.53**	**217**	P	Pg	08 10 09.3	-0.5
TBM	**Table Mountain**	**0.58**	**208**	P	Pg	08 10 10.5	-0.2
EBG	**Ellensburg**	**0.82**	**198**	⇓P	Pg	08 10 14.9	-0.3
BVW	**Beverly**	**0.90**	**166**	P	Pg	08 10 16.4	-0.4
NAC	**Naches**	**1.04**	**204**	P	Pg	08 10 19.5	-0.1
OD2	**Odessa Site #2**	**1.05**	**106**	P	Pg	08 10 18.6	-1.2
LOCW	**Locke Island**	**1.10**	**151**	P	Pg	08 10 20.3	-0.4
MXC	**Moxie City**	**1.11**	**183**	P	Pg	08 10 20.6	-0.2
MDW	**Midway**	**1.12**	**164**	P	Pg	08 10 20.2	-0.8
WRD	**Warden**	**1.14**	**140**	P	Pg	08 10 18.2	-3.2
OT3	**Othello 3**	**1.21**	**147**	P	Pg	08 10 21.9	-0.9
BENWA	**Benson Ranch**	**1.22**	**164**	P	Pg	08 10 22.0	-0.9
FMW	**Mount Fremont**	**1.25**	**233**	P	Pg	08 10 21.9	-1.6
JCW	**Jim Creek**	**1.27**	**294**	*e*Pn	Pn	08 10 23.2	-0.8
JCW				*e*Sn	Sn	08 10 39.7	-1.7
MJ2	**May Junction 2**	**1.27**	**153**	P	Pg	08 10 22.9	-0.9
SNIWA	**Snively Ranch**	**1.28**	**163**	P	Pg	08 10 23.4	-0.6
WPW	**White Pass**	**1.35**	**223**	P	Pn	08 10 23.7	-1.4
RSW	**Rattlesnake Hi**	**1.36**	**162**	P	Pn	08 10 24.8	-0.4
DPW	**Davenport**	**1.36**	**82**	P	Pn	08 10 23.5	-1.8
HAWA	**Hanford**	**1.37**	**160**	*e*Pn	Pn	08 10 24.5	-1.0
HAWA				*e*Sn	Sn	08 10 42.6	-1.4
H2OWA	**Water**	**1.40**	**157**	P	Pn	08 10 25.0	-0.8
LON	**Longmire**	**1.44**	**230**	P	Pn	08 10 26.4	+0.1
PNT	**Penticton**	**1.68**	**13**	⇓P	Pn	08 10 29.4	-0.2
PNT				⇑S	Sn	08 10 51.9	+0.4
HOPB	**Hope**	**1.89**	**335**	⇑Pn	Pn	08 10 32.5	0.0
HOPB				⇑Sg	Sg	08 10 58.0	-2.1
NLWA	**Neilton Lookou**	**2.50**	**265**	*e*Pg	Pg	08 10 44.7	-2.8
SLEB	**Sale Mountain**	**3.74**	**20**	⇓Sg	Sg	08 11 56.0	-3.4
DOWB	**Downie Slide**	**3.99**	**15**	⇑Sg	Sg	08 12 02.9	-4.7
WALA	**Waterton Lakes**	**4.41**	**70**	⇑Sg	Sg	08 12 15.8	-5.3

IDC 29 08:53:40.0±1.8, 4°.81S×145°.98E, h0km, mb4.0/5, mb1 4.2/5, mb1mx3.9/16, mbtmp4.0/5, Error ellipse: s-maj=63.4km s-min=23.8km az=115.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**22.06**	**211**	P	P	08 58 37.4	+0.8
	1.8nm,0.5s,baz=40,slow=7.5,SNR=30						
FITZ	**Fitzroy Crossi**	**23.87**	**235**	P	P	08 58 54.9	-0.5
	11nm,0.5s,baz=61,slow=9.8,SNR=58						
KSRS	**Korea Array**	**45.29**	**340**	P	P	09 02 00.7	+1.1
	0.7nm,0.6s,baz=156,slow=9.2,SNR=4.5						
MKAR	**Makanchi Array**	**75.94**	**321**	P	P	09 05 28.4	-0.3
	0.2nm,0.2s,baz=125,slow=7.6,SNR=2.5						
ILAR	**Eielson Array**	**84.80**	**23**	P	P	09 06 15.8	-0.3
	1.6nm,0.7s,baz=255,slow=5.3,SNR=22						

CSEM 29 08:58:38.1±0.1, 32°.57N×48°.63E, h2km, ML3.9, Error ellipse: s-maj=4.9km s-min=2.1km az=106.0, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**0.48**	**162**	*e*Pg	Pg	08 58 47.4	0.0
SHGR				*e*Sg	Sg	08 58 54.5	+0.8
ASAO	**Ashtian**	**2.29**	**30**	*e*Pn	Pn	08 59 17.2	+0.3
ASAO				*e*Sg	Sg	08 59 50.6	-1.2
GHVR	**GHOM**	**2.93**	**49**	*e*Pn	Pn	08 59 25.9	+0.2
MIB	**Mutribah**	**2.97**	**202**	*e*P	Pn	08 59 26.4	+0.1
UMR	**Umm Al-Rimmam**	**3.11**	**195**	*e*P	Pn	08 59 27.8	-0.3
KBD	**Kabd**	**3.48**	**194**	*e*P	Pn	08 59 33.3	+0.1
NAY	**Al-Naaiem**	**3.52**	**200**	*e*P	Pn	08 59 33.4	-0.4
NASN	**Na'in**	**3.53**	**85**	*e*Pn	Pn	08 59 34.6	+0.6
RDF	**Al-Radifah**	**3.75**	**195**	*e*P	Pn	08 59 37.2	+0.2
THKV	**Tehran--Karaj**	**3.82**	**29**	*e*Pn	Pn	08 59 38.6	+0.6
MAKU	**Maku**	**7.49**	**336**	*e*Pn	Pn	09 00 28.6	+0.3

DJA 29 09:34:19, 1°.42S×100°.42E, h32km, MLv3.7/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**0.51**	**5**	P	Pb	09 34 30.8	+1.1
PDSI				S	Sb	09 34 40.0	+3.1
PPI	**Padang Panjang**	**0.96**	**359**	P	Pn	09 34 35.9	-0.3
PPI				S	Sn	09 34 49.5	+0.7
SDSI	**Sungai Dareh**	**1.12**	**64**	P	Pn	09 34 39.3	+0.9
SISI	**Saibi**	**1.33**	**274**	P	Pn	09 34 41.5	+0.1
SISI				S	Sn	09 34 59.7	+1.6
MNSI	**Mandailing Nat**	**2.36**	**339**	P	Pn	09 34 56.7	+1.2

CSEM ***29*** *09:48:53.6±0.5, 36°.93N×35°.09E, h5km, ML1.9, Error ellipse: s-maj=14.2km s-min=7.1km az=1.0*
DDA ***29*** *09:48:54.8, 36°.94N×35°.06E, h7km±5km, Md2.8*

ISK 29 09:48:51.8, 37°.01N×35°.07E, h5km, ML1.9, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GULE	**Gulek**	**0.36**	**320**	*i* P	Pg	09 49 02.3	+3.5
GULE				*i* S	Sg	09 49 09.7	+6.1
GULE	**Gulek**	**0.36**	**320**	*i* P	Pg	09 49 02.3	+3.5
GULE				*i* S	Sg	09 49 09.7	+6.1
MERS	**Mersin**	**0.46**	**253**	*e*PG	Pg	09 49 01.9	+1.3
MERS				*e*SG	Sg	09 49 09.6	+2.9
MERS	**Mersin**	**0.46**	**253**	*e*Pg	Pg	09 49 01.9	+1.2
MERS				*e*Sg	Sg	09 49 09.6	+2.9
YURE	**YUREGIR**	**0.48**	**112**	*i* P	Pg	09 49 03.3	+2.2
YURE				*i* S	Sg	09 49 12.2	+4.7
YURE	**YUREGIR**	**0.48**	**112**	*i* P	Pg	09 49 03.3	+2.2
YURE				*i* S	Sg	09 49 12.1	+4.7
CEYT	**Ceyhan**	**0.54**	**89**	*e*PG	Pg	09 49 03.1	+0.9
CEYT				*e*SG	Sg	09 49 12.2	+3.0
CEYT	**Ceyhan**	**0.54**	**89**	*e*Pg	Pg	09 49 03.2	+1.0
CEYT				*e*Sg	Sg	09 49 12.2	+3.0
KOZT	**Kozan**	**0.77**	**52**	*e*PG	Pg	09 49 07.0	+0.5
KOZT				*e*SG	Sg	09 49 19.5	+3.1

ISK ***29*** *10:37:33.1, 38°.94N×38°.18E, h5km, MD2.7*
DDA ***29*** *10:37:35.6, 38°.87N×38°.25E, h7km±5km, Md2.7*
ISCJB ***29*** *10:37:36.3±0.7, 38°.83N±0°.03×38°.44E±0°.06, h10km, Error ellipse: s-maj=6.4km s-min=4.7km az=10.4*
CSEM ***29*** *10:37:36.1±0.5, 38°.83N×38°.38E, h5km, MD2.7, Error ellipse: s-maj=12.1km s-min=10.1km az=97.0*

ISC 29 10:37:36.8±0.7, 38°.84N±0°.03×38°.43E±0°.06, h10km, n14, σ1§22/21, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEMA	**Kemaliye**	**0.43**	**7**	*i* P	**Pg**	**10 37 44.2**	**-1.1**
KEMA				*i* S	**Sg**	**10 37 51.7**	**+0.7**
KEMA	**Kemaliye**	**0.43**	**7**	*i* P	**Pg**	**10 37 44.2**	**-1.1**
KEMA				*i* S	**Sg**	**10 37 51.7**	**+0.7**
DARE	**Darende-Malaty**	**0.50**	**283**	*e*PG	**Pg**	**10 37 46.3**	**-0.2**
DARE				*e*SG	**Sg**	**10 37 55.6**	**+2.5**
DARE	**Darende-Malaty**	**0.50**	**283**	*e*Pg	**Pg**	**10 37 46.3**	**-0.2**
DARE				*e*Sg	**Sg**	**10 37 55.6**	**+2.6**
MYA	**Malataya**	**0.51**	**180**	*e*PG	**Pg**	**10 37 46.5**	**-0.3**
MYA				*e*SG	**Sg**	**10 37 55.2**	**+1.8**
MYA	**Malataya**	**0.51**	**180**	*e*Pg	**Pg**	**10 37 46.5**	**-0.2**
MYA				*e*Sg	**Sg**	**10 37 55.2**	**+1.8**
AKCD	**Akcadag**	**0.67**	**216**	*i* P	**Pg**	**10 37 46.9**	**-2.8**
AKCD				*i* S	**Sg**	**10 37 57.9**	**-0.6**
AKCD	**Akcadag**	**0.67**	**216**	*i* P	**Pg**	**10 37 46.9**	**-2.8**
PTK	**Pertek**	**0.76**	**86**	*e*PG	**Pg**	**10 37 51.4**	**0.0**
PTK	**Pertek**	**0.76**	**86**	*e*Pg	**Pg**	**10 37 51.4**	**0.0**
SVRC	**Sivrice-ELAZID**	**0.83**	**123**	*e*PG	**Pg**	**10 37 53.0**	**+0.2**
SVRC	**Sivrice-ELAZID**	**0.83**	**123**	*e*Pg	**Pg**	**10 37 53.0**	**+0.3**
SVSK	**Karacayir**	**1.54**	**315**	*e*PN	**Pn**	**10 37 59.6**	**-4.8**
SVSK	**Karacayir**	**1.54**	**315**	*e*Pn	**Pn**	**10 37 59.6**	**-4.7**

KRSC 29 10:38:17.3±0.7, 54°.85N×162°.95E, h40km±30km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.77**	**248**	*e*P	Pn	10 38 31.4	-0.2
MKZ				*i* S	Sn	10 38 41.6	-0.3
KBTR	**Krutoberegovo**	**1.36**	**357**	*e*P	Pn	10 38 38.7	-1.1
BKI	**Bering**	**1.78**	**77**	*e*P	Pn	10 38 46.0	+0.6
BKI				*i* S	Sn	10 39 06.6	-0.1
KMNR	**Kamenistaya**	**1.80**	**301**	*e*P	Pn	10 38 46.7	+1.0
KMNR				*i* S	Sn	10 39 08.4	+1.1
KII	**Karymskiy**	**2.20**	**250**	*e*P	Pn	10 38 53.1	+1.8
KII				*i* S	Sn	10 39 19.4	+2.2
SPN	**Mys Shipunski**	**2.46**	**226**	P	Pn	10 38 55.3	+0.4
SPN				*i* S	Sn	10 39 23.3	-0.4
NLC	**Nalytchevo**	**2.71**	**233**	*e*P	Pn	10 38 59.7	+1.4
NLC				*i* S	Sn	10 39 30.4	+0.6
AVH	**Avacha**	**2.95**	**239**	*e*P	Pn	10 39 04.2	+2.7
AVH				*i* S	Sn	10 39 37.5	+1.9
PET	**Petropavlovsk**	**3.13**	**236**	*e*P	Pn	10 39 05.9	+1.9
PET				*i* S	Sn	10 39 41.7	+1.6

ISCJB ***29*** *10:43:58.8±0.3, 63°.57N±0°.03×147°.36W±0°.07, h10km, mb3.7/2, Error ellipse: s-maj=4.5km s-min=3.9km az=7.1*
IDC ***29*** *10:43:58.5±1.6, 63°.59N×147°.36W, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.4/22, mbtmp3.7/2, Error ellipse: s-maj=16.2km s-min=13.3km az=38.0*
NEIC ***29*** *10:43:59.1, 63°.55N×147°.34W, h8km, ML3.6(PMR), ML3.2(AEIC), After AEIC.*

ISC 29 10:43:59.8±0.3, 63°.58N±0°.03×147°.37W±0°.07, h10km, n35, σ1§10/39, mb3.7/2, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DHY	**Denali Highway**	**0.50**	**180**	P	**Pg**	**10 44 08.1**	**-1.4**
DHY				S	**Sg**	**10 44 14.6**	**-1.6**
RND	**Reindeer**	**0.69**	**256**	P	**Pg**	**10 44 12.1**	**-1.0**
RND				S	**Sg**	**10 44 21.8**	**-0.3**
PAX	**Paxson**	**1.05**	**125**	P	**Pg**	**10 44 17.6**	**-2.4**
ILAR	**Eielson Array**	**1.22**	**10**	Pg	**Pg**	**10 44 21.9**	**-1.2**
	59nm,0.3s,baz=189,slow=17,SNR=1251						
ILAR				Lg		10 44 38.2	
	170nm,0.3s,baz=188,slow=29,SNR=51						
COLA	**College**	**1.32**	**351**	P	**Pn**	**10 44 23.6**	**-0.7**
COLA				S	**Sb**	**10 44 42.3**	**+0.8**
DOT	**Dot Lake**	**1.48**	**86**	P	**Pn**	**10 44 26.0**	**-0.4**
BPAW	**Bear Paw Mtn.**	**1.69**	**290**	P	**Pn**	**10 44 28.7**	**-0.5**
MENT	**Mentasta**	**1.77**	**110**	*e*P	**Pn**	**10 44 29.7**	**-0.7**
SML	**Sawmill**	**1.83**	**195**	P	**Pn**	**10 44 30.4**	**-0.8**
PMR	**Palmer**	**2.15**	**203**	*e*P	**Pn**	**10 44 35.2**	**-0.5**
CHUM	**Lake Minchumin**	**2.22**	**280**	P	**Pn**	**10 44 36.3**	**-0.3**
PPLA	**Purkeypile**	**2.29**	**255**	P	**Pn**	**10 44 38.3**	**+0.8**
SKT	**Skwentna**	**2.50**	**232**	P	**Pn**	**10 44 39.7**	**-0.7**
DIV	**Divide**	**2.57**	**162**	P	**Pn**	**10 44 42.2**	**+0.8**
BCA3	**Beaver Creek A**	**2.57**	**99**	P	**Pn**	**10 44 40.6**	**-0.8**
RC01	**Rabbit Creek A**	**2.73**	**205**	P	**Pn**	**10 44 44.8**	**+1.2**
BMRM	**Bremner River**	**2.92**	**153**	P	**Pn**	**10 44 47.0**	**+0.8**
EGAK	**Eagle**	**2.97**	**63**	P	**Pn**	**10 44 47.9**	**+1.0**
EYAK	**Cordova Ski Ar**	**3.13**	**165**	P	**Pn**	**10 44 51.0**	**+1.9**
SLKM	**Skilak Lake**	**3.36**	**205**	P	**Pn**	**10 44 53.7**	**+1.5**
DAWY	**Dawson**	**3.57**	**79**	P	**Pn**	**10 44 55.2**	**+0.1**
SEW	**Seward**	**3.62**	**197**	P	**Pn**	**10 44 57.7**	**+1.9**
IM3	**Indian Mountai**	**3.65**	**314**	P	**

TT01	Tatalina	3.97	264	P	Pn	10 45 00.0	-0.6
BM3	Burnt Mountain	4.03	15	P	Pn	10 45 01.6	+0.2
RSO	Redoubt South	4.03	221	ePn	Pn	10 45 03.1	+1.7
BRLK	Bradley Lake	4.18	205	P	Pn	10 45 05.4	+1.9
SVW2	Sparrevohn	4.57	241	eP	Pn	10 45 08.6	-0.2
KDAK	Kodiak Island	6.35	206	Pn	Pn	10 45 33.3	0.0
	0.3nm,0.3s,baz=10.0,slow=17,SNR=5.4						
KDAK				Sn	Sn	10 46 43.1	-2.7
	1.0nm,0.3s,baz=314,slow=23,SNR=8.0						
OHAK	Old Harbor	7.01	207	eP	Pn	10 45 43.4	+1.0
CRAG	Craig	10.86	132	eP	Pn	10 46 34.9	-0.1
	19nm,0.6s						
TXAR	Lajitas Array	44.08	120	P	P	10 52 09.3	+1.6
	0.6nm,0.6s,mb3.5,baz=318,slow=7.4,SNR=12						
TXAR	Lajitas Array	44.08	120	P	P	10 52 09.3	+1.6
MKAR	Makanchi Array	63.20	324	P	P	10 54 26.0	-1.6
	0.4nm,0.4s,mb3.9,baz=40,slow=6.3,SNR=3.9						

*ISCJB **29** 10:45:37.9±0.4, 40°.32N±0°.03×29°.17E±0°.03, h10km, Error ellipse: s-maj=4.2km s-min=3.4km az=21.3*
*DDA **29** 10:45:38.0, 40°.28N×29°.15E, h6km±1km, Md2.6*
*ISK **29** 10:45:37.0, 40°.27N×29°.13E, h18km, MD2.7*
*CSEM **29** 10:45:37.8±0.1, 40°.29N×29°.17E, h2km, MD2.6, Error ellipse: s-maj=3.5km s-min=2.6km az=8.0*

ISC 29 10:45:38.4±0.4, 40°.30N±0°.03×29°.16E±0°.03, h7km±8km, n28, σ0°98/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULDT	Uludag	0.16	186	i P	Pg	10 45 40.6	-1.0
ULDT				i S	Sg	10 45 43.6	-0.2
ULDT	Uludag	0.16	186	i P	Pg	10 45 40.6	-1.0
ULDT				i S	Sg	10 45 43.6	-0.2
MDNY	Mudanya-Bursa	0.22	288	ePG	Pg	10 45 42.3	-0.4
MDNY				eSG	Sg	10 45 46.4	+0.7
MDNY	Mudanya-Bursa	0.22	288	ePg	Pg	10 45 42.3	-0.4
MDNY				eSg	Sg	10 45 46.4	+0.7
YLV	Yalova	0.31	32	ePG	Pg	10 45 44.6	+0.1
YLV				eSG	Sg	10 45 50.9	+2.4
YLV	Yalova	0.31	32	ePg	Pg	10 45 44.6	+0.2
YLV				eSg	Sg	10 45 50.9	+2.3
ARMT	Armutlu	0.35	319	ePG	Pg	10 45 44.9	-0.3
ARMT				eSG	Sg	10 45 50.6	+0.9
ARMT	Armutlu	0.35	319	ePg	Pg	10 45 44.9	-0.2
ARMT				eSg	Sg	10 45 50.6	+0.9
ADVT	Abdulvahap	0.46	73	ePG	Pg	10 45 47.0	-0.3
ADVT	Abdulvahap	0.46	73	ePg	Pg	10 45 47.0	-0.3
CAVI	Cavuskoy	0.53	101	ePG	Pg	10 45 48.5	-0.1
CAVI	Cavuskoy	0.53	101	ePg	Pg	10 45 48.5	-0.1
KCTX	Karacabey (Bur	0.61	267	ePG	Pg	10 45 50.0	-0.2
KCTX	Karacabey (Bur	0.61	267	ePg	Pg	10 45 50.0	-0.2
HRT	Hereke	0.65	37	ePG	Pg	10 45 50.0	-0.8
HRT	Hereke	0.65	37	ePg	Pg	10 45 50.0	-0.8
BNT	Bandirma	0.95	274	ePG	Pg	10 45 55.9	-0.6
GULT	Gulveren	1.04	82	ePG	Pg	10 45 57.6	-0.9
GULT	Gulveren	1.04	82	ePg	Pg	10 45 57.6	-0.8
CTKS	Kestanelik-??a	1.06	332	ePG	Pg	10 45 57.6	-1.0
CTKS	Kestanelik-??a	1.06	332	ePg	Pg	10 45 57.6	-1.0
BORA	Eskisehir	1.08	113	i P	Pg	10 45 58.0	-1.0
BORA				i S	Sg	10 46 14.9	+1.8
BORA	Eskisehir	1.08	113	i P	Pg	10 45 58.0	-1.1
GDZ	Gediz	1.24	168	i P	Pg	10 46 01.0	-1.1
GDZ				i S	Sg	10 46 18.9	+0.8
GDZ	Gediz	1.24	168	i P	Pg	10 46 01.0	-1.1
GDZ				i S	Sg	10 46 18.9	+0.8
DEMI	Demirci	1.30	195	i P	Pn	10 45 57.3	-5.8
DEMI				i S	Sg	10 46 22.8	+2.5
BALY	Balya	1.31	245	i P	Pn	10 46 02.8	-0.3
BALY				i S	Sb	10 46 21.0	+0.7
BALY	Balya	1.31	245	i P	Pn	10 46 02.8	-0.3
BALY				i S	Sb	10 46 21.0	+0.7

AUST 29 11:09:20.0, 14°.55S×122°.11E, h0km, ML4.5, Northwest of Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	4.89	137	eP	Pn	11 10 32.5	-2.4
FITZ				eS	Sn	11 11 27.7	-4.6
	100nm,0.4s						
KNA	Kununurra	6.54	101	eP	Pn	11 10 55.3	-2.2
KNA				eS	Sn	11 12 04.5	-8.3
	52nm,0.5s						
MBWA	Marble Bar	6.95	199	eP	Pn	11 11 00.8	-2.4
MBWA				eS	Sn	11 12 17.2	-5.8
KAKA	Kakadu	10.21	81	eP	Pn	11 11 46.0	-1.9
KAKA				eS	Sn	11 13 32.3	-11
	29nm,0.5s						
MEEK	Meekatharra	12.46	195	eP	Pn	11 12 15.3	-3.4
MEEK				eS	Sn	11 14 25.3	-13
MORW	Morawa	15.50	200	eP	Pn	11 12 55.3	-4.7
MORW				eS	Sn	11 15 35.5	-17
KMBL	Kambalda	16.74	181	eP	Pn	11 13 09.6	-6.4
KLBR	Kellerberrin	17.43	192	eP	Pn	11 13 20.2	-4.4
KLBR				eS	Sn	11 16 20.7	-19
	6.3nm,0.5s						

*ISCJB **29** 11:20:04.4±0.4, 39°.64N±0°.03×29°.38E±0°.03, h0km, Error ellipse: s-maj=3.9km s-min=3.7km az=161.2*
*CSEM **29** 11:20:04.4±0.2, 39°.64N×29°.40E, h1km, MD2.8, Error ellipse: s-maj=4.1km s-min=4.0km az=53.0*
*ISK **29** 11:20:04.5, 39°.65N×29°.38E, h12km, MD2.8*

ISC 29 11:20:04.7±0.4, 39°.63N±0°.03×29°.36E±0°.03, h0km, n34, σ0°92/43, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULDT	Uludag	0.54	341	i P	Pg	11 20 14.4	-0.5
ULDT	Uludag	0.54	341	i P	Pg	11 20 14.4	-0.6
ULDT				i S	Sg	11 20 22.6	+0.6
GDZ	Gediz	0.55	170	i P	Pg	11 20 14.8	-0.4
GDZ	Gediz	0.55	170	i P	Pg	11 20 14.8	-0.4
CAVI	Cavuskoy	0.68	33	ePG	Pg	11 20 17.3	-0.4
CAVI				eSG	Sg	11 20 27.4	+0.8
CAVI	Cavuskoy	0.68	33	ePg	Pg	11 20 17.3	-0.4
CAVI				eSg	Sg	11 20 27.4	+0.8
DURS	Dursunbey	0.68	268	i P	Pg	11 20 19.7	+1.9
DURS	Dursunbey	0.68	268	i P	Pg	11 20 19.7	+1.9
DURS				i S	Sg	11 20 31.0	+4.4
DEMI	Demirci	0.77	221	i P	Pg	11 20 21.0	+1.6
DEMI	Demirci	0.77	221	i P	Pg	11 20 21.0	+1.6
DEMI				i S	Sg	11 20 34.0	+4.6
ALT	Altintas	0.82	134	ePG	Pg	11 20 20.5	+0.2
ALT	Altintas	0.82	134	ePg	Pg	11 20 20.5	+0.1
BORA	Eskisehir	0.88	73	i P	Pg	11 20 21.0	-0.6
BORA	Eskisehir	0.88	73	i P	Pg	11 20 21.0	-0.5
BORA				i S	Sg	11 20 33.2	+0.3
KCTX	Karacabey (Bur	1.00	310	ePG	Pg	11 20 24.6	+0.9
KCTX	Karacabey (Bur	1.00	310	ePg	Pg	11 20 24.7	+0.9
ESKT	Eskisehir	1.16	95	ePN	Pn	11 20 27.4	-0.7
ESKT	Eskisehir	1.16	95	i P	Pg	11 20 26.5	-0.3
ESKT	Eskisehir	1.16	95	ePn	Pn	11 20 27.4	-0.7
SEYT	Eskypehyr	1.16	95	i P	Pg	11 20 26.5	-0.4
SEYT				i S	Sg	11 20 43.9	+2.0
GULT	Gulveren	1.20	48	ePN	Pn	11 20 27.0	-1.6
GULT	Gulveren	1.20	48	ePn	Pn	11 20 27.0	-1.6
KULA	Kula-Manisa	1.24	206	ePN	Pn	11 20 28.7	-0.5
KULA	Kula-Manisa	1.24	206	ePn	Pn	11 20 28.7	-0.5
KHAL	Karahalli	1.26	175	i P	Pg	11 20 28.9	0.0
KHAL	Karahalli	1.26	175	i P	Pg	11 20 28.9	0.0
KHAL				i S	Sg	11 20 45.3	0.0
KHL	Karahalli	1.31	174	ePN	Pn	11 20 29.7	-0.5
KHL	Karahalli	1.31	174	ePn	Pn	11 20 29.7	-0.5
BNT	Bandirma	1.32	304	ePN	Pn	11 20 29.7	-0.7
BALY	Balya	1.35	275	i P	Pg	11 20 25.5	-4.9
BALY	Balya	1.35	275	i P	Pg	11 20 25.5	-5.0
BALY				i S	Sg	11 20 47.6	-0.3
GONE	Gonen-Balikesi	1.35	288	ePN	Pn	11 20 29.6	-1.2
GONE	Gonen-Balikesi	1.35	288	ePn	Pn	11 20 29.6	-1.2
AKHS	Akhisar	1.42	238	i P	Pn	11 20 25.2	-6.5

DJA 29 11:30:43, 3°.31S×102°.08E, h84km, MLv3.6/10, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	Kapahiang	0.61	124	P	Pn	11 30 59.3	+1.1
KRJI	Kerinci	1.36	333	P	Pn	11 31 07.7	+1.0
MNAI	Manna	1.36	140	P	Pn	11 31 07.4	+0.7
MNAI				S	Sn	11 31 27.1	+2.5
MDSI	Maura Dua	2.40	119	P	Pn	11 31 20.4	+0.1
SDSI	Sungai Dareh	2.45	345	P	Pn	11 31 20.2	-0.8
LWLI	Liwa	2.60	131	P	Pn	11 31 24.9	+1.8
PMBI	Palembang	2.71	82	P	Pn	11 31 25.2	+0.6
PDSI	Padang	2.88	326	P	Pn	11 31 26.9	+0.1
KLSI		2.98	117	P	Pn	11 31 28.3	+0.2
KASI	Kota Agung	3.26	132	P	Pn	11 31 31.7	-0.3
SISI	Saibi	3.58	303	P	Pn	11 31 36.7	+0.4
TPTI		8.16	323	P	Pn	11 32 36.2	-2.5

*IDC **29** 11:33:53.0±1.2, 45°.91N×150°.58E, h0km, mb3.8/7, mb1 4.0/7, mb1mx3.7/19, mbtmp3.8/7, Error ellipse: s-maj=43.0km s-min=31.1km az=74.0*
*ISCJB **29** 11:34:07.2±2.7, 45°.9N±0°.2×150°.4E±0°.3, h127km±22km, mb3.6/7, Error ellipse: s-maj=40.2km s-min=32.1km az=154.2*
*MOS **29** 11:34:07.1±1.4, 45°.95N×150°.30E, h127km, mb3.8/4, Error ellipse: s-maj=39.7km s-min=30.5km az=100.0*

ISC 29 11:34:07.5±2.8, 45°.9N±0°.2×150°.5E±0°.3, h115km±23km, n14, σ0°76/15, mb3.6/7, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.98	250	↓i PN	Pn	11 34 40.0	-0.4
KUR				i S	Sn	11 35 06.0	+0.4
KUR				pmax	pmax		
	comp=N,240nm,0.4s						
KUR				pmax	pmax		
	comp=E,110nm,0.4s						
KUR				pmax	pmax		
	comp=Z,490nm,0.4s						
KUR				smax			
	comp=N,1μm,0.6s						
KUR				smax			
	comp=E,990nm,0.6s						
KUR				smax			
	comp=N,4μm,1.5s						
KUR				smax			
	comp=E,4μm,1.5s						
MKAR	Makanchi Array	45.70	297	P	P	11 42 16.4	-0.3
	comp=E,0.3nm,0.2s,mb3.6,baz=65,slow=5.8,SNR=4.1						
FINES	FINESS Array B	63.99	334	P	P	11 44 26.9	-1.2
	comp=E,1.5nm,0.6s,mb4.0,baz=50,slow=10,SNR=5.0						
FINES	FINESS Array B	63.99	334	P	P	11 44 26.9	-1.2
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES	FINESS Array B	63.99	334	P	P	11 44 26.9	-1.2
NB2	NORSAR Subarra	68.39	340	P	P	11 44 56.2	0.0
	comp=Z,0.9nm,0.5s,mb3.9,baz=27,slow=6.5						
NOA	NORSAR Array B	68.39	340	P	P	11 44 56.5	+0.3
	comp=Z,1.1nm,0.6s,mb3.9,baz=28,slow=6.4,SNR=6.1						
NOA	NORSAR Array B	68.39	340	P	P	11 44 56.5	+0.3
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	Alice Springs	70.89	196	P	P	11 45 11.5	-0.4
	comp=Z,0.2nm,0.5s,mb3.2,baz=8.4,slow=6.3,SNR=5.6						
AKASG	Malin Array Be	71.20	325	P	P	11 45 13.1	-0.5
	comp=Z,0.9nm,0.3s,mb4.0,baz=38,slow=6.2,SNR=5.0						
AKASG	Malin Array Be	71.20	325	P	P	11 45 13.1	-0.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BRTR	Keskin Array B	77.72	315	P	P	11 45 53.2	+1.8
	comp=Z,0.6nm,0.6s,mb3.5,baz=33,slow=4.1,SNR=3.7						
BRTR	Keskin Array B	77.72	315	P	P	11 45 53.2	+1.7
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	Lajitas Array	79.46	59	P	P	11 46 01.8	+0.5
	comp=Z,0.1nm,0.5s,mb2.9,baz=307,slow=5.3,SNR=3.3						

CASC 29 11:35:04.2±0.9, 13°.12N×89°.38W, h47km±16km, MD3.7, ML3.4, 2C-2D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNET	Serv Nac Est T	0.58	14	eP	Pn	11 35 16.4	0.0
SNET				eS	Sn	11 35 26.4	+1.3
SNET				AML	AML	11 35 30.2	
	comp=Z,1μm,0.3s						
LFRS	El Faro	0.59	31	↓i P	Pn	11 35 16.6	+0.2
LFRS				eS	Sn	11 35 25.7	+0.5
BOQS	Boqueron	0.62	9	↑i P	Pn	11 35 17.3	+0.4
BOQS				eS	Sn	11 35 27.3	+1.4
LBRS	Las Brisas	0.70	28	↑i P	Pn	11 35 18.3	+0.5
SNVI	San Vicente	0.72	47	↓eP	Pn	11 35 18.0	-0.1
SNVI				eS	Sn	11 35 28.5	+0.4
SBLS	San Blas	0.76	342	eP	Pn	11 35 18.8	+0.2
SBLS				eS	Sn	11 35 30.6	+1.6
SNJE	San Jose	0.78	344	eP	Pn	11 35 19.1	+0.2
SNJE				eS	Sn	11 35 30.7	+1.1
RTR	El Retiro	0.82	341	eP	Pn	11 35 19.9	+0.4
RTR				eS	Sn	11 35 32.3	+1.8
RBDL	Robledal	1.03	343	eP	Pn	11 35 22.8	+0.4
RBDL				eS	Sn	11 35 36.6	+0.8
VSM	San Miguel	1.12	74	eP	Pn	11 35 24.0	+0.5
BLLM	Bellamira	1.16	74	eP	Pn	11 35 24.3	+0.3
BLLM				eS	Sn	11 35 39.6	+1.0
CAHU	Cacacuatique	1.31	60	eP	Pn	11 35 26.0	-0.1
CAHU				eS	Sn	11 35 44.2	+1.8
CNCH	Conchagua	1.51	84	eP	Pn	11 35 28.9	+0.1

*ISK **29** 11:38:54.5, 38°.25N×25°.92E, h7km, MD3.5, ML3.7*
*NEIC **29** 11:38:55.0, 38°.22N×25°.94E, h9km, ML3.8(ISK), ML3.4(ATH), After ISK.*
*ISCJB **29** 11:38:56.9±0.4, 38°.27N±0°.02×26°.05E±0°.02, h13km±3km, Error ellipse: s-maj=2.9km s-min=2.6km az=42.5*
*DDA **29** 11:38:56.4, 38°.26N×26°.02E, h25km±1km, Md3.7*
*ATH **29** 11:38:56.2, 38°.23N×26°.03E, h17km, MD3.5/21, ML3.4*
*CSEM **29** 11:38:57.2±0.1, 38°.26N×26°.05E, h10km, ML4.4/4, Error ellipse: s-maj=2.5km s-min=2.4km az=130.0*
*THE **29** 11:38:57.4, 38°.26N×26°.02E, h10km, ML4.4/4, Error ellipse: s-maj=1.0km s-min=0.4km az=66.0*

ISC 29 11:38:57.3±0.4, 38°.25N±0°.02×26°.04E±0°.02, h9km±3km, n193, σ1°00/247, 6C-10D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOS	Chios island	0.13	4	↑i PB	Pg	11 39 00.5	+0.2
CHOS				eSB	Sg	11 39 02.9	+0.5
CHOS	Chios island	0.13	4	P	Pg	11 39 00.4	+0.1
CHOS				S	Sg	11 39 02.7	+0.3
CHOS	Chios island	0.13	4	P	Pg	11 39 00.4	+0.1
CHOS				S	Sg	11 39 02.7	+0.3
URLA	Izmir	0.45	76	i P	Pg	11 39 05.5	-0.6
URLA				i S	Sg	11 39 12.9	+1.0
URLA	Izmir	0.45	76	i P	Pg	11 39 05.4	-0.6
URLA				i S	Sg	11 39 12.9	+1.0
BLCB	Balcova	0.80	80	ePG	Pg	11 39 12.6	-0.1
BLCB				eSG	Sg	11 39 24.7	+1.7
BLCB	Balcova	0.80	80	P	Pg	11 39 12.9	+0.3
BLCB				S	Sg	11 39 24.6	+1.6
BLCB	Balcova	0.80	80	ePg	Pg	11 39 12.6	0.0
BLCB	Balcova	0.80	80	P	Pg	11 39 12.9	+0.3
BLCB				S	Sg	11 39 24.6	+1.6
SIGR	SIGRI	0.97	351	P	Pg	11 39 15.0	-0.9
SIGR	SIGRI	0.97	351	P	Pg	11 39 15.2	-0.7
SIGR				S	Sg	11 39 29.1	+0.6
SIGR	SIGRI	0.97	351	P	Pg	11 39 15.2	-0.7
SIGR				S	Sg	11 39 29.1	+0.6
IZM	Izmir	0.97	81	ePG	Pg	11 39 15.9	0.0
IZM				eSG	Sg	11 39 30.2	+1.7
KDAG	Bornova	0.97	81	i P	Pg	11 39 15.4	-0.6
KDAG				i S	Sg	11 39 28.0	-0.7
KDAG	Bornova	0.97	81	i P	Pg	11 39 15.4	-0.6
KDAG				i S	Sg	11 39 28.0	-0.7
PRK	Paraskevi	1.01	10	↑i Pn	Pg	11 39 16.2	-0.5
PRK				eSn	Sg	11 39 30.2	+0.4
PRK	Paraskevi	1.01	10	↑i PN	Pg	11 39 16.2	-0.5
PRK				eSN	Sg	11 39 30.2	+0.4
PRK	Paraskevi	1.01	10	P	Pg	11 39 16.2	-0.5
PRK				S	Sg	11 39 30.1	+0.3
PRK	Paraskevi	1.01	10	P	Pg	11 39 16.2	-0.5
PRK				eSn	Sg	11 39 30.2	+0.4
GCAM	G?zelcaml?	1.09	120	i P	Pg	11 39 17.5	-0.7
GCAM				i S	Sg	11 39 34.9	+2.6
GCAM	G?zelcaml?	1.09	120	i P	Pg	11 39 17.5	-0.7
GCAM				i S	Sg	11 39 34.9	+2.5
AYVA	Ayvalik	1.17	25	i P	Pb	11 39 18.5	-1.1
AYVA				i S	Sb	11 39 35.9	+1.1
AYVA	Ayvalik	1.17	25	i P	Pb	11 39 18.5	-1.1
AYVA				i S	Sb	11 39 35.9	+1.1
APE	Apeiranthos	1.25	199	ePN	Pn	11 39 18.4	-2.5
APE				eSN	Sn	11 39 35.2	-2.6
APE	Apeiranthos	1.25	199	ePn	Pn	11 39 20.0	-0.9
APE	Apeiranthos	1.25	199	ePN	Pn	11 39 20.0	-0.9
APE	Apeiranthos	1.25	199	P	Pn	11 39 19.6	-1.3
APE				S	Sb	11 39 37.3	+0.1
APE	Apeiranthos	1.25	199	P	Pn	11 39 19.6	-1.3
APE	Apeiranthos	1.25	199	ePn	Pn	11 39 20.0	-0.9
APE				eSn	Sn	11 39 35.2	-2.6
APE				S	Sb	11 39 37.3	+0.1
AKS	Akhisar	1.52	65	ePN	Pn	11 39 24.7	+0.1
AKS	Akhisar	1.52	65	ePn	Pn	11 39 24.7	+0.1
AKHS	Akhisar	1.52	65	i P	Pn	11 39 24.5	-0.1
AKHS				i S	Sn	11 39 40.8	-3.7
AKHS	Akhisar	1.52	65	i P	Pn	11 39 24.5	-0.1
AKHS				i S	Sn	11 39 40.8	-3.7
BODT	Bodrum	1.56	139	ePN	Pn	11 39 23.3	-1.8
BODT	Bodrum	1.56	139	ePn	Pn	11 39 23.3	-1.8
AYDN	Tasoluk	1.57	112	i P	Pn	11 39 24.9	-0.3
AYDN				i S	Sn	11 39 47.3	+1.7
AYDN	Tasoluk	1.57	112	i P	Pn	11 39 24.9	-0.3
AYDN				i S	Sn	11 39 47.3	+1.7
EZN	Ezine	1.59	8	ePN	Pn	11 39 24.2	-1.3
EZN	Ezine	1.59	8	ePn	Pn	11 39 24.2	-1.3
BDRM	Kayabasi	1.62	136	i P	Pn	11 39 25.5	-0.5
BDRM				i S	Sn	11 39 51.4	+4.3
BDRM	Kayabasi	1.62	136	i P	Pn	11 39 25.5	-0.5
BDRM				i S	Sn	11 39 51.4	+4.4
MLSB	Milas	1.67	124	ePN	Pn	11 39 26.2	-0.4
MLSB	Milas	1.67	124	ePn	Pn	11 39 26.3	-0.4
PTL	Penteli	1.73	264	ePn	Pn	11 39 28.0	+0.5
PTL				eSn	Sn	11 39 50.6	+1.0
PTL	Penteli	1.73	264	ePN	Pn	11 39 28.0	+0.5
PTL				eSN	Sn	11 39 50.0	+0.4
PTL	Penteli	1.73	264	ePn	Pn	11 39 28.0	+0.5
LIA	Limnos Island	1.77	338	ePb	Pn	11 39 27.5	-0.6
LIA				eSb	Sb	11 39 53.9	+1.6
LIA	Limnos Island	1.77	338	ePN	Pn	11 39 28.0	-0.1
LIA				eSN	Sn	11 39 51.9	+1.2
LIA	Limnos Island	1.77	338	P	Pn	11 39 27.1	-1.0
LIA				S	Sn	11 39 49.6	-1.1
LIA	Limnos Island	1.77	338	P	Pn	11 39 27.1	-1.0
LIA	Limnos Island	1.77	338	ePb	Pn	11 39 27.5	-0.6
LIA				S	Sn	11 39 49.6	-1.1
LIA				eSb	Sb	11 39 53.9	+1.6
VLY	Voula,Athens	1.82	258	ePb	Pn	11 39 28.1	-0.6
VLY	Voula,Athens	1.82	258	ePB	Pn	11 39 28.1	-0.6
VLY	Voula,Athens	1.82	258	ePb	Pn	11 39 28.1	-0.6
ATH	Athens Observa	1.86	262	ePn	Pn	11 39 29.7	+0.5
ATH				eSn	Sn	11 39 54.1	+1.3
ATH	Athens Observa	1.86	262	ePN	Pn	11 39 29.7	+0.5
ATH				eSN	Sn	11 39 53.4	+0.6
ATH	Athens Observa	1.86	262	ePn	Pn	11 39 29.7	+0.5
THR3	Thira Island,	1.91	196	P	Pn	11 39 30.2	+0.2
THR3	Thira Island,	1.91	196	P	Pn	11 39 30.2	+0.2
THR5	Thira Island,	1.92	197	P	Pn	11 39 29.1	-0.9
THR5	Thira Island,	1.92	197	P	Pn	11 39 29.1	-0.9
AOS	Alonnisos	1.93	299	P	Pn	11 39 33.9	+3.8
AOS	Alonnisos	1.93	299	P	Pn	11 39 33.9	+3.8
BALY	Balya	1.93	39	i P	Pn	11 39 29.6	-0.6
BALY				i S	Sn	11 39 58.7	+4.2
BALY	Balya	1.93	39	i P	Pn	11 39 29.6	-0.6
BALY				i S	Sn	11 39 58.7	+4.2
GADA	Gvkgeada	1.94	357	ePN	Pn	11 39 28.5	-1.9
GADA	Gvkgeada	1.94	357	ePn	Pn	11 39 28.5	-1.8
DAT	Datca	1.95	141	ePN	Pn	11 39 29.8	-0.7
DAT	Datca	1.95	141	ePn	Pn	11 39 29.8	-0.7
BALB	Balikesir	1.99	45	ePN	Pn	11 39 31.1	0.0
BALB	Balikesir	1.99	45	ePn	Pn	11 39 31.1	0.0
KULA	Kula-Manisa	2.07	82	ePN	Pn	11 39 32.2	0.0
KULA	Kula-Manisa	2.07	82	ePn	Pn	11 39 32.2	0.0
NAIG	Nisos Aigina	2.08	257	ePN	Pn	11 39 32.2	-0.1
NAIG	Nisos Aigina	2.08	257	ePN	Pn	11 39 32.2	-0.1
NAIG	Nisos Aigina	2.08	257	ePn	Pn	11 39 32.2	-0.1
YER	Yerkesik	2.10	121	ePN	Pn	11 39 32.6	+0.1
YER	Yerkesik	2.10	121	ePn	Pn	11 39 32.6	+0.1
GELI	Tayfur-Gelibol	2.17	9	ePN	Pn	11 39 32.1	-1.4
GELI	Tayfur-Gelibol	2.17	9	ePn	Pn	11 39 32.1	-1.4
LPK	Lapseki	2.19	14	ePN	Pn	11 39 31.8	-2.0
LPK	Lapseki	2.19	14	ePn	Pn	11 39 31.8	-2.0
GONE	Gonen-Balikesi	2.20	35	ePN	Pn	11 39 32.9	-1.0
GONE	Gonen-Balikesi	2.20	35	ePn	Pn	11 39 32.9	-1.0
DEMI	Demirci	2.24	69	i P	Pn	11 39 34.7	+0.3
DEMI	Demirci	2.24	69	i P	Pn	11 39 34.7	+0.3
DID	Didima	2.34	252	ePN	Pn	11 39 36.4	+0.5
DID	Didima	2.34	252	P	Pn	11 39 34.5	-1.4
DID	Didima	2.34	252	P	Pn	11 39 34.5	-1.4
DID	Didima	2.34	252	ePn	Pn	11 39 36.4	+0.5
KRBG	Karabiga-Canak	2.35	24	ePN	Pn	11 39 35.3	-0.7
KRBG	Karabiga-Canak	2.35	24	ePn	Pn	11 39 35.3	-0.7
DENT	Denizli	2.41	101	ePN	Pn	11 39 37.2	+0.3
DENT	Denizli	2.41	101	ePn	Pn	11 39 37.2	+0.3
LKR	Lokris	2.42

IDI	**Anoyia**	**3.10 198**	P	**Pn**	**11 39 47.6**	**+1.3**
IDI	**Anoyia**	**3.10 198**	P	**Pn**	**11 39 47.6**	**+1.3**
KYTH	**Kithira**	**3.10 232**	*e*Pn	**Pn**	**11 39 45.2**	**-1.2**
KYTH	**Kithira**	**3.10 232**	*e*Pn	**Pn**	**11 39 45.7**	**-0.7**
KYTH	**Kithira**	**3.10 232**	*e*Pn	**Pn**	**11 39 45.2**	**-1.2**
ARMT	**Armutlu**	**3.18 43**	*e*PN	**Pn**	**11 39 47.9**	**+0.6**
ARMT	**Armutlu**	**3.18 43**	*e*Pn	**Pn**	**11 39 47.9**	**+0.5**
SOH	**Sokhos**	**3.30 322**	*e*Pn	**Pn**	**11 39 48.8**	**-0.3**
SOH	**Sokhos**	**3.30 322**	*e*PN	**Pn**	**11 39 49.3**	**+0.2**
SOH	**Sokhos**	**3.30 322**	*e*Pn	**Pn**	**11 39 48.8**	**-0.3**
KARN	**Karanos**	**3.32 212**	*e*PN	**Pn**	**11 39 49.4**	**+0.1**
KARN	**Karanos**	**3.32 212**	*e*Pn	**Pn**	**11 39 49.4**	**+0.1**
LIT	**Litokhoron**	**3.32 305**	*e*Pn	**Pn**	**11 39 49.5**	**+0.1**
LIT	**Litokhoron**	**3.32 305**	*e*PN	**Pn**	**11 39 49.5**	**+0.1**
LIT	**Litokhoron**	**3.32 305**	*e*Pn	**Pn**	**11 39 49.5**	**+0.1**
SIVA	**Sivas**	**3.38 197**	*e*Pn	**Pn**	**11 39 50.5**	**+0.4**
SIVA	**Sivas**	**3.38 197**	*e*PN	**Pn**	**11 39 50.5**	**+0.4**
SIVA	**Sivas**	**3.38 197**	*e*Pn	**Pn**	**11 39 50.5**	**+0.4**
EVR	**Evrytania**	**3.38 283**	*e*Pn	**Pn**	**11 39 52.1**	**+1.9**
EVR	**Evrytania**	**3.38 283**	*e*PN	**Pn**	**11 39 51.1**	**+0.9**
EVR	**Evrytania**	**3.38 283**	*e*Pn	**Pn**	**11 39 52.1**	**+1.9**
ITM	**Ithomi**	**3.44 253**	P	**Pn**	**11 39 55.3**	**+4.4**
ITM	**Ithomi**	**3.44 253**	*e*PN	**Pn**	**11 39 51.8**	**+0.9**
ITM	**Ithomi**	**3.44 253**	*e*Pn	**Pn**	**11 39 51.8**	**+0.9**
ITM	**Ithomi**	**3.44 253**	P	**Pn**	**11 39 55.3**	**+4.4**
AKAS	**Kas**	**3.48 124**	*i* P	**Pn**	**11 39 52.3**	**+0.7**
AKAS			*i* S	**Sn**	**11 40 34.1**	**+1.2**
AKAS	**Kas**	**3.48 124**	*i* P	**Pn**	**11 39 52.3**	**+0.7**
AKAS			*i* S	**Sn**	**11 40 34.1**	**+1.2**
ISP	**Isparta**	**3.56 96**	P	**Pn**	**11 39 54.1**	**+1.4**
EDRB	**Edirne**	**3.63 8**	*e*PN	**Pn**	**11 39 52.3**	**-1.3**
EDRB	**Edirne**	**3.63 8**	*e*Pn	**Pn**	**11 39 52.3**	**-1.3**
VTS	**Vitosha**	**4.84 334**	⇓P	**Pn**	**11 40 10.7**	**+0.5**
VTS	**Vitosha**	**4.84 334**	⇓*i*P	**Pn**	**11 40 10.7**	**+0.4**
VTS	**Vitosha**	**4.84 334**	⇓P	**Pn**	**11 40 10.7**	**+0.4**
BARS	**Barje**	**5.58 326**	*i* Pn	**Pn**	**11 40 20.6**	**+0.2**
TIRR	**Tirgusor**	**6.45 15**	*e*Pn	**Pn**	**11 40 31.8**	**-0.6**
TIRR	3.7nm,0.5s		*e*Sn	**Sn**	**11 41 46.8**	**+0.8**
TIRR	**Tirgusor**	**6.45 15**	⇓*i*P	**Pn**	**11 40 31.8**	**-0.5**
TIRR	**Tirgusor**	**6.45 15**	⇓*i*P	**Pn**	**11 40 31.8**	**-0.5**
TIRR			*e*Sn	**Sn**	**11 41 46.8**	**+0.8**
MLR	**Muntele Rosu**	**7.23 359**	⇑P	**Pn**	**11 40 44.7**	**+1.7**
MLR	**Muntele Rosu**	**7.23 359**	⇑*i*P	**Pn**	**11 40 44.7**	**+1.6**
MLR	**Muntele Rosu**	**7.23 359**	⇑P	**Pn**	**11 40 44.7**	**+1.6**
PLOR	**Plostina**	**7.61 3**	⇓*i*P	**Pn**	**11 40 49.2**	**+1.0**
PLOR	**Plostina**	**7.61 3**	⇓*i*P	**Pn**	**11 40 49.2**	**+1.0**
VRI	**Vrincioaia**	**7.62 4**	⇓P	**Pn**	**11 40 49.7**	**+1.3**
VRI	**Vrincioaia**	**7.62 4**	⇓*i*P	**Pn**	**11 40 49.7**	**+1.3**
VRI	**Vrincioaia**	**7.62 4**	⇓P	**Pn**	**11 40 49.7**	**+1.3**

*IDC **29** 12:28:03.1±1.3,21°.11N×121°.02E,h0km,mb3.6/6, mb1 3.7/6,mb1mx3.5/20,mbtmp3.6/6,MS3.0/2,Ms1 3.1/2, ms1mx2.5/26,Error ellipse: s-maj=33.8km s-min=24.6km az=68.0*

*NEIC **29** 12:28:04.7±0.8,21°.05N×121°.00E,h10km,Error ellipse: s-maj=15.9km s-min=10.3km az=104.0*

*ISCJB **29** 12:28:05.7±0.8,21°.09N±0°.05×121°.14E±0°.08,h33km, mb3.5/6,Error ellipse: s-maj=10.8km s-min=7.1km az=167.9*

*TAP **29** 12:28:06.8,21°.34N×121°.19E,h76km±1km,ML4.1,C*

ISC 29 12:28:07.7±0.8,21°.17N±0°.05×121°.13E±0°.08,h35km,n39, σ0s93/46,mb3.5/6,1C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**0.76**	**344**	*i* P	**Pn**	**12 28 22.2**	**+0.2**
TSEB	baz=325			*i* S	**Sn**	**12 28 33.4**	**+1.3**
TWK1	**Hengchun**	**0.82**	**339**	P	**Pn**	**12 28 22.5**	**-0.4**
TWK1	baz=326			*i* S	**Sn**	**12 28 34.2**	**+0.3**
HEN	**Hengchun**	**0.91**	**337**	P	**Pn**	**12 28 23.4**	**-0.6**
HEN	baz=322			*e*S	**Sn**	**12 28 37.0**	**+1.1**
LAY	**Lan-yu**	**0.95**	**25**	P	**Pn**	**12 28 23.1**	**-1.5**
LAY	baz=26			*e*S	**Sn**	**12 28 36.2**	**-0.8**
TAW	**Tawu**	**1.20**	**350**	*e*P	**Pn**	**12 28 27.0**	**-1.0**
EAST	**Anshuo**	**1.23**	**348**	P	**Pn**	**12 28 27.8**	**-0.7**
EAST	baz=353			*e*S	**Sn**	**12 28 43.8**	**-0.1**
SCZT	**Fangliau**	**1.28**	**339**	⇑*i*P	**Pn**	**12 28 28.2**	**-1.0**
SCZT	baz=327			*e*S	**Sn**	**12 28 44.2**	**-1.0**
ECL	**Taimali**	**1.43**	**354**	*e*P	**Pn**	**12 28 29.1**	**-2.1**
SSD	**Sandimen**	**1.63**	**344**	*e*P	**Pn**	**12 28 32.8**	**-1.2**
TWG	**Pinlang**	**1.64**	**358**	*e*Pn	**Pn**	**12 28 34.7**	**+0.6**
TWG				*e*Sn	**Sn**	**12 28 59.1**	**+5.1**
TWG	**Pinlang**	**1.64**	**358**	*e*P	**Pn**	**12 28 32.6**	**-1.5**
TWM1	**Shoushan**	**1.77**	**339**	*e*P	**Pn**	**12 28 36.1**	**+0.2**
SGST	**Jiashian**	**1.97**	**345**	*e*P	**Pn**	**12 28 39.6**	**+1.0**
ELDTW	**Lidau**	**2.01**	**357**	*e*P	**Pn**	**12 28 37.7**	**-1.5**
STYT	**Tauyuan**	**2.01**	**350**	*e*P	**Pn**	**12 28 38.8**	**-0.4**
WTP	**Ta-pu**	**2.12**	**347**	*e*P	**Pn**	**12 28 40.2**	**-0.5**
TWK	**Hsinying**	**2.17**	**344**	*e*P	**Pn**	**12 28 42.0**	**+0.7**
TPUB	**Ta-pu**	**2.17**	**348**	*e*Pn	**Pn**	**12 28 43.2**	**+1.8**
CHN4	**Tsaushan**	**2.23**	**347**	*e*P	**Pn**	**12 28 42.2**	**+0.1**
EHY	**Hungye**	**2.33**	**4**	*e*P	**Pn**	**12 28 42.9**	**-0.7**
CHN5	**Tsauling**	**2.45**	**350**	*e*P	**Pn**	**12 28 44.8**	**-0.5**
SSLB	**Suanglung**	**2.61**	**357**	*e*Pn	**Pn**	**12 28 48.9**	**+1.4**
SSLB				*e*Sg	**Sn**	**12 29 32.7**	**+15**
ESL	**Shilin**	**2.65**	**6**	*e*P	**Pn**	**12 28 47.5**	**-0.4**
SMLT	**Sun Moon Lake**	**2.71**	**356**	*e*P	**Pn**	**12 28 48.6**	**-0.2**
TYC	**Yuchr**	**2.73**	**355**	*e*P	**Pn**	**12 28 48.9**	**-0.2**
TWQ1	**Liyutan**	**3.18**	**354**	*e*P	**Pn**	**12 28 55.6**	**+0.4**
NNS	**Nan Shan**	**3.26**	**4**	*e*P	**Pn**	**12 28 57.7**	**+1.3**
NSTT	**Nanjuang**	**3.45**	**358**	*e*P	**Pn**	**12 28 59.1**	**+0.1**
ENTT	**Nioudou**	**3.48**	**7**	*e*P	**Pn**	**12 29 00.0**	**+0.7**
YHNB	**Yeheng**	**3.49**	**4**	*e*Pn	**Pn**	**12 29 01.4**	**+1.8**
NSK	**Sanguang**	**3.50**	**3**	*e*P	**Pn**	**12 29 00.2**	**+0.6**
TWE	**Neicheng**	**3.57**	**8**	*e*P	**Pn**	**12 29 00.2**	**-0.4**
KSRS	**Korea Array**	**17.27**	**19**	LR	LR	12 39 44.0	
	comp=Z,39nm,18.6s,baz=195,slow=40						
CMAR	**Chiang Mai Arr**	**21.04**	**267**	P	**P**	**12 32 48.0**	**-0.8**
	0.6nm,0.3s,mb3.3,baz=77,slow=9.1,SNR=5.4						
CMAR				LR	LR	12 42 23.5	
	comp=Z,41nm,18.6s,baz=190,slow=41						
MJAR	**Matsushiro Arr**	**21.36**	**41**	P	**P**	**12 32 53.9**	**+1.9**
	0.5nm,0.4s,mb3.2,baz=234,slow=10,SNR=3.8						
SONM	**Songino Array**	**29.14**	**339**	P	**P**	**12 34 05.7**	**+0.5**
	0.4nm,0.4s,mb3.5,baz=147,slow=12,SNR=3.6						
MKAR	**Makanchi Array**	**40.50**	**318**	P	**P**	**12 35 44.0**	**+0.8**
	0.7nm,0.6s,mb3.5,baz=108,slow=10,SNR=7.9						
ZALV	**Zalesovo Beam**	**42.76**	**329**	P	**P**	**12 36 01.6**	**+0.1**
	1.3nm,0.5s,mb3.9,baz=122,slow=7.9,SNR=7.8						
ASAR	**Alice Springs**	**46.27**	**164**	P	**P**	**12 36 30.1**	**+0.2**
	0.2nm,0.4s,mb3.4,baz=346,slow=6.9,SNR=8.0						

*NEIC **29** 12:40:19.9,17°.10N×100°.03W,h24km,MD3.6(MEX),After MEX.*

MEX 29 12:40:19.6±1.5,17°.09N×100°.04W,h27km±19km,MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.22**	**259**	*e*P	Pb	12 40 23.9	-1.8
CAIG				*e*S	Sb	12 40 29.3	-0.7
CAIG	**El Cayaco**	**0.22**	**259**	*e*P	Pb	12 40 24.0	-1.8
CAIG				*e*S	Sb	12 40 29.3	-0.7
ACX	**Acapulco**	**0.28**	**142**	*e*P	Pb	12 40 24.1	-2.4
ACX				*e*S	Sb	12 40 29.3	-1.9
ACX	**Acapulco**	**0.28**	**142**	*e*P	Pb	12 40 24.1	-2.4
ACX				*e*S	Sb	12 40 29.3	-1.9
MEIG	**Mezcala**	**0.92**	**26**	*e*P	Pn	12 40 33.2	-3.6
MEIG				*i* S	Sb	12 40 45.4	-3.4
PLIG	**Platanillo**	**1.39**	**21**	*e*P	Pn	12 40 40.6	-2.6
PLIG				*e*S	Sn	12 40 58.7	-2.0
PLIG	**Platanillo**	**1.39**	**21**	*e*P	Pn	12 40 40.6	-2.6
PLIG				*e*S	Sn	12 40 58.7	-2.0
ZIIG	**Zihuatanejo**	**1.46**	**291**	*e*P	Pn	12 40 43.0	-1.1
ZIIG				*e*S	Sn	12 41 03.3	+1.0
ZIIG	**Zihuatanejo**	**1.46**	**291**	*e*P	Pn	12 40 43.0	-1.1
ZIIG				*i* S	Sn	12 40 59.9	-2.4
ZIIG				*e*S	Sn	12 41 03.3	+1.0
PNIG	**Pinotepa**	**1.96**	**110**	*e*P	Pn	12 40 50.6	-0.4
PNIG				*e*S	Sn	12 41 15.2	+0.6
PNIG	**Pinotepa**	**1.96**	**110**	*i* P	Pn	12 40 49.4	-1.6
PNIG				*e*P		12 40 50.6	
PNIG				*i* S	Sn	12 41 11.2	-3.5
PNIG				*e*S	Sn	12 41 15.2	+0.6

CASC 29 12:47:36.0±1.9,8°.41N×83°.01W,h9km±8km,MD3.7,2C, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.29**	**327**	⇑*e*P	Pg	12 47 42.3	+0.6
ACR				*e*S	Sg	12 47 47.3	+1.6
BAR1		**0.88**	**340**	*e*P	Pg	12 47 51.9	-1.0
BAR1				*e*S	Sg	12 48 04.3	-0.1
BUS	**Buena Vista**	**1.36**	**327**	*e*P	Pn	12 48 00.1	-1.1
URSC	**Urasca**	**1.61**	**332**	⇑*e*P	Pn	12 48 03.9	-0.6
URSC				*e*S	Sn	12 48 26.0	+0.5
LAJ	**Bijagual**	**1.81**	**323**	*e*P	Pn	12 48 10.1	+2.7
PRS1	**Puriscal**	**2.02**	**321**	*e*P	Pn	12 48 09.9	-0.4

*NEIC **29** 13:04:16.8,39°.16S×174°.76E,h227km,MG4.3(WEL), After WEL.*

WEL 29 13:04:17.2±0.4,39°.13S×174°.79E,h222km±2km,ML4.3/21, 3D,Error ellipse: s-maj=2.6km s-min=2.5km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRZ	**Vera Road**	**0.02**	**283**	PN	Pn	13 04 45.3	-0.8
VRZ				SN	S	13 05 07.3	-1.2
VRZ	**Vera Road**	**0.02**	**283**	P	Pn	13 04 45.4	-0.7
VRZ				S	S	13 05 07.5	-1.0
RAEZ	**Rainy Point**	**0.34**	**243**	PN	Pn	13 04 46.2	-0.2
DREZ	**Durham Road**	**0.46**	**262**	PN	Pn	13 04 46.4	-0.3
DREZ				SN	S	13 05 09.5	-0.2
PKVZ	**Pokaka**	**0.46**	**110**	⇓PN	Pn	13 04 46.7	0.0
PKVZ				SN	S	13 05 08.6	-1.2
NEZ	**North Egmont**	**0.55**	**255**	PN	Pn	13 04 47.1	0.0
DFE	**Dawson Falls**	**0.56**	**249**	PN	Pn	13 04 47.3	+0.2
DFE	**Dawson Falls**	**0.56**	**249**	P	Pn	13 04 47.3	+0.2
MTVZ	**Mangateitei**	**0.59**	**116**	PN	Pn	13 04 47.2	0.0
MTVZ				SN	S	13 05 09.8	-0.8
TRVZ	**Turoa**	**0.62**	**106**	PN	Pn	13 04 47.5	+0.2
HIZ	**Hauiti**	**0.62**	**5**	⇓PN	Pn	13 04 46.6	-0.8
WAZ	**Wanganui**	**0.64**	**166**	PN	Pn	13 04 47.8	+0.4
WAZ	**Wanganui**	**0.64**	**166**	P	Pn	13 04 47.8	+0.4
WNVZ	**Wahianoa**	**0.66**	**108**	PN	Pn	13 04 47.8	+0.3
TUVZ	**Tukino**	**0.69**	**102**	PN	Pn	13 04 47.9	+0.3
TUVZ	**Tukino**	**0.69**	**102**	P	Pn	13 04 47.9	+0.3
NWEZ	**Newall Road**	**0.73**	**258**	*e*PN	Pn	13 04 47.7	-0.1
MOVZ	**Moawhango**	**0.80**	**111**	PN	Pn	13 04 47.9	-0.2
MOVZ	**Moawhango**	**0.80**	**111**	P	Pn	13 04 47.9	-0.2
TSZ	**Takapari Road**	**1.30**	**136**	PN	Pn	13 04 51.5	+0.2
TSZ				SN	S	13 05 16.3	-1.7
TSZ	**Takapari Road**	**1.30**	**136**	P	Pn	13 04 51.6	+0.3
BKZ	**Black Stump Fm**	**1.33**	**92**	⇓PN	Pn	13 04 51.2	-0.4
BKZ	**Black Stump Fm**	**1.33**	**92**	P	Pn	13 04 51.2	-0.3
ALRZ	**Allen Road**	**1.34**	**66**	PN	Pn	13 04 50.8	-0.8
PNHZ	**Pukenui**	**1.34**	**126**	PN	Pn	13 04 51.8	+0.2
NMHZ	**Naumai**	**1.57**	**89**	PN	Pn	13 04 54.1	+0.6
DVHZ	**Dannevirke**	**1.58**	**138**	PN	Pn	13 04 53.5	0.0
WPHZ	**Waipukurau**	**1.58**	**127**	PN	Pn	13 04 53.9	+0.3
MRZ	**Mangatainoka R**	**1.65**	**158**	PN	Pn	13 04 53.8	-0.3
MRZ	**Mangatainoka R**	**1.65**	**158**	P	Pn	13 04 53.8	-0.3
OGWZ	**Otaki Gorge**	**1.71**	**177**	PN	Pn	13 04 54.6	-0.1
KIW	**Kapiti Island**	**1.73**	**177**	PN	Pn	13 04 54.4	-0.4
KIW	**Kapiti Island**	**1.73**	**177**	P	Pn	13 04 54.4	-0.5
DUWZ	**D'Urville Isla**	**1.80**	**201**	PN	Pn	13 04 54.9	-0.6
RAHZ	**Arahi**	**1.80**	**84**	PN	Pn	13 04 55.5	-0.1
PRHZ	**Porangahau**	**1.82**	**129**	PN	Pn	13 04 55.9	+0.2
PXZ	**Pawanui**	**1.84**	**120**	PN	Pn	13 04 55.8	-0.1
HOWZ	**Holdsworth Sta**	**1.85**	**163**	PN	Pn	13 04 55.5	-0.5
BFZ	**Birch Farm**	**1.91**	**145**	P	Pn	13 05 00.4	+3.9
CAW	**Cannon Point**	**1.99**	**174**	PN	Pn	13 04 56.8	-0.5
CAW	**Cannon Point**	**1.99**	**174**	P	Pn	13 04 56.8	-0.4
URZ	**Urewera**	**2.02**	**65**	PN	Pn	13 04 56.1	-1.5
URZ	**Urewera**	**2.02**	**65**	P	Pn	13 04 56.1	-1.5
MTW	**Mount Morrison**	**2.10**	**165**	PN	Pn	13 04 57.8	-0.5
MTW	**Mount Morrison**	**2.10**	**165**	P	Pn	13 04 57.8	-0.5
TCW	**Tory Channel**	**2.12**	**190**	PN	Pn	13 04 58.0	-0.5
TCW	**Tory Channel**	**2.12**	**190**	P	Pn	13 04 58.0	-0.5
WEL	**Wellington**	**2.15**	**180**	PN	Pn	13 04 58.1	-0.7
WEL	**Wellington**	**2.15**	**180**	P	Pn	13 04 58.1	-0.8
SNZO	**South Karori**	**2.18**	**182**	PN	Pn	13 04 58.3	-0.9
SNZO	**South Karori**	**2.18**	**182**	P	Pn	13 04 58.3	-0.8
KNZ	**Kokohu**	**2.25**	**88**	PN	Pn	13 04 59.6	-0.3
KNZ	**Kokohu**	**2.25**	**88**	P	Pn	13 04 59.6	-0.3
BHW	**Baring Head**	**2.28**	**178**	PN	Pn	13 04 59.1	-1.0
BHW	**Baring Head**	**2.28**	**178**	P	Pn	13 04 59.1	-1.0
MWZ	**Matawai**	**2.29**	**71**	PN	Pn	13 04 59.1	-1.2
MWZ	**Matawai**	**2.29**	**71**	P	Pn	13 04 59.1	-1.2
PAWZ	**Paruwai Farm**	**2.30**	**168**	PN	Pn	13 04 59.7	-0.7
PAWZ	**Paruwai Farm**	**2.30**	**168**	P	Pn	13 04 59.7	-0.7
MSWZ	**Moikau Station**	**2.31**	**171**	PN	Pn	13 04 59.7	-0.8
NNZ	**Nelson**	**2.35**	**207**	PN	Pn	13 04 59.7	-1.1
NNZ	**Nelson**	**2.35**	**207**	P	Pn	13 04 59.7	-1.2
TRWZ	**Traveller**	**2.37**	**163**	PN	Pn	13 05 00.5	-0.6
TUWZ	**Tuamarina**	**2.39**	**195**	PN	Pn	13 05 00.5	-0.8
QRZ	**Quartz Range**	**2.42**	**225**	PN	Pn	13 04 59.7	-1.9
QRZ	**Quartz Range**	**2.42**	**225**	P	Pn	13 04 59.7	-2.0
MHGZ	**Mahia Peninsul**	**2.43**	**92**	PN	Pn	13 05 01.5	-0.3
PLWZ	**Palliser**	**2.46**	**172**	PN	Pn	13 05 01.1	-1.0
BSWZ	**Blackbirch Sta**	**2.67**	**195**	PN	Pn	13 05 03.5	-0.9
BSWZ	**Blackbirch Sta**	**2.67**	**195**	P	Pn	13 05 03.5	-0.8
CNGZ	**Carnagh Statio**	**2.75**	**78**	PN	Pn	13 05 04.7	-0.6
THZ	**Tophouse**	**3.00**	**208**	PN	Pn	13 05 06.3	-1.6
THZ	**Tophouse**	**3.00**	**208**	P	Pn	13 05 06.3	-1.6
MXZ	**Matakaoa Point**	**3.18**	**62**	PN	Pn	13 05 08.5	-1.6
MXZ	**Matakaoa Point**	**3.18**	**62**	P	Pn	13 05 08.5	-1.6
KHZ	**Kahutara**	**3.42**	**196**	PN	Pn	13 05 11.3	-1.5
KHZ	**Kahutara**	**3.42**	**196**	P	Pn	13 05 11.3	-1.5
DSZ	**Denniston Nort**	**3.46**	**220**	PN	Pn	13 05 11.0	-2.4
DSZ	**Denniston Nort**	**3.46**	**220**	P	Pn	13 05 11.0	-2.4
LTZ	**Lake Taylor**	**4.12**	**207**	PN	Pn	13 05 19.0	-2.2
CRLZ	**Canterbury Las**	**4.73**	**199**	PN	Pn	13 05 25.5	-3.2
CRLZ	**Canterbury Las**	**4.73**	**199**	P	Pn	13 05 25.5	-3.2
MQZ	**McQueen's Vall**	**4.85**	**199**	PN	Pn	13 05 26.7	-3.4
MQZ	**McQueen's Vall**	**4.85**	**199**	P	Pn	13 05 26.7	-3.5
WVZ	**Waitaha Valley**	**4.99**	**217**	PN	Pn	13 05 28.4	-3.6
WVZ	**Waitaha Valley**	**4.99**	**217**	P	Pn	13 05 28.4	-3.6
RPZ	**Rata Peaks**	**5.37**	**210**	PN	Pn	13 05 33.5	-3.3
RPZ	**Rata Peaks**	**5.37**	**210**	P	Pn	13 05 33.5	-3.2
FOZ	**Fox Glacier**	**5.86**	**219**	PN	Pn	13 05 37.6	-5.4
FOZ	**Fox Glacier**	**5.86**	**219**	P	Pn	13 05 37.6	-5.3
LBZ	**Lake Benmore**	**6.28**	**212**	PN	Pn	13 05 44.4	-3.8
LBZ	**Lake Benmore**	**6.28**	**212**	P	Pn	13 05 44.4	-3.8
ODZ	**Otahua Downs**	**6.66**	**206**	PN	Pn	13 05 50.3	-2.8
ODZ	**Otahua Downs**	**6.66**	**206**	P	Pn	13 05 50.3	-2.9
WKZ	**Wanaka**	**7.13**	**215**	PN	Pn	13 05 54.2	-5.0
WKZ	**Wanaka**	**7.13**	**215**	P	Pn	13 05 54.2	-5.0
EAZ	**Earnscleugh**	**7.33**	**212**	PN	Pn	13 05 56.8	-4.9
EAZ	**Earnscleugh**	**7.33**	**212**	P	Pn	13 05 56.8	-4.9
MSZ	**Milford Sound**	**7.54**	**221**	PN	Pn	13 05 59.7	-4.7
TUZ	**Tuapeka**	**7.81**	**207**	*e*PN	Pn	13 06 04.2	-3.6
MLZ	**Mavora Lakes**	**7.91**	**216**	*e*PN	Pn	13 06 05.0	-4.2
CTZ	**Chatham Island**	**7.93**	**128**	*e*PN	Pn	13 06 20.5	+11
WHZ	**Wether Hill Ro**	**8.44**	**215**	PN	Pn	13 06 10.5	-5.4
WHZ	**Wether Hill Ro**	**8.44**	**215**	P	Pn	13 06 10.6	-5.3
SYZ	**Scrubby Hill**	**8.48**	**207**	*e*PN	Pn	13 06 13.0	-3.5
SYZ	**Scrubby Hill**	**8.48**	**207**	P	Pn	13 06 13.6	-2.9
DCZ	**Deep Cove**	**8.49**	**219**	*e*PN	Pn	13 06 10.1	-6.6

*DDA **29** 13:24:52.9,36°.99N×29°.22E,h7km±4km,Md2.7*

*ISCJB **29** 13:24:53.3±0.6,36°.99N±0°.03×29°.22E±0°.04,h5km±6km, Error ellipse: s-maj=5.9km s-min=4.4km az=25.9*

*CSEM **29** 13:24:53.5±0.2,37°.01N×29°.23E,h10km,MD2.7,Error ellipse: s-maj=4.9km s-min=3.8km az=26.0*

*ISK **29** 13:24:53.4,37°.03N×29°.23E,h13km,MD2.8*

ISC 29 13:24:53.9±0.6,36°.99N±0°.03×29°.22E±0°.04,h10km±5km, n31,σ0s86/47,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.36**	**48**	*i* P	**Pg**	**13 24 59.5**	**-1.6**
GOLH				*i* S	**Sg**	**13 25 06.2**	**+0.2**
GOLH	**Golhisar**	**0.36**	**48**	*i* P	**Pg**	**13 24 59.5**	**-1.6**
GOLH				*i* S	**Sg**	**13 25 06.2**	**+0.3**
TURN	**Turunc**	**0.51**	**257**	*i* P	**Pg**	**13 25 08.3**	**+4.4**
TURN				*i* S	**Sg**	**13 25 20.2**	**+10**
ELL	**Elmali**	**0.60**	**114**	*e*PG	**Pg**	**13 25 05.8**	**+0.3**
ELL				*e*SG	**Sg**	**13 25 15.0**	**+1.6**
ELL	**Elmali**	**0.60**	**114**	*e*Pg	**Pg**	**13 25 05.8**	**+0.2**
ELL				*e*Sg	**Sg**	**13 25 15.0**	**+1.6**
DNZL	**Cakiroluk**	**0.71**	**349**	*i* P	**Pg**	**13 25 06.2**	**-1.4**
DNZL				*i* S	**Sg**	**13 25 18.3**	**+1.4**
DNZL	**Cakiroluk**	**0.71**	**349**	*i* P	**Pg**	**13 25 06.2**	**-1.4**
DNZL				*i* S	**Sg**	**13 25 18.3**	**+1.4**
YER	**Yerkesik**	**0.77**	**281**	*e*PG	**Pg**	**13 25 08.3**	**-0.4**
YER				*e*SG	**Sg**	**13 25 19.7**	**+1.0**
YER	**Yerkesik**	**0.77**	**281**	*e*Pg	**Pg**	**13 25 08.3**	**-0.4**
YER				*e*Sg	**Sg**	**13 25 19.7**	**+1.0**
DENT	**Denizli**	**0.77**	**349**	*e*PG	**Pg**	**13 25 07.6**	**-1.3**
DENT				*e*SG	**Sg**	**13 25 19.1**	**+0.1**
DENT	**Denizli**	**0.77**	**349**	*e*Pg	**Pg**	**13 25 07.6**	**-1.3**
DENT				*e*Sg	**Sg**	**13 25 19.1**	**+0.1**
AKAS	**Kas**	**0.82**	**158**	*i* P	**Pg**	**13 25 09.3**	**-0.4**
AKAS				*i* S	**Sg**	**13 25 26.8**	**+6.5**
AKAS	**Kas**	**0.82**	**158**	*i* P	**Pg**	**13 25 09.3**	**-0.4**
MLSB	**Milas**	**1.20**	**285**	*e*PN	**Pn**	**13 25 16.0**	**-0.6**
MLSB	**Milas**	**1.20**	**285**	*e*Pn	**Pn**	**13 25 16.0**	**-0.7**
AYDN	**Tasoluk**	**1.26**	**302**	*i* P	**Pn**	**13 25 17.7**	**+0.1**
AYDN				*i* S	**Sb**	**13 25 34.9**	**+0.8**
AYDN	**Tasoluk**	**1.26**	**302**	*i* P	**Pn**	**13 25 17.7**	**+0.1**
AYDN				*i* S	**Sb**	**13 25 34.9**	**+0.8**
DAT	**Datca**	**1.35**	**259**	*e*PN	**Pn**	**13 25 18.8**	**+0.1**
DAT	**Datca**	**1.35**	**259**	*e*Pn	**Pn**	**13 25 18.8**	**+0.1**
KHL	**Karahalli**	**1.35**	**10**	*e*PN	**Pn**	**13 25 17.6**	**-1.2**
KHL	**Karahalli**	**1.35**	**10**	*e*Pn	**Pn**	**13 25 17.6**	**-1.2**
KHAL	**Karahalli**	**1.39**	**9**	*i* P	**Pn**	**13 25 19.7**	**+0.3**
KHAL				*i* S	**Sb**	**13 25 39.0**	**+1.3**
KHAL	**Karahalli**	**1.39**	**9**	*i* P	**Pn**	**13 25 19.7**	**+0.3**
KHAL				*i* S	**Sb**	**13 25 39.0**	**+1.2**
SUTC	**Sutluce-Ispart**	**1.50**	**71**	*e*PN	**Pn**	**13 25 20.8**	**0.0**
SUTC	**Sutluce-Ispart**	**1.50**	**71**	*e*Pn	**Pn**	**13 25 20.8**	**0.0**
BODT	**Bodrum**	**1.53**	**273**	*e*PN	**Pn**	**13 25 21.1**	**-0.2**
BODT	**Bodr

MKAR Sn **Sn** **13 43 17.8 +3.7**
comp=N,19nm,0.3s,baz=184,slow=21,SNR=4.7
MKAR Lg 13 43 39.7
comp=N,34nm,0.3s,baz=189,slow=33,SNR=7.2
MKAR Makanchi Array 5.14 7 PN **Pn** **13 42 17.5 +2.2**
MKAR 13 43 17.8
MKAR pmax pmax
comp=Z,8.0nm,0.3s
MKAR smax
comp=N,19nm,0.3s
MKAR Makanchi Array 5.14 7 Pn **Pn** **13 42 17.5 +2.1**
MKAR Sn **Sn** **13 43 17.8 +3.7**
MKAR Lg 13 43 39.7
FRU Bishkek 5.15 285 *e*PN **Pn** **13 42 16.0 +0.5**
FRU *i* 13 42 34.0
FRU *e*S **Sb** **13 43 35.0 +4.7**
FRU pmax pmax
comp=Z,420nm,1.8s
FRU pmax pmax
comp=N,788nm,1.6s
FRU MLR MLR
comp=E,4μm,9.0s
UCH Uchtor 5.15 278 *e*Pn **Pn** **13 42 17.4 +1.9**
AAK Ala-Archa 5.21 283 P **Pn** **13 42 19.9 +3.7**
SNR=6.5
AAK Ala-Archa 5.21 283 Pn **Pn** **13 42 17.2 +1.0**
comp=E,1.5nm,0.3s,baz=91,slow=9.6,SNR=14
AAK Pg **Pg** **13 42 32.3 -6.9**
comp=E,5.8nm,0.3s,baz=110,slow=11,SNR=31
AAK Lg 13 43 39.4
comp=E,3.3nm,0.3s,baz=53,slow=20,SNR=2.2
AAK Ala-Archa 5.21 283 *e*Pn **Pn** **13 42 16.6 +0.4**
AAK Pg **Pg** **13 42 32.3 -6.9**
AAK Lg 13 43 39.4
USP Ospenovka 5.33 289 P **Pn** **13 42 19.1 +1.1**
SNR=28
EKS2 Erkin-Say 5.73 282 P **Pn** **13 42 25.6 +2.1**
SNR=12
EKS2 Erkin-Say 5.73 282 *e*Pn **Pn** **13 42 25.1 +1.7**
comp=E,224nm,1.0s
AML Almayashu 5.75 277 P **Pn** **13 42 26.3 +2.5**
SNR=6.2
AML Almayashu 5.75 277 *e*Pn **Pn** **13 42 26.1 +2.3**
comp=E,143nm,0.8s
KK31 Karatay Array 8.17 284 Pn **Pn** **13 42 57.1 +0.2**
comp=E,1.5nm,0.7s,baz=91,slow=13,SNR=11
KK31 ⇑Pg Pn 13 43 28.1 +31
comp=E,16nm,0.7s,baz=91,slow=14,SNR=5.0
KK31 ⇑Lg 13 45 16.6
comp=E,32nm,0.7s,baz=83,slow=27,SNR=6.8
KURBB Kurchatov Arra 9.15 348 ⇑Pn **Pn** **13 43 10.4 +0.1**
comp=E,3.8nm,0.7s
KURBB ⇑Lg 13 45 44.8
comp=E,36nm,1.3s
KURK Kurchatov 9.22 349 ⇑Lg 13 45 46.7
comp=E,146nm,1.1s
KURK Kurchatov 9.22 349 Pn **Pn** **13 43 10.9 -0.4**
comp=E,0.2nm,0.3s,baz=171,slow=12,SNR=18
KURK Sn **Sn** **13 44 54.3 -0.2**
comp=E,0.7nm,0.3s,baz=160,slow=23,SNR=6.6
KURK Lg 13 45 45.9
comp=E,0.7nm,0.3s,baz=170,slow=29,SNR=4.0
KURK Kurchatov 9.22 349 *e*P **Pn** **13 43 10.8 -0.5**
KURK 13 44 54.3
KURK Kurchatov 9.22 349 *e*Pn **Pn** **13 43 10.8 -0.5**
KURK Sn **Sn** **13 44 54.3 -0.2**
KURK Lg 13 45 45.9
THN Thein Dam 10.29 208 *e*PKP **Pn** **13 43 24.8 -1.2**
THN *ex* x 13 45 15.1
KLP Kalpa 10.45 195 *e*PKP **Pn** **13 43 25.9 -2.3**
KLP AMb AMB 13 43 28.6
comp=Z,9.7nm,0.9s
KLP *e*S Sn 13 45 05.0 -20
SDNR Sundarnagar 10.77 201 *e*PKP Px 13 43 51.5
SDNR *e*S **Sn** **13 45 33.5 +0.9**
DDI Dehra Dun 11.66 194 *e*PKP **Pn** **13 43 42.0 -2.8**
DDI *ex* x 13 45 43.8
KBL Kabul 12.05 238 *e*P **Pn** **13 43 50.1 0.0**
KBL pmax pmax
comp=Z,9.0nm,0.8s
KBL Kabul 12.05 238 *e*P **Pn** **13 43 50.1 0.0**
comp=Z,9.2nm,0.8s
ZAA0 Zalesovo Array 12.48 9 *e*P **Pn** **13 43 54.5 -1.3**
ZALV Zalesovo Beam 12.48 9 Pn **Pn** **13 43 54.4 -1.4**
comp=Z,2.1nm,0.3s,baz=185,slow=13,SNR=38
ZALV Sn **Sn** **13 46 10.6 -3.5**
comp=Z,0.4nm,0.3s,baz=193,slow=21,SNR=2.7
ZALV Lg 13 47 30.0
comp=Z,0.3nm,0.3s,baz=184,slow=31,SNR=2.8
ZALV LR LR 13 49 18.9
comp=Z,55nm,20.5s,baz=248,slow=40
VOSK Vostochnaya 13.09 331 ⇑Pn **Pn** **13 44 02.9 -1.3**
comp=Z,6.8nm,0.8s
VOSK ⇓Lg 13 47 48.5
comp=Z,107nm,1.4s
NVS Novosibirsk 13.21 5 *e*P **Pn** **13 44 05.0 -0.9**
NVS *e* 13 46 28.4
NDI New Delhi 13.42 196 *e*PKP **Pn** **13 44 05.0 -3.8**
NDI *ex* x 13 46 26.0
BVAR Borovoye Array 13.55 331 Pn **Pn** **13 44 09.7 -0.7**
comp=Z,0.3nm,0.3s,baz=140,slow=12,SNR=12
BVAR Lg 13 47 58.4
comp=Z,0.4nm,0.3s,baz=144,slow=33,SNR=5.0
BRVK Borovoye 13.61 330 ⇑Pn **Pn** **13 44 11.2 -0.1**
comp=Z,17nm,0.8s
BRVK Borovoye 13.61 330 *e*P **Pn** **13 44 10.6 -0.7**
BRVK pmax pmax
comp=Z,6.0nm,0.9s
BRVK Borovoye 13.61 330 *e*P **Pn** **13 44 10.0 -1.3**
comp=Z,8.2nm,0.6s
AYAN Aya Nagar 13.63 196 *e*PKP **Pn** **13 44 09.7 -2.0**
AYAN *ex* x 13 46 29.7
SONA Sohna 13.86 196 *e*PKP **Pn** **13 44 11.6 -3.3**
SONA *ex* x 13 46 37.1
GKN Gorkha 13.91 168 *e*P **Pn** **13 44 18.0 +2.4**
comp=Z,30nm,0.9s
KOLN Koldanda 14.01 172 *e*P **Pn** **13 44 14.4 -2.5**
comp=Z,29nm,0.6s
ZRNK Zerenda 14.02 328 ⇑Pn **Pn** **13 44 14.3 -2.6**
comp=Z,20nm,0.8s
ZRNK ⇑Lg 13 48 18.5
comp=Z,113nm,1.6s
GTA Gaotai 14.20 93 P **Pn** **13 44 18.0 -1.4**
GTA pP 13 44 21.8
GTA sP sP 13 44 25.0 -10
GTA S **Sn** **13 46 55.8 -0.5**
GTA SS 13 47 11.8
GTA pmax pmax
comp=Z,4.0nm,1.8s
GTA pmax pmax
comp=Z,98nm,4.2s
GTA LR LR
comp=N,300nm,13.5s
GTA LR LR
comp=E,260nm,13.8s
GTA LR LR
comp=Z,260nm,14.4s
KKN Kakani 14.23 166 *e*P **Pn** **13 44 22.2 +2.3**
GUN Gumba 14.23 164 *e*P **Pn** **13 44 24.6 +4.7**
KHET Khetri 14.33 200 *ex* **Pn** **13 44 17.1 -4.2**
KHET AMb AMB 13 44 19.1
comp=Z,7.3nm,0.4s
KHET *ex* x 13 46 46.8
LSA Lhasa 14.35 143 P **Pn** **13 44 27.0 +5.5**
LSA Lhasa 14.35 143 *e*P **Pn** **13 44 24.2 +2.7**
LSA pmax pmax
comp=Z,6.0nm,0.4s
LSA Lhasa 14.35 143 *e*P **Pn** **13 44 24.2 +2.8**
comp=Z,6.4nm,0.4s
DMN Daman 14.38 167 *e*P **Pn** **13 44 21.7 -0.2**
PKI Pulchoki 14.47 166 *e*P **Pn** **13 44 22.7 -0.5**
comp=Z,19nm,0.6s
PKI Pulchoki 14.47 166 *e*P **Pn** **13 44 22.7 -0.5**
PKI pmax pmax
comp=Z,19nm,0.6s
TAPN Taplejung 15.22 158 *e*P **Pn** **13 44 35.6 +2.3**
comp=Z,38nm,0.8s
ODAN Odare 15.60 160 *e*P **Pn** **13 44 35.6 -2.6**
comp=Z,40nm,0.6s
MOY Mondy 16.70 47 *e*P **Pn** **13 44 57.2 +5.0**
AB31 Akbulak array 16.80 304 ⇑Pn **Pn** **13 44 50.5 -2.9**
comp=Z,13nm,0.8s,baz=97,slow=13,SNR=88
AB31 Akbulak array 16.80 304 *i* P **Pn** **13 44 50.4 -3.0**
AB31 pmax pmax
comp=Z,9.0nm,0.6s
ABKAR Akbulak array 16.80 304 *e*P **Pn** **13 44 50.0 -3.4**
comp=Z,12nm,0.7s
ZAK Zakamensk 17.46 53 *e*P **Pn** **13 45 03.8 +2.1**
ZAK pmax pmax
comp=Z,3.0nm,0.8s
SHL Shillong 18.28 148 *e*PKP **Pn** **13 45 11.5 -0.5**
LZH Lanzhou 18.34 100 *e*P **Pn** **13 45 14.0 +1.4**
LZH pP pP 13 45 19.3 +1.2
LZH sP sP 13 45 21.5 +0.9
LZH pmax pmax
comp=Z,18nm,1.4s
AKTK Aktyubinsk 18.36 306 P **Pn** **13 45 11.3 -1.4**
AKTK Lg 13 50 35.1
AKTK LR LR 13 52 33.4
AKTO Aktyubinsk 18.36 306 P **Pn** **13 45 11.3 -1.4**
comp=Z,0.4nm,0.3s,baz=101,slow=12,SNR=20
AKTO Lg 13 50 35.1
comp=Z,0.2nm,0.3s,baz=142,slow=18,SNR=3.8
AKTO LR LR 13 52 33.4
comp=Z,175nm,20.2s,baz=261,slow=38
SONM Songino Array 18.75 62 P **Pn** **13 45 17.4 -0.1**
comp=Z,0.7nm,0.3s,baz=258,slow=12,SNR=49
SONM Lg 13 50 51.8
comp=Z,0.1nm,0.3s,baz=254,slow=29,SNR=3.9
SONM LR LR 13 52 18.8
comp=Z,32nm,22.0s,baz=265,slow=36
ULN Ulaanbaatar 19.19 63 *e*P **Pn** **13 45 21.3 -1.5**
ULN pmax pmax
comp=Z,7.0nm,0.8s
ULN Ulaanbaatar 19.19 63 *e*P **Pn** **13 45 21.3 -1.5**
comp=Z,7.5nm,0.8s
SVE Sverdlovsk 20.19 326 *e*P **P** **13 45 34.6 +1.9**
SVE pmax pmax
comp=Z,35nm,1.0s
ARU Arti 20.86 323 *c i*P **P** **13 45 39.3 -0.6**
ARU *e* 13 46 08.6
ARU S **S** **13 49 22.2 -9.3**
ARU SS 13 49 48.8
ARU pmax pmax
comp=Z,22nm,1.0s
ARU Arti 20.86 323 *e*P **P** **13 45 39.0 -0.9**
comp=Z,15nm,0.8s
SOKR Solikamsk 23.50 328 *e*P **P** **13 46 06.5 -1.6**
SOKR pmax pmax
comp=Z,10.0nm,0.9s,mb4.2
SOKR MLR MLR
comp=Z,90nm,13.0s,MS3.4
ENH Enshi 25.33 108 *e*P **P** **13 46 25.7 +0.8**
comp=Z,26nm,0.9s,mb4.8
CHTO Chiang Mai 27.28 141 *e*P **P** **13 46 43.8 +1.1**
CHTO pmax pmax
comp=Z,7.0nm,1.0s,mb4.2
CHTO Chiang Mai 27.28 141 *e*P **P** **13 46 43.8 +1.1**
comp=Z,7.1nm,1.0s,mb4.2
CMAR Chiang Mai Arr 27.59 142 P **P** **13 46 46.1 +0.7**
comp=Z,5.6nm,0.9s,mb4.2,baz=322,slow=8.9,SNR=16
CMAR LR LR 13 59 18.4
comp=Z,46nm,18.1s,MS3.1,baz=180,slow=40
CMAR Chiang Mai Arr 27.59 142 P **P** **13 46 46.2 +0.8**
CMAR pmax pmax
comp=Z,6.0nm,0.9s
CMAR MLR MLR
comp=Z,46nm,18.1s
GNI Garni 27.60 279 LR LR 13 59 23.5
comp=Z,56nm,19.3s,MS3.2,baz=81,slow=40
KIV Kislovodsk 28.30 288 *e*P **P** **13 46 59.7 +8.1**
KIV *e*S **S** **13 51 38.5 +1.7**
KIV pmax pmax
comp=Z,7.0nm,0.9s,mb4.3
KIV MLR MLR
comp=Z,51nm,14.0s,MS3.3
VRHR Novokhopersk 28.68 303 *e*P **P** **13 46 56.2 +1.3**
VRHR pmax pmax
comp=N,10.0nm,1.0s
VRHR pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
VRHR pmax pmax
comp=E,5.0nm,0.5s
VSR Storozhevoye 30.23 303 *e*P **P** **13 47 08.4 -0.2**
VSR pmax pmax
comp=N,10.0nm,1.1s
VSR pmax pmax
comp=Z,10.0nm,1.1s,mb4.5
VSR pmax pmax
comp=E,8.0nm,0.6s
QIZ Qiongzhong 33.11 124 P **P** **13 47 41.3 +7.1**
KSRS Korea Array 35.78 81 P **P** **13 47 57.5 +0.2**
comp=E,0.9nm,0.6s,mb3.9,baz=287,slow=8.8,SNR=7.2
KSRS LR LR 14 02 50.5
comp=E,29nm,18.3s,MS3.1,baz=338,slow=37
KSRS Korea Array 35.78 81 P **P** **13 47 57.5 +0.2**
KSRS pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
KSRS MLR MLR
comp=Z,29nm,18.3s,MS3.1
BR131 Keskin Array S 35.88 283 *e*P **P** **13 47 58.4 +0.3**
comp=Z,4.8nm,0.7s,mb4.5
BRTR Keskin Array B 35.88 283 P **P** **13 47 58.8 +0.7**
comp=Z,6.2nm,0.7s,mb4.6,baz=93,slow=8.7,SNR=34
BRTR Keskin Array B 35.88 283 P **P** **13 47 58.8 +0.7**
BRTR pmax pmax
comp=Z,6.0nm,0.7s
AKASG Malin Array Be 36.53 302 P **P** **13 48 02.8 -0.7**
comp=Z,1.4nm,0.5s,mb4.1,baz=68,slow=9.4,SNR=5.1
AKASG Malin Array Be 36.53 302 P **P** **13 48 02.8 -0.7**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
MMAI Mount Meron Ar 37.19 272 LR LR 14 06 12.3
comp=Z,26nm,19.1s,MS3.0,baz=225,slow=41
FINES FINESS Array B 38.19 320 P **P** **13 48 17.2 -0.2**
comp=Z,1.8nm,0.8s,mb3.9,baz=98,slow=12,SNR=6.1
FINES LR LR 14 04 39.9
comp=Z,167nm,18.2s,MS3.9,baz=303,slow=37
FINES FINESS Array B 38.19 320 P **P** **13 48 17.2 -0.2**
FINES pmax pmax
comp=Z,2.0nm,0.8s
FINES MLR MLR
comp=Z,167nm,18.3s
FINES FINESS Array B 38.19 320 P **P** **13 48 17.2 -0.2**
FINES LR LR 14 04 39.9
BUR08 Bucovina Ar. S 39.64 298 *e*P **P** **13 48 29.4 -0.4**
ARCES ARCESS Array B 39.82 333 P **P** **13 48 30.9 0.0**
comp=Z,2.9nm,0.6s,mb4.2,baz=97,slow=9.1,SNR=27
ARCES ARCESS Array B 39.82 333 P **P** **13 48 30.9 0.0**
ARCES pmax pmax
comp=Z,3.0nm,0.6s
ARE0 ARCESS Array S 39.82 333 *e*P **P** **13 48 31.2 +0.2**
DPC Dobruska-Polom 44.67 304 *e*P **P** **13 49 11.7 +1.0**
DPC Dobruska-Polom 44.67 304 *e*P **P** **13 49 11.7 +1.0**
UPC Upice 44.83 305 *e*P **P** **13 49 12.8 +0.9**
UPC Upice 44.83 305 *e*P **P** **13 49 12.8 +0.9**
NB2 NORSAR Subarra 45.37 320 P **P** **13 49 15.5 -0.6**
comp=Z,5.6nm,0.6s,mb4.6,baz=82,slow=7.9
NOA NORSAR Array B 45.37 320 P **P** **13 49 15.8 -0.3**
comp=Z,5.5nm,0.6s,mb4.6,baz=82,slow=7.9,SNR=30
NOA LR LR 14 09 18.2
comp=Z,25nm,19.4s,MS3.2,baz=90,slow=38
NOA NORSAR Array B 45.37 320 P **P** **13 49 15.9 -0.2**
NOA pmax pmax
comp=Z,6.0nm,0.6s
NOA MLR MLR
comp=Z,25nm,19.4s
NAO01 NORSAR Array S 45.56 320 *e*P **P** **13 49 16.8 -0.8**
comp=Z,3.9nm,0.6s,mb4.5
BRG Berggiesshubel 46.00 306 *e*P **P** **13 49 21.4 +0.2**
comp=Z,4.5nm,0.8s,mb4.4
BRG
comp=N,78nm,23.4s
BRG
comp=E,112nm,12.2s
BRG
comp=Z,102nm,14.8s
BRG Berggiesshubel 46.00 306 *e*P **P** **13 49 21.4 +0.2**
BRG pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
BRG MLR MLR
comp=N,47nm,23.4s
BRG MLR MLR
comp=E,67nm,12.2s
BRG MLR MLR
comp=Z,61nm,14.8s
CLL Collm 46.45 306 *i* P **P** **13 49 24.5 -0.2**
CLL pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
CLL Collm 46.45 306 *i* P **P** **13 49 24.5 -0.2**
comp=Z,9.0nm,1.1s,mb4.6
KHC Kasperske Hory 46.73 303 *e*P **P** **13 49 33.2 +6.2**
KHC Kasperske Hory 46.73 303 *e*pP pP 13 49 33.2 +0.1
GEC2 GERESS Array S 46.74 303 *e*P **P** **13 49 27.8 +0.7**
BILL Bilibino 50.28 29 *e*P **P** **13 49 52.3 -1.7**
BILL pmax pmax
comp=Z,2.0nm,1.2s,mb4.0
PETK Petropavlovsk- 50.54 49 LR LR 14 12 44.6
comp=Z,35nm,18.3s,MS3.4,baz=90,slow=38
CABF La Chapelle 52.33 303 *e*P **P** **13 50 08.6 -1.2**
comp=Z,9.4nm,0.9s,mb4.4
CABF La Chapelle 52.33 303 *e*P **P** **13 50 08.6 -1.2**
CABF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
CABF La Chapelle 52.33 303 *e*P **P** **13 50 08.6 -1.2**
comp=Z,4.7nm,0.9s,mb4.4
LPG La Plagne 52.36 301 *e*P **P** **13 50 10.5 +0.5**
comp=Z,14nm,0.9s,mb4.6
LPG La Plagne 52.36 301 *e*P **P** **13 50 10.5 +0.5**
LPG pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
LPG La Plagne 52.36 301 *e*P **P** **13 50 10.5 +0.5**
comp=Z,6.8nm,0.9s,mb4.6
LPL La Plagne 52.37 301 *e*P **P** **13 50 10.4 +0.4**
comp=Z,16nm,0.9s,mb4.7
LPL La Plagne 52.37 301 *e*P **P** **13 50 10.4 +0.4**
LPL pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
LPL La Plagne 52.37 301 *e*P **P** **13 50 10.4 +0.4**
comp=Z,7.9nm,0.9s,mb4.6
SBF Sospel 52.60 299 *e*P **P** **13 50 11.5 -0.3**
MBDF Montbardon 52.67 300 *e*P **P** **13 50 12.5 +0.2**
comp=Z,5.7nm,0.7s,mb4.3
MBDF Montbardon 52.67 300 *e*P **P** **13 50 12.5 +0.2**
MBDF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
MBDF Montbardon 52.67 300 *e*P **P** **13 50 12.5 +0.2**
comp=Z,2.8nm,0.7s,mb4.3
ORIF Oris-en-Rattie 53.17 301 *e*P **P** **13 50 15.3 -0.6**
ORIF *e*MLR MLR
comp=Z,68nm,17.5s,MS3.5
LOR Lormes 53.46 304 *e*P **P** **13 50 17.9 -0.1**
LOR *e*MLR MLR
comp=Z,34nm,21.2s,MS3.1
LOR Lormes 53.46 304 *e*P **P** **13 50 17.9 -0.1**
LOR LR LR
comp=Z,30nm,21.3s,MS3.3
SMF Signal de Mont 53.73 303 *e*P **P** **13 50 19.3 -0.8**
SMRF Simiane la Rot 53.77 300 *e*P **P** **13 50 20.3 -0.1**
VIVF Saint-Julien-l 53.97 301 *e*P **P** **13 50 21.5 -0.3**
comp=Z,9.7nm,0.8s,mb4.5
VIVF Saint-Julien-l 53.97 301 *e*P **P** **13 50 21.5 -0.3**
VIVF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
VIVF Saint-Julien-l 53.97 301 *e*P **P** **13 50 21.5 -0.3**
comp=Z,4.8nm,0.8s,mb4.5
AVF Avril sur Loir 53.97 304 *e*P **P** **13 50 21.1 -0.7**
comp=Z,10nm,0.8s,mb4.5
AVF Avril sur Loir 53.97 304 *e*P **P** **13 50 21.1 -0.7**
AVF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
AVF Avril sur Loir 53.97 304 *e*P **P** **13 50 21.1 -0.7**
comp=Z,5.1nm,0.8s,mb4.5
LASF Ste Croix 54.84 301 *e*P **P** **13 50 28.1 0.0**
comp=Z,8.6nm,0.8s,mb4.5
TCF Toulx Ste Croi 54.90 304 *e*P **P** **13 50 28.3 -0.3**
MTLF Montolieu 56.23 300 *e*P **P** **13 50 37.9 -0.3**
ETSF Etsaut 58.23 301 *e*P **P** **13 50 52.3 0.0**
ESDC Sonseca Array 62.08 299 P **P** **13 51 18.6 -0.2**
comp=Z,1.6nm,0.7s,mb4.3,baz=48,slow=7.2,SNR=7.1
ILAR Eielson Array 67.35 20 P **P** **13 51 52.0 -0.7**
comp=Z,1.8nm,0.7s,mb4.2,baz=316,slow=5.2,SNR=29
ILAR Eielson Array 67.35 20 P **P** **13 51 52.1 -0.6**
ILAR pmax pmax
comp=Z,2.0nm,0.7s
KDAK Kodiak Island 71.12 27 P **P** **13 52 16.4 +0.2**
comp=Z,5.6nm,0.6s,mb4.7,baz=288,slow=5.2,SNR=5.0
KDAK Kodiak Island 71.12 27 P **P** **13 52 16.4 +0.2**
KDAK pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
YKA Yellowknife Ar 75.37 8 P **P** **13 52 40.5 -0.7**
comp=Z,1.7nm,0.7s,mb4.1,baz=359,slow=4.8,SNR=5.7
YKA Yellowknife Ar 75.37 8 P **P** **13 52 40.5 -0.6**
YKA pmax pmax
comp=Z,2.0nm,0.7s
YKA Yellowknife Ar 75.37 8 P **P** **13 52 40.5 -0.7**
WRAB Tennant Creek 78.47 130 *e*P **P** **13 52 59.9 +0.7**
WRAB pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
WRAB Tennant Creek 78.47 130 *e*P **P** **13 52 59.9 +0.8**
comp=Z,2.8nm,0.5s,mb4.5
ASAR Alice Springs 81.18 133 P **P** **13 53 14.6 +0.9**
comp=Z,3.0nm,0.7s,mb4.3,baz=324,slow=5.2,SNR=38
ASAR Alice Springs 81.18 133 P **P** **13 53 14.6 +0.9**
ASAR pmax pmax
comp=Z,3.0nm,0.7s
DBIC Dimbokro 82.81 272 P **P** **13 53 22.1 -0.5**
comp=Z,4.3nm,0.8s,mb4.5,baz=39,slow=6.5,SNR=4.0
DBIC Dimbokro 82.81 272 P **P** **13 53 22.1 -0.6**
DBIC pmax pmax
comp=Z,4.0nm,0.9s
NVAR Mina Array Bea 98.26 16 P **P** **13 54 36.0 +0.5**
comp=Z,0.3nm,0.6s,mb4.0,baz=347,slow=3.7,SNR=3.6

*NEIC **29** 13:44:25.6, 31°.84S×71°.45W, h44km, MD3.5(GUC), After GUC.*

GUC 29 13:44:25.6±0.3, 31°.84S×71°.45W, h44km±1km, MD3.5, ML2.8, 4C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.06**	**225**	*e*P		Pn	Pn	13 44 32.4	-0.1
CHNG				*i* S		Sn	Sn	13 44 37.9	+0.5
CHNG				AML		AML	AML	13 44 40.6	
comp=E,882nm,0.3s									
JACH	**Jahuel**	**1.11**	**139**	⇑*i*P		Pn	Pn	13 44 45.6	+1.0
JACH				*i* S		Sn	Sn	13 45 01.2	+2.4
JACH	**Jahuel**	**1.11**	**139**	⇑*i*P		Pn	Pn	13 44 45.6	+1.0
JACH				*i* S		Sn	Sn	13 45 01.2	+2.4
SAN	**Santiago**	**1.74**	**158**	AML		AML	AML	13 45 23.8	
comp=N,256nm,0.3s									
FCH	**Farellones**	**1.78**	**147**	*e*P		Pn	Pn	13 44 55.2	+1.4
FCH				*i* S		Sn	Sn	13 45 17.9	+2.7
FCH	**Farellones**	**1.78**	**147**	*e*P		Pn	Pn	13 44 55.2	+1.4
FCH				*i* S		Sn	Sn	13 45 17.9	+2.7
TACH	**Talagante**	**1.86**	**167**	⇑*i*P		Pn	Pn	13 44 55.9	+1.0
TACH				*i* S		Sn	Sn	13 45 18.6	+1.4
TACH	**Talagante**	**1.86**	**167**	⇑*i*P		Pn	Pn	13 44 55.9	+1.0
TACH				*i* S		Sn	Sn	13 45 18.6	+1.4
PCH	**Pirque**	**1.94**	**156**	*e*P		Pn	Pn	13 44 57.1	+1.0
PCH				*i* S		Sn	Sn	13 45 21.1	+1.8
PCH	**Pirque**	**1.94**	**156**	*e*P		Pn	Pn	13 44 57.1	+1.0
PCH				*i* S		Sn	Sn	13 45 21.1	+1.8
LNV	**Longovilo**	**2.11**	**179**	*e*P		Pn	Pn	13 44 59.2	+0.9
LNV				*e*S		Sn	Sn	13 45 24.6	+1.2
LNV	**Longovilo**	**2.11**	**179**	*e*P		Pn	Pn	13 44 59.2	+0.9
LNV				*e*S		Sn	Sn	13 45 24.6	+1.2
CHCH	**Chadas Angostu**	**2.19**	**162**	*e*P		Pn	Pn	13 45 00.5	+1.0
CHCH				*i* S		Sn	Sn	13 45 26.9	+1.5
CHCH	**Chadas Angostu**	**2.19**	**162**	*e*P		Pn	Pn	13 45 00.5	+1.0
CHCH				*i* S		Sn	Sn	13 45 26.9	+1.5
CACH	**El Canelo**	**2.38**	**163**	*i* P		Pn	Pn	13 45 03.9	+1.8
CACH				*i* S		Sn	Sn	13 45 32.9	+2.9
CACH	**El Canelo**	**2.38**	**163**	*i* P		Pn	Pn	13 45 03.9	+1.8
CACH				*i* S		Sn	Sn	13 45 32.9	+2.9
LCO	**Las Campanas**	**2.89**	**13**	*e*Pn		Pn	Pn	13 45 07.6	-1.5
LCO				*e*Sn		Sn	Sn	13 45 41.2	-1.5

IDC 29 13:44:54.5±21.0, 10°.91S×163°.48E, h0km, mb3.9/3, mb1 3.9/3, mb1mx3.6/15, mbtmp3.9/3, Error ellipse: s-maj=660.5km s-min=47.5km az=119.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**30.88**	**242**	P		P	P	13 51 12.9	+0.1
0.7nm,0.7s,baz=69,slow=10,SNR=6.0									
SONM	**Songino Array**	**77.25**	**325**	P		P	P	13 56 50.9	+0.4
0.3nm,0.5s,baz=120,slow=5.8,SNR=4.1									
MKAR	**Makanchi Array**	**91.91**	**317**	P		P	P	13 58 04.8	-0.1
0.4nm,0.2s,baz=96,slow=5.5,SNR=6.9									

MEX 29 14:01:22.1±0.8, 15°.99N×97°.76W, h25km, MD3.6, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.53**	**319**	*eP*	Pb	14 01 30.7	-2.2
PNIG				*eS*	Sb	14 01 38.3	-1.9
VHO	**Vista Hermosa**	**1.46**	**42**	*eP*	Pn	14 01 43.5	-3.4
VHO				*eS*	Sn	14 02 01.0	-4.2
HUIG	**Huatulco**	**1.60**	**98**	*eP*	Pn	14 01 46.0	-2.9
HUIG				*i* S	Sn	14 02 06.1	-2.7
HUIG				*eS*	Sn	14 02 06.4	-2.4
UTMO	**Huajuapan**	**1.83**	**359**	*eP*	Pn	14 01 50.2	-1.7
UTMO				*eS*	Sn	14 02 12.8	-1.6

IDC 29 14:18:55.2±2.0, 17°.11S×178°.00W, h0km, mb4.0/4, mb1 4.3/4, mb1mx3.9/14, mbtmp4.0/4, Error ellipse: s-maj=215.0km s-min=26.9km az=151.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.36**	**240**	P	P	14 26 26.9	+0.4
	3.5nm,1.0s,baz=85,slow=11,SNR=2.9						
ASAR	**Alice Springs**	**45.39**	**253**	P	P	14 27 15.4	-0.3
	5.6nm,0.8s,baz=85,slow=8.5,SNR=98						
NVAR	**Mina Array Bea**	**78.58**	**44**	P	P	14 30 59.9	+1.1
	0.3nm,0.7s,baz=235,slow=7.6,SNR=3.8						
TXAR	**Lajitas Array**	**85.24**	**58**	P	P	14 31 33.5	-0.6
	0.1nm,0.6s,baz=232,slow=4.0,SNR=3.7						

*NEIC **29** 15:12:53.4, 32°.64S×71°.69W, h26km, ML3.2(GUC), After GUC.*

GUC 29 15:12:53.4±0.8, 32°.64S×71°.69W, h26km±9km, MD3.8, ML3.2, 1C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.78**	**12**	*eP*	Pb	15 13 07.2	-1.1
CHNG				*eS*	Sb	15 13 18.0	-0.3
PEL	**Peldehue**	**0.98**	**121**	⇑*iP*	Pn	15 13 11.3	-0.2
PEL				*i* S	Sb	15 13 24.4	+0.1
PEL				AML	AML	15 13 26.6	
	comp=E,2μm,0.4s						
TACH	**Talagante**	**1.19**	**148**	*eP*	Pn	15 13 14.3	-0.1
TACH	**Talagante**	**1.19**	**148**	*eP*	Pn	15 13 14.3	-0.1
CLCH	**Cerro Calan**	**1.23**	**128**	⇓*iP*	Pn	15 13 15.0	+0.1
CLCH				*eS*	Sn	15 13 30.7	+0.2
CLCH				AML	AML	15 13 31.9	
	comp=N,562nm,0.4s						
LNV	**Longovilo**	**1.33**	**170**	*eP*	Pn	15 13 16.1	-0.2
LNV	**Longovilo**	**1.33**	**170**	*eP*	Pn	15 13 16.1	-0.2
FCH	**Farellones**	**1.36**	**120**	*eP*	Pn	15 13 16.6	-0.1
FCH				*i* S	Sn	15 13 31.8	-2.0
FCH				AML	AML	15 13 34.0	
	comp=N,306nm,0.2s						
PCH	**Pirque**	**1.39**	**135**	*eP*	Pn	15 13 17.5	+0.4
PCH				*i* S	Sn	15 13 35.6	+1.1
PCH	**Pirque**	**1.39**	**135**	*eP*	Pn	15 13 17.5	+0.4
PCH				*i* S	Sn	15 13 35.6	+1.1
CHCH	**Chadas Angostu**	**1.55**	**146**	*eP*	Pn	15 13 20.2	+0.9
CHCH	**Chadas Angostu**	**1.55**	**146**	*eP*	Pn	15 13 20.2	+0.9
CMCH	**Combarbala**	**1.58**	**22**	*eP*	Pn	15 13 20.7	+1.0
CMCH				*i* S	Sn	15 13 41.3	+2.0
CMCH	**Combarbala**	**1.58**	**22**	*eP*	Pn	15 13 20.7	+1.0
CMCH				*i* S	Sn	15 13 41.3	+2.0
CMCH				AML	AML	15 13 46.2	
	comp=N,2μm,0.8s						
TLL	**Tololo Astrono**	**2.58**	**17**	*eP*	Pn	15 13 35.1	+1.7
TLL				S	Sn	15 14 06.0	+2.0
TLL	**Tololo Astrono**	**2.58**	**17**	*eP*	Pn	15 13 35.1	+1.7
TLL				*eS*	Sn	15 14 06.0	+2.0
TLL				AML	AML	15 14 18.8	
	comp=E,102nm,0.5s						

*ISCJB **29** 15:15:42.3±1.0, 37°.8N±0°.2×32°.2W±0°.2, h10km, mb3.6/6, MS3.3/3, Error ellipse: s-maj=29.9km s-min=19.5km az=176.0*
*IDC **29** 15:15:42.3±1.2, 37°.72N×32°.16W, h0km, mb3.6/6, mb1 3.9/6, mb1mx3.5/25, mbtmp3.6/6, MS3.4/3, Ms1 3.4/3, ms1mx2.9/28, Error ellipse: s-maj=34.8km s-min=26.6km az=162.0*
*CSEM **29** 15:15:43.9, 37°.72N×32°.17W, h10km, After NEIC*
*NEIC **29** 15:15:43.9±0.8, 37°.72N×32°.17W, h10km, Error ellipse: s-maj=25.0km s-min=15.8km az=175.0*

ISC 29 15:15:44.3±1.0, 37°.8N±0°.2×32°.2W±0°.2, h10km, n17, σ0°.33/15, mb3.6/6, MS3.3/3, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	**22.04**	**76**	P	P	15 20 39.2	+0.2
	0.2nm,0.3s,mb3.0,baz=277,slow=10,SNR=4.5						
ESDC	**Sonseca Array**	**22.04**	**76**	P	P	15 20 39.2	+0.2
ESDC	**Sonseca Array**	**22.04**	**76**	P	P	15 20 39.2	+0.2
SCHQ	**Schefferville**	**29.00**	**317**	P	P	15 21 44.0	0.0
	8.9nm,1.3s,mb4.3,baz=135,slow=7.1,SNR=4.2						
SCHQ				LR	LR	15 32 09.3	
	comp=Z,86nm,20.1s,MS3.4,baz=104,slow=34						
SCHQ	**Schefferville**	**29.00**	**317**	P	P	15 21 44.0	0.0
SCHQ				LR	LR	15 32 09.3	
SCHQ	**Schefferville**	**29.00**	**317**	P	P	15 21 44.0	0.0
TORD	**Torodi Ar. Bea**	**38.84**	**120**	LR	LR	15 38 59.1	
	comp=Z,59nm,18.2s,MS3.5,baz=165,slow=36						
FINES	**FINESS Array B**	**42.65**	**37**	LR	LR	15 38 56.4	
	comp=Z,27nm,18.6s,MS3.2,baz=312,slow=33						
TXAR	**Lajitas Array**	**58.88**	**285**	P	P	15 25 43.1	-0.3
	0.6nm,0.7s,mb3.7,baz=78,slow=8.4,SNR=8.5						
TXAR	**Lajitas Array**	**58.88**	**285**	P	P	15 25 43.2	-0.3
LPAZ	**La Paz**	**63.53**	**219**	P	P	15 26 15.0	+0.1
	0.7nm,1.0s,mb3.7,baz=41,slow=11,SNR=2.2						
LPAZ	**La Paz**	**63.53**	**219**	P	P	15 26 15.0	+0.1
LPAZ	**La Paz**	**63.53**	**219**	P	P	15 26 15.0	+0.1
ILAR	**Eielson Array**	**65.85**	**335**	P	P	15 26 30.0	+0.5
	0.4nm,0.8s,mb3.5,baz=39,slow=7.3,SNR=4.5						
ILAR	**Eielson Array**	**65.85**	**335**	P	P	15 26 30.0	+0.5
MKAR	**Makanchi Array**	**77.41**	**40**	P	P	15 27 38.9	-0.5
	0.3nm,0.9s,mb3.2,baz=321,slow=5.2,SNR=2.3						
MKAR	**Makanchi Array**	**77.41**	**40**	P	P	15 27 38.9	-0.5

*IDC **29** 15:40:39.0±1.0, 10°.72S×163°.51E, h0km, mb4.0/10, mb1 4.3/12, mb1mx4.2/18, mbtmp4.2/12, ML5.4/1, MS3.9/6, Ms1 3.9/6, ms1mx3.5/23, Error ellipse: s-maj=29.1km s-min=21.8km az=116.0*
*ISCJB **29** 15:40:43.9±2.2, 10°.74S±0°.08×163°.3E±0°.1, h38km±18km, mb4.2/13, MS3.9/4, Error ellipse: s-maj=18.3km s-min=11.7km az=148.3*
*BJI **29** 15:40:43.1, 10°.70S×163°.40E, h35km, mB5.1/2, mb4.6/5*
*NEIC **29** 15:40:45.2±0.7, 10°.67S×163°.41E, h35km, mb4.6/4, Error ellipse: s-maj=14.3km s-min=12.6km az=116.0*

ISC 29 15:40:46.3±1.8, 10°.72S±0°.08×163°.30E±0°.10, h43km±15km, n27, σ1°.09/25, mb4.2/13, MS3.9/4, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.54**	**291**	Pn	Pn	15 41 37.7	-1.0
	312nm,0.3s,baz=144,slow=5.0,SNR=140						
HNR				Sn	Sn	15 42 19.4	-0.1
	300nm,0.3s,baz=182,slow=20,SNR=11						
HNR				LR	LR	15 42 59.4	
	comp=Z,800nm,19.1s,baz=154,slow=38						
DZM	**Mont Dzumac**	**11.68**	**165**	*eP*	Pn	15 43 31.3	+0.9
PMG	**Port Moresby**	**15.95**	**273**	P	Pn	15 44 30.5	+2.7
	15nm,0.8s						
EIDS	**Eidsvold**	**18.61**	**217**	P	Pn	15 44 59.9	-0.9
CTA	**Charters Tower**	**18.88**	**238**	*eP*	Pn	15 45 05.6	+1.6
	25nm,0.7s						
CTA	**Charters Tower**	**18.88**	**238**	P	Pn	15 45 04.1	+0.1
	1.6nm,0.3s,baz=66,slow=12,SNR=35						
CTA				LR	LR	15 51 19.6	
	comp=Z,203nm,21.1s,baz=255,slow=34						
CTA	**Charters Tower**	**18.88**	**238**	P	Pn	15 45 04.1	+0.1
CTA				LR	LR	15 51 19.6	
CTAO	**Charters Tower**	**18.88**	**238**	*eP*	Pn	15 45 05.5	+1.6
	54nm,1.0s						
COEN	**Coen**	**19.92**	**259**	*eP*	Pn	15 45 16.2	-0.3
	152nm,1.1s						
AFI	**Afiamalu**	**24.55**	**100**	LR	LR	15 53 18.4	
	comp=Z,426nm,19.8s,MS3.9,baz=319,slow=31						
STKA	**Stephens Creek**	**29.08**	**220**	P	P	15 46 43.0	+0.2
	4.7nm,1.0s,mb4.2,baz=74,slow=15,SNR=2.7						
STKA				LR	LR	15 58 06.7	
	comp=Z,225nm,21.0s,MS3.8,baz=28,slow=36						
GUMO	**Guam**	**30.29**	**322**	LR	LR	15 57 27.5	
	comp=Z,234nm,18.2s,MS3.9,baz=67,slow=33						
ASAR	**Alice Springs**	**30.82**	**241**	P	P	15 46 57.1	-1.1
	6.5nm,0.8s,mb4.5,baz=73,slow=9.8,SNR=54						
FITZ	**Fitzroy Crossi**	**37.15**	**254**	*eP*	P	15 47 51.5	-1.8
PPT	**Papeete**	**46.10**	**104**	LR	LR	16 05 49.0	
	comp=Z,212nm,18.5s,MS4.1,baz=281,slow=33						
KSRS	**Korea Array**	**58.28**	**327**	P	P	15 50 35.6	-1.0
	0.3nm,0.4s,mb3.7,baz=141,slow=6.0,SNR=3.1						
KMI	**Kunming**	**68.91**	**302**	P	P	15 51 49.3	+2.2
KMI				pP	pP	15 52 03.3	+3.5
KMI				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
CMAR	**Chiang Mai Arr**	**69.79**	**294**	P	P	15 51 53.5	+0.9
	comp=Z,3.0nm,1.0s,mb4.2,baz=109,slow=5.0,SNR=8.4						
ULN	**Ulaanbaatar**	**76.64**	**325**	P	P	15 52 32.0	-0.5
	comp=Z,4.4nm,1.0s,mb4.3						
SONM	**Songino Array**	**77.00**	**325**	P	P	15 52 34.4	0.0
	comp=Z,2.7nm,1.1s,mb4.1,baz=131,slow=7.0,SNR=5.6						
QSPA	**South Pole Qui**	**79.28**	**180**	P	P	15 52 46.3	-0.4
	comp=Z,0.7nm,0.9s,mb3.6,baz=38,slow=6.7,SNR=1.7						
ILAR	**Eielson Array**	**83.98**	**19**	P	P	15 53 10.1	-1.5
	comp=Z,1.2nm,1.1s,mb4.0,baz=240,slow=5.2,SNR=6.8						
EGAK	**Eagle**	**85.91**	**21**	*eP*	P	15 53 21.9	+0.7
	comp=Z,13nm,1.3s,mb5.0						
NVAR	**Mina Array Bea**	**87.66**	**50**	P	P	15 53 29.4	-1.0
	comp=Z,0.2nm,0.6s,mb3.5,baz=242,slow=9.1,SNR=2.3						
MK31	**Makanchi Array**	**91.65**	**317**	P	P	15 53 49.6	+0.7
MKAR	**Makanchi Array**	**91.65**	**317**	P	P	15 53 49.2	+0.3
	comp=Z,0.9nm,0.8s,mb4.2,baz=90,slow=5.2,SNR=6.0						
ZALV	**Zalesovo Beam**	**91.89**	**325**	P	P	15 53 51.6	+1.7
	comp=Z,0.3nm,0.2s,mb4.2,baz=104,slow=3.0,SNR=2.6						

KRSC 29 16:00:52.5±1.5, 51°.19N×158°.03E, h106km±106km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIPR	**Malaya Ipel'ka**	**1.34**	**324**	*eP*	Pn	16 01 18.3	+1.1
GRL	**Gorelyg**	**1.36**	**1**	*eP*	Pn	16 01 20.0	+2.6
ALID	**Alaid**	**1.60**	**259**	*eP*	Pn	16 01 20.5	+0.3
SDLR	**Sedlovina**	**2.16**	**14**	*eP*	Pn	16 01 29.8	+2.6
SPN	**Mys Shipunski**	**2.27**	**32**	*eS*	Sn	16 01 59.7	+3.2
MKZ	**Mys Kozlova**	**4.05**	**32**	*eP*	Pn	16 01 54.2	+1.9
MKZ				*eS*	Sn	16 02 38.5	-0.2

*NIED **29** 16:19:00, 44°.10N×148°.10E, h41km, Mw4.4 Best double couple: M0=5.22000×10^15 NP1:φs=353.00000°, δ83.00000°, λ65.00000°. NP2:φs=249.00000°, δ26.00000°, λ164.00000°.*
*SZGRF **29** 16:19:42.5, 43°.55N×148°.80E, h33km, mb4.8, East of Kuril Islands, Russia*
*DJA **29** 16:19:45, 44°.77N×149°.48E, h19km, mb5.1/14*
*IDC **29** 16:19:47.1±0.5, 44°.69N×148°.21E, h0km, mb4.6/19, mb1 4.7/21, mb1mx4.7/22, mbtmp4.5/21, ML4.2/2, MS3.7/24, Ms1 3.7/24, ms1mx3.7/39, Error ellipse: s-maj=16.2km s-min=14.2km az=152.0*
*MOS **29** 16:19:52.8±0.8, 44°.49N×148°.20E, h55km, mb5.0/66, Error ellipse: s-maj=7.2km s-min=5.1km az=103.2*
*JMA **29** 16:19:53.0±0.3, 44°.11N×148°.13E, h0km, M4.6*
JMA Felt I J1.
*BJI **29** 16:19:53.0, 44°.51N×148°.26E, h61km, mB4.9/31, mb4.9/49, Ms4.2/30, Ms7 3.9/29*
*SKHL **29** 16:19:54.7±0.6, 44°.51N×148°.27E, h61km±1km, mb5.2/6, Ms3.8/1, msh4.7/2*
*ISCJB **29** 16:19:54.1±0.3, 44°.51N±0°.03×148°.18E±0°.02, h64km±3km, mb4.8/173, Error ellipse: s-maj=4.6km s-min=2.4km az=158.2*
*NEIC **29** 16:19:54.8±0.5, 44°.62N×148°.16E, h55km±4km, mb4.8/87, Error ellipse: s-maj=6.2km s-min=3.2km az=157.0*
NEIC Recorded [1 JMA] in eastern Hokkaido.

ISC 29 16:19:56.0±0.3, 44°.56N±0°.03×148°.14E±0°.02, h64km±3km, h62km±1.4km; pP-P, n653, σ0°.73/659, mb4.8/173, 170C-128D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.70**	**344**	*j*PN	Pn	16 20 08.9	-1.5
KUR				*i* S	Sn	16 20 20.0	-1.0
KUR				pmax	pmax		
	comp=N,10μm,1.0s						
KUR				pmax	pmax		
	comp=E,10μm,1.0s						
KUR				pmax	pmax		
	comp=Z,30μm,1.0s						
KUR				smax			
	comp=N,128μm,1.2s						
KUR				smax			
	comp=E,79μm,1.2s						
KUR	**Kuril'sk**	**0.70**	**344**	⇑*iP*	Pn	16 20 08.9	-1.5
KUR				⇓*iP*		16 20 08.9	
KUR				AMB	AMB	16 20 10.0	
	comp=E,15μm,1.0s						
KUR				AMB	AMB	16 20 10.0	
	comp=E,30μm,1.0s						
KUR				AMB	AMB	16 20 10.0	
	comp=E,10μm,1.0s						
KUR				*i* S	Sn	16 20 20.0	-1.0
KUR				A		16 20 24.0	
	comp=E,70μm,1.2s						
KUR				A		16 20 24.0	
	comp=E,45μm,1.2s						
KUR				A		16 20 24.0	
	comp=E,128μm,1.2s						
KUR				A		16 20 24.0	
	comp=E,79μm,1.2s						
YUK	**Yuzh-Kuril'sk**	**1.72**	**253**	⇓*iP*N	Pn	16 20 22.8	-0.8
YUK				*i* S	Sn	16 20 43.4	-1.2
YUK				pmax	pmax		
	comp=N,2μm,0.3s						
YUK				pmax	pmax		
	comp=E,990nm,0.3s						
YUK				pmax	pmax		
	comp=Z,4μm,0.3s						
YUK				smax			
	comp=N,9μm,0.3s						
YUK				smax			
	comp=E,13μm,0.6s						
YUK	**Yuzh-Kuril'sk**	**1.72**	**253**	⇓*iP*	Pn	16 20 22.8	-0.8
YUK				AMB	AMB	16 20 24.5	
	comp=E,4μm,0.6s						
YUK				AMB	AMB	16 20 25.2	
	comp=E,4μm,0.2s						
YUK				AMB	AMB	16 20 25.2	
	comp=E,2μm,0.4s						
YUK				AMB	AMB	16 20 25.2	
	comp=E,2μm,0.4s						
YUK				*i* S	Sn	16 20 43.4	-1.2
YUK				A		16 20 50.4	
	comp=E,6μm,0.5s						
YUK				A		16 20 50.4	
	comp=E,12μm,0.5s						
YUK				A		16 20 52.0	
	comp=E,18μm,1.0s						
YUK				A		16 20 52.0	
	comp=E,21μm,0.5s						
YUK				AMS	AMS	16 21 06.0	
	comp=E,2μm,18.0s						
NEM2	**Nemuro 2**	**2.10**	**236**	P	Pn	16 20 26.8	-2.0
NEM2				*eS*	Sn	16 20 51.4	-2.5
JRA	**Rausu**	**2.26**	**255**	P	Pn	16 20 31.4	+0.5
JRA				*eS*	Sn	16 20 59.1	+1.5
JNK	**Nakash**	**2.65**	**250**	P	Pn	16 20 36.2	-0.1
JNK				*eS*	Sn	16 21 07.6	+0.3
JAK	**Akkeshi**	**2.94**	**239**	P	Pn	16 20 38.8	-1.5
JAK				*eS*	Sn	16 21 12.1	-2.3
JTKR	**Abashiri--Toko**	**3.10**	**260**	P	Pn	16 20 43.0	+0.7
JAR	**Ashorobuto**	**3.40**	**250**	P	Pn	16 20 47.2	+0.7
JAR				*eS*	Sn	16 21 27.6	+2.0
JKK2	**Kamakawa 2**	**3.94**	**262**	P	Pn	16 20 55.6	+1.8
JSE	**Soyaes**	**3.98**	**278**	P	Pn	16 20 55.8	+1.4
JCH	**Churui**	**3.98**	**242**	P	Pn	16 20 53.7	-0.7
JCH				*eS*	Sn	16 21 39.5	-0.3
ASAJ	**Asahikawa**	**4.00**	**266**	Pn	Pn	16 20 55.2	+0.6
	comp=E,37nm,0.3s,baz=80,slow=19,SNR=99						
ASAJ				LR	LR	16 22 36.4	
	comp=E,1μm,21.4s,baz=293,slow=42						
JFR	**Furan**	**4.25**	**253**	P	Pn	16 20 59.7	+1.6
ERM	**Erimo**	**4.44**	**237**	*e*Pn	Pn	16 21 01.3	+0.6
ERM				*e*		16 21 10.9	
ERM				*e*Sn	Sn	16 21 52.5	+1.4
YSS	**Yuzh-Sakhalins**	**4.46**	**304**	⇓*i*PN	Pn	16 21 02.4	+1.4
YSS				*eS*	Sn	16 21 53.0	+1.4
YSS				MLR	MLR		
	comp=E,700nm,15.0s						
YSS				MLR	MLR		
	comp=Z,600nm,15.0s						
YSS	**Yuzh-Sakhalins**	**4.46**	**304**	*e*Pn	Pn	16 21 02.4	+1.4
YSS	**Yuzh-Sakhalins**	**4.46**	**304**	⇓*iP*	Pn	16 21 02.4	+1.4
YSS				*eS*	Sn	16 21 53.0	+1.4
YSS				*e*LR	LR	16 22 30.0	
YSS				AMS	AMS	16 22 56.0	
	comp=Z,700nm,15.0s						
YSS				AMS	AMS	16 22 56.0	
	comp=Z,60nm,15.0s						
JWK2	**Keihoku**	**4.49**	**282**	P	Pn	16 21 04.4	+3.0
JNBK	**Urakawa-nobuka**	**4.54**	**242**	P	Pn	16 21 01.0	-1.1
JYG	**Yagishiri**	**4.80**	**271**	P	Pn	16 21 08.1	+2.4
JEW	**Eniwo**	**5.15**	**253**	P	Pn	16 21 11.7	+1.3
JSK	**Shakotan**	**5.66**	**260**	P	Pn	16 21 20.2	+2.8
JKB	**Kayabe**	**5.84**	**245**	P	Pn	16 21 19.9	0.0
JKB				*eS*	Sn	16 22 24.3	-1.1
JOT	**Ohata**	**6.09**	**241**	P	Pn	16 21 22.2	-1.2
JOT				*eS*	Sn	16 22 29.1	-2.6
UGL	**Uglegorsk**	**6.14**	**319**	*eP*	Pn	16 21 26.0	+2.0
UGL				AMB	AMB	16 21 28.0	
	comp=Z,101nm,0.7s						
UGL				AMS	AMS	16 23 45.0	
	comp=Z,600nm,19.0s						
UGL				AMS	AMS	16 23 45.0	
	comp=Z,500nm,19.0s						
JANG	**Nango**	**6.44**	**232**	P	Pn	16 21 25.4	-2.7
JANG				*eS*	Sn	16 22 33.1	-7.1
TYV	**Tymovskoe**	**7.30**	**332**	*eP*	Pn	16 21 41.0	+1.1
TYV				AMB	AMB	16 21 43.0	
	comp=Z,9.0nm,0.4s						
TYV				AMB	AMB	16 21 43.0	
	comp=Z,45nm,0.4s						
TYV				AMS	AMS	16 24 16.0	
	comp=Z,1μm,18.0s						
SKR	**Severo-Kuril's**	**8.15**	**39**	*i* PN	Pn	16 21 51.5	0.0
SKR				*eS*	Sn	16 23 25.0	+3.0
SKR				pmax	pmax		
	comp=N,50nm,0.5s						
SKR				pmax	pmax		
	comp=E,30nm,0.5s						
SKR				pmax	pmax		
	comp=Z,110nm,0.5s						
SKR				smax			
	comp=E,1μm,8.0s						
SKR				smax			
	comp=N,110nm,1.0s						
SKR				smax			
	comp=E,80nm,0.7s						
SKR				MLR	MLR		
	comp=E,800nm,14.0s						
SKR				MLR	MLR		
	comp=Z,800nm,14.0s						
SKR	**Severo-Kuril's**	**8.15**	**39**	⇑*iP*	Pn	16 21 51.5	0.0
SKR				AMB	AMB	16 21 54.5	
	comp=Z,50nm,0.5s						
SKR				AMB	AMB	16 21 54.5	
	comp=Z,30nm,0.5s						
SKR				AMB	AMB	16 21 54.5	
	comp=Z,110nm,0.5s						
SKR				A		16 23 44.0	
	comp=Z,1μm,8.0s						
SKR				A		16 23 55.5	
	comp=Z,80nm,0.7s						
SKR				A		16 23 55.5	
	comp=Z,50nm,0.7s						
SKR				A		16 23 55.5	
	comp=Z,110nm,1.0s						
SKR				AMS	AMS	16 25 12.0	
	comp=Z,800nm,14.0s						
SKR				AMS	AMS	16 25 12.0	
	comp=Z,800nm,14.0s						
HABR	**Khabarovsk**	**9.83**	**298**	*de*PN	Pn	16 22 16.0	+1.6
HABR				S	Sn	16 24 07.3	+4.2
HABR				pmax	pmax		
	comp=Z,13nm,1.6s						
HABR				pmax	pmax		
	comp=N,10.0nm,1.2s						
HABR				pmax	pmax		
	comp=E,27nm,1.0s						
HABR				MLR	MLR		
	comp=Z,325nm,17.0s						
NKL	**Nikolayevsk**	**9.89**	**333**	*eP*	Pn	16 22 11.0	-4.2
NKL				AMB	AMB	16 22 13.3	
	comp=Z,55nm,1.0s						
NKL				AMB	AMB	16 22 13.3	
	comp=Z,40nm,1.0s						
NKL				AMB	AMB	16 22 13.3	
	comp=Z,80nm,1.0s						
PETK	**Petropavlovsk-**	**10.61**	**33**	Pn	Pn	16 22 21.6	-3.5
	comp=Z,1.6nm,0.3s,baz=201,slow=11,SNR=29						
PETK				LR	LR	16 27 01.7	
	comp=Z,136nm,18.1s,baz=64,slow=42						
PET	**Petropavlovsk**	**10.93**	**36**	*e*PN	Pn	16 22 27.9	-1.5
PET				MLR	MLR		
	comp=Z,300nm,16.0s						
PET				MLR	MLR		
	comp=Z,300nm,19.0s						
PET	**Petropavlovsk**	**10.93**	**36**	*e*Pn	Pn	16 22 27.5	-1.9
	comp=Z,6.0nm,0.4s						
MJAR	**Matsushiro Arr**	**11.00**	**227**	Pn	Pn	16 22 28.1	-2.3
	comp=Z,2.0nm,0.3s,baz=27,slow=14,SNR=32						
MJAR	**Matsushiro Arr**	**11.00**	**227**	PN	Pn	16 22 28.1	-2.4
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MAJO	**Matsushiro**	**11.01**	**227**	*e*PN	Pn	16 22 27.9	-2.6
MAJO				pmax	pmax		
	comp=Z,18nm,0.5s						
MAJO	**Matsushiro**	**11.01**	**227**	*e*Pn	Pn	16 22 27.9	-2.6
	comp=Z,18nm,0.5s						
MAT	**Matsushiro**	**11.01**	**227**	P	Pn	16 22 28.3	-2.2
MAT				S	Sn	16 24 33.1	+1.2
KLR	**Kul'dur**	**12.14**	**298**	*e*PN	Pn	16 22 45.6	-0.2
KLR				MLR	MLR		
	comp=Z,1μm,13.0s						
MDJ	**Mudanjiang**	**13.22**	**277**	P	Pn	16 23 01.3	+0.6
MDJ				pmax	pmax		
	comp=Z,14nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,86nm,5.8s						
MDJ				LR	LR		
	comp=N,100nm,18.3s						
MDJ				LR	LR		
	comp=E,180nm,26.2s						
MDJ				LR	LR		
	comp=Z,270nm,22.9s						
MDJ	**Mudanjiang**	**13.22**	**277**	*e*Pn	Pn	16 23 01.1	+0.5
	comp=Z,17nm,0.9s						
CN2	**Changchun**	**16.29**	**275**	*eP*	Pn	16 23 41.3	+0.8
CN2				*ep*P	pP	16 23 52.3	-3.4
CN2				*eS*	S	16 26 39.5	-10
CN2				pmax	pmax		
	comp=Z,20nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
ZEA	**Zeya**	**16.41**	**311**	*eP*	Pn	16 23 39.1	-2.8
ZEA				AMB	AMB	16 23 41.5	
	comp=Z,22nm,0.9s						
ZEA				A		16 26 44.0	
	comp=Z,100nm,7.0s						
KSRS	**Korea Array**	**16.81**	**252**	Pn	Pn	16 23 44.2	-2.8

comp=Z,23nm,0.9s
YAK smax
comp=N,68nm,3.0s
YAK smax
comp=E,113nm,3.5s
YAK MLR MLR
comp=Z,302nm,24.0s
YAK MLR MLR
comp=E,147nm,23.0s
YAK MLR MLR
comp=N,225nm,21.0s
YAK Yakutsk 20.55 335 *e*P **P 16 24 26.5 -2.4**
comp=N,50nm,0.6s
BJI Beijing 23.98 270 P **P 16 25 03.3 -1.0**
BJI pmax pmax
comp=Z,56nm,0.9s,mb5.0
BJI pmax pmax
comp=Z,110nm,3.6s
BJI LR LR
comp=N,180nm,25.6s
BJI LR LR
comp=E,180nm,29.6s
BJI LR LR
comp=Z,170nm,27.0s
BJT Baijiatuau 23.99 270 *e*P **P 16 25 04.0 -0.5**
BJT pmax pmax
comp=Z,60nm,0.8s
BJT Baijiatuau 23.99 270 *e*P **P 16 25 04.0 -0.5**
comp=Z,60nm,0.8s,mb5.1
BILL Bilibino 25.38 16 *e*P **P 16 25 17.7 +0.9**
BILL pmax pmax
comp=Z,14nm,2.5s,mb4.0
NJ2 Nanjing 26.00 251 *e*P **P 16 25 23.3 +0.5**
NJ2 pmax pmax
comp=Z,20nm,0.6s,mb4.8
HHC Hu-ho-hao-te 26.98 275 *e*P **P 16 25 32.0 +0.4**
HHC pP pP 16 25 47.0 +0.1
HHC sP sP 16 25 53.5 -1.0
HHC PP 16 26 19.3
HHC PcP PcP 16 28 53.5 +1.9
HHC S **S 16 30 02.3 -1.9**
HHC sS sS 16 30 27.5 -3.1
HHC SS 16 31 19.0
HHC ScP ScP 16 32 26.8 +0.7
HHC PcS PcS 16 32 33.3 +0.3
HHC pmax pmax
comp=Z,12nm,0.6s,mb4.6
HHC pmax pmax
comp=Z,130nm,5.7s
HHC LR LR
comp=N,650nm,12.6s
HHC LR LR
comp=E,640nm,12.5s
HHC LR LR
comp=Z,620nm,12.5s
BTO Baotou 28.17 275 *e*P **P 16 25 43.5 +1.4**
ULN Ulaanbaatar 28.38 291 *e*P **P 16 25 44.8 +0.9**
ULN pmax pmax
comp=Z,6.0nm,0.7s,mb4.3
ULN Ulaanbaatar 28.38 291 *e*P **P 16 25 44.8 +0.8**
comp=Z,5.5nm,0.7s,mb4.3
ULN Ulaanbaatar 28.38 291 P **P 16 25 45.5 +1.6**
comp=Z,8.7nm,0.8s,mb4.5
SONM Songino Array 28.82 291 P **P 16 25 47.4 -0.5**
comp=Z,3.9nm,0.4s,mb4.5,baz=81,slow=8.3,SNR=29
SONM PcP PcP 16 28 56.1 +0.2
comp=Z,2.2nm,0.9s,baz=128,slow=2.9,SNR=5.1
SONM LR LR 16 38 15.7
comp=Z,210nm,20.3s,baz=86,slow=38
SONM Songino Array 28.82 291 P **P 16 25 47.4 -0.5**
SONM 16 28 56.1
SONM pmax pmax
comp=Z,4.0nm,0.4s
SONM MLR MLR
comp=Z,210nm,20.3s
WHN Wuhan 29.98 254 ⇑P **P 16 25 58.0 -0.3**
TLY Talaya 30.15 300 *e*P **P 16 26 00.0 +0.4**
TLY pmax pmax
comp=Z,2.0nm,0.9s,mb3.9
ZAK Zakamensk 30.50 297 *e*P **P 16 26 02.4 -0.3**
ZAK *e* 16 29 00.0
XAN Xi'an 31.84 264 P **P 16 26 14.5 -0.1**
XAN pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
ENH Enshi 33.52 258 *e*P **P 16 26 28.6 -0.8**
comp=Z,6.6nm,0.5s,mb4.8
LZH Lanzhou 34.46 271 ⇓P **P 16 26 38.8 +1.4**
LZH pP pP 16 26 54.3 +1.2
LZH sP sP 16 27 01.0 +0.5
LZH PcP PcP 16 29 13.3 +1.9
LZH *e*S **S 16 32 00.0 -1.1**
LZH SS SS 16 34 15.0 -17
LZH pmax pmax
comp=Z,76nm,1.0s,mb5.6
LZH pmax pmax
comp=Z,230nm,4.0s
LZH LR LR
comp=N,2μm,15.2s
LZH LR LR
comp=Z,2μm,16.0s
GTA Gaotai 35.86 279 ⇓P **P 16 26 51.0 +1.5**
GTA PcP PcP 16 29 16.5 +1.0
GTA S **S 16 32 28.3 +5.7**
GTA pmax pmax
comp=Z,14nm,0.9s,mb4.9
GTA pmax pmax
comp=Z,64nm,5.7s
GTA LR LR
comp=N,71nm,17.4s
GTA LR LR
comp=E,96nm,16.8s
GTA LR LR
comp=Z,120nm,17.1s
CD2 Chengdu 37.20 264 P **P 16 27 01.3 +0.4**
CD2 pP pP 16 27 16.5 -0.2
CD2 sP sP 16 27 23.8 -0.3
CD2 PP PP 16 28 30.0 +3.4
CD2 PcP PcP 16 29 21.0 +1.4
CD2 S **S 16 32 42.5 -0.6**
CD2 sS sS 16 33 08.5 -1.4
CD2 SS SS 16 35 15.3 -13
CD2 pmax pmax
comp=Z,170nm,4.9s
CD2 LR LR
comp=N,570nm,6.0s
CD2 LR LR
comp=Z,240nm,6.0s
GYA Guiyang 37.81 256 P **P 16 27 07.0 +0.8**
GYA pP pP 16 27 22.5 +0.5
GYA sP sP 16 27 30.0 +0.6
GYA PP PP 16 28 36.8 +3.3
GYA PcP PcP 16 29 22.3 +0.7
GYA S **S 16 32 52.5 0.0**
GYA ScP ScP 16 33 04.3 +0.9
GYA PcS PcS 16 33 11.8 +1.3
GYA sS sS 16 33 20.0 +0.6
GYA SS SS 16 35 30.5 -10
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
GYA pmax pmax
comp=Z,90nm,4.8s
GYA LR LR
comp=N,460nm,16.8s
GYA LR LR
comp=E,410nm,17.2s
GYA LR LR
comp=Z,450nm,16.9s
PPLA Purkeypile 38.10 40 *e*P **P 16 27 08.8 +0.7**
comp=Z,8.7nm,0.9s,mb4.5
KDAK Kodiak Island 38.18 48 *i*P **P 16 27 08.0 -0.8**
COLD Coldfoot 39.08 33 *e*P **P 16 27 15.7 -0.6**
comp=Z,5.1nm,0.7s,mb4.4
COLA College 40.00 37 *e*P **P 16 27 23.7 -0.2**
COLA pmax pmax
comp=Z,15nm,0.9s,mb4.7
COLA College 40.00 37 *e*P **P 16 27 23.7 -0.3**
comp=Z,15nm,0.9s,mb4.7
ILAR Eielson Array 40.41 37 P **P 16 27 26.3 -1.1**
comp=Z,2.1nm,0.4s,mb4.2,baz=264,slow=8.4,SNR=42
ILAR PcP PcP 16 29 27.2 -1.8
comp=Z,0.7nm,0.5s,baz=293,slow=3.6,SNR=4.8
ILAR Eielson Array 40.41 37 P **P 16 27 26.3 -1.1**
ILAR 16 29 27.3
ILAR pmax pmax
comp=Z,2.0nm,0.4s

ZALV Zalesovo Beam 41.08 307 P **P 16 27 32.5 -0.5**
comp=Z,1.2nm,0.4s,mb3.9,baz=72,slow=7.0,SNR=9.3
ZALV PcP PcP 16 29 31.3 -0.1
comp=Z,9.2nm,0.4s,baz=71,slow=4.1,SNR=28
ZALV LR LR 16 45 44.8
comp=Z,70nm,18.5s,baz=254,slow=38
ZALV Zalesovo Beam 41.08 307 P **P 16 27 32.5 -0.5**
ZALV 16 29 31.3
ZALV pmax pmax
comp=Z,1.0nm,0.4s,mb3.8
ZALV MLR MLR
comp=Z,70nm,18.5s
ZALV Zalesovo Beam 41.08 307 P **P 16 27 32.5 -0.5**
ZALV PcP PcP 16 29 31.3 -0.1
ZALV LR LR 16 45 44.8
PAX Paxson 41.16 39 *e*P **P 16 27 34.3 +0.7**
PAX pmax pmax
comp=Z,4.0nm,0.9s,mb4.0
PAX Paxson 41.16 39 *e*P **P 16 27 34.3 +0.7**
comp=Z,4.0nm,0.9s,mb4.0
KMI Kunming 41.39 257 P **P 16 27 36.3 +0.4**
KMI pP pP 16 27 52.3 +0.4
KMI sP sP 16 27 59.3 +0.1
KMI PP PP 16 29 15.8 +3.4
KMI S **S 16 33 46.0 0.0**
KMI sS sS 16 34 13.5 +0.3
KMI SS SS 16 36 45.0 -7.0
KMI pmax pmax
comp=Z,24nm,1.0s,mb4.8
KMI pmax pmax
comp=Z,130nm,5.1s
KMI LR LR
comp=N,220nm,22.5s
KMI LR LR
comp=E,140nm,22.5s
KMI LR LR
comp=Z,100nm,20.8s
NVS Novosibirsk 41.77 308 *e*P **P 16 27 39.5 +0.8**
BMRM Bremner River 41.82 42 *e*P **P 16 27 39.0 +0.1**
comp=Z,6.1nm,0.6s,mb4.4
MENT Mentasta 41.96 39 *e*P **P 16 27 40.6 +0.5**
WMQ Urumqi 42.46 291 P **P 16 27 46.0 +1.6**
WMQ pP pP 16 28 01.3 +0.8
WMQ sP sP 16 28 08.5 +0.7
WMQ PP PP 16 29 28.0 +4.3
WMQ PcP PcP 16 29 38.5 +2.3
WMQ *e*S **S 16 34 03.5 +2.0**
WMQ SS SS 16 37 08.0 -4.5
WMQ ScS ScS 16 37 39.5 -0.1
WMQ pmax pmax
comp=Z,15nm,0.8s,mb4.7
WMQ pmax pmax
comp=Z,87nm,4.5s
WMQ LR LR
comp=N,100nm,20.6s
WMQ LR LR
comp=E,85nm,20.6s
WMQ LR LR
comp=Z,120nm,21.0s
EGAK Eagle 42.86 36 *e*P **P 16 27 45.1 -2.3**
comp=Z,15nm,1.0s,mb4.7
DAWY Dawson 43.72 37 *e*P **P 16 27 53.8 -0.5**
MK31 Makanchi Array 44.84 297 *e*P **P 16 28 03.5 0.0**
MK31 pmax pmax
comp=Z,4.0nm,0.4s,mb4.6
MK31 Makanchi Array 44.84 297 *e*P **P 16 28 03.6 +0.1**
MK31 *e*PcP PcP 16 29 43.9 -0.3
MKAR Makanchi Array 44.84 297 P **P 16 28 03.5 +0.1**
comp=Z,3.8nm,0.5s,mb4.5,baz=77,slow=8.7,SNR=82
MKAR PcP PcP 16 29 44.2 0.0
comp=Z,6.6nm,0.6s,baz=68,slow=4.8,SNR=19
MKAR LR LR 16 48 10.8
comp=Z,220nm,18.7s,baz=338,slow=38
MKAR Makanchi Array 44.84 297 P **P 16 28 03.6 +0.1**
MKAR 16 29 44.2
MKAR pmax pmax
comp=Z,4.0nm,0.5s
MKAR MLR MLR
comp=Z,220nm,18.7s
MKAR Makanchi Array 44.84 297 P **P 16 28 03.5 +0.1**
MKAR PcP PcP 16 29 44.2 0.0
MKAR LR LR 16 48 10.8
INK Inuvik 45.34 31 *e*P **P 16 28 07.5 +0.3**
KURK Kurchatov 45.67 304 ⇑*i*P **P 16 28 09.6 -0.4**
KURK pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
KURK Kurchatov 45.67 304 *e*P **P 16 28 09.1 -0.9**
comp=Z,4.6nm,0.5s,mb4.7
LSA Lhasa 46.88 272 P **P 16 28 20.5 +0.8**
LSA Lhasa 46.88 272 *e*P **P 16 28 21.3 +1.6**
LSA pmax pmax
comp=Z,14nm,0.9s,mb4.9
LSA Lhasa 46.88 272 *e*P **P 16 28 21.3 +1.6**
comp=Z,14nm,0.9s,mb4.9
CHRT Chiangrai 46.89 254 ⇑P **P 16 28 20.0 0.0**
comp=Z,118nm,0.9s,mb5.8
CHG Chiang Mai 48.19 254 ⇑P **P 16 28 30.6 +0.6**
comp=Z,25nm,0.9s,mb5.2
CHTO Chiang Mai 48.19 254 *e*P **P 16 28 30.5 +0.5**
CHTO *e**PP pP 16 28 46.4 +0.1
CHTO pmax pmax
comp=Z,22nm,0.9s,mb5.2
CHTO Chiang Mai 48.19 254 *e*P **P 16 28 30.5 +0.5**
comp=Z,22nm,0.9s,mb5.2
CHTO *e*pP pP 16 28 46.4 +0.1
CHTO Chiang Mai 48.19 254 P **P 16 28 31.0 +1.0**
comp=Z,30nm,0.9s,mb5.3
CM31 Chiang Mai Arr 48.44 254 *e*P **P 16 28 31.6 -0.3**
comp=Z,2.3nm,0.4s,mb4.6
CMAR Chiang Mai Arr 48.44 254 P **P 16 28 32.6 +0.7**
comp=Z,5.1nm,0.7s,mb4.7,baz=41,slow=7.4,SNR=38
CMAR LR LR 16 48 17.8
comp=Z,42nm,20.4s,baz=244,slow=35
CMAR Chiang Mai Arr 48.44 254 P **P 16 28 32.7 +0.8**
CMAR pmax pmax
comp=Z,5.0nm,0.7s
CMAR MLR MLR
comp=Z,42nm,20.5s
SHL Shillong 48.79 267 *e*PKP **P 16 28 34.8 +0.2**
VOSK Vostochnaya 49.33 309 P **P 16 28 38.4 +0.1**
VOSK pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
BVAR Borovoye Array 49.54 309 P **P 16 28 39.9 0.0**
comp=Z,1.1nm,0.5s,mb4.2,baz=77,slow=9.3,SNR=11
BVAR PcP PcP 16 30 00.7 -0.1
comp=Z,3.7nm,0.5s,baz=90,slow=3.0,SNR=12
BVAR Borovoye Array 49.54 309 P **P 16 28 39.9 0.0**
BVAR 16 30 00.7
BVAR pmax pmax
comp=Z,1.0nm,0.5s
BRVK Borovoye 49.59 309 ⇑*i*P **P 16 28 40.9 +0.6**
BRVK pmax pmax
comp=Z,10.0nm,2.5s,mb4.4
MRSI Marisa 49.67 215 P **P 16 28 40.1 -1.3**
comp=Z,23nm,0.8s,mb5.3
ZRNK Zerenda 50.34 309 P **P 16 28 46.0 0.0**
ZRNK pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
TAPN Taplejung 50.70 271 *e*P **P 16 28 50.1 +1.0**
comp=Z,54nm,0.7s,mb5.6
ULHL Ulahol 50.70 294 P **P 16 28 50.1 +1.2**
SNR=10
ODAN Odare 51.22 271 *e*P **P 16 28 53.3 +0.3**
comp=Z,19nm,0.4s,mb5.3
KBK Karagaybulak 51.35 295 P **P 16 28 54.9 +1.2**
SNR=6.0
KZA Kyzart 51.43 294 P **P 16 28 56.5 +2.2**
SNR=8.6
JIRN Jiri 51.60 273 *e*P **P 16 28 56.9 +1.1**
comp=Z,19nm,0.2s,mb5.6
GUN Gumba 51.68 273 *e*P **P 16 28 57.5 +1.1**
comp=Z,80nm,0.4s,mb6.0
RAMN Ramite 51.73 272 *e*P **P 16 28 57.4 +0.6**
comp=Z,278nm,0.5s
EKS2 Erkin-Say 52.10 296 P **P 16 29 00.3 +1.0**
SNR=7.4
EKS2 Erkin-Say 52.10 296 *e*P **P 16 28 59.8 +0.5**
comp=Z,5.7nm,0.8s,mb4.5
KKN Kakani 52.18 274 *e*P **P 16 29 00.8 +0.7**
comp=Z,52nm,0.6s,mb5.7
PKI Pulchoki 52.21 273 *e*P **P 16 29 01.0 +0.6**
comp=Z,41nm,0.6s,mb5.5
PKIN Phulchoki 52.22 273 *e*P **P 16 29 01.0 +0.6**
KSH Kashi 52.23 291 P **P 16 29 04.5 +4.2**
KSH pP pP 16 29 20.3 +3.5
KSH sP sP 16 29 27.5 +3.4

KSH PcP PcP 16 30 13.3 +2.3
KSH PP PP 16 31 05.5 +6.5
KSH ScP ScP 16 34 04.3 +1.9
KSH PcS PcS 16 34 10.8 +1.5
KSH S **S 16 36 25.8 +5.5**
KSH sS sS 16 36 52.0 +3.8
KSH SS SS 16 40 03.0 +5.0
KSH pmax pmax
comp=Z,11nm,1.1s,mb4.7
KSH pmax pmax
comp=Z,59nm,4.3s
KSH LR LR
comp=N,130nm,4.7s
KSH LR LR
comp=E,89nm,4.7s
KSH LR LR
comp=Z,150nm,6.3s
DMN Daman 52.41 273 *e*P **P 16 29 02.6 +0.8**
comp=Z,90nm,0.6s,mb5.8
AML Almayashu 52.41 295 P **P 16 29 03.2 +1.6**
SNR=6.5
AML Almayashu 52.41 295 *e*P **P 16 29 02.6 +0.9**
comp=Z,5.2nm,0.8s,mb4.5
GKN Gorkha 52.51 274 *e*P **P 16 29 03.0 +0.4**
comp=Z,72nm,0.5s,mb5.8
SBUM Sibu 52.55 228 P **P 16 29 02.8 -0.1**
comp=Z,8.1nm,0.8s,mb4.7
SVE Sverdlovsk 53.04 317 ⇑*e*P **P 16 29 06.8 +0.8**
SVE pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
KOLN Koldanda 53.39 275 *e*P **P 16 29 09.8 +0.8**
comp=Z,27nm,0.4s,mb5.6
KDI Kendari 53.44 212 P **P 16 29 10.3 +0.8**
comp=Z,13nm,1.2s,mb4.7
ARU Arti 54.24 317 *c i*P **P 16 29 14.4 -0.4**
ARU *PP pP 16 29 28.0 -3.4
ARU *e* 16 30 17.1
ARU *e* 16 31 13.4
ARU S **S 16 36 51.3 +4.2**
ARU SS SS 16 40 28.9 -0.1
ARU pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
ARU Arti 54.24 317 *e*P **P 16 29 13.5 -1.3**
comp=Z,3.7nm,0.3s,mb4.8
KSM Kuching 54.39 229 P **P 16 29 16.5 +0.1**
comp=Z,16nm,0.9s,mb4.9
JOSI Joshimath 54.62 280 *e*PKP **P 16 29 17.8 -0.3**
YKA Yellowknife Ar 54.73 34 P **P 16 29 17.3 -0.9**
comp=Z,7.7nm,0.7s,mb4.8,baz=299,slow=6.9,SNR=13
YKA Yellowknife Ar 54.73 34 P **P 16 29 17.3 -1.0**
YKA pmax pmax
comp=Z,8.0nm,0.7s
YKA Yellowknife Ar 54.73 34 P **P 16 29 17.3 -0.9**
HNR Honiara 54.79 166 LR LR 16 47 43.3
comp=Z,90nm,21.9s,baz=231,slow=30
KLP Kalpa 54.98 282 *e*PKP **P 16 29 20.8 +0.2**
DDI Dehra Dun 55.82 281 *ex* x 16 29 26.0
KULM Kulim 56.97 241 P **P 16 29 34.8 -0.1**
comp=Z,28nm,0.8s,mb5.3
AB31 Akbulak array 57.11 309 *i* P **P 16 29 35.3 -0.2**
AB31 pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
ABKAR Akbulak array 57.11 309 *e*P **P 16 29 34.8 -0.7**
comp=Z,5.5nm,0.4s,mb4.9
AYAN Aya Nagar 57.55 279 *e*PKP **P 16 29 38.1 -0.9**
AYAN AMb AMB 16 29 39.9
comp=Z,37nm,1.2s,mb5.3
SONA Sohna 57.72 279 *e*PKP **P 16 29 39.8 -0.3**
AGRA Agra 57.73 278 *e*PKP **P 16 29 39.1 -1.1**
NLWA Neilton Lookou 57.99 53 ⇓P **P 16 29 41.6 0.0**
baz=58
KHET Khetri 58.73 280 *e*PKP **P 16 29 46.5 -0.7**
KHET AMb AMB 16 29 47.6
comp=Z,26nm,0.7s,mb5.3
ARCES ARCESS Array B 58.73 340 P **P 16 29 44.6 -2.0**
comp=Z,2.0nm,0.8s,mb4.2,baz=45,slow=8.7,SNR=14
ARCES PcP PcP 16 30 35.2 -0.4
comp=Z,2.5nm,0.7s,baz=65,slow=4.7,SNR=8.6
ARCES LR LR 16 58 30.3
comp=Z,69nm,19.7s,baz=49,slow=40
ARCES ARCESS Array B 58.73 340 P **P 16 29 44.6 -1.9**
ARCES 16 30 35.3
ARCES pmax pmax
comp=Z,2.0nm,0.8s
ARCES MLR MLR
comp=Z,69nm,19.7s
KAKA Kakadu 58.76 198 *e*P **P 16 29 47.3 0.0**
comp=Z,9.4nm,0.6s,mb5.0
KBL Kabul 59.58 290 *e*P **P 16 29 51.7 -1.2**
KBL pmax pmax
comp=Z,19nm,0.8s,mb5.2
KBL Kabul 59.58 290 *e*P **P 16 29 51.7 -1.3**
comp=Z,20nm,0.8s,mb5.2
F04A Amboy 59.62 54 ⇑P **P 16 29 53.4 +0.4**
baz=59
B08A Colville Reser 60.00 50 ⇑P **P 16 29 55.5 -0.1**
baz=60
EDM Edmonton 60.32 43 *e*P **P 16 29 57.4 -0.3**
H04A Detroit Lake 60.47 55 ⇑P **P 16 29 59.4 +0.5**
baz=60
AJM Ajmer 60.52 279 *e*PKP **P 16 29 59.7 +0.2**
BHPL Bhopal 60.56 274 *e*PKP **P 16 29 59.6 -0.2**
BHPL AMb AMB 16 30 00.1
comp=Z,14nm,0.7s,mb5.2
NGP Nagpur 60.73 272 *e*PKP **P 16 29 59.4 -1.5**
E07A Sunnyside 60.74 52 ⇓P **P 16 30 01.0 +0.3**
baz=60
C09A Chrisman Ranch 60.90 50 ⇓P **P 16 30 01.8 0.0**
baz=61
D08A Wollman Farm, 60.97 51 ⇓P **P 16 30 02.0 -0.2**
baz=61
G06A Carlson Farm, 61.05 54 ⇓P **P 16 30 03.3 +0.5**
baz=61
F07A Phinny Hill Vi 61.08 53 ⇓P **P 16 30 03.5 +0.6**
baz=61
E08A Dider Farm, El 61.22 52 ⇓P **P 16 30 03.9 -0.1**
baz=61
SDSI Sungai Dareh 61.39 236 P **P 16 30 05.9 +0.4**
comp=Z,17nm,1.1s,mb5.1
JOF Joensuu 61.70 332 *e*P **P 16 30 05.4 -1.5**
JOF pmax pmax
comp=Z,5.0nm,0.3s,mb5.1
JOF Joensuu 61.70 332 *e*p **P 16 30 05.4 -1.5**
comp=Z,4.8nm,0.3s,mb5.1
E09A Wood Farm, Sta 61.72 51 ⇓P **P 16 30 07.2 -0.1**
baz=62
PWJI Pagerwojo 61.75 222 P **P 16 30 07.5 -0.3**
comp=Z,80nm,0.8s,mb5.9
GSI Gunungsitoli 61.98 241 P **P 16 30 10.6 +1.2**
comp=Z,19nm,1.1s,mb5.2
G08A Pilot Rock 61.98 53 ⇓P **P 16 30 09.2 +0.2**
baz=62
C11A Tepee Creek (N 61.98 49 ⇑P **P 16 30 09.3 +0.3**
baz=62,SNR=8.6
K05A Summer Lake 62.37 56 ⇓P **P 16 30 11.7 0.0**
baz=62
AKL Akola 62.47 273 *e*PKP **P 16 30 12.7 +0.1**
AKL AMb AMB 16 30 39.1
comp=Z,53nm,2.4s,mb5.2
WALA Waterton Lakes 62.51 47 *e*P **P 16 30 12.4 -0.1**
comp=Z,0.3nm,0.8s,mb3.5
KLSI 62.56 231 P **P 16 30 13.6 +0.3**
comp=Z,26nm,1.3s,mb5.2
B13A Whitefish 62.62 48 ⇑P **P 16 30 13.9 +0.6**
baz=62,SNR=5.9
BSMT Bassoo Peak 62.77 49 *e*P **P 16 30 14.7 +0.4**
comp=Z,2.2nm,0.6s,mb4.5
LEM Lembang 62.80 226 P **P 16 30 15.1 +0.2**
A14A Double T Ranch 62.81 47 ⇓P **P 16 30 14.8 +0.2**
baz=63,SNR=5.7
D12A Red Ives Fores 62.95 50 ⇑P **P 16 30 15.3 -0.2**
baz=63
C13A Hot Springs 62.99 49 ⇓P **P 16 30 16.2 +0.5**
baz=63,SNR=6.8
A15A Johnson Ranch, 63.17 47 ⇓P **P 16 30 16.3 -0.6**
baz=63
BMO Blue Mountains 63.18 53 *e*P **P 16 30 16.6 -0.5**
comp=Z,1.2nm,0.8s,mb4.1
E12A Beaver Dam Sad 63.21 50 ⇑P **P 16 30 17.2 0.0**
baz=63,SNR=17
B14A Marquette Ranc 63.27 48 ⇑P **P 16 30 17.7 +0.1**
baz=63,SNR=7.3
C14A Swan Lake 63.38 48 ⇑P **P 16 30 18.4 +0.1**
baz=63,SNR=9.0
D13A Huson 63.41 49 ⇓P **P 16 30 18.5 -0.1**
baz=63,SNR=10

HYB **Hyderabad** 63.51 269 eP P 16 30 18.0 -1.6
B15A **Bradely Ranch,** 63.67 47 ⇓P P 16 30 20.2 0.0
baz=63,SNR=5.6
A16A **West Butte Ran** 63.78 46 ⇓P P 16 30 20.8 -0.2
baz=64
F12A **Elk City** 63.79 51 ⇑P P 16 30 21.6 +0.6
baz=64,SNR=7.9
SLMT **Seeley Lake** 63.84 49 eP P 16 30 21.2 -0.2
comp=Z,14nm,0.9s,mb5.0
MSO **Missoula** 63.85 49 eP P 16 30 21.2 -0.2
comp=Z,10nm,1.1s,mb4.8
WVOR **Wild Horse Val** 63.88 55 P P 16 30 21.6 -0.1
WVOR pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
WVOR **Wild Horse Val** 63.88 55 P P 16 30 21.6 -0.1
comp=Z,2.5nm,1.0s,mb4.2
KAF **Kangasniemi** 63.90 334 eP P 16 30 20.1 -1.4
KAF pmax pmax
comp=Z,5.0nm,0.5s,mb4.8
KAF **Kangasniemi** 63.90 334 eP P 16 30 20.1 -1.4
comp=Z,4.7nm,0.5s,mb4.8
KAF **Kangasniemi** 63.90 334 ep P 16 30 20.1 -1.4
comp=Z,4.7nm,0.5s,mb4.8,baz=41,slow=6.1
D14A **Greenough** 63.93 49 ⇑P P 16 30 21.9 0.0
baz=64,SNR=6.2
E13A **Victor** 63.95 50 ⇑P P 16 30 22.2 0.0
baz=64
B16A **M & M Farms, S** 64.06 47 ⇑P P 16 30 22.2 -0.5
baz=64
A17A **Triple J Farms** 64.24 46 ⇑P P 16 30 23.6 -0.4
baz=64,SNR=7.3
F13A **Darby** 64.28 50 ⇓P P 16 30 23.8 -0.4
baz=64
E14A **Clinton** 64.35 49 ⇓P P 16 30 24.7 -0.1
baz=64
CTA **Charters Tower** 64.36 182 eP P 16 30 24.4 -0.5
comp=Z,2.5nm,0.6s,mb4.4
FINES **FINESS Array B** 64.47 333 P P 16 30 22.9 -2.3
comp=Z,6.9nm,0.5s,mb4.9,baz=47,slow=5.8,SNR=32
FINES PcP PcP 16 30 58.0 -1.0
comp=Z,3.1nm,0.5s,baz=75,slow=4.0,SNR=6.0
FINES LR LR 17 00 05.6
comp=Z,85nm,20.9s,baz=243,slow=38
FINES **FINESS Array B** 64.47 333 P P 16 30 22.9 -2.4
FINES 16 30 58.0
FINES pmax pmax
comp=Z,7.0nm,0.5s
FINES MLR MLR
comp=Z,85nm,20.9s
FINES **FINESS Array B** 64.47 333 P P 16 30 22.9 -2.4
FINES PcP PcP 16 30 58.0 -1.0
FINES LR LR 17 00 05.6
D15A **Lincoln** 64.48 48 ⇑P P 16 30 25.6 0.0
baz=64
B17A **L&G Farms, Che** 64.60 47 ⇓P P 16 30 26.2 -0.2
baz=64,SNR=8.7
FFC **Flin Flon** 64.62 37 eP P 16 30 26.3 -0.1
FFC pmax pmax
comp=Z,18nm,0.8s,mb5.2
FFC **Flin Flon** 64.62 37 eP P 16 30 26.3 0.0
comp=Z,18nm,0.8s,mb5.2
A18A **Metzger Ranch,** 64.70 46 ⇑P P 16 30 26.6 -0.3
baz=64
H12A **Diamond D Ranc** 64.75 52 ⇓P P 16 30 27.6 +0.2
baz=64
G13A **Cobalt** 64.76 51 ⇓P P 16 30 27.0 -0.4
baz=64,SNR=9.4
E15A **Deer Lodge** 64.80 49 ⇑P P 16 30 27.7 0.0
baz=64
MFID **Camas Ranch** 64.90 53 ⇑P P 16 30 28.4 0.0
baz=65
D16A **Dana Ranch, Ca** 65.00 48 ⇑P P 16 30 29.3 +0.3
baz=65,SNR=8.9
HRY **Holter Researc** 65.06 48 eP P 16 30 29.6 +0.2
comp=Z,7.3nm,0.6s,mb4.9
I12A **Atlanta** 65.06 52 ⇑P P 16 30 29.1 -0.3
baz=65,SNR=9.3
B18A **Beardsley Farm** 65.07 46 ⇓P P 16 30 29.2 -0.1
baz=65,SNR=9.6
H13A **Challis** 65.08 51 ⇑P P 16 30 29.2 -0.3
baz=65,SNR=9.8
OBN **Obninsk** 65.08 324 eP P 16 30 29.2 -0.1
OBN e 16 31 00.5
OBN eSS SS 16 43 20.7 +2.0
OBN pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
WCN **Washoe City** 65.12 59 ⇓P P 16 30 30.3 +0.5
baz=65
E16A **East Helena** 65.25 48 ⇓P P 16 30 30.7 +0.1
baz=65
LRM **Limekiln Ridge** 65.28 49 eP P 16 30 30.8 0.0
comp=Z,47nm,0.8s,mb5.6
EGMT **Eagleton** 65.31 46 ⇑P P 16 30 30.9 -0.1
baz=65,SNR=11
EGMT **Eagleton** 65.31 46 eP P 16 30 30.9 -0.1
comp=Z,13nm,0.8s,mb5.0
D17A **Six Diamond Ra** 65.38 47 ⇑P P 16 30 31.3 -0.1
baz=65,SNR=6.0
VRHR **Novokhopersk** 65.50 318 eP P 16 30 30.4 -1.7
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,7.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
H14A **Leadore** 65.54 51 ⇑P P 16 30 32.2 -0.3
baz=65
I13A **Wildhorse Cree** 65.56 52 ⇓P P 16 30 32.9 +0.3
baz=65
HLID **Hailey** 65.62 52 ⇑P P 16 30 32.8 -0.2
baz=65
FITZ **Fitzroy Crossi** 65.66 204 eP P 16 30 33.2 -0.2
comp=Z,5.8nm,0.6s,mb4.8
M10A **I.L. Ranch, Tu** 65.67 55 ⇓P P 16 30 33.6 +0.2
baz=65
G15A **Dillon** 65.68 50 ⇓P P 16 30 33.3 0.0
baz=65,SNR=5.7
MCMT **McKenzie Canyo** 65.69 50 P P 16 30 33.0 -0.5
comp=Z,0.7nm,0.6s,mb3.9
L11A **Cat Creek Ranc** 65.72 54 ⇑P P 16 30 33.9 +0.2
baz=66
E17A **Martinsdale** 65.73 48 ⇑P P 16 30 34.5 +0.8
baz=66,SNR=11
F16A **Kennard Place,** 65.75 49 ⇓P P 16 30 33.8 0.0
baz=66,SNR=5.5
D18A **Linhart Farms,** 65.82 47 ⇓P P 16 30 34.4 +0.2
baz=66
J13A **Cove Ranch, Pi** 65.86 52 ⇓P P 16 30 34.8 +0.3
baz=66
G16A **Moss Hill, Enn** 66.01 50 ⇓P P 16 30 36.1 +0.6
baz=66,SNR=10
POO **Poona** 66.14 273 ePKP P 16 30 36.7 0.0
POO AMb AMB 16 30 38.9
comp=Z,32nm,1.0s,mb5.3
L12A **House Creek Ra** 66.16 54 ⇑P P 16 30 36.6 +0.1
baz=66
M11A **Holland Ranch,** 66.16 55 ⇑P P 16 30 36.8 +0.2
baz=66
E18A **Harlowton** 66.17 48 ⇓P P 16 30 36.9 +0.4
baz=66
N10A **Dunphy** 66.19 56 ⇑P P 16 30 37.4 +0.6
baz=66
F17A **Fitzpatrick Pl** 66.20 48 ⇓P P 16 30 36.6 -0.1
baz=66
J14A **Carey** 66.27 52 ⇑P P 16 30 37.8 +0.5
baz=66
NVAR **Mina Array Bea** 66.55 59 P P 16 30 39.2 +0.1
comp=Z,4.2nm,0.7s,mb4.6,baz=296,slow=7.0,SNR=32
NVAR **Mina Array Bea** 66.55 59 P P 16 30 39.2 +0.1
VSR **Storozhevoye** 66.58 320 eP P 16 30 38.7 -0.3
VSR pmax pmax
comp=N,5.0nm,0.4s
VSR pmax pmax
comp=E,3.0nm,0.4s
VSR pmax pmax
comp=Z,9.0nm,0.4s,mb5.2
H16A **Russell Place,** 66.65 50 ⇓P P 16 30 39.6 0.0
baz=66,SNR=5.4
M12A **Wells** 66.68 54 ⇑P P 16 30 40.7 +0.8
baz=66
F18A **Big Timber** 66.70 48 ⇑P P 16 30 40.6 +0.7
baz=66,SNR=8.0
GCMT **Greycliff** 66.80 48 eP P 16 30 41.0 +0.4
comp=Z,4.4nm,0.8s,mb4.5
J15A **Blackfoot** 66.83 51 ⇑P P 16 30 41.7 +0.9
baz=67
P10A **Eureka** 66.91 57 ⇑P P 16 30 41.8 +0.5
baz=67
I16A **Newdale** 67.05 51 ⇑P P 16 30 42.7 +0.5
baz=67
O11A **Cowboy Ranch,** 67.06 56 ⇓P P 16 30 43.0 +0.7
baz=67
M13A **Montello** 67.15 54 ⇑P P 16 30 43.2 +0.3
baz=67
K15A **Arbon** 67.24 52 ⇑P P 16 30 44.0 +0.6
baz=67
L14A **Malta** 67.25 53 ⇑P P 16 30 44.0 +0.5
baz=67
IMW **Indian Meadow** 67.34 50 eP P 16 30 45.6 +1.6
comp=Z,4.4nm,0.8s,mb4.5
J16A **Bone** 67.37 51 ⇑P P 16 30 44.7 +0.5
baz=67
P11A **Circle Ranch,** 67.37 56 ⇓P P 16 30 44.6 +0.4
baz=67
RLMT **Red Lodge** 67.45 48 ⇑P P 16 30 44.6 0.0
baz=67
Q10A **Clear Creek Ra** 67.45 57 ⇓P P 16 30 44.9 +0.1
baz=67
O12A **Currie** 67.51 55 ⇑P P 16 30 45.1 0.0
baz=67
I17A **Pilgrim Ck.** 67.53 50 ⇑P P 16 30 46.0 +0.8
baz=67
M14A **Sheep Mountain** 67.53 54 ⇓P P 16 30 45.5 +0.3
baz=67
MOOW **Moose Ponds** 67.54 50 eP P 16 30 45.9 +0.6
comp=Z,6.2nm,1.2s,mb4.5
K16A **Soda Springs** 67.67 51 ⇑P P 16 30 46.8 +0.7
baz=67
Q11A **Duckwater** 67.89 57 ⇑P P 16 30 47.8 +0.2
baz=68
S10A **Tonopah Range,** 67.91 58 ⇓P P 16 30 47.8 +0.1
baz=68
P12A **McGill** 67.93 56 ⇑P P 16 30 47.6 -0.2
baz=68
GRAC **Grapevine Rang** 68.02 59 ⇑P P 16 30 48.3 -0.2
baz=68,SNR=8.2
M15A **Larsen Ranch,** 68.08 53 ⇑P P 16 30 48.6 -0.1
baz=68,SNR=5.6
ISA **Isabella** 68.19 61 ⇑P P 16 30 48.7 -0.8
baz=68
R11A **Troy Canyon, C** 68.25 57 ⇑P P 16 30 49.7 -0.1
baz=68,SNR=5.7
Q12A **Willow Creek R** 68.25 56 ⇓P P 16 30 50.2 +0.3
baz=68
N15A **Stansbury Isla** 68.41 54 ⇑P P 16 30 50.9 +0.1
baz=68
P13A **Bates Ranch, G** 68.47 56 ⇓P P 16 30 50.6 -0.5
baz=68
L17A **Cokeville** 68.55 52 ⇑P P 16 30 51.4 -0.3
baz=68
MPMC **Manual Prospec** 68.55 60 ⇑P P 16 30 51.5 -0.2
baz=68,SNR=6.1
S11A **Rachel** 68.60 58 ⇑P P 16 30 51.9 -0.1
baz=68,SNR=5.2
K18A **Toltan Ranch,** 68.66 51 ⇑P P 16 30 52.6 +0.3
baz=68
FURC **Furnace Creek,** 68.68 60 ⇓P P 16 30 52.4 -0.1
baz=68,SNR=7.5
DUG **Dugway** 68.69 54 ⇓P P 16 30 52.9 +0.4
baz=68
DUG **Dugway** 68.69 54 eP P 16 30 52.7 +0.2
DUG pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
DUG **Dugway** 68.69 54 eP P 16 30 52.7 +0.2
comp=Z,1.8nm,0.6s,mb4.2
LRMC **Laurel Mountai** 68.80 61 ⇑P P 16 30 53.0 -0.3
baz=69
BW06 **Boulder Array** 68.84 50 ⇑P P 16 30 53.2 -0.2
baz=69,SNR=5.5
R12A **Pony Springs,** 68.85 57 ⇓P P 16 30 53.7 +0.2
baz=69
P14A **Drum Mountains** 68.94 55 ⇑P P 16 30 54.2 +0.2
baz=69
EDW2 **Edwards Air Fo** 69.00 61 ⇑P P 16 30 54.4 -0.1
baz=69
NB2 **NORSAR Subarra** 69.10 339 P P 16 30 54.0 -0.7
comp=Z,4.5nm,0.4s,mb4.8,baz=31,slow=6.5
NOA **NORSAR Array B** 69.10 339 P P 16 30 53.7 -1.0
comp=Z,4.3nm,0.5s,mb4.6,baz=30,slow=6.5,SNR=41
NOA LR LR 17 04 08.2
comp=Z,54nm,20.1s,baz=25,slow=39
NOA **NORSAR Array B** 69.10 339 P P 16 30 53.7 -1.0
NOA pmax pmax
comp=Z,4.0nm,0.5s
NOA MLR MLR
comp=Z,54nm,20.1s
NOA **NORSAR Array B** 69.10 339 P P 16 30 53.7 -1.0
NOA LR LR 17 04 08.2
ASAR **Alice Springs** 69.13 194 P P 16 30 55.2 -0.1
comp=Z,4.6nm,0.6s,mb4.6,baz=10,slow=7.0,SNR=115
ASAR **Alice Springs** 69.13 194 P P 16 30 55.2 -0.1
ASAR pmax pmax
comp=Z,5.0nm,0.6s
S12A **Delamar Landin** 69.17 57 ⇑P P 16 30 55.6 +0.1
baz=69
T11A **Corn Creek, Al** 69.18 58 ⇑P P 16 30 55.8 +0.2
baz=69
K19A **Absolon Red Bu** 69.20 50 ⇑P P 16 30 54.9 -0.7
baz=69
Q14A **Sevier Lake (B** 69.21 56 ⇑P P 16 30 55.7 0.0
baz=69,SNR=8.3
HFS **Hagfors** 69.21 338 LR LR 17 04 35.4
comp=Z,36nm,18.7s,baz=29,slow=39
R13A **O'Grain Ranch,** 69.32 57 ⇓P P 16 30 56.4 -0.1
baz=69
N17A **Moffit Pass** 69.34 53 ⇓P P 16 30 56.4 -0.2
baz=69
L19A **Farson** 69.40 51 ⇑P P 16 30 57.0 +0.2
baz=69
KIV **Kislovodsk** 69.75 312 eP P 16 30 59.3 +0.3
KIV pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
KIV MLR MLR
comp=Z,105nm,18.0s
KIV **Kislovodsk** 69.75 312 eP P 16 30 59.9 +0.9
comp=Z,7.0nm,0.6s,mb4.8
S13A **Holt Ranch, En** 69.78 57 ⇑P P 16 30 59.1 -0.2
baz=70
ZEI **Tsey** 69.90 311 eP P 16 31 00.2 +0.2
ZEI pmax pmax
comp=Z,15nm,0.5s,mb5.2
TUQ **Turquoise Moun** 69.93 60 ⇑P P 16 31 00.2 0.0
baz=70
V12A **Nelson** 70.40 59 ⇑P P 16 31 03.0 -0.2
baz=70
M20A **Sweetwater, Wa** 70.45 51 ⇑P P 16 31 03.4 0.0
baz=70
Q16A **Castle Valley** 70.48 54 ⇓P P 16 31 04.0 +0.4
baz=70
GMRC **Granite Mounta** 70.52 60 ⇓P P 16 31 03.8 0.0
baz=70
P18A **Preston Nutter** 70.55 53 ⇑P P 16 31 04.2 +0.2
baz=70
L21A **Rawlins** 70.58 50 ⇓P P 16 31 04.3 +0.1
baz=70
R16A **Teasdale** 70.72 55 ⇑P P 16 31 05.8 +0.7
baz=70
SRU **San Rafael** 70.73 54 ⇑P P 16 31 05.2 +0.1
baz=70,SNR=9.6
SRU **San Rafael** 70.73 54 eP P 16 31 05.0 -0.1
PFO **Pinyon Flat Ob** 70.79 62 ⇑P P 16 31 05.5 0.0
baz=71
BELC **Belle Mtn. Jos** 70.82 61 ⇓P P 16 31 05.5 -0.2
baz=71
M21A **Separation Pea** 70.83 50 ⇓P P 16 31 05.5 -0.1
baz=71
V13A **Grand Canyon W** 70.84 58 ⇑P P 16 31 06.3 +0.4
baz=71
N20A **Spence Gulch,** 70.86 51 ⇑P P 16 31 06.6 +0.7
baz=71,SNR=6.7
U14A **Mt Trumbull** 70.95 58 ⇑P P 16 31 06.7 +0.2
baz=71
Q18A **Rafter H Ranch** 70.96 54 ⇑P P 16 31 05.6 -0.9
baz=71
S16A **Weppner Ranch,** 71.03 56 ⇑P P 16 31 07.2 +0.2
baz=71
R17A **Hanksville Air** 71.09 55 ⇑P P 16 31 07.3 0.0
baz=71,SNR=5.5
GNI **Garni** 71.21 308 LR LR 17 05 39.1
comp=Z,63nm,18.1s,baz=89,slow=39
IRM **Iron Mountain** 71.24 60 ⇓P P 16 31 08.2 -0.1
baz=71
P19A **Cripple Cowboy** 71.26 53 ⇑P P 16 31 08.2 -0.1
baz=71
MONP **Monument Peak** 71.28 62 ⇑P P 16 31 08.2 -0.4
baz=71
AKASG **Malin Array Be** 71.34 324 P P 16 31 06.5 -2.0
comp=Z,1.7nm,0.4s,mb4.3,baz=36,slow=6.1,SNR=14
AKASG **Malin Array Be** 71.34 324 P P 16 31 06.6 -2.0
AKASG pmax pmax
comp=Z,2.0nm,0.4s
KIEV **Kiev** 71.36 324 eP P 16 31 08.1 -0.6
KIEV pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
KIEV **Kiev** 71.36 324 eP P 16 31 08.1 -0.6
comp=Z,4.9nm,0.7s,mb4.5
W13A **Hualapai Mount** 71.40 59 ⇓P P 16 31 08.9 -0.3
baz=71
U15A **North Rim** 71.48 57 ⇓P P 16 31 09.7 0.0
baz=71
V14A **Boquillas Ranc** 71.52 58 ⇑P P 16 31 10.5 +0.6
baz=71,SNR=7.4
S17A **Black Ridge (B** 71.56 55 ⇓P P 16 31 09.8 -0.3
baz=71,SNR=5.1
Q19A **Hogan Spring (** 71.56 53 ⇓P P 16 31 09.5 -0.6
baz=71,SNR=7.7
R18A **Canyonlands Na** 71.58 54 ⇓P P 16 31 09.8 -0.4
baz=71
X13A **Yucca** 71.77 59 ⇓P P 16 31 11.1 -0.3
baz=72,SNR=5.3
AGMN **Agassiz Nation** 71.86 39 eP P 16 31 10.6 -1.1
comp=Z,2.3nm,0.4s,mb4.5
N22A **Wattenberg Ran** 71.88 50 ⇑P P 16 31 12.1 +0.1
baz=72
V15A **Kaibab Nationa** 71.96 57 ⇑P P 16 31 12.8 +0.3
baz=72
S18A **Hurst Farm, Bl** 71.99 55 ⇑P P 16 31 12.4 -0.4
baz=72,SNR=6.9
R19A **Curley Farm, L** 72.01 54 ⇓P P 16 31 12.5 -0.3
baz=72
N23A **Red Feather La** 72.10 50 ⇓P P 16 31 13.2 0.0
baz=72
GLA **Glamis** 72.18 61 ⇓P P 16 31 13.6 -0.3
baz=72
P21A **Newcastle** 72.20 52 ⇑P P 16 31 14.1 +0.1
baz=72
O22A **Kremmling** 72.27 51 ⇓P P 16 31 14.6 +0.2
baz=72
U16A **Tuba City** 72.37 57 ⇓P P 16 31 15.6 +0.6
baz=72
X14A **Yava** 72.43 59 ⇓P P 16 31 15.8 +0.4
baz=72
T18A **Mexican Hat** 72.44 55 ⇓P P 16 31 15.0 -0.4
baz=72
S19A **Harvey Farm, M** 72.45 54 ⇓P P 16 31 15.4 -0.1
baz=72,SNR=7.1
P22A **Eagle** 72.54 51 ⇓P P 16 31 16.3 +0.4
baz=72
O23A **Lake Granby, G** 72.58 51 ⇓P P 16 31 16.7 +0.4
baz=72
Y14A **Wickenburg** 72.72 59 ⇓P P 16 31 17.3 +0.2
baz=72
Z13A **Yuma Proving G** 72.81 60 ⇑P P 16 31 17.5 -0.2
baz=73
X15A **Humboldt** 72.82 58 ⇑P P 16 31 18.3 +0.6
baz=73
V17A **Tonalea, Kykot** 72.92 57 ⇓P P 16 31 18.7 +0.4
baz=73,SNR=7.2
U18A **Rough Rock, Ch** 72.93 56 ⇓P P 16 31 18.6 +0.3
baz=73
ISCO **Idaho Springs** 73.04 51 eP P 16 31 18.9 0.0
ISCO pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
ISCO **Idaho Springs** 73.04 51 eP P 16 31 18.9 0.0
comp=Z,2.5nm,0.8s,mb4.2
Y15A **Casa Rosa Ranc** 73.12 59 ⇓P P 16 31 19.8 +0.3
baz=73
T19A **Beclabito** 73.15 55 ⇑P P 16 31 19.8 +0.2
baz=73
MVCO **Mesa Verde** 73.19 54 ⇓P P 16 31 20.1 +0.3
baz=73
V18A **Ganado** 73.38 56 ⇓P P 16 31 21.2 +0.2
baz=73
U19A **Dine' College,** 73.41 55 ⇓P P 16 31 21.4 +0.3
baz=73
R22A **Saguache, Gunn** 73.49 52 ⇑P P 16 31 22.1 +0.5
baz=73
Y16A **Circle Bar Ran** 73.69 58 ⇓P P 16 31 23.6 +0.7
baz=74
S22A **4UR Ranch, Cre** 73.78 53 ⇓P P 16 31 23.9 +0.6
baz=74
X17A **Forest Lakes** 73.79 58 ⇓P P 16 31 23.9 +0.5
baz=74
W19A **Sanders** 74.11 56 ⇑P P 16 31 25.7 +0.4
baz=74
X18A **Snowflake** 74.17 57 ⇑P P 16 31 26.0 +0.3
baz=74
Y17A **Roosevelt** 74.20 58 ⇑P P 16 31 26.2 +0.4
baz=74
U21A **Nageezi** 74.22 54 ⇑P P 16 31 25.5 -0.4
baz=74
T22A **Edith** 74.25 53 ⇓P P 16 31 26.4 +0.4
baz=74
R24A **Sanders Place,** 74.42 52 ⇑P P 16 31 27.4 +0.4
baz=74
Y18A **Canyon Day Jun** 74.64 58 ⇓P P 16 31 28.7 +0.3
baz=74
X19A **St. Johns** 74.64 57 ⇓P P 16 31 28.9 +0.6
baz=74
V21A **Milan** 74.66 55 ⇑P P 16 31 28.6 +0.1
baz=74
S24A **Houchin Ranch,** 74.77 52 ⇓P P 16 31 29.5 +0.4
baz=74
ECSD **EROS Data Cent** 74.89 43 eP P 16 31 28.6 -1.1
comp=Z,9.4nm,0.9s,mb4.7
216A **Three Points,** 74.98 60 ⇑P P 16 31 30.8 +0.4
baz=75
V22A **San Miguel Ran** 75.01 54 ⇓P P 16 31 30.6 +0.1
baz=75
X20A **Quemado** 75.03 56 ⇑P P 16 31 31.2 +0.6
baz=75,SNR=5.8
117A **Oracle** 75.03 59 ⇓P P 16 31 30.9 +0.2
baz=75
U23A **El Rito** 75.14 54 ⇑P P 16 31 31.9 +0.7
baz=75
S25A **Robets Cordova** 75.19 52 ⇑P P 16 31 31.0 -0.5
baz=75
BUR08 **Bucovina Ar. S** 75.38 324 eP P 16 31 32.1 -0.2
BURAR **Bucovina Array** 75.40 324 ⇓P P 16 31 32.6 +0.1
BURAR **Bucovina Array** 75.40 324 ⇓/P P 16 31 32.6 +0.1
BSEG **Bad Segeberg** 75.48 336 eP P 16 31 32.9 +0.1
comp=Z,10.0nm,0.8s,mb4.8
BSEG **Bad Segeberg** 75.48 336 eP P 16 31 32.9 +0.1
BSEG pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
X21A **Alamocita Cree** 75.52 56 ⇓P P 16 31 33.8 +0.4
baz=75
Y20A **Horse Springs,** 75.54 57 ⇓P P 16 31 34.0 +0.4
baz=75
STHS **Stebnicka Huta** 75.56 327 eP P 16 31 34.0 +0.6
STHS pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
STHS **Stebnicka Huta** 75.56 327 eP P 16 31 34.0 +0.6
comp=Z,2.5nm,0.6s,mb4.3
STHS **Stebnicka Huta** 75.56 327 eP P 16 31 34.0 +0.6
RUE **Ruedersdorf** 75.67 333 eP P 16 31 34.6 +0.7
comp=Z,13nm,0.7s,mb5.0
119A **Ashpeak Ranch,** 75.78 58 ⇓P P 16 31 34.9 -0.1
baz=76
218A **Dragoon** 75.87 59 ⇑P P 16 31 35.7 +0.2
baz=76
Y21A **Point of Rocks** 75.89 56 ⇓P P 16 31 36.1 +0.5
baz=76
Z20A **Nine Sixteen R** 75.97 57 ⇑P P 16 31 36.5 +0.5
baz=76
W23A **Werner Place,** 75.98 54 ⇑P P 16 31 36.4 +0.3
baz=76
V24A **Rampart Ranch,** 76.09 53 ⇓P P 16 31 37.1 +0.4
baz=76
TRPA **Tarpa** 76.09 326 ⇓/P P 16 31 36.8 +0.4
318A **Bisbee** 76.28 59 ⇑P P 16 31 37.9 +0.1
baz=76
STKA **Stephens Creek** 76.31 186 eP P 16 31 38.2 +0.6
comp=Z,5.7nm,0.6s,mb4.7
STKA **Stephens Creek** 76.31 186 P P 16 31 38.3 +0.7
comp=Z,7.2nm,0.7s,mb4.7,baz=341,slow=5.9,SNR=17
STKA LR LR 17 08 51.6
comp=Z,106nm,18.0s,baz=205,slow=38
120A **U Bar Ranch, L** 76.33 58 ⇑P P 16 31 38.5 +0.4
baz=76,SNR=5.3
219A **White Tail Can** 76.33 59 ⇓P P 16 31 38.2 +0.1
baz=76
W24A **Lazy 6 Ranch,** 76.37 54 ⇓P P 16 31 38.9 +0.6
baz=76,SNR=5.5

OKC Ostrava-Krasne 76.38 329 AMS AMS 17 07 10.0
comp=Z,100nm,18.0s
Z21A St. Cloud Mine 76.38 57 ⇓P **P 16 31 39.2 +0.8**
baz=76
V25A Rancho No Teng 76.38 53 ⇓P **P 16 31 38.2 -0.1**
baz=76
DPC Dobruska-Polom 76.61 331 *e*P **P 16 31 39.5 +0.2**
DPC Dobruska-Polom 76.61 331 *e*P **P 16 31 39.5 +0.2**
SCHQ Schefferville 76.62 20 P **P 16 31 38.7 -0.6**
comp=Z,4.3nm,0.6s,mb4.5,baz=340,slow=6.7,SNR=10
SCHQ LR LR 17 08 08.3
comp=Z,60nm,18.7s,baz=208,slow=38
MORC Moravsky Berou 76.65 330 ⇑P **P 16 31 39.4 -0.2**
MORC Moravsky Berou 76.65 330 ⇑*i*P **P 16 31 39.4 -0.2**
UMR Umm Al-Rimmam 76.67 298 *e*P **P 16 31 39.8 -0.3**
UMR AMb AMB 16 31 40.4
comp=Z,41nm,0.5s,mb5.7
MIB Mutribah 76.74 299 *e*P **P 16 31 40.2 -0.2**
MIB AMb AMB 16 31 40.8
comp=Z,51nm,0.9s,mb5.5
MLR Muntele Rosu 76.75 322 LR LR 17 07 52.8
comp=Z,107nm,20.3s,baz=204,slow=38
MLR Muntele Rosu 76.75 322 ⇓P **P 16 31 40.7 +0.5**
MLR Muntele Rosu 76.75 322 ⇓*i*P **P 16 31 40.7 +0.5**
319A Douglas 76.75 59 ⇓P **P 16 31 40.9 +0.4**
baz=76
Z22A Elephant Butte 76.84 56 ⇓P **P 16 31 41.2 +0.2**
baz=77
220A Playas Peak, P 76.85 58 ⇓P **P 16 31 41.2 +0.2**
baz=77
121A Cookes Peak, D 76.86 57 ⇓P **P 16 31 41.3 +0.3**
baz=77
Y23A Lovelace Mesa, 76.90 55 ⇑P **P 16 31 41.5 +0.2**
baz=77
W25A X Bar L Ranch, 76.91 53 ⇓P **P 16 31 41.4 0.0**
baz=77
CLL Collm 76.92 333 *e*P **P 16 31 40.3 -0.7**
comp=Z,11nm,0.5s,mb5.0
CLL Collm 76.92 333 *i* P **P 16 31 40.2 -0.8**
CLL pmax pmax
comp=Z,11nm,0.5s,mb5.0
CLL Collm 76.92 333 *i* P **P 16 31 40.2 -0.8**
comp=Z,11nm,0.5s,mb5.0
CLL Collm 76.92 333 *i* P **P 16 31 40.2 -0.8**
comp=Z,11nm,0.5s,mb5.0
BRG Berggiesshubel 76.98 332 *e*P **P 16 31 41.2 -0.2**
comp=Z,4.0nm,1.0s,mb4.3
BRG Berggiesshubel 76.98 332 *e*P **P 16 31 41.1 -0.2**
comp=Z,4.3nm,1.0s,mb4.3
BRG Berggiesshubel 76.98 332 *e*P **P 16 31 41.2 -0.2**
BRG pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
PVCC Panska Ves 77.06 332 AMS AMS 17 09 20.0
comp=Z,100nm,11.5s
NAY Al-Naaiem 77.18 298 *e*P **P 16 31 42.7 -0.2**
NAY AMb AMB 16 31 43.7
comp=Z,33nm,1.1s,mb5.2
VOIR 77.19 323 ⇑P **P 16 31 43.4 +0.8**
VOIR 77.19 323 ⇑*i*P **P 16 31 43.4 +0.8**
FORT Forrest 77.19 198 *e*P **P 16 31 42.9 +0.3**
comp=Z,22nm,0.7s,mb5.2
RDF Al-Radifah 77.21 298 *e*P **P 16 31 43.8 +0.7**
RDF AMb AMB 16 31 44.4
comp=Z,108nm,0.7s,mb5.9
VYHS Vyhne 77.23 328 *e*P **P 16 31 43.0 +0.1**
VYHS pmax pmax
comp=Z,4.0nm,1.4s,mb4.2
VYHS Vyhne 77.23 328 *e*P **P 16 31 43.0 +0.1**
comp=Z,3.5nm,1.4s,mb4.1
VYHS Vyhne 77.23 328 *e*P **P 16 31 43.0 +0.1**
CLZ Clausthal 77.29 335 *e*P **P 16 31 43.0 -0.1**
comp=Z,20nm,1.4s,mb4.8
CLZ Clausthal 77.29 335 *e*P **P 16 31 43.0 -0.1**
CLZ pmax pmax
comp=Z,20nm,1.4s,mb4.8
VRAC Vranov 77.38 330 LR LR 17 07 44.3
comp=Z,63nm,20.1s,baz=27,slow=37
BR131 Keskin Array S 77.49 314 *e*P **P 16 31 45.0 +0.5**
comp=Z,0.6nm,0.4s,mb3.9
BRTR Keskin Array B 77.50 314 P **P 16 31 44.4 -0.1**
comp=Z,2.5nm,0.7s,mb4.2,baz=80,slow=3.0,SNR=14
BRTR LR LR 17 10 40.2
comp=Z,39nm,19.5s,baz=210,slow=39
BRTR Keskin Array B 77.50 314 *i* P **P 16 31 44.9 +0.4**
BRTR pmax pmax
comp=Z,3.0nm,0.7s
PRU Pruhonice 77.53 331 *e*P **P 16 31 45.2 +0.7**
PRU MLR MLR
comp=Z,100nm,19.8s
PRU Pruhonice 77.53 331 *e*P **P 16 31 45.2 +0.7**
PRU AMS AMS 17 08 50.0
comp=Z,100nm,19.8s
IBBN Ibbenburen 77.65 336 *e*P **P 16 31 44.8 -0.3**
comp=Z,14nm,0.7s,mb5.0
TREC Trest 77.79 330 AMS AMS 17 08 30.0
comp=Z,200nm,6.1s
W27A Bowe Ranch, En 77.82 53 ⇓P **P 16 31 46.4 0.0**
baz=78
WERD Werda 77.88 333 *e*P **P 16 31 46.0 -0.4**
comp=Z,2.0nm,0.7s,mb4.2
SCIA State Center 77.91 42 *e*P **P 16 31 46.2 -0.5**
MOX Moxa 77.94 333 *e*P **P 16 31 46.3 -0.4**
comp=Z,7.0nm,1.1s,mb4.5
GUNZ Gunzen 77.95 333 *e*P **P 16 31 46.4 -0.4**
comp=Z,4.0nm,0.7s,mb4.5
NKC Novy Kostel 78.02 333 AMS AMS 17 10 20.0
comp=Z,100nm,9.6s
124A Stringfield Ra 78.13 56 ⇓P **P 16 31 47.8 -0.3**
baz=78
GZR Gura Zlata 78.19 324 ⇓P **P 16 31 48.0 -0.2**
GZR Gura Zlata 78.19 324 ⇓*i*P **P 16 31 48.0 -0.2**
Z26A Caprock 78.58 54 ⇑P **P 16 31 50.3 -0.3**
baz=78
KHC Kasperske Hory 78.59 331 *e*P **P 16 31 50.3 -0.1**
KHC pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
KHC Kasperske Hory 78.59 331 *e*P **P 16 31 50.3 -0.1**
comp=Z,6.8nm,0.6s,mb4.8
KHC Kasperske Hory 78.59 331 *e*P **P 16 31 50.5 +0.1**
KHC AMS AMS 17 09 40.0
comp=Z,100nm,23.8s
125A Gardner Draw, 78.63 55 ⇓P **P 16 31 50.8 -0.1**
baz=78
GEC2 GERESS Array S 78.79 331 *e*P **P 16 31 51.0 -0.5**
comp=Z,4.0nm,0.6s,mb4.5
GEC2 GERESS Array S 78.79 331 *e*P **P 16 31 51.0 -0.5**
GEC2 pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
CONA Conrad Observa 78.81 330 ⇑*i*P **P 16 31 51.8 +0.2**
comp=Z,5.0nm,0.6s,mb4.6
WET Wettzell 78.82 332 *e*P **P 16 31 51.8 +0.2**
comp=Z,10.0nm,1.2s,mb4.6
WET Wettzell 78.82 332 *e*P **P 16 31 51.8 +0.2**
WET pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
GRA1 Grafenberg Arr 78.89 333 *e*P **P 16 31 51.9 -0.1**
comp=Z,24nm,1.1s,mb5.0
GRF Grafenberg Arr 78.89 333 *e*P **P 16 31 51.9 -0.1**
comp=Z,24nm,1.1s,mb5.0
GRF Grafenberg Arr 78.89 333 *e*P **P 16 31 51.9 -0.1**
GRF pmax pmax
comp=Z,24nm,1.1s,mb5.0
Z27A Tatum 79.00 54 ⇑P **P 16 31 52.4 -0.5**
baz=79
324A Moseley Ranch, 79.01 57 ⇑P **P 16 31 52.9 -0.1**
baz=79
TNS Taunus Mts 79.29 335 *e*P **P 16 31 54.2 0.0**
comp=Z,22nm,1.4s,mb4.9
TNS Taunus Mts 79.29 335 *e*P **P 16 31 54.2 0.0**
TNS pmax pmax
comp=Z,22nm,1.4s,mb4.9
325A Bean Ranch, Si 79.36 56 ⇓P **P 16 31 54.2 -0.7**
baz=79
226A Malaga, Loving 79.38 55 ⇓P **P 16 31 54.8 -0.2**
baz=79
MEM Membach 79.66 337 P **P 16 31 56.3 +0.1**
425A Indio Mountain 79.77 57 ⇓P **P 16 31 56.8 -0.4**
baz=80
326A Caldwell Ranch 79.99 56 ⇓P **P 16 31 58.1 -0.2**
baz=80
BCLA Clavier 80.03 337 P **P 16 31 57.7 -0.5**
comp=Z,8.8nm,2.0s,mb4.3
SOKA Soboth 80.17 329 ⇑*i*P **P 16 31 58.7 -0.3**
comp=Z,9.4nm,0.9s,mb4.7
PERS Pernice 80.17 329 *i* P **P 16 31 58.6 -0.5**
GROS Grobnik 80.18 329 *i* P **P 16 31 58.5 -0.5**
VTS Vitosha 80.25 322 ⇑P **P 16 31 59.4 -0.1**
VTS Vitosha 80.25 322 ⇑*i*P **P 16 31 59.4 -0.1**
STU Stuttgart 80.34 334 *e*P **P 16 31 59.7 -0.2**
comp=Z,12nm,0.9s,mb4.8
426A McDonald Obser 80.43 56 ⇓P **P 16 32 00.5 -0.2**
baz=80
KBA Koelnbreinsper 80.43 331 ⇑*i*P **P 16 32 00.7 +0.3**
comp=Z,15nm,1.1s,mb4.8
GIVF Givet 80.45 337 *e*P **P 16 31 59.7 -0.8**
GOLS Golise 80.51 329 *i* P **P 16 32 00.2 -0.6**
328A Wristen Ranch, 80.63 55 ⇑P **P 16 32 01.5 -0.3**
baz=80
BAIF Baives 80.66 337 *e*P **P 16 32 00.9 -0.7**
427A Hayter Ranch, 80.67 56 ⇑P **P 16 32 01.9 -0.1**
baz=80
CRES Cresnjev 80.73 329 *i* P **P 16 32 01.3 -0.8**
WATA Walderalm 80.82 332 ⇑*i*P **P 16 32 02.5 0.0**
comp=Z,5.7nm,0.4s,mb4.8
526A Mary Lane Ranc 80.83 57 ⇑P **P 16 32 02.5 -0.4**
baz=81
WTTA Wattenberg 80.86 332 ⇑*i*P **P 16 32 02.9 +0.2**
comp=Z,15nm,0.8s,mb5.0
MOTA Moosalm 80.97 332 ⇑*i*P **P 16 32 03.2 -0.1**
comp=Z,17nm,0.9s,mb5.0
BFO Black Forest 81.00 334 *e*P **P 16 32 02.6 -0.8**
comp=Z,7.0nm,1.0s,mb4.5
BFO Black Forest 81.00 334 *e*P **P 16 32 02.6 -0.8**
BFO pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
527A Woodward Ranch 81.05 56 ⇓P **P 16 32 03.8 -0.3**
baz=81
626A Big Bend Ranch 81.17 57 ⇑P **P 16 32 04.6 -0.1**
baz=81
428A Kincaid Ranch, 81.18 55 ⇓P **P 16 32 04.8 +0.1**
baz=81
CDF Champ du Feu 81.25 335 ⇑*i*P **P 16 32 04.2 -0.6**
comp=Z,15nm,0.9s,mb4.6
CDF Champ du Feu 81.25 335 ⇑*i*P **P 16 32 04.2 -0.6**
CDF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
CDF Champ du Feu 81.25 335 ⇑*i*P **P 16 32 04.2 -0.6**
comp=Z,7.7nm,0.9s,mb4.6
ASF Jabal al Asfar 81.32 307 LR LR 17 11 20.4
comp=Z,30nm,18.1s,baz=206,slow=38
FETA Feichten 81.38 332 ⇓*i*P **P 16 32 05.3 -0.2**
comp=Z,8.1nm,1.2s,mb4.5
DAVA Damuels 81.42 333 ⇑*i*P **P 16 32 05.4 -0.3**
comp=Z,9.8nm,0.8s,mb4.8
ECH Echery 81.46 335 *e*P **P 16 32 05.2 -0.7**
ECH pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
ECH Echery 81.46 335 *e*P **P 16 32 05.2 -0.7**
comp=Z,5.4nm,0.8s,mb4.5
528A Cox Ranch, San 81.53 56 ⇓P **P 16 32 06.2 -0.4**
baz=81
MMAI Mount Meron Ar 81.54 308 P **P 16 32 07.1 +0.5**
comp=Z,16nm,0.5s,mb5.2,baz=43,slow=6.3,SNR=32
MMAI LR LR 17 11 53.2
comp=Z,46nm,19.4s,baz=185,slow=38
TXAR Lajitas Array 81.61 57 P **P 16 32 06.7 -0.3**
comp=Z,4.9nm,0.5s,mb4.7,baz=301,slow=4.2,SNR=56
TXAR Lajitas Array 81.61 57 P **P 16 32 06.7 -0.3**
TXAR pmax pmax
comp=Z,5.0nm,0.5s
TXAR Lajitas Array 81.61 57 P **P 16 32 06.7 -0.3**
627A Terlingua Ranc 81.69 57 ⇓P **P 16 32 07.3 -0.1**
baz=81
TOO Toolangi 81.79 182 *e*P **P 16 32 08.9 +1.5**
MEZF Maizieres J'vi 81.83 336 *e*P **P 16 32 07.4 -0.4**
comp=Z,13nm,0.6s,mb4.7
MEZF Maizieres J'vi 81.83 336 *e*P **P 16 32 07.4 -0.4**
comp=Z,13nm,0.6s,mb5.0
CCM Cathedral Cave 81.84 43 *e*P **P 16 32 07.0 -1.1**
CCM pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
CCM Cathedral Cave 81.84 43 *e*P **P 16 32 07.0 -1.1**
comp=Z,8.1nm,0.7s,mb4.8
DAVOX Davos/Dischmat 81.87 332 LR LR 17 10 33.2
comp=Z,50nm,19.0s,baz=87,slow=37
HAU Haudompre 81.90 335 *e*P **P 16 32 07.3 -0.9**
comp=Z,5.4nm,0.5s,mb4.4
HAU *e*MLR MLR
comp=Z,64nm,23.0s
HAU Haudompre 81.90 335 *e*P **P 16 32 07.3 -0.9**
HAU pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
HAU MLR MLR
comp=Z,60nm,23.0s
HAU Haudompre 81.90 335 *e*P **P 16 32 07.3 -0.9**
comp=Z,2.7nm,0.5s,mb4.4
HAU LR LR
comp=Z,60nm,23.0s
HINF Hinteralfeld 81.91 335 *e*P **P 16 32 07.3 -1.0**
comp=Z,8.0nm,0.8s,mb4.4
HINF Hinteralfeld 81.91 335 *e*P **P 16 32 07.3 -1.0**
HINF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
HINF Hinteralfeld 81.91 335 *e*P **P 16 32 07.3 -1.0**
comp=Z,4.0nm,0.8s,mb4.4
628A Black Gap, Mar 81.96 56 ⇑P **P 16 32 08.3 -0.5**
baz=82
FLN La Foliniere 83.08 340 *e*P **P 16 32 13.6 -0.7**
comp=Z,9.6nm,0.4s,mb4.9
FLN *e*MLR MLR
comp=Z,63nm,20.2s
FLN La Foliniere 83.08 340 *e*P **P 16 32 13.6 -0.7**
FLN pmax pmax
comp=Z,5.0nm,0.4s,mb4.9
FLN MLR MLR
comp=Z,60nm,20.3s
FLN La Foliniere 83.08 340 *e*P **P 16 32 13.6 -0.7**
comp=Z,4.8nm,0.4s,mb4.9
FLN LR LR
comp=Z,60nm,20.3s
LDF La Druitiere 83.15 339 *e*P **P 16 32 13.8 -0.9**
comp=Z,3.6nm,0.4s,mb4.5
LDF La Druitiere 83.15 339 *e*P **P 16 32 13.8 -0.9**
LDF pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
LDF La Druitiere 83.15 339 *e*P **P 16 32 13.8 -0.9**
comp=Z,1.8nm,0.4s,mb4.5
CABF La Chapelle 83.22 335 *e*P **P 16 32 14.9 -0.2**
LOR Lormes 83.29 336 ⇑*i*P **P 16 32 14.7 -0.7**
comp=Z,6.6nm,0.5s,mb4.6
LOR *e*MLR MLR
comp=Z,65nm,21.0s
LOR Lormes 83.29 336 ⇑*i*P **P 16 32 14.7 -0.7**
LOR pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
LOR MLR MLR
comp=Z,70nm,21.0s
LOR Lormes 83.29 336 ⇑*i*P **P 16 32 14.7 -0.7**
comp=Z,3.3nm,0.5s,mb4.6
LOR LR LR
comp=Z,70nm,21.0s
MIAR Mount Ida 83.39 47 *e*P **P 16 32 15.5 -0.7**
MIAR pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
MIAR Mount Ida 83.39 47 *e*P **P 16 32 15.4 -0.7**
comp=Z,6.9nm,0.8s,mb4.7
GRR Gorron 83.52 340 *e*P **P 16 32 16.2 -0.4**
comp=Z,23nm,0.5s,mb5.2
GRR Gorron 83.52 340 *e*P **P 16 32 16.2 -0.4**
GRR pmax pmax
comp=Z,11nm,0.5s,mb5.2
GRR Gorron 83.52 340 *e*P **P 16 32 16.2 -0.4**
comp=Z,11nm,0.5s,mb5.2
SSF Saint Saulge 83.58 337 ⇑*i*P **P 16 32 16.2 -0.7**
comp=Z,16nm,0.9s,mb4.8
SSF Saint Saulge 83.58 337 ⇑*i*P **P 16 32 16.2 -0.7**
SSF pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
SSF Saint Saulge 83.58 337 ⇑*i*P **P 16 32 16.2 -0.7**
comp=Z,7.8nm,0.9s,mb4.8
SMF Signal de Mont 83.86 336 ⇑*i*P **P 16 32 17.9 -0.5**
comp=Z,30nm,0.7s,mb5.2
SMF Signal de Mont 83.86 336 ⇑*i*P **P 16 32 17.9 -0.5**
SMF pmax pmax
comp=Z,15nm,0.7s,mb5.2
SMF Signal de Mont 83.86 336 ⇑*i*P **P 16 32 17.9 -0.5**
comp=Z,15nm,0.7s,mb5.2
AVF Avril sur Loir 83.87 337 ⇑*i*P **P 16 32 18.0 -0.4**
comp=Z,20nm,0.8s,mb5.0
AVF Avril sur Loir 83.87 337 ⇑*i*P **P 16 32 18.0 -0.4**
AVF pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
AVF Avril sur Loir 83.87 337 ⇑*i*P **P 16 32 18.0 -0.4**
comp=Z,9.9nm,0.8s,mb5.0
LPL La Plagne 84.00 334 ⇑*i*P **P 16 32 19.3 +0.2**
comp=Z,19nm,0.8s,mb5.0
LPL La Plagne 84.00 334 ⇑*i*P **P 16 32 19.3 +0.2**
LPL pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
LPL La Plagne 84.00 334 ⇑*i*P **P 16 32 19.3 +0.2**
comp=Z,9.3nm,0.8s,mb5.0
LPG La Plagne 84.02 334 ⇑*i*P **P 16 32 19.5 +0.3**
comp=Z,24nm,0.8s,mb5.1
LPG La Plagne 84.02 334 ⇑*i*P **P 16 32 19.5 +0.3**
LPG pmax pmax
comp=Z,12nm,0.8s,mb5.1
LPG La Plagne 84.02 334 ⇑*i*P **P 16 32 19.5 +0.3**
comp=Z,12nm,0.8s,mb5.1
SGMF Saint Gilles 84.05 341 *e*P **P 16 32 18.9 -0.4**
comp=Z,29nm,0.6s,mb5.3
SGMF Saint Gilles 84.05 341 *e*P **P 16 32 18.9 -0.4**
SGMF pmax pmax
comp=Z,15nm,0.6s,mb5.3
SGMF Saint Gilles 84.05 341 *e*P **P 16 32 18.9 -0.4**
comp=Z,15nm,0.6s,mb5.3
ROSF Rostrenen 84.14 341 *e*P **P 16 32 19.2 -0.6**
comp=Z,44nm,0.9s,mb5.3
ROSF Rostrenen 84.14 341 *e*P **P 16 32 19.2 -0.6**
ROSF pmax pmax
comp=Z,22nm,0.9s,mb5.3
ROSF Rostrenen 84.14 341 *e*P **P 16 32 19.2 -0.6**
comp=Z,22nm,0.9s,mb5.3
EIL Elat 84.29 306 LR LR 17 13 09.8
comp=Z,60nm,19.5s,baz=103,slow=38
QUIF Quistinic 84.51 341 *e*P **P 16 32 21.0 -0.6**
comp=Z,29nm,0.7s,mb5.2
QUIF Quistinic 84.51 341 *e*P **P 16 32 21.0 -0.6**
QUIF pmax pmax
comp=Z,14nm,0.7s,mb5.2
QUIF Quistinic 84.51 341 *e*P **P 16 32 21.0 -0.6**
comp=Z,14nm,0.7s,mb5.2
TCF Toulx Ste Croi 84.65 337 *e*P **P 16 32 21.3 -1.1**
comp=Z,9.4nm,0.8s,mb4.7
TCF Toulx Ste Croi 84.65 337 *e*P **P 16 32 21.3 -1.1**
TCF pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
TCF Toulx Ste Croi 84.65 337 *e*P **P 16 32 21.3 -1.1**
comp=Z,4.7nm,0.8s,mb4.7
MBDF Montbardon 84.70 333 *e*P **P 16 32 22.1 -0.5**
comp=Z,14nm,0.6s,mb5.0
MBDF Montbardon 84.70 333 *e*P **P 16 32 22.1 -0.5**
MBDF pmax pmax
comp=Z,7.0nm,0.6s,mb5.0
MBDF Montbardon 84.70 333 *e*P **P 16 32 22.1 -0.5**
comp=Z,6.8nm,0.6s,mb5.0
ORIF Oris-en-Rattie 84.81 334 ⇑*i*P **P 16 32 23.3 +0.1**
comp=Z,17nm,0.7s,mb5.0
ORIF *e*MLR MLR
comp=Z,62nm,18.5s
ORIF Oris-en-Rattie 84.81 334 ⇑*i*P **P 16 32 23.3 +0.1**
ORIF pmax pmax
comp=Z,9.0nm,0.7s,mb5.0
ORIF Oris-en-Rattie 84.81 334 ⇑*i*P **P 16 32 23.3 +0.1**
comp=Z,8.5nm,0.7s,mb5.0
MFF Saint Martin d 85.00 339 *e*P **P 16 32 24.2 +0.1**
comp=Z,37nm,0.8s,mb5.2
MFF Saint Martin d 85.00 339 *e*P **P 16 32 24.2 +0.1**
MFF pmax pmax
comp=Z,19nm,0.8s,mb5.3
MFF Saint Martin d 85.00 339 *e*P **P 16 32 24.2 +0.1**
comp=Z,19nm,0.8s,mb5.3
VIVF Saint-Julien-l 85.24 335 ⇑*i*P **P 16 32 25.3 0.0**
comp=Z,12nm,0.7s,mb4.9
VIVF Saint-Julien-l 85.24 335 ⇑*i*P **P 16 32 25.3 0.0**
VIVF pmax pmax
comp=Z,6.0nm,0.6s,mb4.9
VIVF Saint-Julien-l 85.24 335 ⇑*i*P **P 16 32 25.3 0.0**
comp=Z,5.9nm,0.6s,mb4.9
SBF Sospel 85.25 333 *e*P **P 16 32 24.5 -0.9**
comp=Z,18nm,0.7s,mb5.0
SBF Sospel 85.25 333 *e*P **P 16 32 24.5 -0.9**
SBF pmax pmax
comp=Z,9.0nm,0.6s,mb5.1
SBF Sospel 85.25 333 *e*P **P 16 32 24.5 -0.9**
comp=Z,8.9nm,0.6s,mb5.1
RJF Les Rejaudoux 85.75 337 *e*P **P 16 32 27.8 -0.1**
comp=Z,18nm,1.0s,mb4.9
RJF *e*MLR MLR
comp=Z,57nm,19.2s
RJF Les Rejaudoux 85.75 337 *e*P **P 16 32 27.8 -0.1**
RJF pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
RJF MLR MLR
comp=Z,60nm,19.3s
RJF Les Rejaudoux 85.75 337 *e*P **P 16 32 27.8 -0.1**
comp=Z,8.9nm,1.0s,mb5.0
RJF LR LR
comp=Z,60nm,19.3s
SMRF Simiane la Rot 85.75 334 *e*P **P 16 32 27.9 0.0**
comp=Z,12nm,0.9s,mb4.8
SMRF Simiane la Rot 85.75 334 *e*P **P 16 32 27.9 0.0**
comp=Z,12nm,0.9s,mb5.1
FRF La Foret Royal 85.78 333 *e*P **P 16 32 27.4 -0.7**
PGF Pioggiola 85.89 331 ⇑*i*P **P 16 32 27.8 -0.8**
comp=Z,13nm,0.7s,mb5.0
PGF Pioggiola 85.89 331 ⇑*i*P **P 16 32 27.8 -0.8**
PGF pmax pmax
comp=Z,7.0nm,0.7s,mb5.0
PGF Pioggiola 85.89 331 ⇑*i*P **P 16 32 27.8 -0.8**
comp=Z,6.6nm,0.7s,mb5.0
CAF Calviac 85.94 337 *e*P **P 16 32 29.3 +0.5**
comp=Z,12nm,0.5s,mb5.1
CAF Calviac 85.94 337 *e*P **P 16 32 29.3 +0.5**
CAF pmax pmax
comp=Z,6.0nm,0.5s,mb5.1
CAF Calviac 85.94 337 *e*P **P 16 32 29.3 +0.5**
comp=Z,6.3nm,0.5s,mb5.1
LMR La Mourre 86.03 333 *e*P **P 16 32 28.8 -0.5**
comp=Z,35nm,1.2s,mb5.2
LMR La Mourre 86.03 333 *e*P **P 16 32 28.8 -0.5**
LMR pmax pmax
comp=Z,17nm,1.2s,mb5.2
LMR La Mourre 86.03 333 *e*P **P 16 32 28.8 -0.5**
comp=Z,18nm,1.2s,mb5.2
LASF Ste Croix 86.19 335 ⇑*i*P **P 16 32 30.4 +0.3**
comp=Z,13nm,0.8s,mb4.9
LFF La Frestale 86.30 337 *e*P **P 16 32 31.0 +0.4**
comp=Z,29nm,0.6s,mb5.4
LFF La Frestale 86.30 337 *e*P **P 16 32 31.0 +0.4**
LFF pmax pmax
comp=Z,15nm,0.6s,mb5.4
LFF La Frestale 86.30 337 *e*P **P 16 32 31.0 +0.4**
comp=Z,15nm,0.6s,mb5.4
TKL Tuckaleechee C 87.32 40 LR LR 17 10 44.4
comp=Z,32nm,18.6s,baz=102,slow=35
EPF Esparros 88.17 337 *e*P **P 16 32 39.9 +0.2**
SJPF Ste Jean 88.52 338 *e*P **P 16 32 41.3 0.0**
ETSF Etsaut 88.54 338 ⇑*i*P **P 16 32 41.2 -0.2**
comp=Z,7.1nm,0.6s,mb4.9
ETSF Etsaut 88.54 338 ⇑*i*P **P 16 32 41.2 -0.2**
ETSF pmax pmax
comp=Z,4.0nm,0.6s,mb4.9
ETSF Etsaut 88.54 338 ⇑*i*P **P 16 32 41.2 -0.2**
comp=Z,3.5nm,0.6s,mb4.9
ESDC Sonseca Array 92.46 339 P **P 16 32 59.5 -0.3**
comp=Z,1.1nm,0.5s,mb4.4,baz=29,slow=3.7,SNR=5.0
DBIC Dimbokro 123.50 327 PKP PKPdf 16 38 44.8 -1.5
comp=Z,2.8nm,0.7s,baz=155,slow=12,SNR=4.0
DBIC Dimbokro 123.50 327 PKIKP PKPdf 16 38 44.8 -1.5
DBIC pmax pmax
comp=Z,3.0nm,0.7s
BOSA Boshof 132.41 269 PKP PKPdf 16 39 04.7 +1.9
comp=Z,7.1nm,1.3s,baz=75,slow=6.4,SNR=3.9
BOSA Boshof 132.41 269 PKIKP PKPdf 16 39 04.7 +1.9
BOSA pmax pmax
comp=Z,7.0nm,1.3s
LPAZ La Paz 138.45 59 PKP PKPdf 16 39 16.4 +2.0
comp=Z,1.1nm,0.7s,baz=7.7,slow=2.9,SNR=5.7
LPAZ La Paz 138.45 59 PKIKP PKPdf 16 39 16.4 +2.0
LPAZ pmax pmax
comp=Z,1.0nm,0.7s
VNA1 Neumayer--Stat 151.36 196 *e*PKPdf PKPdf 16 39 38.6 +3.8
VNA1 *e* 16 39 46.6
PLCA Paso Flores 151.47 96 PKPbc PKPbc 16 39 41.8 -0.3
comp=Z,7.4nm,0.8s,baz=274,slow=2.3,SNR=22
CPUP Villa Florida 152.58 57 PKPbc PKPbc 16 39 44.4 -0.7
comp=Z,0.9nm,0.5s,baz=104,slow=0.9,SNR=6.5

DDA **29** *16:34:47.2,36°.97N×29°.21E,h7km±5km,Md2.9*

*ISCJB **29** 16:34:48.6±0.6, 36°.98N±0°.04×29°.23E±0°.04, h11km±6km, Error ellipse: s-maj=6.8km s-min=5.0km az=9.7*
*CSEM **29** 16:34:48.3±0.2, 36°.99N×29°.23E, h8km, MD2.9, Error ellipse: s-maj=5.8km s-min=4.4km az=16.0*
*ISK **29** 16:34:48.6, 36°.98N×29°.22E, h16km, MD2.9*
ISC 29 16:34:48.9±0.6, 36°.98N±0°.04×29°.24E±0°.04, h14km±5km, n26, σ0°83/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.36**	**45**	*i* P	**Pg**	**16 34 54.8**	**-1.5**
GOLH				*i* S	**Sg**	**16 35 01.6**	**+0.3**
GOLH	**Golhisar**	**0.36**	**45**	*i* P	**Pg**	**16 34 54.8**	**-1.5**
GOLH				*i* S	**Sg**	**16 35 01.5**	**+0.2**
ELL	**Elmali**	**0.59**	**113**	*e*PG	**Pg**	**16 35 01.0**	**+0.5**
ELL				*e*SG	**Sg**	**16 35 09.7**	**+1.5**
ELL	**Elmali**	**0.59**	**113**	*e*Pg	**Pg**	**16 35 01.0**	**+0.6**
ELL				*e*Sg	**Sg**	**16 35 09.7**	**+1.5**
DNZL	**Cakiroluk**	**0.72**	**348**	*i* P	**Pg**	**16 35 01.3**	**-1.7**
DNZL				*i* S	**Sg**	**16 35 13.3**	**+0.8**
DNZL	**Cakiroluk**	**0.72**	**348**	*i* P	**Pg**	**16 35 01.3**	**-1.7**
DNZL				*i* S	**Sg**	**16 35 13.3**	**+0.7**
YER	**Yerkesik**	**0.78**	**282**	*e*PG	**Pg**	**16 35 03.8**	**-0.2**
YER				*e*SG	**Sg**	**16 35 15.1**	**+0.8**
YER	**Yerkesik**	**0.78**	**282**	*e*Pg	**Pg**	**16 35 03.8**	**-0.2**
YER				*e*Sg	**Sg**	**16 35 15.1**	**+0.8**
DENT	**Denizli**	**0.79**	**348**	*e*PG	**Pg**	**16 35 04.5**	**+0.3**
DENT	**Denizli**	**0.79**	**348**	*e*Pg	**Pg**	**16 35 04.5**	**+0.3**
AKAS	**Kas**	**0.80**	**158**	*i* P	**Pg**	**16 35 03.4**	**-1.1**
AKAS				*i* S	**Sg**	**16 35 21.9**	**+6.9**
AKAS	**Kas**	**0.80**	**158**	*i* P	**Pg**	**16 35 03.4**	**-1.1**
BCK	**Bucak**	**1.18**	**66**	*e*PN	**Pn**	**16 35 11.2**	**+0.1**
BCK	**Bucak**	**1.18**	**66**	*e*Pn	**Pn**	**16 35 11.2**	**+0.2**
AYDN	**Tasoluk**	**1.28**	**302**	*i* P	**Pn**	**16 35 11.2**	**-1.2**
AYDN				*i* S	**Sb**	**16 35 30.2**	**+1.2**
AYDN	**Tasoluk**	**1.28**	**302**	*i* P	**Pn**	**16 35 11.2**	**-1.2**
AYDN				*i* S	**Sb**	**16 35 30.2**	**+1.2**
DAT	**Datca**	**1.35**	**260**	*e*PN	**Pn**	**16 35 13.4**	**0.0**
DAT	**Datca**	**1.35**	**260**	*e*Pn	**Pn**	**16 35 13.4**	**0.0**
KHL	**Karahalli**	**1.36**	**10**	*e*PN	**Pn**	**16 35 13.8**	**+0.3**
KHL	**Karahalli**	**1.36**	**10**	*e*Pn	**Pn**	**16 35 13.8**	**+0.3**
BDRM	**Kayabasi**	**1.44**	**274**	*i* P	**Pn**	**16 35 14.2**	**-0.4**
BDRM				*i* S	**Sn**	**16 35 33.5**	**+0.2**
BDRM	**Kayabasi**	**1.44**	**274**	*i* P	**Pn**	**16 35 14.1**	**-0.4**
BDRM				*i* S	**Sn**	**16 35 33.5**	**+0.3**
BODT	**Bodrum**	**1.54**	**274**	*e*PN	**Pn**	**16 35 16.1**	**+0.1**
BODT	**Bodrum**	**1.54**	**274**	*e*Pn	**Pn**	**16 35 16.1**	**+0.1**
KULA	**Kula-Manisa**	**1.60**	**344**	*e*PN	**Pn**	**16 35 16.5**	**-0.2**
KULA	**Kula-Manisa**	**1.60**	**344**	*e*Pn	**Pn**	**16 35 16.5**	**-0.3**

*ISCJB **29** 16:40:34.3±1.2, 19°.83S±0°.07×177°.73W±0°.09, h387km±13km, mb4.1/15, Error ellipse: s-maj=15.4km s-min=9.6km az=31.8*
*IDC **29** 16:40:34.6±2.3, 19°.81S×177°.70W, h376km±26km, mb3.6/9, mb1 3.8/11, mb1mx3.7/17, mbtmp3.7/11, Error ellipse: s-maj=23.8km s-min=13.3km az=126.0*
*NEIC **29** 16:40:39.2±1.1, 19°.82S×177°.80W, h424km±10km, mb4.7/7, Error ellipse: s-maj=15.1km s-min=8.2km az=128.0*
ISC 29 16:40:38.7±1.2, 19°.91S±0°.08×177°.8W±0°.1, h421km±12km, n42, σ0°75/40, mb4.1/15, 3C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.52**	**298**	*e*P	**P**	**16 41 57.0**	**-0.1**
AFI	**Afiamalu**	**8.27**	**45**	P	**P**	**16 42 31.0**	**-5.8**
	3.0nm,0.3s,baz=343,slow=21,SNR=9.3						
AFI				S	**S**	**16 43 59.6**	**-14**
	13nm,0.3s,baz=161,slow=20,SNR=8.2						
AFI	**Afiamalu**	**8.27**	**45**	P	**P**	**16 42 31.0**	**-5.8**
AFI				S	**S**	**16 43 59.6**	**-14**
FUNA	**Funafuti**	**11.69**	**345**	P	**P**	**16 43 13.2**	**-1.4**
	112nm,0.7s						
DZM	**Mont Dzumac**	**14.91**	**259**	*e*P	**P**	**16 43 50.9**	**+1.3**
DZM	**Mont Dzumac**	**14.91**	**259**	*e*P	**P**	**16 43 51.8**	**+2.2**
	128nm,1.0s						
URZ	**Urewera**	**18.82**	**193**	P	**P**	**16 44 29.2**	**-1.6**
	7.6nm,0.3s,baz=310,slow=3.5,SNR=41						
URZ				S	**S**	**16 47 39.7**	**-1.0**
	1.1nm,0.3s,baz=131,slow=20,SNR=6.5						
URZ	**Urewera**	**18.82**	**193**	*e*P	**P**	**16 44 27.0**	**-3.8**
URZ				S	**S**	**16 47 39.7**	**-1.0**
RPZ	**Rata Peaks**	**25.52**	**199**	P	**P**	**16 45 32.4**	**+1.1**
	12nm,0.7s,mb4.5,baz=15,slow=7.6,SNR=7.9						
RPZ	**Rata Peaks**	**25.52**	**199**	P	**P**	**16 45 32.4**	**+1.0**
EIDS	**Eidsvold**	**29.23**	**253**	*e*P	**P**	**16 46 04.3**	**0.0**
ARMA	**Armidale**	**29.53**	**243**	*e*P	**P**	**16 46 08.0**	**+1.1**
CTA	**Charters Tower**	**33.78**	**263**	⇑*i*P	**P**	**16 46 44.0**	**+0.3**
	22nm,0.4s,mb4.8						
CTAO	**Charters Tower**	**33.78**	**263**	*e*P	**P**	**16 46 44.0**	**+0.3**
	42nm,0.8s,mb4.8						
COEN	**Coen**	**37.77**	**273**	*e*P	**P**	**16 47 17.1**	**-0.1**
STKA	**Stephens Creek**	**38.25**	**244**	⇑*i*P	**P**	**16 47 21.0**	**+0.1**
	4.1nm,0.5s,mb4.0						
STKA	**Stephens Creek**	**38.25**	**244**	P	**P**	**16 47 21.1**	**+0.2**
	5.0nm,0.5s,mb4.1,baz=97,slow=9.9,SNR=24						
STKA	**Stephens Creek**	**38.25**	**244**	*e*P	**P**	**16 47 21.0**	**+0.1**
	0.9nm,0.5s,mb3.4						
ASAR	**Alice Springs**	**44.88**	**256**	P	**P**	**16 48 13.7**	**-0.3**
	21nm,0.7s,mb4.6,baz=90,slow=8.4,SNR=303						
ASAR				S	**S**	**16 54 19.3**	**-0.5**
	1.7nm,0.7s,baz=92,slow=16,SNR=9.8						
WRAB	**Tennant Creek**	**44.90**	**261**	*e*P	**P**	**16 48 13.1**	**-1.1**
	5.8nm,0.6s,mb4.1						
KAKA	**Kakadu**	**48.19**	**271**	*e*P	**P**	**16 48 39.4**	**0.0**
	14nm,0.7s,mb4.4						
KAKA	**Kakadu**	**48.19**	**271**	*e*P	**P**	**16 48 39.3**	**-0.1**
	25nm,0.4s,mb4.9						
FORT	**Forrest**	**49.74**	**246**	*e*P	**P**	**16 48 50.0**	**-0.8**
	7.6nm,0.4s,mb4.4						
FITZ	**Fitzroy Crossi**	**53.33**	**262**	*e*P	**P**	**16 49 17.3**	**+0.1**
	3.9nm,0.3s,mb4.1						
FITZ	**Fitzroy Crossi**	**53.33**	**262**	*e*P	**P**	**16 49 16.9**	**-0.2**
	2.8nm,0.6s,mb3.7						
MJAR	**Matsushiro Arr**	**69.87**	**323**	P	**P**	**16 51 05.3**	**-0.3**
	2.7nm,0.5s,mb4.0,baz=156,slow=6.3,SNR=11						
QSPA	**South Pole Qui**	**70.16**	**180**	*e*P	**P**	**16 51 07.5**	**+0.7**
PETK	**Petropavlovsk-**	**75.76**	**345**	P	**P**	**16 51 39.4**	**0.0**
	6.8nm,0.7s,mb4.4,baz=127,slow=9.5,SNR=16						
KSRS	**Korea Array**	**76.59**	**318**	P	**P**	**16 51 45.4**	**+0.9**
	0.4nm,0.6s,mb3.2,baz=123,slow=4.3,SNR=3.3						
NVAR	**Mina Array Bea**	**80.44**	**43**	P	**P**	**16 52 06.0**	**+0.8**
	0.5nm,0.6s,mb3.3,baz=231,slow=8.6,SNR=4.7						
DIV	**Divide**	**84.76**	**15**	*e*P	**P**	**16 52 26.4**	**-0.1**
TXAR	**Lajitas Array**	**86.55**	**57**	P	**P**	**16 52 35.9**	**-0.1**
	0.2nm,0.5s,mb3.1,baz=284,slow=3.6,SNR=2.5						
ILAR	**Eielson Array**	**87.69**	**13**	P	**P**	**16 52 40.0**	**-0.5**
	2.6nm,0.8s,mb4.0,baz=229,slow=4.9,SNR=39						
DAWY	**Dawson**	**88.83**	**16**	*e*P	**P**	**16 52 46.2**	**+0.3**
EGAK	**Eagle**	**88.98**	**15**	*e*P	**P**	**16 52 46.8**	**+0.3**
	4.1nm,0.9s,mb4.2						
ARCES	**ARCESS Array B**	**128.38**	**350**	PKP	PKPdf	16 58 55.5	-0.1
	0.5nm,0.4s,baz=17,slow=1.3,SNR=8.6						
AKASG	**Malin Array Be**	**142.60**	**332**	PKhKP	PKPpre	16 59 18.5	
	0.9nm,0.3s,baz=39,slow=3.9,SNR=6.1						
BUR08	**Bucovina Ar. S**	**146.64**	**331**	*e*PKPbc	PKPbc	16 59 33.1	+1.3
CLL	**Collm**	**147.54**	**347**	⇑*i*PKPbc	PKPbc	16 59 34.5	+0.4
	comp=Z,7.0nm,0.6s						
CLL				*i* PKPab	PKPab	16 59 37.1	-0.4
MMAI	**Mount Meron Ar**	**147.71**	**301**	PKPbc	PKPbc	16 59 34.8	-0.4
	comp=Z,1.2nm,0.5s,baz=84,slow=5.9,SNR=2.7						
BRG	**Berggiesshubel**	**147.74**	**346**	*e*P	PKPab	16 59 38.2	-0.1
	comp=Z,4.8nm,0.8s						
KHC	**Kasperske Hory**	**149.46**	**345**	*e*PKPbc	PKPbc	16 59 39.5	+0.5
KHC				*e*PKPab	PKPab	16 59 45.8	+0.4

*IDC **29** 16:55:10.1±2.0, 12°.62N×87°.73W, h0km, mb3.8/2, mb1 3.9/4, mb1mx3.6/18, mbtmp3.7/4, ML3.2/2, MS3.0/1, Ms1 3.0/1, ms1mx2.5/25, Error ellipse: s-maj=64.5km s-min=27.4km az=40.0*
*ISCJB **29** 16:55:11.4±0.9, 11°.91N±0°.06×88°.30W±0°.06, h43km±12km, mb4.0/5, Error ellipse: s-maj=13.3km s-min=5.5km az=138.4*
*NEIC **29** 16:55:11.4±1.6, 11°.90N×88°.04W, h38km±16km, mb4.2/2, Error ellipse: s-maj=26.5km s-min=13.8km az=218.0*
*CASC **29** 16:55:11.3±2.3, 12°.08N×88°.24W, h8km±20km, MD4.0, ML3.8, mb4.2(NEIC)*
ISC 29 16:55:12.9±0.8, 11°.95N±0°.06×88°.25W±0°.06, h49km±11km, n31, σ1°23/35, mb4.0/5, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**1.38**	**17**	*e*P	**Pn**	**16 55 34.3**	**-1.5**
CNCH				*e*S	**Sn**	**16 55 54.1**	**+1.2**
CNCH				AML	AML	16 55 58.3	
	comp=Z,583nm,0.8s						
VSM	**San Miguel**	**1.47**	**359**	*e*P	**Pn**	**16 55 36.1**	**-0.9**
VSM				*e*S	**Sn**	**16 55 57.0**	**+1.9**
BLLM	**Bellamira**	**1.48**	**0**	*e*P	**Pn**	**16 55 35.5**	**-1.7**
CNGN	**Cerro Negro**	**1.61**	**70**	*e*P	**Pn**	**16 55 38.9**	**+0.1**
COPN	**Copaltepe**	**1.64**	**82**	*e*P	**Pn**	**16 55 38.5**	**-0.7**
MOMN	**Momotombo**	**1.73**	**75**	*e*P	**Pn**	**16 55 40.0**	**-0.5**
SNVI	**San Vicente**	**1.75**	**341**	*e*P	**Pn**	**16 55 39.2**	**-1.6**
SNVI				*e*S	**Sn**	**16 56 02.7**	**+0.7**
CSAN		**1.80**	**82**	*e*P	**Pn**	**16 55 41.1**	**-0.3**
CSAN				AML	AML	16 56 14.6	
	comp=Z,4μm,0.4s						
CAHU	**Cacacuatique**	**1.81**	**1**	*e*P	**Pn**	**16 55 41.0**	**-0.7**
CAHU				*e*S	**Sn**	**16 56 04.7**	**+1.3**
LBRS	**Las Brisas**	**1.94**	**337**	*e*P	**Pn**	**16 55 42.7**	**-0.7**
BOQS	**Boqueron**	**2.04**	**331**	*e*P	**Pn**	**16 55 46.3**	**+1.5**
TGUH	**Tegucigalpa,Un**	**2.30**	**24**	*e*P	**Pn**	**16 55 47.5**	**-0.9**
TGUH	**Tegucigalpa,Un**	**2.30**	**24**	*e*P	**Pn**	**16 55 47.5**	**-0.8**
SNJE	**San Jose**	**2.32**	**325**	*e*P	**Pn**	**16 55 47.1**	**-1.5**
RBDL	**Robledal**	**2.57**	**327**	*e*P	**Pn**	**16 55 51.2**	**-0.8**
JTS	**JuntasAbangare**	**3.63**	**117**	Pn	**Pn**	**16 56 07.3**	**-0.8**
	comp=Z,1.5nm,0.3s,baz=317,slow=19,SNR=6.3						
JTS				Sn	**Sn**	**16 56 47.6**	**-0.6**
	comp=Z,1.7nm,0.3s,baz=288,slow=14,SNR=4.2						
JTS				LR	LR	16 57 44.1	
	comp=Z,198nm,19.4s,baz=314,slow=43						
JTS	**JuntasAbangare**	**3.63**	**117**	*e*P	**Pn**	**16 56 02.0**	**-4.5**
JTS				Sn	**Sn**	**16 56 47.6**	**-0.6**
JTS				LR	LR	16 57 44.1	
PRS1	**Puriscal**	**4.33**	**116**	*e*P	**Pn**	**16 56 20.1**	**+3.9**
LAJ	**Bijagual**	**4.55**	**117**	*e*P	**Pn**	**16 56 14.1**	**-5.1**
QCR	**Quepos**	**4.73**	**122**	*e*P	**Pn**	**16 56 23.5**	**+1.8**
URSC	**Urasca**	**4.87**	**115**	*e*P	**Pn**	**16 56 27.3**	**+3.7**
BAR1		**5.55**	**119**	*e*P	**Pn**	**16 56 35.6**	**+2.7**
CMIG	**Matias Romero**	**8.21**	**309**	Pn	**Pn**	**16 57 10.6**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=101,slow=5.4,SNR=5.3						
CMIG	**Matias Romero**	**8.21**	**309**	Pn	**Pn**	**16 57 10.6**	**+1.1**
JCT	**Junction City**	**21.32**	**332**	*e*P	**P**	**16 59 56.0**	**+0.2**
	comp=Z,6.3nm,0.8s,mb4.0						
TXAR	**Lajitas Array**	**22.48**	**323**	P	**P**	**17 00 09.5**	**+1.4**
	comp=Z,1.5nm,0.7s,mb3.6,baz=138,slow=11,SNR=16						
MIAR	**Mount Ida**	**23.01**	**349**	P	**P**	**17 00 13.9**	**+0.3**
	comp=Z,13nm,0.9s,mb4.4						
TKL	**Tuckaleechee C**	**23.95**	**9**	P	**P**	**17 00 22.7**	**+0.2**
	comp=Z,6.6nm,0.9s,mb4.1,baz=202,slow=11,SNR=5.3						
SCHQ	**Schefferville**	**45.98**	**17**	P	**P**	**17 03 28.8**	**-2.3**
	comp=Z,1.8nm,0.7s,mb4.1,baz=225,slow=13,SNR=4.7						
PMSA	**Palmer Station**	**78.66**	**170**	LR	LR	17 33 59.8	
	comp=Z,275nm,18.4s,baz=78,slow=29						
CMAR	**Chiang Mai Arr**	**148.97**	**347**	PKPbc	PKPbc	17 14 58.4	+2.1
	comp=Z,0.9nm,0.7s,baz=357,slow=3.2,SNR=5.1						

IDC 29 17:44:29.5±2.4, 7°.11S×150°.86E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.5/17, mbtmp3.6/5, MS2.8/1, Ms1 2.8/1, ms1mx2.5/19, Error ellipse: s-maj=85.7km s-min=27.1km az=123.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**13.65**	**199**	LR	LR	17 51 07.1	
	comp=Z,41nm,19.8s,baz=126,slow=29						
ASAR	**Alice Springs**	**23.15**	**223**	P	P	17 49 38.0	+0.3
	0.4nm,0.4s,baz=55,slow=8.9,SNR=22						
FITZ	**Fitzroy Crossi**	**26.89**	**244**	P	P	17 50 11.6	-0.7
	1.2nm,0.7s,baz=72,slow=11,SNR=8.1						
MKAR	**Makanchi Array**	**80.80**	**320**	P	P	17 56 45.5	+0.4
	0.1nm,0.5s,baz=101,slow=7.5,SNR=2.3						
KURK	**Kurchatov**	**84.40**	**323**	P	P	17 57 04.0	+0.3
	0.5nm,0.9s,baz=114,slow=3.5,SNR=2.7						
ILAR	**Eielson Array**	**85.01**	**22**	P	P	17 57 06.6	+0.1
	0.3nm,0.6s,baz=244,slow=5.2,SNR=4.9						

DJA 29 17:58:01, 1°.07N×121°.46E, h10km, MLv3.9/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.76**	**141**	P	Pg	17 58 14.3	-1.4
MRSI				S	Sg	17 58 26.8	+1.2
APSI	**Ampana**	**1.98**	**175**	P	Pn	17 58 36.9	+2.3
APSI				S	Sn	17 59 12.3	+13
LUWI	**Luwuk**	**2.47**	**148**	P	Pn	17 58 38.4	-3.0
LUWI				S	Sn	17 59 12.6	+0.9
MNI	**Manado**	**3.40**	**84**	P	Pn	17 58 56.0	+1.9

*IDC **29** 18:06:40.8±4.9, 33°.88N×135°.36E, h0km, mb3.2/3, mb1 3.4/5, mb1mx3.2/25, mbtmp3.3/5, ML3.4/2, Error ellipse: s-maj=86.3km s-min=19.0km az=153.0*
*ISCJB **29** 18:06:47.5±0.6, 34°.08N±0°.04×135°.46E±0°.05, h67km±4km, mb2.9/3, Error ellipse: s-maj=7.8km s-min=6.0km az=150.5*
*JMA **29** 18:06:48.4±0.1, 34°.06N×135°.47E, h63km±1km, M3.3 Broadband fault plane solution: P waves. NP1: ϕ_s=67.00000°, δ=59.00000°, λ=176.00000°. NP2: ϕ_s=159.00000°, δ=87.00000°, λ=31.00000°. Principal axes: T Plg=24.0000°, Azm=28.0000°; N Plg=59.0000°, Azm=165.0000°; P Plg=19.0000°, Azm=289.0000°;*
JMA Felt I J1.
ISC 29 18:06:48.4±0.6, 34°.08N±0°.04×135°.46E±0°.05, h61km±5km, n15, σ0°41/26, mb2.9/3, 2C-5D, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWY	**Kouya**	**0.18**	**38**	⇓P	**Pn**	**18 06 58.3**	**+0.4**
JWY				S	**Sn**	**18 07 05.3**	**+0.6**
JWM	**Minabe**	**0.24**	**201**	⇑P	**Pn**	**18 06 58.2**	**0.0**
JWM				S	**Sn**	**18 07 05.3**	**0.0**
JWZ	**Kozaga**	**0.58**	**159**	P	**Pn**	**18 07 01.3**	**-0.1**
JWZ				S	**Sn**	**18 07 10.7**	**-0.1**
JAJ2	**Tsuna**	**0.59**	**306**	⇓P	**Pn**	**18 07 01.7**	**+0.3**
JAJ2				S	**Sn**	**18 07 11.3**	**+0.4**
JHE	**Heguri**	**0.60**	**18**	⇑P	**Pn**	**18 07 01.6**	**0.0**
JHE				S	**Sn**	**18 07 11.2**	**-0.1**
JKN2	**Miekihoku**	**0.69**	**76**	⇓P	**Pn**	**18 07 02.6**	**0.0**
JKN2				S	**Sn**	**18 07 12.9**	**-0.2**
JAI	**Aioi**	**0.89**	**252**	P	**Pn**	**18 07 05.0**	**0.0**
JAI				S	**Sn**	**18 07 17.1**	**-0.1**
TSUJ	**Tsu 2**	**1.01**	**51**	⇓P	**Pn**	**18 07 06.5**	**-0.2**
TSUJ				S	**Sn**	**18 07 19.4**	**-0.8**
JKS	**Kasai**	**1.04**	**331**	⇓P	**Pn**	**18 07 06.9**	**-0.1**
JKS				S	**Sn**	**18 07 20.3**	**-0.4**
MAT	**Matsushiro**	**3.33**	**42**	P	**Pn**	**18 07 38.0**	**0.0**
MAT				S	**Sn**	**18 08 16.9**	**+0.5**
MJAR	**Matsushiro Arr**	**3.33**	**42**	Pn	**Pn**	**18 07 38.3**	**+0.2**
	4.1nm,0.3s,baz=246,slow=14,SNR=42						
MJAR				Pg	**Pn**	**18 07 46.7**	**+8.7**
	2.6nm,0.3s,baz=222,slow=15,SNR=13						
MJAR				Lg		18 08 31.2	
	2.4nm,0.3s,baz=232,slow=26,SNR=6.2						
KSRS	**Korea Array**	**6.99**	**301**	Pn	**Pn**	**18 08 26.9**	**-1.2**
	0.6nm,0.3s,baz=118,slow=14,SNR=8.9						
SONM	**Songino Array**	**25.72**	**311**	P	**P**	**18 12 13.7**	**+0.9**
	0.1nm,0.4s,mb2.7,baz=111,slow=11,SNR=4.0						
MKAR	**Makanchi Array**	**41.66**	**304**	P	**P**	**18 14 30.5**	**-0.2**
	0.3nm,0.6s,mb3.1,baz=85,slow=8.8,SNR=4.6						
KURK	**Kurchatov**	**44.02**	**310**	P	**P**	**18 14 49.9**	**+0.3**
	0.2nm,0.8s,mb2.9,baz=96,slow=8.7,SNR=2.5						

*IDC **29** 18:06:52.8±1.2, 15°.37N×122°.72E, h0km, mb3.7/7, mb1 3.7/7, mb1mx3.5/22, mbtmp3.7/7, ML4.8/1, Error ellipse: s-maj=31.5km s-min=18.8km az=93.0*
*NEIC **29** 18:06:53.8±0.6, 15°.39N×122°.81E, h10km, mb4.4/2, Error ellipse: s-maj=18.7km s-min=10.3km az=80.0*
*MAN **29** 18:06:55, 15°.41N×122°.37E, h0km, mb5.0, ML3.9, MS4.0*
*ISCJB **29** 18:06:57.4±0.5, 15°.47N±0°.03×122°.48E±0°.05, h33km, mb3.8/8, Error ellipse: s-maj=7.4km s-min=4.3km az=170.7*
ISC 29 18:06:58.7±0.5, 15°.47N±0°.03×122°.47E±0°.06, h35km, n27, σ1°40/33, mb3.8/8, 2C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**0.90**	**215**	*e*P	**Pn**	**18 07 10.4**	**-4.4**
BALP	**Baler**	**0.91**	**288**	*e*P	**Pn**	**18 07 12.1**	**-2.8**
BALP				*e*S	**Sn**	**18 07 24.5**	**-2.2**
GQP	**Guinayangan**	**1.55**	**181**	⇑*i*P	**Pn**	**18 07 21.2**	**-2.6**
GQP				*i* S	**Sn**	**18 07 40.5**	**-2.2**
PALP	**Palanan**	**1.59**	**358**	*e*P	**Pn**	**18 07 23.5**	**-0.8**
PALP				*e*S	**Sn**	**18 07 41.9**	**-1.8**
CAUP	**Cauayan**	**1.60**	**337**	*e*P	**Pn**	**18 07 24.1**	**-0.3**
TGY	**Tagaytay City**	**2.01**	**228**	Pn	**Pn**	**18 07 30.7**	**+0.6**
	310nm,0.3s,baz=86,slow=2.1,SNR=24						
TGY				Sn	**Sn**	**18 07 57.9**	**+3.9**
	231nm,0.3s,baz=134,slow=21,SNR=9.0						
BCPH	**Baguio City Da**	**2.03**	**297**	⇑*i*P	**Pn**	**18 07 30.3**	**-0.1**
BCPH				*i* S	**Sn**	**18 07 55.9**	**+1.2**
BOAC	**Boac**	**2.08**	**197**	*e*P	**Pn**	**18 07 31.1**	**0.0**
BOAC				*e*S	**Sn**	**18 07 56.6**	**+0.7**
AUQP	**San Andres**	**2.14**	**175**	*e*P	**Pn**	**18 07 34.5**	**+2.6**
PVCP	**Virac**	**2.47**	**139**	*e*P	**Pn**	**18 07 38.3**	**+1.8**
SCZP	**Santa Cruz**	**2.49**	**277**	*e*P	**Pn**	**18 07 36.7**	**+0.1**
APYP	**Conner**	**2.66**	**334**	*e*P	**Pn**	**18 07 39.2**	**+0.1**
ABRA	**Dolores**	**2.75**	**322**	*e*P	**Pn**	**18 07 42.3**	**+2.0**
LUBP	**Lubang**	**2.76**	**232**	*e*P	**Pn**	**18 07 41.3**	**+0.9**
CNP	**Catarman**	**3.63**	**144**	*e*P	**Pn**	**18 07 54.6**	**+2.3**
BUSP	**Coron**	**4.09**	**213**	*e*P	**Pn**	**18 07 58.1**	**-0.6**
KSRS	**Korea Array**	**22.43**	**11**	P	**P**	**18 11 54.4**	**+0.1**
	0.4nm,0.4s,mb3.2,baz=191,slow=12,SNR=4.4						
SONM	**Songino Array**	**34.91**	**341**	P	**P**	**18 13 47.3**	**+0.5**
	0.3nm,0.5s,mb3.5,baz=162,slow=9.2,SNR=4.2						
WRAB	**Tennant Creek**	**37.06**	**161**	*e*P	**P**	**18 14 02.4**	**-3.2**
	5.7nm,1.1s,mb4.3						
ASAR	**Alice Springs**	**40.47**	**164**	P	**P**	**18 14 31.8**	**-2.3**
	0.3nm,0.3s,mb3.4,baz=340,slow=7.5,SNR=17						
MKAR	**Makanchi Array**	**45.68**	**322**	P	**P**	**18 15 16.6**	**+0.7**
	0.8nm,0.8s,mb3.7,baz=120,slow=9.0,SNR=8.3						
ZALV	**Zalesovo Beam**	**48.32**	**331**	P	**P**	**18 15 36.9**	**+0.4**
	0.6nm,0.5s,mb3.9,baz=140,slow=7.7,SNR=3.6						
ZALV	**Zalesovo Beam**	**48.32**	**331**	P	**P**	**18 15 36.9**	**+0.4**
KURK	**Kurchatov**	**49.71**	**325**	P	**P**	**18 15 48.2**	**+0.9**
	4.2nm,0.7s,mb4.6,baz=123,slow=7.6,SNR=44						
KURK	**Kurchatov**	**49.71**	**325**	*e*P	**P**	**18 15 48.0**	**+0.8**
	4.6nm,0.7s,mb4.6						
BVAR	**Borovoye Array**	**55.31**	**325**	P	**P**	**18 16 29.4**	**+0.8**
	0.5nm,0.6s,mb3.7,baz=111,slow=7.9,SNR=3.1						
ARE0	**ARCESS Array S**	**78.06**	**339**	*e*P	**P**	**18 18 49.3**	**-4.1**

WEL 29 18:09:33.1±0.8, 38°.07S×176°.09E, h142km±8km, ML3.5/5, Error ellipse: s-maj=8.5km s-min=5.9km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.82**	**104**	PN	Pn	18 09 55.7	+0.1
URZ				SN	Sn	18 10 12.9	+0.1
BKZ	**Black Stump Fm**	**1.14**	**164**	PN	Pn	18 09 58.4	+0.1
BKZ				SN	Sn	18 10 17.4	-0.3
RAHZ	**Arahi**	**1.15**	**138**	PN	Pn	18 09 58.9	+0.5
RAHZ				SN	Sn	18 10 18.5	+0.7
MWZ	**Matawai**	**1.16**	**104**	PN	Pn	18 09 58.6	+0.1
MWZ				SN	Sn	18 10 17.6	-0.3
PUZ	**Puketiti**	**1.71**	**91**	SN	Sn	18 10 27.3	-1.0
WPHZ	**Waipukurau**	**2.01**	**172**	PN	Pn	18 10 06.7	-1.1
MRZ	**Mangatainoka R**	**2.62**	**189**	PN	Pn	18 10 12.9	-2.3
MRZ				SN	Sn	18 10 43.3	-4.5
HOWZ	**Holdsworth Sta**	**2.86**	**189**	PN	Pn	18 10 15.3	-2.9
HOWZ				SN	Sn	18 10 49.1	-4.2
KIW	**

ASAR	**Alice Springs**	**43.27**	**126**	P	**P**	**18 43 01.4**	**+0.6**
	0.6nm,0.7s,mb3.5,baz=303,slow=8.2,SNR=6.6						
ASAR				PcP	PcP	18 44 50.0	+0.2
	0.5nm,0.8s,baz=290,slow=2.7,SNR=4.7						
AML	**Almayashu**	**46.53**	**336**	*eP*	**P**	**18 43 27.1**	**+0.7**
	4.2nm,0.8s,mb4.4						
KSRS	**Korea Array**	**46.92**	**34**	P	**P**	**18 43 31.5**	**+2.0**
	1.3nm,0.7s,mb4.0,baz=220,slow=8.9,SNR=7.1						
EKS2	**Erkin-Say**	**46.95**	**337**	*eP*	**P**	**18 43 29.8**	**+0.1**
	4.1nm,0.6s,mb4.5						
MK31	**Makanchi Array**	**48.02**	**347**	*eP*	**P**	**18 43 37.7**	**-0.2**
MKAR	**Makanchi Array**	**48.02**	**347**	P	**P**	**18 43 38.4**	**+0.5**
	5.6nm,0.6s,mb4.7,baz=158,slow=7.9,SNR=71						
SONM	**Songino Array**	**48.13**	**9**	P	**P**	**18 43 39.6**	**+0.9**
	0.7nm,0.5s,mb4.0,baz=190,slow=10,SNR=6.7						
SONM				PcP	PcP	18 45 06.6	+0.4
	0.9nm,0.4s,baz=196,slow=3.4,SNR=5.5						
PMG	**Port Moresby**	**51.17**	**102**	P	**P**	**18 44 01.9**	**-0.6**
KURK	**Kurchatov**	**52.55**	**346**	*eP*	**P**	**18 44 11.9**	**-0.3**
	5.2nm,1.1s,mb4.4						
STKA	**Stephens Creek**	**53.14**	**131**	P	**P**	**18 44 17.9**	**+1.0**
	3.5nm,0.9s,mb4.3,baz=313,slow=7.5,SNR=3.2						
STKA	**Stephens Creek**	**53.14**	**131**	P	**P**	**18 44 16.4**	**-0.5**
ZAA0	**Zalesovo Array**	**54.39**	**351**	*eP*	**P**	**18 44 25.5**	**-0.1**
ZALV	**Zalesovo Beam**	**54.39**	**351**	P	**P**	**18 44 25.9**	**+0.3**
	9.7nm,0.4s,mb5.1,baz=170,slow=7.3,SNR=65						
ZALV	**Zalesovo Beam**	**54.39**	**351**	P	**P**	**18 44 25.9**	**+0.3**
BVAR	**Borovoye Array**	**56.95**	**341**	P	**P**	**18 44 43.5**	**-0.5**
	1.7nm,0.6s,mb4.2,baz=128,slow=9.6,SNR=8.1						
BRVK	**Borovoye**	**57.02**	**341**	*eP*	**P**	**18 44 43.2**	**-1.3**
ABKAR	**Abkulak array**	**58.09**	**333**	*eP*	**P**	**18 44 51.0**	**-1.1**
	3.8nm,0.7s,mb4.5						
ARU	**Arti**	**63.83**	**338**	*eP*	**P**	**18 45 29.8**	**-1.2**
LSZ	**Lusaka**	**69.34**	**254**	*eP*	**P**	**18 46 07.0**	**0.0**
	1.4nm,0.6s,mb4.1						
BR131	**Keskin Array S**	**69.34**	**313**	*eP*	**P**	**18 46 05.7**	**-1.0**
	0.7nm,0.5s,mb3.9						
BRTR	**Keskin Array B**	**69.34**	**313**	P	**P**	**18 46 05.8**	**-0.8**
	1.9nm,0.8s,mb4.1,baz=128,slow=7.3,SNR=13						
LBTB	**Lobatse**	**73.00**	**244**	*eP*	**P**	**18 46 28.9**	**-0.1**
	3.5nm,0.9s,mb4.3						
BOSA	**Boshof**	**73.85**	**240**	P	**P**	**18 46 33.9**	**-0.2**
	3.6nm,1.1s,mb4.2,baz=108,slow=3.2,SNR=3.6						
BOSA	**Boshof**	**73.85**	**240**	P	**P**	**18 46 33.8**	**-0.2**
	3.5nm,0.9s,mb4.3						
AKASG	**Malin Array Be**	**75.67**	**323**	P	**P**	**18 46 42.8**	**-1.3**
	5.0nm,0.6s,mb4.6,baz=91,slow=4.8,SNR=18						
KIEV	**Kiev**	**75.68**	**323**	*eP*	**P**	**18 46 42.4**	**-1.7**
	2.7nm,0.6s,mb4.3						
BUR08	**Bucovina Ar. S**	**77.39**	**319**	P	**P**	**18 46 53.6**	**-0.3**
JOF	**Joensuu**	**78.76**	**335**	*eP*	**P**	**18 47 00.5**	**-0.7**
JOF	**Joensuu**	**78.76**	**335**	*ep*	**P**	**18 47 00.5**	**-0.7**
	2.4nm,0.7s,mb4.2						
RPZ	**Rata Peaks**	**78.93**	**135**	LR	LR	19 19 18.8	
	comp=Z,2μm,19.4s,baz=339,slow=34						
TSUM	**Tsumeb**	**79.78**	**251**	*eP*	**P**	**18 47 05.8**	**-1.9**
	1.5nm,0.8s,mb4.0						
FINES	**FINESS Array B**	**80.58**	**333**	P	**P**	**18 47 10.7**	**-0.4**
	2.7nm,0.5s,mb4.4,baz=95,slow=5.8,SNR=23						
KAF	**Kangasniemi**	**80.67**	**333**	*eP*	**P**	**18 47 11.1**	**-0.5**
	2.9nm,0.5s,mb4.5						
KAF	**Kangasniemi**	**80.67**	**333**	*ep*	**P**	**18 47 11.1**	**-0.5**
	2.9nm,0.5s,mb4.5,baz=103,slow=5.0						
ARCES	**ARCESS Array B**	**83.23**	**340**	P	**P**	**18 47 24.8**	**-0.1**
	1.1nm,0.4s,mb4.2,baz=100,slow=5.4,SNR=34						
SBA	**Scott Base**	**86.12**	**168**	P	**P**	**18 47 40.6**	**+1.2**
NB2	**NORSAR Subarra**	**87.56**	**331**	P	**P**	**18 47 46.4**	**-0.3**
	comp=Z,0.9nm,0.6s,mb4.2,baz=97,slow=4.6						
NOA	**NORSAR Array B**	**87.56**	**331**	P	**P**	**18 47 46.6**	**0.0**
	comp=Z,1.7nm,0.8s,mb4.3,baz=94,slow=4.9,SNR=5.5						
QSPA	**South Pole Qui**	**90.22**	**180**	P	**P**	**18 47 55.9**	**-3.0**
	comp=Z,4.1nm,1.3s,mb4.6						
CPUP	**Villa Florida**	**143.96**	**222**	PKP	PKPdf	18 54 33.0	-2.2
	comp=Z,1.8nm,0.4s,baz=96,slow=1.7,SNR=11						
TXAR	**Lajitas Array**	**144.74**	**32**	PKP	PKPdf	18 54 35.7	-0.8
	comp=Z,1.3nm,0.8s,baz=186,slow=2.0,SNR=10						
TXAR	**Lajitas Array**	**144.74**	**32**	PKP	PKPdf	18 54 35.7	-0.8

BGS ***29*** *18:42:09.6±2.7,31.°81N×115.°73W,h15km,mb5.2,MS5.6*
BJI ***29*** *18:42:11.6,33.°97N×117.°90W,h3km,mB5.7/27,mb5.4/29, Ms5.4/32,Ms7 5.1/31*
ECX ***29*** *18:42:13.0±0.8,34.°00N×117.°82W,h7km,MD5.5,ML5.7*
ISCJB ***29*** *18:42:14.6±0.1,33.°859N±0.°009×117.°81W±0.°01,h15km, mb5.3/266,MS5.3/119,Error ellipse: s-maj=1.5km s-min=1.1km az=34.4*
NEIC ***29*** *18:42:15.7,33.°95N×117.°76W,h15km,mb5.5/189,ME5.4, MS5.5/9,MW5.4,MW5.3,MW5.4(PAS),MW5.3(SLM) Broadband fault plane solution: P waves. NP1: ϕ_s295.00000°,δ67.00000°,λ110.00000°. NP2: ϕ_s72.00000°,δ30.00000°,λ51.00000°. Principal axes: T Plg63.0000°, Azm237.0000°; N Plg0.0000°, Azm0.0000°; P Plg20.0000°, Azm10.0000°; Moment Tensor Solution. s34 Moment tensor: Scale 10^{17} Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{r\phi}$0.00; Best double couple: $M_0$1.30000×10^{17} NP1:ϕ_s286.00000°,δ72.00000°, λ137.00000°. NP2:ϕ_s32.00000°,δ50.00000°,λ24.00000°. Principal axes: T 1.4000, Plg42.0000°, Azm240.0000°; N -0.1700, Plg44.0000°, Azm87.0000°; P -1.2200, Plg13.0000°, Azm343.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism. After PAS.*
NEIC Three people injured at Brea and five people injured in the Wilshire District of Los Angeles. Minor damage to windows and brick walls at Los Angeles and Topanga. Felt [VI] at Anaheim, Artesia, Brea, Chino, Chino Hills, Covina, Diamond Bar, Fullerton, La Puente, Los Alamitos, Montclair, Pomona, Placentia, San Dimas, Walnut, West Covina, Whittier and Yorba Linda; [V] at Alhambra, Azusa, Baldwin Park, Bell, Bellflower, Buena Park, Canoga Park, Cerritos, Claremont, Corona, Cypress, Downey, El Monte, Garden Grove, Glendora, Hacienda Heights, Hawaiian Gardens, La Habra, Lakewood, La Mirada, La Palma, La Verne, Lynwood, Maywood, Mira Loma, Montrose, Mount Baldy, North Hollywood, Northridge, Norwalk, Ontario, Panorama City, Paramount, Pico Rivera, Rancho Cucamonga, Reseda, Rosemead, Rowland Heights, San Gabriel, Santa Fe Springs, Seal Beach, South El Monte, South Gate, South Pasadena, Stanton, Upland, Villa Park, Winnetka and Woodland Hills. Felt [IV] in much of the surrounding Los Angeles basin and in much of southern California. Felt [III] at Las Vegas and [II] at North Las Vegas and Pahrump, Nevada. Also felt at Henderson. Felt at Bullhead City, Flagstaff, Kingman, Mesa, Phoenix and Yuma, Arizona. Also felt at Tijuana, Baja California.
IDC ***29*** *18:42:16.0±0.5,33.°94N×117.°82W,h15km±2km,mb5.0/26, mb1 5.0/31,mb1mx5.0/31,mbtmp4.9/31,ML4.6/5,MS5.1/29, Ms1 5.1/29,ms1mx5.0/37 Error ellipse: s-maj=15.2km s-min=8.3km az=52.0*
MOS ***29*** *18:42:15.0±0.8,33.°95N×117.°85W,h18km,mb5.6/114, MS5.4/37,Error ellipse: s-maj=5.1km s-min=3.3km az=73.3*
SZGRF ***29*** *18:42:16.0,34.°01N×118.°75W,h16km,mb5.3,MS5.6, Southern California, United States*
DJA ***29*** *18:42:18,34.°50N×118.°29W,h10km,mb5.7/3*
GCMT ***29*** *18:42:19.5±0.2,33.°93N×117.°84W,h20km,MW5.5, Moment Tensor Solution. s73,c137; s18,c22; Moment tensor: Scale 10^{17}Nm; M_{rr}0.92±.03; $M_{\theta\theta}$-1.87±.03; $M_{\phi\phi}$0.95±.03; $M_{r\theta}$-0.49±.05; $M_{\theta\phi}$-0.51±.02; $M_{r\phi}$0.84±.05; Best double couple: $M_0$2.00000×10^{17} NP1:ϕ_s44.00000°, δ55.00000°,λ29.00000°. NP2:ϕ_s296.00000°,δ67.00000°, λ141.00000°. Principal axes: T 1.9100, Plg43.0000°, Azm255.0000°; N 0.1000, Plg46.0000°, Azm90.0000°; P -2.0000, Plg7.0000°, Azm352.0000°; Data Used: II IU IC G CN. Surface waves: sta= 94, comp=193, per= 50.*
ISC 29 18:42:16.1±0.1,33.°83N±0.°01×117.°87W±0.°01,h16km, h16km±.4km:pP-P,n1235,σ1§26/1221,mb5.3/267, MS5.3/119,316C-213D,Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FMP	**Fort Macarthur**	**0.37**	**252**	⇑P	**Pg**	**18 42 24.8**	**+1.1**
	baz=0.5						
FMP				⇑S	**Sg**	**18 42 31.4**	**+2.6**
	baz=0.5						
MWC	**Mount Wilson**	**0.42**	**339**	⇓*iP*	**Pg**	**18 42 22.6**	**-2.1**
MWC				*eS*	**Sg**	**18 42 27.8**	**-2.7**
PASC	**Pasadena Art C**	**0.43**	**323**	*ePg*	**Pg**	**18 42 23.2**	**-1.6**
PASC				*eSg*	**Sg**	**18 42 28.9**	**-1.8**
BFSC	**Mount Baldy Ra**	**0.45**	**23**	⇑P	**Pg**	**18 42 21.4**	**-3.8**
	baz=0.3						
BFSC				⇑S	**Sg**	**18 42 25.6**	**-5.7**
	baz=0.3						
DECC	**Green Verdugo**	**0.57**	**318**	P	**Pg**	**18 42 25.9**	**-1.4**
	baz=0.6,SNR=1000						
DECC				⇓S	**Sg**	**18 42 33.5**	**-1.5**
	baz=0.6						
MURC	**Murrieta**	**0.60**	**112**	⇑P	**Pg**	**18 42 26.4**	**-1.6**
	baz=0.6,SNR=1000						
MURC				⇑S	**Sg**	**18 42 34.5**	**-1.6**
	baz=0.6						
CIS	**Catalina Islan**	**0.61**	**227**	⇑P	**Pg**	**18 42 29.7**	**+1.7**
	baz=0.8						
CIS				⇓S	**Sg**	**18 42 40.0**	**+3.8**
	baz=0.8						
BBRC	**Big Bear Solar**	**0.90**	**61**	⇓P	**Pb**	**18 42 29.7**	**-3.6**
	baz=0.8						
BBRC				⇑S	**Sb**	**18 42 39.8**	**-5.3**
	baz=0.8						
SCI	**San Clemente I**	**1.01**	**214**	⇓P	**Pb**	**18 42 35.8**	**+0.5**
	baz=1.2						
SCI				⇓S	**Sb**	**18 42 50.2**	**+1.8**
	baz=1.2						
BLG	**Laguna Peak**	**1.03**	**286**	P	**Pb**	**18 42 34.3**	**-1.2**
	baz=1.1,SNR=1000						
BLG				⇓S	**Sb**	**18 42 48.7**	**-0.1**
	baz=1.1						
EDW2	**Edwards Air Fo**	**1.05**	**355**	⇓P	**Pb**	**18 42 32.9**	**-3.0**
	baz=0.9,SNR=1000						
EDW2				⇓S	**Sb**	**18 42 46.0**	**-3.6**
	baz=0.9						
OSI	**Osito Adit**	**1.05**	**318**	P	**Pb**	**18 42 34.4**	**-1.6**
	baz=1.0,SNR=1000						
OSI				⇑S	**Sb**	**18 42 48.0**	**-1.5**
	baz=1.0						
OSI	**Osito Adit**	**1.05**	**318**	*ePg*	**Pg**	**18 42 34.4**	**-2.2**
OSI				*eSg*	**Sg**	**18 42 48.9**	**-1.5**
109C	**Camp Elliot, M**	**1.14**	**145**	⇑P	**Pn**	**18 42 36.4**	**-0.9**
	baz=1.2,SNR=1000						
109C				⇑S	**Sb**	**18 42 51.9**	**+0.1**
	baz=1.2						
PFO	**Pinyon Flat Ob**	**1.20**	**100**	P	**Pn**	**18 42 35.9**	**-2.3**
	baz=1.1,SNR=1000						
PFO				⇑S	**Sb**	**18 42 50.6**	**-3.2**
	baz=1.1						
PFO	**Pinyon Flat Ob**	**1.20**	**100**	*ePg*	**Pg**	**18 42 35.9**	**-3.4**
PFO				*eSg*	**Sg**	**18 42 50.8**	**-4.2**
RRX	**Edison Barstow**	**1.27**	**34**	⇑P	**Pn**	**18 42 36.2**	**-3.0**
	baz=1.1,SNR=1000						
RRX				⇓S	**Sb**	**18 42 51.3**	**-4.6**
	baz=1.1						
BSC	**Santa Cruz Isl**	**1.47**	**277**	⇓P	**Pn**	**18 42 40.5**	**-1.4**
	baz=1.6,SNR=398						
BSC				⇓S	**Sn**	**18 43 03.3**	**+2.5**
	baz=1.6						
ARVC	**Arvin**	**1.52**	**329**	⇓P	**Pn**	**18 42 41.0**	**-1.6**
	baz=1.5,SNR=1000						
ARVC				⇓S	**Sn**	**18 43 00.4**	**-1.6**
	baz=1.5						
BAR	**Barrett**	**1.52**	**138**	*ePn*	**Pn**	**18 42 41.7**	**-0.9**
BAR				*eSn*	**Sn**	**18 43 02.2**	**+0.1**
MONP	**Monument Peak**	**1.53**	**127**	⇓P	**Pn**	**18 42 42.0**	**-0.8**
	baz=1.5,SNR=1000						
MONP				⇓S	**Sn**	**18 43 01.7**	**-0.6**
	baz=1.5						
BELC	**Belle Mtn. Jos**	**1.57**	**83**	⇑P	**Pn**	**18 42 41.1**	**-2.1**
	baz=1.5,SNR=1000						
BELC				⇑S	**Sn**	**18 43 01.0**	**-2.2**
	baz=1.5						
HEC	**Hector,Ludlow**	**1.62**	**51**	⇑P	**Pn**	**18 42 41.2**	**-2.8**
	baz=1.5,SNR=1000						
HEC				⇓S	**Sn**	**18 43 00.4**	**-4.2**
	baz=1.5						
SBC	**Santa Barbara**	**1.65**	**292**	⇓P	**Pn**	**18 42 43.5**	**-0.8**
	baz=1.7,SNR=199						
SBC				⇑S	**Sn**	**18 43 05.2**	**+0.1**
	baz=1.7						
LRMC	**Laurel Mountai**	**1.65**	**5**	⇓P	**Pn**	**18 42 42.1**	**-2.3**
	baz=1.5,SNR=1000						
LRMC				⇓S	**Sn**	**18 43 01.5**	**-3.9**
	baz=1.5						
GSC	**Goldstone**	**1.71**	**31**	⇑P	**Pn**	**18 42 42.9**	**-2.3**
	baz=1.6,SNR=1000						
GSC				⇑S	**Sn**	**18 43 02.7**	**-4.1**
	baz=1.6						
GSC	**Goldstone**	**1.71**	**31**	*ePn*	**Pn**	**18 42 42.5**	**-2.7**
GSC				*eSn*	**Sn**	**18 43 03.9**	**-2.9**
CBX	**Cerro Bola**	**1.82**	**146**	⇓*eP*	**Pn**	**18 42 46.3**	**-0.4**
CBX				*eS*	**Sn**	**18 43 11.4**	**+2.0**
DVTC	**Desert V Tower**	**1.89**	**128**	⇑P	**Pn**	**18 42 46.5**	**-1.2**
	baz=1.9						
DVTC				⇓S	**Sn**	**18 43 12.1**	**+1.1**
	baz=1.9						
ISA	**Isabella**	**1.90**	**345**	⇓P	**Pn**	**18 42 45.7**	**-2.1**
	baz=1.8,SNR=1000						
ISA				⇓S	**Sn**	**18 43 08.6**	**-2.8**
	baz=1.8						
RMX	**La Rumorosa**	**1.94**	**129**	⇓*eP*	**Pn**	**18 42 47.0**	**-1.3**
RMX				*eS*	**Sn**	**18 43 13.8**	**+1.5**
SWSC	**Sam W. Stewart**	**1.95**	**116**	⇓P	**Pn**	**18 42 45.9**	**-2.6**
	baz=1.9,SNR=130						
SWSC				⇑Sb	**Sb**	**18 43 15.1**	**-0.1**
	baz=1.9						
BC3	**Big Chuckawall**	**2.02**	**94**	⇑P	**Pn**	**18 42 46.9**	**-2.6**
	baz=1.9,SNR=1000						
BC3				⇓Sb	**Sb**	**18 43 15.9**	**-1.5**
	baz=1.9						
GMRC	**Granite Mounta**	**2.06**	**62**	P	**Pn**	**18 42 47.3**	**-2.8**
	baz=1.9,SNR=639						
GMRC				⇓S	**Sn**	**18 43 12.0**	**-3.4**
	baz=1.9						
VES	**Vestal, Richgr**	**2.24**	**334**	⇓P	**Pn**	**18 42 50.9**	**-1.7**
	baz=2.2,SNR=221						
VES				⇓S	**Sn**	**18 43 18.6**	**-1.3**
	baz=2.2						
MPMC	**Manual Prospec**	**2.25**	**8**	P	**Pn**	**18 42 50.4**	**-2.2**
	baz=2.1,SNR=1000						
MPMC				⇓Sb	**Sb**	**18 43 21.7**	**-2.2**
	baz=2.1						
TUQ	**Turquoise Moun**	**2.27**	**44**	⇑P	**Pn**	**18 42 50.3**	**-2.6**
	baz=2.1,SNR=144						
TUQ				⇓Sb	**Sb**	**18 43 20.9**	**-3.6**
	baz=2.1						
IRM	**Iron Mountain**	**2.29**	**81**	P	**Pn**	**18 42 50.6**	**-2.5**
	baz=2.2,SNR=1000						
IRM				⇑Sb	**Sb**	**18 43 22.8**	**-2.2**
	baz=2.2						
PBX	**Punta Banda**	**2.29**	**155**	⇓*eP*	**Pn**	**18 42 52.5**	**-0.7**
PBX				*eS*	**Sn**	**18 43 25.1**	**+4.0**
PBX				⇑*e*		18 43 44.7	
	comp=E,39μm,1.0s						
SMMC	**Simmler**	**2.30**	**311**	⇑P	**Pn**	**18 42 52.1**	**-1.1**
	baz=2.3,SNR=858						
SMMC				⇓S	**Sn**	**18 43 20.1**	**-1.1**
	baz=2.3						
ECNX	**Esteban Cantu**	**2.42**	**153**	⇓*eP*	**Pn**	**18 42 54.3**	**-0.6**
ECNX				⇓*eP*		18 42 51.6	
ECNX				*eS*	**Sn**	**18 43 27.8**	**+3.6**
SHOC	**Shoshone**	**2.45**	**32**	P	**Pn**	**18 42 53.0**	**-2.3**
	baz=2.3,SNR=90						
SHOC				⇑Sb	**Sb**	**18 43 26.5**	**-3.1**
	baz=2.3						
RDX	**Rancho Dawling**	**2.50**	**139**	⇓*eP*	**Pn**	**18 42 56.0**	**0.0**
RDX				*eS*	**Sn**	**18 43 28.1**	**+2.0**
CPBX	**Cerro Prieto**	**2.57**	**122**	*eP*	**Pn**	**18 42 57.0**	**-0.1**
CWC	**Cottonwood Cre**	**2.61**	**356**	⇓P	**Pn**	**18 42 56.0**	**-1.6**
	baz=2.5,SNR=26						
CWC				⇓Sb	**Sb**	**18 43 32.7**	**-1.7**
	baz=2.5						
GLA	**Glamis**	**2.66**	**106**	⇑P	**Pn**	**18 42 56.6**	**-1.6**
	baz=2.6,SNR=71						
GLA				⇓Sb	**Sb**	**18 43 35.9**	**+0.1**
	baz=2.6						
GLA	**Glamis**	**2.66**	**106**	*ePn*	**Pn**	**18 42 56.4**	**-1.9**
RCTC	**Rector, Farmer**	**2.72**	**336**	⇑P	**Pn**	**18 42 57.6**	**-1.4**
	baz=2.6,SNR=122						
RCTC				⇑S	**Sn**	**18 43 29.4**	**-2.2**
	baz=2.6						
FURC	**Furnace Creek,**	**2.77**	**17**	⇑P	**Pn**	**18 42 57.4**	**-2.3**
	baz=2.6,SNR=40						
FURC				⇓Sb	**Sb**	**18 43 36.5**	**-2.3**
	baz=2.6						
V11A	**Goodsprings**	**2.84**	**44**	⇑P	**Pn**	**18 42 58.7**	**-2.0**
	baz=2.7,SNR=1000						
V11A				⇑Sb	**Sb**	**18 43 39.2**	**-1.7**
	baz=2.7						
EMX	**El Mayor**	**2.87**	**129**	⇓*eP*	**Pn**	**18 43 00.9**	**-0.3**
EMX				*eS*	**Sn**	**18 43 42.8**	**+7.4**
U10A	**Ash Meadows, A**	**2.88**	**26**	⇑P	**Pn**	**18 42 59.2**	**-2.0**
	baz=2.7						
U10A				⇓Sb	**Sb**	**18 43 40.1**	**-2.0**
	baz=2.7						
W12A	**Cal Nev Ari**	**2.88**	**58**	⇑P	**Pn**	**18 42 58.8**	**-2.5**
	baz=2.7,SNR=86						
W12A				⇑Sb	**Sb**	**18 43 40.2**	**-1.9**
	baz=2.7						
112A	**Yuma**	**3.05**	**114**	⇓P	**Pn**	**18 43 02.9**	**-0.6**
	baz=3.0						
V12A	**Nelson**	**3.13**	**52**	⇓P	**Pn**	**18 43 02.4**	**-2.3**
	baz=3.0,SNR=139						
V12A				⇑Sb	**Sb**	**18 43 46.8**	**-2.3**
	baz=3.0						
GRAC	**Grapevine Rang**	**3.19**	**7**	P	**Pn**	**18 43 04.6**	**-1.0**
	baz=3.1,SNR=372						
GRAC				⇑Sb	**Sb**	**18 43 48.9**	**-2.1**
	baz=3.1						
TIN	**Tinemaha**	**3.23**	**355**	⇓P	**Pn**	**18 43 05.3**	**-0.8**
	baz=3.1,SNR=40						
U11A	**Corn Creek**	**3.30**	**38**	⇑P	**Pn**	**18 43 05.3**	**-1.7**
	baz=3.1						
U11A				P		18 43 05.5	
	baz=3.1,SNR=197						
ECBX	**El Chinero**	**3.34**	**134**	*eP*	**Pn**	**18 43 06.6**	**-1.1**
X13A	**Yucca**	**3.44**	**76**	P	**Pn**	**18 43 06.8**	**-2.2**
	baz=3.3,SNR=1000						
X13A				⇑S	**Sn**	**18 43 47.3**	**-2.0**
	baz=3.3						
SPX	**San Pedro Mart**	**3.44**	**143**	*eP*	**Pn**	**18 43 09.8**	**+0.8**
W13A	**Hualapai Mount**	**3.53**	**68**	⇓P	**Pn**	**18 43 08.1**	**-2.1**
	baz=3.4,SNR=598						
W13A				⇓Sb	**Sb**	**18 44 00.4**	**-0.4**
	baz=3.4						
Z13A	**Yuma Proving G**	**3.58**	**99**	⇓P	**Pn**	**18 43 08.6**	**-2.2**
	baz=3.5,SNR=147						
113A	**Mohawk Valley,**	**3.60**	**106**	⇓P	**Pn**	**18 43 09.6**	**-1.6**
	baz=3.5						
113A				⇓Sb	**Sb**	**18 44 04.5**	**+1.8**
	baz=3.5						
U12A	**Valley of Fire**	**3.77**	**45**	⇑P	**Pn**	**18 43 11.6**	**-2.0**
	baz=3.6						
U12A				⇓Sb	**Sb**	**18 44 05.3**	**-2.4**
	baz=3.6						
V13A	**Grand Canyon W**	**3.78**	**57**	⇑P	**Pn**	**18 43 11.6**	**-2.1**
	baz=3.6,SNR=394						
V13A				⇑Sb	**Sb**	**18 44 07.1**	**-1.0**
	baz=3.6						
MLAC	**Mammoth Lakes**	**3.88**	**349**	⇓P	**Pn**	**18 43 15.2**	**+0.2**
	baz=3.8						
T12A	**Moapa**	**3.88**	**41**	⇓P	**Pn**	**18 43 13.4**	**-1.6**
	baz=3.7,SNR=64						
T12A				⇓Sb	**Sb**	**18 44 09.2**	**-1.6**
	baz=3.7						
T11A	**Corn Creek, Al**	**4.04**	**32**	⇑P	**Pn**	**18 43 15.9**	**-1.3**
	baz=3.9						
T11A				⇑Sb	**Sb**	**18 44 13.4**	**-1.9**
	baz=3.9						
Y14A	**Wickenburg**	**4.05**	**87**	P	**Pn**	**18 43 15.8**	**-1.6**
	baz=3.9,SNR=101						
Y14A				⇓Sb	**Sb**	**18 44 14.9**	**-0.9**
	baz=3.9						
Z14A	**Wintersburg**	**4.14**	**95**	⇑P	**Pn**	**18 43 16.6**	**-2.0**
	baz=4.1,SNR=88						
Z14A				⇓Sb	**Sb**	**18 44 18.3**	**+0.1**
	baz=4.1						
SAO	**San Andreas Ge**	**4.14**	**316**	*eP*	**Pn**	**18 43 15.7**	**-2.9**
X14A	**Yava**	**4.18**	**80**	P	**Pn**	**18 43 17.3**	**-1.8**
	baz=4.1,SNR=687						
X14A				⇓Sb	**Sb**	**18 44 19.4**	**-0.1**
	baz=4.1						
S11A	**Rachel**	**4.18**	**24**	⇑P	**Pn**	**18 43 18.1**	**-1.1**
	baz=4.0,SNR=19						
S11A				⇓Sb	**Sb**	**18 44 16.6**	**-3.0**
	baz=4.0						
S10A	**Tonopah Range,**	**4.22**	**14**	P	**Pn**	**18 43 18.8**	**-0.9**
	baz=4.1,SNR=335						
114A	**Black Gap (USA**	**4.32**	**103**	⇑P	**Pn**	**18 43 19.2**	**-1.8**
	baz=4.3,SNR=200						
114A				⇑Sb	**Sb**	**18 44 24.2**	**+0.8**
	baz=4.3						
V14A	**Boquillas Ranc**	**4.32**	**64**	P	**Pn**	**18 43 19.3**	**-1.8**
	baz=4.2,SNR=710						
V14A				⇑Sb	**Sb**	**18 44 20.9**	**-2.6**
	baz=4.2						
S12A	**Delamar Landin**	**4.50**	**32**	⇑P	**Pn**	**18 43 22.6**	**-1.0**
	baz=4.4						
T13A	**Saint George**	**4.54**	**44**	P	**Pn**	**18 43 22.5**	**-1.6**
	baz=4.4,SNR=590						
NVAR	**Mina Array Bea**	**4.61**	**356**	Pn	**Pn**	**18 43 24.8**	**-0.2**
	comp=E,27nm,0.3s,baz=178,slow=16,SNR=440						
NVAR				Pg	**Pg**	**18 43 37.6**	**-6.7**
	comp=E,226nm,0.3s,baz=180,slow=14,SNR=189						
Y15A	**Casa Rosa Ranc**	**4.61**	**87**	⇓P	**Pn**	**18 43 23.3**	**-1.8**
	baz=4.5,SNR=461						
Y15A				⇑Sb	**Sb**	**18 44 30.9**	**-0.9**
	baz=4.5						
R10A	**Warm Springs**	**4.63**	**15**	P	**Pn**	**18 43 24.8**	**-0.6**
	baz=4.5,SNR=159						
U14A	**Mt Trumbull**	**4.63**	**55**	P	**Pn**	**18 43 23.9**	**-1.5**
	baz=4.5,SNR=188						
214A	**Organ Pipe Nat**	**4.65**	**112**	⇑P	**Pn**	**18 43 25.3**	**-0.3**
	baz=4.6						
214A				⇓Sb

	baz=5.6						
216A	Three Points,	5.69	107	⇑P	Pn	18 43 39.7	-0.3
	baz=5.6						
Q12A	Willow Creek R	5.75	24	⇑P	Pn	18 43 39.8	-1.0
	baz=5.6						
Y17A	Roosevelt	5.86	89	⇑P	Pn	18 43 40.7	-1.5
	baz=5.8,SNR=13						
X17A	Forest Lakes	5.89	83	⇑P	Pn	18 43 42.0	-0.7
	baz=5.8						
P10A	Eureka	5.89	11	⇑P	Pn	18 43 42.9	+0.2
	baz=5.8,SNR=102						
S15A	Panguitch	5.90	48	⇑P	Pn	18 43 42.4	-0.4
	baz=5.7						
MCCM	Marconi Confer	5.92	318	*e*Pn	Pn	18 43 40.8	-2.2
	comp=Z,1μm,0.8s						
R14A	James Farms, M	5.95	40	⇑P	Pn	18 43 42.8	-0.6
	baz=5.8						
P11A	Circle Ranch,	5.96	16	⇓P	Pn	18 43 43.5	-0.1
	baz=5.8,SNR=6.2						
Q13A	Wheeler Ranch,	5.99	30	⇓P	Pn	18 43 42.9	-1.1
	baz=5.8						
U16A	Tuba City	6.00	65	⇓P	Pn	18 43 43.7	-0.5
	baz=5.9						
U16A				⇑Sb	Sb	18 45 12.1	+0.3
	baz=5.9						
W17A	Winslow	6.05	76	⇑P	Pn	18 43 44.2	-0.6
	baz=5.9						
T16A	Glen Canyon Da	6.08	57	⇑P	Pn	18 43 44.7	-0.6
	baz=5.9						
V17A	Tonalea, Kykot	6.10	71	⇑P	Pn	18 43 45.3	-0.2
	baz=6.0						
117A	Oracle	6.11	100	⇓P	Pn	18 43 44.2	-1.5
	baz=6.0,SNR=19						
117A				⇑Sb	Sb	18 45 16.0	+1.1
	baz=6.0						
P12A	McGill	6.12	22	⇑P	Pn	18 43 45.3	-0.5
	baz=6.0						
Z17A	San Carlos Hig	6.20	93	⇓P	Pn	18 43 45.7	-1.2
	baz=6.1						
217A	Green Valley	6.28	107	⇓P	Pn	18 43 48.5	+0.4
	baz=6.2						
R15A	Junction	6.30	44	⇑P	Pn	18 43 48.3	0.0
	baz=6.1						
Q14A	Sevier Lake (B	6.34	34	⇑P	Pn	18 43 48.5	-0.4
	baz=6.2						
Q14A				⇑Sb	Sb	18 45 21.1	-0.6
	baz=6.2						
S16A	Weppner Ranch,	6.41	51	⇑P	Pn	18 43 49.7	-0.1
	baz=6.3						
P13A	Bates Ranch, G	6.42	28	⇑P	Pn	18 43 49.3	-0.6
	baz=6.3						
Y18A	Canyon Day Jun	6.53	88	⇓P	Pn	18 43 50.7	-0.7
	baz=6.4						
Y18A				⇓Sb	Sb	18 45 27.6	+0.6
	baz=6.4						
O11A	Cowboy Ranch,	6.54	15	⇑P	Pn	18 43 51.2	-0.3
	baz=6.4,SNR=94						
O10A	Cortez Mining,	6.54	9	⇑P	Pn	18 43 51.7	+0.1
	baz=6.4,SNR=124						
MSU	Marysvale	6.56	43	*e*P	Pn	18 43 51.7	-0.2
MSU				pmax	pmax		
	comp=Z,440nm,0.9s						
MSU	Marysvale	6.56	43	*e*Pn	Pn	18 43 51.7	-0.2
	comp=Z,440nm,0.9s						
T17A	Navajo Res., N	6.58	59	⇓P	Pn	18 43 51.8	-0.4
	baz=6.4						
Z18A	Geronimo	6.59	94	⇓P	Pn	18 43 51.5	-0.8
	baz=6.5						
X18A	Snowflake	6.60	82	⇑P	Pn	18 43 52.1	-0.3
	baz=6.5						
BMN	Battle Mountai	6.61	4	*e*P	Pn	18 43 52.0	-0.6
BMN				pmax	pmax		
	comp=Z,2μm,1.0s						
BMN	Battle Mountai	6.61	4	*e*Pn	Pn	18 43 52.0	-0.5
	comp=Z,2μm,1.0s						
BMN				*e*Pg	Pb	18 44 15.1	+4.4
HOPS	Hopland	6.64	322	*e*Pn	Pn	18 43 50.8	-2.2
	comp=Z,657nm,1.0s						
V18A	Ganado	6.80	72	⇓P	Pn	18 43 55.6	+0.4
	baz=6.7						
Q15A	Fillmore	6.80	39	⇓P	Pn	18 43 54.9	-0.3
	baz=6.6						
R16A	Teasdale	6.82	47	⇑P	Pn	18 43 55.5	+0.1
	baz=6.7						
218A	Dragoon	6.84	104	⇓P	Pn	18 43 55.2	-0.5
	baz=6.8						
W18A	Petrified Fore	6.84	77	⇓P	Pn	18 43 55.8	0.0
	baz=6.7						
S17A	Black Ridge (B	6.89	55	⇑P	Pn	18 43 56.3	-0.1
	baz=6.7						
O12A	Currie	6.90	20	⇓P	Pn	18 43 55.9	-0.6
	baz=6.8						
P14A	Drum Mountains	6.92	32	⇑P	Pn	18 43 56.2	-0.6
	baz=6.8						
N10A	Dunphy	6.96	9	⇓P	Pn	18 43 57.3	-0.1
	baz=6.8,SNR=19						
O13A	Hicks Ranch, I	7.02	25	⇑P	Pn	18 43 57.4	-0.7
	baz=6.9						
U18A	Rough Rock, Ch	7.05	66	⇓P	Pn	18 43 58.8	+0.2
	baz=6.9						
318A	Bisbee	7.06	108	⇑P	Pn	18 43 58.4	-0.4
	baz=7.0						
W19A	Sanders	7.12	77	⇑P	Pn	18 43 59.5	-0.1
	baz=7.0						
X19A	St. Johns	7.14	83	⇓P	Pn	18 43 59.7	-0.2
	baz=7.0						
Y19A	Nutrioso	7.17	87	⇑P	Pn	18 44 00.2	0.0
	baz=7.1						
N11A	Elko Archery C	7.18	13	⇓P	Pn	18 44 00.4	0.0
	baz=7.0,SNR=68						
Z19A	T-Link Ranch,	7.21	92	⇑P	Pn	18 44 00.1	-0.6
	baz=7.1						
ELK	Elko	7.22	16	*e*P	Pn	18 44 00.0	-0.9
ELK				pmax	pmax		
	comp=Z,2μm,1.0s						
ELK	Elko	7.22	16	*e*Pn	Pn	18 44 00.0	-0.8
	comp=Z,2μm,1.0s						
ELK				*e*Pg	Pb	18 44 27.8	+6.9
ELK				*e*S	Sb	18 45 49.6	+2.8
119A	Ashpeak Ranch,	7.25	96	⇓P	Pn	18 44 00.8	-0.6
	baz=7.2						
T18A	Mexican Hat	7.31	61	⇑P	Pn	18 44 01.8	-0.4
	baz=7.2						
N12A	Clover Valley,	7.37	17	⇓P	Pn	18 44 02.7	-0.2
	baz=7.2,SNR=244						
N12A	Clover Valley,	7.37	17	*e*Pn	Pn	18 44 02.0	-0.9
	comp=Z,3μm,1.2s						
N12A				*e*S	Sb	18 46 01.4	+10
R17A	Hanksville Air	7.39	50	⇓P	Pn	18 44 02.7	-0.5
	baz=7.2						
Q16A	Castle Valley	7.42	45	⇓P	Pn	18 44 03.6	0.0
	baz=7.3						
S18A	Hurst Farm, Bl	7.47	57	⇓P	Pn	18 44 03.7	-0.7
	baz=7.3						
V19A	Window Rock	7.50	73	⇓P	Pn	18 44 04.7	-0.2
	baz=7.4						
U19A	Dine' College,	7.52	68	⇑P	Pn	18 44 04.5	-0.6
	baz=7.4						
DUG	Dugway	7.53	31	⇑P	Pn	18 44 04.4	-0.8
	baz=7.4						
DUG	Dugway	7.53	31	*e*P	Pn	18 44 05.0	-0.2
DUG				pmax	pmax		
	comp=Z,749nm,0.9s						
DUG	Dugway	7.53	31	*e*Pn	Pn	18 44 05.0	-0.3
	comp=Z,749nm,0.9s						
N13A	Wendover, West	7.60	22	⇓P	Pn	18 44 05.5	-0.6
	baz=7.5						
N13A	Wendover, West	7.60	22	*e*Pn	Pn	18 44 05.4	-0.7
	comp=Z,2μm,0.9s						
P16A	Fountain Green	7.63	39	⇑P	Pn	18 44 05.9	-0.6
	baz=7.5						
319A	Douglas	7.65	106	⇓P	Pn	18 44 07.1	+0.2
	baz=7.6						
TMUT	Trail Mountain	7.65	43	*e*Pn	Pn	18 44 07.4	+0.6
	comp=Z,735nm,1.4s						
NLU	North Lily Min	7.68	36	*e*Pn	Pn	18 44 03.7	-3.5
	comp=Z,207nm,1.3s						
WDC	Whiskeytown Da	7.70	332	*e*P	Pn	18 44 06.1	-1.4
WDC				pmax	pmax		
	comp=Z,319nm,1.0s						
WDC	Whiskeytown Da	7.70	332	*e*Pn	Pn	18 44 06.1	-1.4
	comp=Z,319nm,1.0s						
M10A	I.L. Ranch, Tu	7.75	7	P	Pn	18 44 08.8	+0.5
	baz=7.6,SNR=70						
O15A	The Old Anders	7.75	32	⇓P	Pn	18 44 08.1	-0.2
	baz=7.6						
M11A	Holland Ranch,	7.77	12	⇓P	Pn	18 44 08.4	0.0
	baz=7.6,SNR=16						
Z20A	Nine Sixteen R	7.79	93	⇑P	Pn	18 44 08.1	-0.7
	baz=7.7						
X20A	Quemado	7.80	82	⇑P	Pn	18 44 09.2	+0.3
	baz=7.7						
T19A	Beclabito	7.83	65	⇓P	Pn	18 44 09.0	-0.2
	baz=7.7						
W20A	Ramah	7.85	78	⇑P	Pn	18 44 09.4	-0.2
	baz=7.7						
120A	U Bar Ranch, L	7.85	97	⇓P	Pn	18 44 09.0	-0.6
	baz=7.8						
R18A	Canyonlands Na	7.90	53	⇑P	Pn	18 44 08.7	-1.5
	baz=7.7						
Y20A	Horse Springs,	7.90	87	⇓P	Pn	18 44 10.3	+0.1
	baz=7.8						
SRU	San Rafael	7.93	46	⇑P	Pn	18 44 10.5	0.0
	baz=7.8						
SRU	San Rafael	7.93	46	*e*P	Pn	18 44 10.8	+0.2
SRU				pmax	pmax		
	comp=Z,33nm,0.5s						
SRU	San Rafael	7.93	46	*e*Pn	Pn	18 44 10.8	+0.2
	comp=Z,33nm,0.5s						
M12A	Wells	7.93	16	⇑P	Pn	18 44 10.1	-0.5
	baz=7.8,SNR=41						
N14A	Grayback Hills	7.94	27	⇑P	Pn	18 44 10.4	-0.4
	baz=7.8						
MPU	Maple Canyon	7.94	37	*e*Pn	Pn	18 44 11.8	+1.0
	comp=Z,298nm,0.8s						
V20A	Brimhall	7.98	73	⇓P	Pn	18 44 11.4	0.0
	baz=7.8						
P17A	Butcher Ranch,	8.04	43	⇑P	Pn	18 44 12.7	+0.6
	baz=7.9						
BGU	Big Grassy Mou	8.06	27	*e*Pn	Pn	18 44 11.8	-0.7
	comp=Z,2μm,2.4s						
M13A	Montello	8.07	20	⇑P	Pn	18 44 11.9	-0.7
	baz=7.9						
M13A	Montello	8.07	20	*e*Pn	Pn	18 44 11.9	-0.7
	comp=Z,1μm,1.0s						
U20A	Newcomb	8.07	69	⇑P	Pn	18 44 11.9	-0.8
	baz=7.9						
220A	Playas Peak, P	8.09	101	⇓P	Pn	18 44 12.4	-0.5
	baz=8.0						
S19A	Harvey Farm, M	8.10	59	⇓P	Pn	18 44 12.2	-0.9
	baz=8.0						
O16A	Springville	8.15	37	⇑P	Pn	18 44 14.8	+1.1
	baz=8.0						
Q18A	Rafter H Ranch	8.16	48	⇑P	Pn	18 44 14.2	+0.4
	baz=8.0						
NOQ	North Oquirrh	8.21	32	*e*Pn	Pn	18 44 16.1	+1.6
	comp=Z,912nm,1.0s						
N15A	Stansbury Isla	8.24	30	⇓P	Pn	18 44 15.1	+0.3
	baz=8.1						
320A	Kipp Ranch, An	8.27	105	⇑P	Pn	18 44 15.9	+0.6
	baz=8.2						
R19A	Curley Farm, L	8.27	55	⇑P	Pn	18 44 15.2	-0.2
	baz=8.1						
MOD	Modoc	8.29	347	⇑*e*Pn	Pn	18 44 17.2	+1.7
	comp=Z,2μm,1.3s						
L10A	Juniper Basin	8.31	7	⇓P	Pn	18 44 16.4	+0.5
	baz=8.2						
MVCO	Mesa Verde	8.35	64	⇑P	Pn	18 44 16.2	-0.2
	baz=8.2						
MVCO	Mesa Verde	8.35	64	*e*Pn	Pn	18 44 15.9	-0.6
	comp=Z,177nm,1.4s						
X21A	Alamocita Cree	8.39	83	⇑P	Pn	18 44 17.4	+0.5
	baz=8.3						
CTU	Camp Tracy	8.41	34	⇓*e*P	Pn	18 44 19.4	+2.2
	comp=Z,239nm,0.8s						
P18A	Preston Nutter	8.42	44	⇑P	Pn	18 44 18.2	+0.8
	baz=8.3						
DAU	Daniels Canyon	8.43	37	*e*P	Pn	18 44 19.3	+1.8
DAU				pmax	pmax		
	comp=Z,701nm,1.1s						
DAU	Daniels Canyon	8.43	37	*e*Pn	Pn	18 44 19.3	+1.8
	comp=Z,701nm,1.1s						
M14A	Sheep Mountain	8.46	24	⇑P	Pn	18 44 17.7	-0.2
	baz=8.3						
Y21A	Point of Rocks	8.48	86	⇓P	Pn	18 44 18.4	+0.2
	baz=8.4						
JLU	Jordanelle	8.48	35	⇓*e*Pn	Pn	18 44 20.3	+2.1
	comp=Z,412nm,1.0s						
L11A	Cat Creek Ranc	8.49	11	⇓P	Pn	18 44 19.1	+0.8
	baz=8.4,SNR=12						
Z21A	St. Cloud Mine	8.53	91	⇓P	Pn	18 44 18.6	-0.3
	baz=8.4						
O17A	Robinson Place	8.54	40	⇑P	Pn	18 44 21.0	+2.0
	baz=8.4						
W21A	San Fidel	8.54	78	⇑P	Pn	18 44 19.7	+0.7
	baz=8.4						
121A	Cookes Peak, D	8.55	96	⇓P	Pn	18 44 19.2	0.0
	baz=8.5						
PV04	Paradox Valley	8.57	55	*e*Pn	Pn	18 44 19.5	+0.1
L12A	House Creek Ra	8.61	14	⇓P	Pn	18 44 20.2	+0.4
	baz=8.5,SNR=10.0						
WVOR	Wild Horse Val	8.61	356	⇓*e*P	Pn	18 44 21.8	+1.8
WVOR				pmax	pmax		
	comp=Z,729nm,1.2s						
WVOR	Wild Horse Val	8.61	356	⇓*e*P	Pn	18 44 21.8	+1.8
	comp=Z,728nm,1.2s						
SPUT	South Promonto	8.62	28	*e*Pn	Pn	18 44 20.7	+0.6
	comp=Z,491nm,0.8s						
Q19A	Hogan Spring (	8.62	51	⇓P	Pn	18 44 19.9	-0.2
	baz=8.5						
V21A	Milan	8.64	74	⇑P	Pn	18 44 21.6	+1.1
	baz=8.5						
221A	Mesquite Ranch	8.68	99	⇑P	Pn	18 44 21.2	+0.2
	baz=8.6						
PV01	Paradox Valley	8.68	58	*e*Pn	Pn	18 44 20.6	-0.3
	comp=Z,13μm,0.6s						
N16A	Rees Ranch, Co	8.71	34	⇓P	Pn	18 44 23.5	+2.2
	baz=8.6						
M15A	Larsen Ranch,	8.75	28	⇑P	Pn	18 44 22.1	+0.2
	baz=8.6						
U21A	Nageezi	8.76	70	⇓P	Pn	18 44 22.9	+0.9
	baz=8.6						
YBH	Yreka Blue Hor	8.77	336	Pn	Pn	18 44 23.9	+1.7
	comp=Z,4.8nm,0.3s,baz=146,slow=6.0,SNR=43						
YBH				Sn	Sn	18 46 12.7	+12
	baz=95,slow=11,SNR=2.0						
YBH				LR	LR	18 47 55.5	
	comp=Z,3μm,20.8s,baz=173,slow=39						
YBH	Yreka Blue Hor	8.77	336	*e*P	Pn	18 44 24.3	+2.1
YBH				pmax	pmax		
	comp=Z,141nm,1.0s						
YBH	Yreka Blue Hor	8.77	336	*e*Pn	Pn	18 44 24.3	+2.1
	comp=Z,141nm,1.0s						
L13A	Double Diamond	8.81	19	⇓P	Pn	18 44 22.6	-0.1
	baz=8.7						
R20A	Redvale	8.84	58	⇑P	Pn	18 44 23.0	-0.1
	baz=8.7						
HVU	Hansel Valley	8.90	25	*e*P	Pn	18 44 24.1	+0.1
HVU				pmax	pmax		
	comp=Z,261nm,0.8s						
HVU	Hansel Valley	8.90	25	*e*Pn	Pn	18 44 24.1	+0.1
	comp=Z,261nm,0.8s						
LAZ	Ladron	8.92	83	*e*Pn	Pn	18 44 24.3	+0.1
	comp=Z,340nm,1.0s						
HOG	Hogback Mounta	8.93	341	P	Pn	18 44 30.7	+6.4
L14A	Malta	8.97	23	⇑P	Pn	18 44 24.9	0.0
	baz=8.8						
O18A	Roosevelt	8.99	42	⇑P	Pn	18 44 27.9	+2.8
	baz=8.8						
T21A	Navajo Lake	9.01	67	⇑P	Pn	18 44 26.5	+1.0
	baz=8.9						
N17A	Moffit Pass	9.04	36	⇑P	Pn	18 44 28.3	+2.4
	baz=8.9						
LENM	Lemitar	9.06	85	*e*Pn	Pn	18 44 26.2	+0.1
	comp=Z,572nm,1.3s						
Y22A	Socorro	9.07	86	⇓P	Pn	18 44 26.1	-0.2
	baz=9.0						
VSP	Spence Mountai	9.09	341	P	Pn	18 44 31.9	+5.4
Y22D	IRIS PASSCAL I	9.10	85	⇑P	Pn	18 44 27.3	+0.6
	baz=9.0						
Z22A	Elephant Butte	9.12	91	⇓P	Pn	18 44 26.6	-0.4
	baz=9.0						
122A	Conniff Cattle	9.17	94	⇓P	Pn	18 44 27.8	+0.1
	baz=9.1						
W22A	Albuquerque	9.18	79	⇑P	Pn	18 44 28.9	+1.1
	baz=9.0						
P19A	Cripple Cowboy	9.19	48	⇓P	Pn	18 44 28.1	+0.2
	baz=9.0						
K05A	Summer Lake	9.20	346	⇓P	Pn	18 44 29.2	+1.2
	baz=9.1						
222A	Williams Famil	9.21	98	⇑P	Pn	18 44 28.2	-0.1
	baz=9.1						
HWUT	Hardware Ranch	9.23	31	*e*Pn	Pn	18 44 29.9	+1.4
	comp=Z,556nm,1.0s						
L15A	Malad City	9.24	26	⇑P	Pn	18 44 29.0	+0.4
	baz=9.1						
V22A	San Miguel Ran	9.25	74	⇑P	Pn	18 44 30.3	+1.6
	baz=9.1						
K13A	Stover Farm, H	9.30	18	⇓P	Pn	18 44 29.2	-0.2
	baz=9.2						
BNM	Barren Site	9.34	85	*e*Pn	Pn	18 44 29.5	-0.6
	comp=Z,20nm,0.6s						
U22A	Llaves	9.38	71	⇑P	Pn	18 44 32.3	+1.8
	baz=9.2						
K14A	Jones Ranch, D	9.46	22	⇑P	Pn	18 44 31.7	+0.2
	baz=9.3,SNR=7.1						
P20A	De Beque	9.49	51	⇓P	Pn	18 44 32.0	-0.1
	baz=9.3						
ANMO	Albuquerque	9.50	80	Pn	Pn	18 44 32.5	+0.4
	comp=Z,0.6nm,0.3s,baz=282,slow=13,SNR=24						
ANMO				Lg		18 47 11.4	
ANMO				LR	LR	18 48 41.8	
	comp=Z,8μm,18.4s,baz=74,slow=41						
ANMO	Albuquerque	9.50	80	*e*P	Pn	18 44 32.5	+0.3
ANMO				pmax	pmax		
	comp=Z,268nm,1.0s						
ANMO	Albuquerque	9.50	80	*e*Pn	Pn	18 44 32.5	+0.3
	comp=Z,268nm,1.0s						
T22A	Edith	9.50	67	⇓P	Pn	18 44 32.7	+0.5
	baz=9.4						
O19A	Miners Draw (B	9.52	45	⇓P	Pn	18 44 33.8	+1.4
	baz=9.4						
J08A	Circle Bar Ran	9.53	357	⇑P	Pn	18 44 35.1	+2.6
	baz=9.4						
M17A	Scullys Gap (B	9.53	35	⇑P	Pn	18 44 34.8	+2.2
	baz=9.4						
L16A	Fish Haven	9.62	30	⇑P	Pn	18 44 35.5	+1.6
	baz=9.5						
HUMO	Hull Mountain	9.63	337	*e*Pn	Pn	18 44 35.1	+1.2
	comp=Z,175nm,1.1s						
N18A	Larsen Ranch,	9.66	40	⇑P	Pn	18 44 37.0	+2.6
	baz=9.5						
Q21A	Lamborn Mesa,	9.69	56	⇓P	Pn	18 44 34.6	-0.2
	baz=9.5						
MFID	Camas Ranch	9.71	9	⇑P	Pn	18 44 37.1	+2.1
	baz=9.6						
X23A	Hourglass Bar	9.71	82	⇓P	Pn	18 44 35.3	+0.2
	baz=9.6						
Z23A	Rita Site, Whi	9.73	90	⇓P	Pn	18 44 35.5	+0.1
	baz=9.6						
W23A	Werner Place,	9.77	79	⇓P	Pn	18 44 36.0	+0.1
	baz=9.6						
S22A	4UR Ranch, Cre	9.79	63	⇑P	Pn	18 44 37.0	+0.9
	baz=9.6						
K15A	Arbon	9.79	24	⇑P	Pn	18 44 36.5	+0.4
	baz=9.6						
M18A	Lyman	9.79	37	⇑P	Pn	18 44 38.2	+2.1
	baz=9.6						
223A	Chaparral, Ant	9.79	98	⇑P	Pn	18 44 37.2	+1.0
	baz=9.7						
123A	Bell Site, Whi	9.80	94	⇓P	Pn	18 44 36.4	+0.1
	baz=9.7						
BBOR	Butler Butte	9.80	339	P	Pn	18 44 39.1	+2.9
V23A	Ortiz Mt. (NFS	9.80	75	⇓P	Pn	18 44 37.2	+0.8
	baz=9.7						
Y23A	Lovelace Mesa,	9.83	86	⇑P	Pn	18 44 36.4	-0.3
	baz=9.7						
N19A	John Jarvie Ra	9.88	42	⇑P	Pn	18 44 38.9	+1.5
	baz=9.7						
U23A	El Rito	9.89	72	⇓P	Pn	18 44 38.8	+1.2
	baz=9.8						
L17A	Cokeville	9.93	32	⇓P	Pn	18 44 39.6	+1.5
	baz=9.8						
O20A	White River Ci	9.95	48	⇑P	Pn	18 44 39.2	+0.9
	baz=9.8						
J13A	Cove Ranch, Pi	9.98	16	⇑P	Pn	18 44 39.4	+0.6
	baz=9.9						
R22A	Saguache, Gunn	10.02	61	⇑P	Pn	18 44 39.3	+0.1
	baz=9.9						
J14A	Carey	10.07	18	⇓P	Pn	18 44 41.9	+1.8
	baz=9.9						
HLID	Hailey	10.09	15	⇑P	Pn	18 44 41.3	+1.1
	baz=10.0						
HLID	Hailey	10.09	15	*e*Pn	Pn	18 44 41.0	+0.8
	comp=Z,337nm,0.9s						
P21A	Newcastle	10.12	53	⇑P	Pn	18 44 41.8	+1.2
	baz=10.0						
Q22A	Crested Butte,	10.17	57	⇑P	Pn	18 44 41.5	+0.2
	baz=10.0						
T23A	Casias Ranch,	10.17	68	⇑P	Pn	18 44 42.5	+1.1
	baz=10.0						
I12A	Atlanta	10.18	11	⇓P	Pn	18 44 43.5	+2.0
	baz=10.0						
L18A	Fontenelle, Gr	10.18	35	⇓P	Pn	18 44 43.0	+1.5
	baz=10.0						
NCOR	Newberry Crate	10.19	346	P	Pn	18 44 47.6	+6.0
K16A	Soda Springs	10.25	27	⇓P	Pn	18 44 43.7	+1.2
	baz=10						
SMCO	Snowmass	10.27	56	*e*Pn	Pn	18 44 42.7	0.0
	comp=Z,288nm,0.9s						
M19A	Rock Springs	10.31	39	⇓P	Pn	18 44 44.3	+1.0
	baz=10						
I07A	Izee	10.32	353	⇑P	Pn	18 44 47.1	+3.7
	baz=10						
X24A	Lazy VL Ranch,	10.33	82	⇓P	Pn	18 44 44.6	+1.1
	baz=10						
Y24A	Capitan	10.34	86	⇓P	Pn	18 44 43.9	+0.1
	baz=10						
Y24A				⇓S	Sn	18 46 39.1	-0.2
	baz=10						
N20A	Spence Gulch,	10.36	45	⇑P	Pn	18 44 45.2	+1.3
	baz=10						
W24A	Lazy 6 Ranch,	10.38	79	⇑P	Pn	18 44 45.0	+0.7
	baz=10						
AHID	Auburn Hatcher	10.39	29	*e*Pn	Pn	18 44 46.5	+2.2
	comp=Z,185nm,1.0s						
S23A	Nye Farm, Mont	10.39	65	⇑P	Pn	18 44 45.3	+0.9
	baz=10						
K17A	Gardner Place,	10.45	29	⇑P	Pn	18 44 47.2	+2.1
	baz=10						
Z24A	Sheeppen Canyo	10.45	89	⇓P	Pn	18 44 45.0	-0.2
	baz=10						
124A	Stringfield Ra	10.46	93	⇑P	Pn	18 44 45.1	-0.2
	baz=10						
J15A	Blackfoot	10.46	22	⇑P	Pn	18 44 47.2	+1.9
	baz=10						
O21A	Pagoda	10.47	50	⇑P	Pn	18 44 46.3	+0.8
	baz=10						
I13A	Wildhorse Cree	10.49	15	⇓P	Pn	18 44 47.1	+1.4
	baz=10						
224A	Cornudas Mount	10.52	96	⇑P	Pn	18 44 46.1	-0.2
	baz=10						
V24A	Rampart Ranch,	10.54	76	⇑P	Pn	18 44 46.5	+0.1
	baz=10						
P22A	Eagle	10.61	54	⇓P	Pn	18 44 47.6	+0.2
	baz=10						
J16A	Bone	10.63	26	⇓P	Pn	18

baz=11
J17A Brown Place, J 11.04 28 ⇓P Pn 18 44 55.8 +2.5
baz=11
BW06 Boulder Array 11.05 34 ⇑P Pn 18 44 55.2 +1.8
baz=11
BW06 Boulder Array 11.05 34 ePn Pn 18 44 55.0 +1.5
comp=Z,24nm,0.5s
RNO Roman Nose 11.06 337 P Pn 18 44 57.7 +4.2
TPAW Teton Pass 11.06 27 ePn Pn 18 44 55.8 +2.4
comp=Z,556nm,1.2s
DCID1 Drake Creek 11.06 26 ePn Pn 18 44 56.2 +2.7
comp=Z,499nm,1.0s
V25A Rancho No Teng 11.08 76 ⇑P Pn 18 44 55.3 +1.5
baz=11
H13A Challis 11.08 14 ⇓P Pn 18 44 57.1 +3.2
baz=11
225A Deer Hill, Car 11.10 95 ⇓P Pn 18 44 54.9 +0.8
baz=11
L20A Wamsutter 11.10 40 ⇓P Pn 18 44 56.2 +2.1
baz=11
SNOW Snow King Moun 11.11 28 ePn Pn 18 44 56.7 +2.5
comp=Z,2μm,1.7s
125A Gardner Draw, 11.13 92 ⇓P Pn 18 44 55.6 +1.1
baz=11
P23A Jefferson 11.14 57 ⇓P Pn 18 44 55.2 +0.5
baz=11
W25A X Bar L Ranch, 11.15 79 ⇑P Pn 18 44 57.8 +2.9
baz=11
325A Bean Ranch, Si 11.15 99 ⇓P Pn 18 44 55.0 +0.1
baz=11
I16A Newdale 11.20 24 ⇓P Pn 18 44 56.3 +0.9
baz=11
J18A Kendall Valley 11.20 31 ⇓P Pn 18 44 56.8 +1.4
baz=11
R24A Sanders Place, 11.23 63 ⇑P Pn 18 44 56.0 +0.2
baz=11
LOHW Long Hollow 11.29 28 ePn Pn 18 44 58.7 +1.9
comp=Z,183nm,1.8s
425A Indio Mountain 11.32 102 ⇑P Pn 18 44 58.2 +1.1
baz=11
U25A Circle Dot Ran 11.32 73 ⇓P Pn 18 44 57.9 +0.8
baz=11
H14A Leadore 11.32 17 ⇑P Pn 18 44 59.0 +1.8
baz=11
H04A Detroit Lake 11.34 344 ⇓P Pn 18 44 59.8 +2.4
baz=11
MOOW Moose Ponds 11.36 27 ePn Pn 18 44 59.7 +2.1
comp=Z,416nm,1.4s
M21A Separation Pea 11.38 44 ⇓P Pn 18 44 58.5 +0.6
baz=11
IMW Indian Meadow 11.41 26⇓ePn Pn 18 45 00.8 +2.5
comp=Z,615nm,1.4s
K19A Absolon Red Bu 11.44 36 ⇑P Pn 18 44 60.0 +1.3
baz=11
N22A Wattenberg Ran 11.45 49 ⇓P Pn 18 44 59.5 +0.7
baz=11
GDL2 Guadalupe Moun 11.46 94 ePn Pn 18 45 00.3 +1.3
comp=Z,33nm,0.7s
Q24A Divide 11.46 60 ⇓P Pn 18 44 60.0 +1.0
baz=11
T25A Trinidad 11.46 69 ⇑P Pn 18 45 00.8 +1.8
baz=11
G08A Pilot Rock 11.48 356 ⇑P Pn 18 45 02.8 +3.6
baz=11
O23A Lake Granby, G 11.48 53 ⇑P Pn 18 44 59.4 +0.1
baz=11
ISCO Idaho Springs 11.49 55 eP Pn 18 44 59.6 +0.2
ISCO pmax pmax
comp=Z,67nm,0.9s
ISCO Idaho Springs 11.49 55 ePn Pn 18 44 59.6 +0.2
comp=Z,67nm,0.9s
RWWY Rawlins 11.52 44 ePn Pn 18 44 57.6 -2.2
comp=Z,270nm,1.1s
COR Corvallis 11.54 340 eP Pn 18 44 59.3 -0.7
COR pmax pmax
comp=Z,160nm,0.9s
COR Corvallis 11.54 340 ePn Pn 18 44 59.3 -0.7
comp=Z,160nm,0.9s
K20A Yellowstone Ra 11.56 38 ⇓P Pn 18 45 01.4 +1.0
baz=11
I17A Pilgrim Ck. 11.56 27 ⇓P Pn 18 45 03.3 +2.8
baz=11
S25A Robets Cordova 11.57 67 ⇑P Pn 18 45 02.4 +1.9
baz=11
G06A Carlson Farm, 11.59 350 ⇑P Pn 18 45 04.6 +3.9
baz=12
G13A Cobalt 11.60 13 ⇑P Pn 18 45 02.9 +2.1
baz=12
L21A Rawlins 11.60 43 ⇑P Pn 18 45 02.0 +1.0
baz=11
Z26A Caprock 11.61 89 ⇑P Pn 18 45 03.7 +2.7
baz=12
MCMT McKenzie Canyo 11.65 18 ePn Pn 18 45 05.0 +3.4
comp=Z,549nm,1.3s
126A Clayton Basin, 11.66 92 ⇓P Pn 18 45 03.3 +1.5
baz=12
X26A CR and CF Fran 11.67 83 ⇑P Pn 18 45 02.7 +0.8
baz=12
Y26A Elida 11.68 86 ⇑P Pn 18 45 03.5 +1.5
baz=12
I18A Diamond G Ranc 11.69 30 ⇑P Pn 18 45 03.6 +1.6
baz=12
226A Malaga, Loving 11.70 95 ⇑P Pn 18 45 04.2 +1.8
baz=12
W26A Owens Ranch, T 11.71 80 ⇑P Pn 18 45 04.6 +2.0
baz=12
N23A Red Feather La 11.82 50 ⇓P Pn 18 45 04.9 +1.0
baz=12
CLNB Carlsbad 11.85 94 ePn Pn 18 45 05.8 +1.5
comp=Z,11nm,0.6s
P24A Kohler Place, 11.85 58 ⇓P Pn 18 45 05.2 +0.8
baz=12
U26A Atchley Ranch, 11.85 74 ⇑P Pn 18 45 05.4 +1.0
baz=12
G14A Jackson 11.90 15 ⇓P Pn 18 45 07.4 +2.4
baz=12
G04A Mulino 11.90 344 ⇓P Pn 18 45 07.2 +2.2
baz=12
YFT Old Faithful 11.93 25 ePn Pn 18 45 07.4 +2.0
comp=Z,260nm,1.3s
H17A Grant Village 11.97 26 ⇑P Pn 18 45 08.4 +2.4
baz=12
326A Caldwell Ranch 11.99 98 ⇑P Pn 18 45 09.0 +2.7
baz=12
O24A Longmont 12.01 55 ⇓P Pn 18 45 07.0 +0.6
baz=12
H16A Russell Place, 12.01 23 ⇑P Pn 18 45 09.0 +2.5
baz=12
LNOR Lincton Mounta 12.03 359 eP Pn 18 45 11.1 +4.3
LNOR pmax pmax
comp=Z,6.0nm,0.6s
LNOR Lincton Mounta 12.03 359 ePn Pn 18 45 11.1 +4.3
comp=Z,6.0nm,0.6s
G15A Dillon 12.06 19 ⇑P Pn 18 45 09.7 +2.6
baz=12
YMR Madison River 12.07 24 ePn Pn 18 45 04.6 -2.8
comp=Z,385nm,1.3s
F12A Elk City 12.08 9 ⇓P Pn 18 45 10.6 +3.1
baz=12
Q25A Bedland, Calha 12.10 61 ⇓P Pn 18 45 09.5 +1.8
baz=12
426A McDonald Obser 12.13 101 ⇑P Pn 18 45 10.9 +2.6
baz=12
F10A Beach Ranch, E 12.14 2 ⇑P Pn 18 45 11.4 +3.1
baz=12
F07A Phinny Hill Vi 12.16 353 ⇓P Pn 18 45 11.7 +3.2
baz=12
LKWY Lake 12.18 26 eP Pn 18 45 08.6 -0.3
LKWY pmax pmax
comp=Z,364nm,1.2s
LKWY Lake 12.18 26 ePn Pn 18 45 08.6 -0.3
comp=Z,364nm,1.2s
127A Arkansas Junct 12.21 91 ⇓P Pn 18 45 10.7 +1.4
baz=12
YNR Norris Junctio 12.21 25 Pn Pn 18 45 09.4 +0.2
comp=Z,184nm,1.2s
DLMT Dillon 12.21 18 ePn Pn 18 45 12.0 +2.7
comp=Z,12nm,0.5s
HEBO Mount Hebo 12.24 340 ePn Pn 18 45 12.2 +2.5
comp=Z,480nm,1.4s
Z27A Tatum 12.24 88 ⇓P Pn 18 45 12.3 +2.6
baz=12
F13A Darby 12.25 12 ⇑P Pn 18 45 12.5 +2.7
baz=12
X27A F and S Farms, 12.26 82 ⇑P Pn 18 45 11.7 +1.8
baz=12
W27A Bowe Ranch, En 12.29 80 ⇓P Pn 18 45 12.7 +2.3
baz=12
526A Mary Lane Ranc 12.29 104 ⇓P Pn 18 45 13.0 +2.6
baz=12
G16A Moss Hill, Enn 12.31 21 ⇑P Pn 18 45 12.7 +2.1
baz=12
PHWY Pilot Hill 12.35 49 ePn Pn 18 45 12.2 +1.0
comp=Z,62nm,1.0s
327A Balmorhea Ranc 12.37 97 ⇑P Pn 18 45 15.1 +3.5
baz=12
P25A Willow Gulch B 12.38 59 ⇑P Pn 18 45 13.3 +1.8
baz=12
227A Bennet, Jal 12.39 94 ⇑P Pn 18 45 14.1 +2.4
baz=12
626A Big Bend Ranch 12.45 106 ⇑P Pn 18 45 15.7 +3.1
baz=12
F14A Wisdom 12.46 15 ⇑P Pn 18 45 14.7 +2.1
baz=12
N24A Carr 12.47 52 ⇑P Pn 18 45 15.2 +2.4
baz=12
MSTX Muleshoe 12.55 85 ⇑P Pn 18 45 15.4 +1.4
baz=12
F04A Amboy 12.58 345 ⇓P Pn 18 45 18.3 +4.0
baz=12
427A Hayter Ranch, 12.59 100 ⇑P Pn 18 45 17.1 +2.5
baz=12
HAWA Hanford 12.62 355 ePn Pn 18 45 18.2 +3.4
comp=Z,1μm,1.6s
RSW Rattlesnake Hi 12.62 355 ePn Pn 18 45 18.3 +3.5
comp=Z,799nm,1.2s
527A Woodward Ranch 12.65 103 ⇓P Pn 18 45 17.4 +2.1
baz=13
O25A Wiggins 12.65 56 ⇓P Pn 18 45 17.0 +1.7
baz=12
E09A Wood Farm, Sta 12.67 359 ⇓P Pn 18 45 18.8 +3.3
baz=13
LRM Limekiln Ridge 12.68 18 ePn Pn 18 45 18.2 +2.6
comp=Z,548nm,1.4s
E08A Dider Farm, El 12.68 356 ⇓P Pn 18 45 18.8 +3.1
baz=13
G17A Pierce Place, 12.72 23 ⇓P Pn 18 45 19.7 +3.5
baz=13
E07A Sunnyside 12.81 354 ⇑P Pn 18 45 20.9 +3.6
baz=13
F03A Seaside 12.85 342 ⇑P Pn 18 45 20.2 +2.3
baz=13
F16A Kennard Place, 12.87 20 ⇓P Pn 18 45 20.5 +2.4
baz=13
E13A Victor 12.91 11 ⇓P Pn 18 45 20.7 +1.9
baz=13
TXAR Lajitas Array 12.91 106 Pn Pn 18 45 20.4 +1.5
comp=Z,1.6nm,0.3s,baz=288,slow=13,SNR=40
TXAR LR LR 18 50 21.0
comp=Z,8μm,20.4s,baz=350,slow=38
328A Wristen Ranch, 12.93 97 ⇓P Pn 18 45 21.2 +2.0
baz=13
N25A Grover 12.99 54 ⇑P Pn 18 45 21.3 +1.4
baz=13
E14A Clinton 13.01 14 ⇑P Pn 18 45 21.6 +1.5
baz=13
RLMT Red Lodge 13.08 28 ⇓P Pn 18 45 24.0 +2.8
baz=13
RLMT Red Lodge 13.08 28 ePn Pn 18 45 23.5 +2.4
627A Terlingua Ranc 13.09 106 ⇓P Pn 18 45 25.6 +4.3
baz=13
G18A Lazy EL Ranch, 13.13 27 ⇑P Pn 18 45 24.9 +3.0
baz=13
E15A Deer Lodge 13.20 16 ⇓P Pn 18 45 23.7 +1.0
baz=13
D08A Wollman Farm, 13.24 357 ⇑P Pn 18 45 25.6 +2.3
baz=13
LON Longmire 13.25 348 eP Pn 18 45 25.8 +2.4
LON pmax pmax
comp=Z,293nm,1.3s
LON Longmire 13.25 348 ePn Pn 18 45 25.8 +2.3
comp=Z,293nm,1.3s
F17A Fitzpatrick Pl 13.27 22 ⇓P Pn 18 45 26.8 +3.1
baz=13
528A Cox Ranch, San 13.31 102 ⇑P Pn 18 45 28.6 +4.2
baz=13
MSO Missoula 13.33 12⇓ePn Pn 18 45 26.4 +1.9
comp=Z,231nm,1.3s
E03A Lebam 13.42 343 ⇑P Pn 18 45 28.0 +2.2
baz=13
AMTX Amarillo 13.42 81 ePn Pn 18 45 27.6 +1.7
comp=Z,144nm,1.1s
628A Black Gap, Mar 13.48 105 ⇓P Pn 18 45 30.2 +3.6
baz=13
GCMT Greycliff 13.50 25 ePn Pn 18 45 29.6 +2.8
comp=Z,346nm,1.4s
D13A Huson 13.50 10 ⇓P Pn 18 45 29.2 +2.4
baz=13
CHMT Chamberlain Mo 13.54 14 ePn Pn 18 45 29.1 +1.8
comp=Z,110nm,1.1s
E16A East Helena 13.54 19 ⇑P Pn 18 45 28.8 +1.4
baz=13
OD2 Odessa Site #2 13.56 358 ePn Pn 18 45 29.3 +1.6
comp=Z,267nm,1.0s
F18A Big Timber 13.58 25 ⇑P Pn 18 45 30.6 +2.7
baz=13
D14A Greenough 13.65 13 ⇑P Pn 18 45 30.3 +1.4
baz=14
HRY Holter Researc 13.66 18 ePn Pn 18 45 31.8 +2.7
comp=Z,804nm,1.5s
E17A Martinsdale 13.71 21 ⇑P Pn 18 45 31.4 +1.7
baz=14
D05A Enumclaw 13.71 348 ⇑P Pn 18 45 31.3 +1.7
baz=14
SLMT Seeley Lake 13.80 13 ePn Pn 18 45 32.4 +1.4
comp=Z,74nm,0.8s
D15A Lincoln 13.81 16 ⇑P Pn 18 45 31.9 +0.8
baz=14
ETW Entiat 13.89 353 ePn Pn 18 45 34.4 +2.3
comp=Z,318nm,1.1s
C09A Chrisman Ranch 13.96 359 ⇑P Pn 18 45 34.4 +1.2
baz=14
SWMT Swartz Lake 13.98 11 ePn Pn 18 45 34.8 +1.4
comp=Z,346nm,1.4s
C12B Naegeli Ranch, 13.99 7 ⇓P Pn 18 45 34.7 +1.2
baz=14
D16A Dana Ranch, Ca 14.03 18 ⇑P Pn 18 45 34.7 +0.6
baz=14
E18A Harlowton 14.09 23 ⇑P Pn 18 45 37.4 +2.5
baz=14
JTMT Jette 14.17 10 ePn Pn 18 45 37.4 +1.5
comp=Z,126nm,1.0s
BSMT Bassoo Peak 14.20 8 ePn Pn 18 45 38.0 +1.6
comp=Z,3μm,0.2s
GNW Green Mountain 14.22 346 ePn Pn 18 45 37.3 +0.6
comp=Z,63nm,1.0s
NLWA Neilton Lookou 14.29 343 ⇓P Pn 18 45 40.2 +2.6
baz=14
NLWA Neilton Lookou 14.29 343 Pn Pn 18 45 42.0 +4.4
comp=Z,228nm,1.2s
YBMT Yellow Bay 14.32 11 ePn Pn 18 45 39.0 +1.0
comp=Z,171nm,1.1s
D17A Six Diamond Ra 14.38 20 ⇓P Pn 18 45 40.6 +1.7
baz=14
NEW Newport 14.44 2 eP Pn 18 45 40.3 +0.7
NEW pmax pmax
comp=Z,195nm,1.1s
NEW Newport 14.44 2 ePn Pn 18 45 40.3 +0.7
comp=Z,195nm,1.1s
OGNE Ogallala 14.45 56 ePn Pn 18 45 40.6 +0.8
comp=Z,2μm,1.5s
B08A Colville Reser 14.56 356 ⇑P Pn 18 45 42.8 +1.5
baz=14
JCW Jim Creek 14.67 349 ePn Pn 18 45 45.7 +2.9
comp=Z,673nm,1.6s
D18A Linhart Farms, 14.69 22 ⇑P Pn 18 45 44.5 +1.5
baz=14
B12A Libby 14.73 6 ⇓P Pn 18 45 44.8 +1.2
baz=15
B13A Whitefish 14.76 9 ⇑P Pn 18 45 44.7 +0.8
baz=15
RPW Rockport 14.86 351 ePn Pn 18 45 45.4 0.0
comp=Z,133nm,1.3s
B14A Marquette Ranc 14.92 12 ⇓P Pn 18 45 47.3 +1.1
baz=15
B06A Marblemount 14.93 351 ⇑P Pn 18 45 47.5 +1.2
baz=15
B15A Bradely Ranch, 15.01 14 ⇓P Pn 18 45 48.5 +1.1
baz=15
A12A Yaak River Ran 15.18 6 ⇑P Pn 18 45 50.4 +0.7
baz=15
B16A M & M Farms, S 15.29 16 ⇑P Pn 18 45 52.0 +0.9
baz=15
PGC Sidney 15.38 346 ePn Pn 18 45 53.5 +1.1
comp=Z,24nm,1.2s
B17A L&G Farms, Che 15.39 18 ⇓P Pn 18 45 53.5 +1.1
baz=15
CBKS Cedar Bluff 15.44 66 eP Pn 18 45 53.1 0.0
CBKS pmax pmax
comp=Z,297nm,1.2s
CBKS Cedar Bluff 15.44 66 ePn Pn 18 45 53.1 0.0
comp=Z,297nm,1.2s
EGMT Eagleton 15.44 21 ⇓P Pn 18 45 53.9 +0.8
baz=15
EGMT Eagleton 15.44 21 ePn Pn 18 45 54.2 +1.2
comp=Z,900nm,1.4s
A05A Maple Falls 15.48 350 ⇑P Pn 18 45 53.9 +0.3
baz=15
A14A Double T Ranch 15.49 11 ⇑P Pn 18 45 54.5 +0.8
baz=15
WALA Waterton Lakes 15.50 10 ePn Pn 18 45 54.4 +0.5
comp=Z,15nm,1.2s
A15A Johnson Ranch, 15.62 13 ⇓P Pn 18 45 55.9 +0.6
baz=16
JCT Junction City 15.66 97 eP Pn 18 45 57.9 +1.8
JCT pmax pmax
comp=Z,162nm,1.0s
JCT Junction City 15.66 97 ePn Pn 18 45 57.9 +1.8
comp=Z,162nm,1.0s
B18A Beardsley Farm 15.77 20 ⇓P Pn 18 45 57.9 +0.6
baz=16
WMOK Wichita Mounta 15.81 81 eP Pn 18 45 57.8 -0.2
WMOK pmax pmax
comp=Z,154nm,1.2s
WMOK Wichita Mounta 15.81 81 ePn Pn 18 45 57.8 -0.2
comp=Z,154nm,1.2s
A17A Triple J Farms 16.02 17 ⇓P Pn 18 46 01.3 +0.7
baz=16
A18A Metzger Ranch, 16.22 19 ⇑P Pn 18 46 03.0 -0.1
baz=16
KSU1 Kansas State U 17.88 67 ePn Pn 18 46 23.6 -0.5
comp=Z,287nm,1.3s
HKT Hockley 19.10 96 eP Pn 18 46 39.9 +0.9
HKT pmax pmax
comp=Z,140nm,1.4s
HKT Hockley 19.10 96 eP Pn 18 46 39.9 +0.8
comp=Z,140nm,1.4s
ECSD EROS Data Cent 19.25 53 ePn Pn 18 46 39.3 -1.4
comp=Z,111nm,0.9s
NATX Nacogdoches 19.62 90 eP Pn 18 46 45.6 +0.4
comp=Z,853nm,1.8s
EDM Edmonton 19.66 8 eP Pn 18 46 42.2 -3.2
BBB Bella Bella 19.78 341 Pn Pn 18 46 46.4 -0.5
comp=Z,0.6nm,0.3s,baz=13,slow=14,SNR=3.7
BBB LR LR 18 55 00.4
comp=Z,3μm,18.6s,baz=345,slow=39
MIAR Mount Ida 20.11 81 eP P 18 46 48.9 -0.2
MIAR pmax pmax
comp=Z,983nm,1.5s
MIAR Mount Ida 20.11 81 eP P 18 46 48.9 -0.2
comp=Z,983nm,1.5s
SCIA State Center 21.02 60 eP P 18 46 59.1 +0.2
comp=Z,335nm,1.2s,mb5.3
UALR University of 21.10 80 eP P 18 46 58.5 -1.3
comp=Z,104nm,1.2s,mb5.0
AGMN Agassiz Nation 21.90 42 ePn P 18 47 06.9 -1.4
comp=Z,727nm,1.3s,mb6.0
CCM Cathedral Cave 21.94 71 eP P 18 47 08.9 +0.1
CCM pmax pmax
comp=Z,365nm,1.4s,mb5.6
CCM Cathedral Cave 21.94 71 eP P 18 47 08.9 0.0
comp=Z,365nm,1.4s,mb5.6
HBAR Harrisburg 22.42 78 eP P 18 47 11.8 -2.2
FVM French Village 22.58 72 eP P 18 47 15.5 -0.2
FVM pmax pmax
comp=Z,146nm,1.3s,mb5.2
FVM French Village 22.58 72 eP P 18 47 15.5 -0.2
comp=Z,146nm,1.3s,mb5.2
SLM Saint Louis 22.76 70 eP P 18 47 18.1 +0.5
SLM pmax pmax
comp=Z,156nm,1.1s,mb5.3
SLM Saint Louis 22.76 70 eP P 18 47 18.1 +0.5
comp=Z,156nm,1.1s,mb5.3
VBMS Vicksburg 22.97 86 eP P 18 47 21.4 +1.6
comp=Z,622nm,1.4s,mb5.8
PARMO Parma 23.11 75 eP P 18 47 24.1 +2.9
JFWS Jewell Farm 23.40 59 eP P 18 47 22.7 -1.6
JFWS pmax pmax
comp=Z,276nm,1.4s,mb5.5
JFWS Jewell Farm 23.40 59 eP P 18 47 22.7 -1.6
comp=Z,276nm,1.4s,mb5.5
HALT Halls 23.47 77 ePn P 18 47 24.4 -0.7
SIUC Southern Illin 23.53 72 eP P 18 47 26.2 +0.5
comp=Z,836nm,2.1s,mb5.8
OXF Oxford 23.53 80 eP P 18 47 25.1 -0.6
OXF pmax pmax
comp=Z,246nm,1.2s,mb5.5
OXF Oxford 23.53 80 eP P 18 47 25.1 -0.6
comp=Z,246nm,1.2s,mb5.5
HDIL Hopedale 23.67 65 eP P 18 47 26.8 -0.2
comp=Z,1μm,2.0s,mb6.0
FFC Flin Flon 23.68 23 P P 18 47 25.2 -1.7
comp=Z,926nm,1.0s,mb6.2,SNR=32
FFC Flin Flon 23.68 23 eP P 18 47 25.4 -1.5
FFC pmax pmax
comp=Z,303nm,1.3s,mb5.6
FFC Flin Flon 23.68 23 eP P 18 47 25.4 -1.5
comp=Z,302nm,1.3s,mb5.6
CRAG Craig 24.10 338 eP P 18 47 30.8 +0.1
EYMN Ely 24.28 47 eP P 18 47 30.7 -1.7
comp=Z,350nm,1.6s,mb5.5
OLIL Olney 24.44 70 eP P 18 47 33.0 -0.9
comp=Z,66nm,1.0s,mb5.0
WVT Waverly 24.68 76 eP P 18 47 35.4 -0.8
WVT pmax pmax
comp=Z,346nm,1.6s,mb5.6
WVT Waverly 24.68 76 eP P 18 47 35.4 -0.8
comp=Z,346nm,1.6s,mb5.6
COWI Conover 25.06 52 eP P 18 47 38.0 -1.5
comp=Z,105nm,0.9s,mb5.4
BLO Bloomington 25.68 69 eP P 18 47 45.0 -0.3
BLO pmax pmax
comp=Z,277nm,1.3s,mb5.6
BLO Bloomington 25.68 69 eP P 18 47 45.0 -0.3
comp=Z,277nm,1.3s,mb5.6
WCI Wyandotte Cave 25.84 71 eP P 18 47 46.8 0.0
WCI pmax pmax
comp=Z,181nm,1.5s,mb5.4
WCI Wyandotte Cave 25.84 71 eP P 18 47 46.8 +0.1
comp=Z,181nm,1.5s,mb5.4
DLBC Dease Lake 25.93 345 P P 18 47 48.1 +0.8
comp=Z,49nm,0.9s,mb5.0,baz=165,slow=7.1,SNR=56
DLBC LR LR 18 59 36.0
comp=Z,9μm,18.6s,MS5.3,baz=257,slow=40
DLBC Dease Lake 25.93 345 eP P 18 47 47.6 +0.3
DLBC e 18 47 57.4
SIT Sitka 26.11 338 eP P 18 47 49.7 +0.8
SIT pmax pmax
comp=Z,353nm,2.0s,mb5.5
SIT MLR MLR
comp=Z,2μm,17.0s,MS4.7
SIT Sitka 26.11 338 eP P 18 47 49.7 +0.8
comp=Z,353nm,2.0s,mb5.5
SIT LR LR
comp=Z,2μm,17.0s,MS4.7
BRAL Brewton 26.12 88 eP P 18 47 47.9 -1.4
comp=Z,811nm,1.7s,mb6.0
SWET Sewanee 26.30 78 eP P 18 47 49.6 -1.3
CMIG Matias Romero 26.52 123 P P 18 47 54.0 +1.0
comp=Z,18nm,0.9s,mb4.6,baz=317,slow=6.9,SNR=11
CMIG PcP PcP 18 51 17.6 0.0
comp=Z,9.2nm,1.0s,baz=44,slow=4.7,SNR=4.0
CMIG pPcP 18 51 23.0
comp=Z,12nm,0.9s,baz=296,slow=4.9,SNR=5.4
CMIG LR LR 18 58 40.8
comp=Z,5μm,18.4s,MS5.1,baz=291,slow=37
CPCT Cooper Cave 27.42 77 eP P 18 48 00.6 -0.4
TKL Tuckaleechee C 28.00 77 P P 18 48 05.9 -0.3
comp=Z,28nm,1.1s,mb4.8,baz=257,slow=4.4,SNR=14
TKL LR LR 19 00 10.4
comp=Z,1μm,20.8s,MS4.5,baz=346,slow=38
TKL Tuckaleechee C 28.00 77 eP P 18 48 05.6 -0.6
AAM Ann Arbor 28.09 62 eP P 18 48 06.3 -0.6
SKAG Skagway 28.12 341 eP P 18 48 07.0 0.0
comp=Z,52nm,1.1s,mb5.1
SKAG LR LR
comp=Z,2μm,17.0s,MS4.9
ACSO Alum Creek Sta 28.45 67 eP P 18 48 10.4 +0.3
comp=Z,97nm,1.2s,mb5.3
GOGA Godfrey 28.58 81 eP P 18 48 09.7 -1.7
GOGA pmax pmax
comp=Z,89nm,1.4s,mb5.3
GOGA Godfrey 28.58 81 eP P 18 48 09.7 -1.7

comp=Z,89nm,1.4s,mb5.3
YKA Yellowknife Ar 28.76 3 P **P 18 48 11.5 -1.1**
comp=Z,8.7nm,0.8s,mb4.5,baz=179,slow=8.5,SNR=21
YKA PcP PcP 18 51 21.7 -0.6
comp=Z,7.3nm,0.9s,baz=159,slow=2.3,SNR=4.6
YKA pPcP 18 51 27.2
comp=Z,7.2nm,0.8s,baz=178,slow=2.6,SNR=7.7
YKA Yellowknife Ar 28.76 3 P **P 18 48 11.6 -1.0**
YKA 18 51 21.7
YKA Yellowknife Ar 28.76 3 P **P 18 48 11.6 -1.1**
YKA PcP PcP 18 51 21.7 -0.6
YKA pPcP 18 51 27.2
FCC Fort Churchill 29.55 25 *e*P **P 18 48 17.8 -1.9**
comp=Z,2.9nm,1.2s,mb3.9
JSC Jenkinsville 30.24 79 *e*P **P 18 48 25.9 -0.1**
ELN Prospectdale 30.28 73 *e*P **P 18 48 26.0 -0.4**
BLA Blacksburg 30.54 73 *e*P **P 18 48 28.4 -0.3**
BLA pmax pmax
comp=Z,177nm,1.4s,mb5.7
BLA Blacksburg 30.54 73 *e*P **P 18 48 28.4 -0.3**
comp=Z,177nm,1.4s,mb5.7
ERPA Erie 30.79 63 *e*P **P 18 48 30.0 -0.9**
comp=Z,87nm,1.2s,mb5.5
MCWV Mont Chateau 30.86 68 *e*P **P 18 48 31.7 +0.2**
comp=Z,312nm,1.9s,mb5.8
NHSC New Hope 31.34 81 *e*P **P 18 48 36.6 +0.8**
comp=Z,485nm,1.5s,mb6.1
SADO Sadowa 31.63 58 P **P 18 48 37.1 -1.1**
comp=Z,7.0nm,0.8s,mb4.5,baz=264,slow=10,SNR=5.4
SADO pPcP 18 51 34.7
comp=Z,6.4nm,0.7s,baz=16,slow=5.1,SNR=3.5
SADO Sadowa 31.63 58 P **P 18 48 37.1 -1.1**
SADO pPcP 18 51 34.7
BMRM Bremner River 32.18 336 *e*P **P 18 48 43.8 +1.0**
comp=Z,26nm,0.9s,mb5.1
SOR Soroa 32.46 101 P **P 18 48 47.1 +1.4**
DIV Divide 32.70 335 *e*P **P 18 48 48.4 +1.0**
comp=Z,65nm,1.3s,mb5.4
CNNC Cliffs of the 32.82 76 *e*P **P 18 48 49.1 +0.3**
comp=Z,231nm,1.8s,mb5.8
CBN Corbin 32.86 71 *e*P **P 18 48 48.7 -0.4**
DAWY Dawson 33.05 343 *e*P **P 18 48 51.1 +0.7**
MENT Mentasta 33.34 339 *e*P **P 18 48 53.5 +0.5**
SEW Seward 33.40 332 *e*P **P 18 48 54.1 +0.5**
comp=Z,77nm,1.2s,mb5.5
KDAK Kodiak Island 33.44 326 LR LR 19 00 03.6
comp=Z,2μm,20.0s,MS4.8,baz=130,slow=32
KDAK Kodiak Island 33.44 326 *e*P **P 18 48 54.3 +0.4**
KDAK pmax pmax
comp=Z,63nm,1.4s,mb5.3
KDAK Kodiak Island 33.44 326 *e*P **P 18 48 54.3 +0.4**
comp=Z,63nm,1.4s,mb5.3
OHAK Old Harbor 33.49 325 *e*P **P 18 48 55.2 +0.8**
comp=Z,97nm,1.2s,mb5.6
OHAK LR LR
comp=Z,2μm,17.0s,MS4.9
BINY Binghamton 33.77 63 *e*P **P 18 48 56.3 -0.6**
comp=Z,432nm,1.7s,mb6.1
PAX Paxson 33.91 338 *e*P **P 18 48 58.1 +0.2**
PAX pmax pmax
comp=Z,46nm,1.2s,mb5.3
PAX Paxson 33.91 338 *e*P **P 18 48 58.1 +0.2**
comp=Z,46nm,1.2s,mb5.3
TGUH Tegucigalpa,Un 34.00 118 *e*P **P 18 49 00.9 +1.7**
comp=Z,194nm,1.4s,mb5.8
EGAK Eagle 34.08 342 *e*P **P 18 49 00.0 +0.7**
comp=Z,92nm,1.1s,mb5.6
RC01 Rabbit Creek A 34.12 333 *e*P **P 18 48 58.1 -1.7**
comp=Z,53nm,1.0s,mb5.4
PMR Palmer 34.21 334 *e*P **P 18 49 01.3 +0.7**
PMR pmax pmax
comp=Z,75nm,0.9s,mb5.6
PMR MLR MLR
comp=Z,2μm,17.0s,MS4.8
PMR Palmer 34.21 334 *e*P **P 18 49 01.3 +0.7**
comp=Z,75nm,0.9s,mb5.6
PMR LR LR
comp=Z,2μm,17.0s,MS4.8
LONY Lake Ozonia 34.86 59 *e*P **P 18 49 03.0 -3.4**
comp=Z,37nm,1.4s,mb5.1
RSO Redoubt South 34.95 330 *e*P **P 18 49 07.6 +0.6**
CHGN Chignik 35.64 322 *e*P **P 18 49 13.4 +0.4**
ILAR Eielson Array 35.65 339 P **P 18 49 13.3 +0.4**
comp=Z,46nm,0.9s,mb5.4,baz=153,slow=7.4,SNR=253
ILAR LR LR 19 03 05.9
comp=Z,895nm,18.4s,MS4.6,baz=152,slow=35
INK Inuvik 35.67 350 *e*P **P 18 49 12.9 -0.1**
INK pmax pmax
comp=Z,127nm,1.3s
INK Inuvik 35.67 350 *e*P **P 18 49 12.9 -0.1**
comp=Z,127nm,1.3s,mb5.7
COLA College 36.01 339 *e*P **P 18 49 15.8 -0.2**
COLA pmax pmax
comp=Z,61nm,1.1s,mb5.4
COLA College 36.01 339 *e*P **P 18 49 15.8 -0.3**
comp=Z,61nm,1.1s,mb5.4
PPLA Purkeypile 36.15 334 *e*P **P 18 49 17.9 +0.6**
comp=Z,287nm,1.4s,mb6.0
SDPT Sand Point 36.41 319 *e*P **P 18 49 20.2 +0.6**
comp=Z,161nm,1.4s,mb5.8
SDPT LR LR
comp=Z,1μm,18.0s,MS4.7
SVW2 Sparrevohn 36.46 330 *e*P **P 18 49 20.0 +0.1**
comp=Z,99nm,1.4s,mb5.5
SVW2 LR LR
comp=Z,2μm,17.0s,MS4.9
BPAW Bear Paw Mtn. 36.48 336 *e*P **P 18 49 20.2 +0.1**
comp=Z,133nm,1.4s,mb5.7
KHU Kahuku 36.54 256 *e*P **P 18 49 22.6 +1.6**
LBNH Lisbon 36.75 60 *e*P **P 18 49 22.8 +0.2**
LBNH pmax pmax
comp=Z,210nm,1.9s,mb5.6
LBNH Lisbon 36.75 60 *e*P **P 18 49 22.8 +0.2**
comp=Z,210nm,1.9s,mb5.6
KIP Kipapa 37.43 261 *e*P **P 18 49 30.2 +1.6**
KIP pmax pmax
comp=Z,198nm,1.0s,mb5.9
KIP Kipapa 37.43 261 *e*P **P 18 49 30.2 +1.6**
comp=Z,198nm,1.0s,mb5.9
TTA Tatalina 37.60 332 *e*P **P 18 49 30.1 +0.5**
JTS JuntasAbangare 38.18 120 *e*P **P 18 49 35.3 +0.3**
JTS pmax pmax
comp=Z,26nm,1.0s
JTS JuntasAbangare 38.18 120 *e*P **P 18 49 35.3 +0.2**
comp=Z,26nm,1.0s,mb4.9
COLD Coldfoot 38.35 340 *e*P **P 18 49 36.3 +0.5**
comp=Z,66nm,1.3s,mb5.2
PKME Peaks-Kenny Pk 38.63 58 *e*P **P 18 49 38.3 -0.1**
comp=Z,102nm,1.7s,mb5.3
LMGC Las Mercedes 38.67 100 P **P 18 49 32.0 -7.1**
HLGC Holguin 39.05 98 P **P 18 49 38.7 -3.6**
MOAC Moa 40.07 98 P **P 18 49 49.7 -1.1**
MASC Masc 40.90 98 P **P 18 49 57.2 -0.5**
SCHQ Schefferville 40.99 43 P **P 18 49 56.1 -1.9**
comp=Z,52nm,1.0s,mb5.1,baz=272,slow=7.0,SNR=9.5
SCHQ LR LR 19 07 29.5
comp=Z,8μm,18.8s,MS5.6,baz=263,slow=37
SCHQ Schefferville 40.99 43 *e*P **P 18 49 56.3 -1.7**
comp=Z,110nm,1.2s,mb5.4
RES Resolute Bay 42.45 9 LR LR 19 08 40.6
comp=Z,6μm,18.2s,MS5.5,baz=213,slow=37
RES Resolute Bay 42.45 9 *e*P **P 18 50 08.5 -1.2**
RES pmax pmax
comp=Z,88nm,1.2s,mb5.3
RES Resolute Bay 42.45 9 *e*P **P 18 50 08.5 -1.2**
comp=Z,88nm,1.2s,mb5.3
SDDR Presa de Saban 43.90 98 *e*P **P 18 50 20.6 -1.5**
comp=Z,31nm,1.1s,mb5.0
AGPR Aguadilla, PR 47.60 95 *e*P **P 18 50 52.6 +1.2**
comp=Z,323nm,1.6s,mb6.1
CRPR Cabo Rojo, PR 47.83 96 *e*P **P 18 50 51.7 -1.5**
comp=Z,94nm,1.6s,mb5.6
AMKA Amchitka 47.93 311 *e*P **P 18 50 52.4 -1.1**
comp=Z,88nm,1.3s,mb5.6
ICM Isla Caja Muer 48.37 96 *e*P **P 18 50 58.3 +0.9**
SJG San Juan 48.57 95 *e*P **P 18 50 59.2 +0.3**
SJG pmax pmax
comp=Z,163nm,1.4s
SJG San Juan 48.57 95 *e*P **P 18 50 59.2 +0.3**
comp=Z,163nm,1.4s,mb5.9
XMAS Kiritimati 48.63 238 *e*P **P 18 50 59.3 0.0**
comp=Z,163nm,1.1s,mb6.0
CBYP Canovanas 48.74 95 *e*P **P 18 51 00.6 +0.4**
comp=Z,168nm,1.8s,mb5.8
MTP Monte Pirata 49.08 95 *e*P **P 18 51 02.9 +0.1**
comp=Z,289nm,1.3s,mb6.2
ROSC El Rosal 49.62 116 P **P 18 51 09.1 +2.1**
comp=Z,3.0nm,0.3s,mb4.8,baz=90,slow=22,SNR=9.7
ROSC LR LR 19 14 33.6
comp=Z,754nm,18.7s,MS4.7,baz=20,slow=39
OTAV Otavalo 49.81 124 *e*P **P 18 51 10.2 +1.8**
comp=Z,187nm,1.6s,mb5.9
SDV Santo Domingo 49.95 109 *e*P **P 18 51 10.3 +0.9**
comp=Z,72nm,1.3s,mb5.5
ALE Alert 52.33 8 P **P 18 51 25.2 -1.2**
comp=Z,236nm,1.1s,mb6.0,SNR=11
BILL Bilibino 53.85 333 *c i*P **P 18 51 37.3 -0.5**
BILL *e*SS SS 19 02 51.7 -0.5
BILL pmax pmax
comp=Z,54nm,1.2s,mb5.3
BILL Bilibino 53.85 333 *e*P **P 18 51 37.4 -0.4**
comp=Z,8.4nm,0.8s,mb4.7
PCRV Puerto La Cruz 54.00 103 P **P 18 51 40.0 +0.4**
baz=352,slow=7.1
SUMG Summit 54.94 21 *e*P **P 18 51 44.8 -0.9**
comp=Z,50nm,1.0s,mb5.5
SUMG Summit 54.94 21 *i*P **P 18 51 44.9 -0.8**
SUMG *i*S **S 18 59 28.1 +1.7**
SUMG
comp=Z,3μm,19.0s
PMOR Pomariorio Ree 56.36 216 *e*P **P 18 51 58.1 +1.6**
comp=Z,132nm,1.3s,mb5.8
RKT Rikitea 58.92 198 *e*S Sx 18 59 27.0
RKT *e*LR LR 19 09 13.4
comp=Z,2μm,25.2s,baz=14
PPT Papeete 59.38 216 *e*P **P 18 52 19.4 +1.7**
comp=Z,118nm,1.3s,mb5.8
PPT *e*LR LR 19 09 31.5
comp=Z,2μm,22.2s,baz=30
PPT Papeete 59.38 216 P **P 18 52 20.7 +3.1**
comp=Z,90nm,0.3s,mb6.3,baz=194,slow=20,SNR=12
PPT LR LR 19 11 02.2
comp=Z,2μm,19.6s,MS5.2,baz=340,slow=29
DAG Danmarks Havn 59.44 15 ⇑ *i*P **P 18 52 16.0 -1.4**
DAG pmax pmax
comp=Z,19nm,0.9s,mb5.1
DAG Danmarks Havn 59.44 15 ⇑ *i*P **P 18 52 16.0 -1.4**
comp=Z,19nm,0.9s,mb5.1
PAE Paea 59.46 216 *e*P **P 18 52 18.8 +0.5**
comp=Z,36nm,1.3s,mb5.3
PAE Paea 59.46 216 *e*P **P 18 52 18.8 +0.5**
PAE pmax pmax
comp=Z,36nm,1.3s,mb5.2
PET Petropavlovsk 60.08 316 ⇑ *i*P **P 18 52 21.9 -0.3**
PET *i*S **S 19 00 36.9 +2.5**
PET pmax pmax
comp=Z,55nm,1.2s,mb5.5
PET pmax pmax
comp=Z,300nm,10.6s
PET pmax pmax
comp=Z,400nm,9.5s
PET MLR MLR
comp=Z,600nm,18.0s,MS4.8
PET MLR MLR
comp=Z,600nm,18.0s
PET Petropavlovsk 60.08 316 *e*P **P 18 52 21.4 -0.8**
comp=Z,78nm,1.4s,mb5.5
SEY Seymchan 60.37 328 *c i*P **P 18 52 24.0 0.0**
SEY Seymchan 60.37 328 ⇑ *i*P **P 18 52 24.1 +0.1**
SCO Scoresbysund 60.46 23 *i*P **P 18 52 22.2 -2.3**
SCO MLR MLR
comp=Z,2μm,18.0s,MS5.3
SCO Scoresbysund 60.46 23 *i*P **P 18 52 22.2 -2.3**
SCO
comp=Z,2μm,18.0s
PETK Petropavlovsk- 60.61 316 P **P 18 52 25.6 -0.2**
comp=Z,29nm,0.9s,mb5.4,baz=76,slow=12,SNR=52
SKR Severo-Kuril's 62.33 314 *e*P **P 18 52 40.0 +2.5**
SKR *e* 19 01 06.0
KBS Kingsbay 63.86 10 *e*P **P 18 52 47.0 -0.2**
KBS AMb AMB 18 52 54.6
comp=Z,50nm,1.9s,mb5.2
KBS *e*S **S 19 01 21.3 -0.2**
KBS AMS AMS 19 21 49.0
comp=Z,4μm,15.0s,MS5.7
KBS Kingsbay 63.86 10 *e*P **P 18 52 47.5 +0.3**
KBS pmax pmax
comp=Z,45nm,1.2s,mb5.4
KBS Kingsbay 63.86 10 *e*P **P 18 52 47.5 +0.3**
comp=Z,82nm,1.4s,mb5.6
JMIC Jan Mayen 64.34 20 *e*P **P 18 52 53.1 +2.7**
JMIC AMS AMS 19 22 37.4
comp=Z,2μm,13.6s,MS5.4
TIXI Tiksi 65.08 341 *c i*P **P 18 52 53.6 -1.6**
TIXI *e*S S 19 01 34.4 -2.2
TIXI *e* 19 02 46.9
TIXI pmax pmax
comp=Z,80nm,1.3s,mb5.6
TIXI MLR MLR
comp=Z,1μm,19.0s,MS5.1
TIXI Tiksi 65.08 341 *e*P **P 18 52 54.1 -1.1**
comp=Z,66nm,1.3s,mb5.5
RAR Rarotonga 67.74 222 LR LR 19 18 33.4
comp=Z,984nm,18.2s,MS5.1,baz=350,slow=32
LPAZ La Paz 68.77 128 P **P 18 53 19.9 +0.4**
comp=Z,14nm,1.2s,mb4.8,baz=340,slow=6.4,SNR=24
LPAZ La Paz 68.77 128 *e*P **P 18 53 19.4 0.0**
LPAZ pmax pmax
comp=Z,72nm,1.4s
LPAZ La Paz 68.77 128 *e*P **P 18 53 19.4 0.0**
comp=Z,72nm,1.4s,mb5.4
SOFL Sornfelli, Far 69.58 28 AMS AMS 19 24 20.9
comp=Z,4μm,16.4s,MS5.7
AFI Afiamalu 69.89 237 LR LR 19 15 50.0
comp=Z,3μm,20.0s,MS5.5,baz=99,slow=29
YAK Yakutsk 70.20 332 *c i*P **P 18 53 26.8 -0.9**
YAK *e* 18 53 52.4
YAK *e*PPP 18 57 42.6
YAK *e*S S 19 02 36.7 -1.5
YAK *e* 19 03 29.2
YAK *e*SS SS 19 07 08.9 +1.5
YAK pmax pmax
comp=Z,68nm,1.0s,mb5.5
YAK pmax pmax
comp=E,35nm,1.1s
YAK pmax pmax
comp=N,13nm,1.3s
YAK pmax pmax
comp=Z,87nm,2.5s,mb5.2
YAK pmax pmax
comp=N,66nm,2.8s
YAK pmax pmax
comp=E,77nm,2.7s
YAK smax
comp=N,86nm,2.3s
YAK smax
comp=E,122nm,2.2s
YAK MLR MLR
comp=Z,1μm,19.0s,MS5.1
YAK MLR MLR
comp=E,661nm,18.0s,MS4.9
YAK MLR MLR
comp=N,270nm,22.0s,MS4.9
YAK Yakutsk 70.20 332 *e*P **P 18 53 26.7 -1.0**
comp=N,123nm,1.3s,mb5.7
YUK Yuzh-Kuril'sk 71.44 311 ⇑ *i*P **P 18 53 34.7 -0.9**
YUK *i*S S 19 02 53.1 -0.2
YUK pmax pmax
comp=Z,400nm,1.0s,mb6.3
YUK pmax pmax
comp=Z,510nm,1.4s,mb6.3
YUK pmax pmax
comp=N,80nm,0.7s
YUK pmax pmax
comp=E,210nm,1.4s
YSS Yuzh-Sakhalins 71.89 315 ⇑ *i*P **P 18 53 37.7 -0.6**
YSS *e* 18 53 53.0
YSS *e*S S 19 02 58.0 -0.4
YSS MLR MLR
comp=N,400nm,19.0s
YSS MLR MLR
comp=Z,400nm,19.0s,MS4.7
YSS Yuzh-Sakhalins 71.89 315 *e*P **P 18 53 37.0 -1.3**
comp=Z,147nm,1.1s,mb5.8
TRO Tromso 72.15 15 *e*P **P 18 53 38.5 -0.9**
TRO *e*pP pP 18 53 43.0 -1.8
TRO *e*S S 19 03 00.6 0.0
TRO AMS AMS 19 27 10.7
comp=Z,2μm,10.2s,MS5.7
TRO Tromso 72.15 15 *e*P **P 18 53 38.7 -0.7**
TRO LR LR
comp=Z,2μm,10.2s,MS5.7
KPL Plockton 72.85 32 P **P 18 53 40.1 -3.7**
KPL AMb AMB 18 53 48.6
comp=Z,49nm,1.6s,mb5.2
KPL AMS AMS 19 25 44.8
comp=Z,3μm,14.9s
KPL Plockton 72.85 32 *e*P **P 18 53 40.1 -3.7**
KPL AMb AMB 18 53 48.6
comp=Z,49nm,1.6s,mb5.2
KPL AMS AMS 19 25 44.8
comp=Z,3μm,14.9s,MS5.7
LRW Lerwick 72.99 28 AMS AMS 19 27 13.9
comp=Z,3μm,15.4s,MS5.7
LRW Lerwick 72.99 28 AMS AMS 19 27 13.9
comp=Z,3μm,15.4s
KAR1 Arisaig 73.02 32 P **P 18 53 43.3 -1.5**
KAR1 Arisaig 73.02 32 *e*P **P 18 53 43.3 -1.5**
MDO Dochfour 73.35 31 P **P 18 53 45.5 -1.2**
MDO Dochfour 73.35 31 *e*P **P 18 53 45.5 -1.2**
ASAJ Asahikawa 73.44 312 P **P 18 53 47.0 -0.5**
comp=Z,59nm,1.2s,mb5.4,baz=335,slow=1.6,SNR=16
ARCES ARCESS Array B 73.52 13 P **P 18 53 46.4 -1.2**
comp=Z,11nm,0.9s,mb4.8,baz=332,slow=6.8,SNR=23
ARCES pP pP 18 53 51.4 -1.5
comp=Z,18nm,0.9s,baz=335,slow=4.0,SNR=18
ARCES LR LR 19 28 09.5
comp=Z,2μm,19.1s,MS5.5,baz=152,slow=38
ARCES ARCESS Array B 73.52 13 P **P 18 53 46.4 -1.1**
ARCES *PP pP 18 53 51.4 -1.5
ARE0 ARCESS Array S 73.52 13 *e*P **P 18 53 45.9 -1.6**
KTK1 Kautokeino 73.53 14 AMS AMS 19 24 09.4
comp=Z,1μm,24.2s,MS5.2
KEV Kevo 73.59 12 *e*P **P 18 53 45.9 -2.1**
KEV pmax pmax
comp=Z,28nm,0.9s,mb5.2
KEV Kevo 73.59 12 *e*P **P 18 53 45.9 -2.1**
comp=Z,28nm,0.9s,mb5.2
KEV Kevo 73.59 12 *e*p **P 18 53 45.9 -2.1**
comp=Z,28nm,0.9s,mb5.2
MCD Coleburn Disti 73.74 31 P **P 18 53 47.7 -1.3**
MCD Coleburn Disti 73.74 31 *e*P **P 18 53 47.7 -1.3**
EAB Aberfoyle 74.12 32 P **P 18 53 49.4 -1.9**
EAB Aberfoyle 74.12 32 *e*P **P 18 53 49.4 -1.9**
ERM Erimo 74.17 310 P **P 18 53 51.0 -0.9**
comp=Z,794nm,1.1s,mb6.6,SNR=9.2
ERM Erimo 74.17 310 *e*P **P 18 53 51.2 -0.7**
ERM pmax pmax
comp=Z,171nm,1.1s,mb5.9
ERM Erimo 74.17 310 *e*P **P 18 53 51.2 -0.7**
comp=Z,171nm,1.1s,mb5.9
PGBU Glenifferbraes 74.29 33 P **P 18 53 50.8 -1.5**
PGBU AMS AMS 19 26 26.1
comp=Z,3μm,15.5s
PGBU Glenifferbraes 74.29 33 *e*P **P 18 53 50.8 -1.5**
PGBU AMS AMS 19 26 26.1
comp=Z,3μm,15.5s,MS5.7
FOO Floro 74.31 25 AMS AMS 19 25 14.1
comp=Z,2μm,24.4s,MS5.2
FOO Floro 74.31 25 *e*P **P 18 53 44.2 -8.1**
FOO LR LR
comp=Z,2μm,24.4s,MS5.2
NSS Namsos 74.39 20 *e*P **P 18 53 50.3 -2.4**
NSS Namsos 74.39 20 *e*P **P 18 53 50.9 -1.9**
EBH Black Hill 74.45 32 P **P 18 53 52.0 -1.2**
EBH Black Hill 74.45 32 *e*P **P 18 53 52.0 -1.2**
GAL1 Galloway 74.76 33 P **P 18 53 53.5 -1.5**
GAL1 AMb AMB 18 53 59.4
comp=Z,32nm,1.2s,mb5.1
GAL1 AMS AMS 19 26 30.6
comp=Z,3μm,15.9s
GAL1 Galloway 74.76 33 *e*P **P 18 53 53.5 -1.5**
GAL1 AMb AMB 18 53 59.4
comp=Z,32nm,1.2s,mb5.1
GAL1 AMS AMS 19 26 30.6
comp=Z,3μm,15.9s,MS5.7
EDI Edinburgh 74.80 32 P **P 18 53 51.9 -3.3**
EDI AMb AMB 18 54 00.4
comp=Z,51nm,1.2s,mb5.3
EDI AMS AMS 19 26 59.7
comp=Z,4μm,15.6s
EDI Edinburgh 74.80 32 *e*P **P 18 53 51.9 -3.3**
EDI AMb AMB 18 54 00.4
comp=Z,51nm,1.2s,mb5.3
EDI AMS AMS 19 26 59.7
comp=Z,4μm,15.6s,MS5.8
EBL Broad Law 74.95 32 P **P 18 53 54.4 -1.7**
EBL Broad Law 74.95 32 *e*P **P 18 53 54.4 -1.7**
ESK Eskdalemuir 75.17 33 P **P 18 53 55.7 -1.6**
ESK AMS AMS 19 27 01.3
comp=Z,4μm,15.3s
ESK Eskdalemuir 75.17 33 *e*P **P 18 53 55.7 -1.6**
ESK AMS AMS 19 27 01.3
comp=Z,4μm,15.3s,MS5.8
ESK Eskdalemuir 75.17 33 *e*P **P 18 53 56.2 -1.2**
ESK pmax pmax
comp=Z,31nm,1.3s,mb5.1
ESK Eskdalemuir 75.17 33 *e*P **P 18 53 56.2 -1.1**
comp=Z,31nm,1.3s,mb5.1
BER Bergen 75.26 25 *e* **P 18 54 00.4 +2.6**
BER *e*S S 19 03 36.3 +0.3
BER AMS AMS 19 28 38.8
comp=Z,1μm,18.3s,MS5.3
CLNS Chul'man 75.31 330 *e*P **P 18 53 56.9 -1.3**
CLNS pmax pmax
comp=Z,42nm,1.2s,mb5.2
CLNS pmax pmax
comp=E,29nm,1.2s
CLNS pmax pmax
comp=N,19nm,1.1s
HABR Khabarovsk 75.47 319 *c i*P **P 18 53 58.1 -1.1**
HABR *e* 18 54 09.8
HABR *e*PPP 18 58 31.3
HABR *e*S S 19 03 38.2 -0.5
HABR *e* 19 04 09.4
HABR *e*SS SS 19 08 28.4 -0.1
HABR pmax pmax
comp=Z,136nm,1.5s,mb5.7
HABR pmax pmax
comp=E,50nm,1.3s
HABR pmax pmax
comp=N,38nm,1.6s
HABR MLR MLR
comp=Z,309nm,20.0s,MS4.6
WLF1 Llynfaes 75.88 35 AMS AMS 19 28 48.2
comp=Z,4μm,14.1s,MS5.9
WLF1 Llynfaes 75.88 35 AMS AMS 19 28 48.2
comp=Z,4μm,14.1s
LVZ Lovozero 76.50 10 ⇓ *i*P **P 18 54 04.4 -0.4**
APA Apatity 76.61 11 ⇑ *i*P **P 18 54 05.0 -0.4**
APA *i* pP 18 54 10.2 -0.6
APA *e*S S 19 03 46.0 -4.7
APA pmax pmax
comp=Z,43nm,1.3s,mb5.2
APA MLR MLR
comp=Z,1μm,13.0s,MS5.4
APA MLR MLR
comp=Z,1μm,21.0s
HPK Haverah Park 76.74 33 AMS AMS 19 27 42.2
comp=Z,3μm,16.2s,MS5.7
HPK Haverah Park 76.74 33 AMS AMS 19 27 42.2
comp=Z,3μm,16.2s
NB2 NORSAR Subarra 76.79 23 P **P 18 54 05.6 -0.9**
comp=Z,0.6nm,0.8s,baz=327,slow=6.2
NOA NORSAR Array B 76.79 23 P **P 18 54 05.6 -0.9**
comp=Z,5.8nm,0.8s,mb4.5,baz=322,slow=5.7,SNR=16
NOA pP pP 18 54 10.9 -0.9
comp=Z,5.8nm,0.8s,baz=323,slow=5.7,SNR=15
NOA LR LR 19 27 40.6
comp=Z,955nm,18.8s,MS5.1,baz=320,slow=36
NOA NORSAR Array B 76.79 23 P **P 18 54 05.6 -0.9**
NOA *PP pP 18 54 10.9 -0.9
KLR Kul'dur 76.80 321 *e*P **P 18 54 02.4 -4.4**
KLR *e*S S 19 03 42.5 -11
KLR pmax pmax
comp=E,50nm,1.8s
KLR pmax pmax
comp=Z,100nm,1.8s,mb5.4
HLM1 Long Mynd 77.08 35 P **P 18 54 04.2 -4.1**
HLM1 Long Mynd 77.08 35 *e*P **P 18 54 04.2 -4.1**
HTR Trewern Hill 77.17 35 P **P 18 54 06.6 -2.3**
HTR Trewern Hill 77.17 35 *e*P **P 18 54 06.6 -2.3**
KONO Kongsberg 77.28 24 *e*P **P 18 54 06.9 -2.4**
KONO pmax pmax
comp=Z,20nm,1.1s,mb5.0
KONO Kongsberg 77.28 24 *e*P **P 18 54 06.9 -2.4**
comp=Z,20nm,1.1s,mb5.0
MCH1 Michaelchurch 77.35 35 AMS AMS 19 25 28.9

comp=Z,1µm,18.0s,MS5.3
CCA1 Carnmenellis 77.39 37 AMS AMS 19 29 59.7
comp=Z,1µm,13.4s,MS5.4
CCA1 Carnmenellis 77.39 37 AMS AMS 19 29 59.7
comp=Z,1µm,13.4s
CWF Charnwood Fore 77.67 34 AMS AMS 19 28 55.2
comp=Z,2µm,15.0s,MS5.5
CWF Charnwood Fore 77.67 34 AMS AMS 19 28 55.2
comp=Z,2µm,15.0s
DYA Yadsworthy 77.88 37 AMS AMS 19 29 22.2
comp=Z,1µm,15.1s,MS5.4
DYA Yadsworthy 77.88 37 AMS AMS 19 29 22.2
comp=Z,1µm,15.1s
SWN1 Swindon 78.23 35 AMS AMS 19 32 27.6
comp=Z,1µm,16.0s,MS5.3
SWN1 Swindon 78.23 35 AMS AMS 19 32 27.6
comp=Z,1µm,16.0s
MUD Monsted U'grnd 79.49 27 *i* P **P 18 54 24.2 +2.6**
MUD *i* S S 19 04 27.5 +5.5
MUD MLR MLR
comp=Z,1µm,18.0s,MS5.2
MUD Monsted U'grnd 79.49 27 *i* P **P 18 54 24.2 +2.6**
MUD Monsted U'grnd 79.49 27 *i* S S 19 04 27.5 +5.5
MUD
comp=Z,1µm,18.0s
ROSF Rostrenen 79.54 38 *eP* **P 18 54 21.2 -0.8**
JSA Saint Aubin 79.56 37 AMS AMS 19 27 12.3
comp=Z,1µm,19.5s,MS5.3
JSA Saint Aubin 79.56 37 AMS AMS 19 27 12.3
comp=Z,1µm,19.5s
EMAZ Mazaricos 79.73 45 P **P 18 54 22.0 -1.2**
comp=Z,55nm,3.0s
QUIF Quistinic 79.87 38 *eP* **P 18 54 23.4 -0.4**
comp=Z,82nm,1.1s,mb5.2
QUIF Quistinic 79.87 38 *eP* **P 18 54 23.4 -0.4**
QUIF pmax pmax
comp=Z,41nm,1.1s,mb5.3
QUIF Quistinic 79.87 38 *eP* **P 18 54 23.4 -0.4**
comp=Z,41nm,1.1s,mb5.3
SGMF Saint Gilles 79.96 38 *eP* **P 18 54 23.7 -0.6**
comp=Z,41nm,1.1s,mb5.0
SGMF Saint Gilles 79.96 38 *eP* **P 18 54 23.7 -0.6**
SGMF pmax pmax
comp=Z,20nm,1.1s,mb5.0
SGMF Saint Gilles 79.96 38 *eP* **P 18 54 23.7 -0.6**
comp=Z,20nm,1.1s,mb5.0
STS Santiago 80.02 45 P **P 18 54 27.3 +2.6**
STS pmax pmax
comp=Z,14nm,3.0s
STS Santiago 80.02 45 P **P 18 54 27.3 +2.5**
comp=Z,14nm,3.0s
KAF Kangasniemi 80.12 16 *eP* **P 18 54 23.8 -1.1**
KAF pmax pmax
comp=Z,37nm,1.2s,mb5.2
KAF Kangasniemi 80.12 16 *eP* **P 18 54 23.8 -1.1**
comp=Z,37nm,1.2s,mb5.2
KAF Kangasniemi 80.12 16 *ep* **P 18 54 23.8 -1.1**
comp=Z,37nm,1.2s,mb5.2,baz=326,slow=5.3
MJAR Matsushiro Arr 80.37 308 P **P 18 54 26.0 -0.8**
comp=Z,29nm,1.1s,mb5.1,baz=42,slow=3.9,SNR=59
MJAR LR LR 19 21 16.8
comp=Z,704nm,21.6s,MS5.0,baz=160,slow=29
MAJO Matsushiro 80.38 308 *eP* **P 18 54 25.9 -0.9**
MAJO pmax pmax
comp=Z,129nm,1.4s,mb5.7
MAJO Matsushiro 80.38 308 *eP* **P 18 54 25.9 -0.8**
comp=Z,129nm,1.4s,mb5.7
MAT Matsushiro 80.38 308 P **P 18 54 26.0 -0.8**
MAT S S 19 04 36.0 +3.9
JOF Joensuu 80.48 14 *eP* **P 18 54 26.0 -0.8**
JOF pmax pmax
comp=Z,32nm,0.9s,mb5.2
JOF Joensuu 80.48 14 *ep* **P 18 54 26.0 -0.8**
comp=Z,32nm,0.9s,mb5.2
EPON Pontenova 80.57 44 P **P 18 54 28.9 +1.2**
comp=Z,78nm,2.2s,mb5.2
FINES FINESS Array B 80.65 17 P **P 18 54 26.9 -0.8**
comp=Z,17nm,0.9s,mb5.0,baz=1.8,slow=5.9,SNR=31
FINES pP pP 18 54 32.2 -0.9
comp=Z,18nm,0.8s,baz=329,slow=4.1,SNR=15
FINES LR LR 19 33 07.6
comp=Z,1µm,19.2s,MS5.3,baz=336,slow=38
FINES FINESS Array B 80.65 17 P **P 18 54 26.9 -0.8**
FINES *PP pP 18 54 32.2 -0.9
FINES FINESS Array B 80.65 17 P **P 18 54 26.9 -0.8**
FINES pP pP 18 54 32.2 -0.9
FINES LR LR 19 33 07.6
FLN La Foliniere 80.67 37 *eP* **P 18 54 27.8 -0.3**
comp=Z,246nm,1.8s,mb5.5
FLN *e*MLR MLR
comp=Z,2µm,20.5s,MS5.1
FLN La Foliniere 80.67 37 *eP* **P 18 54 27.8 -0.3**
FLN pmax pmax
comp=Z,123nm,1.8s,mb5.5
FLN MLR MLR
comp=Z,2µm,20.5s,MS5.4
FLN La Foliniere 80.67 37 *eP* **P 18 54 27.8 -0.3**
comp=Z,123nm,1.8s,mb5.5
FLN LR LR
comp=Z,2µm,20.5s,MS5.4
GRR Gorron 80.73 37 *eP* **P 18 54 28.2 -0.3**
comp=Z,104nm,1.2s,mb5.3
GRR Gorron 80.73 37 *eP* **P 18 54 28.2 -0.3**
GRR pmax pmax
comp=Z,52nm,1.2s,mb5.3
GRR Gorron 80.73 37 *eP* **P 18 54 28.2 -0.3**
comp=Z,52nm,1.2s,mb5.3
MDJ Mudanjiang 80.79 318 P **P 18 54 27.8 -1.0**
MDJ pP pP 18 54 30.3 -3.9
MDJ sP sP 18 54 32.3 -3.9
MDJ PP PP 18 57 30.5 -2.0
MDJ S S 19 04 34.5 -1.7
MDJ sS sS 19 04 42.0 -3.1
MDJ ScS ScS 19 04 53.5 -1.8
MDJ SS SS 19 09 50.3 +1.6
MDJ pmax pmax
comp=Z,18nm,1.1s,mb4.9
MDJ pmax pmax
comp=Z,230nm,8.0s
MDJ LR LR
comp=N,410nm,14.4s,MS5.0
MDJ LR LR
comp=E,370nm,14.4s,MS5.0
MDJ LR LR
comp=Z,550nm,15.9s,MS5.0
MDJ Mudanjiang 80.79 318 *eP* **P 18 54 27.1 -1.7**
comp=Z,13nm,0.9s,mb4.8
ELOB Lobios 80.93 45 P **P 18 54 29.8 +0.1**
comp=Z,7.1nm,0.8s,mb4.7
LDF La Druitiere 80.97 37 *eP* **P 18 54 29.3 -0.4**
comp=Z,15nm,0.8s,mb4.7
LDF La Druitiere 80.97 37 *eP* **P 18 54 29.3 -0.4**
LDF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
LDF La Druitiere 80.97 37 *eP* **P 18 54 29.3 -0.4**
comp=Z,7.6nm,0.8s,mb4.7
PCAB Cabril 81.04 45 *eP* **P 18 54 30.9 +0.7**
comp=Z,78nm,1.3s,mb5.5
COP Copenhagen 81.27 26 *i* P **P 18 54 33.3 +2.1**
COP MLR MLR
comp=Z,670nm,18.0s,MS5.0
COP Copenhagen 81.27 26 *i* P **P 18 54 33.3 +2.1**
COP
comp=Z,660nm,18.0s
PVRL Vila Real 81.49 46 *eP* **P 18 54 32.3 -0.3**
comp=Z,93nm,1.5s,mb5.5
ECAL Calabor 81.66 45 P **P 18 54 33.6 +0.1**
comp=Z,18nm,1.0s,mb4.9
EARI Arriondas 81.69 43 P **P 18 54 33.6 0.0**
comp=Z,19nm,1.0s,mb5.0
PVIS Viseu 81.73 46 *eP* **P 18 54 32.9 -1.0**
comp=Z,88nm,1.5s,mb5.5
SNF Seneffe 81.75 33 P **P 18 54 34.5 +0.7**
comp=Z,16nm,2.1s,mb4.6
SNF AP pP 18 54 39.2 0.0
BSEG Bad Segeberg 81.81 28 *eP* **P 18 54 33.8 -0.2**
comp=Z,32nm,1.2s,mb5.1
BSEG *e*S S 19 04 47.4 +1.0
BSEG Bad Segeberg 81.81 28 *eP* **P 18 54 33.8 -0.2**
BSEG *e*S S 19 04 47.4 +1.0
BSEG pmax pmax
comp=Z,32nm,1.2s,mb5.1
PMAFR Mafra 81.95 48 *e*PP PP 18 57 34.3 -7.9
PMAFR *e*S S 19 04 50.9 +2.5
PMAFR *e*LR LR 19 21 54.8
comp=Z,1µm,18.0s
MVO Moncorvo 81.97 45 *eP* **P 18 54 35.0 -0.2**
comp=Z,73nm,1.4s,mb5.4
MVO Moncorvo 81.97 45 *e*PP PP 18 57 44.3 +2.0
MVO *e*S S 19 04 51.6 +3.1
MVO *e*LR LR 19 21 14.2
comp=Z,1µm,18.0s
MVO Moncorvo 81.97 45 P **P 18 54 36.2 +1.0**
IBBN Ibbenburen 81.98 30 *e*S S 19 04 49.0 +0.8
BAIF Baives 82.03 33 *eP* **P 18 54 35.1 -0.2**
comp=Z,45nm,1.1s,mb5.0
BAIF Baives 82.03 33 *eP* **P 18 54 35.1 -0.2**
BAIF pmax pmax
comp=Z,23nm,1.1s,mb5.0
BAIF Baives 82.03 33 *eP* **P 18 54 35.1 -0.2**
comp=Z,23nm,1.1s,mb5.0
PTOM Tomar 82.09 47 *eP* **P 18 54 34.5 -1.3**
comp=Z,81nm,1.5s,mb5.4
MTE Manteigas 82.13 46 *eP* **P 18 54 35.9 -0.1**
comp=Z,70nm,1.3s,mb5.4
MTE *e*S S 19 04 53.7 +3.4
MTE *e*LR LR 19 21 09.3
comp=Z,963nm,18.0s
MTE Manteigas 82.13 46 *eP* **P 18 54 35.0 -1.1**
comp=Z,47nm,1.1s,mb5.3
LIS Lisbon 82.18 48 *eP* **P 18 54 34.6 -1.6**
LIS AMS AMS 19 24 24.6
comp=N,2µm,18.7s
LIS Lisbon 82.18 48 *eP* **P 18 54 34.6 -1.7**
DOU Dourbes 82.18 33 P **P 18 54 36.0 -0.1**
comp=Z,15nm,2.3s,mb4.5
DOU AP pP 18 54 41.1 -0.3
BCLA Clavier 82.27 33 P **P 18 54 36.5 0.0**
comp=Z,21nm,1.6s,mb4.8
BCLA AP pP 18 54 41.5 -0.4
GIVF Givet 82.28 33 *eP* **P 18 54 36.5 -0.1**
comp=Z,101nm,1.3s,mb5.3
GIVF Givet 82.28 33 *eP* **P 18 54 36.5 -0.1**
GIVF pmax pmax
comp=Z,50nm,1.3s,mb5.3
GIVF Givet 82.28 33 *eP* **P 18 54 36.5 -0.1**
comp=Z,50nm,1.3s,mb5.3
MFF Saint Martin d 82.28 38 *eP* **P 18 54 36.5 -0.2**
comp=Z,115nm,1.1s,mb5.4
MFF Saint Martin d 82.28 38 *eP* **P 18 54 36.5 -0.2**
MFF pmax pmax
comp=Z,58nm,1.1s,mb5.4
MFF Saint Martin d 82.28 38 *eP* **P 18 54 36.5 -0.2**
comp=Z,58nm,1.1s,mb5.4
BUG Bochum--Univer 82.40 31 *e*S S 19 04 54.3 +1.7
MEM Membach 82.45 32 P **P 18 54 38.0 +0.5**
comp=Z,21nm,1.8s,mb4.8
PCBR Castelo Branco 82.52 47 *eP* **P 18 54 37.2 -0.9**
comp=Z,56nm,1.2s,mb5.5
BSD Bornholm Skovb 82.61 25 *i* P **P 18 54 36.6 -1.6**
BSD MLR MLR
comp=Z,1µm,19.0s,MS5.2
BSD Bornholm Skovb 82.61 25 *i* P **P 18 54 36.6 -1.6**
BSD
comp=Z,1µm,19.0s
HIA Hailar 82.73 326 *eP* **P 18 54 38.1 -0.8**
HIA pmax pmax
comp=Z,62nm,1.3s
HIA Hailar 82.73 326 *eP* **P 18 54 38.1 -0.8**
comp=Z,62nm,1.3s,mb5.5
ELAN Lanestosa 82.74 42 P **P 18 54 40.9 +1.7**
comp=Z,31nm,1.0s,mb5.3
NRDL Niedersach Rie 82.81 29 *eP* **P 18 54 38.5 -0.8**
comp=Z,32nm,1.4s,mb5.2
NRDL *e*S S 19 04 59.0 +2.3
PMRV Marv??o 82.83 47 *eP* **P 18 54 38.7 -1.0**
comp=Z,50nm,1.1s,mb5.5
PMRV *e*S S 19 04 59.9 +2.5
PMRV *e*LR LR 19 21 31.1
comp=Z,1µm,20.0s
EVOP Sao Brissos 82.93 48 *eP* **P 18 54 39.5 -0.7**
EVOP *e*S S 19 04 55.8 -2.6
EVOP AMS AMS 19 32 15.3
comp=Z,1µm,19.7s,MS5.2
EVOP Sao Brissos 82.93 48 *eP* **P 18 54 39.4 -0.8**
EVOP *e*S S 19 04 55.8 -2.7
CPUP Villa Florida 82.94 128 P **P 18 54 40.2 -0.1**
comp=Z,3.4nm,0.6s,mb4.5,baz=312,slow=6.7,SNR=9.5
CPUP pP pP 18 54 45.6 0.0
comp=Z,29nm,0.8s,baz=292,slow=4.8,SNR=19
CPUP Villa Florida 82.94 128 P **P 18 54 40.2 -0.1**
CPUP *PP pP 18 54 45.6 0.0
CPUP Villa Florida 82.94 128 P **P 18 54 40.2 -0.1**
CPUP pP pP 18 54 45.6 0.0
CBIJ Chichi jima 82.94 298 LR LR 19 22 09.8
comp=Z,805nm,21.8s,MS5.0,baz=234,slow=29
EVO Evora 83.00 48 ⇑*iP* **P 18 54 39.3 -1.3**
comp=Z,49nm,0.9s,mb5.3
EVO *e*MLR MLR
comp=Z,1µm,17.2s,MS5.0
EVO Evora 83.00 48 *eP* **P 18 54 39.7 -0.9**
comp=Z,34nm,1.5s,mb5.2
PESTR Estremoz 83.05 48 *eP* **P 18 54 39.4 -1.4**
comp=Z,33nm,1.4s,mb5.2
PESTR *e*S S 19 04 59.5 -0.2
PESTR *e*LR LR 19 21 31.2
comp=Z,1µm,18.0s
PTEO Sao Teotonio 83.16 49 *eP* **P 18 54 42.5 +1.1**
comp=Z,70nm,1.4s,mb5.5
WLF Walferdange 83.19 33 P **P 18 54 41.9 +0.5**
comp=Z,40nm,1.6s,mb5.2
WLF AP pP 18 54 46.7 0.0
WLF Walferdange 83.19 33 *eP* **P 18 54 40.8 -0.6**
WLF pmax pmax
comp=Z,67nm,1.3s,mb5.5
WLF Walferdange 83.19 33 *eP* **P 18 54 40.8 -0.6**
comp=Z,67nm,1.3s,mb5.5
EPLA Plasencia 83.22 46 P **P 18 54 41.6 -0.1**
EPLA pmax pmax
comp=Z,19nm,0.8s,mb5.2
EPLA Plasencia 83.22 46 P **P 18 54 41.6 -0.1**
comp=Z,19nm,0.8s,mb5.2
HYF Humbligny 83.23 36 *eP* **P 18 54 41.7 +0.1**
MESJ Messejana 83.29 49 *eP* **P 18 54 40.6 -1.5**
MESJ *e*S S 19 04 59.1 -3.1
MESJ AMS AMS 19 32 19.1
comp=Z,1µm,24.5s,MS5.2
MESJ Messejana 83.29 49 *eP* **P 18 54 40.5 -1.6**
MESJ *e*S S 19 04 59.0 -3.2
PFVI Vila Bisbo 83.34 50 *eP* **P 18 54 42.0 -0.4**
comp=Z,119nm,1.6s,mb5.7
PFVI *e*LR LR 19 21 59.6
comp=Z,1µm,20.0s
MORF Marmelete 83.35 49 *eP* **P 18 54 42.3 -0.1**
comp=Z,62nm,1.8s,mb5.3
MORF *e*S S 19 05 13.1 +10
MORF *e*LR LR 19 22 50.8
comp=Z,1µm,20.0s
MORF Marmelete 83.35 49 *eP* **P 18 54 40.6 -1.8**
MORF *e*S S 19 05 01.7 -1.0
PBEJ Beja 83.40 48 *eP* **P 18 54 44.3 +1.7**
comp=Z,22nm,1.5s,mb5.0
CIT Chita 83.40 331 *eP* **P 18 54 42.2 -0.2**
CIT *e* 18 54 51.6
CIT pmax pmax
comp=Z,132nm,1.5s,mb5.7
CLZ Clausthal 83.41 29 *eP* **P 18 54 42.6 +0.2**
comp=Z,63nm,1.4s,mb5.5
CLZ *e*S S 19 05 05.9 +3.1
CLZ Clausthal 83.41 29 *eP* **P 18 54 42.6 +0.2**
CLZ *e*S S 19 05 05.9 +3.1
CLZ pmax pmax
comp=Z,63nm,1.4s,mb5.5
VSU Vasula 83.42 18*c iP* **P 18 54 41.8 -0.5**
VSU pmax pmax
comp=Z,25nm,1.1s,mb5.2
EBAD Badajoz 83.47 47 P **P 18 54 43.5 +0.5**
comp=Z,7.6nm,0.8s,mb4.8
MEZF Maizieres J'vi 83.52 34 *eP* **P 18 54 42.9 -0.2**
comp=Z,120nm,1.3s,mb5.5
MEZF Maizieres J'vi 83.52 34 *eP* **P 18 54 42.9 -0.2**
comp=Z,120nm,1.3s,mb5.9
PCVE Castro Verde 83.53 49 *eP* **P 18 54 45.1 +1.8**
comp=Z,44nm,1.8s,mb5.3
PCVE *e*S S 19 05 06.5 +1.9
PCVE *e*LR LR 19 23 07.1
comp=Z,928nm,16.0s
RUP Ruppelstein 83.58 32 *eP* **P 18 54 43.4 +0.1**
CN2 Changchun 83.60 319 ⇑P **P 18 54 41.3 -2.2**
CN2 *es*P sP 18 54 48.0 -2.9
CN2 *e*S S 19 05 00.0 -5.0
CN2 pmax pmax
comp=Z,10.0nm,1.1s,mb4.9
CN2 pmax pmax
comp=Z,300nm,5.0s
CN2 LR LR
comp=N,500nm,15.0s,MS5.2
CN2 LR LR
comp=E,600nm,15.0s,MS5.2
CN2 LR LR
comp=Z,800nm,17.0s,MS5.2
TCF Toulx Ste Croi 83.69 37⇑*iP* **P 18 54 43.6 -0.4**
comp=Z,98nm,1.2s,mb5.5
TCF Toulx Ste Croi 83.69 37⇑*iP* **P 18 54 43.6 -0.4**
TCF pmax pmax
comp=Z,49nm,1.2s,mb5.5
TCF Toulx Ste Croi 83.69 37⇑*iP* **P 18 54 43.6 -0.4**
comp=Z,49nm,1.2s,mb5.5
SSF Saint Saulge 83.80 36⇑*iP* **P 18 54 44.2 -0.3**
comp=Z,131nm,1.2s,mb5.6
SSF Saint Saulge 83.80 36⇑*iP* **P 18 54 44.2 -0.3**
SSF pmax pmax
comp=Z,65nm,1.2s,mb5.6
SSF Saint Saulge 83.80 36⇑*iP* **P 18 54 44.2 -0.3**
comp=Z,65nm,1.2s,mb5.6
TNS Taunus Mts 83.80 31 *eP* **P 18 54 44.4 -0.1**
comp=Z,145nm,2.1s,mb5.7
TNS *e*S S 19 05 10.7 +3.8
TNS Taunus Mts 83.80 31 *eP* **P 18 54 44.4 -0.1**
TNS *e*S S 19 05 10.7 +3.8
TNS pmax pmax
comp=Z,145nm,2.1s,mb5.7
EALK Alkurruntz 83.81 41 P **P 18 54 44.8 +0.1**
comp=Z,58nm,1.4s,mb5.5
PBAR Barrancos 83.82 48 *eP* **P 18 54 44.6 -0.2**
comp=Z,59nm,1.6s,mb5.5
PBAR *e*S S 19 05 09.3 +1.8
PBAR *e*LR LR 19 21 37.0
comp=Z,1µm,20.0s
BGF Bois d'Agland 83.82 37⇑*iP* **P 18 54 44.3 -0.4**
comp=Z,157nm,1.2s,mb5.7
BGF Bois d'Agland 83.82 37⇑*iP* **P 18 54 44.3 -0.4**
BGF pmax pmax
comp=Z,79nm,1.2s,mb5.7
BGF Bois d'Agland 83.82 37⇑*iP* **P 18 54 44.3 -0.4**
comp=Z,79nm,1.2s,mb5.7
LOR Lormes 83.83 36⇑*iP* **P 18 54 44.4 -0.3**
comp=Z,180nm,1.2s,mb5.8
LOR *e*MLR MLR
comp=Z,2µm,20.5s,MS5.2
LOR Lormes 83.83 36⇑*iP* **P 18 54 44.4 -0.3**
LOR pmax pmax
comp=Z,90nm,1.2s,mb5.8
LOR MLR MLR
comp=Z,2µm,20.5s,MS5.5
LOR Lormes 83.83 36⇑*iP* **P 18 54 44.4 -0.3**
comp=Z,90nm,1.2s,mb5.8
LOR LR LR
comp=Z,2µm,20.5s,MS5.5
PBDV Barranco-do-Ve 83.84 49 *e*PP PP 18 57 54.4 -3.3
PBDV *e*S S 19 05 11.9 +4.2
PBDV *e*LR LR 19 21 54.5
comp=Z,982nm,16.0s
LFF La Frestale 83.86 39 *eP* **P 18 54 44.9 0.0**
comp=Z,155nm,1.3s,mb5.7
LFF La Frestale 83.86 39 *eP* **P 18 54 44.9 0.0**
LFF pmax pmax
comp=Z,78nm,1.3s,mb5.7
LFF La Frestale 83.86 39 *eP* **P 18 54 44.9 0.0**
comp=Z,78nm,1.3s,mb5.7
PVAQ Vaqueiros 83.87 49 *eP* **P 18 54 44.7 -0.4**
comp=Z,60nm,1.7s,mb5.5
PVAQ Vaqueiros 83.87 49 *e*PP PP 18 57 55.1 -2.9
PVAQ *e*S S 19 05 12.1 +4.0
PVAQ *e*LR LR 19 21 42.1
comp=Z,791nm,16.0s
AVF Avril sur Loir 83.91 36⇑*iP* **P 18 54 44.5 -0.6**
comp=Z,121nm,1.2s,mb5.6
AVF Avril sur Loir 83.91 36⇑*iP* **P 18 54 44.5 -0.6**
AVF pmax pmax
comp=Z,61nm,1.2s,mb5.6
AVF Avril sur Loir 83.91 36⇑*iP* **P 18 54 44.5 -0.6**
comp=Z,60nm,1.2s,mb5.6
EGRO El Granado 83.94 49 P **P 18 54 44.0 -1.4**
comp=Z,8.3nm,0.8s,mb4.9
GUD Guadarrama 83.99 44 P **P 18 54 46.2 +0.6**
GUD pmax pmax
comp=Z,27nm,1.0s,mb5.3
GUD Guadarrama 83.99 44 P **P 18 54 46.2 +0.6**
comp=Z,27nm,1.0s,mb5.3
RJF Les Rejaudoux 84.02 38⇑*iP* **P 18 54 45.3 -0.4**
comp=Z,306nm,1.7s,mb5.8
RJF *e*MLR MLR
comp=Z,3µm,19.2s,MS5.4
RJF Les Rejaudoux 84.02 38⇑*iP* **P 18 54 45.3 -0.4**
RJF pmax pmax
comp=Z,153nm,1.7s,mb5.8
RJF MLR MLR
comp=Z,3µm,19.3s,MS5.7
RJF Les Rejaudoux 84.02 38⇑*iP* **P 18 54 45.3 -0.4**
comp=Z,153nm,1.7s,mb5.8
RJF LR LR
comp=Z,3µm,19.3s,MS5.7
UBBA Unterbreizbach 84.02 30 *e*S S 19 05 11.5 +2.5
SJPF Ste Jean 84.03 41 *eP* **P 18 54 45.8 0.0**
comp=Z,60nm,1.4s,mb5.2
SJPF Ste Jean 84.03 41 *eP* **P 18 54 45.8 0.0**
SJPF pmax pmax
comp=Z,30nm,1.4s,mb5.2
SJPF Ste Jean 84.03 41 *eP* **P 18 54 45.8 0.0**
comp=Z,30nm,1.4s,mb5.2
THEF They Montfort 84.15 34 *eP* **P 18 54 46.0 -0.3**
LARF Larrau 84.22 41 *eP* **P 18 54 46.7 0.0**
SMF Signal de Mont 84.25 36⇑*iP* **P 18 54 46.2 -0.7**
comp=Z,151nm,1.2s,mb5.7
SMF Signal de Mont 84.25 36⇑*iP* **P 18 54 46.2 -0.7**
SMF pmax pmax
comp=Z,75nm,1.2s,mb5.7
SMF Signal de Mont 84.25 36⇑*iP* **P 18 54 46.2 -0.7**
comp=Z,75nm,1.2s,mb5.7
RUE Ruedersdorf 84.26 27 *eP* **P 18 54 46.4 -0.4**
comp=Z,48nm,1.2s,mb5.5
RUE *e*S S 19 05 12.5 +1.1
EMIN Mina Concepcio 84.30 48 P **P 18 54 47.4 +0.1**
comp=Z,26nm,1.1s,mb5.3
TOD Tromm 84.42 32 *eP* **P 18 54 47.1 -0.5**
LANF Langenberg 84.44 33 *eP* **P 18 54 47.3 -0.4**
PYM Petit Puy Mans 84.47 37 *eP* **P 18 54 47.1 -0.8**
HAU Haudompre 84.48 34⇑*iP* **P 18 54 47.6 -0.4**
comp=Z,105nm,1.3s,mb5.5
HAU *e*MLR MLR
comp=Z,2µm,21.8s,MS5.2
HAU Haudompre 84.48 34⇑*iP* **P 18 54 47.6 -0.4**
HAU pmax pmax
comp=Z,53nm,1.3s,mb5.5
HAU MLR MLR
comp=Z,2µm,21.8s,MS5.5
HAU Haudompre 84.48 34⇑*iP* **P 18 54 47.6 -0.4**
comp=Z,52nm,1.3s,mb5.5
HAU LR LR
comp=Z,2µm,21.8s,MS5.5
FRNF Fournols 84.49 38 *eP* **P 18 54 47.8 -0.3**
REYF Montagne du Re 84.52 41 *eP* **P 18 54 48.1 -0.2**
ETSF Etsaut 84.54 41⇑*iP* **P 18 54 48.8 +0.4**
comp=Z,81nm,1.1s,mb5.5
ETSF Etsaut 84.54 41⇑*iP* **P 18 54 48.8 +0.4**
ETSF pmax pmax
comp=Z,40nm,1.1s,mb5.5
ETSF Etsaut 84.54 41⇑*iP* **P 18 54 48.8 +0.4**
comp=Z,40nm,1.1s,mb5.5
CAF Calviac 84.56 38⇑*iP* **P 18 54 48.0 -0.4**
comp=Z,122nm,1.0s,mb5.7
CAF Calviac 84.56 38⇑*iP* **P 18 54 48.0 -0.4**
CAF pmax pmax
comp=Z,61nm,1.0s,mb5.7
CAF Calviac 84.56 38⇑*iP* **P 18 54 48.0 -0.4**
comp=Z,61nm,1.0s,mb5.7
PAB San Pablo 84.58 45 *eP* **P 18 54 48.2 -0.5**
PAB pmax pmax
comp=Z,60nm,1.4s,mb5.5
PAB San Pablo 84.58 45 *eP* **P 18 54 48.2 -0.5**
comp=Z,60nm,1.4s,mb5.5
CDF Champ du Feu 84.61 33⇑*iP* **P 18 54 48.2 -0.4**
comp=Z,73nm,1.4s,mb5.3
CDF Champ du Feu 84.61 33⇑*iP* **P 18 54 48.2 -0.4**
CDF pmax pmax
comp=Z,37nm,1.4s,mb5.3
CDF Champ du Feu 84.61 33⇑*iP* **P 18 54 48.2 -0.4**
comp=Z,37nm,1.4s,mb5.3

ECH Echery 84.70 33 *e*P **P 18 54 47.5 -1.6**
ECH pmax pmax
comp=Z,15nm,1.8s,mb4.8
ECH Echery 84.70 33 *e*P **P 18 54 47.5 -1.6**
comp=Z,15nm,1.8s,mb4.8
ESDC Sonseca Array 84.72 45 P **P 18 54 48.5 -0.9**
comp=Z,12nm,0.9s,mb5.0,baz=310,slow=5.0,SNR=34
ESDC pP pP 18 54 54.1 -0.7
comp=Z,17nm,1.1s,baz=313,slow=5.0,SNR=12
ESDC LR LR 19 30 11.6
comp=Z,800nm,19.1s,MS5.1,baz=290,slow=34
ESDC Sonseca Array 84.72 45 P **P 18 54 49.3 -0.1**
comp=Z,11nm,1.0s,mb5.0
ESLA Sonseca Array 84.72 45 *e*P **P 18 54 48.1 -1.2**
comp=Z,33nm,1.6s,mb5.2
MOX Moxa 84.82 30 *e*P **P 18 54 49.1 -0.5**
MOX *e* pP 18 54 54.8 -0.2
comp=Z,46nm,1.6s
MOX *e* 18 58 12.0
MOX
comp=Z,3μm,18.0s
MOX Moxa 84.82 30 *e*P **P 18 54 49.3 -0.3**
comp=Z,38nm,1.4s,mb5.3
MOX *e*S S 19 05 18.8 +1.8
MOX Moxa 84.82 30 *e*P **P 18 54 49.1 -0.5**
MOX *e* pP 18 54 54.8 -0.2
MOX *e* 18 58 12.0
MOX pmax pmax
comp=Z,46nm,1.6s,mb5.4
MOX MLR MLR
comp=Z,3μm,18.0s,MS5.7
MOX Moxa 84.82 30 *e*P **P 18 54 49.1 -0.5**
comp=Z,46nm,1.6s,mb5.4
MOX *e* pP 18 54 54.8 -0.2
MOX *e* 18 58 12.0
MOX LR LR
comp=Z,3μm,18.0s,MS5.7
HINF Hinteralfeld 84.85 34 *e*P **P 18 54 49.3 -0.6**
comp=Z,87nm,1.4s,mb5.4
HINF Hinteralfeld 84.85 34 *e*P **P 18 54 49.3 -0.6**
HINF pmax pmax
comp=Z,44nm,1.4s,mb5.4
HINF Hinteralfeld 84.85 34 *e*P **P 18 54 49.3 -0.6**
comp=Z,44nm,1.4s,mb5.4
VIEF Viey 84.87 41 *e*P **P 18 54 50.2 +0.2**
CLL Collm 84.87 28 *e*P **P 18 54 49.1 -0.8**
comp=Z,30nm,1.2s,mb5.3
CLL *e*S S 19 05 18.2 +0.7
CLL Collm 84.87 28⇑*i*P **P 18 54 49.1 -0.8**
CLL *i* *SP sP 18 54 54.4 -2.8
CLL *e*S S 19 05 17.0 -0.5
CLL pmax pmax
comp=Z,20nm,1.3s,mb5.1
CLL MLR MLR
comp=Z,2μm,18.0s,MS5.5
CLL Collm 84.87 28⇑*i*P **P 18 54 49.1 -0.8**
comp=Z,20nm,1.3s,mb5.1
CLL *i* sP sP 18 54 54.4 -2.8
CLL *e*S S 19 05 17.0 -0.5
CLL LR LR
comp=Z,2μm,18.0s,MS5.5
CLL Collm 84.87 28⇑*i*P **P 18 54 49.1 -0.8**
comp=Z,20nm,1.3s,mb5.1
CLL *i* sP sP 18 54 54.4 -2.8
comp=Z,30nm,1.2s
CLL *e* 18 55 14.0
CLL *e*PP PP 18 58 03.0 -2.6
CLL *e*S S 19 05 17.0 -0.5
CLL *e*PS 19 06 13.0
CLL *e*SS SS 19 11 06.0 +17
CLL *e* 19 12 00.0
CLL *e*SSS 19 14 48.0
CLL *e*SSSS 19 17 12.0
CLL LmH 19 29 00.0
comp=N,2μm,20.6s
CLL LmH 19 29 00.0
comp=E,900nm,19.9s
CLL L 19 33 00.0
comp=Z,2μm,18.0s
ECAB El Cabril 84.87 47 P **P 18 54 50.1 0.0**
comp=Z,15nm,1.0s,mb5.1
GKP Gorka Klasztor 84.91 25 *e*P **P 18 54 50.7 +0.7**
GKP LMZ 19 36 28.2
comp=Z,2μm,16.9s
EPF Esparros 84.94 40 *e*P **P 18 54 50.2 -0.2**
EPF pmax pmax
comp=Z,53nm,1.4s,mb5.5
EPF Esparros 84.94 40 *e*P **P 18 54 50.2 -0.2**
comp=Z,53nm,1.4s,mb5.5
LBL Lubilhac 84.95 37 *e*P **P 18 54 50.6 +0.2**
MOF Molkenrain 84.96 34 *e*P **P 18 54 49.0 -1.4**
EBIE Bielsa 85.07 41 P **P 18 54 51.9 +0.9**
comp=Z,20nm,1.0s,mb5.2
ETOR Torete 85.09 43 P **P 18 54 50.5 -0.7**
ETOR pmax pmax
comp=Z,23nm,0.9s,mb5.3
ETOR Torete 85.09 43 P **P 18 54 50.5 -0.6**
comp=Z,23nm,0.9s,mb5.3
RESF Ens 85.09 41 *e*P **P 18 54 51.7 +0.5**
BFO Black Forest 85.15 33 *e*P **P 18 54 50.6 -0.7**
comp=Z,29nm,1.4s,mb5.2
BFO *e*PP PP 18 58 07.7 -0.3
BFO *e*S S 19 05 21.7 +1.3
BFO Black Forest 85.15 33 *e*P **P 18 54 50.6 -0.7**
BFO *e* 18 58 07.7
BFO *e*S S 19 05 21.7 +1.3
BFO pmax pmax
comp=Z,29nm,1.4s,mb5.2
STU Stuttgart 85.21 32 *e*P **P 18 54 51.3 -0.3**
comp=Z,16nm,0.8s,mb5.2
STU *e*S S 19 05 23.0 +2.1
WERD Werda 85.26 29 *e*P **P 18 54 51.0 -0.8**
comp=Z,22nm,1.4s,mb5.1
EADA Adamuz 85.33 47 P **P 18 54 52.5 +0.1**
comp=Z,26nm,1.0s,mb5.3
GUNZ Gunzen 85.33 29 *e*P **P 18 54 51.8 -0.4**
comp=Z,47nm,1.6s,mb5.4
FELD Feldberg im Sc 85.34 33 *e*P **P 18 54 51.4 -0.9**
TANN Tannenbergstha 85.35 29 *e*P **P 18 54 51.8 -0.5**
comp=Z,24nm,1.4s,mb5.1
TANN *e*S S 19 05 23.8 +1.6
CABF La Chapelle 85.37 35 *e*P **P 18 54 52.3 -0.1**
comp=Z,79nm,1.3s,mb5.4
CABF La Chapelle 85.37 35 *e*P **P 18 54 52.3 -0.1**
CABF pmax pmax
comp=Z,40nm,1.3s,mb5.4
CABF La Chapelle 85.37 35 *e*P **P 18 54 52.3 -0.1**
comp=Z,40nm,1.3s,mb5.4
ESPR Espera 85.37 48 P **P 18 54 53.9 +1.3**
comp=Z,15nm,1.1s,mb5.0
ESAC San Caprasio 85.38 42 P **P 18 54 53.4 +0.8**
comp=Z,49nm,1.0s,mb5.6
GRA1 Grafenberg Arr 85.39 30 *e*P **P 18 54 52.5 0.0**
comp=Z,41nm,1.1s,mb5.5
GRA1 *e*pP pP 18 54 57.1 -0.8
GRA1 *e*S S 19 05 25.2 +2.5
GRA1 LR LR
comp=Z,2μm,20.1s,MS5.6
GRF Grafenberg Arr 85.39 30 *e*P **P 18 54 52.5 0.0**
comp=Z,41nm,1.1s,mb5.5
GRF *e*pP pP 18 54 57.1 -0.8
GRF *e*S S 19 05 25.2 +2.5
GRF *e*L 19 31 34.6
comp=Z,3μm,20.1s
GRF Grafenberg Arr 85.39 30 *e*P **P 18 54 52.5 0.0**
GRF *e**PP pP 18 54 57.1 -0.8
GRF *e*S S 19 05 25.2 +2.5
GRF pmax pmax
comp=Z,41nm,1.1s,mb5.5
GRF MLR MLR
comp=Z,2μm,20.1s,MS5.6
MLS Moulis 85.40 40 *e*P **P 18 54 51.3 -1.4**
BBS Basel-Blauen 85.41 34 *e*P **P 18 54 51.9 -0.8**
NKC Novy Kostel 85.48 29 *e*P **P 18 54 53.1 +0.2**
NKC *e**PP pP 18 54 58.3 0.0
NKC *e*S S 19 05 19.8 -3.8
NKC MLR MLR
comp=Z,4μm,15.5s,MS5.9
NKC Novy Kostel 85.48 29 *e*P **P 18 54 53.1 +0.2**
NKC *e*pP pP 18 54 58.3 0.0
NKC *e*SKS 19 05 19.8
NKC AMS AMS 19 34 50.0
comp=Z,4μm,15.5s

SPAK Spaichingen-Ko 85.52 33 *e*P **P 18 54 52.9 -0.3**
SSB Saint Sauveur 85.56 37 *e*P **P 18 54 52.6 -0.9**
SSB pmax pmax
comp=Z,29nm,1.4s,mb5.3
SSB Saint Sauveur 85.56 37 *e*P **P 18 54 52.6 -0.9**
comp=Z,29nm,1.4s,mb5.3
BRG Berggiesshubel 85.58 28 *e*P **P 18 54 52.9 -0.5**
comp=Z,42nm,1.2s,mb5.5
BRG *e*S S 19 05 24.8 +0.3
BRG Berggiesshubel 85.58 28 *i* P **P 18 54 52.7 -0.8**
comp=Z,22nm,1.2s,mb5.3
BRG *i* PCP PcP 18 54 58.1 +1.8
BRG comp=Z,42nm,1.2s *i* 18 55 17.9
BRG comp=Z,19nm,1.1s *e*PP PP 18 57 55.2 -16
BRG comp=Z,9.9nm,1.7s S S 19 05 19.0 -5.5
BRG PS 19 06 21.0
BRG SS SS 19 10 49.0 -10
BRG *e*PKPPKP 19 21 01.9
comp=Z,4.0nm,1.0s
BRG comp=N,1μm,15.2s
BRG comp=E,1μm,16.0s
BRG comp=Z,3μm,16.3s
BRG Berggiesshubel 85.58 28 *i* P **P 18 54 52.7 -0.7**
BRG *i* pP 18 54 58.1 -0.7
BRG S S 19 05 19.0 -5.5
BRG PS 19 06 21.0
BRG pmax pmax
comp=Z,14nm,1.2s,mb5.1
BRG pmax pmax
comp=Z,25nm,1.2s,mb5.3
BRG pmax pmax
comp=Z,11nm,1.1s,mb5.0
BRG pmax pmax
comp=Z,6.0nm,1.7s,mb4.5
BRG pmax pmax
comp=Z,2.0nm,1.0s,mb4.3
BRG MLR MLR
comp=N,745nm,15.2s,MS5.4
BRG MLR MLR
comp=E,855nm,16.0s,MS5.4
BRG MLR MLR
comp=Z,2μm,16.3s,MS5.5
SALF Salau 85.58 40 *e*P **P 18 54 53.7 +0.1**
EBAN Banos Encina 85.81 46 P **P 18 54 54.6 -0.2**
EBAN pmax pmax
comp=Z,3.0nm,0.4s,mb4.9
EBAN Banos Encina 85.81 46 P **P 18 54 54.6 -0.2**
comp=Z,2.7nm,0.4s,mb4.8
CSOR Sort 85.82 41 P **P 18 54 55.0 +0.2**
comp=Z,20nm,1.1s,mb5.3
ELUQ Luque 85.90 47 P **P 18 54 54.8 -0.5**
ELUQ pmax pmax
comp=Z,18nm,1.1s,mb5.2
ELUQ Luque 85.90 47 P **P 18 54 54.8 -0.5**
comp=Z,18nm,1.1s,mb5.2
VIVF Saint-Julien-I 85.93 37⇑*i*P **P 18 54 55.0 -0.3**
comp=Z,154nm,1.7s,mb5.7
VIVF Saint-Julien-I 85.93 37⇑*i*P **P 18 54 55.0 -0.3**
VIVF pmax pmax
comp=Z,77nm,1.7s,mb5.7
VIVF Saint-Julien-I 85.93 37⇑*i*P **P 18 54 55.0 -0.3**
comp=Z,77nm,1.7s,mb5.7
SNY Shenyang 85.94 319⇑P **P 18 54 55.3 -0.1**
SNY S S 19 05 32.3 +3.9
SNY pmax pmax
comp=Z,30nm,1.5s,mb5.3
SNY pmax pmax
comp=Z,320nm,7.6s
SNY LR LR
comp=N,580nm,18.3s,MS5.1
SNY LR LR
comp=E,480nm,17.7s,MS5.1
SNY LR LR
comp=Z,320nm,30.0s
PLCA Paso Flores 86.06 146 P **P 18 54 57.5 +1.7**
comp=Z,12nm,1.0s,mb5.1,baz=318,slow=5.9,SNR=12
PLCA pP pP 18 55 02.9 +1.7
comp=Z,28nm,1.0s,baz=322,slow=6.9,SNR=20
PLCA LR LR 19 27 21.7
comp=Z,887nm,18.1s,MS5.2,baz=135,slow=31
PLCA Paso Flores 86.06 146 *e*P **P 18 54 57.0 +1.3**
PLCA pmax pmax
comp=Z,70nm,1.3s
PLCA Paso Flores 86.06 146 *e*P **P 18 54 57.0 +1.3**
comp=Z,70nm,1.3s,mb5.7
LASF Ste Croix 86.07 38 *e*P **P 18 54 55.8 -0.2**
comp=Z,71nm,1.2s,mb5.5
PVCC Panska Ves 86.10 28 *e*P **P 18 54 56.7 +0.7**
PVCC *e**PP pP 18 55 01.6 +0.2
PVCC *e*S S 19 05 27.7 -1.9
PVCC MLR MLR
comp=Z,2μm,15.4s,MS5.7
PVCC Panska Ves 86.10 28 *e*P **P 18 54 56.7 +0.7**
PVCC *e*pP pP 18 55 01.6 +0.2
PVCC *e*S S 19 05 27.7 -1.9
PVCC AMS AMS 19 36 00.0
comp=Z,2μm,15.4s
CLLI Llivia 86.20 40 P **P 18 54 59.4 +2.7**
EMIJ Mijas 86.23 48 P **P 18 54 58.1 +1.1**
comp=Z,36nm,1.5s,mb5.4
ELOJ Sierra Loja 86.24 47 P **P 18 54 56.9 -0.1**
ELOJ pmax pmax
comp=Z,17nm,1.1s,mb5.2
ELOJ Sierra Loja 86.24 47 P **P 18 54 56.9 -0.1**
comp=Z,17nm,1.1s,mb5.2
EVIA Vianos 86.26 45 P **P 18 54 57.1 0.0**
EVIA pmax pmax
comp=Z,13nm,0.9s,mb5.2
EVIA Vianos 86.26 45 P **P 18 54 57.1 +0.1**
comp=Z,13nm,0.9s,mb5.2
SUW Suwalki 86.26 22 *e*P **P 18 54 55.7 -1.1**
SUW LMZ 19 32 23.1
comp=Z,2μm,22.9s
SUW Suwalki 86.26 22 *e*P **P 18 54 56.5 -0.2**
SUW pmax pmax
comp=Z,81nm,1.0s,mb5.9
SUW Suwalki 86.26 22 *e*P **P 18 54 56.5 -0.3**
comp=Z,82nm,1.0s,mb5.9
EMOS Mosqueruela 86.29 43 P **P 18 54 58.1 +0.9**
comp=Z,24nm,1.1s,mb5.3
KSRS Korea Array 86.33 313 P **P 18 54 57.3 -0.1**
comp=Z,40nm,1.2s,mb5.5,baz=56,slow=4.6,SNR=57
KSRS LR LR 19 31 26.3
comp=Z,382nm,19.1s,MS4.8,baz=97,slow=34
ERTA Horta de San J 86.34 42 P **P 18 55 01.1 +3.7**
comp=Z,14nm,1.0s,mb5.1
EMIR Miracle 86.34 41 P **P 18 54 59.6 +2.2**
comp=Z,12nm,0.9s,mb5.1
PRA Prague 86.41 29 P **P 18 54 58.0 +0.5**
PRA pP pP 18 55 02.0 -0.9
PRA AMS AMS 19 35 45.0
OCF Saint Nazaire 86.44 37 *e*P **P 18 54 59.2 +1.4**
OG26 St.-Nazaire-De 86.44 37 *e*P **P 18 54 59.2 +1.4**
LPL La Plagne 86.47 35⇑*i*P **P 18 54 58.0 +0.1**
comp=Z,39nm,1.2s,mb5.2
LPL La Plagne 86.47 35⇑*i*P **P 18 54 58.0 +0.1**
LPL pmax pmax
comp=Z,20nm,1.2s,mb5.2
LPL La Plagne 86.47 35⇑*i*P **P 18 54 58.0 +0.1**
comp=Z,20nm,1.2s,mb5.2
EQES Quesada 86.47 46 P **P 18 54 58.2 +0.1**
comp=Z,8.0nm,0.8s,mb5.0
EPOB Poblet 86.48 41 P **P 18 55 02.8 +4.7**
comp=Z,26nm,1.0s,mb5.4
ORIF Oris-en-Rattie 86.49 36 *e*P **P 18 54 58.0 0.0**
comp=Z,29nm,0.9s,mb5.2
ORIF *e*MLR MLR
comp=Z,2μm,18.0s,MS5.3
ORIF Oris-en-Rattie 86.49 36 *e*P **P 18 54 58.0 0.0**
ORIF pmax pmax
comp=Z,15nm,0.9s,mb5.2
ORIF Oris-en-Rattie 86.49 36 *e*P **P 18 54 58.0 0.0**
comp=Z,15nm,0.9s,mb5.2
LPG La Plagne 86.49 35⇑*i*P **P 18 54 58.2 +0.2**
comp=Z,40nm,1.2s,mb5.2
LPG La Plagne 86.49 35⇑*i*P **P 18 54 58.2 +0.2**
LPG pmax pmax
comp=Z,20nm,1.2s,mb5.2
LPG La Plagne 86.49 35⇑*i*P **P 18 54 58.2 +0.2**
comp=Z,20nm,1.2s,mb5.2

WET Wettzell 86.50 30 *e*P **P 18 54 57.6 -0.4**
comp=Z,9.0nm,1.2s,mb4.9
WET *e*S S 19 05 36.0 +2.4
WET Wettzell 86.50 30 *e*P **P 18 54 57.6 -0.4**
WET *e*S S 19 05 36.0 +2.4
WET pmax pmax
comp=Z,9.0nm,1.2s,mb4.9
ECOG Cogollos-Vega 86.51 47 P **P 18 54 59.4 +1.1**
ECOG pmax pmax
comp=Z,9.0nm,0.6s,mb5.2
ECOG Cogollos-Vega 86.51 47 P **P 18 54 59.4 +1.1**
comp=Z,8.8nm,0.6s,mb5.2
KSP Ksiaz 86.52 27 *e*P **P 18 54 56.8 -1.3**
KSP *e* 19 05 18.5
KSP MLR MLR
comp=Z,3μm,17.0s,MS5.7
PRU Pruhonice 86.52 29 *e*P **P 18 54 59.2 +1.1**
PRU *e**PP pP 18 55 04.1 +0.6
PRU *e* 18 58 22.8
PRU *e*S S 19 05 26.3 -7.4
PRU *e*SP 19 06 38.7
PRU MLR MLR
comp=Z,2μm,15.1s,MS5.7
PRU Pruhonice 86.52 29 *e*P **P 18 54 59.2 +1.1**
PRU *e*pP pP 18 55 04.1 +0.6
PRU *e*PP PP 18 58 22.8 +3.9
PRU *e*SKS 19 05 26.3
PRU *e*PS 19 06 38.7
PRU *e*x x 19 11 31.8
PRU AMS AMS 19 35 40.0
comp=Z,2μm,15.1s
ECHE Chera 86.52 44 P **P 18 54 58.7 +0.4**
ECHE pmax pmax
comp=Z,37nm,2.0s,mb5.3
ECHE Chera 86.52 44 P **P 18 54 58.7 +0.4**
comp=Z,37nm,2.0s,mb5.3
ERON Agron 86.53 47 P **P 18 54 59.5 +1.0**
comp=Z,12nm,0.9s,mb5.1
NACGM Naroch 86.55 20 *e* **P 18 54 55.0 -3.2**
FUR Furstenfeldbru 86.58 31 *e*P **P 18 54 58.4 0.0**
comp=Z,16nm,0.7s,mb5.4
FUR *e*S S 19 05 37.1 +2.8
FUR Furstenfeldbru 86.58 31 *e*P **P 18 54 58.4 0.0**
FUR *e*S S 19 05 37.1 +2.8
FUR pmax pmax
comp=Z,16nm,0.7s,mb5.4
UPC Upice 86.68 27 *e*P **P 18 54 59.5 +0.6**
UPC *e**PP pP 18 55 04.4 +0.1
UPC *e* 18 58 24.4
UPC Upice 86.68 27 *e*P **P 18 54 59.5 +0.6**
UPC *e*pP pP 18 55 04.4 +0.1
UPC *e*PP PP 18 58 24.4 +4.2
IRK Irkutsk 86.71 336⇑*i*P **P 18 54 58.4 -0.6**
IRK *e* 18 55 07.6
IRK pmax pmax
comp=Z,97nm,1.5s,mb5.8
EHUE Huescar 86.75 46 P **P 18 54 59.6 +0.1**
EHUE pmax pmax
comp=Z,42nm,1.5s,mb5.5
EHUE Huescar 86.75 46 P **P 18 54 59.6 +0.2**
comp=Z,42nm,1.5s,mb5.5
KHC Kasperske Hory 86.80 30 *e*P **P 18 55 00.1 +0.6**
KHC *e* 18 58 20.4
KHC *e*S S 19 05 24.6 -12
KHC *e*SP 19 06 32.7
KHC MLR MLR
comp=Z,4μm,15.3s,MS5.9
KHC Kasperske Hory 86.80 30 *e*P **P 18 54 58.6 -0.9**
KHC Kasperske Hory 86.80 30 *e*P **P 18 55 00.1 +0.6**
KHC *e**PP PP 18 58 20.4 -0.9
KHC *e*SKS 19 05 24.6
KHC *e*PS 19 06 32.7
KHC *e*x x 19 11 34.0
KHC AMS AMS 19 35 20.0
comp=Z,4μm,15.3s
ETOB Tobarra 86.82 45 P **P 18 55 02.4 +2.6**
comp=Z,8.1nm,0.9s,mb5.0
SOKR Solikamsk 86.85 3*c* *i*P **P 18 54 58.2 -1.3**
SOKR S S 19 05 37.4 +0.8
SOKR pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
SOKR MLR MLR
comp=Z,1μm,19.0s,MS5.4
RETA Reutte 86.87 32⇓*i*PcP PcP 18 54 59.2 -2.9
comp=Z,12nm,1.1s
DPC Dobruska-Polom 86.92 27 *e*P **P 18 55 00.0 -0.1**
DPC *e**PP pP 18 55 05.4 -0.1
DPC *e* 18 58 20.9
DPC *e*S S 19 05 26.0 -12
DPC *e*SP 19 06 39.8
DPC MLR MLR
comp=Z,2μm,15.7s,MS5.6
DPC Dobruska-Polom 86.92 27 *e*P **P 18 55 00.0 -0.1**
DPC *e*pP pP 18 55 05.4 -0.1
DPC *e*PP PP 18 58 20.9 -1.3
DPC *e*SKS 19 05 26.0
DPC *e*PS 19 06 39.8
DPC *e*SS SS 19 11 28.0 +9.3
DPC AMS AMS 19 36 50.0
comp=Z,2μm,15.7s
CFON Fontmartina 86.94 40 P **P 18 55 00.4 0.0**
comp=Z,56nm,1.5s,mb5.6
SMRF Simiane la Rot 87.01 37 *e*P **P 18 55 00.4 -0.2**
comp=Z,27nm,1.2s,mb5.1
SMRF Simiane la Rot 87.01 37 *e*P **P 18 55 00.4 -0.2**
comp=Z,27nm,1.2s,mb5.3
MBDF Montbardon 87.06 36 *e*P **P 18 55 01.2 +0.3**
comp=Z,37nm,1.0s,mb5.3
MBDF Montbardon 87.06 36 *e*P **P 18 55 01.2 +0.3**
MBDF pmax pmax
comp=Z,19nm,1.0s,mb5.3
MBDF Montbardon 87.06 36 *e*P **P 18 55 01.2 +0.3**
comp=Z,18nm,1.0s,mb5.3
GEC2 GERESS Array S 87.07 30 *e*P **P 18 55 00.2 -0.6**
comp=Z,9.0nm,1.5s,mb4.8
GEC2 *e*S S 19 05 40.8 +1.6
GEC2 GERESS Array S 87.07 30 *e*P **P 18 55 00.2 -0.6**
GEC2 *e*S S 19 05 40.8 +1.6
GEC2 pmax pmax
comp=Z,9.0nm,1.5s,mb4.8
EBER Berja 87.17 47 P **P 18 55 03.3 +1.7**
comp=Z,18nm,1.0s,mb5.3
FETA Feichten 87.20 32⇑*i*PcP PcP 18 55 00.5 -3.1
comp=Z,15nm,1.1s
TLY Talaya 87.39 336 P **P 18 55 02.0 -0.3**
comp=Z,204nm,1.2s,mb6.2,SNR=6.9
TLY Talaya 87.39 336*c* *i*P **P 18 55 02.1 -0.2**
TLY *e* 18 58 27.7
TLY *e*S S 19 05 30.7 -11
TLY *e*PPS 19 06 38.8
TLY pmax pmax
comp=Z,66nm,1.3s,mb5.7
TLY MLR MLR
comp=Z,766nm,19.0s,MS5.1
TLY Talaya 87.39 336 *e*P **P 18 55 02.1 -0.2**
comp=Z,34nm,1.1s,mb5.5
TLY Talaya 87.39 336 P **P 18 55 03.0 +0.7**
SNR=10
TREC Trest 87.44 28 *e*P **P 18 55 03.8 +1.2**
TREC *e*S S 19 05 30.5 -12
TREC *e*SP 19 06 45.7
TREC MLR MLR
comp=Z,3μm,15.2s,MS5.9
TREC Trest 87.44 28 *e*P **P 18 55 03.8 +1.2**
TREC *e*SKS 19 05 30.5
TREC *e*PS 19 06 45.7
TREC AMS AMS 19 36 20.0
comp=Z,3μm,15.2s
TOUF Mont Tournerai 87.82 36 *e*P **P 18 55 04.6 +0.1**
FRF La Foret Royal 87.85 37 *e*P **P 18 55 03.7 -1.0**
comp=Z,54nm,1.4s,mb5.3
FRF La Foret Royal 87.85 37 *e*P **P 18 55 03.7 -1.0**
FRF pmax pmax
comp=Z,27nm,1.4s,mb5.3
FRF La Foret Royal 87.85 37 *e*P **P 18 55 03.7 -1.0**
comp=Z,27nm,1.4s,mb5.3
LMR La Mourre 87.94 37 *e*P **P 18 55 04.1 -1.0**
comp=Z,34nm,1.1s,mb5.2
LMR La Mourre 87.94 37 *e*P **P 18 55 04.1 -1.0**
LMR pmax pmax
comp=Z,17nm,1.1s,mb5.2
LMR La Mourre 87.94 37 *e*P **P 18 55 04.1 -1.0**
comp=Z,17nm,1.1s,mb5.2
SBF Sospel 88.02 36 *e*P **P 18 55 04.0 -1.5**

OKC	**Ostrava-Krasne**	**88.03**	**27**	*e*P	**P**	**18 55 04.8**	**-0.6**
OKC				*e**PP	pP	18 55 09.8	-1.0
OKC				*e*		18 58 34.5	
OKC				*e*S	SKSac	19 05 34.2	+1.1
OKC				*e*SP		19 06 55.7	
OKC				MLR	MLR		
	comp=Z,1μm,15.6s,MS5.4						
OKC	**Ostrava-Krasne**	**88.03**	**27**	*e*P	**P**	**18 55 04.8**	**-0.6**
OKC				*e*pP	pP	18 55 09.8	-1.0
OKC				*e*PP	PP	18 58 34.5	+3.4
OKC				*e*SKS		19 05 34.2	
OKC				*e*PS		19 06 55.7	
OKC				AMS	AMS	19 38 50.0	
	comp=Z,1μm,15.6s						
MOY	**Mondy**	**88.29**	**337**	*e*P	**P**	**18 55 07.1**	**+0.5**
MOY				pmax	pmax		
	comp=Z,47nm,1.8s,mb5.4						
MOS	**Moscow**	**88.36**	**14**	*e*P	**P**	**18 55 05.8**	**-1.1**
MOS				MLR	MLR		
	comp=N,1μm,16.0s,MS5.5						
MOS				MLR	MLR		
	comp=Z,2μm,16.0s,MS5.6						
MOS				MLR	MLR		
	comp=E,1μm,16.0s,MS5.5						
TRQA	**Tornquist**	**88.38**	**139**	*e*P	**P**	**18 55 06.1**	**-0.9**
	comp=E,55nm,1.4s,mb5.6						
GUMO	**Guam**	**88.45**	**285**	P	**P**	**18 55 06.4**	**-1.6**
	comp=E,127nm,1.0s,mb6.1,baz=246,slow=3.7,SNR=5.3						
GUMO	**Guam**	**88.45**	**285**	P	**P**	**18 55 07.6**	**-0.4**
	comp=E,222nm,1.3s,mb6.2						
ZAK	**Zakamensk**	**88.60**	**335**	*e*P	**P**	**18 55 07.9**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,12nm,1.3s,mb5.1						
CONA	**Conrad Observa**	**88.68**	**29⇓**	*i*P	**P**	**18 55 03.1**	**-5.4**
	comp=Z,9.0nm,1.3s,mb4.9						
MDT	**Midelt**	**88.74**	**51**	LR	LR	19 35 22.6	
	comp=Z,1μm,18.0s,MS5.4,baz=291,slow=36						
OBN	**Obninsk**	**88.74**	**14***c*	*i*P	**P**	**18 55 07.5**	**-1.1**
OBN				*e**PP	pP	18 55 12.3	-1.8
OBN				*e*		18 58 33.3	
OBN				*e*PS		19 06 56.8	
OBN				*e*SS	SS	19 11 44.1	-0.6
OBN				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.4						
HNR	**Honiara**	**88.77**	**258**	P	**P**	**18 55 09.8**	**+0.4**
	comp=Z,63nm,0.9s,mb5.9,baz=26,slow=7.2,SNR=8.9						
HNR	**Honiara**	**88.77**	**258**	*e*P	**P**	**18 55 09.5**	**+0.1**
HNR				pmax	pmax		
	comp=Z,51nm,0.9s,mb5.8						
HNR	**Honiara**	**88.77**	**258**	*e*P	**P**	**18 55 09.5**	**+0.1**
	comp=Z,51nm,0.9s,mb5.9						
ZST	**Bratislava**	**88.96**	**28**	*e*S	SKSac	19 05 43.4	+4.6
KOLL	**Kolacno**	**89.16**	**27**	*e*P	**P**	**18 55 11.0**	**+0.3**
KOLL	**Kolacno**	**89.16**	**27**	*e*P	**P**	**18 55 11.0**	**+0.3**
NIE	**Niedzica**	**89.17**	**26**	*e*P	**P**	**18 55 11.0**	**+0.2**
OBKA	**Obir**	**89.26**	**31⇑**	*i*P	**P**	**18 55 09.3**	**-2.0**
	comp=Z,15nm,0.9s,mb5.3						
ULN	**Ulaanbaatar**	**89.27**	**332**	*e*P	**P**	**18 55 11.0**	**-0.3**
ULN				pmax	pmax		
	comp=Z,33nm,1.4s,mb5.5						
ULN	**Ulaanbaatar**	**89.27**	**332**	*e*P	**P**	**18 55 11.0**	**-0.3**
	comp=Z,33nm,1.4s,mb5.5						
ULN	**Ulaanbaatar**	**89.27**	**332**	P	**P**	**18 55 11.8**	**+0.6**
	SNR=14						
SOKA	**Soboth**	**89.33**	**30⇑**	*i*P	**P**	**18 55 09.5**	**-2.1**
	comp=Z,18nm,1.3s,mb5.2						
VYHS	**Vyhne**	**89.39**	**27**	*e*P	**P**	**18 55 12.0**	**+0.2**
	comp=Z,4.9nm,1.3s,mb4.7						
VYHS				*e*PP	PP	18 58 44.6	+2.6
VYHS				*e*S	SKSac	19 05 44.4	+3.1
VYHS				LR	LR		
	comp=Z,1μm,16.5s,MS5.5						
VYHS	**Vyhne**	**89.39**	**27**	*e*P	**P**	**18 55 12.0**	**+0.2**
VYHS				*e*PP	PP	18 58 44.6	+2.6
VYHS				*e*S	SKSac	19 05 44.4	+3.1
CRNS	**Crni Vrh**	**89.48**	**31**	*e*P	**P**	**18 55 10.1**	**-2.2**
STHS	**Stebnicka Huta**	**89.51**	**25**	*e*P	**P**	**18 55 13.0**	**+0.6**
STHS				pmax	pmax		
	comp=Z,12nm,1.2s,mb5.1						
STHS	**Stebnicka Huta**	**89.51**	**25**	*e*P	**P**	**18 55 13.0**	**+0.6**
	comp=Z,12nm,1.2s,mb5.1						
STHS	**Stebnicka Huta**	**89.51**	**25**	*e*P	**P**	**18 55 13.0**	**+0.6**
SONM	**Songino Array**	**89.55**	**332**	P	**P**	**18 55 13.0**	**+0.4**
	comp=Z,10nm,1.0s,mb5.1,baz=42,slow=3.1,SNR=61						
SONM				PKKPbc	PKKPbc	19 12 46.3	-0.3
	comp=Z,0.5nm,0.6s,baz=151,slow=3.3,SNR=3.6						
SONM				LR	LR	19 34 22.1	
	comp=Z,960nm,20.6s,MS5.2,baz=34,slow=35						
SVE	**Sverdlovsk**	**89.69**	**1⇓**	*e*P	**P**	**18 55 12.4**	**-0.7**
SVE				*e*S	SKSac	19 05 34.7	-8.1
SVE				pmax	pmax		
	comp=Z,43nm,1.3s,mb5.6						
SVE				MLR	MLR		
	comp=Z,1μm,16.0s,MS5.4						
PGF	**Pioggiola**	**89.76**	**36**	*e*P	**P**	**18 55 12.5**	**-1.2**
	comp=Z,24nm,1.2s,mb5.1						
PGF	**Pioggiola**	**89.76**	**36**	*e*P	**P**	**18 55 12.5**	**-1.2**
PGF				pmax	pmax		
	comp=Z,12nm,1.2s,mb5.1						
PGF	**Pioggiola**	**89.76**	**36**	*e*P	**P**	**18 55 12.5**	**-1.2**
	comp=Z,12nm,1.2s,mb5.1						
KWP	**Kalwaria Pacla**	**89.84**	**24**	*e*P	**P**	**18 55 14.1**	**+0.1**
KWP				*e*pP	pP	18 55 18.6	-0.8
KWP				*e*SKS		19 05 42.2	
KWP				LMZ		19 35 53.4	
	comp=Z,2μm,21.1s						
KWP	**Kalwaria Pacla**	**89.84**	**24**	*e*P	**P**	**18 55 13.2**	**-0.7**
	comp=Z,30nm,1.0s,mb5.6						
NVS	**Novosibirsk**	**89.84**	**348⇑**	*i*P	**P**	**18 55 12.3**	**-1.5**
NVS				pmax	pmax		
	comp=Z,52nm,1.6s,mb5.6						
NVS				pmax	pmax		
	comp=N,16nm,1.8s						
NVS				pmax	pmax		
	comp=E,30nm,1.6s						
VISS	**Visnje**	**89.95**	**31**	*i* P	**P**	**18 55 12.9**	**-1.6**
KECS	**Kecovo**	**90.02**	**26**	*e*P	**P**	**18 55 14.2**	**-0.6**
KECS				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.6						
KECS	**Kecovo**	**90.02**	**26**	*e*P	**P**	**18 55 14.2**	**-0.6**
	comp=Z,3.0nm,0.9s,mb4.6						
KECS	**Kecovo**	**90.02**	**26**	*e*P	**P**	**18 55 14.2**	**-0.6**
ARU	**Arti**	**90.05**	**2**	P	**P**	**18 55 14.8**	**+0.1**
	comp=Z,179nm,1.1s,mb6.3,SNR=12						
ARU	**Arti**	**90.05**	**2***d*	*i*P	**P**	**18 55 13.9**	**-0.8**
ARU						18 58 44.4	
ARU				PPP		19 00 45.6	
ARU				S	SKSac	19 05 43.3	-1.5
ARU				SP	SP	19 07 11.5	-0.2
ARU				PS	PS	19 07 21.9	+7.6
ARU				SS	SS	19 12 01.4	-2.2
ARU				pmax	pmax		
	comp=Z,53nm,1.2s,mb5.8						
ARU				MLR	MLR		
	comp=Z,1μm,22.0s,MS5.3						
ARU	**Arti**	**90.05**	**2**	*e*P	**P**	**18 55 13.9**	**-0.8**
	comp=Z,66nm,1.4s,mb5.8						
LVV	**L'vov**	**90.13**	**24**	*e*P	**P**	**18 55 14.2**	**-1.1**
LVV				*e*		19 05 45.8	
LVV				*e*S	S	19 06 03.9	-4.1
LVV				*e*PS	PS	19 07 21.8	+6.4
LVV				MLR	MLR		
	comp=N,1μm,19.0s,MS5.3						
LVV				MLR	MLR		
	comp=E,600nm,19.0s,MS5.3						
LVV				MLR	MLR		
	comp=Z,800nm,19.0s,MS5.2						
BUD	**Budapest**	**90.29**	**28**	*e*sP	**P**	**18 55 16.5**	**+0.4**
BOJS	**Bojanci**	**90.36**	**31**	*i* P	**P**	**18 55 15.1**	**-1.3**
BOJS				*e*S	SKSac	19 05 45.1	-2.0
BOJS				*e*		19 07 08.7	
ZAA0	**Zalesovo Array**	**90.40**	**347**	*e*P	**P**	**18 55 14.5**	**-1.9**
ZALV	**Zalesovo Beam**	**90.40**	**347**	P	**P**	**18 55 15.2**	**-1.2**
	comp=Z,4.3nm,0.9s,mb4.8,baz=6.9,slow=4.9,SNR=27						
UZH	**Uzhgorod**	**90.54**	**25**	*e*P	**P**	**18 55 16.8**	**-0.4**
UZH				*e*	pP	18 55 21.6	-1.0
UZH				*e*		18 55 27.0	
UZH				*e*		18 58 55.8	
UZH				*e*S	S	19 06 10.6	-1.3
UZH				*e*SS	SS	19 12 24.4	+13
UZH				MLR	MLR		
	comp=N,400nm,15.0s,MS5.3						
UZH				MLR	MLR		
	comp=E,750nm,15.0s,MS5.3						
UZH				MLR	MLR		
	comp=Z,610nm,15.0s,MS5.2						
AKASG	**Malin Array Be**	**90.97**	**20**	P	**P**	**18 55 17.4**	**-1.8**
	comp=Z,12nm,1.0s,mb5.2,baz=325,slow=4.0,SNR=33						
AKASG				pP	pP	18 55 22.8	-1.7
	comp=Z,11nm,0.9s,baz=328,slow=3.6,SNR=9.9						
AKASG				LR	LR	19 37 31.4	
	comp=Z,1μm,18.7s,MS5.4,baz=320,slow=36						
AKASG	**Malin Array Be**	**90.97**	**20**	P	**P**	**18 55 17.4**	**-1.7**
AKASG				*PP	pP	18 55 22.8	-1.8
KIEV	**Kiev**	**90.97**	**20**	*e*P	**P**	**18 55 16.7**	**-2.4**
KIEV				pmax	pmax		
	comp=Z,30nm,1.3s,mb5.5						
KIEV	**Kiev**	**90.97**	**20**	*e*P	**P**	**18 55 16.6**	**-2.5**
	comp=Z,30nm,1.3s,mb5.5						
BJI	**Beijing**	**91.16**	**322**	P	**P**	**18 55 18.5**	**-1.7**
BJI				S	S	19 06 10.5	-7.3
BJI				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.5						
BJI				pmax	pmax		
	comp=Z,81nm,3.5s						
BJI				LR	LR		
	comp=N,720nm,21.0s,MS5.2						
BJI				LR	LR		
	comp=E,600nm,18.5s,MS5.2						
BJI				LR	LR		
	comp=Z,490nm,37.0s						
BUR08	**Bucovina Ar. S**	**92.39**	**24**	*e*P	**P**	**18 55 25.1**	**-0.8**
HHC	**Hu-ho-hao-te**	**92.84**	**325⇑**	P	**P**	**18 55 28.0**	**0.0**
HHC				sP	sP	18 55 34.3	-1.1
HHC				PP	PP	18 59 11.3	+1.7
HHC				SKS		19 05 59.8	
HHC				S	S	19 06 28.8	-4.2
HHC				sS	sS	19 06 36.0	-6.0
HHC				SS	SS	19 12 44.0	-0.9
HHC				pmax	pmax		
	comp=Z,28nm,1.1s,mb5.6						
HHC				pmax	pmax		
	comp=Z,270nm,7.5s						
HHC				LR	LR		
	comp=N,580nm,18.5s,MS5.2						
HHC				LR	LR		
	comp=E,570nm,18.6s,MS5.2						
HHC				LR	LR		
	comp=Z,560nm,18.3s,MS5.0						
VSR	**Storozhevoye**	**92.94**	**14**	*e*P	**P**	**18 55 27.1**	**-1.2**
VSR				*e*	pP	18 55 32.4	-1.3
VSR				pmax	pmax		
	comp=N,10.0nm,1.4s						
VSR				pmax	pmax		
	comp=Z,20nm,1.4s,mb5.3						
VSR				pmax	pmax		
	comp=E,6.0nm,0.7s						
VSR				MLR	MLR		
	comp=N,1μm,19.0s,MS5.4						
VSR				MLR	MLR		
	comp=E,830nm,19.0s,MS5.4						
VSR				MLR	MLR		
	comp=Z,2μm,19.0s,MS5.5						
BRVK	**Borovoye**	**93.19**	**355**	P	**P**	**18 55 29.5**	**+0.1**
	comp=Z,89nm,1.0s,mb6.2,SNR=5.8						
BRVK	**Borovoye**	**93.19**	**355***c*	*i*P	**P**	**18 55 28.8**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.5						
BRVK	**Borovoye**	**93.19**	**355**	*e*P	**P**	**18 55 28.7**	**-0.6**
	comp=Z,23nm,1.2s,mb5.5						
BRVK	**Borovoye**	**93.19**	**355**	P	**P**	**18 55 29.5**	**+0.1**
	SNR=7.6						
VORD	**Divnogorie**	**93.20**	**14**	*e*P	**P**	**18 55 28.4**	**-1.1**
VORD				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb5.1						
VORD				pmax	pmax		
	comp=N,6.0nm,0.6s						
VORD				pmax	pmax		
	comp=E,20nm,1.2s						
VORD				MLR	MLR		
	comp=N,1μm,17.0s,MS5.4						
VORD				MLR	MLR		
	comp=E,560nm,17.0s,MS5.4						
VORD				MLR	MLR		
	comp=Z,1μm,17.0s,MS5.5						
BVAR	**Borovoye Array**	**93.21**	**355**	P	**P**	**18 55 29.2**	**-0.3**
	comp=Z,7.4nm,0.9s,mb5.1,baz=29,slow=3.4,SNR=35						
VRHR	**Novokhopersk**	**93.53**	**13**	*e*P	**P**	**18 55 28.8**	**-2.2**
VRHR				pmax	pmax		
	comp=N,20nm,1.1s						
VRHR				pmax	pmax		
	comp=E,30nm,1.1s						
VRHR				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.5						
URZ	**Urewera**	**93.72**	**226**	LR	LR	19 29 09.2	
	comp=Z,1μm,18.5s,MS5.3,baz=32,slow=30						
BTO	**Baotou**	**93.77**	**326**	*e*P	**P**	**18 55 31.5**	**-0.8**
KIS	**Kishinev**	**94.14**	**22**	*e*P	**P**	**18 55 33.0**	**-0.9**
KIS				*e*LR	LR	19 34 33.0	
	comp=Z,2μm,16.0s						
KIS	**Kishinev**	**94.14**	**22**	*e*P	**P**	**18 55 33.0**	**-0.9**
KIS				*e*	pP	18 55 38.0	-1.3
KURK	**Kurchatov**	**94.57**	**350***c*	*i*P	**P**	**18 55 34.7**	**-1.1**
KURK				pmax	pmax		
	comp=Z,16nm,1.2s,mb5.3						
KURK	**Kurchatov**	**94.57**	**350⇑**	*i*P	**P**	**18 55 34.8**	**-1.0**
KURK	**Kurchatov**	**94.57**	**350**	P	**P**	**18 55 34.9**	**-0.9**
	SNR=8.6						
SSE	**Sheshan**	**94.73**	**312**	*e*P	**P**	**18 55 34.5**	**-2.4**
SSE				sP	sP	18 55 42.8	-1.5
SSE				S	S	19 06 41.8	-8.0
SSE				sS	sS	19 06 54.8	-4.1
SSE				pmax	pmax		
	comp=Z,35nm,0.7s,mb5.9						
SSE				pmax	pmax		
	comp=Z,96nm,3.6s						
SSE				LR	LR		
	comp=N,380nm,24.4s,MS4.9						
SSE				LR	LR		
	comp=E,260nm,24.4s,MS4.9						
SSE				LR	LR		
	comp=Z,610nm,22.2s,MS5.0						
NJ2	**Nanjing**	**95.46**	**315**	*e*P	**P**	**18 55 42.3**	**+2.1**
NJ2				pP	pP	18 55 46.0	+0.3
NJ2				sP	sP	18 55 49.5	+1.9
NJ2				PP	PP	18 59 33.8	+3.5
NJ2				S	S	19 06 53.0	-3.2
NJ2				sS	sS	19 07 01.0	-4.2
NJ2				pmax	pmax		
	comp=Z,310nm,4.8s						
NJ2				LR	LR		
	comp=N,400nm,24.3s,MS4.9						
NJ2				LR	LR		
	comp=E,250nm,22.4s,MS4.9						
NJ2				LR	LR		
	comp=Z,530nm,23.9s,MS4.9						
AKTO	**Aktyubinsk**	**96.03**	**3**	LR	LR	19 44 41.6	
	comp=Z,980nm,18.3s,MS5.3,baz=355,slow=39						
ABKAR	**Akbulak array**	**97.26**	**1**	*e*P	**P**	**18 55 47.0**	**-1.0**
	comp=Z,5.0nm,0.9s,mb4.9						
SIM	**Simferopol'**	**97.57**	**20**	P	**P**	**18 55 51.5**	**+2.0**
SIM				*e*		18 59 49.0	
SIM				*e*		19 06 31.0	
SIM				*e*PS	PS	19 08 38.0	+0.6
SIM				*e*PPS		19 09 19.0	
SIM				*e*SS	SS	19 13 46.0	-5.4
SIM				*e*SSS		19 17 40.0	
SIM				pmax	pmax		
	comp=Z,17nm,8.0s						
SIM				pmax	pmax		
	comp=Z,44nm,11.6s						
SIM				MLR	MLR		
	comp=Z,2μm,18.6s,MS5.5						
MK31	**Makanchi Array**	**97.72**	**346**	*e*P	**P**	**18 55 48.3**	**-1.9**
MKAR	**Makanchi Array**	**97.72**	**346**	P	**P**	**18 55 48.5**	**-1.7**
	comp=Z,2.6nm,1.0s,mb4.7,baz=18,slow=4.3,SNR=18						
MKAR				LR	LR	19 45 37.6	
	comp=Z,570nm,18.9s,MS5.1,baz=354,slow=39						
ANN	**Anapa**	**98.59**	**18**	*e*P	**P**	**18 55 55.8**	**+1.7**
ANN				pmax	pmax		
	comp=Z,28nm,1.5s,mb5.6						
ANN				MLR	MLR		
	comp=N,462nm,14.0s,MS5.3						
ANN				MLR	MLR		
	comp=E,511nm,14.0s,MS5.3						
ANN				MLR	MLR		
	comp=Z,1μm,14.0s,MS5.6						
GTA	**Gaotai**	**99.21**	**331**	*e*P	**P**	**18 55 53.5**	**-3.5**
GTA				pP	pP	18 55 58.3	-4.1
GTA				sP	sP	18 56 00.5	-3.9
GTA				PP	PP	18 59 57.5	-1.2
GTA				S	S	19 07 19.0	-8.9
GTA				SS	SS	19 14 09.5	-5.2
GTA				pmax	pmax		
	comp=Z,2.0nm,1.6s,mb4.4						
GTA				pmax	pmax		
	comp=Z,160nm,6.9s						
GTA				LR	LR		
	comp=N,510nm,20.1s,MS5.2						
GTA				LR	LR		
	comp=E,460nm,17.7s,MS5.2						
GTA				LR	LR		
	comp=Z,570nm,20.1s,MS5.1						
WMQ	**Urumqi**	**99.28**	**342**	*e*P	**P**	**18 55 57.3**	**+0.1**
WMQ				pP	pP	18 56 02.0	-0.7
WMQ				sP	sP	18 56 04.3	-0.3
WMQ				PP	PP	19 00 02.3	+3.3
WMQ				SKS		19 06 34.0	
WMQ				*e*S	S	19 07 24.5	-3.9
WMQ				sS	sS	19 07 32.8	-4.6
WMQ				SS	SS	19 14 17.3	+1.9
WMQ				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb5.1						
WMQ				pmax	pmax		
	comp=Z,160nm,7.4s						
WMQ				LR	LR		
	comp=N,490nm,18.0s,MS5.1						
WMQ				LR	LR		
	comp=E,360nm,21.8s,MS5.1						
WMQ				LR	LR		
	comp=Z,480nm,18.8s,MS5.0						
LZH	**Lanzhou**	**100.28**	**327**	*e*P	Pdif	18 56 02.0	+0.3
LZH				pP		18 56 06.3	
LZH				sP		18 56 09.5	
LZH				PP	PP	19 00 09.8	+2.9
LZH				*e*S	Sdif	19 07 32.0	-4.7
LZH				SS	SS	19 14 31.0	+1.1
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
LZH				pmax	pmax		
	comp=Z,73nm,4.0s						
LZH				LR	LR		
	comp=E,1μm,18.0s						
LZH				LR	LR		
	comp=Z,2μm,19.2s,MS5.6						
KIV	**Kislovodsk**	**100.58**	**14**	*i* P	Pdif	18 56 02.0	-1.0
KIV				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KIV				MLR	MLR		
	comp=Z,927nm,21.0s,MS5.3						
BRTR	**Keskin Array B**	**102.21**	**22**	PP	PP	19 00 20.3	-1.0
	comp=Z,0.6nm,0.8s,baz=15,slow=7.4,SNR=2.8						
BRTR				PKKPbc	PKKPbc	19 12 09.4	-3.2
	comp=Z,0.7nm,1.0s,baz=131,slow=3.8,SNR=3.8						
GYA	**Guiyang**	**106.64**	**319**	Pdif	Pdif	18 56 28.8	-1.1
GYA				PKP	PKiKP	19 00 38.0	-2.8
GYA				PP	PP	19 00 56.5	+1.7
GYA				S	Sdif	19 08 23.5	-6.3
GYA				SS	SS	19 15 56.0	-2.0
GYA				AMB	AMB		
	comp=Z,130nm,7.8s						
GYA				LR	LR		
	comp=N,260nm,20.8s,MS4.8						
GYA				LR	LR		
	comp=E,110nm,21.2s,MS4.8						
GYA				LR	LR		
	comp=Z,250nm,20.9s,MS4.7						
DAV	**Davao City (W)**	**107.55**	**291**	Pdiff	Pdif	18 56 37.1	+3.1
	comp=Z,165nm,0.3s,baz=56,slow=7.3,SNR=4.5						
KMI	**Kunming**	**109.81**	**321**	PKP	PKiKP	19 00 43.8	-3.0
KMI				PP	PP	19 01 20.0	+2.2
KMI				SS	SS	19 16 38.3	-2.5
KMI				AMB	AMB		
	comp=Z,160nm,8.1s						
KMI				LR	LR		
	comp=N,230nm,22.1s,MS5.0						
KMI				LR	LR		
	comp=E,410nm,21.5s,MS5.0						
KMI				LR	LR		
	comp=Z,400nm,19.1s,MS5.0						
CM31	**Chiang Mai Arr**	**117.27**	**320**	*e*PKPdf	PKPdf	19 01 00.3	-0.9
CMAR	**Chiang Mai Arr**	**117.27**	**320**	PKP	PKPdf	19 01 00.4	-0.8
	comp=Z,5.1nm,1.0s,baz=334,slow=2.3,SNR=25						
ASAR	**Alice Springs**	**117.38**	**259**	PKKPab	PKKPab	19 11 27.4	+0.3
	comp=Z,2.0nm,1.0s,baz=225,slow=5.0,SNR=6.5						
SBUM	**Sibu**	**120.67**	**297**	PKP	PKPdf	19 01 08.7	+0.9
KBKI	**Kotabaru**	**121.31**	**289**	PKP	PKPdf	19 01 09.4	+0.3
KSM	**Kuching**	**122.73**	**298**	*e*PKPdf	PKPdf	19 01 11.3	-0.6
KSM	**Kuching**	**122.73**	**298**	PKP	PKPdf	19 01 12.0	+0.2
FORT	**Forrest**	**125.05**	**254**	*e*P	PKPdf	19 01 14.0	-1.7
FORT				*e*PKPdf	PKPdf	19 01 14.1	-1.6
KULM	**Kulim**	**126.71**	**309**	*e*PKPdf	PKPdf	19 01 18.4	-1.0
KULM	**Kulim**	**126.71**	**309**	PKP	PKPdf	19 01 19.7	+0.3
IPM	**Ipoh**	**127.08**	**308**	PKP	PKPdf	19 01 20.4	+0.3
MYKOM	**Kota Tinggi**	**127.14**	**303**	PKP	PKPdf	19 01 21.5	+1.2
PWJI	**Pagerwojo**	**127.61**	**288**	PKP	PKPdf	19 01 21.3	+0.2
VNA1	**Neumayer--Stat**	**127.99**	**157**	*e*PKPdf	PKPdf	19 01 17.8	-2.3
VNA1				*e*		19 01 23.3	
VNA1				*e*		19 01 26.7	
CISI	**Cisompet, Garu**	**130.46**	**291**	PKP	PKPdf	19 01 28.5	+2.0
SDSI	**Sungai Dareh**	**130.77**	**303**	PKP	PKPdf	19 01 26.3	-0.9
KLSI		**130.97**	**297**	PKP	PKPdf	19 01 26.6	-0.9
PPI	**Padang Panjang**	**131.14**	**305**	PKP	PKPdf	19 01 28.6	+0.7
MDSI	**Maura Dua**	**131.25**	**297**	PKP	PKPdf	19 01 27.4	-0.7
GSI	**Gunungsitoli**	**131.72**	**309**	PKP	PKPdf	19 01 30.5	+1.5
TSUM	**Tsumeb**	**137.89**	**81**	*e*P	PKPdf	19 01 39.0	-1.3
KMBO	**Kilima Mbogo**	**139.99**	**41**	PKP	PKPdf	19 01 45.6	+1.3
	comp=Z,2.7nm,0.9s,baz=180,slow=20,SNR=3.4						
KMBO	**Kilima Mbogo**	**139.99**	**41**	*e*P	PKPdf	19 01 45.7	+1.4
KOMG	**Komaggas**	**142.07**	**96**	*e*P	PKPdf	19 01 47.0	-0.6
KOMG				AMS	AMS	19 26 31.0	
	comp=Z,676nm,18.9s,MS5.4						
MIR	**Mirnyy**	**142.53**	**200⇓**	*i*PKIKP	PKPdf	19 01 43.6	-3.6
MIR				pmax	pmax		
	comp=Z,135nm,2.4s						
SYO	**Syowa Base**	**142.55**	**167⇑**	*i*PKPdf	PKPdf	19 01 46.6	-0.6
LSZ	**Lusaka**	**144.25**	**67⇑**	*i*P	PKPdf	19 01 50.5	-1.3
LSZ	**Lusaka**	**144.25**	**67**	PKPdf	PKPdf	19 01 50.3	-1.5
	SNR=12						
CVNA	**Calvinia**	**144.43**	**98⇓**	*i*P	PKPdf	19 01 50.5	-1.2
CVNA				AMS	AMS	19 47 39.1	
	comp=Z,907nm,20.1s,MS5.5						
UPI	**Upington**	**144.74**	**92**	*e*P	PKPdf	19 01 51.4	-0.9
ELIM	**Elim**	**145.13**	**103**	*e*P	PKPbc	19 01 51.8	-0.6
SUR	**Sutherland**	**145.52**	**99**	*e*PKPdf	PKPdf	19 01 53.4	-0.1
SUR	**Sutherland**	**145.52**	**99⇑**	*i*P	PKPdf	19 01 54.3	+0.8
SUR				AMS	AMS	19 58 56.2	
	comp=Z,170nm,22.1s,MS4.8						
SUR	**Sutherland**	**145.52**	**99**	PKPbc	PKPbc	19 01 54.1	+0.5
	SNR=15						
MAW	**Mawson**	**146.18**	**181**	*e*P	PKPdf	19 01 54.5	+1.0
	comp=Z,32nm,0.9s						
**MA

ERPM **east rand prop** **149.84** **85** *eP* PKPbc 19 02 05.7 0.0
ERPM AMS AMS 19 41 57.9
comp=Z,740nm,21.7s,MS5.4
SEK **Senekal** **150.03** **89** *eP* PKPbc 19 02 06.0 0.0
GRM **Grahamstown** **150.41** **99** *eP* PKPbc 19 02 06.5 -0.3
MOPA **Mopani** **151.25** **77** ⇑*iP* PKPbc 19 02 09.1 0.0
KSD **Kokstad** **152.19** **92** *eP* PKPdf 19 02 04.5 +0.2
POGA **Pongola** **153.02** **84** *eP* PKPdf 19 02 06.5 +0.9
POGA AMS AMS 19 50 04.9
comp=Z,3μm,21.8s,MS6.1

ISCJB ***29*** *18:51:51.3±0.5, 33°.95N±0°.02×117°.81W±0°.02, h13km±3km, Error ellipse: s-maj=2.7km s-min=2.4km az=30.2*
NEIC ***29*** *18:51:52.3, 33°.95N×117°.80W, h16km, ML3.8(PAS), After PAS.*
ISC 29 18:51:51.6±0.3, 33°.93N±0°.02×117°.83W±0°.02, h14km±2km, n57, σ0°.74/83, 38C-32D, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BFSC	**Mount Baldy Ra**	**0.34**	**24**	⇑P	**Pg**	**18 51 58.4**	**-0.1**
	baz=0.3						
BFSC				⇑S	**Sg**	**18 52 03.2**	**+0.1**
	baz=0.3						
MWC	**Mount Wilson**	**0.35**	**327**	*e*Pg	**Pg**	**18 51 58.0**	**-0.7**
MWC				*e*Sg	**Sg**	**18 52 03.8**	**+0.3**
PASC	**Pasadena Art C**	**0.38**	**309**	*e*Pg	**Pg**	**18 51 58.7**	**-0.6**
PASC				*e*Sg	**Sg**	**18 52 04.3**	**-0.2**
FMP	**Fort Macarthur**	**0.45**	**241**	⇓P	**Pg**	**18 52 00.8**	**+0.3**
	baz=0.5,SNR=12						
FMP				⇓S	**Sg**	**18 52 07.1**	**+0.6**
	baz=0.5						
DECC	**Green Verdugo**	**0.53**	**307**	⇑P	**Pg**	**18 52 01.9**	**-0.1**
	baz=0.5,SNR=15						
DECC				⇑S	**Sg**	**18 52 09.4**	**+0.4**
	baz=0.5						
MURC	**Murrieta**	**0.62**	**122**	⇓P	**Pg**	**18 52 03.6**	**-0.1**
	baz=0.6						
MURC				⇓S	**Sg**	**18 52 11.8**	**-0.1**
	baz=0.6						
CIS	**Catalina Islan**	**0.71**	**223**	⇓P	**Pg**	**18 52 05.9**	**+0.4**
	baz=0.7,SNR=18						
CIS				⇓S	**Sg**	**18 52 15.9**	**+1.0**
	baz=0.7						
BBRC	**Big Bear Solar**	**0.82**	**66**	⇑P	**Pg**	**18 52 07.1**	**-0.4**
	baz=0.8,SNR=6.7						
BBRC				⇓S	**Sg**	**18 52 17.5**	**-0.8**
	baz=0.8						
EDW2	**Edwards Air Fo**	**0.95**	**352**	⇑P	**Pb**	**18 52 09.5**	**-0.5**
	baz=0.9						
EDW2				⇓S	**Sb**	**18 52 22.2**	**-0.2**
	baz=0.9						
OSI	**Osito Adit**	**1.01**	**313**	⇑P	**Pb**	**18 52 10.5**	**-0.3**
	baz=1.0,SNR=8.4						
OSI				⇓S	**Sb**	**18 52 24.0**	**+0.1**
	baz=1.0						
OSI	**Osito Adit**	**1.01**	**313**	*e*Pg	**Pg**	**18 52 10.4**	**-0.7**
OSI				*e*Sg	**Sg**	**18 52 24.2**	**0.0**
BLG	**Laguna Peak**	**1.04**	**280**	⇓P	**Pb**	**18 52 10.8**	**-0.6**
	baz=1.1,SNR=9.7						
BLG				⇑S	**Sb**	**18 52 25.1**	**+0.1**
	baz=1.1						
SCI	**San Clemente I**	**1.12**	**213**	⇓P	**Pb**	**18 52 11.9**	**-1.0**
	baz=1.2						
SCI				⇑S	**Sb**	**18 52 26.6**	**-0.7**
	baz=1.2						
RRX	**Edison Barstow**	**1.17**	**36**	⇓P	**Pn**	**18 52 12.8**	**-0.7**
	baz=1.1						
RRX				⇓S	**Sb**	**18 52 28.2**	**-0.3**
	baz=1.1						
PFO	**Pinyon Flat Ob**	**1.19**	**105**	⇑P	**Pn**	**18 52 12.9**	**-0.9**
	baz=1.2						
PFO				⇓S	**Sb**	**18 52 28.3**	**-0.8**
	baz=1.2						
109C	**Camp Elliot, M**	**1.20**	**150**	⇓P	**Pn**	**18 52 13.1**	**-0.8**
	baz=1.2						
109C				⇑S	**Sb**	**18 52 29.4**	**-0.2**
	baz=1.2						
ARVC	**Arvin**	**1.45**	**325**	⇑Sb	**Sb**	**18 52 37.1**	**+0.4**
	baz=1.4						
BELC	**Belle Mtn. Jos**	**1.52**	**87**	⇓Sb	**Sb**	**18 52 38.5**	**-0.2**
	baz=1.5						
HEC	**Hector,Ludlow**	**1.53**	**54**	⇑Sb	**Sb**	**18 52 38.5**	**-0.4**
	baz=1.5						
LRMC	**Laurel Mountai**	**1.55**	**4**	⇑S	**Sn**	**18 52 37.9**	**-0.7**
	baz=1.5						
MONP	**Monument Peak**	**1.57**	**131**	⇑S	**Sn**	**18 52 39.0**	**-0.1**
	baz=1.6						
BAR	**Barrett**	**1.58**	**142**	*e*Pn	**Pn**	**18 52 19.4**	**+0.2**
BAR				*e*Sn	**Sn**	**18 52 39.5**	**+0.2**
GSC	**Goldstone**	**1.60**	**31**	⇑S	**Sn**	**18 52 39.7**	**-0.4**
	baz=1.6						
GSC	**Goldstone**	**1.60**	**31**	*e*Pn	**Pn**	**18 52 19.7**	**+0.2**
GSC				*e*Sn	**Sn**	**18 52 39.3**	**-0.7**
SBC	**Santa Barbara**	**1.65**	**288**	⇑Sb	**Sb**	**18 52 43.4**	**+1.0**
	baz=1.7						
ISA	**Isabella**	**1.81**	**343**	⇑S	**Sn**	**18 52 44.4**	**-0.6**
	baz=1.8						
DVTC	**Desert V Tower**	**1.92**	**131**	⇓Sb	**Sb**	**18 52 50.9**	**+0.6**
	baz=1.9						
SWSC	**Sam W. Stewart**	**1.96**	**120**	⇓Sb	**Sb**	**18 52 52.3**	**+0.8**
	baz=2.0						
GMRC	**Granite Mounta**	**1.98**	**64**	⇓Sb	**Sb**	**18 52 53.0**	**+1.1**
	baz=2.0						
BC3	**Big Chuckawall**	**2.00**	**97**	⇑Pb	**Pb**	**18 52 27.5**	**-0.2**
	baz=2.0						
BC3				⇓Sb	**Sb**	**18 52 52.9**	**+0.5**
	baz=2.0						
MPMC	**Manual Prospec**	**2.14**	**7**	⇓P	**Pn**	**18 52 25.9**	**-1.0**
	baz=2.1,SNR=18						
MPMC				⇑S	**Sn**	**18 52 52.7**	**-0.5**
	baz=2.1						
VES	**Vestal, Richgr**	**2.17**	**332**	⇑S	**Sn**	**18 52 54.3**	**+0.3**
	baz=2.2						
TUQ	**Turquoise Moun**	**2.17**	**46**	⇑S	**Sn**	**18 52 53.2**	**-0.8**
	baz=2.1						
IRM	**Iron Mountain**	**2.23**	**83**	⇑Sb	**Sb**	**18 53 00.2**	**+1.0**
	baz=2.2						
SHOC	**Shoshone**	**2.34**	**32**	⇑S	**Sn**	**18 52 58.5**	**+0.4**
	baz=2.3						
CWC	**Cottonwood Cre**	**2.51**	**355**	⇓Sb	**Sb**	**18 53 09.2**	**+2.0**
	baz=2.5						
GLA	**Glamis**	**2.66**	**108**	Pn	**Pn**	**18 52 30.3**	**-3.7**
GLA	**Glamis**	**2.66**	**108**	*e*Pn	**Pn**	**18 52 35.3**	**+1.4**
V11A	**Goodsprings**	**2.74**	**45**	⇑S	**Sn**	**18 53 07.7**	**-0.3**
	baz=2.7						
W12A	**Cal Nev Ari**	**2.79**	**60**	⇓Sb	**Sb**	**18 53 18.0**	**+2.6**
	baz=2.8						
V12A	**Nelson**	**3.03**	**53**	⇑P	**Pn**	**18 52 38.6**	**-0.5**
	baz=3.0,SNR=12						
V12A				⇑S	**Sn**	**18 53 14.6**	**-0.6**
	baz=3.0						
GRAC	**Grapevine Rang**	**3.08**	**7**	⇑S	**Sn**	**18 53 15.8**	**-0.7**
	baz=3.1						
U11A	**Corn Creek**	**3.19**	**38**	⇑Sb	**Sb**	**18 53 30.2**	**+3.4**
	baz=3.2						
X13A	**Yucca**	**3.37**	**78**	⇓P	**Pn**	**18 52 43.6**	**-0.3**
	baz=3.3,SNR=7.6						
X13A				⇓S	**Sn**	**18 53 23.3**	**-0.3**
	baz=3.3						
W13A	**Hualapai Mount**	**3.46**	**69**	⇓P	**Pn**	**18 52 44.9**	**-0.1**
	baz=3.4						
W13A				⇓S	**Sn**	**18 53 24.9**	**-0.8**
	baz=3.4						
U12A	**Valley of Fire**	**3.67**	**46**	⇓S	**Sn**	**18 53 31.1**	**+0.1**
	baz=3.6						
V13A	**Grand Canyon W**	**3.69**	**58**	⇓P	**Pn**	**18 52 48.0**	**-0.3**
	baz=3.7,SNR=8.5						
T12A	**Moapa**	**3.77**	**41**	⇑S	**Sn**	**18 53 34.0**	**+0.5**
	baz=3.7						
Y14A	**Wickenburg**	**4.01**	**89**	⇑P	**Pn**	**18 52 51.9**	**-0.6**
	baz=4.0						
Y14A				⇑Sb	**Sb**	**18 53 53.8**	**+3.5**
	baz=4.0						
S10A	**Tonopah Range,**	**4.11**	**14**	⇓S	**Sn**	**18 53 42.6**	**+0.8**
	baz=4.1						
X14A	**Yava**	**4.12**	**81**	⇓P	**Pn**	**18 52 53.9**	**-0.3**
	baz=4.1						
X14A				⇑Sb	**Sb**	**18 53 57.9**	**+4.2**
	baz=4.1						
V14A	**Boquillas Ranc**	**4.24**	**65**	⇓P	**Pn**	**18 52 55.8**	**+0.1**
	baz=4.2,SNR=16						
V14A				⇑Sb	**Sb**	**18 54 02.5**	**+5.6**
	baz=4.2						
T13A	**Saint George**	**4.44**	**45**	⇑P	**Pn**	**18 52 59.3**	**+0.8**
	baz=4.4,SNR=10						
Y15A	**Casa Rosa Ranc**	**4.57**	**88**	⇑P	**Pn**	**18 53 00.1**	**-0.2**
	baz=4.5						
S13A	**Holt Ranch, En**	**4.86**	**40**	⇑P	**Pn**	**18 53 05.2**	**+0.9**
	baz=4.8,SNR=11						
T14A	**Hurricane**	**4.97**	**50**	⇑P	**Pn**	**18 53 06.6**	**+0.8**
	baz=4.9,SNR=19						
HWUT	**Hardware Ranch**	**9.12**	**31**	*e*Pn	**Pn**	**18 54 05.4**	**+2.7**

BJI ***29*** *18:54:32.8, 2°.44S×152°.92E, h7km, mB5.3/35, mb5.4/60, Ms5.0/44, Ms7 4.8/42*
IDC ***29*** *18:54:33.7±0.4, 2°.71S×152°.47E, h0km, mb5.1/22, mb1 5.2/23, mb1mx5.2/24, mbtmp5.2/23, ML5.3/1, MS4.8/9, Ms1 4.8/9, ms1mx4.5/27, Error ellipse: s-maj=18.8km s-min=12.0km az=73.0*
NEIC ***29*** *18:54:35.2±0.2, 2°.67S×152°.66E, h10km, mb5.5/57, MS5.1/1, MW5.2, Error ellipse: s-maj=6.3km s-min=4.8km az=96.0, Moment Tensor Solution. s18 Moment tensor: Scale 10^{16}Nm; M_{rr}2.84; $M_{\theta\theta}$0.65; $M_{\phi\phi}$-3.50; $M_{r\theta}$0.68; $M_{\theta\phi}$-1.67; $M_{\phi r}$6.10; Best double couple: $M_0$7.10000×10^{16} NP1:ϕ_s7.00000°, δ76.00000°, λ81.00000°. NP2: ϕ_s220.00000°, δ17.00000°, λ122.00000°. Principal axes: T 6.5600, Plg58.0000°, Azm264.0000°; N 1.0200, Plg8.0000°, Azm8.0000°; P -7.5900, Plg30.0000°, Azm104.0000°;*
ISCJB ***29*** *18:54:37.6±0.9, 2°.74S±0°.03×152°.61E±0°.03, h37km±8km, mb5.5/169, MS4.9/28 Error ellipse: s-maj=5.6km s-min=5.3km az=179.2*
MOS ***29*** *18:54:38.4±0.9, 2°.55S×152°.55E, h33km, mb5.5/47, MS5.0/7, Error ellipse: s-maj=10.7km s-min=6.4km az=106.8*
GCMT ***29*** *18:54:42.0±0.2, 2°.65S×152°.71E, h31km, MW5.3, Moment Tensor Solution. s69,c106; s89,c148; Moment tensor: Scale 10^{17}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{\phi r}$0.00; Best double couple: $M_0$1.20000×10^{17} NP1:ϕ_s147.00000°, δ19.00000°, λ73.00000°. NP2: ϕ_s345.00000°, δ71.00000°, λ96.00000°. Principal axes: T 1.2600, Plg63.0000°, Azm265.0000°; N -0.1200, Plg6.0000°, Azm163.0000°; P -1.1400, Plg26.0000°, Azm71.0000°; Data Used: II IU IC G CN.*
DJA ***29*** *18:54:46, 2°.81S×152°.53E, h97km, Mw5.7/41*
ISC 29 18:54:40.7±0.8, 2°.72S±0°.03×152°.60E±0°.03, h47km±7km, h14km±7.1km; pP-P, n470, σ1°.05/337, mb5.5/169, MS4.9/28, 58C-14D, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.56**	**219**	*c iP*	**Pn**	**18 56 44.9**	**+2.7**
PMG				pmax	pmax		
	comp=Z,1μm,1.7s						
PMG	**Port Moresby**	**8.56**	**219**	⇑*e*Pn	**Pn**	**18 56 43.9**	**+1.7**
	comp=Z,525nm,0.8s						
PMG	**Port Moresby**	**8.56**	**219**	P	**Pn**	**18 56 45.0**	**+2.8**
	comp=Z,7μmcomp=Z,791nm,1.2s						
HNR	**Honiara**	**9.89**	**133**	Pn	**Pn**	**18 56 58.5**	**-1.9**
	comp=Z,23nm,0.3s,baz=214,slow=2.0,SNR=21						
HNR				Sn	**Sn**	**18 58 44.8**	**-5.2**
	comp=Z,3.5nm,0.3s,baz=17,slow=19,SNR=3.0						
HNR	**Honiara**	**9.89**	**133**	⇑*i*Pn	**Pn**	**18 56 58.2**	**-2.1**
	comp=Z,228nm,1.1s						
HNR				*e*Sn	**Sn**	**18 58 49.6**	**-0.4**
COEN	**Coen**	**14.54**	**219**	⇑*e*Pn	**Pn**	**18 58 04.5**	**+0.7**
	comp=Z,3μm,1.4s						
COEN	**Coen**	**14.54**	**219**	P	**Pn**	**18 58 05.5**	**+1.8**
	comp=Z,10μmcomp=Z,729nm,1.6s						
BAKI	**Biak**	**16.55**	**275**	P	**Pn**	**18 58 29.4**	**-0.3**
	comp=Z,3μmcomp=Z,269nm,1.4s						
GUMO	**Guam**	**17.93**	**335**	P	**Pn**	**18 58 46.8**	**+0.1**
	comp=Z,3.6nm,0.3s,baz=165,slow=7.9,SNR=9.7						
GUMO				LR	LR	19 04 40.6	
	comp=Z,812nm,19.5s,baz=157,slow=34						
GUMO	**Guam**	**17.93**	**335**	*e*P	**Pn**	**18 58 46.4**	**-0.3**
GUMO				pmax	pmax		
	comp=Z,254nm,1.1s						
GUMO	**Guam**	**17.93**	**335**	*e*Pn	**Pn**	**18 58 46.4**	**-0.3**
	comp=Z,254nm,1.1s						
GUMO	**Guam**	**17.93**	**335**	P	**Pn**	**18 58 47.9**	**+1.2**
	comp=Z,278nm,1.1s						
CTA	**Charters Tower**	**18.34**	**199**	⇑*i*P	**Pn**	**18 58 52.0**	**+0.3**
	comp=Z,86nm,0.9s						
CTA				*e*		18 59 24.2	
CTA				*e*S	**S**	**19 02 20.9**	**+2.3**
CTA	**Charters Tower**	**18.34**	**199**	P	**Pn**	**18 58 52.1**	**+0.4**
	comp=Z,2.2nm,0.3s,baz=27,slow=13,SNR=60						
CTA	**Charters Tower**	**18.34**	**199**	P	**Pn**	**18 58 52.1**	**+0.4**
CTA				pmax	pmax		
	comp=Z,2.0nm,0.3s						
CTAO	**Charters Tower**	**18.34**	**199**	⇑*i*P	**Pn**	**18 58 51.9**	**+0.2**
CTAO				pmax	pmax		
	comp=Z,238nm,1.1s						
CTAO	**Charters Tower**	**18.34**	**199**	⇑*i*P	**Pn**	**18 58 51.9**	**+0.2**
	comp=Z,238nm,1.1s						
CTAO	**Charters Tower**	**18.34**	**199**	P	**Pn**	**18 58 52.1**	**+0.4**
	comp=Z,3μmcomp=Z,216nm,1.2s						
KWAJ	**Kwajalein Atol**	**18.84**	**52**	P	**Pn**	**18 58 59.7**	**+1.9**
	comp=Z,100nm,0.5s						
TLE	**Tual**	**20.02**	**261**	P	**P**	**18 59 12.3**	**+2.5**
	comp=Z,7μmcomp=Z,757nm,1.0s						
KAKA	**Kakadu**	**22.28**	**242**	⇑*i*P	**P**	**18 59 33.7**	**-0.4**
	comp=Z,346nm,0.6s,mb6.0						
KAKA	**Kakadu**	**22.28**	**242**	*e*P	**P**	**18 59 33.3**	**-0.8**
	comp=Z,1μm,0.6s,mb6.4						
KAKA	**Kakadu**	**22.28**	**242**	P	**P**	**18 59 34.2**	**+0.1**
	comp=Z,8μmcomp=Z,928nm,0.8s,mb6.2						
EIDS	**Eidsvold**	**22.56**	**184**	*e*P	**P**	**18 59 36.0**	**-1.0**
DZM	**Mont Dzumac**	**23.47**	**146**	*e*P	**P**	**18 59 48.2**	**+1.9**
	comp=Z,128nm,0.9s,mb5.3						
DZM				*e*S	**S**	**19 03 59.0**	**+2.5**
	comp=Z,1μm,26.3s						
DZM				*e*LR	LR	19 05 46.4	
	comp=Z,4μm,24.0s						
WRAB	**Tennant Creek**	**24.70**	**225**	P	**P**	**18 59 56.0**	**-1.6**
	comp=Z,849nm,0.9s,mb6.3,SNR=87						
WRAB	**Tennant Creek**	**24.70**	**225**	⇑*i*P	**P**	**18 59 55.9**	**-1.7**
WRAB				pmax	pmax		
	comp=Z,187nm,1.0s,mb5.6						
WRAB	**Tennant Creek**	**24.70**	**225**	⇑*i*P	**P**	**18 59 55.9**	**-1.7**
	comp=Z,187nm,1.0s,mb5.6						
WRAB	**Tennant Creek**	**24.70**	**225**	P	**P**	**18 59 57.6**	**0.0**
	comp=Z,197nm,1.0s,mb5.6						
TNTI	**Ternate**	**25.46**	**277**	P	**P**	**19 00 05.3**	**+0.7**
	comp=Z,245nm,1.1s,mb5.7						
NLAI	**Namlea**	**25.47**	**268**	P	**P**	**19 00 05.7**	**+1.0**
	comp=Z,3μmcomp=Z,293nm,0.8s,mb5.8						
KNA	**Kununurra**	**26.80**	**240**	P	**P**	**19 00 15.5**	**-1.2**
	comp=Z,8μmcomp=Z,1μm,0.9s,mb6.3						
ARMA	**Armidale**	**27.56**	**182**	*e*P	**P**	**19 00 23.2**	**-0.1**
ARMA	**Armidale**	**27.56**	**182**	⇑*e*P	**P**	**19 00 23.1**	**-0.2**
	comp=Z,257nm,0.8s,mb5.9						
ASAR	**Alice Springs**	**27.58**	**219**	P	**P**	**19 00 22.4**	**-1.1**
	comp=Z,45nm,0.9s,mb5.1,baz=52,slow=8.3,SNR=338						
ASAR				PcP	PcP	19 03 41.0	+0.4
	comp=Z,13nm,0.9s,baz=59,slow=3.2,SNR=6.5						
ASAR	**Alice Springs**	**27.58**	**219**	P	**P**	**19 00 22.5**	**-1.1**
ASAR						19 03 41.0	
ASAR				pmax	pmax		
	comp=Z,45nm,0.9s						
MNI	**Manado**	**28.06**	**278**	P	**P**	**19 00 25.1**	**-2.9**
	comp=Z,2μmcomp=Z,181nm,0.9s,mb5.7						
DAV	**Davao City (W)**	**28.67**	**290**	P	**P**	**19 00 31.4**	**-2.0**
	comp=Z,51nm,0.3s,mb5.8,baz=307,slow=16,SNR=4.7						
DAV				LR	LR	19 11 52.9	
	comp=Z,2μm,19.3s,MS4.7,baz=76,slow=36						
KMSI	**Cibinong**	**28.80**	**276**	P	**P**	**19 00 35.1**	**+0.5**
	comp=Z,8μmcomp=Z,1μm,1.1s,mb6.5						
BUKP	**Musuan**	**29.42**	**291**	*e*P	**P**	**19 00 39.6**	**-0.5**
LUWI	**Luwuk**	**29.86**	**273**	P	**P**	**19 00 44.8**	**+0.8**
	comp=Z,3μmcomp=Z,267nm,1.4s,mb5.8						
KDI	**Kendari**	**29.95**	**267**	P	**P**	**19 00 45.4**	**+0.6**
	comp=Z,806nmcomp=Z,67nm,1.0s,mb5.3						
FITZ	**Fitzroy Crossi**	**30.53**	**238**	⇑*i*P	**P**	**19 00 47.8**	**-2.0**
	comp=Z,152nm,0.9s,mb5.8						
FITZ				*e*		19 01 26.8	
FITZ				*e*S	**S**	**19 06 00.5**	**+12**
FITZ	**Fitzroy Crossi**	**30.53**	**238**	LR	LR	19 13 56.8	
	comp=Z,4μm,18.7s,MS5.1,baz=48,slow=38						
FITZ	**Fitzroy Crossi**	**30.53**	**238**	⇑*i*P	**P**	**19 00 47.7**	**-2.1**
	comp=Z,92nm,0.9s,mb5.6						
FITZ	**Fitzroy Crossi**	**30.53**	**238**	P	**P**	**19 00 48.2**	**-1.6**
	comp=Z,242nm,1.0s,mb6.0						
MMRI	**Maumere**	**30.76**	**258**	P	**P**	**19 00 51.6**	**-0.4**
	comp=Z,1μmcomp=Z,117nm,1.1s,mb5.6						
STKA	**Stephens Creek**	**30.80**	**198**	⇑*i*P	**P**	**19 00 50.2**	**-1.8**
	comp=Z,25nm,0.9s,mb5.0						
STKA	**Stephens Creek**	**30.80**	**198**	P	**P**	**19 00 50.2**	**-1.8**
	comp=Z,30nm,0.9s,mb5.1,baz=10,slow=8.3,SNR=3.0						
STKA				LR	LR	19 13 14.2	
	comp=Z,2μm,20.6s,MS4.7,baz=269,slow=36						
STKA	**Stephens Creek**	**30.80**	**198**	⇑*i*P	**P**	**19 00 50.1**	**-1.9**
	comp=Z,5.2nm,0.8s,mb4.4						
MRSI	**Marisa**	**30.81**	**275**	P	**P**	**19 00 51.9**	**-0.5**
	comp=Z,920nmcomp=Z,79nm,1.0s,mb5.5						
RIV	**Riverview**	**30.98**	**182**	*e*P	**P**	**19 00 53.9**	**+0.3**
CBIJ	**Chichi jima**	**31.30**	**342**	P	**P**	**19 00 52.8**	**-3.7**
	comp=Z,121nm,0.7s,mb5.8,baz=109,slow=20,SNR=6.8						
CNP	**Catarman**	**31.61**	**299**	*e*P	**P**	**19 00 58.9**	**-0.5**
BKSI	**Bulukumba**	**32.49**	**264**	P	**P**	**19 01 07.4**	**+0.2**
	comp=Z,1μmcomp=Z,101nm,1.1s,mb5.5						
PVCP	**Virac**	**32.54**	**301**	*e*P	**P**	**19 01 07.4**	**-0.2**
CNB	**Canberra Magne**	**32.57**	**185**	*e*P	**P**	**19 01 07.2**	**-0.3**
CAN	**Canberra**	**32.61**	**185**	⇑*e*P	**P**	**19 01 07.3**	**-0.6**
CAN				pmax	pmax		
	comp=Z,186nm,1.2s,mb5.9						
CAN	**Canberra**	**32.61**	**185**	⇑*e*P	**P**	**19 01 07.3**	**-0.6**
	comp=Z,186nm,1.2s,mb5.9						
TTSI	**Tana Toraja**	**32.74**	**269**	P	**P**	**19 01 10.3**	**+0.9**
	comp=Z,1μmcomp=Z,106nm,1.1s,mb5.7						
PCI	**Palu**	**32.79**	**273**	P	**P**	**19 01 11.0**	**+1.1**
	comp=Z,3μmcomp=Z,261nm,1.1s,mb6.1						
SPSI	**Sidrap Palu**	**32.80**	**267**	P	**P**	**19 01 10.0**	**+0.1**
	comp=Z,1μmcomp=Z,153nm,1.2s,mb5.8						
WSI	**Waingapu**	**32.82**	**256**	P	**P**	**19 01 09.3**	**-0.8**
	comp=Z,6μmcomp=Z,588nm,0.9s,mb6.5						
CUYO	**Cuyo Island**	**34.20**	**294**	*e*P	**P**	**19 01 22.5**	**+0.5**
BOAC	**Boac**	**34.49**	**299**	*e*P	**P**	**19 01 24.6**	**+0.1**
MYLDM	**Lahad Datu**	**34.96**	**283**	P	**P**	**19 01 30.2**	**+1.6**
	comp=Z,3μmcomp=Z,202nm,1.4s,mb5.9						
TOO	**Toolangi**	**35.29**	**190**	*e*P	**P**	**19 01 30.4**	**-0.8**
BUSP	**Coron**	**35.37**	**295**	*e*P	**P**	**19 01 32.5**	**+0.3**
TSM	**Tawau**	**35.39**	**281**	P	**P**	**19 01 33.0**	**+0.6**
TGY	**Tagaytay City**	**35.56**	**299**	P	**P**	**19 01 34.2**	**+0.4**
	comp=Z,502nm,0.9s,mb6.5,baz=151,slow=7.7,SNR=15						
TGY				LR	LR	19 15 27.3	
	comp=Z,3.0nm,20.6s,baz=338,slow=35						
TGY	**Tagaytay City**	**35.56**	**299**	P	**P**	**19 01 34.2**	**+0.4**
TGY				pmax	pmax		
	comp=Z,502nm,0.9s						
TGY				MLR	MLR		
	comp=Z,3.0nm,20.6s						
PALP	**Palanan**	**35.68**	**304**	*e*P	**P**	**19 01 34.5**	**-0.2**
BALP	**Baler**	**35.75**	**302**	*e*P	**P**	**19 01 35.0**	**-0.4**
ENPP	**El Nido**	**35.78**	**293**	*e*P	**P**	**19 01 36.4**	**+0.7**
PPR	**Puerto Princes**	**35.95**	**291**	⇓*e*P	**P**	**19 01 38.5**	**+1.4**
LUBP	**Lubang**	**36.01**	**298**	*e*P	**P**	**19 01 36.7**	**-0.9**
CAUP	**Cauayan**	**36.12**	**304**	*e*P	**P**	**19 01 38.9**	**+0.4**
FORT	**Forrest**	**36.29**	**217**	⇑*i*P	**P**	**19 01 38.2**	**-1.6**
	comp=Z,175nm,0.6s,mb6.2						
FORT	**Forrest**	**36.29**	**217**	⇑*i*P	**P**	**19 01 37.7**	**-2.1**
	comp=Z,402nm,0.6s,mb6.5						
KBKI	**Kotabaru**	**36.38**	**268**	P	**P**	**19 01 41.1**	**+0.2**
	comp=Z,1μmcomp=Z,80nm,1.2s,mb5.5						
BATP	**Bataraza**	**36.53**	**289**	*e*P	**P**	**19 01 42.9**	**+0.8**
APYP	**Conner**	**37.06**	**305**	*e*P	**P**	**19 01 45.8**	**-0.7**
KHKI	**Kahang-Kahang**	**37.22**	**260**	P	**P**	**19 01 47.8**	**-0.2**
	comp=Z,2μmcomp=Z,326nm,0.9s,mb6.1						
ABRA	**Dolores**	**37.39**	**304**	*e*P	**P**	**19 01 48.3**	**-1.1**
SRBI	**Singaraja**	**37.58**	**260**	P	**P**	**19 01 50.3**	**-0.8**
	comp=Z,118nm,1.1s,mb5.5						
IGBI	**Denpasar**	**37.73**	**259**	P	**P**	**19 01 51.0**	**-1.3**
	comp=Z,308nm,0.9s,mb6.0						
GMJI	**Gumukmas**	**39.34**	**260**	P	**P**	**19 02 04.7**	**-1.2**
	comp=Z,81nm,0.9s,mb5.5						
MOO	**Moorlands**	**39.84**	**186**	*e*P	**P**	**19 02 10.0**	**+0.4**
TWG	**Pinlang**	**39.88**	**311**	*e*P	**P**	**19 02 08.6**	**-1.5**
	comp=Z,72nm,0.9s,mb5.4						
NACB	**Ninganchiao**	**40.29**	**313**	*e*P	**P**	**19 02 13.6**	**+0.1**
	comp=Z,264nm,0.9s,mb6.0						
SSLB	**Suanglung**	**40.53**	**312**	*e*P	**P**	**19 02 14.8**	**-0.8**
	comp=Z,95nm,0.6s,mb5.6						
SBUM	**Sibu**	**40.69**	**277**	P	**P**	**19 02 18.1**	**+1.0**
	comp=Z,3μmcomp=Z,221nm,1.4s,mb5.6						
YHNB	**Yeheng**	**40.75**	**314**	*e*P	**P**	**19 02 17.6**	**+0.2**
	comp=Z,272nm,1.0s,mb5.8						
PWJI	**Pagerwojo**	**40.94**	**261**	P	**P**	**19 02 17.8**	**-1.3**
	comp=Z,123nm,1.4s,mb5.3

comp=Z,58nm,1.1s,mb5.4
ASAJ Asahikawa 47.48 350 P P 19 03 10.8 -0.1
comp=Z,19nm,0.9s,mb5.0,baz=233,slow=14,SNR=12
ASAJ Asahikawa 47.48 350 P P 19 03 10.8 -0.1
ASAJ pmax pmax
comp=Z,19nm,0.9s
PMBI Palembang 47.77 269 P P 19 03 12.9 -0.8
comp=Z,177nm,1.1s,mb6.0
KLSI 47.80 266 P P 19 03 12.7 -1.3
comp=Z,2μmcomp=Z,91nm,1.4s,mb5.6
KASI Kota Agung 48.05 265 P P 19 03 14.4 -1.5
comp=Z,154nm,1.0s,mb6.0
MDSI Maura Dua 48.35 266 P P 19 03 17.4 -0.8
comp=Z,2μmcomp=Z,126nm,1.2s,mb5.8
MYKOM Kota Tinggi 48.94 275 P P 19 03 23.8 +1.0
MYKOM Kota Tinggi 48.94 275 P P 19 03 23.6 +0.8
comp=Z,1μmcomp=Z,103nm,1.6s,mb5.6
WHN Wuhan 49.24 315 ⇓P P 19 03 25.5 +0.8
WHN S **S** **19 10 37.5 +10**
WHN LR LR
comp=Z,2μm,13.6s,MS5.2
KGM Kluang 49.49 275 P P 19 03 28.1 +1.1
RAR Rarotonga 49.83 116 P P 19 03 30.3 +0.9
comp=Z,15nm,0.6s,mb5.2,baz=85,slow=4.0,SNR=4.4
RAR Rarotonga 49.83 116 P P 19 03 30.3 +0.9
RAR pmax pmax
comp=Z,15nm,0.6s
KSI Kapahiang 49.93 268 P P 19 03 29.4 -0.9
comp=Z,73nm,1.0s,mb5.7
KTGM Kuala Trenggan 50.05 279 P P 19 03 32.3 +1.1
YSS Yuzh-Sakhalins 50.22 351 *i* P **P 19 03 31.1 -0.8**
YSS pmax pmax
comp=Z,34nm,1.7s,mb5.1
SDSI Sungai Dareh 51.17 271 P P 19 03 39.6 -0.1
comp=Z,2μmcomp=Z,166nm,1.0s,mb5.9
FRIM Kepong 51.29 276 P P 19 03 41.3 +0.7
MDJ Mudanjiang 51.42 339 P P 19 03 40.0 -0.9
MDJ pP pP 19 03 43.0 -11
MDJ sP sP 19 03 44.5 -15
MDJ PcP PcP 19 04 54.5 -0.5
MDJ PP PP 19 05 37.0 -1.6
MDJ ScP ScP 19 08 50.5 +2.6
MDJ PcS PcS 19 08 52.0 -0.7
MDJ S **S** **19 11 03.0 +5.7**
MDJ sS sS 19 11 05.3 -14
MDJ ScS ScS 19 13 30.5 +3.2
MDJ pmax pmax
comp=Z,51nm,1.0s,mb5.4
MDJ pmax pmax
comp=Z,140nm,8.2s
MDJ LR LR
comp=N,200nm,16.1s,MS4.6
MDJ LR LR
comp=E,400nm,18.3s,MS4.6
MDJ LR LR
comp=Z,520nm,18.3s,MS4.6
MDJ Mudanjiang 51.42 339 *e*P **P 19 03 40.0 -1.0**
comp=Z,43nm,1.0s,mb5.3
SNY Shenyang 51.58 332 ⇑P **P 19 03 41.3 -0.9**
SNY S **S** **19 10 51.0 -8.6**
SNY pmax pmax
comp=Z,17nm,1.1s,mb4.9
SNY pmax pmax
comp=Z,130nm,5.9s
SNY LR LR
comp=N,420nm,20.7s,MS4.6
SNY LR LR
comp=E,360nm,18.0s,MS4.6
SNY LR LR
comp=Z,520nm,18.6s,MS4.6
BKNI Bangkinang 51.63 273 P P 19 03 42.9 -0.2
comp=Z,4μmcomp=Z,366nm,1.0s,mb6.3
MCQ Macquarie Isla 51.87 175 *e*P **P 19 03 44.4 +0.2**
IPM Ipoh 52.03 278 P P 19 03 46.4 +0.3
IPM Ipoh 52.03 278 P P 19 03 46.1 0.0
comp=Z,2μmcomp=Z,131nm,1.4s,mb5.7
PPI Padang Panjang 52.23 272 P P 19 03 47.0 -0.6
comp=Z,7μmcomp=Z,157nm,1.1s,mb5.9
CN2 Changchun 52.34 335 ⇑P **P 19 03 47.5 -0.3**
CN2 *e*S **S** **19 11 08.5 -1.5**
CN2 pmax pmax
comp=Z,40nm,1.0s,mb5.3
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,400nm,14.0s,MS4.9
CN2 LR LR
comp=E,600nm,14.0s,MS4.9
CN2 LR LR
comp=Z,600nm,16.0s,MS4.7
KULM Kulim 52.50 279 P P 19 03 50.0 +0.4
KULM Kulim 52.50 279 *e*P **P 19 03 49.6 0.0**
comp=Z,128nm,1.0s,mb5.8
KULM Kulim 52.50 279 P P 19 03 49.4 -0.2
comp=Z,2μmcomp=Z,137nm,1.1s,mb5.8
ENH Enshi 52.61 312 *e*P **P 19 03 50.1 -0.1**
comp=Z,139nm,1.0s,mb5.8
GYA Guiyang 53.00 306 ⇑*i*P **P 19 03 54.0 +1.0**
GYA PcP PcP 19 05 03.3 +2.0
GYA PP PP 19 05 57.0 +3.8
GYA ScP ScP 19 08 53.5 -1.7
GYA S **S** **19 11 19.0 -0.6**
GYA SS SS 19 14 59.3 -0.2
GYA pmax pmax
comp=Z,60nm,1.0s,mb5.5
GYA pmax pmax
comp=Z,140nm,4.9s
GYA LR LR
comp=N,860nm,18.8s,MS4.9
GYA LR LR
comp=E,610nm,19.2s,MS4.9
GYA LR LR
comp=Z,850nm,17.9s,MS4.8
MNSI Mandailing Nat 53.12 273 P P 19 03 53.5 -0.7
comp=Z,168nm,1.1s,mb5.9
HABR Khabarovsk 53.23 345*c i*P **P 19 03 52.3 -2.0**
HABR *e* 19 04 58.7
HABR *e* 19 05 51.6
HABR *e*PPP 19 06 57.4
HABR *e*S **S** **19 11 18.9 -3.1**
HABR *e*SS SS 19 14 59.4 -3.0
HABR *e*SSS 19 16 54.3
HABR pmax pmax
comp=Z,109nm,1.1s,mb5.7
HABR pmax pmax
comp=N,32nm,1.0s
HABR pmax pmax
comp=E,19nm,1.0s
HABR MLR MLR
comp=Z,450nm,19.0s,MS4.5
SISI Saibi 53.49 270 P P 19 03 56.1 -0.8
comp=Z,239nm,1.2s,mb6.0
BJT Baijiatuau 54.06 326 *e*P **P 19 03 59.7 -0.8**
BJT pmax pmax
comp=Z,24nm,0.8s
BJT Baijiatuau 54.06 326 *e*P **P 19 03 59.7 -0.8**
comp=Z,24nm,0.8s,mb5.2
BJI Beijing 54.07 326 P P 19 04 00.0 -0.6
BJI S **S** **19 11 32.3 -1.4**
BJI SS SS 19 15 19.8 +3.9
BJI pmax pmax
comp=Z,32nm,0.7s,mb5.4
BJI pmax pmax
comp=Z,190nm,3.9s
BJI LR LR
comp=N,610nm,17.9s
BJI LR LR
comp=E,420nm,25.4s
BJI LR LR
comp=Z,500nm,24.8s
KLR Kul'dur 54.81 343 ⇓*i*P **P 19 04 02.0 -3.8**
KLR *e* 19 17 26.5
KLR pmax pmax
comp=E,88nm,1.6s
KLR pmax pmax
comp=Z,180nm,1.6s,mb5.8
XAN Xi'an 55.00 316 P P 19 04 07.5 0.0
XAN S **S** **19 11 46.5 +0.1**
XAN pmax pmax
comp=Z,17nm,1.0s,mb5.0
XAN pmax pmax
comp=Z,73nm,6.5s
XAN LR LR
comp=N,240nm,18.4s,MS4.4
XAN LR LR
comp=E,170nm,20.4s,MS4.4
XAN LR LR
comp=Z,210nm,20.9s,MS4.2
NST Nakhon Sawan 55.00 291 ⇓P **P 19 04 09.7 +1.9**
comp=Z,92nm,1.0s,mb5.8
GSI Gunungsitoli 55.15 273 P P 19 04 08.3 -0.7
comp=Z,214nm,1.3s,mb6.0
KMI Kunming 55.68 303 ⇑P **P 19 04 14.0 +1.4**
KMI PcP PcP 19 05 12.0 +0.4
KMI PP PP 19 06 21.3 +4.0
KMI S **S** **19 11 56.0 +0.2**
KMI SS SS 19 15 43.3 +1.4
KMI pmax pmax
comp=Z,58nm,1.3s,mb5.5
KMI pmax pmax
comp=Z,260nm,5.0s
KMI LR LR
comp=N,410nm,17.5s,MS4.7
KMI LR LR
comp=E,490nm,18.9s,MS4.7
KMI LR LR
comp=Z,630nm,18.2s,MS4.7
TPTI 55.71 276 P P 19 04 12.1 -0.9
comp=Z,87nm,1.1s,mb5.7
PET Petropavlovsk 55.77 4 *i* P **P 19 04 12.4 -0.3**
PET pmax pmax
comp=Z,12nm,0.8s,mb5.0
PETK Petropavlovsk- 55.79 4 P P 19 04 12.5 -0.3
comp=Z,16nm,0.7s,mb5.2,baz=156,slow=6.9,SNR=27
PETK Petropavlovsk- 55.79 4 P P 19 04 12.5 -0.3
PETK pmax pmax
comp=Z,17nm,0.7s,mb5.2
PETK Petropavlovsk- 55.79 4 P P 19 04 12.5 -0.3
COCO West Island 55.99 257 *i* P **P 19 04 17.1 +2.1**
BDT Bhumibol Dam 56.45 293 P P 19 04 15.0 -3.2
comp=Z,13nm,1.0s,mb4.9
CHRT Chiangrai 56.48 296 ⇓P **P 19 04 18.0 -0.4**
comp=Z,329nm,1.0s,mb6.3
CM31 Chiang Mai Arr 56.83 294 *e*P **P 19 04 22.5 +1.5**
comp=Z,81nm,0.8s,mb5.8
CMAR Chiang Mai Arr 56.83 294 P P 19 04 22.6 +1.7
comp=Z,78nm,0.8s,mb5.8,baz=112,slow=5.3,SNR=313
CMAR LR LR 19 27 25.0
comp=Z,173nm,18.3s,MS4.2,baz=307,slow=35
CMAR Chiang Mai Arr 56.83 294 P P 19 04 22.6 +1.7
CMAR pmax pmax
comp=Z,78nm,0.8s
CMAR MLR MLR
comp=Z,173nm,18.3s
CHG Chiang Mai 56.93 294 ⇑P **P 19 04 22.2 +0.6**
comp=Z,70nm,1.3s,mb5.5
CHTO Chiang Mai 56.93 294 P P 19 04 22.2 +0.6
comp=Z,870nmcomp=Z,75nm,1.3s,mb5.6
CHTO Chiang Mai 56.93 294 P P 19 04 22.9 +1.3
SNR=18
CD2 Chengdu 57.25 310 P P 19 04 24.5 +0.8
CD2 pP pP 19 04 30.5 -6.4
CD2 sP sP 19 04 33.0 -9.3
CD2 PcP PcP 19 05 19.5 +1.8
CD2 PP PP 19 06 35.0 +3.7
CD2 S **S** **19 12 21.0 +4.5**
CD2 sS sS 19 12 28.5 -10
CD2 SS SS 19 16 11.5 +5.1
CD2 pmax pmax
comp=Z,220nm,0.9s,mb6.2
CD2 pmax pmax
comp=Z,440nm,5.5s
CD2 LR LR
comp=N,620nm,10.7s
CD2 LR LR
comp=Z,490nm,20.2s
HHC Hu-ho-hao-te 57.26 324 *e*P **P 19 04 23.3 -0.2**
HHC sP sP 19 04 29.0 -13
HHC PcP PcP 19 05 16.5 -0.9
HHC PP PP 19 06 32.0 +0.9
HHC ScP ScP 19 09 15.0 +1.5
HHC PcS PcS 19 09 16.8 -1.6
HHC S **S** **19 12 17.8 +1.6**
HHC sS sS 19 12 24.0 -14
HHC ScS ScS 19 14 08.8 -0.2
HHC SS SS 19 16 08.8 +2.6
HHC pmax pmax
comp=Z,44nm,0.9s,mb5.5
HHC pmax pmax
comp=Z,240nm,6.5s
HHC LR LR
comp=N,480nm,16.7s,MS4.8
HHC LR LR
comp=E,430nm,16.5s,MS4.8
HHC LR LR
comp=Z,570nm,16.6s,MS4.8
BTO Baotou 58.03 323 *e*P **P 19 04 29.3 +0.3**
BTO pmax pmax
comp=Z,37nm,0.9s,mb5.4
PPT Papeete 58.56 109 *e*LR LR 19 21 38.6
comp=Z,738nm,22.8s
PPT Papeete 58.56 109 LR LR 19 25 15.5
comp=Z,641nm,18.2s,MS4.8,baz=319,slow=31
HIA Hailar 59.07 336 *e*P **P 19 04 35.5 -0.5**
HIA pmax pmax
comp=Z,37nm,1.1s
HIA Hailar 59.07 336 *e*P **P 19 04 35.5 -0.5**
comp=Z,38nm,1.1s,mb5.3
LZH Lanzhou 59.62 315 ⇑P **P 19 04 41.5 +1.4**
LZH PcP PcP 19 05 27.5 +0.6
LZH *e*S **S** **19 12 45.5 -1.6**
LZH SS SS 19 16 41.0 -2.4
LZH pmax pmax
comp=Z,200nm,1.4s,mb6.0
LZH pmax pmax
comp=Z,480nm,4.0s
LZH LR LR
comp=E,1μm,13.9s
LZH LR LR
comp=Z,2μm,15.7s,MS5.3
CLNS Chul'man 63.47 343 *e*P **P 19 05 05.6 0.0**
CLNS pmax pmax
comp=N,34nm,1.3s
CLNS pmax pmax
comp=Z,30nm,1.1s,mb5.3
CLNS pmax pmax
comp=E,14nm,1.0s
CLNS MLR MLR
comp=E,450nm,16.0s,MS4.9
CLNS MLR MLR
comp=Z,513nm,15.0s,MS4.8
CLNS MLR MLR
comp=N,440nm,15.0s,MS4.9
CIT Chita 63.75 334 *e*P **P 19 05 08.2 +0.7**
CIT *e* 19 05 14.2
CIT *e* pP 19 05 23.2 +2.2
CIT *e* 19 05 37.4
CIT pmax pmax
comp=Z,98nm,1.8s,mb5.5
GTA Gaotai 64.01 317 ⇑*i*P **P 19 05 11.0 +1.5**
GTA S **S** **19 13 43.8 +1.3**
GTA SS SS 19 17 55.5 +3.4
GTA pmax pmax
comp=Z,110nm,1.1s,mb5.8
GTA pmax pmax
comp=Z,380nm,7.5s
GTA LR LR
comp=N,380nm,22.2s,MS4.7
GTA LR LR
comp=E,420nm,22.8s,MS4.7
GTA LR LR
comp=Z,430nm,20.4s,MS4.6
ULN Ulaanbaatar 64.14 328 ⇑*i*P **P 19 05 11.1 +0.9**
ULN Ulaanbaatar 64.14 328 P P 19 05 10.9 +0.7
comp=Z,775nmcomp=Z,67nm,1.2s,mb5.5
ULN Ulaanbaatar 64.14 328 P P 19 05 11.4 +1.2
SNR=24
SONM Songino Array 64.47 327 P P 19 05 13.1 +0.7
comp=Z,14nm,0.7s,mb5.1,baz=150,slow=5.2,SNR=111
SONM PKP2bc 19 34 07.6
comp=Z,0.4nm,0.5s,baz=177,slow=2.7,SNR=4.1
SONM Songino Array 64.47 327 P P 19 05 13.1 +0.7
SONM ⇑*e* 19 34 07.6
SHL Shillong 65.10 300 ⇑*i*P **P 19 05 16.5 -0.4**
SEY Seymchan 65.48 360 ⇑*i*P **P 19 05 17.9 -0.7**
UNV Unalaska Valle 65.83 25 *e*P **P 19 05 21.7 +0.6**
YAK Yakutsk 66.91 348 *e*P **P 19 05 26.9 -0.9**
YAK *e**PP pP 19 05 38.9 -2.4
YAK *e* 19 05 59.1
YAK *e* 19 07 57.2
YAK *e*S S 19 14 18.0 +0.9
YAK pmax pmax
comp=Z,68nm,1.2s,mb5.5
YAK pmax pmax
comp=E,15nm,1.4s
YAK pmax pmax
comp=N,32nm,1.4s
YAK pmax pmax
comp=Z,31nm,1.8s,mb5.0
YAK pmax pmax
comp=N,15nm,1.7s
YAK pmax pmax
comp=E,30nm,2.0s
YAK smax
comp=E,254nm,3.5s
YAK smax
comp=N,63nm,2.5s
YAK MLR MLR
comp=Z,526nm,19.0s,MS4.8
YAK MLR MLR
comp=N,245nm,19.0s,MS4.5
YAK MLR MLR
comp=E,137nm,17.0s,MS4.5
YAK Yakutsk 66.91 348 ⇑*i*P **P 19 05 27.2 -0.6**
LSA Lhasa 66.91 304 P **P 19 05 30.3 +1.8**
LSA Lhasa 66.91 304 *e*P **P 19 05 30.0 +1.5**
LSA pmax pmax
comp=Z,55nm,1.1s,mb5.5
LSA Lhasa 66.91 304 *e*P **P 19 05 30.0 +1.5**
comp=Z,55nm,1.1s,mb5.5
TAOE Nuku Hiva Isla 67.11 98 *e*LR LR 19 25 46.8
comp=Z,1μm,23.2s
ZAK Zakamensk 67.63 328 *e*P **P 19 05 32.5 -0.1**
ZAK pmax pmax
comp=Z,200nm,1.0s,mb6.1
TLY Talaya 68.19 330 P **P 19 05 36.8 +0.7**
comp=Z,178nm,0.8s,mb6.2,SNR=13
TLY Talaya 68.19 330 *e*P **P 19 05 36.1 0.0**
TLY pmax pmax
comp=Z,34nm,1.0s,mb5.3
TLY Talaya 68.19 330 *e*P **P 19 05 36.1 0.0**
comp=Z,24nm,0.9s,mb5.2
TLY Talaya 68.19 330 P **P 19 05 36.4 +0.3**
SNR=15
IRK Irkutsk 68.21 330 ⇑*i*P **P 19 05 35.5 -0.7**
IRK pmax pmax
comp=Z,67nm,1.6s,mb5.4
TAPN Taplejung 69.18 300 *e*P **P 19 05 44.1 +1.3**
comp=Z,263nm,1.3s,mb6.0
ODAN Odare 69.33 300 *e*P **P 19 05 45.0 +1.3**
comp=Z,180nm,0.9s,mb6.0
SDPT Sand Point 69.45 26 *e*P **P 19 05 44.3 +0.4**
comp=Z,33nm,1.0s,mb5.2
MOY Mondy 69.54 329 *e*P **P 19 05 45.2 +0.7**
MOY pmax pmax
comp=Z,72nm,1.5s,mb5.4
CASY Casey 69.93 197 *e*P **P 19 05 45.6 -1.1**
RAMN Ramite 70.04 300 *e*P **P 19 05 49.1 +1.0**
GUN Gumba 70.89 301 *e*P **P 19 05 54.8 +1.5**
comp=Z,236nm,1.0s,mb6.1
PKI Pulchoki 71.21 300 *e*P **P 19 05 56.3 +1.0**
comp=Z,225nm,1.2s,mb6.0
PKI Pulchoki 71.21 300 *e*P **P 19 05 56.3 +1.0**
PKI pmax pmax
comp=Z,225nm,1.2s,mb6.0
BILL Bilibino 71.25 5*c i*P **P 19 05 54.2 -0.4**
BILL *e* 19 06 01.4
BILL *e* pP 19 06 11.0 +2.8
BILL *e* 19 08 33.9
BILL pmax pmax
comp=Z,31nm,1.2s,mb5.1
KKN Kakani 71.38 300 *e*P **P 19 05 57.2 +1.0**
comp=Z,95nm,0.8s,mb5.8
KKN Kakani 71.38 300 *e*P **P 19 05 57.2 +1.0**
KKN pmax pmax
comp=Z,95nm,0.8s,mb5.8
DMN Daman 71.48 300 *e*P **P 19 05 58.1 +1.2**
comp=Z,350nm,1.2s,mb6.2
GKN Gorkha 71.98 300 *e*P **P 19 06 00.8 +0.9**
comp=Z,409nm,1.3s,mb6.2
PALK Pallekele 72.42 278 *i* P **P 19 06 04.6 +1.8**
PALK Pallekele 72.42 278 P **P 19 06 03.0 +0.2**
comp=Z,23nm,1.4s,mb4.9
RKT Rikitea 72.78 113 *e*LR LR 19 28 25.3
comp=Z,874nm,24.0s
KOLN Koldanda 72.82 300 *e*P **P 19 06 05.8 +0.9**
comp=Z,130nm,1.0s,mb5.8
OHAK Old Harbor 73.80 27 *e*P **P 19 06 10.4 +0.4**
comp=Z,35nm,1.0s,mb5.2
WMQ Urumqi 74.09 317 P **P 19 06 12.5 +0.5**
WMQ pP pP 19 06 17.0 -8.7
WMQ sP sP 19 06 19.5 -11
WMQ PcP PcP 19 06 28.0 +1.0
WMQ PP PP 19 08 59.5 +1.5
WMQ S S 19 15 43.5 +2.0
WMQ SKS 19 16 14.5
WMQ ScS ScS 19 16 18.5 -0.1
WMQ SS SS 19 20 30.8 +3.4
WMQ pmax pmax
comp=Z,51nm,1.2s,mb5.3
WMQ pmax pmax
comp=Z,240nm,4.5s
WMQ LR LR
comp=N,470nm,21.8s
WMQ LR LR
comp=E,330nm,16.5s
WMQ LR LR
comp=Z,670nm,18.0s,MS5.0
KDAK Kodiak Island 74.42 27 P **P 19 06 15.4 +1.8**
comp=Z,19nm,1.0s,mb5.0,baz=142,slow=5.4,SNR=3.6
KDAK Kodiak Island 74.42 27 P **P 19 06 15.5 +1.9**
KDAK pmax pmax
comp=Z,19nm,1.0s,mb5.0
HYB Hyderabad 75.64 289 *e*P **P 19 06 21.0 -0.5**
HYB Hyderabad 75.64 289 *i* P **P 19 06 21.0 -0.5**
NGP Nagpur 75.69 292 *e*PKP **P 19 06 20.9 -0.8**
NGP AMb AMB 19 06 22.1
comp=Z,70nm,1.9s,mb5.3
MIR Mirnyy 75.78 201 ⇑*i*P **P 19 06 21.2 -0.1**
MIR pmax pmax
comp=Z,178nm,1.4s,mb5.8
MIR pmax pmax
comp=Z,45nm,2.0s,mb5.0
MIR MLR MLR
comp=N,900nm,15.0s,MS5.3
MIR MLR MLR
comp=E,800nm,15.0s,MS5.3
MIR MLR MLR
comp=Z,1μm,15.0s,MS5.3
TIXI Tiksi 75.82 352 *i* P **P 19 06 20.2 -1.2**
TIXI pmax pmax
comp=Z,24nm,1.3s,mb5.0
TTA Tatalina 75.92 22 *e*P **P 19 06 22.1 0.0**
TTA pmax pmax
comp=Z,27nm,1.1s,mb5.1
TTA Tatalina 75.92 22 *e*P **P 19 06 22.1 -0.1**
comp=Z,27nm,1.1s,mb5.1
PTH Pithoragarh 76.10 301 *e*PKP **P 19 06 23.2 -0.7**
JOSI Joshimath 76.85 302 *e*PKP **P 19 06 28.4 +0.3**
SEW Seward 77.01 26 *e*P **P 19 06 30.2 +1.8**
comp=Z,47nm,1.0s,mb5.4
PPLA Purkeypile 77.34 23 *e*P **P 19 06 31.9 +1.7**
comp=Z,43nm,1.4s,mb5.2
RC01 Rabbit Creek A 77.38 25 *e*P **P 19 06 29.8 -0.7**
comp=Z,64nm,1.1s,mb5.5
BHPL Bhopal 77.49 294 *e*PKP **P 19 06 31.8 0.0**
BHPL AMb AMB 19 06 33.2
comp=Z,47nm,1.1s,mb5.3
AKL Akola 77.51 292 *e*PKP **P 19 06 32.0 0.0**
AKL AMb AMB 19 06 33.3
comp=Z,125nm,1.8s,mb5.5
AGRA Agra 77.65 298 *e*PKP **P 19 06 32.5 -0.1**
AGRA AMb AMB 19 06 34.0
comp=Z,53nm,0.2s,mb6.2
PMR Palmer 77.89 25 *e*P **P 19 06 32.6 -0.6**
PMR pmax pmax
comp=Z,30nm,1.1s,mb5.1
PMR Palmer 77.89 25 *e*P **P 19 06 32.6 -0.7**
comp=Z,30nm,1.1s,mb5.1
DDI Dehra Dun 78.08 302 *e*PKP **P 19 06 34.0 -1.0**
KLP Kalpa 78.14 303 *e*PKP **P 19 06 36.6 +1.3**
KLP AMb AMB 19 06 38.4
comp=Z,177nm,1.3s,mb5.8
AYAN Aya Nagar 78.57 300 *e*PKP **P 19 06 37.4 -0.4**
AYAN AMb AMB 19 06 38.9
comp=Z,51nm,0.7s,mb5.6
SONA Sohna 78.57 299 *e*PKP **P 19 06 37.5 -0.2**

SONA AMb AMB 19 06 40.8
comp=Z,39nm,1.1s,mb5.2
MK31 Makanchi Array 78.64 319 *eP* **P** **19 06 37.7 0.0**
MKAR Makanchi Array 78.64 319 P **P** **19 06 37.9 +0.2**
comp=Z,27nm,0.9s,mb5.2,baz=105,slow=5.9,SNR=190
MKAR Makanchi Array 78.64 319 P **P** **19 06 37.9 +0.2**
MKAR pmax pmax
comp=Z,27nm,0.9s
DIV Divide 79.10 26 *eP* **P** **19 06 39.8 -0.1**
comp=Z,34nm,1.0s,mb5.2
SDNR Sundarnagar 79.21 303 *e*PKP **P** **19 06 41.5 +0.3**
ZAA0 Zalesovo Array 79.32 326⇑*iP* **P** **19 06 40.1 -1.2**
ZALV Zalesovo Beam 79.32 326 P **P** **19 06 40.3 -1.0**
comp=Z,19nm,0.7s,mb5.1,baz=108,slow=6.0,SNR=84
ZALV Zalesovo Beam 79.32 326 P **P** **19 06 40.3 -1.0**
ZALV pmax pmax
comp=Z,19nm,0.7s,mb5.1
BMRM Bremner River 79.54 26 *eP* **P** **19 06 42.5 +0.2**
comp=Z,29nm,1.1s,mb5.1
KHET Khetri 79.65 299 *e*PKP **P** **19 06 43.3 -0.4**
KHET AMb AMB 19 06 45.6
comp=Z,63nm,1.3s,mb5.4
PAX Paxson 80.05 24 *eP* **P** **19 06 44.4 -0.7**
PAX pmax pmax
comp=Z,14nm,1.1s,mb4.8
PAX Paxson 80.05 24 *eP* **P** **19 06 44.4 -0.7**
comp=Z,14nm,1.1s,mb4.8
ILAR Eielson Array 80.32 22 P **P** **19 06 44.9 -1.6**
comp=Z,15nm,0.9s,mb4.9,baz=246,slow=4.9,SNR=109
ILAR Eielson Array 80.32 22 P **P** **19 06 44.9 -1.6**
ILAR pmax pmax
comp=Z,15nm,0.9s
COLD Coldfoot 80.37 19 *eP* **P** **19 06 46.9 +0.2**
comp=Z,17nm,1.0s,mb4.9
THN Thein Dam 80.41 303 *e*PKP **P** **19 06 46.0 -1.7**
NVS Novosibirsk 80.49 327⇑*iP* **P** **19 06 45.8 -1.8**
NVS *e*S S 19 16 49.9 -0.6
NVS pmax pmax
comp=Z,55nm,1.5s,mb5.3
NVS pmax pmax
comp=N,32nm,1.6s
NVS pmax pmax
comp=E,56nm,1.5s
NVS smax
comp=E,25nm,1.9s
MENT Mentasta 80.76 25 *eP* **P** **19 06 46.4 -2.5**
KSH Kashi 81.44 310 P **P** **19 06 55.5 +2.5**
KSH PP PP 19 10 05.5 +5.9
KSH S S 19 17 02.0 +0.9
KSH SKS 19 17 05.5
KSH SS SS 19 22 26.8 +8.4
KSH pmax pmax
comp=Z,23nm,1.1s,mb5.0
KSH pmax pmax
comp=Z,340nm,5.8s
KSH LR LR
comp=N,730nm,15.1s,MS5.3
KSH LR LR
comp=E,490nm,13.7s,MS5.3
KSH LR LR
comp=Z,710nm,16.7s,MS5.1
ULHL Ulahol 81.76 313 P **P** **19 06 55.6 +1.0**
SNR=17
KURK Kurchatov 82.02 322 P **P** **19 06 55.8 0.0**
comp=Z,327nm,0.9s,mb6.3,SNR=41
KURK Kurchatov 82.02 322 P **P** **19 06 55.3 -0.5**
comp=Z,29nm,0.9s,mb5.2,baz=104,slow=4.6,SNR=100
KURK Kurchatov 82.02 322*c iP* **P** **19 06 55.2 -0.6**
KURK pmax pmax
comp=Z,56nm,0.8s,mb5.5
KURK Kurchatov 82.02 322⇑*iP* **P** **19 06 55.1 -0.7**
comp=Z,59nm,1.0s,mb5.5
KURK Kurchatov 82.02 322 P **P** **19 06 55.6 -0.2**
SNR=20
KZA Kyzart 82.45 313 P **P** **19 06 59.9 +1.6**
SNR=36
KBK Karagaybulak 82.78 313 P **P** **19 07 00.9 +0.9**
SNR=9.5
CHMS Chumysh 82.98 314 P **P** **19 07 01.5 +0.5**
SNR=18
DAWY Dawson 82.98 24 *eP* **P** **19 07 00.8 +0.3**
UCH Uchtor 83.02 313 *eP* **P** **19 07 02.5 +1.3**
comp=Z,14nm,1.4s,mb4.8
FRU Bishkek 83.05 314 *eP* **P** **19 07 01.0 -0.4**
FRU pmax pmax
comp=Z,76nm,1.8s,mb5.4
AAK Ala-Archa 83.10 313 *eP* **P** **19 07 02.1 +0.5**
AAK pmax pmax
comp=Z,25nm,1.2s,mb5.1
AAK Ala-Archa 83.10 313 *eP* **P** **19 07 02.1 +0.5**
comp=Z,25nm,1.2s,mb5.1
USP Ospenovka 83.21 314 P **P** **19 07 02.8 +0.6**
SNR=16
SKAG Skagway 83.31 29 P **P** **19 07 01.3 -1.1**
AML Almayashu 83.60 313 P **P** **19 07 05.9 +1.7**
SNR=64
AML Almayashu 83.60 313⇑*iP* **P** **19 07 05.6 +1.4**
comp=Z,71nm,1.0s,mb5.8
EKS2 Erkin-Say 83.63 313 P **P** **19 07 05.5 +1.1**
SNR=36
EKS2 Erkin-Say 83.63 313⇑*iP* **P** **19 07 05.0 +0.7**
comp=Z,42nm,1.0s,mb5.5
DLBC Dease Lake 85.71 31 P **P** **19 07 15.3 +0.8**
comp=Z,8.6nm,1.0s,mb4.9,baz=246,slow=8.7,SNR=4.9
DLBC LR LR 19 40 18.8
comp=Z,1μm,18.8s,MS5.3,baz=329,slow=32
DLBC Dease Lake 85.71 31 *eP* **P** **19 07 15.1 +0.6**
KBL Kabul 86.22 305⇑*iP* **P** **19 07 17.1 -0.5**
KBL pmax pmax
comp=Z,40nm,1.0s,mb5.6
KBL Kabul 86.22 305⇑*iP* **P** **19 07 17.1 -0.5**
comp=Z,40nm,1.0s,mb5.6
MAW Mawson 87.40 203⇑*iP* **P** **19 07 21.4 -1.2**
comp=Z,17nm,0.9s,mb5.3
MAW Mawson 87.40 203 P **P** **19 07 21.5 -1.1**
comp=Z,24nm,1.0s,mb5.4,baz=99,slow=5.2,SNR=18
MAW Mawson 87.40 203 P **P** **19 07 21.5 -1.1**
MAW pmax pmax
comp=Z,24nm,1.0s
MAW Mawson 87.40 203 *eP* **P** **19 07 21.3 -1.3**
comp=Z,7.8nm,1.1s,mb4.8
BVAR Borovoye Array 87.47 323 P **P** **19 07 22.2 -1.0**
comp=Z,38nm,0.8s,mb5.7,baz=104,slow=6.3,SNR=152
BVAR Borovoye Array 87.47 323 P **P** **19 07 22.2 -1.0**
BVAR pmax pmax
comp=Z,38nm,0.8s
BRVK Borovoye 87.53 323 P **P** **19 07 22.1 -1.4**
comp=Z,243nm,1.0s,mb6.4,SNR=18
BRVK Borovoye 87.53 323*c iP* **P** **19 07 22.4 -1.1**
BRVK pmax pmax
comp=Z,41nm,0.8s,mb5.7
BRVK Borovoye 87.53 323⇑*iP* **P** **19 07 22.1 -1.4**
comp=Z,42nm,0.9s,mb5.7
BRVK Borovoye 87.53 323 P **P** **19 07 22.9 -0.6**
SNR=13
YBH Yreka Blue Hor 87.83 48 P **P** **19 07 27.4 +2.2**
comp=Z,1.2nm,0.5s,mb4.3,baz=280,slow=7.0,SNR=3.2
YBH LR LR 19 40 03.4
comp=Z,1μm,19.4s,MS5.3,baz=355,slow=31
YBH Yreka Blue Hor 87.83 48 P **P** **19 07 27.4 +2.2**
YBH pmax pmax
comp=Z,1.0nm,0.5s
YBH MLR MLR
comp=Z,1μm,19.4s
MOD Modoc 89.64 48 *eP* **P** **19 07 33.7 0.0**
comp=Z,9.2nm,0.9s,mb5.1
WVOR Wild Horse Val 90.90 48 *eP* **P** **19 07 39.9 +0.3**
WVOR pmax pmax
comp=Z,2.0nm,0.8s,mb4.5
WVOR Wild Horse Val 90.90 48 *eP* **P** **19 07 39.9 +0.3**
comp=Z,2.0nm,0.8s,mb4.5
NVAR Mina Array Bea 90.96 52 P **P** **19 07 40.4 +0.4**
comp=Z,2.0nm,1.0s,mb4.4,baz=260,slow=5.4,SNR=7.3
NVAR Mina Array Bea 90.96 52 P **P** **19 07 40.4 +0.4**
SVE Sverdlovsk 93.34 327⇓*eP* **P** **19 07 48.9 -1.6**
SVE pmax pmax
comp=Z,21nm,1.6s,mb5.3
N12A Clover Valley, 93.55 49 P **P** **19 07 52.8 +0.9**
comp=Z,7.3nm,1.0s,mb5.1
YKA Yellowknife Ar 93.69 28 P **P** **19 07 51.6 -0.4**
comp=Z,4.5nm,0.9s,mb4.9,baz=268,slow=4.8,SNR=13
YKA Yellowknife Ar 93.69 28 P **P** **19 07 51.6 -0.4**
YKA pmax pmax
comp=Z,5.0nm,0.9s
BSMT Bassoo Peak 93.76 42 *eP* **P** **19 07 53.0 +0.3**
comp=Z,6.4nm,1.1s,mb5.0
ABKAR Akbulak array 93.78 319 *eP* **P** **19 07 50.1 -2.6**
comp=Z,11nm,1.0s,mb5.2
ARU Arti 94.49 326*c iP* **P** **19 07 53.4 -2.4**
ARU 19 11 40.6
ARU PPP 19 13 44.4
ARU S SKSac 19 18 22.7 -4.4
ARU pmax pmax
comp=Z,15nm,1.2s,mb5.3
ARU Arti 94.49 326 *eP* **P** **19 07 53.3 -2.5**
comp=Z,16nm,1.4s,mb5.3
ABKT Ailbek 95.20 308 P **P** **19 07 59.8 +0.3**
comp=Z,185nm,1.0s,mb6.5,SNR=19
SYO Syowa Base 95.55 199⇓*eP* **P** **19 07 57.6 -2.8**
SYO Syowa Base 95.55 199⇓*iP* PcP 19 08 03.0 +2.3
TXAR Lajitas Array 103.30 61 PKiKP PKiKP 19 12 54.7 -0.6
comp=Z,1.0nm,1.0s,baz=255,slow=1.9,SNR=4.7
TXAR PKKPbc PKKPbc 19 24 31.0 -0.2
comp=Z,0.7nm,0.7s,baz=105,slow=4.7,SNR=7.3
ARCES ARCESS Array B 104.83 343 PKiKP PKiKP 19 12 56.3 -0.6
comp=Z,2.1nm,0.9s,baz=130,slow=1.4,SNR=3.9
ARCES PKKPbc PKKPbc 19 24 23.1 -4.8
comp=Z,2.2nm,0.7s,baz=267,slow=2.2,SNR=12
VNA1 Neumayer--Stat 105.67 187 *e*Pdiff Pdif 19 08 46.8 +0.8
VNA1 *e* 19 13 05.9
VNA1 *e* 19 13 08.5
KIV Kislovodsk 106.16 315 *eP* Pdif 19 08 49.7 +1.6
KIV *e* 19 13 11.8
KIV *e* 19 19 24.5
KIV *e*PS PS 19 22 33.9 +2.5
KIV *e*SS SS 19 28 10.0 -0.7
KIV pmax pmax
comp=Z,7.0nm,0.9s
OBN Obninsk 106.89 327 *eP* Pdif 19 08 49.8 -1.6
OBN *e* 19 13 17.4
OBN *e*SS SS 19 28 13.8 -6.0
OBN pmax pmax
comp=Z,6.0nm,0.8s
FINES FINESS Array B 109.09 336 Pdiff Pdif 19 08 59.1 -2.1
comp=Z,1.4nm,0.6s,baz=46,slow=5.5,SNR=7.6
FINES PKiKP PKiKP 19 13 04.9 -0.1
comp=Z,2.5nm,0.8s,baz=122,slow=9.3,SNR=6.0
FINES PP PP 19 13 31.8 -1.5
comp=Z,8.3nm,1.1s,baz=108,slow=6.2,SNR=6.8
FINES PKKPbc PKKPbc 19 24 09.8 -4.7
comp=Z,2.2nm,0.7s,baz=184,slow=3.1,SNR=6.2
FINES FINESS Array B 109.09 336 P Pdif 19 08 59.1 -2.0
FINES 19 13 31.8
FINES pmax pmax
comp=Z,1.0nm,0.6s
FINES pmax pmax
comp=Z,3.0nm,0.8s
FINES pmax pmax
comp=Z,8.0nm,1.1s
FINES pmax pmax
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 112.69 325 Pdiff Pdif 19 09 15.2 -1.9
comp=Z,1.5nm,0.8s,baz=47,slow=3.3,SNR=4.6
AKASG PKiKP PKiKP 19 13 11.1 -1.1
comp=Z,4.0nm,0.7s,baz=66,slow=1.9,SNR=15
AKASG PP PP 19 13 56.6 -3.0
comp=Z,0.2nm,0.3s,baz=68,slow=8.1,SNR=3.0
AKASG Malin Array Be 112.69 325 P Pdif 19 09 15.3 -1.9
AKASG 19 13 11.1
AKASG 19 13 56.6
AKASG pmax pmax
comp=Z,2.0nm,0.8s
AKASG pmax pmax
comp=Z,4.0nm,0.7s
ASF Jabal al Asfar 113.10 304 PP PP 19 14 04.2 +0.9
comp=Z,5.5nm,1.1s,baz=206,slow=2.1,SNR=4.3
BRTR Keskin Array B 113.77 312 PKiKP PKiKP 19 13 14.1 -0.4
comp=Z,0.7nm,0.6s,baz=102,slow=3.6,SNR=3.7
BRTR PP PP 19 14 09.9 +2.3
comp=Z,3.4nm,0.9s,baz=97,slow=5.2,SNR=9.8
BRTR Keskin Array B 113.77 312 *i* PKIKP PKiKP 19 13 14.1 -0.4
BRTR 19 14 10.0
BRTR pmax pmax
comp=Z,1.0nm,0.6s
BRTR pmax pmax
comp=Z,3.0nm,0.9s
NB2 NORSAR Subarra114.90 340 PKPdf PKiKP 19 13 15.3 -0.8
comp=Z,3.1nm,0.8s,baz=41,slow=1.8
NOA NORSAR Array B 114.90 340 PKP PKiKP 19 13 15.6 -0.5
comp=Z,2.2nm,0.7s,baz=46,slow=2.2,SNR=14
NOA PKKPab PKKPab 19 23 58.6 -0.7
comp=Z,1.6nm,0.8s,baz=224,slow=4.5,SNR=6.7
NOA NORSAR Array B 114.90 340 PKIKP PKiKP 19 13 15.6 -0.5
NOA 19 23 58.6
NOA pmax pmax
comp=Z,2.0nm,0.7s
NOA pmax pmax
comp=Z,2.0nm,0.8s
NOA NORSAR Array B 114.90 340 PKP PKiKP 19 13 15.6 -0.5
NOA PKKPab PKKPab 19 23 58.6 -0.7
KMBO Kilima Mbogo 115.25 267 PKP PKPdf 19 13 19.0 +0.9
comp=Z,6.1nm,1.0s,baz=1.3,slow=23,SNR=8.2
KMBO Kilima Mbogo 115.25 267 PKIKP PKPdf 19 13 19.0 +0.9
KMBO pmax pmax
comp=Z,6.0nm,1.0s
KMBO Kilima Mbogo 115.25 267 PKP PKPdf 19 13 19.0 +0.9
BUR08 Bucovina Ar. S 116.42 323 *e*PKPdf PKPdf 19 13 18.9 -0.5
BURAR Bucovina Array 116.43 323 ⇓PKIKP PKPdf 19 13 21.0 +1.6
BURAR Bucovina Array 116.43 323 ⇓*iP* PKPdf 19 13 21.0 +1.6
STHS Stebnicka Huta 117.82 326 *e*PKIKP PKPdf 19 13 23.0 +1.0
STHS Stebnicka Huta 117.82 326 *e*PKP PKPdf 19 13 23.0 +1.0
NIE Niedzica 118.33 327 *e*PKP PKPdf 19 13 24.0 +1.0
BZS Buzias 119.56 322 ⇓PKIKP PKPdf 19 13 25.7 +0.2
BZS Buzias 119.56 322 ⇓*iP* PKPdf 19 13 25.7 +0.2
VYHS Vyhne 119.66 326 *e*PKIKP PKPdf 19 13 25.7 +0.1
VYHS Vyhne 119.66 326 *e*PKP PKPdf 19 13 25.7 +0.1
DPC Dobruska-Polom 119.91 329 *e*PKIKP PKPdf 19 13 26.6 +0.6
DPC Dobruska-Polom 119.91 329 *e*PKPdf PKPdf 19 13 26.6 +0.6
VTS Vitosha 119.99 319 ⇑PKIKP PKPdf 19 13 27.0 +0.6
VTS Vitosha 119.99 319⇑*iP* PKPdf 19 13 27.0 +0.6
BSEG Bad Segeberg 120.35 335 *e*PKPdf PKPdf 19 13 27.0 +0.2
BOSA Boshof 120.68 234 PKP PKPdf 19 13 27.6 -0.6
comp=Z,2.6nm,0.7s,baz=153,slow=16,SNR=6.1
BOSA Boshof 120.68 234 PKIKP PKPdf 19 13 27.6 -0.6
BOSA pmax pmax
comp=Z,3.0nm,0.7s
PVCC Panska Ves 120.68 330 *e*PKIKP PKPdf 19 13 27.9 +0.4
PVCC Panska Ves 120.68 330 *e*PKPdf PKPdf 19 13 27.9 +0.4
BRG Berggiesshubel 120.77 331 *e*PKPdf PKPdf 19 13 27.8 +0.1
BRG Berggiesshubel 120.77 331 *i* PKP PKPdf 19 13 27.7 0.0
comp=Z,13nm,0.9s
BRG Berggiesshubel 120.77 331 *i* PKIKP PKPdf 19 13 27.7 0.0
BRG pmax pmax
comp=Z,8.0nm,0.9s
CLL Collm 120.94 332 *e*PKPdf PKPdf 19 13 27.9 -0.1
CLL Collm 120.94 332 *i* PKIKP PKPdf 19 13 28.0 0.0
CLL pmax pmax
comp=Z,13nm,0.8s
CLL MLR MLR
comp=Z,400nm,20.0s,MS5.1
CLL Collm 120.94 332 *i* PKP PKPdf 19 13 28.0 0.0
CLL LR LR
comp=Z,400nm,20.0s,MS5.1
CLL Collm 120.94 332 *i* PKPdf PKPdf 19 13 28.0 0.0
comp=Z,13nm,0.8s
CLL Lm 20 06 00.0
comp=Z,400nm,20.0s
TREC Trest 120.98 329 *e*PKIKP PKPdf 19 13 28.5 +0.4
TREC Trest 120.98 329 *e*PKPdf PKPdf 19 13 28.5 +0.4
PKSM Moragy 121.03 324 ⇑PKIKP PKPdf 19 13 27.8 -0.5
PKSM Moragy 121.03 324⇑*iP* PKPdf 19 13 27.8 -0.5
PRU Pruhonice 121.04 330 *e*PKIKP PKPdf 19 13 28.9 +0.7
PRU Pruhonice 121.04 330 *e*PKPdf PKPdf 19 13 28.9 +0.7
NRDL Niedersach Rie 121.45 334 *e*PKPdf PKPdf 19 13 28.2 -0.7
PLCA Paso Flores 121.54 142 PKP PKPdf 19 13 29.4 -0.1
comp=Z,4.0nm,0.8s,baz=232,slow=3.7,SNR=6.8
PLCA Paso Flores 121.54 142 PKIKP PKPdf 19 13 29.4 -0.1
PLCA pmax pmax
comp=Z,4.0nm,0.9s
CONA Conrad Observa 121.61 327⇑*iP*KIKP PKPdf 19 13 28.9 -0.5
comp=Z,7.5nm,0.9s
TANN Tannenbergstha 121.79 331 *e*PKPdf PKPdf 19 13 29.6 0.0
CLZ Clausthal 121.79 333 *e*PKPdf PKPdf 19 13 30.1 +0.5
WERD Werda 121.84 331 *e*PKPdf PKPdf 19 13 29.8 +0.1
GUNZ Gunzen 121.88 331 *e*PKPdf PKPdf 19 13 30.1 +0.3
NKC Novy Kostel 121.91 331 *e*PKIKP PKPdf 19 13 30.3 +0.4
NKC Novy Kostel 121.91 331 *e*PKPdf PKPdf 19 13 30.3 +0.4
MOX Moxa 122.04 332 *e*PKPdf PKPdf 19 13 29.9 -0.2
KHC Kasperske Hory 122.07 329 *e*PKPdf PKPdf 19 13 29.9 -0.3
KHC Kasperske Hory 122.07 329 *e*PKPdf PKPdf 19 13 30.3 +0.1
LSZ Lusaka 122.17 250 *e*PKIKP PKPdf 19 13 31.1 -0.2
GEC2 GERESS Array S 122.18 329 *e*PKPdf PKPdf 19 13 30.5 +0.1
WET Wettzell 122.41 330 *e*PKPdf PKPdf 19 13 31.1 +0.2
PERS Pernice 122.79 326 *e*PKPdf PKPdf 19 13 31.1 -0.6
SOKA Soboth 122.81 326⇑*iP*KPdf PKPdf 19 13 31.0 -0.8
comp=Z,8.3nm,0.9s
GRA1 Grafenberg Arr 122.87 331 *e*PKPdf PKPdf 19 13 31.9 +0.2
GRF Grafenberg Arr 122.87 331 *e*PKIKP PKPdf 19 13 31.9 +0.2
GRF MLR MLR
comp=Z,700nm,20.6s,MS5.3
BOJS Bojanci 123.38 325 *i* PKPdf PKPdf 19 13 32.8 0.0
LJU Ljubljana 123.47 326 *i* PKPdf PKPdf 19 13 32.7 -0.3
KBA Koelnbreinsper 123.48 326⇑*iP*KPdf PKPdf 19 13 32.0 -1.0
comp=Z,7.4nm,1.0s
CEY Cerknica 123.71 326 *i* PKPdf PKPdf 19 13 33.1 -0.4
TNS Taunus Mts 123.80 333 *e*PKPdf PKPdf 19 13 33.7 +0.2
FUR Furstenfeldbru 123.86 330 *e*PKPdf PKPdf 19 13 34.0 +0.3
ABTA Abfaltersbach 124.13 328⇑*iP*KPdf PKPdf 19 13 33.5 -0.7
comp=Z,15nm,0.9s
WTTA Wattenberg 124.26 329⇑*iP*KIKP PKPdf 19 13 34.2 -0.3
comp=Z,19nm,0.9s
STU Stuttgart 124.47 331 *e*PKPdf PKPdf 19 13 35.0 +0.2
MOTA Moosalm 124.48 329⇓*iP*KIKP PKiKP 19 13 34.5 -0.7
comp=Z,10nm,0.7s
MEM Membach 124.59 335 PKP PKPdf 19 13 35.2 +0.2
FETA Feichten 124.89 329⇓*iP*KiKP PKPdf 19 13 35.9 +0.2
comp=Z,17nm,0.9s
BCLA Clavier 125.03 335 PKP PKPdf 19 13 35.1 -0.7
DAVA Damuels 125.14 330⇑*iP*KIKP PKPdf 19 13 36.4 +0.2
comp=Z,15nm,0.9s
BFO Black Forest 125.19 332 *e*PKPdf PKPdf 19 13 35.7 -0.5
WLF Walferdange 125.22 334 PKP PKPdf 19 13 36.6 +0.4
SNF Seneffe 125.38 336 PKP PKPdf 19 13 37.0 +0.5
GIVF Givet 125.47 335 *e*PKIKP PKPdf 19 13 36.3 -0.4
comp=Z,50nm,1.0s
DOU Dourbes 125.57 335 PKP PKPdf 19 13 37.1 +0.2
CDF Champ du Feu 125.62 332 *e*PKIKP PKPdf 19 13 36.2 -0.9
comp=Z,26nm,1.3s
BAIF Baives 125.76 335 *e*PKIKP PKPdf 19 13 36.9 -0.4
comp=Z,15nm,1.0s
CUC Castrocucco 126.12 319 *e*PKPdf PKPdf 19 13 37.0 -1.3
HINF Hinteralfeld 126.25 332 *e*PKIKP PKPdf 19 13 37.5 -0.8
comp=Z,35nm,1.1s
HAU Haudompre 126.35 332 *e*PKIKP PKPdf 19 13 37.8 -0.7
comp=Z,18nm,0.8s
MEZF Maizieres J'vi 126.57 334 *e*PKIKP PKPdf 19 13 38.7 -0.2
comp=Z,37nm,1.0s
CABF La Chapelle 127.48 331 *e*PKIKP PKPdf 19 13 40.7 0.0
comp=Z,51nm,1.2s
LPL La Plagne 127.94 330 *e*PKIKP PKPdf 19 13 41.5 -0.1
comp=Z,14nm,0.9s
LPG La Plagne 127.95 330 *e*PKIKP PKPdf 19 13 41.6 0.0
comp=Z,14nm,0.9s
LOR Lormes 128.03 333 *e*PKIKP PKPdf 19 13 41.3 -0.4
comp=Z,42nm,1.2s
TRQA Tornquist 128.34 145 *e*PKPdf PKPdf 19 13 41.6 -1.0
SSF Saint Saulge 128.34 333 *e*PKIKP PKPdf 19 13 42.0 -0.3
comp=Z,42nm,1.2s
MBDF Montbardon 128.48 329 *e*PKIKP PKPdf 19 13 42.1 -0.5
comp=Z,14nm,1.1s
SMF Signal de Mont 128.50 333 *e*PKIKP PKPdf 19 13 42.1 -0.5
comp=Z,27nm,1.1s
AVF Avril sur Loir 128.62 333 *e*PKIKP PKPdf 19 13 42.0 -0.8
LDF La Druitiere 128.66 337 *e*PKIKP PKPdf 19 13 42.2 -0.6
comp=Z,3.4nm,0.6s
FLN La Foiniere 128.66 337 *e*PKIKP PKPdf 19 13 42.3 -0.5
comp=Z,50nm,1.1s
SBF Sospel 128.73 328 *e*PKIKP PKPdf 19 13 42.4 -0.7
comp=Z,52nm,1.3s
PGF Pioggiola 128.75 326 *e*PKIKP PKPdf 19 13 42.7 -0.5
comp=Z,73nm,1.2s
ORIF Oris-en-Rattie 128.79 330 *e*PKIKP PKPdf 19 13 42.9 -0.3
comp=Z,14nm,0.9s
BGF Bois d'Agland 129.02 333 *e*PKIKP PKPdf 19 13 43.4 -0.2
comp=Z,30nm,1.1s
GRR Gorron 129.11 337 *e*PKIKP PKPdf 19 13 43.3 -0.4
comp=Z,42nm,1.2s
FRF La Foret Royal 129.35 328 *e*PKIKP PKPdf 19 13 43.7 -0.6
comp=Z,64nm,1.4s
VIVF Saint-Julien-l 129.43 331 *e*PKIKP PKPdf 19 13 44.1 -0.3
comp=Z,41nm,1.4s
TCF Toulx Ste Croi 129.51 334 *e*PKIKP PKPdf 19 13 44.3 -0.2
comp=Z,33nm,1.0s
LMR La Mourre 129.58 328 *e*PKIKP PKPdf 19 13 44.1 -0.7
comp=Z,40nm,1.4s
SMRF Simiane la Rot 129.61 329 *e*PKIKP PKPdf 19 13 44.9 +0.1
comp=Z,41nm,1.3s
MFF Saint Martin d 130.27 336 *e*PKIKP PKPdf 19 13 45.7 -0.3
comp=Z,85nm,1.6s
LASF Ste Croix 130.40 331 *e*PKIKP PKPdf 19 13 46.3 0.0
comp=Z,24nm,1.0s
RJF Les Rejaudoux 130.58 333 *e*PKIKP PKPdf 19 13 46.7 +0.1
CAF Calviac 130.62 333 *e*PKIKP PKPdf 19 13 46.8 +0.1
comp=Z,56nm,1.7s
LFF La Frestale 131.21 334 *e*PKIKP PKPdf 19 13 48.0 +0.2
EPF Esparros 132.87 332 *e*PKIKP PKPdf 19 13 50.2 -0.8
comp=Z,12nm,1.1s
ETSF Etsaut 133.39 333 *e*PKIKP PKPdf 19 13 52.9 +0.9
comp=Z,14nm,0.7s
LPAZ La Paz 135.55 117 PKhKP PKPpre 19 13 49.8
comp=Z,1.6nm,0.6s,baz=180,slow=1.4,SNR=4.6
LPAZ La Paz 135.55 117 PKHKP PKPpre 19 13 49.8
LPAZ pmax pmax
comp=Z,2.0nm,0.6s
LPAZ La Paz 135.55 117 *e*PKPpre PKPpre 19 13 49.4
SDV Santo Domingo 136.59 80 *e*PKPdf PKPdf 19 13 59.5 +0.7
ESDC Sonseca Array 137.50 333 PKP PKPdf 19 14 00.3 +0.5
comp=Z,1.0nm,0.6s,baz=26,slow=2.2,SNR=6.0
ESDC PP PP 19 16 43.2 -1.7
comp=Z,0.5nm,0.5s,baz=28,slow=6.7,SNR=4.5
MVO Moncorvo 137.56 337 *e*PKP PKPdf 19 14 00.4 +0.6
PVRL Vila Real 137.72 338 *e*PKP PKPdf 19 14 00.6 +0.5
MTE Manteigas 138.41 337 *e*PKP PKPdf 19 14 00.7 -0.7
PCBR Castelo Branco 138.86 336 *e*PKP PKPdf 19 14 02.8 +0.5
CPUP Villa Florida 139.12 137 PKhKP PKPpre 19 13 54.8
comp=Z,0.5nm,0.4s,baz=210,slow=4.5,SNR=3.4
CPUP PKP PKPdf 19 14 03.3 +0.1
comp=Z,3.7nm,0.8s,baz=237,slow=1.3,SNR=7.3
CPUP Villa Florida 139.12 137 PKHKP PKPpre 19 13 54.8
CPUP 19 14 03.3
CPUP pmax pmax
comp=Z,1.0nm,0.4s
CPUP pmax pmax
comp=Z,4.0nm,0.8s
PMRV Marv??o 139.18 336 *e*PKP PKPdf 19 14 03.5 +0.6
PTOM Tomar 139.42 337 *e*PKP PKPdf 19 14 04.3 +1.0
PBEJ Beja 140.57 335 *e*PKP PKPdf 19 14 04.3 -1.1
PCVE Castro Verde 140.97 335 *e*PKP PKPdf 19 14 06.7 +0.5
TAM Tamanrasset 142.37 305 *e*PKIKP PKPdf 19 14 05.4 -3.7
KIC Kosan Boka 157.13 280 *e*PKP1 PKPab 19 15 03.0 -0.2
comp=Z,68nm,0.9s
DBIC Dimbokro 157.19 281 PKPab PKPab 19 15 04.1 +0.7
comp=Z,26nm,0.9s,baz=50,slow=4.3,SNR=13
DBIC Dimbokro 157.19 281 PKP2 PKPab 19 15 04.1 +0.6
DBIC pmax pmax
comp=Z,26nm,0.9s
DBIC Dimbokro 157.19 281 *e*PKPab PKPab 19 15 03.7 +0.2
TIC Toumodi 157.36 281 *e*PKP1 PKPab 19 15 04.0 -0.2
comp=Z,52nm,0.9s
LIC Lamto 157.43 280 *e*PKP1 PKPab 19 15 02.6 -1.9
comp=Z,94nm,1.4s

IDC 29 19:01:23.3±10.0, 47°80N×155°36E, h0km, mb4.1/3, mb1 3.9/4, mb1mx3.5/23, mbtmp3.9/4, ML2.9/1, Error ellipse: s-maj=221.5km s-min=49.9km az=141.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**5.52**	**15**	Pn	Pn	19 02 46.1	-0.5
	0.4nm,0.3s,baz=162,slow=13,SNR=18						
KURK	**Kurchatov**	**48.05**	**304**	P	P	19 10 04.2	+0.1
	2.1nm,0.8s,baz=68,slow=8.4,SNR=4.4						
BVAR	**Borovoye Array**	**51.37**	**310**	P	P	19 10 29.2	0.0
	0.7nm,0.3s,baz=57,slow=7.4,SNR=4.2						
FINES	**FINESS Array B**	**63.73**	**335**	P	P	19 11 56.8	+0.6
	2.6nm,1.1s,baz=31,slow=7.0,SNR=5.5						

*IDC **29** 19:10:50.3±1.8, 17°17N×73°49E, h0km, mb3.8/11, mb1 3.9/11, mb1mx3.7/24, mbtmp3.8/11, Error ellipse: s-maj=43.2km s-min=21.5km az=46.0*
*NDI **29** 19:10:53.2±2.3, 17°38N×73°75E, h8km±9km, ML4.3, mb4.5(NEIC)*
*ISCJB **29** 19:10:55.7±0.6, 17°57N±0°04×74°16E±0°04, h29km±5km,*

mb4.1/21, Error ellipse: s-maj=6.8km s-min=6.1km az=175.0
*BJI **29** 19:10:59.4, 17°.58N×73°.74E, h62km, mB5.0/3, mb4.2/5*
*NEIC **29** 19:10:59.6±0.9, 17°.64N×74°.17E, h45km, mb4.5/12, Error ellipse: s-maj=17.4km s-min=14.0km az=146.0*
NEIC Felt [IV] at Pune and [III] at Mumbai. Felt at Kolhapur and in much of western Maharashtra.

ISC 29 19:10:56.6±0.7, 17°.58N±0°.04×74°.12E±0°.04, h18km±5km, n60, σ1§48/80, mb4.1/21, 1C-1D, Southern India

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAD	**Karad**	**0.27**	**168**	*e*PKP	**Pg**	**19 11 01.9**	**-0.7**
KAD				*e*S	**Sg**	**19 11 07.5**	**+0.7**
KAD				AML	AML	19 11 08.3	
	comp=N,29μm,0.3s						
KAD				AML	AML	19 11 08.3	
	comp=E,5μm,0.3s						
POO	**Poona**	**0.98**	**345**	*e*PKP	**Pb**	**19 11 15.1**	**0.0**
POO				*e*S	**Sb**	**19 11 30.8**	**+3.0**
POO				AML	AML	19 11 33.0	
	comp=N,19μm,0.3s						
POO				AML	AML	19 11 33.1	
	comp=E,19μm,0.2s						
AKL	**Akola**	**4.14**	**41**	*e*PKP	**Pn**	**19 12 02.3**	**+3.3**
AKL				*e*S	**Sn**	**19 12 51.5**	**+4.5**
HYB	**Hyderabad**	**4.23**	**91**	*i* Pn	**Pn**	**19 12 01.5**	**+1.3**
HYB				*e*Pg	**Pg**	**19 12 15.0**	**-2.7**
HYB				*e*Sn	**Sn**	**19 12 53.0**	**+3.8**
HYB				*e*Sg	Sg	19 13 13.0	+0.5
BHV	**Bhavnagar**	**4.55**	**336**	*e*PKP	**Pn**	**19 12 03.8**	**-0.8**
NGP	**Nagpur**	**5.85**	**52⇑**	*i*P	**Pn**	**19 12 25.3**	**+2.8**
NGP				*e*S	**Sn**	**19 13 32.1**	**+2.8**
VJD	**Vijayawada**	**6.33**	**99**	*e*PKP	**Pn**	**19 12 30.0**	**+0.9**
VJD				*ex*	**Sn**	**19 13 41.0**	**0.0**
BHPL	**Bhopal**	**6.43**	**28**	*e*PKP	**Pn**	**19 12 33.2**	**+2.8**
BHPL				*e*S	**Sn**	**19 13 44.5**	**+1.1**
VIS	**Vishakhapatnam**	**8.78**	**88**	*i* P	**Pn**	**19 13 04.1**	**+1.4**
VIS				*i* S	**Sn**	**19 14 41.5**	**+0.2**
KHET	**Khetri**	**10.56**	**8**	*e*PKP	**Pn**	**19 13 27.4**	**+0.3**
KHET				*e*S	**Sn**	**19 15 20.8**	**-4.3**
SONA	**Sohna**	**10.97**	**14**	*e*PKP	**Pn**	**19 13 32.1**	**-0.5**
SONA				*ex*	x	19 15 26.2	
NDI	**New Delhi**	**11.41**	**14**	*e*PKP	**Pn**	**19 13 40.0**	**+1.2**
NDI				*ex*	x	19 16 54.0	
PTH	**Pithoragarh**	**13.16**	**24**	*ex*	**Sn**	**19 16 23.2**	**-5.4**
PTH				*ex*	x	19 18 03.2	
KOLN	**Koldanda**	**13.39**	**39**	*e*P	**Pn**	**19 14 03.5**	**-2.3**
KOLN				*e*S	**Sn**	**19 16 30.2**	**-4.0**
SMLA	**Simla**	**13.77**	**11**	*i* P	**Pn**	**19 14 09.9**	**-1.1**
SMLA				*i* S	**Sn**	**19 16 37.0**	**-6.5**
SMLA				⇓		19 16 41.0	
	comp=E,820nm,0.7s						
SMLA						19 16 42.3	
	comp=N,458nm,0.4s						
GKN	**Gorkha**	**14.19**	**41**	*e*P	**Pn**	**19 14 15.7**	**-1.1**
	comp=N,73nm,0.5s						
GKN				*e*S	**Sn**	**19 16 49.1**	**-4.7**
DMN	**Daman**	**14.22**	**43**	*e*P	**Pn**	**19 14 16.4**	**-0.8**
	comp=N,41nm,0.6s						
KLP	**Kalpa**	**14.39**	**14**	*e*PKP	**Pn**	**19 14 20.3**	**+0.8**
KLP				*e*S	**Sn**	**19 16 52.1**	**-6.5**
PKIN	**Phulchoki**	**14.39**	**44**	*e*P	**Pn**	**19 14 18.3**	**-1.2**
	comp=N,56nm,0.6s						
PKI	**Pulchoki**	**14.40**	**44**	*e*P	**Pn**	**19 14 18.5**	**-1.1**
	comp=N,47nm,0.5s						
PKI				*e*S	**Sn**	**19 16 55.7**	**-3.2**
KKN	**Kakani**	**14.46**	**43**	*e*P	**Pn**	**19 14 19.2**	**-1.2**
	comp=N,57nm,0.5s						
KKN				*e*S	**Sn**	**19 16 56.8**	**-3.5**
RAMN	**Ramite**	**14.84**	**49**	*e*P	**Pn**	**19 14 25.1**	**-0.4**
	comp=N,61nm,0.6s						
RAMN				*e*S	**Sn**	**19 17 08.1**	**-1.4**
THN	**Thein Dam**	**14.86**	**5**	*ex*	**Pn**	**19 14 33.3**	**+7.4**
THN				*ex*	x	19 17 35.4	
GUN	**Gumba**	**14.94**	**44**	*e*P	**Pn**	**19 14 25.0**	**-1.9**
GUN				*e*S	**Sn**	**19 17 08.5**	**-3.4**
JIRN	**Jiri**	**14.98**	**46**	*e*P	**Pn**	**19 14 27.4**	**-0.1**
JIRN				*e*S	**Sn**	**19 17 10.5**	**-2.6**
ODAN	**Odare**	**15.36**	**51**	*e*P	**Pn**	**19 14 31.7**	**-0.8**
	comp=N,33nm,0.4s						
ODAN				*e*S	**Sn**	**19 17 21.7**	**-0.6**
TAPN	**Taplejung**	**15.87**	**50**	*e*P	**Pn**	**19 14 38.9**	**-0.3**
	comp=N,33nm,0.5s						
TAPN				*e*S	**Sn**	**19 17 33.4**	**-1.3**
KBL	**Kabul**	**17.49**	**346**	*e*Pn	**Pn**	**19 15 00.3**	**+0.7**
	comp=N,7.6nm,1.0s						
SHL	**Shillong**	**18.32**	**61**	*e*PKP	Sx	19 18 52.0	
SHL				*e*S	PcP	19 19 49.0	+7.6
LSA	**Lhasa**	**19.69**	**49**	P	**Pn**	**19 15 30.0**	**+3.6**
LSA	**Lhasa**	**19.69**	**49**	*e*P	**Pn**	**19 15 29.8**	**+3.3**
	comp=N,17nm,0.6s						
LSA				*e*S	**Sn**	**19 19 14.9**	**+7.7**
CM31	**Chiang Mai Arr**	**23.62**	**84**	P	**P**	**19 16 09.9**	**+2.9**
CMAR	**Chiang Mai Arr**	**23.62**	**84**	P	**P**	**19 16 09.5**	**+2.5**
	comp=N,2.1nm,0.7s,mb3.7,baz=275,slow=9.7,SNR=16						
AML	**Almayashu**	**24.48**	**359**	*e*P	**P**	**19 16 15.2**	**+0.7**
	comp=N,2.5nm,0.6s,mb3.8						
EKS2	**Erkin-Say**	**25.00**	**359**	*e*P	**P**	**19 16 21.1**	**+1.7**
	comp=N,7.9nm,0.8s,mb4.3						
KMI	**Kunming**	**27.65**	**69**	P	**P**	**19 16 47.8**	**+4.3**
KMI				pP	pP	19 17 02.0	+13
KMI				sP	sP	19 17 08.8	+18
KMI				pmax	pmax		
	comp=Z,4.0nm,1.7s,mb3.8						
KMI				pmax	pmax		
	comp=Z,160nm,6.3s						
WMQ	**Urumqi**	**28.57**	**21**	*e*P	**P**	**19 16 53.5**	**+2.1**
WMQ				pP	pP	19 17 07.8	+11
WMQ				sP	sP	19 17 15.5	+16
WMQ				PP	PP	19 17 48.0	-8.1
WMQ				PcP	PcP	19 20 03.0	+0.4
WMQ				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.6						
WMQ				pmax	pmax		
	comp=Z,220nm,5.8s						
MKAR	**Makanchi Array**	**29.91**	**11**	P	**P**	**19 17 04.0**	**+0.7**
	comp=Z,0.5nm,0.6s,mb3.4,baz=198,slow=7.6,SNR=4.5						
KURK	**Kurchatov**	**33.26**	**5**	P	**P**	**19 17 32.4**	**-0.3**
	comp=Z,1.5nm,0.6s,mb4.1,baz=203,slow=8.7,SNR=6.1						
KURK	**Kurchatov**	**33.26**	**5**	*e*P	**P**	**19 17 33.3**	**+0.6**
	comp=Z,3.1nm,0.7s,mb4.3						
ABKAR	**Akbulak array**	**33.62**	**343**	*e*P	**P**	**19 17 35.8**	**-0.1**
	comp=Z,2.4nm,0.6s,mb4.3						
ENH	**Enshi**	**34.56**	**62**	*e*P	**P**	**19 17 45.9**	**+1.6**
	comp=Z,45nm,1.6s,mb5.2						
AKTK	**Aktyubinsk**	**35.23**	**342**	P	**P**	**19 17 48.7**	**-1.1**
AKTO	**Aktyubinsk**	**35.23**	**342**	P	**P**	**19 17 48.7**	**-1.1**
	comp=Z,0.7nm,0.6s,mb3.7,baz=94,slow=14,SNR=3.3						
BVAR	**Borovoye Array**	**35.49**	**356**	P	**P**	**19 17 52.1**	**+0.1**
	comp=Z,0.8nm,0.6s,mb3.8,baz=152,slow=9.8,SNR=5.1						
ZALV	**Zalesovo Beam**	**37.24**	**10**	P	**P**	**19 18 08.0**	**+1.1**
	comp=Z,1.4nm,0.6s,mb4.0,baz=191,slow=8.6,SNR=8.4						
HHC	**Hu-ho-hao-te**	**39.64**	**46**	*e*P	**P**	**19 18 29.8**	**+2.5**
HHC				S	**S**	**19 24 30.3**	**+0.6**
HHC				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.8						
HHC				pmax	pmax		
	comp=Z,140nm,6.3s						
SONM	**Songino Array**	**40.08**	**34**	P	**P**	**19 18 33.5**	**+2.6**
	comp=Z,1.6nm,0.8s,mb3.8,baz=228,slow=9.8,SNR=7.2						
ULN	**Ulaanbaatar**	**40.45**	**34**	P	**P**	**19 18 35.7**	**+1.8**
	comp=Z,1.8nm,0.8s,mb3.9						
KSRS	**Korea Array**	**50.94**	**56**	P	**P**	**19 19 57.8**	**+0.7**
	comp=Z,0.6nm,0.5s,mb3.8,baz=268,slow=8.5,SNR=3.7						
ARCES	**ARCESS Array B**	**59.82**	**342**	P	**P**	**19 20 57.4**	**-3.1**
	comp=Z,1.2nm,0.8s,mb4.0,baz=142,slow=9.0,SNR=5.3						
NOA	**NORSAR Array B**	**61.73**	**331**	P	**P**	**19 21 10.6**	**-3.1**
	comp=Z,0.8nm,0.8s,mb3.9,baz=104,slow=7.0,SNR=3.4						
NOA	**NORSAR Array B**	**61.73**	**331**	P	**P**	**19 21 10.6**	**-3.1**
LBTB	**Lobatse**	**63.45**	**229**	*e*P	**P**	**19 21 24.1**	**-1.6**
	comp=Z,10.0nm,1.2s,mb4.8						
BOSA	**Boshof**	**65.88**	**227**	P	**P**	**19 21 40.0**	**-1.4**
WRAB	**Tennant Creek**	**69.89**	**120**	*e*P	**P**	**19 22 05.8**	**-1.0**
	comp=Z,26nm,1.6s,mb4.9						
ASAR	**Alice Springs**	**71.31**	**123**	P	**P**	**19 22 14.3**	**-1.2**
	comp=Z,0.4nm,0.6s,mb3.5,baz=295,slow=5.1,SNR=6.7						
PMG	**Port Moresby**	**76.94**	**104**	*e*Pn	**P**	**19 22 46.5**	**-2.1**
TXAR	**Lajitas Array**	**133.32**	**357**	PKhKP	PKPpre	19 30 04.6	
	comp=Z,0.1nm,0.3s,baz=358,slow=2.3,SNR=4.7						
TXAR	**Lajitas Array**	**133.32**	**357**	PKP	PKPpre	19 30 04.6	

DJA 29 19:14:09.0±1.8N×96.74E, h27km, MLv3.4/5, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.39**	**37**	P	Pn	19 14 32.5	-0.2
GSI				S	Sn	19 14 50.4	+0.2
MNSI	**Mandailing Nat**	**2.91**	**78**	P	Pn	19 14 54.3	+0.8
TPTI		**3.09**	**8**	P	Pn	19 14 56.0	-0.1
SDSI	**Sungai Dareh**	**4.82**	**103**	P	Pn	19 15 19.4	-0.4
KULM	**Kulim**	**6.40**	**38**	P	Pn	19 15 41.9	+0.3

IDC 29 19:14:17.0±2.3, 10°.84S×163°.32E, h0km, mb3.9/4, mb1 4.1/6, mb1mx3.9/18, mbtmp4.1/6, ML4.0/1, Error ellipse: s-maj=47.5km s-min=34.7km az=121.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.60**	**292**	Pn	Pn	19 15 15.0	+0.9
	77nm,0.3s,baz=133,slow=5.0,SNR=25						
HNR				Sn	Sn	19 15 56.9	-0.6
	71nm,0.3s,baz=335,slow=21,SNR=12						
CTA	**Charters Tower**	**18.83**	**239**	P	Pn	19 18 39.5	+0.5
	0.3nm,0.3s,baz=63,slow=9.0,SNR=4.5						
ASAR	**Alice Springs**	**30.78**	**242**	P	P	19 20 34.4	-0.1
	1.7nm,0.8s,baz=69,slow=10,SNR=23						
FITZ	**Fitzroy Crossi**	**37.14**	**254**	P	P	19 21 29.5	-0.4
	1.9nm,0.9s,baz=79,slow=5.2,SNR=3.7						
SONM	**Songino Array**	**77.10**	**325**	P	P	19 26 13.0	+0.8
	0.4nm,0.5s,baz=134,slow=7.3,SNR=4.1						
MKAR	**Makanchi Array**	**91.75**	**317**	P	P	19 27 26.1	-0.5
	0.2nm,0.7s,baz=86,slow=6.6,SNR=2.9						

GUC 29 19:15:28.5±1.0, 22°.53S×70°.21W, h42km±3km, MD3.7, ML2.8, 1C, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACH	**Maria Elena**	**0.54**	**52**	*e*P	Pn	19 15 40.2	+0.4
MACH				*e*S	Sn	19 15 49.0	+1.2
PB04	**Plate Boundary**	**0.72**	**69⇑**	*i* P	Pn	19 15 36.3	-5.9
PB04				*e*S	Sn	19 15 42.2	-10
PB04				AML	AML	19 15 42.7	
	comp=E,2μm,0.4s						
CEN1	**Los Morros**	**0.86**	**179**	*e*P	Pn	19 15 45.3	+1.2
CEN1				*i* S	Sn	19 16 00.3	+4.8
CEN1				AML	AML	19 16 01.6	
	comp=N,284nm,0.5s						
ANCH	**Antofagasta**	**1.16**	**189**	*e*P	Pn	19 15 45.5	-2.8
ANCH				*i* S	Sn	19 16 00.5	-2.5
PB01	**Plate Boundary**	**1.62**	**25**	*e*P	Pn	19 15 55.9	+1.2
PB01				*i* S	Sn	19 16 16.7	+2.3
PB01				AML	AML	19 16 20.3	
	comp=E,210nm,0.4s						

*IDC **29** 19:20:15.4±1.3, 10°.71S×163°.22E, h0km, mb4.0/8, mb1 4.3/10, mb1mx4.1/18, mbtmp4.1/10, ML4.9/2, MS4.1/4, Ms1 4.1/4, ms1mx3.9/17, Error ellipse: s-maj=35.1km s-min=22.4km az=142.0*
*ISCJB **29** 19:20:21.8±3.6, 10°.8S±0°.1×163°.1E±0°.2, h56km±28km, mb4.0/11, MS4.0/4, Error ellipse: s-maj=28.1km s-min=19.7km az=18.5*
*NEIC **29** 19:20:24.0±3.6, 10°.61S×163°.03E, h59km±26km, mb4.3/4, Error ellipse: s-maj=35.9km s-min=15.5km az=117.0*

ISC 29 19:20:24.4±3.2, 10°.7S±0°.1×163°.1E±0°.2, h63km±25km, n23, σ1§15/21, mb4.0/11, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.31**	**291**	Pn	**Pn**	**19 21 12.3**	**-1.5**
	296nm,0.3s,baz=142,slow=5.9,SNR=71						
HNR				Sn	**Sn**	**19 21 53.4**	**+1.4**
	394nm,0.3s,baz=144,slow=9.4,SNR=12						
HNR	**Honiara**	**3.31**	**291**	Pn	**Pn**	**19 21 12.3**	**-1.5**
HNR				*e*Sn	**Sn**	**19 21 53.2**	**+1.2**
PMG	**Port Moresby**	**15.72**	**273**	*e*Pn	**Pn**	**19 23 56.9**	**-5.3**
CTA	**Charters Tower**	**18.73**	**238**	*e*P	**Pn**	**19 24 40.1**	**+0.9**
	9.5nm,0.6s						
CTA	**Charters Tower**	**18.73**	**238**	P	**Pn**	**19 24 37.6**	**-1.5**
	1.1nm,0.3s,baz=64,slow=11,SNR=22						
CTAO	**Charters Tower**	**18.73**	**238**	*e*P	**Pn**	**19 24 39.7**	**+0.5**
	19nm,0.8s						
ARMA	**Armidale**	**22.37**	**207**	*e*P	**P**	**19 25 19.0**	**+1.6**
AFI	**Afiamalu**	**24.78**	**100**	LR	LR	19 33 20.5	
	comp=Z,434nm,18.2s,baz=61,slow=32						
STKA	**Stephens Creek**	**28.99**	**220**	*e*P	**P**	**19 26 20.5**	**+2.2**
	4.9nm,1.7s,mb4.0						
STKA	**Stephens Creek**	**28.99**	**220**	P	**P**	**19 26 19.1**	**+0.7**
	2.7nm,0.9s,mb4.0,baz=0.0,slow=8.1,SNR=2.9						
WRAB	**Tennant Creek**	**29.17**	**248**	P	**P**	**19 26 15.3**	**-4.7**
	6.9nm,1.1s,mb4.3						
ASAR	**Alice Springs**	**30.66**	**241**	P	**P**	**19 26 31.9**	**-1.3**
	3.1nm,0.7s,mb4.2,baz=68,slow=10,SNR=27						
FITZ	**Fitzroy Crossi**	**36.96**	**254**	P	**P**	**19 27 26.2**	**-1.8**
	1.1nm,0.8s,mb3.8,baz=80,slow=10,SNR=3.1						
MBWA	**Marble Bar**	**42.85**	**250**	*e*P	**P**	**19 28 15.7**	**-1.1**
	7.1nm,1.1s,mb4.3						
MJAR	**Matsushiro Arr**	**52.45**	**335**	LR	LR	19 52 09.1	
	comp=Z,215nm,18.0s,baz=60,slow=36						
KSRS	**Korea Array**	**58.10**	**327**	LR	LR	19 55 04.3	
	comp=Z,93nm,18.1s,baz=30,slow=36						
PETK	**Petropavlovsk-**	**63.66**	**356**	LR	LR	19 57 29.4	
	comp=Z,97nm,18.3s,baz=358,slow=35						
CMAR	**Chiang Mai Arr**	**69.56**	**294**	P	**P**	**19 31 27.9**	**+0.7**
	1.2nm,1.0s,mb3.8,baz=114,slow=4.7,SNR=4.6						
ULN	**Ulaanbaatar**	**76.45**	**325**	*e*P	**P**	**19 32 07.7**	**+0.4**
	1.5nm,0.7s,mb4.0						
SONM	**Songino Array**	**76.81**	**325**	P	**P**	**19 32 10.7**	**+1.3**
	0.6nm,0.7s,mb3.6,baz=158,slow=6.0,SNR=6.2						
ILAR	**Eielson Array**	**83.98**	**19**	P	**P**	**19 32 47.2**	**-0.2**
	0.8nm,1.1s,mb3.8,baz=234,slow=6.2,SNR=3.9						
NVAR	**Mina Array Bea**	**87.78**	**50**	P	**P**	**19 33 07.0**	**+0.1**
	0.8nm,0.8s,mb4.0,baz=241,slow=5.8,SNR=4.0						
MKAR	**Makanchi Array**	**91.44**	**317**	P	**P**	**19 33 23.1**	**-0.8**
	0.8nm,0.8s,mb4.1,baz=104,slow=6.0,SNR=7.8						

IDC 29 19:23:44.1±1.3, 75°.93N×134°.71E, h0km, mb3.7/5, mb1 4.0/5, mb1mx3.5/25, mbtmp3.7/5, MS4.5/2, Ms1 4.5/2, ms1mx3.1/38, Error ellipse: s-maj=42.0km s-min=26.7km az=152.0, Laptev Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**24.58**	**146**	P	P	19 29 04.9	-0.3
	1.2nm,0.4s,baz=353,slow=6.2,SNR=3.6						
ILAR	**Eielson Array**	**26.22**	**72**	P	P	19 29 21.9	+1.9
	0.1nm,0.7s,baz=322,slow=8.2,SNR=6.0						
KURK	**Kurchatov**	**33.36**	**254**	P	P	19 30 24.8	+1.4
	0.5nm,0.6s,baz=27,slow=8.6,SNR=4.4						
NVAR	**Mina Array Bea**	**57.04**	**64**	P	P	19 33 31.3	+0.1
	0.8nm,0.6s,baz=352,slow=4.6,SNR=6.4						
SADO	**Sadowa**	**57.61**	**28**	LR	LR	19 58 04.4	
	comp=Z,385nm,19.1s,baz=350,slow=36						
TXAR	**Lajitas Array**	**68.87**	**53**	P	P	19 34 49.1	-0.8
	0.8nm,0.8s,baz=1.3,slow=5.4,SNR=8.4						
AFI	**Afiamalu**	**95.18**	**128**	LR	LR	20 13 21.2	
	comp=Z,222nm,20.6s,baz=79,slow=31						

DJA 29 19:28:32.6±7.8S×100°.48E, h17km, MLv4.3/4, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**3.50**	**45**	P	Pn	19 29 25.5	-0.2
KASI	**Kota Agung**	**4.21**	**72**	P	Pn	19 29 36.1	+0.6
KLSI		**4.75**	**63**	P	Pn	19 29 43.8	+0.9
CGJI	**Cibinong**	**5.18**	**87**	P	Pn	19 29 49.7	+0.9
	46nm,0.9s						
SDSI	**Sungai Dareh**	**5.97**	**9**	P	Pn	19 30 00.5	+0.8

CASC 29 19:47:24.2±0.9, 13°.04N×89°.04W, h43km±25km, MD3.6, ML3.2, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFRS	**El Faro**	**0.58**	**358**	*e*P	Pn	19 47 36.2	0.0
SNVI	**San Vicente**	**0.61**	**19**	*e*P	Pn	19 47 36.4	0.0
SNVI				*e*S	Sn	19 47 46.3	+1.1
SNET	**Serv Nac Est T**	**0.67**	**344**	*e*P	Pn	19 47 37.4	0.0
LBRS	**Las Brisas**	**0.70**	**360**	*e*P	Pn	19 47 38.1	+0.4
LBRS				*e*S	Sn	19 47 48.7	+1.3
LFU	**La Fuente**	**0.71**	**354**	*e*P	Pn	19 47 38.2	+0.3
BOQS	**Boqueron**	**0.73**	**341**	*e*P	Pn	19 47 38.5	+0.3
BOQS				*e*S	Sn	19 47 49.2	+1.0
VSM	**San Miguel**	**0.84**	**62**	*e*P	Pn	19 47 39.9	+0.3
VSM				*e*S	Sn	19 47 52.4	+1.5
BLLM	**Bellamira**	**0.88**	**63**	*e*P	Pn	19 47 40.1	0.0
BLLM				*e*S	Sn	19 47 53.1	+1.3
SBLS	**San Blas**	**0.98**	**325**	*e*P	Pn	19 47 42.0	+0.5
SBLS				*e*S	Sn	19 47 56.6	+2.3
SNJE	**San Jose**	**0.99**	**326**	*e*P	Pn	19 47 42.0	+0.2
SNJE				*e*S	Sn	19 47 55.6	+1.0
RTR	**El Retiro**	**1.04**	**326**	*e*P	Pn	19 47 42.9	+0.6
CAHU	**Cacacuatique**	**1.09**	**48**	*e*P	Pn	19 47 43.5	+0.5
CNCH	**Conchagua**	**1.20**	**78**	*e*P	Pn	19 47 44.1	-0.4
CNCH				*e*S	Sn	19 48 00.7	+1.1
CNCH				AML	AML	19 48 04.0	
	comp=Z,430nm,0.3s						
RBDL	**Robledal**	**1.24**	**330**	*e*P	Pn	19 47 45.6	+0.5
RBDL				*e*S	Sn	19 48 01.1	+0.4
MTO2	**Montecristo 2**	**1.39**	**347**	*e*P	Pn	19 47 47.8	+0.6

*IDC **29** 20:03:38.6±2.0, 4°.14S×130°.08E, h0km, mb3.9/3, mb1 3.8/5, mb1mx3.6/18, mbtmp3.7/5, ML3.7/2, Error ellipse: s-maj=90.2km s-min=26.2km az=74.0*
*ISCJB **29** 20:04:00.8±0.8, 4°.98S±0°.06×129°.4E±0°.1, h225km±7km, mb3.6/4, Error ellipse: s-maj=20.3km s-min=8.6km az=160.8*
*NEIC **29** 20:04:00.1±2.3, 4°.89S×129°.33E, h196km±25km, mb4.3/4, Error ellipse: s-maj=38.3km s-min=12.6km az=58.0*
*DJA **29** 20:04:05, 5°.64S×128°.89E, h20km, MLv3.8/3*

ISC 29 20:04:01.7±0.8, 5°.0S±0°.1×129°.4E±0°.1, h216km±7km, n14, σ0§92/18, mb3.6/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.66**	**50**	P	**Pn**	**20 04 30.8**	**-0.5**
NLAI	**Namlea**	**2.85**	**306**	P	**Pn**	**20 04 52.4**	**+1.8**
NLAI				S	**S**	**20 05 28.7**	**-0.2**
KAKA	**Kakadu**	**8.28**	**159**	*e*Pn	**Pn**	**20 05 58.3**	**-0.2**
	30nm,0.3s						
KAKA				*e*Sn	**S**	**20 07 24.6**	**-7.5**
KAKA	**Kakadu**	**8.28**	**159**	P	**Pn**	**20 05 58.7**	**+0.2**
FITZ	**Fitzroy Crossi**	**13.58**	**195**	Pn	**Pn**	**20 07 05.2**	**-0.7**
	0.2nm,0.3s,baz=28,slow=8.5,SNR=9.8						
FITZ				Sn	**S**	**20 09 30.2**	**-6.9**
	0.1nm,0.3s,baz=90,slow=20,SNR=2.7						
WRAB	**Tennant Creek**	**15.65**	**162**	*e*Pn	**Pn**	**20 07 30.2**	**-1.0**
	13nm,1.4s						
KKM	**Kota Kinabalu**	**17.10**	**310**	*e*Pn	**Pn**	**20 07 47.1**	**-1.4**
	14nm,0.8s						
ASAR	**Alice Springs**	**19.11**	**167**	P	**P**	**20 08 10.6**	**+2.1**
	0.3nm,0.3s,baz=346,slow=12,SNR=17						
ASAR				S	**S**	**20 11 43.2**	**+10**
	0.1nm,0.3s,baz=351,slow=24,SNR=4.1						
CMAR	**Chiang Mai Arr**	**37.98**	**309**	P	**P**	**20 10 59.0**	**+0.1**
	0.6nm,0.6s,mb3.3,baz=129,slow=7.1,SNR=5.8						
MK31	**Makanchi Array**	**66.19**	**327**	*e*P	**P**	**20 14 26.5**	**+0.4**
MKAR	**Makanchi Array**	**66.19**	**327**	P	**P**	**20 14 26.4**	**+0.3**
	1.2nm,0.4s,mb3.9,baz=128,slow=7.7,SNR=34						
MKAR	**Makanchi Array**	**66.19**	**327**	P	**P**	**20 14 26.4**	**+0.3**
ZALV	**Zalesovo Beam**	**69.49**	**334**	P	**P**	**20 14 46.2**	**-0.3**
	0.4nm,0.4s,mb3.4,baz=114,slow=3.6,SNR=3.4						
KURK	**Kurchatov**	**70.47**	**328**	P	**P**	**20 14 52.5**	**-0.1**
	2.2nm,0.8s,mb3.8						

*ISCJB **29** 20:25:27.0±0.6, 38°.21N±0°.04×21°.84E±0°.05, h17km±8km, Error ellipse: s-maj=6.8km s-min=6.1km az=35.0*
*CSEM **29** 20:25:27.0±0.2, 38°.23N×21°.84E, h15km, ML1.7/2, Error ellipse: s-maj=7.9km s-min=5.1km az=133.0*
*THE **29** 20:25:29.4, 38°.29N×21°.90E, h8km±1km, ML1.7/2, Error ellipse: s-maj=1.5km s-min=0.5km az=162.0*
*NEIC **29** 20:25:31.0, 37°.98N×21°.57E, h15km, MD3.1(ATH), After ATH.*
*ATH **29** 20:25:31.0, 37°.98N×21°.57E, h15km±4km, MD3.1/6*

ISC 29 20:25:27.0±0.6, 38°.21N±0°.04×21°.83E±0°.05, h15km±6km, n24, σ0§68/35, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.08**	**334**	P	**Pg**	**20 25 31.6**	**+1.5**
UPR	**University Cam**	**0.08**	**334**	P	**Pg**	**20 25 31.6**	**+1.5**
LAKA	**Lakka**	**0.12**	**75**	P	**Pg**	**20 25 31.4**	**+0.9**
LAKA				S	**Sg**	**20 25 32.9**	**0.0**
LAKA	**Lakka**	**0.12**	**75**	P	**Pg**	**20 25 31.4**	**+0.9**
LAKA				S	**Sg**	**20 25 32.9**	**0.0**
EFP	**Efpalio**	**0.23**	**15**	P	**Pg**	**20 25 32.3**	**+0.2**
EFP				S	**Sg**	**20 25 34.8**	**-0.7**
EFP	**Efpalio**	**0.23**

	baz=1.1,SNR=12							
OSI				⇑S		Sg	20 41 15.1	+0.2
	baz=1.1							
OSI	**Osito Adit**	**1.06**	**313**	*e*Pg		**Pg**	**20 41 00.6**	**-0.4**
OSI				*e*Sg		**Sg**	**20 41 15.5**	**+0.7**
BLG	**Laguna Peak**	**1.09**	**282**	⇓P		**Pb**	**20 41 00.5**	**-1.0**
	baz=1.1,SNR=65							
BLG				⇑S		**Sg**	**20 41 15.6**	**0.0**
	baz=1.1							
SCI	**San Clemente I**	**1.11**	**215**	⇓P		**Pb**	**20 41 01.6**	**-0.3**
	baz=1.2							
PFO	**Pinyon Flat Ob**	**1.14**	**104**	P		**Pb**	**20 41 01.4**	**-0.9**
	baz=1.1,SNR=264							
PFO				⇑S		**Sb**	**20 41 16.6**	**-0.5**
	baz=1.1							
PFO	**Pinyon Flat Ob**	**1.14**	**104**	*e*Pg		**Pg**	**20 41 01.2**	**-1.2**
PFO				*e*Sg		**Sg**	**20 41 15.9**	**-1.2**
109C	**Camp Elliot, M**	**1.15**	**150**	⇑P		**Pb**	**20 41 02.2**	**-0.3**
	baz=1.2,SNR=52							
109C				⇓S		**Sb**	**20 41 17.4**	**0.0**
	baz=1.2							
RRX	**Edison Barstow**	**1.18**	**33**	⇓Pb		**Pb**	**20 41 02.5**	**-0.4**
	baz=1.1,SNR=11							
RRX				⇑S		**Sb**	**20 41 17.2**	**-1.0**
	baz=1.1							
BELC	**Belle Mtn. Jos**	**1.48**	**85**	Pb		**Pb**	**20 41 07.4**	**-0.8**
	baz=1.4,SNR=384							
BELC				⇑S		**Sn**	**20 41 26.6**	**-0.1**
	baz=1.4							
ARVC	**Arvin**	**1.51**	**325**	⇑Pb		**Pb**	**20 41 07.9**	**-0.7**
	baz=1.5							
ARVC				⇑S		**Sn**	**20 41 27.0**	**-0.3**
	baz=1.5							
MONP	**Monument Peak**	**1.51**	**131**	⇑Pb		**Pb**	**20 41 08.2**	**-0.5**
	baz=1.5							
MONP				⇑S		**Sn**	**20 41 27.7**	**+0.3**
	baz=1.5							
HEC	**Hector,Ludlow**	**1.52**	**52**	⇑P		**Pn**	**20 41 06.4**	**-1.3**
	baz=1.5,SNR=87							
HEC				⇑S		**Sn**	**20 41 27.1**	**-0.5**
	baz=1.5							
BAR	**Barrett**	**1.52**	**142**	*e*Pn		**Pn**	**20 41 07.9**	**+0.1**
BAR				*e*Sn		**Sn**	**20 41 27.9**	**+0.2**
BSC	**Santa Cruz Isl**	**1.55**	**274**	⇓P		**Pn**	**20 41 07.1**	**-1.0**
	baz=1.6,SNR=28							
LRMC	**Laurel Mountai**	**1.58**	**3**	⇑P		**Pn**	**20 41 08.1**	**-0.5**
	baz=1.5,SNR=29							
LRMC				⇓S		**Sn**	**20 41 28.0**	**-1.1**
	baz=1.5							
GSC	**Goldstone**	**1.62**	**29**	⇑P		**Pn**	**20 41 08.6**	**-0.5**
	baz=1.6,SNR=27							
GSC				⇓S		**Sn**	**20 41 29.6**	**-0.4**
	baz=1.6							
GSC	**Goldstone**	**1.62**	**29**	*e*Pn		**Pn**	**20 41 08.7**	**-0.4**
GSC				*e*Sn		**Sn**	**20 41 27.0**	**-3.0**
SBC	**Santa Barbara**	**1.70**	**289**	⇑Sb		**Sb**	**20 41 34.1**	**+0.9**
	baz=1.7							
ISA	**Isabella**	**1.86**	**342**	⇑P		**Pn**	**20 41 11.9**	**-0.5**
	baz=1.8,SNR=26							
ISA				⇓S		**Sn**	**20 41 35.0**	**-0.9**
	baz=1.8							
DVTC	**Desert V Tower**	**1.87**	**131**	⇓Sb		**Sb**	**20 41 38.8**	**+0.7**
	baz=1.9							
SWSC	**Sam W. Stewart**	**1.91**	**119**	⇓P		**Pn**	**20 41 12.8**	**-0.3**
	baz=1.9,SNR=38							
SWSC				⇓Sb		**Sb**	**20 41 40.5**	**+1.1**
	baz=1.9							
BC3	**Big Chuckawall**	**1.95**	**96**	⇑P		**Pn**	**20 41 13.3**	**-0.4**
	baz=1.9,SNR=19							
BC3				⇓Sb		**Sb**	**20 41 41.4**	**+0.9**
	baz=1.9							
GMRC	**Granite Mounta**	**1.96**	**63**	⇑P		**Pn**	**20 41 13.4**	**-0.5**
	baz=1.9,SNR=72							
GMRC				⇓Sb		**Sb**	**20 41 41.4**	**+0.5**
	baz=1.9							
TUQ	**Turquoise Moun**	**2.17**	**44**	⇓Sb		**Sb**	**20 41 47.3**	**+0.5**
	baz=2.1							
MPMC	**Manual Prospec**	**2.17**	**6**	⇓P		**Pn**	**20 41 16.3**	**-0.5**
	baz=2.1,SNR=261							
MPMC				⇑Sb		**Sb**	**20 41 48.1**	**+1.2**
	baz=2.1							
IRM	**Iron Mountain**	**2.20**	**82**	P		**Pn**	**20 41 16.4**	**-0.7**
	baz=2.2,SNR=97							
IRM				⇑Sb		**Sb**	**20 41 49.2**	**+1.6**
	baz=2.2							
VES	**Vestal, Richgr**	**2.22**	**331**	⇑S		**Sn**	**20 41 44.7**	**-0.2**
	baz=2.2							
SMMC	**Simmler**	**2.31**	**308**	⇓S		**Sn**	**20 41 46.5**	**-0.7**
	baz=2.3							
SHOC	**Shoshone**	**2.35**	**31**	⇓Sb		**Sb**	**20 41 53.2**	**+1.2**
	baz=2.3							
CWC	**Cottonwood Cre**	**2.55**	**355**	⇓Sb		**Sb**	**20 41 59.7**	**+1.9**
	baz=2.5							
GLA	**Glamis**	**2.60**	**108**	⇑Sb		**Sb**	**20 42 02.3**	**+2.9**
	baz=2.6							
GLA	**Glamis**	**2.60**	**108**	*e*Pn		**Pn**	**20 41 20.1**	**-2.5**
GLA				*e*Sg		**Sg**	**20 42 01.5**	**-2.8**
FURC	**Furnace Creek,**	**2.68**	**16**	⇑Sb		**Sb**	**20 42 03.6**	**+2.1**
	baz=2.6							
V11A	**Goodsprings**	**2.74**	**44**	⇑P		**Pn**	**20 41 24.5**	**0.0**
	baz=2.7,SNR=9.4							
V11A				⇓S		**Sn**	**20 41 57.0**	**-0.6**
	baz=2.7							
U10A	**Ash Meadows, A**	**2.79**	**25**	⇑Sb		**Sb**	**20 42 06.9**	**+2.4**
	baz=2.7							
V12A	**Nelson**	**3.02**	**52**	⇓P		**Pn**	**20 41 28.2**	**-0.2**
	baz=3.0,SNR=16							
V12A				⇓Sb		**Sb**	**20 42 13.4**	**+1.9**
	baz=3.0							
U11A	**Corn Creek**	**3.20**	**37**	⇓Sb		**Sb**	**20 42 19.3**	**+3.0**
	baz=3.1							
Y13A	**Salome**	**3.29**	**90**	⇓P		**Pn**	**20 41 31.5**	**-0.5**
	baz=3.3							
Y13A				⇑Sb		**Sb**	**20 42 22.0**	**+3.0**
	baz=3.3							
X13A	**Yucca**	**3.34**	**77**	P		**Pn**	**20 41 32.5**	**-0.3**
	baz=3.3,SNR=117							
Z13A	**Yuma Proving G**	**3.51**	**100**	P		**Pn**	**20 41 34.5**	**-0.6**
	baz=3.5,SNR=10							
Y14A	**Wickenburg**	**3.97**	**88**	⇑P		**Pn**	**20 41 41.5**	**+0.1**
	baz=3.9							
X14A	**Yava**	**4.09**	**81**	⇑P		**Pn**	**20 41 43.1**	**-0.1**
	baz=4.0,SNR=28							
V14A	**Boquillas Ranc**	**4.22**	**64**	⇑P		**Pn**	**20 41 45.0**	**+0.2**
	baz=4.2,SNR=15							
114A	**Black Gap (USA**	**4.25**	**104**	⇓P		**Pn**	**20 41 45.1**	**-0.2**
	baz=4.2,SNR=7.1							
Y15A	**Casa Rosa Ranc**	**4.53**	**88**	⇓P		**Pn**	**20 41 49.0**	**-0.1**
	baz=4.5,SNR=23							
X15A	**Humboldt**	**4.63**	**81**	⇑P		**Pn**	**20 41 50.6**	**+0.1**
	baz=4.6,SNR=9.9							
CMB	**Columbia Colle**	**4.64**	**334**	*e*Pn		**Pn**	**20 41 53.4**	**+2.7**
CMB				*e*S		**Sb**	**20 42 57.7**	**-0.3**
CCUT	**Cedar City**	**5.12**	**43**	*e*Pn		**Pn**	**20 41 57.9**	**+0.7**
	7.0nm,0.8s							
CCUT				*e*Sg		**Sg**	**20 43 17.8**	**-7.1**
Y16A	**Circle Bar Ran**	**5.24**	**88**	⇓P		**Pn**	**20 41 59.2**	**+0.3**
	baz=5.2,SNR=14							
ARUT	**Antelope Range**	**5.25**	**41**	*e*Pn		**Pn**	**20 41 57.0**	**-2.0**
	6.3nm,0.4s							
WUAZ	**Wupatki**	**5.52**	**71**	*e*Pn		**Pn**	**20 42 04.2**	**+1.5**
	6.1nm,0.6s							
MSU	**Marysvale**	**6.46**	**43**	*e*Pn		**Pn**	**20 42 15.8**	**+0.2**
	4.1nm,0.7s							

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*ISK **29** 20:50:16.8, 37.°05N×29.°21E, h9km, MD3.0*
*ISCJB **29** 20:50:17.3±0.6, 37.°06N±0.°04×29.°24E±0.°04, h6km±7km, Error ellipse: s-maj=7.0km s-min=4.6km az=43.1*
*CSEM **29** 20:50:17.9±0.3, 37.°08N×29.°24E, h12km, MD3.0, Error ellipse: s-maj=8.1km s-min=6.2km az=15.0*
*DDA **29** 20:50:17.1, 37.°01N×29.°17E, h8km±6km, Md3.0*
ISC 29 20:50:18.0±0.5, 37.°07N±0.°04×29.°24E±0.°04, h11km±6km, n34, σ0.°98/46, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TURN	**Turunc**	**0.55**	**249**	*i* P	**Pg**	**20 50 31.3**	**+2.7**
TURN				*i* S	**Sg**	**20 50 43.7**	**+7.9**
TURN	**Turunc**	**0.55**	**249**	*i* P	**Pg**	**20 50 31.3**	**+2.7**
TURN				*i* S	**Sg**	**20 50 43.7**	**+7.9**
ELL	**Elmali**	**0.63**	**121**	*e*PG	**Pg**	**20 50 28.8**	**-1.3**
ELL				*e*SG	**Sg**	**20 50 38.3**	**0.0**
ELL	**Elmali**	**0.63**	**121**	*e*Pg	**Pg**	**20 50 28.8**	**-1.3**
ELL				*e*Sg	**Sg**	**20 50 38.3**	**0.0**
DNZL	**Cakiroluk**	**0.64**	**346**	*i* P	**Pg**	**20 50 29.2**	**-1.1**
DNZL				*i* S	**Sg**	**20 50 42.4**	**+3.6**
DNZL	**Cakiroluk**	**0.64**	**346**	*i* P	**Pg**	**20 50 29.2**	**-1.2**
DNZL				*i* S	**Sg**	**20 50 42.4**	**+3.7**
DENT	**Denizli**	**0.70**	**347**	*e*PG	**Pg**	**20 50 31.2**	**-0.4**
DENT				*e*SG	**Sg**	**20 50 41.1**	**+0.3**
DENT	**Denizli**	**0.70**	**347**	*e*Pg	**Pg**	**20 50 31.2**	**-0.4**
DENT				*e*Sg	**Sg**	**20 50 41.1**	**+0.3**
YER	**Yerkesik**	**0.77**	**275**	*e*PG	**Pg**	**20 50 32.1**	**-0.7**
YER	**Yerkesik**	**0.77**	**275**	*e*Pg	**Pg**	**20 50 32.1**	**-0.7**
AKAS	**Kas**	**0.89**	**160**	*i* P	**Pg**	**20 50 30.0**	**-5.0**
AKAS				*i* S	**Sg**	**20 50 47.0**	**+0.4**
AKAS	**Kas**	**0.89**	**160**	*i* P	**Pg**	**20 50 30.0**	**-5.0**
AKAS				*i* S	**Sg**	**20 50 47.0**	**+0.4**
ANTB	**Antalya**	**1.15**	**98**	*e*PN	**Pg**	**20 50 40.1**	**+0.1**
ANTB	**Antalya**	**1.15**	**98**	*e*Pn	**Pg**	**20 50 40.1**	**+0.1**
BCK	**Bucak**	**1.15**	**70**	*e*PN	**Pg**	**20 50 40.3**	**+0.3**
BCK	**Bucak**	**1.15**	**70**	*e*Pn	**Pg**	**20 50 40.3**	**+0.3**
MLSB	**Milas**	**1.19**	**281**	*e*PN	**Pn**	**20 50 39.4**	**-1.1**
MLSB	**Milas**	**1.19**	**281**	*e*Pn	**Pn**	**20 50 39.4**	**-1.1**
AYDN	**Tasoluk**	**1.23**	**299**	*i* P	**Pn**	**20 50 40.3**	**-0.8**
AYDN				*i* S	**Sb**	**20 50 59.1**	**+2.0**
AYDN	**Tasoluk**	**1.23**	**299**	*i* P	**Pn**	**20 50 40.3**	**-0.8**
AYDN				*i* S	**Sb**	**20 50 59.1**	**+2.0**
ISP	**Isparta**	**1.27**	**53**	*e*PN	**Pn**	**20 50 41.9**	**+0.4**
ISP	**Isparta**	**1.27**	**53**	*e*Pn	**Pn**	**20 50 41.9**	**+0.3**
KHL	**Karahalli**	**1.27**	**10**	*e*PN	**Pn**	**20 50 41.0**	**-0.6**
KHL	**Karahalli**	**1.27**	**10**	*e*Pn	**Pn**	**20 50 41.0**	**-0.6**
DAT	**Datca**	**1.37**	**256**	*e*PN	**Pn**	**20 50 42.9**	**-0.2**
DAT	**Datca**	**1.37**	**256**	*e*Pn	**Pn**	**20 50 42.9**	**-0.1**
SUTC	**Sutluce-Ispart**	**1.46**	**73**	*e*PN	**Pn**	**20 50 45.0**	**+0.7**
SUTC	**Sutluce-Ispart**	**1.46**	**73**	*e*Pn	**Pn**	**20 50 45.0**	**+0.8**
KULA	**Kula-Manisa**	**1.51**	**343**	*e*PN	**Pn**	**20 50 44.7**	**-0.3**
KULA	**Kula-Manisa**	**1.51**	**343**	*e*Pn	**Pn**	**20 50 44.7**	**-0.2**
BODT	**Bodrum**	**1.54**	**270**	*e*PN	**Pn**	**20 50 44.3**	**-1.0**
BODT	**Bodrum**	**1.54**	**270**	*e*Pn	**Pn**	**20 50 44.3**	**-1.0**
HDMB	**Hadim**	**2.60**	**91**	*e*PN	**Pn**	**20 51 01.1**	**+1.2**
HDMB	**Hadim**	**2.60**	**91**	*e*Pn	**Pn**	**20 51 01.1**	**+1.2**

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*IDC **29** 20:50:34.6±4.3, 9.°56S×111.°36E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.5/19, mbtmp3.8/4, Error ellipse: s-maj=297.2km s-min=22.1km az=52.0*
*ISCJB **29** 20:50:38.2±2.7, 9.°57S±0.°07×111.°87E±0.°05, h15km±26km, mb3.8/4, Error ellipse: s-maj=12.1km s-min=8.0km az=27.7*
*DJA **29** 20:50:39, 9.°56S×111.°89E, h15km, MLv4.1/13*
ISC 29 20:50:38.7±2.9, 9.°52S±0.°07×111.°88E±0.°06, h6km±22km, n18, σ1.°18/21, mb3.8/4, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**1.49**	**332**	P	**Pn**	**20 51 04.7**	**-1.3**
PWJI	**Pagerwojo**	**1.49**	**357**	P	**Pn**	**20 51 03.8**	**-2.2**
GMJI	**Gumukmas**	**1.98**	**51**	P	**Pn**	**20 51 10.9**	**-1.8**
UGM	**Wanagama**	**2.09**	**320**	P	**Pn**	**20 51 13.5**	**-0.7**
NGJI	**Ngawi**	**2.18**	**349**	P	**Pn**	**20 51 17.6**	**+2.1**
NGJI				S	**Sn**	**20 51 47.0**	**+4.2**
YOGI	**Yogyakarta**	**2.31**	**317**	P	**Pn**	**20 51 16.3**	**-1.0**
JAGI	**Jajag, Banyuwa**	**2.47**	**65**	P	**Pn**	**20 51 19.2**	**-0.3**
GRJI	**Gresik**	**2.66**	**13**	P	**Pn**	**20 51 23.8**	**+1.7**
GRJI				S	**Sn**	**20 51 54.9**	**+0.3**
SMRI	**Semarang**	**2.84**	**330**	P	**Pn**	**20 51 25.7**	**+1.1**
SMRI				S	**Sn**	**20 51 58.9**	**-0.3**
BJII	**Banjamegara**	**3.06**	**315**	P	**Pn**	**20 51 28.7**	**+1.1**
SRBI	**Singaraja**	**3.59**	**67**	P	**Pn**	**20 51 35.1**	**+0.2**
KHKI	**Kahang-Kahang**	**3.86**	**73**	P	**Pn**	**20 51 39.1**	**+0.5**
CISI	**Cisompet, Garu**	**4.47**	**296**	P	**Pn**	**20 51 46.1**	**-0.9**
CGJI	**Cibinong**	**6.78**	**295**	P	**Pn**	**20 52 20.0**	**+1.3**
ASAR	**Alice Springs**	**25.31**	**126**	P	**P**	**20 56 06.8**	**+0.6**
	0.5nm,0.6s,mb3.2,baz=302,slow=9.6,SNR=11						
STKA	**Stephens Creek**	**35.39**	**133**	P	**P**	**20 57 35.2**	**-0.2**
	3.1nm,1.0s,mb4.2,baz=320,slow=9.1,SNR=4.1						
MKAR	**Makanchi Array**	**61.97**	**337**	P	**P**	**21 00 55.6**	**-3.8**
	0.5nm,0.5s,mb3.9,baz=155,slow=7.4,SNR=12						
ZALV	**Zalesovo Beam**	**67.25**	**343**	P	**P**	**21 01 29.6**	**-4.2**
	0.4nm,0.4s,mb3.8,baz=154,slow=4.6,SNR=3.6						

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*IDC **29** 20:56:20.8±0.4, 54.°60S×119.°02W, h0km, mb4.7/14, mb1 4.8/14, mb1mx4.8/16, mbtmp4.7/14, MS5.3/17, Ms1 5.3/17, ms1mx5.3/17, Error ellipse: s-maj=18.6km s-min=13.9km az=148.0*
*ISCJB **29** 20:56:21.8±0.2, 54.°86S±0.°05×118.°8W±0.°1, h10km, mb5.3/54, MS5.3/210, Error ellipse: s-maj=8.7km s-min=6.7km az=14.8*
*MOS **29** 20:56:22.0±1.8, 54.°67S×118.°72W, h10km, mb5.7/24, MS5.3/45, Error ellipse: s-maj=24.8km s-min=10.9km az=77.3*
*NEIC **29** 20:56:22.4±0.2, 54.°73S×118.°78W, h10km, mb5.5/43, MS5.4/179, MW5.8, Error ellipse: s-maj=12.3km s-min=9.2km az=116.0, Moment Tensor Solution. s7 Moment tensor: Scale 10^17^Nm; M_{rr}=0.74; $M_{\theta\theta}$=2.68; $M_{\phi\phi}$=-1.94; $M_{r\theta}$=0.13; $M_{\theta\phi}$=4.90; $M_{r\phi}$=0.27; Best double couple: M_0=5.50000×10^17^ NP1:ϕ_s=103.00000°, δ87.00000°, λ=-3.00000°. NP2:ϕ_s=193.00000°, δ87.00000°, λ=-177.00000°. Principal axes: T 5.7900, Plg0.0000°, Azm327.0000°; N -0.7200, Plg85.0000°, Azm233.0000°; P -5.0700, Plg4.0000°, Azm57.0000°;*
*GCMT **29** 20:56:28.5±0.1, 54.°76S×118.°95W, h15km, MW5.7, Moment Tensor Solution. s94,c189; s63,c75; Moment tensor: Scale 10^17^Nm; M_{rr}=0.32±.04; $M_{\theta\theta}$=2.13±.05; $M_{\phi\phi}$=-1.81±.04; $M_{r\theta}$=0.29±.13; $M_{\theta\phi}$=4.16±.04; $M_{r\phi}$=0.30±.12; Best double couple: M_0=4.60000×10^17^ NP1:ϕ_s=193.00000°, δ85.00000°, λ=-177.00000°. NP2:ϕ_s=103.00000°, δ87.00000°, λ=-5.00000°. Principal axes: T 4.7600, Plg1.0000°, Azm148.0000°; N -0.2800, Plg84.0000°, Azm247.0000°; P -4.4800, Plg6.0000°, Azm58.0000°; Data Used: II IU IC G CN. Surface waves: sta=107, comp=214, per= 50.*
ISC 29 20:56:23.5±0.2, 54.°81S±0.°05×118.°8W±0.°1, h10km, n786, σ0.°63/371, mb5.3/54, MS5.3/210, 154C-153D, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**28.38**	**133**	LR	LR	21 10 53.1	
	comp=Z,12μm,18.6s,MS5.5,baz=276,slow=30						
PMSA	**Palmer Station**	**28.38**	**133**	PFAKE		21 02 30.0	+13
PMSA				LR	LR		
	comp=Z,14μm,20.0s,MS5.5						
RPN	**Rapa Nui**	**28.52**	**18**	LR	LR	21 10 49.2	
	comp=Z,3μm,20.6s,MS4.9,baz=207,slow=31						
RPN	**Rapa Nui**	**28.52**	**18**	*e*P	**P**	**21 02 16.2**	**-2.7**
RPN				pmax	pmax		
	comp=Z,177nm,1.1s,mb5.7						
RPN				MLR	MLR		
	comp=Z,4μm,21.0s,MS5.0						
RPN	**Rapa Nui**	**28.52**	**18**	*e*P	**P**	**21 02 16.2**	**-2.7**
	comp=Z,177nm,1.1s,mb5.7						
RPN				LR	LR		
	comp=Z,4μm,21.0s,MS5.0						
USHA	**Ushuaia**	**28.53**	**111**	P	**P**	**21 02 19.4**	**+0.7**
	comp=Z,26nm,1.1s,mb4.9,baz=234,slow=7.2,SNR=3.7						
USHA				LR	LR	21 10 33.2	
	comp=Z,8μm,19.9s,MS5.3,baz=222,slow=30						
PTCN	**Pitcairn Islan**	**30.85**	**340**	PFAKE		21 02 50.0	+10
PTCN				LR	LR		
	comp=Z,13μm,21.0s,MS5.6						
RKT	**Rikitea**	**33.87**	**333**	*e*LR	LR	21 11 46.0	
	comp=Z,21μm,27.8s,baz=163						
SBA	**Scott Base**	**33.92**	**201**	*e*P	**P**	**21 03 08.6**	**+2.6**
SBA				pmax	pmax		
	comp=Z,127nm,1.8s,mb5.5						
SBA				MLR	MLR		
	comp=Z,4μm,19.0s,MS5.1						
SBA	**Scott Base**	**33.92**	**201**	*e*P	**P**	**21 03 08.6**	**+2.6**
	comp=Z,128nm,1.8s,mb5.5						
SBA				LR	LR		
	comp=Z,4μm,19.0s,MS5.1						
PLCA	**Paso Flores**	**34.63**	**86**	P	**P**	**21 03 12.4**	**-0.2**
	comp=Z,7.6nm,1.1s,mb4.5,baz=238,slow=7.2,SNR=4.3						
PLCA				PcP	PcP	21 05 45.9	-0.7
	comp=Z,2.5nm,1.1s,baz=270,slow=2.0,SNR=2.8						
PLCA				LR	LR	21 13 51.5	
	comp=Z,4μm,18.8s,MS5.2,baz=228,slow=30						
PLCA	**Paso Flores**	**34.63**	**86**	*e*P	**P**	**21 03 12.2**	**-0.4**
PLCA				pmax	pmax		
	comp=Z,102nm,1.9s						
PLCA				MLR	MLR		
	comp=Z,4μm,19.0s						
PLCA	**Paso Flores**	**34.63**	**86**	*e*P	**P**	**21 03 12.2**	**-0.3**
	comp=Z,102nm,1.9s,mb5.4						
PLCA				LR	LR		
	comp=Z,4μm,19.0s,MS5.2						
QSPA	**South Pole Qui**	**35.38**	**180**	P	**P**	**21 03 21.4**	**+2.8**
	comp=Z,31nm,1.0s,mb5.2,baz=116,slow=3.6,SNR=48						
QSPA				PcP	PcP	21 05 48.9	+0.8
	comp=Z,2.9nm,0.9s,baz=112,slow=3.3,SNR=4.4						
QSPA				LR	LR	21 16 48.0	
	comp=Z,7μm,18.1s,MS5.5,baz=286,slow=34						
QSPA	**South Pole Qui**	**35.38**	**180**	*e*P	**P**	**21 03 19.9**	**+1.3**
	comp=Z,53nm,1.1s,mb5.4						
QSPA				PcP	PcP	21 05 48.9	+0.8
QSPA				LR	LR	21 16 48.0	
TRQA	**Tornquist**	**41.37**	**90**	*e*P	**P**	**21 04 08.7**	**-0.7**
	comp=Z,63nm,1.3s,mb5.1						
TRQA				LR	LR		
	comp=Z,5μm,22.0s,MS5.4						
CFAA	**Coronel Fontan**	**42.37**	**78**	P	**P**	**21 04 16.4**	**-1.3**
	comp=Z,0.4nm,0.4s,baz=210,slow=5.7,SNR=11						
LCO	**Las Campanas**	**42.96**	**73**	PFAKE		21 04 30.0	+7.6
LCO				LR	LR		
	comp=Z,4μm,19.0s,MS5.3						
PPT	**Papeete**	**44.01**	**315**	*e*S	**S**	**21 11 01.2**	**-1.7**
	comp=Z,2μm,25.8s						
PPT				*e*LR	LR	21 16 19.4	
	comp=Z,22μm,26.0s,baz=159						
PPT	**Papeete**	**44.01**	**315**	LR	LR	21 18 11.9	
	comp=Z,7μm,19.6s,MS5.6,baz=148,slow=30						
SNZO	**South Karori**	**44.74**	**259**	PFAKE		21 04 50.0	+13
SNZO				LR	LR		
	comp=Z,7μm,19.0s,MS5.6						
RPZ	**Rata Peaks**	**45.23**	**254**	LR	LR	21 18 44.6	
	comp=Z,10μm,21.8s,MS5.7,baz=122,slow=30						
URZ	**Urewera**	**45.40**	**264**	LR	LR	21 19 07.3	
	comp=Z,3μm,19.9s,MS5.2,baz=138,slow=30						
RAR	**Rarotonga**	**45.47**	**301**	LR	LR	21 19 20.5	
	comp=Z,2μm,19.7s,MS5.1,baz=146,slow=30						
VNA1	**Neumayer--Stat**	**45.49**	**154**	*e*P	**P**	**21 04 41.5**	**-0.8**
VNA1				*e*	pP	21 04 43.7	-1.7
LPA	**La Plata**	**45.90**	**90**	*de*P	**P**	**21 04 44.0**	**-1.9**
LPA				*e*S	**S**	**21 11 31.0**	**+0.9**
LPA							
	comp=Z,4μm,18.0s						
TAOE	**Nuku Hiva Isla**	**48.88**	**332**	*e*S	**S**	**21 12 08.4**	**-4.4**
	comp=Z,2μm,25.6s						
TAOE				*e*LR	LR	21 18 44.1	
	comp=Z,13μm,27.2s						
MAIT	**Maitri**	**49.86**	**161**	*e*P	**P**	**21 05 17.7**	**+1.6**
CPUP	**Villa Florida**	**52.58**	**83**	P	**P**	**21 05 35.5**	**-1.7**
	comp=Z,4.5nm,0.7s,mb4.5,baz=212,slow=8.0,SNR=14						
CPUP				LR	LR	21 25 15.6	
	comp=Z,7μm,18.1s,MS5.8,baz=210,slow=33						
CASY	**Casey**	**53.62**	**202**	*e*P	**P**	**21 05 45.8**	**+1.6**
CASY	**Casey**	**53.62**	**202**	*e*P	**P**	**21 05 45.3**	**+1.1**
	comp=Z,168nm,2.1s,mb5.6						
CASY				LR	LR		
	comp=Z,3μm,19.0s,MS5.3						
LPAZ	**La Paz**	**54.59**	**66**	P	**P**	**21 05 51.5**	**-0.4**
	comp=Z,34nm,1.2s,mb5.2,baz=200,slow=5.8,SNR=44						
LPAZ				LR	LR	21 23 28.1	
	comp=Z,3μm,19.0s,MS5.4,baz=203,slow=30						
LPAZ	**La Paz**	**54.59**	**66**	*e*P	**P**	**21 05 51.1**	**-0.8**
LPAZ				pmax	pmax		
	comp=Z,105nm,1.5s						
LPAZ				MLR	MLR		
	comp=Z,3μm,20.0s						
LPAZ	**La Paz**	**54.59**	**66**	*e*P	**P**	**21 05 51.1**	**-0.8**
	comp=Z,105nm,1.5s,mb5.6						
LPAZ				LR	LR		
	comp=Z,3μm,20.0s,MS5.4						
SYO	**Syowa Base**	**55.48**	**171**	*e*P	**P**	**21 05 56.5**	**-1.2**
SYO	**Syowa Base**	**55.48**	**171**	*i* P	**P**	**21 06 04.6**	**+6.9**
MIR	**Mirnyy**	**56.60**	**195**	*e*P	**P**	**21 06 07.0**	**+1.3**
MIR				*e*S	**S**	**21 14 02.0**	**+4.9**
MIR				pmax	pmax		
	comp=Z,165nm,2.2s,mb5.7						
MIR				pmax	pmax		
	comp=Z,500nm,5.0s						
MIR				smax			
	comp=N,990nm,8.0s						
MIR				smax			
	comp=E,1μm,16.0s						
MIR				MLR	MLR		
	comp=N,2μm,16.0s,MS5.3						
MIR				MLR	MLR		
	comp=E,1μm,16.0s,MS5.3						
MIR				MLR	MLR		
	comp=Z,2μm,16.0s,MS5.3						
AFI	**Afiamalu**	**57.76**	**294**	PFAKE		21 06 30.0	+15
AFI				LR	LR		
	comp=Z,4μm,19.0s,MS5.6						
MAW	**Mawson**	**57.90**	**181**	*e*P	**P**	**21 06 16.2**	**+1.3**
	comp=Z,8.6nm,0.9s,m

CTAO pmax pmax
comp=Z,22nm,1.1s,mb5.0
CTAO MLR MLR
comp=Z,2µm,21.0s,MS5.5
CTAO Charters Tower 76.60 254 *eP* **P 21 08 13.1 -1.0**
comp=Z,22nm,1.1s,mb5.0
CTAO LR LR
comp=Z,2µm,21.0s,MS5.5
HNR Honiara 77.30 272 LR LR 21 34 01.5
comp=Z,279nm,21.2s,MS4.5,baz=138,slow=29
HNR Honiara 77.30 272 PFAKE 21 08 30.0 +12
HNR LR LR
comp=Z,936nm,21.0s,MS5.1
FORT Forrest 77.31 234 *eP* **P 21 08 17.1 -0.9**
comp=Z,20nm,0.8s,mb5.1
TEIG Tepich 79.17 29 PFAKE 21 08 40.0 +12
TEIG LR LR
comp=Z,1µm,19.0s,MS5.2
NWAO Narrogin (SRO) 80.25 225 PFAKE 21 08 40.0 +5.9
NWAO LR LR
comp=Z,1µm,20.0s,MS5.3
ASAR Alice Springs 80.33 243 P **P 21 08 32.9 -1.8**
comp=Z,5.2nm,1.0s,mb4.4,baz=140,slow=4.9,SNR=22
POHA Pohakuloa 80.61 325 PFAKE 21 08 50.0 +14
POHA LR LR
comp=Z,2µm,22.0s,MS5.5
MTDJ Mount Denham 80.80 39 PFAKE 21 08 50.0 +13
MTDJ LR LR
comp=Z,1µm,19.0s,MS5.3
RCBR Riachuelo 81.19 88 PFAKE 21 08 50.0 +11
RCBR LR LR
comp=Z,1µm,21.0s,MS5.3
GRGR Grenville 82.15 56 PFAKE 21 08 50.0 +5.7
GRGR LR LR
comp=Z,1µm,21.0s,MS5.2
KIP Kipapa 82.99 324 PFAKE 21 09 00.0 +11
KIP LR LR
comp=Z,2µm,22.0s,MS5.5
WRAB Tennant Creek 83.18 245 P **P 21 08 48.3 -1.5**
comp=Z,226nm,0.9s,mb6.2,SNR=10
WRAB Tennant Creek 83.18 245 *eP* **P 21 08 48.1 -1.7**
WRAB pmax pmax
comp=Z,73nm,1.3s,mb5.5
WRAB MLR MLR
comp=Z,2µm,19.0s,MS5.5
WRAB Tennant Creek 83.18 245 *eP* **P 21 08 48.1 -1.7**
comp=Z,73nm,1.3s,mb5.5
WRAB LR LR
comp=Z,2µm,19.0s,MS5.5
JOHN Johnston Islan 83.22 312 PFAKE 21 09 00.0 +10
JOHN LR LR
comp=Z,3µm,19.0s,MS5.7
GTBY Guantanamo Bay 83.26 41 PFAKE 21 09 00.0 +10
GTBY LR LR
comp=Z,583nm,21.0s,MS4.9
SDDR Presa de Saban 83.90 45 PFAKE 21 09 00.0 +6.7
SDDR LR LR
comp=Z,660nm,19.0s,MS5.0
KVTX Kingsville 83.97 19 PFAKE 21 09 00.0 +6.6
KVTX LR LR
comp=Z,697nm,19.0s,MS5.1
BBGH Gun Hill 84.03 57 PFAKE 21 09 00.0 +6.0
BBGH LR LR
comp=Z,2µm,19.0s,MS5.4
FDF Fort de France 84.64 55 PFAKE 21 09 10.0 +13
FDF LR LR
comp=Z,1µm,20.0s,MS5.2
PMG Port Moresby 84.70 261 *ceP* **P 21 08 57.0 -0.6**
PMG pmax pmax
comp=Z,54nm,1.7s
PMG Port Moresby 84.70 261 PFAKE 21 09 10.0 +12
PMG LR LR
comp=Z,2µm,21.0s,MS5.4
TXAR Lajitas Array 84.81 13 P **P 21 08 57.0 -0.6**
comp=Z,2.4nm,1.0s,mb4.3,baz=188,slow=8.5,SNR=13
TXAR LR LR 21 39 53.8
comp=Z,457nm,20.6s,MS4.8,baz=10.0,slow=31
TXAR Lajitas Array 84.81 13 P **P 21 08 57.0 -0.6**
TXAR LR LR 21 39 53.8
627A Terlingua Ranc 84.96 13 ⇓P **P 21 08 58.7 +0.3**
baz=85,SNR=13
626A Big Bend Ranch 84.96 13 ⇑P **P 21 08 58.4 +0.1**
baz=85
SJG San Juan 85.30 49 PFAKE 21 09 10.0 +10
SJG LR LR
comp=Z,936nm,20.0s,MS5.2
526A Mary Lane Ranc 85.47 13 ⇓P **P 21 09 00.6 -0.3**
baz=86,SNR=6.4
527A Woodward Ranch 85.61 13 ⇑P **P 21 09 00.9 -0.7**
baz=86
528A Cox Ranch, San 85.74 14 ⇓P **P 21 09 02.2 -0.1**
baz=86
425A Indio Mountain 86.07 12 ⇓P **P 21 09 04.0 +0.1**
baz=86
426A McDonald Obser 86.08 13 ⇓P **P 21 09 03.5 -0.4**
baz=86
319A Douglas 86.22 8 ⇑P **P 21 09 05.1 +0.5**
baz=86
318A Bisbee 86.23 8 ⇑P **P 21 09 04.6 0.0**
baz=86
GRTK Grand Turk 86.24 44 PFAKE 21 09 10.0 +5.1
GRTK LR LR
comp=Z,768nm,19.0s,MS5.1
320A Kipp Ranch, An 86.25 9 ⇓P **P 21 09 05.2 +0.5**
baz=86
427A Hayter Ranch, 86.34 13 ⇑P **P 21 09 05.1 0.0**
baz=87,SNR=12
SUR Sutherland 86.48 147 PFAKE 21 09 20.0 +14
SUR LR LR
comp=Z,2µm,19.0s,MS5.5
217A Green Valley 86.50 7 ⇑P **P 21 09 06.2 +0.3**
baz=87
JCT Junction City 86.51 16 *eP* **P 21 09 05.0 -1.0**
JCT pmax pmax
comp=Z,77nm,1.3s,mb5.8
JCT MLR MLR
comp=Z,2µm,21.0s,MS5.5
JCT Junction City 86.51 16 *eP* **P 21 09 05.0 -1.0**
comp=Z,77nm,1.3s,mb5.8
JCT LR LR
comp=Z,2µm,21.0s,MS5.5
214A Organ Pipe Nat 86.56 5 ⇑P **P 21 09 06.7 +0.4**
baz=87
325A Bean Ranch, Si 86.65 12 ⇑P **P 21 09 06.1 -0.7**
baz=87,SNR=13
324A Moseley Ranch, 86.66 11 ⇓P **P 21 09 06.2 -0.5**
baz=87,SNR=11
216A Three Points, 86.69 6 ⇓P **P 21 09 07.1 +0.3**
baz=87
HKT Hockley 86.70 20 *eP* **P 21 09 06.3 -0.7**
HKT pmax pmax
comp=Z,114nm,1.7s,mb5.8
HKT MLR MLR
comp=Z,173nm,19.0s,MS4.5
HKT Hockley 86.70 20 *eP* **P 21 09 06.3 -0.7**
comp=Z,114nm,1.7s,mb5.8
HKT LR LR
comp=Z,173nm,19.0s,MS4.5
326A Caldwell Ranch 86.72 13 ⇑P **P 21 09 07.0 0.0**
baz=87
218A Dragoon 86.76 7 ⇓P **P 21 09 07.0 -0.2**
baz=87
220A Playas Peak, P 86.81 9 ⇓P **P 21 09 07.7 +0.2**
baz=87
327A Balmorhea Ranc 86.84 13 ⇑P **P 21 09 07.8 +0.2**
baz=87
219A White Tail Can 86.84 8 ⇓P **P 21 09 08.1 +0.5**
baz=87
ANWB Willy Bob 86.89 53 PFAKE 21 09 20.0 +12
ANWB LR LR
comp=Z,1µm,22.0s,MS5.2
MNTX Cornudas Mount 86.93 11 *eP* **P 21 09 06.8 -1.2**
comp=Z,72nm,1.8s,mb5.6
MNTX LR LR
comp=Z,523nm,20.0s,MS4.9
328A Wristen Ranch, 86.94 14 ⇑P **P 21 09 07.8 -0.3**
baz=87
221A Mesquite Ranch 86.98 9 ⇓P **P 21 09 08.6 +0.2**
baz=87
112A Yuma 87.06 4 ⇓P **P 21 09 09.1 +0.4**
baz=87
223A Chaparral, Ant 87.12 11 ⇓P **P 21 09 09.3 +0.4**
baz=87
DVTC Desert V Tower 87.14 2 ⇑P **P 21 09 09.3 +0.3**
baz=87
222A Williams Famil 87.14 10 ⇓P **P 21 09 09.6 +0.5**
baz=87

BAR Barrett 87.15 2 *eP* **P 21 09 07.4 -1.7**
comp=Z,73nm,1.9s,mb5.6
116A Eloy 87.23 6 ⇑P **P 21 09 09.9 +0.4**
baz=88
224A Cornudas Mount 87.28 11 ⇓P **P 21 09 09.7 0.0**
baz=88,SNR=24
117A Oracle 87.30 7 ⇓P **P 21 09 10.2 +0.4**
baz=88
113A Mohawk Valley, 87.33 4 ⇓P **P 21 09 10.2 +0.3**
baz=88
109C Camp Elliot, M 87.35 1 ⇓P **P 21 09 10.2 +0.1**
baz=88
114A Black Gap (USA 87.35 5 ⇓P **P 21 09 10.2 +0.1**
baz=88
MONP Monument Peak 87.36 2 ⇑P **P 21 09 10.8 +0.7**
baz=88
225A Deer Hill, Car 87.40 12 ⇑P **P 21 09 09.8 -0.5**
baz=88,SNR=9.8
SCI San Clemente I 87.43 0 ⇓P **P 21 09 11.1 +0.6**
baz=88
SWSC Sam W. Stewart 87.43 3 ⇓P **P 21 09 10.8 +0.4**
baz=88
120A U Bar Ranch, L 87.44 9 ⇑P **P 21 09 10.7 +0.2**
baz=88,SNR=9.9
226A Malaga, Loving 87.44 12 ⇓P **P 21 09 10.5 0.0**
baz=88
227A Bennet, Jal 87.50 13 ⇓P **P 21 09 11.1 +0.3**
baz=88
121A Cookes Peak, D 87.50 9 ⇑P **P 21 09 10.8 0.0**
baz=88,SNR=11
GDL2 Guadalupe Moun 87.55 12 *eP* **P 21 09 08.3 -2.7**
comp=Z,9.0nm,1.1s,mb4.9
GLA Glamis 87.57 3 ⇓P **P 21 09 11.8 +0.6**
baz=88
GLA Glamis 87.57 3 *eP* **P 21 09 11.0 -0.1**
GLA pmax pmax
comp=Z,63nm,1.5s,mb5.6
GLA Glamis 87.57 3 *eP* **P 21 09 11.0 -0.2**
comp=Z,63nm,1.5s,mb5.6
119A Ashpeak Ranch, 87.60 8 ⇑P **P 21 09 11.4 +0.1**
baz=88
CLNB Carlsbad 87.67 13 *eP* **P 21 09 11.5 -0.1**
comp=Z,18nm,1.4s,mb5.1
122A Conniff Cattle 87.74 10 ⇓P **P 21 09 12.8 +0.8**
baz=88
123A Bell Site, Whi 87.76 11 ⇑P **P 21 09 12.2 +0.2**
baz=88
Z13A Yuma Proving G 87.76 4 ⇓P **P 21 09 12.3 +0.3**
baz=88
CIS Catalina Islan 87.86 0 ⇓P **P 21 09 12.1 -0.4**
baz=88
Z18A Geronimo 87.86 7 ⇓P **P 21 09 12.6 +0.1**
baz=88
124A Stringfield Ra 87.91 11 ⇓P **P 21 09 12.6 -0.2**
baz=88,SNR=14
Z15A Gila River Ind 87.93 6 ⇓P **P 21 09 13.2 +0.4**
baz=88
Z14A Wintersburg 87.96 5 ⇓P **P 21 09 13.1 +0.1**
baz=88
125A Gardner Draw, 87.96 12 ⇑P **P 21 09 12.2 -0.8**
baz=88,SNR=12
Z20A Nine Sixteen R 88.01 9 ⇓P **P 21 09 13.4 +0.2**
baz=88,SNR=12
Z16A Peralta Trail, 88.02 6 ⇓P **P 21 09 13.1 -0.1**
baz=88
126A Clayton Basin, 88.03 12 ⇑P **P 21 09 12.4 -0.9**
baz=88
Z17A San Carlos Hig 88.04 7 ⇑P **P 21 09 13.5 +0.1**
baz=88
MURC Murrieta 88.06 1 ⇑P **P 21 09 13.7 +0.3**
baz=88
PFO Pinyon Flat Ob 88.08 2 P **P 21 09 13.2 -0.3**
comp=Z,75nm,1.3s,mb5.8,SNR=6.4
PFO Pinyon Flat Ob 88.08 2 ⇓P **P 21 09 13.9 +0.4**
baz=88
PFO Pinyon Flat Ob 88.08 2 *eP* **P 21 09 13.3 -0.2**
PFO pmax pmax
comp=Z,64nm,1.6s,mb5.6
PFO MLR MLR
comp=Z,2µm,20.0s,MS5.5
PFO Pinyon Flat Ob 88.08 2 *eP* **P 21 09 13.2 -0.3**
comp=Z,64nm,1.6s,mb5.6
PFO LR LR
comp=Z,2µm,20.0s,MS5.5
Z19A T-Link Ranch, 88.13 8 ⇓P **P 21 09 14.0 +0.2**
baz=88
127A Arkansas Junct 88.14 13 ⇑P **P 21 09 13.7 -0.2**
baz=88
BC3 Big Chuckawall 88.15 3 ⇓P **P 21 09 14.4 +0.5**
baz=88
FMP Fort Macarthur 88.16 0 ⇑P **P 21 09 13.9 0.0**
baz=88
Z21A St. Cloud Mine 88.28 9 ⇑P **P 21 09 15.1 +0.6**
baz=88
Z22A Elephant Butte 88.30 10 ⇑P **P 21 09 14.7 +0.1**
baz=88,SNR=12
Y13A Salome 88.37 4 ⇓P **P 21 09 15.3 +0.4**
baz=89
Z23A Rita Site, Whi 88.38 11 ⇓P **P 21 09 15.2 +0.2**
baz=89
Y17A Roosevelt 88.41 7 ⇓P **P 21 09 15.1 0.0**
baz=89
BSC Santa Cruz Isl 88.44 359 ⇑P **P 21 09 15.2 -0.1**
baz=89
BELC Belle Mtn. Jos 88.48 2 ⇑P **P 21 09 16.2 +0.8**
baz=89
Y14A Wickenburg 88.53 5 ⇓P **P 21 09 15.8 +0.1**
baz=89
Z24A Sheeppen Canyo 88.54 11 ⇓P **P 21 09 16.1 +0.3**
baz=89
Y18A Canyon Day Jun 88.55 7 ⇑P **P 21 09 16.0 +0.3**
baz=89
Y16A Circle Bar Ran 88.55 6 ⇑P **P 21 09 15.9 +0.1**
baz=89
BLG Laguna Peak 88.56 360 ⇓P **P 21 09 15.8 0.0**
baz=89
Z25A Roswell 88.57 12 ⇑P **P 21 09 16.2 +0.3**
baz=89
Y15A Casa Rosa Ranc 88.58 5 ⇑P **P 21 09 16.1 +0.3**
baz=89
DWPF Disney 88.62 32 PFAKE 21 09 30.0 +14
DWPF LR LR
comp=Z,210nm,19.0s,MS4.6
Z26A Caprock 88.65 12 ⇓P **P 21 09 15.3 -0.9**
baz=89,SNR=11
IRM Iron Mountain 88.66 3 ⇑P **P 21 09 16.5 +0.3**
baz=89
BFSC Mount Baldy Ra 88.69 1 ⇑P **P 21 09 16.7 +0.3**
baz=89
NATX Nacogdoches 88.69 20 *eP* **P 21 09 16.2 -0.3**
NATX LR LR
comp=Z,566nm,21.0s,MS5.0
DECC Green Verdugo 88.70 0 ⇑P **P 21 09 16.7 +0.3**
baz=89
BBRC Big Bear Solar 88.72 2 ⇑P **P 21 09 17.0 +0.4**
baz=89
Y19A Nutrioso 88.79 8 ⇓P **P 21 09 17.4 +0.5**
baz=89
Z27A Tatum 88.79 13 ⇑P **P 21 09 16.9 0.0**
baz=89
Y20A Horse Springs, 88.81 9 ⇑P **P 21 09 18.0 +1.0**
baz=89,SNR=18
SBC Santa Barbara 88.89 359 ⇑P **P 21 09 17.6 +0.3**
baz=89
Y22A Socorro 88.97 10 ⇓P **P 21 09 17.9 +0.1**
baz=89
Y21A Point of Rocks 88.98 9 ⇑P **P 21 09 18.4 +0.6**
baz=89,SNR=9.6
X17A Forest Lakes 89.05 7 ⇑P **P 21 09 18.9 +0.8**
baz=89
OSI Osito Adit 89.06 0 ⇓P **P 21 09 18.2 0.0**
baz=89
Y23A Lovelace Mesa, 89.06 11 ⇓P **P 21 09 18.6 +0.5**
baz=89
X14A Yava 89.06 5 ⇑P **P 21 09 18.3 +0.2**
baz=89
X16A Lo Mia Camp, P 89.09 6 ⇑P **P 21 09 18.3 0.0**
baz=89
Y22D IRIS PASSCAL I 89.11 10 ⇑P **P 21 09 18.8 +0.4**
baz=89
X15A Humboldt 89.11 5 ⇓P **P 21 09 18.5 +0.1**
baz=89,SNR=12
Y24A Capitan 89.12 11 ⇑P **P 21 09 18.7 +0.2**
baz=89,SNR=13
X13A Yucca 89.14 4 ⇑P **P 21 09 18.7 +0.2**
baz=89,SNR=11
FITZ Fitzroy Crossi 89.17 239 *eP* **P 21 09 17.2 -2.1**
comp=Z,24nm,0.9s,mb5.5

FITZ Fitzroy Crossi 89.17 239 *eP* **P 21 09 16.9 -2.4**
comp=Z,52nm,1.5s,mb5.6
LENM Lemitar 89.20 10 *eP* **P 21 09 18.5 -0.3**
comp=Z,164nm,2.2s,mb6.0
Y25A Mesa, Roswell 89.20 12 ⇓P **P 21 09 18.7 -0.1**
baz=90,SNR=16
BNM Barren Site 89.22 10 *eP* **P 21 09 18.6 -0.3**
comp=Z,64nm,1.7s,mb5.7
X19A St. Johns 89.25 8 ⇑P **P 21 09 19.2 +0.1**
baz=90
GMRC Granite Mounta 89.27 3 ⇓P **P 21 09 19.5 +0.4**
baz=90
HEC Hector,Ludlow 89.30 2 ⇓P **P 21 09 19.8 +0.5**
baz=90
X18A Snowflake 89.30 7 ⇓P **P 21 09 19.5 +0.3**
baz=90
Y26A Elida 89.31 12 ⇑P **P 21 09 19.1 -0.3**
baz=90
EDW2 Edwards Air Fo 89.33 1 ⇑P **P 21 09 19.6 +0.2**
baz=90
RRX Edison Barstow 89.34 2 ⇓P **P 21 09 19.6 +0.1**
baz=90
MBWA Marble Bar 89.39 233 PFAKE 21 09 30.0 +10
MBWA LR LR
comp=Z,2µm,19.0s,MS5.7
X21A Alamocita Cree 89.40 9 ⇑P **P 21 09 20.0 +0.3**
baz=90,SNR=13
LAZ Ladron 89.42 10 *eP* **P 21 09 19.6 -0.3**
comp=Z,31nm,1.6s,mb5.4
X20A Quemado 89.43 9 ⇑P **P 21 09 20.3 +0.4**
baz=90
MSTX Muleshoe 89.49 13 ⇑P **P 21 09 19.5 -0.7**
baz=90
ARVC Arvin 89.57 360 ⇓P **P 21 09 20.4 -0.1**
baz=90
W13A Hualapai Mount 89.64 4 ⇑P **P 21 09 21.2 +0.3**
baz=90,SNR=9.9
X23A Hourglass Bar 89.69 10 ⇓P **P 21 09 21.2 +0.1**
baz=90
BRAL Brewton 89.74 27 PFAKE 21 09 30.0 +8.6
BRAL LR LR
comp=Z,877nm,21.0s,MS5.2
X24A Lazy VL Ranch, 89.75 11 ⇓P **P 21 09 21.5 +0.1**
baz=90
SMMC Simmler 89.76 359 ⇑P **P 21 09 22.0 +0.6**
baz=90
W16A Flagstaff 89.76 6 ⇑P **P 21 09 21.6 +0.2**
baz=90
GSC Goldstone 89.76 2 ⇑P **P 21 09 21.7 +0.3**
baz=90
GSC Goldstone 89.76 2 *eP* **P 21 09 21.1 -0.3**
GSC pmax pmax
comp=Z,62nm,1.7s,mb5.7
GSC Goldstone 89.76 2 *eP* **P 21 09 21.1 -0.3**
comp=Z,62nm,1.7s,mb5.7
W17A Winslow 89.80 7 ⇑P **P 21 09 21.7 +0.2**
baz=90
W15A Williams 89.80 5 ⇑P **P 21 09 21.6 0.0**
baz=90
X25A Clemmons Ranch 89.81 12 ⇓P **P 21 09 21.4 -0.3**
baz=90
W12A Cal Nev Ari 89.81 3 ⇑P **P 21 09 21.8 +0.2**
baz=90
W18A Petrified Fore 89.90 7 ⇓P **P 21 09 21.7 -0.3**
baz=90
TUQ Turquoise Moun 89.91 2 ⇓P **P 21 09 22.2 +0.1**
baz=90
W19A Sanders 89.92 8 ⇑P **P 21 09 22.3 +0.2**
baz=90,SNR=9.5
LRMC Laurel Mountai 89.93 1 ⇓P **P 21 09 22.0 -0.2**
baz=90
X26A CR and CF Fran 89.93 12 ⇑P **P 21 09 22.0 -0.3**
baz=90
W20A Ramah 90.01 8 ⇓P **P 21 09 22.9 +0.3**
baz=90
ANMO Albuquerque 90.03 10 P **P 21 09 21.9 -0.7**
comp=Z,6.5nm,1.1s,mb4.9,baz=172,slow=6.7,SNR=17
ANMO Albuquerque 90.03 10 *eP* **P 21 09 21.6 -1.1**
ANMO pmax pmax
comp=Z,37nm,1.4s
ANMO MLR MLR
comp=Z,902nm,19.0s
ANMO Albuquerque 90.03 10 *eP* **P 21 09 21.6 -1.1**
comp=Z,37nm,1.4s,mb5.5
ANMO LR LR
comp=Z,902nm,19.0s,MS5.2
VBMS Vicksburg 90.03 24 PFAKE 21 09 30.0 +7.2
VBMS LR LR
comp=Z,436nm,21.0s,MS4.9
W21A San Fidel 90.08 9 ⇓P **P 21 09 23.2 +0.3**
baz=90
ISA Isabella 90.11 0 ⇑P **P 21 09 22.9 -0.1**
baz=90
W22A Albuquerque 90.11 10 ⇑P **P 21 09 23.3 +0.3**
baz=90
X27A F and S Farms, 90.12 13 ⇓P **P 21 09 23.1 0.0**
baz=90
WUAZ Wupatki 90.19 6 ⇓P **P 21 09 23.4 0.0**
baz=90,SNR=9.0
WUAZ Wupatki 90.19 6 *eP* **P 21 09 23.0 -0.4**
comp=Z,72nm,1.5s,mb5.8
WUAZ LR LR
comp=Z,1µm,20.0s,MS5.4
V14A Boquillas Ranc 90.21 5 ⇑P **P 21 09 23.8 +0.3**
baz=90,SNR=12
V12A Nelson 90.23 3 ⇑P **P 21 09 23.7 +0.1**
baz=90
W23A Werner Place, 90.27 10 ⇓P **P 21 09 23.8 0.0**
baz=90
VES Vestal, Richgr 90.28 360 ⇑P **P 21 09 23.5 -0.3**
baz=90
V11A Goodsprings 90.33 3 ⇑P **P 21 09 24.2 +0.2**
baz=91
V17A Tonalea, Kykot 90.33 7 ⇓P **P 21 09 24.0 -0.1**
baz=91,SNR=14
SHOC Shoshone 90.37 2 ⇓P **P 21 09 24.3 +0.1**
baz=91
V13A Grand Canyon W 90.39 4 ⇑P **P 21 09 24.4 +0.1**
baz=91,SNR=8.8
W24A Lazy 6 Ranch, 90.40 11 ⇑P **P 21 09 24.1 -0.2**
baz=91,SNR=8.6
V15A Kaibab Nationa 90.44 5 ⇑P **P 21 09 24.8 +0.2**
baz=91
W26A Owens Ranch, T 90.47 12 ⇓P **P 21 09 24.6 -0.1**
baz=91
V18A Ganado 90.48 7 ⇓P **P 21 09 24.9 +0.2**
baz=91,SNR=12
MPMC Manual Prospec 90.51 1 ⇓P **P 21 09 24.8 -0.1**
baz=91,SNR=14
W25A X Bar L Ranch, 90.51 12 ⇓P **P 21 09 24.4 -0.5**
baz=91
W27A Bowe Ranch, En 90.53 13 ⇑P **P 21 09 24.9 -0.1**
baz=91
AMTX Amarillo 90.54 14 *eP* **P 21 09 23.9 -1.2**
comp=Z,46nm,1.5s,mb5.6
AMTX LR LR
comp=Z,876nm,19.0s,MS5.2
V19A Window Rock 90.55 8 ⇑P **P 21 09 24.6 -0.5**
baz=91
V20A Brimhall 90.68 8 ⇑P **P 21 09 25.9 +0.2**
baz=91
DAC Darwin (Calif) 90.72 1 PFAKE 21 09 40.0 +14
DAC LR LR
comp=Z,2µm,22.0s,MS5.5
RCTC Rector, Farmer 90.75 360 ⇓P **P 21 09 25.7 -0.3**
baz=91
V21A Milan 90.76 9 ⇑P **P 21 09 26.0 -0.1**
baz=91
U16A Tuba City 90.83 6 ⇑P **P 21 09 26.3 -0.1**
baz=91
WMOK Wichita Mounta 90.84 16 *eP* **P 21 09 25.1 -1.3**
WMOK pmax pmax
comp=Z,32nm,1.5s,mb5.4
WMOK MLR MLR
comp=Z,1µm,20.0s,MS5.4
WMOK Wichita Mounta 90.84 16 *eP* **P 21 09 25.1 -1.3**
comp=Z,32nm,1.5s,mb5.4
WMOK LR LR
comp=Z,1µm,20.0s,MS5.4
V23A Ortiz Mt. (NFS 90.84 10 ⇑P **P 21 09 26.5 0.0**
baz=91
CWC Cottonwood Cre 90.88 1 ⇑P **P 21 09 26.6 0.0**
baz=91
U10A Ash Meadows, A 90.89 2 ⇓P **P 21 09 26.8 +0.2**
baz=91
U11A Corn Creek 90.91 3 ⇓P **P 21 09 27.2 +0.4**
baz=91
V24A Rampart Ranch, 90.92 11 ⇑P **P 21 09 26.9 +0.1**

baz=91
FURC Furnace Creek, 90.93 2 ⇓P P 21 09 26.7 -0.1
baz=91
V22A San Miguel Ran 90.94 10 ⇑P P 21 09 27.0 +0.2
baz=91,SNR=14
U12A Valley of Fire 90.95 3 ⇓P P 21 09 27.1 +0.2
baz=91
U14A Mt Trumbull 90.99 5 ⇓P P 21 09 26.9 -0.2
baz=91,SNR=11
U15A North Rim 91.04 5 ⇓P P 21 09 27.7 +0.3
baz=91,SNR=10
V25A Rancho No Teng 91.11 12 ⇓P P 21 09 27.3 -0.4
baz=91
U19A Dine' College, 91.11 8 ⇑P P 21 09 27.2 -0.4
baz=91
U18A Rough Rock, Ch 91.19 7 ⇑P P 21 09 28.1 +0.1
baz=91,SNR=9.4
SAO San Andreas Ge 91.23 358 PFAKE 21 09 40.0 +12
SAO LR LR
comp=Z,2μm,20.0s,MS5.6
T12A Moapa 91.23 3 ⇑P P 21 09 28.7 +0.4
baz=92
U20A Newcomb 91.25 8 ⇑P P 21 09 28.2 -0.1
baz=92
BOSA Boshof 91.36 149 LR LR 21 50 36.1
comp=Z,3μm,18.0s,MS5.7,baz=195,slow=36
BOSA Boshof 91.36 149 PFAKE 21 09 40.0 +11
BOSA LR LR
comp=Z,3μm,20.0s,MS5.8
U21A Nageezi 91.38 9 ⇓P P 21 09 29.1 +0.2
baz=92
U22A Llaves 91.40 10 ⇓P P 21 09 28.9 -0.1
baz=92
U23A El Rito 91.42 10 ⇓P P 21 09 29.4 +0.3
baz=92
GRAC Grapevine Rang 91.45 1 ⇓P P 21 09 30.0 +0.8
baz=92
TIN Tinemaha 91.50 0 ⇓P P 21 09 30.3 +0.8
baz=92
T13A Saint George 91.56 4 ⇓P P 21 09 30.1 +0.3
baz=92,SNR=9.2
U24A Moreno Valley 91.60 11 ⇓P P 21 09 30.6 +0.7
baz=92
MIAR Mount Ida 91.61 21 *e*P **P 21 09 30.0 0.0**
MIAR pmax pmax
comp=Z,21nm,1.4s,mb5.3
MIAR MLR MLR
comp=Z,481nm,20.0s,MS4.9
MIAR Mount Ida 91.61 21 *e*P **P 21 09 30.0 -0.1**
comp=Z,21nm,1.4s,mb5.3
MIAR LR LR
comp=Z,481nm,20.0s,MS4.9
T15A Red Dirt Ranch 91.63 5 ⇑P P 21 09 30.4 +0.3
baz=92
T14A Hurricane 91.64 5 ⇓P P 21 09 30.2 +0.1
baz=92
T16A Glen Canyon Da 91.64 6 ⇑P P 21 09 29.8 -0.3
baz=92
T19A Beclabito 91.66 8 ⇓P P 21 09 29.8 -0.4
baz=92,SNR=7.6
LRAL Lakeview Retre 91.68 26 *e*P **P 21 09 27.8 -2.6**
comp=Z,46nm,1.8s,mb5.5
LRAL LR LR
comp=Z,879nm,22.0s,MS5.2
U25A Circle Dot Ran 91.69 12 ⇓P P 21 09 30.5 +0.2
baz=92
T17A Navajo Res., N 91.70 6 ⇓P P 21 09 30.4 +0.1
baz=92,SNR=9.1
T11A Corn Creek, Al 91.73 3 ⇓P P 21 09 30.6 +0.1
baz=92,SNR=9.4
U26A Atchley Ranch, 91.76 12 ⇓P P 21 09 30.6 -0.1
baz=92
T18A Mexican Hat 91.90 7 ⇓P P 21 09 31.0 -0.3
baz=92,SNR=11
T21A Navajo Lake 91.95 9 ⇓P P 21 09 31.5 -0.1
baz=92
T22A Edith 92.03 10 ⇑P P 21 09 32.0 +0.1
baz=92
MVCO Mesa Verde 92.08 8 ⇓P P 21 09 31.8 -0.3
baz=92,SNR=8.8
MVCO Mesa Verde 92.08 8 *e*P **P 21 09 31.5 -0.6**
comp=Z,64nm,1.4s,mb5.8
MVCO LR LR
comp=Z,2μm,21.0s,MS5.4
UALR University of 92.09 22 *e*P **P 21 09 32.7 +0.5**
CCUT Cedar City 92.11 4 *e*P **P 21 09 31.7 -0.6**
comp=Z,63nm,1.7s,mb5.7
S12A Delamar Landin 92.11 3 ⇓P P 21 09 33.1 +0.8
baz=92
S13A Holt Ranch, En 92.12 4 ⇑P P 21 09 32.3 0.0
baz=92,SNR=6.8
S11A Rachel 92.12 2 ⇓P P 21 09 33.3 +1.0
baz=92
T23A Casias Ranch, 92.14 10 ⇑P P 21 09 32.6 +0.2
baz=92
S15A Panguitch 92.28 5 ⇓P P 21 09 33.5 +0.5
baz=92
S14A Cedar City 92.33 4 ⇓P P 21 09 34.1 +0.8
baz=93
S17A Black Ridge (B 92.33 6 ⇓P P 21 09 33.9 +0.6
baz=93
ARUT Antelope Range 92.34 4 *e*P **P 21 09 33.3 0.0**
ARUT pmax pmax
comp=Z,37nm,1.5s,mb5.5
ARUT Antelope Range 92.34 4 *e*P **P 21 09 33.3 0.0**
comp=Z,37nm,1.5s,mb5.5
S16A Weppner Ranch, 92.37 6 ⇑P P 21 09 33.1 -0.4
baz=93
S10A Tonopah Range, 92.38 2 ⇓P P 21 09 34.1 +0.6
baz=93
T25A Trinidad 92.41 11 ⇓P P 21 09 33.9 +0.2
baz=93
S18A Hurst Farm, Bl 92.44 7 ⇑P P 21 09 33.9 +0.1
baz=93,SNR=8.9
CMB Columbia Colle 92.48 359 *e*P **P 21 09 33.0 -1.0**
CMB pmax pmax
comp=Z,14nm,1.2s,mb5.2
CMB MLR MLR
comp=Z,2μm,20.0s,MS5.5
CMB Columbia Colle 92.48 359 *e*P **P 21 09 33.0 -1.0**
comp=Z,14nm,1.2s,mb5.2
CMB LR LR
comp=Z,2μm,20.0s,MS5.5
OXF Oxford 92.49 24 PFAKE 21 09 40.0 +5.9
OXF LR LR
comp=Z,382nm,21.0s,MS4.8
TPH Tonopah 92.52 1 PFAKE 21 09 40.0 +5.8
TPH LR LR
comp=Z,2μm,21.0s,MS5.5
S19A Harvey Farm, M 92.56 8 ⇓P P 21 09 34.2 -0.2
baz=93
MCCM Marconi Confer 92.65 357 PFAKE 21 09 40.0 +5.3
MCCM LR LR
comp=Z,2μm,20.0s,MS5.5
R13A O'Grain Ranch, 92.71 4 ⇑P P 21 09 35.5 +0.5
baz=93,SNR=7.7
R10A Warm Springs 92.75 2 ⇑P P 21 09 35.9 +0.7
baz=93
S22A 4UR Ranch, Cre 92.76 9 ⇑P P 21 09 35.8 +0.6
baz=93
S23A Nye Farm, Mont 92.80 10 ⇑P P 21 09 35.9 +0.4
baz=93
R15A Junction 92.82 5 ⇑P P 21 09 36.2 +0.7
baz=93
S24A Houchin Ranch, 92.82 11 ⇓P P 21 09 36.2 +0.7
baz=93
R11A Troy Canyon, C 92.83 3 ⇓P P 21 09 36.3 +0.7
baz=93,SNR=8.9
R12A Pony Springs, 92.84 3 ⇓P P 21 09 36.5 +0.8
baz=93
NVAR Mina Array Bea 92.87 0 P **P 21 09 35.2 -0.6**
comp=Z,4.0nm,1.0s,mb4.8,baz=189,slow=5.6,SNR=12
NVAR Mina Array Bea 92.87 0 P **P 21 09 35.2 -0.6**
R14A James Farms, M 92.87 5 ⇓P P 21 09 36.2 +0.5
baz=93
SDCO Great Sand Dun 92.89 11 *e*P **P 21 09 34.2 -1.7**
comp=Z,13nm,1.4s,mb5.2
SDCO LR LR
comp=Z,560nm,20.0s,MS5.0
S25A Robets Cordova 92.93 11 ⇑P P 21 09 36.3 +0.3
baz=93
R16A Teasdale 92.94 6 ⇑P P 21 09 36.4 +0.3
baz=93
GOGA Godfrey 92.98 29 PFAKE 21 09 50.0 +14
GOGA LR LR
comp=Z,470nm,20.0s,MS4.9
PV01 Paradox Valley 92.99 8 *e*P **P 21 09 35.4 -0.9**
comp=Z,2μm,1.3s
R20A Redvale 93.06 8 ⇑P P 21 09 36.6 -0.1
baz=93
R19A Curley Farm, L 93.09 8 ⇑P P 21 09 36.7 0.0
baz=93
R17A Hanksville Air 93.12 6 ⇓P P 21 09 37.7 +0.8
baz=93
MSU Marysvale 93.13 5 *e*P **P 21 09 36.0 -0.9**
MSU pmax pmax
comp=Z,56nm,1.7s,mb5.7
MSU Marysvale 93.13 5 *e*P **P 21 09 36.0 -0.9**
comp=Z,56nm,1.7s,mb5.7
R18A Canyonlands Na 93.14 7 ⇑P P 21 09 37.2 +0.2
baz=93
PV04 Paradox Valley 93.22 8 *e*P **P 21 09 36.3 -1.1**
R22A Saguache, Gunn 93.25 9 ⇓P P 21 09 37.7 +0.2
baz=94
Q11A Duckwater 93.32 2 ⇑P P 21 09 38.7 +0.8
baz=94
R24A Sanders Place, 93.42 11 ⇓P P 21 09 38.7 +0.4
baz=94
HOPS Hopland 93.50 357 PFAKE 21 09 50.0 +11
HOPS LR LR
comp=Z,2μm,21.0s,MS5.5
Q12A Willow Creek R 93.54 3 ⇑P P 21 09 39.3 +0.5
baz=94
Q14A Sevier Lake (B 93.55 4 ⇓P P 21 09 39.2 +0.3
baz=94,SNR=12
Q16A Castle Valley 93.59 6 ⇓P P 21 09 39.3 +0.2
baz=94
Q15A Fillmore 93.60 5 ⇑P P 21 09 39.5 +0.3
baz=94
NHSC New Hope 93.66 32 PFAKE 21 09 50.0 +10
NHSC LR LR
comp=Z,602nm,19.0s,MS5.1
WCN Washoe City 93.74 359 ⇓P P 21 09 39.9 +0.1
baz=94
Q19A Hogan Spring (93.75 7 ⇓P P 21 09 39.8 0.0
baz=94
Q21A Lamborn Mesa, 93.77 9 ⇑P P 21 09 40.1 +0.2
baz=94
SRU San Rafael 93.82 6 ⇑P P 21 09 40.5 +0.3
baz=94
SRU San Rafael 93.82 6 *e*P **P 21 09 38.6 -1.5**
SRU pmax pmax
comp=Z,59nm,1.7s,mb5.7
SRU San Rafael 93.82 6 *e*P **P 21 09 38.6 -1.5**
comp=Z,59nm,1.7s,mb5.7
Q18A Rafter H Ranch 93.84 7 ⇑P P 21 09 39.8 -0.4
baz=94
Q22A Crested Butte, 93.86 9 ⇑P P 21 09 40.3 -0.1
baz=94
P12A McGill 93.97 3 ⇑P P 21 09 40.5 -0.3
baz=94
P13A Bates Ranch, G 93.98 4 ⇓P P 21 09 41.2 +0.4
baz=94
P11A Circle Ranch, 94.03 2 ⇑P P 21 09 41.5 +0.5
baz=94
P10A Eureka 94.08 2 ⇑P P 21 09 41.6 +0.4
baz=94
Q24A Divide 94.14 11 ⇓P P 21 09 42.0 +0.4
baz=94
P14A Drum Mountains 94.16 4 ⇑P P 21 09 42.5 +0.8
baz=94
P17A Butcher Ranch, 94.17 6 ⇓P P 21 09 41.5 -0.2
baz=94
SMCO Snowmass 94.17 9 *e*P **P 21 09 41.3 -0.4**
comp=Z,15nm,1.5s,mb5.2
P15A Leamington 94.17 5 ⇑P P 21 09 41.8 +0.1
baz=94
P16A Fountain Green 94.25 6 ⇑P P 21 09 42.0 0.0
baz=94
P18A Preston Nutter 94.35 7 ⇓P P 21 09 42.4 -0.2
baz=95
P20A De Beque 94.36 8 ⇓P P 21 09 42.4 -0.2
baz=95
WVT Waverly 94.41 25 *e*P **P 21 09 43.9 +1.0**
WVT pmax pmax
comp=Z,13nm,1.4s,mb5.2
WVT MLR MLR
comp=Z,709nm,20.0s,MS5.1
WVT Waverly 94.41 25 *e*P **P 21 09 43.9 +1.0**
comp=Z,13nm,1.4s,mb5.2
WVT LR LR
comp=Z,709nm,20.0s,MS5.1
P19A Cripple Cowboy 94.45 8 ⇓P P 21 09 42.9 0.0
baz=95
P21A Newcastle 94.47 9 ⇑P P 21 09 43.0 -0.1
baz=95
P23A Jefferson 94.47 10 ⇑P P 21 09 43.4 +0.3
baz=95
NLU North Lily Min 94.57 5 *e*P **P 21 09 43.2 -0.4**
comp=Z,46nm,1.6s,mb5.7
P22A Eagle 94.60 9 ⇑P P 21 09 43.8 +0.1
baz=95
O11A Cowboy Ranch, 94.61 2 ⇑P P 21 09 43.9 +0.2
baz=95
CBKS Cedar Bluff 94.68 15 PFAKE 21 09 50.0 +5.9
CBKS LR LR
comp=Z,739nm,21.0s,MS5.1
P24A Kohler Place, 94.71 11 ⇑P P 21 09 44.2 +0.1
baz=95
O10A Cortez Mining, 94.75 2 ⇓P P 21 09 44.6 +0.2
baz=95
O12A Cutie 94.77 3 ⇑P P 21 09 44.8 +0.4
baz=95
DUG Dugway 94.77 5 ⇓P P 21 09 44.9 +0.5
baz=95
DUG Dugway 94.77 5 *e*P **P 21 09 44.8 +0.3**
DUG pmax pmax
comp=Z,25nm,1.6s,mb5.4
DUG MLR MLR
comp=Z,1μm,19.0s,MS5.5
DUG Dugway 94.77 5 *e*P **P 21 09 44.8 +0.4**
comp=Z,25nm,1.6s,mb5.4
DUG LR LR
comp=Z,1μm,19.0s,MS5.5
P25A Willow Gulch B 94.79 11 ⇓P P 21 09 44.8 +0.3
baz=95
LBTB Lobatse 94.84 148 PFAKE 21 10 00.0 +15
LBTB LR LR
comp=Z,2μm,19.0s,MS5.6
O16A Springville 94.85 6 ⇓P P 21 09 44.7 -0.2
baz=95
O15A The Old Anders 94.87 5 ⇑P P 21 09 45.3 +0.3
baz=95
BMN Battle Mountai 94.88 1 PFAKE 21 09 50.0 +5.1
BMN LR LR
comp=Z,2μm,19.0s,MS5.7
O17A Robinson Place 94.88 6 ⇓P P 21 09 45.3 +0.3
baz=95
ISCO Idaho Springs 94.92 10 PFAKE 21 10 00.0 +15
ISCO LR LR
comp=Z,2μm,19.0s,MS5.6
WDC Whiskeytown Da 95.07 357 *e*P **P 21 09 43.7 -2.1**
WDC pmax pmax
comp=Z,24nm,1.4s,mb5.4
WDC MLR MLR
comp=Z,2μm,21.0s,MS5.4
WDC Whiskeytown Da 95.07 357 *e*P **P 21 09 43.7 -2.1**
comp=Z,24nm,1.4s,mb5.4
WDC LR LR
comp=Z,2μm,21.0s,MS5.4
O21A Pagoda 95.15 9 ⇑P P 21 09 46.4 +0.2
baz=95
O22A Kremmling 95.18 9 ⇑P P 21 09 46.8 +0.4
baz=95
ELK Elko 95.23 3 PFAKE 21 10 00.0 +13
ELK LR LR
comp=Z,2μm,19.0s,MS5.6
O23A Lake Granby, G 95.29 10 ⇓P P 21 09 47.1 +0.3
baz=96
KSU1 Kansas State U 95.46 17 PFAKE 21 10 00.0 +12
KSU1 LR LR
comp=Z,946nm,20.0s,MS5.3
CCM Cathedral Cave 95.48 22 PFAKE 21 10 00.0 +12
CCM LR LR
comp=Z,131nm,22.0s,MS4.4
N21A Black Mountain 95.69 9 ⇓P P 21 09 48.9 +0.3
baz=96
N18A Larsen Ranch, 95.73 7 ⇓P P 21 09 48.9 +0.1
baz=96
N22A Wattenberg Ran 95.83 9 ⇓P P 21 09 49.6 +0.3
baz=96
M13A Montello 95.88 4 ⇓P P 21 09 49.2 -0.3
baz=96
M14A Sheep Mountain 96.05 4 ⇓P P 21 09 50.2 0.0
baz=96
YBH Yreka Blue Hor 96.22 357 P **P 21 09 49.6 -1.5**
comp=Z,0.5nm,0.3s,mb4.4,baz=242,slow=5.6,SNR=2.7
YBH Yreka Blue Hor 96.22 357 P **P 21 09 49.6 -1.5**
YBH LR LR
comp=Z,2μm,20.0s,MS5.5
HWUT Hardware Ranch 96.24 5 PFAKE 21 10 00.0 +8.9
HWUT LR LR
comp=Z,2μm,20.0s,MS5.5
CNNC Cliffs of the 96.34 33 PFAKE 21 10 00.0 +8.2
CNNC LR LR
comp=Z,865nm,20.0s,MS5.2
MOD Modoc 96.34 359 PFAKE 21 10 00.0 +8.4
MOD LR LR
comp=Z,1μm,21.0s,MS5.4
OGNE Ogallala 96.46 13 PFAKE 21 10 00.0 +7.9
OGNE LR LR
comp=Z,985nm,19.0s,MS5.3
L14A Malta 96.59 4 ⇓P P 21 09 53.3 +0.6
baz=97
MIDW Midway 96.71 311 PFAKE 21 10 00.0 +6.4
MIDW LR LR
comp=Z,2μm,20.0s,MS5.6
WCI Wyandotte Cave 96.78 25 PFAKE 21 10 00.0 +6.3
WCI LR LR
comp=Z,144nm,21.0s,MS4.4
WVOR Wild Horse Val 96.87 0 PFAKE 21 10 00.0 +6.0
WVOR LR LR
comp=Z,1μm,19.0s,MS5.4
HUMO Hull Mountain 97.11 357 PFAKE 21 10 00.0 +5.0
HUMO LR LR
comp=Z,1μm,22.0s,MS5.4
BLA Blacksburg 97.40 30 PFAKE 21 10 10.0 +13
BLA LR LR
comp=Z,678nm,19.0s,MS5.2
AHID Auburn Hatcher 97.42 6 PFAKE 21 10 10.0 +14
AHID LR LR
comp=Z,2μm,20.0s,MS5.6
TSUM Tsumeb 97.45 139 PFAKE 21 10 10.0 +13
TSUM LR LR
comp=Z,1μm,20.0s,MS5.4
BW06 Boulder Array 97.52 7 PFAKE 21 10 10.0 +13
BW06 LR LR
comp=Z,1μm,19.0s,MS5.5
J16A Bone 97.90 5 ⇑P P 21 09 58.5 -0.1
baz=98
HLID Hailey 98.07 3 PFAKE 21 10 10.0 +11
HLID LR LR
comp=Z,1μm,20.0s,MS5.3
HDIL Hopedale 98.30 22 PFAKE 21 10 10.0 +10
HDIL LR LR
comp=Z,737nm,19.0s,MS5.2
BBSR BB Station 98.48 44 PFAKE 21 10 10.0 +8.5
BBSR LR LR
comp=Z,487nm,19.0s,MS5.0
SCIA State Center 98.80 19 PFAKE 21 10 10.0 +7.3
SCIA LR LR
comp=Z,668nm,20.0s,MS5.1
H17A Grant Village 99.08 6 ⇓P P 21 10 04.5 +0.6
baz=99
COR Corvallis 99.09 357 PFAKE 21 10 10.0 +6.1
COR LR LR
comp=Z,223nm,19.0s,MS4.7
CBN Corbin 99.23 32 PFAKE 21 10 10.0 +5.3
CBN LR LR
comp=Z,1μm,20.0s,MS5.4
LKWY Lake 99.26 6 PFAKE 21 10 10.0 +5.4
LKWY LR LR
comp=Z,2μm,20.0s,MS5.6
BMO Blue Mountains 99.29 1 PFAKE 21 10 10.0 +5.2
BMO LR LR
comp=Z,1μm,19.0s,MS5.4
RSSD Black Hills 99.36 11 PFAKE 21 10 20.0 +15
RSSD LR LR
comp=Z,271nm,19.0s,MS4.8
ACSO Alum Creek Sta 99.52 27 PFAKE 21 10 20.0 +14
ACSO LR LR
comp=Z,523nm,22.0s,MS5.0
MCWV Mont Chateau 99.84 30 PFAKE 21 10 20.0 +12
MCWV LR LR
comp=Z,1μm,20.0s,MS5.3
RLMT Red Lodge 99.89 7 PFAKE 21 10 20.0 +12
RLMT LR LR
comp=Z,2μm,19.0s,MS5.6
ECSD EROS Data Cent 99.97 16 PFAKE 21 10 20.0 +11
ECSD LR LR
comp=Z,398nm,20.0s,MS4.9
JFWS Jewell Farm 100.35 21 PFAKE 21 10 20.0 +10
JFWS LR LR
comp=Z,567nm,20.0s,MS5.1
HAWA Hanford 100.83 360 PFAKE 21 10 20.0 +7.5
HAWA LR LR
comp=Z,1μm,21.0s,MS5.3
AAM Ann Arbor 101.28 26 PFAKE 21 10 20.0 +5.5
AAM LR LR
comp=Z,442nm,19.0s,MS5.0
MSO Missoula 101.35 3 PFAKE 21 10 20.0 +5.2
MSO LR LR
comp=Z,1μm,19.0s,MS5.4
NLWA Neilton Lookou 101.91 357 PFAKE 21 10 30.0 +13
NLWA LR LR
comp=Z,997nm,20.0s,MS5.3
ERPA Erie 102.08 29 PFAKE 21 10 30.0 +12
ERPA LR LR
comp=Z,958nm,20.0s,MS5.3
NEW Newport 102.71 1 PFAKE 21 10 30.0 +9.1
NEW LR LR
comp=Z,1μm,21.0s,MS5.3
EGMT Eagleton 102.74 6 PFAKE 21 10 30.0 +9.0
EGMT LR LR
comp=Z,729nm,20.0s,MS5.2
BINY Binghamton 103.31 31 PFAKE 21 10 30.0 +6.4
BINY LR LR
comp=Z,885nm,20.0s,MS5.3
COWI Conover 103.63 21 PFAKE 21 10 30.0 +5.0
COWI LR LR
comp=Z,632nm,21.0s,MS5.1
AGMN Agassiz Nation 104.54 16 PFAKE 21 10 40.0 +11
AGMN LR LR
comp=Z,618nm,22.0s,MS5.1
LSZ Lusaka 104.78 147 PFAKE 21 10 40.0 +10
LSZ LR LR
comp=Z,4μm,21.0s,MS5.9
EYMN Ely 104.94 19 PFAKE 21 10 40.0 +9.2
EYMN LR LR
comp=Z,1μm,19.0s,MS5.5
ABPO Ambohimpanom 105.51 166 PFAKE 21 15 00.0 +13
ABPO LR LR
comp=Z,4μm,21.0s,MS5.9
LONY Lake Ozonia 105.94 31 PFAKE 21 15 00.0 +13
LONY LR LR
comp=Z,1μm,21.0s,MS5.4
LBNH Lisbon 106.42 33 PFAKE 21 15 00.0 +13
LBNH LR LR
comp=Z,1μm,20.0s,MS5.4
COCO West Island 106.79 217 PFAKE 21 15 00.0 +11
COCO LR LR
comp=Z,1μm,22.0s,MS5.5
PKME Peaks-Kenny Pk 108.18 34 PFAKE 21 15 00.0 +9.3
PKME LR LR
comp=Z,1μm,20.0s,MS5.4
DBIC Dimbokro 109.13 106 PFAKE 21 15 00.0 +6.5
DBIC LR LR
comp=Z,650nm,20.0s,MS5.2
FFC Flin Flon 110.05 10 PFAKE 21 15 00.0 +6.2
FFC LR LR
comp=Z,1μm,19.0s,MS5.4
DAV Davao City (W) 110.36 253 PFAKE 21 15 10.0 +14
DAV LR LR
comp=Z,448nm,19.0s,MS5.1
KSM Kuching 113.54 236 PFAKE 21 15 10.0 +8.1
KSM LR LR
comp=Z,693nm,20.0s,MS5.2
KDAK Kodiak Island 115.51 341 PFAKE 21 15 10.0 +5.8
KDAK LR LR
comp=Z,3μm,19.0s,MS5.9
YKA Yellowknife Ar 117.01 2⇑ *e*PKIKP PKPdf 21 15 07.6 +0.7
SCHQ Schefferville 117.31 31 PFAKE 21 15 20.0 +12
SCHQ LR LR
comp=Z,1μm,20.0s,MS5.5
MBAR Mbarara 119.38 144 PFAKE 21 15 20.0 +6.9
MBAR LR LR
comp=Z,708nm,19.0s,MS5.3
EGAK Eagle 120.48 349 PFAKE 21 15 20.0 +6.5
EGAK LR LR
comp=Z,2μm,20.0s,MS5.7
MSEY Mahe Island 120.54 173 PFAKE 21 15 30.0 +15

MSEY				LR	LR			
	comp=Z,2µm,19.0s,MS5.8							
KMBO	**Kilima Mbogo**	**120.88**	**152**	PFAKE		21 15 30.0	+14	
KMBO				LR	LR			
	comp=Z,2µm,20.0s,MS5.7							
ILAR	**Eielson Array**	**121.18**	**346**	PKP	PKPdf	21 15 13.6	-1.3	
	comp=Z,1.6nm,1.0s,baz=190,slow=1.8,SNR=11							
KULM	**Kulim**	**121.31**	**228**	PFAKE		21 15 30.0	+13	
KULM				LR	LR			
	comp=Z,654nm,21.0s,MS5.2							
COLA	**College**	**121.41**	**346**	*e*PKIKP	PKPdf	21 15 17.3	+2.0	
COLA				MLR	MLR			
	comp=Z,2µm,19.0s,MS5.7							
MAJO	**Matsushiro**	**126.01**	**284**	PFAKE		21 15 40.0	+15	
MAJO				LR	LR			
	comp=Z,977nm,22.0s,MS5.4							
YHNB	**Yeheng**	**126.88**	**261**	PFAKE		21 15 40.0	+13	
YHNB				LR	LR			
	comp=Z,1µm,22.0s,MS5.5							
ERM	**Erimo**	**127.15**	**292**	PFAKE		21 15 40.0	+13	
ERM				LR	LR			
	comp=Z,1µm,20.0s,MS5.6							
PET	**Petropavlovsk**	**127.18**	**311**	*e*PKIKP	PKPdf	21 15 28.7	+2.0	
PET				pmax	pmax			
	comp=Z,21nm,1.7s							
PETK	**Petropavlovsk-**	**127.65**	**311**	PKP	PKPdf	21 15 25.8	-1.9	
	comp=Z,1.7nm,0.4s,baz=83,slow=4.8,SNR=3.6							
PETK	**Petropavlovsk-**	**127.65**	**311**	PKP	PKPdf	21 15 25.8	-1.9	
TAM	**Tamanrasset**	**127.99**	**105**	*e*PKIKP	PKPdf	21 15 29.0	-0.3	
TAM				MLR	MLR			
	comp=Z,831nm,20.0s,MS5.4							
QIZ	**Qiongzhong**	**128.75**	**246**	PKP	PKPdf	21 15 30.3	-0.5	
QIZ				PP	PP	21 17 36.8	-0.3	
QIZ				LR	LR			
	comp=N,450nm,23.6s							
QIZ				LR	LR			
	comp=Z,680nm,27.2s,MS5.2							
QIZ	**Qiongzhong**	**128.75**	**246**	PFAKE		21 15 40.0	+9.2	
QIZ				LR	LR			
	comp=Z,452nm,19.0s,MS5.2							
PFVI	**Vila Bisbo**	**130.42**	**81**	*e*LR	LR	21 58 42.1		
	comp=Z,671nm,22.0s							
MORF	**Marmelete**	**130.64**	**81**	*e*LR	LR	21 59 56.6		
	comp=Z,731nm,22.0s							
YSS	**Yuzh-Sakhalins**	**130.70**	**297**	PFAKE		21 15 40.0	+6.4	
YSS				LR	LR			
	comp=Z,268nm,19.0s,MS5.0							
PBDV	**Barranco-do-Ve**	**131.01**	**81**	*e*LR	LR	22 00 12.2		
	comp=Z,606nm,22.0s							
PCVE	**Castro Verde**	**131.22**	**81**	*e*SS	SS	21 35 29.6	+4.1	
PCVE				*e*LR	LR	21 57 57.1		
	comp=Z,773nm,22.0s							
PVAQ	**Vaqueiros**	**131.24**	**81**	*e*SS	SS	21 35 33.6	+7.8	
PVAQ				*e*LR	LR	21 59 04.6		
	comp=Z,599nm,22.0s							
MESJ	**Messejana**	**131.26**	**80**	*e*PP	PP	21 17 52.7	-0.9	
MESJ				*e*SS	SS	21 35 26.9	+0.8	
MESJ				AMS	AMS	22 05 40.1		
	comp=Z,773nm,18.8s,MS5.4							
MESJ	**Messejana**	**131.26**	**80**	*e*PP	PP	21 17 52.7	-0.9	
MESJ				*e*SS	SS	21 35 26.9	+0.9	
MESJ				A		22 05 40.1		
	comp=Z,773nm,18.8s							
PMAFR	**Mafra**	**131.42**	**78**	*e*LR	LR	21 59 10.3		
	comp=Z,878nm,22.0s							
SFS	**San Fernando**	**131.45**	**83**	PFAKE		21 15 50.0	+15	
SFS				LR	LR			
	comp=Z,1µm,19.0s,MS5.5							
EVOP	**Sao Brissos**	**131.78**	**80**	*e*PP	PP	21 17 57.7	+0.6	
EVOP				*e*SS	SS	21 35 33.2	+0.7	
EVOP				*e*SS	SS	21 35 33.3	+0.9	
EVOP				AMS	AMS	22 11 10.6		
	comp=Z,593nm,15.4s,MS5.4							
SSE	**Sheshan**	**131.85**	**266**	*e*PKP	PKPdf	21 15 39.5	+3.1	
SSE				PP	PP	21 18 03.8	+6.3	
SSE				SS	SS	21 35 39.0	+5.7	
SSE				AMB	AMB			
	comp=Z,270nm,4.9s							
SSE				LR	LR			
	comp=N,230nm,23.6s,MS4.8							
SSE				LR	LR			
	comp=E,28nm,23.6s,MS4.8							
SSE				LR	LR			
	comp=Z,390nm,23.4s,MS5.0							
PBAR	**Barrancos**	**132.16**	**81**	*e*LR	LR	22 00 28.9		
	comp=Z,863nm,22.0s							
PESTR	**Estremoz**	**132.32**	**80**	*e*SS	SS	21 35 51.0	+12	
PESTR				*e*LR	LR	21 59 45.3		
	comp=Z,568nm,18.0s							
PMRV	**Marv??o**	**132.82**	**79**	*e*SS	SS	21 35 51.4	+6.4	
PMRV				*e*LR	LR	21 59 58.2		
	comp=Z,729nm,18.0s							
INCN	**Inchon**	**133.26**	**276**	PFAKE		21 15 50.0	+11	
INCN				LR	LR			
	comp=Z,764nm,20.0s,MS5.4							
MTE	**Manteigas**	**133.38**	**78**	*e*SS	SS	21 36 03.3	+11	
MTE				*e*LR	LR	22 01 56.5		
	comp=Z,893nm,18.0s							
MTE	**Manteigas**	**133.38**	**78**	PFAKE		21 15 50.0	+11	
MTE				LR	LR			
	comp=Z,934nm,19.0s,MS5.5							
CM31	**Chiang Mai Arr**	**133.71**	**234**	PFAKE		21 15 50.0	+10	
CM31				LR	LR			
	comp=Z,862nm,19.0s,MS5.5							
CMAR	**Chiang Mai Arr**	**133.71**	**234**	PKP	PKPdf	21 15 39.0	-1.3	
	comp=Z,1.6nm,0.9s,baz=194,slow=2.1,SNR=4.8							
NJ2	**Nanjing**	**133.90**	**265**	*e*PKP	PKPdf	21 15 37.5	-2.7	
NJ2				PP	PP	21 18 10.5	-0.1	
NJ2				PKS		21 19 13.5		
NJ2				SKS	SKSdf	21 22 45.5	-5.7	
NJ2				AMB	AMB			
	comp=Z,310nm,5.5s							
NJ2				LR	LR			
	comp=N,470nm,25.0s,MS5.4							
NJ2				LR	LR			
	comp=E,800nm,22.6s,MS5.4							
NJ2				LR	LR			
	comp=Z,500nm,24.0s,MS5.2							
CHTO	**Chiang Mai**	**134.01**	**234**	PFAKE		21 15 50.0	+9.2	
CHTO				LR	LR			
	comp=Z,870nm,19.0s,MS5.5							
MVO	**Moncorvo**	**134.18**	**78**	*e*SS	SS	21 36 10.5	+9.0	
MVO				*e*LR	LR	22 00 33.0		
	comp=Z,622nm,20.0s							
BILL	**Bilibino**	**134.33**	**329**	*e*PKIKP	PKPdf	21 15 47.4	+7.6	
BILL				pmax	pmax			
	comp=Z,4.0nm,1.4s							
BILL	**Bilibino**	**134.33**	**329**	PFAKE		21 15 50.0	+10	
BILL				LR	LR			
	comp=Z,1µm,22.0s,MS5.6							
PAB	**San Pablo**	**134.63**	**81**	PFAKE		21 15 50.0	+8.7	
PAB				LR	LR			
	comp=Z,721nm,21.0s,MS5.4							
ESDC	**Sonseca Array**	**134.94**	**82**	PKhKP	PKPpre	21 15 37.5		
	comp=Z,0.1nm,0.3s,baz=195,slow=1.8,SNR=3.3							
ESDC				PKP	PKPdf	21 15 42.2	+0.4	
	comp=Z,0.3nm,0.4s,baz=298,slow=2.8,SNR=6.2							
ESDC				PP	PP	21 18 16.6	-0.6	
	comp=Z,0.2nm,0.5s,baz=251,slow=4.5,SNR=4.4							
ESDC	**Sonseca Array**	**134.94**	**82**	PKP	PKPpre	21 15 37.5		
ESDC				PKP	PKPdf	21 15 42.2	+0.4	
ESDC				PP	PP	21 18 16.6	-0.6	
ESLA	**Sonseca Array**	**134.94**	**82**	PFAKE		21 15 50.0	+8.1	
ESLA				LR	LR			
	comp=Z,5µm,22.0s,MS6.2							
SEY	**Seymchan**	**136.01**	**319⇑**	*e*PKIKP	PKPdf	21 15 46.1	+3.0	
MDJ	**Mudanjiang**	**136.29**	**286**	PFAKE		21 15 50.0	+5.8	
MDJ				LR	LR			
	comp=Z,1µm,20.0s,MS5.6							
GYA	**Guiyang**	**136.48**	**248**	Pdif	Pdif	21 12 50.0	-1.0	
GYA				PP	PP	21 18 30.5	+3.8	
GYA				PKS		21 19 21.8		
GYA				SKKS	SKKSac	21 25 20.8	-0.6	
GYA				SS	SS	21 36 31.0	+2.2	
GYA				AMB	AMB			
	comp=Z,260nm,7.9s							
GYA				LR	LR			
	comp=N,4µm,20.8s,MS6.2							
GYA				LR	LR			
	comp=E,3µm,21.2s,MS6.2							
GYA				LR	LR			
	comp=Z,3µm,20.9s,MS6.0							
KMI	**Kunming**	**137.47**	**243**	PKP	PKPdf	21 15 48.0	+0.9	
KMI				PP	PP	21 18 38.0	+5.2	
KMI				PKS		21 19 23.0		
KMI				SKS	SKSdf	21 22 56.0	-1.7	
KMI				SKKS	SKKSac	21 25 26.8	-0.5	
KMI				SS	SS	21 36 44.8	+4.4	
KMI				AMB	AMB			
	comp=Z,50nm,13.8s							
KMI				LR	LR			
	comp=N,350nm,16.2s,MS5.3							
KMI				LR	LR			
	comp=E,300nm,18.9s,MS5.3							
KMI				LR	LR			
	comp=Z,890nm,44.5s							
KLR	**Kul'dur**	**137.90**	**293**	*e*PKIKP	PKPdf	21 15 43.2	-3.8	
ENH	**Enshi**	**137.91**	**255**	*e*PKPpre	PKPpre	21 15 41.8		
ENH				LR	LR			
	comp=Z,599nm,21.0s,MS5.3							
CN2	**Changchun**	**138.10**	**282**	*e*PKP	PKPdf	21 15 45.0	-2.6	
CN2				*e*PP	PP	21 18 38.8	+1.8	
CN2				*e*SS	SS	21 36 45.0	-3.3	
CN2				AMB	AMB			
	comp=Z,200nm,8.0s							
CN2				LR	LR			
	comp=N,800nm,20.0s,MS5.6							
CN2				LR	LR			
	comp=E,900nm,20.0s,MS5.6							
CN2				LR	LR			
	comp=Z,1µm,22.0s,MS5.6							
SUMG	**Summit**	**138.45**	**27**	*e*PKPdf	PKPdf	21 15 46.8	-0.6	
SUMG	**Summit**	**138.45**	**27**	*i* P	PKPdf	21 15 47.6	+0.2	
	comp=Z,5.1nm,0.9s							
SUMG								
	comp=Z,2µm,19.0s							
SJPF	**Ste Jean**	**138.74**	**80**	*e*PKP1	PKPdf	21 15 46.6	-2.2	
	comp=Z,62nm,1.5s							
BJT	**Baijiatuau**	**141.01**	**271**	PFAKE		21 16 00.0	+7.0	
BJT				LR	LR			
	comp=Z,689nm,22.0s,MS5.4							
BJI	**Beijing**	**141.02**	**271**	PKP	PKPdf	21 15 53.3	+0.2	
BJI				PP	PP	21 18 55.5	+0.5	
BJI				SS	SS	21 37 24.5	+1.9	
BJI				LR	LR			
	comp=N,410nm,14.8s,MS5.4							
BJI				LR	LR			
	comp=E,350nm,16.6s,MS5.4							
BJI				LR	LR			
	comp=Z,490nm,26.2s							
XAN	**Xi'an**	**141.04**	**258**	PKP	PKPdf	21 15 55.0	+1.7	
CD2	**Chengdu**	**141.55**	**249**	PKP	PKPdf	21 15 55.3	+1.0	
CD2				PP	PP	21 19 02.5	+4.5	
CD2				PKS		21 19 29.5		
CD2				SKS	SKSdf	21 23 03.8	-0.3	
CD2				SKKS	SKKSac	21 25 52.5	+1.5	
CD2				SS	SS	21 37 32.3	+3.8	
CD2				AMB	AMB			
	comp=Z,210nm,8.9s							
CD2				LR	LR			
	comp=N,940nm,13.1s							
CD2				LR	LR			
	comp=Z,480nm,19.0s							
SCO	**Scoresbysund**	**142.30**	**33**	*e*PKHKP	PKPpre	21 15 47.4		
SCO				pmax	pmax			
	comp=Z,2.0nm,0.9s							
SCO				MLR	MLR			
	comp=Z,570nm,20.0s,MS5.3							
SCO	**Scoresbysund**	**142.30**	**33**	*i* P	PKPpre	21 15 47.4		
	comp=Z,2.4nm,0.9s							
SCO								
	comp=Z,560nm,20.0s							
TCF	**Toulx Ste Croi**	**142.61**	**78**	*e*PKP1	PKPdf	21 15 52.3	-3.4	
	comp=Z,23nm,1.3s							
WDD	**Wield Dalam**	**142.98**	**101**	PFAKE		21 16 10.0	+13	
WDD				LR	LR			
	comp=Z,1µm,20.0s,MS5.6							
SMRF	**Simiane la Rot**	**143.16**	**83**	*e*PKP1	PKPdf	21 15 53.9	-2.8	
	comp=Z,103nm,1.9s							
VIVF	**Saint-Julien-l**	**143.17**	**82**	*e*PKP1	PKPdf	21 15 53.1	-3.6	
	comp=Z,97nm,1.9s							
LMR	**La Mourre**	**143.31**	**85**	*e*PKP1	PKPdf	21 15 53.6	-3.4	
	comp=Z,135nm,1.9s							
SSB	**Saint Sauveur**	**143.35**	**81**	PFAKE		21 16 10.0	+13	
SSB				LR	LR			
	comp=Z,648nm,20.0s,MS5.4							
FRF	**La Foret Royal**	**143.53**	**85**	*e*PKP1	PKPdf	21 15 54.4	-3.0	
	comp=Z,167nm,1.9s							
AVF	**Avril sur Loir**	**143.54**	**78**	*e*PKP1	PKPdf	21 15 52.9	-4.4	
	comp=Z,61nm,1.6s							
OG25	**Le Caire**	**143.69**	**83**	PKP	PKPdf	21 15 54.9	-2.8	
SMF	**Signal de Mont**	**143.74**	**79**	*e*PKP1	PKPdf	21 15 53.2	-4.5	
SSF	**Saint Saulge**	**143.78**	**78**	*e*PKP1	PKPdf	21 15 53.5	-4.2	
	comp=Z,61nm,1.8s							
CALN	**Calern**	**143.78**	**85**	PKP	PKPdf	21 15 55.3	-2.5	
ORIF	**Oris-en-Rattie**	**143.90**	**82**	*e*PKP1	PKPdf	21 15 54.3	-3.7	
MVIF	**Mont Vial**	**144.02**	**85**	PKP	PKPdf	21 15 53.7	-4.6	
REVF	**Revere**	**144.05**	**85**	PKP	PKPdf	21 15 54.6	-3.7	
LOR	**Lormes**	**144.09**	**78**	*e*PKP1	PKPdf	21 15 54.0	-4.3	
	comp=Z,77nm,1.7s							
LUCF	**Luceram**	**144.13**	**85**	PKP	PKPdf	21 15 54.6	-3.8	
TOUF	**Mont Tournerai**	**144.15**	**85**	PKP	PKPdf	21 15 54.8	-3.7	
SBF	**Sospel**	**144.17**	**85**	*e*PKP1	PKPdf	21 15 54.8	-3.7	
SURF	**Saint Ours**	**144.18**	**84**	PKP	PKPdf	21 15 56.0	-2.5	
HHC	**Hu-ho-hao-te**	**144.22**	**268**	*e*PKP	PKPdf	21 15 55.0	-3.7	
HHC				PP	PP	21 19 13.8	-0.5	
HHC				PKS		21 19 29.5		
HHC				SKS	SKSdf	21 23 02.0	-5.8	
HHC				SKKS	SKKSac	21 26 02.0	-4.0	
HHC				SS	SS	21 37 57.8	-1.8	
HHC				AMB	AMB			
	comp=Z,120nm,9.0s							
HHC				LR	LR			
	comp=N,440nm,20.1s,MS5.3							
HHC				LR	LR			
	comp=E,370nm,20.1s,MS5.3							
HHC				LR	LR			
	comp=Z,620nm,20.6s,MS5.4							
AUTN	**L'Aution**	**144.24**	**85**	PKP	PKPdf	21 15 55.3	-3.3	
PGF	**Pioggiola**	**144.26**	**88**	*e*PKP1	PKPdf	21 15 55.4	-3.3	
	comp=Z,313nm,1.7s							
MBDF	**Montbardon**	**144.30**	**83**	*e*PKP1	PKPdf	21 15 55.6	-3.1	
	comp=Z,135nm,1.5s							
ESK	**Eskdalemuir**	**144.31**	**62**	PFAKE		21 16 10.0	+12	
ESK				LR	LR			
	comp=Z,464nm,19.0s,MS5.3							
SAOF	**Saorge**	**144.31**	**85**	PKP	PKPdf	21 15 55.8	-3.0	
EKA	**Eskdalemuir Ar**	**144.34**	**62**	PKP	PKPdf	21 15 55.5	-2.9	
	comp=Z,11nm,1.1s,baz=281,slow=2.1,SNR=8.5							
HIA	**Hailar**	**144.47**	**286**	*e*PKIKP	PKPdf	21 15 55.5	-3.4	
HIA				MLR	MLR			
	comp=Z,630nm,19.0s							
LPG	**La Plagne**	**144.74**	**82**	*e*PKP1	PKPdf	21 15 57.7	-1.7	
	comp=Z,411nm,1.9s							
LPL	**La Plagne**	**144.74**	**82**	*e*PKP1	PKPdf	21 15 57.6	-1.8	
	comp=Z,237nm,1.6s							
DAG	**Danmarks Havn**	**144.79**	**23⇑**	*i*PKIKP	PKPdf	21 15 56.6	-2.0	
DAG				pmax	pmax			
	comp=Z,42nm,1.3s							
DAG	**Danmarks Havn**	**144.79**	**23⇑**	*i*P	PKPdf	21 15 56.6	-2.0	
	comp=Z,42nm,1.3s							
BTO	**Baotou**	**144.95**	**267**	*e*PKPbc	PKPdf	21 15 57.3	-2.7	
YAK	**Yakutsk**	**144.99**	**310**	*i* PKIKP	PKPdf	21 15 56.0	-3.3	
YAK				*e*		21 19 18.8		
YAK				pmax	pmax			
	comp=Z,31nm,1.3s							
YAK				pmax	pmax			
	comp=N,4.0nm,1.3s							
YAK				pmax	pmax			
	comp=E,7.0nm,1.5s							
YAK				pmax	pmax			
	comp=Z,36nm,8.1s							
YAK	**Yakutsk**	**144.99**	**310**	*e*PKPdf	PKPdf	21 15 55.9	-3.4	
YAK				LR	LR			
	comp=Z,612nm,20.0s,MS5.4							
CABF	**La Chapelle**	**144.99**	**80**	*e*PKP1	PKPdf	21 15 57.7	-2.1	
CLNS	**Chul'man**	**145.29**	**300**	*e*PKP2	PKPab	21 15 57.0	-3.0	
CLNS				pmax	pmax			
	comp=Z,26nm,1.0s							
CLNS				pmax	pmax			
	comp=E,14nm,1.2s							
CLNS				pmax	pmax			
	comp=N,13nm,1.2s							
LZH	**Lanzhou**	**145.38**	**255**	*e*PKPbc	PKPbc	21 16 00.0	-0.8	
LZH				pPKP	pPKPdf	21 16 03.8	-0.5	
LZH				sPKP		21 16 05.3		
LZH				PP	PP	21 19 23.0	+1.9	
LZH				SKKS	SKKSac	21 26 07.0	-5.8	
LZH				AMB	AMB			
	comp=Z,230nm,4.2s							
LZH				LR	LR			
	comp=E,840nm,18.7s							
LZH				LR	LR			
	comp=Z,890nm,19.6s,MS5.5							
CEL	**Celeste**	**145.44**	**100**	*e*PKPdf	PKPdf	21 15 59.6	-1.3	
CEL				LR	LR			
	comp=Z,741nm,20.0s,MS5.5							
MEZF	**Maizieres J'vi**	**145.44**	**77**	*e*PKP1	PKPbc	21 15 58.9	-1.7	
BAIF	**Baives**	**145.78**	**74**	*e*PKP1	PKPbc	21 15 59.8	-1.8	
	comp=Z,165nm,1.6s							
THEF	**They Montfort**	**145.82**	**78**	PKP	PKPdf	21 16 00.3	-0.9	
LOMF	**Lomont**	**145.83**	**80**	PKP	PKPdf	21 16 00.3	-0.9	
HAU	**Haudompre**	**145.91**	**78**	*e*PKP1	PKPbc	21 16 00.5	-1.6	
	comp=Z,61nm,1.2s							
DOU	**Dourbes**	**146.01**	**74**	PKP	PKPdf	21 16 02.3	+0.8	
SNF	**Seneffe**	**146.04**	**73**	PKP	PKPdf	21 16 03.2	+1.7	
VLC	**Villacollemand**	**146.05**	**87**	PFAKE		21 16 10.0	+8.3	
VLC				LR	LR			
	comp=Z,499nm,22.0s,MS5.2							
HINF	**Hinteralfeld**	**146.09**	**79**	*e*PKP1	PKPbc	21 16 00.7	-2.0	
ODAN	**Odare**	**146.14**	**225**	*e*P	PKPdf	21 16 02.4	-0.1	
	comp=Z,491nm,1.7s							
GIVF	**Givet**	**146.14**	**74**	*e*PKP1	PKPbc	21 16 02.6	-0.1	
MOF	**Molkenrain**	**146.27**	**79**	PKP	PKPdf	21 16 03.3	+1.3	
BBS	**Basel-Blauen**	**146.28**	**80**	PKP2	PKPdf	21 16 01.2	-0.8	
TAPN	**Taplejung**	**146.44**	**226**	*e*P	PKPdf	21 16 03.8	+0.8	
	comp=Z,490nm,1.8s							
ECH	**Echery**	**146.48**	**79**	*e*PKIKP	PKPdf	21 16 01.3	-1.0	
ECH				MLR	MLR			
	comp=Z,703nm,19.0s,MS5.5							
RAMN	**Ramite**	**146.54**	**224**	*e*P	PKPdf	21 16 03.4	+0.2	
	comp=Z,219nm,1.3s							
CUC	**Castrocucco**	**146.56**	**97**	*e*PKPdf	PKPdf	21 16 01.4	-1.3	
BCLA	**Clavier**	**146.56**	**74**	PKP	PKPdf	21 16 03.0	+0.6	
CDF	**Champ du Feu**	**146.65**	**78**	*e*PKP1	PKPbc	21 16 02.4	-1.9	
	comp=Z,118nm,1.8s							
WLF	**Walferdange**	**146.66**	**76**	PKP	PKPdf	21 16 04.8	+2.2	
WLF	**Walferdange**	**146.66**	**76**	*e*PKP2	PKPdf	21 16 02.7	+0.1	
WLF				MLR	MLR			
	comp=Z,973nm,19.0s,MS5.6							
WLF	**Walferdange**	**146.66**	**76**	*e*PKPdf	PKPdf	21 16 02.6	+0.1	
WLF				LR	LR			
	comp=Z,973nm,19.0s,MS5.6							
AQU	**L'Aquila**	**146.69**	**92**	*e*PKP2	PKPdf	21 16 02.7	-0.2	
AQU				MLR	MLR			
	comp=Z,1µm,22.0s,MS5.6							
AQU	**L'Aquila**	**146.69**	**92⇓**	*i*P	PKPdf	21 16 03.6	+0.7	
JMIC	**Jan Mayen**	**146.74**	**34**	PKPbc	PKPbc	21 16 03.5	-0.4	
	comp=Z,9.3nm,0.4s,baz=297,slow=2.3,SNR=2.6							
FELD	**Feldberg im Sc**	**146.78**	**80**	PKP	PKPdf	21 16 03.1	+0.3	
LSA	**Lhasa**	**146.96**	**233**	PKPbc	PKPdf	21 16 03.8	0.0	
LSA	**Lhasa**	**146.96**	**233**	*e*PKIKP	PKPdf	21 16 03.2	-0.6	
LSA				MLR	MLR			
	comp=Z,1µm,20.0s,MS5.7							
LSA	**Lhasa**	**146.96**	**233**	*e*PKPdf	PKPdf	21 16 03.2	-0.5	
LSA				LR	LR			
	comp=Z,1µm,20.0s,MS5.7							
MEM	**Membach**	**147.05**	**74**	PKP	PKPdf	21 16 06.1	+2.9	
RUP	**Ruppelstein**	**147.19**	**76**	PKP2	PKPdf	21 16 04.6	+1.1	
BFO	**Black Forest**	**147.21**	**79**	*e*PKP	PKPdf	21 16 03.4	-0.1	
LANF	**Langenberg**	**147.25**	**78**	PKP	PKPdf	21 16 04.4	+0.8	
DAVOX	**Davos/Dischmat**	**147.26**	**83**	PKPbc	PKPbc	21 16 04.9	-1.1	
	comp=Z,4.9nm,0.7s,baz=220,slow=5.0,SNR=12							
TIXI	**Tiksi**	**147.46**	**327**	*e*PKP2	PKPdf	21 16 03.8	+0.5	
TIXI				pmax	pmax			
	comp=Z,81nm,1.6s							
TIXI	**Tiksi**	**147.46**	**327**	*e*PKPdf	PKPdf	21 16 01.1	-2.2	
TIXI				LR	LR			
	comp=Z,798nm,22.0s,MS5.5							
DAVA	**Damuels**	**147.53**	**82⇑**	*i*PKPbc	PKPbc	21 16 06.5	-0.3	
	comp=Z,52nm,1.8s,SNR=14							
PKI	**Pulchoki**	**147.57**	**223**	*e*P	PKPdf	21 16 05.8	+0.9	
	comp=Z,304nm,1.6s							
GUN	**Gumba**	**147.68**	**224**	*e*P	PKPdf	21 16 07.1	+2.1	
	comp=Z,243nm,1.4s							
DMN	**Daman**	**147.72**	**222**	*e*P	PKPdf	21 16 07.0	+1.9	
	comp=Z,113nm,0.9s							
KKN	**Kakani**	**147.81**	**223**	*e*P	PKPdf	21 16 07.0	+1.7	
	comp=Z,170nm,1.3s							
FETA	**Feichten**	**147.88**	**83⇓**	*i*PKPbc	PKPbc	21 16 06.5	-1.2	
	comp=Z,30nm,1.2s,SNR=18							
STU	**Stuttgart**	**147.93**	**79**	*e*PKP	PKPbc	21 16 08.1	+0.3	
RETA	**Reutte**	**148.15**	**82⇓**	*i*PKPbc	PKPbc	21 16 06.8	-1.6	
	comp=Z,36nm,1.3s,SNR=8.4							
GKN	**Gorkha**	**148.25**	**222**	*e*P	PKPdf	21 16 07.4	+1.4	
	comp=Z,260nm,1.7s							
MOTA	**Moosalm**	**148.27**	**83⇓**	*i*pPKPdf	PKPdf	21 16 07.8	+2.5	
	comp=Z,23nm,0.9s,SNR=9.5							
KOLN	**Koldanda**	**148.44**	**220**	*e*P	PKPdf	21 16 07.7	+1.4	
	comp=Z,70nm,1.1s							
WTTA	**Wattenberg**	**148.53**	**83⇑**	*i*pPKPdf	PKPdf	21 16 08.3	+2.5	
	comp=Z,58nm,1.3s,SNR=12							
ABTA	**Abfaltersbach**	**148.75**	**84⇑**	*i*pPKPdf	PKPdf	21 16 08.5	+2.3	
	comp=Z,90nm,2.0s,SNR=24							
FUR	**Furstenfeldbru**	**148.80**	**81**	*e*PKP	PKPdf	21 16 08.1	+1.9	
FUR	**Furstenfeldbru**	**148.80**	**81**	*e*PKP	PKPdf	21 16 08.2	+2.0	
IBBN	**Ibbenburen**	**148.81**	**72**	*e*PKP	PKPdf	21 16 08.0	+2.0	
SRN	**Sarande**	**148.88**	**101**	*e*P	PKPbc	21 16 12.1	+1.5	
TRI	**Trieste**	**148.90**	**87**	PFAKE		21 16 20.0	+14	
TRI				LR	LR			
	comp=Z,769nm,21.0s,MS5.5							
KNDS	**Knez

KHC Kasperske Hory 150.60 81 *e*PKPbc PKPbc 21 16 12.5 -2.0
KHC Kasperske Hory 150.60 81⇑*e*PKP PKPdf 21 16 13.3 +4.3
KHC *e*PKPAB PKPab 21 16 19.9 -1.5
KHC *e*SS SS 21 39 07.5 -4.2
KHC *e*x x 21 45 07.2
KHC *e*x x 21 48 47.7
KHC *e*x x 22 00 27.9
KHC AMS AMS 22 18 10.0
comp=Z,700nm,22.1s
KOGS Kog 150.75 88 *e*PKPdf PKPbc 21 16 13.8 -1.1
ARSA Arzberg 150.76 86⇑*i*sPKPdf PKPbc 21 16 13.4 -1.5
comp=Z,51nm,1.4s,SNR=16
KBS Kingsbay 150.82 17 *e*PKIKP PKPdf 21 16 08.0 -0.6
KBS *e* 21 16 20.3
KBS MLR MLR
comp=Z,699nm,19.0s,MS5.5
BSEG Bad Segeberg 150.89 70 *e*PKP PKPdf 21 16 13.0 +3.7
ULN Ulaanbaatar 150.95 275 *e*PKIKP PKPdf 21 16 13.5 +3.9
ULN MLR MLR
comp=Z,721nm,20.0s,MS5.5
MUD Monsted U'grnd 151.17 65 *i* PKIKP PKPbc 21 16 16.5 +1.0
MUD pmax pmax
comp=Z,10.0nm,1.3s
MUD MLR MLR
comp=Z,710nm,22.0s,MS5.4
MUD Monsted U'grnd 151.17 65 *i* P PKPbc 21 16 16.5 +1.0
comp=Z,9.9nm,1.3s
MUD
comp=Z,710nm,22.0s
CLL Collm 151.29 77 *e*PKIKP PKPbc 21 16 14.0 -2.0
CLL *i* 21 16 20.0
CLL MLR MLR
comp=Z,600nm,18.3s,MS5.4
CLL Collm 151.29 77 *e*PKP PKPbc 21 16 14.0 -2.0
CLL *i* PKP pPKPbc 21 16 20.0 +0.6
CLL *e*PKP pPKPab 21 16 27.0 -0.6
CLL LR LR
comp=Z,600nm,18.3s,MS5.4
CLL Collm 151.29 77 *e*PKPbc PKPbc 21 16 14.0 -2.0
comp=Z,15nm,1.0s
CLL *i* pPKPbc pPKPbc 21 16 20.0 +0.6
comp=Z,125nm,2.0s
CLL *e*pPKPab pPKPab 21 16 27.0 -0.6
comp=Z,36nm,1.6s
CLL *e* 21 16 30.0
CLL *e*PP PP 21 20 01.0 +5.3
CLL *e*PPP 21 23 18.0
CLL *e*SKKSac SKKSac 21 26 42.0 -3.2
CLL *e*SKSP 21 30 15.0
CLL *e*PPS 21 32 45.0
CLL *e*SS SS 21 39 24.0 +4.8
CLL *e* 21 43 00.0
CLL *e*SSS 21 44 57.0
CLL *e*SSSS 21 48 59.0
CLL LmH 22 16 00.0
comp=Z,600nm,21.6s
CLL LmV 22 25 00.0
comp=Z,600nm,18.3s
CONA Conrad Observa 151.31 85 *i* sPKPdf PKPbc 21 16 14.3 -1.8
comp=Z,44nm,1.8s,SNR=9.5
SONM Songino Array 151.31 275 PKPbc PKPbc 21 16 14.4 -1.8
comp=Z,2.4nm,0.9s,baz=190,slow=2.7,SNR=14
SONM PP PP 21 19 58.9 +3.0
comp=Z,0.4nm,0.4s,baz=139,slow=9.2,SNR=3.9
NDI New Delhi 151.42 211 *e*PKP PKPdf 21 16 11.0 0.0
PRA Prague 151.54 80⇑PKP PKPbc 21 16 16.0 -0.6
PRU Pruhonice 151.57 80 *e*PKIKP PKPbc 21 16 16.4 -0.3
PRU *e* 21 16 23.2
PRU *e*SS SS 21 39 25.4 +3.1
PRU MLR MLR
comp=Z,600nm,16.8s,MS5.5
PRU Pruhonice 151.57 80⇑*e*PKP PKPbc 21 16 16.4 -0.3
PRU *e*PKPAB PKPab 21 16 23.2 -2.2
PRU *e*SS SS 21 39 25.4 +3.1
PRU *e*x x 21 45 23.2
PRU *e*x x 21 49 14.5
PRU *e*x x 22 00 44.2
PRU AMS AMS 22 26 00.0
comp=Z,600nm,16.8s
BRG Berggiesshubel 151.63 78 *e*PKP PKPbc 21 16 14.9 -1.9
BRG Berggiesshubel 151.63 78 *i* PKP PKPbc 21 16 14.8 -1.9
comp=Z,47nm,1.9s
BRG Berggiesshubel 151.63 78 *i* PKP PKPab 21 16 22.0 -3.6
comp=Z,30nm,1.3s
BRG Berggiesshubel 151.63 78 *i* PKIKP PKPbc 21 16 14.9 -1.9
BRG *i* 21 16 22.0
BRG SS SS 21 39 24.0 +1.0
BRG pmax pmax
comp=Z,28nm,1.9s
BRG pmax pmax
comp=Z,18nm,1.3s
BRG pmax pmax
comp=Z,11nm,0.6s
BRG MLR MLR
comp=N,135nm,21.1s,MS5.0
BRG MLR MLR
comp=E,209nm,25.5s,MS5.0
BRG MLR MLR
comp=Z,322nm,23.0s,MS5.1
BRG Berggiesshubel 151.63 78 SS SS 21 39 24.0 +1.0
MMAI Mount Meron Ar 151.67 130 PKPbc PKPbc 21 16 17.8 +0.3
comp=Z,2.2nm,0.8s,baz=241,slow=1.5,SNR=3.0
TREC Trest 151.78 82 *e*PKIKP PKPbc 21 16 15.9 -1.3
TREC *e* 21 16 23.5
TREC *e*SS SS 21 39 22.8 -1.8
TREC MLR MLR
comp=Z,700nm,20.8s,MS5.5
TREC Trest 151.78 82⇑*e*PKP PKPbc 21 16 15.9 -1.3
TREC *e*PKPAB PKPab 21 16 23.5 -2.8
TREC *e*SS SS 21 39 22.8 -1.8
TREC *e*x x 21 45 23.6
TREC *e*x x 21 49 03.8
TREC *e*x x 21 59 29.5
TREC AMS AMS 22 23 10.0
comp=Z,700nm,20.8s
PVCC Panska Ves 151.83 79 *e*PKIKP PKPbc 21 16 17.0 -0.3
PVCC *e* 21 16 23.9
PVCC *e*SS SS 21 39 28.2 +3.0
PVCC MLR MLR
comp=Z,600nm,24.0s,MS5.3
PVCC Panska Ves 151.83 79⇑*e*PKP PKPbc 21 16 17.0 -0.3
PVCC *e*PKPAB PKPab 21 16 23.9 -2.6
PVCC *e*SS SS 21 39 28.2 +3.0
PVCC AMS AMS 22 16 50.0
comp=Z,600nm,24.0s
KKB Krupnik 151.94 102 *e*P PKPbc 21 16 19.3 +1.5
SPITS Spitsbergen Ar 151.95 18 PKPbc PKPbc 21 16 14.0 -2.9
comp=Z,18nm,0.9s,baz=233,slow=5.1,SNR=4.8
PKSM Moragy 152.00 90⇓PKIKP PKPbc 21 16 19.5 +1.7
PKSM Moragy 152.00 90⇓*i*P PKPbc 21 16 19.5 +1.7
MMB Musomiste 152.13 103 *e*P PKPdf 21 16 15.5 +3.9
ZST Bratislava 152.16 85 *e*PKP2 PKPab 21 16 30.9 +3.0
ZST Bratislava 152.16 85 *e*PKP PKPab 21 16 30.9 +3.0
KONO Kongsberg 152.27 59 PFAKE 21 16 20.0 +8.8
KONO LR LR
comp=Z,865nm,21.0s,MS5.5
VRAC Vranov 152.42 83 PKPbc PKPbc 21 16 16.6 -2.1
comp=Z,1.7nm,0.5s,baz=265,slow=8.8,SNR=5.4
VRAC Vranov 152.42 83 P PKPbc 21 16 16.9 -1.7
VRAC Vranov 152.42 83⇓*i*P PKPab 21 16 24.1 -4.9
VTS Vitosha 152.48 101⇓PKIKP PKPbc 21 16 18.2 -0.8
VTS Vitosha 152.48 101 *e*P PKPbc 21 16 22.9 +3.9
VTS Vitosha 152.48 101⇓*i*P PKPbc 21 16 18.2 -0.8
UPC Upice 152.65 80⇑*e*PKP PKPbc 21 16 24.4 +5.3
UPC *e*PKPAB PKPab 21 16 34.9 +5.0
COP Copenhagen 152.65 68 *i* P PKPbc 21 16 27.4 +8.5
COP
comp=Z,240nm,20.0s
DPC Dobruska-Polom 152.75 81 *e*pPKP PKPbc 21 16 24.9 +5.6
DPC *e*PKPAB PKPab 21 16 30.0 -0.3
DPC *e*SS SS 21 39 34.6 -0.7
DPC *e*x x 21 49 32.1
DPC *e*x x 22 01 08.7
DPC AMS AMS 22 23 30.0
comp=Z,400nm,20.2s
BUD Budapest 152.91 88⇓*e*pPKP PKPbc 21 16 20.2 +0.4
KSP Ksiaz 152.95 80 *e*PKIKP PKPbc 21 16 19.5 -0.3
KSP *e*SS SS 21 39 41.5 +4.0
KSP MLR MLR
comp=Z,1μm,22.7s,MS5.7
KOLL Kolacno 153.11 86 *e*PKIKP PKPbc 21 16 19.6 -0.6
KOLL Kolacno 153.11 86 *e*PKP PKPbc 21 16 19.6 -0.6
ISP Isparta 153.16 117 PFAKE 21 16 20.0 +6.7
ISP LR LR
comp=Z,579nm,21.0s,MS5.4
MORC Moravsky Berou 153.19 83 *e*PKPdf PKPdf 21 16 13.5 +0.6
MORC ⇑P 21 16 24.3
VYHS Vyhne 153.31 86 *e*PKIKP PKPdf 21 16 12.5 -0.6
VYHS *e* 21 16 18.4
VYHS Vyhne 153.31 86 *e*PKP PKPdf 21 16 12.5 -0.6
VYHS *e* 21 16 18.4
NOA NORSAR Array B 153.32 56 PKPbc PKPbc 21 16 19.0 -1.3
comp=Z,6.4nm,1.2s,baz=274,slow=1.8,SNR=4.5
BZS Buzias 153.39 94⇓PKIKP PKPdf 21 16 14.7 +1.4
BZS 21 16 18.2
BZS Buzias 153.39 94⇓*i*P PKPdf 21 16 14.7 +1.4
OKC Ostrava-Krasne 153.56 83 *e*SS SS 21 39 42.4 -1.8
OKC *e*x x 21 44 59.2
OKC *e*x x 21 49 30.4
OKC AMS AMS 22 22 20.0
comp=Z,400nm,22.5s
PSZ Piszkesteto 153.64 88 PKIKP PKPdf 21 16 18.4 +4.8
PSZ MLR MLR
comp=Z,661nm,21.0s,MS5.4
BSD Bornholm Skovb 153.81 70 *i* P PKPbc 21 16 26.4 +4.9
BSD
comp=Z,520nm,21.0s
KECS Kecovo 154.26 87 *e*PKP PKPbc 21 16 28.2 +5.5
KECS *e* 21 16 41.3
KECS Kecovo 154.26 87 *e*PKP PKPbc 21 16 28.2 +5.5
KECS *e* 21 16 41.3
ZAK Zakamensk 154.34 278 *e*PKIKP PKPdf 21 16 13.5 -1.0
ZAK pmax pmax
comp=Z,8.0nm,1.4s
SZH Strazhica 154.46 102 *e*P PKPdf 21 16 19.6 +4.7
IRK Irkutsk 154.55 282 *e*PKIKP PKPbc 21 16 25.6 +2.4
IRK pmax pmax
comp=Z,25nm,1.6s
NIE Niedzica 154.61 85 *e*PKP PKPdf 21 16 20.6 +5.7
DRGR 154.68 92 PKIKP PKPdf 21 16 20.8 +5.7
TLY Talaya 154.68 281 *i* PKIKP PKPdf 21 16 16.7 +1.8
TLY pmax pmax
comp=Z,5.0nm,0.9s
TLY MLR MLR
comp=Z,718nm,20.0s,MS5.5
TLY Talaya 154.68 281 PFAKE 21 16 20.0 +5.1
TLY LR LR
comp=Z,808nm,21.0s,MS5.5
SIBR Sibiu 154.98 96⇑*i*P PKPbc 21 16 31.0 +6.7
STHS Stebnicka Huta 155.15 86 *e*PKIKP PKPdf 21 16 11.3 -4.3
STHS *e* 21 16 22.2
STHS Stebnicka Huta 155.15 86 *e*PKP PKPdf 21 16 11.3 -4.3
STHS *e* 21 16 22.2
STHS *e* 21 16 43.4
STHS Stebnicka Huta 155.15 86 *e*PKP PKPdf 21 16 11.3 -4.3
STHS *e* 21 16 22.2
STHS *e* 21 16 43.4
VOIR 155.27 97⇑PKIKP PKPdf 21 16 19.6 +3.7
VOIR 155.27 97⇑*i*P PKPdf 21 16 19.6 +3.7
UZH Uzhgorod 155.38 88 *i* PKIKP PKPdf 21 16 14.8 -1.2
UZH *i* 21 16 40.8
UZH MLR MLR
comp=N,300nm,21.0s,MS5.2
UZH MLR MLR
comp=E,300nm,21.0s,MS5.2
UZH MLR MLR
comp=Z,250nm,21.0s,MS5.0
MLR Muntele Rosu 155.81 98 PKP PKPdf 21 16 15.3 -1.3
comp=Z,3.7nm,1.0s,baz=262,slow=5.4,SNR=5.9
MLR PKPab PKPab 21 16 42.2 -1.3
comp=Z,16nm,1.1s,baz=15,slow=3.5,SNR=3.3
MLR Muntele Rosu 155.81 98⇑P PKPdf 21 16 17.7 +1.1
MLR Muntele Rosu 155.81 98⇑*i*P PKPdf 21 16 17.7 +1.0
KWP Kalwaria Pacla 156.09 87 *e*PKIKP PKPdf 21 16 16.4 -0.5
KWP MLR MLR
comp=Z,699nm,20.0s,MS5.5
MOY Mondy 156.19 279 *e*PKP2 PKPab 21 16 44.1 -0.8
BRTR Keskin Array B 156.20 118 PKP PKPdf 21 16 17.8 +0.4
comp=Z,1.6nm,0.8s,baz=232,slow=4.1,SNR=4.9
BRTR PKPab PKPab 21 16 45.2 -0.1
comp=Z,9.4nm,0.9s,baz=186,slow=5.0,SNR=20
BRTR PP PP 21 20 21.7 -1.5
comp=Z,1.0nm,0.9s,baz=166,slow=6.1,SNR=4.3
BR131 Keskin Array S 156.20 118 *e*PKPdf PKPdf 21 16 17.6 +0.2
BR131 *e*PKPab PKPab 21 16 45.0 -0.3
BR131 LR LR
comp=Z,603nm,20.0s,MS5.4
CVD Cernavoda 156.30 103⇓P PKPdf 21 16 26.9 +10
CVD Cernavoda 156.30 103⇓*i*P PKPdf 21 16 26.9 +10
VRI Vrincioaia 156.48 98⇓PKIKP PKPdf 21 16 19.0 +1.5
VRI 21 16 22.8
VRI Vrincioaia 156.48 98⇓*i*P PKPdf 21 16 19.0 +1.5
BUR08 Bucovina Ar. S 156.57 93 *e*PKPdf PKPdf 21 16 17.2 -0.3
BUR08 *e*PKPab PKPab 21 16 47.6 +1.0
LVV L'vov 156.95 87 *e*PKIKP PKPdf 21 16 21.1 +3.1
NIL Nilore 157.21 207 PFAKE 21 16 30.0 +11
NIL LR LR
comp=Z,77nm,19.0s,MS4.5
SUW Suwalki 158.05 76 *e*PKIKP PKPdf 21 16 20.2 +1.0
ARCES ARCESS Array B 158.24 34 PKPab PKPab 21 16 49.6 -3.6
comp=Z,1.2nm,0.8s,baz=4.4,slow=4.7,SNR=4.0
KEV Kevo 158.61 32 PFAKE 21 16 30.0 +11
KEV LR LR
comp=Z,796nm,20.0s,MS5.5
WMQ Urumqi 159.64 248 PKP PKPdf 21 16 21.0 -0.5
WMQ PKS 21 19 53.0
WMQ PP PP 21 20 43.5 +1.4
WMQ SKS SKSdf 21 23 25.0 -1.5
WMQ SKKS SKKSac 21 27 30.5 +0.4
WMQ SS SS 21 40 49.5 +0.2
WMQ LR LR
comp=N,830nm,23.0s,MS5.6
WMQ LR LR
comp=E,650nm,20.8s,MS5.6
WMQ LR LR
comp=Z,640nm,22.0s,MS5.4
SIM Simferopol' **160.09 108** *i* PKIKP PKPdf 21 16 27.9 +6.0
SIM *e* 21 20 40.0
SIM *e*PPS 21 34 09.0
SIM *e*SSS 21 47 07.0
SIM pmax pmax
comp=Z,39nm,8.2s
KIEV Kiev 160.32 89 *e*PKIKP PKPdf 21 16 20.9 -1.1
KIEV MLR MLR
comp=Z,845nm,21.0s
AKASG Malin Array Be 160.33 89 PKP PKPdf 21 16 21.5 -0.5
comp=Z,0.2nm,0.3s,baz=274,slow=1.9,SNR=12
AKASG PKPab PKPab 21 17 00.9 -2.1
comp=Z,0.3nm,0.2s,baz=253,slow=3.5,SNR=2.8
AKASG Malin Array Be 160.33 89 PKP PKPdf 21 16 21.5 -0.5
AKASG PKPab PKPab 21 17 00.9 -2.1
MNK Minsk 160.81 77 *e*PKIKP PKPdf 21 16 21.0 -1.4
MICGM Minsk 160.83 77 *e*P PKPdf 21 16 21.0 -1.4
GNI Garni 161.68 136 PFAKE 21 16 30.0 +6.2
GNI LR LR
comp=Z,2μm,22.0s
ANN Anapa 161.78 114 *e*PKIKP PKPdf 21 16 27.9 +4.1
ANN pmax pmax
comp=Z,60nm,1.7s
LVZ Lovozero 161.95 33 PFAKE 21 16 30.0 +6.8
LVZ LR LR
comp=Z,1μm,22.0s
ZEI Tsey 163.49 130 *e*PKP2 PKPab 21 17 16.0 -0.9
ZEI pmax pmax
comp=Z,11nm,0.4s
KIV Kislovodsk 163.84 125 *e*PKIKP PKPdf 21 16 26.5 +0.7
KIV *e* 21 21 09.3
KIV *e* 21 23 31.6
KIV pmax pmax
comp=Z,6.0nm,1.2s
KIV Kislovodsk 163.84 125 PFAKE 21 16 40.0 +14
KIV LR LR
comp=Z,982nm,22.0s
MK31 Makanchi Array 164.47 248 *e*PKIKP PKPdf 21 16 23.6 -2.7
MKAR Makanchi Array 164.47 248 PKP PKPdf 21 16 24.0 -2.2
comp=Z,0.4nm,0.9s,baz=242,slow=2.6,SNR=4.5
MKAR PKPab PKPab 21 17 19.1 -2.0
comp=Z,2.4nm,1.0s,baz=131,slow=5.5,SNR=8.9
MKAR PP PP 21 21 05.7 -2.1
comp=Z,1.3nm,0.9s,baz=131,slow=5.5,SNR=7.0
UCH Uchtor 164.66 220 PFAKE 21 16 40.0 +13
UCH LR LR
comp=Z,601nm,19.0s
GOF Gofitskoye 164.83 123 *e*PKP2 PKPab 21 17 08.0 -15
GOF pmax pmax
comp=Z,20nm,1.6s
AML Almayashu 164.87 218 PFAKE 21 16 40.0 +13
AML LR LR
comp=Z,1μm,19.0s
MAK Makhachkala 165.16 137 *e*PKIKP PKPdf 21 16 13.4 -14
EKS2 Erkin-Say 165.30 219 PFAKE 21 16 40.0 +13
EKS2 LR LR
comp=Z,1μm,20.0s
OBN Obninsk 165.88 79 *e*PKIKP PKPdf 21 16 25.9 -1.3
OBN pmax pmax
comp=Z,10.0nm,1.7s
OBN Obninsk 165.88 79 PFAKE 21 16 40.0 +13
OBN LR LR
comp=Z,1μm,21.0s
ZAA0 Zalesovo Array 166.21 276 *e*PKPdf PKPdf 21 16 25.5 -2.0
ZALV Zalesovo Beam 166.21 276 PKP PKPdf 21 16 26.4 -1.1
comp=Z,0.2nm,0.3s,baz=90,slow=0.1,SNR=4.9
ZALV PKPab PKPab 21 17 26.3 -2.4
comp=Z,1.2nm,0.6s,baz=120,slow=5.3,SNR=5.5
ZALV PP PP 21 21 19.7 +2.8
comp=Z,0.2nm,0.3s,baz=134,slow=4.2,SNR=2.3
ZALV Zalesovo Beam 166.21 276 PKP PKPdf 21 16 26.4 -1.1
ZALV PKPab PKPab 21 17 26.3 -2.4
ZALV PP PP 21 21 19.8 +2.8
VSR Storozhevoye 166.29 96 *e*PKIKP PKPdf 21 16 31.6 +4.0
VSR *e* 21 17 27.2
VSR pmax pmax
comp=Z,60nm,2.5s
VSR pmax pmax
comp=N,10.0nm,1.2s
VSR pmax pmax
comp=E,3.0nm,0.8s
NVS Novosibirsk 167.28 279 *e*PKIKP PKPdf 21 16 24.5 -3.8
NVS *i* 21 17 30.5
NVS pmax pmax
comp=Z,32nm,2.5s
NVS pmax pmax
comp=N,30nm,2.7s
NVS pmax pmax
comp=E,15nm,1.8s
KURK Kurchatov 168.67 256 PKP PKPdf 21 16 28.4 -1.0
comp=E,1.3nm,0.2s,baz=162,slow=0.3,SNR=4.4
KURK PKPab PKPab 21 17 37.1 -2.5
comp=E,1.4nm,0.7s,baz=137,slow=2.5,SNR=5.8
KURK PP PP 21 21 25.1 -4.5
comp=E,3.0nm,1.1s,baz=130,slow=4.0,SNR=5.9
KURK Kurchatov 168.67 256 PKP PKPdf 21 16 28.4 -1.0
KURK PKPab PKPab 21 17 37.1 -2.5
KURK PP PP 21 21 25.1 -4.5
KURK LR LR
comp=Z,1μm,22.0s
BVAR Borovoye Array 174.27 256 PKP PKPdf 21 16 31.8 -0.2
comp=Z,0.2nm,0.4s,baz=183,slow=2.9,SNR=4.4
BVAR PKPab PKPab 21 18 01.9 -2.6
comp=Z,1.4nm,0.8s,baz=108,slow=4.8,SNR=8.0
BVAR PP PP 21 22 00.7 +3.3
comp=Z,0.6nm,0.8s,baz=57,slow=5.5,SNR=5.3
BRVK Borovoye 174.34 256 PFAKE 21 16 40.0 +8.0
BRVK LR LR
comp=Z,1μm,21.0s
ABKAR Akbulak array 174.39 172 *e*PKPdf PKPdf 21 16 32.4 +0.2
AKTK Aktyubinsk 175.22 155 PKP PKPdf 21 16 33.2 +0.8
AKTK PKPab PKPab 21 18 06.3 -2.2
AKTK PP PP 21 22 06.2 +4.9
AKTO Aktyubinsk 175.22 155 PKP PKPdf 21 16 33.2 +0.8
comp=Z,0.8nm,0.5s,baz=264,slow=9.2,SNR=6.1
AKTO PKPab PKPab 21 18 06.3 -2.2
comp=Z,1.2nm,0.6s,baz=132,slow=6.6,SNR=2.0
AKTO PP PP 21 22 06.2 +4.9
comp=Z,1.2nm,1.0s,baz=233,slow=12,SNR=4.0
ARU Arti 177.80 41 PKIKP PKPdf 21 16 34.4 +1.7
ARU 21 22 12.3
ARU Arti 177.80 41 *e*PKPdf PKPdf 21 16 31.9 -0.8
ARU LR LR
comp=Z,2μm,20.0s

ISCJB ***29*** *21:07:02.0±1.1, 23°.45S±0°.07×179°.77W±0°.08, h561km±13km, mb4.2/34, Error ellipse: s-maj=12.3km s-min=8.8km az=38.1*
IDC ***29*** *21:07:02.8±1.6, 23°.32S×179°.70W, h556km±16km, mb3.7/15, mb1 3.9/15, mb1mx3.8/18, mbtmp3.7/15, Error ellipse: s-maj=15.7km s-min=12.4km az=101.0*
NEIC ***29*** *21:07:03.7±1.0, 23°.30S×179°.77W, h570km±10km, mb4.4/17, Error ellipse: s-maj=13.2km s-min=8.6km az=139.0*

ISC 29 21:07:03.6±1.2, 23°.34S±0°.09×179°.78W±0°.09, h565km±13km, n150, σ0°89/55, mb4.2/34, 22C-6D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu** 47nm,0.6s	**5.94**	**340**	*e*P	**P**	**21 08 41.9**	**-0.6**
AFI	**Afiamalu** 9.7nm,0.3s,baz=42,slow=20,SNR=8.8	**12.06**	**40**	P	**P**	**21 09 37.1**	**-5.8**
AFI	1.5nm,0.3s,baz=90,slow=20,SNR=3.0			S	**S**	**21 11 44.0**	**-10**
URZ	**Urewera** 2.7nm,0.3s,baz=333,slow=6.8,SNR=9.3	**15.11**	**189**	P	**P**	**21 10 08.2**	**-5.6**
URZ	3.0nm,0.3s,baz=61,slow=23,SNR=10			S	**S**	**21 12 42.4**	**-7.3**
RPZ	**Rata Peaks** 36nm,0.6s,mb5.2,baz=351,slow=2.0,SNR=19	**21.68**	**198**	P	**P**	**21 11 15.0**	**+1.2**
ARMA	**Armidale**	**26.41**	**248**	*e*P	**P**	**21 11 57.2**	**+1.2**
CMSA	**Cobar Meteorol**	**31.61**	**247**	*e*P	**P**	**21 12 41.2**	**+0.2**
CTA	**Charters Tower** 8.5nm,0.3s,mb4.8	**31.68**	**269**	*e*P	**P**	**21 12 42.4**	**+0.7**
CTAO	**Charters Tower** 12nm,0.8s,mb4.5	**31.68**	**269**	*e*P	**P**	**21 12 42.5**	**+0.7**
TOO	**Toolangi**	**32.92**	**236**	*e*P	**P**	**21 12 52.3**	**+0.3**
STKA	**Stephens Creek** 10nm,0.7s,mb4.5,baz=90,slow=9.5,SNR=21	**35.12**	**247**	P	**P**	**21 13 10.7**	**+0.2**
STKA	2.3nm,0.5s,baz=92,slow=7.1,SNR=3.3			PcP	PcP	21 15 26.0	+0.1
STKA	**Stephens Creek**	**35.12**	**247**	*e*P	**P**	**21 13 11.0**	**+0.5**
STKA				PcP	PcP	21 15 26.0	+0.1
ASAR	**Alice Springs** 1.0nm,0.3s,mb3.9,baz=96,slow=6.8,SNR=36	**42.33**	**260**	P	**P**	**21 14 08.8**	**-0.1**
ASAR	1.6nm,0.6s,baz=98,slow=4.5,SNR=7.2			PcP	PcP	21 15 49.1	0.0
ASAR	3.2nm,0.8s,baz=95,slow=14,SNR=19			S	**S**	**21 19 48.8**	**-0.8**
WRAB	**Tennant Creek** 3.1nm,0.6s,mb4.0	**42.64**	**265**	*e*P	**P**	**21 14 10.5**	**-0.8**
KAKA	**Kakadu** 6.0nm,0.9s,mb4.1	**46.46**	**275**	*e*P	**P**	**21 14 40.9**	**+0.2**
FORT	**Forrest** 6.4nm,0.2s,mb4.8	**46.70**	**249**	*e*P	**P**	**21 14 41.5**	**-0.8**
KNA	**Kununurra** 9.1nm,0.3s,mb4.8	**48.87**	**269**	*e*P	**P**	**21 14 58.8**	**+0.1**
FITZ	**Fitzroy Crossi** 8.1nm,0.4s,mb4.4	**51.07**	**265**	*e*P	**P**	**21 15 14.9**	**+0.1**
FITZ	**Fitzroy Crossi** 4.1nm,0.7s,mb3.9	**51.07**	**265**	*e*P	**P**	**21 15 15.1**	**+0.3**
MBWA	**Marble Bar**	**55.67**	**260**	*e*P	**P**	**21 15 46.4**	**-0.9**
MBWA	**Marble Bar** 6.5nm,0.3s,mb4.3	**55.67**	**260**	*e*P	**P**	**21 15 46.7**	**-0.6**
CASY	**Casey** 4.6nm,0.6s,mb4.0	**60.70**	**206**	*e*P	**P**	**21 16 18.8**	**-1.6**
QSPA	**South Pole Qui** 16nm,0.6s,mb4.7,baz=33,slow=1.5,SNR=116	**66.74**	**180**	P	**P**	**21 16 59.0**	**+0.3**
MJAR	**Matsushiro Arr** 1.5nm,0.6s,mb3.6,baz=159,slow=5.2,SNR=8.0	**71.55**	**325**	P	**P**	**21 17 27.7**	**-0.4**
KSM	**Kuching** 8.3nm,0.8s,mb4.2	**72.21**	**280**	*e*P	**P**	**21 17 31.9**	**-0.5**
SSLB	**Suanglung**	**74.20**	**305**	P	**P**	**21 17 39.2**	**-4.4**
KSRS	**Korea Array** 2.0nm,0.7s,mb3.6,baz=131,slow=5.9,SNR=12	**77.95**	**320**	P	**P**	**21 18 04.3**	**+0.4**
MAW	**Mawson** 5.3nm,0.7s,mb4.0,baz=131,slow=8.2,SNR=12	**78.34**	**200**	P	**P**	**21 18 05.1**	**-0.4**
MAW	**Mawson**	**78.34**	**200**	*e*P	**P**	**21 18 05.2**	**-0.3**
PETK	**Petropavlovsk-** 5.2nm,0.5s,mb4.1,baz=144,slow=6.9,SNR=7.4	**78.60**	**346**	P	**P**	**21 18 07.2**	**+0.2**
COCO	**West Island**	**79.27**	**261**	P	**P**	**21 18 20.9**	**+9.4**
MDJ	**Mudanjiang**	**81.91**	**326**	P	**P**	**21 18 15.5**	**-8.9**
KULM	**Kulim** 3.8nm,0.5s,mb4.2	**82.55**	**279**	*e*P	**P**	**21 18 28.2**	**-0.2**
CMB	**Columbia Colle** 4.6nm,0.8s,mb4.1	**82.66**	**43**	*e*P	**P**	**21 18 26.8**	**-1.6**
YBH	**Yreka Blue Hor** 1.9nm,0.7s,mb3.8,baz=167,slow=9.4,SNR=5.9	**83.53**	**39**	P	**P**	**21 18 33.4**	**+0.8**
WAKR	**Walker**	**83.54**	**43**	*e*P	**P**	**21 18 31.1**	**-1.6**
SYO	**Syowa Base**	**83.60**	**193**⇑	*e*P	**P**	**21 18 29.8**	**-2.8**
NVAR	**Mina Array Bea** 2.4nm,0.9s,mb3.7,baz=213,slow=6.9,SNR=7.0	**84.21**	**44**	P	**P**	**21 18 36.2**	**+0.2**
ENH	**Enshi**	**86.28**	**305**	P	**P**	**21 18 42.4**	**-3.9**

16nm,0.8s,mb4.7
CCUT Cedar City 86.95 47 *e*P **P 21 18 48.8 -0.5**
2.4nm,0.9s,mb3.8
M13A Montello 88.49 43 *e*P **P 21 18 57.1 +0.8**
7.7nm,0.6s,mb4.6
PLCA Paso Flores 88.51 134 P **P 21 18 56.7 +0.1**
1.2nm,0.6s,mb3.9,baz=214,slow=8.8,SNR=4.2
PLCA Paso Flores 88.51 134 *e*P **P 21 18 57.0 +0.4**
TMUT Trail Mountain 89.31 46 *e*P **P 21 19 01.6 +1.5**
8.7nm,0.7s,mb4.7
CMAR Chiang Mai Arr 89.52 290 P **P 21 19 03.5 +1.9**
5.3nm,0.8s,mb4.4,baz=135,slow=3.0,SNR=22
HLID Hailey 89.55 41 *e*P **P 21 19 01.8 +0.6**
3.8nm,1.0s,mb4.2
HVU Hansel Valley 89.60 44 *e*P **P 21 19 00.9 -0.5**
5.4nm,0.9s,mb4.4
CHTO Chiang Mai 89.67 291 *e*P **P 21 19 03.4 +1.1**
10nm,1.0s,mb4.6
SRU San Rafael 89.67 47 *e*P **P 21 19 02.5 +0.6**
6.4nm,0.8s,mb4.5
TXAR Lajitas Array 89.97 58 P **P 21 19 04.2 +0.7**
2.5nm,0.7s,mb4.1,baz=215,slow=6.4,SNR=36
ANMO Albuquerque 90.46 52 P **P 21 19 05.8 +0.2**
0.7nm,0.4s,mb3.8,baz=145,slow=2.2,SNR=3.9
COLA College 91.33 13 P **P 21 19 02.6 -6.3**
ILAR Eielson Array 91.44 13 P **P 21 19 08.0 -1.4**
0.6nm,0.7s,mb3.6,baz=226,slow=5.7,SNR=7.7
ZALV Zalesovo Beam 111.65 321 PKiKP PKiKP 21 24 31.6 -2.4
0.7nm,0.4s,baz=100,slow=2.1,SNR=6.0
MKAR Makanchi Array 111.92 313 PKiKP PKiKP 21 24 33.4 -1.4
1.2nm,0.6s,baz=93,slow=2.3,SNR=21
KURK Kurchatov 114.93 317 PKP PKPdf 21 24 39.1 -1.3
2.4nm,0.7s,baz=95,slow=2.0,SNR=8.8
AML Almayashu 117.24 307 *e*PKPdf PKPdf 21 24 45.1 0.0
BVAR Borovoye Array 120.15 319 PKP PKPdf 21 24 49.4 -1.0
1.9nm,0.3s,baz=124,slow=1.9,SNR=18
SCHQ Schefferville 121.92 39 PKP PKPdf 21 24 51.8 -1.9
3.9nm,0.8s,baz=217,slow=15,SNR=4.0
BOSA Boshof 122.99 206 PKP PKPdf 21 24 56.4 -0.4
3.1nm,0.9s,baz=91,slow=2.5,SNR=5.3
SPITS Spitsbergen Ar 124.58 356 PKP PKPdf 21 24 56.1 -2.2
7.0nm,0.7s,baz=28,slow=5.7,SNR=4.5
ARU Arti 126.55 324 *e*PKPdf PKPdf 21 25 01.9 -0.6
ABKAR Akbulak array 126.96 315 *e*PKPdf PKPdf 21 25 02.8 -0.8
KEV Kevo 130.91 348 *e*p PKPdf 21 25 08.6 -1.9
4.6nm,0.8s
ARCES ARCESS Array B 131.38 348 PKhKP PKPpre 21 24 58.5
1.9nm,0.9s,baz=48,slow=1.8,SNR=5.6
ARCES PKP PKPdf 21 25 10.2 -1.2
3.6nm,0.5s,baz=73,slow=1.1,SNR=38
ARCES SKPbc SKPbc 21 27 45.2 +1.0
2.5nm,0.9s,baz=22,slow=4.5,SNR=5.7
ARCES ARCESS Array B 131.38 348 PKP PKPdf 21 25 10.2 -1.2
ARCES SKPbc SKPbc 21 27 45.2 +1.0
JOF Joensuu 135.28 340 *e*p PKPdf 21 25 19.2 +0.3
3.9nm,0.5s
KMBO Kilima Mbogo 136.54 241 PKP PKPdf 21 25 23.9 +1.2
1.5nm,0.8s,baz=343,slow=19,SNR=4.3
KAF Kangasniemi 137.38 342 *e*p PKPdf 21 25 23.1 +0.3
2.0nm,0.3s
FINES FINESS Array B 137.98 342 PKhKP PKPpre 21 25 13.2
0.6nm,0.3s,baz=25,slow=6.3,SNR=11
FINES PKP PKPdf 21 25 24.1 +0.2
1.4nm,0.4s,baz=98,slow=3.5,SNR=10
FINES SKPbc SKPbc 21 28 05.7 +0.5
1.8nm,0.9s,baz=352,slow=3.1,SNR=3.2
FINES FINESS Array B 137.98 342 PKP PKPdf 21 25 24.1 +0.2
FINES SKPbc SKPbc 21 28 05.7 +0.5
NB2 NORSAR Subarra141.56 351 PKP PKPpre 21 25 25.3
comp=Z,1.5nm,0.5s,baz=16,slow=3.2
NOA NORSAR Array B 141.56 351 PKhKP PKPpre 21 25 25.2
comp=Z,2.3nm,0.6s,baz=15,slow=4.3,SNR=18
AKASG Malin Array Be 144.61 328 PKP PKPdf 21 25 35.2 -0.8
comp=Z,9.8nm,0.5s,baz=43,slow=4.1,SNR=43
AKASG SKPbc SKPbc 21 28 22.6 +0.3
comp=Z,0.2nm,0.3s,baz=40,slow=2.1,SNR=4.4
KIEV Kiev 144.62 328 *e*PKPdf PKPdf 21 25 34.5 -1.5
SUW Suwalki 144.84 336 *e*P PKPdf 21 25 36.3 -0.1
SUW Suwalki 144.84 336 *e*PKPdf PKPdf 21 25 36.3 0.0
ASF Jabal al Asfar 146.50 293 PKPbc PKPbc 21 25 42.7 +0.3
comp=Z,6.2nm,0.6s,baz=36,slow=8.7,SNR=10
BR131 Keskin Array S 147.40 308 *e*PKPdf PKPbc 21 25 44.3 -0.2
BRTR Keskin Array B 147.40 308 PKPbc PKPbc 21 25 44.0 -0.6
comp=Z,4.0nm,0.7s,baz=141,slow=4.9,SNR=23
GKP Gorka Klasztor 147.44 341 *e*P PKPbc 21 25 43.9 -0.3
MMAI Mount Meron Ar 147.65 295 PKPbc PKPbc 21 25 45.9 +0.5
comp=Z,19nm,0.5s,baz=76,slow=7.0,SNR=51
LEOM Leova 147.72 323⇑*i*P PKPdf 21 25 40.9 -0.5
EKA Eskdalemuir Ar 147.95 4 PKPbc PKPbc 21 25 44.5 -0.9
baz=340,slow=2.6
TLCR 148.13 320⇑*i*P PKPbc 21 25 45.6 -0.6
EIL Elat 148.37 289 PKPbc PKPbc 21 25 47.5 +0.2
comp=Z,7.9nm,0.7s,baz=132,slow=4.8,SNR=5.6
KWP Kalwaria Pacla 148.38 332 *e*P PKPbc 21 25 46.5 -0.2
KWP Kalwaria Pacla 148.38 332⇓*i*P PKPbc 21 25 46.6 -0.1
CFR Carcaliu 148.53 321⇑*i*P PKPbc 21 25 47.3 +0.1
BUR08 Bucovina Ar. S 148.61 327 *e*PKP PKPbc 21 25 47.4 +0.1
BURAR Bucovina Array 148.62 327⇑*i*P PKPbc 21 25 47.8 +0.5
TIRR Tirgusor 148.77 319⇑*i*P PKPbc 21 25 47.7 -0.1
VRI Vrincioaia 148.93 323⇑*i*P PKPdf 21 25 45.3 +1.9
STHS Stebnicka Huta 149.16 333 *e*PKP PKPbc 21 25 48.9 +0.3
NIE Niedzica 149.55 334 *e*PX PKPbc 21 25 49.9 +0.4
TRPA Tarpa 149.55 330⇑*i*P PKPbc 21 25 49.3 -0.3
MLR Muntele Rosu 149.59 323 PKPbc PKPbc 21 25 49.1 -0.7
comp=Z,4.1nm,0.6s,baz=330,slow=6.2,SNR=11
MLR Muntele Rosu 149.59 323⇑*i*P PKPbc 21 25 49.3 -0.4
DOPR Dopca 149.60 324⇓*i*P PKPbc 21 25 50.5 +0.8
KSP Ksiaz 149.84 340 *e*P PKPbc 21 25 50.4 +0.2
OKC Ostrava-Krasne 150.05 336⇑*e*PKP PKPbc 21 25 50.5 -0.2
OKC *e*PKPAB PKPab 21 25 59.3 +0.3
VOIR 150.12 324⇓*i*P PKPbc 21 25 51.0 0.0
KECS Kecovo 150.20 332 *e*PKP PKPbc 21 25 49.9 -1.2
KECS *e* 21 25 56.9
KECS *e* 21 26 00.1
UPC Upice 150.22 340⇑*e*PKP PKPbc 21 25 51.1 +0.1
UPC *e*PKPAB PKPab 21 26 00.5 +0.8
DPC Dobruska-Polom 150.25 339⇑*e*PKP PKPbc 21 25 51.3 +0.2
DPC *e*PKPAB PKPab 21 26 01.3 +1.4
MORC Moravsky Berou 150.32 337 *e*PKPdf PKPbc 21 25 49.7 -1.6
MORC Moravsky Berou 150.32 337⇑*i*P PKPbc 21 25 51.1 -0.2
CLL Collm 150.38 344⇓*i*PKPbc PKPbc 21 25 50.9 -0.5
comp=Z,28nm,0.9s
CLL *i* PKPab PKPab 21 25 59.9 -0.4
comp=Z,8.0nm,0.9s
CLL *e*pPKPbc pPKPbc 21 28 04.0 +1.9
DRGR 150.43 328⇑*i*P PKPbc 21 25 51.5 -0.1
BRG Berggiesshubel 150.52 342 *i* PKP PKPbc 21 25 51.5 -0.2
comp=Z,19nm,0.6s
BRG
comp=N,225nm,21.1s
BRG
comp=E,349nm,25.5s
BRG
comp=Z,538nm,23.0s
PVCC Panska Ves 150.65 341⇑*e*PKP PKPbc 21 25 52.2 +0.2
VYHS Vyhne 150.88 334 *e*PKP PKPbc 21 25 52.2 -0.4
VYHS *e* 21 26 03.1
KOLL Kolacno 150.98 335 *e*PKP PKPbc 21 25 53.0 +0.2
KOLL *e* 21 26 03.6
VRAC Vranov 151.05 338 PKPbc PKPbc 21 25 52.9 0.0
comp=Z,0.8nm,0.4s,baz=9.0,slow=3.4,SNR=3.3
VRAC PKPab PKPab 21 26 03.9 +0.6
comp=Z,4.9nm,0.7s,baz=23,slow=5.3,SNR=6.6
VRAC Vranov 151.05 338⇑*i*P PKPbc 21 25 53.1 +0.1
PRU Pruhonice 151.13 341⇑*e*PKP PKPbc 21 25 53.2 +0.1
PRU *e*PKPAB PKPab 21 26 04.6 +1.0
GZR Gura Zlata 151.36 326⇑*i*P PKPbc 21 25 53.3 -0.5
TREC Trest 151.44 339⇑*e*PKP PKPbc 21 25 53.7 -0.2
NKC Novy Kostel 151.50 343⇑*e*PKP PKPbc 21 25 53.3 -0.7
ZST Bratislava 151.79 336 *e*PKP PKPab 21 26 07.5 +1.1
BZS Buzias 151.79 327⇑*i*P PKPdf 21 25 46.9 -0.9
KHC Kasperske Hory 152.18 341 *e*PKP PKPbc 21 25 54.4 -1.2
KHC Kasperske Hory 152.18 341⇑*e*PKP PKPbc 21 25 55.3 -0.2
KHC *e*PKPAB PKPab 21 26 08.7 +0.7
PKSM Moragy 152.75 331⇓*i*P PKPdf 21 25 48.6 -0.6
VTS Vitosha 152.93 321⇓*i*P PKPbc 21 25 56.9 -0.5
CDF Champ du Feu 154.36 349 *e*PKP2 PKPab 21 26 17.1 -0.2
MEZF Maizieres J'vi 154.60 352 *e*PKP2 PKPab 21 26 17.4 -0.9
FLN La Foliniere 154.62 1 *e*PKP2 PKPab 21 26 16.7 -1.7
HAU Haudompre 154.91 350 *e*PKP2 PKPab 21 26 18.6 -1.1
comp=Z,7.7nm,0.7s
GRR Gorron 154.99 2 *e*PKP2 PKPab 21 26 18.4 -1.6
HINF Hinteralfeld 155.01 349 *e*PKP2 PKPab 21 26 18.8 -1.3
comp=Z,7.8nm,0.9s
DAVOX Davos/Dischmat 155.35 344 PKPab PKPab 21 26 22.0 +0.4
comp=Z,4.9nm,0.6s,baz=150,slow=1.7,SNR=8.0
LOR Lormes 155.95 354 *e*PKP2 PKPab 21 26 23.9 -0.3
comp=Z,4.6nm,0.7s
SSF Saint Saulge 156.19 354 *e*PKP2 PKPab 21 26 24.2 -1.0
comp=Z,15nm,1.0s
CABF La Chapelle 156.30 350 *e*PKP2 PKPab 21 26 25.3 -0.5
AVF Avril sur Loir 156.47 355 *e*PKP2 PKPab 21 26 25.3 -1.1
SMF Signal de Mont 156.56 354 *e*PKP2 PKPab 21 26 25.2 -1.7
comp=Z,5.0nm,0.6s
TCF Toulx Ste Croi 157.05 356 *e*PKP2 PKPab 21 26 27.7 -1.3
comp=Z,10nm,1.1s
LPL La Plagne 157.25 348 *e*PKP2 PKPab 21 26 29.8 -0.1
LPG La Plagne 157.26 348 *e*PKP2 PKPab 21 26 30.1 +0.1
comp=Z,7.6nm,0.8s
ORIF Oris-en-Rattie 157.98 349 *e*PKP2 PKPab 21 26 32.8 -0.3
comp=Z,7.2nm,0.9s
MBDF Montbardon 158.00 347 *e*PKP2 PKPab 21 26 31.9 -1.3
RJF Les Rejaudoux 158.06 358 *e*PKP2 PKPab 21 26 32.0 -1.4
LFF La Frestale 158.45 359 *e*PKP2 PKPab 21 26 34.0 -1.1
SBF Sospel 158.68 346 *e*PKP2 PKPab 21 26 35.2 -1.0
comp=Z,13nm,0.8s
SMRF Simiane la Rot 158.95 349 *e*PKP2 PKPab 21 26 37.1 -0.2
comp=Z,4.1nm,0.8s
FRF La Foret Royal 159.15 347 *e*PKP2 PKPab 21 26 37.3 -0.9
LMR La Mourre 159.39 347 *e*PKP2 PKPab 21 26 37.9 -1.4
DBIC Dimbokro 162.72 163 PKP PKPdf 21 26 00.8 -1.4
comp=Z,3.8nm,0.8s,baz=191,slow=5.2,SNR=3.1
DBIC PKPab PKPab 21 26 53.8 -0.7
comp=Z,2.8nm,0.7s,baz=164,slow=6.0,SNR=3.4
ESDC Sonseca Array 163.34 11 PKP PKPdf 21 26 02.9 +0.9
comp=Z,0.3nm,0.5s,baz=340,slow=2.1,SNR=3.0
ESDC PKPab PKPab 21 26 56.2 -0.5
comp=Z,0.6nm,0.7s,baz=345,slow=4.5,SNR=5.3
MDT Midelt 169.64 23 PKP PKPdf 21 26 07.5 +0.5
comp=Z,3.6nm,1.0s,baz=248,slow=2.8,SNR=3.3

*THE **29** 21:20:19.9, 38°.29N×22°.71E, h16km±2km, ML2.4/3, Error ellipse: s-maj=2.1km s-min=0.5km az=313.0*
*ISCJB **29** 21:20:20.1±0.4, 38°.29N±0°.03×22°.72E±0°.03, h8km±8km, Error ellipse: s-maj=4.4km s-min=3.6km az=31.4*
*CSEM **29** 21:20:20.2±0.1, 38°.30N×22°.71E, h10km, ML2.4/3, Error ellipse: s-maj=2.4km s-min=2.2km az=9.0*
*NEIC **29** 21:20:20.4, 38°.30N×22°.72E, h4km, MD3.1(ATH), After ATH.*
*ATH **29** 21:20:20.2, 38°.31N×22°.72E, h2km, MD3.1/8*
ISC 29 21:20:20.4±0.5,**38°.30N**±0°.03×**22°.71E**±0°.03,**h13**km±8km,
n35,σ0°53/58,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSF	**Desfina**	**0.19**	**308**	P	**Pg**	**21 20 24.3**	**-0.3**
DSF				S	**Sg**	**21 20 27.8**	**+0.3**
DSF	**Desfina**	**0.19**	**308**	P	**Pg**	**21 20 24.3**	**-0.3**
DSF				S	**Sg**	**21 20 27.8**	**+0.3**
LTK	**Loutraki**	**0.34**	**144**	*e*PG	**Pg**	**21 20 26.6**	**-0.7**
LTK				*e*SG	**Sg**	**21 20 32.5**	**+0.6**
LTK	**Loutraki**	**0.34**	**144**	P	**Pg**	**21 20 26.6**	**-0.7**
LTK				S	**Sg**	**21 20 32.3**	**+0.4**
LTK	**Loutraki**	**0.34**	**144**	P	**Pg**	**21 20 26.6**	**-0.7**
LTK				S	**Sg**	**21 20 32.3**	**+0.4**
LKR	**Lokris**	**0.42**	**32**	*e*Pg	**Pg**	**21 20 27.7**	**-1.1**
LKR				*e*Sg	**Sg**	**21 20 34.1**	**-0.3**
LKR	**Lokris**	**0.42**	**32**	*e*PG	**Pg**	**21 20 27.7**	**-1.1**
LKR				*e*SG	**Sg**	**21 20 34.1**	**-0.3**
LKR	**Lokris**	**0.42**	**32**	P	**Pg**	**21 20 27.7**	**-1.1**
LKR	**Lokris**	**0.42**	**32**	P	**Pg**	**21 20 27.7**	**-1.1**
LKR				*e*Sg	**Sg**	**21 20 34.1**	**-0.3**
KALE	**Kalithea**	**0.46**	**282**	P	**Pg**	**21 20 29.1**	**-0.4**
KALE				S	**Sg**	**21 20 36.1**	**+0.4**
KALE	**Kalithea**	**0.46**	**282**	P	**Pg**	**21 20 29.1**	**-0.4**
KALE				S	**Sg**	**21 20 36.1**	**+0.4**
GUR	**Goura**	**0.46**	**219**	*e*PG	**Pg**	**21 20 29.8**	**+0.2**
GUR				*e*SG	**Sg**	**21 20 36.3**	**+0.6**
GUR	**Goura**	**0.46**	**219**	P	**Pg**	**21 20 29.1**	**-0.5**
GUR				S	**Sg**	**21 20 35.3**	**-0.4**
GUR	**Goura**	**0.46**	**219**	P	**Pg**	**21 20 29.1**	**-0.5**
GUR	**Goura**	**0.46**	**219**	*e*Pg	**Pg**	**21 20 29.8**	**+0.2**
GUR				S	**Sg**	**21 20 35.3**	**-0.4**
ATAL	**Atalanti**	**0.46**	**31**	P	**Pg**	**21 20 29.1**	**-0.5**
ATAL				S	**Sg**	**21 20 36.6**	**+0.8**
ATAL	**Atalanti**	**0.46**	**31**	P	**Pg**	**21 20 29.1**	**-0.5**
ATAL				S	**Sg**	**21 20 36.6**	**+0.8**
TRIZ	**Trizonia**	**0.51**	**278**	P	**Pg**	**21 20 29.9**	**-0.5**
TRIZ	**Trizonia**	**0.51**	**278**	P	**Pg**	**21 20 29.9**	**-0.5**
EFP	**Efpalio**	**0.65**	**282**	*e*PG	**Pg**	**21 20 32.7**	**-0.3**
EFP				*e*SG	**Sg**	**21 20 41.8**	**+0.2**
EFP	**Efpalio**	**0.65**	**282**	*e*Pg	**Pg**	**21 20 32.7**	**-0.3**
EFP				*e*Sg	**Sg**	**21 20 42.8**	**+1.2**
AGG	**Agios Georgios**	**0.78**	**338**	*e*Pg	**Pg**	**21 20 35.2**	**-0.4**
AGG				*e*Sg	**Sg**	**21 20 47.0**	**+1.1**
AGG	**Agios Georgios**	**0.78**	**338**	*e*PB	**Pg**	**21 20 35.2**	**-0.4**
AGG				*e*SG	**Sg**	**21 20 46.0**	**+0.1**
AGG	**Agios Georgios**	**0.78**	**338**	*e*Pg	**Pg**	**21 20 35.2**	**-0.4**
AGG				*e*Sg	**Sg**	**21 20 47.0**	**+1.1**
NAIG	**Nisos Aigina**	**0.81**	**131**	*e*Pb	**Pb**	**21 20 36.7**	**+0.2**
NAIG	**Nisos Aigina**	**0.81**	**131**	*e*PG	**Pg**	**21 20 36.1**	**-0.1**
NAIG	**Nisos Aigina**	**0.81**	**131**	*e*Pb	**Pb**	**21 20 36.7**	**+0.2**
VLY	**Voula,Athens**	**0.96**	**117**	*e*Pg	**Pg**	**21 20 39.3**	**+0.3**
VLY				*e*Sg	**Sg**	**21 20 52.1**	**+0.6**
VLY	**Voula,Athens**	**0.96**	**117**	*e*PG	**Pg**	**21 20 39.3**	**+0.3**
VLY				*e*SG	**Sg**	**21 20 52.1**	**+0.6**
VLY	**Voula,Athens**	**0.96**	**117**	*e*Pg	**Pg**	**21 20 39.3**	**+0.3**
VLY				*e*Sg	**Sg**	**21 20 52.1**	**+0.6**
RLS	**Riolos of Patr**	**1.01**	**257**	*e*Pg	**Pg**	**21 20 39.9**	**0.0**
RLS	**Riolos of Patr**	**1.01**	**257**	*e*PG	**Pg**	**21 20 39.9**	**0.0**
RLS	**Riolos of Patr**	**1.01**	**257**	*e*Pg	**Pg**	**21 20 39.9**	**0.0**
THL	**Klokotos Trika**	**1.38**	**337**	*e*PN	**Pb**	**21 20 46.4**	**+0.3**
THL	**Klokotos Trika**	**1.38**	**337**	*e*Pb	**Pb**	**21 20 46.4**	**+0.3**

*IDC **29** 21:26:38.5±1.4, 38°.45N×16°.69E, h0km, mb3.7/6, mb1 3.7/9, mb1mx3.6/25, mbtmp3.7/9, ML4.2/2, MS3.7/2, Ms1 3.7/2, ms1mx2.7/37, Error ellipse: s-maj=33.2km s-min=25.1km az=155.0*
*ROM **29** 21:26:43.7±0.1, 38°.16N×16°.47E, h70km±1km, MI3.5/51, Error ellipse: s-maj=2.9km s-min=1.3km az=118.0*
*ISCJB **29** 21:26:43.2±0.2, 38°.22N±0°.02×16°.52E±0°.02, h74km±3km, mb3.6/6, Error ellipse: s-maj=3.6km s-min=2.8km az=138.8*
*PDG **29** 21:26:43.1±0.2, 38°.17N×16°.85E, h50km±95km, ML3.7/6, Error ellipse: s-maj=2.9km s-min=9.9km az=0.0*
*NEIC **29** 21:26:44.4, 38°.18N×16°.47E, h61km, MD3.2(ROM), After ROM.*
*CSEM **29** 21:26:44.0±0.1, 38°.31N×16°.36E, h73km±2km, ML3.9/9, Error ellipse: s-maj=3.7km s-min=2.9km az=149.0*
ISC 29 21:26:44.4±0.2,**38°.23N**±0°.02×**16°.47E**±0°.02,**h69**km±3km,
n199,σ1°09/252,mb3.6/6,7C-14D,Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAC	**Placanica**	**0.22**	**353**	Pg	**Pn**	**21 26 55.3**	**+0.3**
PLAC				Sg	**Sn**	**21 27 03.1**	**+0.4**
3μm,0.6s							
PLAC	**Placanica**	**0.22**	**353**	Pg	**Pn**	**21 26 55.3**	**+0.3**
PLAC				Sg	**Sn**	**21 27 03.1**	**+0.4**
3μm,0.6s							
SOI	**Samo**	**0.37**	**244**	Pg	**Pn**	**21 26 55.7**	**-0.2**
SOI				Sg	**Sn**	**21 27 04.0**	**-0.4**
1μm,0.3s							
SOI	**Samo**	**0.37**	**244**	Pg	**Pn**	**21 26 55.7**	**-0.2**
SOI				Sg	**Sn**	**21 27 04.0**	**-0.4**
1μm,0.3s							
CEL	**Celeste**	**0.46**	**273**	*e*P	**Pn**	**21 26 56.6**	**-0.1**
CEL				*e*S	**Sn**	**21 27 04.8**	**-0.9**
CEL	**Celeste**	**0.46**	**273**	*e*P	**Pn**	**21 26 56.5**	**-0.2**
CEL	**Celeste**	**0.46**	**273**	Pg	**Pn**	**21 26 56.9**	**+0.2**
CEL				Sg	**Sn**	**21 27 05.7**	**0.0**
3μm,0.6s							
CEL	**Celeste**	**0.46**	**273**	*e*P	**Pn**	**21 26 56.6**	**-0.1**
CEL	**Celeste**	**0.46**	**273**	Pg	**Pn**	**21 26 56.9**	**+0.2**
CEL				*e*S	**Sn**	**21 27 04.8**	**-0.9**
CEL				Sg	**Sn**	**21 27 05.7**	**0.0**
3μm,0.6s							
MPAZ	**Palizzi**	**0.46**	**233**	Pg	**Pn**	**21 26 56.6**	**-0.2**
MPAZ				Sg	**Sn**	**21 27 05.3**	**-0.5**
2μm,0.3s							
MPAZ	**Palizzi**	**0.46**	**233**	Pg	**Pn**	**21 26 56.6**	**-0.2**
MPAZ				Sg	**Sn**	**21 27 05.3**	**-0.5**
2μm,0.3s							

MSCL	**Scilla**	**0.54 270**	Pg	**Pn**	**21 26 57.7**	**+0.2**
MSCL			Sg	**Sn**	**21 27 07.2**	**+0.1**
4μm,0.6s						
MSCL	**Scilla**	**0.54 270**	Pg	**Pn**	**21 26 57.7**	**+0.2**
MSCL			Sg	**Sn**	**21 27 07.2**	**+0.1**
4μm,0.6s						
GRI	**Girifalco**	**0.59 356**	Pg	**Pn**	**21 26 58.8**	**+0.8**
GRI			Sg	**Sn**	**21 27 09.5**	**+1.5**
498nm,0.4s						
GRI	**Girifalco**	**0.59 356**	Pg	**Pn**	**21 26 58.8**	**+0.8**
JOPP	**Joppolo**	**0.59 309**	Pg	**Pn**	**21 26 58.7**	**+0.6**
JOPP			Sg	**Sn**	**21 27 08.7**	**+0.6**
1μm,0.6s						
JOPP	**Joppolo**	**0.59 309**	Pg	**Pn**	**21 26 58.7**	**+0.6**
SCLL	**Scilla**	**0.60 272**	Pg	**Pn**	**21 26 58.3**	**+0.2**
SCLL			Sg	**Sn**	**21 27 07.9**	**-0.3**
SCLL	**Scilla**	**0.60 272**	Pg	**Pn**	**21 26 58.3**	**+0.2**
SCLL			Sg	**Sn**	**21 27 07.9**	**-0.3**
MTTG	**Motta San Giov**	**0.66 250**⇑*e*Pg		**Pn**	**21 26 58.7**	**0.0**
MTTG			Sg	**Sn**	**21 27 09.1**	**-0.2**
3μm,0.5s						
MTTG	**Motta San Giov**	**0.66 250**⇑*e*Pg		**Pn**	**21 26 58.7**	**0.0**
MTTG			Sg	**Sn**	**21 27 09.1**	**-0.2**
3μm,0.5s						
MSRU	**Castanea**	**0.76 273**⇓*e*Pg		**Pn**	**21 27 00.0**	**+0.1**
MSRU			Sg	**Sn**	**21 27 11.1**	**-0.3**
4μm,0.3s						
MSRU	**Castanea**	**0.76 273**⇓*e*Pg		**Pn**	**21 27 00.0**	**+0.1**
MSRU			Sg	**Sn**	**21 27 11.1**	**-0.3**
4μm,0.3s						
SERS	**Sersale**	**0.82 12**⇑*i*Pg		**Pn**	**21 27 01.8**	**+1.2**
SERS			Sg	**Sn**	**21 27 14.2**	**+1.6**
400nm,0.5s						
SERS	**Sersale**	**0.82 12**⇑*i*Pg		**Pn**	**21 27 01.8**	**+1.2**
SERS			Sg	**Sn**	**21 27 14.2**	**+1.6**
400nm,0.5s						
MILZ	**Milazzo**	**0.98 273**	Pg	**Pn**	**21 27 02.2**	**-0.4**
MILZ			Sg	**Sn**	**21 27 15.4**	**-0.7**
2μm,0.4s						
MILZ	**Milazzo**	**0.98 273**	Pg	**Pn**	**21 27 02.2**	**-0.4**
MILZ			Sg	**Sn**	**21 27 15.4**	**-0.7**
2μm,0.4s						
MMME	**Mongiuffi-Meli**	**1.01 253**	Pg	**Pn**	**21 27 03.3**	**+0.4**
2μm,0.4s						
MMME	**Mongiuffi-Meli**	**1.01 253**	Pg	**Pn**	**21 27 03.3**	**+0.4**
2μm,0.4s						
CARO	**Carolei**	**1.04 349**	Pg	**Pn**	**21 27 04.3**	**+1.0**
1μm,0.6s						
CARO	**Carolei**	**1.04 349**	Pg	**Pn**	**21 27 04.3**	**+1.0**
1μm,0.6s						
LADO	**San Nicola del**	**1.12 20**	Pg	**Pn**	**21 27 05.2**	**+0.8**
462nm,0.4s						
LADO	**San Nicola del**	**1.12 20**	Pg	**Pn**	**21 27 05.2**	**+0.8**
462nm,0.4s						
VPL	**Vulcano Piano**	**1.18 278**	Pg	**Pn**	**21 27 04.9**	**-0.2**
1μm,0.2s						
VPL	**Vulcano Piano**	**1.18 278**	Pg	**Pn**	**21 27 04.9**	**-0.2**
1μm,0.2s						
LLI	**Lipari**	**1.22 280**	Pg	**Pn**	**21 27 05.7**	**+0.1**
4μm,0.4s						
LLI	**Lipari**	**1.22 280**	Pg	**Pn**	**21 27 05.7**	**+0.1**
4μm,0.4s						
SLNA	**Salina**	**1.33 285**	Pg	**Pn**	**21 27 07.4**	**+0.3**
748nm,0.4s						
SLNA	**Salina**	**1.33 285**	Pg	**Pn**	**21 27 07.4**	**+0.3**
748nm,0.4s						
HAGA	**Augusta**	**1.41 228**	Pg	**Pn**	**21 27 06.5**	**-1.6**
641nm,0.2s						
TDS	**Terranova Siba**	**1.43 356**	Pg	**Pn**	**21 27 10.1**	**+1.7**
45nm,0.3s						
TDS	**Terranova Siba**	**1.43 356**	Pg	**Pn**	**21 27 10.1**	**+1.7**
45nm,0.3s						
HCRL	**Carlentini**	**1.48 231**⇑*i*Pg		**Pn**	**21 27 07.8**	**-1.3**
1μm,0.2s						
ECNV	**Catenanuova**	**1.53 246**	Pg	**Pn**	**21 27 10.0**	**+0.3**
564nm,0.5s						
IFIL	**Filicudi I Eol**	**1.54 283**	Pg	**Pn**	**21 27 09.6**	**-0.2**
1μm,0.3s						
SSY	**Sortino**	**1.55 226**	Pg	**Pn**	**21 27 08.5**	**-1.5**
3μm,0.2s						
GALF	**Gagliano Caste**	**1.59 251**	Pg	**Pn**	**21 27 11.1**	**+0.5**
1μm,0.5s						
ACL	**Alicudi**	**1.69 281**	Pg	**Pn**	**21 27 11.5**	**-0.4**
606nm,0.2s						
HVZN	**Vizzini**	**1.75 233**	Pg	**Pn**	**21 27 11.5**	**-1.1**
HVZN			Sg	**Sn**	**21 27 32.0**	**-2.0**
1μm,0.3s						
VAE	**Valguarnera**	**1.80 246**	Pn	**Pn**	**21 27 14.9**	**+1.6**
5.2nm,0.3s,baz=282,slow=3.8,SNR=12						
VAE			Sn	**Sn**	**21 27 33.6**	**-1.6**
36nm,0.3s,baz=116,slow=4.2,SNR=10						
VAE	**Valguarnera**	**1.80 246**	Pn	**Pn**	**21 27 14.9**	**+1.6**
VAE			Sn	**Sn**	**21 27 33.6**	**-1.6**
VAE	**Valguarnera**	**1.80 246**	Pn	**Pn**	**21 27 14.9**	**+1.6**
VAE			Sn	**Sn**	**21 27 33.6**	**-1.6**
CUC	**Castrocucco**	**1.83 344**	*e*Pn	**Pn**	**21 27 13.5**	**-0.2**
CUC	**Castrocucco**	**1.83 344**	Pg	**Pn**	**21 27 14.1**	**+0.4**
159nm,0.3s						
CUC	**Castrocucco**	**1.83 344**	*e*Pn	**Pn**	**21 27 13.5**	**-0.2**
HMDC	**Modica**	**1.85 227**	Pg	**Pn**	**21 27 12.9**	**-1.1**
GIB	**Gibilmanna**	**1.95 264**	Pg	**Pn**	**21 27 15.5**	**+0.2**
382nm,0.5s						
RAFF	**Raffo Rosso**	**1.96 240**	Pg	**Pn**	**21 27 15.2**	**-0.2**
643nm,0.5s						
SCHR	**S. Chirico Rap**	**1.99 351**	Pg	**Pn**	**21 27 17.4**	**+1.5**
55nm,0.6s						
SIRI	**Monte Sirino -**	**2.00 347**	Pg	**Pn**	**21 27 16.7**	**+0.6**
222nm,0.3s						
BULG	**Bulgheria - Ca**	**2.03 336**	Pg

KFL	Anninata	3.40	91	P		Pn	21 27 34.7	-0.4
KFL	Anninata	3.40	91	P		Pn	21 27 34.7	-0.4
RGNG	Rignano Grg	3.50	349	Pg		Pn	21 27 36.8	+0.4
MIDA	Miranda	3.81	334	Pg		Pn	21 27 42.6	+2.0
	16nm,0.8s							
CERA	Filignano	3.85	331	Pg		Pn	21 27 43.2	+2.0
	27nm,0.5s							
TIR	Tirane	4.06	39	P		Pn	21 27 43.9	-0.2
TIR	Tirane	4.06	39	P		Pn	21 27 43.9	-0.2
POFI	Posta Fibreno	4.08	329	Pg		Pn	21 27 46.3	+2.1
	12nm,0.9s							
GIUL	Giuliano Di Ro	4.14	324	Pg		Pn	21 27 46.4	+1.2
	11nm,0.6s							
NEST	Nestorio	4.16	57	P		Pn	21 27 46.4	+1.0
NEST	Nestorio	4.16	57	P		Pn	21 27 46.4	+1.0
EVR	Evrytania	4.24	79	*e*P		Pn	21 27 49.5	+3.1
VVLD	Villa Vallelon	4.24	330	Pg		Pn	21 27 48.6	+2.1
EFP	Efpalio	4.28	86	*e*P		Pn	21 27 48.5	+1.5
EFP	Efpalio	4.28	86	P		Pn	21 27 47.7	+0.7
EFP	Efpalio	4.28	86	P		Pn	21 27 47.7	+0.7
ULC	Ulcinj	4.29	29	⇓*i*Pn		Pn	21 27 45.8	-1.4
ULC				*e*Sn		Sn	21 28 32.8	-3.1
ULC	Ulcinj	4.29	29	⇓*i*Pn		Pn	21 27 45.8	-1.4
ULC				*e*Sn		Sn	21 28 32.8	-3.1
PYL	PYLOS	4.39	106	*e*P		Pn	21 27 48.5	-0.1
PYL	PYLOS	4.39	106	P		Pn	21 27 48.5	-0.1
PYL	PYLOS	4.39	106	P		Pn	21 27 48.5	-0.1
OHR	Ohrid	4.40	48	*i*Pn		Pn	21 27 48.8	+0.1
TRIZ	Trizonia	4.41	87	P		Pn	21 27 49.8	+1.0
TRIZ	Trizonia	4.41	87	P		Pn	21 27 49.8	+1.0
ITM	Ithomi	4.45	102	*e*P		Pn	21 27 49.5	+0.1
ITM	Ithomi	4.45	102	P		Pn	21 27 49.2	-0.2
ITM	Ithomi	4.45	102	P		Pn	21 27 49.2	-0.2
KALE	Kalithea	4.46	86	P		Pn	21 27 50.6	+1.1
KALE	Kalithea	4.46	86	P		Pn	21 27 50.6	+1.1
BUM	Brajici-Budva	4.47	24	⇓*i*Pn		Pn	21 27 48.8	-0.8
BUM				*e*Sn		Sn	21 28 38.0	-2.2
BUM	Brajici-Budva	4.47	24	⇓*i*Pn		Pn	21 27 48.8	-0.8
BUM				*e*Sn		Sn	21 28 38.0	-2.2
HCY	Herceg Novi	4.48	20	⇓*i*Pn		Pn	21 27 49.2	-0.6
HCY				*e*Sn		Sn	21 28 38.4	-2.3
HCY	Herceg Novi	4.48	20	⇓*i*Pn		Pn	21 27 49.2	-0.6
HCY				*e*Sn		Sn	21 28 38.4	-2.3
THL	Klokotos Trika	4.52	71	P		Pn	21 27 51.8	+1.5
THL	Klokotos Trika	4.52	71	P		Pn	21 27 51.8	+1.5
FNA	Florina	4.57	55	P		Pn	21 27 51.3	+0.3
FNA	Florina	4.57	55	P		Pn	21 27 51.3	+0.3
KZN	Kozani	4.60	62	P		Pn	21 27 52.6	+1.2
KZN	Kozani	4.60	62	P		Pn	21 27 52.6	+1.2
GUR	Goura	4.64	92	*e*P		Pn	21 27 53.5	+1.5
AGG	Agios Georgios	4.65	78	*e*P		Pn	21 27 53.5	+1.4
AGG	Agios Georgios	4.65	78	P		Pn	21 27 53.9	+1.8
AGG	Agios Georgios	4.65	78	P		Pn	21 27 53.9	+1.8
BIA	Bitola	4.67	52	*i*Pn		Pn	21 27 52.0	-0.3
BIA				*i*Sn		Sn	21 28 43.6	-1.5
PDG	Podgorica	4.70	26	⇓*i*Pn		Pn	21 27 51.7	-1.1
PDG				*e*Sn		Sn	21 28 43.0	-3.0
TTG	Podgorica	4.70	26	⇓*i*Pn		Pn	21 27 51.7	-1.1
TTG				*e*Sn		Sn	21 28 43.0	-3.0
TTG	Podgorica	4.70	26	⇓*i*Pn		Pn	21 27 51.7	-1.1
TTG				*e*Sn		Sn	21 28 43.0	-3.0
STON	Ston	4.73	11	*e*Pn		Pn	21 27 50.7	-2.4
STON				Sn		Sn	21 28 41.3	-5.2
STON	Ston	4.73	11	*e*Pn		Pn	21 27 50.7	-2.4
STON				Sn		Sn	21 28 41.3	-5.3
VLX	Vlachokerasia	4.76	99	*e*P		Pn	21 27 55.0	+1.4
VLX	Vlachokerasia	4.76	99	P		Pn	21 27 54.7	+1.1
VLX	Vlachokerasia	4.76	99	P		Pn	21 27 54.7	+1.1
DSF	Desfina	4.76	86	P		Pn	21 27 55.3	+1.6
DSF	Desfina	4.76	86	P		Pn	21 27 55.3	+1.6
KRUS	Krusevo	4.83	48	*i*Pn		Pn	21 27 53.9	-0.7
BRY	Bratogost	4.92	18	⇑*i*Pn		Pn	21 27 54.5	-1.3
BRY				*e*Sn		Sn	21 28 48.3	-3.1
BRY	Bratogost	4.92	18	⇑*i*Pn		Pn	21 27 54.5	-1.3
BRY				*e*Sn		Sn	21 28 48.3	-3.1
NKY	Niksic	4.96	22	⇓*i*Pn		Pn	21 27 55.2	-1.1
NKY				*e*Sn		Sn	21 28 48.5	-3.9
NKY	Niksic	4.96	22	⇓*i*Pn		Pn	21 27 55.2	-1.1
NKY				*e*Sn		Sn	21 28 48.5	-3.9
LIT	Litokhoron	5.03	66	*e*P		Pn	21 27 58.0	+0.7
LIT	Litokhoron	5.03	66	P		Pn	21 27 58.3	+1.0
LIT	Litokhoron	5.03	66	P		Pn	21 27 58.3	+1.0
LKR	Lokris	5.14	83	*e*P		Pn	21 28 00.0	+1.2
GRG	Griva	5.33	57	P		Sn	21 29 00.7	-0.6
DID	Didima	5.40	96	*e*P		Pn	21 28 02.5	+0.1
KYTH	Kithira	5.58	108	*e*P		Pn	21 28 06.0	+1.1
VAY	Valandovo	5.62	55	*i*Pn		Pn	21 28 03.9	-1.5
VAY				*i*Sn		Sn	21 29 02.5	-5.9
PLG	Polygyros	5.81	66	P		Pn	21 28 07.8	-0.2
PLG	Polygyros	5.81	66	P		Pn	21 28 07.8	-0.2
PAIG	Paliouri	5.86	71	P		Pn	21 28 08.8	+0.2
PAIG	Paliouri	5.86	71	P		Pn	21 28 08.8	+0.2
BBLS	Lazići	6.05	21	*i*Pn		Pn	21 28 11.0	-0.2
BARS	Barje	6.12	40	*e*Pn		Pn	21 28 11.0	-1.2
KKB	Krupnik	6.24	52	P		Pn	21 28 14.0	+0.3
KKB	Krupnik	6.24	52	P		Pn	21 28 14.0	+0.3
DIVS	Divibare	6.43	23	⇓*i*Pn		Pn	21 28 15.4	-1.0
NVLJ	Novalja	6.44	350	Sn		Sn	21 29 25.1	-3.4
NVLJ	Novalja	6.44	350	Sn		Sn	21 29 25.1	-3.4
MMB	Musomiste	6.50	57	P		Pn	21 28 18.2	+0.8
MMB	Musomiste	6.50	57	P		Pn	21 28 18.2	+0.8
KARN	Karanos	6.61	113	*e*P		Pn	21 28 19.0	+0.1
KARN	Karanos	6.61	113	P		Pn	21 28 19.1	+0.2
KARN	Karanos	6.61	113	P		Pn	21 28 19.1	+0.2
VTS	Vitosha	6.73	48	P		Pn	21 28 20.9	+0.3
VTS	Vitosha	6.73	48	P		Pn	21 28 20.9	+0.3
VAM	Vamos	6.81	112	*e*P		Pn	21 28 21.5	-0.1
ZAPS	Zavoj	6.87	41	*i*Pn		Pn	21 28 22.7	+0.3
BOLS	Boljevac	6.96	35	*i*Pn		Pn	21 28 22.7	-0.9
RZN	Rozhen	7.21	59	P		Pn	21 28 28.1	+1.0
RZN	Rozhen	7.21	59	P		Pn	21 28 28.1	+1.0
FGSL	Fruska Gora	7.35	19	*i*Pn		Pn	21 28 27.5	-1.5
DAVOX	Davos/Dischmat	9.83	332	LR		LR	21 32 60.0	
	comp=Z,99nm,19.7s,baz=173,slow=39							
MLR	Muntele Rosu	10.12	41	Pn		Pn	21 29 05.2	-1.6
	0.1nm,0.3s,baz=201,slow=14,SNR=2.3							
MLR	Muntele Rosu	10.12	41	Pn		Pn	21 29 05.2	-1.6
MMAI	Mount Meron Ar	16.24	103	Pn		Pn	21 30 25.6	-2.6
	1.2nm,0.3s,baz=310,slow=12,SNR=7.2							
EIL	Elat	17.53	114	P		Pn	21 30 43.9	-0.3
	0.8nm,0.3s,baz=318,slow=14,SNR=8.1							
EIL	Elat	17.53	114	P		Pn	21 30 43.9	-0.2
FINES	FINESS Array B	23.99	11	P		P	21 31 52.8	+0.5
	0.8nm,0.4s,mb3.4,baz=190,slow=8.4,SNR=9.4							
FINES	FINESS Array B	23.99	11	P		P	21 31 52.8	+0.5
ARCES	ARCESS Array B	31.74	6	P		P	21 33 00.9	-0.5
	0.3nm,0.6s,mb3.2,baz=180,slow=9.6,SNR=4.0							
ARCES	ARCESS Array B	31.74	6	P		P	21 33 00.9	-0.5
DBIC	Dimbokro	36.89	217	LR		LR	21 50 50.9	
	comp=Z,494nm,21.7s,baz=196,slow=39							
BVAR	Borovoye Array	39.53	50	P		P	21 34 08.4	+0.2
	0.5nm,0.6s,mb3.5,baz=261,slow=7.2,SNR=3.2							
BVAR	Borovoye Array	39.53	50	P		P	21 34 08.4	+0.2
MKAR	Makanchi Array	47.98	58	P		P	21 35 16.9	+0.8
	0.6nm,0.4s,mb3.7,baz=280,slow=7.1,SNR=18							
MKAR	Makanchi Array	47.98	58	P		P	21 35 16.9	+0.8
ZALV	Zalesovo Beam	48.02	48	P		P	21 35 16.8	+0.5
	0.9nm,0.4s,mb4.0,baz=291,slow=9.0,SNR=4.5							
ZALV	Zalesovo Beam	48.02	48	P		P	21 35 16.8	+0.5
SONM	Songino Array	62.86	49	P		P	21 37 04.8	+1.9
	0.6nm,0.7s,mb3.6,baz=293,slow=6.6,SNR=3.4							

*ISCJB **29** 21:35:05.5±0.4, 40.°72N±0.°02×21.°90E±0.°02, h2km±4km, Error ellipse: s-maj=3.3km s-min=2.9km az=37.2*
*CSEM **29** 21:35:06.0±0.1, 40.°71N×21.°91E, h2km, MD3.4, Error ellipse: s-maj=2.1km s-min=1.8km az=27.0*
*SKO **29** 21:35:06.2, 40.°81N×21.°88E, h7km, M2.5, ML2.8*
*THE **29** 21:35:06.0, 40.°71N×21.°89E, h0km±1km, ML3.6/5, Error ellipse: s-maj=1.5km s-min=0.3km az=44.0*
*ATH **29** 21:35:06.5, 40.°67N×21.°90E, h18km±2km, MD3.4/11*
*NEIC **29** 21:35:06.5, 40.°67N×21.°90E, h18km, MD3.4(ATH), After ATH.*
ISC 29 21:35:06.1±0.3, **40.°72N**±0.°02×**21.°91E**±0.°02, **h2**km±4km, **n95**, σ0°91/129, **1C-1D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FNA	Florina	0.41	280	P	Pg	21 35 13.7	-0.3
	4μm,0.4s						
FNA				S	Sg	21 35 19.4	+0.1
FNA	Florina	0.41	280	P	Pg	21 35 13.7	-0.3
	4μm,0.4s						
FNA				S	Sg	21 35 19.4	+0.1
KZN	Kozani	0.42	195	*e*Pb	Pg	21 35 13.9	-0.3
KZN				*e*Sb	Sg	21 35 19.6	-0.1
KZN	Kozani	0.42	195	*e*PB	Pg	21 35 13.9	-0.3
KZN				*e*SB	Sg	21 35 19.6	-0.1
KZN	Kozani	0.42	195	P	Pg	21 35 13.9	-0.3
	2μm,0.4s						
KZN				S	Sg	21 35 20.3	+0.6
KZN	Kozani	0.42	195	P	Pg	21 35 13.9	-0.3
	2μm,0.4s						
KZN				*e*Sb	Sg	21 35 19.6	-0.1
KZN				S	Sg	21 35 20.3	+0.6
GRG	Griva	0.44	57	P	Pg	21 35 14.7	+0.1
	2μm,0.5s						
GRG				S	Sg	21 35 22.3	+1.9
GRG	Griva	0.44	57	P	Pg	21 35 14.7	+0.1
	2μm,0.5s						
GRG				S	Sg	21 35 22.3	+1.9
BIA	Bitola	0.54	304	*i*Pg	Pg	21 35 15.8	-0.6
BIA				*i*Sg	Sg	21 35 24.3	+0.9
BIA				*e*Lg		21 35 24.8	
	comp=E,324nm,0.2s						
BIA				*e*Lg		21 35 24.9	
	comp=N,314nm,0.2s						
BIA	Bitola	0.54	304	P	Pg	21 35 15.6	-0.8
BIA				S	Sg	21 35 24.0	+0.6
BIA	Bitola	0.54	304	P	Pg	21 35 15.6	-0.8
BIA				S	Sg	21 35 24.0	+0.6
NEST	Nestorio	0.72	246	P	Pg	21 35 19.3	-0.6
NEST	Nestorio	0.72	246	P	Pg	21 35 19.3	-0.6
LIT	Litokhoron	0.76	144	*e*Pn	Pn	21 35 20.3	-3.5
LIT				*e*Sn	Sg	21 35 31.5	+1.1
LIT	Litokhoron	0.76	144	*e*PN	Pn	21 35 20.3	-3.5
LIT				*e*SN	Sg	21 35 31.5	+1.1
LIT	Litokhoron	0.76	144	P	Pg	21 35 20.2	-0.4
	comp=N,1μm,0.2s						
LIT				S	Sg	21 35 31.7	+1.3
LIT	Litokhoron	0.76	144	P	Pg	21 35 20.2	-0.4
	comp=N,1μm,0.2s						
LIT				S	Sg	21 35 31.7	+1.3
VAY	Valandovo	0.78	39	*i*Pg	Pg	21 35 21.0	-0.1
VAY				*i*Sg	Sg	21 35 33.7	+2.5
VAY				*e*Lg		21 35 36.0	
	comp=N,209nm,0.5s						
VAY				*e*Lg		21 35 36.4	
	comp=E,210nm,0.4s						
VAY	Valandovo	0.78	39	P	Pg	21 35 20.9	-0.2
VAY				S	Sg	21 35 32.5	+1.2
VAY	Valandovo	0.78	39	P	Pg	21 35 20.9	-0.2
VAY				S	Sg	21 35 32.5	+1.2
THE	Thessaloniki	0.81	96	P	Pg	21 35 21.7	+0.1
THE	Thessaloniki	0.81	96	P	Pg	21 35 21.7	+0.1
KRUS	Krusevo	0.82	323	*i*Pg	Pg	21 35 21.0	-0.9
KRUS				*i*Sg	Sg	21 35 32.1	-0.4
KRUS				*e*Lg		21 35 32.1	
	comp=E,89nm,0.2s						
KRUS				*e*Lg		21 35 32.5	
	comp=N,109nm,0.2s						
KNT	Kendrikon	0.87	59	P	Pg	21 35 23.2	+0.4
KNT	Kendrikon	0.87	59	P	Pg	21 35 23.2	+0.4
HORT	Hortiatis	0.91	97	P	Pg	21 35 23.5	-0.1
	comp=N,480nm,0.6s						
HORT	Hortiatis	0.91	97	P	Pg	21 35 23.5	-0.1
	comp=N,480nm,0.6s						
OHR	Ohrid	0.93	295	*i*Pg	Pg	21 35 22.1	-1.8
OHR				*i*Sg	Sg	21 35 36.1	+0.1
OHR				*e*Lg		21 35 36.5	
	comp=E,251nm,0.5s						
OHR				*e*Lg		21 35 37.8	
	comp=N,296nm,0.5s						
OHR	Ohrid	0.93	295	P	Pg	21 35 23.0	-0.9
OHR				S	Sg	21 35 36.6	+0.6
OHR	Ohrid	0.93	295	P	Pg	21 35 23.0	-0.9
OHR				S	Sg	21 35 36.6	+0.6
SOH	Sokhos	1.10	84	*e*Pn	Pn	21 35 27.4	-1.1
SOH	Sokhos	1.10	84	*e*PN	Pn	21 35 27.4	-1.1
SOH	Sokhos	1.10	84	P	Pg	21 35 27.2	0.0
SOH	Sokhos	1.10	84	P	Pg	21 35 27.2	0.0
THL	Klokotos Trika	1.15	176	*e*PN	Pn	21 35 27.8	-1.4
THL				*e*SN	Sn	21 35 42.1	-3.4
THL	Klokotos Trika	1.15	176	P	Pg	21 35 27.9	-0.3
THL				S	Sg	21 35 44.2	+1.1
THL	Klokotos Trika	1.15	176	P	Pg	21 35 27.9	-0.3
THL				S	Sg	21 35 44.2	+1.1
PLG	Polygyros	1.22	106	*e*Pn	Pn	21 35 29.2	-0.9
PLG	Polygyros	1.22	106	*e*PN	Pn	21 35 29.2	-0.9
PLG	Polygyros	1.22	106	P	Pg	21 35 29.0	-0.5
PLG				S	Sg	21 35 46.9	+1.7
PLG	Polygyros	1.22	106	P	Pg	21 35 29.0	-0.5
PLG				S	Sg	21 35 46.9	+1.7
SKO	Skopje	1.30	344	*i*Pg	Pg	21 35 28.2	-2.9
SKO				*i*Sg	Sg	21 35 47.9	-0.1
SKO				*e*Lg		21 35 48.3	
	comp=E,122nm,0.2s						
SKO				*e*Lg		21 35 48.6	
	comp=N,203nm,0.3s						
SKO	Skopje	1.30	344	P	Pg	21 35 28.4	-2.7
SKO	Skopje	1.30	344	P	Pg	21 35 28.4	-2.7
JAN	Janina	1.33	218	*e*Pn	Pn	21 35 31.9	+0.2
JAN	Janina	1.33	218	*e*PN	Pn	21 35 31.9	+0.2
JAN	Janina	1.33	218	*e*Pn	Pn	21 35 31.9	+0.2
SRS	Serrai	1.34	72	P	Pg	21 35 31.0	-0.7
SRS	Serrai	1.34	72	P	Pg	21 35 31.0	-0.7
PAIG	Paliouri	1.57	120	P	Pn	21 35 33.9	-1.0
PAIG	Paliouri	1.57	120	P	Pn	21 35 33.9	-1.0
OUR	Ouranopolis	1.62	103	P	Pn	21 35 35.4	-0.3
OUR	Ouranopolis	1.62	103	P	Pn	21 35 35.4	-0.3
XOR	Xorichti	1.67	143	P	Pn	21 35 35.5	-0.8
XOR	Xorichti	1.67	143	P	Pn	21 35 35.5	-0.8
TIR	Tirane	1.67	293	*e*Pn	Pn	21 35 36.1	-0.3
TIR				*e*S	Sn	21 36 01.5	+3.2
TIR	Tirane	1.67	293	P	Pn	21 35 36.7	+0.4
TIR	Tirane	1.67	293	*e*Pn	Pn	21 35 36.1	-0.2
TIR	Tirane	1.67	293	P	Pn	21 35 36.7	+0.4
TIR				*e*S	Sn	21 36 01.5	+3.2
SRN	Sarande	1.68	241	*i*PN	Pn	21 35 38.9	+2.4
SRN				*i*SN	Sn	21 36 00.0	+1.4
SRN	Sarande	1.68	241	*i*Pn	Pn	21 35 38.9	+2.4
SRN				*i*Sn	Sn	21 36 00.0	+1.4
AGG	Agios Georgios	1.72	169	*e*Pn	Pn	21 35 36.8	-0.2
AGG	Agios Georgios	1.72	169	*e*PN	Pn	21 35 36.8	-0.2
AGG	Agios Georgios	1.72	169	P	Pn	21 35 36.8	-0.2
AGG	Agios Georgios	1.72	169	P	Pn	21 35 36.8	-0.2
NEO	Neokhori	1.73	144	*e*Pn	Pn	21 35 36.7	-0.5
NEO	Neokhori	1.73	144	*e*PN	Pn	21 35 36.7	-0.5
NEO	Neokhori	1.73	144	*e*Pn	Pn	21 35 36.7	-0.5
EVR	Evrytania	1.80	183	*e*Pn	Pn	21 35 38.4	+0.3
EVR	Evrytania	1.80	183	*e*PN	Pn	21 35 38.4	+0.3
EVR	Evrytania	1.80	183	*e*Pn	Pn	21 35 38.4	+0.3
KEK	Kerkira	1.90	239	*e*Pn	Pn	21 35 40.6	+1.1
KEK	Kerkira	1.90	239	*e*PN	Pn	21 35 40.6	+1.1
KEK	Kerkira	1.90	239	P	Pn	21 35 40.6	+1.1
KEK	Kerkira	1.90	239	P	Pn	21 35 40.6	+1.1
KAVA	Kavala	1.99	81	P	Pn	21 35 40.3	-0.5
KAVA	Kavala	1.99	81	P	Pn	21 35 40.3	-0.5
PUK	Puka	2.02	312	*e*PN	Pn	21 35 41.6	+0.5
PUK	Puka	2.02	312	*e*Pn	Pn	21 35 41.6	+0.5
BARS	Barje	2.10	358	⇑*i*Pn	Pn	21 35 42.3	+0.1
VTS	Vitosha	2.11	27	P	Pn	21 35 43.1	+0.7
VTS	Vitosha	2.11	27	P	Pn	21 35 43.1	+0.7
BCI	Bajram Curri	2.15	321	*e*PN	Pn	21 35 43.4	+0.4
BCI				*i*SN	Sn	21 36 16.4	+6.2
BCI	Bajram Curri	2.15	321	*e*Pn	Pn	21 35 43.4	+0.4
EFP	Efpalio	2.29	180	P	Pn	21 35 44.8	0.0
EFP	Efpalio	2.29	180	P	Pn	21 35 44.8	0.0
KALE	Kalithea	2.33	176	P	Pn	21 35 45.0	-0.4
KALE	Kalithea	2.33	176	P	Pn	21 35 45.0	-0.4
VLS	Valsamata	2.73	202	*e*Pn	Pn	21 35 51.2	+0.2
VLS	Valsamata	2.73	202	*e*PN	Pn	21 35 51.2	+0.2
VLS	Valsamata	2.73	202	*e*Pn	Pn	21 35 51.2	+0.2
GRUS	Gruza	3.29	345	*e*Pn	Pn	21 35 58.0	-0.6
BBLS	Lazići	3.66	330	*e*Pn	Pn	21 36 04.5	+0.9
DIVS	Divibare	3.67	338	⇓*i*Pn	Pn	21 36 03.8	0.0
FGSL	Fruska Gora	4.70	342	*e*Pn	Pn	21 36 17.3	-0.6

*IDC **29** 21:37:26.2±1.4, 37.°39N×20.°93E, h0km, mb3.7/7, mb1 3.7/9, mb1mx3.5/26, mbtmp3.6/9, ML3.4/2, Error ellipse: s-maj=29.4km s-min=23.2km az=139.0*
*CSEM **29** 21:37:34.9±0.2, 38.°09N×21.°70E, h9km, ML3.3, Error ellipse: s-maj=4.2km s-min=4.0km az=33.0*
*ISCJB **29** 21:37:34.6±0.4, 38.°08N±0.°02×21.°71E±0.°03, h3km±3km, mb3.5/6, Error ellipse: s-maj=3.4km s-min=3.1km az=152.1*
*ATH **29** 21:37:34.9, 38.°11N×21.°71E, h15km±1km, MD3.4/7, ML3.3*
*NEIC **29** 21:37:34.9, 38.°11N×21.°71E, h15km, ML3.3(ATH), After ATH.*
*THE **29** 21:37:34.9, 38.°10N×21.°72E, h0km±1km, ML4.0/5, Error ellipse: s-maj=1.5km s-min=0.4km az=218.0*
ISC 29 21:37:35.1±0.4, **38.°09N**±0.°02×**21.°70E**±0.°03, **h4**km±3km, **n127**, σ1°01/169, **mb3.5**/6, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.19	259	*e*Pb	Pg	21 37 39.0	+0.2
RLS	Riolos of Patr	0.19	259	*e*PB	Pg	21 37 39.0	+0.2
RLS	Riolos of Patr	0.19	259	*e*Pb	Pg	21 37 39.0	+0.2
UPR	University Cam	0.20	19	*e*PB	Pg	21 37 38.9	-0.2
UPR				*e*SB	Sg	21 37 42.6	+0.8
UPR	University Cam	0.20	19	P	Pg	21 37 38.7	-0.4
UPR				S	Sg	21 37 42.2	+0.4
UPR	University Cam	0.20	19	*e*Pb	Pg	21 37 38.9	-0.2
UPR				S	Sg	21 37 42.2	+0.4
UPR				*e*Sb	Sg	21 37 42.6	+0.8
LAKA	Lakka	0.26	56	P	Pg	21 37 40.0	-0.2
LAKA				S	Sg	21 37 43.6	-0.1
LAKA	Lakka	0.26	56	P	Pg	21 37 40.0	-0.2
LAKA				S	Sg	21 37 43.6	-0.1
EFP	Efpalio	0.37	25	*e*PB	Pg	21 37 42.0	-0.3
EFP				*e*SB	Sg	21 37 47.5	+0.4
EFP	Efpalio	0.37	25	P	Pg	21 37 41.6	-0.7
EFP				S	Sg	21 37 47.3	+0.2
EFP	Efpalio	0.37	25	P	Pg	21 37 41.6	-0.7
EFP	Efpalio	0.37	25	*e*Pb	Pg	21 37 42.0	-0.3
EFP				*e*Sb	Sg	21 37 47.5	+0.4
TRIZ	Trizonia	0.40	47	P	Pg	21 37 42.2	-0.6
TRIZ				S	Sg	21 37 48.7	+0.7
TRIZ	Trizonia	0.40	47	P	Pg	21 37 42.2	-0.6
TRIZ				S	Sg	21 37 48.7	+0.7
KALE	Kalithea	0.46	49	P	Pg	21 37 43.2	-0.7
KALE				S	Sg	21 37 50.1	+0.3
KALE	Kalithea	0.46	49	P	Pg	21 37 43.2	-0.7
KALE				S	Sg	21 37 50.1	+0.3
GUR	Goura	0.53	107	*e*PN	Pg	21 37 44.7	-0.6
GUR	Goura	0.53	107	P	Pg	21 37 44.6	-0.7
GUR				S	Sg	21 37 52.8	+0.7
GUR	Goura	0.53	107	*e*Pn	Pg	21 37 44.7	-0.6
GUR				S	Sg	21 37 52.8	+0.7
DSF	Desfina	0.72	64	P	Pg	21 37 47.7	-1.3
DSF				S	Sg	21 37 59.2	+0.8
DSF	Desfina	0.72	64	P	Pg	21 37 47.7	-1.3
DSF				S	Sg	21 37 59.2	+0.8
KFL	Anninata	0.72	272	P	Pg	21 37 49.2	+0.2
KFL	Anninata	0.72	272	P	Pg	21 37 49.2	+0.2
EVR	Evrytania	0.83	6	*e*Pn	Pg	21 37 51.1	+0.1
EVR				*e*Sn	Sg	21 38 02.1	+0.4
EVR	Evrytania	0.83	6	*e*PN	Pg	21 37 51.1	+0.1
EVR				*e*SN	Sg	21 38 02.1	+0.4
EVR	Evrytania	0.83	6	*e*Pn	Pg	21 37 51.1	+0.1
EVR				*e*Sn	Sg	21 38 02.1	+0.4
VLS	Valsamata	0.88	276	*e*Pn	Pg	21 37 51.8	-0.3
VLS				*e*Sn	Sg	21 38 05.2	+1.7
VLS	Valsamata	0.88	276	*e*PN	Pg	21 37 51.8	-0.3
VLS				*e*SN	Sg	21 38 05.2	+1.7
VLS	Valsamata	0.88	276	P	Pg	21 37 51.4	-0.7
VLS				S	Sg	21 38 05.2	+1.7
VLS	Valsamata	0.88	276	P	Pg	21 37 51.4	-0.7
VLS	Valsamata	0.88	276	*e*Pn	Pg	21

OUR	Ouranopolis	2.85	38	P		Pn	21 38 26.2	+4.8
BIA	Bitola	2.94	354	*i* Pn		Pn	21 38 26.4	+3.8
BIA				*e*Sn		Sn	21 39 02.2	+4.0
OHR	Ohrid	3.10	347	*i* Pn		Pn	21 38 32.2	+7.5
APE	Apeiranthos	3.21	107	*e*Pn		Pn	21 38 27.0	+0.7
APE	Apeiranthos	3.21	107	*e*PN		Pn	21 38 27.0	+0.7
APE	Apeiranthos	3.21	107	*e*Pn		Pn	21 38 27.0	+0.7
KRUS	Krusevo	3.29	354	*i* Pn		Pn	21 38 28.4	+1.0
VAY	Valandovo	3.29	11	*e*Pn		Pn	21 38 31.2	+3.7
VAY				*e*Sn		Sn	21 39 04.1	-2.9
NVR	Nevrokopi	3.65	26	*e*Pn		Pn	21 38 33.0	+0.6
NVR	Nevrokopi	3.65	26	*e*PN		Pn	21 38 33.0	+0.6
NVR	Nevrokopi	3.65	26	*e*Pn		Pn	21 38 33.0	+0.6
MLR	Muntele Rosu	8.04	22	Pn		Pn	21 39 37.7	+5.1
	0.1nm,0.3s,baz=221,slow=5.1,SNR=2.3							
BRTR	Keskin Array B	9.45	76	Pn		Pn	21 39 54.5	+2.6
	0.2nm,0.3s,baz=263,slow=13,SNR=5.4							
HFS	Hagfors	22.64	350	P		P	21 42 35.2	-1.7
	0.8nm,0.6s,mb3.4,baz=148,slow=12,SNR=4.8							
HFS	Hagfors	22.64	350	P		P	21 42 35.2	-1.6
FINES	FINESS Array B	23.54	5	P		P	21 42 43.3	-3.0
	1.2nm,0.7s,mb3.4,baz=185,slow=15,SNR=2.6							
NOA	NORSAR Array B	23.89	347	P		P	21 42 46.8	-2.8
	0.6nm,0.7s,mb3.2,baz=159,slow=12,SNR=3.6							
EKA	Eskdalemuir Ar	24.04	324	P		P	21 42 45.8	-5.2
	1.2nm,0.9s,mb3.3,baz=122,slow=10,SNR=3.1							
MK31	Makanchi Array	44.55	59	*e*P		P	21 45 44.8	-3.1
MK31	Makanchi Array	44.55	59	*e*P		P	21 45 44.8	-3.1
MKAR	Makanchi Array	44.55	59	P		P	21 45 47.2	-0.7
	0.8nm,0.6s,mb3.8,baz=276,slow=7.4,SNR=17							
MKAR	Makanchi Array	44.55	59	P		P	21 45 47.2	-0.7
ZALV	Zalesovo Beam	45.05	48	P		P	21 45 50.9	-0.9
	1.2nm,0.5s,mb4.0,baz=272,slow=7.8,SNR=3.8							
ZALV	Zalesovo Beam	45.05	48	P		P	21 45 50.9	-0.9

DJA 29 21:49:31.0˚11S×123˚91E, h53km, MLv3.9/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	Cibinong	0.68	6	P	Pn	21 49 46.9	+2.2
KMSI				S	Sn	21 49 57.3	+2.7
LUWI	Luwuk	1.47	231	P	Pn	21 49 54.3	-0.8
LUWI				S	Sn	21 50 13.1	-0.1
MRSI	Marisa	2.05	286	P	Pn	21 50 04.1	+1.0
APSI	Ampana	2.40	251	P	Pn	21 50 08.3	+0.5
APSI				S	Sn	21 50 37.6	+1.6
TTSI	Tana Toraja	5.02	234	P	Pn	21 50 44.2	+0.4

ECX 29 21:54:34.6±0.6, 31˚94N×114˚77W, h15km, MD3.7, ML3.8, 7C-2D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMX	El Mayor	0.41	276	⇑*e*P	Pg	21 54 43.2	+0.4
EMX				*e*S	Sg	21 54 49.2	+0.9
EMX				⇓*e*		21 54 50.2	
	comp=N,6μm,0.3s						
EMX				⇑*e*		21 54 50.3	
	comp=E,8μm,0.3s						
ECBX	El Chinero	0.53	207	⇑*e*P	Pg	21 54 44.6	-0.5
ECBX				*i* S	Sg	21 54 51.5	-0.7
ECBX				⇓*e*		21 54 52.9	
	comp=E,5μm,0.5s						
CPBX	Cerro Prieto	0.66	316	*e*P	Pg	21 54 48.4	+0.9
CPBX				*e*S	Sg	21 54 57.5	+1.3
RDX	Rancho Dawling	1.00	269	*e*P	Pb	21 54 52.5	-1.1
RDX				⇑*e*		21 55 09.2	
	comp=N,966nm,0.4s						
SPX	San Pedro Mart	1.08	214	*e*P	Pb	21 54 53.5	-1.4
RMX	La Rumorosa	1.29	301	*e*P	Pn	21 54 56.8	-1.3
ECNX	Esteban Cantu	1.59	260	⇑*e*P	Pn	21 55 01.2	-1.0
ECNX				*e*P		21 55 01.9	
CBX	Cerro Bola	1.65	283	⇑*e*P	Pn	21 55 02.5	-0.5
PBX	Punta Banda	1.68	264	⇑*e*P	Pn	21 55 02.6	-0.9

NIED ***29*** *21:58:00, 28˚30N×128˚20E, h8km, Mw4.1 Best double couple: M0=1.86000×10^15 NP1:φs=285.00000°, δ83.00000°, λ15.00000°. NP2:φs193.00000°, δ75.00000°, λ173.00000°.*
JMA ***29*** *21:58:13.8±0.5, 28˚31N×128˚17E, h1km±4km, M3.9*
IDC ***29*** *21:58:16.8±1.5, 27˚98N×127˚30E, h0km, mb3.7/6, mb1 3.6/8, mb1mx3.5/24, mbtmp3.6/8, ML3.2/2, Error ellipse: s-maj=42.7km s-min=25.7km az=70.0*
NEIC ***29*** *21:58:17.8±2.4, 27˚64N×127˚37E, h28km±18km, mb4.0/10, Error ellipse: s-maj=10.3km s-min=8.0km az=131.0*

ISC 29 21:58:14.4±1.3, 28˚30N±0˚04×128˚18E±0˚06, h2km±10km, n34, σ1s01/36, mb3.9/14, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	Tokunoshima	0.85	127	P	Pg	21 58 30.7	0.0
JTK				S	Sg	21 58 42.7	+0.9
JAM	Amami Oshima	1.26	85	P	Pg	21 58 37.7	-0.9
JAM				S	Sg	21 58 54.2	-0.7
JIH	Iheya	1.27	189	P	Pg	21 58 38.4	-0.4
JIH				S	Sg	21 58 55.5	+0.1
JOW	Kunigami	1.46	177	P	Pn	21 58 41.0	-0.8
JOW				*e*S	Sb	21 59 00.5	-0.9
JZK	Kikaishima	1.58	89	P	Pn	21 58 44.2	+0.8
JAGN	Aguni-jima	1.90	206	P	Pn	21 58 48.0	+0.2
JJT2	Tamagusuku 2	2.19	190	P	Pn	21 58 52.8	+1.0
JKE	Kume jima 2	2.33	213	P	Pn	21 58 54.9	+1.2
JKC	Kuchinoerabu	2.78	39	P	Pn	21 59 00.9	+0.9
JTN	Tanegashima 3	3.38	45	P	Pn	21 59 08.3	0.0
KSRS	Korea Array	9.13	359	Pn	Pn	22 00 33.2	+6.1
	0.2nm,0.3s,baz=163,slow=14,SNR=3.8						
MAJO	Matsushiro	11.80	43	Pn	Px	22 01 16.8	
MJAR	Matsushiro Arr	11.80	43	Pn	Px	22 01 17.9	
	0.2nm,0.3s,baz=234,slow=11,SNR=5.3						
BJT	Baijiatuau	15.33	323	*e*Pn	Pn	22 01 53.5	+1.7
	8.0nm,0.7s						
ENH	Enshi	16.43	281	*e*Pn	Pn	22 01 59.3	-6.8
	6.7nm,0.9s						
ULN	Ulaanbaatar	25.51	326	*e*P	P	22 03 44.3	+0.2
	6.9nm,1.3s,mb4.0						
SONM	Songino Array	25.82	325	P	P	22 03 48.8	+1.9
	1.9nm,1.0s,mb3.6,baz=121,slow=10,SNR=3.4						
GTA	Gaotai	25.93	303	*e*P	P	22 03 48.0	0.0
GTA				pP		22 03 55.0	
GTA				sP	sP	22 03 58.0	+9.1
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.6						
CHTO	Chiang Mai	28.35	257	*e*P	P	22 04 01.9	-8.1
CM31	Chiang Mai Arr	28.50	256	*e*P	P	22 04 03.0	-8.3
	comp=Z,0.8nm,0.4s,mb3.8						
MKAR	Makanchi Array	40.15	310	P	P	22 05 51.5	-0.2
	comp=Z,0.6nm,0.8s,mb3.4,baz=101,slow=9.0,SNR=6.1						
ZALV	Zalesovo Beam	40.59	321	P	P	22 05 55.5	+0.2
	comp=Z,0.3nm,0.3s,mb3.4,baz=112,slow=6.4,SNR=3.1						
KURK	Kurchatov	43.31	315	P	P	22 06 17.6	+0.1
	comp=Z,0.3nm,0.3s,mb3.4,baz=103,slow=8.9,SNR=4.0						
KURK	Kurchatov	43.31	315	*e*P	P	22 06 16.1	-1.4
	comp=Z,1.6nm,0.7s,mb3.9						
UCH	Uchtor	45.27	303	P	P	22 06 31.3	-2.0
EKS2	Erkin-Say	45.81	303	*e*P	P	22 06 34.6	-3.0
	comp=Z,1.6nm,1.3s,mb3.8						
WRAB	Tennant Creek	48.32	172	*e*P	P	22 06 52.8	-4.6
	comp=Z,1.2nm,0.3s,mb4.4						
BVAR	Borovoye Array	48.72	317	P	P	22 07 00.9	+0.7
	comp=Z,2.7nm,0.8s,mb4.3,baz=91,slow=7.4,SNR=17						
BRVK	Borovoye	48.79	317	*e*P	P	22 07 00.3	-0.4
	comp=Z,4.6nm,0.9s,mb4.5						
MBWA	Marble Bar	49.84	190	P	P	22 07 02.8	-6.3
ASAR	Alice Springs	51.96	173	P	P	22 07 25.9	+1.0
	comp=Z,0.3nm,0.5s,mb3.4,baz=3.1,slow=15,SNR=4.1						
ABKAR	Akbulak array	55.22	312	*e*P	P	22 07 48.7	0.0
	comp=Z,1.2nm,0.8s,mb4.0						
ARU	Arti	55.75	321	P	P	22 07 51.7	-0.8
KIV	Kislovodsk	67.90	309	*e*P	P	22 09 11.6	-2.9
	comp=Z,1.3nm,0.5s,mb4.2						

IDC ***29*** *22:03:29.7±1.0, 32˚83N×104˚93E, h0km, mb3.7/10, mb1 3.8/13, mb1mx3.7/25, mbtmp3.7/13, ML3.8/2, Error ellipse: s-maj=33.6km s-min=20.0km az=51.0*
BJI ***29*** *22:03:31.0, 32˚44N×104˚95E, h17km, ML3.6/14, Ms3.5/2, Ms7 3.4/2*
MOS ***29*** *22:03:32.1±0.6, 32˚76N×104˚91E, h31km, mb4.5/5, Error ellipse: s-maj=17.6km s-min=8.9km az=104.9*
NEIC ***29*** *22:03:32.4±0.4, 32˚76N×104˚55E, h10km, mb4.2/7, Error ellipse: s-maj=10.7km s-min=6.6km az=75.0*

ISC 29 22:03:28.5±0.8, 32˚41N±0˚03×104˚87E±0˚05, h6km±6km, n45, σ1s18/53, mb4.0/17, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.77	213	Pg	Pg	22 04 02.3	0.0
CD2				Sg	Sg	22 04 26.3	+1.0
CD2				smax			
	comp=N,2μm,0.8s						
XAN	Xi'an	3.77	63	Pn	Pn	22 04 29.3	+2.3
XAN				Pg	Pg	22 04 38.5	-2.1
XAN				Sg	Sg	22 05 31.5	+2.1
XAN				smax			
	comp=N,240nm,0.6s						
XAN				smax			
	comp=E,120nm,0.7s						
LZH	Lanzhou	3.77	347	Pn	Pn	22 04 30.3	+3.2
LZH				Sg	Sg	22 05 30.0	+0.4
LZH				smax			
	comp=N,250nm,0.6s						
LZH				smax			
	comp=E,280nm,0.5s						
LZH				LR	LR		
	comp=N,460nm,4.3s						
LZH				LR	LR		
	comp=Z,510nm,5.0s						
ENH	Enshi	4.48	117	*e*Pn	Pb	22 04 47.6	0.0
ENH				Sn	Sb	22 05 44.6	+2.7
GYA	Guiyang	6.13	165	Pn	Pn	22 05 01.0	+1.5
GYA				Pg	Pg	22 05 23.3	-2.6
GYA				Sn	Sn	22 06 08.3	-1.7
GYA				Sg	Sg	22 06 36.0	-9.3
GYA				smax			
	comp=N,40nm,0.7s						
GYA				smax			
	comp=E,50nm,0.5s						
GTA	Gaotai	8.10	331	*e*P	Pb	22 05 40.0	-9.2
GTA				pP		22 05 43.8	
GTA				sP		22 05 46.0	
GTA				pmax	pmax		
	comp=Z,4.0nm,1.7s						
WHN	Wuhan	8.30	100	S	Sn	22 06 58.3	-5.2
CHTO	Chiang Mai	14.55	203	*e*P	Pn	22 07 01.9	+7.0
CM31	Chiang Mai Arr	14.88	202	Pn	Pn	22 07 06.1	+6.7
CMAR	Chiang Mai Arr	14.88	202	Pn	Pn	22 07 05.7	+6.3
	comp=Z,0.1nm,0.3s,baz=7.7,slow=9.6,SNR=3.4						
SONM	Songino Array	15.46	4	Pn	Pn	22 07 05.1	-1.8
	comp=Z,0.2nm,0.3s,baz=182,slow=11,SNR=3.2						
TLY	Talaya	19.28	358	*e*P	Pn	22 07 52.9	-1.8
TLY				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TLY	Talaya	19.28	358	*e*P	Pn	22 07 52.9	-1.8
	comp=Z,1.3nm,0.4s						
KSRS	Korea Array	19.54	69	P	Pn	22 07 57.2	-0.7
	comp=Z,0.4nm,0.3s,baz=262,slow=8.5,SNR=3.2						
MK31	Makanchi Array	22.46	316	*e*P	P	22 08 27.2	-0.9
MK31				*e*		22 12 23.2	
MKAR	Makanchi Array	22.46	316	P	P	22 08 28.5	+0.4
	comp=Z,1.0nm,0.7s,mb3.4,baz=111,slow=12,SNR=9.2						
MKAR	Makanchi Array	22.46	316	P	P	22 08 28.5	+0.4
ZALV	Zalesovo Beam	25.86	332	P	P	22 09 00.2	-0.4
	comp=Z,0.4nm,0.3s,mb3.5,baz=128,slow=9.6,SNR=3.8						
KURK	Kurchatov	26.62	321	P	P	22 09 07.1	-0.5
	comp=Z,0.5nm,0.6s,mb3.2,baz=133,slow=8.7,SNR=4.5						
KURK	Kurchatov	26.62	321	*e*P	P	22 09 08.1	+0.6
KURK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.6						
KURK	Kurchatov	26.62	321	*e*P	P	22 09 08.1	+0.5
	comp=Z,1.7nm,0.9s,mb3.6						
MAJO	Matsushiro	27.71	72	*e*P	P	22 09 23.6	+6.1
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.3						
MAJO	Matsushiro	27.71	72	*e*P	P	22 09 23.6	+6.1
	comp=Z,5.2nm,0.6s,mb4.3						
BVAR	Borovoye Array	32.20	320	P	P	22 09 58.1	+1.1
	comp=Z,0.2nm,0.4s,mb3.3,baz=108,slow=9.5,SNR=4.0						
ARU	Arti	39.82	321	*e*P	P	22 11 02.3	+0.1
ARU				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.2						
ARU	Arti	39.82	321	*e*P	P	22 11 02.2	0.0
	comp=Z,4.6nm,1.1s,mb4.1						
ARCES	ARCESS Array B	56.35	335	P	P	22 13 09.3	-0.5
	comp=Z,2.0nm,1.0s,mb4.1,baz=90,slow=8.5,SNR=6.7						
FINES	FINESS Array B	56.86	326	P	P	22 13 13.4	-0.2
	comp=Z,1.5nm,0.6s,mb4.2,baz=85,slow=8.2,SNR=9.4						
AKASG	Malin Array Be	56.98	313	P	P	22 13 14.5	-0.1
	comp=Z,1.0nm,0.5s,mb4.1,baz=67,slow=7.2,SNR=2.4						
CSS	Prodhromos	58.38	294	*e*P	P	22 13 25.4	+0.6
WRAB	Tennant Creek	59.20	147	*e*P	P	22 13 35.4	+5.0
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
WRAB	Tennant Creek	59.20	147	*e*P	P	22 13 35.4	+4.9
	comp=Z,2.2nm,0.6s,mb4.4						
KWP	Kalwaria Pacla	61.30	313	*e*P	P	22 13 45.1	+0.5
KWP				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.2						
KWP	Kalwaria Pacla	61.30	313	*e*P	P	22 13 45.1	+0.5
	comp=Z,11nm,0.6s,mb5.2						
ASAR	Alice Springs	62.27	150	P	P	22 13 56.5	+5.1
	comp=Z,0.8nm,0.7s,mb4.0,baz=340,slow=7.5,SNR=6.9						
PSZ	Piszkesteto	63.61	312	P	P	22 14 00.5	+0.4
NB2	NORSAR Subarra	63.92	327	P	P	22 14 00.5	-1.4
	comp=Z,0.8nm,0.5s,mb4.0,baz=72,slow=6.5						
NOA	NORSAR Array B	63.92	327	P	P	22 14 00.8	-1.1
	comp=Z,1.0nm,0.5s,mb4.1,baz=72,slow=6.8,SNR=7.5						
MORC	Moravsky Berou	64.43	314	*e*P	P	22 14 05.6	+0.2
MORC				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
MORC	Moravsky Berou	64.43	314	*e*P	P	22 14 05.6	+0.2
	comp=Z,1.0nm,0.6s,mb4.0						
ILAR	Eielson Array	68.38	26	P	P	22 14 29.2	-1.3
	comp=Z,0.2nm,0.5s,mb3.4,baz=277,slow=3.2,SNR=3.4						
STU	Stuttgart	69.84	315	P	P	22 14 40.8	+1.0
WLF	Walferdange	71.21	317	P	P	22 14 48.3	+0.1
LPG	La Plagne	72.84	313	*e*P	P	22 14 58.7	+0.7
	comp=Z,2.2nm,0.5s,mb4.0						
LPL	La Plagne	72.84	313	*e*P	P	22 14 58.5	+0.5
	comp=Z,2.7nm,0.5s,mb4.1						

IDC ***29*** *22:45:55.9±1.0, 10˚82S×166˚44E, h0km, mb4.2/13, mb1 4.4/14, mb1mx4.3/17, mbtmp4.2/14, ML4.7/1, MS4.1/6, Ms1 4.1/6, ms1mx3.5/34, Error ellipse: s-maj=31.0km s-min=19.2km az=144.0*
NEIC ***29*** *22:45:58.7±0.2, 10˚67S×166˚31E, h10km, mb4.8/19, Error ellipse: s-maj=9.6km s-min=4.8km az=150.0*
ISCJB ***29*** *22:46:01.8±2.9, 10˚67S±0˚09×166˚17E±0˚09, h41km±25km, mb4.5/33, MS4.0/6, Error ellipse: s-maj=17.3km s-min=11.7km az=41.7*

ISC 29 22:46:04.0±2.4, 10˚67S±0˚08×166˚21E±0˚09, h47km±20km, n61, σ0s66/58, mb4.5/33, MS4.0/6, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.29	281	Pn	Pn	22 47 34.2	0.0
	15nm,0.3s,baz=134,slow=1.1,SNR=19						
HNR				Sn	Sn	22 48 50.8	+5.9
	11nm,0.3s,baz=308,slow=20,SNR=2.2						
PMG	Port Moresby	18.80	272	P	Pn	22 50 19.6	-1.0
EIDS	Eidsvold	20.47	222	*e*P	P	22 50 39.4	+1.5
EIDS	Eidsvold	20.47	222	*e*P	P	22 50 39.1	+1.2
	24nm,0.9s						
CTA	Charters Tower	21.37	242	P	P	22 50 47.4	-0.3
	5.3nm,0.8s,mb3.9,baz=61,slow=12,SNR=3.2						
CTA				LR	LR	22 57 57.7	
	comp=Z,304nm,20.1s,MS3.7,baz=247,slow=34						
CTAO	Charters Tower	21.37	242	*e*P	P	22 50 48.3	+0.6
	21nm,1.1s,mb4.4						
AFI	Afiamalu	21.75	101	LR	LR	22 57 09.0	
	comp=Z,198nm,20.0s,MS3.5,baz=244,slow=31						
RMQ	Roma	22.78	224	*e*P	P	22 51 03.2	+0.6
	16nm,0.9s,mb4.5						
STKA	Stephens Creek	31.02	223	P	P	22 52 16.3	-1.0
	2.2nm,0.7s,mb4.1,baz=22,slow=5.4,SNR=2.7						
STKA				LR	LR	23 04 20.0	
	comp=Z,290nm,20.2s,MS3.9,baz=28,slow=36						
STKA	Stephens Creek	31.02	223	*e*P	P	22 52 17.5	+0.2
	0.3nm,0.7s						
STKA				LR	LR	23 04 20.0	
WRAB	Tennant Creek	32.02	249	*e*P	P	22 52 26.7	+0.4
	8.9nm,0.9s,mb4.6						
GUMO	Guam	32.08	318	*e*P	P	22 52 26.4	-0.4
	15nm,0.5s,mb5.1						
KAKA	Kakadu	33.12	263	*e*P	P	22 52 41.2	+5.3
	6.3nm,0.7s,mb4.7						
ASAR	Alice Springs	33.36	243	P	P	22 52 37.0	-1.0
	4.5nm,0.8s,mb4.4,baz=72,slow=9.7,SNR=36						
ASAR				PcP	PcP	22 55 18.4	-0.7
	0.4nm,0.7s,baz=86,slow=2.9,SNR=4.1						
KNA	Kununurra	36.76	258	*e*P	P	22 53 07.5	+0.2
	16nm,0.9s,mb4.8						
FITZ	Fitzroy Crossi	39.91	255	*e*P	P	22 53 33.7	-0.2
	19nm,0.7s,mb4.9						
FITZ	Fitzroy Crossi	39.91	255	*e*P	P	22 53 33.7	-0.1
	8.9nm,0.7s,mb4.6						
MBWA	Marble Bar	45.74	251	*e*P	P	22 54 21.3	+0.2
	17nm,1.2s,mb4.8						
NWAO	Narrogin (SRO)	50.05	236	LR	LR	23 16 12.6	
	comp=Z,399nm,19.2s,MS4.4,baz=12,slow=36						
NWAO	Narrogin (SRO)	50.05	236	*e*P	P	22 54 54.3	+0.1
	62nm,1.3s,mb5.5						
MJAR	Matsushiro Arr	53.85	332	P	P	22 55 22.1	-0.3
	7.6nm,1.1s,mb4.5,baz=167,slow=8.8,SNR=7.0						
KSRS	Korea Array	59.83	325	P	P	22 56 05.3	+0.6
	0.4nm,0.4s,mb3.8,baz=132,slow=6.9,SNR=4.9						
PETK	Petropavlovsk-	63.94	354	P	P	22 56 32.6	+0.6
	2.3nm,0.5s,mb4.5,baz=144,slow=10,SNR=3.7						
KULM	Kulim	67.16	280	P	P	22 56 53.7	0.0
SBA	Scott Base	67.17	180	*e*P	P	22 56 51.1	-1.4
	2.8nm,0.7s,mb4.4						
CMAR	Chiang Mai Arr	72.38	293	P	P	22 57 26.3	+0.6
	0.4nm,0.3s,mb3.8,baz=116,slow=2.1,SNR=4.1						
ULN	Ulaanbaatar	78.27	324	*e*P	P	22 57 59.4	+0.5
	1.5nm,0.8s,mb4.0						
BILL	Bilibino	78.51	0	*e*P	P	22 57 59.6	-0.2
	18nm,1.0s,mb5.0						
SONM	Songino Array	78.64	324	P	P	22 58 01.6	+0.7
	0.2nm,0.3s,mb3.5,baz=138,slow=9.3,SNR=2.9						
TTA	Tatalina	78.94	17	*e*P	P	22 58 02.8	+0.5
RC01	Rabbit Creek A	79.49	20	P	P	22 58 04.8	-0.5
LSA	Lhasa	82.54	302	*e*P	P	22 58 23.2	+0.9
	1.3nm,0.5s,mb4.2						
COLA	College	82.79	18	*e*P	P	22 58 22.3	-0.4
	6.4nm,0.7s,mb4.8						
ILAR	Eielson Array	83.02	18	P	P	22 58 23.2	-0.7
	4.4nm,0.8s,mb4.5,baz=229,slow=6.1,SNR=44						
YBH	Yreka Blue Hor	83.31	45	LR	LR	23 30 50.6	
	comp=Z,115nm,18.8s,MS4.3,baz=344,slow=32						
CMB	Columbia Colle	83.76	50	*e*P	P	22 58 28.1	-0.2
	3.6nm,0.7s,mb4.6						
BBB	Bella Bella	84.02	34	LR	LR	23 28 19.9	
	comp=Z,151nm,20.1s,MS4.4,baz=104,slow=30						
EGAK	Eagle	84.88	20	*e*P	P	22 58 33.2	-0.2
	7.2nm,0.4s,mb5.2						
DAWY	Dawson	85.05	21	*e*P	P	22 58 34.8	+0.6
NVAR	Mina Array Bea	85.44	50	P	P	22 58 36.2	-0.6
	3.4nm,0.9s,mb4.5,baz=234,slow=6.7,SNR=16						
BMO	Blue Mountains	88.05	44	*e*P	P	22 58 49.3	-0.1
N12A	Clover Valley,	88.54	48	P	P	22 58 51.0	-0.8
	16nm,1.4s,mb5.1						
ARUT	Antelope Range	88.96	51	*e*P	P	22 58 53.8	0.0
	3.7nm,0.7s,mb4.8						
CCUT	Cedar City	88.96	52	*e*P	P	22 58 54.8	+0.9
M13A	Montello	89.31	48	*e*P	P	22 58 55.5	+0.1
	23nm,0.8s,mb5.5						
BGU	Big Grassy Mou	90.03	48	*e*P	P	22 58 59.0	+0.2
	21nm,1.7s,mb5.2						
MSU	Marysvale	90.10	51	*e*P	P	22 59 00.2	+1.0
HVU	Hansel Valley	90.42	48	*e*P	P	22 59 01.4	+0.7
NLU	North Lily Min	90.51	50	*e*P	P	22 59 01.8	+0.7
SPUT	South Promonto	90.55	48	*e*P	P	22 59 01.8	+0.6
BSMT	Bassoo Peak	90.56	41	*e*P	P	22 59 01.1	0.0
CHMT	Chamberlain Mo	91.33	43	*e*P	P	22 59 05.1	+0.4
WALA	Waterton Lakes	91.43	40	*e*P	P	22 59 05.1	0.0
HRY	Holter Researc	92.23	43	*e*P	P	22 59 08.8	-0.1
	5.0nm,1.1s,mb4.8						
ZALV	Zalesovo Beam	93.52	324	P	P	22 59 13.6	-1.1
	0.2nm,0.3s,mb4.1,baz=81,slow=4.5,SNR=2.9						
MK31	Makanchi Array	93.56	317	*e*P	P	22 59 14.3	-0.7
MKAR	Makanchi Array	93.56	317	P	P	22 59 14.2	-0.8
	0.7nm,0.7s,mb4.2,baz=94,slow=6.3,SNR=7.6						
ANMO	Albuquerque	93.86	55	*e*P	P	22 59 16.9	+0.1
TXAR	Lajitas Array	95.25	61	P	P	22 59 21.0	-2.2
	0.4nm,0.9s,mb3.9,baz=251,slow=2.8,SNR=3.1						
KURK	Kurchatov	96.65	320	*e*P	P	22 59 28.6	-0.4
AAK	Ala-Archa	98.39	312	*e*P	P	22 59 37.6	+0.5

IDC ***29*** *22:57:40.0±0.9, 9˚05N×78˚07W, h0km, mb3.6/6, mb1 3.9/8, mb1mx3.8/18, mbtmp3.8/8, ML2.4/1, MS3.0/1, Ms1 3.0/1, ms1mx2.5/27, Error ellipse: s-maj=36.0km s-min=19.1km az=57.0*
ISCJB ***29*** *22:57:47.4±0.6, 8˚94N±0˚05×77˚78W±0˚04, h61km±6km, mb3.6/8, Error ellipse: s-maj=8.3km s-min=6.5km az=1.7*
NEIC ***29*** *22:57:49.

0.6nm,0.7s,mb3.7,baz=271,slow=6.5,SNR=4.7
ILAR Eielson Array 73.09 335 P **P 23 09 11.8 -1.2**
0.1nm,0.6s,mb2.9,baz=91,slow=7.2,SNR=2.8
ARCES ARCESS Array B 86.32 20 P **P 23 10 23.3 -1.2**
0.6nm,0.7s,mb4.0,baz=275,slow=4.1,SNR=9.0
ARCES ARCESS Array B 86.32 20 P **P 23 10 23.3 -1.2**
ASAR Alice Springs 146.30 240 PKPbc PKPbc 23 17 22.1 -2.0
0.8nm,0.6s,baz=110,slow=3.4,SNR=7.5

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*BJI **29** 22:58:23.4, 4°.83N×127°.25E, h153km, mB4.8/4, mb4.6/8*
*MAN **29** 22:58:31, 5°.71N×126°.64E, h156km, mb5.2, ML4.1, MS4.3*
*ISCJB **29** 22:58:32.5±0.4, 5°.67N±0°.03×126°.54E±0°.05, h159km±3km, mb4.6/53, Error ellipse: s-maj=8.6km s-min=4.0km az=165.3*
*MOS **29** 22:58:32.3±1.1, 5°.66N×126°.44E, h153km, mb4.5/13, Error ellipse: s-maj=15.3km s-min=7.3km az=121.1*
*NEIC **29** 22:58:33.8±0.5, 5°.67N×126°.49E, h154km±5km, mb4.7/34, Error ellipse: s-maj=5.5km s-min=3.1km az=63.0*
*IDC **29** 22:58:34.2±0.8, 5°.63N×126°.49E, h154km±6km, mb4.1/17, mb1 4.2/17, mb1mx4.0/25, mbtmp4.1/17, Error ellipse: s-maj=21.5km s-min=8.1km az=73.0*
*DJA **29** 22:58:34, 5°.53N×126°.82E, h128km, mb4.9/9*
ISC 29 22:58:33.6±0.4, **5°.66N**±0°.03×**126°.53E**±0°.05, **h153**km±3km, **h153**km±2.7km:**pP-P, n147,** σ0=**80**/136, **mb4.6**/53, **2C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.31**	**348**	*eP*	**Pn**	**22 59 00.3**	**-1.2**
MATI				*eS*	**Sn**	**22 59 23.9**	**+1.0**
DAV	**Davao City (W)**	**1.69**	**326**	P	**Pn**	**22 59 05.7**	**+0.2**
157nm,0.3s,baz=232,slow=6.2,SNR=15							
DAV				S	**Sn**	**22 59 31.0**	**+1.1**
887nm,0.3s,baz=311,slow=19,SNR=39							
DMPH	**Davao City--Mi**	**1.74**	**324**	⇓*eP*	**Pn**	**22 59 07.8**	**+1.8**
DMPH				*eS*	**Sn**	**22 59 32.5**	**+1.6**
KCP	**Kidapawan**	**1.96**	**313**	⇓*iP*	**Pn**	**22 59 08.2**	**-0.3**
KCP				*i S*	**Sn**	**22 59 35.7**	**+0.4**
BUKP	**Musuan**	**2.64**	**327**	*eP*	**Pn**	**22 59 16.6**	**-0.1**
BUKP				*eS*	**Sn**	**22 59 48.8**	**-1.1**
CTBH	**Cotabato--PC H**	**2.75**	**305**	⇑*iP*	**Pn**	**22 59 17.0**	**-0.9**
CTBH				*i S*	**Sn**	**22 59 50.1**	**-2.1**
CGP	**Cagayan de Oro**	**3.32**	**327**	⇓*eP*	**Pn**	**22 59 24.8**	**-0.4**
CGP				*eS*	**Sn**	**23 00 05.9**	**+0.7**
PAGZ	**Pagadian**	**3.81**	**305**	*eP*	**Pn**	**22 59 30.9**	**-0.6**
SCPH	**Surigao**	**4.22**	**346**	⇑*eP*	**Pn**	**22 59 35.5**	**-1.4**
MNI	**Manado**	**4.51**	**202**	P	**Pn**	**22 59 40.4**	**-0.3**
TBP	**Tagbilaran**	**4.80**	**327**	*eP*	**Pn**	**22 59 43.5**	**-1.0**
TNTI	**Ternate**	**4.93**	**170**	P	**Pn**	**22 59 44.8**	**-1.4**
KMSI	**Cibinong**	**5.65**	**207**	P	**Pn**	**22 59 55.3**	**-0.5**
2.6nm6μm456nm,0.8s							
MRSI	**Marisa**	**6.89**	**222**	P	**Pn**	**23 00 13.0**	**+0.7**
2μm199nm,0.7s							
LUWI	**Luwuk**	**7.64**	**210**	P	**Pn**	**23 00 23.5**	**+1.2**
139nm,1.1s							
MYLDM	**Lahad Datu**	**8.01**	**267**	P	**Pn**	**23 00 30.0**	**+2.8**
34nm,1.1s							
NLAI	**Namlea**	**8.86**	**176**	P	**Pn**	**23 00 35.9**	**-2.6**
6μm318nm,0.7s							
KDI	**Kendari**	**10.32**	**202**	P	**Pn**	**23 00 55.9**	**-2.0**
31nm,0.3s							
TTSI	**Tana Toraja**	**10.94**	**218**	P	**Pn**	**23 01 07.1**	**+1.0**
19nm,0.9s							
SBUM	**Sibu**	**14.62**	**258**	P	**Pn**	**23 01 57.7**	**+4.3**
KSM	**Kuching**	**16.71**	**256**	*eP*	**Pn**	**23 02 19.2**	**+0.2**
TWG	**Pinlang**	**17.86**	**343**	*eP*	**Pn**	**23 02 30.6**	**-2.0**
32nm,0.6s							
TPUB	**Ta-pu**	**18.44**	**343**	*eP*	**P**	**23 02 37.4**	**-0.2**
104nm,0.7s							
SSLB	**Suanglung**	**18.81**	**344**	*eP*	**P**	**23 02 40.8**	**-0.7**
73nm,0.8s							
KAKA	**Kakadu**	**19.17**	**162**	*eP*	**P**	**23 02 46.6**	**+1.0**
38nm,0.6s							
KAKA	**Kakadu**	**19.17**	**162**	*eP*	**P**	**23 02 46.2**	**+0.7**
114nm,0.6s							
YHNB	**Yeheng**	**19.54**	**346**	*eP*	**P**	**23 02 50.1**	**+0.6**
22nm,0.5s							
GUMO	**Guam**	**19.71**	**65**	*eP*	**P**	**23 02 52.3**	**+0.9**
TATO	**Taipei**	**19.81**	**346**	P	**P**	**23 02 52.5**	**+0.2**
KNA	**Kununurra**	**21.39**	**174**	*eP*	**P**	**23 03 09.9**	**+0.6**
33nm,0.7s,mb4.8							
FITZ	**Fitzroy Crossi**	**23.63**	**182**	*eP*	**P**	**23 03 31.1**	**+0.2**
31nm,0.9s,mb4.8							
FITZ	**Fitzroy Crossi**	**23.63**	**182**	P	**P**	**23 03 30.8**	**-0.1**
17nm,0.8s,mb4.7,baz=9.3,slow=7.0,SNR=32							
FITZ	**Fitzroy Crossi**	**23.63**	**182**	*eP*	**P**	**23 03 31.2**	**+0.2**
12nm,0.6s,mb4.6							
PMG	**Port Moresby**	**25.43**	**126**	*eP*	**P**	**23 03 47.0**	**-0.4**
PMG				pmax	pmax		
comp=Z,11nm,0.7s							
PMG	**Port Moresby**	**25.43**	**126**	*eP*	**P**	**23 03 47.0**	**-0.5**
comp=Z,11nm,0.7s,mb4.5							
COEN	**Coen**	**25.55**	**140**	*eP*	**P**	**23 03 47.7**	**-0.8**
COEN	**Coen**	**25.55**	**140**	*eP*	**P**	**23 03 48.0**	**-0.4**
comp=Z,46nm,0.5s,mb5.4							
WRAB	**Tennant Creek**	**26.57**	**163**	*eP*	**P**	**23 03 57.1**	**-0.5**
WRAB				pmax	pmax		
comp=Z,7.0nm,0.6s,mb4.5							
WRAB	**Tennant Creek**	**26.57**	**163**	*eP*	**P**	**23 03 57.1**	**-0.4**
comp=Z,7.2nm,0.6s,mb4.5							
MBWA	**Marble Bar**	**27.47**	**194**	*eP*	**P**	**23 04 05.4**	**-0.2**
comp=Z,3.4nm,0.5s,mb4.2							
QIS	**Mount Isa**	**29.05**	**154**	*eP*	**P**	**23 04 19.6**	**0.0**
ENH	**Enshi**	**29.27**	**329**	*eP*	**P**	**23 04 21.6**	**+0.1**
comp=Z,6.1nm,0.4s,mb4.7							
CM31	**Chiang Mai Arr**	**29.76**	**298**	P	**P**	**23 04 25.9**	**-0.1**
CMAR	**Chiang Mai Arr**	**29.76**	**298**	P	**P**	**23 04 25.9**	**-0.1**
comp=Z,2.2nm,0.6s,mb4.0,baz=113,slow=7.3,SNR=10							
CMAR				ScP	ScP	23 10 55.6	+1.5
comp=Z,0.9nm,0.6s,baz=152,slow=1.7,SNR=8.3							
CHTO	**Chiang Mai**	**29.90**	**298**	*eP*	**P**	**23 04 26.9**	**-0.3**
CHTO				pmax	pmax		
comp=Z,3.0nm,0.5s,mb4.3							
CHTO	**Chiang Mai**	**29.90**	**298**	*eP*	**P**	**23 04 26.9**	**-0.3**
comp=Z,3.3nm,0.5s,mb4.3							
ASAR	**Alice Springs**	**30.02**	**166**	P	**P**	**23 04 27.9**	**-0.3**
comp=Z,5.1nm,0.4s,mb4.6,baz=345,slow=7.1,SNR=58							
ASAR				PcP	PcP	23 07 27.1	+0.4
comp=Z,3.0nm,0.6s,baz=348,slow=2.6,SNR=11							
ASAR				S	**S**	**23 09 13.2**	**-1.9**
comp=Z,0.6nm,0.8s,baz=347,slow=19,SNR=4.8							
KSRS	**Korea Array**	**31.67**	**2**	P	**P**	**23 04 41.9**	**-0.6**
comp=Z,0.8nm,0.5s,mb3.7,baz=186,slow=10,SNR=6.6							
KSRS				PcP	PcP	23 07 31.8	+0.9
comp=Z,1.2nm,0.5s,baz=179,slow=2.5,SNR=7.3							
KSRS	**Korea Array**	**31.67**	**2**	P	**P**	**23 04 41.9**	**-0.6**
KSRS						23 07 31.8	
KSRS				pmax	pmax		
comp=Z,1.0nm,0.5s,mb3.8							
KSRS				pmax	pmax		
comp=Z,1.0nm,0.5s,mb3.8							
INCN	**Inchon**	**31.68**	**0**	P	**P**	**23 04 42.6**	**0.0**
CTA	**Charters Tower**	**32.11**	**143**	P	**P**	**23 04 47.2**	**+0.7**
comp=Z,2.5nm,0.4s,mb4.3,baz=350,slow=9.3,SNR=4.9							
CTA	**Charters Tower**	**32.11**	**143**	P	**P**	**23 04 47.2**	**+0.7**
CTAO	**Charters Tower**	**32.11**	**143**	*eP*	**P**	**23 04 46.7**	**+0.1**
CTAO				pmax	pmax		
comp=Z,9.0nm,0.9s,mb4.5							
CTAO	**Charters Tower**	**32.11**	**143**	*eP*	**P**	**23 04 46.7**	**+0.2**
comp=Z,9.5nm,0.9s,mb4.5							
XAN	**Xi'an**	**32.62**	**332**	P	**P**	**23 04 50.5**	**-0.4**
XAN				pmax	pmax		
comp=Z,7.0nm,0.7s,mb4.5							
BJT	**Baijiatuau**	**35.46**	**346**	*eP*	**P**	**23 05 16.0**	**+0.7**
BJT				pmax	pmax		
comp=Z,73nm,0.8s							
BJT	**Baijiatuau**	**35.46**	**346**	*eP*	**P**	**23 05 16.0**	**+0.8**
comp=Z,73nm,0.8s,mb5.4							
FORT	**Forrest**	**36.26**	**178**	*eP*	**P**	**23 05 22.5**	**+0.3**
comp=Z,16nm,0.4s,mb5.0							
QLP	**Quilpie**	**36.35**	**153**	*eP*	**P**	**23 05 22.5**	**-0.6**
LZH	**Lanzhou**	**36.76**	**329**	P	**P**	**23 05 27.8**	**+1.4**
LZH				pmax	pmax		
comp=Z,41nm,1.1s,mb5.0							
LZH				pmax	pmax		
comp=Z,170nm,4.3s							
KMBL	**Kambalda**	**37.08**	**187**	*eP*	**P**	**23 05 29.3**	**+0.1**
comp=Z,104nm,0.5s							
KLBR	**Kellerberrin**	**37.98**	**192**	*eP*	**P**	**23 05 36.9**	**+0.2**
comp=Z,95nm,1.7s,mb5.2							
MDJ	**Mudanjiang**	**38.90**	**3**	P	**P**	**23 05 44.9**	**+0.7**
BBOO	**Buckleboo**	**39.31**	**167**	*eP*	**P**	**23 05 48.0**	**+0.2**
comp=Z,23nm,0.4s,mb5.2							

NWAO	**Narrogin (SRO)**	**39.38**	**192**	P	**P**	**23 05 49.1**	**+0.8**
comp=Z,12nm,0.3s,mb5.0,baz=20,slow=10,SNR=26							
STKA	**Stephens Creek**	**39.99**	**160**	*eP*	**P**	**23 05 53.7**	**+0.2**
comp=Z,15nm,0.8s,mb4.7							
STKA	**Stephens Creek**	**39.99**	**160**	*eP*	**P**	**23 05 53.8**	**+0.3**
comp=Z,20nm,0.7s,mb4.9,baz=340,slow=8.1,SNR=36							
STKA				PcP	PcP	23 07 55.9	+0.2
comp=Z,6.3nm,0.6s,baz=343,slow=5.9,SNR=4.5							
STKA	**Stephens Creek**	**39.99**	**160**	P	**P**	**23 05 53.8**	**+0.3**
STKA						23 07 55.9	
STKA				pmax	pmax		
comp=Z,20nm,0.7s							
STKA				pmax	pmax		
comp=Z,6.0nm,0.6s							
STKA	**Stephens Creek**	**39.99**	**160**	*eP*	**P**	**23 05 53.7**	**+0.2**
comp=Z,4.0nm,0.8s,mb4.1							
STKA				*e*PcP	PcP	23 07 56.0	+0.3
LSA	**Lhasa**	**41.04**	**310**	P	**P**	**23 06 03.0**	**+0.9**
LSA	**Lhasa**	**41.04**	**310**	*eP*	**P**	**23 06 03.1**	**+1.0**
LSA				pmax	pmax		
comp=Z,4.0nm,0.8s,mb4.1							
LSA	**Lhasa**	**41.04**	**310**	*eP*	**P**	**23 06 03.1**	**+1.0**
comp=Z,4.2nm,0.8s,mb4.1							
GTA	**Gaotai**	**41.35**	**328**	*eP*	**P**	**23 06 05.3**	**+0.8**
GTA				pmax	pmax		
comp=Z,4.0nm,0.9s,mb4.0							
TAPN	**Taplejung**	**42.74**	**305**	*eP*	**P**	**23 06 16.3**	**+0.3**
comp=Z,28nm,0.7s,mb5.0							
ODAN	**Odare**	**42.81**	**304**	*eP*	**P**	**23 06 16.7**	**+0.1**
comp=Z,59nm,0.8s,mb5.3							
ARMA	**Armidale**	**43.19**	**148**	*eP*	**P**	**23 06 20.3**	**+0.8**
RAMN	**Ramite**	**43.50**	**304**	*eP*	**P**	**23 06 22.6**	**+0.5**
comp=Z,60nm,0.7s,mb5.3							
GUN	**Gumba**	**44.45**	**305**	*eP*	**P**	**23 06 30.1**	**+0.4**
comp=Z,81nm,0.8s,mb5.4							
ARPS	**Mount Arapiles**	**44.57**	**162**	*eP*	**P**	**23 06 30.9**	**+0.5**
comp=Z,45nm,0.6s,mb5.3							
PKI	**Pulchoki**	**44.71**	**304**	*eP*	**P**	**23 06 31.6**	**-0.2**
comp=Z,27nm,0.8s,mb4.9							
PKI	**Pulchoki**	**44.71**	**304**	*eP*	**P**	**23 06 31.6**	**-0.2**
PKI				pmax	pmax		
comp=Z,27nm,0.8s,mb4.9							
KKN	**Kakani**	**44.90**	**304**	*eP*	**P**	**23 06 33.0**	**-0.2**
comp=Z,30nm,0.8s,mb5.0							
KKN	**Kakani**	**44.90**	**304**	*eP*	**P**	**23 06 33.0**	**-0.2**
KKN				pmax	pmax		
comp=Z,30nm,0.8s,mb5.0							
DMN	**Daman**	**44.98**	**304**	*eP*	**P**	**23 06 33.7**	**-0.1**
comp=Z,32nm,0.8s,mb5.0							
ULN	**Ulaanbaatar**	**45.23**	**342**	*eP*	**P**	**23 06 36.5**	**+1.0**
ULN				pmax	pmax		
comp=Z,15nm,1.0s,mb4.6							
ULN	**Ulaanbaatar**	**45.23**	**342**	*eP*	**P**	**23 06 36.5**	**+1.0**
comp=Z,15nm,1.0s,mb4.6							
SONM	**Songino Array**	**45.42**	**341**	P	**P**	**23 06 38.3**	**+1.3**
comp=Z,3.0nm,0.8s,mb4.0,baz=159,slow=8.9,SNR=19							
SONM				PcP	PcP	23 08 14.1	+0.6
comp=Z,1.3nm,0.7s,baz=152,slow=3.1,SNR=4.9							
GKN	**Gorkha**	**45.51**	**304**	*eP*	**P**	**23 06 37.6**	**-0.4**
KOLN	**Koldanda**	**46.28**	**303**	*eP*	**P**	**23 06 44.4**	**+0.3**
comp=Z,84nm,0.7s,mb5.5							
TOO	**Toolangi**	**46.50**	**159**	*eP*	**P**	**23 06 47.0**	**+1.4**
ZAK	**Zakamensk**	**48.65**	**340**	*eP*	**P**	**23 07 02.0**	**0.0**
ZAK				pmax	pmax		
comp=Z,1.0nm,1.3s							
PETK	**Petropavlovsk-**	**53.73**	**23**	P	**P**	**23 07 40.8**	**+0.9**
comp=Z,4.0nm,0.7s,mb4.3,baz=219,slow=3.8,SNR=7.4							
MK31	**Makanchi Array**	**55.87**	**325**	*eP*	**P**	**23 07 54.6**	**-0.7**
MK31				*e*	pP	23 08 30.8	0.0
MK31				*e*		23 10 01.7	
MKAR	**Makanchi Array**	**55.87**	**325**	P	**P**	**23 07 55.2**	**-0.1**
comp=Z,2.3nm,0.5s,mb4.3,baz=115,slow=7.1,SNR=38							
MKAR				pP	pP	23 08 30.7	-0.1
comp=Z,1.3nm,0.6s,baz=125,slow=8.0,SNR=2.4							
MKAR				PcP	PcP	23 08 53.0	+0.7
comp=Z,2.1nm,0.7s,baz=120,slow=3.8,SNR=6.9							
MKAR				ScP	ScP	23 12 39.0	+1.9
comp=Z,0.6nm,0.7s,baz=131,slow=4.5,SNR=4.7							
MKAR	**Makanchi Array**	**55.87**	**325**	P	**P**	**23 07 55.2**	**-0.1**
MKAR				*PP	pP	23 08 30.7	-0.1
MKAR						23 08 53.0	
MKAR	**Makanchi Array**	**55.87**	**325**	P	**P**	**23 07 55.2**	**-0.1**
MKAR				pP	pP	23 08 30.7	-0.1
MKAR				PcP	PcP	23 08 53.0	+0.7
MKAR				ScP	ScP	23 12 39.0	+1.9
ZALV	**Zalesovo Beam**	**58.79**	**333**	P	**P**	**23 08 15.1**	**-0.6**
comp=Z,1.7nm,0.5s,mb4.2,baz=130,slow=6.4,SNR=9.1							
AAK	**Ala-Archa**	**58.81**	**317**	P	**P**	**23 08 16.1**	**+0.1**
EKS2	**Erkin-Say**	**59.30**	**317**	*eP*	**P**	**23 08 15.8**	**-3.6**
EKS2				pmax	pmax		
comp=Z,2.0nm,0.8s,mb4.0							
EKS2	**Erkin-Say**	**59.30**	**317**	*eP*	**P**	**23 08 15.8**	**-3.6**
comp=Z,2.5nm,0.8s,mb4.1							
KURK	**Kurchatov**	**60.02**	**327**	*eP*	**P**	**23 08 23.6**	**-0.5**
KURK				pmax	pmax		
comp=Z,5.0nm,0.8s,mb4.4							
KURK	**Kurchatov**	**60.02**	**327**	*eP*	**P**	**23 08 23.6**	**-0.6**
comp=Z,5.0nm,0.8s,mb4.4							
KBL	**Kabul**	**60.21**	**307**	*eP*	**P**	**23 08 25.6**	**-0.1**
BVAR	**Borovoye Array**	**65.61**	**327**	P	**P**	**23 09 01.2**	**+0.2**
comp=Z,2.6nm,0.8s,mb4.1,baz=120,slow=8.8,SNR=17							
BVAR				pP	pP	23 09 36.3	-1.3
comp=Z,1.9nm,0.8s,baz=131,slow=8.3,SNR=4.9							
BRVK	**Borovoye**	**65.68**	**327**	*eP*	**P**	**23 09 01.6**	**+0.1**
BRVK				pmax	pmax		
comp=Z,3.0nm,0.8s,mb4.2							
BRVK	**Borovoye**	**65.68**	**327**	*eP*	**P**	**23 09 01.6**	**+0.1**
comp=Z,3.1nm,0.8s,mb4.2							
BILL	**Bilibino**	**67.75**	**15**	*eP*	**P**	**23 09 05.9**	**-8.5**
BILL				pmax	pmax		
comp=Z,3.0nm,0.8s,mb4.1							
ABKAR	**Akbulak array**	**70.54**	**320**	*eP*	**P**	**23 09 31.4**	**-0.5**
comp=Z,2.4nm,0.7s,mb4.0							
CASY	**Casey**	**72.69**	**187**	*eP*	**P**	**23 09 45.0**	**+0.6**
comp=Z,8.3nm,0.8s,mb4.5							
ARU	**Arti**	**73.21**	**327**	*eP*	**P**	**23 09 47.2**	**-0.5**
ARU				pmax	pmax		
comp=Z,4.0nm,0.5s,mb4.4							
ARU	**Arti**	**73.21**	**327**	*eP*	**P**	**23 09 47.1**	**-0.5**
comp=Z,3.6nm,0.5s,mb4.4							
KDAK	**Kodiak Island**	**80.38**	**32**	P	**P**	**23 10 27.6**	**-0.2**
comp=Z,6.5nm,0.7s,mb4.4,baz=275,slow=12,SNR=5.5							
KIV	**Kislovodsk**	**81.67**	**313**	P	**P**	**23 10 34.8**	**-0.2**
KIV	**Kislovodsk**	**81.67**	**313**	P	**P**	**23 10 34.8**	**-0.2**
SEW	**Seward**	**82.14**	**30**	P	**P**	**23 10 36.7**	**-0.4**
OBN	**Obninsk**	**85.38**	**325**	*eP*	**P**	**23 10 53.1**	**-0.5**
comp=Z,4.5nm,0.4s,mb4.5							
JOF	**Joensuu**	**87.38**	**333**	*eP*	**P**	**23 11 02.7**	**-0.5**
JOF	**Joensuu**	**87.38**	**333**	*ep*	**P**	**23 11 02.7**	**-0.5**
comp=Z,7.0nm,0.8s,mb4.5							
ARCES	**ARCESS Array B**	**88.58**	**340**	P	**P**	**23 11 08.4**	**-0.4**
comp=Z,1.6nm,0.5s,mb4.2,baz=85,slow=6.7,SNR=18							
ARE0	**ARCESS Array S**	**88.58**	**340**	*eP*	**P**	**23 11 08.1**	**-0.7**
BRTR	**Keskin Array B**	**88.64**	**310**	P	**P**	**23 11 09.6**	**-0.1**
comp=Z,0.9nm,0.9s,mb3.7,baz=125,slow=6.2,SNR=4.9							
SIT	**Sitka**	**89.72**	**33**	P	**P**	**23 11 14.6**	**+0.3**
KAF	**Kangasniemi**	**89.80**	**332**	*eP*	**P**	**23 11 14.0**	**-0.6**
KAF				pmax	pmax		
comp=Z,2.0nm,0.5s,mb4.3							
KAF	**Kangasniemi**	**89.80**	**332**	*eP*	**P**	**23 11 14.0**	**-0.6**
comp=Z,2.0nm,0.5s,mb4.3							
KAF	**Kangasniemi**	**89.80**	**332**	*ep*	**P**	**23 11 14.0**	**-0.6**
comp=Z,2.0nm,0.5s,mb4.3,baz=75,slow=4.3							
FINES	**FINESS Array B**	**90.05**	**332**	P	**P**	**23 11 15.5**	**-0.3**
comp=Z,1.7nm,0.5s,mb4.2,baz=50,slow=4.1,SNR=16							
QSPA	**South Pole Qui**	**95.55**	**180**	*eP*	**P**	**23 11 41.1**	**+0.4**
comp=Z,1.8nm,0.7s,mb4.5							
NOA	**NORSAR Array B**	**96.98**	**334**	P	**P**	**23 11 47.0**	**-0.7**
comp=Z,0.3nm,0.7s,mb3.7,baz=67,slow=1.5,SNR=4.5							
SUMG	**Summit**	**101.31**	**355**	P	Pdif	23 12 07.2	+0.1
STU	**Stuttgart**	**103.23**	**323**	*eP*	Pdif	23 12 15.9	+0.3
HLID	**Hailey**	**106.51**	**42**	PKiKP	PKiKP	23 16 41.1	+0.5
ELK	**Elko**	**107.10**	**44**	PKiKP	PKiKP	23 16 42.6	+0.7
SCHQ	**Schefferville**	**118.71**	**9**	*e*PKPdf	PKPdf	23 17 04.3	+0.8
TXAR	**Lajitas Array**	**120.57**	**51**	PKP	PKPdf	23 17 08.4	+0.6
comp=Z,0.3nm,0.5s,baz=225,slow=1.1,SNR=7.2							
WMOK	**Wichita Mounta**	**121.39**	**43**	*e*PKiKP	PKPdf	23 17 09.3	0.0
JCT	**Junction City**	**122.94**	**48**	*e*PKiKP	PKPdf	23 17 13.1	+0.7
DBIC	**Dimbokro**	**129.96**	**284**	PKP	PKPdf	23 17 28.6	+2.4
comp=Z,3.4nm,0.9s,baz=107,slow=11,SNR=3.2							
TKL	**Tuckaleechee C**	**130.01**	**32**	PKP	PKPdf	23 17 26.5	+0.8
comp=Z,3.6nm,0.7s,baz=214,slow=3.6,SNR=5.2							
TKL	**Tuckaleechee C**	**130.01**	**32**	PKP	PKPdf	23 17 26.5	+0.8
PLCA	**Paso Flores**	**141.87**	**159**	PKP	PKPdf	23 17 49.2	+1.6
comp=Z,1.9nm,0.8s,baz=207,slow=3.0,SNR=3.4							
JTS	**JuntasAbangare**	**144.87**	**63**	*e*PKiKP	PKPdf	23 17 53.9	+0.3

TRQA	**Tornquist**	**146.84**	**168**	*e*PKPdf	PKPdf	23 17 57.1	+0.8
CPUP	**Villa Florida**	**159.12**	**170**	PKPab	PKPab	23 18 52.6	+1.0
comp=Z,2.6nm,0.8s,baz=150,slow=3.9,SNR=6.5							
CPUP	**Villa Florida**	**159.12**	**170**	PKP2	PKPab	23 18 52.6	+1.0
CPUP				pmax	pmax		
comp=Z,3.0nm,0.8s							
LPAZ	**La Paz**	**162.17**	**127**	PKPab	PKPab	23 19 07.4	+2.0
comp=Z,2.4nm,0.7s,baz=194,slow=4.1,SNR=9.3							
LPAZ	**La Paz**	**162.17**	**127**	PKIKP	PKPdf	23 18 19.0	+1.1
SIV	**San Ignacio**	**167.31**	**145**	PKP	PKPdf	23 18 22.6	+0.3
comp=Z,1.3nm,0.9s,baz=256,slow=5.2,SNR=6.3							

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*ISCJB **29** 23:06:25.4±3.1, 5°.6S±0°.1×154°.55E±0°.09, h41km±30km, mb4.3/16, Error ellipse: s-maj=18.0km s-min=14.2km az=144.7*
*IDC **29** 23:06:28.8±1.3, 5°.62S×154°.48E, h53km±7km, mb3.9/8, mb1 4.0/9, mb1mx3.9/17, mbtmp4.0/9, Error ellipse: s-maj=31.6km s-min=22.5km az=101.0*
*NEIC **29** 23:06:29.6±1.6, 5°.63S×154°.57E, h66km±17km, mb4.4/8, Error ellipse: s-maj=13.7km s-min=8.1km az=130.0*
ISC 29 23:06:29.1±2.6, **5°.6S**±0°.1×**154°.6E**±0°.1, **h61**km±27km, **h58**km±1.3km:**pP-P, n29,** σ0=**62**/30, **mb4.3**/16, **1D, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.53**	**126**	P	**Pn**	**23 08 02.7**	**+0.1**
19nm,0.3s,baz=134,slow=5.7,SNR=5.0							
HNR	**Honiara**	**6.53**	**126**	*e*Pn	**Pn**	**23 08 03.2**	**+0.6**
HNR				Sn	**Sn**	**23 09 15.7**	**-0.1**
WRAB	**Tennant Creek**	**24.27**	**232**	*eP*	**P**	**23 11 40.7**	**-0.1**
2.2nm,0.5s,mb3.8							
ASAR	**Alice Springs**	**26.79**	**226**	P	**P**	**23 12 04.5**	**+0.9**
0.4nm,0.7s,mb3.1,baz=56,slow=8.0,SNR=4.4							
STKA	**Stephens Creek**	**28.80**	**203**	*eP*	**P**	**23 12 21.2**	**-0.3**
FITZ	**Fitzroy Crossi**	**30.85**	**244**	P	**P**	**23 12 38.6**	**-1.2**
2.3nm,0.5s,mb4.2,baz=59,slow=7.9,SNR=11							
FITZ				pP	pP	23 12 52.6	-2.2
3.1nm,0.6s,baz=92,slow=7.3,SNR=4.4							
FITZ	**Fitzroy Crossi**	**30.85**	**244**	*eP*	**P**	**23 12 38.8**	**-1.0**
2.3nm,0.5s,mb4.3							
FITZ				pP	pP	23 12 52.6	-2.2
MBWA	**Marble Bar**	**37.12**	**242**	*eP*	**P**	**23 13 34.1**	**-0.1**
4.1nm,1.0s,mb4.2							
MAJO	**Matsushiro**	**44.66**	**341**	P	**P**	**23 14 35.7**	**-0.1**
KSRS	**Korea Array**	**49.54**	**332**	P	**P**	**23 15 12.7**	**-1.2**
1.1nm,0.8s,mb4.0,baz=151,slow=7.8,SNR=5.8							
KSRS				pP	pP	23 15 28.4	-1.3
0.6nm,0.4s,baz=141,slow=7.9,SNR=2.2							
YSS	**Yuzh-Sakhalins**	**53.39**	**350**	P	**P**	**23 15 42.2**	**-0.3**
CMAR	**Chiang Mai Arr**	**59.83**	**295**	P	**P**	**23 16 28.3**	**-0.4**
3.3nm,0.8s,mb4.4,baz=115,slow=5.2,SNR=14							
CMAR				pP	pP	23 16 43.4	-1.6
1.1nm,0.6s,baz=115,slow=6.2,SNR=2.7							
CHTO	**Chiang Mai**	**59.94**	**295**	*eP*	**P**	**23 16 28.9**	**-

8.2nm,0.4s,mb5.1
ZAA0 Zalesovo Array 53.95 321 *eP* **P 23 17 33.3 -0.4**
ZALV Zalesovo Beam 53.95 321 P **P 23 17 33.5 -0.1**
3.0nm,0.5s,mb4.6,baz=108,slow=8.6,SNR=20
ZALV pP pP 23 17 56.5 -2.7
1.5nm,0.7s,baz=102,slow=6.8,SNR=2.7
ZALV PcP PcP 23 18 36.8 -0.9
1.0nm,0.6s,baz=126,slow=2.0,SNR=2.8
ZALV Zalesovo Beam 53.95 321 P **P 23 17 33.5 -0.1**
ZALV pP pP 23 17 56.5 -2.7
ZALV PcP PcP 23 18 36.8 -0.9
STKA Stephens Creek 54.00 182 P **P 23 17 32.7 -1.5**
2.0nm,0.5s,mb4.4,baz=341,slow=5.8,SNR=5.9
MK31 Makanchi Array 54.57 312 *eP* **P 23 17 38.6 +0.4**
MK31 *ep*P pP 23 18 02.0 -1.8
MKAR Makanchi Array 54.57 312 P **P 23 17 39.1 +0.8**
4.7nm,0.6s,mb4.7,baz=91,slow=9.2,SNR=53
MKAR pP pP 23 18 02.6 -1.3
1.1nm,0.5s,baz=84,slow=12,SNR=4.2
MKAR PcP PcP 23 18 40.8 +0.6
3.1nm,0.9s,baz=110,slow=4.9,SNR=4.0
KURK Kurchatov 57.28 317 *eP* **P 23 17 57.5 0.0**
10nm,0.8s,mb4.9
AML Almayashu 60.74 307 *eP* **P 23 18 22.5 +0.9**
1.9nm,0.5s,mb4.4
ILAR Eielson Array 61.21 27 P **P 23 18 24.6 +0.3**
0.4nm,0.5s,mb3.8,baz=259,slow=5.5,SNR=7.4
ILAR pP pP 23 18 47.5 -3.0
0.3nm,0.5s,baz=256,slow=4.8,SNR=3.3
BVAR Borovoye Array 62.45 319 P **P 23 18 33.5 +0.7**
9.5nm,0.5s,mb5.1,baz=92,slow=7.7,SNR=74
BVAR pP pP 23 18 57.3 -1.8
4.8nm,0.6s,baz=92,slow=7.6,SNR=6.0
BRVK Borovoye 62.51 319 *eP* **P 23 18 33.1 -0.2**
11nm,0.9s,mb4.8
KBL Kabul 65.41 299 *eP* **P 23 18 52.9 +0.3**
6.8nm,0.8s,mb4.5
ARU Arti 68.98 324 *eP* **P 23 19 14.8 +0.1**
4.2nm,0.6s,mb4.5
DLBC Dease Lake 69.29 34 P **P 23 19 20.2 +3.6**
ABKAR Akbulak array 69.37 316 *eP* **P 23 19 17.3 0.0**
6.1nm,0.6s,mb4.6
KEV Kevo 77.85 341 *eP* **P 23 20 07.4 +0.9**
1.8nm,0.6s,mb4.0
KEV Kevo 77.85 341 *ep* **P 23 20 07.4 +0.9**
1.8nm,0.6s,mb4.0
ARCES ARCESS Array B 78.41 342 P **P 23 20 10.2 +0.6**
1.6nm,0.6s,mb3.9,baz=75,slow=8.9,SNR=16
ARE0 ARCESS Array S 78.41 342 *eP* **P 23 20 10.2 +0.5**
NEW Newport 79.45 42 *eP* **P 23 20 15.9 +0.2**
JOF Joensuu 79.89 335 *eP* **P 23 20 17.5 -0.3**
JOF Joensuu 79.89 335 *ep* **P 23 20 17.5 -0.3**
2.9nm,0.3s,mb4.6
WALA Waterton Lakes 81.11 41 P **P 23 20 24.6 0.0**
KAF Kangasniemi 82.28 335 *eP* **P 23 20 29.3 -1.2**
0.9nm,0.4s,mb4.0
KAF Kangasniemi 82.28 335 *ep* **P 23 20 29.3 -1.2**
0.9nm,0.4s,mb4.0,baz=56,slow=5.0
NVAR Mina Array Bea 82.55 52 P **P 23 20 33.2 +1.9**
0.4nm,0.6s,mb3.4,baz=289,slow=8.3,SNR=4.2
FINES FINESS Array B 82.75 335 P **P 23 20 32.3 -0.6**
1.6nm,0.4s,mb4.2,baz=64,slow=4.4,SNR=34
EGMT Eagleton 84.05 40 P **P 23 20 39.7 -0.2**
TPNV Topopah Spring 84.43 52 *eP* **P 23 20 41.9 -0.1**
FFC Flin Flon 84.99 32 *eP* **P 23 20 43.2 -1.3**
SUMG Summit 85.26 1 *eP* **P 23 20 47.4 +1.9**
2.3nm,0.7s,mb4.2
DUG Dugway 85.53 48 *eP* **P 23 20 47.4 0.0**
FCC Fort Churchill 86.21 26 P **P 23 20 51.1 +0.7**
AKASG Malin Array Be 87.21 325 P **P 23 20 54.1 -1.3**
1.2nm,0.4s,mb4.2,baz=52,slow=5.2,SNR=8.1
NB2 NORSAR Subarra 88.46 339 P **P 23 20 59.9 -1.3**
comp=Z,0.2nm,0.4s,mb3.5,baz=49,slow=4.6
NOA NORSAR Array B 88.46 339 P **P 23 20 59.5 -1.6**
comp=Z,0.2nm,0.5s,mb3.4,baz=32,slow=5.1,SNR=3.3
BRTR Keskin Array B 90.20 314 P **P 23 21 08.8 -1.0**
comp=Z,0.2nm,0.4s,mb3.6,baz=101,slow=4.0,SNR=4.0
PLCA Paso Flores 145.86 130 PKPbc PKPbc 23 27 48.4 +0.2
comp=Z,3.4nm,0.8s,baz=248,slow=5.4,SNR=5.2
LPAZ La Paz 149.41 84 PKPbc PKPbc 23 27 59.7 +1.2
comp=Z,0.9nm,0.5s,baz=114,slow=0.6,SNR=6.2
LPAZ La Paz 149.41 84 PKPbc PKPbc 23 27 59.7 +1.2

NIED ***29*** *23:15:00,39.7°±10N×140.9°±0.9E,h5km,Mw3.6 Best double couple: M0=2.52000×10^14 NP1:φ=117.00000°,δ=61.00000°, λ=141.00000°. NP2:φ=228.00000°,δ=56.00000°,λ=35.00000°.*
ISCJB ***29*** *23:15:52.8±0.4,39.0°±0.6N×140.3°±0.4E,h19km±4km, mb3.7/10,Error ellipse: s-maj=5.5km s-min=4.3km az=18.0*
IDC ***29*** *23:15:52.2±1.0,39.1°±1.1N×140.7°±1.9E,h0km,mb3.6/7, mb1 3.7/10,mb1mx3.6/23,mbtmp3.5/10,ML3.1/3,MS2.8/1, Ms1 2.8/1,ms1mx2.6/22,Error ellipse: s-maj=27.1km s-min=13.7km az=120.0*
JMA ***29*** *23:15:53.2,39.0°±5N×140.7°±8.7E,h9km±1km,M3.5 Broadband fault plane solution: P waves. NP1: φ=65.00000°,δ=36.00000°,λ=55.00000°. NP2:φ=285.00000°, δ=61.00000°,λ=113.00000°. Principal axes: T Plg66.0000°, Azm237.0000°; N Plg20.0000°, Azm94.0000°; P Plg13.0000°, Azm359.0000°;*
JMA Felt I J1.
NEIC ***29*** *23:15:55.2±2.3,39.1°±10N×140.7°±8.1E,h21km±16km,mb4.1/2 Error ellipse: s-maj=10.3km s-min=7.0km az=103.0*
ISC 29 23:15:53.3±0.5,39.05N±0.02×140.88E±0.04,h9km±3km, n30,σ0°85/40,mb3.7/10,1C-5D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMK	**Ichinoseki**	**0.29**	**110**	⇓P		**Pg**	**23 15 58.9 -0.1**
JMK				S		**Sg**	**23 16 03.0 +0.2**
JRG	**Rokugo**	**0.40**	**332**	⇓P		**Pg**	**23 16 00.9 -0.2**
JRG				*e*S		**Sg**	**23 16 06.7 +0.4**
JYK	**Kaneyama**	**0.42**	**252**	⇑P		**Pg**	**23 16 01.5 -0.1**
JYK				S		**Sg**	**23 16 07.5 +0.4**
JOM	**Ohasama**	**0.53**	**37**	⇓P		**Pg**	**23 16 03.4 -0.3**
JOM				S		**Sg**	**23 16 10.8 +0.1**
JIO	**Ouri**	**0.70**	**148**	⇓P		**Pg**	**23 16 06.4 -0.4**
JIO				S		**Sg**	**23 16 15.9 0.0**
JOU	**Okura**	**0.70**	**194**	⇓P		**Pg**	**23 16 06.8 -0.1**
JOU				S		**Sg**	**23 16 16.1 +0.1**
MAJO	**Matsushiro**	**3.27**	**221**	*e*Pn		**Pn**	**23 16 45.0 +0.1**
MAJO				Sn		**Sn**	**23 17 23.0 -0.9**
MAT	**Matsushiro**	**3.27**	**221**	P		**Pn**	**23 16 46.4 +1.5**
MAT				*e*S		**Sn**	**23 17 26.9 +2.9**
MJAR	**Matsushiro Arr**	**3.27**	**221**	Pn		**Pn**	**23 16 46.6 +1.8**
	1.0nm,0.3s,baz=30,slow=14,SNR=9.8						
MJAR				Pg		**Pg**	**23 16 52.5 -3.6**
	1.6nm,0.3s,baz=22,slow=15,SNR=18						
MJAR				LR		LR	23 17 34.6
	comp=Z,158nm,19.5s,baz=230,slow=31						
MJAR				Lg			23 17 35.3
	1.0nm,0.3s,baz=30,slow=34,SNR=2.8						
ASAJ	**Asahikawa**	**5.23**	**14**	Pn		**Pn**	**23 17 12.3 +0.7**
	0.6nm,0.3s,baz=253,slow=19,SNR=2.6						
ASAJ				Sn		**Sn**	**23 18 14.2 +2.2**
	1.0nm,0.3s,baz=47,slow=19,SNR=2.0						
YSS	**Yuzh-Sakhalins**	**8.02**	**9**	*e*Pn		**Pn**	**23 17 49.3 -0.7**
MDJ	**Mudanjiang**	**10.09**	**307**	Pn		**Pn**	**23 18 17.7 -0.7**
KSRS	**Korea Array**	**10.31**	**265**	Pn		**Pn**	**23 18 22.4 +0.9**
	0.3nm,0.3s,baz=81,slow=14,SNR=7.9						
INCN	**Inchon**	**11.31**	**267**	Pn		**Pn**	**23 18 34.7 -0.4**
GUMO	**Guam**	**25.60**	**171**	*e*P		**P**	**23 21 22.5 -0.5**
	8.4nm,0.3s,mb4.8						
ENH	**Enshi**	**27.16**	**261**	P		**P**	**23 21 36.2 -0.8**
ZALV	**Zalesovo Beam**	**40.26**	**311**	P		**P**	**23 23 29.8 -0.5**
	0.5nm,0.6s,mb3.4,baz=83,slow=12,SNR=2.4						
CHTO	**Chiang Mai**	**41.42**	**253**	*e*P		**P**	**23 23 39.8 -0.6**
MKAR	**Makanchi Array**	**42.72**	**300**	P		**P**	**23 23 49.7 -0.9**
	0.4nm,0.8s,mb3.2,baz=92,slow=7.2,SNR=3.7						
MKAR	**Makanchi Array**	**42.72**	**300**	P		**P**	**23 23 49.7 -0.9**
KURK	**Kurchatov**	**44.38**	**306**	*e*P		**P**	**23 24 03.6 -0.3**
	2.1nm,0.9s,mb3.9						
ILAR	**Eielson Array**	**48.03**	**33**	P		**P**	**23 24 32.8 +0.3**
	0.6nm,0.8s,mb3.7,baz=281,slow=6.1,SNR=7.6						
BRVK	**Borovoye**	**48.97**	**311**	P		**P**	**23 24 38.5 -1.4**
UCH	**Uchtor**	**49.31**	**296**	*e*P		**P**	**23 24 43.7 +1.1**
ARU	**Arti**	**54.58**	**318**	*e*P		**P**	**23 25 21.2 -0.5**
	1.2nm,0.5s,mb4.2						
ASAR	**Alice Springs**	**62.73**	**187**	P		**P**	**23 26 18.9 +0.2**
	0.3nm,0.6s,mb3.6,baz=355,slow=5.9,SNR=3.5						
FINES	**FINESS Array B**	**66.84**	**332**	P		**P**	**23 26 44.3 -0.9**
	0.8nm,0.7s,mb3.8,baz=14,slow=12,SNR=3.5						
NOA	**NORSAR Array B**	**72.17**	**337**	P		**P**	**23 27 17.3 -0.8**
	0.2nm,0.4s,mb3.4,baz=39,slow=6.2,SNR=3.3						
NVAR	**Mina Array Bea**	**74.13**	**53**	P		**P**	**23 27 30.9 +0.8**
	0.4nm,0.6s,mb3.5,baz=28,slow=10,SNR=3.9						
NVAR	**Mina Array Bea**	**74.13**	**53**	P		**P**	**23 27 30.9 +0.8**

ISCJB ***29*** *23:20:41.3±0.4,10.80N±0.03×62.35W±0.03,h92km±5km, Error ellipse: s-maj=4.9km s-min=3.4km az=138.5*
NEIC ***29*** *23:20:43.9,10.77N×62.35W,h81km,MD3.8(CAR), MD3.6(TRN),After CAR.*
FUNV ***29*** *23:20:44.1,10.77N×62.35W,h80km,MW3.8*
TRN ***29*** *23:20:45.3,10.86N×62.13W,h82km,MD3.6*
ISC 29 23:20:42.4±0.5,10.80N±0.03×62.35W±0.03,h85km±6km, n28,σ1°10/51,3C-5D,Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUIV	**Guiria**	**0.20**	**140**	⇑*e*P		**Pn**	**23 20 55.6 +0.8**
GUIV				*e*S		**Sn**	**23 21 03.8 -0.1**
TCE	**Chacachacare**	**0.60**	**100**	⇓*e*P		**Pn**	**23 20 59.2 +1.8**
TCE				*e*S		**Sn**	**23 21 08.6 0.0**
GUNV	**Guanoco**	**0.86**	**223**	⇑*e*P		**Pn**	**23 21 01.8 +1.6**
GUNV				*e*S		**Sn**	**23 21 13.8 +0.4**
CRUV	**Carupano**	**0.88**	**262**	⇑*i*P		**Pn**	**23 21 01.6 +1.2**
CRUV				*e*S		**Sn**	**23 21 13.6 -0.2**
TRN	**Trinidad (W)**	**0.94**	**99**	*e*P		**Pn**	**23 21 01.8 +0.7**
TRN				*e*S		**Sn**	**23 21 14.1 -1.0**
ITEV	**Isla Los Testi**	**0.94**	**306**	*e*P		**Pn**	**23 21 02.2 +1.1**
ITEV				*e*S		**Sn**	**23 21 15.6 +0.5**
TPP	**Pointe-a-Pierr**	**1.01**	**118**	⇓*e*P		**Pn**	**23 21 03.0 +1.2**
TPP				*e*S		**Sn**	**23 21 15.3 -1.1**
TBH	**Brigand Hill**	**1.30**	**104**	⇓*e*P		**Pn**	**23 21 07.0 +1.6**
TBH				*e*S		**Sn**	**23 21 21.2 -1.6**
GRGR	**Grenville**	**1.49**	**27**	*e*Pn		**Pn**	**23 21 08.1 +0.3**
GRGR				*e*Sn		**Sn**	**23 21 26.6 -0.4**
GRW	**Mount Saint Ca**	**1.51**	**27**	⇓*e*P		**Pn**	**23 21 09.8 +1.7**
GRW				*e*S		**Sn**	**23 21 25.9 -1.6**
TPR	**Prospect**	**1.59**	**76**	⇓*e*P		**Pn**	**23 21 09.5 +0.4**
TPR				*e*S		**Sn**	**23 21 25.8 -3.5**
ORIV	**Oritupano**	**2.01**	**211**	*e*P		**Pn**	**23 21 16.1 +1.5**
ORIV				*e*S		**Sn**	**23 21 38.4 -0.7**
PCRV	**Puerto La Cruz**	**2.33**	**255**	*e*P		**Pn**	**23 21 19.5 +0.6**
PCRV				*e*S		**Sn**	**23 21 45.2 -1.6**
IBAV	**Isla La Blanqu**	**2.41**	**295**	*e*P		**Pn**	**23 21 20.5 +0.6**
IBAV				*e*S		**Sn**	**23 21 48.1 -0.5**
SVB	**Belmont**	**2.68**	**24**	*e*P		**Pn**	**23 21 24.1 +0.6**
SVB				*e*S		**Sn**	**23 21 54.0 -1.2**
SSV	**Crater Summit**	**2.76**	**24**	*e*P		**Pn**	**23 21 25.3 +0.7**
SSV				*e*S		**Sn**	**23 21 55.8 -1.1**
RIOV	**Rio Grande**	**2.76**	**169**	*e*P		**Pn**	**23 21 25.7 +1.0**
RIOV				*e*S		**Sn**	**23 21 55.1 -2.1**
PRGV	**PARIAGUAN**	**3.04**	**228**	*e*P		**Pn**	**23 21 29.4 +1.0**
PRGV				*e*S		**Sn**	**23 22 02.0 -1.8**
MCLT	**Moule a Chique**	**3.20**	**25**	*e*P		**Pn**	**23 21 31.6 +1.0**
MCLT				*e*S		**Sn**	**23 22 06.7 -1.1**
SLB	**Belfond**	**3.27**	**23**	*e*P		**Pn**	**23 21 32.3 +0.8**
SLB				*e*S		**Sn**	**23 22 08.4 -1.1**
CUPV	**Cœpira**	**3.46**	**258**	*e*P		**Pn**	**23 21 34.3 +0.2**
CUPV				*e*S		**Sn**	**23 22 11.6 -2.4**
BIRV	**Birongo**	**3.87**	**266**	*e*P		**Pn**	**23 21 40.3 +0.7**
MERV	**Las Mercedes**	**4.18**	**249**	*e*P		**Pn**	**23 21 43.8 -0.1**
MERV				*e*S		**Sn**	**23 22 28.2 -3.4**
LUEV	**Luepa**	**5.00**	**170**	*e*P		**Pn**	**23 21 54.6 -0.5**
CAOV	**Caicara del Or**	**5.22**	**229**	*e*P		**Pn**	**23 21 57.2 -0.9**
CAOV				*e*S		**Sn**	**23 22 52.2 -4.8**
TURV	**Turiamo**	**5.41**	**267**	*e*P		**Pn**	**23 22 01.2 +0.7**
BAUV	**El Baul**	**5.90**	**252**	*e*P		**Pn**	**23 22 07.3 0.0**
MAPV	**Macapo**	**6.08**	**261**	*e*P		**Pn**	**23 22 08.8 -1.0**

ISCJB ***29*** *23:23:15.6±0.5,55.91S±0.09×27.4W±0.2,h10km, mb4.4/14,Error ellipse: s-maj=13.9km s-min=11.0km az=37.0*
IDC ***29*** *23:23:15.9±0.7,55.94S×27.41W,h0km,mb4.5/9, mb1 4.5/9,mb1mx4.3/17,mbtmp4.5/9,Error ellipse: s-maj=24.9km s-min=17.5km az=42.0*
NEIC ***29*** *23:23:23.5±2.8,55.92S×27.43W,h60km±25km,mb4.4/8, Error ellipse: s-maj=10.2km s-min=7.6km az=225.0*
ISC 29 23:23:17.5±0.5,55.93S±0.09×27.4W±0.1,h10km,n32, σ0°68/23,mb4.4/14,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
USHA	**Ushuaia**	**23.12**	**255**	P		**P**	**23 28 23.6 +0.2**
	33nm,1.2s,mb4.6,baz=85,slow=11,SNR=4.9						
TRQA	**Tornquist**	**29.18**	**293**	*e*P		**P**	**23 29 19.0 +0.2**
	2.6nm,0.4s,mb4.3						
PLCA	**Paso Flores**	**31.88**	**280**	P		**P**	**23 29 41.8 -0.8**
	2.3nm,1.1s,mb3.9,baz=121,slow=12,SNR=2.6						
PLCA	**Paso Flores**	**31.88**	**280**	P		**P**	**23 29 41.7 -0.9**
QSPA	**South Pole Qui**	**34.33**	**180**	P		**P**	**23 30 04.2 +0.7**
	4.0nm,0.3s,mb4.8,baz=190,slow=0.5,SNR=37						
CPUP	**Villa Florida**	**36.65**	**311**	P		**P**	**23 30 24.6 +0.5**
	2.3nm,0.5s,mb4.3,baz=129,slow=7.4,SNR=11						
CPUP				PcP	PcP	23 32 45.7	-1.1
	0.6nm,0.4s,baz=112,slow=2.1,SNR=4.7						
CPUP	**Villa Florida**	**36.65**	**311**	*e*P		**P**	**23 30 24.1 0.0**
	13nm,0.4s,mb5.1						
CPUP				PcP	PcP	23 32 45.7	-1.1
CFAA	**Coronel Fontan**	**37.42**	**293**	P		**P**	**23 30 29.1 -1.4**
	0.8nm,0.7s,mb3.7,baz=152,slow=8.2,SNR=10						
MAW	**Mawson**	**40.31**	**144**	P		**P**	**23 30 54.8 +0.4**
	3.7nm,0.4s,mb4.4,baz=225,slow=8.7,SNR=11						
MAW	**Mawson**	**40.31**	**144**	*e*P		**P**	**23 30 54.8 +0.4**
	1.3nm,0.7s,mb3.8						
SHEL	**Horse Pasture**	**43.18**	**31**	P		**P**	**23 31 17.8 -0.6**
BOSA	**Boshof**	**46.04**	**76**	*e*P		**P**	**23 31 41.1 0.0**
	5.2nm,1.1s,mb4.4						
SBA	**Scott Base**	**46.20**	**184**	*e*P		**P**	**23 31 42.0 +0.2**
	1.6nm,0.6s,mb4.1						
LPAZ	**La Paz**	**50.22**	**305**	P		**P**	**23 32 15.0 +1.4**
	5.2nm,0.4s,mb5.0,baz=136,slow=5.3,SNR=47						
LPAZ	**La Paz**	**50.22**	**305**	*e*P		**P**	**23 32 14.7 +1.2**
	6.5nm,0.3s,mb5.1						
CASY	**Casey**	**54.06**	**160**	*e*P		**P**	**23 32 41.5 0.0**
	4.6nm,0.8s,mb4.5						
LSZ	**Lusaka**	**58.42**	**69**	*e*P		**P**	**23 33 13.4 +0.1**
DBIC	**Dimbokro**	**65.09**	**25**	P		**P**	**23 33 59.1 +0.9**
	4.4nm,1.0s,mb4.5,baz=162,slow=3.2,SNR=3.2						
DBIC	**Dimbokro**	**65.09**	**25**	P		**P**	**23 33 58.3 +0.2**
OTAV	**Otavalo**	**69.50**	**304**	*e*P		**P**	**23 34 26.3 +0.1**
	8.3nm,1.1s,mb4.6						
MCQ	**Macquarie Isla**	**69.82**	**184**	P		**P**	**23 34 27.0 -0.6**
PCRV	**Puerto La Cruz**	**72.79**	**321**	P		**P**	**23 34 46.7 +0.7**
	12nm,0.6s,mb5.0,baz=327,slow=20,SNR=9.4						
COCO	**West Island**	**97.81**	**125**	P		**P**	**23 36 52.0 -1.2**
FINES	**FINESS Array B**	**124.32**	**28**	PKP	PKPdf	23 42 13.7	-1.4
	0.5nm,0.4s,baz=232,slow=1.6,SNR=3.4						
ARCES	**ARCESS Array B**	**130.86**	**22**	PKP	PKPdf	23 42 26.7	-0.6
	0.9nm,0.7s,baz=202,slow=2.0,SNR=7.1						
ARCES	**ARCESS Array B**	**130.86**	**22**	PKP	PKPdf	23 42 26.7	-0.6
BVAR	**Borovoye Array**	**134.80**	**58**	PKP	PKPdf	23 42 33.7	-1.5
	0.2nm,0.4s,baz=270,slow=1.4,SNR=2.4						
YKA	**Yellowknife Ar**	**136.01**	**318**	PKP	PKPdf	23 42 35.7	-1.5
	0.7nm,0.5s,baz=125,slow=2.5,SNR=5.0						
YKA	**Yellowknife Ar**	**136.01**	**318**	PKP	PKPdf	23 42 35.7	-1.5
ZALV	**Zalesovo Beam**	**142.40**	**64**	PKP	PKPdf	23 42 47.0	-2.1
	0.4nm,0.5s,baz=191,slow=1.5,SNR=2.6						
ILAR	**Eielson Array**	**149.96**	**312**	PKPbc	PKPbc	23 43 05.1	-1.4
	6.0nm,0.7s,baz=132,slow=1.9,SNR=72						
SONM	**Songino Array**	**150.82**	**86**	PKPbc	PKPbc	23 43 09.0	-0.1
	0.7nm,0.4s,baz=225,slow=4.0,SNR=6.1						

PGC 30 00:03:12.4±3.3,50.66N×130.52W,h10km,ML2.9/9, Mw3.5,8D,218km west of Pt. Hardy, Bc Vancouver Island Region,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.52**	**90**	⇑Pn		Pn	00 03 37.6 -2.0
BPBC	**Brooks Peninsu**	**1.83**	**105**	⇑Pn		Pn	00 03 41.7 -2.1
BPBC				⇓Sn		Sn	00 04 02.2 -4.8
PHC	**Port Hardy**	**1.96**	**87**	⇑Pn		Pn	00 03 43.9 -1.8
PHC				⇑Sn		Sn	00 04 06.3 -4.0
BNB	**Barry Inlet**	**2.07**	**339**	⇑Pn		Pn	00 03 44.8 -2.4
BBB	**Bella Bella**	**2.15**	**44**	⇓Pn		Pn	00 03 46.1 -2.1
BBB				⇓Sn		Sn	00 04 09.7 -5.2
MAYB	**Maynard**	**2.15**	**95**	Pn		Pn	00 03 46.7 -1.5
MAYB				⇑Sn		Sn	00 04 11.0 -4.0
EDB	**Eliza Dome**	**2.32**	**108**	⇑Pn		Pn	00 03 49.3 -1.2
EDB				⇓Sn		Sn	00 04 14.0 -5.1
WOSB	**Woss**	**2.57**	**100**	⇓Pn		Pn	00 03 53.1 -1.0
NCRB	**Newcastle Ridg**	**2.86**	**93**	⇓Pn		Pn	00 03 56.7 -1.3
GDR	**Gold River**	**3.01**	**105**	⇓Pn		Pn	00 03 58.8 -1.3
MGB	**Mount Grey**	**4.12**	**111**	⇓Pn		Pn	00 04 13.6 -1.7

TIR ***30*** *00:08:41.6±0.8,43.51N×17.57E,h0km±999km,ML4.2*
PDG ***30*** *00:08:43.6±0.2,43.30N×17.46E,h0km±11km,ML2.6/9, Error ellipse: s-maj=0.8km s-min=1.2km az=0.0*
NEIC ***30*** *00:08:43.6,43.30N×17.46E,h0km,ML2.6(PDG),After PDG.*
VIE ***30*** *00:08:43.4±0.7,43.27N×17.70E,h10km,mb2.5/2,ML2.4/2, Error ellipse: s-maj=11.2km s-min=4.9km az=55.0 85 km SW of Sarajevo*
ISCJB ***30*** *00:08:44.9±0.4,43.33N±0.03×17.52E±0.04,h10km,Error ellipse: s-maj=4.7km s-min=2.4km az=136.8*
CSEM ***30*** *00:08:44.8±0.3,43.35N×17.42E,h2km,ML2.6/9,Error ellipse: s-maj=10.1km s-min=5.0km az=44.0*
BEO ***30*** *00:08:45.1±0.7,43.45N×17.43E,h0km,ML2.3/4*
ISC 30 00:08:46.0±0.5,43.34N±0.03×17.52E±0.04,h10km,n45, σ1°43/81,7C-12D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STON	**Ston**	**0.48**	**164**	*i* Pg		**Pg**	**00 08 51.9 -3.6**
STON				Sg		**Sg**	**00 09 00.2 -1.6**
BRY	**Bratogost**	**0.87**	**120**	⇓*i*Pg		**Pg**	**00 08 59.5 -3.2**
BRY				*e*Sg		**Sg**	**00 09 13.6 -0.4**
UPM	**Unac-Piva**	**1.02**	**97**	⇓*i*Pg		**Pg**	**00 09 03.0 -2.7**
UPM				*e*Sg		**Sg**	**00 09 20.0 +0.9**
HCY	**Herceg Novi**	**1.14**	**141**	⇑*i*Pg		**Pg**	**00 09 04.4 -3.6**
HCY				*e*Sg		**Sg**	**00 09 22.7 -0.1**
PLE	**Pljevlja**	**1.37**	**90**	⇓*i*Pg		**Pg**	**00 09 09.6 -1.6**
PLE				*e*Sg		**Sg**	**00 09 31.5 +1.4**
BLY	**Banja Luka**	**1.43**	**350**	*e*Pg		**Pn**	**00 09 09.5 -2.5**
BLY				*e*Sn		**Sn**	**00 09 31.7 +0.8**
BLY	**Banja Luka**	**1.43**	**350**	*e*Pg		**Pn**	**00 09 09.5 -2.5**
BLY				*e*Sn		**Sn**	**00 09 31.7 +0.8**
BUM	**Brajici-Budva**	**1.45**	**135**	⇑*i*Pg		**Pn**	**00 09 10.4 -1.9**
BUM				*e*Sg		**Sg**	**00 09 33.2 +0.5**
BBLS	**Lazići**	**1.47**	**68**	*e*Pg		**Pn**	**00 09 11.9 -0.6**
BBLS				*e*Sg		**Sg**	**00 09 32.5 -0.8**
BBLS	**Lazići**	**1.47**	**68**	*e*Pg		**Pn**	**00 09 11.9 -0.6**
BBLS				*e*Sg		**Sg**	**00 09 32.5 -0.8**
PDG	**Podgorica**	**1.57**	**125**	⇓*i*Pn		**Pn**	**00 09 13.1 -0.8**
PDG				*e*Sn		**Sg**	**00 09 37.4 +0.9**
TTG	**Podgorica**	**1.57**	**125**	⇓*i*Pn		**Pn**	**00 09 13.1 -0.8**
TTG				*e*Sn		**Sg**	**00 09 37.4 +0.9**
TTG	**Podgorica**	**1.57**	**125**	⇓*i*Pn		**Pn**	**00 09 13.1 -0.8**
TTG				*e*Sn		**Sg**	**00 09 37.4 +0.9**
BEY	**Berane**	**1.80**	**104**	⇓*i*Pn		**Pn**	**00 09 17.8 +0.7**
BEY				*e*Sn		**Sg**	**00 09 44.1 +0.1**
IVA	**Berane**	**1.80**	**104**	⇓*i*Pn		**Pn**	**00 09 17.8 +0.7**
IVA				*e*Sn		**Sg**	**00 09 44.1 +0.1**
IVA	**Berane**	**1.80**	**104**	⇓*i*Pn		**Pn**	**00 09 17.8 +0.7**
IVA				*e*Sn		**Sg**	**00 09 44.1 +0.1**
ULC	**Ulcinj**	**1.88**	**136**	⇓*i*Pn		**Pn**	**00 09 17.7 -0.4**
ULC				*e*Sn		**Sb**	**00 09 44.7 +0.9**
ULC	**Ulcinj**	**1.88**	**136**	⇓*i*Pn		**Pn**	**00 09 17.7 -0.4**
ULC				*e*Sn		**Sb**	**00 09 44.7 +0.9**
DIVS	**Divibare**	**1.95**	**66**	*e*Pn		**Pn**	**00 09 19.3 +0.2**
DIVS				*e*Sn		**Sb**	**00 09 47.3 +1.4**
DIVS	**Divibare**	**1.95**	**66**	*e*Pn		**Pn**	**00 09 19.3 +0.2**
DIVS				*e*Sn		**Sb**	**00 09 47.3 +1.4**
PVY	**Plav**	**1.95**	**112**	⇑*i*Pn		**Pn**	**00 09 19.4 +0.3**
PVY				*e*Sn		**Sg**	**00 09 48.1 -0.5**
PVY	**Plav**	**1.95**	**112**	⇑*i*Pn		**Pn**	**00 09 19.4 +0.3**
PVY				*e*Sn		**Sg**	**00 09 48.1 -0.5**
BCI	**Bajram Curri**	**2.11**	**116**	*i* PN		**Pn**	**00 09 23.2 +1.9**
BCI				*i* SN		**Sg**	**00 09 53.1 -0.7**
BCI	**Bajram Curri**	**2.11**	**116**	*i* Pn		**Pn**	**00 09 23.2 +1.8**
BCI				*i* Sn		**Sg**	**00 09 53.1 -0.7**
PUK	**Puka**	**2.18**	**126**	*i* PN		**Pn**	**00 09 24.5 +2.2**
P

AAK	Ala-Archa	84.66	314	eP		P	00 23 06.7	+1.6
COLA	College	84.72	22	P		P	00 23 05.2	+0.2
ILAR	Eielson Array	85.04	22	P		P	00 23 06.4	-0.1
	2.5nm,0.9s,mb4.4,baz=250,slow=4.8,SNR=22							
AML	Almayashu	85.11	313	eP		P	00 23 08.5	+1.1
	10nm,0.9s,mb5.0							
EKS2	Erkin-Say	85.18	314	eP		P	00 23 07.7	-0.1
	6.7nm,1.1s,mb4.7							
DAWY	Dawson	87.70	24	eP		P	00 23 21.9	+2.3
BVAR	Borovoye Array	89.75	323	P		P	00 23 29.0	-0.5
	1.1nm,0.7s,mb4.3,baz=102,slow=6.1,SNR=7.4							
BRVK	Borovoye	89.82	323	P		P	00 23 29.8	0.0
YKA	Yellowknife Ar	98.40	28	P		P	00 24 10.8	+1.8
	0.6nm,0.7s,mb4.3,baz=257,slow=3.5,SNR=3.2							
PLCA	Paso Flores	119.23	145	PKP		PKPdf	00 29 24.4	+3.8
	1.2nm,0.5s,baz=256,slow=1.9,SNR=2.1							
PLCA	Paso Flores	119.23	145	PKP		PKPdf	00 29 24.4	+3.8
TORD	Torodi Ar. Bea	148.85	284	PKPbc		PKPbc	00 30 20.7	+0.8
	2.5nm,0.6s,baz=55,slow=3.5,SNR=23							

IDC ***30*** *00:24:29.4±1.2, 10.69S×163.71E, h0km, mb3.9/8, mb1 4.1/10, mb1mx4.0/18, mbtmp4.0/10, ML4.1/2, MS3.8/10, Ms1 3.9/10, ms1mx3.7/16, Error ellipse: s-maj=41.1km s-min=21.6km az=152.0*

ISCJB ***30*** *00:24:33.3±0.5, 10.65S±0.09×163.61E±0.07, h33km, mb4.1/13, MS3.9/10, Error ellipse: s-maj=12.3km s-min=9.9km az=4.6*

NEIC ***30*** *00:24:35.4±0.4, 10.57S×163.60E, h35km, mb4.2/6, Error ellipse: s-maj=10.5km s-min=7.6km az=131.0*

ISC 30 00:24:35.3±0.5, 10.62S±0.09×163.63E±0.07, h35km, n38, σ0.71/33, mb4.1/13, MS3.9/10, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	3.82	288	Pn		Pn	00 25 30.9	-0.7
	44nm,0.3s,baz=140,slow=7.9,SNR=9.8						
HNR				Sn		Sn	00 26 16.7	+1.4
	34nm,0.3s,baz=165,slow=16,SNR=2.7						
PMG	Port Moresby	16.27	273	ePn		Pn	00 28 20.3	-0.9
CTA	Charters Tower	19.20	239	P		Pn	00 28 55.0	-2.5
	0.1nm,0.3s,baz=48,slow=12,SNR=2.0							
CTA	Charters Tower	19.20	239	P		Pn	00 28 55.0	-2.5
CTAO	Charters Tower	19.20	239	eP		Pn	00 28 57.3	-0.1
	8.6nm,0.8s							
STKA	Stephens Creek	29.36	221	P		P	00 30 36.0	+0.9
WRAB	Tennant Creek	29.68	248	eP		P	00 30 38.2	+0.2
	3.6nm,0.9s,mb4.1							
URZ	Urewera	30.06	159	LR		LR	00 40 54.4	
	comp=Z,234nm,20.3s,MS3.8,baz=281,slow=33							
GUMO	Guam	30.42	322	P		P	00 30 43.8	-0.8
ASAR	Alice Springs	31.15	242	P		P	00 30 51.0	+0.1
	2.0nm,0.3s,mb3.9,baz=68,slow=9.8,SNR=8.5							
RPZ	Rata Peaks	33.59	170	LR		LR	00 41 46.4	
	comp=Z,1μm,19.6s,MS4.7,baz=144,slow=31							
FITZ	Fitzroy Crossi	37.49	254	P		P	00 31 45.3	-0.7
	0.9nm,0.6s,mb3.8,baz=87,slow=6.9,SNR=3.8							
FITZ	Fitzroy Crossi	37.49	254	eP		P	00 31 45.9	-0.1
	1.2nm,0.6s,mb3.9							
MBWA	Marble Bar	43.37	250	P		P	00 32 34.7	0.0
NWAO	Narrogin (SRO)	47.99	235	eP		P	00 33 11.0	0.0
KKM	Kota Kinabalu	50.03	287	P		P	00 33 26.1	-0.7
MJAR	Matsushiro Arr	52.66	334	LR		LR	00 53 52.9	
	comp=Z,70nm,20.5s,MS3.7,baz=225,slow=33							
NACB	Ninganchiao	53.68	311	P		P	00 33 53.1	-0.7
KSM	Kuching	54.38	280	P		P	00 33 58.9	-0.3
KSRS	Korea Array	58.37	327	LR		LR	00 59 59.3	
	comp=Z,57nm,18.1s,MS3.7,baz=23,slow=36							
PETK	Petropavlovsk-	63.68	356	LR		LR	00 58 28.3	
	comp=Z,49nm,19.9s,MS3.7,baz=168,slow=32							
COCO	West Island	65.34	261	P		P	00 35 14.9	+0.3
CASY	Casey	66.03	201	eP		P	00 35 18.2	+0.1
BJT	Baijiatuau	66.85	322	eP		P	00 35 23.8	+0.1
CMAR	Chiang Mai Arr	70.04	294	P		P	00 35 44.7	+0.6
	0.9nm,0.5s,mb4.0,baz=110,slow=4.1,SNR=5.6							
CMAR				LR		LR	01 06 05.7	
	comp=Z,33nm,19.1s,MS3.6,baz=120,slow=36							
CMAR	Chiang Mai Arr	70.04	294	P		P	00 35 44.7	+0.6
CMAR				LR		LR	01 06 05.7	
SONM	Songino Array	77.11	324	P		P	00 36 25.5	+0.4
	0.3nm,0.5s,mb3.5,baz=132,slow=6.0,SNR=3.1							
SONM				LR		LR	01 09 55.1	
	comp=Z,74nm,18.2s,MS4.0,baz=158,slow=35							
GTA	Gaotai	77.28	315	eP		P	00 36 33.5	+7.3
GTA				pP		pP	00 36 38.3	+1.1
GTA				sP		sP	00 36 40.8	-0.4
GTA				pmax		pmax		
	comp=Z,4.0nm,1.5s,mb4.1							
QSPA	South Pole Qui	79.38	180	eP		P	00 36 37.7	+0.5
	comp=Z,2.0nm,0.9s,mb4.0							
LSA	Lhasa	80.37	303	eP		P	00 36 43.4	0.0
COLA	College	83.54	19	eP		P	00 36 59.1	-0.2
	comp=Z,2.4nm,0.5s,mb4.6							
ILAR	Eielson Array	83.78	19	P		P	00 36 59.6	-0.9
	comp=Z,0.6nm,0.7s,mb3.8,baz=251,slow=5.1,SNR=6.2							
ILAR				LR		LR	01 15 01.7	
	comp=Z,51nm,18.1s,MS3.9,baz=302,slow=36							
NVAR	Mina Array Bea	87.34	50	P		P	00 37 19.1	+0.2
	comp=Z,0.3nm,0.4s,mb3.9,baz=244,slow=5.8,SNR=3.4							
MK31	Makanchi Array	91.80	317	eP		P	00 37 40.5	+0.9
MKAR	Makanchi Array	91.80	317	P		P	00 37 39.5	0.0
	comp=Z,0.9nm,0.9s,mb4.1,baz=108,slow=4.7,SNR=4.8							
MKAR				LR		LR	01 17 04.2	
	comp=Z,27nm,18.7s,MS3.7,baz=77,slow=34							
ZALV	Zalesovo Beam	92.00	325	P		P	00 37 42.0	+1.7
	comp=Z,0.2nm,0.3s,mb3.9,baz=111,slow=3.7,SNR=3.1							
ZALV				LR		LR	01 14 58.1	
	comp=Z,40nm,21.5s,MS3.8,baz=69,slow=33							
AAK	Ala-Archa	96.47	312	eP		P	00 38 01.0	-0.2
	comp=Z,1.9nm,0.3s,mb5.0							
ARCES	ARCESS Array B	115.40	345	PKP		PKPdf	00 43 11.9	-0.9
	comp=Z,0.7nm,0.8s,baz=88,slow=2.1,SNR=5.0							

NIED ***30*** *01:15:00, 38.80N×140.80E, h5km, Mw3.5 Best double couple: M0=1.78000×10^14 NP1:φs=30.00000°, δ70.00000°, λ55.00000°. NP2:φs=275.00000°, δ39.00000°, λ148.00000°.*

ISCJB ***30*** *01:15:01.7±0.4, 38.83N±0.03×140.85E±0.04, h20km±4km, mb3.7/8, Error ellipse: s-maj=5.9km s-min=4.4km az=35.8*

JMA ***30*** *01:15:02.0, 38.83N×140.83E, h5km±1km, M3.6 Broadband fault plane solution: P waves. NP1: φs=266.00000°, δ41.00000°, λ142.00000°. NP2: φs=27.00000°, δ66.00000°, λ55.00000°. Principal axes: T Plg55.0000°, Azm252.0000°; N Plg31.0000°, Azm42.0000°; P Plg14.0000°, Azm141.0000°;*

JMA Felt III J1.

IDC ***30*** *01:15:02.4±2.2, 39.35N×140.86E, h0km, mb3.6/6, mb1 3.7/8, mb1mx3.6/21, mbtmp3.6/8, ML3.4/2 Error ellipse: s-maj=50.1km s-min=27.4km az=141.0*

NEIC ***30*** *01:15:02.0, 38.83N×140.83E, h5km, mb4.2/2, After JMA.*

ISC 30 01:15:01.7±0.4, 38.83N±0.03×140.84E±0.04, h9km±4km, n27, σ0.88/39, mb3.7/8, 3C-6D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	Ichinoseki	0.32	67	↑P		Pg	01 15 08.3	+0.2
JMK				eS		Sg	01 15 12.9	+0.4
JYK	Kaneyama	0.39	284	↓P		Pg	01 15 09.4	+0.1
JYK				S		Sg	01 15 14.4	0.0
JOU	Okura	0.48	197	↓P		Pg	01 15 11.3	+0.3
JOU				S		Sg	01 15 17.8	+0.5
JIO	Ouri	0.55	133	↓P		Pg	01 15 12.2	-0.1
JIO				eS		Sg	01 15 19.5	+0.1
JRG	Rokugo	0.59	344	↓P		Pg	01 15 13.3	+0.1
JOM	Ohasama	0.74	28	↓P		Pg	01 15 15.7	-0.3
JOM				S		Sg	01 15 25.6	0.0
JYS	Shiratake	0.85	225	↑P		Pg	01 15 18.1	-0.1
JYS				S		Sg	01 15 29.5	+0.2
JYA	Atsumi	0.91	256	↑P		Pg	01 15 18.9	-0.3
JMM	Marumori	0.96	182	↓P		Pg	01 15 19.3	-0.9
JMM				S		Sg	01 15 31.9	-0.7
MAJO	Matsushiro	3.09	223	ePn		Pn	01 15 51.5	+0.9
MAJO				ePg		Pg	01 15 57.7	-3.3
MAJO				eSg		Sg	01 16 36.8	-4.2
MAT	Matsushiro	3.09	223	P		Pn	01 15 52.4	+1.7
MAT				eS		Sn	01 16 31.4	+3.7
MJAR	Matsushiro Arr	3.09	223	Pn		Pn	01 15 58.2	+7.5
	2.0nm,0.3s,baz=22,slow=15,SNR=13							
MJAR				Sn		Sn	01 16 36.6	+8.8
	2.5nm,0.3s,baz=22,slow=17,SNR=5.6							
MJAR	Matsushiro Arr	3.09	223	Pn		Pn	01 15 58.2	+7.5
MJAR				Sn		Sn	01 16 36.5	+8.8
ERM	Erimo	3.65	28	ePn		Pn	01 16 00.2	+1.9
KSRS	Korea Array	10.27	266	Pn		Pn	01 17 32.9	+3.7
	0.5nm,0.3s,baz=81,slow=14,SNR=14							
SONM	Songino Array	26.44	301	P		P	01 20 40.7	+1.9
	0.4nm,0.7s,mb3.1,baz=108,slow=7.7,SNR=2.5							
SONM	Songino Array	26.44	301	P		P	01 20 40.7	+1.9
MKAR	Makanchi Array	42.80	300	P		P	01 22 58.8	-0.8
	0.2nm,0.5s,mb3.1,baz=87,slow=7.4,SNR=4.0							
KURK	Kurchatov	44.49	307	eP		P	01 23 12.8	-0.3
	2.0nm,0.7s,mb4.0							
ILAR	Eielson Array	48.24	33	P		P	01 23 42.1	-0.4
	0.2nm,0.6s,mb3.3,baz=262,slow=6.3,SNR=4.2							
ABKAR	Akbulak array	56.45	309	eP		P	01 24 43.2	-0.4
	1.6nm,0.5s,mb4.3							
FINES	FINESS Array B	67.02	332	P		P	01 25 54.0	-0.6
	1.8nm,0.9s,mb4.1,baz=59,slow=8.3,SNR=5.0							
NB2	NORSAR Subarra	72.36	337	P		P	01 26 27.1	-0.5
	comp=Z,0.7nm,0.7s,mb3.7,baz=39,slow=6.2							
NOA	NORSAR Array B	72.36	337	P		P	01 26 26.0	-1.6
	comp=Z,0.6nm,0.7s,mb3.7,baz=38,slow=5.9,SNR=4.3							
AKASG	Malin Array Be	72.61	322	P		P	01 26 28.1	-1.2
	comp=Z,0.5nm,0.3s,mb3.9,baz=46,slow=6.3,SNR=5.6							
BUR08	Bucovina Ar. S	76.62	321	eP		P	01 26 52.2	-0.4
CLL	Collm	79.32	330	eP		P	01 27 07.0	-0.5

NIED ***30*** *01:34:00, 34.50N×140.30E, h77km, Mw3.6 Best double couple: M0=3.09000×10^14 NP1:φs=257.00000°, δ80.00000°, λ147.00000°. NP2:φs=354.00000°, δ58.00000°, λ11.00000°.*

NEIC ***30*** *01:34:36.5±1.6, 34.41N×140.44E, h75km±11km, mb4.2/3, Error ellipse: s-maj=18.9km s-min=17.1km az=53.0*

ISCJB ***30*** *01:34:37.3±0.5, 34.48N±0.04×140.29E±0.05, h92km±3km, mb3.9/7, Error ellipse: s-maj=6.7km s-min=5.9km az=138.9*

JMA ***30*** *01:34:37.8±0.2, 34.48N×140.25E, h85km±2km, M3.5*

IDC ***30*** *01:34:38.6±7.8, 34.43N×140.15E, h79km±48km, mb3.6/4, mb1 3.6/5, mb1mx3.3/22, mbtmp3.6/5, ML3.9/1, Error ellipse: s-maj=79.2km s-min=59.4km az=45.0*

ISC 30 01:34:38.4±0.5, 34.48N±0.04×140.27E±0.05, h85km±3km, n28, σ0.80/44, mb3.9/7, 2C-6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO3	Boso 3	0.38	31	P		Pn	01 34 51.2	-0.6
BSO3				S		Sn	01 35 02.1	+0.4
BSO2	Boso 2	0.48	55	eS		Sn	01 35 04.7	+1.6
BSO4	Boso 4	0.52	6	↑P		Pn	01 34 52.6	-0.2
BSO4				eS		Sn	01 35 04.4	+0.9
BSO1	Boso 1	0.61	73	↓P		Pn	01 34 52.8	-0.8
BSO1				eS		Sn	01 35 05.3	+0.3
TATJ	Tateyama 2	0.64	331	P		Pn	01 34 53.8	-0.1
TATJ				eS		Sn	01 35 05.9	+0.4
KTR	Katsuura	0.67	3	↑P		Pn	01 34 53.9	-0.4
KTR				eS		Sn	01 35 05.7	-0.3
JIM2	Oshima 3	0.73	289	↓P		Pn	01 34 54.1	-0.8
JIM2				eS		Sn	01 35 05.9	-1.2
JMY	Miyakejima3	0.75	238	P		Pn	01 34 54.5	-0.5
JKO	Kozu shima	0.98	253	P		Pn	01 34 57.3	-0.3
JKO				eS		Sn	01 35 12.8	+0.8
JIZS	Izushimoda	1.18	282	↓P		Pn	01 34 59.6	-0.3
JIZS				eS		Sn	01 35 16.4	+0.4
JOD2	Odawara 2	1.25	309	↓P		Pn	01 34 59.9	-0.9
JOD2				eS		Sn	01 35 16.6	-1.1
JHJ2	Mitsune	1.41	196	P		Pn	01 35 03.1	+0.2
JHJ2				eS		Sn	01 35 21.5	+0.2
JYN	Shimob	1.75	306	P		Pn	01 35 07.3	+0.2
JYN				eS		Sn	01 35 30.2	+1.3
SHZ3	Shizuoka 3	1.80	290	↓P		Pn	01 35 08.4	+0.6
JRY	Ryogami san	1.90	324	↓P		Pn	01 35 09.1	-0.1
JRY				eS		Sn	01 35 32.9	+0.3
MJAR	Matsushiro Arr	2.66	321	P		Pn	01 35 18.8	-0.4
	23nm,0.3s,baz=154,slow=13,SNR=52							
MJAR				S		Sn	01 35 49.9	-0.8
	8.4nm,0.3s,baz=186,slow=22,SNR=6.0							
MAJO	Matsushiro	2.66	321	ePn		Pn	01 35 19.5	+0.2
MAJO				eSn		Sn	01 35 49.0	-1.7
MAT	Matsushiro	2.66	321	P		Pn	01 35 19.8	+0.5
MAT				S		Sn	01 35 52.9	+2.2
ERM	Erimo	7.86	16	ePn		Pn	01 36 28.4	-1.6
ERM				eSn		Sn	01 37 49.8	-7.5
SONM	Songino Array	28.54	308	P		P	01 40 27.1	+1.2
	1.0nm,0.6s,mb3.6,baz=109,slow=7.6,SNR=5.7							
ZALV	Zalesovo Beam	42.99	314	P		P	01 42 29.9	+0.8
	1.0nm,0.4s,mb3.9,baz=93,slow=7.1,SNR=6.5							
MK31	Makanchi Array	44.74	304	eP		P	01 42 42.8	-0.3
MKAR	Makanchi Array	44.74	304	P		P	01 42 43.3	+0.2
	1.0nm,0.6s,mb3.7,baz=89,slow=9.6,SNR=14							
MKAR	Makanchi Array	44.74	304	P		P	01 42 43.3	+0.2
KURK	Kurchatov	46.82	310	eP		P	01 42 59.4	0.0
	2.0nm,0.5s,mb4.1							
WRAB	Tennant Creek	54.40	187	eP		P	01 43 55.6	-1.0
	2.3nm,0.7s,mb4.3							
ABKAR	Akbulak array	58.90	311	eP		P	01 44 29.0	+0.7
	0.4nm,0.4s,mb3.8							
FINES	FINESS Array B	70.64	332	P		P	01 45 44.6	+0.2
	0.9nm,0.9s,mb3.6,baz=67,slow=5.0,SNR=3.2							

NEIC ***30*** *01:55:47.1, 32.12N×115.80W, h4km, ML3.1(ECX), ML3.0(PAS), After ECX.*

ECX 30 01:55:47.1±0.8, 32.12N×115.80W, h4km±3km, MD3.0, ML3.1, 16C-2D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RDX	Rancho Dawling	0.22	213	↑eP		Pg	01 55 51.1	-0.3
RDX				eS		Sg	01 55 54.5	+0.2
RDX				eS		Sg	01 55 54.5	+0.2
RDX				↓e			01 55 55.0	
	comp=E,6μm,0.3s							
EMX	El Mayor	0.49	105	↑eP		Pg	01 55 56.0	-0.6
EMX				eS		Sg	01 56 02.5	-0.4
EMX				↑e			01 56 04.3	
	comp=N,1μm,0.2s							
EMX	El Mayor	0.49	105	↑eP		Pg	01 55 56.0	-0.6
EMX				eS		Sg	01 56 02.5	-0.4
CPBX	Cerro Prieto	0.52	54	↑eP		Pg	01 55 57.0	-0.1
RMX	La Rumorosa	0.54	334	↓eP		Pg	01 55 56.4	-1.1
RMX				eS		Sg	01 56 03.3	-1.2
RMX	La Rumorosa	0.54	334	↑eP		Pg	01 55 56.4	-1.1
RMX				eS		Sg	01 56 03.3	-1.2
CBX	Cerro Bola	0.76	285	↑eP		Pg	01 56 00.6	-1.0
CBX				eS		Sg	01 56 10.7	-0.8
CCX	Cicese	0.77	252	↑eP		Pg	01 56 01.0	-0.9
CCX				eS		Sg	01 56 11.5	-0.5
ECNX	Esteban Cantu	0.82	236	↑eP		Pg	01 56 01.8	-1.0
ECNX				↑eP			01 56 01.0	
ECNX				eS		Sg	01 56 11.5	-1.9
ECNX				eS		Sg	01 56 12.7	-0.7
PBX	Punta Banda	0.87	245	↑eP		Pg	01 56 02.6	-1.2
PBX				eS		Sg	01 56 14.3	-0.7
PBX				↑e			01 56 14.7	
	comp=N,447nm,0.2s							
PBX	Punta Banda	0.87	245	↑eP		Pg	01 56 02.6	-1.2
PBX				eS		Sg	01 56 14.2	-0.8
ECBX	El Chinero	0.91	135	↑eP		Pg	01 56 02.7	-1.8
ECBX				eS		Sg	01 56 15.4	-0.8
BAR	Barrett	0.93	308	↑/Pg		Pg	01 56 03.3	-1.6
BAR				eSg		Sg	01 56 14.7	-2.2
SPX	San Pedro Mart	1.10	165	eP		Pg	01 56 07.0	-1.3
SPX				eS		Sg	01 56 21.6	-1.0
SPX				e			01 56 23.5	
	comp=N,194nm,0.1s							
SPX				↑e			01 56 27.7	
	comp=E,230nm,0.4s							
GLA	Glamis	1.25	41	eP		Pg	01 56 07.4	-3.5
PFO	Pinyon Flat Ob	1.59	340	ePn		Pn	01 56 13.0	-3.0
GSC	Goldstone	3.29	346	Pn		Pn	01 56 39.1	-0.3

WEL 30 02:25:23.6±0.2, 37.47S×178.18E, h5km, ML3.5/4, 1C-1D, Error ellipse: s-maj=1.2km s-min=0.6km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.14	134	↑PG		Pg	02 25 26.8	+0.2
MXZ				SG		Sg	02 25 28.9	+0.5
MXZ				SG		Sg	02 25 29.0	+0.5
PUZ	Puketiti	0.61	174	↓P*		Pg	02 25 35.9	+0.5
PUZ				SG		Sg	02 25 44.5	+1.2
MWZ	Matawai	1.01	210	P*		Pb	02 25 42.5	-1.1
CNGZ	Carnagh Statio	1.02	179	P*		Pb	02 25 44.6	+0.8
CNGZ				S*		Sb	02 26 00.0	+2.6
URZ	Urewera	1.16	226	P*		Pb	02 25 45.2	-1.0

KRSC 30 03:03:28.7±0.3, 50.97N×158.63E, h34km±34km, ML3.8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	Gorelyy	1.62	348	eP		Pn	03 03 57.5	+2.7
GRL				eS		Sn	03 04 18.4	+3.9
MIPR	Malaya Ipel'ka	1.75	319	eP		Pn	03 03 58.7	+2.1
MIPR				eS		Sn	03 04 20.8	+3.1
ALID	Alaid	1.95	268	eP		Pn	03 03 59.8	+0.4
ALID				eS		Sn	03 04 23.1	+0.5
PET	Petropavlovsk	2.06	0	eP		Pn	03 04 03.2	+2.4
PET				eS		Sn	03 04 27.4	+2.2
NLC	Nalytchevo	2.25	11	eS		Sn	03 04 30.5	+0.5
SPN	Mys Shipunski	2.30	21	eS		Sn	03 04 33.3	+2.1
AVH	Avacha	2.30	2	eP		Pn	03 04 07.5	+3.4
GNL	Ganaly	2.76	351	eP		Pn	03 04 13.4	+2.9
MKZ	Mys Kozlova	4.06	26	eP		Pn	03 04 30.2	+2.0
MKZ				eS		Sn	03 05 14.5	0.0
KBTR	Krutoberegovo	5.81	24	eP		Pn	03 04 56.1	+3.8

ISCJB ***30*** *03:11:34.5±5.3, 7.31S±0.10×148.4E±0.2, h27km±37km, mb4.2/17, MS3.1/3, Error ellipse: s-maj=29.8km s-min=16.1km az=2.8*

NEIC ***30*** *03:11:37.8±0.5, 7.38S×148.51E, mb4.3/7, Error ellipse: s-maj=16.4km s-min=6.7km az=101.0*

IDC ***30*** *03:11:38.3±0.8, 7.37S×148.39E, h45km±5km, mb3.9/12, mb1 4.0/13, mb1mx4.0/18, mbtmp3.9/13, MS3.2/4, Ms1 3.2/4, ms1mx3.0/18, Error ellipse: s-maj=28.4km s-min=12.0km az=106.0*

ISC 30 03:11:37.8±1.6, 7.35S±0.08×148.4E±0.2, h40km±15km, h46km±1.4km: pP-P, n29, σ0.61/29, mb4.2/17, MS3.1/3, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	2.41	212	ePn		Pn	03 12 14.8	+0.1
PMG				eSn		Sn	03 12 46.7	+3.8
COEN	Coen	8.36	218	ePn		Pn	03 13 35.9	-0.6
COEN				eSn		Sn	03 15 05.2	-4.5
CTA	Charters Tower	12.84	189	P		Pn	03 14 38.1	+0.2
	baz=0.0,slow=15,SNR=2.0							
CTA				LR		LR	03 18 19.6	
	comp=Z,64nm,19.1s,baz=46,slow=31							
WRAB	Tennant Creek	18.52	226	eP		Pn	03 15 52.4	+1.0
	9.1nm,0.6s							
GUMO	Guam	21.10	350	LR		LR	03 22 48.4	
	comp=Z,30nm,21.8s,MS2.6,baz=159,slow=32							
ASAR	Alice Springs	21.40	219	P		P	03 16 21.9	-0.4
	0.2nm,0.3s,baz=46,slow=10,SNR=4.1							
ASAR				S		S	03 20 17.8	+0.2
	1.0nm,0.9s,baz=37,slow=23,SNR=4.1							
FITZ	Fitzroy Crossi	24.64	242	P		P	03 16 53.3	-1.6
	2.1nm,0.4s,mb4.0,baz=61,slow=7.7,SNR=9.6							
STKA	Stephens Creek	25.23	194	P		P	03 17 00.2	+0.2
	3.4nm,0.7s,mb4.0,baz=22,slow=12,SNR=7.5							
STKA				LR		LR	03 27 24.8	
	comp=Z,101nm,20.2s,MS3.3,baz=24,slow=38							
STKA	Stephens Creek	25.23	194	P		P	03 17 00.2	+0.2
STKA				LR		LR	03 27 24.8	
MJAR	Matsushiro Arr	44.70	348	P		P	03 19 46.6	-0.3
	6.8nm,0.8s,mb4.5,baz=177,slow=9.0,SNR=17							
MJAR				pP		pP	03 20 00.5	+2.2
	1.9nm,0.7s,baz=162,slow=8.9,SNR=3.0							
MAJO	Matsushiro	44.70	348	eP		P	03 19 46.8	-0.2
	13nm,1.1s,mb4.7							
MAT	Matsushiro	44.70	348	P		P	03 19 46.9	-0.1
KSRS	Korea Array	48.51	338	P		P	03 20 16.6	-0.3
	2.7nm,0.8s,mb4.4,baz=155,slow=9.1,SNR=14							
KSRS				LR		LR	03 39 03.8	
	comp=Z,37nm,19.3s,MS3.4,baz=220,slow=34							
CMAR	Chiang Mai Arr	55.14	298	P		P	03 21 07.2	+0.6
	1.2nm,0.4s,mb4.3,baz=116,slow=6.1,SNR=5.9							
CHTO	Chiang Mai	55.28	299	eP		P	03 21 07.6	0.0
	2.3nm,0.6s,mb4.4							
ULN	Ulaanbaatar	65.97	331	eP		P	03 22 20.3	+0.4
	1.8nm,0.6s,mb4.3							
SONM	Songino Array	66.27	330	P		P	03 22 22.3	+0.5
	1.4nm,0.8s,mb4.0,baz=140,slow=6.3,SNR=8.5							
SONM				pP		pP	03 22 34.9	+1.2
	1.7nm,1.1s,baz=152,slow=6.5,SNR=4.0							
MK31	Makanchi Array	79.43	320	eP		P	03 23 39.8	-0.2
MKAR	Makanchi Array	79.43	320	P		P	03 23 40.2	+0.3
	0.6nm,0.4s,mb3.9,baz=98,slow=8.9,SNR=5.9							
MKAR				pP		pP	03 23 53.1	+1.0
	1.6nm,0.8s,baz=104,slow=6.1,SNR=4.3					

MNTX	Cornudas Mount	35.12	327	*e*P	P	03 32 27.1	-0.8
	1.2nm,0.8s,mb3.9						
ANMO	Albuquerque	38.21	330	*e*P	P	03 32 54.6	+0.3
	1.3nm,0.8s,mb3.7						
SMCO	Snowmass	41.84	333	*e*P	P	03 33 25.1	+0.9
	1.9nm,0.8s,mb3.8						
RSSD	Black Hills	44.83	340	*e*P	P	03 33 49.8	+1.5
	1.8nm,0.9s,mb3.9						
HWUT	Hardware Ranch	45.90	331	*e*P	P	03 33 56.9	0.0
	2.3nm,0.7s,mb4.2						
NVAR	Mina Array Bea	47.32	323	P	P	03 34 08.2	+0.2
	0.7nm,0.5s,mb3.8,baz=129,slow=8.3,SNR=4.5						
HLID	Hailey	48.76	331	*e*P	P	03 34 18.9	-0.1
	1.0nm,0.8s,mb3.9						
YKA	Yellowknife Ar	63.79	345	P	P	03 36 05.2	-0.6
	1.1nm,0.8s,mb4.0,baz=138,slow=6.6,SNR=5.1						
ILAR	Eielson Array	76.20	337	P	P	03 37 21.6	-0.2
	0.8nm,1.0s,mb3.6,baz=129,slow=4.6,SNR=6.4						
ILAR				LR	LR	04 12 39.7	
	comp=Z,49nm,19.7s,MS3.8,baz=61,slow=37						

DJA 30 04:02:54,4°.09S×121°.51E,h29km,MLv3.6/3,Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDI	Kendari	1.11	83	P	Pn	04 03 13.3	-0.4
KDI				S	Sn	04 03 29.1	+1.1
BKSI	Bulukumba	1.85	228	P	Pn	04 03 24.0	+0.3
TTSI	Tana Toraja	1.98	302	P	Pn	04 03 25.9	+0.3
LUWI	Luwuk	3.28	23	P	Pn	04 03 43.7	+0.2
PCI	Palu	3.58	332	P	Pn	04 03 49.6	+2.0

*ISCJB **30** 04:16:11.8±1.4,25°.61S±0°.08×179°.4E±0°.2,h503km±19km, mb3.6/6, Error ellipse: s-maj=26.9km s-min=12.4km az=6.4*
*NEIC **30** 04:16:12.1±1.0,25°.68S×179°.48E,h503km±11km,mb3.7/2, Error ellipse: s-maj=16.5km s-min=11.2km az=101.0*
*IDC **30** 04:16:13.1±2.5,25°.71S×179°.46E,h512km±25km,mb3.2/5, mb1 3.7/7,mb1mx3.4/16,mbtmp3.5/7, Error ellipse: s-maj=25.5km s-min=23.3km az=161.0*

ISC 30 04:16:12.2±1.3,25°.67S±0°.08×179°.5E±0°.2,h497km±17km, n20,σ0°.74/11,mb3.6/6,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	8.01	350	*e*Pn	P	04 18 09.2	+0.5
	13nm,0.5s						
URZ	Urewera	12.71	188	P	P	04 18 56.9	-1.2
	8.6nm,0.3s,baz=64,slow=2.8,SNR=29						
URZ				S	S	04 21 15.3	-9.2
	1.2nm,0.3s,baz=8.1,slow=7.1,SNR=3.7						
RPZ	Rata Peaks	19.26	199	P	P	04 20 03.9	-0.1
	2.0nm,0.3s,baz=337,slow=16,SNR=6.9						
CTA	Charters Tower	31.04	273	P	P	04 21 48.4	-0.4
	2.5nm,0.3s,mb4.1,baz=93,slow=12,SNR=4.7						
CTAO	Charters Tower	31.04	273	*e*P	P	04 21 49.2	+0.4
	0.9nm,0.4s,mb3.5						
ASAR	Alice Springs	41.29	263	P	P	04 23 13.8	+0.1
	0.6nm,0.5s,mb3.3,baz=89,slow=7.7,SNR=10.0						
QSPA	South Pole Qui	64.42	180	*e*P	P	04 25 59.1	+0.9
	1.9nm,0.7s,mb3.7						
NVAR	Mina Array Bea	86.36	44	P	P	04 28 01.2	+0.1
	0.9nm,0.6s,mb3.6,baz=221,slow=8.0,SNR=4.7						
TXAR	Lajitas Array	91.78	58	P	P	04 28 27.1	+0.5
	0.8nm,0.8s,mb3.7,baz=218,slow=5.5,SNR=8.3						
ILAR	Eielson Array	93.86	14	P	P	04 28 33.8	-1.4
	0.2nm,0.5s,mb3.4,baz=207,slow=5.7,SNR=3.2						
BVAR	Borovoye Array	121.43	318	PKP	PKPdf	04 34 07.4	-0.7
	0.6nm,0.4s,baz=88,slow=3.3,SNR=3.4						
ARCES	ARCESS Array B	133.51	348	PKP	PKPdf	04 34 29.6	-1.1
	1.5nm,0.8s,baz=70,slow=1.3,SNR=7.1						
ARCES				SKPbc	SKPbc	04 37 09.1	-3.3
	1.1nm,0.6s,baz=45,slow=3.6,SNR=10						
FINES	FINESS Array B	139.95	340	SKPbc	SKPbc	04 37 30.8	-0.8
	0.9nm,0.6s,baz=73,slow=6.1,SNR=3.6						
NB2	NORSAR Subarra	143.74	350	PKP	PKPdf	04 34 47.2	-2.3
	comp=Z,1.1nm,0.5s,baz=14,slow=2.7						
NOA	NORSAR Array B	143.74	350	PKP	PKPdf	04 34 47.5	-2.1
	comp=Z,2.0nm,0.7s,baz=16,slow=4.6,SNR=13						
NOA	NORSAR Array B	143.74	350	PKP	PKPdf	04 34 47.5	-2.1
AKASG	Malin Array Be	146.17	325	PKPbc	PKPbc	04 34 54.5	-1.6
	comp=Z,0.8nm,0.5s,baz=43,slow=4.1,SNR=6.0						
MMAI	Mount Meron Ar	147.94	292	PKPbc	PKPbc	04 35 01.2	-0.1
	comp=Z,2.5nm,0.4s,baz=73,slow=5.0,SNR=4.7						
BRTR	Keskin Array B	148.21	305	PKPbc	PKPbc	04 35 01.2	-0.6
	comp=Z,0.5nm,0.5s,baz=59,slow=3.7,SNR=3.6						
TORD	Torodi Ar. Bea	167.37	190	PKPab	PKPab	04 36 28.8	-1.0
	comp=Z,0.8nm,0.8s,baz=166,slow=2.7,SNR=4.3						

*ISCJB **30** 04:22:13.3±0.8,38°.08N±0°.04×20°.16E±0°.04,h1km±4km, Error ellipse: s-maj=6.6km s-min=4.0km az=33.3*
*NEIC **30** 04:22:13.6,38°.09N×20°.15E,h5km,MD3.5(ATH),After ATH.*
*ATH **30** 04:22:13.6,38°.09N×20°.15E,h5km±4km,MD3.5/11*
*CSEM **30** 04:22:14.1±0.4,38°.05N×20°.20E,h2km,ML3.6/6, Error ellipse: s-maj=8.6km s-min=4.6km az=32.0*
*THE **30** 04:22:15.8,38°.11N×20°.27E,h5km,ML3.6/6, Error ellipse: s-maj=1.2km s-min=0.7km az=28.0*

ISC 30 04:22:13.6±0.8,38°.07N±0°.04×20°.16E±0°.04,h0km±4km, n77,σ1°.26/105,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	Valsamata	0.36	72	*e*Pb	Pg	04 22 21.0	+0.5
VLS				*e*Sb	Sg	04 22 25.9	+0.8
VLS	Valsamata	0.36	72	*e*PB	Pg	04 22 21.0	+0.5
VLS				*e*SB	Sg	04 22 25.9	+0.8
VLS	Valsamata	0.36	72	P	Pg	04 22 21.0	+0.5
VLS				S	Sg	04 22 25.0	-0.1
VLS	Valsamata	0.36	72	P	Pg	04 22 21.0	+0.5
VLS				S	Sg	04 22 25.0	-0.1
VLS				*e*Sb	Sg	04 22 25.9	+0.8
KFL	Anninata	0.50	85	P	Pg	04 22 23.5	+0.3
KFL	Anninata	0.50	85	P	Pg	04 22 23.5	+0.3
LKD2	Lefkada island	0.82	28	P	Pg	04 22 29.2	-0.1
LKD2				S	Sg	04 22 40.7	+0.7
LKD2	Lefkada island	0.82	28	P	Pg	04 22 29.2	-0.1
LKD2				S	Sg	04 22 40.7	+0.7
RLS	Riolos of Patr	1.03	90	*e*Pg	Pg	04 22 33.2	-0.2
RLS				*e*Sb	Sg	04 22 48.2	+1.4
RLS	Riolos of Patr	1.03	90	*e*PB	Pg	04 22 33.2	-0.2
RLS				*e*SB	Sg	04 22 48.2	+1.4
RLS	Riolos of Patr	1.03	90	*e*Pg	Pg	04 22 33.2	-0.2
RLS				*e*Sb	Sg	04 22 48.2	+1.4
EFP	Efpalio	1.42	75	*e*PG	Pn	04 22 40.0	-0.7
EFP	Efpalio	1.42	75	P	Pn	04 22 40.0	-0.7
EFP				S	Sg	04 22 59.0	-0.3
EFP	Efpalio	1.42	75	P	Pn	04 22 40.0	-0.7
EFP				S	Sg	04 22 59.0	-0.3
LAKA	Lakka	1.45	83	P	Pn	04 22 40.3	-0.7
LAKA				S	Sg	04 22 59.7	-0.4
LAKA	Lakka	1.45	83	P	Pn	04 22 40.3	-0.7
LAKA				S	Sg	04 22 59.7	-0.4
TRIZ	Trizonia	1.54	78	P	Pn	04 22 41.5	-0.8
TRIZ				S	Sn	04 23 02.0	-0.9
TRIZ	Trizonia	1.54	78	P	Pn	04 22 41.5	-0.8
TRIZ				S	Sn	04 23 02.0	-0.9
EVR	Evrytania	1.55	56	*e*Pb	Pb	04 22 43.7	+0.6
EVR	Evrytania	1.55	56	*e*PB	Pb	04 22 43.1	0.0
EVR	Evrytania	1.55	56	*e*Pb	Pb	04 22 43.7	+0.6
KALE	Kalíthea	1.59	78	P	Pn	04 22 42.4	-0.6
KALE	Kalithea	1.59	78	P	Pn	04 22 42.4	-0.6
ITM	Ithomi	1.66	122	P	Pn	04 22 45.4	+1.4
ITM	Ithomi	1.66	122	P	Pn	04 22 44.3	+0.3
ITM	Ithomi	1.66	122	P	Pn	04 22 44.3	+0.3
KEK	Kerkira	1.67	350	*e*Pg	Pb	04 22 44.5	-0.7
KEK	Kerkira	1.67	350	*e*PB	Pb	04 22 44.5	-0.7
KEK	Kerkira	1.67	350	P	Pn	04 22 44.8	+0.7
KEK	Kerkira	1.67	350	*e*Pg	Pb	04 22 44.5	-0.7
KEK	Kerkira	1.67	350	P	Pn	04 22 44.8	+0.7
PYL	PYLOS	1.72	132	*e*PG	Pg	04 22 45.7	-0.9
PYL	PYLOS	1.72	132	*e*Pg	Pg	04 22 45.7	-0.9
GUR	Goura	1.73	94	*e*PG	Pg	04 22 45.8	-1.0
GUR	Goura	1.73	94	P	Pn	04 22 45.0	+0.1
GUR				S	Sn	04 23 07.0	-0.7
GUR	Goura	1.73	94	P	Pn	04 22 45.0	+0.1
GUR	Goura	1.73	94	*e*Pg	Pg	04 22 45.3	-1.5
GUR				S	Sn	04 23 07.0	-0.7
VLX	Vlachokerasia	1.89	111	*e*PG	Pg	04 22 49.0	-0.9
VLX	Vlachokerasia	1.89	111	P	Pn	04 22 48.9	+1.7
VLX				S	Sn	04 23 11.4	-0.3
VLX	Vlachokerasia	1.89	111	P	Pn	04 22 48.9	+1.7
VLX	Vlachokerasia	1.89	111	*e*Pn	Pn	04 22 51.0	+3.8
VLX				S	Sn	04 23 11.4	-0.3
DSF	Desfina	1.90	79	P	Pn	04 22 46.5	-0.7
DSF	Desfina	1.90	79	P	Pn	04 22 46.5	-0.7
AGG	Agios Georgios	1.95	60	*e*Pn	Pn	04 22 50.2	+2.2
AGG	Agios Georgios	1.95	60	*e*PN	Pn	04 22 50.2	+2.2
AGG	Agios Georgios	1.95	60	P	Pn	04 22 49.9	+1.9
AGG				S	Sn	04 23 12.1	-1.0
AGG	Agios Georgios	1.95	60	P	Pn	04 22 49.9	+1.9
AGG	Agios Georgios	1.95	60	*e*Pn	Pn	04 22 50.2	+2.2
AGG				S	Sn	04 23 12.1	-1.0
THL	Klokotos Trika	2.08	44	P	Pn	04 22 51.0	+1.2
THL	Klokotos Trika	2.08	44	P	Pn	04 22 51.0	+1.2
LTK	Loutraki	2.22	90	*e*PN	Pn	04 22 52.7	+1.1
LTK	Loutraki	2.22	90	*e*Pb	Pb	04 22 52.2	-2.4
NEST	Nestorio	2.44	16	P	Pn	04 22 56.8	+2.1
NEST	Nestorio	2.44	16	P	Pn	04 22 56.8	+2.1
DID	Didima	2.50	102	*e*PN	Pn	04 22 57.7	+2.1
DID	Didima	2.50	102	*e*Pg	Pg	04 22 59.7	-1.9
VLI	Veliai	2.59	121	*e*Pn	Pn	04 23 00.8	+4.0
VLI	Veliai	2.59	121	*e*PN	Pn	04 22 59.8	+3.0
VLI	Veliai	2.59	121	*e*Pn	Pn	04 23 00.8	+4.0
NAIG	Nisos Aigina	2.65	96	*e*Pb	Pb	04 22 58.7	-3.3
NAIG	Nisos Aigina	2.65	96	*e*PN	Pn	04 22 59.3	+1.7
NAIG	Nisos Aigina	2.65	96	*e*Pb	Pb	04 22 58.7	-3.3
FNA	Florina	2.87	19	P	Pn	04 23 01.3	+0.7
FNA	Florina	2.87	19	P	Pn	04 23 01.3	+0.7
KYTH	Kithira	2.91	127	*e*Pn	Pn	04 23 04.1	+2.9
KYTH	Kithira	2.91	127	*e*PN	Pn	04 23 04.1	+2.9
KYTH	Kithira	2.91	127	*e*Pn	Pn	04 23 04.1	+2.9
OHR	Ohrid	3.08	9	*e*Pn	Pn	04 23 05.1	+1.6
OHR				*e*Sn	Sn	04 23 42.1	+1.1
KRUS	Krusevo	3.40	14	*e*Pn	Pn	04 23 09.1	+1.2
KRUS				*e*Sn	Sn	04 23 48.0	-1.0
PE1	Pezze di Greco	3.46	323	*e*Pn	Pn	04 23 08.7	0.0
PE1				*e*Sn	Sn	04 23 49.4	-0.9
VAY	Valandovo	3.74	29	*e*Pn	Pn	04 23 10.7	-1.9
SG1	Sgolgore (BA)	3.86	317	*e*Pn	Pn	04 23 16.0	+1.8
SG1				*e*Sn	Sn	04 23 58.1	-2.2
CUC	Castrocucco	3.89	301	*e*Pn	Pn	04 23 15.4	+0.8
CUC	Castrocucco	3.89	301	*e*Pn	Pn	04 23 15.4	+0.8
STON	Ston	5.15	339	*e*Pn	Pn	04 23 29.8	-2.2
STON				Sn	Sn	04 24 26.6	-5.5
STON	Ston	5.15	339	*e*Pn	Pn	04 23 29.7	-2.2
NVLJ	Novalja	7.61	330	*e*Pn	Pn	04 24 03.5	-2.2
NVLJ				Sn	Sn	04 25 27.4	-5.2

JMA 30 04:50:29.9±0.1,26°.01N×129°.52E,h45km,M3.6,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOW	Kunigami	1.39	307	P	Pn	04 50 53.3	+0.5
JOW				*e*S	Sn	04 51 09.5	-0.4
JMZ	Minamidaito 2	1.54	97	P	Pn	04 50 55.6	+0.7
JMZ				*e*S	Sn	04 51 13.4	-0.4
JJT2	Tamagusuku 2	1.60	275	P	Pn	04 50 56.6	+0.9
JJT2				S	Sn	04 51 15.5	+0.4
NAH1	Naha	1.66	277	P	Pn	04 50 57.2	+0.7
NAH1				*e*S	Sn	04 51 16.3	-0.3
JIH	Iheya	1.73	307	P	Pn	04 50 58.7	+1.3
JIH				*e*S	Sn	04 51 17.7	-0.6
JTK	Tokunoshima	1.84	344	P	Pn	04 51 00.2	+1.2
JTK				*e*S	Sn	04 51 21.3	+0.2
JAGN	Aguni-jima	2.12	286	P	Pn	04 51 03.8	+0.9
JAGN				S	Sn	04 51 28.1	0.0
JKE	Kume jima 2	2.48	278	S	Sn	04 51 34.7	-2.1

*BGS **30** 05:02:53.6±1.8,37°.58N×20°.41E,h10km,mb4.8,MS4.4*
*BJI **30** 05:02:54.6,38°.85N×19°.47E,h8km,mB5.0/24,mb4.8/37, Ms5.0/26,Ms7 4.6/27*
*LDG **30** 05:02:55.8±0.2,38°.25N×20°.34E,h10km,Mb5.0/35, Ms4.1/10,Error ellipse: s-maj=8.6km s-min=4.1km az=25.0*
*ATH **30** 05:02:56.0,38°.02N×20°.12E,h9km±2km,ML5.0*
*ISCJB **30** 05:02:56.3±0.4,38°.16N±0°.01×20°.15E±0°.01,h4km±2km, mb4.7/132,MS4.5/58,Error ellipse: s-maj=2.1km s-min=1.4km az=2.6*
*IDC **30** 05:02:56.2±0.5,38°.17N×20°.30E,h0km,mb4.5/23, mb1 4.6/32,mb1mx4.5/37,mbtmp4.5/32,ML4.4/8,MS4.4/25, Ms1 4.4/25,ms1mx4.2/39,Error ellipse: s-maj=11.5km s-min=10.0km az=106.0*
*NEIC **30** 05:02:56.0,38°.02N×20°.12E,h9km,mb4.8/111, ML5.0(ATH),After ATH.*
*MOS **30** 05:02:57.0±1.2,38°.17N×20°.16E,h12km,mb4.9/49, MS4.3/43,Error ellipse: s-maj=3.1km s-min=2.0km az=98.2*
*CSEM **30** 05:02:57.2±0.1,38°.10N×20°.17E,h2km,mb4.9/59,Ms4.1, Mw5.0,Error ellipse: s-maj=2.4km s-min=1.7km az=4.0*
*PRU **30** 05:02:57.8,38°.24N×19°.66E,h0km,M4.8*
*PDG **30** 05:02:57.4±0.7,38°.16N×20°.17E,h6km±1km,MD5.2/10, ML5.0/8,Error ellipse: s-maj=1.2km s-min=1.3km az=0.0*
*THE **30** 05:02:58.4,38°.11N×20°.27E,h0km±3km,ML5.5/4,Error ellipse: s-maj=3.9km s-min=1.4km az=244.0*
*TEH **30** 05:02:59.0,38°.19N×20°.18E,h10km*
*GCMT **30** 05:03:01.1±0.2,38°.05N×20°.13E,h18km±1km,MW5.0, Moment Tensor Solution. s40,c51; s83,c141; Moment tensor: Scale 10^{16}Nm; M_{rr}0.09±.13; $M_{\theta\theta}$4.18±.12; $M_{\phi\phi}$-4.27±.11; $M_{r\theta}$0.81±.26; $M_{\theta\phi}$0.85±.09; $M_{\phi r}$-0.37±.26; Best double couple: $M_0$4.40000×10^{16} NP1:ϕ_s39.00000°, δ79.00000°,λ177.00000°. NP2:ϕ_s130.00000°,δ87.00000°, λ11.00000°. Principal axes: T 4.4000, Plg10.0000°, Azm355.0000°; N 0.0000, Plg78.0000°, Azm145.0000°; P -4.4000, Plg6.0000°, Azm264.0000°; Data Used: II IU IC G CN.*

ISC 30 05:02:57.8±0.4,38°.10N±0°.01×20°.18E±0°.01,h5km±2km, h15km±1.5km:pP-P,n1257,σ1°.19/1398,mb4.8/132, MS4.5/58,65C-68D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	Valsamata	0.33	77	P	Pg	05 03 03.6	-0.7
VLS	Valsamata	0.33	77	*e*PG	Pg	05 03 03.7	-0.6
VLS				*e*SB	Sg	05 03 09.7	+1.1
VLS	Valsamata	0.33	77	P	Pg	05 03 03.6	-0.7
VLS	Valsamata	0.33	77	*e*Pg	Pg	05 03 03.7	-0.6
VLS				*e*Sb	Sg	05 03 09.7	+1.1
KFL	Anninata	0.48	89	P	Pg	05 03 06.2	-0.9
KFL	Anninata	0.48	89	P	Pg	05 03 06.2	-0.9
LKD2	Lefkada island	0.78	29	P	Pg	05 03 11.9	-0.9
LKD2				S	Sg	05 03 23.6	+0.6
LKD2	Lefkada island	0.78	29	P	Pg	05 03 11.9	-0.9
LKD2				S	Sg	05 03 23.6	+0.6
RLS	Riolos of Patr	1.02	92	*e*Pb	Pb	05 03 16.0	-1.9
RLS				*e*Sb	Sg	05 03 31.2	+0.7
RLS	Riolos of Patr	1.02	92	*e*PB	Pb	05 03 16.0	-1.9
RLS				*e*SB	Sg	05 03 31.2	+0.7
RLS	Riolos of Patr	1.02	92	*e*Pb	Pb	05 03 16.0	-1.9
RLS				*e*Sb	Sg	05 03 31.2	+0.7
UPR	University Cam	1.28	81	*e*PB	Pb	05 03 21.1	-1.3
UPR				*e*SB	Sb	05 03 39.8	+0.7
UPR	University Cam	1.28	81	P	Pn	05 03 20.9	-1.5
UPR	University Cam	1.28	81	P	Pn	05 03 20.9	-1.5
UPR				*e*Sb	Sb	05 03 39.8	+0.7
EFP	Efpalio	1.40	76	*e*PG	Pg	05 03 22.6	-2.0
EFP				*e*SB	Sb	05 03 44.0	+1.5
EFP	Efpalio	1.40	76	P	Pn	05 03 22.2	-1.8
EFP	Efpalio	1.40	76	P	Pn	05 03 22.2	-1.8
EFP	Efpalio	1.40	76	*e*Pg	Pg	05 03 22.6	-2.0
EFP				*e*Sb	Sb	05 03 44.0	+1.5
LAKA	Lakka	1.43	84	P	Pn	05 03 22.8	-1.6
LAKA				S	Sb	05 03 43.3	0.0
LAKA	Lakka	1.43	84	P	Pn	05 03 22.8	-1.6
LAKA				S	Sb	05 03 43.3	0.0
TRIZ	Trizonia	1.51	79	P	Pn	05 03 23.9	-1.7
TRIZ	Trizonia	1.51	79	P	Pn	05 03 23.9	-1.7
EVR	Evrytania	1.52	57	*e*Pb	Pb	05 03 26.0	-0.4
EVR	Evrytania	1.52	57	*e*PB	Pb	05 03 26.0	-0.4
EVR	Evrytania	1.52	57	*e*Pb	Pb	05 03 26.0	-0.4
KALE	Kalithea	1.57	79	P	Pn	05 03 24.8	-1.6
KALE				S	Sn	05 03 46.9	-0.2
KALE	Kalithea	1.57	79	P	Pn	05 03 24.8	-1.6
KALE				S	Sn	05 03 46.9	-0.2
KEK	Kerkira	1.64	350	P	Pn	05 03 27.4	+0.1
KEK	Kerkira	1.64	350	*e*PN	Pn	05 03 28.0	+0.7
KEK	Kerkira	1.64	350	P	Pn	05 03 27.4	+0.1
KEK	Kerkira	1.64	350	P	Pn	05 03 27.4	+0.1
KEK	Kerkira	1.64	350	*e*Pn	Pn	05 03 28.0	+0.7
JAN	Janina	1.64	18	*e*P	Pn	05 03 28.2	+0.9
JAN	Janina	1.64	18	*e*PG	Pn	05 03 28.2	+0.9
JAN	Janina	1.64	18	*e*Pg	Pn	05 03 28.2	+0.9
ITM	Ithomi	1.67	123	P	Pn	05 03 27.6	-0.1
ITM	Ithomi	1.67	123	*e*PB	Pb	05 03 27.7	-1.3
ITM	Ithomi	1.67	123	P	Pn	05 03 27.6	-0.1
ITM	Ithomi	1.67	123	P	Pn	05 03 27.6	-0.1
PYL	PYLOS	1.73	134	*e*PG	Pn	05 03 27.8	-0.8
PYL	PYLOS	1.73	134	P	Pn	05 03 27.5	-1.1
PYL	PYLOS	1.73	134	P	Pn	05 03 27.5	-1.1
PYL	PYLOS	1.73	134	*e*Pg	Pn	05 03 27.8	-0.8
SRN	Sarande	1.78	356	*i* PN	Pn	05 03 29.8	+0.6
SRN				*i* SN	Sn	05 03 56.9	+4.6
SRN	Sarande	1.78	356	*i* Pn	Pn	05 03 29.8	+0.6
SRN				*i* Sn	Sn	05 03 56.9	+4.6
DSF	Desfina	1.87	80	P	Pn	05 03 29.8	-0.7
DSF	Desfina	1.87	80	P	Pn	05 03 29.8	-0.7
VLX	Vlachokerasia	1.89	112	*e*PG	Pn	05 03 31.6	+0.8
VLX	Vlachokerasia	1.89	112	P	Pn	05 03 31.4	+0.6
VLX	Vlachokerasia	1.89	112	P	Pn	05 03 31.4	+0.6
AGG	Agios Georgios	1.92	61	P	Pn	05 03 31.8	+0.6
AGG				S	Sn	05 03 56.1	+0.4
AGG	Agios Georgios	1.92	61	P	Pn	05 03 31.8	+0.6
AGG				S	Sn	05 03 56.1	+0.4
AGG	Agios Georgios	1.92	61	P	Pn	05 03 31.8	+0.6
AGG				S	Sn	05 03 56.1	+0.4
THL	Klokotos Trika	2.05	44	*e*PN	Pn	05 03 34.5	+1.6
THL	Klokotos Trika	2.05	44	P	Pn	05 03 34.0	+1.1
THL	Klokotos Trika	2.05	44	P	Pn	05 03 34.0	+1.1
THL	Klokotos Trika	2.05	44	*e*Pn	Pn	05 03 34.5	+1.6
LTK	Loutraki	2.20	91	*e*PN	Pn	05 03 35.1	+0.1
LTK	Loutraki	2.20	91	P	Pn	05 03 35.2	+0.2
LTK	Loutraki	2.20	91	P	Pn	05 03 35.2	+0.2
LKR	Lokris	2.28	75	P	Pn	05 03 36.4	+0.2
LKR	Lokris	2.28	75	*e*PN	Pn	05 03 36.5	+0.3
LKR	Lokris	2.28	75	P	Pn	05 03 36.4	+0.2
LKR	Lokris	2.28	75	P	Pn	05 03 36.4	+0.2
ATAL	Atalanti	2.31	74	P	Pn	05 03 37.0	+0.5
ATAL	Atalanti	2.31	74	P	Pn	05 03 37.0	+0.5
NEST	Nestorio	2.41	16	P	Pn	05 03 39.6	+1.8
NEST	Nestorio	2.41	16	P	Pn	05 03 39.6	+1.8
DID	Didima	2.49	103	*e*PN	Pn	05 03 39.2	+0.1
DID	Didima	2.49	103	P	Pn	05 03 39.4	+0.3
DID	Didima	2.49	103	P	Pn	05 03 39.4	+0.3
KZN	Kozani	2.52	29	*e*P	Pn	05 03 41.6	+2.1
KZN	Kozani	2.52	29	*e*PN	Pn	05 03 41.6	+2.1
KZN	Kozani	2.52	29	P	Pn	05 03 40.8	+1.3
KZN	Kozani	2.52	29	P	Pn	05 03 40.8	+1.3
KZN	Kozani	2.52	29	*e*Pn	Pn	05 03 41.6	+2.1
VLI	Veliai	2.59	121	*e*Pn	Pn	05 03 41.0	+0.6
VLI	Veliai	2.59	121	*e*PN	Pn	05 03 41.0	+0.6
VLI	Veliai	2.59	121	*e*Pn	Pn	05 03 41.0	+0.6
NAIG	Nisos Aigina	2.64	96	*e*Pb	Pn	05 03 41.3	+0.2
NAIG	Nisos Aigina	2.64	96	*e*PB	Pn	05 03 41.3	+0.2
NAIG	Nisos Aigina	2.64	96	*e*Pb	Pn	05 03 41.3	+0.2
NEO	Neokhori	2.67	62	*e*Pb	Pn	05 03 42.4	+1.0
NEO	Neokhori	2.67	62	*e*PB	Pn	05 03 42.4	+1.0
NEO	Neokhori	2.67	62	*e*Pb	Pn	05 03 42.4	+1.0
XOR	Xorichti	2.67	61	P	Pn	05 03 42.4	+0.9
XOR	Xorichti	2.67	61	P	Pn	05 03 42.4	+0.9
XOR	Xorichti	2.67	61	P	Pn	05 03 42.4	+0.9
LIT	Litokhoron	2.69	41	P	Pn	05 03 41.3	-0.4
LIT	Litokhoron	2.69	41	P	Pn	05 03 41.3	-0.4
LIT	Litokhoron	2.69	41	P	Pn	05 03 41.3	-0.4
ATH	Athens Observa	2.80	92	*e*P	Pn	05 03 43.1	-0.1
ATH	Athens Observa	2.80	92	*e*PN	Pn	05 03 43.1	-0.1
ATH	Athens Observa	2.80	92	*e*Pn	Pn	05 03 43.1	-0.1
FNA	Florina	2.83	19	P	Pn	05 03 44.5	+0.8
FNA	Florina	2.83	19	P	Pn	05 03 44.5	+0.8
FNA	Florina	2.83	19	P	Pn	05 03 44.5	+0.8
VLY	Voula,Athens	2.87	94	*e*Pn	Pn	05

SKO	Skopje	3.98	14	P	Pn	05 04 00.4	+0.9
SKO	Skopje	3.98	14	P	Pn	05 04 00.4	+0.9
SRS	Serrai	4.00	40	P	Pn	05 04 00.1	+0.3
SRS	Serrai	4.00	40	P	Pn	05 04 00.1	+0.3
SRS	Serrai	4.00	40	P	Pn	05 04 00.1	+0.3
VAM	Vamos	4.20	129	*e*P	Pn	05 04 02.7	+0.2
VAM	Vamos	4.20	129	*e*PN	Pn	05 04 02.7	+0.2
VAM	Vamos	4.20	129	*e*Pn	Pn	05 04 02.7	+0.2
BCI	Bajram Curri	4.26	359	*i* PN	Pn	05 04 04.2	+0.9
BCI				*i* SN	Sn	05 04 55.4	+2.0
BCI	Bajram Curri	4.26	359	*i* Pn	Pn	05 04 04.2	+0.9
BCI				*i* Sn	Sn	05 04 55.4	+2.0
LIA	Limnos Island	4.29	64	P	Pn	05 04 03.7	-0.1
LIA	Limnos Island	4.29	64	P	Pn	05 04 03.7	-0.1
LIA	Limnos Island	4.29	64	P	Pn	05 04 03.7	-0.1
BUM	Brajici-Budva	4.31	347	⇓*i*Pn	Pn	05 04 03.4	-0.6
BUM				*e*Sn	Sn	05 04 53.8	-0.7
BUM	Brajici-Budva	4.31	347	⇓*i*Pn	Pn	05 04 03.4	-0.6
BUM				*e*Sn	Sn	05 04 53.8	-0.7
NVR	Nevrokopi	4.31	40	*e*Pn	Pn	05 04 05.4	+1.4
NVR	Nevrokopi	4.31	40	*e*PN	Pn	05 04 05.4	+1.4
NVR	Nevrokopi	4.31	40	*e*Pn	Pn	05 04 05.4	+1.4
APE	Apeiranthos	4.37	102	*e*Pn	Pn	05 04 06.0	+1.1
APE	Apeiranthos	4.37	102	*e*PN	Pn	05 04 06.0	+1.1
APE	Apeiranthos	4.37	102	⇑*i*P	Pn	05 04 09.8	+4.9
APE	Apeiranthos	4.37	102	*e*Pn	Pn	05 04 06.0	+1.1
APE	Apeiranthos	4.37	102	⇑*i*P	Pn	05 04 09.8	+4.9
PDG	Podgorica	4.38	351	⇑*i*Pn	Pn	05 04 04.0	-1.0
PDG				*e*Sn	Sn	05 04 56.3	0.0
TTG	Podgorica	4.38	351	⇑*i*Pn	Pn	05 04 04.0	-1.0
TTG				*e*Sn	Sn	05 04 56.3	0.0
TTG	Podgorica	4.38	351	*i* P	Pn	05 04 04.0	-1.0
TTG				*e*S	Sn	05 04 56.3	0.0
KAVA	Kavala	4.42	48	P	Pn	05 04 06.6	+1.0
KAVA	Kavala	4.42	48	P	Pn	05 04 05.3	-0.3
KAVA	Kavala	4.42	48	P	Pn	05 04 05.3	-0.3
MMB	Musomiste	4.42	37	*i* P	Pb	05 04 17.0	+1.0
PVY	Plav	4.49	358	⇑*i*Pn	Pn	05 04 07.3	+0.8
PVY				*e*Sn	Sn	05 04 58.9	-0.2
PVY	Plav	4.49	358	⇑*i*Pn	Pn	05 04 07.3	+0.8
PVY				*e*Sn	Sn	05 04 58.9	-0.2
HCY	Herceg Novi	4.53	344	⇑*i*Pn	Pn	05 04 05.7	-1.3
HCY				*e*Sn	Sn	05 04 59.2	-0.8
HCY	Herceg Novi	4.53	344	⇑*i*Pn	Pn	05 04 05.7	-1.3
HCY				*e*Sn	Sn	05 04 59.2	-0.8
GVD	Gavdhos	4.53	135	*e*Pn	Pn	05 04 06.2	-0.9
GVD	Gavdhos	4.53	135	*e*Pn	Pn	05 04 06.2	-0.9
SIGR	SIGRI	4.58	74	P	Pn	05 04 11.0	+3.3
SIGR	SIGRI	4.58	74	P	Pn	05 04 11.0	+3.3
VAE	Valguarnera 10nm,0.3s,baz=46,slow=1.2,SNR=13	4.61	264	Pn	Pn	05 04 07.9	-0.2
VAE				Sn	Sn	05 05 06.0	+3.9
	31nm,0.3s,baz=82,slow=19,SNR=3.9						
VAE	Valguarnera	4.61	264	Pn	Pn	05 04 07.9	-0.2
VAE				Sn	Sn	05 05 06.0	+3.9
VAE	Valguarnera	4.61	264	Pn	Pn	05 04 07.9	-0.2
VAE				Sn	Sn	05 05 06.0	+3.9
CHOS	Chios island	4.63	85	P	Pn	05 04 08.5	0.0
CHOS	Chios island	4.63	85	P	Pn	05 04 08.5	0.0
IDI	Anoyia	4.71	125	P	Pn	05 04 09.7	+0.1
IDI	Anoyia	4.71	125	P	Pn	05 04 09.7	+0.1
BEY	Berane	4.77	358	⇑*i*Pn	Pn	05 04 10.9	+0.6
BEY				*e*Sn	Sn	05 05 05.7	-0.2
IVA	Berane	4.77	358	⇑*i*Pn	Pn	05 04 10.9	+0.6
IVA				*e*Sn	Sn	05 05 05.7	-0.2
IVA	Berane	4.77	358	⇑*i*Pn	Pn	05 04 10.9	+0.6
IVA				*e*Sn	Sn	05 05 05.7	-0.2
NKY	Niksic	4.79	350	⇓*i*Pn	Pn	05 04 10.2	-0.4
NKY				*e*Sn	Sn	05 05 06.7	+0.2
NKY	Niksic	4.79	350	⇓*i*Pn	Pn	05 04 10.2	-0.4
NKY				*e*Sn	Sn	05 05 06.7	+0.2
SIVA	Sivas	4.83	128	P	Pn	05 04 14.6	+3.4
SIVA	Sivas	4.83	128	P	Pn	05 04 14.6	+3.4
MS1	Monte Sant'Ang	4.85	319	*e*Pn	Pn	05 04 11.9	+0.4
MS1				*e*Sn	Sn	05 05 05.7	-2.3
BARS	Barje	4.87	14	P	Pn	05 04 11.6	-0.1
BRY	Bratogost	4.95	346	⇓*i*Pn	Pn	05 04 12.1	-0.7
BRY				*e*Sn	Sn	05 05 09.2	-1.3
BRY	Bratogost	4.95	346	⇓*i*Pn	Pn	05 04 12.1	-0.7
BRY				*e*Sn	Sn	05 05 09.2	-1.3
SGRT	San Giovanni R	4.99	318	P	Pn	05 04 13.0	-0.4
SGRT	San Giovanni R	4.99	318	P	Pn	05 04 13.0	-0.4
RZN	Rozhen	5.00	43	*i* P	Pn	05 04 14.5	+1.0
RZN	Rozhen	5.00	43	*i* P	Pn	05 04 14.5	+1.0
VTS	Vitosha	5.05	26	P	Pn	05 04 14.9	+0.8
VTS	Vitosha	5.05	26	*i* P	Pn	05 04 15.0	+0.9
VTS	Vitosha	5.05	26	⇑*i*P	Pn	05 04 15.2	+1.1
VTS	Vitosha	5.05	26	P	Pn	05 04 14.9	+0.8
WDD	Wield Dalam	5.05	245	*e*Pn	Pn	05 04 14.3	+0.1
WDD				*e*Sn	Sn	05 05 11.3	-1.5
WDD	Wield Dalam	5.05	245	*e*Pn	Pn	05 04 14.3	+0.1
WDD				*e*Sn	Sn	05 05 11.4	-1.4
URLA	Izmir	5.06	85	*i* P	Pn	05 04 19.1	+4.8
URLA	Izmir	5.06	85	*i* P	Pn	05 04 19.1	+4.8
STON	Ston	5.12	339	⇑*i*Pn	Pn	05 04 13.1	-2.1
STON				Sn	Sn	05 05 10.0	-4.7
SJES	Sjenica	5.16	358	⇑*i*Pn	Pn	05 04 15.5	-0.1
UPM	Unac-Piva	5.18	350	⇓*i*Pn	Pn	05 04 15.9	-0.1
UPM				*e*Sn	Sn	05 05 15.8	-0.4
UPM	Unac-Piva	5.18	350	⇓*i*Pn	Pn	05 04 15.9	-0.1
UPM				*e*Sn	Sn	05 05 15.8	-0.4
NPS	Neapolis	5.21	121	*e*P	Pn	05 04 15.8	-0.5
NPS	Neapolis	5.21	121	*e*PN	Pn	05 04 15.8	-0.5
NPS	Neapolis	5.21	121	*e*Pn	Pn	05 04 15.8	-0.5
AYVA	Ayvalik	5.23	75	*i* P	Pn	05 04 18.4	+1.7
AYVA	Ayvalik	5.23	75	*i* P	Pn	05 04 18.4	+1.7
PLE	Pljevlja	5.26	354	⇑*i*Pn	Pn	05 04 17.4	+0.4
PLE				*e*Sn	Sn	05 05 18.2	+0.3
PLE	Pljevlja	5.26	354	⇑*i*Pn	Pn	05 04 17.4	+0.4
PLE				*e*Sn	Sn	05 05 18.2	+0.3
ALN	Alexandroupoli	5.33	57	P	Pn	05 04 18.7	+0.7
ALN	Alexandroupoli	5.33	57	P	Pn	05 04 18.7	+0.7
ALN	Alexandroupoli	5.33	57	P	Pn	05 04 18.7	+0.7
PGB	Panagyurishte	5.39	33	*i* P	Pn	05 04 19.2	+0.4
PGB	Panagyurishte	5.39	33	*i* P	Pn	05 04 19.2	+0.4
KDAG	Bornova	5.59	85	*i* P	Pn	05 04 21.3	-0.2
KDAG	Bornova	5.59	85	*i* P	Pn	05 04 21.3	-0.2
GCAM	G?zelcaml?	5.59	92	*i* P	Pn	05 04 28.1	+6.4
BBLS	Lazići	5.79	354	P	Pn	05 04 23.7	-0.6
BBLS	Lazići	5.79	354	P	Pn	05 04 23.7	-0.6
GRUS	Gruza	5.79	4	P	Pn	05 04 23.6	-0.8
GRUS	Gruza	5.79	4	⇑*i*Pn	Pn	05 04 23.0	-1.4
GRUS	Gruza	5.79	4	P	Pn	05 04 23.6	-0.8
BDRM	Kayabasi	5.86	98	*i* P	Pn	05 04 31.9	+6.5
BOLS	Boljevac	5.88	13	⇑*i*Pn	Pn	05 04 24.5	-1.0
DIVS	Divibare	5.99	359	⇑*i*Pn	Pn	05 04 25.9	-1.2
BALY	Balya	6.03	72	*i* P	Pn	05 04 25.2	-2.4
AYDN	Tasoluk	6.11	92	*i* P	Pn	05 04 36.1	+7.4
TRUS	Trudelj	6.12	2	⇑*i*Pn	Pn	05 04 26.8	-2.0
SVIS	Svilajnac	6.21	7	P	Pn	05 04 29.7	-0.4
PVL	Pavlikeni	6.44	36	*i* P	Pn	05 04 32.3	-0.9
PVL	Pavlikeni	6.44	36	*i* P	Pn	05 04 32.3	-0.9
AQU	L'Aquila	6.70	311	*e*P	Pn	05 04 38.8	+2.0
AQU	L'Aquila	6.70	311	⇑*i*P	Pn	05 04 39.6	+2.8
AQU	L'Aquila	6.70	311	*e*P	Pn	05 04 38.8	+2.0
BEO	Beograd	6.71	2	⇑*i*Pn	Pn	05 04 35.4	-1.5
BEO	Beograd	6.71	2	P	Pn	05 04 35.7	-1.2
DEMI	Demirci	6.75	79	*i* P	Pb	05 04 52.5	-3.2
LTBQ	Tobruq SNR=22	6.77	152	*e*P	Pn	05 04 37.1	-0.7
CRAR	CRAIOVA	6.79	23	⇓P	Pn	05 04 37.6	-0.4
CRAR	CRAIOVA	6.79	23	⇓*i*P	Pn	05 04 37.6	-0.4
CRAR	CRAIOVA	6.79	23	P	Pn	05 04 37.6	-0.4
ZIMR		6.80	34	⇓P	Pn	05 04 40.0	+1.8
ZIMR		6.80	34	⇓*i*P	Pn	05 04 40.0	+1.8
TURN	Turunc	6.81	98	*i* P	Pn	05 04 40.8	+2.4
TURN	Turunc	6.81	98	*i* P	Pn	05 04 40.8	+2.4
BLY	Banja Luka	7.01	342	P	Pn	05 04 41.3	+0.2
BLY	Banja Luka	7.01	342	P	Pn	05 04 41.3	+0.2
DNZL	Cakiroluk	7.03	91	*i* P	Pn	05 04 44.9	+3.6
FGSL	Fruska Gora	7.05	358	⇑*i*Pn	Pn	05 04 39.9	-1.8
ELBA	Catalca	7.06	62	*i* P	Pn	05 04 40.5	-1.3
ELBA	Catalca	7.06	62	*i* P	Pn	05 04 40.5	-1.2
LMSR	Misrath 71nm,0.3s,SNR=22	7.16	218	*e*P	Pn	05 04 42.7	-0.5
LJBD	Adjabya 307nm,1.2s,SNR=22	7.17	180	*e*P	Pn	05 04 41.5	-1.9
ULDT	Uludag	7.25	71	*i* P	Pn	05 04 45.0	+0.5
ULDT	Uludag	7.25	71	*i* P	Pn	05 04 45.0	+0.5
KHAL	Karahalli	7.34	85	*i* P	Pn	05 04 49.2	+3.6
GDZ	Gediz	7.35	79	*i* P	Pn	05 04 52.2	+6.4
GOLH	Golhisar	7.49	94	*i* P	Pn	05 04 52.7	+5.0
GZR	Gura Zlata	7.54	14	⇓P	Pn	05 04 48.3	0.0
GZR	Gura Zlata	7.54	14	⇓*i*P	Pn	05 04 48.3	0.0
GZR	Gura Zlata	7.54	14	⇓P	Pn	05 04 48.3	0.0
BZS	Buzias	7.58	8	P	Pn	05 04 47.9	-1.1
BZS	Buzias	7.58	8	⇓P	Pn	05 04 48.4	-0.5
BZS	Buzias	7.58	8	⇓*i*P	Pn	05 04 48.4	-0.6
BZS	Buzias	7.58	8	⇓P	Pn	05 04 48.4	-0.6
NVLJ	Novalja	7.59	330	⇑*i*Pn	Pn	05 04 48.5	-0.5
NVLJ				Sn	Sn	05 06 10.2	-5.1
AKAS	Kas	7.75	101	*i* P	Pn	05 04 52.8	+1.5
AKAS	Kas	7.75	101	*i* P	Pn	05 04 52.8	+1.5
SULR		8.00	33	⇓P	Pn	05 04 56.3	+1.7
SULR		8.00	33	⇓*i*P	Pn	05 04 56.3	+1.6
SULR		8.00	33	⇓P	Pn	05 04 56.3	+1.6
DEV	Deva	8.04	14	⇑P	Pn	05 04 56.2	+1.1
DEV	Deva	8.04	14	⇑*i*P	Pn	05 04 56.2	+1.1
DEV	Deva	8.04	14	P	Pn	05 04 56.2	+1.1
ISP	Isparta	8.18	89	*e*P	Pn	05 04 59.9	+2.8
ISP				pmax	pmax		
	comp=Z,28nm,0.6s						
ISP	Isparta	8.18	89	*e*Pn	Pn	05 04 59.9	+2.8
	comp=Z,28nm,0.6s						
ISP	Isparta	8.18	89	*e*P	Pn	05 04 59.9	+2.8
	comp=Z,28nm,0.6s						
VOIR		8.18	25	⇓P	Pn	05 04 58.1	+1.0
VOIR		8.18	25	⇓*i*P	Pn	05 04 58.2	+1.1
VOIR		8.18	25	P	Pn	05 04 58.2	+1.1
PKSM	Moragy	8.18	352	P	Pn	05 04 55.6	-1.6
PKSM	Moragy	8.18	352	⇑P	Pn	05 04 55.9	-1.3
PKSM	Moragy	8.18	352	⇑*i*P	Pn	05 04 55.9	-1.3
PKSM	Moragy	8.18	352	⇑P	Pn	05 04 55.9	-1.3
BORA	Eskisehir	8.20	74	*i* P	Pn	05 05 01.8	+4.4
BOJS	Bojanci	8.26	335	*e*Pn	Pn	05 04 57.6	-0.6
BOJS				*e*Sn	Sn	05 06 27.1	-4.7
BOJS							
	comp=Z,3μm,4.7s						
BOJS	Bojanci	8.26	335	*e*Pn	Pn	05 04 57.6	-0.6
BOJS				*e*Sn	Sn	05 06 27.1	-4.7
BOJS	Bojanci	8.26	335	*e*Pn	Pn	05 04 57.6	-0.6
GHAR	Gharyan	8.33	226	*e*P	Pn	05 04 57.7	-1.5
	comp=Z,104nm,1.5s,SNR=22						
ESKT	Eskisehir	8.45	77	*i* P	Pn	05 05 02.7	+1.8
SEYT	Eskypehyr	8.45	77	*i* P	Pn	05 05 02.7	+1.8
CRES	Cresnjev	8.48	337	P	Pn	05 05 00.6	-0.6
CRES	Cresnjev	8.48	337	P	Pn	05 05 00.6	-0.6
BOLV	Bolvadin	8.48	83	*i* P	Pn	05 05 04.1	+2.9
MLR	Muntele Rosu	8.54	28	Pn	Pn	05 05 01.9	-0.2
	comp=Z,2.6nm,0.3s,baz=235,slow=5.5,SNR=54						
MLR				Lg		05 07 40.7	
	baz=159,slow=19,SNR=2.9						
MLR	Muntele Rosu	8.54	28	P	Pn	05 05 01.9	-0.2
MLR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MLR	Muntele Rosu	8.54	28	⇑P	Pn	05 05 03.6	+1.5
MLR	Muntele Rosu	8.54	28	⇑*i*P	Pn	05 05 03.6	+1.5
MLR	Muntele Rosu	8.54	28	P	Pn	05 05 01.9	-0.2
	comp=Z,3.0nm,0.3s						
VSL	Villasalto	8.55	283	*e*Pn	Pn	05 05 01.1	-1.1
	comp=Z,62nm,1.1s						
VSL	Villasalto	8.55	283	*e*Pn	Pn	05 05 01.1	-1.1
	comp=Z,62nm,1.1s						
PKS9	Tamasi	8.59	351	*e*P	Pn	05 05 01.5	-1.3
ALAS	Alassa	8.73	236	*e*P	Pn	05 05 02.7	-2.1
	comp=Z,185nm,1.1s,SNR=22						
CEY	Cerknica	8.75	333	P	Pn	05 05 05.0	+0.1
CEY	Cerknica	8.75	333	P	Pn	05 05 05.0	+0.1
DOPR	Dopca	8.76	25	⇓*i*P	Pn	05 05 05.4	+0.3
DOPR	Dopca	8.76	25	⇓*i*P	Pn	05 05 05.4	+0.3
HARR	Harsova	8.79	39	⇑P	Pn	05 05 05.0	-0.4
HARR	Harsova	8.79	39	⇑*i*P	Pn	05 05 05.0	-0.4
HARR	Harsova	8.79	39	P	Pn	05 05 05.0	-0.4
KOGS	Kog	8.83	342	P	Pn	05 05 05.0	-1.1
KOGS	Kog	8.83	342	P	Pn	05 05 05.0	-1.1
GRER		8.87	33	⇓P	Pn	05 05 07.8	+1.3
GRER		8.87	33	⇓*i*P	Pn	05 05 07.8	+1.3
GRER		8.87	33	⇓P	Pn	05 05 07.8	+1.3
TIRR	Tirgusor	8.87	42	*e*P	Pn	05 05 06.9	+0.3
TIRR				pmax	pmax		
	comp=Z,27nm,0.8s						
TIRR	Tirgusor	8.87	42	*e*Pn	Pn	05 05 06.9	+0.3
	comp=Z,27nm,0.8s						
TIRR	Tirgusor	8.87	42	⇑*i*P	Pn	05 05 07.1	+0.5
TIRR	Tirgusor	8.87	42	*e*P	Pn	05 05 06.9	+0.3
	comp=Z,27nm,0.8s						
DRGR		8.88	11	⇓P	Pn	05 05 07.2	+0.5
DRGR		8.88	11	⇓*i*P	Pn	05 05 07.2	+0.4
DRGR		8.88	11	P	Pn	05 05 07.2	+0.4
LJU	Ljubljana	8.98	334	*e*Pn	Pn	05 05 06.9	-1.1
LJU				*e*Sn	Sn	05 06 45.0	-4.5
LJU	Ljubljana	8.98	334	P	Pn	05 05 07.9	-0.1
LJU	Ljubljana	8.98	334	P	Pn	05 05 07.9	-0.1
TRI	Trieste	8.98	330	*e*P	Pn	05 05 07.0	-1.0
TRI				*e*		05 06 43.8	
TRI				pmax	pmax		
	comp=Z,60nm,0.4s						
TRI	Trieste	8.98	330	*e*Pn	Pn	05 05 07.0	-1.0
	comp=Z,60nm,0.4s						
TRI				*e*Sn	Sn	05 06 43.8	-5.7
TRI	Trieste	8.98	330	*e*P	Pn	05 05 07.0	-1.0
	comp=Z,60nm,0.4s						
PLOR	Plostina	9.12	30	⇑P	Pn	05 05 11.3	+1.3
PLOR	Plostina	9.12	30	⇑*i*P	Pn	05 05 11.3	+1.3
PLOR	Plostina	9.12	30	P	Pn	05 05 11.3	+1.3
VRI	Vrincioaia	9.16	30	⇓P	Pn	05 05 11.5	+1.0
VRI	Vrincioaia	9.16	30	⇓*i*P	Pn	05 05 11.5	+0.9
VRI	Vrincioaia	9.16	30	P	Pn	05 05 11.5	+0.9
VOY	Vojsko	9.20	331	⇓*e*Pn	Pn	05 05 10.7	-0.3
VOY				*e*Sn	Sn	05 06 47.7	-7.2
VOY	Vojsko	9.20	331	⇓*e*Pn	Pn	05 05 10.7	-0.3
CFR	Carcaliu	9.24	38	⇑P	Pn	05 05 13.6	+1.9
CFR	Carcaliu	9.24	38	⇑*i*P	Pn	05 05 13.6	+1.9
CFR	Carcaliu	9.24	38	P	Pn	05 05 13.6	+1.9
SOKA	Soboth	9.37	338	⇓*i*Pn	Pn	05 05 12.3	-1.2
SOKA				⇑*i*Sn	Sn	05 06 52.8	-6.4
SOKA	Soboth	9.37	338	Pn	Pn	05 05 12.3	-1.2
OBKA	Obir SNR=42	9.38	335	⇑*i*Pn	Pn	05 05 12.6	-0.9
OBKA				⇑*i*Sn	Sn	05 06 53.1	-6.2
OBKA	Obir SNR=42	9.38	335	Pn	Pn	05 05 12.6	-0.9
PKSG		9.38	353	*e*P	Pn	05 05 12.4	-1.1
BUD	Budapest	9.41	355	⇑*e*Pn	Pn	05 05 18.7	+4.7
BUD				*e*Sn	Sn	05 07 02.3	+2.1
SGKT	Sivrigoynuk	9.53	71	*i* P	Pn	05 05 17.0	+1.4
SGKT	Sivrigoynuk	9.53	71	*i* P	Pn	05 05 17.0	+1.4
VLC	Villacollemand	9.54	312	*e*Pn	Pn	05 05 18.0	+2.1
VLC	Villacollemand	9.54	312	*e*Pn	Pn	05 05 18.0	+2.1
TLCR		9.58	40	⇑P	Pn	05 05 16.7	+0.4
TLCR		9.58	40	⇑*i*P	Pn	05 05 16.7	+0.4
TLCR		9.58	40	P	Pn	05 05 16.7	+0.4
PGF	Pioggiola comp=Z,305nm,1.4s	9.62	301	*e*P	Pn	05 05 17.9	+1.0
PGF	Pioggiola comp=Z,152nm,1.4s	9.62	301	*e*P	Pn	05 05 17.9	+1.0
TESR		9.67	28	⇓P	Pn	05 05 18.2	+0.7
TESR		9.67	28	⇓*i*P	Pn	05 05 18.2	+0.7
TESR		9.67	28	⇓P	Pn	05 05 18.2	+0.7
LJFR	Jufra comp=Z,42nm,1.3s,SNR=22	9.69	203	*e*P	Pn	05 05 15.2	-2.6
ARSA	Arzberg	9.76	341	P	Pn	05 05 17.8	-1.0
ARSA	Arzberg SNR=28	9.76	341	⇓*i*Pn	Pn	05 05 17.3	-1.5
ARSA				⇓*i*Sn	Sn	05 07 01.6	-7.2
ARSA	Arzberg SNR=28	9.76	341	Pn	Pn	05 05 17.3	-1.5
ARSA	Arzberg	9.76	341	P	Pn	05 05 17.8	-1.0
MYKA	Terra Mystica	9.79	333	⇓*i*Pn	Pn	05 05 18.6	-0.7
MYKA				⇓*i*Sn	Sn	05 07 04.0	-5.6
MYKA	Terra Mystica	9.79	333	Pn	Pn	05 05 18.6	-0.7
PSZ	Piszkesteto	9.81	359	*e*P	Pn	05 05 18.3	-1.2
PSZ	Piszkesteto	9.81	359	⇓*i*P	Pn	05 05 19.1	-0.4
PSZ	Piszkesteto	9.81	359	*e*P	Pn	05 05 18.3	-1.2
BMR	Baia Mare	9.87	13	P	Pn	05 05 21.0	+0.7
TRPA	Tarpa	10.17	9	⇓*i*P	Pn	05 05 24.4	0.0
TRPA	Tarpa	10.17	9	⇑*e*P	Pn	05 05 23.9	-0.5
BURAR	Bucovina Array	10.20	20	P	Pn	05 05 25.8	+1.0
BURAR	Bucovina Array	10.20	20	⇓P	Pn	05 05 26.0	+1.2
BURAR	Bucovina Array	10.20	20	⇓*i*P	Pn	05 05 26.0	+1.2
BURAR	Bucovina Array	10.20	20	⇓P	Pn	05 05 26.0	+1.2
BUR08	Bucovina Ar. S	10.22	19	*e*Pn	Pn	05 05 25.6	+0.6
BUR08	Bucovina Ar. S	10.22	19	*e*Pn	Pn	05 05 25.6	+0.5
CMAH	Djebel Manchou	10.26	266	P	Pn	05 05 28.3	+2.6
LEOM	Leova	10.28	33	⇓P	Pn	05 05 26.3	+0.5
LEOM	Leova	10.28	33	⇓*i*P	Pn	05 05 26.3	+0.5
LEOM	Leova	10.28	33	P	Pn	05 05 26.3	+0.5
KBA	Koelnbreinsper SNR=36	10.28	333	⇓*i*Pn	Pn	05 05 25.4	-0.5
KBA				⇑*i*Sn	Sn	05 07 15.5	-6.1
KBA	Koelnbreinsper SNR=36	10.28	333	Pn	Pn	05 05 25.4	-0.5
ABSA	Djebel Ababsia	10.30	264	P	Pn	05 05 29.4	+3.2
CONA	Conrad Observa SNR=9.2	10.31	344	⇑*i*Pn	Pn	05 05 24.7	-1.7
CONA				⇑*i*Sn	Sn	05 07 16.1	-6.2
CONA	Conrad Observa SNR=9.2	10.31	344	Pn	Pn	05 05 24.7	-1.7
ABTA	Abfaltersbach SNR=12	10.33	329	⇓*i*Pn	Pn	05 05 26.2	-0.4
ABTA				⇓*i*Sn	Sn	05 07 17.5	-5.1
ABTA	Abfaltersbach SNR=12	10.33	329	Pn	Pn	05 05 26.2	-0.3
ZST	Bratislava	10.34	348	*e*P	Pn	05 05 27.1	+0.5
ZST				*e*		05 07 14.0	
ZST	Bratislava	10.34	348	*e*Pn	Pn	05 05 27.1	+0.5
ZST				*e*Sn	Sn	05 07 14.0	-8.8
ZST				*e*Sg		05 08 41.5	
ZST	Bratislava	10.34	348	*e*PN	Pn	05 05 27.1	+0.5
ZST				*e*SN	Sn	05 07 14.0	-8.8
ZST				*e*SG		05 08 41.5	
ZST	Bratislava	10.34	348	*e*P	Pn	05 05 27.1	+0.5
KECS	Kecovo	10.38	1	*e*Pn	Pn	05 05 26.8	-0.4
KECS				*e*Sn	Sn	05 07 16.0	-7.9
KECS	Kecovo	10.38	1	*e*PN	Pn	05 05 26.8	-0.4
KECS				*e*SN	Sn	05 07 16.0	-7.9
KECS	Kecovo	10.38	1	*e*P	Pn	05 05 26.8	-0.4
VYHS	Vyhne	10.43	355	*e*P	Pn	05 05 27.3	-0.7
VYHS				*e*		05 07 16.7	
VYHS	Vyhne	10.43	355	*e*Pn	Pn	05 05 27.3	-0.7
VYHS				*e*Sn	Sn	05 07 16.7	-8.5
VYHS				*e*Sg	Sn	05 08 27.3	+62
VYHS	Vyhne	10.43	355	*e*PN	Pn	05 05 27.3	-0.7
VYHS				*e*SN	Sn	05 07 16.7	-8.5
VYHS				*e*SG	Sn	05 08 27.3	+62
VYHS	Vyhne	10.43	355	*e*P	Pn	05 05 27.3	-0.7
ELDT	Eldivan	10.54	73	*i* P	Pn	05 05 34.1	+4.6
KOLL	Kolacno	10.55	354	*e*Pn	Pn	05 05 28.8	-0.8
KOLL				*e*Sn	Sn	05 07

DAVOX 05 07 45.7
DAVOX Davos/Dischmat 11.53 322 Pn Pn 05 05 43.2 +0.2
GULE Gulek 11.60 90 *i* P **Pn 05 05 51.6 +7.7**
FRF La Foret Royal 11.61 302 *e*P **Pn 05 05 44.4 +0.3**
comp=Z,181nm,1.5s
FRF La Foret Royal 11.61 302 *e*P **Pn 05 05 44.4 +0.3**
FRF pmax pmax
comp=Z,91nm,1.5s
FRF La Foret Royal 11.61 302 *e*P **Pn 05 05 44.4 +0.3**
comp=Z,91nm,1.5s
FRF La Foret Royal 11.61 302 *e*P **Pn 05 05 44.4 +0.3**
comp=Z,91nm,1.5s
LMR La Mourre 11.61 301 *e*P **Pn 05 05 44.7 +0.6**
comp=Z,144nm,1.5s
LMR La Mourre 11.61 301 *e*P **Pn 05 05 44.7 +0.6**
LMR pmax pmax
comp=Z,72nm,1.5s
LMR La Mourre 11.61 301 *e*P **Pn 05 05 44.7 +0.6**
comp=Z,72nm,1.5s
LMR La Mourre 11.61 301 *e*P **Pn 05 05 44.7 +0.6**
comp=Z,72nm,1.5s
KWP Kalwaria Pacla 11.67 8 *e*P **Pn 05 05 45.5 +0.6**
KWP pmax pmax
comp=Z,22nm,0.4s
KWP Kalwaria Pacla 11.67 8 *e*Pn **Pn 05 05 45.5 +0.7**
comp=Z,22nm,0.4s
KWP Kalwaria Pacla 11.67 8 *e*P **Pn 05 05 45.5 +0.6**
comp=Z,22nm,0.4s
TREC Trest 11.69 345 *e*P **Pn 05 05 44.6 -0.6**
TREC MLR MLR
comp=Z,2µm,9.2s
TREC Trest 11.69 345 *e*P **Pn 05 05 44.6 -0.6**
TREC AMS AMS 05 10 50.0
comp=Z,2µm,9.2s
TREC Trest 11.69 345 P **Pn 05 05 44.6 -0.6**
GEC2 GERESS Array S 11.72 338 *e*Pn **Pn 05 05 44.0 -1.6**
GEC2 GERESS Array S 11.72 338 *e*P **Pn 05 05 44.0 -1.6**
OKC Ostrava-Krasne 11.82 354 *e*P **Pn 05 05 46.7 -0.3**
OKC *e*S **Sn 05 07 52.0 -7.2**
OKC MLR MLR
comp=Z,2µm,9.8s
OKC Ostrava-Krasne 11.82 354 *e*P **Pn 05 05 46.7 -0.3**
OKC *e*S **Sn 05 07 52.0 -7.2**
OKC AMS AMS 05 12 20.0
comp=Z,2µm,9.8s
OKC Ostrava-Krasne 11.82 354 P **Pn 05 05 46.7 -0.3**
MORC Moravsky Berou 11.82 352 *e*Pn **Pn 05 05 46.3 -0.7**
MORC *e*Sn **Sn 05 07 53.7 -5.6**
MORC Moravsky Berou 11.82 352 ⇓ *i*P **Pn 05 05 46.4 -0.6**
MORC Moravsky Berou 11.82 352 *e*P **Pn 05 05 46.3 -0.7**
DAVA Damuels 11.89 324 ⇑ *i*Pn **Pn 05 05 48.2 +0.2**
DAVA ⇑ *i*Sn **Sn 05 07 53.7 -7.2**
DAVA Damuels 11.89 324 Pn **Pn 05 05 48.2 +0.3**
SURF Saint Ours 11.90 307 *e*P **Pn 05 05 51.1 +3.1**
FUR Furstenfeldbru 11.97 330 *e*Pn **Pn 05 05 48.9 -0.1**
FUR *e*S **Sn 05 07 54.5 -8.3**
FUR Furstenfeldbru 11.97 330 *e*P **Pn 05 05 48.9 -0.1**
KHC Kasperske Hory 12.01 339 *e*P **Pn 05 05 48.1 -1.5**
KHC pmax pmax
comp=Z,22nm,0.7s
KHC Kasperske Hory 12.01 339 *e*Pn **Pn 05 05 48.1 -1.5**
comp=Z,22nm,0.7s
KHC Kasperske Hory 12.01 339 *e*P **Pn 05 05 48.1 -1.5**
KHC *e*S **Sn 05 07 56.0 -7.8**
KHC *e*x x 05 09 27.0
KHC AMS AMS 05 11 10.0
comp=Z,3µm,14.5s
KHC Kasperske Hory 12.01 339 P **Pn 05 05 48.1 -1.5**
LVV L'vov 12.04 12 *e*P **Pn 05 05 52.0 +2.1**
LVV *e*S **Sn 05 08 04.0 -0.4**
LVV MLR MLR
comp=Z,1µm,11.0s
LVV L'vov 12.04 12 *e*P **Pn 05 05 52.0 +2.1**
comp=Z,1µm,11.0s
LVV *e*S **Sn 05 08 04.0 -0.4**
MBDF Montbardon 12.04 308 *e*P **Pn 05 05 51.5 +1.5**
comp=Z,111nm,1.0s
MBDF Montbardon 12.04 308 *e*P **Pn 05 05 51.5 +1.5**
MBDF pmax pmax
comp=Z,55nm,1.0s
MBDF Montbardon 12.04 308 *e*P **Pn 05 05 51.5 +1.5**
comp=Z,56nm,1.0s
MBDF Montbardon 12.04 308 *e*P **Pn 05 05 51.5 +1.5**
comp=Z,56nm,1.0s
WET Wettzell 12.23 337 *e*Pn **Pn 05 05 50.4 -2.2**
WET Wettzell 12.23 337 *e*P **Pn 05 05 50.4 -2.2**
YURE YUREGIR 12.35 91 *i*P Px 05 06 06.5
LPG La Plagne 12.44 311 *e*P **Pn 05 05 57.7 +2.3**
comp=Z,55nm,0.8s
LPG La Plagne 12.44 311 *e*P **Pn 05 05 57.7 +2.3**
LPG pmax pmax
comp=Z,28nm,0.8s
LPG La Plagne 12.44 311 *e*P **Pn 05 05 57.7 +2.3**
comp=Z,28nm,0.8s
LPG La Plagne 12.44 311 *e*P **Pn 05 05 57.7 +2.3**
comp=Z,28nm,0.8s
LPL La Plagne 12.46 311 *e*P **Pn 05 05 57.9 +2.2**
LPL La Plagne 12.46 311 *e*P **Pn 05 05 57.9 +2.2**
SIM Simferopol' 12.47 52 P **Pn 05 06 01.0 +5.1**
SIM pmax pmax
comp=Z,21nm,0.8s
SIM MLR MLR
comp=Z,890nm,15.6s
SMRF Simiane la Rot 12.48 303 *e*P **Pn 05 05 57.2 +1.1**
comp=Z,206nm,1.6s
SMRF Simiane la Rot 12.48 303 *e*P **Pn 05 05 57.2 +1.1**
comp=Z,206nm,1.6s
SMRF Simiane la Rot 12.48 303 *e*P **Pn 05 05 57.2 +1.1**
comp=Z,103nm,1.6s
AKF Akfadou 12.51 268 P **Pn 05 06 04.6 +8.1**
DPC Dobruska-Polom 12.55 349 *e*P **Pn 05 05 56.4 -0.5**
DPC MLR MLR
comp=Z,2µm,10.6s
DPC Dobruska-Polom 12.55 349 *e*P **Pn 05 05 56.4 -0.5**
DPC AMS AMS 05 12 10.0
comp=Z,2µm,10.6s
DPC Dobruska-Polom 12.55 349 P **Pn 05 05 56.4 -0.5**
PRU Pruhonice 12.55 343 *e*P **Pn 05 05 56.7 -0.2**
PRU MLR MLR
comp=Z,3µm,10.9s
PRU Pruhonice 12.55 343 *e*P **Pn 05 05 56.7 -0.2**
PRU AMS AMS 05 11 30.0
comp=Z,3µm,10.9s
PRU Pruhonice 12.55 343 P **Pn 05 05 56.7 -0.2**
GDM Grand'Maison 12.68 308 *e*P **Pn 05 06 02.0 +3.3**
ORIF Oris-en-Rattie 12.69 307 *e*P **Pn 05 06 00.8 +2.0**
ORIF *e*MLR MLR
comp=Z,3µm,19.2s
ORIF Oris-en-Rattie 12.69 307 *e*P **Pn 05 06 00.8 +2.0**
UPC Upice 12.75 348 *e*P **Pn 05 05 59.1 -0.6**
UPC Upice 12.75 348 *e*P **Pn 05 05 59.1 -0.6**
UPC Upice 12.75 348 P **Pn 05 05 59.1 -0.6**
KSP Ksiaz 13.03 349 *e*P **Pn 05 06 02.4 -1.1**
KSP Ksiaz 13.03 349 *e*P **Pn 05 06 02.4 -1.1**
PVCC Panska Ves 13.05 344 *e*P **Pn 05 06 02.7 -1.1**
PVCC MLR MLR
comp=Z,3µm,12.7s
PVCC Panska Ves 13.05 344 *e*P **Pn 05 06 02.7 -1.1**
PVCC AMS AMS 05 12 00.0
comp=Z,3µm,12.7s
PVCC Panska Ves 13.05 344 P **Pn 05 06 02.7 -1.1**
AKET Djebel Ketaf 13.18 266 P **Pn 05 06 09.4 +3.8**
BBS Basel-Blauen 13.18 319 *e*P **Pn 05 06 05.9 +0.4**
BBS Basel-Blauen 13.18 319 *e*P **Pn 05 06 05.9 +0.4**
FELD Feldberg im Sc 13.21 322 *e*P **Pn 05 06 06.3 +0.4**
FELD Feldberg im Sc 13.21 322 *e*P **Pn 05 06 06.3 +0.4**
GRA1 Grafenberg Arr 13.25 334 *e*Pn **Pn 05 06 04.9 -1.6**
GRA1 *e*S **Sn 05 08 21.8 -12**
GRA1 Grafenberg Arr 13.25 334 *e*P **Pn 05 06 04.9 -1.6**
GRF Grafenberg Arr 13.25 334 *e*Pn **Pn 05 06 04.9 -1.6**
GRF *e*S **Sn 05 08 21.8 -12**
GRF *e*L 05 11 08.5
comp=Z,1µm,20.3s
STU Stuttgart 13.30 327 *e*P **Pn 05 06 06.8 -0.4**
STU Stuttgart 13.30 327 *e*P **Pn 05 06 06.8 -0.4**
NKC Novy Kostel 13.33 338 AMS AMS 05 12 00.0
comp=Z,3µm,13.2s
BFO Black Forest 13.37 324 *e*Pn **Pn 05 06 03.2 -4.9**
BFO Black Forest 13.37 324 *e*P **Pn 05 06 09.1 +1.0**
BFO pmax pmax
comp=Z,21nm,1.0s
BFO Black Forest 13.37 324 *e*Pn **Pn 05 06 09.1 +1.0**
comp=Z,21nm,1.0s
BFO Black Forest 13.37 324 *e*P **Pn 05 06 09.1 +1.0**
comp=Z,21nm,1.0s
MMAI Mount Meron Ar 13.39 108 Pn **Pn 05 06 05.2 -3.3**
comp=Z,4.9nm,0.3s,baz=312,slow=11,SNR=9.1
MMAI Sn **Sn 05 08 25.2 -12**
comp=Z,8.1nm,0.3s,baz=301,slow=24,SNR=5.7
VIVF Saint-Julien-l 13.43 305 *e*P **Pn 05 06 09.2 +0.2**
comp=Z,30nm,1.0s
VIVF Saint-Julien-l 13.43 305 *e*P **Pn 05 06 09.2 +0.2**
VIVF pmax pmax
comp=Z,15nm,1.0s
VIVF Saint-Julien-l 13.43 305 *e*P **Pn 05 06 09.2 +0.2**
comp=Z,15nm,1.0s
VIVF Saint-Julien-l 13.43 305 *e*P **Pn 05 06 09.2 +0.2**
comp=Z,15nm,1.0s
CABF La Chapelle 13.43 314 *e*P **Pn 05 06 08.4 -0.6**
CABF La Chapelle 13.43 314 *e*P **Pn 05 06 08.4 -0.6**
LOMF Lomont 13.46 318 *e*P **Pn 05 06 10.2 +0.8**
LOMF Lomont 13.46 318 *e*P **Pn 05 06 10.2 +0.8**
TANN Tannenbergstha 13.48 338 *e*Pn **Pn 05 06 09.1 -0.6**
ADJB Djebel Djouab 13.50 267 P **Pn 05 06 13.1 +3.1**
BRG Berggiesshubel 13.51 343 *e*Pn **Pn 05 06 08.2 -1.9**
BRG Berggiesshubel 13.51 343 *i*P **Pn 05 06 08.6 -1.5**
comp=Z,18nm,1.2s
BRG PP 05 06 18.0
comp=Z,17nm,1.1s
BRG S **Sn 05 08 42.0 +1.4**
BRG SS 05 09 00.0
BRG
comp=N,3µm,9.3s
BRG
comp=E,3µm,16.0s
BRG
comp=Z,3µm,11.0s
BRG Berggiesshubel 13.51 343 *i*P **Pn 05 06 08.6 -1.5**
BRG S **Sn 05 08 42.0 +1.4**
BRG pmax pmax
comp=Z,11nm,1.2s
BRG pmax pmax
comp=Z,10.0nm,1.1s
BRG MLR MLR
comp=N,2µm,9.3s
BRG MLR MLR
comp=E,2µm,16.0s
BRG MLR MLR
comp=Z,2µm,11.0s
BRG Berggiesshubel 13.51 343 *i*P **Pn 05 06 08.6 -1.5**
comp=Z,10.0nm,1.1s
BRG S **Sn 05 08 42.0 +1.4**
comp=Z,2µm,11.0s
WERD Werda 13.56 338 *e*Pn **Pn 05 06 09.0 -1.7**
MOF Molkenrain 13.62 320 *e*P **Pn 05 06 11.6 0.0**
MOF Molkenrain 13.62 320 *e*P **Pn 05 06 11.6 0.0**
LASF Ste Croix 13.67 301 *e*P **Pn 05 06 12.4 +0.1**
comp=Z,89nm,1.6s
LASF Ste Croix 13.67 301 *e*P **Pn 05 06 12.4 +0.1**
comp=Z,44nm,1.6s
SSB Saint Sauveur 13.70 307 *e*P **Pn 05 06 12.6 0.0**
SSB pmax pmax
comp=Z,19nm,1.1s
SSB Saint Sauveur 13.70 307 *e*Pn **Pn 05 06 12.6 -0.1**
comp=Z,19nm,1.1s
SSB Saint Sauveur 13.70 307 *e*P **Pn 05 06 12.6 0.0**
comp=Z,19nm,1.1s
HINF Hinteralfeld 13.75 319 *e*P **Pn 05 06 12.2 -1.1**
comp=Z,17nm,0.4s
HINF Hinteralfeld 13.75 319 *e*P **Pn 05 06 12.2 -1.1**
HINF pmax pmax
comp=Z,9.0nm,0.4s
HINF Hinteralfeld 13.75 319 *e*P **Pn 05 06 12.2 -1.1**
comp=Z,8.6nm,0.4s
HINF Hinteralfeld 13.75 319 *e*P **Pn 05 06 12.2 -1.1**
comp=Z,8.6nm,0.4s
GZT Gaziantep 13.79 88 *i*P **Pn 05 06 19.2 +5.4**
ECH Echery 13.85 321 *e*P **Pn 05 06 15.7 +1.0**
ECH Echery 13.85 321 *e*P **Pn 05 06 15.0 +0.3**
ECH pmax pmax
comp=Z,55nm,1.3s
ECH Echery 13.85 321 *e*Pn **Pn 05 06 15.0 +0.2**
comp=Z,55nm,1.3s
ECH Echery 13.85 321 *e*P **Pn 05 06 15.0 +0.3**
comp=Z,55nm,1.3s
EMHD Djebel Mahouad 13.87 267 P **Pn 05 06 18.0 +2.9**
EJON La Jonquera 13.89 294 P **Pn 05 06 12.9 -2.5**
comp=Z,40nm,1.2s
EJON La Jonquera 13.89 294 P **Pn 05 06 12.9 -2.4**
comp=Z,40nm,1.2s
CDF Champ du Feu 13.93 322 *e*P **Pn 05 06 15.0 -0.8**
comp=Z,18nm,0.4s
CDF Champ du Feu 13.93 322 *e*P **Pn 05 06 15.0 -0.8**
CDF pmax pmax
comp=Z,9.0nm,0.4s
CDF Champ du Feu 13.93 322 *e*P **Pn 05 06 15.0 -0.8**
comp=Z,9.2nm,0.4s
CDF Champ du Feu 13.93 322 *e*P **Pn 05 06 15.0 -0.8**
comp=Z,9.2nm,0.4s
MOX Moxa 13.94 337 *e*P **Pn 05 06 15.6 -0.3**
MOX *e* 05 09 25.0
MOX
comp=Z,3µm,16.0s
MOX Moxa 13.94 337 *e*Pn **Pn 05 06 14.2 -1.7**
MOX Moxa 13.94 337 *e*P **Pn 05 06 15.6 -0.3**
MOX *e* 05 09 25.0
MOX Moxa 13.94 337 *e*P **Pn 05 06 15.6 -0.3**
AKCD Akcadag 13.96 84 *i*P Px 05 06 26.5
CFON Fontmartina 14.10 291 P **Pn 05 06 15.0 -3.1**
comp=Z,74nm,1.6s
HAU Haudompre 14.13 319 *e*P **Pn 05 06 17.6 -0.9**
comp=Z,32nm,0.5s
HAU *e*MLR MLR
comp=Z,3µm,19.0s
HAU Haudompre 14.13 319 *e*P **Pn 05 06 17.6 -0.9**
HAU pmax pmax
comp=Z,16nm,0.5s
HAU Haudompre 14.13 319 *e*P **Pn 05 06 17.6 -0.9**
comp=Z,16nm,0.5s
KIEV Kiev 14.13 24 *e*P **Pn 05 06 17.3 -1.2**
KIEV pmax pmax
comp=Z,29nm,1.0s
KIEV Kiev 14.13 24 *e*Pn **Pn 05 06 17.3 -1.2**
comp=Z,29nm,1.0s
KIEV Kiev 14.13 24 *e*Pn **Pn 05 06 17.3 -1.2**
comp=Z,29nm,1.0s
AKASG Malin Array Be 14.14 24 Pn **Pn 05 06 16.8 -1.9**
comp=Z,1.9nm,0.3s,baz=213,slow=12,SNR=29
AKASG Sn **Sn 05 09 07.7 +12**
baz=211,slow=20,SNR=6.4
AKASG Malin Array Be 14.14 24 P **Pn 05 06 16.8 -1.9**
AKASG pmax pmax
comp=Z,2.0nm,0.3s
AKASG Malin Array Be 14.14 24 Pn **Pn 05 06 16.8 -1.9**
CLL Collm 14.14 341 *e*Pn **Pn 05 06 18.9 +0.2**
CLL Collm 14.14 341 *e*P **Pn 05 06 19.0 +0.3**
CLL pmax pmax
comp=Z,19nm,1.7s
CLL MLR MLR
comp=Z,2µm,19.2s
CLL Collm 14.14 341 *e*P **Pn 05 06 19.0 +0.3**
comp=Z,19nm,1.7s
CLL *e* 05 06 24.0
CLL *e* 05 06 28.0
CLL Collm 14.14 341 *e*P **Pn 05 06 19.0 +0.3**
comp=Z,19nm,1.7s
CLL *e*PP 05 06 24.0
CLL *es*PP 05 06 28.0
CLL *e* 05 06 55.0
CLL LV 05 12 00.0
comp=Z,2µm,19.2s
CLL Lmax 05 12 36.0
CLL Collm 14.14 341 *e*P **Pn 05 06 19.0 +0.3**
comp=Z,2µm,19.2s
SUSE Susehri 14.15 76 *i*P **Pn 05 06 22.8 +4.0**
SUSE Susehri 14.15 76 *i*P **Pn 05 06 22.8 +4.0**
FILF Fillols 14.15 294 *e*P **Pn 05 06 18.7 -0.2**
FILF Fillols 14.15 294 *e*P **Pn 05 06 18.7 -0.2**
KEMA Kemaliye 14.36 80 *i*P **Pn 05 06 25.9 +4.2**
THEF They Montfort 14.46 319 *e*P **Pn 05 06 22.9 0.0**
VALF Valcebollere 14.52 293 *e*P **Pn 05 06 25.2 +1.4**
ANN Anapa 14.55 57 *e*P **Pn 05 06 22.4 -1.9**
ANN *es*S **Sn 05 09 03.4 -2.6**
ANN pmax pmax
comp=N,14nm,1.4s
ANN pmax pmax
comp=Z,42nm,1.4s
ANN pmax pmax
comp=E,8.0nm,0.7s
ANN MLR MLR
comp=N,572nm,13.0s
ANN MLR MLR
comp=E,1µm,13.0s
ANN MLR MLR
comp=Z,1µm,13.0s
CLLI Llivia 14.56 293 P **Pn 05 06 22.8 -1.6**
TNS Taunus Mts 14.73 329 *e*Pn **Pn 05 06 25.9 -0.8**
TNS Taunus Mts 14.73 329 *e*Pn **Pn 05 06 25.9 -0.8**
SMF Signal de Mont 14.77 311 *e*P **Pn 05 06 26.0 -1.2**
comp=Z,12nm,0.5s
SMF Signal de Mont 14.77 311 *e*P **Pn 05 06 26.0 -1.2**
SMF pmax pmax
comp=Z,6.0nm,0.5s
SMF Signal de Mont 14.77 311 *e*P **Pn 05 06 26.0 -1.2**
comp=Z,6.1nm,0.5s
EIBI Ibiza 14.77 279 P **Pn 05 06 24.8 -2.5**
comp=Z,190nm,1.6s
EMIR Miracle 14.79 291 P **Pn 05 06 27.2 -0.3**
comp=Z,64nm,1.7s
EIL Elat 14.86 120 Pn **Pn 05 06 23.6 -5.0**
comp=Z,1.5nm,0.3s,baz=0.5,slow=13,SNR=11
EIL Sn **Sn 05 08 58.5 -15**
comp=Z,5.8nm,0.3s,baz=306,slow=18,SNR=8.0
ASF Jabal al Asfar 14.90 108 Pn **Pn 05 06 27.2 -1.9**
comp=Z,0.4nm,0.3s,baz=299,slow=19,SNR=3.0
ASF Sn **Sn 05 09 04.7 -10**
comp=Z,0.4nm,0.3s,baz=303,slow=17,SNR=2.6
RUP Ruppelstein 14.94 325 *e*P **Pn 05 06 33.2 +3.7**
RUP Ruppelstein 14.94 325 *e*P **Pn 05 06 33.2 +3.7**
KELT Kelkit 14.95 76 *i*P **Pn 05 06 30.3 +0.6**
EBNR Beni Rached 14.97 269 P **Pn 05 06 32.0 +1.9**
EPOB Poblet 15.05 288 P **Pn 05 06 30.0 -1.1**
comp=Z,107nm,1.3s
RUE Ruedersdorf 15.06 345 *e*Pn **Pn 05 06 32.4 +1.3**
comp=Z,34nm,0.4s
RUE Ruedersdorf 15.06 345 *e*Pn **Pn 05 06 32.4 +1.3**
comp=Z,34nm,0.4s
LOR Lormes 15.07 313 *e*P **Pn 05 06 31.1 -0.3**
comp=Z,16nm,0.6s
LOR *e*MLR MLR
comp=Z,2µm,22.8s
LOR Lormes 15.07 313 *e*P **Pn 05 06 31.1 -0.3**
LOR pmax pmax
comp=Z,8.0nm,0.6s
LOR Lormes 15.07 313 *e*P **Pn 05 06 31.1 -0.3**
comp=Z,8.3nm,0.6s
MEZF Maizieres J'vi 15.12 318 *e*P **Pn 05 06 32.6 +0.7**
AVF Avril sur Loir 15.13 310 *e*P **Pn 05 06 30.1 -2.0**
ECHA Ech Chlef 15.13 268 P **Pn 05 06 34.5 +2.2**
CSOR Sort 15.15 292 P **Pn 05 06 32.4 -0.1**
comp=Z,142nm,1.4s
CAF Calviac 15.17 302 *e*P **Pn 05 06 32.5 -0.2**
SSF Saint Saulge 15.17 311 *e*P **Pn 05 06 32.3 -0.4**
comp=Z,40nm,1.1s
SSF Saint Saulge 15.17 311 *e*P **Pn 05 06 32.3 -0.4**
SSF pmax pmax
comp=Z,20nm,1.1s
SSF Saint Saulge 15.17 311 *e*P **Pn 05 06 32.3 -0.4**
comp=Z,20nm,1.1s
SALF Salau 15.19 294 *e*P **Pn 05 06 40.2 +7.3**
SALF Salau 15.19 294 *e*P **Pn 05 06 40.2 +7.3**
MLS Moulis 15.29 294 *e*P **Pn 05 06 38.9 +4.6**
MLS Moulis 15.29 294 *e*P **Pn 05 06 38.9 +4.6**
GKP Gorka Klasztor 15.30 353 *e*P **Pn 05 06 36.2 +1.8**
GKP *ep*P pP 05 06 40.9 +0.3
GKP LMZ 05 16 09.3
comp=Z,3µm,14.8s
WLF Walferdange 15.33 323 P **Pn 05 06 43.0 +8.4**
comp=Z,58nm,1.4s
WLF Walferdange 15.33 323 *e*P **Pn 05 06 42.6 +7.9**
WLF pmax pmax
comp=Z,91nm,1.1s
WLF Walferdange 15.33 323 *e*P **Pn 05 06 42.6 +7.9**
comp=Z,91nm,1.1s
BGF Bois d'Agland 15.33 309 *e*P **Pn 05 06 34.8 +0.1**
CLZ Clausthal 15.37 337 *e*Pn **Pn 05 06 37.1 +1.9**
CLZ Clausthal 15.37 337 *e*Pn **Pn 05 06 37.1 +1.9**
ETRT Tiaret 15.38 266 P **Pn 05 06 42.0 +6.6**
ETRT Tiaret 15.38 266 P **Pn 05 06 42.0 +6.6**
EANR 'Ain N'Sour 15.39 268 P **Pn 05 06 37.0 +1.4**
ERTA Horta de San J 15.57 287 P **Pn 05 06 37.5 -0.5**
comp=Z,192nm,1.5s
TCF Toulx Ste Croi 15.60 307 *e*P **Pn 05 06 36.7 -1.6**
comp=Z,34nm,1.2s
TCF Toulx Ste Croi 15.60 307 *e*P **Pn 05 06 36.7 -1.6**
TCF pmax pmax
comp=Z,17nm,1.2s
TCF Toulx Ste Croi 15.60 307 *e*P **Pn 05 06 36.7 -1.6**
comp=Z,17nm,1.2s
RJF Les Rejaudoux 15.67 303 *e*P **Pn 05 06 37.6 -1.6**
RJF *e*MLR MLR
comp=Z,1µm,23.0s
DIYA Diyarbakir 15.72 84 *i*P **Pn 05 06 43.8 +3.8**
DIYA Diyarbakir 15.72 84 *i*P **Pn 05 06 43.8 +3.9**
SOC Sochi 15.76 64 *e*P **Pn 05 06 43.1 +2.8**
SOC *e* 05 09 42.6
SOC pmax pmax
comp=Z,48nm,1.0s
SOC MLR MLR
comp=Z,1µm,17.0s
SOC Sochi 15.76 64 *e*P **Pn 05 06 43.1 +2.8**
comp=Z,48nm,1.0s
RESF Ens 15.81 294 *e*P **Pn 05 06 42.3 +1.3**
EPF Esparros 15.85 294 *e*P **Pn 05 06 41.8 +0.2**
comp=Z,59nm,1.6s
EPF Esparros 15.85 294 *e*P **Pn 05 06 41.8 +0.2**
EPF pmax pmax
comp=Z,29nm,1.6s
EPF Esparros 15.85 294 *e*P **Pn 05 06 41.8 +0.2**
comp=Z,29nm,1.6s
KOPT Kop Dagi 15.90 77 *i*P **Pn 05 06 46.7 +4.5**
KOPT Kop Dagi 15.90 77 *i*P **Pn 05 06 46.7 +4.5**
EBIE Bielsa 15.93 293 P **Pn 05 06 42.0 -0.6**
comp=Z,75nm,1.3s
EBEN Beniarda 16.01 278 P **Pn 05 06 42.8 -0.9**
comp=Z,126nm,1.2s
NRDL Niedersach Rie 16.02 337 *e*Pn **Pn 05 06 47.3 +3.6**
SUW Suwalki 16.05 6 *e*P **Pn 05 06 42.5 -1.5**
SUW *ep*P pP 05 06 47.1 -1.8
SUW LMZ 05 14 16.3
comp=Z,2µm,15.1s
SUW Suwalki 16.05 6 *e*Pn **Pn 05 06 42.9 -1.1**
comp=Z,293nm,1.1s
SUW Suwalki 16.05 6 *e*Pn **Pn 05 06 42.9 -1.1**
comp=Z,293nm,1.1s
MEM Membach 16.06 326 P **Pn 05 06 51.2 +7.0**
comp=Z,26nm,1.2s
LFF La Frestale 16.06 301 *e*P **Pn 05 06 45.5 +1.2**
comp=Z,70nm,1.2s
LFF La Frestale 16.06 301 *e*P **Pn 05 06 45.5 +1.2**
LFF pmax pmax
comp=Z,35nm,1.2s
LFF La Frestale 16.06 301 *e*P **Pn 05 06 45.5 +1.2**
comp=Z,35nm,1.2s
LFF La Frestale 16.06 301 *e*P **Pn 05 06 45.5 +1.2**
comp=Z,35nm,1.2s
EMOS Mosqueruela 16.16 284 P **Pn 05 06 47.4 +1.9**
comp=Z,164nm,1.4s
EMOS Mosqueruela 16.16 284 P **Pn 05 06 47.4 +1.8**
comp=Z,164nm,1.4s
BCLA Clavier 16.25 324 P **Pn 05 06 53.6 +7.0**
ESAC San Caprasio 16.25 289 P **Pn 05 06 45.3 -1.4**
comp=Z,129nm,1.4s
GIVF Givet 16.25 322 *e*P **Pn 05 06 45.5 -1.2**
MARD Mardin 16.32 86 *i*P **Pn 05 06 48.1 +0.3**
DOU Dourbes 16.36 322 P **Pn 05 06 53.1 +5.0**
comp=Z,23nm,1.8s
DOU Dourbes 16.36 322 P **Pn 05 06 53.0 +4.9**
comp=Z,23nm,1.8s
BNGL BINGOL 16.43 81 *i*P **Pn 05 06 52.2 +3.1**
ETSF Etsaut 16.48 293 *e*P **Pn 05 06 49.7 +0.1**
comp=Z,154nm,1.5s
ETSF Etsaut 16.48 293 *e*P **Pn 05 06 49.7 +0.1**
ETSF pmax pmax
comp=Z,77nm,1.5s
ETSF Etsaut 16.48 293 *e*P **Pn 05 06 49.7 +0.1**
comp=Z,77nm,1.5s
ETSF Etsaut 16.48 293 *e*P **Pn 05 06 49.7 +0.1**
comp=Z,77nm,1.5s
BAIF Baives 16.53 321 *e*P **Pn 05 06 50.2 0.0**
comp=Z,91nm,1.3s
BAIF Baives 16.53 321 *e*P **Pn 05 06 50.2 0.0**
BAIF pmax pmax
comp=Z,46nm,1.3s
BAIF Baives 16.53 321 *e*P **Pn 05 06 50.2 0.0**
comp=Z,46nm,1.3s

BAIF	Baives	16.53	321	eP	Pn	05 06 50.2	0.0
	comp=Z,46nm,1.3s						
ECHE	Chera	16.54	282	P	Pn	05 06 52.1	+1.6
ECHE				pmax	pmax		
	comp=Z,98nm,1.1s						
ECHE	Chera	16.54	282	P	Pn	05 06 52.1	+1.6
	comp=Z,98nm,1.1s						
ECHE	Chera	16.54	282	P	Pn	05 06 52.1	+1.6
	comp=Z,98nm,1.1s						
BEST	Besiri	16.63	84	iP	Pn	05 06 52.3	+0.7
CART	Cartagena	16.74	275	ePn	Pn	05 06 55.3	+2.3
	comp=Z,214nm,1.4s						
SNF	Seneffe	16.79	323	P	Pn	05 06 58.1	+4.7
	comp=Z,30nm,2.0s						
SNF				AP	pP	05 07 04.8	+7.7
SNF	Seneffe	16.79	323	P	Pn	05 06 58.1	+4.6
DDEM	Demirkent	16.88	74	iP	Pn	05 06 57.8	+3.1
DDEM	Demirkent	16.88	74	iP	Pn	05 06 57.8	+3.1
EMUR	La Murta	16.89	276	P	Pn	05 06 53.7	-1.2
	comp=Z,212nm,1.5s						
HOMI	Horasan	16.98	77	iP	Pn	05 07 01.8	+5.7
SJPF	Ste Jean	16.99	294	eP	Pn	05 06 56.2	0.0
	comp=Z,42nm,1.0s						
SJPF	Ste Jean	16.99	294	eP	Pn	05 06 56.2	0.0
SJPF				pmax	pmax		
	comp=Z,21nm,1.0s						
SJPF	Ste Jean	16.99	294	eP	Pn	05 06 56.2	0.0
	comp=Z,21nm,1.0s						
SJPF	Ste Jean	16.99	294	eP	Pn	05 06 56.2	0.0
	comp=Z,21nm,1.0s						
DAGI	Agillar	17.01	73	iP	Pn	05 06 59.3	+2.9
ARTV	Artvin	17.03	73	iP	Pn	05 06 58.5	+1.9
ARTV	Artvin	17.03	73	iP	Pn	05 06 58.5	+1.9
ETOB	Tobarra	17.05	279	P	Pn	05 06 55.7	-1.2
	comp=Z,101nm,2.2s						
MNK	Minsk	17.21	15	⫽iP	Pn	05 06 53.0	-5.8
MNK				eS	Sn	05 10 03.0	-7.5
MNK				pmax	pmax		
	comp=Z,170nm,1.0s						
MNK				pmax	pmax		
	comp=N,260nm,1.0s						
ELIZ	Elizondo	17.22	294	P	Pn	05 06 58.8	-0.2
ELIZ				pmax	pmax		
	comp=Z,23nm,1.0s						
ELIZ	Elizondo	17.22	294	P	Pn	05 06 58.8	-0.2
	comp=Z,23nm,1.0s						
ELIZ	Elizondo	17.22	294	P	Pn	05 06 58.8	-0.2
	comp=Z,23nm,1.0s						
MFF	Saint Martin d	17.22	306	eP	Pn	05 06 59.3	+0.3
	comp=Z,164nm,1.4s						
MFF	Saint Martin d	17.22	306	eP	Pn	05 06 59.3	+0.3
MFF				pmax	pmax		
	comp=Z,82nm,1.4s						
MFF	Saint Martin d	17.22	306	eP	Pn	05 06 59.3	+0.3
	comp=Z,82nm,1.4s						
MFF	Saint Martin d	17.22	306	eP	Pn	05 06 59.3	+0.3
	comp=Z,82nm,1.4s						
BSEG	Bad Segeberg	17.22	340	ePn	Pn	05 07 01.4	+2.4
BSEG	Bad Segeberg	17.22	340	eP	Pn	05 07 01.4	+2.4
MICGM	Minsk	17.22	15	⫽iP	Pn	05 06 53.0	-6.0
ETOR	Torete	17.38	286	P	Pn	05 07 00.5	-0.5
ETOR				pmax	pmax		
	comp=Z,55nm,1.2s						
ETOR	Torete	17.38	286	P	Pn	05 07 00.5	-0.5
	comp=Z,55nm,1.2s						
ETOR	Torete	17.38	286	P	Pn	05 07 00.5	-0.5
	comp=Z,55nm,1.2s						
BSD	Bornholm Skovb	17.39	350	eP	Pn	05 06 58.8	-2.2
BSD				pmax	pmax		
	comp=Z,23nm,1.0s						
BSD				MLR	MLR		
	comp=Z,1μm,18.0s						
BSD	Bornholm Skovb	17.39	350	iP	Pn	05 06 58.8	-2.2
	comp=Z,23nm,1.0s						
BSD							
	comp=Z,1μm,18.0s						
NACGM	Naroch	17.39	13	eP	Pn	05 06 56.0	-5.1
ENIJ	Nijar	17.79	273	P	Pn	05 07 05.5	-0.6
ENIJ				pmax	pmax		
	comp=Z,133nm,1.3s						
ENIJ	Nijar	17.79	273	P	Pn	05 07 05.5	-0.6
	comp=Z,133nm,1.3s						
ENIJ	Nijar	17.79	273	P	Pn	05 07 05.5	-0.6
	comp=Z,133nm,1.3s						
EVIA	Vianos	17.79	279	P	Pn	05 07 06.2	0.0
EVIA				pmax	pmax		
	comp=Z,126nm,1.4s						
EVIA	Vianos	17.79	279	P	Pn	05 07 06.2	0.0
	comp=Z,126nm,1.4s						
EVIA	Vianos	17.79	279	P	Pn	05 07 06.2	0.0
	comp=Z,126nm,1.4s						
KIV	Kislovodsk	17.94	64	eP	Pn	05 07 09.0	+1.1
KIV				eS	Sn	05 10 27.0	-1.1
KIV				pmax	pmax		
	comp=Z,32nm,1.2s						
KIV				MLR	MLR		
	comp=Z,350nm,11.0s						
KIV	Kislovodsk	17.94	64	ePn	Pn	05 07 08.8	+0.9
	comp=Z,54nm,1.2s						
KIV	Kislovodsk	17.94	64	eP	Pn	05 07 09.0	+1.1
	comp=Z,32nm,1.2s						
EHUE	Huescar	17.96	276	P	Pn	05 07 08.0	-0.2
EHUE				pmax	pmax		
	comp=Z,87nm,1.3s						
EHUE	Huescar	17.96	276	P	Pn	05 07 08.0	-0.2
	comp=Z,87nm,1.3s						
EHUE	Huescar	17.96	276	P	Pn	05 07 08.0	-0.2
	comp=Z,87nm,1.3s						
LDF	La Druitiere	18.05	312	eP	Pn	05 07 10.1	+0.8
	comp=Z,7.7nm,0.5s						
LDF	La Druitiere	18.05	312	eP	Pn	05 07 10.1	+0.8
LDF				pmax	pmax		
	comp=Z,4.0nm,0.5s						
LDF	La Druitiere	18.05	312	eP	Pn	05 07 10.1	+0.8
	comp=Z,3.8nm,0.5s						
LDF	La Druitiere	18.05	312	eP	Pn	05 07 10.1	+0.8
	comp=Z,3.8nm,0.5s						
DIGO	Kars	18.10	75	iP	Pn	05 07 10.1	+0.2
DIGO	Kars	18.10	75	iP	Pn	05 07 10.1	+0.1
ONI	Oni	18.28	68	P	Pn	05 07 10.4	-1.7
ONI				S	Sn	05 10 38.5	+2.0
EQES	Quesada	18.33	276	P	Pn	05 07 13.0	+0.1
	comp=Z,81nm,1.4s						
EQES	Quesada	18.33	276	P	Pn	05 07 13.0	+0.2
	comp=Z,81nm,1.4s						
EBER	Berja	18.34	273	P	Pn	05 07 12.0	-0.9
	comp=Z,56nm,1.3s						
EBER	Berja	18.34	273	P	Pn	05 07 12.0	-0.9
	comp=Z,56nm,1.3s						
FLN	La Foliniere	18.34	312	eP	Pn	05 07 12.5	-0.4
	comp=Z,86nm,1.2s						
FLN				eMLR	MLR		
	comp=Z,2μm,22.8s						
FLN	La Foliniere	18.34	312	eP	Pn	05 07 12.5	-0.4
FLN				pmax	pmax		
	comp=Z,43nm,1.2s						
FLN	La Foliniere	18.34	312	eP	Pn	05 07 12.5	-0.4
	comp=Z,43nm,1.2s						
FLN	La Foliniere	18.34	312	eP	Pn	05 07 12.5	-0.4
	comp=Z,43nm,1.2s						
COP	Copenhagen	18.35	346	eP	Pn	05 07 15.0	+2.2
COP				i		05 10 39.9	
COP				MLR	MLR		
	comp=Z,620nm,17.0s						
COP	Copenhagen	18.35	346	iP	Pn	05 07 15.0	+2.2
COP				i		05 10 39.9	
COP				eS	Sn	05 10 45.0	+7.1
COP							
	comp=Z,610nm,17.0s						
COP	Copenhagen	18.35	346	eP	Pn	05 07 15.0	+2.2
COP				eS	Sn	05 10 45.0	+7.1
HAKT	HAKKARI	18.59	84	iP	Pn	05 07 15.9	-0.1
HAKT	HAKKARI	18.59	84	iP	Pn	05 07 15.9	0.0
ELAN	Lanestosa	18.61	293	P	Pn	05 07 15.5	-0.7
	comp=Z,113nm,1.4s						
ELAN	Lanestosa	18.61	293	P	Pn	05 07 15.5	-0.6
	comp=Z,113nm,1.4s						
ZEI	Tsey	18.63	68	eP	Pn	05 07 16.3	-0.1
ZEI				eS	Sn	05 10 50.1	+5.2
ZEI				pmax	pmax		
	comp=Z,14nm,0.5s						
ZEI				MLR	MLR		
	comp=Z,380nm,10.0s						
ZEI	Tsey	18.63	68	eP	Pn	05 07 16.3	-0.1
	comp=Z,14nm,0.5s						
ZEI				eS	Sn	05 10 50.1	+5.2
	comp=Z,380nm,10.0s						
EALB	Alboran	18.66	270	P	Pn	05 07 17.9	+1.1
	comp=Z,114nm,1.3s						
EALB	Alboran	18.66	270	P	Pn	05 07 17.9	+1.1
	comp=Z,114nm,1.3s						
VORD	Divnogorie	18.66	40	eP	Pn	05 07 15.5	-1.3
VORD				eS	Sn	05 10 39.7	-5.9
VORD				pmax	pmax		
	comp=Z,20nm,1.3s						
VORD				pmax	pmax		
	comp=N,9.0nm,0.6s						
VORD				pmax	pmax		
	comp=E,50nm,1.3s						
VORD				smax			
	comp=E,290nm,4.0s						
VORD				smax			
	comp=Z,100nm,4.0s						
VORD				smax			
	comp=N,40nm,1.0s						
VORD				MLR	MLR		
	comp=N,2μm,12.0s						
VORD				MLR	MLR		
	comp=E,2μm,12.0s						
VORD				MLR	MLR		
	comp=Z,1μm,12.0s						
VORD	Divnogorie	18.66	40	eP	Pn	05 07 15.5	-1.3
	comp=Z,9.0nm,0.6s						
GOR	Gori	18.71	71	P	Pn	05 07 19.8	+2.4
VSR	Storozhevoye	18.75	40	eP	Pn	05 07 15.8	-2.0
VSR				eS	Sn	05 10 41.4	-6.3
VSR				pmax	pmax		
	comp=N,10.0nm,1.0s						
VSR				pmax	pmax		
	comp=E,20nm,1.0s						
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VSR				smax			
	comp=N,170nm,3.0s						
VSR				smax			
	comp=E,250nm,3.0s						
VSR				smax			
	comp=Z,80nm,3.0s						
VSR				MLR	MLR		
	comp=Z,1μm,12.0s						
VSR				MLR	MLR		
	comp=N,520nm,6.0s						
VSR				MLR	MLR		
	comp=E,1μm,12.0s						
VSR	Storozhevoye	18.75	40	eP	Pn	05 07 15.8	-2.0
ECOG	Cogollos-Vega	18.80	275	P	Pn	05 07 19.3	+0.7
ECOG				pmax	pmax		
	comp=Z,105nm,1.3s						
ECOG	Cogollos-Vega	18.80	275	P	Pn	05 07 19.3	+0.7
	comp=Z,105nm,1.3s						
ECOG	Cogollos-Vega	18.80	275	P	Pn	05 07 19.3	+0.7
	comp=Z,105nm,1.3s						
EBAN	Banos Encina	18.85	278	P	Pn	05 07 19.0	-0.1
EBAN				pmax	pmax		
	comp=Z,73nm,1.0s						
EBAN	Banos Encina	18.85	278	P	Pn	05 07 19.0	0.0
	comp=Z,73nm,1.0s						
EBAN	Banos Encina	18.85	278	P	Pn	05 07 19.0	-0.1
	comp=Z,73nm,1.0s						
ESDC	Sonseca Array	18.85	282	P	Pn	05 07 18.8	-0.3
	comp=Z,0.7nm,0.3s,baz=79,slow=11,SNR=60						
ESDC	Sonseca Array	18.85	282	P	Pn	05 07 18.0	-1.1
	comp=Z,32nm,1.1s						
ESDC	Sonseca Array	18.85	282	P	Pn	05 07 18.0	-1.1
	comp=Z,32nm,1.1s						
ESLA	Sonseca Array	18.85	282	eP	Pn	05 07 19.1	0.0
	comp=Z,27nm,1.3s						
ESLA	Sonseca Array	18.85	282	eP	Pn	05 07 19.1	0.0
	comp=Z,27nm,1.3s						
EGUA	Guajares	18.88	273	P	Pn	05 07 17.7	-1.8
EGUA				pmax	pmax		
	comp=Z,445nm,1.0s						
EGUA	Guajares	18.88	273	P	Pn	05 07 17.7	-1.8
	comp=Z,445nm,1.0s						
EGUA	Guajares	18.88	273	P	Pn	05 07 17.7	-1.8
	comp=Z,445nm,1.0s						
GUD	Guadarrama	18.97	285	P	Pn	05 07 19.7	-0.8
GUD				pmax	pmax		
	comp=Z,42nm,1.0s						
GUD	Guadarrama	18.97	285	P	Pn	05 07 19.7	-0.9
	comp=Z,42nm,1.0s						
GUD	Guadarrama	18.97	285	P	Pn	05 07 19.7	-0.8
	comp=Z,42nm,1.0s						
ERON	Agron	19.04	274	P	Pn	05 07 19.6	-1.8
	comp=Z,13nm,1.0s						
ERON	Agron	19.04	274	P	Pn	05 07 19.6	-1.8
	comp=Z,13nm,1.0s						
GNI	Garni	19.15	76	P	Pn	05 07 21.1	-1.7
	comp=Z,1.2nm,0.3s,baz=281,slow=5.6,SNR=10.0						
GNI				LR	LR	05 14 44.5	
	comp=Z,768nm,20.1s,baz=286,slow=37						
GNI	Garni	19.15	76	P	Pn	05 07 21.1	-1.7
GNI				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GNI				MLR	MLR		
	comp=Z,768nm,20.1s						
GNI	Garni	19.15	76	eP	Pn	05 07 22.6	-0.2
	comp=Z,250nm,1.5s						
GNI	Garni	19.15	76	eP	Pn	05 07 22.6	-0.2
	comp=Z,250nm,1.5s						
PAB	San Pablo	19.15	282	eP	Pn	05 07 22.1	-0.7
PAB				pmax	pmax		
	comp=Z,59nm,1.4s						
PAB	San Pablo	19.15	282	eP	Pn	05 07 22.1	-0.7
	comp=Z,59nm,1.4s						
PAB	San Pablo	19.15	282	eP	Pn	05 07 22.1	-0.7
	comp=Z,59nm,1.4s						
TBLG	Delisi	19.16	71	eP	Pn	05 07 23.1	+0.2
TBLG	Delisi	19.16	71	P	Pn	05 07 23.1	+0.2
TBLG	Delisi	19.16	71	eP	Pn	05 07 23.1	+0.2
MTA	Mtatsminda	19.20	71	P	Pn	05 07 23.3	0.0
MTA				S	Sn	05 10 51.4	-7.5
ELOJ	Sierra Loja	19.29	275	P	Pn	05 07 22.3	-2.1
ELOJ				pmax	pmax		
	comp=Z,72nm,2.1s						
ELOJ	Sierra Loja	19.29	275	P	Pn	05 07 22.3	-2.1
	comp=Z,72nm,2.1s						
ELOJ	Sierra Loja	19.29	275	P	Pn	05 07 22.3	-2.1
	comp=Z,72nm,2.1s						
ELUQ	Luque	19.31	276	P	Pn	05 07 22.6	-2.0
ELUQ				pmax	pmax		
	comp=Z,84nm,1.1s						
ELUQ	Luque	19.31	276	P	Pn	05 07 22.6	-2.1
	comp=Z,84nm,1.1s						
ELUQ	Luque	19.31	276	P	Pn	05 07 22.6	-2.0
	comp=Z,84nm,1.1s						
SGMF	Saint Gilles	19.37	309	eP	Pn	05 07 24.3	-1.0
SGMF	Saint Gilles	19.37	309	eP	Pn	05 07 24.3	-1.0
EADA	Adamuz	19.46	278	P	Pn	05 07 24.5	-2.0
	comp=Z,190nm,1.4s						
EADA	Adamuz	19.46	278	P	Pn	05 07 24.5	-2.0
	comp=Z,190nm,1.4s						
JSA	Saint Aubin	19.53	312	AMS	AMS	05 15 46.7	
	comp=Z,1μm,14.8s						
QUIF	Quistinic	19.62	307	eP	Pn	05 07 26.9	-1.4
QUIF	Quistinic	19.62	307	eP	Pn	05 07 26.9	-1.4
DGRG	David-gareji	19.63	72	P	Pn	05 07 26.7	-1.8
DGRG				S	Sn	05 11 16.1	+7.0
TAM	Tamanrasset	19.77	224	eP	Pn	05 07 31.0	+0.7
TAM				pmax	pmax		
	comp=Z,34nm,1.4s						
TAM	Tamanrasset	19.77	224	eP	Pn	05 07 31.0	+0.7
	comp=Z,34nm,1.4s						
TAM	Tamanrasset	19.77	224	eP	Pn	05 07 31.0	+0.7
	comp=Z,34nm,1.4s						
MUD	Monsted U'grnd	19.77	342⇑	iP	Pn	05 07 28.6	-1.4
MUD				eS	Sn	05 11 12.9	+0.6
MUD				pmax	pmax		
	comp=Z,18nm,1.1s						
MUD				MLR	MLR		
	comp=Z,810nm,20.0s						
MUD	Monsted U'grnd	19.77	342⇑	iP	Pn	05 07 28.6	-1.4
	comp=Z,18nm,1.1s						
MUD				eS	Sn	05 11 12.9	+0.6
MUD							
	comp=Z,810nm,20.0s						
MUD	Monsted U'grnd	19.77	342	iP	Pn	05 07 28.6	-1.4
	comp=Z,18nm,1.1s						
MUD				eS	Sn	05 11 12.9	+0.6
	comp=Z,810nm,20.0s						
ROSF	Rostrenen	19.84	309	eP	Pn	05 07 29.8	-1.2
	comp=Z,167nm,1.4s						
ROSF	Rostrenen	19.84	309	eP	Pn	05 07 29.8	-1.2
ROSF				pmax	pmax		
	comp=Z,83nm,1.4s						
ROSF	Rostrenen	19.84	309	eP	Pn	05 07 29.8	-1.2
	comp=Z,83nm,1.4s						
ROSF	Rostrenen	19.84	309	eP	Pn	05 07 29.8	-1.2
	comp=Z,83nm,1.4s						
EMIJ	Mijas	19.89	273	P	Pn	05 07 29.2	-2.4
	comp=Z,88nm,1.2s						
EMIJ	Mijas	19.89	273	P	Pn	05 07 29.2	-2.4
	comp=Z,88nm,1.2s						
EARI	Arriondas	19.90	293	P	Pn	05 07 31.0	-0.7
	comp=Z,18nm,2.7s						
EARI	Arriondas	19.90	293	P	Pn	05 07 31.0	-0.7
	comp=Z,18nm,2.7s						
VRHR	Novokhopersk	19.95	42	eP	Pn	05 07 31.7	-0.5
VRHR				eS	Sn	05 11 10.5	-6.3
VRHR				pmax	pmax		
	comp=N,60nm,1.1s						
VRHR				pmax	pmax		
	comp=E,80nm,1.1s						
VRHR				pmax	pmax		
	comp=Z,70nm,1.1s						
VRHR				smax			
	comp=E,60nm,1.1s						
VRHR				smax			
	comp=Z,5.0nm,0.4s						
VRHR				smax			
	comp=N,30nm,1.1s						
VRHR	Novokhopersk	19.95	42	eP	Pn	05 07 31.7	-0.5
ECAB	El Cabril	20.13	278	P	P	05 07 33.3	+0.6
	comp=N,302nm,1.4s						
ECAB	El Cabril	20.13	278	P	P	05 07 33.3	+0.6
	comp=N,302nm,1.4s						
BHD	Baghdad	20.22	96	ex	x	05 07 31.5	
BHD				ex	x	05 07 55.0	
BHD				ex	x	05 11 22.0	
BHD	Baghdad	20.22	96	eP	P	05 07 31.5	-2.1
BHD				eS	S	05 11 22.0	+1.1
OBN	Obninsk	20.32	28⇑	eP	P	05 07 32.5	-2.0
OBN				e		05 07 50.9	
OBN				iS	S	05 11 18.2	-4.2
OBN				pmax	pmax		
	comp=Z,100nm,1.2s						
OBN				MLR	MLR		
	comp=Z,700nm,16.0s,MS4.1						
OBN	Obninsk	20.32	28	eP	P	05 07 34.5	+0.1
	comp=Z,69nm,1.0s						
OBN	Obninsk	20.32	28	eP	P	05 07 34.5	0.0
	comp=Z,69nm,1.0s						
EPLA	Plasencia	20.46	284	P	P	05 07 35.7	-0.5
EPLA				pmax	pmax		
	comp=Z,219nm,1.6s						
EPLA	Plasencia	20.46	284	P	P	05 07 35.7	-0.5
	comp=Z,219nm,1.6s						
EPLA	Plasencia	20.46	284	P	P	05 07 35.7	-0.5
	comp=Z,219nm,1.6s						
EJIF	Jimena Fronter	20.46	273	P	P	05 07 35.6	-0.6
EJIF				pmax	pmax		
	comp=Z,195nm,1.5s						
EJIF	Jimena Fronter	20.46	273	P	P	05 07 35.6	-0.6
	comp=Z,195nm,1.5s						
EJIF	Jimena Fronter	20.46	273	P	P	05 07 35.6	-0.6
	comp=Z,195nm,1.5s						
SWN1	Swindon	20.46	318	AMS	AMS	05 17 31.8	
	comp=Z,2μm,17.5s,MS4.5						
DKH	Dar Kharkhour	20.60	271	iP	P	05 07 40.0	+2.2
ESPR	Espera	20.68	275	P	P	05 07 37.6	-1.0
	comp=Z,77nm,1.2s						
ESPR	Espera	20.68	275	P	P	05 07 37.6	-1.0
	comp=Z,77nm,1.2s						
VSU	Vasula	20.82	10c	iP	P	05 07 39.0	-0.9
VSU				pmax	pmax		
	comp=Z,396nm,1.2s						
VSU	Vasula	20.82	10	iP	P	05 07 39.0	-0.9
	comp=Z,396nm,1.2s						
MDT	Midelt	20.85	263	P	P	05 07 40.6	+0.2
	comp=Z,23nm,1.1s,baz=86,slow=12,SNR=15						
MDT				LR	LR	05 17 38.5	
	comp=Z,504nm,18.5s,MS3.9,baz=221,slow=42						
MDT	Midelt	20.85	263	P	P	05 07 40.6	+0.2
CWF	Charnwood Fore	20.90	321	P	P	05 07 41.3	+0.5
CWF				AMb	AMB	05 07 45.2	
	comp=Z,34nm,1.3s						
CWF				S	S	05 11 40.4	+6.3
CWF				AMS	AMS	05 16 10.7	
	comp=Z,1μm,14.5s						
CWF	Charnwood Fore	20.90	321	eP	P	05 07 41.3	+0.5
CWF				AMb	AMB	05 07 45.2	
	comp=Z,34nm,1.3s						
CWF				eS	S	05 11 40.4	+6.3
CWF				AMS	AMS	05 16 10.7	
	comp=Z,1μm,14.5s,MS4.4						
CWF	Charnwood Fore	20.90	321	eP	P	05 07 41.3	+0.5
PBRG	Braganca	20.93	289	eP	P	05 07 41.0	-0.3
	comp=Z,86nm,1.0s						
PBRG	Braganca	20.93	289	eP	P	05 07 41.0	-0.3
	comp=Z,86nm,1.0s						
ECAL	Calabor	20.93	289	P	P	05 07 41.7	+0.4
	comp=Z,120nm,1.4s						
ECAL	Calabor	20.93	289	P	P	05 07 41.7	+0.4
	comp=Z,120nm,1.4s						
ZFT	Errachidia	20.94	261	iP	P	05 07 43.0	+1.5
HGH	Gray Hill	21.06	317	P	P	05 07 43.1	+0.5
HGH	Gray Hill	21.06	317	eP	P	05 07 43.1	+0.5
HGH	Gray Hill	21.06	317	eP	P	05 07 43.1	+0.5
DYA	Yadsworthy	21.11	313	AMS	AMS	05 17 26.2	
	comp=Z,1μm,10.8s,MS4.6						
RSA	Sarsar	21.13	269	iP	P	05 07 45.0	+1.5
MVO	Moncorvo	21.14	287	eP	P	05 07 43.4	-0.2
	comp=Z,178nm,1.5s,mb5.2						
MVO				eLR	LR	05 16 03.7	
	comp=Z,710nm,20.0s						
MVO	Moncorvo	21.14	287	P	P	05 07 44.0	+0.4
MVO	Moncorvo	21.14	287	eP	P	05 07 43.4	-0.2
	comp=Z,178nm,1.5s,mb5.2						
EMIN	Mina Concepcio	21.16	277	P	P	05 07 44.6	+0.8
	comp=Z,148nm,1.2s,mb5.2						
EMIN	Mina Concepcio	21.16	277	P	P	05 07 44.6	+0.8
	comp=Z,148nm,1.2s,mb5.2						
MOS	Moscow	21.18	28	eP	P	05 07 41.8	-2.0
MOS				e		05 08 00.4	
MOS				eS	S	05 11 31.1	-8.5
MOS				pmax	pmax		
	comp=Z,171nm,1.5s,mb5.2						
MOS				pmax	pmax		
	comp=Z,200nm,1.3s,mb5.3						
MOS				MLR	MLR		
	comp=Z,1μm,12.0s,MS4.5						
MOS	Moscow	21.18	28	eP	P	05 07 41.8	-2.0
	comp=Z,200nm,1.3s,mb5.3						
MAK	Makhachkala	21.29	68	eP	P	05 07 39.7	-5.4
MAK				e		05 08 02.0	
MAK				eS	S	05 11 36.2	-5.7
MAK				eSSS		05 12 16.5	
MAK				pmax	pmax		
	comp=Z,495nm,1.6s,mb5.6						
MAK				MLR	MLR		
	comp=Z,929nm,13.0s,MS4.4						
EBAD	Badajoz	21.29	280	P	P	05 07 44.8	-0.3
	comp=Z,124nm,1.4s,mb5.0						
EBAD	Badajoz	21.29	280	P	P	05 07 44.8	-0.4
	comp=Z,124nm,1.4s,mb5.0						
KBI1	Birley Grange	21.31	322	P	P	05 07 45.9	+0.6
KBI1	Birley Grange	21.31	322	eP	P	05 07 45.9	+0.6
KBI1	Birley Grange	21.31	322	eP	P	05 07 45.9	+0.6
HEX	Exmoor	21.32	315	P	P	05 07 45.7	+0.3
HEX	Exmoor	21.32	315	eP	P	05 07 45.7	+0.3
HEX	Exmoor	21.32	315	eP	P	05 07 45.7	+0.3
MCH1	Michaelchurch	21.35	318	P	P	05 07 45.9	+0.2
MCH1				AMb	AMB	05 07 51.9	
	comp=Z,55nm,3.1s						
MCH1				AMS	AMS	05 17 59.8	
	comp=Z,2μm,16.9s						
MCH1	Michaelchurch	21.35	318	eP	P	05 07 45.9	+0.2
MCH1				AMb	AMB	05 07 51.9	
	comp=Z,55nm,3.1s						
MCH1				AMS	AMS	05 17 59.8	
	comp=Z,2μm,16.9s,MS4.6						
MCH1	Michaelchurch	21.35	318	eP	P	05 07 45.9	+0.2
PBAR	Barrancos	21.39

comp=Z,148nm,1.5s,mb5.2
PMRV eLR LR 05 15 36.1
comp=Z,618nm,18.0s
PMRV Marv??o 21.51 282 eP **P 05 07 46.2 -1.4**
PMRV Marv??o 21.51 282 eP **P 05 07 46.9 -0.7**
comp=Z,148nm,1.5s,mb5.2
HTR Trewern Hill 21.54 318 P **P 05 07 49.0 +1.3**
HTR Trewern Hill 21.54 318 eP **P 05 07 49.0 +1.3**
HTR Trewern Hill 21.54 318 eP **P 05 07 49.0 +1.3**
PCBR Castelo Branco 21.54 283 eP **P 05 07 47.5 -0.4**
comp=Z,133nm,1.8s,mb5.1
PCBR Castelo Branco 21.54 283 eP **P 05 07 47.5 -0.4**
comp=Z,133nm,1.8s,mb5.1
MTE Manteigas 21.56 285 eP **P 05 07 46.0 -2.1**
comp=Z,210nm,1.7s,mb5.3
MTE eLR LR 05 15 16.4
comp=Z,642nm,20.0s
MTE Manteigas 21.56 285 eP **P 05 07 47.9 -0.2**
comp=Z,158nm,1.3s,mb5.3
MTE Manteigas 21.56 285 eP **P 05 07 47.8 -0.3**
comp=Z,158nm,1.3s,mb5.3
IGHG Ghaleghazi 21.60 92 eP **P 05 07 45.1 -3.4**
IGHG Ghaleghazi 21.60 92 eP **P 05 07 45.1 -3.4**
PVRL Vila Real 21.66 287 eP **P 05 07 49.1 -0.1**
comp=Z,77nm,1.5s,mb4.9
PVRL Vila Real 21.66 287 eP **P 05 07 49.1 -0.1**
comp=Z,77nm,1.5s,mb4.9
HTL Hartland 21.67 314 P **P 05 07 49.5 +0.4**
HTL AMb AMB 05 07 53.5
comp=Z,66nm,1.1s,mb5.0
HTL AMS AMS 05 18 01.1
comp=Z,1µm,12.0s
HTL Hartland 21.67 314 eP **P 05 07 49.5 +0.4**
HTL AMb AMB 05 07 53.5
comp=Z,66nm,1.1s,mb5.0
HTL AMS AMS 05 18 01.1
comp=Z,1µm,12.0s,MS4.6
HTL Hartland 21.67 314 eP **P 05 07 49.5 +0.3**
PESTR Estremoz 21.72 281 eP **P 05 07 49.4 -0.4**
comp=Z,72nm,1.4s,mb4.9
PESTR eLQ 05 11 47.1
PESTR eLR LR 05 15 25.5
comp=Z,596nm,18.0s
PESTR Estremoz 21.72 281 eP **P 05 07 49.4 -0.4**
comp=Z,72nm,1.4s,mb4.9
ILIN Lien 21.73 90 eP **P 05 07 48.4 -1.6**
ILIN Lien 21.73 90 eP **P 05 07 48.4 -1.6**
CCA1 Carnmenellis 21.75 312 AMS AMS 05 17 04.9
comp=Z,1µm,14.1s,MS4.4
IVIS Veis 21.76 91 eP **P 05 07 47.9 -2.4**
IVIS Veis 21.76 91 eP **P 05 07 47.9 -2.4**
HPK Haverah Park 21.78 324 P **P 05 07 50.2 -0.1**
HPK AMb AMB 05 07 57.7
comp=Z,82nm,1.5s,mb4.9
HPK AMS AMS 05 16 11.4
comp=Z,1µm,15.3s
HPK Haverah Park 21.78 324 eP **P 05 07 50.2 -0.1**
HPK AMb AMB 05 07 57.7
comp=Z,82nm,1.5s,mb4.9
HPK AMS AMS 05 16 11.4
comp=Z,1µm,15.3s,MS4.4
HPK Haverah Park 21.78 324 eP **P 05 07 50.2 -0.1**
PVIS Viseu 21.81 286 eP **P 05 07 50.4 -0.4**
comp=Z,197nm,1.6s,mb5.3
PVIS Viseu 21.81 286 eP **P 05 07 50.4 -0.4**
comp=Z,197nm,1.6s,mb5.3
EGRO El Granado 21.83 277 P **P 05 07 49.9 -1.2**
comp=Z,42nm,1.3s,mb4.7
EGRO El Granado 21.83 277 P **P 05 07 49.9 -1.1**
comp=Z,42nm,1.3s,mb4.7
PCAB Cabril 21.89 288 eP **P 05 07 51.4 -0.2**
comp=Z,67nm,1.4s,mb4.9
PCAB Cabril 21.89 288 eP **P 05 07 51.4 -0.2**
comp=Z,67nm,1.4s,mb4.9
ELOB Lobios 21.92 289 P **P 05 07 51.3 -0.6**
comp=Z,34nm,1.4s,mb4.6
ELOB Lobios 21.92 289 P **P 05 07 51.3 -0.6**
comp=Z,34nm,1.4s,mb4.6
PVAQ Vaqueiros 22.04 277 eP **P 05 07 53.0 -0.2**
comp=Z,62nm,1.6s,mb4.8
PVAQ eLQ 05 11 52.2
PVAQ eLR LR 05 17 02.7
comp=Z,435nm,18.0s
PVAQ Vaqueiros 22.04 277 eP **P 05 07 53.0 -0.2**
comp=Z,62nm,1.6s,mb4.8
KIB El Ksiba 22.05 263 *i* P **P 05 07 55.0 +1.6**
PBEJ Beja 22.05 279 eP **P 05 07 54.1 +0.7**
comp=Z,96nm,1.1s,mb5.1
PBEJ Beja 22.05 279 eP **P 05 07 54.1 +0.7**
comp=Z,96nm,1.1s,mb5.1
EVO Evora 22.09 280 eP **P 05 07 52.5 -1.3**
comp=Z,95nm,1.5s,mb5.0
EVO Evora 22.09 280 eP **P 05 07 53.1 -0.7**
comp=Z,104nm,1.3s,mb4.8
EVO eMLR MLR
comp=Z,828nm,17.2s,MS3.9
EVO Evora 22.09 280 eP **P 05 07 51.6 -2.2**
EVO Evora 22.09 280 eP **P 05 07 52.5 -1.3**
comp=Z,95nm,1.5s,mb5.0
EVOP Sao Brissos 22.18 280 eP **P 05 07 53.2 -1.5**
EVOP AMb AMB 05 08 01.7
comp=Z,61nm,1.8s,mb4.7
EVOP eS **S 05 11 56.1 -3.3**
EVOP eS **S 05 11 57.1 -2.3**
EVOP Sao Brissos 22.18 280 eP **P 05 07 53.2 -1.5**
EVOP eS **S 05 11 57.1 -2.4**
PBDV Barranco-do-Ve 22.24 277 eP **P 05 07 57.6 +2.2**
comp=Z,115nm,1.5s,mb5.1
PBDV eLQ 05 11 30.6
PBDV eLR LR 05 16 41.8
comp=Z,517nm,18.0s
PCVE Castro Verde 22.25 278 eP **P 05 07 55.4 -0.1**
comp=Z,108nm,1.4s,mb5.1
PCVE eLQ 05 11 58.0
PCVE eLR LR 05 14 36.5
comp=Z,664nm,18.0s
PCVE Castro Verde 22.25 278 eP **P 05 07 55.4 -0.1**
comp=Z,108nm,1.4s,mb5.1
PTOM Tomar 22.28 283 eP **P 05 07 55.3 -0.5**
comp=Z,142nm,1.8s,mb5.1
PTOM Tomar 22.28 283 eP **P 05 07 55.3 -0.5**
comp=Z,142nm,1.8s,mb5.1
PTO Porto 22.33 287 eP **P 05 07 56.6 +0.3**
comp=Z,90nm,1.6s,mb5.0
PTO Porto 22.33 287 eP **P 05 07 56.6 +0.3**
comp=Z,90nm,1.6s,mb5.0
MESJ Messejana 22.36 278 eP **P 05 07 55.1 -1.5**
MESJ AMb AMB 05 08 00.1
comp=Z,76nm,1.4s,mb5.0
MESJ eS **S 05 11 59.9 -3.1**
MESJ eS **S 05 11 59.9 -3.1**
MESJ Messejana 22.36 278 eP **P 05 07 55.1 -1.5**
comp=Z,76nm,1.4s,mb4.9
MESJ eS **S 05 11 59.9 -3.0**
MESJ Messejana 22.36 278 eP **P 05 07 55.1 -1.5**
MESJ eS **S 05 11 59.8 -3.1**
MESJ Messejana 22.36 278 eP **P 05 07 55.1 -1.5**
comp=Z,76nm,1.4s,mb4.9
IKOM Komasi 22.39 92 eP **P 05 07 54.8 -2.2**
IKOM Komasi 22.39 92 eP **P 05 07 54.8 -2.2**
EZAM Zamans 22.39 290 P **P 05 07 55.6 -1.4**
EZAM pmax pmax
comp=Z,87nm,1.0s,mb5.1
EZAM Zamans 22.39 290 P **P 05 07 55.6 -1.4**
comp=Z,87nm,1.0s,mb5.1
EZAM Zamans 22.39 290 P **P 05 07 55.6 -1.4**
comp=Z,87nm,1.0s,mb5.1
HFS Hagfors 22.43 351 P **P 05 07 56.1 -1.1**
comp=Z,168nm,1.1s,mb5.4,baz=153,slow=10.0,SNR=45
HFS S **S 05 12 01.7 -2.2**
comp=Z,13nm,1.1s,baz=170,slow=19,SNR=5.9
HFS Hagfors 22.43 351 P **P 05 07 56.1 -1.1**
HFS S **S 05 12 01.7 -2.3**
HFS pmax pmax
comp=Z,168nm,1.2s
HFS smax
comp=N,13nm,1.1s
HFS Hagfors 22.43 351 P **P 05 07 56.1 -1.1**
comp=N,168nm,1.2s,mb5.3
HFA0 Hagfors New Ar 22.44 351 P **P 05 07 56.0 -1.3**
HFA0 Hagfors New Ar 22.44 351 P **P 05 07 56.0 -1.3**
TZC Tazercounte 22.57 263 *i* P **P 05 08 00.5 +1.6**
KONO Kongsberg 22.60 346 eP **P 05 07 59.0 0.0**
KONO pmax pmax
comp=Z,48nm,1.2s,mb4.8
KONO Kongsberg 22.60 346 eP **P 05 07 59.0 0.0**
comp=Z,48nm,1.2s,mb4.8
KONO Kongsberg 22.60 346 eP **P 05 07 59.0 0.0**
comp=Z,48nm,1.2s,mb4.8
PUL Pulkovo 22.63 13 eP **P 05 07 58.1 -1.2**
PUL pmax pmax
comp=Z,142nm,0.4s,mb5.8
PUL Pulkovo 22.63 13 eP **P 05 07 58.1 -1.2**
comp=Z,142nm,0.4s,mb5.8
WLF1 Llynfaes 22.76 320 AMS AMS 05 18 22.9
comp=Z,5µm,15.2s,MS5.1
MORF Marmelete 22.79 277 eP **P 05 08 01.4 +0.2**
comp=Z,64nm,1.4s,mb4.9
MORF eLQ 05 12 11.8
MORF eLR LR 05 16 24.5
comp=Z,699nm,18.0s
MORF Marmelete 22.79 277 eP **P 05 07 59.7 -1.5**
MORF eS **S 05 12 09.4 -1.6**
MORF Marmelete 22.79 277 eP **P 05 08 01.4 +0.2**
comp=Z,64nm,1.4s,mb4.9
MORF eS **S 05 12 09.4 -1.6**
PTEO Sao Teotonio 22.80 278 eP **P 05 08 02.0 +0.6**
comp=Z,100nm,1.6s,mb5.0
PTEO Sao Teotonio 22.80 278 eP **P 05 08 02.0 +0.6**
comp=Z,100nm,1.6s,mb5.0
PFVI Vila Bisbo 22.96 277 eP **P 05 08 02.8 -0.2**
comp=Z,121nm,1.8s,mb5.0
PFVI eLR LR 05 16 37.7
comp=Z,620nm,18.0s
PFVI Vila Bisbo 22.96 277 eP **P 05 08 02.8 -0.2**
comp=Z,121nm,1.8s,mb5.0
PMAFR Mafra 23.02 281 eLQ 05 12 08.4
PMAFR eLR LR 05 16 20.4
comp=Z,559nm,16.0s
ECK Cauldkaine Hil 23.23 325 P **P 05 08 06.2 +0.5**
ECK Cauldkaine Hil 23.23 325 eP **P 05 08 06.2 +0.5**
ECK Cauldkaine Hil 23.23 325 eP **P 05 08 06.2 +0.5**
EKA Eskdalemuir Ar 23.34 325 P **P 05 08 07.1 +0.3**
comp=Z,28nm,0.9s,mb4.7,baz=131,slow=10.0,SNR=34
EKA Eskdalemuir Ar 23.34 325 P **P 05 08 07.1 +0.3**
EKA pmax pmax
comp=Z,28nm,0.9s
EKA Eskdalemuir Ar 23.34 325 P **P 05 08 07.1 +0.3**
comp=Z,28nm,0.9s,mb4.7
ESK Eskdalemuir 23.34 325 P **P 05 08 06.8 -0.2**
ESK AMb AMB 05 08 10.8
comp=Z,40nm,1.2s,mb4.7
ESK AMS AMS 05 17 17.0
comp=Z,699nm,15.9s
ESK Eskdalemuir 23.34 325 eP **P 05 08 06.8 -0.2**
ESK AMb AMB 05 08 10.8
comp=Z,40nm,1.2s,mb4.7
ESK AMS AMS 05 17 17.0
comp=Z,699nm,15.9s,MS4.2
ESK Eskdalemuir 23.34 325 eP **P 05 08 07.7 +0.8**
ESK pmax pmax
comp=Z,43nm,0.9s,mb4.9
ESK Eskdalemuir 23.34 325 eP **P 05 08 07.7 +0.8**
comp=Z,43nm,0.9s,mb4.9
ESK Eskdalemuir 23.34 325 eP **P 05 08 06.8 -0.1**
ESY Stoneypath 23.46 327 P **P 05 08 08.3 +0.2**
ESY Stoneypath 23.46 327 eP **P 05 08 08.3 +0.2**
ESY Stoneypath 23.46 327 eP **P 05 08 08.3 +0.2**
EBL Broad Law 23.56 326 P **P 05 08 09.7 +0.5**
EBL Broad Law 23.56 326 eP **P 05 08 09.7 +0.5**
EBL Broad Law 23.56 326 eP **P 05 08 09.6 +0.5**
NB2 NORSAR Subarra 23.64 349 P **P 05 08 08.6 -1.2**
comp=Z,13nm,0.7s,mb4.5,baz=145,slow=10
NB2 NORSAR Subarra 23.64 349 P **P 05 08 08.6 -1.2**
comp=Z,13nm,0.7s,mb4.5,baz=145,slow=9.5,SNR=4.5
NOA NORSAR Array B 23.64 349 P **P 05 08 08.7 -1.1**
comp=Z,16nm,0.6s,mb4.6,baz=163,slow=10,SNR=48
NOA LR LR 05 18 29.9
comp=Z,333nm,21.2s,MS3.8,baz=170,slow=40
NOA NORSAR Array B 23.64 349 P **P 05 08 08.7 -1.1**
NOA pmax pmax
comp=Z,16nm,0.6s
NOA MLR MLR
comp=Z,333nm,21.2s
NOA NORSAR Array B 23.64 349 P **P 05 08 08.7 -1.1**
comp=Z,333nm,21.2s
FINES FINESS Array B 23.65 7 P **P 05 08 07.7 -2.3**
comp=Z,18nm,0.7s,mb4.6,baz=184,slow=9.8,SNR=43
FINES S **S 05 12 21.1 -3.5**
comp=Z,11nm,1.0s,baz=198,slow=18,SNR=4.5
FINES LR LR 05 18 42.9
comp=Z,805nm,19.1s,MS4.2,baz=290,slow=40
FINES FINESS Array B 23.65 7 P **P 05 08 07.7 -2.3**
FINES S **S 05 12 21.1 -3.5**
FINES pmax pmax
comp=Z,18nm,0.7s
FINES smax
comp=N,11nm,1.0s
FINES MLR MLR
comp=Z,805nm,19.1s
FINES FINESS Array B 23.65 7 P **P 05 08 07.7 -2.3**
comp=Z,18nm,0.7s,mb4.6
EDI Edinburgh 23.71 326 P **P 05 08 10.8 +0.3**
EDI AMb AMB 05 08 15.1
comp=Z,34nm,1.0s,mb4.7
EDI AMS AMS 05 18 17.5
comp=Z,670nm,13.4s
EDI Edinburgh 23.71 326 eP **P 05 08 10.8 +0.3**
EDI AMb AMB 05 08 15.1
comp=Z,34nm,1.0s,mb4.7
EDI AMS AMS 05 18 17.5
comp=Z,670nm,13.4s,MS4.3
EDI Edinburgh 23.71 326 eP **P 05 08 10.8 +0.2**
GAL1 Galloway 23.78 323 AMS AMS 05 18 32.7
comp=Z,793nm,17.7s,MS4.2
EAU Auchinoon 23.78 326 P **P 05 08 11.4 +0.3**
EAU Auchinoon 23.78 326 eP **P 05 08 11.4 +0.3**
EAU Auchinoon 23.78 326 eP **P 05 08 11.4 +0.2**
IRAZ Razeghan 23.94 87 eP **P 05 08 11.3 -1.6**
IRAZ Razeghan 23.94 87 eP **P 05 08 11.3 -1.6**
OUK Oukaimeden 24.02 262 *i* P **P 05 08 15.0 +1.4**
EBH Black Hill 24.06 327 P **P 05 08 13.7 0.0**
EBH Black Hill 24.06 327 eP **P 05 08 13.7 0.0**
EBH Black Hill 24.06 327 eP **P 05 08 13.7 0.0**
KAF Kangasniemi 24.33 7 eP **P 05 08 15.1 -1.1**
KAF pmax pmax
comp=Z,20nm,0.7s,mb4.7
KAF Kangasniemi 24.33 7 eP **P 05 08 15.1 -1.1**
comp=Z,20nm,0.7s,mb4.7
KAF Kangasniemi 24.33 7 ep **P 05 08 15.1 -1.1**
comp=Z,20nm,0.7s,mb4.7
KAF Kangasniemi 24.33 7 eP **P 05 08 15.1 -1.1**
comp=Z,20nm,0.7s,mb4.7
EAB Aberfoyle 24.39 326 P **P 05 08 16.7 0.0**
EAB Aberfoyle 24.39 326 eP **P 05 08 16.7 0.0**
EAB Aberfoyle 24.39 326 eP **P 05 08 16.7 0.0**
CIA Chichaoua 24.57 263 *i* P **P 05 08 20.0 +1.4**
IR3 Iran Long-Peri 24.79 87 eP **P 05 08 21.1 +0.5**
IR3 Iran Long-Peri 24.79 87 eP **P 05 08 21.1 +0.5**
KAR1 Arisaig 25.49 326 P **P 05 08 27.6 +0.9**
KAR1 Arisaig 25.49 326 eP **P 05 08 27.6 +0.9**
KAR1 Arisaig 25.49 326 eP **P 05 08 27.6 +0.9**
IPIR Pirpir 25.55 93 eP **P 05 08 27.1 -0.4**
IPIR Pirpir 25.55 93 eP **P 05 08 27.1 -0.4**
IDMV Damavand 25.55 86 eP **P 05 08 27.7 +0.2**
IDMV Damavand 25.55 86 eP **P 05 08 27.7 +0.2**
KPL Plockton 25.66 327 P **P 05 08 28.1 -0.2**
KPL AMb AMB 05 08 37.1
comp=Z,28nm,1.4s,mb4.6
KPL AMS AMS 05 18 49.0
comp=Z,655nm,21.6s
KPL Plockton 25.66 327 eP **P 05 08 28.1 -0.2**
KPL AMb AMB 05 08 37.1
comp=Z,28nm,1.4s,mb4.6
KPL AMS AMS 05 18 49.0
comp=Z,655nm,21.6s,MS4.1
KPL Plockton 25.66 327 eP **P 05 08 28.1 -0.2**
JOF Joensuu 25.76 12 eP **P 05 08 29.3 +0.2**
JOF pmax pmax
comp=Z,4.0nm,0.4s,mb4.3
JOF Joensuu 25.76 12 ep **P 05 08 29.3 +0.2**
comp=Z,4.1nm,0.4s,mb4.3
JOF Joensuu 25.76 12 eP **P 05 08 29.3 +0.2**
comp=Z,4.0nm,0.4s,mb4.3
IKLH Kolahrood 25.87 91 eP **P 05 08 31.4 +1.0**
IKLH Kolahrood 25.87 91 eP **P 05 08 31.4 +1.0**
LRW Lerwick 25.88 335 P **P 05 08 29.8 -0.4**
LRW AMb AMB 05 08 34.4
comp=Z,31nm,1.1s,mb4.8
LRW AMS AMS 05 20 40.8
comp=Z,856nm,17.9s
LRW Lerwick 25.88 335 eP **P 05 08 29.8 -0.4**
LRW Lerwick 25.88 335 eP **P 05 08 29.8 -0.4**
LRW AMb AMB 05 08 34.4
comp=Z,31nm,1.1s,mb4.8
LRW AMS AMS 05 20 40.8
comp=Z,856nm,17.9s,MS4.3
LRW Lerwick 25.88 335 eP **P 05 08 29.8 -0.4**
ISHM Shahmirzad 26.48 85 eP **P 05 08 35.5 -0.5**
ISHM Shahmirzad 26.48 85 eP **P 05 08 35.5 -0.5**
IGAR Gharneh 26.55 93 eP **P 05 08 36.1 -0.5**
IZEF Zefreh 26.61 91 eP **P 05 08 36.6 -0.5**
IZEF Zefreh 26.61 91 eP **P 05 08 36.6 -0.5**
IPAR Pars 28.36 97 eP **P 05 08 53.8 +0.9**
IPAR Pars 28.36 97 eP **P 05 08 53.8 +0.9**
IMEH Mehriz 28.96 93 eP **P 05 08 57.4 -0.8**
IMEH Mehriz 28.96 93 eP **P 05 08 57.4 -0.8**
AKTK Aktyubinsk 29.44 53 P **P 05 08 58.8 -3.4**
AKTK LR LR 05 22 07.2
AKTO Aktyubinsk 29.44 53 P **P 05 08 58.8 -3.4**
comp=Z,1.4nm,0.4s,mb4.0,baz=252,slow=12,SNR=3.0
AKTO LR LR 05 22 07.2
comp=Z,745nm,20.2s,MS4.3,baz=76,slow=39
AKTO Aktyubinsk 29.44 53 P **P 05 08 58.8 -3.4**
AKTO pmax pmax
comp=Z,1.0nm,0.4s,mb3.9
AKTO MLR MLR
comp=Z,745nm,20.2s,MS4.3
TORD Torodi Ar. Bea 29.80 218 P **P 05 09 05.6 -0.1**
comp=Z,22nm,1.1s,mb4.8,baz=36,slow=8.4,SNR=24
APA Apatity 30.44 10 eP **P 05 09 13.0 +2.1**
APA eS **S 05 14 13.0 +1.1**
APA pmax pmax
comp=Z,14nm,1.2s,mb4.6
APA MLR MLR
comp=Z,1µm,15.0s,MS4.7
APA Apatity 30.44 10 eP **P 05 09 13.0 +2.1**
comp=Z,1µm,15.0s
AB31 Akbulak array 30.51 56 eP **P 05 09 13.5 +1.8**
AB31 pmax pmax
comp=Z,1.0nm,0.2s,mb4.3
AB31 Akbulak array 30.51 56 eP **P 05 09 13.5 +1.8**
comp=Z,1.0nm,0.2s,mb4.3
ABKAR Akbulak array 30.51 56 eP **P 05 09 11.9 +0.2**
comp=Z,3.0nm,0.5s,mb4.4
ABKAR Akbulak array 30.51 56 eP **P 05 09 11.9 +0.2**
comp=Z,3.0nm,0.5s,mb4.4
ARU Arti 31.30 42 *d i* P **P 05 09 16.7 -1.8**
ARU PPP 05 10 26.4
ARU S **S 05 14 23.8 -1.8**
ARU SS SS 05 16 03.7 -35
ARU pmax pmax
comp=Z,17nm,1.7s,mb4.6
ARU MLR MLR
comp=Z,600nm,18.0s,MS4.3
ARU Arti 31.30 42 eP **P 05 09 18.1 -0.4**
comp=Z,8.1nm,0.4s,mb4.9
ARU Arti 31.30 42 eP **P 05 09 18.1 -0.4**
comp=Z,8.1nm,0.4s,mb4.9
ARCES ARCESS Array B 31.62 4 P **P 05 09 19.9 -1.4**
comp=Z,1.4nm,0.4s,mb4.2,baz=190,slow=10,SNR=31
ARCES LR LR 05 22 37.5
comp=Z,624nm,21.6s,MS4.2,baz=6.8,slow=37
ARCES ARCESS Array B 31.62 4 P **P 05 09 19.9 -1.4**
ARCES pmax pmax
comp=Z,1.0nm,0.4s
ARCES MLR MLR
comp=Z,624nm,21.6s
ARCES ARCESS Array B 31.62 4 P **P 05 09 19.9 -1.4**
comp=Z,624nm,21.6s
ARE0 ARCESS Array S 31.62 4 eP **P 05 09 22.5 +1.2**
ARE0 ARCESS Array S 31.62 4 eP **P 05 09 22.5 +1.2**
SOKR Solikamsk 31.65 35 *d i* P **P 05 09 23.6 +2.0**
SOKR pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
SOKR MLR MLR
comp=Z,1µm,21.0s,MS4.5
SOKR Solikamsk 31.65 35 *i* P **P 05 09 23.6 +2.0**
comp=Z,1µm,21.0s
KEV Kevo 31.93 4 eP **P 05 09 23.0 -0.9**
KEV pmax pmax
comp=Z,3.0nm,0.5s,mb4.4
KEV Kevo 31.93 4 eP **P 05 09 23.0 -0.9**
comp=Z,2.5nm,0.5s,mb4.3
KEV Kevo 31.93 4 ep **P 05 09 23.0 -0.9**
comp=Z,2.5nm,0.5s,mb4.3
KEV Kevo 31.93 4 eP **P 05 09 23.0 -0.9**
comp=Z,2.5nm,0.5s,mb4.3
SVE Sverdlovsk 32.51 42 eP **P 05 09 28.5 -0.7**
SVE eS **S 05 14 44.8 +0.3**
SVE pmax pmax
comp=Z,24nm,0.8s,mb5.2
SVE MLR MLR
comp=Z,601nm,11.0s,MS4.5
SVE Sverdlovsk 32.51 42 eP **P 05 09 28.5 -0.7**
comp=Z,24nm,0.8s,mb5.2
BRVK Borovoye 37.31 50 eP **P 05 10 10.9 +0.2**
BRVK pmax pmax
comp=Z,13nm,1.7s,mb4.5
BRVK Borovoye 37.31 50 eP **P 05 10 11.2 +0.5**
comp=Z,13nm,0.9s,mb4.8
BRVK Borovoye 37.31 50 eP **P 05 10 10.9 +0.2**
comp=Z,13nm,1.7s,mb4.5
BVAR Borovoye Array 37.37 50 P **P 05 10 09.8 -1.4**
comp=Z,3.7nm,0.6s,mb4.4,baz=254,slow=8.0,SNR=7.1
BVAR Borovoye Array 37.37 50 P **P 05 10 09.8 -1.4**
BVAR pmax pmax
comp=Z,4.0nm,0.6s
BVAR Borovoye Array 37.37 50 P **P 05 10 09.8 -1.4**
comp=Z,4.0nm,0.6s,mb4.4
KK31 Karatay Array 38.07 66 P **P 05 10 16.2 -1.1**
KK31 pmax pmax
comp=Z,9.0nm,0.5s,mb4.8
KK31 Karatay Array 38.07 66 P **P 05 10 16.2 -1.1**
comp=Z,9.0nm,0.5s,mb4.8
DBIC Dimbokro 38.65 222 P **P 05 10 21.8 -0.7**
comp=Z,19nm,0.9s,mb4.8,baz=13,slow=11,SNR=9.3
DBIC LR LR 05 27 04.6
comp=Z,346nm,19.6s,MS4.2,baz=12,slow=37
DBIC Dimbokro 38.65 222 P **P 05 10 21.8 -0.6**
DBIC pmax pmax
comp=Z,19nm,0.9s
DBIC MLR MLR
comp=Z,346nm,19.6s
DBIC Dimbokro 38.65 222 P **P 05 10 21.8 -0.6**
comp=Z,346nm,19.6s
TIC Toumodi 38.76 222 eP **P 05 10 23.4 +0.1**
comp=Z,65nm,1.3s,mb5.2
TIC Toumodi 38.76 222 eP **P 05 10 23.4 +0.1**
TIC pmax pmax
comp=Z,65nm,1.3s,mb5.2
TIC Toumodi 38.76 222 eP **P 05 10 23.4 +0.1**
comp=Z,65nm,1.3s,mb5.2
KIC Kosan Boka 38.85 222 eP **P 05 10 24.3 +0.2**
comp=Z,44nm,0.9s,mb5.2
KIC Kosan Boka 38.85 222 eP **P 05 10 24.3 +0.2**
comp=Z,44nm,0.9s,mb5.2
LIC Lamto 39.12 222 eP **P 05 10 25.9 -0.4**
comp=Z,105nm,1.2s,mb5.1
LIC eMLR MLR
comp=Z,560nm,19.8s,MS4.1
LIC Lamto 39.12 222 eP **P 05 10 25.9 -0.4**
comp=Z,52nm,1.2s,mb5.1
LIC LR LR
comp=Z,280nm,19.8s,MS4.1
LIC Lamto 39.12 222 eP **P 05 10 25.9 -0.4**
comp=Z,52nm,1.2s,mb5.1
SCO Scoresbysund 39.16 339 *i* P **P 05 10 28.8 +2.8**
SCO pmax pmax
comp=Z,19nm,0.9s,mb4.8
SCO Scoresbysund 39.16 339 *i* P **P 05 10 28.8 +2.8**
comp=Z,19nm,0.9s,mb4.8
SCO Scoresbysund 39.16 339 *i* P **P 05 10 28.8 +2.8**
comp=Z,19nm,0.9s,mb4.8
MSKU Masuku 40.02 190 LR LR 05 30 15.5
comp=Z,361nm,18.3s,MS4.2,baz=4.0,slow=41
EKS2 Erkin-Say 40.51 66 eP **P 05 10 37.5 -0.2**
comp=Z,15nm,1.0s,mb4.6
EKS2 Erkin-Say 40.51 66 eP **P 05 10 37.5 -0.2**
comp=Z,15nm,1.0s,mb4.6
AML Almayashu 40.57 67 eP **P 05 10 38.5 +0.3**
comp=Z,5.5nm,0.8s,mb4.2
AML Almayashu 40.57 67 eP **P 05 10 38.5 +0.4**
comp=Z,5.5nm,0.8s,mb4.2
AAK Ala-Archa 41.04 66 eP **P 05 10 44.1 +2.1**
AAK pmax pmax
comp=Z,8.0nm,0.8s,mb4.4
AAK Ala-Archa 41.04 66 eP **P 05 10 44.1 +2.1**

comp=Z,8.2nm,0.8s,mb4.4
AAK Ala-Archa 41.04 66 *e*P **P 05 10 44.1 +2.1**
comp=Z,8.2nm,0.8s,mb4.4
FRU Bishkek 41.08 66 *e*P **P 05 10 46.0 +3.6**
FRU pmax pmax
comp=Z,60nm,1.4s,mb5.0
TKM2 Tokmak 2 41.77 65 *e*P **P 05 10 49.6 +1.6**
TKM2 pmax pmax
comp=Z,2.0nm,0.5s,mb4.0
TKM2 Tokmak 2 41.77 65 *e*P **P 05 10 49.6 +1.7**
comp=Z,2.1nm,0.5s,mb4.0
TKM2 Tokmak 2 41.77 65 *e*P **P 05 10 49.6 +1.6**
comp=Z,2.1nm,0.5s,mb4.0
KMBO Kilima Mbogo 42.10 154 P **P 05 10 51.0 +0.1**
comp=Z,3.3nm,0.6s,mb4.2,baz=0.0,slow=20,SNR=8.1
KMBO LR LR 05 28 06.1
comp=Z,423nm,21.2s,MS4.3,baz=271,slow=36
KMBO Kilima Mbogo 42.10 154 P **P 05 10 51.0 +0.1**
KMBO pmax pmax
comp=Z,3.0nm,0.6s
KMBO MLR MLR
comp=Z,423nm,21.2s
KMBO Kilima Mbogo 42.10 154 *e*P **P 05 10 52.6 +1.7**
comp=Z,16nm,1.3s,mb4.5
KMBO Kilima Mbogo 42.10 154 P **P 05 10 51.0 +0.1**
comp=Z,423nm,21.2s
KURK Kurchatov 42.54 53 *e*P **P 05 10 52.2 -2.0**
KURK pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
KURK Kurchatov 42.54 53 *e*P **P 05 10 52.2 -2.0**
comp=Z,6.7nm,0.8s,mb4.4
KURK Kurchatov 42.54 53 *e*P **P 05 10 52.2 -2.0**
comp=Z,6.7nm,0.8s,mb4.4
KSH Kashi 42.90 70 *e*P **P 05 11 00.3 +3.0**
KSH pP pP 05 11 04.3 +5.5
KSH sP sP 05 11 07.0 +7.6
KSH PP PP 05 12 42.5 +5.9
KSH PcP PcP 05 12 50.8 +2.8
KSH ScP ScP 05 16 40.8 +1.1
KSH PcS PcS 05 16 42.0 +1.7
KSH S **S 05 17 24.0 +1.5**
KSH sS sS 05 17 32.5 +7.5
KSH SS SS 05 20 30.5 -3.1
KSH ScS ScS 05 20 57.5 -1.4
KSH pmax pmax
comp=Z,10.0nm,1.4s,mb4.3
KSH pmax pmax
comp=Z,67nm,4.5s
KSH LR LR
comp=N,500nm,13.5s
KSH LR LR
comp=E,190nm,7.5s
KSH LR LR
comp=Z,180nm,5.4s
SUMG Summit 44.79 339 *e*P **P 05 11 14.0 +2.0**
comp=Z,9.1nm,0.9s,mb4.6
SUMG Summit 44.79 339 *i*P **P 05 11 12.9 +0.9**
comp=Z,8.0nm,1.0s,mb4.5
SUMG Summit 44.79 339 *e*P **P 05 11 14.0 +2.0**
comp=Z,9.1nm,0.9s,mb4.6
NVS Novosibirsk 44.92 47 *e*P **P 05 11 12.1 -1.2**
NVS *e* 05 13 01.5
NVS pmax pmax
comp=Z,48nm,1.5s,mb5.1
NVS Novosibirsk 44.92 47 *e*P **P 05 11 12.1 -1.2**
comp=Z,48nm,1.5s,mb5.1
MK31 Makanchi Array 45.57 58 *e*P **P 05 11 16.4 -2.2**
MK31 Makanchi Array 45.57 58 *e*P **P 05 11 16.4 -2.2**
MKAR Makanchi Array 45.57 58 P **P 05 11 16.3 -2.3**
comp=Z,5.1nm,0.4s,mb4.8,baz=278,slow=7.2,SNR=41
MKAR LR LR 05 32 24.9
comp=Z,460nm,19.4s,MS4.4,baz=285,slow=39
MKAR Makanchi Array 45.57 58 P **P 05 11 16.3 -2.3**
MKAR pmax pmax
comp=Z,5.0nm,0.4s
MKAR MLR MLR
comp=Z,460nm,19.4s
ZAA0 Zalesovo Array 45.94 48 *e*P **P 05 11 19.1 -2.2**
ZALV Zalesovo Beam 45.94 48 P **P 05 11 19.3 -2.1**
comp=Z,9.3nm,0.5s,mb5.0,baz=274,slow=8.8,SNR=33
ZALV LR LR 05 31 22.0
comp=Z,412nm,20.4s,MS4.4,baz=102,slow=37
ZALV Zalesovo Beam 45.94 48 P **P 05 11 19.3 -2.1**
ZALV pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
ZALV MLR MLR
comp=Z,412nm,20.4s,MS4.4
ZALV Zalesovo Beam 45.94 48 P **P 05 11 19.3 -2.1**
comp=Z,412nm,20.4s
WMQ Urumqi 50.03 61 *e*P **P 05 11 54.8 +1.6**
WMQ pP pP 05 11 59.3 +4.5
WMQ sP sP 05 12 01.8 +6.4
WMQ PP PP 05 13 50.8 +2.8
WMQ *e*S **S 05 19 04.0 -0.5**
WMQ ScS ScS 05 21 42.8 -2.4
WMQ SS SS 05 22 33.5 -3.6
WMQ pmax pmax
comp=Z,15nm,0.8s,mb5.1
WMQ pmax pmax
comp=Z,140nm,4.8s
WMQ LR LR
comp=N,530nm,21.2s,MS4.6
WMQ LR LR
comp=E,390nm,19.0s,MS4.6
WMQ LR LR
comp=Z,330nm,20.0s,MS4.3
LSZ Lusaka 53.62 170 *e*P **P 05 12 20.4 +0.2**
LSZ pmax pmax
comp=Z,17nm,1.1s,mb4.9
LSZ Lusaka 53.62 170 *e*P **P 05 12 20.4 +0.3**
comp=Z,17nm,1.1s,mb4.9
TLY Talaya 57.54 47 *e*P **P 05 12 48.5 +0.5**
TLY *e*S **S 05 20 59.8 +14**
TLY pmax pmax
comp=Z,12nm,1.2s,mb4.8
TLY MLR MLR
comp=Z,300nm,15.0s,MS4.5
ZAK Zakamensk 57.81 49 *e*P **P 05 12 45.2 -4.8**
ZAK pmax pmax
comp=Z,3.0nm,1.2s,mb4.2
SCHQ Schefferville 58.33 317 P **P 05 12 53.7 +0.2**
comp=Z,2.6nm,0.5s,mb4.5,baz=72,slow=5.7,SNR=7.5
SCHQ LR LR 05 37 54.1
comp=Z,322nm,18.2s,MS4.5,baz=67,slow=36
GTA Gaotai 60.10 62 *e*P **P 05 13 04.3 -1.7**
GTA pP pP 05 13 08.0 +0.4
GTA sP sP 05 13 10.5 +2.3
GTA S **S 05 21 15.5 -4.1**
GTA sS sS 05 21 24.0 +1.8
GTA SS SS 05 25 13.8 -2.2
GTA pmax pmax
comp=Z,3.0nm,1.4s,mb4.1
GTA pmax pmax
comp=Z,80nm,4.8s
GTA LR LR
comp=N,360nm,19.5s,MS4.7
GTA LR LR
comp=E,460nm,18.6s,MS4.7
GTA LR LR
comp=Z,260nm,18.6s,MS4.4
SONM Songino Array 60.72 50 P **P 05 13 08.8 -1.3**
comp=Z,2.1nm,0.6s,mb4.5,baz=285,slow=8.2,SNR=11
SONM LR LR 05 40 34.2
comp=Z,464nm,19.8s,MS4.6,baz=310,slow=37
SONM Songino Array 60.72 50 P **P 05 13 08.8 -1.3**
SONM pmax pmax
comp=Z,2.0nm,0.6s
SONM MLR MLR
comp=Z,464nm,19.8s
SHL Shillong 60.83 79 *e*PKP **P 05 13 17.0 +5.8**
ULN Ulaanbaatar 61.10 50 *e*P **P 05 13 11.8 -0.9**
ULN pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
ULN Ulaanbaatar 61.10 50 *e*P **P 05 13 11.8 -1.0**
comp=Z,4.8nm,0.8s,mb4.7
LZH Lanzhou 64.48 63 *e*P **P 05 13 33.0 -2.4**
LZH pP pP 05 13 37.5 +0.5
LZH sP sP 05 13 39.0 +1.4
LZH PP PP 05 15 56.0 -0.9
LZH *e*S **S 05 22 10.0 -4.9**
LZH pmax pmax
comp=Z,13nm,1.0s,mb4.9
LZH pmax pmax
comp=Z,70nm,4.2s
LZH LR LR
comp=N,630nm,15.0s
LZH LR LR
comp=Z,840nm,16.2s,MS5.0
YAK Yakutsk 65.31 29 *e*P **P 05 13 41.7 +1.3**
YAK pmax pmax
comp=Z,18nm,0.8s,mb5.2
YAK MLR MLR
comp=N,829nm,20.0s,MS5.0
YAK MLR MLR
comp=Z,604nm,19.0s,MS4.8
YAK MLR MLR
comp=E,354nm,17.0s,MS5.0
YAK Yakutsk 65.31 29 *e*P **P 05 13 40.8 +0.4**
CLNS Chul'man 66.22 36 *e*P **P 05 13 45.6 -0.8**
CLNS pmax pmax
comp=Z,12nm,1.1s,mb4.8
CLNS pmax pmax
comp=N,6.0nm,0.7s
BOSA Boshof 66.54 175 P **P 05 13 49.0 +0.4**
comp=N,2.4nm,0.6s,mb4.4,baz=354,slow=15,SNR=7.3
BOSA LR LR 05 45 55.1
comp=N,956nm,19.1s,MS5.0,baz=1.7,slow=39
BOSA Boshof 66.54 175 P **P 05 13 49.0 +0.4**
BOSA pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
BOSA MLR MLR
comp=Z,956nm,19.1s,MS5.0
BOSA Boshof 66.54 175 P **P 05 13 49.0 +0.4**
BOSA LR LR 05 45 55.1
CD2 Chengdu 67.05 68 P **P 05 13 53.5 +1.4**
CD2 pP pP 05 13 58.3 +4.6
CD2 sP sP 05 14 00.5 +6.2
CD2 PP PP 05 16 22.8 +3.3
CD2 S S 05 22 45.0 -1.5
CD2 sS sS 05 22 52.3 +3.2
CD2 SS SS 05 27 04.5 -0.3
CD2 pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
CD2 pmax pmax
comp=Z,190nm,8.3s
CD2 LR LR
comp=N,470nm,10.7s
CD2 LR LR
comp=Z,330nm,9.5s
HHC Hu-ho-hao-te 67.30 55 *e*P **P 05 13 52.5 -1.0**
HHC sP sP 05 13 57.8 +2.1
HHC PcP PcP 05 14 21.0 -0.3
HHC PP PP 05 16 22.0 +0.6
HHC ScP 05 18 21.5
HHC PcS 05 18 24.0
HHC S S 05 22 44.8 -4.4
HHC ScS ScS 05 23 46.3 -5.9
HHC SS SS 05 27 05.0 -3.2
HHC pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
HHC pmax pmax
comp=Z,70nm,6.8s
HHC LR LR
comp=N,530nm,18.5s,MS4.9
HHC LR LR
comp=E,520nm,18.0s,MS4.9
HHC LR LR
comp=Z,550nm,18.3s,MS4.8
XAN Xi'an 69.10 63 P **P 05 14 03.3 -1.6**
XAN pP pP 05 14 08.5 +1.9
XAN pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
KMI Kunming 69.39 74 P **P 05 14 08.3 +1.4**
KMI pP pP 05 14 11.3 +2.8
KMI S S 05 23 12.8 -1.8
KMI SS SS 05 27 41.0 -0.2
KMI pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
KMI LR LR
comp=N,200nm,20.2s,MS4.6
KMI LR LR
comp=E,240nm,19.1s,MS4.6
KMI LR LR
comp=Z,210nm,20.2s,MS4.4
CMAR Chiang Mai Arr 70.17 82 P **P 05 14 09.9 -1.8**
comp=Z,3.9nm,0.7s,mb4.4,baz=302,slow=7.8,SNR=12
CMAR LR LR 05 50 24.2
comp=Z,162nm,19.5s,MS4.3,baz=169,slow=41
CMAR Chiang Mai Arr 70.17 82 P **P 05 14 10.0 -1.7**
CMAR pmax pmax
comp=Z,4.0nm,0.7s
CMAR MLR MLR
comp=Z,162nm,19.5s
BJI Beijing 70.70 54 P **P 05 14 13.5 -1.2**
BJI S S 05 23 26.3 -3.2
BJI SS SS 05 28 03.0 +2.4
BJI pmax pmax
comp=Z,5.0nm,1.5s,mb4.2
BJI pmax pmax
comp=Z,110nm,3.9s
BJI LR LR
comp=N,390nm,25.1s,MS4.7
BJI LR LR
comp=E,440nm,24.5s,MS4.7
BJI LR LR
comp=Z,310nm,20.8s,MS4.5
BILL Bilibino 71.15 13⇑ *i*P **P 05 14 17.2 +0.3**
BILL *e*S S 05 23 29.6 -4.2
BILL pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
GYA Guiyang 71.60 71 P **P 05 14 21.0 +0.6**
GYA PcP PcP 05 14 41.8 +2.1
GYA PP PP 05 17 01.3 +2.4
GYA S S 05 23 38.0 -2.3
GYA SS SS 05 28 15.5 +0.4
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
GYA pmax pmax
comp=Z,90nm,4.8s
GYA LR LR
comp=N,460nm,18.8s,MS4.9
GYA LR LR
comp=E,410nm,19.2s,MS4.9
GYA LR LR
comp=Z,450nm,18.9s,MS4.8
ERPA Erie 72.12 310 *e*P **P 05 14 24.4 +1.2**
comp=Z,23nm,0.8s,mb5.2
SEY Seymchan 72.30 21 *e*P **P 05 14 24.2 +0.3**
YKA Yellowknife Ar 73.37 340 P **P 05 14 29.3 -1.0**
comp=Z,1.4nm,0.6s,mb4.0,baz=36,slow=6.0,SNR=6.5
YKA Yellowknife Ar 73.37 340 P **P 05 14 29.3 -1.0**
YKA pmax pmax
comp=Z,1.0nm,0.6s
MCWV Mont Chateau 73.47 308 *e*P **P 05 14 29.8 -1.5**
comp=Z,12nm,0.7s,mb4.9
KLR Kul'dur 74.10 39 *e*P **P 05 14 30.1 -4.7**
CN2 Changchun 74.13 47 *e*P **P 05 14 32.3 -2.8**
CN2 *e*pP pP 05 14 40.0 +3.3
CN2 *e*sP sP 05 14 42.3 +5.0
CN2 PcP PcP 05 14 51.3 +1.1
CN2 *e*S S 05 24 05.0 -3.7
CN2 pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
CN2 pmax pmax
comp=Z,300nm,5.0s
CN2 LR LR
comp=N,700nm,16.0s,MS5.2
CN2 LR LR
comp=E,800nm,16.0s,MS5.2
CN2 LR LR
comp=Z,300nm,18.0s,MS4.6
COLD Coldfoot 74.74 356 *e*P **P 05 14 39.1 +0.9**
comp=Z,4.8nm,1.0s,mb4.4
COWI Conover 74.94 317 *e*P **P 05 14 40.6 +0.8**
FFC Flin Flon 75.11 329 *i*P **P 05 14 45.7 +5.1**
MDJ Mudanjiang 75.95 44 P **P 05 14 44.3 -1.3**
MDJ pP pP 05 14 47.5 +0.3
MDJ sP sP 05 14 48.8 +1.0
MDJ PcP PcP 05 14 52.0 -6.0
MDJ PP PP 05 17 29.0 -6.3
MDJ S S 05 24 25.0 -3.8
MDJ ScS ScS 05 24 59.0 -1.6
MDJ SS SS 05 29 20.8 +0.5
MDJ pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
MDJ pmax pmax
comp=Z,45nm,4.5s
MDJ LR LR
comp=N,660nm,20.1s,MS5.2
MDJ LR LR
comp=E,1μm,18.3s,MS5.2
MDJ LR LR
comp=Z,580nm,16.5s,MS5.0
HABR Khabarovsk 76.24 38 P **P 05 14 47.7 +0.5**
HABR *e* 05 14 56.8
HABR *e*S S 05 24 29.4 -2.5
HABR *e* 05 24 59.4
HABR *e*SS SS 05 29 23.7 -0.8
HABR *e*SSS 05 32 46.3
HABR pmax pmax
comp=N,29nm,1.4s
HABR pmax pmax
comp=Z,58nm,1.4s,mb5.3
HABR pmax pmax
comp=E,18nm,0.8s
HABR MLR MLR
comp=Z,332nm,18.0s,MS4.7
DAWY Dawson 76.89 351 *e*P **P 05 14 51.2 +0.7**
ILAR Eielson Array 76.96 354 P **P 05 14 50.6 -0.3**
comp=Z,1.2nm,0.8s,mb3.9,baz=1.6,slow=5.3,SNR=16
ILAR Eielson Array 76.96 354 P **P 05 14 50.6 -0.3**
ILAR pmax pmax
comp=Z,1.0nm,0.8s
NJ2 Nanjing 77.09 59 *e*P **P 05 14 53.8 +1.5**
NJ2 pmax pmax
comp=Z,20nm,0.8s,mb5.1
QIZ Qiongzhong 78.26 75 *e*P **P 05 14 58.0 -1.0**
QIZ S S 05 24 51.8 -2.9
QIZ LR LR
comp=Z,210nm,16.6s,MS4.5
SSE Sheshan 79.25 59 P **P 05 15 02.0 -2.3**
SSE pmax pmax
comp=Z,26nm,0.8s,mb5.2
SSE pmax pmax
comp=Z,170nm,5.6s
SSE LR LR
comp=N,210nm,24.1s,MS4.6
SSE LR LR
comp=E,250nm,24.1s,MS4.6
SSE LR LR
comp=Z,130nm,22.6s,MS4.2
KSRS Korea Array 79.59 50 P **P 05 15 04.2 -1.7**
comp=Z,2.8nm,0.6s,mb4.4,baz=311,slow=5.1,SNR=12
KSRS LR LR 05 51 24.0
comp=Z,280nm,20.9s,MS4.6,baz=330,slow=37
KSRS Korea Array 79.59 50 P **P 05 15 04.3 -1.7**
KSRS pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
KSRS MLR MLR
comp=Z,280nm,20.9s,MS4.6
SIUC Southern Illin 80.41 311 *e*P **P 05 15 10.5 0.0**
comp=Z,8.7nm,0.6s,mb4.9
ECSD EROS Data Cent 80.47 319 *e*P **P 05 15 10.7 0.0**
comp=Z,5.2nm,0.8s,mb4.5
WVT Waverly 80.60 309 *e*P **P 05 15 12.4 +0.9**
WVT pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
WVT Waverly 80.60 309 *e*P **P 05 15 12.4 +0.9**
comp=Z,4.4nm,1.0s,mb4.3
YSS Yuzh-Sakhalins 80.99 36⇑ *e*P **P 05 15 13.2 -0.1**
YSS pmax pmax
comp=Z,40nm,1.0s,mb5.3
YSS MLR MLR
comp=Z,500nm,18.0s,MS4.9
YSS Yuzh-Sakhalins 80.99 36 *e*P **P 05 15 13.5 +0.2**
comp=Z,21nm,0.6s,mb5.2
CCM Cathedral Cave 81.39 312 *e*P **P 05 15 15.8 +0.1**
CCM pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
CCM Cathedral Cave 81.39 312 *e*P **P 05 15 15.8 +0.2**
comp=Z,4.6nm,0.8s,mb4.5
PETK Petropavlovsk- 81.98 24 LR LR 05 55 04.8
comp=Z,258nm,21.2s,MS4.6,baz=135,slow=38
EGMT Eagleton 83.37 329 *e*P **P 05 15 27.5 +1.7**
comp=Z,20nm,1.1s,mb5.1
KSU1 Kansas State U 83.72 316 *e*P **P 05 15 28.8 +0.9**
comp=Z,10nm,0.8s,mb5.0
RSSD Black Hills 83.87 323 *e*P **P 05 15 29.6 +1.1**
RSSD pmax pmax
comp=Z,3.0nm,0.9s,mb4.4
RSSD Black Hills 83.87 323 *e*P **P 05 15 29.6 +1.1**
comp=Z,3.3nm,0.9s,mb4.5
WALA Waterton Lakes 84.16 332 *e*P **P 05 15 30.4 +0.6**
comp=Z,0.1nm,0.8s
GCMT Greycliff 85.10 327 *e*P **P 05 15 36.5 +1.8**
comp=Z,3.0nm,0.9s,mb4.4
MIAR Mount Ida 85.15 311 *e*P **P 05 15 36.0 +0.9**
MIAR pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
MIAR Mount Ida 85.15 311 *e*P **P 05 15 36.0 +0.9**
comp=Z,7.4nm,0.9s,mb4.8
HRY Holter Researc 85.27 329 *e*P **P 05 15 37.4 +2.0**
comp=Z,6.1nm,1.0s,mb4.7
JTMT Jette 85.38 331 *e*P **P 05 15 36.7 +0.7**
comp=Z,7.0nm,0.8s,mb4.8
RLMT Red Lodge 85.46 327 *e*P **P 05 15 37.7 +1.2**
comp=Z,8.3nm,1.3s,mb4.7
SWMT Swartz Lake 85.47 331 *e*P **P 05 15 38.3 +1.8**
comp=Z,11nm,1.3s,mb4.8
BSMT Bassoo Peak 85.49 331 *e*P **P 05 15 37.7 +1.1**
comp=Z,3.9nm,1.0s,mb4.5
SLMT Seeley Lake 85.49 330 *e*P **P 05 15 37.4 +0.8**
comp=Z,3.0nm,0.8s,mb4.5
CHMT Chamberlain Mo 85.67 330 *e*P **P 05 15 38.4 +1.0**
comp=Z,1.5nm,0.9s,mb4.2
NEW Newport 86.00 333 *e*P **P 05 15 40.3 +1.2**
NEW pmax pmax
comp=Z,21nm,1.6s
NEW Newport 86.00 333 *e*P **P 05 15 40.3 +1.2**
comp=Z,21nm,1.6s,mb5.1
MJAR Matsushiro Arr 86.23 45 P **P 05 15 39.0 -1.5**
comp=Z,1.6nm,0.6s,mb4.4,baz=299,slow=3.8,SNR=3.4
MJAR Matsushiro Arr 86.23 45 P **P 05 15 39.0 -1.5**
MJAR pmax pmax
comp=Z,2.0nm,0.6s
DLMT Dillon 86.67 329 *e*P **P 05 15 43.2 +0.7**
comp=Z,7.3nm,1.1s,mb4.8
IMW Indian Meadow 87.16 327 *e*P **P 05 15 46.2 +1.3**
comp=Z,3.3nm,1.0s,mb4.5
COCO West Island 87.19 108 *i*P **P 05 15 44.8 -0.6**
OD2 Odessa Site #2 87.31 333 *e*P **P 05 15 46.1 +0.6**
comp=Z,14nm,1.2s,mb5.1
WMOK Wichita Mounta 88.05 314 *e*P **P 05 15 50.5 +1.1**
WMOK pmax pmax
comp=Z,7.0nm,1.2s,mb4.8
WMOK Wichita Mounta 88.05 314 *e*P **P 05 15 50.5 +1.1**
comp=Z,6.6nm,1.2s,mb4.7
HWUT Hardware Ranch 89.28 326 *e*P **P 05 15 55.2 +0.2**
comp=Z,6.3nm,0.9s,mb5.0
ROSC El Rosal 90.58 277 LR LR 05 52 24.7
comp=Z,137nm,21.6s,MS4.3,baz=15,slow=33
M13A Montello 90.61 327 *e*P **P 05 16 03.3 +2.1**
comp=Z,4.4nm,1.1s,mb4.7
PV01 Paradox Valley 90.66 322 *e*P **P 05 16 01.3 -0.2**
DUG Dugway 90.98 326 *e*P **P 05 16 04.2 +1.2**
DUG pmax pmax
comp=Z,4.0nm,1.0s,mb4.7
DUG Dugway 90.98 326 *e*P **P 05 16 04.2 +1.3**
comp=Z,4.5nm,1.0s,mb4.8
MSU Marysvale 92.06 325 *e*P **P 05 16 09.1 +1.1**
MSU pmax pmax
comp=Z,3.0nm,1.1s,mb4.5
MSU Marysvale 92.06 325 *e*P **P 05 16 09.1 +1.1**
comp=Z,3.1nm,1.1s,mb4.5
SIV San Ignacio 93.03 252 P **P 05 16 11.6 -1.1**
comp=Z,0.7nm,0.8s,mb4.1,baz=66,slow=13,SNR=2.9
TXAR Lajitas Array 94.83 313 P **P 05 16 20.5 -0.4**
comp=Z,0.6nm,0.8s,mb4.0,baz=74,slow=4.3,SNR=6.6
TXAR LR LR 05 59 41.7
comp=Z,160nm,18.3s,MS4.5,baz=75,slow=36
TXAR Lajitas Array 94.83 313 P **P 05 16 20.5 -0.4**
TXAR pmax pmax
comp=Z,1.0nm,0.9s
TXAR MLR MLR
comp=Z,160nm,18.3s
CPUP Villa Florida 96.77 242 LR LR 06 01 52.5
comp=Z,272nm,18.5s,MS4.8,baz=31,slow=36
DAV Davao City (W) 97.63 75 LR LR 06 04 32.0
comp=Z,133nm,18.3s,MS4.5,baz=297,slow=38
LPAZ La Paz 98.56 256 LR LR 06 01 47.5
comp=Z,165nm,18.4s,MS4.6,baz=224,slow=36
ASAR Alice Springs 122.43 96 PKP PKPdf 05 21 52.7 -1.7
comp=Z,0.7nm,0.7s,baz=298,slow=1.7,SNR=5.6
ASAR Alice Springs 122.43 96 PKIKP PKPdf 05 21 52.7 -1.7
ASAR pmax pmax
comp=Z,1.0nm,0.7s

TRN 30 05:09:18.6, 17°39N×61°21W, h3km, MD3.5, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCG	**Bois Riant Cap**	**1.35**	**197**	*eP*	Pn	05 09 46.3	+1.9
LZG	**Guadaloupe-1**	**1.35**	**204**	*eP*	Pn	05 09 47.1	+2.8
SKI	**Saint Kitts**	**1.46**	**268**	*eP*	Pn	05 09 48.3	+2.4
SKI				*eS*	Sb	05 10 09.9	+4.5

GUC 30 05:10:00.8±0.8, 34°77S×70°26W, h15km±4km, MD3.6, ML3.0, 3C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CACH	**El Canelo**	**0.71**	**336**	⇑*iP*	Pg	05 10 14.0	-0.7
CACH				*iS*	Sg	05 10 23.8	-0.3
CHCH	**Chadas Angostu**	**0.90**	**338**	⇓*iP*	Pb	05 10 17.5	-0.5
CHCH				*iS*	Sb	05 10 29.9	+0.1
SJCH	**San Jose de Ma**	**1.13**	**356**	*eP*	Pb	05 10 21.5	-0.5
SJCH				*iS*	Sb	05 10 37.4	+0.9
LNV	**Longovilo**	**1.25**	**310**	*iP*	Pn	05 10 23.6	-0.1
LNV				*iS*	Sb	05 10 40.4	+0.4
CLCH	**Cerro Calan**	**1.39**	**350**	⇑*iP*	Pn	05 10 26.1	+0.5
CLCH				*eS*	Sn	05 10 45.5	+1.8
CLCH				AML	AML	05 10 52.3	
	comp=E,321nm,0.7s						
FCH	**Farellones**	**1.44**	**359**	⇑*eP*	Pn	05 10 30.2	+3.9
FCH				*eS*	Sn	05 10 49.7	+4.8
PEL	**Peldehue**	**1.66**	**347**	*eP*	Pn	05 10 30.6	+1.2
PEL				*eS*	Sn	05 10 53.4	+3.1
PEL				AML	AML	05 10 54.6	
	comp=E,382nm,0.3s						

ISCJB ***30*** *05:13:08.8±0.5, 38°18N±0°02×20°15E±0°02, h7km±3km, mb4.0/11, Error ellipse: s-maj=4.3km s-min=2.4km az=28.9*
NEIC ***30*** *05:13:08.9, 38°10N×20°17E, h11km, ML4.0(ATH), After ATH.*
ATH ***30*** *05:13:08.9, 38°09N×20°17E, h11km±2km, ML4.0*
IDC ***30*** *05:13:08.0±1.1, 38°10N×20°32E, h0km, mb4.0/10, mb1 4.0/15, mb1mx3.9/31, mbtmp4.0/15, ML4.1/5, MS2.9/1, Ms1 2.9/1, ms1mx2.6/38, Error ellipse: s-maj=24.1km s-min=14.9km az=144.0*
CSEM ***30*** *05:13:09.5±0.2, 38°16N×20°18E, h2km, ML4.5/3, Error ellipse: s-maj=5.5km s-min=2.8km az=31.0*
THE ***30*** *05:13:10.1, 38°08N×20°26E, h2km±1km, ML4.5/3, Error ellipse: s-maj=1.9km s-min=1.0km az=32.0*
PDG ***30*** *05:13:11.9±0.9, 38°17N×20°04E, h27km±5km, MD4.3/1, ML4.1/10, Error ellipse: s-maj=2.2km s-min=2.6km az=0.0*

ISC 30 05:13:10.0±0.5, 38°15N±0°02×20°20E±0°02, h6km±3km, n277, σ1°32/356, mb4.0/11, 19C-35D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.31**	**85**	*ePg*	**Pg**	**05 13 15.5**	**-0.6**
VLS				*eSb*	**Sg**	**05 13 20.7**	**+0.5**
VLS	**Valsamata**	**0.31**	**85**	*ePG*	**Pg**	**05 13 15.5**	**-0.6**
VLS				*eSB*	**Sg**	**05 13 20.7**	**+0.5**
VLS	**Valsamata**	**0.31**	**85**	P	**Pg**	**05 13 15.4**	**-0.7**
VLS				S	**Sg**	**05 13 19.6**	**-0.6**
VLS	**Valsamata**	**0.31**	**85**	*ePg*	**Pg**	**05 13 15.5**	**-0.6**
VLS				S	**Sg**	**05 13 19.6**	**-0.6**
VLS				*eSb*	**Sg**	**05 13 20.7**	**+0.5**
KFL	**Anninata**	**0.47**	**95**	P	**Pg**	**05 13 18.0**	**-1.1**
KFL				S	**Sg**	**05 13 24.0**	**-1.2**
KFL	**Anninata**	**0.47**	**95**	P	**Pg**	**05 13 18.0**	**-1.1**
KFL				S	**Sg**	**05 13 24.0**	**-1.2**
LKD2	**Lefkada island**	**0.73**	**30**	P	**Pg**	**05 13 23.9**	**-0.2**
LKD2	**Lefkada island**	**0.73**	**30**	P	**Pg**	**05 13 23.9**	**-0.2**
RLS	**Riolos of Patr**	**1.01**	**95**	*ePg*	**Pg**	**05 13 27.6**	**-1.7**
RLS				*eSb*	**Sb**	**05 13 43.1**	**-0.2**
RLS	**Riolos of Patr**	**1.01**	**95**	*ePG*	**Pg**	**05 13 27.6**	**-1.7**
RLS				*eSB*	**Sb**	**05 13 43.1**	**-0.2**
RLS	**Riolos of Patr**	**1.01**	**95**	*ePg*	**Pg**	**05 13 27.6**	**-1.7**
RLS				*eSb*	**Sb**	**05 13 43.1**	**-0.2**
UPR	**University Cam**	**1.26**	**83**	*ePG*	**Pn**	**05 13 32.9**	**-1.2**
UPR				*eSB*	**Sb**	**05 13 51.3**	**+0.7**
UPR	**University Cam**	**1.26**	**83**	P	**Pn**	**05 13 32.9**	**-1.2**
UPR				S	**Sg**	**05 13 51.1**	**+0.6**
UPR	**University Cam**	**1.26**	**83**	P	**Pn**	**05 13 32.9**	**-1.2**
UPR				S	**Sg**	**05 13 51.1**	**+0.6**
EFP	**Efpalio**	**1.37**	**78**	*ePG*	**Pg**	**05 13 35.1**	**-1.3**
EFP				*eSB*	**Sb**	**05 13 54.7**	**+0.9**
EFP	**Efpalio**	**1.37**	**78**	P	**Pn**	**05 13 34.1**	**-1.6**
EFP				S	**Sb**	**05 13 54.1**	**+0.3**
EFP	**Efpalio**	**1.37**	**78**	P	**Pn**	**05 13 34.1**	**-1.6**
EFP	**Efpalio**	**1.37**	**78**	*ePg*	**Pg**	**05 13 35.1**	**-1.3**
EFP				S	**Sb**	**05 13 54.1**	**+0.3**
EFP				*eSb*	**Sb**	**05 13 54.7**	**+0.9**
LAKA	**Lakka**	**1.41**	**86**	P	**Pn**	**05 13 34.7**	**-1.4**
LAKA	**Lakka**	**1.41**	**86**	P	**Pn**	**05 13 34.7**	**-1.4**
EVR	**Evrytania**	**1.48**	**58**	*ePb*	**Pb**	**05 13 37.7**	**-0.2**
EVR	**Evrytania**	**1.48**	**58**	*ePB*	**Pb**	**05 13 37.7**	**-0.2**
EVR	**Evrytania**	**1.48**	**58**	*ePb*	**Pb**	**05 13 37.7**	**-0.2**
TRIZ	**Trizonia**	**1.49**	**81**	P	**Pn**	**05 13 36.0**	**-1.3**
TRIZ	**Trizonia**	**1.49**	**81**	P	**Pn**	**05 13 36.0**	**-1.3**
KALE	**Kalithea**	**1.55**	**80**	P	**Pn**	**05 13 36.8**	**-1.3**
KALE				S	**Sn**	**05 13 58.1**	**-0.3**
KALE	**Kalithea**	**1.55**	**80**	P	**Pn**	**05 13 36.8**	**-1.3**
KALE				S	**Sn**	**05 13 58.1**	**-0.3**
JAN	**Janina**	**1.59**	**19**	*ePb*	**Pb**	**05 13 40.0**	**+0.3**
JAN	**Janina**	**1.59**	**19**	*ePB*	**Pb**	**05 13 40.0**	**+0.3**
JAN	**Janina**	**1.59**	**19**	*ePb*	**Pb**	**05 13 40.0**	**+0.3**
KEK	**Kerkira**	**1.59**	**349**	*ePb*	**Pb**	**05 13 39.5**	**-0.3**
KEK	**Kerkira**	**1.59**	**349**	*ePG*	**Pb**	**05 13 39.5**	**-0.3**
KEK	**Kerkira**	**1.59**	**349**	P	**Pb**	**05 13 39.5**	**-0.3**
KEK	**Kerkira**	**1.59**	**349**	P	**Pb**	**05 13 39.5**	**-0.3**
ITM	**Ithomi**	**1.68**	**125**	*ePg*	**Pg**	**05 13 39.6**	**-2.6**
ITM	**Ithomi**	**1.68**	**125**	*ePG*	**Pg**	**05 13 39.6**	**-2.6**
ITM	**Ithomi**	**1.68**	**125**	P	**Pn**	**05 13 39.5**	**-0.4**
ITM				S	**Sn**	**05 14 00.4**	**-1.3**
ITM	**Ithomi**	**1.68**	**125**	P	**Pn**	**05 13 39.5**	**-0.4**
SRN	**Sarande**	**1.73**	**355**	*iPN*	**Pn**	**05 13 41.6**	**+1.0**
SRN				*iSN*	**Sg**	**05 14 11.9**	**+6.1**
SRN	**Sarande**	**1.73**	**355**	*iPn*	**Pn**	**05 13 41.6**	**+1.0**
PYL	**PYLOS**	**1.75**	**135**	*ePG*	**Pg**	**05 13 41.9**	**-1.8**
PYL	**PYLOS**	**1.75**	**135**	P	**Pn**	**05 13 39.6**	**-1.3**
PYL	**PYLOS**	**1.75**	**135**	P	**Pn**	**05 13 39.6**	**-1.3**
PYL	**PYLOS**	**1.75**	**135**	*ePg*	**Pg**	**05 13 41.9**	**-1.8**
DSF	**Desfina**	**1.85**	**81**	P	**Pn**	**05 13 42.0**	**-0.3**
DSF	**Desfina**	**1.85**	**81**	P	**Pn**	**05 13 42.0**	**-0.3**
AGG	**Agios Georgios**	**1.89**	**62**	P	**Pn**	**05 13 44.6**	**+1.9**
AGG	**Agios Georgios**	**1.89**	**62**	P	**Pn**	**05 13 42.8**	**+0.1**
AGG				S	**Sn**	**05 14 08.1**	**+1.3**
AGG	**Agios Georgios**	**1.89**	**62**	P	**Pn**	**05 13 42.8**	**+0.1**
AGG				S	**Sn**	**05 14 08.1**	**+1.3**
VLX	**Vlachokerasia**	**1.90**	**114**	*ePG*	**Pg**	**05 13 43.9**	**-2.5**
VLX	**Vlachokerasia**	**1.90**	**114**	P	**Pn**	**05 13 44.2**	**+1.3**
VLX	**Vlachokerasia**	**1.90**	**114**	*ePg*	**Pg**	**05 13 43.9**	**-2.5**
VLX	**Vlachokerasia**	**1.90**	**114**	P	**Pn**	**05 13 44.2**	**+1.3**
THL	**Klokotos Trika**	**2.00**	**45**	P	**Pn**	**05 13 46.1**	**+1.8**
THL	**Klokotos Trika**	**2.00**	**45**	P	**Pn**	**05 13 46.1**	**+1.8**
LTK	**Loutraki**	**2.19**	**92**	*ePN*	**Pn**	**05 13 47.1**	**+0.2**
LTK	**Loutraki**	**2.19**	**92**	P	**Pn**	**05 13 47.0**	**+0.1**
LTK	**Loutraki**	**2.19**	**92**	*ePn*	**Pn**	**05 13 47.1**	**+0.2**
LKR	**Lokris**	**2.26**	**76**	*ePn*	**Pn**	**05 13 48.7**	**+0.9**
LKR	**Lokris**	**2.26**	**76**	*ePN*	**Pn**	**05 13 48.7**	**+0.9**
LKR	**Lokris**	**2.26**	**76**	P	**Pn**	**05 13 48.1**	**+0.3**
LKR	**Lokris**	**2.26**	**76**	P	**Pn**	**05 13 48.1**	**+0.3**
LKR	**Lokris**	**2.26**	**76**	*ePn*	**Pn**	**05 13 48.7**	**+0.9**
ATAL	**Atalanti**	**2.28**	**75**	P	**Pn**	**05 13 48.5**	**+0.3**
ATAL	**Atalanti**	**2.28**	**75**	P	**Pn**	**05 13 48.5**	**+0.3**
NEST	**Nestorio**	**2.36**	**16**	P	**Pn**	**05 13 51.8**	**+2.6**
KZN	**Kozani**	**2.48**	**29**	*ePn*	**Pn**	**05 13 52.5**	**+1.7**
KZN	**Kozani**	**2.48**	**29**	*ePN*	**Pn**	**05 13 52.5**	**+1.7**
KZN	**Kozani**	**2.48**	**29**	*ePn*	**Pn**	**05 13 52.5**	**+1.7**
DID	**Didima**	**2.49**	**104**	*ePN*	**Pn**	**05 13 51.7**	**+0.7**
DID	**Didima**	**2.49**	**104**	P	**Pn**	**05 13 50.7**	**-0.3**
DID	**Didima**	**2.49**	**104**	P	**Pn**	**05 13 50.7**	**-0.3**
DID	**Didima**	**2.49**	**104**	*ePn*	**Pn**	**05 13 51.7**	**+0.7**
VLI	**Veliai**	**2.61**	**122**	*ePb*	**Pb**	**05 13 53.0**	**-4.1**
VLI				*eSn*	**Sn**	**05 14 25.4**	**+0.8**
VLI	**Veliai**	**2.61**	**122**	*ePB*	**Pb**	**05 13 53.0**	**-4.1**
VLI				*eSN*	**Sn**	**05 14 25.4**	**+0.8**
VLI	**Veliai**	**2.61**	**122**	*ePb*	**Pb**	**05 13 53.0**	**-4.1**
VLI				*eSn*	**Sn**	**05 14 25.4**	**+0.8**
NAIG	**Nisos Aigina**	**2.63**	**98**	*ePN*	**Pn**	**05 13 54.2**	**+1.2**
NAIG	**Nisos Aigina**	**2.63**	**98**	*ePN*	**Pn**	**05 13 54.2**	**+1.2**
NAIG	**Nisos Aigina**	**2.63**	**98**	*ePn*	**Pn**	**05 13 54.2**	**+1.2**
NEO	**Neokhori**	**2.63**	**63**	*ePn*	**Pn**	**05 13 54.6**	**+1.6**
NEO	**Neokhori**	**2.63**	**63**	*ePN*	**Pn**	**05 13 54.6**	**+1.6**
NEO	**Neokhori**	**2.63**	**63**	*ePn*	**Pn**	**05 13 54.6**	**+1.6**
XOR	**Xorichti**	**2.64**	**62**	P	**Pn**	**05 13 56.0**	**+3.0**
XOR	**Xorichti**	**2.64**	**62**	P	**Pn**	**05 13 53.7**	**+0.7**
XOR	**Xorichti**	**2.64**	**62**	P	**Pn**	**05 13 53.7**	**+0.7**
FNA	**Florina**	**2.78**	**19**	P	**Pn**	**05 13 56.6**	**+1.5**
FNA	**Florina**	**2.78**	**19**	P	**Pn**	**05 13 56.4**	**+1.3**
FNA	**Florina**	**2.78**	**19**	P	**Pn**	**05 13 56.4**	**+1.3**
ATH	**Athens Observa**	**2.79**	**93**	*ePb*	**Pb**	**05 13 56.9**	**-3.2**
ATH	**Athens Observa**	**2.79**	**93**	*ePB*	**Pb**	**05 13 56.9**	**-3.2**
ATH	**Athens Observa**	**2.79**	**93**	*ePb*	**Pb**	**05 13 56.9**	**-3.2**
VLY	**Voula,Athens**	**2.86**	**95**	*ePn*	**Pn**	**05 13 56.2**	**+0.1**
VLY	**Voula,Athens**	**2.86**	**95**	*ePN*	**Pn**	**05 13 56.2**	**+0.1**
VLY	**Voula,Athens**	**2.86**	**95**	*ePn*	**Pn**	**05 13 56.2**	**+0.1**
KYTH	**Kithira**	**2.94**	**129**	*ePb*	**Pb**	**05 13 58.7**	**-4.0**
KYTH	**Kithira**	**2.94**	**129**	*ePB*	**Pb**	**05 13 58.7**	**-4.0**
KYTH	**Kithira**	**2.94**	**129**	*ePb*	**Pb**	**05 13 58.7**	**-4.0**
OHR	**Ohrid**	**2.99**	**9**	*iPn*	**Pn**	**05 13 59.9**	**+1.9**
OHR				*iSn*	**Sn**	**05 14 36.7**	**+2.6**
BIA	**Bitola**	**3.00**	**17**	P	**Pn**	**05 13 58.8**	**+0.8**
BIA	**Bitola**	**3.00**	**17**	*iPn*	**Pn**	**05 13 59.9**	**+2.0**
BIA				*iSn*	**Sn**	**05 14 37.4**	**+3.3**
BIA	**Bitola**	**3.00**	**17**	P	**Pn**	**05 13 58.8**	**+0.8**
BIA	**Bitola**	**3.00**	**17**	P	**Pn**	**05 13 58.8**	**+0.8**
AOS	**Alonnisos**	**3.06**	**69**	P	**Pn**	**05 14 00.8**	**+2.0**
AOS	**Alonnisos**	**3.06**	**69**	P	**Pn**	**05 14 00.8**	**+2.0**
TIR	**Tirane**	**3.20**	**356**	P	**Pn**	**05 14 02.3**	**+1.5**
TIR	**Tirane**	**3.20**	**356**	P	**Pn**	**05 14 02.0**	**+1.2**
TIR	**Tirane**	**3.20**	**356**	P	**Pn**	**05 14 02.0**	**+1.2**
TAR1	**Taranto**	**3.27**	**317**	*ePn*	**Pn**	**05 14 01.8**	**0.0**
TAR1				*eSn*	**Sn**	**05 14 41.0**	**0.0**
GRG	**Griva**	**3.28**	**31**	P	**Pn**	**05 14 03.1**	**+1.2**
GRG	**Griva**	**3.28**	**31**	P	**Pn**	**05 14 02.0**	**+0.1**
GRG	**Griva**	**3.28**	**31**	P	**Pn**	**05 14 02.0**	**+0.1**
KRUS	**Krusevo**	**3.31**	**14**	*iPn*	**Pn**	**05 14 03.1**	**+0.8**
KRUS				*iSn*	**Sn**	**05 14 43.4**	**+1.4**
HORT	**Hortiatis**	**3.32**	**42**	P	**Pn**	**05 14 04.4**	**+1.9**
HORT	**Hortiatis**	**3.32**	**42**	P	**Pn**	**05 14 04.4**	**+1.9**
PLG	**Polygyros**	**3.36**	**48**	*ePn*	**Pn**	**05 14 02.6**	**-0.4**
PLG	**Polygyros**	**3.36**	**48**	*ePN*	**Pn**	**05 14 01.6**	**-1.4**
PLG	**Polygyros**	**3.36**	**48**	*ePn*	**Pn**	**05 14 02.6**	**-0.4**
CEL	**Celeste**	**3.39**	**273**	P	**Pn**	**05 14 03.6**	**+0.2**
CEL	**Celeste**	**3.39**	**273**	P	**Pn**	**05 14 03.6**	**+0.2**
PE1	**Pezze di Greco**	**3.41**	**322**	*ePn*	**Pn**	**05 14 04.5**	**+0.8**
PE1				*eSn*	**Sn**	**05 14 45.3**	**+0.9**
PHP	**Peshkopia**	**3.54**	**3**	*iPN*	**Pn**	**05 14 06.9**	**+1.5**
PHP				*iSN*	**Sn**	**05 14 50.7**	**+3.3**
PHP	**Peshkopia**	**3.54**	**3**	*iPn*	**Pn**	**05 14 06.9**	**+1.5**
PHP				*iSn*	**Sn**	**05 14 50.7**	**+3.3**
VAY	**Valandovo**	**3.66**	**29**	*iPn*	**Pn**	**05 14 08.9**	**+1.8**
SG1	**Sgolgore (BA)**	**3.82**	**316**	*ePn*	**Pn**	**05 14 10.6**	**+1.3**
SG1				*eSn*	**Sn**	**05 14 53.6**	**-0.9**
CUC	**Castrocucco**	**3.87**	**300**	P	**Pn**	**05 14 12.5**	**+2.5**
CUC	**Castrocucco**	**3.87**	**300**	P	**Pn**	**05 14 12.5**	**+2.5**
ULC	**Ulcinj**	**3.88**	**350**	⇓*iPn*	**Pn**	**05 14 10.0**	**-0.1**
ULC				*eSn*	**Sn**	**05 14 54.7**	**-1.2**
ULC	**Ulcinj**	**3.88**	**350**	⇓*iPn*	**Pn**	**05 14 10.0**	**-0.1**
ULC				*eSn*	**Sn**	**05 14 54.7**	**-1.2**
PUK	**Puka**	**3.90**	**357**	*iPN*	**Pn**	**05 14 11.1**	**+0.8**
PUK				*iSN*	**Sn**	**05 14 58.8**	**+2.5**
PUK	**Puka**	**3.90**	**357**	*iPn*	**Pn**	**05 14 11.1**	**+0.8**
PUK				*iSn*	**Sn**	**05 14 58.8**	**+2.5**
BAI	**Bari**	**3.91**	**320**	*ePn*	**Pn**	**05 14 11.9**	**+1.4**
SRS	**Serrai**	**3.96**	**40**	P	**Pn**	**05 14 12.6**	**+1.4**
SRS	**Serrai**	**3.96**	**40**	P	**Pn**	**05 14 12.6**	**+1.4**
BCI	**Bajram Curri**	**4.21**	**359**	*iPN*	**Pn**	**05 14 15.9**	**+1.2**
BCI				*iSN*	**Sn**	**05 15 09.9**	**+5.8**
BCI	**Bajram Curri**	**4.21**	**359**	*iPn*	**Pn**	**05 14 15.9**	**+1.2**
VAM	**Vamos**	**4.22**	**129**	P	**Pn**	**05 14 17.8**	**+3.0**
VAM	**Vamos**	**4.22**	**129**	P	**Pn**	**05 14 17.8**	**+3.0**
BUM	**Brajici-Budva**	**4.26**	**347**	⇓*iPn*	**Pn**	**05 14 15.2**	**-0.2**
BUM				*eSn*	**Sn**	**05 15 03.7**	**-1.7**
BUM	**Brajici-Budva**	**4.26**	**347**	⇓*iPn*	**Pn**	**05 14 15.2**	**-0.2**
BUM				*eSn*	**Sn**	**05 15 03.7**	**-1.7**
KKB	**Krupnik**	**4.32**	**30**	*iP*	**Pn**	**05 14 17.0**	**+0.8**
KKB	**Krupnik**	**4.32**	**30**	*iP*	**Pn**	**05 14 17.0**	**+0.8**
PDG	**Podgorica**	**4.33**	**351**	⇓*iPn*	**Pn**	**05 14 16.4**	**+0.1**
PDG				*eSn*	**Sn**	**05 15 05.8**	**-1.3**
TTG	**Podgorica**	**4.33**	**351**	⇓*iPn*	**Pn**	**05 14 16.4**	**+0.1**
TTG				*eSn*	**Sn**	**05 15 05.8**	**-1.3**
TTG	**Podgorica**	**4.33**	**351**	⇓*iPn*	**Pn**	**05 14 16.4**	**+0.1**
TTG				*eSn*	**Sn**	**05 15 05.8**	**-1.3**
APE	**Apeiranthos**	**4.37**	**103**	⇑*iP*	**Pb**	**05 14 30.2**	**+3.0**
MMB	**Musomiste**	**4.38**	**37**	*iP*	**Pn**	**05 14 15.5**	**-1.5**
MMB	**Musomiste**	**4.38**	**37**	*iP*	**Pn**	**05 14 15.5**	**-1.5**
PVY	**Plav**	**4.44**	**358**	⇓*iPn*	**Pn**	**05 14 19.3**	**+1.5**
PVY				*eSn*	**Sn**	**05 15 09.1**	**-0.7**
PVY	**Plav**	**4.44**	**358**	⇓*iPn*	**Pn**	**05 14 19.3**	**+1.5**
PVY				*eSn*	**Sn**	**05 15 09.1**	**-0.7**
HCY	**Herceg Novi**	**4.48**	**344**	⇓*iPn*	**Pn**	**05 14 17.7**	**-0.7**
HCY				*eSn*	**Sn**	**05 15 08.7**	**-2.1**
HCY	**Herceg Novi**	**4.48**	**344**	⇓*iPn*	**Pn**	**05 14 17.7**	**-0.7**
HCY				*eSn*	**Sn**	**05 15 08.7**	**-2.1**
VAE	**Valguarnera**	**4.63**	**263**	*Pn*	**Pn**	**05 14 20.6**	**+0.2**
	3.8nm,0.3s,baz=59,slow=5.9,SNR=3.0						
VAE				Sn	**Sn**	**05 15 21.6**	**+7.2**
	3.9nm,0.3s,baz=124,slow=15,SNR=3.3						
VAE	**Valguarnera**	**4.63**	**263**	Pn	**Pn**	**05 14 20.6**	**+0.2**
VAE				Sn	**Sn**	**05 15 21.6**	**+7.2**
VAE	**Valguarnera**	**4.63**	**263**	Pn	**Pn**	**05 14 20.6**	**+0.2**
BEY	**Berane**	**4.72**	**357**	⇑*iPn*	**Pn**	**05 14 23.0**	**+1.3**
BEY				*eSn*	**Sn**	**05 15 15.6**	**-1.1**
IVA	**Berane**	**4.72**	**357**	⇑*iPn*	**Pn**	**05 14 23.0**	**+1.3**
IVA				*eSn*	**Sn**	**05 15 15.6**	**-1.1**
IVA	**Berane**	**4.72**	**357**	⇑*iPn*	**Pn**	**05 14 23.0**	**+1.3**
IVA				*eSn*	**Sn**	**05 15 15.6**	**-1.1**
NKY	**Niksic**	**4.75**	**349**	⇓*iPn*	**Pn**	**05 14 22.0**	**0.0**
NKY				*eSn*	**Sn**	**05 15 15.4**	**-1.9**
NKY	**Niksic**	**4.75**	**349**	⇓*iPn*	**Pn**	**05 14 22.0**	**0.0**
NKY				*eSn*	**Sn**	**05 15 15.4**	**-1.9**
MS1	**Monte Sant'Ang**	**4.83**	**319**	*ePn*	**Pn**	**05 14 24.3**	**+1.2**
MS1				*eSn*	**Sn**	**05 15 18.7**	**-0.6**
BRY	**Bratogost**	**4.91**	**346**	⇑*iPn*	**Pn**	**05 14 23.5**	**-0.8**
BRY				*eSn*	**Sn**	**05 15 19.4**	**-1.9**
BRY	**Bratogost**	**4.91**	**346**	⇑*iPn*	**Pn**	**05 14 23.5**	**-0.8**
BRY				*eSn*	**Sn**	**05 15 19.4**	**-1.9**
VTS	**Vitosha**	**5.00**	**26**	P	**Pn**	**05 14 27.4**	**+1.9**
VTS	**Vitosha**	**5.00**	**26**	*iP*	**Pn**	**05 14 26.0**	**+0.5**
VTS	**Vitosha**	**5.00**	**26**	⇓*iP*	**Pn**	**05 14 27.2**	**+1.7**
VTS	**Vitosha**	**5.00**	**26**	P	**Pn**	**05 14 27.4**	**+1.9**
WDD	**Wield Dalam**	**5.08**	**245**	P	**Pn**	**05 14 27.9**	**+1.3**
WDD	**Wield Dalam**	**5.08**	**245**	P	**Pn**	**05 14 27.9**	**+1.3**
STON	**Ston**	**5.08**	**339**	*iPn*	**Pn**	**05 14 24.3**	**-2.4**
STON				Sn	**Sn**	**05 15 21.3**	**-4.4**
UPM	**Unac-Piva**	**5.14**	**349**	⇓*iPn*	**Pn**	**05 14 27.8**	**+0.4**
UPM				*eSn*	**Sn**	**05 15 24.7**	**-2.3**
UPM	**Unac-Piva**	**5.14**	**349**	⇓*iPn*	**Pn**	**05 14 27.8**	**+0.4**
UPM				*eSn*	**Sn**	**05 15 24.7**	**-2.3**
PLE	**Pljevlja**	**5.21**	**354**	⇓*iPn*	**Pn**	**05 14 29.1**	**+0.7**
PLE				*eSn*	**Sn**	**05 15 26.9**	**-1.8**
PLE	**Pljevlja**	**5.21**	**354**	⇓*iPn*	**Pn**	**05 14 29.1**	**+0.7**
PLE				*eSn*	**Sn**	**05 15 26.9**	**-1.8**
KDZ	**Kurdzhali**	**5.32**	**47**	*iP*	**Pn**	**05 14 28.0**	**-1.9**
KDZ	**Kurdzhali**	**5.32**	**47**	*iP*	**Pn**	**05 14 28.0**	**-1.9**
DIVS	**Divibare**	**5.94**	**359**	P	**Pn**	**05 14 38.3**	**-0.2**
DIVS	**Divibare**	**5.94**	**359**	P	**Pn**	**05 14 38.3**	**-0.2**
AQU	**L'Aquila**	**6.68**	**311**	*ePn*	**Pn**	**05 14 47.1**	**-1.4**
AQU	**L'Aquila**	**6.68**	**311**	⇓*iP*	**Pn**	**05 14 54.0**	**+5.4**
AQU	**L'Aquila**	**6.68**	**311**	*ePn*	**Pn**	**05 14 47.1**	**-1.5**
GZR	**Gura Zlata**	**7.49**	**14**	⇓P	**Pn**	**05 14 60.0**	**+0.3**
GZR	**Gura Zlata**	**7.49**	**14**	⇓*iP*	**Pn**	**05 15 00.0**	**+0.3**
GZR	**Gura Zlata**	**7.49**	**14**	⇓P	**Pn**	**05 15 00.0**	**+0.3**
BZS	**Buzias**	**7.54**	**8**	⇓P	**Pn**	**05 15 00.8**	**+0.5**
BZS	**Buzias**	**7.54**	**8**	⇓*iP*	**Pn**	**05 15 00.8**	**+0.5**
BZS	**Buzias**	**7.54**	**8**	⇓P	**Pn**	**05 15 00.8**	**+0.5**
NVLJ	**Novalja**	**7.55**	**330**	*ePn*	**Pn**	**05 15 00.4**	**-0.2**
NVLJ				Sn	**Sn**	**05 16 22.0**	**-4.4**
NVLJ	**Novalja**	**7.55**	**330**	*ePn*	**Pn**	**05 15 00.3**	**-0.3**
VOIR		**8.13**	**25**	⇑P	**Pn**	**05 15 09.8**	**+1.3**
VOIR		**8.13**	**25**	⇑*iP*	**Pn**	**05 15 09.8**	**+1.3**
VOIR		**8.13**	**25**	⇑P	**Pn**	**05 15 09.8**	**+1.3**
MLR	**Muntele Rosu**	**8.50**	**28**	*Pn*	**Pn**	**05 15 15.2**	**+1.8**
	0.6nm,0.3s,baz=286,slow=20,SNR=11						
MLR	**Muntele Rosu**	**8.50**	**28**	⇓*iP*	**Pn**	**05 15 15.7**	**+2.2**
MLR	**Muntele Rosu**	**8.50**	**28**	Pn	**Pn**	**05 15 15.2**	**+1.7**
MLR	**Muntele Rosu**	**8.50**	**28**	⇓*iP*	**Pn**	**05 15 15.7**	**+2.2**
DRGR		**8.83**	**11**	⇓P	**Pn**	**05 15 17.8**	**-0.3**
DRGR		**8.83**	**11**	⇓*iP*	**Pn**	**05 15 17.8**	**-0.3**
DRGR		**8.83**	**11**	⇓P	**Pn**	**05 15 17.8**	**-0.3**
LJU	**Ljubljana**	**8.94**	**334**	*ePn*	**Pn**	**05 15 20.2**	**+0.7**
LJU				*eSn*	**Sn**	**05 16 57.5**	**-3.0**
PLOR	**Plostina**	**9.07**	**30**	⇓*iP*	**Pn**	**05 15 15.8**	**-5.5**
VRI	**Vrincioaia**	**9.11**	**30**	⇑P	**Pn**	**05 15 24.1**	**+2.2**
VRI	**Vrincioaia**	**9.11**	**30**	⇑*iP*	**Pn**	**05 15 24.1**	**+2.2**
VRI	**Vrincioaia**	**9.11**	**30**	⇑P	**Pn**	**05 15 24.1**	**+2.2**
VOY	**Vojsko**	**9.16**	**331**	*ePn*	**Pn**	**05 15 23.0**	**+0.4**
VOY				*eSn*	**Sn**	**05 17 02.7**	**-3.2**
VOY	**Vojsko**	**9.16**	**331**	*ePn*	**Pn**	**05 15 23.0**	**+0.4**
SOKA	**Soboth**	**9.34**	**338**	⇑*iPn*	**Pn**	**05 15 24.0**	**-0.9**
SOKA				⇓*iSn*	**Sn**	**05 17 04.1**	**-6.1**
SOKA	**Soboth**	**9.34**	**338**	Pn	**Pn**	**05 15 24.0**	**-1.0**
OBKA	**Obir**	**9.34**	**335**	⇓*iPn*	**Pn**	**05 15 25.0**	**0.0**
OBKA				⇓*iSn*	**Sn**	**05 17 07.7**	**-2.5**
OBKA	**Obir**	**9.34**	**335**	Pn	**Pn**	**05 15 25.0**	**0.0**
OBKA				Sn	**Sn**	**05 17 07.7**	**-2.6**
PGF	**Pioggiola**	**9.61**	**301**	*ePn*	**Pn**	**05

*BJI **30** 05:52:44.8, 45°.29N×151°.52E, h19km, mB4.7/5, mb4.6/12*
*IDC **30** 05:52:45.3±1.0, 45°.43N×151°.25E, h0km, mb3.9/14, mb1 4.0/17, mb1mx4.0/24, mbtmp3.9/17, ML3.9/3, Error ellipse: s-maj=28.9km s-min=16.1km az=163.0*
*ISCJB **30** 05:52:46.0±1.6, 45°.22N±0°.07×151°.39E±0°.07, h22km±12km, mb4.1/25, Error ellipse: s-maj=13.9km s-min=5.8km az=151.0*
*JMA **30** 05:52:46.4±0.8, 45°.58N×151°.42E, h30km, M4.7*
*NEIC **30** 05:52:46.1±0.7, 45°.24N×151°.35E, h10km, mb4.7/3, Error ellipse: s-maj=18.0km s-min=8.6km az=145.0*
*SKHL **30** 05:52:47.4±0.4, 45°.02N×151°.55E, h39km±7km, mb5.1/3, Ms4.1/1*
*MOS **30** 05:52:48.7±0.9, 45°.39N×151°.26E, h37km, mb4.3/12, Error ellipse: s-maj=11.5km s-min=10.1km az=140.7*

ISC 30 05:52:49.0±1.6, 45°.23N±0°.07×151°.37E±0°.07, h28km±12km, n73, σ1°13/80, mb4.1/25, 5C-3D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.48**	**271**	*e*PN	**Pn**	**05 53 27.0**	**-0.4**
KUR				*e*S	**Sn**	**05 53 57.0**	**+0.4**
KUR				pmax	pmax		
	comp=Z,240nm,0.4s						
KUR				smax			
	comp=N,850nm,0.5s						
KUR				smax			
	comp=E,340nm,0.5s						
KUR				smax			
	comp=N,3μm,1.6s						
KUR	**Kuril'sk**	**2.48**	**271**	*e*P	**Pn**	**05 53 27.0**	**-0.4**
KUR				AMB	AMB	05 53 28.0	
	comp=N,240nm,0.4s						
KUR				*e*S	**Sn**	**05 53 57.0**	**+0.4**
KUR				A		05 54 07.0	
	comp=N,850nm,0.5s						
KUR				A		05 54 07.0	
	comp=N,340nm,0.5s						
KUR				A		05 54 14.0	
	comp=N,3μm,1.6s						
KUR				A		05 54 14.0	
	comp=N,1μm,1.6s						
YUK	**Yuzh-Kuril'sk**	**4.11**	**255⇑**	*i*PN	**Pn**	**05 53 51.1**	**+1.3**
YUK				*i* S	**Sn**	**05 54 38.6**	**+1.7**
YUK				pmax	pmax		
	comp=Z,280nm,0.3s						
YUK				pmax	pmax		
	comp=N,84nm,0.1s						
YUK				pmax	pmax		
	comp=E,77nm,0.3s						
YUK				pmax	pmax		
	comp=Z,264nm,0.9s						
YUK				smax			
	comp=N,584nm,1.0s						
YUK				smax			
	comp=E,1μm,1.0s						
YUK				smax			
	comp=N,298nm,0.4s						
YUK				smax			
	comp=E,542nm,0.7s						
YUK				MLR	MLR		
	comp=Z,269nm,13.0s						
YUK	**Yuzh-Kuril'sk**	**4.11**	**255⇑**	*i*P	**Pn**	**05 53 51.1**	**+1.3**
YUK				AMB	AMB	05 53 56.5	
	comp=Z,180nm,0.4s						
YUK				AMB	AMB	05 53 56.5	
	comp=Z,200nm,0.4s						
YUK				AMB	AMB	05 53 56.5	
	comp=Z,200nm,0.3s						
YUK				*i* S	**Sn**	**05 54 38.6**	**+1.7**
YUK				A		05 54 54.5	
	comp=Z,2μm,1.1s						
YUK				A		05 54 54.5	
	comp=Z,2μm,1.0s						
YUK				A		05 54 55.1	
	comp=Z,460nm,0.5s						
YUK				A		05 54 55.1	
	comp=Z,490nm,0.5s						
YUK				AMS	AMS	05 56 21.5	
	comp=Z,270nm,13.0s						
NEM2	**Nemuro 2**	**4.45**	**247**	P	**Pn**	**05 53 53.1**	**-1.4**
NEM2				*e*S	**Sn**	**05 54 43.2**	**-2.0**
JRA	**Rausu**	**4.64**	**256**	P	**Pn**	**05 53 58.3**	**+1.1**
JAK	**Akkeshi**	**5.30**	**247**	P	**Pn**	**05 54 05.0**	**-1.1**
JTKR	**Abashiri--Toko**	**5.47**	**259**	P	**Pn**	**05 54 09.9**	**+1.3**
JAR	**Ashorobuto**	**5.79**	**253**	P	**Pn**	**05 54 13.5**	**+0.6**
JAR				*e*S	**Sn**	**05 55 18.8**	**+0.5**
JMP	**Maruseppu**	**5.85**	**261**	P	**Pn**	**05 54 15.5**	**+1.8**
JOB	**Onbets**	**5.91**	**249**	P	**Pn**	**05 54 13.8**	**-0.7**
YSS	**Yuzh-Sakhalins**	**6.24**	**289**	*e*PN	**Pn**	**05 54 21.0**	**+2.0**
YSS	**Yuzh-Sakhalins**	**6.24**	**289**	*e*Pn	**Pn**	**05 54 19.7**	**+0.7**
YSS	**Yuzh-Sakhalins**	**6.24**	**289**	*e*P	**Pn**	**05 54 21.0**	**+2.0**
JKK2	**Kamakawa 2**	**6.31**	**261**	P	**Pn**	**05 54 21.7**	**+1.7**
SKR	**Severo-Kuril's**	**6.32**	**29**	*e*PN	**Pn**	**05 54 20.2**	**0.0**
SKR				*e*		05 55 33.7	
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				pmax	pmax		
	comp=N,30nm,0.4s						
SKR	**Severo-Kuril's**	**6.32**	**29**	*e*P	**Pn**	**05 54 20.2**	**0.0**
SKR				AMB	AMB	05 54 22.1	
	comp=N,30nm,0.4s						
SKR				AMB	AMB	05 54 22.1	
	comp=N,80nm,0.5s						
SKR				AMS	AMS	05 57 08.0	
	comp=N,800nm,12.0s						
JCH	**Churui**	**6.34**	**249**	P	**Pn**	**05 54 20.6**	**+0.1**
JCH				*e*S	**Sn**	**05 55 28.9**	**-3.1**
ASAJ	**Asahikawa**	**6.35**	**263**	Pn	**Pn**	**05 54 20.2**	**-0.4**
	comp=N,3.3nm,0.3s,baz=81,slow=14,SNR=16						
ASAJ	**Asahikawa**	**6.35**	**263**	PN	**Pn**	**05 54 20.2**	**-0.4**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
JEM	**Erimo**	**6.77**	**245**	P	**Pn**	**05 54 26.9**	**+0.6**
ERM	**Erimo**	**6.77**	**245**	*e*PN	**Pn**	**05 54 27.1**	**+0.7**
ERM				pmax	pmax		
	comp=Z,129nm,0.6s						
ERM	**Erimo**	**6.77**	**245**	*e*Pn	**Pn**	**05 54 27.1**	**+0.8**
	comp=Z,129nm,0.6s						
JNBK	**Urakawa-nobuka**	**6.90**	**248**	P	**Pn**	**05 54 27.4**	**-0.7**
JKB	**Kayabe**	**8.21**	**250**	P	**Pn**	**05 54 45.0**	**-1.2**
JKB				*e*S	**Sn**	**05 56 11.6**	**-6.4**
PETK	**Petropavlovsk-**	**8.91**	**25**	Pn	**Pn**	**05 54 54.6**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=194,slow=12,SNR=4.9						
PETK	**Petropavlovsk-**	**8.91**	**25**	PN	**Pn**	**05 54 54.6**	**-1.0**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MAJO	**Matsushiro**	**13.19**	**233**	*e*PN	**Pn**	**05 55 52.7**	**-1.6**
MJAR	**Matsushiro Arr**	**13.19**	**233**	Pn	**Pn**	**05 55 51.1**	**-3.2**
	comp=Z,0.9nm,0.3s,baz=37,slow=12,SNR=5.5						
KLR	**Kul'dur**	**13.91**	**294**	*e*P	**Pn**	**05 56 03.8**	**-0.3**
MDJ	**Mudanjiang**	**15.44**	**275**	*e*Pn	**Pn**	**05 56 25.0**	**+0.4**
	comp=Z,13nm,1.0s						
ZEA	**Zeya**	**17.77**	**307**	*e*P	**Pn**	**05 56 53.1**	**-0.8**
ZEA				AMB	AMB	05 56 54.1	
	comp=Z,23nm,1.0s						
KSRS	**Korea Array**	**19.20**	**254**	Pn	**Pn**	**05 57 10.9**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=63,slow=11,SNR=9.4						
KSRS	**Korea Array**	**19.20**	**254**	*e*P	**Pn**	**05 57 11.6**	**+0.1**
YAK	**Yakutsk**	**21.00**	**331**	*e*P	**P**	**05 57 34.2**	**+4.3**
YAK				pmax	pmax		
	comp=E,10.0nm,1.4s						
YAK				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.3						
YAK				pmax	pmax		
	comp=N,14nm,1.8s						
BILL	**Bilibino**	**24.15**	**14⇓**	*e*P	pP	05 58 13.0	+2.6
BILL				*e*S	**S**	**06 02 12.7**	**-5.4**
BILL				pmax	pmax		
	comp=Z,13nm,1.7s,mb4.1						
BJT	**Baijiatuau**	**26.28**	**271**	*e*P	**P**	**05 58 20.5**	**-1.3**
BJT				pmax	pmax		
	comp=Z,16nm,0.8s						
BJT	**Baijiatuau**	**26.28**	**271**	*e*P	**P**	**05 58 20.5**	**-1.3**
	comp=Z,16nm,0.8s,mb4.6						
TIXI	**Tiksi**	**28.61**	**345**	*e*P	pP	05 58 52.9	+2.3
TIXI				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.7						
SONM	**Songino Array**	**30.72**	**291**	P	**P**	**05 59 01.8**	**+0.5**
	comp=Z,0.3nm,0.4s,mb3.5,baz=87,slow=7.5,SNR=3.6						
KDAK	**Kodiak Island**	**36.01**	**49**	P	**P**	**05 59 47.8**	**+0.6**
	comp=Z,4.7nm,0.7s,mb4.5,baz=307,slow=6.1,SNR=5.3						
KDAK	**Kodiak Island**	**36.01**	**49**	P	**P**	**05 59 47.8**	**+0.6**
KDAK				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
LZH	**Lanzhou**	**36.73**	**273**	*e*P	**P**	**05 59 55.0**	**+1.4**
LZH				pP	pP	06 00 01.0	-1.0
LZH				sP	sP	06 00 04.0	-1.4
LZH				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.0						
LZH				pmax	pmax		
	comp=Z,16nm,5.0s						
GTA	**Gaotai**	**38.02**	**280**	*e*P	**P**	**06 00 05.3**	**+0.8**
GTA				pP	pP	06 00 09.5	-3.4
GTA				sP	sP	06 00 12.3	-4.0
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.2						
ILAR	**Eielson Array**	**38.50**	**37**	P	**P**	**06 00 07.4**	**-0.8**
	comp=Z,0.6nm,0.7s,mb3.5,baz=278,slow=10,SNR=5.6						
ILAR	**Eielson Array**	**38.50**	**37**	P	**P**	**06 00 07.4**	**-0.8**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZALV	**Zalesovo Beam**	**42.53**	**307**	P	**P**	**06 00 39.9**	**-1.7**
	comp=Z,0.6nm,0.4s,mb3.7,baz=81,slow=8.6,SNR=3.0						
ZALV				PcP	PcP	06 02 34.5	+0.8
	comp=Z,0.4nm,0.4s,baz=67,slow=3.7,SNR=2.9						
ZALV	**Zalesovo Beam**	**42.53**	**307**	P	**P**	**06 00 39.9**	**-1.7**
ZALV						06 02 34.5	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
MKAR	**Makanchi Array**	**46.57**	**298**	P	**P**	**06 01 13.2**	**-0.8**
	comp=Z,2.0nm,0.7s,mb4.1,baz=71,slow=8.3,SNR=12						
MKAR				PcP	PcP	06 02 48.3	+0.5
	comp=Z,0.5nm,0.6s,baz=83,slow=2.8,SNR=3.3						
MKAR	**Makanchi Array**	**46.57**	**298**	P	**P**	**06 01 13.2**	**-0.8**
MKAR						06 02 48.3	
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KURK	**Kurchatov**	**47.20**	**304**	*e*P	**P**	**06 01 17.2**	**-1.7**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.9						
YKA	**Yellowknife Ar**	**52.87**	**36**	P	**P**	**06 02 02.8**	**+1.2**
	comp=Z,0.3nm,0.4s,mb3.5,baz=300,slow=7.2,SNR=2.8						
ARU	**Arti**	**55.31**	**318**	*d*P	**P**	**06 02 22.1**	**+2.5**
ARU				*e**PP	PcP	06 03 26.1	+6.2
ARU						06 04 28.4	
ARU				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
NVAR	**Mina Array Bea**	**64.23**	**61**	P	**P**	**06 03 22.3**	**+1.1**
	comp=Z,0.5nm,0.7s,mb3.6,baz=270,slow=8.9,SNR=4.1						
FINES	**FINESS Array B**	**64.89**	**334**	P	**P**	**06 03 24.1**	**-1.0**
	comp=Z,0.9nm,0.6s,mb4.0,baz=46,slow=8.2,SNR=4.4						
FINES	**FINESS Array B**	**64.89**	**334**	P	**P**	**06 03 24.1**	**-1.0**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
OBN	**Obninsk**	**65.87**	**325⇓**	*e*P	**P**	**06 03 31.5**	**-0.1**
OBN				*e*		06 05 59.3	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb5.0						
NB2	**NORSAR Subarra**	**69.27**	**341**	P	**P**	**06 03 52.2**	**-0.7**
	comp=Z,1.4nm,0.5s,mb4.2,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**69.27**	**341**	P	**P**	**06 03 52.3**	**-0.6**
	comp=Z,1.2nm,0.6s,mb4.0,baz=28,slow=6.4,SNR=7.3						
NOA	**NORSAR Array B**	**69.27**	**341**	P	**P**	**06 03 52.3**	**-0.6**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**70.39**	**197**	P	**P**	**06 04 01.9**	**+1.7**
	comp=Z,0.3nm,0.4s,mb3.5,baz=17,slow=6.8,SNR=3.7						
KIV	**Kislovodsk**	**70.98**	**314**	*e*P	**P**	**06 04 04.2**	**+0.5**
KIV				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
KIV				MLR	MLR		
	comp=Z,49nm,19.0s						
AKASG	**Malin Array Be**	**72.13**	**326**	P	**P**	**06 04 09.6**	**-0.9**
	comp=Z,0.7nm,0.4s,mb4.0,baz=33,slow=5.3,SNR=4.7						
AKASG	**Malin Array Be**	**72.13**	**326**	P	**P**	**06 04 09.6**	**-0.9**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**72.13**	**326**	P	**P**	**06 04 09.6**	**-0.9**
SCHQ	**Schefferville**	**75.18**	**22**	P	**P**	**06 04 27.1**	**-1.2**
	comp=Z,2.0nm,0.8s,mb4.1,baz=329,slow=5.9,SNR=3.2						
CLL	**Collm**	**77.34**	**335⇑**	*i*P	**P**	**06 04 40.6**	**0.0**
CLL				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
CLL	**Collm**	**77.34**	**335⇑**	*i*P	**P**	**06 04 40.6**	**0.0**
	comp=Z,9.0nm,1.1s,mb4.6						
CLL	**Collm**	**77.34**	**335⇑**	*i*P	**P**	**06 04 40.6**	**0.0**
	comp=Z,9.0nm,1.1s,mb4.6						
BRTR	**Keskin Array B**	**78.65**	**316**	P	**P**	**06 04 48.6**	**+0.5**
	comp=Z,0.8nm,0.6s,mb3.8,baz=42,slow=3.8,SNR=5.4						
BRTR	**Keskin Array B**	**78.65**	**316**	P	**P**	**06 04 48.6**	**+0.4**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	**Lajitas Array**	**79.31**	**59**	P	**P**	**06 04 52.5**	**+0.6**
	comp=Z,0.7nm,0.7s,mb3.7,baz=295,slow=3.8,SNR=12						
TXAR	**Lajitas Array**	**79.31**	**59**	P	**P**	**06 04 52.6**	**+0.7**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						

*ISCJB **30** 05:54:40.3±1.4, 7°.8S±0°.1×116°.3E±0°.2, h311km±15km, mb3.8/10, Error ellipse: s-maj=31.0km s-min=8.2km az=147.0*
*NEIC **30** 05:54:41.5±1.4, 7°.80S×116°.32E, h308km±15km, mb4.2/3, Error ellipse: s-maj=22.3km s-min=7.1km az=56.0*
*IDC **30** 05:54:41.7±5.7, 7°.85S×116°.15E, h307km±62km, mb3.5/9, mb1 3.6/10, mb1mx3.4/21, mbtmp3.5/10, Error ellipse: s-maj=36.4km s-min=14.2km az=68.0*

ISC 30 05:54:40.8±1.4, 7°.8S±0°.1×116°.4E±0°.2, h300km±15km, n18, σ0°77/20, mb3.8/10, Bali Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSM	**Kuching**	**11.03**	**327**	Pn	**Pn**	**05 57 11.8**	**+0.1**
	7.2nm,0.4s						
FITZ	**Fitzroy Crossi**	**13.64**	**139**	P	**Pn**	**05 57 42.8**	**-0.4**
	0.7nm,0.3s,baz=327,slow=6.6,SNR=26						
FITZ				S	**S**	**06 00 12.9**	**-0.9**
	0.6nm,0.3s,baz=51,slow=19,SNR=6.1						
KKM	**Kota Kinabalu**	**13.78**	**359**	*e*P	**Pn**	**05 57 44.9**	**0.0**
	8.8nm,0.6s						
KAKA	**Kakadu**	**16.56**	**108**	*e*P	**P**	**05 58 14.7**	**-0.4**
WRAB	**Tennant Creek**	**21.19**	**126**	*e*P	**P**	**05 59 03.7**	**+0.2**
ASAR	**Alice Springs**	**23.05**	**135**	P	**P**	**05 59 21.8**	**+1.3**
	2.9nm,0.3s,mb4.0,baz=308,slow=8.6,SNR=47						
ASAR				S	**S**	**06 03 08.2**	**-0.5**
	0.3nm,0.8s,baz=310,slow=16,SNR=3.5						
ASAR	**Alice Springs**	**23.05**	**135**	P	**P**	**05 59 21.8**	**+1.3**
ASAR				S	**S**	**06 03 08.2**	**-0.5**
NWAO	**Narrogin (SRO)**	**24.99**	**178**	P	**P**	**05 59 38.0**	**+0.2**
	12nm,0.9s,mb4.3,baz=2.7,slow=13,SNR=6.4						
CMAR	**Chiang Mai Arr**	**31.26**	**327**	P	**P**	**06 00 34.0**	**+0.5**
	0.8nm,0.3s,mb3.7,baz=152,slow=6.7,SNR=4.6						
STKA	**Stephens Creek**	**33.54**	**139**	P	**P**	**06 00 54.7**	**+1.6**
	1.4nm,0.6s,mb3.7,baz=318,slow=11,SNR=8.5						
STKA	**Stephens Creek**	**33.54**	**139**	P	**P**	**06 00 54.7**	**+1.6**
KSRS	**Korea Array**	**46.33**	**13**	P	**P**	**06 02 38.0**	**+0.7**
	0.6nm,0.3s,mb3.5,baz=192,slow=7.7,SNR=4.3						
SONM	**Songino Array**	**56.12**	**352**	P	**P**	**06 03 50.1**	**+0.7**
	1.6nm,0.7s,mb3.6,baz=172,slow=9.0,SNR=11						
MKAR	**Makanchi Array**	**62.25**	**334**	P	**P**	**06 04 31.0**	**-0.3**
	0.8nm,0.5s,mb3.6,baz=151,slow=7.5,SNR=10						
ZALV	**Zalesovo Beam**	**67.04**	**340**	P	**P**	**06 05 00.6**	**-1.4**
	1.1nm,0.6s,mb3.8,baz=150,slow=3.8,SNR=4.5						
BVAR	**Borovoye Array**	**72.05**	**333**	P	**P**	**06 05 31.5**	**-0.9**
	1.4nm,0.7s,mb3.7,baz=146,slow=8.2,SNR=7.2						
ABKAR	**Akbulak array**	**75.11**	**326**	*e*P	**P**	**06 05 49.5**	**-0.7**
	2.0nm,0.6s,mb3.9						
TORD	**Torodi Ar. Bea**	**115.67**	**281**	PKP	PKPdf	06 12 48.5	0.0
	0.4nm,0.6s,baz=54,slow=0.6,SNR=3.7						

*NIED **30** 06:01:00, 36°.20N×141°.80E, h26km, Mw3.8 Best double couple: M0:6.67000×10^14 NP1:φs:15.00000°, δ:69.00000°, λ:68.00000°. NP2:φs:243.00000°, δ:29.00000°, λ:135.00000°.*
*ISCJB **30** 06:01:46.8±1.8, 36°.23N±0°.04×141°.86E±0°.10, h27km±12km, mb3.9/6, Error ellipse: s-maj=12.9km s-min=7.4km az=2.3*
*IDC **30** 06:01:46.1±10.0, 36°.52N×141°.84E, h0km, mb3.9/5, mb1 3.9/7, mb1mx3.6/23, mbtmp3.8/7, ML3.6/2, Error ellipse: s-maj=223.9km s-min=45.4km az=158.0*
*NEIC **30** 06:01:47.6, 36°.21N×141°.78E, h58km, MG3.5(JMA), After JMA.*
*JMA **30** 06:01:47.5±0.2, 36°.21N×141°.78E, h58km, M3.5*

ISC 30 06:01:47.7±2.2, 36°.23N±0°.04×141°.79E±0°.08, h19km±14km, n21, σ0°73/26, mb3.9/6, Near east coast of eastern Honshu

JMA 30 06:18:37.5±0.4, 44°.04N×148°.09E, h0km, M4.3, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.83**	**249**	P	Pn	06 19 10.5	+0.3
NEM2				*e*S	Sn	06 19 34.8	+0.8
JRA	**Rausu**	**2.15**	**268**	P	Pn	06 19 15.2	+0.7
JRA				*e*S	Sn	06 19 43.4	+1.6
JNK	**Nakash**	**2.48**	**261**	P	Pn	06 19 20.0	+0.9
JNK				*e*S	Sn	06 19 51.0	+0.9
JAK	**Akkeshi**	**2.68**	**248**	P	Pn	06 19 22.9	+1.0
JAR	**Ashorobuto**	**3.22**	**258**	P	Pn	06 19 31.0	+1.7
JAR				*e*S	Sn	06 20 11.2	+2.8
JCH	**Churui**	**3.73**	**249**	P	Pn	06 19 37.3	+1.0
JCH				*e*S	Sn	06 20 22.0	+1.1
JNBK	**Urakawa-nobuka**	**4.28**	**248**	P	Pn	06 19 45.6	+1.7
JKB	**Kayabe**	**5.61**	**250**	P	Pn	06 20 03.8	+1.7
JKB				*e*S	Sn	06 21 07.0	-0.2
JOT	**Ohata**	**5.83**	**245**	P	Pn	06 20 06.7	+1.6
JANG	**Nango**	**6.10**	**235**	P	Pn	06 20 09.7	+0.8
JANG				*e*S	Sn	06 21 17.4	-2.0

GUC 30 06:19:27.9±0.7, 22°.11S×68°.49W, h128km±17km, MD4.0, ML3.7, 2C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**0.94**	**261**	*e*P	Pn	06 19 57.0	+7.0
PB04				*i* S	Sn	06 20 19.2	+12
PB04				AML	AML	06 20 24.2	
	comp=E,499nm,0.1s						
PB01	**Plate Boundary**	**1.41**	**319⇑**	*e*P	Pn	06 19 55.5	+0.6
PB01				*e*S	Sn	06 20 15.7	+0.2
PB01				AML	AML	06 20 16.7	
	comp=N,604nm,0.4s						
CEN1	**Los Morros**	**2.03**	**231**	*e*P	Pn	06 20 05.4	+3.3
CEN1				*i* S	Sn	06 20 33.7	+5.4
CEN1				AML	AML	06 20 40.9	
	comp=N,452nm,0.5s						
HMBC	**Humberston**	**2.25**	**324⇑**	*i*P	Pn	06 20 05.2	+0.3
HMBC				AML	AML	06 20 37.6	
	comp=E,371nm,0.6s						
ANCH	**Antofagasta**	**2.36**	**228**	*e*P	Pn	06 20 05.6	-0.6
ANCH				*i* S	Sn	06 20 35.0	-0.7
ANCH				AML	AML	06 20 41.9	
	comp=N,550nm,0.6s						
MNMC	**Miæe Miæ**	**3.14**	**341**	*e*P	Pn	06 20 17.3	+1.0
MNMC				*i* S	Sn	06 20 54.8	+1.1
MNMC				AML	AML	06 21 13.6	
	comp=N,198nm,0.6s						

NEIC 30 07:17:56.6, 60°.36N×147°.56W, h16km, ML3.7(PMR), ML3.4(AEIC), After AEIC., Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EYAK	**Cordova Ski Ar**	**0.92**	**77**	P	Pb	07 18 12.4	-1.7
EYAK				S	Sb	07 18 24.7	-1.2
SEW	**Seward**	**0.98**	**255**	P	Pb	07 18 13.2	-1.9
SEW				S	Sb	07 18 26.0	-1.7
MID	**Middleton Isla**	**1.12**	**146**	*e*P	Pb	07 18 16.3	-1.2
KNK	**Knik Glacier**	**1.14**	**338**	P	Pn	07 18 16.1	-1.7
DIV	**Divide**	**1.17**	**48**	P	Pn	07 18 16.4	-1.8
DIV				S	Sb	07 18 31.8	-1.4
RC01	**Rabbit Creek A**	**1.29**	**305**	P	Pn	07 18 18.2	-1.7
RC01				S	Sb	07 18 35.1	-1.7
SLKM	**Skilak Lake**	**1.33**	**277**	P	Pn	07 18 18.6	-1.7
RAGM	**Ragged Mountai**	**1.43**	**88**	P	Pn	07 18 19.9	-1.9
PMR	**Palmer**	**1.45**	**329**	*e*P	Pn	07 18 20.3	-1.8
SCM	**Sheep Creek Mo**	**1.48**	**4**	P	Pn	07 18 21.7	-0.8
SML	**Sawmill**	**1.50**	**346**	P	Pn	07 18 21.8	-0.9
FIB	**Fire Island**	**1.52**	**303**	P	Pn	07 18 22.0	-0.9
GHO	**Glory Hole Cre**	**1.56**	**335**	P	Pn	07 18 22.9	-0.7
BMRM	**Bremner River**	**1.58**	**66**	P	Pn	07 18 22.3	-1.5
BMRM				S	Sn	07 18 44.0	+0.2
BRLK	**Bradley Lake**	**1.77**	**252**	P	Pn	07 18 24.8	-1.7
CNPM	**China Poot**	**2.03**	**247**	P	Pn	07 18 28.2	-1.8
RSO	**Redoubt South**	**2.58**	**274**	*e*Pn	Pn	07 18 35.5	-2.1
PAX	**Paxson**	**2.80**	**20**	*e*Pn	Pn	07 18 40.4	-0.2
PAX				*e*Sn	Sn	07 19 17.2	+3.2
MENT	**Mentasta**	**3.17**	**34**	*e*P	Pn	07 18 45.2	-0.4
PPLA	**Purkeypile**	**3.37**	**321**	*e*Pn	Pn	07 18 49.0	+0.6
PPLA				*e*Sn	Sn	07 19 30.6	+2.7
KDAK	**Kodiak Island**	**3.66**	**227**	*e*Pn	Pn	07 18 50.5	-2.0
SVW2	**Sparrevohn**	**4.01**	**284**	*e*P	Pn	07 18 54.1	-3.1
BPAW	**Bear Paw Mtn.**	**4.08**	**338**	*e*Pn	Pn	07 18 57.3	-0.8
PNL	**Peninsula**	**4.16**	**96**	*e*Pn	Pn	07 18 57.0	-2.2
OHAK	**Old Harbor**	**4.33**	**226**	*e*P	Pn	07 18 59.1	-2.6
COLA	**College**	**4.53**	**358**	*e*Pn	Pn	07 19 03.2	-1.1
TTA	**Tatalina**	**4.78**	**306**	*e*Pn	Pn	07 19 09.2	+1.4
EGAK	**Eagle**	**5.33**	**31**	*e*Pn	Pn	07 19 15.2	-0.1
	24nm,0.6s						
DAWY	**Dawson**	**5.33**	**42**	*e*Pn	Pn	07 19 16.9	+1.6
SKAG	**Skagway**	**6.22**	**93**	*e*P	Pn	07 19 26.0	-1.5
COLD	**Coldfoot**	**6.99**	**352**	*e*Pn	Pn	07 19 37.0	-1.1
	5.8nm,0.4s						

BJI 30 07:26:10.0, 31°.26N×104°.02E, h16km, ML3.5/13, Ms3.4/1, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.41**	**213**	Pg	Pg	07 26 16.8	-1.6
CD2				Sg	Sg	07 26 24.5	+0.4
CD2				smax			
	comp=N,2μm,0.6s						
LZH	**Lanzhou**	**4.82**	**358**	Pg	Pg	07 27 38.8	-3.4
LZH				Sg	Sg	07 28 38.3	-6.3
LZH				smax			
	comp=N

GYA	Guiyang	5.32 153	Pn	Pn	07 27 26.0	-2.7
GYA			Sn	Sn	07 28 31.5	+1.9
GYA			Sg	Sg	07 28 59.8	-0.9
GYA			smax			
	comp=N,70nm,0.9s					
GYA			smax			
	comp=E,60nm,0.7s					

IDC 30 07:59:48.8±2.9, 52°43N×35°03E, h0km, mb1 3.6/3, mb1mx3.2/21, mbtmp3.6/3, ML3.1/3, Error ellipse: s-maj=32.5km s-min=11.0km az=113.0, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKASG	Malin Array Be	4.01	247	Pn	Pn	08 00 49.2	-2.3
	0.5nm,0.3s,baz=355,slow=27,SNR=1.9						
AKASG				Pg	Pg	08 00 59.6	-6.0
	1.5nm,0.3s,baz=56,slow=16,SNR=4.1						
AKASG				Sn	Sn	08 01 38.5	-0.7
	2.3nm,0.3s,baz=61,slow=21,SNR=5.3						
AKASG				Lg		08 01 52.4	
	1.9nm,0.3s,baz=63,slow=27,SNR=3.4						
FINES	Finess Array B	10.27	335	Pn	Pn	08 02 12.2	-5.0
	0.2nm,0.3s,baz=151,slow=17,SNR=3.4						
FINES				Sn	Sn	08 04 03.8	-9.1
	0.2nm,0.3s,baz=142,slow=14,SNR=2.8						
FINES				Lg		08 05 08.9	
	0.1nm,0.3s,baz=158,slow=27,SNR=3.0						
HFS	Hagfors	14.09	312	Pn	Pn	08 03 01.5	-7.9
	0.0nm,0.3s,baz=120,slow=28,SNR=2.0						
ARCES	ARCESS Array B	17.74	349	Pn	Pn	08 03 50.9	-5.9
	0.3nm,0.3s,baz=168,slow=9.2,SNR=13						

IDC 30 08:02:12.9±2.7, 24°71S×115°91W, h0km, mb3.7/2, mb1 4.1/2, mb1mx3.7/12, mbtmp3.7/2, MS3.5/4, Ms1 3.6/4, ms1mx3.5/9, Error ellipse: s-maj=97.8km s-min=42.4km az=34.0, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPT	Papeete	32.13	276	LR	LR	08 17 48.5	
	comp=Z,41nm,18.9s,baz=143,slow=29						
PLCA	Paso Flores	40.90	124	LR	LR	08 21 06.1	
	comp=Z,109nm,20.4s,baz=269,slow=28						
LPAZ	La Paz	45.35	89	P	P	08 10 33.3	+0.1
	0.9nm,0.5s,baz=252,slow=5.1,SNR=6.5						
LPAZ				LR	LR	08 25 44.2	
	comp=Z,95nm,20.4s,baz=229,slow=31						
TXAR	Lajitas Array	55.01	13	LR	LR	08 31 17.9	
	comp=Z,41nm,20.8s,baz=200,slow=32						
NVAR	Mina Array Bea	62.85	358	P	P	08 12 40.8	+0.3
	0.4nm,0.7s,baz=185,slow=9.7,SNR=3.7						
BRTR	Keskin Array B	150.38	52	PKPbc	PKPbc	08 22 07.5	+1.1
	0.4nm,0.5s,baz=349,slow=2.9,SNR=2.9						
MKAR	Makanchi Array	153.60	331	PKPbc	PKPbc	08 22 12.6	-0.9
	0.3nm,0.7s,baz=47,slow=2.6,SNR=4.3						

IDC 30 08:43:21.1±1.8, 1°03N×96°88E, h0km, mb3.8/6, mb1 3.7/7, mb1mx3.6/23, mbtmp3.7/7, ML3.0/1, Error ellipse: s-maj=43.4km s-min=27.8km az=44.0
ISCJB 30 08:43:24.1±1.0, 1°1N±0°1×97°0E±0°1, h33km, mb3.8/7, Error ellipse: s-maj=19.5km s-min=16.2km az=35.4
NEIC 30 08:43:26.6±1.0, 1°12N×97°04E, h35km, mb3.9/1, Error ellipse: s-maj=19.7km s-min=16.0km az=223.0
ISC 30 08:43:26.5±1.0, 1°1N±0°1×97°0E±0°1, h35km, n11, σ1°04/11, mb3.8/7, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	2.51	49	Pn	Pn	08 44 04.5	-0.3
	2.9nm,0.3s,baz=272,slow=6.2,SNR=8.6						
KULM	Kulim	5.48	41	ePn	Pn	08 44 45.1	-0.6
	9.3nm,0.8s						
WRAB	Tennant Creek	42.15	122	eP	P	08 51 15.7	-0.3
ASAR	Alice Springs	43.49	127	P	P	08 51 27.1	+0.3
	0.3nm,0.7s,mb3.1,baz=299,slow=7.4,SNR=4.3						
KSRS	Korea Array	45.99	35	P	P	08 51 47.0	+0.5
	1.4nm,0.6s,mb4.1,baz=223,slow=9.3,SNR=9.2						
SONM	Songino Array	47.21	9	P	P	08 51 57.1	+1.2
	0.3nm,0.3s,mb3.7,baz=178,slow=11,SNR=3.8						
MKAR	Makanchi Array	47.26	346	P	P	08 51 57.7	+1.5
	0.8nm,0.5s,mb3.9,baz=159,slow=9.1,SNR=15						
BVAR	Borovoye Array	56.25	341	P	P	08 53 04.1	+0.9
	0.6nm,0.4s,mb4.0,baz=151,slow=9.5,SNR=3.8						
ABKAR	Akbulak array	57.49	332	eP	P	08 53 12.4	+0.3
	0.7nm,0.7s,mb3.8						
AKTK	Aktyubinsk	59.20	332	P	P	08 53 22.1	-1.9
AKTO	Aktyubinsk	59.20	332	P	P	08 53 22.1	-1.9
	0.8nm,0.6s,mb3.9,baz=125,slow=10,SNR=4.2						

IDC 30 08:55:38.3±2.2, 10°95S×163°73E, h0km, mb3.9/5, mb1 4.1/6, mb1mx3.8/16, mbtmp4.0/6, ML4.5/1, MS3.1/1, Ms1 3.1/1, ms1mx2.5/18, Error ellipse: s-maj=61.2km s-min=33.3km az=143.0
ISCJB 30 08:55:39.8±6.4, 11°0S±0°2×163°6E±0°1, h17km±44km, mb4.0/6, Error ellipse: s-maj=26.9km s-min=18.5km az=24.8
NEIC 30 08:55:44.9±1.2, 10°75S×163°53E, h35km, mb4.2/2, Error ellipse: s-maj=30.9km s-min=16.3km az=137.0
ISC 30 08:55:40.8±6.8, 10°9S±0°2×163°62E±0°10, h12km±42km, n11, σ0°64/13, mb4.0/6, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	3.89	292	Pn	Pn	08 56 40.7	+0.2
	33nm,0.3s,baz=165,slow=3.6,SNR=12						
HNR				Sn	Sn	08 57 25.4	-0.7
	23nm,0.3s,baz=79,slow=18,SNR=5.1						
HNR				LR	LR	08 58 15.0	
	comp=Z,243nm,18.4s,baz=44,slow=39						
HNR	Honiara	3.89	292	ePn	Pn	08 56 40.0	-0.5
HNR				eSn	Sn	08 57 26.7	+0.6
HNR				LR	LR	08 58 15.0	
CTA	Charters Tower	19.05	239	P	Pn	09 00 06.7	+2.9
	0.1nm,0.3s,baz=66,slow=11,SNR=11						
CTAO	Charters Tower	19.05	239	eP	Pn	09 00 03.3	-0.5
	10.0nm,1.0s						
WRAB	Tennant Creek	29.57	249	P	P	09 01 45.1	-0.7
ASAR	Alice Springs	31.01	242	P	P	09 01 58.4	-0.1
	1.2nm,0.8s,mb3.8,baz=68,slow=10,SNR=12						
CMAR	Chiang Mai Arr	70.14	294	P	P	09 06 54.3	+0.6
	2.0nm,0.8s,mb4.1,baz=125,slow=5.3,SNR=5.9						
SONM	Songino Array	77.31	325	P	P	09 07 35.7	+0.5
	0.7nm,0.7s,mb3.7,baz=134,slow=6.2,SNR=4.4						
ILAR	Eielson Array	84.04	19	P	P	09 08 10.4	-0.5
	0.6nm,1.0s,mb3.7,baz=224,slow=3.8,SNR=3.9						
EGAK	Eagle	85.96	21	P	P	09 08 20.5	0.0
	3.0nm,1.1s,mb4.4						
MKAR	Makanchi Array	91.98	317	P	P	09 08 49.5	0.0
	1.0nm,0.8s,mb4.2,baz=102,slow=5.1,SNR=4.6						

IDC 30 08:59:02.3±1.9, 10°95S×163°79E, h0km, mb3.8/5, mb1 4.0/6, mb1mx3.9/16, mbtmp3.9/6, ML4.7/1, Error ellipse: s-maj=57.5km s-min=33.3km az=148.0
ISCJB 30 08:59:06.9±1.0, 10°9S±0°2×163°55E±0°09, h33km, mb3.9/6, Error ellipse: s-maj=23.3km s-min=12.7km az=9.5
NEIC 30 08:59:08.9±1.1, 10°74S×163°62E, h35km, mb4.1/2, Error ellipse: s-maj=31.0km s-min=16.8km az=141.0
ISC 30 08:59:08.8±1.0, 10°8S±0°2×163°58E±0°09, h35km, n12, σ0°85/11, mb3.9/6, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	3.83	291	Pn	Pn	09 00 05.4	+0.1
	51nm,0.3s,baz=42,slow=3.7,SNR=12						
HNR	Honiara	3.83	291	ePn	Pn	09 00 05.2	-0.1
HNR				eSn	Sn	09 00 48.9	-0.2
CTA	Charters Tower	19.06	239	P	Pn	09 03 31.6	+2.3
	0.2nm,0.3s,baz=65,slow=12,SNR=4.8						
CTAO	Charters Tower	19.06	239	eP	Pn	09 03 28.0	-1.3
	3.8nm,0.6s						
ASAR	Alice Springs	31.01	242	P	P	09 05 22.7	-0.6
	0.8nm,0.7s,mb3.7,baz=62,slow=9.5,SNR=8.7						
CMAR	Chiang Mai Arr	70.07	294	P	P	09 10 19.2	+1.4
	0.5nm,0.4s,mb3.8,baz=110,slow=4.1,SNR=4.4						
SONM	Songino Array	77.23	325	P	P	09 10 59.9	+0.6
	0.8nm,1.0s,mb3.6,baz=116,slow=3.4,SNR=3.1						
ILAR	Eielson Array	83.97	19	P	P	09 11 34.3	-0.7
	0.5nm,0.7s,mb3.8,baz=244,slow=6.1,SNR=7.0						
EGAK	Eagle	85.90	21	P	P	09 11 44.8	+0.1
	2.8nm,1.0s,mb4.5						
MKAR	Makanchi Array	91.90	317	P	P	09 12 12.9	-0.7
	0.3nm,0.6s,mb3.8,baz=97,slow=6.2,SNR=3.5						
ARCES	ARCESS Array B	115.56	345	PKP	PKPdf	09 17 46.4	-0.2
	0.6nm,0.5s,baz=64,slow=2.8,SNR=9.0						
ARCES	ARCESS Array B	115.56	345	PKP	PKPdf	09 17 46.4	-0.2

ISCJB 30 09:23:32.9±2.3, 7°34S±0°07×148°3E±0°1, h42km±21km, mb4.3/18, MS3.2/3, Error ellipse: s-maj=20.6km s-min=11.8km az=168.7
IDC 30 09:23:34.6±0.7, 7°36S×148°39E, h44km±5km, mb4.0/13, mb1 4.1/14, mb1mx4.1/18, mbtmp4.0/14, ML3.8/1, MS3.3/5, Ms1 3.3/5, ms1mx3.1/17, Error ellipse: s-maj=24.8km s-min=12.9km az=92.0
NEIC 30 09:23:34.9±0.4, 7°35S×148°26E, mb4.7/4, Error ellipse: s-maj=12.4km s-min=5.9km az=106.0
ISC 30 09:23:35.2±1.8, 7°35S±0°08×148°3E±0°1, h47km±17km, h47km±.5km: pP-P, n35, σ0°72/35, mb4.3/18, MS3.2/3, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	2.31	208	ePn	Pn	09 24 11.2	+0.4
PMG				eSn	Sn	09 24 43.4	+5.3
COEN	Coen	8.25	217	ePn	Pn	09 25 31.1	-1.2
COEN				eSn	Sn	09 26 59.6	-4.6
MTSU	Mount Surprise	11.38	199	eP	Pn	09 26 16.0	+0.8
	74nm,1.3s						
HNR	Honiara	11.74	101	LR	LR	09 30 11.1	
	comp=Z,66nm,20.9s,baz=20,slow=34						
CTA	Charters Tower	12.81	189	eP	Pn	09 26 36.4	+1.7
	1.9nm,0.3s						
CTA	Charters Tower	12.81	189	P	Pn	09 26 35.5	+0.8
	0.3nm,0.3s,baz=9.5,slow=16,SNR=3.7						
CTA				LR	LR	09 30 58.4	
	comp=Z,170nm,19.6s,baz=155,slow=35						
KAKA	Kakadu	16.46	250	eP	Pn	09 27 22.4	-0.6
	7.8nm,0.6s						
KAKA	Kakadu	16.46	250	ePn	Pn	09 27 22.5	-0.5
WRAB	Tennant Creek	18.40	226	eP	Pn	09 27 46.7	-0.2
	8.2nm,0.8s						
RMQ	Roma	19.03	179	eP	Pn	09 27 54.7	+0.2
	5.2nm,0.5s						
QLP	Quilpie	19.50	191	eP	Pn	09 27 59.1	-1.0
GUMO	Guam	21.07	351	LR	LR	09 35 59.0	
	comp=Z,46nm,20.5s,MS2.9,baz=149,slow=35						
ASAR	Alice Springs	21.29	219	P	P	09 28 17.8	-0.1
	2.0nm,0.5s,mb3.7,baz=52,slow=9.2,SNR=35						
FITZ	Fitzroy Crossi	24.48	242	eP	P	09 28 49.4	-0.7
	8.2nm,0.3s,mb4.6						
FITZ	Fitzroy Crossi	24.48	242	P	P	09 28 49.5	-0.6
	2.7nm,0.4s,mb4.0,baz=70,slow=7.0,SNR=26						
STKA	Stephens Creek	25.18	193	eP	P	09 28 56.7	+0.4
	4.1nm,0.5s,mb4.2						
STKA	Stephens Creek	25.18	193	P	P	09 28 56.8	+0.5
	2.8nm,0.4s,mb4.1,baz=3.6,slow=7.8,SNR=22						
STKA				pP	pP	09 29 08.4	-0.1
	5.0nm,0.5s,baz=335,slow=6.3,SNR=5.5						
STKA				LR	LR	09 38 48.8	
	comp=Z,122nm,18.2s,MS3.5,baz=24,slow=36						
YNG	Young	26.82	180	eP	P	09 29 11.0	-0.1
	6.3nm,1.1s,mb4.1						
RPZ	Rata Peaks	41.36	155	P	P	09 31 15.3	-1.3
	5.8nm,0.5s,mb4.5,baz=355,slow=11,SNR=4.9						
MJAR	Matsushiro Arr	44.67	348	P	P	09 31 42.3	-1.1
	10nm,0.9s,mb4.7,baz=178,slow=8.8,SNR=26						
MAJO	Matsushiro	44.67	348	eP	P	09 31 43.0	-0.4
	25nm,1.0s,mb5.0						
MAT	Matsushiro	44.67	348	P	P	09 31 42.7	-0.7
KSRS	Korea Array	48.46	338	P	P	09 32 12.9	-0.1
	4.3nm,0.8s,mb4.5,baz=155,slow=8.4,SNR=19						
KSRS				LR	LR	09 51 23.3	
	comp=Z,36nm,20.2s,MS3.4,baz=138,slow=34						
CMAR	Chiang Mai Arr	54.99	298	P	P	09 33 03.4	+1.2
	1.1nm,0.4s,mb4.3,baz=119,slow=5.7,SNR=8.8						
CMAR				pP	pP	09 33 16.4	+1.2
	1.8nm,0.5s,baz=125,slow=5.5,SNR=4.6						
PETK	Petropavlovsk-	60.76	7	P	P	09 33 42.5	+0.6
	2.2nm,1.0s,mb4.2,baz=146,slow=5.6,SNR=4.1						
GTA	Gaotai	64.58	320	eP	P	09 34 09.0	+1.3
GTA				pP	pP	09 34 13.0	-8.0
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.2						
SONM	Songino Array	66.19	331	P	P	09 34 18.7	+0.7
	comp=Z,1.3nm,0.4s,mb4.3,baz=148,slow=6.4,SNR=12						
MK31	Makanchi Array	79.33	320	eP	P	09 35 36.3	+0.3
MKAR	Makanchi Array	79.33	320	P	P	09 35 36.3	+0.4
	comp=Z,1.2nm,0.5s,mb4.1,baz=99,slow=8.4,SNR=20						
MKAR				pP	pP	09 35 49.3	-0.3
	comp=Z,1.1nm,0.5s,baz=100,slow=6.8,SNR=10						
ZALV	Zalesovo Beam	80.82	328	P	P	09 35 43.3	-0.5
	comp=Z,1.1nm,0.5s,mb4.1,baz=134,slow=4.3,SNR=4.7						
ZALV				pP	pP	09 35 56.8	-0.8
	comp=Z,2.3nm,0.6s,baz=116,slow=6.2,SNR=5.2						
QSPA	South Pole Qui	82.62	180	eP	P	09 35 53.7	+0.7
	comp=Z,14nm,0.9s,mb5.0						
ILAR	Eielson Array	86.23	23	P	P	09 36 10.8	-0.6
	comp=Z,1.5nm,0.7s,mb4.3,baz=253,slow=4.7,SNR=18						
ILAR				pP	pP	09 36 24.1	-1.1
	comp=Z,1.6nm,0.7s,baz=254,slow=4.8,SNR=10						
EGAK	Eagle	88.48	24	eP	P	09 36 21.9	-0.3
	comp=Z,2.7nm,1.0s,mb4.4						
BVAR	Borovoye Array	88.59	324	P	P	09 36 22.8	-0.1
	comp=Z,0.8nm,0.5s,mb4.3,baz=104,slow=6.3,SNR=5.0						
BVAR				pP	pP	09 36 35.8	-1.0
	comp=Z,0.7nm,0.5s,baz=104,slow=6.3,SNR=2.5						
DAWY	Dawson	88.96	25	eP	P	09 36 24.9	+0.5

ISCJB 30 09:23:50.3±0.5, 10°39N±0°03×62°86W±0°03, h19km±5km, Error ellipse: s-maj=5.0km s-min=4.3km az=163.0
FUNV 30 09:23:50.7, 10°39N×62°80W, h7km, MW3.6
TRN 30 09:24:02.0, 10°61N×62°20W, h10km
NEIC 30 09:24:02.0, 10°61N×62°20W, h10km, MD3.2(TRN), After TRN.
ISC 30 09:23:50.5±0.5, 10°41N±0°03×62°84W±0°03, h12km±4km, n28, σ0°97/43, 4C-7D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUNV	Guanoco	0.26	203	⇑iP	Pg	09 23 55.7	-0.3
GUNV				eS	Sg	09 24 00.2	+0.5
CRUV	Carupano	0.47	304	eP	Pg	09 23 59.1	-0.8
CRUV				eS	Sg	09 24 06.5	+0.4
GUIV	Guiria	0.65	68	⇑iP	Pg	09 24 02.0	-1.2
GUIV				eS	Sg	09 24 11.4	-0.3
ITEV	Isla Los Testi	0.99	343	⇓eP	Pb	09 24 08.7	-0.8
ITEV				eS	Sg	09 24 22.7	+0.3
TCE	Chacachacare	1.10	75	⇓iP	Pb	09 24 10.8	-0.7
TCE	Chacachacare	1.10	75	⇓iP	Pb	09 24 10.8	-0.7
TPP	Pointe-a-Pierr	1.37	94	⇓eP	Pn	09 24 18.1	+2.8
TPP	Pointe-a-Pierr	1.37	94	⇓eP	Pn	09 24 18.1	+2.8
TRN	Trinidad (W)	1.43	80	⇑eP	Pn	09 24 16.8	+0.6
TRN				eS	Sn	09 24 28.7	-6.3
TRN	Trinidad (W)	1.43	80	⇑eP	Pn	09 24 16.8	+0.6
TRN				eS	Sn	09 24 28.7	-6.3
ORIV	Oritupano	1.44	203	eP	Pn	09 24 17.4	+1.1
ORIV				eS	Sn	09 24 35.5	+0.3
TBH	Brigand Hill	1.74	87	⇓eP	Pn	09 24 24.0	+3.4
TBH				eS	Sn	09 24 40.3	-2.4
TBH	Brigand Hill	1.74	87	⇓eP	Pn	09 24 24.0	+3.4
TBH				eS	Sn	09 24 40.3	-2.4
PCRV	Puerto La Cruz	1.79	263	eP	Pn	09 24 21.6	+0.5
GRW	Mount Saint Ca	2.09	33	eP	Pn	09 24 30.6	+5.3
GRW				eS	Sn	09 24 53.0	+1.7
GRW	Mount Saint Ca	2.09	33	eP	Pn	09 24 30.6	+5.3
GRW				eS	Sn	09 24 53.0	+1.7
PRGV	PARIAGUAN	2.42	228	eP	Pn	09 24 30.6	+0.8
RIOV	Rio Grande	2.53	156	eP	Pn	09 24 32.0	+0.6
RIOV				eS	Sn	09 25 01.1	-1.1
GURV	El Guri	2.64	185	eP	Pn	09 24 33.6	+0.7
CUPV	Cœpira	2.92	263	eP	Pn	09 24 37.4	+0.6
CUPV				eS	Sn	09 25 11.4	-0.5
BIRV	Birongo	3.38	271	eP	Pn	09 24 43.4	+0.4
MERV	Las Mercedes	3.60	252	eP	Pn	09 24 46.8	+0.7
MERV				eS	Sn	09 25 26.3	-2.2
CAOV	Caicara del Or	4.61	229	eP	Pn	09 24 59.7	-0.3
CAOV				eS	Sn	09 25 49.5	-3.9
LUEV	Luepa	4.73	163	eP	Pn	09 25 01.6	-0.1
TURV	Turiamo	4.92	271	eP	Pn	09 25 03.6	-0.6
BAUV	El Baul	5.33	255	eP	Pn	09 25 09.7	-0.3
MAPV	Macapo	5.56	265	eP	Pn	09 25 12.9	-0.2
MONV	Montecano	7.17	283	eP	Pn	09 25 34.8	-0.4

CSEM 30 09:49:15.5, 46°87N×8°61E, h-1km, ML1.0, Suspected Mining explosion. After ZUR
ZUR 30 09:49:15.5, 46°87N×8°61E, h-1km±7km, ML1.0/4, 4C, Suspected Mining explosion., Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MUO	Muotathal	0.10	12	⇑iPg		09 49 18.1	
	138nm,0.6s						
MUO	Muotathal	0.10	12	⇑iPg		09 49 18.1	
	138nm,0.6s						
BNALP	Bannalp	0.12	271	⇑iPg		09 49 18.5	
	112nm,0.3s						
BNALP	Bannalp	0.12	271	⇑iPg		09 49 18.5	
	112nm,0.3s						
HASLI	Hasliberg/Brie	0.33	251	ePg		09 49 22.5	
	31nm,0.6s						
HASLI	Hasliberg/Brie	0.33	251	ePg		09 49 22.5	
	31nm,0.6s						
FUSIO	Fusio	0.41	175	ePg		09 49 24.2	
	8.9nm,0.9s						
FUSIO	Fusio	0.41	175	ePg		09 49 24.2	
	8.9nm,0.9s						

ISCJB 30 09:50:44.9±0.9, 16°64N±0°04×61°08W±0°07, h27km±4km, Error ellipse: s-maj=12.1km s-min=4.1km az=155.5
TRN 30 09:50:45.5, 16°51N×61°20W, h26km, MD3.7, MD3.6(FDF)
TRN Felt II, III, Guadeloupe.
NEIC 30 09:50:46.7, 16°52N×61°19W, h35km, MD3.7(TRN), After TRN.
ISC 30 09:50:45.7±1.0, 16°60N±0°04×61°12W±0°07, h22km±5km, n39, σ0°89/62, 4C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEG	La Desirade	0.29	169	⇑iP	Pb	09 50 52.7	+0.3
SFG	Saint Francois	0.35	192	eP	Pb	09 50 53.5	+0.1
SEG	Port Louis	0.42	242	⇑iP	Pb	09 50 54.8	+0.3
BCG	Bois Riant Cap	0.70	223	eP	Pb	09 50 59.1	-0.2
MGG	Marie-Galante	0.70	196	⇑iP	Pb	09 50 59.1	-0.2
PHG	Guadaloupe-2	0.77	221	eP	Pb	09 51 00.3	-0.1
LZG	Guadaloupe-1	0.78	234	⇑iP	Pb	09 51 00.2	-0.4
SCG	Saint Claude	0.78	224	eP	Pb	09 51 00.7	0.0
HMG	Houelmont	0.83	222	eP	Pb	09 51 01.2	-0.3
TBG	Guadaloupe-3	0.90	214	eP	Pb	09 51 02.2	-0.5
DWS	Wesley	1.04	190	eP	Pn	09 51 05.5	+0.5
DWS				eS	Sb	09 51 19.6	+1.3
DWS	Wesley	1.04	190	eP	Pn	09 51 05.5	+0.5
DWS				eS	Sb	09 51 18.3	0.0
BBL	Barber's Block	1.12	198	eP	Pn	09 51 04.8	-1.2
ANWB	Willy Bob	1.24	329	ePn	Pn	09 51 06.5	-1.2
ANWB				eSn	Sn	09 51 20.4	-3.3
DLPL	La Plaine	1.27	186	eP	Pn	09 51 07.2	-0.9
DLPL				eS	Sn	09 51 24.3	-0.1
MDN	Morne-Daniel	1.30	192	eP	Pn	09 51 08.5	-0.1
MDN				eS	Sn	09 51 25.4	+0.2
MDN	Morne-Daniel	1.30	192	eP	Pn	09 51 08.5	-0.1
MDN				eS	Sn	09 51 25.4	+0.2
DPMT	Pointe Michel	1.35	191	eP	Pn	09 51 08.6	-0.7
DPMT				eS	Sn	09 51 25.5	-1.1
DPMT	Pointe Michel	1.35	191	eP	Pn	09 51 08.6	-0.7
DPMT				eS	Sn	09 51 25.5	-1.1
DSTT	Stowe	1.36	188	eP	Pn	09 51 09.0	-0.3
DSTT				eS	Sn	09 51 26.2	-0.5
DSTT	Stowe	1.36	188	eP	Pn	09 51 09.0	-0.3
DSTT				eS	Sn	09 51 26.2	-0.5
DFBT	Forest Bistro	1.37	190	eP	Pn	09 51 09.5	0.0
DFBT	Forest Bistro	1.37	190	eP	Pn	09 51 09.5	0.0
DFBT				eS	Sn	09 51 26.9	-0.1
DSHT	Scott's Head	1.40	190	eP	Pn	09 51 10.4	+0.5
DSHT				eS	Sn	09 51 27.3	-0.4
DSHT	Scott's Head	1.40	190	eP	Pn	09 51 10.4	+0.5
DSHT				eS	Sn	09 51 27.3	-0.4
SKI	Saint Kitts	1.71	295	eP	Pn	09 51 15.3	+1.1
SKI				eS	Sn	09 51 36.2	+0.8
SKI	Saint Kitts	1.71	295	eP	Pn	09 51 15.3	+1.1
SKI				eS	Sn	09 51 36.2	+0.8
FDF	Fort de France	1.86	181	eP	Pn	09 51 15.3	-1.0
FDF				eS	Sn	09 51 41.7	+2.7
MVM	Montagne Vaucl	2.05	174	eP	Pn	09 51 18.5	-0.3
MVM				eS	Sn	09 51 44.9	+1.2
BIM	Bigot	2.07	179	eP	Pn	09 51 19.3	+0.2
SLB	Belfond	2.76	178	eP	Pn	09 51 29.6	+0.9
SLB				eS	Sn	09 52 04.3	+3.0
SLB	Belfond	2.76	178	eP	Pn	09 51 29.6	+0.9
SLB				eS	Sn	09 52 00.3	-1.0
MCLT	Moule a Chique	2.88	177	eP	Pn	09 51 30.8	+0.5
MCLT				eS	Sn	09 52 03.2	-1.1
MCLT	Moule a Chique	2.88	177	eP	Pn	09 51 30.8	+0.5
MCLT				eS	Sn	09 52 03.2	-1.1
SVB	Belmont	3.31	182	eP	Pn	09 51 39.4	+3.2
SVB	Belmont	3.31	182	eP	Pn	09 51 36.4	+0.2
GRGR	Grenville	4.47	187	ePn	Pn	09 51 53.2	+1.0
MTP	Monte Pirata	4.49	290	ePn	Pn	09 51 53.0	+0.6
MTP				eSn	Sn	09 52 42.4	-1.6
CBYP	Canovanas	4.82	291	ePn	Pn	09 51 57.7	+0.8
CBYP				eSn	Sn	09 52 55.3	+3.2

BUC 30 10:09:31.5±0.1, 46°99N×22°14E, h0km, MD2.5/2, 8C-2D, Error ellipse: s-maj=3.3km s-min=1.2km az=105.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRGR		0.44	116	⇑iP	Pg	10 09 40.3	+0.4
DRGR				iS

ISC 30 10:23:35.2±0.2,16°30N±0°03×95°71W±0°02,h43km, h43km±.5km:pP-P,n1066,σ0°79/1000,mb5.2/232, MS4.7/143,188C-212D,Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.65**	**216**	*e*P	**Pn**	**10 23 40.5**	**-7.6**
HUIG				*e*S	**Sn**	**10 23 46.6**	**-11**
HUIG	**Huatulco**	**0.65**	**216**	*e*P	**Pn**	**10 23 40.5**	**-7.5**
HUIG				*e*S	**Sn**	**10 23 46.2**	**-11**
CMIG	**Matias Romero**	**1.12**	**45**	Pn	**Pn**	**10 23 56.5**	**+2.2**
	648nm,0.3s,baz=225,slow=9.5,SNR=5000						
CMIG				Sn	**Sn**	**10 24 08.2**	**-0.4**
	2μm,0.3s,baz=246,slow=12,SNR=40						
VHO	**Vista Hermosa**	**1.25**	**308**	*e*P	**Pn**	**10 23 53.2**	**-2.9**
VHO				*e*S	**Sn**	**10 24 09.3**	**-2.4**
VHO	**Vista Hermosa**	**1.25**	**308**	*e*P	**Pn**	**10 23 53.2**	**-2.9**
VHO				*e*S	**Sn**	**10 24 09.3**	**-2.4**
PNIG	**Pinotepa**	**2.32**	**273**	*e*P	**Pn**	**10 24 04.4**	**-6.5**
PNIG				*e*S	**Sn**	**10 24 26.9**	**-11**
PNIG	**Pinotepa**	**2.32**	**273**	*e*P	**Pn**	**10 24 04.4**	**-6.5**
PNIG				*e*S	**Sn**	**10 24 26.9**	**-11**
PCIG		**2.47**	**104**	*e*P	**Pn**	**10 24 15.2**	**+2.3**
PCIG				*e*S	**Sn**	**10 24 46.4**	**+4.6**
TGIG		**2.53**	**79**	*e*P	**Pn**	**10 24 16.5**	**+2.8**
TGIG				*e*S	**Sn**	**10 24 51.3**	**+8.0**
TPIG	**Tehuac#an**	**2.63**	**323**	*e*P	**Pn**	**10 24 14.6**	**-0.6**
TPIG				*i* S	**Sn**	**10 24 45.5**	**-0.3**
LVIG	**Laguna Verde**	**3.47**	**349**	*e*P	**Pn**	**10 24 27.0**	**+0.3**
LVIG				*i* S	**Sn**	**10 25 10.6**	**+4.0**
THIG		**3.60**	**112**	*e*P	**Pn**	**10 24 29.4**	**+0.9**
THIG				*e*S	**Sn**	**10 25 13.2**	**+3.5**
YAIG	**Yautepec**	**4.09**	**309**	*e*P	**Pn**	**10 24 33.6**	**-1.6**
YAIG				*i* S	**Sn**	**10 25 17.2**	**-4.6**
PLIG	**Platanillo**	**4.18**	**300**	*e*P	**Pn**	**10 24 36.6**	**+0.2**
PLIG				*e*S	**Sn**	**10 25 17.7**	**-6.3**
PLIG	**Platanillo**	**4.18**	**300**	*i* P	**Pn**	**10 24 32.4**	**-3.9**
PLIG				*e*S	**Sn**	**10 25 17.7**	**-6.3**
CAIG	**El Cayaco**	**4.43**	**280**	*e*P	**Pn**	**10 24 33.5**	**-6.3**
CAIG				*e*S	**Sn**	**10 25 15.6**	**-15**
CAIG	**El Cayaco**	**4.43**	**280**	*e*P	**Pn**	**10 24 33.5**	**-6.4**
CAIG				*i* S	**Sn**	**10 25 20.2**	**-10**
UNM	**Universidad Na**	**4.47**	**313**	*i* P	**Pn**	**10 24 38.1**	**-2.3**
UNM				*i* S	**Sn**	**10 25 28.4**	**-2.7**
SCIG	**Sabancuy**	**5.07**	**58**	*e*P	**Pn**	**10 24 50.5**	**+2.0**
SCIG				*i* S	**Sn**	**10 25 54.6**	**+8.7**
DEIG	**Demacu**	**5.08**	**322**	*e*P	**Pn**	**10 24 48.6**	**-0.2**
DEIG				*i* S	**Sn**	**10 25 46.1**	**-0.1**
ZIIG	**Zihuatanejo**	**5.66**	**284**	*e*P	**Pn**	**10 24 51.8**	**-4.9**
ZIIG	**Zihuatanejo**	**5.66**	**284**	*e*P	**Pn**	**10 24 51.8**	**-4.9**
ZIIG				*i* S	**Sn**	**10 25 51.3**	**-9.2**
MOIG	**Morelia**	**6.20**	**304**	*i* P	**Pn**	**10 25 00.6**	**-3.6**
MOIG				*i* S	**Sn**	**10 26 08.6**	**-5.2**
TEIG	**Tepich**	**8.07**	**60**	*e*Pn	**Pn**	**10 25 29.8**	**0.0**
TEIG				*e*Sn	**Sn**	**10 26 58.0**	**-1.8**
TGUH	**Tegucigalpa,Un**	**8.45**	**104**	*e*Pn	**Pn**	**10 25 36.9**	**+1.9**
	295nm,0.9s						
LNIG	**Linares**	**9.25**	**338**	*i* P	**Pn**	**10 25 46.6**	**+0.7**
LNIG				*i* S	**Sn**	**10 27 32.0**	**+3.3**
ANIG	**Ahuacatlan**	**9.59**	**301**	*i* P	**Pn**	**10 25 49.1**	**-1.6**
ANIG				*i* S	**Sn**	**10 27 32.8**	**-4.4**
KVTX	**Kingsville**	**11.37**	**350**	*e*Pn	**Pn**	**10 26 15.9**	**+0.8**
	30nm,0.8s						
JTS	**JuntasAbangare**	**12.05**	**118**	Pn	**Pn**	**10 26 27.7**	**+3.3**
	790nm,0.6s,SNR=28						
JTS	**JuntasAbangare**	**12.05**	**118**	Pn	**Pn**	**10 26 27.1**	**+2.7**
	9.6nm,0.3s,baz=308,slow=7.2,SNR=34						
JTS	**JuntasAbangare**	**12.05**	**118**	*c i* P	**Pn**	**10 26 27.0**	**+2.6**
JTS	**JuntasAbangare**	**12.05**	**118**	*e*Pn	**Pn**	**10 26 26.6**	**+2.2**
HKT	**Hockley**	**13.59**	**360**	*e*P	**Pn**	**10 26 44.8**	**-0.5**
HKT				*e*		10 29 11.6	
HKT				pmax	pmax		
	comp=Z,269nm,1.5s						
HKT	**Hockley**	**13.59**	**360**	*e*Pn	**Pn**	**10 26 44.8**	**-0.5**
	comp=Z,269nm,1.5s						
HKT				*e*Sn	**Sn**	**10 29 11.6**	**-3.3**
HPIG		**14.05**	**321**	*i* P	**Pn**	**10 26 50.7**	**-1.0**
HPIG				*i* S	**Sn**	**10 29 21.6**	**-4.6**
JCT	**Junction City**	**14.60**	**346**	*e*P	**Pn**	**10 26 58.7**	**-0.4**
628A	**Black Gap, Mar**	**14.69**	**335**	⇓P	**Pn**	**10 27 00.8**	**+0.6**
	baz=15,SNR=40						
TXAR	**Lajitas Array**	**14.89**	**332**	Pn	**Pn**	**10 27 03.0**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=148,slow=14,SNR=78						
TXAR				LR	LR	10 33 17.2	
	comp=Z,1μm,18.2s,baz=10.0,slow=39						
528A	**Cox Ranch, San**	**15.24**	**336**	⇑P	**Pn**	**10 27 08.0**	**+0.5**
	baz=15,SNR=69						
626A	**Big Bend Ranch**	**15.29**	**331**	⇓P	**Pn**	**10 27 08.4**	**+0.2**
	baz=15,SNR=37						
NATX	**Nacogdoches**	**15.42**	**3**	*e*Pn	**Pn**	**10 27 10.4**	**+0.7**
	comp=Z,944nm,1.6s						
527A	**Woodward Ranch**	**15.57**	**334**	⇑P	**Pn**	**10 27 12.4**	**+0.7**
	baz=16,SNR=100						
526A	**Mary Lane Ranc**	**15.70**	**332**	⇓P	**Pn**	**10 27 13.7**	**+0.3**
	baz=16,SNR=58						
428A	**Kincaid Ranch,**	**15.71**	**337**	⇓P	**Pn**	**10 27 14.4**	**+0.8**
	baz=16,SNR=68						
427A	**Hayter Ranch,**	**16.10**	**335**	⇑P	**Pn**	**10 27 19.0**	**+0.5**
	baz=16,SNR=59						
426A	**McDonald Obser**	**16.20**	**333**	⇓P	**Pn**	**10 27 20.3**	**+0.5**
	baz=16,SNR=88						
328A	**Wristen Ranch,**	**16.35**	**338**	⇑P	**Pn**	**10 27 21.5**	**-0.2**
	baz=16,SNR=51						
VBMS	**Vicksburg**	**16.54**	**16**	Pn	**Pn**	**10 27 26.6**	**+2.6**
	comp=Z,133nm,1.1s						
VBMS				*e*Sn	**Sn**	**10 30 30.2**	**+3.7**
327A	**Balmorhea Ranc**	**16.59**	**336**	⇓P	**Pn**	**10 27 24.9**	**+0.2**
	baz=17						
BRAL	**Brewton**	**16.64**	**27**	*e*Pn	**Pn**	**10 27 30.0**	**+4.7**
	comp=Z,532nm,1.5s						
BRAL				*e*Sn	**Sn**	**10 30 27.4**	**-1.7**
425A	**Indio Mountain**	**16.73**	**331**	⇓P	**Pn**	**10 27 26.4**	**0.0**
	baz=17,SNR=128						
326A	**Caldwell Ranch**	**16.74**	**335**	⇑P	**Pn**	**10 27 27.0**	**+0.4**
	baz=17,SNR=94						
227A	**Bennet, Jal**	**17.09**	**338**	⇑P	**Pn**	**10 27 31.1**	**+0.1**
	baz=17						
325A	**Bean Ranch, Si**	**17.21**	**332**	⇑P	**Pn**	**10 27 32.1**	**-0.3**
	baz=17,SNR=46						
226A	**Malaga, Loving**	**17.45**	**336**	⇑P	**Pn**	**10 27 35.5**	**+0.2**
	baz=17,SNR=43						
MTDJ	**Mount Denham**	**17.47**	**81**	*e*Pn	**Pn**	**10 27 38.7**	**+3.0**
	comp=Z,128nm,1.0s						
324A	**Moseley Ranch,**	**17.51**	**331**	⇓P	**Pn**	**10 27 35.9**	**-0.3**
	baz=18,SNR=56						
CLNB	**Carlsbad**	**17.54**	**336**	*e*Pn	**Pn**	**10 27 36.9**	**+0.4**
	comp=Z,29nm,0.6s						
DWPF	**Disney**	**17.67**	**46**	*e*Pn	**Pn**	**10 27 37.0**	**-1.2**
	comp=Z,195nm,0.9s						
GDL2	**Guadalupe Moun**	**17.67**	**335**	*e*Pn	**Pn**	**10 27 38.5**	**+0.4**
MNTX	**Cornudas Mount**	**17.68**	**332**	*e*Pn	**Pn**	**10 27 37.2**	**-0.9**
	comp=Z,89nm,1.6s						
127A	**Arkansas Junct**	**17.71**	**338**	⇓P	**Pn**	**10 27 38.1**	**-0.6**
	baz=18,SNR=59						
225A	**Deer Hill, Car**	**17.78**	**334**	⇑P	**Pn**	**10 27 39.4**	**-0.1**
	baz=18,SNR=48						
225A				⇓S	**S**	**10 31 04.0**	**+1.8**
	baz=18						
126A	**Clayton Basin,**	**17.93**	**337**	⇓P	**Pn**	**10 27 41.0**	**-0.3**
	baz=18,SNR=26						
224A	**Cornudas Mount**	**18.06**	**332**	⇓P	**Pn**	**10 27 42.5**	**-0.4**
	baz=18,SNR=32						
224A				⇓S	**S**	**10 31 10.9**	**+3.1**
	baz=18						
125A	**Gardner Draw,**	**18.19**	**335**	⇓P	**Pn**	**10 27 44.3**	**-0.2**
	baz=18,SNR=51						
125A				⇑S	**S**	**10 31 12.2**	**+1.8**
	baz=18						
CPRX	**Cap Rock**	**18.22**	**338**	*e*P	**Pn**	**10 27 44.1**	**-0.7**
	comp=Z,61nm,1.1s						
CPRX				*e*PcP	PcP	10 32 13.8	-2.2
Z27A	**Tatum**	**18.25**	**340**	⇓P	**Pn**	**10 27 44.5**	**-0.6**
	baz=18,SNR=147						
MIAR	**Mount Ida**	**18.27**	**6**	*e*P	**Pn**	**10 27 45.3**	**-0.1**
223A	**Chaparral, Ant**	**18.42**	**330**	⇓P	**Pn**	**10 27 46.5**	**-0.7**
	baz=18						
LRAL	**Lakeview Retre**	**18.43**	**24**	*e*P	**Pn**	**10 27 49.2**	**+1.8**
	comp=Z,61nm,1.1s						
LRAL				*e*S	**Sn**	**10 31 00.9**	**-12**
Z26A	**Caprock**	**18.48**	**338**	⇓P	**Pn**	**10 27 46.9**	**-1.1**
	baz=18,SNR=43						
124A	**Stringfield Ra**	**18.56**	**333**	⇓P	**Pn**	**10 27 48.7**	**-0.2**
	baz=18,SNR=36						
WMOK	**Wichita Mounta**	**18.57**	**352**	*e*P	**Pn**	**10 27 47.9**	**-1.1**
WMOK				*e*S	**Sn**	**10 31 06.2**	**-9.4**
UALR	**University of**	**18.64**	**9**	*e*Pn	**Pn**	**10 27 50.5**	**+0.5**
	comp=Z,372nm,1.0s						
MSTX	**Muleshoe**	**18.71**	**341**	⇓P	**Pn**	**10 27 49.4**	**-1.3**
	baz=19,SNR=56						
Z25A	**Roswell**	**18.76**	**336**	⇑P	**Pn**	**10 27 50.1**	**-1.3**
	baz=19,SNR=50						
222A	**Williams Famil**	**18.83**	**329**	⇓P	**Pn**	**10 27 51.4**	**-0.9**
	baz=19,SNR=22						
SRIG	**Santa Rosalia**	**18.84**	**308**	*i* P	**Pn**	**10 27 53.2**	**+0.8**
123A	**Bell Site, Whi**	**18.86**	**331**	⇓P	**Pn**	**10 27 51.8**	**-0.8**
	baz=19,SNR=14						
HSIG		**18.89**	**315**	*i* P	**Pn**	**10 27 51.7**	**-1.3**
HSIG				*i* S	**Sn**	**10 31 14.4**	**-9.3**
320A	**Kipp Ranch, An**	**18.99**	**324**	⇓P	**Pn**	**10 27 53.7**	**-0.4**
	baz=19,SNR=72						
OXF	**Oxford**	**19.00**	**16**	*e*P	**Pn**	**10 27 53.4**	**-0.8**
OXF				pmax	pmax		
	comp=Z,184nm,1.1s						
OXF	**Oxford**	**19.00**	**16**	*e*P	**Pn**	**10 27 53.4**	**-0.8**
	comp=Z,184nm,1.1s						
Y26A	**Elida**	**19.01**	**339**	⇑P	**Pn**	**10 27 53.0**	**-1.4**
	baz=19,SNR=45						
Z24A	**Sheeppen Canyo**	**19.07**	**335**	⇓P	**Pn**	**10 27 54.5**	**-0.6**
	baz=19,SNR=70						
221A	**Mesquite Ranch**	**19.10**	**327**	⇓P	**Pn**	**10 27 55.3**	**-0.1**
	baz=19,SNR=13						
AMTX	**Amarillo**	**19.26**	**345**	*e*P	**Pn**	**10 27 55.3**	**-2.1**
	comp=Z,103nm,1.0s						
122A	**Conniff Cattle**	**19.27**	**330**	⇑P	**Pn**	**10 27 56.4**	**-1.1**
	baz=19,SNR=12						
Y25A	**Mesa, Roswell**	**19.32**	**337**	⇑P	**Pn**	**10 27 56.4**	**-1.7**
	baz=19,SNR=163						
Z23A	**Rita Site, Whi**	**19.38**	**333**	⇑P	**Pn**	**10 27 57.8**	**-1.0**
	baz=19,SNR=44						
220A	**Playas Peak, P**	**19.42**	**325**	⇓P	**Pn**	**10 27 58.2**	**-1.1**
	baz=19,SNR=60						
X27A	**F and S Farms,**	**19.43**	**341**	⇑P	**Pn**	**10 27 57.3**	**-2.1**
	baz=19,SNR=30						
319A	**Douglas**	**19.45**	**323**	⇓P	**Pn**	**10 27 58.7**	**-0.9**
	baz=19,SNR=34						
121A	**Cookes Peak, D**	**19.52**	**328**	⇑P	**Pn**	**10 27 59.8**	**-0.6**
	baz=20,SNR=102						
X26A	**CR and CF Fran**	**19.57**	**340**	⇑P	**Pn**	**10 27 59.1**	**-2.0**
	baz=20,SNR=150						
Y24A	**Capitan**	**19.61**	**335**	⇓P	**Pn**	**10 28 00.4**	**-1.2**
	baz=20,SNR=177						
HBAR	**Harrisburg**	**19.70**	**12**	*e*P	**Pn**	**10 28 02.1**	**-0.5**
Z22A	**Elephant Butte**	**19.71**	**331**	⇓P	**Pn**	**10 28 01.2**	**-1.5**
	baz=20,SNR=106						
W27A	**Bowe Ranch, En**	**19.81**	**342**	⇓P	**Pn**	**10 28 01.8**	**-2.1**
	baz=20,SNR=91						
X25A	**Clemmons Ranch**	**19.85**	**338**	⇓P	**Pn**	**10 28 01.9**	**-2.4**
	baz=20						
Y23A	**Lovelace Mesa,**	**19.87**	**334**	⇓P	**Pn**	**10 28 03.5**	**-1.1**
	baz=20						
219A	**White Tail Can**	**19.89**	**324**	⇓P	**Pn**	**10 28 03.7**	**-1.2**
	baz=20,SNR=107						
GTBY	**Guantanamo Bay**	**19.91**	**76**	*e*Pn	**Pn**	**10 28 05.5**	**+0.4**
	comp=Z,278nm,1.1s						
120A	**U Bar Ranch, L**	**19.97**	**326**	⇑P	**Pn**	**10 28 04.8**	**-1.0**
	baz=20,SNR=86						
W26A	**Owens Ranch, T**	**20.05**	**340**	⇑P	**P**	**10 28 04.5**	**-0.2**
	baz=20,SNR=34						
Z21A	**St. Cloud Mine**	**20.09**	**330**	⇑P	**P**	**10 28 06.1**	**+1.0**
	baz=20,SNR=19						
X24A	**Lazy VL Ranch,**	**20.17**	**336**	⇓P	**P**	**10 28 06.3**	**+0.3**
	baz=20,SNR=6.3						
GNAR	**Gosnell**	**20.23**	**13**	*e*Pn	**P**	**10 28 07.8**	**+1.2**
	comp=Z,4μm,1.0s						
Y22A	**Socorro**	**20.27**	**332**	⇑P	**P**	**10 28 07.9**	**+0.7**
	baz=20,SNR=91						
BNM	**Barren Site**	**20.31**	**333**	*e*P	**P**	**10 28 08.3**	**+0.8**
	comp=Z,79nm,0.9s						
GOGA	**Godfrey**	**20.31**	**31**	*e*P	**P**	**10 28 07.8**	**+0.3**
GOGA				*e*S	**S**	**10 31 47.8**	**-5.1**
GOGA				pmax	pmax		
	comp=Z,310nm,1.3s						
GOGA				MLR	MLR		
	comp=Z,2μm,21.0s,MS4.4						
GOGA	**Godfrey**	**20.31**	**31**	*e*P	**P**	**10 28 07.8**	**+0.3**
	comp=Z,310nm,1.3s						
GOGA				*e*S	**S**	**10 31 47.8**	**-5.1**
GOGA				LR	LR		
	comp=Z,2μm,21.0s,MS4.4						
218A	**Dragoon**	**20.33**	**323**	⇓P	**P**	**10 28 08.3**	**+0.6**
	baz=20,SNR=7.5						
HALT	**Halls**	**20.34**	**15**	*e*P	**P**	**10 28 07.3**	**-0.5**
Y22D	**IRIS PASSCAL I**	**20.37**	**332**	⇑P	**P**	**10 28 09.2**	**+1.1**
	baz=20,SNR=10.0						
Z20A	**Nine Sixteen R**	**20.39**	**328**	⇑P	**P**	**10 28 09.4**	**+1.0**
	baz=20,SNR=87						
W25A	**X Bar L Ranch,**	**20.40**	**339**	⇑P	**P**	**10 28 08.4**	**-0.1**
	baz=20,SNR=110						
LPM	**Los Pinos Moun**	**20.45**	**333**	*e*P	**P**	**10 28 09.6**	**+0.6**
X23A	**Hourglass Bar**	**20.49**	**335**	⇓P	**P**	**10 28 10.1**	**+0.7**
	baz=20,SNR=112						
119A	**Ashpeak Ranch,**	**20.50**	**326**	⇑P	**P**	**10 28 10.7**	**+1.1**
	baz=20,SNR=44						
217A	**Green Valley**	**20.64**	**321**	⇑P	**P**	**10 28 11.8**	**+0.7**
	baz=21,SNR=120						
Y21A	**Point of Rocks**	**20.66**	**331**	⇑P	**P**	**10 28 12.6**	**+1.3**
	baz=21,SNR=46						
PVMO	**Portageville**	**20.73**	**14**	*e*P	**P**	**10 28 13.3**	**+1.2**
	comp=Z,203nm,0.6s						
W24A	**Lazy 6 Ranch,**	**20.73**	**337**	⇑P	**P**	**10 28 12.3**	**+0.2**
	baz=21,SNR=64						
LAZ	**Ladron**	**20.74**	**332**	*e*P	**P**	**10 28 13.2**	**+1.0**
	comp=Z,66nm,1.3s						
SWET	**Sewanee**	**20.77**	**23**	*e*P	**P**	**10 28 11.7**	**-0.8**
118A	**Homack Ranch,**	**20.77**	**324**	⇓P	**P**	**10 28 13.3**	**+0.8**
	baz=21,SNR=88						
X22A	**Bernardo**	**20.77**	**333**	⇓P	**P**	**10 28 13.9**	**+1.4**
	baz=21						
UTMT	**University of**	**20.87**	**16**	*e*P	**P**	**10 28 13.4**	**-0.1**
	comp=Z,273nm,1.3s						
Z19A	**T-Link Ranch,**	**20.88**	**327**	⇑P	**P**	**10 28 14.6**	**+0.9**
	baz=21,SNR=15						
Y20A	**Horse Springs,**	**20.92**	**329**	⇓P	**P**	**10 28 15.2**	**+1.1**
	baz=21,SNR=63						
ANMO	**Albuquerque**	**20.92**	**335**	P	**P**	**10 28 14.2**	**+0.1**
	comp=Z,11nm,0.7s,baz=146,slow=12,SNR=59						
ANMO				LR	LR	10 37 21.4	
	comp=Z,1μm,18.4s,MS4.4,baz=155,slow=40						
ANMO	**Albuquerque**	**20.92**	**335**	*e*P	**P**	**10 28 14.1**	**0.0**
ANMO				pmax	pmax		
	comp=Z,53nm,1.0s						
ANMO				MLR	MLR		
	comp=Z,2μm,20.0s						
ANMO	**Albuquerque**	**20.92**	**335**	*e*P	**P**	**10 28 14.1**	**0.0**
	comp=Z,53nm,1.0s						
ANMO				LR	LR		
	comp=Z,2μm,20.0s,MS4.4						
WVT	**Waverly**	**20.96**	**18**	*e*P	**P**	**10 28 13.7**	**-0.8**
WVT				pmax	pmax		
	comp=Z,85nm,0.9s						
WVT	**Waverly**	**20.96**	**18**	*e*P	**P**	**10 28 13.7**	**-0.9**
	comp=Z,85nm,0.9s						
PARMO	**Parma**	**20.96**	**13**	*e*P	**P**	**10 28 14.8**	**+0.3**
W23A	**Werner Place,**	**20.98**	**335**	⇓P	**P**	**10 28 14.9**	**+0.1**
	baz=21,SNR=52						
V25A	**Rancho No Teng**	**21.02**	**339**	⇑P	**P**	**10 28 15.3**	**+0.2**
	baz=21,SNR=146						
X21A	**Alamocita Cree**	**21.07**	**331**	⇑P	**P**	**10 28 16.8**	**+1.1**
	baz=21,SNR=96						
Z18A	**Geronimo**	**21.14**	**325**	⇓P	**P**	**10 28 17.4**	**+0.9**
	baz=21,SNR=54						
V24A	**Rampart Ranch,**	**21.14**	**338**	⇓P	**P**	**10 28 17.1**	**+0.6**
	baz=21,SNR=76						
117A	**Oracle**	**21.16**	**323**	⇑P	**P**	**10 28 17.4**	**+0.7**
	baz=21,SNR=73						
216A	**Three Points,**	**21.19**	**320**	⇑P	**P**	**10 28 17.5**	**+0.5**
	baz=21,SNR=62						
W22A	**Albuquerque**	**21.19**	**334**	⇑P	**P**	**10 28 17.7**	**+0.6**
	baz=21,SNR=14						
U26A	**Atchley Ranch,**	**21.25**	**342**	⇑P	**P**	**10 28 17.5**	**-0.1**
	baz=21,SNR=84						
Y19A	**Nutrioso**	**21.39**	**328**	⇓P	**P**	**10 28 20.2**	**+1.0**
	baz=21,SNR=135						
U25A	**Circle Dot Ran**	**21.46**	**341**	⇑P	**P**	**10 28 20.2**	**+0.3**
	baz=21,SNR=110						
X20A	**Quemado**	**21.49**	**330**	⇓P	**P**	**10 28 21.3**	**+1.1**
	baz=21,SNR=150						
V23A	**Ortiz Mt. (NFS**	**21.50**	**336**	⇓P	**P**	**10 28 21.1**	**+0.8**
	baz=22,SNR=94						
CPCT	**Cooper Cave**	**21.53**	**26**	*e*P	**P**	**10 28 19.6**	**-1.1**
Z17A	**San Carlos Hig**	**21.54**	**324**	⇓P	**P**	**10 28 21.4**	**+0.6**
	baz=22,SNR=67						
W21A	**San Fidel**	**21.57**	**333**	⇓P	**P**	**10 28 21.8**	**+0.7**
	baz=22						
Y18A	**Canyon Day Jun**	**21.66**	**326**	⇓P	**P**	**10 28 22.8**	**+0.6**
	baz=22,SNR=93						
116A	**Eloy**	**21.73**	**321**	⇓P	**P**	**10 28 22.8**	**-0.1**
	baz=22,SNR=33						
U24A	**Moreno Valley**	**21.76**	**339**	⇓P	**P**	**10 28 23.8**	**+0.7**
	baz=22,SNR=55						
X19A	**St. Johns**	**21.78**	**328**	⇑P	**P**	**10 28 24.0**	**+0.6**
	baz=22,SNR=11						
NHSC	**New Hope**	**21.84**	**37**	*e*P	**P**	**10 28 24.7**	**+0.6**
	comp=Z,370nm,1.3s,mb5.7						
NHSC				LR	LR		
	comp=Z,1μm,19.0s,MS4.4						
V22A	**San Miguel Ran**	**21.94**	**335**	⇑P	**P**	**10 28 25.2**	**+0.2**
	baz=22,SNR=68						
W20A	**Ramah**	**21.96**	**331**	⇑P	**P**	**10 28 26.0**	**+0.7**
	baz=22,SNR=133						
214A	**Organ Pipe Nat**	**22.01**	**318**	⇓P	**P**	**10 28 25.8**	**0.0**
	baz=22,SNR=59						
U23A	**El Rito**	**22.02**	**337**	⇑P	**P**	**10 28 26.3**	**+0.4**
	baz=22,SNR=94						
CCM	**Cathedral Cave**	**22.03**	**9**	*e*P	**P**	**10 28 24.9**	**-1.0**
CCM				MLR	MLR		
	comp=Z,1μm,20.0s,MS4.4						
TKL	**Tuckaleechee C**	**22.03**	**27**	P	**P**	**10 28 24.6**	**-1.3**
	comp=Z,22nm,0.6s,mb4.8,baz=194,slow=12,SNR=25						
TKL				S	**S**	**10 32 30.7**	**+4.1**
	comp=Z,5.1nm,0.6s,baz=0.0,slow=20,SNR=3.3						
TKL				LR	LR	10 40 27.4	
	comp=Z,642nm,18.8s,MS4.1,baz=218,slow=46						
TKL	**Tuckaleechee C**	**22.03**	**27**	*e*P	**P**	**10 28 24.1**	**-1.8**
TKL				*e*S	**S**	**10 32 33.8**	**+7.2**
Y17A	**Roosevelt**	**22.05**	**325**	⇑P	**P**	**10 28 26.6**	**+0.4**
	baz=22						
SIUC	**Southern Illin**	**22.09**	**14**	*e*P	**P**	**10 28 26.3**	**-0.3**
	comp=Z,985nm,2.0s,mb5.9						
FVM	**French Village**	**22.10**	**11**	*e*P	**P**	**10 28 24.8**	**-1.9**
FVM				pmax	pmax		
	comp=Z,90nm,1.1s,mb5.1						
FVM	**French Village**	**22.10**	**11**	*e*P	**P**	**10 28 24.8**	**-1.9**
	comp=Z,90nm,1.1s,mb5.1						
Z16A	**Peralta Trail,**	**22.12**	**323**	⇑P	**P**	**10 28 26.8**	**-0.2**
	baz=22,SNR=28						
JSC	**Jenkinsville**	**22.12**	**33**	*e*P	**P**	**10 28 26.9**	**-0.1**
JSC				*e**PP		10 28 37.6	
JSC				*e**SP	sP	10 28 43.4	+0.5
T25A	**Trinidad**	**22.14**	**341**	⇓P	**P**	**10 28 28.1**	**+0.9**
	baz=22,SNR=153						
V21A	**Milan**	**22.15**	**334**	⇑P	**P**	**10 28 27.5**	**+0.2**
	baz=22,SNR=18						
X18A	**Snowflake**	**22.20**	**327**	⇑P	**P**	**10 28 28.3**	**+0.5**
	baz=22,SNR=119						
U22A	**Llaves**	**22.32**	**336**	⇑P	**P**	**10 28 29.5**	**+0.4**
	baz=22,SNR=42						
W19A	**Sanders**	**22.38**	**329**	⇑P	**P**	**10 28 30.0**	**+0.3**
	baz=22						
V20A	**Brimhall**	**22.50**	**332**	⇑P	**P**	**10 28 31.4**	**+0.3**
	baz=22,SNR=58						
X17A	**Forest Lakes**	**22.50**	**326**	⇑P	**P**	**10 28 31.7**	**+0.6**
	baz=22,SNR=56						
LHS	**Liberty Hill**	**22.51**	**34**	*e*P	pP	10 28 38.3	-3.4
LHS	**Liberty Hill**	**22.51**	**34**	*e*pP	pP	10 28 38.3	-3.4
Z15A	**Gila River Ind**	**22.51**	**322**	⇑P	**P**	**10 28 30.4**	**-0.8**
	baz=22						
Y16A	**Circle Bar Ran**	**22.54**	**324**	⇑P	**P**	**10 28 31.6**	**+0.2**
	baz=22,SNR=47						
W18A	**Petrified Fore**	**22.55**	**329**	⇓P	**P**	**10 28 31.5**	**-0.1**
	baz=22						
114A	**Black Gap (USA**	**22.58**	**320**	⇓P	**P**	**10 28 31.7**	**-0.2**
	baz=22,SNR=24						
T23A	**Casias Ranch,**	**22.59**	**338**	⇓P	**P**	**10 28 32.3**	**+0.4**
	baz=23,SNR=94						
S25A	**Robets

GLA **Glamis** 24.01 317 ⇑P P 10 28 45.8 -0.3
baz=24,SNR=20
GLA **Glamis** 24.01 317 *e*P P 10 28 45.8 -0.2
GLA pmax pmax
comp=Z,118nm,1.0s,mb5.3
GLA **Glamis** 24.01 317 *e*P P 10 28 45.8 -0.2
comp=Z,118nm,1.0s,mb5.3
Q24A **Divide** 24.05 342 ⇓P P 10 28 46.9 +0.7
baz=24,SNR=25
U16A **Tuba City** 24.06 328 ⇑P P 10 28 46.5 +0.1
baz=24,SNR=62
BLO **Bloomington** 24.16 18 *e*P P 10 28 46.6 -0.7
BLO pmax pmax
comp=Z,854nm,1.7s,mb5.9
BLO **Bloomington** 24.16 18 *e*P P 10 28 46.6 -0.8
comp=Z,854nm,1.7s,mb5.9
Q23A **Hartsel** 24.20 340 ⇓P P 10 28 48.1 +0.4
baz=24
T18A **Mexican Hat** 24.25 332 ⇑P P 10 28 48.1 0.0
baz=24,SNR=66
P25A **Willow Gulch B** 24.28 344 ⇓P P 10 28 48.6 +0.2
baz=24,SNR=25
R21A **Cimarron** 24.32 337 ⇑P P 10 28 49.4 +0.6
baz=24,SNR=46
V15A **Kaibab Nationa** 24.36 326 ⇓P P 10 28 49.5 +0.4
baz=24,SNR=87
X13A **Yucca** 24.41 322 ⇑P P 10 28 49.3 -0.4
baz=24,SNR=62
W14A **Seligman** 24.41 324 ⇓P P 10 28 49.9 +0.3
baz=24,SNR=82
S19A **Harvey Farm, M** 24.43 334 ⇑P P 10 28 49.8 +0.1
baz=24,SNR=118
P24A **Kohler Place,** 24.48 343 ⇑P P 10 28 50.5 +0.2
baz=24,SNR=8.8
R20A **Redvale** 24.49 335 ⇑P P 10 28 51.3 +1.0
baz=24,SNR=49
PV01 **Paradox Valley** 24.52 335 *e*P P 10 28 51.4 +0.8
comp=Z,17µm,1.4s
Q22A **Crested Butte,** 24.53 339 ⇑P P 10 28 51.2 +0.6
baz=24,SNR=36
T17A **Navajo Res., N** 24.57 330 ⇓P P 10 28 51.5 +0.4
baz=24,SNR=40
SWSC **Sam W. Stewart** 24.58 316 ⇓P P 10 28 50.9 -0.3
baz=24,SNR=20
DVTC **Desert V Tower** 24.62 315 ⇑P P 10 28 51.4 -0.1
baz=25,SNR=6.8
P23A **Jefferson** 24.63 341 ⇓P P 10 28 52.8 +1.2
baz=25,SNR=67
CNNC **Cliffs of the** 24.69 37 PFAKE 10 29 10.0 +18
CNNC LR LR
comp=Z,745nm,19.0s,MS4.2
ELN **Prospectdale** 24.69 30 *e*P P 10 28 52.4 +0.2
V14A **Boquillas Ranc** 24.73 324 ⇑P P 10 28 52.8 +0.3
baz=25,SNR=109
Q21A **Lamborn Mesa,** 24.74 337 ⇑P P 10 28 53.4 +0.8
baz=25,SNR=39
S18A **Hurst Farm, Bl** 24.76 332 ⇑P P 10 28 52.7 0.0
baz=25,SNR=102
W13A **Hualapai Mount** 24.80 322 ⇑P P 10 28 53.3 +0.1
baz=25,SNR=38
BC3 **Big Chuckawall** 24.80 318 ⇑P P 10 28 53.0 -0.2
baz=25,SNR=76
HDIL **Hopedale** 24.80 12 *e*P P 10 28 53.0 -0.1
comp=Z,158nm,1.1s,mb5.5
HDIL LR LR
comp=Z,846nm,21.0s,MS4.2
O25A **Wiggins** 24.83 345 ⇓P P 10 28 53.7 +0.3
baz=25,SNR=22
SMCO **Snowmass** 24.83 339 *e*P P 10 28 54.2 +0.8
comp=Z,68nm,1.1s,mb5.1
BLA **Blacksburg** 24.84 30 *e*P P 10 28 52.6 -0.9
BLA pmax pmax
comp=Z,245nm,1.5s,mb5.5
BLA MLR MLR
comp=Z,1µm,20.0s,MS4.4
BLA **Blacksburg** 24.84 30 *e*P P 10 28 52.6 -0.9
comp=Z,245nm,1.5s,mb5.5
BLA LR LR
comp=Z,1µm,20.0s,MS4.4
PV04 **Paradox Valley** 24.88 335 *e*P P 10 28 54.4 +0.5
U15A **North Rim** 24.88 327 ⇑P P 10 28 54.6 +0.7
baz=25,SNR=84
T16A **Glen Canyon Da** 24.90 329 ⇓P P 10 28 54.3 +0.2
baz=25,SNR=37
IRM **Iron Mountain** 24.93 319 ⇓P P 10 28 54.3 -0.1
baz=25,SNR=103
R19A **Curley Farm, L** 24.94 334 ⇓P P 10 28 54.4 0.0
baz=25,SNR=73
ISCO **Idaho Springs** 24.95 342 *e*P P 10 28 55.0 +0.5
ISCO MLR MLR
comp=Z,718nm,20.0s,MS4.2
MONP **Monument Peak** 24.97 315 ⇓P P 10 28 54.5 -0.3
baz=25,SNR=47
BAR **Barrett** 25.02 314 *e*P P 10 28 54.7 -0.5
comp=Z,78nm,1.4s,mb5.0
S17A **Black Ridge (B** 25.08 331 ⇓P P 10 28 55.7 0.0
baz=25,SNR=69
O24A **Longmont** 25.09 343 ⇑P P 10 28 55.9 +0.1
baz=25,SNR=9.2
Q20A **Ridgley Place,** 25.12 336 ⇓P P 10 28 56.4 +0.4
baz=25
P22A **Eagle** 25.13 340 ⇓P P 10 28 56.6 +0.4
baz=25,SNR=60
OGNE **Ogallala** 25.16 349 *e*P P 10 28 57.5 +1.1
comp=Z,982nm,1.8s,mb6.0
R18A **Canyonlands Na** 25.29 333 ⇓P P 10 28 57.3 -0.3
baz=25,SNR=66
P21A **Newcastle** 25.31 338 ⇓P P 10 28 58.5 +0.8
baz=25,SNR=54
U14A **Mt Trumbull** 25.35 326 ⇑P P 10 28 58.4 +0.3
baz=25,SNR=33
BELC **Belle Mtn. Jos** 25.37 318 ⇑P P 10 28 58.3 -0.1
baz=25,SNR=47
T15A **Red Dirt Ranch** 25.37 328 ⇓P P 10 28 58.8 +0.4
baz=25,SNR=49
V13A **Grand Canyon W** 25.38 324 ⇑P P 10 28 58.6 +0.1
baz=25,SNR=39
O23A **Lake Granby, G** 25.42 342 ⇑P P 10 28 59.2 +0.5
baz=25,SNR=58
PFO **Pinyon Flat Ob** 25.43 316 P P 10 28 59.0 +0.1
comp=Z,268nm,1.2s,mb5.7,SNR=16
PFO **Pinyon Flat Ob** 25.43 316 ⇑P P 10 28 58.7 -0.2
baz=25,SNR=17
PFO **Pinyon Flat Ob** 25.43 316 *e*P P 10 28 59.0 +0.1
PFO pmax pmax
comp=Z,87nm,1.2s,mb5.2
PFO MLR MLR
comp=Z,2µm,19.0s,MS4.7
PFO **Pinyon Flat Ob** 25.43 316 *e*P P 10 28 59.0 +0.1
comp=Z,87nm,1.2s,mb5.2
PFO LR LR
comp=Z,2µm,19.0s,MS4.7
109C **Camp Elliot, M** 25.44 314 ⇓P P 10 28 58.2 -0.8
baz=25,SNR=11
N25A **Grover** 25.48 345 ⇓P P 10 28 59.9 +0.6
baz=26
Q19A **Hogan Spring (** 25.50 335 ⇑P P 10 28 59.5 0.0
baz=26,SNR=46
W12A **Cal Nev Ari** 25.52 321 ⇑P P 10 28 59.3 -0.4
baz=26
S16A **Weppner Ranch,** 25.53 330 ⇑P P 10 28 59.7 0.0
baz=26,SNR=48
SDV **Santo Domingo** 25.54 104 *e*P P 10 29 02.0 +1.9
O22A **Kremmling** 25.58 341 ⇑P P 10 28 60.0 -0.2
baz=26,SNR=12
SCIA **State Center** 25.61 4 *e*P P 10 29 00.4 0.0
comp=Z,282nm,0.9s,mb5.8
P20A **De Beque** 25.63 337 ⇑P P 10 29 01.2 +0.5
baz=26,SNR=62
GMRC **Granite Mounta** 25.65 320 ⇑P P 10 29 01.0 0.0
baz=26,SNR=32
R17A **Hanksville Air** 25.68 332 ⇓P P 10 29 00.9 -0.2
baz=26,SNR=75
N24A **Carr** 25.70 344 ⇓P P 10 29 01.8 +0.6
baz=26,SNR=7.8
T14A **Hurricane** 25.77 327 ⇓P P 10 29 02.2 +0.2
baz=26,SNR=27
V12A **Nelson** 25.80 322 ⇓P P 10 29 02.2 0.0
baz=26,SNR=36
S15A **Panguitch** 25.87 329 ⇓P P 10 29 03.7 +0.8
baz=26,SNR=32
MURC **Murrieta** 25.92 316 ⇑P P 10 29 02.8 -0.5
baz=26,SNR=14
R16A **Teasdale** 25.92 331 ⇓P P 10 29 03.7 +0.4
baz=26,SNR=44
O21A **Pagoda** 25.93 339 ⇑P P 10 29 04.2 +0.8
baz=26,SNR=19
P19A **Cripple Cowboy** 25.97 336 ⇓P P 10 29 03.9 +0.1
baz=26,SNR=33
Q18A **Rafter H Ranch** 25.99 334 ⇑P P 10 29 04.0 +0.1
baz=26,SNR=22
N23A **Red Feather La** 26.06 342 ⇑P P 10 29 05.2 +0.6
baz=26,SNR=33
HEC **Hector,Ludlow** 26.11 319 ⇓P P 10 29 05.2 +0.2
baz=26,SNR=12
U12A **Valley of Fire** 26.11 324 ⇓P P 10 29 05.2 +0.1
baz=26,SNR=20
N22A **Wattenberg Ran** 26.13 341 ⇓P P 10 29 05.9 +0.7
baz=26,SNR=35
BBRC **Big Bear Solar** 26.13 317 ⇑P P 10 29 05.8 +0.5
baz=26,SNR=19
O20A **White River Ci** 26.13 338 ⇑P P 10 29 05.9 +0.8
baz=26,SNR=48
SRU **San Rafael** 26.16 333 ⇓P P 10 29 05.4 -0.1
baz=26,SNR=9.2
SRU **San Rafael** 26.16 333 *e*P P 10 29 06.0 +0.5
SRU pmax pmax
comp=Z,23nm,1.0s,mb4.7
SRU **San Rafael** 26.16 333 *e*P P 10 29 06.0 +0.5
comp=Z,23nm,1.0s,mb4.7
T13A **Saint George** 26.18 325 ⇓P P 10 29 06.2 +0.6
baz=26,SNR=47
V11A **Goodsprings** 26.22 322 ⇓P P 10 29 05.9 -0.1
baz=26,SNR=36
R15A **Junction** 26.25 329 ⇑P P 10 29 06.7 +0.4
baz=26,SNR=30
TUQ **Turquoise Moun** 26.25 320 ⇓P P 10 29 06.2 -0.1
baz=26,SNR=12
CCUT **Cedar City** 26.29 327 *e*P P 10 29 07.5 +0.8
comp=Z,66nm,1.5s,mb4.9
ACSO **Alum Creek Sta** 26.29 22 *e*P P 10 29 05.8 -0.8
comp=Z,114nm,1.2s,mb5.3
ACSO LR LR
comp=Z,462nm,21.0s,MS4.0
Q16A **Castle Valley** 26.29 332 ⇑P P 10 29 07.1 +0.5
baz=26,SNR=29
PHWY **Pilot Hill** 26.30 343 *e*P P 10 29 07.2 +0.5
comp=Z,100nm,1.7s,mb5.1
S14A **Cedar City** 26.34 328 ⇓P P 10 29 07.8 +0.7
baz=26,SNR=36
T12A **Moapa** 26.42 324 ⇑P P 10 29 07.8 0.0
baz=26
MSU **Marysvale** 26.43 330 *e*P P 10 29 08.1 +0.2
MSU *e* 10 32 32.2
N21A **Black Mountain** 26.43 340 ⇑P P 10 29 09.0 +1.1
baz=26,SNR=25
P18A **Preston Nutter** 26.48 334 ⇓P P 10 29 08.7 +0.4
baz=26,SNR=32
JSRW **J. Sargeant Re** 26.49 33 *e*P P 10 29 07.5 -0.9
SCI **San Clemente I** 26.49 313 ⇓P P 10 29 08.1 -0.4
baz=26
ARUT **Antelope Range** 26.50 327 *e*P P 10 29 09.5 +0.9
ARUT *e* 10 32 33.2
ARUT pmax pmax
comp=Z,126nm,1.4s,mb5.2
ARUT **Antelope Range** 26.50 327 *e*P P 10 29 09.5 +0.9
comp=Z,126nm,1.4s,mb5.3
ARUT *e*PcP PcP 10 32 33.2 +0.5
P17A **Butcher Ranch,** 26.56 333 ⇓P P 10 29 09.3 +0.2
baz=26,SNR=15
RRX **Edison Barstow** 26.56 318 ⇓P P 10 29 09.3 +0.1
baz=26
S13A **Holt Ranch, En** 26.57 326 ⇓P P 10 29 09.9 +0.7
baz=26,SNR=57
U11A **Corn Creek** 26.59 323 ⇓P P 10 29 09.3 0.0
baz=26
BFSC **Mount Baldy Ra** 26.60 316 ⇓P P 10 29 09.2 -0.3
baz=27,SNR=16
O19A **Miners Draw (B** 26.60 337 ⇓P P 10 29 09.7 +0.3
baz=27,SNR=33
TMUT **Trail Mountain** 26.62 332 *e*P P 10 29 10.5 +0.9
comp=Z,29nm,1.1s,mb4.7
CIS **Catalina Islan** 26.62 314 ⇑P P 10 29 09.0 -0.7
baz=27,SNR=8.2
R14A **James Farms, M** 26.68 329 ⇓P P 10 29 10.0 -0.2
baz=27
GSC **Goldstone** 26.71 319 ⇓P P 10 29 10.2 -0.2
baz=27,SNR=19
GSC **Goldstone** 26.71 319 *e*P P 10 29 10.1 -0.4
GSC pmax pmax
comp=Z,109nm,1.6s,mb5.1
GSC **Goldstone** 26.71 319 *e*P P 10 29 10.1 -0.4
comp=Z,109nm,1.6s,mb5.1
FMP **Fort Macarthur** 26.72 315 ⇓P P 10 29 10.3 -0.4
baz=27
N20A **Spence Gulch,** 26.76 339 ⇑P P 10 29 11.3 +0.5
baz=27,SNR=30
SHOC **Shoshone** 26.77 321 ⇓P P 10 29 10.6 -0.4
baz=27,SNR=11
MWC **Mount Wilson** 26.86 316 *e*P P 10 29 11.7 -0.1
MWC pmax pmax
comp=Z,85nm,1.3s,mb5.1
MWC **Mount Wilson** 26.86 316 *e*P P 10 29 11.7 -0.2
comp=Z,85nm,1.3s,mb5.1
PASC **Pasadena Art C** 26.91 316 *e*P P 10 29 12.4 +0.1
comp=Z,436nm,1.5s,mb5.8
Q15A **Fillmore** 26.92 330 ⇑P P 10 29 12.7 +0.4
baz=27,SNR=42
O18A **Roosevelt** 26.92 335 ⇑P P 10 29 13.1 +0.8
baz=27,SNR=29
JFWS **Jewell Farm** 26.93 9 *e*P P 10 29 12.0 -0.4
JFWS pmax pmax
comp=Z,89nm,0.6s,mb5.5
JFWS MLR MLR
comp=Z,680nm,21.0s,MS4.2
JFWS **Jewell Farm** 26.93 9 *e*P P 10 29 12.0 -0.4
comp=Z,89nm,0.6s,mb5.5
JFWS LR LR
comp=Z,680nm,21.0s,MS4.2
DECC **Green Verdugo** 27.06 316 ⇓P P 10 29 13.5 -0.2
baz=27
T11A **Corn Creek, Al** 27.07 324 ⇑P P 10 29 14.1 +0.4
baz=27,SNR=24
P16A **Fountain Green** 27.07 332 ⇑P P 10 29 14.2 +0.5
baz=27,SNR=5.8
R13A **O'Grain Ranch,** 27.07 327 ⇑P P 10 29 14.8 +1.1
baz=27,SNR=40
MCWV **Mont Chateau** 27.08 28 *e*P P 10 29 13.2 -0.6
comp=Z,15nm,0.4s,mb4.9
MCWV LR LR
comp=Z,1µm,19.0s,MS4.5
S12A **Delamar Landin** 27.12 325 ⇓P P 10 29 14.8 +0.6
baz=27,SNR=19
CBN **Corbin** 27.14 33 *e*P P 10 29 13.8 -0.5
comp=Z,38nm,0.7s,mb5.0
CBN LR LR
comp=Z,974nm,21.0s,MS4.3
N19A **John Jarvie Ra** 27.14 337 ⇑P P 10 29 14.2 0.0
baz=27,SNR=22
M21A **Separation Pea** 27.15 341 ⇓P P 10 29 14.6 +0.3
baz=27,SNR=33
U10A **Ash Meadows, A** 27.15 321 ⇓P P 10 29 14.6 +0.2
baz=27,SNR=28
O17A **Robinson Place** 27.16 334 ⇓P P 10 29 15.2 +0.7
baz=27,SNR=78
RWWY **Rawlins** 27.17 341 *e*P P 10 29 15.7 +1.2
comp=Z,200nm,1.4s,mb5.5
EDW2 **Edwards Air Fo** 27.21 317 ⇓P P 10 29 14.6 -0.4
baz=27,SNR=11
M20A **Sweetwater, Wa** 27.31 339 ⇓P P 10 29 16.0 +0.1
baz=27,SNR=7.2
P15A **Leamington** 27.32 331 ⇓P P 10 29 16.2 +0.2
baz=27
Q14A **Sevier Lake (B** 27.34 329 ⇓P P 10 29 16.9 +0.8
baz=27,SNR=94
ECSD **EROS Data Cent** 27.36 359 *e*P P 10 29 15.5 -0.6
comp=Z,59nm,1.0s,mb5.1
ECSD LR LR
comp=Z,716nm,19.0s,MS4.3
LRMC **Laurel Mountai** 27.38 318 ⇓P P 10 29 16.2 -0.3
baz=27,SNR=6.4
MPU **Maple Canyon** 27.39 333 *e*P P 10 29 17.3 +0.8
comp=Z,68nm,1.4s,mb5.0
N18A **Larsen Ranch,** 27.40 337 ⇓P P 10 29 17.1 +0.5
baz=27,SNR=31
L21A **Rawlins** 27.47 341 ⇑P P 10 29 17.2 0.0
baz=27,SNR=34
BLG **Laguna Peak** 27.48 315 ⇑P P 10 29 17.3 -0.1
baz=27
O16A **Springville** 27.49 333 ⇓P P 10 29 17.6 +0.2
baz=28,SNR=37
FURC **Furnace Creek,** 27.50 321 ⇑P P 10 29 17.4 -0.1
baz=28,SNR=7.9
R12A **Pony Springs,** 27.52 327 ⇑P P 10 29 18.3 +0.6
baz=28,SNR=26
OSI **Osito Adit** 27.53 316 ⇑P P 10 29 17.2 -0.7
baz=28
NLU **North Lily Min** 27.54 332 *e*P P 10 29 18.5 +0.6
comp=Z,90nm,1.6s,mb5.2
DAU **Daniels Canyon** 27.56 334 *e*P P 10 29 18.6 +0.6
MPMC **Manual Prospec** 27.62 320 ⇓P P 10 29 18.7 +0.1
baz=28,SNR=43
S11A **Rachel** 27.65 324 ⇑P P 10 29 19.5 +0.6
baz=28,SNR=27
M19A **Rock Springs** 27.66 338 ⇓P P 10 29 18.4 -0.6
baz=28
P14A **Drum Mountains** 27.71 330 ⇓P P 10 29 20.2 +0.9
baz=28,SNR=36
JLU **Jordanelle** 27.80 334 *e*P P 10 29 19.1 -1.1
comp=Z,41nm,1.5s,mb4.8
BSC **Santa Cruz Isl** 27.80 314 ⇑P P 10 29 19.6 -0.7
baz=28
DAC **Darwin (Calif)** 27.82 320 PFAKE 10 29 30.0 +10
DAC LR LR
comp=Z,2µm,20.0s,MS4.8
L20A **Wamsutter** 27.82 340 ⇑P P 10 29 20.1 -0.3
baz=28,SNR=10.0
N17A **Moffit Pass** 27.83 335 ⇓P P 10 29 21.2 +0.7
baz=28,SNR=20
AAM **Ann Arbor** 27.90 19 *e*P P 10 29 20.9 -0.2
AAM pmax pmax
comp=Z,134nm,1.4s,mb5.4
AAM MLR MLR
comp=Z,728nm,21.0s,MS4.2
AAM **Ann Arbor** 27.90 19 *e*P P 10 29 20.9 -0.2
comp=Z,134nm,1.4s,mb5.4
AAM LR LR
comp=Z,728nm,21.0s,MS4.2
ARVC **Arvin** 27.91 317 ⇓P P 10 29 20.9 -0.3
baz=28,SNR=9.2
M18A **Lyman** 27.94 337 ⇓P P 10 29 21.0 -0.4
baz=28,SNR=18
O15A **The Old Anders** 27.98 332 ⇓P P 10 29 22.4 +0.6
baz=28
ISA **Isabella** 28.00 318 ⇓P P 10 29 22.1 +0.1
baz=28,SNR=10
ISA **Isabella** 28.00 318 *e*P P 10 29 22.0 0.0
ISA pmax pmax
comp=Z,54nm,1.6s,mb4.9
ISA **Isabella** 28.00 318 *e*P P 10 29 22.0 0.0
comp=Z,54nm,1.6s,mb4.9
CTU **Camp Tracy** 28.00 333 *e*P P 10 29 22.7 +0.7
comp=Z,52nm,1.4s,mb5.0
N16A **Rees Ranch, Co** 28.03 334 ⇑P P 10 29 22.8 +0.6
baz=28,SNR=9.3
R11A **Troy Canyon, C** 28.06 325 ⇑P P 10 29 23.1 +0.6
baz=28,SNR=42
P13A **Bates Ranch, G** 28.07 329 ⇑P P 10 29 23.3 +0.8
baz=28,SNR=33
DUG **Dugway** 28.07 331 ⇑P P 10 29 23.0 +0.4
baz=28,SNR=29
DUG **Dugway** 28.07 331 *e*P P 10 29 23.2 +0.6
DUG MLR MLR
comp=Z,2µm,22.0s,MS4.5
DUG **Dugway** 28.07 331 *e*P P 10 29 23.2 +0.6
DUG LR LR
comp=Z,2µm,22.0s,MS4.5
SBC **Santa Barbara** 28.11 314 ⇓P P 10 29 22.6 -0.4
baz=28
NOQ **North Oquirrh** 28.13 333 *e*P P 10 29 23.9 +0.8
comp=Z,133nm,1.9s,mb5.2
GRAC **Grapevine Rang** 28.16 321 ⇓P P 10 29 23.9 +0.5
baz=28,SNR=16
Q12A **Willow Creek R** 28.16 327 ⇓P P 10 29 23.9 +0.4
baz=28,SNR=16
M17A **Scullys Gap (B** 28.21 336 ⇓P P 10 29 23.6 -0.2
baz=28,SNR=9.1
CWC **Cottonwood Cre** 28.23 320 ⇓P P 10 29 23.9 -0.1
baz=28,SNR=14
L19A **Farson** 28.26 338 ⇓P P 10 29 24.3 0.0
baz=28,SNR=16
SJG **San Juan** 28.28 82 P P 10 29 24.6 -0.1
comp=Z,20nm,0.2s,mb5.3,baz=340,slow=17,SNR=5.3
S10A **Tonopah Range,** 28.32 324 ⇓P P 10 29 25.4 +0.5
baz=28,SNR=48
L18A **Fontenelle, Gr** 28.35 337 ⇑P P 10 29 25.1 0.0
baz=28,SNR=20
K20A **Yellowstone Ra** 28.41 340 ⇓P P 10 29 25.1 -0.5
baz=28,SNR=29
R10A **Warm Springs** 28.41 324 ⇓P P 10 29 26.4 +0.7
baz=28
Q11A **Duckwater** 28.46 326 ⇓P P 10 29 26.6 +0.6
baz=28,SNR=14
N15A **Stansbury Isla** 28.50 333 ⇓P P 10 29 26.4 0.0
baz=28
VES **Vestal, Richgr** 28.50 317 ⇓P P 10 29 26.3 -0.2
baz=28,SNR=37
P12A **McGill** 28.53 328 ⇓P P 10 29 27.0 +0.4
baz=28,SNR=15
O13A **Hicks Ranch, I** 28.57 330 ⇑P P 10 29 28.1 +1.1
baz=28
RSSD **Black Hills** 28.62 347 *e*P P 10 29 27.9 +0.5
HWUT **Hardware Ranch** 28.68 335 *e*P P 10 29 28.2 +0.2
HWUT LR LR
comp=Z,2µm,19.0s,MS4.7
TIN **Tinemaha** 28.71 320 ⇓P P 10 29 29.0 +0.7
baz=29
K19A **Absolon Red Bu** 28.72 340 ⇓P P 10 29 27.7 -0.7
baz=29,SNR=31
BGU **Big Grassy Mou** 28.75 332 *e*P P 10 29 28.9 +0.2
comp=Z,75nm,1.5s,mb5.2
N14A **Grayback Hills** 28.77 332 ⇓P P 10 29 29.1 +0.3
baz=29,SNR=48
SMMC **Simmler** 28.79 316 ⇓P P 10 29 29.2 +0.1
baz=29
L17A **Cokeville** 28.82 336 ⇓P P 10 29 28.9 -0.3
baz=29,SNR=16
Q10A **Clear Creek Ra** 28.85 325 ⇑P P 10 29 30.6 +1.0
baz=29,SNR=27
RCTC **Rector, Farmer** 28.88 318 ⇓P P 10 29 29.8 -0.1
baz=29,SNR=16
ATAH **Atahualpa** 28.91 142 P P 10 29 32.3 +2.0
comp=Z,16nm,0.8s,mb4.8,baz=346,slow=5.6,SNR=9.8
ATAH LR LR 10 38 48.8
comp=Z,843nm,20.5s,MS4.3,baz=313,slow=32
BW06 **Boulder Array** 28.92 339 ⇓P P 10 29 29.8 -0.3
baz=29,SNR=17
BW06 **Boulder Array** 28.92 339 *e*P P 10 29 29.8 -0.3
comp=Z,253nm,3.0s
BW06 LR LR
comp=Z,2µm,20.0s,MS4.6
M15A **Larsen Ranch,** 28.93 333 ⇓P P 10 29 30.4 +0.2
baz=29,SNR=8.7
L16A **Fish Haven** 28.97 335 ⇑P P 10 29 30.4 -0.2
baz=29,SNR=15
K18A **Toltan Ranch,** 28.97 338 ⇓P P 10 29 31.3 +0.7
baz=29,SNR=95
MVL **Millersville** 29.01 32 *e*P P 10 29 30.1 -0.8
comp=Z,37nm,1.5s,mb4.9
P11A **Circle Ranch,** 29.03 327 ⇓P P 10 29 31.3 +0.2
baz=29
O12A **Currie** 29.05 329 ⇓P P 10 29 32.1 +0.8
baz=29,SNR=29
ERPA **Erie** 29.06 25 *e*P P 10 29 30.6 -0.7
comp=Z,47nm,1.0s,mb5.2
ERPA LR LR
comp=Z,1µm,20.0s,MS4.5
MTUM **Tungsten Hills** 29.11 320 *e*P P 10 29 32.2 +0.3
N13A **Wendover, West** 29.24 330 ⇑P P 10 29 33.5 +0.5
baz=29
N13A **Wendover, West** 29.24 330 *e*P P 10 29 34.2 +1.2
HVU **Hansel Valley** 29.33 333 *e*P P 10 29 34.4 +0.6
HVU pmax pmax
comp=Z,152nm,1.6s,mb5.5
HVU **Hansel Valley** 29.33 333 *e*P P 10 29 34.4 +0.5
comp=Z,152nm,1.6s,mb5.5
L15A **Malad City** 29.35 334 ⇑P P 10 29 34.2 +0.2
baz=29,SNR=39
M14A **Sheep Mountain** 29.36 332 ⇓P P 10 29 34.6 +0.6
baz=29,SNR=28
K17A **Gardner Place,** 29.40 337 ⇓P P 10 29 34.4 +0.1
baz=29,SNR=26
O11A **Cowboy Ranch,** 29.40 328 ⇑P P 10 29 35.0 +0.6
baz=29
MLAC **Mammoth Lakes** 29.45 321 ⇓P P 10 29 35.5 +0.6
baz=29
J18A **Kendall Valley** 29.47 338 ⇑P P 10 29 35.1 +0.2
baz=29,SNR=88
AHID **Auburn Hatcher** 29.48 337 PFAKE 10 29 50.0 +15
AHID LR LR
comp=Z,946nm,21.0s,MS4.4
M13A **Montello** 29.62 331 ⇑P P 10 29 37.0 +0.6
baz=30,SNR=83
M13A **Montello** 29.62 331 *e*P P 10 29 36.7 +0.3

comp=Z,2.5nm,0.8s,mb4.0
N12A Clover Valley, 29.64 329 ⇑P **P 10 29 37.2 +0.7**
baz=30,SNR=52
N12A Clover Valley, 29.64 329 *e*P **P 10 29 37.0 +0.5**
comp=Z,110nm,1.3s,mb5.4
ELK Elko 29.66 329 *e*P **P 10 29 37.9 +1.2**
ELK MLR MLR
comp=Z,3μm,20.0s
NVAR Mina Array Bea 29.66 322 P **P 10 29 37.6 +0.9**
comp=Z,32nm,0.8s,mb5.1,baz=140,slow=8.7,SNR=203
NVAR pP pP 10 29 48.8 +0.5
comp=Z,30nm,0.9s,baz=133,slow=9.8,SNR=13
NVAR PcP PcP 10 32 40.0 -0.5
comp=Z,6.2nm,0.9s,baz=145,slow=4.2,SNR=6.0
K16A Soda Springs 29.72 336 ⇑P **P 10 29 37.4 +0.1**
baz=30,SNR=21
L14A Malta 29.74 333 ⇓P **P 10 29 37.9 +0.5**
baz=30,SNR=88
I18A Diamond G Ranc 29.83 339 ⇑P **P 10 29 38.2 +0.1**
baz=30,SNR=24
J17A Brown Place, J 29.85 338 ⇑P **P 10 29 38.9 +0.5**
baz=30,SNR=60
REDW Red Top Meadow 29.90 338 *e*P **P 10 29 39.1 +0.4**
comp=Z,222nm,1.4s,mb5.7
SNOW Snow King Moun 29.95 338 *e*P **P 10 29 40.0 +0.7**
comp=Z,284nm,1.4s,mb5.8
N11A Elko Archery C 29.96 329 ⇑P **P 10 29 39.9 +0.6**
baz=30,SNR=13
O10A Cortez Mining, 29.96 327 ⇓P **P 10 29 39.9 +0.5**
baz=30,SNR=11
K15A Arbon 29.98 335 ⇑P **P 10 29 39.9 +0.4**
baz=30,SNR=58
M12A Wells 30.01 330 ⇓P **P 10 29 40.1 +0.3**
baz=30,SNR=64
LOHW Long Hollow 30.03 338 *e*P **P 10 29 40.2 +0.3**
RRI2 Red Ridge 30.06 337 *e*P **P 10 29 40.8 +0.6**
comp=Z,138nm,1.5s,mb5.5
L13A Double Diamond 30.10 332 ⇓P **P 10 29 41.0 +0.4**
baz=30,SNR=26
J16A Bone 30.11 336 ⇑P **P 10 29 40.9 +0.3**
baz=30,SNR=14
K14A Jones Ranch, D 30.13 334 ⇓P **P 10 29 40.9 0.0**
baz=30,SNR=23
MOOW Moose Ponds 30.20 338 *e*P **P 10 29 41.6 +0.2**
DCID1 Drake Creek 30.22 337 *e*P **P 10 29 42.4 +0.8**
N10A Dunphy 30.27 328 ⇓P **P 10 29 42.7 +0.6**
baz=30
I17A Pilgrim Ck. 30.28 338 ⇑P **P 10 29 42.8 +0.6**
baz=30,SNR=26
WAKR Walker 30.38 321 *e*P **P 10 29 43.8 +0.7**
IMW Indian Meadow 30.39 338 *e*P **P 10 29 43.5 +0.3**
BMN Battle Mountai 30.44 326 *e*P **P 10 29 43.8 +0.2**
BMN *e**PP pP 10 29 55.5 +0.3
BMN *e* 10 32 41.8
BMN pmax pmax
comp=Z,35nm,1.1s,mb5.0
BMN MLR MLR
comp=Z,2μm,21.0s,MS4.8
BMN Battle Mountai 30.44 326 *e*P **P 10 29 43.8 +0.2**
comp=Z,35nm,1.1s,mb5.0
BMN *e*pP pP 10 29 55.5 +0.3
BMN *e*PcP PcP 10 32 41.8 -0.6
BMN LR LR
comp=Z,2μm,21.0s,MS4.8
M11A Holland Ranch, 30.45 329 ⇑P **P 10 29 44.2 +0.5**
baz=30,SNR=46
J15A Blackfoot 30.54 336 ⇓P **P 10 29 44.7 +0.3**
baz=30,SNR=41
I16A Newdale 30.57 337 ⇓P **P 10 29 45.1 +0.3**
baz=30,SNR=30
SAO San Andreas Ge 30.58 317 PFAKE 10 30 00.0 +15
SAO LR LR
comp=Z,1μm,22.0s,MS4.5
K13A Stover Farm, H 30.61 333 ⇓P **P 10 29 45.2 +0.1**
baz=31,SNR=8.3
L12A House Creek Ra 30.63 331 ⇑P **P 10 29 45.6 +0.3**
baz=31,SNR=34
CMB Columbia Colle 30.66 320 *e*P **P 10 29 44.9 -0.7**
CMB *e**PP pP 10 29 57.0 -0.2
CMB *e**SP sP 10 30 02.8 +0.5
CMB pmax pmax
comp=Z,43nm,1.3s,mb5.1
CMB MLR MLR
comp=Z,1μm,20.0s,MS4.6
CMB Columbia Colle 30.66 320 *e*P **P 10 29 44.9 -0.7**
comp=Z,43nm,1.3s,mb5.1
CMB *e*pP pP 10 29 57.0 -0.2
CMB *e*sP sP 10 30 02.8 +0.5
CMB LR LR
comp=Z,1μm,20.0s,MS4.6
H17A Grant Village 30.70 339 ⇓P **P 10 29 46.6 +0.7**
baz=31,SNR=21
LKWY Lake 30.79 339 PFAKE 10 30 00.0 +13
LKWY LR LR
comp=Z,2μm,19.0s,MS4.8
YFT Old Faithful 30.84 339 *e*P **P 10 29 49.2 +2.1**
comp=Z,72nm,1.4s,mb5.3
BINY Binghamton 30.87 29 *e*P **P 10 29 46.5 -0.8**
BINY *e*PcP PcP 10 32 42.6 -0.8
BINY LR LR
comp=Z,1μm,19.0s,MS4.5
M10A I.L. Ranch, Tu 30.89 329 ⇓P **P 10 29 48.1 +0.6**
baz=31
RLMT Red Lodge 30.91 341 ⇓P **P 10 29 48.0 +0.3**
baz=31,SNR=46
RLMT Red Lodge 30.91 341 *e*P **P 10 29 48.0 +0.3**
RLMT LR LR
comp=Z,687nm,19.0s,MS4.3
L11A Cat Creek Ranc 30.99 330 ⇑P **P 10 29 48.9 +0.5**
baz=31,SNR=134
I15A Monteview 31.06 336 ⇑P **P 10 29 49.6 +0.6**
baz=31,SNR=12
YMR Madison River 31.07 339 *e*P **P 10 29 50.2 +1.0**
comp=Z,129nm,1.4s,mb5.6
WCN Washoe City 31.08 322 ⇑P **P 10 29 50.0 +0.7**
baz=31,SNR=26
PAHR Pah Rah Range 31.13 323 *e*P **P 10 29 50.4 +0.6**
comp=Z,116nm,1.7s,mb5.4
G18A Lazy EL Ranch, 31.18 341 ⇑P **P 10 29 50.0 -0.1**
baz=31,SNR=18
H16A Russell Place, 31.20 338 ⇓P **P 10 29 51.2 +0.9**
baz=31,SNR=18
L10A Juniper Basin 31.27 329 ⇓P **P 10 29 51.4 +0.5**
baz=31,SNR=73
HLID Hailey 31.49 333 ⇓P **P 10 29 53.1 +0.2**
baz=32,SNR=71
HLID Hailey 31.49 333 *e*P **P 10 29 53.0 +0.2**
HLID LR LR
comp=Z,572nm,20.0s,MS4.2
G17A Pierce Place, 31.57 340 ⇑P **P 10 29 54.8 +1.4**
baz=32,SNR=12
GCMT Greycliff 31.64 341 *e*P **P 10 29 54.1 -0.1**
comp=Z,37nm,1.3s,mb5.0
GCMT *e*pP pP 10 30 06.0 +0.3
H15A Lima 31.64 337 ⇑P **P 10 29 55.3 +1.2**
baz=32,SNR=38
I13A Wildhorse Cree 31.65 334 ⇓P **P 10 29 54.6 +0.4**
baz=32,SNR=48
EYMN Ely 31.75 5 *e*P **P 10 29 54.5 -0.5**
comp=Z,43nm,1.1s,mb5.2
EYMN *e*PcP PcP 10 32 44.9 -0.8
EYMN LR LR
comp=Z,712nm,21.0s,MS4.3
F18A Big Timber 31.76 341 ⇑P **P 10 29 55.2 +0.1**
baz=32,SNR=47
G16A Moss Hill, Enn 31.86 338 ⇑P **P 10 29 57.1 +1.1**
baz=32,SNR=35
MCMT McKenzie Canyo 31.90 337 *e*P **P 10 29 57.7 +1.3**
comp=Z,44nm,1.3s,mb5.1
AGMN Agassiz Nation 31.91 360 *e*P **P 10 29 56.0 -0.5**
comp=Z,97nm,0.8s,mb5.7
AGMN *e*pP pP 10 30 07.5 -0.5
AGMN *e*sP sP 10 30 12.7 -0.5
AGMN *e*PcP PcP 10 32 44.3 -1.9
AGMN LR LR
comp=Z,562nm,22.0s,MS4.2
H14A Leadore 31.92 336 ⇑P **P 10 29 57.5 +0.9**
baz=32,SNR=34
I12A Atlanta 31.98 333 ⇑P **P 10 29 57.6 +0.5**
baz=32,SNR=66
MFID Camas Ranch 31.99 332 ⇑P **P 10 29 57.2 0.0**
baz=32,SNR=21
G15A Dillon 32.05 337 ⇑P **P 10 29 58.9 +1.2**
baz=32,SNR=101
F17A Fitzpatrick Pl 32.06 340 ⇑P **P 10 29 58.7 +0.9**
baz=32,SNR=79
OHCM Honcut 32.14 321 *e*P **P 10 29 58.8 +0.2**

H13A Challis 32.23 335 ⇓P **P 10 29 59.9 +0.6**
baz=32,SNR=78
DLMT Dillon 32.26 337 *e*P **P 10 30 00.0 +0.5**
F16A Kennard Place, 32.27 339 ⇓P **P 10 30 00.4 +0.7**
baz=32,SNR=41
MCCM Marconi Confer 32.31 318 PFAKE 10 30 10.0 +10
MCCM LR LR
comp=Z,2μm,19.0s,MS4.8
BBSR BB Station 32.32 55 PFAKE 10 30 10.0 +10
BBSR LR LR
comp=Z,2μm,20.0s,MS4.7
LCCM Lewis and Clar 32.41 339 P **P 10 30 01.5 +0.6**
E18A Harlowton 32.41 342 ⇓P **P 10 30 01.0 +0.1**
baz=32,SNR=33
ANWB Willy Bob 32.45 83 PFAKE 10 30 20.0 +18
ANWB LR LR
comp=Z,473nm,19.0s,MS4.2
H12A Diamond D Ranc 32.47 334 ⇑P **P 10 30 02.1 +0.6**
baz=32,SNR=150
G14A Jackson 32.48 336 ⇓P **P 10 30 02.2 +0.7**
baz=32,SNR=22
LRM Limekiln Ridge 32.60 338 *e*P **P 10 30 03.1 +0.6**
E17A Martinsdale 32.61 340 ⇑P **P 10 30 02.9 +0.2**
baz=33,SNR=37
WVOR Wild Horse Val 32.62 328 *e*P **P 10 30 02.6 -0.2**
WVOR *e**PP pP 10 30 13.7 -0.7
WVOR pmax pmax
comp=Z,170nm,1.4s,mb5.8
WVOR Wild Horse Val 32.62 328 *e*P **P 10 30 02.6 -0.2**
comp=Z,170nm,1.4s,mb5.8
WVOR *e*pP pP 10 30 13.7 -0.6
G13A Cobalt 32.66 335 ⇓P **P 10 30 03.3 +0.3**
baz=33,SNR=40
ACCN Adirondack Com 32.87 30 *e*P **P 10 30 04.5 -0.5**
HOPS Hopland 32.92 319 PFAKE 10 30 20.0 +15
HOPS LR LR
comp=Z,2μm,19.0s,MS4.7
F14A Wisdom 32.93 337 ⇓P **P 10 30 05.7 +0.3**
baz=33,SNR=22
D18A Linhart Farms, 32.95 342 ⇑P **P 10 30 05.6 +0.1**
baz=33,SNR=37
E16A East Helena 32.95 340 ⇓P **P 10 30 05.8 +0.3**
baz=33,SNR=76
MOD Modoc 33.13 325 *e*P **P 10 30 07.0 -0.3**
comp=Z,74nm,1.2s,mb5.5
MOD *e*pP pP 10 30 19.0 +0.1
MOD LR LR
comp=Z,3μm,21.0s,MS5.0
HRY Holter Researc 33.15 340 *e*P **P 10 30 07.5 +0.1**
D17A Six Diamond Ra 33.17 341 ⇓P **P 10 30 07.7 +0.1**
baz=33,SNR=80
E15A Deer Lodge 33.18 338 ⇓P **P 10 30 07.4 -0.2**
baz=33,SNR=22
J08A Circle Bar Ran 33.21 329 ⇓P **P 10 30 08.1 +0.2**
baz=33,SNR=115
GRGR Grenville 33.25 93 *e*P **P 10 30 08.1 -0.5**
comp=Z,162nm,1.1s,mb5.9
GRGR LR LR
comp=Z,628nm,19.0s,MS4.3
FDF Fort de France 33.31 88 PFAKE 10 30 20.0 +11
FDF LR LR
comp=Z,767nm,21.0s,MS4.4
D16A Dana Ranch, Ca 33.34 340 ⇑P **P 10 30 09.0 0.0**
baz=33,SNR=25
LONY Lake Ozonia 33.39 28 *e*P **P 10 30 08.3 -1.2**
comp=Z,41nm,1.2s,mb5.2
LONY *e*pP pP 10 30 21.0 -0.1
LONY *e*S **S 10 35 27.5 -0.1**
LONY LR LR
comp=Z,931nm,20.0s,MS4.5
E14A Clinton 33.48 337 ⇑P **P 10 30 10.1 -0.1**
baz=33,SNR=24
WDC Whiskeytown Da 33.55 322 *e*P **P 10 30 08.3 -2.6**
MDV Middlebury 33.57 30 *e*P **P 10 30 09.7 -1.3**
F12A Elk City 33.62 335 ⇓P **P 10 30 11.5 +0.1**
baz=34,SNR=86
C17A Wharram Farm, 33.62 342 ⇓P **P 10 30 11.6 +0.1**
baz=34,SNR=51
KCPM Cahto Peak 33.65 319 *e*P **P 10 30 12.4 +0.7**
D15A Lincoln 33.67 339 ⇑P **P 10 30 11.8 -0.1**
baz=34,SNR=25
EGMT Eagleton 33.68 343 ⇑P **P 10 30 11.9 -0.1**
baz=34,SNR=36
EGMT Eagleton 33.68 343 *e*P **P 10 30 11.9 -0.1**
comp=Z,200nm,1.6s,mb5.8
EGMT *e*pP pP 10 30 23.4 -0.2
EGMT *e*sP sP 10 30 29.0 +0.3
EGMT *e*PcP PcP 10 32 50.7 -0.4
EGMT LR LR
comp=Z,384nm,19.0s,MS4.1
E13A Victor 33.76 337 ⇑P **P 10 30 12.6 -0.1**
baz=34,SNR=73
BMO Blue Mountains 33.78 332 *e*P **P 10 30 11.9 -1.0**
BMO LR LR
comp=Z,1μm,19.0s,MS4.7
CHMT Chamberlain Mo 33.82 338 *e*P **P 10 30 13.1 -0.1**
MSO Missoula 34.00 337 *e*P **P 10 30 14.3 -0.4**
comp=Z,38nm,1.2s,mb5.2
MSO *e*pP pP 10 30 26.3 0.0
MSO *e*PcP PcP 10 32 51.7 -0.3
MSO LR LR
comp=Z,690nm,20.0s,MS4.4
FRNY Flat Rock 34.01 29 *e*P **P 10 30 14.0 -0.9**
K05A Summer Lake 34.01 326 ⇑P **P 10 30 14.6 -0.3**
baz=34,SNR=6.2
B18A Beardsley Farm 34.02 343 ⇑P **P 10 30 14.9 0.0**
baz=34,SNR=26
D14A Greenough 34.05 338 ⇓P **P 10 30 14.7 -0.5**
baz=34,SNR=54
C16A Fuhringer Ranc 34.08 341 ⇓P **P 10 30 15.3 -0.1**
baz=34,SNR=37
SLMT Seeley Lake 34.19 338 *e*P **P 10 30 15.9 -0.4**
B17A L&G Farms, Che 34.23 342 ⇓P **P 10 30 16.4 -0.3**
baz=34,SNR=25
I07A Izee 34.25 329 ⇑P **P 10 30 16.2 -0.7**
baz=34,SNR=28
C15A Salmond Ranch, 34.34 340 ⇑P **P 10 30 17.3 -0.4**
baz=34,SNR=26
LBNH Lisbon 34.36 31 PFAKE 10 30 30.0 +12
LBNH LR LR
comp=Z,1μm,22.0s,MS4.5
YBH Yreka Blue Hor 34.37 323 *e*P **P 10 30 16.0 -2.0**
D13A Huson 34.41 337 ⇑P **P 10 30 17.9 -0.4**
baz=34,SNR=54
KHMM Horse Mountain 34.44 321 *e*P **P 10 30 18.5 -0.2**
A18A Metzger Ranch, 34.52 343 ⇑P **P 10 30 19.0 -0.3**
baz=34
SWMT Swartz Lake 34.59 338 *e*P **P 10 30 19.5 -0.3**
B16A M & M Farms, S 34.61 341 ⇓P **P 10 30 19.6 -0.4**
baz=35,SNR=8.9
F10A Beach Ranch, E 34.62 333 ⇑P **P 10 30 19.6 -0.5**
baz=35,SNR=62
D12A Red Ives Fores 34.72 336 ⇓P **P 10 30 20.2 -0.7**
baz=35
A17A Triple J Farms 34.78 343 ⇑P **P 10 30 20.9 -0.6**
baz=35,SNR=32
B15A Bradely Ranch, 34.79 340 ⇓P **P 10 30 20.7 -0.8**
baz=35,SNR=12
G08A Pilot Rock 34.87 331 ⇓P **P 10 30 21.4 -1.0**
baz=35,SNR=22
JTMT Jette 34.90 338 *e*P **P 10 30 22.3 -0.2**
YBMT Yellow Bay 34.90 338 *e*P **P 10 30 22.9 +0.5**
C13A Hot Springs 34.95 338 ⇑P **P 10 30 22.2 -0.7**
baz=35,SNR=13
LNOR Lincton Mounta 35.00 332 *e*P **P 10 30 22.8 -0.6**
A16A West Butte Ran 35.05 342 ⇓P **P 10 30 23.5 -0.3**
baz=35,SNR=26
HUMO Hull Mountain 35.07 324 PFAKE 10 30 30.0 +5.9
HUMO LR LR
comp=Z,3μm,22.0s,MS4.9
B14A Marquette Ranc 35.07 339 ⇓P **P 10 30 23.5 -0.5**
baz=35
BBGH Gun Hill 35.08 90 PFAKE 10 30 40.0 +16
BBGH LR LR
comp=Z,2μm,19.0s,MS4.8
VIPM Ingram Point 35.11 328 P **P 10 30 23.7 -0.7**
BSMT Bassoo Peak 35.17 338 *e*P **P 10 30 24.3 -0.5**
C12B Naegeli Ranch, 35.31 337 ⇑P **P 10 30 25.3 -0.7**
baz=35,SNR=20
A15A Johnson Ranch, 35.43 341 ⇓P **P 10 30 26.7 -0.4**
baz=35,SNR=18
E09A Wood Farm, Sta 35.44 333 ⇑P **P 10 30 25.7 -1.4**
baz=35
B13A Whitefish 35.49 338 ⇑P **P 10 30 27.8 +0.2**
baz=36,SNR=35
G06A Carlson Farm, 35.64 329 ⇑P **P 10 30 28.3 -0.6**

baz=36,SNR=15
A14A Double T Ranch 35.65 340 ⇑P **P 10 30 28.8 -0.1**
baz=36,SNR=19
WALA Waterton Lakes 35.89 339 *e*P **P 10 30 31.4 +0.5**
A13A Flathead Natio 35.95 339 ⇓P **P 10 30 31.7 +0.2**
baz=36
HAWA Hanford 35.97 332 *e*P **P 10 30 30.3 -1.4**
comp=Z,31nm,1.5s,mb5.0
HAWA LR LR
comp=Z,740nm,19.0s,MS4.5
B12A Libby 35.98 337 ⇑P **P 10 30 31.8 +0.1**
baz=36,SNR=34
RSW Rattlesnake Hi 35.99 332 *e*P **P 10 30 31.8 -0.1**
KEBM Edson Butte 36.02 323 *e*P **P 10 30 32.6 +0.4**
H04A Detroit Lake 36.03 327 ⇓P **P 10 30 31.4 -0.9**
baz=36,SNR=32
D08A Wollman Farm, 36.20 333 ⇑P **P 10 30 32.5 -1.2**
baz=36,SNR=5.5
E07A Sunnyside 36.24 331 ⇓P **P 10 30 33.0 -1.1**
baz=36
OD2 Odessa Site #2 36.36 333 P **P 10 30 34.5 -0.6**
A12A Yaak River Ran 36.39 338 ⇑P **P 10 30 35.4 +0.1**
baz=36,SNR=21
NEW Newport 36.40 336 *e*P **P 10 30 34.8 -0.6**
NEW *e**PP pP 10 30 45.7 -1.4
NEW *e* 10 32 57.5
NEW pmax pmax
comp=Z,55nm,1.4s
NEW Newport 36.40 336 *e*P **P 10 30 34.8 -0.6**
comp=Z,55nm,1.4s,mb5.3
NEW *e*pP pP 10 30 45.7 -1.4
NEW *e*PcP PcP 10 32 57.5 -1.5
C09A Chrisman Ranch 36.50 334 ⇑P **P 10 30 35.8 -0.4**
baz=36,SNR=21
G04A Mulino 36.54 328 ⇓P **P 10 30 35.8 -0.8**
baz=36,SNR=9.7
COR Corvallis 36.55 326 *e*P **P 10 30 36.7 0.0**
COR *e**PP pP 10 30 48.1 -0.4
COR pmax pmax
comp=Z,196nm,1.5s,mb5.7
COR MLR MLR
comp=Z,3μm,21.0s,MS5.0
COR Corvallis 36.55 326 *e*P **P 10 30 36.7 -0.1**
comp=Z,196nm,1.5s,mb5.7
COR *e*pP pP 10 30 48.1 -0.4
COR LR LR
comp=Z,3μm,21.0s,MS5.0
GULW Guler Mountain 36.60 329 P **P 10 30 38.1 +1.0**
F04A Amboy 37.02 329 ⇑P **P 10 30 39.9 -0.8**
baz=37
TBM Table Mountain 37.03 332 P **P 10 30 40.9 +0.2**
ETW Entiat 37.24 332 P **P 10 30 42.3 -0.2**
ETW *e*pP pP 10 30 54.1 -0.2
ETW *e*PcP PcP 10 33 00.9 -0.6
LON Longmire 37.30 330 *e*P **P 10 30 42.5 -0.5**
LON *e**PP pP 10 30 54.7 0.0
LON *e* 10 32 59.9
LON pmax pmax
comp=Z,56nm,1.5s,mb5.2
LON Longmire 37.30 330 *e*P **P 10 30 42.5 -0.5**
comp=Z,56nm,1.5s,mb5.2
LON *e*pP pP 10 30 54.6 -0.1
LON *e*PcP PcP 10 32 59.9 -1.8
B08A Colville Reser 37.38 334 ⇓P **P 10 30 42.9 -0.8**
baz=37,SNR=19
F03A Seaside 37.59 328 ⇑P **P 10 30 45.5 0.0**
baz=38
D05A Enumclaw 37.70 330 ⇑P **P 10 30 45.9 -0.5**
baz=38,SNR=6.5
E03A Lebam 38.01 328 ⇓P **P 10 30 49.0 -0.1**
baz=38
GNW Green Mountain 38.36 330 *e*P **P 10 30 51.0 -1.1**
comp=Z,35nm,1.5s,mb4.9
GNW *e*pP pP 10 31 02.7 -1.0
GNW *e*sP sP 10 31 07.7 -1.2
JCW Jim Creek 38.40 332 *e*P **P 10 30 50.8 -1.4**
comp=Z,50nm,1.3s,mb5.1
JCW *e*pP pP 10 31 02.4 -1.6
JCW *e*PP PP 10 32 20.2 -0.5
B06A Marblemount 38.43 332 ⇑P **P 10 30 51.8 -0.8**
baz=38
FFC Flin Flon 38.65 354 P **P 10 30 54.1 -0.2**
comp=Z,165nm,1.5s,mb5.5,SNR=17
FFC Flin Flon 38.65 354 *e*P **P 10 30 53.8 -0.5**
FFC pmax pmax
comp=Z,80nm,1.4s,mb5.3
FFC MLR MLR
comp=Z,856nm,19.0s,MS4.6
FFC Flin Flon 38.65 354 *e*P **P 10 30 53.8 -0.5**
comp=Z,80nm,1.4s,mb5.3
FFC LR LR
comp=Z,856nm,19.0s,MS4.6
NLWA Neilton Lookou 38.75 329 ⇓P **P 10 30 55.1 -0.2**
baz=39
NLWA Neilton Lookou 38.75 329 *e*P **P 10 30 55.7 +0.4**
comp=Z,154nm,1.8s,mb5.4
NLWA *e*pP pP 10 31 07.5 +0.5
A05A Maple Falls 39.06 332 ⇓P **P 10 30 56.6 -1.2**
baz=39
EDM Edmonton 39.36 343 *e*P **P 10 30 59.5 -0.8**
EDM *e**PP pP 10 31 11.7 -0.4
LPAZ La Paz 42.29 139 P **P 10 31 24.8 -0.1**
comp=Z,5.8nm,0.8s,mb4.3,baz=334,slow=7.4,SNR=25
LPAZ pP pP 10 31 36.1 -0.6
comp=Z,25nm,0.7s,baz=338,slow=7.2,SNR=33
LPAZ LR LR 10 47 31.7
comp=Z,467nm,21.0s,MS4.3,baz=114,slow=34
LPAZ La Paz 42.29 139 *e*P **P 10 31 24.5 -0.4**
LPAZ *e**PP pP 10 31 35.4 -1.4
LPAZ pmax pmax
comp=Z,42nm,0.9s
LPAZ MLR MLR
comp=Z,705nm,22.0s
LPAZ La Paz 42.29 139 *e*P **P 10 31 24.5 -0.4**
comp=Z,42nm,0.9s,mb5.1
LPAZ *e*pP pP 10 31 35.4 -1.4
LPAZ LR LR
comp=Z,705nm,22.0s,MS4.5
FCC Fort Churchill 42.41 1 *e*P **P 10 31 24.9 -0.4**
FCC pmax pmax
comp=Z,3.0nm,1.5s
FCC Fort Churchill 42.41 1 *e*P **P 10 31 24.9 -0.4**
comp=Z,2.9nm,1.5s
SCHQ Schefferville 44.44 24 P **P 10 31 40.5 -1.2**
comp=Z,15nm,0.8s,mb4.8,baz=228,slow=5.9,SNR=21
SCHQ PcP PcP 10 33 23.2 -1.5
comp=Z,8.0nm,0.9s,baz=300,slow=1.8,SNR=3.7
SCHQ LR LR 10 53 28.4
comp=Z,896nm,19.4s,MS4.7,baz=220,slow=40
SCHQ Schefferville 44.44 24 *e*P **P 10 31 40.8 -0.9**
comp=Z,41nm,1.1s,mb5.1
SCHQ *e*PcP PcP 10 33 23.4 -1.4
YKA Yellowknife Ar 48.02 348 P **P 10 32 08.6 -1.1**
comp=Z,5.1nm,0.7s,mb4.7,baz=152,slow=7.4,SNR=23
YKA pP pP 10 32 20.4 -1.3
comp=Z,3.0nm,0.6s,baz=152,slow=7.4,SNR=7.2
YKA sP sP 10 32 24.8 -1.9
comp=Z,11nm,0.9s,baz=153,slow=7.6,SNR=8.8
YKA PcP PcP 10 33 35.7 -1.5
comp=Z,3.9nm,0.9s,baz=148,slow=4.5,SNR=5.4
YKA Yellowknife Ar 48.02 348 P **P 10 32 08.7 -1.1**
YKA pP pP 10 32 20.4 -1.3
YKA sP sP 10 32 24.8 -2.0
YKA PcP PcP 10 33 35.7 -1.5
DLBC Dease Lake 49.12 337 *e*P **P 10 32 19.3 +1.0**
DLBC *e*pP pP 10 32 31.4 +1.1
DLBC *e*PcP PcP 10 33 41.1 -0.1
TAOE Nuku Hiva Isla 50.58 244 *e*S **S 10 39 32.9 -9.0**
comp=Z,398nm,27.9s
TAOE *e*LR LR 10 46 31.4
comp=Z,1μm,24.8s
SKAG Skagway 51.86 336 *e*P **P 10 32 39.1 +0.2**
comp=Z,95nm,1.8s,mb5.4
SKAG *e*pP pP 10 32 50.9 -0.2
PNL Peninsula 53.65 334 *e*P **P 10 32 52.6 +0.5**
comp=Z,63nm,1.2s,mb5.4
PNL *e*pP pP 10 33 04.3 0.0
RKT Rikitea 54.86 225 *e*LR LR 10 48 57.5
comp=Z,709nm,27.8s
DAWY Dawson 56.23 339 *e*P **P 10 33 09.4 -1.3**
BMRM Bremner River 56.53 334 *e*P **P 10 33 13.0 +0.1**
comp=Z,63nm,1.5s,mb5.4
BMRM *e*pP pP 10 33 25.9 +0.7
DIV Divide 57.11 334 *e*P **P 10 33 17.1 +0.1**
comp=Z,20nm,1.0s,mb5.1
MENT Mentasta 57.19 336 *e*P **P 10 33 17.5 0.0**

EGAK Eagle 57.27 339 *e*P P **10 33 17.0 -1.0**
comp=Z,26nm,1.1s,mb5.2
EGAK *e*PcP PcP 10 34 10.4 -1.6
EGAK LR LR
comp=Z,440nm,20.0s,MS4.6
PAX Paxson 57.89 336 *e*P P **10 33 22.2 -0.3**
PAX *e**PP pP 10 33 34.4 -0.4
PAX *e* 10 34 13.5
PAX pmax pmax
comp=Z,54nm,1.2s,mb5.5
PAX Paxson 57.89 336 *e*P P **10 33 22.2 -0.3**
comp=Z,54nm,1.2s,mb5.5
PAX *e*pP pP 10 33 34.4 -0.4
PAX *e*PcP PcP 10 34 13.4 -1.0
SEW Seward 58.27 332 *e*P P **10 33 24.4 -0.7**
comp=Z,42nm,1.2s,mb5.3
SEW *e*pP pP 10 33 36.8 -0.7
PMR Palmer 58.76 333 *e*P P **10 33 27.9 -0.7**
PMR *e**PP pP 10 33 40.4 -0.5
PMR pmax pmax
comp=Z,59nm,1.2s,mb5.5
PMR Palmer 58.76 333 *e*P P **10 33 27.9 -0.7**
comp=Z,58nm,1.2s,mb5.5
PMR *e*pP pP 10 33 40.4 -0.5
RC01 Rabbit Creek A 58.81 333 *e*P P **10 33 28.4 -0.5**
comp=Z,22nm,1.0s,mb5.1
KDAK Kodiak Island 58.89 328 PFAKE 10 33 40.0 +10
KDAK LR LR
comp=Z,868nm,22.0s,MS4.8
OHAK Old Harbor 59.06 328 *e*P P **10 33 30.4 -0.4**
comp=Z,56nm,1.4s,mb5.4
OHAK *e*pP pP 10 33 41.8 -1.3
OHAK *e*sP sP 10 33 47.0 -1.1
ILAR Eielson Array 59.33 337 P P **10 33 31.6 -0.9**
comp=Z,37nm,1.1s,mb5.3,baz=131,slow=4.6,SNR=165
ILAR pP pP 10 33 42.8 -2.0
comp=Z,15nm,1.0s,baz=138,slow=3.6,SNR=10
ILAR LR LR 11 00 39.5
comp=Z,622nm,19.1s,MS4.8,baz=299,slow=38
ILAR Eielson Array 59.33 337 P P **10 33 31.6 -0.9**
ILAR *PP pP 10 33 42.8 -2.0
COLA College 59.74 337 *e*P P **10 33 34.1 -1.2**
COLA *e**PP pP 10 33 46.7 -1.0
COLA *e* 10 34 20.8
COLA pmax pmax
comp=Z,37nm,1.0s,mb5.4
COLA MLR MLR
comp=Z,427nm,20.0s,MS4.6
COLA College 59.74 337 *e*P P **10 33 34.1 -1.2**
comp=Z,38nm,1.0s,mb5.4
COLA *e*pP pP 10 33 46.7 -0.9
COLA *e*PcP PcP 10 34 20.8 -1.0
COLA LR LR
comp=Z,427nm,20.0s,MS4.6
RSO Redoubt South 59.92 331 *e*P P **10 33 36.0 -0.6**
RSO *e*pP pP 10 33 48.5 -0.5
RSO *e*sP sP 10 33 53.4 -0.5
PPLA Purkeypile 60.60 334 *e*P P **10 33 40.4 -0.8**
comp=Z,119nm,1.6s,mb5.8
PPLA *e*ScP ScP 10 38 21.1 -2.1
PLCA Paso Flores 61.37 158 P P **10 33 45.1 -1.5**
comp=Z,18nm,0.9s,mb5.2,baz=324,slow=6.7,SNR=7.0
PLCA pP pP 10 33 56.4 -2.6
comp=Z,33nm,1.0s,baz=334,slow=8.3,SNR=14
PLCA LR LR 10 54 54.0
comp=Z,448nm,19.2s,MS4.6,baz=152,slow=31
PLCA Paso Flores 61.37 158 *e*P P **10 33 45.5 -1.1**
PLCA *e**PP pP 10 33 56.0 -3.0
PLCA *e**SP sP 10 34 02.4 -1.6
PLCA pmax pmax
comp=Z,59nm,1.5s
PLCA Paso Flores 61.37 158 *e*P P **10 33 45.5 -1.1**
comp=Z,59nm,1.5s,mb5.5
PLCA *e*pP pP 10 33 56.0 -3.0
PLCA *e*sP sP 10 34 02.4 -1.6
COLD Coldfoot 61.70 339 *e*P P **10 33 48.4 -0.2**
comp=Z,32nm,1.2s,mb5.3
COLD *e*pP pP 10 34 00.6 -0.4
TTA Tatalina 62.24 333 *e*P P **10 33 50.7 -1.6**
TTA *e**PP pP 10 34 03.2 -1.5
TTA pmax pmax
comp=Z,43nm,1.2s,mb5.5
TTA Tatalina 62.24 333 *e*P P **10 33 50.7 -1.6**
comp=Z,43nm,1.2s,mb5.5
TTA *e*pP pP 10 34 03.2 -1.5
TRQA Tornquist 62.66 150 *e*P P **10 33 53.7 -1.7**
comp=Z,71nm,1.4s,mb5.6
TRQA *e*pP pP 10 34 05.0 -2.9
PPT Papeete 62.84 240 *e*S S **10 42 16.2 -7.5**
comp=Z,235nm,27.8s
PPT *e*LR LR 10 52 13.5
PPT Papeete 62.84 240 LR LR 10 53 15.6
comp=Z,449nm,21.9s,MS4.6,baz=19,slow=28
SUMG Summit 65.01 16 *e*P P **10 34 09.9 -0.5**
comp=Z,35nm,1.2s,mb5.3
SUMG Summit 65.01 16 *i* P P **10 34 09.9 -0.5**
comp=Z,14nm,0.8s,mb5.0
SCO Scoresbysund 69.33 20 *e*P P **10 34 31.1 -6.7**
SCO pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
SCO Scoresbysund 69.33 20 *i* P P **10 34 31.1 -6.7**
comp=Z,8.3nm,0.9s,mb4.7
DAG Danmarks Havn 71.28 14⇑ *i*P P **10 34 48.5 -1.2**
DAG pmax pmax
comp=Z,15nm,1.0s,mb4.9
DAG Danmarks Havn 71.28 14⇑ *i*P P **10 34 48.5 -1.2**
comp=Z,15nm,1.0s,mb4.9
STS Santiago 77.05 49 P P **10 35 24.5 +0.6**
STS pmax pmax
comp=Z,34nm,0.8s,mb5.3
STS Santiago 77.05 49 P P **10 35 24.5 +0.6**
comp=Z,34nm,0.8s,mb5.3
EZAM Zamans 77.08 50 P P **10 35 24.3 +0.2**
EZAM pmax pmax
comp=Z,27nm,0.8s,mb5.2
EZAM Zamans 77.08 50 P P **10 35 24.3 +0.2**
comp=Z,27nm,0.8s,mb5.2
PMAFR Mafra 77.22 53 *e*LR LR 10 59 58.4
comp=Z,720nm,20.0s
KBS Kingsbay 77.44 11 PFAKE 10 35 40.0 +15
KBS LR LR
comp=Z,314nm,19.0s,MS4.7
ELOB Lobios 77.59 50 P P **10 35 27.7 +0.7**
comp=Z,19nm,0.9s,mb5.0
PTOM Tomar 77.75 52 *e*P P **10 35 28.2 +0.3**
comp=Z,49nm,1.5s,mb5.2
PFVI Vila Bisbo 77.91 55 *e*P P **10 35 28.4 -0.5**
comp=Z,119nm,1.3s,mb5.7
PFVI *e*sP sP 10 35 45.3 -1.2
PFVI *e*LR LR 11 00 34.0
comp=Z,595nm,22.0s
PFVI Vila Bisbo 77.91 55 P P **10 35 28.6 -0.2**
PTEO Sao Teotonio 77.91 54 *e*P P **10 35 29.4 +0.5**
comp=Z,58nm,1.3s,mb5.3
PTEO *e*sP sP 10 35 45.8 -0.7
PVIS Viseu 77.93 51 *e*P P **10 35 28.8 -0.1**
comp=Z,52nm,1.6s,mb5.2
BILL Bilibino 77.99 338⇓ *e*P P **10 35 27.7 -1.0**
BILL *e* 10 38 23.7
BILL *e*S S 10 45 24.6 +5.7
BILL pmax pmax
comp=Z,104nm,1.7s,mb5.5
BILL MLR MLR
comp=Z,400nm,18.0s,MS4.8
BILL Bilibino 77.99 338 *e*P P **10 35 27.9 -0.8**
comp=Z,72nm,1.3s,mb5.4
BILL LR LR
comp=Z,436nm,19.0s,MS4.8
MORF Marmelete 78.02 54 *e*P P **10 35 30.1 +0.7**
comp=Z,34nm,1.3s,mb5.1
MORF *e*sP sP 10 35 46.0 -1.1
MORF *e*LR LR 11 02 15.7
comp=Z,637nm,22.0s
ESK Eskdalemuir 78.18 36 PFAKE 10 35 40.0 +10
ESK LR LR
comp=Z,399nm,22.0s,MS4.7
MTE Manteigas 78.26 51 *e*P P **10 35 30.8 +0.1**
comp=Z,54nm,1.2s,mb5.3
MTE *e*LR LR 11 01 10.4
comp=Z,623nm,20.0s
MTE Manteigas 78.26 51 *e*P P **10 35 31.0 +0.3**
comp=Z,25nm,0.8s,mb5.2
MTE LR LR
comp=Z,664nm,20.0s,MS5.0
EVO Evora 78.27 53 *e*P P **10 35 30.7 -0.1**
comp=Z,41nm,1.7s,mb5.1
EVO Evora 78.27 53 *e*P P **10 35 28.9 -1.9**
comp=Z,54nm,1.1s,mb5.1
EVO *e*MLR MLR
comp=Z,1µm,21.8s,MS4.9
PCBR Castelo Branco 78.42 52 *e*P P **10 35 31.6 0.0**
comp=Z,60nm,1.7s,mb5.2
PCVE Castro Verde 78.43 54 *e*P P **10 35 32.0 +0.3**
comp=Z,28nm,1.6s,mb4.9
PCVE *e*LR LR 11 00 42.5
comp=Z,528nm,20.0s
MVO Moncorvo 78.49 50 *e*P P **10 35 32.3 +0.3**
comp=Z,35nm,1.8s,mb5.0
MVO *e*sP sP 10 35 48.0 -1.6
MVO *e*LR LR 11 00 20.8
comp=Z,554nm,22.0s
MVO Moncorvo 78.49 50 P P **10 35 32.2 +0.3**
PESTR Estremoz 78.53 53 *e*P P **10 35 32.4 +0.2**
comp=Z,28nm,1.4s,mb5.0
PESTR *e*sP sP 10 35 48.1 -1.8
PESTR *e*LR LR 11 00 45.1
comp=Z,671nm,20.0s
PMRV Marv??o 78.56 52 *e*P P **10 35 30.7 -1.7**
comp=Z,43nm,1.6s,mb5.1
PMRV *e*LR LR 11 00 56.4
comp=Z,708nm,20.0s
PBRG Braganca 78.57 50 *e*P P **10 35 33.0 +0.6**
comp=Z,32nm,1.5s,mb5.0
PBRG *e*sP sP 10 35 49.3 -0.7
PBDV Barranco-do-Ve 78.59 54 *e*sP sP 10 35 49.2 -1.1
PBDV *e*LR LR 11 00 24.2
comp=Z,711nm,22.0s
PVAQ Vaqueiros 78.73 54 *e*P P **10 35 33.5 +0.1**
comp=Z,52nm,1.4s,mb5.3
PVAQ *e*LR LR 11 00 44.2
comp=Z,562nm,22.0s
EGRO El Granado 78.88 54 P P **10 35 34.7 +0.5**
comp=Z,11nm,0.9s,mb4.8
EBAD Badajoz 78.99 53 P P **10 35 34.3 -0.4**
comp=Z,6.1nm,0.9s,mb4.5
PBAR Barrancos 79.09 53 *e*P P **10 35 35.7 +0.3**
comp=Z,39nm,1.4s,mb5.2
PBAR *e*pP pP 10 35 49.8 +1.7
PBAR *e*LR LR 11 01 19.1
comp=Z,682nm,22.0s
EARI Arriondas 79.37 48 P P **10 35 36.1 -0.7**
comp=Z,14nm,0.9s,mb4.9
EPLA Plasencia 79.42 51 P P **10 35 35.6 -1.5**
EPLA pmax pmax
comp=Z,51nm,1.2s,mb5.3
EPLA Plasencia 79.42 51 P P **10 35 35.6 -1.5**
comp=Z,50nm,1.2s,mb5.3
EMIN Mina Concepcio 79.46 54 P P **10 35 37.8 +0.4**
comp=Z,8.7nm,0.7s,mb4.8
ROSF Rostrenen 79.60 43 *e*P P **10 35 36.5 -1.4**
comp=Z,245nm,1.8s,mb5.5
ROSF Rostrenen 79.60 43 *e*P P **10 35 36.5 -1.4**
ROSF pmax pmax
comp=Z,122nm,1.8s,mb5.5
ROSF Rostrenen 79.60 43 *e*P P **10 35 36.5 -1.4**
comp=Z,122nm,1.8s,mb5.5
QUIF Quistinic 79.76 43 *e*P P **10 35 37.4 -1.4**
comp=Z,110nm,1.5s,mb5.3
QUIF Quistinic 79.76 43 *e*P P **10 35 37.4 -1.4**
QUIF pmax pmax
comp=Z,55nm,1.5s,mb5.3
QUIF Quistinic 79.76 43 *e*P P **10 35 37.4 -1.4**
comp=Z,55nm,1.5s,mb5.3
SFS San Fernando 80.11 55 PFAKE 10 35 50.0 +9.1
SFS LR LR
comp=Z,1µm,22.0s,MS5.2
ECAB El Cabril 80.36 53 P P **10 35 43.2 +0.9**
comp=Z,16nm,0.9s,mb5.0
ELAN Lanestosa 80.65 48 P P **10 35 44.4 +0.7**
comp=Z,15nm,1.0s,mb4.9
GUD Guadarrama 80.73 50 P P **10 35 45.1 +1.0**
GUD pmax pmax
comp=Z,41nm,0.9s,mb5.4
GUD Guadarrama 80.73 50 P P **10 35 45.0 +0.9**
comp=Z,41nm,0.9s,mb5.4
PAB San Pablo 80.84 52 *e*P P **10 35 45.2 +0.4**
PAB pmax pmax
comp=Z,83nm,1.5s,mb5.4
PAB San Pablo 80.84 52 *e*P P **10 35 45.2 +0.5**
comp=Z,83nm,1.5s,mb5.4
AFI Afiamalu 80.91 253 LR LR 11 02 43.1
comp=Z,255nm,20.2s,MS4.6,baz=78,slow=29
EADA Adamuz 80.99 53 P P **10 35 46.3 +0.8**
comp=Z,11nm,0.9s,mb4.8
ESDC Sonseca Array 81.10 51 P P **10 35 46.6 +0.5**
comp=Z,9.0nm,0.8s,mb4.8,baz=295,slow=4.8,SNR=42
ESDC pP pP 10 35 58.1 -0.9
comp=Z,7.0nm,0.9s,baz=294,slow=5.6,SNR=4.2
ESDC sP sP 10 36 03.3 -0.5
comp=Z,6.9nm,0.8s,baz=296,slow=5.3,SNR=4.4
ESDC LR LR 11 07 22.5
comp=Z,461nm,20.9s,MS4.8,baz=285,slow=32
ESDC Sonseca Array 81.10 51 P P **10 35 46.6 +0.4**
comp=Z,11nm,0.8s,mb4.8
ESLA Sonseca Array 81.10 51 *e*P P **10 35 45.6 -0.5**
comp=Z,24nm,1.6s,mb4.9
ESLA LR LR
comp=Z,3µm,20.0s,MS5.7
GRR Gorron 81.15 42 *e*P P **10 35 45.0 -1.2**
comp=Z,106nm,1.1s,mb5.4
GRR Gorron 81.15 42 *e*P P **10 35 45.0 -1.2**
GRR pmax pmax
comp=Z,53nm,1.1s,mb5.4
GRR Gorron 81.15 42 *e*P P **10 35 45.0 -1.2**
comp=Z,53nm,1.1s,mb5.4
EMIJ Mijas 81.21 55 P P **10 35 47.8 +1.0**
comp=Z,49nm,1.3s,mb5.3
FLN La Foliniere 81.30 42 *e*P P **10 35 46.0 -1.0**
comp=Z,173nm,1.3s,mb5.5
FLN *e*MLR MLR
comp=Z,715nm,20.0s,MS4.7
FLN La Foliniere 81.30 42 *e*P P **10 35 46.0 -1.0**
FLN pmax pmax
comp=Z,86nm,1.3s,mb5.5
FLN MLR MLR
comp=Z,710nm,20.0s,MS5.0
FLN La Foliniere 81.30 42 *e*P P **10 35 46.0 -1.0**
comp=Z,86nm,1.3s,mb5.5
FLN LR LR
comp=Z,710nm,20.0s,MS5.0
ELOJ Sierra Loja 81.56 54 P P **10 35 50.1 +1.5**
ELOJ pmax pmax
comp=Z,24nm,1.0s,mb5.1
ELOJ Sierra Loja 81.56 54 P P **10 35 50.1 +1.5**
comp=Z,24nm,1.0s,mb5.1
LDF La Druitiere 81.58 42 *e*P P **10 35 47.4 -1.1**
comp=Z,28nm,0.9s,mb4.9
LDF La Druitiere 81.58 42 *e*P P **10 35 47.4 -1.1**
LDF pmax pmax
comp=Z,14nm,0.9s,mb4.9
LDF La Druitiere 81.58 42 *e*P P **10 35 47.4 -1.1**
comp=Z,14nm,0.9s,mb4.9
EBAN Banos Encina 81.59 53 P P **10 35 49.2 +0.4**
EBAN pmax pmax
comp=Z,17nm,0.8s,mb5.0
EBAN Banos Encina 81.59 53 P P **10 35 49.2 +0.4**
comp=Z,16nm,0.8s,mb5.0
ERON Agron 81.86 54 P P **10 35 50.6 +0.4**
ECOG Cogollos-Vega 81.98 54 P P **10 35 52.3 +1.5**
ECOG pmax pmax
comp=Z,28nm,0.7s,mb5.3
ECOG Cogollos-Vega 81.98 54 P P **10 35 52.3 +1.5**
comp=Z,28nm,0.7s,mb5.3
EALK Alkurruntz 82.02 47 P P **10 35 51.4 +0.5**
comp=Z,14nm,1.0s,mb4.8
MFF Saint Martin d 82.08 44 *e*P P **10 35 49.7 -1.5**
comp=Z,109nm,1.4s,mb5.3
MFF Saint Martin d 82.08 44 *e*P P **10 35 49.7 -1.5**
MFF pmax pmax
comp=Z,54nm,1.4s,mb5.3
MFF Saint Martin d 82.08 44 *e*P P **10 35 49.7 -1.5**
comp=Z,54nm,1.4s,mb5.3
EGUA Guajares 82.09 54 P P **10 35 51.9 +0.5**
EGUA pmax pmax
comp=Z,61nm,0.8s,mb5.6
EGUA Guajares 82.09 54 P P **10 35 51.9 +0.5**
comp=Z,61nm,0.8s,mb5.6
EQES Quesada 82.23 53 P P **10 35 52.8 +0.6**
comp=Z,12nm,0.8s,mb4.9
ETOR Torete 82.23 50 P P **10 35 52.3 +0.2**
ETOR pmax pmax
comp=Z,13nm,0.8s,mb4.9
ETOR Torete 82.23 50 P P **10 35 52.2 +0.1**
comp=Z,13nm,0.8s,mb4.9
SJPF Ste Jean 82.25 47 *e*P P **10 35 51.2 -0.9**
comp=Z,70nm,1.3s,mb5.1
SJPF Ste Jean 82.25 47 *e*P P **10 35 51.2 -0.9**
SJPF pmax pmax
comp=Z,35nm,1.3s,mb5.1
SJPF Ste Jean 82.25 47 *e*P P **10 35 51.2 -0.9**
comp=Z,35nm,1.3s,mb5.1
LARF Larrau 82.43 47 *e*P P **10 35 53.6 +0.5**
EVIA Vianos 82.45 52 P P **10 35 54.3 +1.0**
EVIA pmax pmax
comp=Z,24nm,0.8s,mb5.2
EVIA Vianos 82.45 52 P P **10 35 54.3 +1.0**
comp=Z,24nm,0.8s,mb5.2
MENF Mencas 82.47 40 *e*P P **10 35 53.4 +0.3**
EHUE Huescar 82.59 53 P P **10 35 54.6 +0.6**
EHUE pmax pmax
comp=Z,27nm,0.9s,mb5.3
EHUE Huescar 82.59 53 P P **10 35 54.6 +0.5**
comp=Z,26nm,0.9s,mb5.3
EBER Berja 82.60 54 P P **10 35 54.8 +0.7**
comp=Z,18nm,0.8s,mb5.2
ETSF Etsaut 82.77 48 *e*P P **10 35 54.1 -0.8**
comp=Z,44nm,1.0s,mb5.1
ETSF Etsaut 82.77 48 *e*P P **10 35 54.1 -0.8**
ETSF pmax pmax
comp=Z,22nm,1.0s,mb5.1
ETSF Etsaut 82.77 48 *e*P P **10 35 54.1 -0.8**
comp=Z,22nm,1.0s,mb5.2
LFF La Frestale 83.12 45 *e*P P **10 35 55.4 -1.2**
comp=Z,82nm,1.0s,mb5.4
LFF La Frestale 83.12 45 *e*P P **10 35 55.4 -1.2**
LFF pmax pmax
comp=Z,41nm,1.0s,mb5.4
LFF La Frestale 83.12 45 *e*P P **10 35 55.4 -1.2**
comp=Z,41nm,1.0s,mb5.4
EBIE Bielsa 83.33 48 P P **10 35 58.5 +0.7**
comp=Z,7.3nm,0.8s,mb4.8
EPF Esparros 83.37 47 *e*P P **10 35 56.9 -1.1**
comp=Z,36nm,1.0s,mb5.0
EPF Esparros 83.37 47 *e*P P **10 35 56.9 -1.1**
EPF pmax pmax
comp=Z,18nm,1.0s,mb5.1
EPF Esparros 83.37 47 *e*P P **10 35 56.9 -1.1**
comp=Z,18nm,1.0s,mb5.1
EMOS Mosqueruela 83.52 50 P P **10 35 59.8 +1.0**
comp=Z,12nm,0.8s,mb5.1
RJF Les Rejaudoux 83.55 45 *e*P P **10 35 57.5 -1.3**
comp=Z,52nm,1.0s,mb5.3
RJF *e*MLR MLR
comp=Z,759nm,22.5s,MS4.7
RJF Les Rejaudoux 83.55 45 *e*P P **10 35 57.5 -1.3**
RJF pmax pmax
comp=Z,26nm,1.0s,mb5.3
RJF MLR MLR
comp=Z,760nm,22.5s,MS5.0
RJF Les Rejaudoux 83.55 45 *e*P P **10 35 57.5 -1.3**
comp=Z,26nm,1.0s,mb5.3
RJF LR LR
comp=Z,760nm,22.5s,MS5.0
KONO Kongsberg 83.60 30 *e*P P **10 36 00.1 +1.3**
KONO *e**PP pP 10 36 11.7 +0.1
KONO *e**SP sP 10 36 16.4 -0.1
KONO pmax pmax
comp=Z,123nm,1.5s,mb5.8
KONO MLR MLR
comp=Z,357nm,20.0s,MS4.7
KONO Kongsberg 83.60 30 *e*P P **10 36 00.1 +1.3**
comp=Z,123nm,1.5s,mb5.8
KONO *e*pP pP 10 36 11.7 +0.1
KONO *e*sP sP 10 36 16.4 -0.1
KONO LR LR
comp=Z,357nm,20.0s,MS4.7
EMUR La Murta 83.62 53 P P **10 35 59.8 +0.5**
comp=Z,9.0nm,0.5s,mb5.2
HYF Humbligny 83.73 43 *e*P P **10 35 58.6 -1.1**
TCF Toulx Ste Croi 83.73 44 *e*P P **10 35 58.3 -1.4**
comp=Z,64nm,1.4s,mb5.3
TCF Toulx Ste Croi 83.73 44 *e*P P **10 35 58.3 -1.4**
TCF pmax pmax
comp=Z,32nm,1.4s,mb5.3
TCF Toulx Ste Croi 83.73 44 *e*P P **10 35 58.3 -1.4**
comp=Z,32nm,1.4s,mb5.3
NAO01 NORSAR Array S 83.75 28 *e*P P **10 36 00.7 +1.2**
comp=Z,52nm,1.2s,mb5.5
NAO01 *e*pP pP 10 36 12.6 +0.2
NAO01 *e*sP sP 10 36 17.7 +0.5
SNF Seneffe 83.78 39 P P **10 36 00.7 +0.7**
comp=Z,22nm,2.0s,mb5.0
SNF XP sP 10 36 17.0 -0.6
NB2 NORSAR Subarra 83.82 28 P P **10 36 00.8 +0.9**
comp=Z,1.9nm,0.8s,mb4.3,baz=300,slow=4.8
NOA NORSAR Array B 83.82 28 P P **10 36 00.7 +0.8**
comp=Z,22nm,1.0s,mb5.2,baz=296,slow=4.9,SNR=37
NOA pP pP 10 36 12.6 -0.2
comp=Z,18nm,0.8s,baz=295,slow=5.0,SNR=18
NOA LR LR 11 13 59.4
comp=Z,192nm,21.5s,MS4.4,baz=280,slow=36
NOA NORSAR Array B 83.82 28 P P **10 36 00.7 +0.8**
NOA *PP pP 10 36 12.6 -0.2
BAIF Baives 83.88 40 *e*P P **10 35 59.3 -1.1**
comp=Z,67nm,1.4s,mb5.3
BAIF Baives 83.88 40 *e*P P **10 35 59.3 -1.1**
BAIF pmax pmax
comp=Z,34nm,1.4s,mb5.3
BAIF Baives 83.88 40 *e*P P **10 35 59.3 -1.1**
comp=Z,34nm,1.4s,mb5.3
CAF Calviac 84.03 45 *e*P P **10 35 59.8 -1.5**
comp=Z,29nm,1.2s,mb5.0
CAF Calviac 84.03 45 *e*P P **10 35 59.8 -1.5**
CAF pmax pmax
comp=Z,15nm,1.2s,mb5.0
CAF Calviac 84.03 45 *e*P P **10 35 59.8 -1.5**
comp=Z,15nm,1.2s,mb5.0
SALF Salau 84.05 47 *e*P P **10 36 02.3 +0.9**
BGF Bois d'Agland 84.07 43 *e*P P **10 36 00.0 -1.5**
comp=Z,110nm,1.5s,mb5.5
BGF Bois d'Agland 84.07 43 *e*P P **10 36 00.0 -1.5**
BGF pmax pmax
comp=Z,55nm,1.5s,mb5.5
BGF Bois d'Agland 84.07 43 *e*P P **10 36 00.0 -1.5**
comp=Z,55nm,1.5s,mb5.5
DOU Dourbes 84.10 40 P P **10 36 01.7 +0.1**
comp=Z,16nm,2.0s,mb4.8
DOU AP pP 10 36 13.7 -0.7
CSOR Sort 84.12 48 P P **10 36 02.6 +0.8**
comp=Z,18nm,0.8s,mb5.2
EBEN Beniarda 84.15 52 P P **10 36 02.5 +0.4**
comp=Z,31nm,1.3s,mb5.3
GIVF Givet 84.24 40 *e*P P **10 36 01.3 -1.0**
comp=Z,102nm,1.4s,mb5.5
GIVF Givet 84.24 40 *e*P P **10 36 01.3 -1.0**
GIVF pmax pmax
comp=Z,51nm,1.4s,mb5.5
GIVF Givet 84.24 40 *e*P P **10 36 01.3 -1.0**
comp=Z,51nm,1.4s,mb5.5
AVF Avril sur Loir 84.33 43 *e*P P **10 36 01.0 -1.8**
comp=Z,44nm,1.2s,mb5.2
AVF Avril sur Loir 84.33 43 *e*P P **10 36 01.0 -1.8**
AVF pmax pmax
comp=Z,22nm,1.2s,mb5.2
AVF Avril sur Loir 84.33 43 *e*P P **10 36 01.0 -1.8**
comp=Z,22nm,1.2s,mb5.2
SSF Saint Saulge 84.35 43 *e*P P **10 36 01.3 -1.6**
comp=Z,85nm,1.3s,mb5.4
SSF Saint Saulge 84.35 43 *e*P P **10 36 01.3 -1.6**
SSF pmax pmax
comp=Z,43nm,1.3s,mb5.4
SSF Saint Saulge 84.35 43 *e*P P **10 36 01.3 -1.6**
comp=Z,43nm,1.3s,mb5.4
EPOB Poblet 84.37 49 P P **10 36 03.5 +0.4**
comp=Z,5.7nm,0.9s,mb4.7
PYM Petit Puy Mans 84.42 44 *e*P P **10 36 03.7 +0.4**
BCLA Clavier 84.43 39 P P **10 36 03.9 +0.7**
comp=Z,31nm,2.0s,mb5.1
BCLA AP pP 10 36 15.3 -0.8
BCLA XP sP 10 36 20.3 -0.6
LOR Lormes 84.52 42 *e*P P **10 36 02.4 -1.3**
comp=Z,187nm,1.4s,mb5.7
LOR *e*MLR MLR
comp=Z,249nm,19.0s,MS4.3
LOR Lormes 84.52 42 *e*P P **10 36 02.4 -1.3**
LOR pmax pmax
comp=Z,94nm,1.4s,mb5.7
LOR MLR MLR
comp=Z,250nm,19.0s,MS4.6
LOR Lormes 84.52 42 *e*P P **10 36 02.4 -1.3**

comp=Z,94nm,1.4s,mb5.7
LOR LR LR
EMIR Miracle 84.53 48 P **P 10 36 05.0 +1.1**
comp=Z,250nm,19.0s,MS4.6
comp=Z,6.9nm,0.6s,mb5.0
MUD Monsted U'grnd 84.55 33 *e*P **P 10 36 04.2 +0.5**
MUD pmax pmax
comp=Z,9.0nm,1.3s,mb4.7
MUD Monsted U'grnd 84.55 33 *i* P **P 10 36 04.2 +0.5**
comp=Z,9.1nm,1.3s,mb4.8
CLLI Llivia 84.68 47 P **P 10 36 05.3 +0.7**
SMF Signal de Mont 84.70 43 *e*P **P 10 36 02.9 -1.7**
comp=Z,96nm,1.5s,mb5.4
SMF Signal de Mont 84.70 43 *e*P **P 10 36 02.9 -1.7**
SMF pmax pmax
comp=Z,48nm,1.5s,mb5.4
SMF Signal de Mont 84.70 43 *e*P **P 10 36 02.9 -1.7**
comp=Z,48nm,1.5s,mb5.4
VALF Valcebollere 84.74 47 *e*P **P 10 36 05.5 +0.6**
LBL Lubilhac 84.74 45 *e*P **P 10 36 05.8 +0.9**
MEM Membach 84.80 39 P **P 10 36 05.4 +0.4**
comp=Z,22nm,1.4s,mb5.1
MEM AP pP 10 36 17.4 -0.5
MEZF Maizieres J'vi 84.89 41 *e*P **P 10 36 04.5 -1.1**
comp=Z,55nm,0.8s,mb5.4
MEZF Maizieres J'vi 84.89 41 *e*P **P 10 36 04.5 -1.1**
comp=Z,55nm,0.8s,mb5.7
LRDF Laroque-de-Fa 84.94 47 *e*P **P 10 36 06.2 +0.2**
ARCES ARCESS Array B 85.06 18 P **P 10 36 05.1 -0.9**
comp=Z,6.3nm,0.9s,mb4.8,baz=318,slow=5.1,SNR=14
ARCES LR LR 11 15 02.1
comp=Z,267nm,21.0s,MS4.6,baz=116,slow=36
SEY Seymchan 85.17 335 *e*P **P 10 36 04.8 -1.9**
WLF Walferdange 85.20 40 P **P 10 36 08.2 +1.2**
comp=Z,34nm,1.9s,mb5.2
WLF AP pP 10 36 19.8 -0.2
WLF Walferdange 85.20 40 *e*P **P 10 36 07.9 +0.8**
WLF *e**SP sP 10 36 25.6 +0.8
WLF pmax pmax
comp=Z,25nm,1.1s,mb5.3
WLF MLR MLR
comp=Z,681nm,20.0s,MS5.0
WLF Walferdange 85.20 40 *e*P **P 10 36 07.9 +0.8**
comp=Z,25nm,1.1s,mb5.3
WLF *es*P sP 10 36 25.6 +0.8
WLF LR LR
comp=Z,681nm,20.0s,MS5.0
CFON Fontmartina 85.22 48 P **P 10 36 07.9 +0.5**
comp=Z,16nm,0.9s,mb5.1
IBBN Ibbenburen 85.25 37 *e*P **P 10 36 08.0 +0.7**
comp=Z,67nm,1.3s,mb5.6
BUG Bochum--Univer 85.27 38 *e*P **P 10 36 07.7 +0.3**
comp=Z,47nm,1.3s,mb5.5
EJON La Jonquera 85.34 47 P **P 10 36 09.0 +1.0**
comp=Z,27nm,0.8s,mb5.4
KEV Kevo 85.36 17 *e*P **P 10 36 06.0 -1.5**
KEV LR LR
comp=Z,350nm,22.0s,MS4.7
KEV Kevo 85.36 17 *e*p **P 10 36 06.0 -1.5**
LASF Ste Croix 85.51 45 *e*P **P 10 36 08.1 -0.7**
comp=Z,237nm,1.6s,mb5.9
THEF They Montfort 85.57 41 *e*P **P 10 36 09.3 +0.3**
SSB Saint Sauveur 85.59 44 *e*P **P 10 36 09.4 +0.3**
SSB Saint Sauveur 85.59 44 *e*P **P 10 36 08.8 -0.3**
SSB *e**PP pP 10 36 21.0 -1.1
SSB pmax pmax
comp=Z,12nm,0.9s,mb5.1
SSB MLR MLR
comp=Z,424nm,20.0s,MS4.8
SSB Saint Sauveur 85.59 44 *e*P **P 10 36 08.8 -0.3**
comp=Z,12nm,0.9s,mb5.1
SSB *ep*P pP 10 36 21.0 -1.1
SSB LR LR
comp=Z,424nm,20.0s,MS4.8
RUP Ruppelstein 85.74 39 *e*P **P 10 36 10.5 +0.7**
VIVF Saint-Julien-I 85.82 45 *e*P **P 10 36 09.4 -0.9**
comp=Z,71nm,1.3s,mb5.4
VIVF Saint-Julien-I 85.82 45 *e*P **P 10 36 09.4 -0.9**
VIVF pmax pmax
comp=Z,35nm,1.3s,mb5.4
VIVF Saint-Julien-I 85.82 45 *e*P **P 10 36 09.4 -0.9**
comp=Z,36nm,1.3s,mb5.4
HAU Haudompre 85.87 41 *e*P **P 10 36 09.0 -1.5**
comp=Z,70nm,1.2s,mb5.5
HAU *e*MLR MLR
comp=Z,504nm,21.2s,MS4.6
HAU Haudompre 85.87 41 *e*P **P 10 36 09.0 -1.5**
HAU pmax pmax
comp=Z,35nm,1.2s,mb5.5
HAU MLR MLR
comp=Z,500nm,21.3s,MS4.9
HAU Haudompre 85.87 41 *e*P **P 10 36 09.0 -1.5**
comp=Z,35nm,1.2s,mb5.5
HAU LR LR
comp=Z,500nm,21.3s,MS4.9
BSEG Bad Segeberg 86.09 35 *e*P **P 10 36 11.8 +0.4**
comp=Z,56nm,1.6s,mb5.5
BSEG Bad Segeberg 86.09 35 *e*P **P 10 36 11.8 +0.4**
BSEG pmax pmax
comp=Z,56nm,1.6s,mb5.5
ETOS Mallorca 86.10 50 P **P 10 36 11.8 +0.1**
comp=Z,24nm,0.9s,mb5.4
CABF La Chapelle 86.18 43 *e*P **P 10 36 10.8 -1.2**
comp=Z,64nm,1.3s,mb5.4
CABF La Chapelle 86.18 43 *e*P **P 10 36 10.8 -1.2**
CABF pmax pmax
comp=Z,32nm,1.3s,mb5.4
CABF La Chapelle 86.18 43 *e*P **P 10 36 10.8 -1.2**
comp=Z,32nm,1.3s,mb5.4
PET Petropavlovsk 86.22 324 *e*P **P 10 36 10.8 -1.3**
PET *e*S S 10 46 40.5 -3.4
PET pmax pmax
comp=Z,200nm,13.2s
PET MLR MLR
comp=Z,200nm,21.0s,MS4.5
HINF Hinteralfeld 86.26 41 *e*P **P 10 36 10.7 -1.7**
comp=Z,130nm,1.8s,mb5.5
HINF Hinteralfeld 86.26 41 *e*P **P 10 36 10.7 -1.7**
HINF pmax pmax
comp=Z,65nm,1.8s,mb5.6
HINF Hinteralfeld 86.26 41 *e*P **P 10 36 10.7 -1.7**
comp=Z,65nm,1.8s,mb5.6
ECH Echery 86.31 41 *e*P **P 10 36 12.4 -0.2**
ECH Echery 86.31 41 *e*P **P 10 36 12.0 -0.6**
ECH *e**PP pP 10 36 24.4 -1.2
ECH pmax pmax
comp=Z,18nm,1.3s,mb5.1
ECH MLR MLR
comp=Z,355nm,20.0s,MS4.8
ECH Echery 86.31 41 *e*P **P 10 36 12.0 -0.7**
comp=Z,18nm,1.3s,mb5.1
ECH *ep*P pP 10 36 24.4 -1.2
ECH LR LR
comp=Z,355nm,20.0s,MS4.8
CDF Champ du Feu 86.32 41 *e*P **P 10 36 11.3 -1.4**
comp=Z,34nm,1.1s,mb5.2
CDF Champ du Feu 86.32 41 *e*P **P 10 36 11.3 -1.4**
CDF pmax pmax
comp=Z,17nm,1.1s,mb5.2
CDF Champ du Feu 86.32 41 *e*P **P 10 36 11.3 -1.4**
comp=Z,17nm,1.1s,mb5.2
TNS Taunus Mts 86.39 39 *e*P **P 10 36 13.4 +0.4**
comp=Z,59nm,1.2s,mb5.7
TNS Taunus Mts 86.39 39 *e*P **P 10 36 13.4 +0.4**
TNS pmax pmax
comp=Z,59nm,1.2s,mb5.7
LOMF Lomont 86.40 42 *e*P **P 10 36 13.3 +0.2**
MOF Molkenrain 86.42 41 *e*P **P 10 36 13.1 -0.1**
LANF Langenberg 86.45 40 *e*P **P 10 36 13.7 +0.4**
NRDL Niedersach Rie 86.52 36 *e*P **P 10 36 12.9 -0.7**
comp=Z,30nm,1.6s,mb5.3
ORIF Oris-en-Rattie 86.61 44 *e*P **P 10 36 13.2 -1.0**
comp=Z,74nm,1.6s,mb5.4
ORIF *e*MLR MLR
comp=Z,731nm,22.5s,MS4.7
ORIF Oris-en-Rattie 86.61 44 *e*P **P 10 36 13.2 -1.0**
ORIF pmax pmax
comp=Z,37nm,1.6s,mb5.4
ORIF Oris-en-Rattie 86.61 44 *e*P **P 10 36 13.2 -1.0**
comp=Z,37nm,1.6s,mb5.4
SMRF Simiane la Rot 86.71 45 *e*P **P 10 36 14.1 -0.6**
comp=Z,90nm,1.5s,mb5.5
SMRF Simiane la Rot 86.71 45 *e*P **P 10 36 14.1 -0.6**
comp=Z,90nm,1.5s,mb5.8
PETK Petropavlovsk- 86.72 325 P **P 10 36 13.5 -1.0**
comp=Z,3.7nm,0.9s,mb4.6,baz=83,slow=12,SNR=5.0

BBS Basel-Blauen 86.80 41 *e*P **P 10 36 14.9 -0.1**
CLZ Clausthal 86.92 37 *e*P **P 10 36 15.8 +0.3**
comp=Z,46nm,1.9s,mb5.4
CLZ Clausthal 86.92 37 *e*P **P 10 36 15.8 +0.3**
CLZ pmax pmax
comp=Z,46nm,1.9s,mb5.4
FELD Feldberg im Sc 86.96 41 *e*P **P 10 36 15.9 +0.1**
LPL La Plagne 86.97 43 *e*P **P 10 36 15.3 -0.6**
comp=Z,71nm,1.7s,mb5.3
LPL La Plagne 86.97 43 *e*P **P 10 36 15.3 -0.6**
LPL pmax pmax
comp=Z,35nm,1.7s,mb5.3
LPL La Plagne 86.97 43 *e*P **P 10 36 15.3 -0.6**
comp=Z,35nm,1.7s,mb5.3
LPG La Plagne 86.99 43 *e*P **P 10 36 15.6 -0.4**
comp=Z,69nm,1.5s,mb5.4
LPG La Plagne 86.99 43 *e*P **P 10 36 15.6 -0.4**
LPG pmax pmax
comp=Z,34nm,1.5s,mb5.4
LPG La Plagne 86.99 43 *e*P **P 10 36 15.6 -0.4**
comp=Z,34nm,1.5s,mb5.4
BFO Black Forest 87.00 40 *e*P **P 10 36 15.8 -0.2**
BFO pmax pmax
comp=Z,4.0nm,1.0s,mb4.6
BFO MLR MLR
comp=Z,518nm,19.0s,MS5.0
BFO Black Forest 87.00 40 *e*P **P 10 36 15.8 -0.2**
comp=Z,4.1nm,1.0s,mb4.6
BFO LR LR
comp=Z,518nm,19.0s,MS5.0
TIXI Tiksi 87.25 347 *i* P **P 10 36 14.9 -1.9**
TIXI pmax pmax
comp=Z,12nm,1.3s,mb5.0
MBDF Montbardon 87.27 44 *e*P **P 10 36 16.4 -1.0**
comp=Z,48nm,1.4s,mb5.2
MBDF Montbardon 87.27 44 *e*P **P 10 36 16.4 -1.0**
MBDF pmax pmax
comp=Z,24nm,1.4s,mb5.2
MBDF Montbardon 87.27 44 *e*P **P 10 36 16.4 -1.0**
comp=Z,24nm,1.4s,mb5.2
STU Stuttgart 87.38 40 *e*P **P 10 36 18.1 +0.3**
comp=Z,22nm,1.1s,mb5.3
LMR La Mourre 87.57 46 *e*P **P 10 36 17.5 -1.4**
comp=Z,42nm,1.2s,mb5.2
LMR La Mourre 87.57 46 *e*P **P 10 36 17.5 -1.4**
LMR pmax pmax
comp=Z,21nm,1.2s,mb5.2
LMR La Mourre 87.57 46 *e*P **P 10 36 17.5 -1.4**
comp=Z,21nm,1.2s,mb5.2
FRF La Foret Royal 87.58 45 *e*P **P 10 36 17.5 -1.4**
comp=Z,52nm,1.3s,mb5.3
FRF La Foret Royal 87.58 45 *e*P **P 10 36 17.5 -1.4**
FRF pmax pmax
comp=Z,26nm,1.3s,mb5.3
FRF La Foret Royal 87.58 45 *e*P **P 10 36 17.5 -1.4**
comp=Z,26nm,1.3s,mb5.3
SAOF Saorge 88.05 45 *e*P **P 10 36 20.5 -0.7**
MOX Moxa 88.11 37 *e*P **P 10 36 21.3 0.0**
comp=Z,9.0nm,1.2s,mb4.9
GRA1 Grafenberg Arr 88.25 38 *e*P **P 10 36 22.0 0.0**
comp=Z,6.0nm,0.8s,mb4.9
GRA1 LR LR
comp=Z,400nm,20.8s,MS4.8
GRF Grafenberg Arr 88.25 38 *e*P **P 10 36 22.0 0.0**
comp=Z,6.0nm,0.8s,mb4.9
GRF *e*L 11 16 48.8
comp=Z,420nm,20.8s
GRF Grafenberg Arr 88.25 38 *e*P **P 10 36 22.0 0.0**
GRF pmax pmax
comp=Z,6.0nm,0.8s,mb4.9
GRF MLR MLR
comp=Z,400nm,20.8s,MS4.8
WERD Werda 88.59 37 *e*P **P 10 36 23.4 -0.2**
comp=Z,12nm,1.4s,mb5.0
CLL Collm 88.64 36 *e*P **P 10 36 23.4 -0.4**
comp=Z,11nm,1.2s,mb5.1
CLL Collm 88.64 36 *i* P **P 10 36 23.5 -0.3**
CLL *e*S S 10 47 10.0 +2.8
CLL pmax pmax
comp=Z,12nm,1.2s,mb5.1
CLL Collm 88.64 36 *i* P **P 10 36 23.5 -0.3**
comp=Z,12nm,1.2s,mb5.1
CLL *e* 10 36 31.0
CLL *e*S S 10 47 10.0 +2.8
CLL Collm 88.64 36 *i* P **P 10 36 23.5 -0.3**
comp=Z,12nm,1.2s,mb5.1
CLL *e* 10 36 31.0
CLL *e*(pP) pP 10 36 35.0 -1.7
CLL *e*PP PP 10 39 50.0 -2.2
CLL *e*S S 10 47 10.0 +2.8
CLL *e*PS 10 48 14.0
CLL *e*PPS 10 48 41.0
CLL *e*SS SS 10 52 54.0 -4.1
CLL *e*SSS 10 56 36.0
CLL *e* 11 01 00.0
GUNZ Gunzen 88.64 38 *e*P **P 10 36 23.8 0.0**
comp=Z,16nm,1.3s,mb5.2
LVZ Lovozero 88.69 17 *e*P **P 10 36 22.3 -1.4**
LVZ pmax pmax
comp=Z,14nm,1.2s,mb5.2
LVZ Lovozero 88.69 17 PFAKE 10 36 30.0 +6.3
LVZ LR LR
comp=Z,272nm,21.0s,MS4.7
TANN Tannenbergstha 88.70 37 *e*P **P 10 36 24.0 0.0**
comp=Z,11nm,1.2s,mb5.1
NKC Novy Kostel 88.76 38 *e*P **P 10 36 23.9 -0.5**
NKC *e**PP pP 10 36 36.7 -0.6
NKC MLR MLR
comp=Z,400nm,21.6s,MS4.8
NKC Novy Kostel 88.76 38 *e*P **P 10 36 23.9 -0.5**
NKC *ep*P pP 10 36 36.7 -0.6
NKC AMS AMS 11 15 50.0
comp=Z,400nm,21.6s
TIC Toumodi 88.82 83 *e*PKIKP **P 10 36 25.3 -0.1**
comp=Z,9.4nm,0.2s,mb5.8
LIC Lamto 88.93 84 *e*PKIKP **P 10 36 25.6 -0.3**
comp=Z,98nm,1.2s,mb6.0
LIC Lamto 88.93 84 *e*P **P 10 36 24.3 -1.6**
comp=Z,86nm,1.2s,mb5.7
LIC *e*MLR MLR
comp=Z,221nm,22.2s,MS4.2
LIC Lamto 88.93 84 *e*P **P 10 36 24.3 -1.6**
comp=Z,43nm,1.2s,mb5.7
LIC LR LR
comp=Z,110nm,22.3s,MS4.2
DBIC Dimbokro 88.97 83 P **P 10 36 25.1 -0.9**
comp=Z,10nm,1.1s,mb5.1,baz=191,slow=5.0,SNR=3.5
DBIC LR LR 11 11 18.1
comp=Z,248nm,21.2s,MS4.6,baz=274,slow=32
KIC Kosan Boka 89.17 84 *e*PKIKP **P 10 36 26.0 -1.0**
comp=Z,120nm,1.5s,mb6.0
BRG Berggiesshubel 89.36 37 *e*P **P 10 36 26.9 -0.2**
comp=Z,12nm,1.0s,mb5.2
BRG *e* pP 10 36 39.2 -1.0
comp=Z,9.7nm,1.0s
BRG *e* 10 36 43.9
comp=Z,8.2nm,1.1s
BRG S S 10 47 16.0 +2.1
BRG PS PS 10 48 38.0 +14
BRG
comp=N,245nm,22.1s
BRG
comp=E,284nm,23.8s
BRG
comp=Z,523nm,26.1s
BRG Berggiesshubel 89.36 37 *e*P **P 10 36 27.0 -0.2**
BRG *e* pP 10 36 39.2 -0.9
BRG *e* 10 36 43.9
BRG S S 10 47 16.0 +2.1
BRG pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
BRG pmax pmax
comp=Z,6.0nm,1.0s,mb4.9
BRG pmax pmax
comp=Z,5.0nm,1.1s,mb4.8
BRG MLR MLR
comp=N,147nm,22.1s,MS4.5
BRG MLR MLR
comp=E,170nm,23.8s,MS4.5
BRG MLR MLR
comp=Z,313nm,26.1s,MS4.6
WET Wettzell 89.47 38 *e*P **P 10 36 27.7 0.0**
comp=Z,12nm,1.1s,mb5.1
WET Wettzell 89.47 38 *e*P **P 10 36 27.7 0.0**
WET pmax pmax
comp=Z,12nm,1.1s,mb5.1

PGF Pioggiola 89.56 46 *e*P **P 10 36 26.6 -1.7**
comp=Z,20nm,1.1s,mb5.1
PGF Pioggiola 89.56 46 *e*P **P 10 36 26.6 -1.7**
PGF pmax pmax
comp=Z,10.0nm,1.1s,mb5.1
PGF Pioggiola 89.56 46 *e*P **P 10 36 26.6 -1.7**
comp=Z,9.8nm,1.1s,mb5.0
PVCC Panska Ves 89.87 37 AMS AMS 11 11 40.0
comp=Z,600nm,25.5s
KHC Kasperske Hory 89.89 38 *e*P **P 10 36 29.6 -0.1**
KHC *e**PP pP 10 36 41.5 -1.1
KHC *e* 10 47 17.8
KHC MLR MLR
comp=Z,600nm,19.8s,MS5.0
KHC Kasperske Hory 89.89 38 *e*P **P 10 36 29.6 -0.1**
KHC *ep*P pP 10 36 41.5 -1.1
KHC *e*S S 10 47 17.8 -1.1
KHC *e*PS PS 10 48 41.8 +12
KHC AMS AMS 11 17 10.0
comp=Z,600nm,19.8s
FINES FINESS Array B 89.91 24 P **P 10 36 28.6 -0.9**
comp=Z,3.3nm,0.9s,mb4.7,baz=349,slow=5.8,SNR=7.8
FINES pP pP 10 36 40.1 -2.4
comp=Z,5.4nm,1.0s,baz=346,slow=3.9,SNR=5.1
FINES LR LR 11 19 25.0
comp=Z,188nm,20.7s,MS4.5,baz=341,slow=37
FINES FINESS Array B 89.91 24 P **P 10 36 28.6 -0.9**
FINES *PP pP 10 36 40.1 -2.4
PRA Prague 89.99 37 P **P 10 36 30.0 -0.1**
PRU Pruhonice 90.09 37 *e*P **P 10 36 30.7 +0.1**
PRU *e**PP pP 10 36 43.1 -0.5
PRU *e* 10 47 17.4
PRU MLR MLR
comp=Z,400nm,19.2s,MS4.9
PRU Pruhonice 90.09 37 *e*P **P 10 36 30.7 +0.1**
PRU *ep*P pP 10 36 43.1 -0.5
PRU *e*S S 10 47 17.4 -3.3
PRU *e*PS PS 10 48 41.0 +9.0
PRU AMS AMS 11 17 50.0
comp=Z,400nm,19.2s
UPC Upice 90.70 36 *e*P **P 10 36 33.3 -0.1**
UPC *e**PP pP 10 36 44.9 -1.5
UPC Upice 90.70 36 *e*P **P 10 36 33.3 -0.1**
UPC *ep*P pP 10 36 44.9 -1.5
TREC Trest 90.94 38 AMS AMS 11 18 50.0
comp=Z,600nm,18.9s
DPC Dobruska-Polom 90.95 36 *e*P **P 10 36 34.9 +0.3**
DPC *e**PP pP 10 36 46.8 -0.8
DPC *e* 10 47 24.3
DPC MLR MLR
comp=Z,400nm,25.6s,MS4.8
DPC Dobruska-Polom 90.95 36 *e*P **P 10 36 34.9 +0.3**
DPC *ep*P pP 10 36 46.8 -0.8
DPC *e*S S 10 47 24.3 -4.3
DPC AMS AMS 11 16 40.0
comp=Z,400nm,25.6s
JOF Joensuu 90.95 21 *e*P **P 10 36 32.2 -2.1**
JOF Joensuu 90.95 21 *ep* **P 10 36 32.2 -2.1**
CADS Cadrg 91.22 41 *i* P **P 10 36 35.7 -0.2**
JAVS Javornik 91.56 41 *e*P **P 10 36 37.6 0.0**
SKDS Skadamscina 91.68 41 *e*P **P 10 36 38.1 0.0**
CEY Cerknica 91.86 41 *e*P **P 10 36 39.2 +0.3**
MORC Moravsky Berou 91.92 37 *e*P **P 10 36 39.0 -0.1**
MORC *e**SP sP 10 36 56.1 -0.8
MORC pmax pmax
comp=Z,10.0nm,1.4s,mb5.0
MORC Moravsky Berou 91.92 37 *e*P **P 10 36 39.0 -0.1**
comp=Z,9.8nm,1.4s,mb5.0
MORC *es*P sP 10 36 56.1 -0.7
OKC Ostrava-Krasne 92.23 36 *e*P **P 10 36 39.6 -0.9**
OKC MLR MLR
comp=Z,300nm,21.7s,MS4.7
OKC Ostrava-Krasne 92.23 36 *e*P **P 10 36 39.6 -0.9**
OKC AMS AMS 11 19 00.0
comp=Z,300nm,21.7s
AQU L'Aquila 92.63 45 PFAKE 10 36 50.0 +7.5
AQU LR LR
comp=Z,547nm,20.0s,MS5.0
VYHS Vyhne 93.27 37 *e*P **P 10 36 45.9 +0.5**
VYHS pmax pmax
comp=Z,13nm,1.8s,mb5.1
VYHS Vyhne 93.27 37 *e*P **P 10 36 45.9 +0.5**
comp=Z,13nm,1.8s,mb5.0
VYHS *e*PP pP 10 36 57.9 -0.5
VYHS Vyhne 93.27 37 *e*P **P 10 36 45.9 +0.5**
VYHS *ep*P pP 10 36 57.9 -0.5
TAM Tamanrasset 93.74 65 *e*P **P 10 36 48.9 +0.8**
TAM *e**PP pP 10 37 01.0 -0.1
TAM pmax pmax
comp=Z,43nm,1.6s,mb5.6
TAM MLR MLR
comp=Z,281nm,19.0s,MS4.7
TAM Tamanrasset 93.74 65 *e*P **P 10 36 48.9 +0.8**
comp=Z,43nm,1.6s,mb5.6
TAM *ep*P pP 10 37 01.0 -0.1
TAM LR LR
comp=Z,281nm,19.0s,MS4.7
YAK Yakutsk 94.13 340 *e*P **P 10 36 47.2 -1.8**
YAK pmax pmax
comp=Z,26nm,1.2s,mb5.5
PSZ Piszkesteto 94.17 37 *e*P **P 10 36 49.7 +0.2**
PSZ pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
PSZ MLR MLR
comp=Z,470nm,20.0s,MS5.0
PSZ Piszkesteto 94.17 37 *e*P **P 10 36 49.7 +0.1**
comp=Z,2.7nm,0.8s,mb4.7
PSZ LR LR
comp=Z,470nm,20.0s,MS5.0
KECS Kecovo 94.23 37 *e*P **P 10 36 49.5 -0.3**
KECS Kecovo 94.23 37 *e*P **P 10 36 49.5 -0.3**
KWP Kalwaria Pacla 94.89 35 PFAKE 10 37 00.0 +7.2
KWP LR LR
comp=Z,644nm,19.0s,MS5.1
UZH Uzhgorod 95.19 36 *e*P **P 10 36 53.0 -1.2**
CUC Castrocucco 95.29 46 PFAKE 10 37 10.0 +15
CUC LR LR
comp=Z,200nm,21.0s,MS4.6
CEL Celeste 96.11 47 PFAKE 10 37 10.0 +11
CEL LR LR
comp=Z,319nm,21.0s,MS4.8
TIP Timpagrande 96.30 46 PFAKE 10 37 10.0 +11
TIP LR LR
comp=Z,313nm,19.0s,MS4.8
TIR Tirane 97.39 43 PFAKE 10 37 20.0 +16
TIR LR LR
comp=Z,408nm,20.0s,MS4.9
KIEV Kiev 97.72 32 PFAKE 10 37 20.0 +14
KIEV LR LR
comp=Z,329nm,20.0s,MS4.8
AKASG Malin Array Be 97.73 32 P **P 10 37 04.2 -1.4**
comp=Z,0.3nm,0.3s,mb4.3,baz=290,slow=4.4,SNR=9.1
AKASG LR LR 11 23 17.8
comp=Z,297nm,19.3s,MS4.8,baz=300,slow=37
URZ Urewera 97.75 233 LR LR 11 09 52.6
comp=Z,533nm,19.2s,MS5.0,baz=193,slow=28
YSS Yuzh-Sakhalins 98.10 324 *e*P **P 10 37 04.4 -3.0**
YSS pmax pmax
comp=Z,12nm,1.3s,mb5.3
OBN Obninsk 98.22 25 *e*P **P 10 37 06.7 -1.0**
OBN *e*PS PS 10 49 56.4 -4.6
OBN pmax pmax
comp=Z,12nm,1.2s,mb5.3
OBN MLR MLR
comp=Z,300nm,20.0s,MS4.8
OBN Obninsk 98.22 25 PFAKE 10 37 20.0 +12
OBN LR LR
comp=Z,390nm,19.0s,MS4.9
ERM Erimo 100.60 320 PFAKE 10 37 30.0 +12
ERM LR LR
comp=Z,172nm,21.0s,MS4.5
HABR Khabarovsk 101.31 328 *e*P Pdif 10 37 19.1 -2.4
HABR *e*S SKSac 10 47 49.1 -8.5
HABR S Sdif 10 48 49.4 -8.5
HABR *e*PS PS 10 50 34.6 +0.2
HABR *e*SS SS 10 55 53.4 -4.5
HABR *e*SSS 10 59 45.6
HABR pmax pmax
comp=E,43nm,2.7s
HABR pmax pmax
comp=Z,23nm,2.0s
HABR pmax pmax
comp=N,16nm,1.9s
HABR MLR MLR

comp=Z,137nm,21.0s,MS4.4
VSR Storozhevoye 102.08 27 *e*P Pdif 10 37 24.7 -0.3
VSR pmax pmax
comp=Z,3.0nm,0.4s
VSR pmax pmax
comp=N,10.0nm,1.1s
VSR pmax pmax
comp=E,4.0nm,0.4s
VSR MLR MLR
comp=N,720nm,27.0s,MS5.2
VSR MLR MLR
comp=E,540nm,27.0s,MS5.2
VSR MLR MLR
comp=Z,720nm,27.0s,MS5.1
DZM Mont Dzumac 103.05 251 *e*LR LR 11 11 37.4
comp=Z,395nm,24.1s
ARU Arti 104.40 14 *e*P Pdif 10 37 34.4 -0.9
ARU pmax pmax
comp=Z,5.0nm,0.4s
ARU MLR MLR
comp=Z,343nm,19.0s,MS4.9
ARU Arti 104.40 14 *e*Pdif Pdif 10 37 34.4 -0.9
comp=Z,5.1nm,0.4s
ARU LR LR
comp=Z,343nm,19.0s,MS4.9
ISP Isparta 106.21 42 PFAKE 10 42 10.0 +15
ISP LR LR
comp=Z,228nm,19.0s,MS4.7
MDJ Mudanjiang 106.69 328 PFAKE 10 42 10.0 +14
MDJ LR LR
comp=Z,179nm,22.0s,MS4.6
MAJO Matsushiro 106.86 317 PFAKE 10 42 10.0 +13
MAJO LR LR
comp=Z,201nm,21.0s,MS4.7
BR131 Keskin Array S 106.98 39 PFAKE 10 42 10.0 +13
BR131 LR LR
comp=Z,299nm,20.0s,MS4.8
HIA Hailar 107.56 337 PFAKE 10 42 10.0 +13
HIA LR LR
comp=Z,309nm,21.0s,MS4.8
KIV Kislovodsk 109.01 30 PFAKE 10 42 10.0 +10
KIV LR LR
comp=Z,255nm,20.0s,MS4.8
CN2 Changchun 109.34 330 *e*Pdif Pdif 10 38 00.0 +2.8
CN2 PP PP 10 42 36.0 +6.1
BRVK Borovoye 109.88 9 PFAKE 10 42 10.0 +8.3
BRVK LR LR
comp=Z,293nm,20.0s,MS4.8
TLY Talaya 110.23 347 PFAKE 10 42 10.0 +7.6
TLY LR LR
comp=Z,230nm,21.0s,MS4.7
MAIT Maitri 111.01 160 *e*PKPab 10 42 19.9
MCQ Macquarie Isla 112.00 217 *e*PKIKP PKiKP 10 42 04.7 -0.8
KSRS Korea Array 112.59 324 PKiKP PKiKP 10 42 05.5 -1.8
comp=Z,1.7nm,0.8s,baz=5.2,slow=1.1,SNR=11
GNI Garni 112.86 32 PFAKE 10 42 20.0 +12
GNI LR LR
comp=Z,229nm,21.0s,MS4.7
KURK Kurchatov 113.09 4 PFAKE 10 42 20.0 +12
KURK LR LR
comp=Z,207nm,21.0s,MS4.7
SONM Songino Array 113.16 344 PKKPbc PKKPbc 10 52 51.4 -3.9
comp=Z,1.2nm,0.9s,baz=206,slow=2.0,SNR=5.9
BJI Beijing 116.57 333 PKP PKPdf 10 42 12.5 -2.3
BJI SS SS 10 59 25.8 +2.7
BJI AMB AMB
comp=Z,120nm,9.7s
BJI LR LR
comp=N,200nm,25.3s,MS4.8
BJI LR LR
comp=E,190nm,24.4s,MS4.8
BJI LR LR
comp=Z,170nm,29.2s,MS4.5
BJT Baijiatuau 116.59 333 PFAKE 10 42 20.0 +5.1
BJT LR LR
comp=Z,232nm,21.0s,MS4.8
MKAR Makanchi Array 117.18 2 PKP PKPdf 10 42 12.9 -2.9
comp=Z,1.6nm,0.8s,baz=6.8,slow=3.6,SNR=3.3
MKAR PKKPbc PKKPbc 10 52 35.8 -5.8
comp=Z,0.5nm,0.6s,baz=208,slow=4.8,SNR=5.7
HHC Hu-ho-hao-te 117.76 337 *e*PKP PKPdf 10 42 12.5 -4.6
HHC PP PP 10 43 28.8 -0.7
HHC PKS 10 45 47.5
HHC SKS SKSdf 10 49 19.8 -6.1
HHC SKKS SKKSac 10 50 17.5 -10
HHC AMB AMB
comp=Z,75nm,9.0s
HHC LR LR
comp=N,170nm,20.4s,MS4.8
HHC LR LR
comp=E,180nm,20.3s,MS4.8
HHC LR LR
comp=Z,170nm,20.2s,MS4.7
WMQ Urumqi 120.09 357 *e*PKP PKPdf 10 42 21.0 -0.5
WMQ LR LR
comp=N,200nm,22.6s,MS4.9
WMQ LR LR
comp=E,190nm,20.8s,MS4.9
WMQ LR LR
comp=Z,200nm,21.6s,MS4.7
TKM2 Tokmak 2 120.53 7 PFAKE 10 42 30.0 +7.6
TKM2 LR LR
comp=Z,84nm,19.0s,MS4.4
EKS2 Erkin-Say 120.54 9 PFAKE 10 42 30.0 +7.6
EKS2 LR LR
comp=Z,119nm,21.0s,MS4.5
AAK Ala-Archa 120.67 8 PFAKE 10 42 30.0 +7.3
AAK LR LR
comp=Z,344nm,21.0s,MS5.0
NJ2 Nanjing 121.62 326 *e*PKP PKPdf 10 42 26.3 +1.5
CMSA Cobar Meteorol 122.53 243 *e*PKP PKPdf 10 42 24.2 -2.2
GTA Gaotai 122.71 346 *e*PKP PKPdf 10 42 25.3 -1.4
GTA sPKP 10 42 39.8
GTA PP PP 10 44 05.3 +2.1
GTA SKS SKSdf 10 49 32.5 -2.9
GTA SKKS SKKSac 10 50 54.3 -6.0
GTA SS SS 11 00 40.0 -1.7
GTA AMB AMB
comp=Z,60nm,5.1s
GTA LR LR
comp=N,210nm,21.9s,MS4.8
GTA LR LR
comp=E,130nm,21.6s,MS4.8
GTA LR LR
comp=Z,300nm,23.7s,MS4.9
MTSU Mount Surprise 122.86 259 *e*PKP PKPdf 10 42 25.2 -2.2
comp=Z,57nm,1.2s
QLP Quilpie 123.70 249 *e*PKP PKPdf 10 42 27.4 -1.4
BOSA Boshof 124.56 114 PKP PKPdf 10 42 29.4 -1.0
comp=Z,13nm,0.9s,baz=255,slow=3.6,SNR=15
BOSA pPKP pPKPdf 10 42 40.6 -3.2
comp=Z,8.5nm,0.8s,baz=246,slow=3.9,SNR=5.2
BOSA Boshof 124.56 114 PKP PKPdf 10 42 29.4 -1.0
BOSA pPKP pPKPdf 10 42 40.6 -3.2
LZH Lanzhou 124.71 341 *e*PKP PKPdf 10 42 30.0 -0.6
LZH PP PP 10 44 20.0 +3.2
LZH SKKS SKKSac 10 51 08.3 -4.9
LZH SS SS 11 01 05.0 -2.2
LZH AMB AMB
comp=Z,170nm,4.0s
LZH LR LR
comp=N,510nm,18.4s
LZH LR LR
comp=Z,700nm,19.8s,MS5.3
XAN Xi'an 124.71 335 PKP PKPdf 10 42 28.5 -2.2
MBAR Mbarara 124.99 79 PFAKE 10 42 40.0 +8.3
MBAR LR LR
comp=Z,919nm,22.0s,MS5.4
WHN Wuhan 125.17 328 PKP PKPdf 10 42 29.3 -2.3
STKA Stephens Creek 126.01 242 *e*PKP PKPdf 10 42 31.2 -1.9
comp=Z,12nm,0.9s
STKA Stephens Creek 126.01 242 PKP PKPdf 10 42 31.3 -1.8
comp=Z,16nm,0.9s,baz=26,slow=3.5,SNR=24
STKA pPKP pPKPdf 10 42 42.6 -3.9
comp=Z,11nm,0.8s,baz=90,slow=2.0,SNR=8.1
STKA Stephens Creek 126.01 242 *e*PKPdf PKPdf 10 42 31.3 -1.8
STKA *ep*PKPdf pPKPdf 10 42 42.8 -3.7
STKA *es*PKPdf 10 42 49.4
LSZ Lusaka 126.15 97 *e*PKIKP PKPdf 10 42 33.4 -0.4
LSZ *e* 10 42 45.7
MAW Mawson 126.89 170 PKP PKPdf 10 42 32.2 -1.5
comp=Z,5.7nm,0.8s,baz=204,slow=2.2,SNR=12
MAW pPKP pPKPdf 10 42 43.8 -3.3
comp=Z,2.9nm,0.7s,baz=170,slow=2.4,SNR=4.0
MAW Mawson 126.89 170 *e*PKPdf PKPdf 10 42 32.5 -1.2
MAW *ep*PKPdf pPKPdf 10 42 44.1 -3.0
CASY Casey 127.12 193 PFAKE 10 42 40.0 +5.8
CASY LR LR
comp=Z,430nm,22.0s,MS5.1
ENH Enshi 127.72 332 *e*PKPdf PKPdf 10 42 35.0 -1.5
ENH LR LR
comp=Z,249nm,20.0s,MS4.9
NIL Nilore 129.23 12 PFAKE 10 42 50.0 +11
NIL LR LR
comp=Z,102nm,22.0s,MS4.5
CD2 Chengdu 129.47 338 PKP PKPdf 10 42 40.0 +0.2
CD2 sPKP 10 42 54.3
CD2 PP PP 10 44 52.5 +4.2
CD2 PKS 10 46 15.0
CD2 SKS SKSdf 10 49 46.3 -2.0
CD2 SKKS SKKSac 10 51 39.8 -3.5
CD2 SS SS 11 02 08.3 +1.8
CD2 AMB AMB
comp=Z,260nm,8.9s
CD2 LR LR
comp=N,220nm,8.3s
CD2 LR LR
comp=Z,240nm,10.7s,MS5.2
KMBO Kilima Mbogo 131.28 77 PFAKE 10 42 50.0 +6.3
KMBO LR LR
comp=Z,295nm,21.0s,MS5.0
GYA Guiyang 132.26 333 Pdif Pdif 10 39 38.0 -1.1
GYA PKP PKPdf 10 42 46.3 +1.1
GYA sPKP 10 43 02.8
GYA PP PP 10 45 10.5 +3.9
GYA PKS 10 46 21.3
GYA SKKS SKKSac 10 51 55.5 -5.2
GYA SS SS 11 02 40.0 -1.1
GYA AMB AMB
comp=Z,130nm,7.9s
GYA LR LR
comp=N,260nm,20.8s,MS5.0
GYA LR LR
comp=E,180nm,22.2s,MS5.0
GYA LR LR
comp=Z,250nm,21.9s,MS4.9
ASAR Alice Springs 132.99 253 PKP PKPdf 10 42 44.4 -2.2
comp=Z,5.5nm,1.1s,baz=94,slow=2.4,SNR=18
ASAR pPKP pPKPdf 10 42 57.0 -3.0
comp=Z,2.0nm,0.8s,baz=94,slow=2.0,SNR=6.1
DAV Davao City (W) 133.00 296 PFAKE 10 43 00.0 +13
DAV LR LR
comp=Z,205nm,21.0s,MS4.8
LSA Lhasa 133.79 352 PFAKE 10 43 00.0 +12
LSA LR LR
comp=Z,278nm,21.0s,MS5.0
KMI Kunming 135.07 336 PKP PKPdf 10 42 47.8 -2.8
KMI sPKP 10 43 08.5
KMI PP PP 10 45 28.0 +3.6
KMI AMB AMB
comp=Z,50nm,3.6s
KMI LR LR
comp=N,230nm,16.9s,MS5.1
KMI LR LR
comp=E,190nm,17.7s,MS5.1
KMI LR LR
comp=Z,220nm,26.2s
QIZ Qiongzhong 136.82 323 PKP PKPdf 10 42 53.0 -0.9
QIZ PP PP 10 45 35.5 -0.3
QIZ SS SS 11 03 36.0 -0.6
QIZ LR LR
comp=N,90nm,24.1s,MS4.5
QIZ LR LR
comp=E,33nm,21.4s,MS4.5
QIZ LR LR
comp=Z,110nm,26.8s
FITZ Fitzroy Crossi 140.52 261 *e*PKP PKPdf 10 42 53.8 -6.9
comp=Z,14nm,0.9s
CHTO Chiang Mai 142.25 337 PFAKE 10 43 10.0 +6.2
CHTO LR LR
comp=Z,124nm,20.0s,MS4.7
CMAR Chiang Mai Arr 142.57 337 PKhKP PKPpre 10 42 58.4
comp=Z,6.9nm,1.1s,baz=348,slow=4.6,SNR=14
CMAR PKP PKPdf 10 43 03.1 -1.3
comp=Z,8.4nm,0.9s,baz=323,slow=2.4,SNR=19
ABPO Ambohimpanom 144.62 100 *e*PKIKP PKPdf 10 43 07.0 -0.9
ABPO *e* 10 43 19.1
HYB Hyderabad 146.02 10 *e*PKP2 PKPab 10 43 09.5 -2.2
HYB Hyderabad 146.02 10 *i* PKP PKPdf 10 43 09.5 -0.9
MBWA Marble Bar 146.13 256 *e*PKP PKPdf 10 43 08.4 -2.1
MBWA Marble Bar 146.13 256 *e*PKPbc PKPbc 10 43 08.9 -2.6
MBWA *ep*PKPdf pPKPdf 10 43 20.7 -3.2
MBWA *es*PKPdf 10 43 26.7
MEEK Meekatharra 146.54 246 *e*PKP PKPdf 10 43 09.7 -1.3
MORW Morawa 148.18 241 *e*PKP PKPdf 10 43 14.5 +0.8
KSM Kuching 148.82 302 *e*PKPdf PKPdf 10 43 14.2 -1.1
KSM *e*PKPbc PKPbc 10 43 17.8 -1.4
KSM *e*PKPab PKPab 10 43 21.4 -1.6
KULM Kulim 153.13 322 PFAKE 10 43 30.0 +8.2
KULM LR LR
comp=Z,334nm,22.0s,MS5.1

*IDC **30** 10:27:00.1±35.0, 21°.48N×122°.64E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/21, mbtmp3.6/3, Error ellipse: s-maj=651.1km s-min=55.2km az=129.0*
*ISCJB **30** 10:27:03.7±0.8, 21°.80N±0°.06×121°.82E±0°.03, h10km, mb3.5/3, Error ellipse: s-maj=8.5km s-min=3.3km az=165.4*
*TAP **30** 10:27:03.5, 21°.77N×121°.65E, h5km, ML3.8, C*
*JMA **30** 10:27:07.4±0.3, 21°.90N×121°.80E, h88km, M3.2*
*NEIC **30** 10:27:12.5±1.9, 22°.33N×121°.47E, h10km, MG3.2(JMA), Error ellipse: s-maj=27.3km s-min=16.6km az=109.0*
ISC 30 10:27:04.7±0.8, 21°.82N±0°.06×121°.76E±0°.03, h10km, n45, σ1°29/62, mb3.5/3, 1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.29**	**318**	⇓*iP*	**Pg**	**10 27 10.1**	**-0.4**
	baz=344						
TSEB	**Hengchuen, Pin**	**0.80**	**276**	P	**Pg**	**10 27 19.3**	**-0.9**
	baz=280						
TSEB				S	**Sg**	**10 27 31.4**	**+0.7**
	baz=280						
TWK1	**Hengchun**	**0.90**	**278**	*e*P	**Pg**	**10 27 20.8**	**-1.1**
	baz=283						
TWK1				*e*S	**Sg**	**10 27 32.6**	**-1.0**
	baz=283						
HEN	**Hengchun**	**0.97**	**281**	*e*P	**Pg**	**10 27 22.4**	**-0.9**
	baz=286						
HEN				*e*S	**Sg**	**10 27 33.2**	**-2.7**
	baz=286						
EAST	**Anshuo**	**1.01**	**304**	*e*P	**Pg**	**10 27 21.7**	**-2.5**
	baz=310						
ECL	**Taimali**	**1.07**	**316**	*e*P	**Pg**	**10 27 23.1**	**-2.3**
	baz=323						
TWG	**Pinlang**	**1.18**	**327**	*e*Pg	**Pg**	**10 27 24.1**	**-3.3**
TWG	**Pinlang**	**1.18**	**327**	*e*P	**Pb**	**10 27 25.7**	**-1.5**
	baz=316						
SCZT	**Fangliau**	**1.19**	**298**	*e*P	**Pb**	**10 27 25.8**	**-1.6**
	baz=303						
SCZT				*e*S	**Sb**	**10 27 43.2**	**+0.4**
	baz=303						
SSD	**Sandimen**	**1.39**	**312**	*e*P	**Pn**	**10 27 29.6**	**-0.5**
	baz=317						
ELDTW	**Lidau**	**1.52**	**333**	*e*P	**Pn**	**10 27 31.2**	**-0.8**
	baz=339						
TWM1	**Shoushan**	**1.59**	**309**	*e*P	**Pn**	**10 27 33.4**	**+0.5**
	baz=326						
STYT	**Tauyuan**	**1.63**	**325**	*e*P	**Pn**	**10 27 32.8**	**-0.5**
	baz=342						
SGST	**Jiashian**	**1.66**	**319**	*e*P	**Pn**	**10 27 34.3**	**+0.4**
	baz=335						
SGST				*e*S	**Sn**	**10 27 56.4**	**+1.1**
	baz=335						
EHY	**Hungye**	**1.73**	**346**	*e*P	**Pn**	**10 27 33.4**	**-1.3**
	baz=2.0						
WTP	**Ta-pu**	**1.77**	**323**	*e*P	**Pn**	**10 27 35.2**	**-0.1**
	baz=328						
WTP				S	**Sn**	**10 28 00.1**	**+2.1**
	baz=328						
TPUB	**Ta-pu**	**1.81**	**325**	*e*Pn	**Pn**	**10 27 35.9**	**+0.1**
TPUB				*e*Sg	**Sg**	**10 28 00.3**	**-2.4**
TWK	**Hsinying**	**1.86**	**321**	*e*P	**Pn**	**10 27 36.9**	**+0.3**
	baz=326						
CHN4	**Tsaushan**	**1.87**	**325**	*e*P	**Pn**	**10 27 37.5**	**+0.9**
	baz=329						
CHN4				*e*S	**Sn**	**10 28 02.4**	**+2.1**
	baz=329						
ESL	**Shilin**	**2.01**	**351**	*e*P	**Pn**	**10 27 36.9**	**-1.7**
	baz=5.0						
CHN5	**Tsauling**	**2.03**	**331**	*e*P	**Pn**	**10 27 39.5**	**+0.6**
	baz=345						
CHY	**Chiayi**	**2.08**	**324**	*e*P	**Pn**	**10 27 41.5**	**+2.0**
	baz=328						
SSLB	**Suanglung**	**2.09**	**339**	*e*Pn	**Pn**	**10 27 40.9**	**+1.0**
SSLB				*e*Sg	**Sg**	**10 28 07.3**	**-4.7**
SMLT	**Sun Moon Lake**	**2.20**	**339**	*e*P	**Pn**	**10 27 42.4**	**+1.1**
	baz=353						
SMLT				*e*S	**Sn**	**10 28 09.3**	**+0.8**
	baz=353						
TYC	**Yuchr**	**2.23**	**338**	*e*P	**Pn**	**10 27 42.6**	**+0.9**
	baz=355						
WNT	**Mingjian**	**2.28**	**334**	*e*P	**Pn**	**10 27 42.8**	**+0.5**
	baz=320						
WHF	**Hehuan Shan**	**2.36**	**349**	*e*P	**Pn**	**10 27 44.6**	**+1.1**
	baz=353						
ENA	**Nanau**	**2.59**	**360**	*e*P	**Pn**	**10 27 45.9**	**-0.8**
	baz=14						
NNS	**Nan Shan**	**2.63**	**352**	*e*P	**Pn**	**10 27 50.2**	**+3.0**
	baz=7.0						
TWQ1	**Liyutan**	**2.67**	**340**	*e*P	**Pn**	**10 27 49.5**	**+1.7**
	baz=325						
TWQ1				*e*S	**Sn**	**10 28 21.5**	**+1.3**
	baz=325						
TWC	**Suao**	**2.78**	**2**	*e*P	**Pn**	**10 27 49.1**	**0.0**
	baz=6.0						
ENTT	**Nioudou**	**2.81**	**356**	*e*P	**Pn**	**10 27 50.8**	**+1.1**
	baz=1.0						
YHNB	**Yeheng**	**2.86**	**353**	*e*Pn	**Pn**	**10 27 50.5**	**+0.2**
YOJ	**Yonaguni jima**	**2.87**	**23**	P	**Pn**	**10 27 50.7**	**+0.2**
YOJ				*e*S	**Sn**	**10 28 23.9**	**-1.1**
NSTT	**Nanjuang**	**2.88**	**346**	*e*P	**Pn**	**10 27 53.8**	**+3.1**
	baz=359						
TWE	**Neicheng**	**2.89**	**358**	*e*P	**Pn**	**10 27 52.9**	**+2.2**
	baz=13						
HATJ	**Hateruma jima**	**2.92**	**40**	P	**Pn**	**10 27 51.5**	**+0.4**
HATJ				*e*S	**Sn**	**10 28 24.8**	**-1.4**
IRIF	**Iriomote-Funau**	**3.09**	**36**	P	**Pn**	**10 27 53.8**	**+0.3**
IRIF				*e*S	**Sn**	**10 28 29.7**	**-0.8**
JKRS	**Kuro-shima**	**3.17**	**40**	P	**Pn**	**10 27 55.3**	**+0.7**
JKRS				*e*S	**Sn**	**10 28 30.9**	**-1.7**
JIJ	**Ishigaki jima**	**3.35**	**40**	P	**Pn**	**10 27 57.1**	**0.0**
JIJ				*e*S	**Sn**	**10 28 34.7**	**-2.2**
JTJ	**Tarama**	**3.90**	**43**	P	**Pn**	**10 28 05.3**	**+0.7**
JTJ				*e*S	**Sn**	**10 28 49.6**	**-0.8**
ENH	**Enshi**	**13.87**	**310**	*e*Pn	**Pn**	**10 30 27.1**	**+5.7**
	42nm,0.4s						
CMAR	**Chiang Mai Arr**	**21.68**	**265**	P	**P**	**10 32 01.1**	**+5.4**
	1.2nm,0.8s,mb3.4,baz=72,slow=9.5,SNR=4.4						
MKAR	**Makanchi Array**	**40.42**	**318**	P	**P**	**10 34 46.9**	**+3.9**
	0.6nm,0.6s,mb3.5,baz=104,slow=8.8,SNR=7.0						
ZALV	**Zalesovo Beam**	**42.52**	**328**	P	**P**	**10 35 02.7**	**+2.6**
	0.5nm,0.4s,mb3.6,baz=120,slow=8.5,SNR=3.3						

BJI 30 10:42:32.1, 34°.11N×101°.00E, h12km, ML3.6/9, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**3.05**	**49**	Pg	Pg	10 43 23.8	-6.8
LZH				Sg	Sg	10 44 05.0	-5.2
LZH				smax			
	comp=N,400nm,0.7s						
LZH				smax			
	comp=E,480nm,0.8s						
GTA	**Gaotai**	**5.38**	**350**	Pg	Pg	10 44 09.5	-5.5
GTA				Sg	Sg	10 45 16.5	-8.1
GTA				smax			
	comp=N,12nm,0.8s						
GTA				smax			
	comp=E,14nm,0.6s						
XAN	**Xi'an**	**6.57**	**88**	Pg	Pg	10 44 29.0	-9.0
XAN				Sg	Sg	10 45 56.0	-7.1
XAN				smax			
	comp=N,11nm,1.0s						
XAN				smax			
	comp=E,5.0nm,1.2s						

*BJI **30** 10:44:41.1, 42°.85N×84°.24E, h8km, ML2.8/6*
NNC 30 10:44:45.2±3.8, 43°.06N×83°.94E, h0km, mb2.7, mpv2.3, 4C-2D, Error ellipse: s-maj=32.3km s-min=27.3km az=120.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.84**	**73**	Pg	Pn	10 45 29.5	-2.3
WMQ				Sg	Sn	10 46 05.8	-0.9
WMQ				smax			
	comp=N,46nm,0.3s						
WMQ				smax			
	comp=E,73nm,0.3s						
MK31	**Makanchi Array**	**3.91**	**343**	⇓Pn	Pn	10 45 47.0	+0.5
	comp=E,0.1nm,0.3s,baz=156,slow=14,SNR=47						
MK31				⇑Pg	Pg	10 45 55.8	-4.4
	comp=E,0.4nm,0.2s,baz=158,slow=16,SNR=5.6						
MK31				⇑Lg		10 46 48.3	
	comp=E,9.9nm,0.6s,baz=160,slow=27,SNR=6.5						
TKM2	**Tokmak 2**	**6.12**	**272**	⇑Lg		10 47 58.4	
	comp=E,9.9nm,0.8s						
KURBB	**Kurchatov Arra**	**8.42**	**336**	⇑Lg		10 49 16.9	
	comp=E,1.2nm,0.7s						
KURK	**Kurchatov**	**8.48**	**336**	⇓Lg		10 49 18.4	
	comp=E,2.7nm,0.7s						

NEIC 30 11:03:08.4, 53°.32N×168°.02W, h0km, ML3.5(PMR), ML2.9(AEIC), After AEIC., Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKFG	**Magazine Ridge**	**0.11**	**37**	P	Pg	11 03 12.6	+2.0
UNV	**Unalaska Valle**	**1.05**	**59**	P	Pg	11 03 28.6	+0.1
AKGG	**Akutan Green G**	**1.49**	**53**	P	Pn	11 03 36.5	0.0
AKUT	**Akutan**	**1.57**	**58**	*e*P	Pn	11 03 38.5	+1.0
AKUT				*e*S	Sn	11 04 01.6	+3.2

IDC 30 11:04:39.3±1.8, 16°.02S×174°.96W, h253km±18km, mb3.5/5, mb1 3.7/6, mb1mx3.5/15, mbtmp3.5/6, Error ellipse: s-maj=55.5km s-min=20.4km az=145.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.72**	**56**	P	Pn	11 05 41.6	+1.5
	25nm,0.3s,baz=178,slow=22,SNR=28						
AFI				S	S	11 06 28.2	-0.1
	35nm,0.3s,baz=259,slow=23,SNR=8.2						
ASAR	**Alice Springs**	**48.49**	**252**	P	P	11 12 56.7	-0.4
	5.0nm,0.3s,baz=88,slow=7.6,SNR=194						
PETK	**Petropavlovsk-**	**72.77**	**343**	P	P	11 15 39.6	-0.2
	2.3nm,0.7s,baz=120,slow=7.2,SNR=7.1						
KSRS	**Korea Array**	**75.55**	**316**	P	P	11 15 57.2	+1.0
	0.3nm,0.3s,baz=111,slow=9.2,SNR=4.8						
NVAR	**Mina Array Bea**	**75.79**	**43**	P	P	11 15 58.7	+1.1
	0.2nm,0.4s,baz=226,slow=8.5,SNR=4.0						
ILAR	**Eielson Array**	**83.34**	**12**	P	P	11 16 36.5	-0.9
	0.5nm,0.5s,baz=232,slow=5.5,SNR=10						
BVAR	**Borovoye Array**	**117.44**	**322**	PKP	PKPdf	11 22 53.6	-1.0
	0.3nm,0.4s,baz=151,slow=3.3,SNR=2.3						
ARCES	**ARCESS Array B**	**125.00**	**351**	PKP	PKPdf	11 23 08.4	-0.2
	1.5nm,0.8s,baz=0.0,slow=0.0,SNR=6.3						
BRTR	**Keskin Array B**	**145.66**	**319**	PKPbc	PKPbc	11 23 48.6	+0.1
	2.0nm,0.8s,baz=107,slow=1.7,SNR=11						

*IDC **30** 11:09:31.9±1.5, 10°.82S×163°.66E, h0km, mb3.8/6, mb1 4.1/8, mb1mx3.9/17, mbtmp3.9/8, ML3.9/2, MS3.6/1, Ms1 3.6/1, ms1mx3.1/18, Error ellipse: s-maj=49.3km s-min=24.9km az=149.0*
*ISCJB **30** 11:09:35.6±6.4, 10°.8S±0°.2×163°.5E±0°.1, h32km±45km, mb3.7/6, Error ellipse: s-maj=29.1km s-min=17.7km az=22.9*
*NEIC **30** 11:09:37.7±1.0, 10°.74S×163°.56E, h35km, mb3.8/1, Error ellipse: s-maj=25.8km s-min=15.0km az=146.0*
ISC 30 11:09:36.0±6.7, 10°.8S±0°.2×163°.5E±0°.1, h22km±47km, n12, σ0°69/13, mb3.7/6, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.76**	**290**	Pn	**Pn**	**11 10 32.6**	**-0.1**

34nm,0.3s,baz=179,slow=3.7,SNR=10
HNR Sn **Sn** **11 11 16.1 -0.3**
22nm,0.3s,baz=180,slow=20,SNR=2.4
HNR Honiara 3.76 290 *e*Pn **Pn** **11 10 33.0 +0.3**
HNR Sn **Sn** **11 11 16.1 -0.3**
CTA Charters Tower 19.03 239 P **Pn** **11 13 57.5 0.0**
0.1nm,0.3s,baz=58,slow=12,SNR=8.8
CTA Charters Tower 19.03 239 P **Pn** **11 13 57.5 0.0**
CTAO Charters Tower 19.03 239 *e*P **Pn** **11 13 57.8 +0.3**
5.7nm,0.8s
ASAR Alice Springs 30.98 242 P **P** **11 15 51.3 -0.6**
1.6nm,0.9s,mb3.8,baz=64,slow=9.9,SNR=8.9
KSRS Korea Array 58.44 327 LR LR 11 40 02.0
comp=Z,55nm,19.9s,baz=35,slow=31
CMAR Chiang Mai Arr 70.00 294 P **P** **11 20 47.5 +1.0**
0.6nm,0.4s,mb3.9,baz=147,slow=4.2,SNR=6.1
SONM Songino Array 77.17 325 P **P** **11 21 28.7 +0.7**
0.3nm,0.5s,mb3.5,baz=121,slow=5.6,SNR=3.2
ILAR Eielson Array 83.96 19 P **P** **11 22 02.5 -1.4**
0.6nm,0.9s,mb3.7,baz=258,slow=4.5,SNR=4.7
NVAR Mina Array Bea 87.52 50 P **P** **11 22 22.6 +0.2**
0.2nm,0.5s,mb3.6,baz=240,slow=10.0,SNR=3.2
MKAR Makanchi Array 91.83 317 P **P** **11 22 42.5 +0.1**
0.5nm,0.8s,mb3.9,baz=90,slow=6.4,SNR=4.0

*TRN **30** 11:16:54.4, 18.°74N×64.°34W, h29km*
*NEIC **30** 11:16:55.7, 18.°83N×64.°30W, h8km, MD3.3(RSPR), After RSPR.*
*RSPR **30** 11:16:55.7, 18.°83N×64.°30W, h8km±2km, MD3.3/7*
ISC 30 11:16:54.3±1.7, 18.°84N±0.°09×64.°27W±0.°08, h26km±8km, n23, σ0°68/40, 11C-6D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.54**	**218**	⇑*i*P	**Pb**	**11 17 05.4**	**+0.2**
TBVI				*e*S	**Sb**	**11 17 12.8**	**+0.3**
TBVI	**Tortola**	**0.54**	**218**	⇑*i*P	**Pb**	**11 17 05.4**	**+0.2**
TBVI				*e*S	**Sb**	**11 17 12.8**	**+0.3**
STVI	**Saint Thomas**	**0.81**	**233**	⇓*e*P	**Pb**	**11 17 09.4**	**-0.4**
STVI				*e*S	**Sb**	**11 17 20.1**	**-0.2**
STVI	**Saint Thomas**	**0.81**	**233**	⇓*e*P	**Pb**	**11 17 09.4**	**-0.4**
STVI				*e*S	**Sb**	**11 17 20.1**	**-0.2**
CDVI	**St. Croix**	**1.18**	**204**	⇑*e*P	**Pn**	**11 17 15.3**	**+0.1**
CDVI				*e*S	**Sn**	**11 17 30.1**	**-0.3**
CDVI	**St. Croix**	**1.18**	**204**	⇑*e*P	**Pn**	**11 17 15.3**	**+0.1**
CDVI				*e*S	**Sn**	**11 17 30.1**	**-0.3**
MTP	**Monte Pirata**	**1.43**	**239**	*e*Pn	**Pn**	**11 17 18.1**	**-0.5**
MTP				*e*Sn	**Sn**	**11 17 36.7**	**+0.3**
CBYP	**Canovanas**	**1.61**	**250**	⇓*e*P	**Pn**	**11 17 20.6**	**-0.5**
CBYP				*e*S	**Sn**	**11 17 40.8**	**-0.2**
CBYP	**Canovanas**	**1.61**	**250**	⇓*e*P	**Pn**	**11 17 20.6**	**-0.5**
CBYP				*e*S	**Sn**	**11 17 40.8**	**-0.2**
HUMP	**Col San Antoni**	**1.66**	**245**	⇓*e*P	**Pn**	**11 17 21.1**	**-0.5**
HUMP				*e*S	**Sn**	**11 17 41.5**	**-0.6**
HUMP	**Col San Antoni**	**1.66**	**245**	⇓*e*P	**Pn**	**11 17 21.1**	**-0.5**
HUMP				*e*S	**Sn**	**11 17 41.5**	**-0.6**
SJG	**San Juan**	**1.93**	**248**	⇑*e*P	**Pn**	**11 17 24.4**	**-1.0**
SJG	**San Juan**	**1.93**	**248**	⇑*e*P	**Pn**	**11 17 24.4**	**-1.0**
CELP	**Cerrillos**	**2.32**	**251**	⇑*e*P	**Pn**	**11 17 31.2**	**+0.4**
CELP				*e*S	**Sn**	**11 17 57.9**	**-0.8**
CELP	**Cerrillos**	**2.32**	**251**	⇑*e*P	**Pn**	**11 17 31.2**	**+0.4**
CELP				*e*S	**Sn**	**11 17 57.9**	**-0.8**
ICM	**Isla Caja Muer**	**2.34**	**247**	⇑*e*P	**Pn**	**11 17 32.4**	**+1.4**
ICM				*e*S	**Sn**	**11 18 00.6**	**+1.6**
ICM	**Isla Caja Muer**	**2.34**	**247**	⇑*e*P	**Pn**	**11 17 32.4**	**+1.4**
ICM				*e*S	**Sn**	**11 18 00.6**	**+1.6**
AOPR	**Arecibo Observ**	**2.41**	**259**	*e*S	**Sn**	**11 18 01.3**	**+0.6**
AOPR	**Arecibo Observ**	**2.41**	**259**	*e*S	**Sn**	**11 18 01.3**	**+0.6**
LSP	**Las Mesas**	**2.76**	**257**	*e*S	**Sn**	**11 18 08.3**	**-1.0**
LSP	**Las Mesas**	**2.76**	**257**	*e*S	**Sn**	**11 18 08.3**	**-1.0**
CRPR	**Cabo Rojo, PR**	**2.82**	**253**	⇑*e*P	**Pn**	**11 17 38.6**	**+0.9**
CRPR				*e*S	**Sn**	**11 18 11.4**	**+0.4**
CRPR	**Cabo Rojo, PR**	**2.82**	**253**	⇑*e*P	**Pn**	**11 17 38.6**	**+0.9**
CRPR				*e*S	**Sn**	**11 18 11.4**	**+0.4**

IDC 30 11:18:34.5±2.6, 10.°88S×163.°49E, h0km, mb3.8/3, mb1 3.9/4, mb1mx3.6/16, mbtmp3.9/4, ML4.5/1, Error ellipse: s-maj=53.3km s-min=49.2km az=30.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.77**	**292**	Pn	Pn	11 19 34.8	+0.8
34nm,0.3s,baz=136,slow=3.4,SNR=11
HNR Sn Sn 11 20 18.5 -0.6
28nm,0.3s,baz=287,slow=14,SNR=4.3
CTA Charters Tower 18.95 239 P Pn 11 23 01.4 +3.5
0.1nm,0.3s,baz=95,slow=10,SNR=2.9
ASAR Alice Springs 30.90 242 P P 11 24 53.0 -0.1
0.4nm,0.7s,baz=61,slow=9.6,SNR=5.0
CMAR Chiang Mai Arr 70.02 294 P P 11 29 49.2 +0.5
0.9nm,0.4s,baz=123,slow=6.6,SNR=2.7
MKAR Makanchi Array 91.89 317 P P 11 31 44.3 -0.5
0.2nm,0.5s,baz=122,slow=5.4,SNR=2.2

*IDC **30** 11:19:30.6±3.4, 59.°33N×22.°32E, h0km, mb1 3.0/3, mb1mx2.9/24, mbtmp2.8/3, ML2.6/3, Error ellipse: s-maj=42.4km s-min=10.4km az=169.0*
*ISCJB **30** 11:19:31.6±0.5, 59.°69N±0.°04×22.°12E±0.°06, h0km, Error ellipse: s-maj=6.0km s-min=3.3km az=152.8*
*HEL **30** 11:19:32.3±0.2, 59.°60N×22.°14E, h0km, ML2.0(UPP), ML2.2(NAO), Explosion*
*CSEM **30** 11:19:32.8±0.3, 59.°72N×22.°12E, h1km, ML2.2, Error ellipse: s-maj=9.3km s-min=4.3km az=158.0*
*UPP **30** 11:19:35.0, 59.°63N×21.°72E, h0km, ML2.0, Suspected Mining explosion.*
*BER **30** 11:19:35.0±2.7, 59.°57N×21.°93E, h0km±16km, ML2.2(NAO)*
*NAO **30** 11:19:35.0±2.0, 59.°81N×21.°95E, ML2.2*
ISC 30 11:19:32.3±0.5, 59.°70N±0.°04×22.°15E±0.°05, h0km, n48, σ1°06/70, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAL	**Aland**	**1.19**	**295**	*e*P	**Pg**	**11 19 54.4**	**-0.5**
MEF	**Metsahovi**	**1.24**	**64**	*e*P	**Pg**	**11 19 56.0**	**-0.1**
MEF				*e*S	**Sg**	**11 20 11.2**	**-0.9**
MEF	**Metsahovi**	**1.24**	**64**	*e*P	**Pg**	**11 19 55.9**	**-0.2**
SNR=70
MEF *e*S **Sg** **11 20 11.4 -0.8**
20nm,0.2s,SNR=70
RAF Rauma 1.34 352 *e*P **Pg** **11 19 58.6 +0.6**
RAF *e*S **Sg** **11 20 17.5 +2.2**
RAF Rauma 1.34 352 P **Pg** **11 19 58.5 +0.6**
RAF *e*S **Sg** **11 20 14.2 -1.1**
32nm,0.2s,SNR=70
NRTU Norrtaelje 1.79 271 *e*P **Pn** **11 20 03.8 -0.5**
NRTU Norrtaelje 1.79 271 P **Pn** **11 20 03.8 -0.5**
GRAU Graesoe 1.92 291 *e*P **Pn** **11 20 06.4 +0.2**
GRAU Graesoe 1.92 291 P **Pn** **11 20 06.4 +0.2**
PVF Pernaja 2.04 64 *e*P **Pn** **11 20 09.9 +2.1**
PVF *e*SG **Sg** **11 20 36.9 -0.9**
PVF Pernaja 2.04 64 P **Pn** **11 20 09.8 +2.0**
SLIT Slitere, Latvi 2.08 178 *e*S **Sn** **11 20 34.7 -0.2**
144nm,0.2s,SNR=50
FORU Forsmark 2.11 291 *e*P **Pn** **11 20 09.6 +0.9**
FORU Forsmark 2.11 291 P **Pn** **11 20 09.6 +0.9**
FLYU Flymyra 2.19 283 *e*P **Pn** **11 20 10.2 +0.4**
FLYU Flymyra 2.19 283 P **Pn** **11 20 10.2 +0.3**
NYNU Nynaeshamn 2.23 254 *e*P **Pn** **11 20 10.7 +0.2**
NYNU Nynaeshamn 2.23 254 P **Pn** **11 20 10.7 +0.2**
BACU Backbrunna 2.55 276 *e*P **Pn** **11 20 15.2 +0.4**
BACU Backbrunna 2.55 276 P **Pn** **11 20 15.2 +0.3**
FIA0 FINESS Array S 2.61 46 Pn **Pn** **11 20 18.2 +2.5**
baz=229,slow=14
FIA0 Sn **Sn** **11 20 52.3 +4.3**
baz=234,slow=28
FIA0 FINESS Array S 2.61 46 *e*PB **Pb** **11 20 18.6 -1.2**
FIA0 *e*SB **Sb** **11 20 52.9 +0.5**
FIA0 FINESS Array S 2.61 46 Pn **Pn** **11 20 18.2 +2.6**
baz=229,slow=13
FIA0 FINESS Array S 2.61 46 Pb **Pb** **11 20 18.6 -1.3**
FIA0 Sb **Sb** **11 20 52.9 +0.5**
FINES FINESS Array B 2.61 46 Pn **Pn** **11 20 18.1 +2.5**
0.9nm,0.3s,baz=219,slow=15,SNR=27
FINES Sn **Sn** **11 20 52.7 +4.7**
2.2nm,0.3s,baz=238,slow=24,SNR=18
IGGU Iggoen 2.68 298 *e*P **Pn** **11 20 17.5 +1.0**
IGGU Iggoen 2.68 298 P **Pn** **11 20 17.5 +0.9**
KEF Keuruu 2.81 27 *e*PB **Pb** **11 20 22.4 -0.8**
KEF *e*SB **Sb** **11 20 59.2 +1.1**
KEF Keuruu 2.81 27 Pb **Pb** **11 20 22.3 -0.9**
KEF Sb **Sb** **11 20 59.2 +1.1**
VJF Virojoki 2.83 70 *e*P **Pn** **11 20 18.8 +0.1**
VJF Virojoki 2.83 70 P **Pn** **11 20 18.8 +0.1**
KAF Kangasniemi 3.16 38 *e*PB **Pb** **11 20 26.7 -2.5**
KAF *e*SB **Sb** **11 21 08.6 +0.4**
FALU Falun 3.26 287 *e*P **Pn** **11 20 24.9 +0.4**
FALU Falun 3.26 287 P **Pn** **11 20 24.9 +0.3**
baz=80
SUF Sumiainen 3.59 31 *e*P **Pn** **11 20 31.8 +2.6**
SUF *e*SB **Sb** **11 21 19.6 -1.1**
SUF Sumiainen 3.59 31 P **Pn** **11 20 31.7 +2.6**
SUF Sb **Sb** **11 21 19.6 -1.1**
HFS Hagfors 4.28 279 Pn **Pn** **11 20 39.0 +0.4**
baz=86,slow=11
HFS Pg **Pg** **11 20 48.7 -5.5**
baz=90,slow=18
HFS Sn **Sn** **11 21 26.8 -2.2**
baz=90,slow=28
HFS Lg 11 21 43.1
baz=101,slow=37
HFS Hagfors 4.28 279 *e*P **Pn** **11 20 39.0 +0.4**
HFS *e*PG **Pg** **11 20 48.7 -5.5**
HFS *e*S **Sn** **11 21 26.8 -2.2**
HFS *e*SG **Sg** **11 21 43.1 -6.4**
HFS Hagfors 4.28 279 P **Pn** **11 20 38.9 +0.4**
HFS S **Sn** **11 21 26.8 -2.3**
KJN Kajaani 5.12 28 *e*SG **Sg** **11 22 11.6 -5.1**
NB2 NORSAR Subarra 5.59 289 Pn **Pn** **11 20 56.1 -0.4**
baz=96,slow=14
NB2 Lg 11 22 26.4
baz=103,slow=37
NB2 NORSAR Subarra 5.59 289 *e*P **Pn** **11 20 56.1 -0.4**
NB2 *e*SG **Sg** **11 22 26.4 -5.3**
NB2 NORSAR Subarra 5.59 289 P **Pn** **11 20 56.1 -0.4**
NOA NORSAR Array B 5.59 289 Pn **Pn** **11 20 55.7 -0.9**
0.2nm,0.3s,baz=176,slow=18,SNR=5.5
NOA Sn **Sn** **11 22 00.9 -0.4**
0.2nm,0.3s,baz=315,slow=16,SNR=2.2
NOA Lg 11 22 33.0
0.7nm,0.3s,baz=316,slow=2.5,SNR=5.0
ARA0 ARCESS Array S 9.98 7 Pn **Pn** **11 21 56.0 -0.6**
baz=189,slow=12
ARA0 ARCESS Array S 9.98 7 *e*P **Pn** **11 21 56.0 -0.6**
ARA0 ARCESS Array S 9.98 7 P **Pn** **11 21 56.0 -0.6**
baz=189,slow=12,SNR=47
ARCES ARCESS Array B 9.98 7 Pn **Pn** **11 21 56.0 -0.6**
0.1nm,0.3s,baz=185,slow=13,SNR=9.3

IDC 30 11:19:46.6±3.7, 59.°33N×22.°34E, h0km, mb1 3.0/3, mb1mx2.9/24, mbtmp2.9/3, ML2.8/3, Error ellipse: s-maj=47.9km s-min=12.1km az=165.0, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FINES	**FINESS Array B**	**2.82**	**40**	Pn	Pn	11 20 34.3	+1.5
1.4nm,0.3s,baz=225,slow=13,SNR=12
FINES Sn Sn 11 21 08.4 +0.9
2.9nm,0.3s,baz=237,slow=24,SNR=11
NOA NORSAR Array B 5.81 292 Pn Pn 11 21 11.1 -2.8
0.2nm,0.3s,baz=97,slow=11,SNR=4.6
NOA Sn Sn 11 22 18.2 -2.9
0.4nm,0.3s,baz=193,slow=14,SNR=3.6
ARCES ARCESS Array B 10.34 6 Pn Pn 11 22 12.1 -3.8
0.2nm,0.3s,baz=186,slow=14,SNR=9.7

MEX 30 12:10:32.7±0.3, 15.°86N×96.°99W, h15km±4km, MD3.5, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.85**	**96**	*e*P	Pb	12 10 46.3	-2.9
HUIG *e*S Sb 12 10 56.9 -3.6
PNIG Pinotepa 1.22 296 *i*P Pn 12 10 51.5 -3.6
PNIG *e*S Sb 12 11 06.2 -4.7
VHO Vista Hermosa 1.23 11 *e*P Pn 12 10 51.8 -3.5
VHO *e*S Sb 12 11 06.8 -4.5

*IDC **30** 12:21:15.1±1.2, 11.°20N×126.°68E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.5/21, mbtmp3.6/5, Error ellipse: s-maj=56.6km s-min=25.7km az=75.0*
*ISCJB **30** 12:21:18.0±1.0, 11.°2N±0.°1×126.°5E±0.°2, h33km, mb3.5/5, Error ellipse: s-maj=34.8km s-min=15.6km az=12.0*
ISC 30 12:21:20.1±1.0, 11.°1N±0.°1×126.°5E±0.°2, h35km, n6, σ0°82/6, mb3.5/5, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.63**	**216**	⇑*e*P	**Pn**	**12 21 45.8**	**-0.5**
KSRS	**Korea Array**	**26.27**	**3**	P	**P**	**12 26 52.1**	**0.0**
0.3nm,0.4s,mb3.2,baz=165,slow=10,SNR=4.4
ASAR Alice Springs 35.31 168 P **P** **12 28 12.8 +0.7**
0.5nm,0.8s,mb3.5,baz=351,slow=7.2,SNR=5.9
MKAR Makanchi Array 51.48 322 P **P** **12 30 22.4 +0.3**
0.9nm,0.7s,mb3.8,baz=120,slow=7.7,SNR=9.0
ZALV Zalesovo Beam 53.99 331 P **P** **12 30 41.0 +0.5**
0.7nm,0.6s,mb3.8,baz=112,slow=6.4,SNR=3.1
ILAR Eielson Array 78.61 26 P **P** **12 33 17.0 -1.0**
0.2nm,0.8s,mb3.1,baz=212,slow=3.2,SNR=3.1

MAN 30 12:47:20, 6.°34N×124.°64E, h37km, mb4.4, ML3.3, MS3.1, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**0.80**	**34**	⇑*e*P	Pn	12 47 36.3	+1.4
KCP *i*S Sn 12 47 54.8 +9.2
CTBH Cotabato--PC H 0.96 336 ⇓*i*P Pn 12 47 35.2 -1.9
CTBH *i*S Sn 12 47 47.3 -2.3
BUKP Musuan 1.59 15 *e*P Pn 12 47 47.5 +1.9
BUKP *e*S Sn 12 48 05.5 +0.6
PAGZ Pagadian 1.96 320 *e*P Pn 12 47 52.5 +1.8
CGP Cagayan de Oro 2.11 1 ⇑*e*P Pn 12 47 54.5 +1.7
CGP *e*S Sn 12 48 19.8 +2.0
IPIL Ipil 2.51 305 *e*P Pn 12 48 00.5 +2.1

*ISK **30** 12:53:01.6, 38.°66N×26.°65E, h12km, ML3.0*
*DDA **30** 12:53:01.5, 38.°62N×26.°62E, h27km±1km, Md2.9*
*ISCJB **30** 12:53:02.1±0.4, 38.°64N±0.°02×26.°63E±0.°03, h12km±3km, Error ellipse: s-maj=4.2km s-min=3.0km az=146.7*
*THE **30** 12:53:02.4, 38.°64N×26.°64E, h14km±1km, ML3.7/3, Error ellipse: s-maj=1.6km s-min=0.5km az=162.0*
*CSEM **30** 12:53:02.3±0.1, 38.°64N×26.°63E, h12km, MD2.9, Error ellipse: s-maj=3.2km s-min=2.2km az=54.0*
ISC 30 12:53:02.6±0.4, 38.°64N±0.°02×26.°63E±0.°03, h14km±3km, n44, σ0°70/73, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.28**	**185**	*i*P	**Pg**	**12 53 07.4**	**-1.0**
URLA *i*S **Sg** **12 53 12.6 +0.2**
URLA Izmir 0.28 185 *i*P **Pg** **12 53 07.4 -1.0**
URLA *i*S **Sg** **12 53 12.6 +0.2**
BLCB Balcova 0.41 128 PG **Pg** **12 53 10.0 -0.8**
BLCB Balcova 0.41 128 P **Pg** **12 53 10.7 -0.1**
BLCB S **Sg** **12 53 16.5 +0.1**
BLCB Balcova 0.41 128 *i*Pg **Pg** **12 53 10.0 -0.8**
BLCB Balcova 0.41 128 P **Pg** **12 53 10.7 -0.1**
BLCB S **Sg** **12 53 16.5 +0.1**
CHOS Chios island 0.52 241 P **Pg** **12 53 13.0 +0.3**
CHOS S **Sg** **12 53 20.2 +0.6**
CHOS Chios island 0.52 241 P **Pg** **12 53 13.0 +0.3**
CHOS S **Sg** **12 53 20.2 +0.6**
IZM Izmir 0.55 116 PG **Pg** **12 53 13.3 -0.1**
IZM SG **Sg** **12 53 21.0 +0.2**
PRK Paraskevi 0.67 336 P **Pg** **12 53 15.3 -0.3**
PRK S **Sg** **12 53 25.2 +0.7**
PRK Paraskevi 0.67 336 P **Pg** **12 53 15.3 -0.3**
PRK S **Sg** **12 53 25.2 +0.7**
AYVA Ayvalik 0.67 4 *i*P **Pg** **12 53 15.0 -0.7**
AYVA *i*S **Sg** **12 53 25.6 +1.0**
AYVA Ayvalik 0.67 4 *i*P **Pg** **12 53 15.0 -0.7**
AYVA *i*S **Sg** **12 53 25.5 +0.9**
SIGR SIGRI 0.83 314 P **Pg** **12 53 18.2 -0.5**
SIGR S **Sg** **12 53 30.2 +0.5**
SIGR SIGRI 0.83 314 P **Pg** **12 53 18.2 -0.5**
SIGR S **Sg** **12 53 30.2 +0.5**
AKS Akhisar 0.96 75 PG **Pg** **12 53 20.0 -1.1**
AKHS Akhisar 0.96 75 *i*P **Pg** **12 53 20.8 -0.4**
AKHS *i*S **Sg** **12 53 33.8 +0.2**
AKHS Akhisar 0.96 75 *i*P **Pg** **12 53 20.8 -0.3**
AKHS *i*S **Sg** **12 53 33.8 +0.2**
GCAM G?zelcaml? 1.05 153 *i*P **Pg** **12 53 22.4 -0.4**
GCAM *i*S **Sg** **12 53 37.8 +1.2**
GCAM G?zelcaml? 1.05 153 *i*P **Pg** **12 53 22.4 -0.5**
GCAM *i*S **Sg** **12 53 37.8 +1.2**
EZN Ezine 1.21 349 *e*PN **Pn** **12 53 24.4 -0.7**
EZN Ezine 1.21 349 *e*Pn **Pn** **12 53 24.4 -0.7**
BALY Balya 1.34 35 *i*P **Pn** **12 53 27.6 +0.7**
BALY *i*S **Sn** **12 53 44.4 -0.2**
BALY Balya 1.34 35 *i*P **Pn** **12 53 27.6 +0.7**
BALY *i*S **Sn** **12 53 44.4 -0.1**
AYDN Tasoluk 1.39 134 *i*P **Pn** **12 53 27.2 -0.3**
AYDN *i*S **Sn** **12 53 45.0 -0.6**
AYDN Tasoluk 1.39 134 *i*P **Pn** **12 53 27.2 -0.3**
AYDN *i*S **Sn** **12 53 45.0 -0.6**
BALB Balikesir 1.40 44 *e*PN **Pn** **12 53 26.7 -0.9**
BALB Balikesir 1.40 44 *e*Pn **Pn** **12 53 26.7 -0.9**
KULA Kula-Manisa 1.60 94 *e*PN **Pn** **12 53 29.4 -1.0**
KULA Kula-Manisa 1.60 94 *e*Pn **Pn** **12 53 29.4 -1.0**
GONE Gonen-Balikesi 1.63 30 PN **Pn** **12 53 30.4 -0.4**
GONE Gonen-Balikesi 1.63 30 *i*Pn **Pn** **12 53 30.4 -0.4**
GADA Gvkgeada 1.65 340 *e*PN **Pn** **12 53 31.8 +0.6**
GADA Gvkgeada 1.65 340 *e*Pn **Pn** **12 53 31.8 +0.7**
DEMI Demirci 1.68 75 *i*P **Pn** **12 53 31.1 -0.4**
DEMI *i*S **Sn** **12 53 55.5 +2.7**
DEMI Demirci 1.68 75 *i*P **Pn** **12 53 31.1 -0.4**
DEMI *i*S **Sn** **12 53 55.5 +2.7**
LIA Limnos Island 1.69 319 P **Pn** **12 53 31.9 +0.3**
LIA S **Sn** **12 53 52.1 -0.9**
LIA Limnos Island 1.69 319 P **Pn** **12 53 31.9 +0.3**
LIA S **Sn** **12 53 52.1 -0.9**
BDRM Kayabasi 1.70 157 *i*P **Pn** **12 53 31.6 -0.1**
BDRM *e*S **Sn** **12 53 53.8 +0.6**
BDRM Kayabasi 1.70 157 *i*P **Pn** **12 53 31.6 -0.2**
BDRM *e*S **Sn** **12 53 53.8 +0.6**
DURS Dursunbey 1.73 56 *i*P **Pn** **12 53 33.0 +0.9**
DURS *i*S **Sn** **12 53 54.3 +0.3**
DURS Dursunbey 1.73 56 *i*P **Pn** **12 53 33.0 +0.8**
DURS *i*S **Sn** **12 53 54.3 +0.3**
DNZL Cakiroluk 2.13 116 *i*P **Pn** **12 53 38.2 +0.5**
DNZL Cakiroluk 2.13 116 *i*P **Pn** **12 53 38.2 +0.5**

*SKO **30** 12:58:23.9, 40.°32N×21.°80E, h27km, M1.6, ML2.1*
*ISCJB **30** 12:58:24.7±0.5, 40.°42N±0.°03×21.°88E±0.°05, h5km±7km, Error ellipse: s-maj=5.9km s-min=4.4km az=166.9*
*THE **30** 12:58:24.9, 40.°43N×21.°92E, h0km±1km, ML2.7/4, Error ellipse: s-maj=2.0km s-min=0.5km az=321.0*
*CSEM **30** 12:58:24.9, 40.°43N×21.°92E, h0km, ML2.7/4, After THE*
ISC 30 12:58:25.1±0.5, 40.°42N±0.°03×21.°88E±0.°05, h9km±9km, n20, σ1°00/32, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZN	**Kozani**	**0.14**	**216**	P	**Pg**	**12 58 28.0**	**-0.2**
KZN S **Sg** **12 58 31.0 +0.7**
KZN Kozani 0.14 216 P **Pg** **12 58 28.0 -0.2**
KZN S **Sg** **12 58 31.0 +0.7**
FNA Florina 0.53 313 P **Pg** **12 58 35.2 -0.1**
FNA S **Sg** **12 58 43.1 +0.8**
FNA Florina 0.53 313 P **Pg** **12 58 35.2 -0.1**
FNA S **Sg** **12 58 43.1 +0.8**
LIT Litokhoron 0.56 124 P **Pg** **12 58 35.4 -0.6**
LIT S **Sg** **12 58 43.2 -0.2**
LIT Litokhoron 0.56 124 P **Pg** **12 58 35.4 -0.6**
LIT S **Sg** **12 58 43.2 -0.2**
NEST Nestorio 0.64 270 P **Pg** **12 58 37.1 -0.3**
NEST Nestorio 0.64 270 P **Pg** **12 58 37.1 -0.3**
BIA Bitola 0.73 325 *e*Pg **Pg** **12 58 37.8 -1.4**
BIA *e*Sg **Sg** **12 58 51.0 +2.3**
THL Klokotos Trika 0.86 173 P **Pg** **12 58 41.0 -0.7**
THL S **Sg** **12 58 54.3 +1.4**
THL Klokotos Trika 0.86 173 P **Pg** **12 58 41.0 -0.7**
THL S **Sg** **12 58 54.3 +1.4**
VAY Valandovo 1.04 30 *e*Pg **Pg** **12 58 44.4 -0.7**
VAY *e*Sg **Sg** **12 59 01.3 +2.8**
VAY *e*Lg 12 59 04.0
comp=E,33nm,0.8s
VAY *e*Lg 12 59 06.3
comp=N,63nm,0.9s
KRUS Krusevo 1.06 333 *e*Pg **Pg** **12 58 44.5 -1.0**
KNT Kendrikon 1.07 46 P **Pg** **12 58 44.6 -1.0**
KNT Kendrikon 1.07 46 P **Pg** **12 58 44.6 -1.0**
OHR Ohrid 1.07 310 *e*Pg **Pg** **12 58 44.5 -1.2**
OHR *e*Lg 12 59 04.9
comp=N,48nm,0.9s
SOH Sokhos 1.19 70 P **Pb** **12 58 48.3 +0.5**
SOH S **Sb** **12 59 03.7 +0.4**
SOH Sokhos 1.19 70 P **Pb** **12 58 48.3 +0.5**
SOH S **Sb** **12 59 03.7 +0.4**
XOR Xorichti 1.46 136 P **Pn** **12 58 51.9 +0.3**
XOR Xorichti 1.46 136 P **Pn** **12 58 51.9 +0.3**

*DJA **30** 12:58:19, 21.°70S×176.°02W, h213km, mb5.5/11*
*MOS **30** 12:59:12.5±1.0, 21.°67S×179.°65W, h569km, mb4.8/17, Error ellipse: s-maj=12.4km s-min=9.4km az=53.4*
*BJI **30** 12:59:13.9, 21.°90S×179.°60W, h590km, mB4.7/20, mb4.6/26*
*IDC **30** 12:59:13.4±1.1, 21.°94S×179.°38W, h577km±11km, mb4.1/15, mb1 4.3/17, mb1mx4.2/20, mbtmp4.1/17, Error ellipse: s-maj=14.9km s-min=10.9km az=127.0*
*NEIC **30** 12:59:16.0±0.6, 21.°95S×179.°61W, h606km±6km, mb5.1/29, Error ellipse: s-maj=7.6km s-min=4.4km az=143.0*
*SZGRF **30** 12:59:15.4, 21.°71S×178.°34W, h600km, Fiji Islands region*
*ISCJB **30** 12:59:15.5±0.6, 21.°96S±0.°06×179.°64W±0.°04, h611km±7km, mb4.7/89, Error ellipse: s-maj=9.1km s-min=4.6km az=155.8*
*BGS **30** 12:59:18.2±5.5, 21.°95S×179.°61W, h606km, mb5.1(NEIC)*
ISC 30 12:59:16.3±0.6, 21.°89S±0.°06×179.°62W±0.°04, h603km±6km, h574km±6.4km: pP-P, n746, σ0°55/538, mb4.7/88, 217C-185D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.68**	**332**	P	**P**	**13 00 46.0**	**-1.0**
762nm,0.5s,SNR=61
MSVF Nonsavu 4.68 332 *e*Pn **P** **13 00 46.6 -0.4**
MSVF *e*Sn **S** **13 02 02.2 +1.4**
MSVF Nonsavu 4.68 332 P **P** **13 00 46.0 -1.0**
762nm,0.5s,SNR=61
AFI Afiamalu 10.89 45 P **P** **13 01 38.5 -5.5**
14nm,0.3s,baz=40,slow=11,SNR=26
AFI S **S** **13 03 35.2 -10**
3.3nm,0.3s,baz=30,slow=20,SNR=5.0
AFI Afiamalu 10.89 45 *e*P **P** **13 01 38.5 -5.5**
AFI pmax pmax
comp=Z,72nm,0.6s
AFI Afiamalu 10.89 45 *e*Pn **P** **13 01 38.5 -5.5**
comp=Z,72nm,0.6s
AFI *e*Sn **S** **13 03 25.7 -20**
NOUC Port Laguerre 13.06 266 *e*P **P** **13 02 04.9 -0.8**
FUNA Funafuti 13.33 355 P **P** **13 02 07.7 -0.8**
URZ Urewera 16.56 189 P **P** **13 02 34.6 -3.8**
comp=Z,5.2nm,0.3s,baz=239,slow=6.4,SNR=9.9
URZ S **S** **13 05 13.6 -9.3**
comp=Z,3.4nm,0.3s,baz=184,slow=20,SNR=7.0
URZ Urewera 16.56 189 *e*Pn **P** **13 02 34.6 -3.7**
comp=Z,199nm,1.5s
URZ *e*S **S** **13 05 13.6 -9.3**
SNZO South Karori 19.95 193 *e*P **P** **13 03 06.9 -2.3**
comp=Z,345nm,1.7s
RPZ Rata Peaks 23.11 197 P **P** **13 03 35.7 -1.6**
comp=Z,16nm,0.7s,mb4.7,baz=10,slow=6.2,SNR=5.8
RPZ ScP ScP 13 09 45.1 0.0
comp=Z,20nm,0.9s,baz=45,slow=10.0,SNR=3.2
EIDS Eidsvold 27.04 257 *e*P **P** **13 04 12.7 +0.4**
comp=Z,48nm,0.6s,mb5.3
ARMA Armidale 27.11 246 ⇓*i*P **P** **13 04 14.1 +1.3**
ARMA Armidale 27.11 246 *e*P **P** **13 04 14.3 +1.5**
comp=Z,72nm,0.7s,mb5.4
RIV Riverview 28.34 239 *e*P **P** **13 04 24.3 +0.8**
CNB Canberra Magne 30.20 237 ⇓*i*P **P** **13 04 40.3 +0.8**

CNB eSCP ScP 13 10 10.4 +3.6
CAN Canberra 30.49 237 eP **P 13 04 42.4 +0.5**
CAN pmax pmax
comp=Z,80nm,1.0s,mb5.3
CAN Canberra 30.49 237 eP **P 13 04 42.4 +0.5**
comp=Z,80nm,1.0s,mb5.3
CTA Charters Tower 31.87 267⇓iP **P 13 04 54.3 +0.4**
comp=Z,56nm,0.5s,mb5.5
CTA e 13 05 49.8
CTA eSCP ScP 13 10 15.2 +2.5
CTA Charters Tower 31.87 267 P **P 13 04 54.5 +0.5**
comp=Z,68nm,0.5s,mb5.6,baz=95,slow=10,SNR=221
CTA ScP ScP 13 10 16.0 +3.3
comp=Z,5.3nm,0.8s,baz=130,slow=1.5,SNR=6.8
CTAO Charters Tower 31.87 267 eP **P 13 04 54.5 +0.6**
CTAO pmax pmax
comp=Z,66nm,0.6s,mb5.4
CTAO Charters Tower 31.87 267 eP **P 13 04 54.5 +0.6**
comp=Z,66nm,0.6s,mb5.4
TOO Toolangi 33.86 235⇓iP **P 13 05 10.6 +0.2**
PMG Port Moresby 34.22 286diP **P 13 05 14.0 +0.3**
PMG pmax pmax
comp=Z,74nm,0.9s
PMG Port Moresby 34.22 286 eP **P 13 05 13.8 +0.1**
comp=Z,75nm,0.7s,mb5.4
STKA Stephens Creek 35.83 246⇓iP **P 13 05 27.3 +0.5**
comp=Z,32nm,0.4s,mb5.2
STKA eSCP ScP 13 10 29.8 +3.1
STKA Stephens Creek 35.83 246 P **P 13 05 27.3 +0.5**
comp=Z,49nm,0.5s,mb5.3,baz=91,slow=9.5,SNR=106
STKA ScP ScP 13 10 30.3 +3.6
comp=Z,2.7nm,0.7s,baz=72,slow=4.7,SNR=7.1
STKA Stephens Creek 35.83 246 eP **P 13 05 26.9 +0.1**
comp=Z,11nm,0.6s,mb4.6
COEN Coen 36.19 276 eP **P 13 05 30.6 +0.7**
comp=Z,300nm,0.8s
ASAR Alice Springs 42.74 258 P **P 13 06 22.2 0.0**
comp=Z,69nm,0.8s,mb5.2,baz=98,slow=7.9,SNR=929
ASAR ScP ScP 13 10 57.2 +3.4
comp=Z,3.4nm,0.8s,baz=106,slow=4.5,SNR=8.9
ASAR S **S 13 12 03.3 -0.4**
comp=Z,4.4nm,1.0s,baz=97,slow=16,SNR=13
WRAB Tennant Creek 42.92 264 P **P 13 06 23.0 -0.6**
comp=Z,437nm,0.9s,SNR=38
WRAB Tennant Creek 42.92 264 eP **P 13 06 22.4 -1.2**
WRAB pmax pmax
comp=Z,73nm,0.9s,mb5.2
WRAB Tennant Creek 42.92 264 eP **P 13 06 22.4 -1.2**
comp=Z,73nm,0.9s,mb5.2
WRAB Tennant Creek 42.92 264 P **P 13 06 23.0 -0.6**
comp=Z,317nm,1.2s,mb5.7,SNR=38
WRAB Tennant Creek 42.92 264 P **P 13 06 22.9 -0.7**
comp=Z,972nm,1.6s,SNR=38
WRAB Tennant Creek 42.92 264 P **P 13 06 24.0 +0.4**
comp=Z,96nm,0.9s,mb5.3
KAKA Kakadu 46.51 273⇓iP **P 13 06 50.7 -0.5**
comp=Z,41nm,0.4s,mb5.3
KAKA eS **S 13 12 56.9 +0.1**
KAKA Kakadu 46.51 273 eP **P 13 06 50.7 -0.4**
comp=Z,110nm,0.6s,mb5.6
KAKA Kakadu 46.51 273 P **P 13 06 50.8 -0.4**
comp=Z,131nm,0.6s,mb5.6
FORT Forrest 47.36 248⇓iP **P 13 06 56.7 -0.6**
comp=Z,89nm,0.6s,mb5.5
FORT eS **S 13 13 06.8 -1.4**
FORT Forrest 47.36 248 eP **P 13 06 56.1 -1.2**
comp=Z,117nm,0.6s,mb5.6
BAKI Biak 47.73 289 P **P 13 06 57.7 -2.6**
comp=Z,2µmcomp=Z,44nm,1.0s,mb4.9
TLE Tual 48.78 282 P **P 13 07 07.7 -0.4**
comp=Z,88nm,0.8s,mb5.2
KNA Kununurra 49.05 268 P **P 13 07 10.1 +0.1**
comp=Z,320nm,0.7s,comp=Z,4µm
GUMO Guam 49.56 312 P **P 13 07 07.1 -6.6**
comp=Z,97nm,1.6s,mb5.0
FITZ Fitzroy Crossi 51.36 264⇓iP **P 13 07 26.9 +0.1**
comp=Z,34nm,0.6s,mb5.0
FITZ eS **S 13 14 03.7 +1.1**
FITZ Fitzroy Crossi 51.36 264 P **P 13 07 26.9 +0.2**
comp=Z,11nm,0.3s,mb4.7,baz=92,slow=4.2,SNR=166
FITZ S **S 13 14 02.7 +0.1**
comp=Z,3.8nm,1.2s,baz=274,slow=21,SNR=6.2
FITZ Fitzroy Crossi 51.36 264 P **P 13 07 26.9 +0.1**
comp=Z,72nm,0.9s,mb5.1
BNDI Bandanaira 51.80 282 P **P 13 07 29.7 -0.4**
comp=Z,271nm,1.5s,mb5.4
MBWA Marble Bar 56.09 259 eP **P 13 07 59.4 -0.6**
comp=Z,50nm,0.6s,mb4.9
MBWA Marble Bar 56.09 259 P **P 13 07 58.8 -1.2**
comp=Z,82nm,0.7s,mb5.1
KLBR Kellerberrin 56.10 246⇓iP **P 13 07 59.4 -0.6**
comp=Z,37nm,0.8s,mb4.7
SBA Scott Base 56.40 183 eP **P 13 08 02.6 +1.4**
SBA pmax pmax
comp=Z,5.0nm,0.9s,mb3.7
SBA Scott Base 56.40 183 eP **P 13 08 02.6 +1.4**
comp=Z,5.4nm,0.9s,mb3.8
NWAO Narrogin (SRO) 56.40 244 eP **P 13 08 01.9 -0.1**
MMRI Maumere 57.31 274 P **P 13 08 07.3 -1.2**
comp=Z,58nm,0.9s,mb4.8
WSI Waingapu 58.76 272 P **P 13 08 18.9 +0.7**
CASY Casey 62.07 205 eP **P 13 08 38.3 -0.7**
comp=Z,12nm,0.4s,mb4.5
QSPA South Pole Qui 68.19 180 P **P 13 09 17.4 +0.4**
comp=Z,1.4nm,0.8s,baz=160,slow=2.0,SNR=17
KKM Kota Kinabalu 68.67 286 eP **P 13 09 21.2 +0.1**
comp=Z,8.8nm,0.7s,mb4.3
MJAR Matsushiro Arr 70.45 325 P **P 13 09 30.9 -0.2**
comp=Z,5.2nm,0.7s,mb4.1,baz=162,slow=6.0,SNR=16
MAJO Matsushiro 70.45 325 eP **P 13 09 29.6 -1.5**
MAT Matsushiro 70.45 325 P **P 13 09 31.2 +0.1**
KSM Kuching 72.12 279 eP **P 13 09 41.9 +0.4**
comp=Z,12nm,0.7s,mb4.5
ATKA Atka Island 73.92 3 eP **P 13 09 49.6 -1.1**
comp=Z,80nm,1.0s,mb5.2
ASAJ Asahikawa 74.24 333 P **P 13 09 54.5 +1.8**
comp=Z,9.9nm,0.7s,mb4.5,baz=219,slow=7.6,SNR=14
SMY Shemya 74.50 356 eP **P 13 09 53.3 -0.7**
SMY pmax pmax
comp=Z,59nm,1.0s,mb5.1
SMY Shemya 74.50 356 eP **P 13 09 53.3 -0.7**
comp=Z,59nm,1.0s,mb5.1
YSS Yuzh-Sakhalins 76.47 335 eP **P 13 10 02.2 -2.8**
YSS Yuzh-Sakhalins 76.47 335 eP **P 13 10 05.5 +0.5**
comp=Z,12nm,0.6s,mb4.5
KSRS Korea Array 76.94 320 P **P 13 10 08.7 +0.9**
comp=Z,1.3nm,0.7s,baz=133,slow=4.7,SNR=6.7
PET Petropavlovsk 76.95 347 eP **P 13 10 06.7 -0.8**
PET pmax pmax
comp=Z,24nm,0.8s,mb4.7
PET Petropavlovsk 76.95 347 eP **P 13 10 07.0 -0.5**
PETK Petropavlovsk- 77.23 346 P **P 13 10 09.0 0.0**
comp=Z,27nm,0.7s,mb4.8,baz=119,slow=6.2,SNR=58
NJ2 Nanjing 79.61 311 eP **P 13 10 22.8 +0.6**
NJ2 pmax pmax
comp=Z,20nm,0.7s,mb4.6
BLG Laguna Peak 80.10 47⇓P **P 13 10 24.3 -0.4**
baz=80
HOPS Hopland 80.40 41 eP **P 13 10 26.8 +0.7**
KCPM Cahto Peak 80.52 40 eP **P 13 10 27.4 +0.7**
MDJ Mudanjiang 80.80 326 P **P 13 10 29.3 +1.3**
MDJ pP pP 13 12 31.0 -3.7
MDJ sP sP 13 13 29.5 -6.1
MDJ S S 13 19 53.3 +5.9
MDJ sS sS 13 23 28.0 -5.2
MDJ SS SS 13 25 23.5 +3.6
MDJ pmax pmax
comp=Z,8.0nm,0.5s,mb4.4
MDJ pmax pmax
comp=Z,30nm,4.6s
MDJ Mudanjiang 80.80 326 eP **P 13 10 29.3 +1.3**
comp=Z,4.3nm,0.4s,mb4.2
ARVC Arvin 80.84 46⇑P **P 13 10 28.4 -0.1**
baz=81
MWC Mount Wilson 80.85 48 eP **P 13 10 28.3 -0.3**
MWC pmax pmax
comp=Z,7.0nm,0.8s,mb4.1
MWC Mount Wilson 80.85 48 eP **P 13 10 28.3 -0.3**
comp=Z,6.7nm,0.8s,mb4.1
HABR Khabarovsk 80.91 331 eP **P 13 10 28.1 -0.4**
HABR e 13 13 42.1
HABR eS S 13 19 47.2 -1.2
HABR eSS SS 13 25 17.9 -3.5
HABR eSSS 13 28 52.6
HABR pmax pmax
comp=N,7.0nm,0.9s
HABR pmax pmax
comp=E,10.0nm,1.5s
HABR pmax pmax
comp=Z,9.0nm,1.0s,mb4.2
HABR MLR MLR
comp=Z,36nm,15.0s
BAR Barrett 80.96 50 eP **P 13 10 28.8 -0.4**
comp=Z,4.7nm,0.8s,mb4.0
VES Vestal, Richgr 81.08 46⇑P **P 13 10 29.2 -0.5**
baz=81,SNR=6.6
MURC Murrieta 81.10 48⇑P **P 13 10 29.8 -0.1**
baz=81
BFSC Mount Baldy Ra 81.14 48⇓P **P 13 10 29.6 -0.4**
baz=81,SNR=5.6
KHMM Horse Mountain 81.18 39 eP **P 13 10 30.9 +0.7**
MONP Monument Peak 81.26 49⇑P **P 13 10 30.9 +0.2**
baz=81,SNR=19
EDW2 Edwards Air Fo 81.27 47⇑P **P 13 10 30.7 0.0**
baz=81,SNR=8.8
DVTC Desert V Tower 81.36 50⇑P **P 13 10 31.4 +0.2**
baz=82
ISA Isabella 81.38 46⇑P **P 13 10 31.3 0.0**
baz=82,SNR=20
ISA Isabella 81.38 46 eP **P 13 10 31.4 +0.2**
CMB Columbia Colle 81.50 43 eP **P 13 10 31.8 0.0**
CMB pmax pmax
comp=Z,13nm,0.8s,mb4.5
CMB Columbia Colle 81.50 43 eP **P 13 10 31.8 0.0**
comp=Z,13nm,0.8s,mb4.5
OHCM Honcut 81.59 42 eP **P 13 10 32.1 -0.1**
PFO Pinyon Flat Ob 81.62 49⇑P **P 13 10 32.6 +0.1**
baz=82
BBRC Big Bear Solar 81.66 48⇑P **P 13 10 32.8 +0.1**
baz=82
WDC Whiskeytown Da 81.70 40 eP **P 13 10 33.3 +0.5**
WDC pmax pmax
comp=Z,25nm,1.0s,mb4.7
WDC Whiskeytown Da 81.70 40 eP **P 13 10 33.3 +0.5**
comp=Z,25nm,1.0s,mb4.7
SWSC Sam W. Stewart 81.72 50⇑P **P 13 10 33.2 +0.1**
baz=82
LRMC Laurel Mountai 81.81 47⇑P **P 13 10 33.3 -0.1**
baz=82,SNR=5.9
OHAK Old Harbor 81.85 14 eP **P 13 10 32.7 -0.4**
RRX Edison Barstow 81.94 48⇑P **P 13 10 34.1 0.0**
baz=82
CWC Cottonwood Cre 82.08 46⇓P **P 13 10 34.8 0.0**
baz=82,SNR=8.7
BELC Belle Mtn. Jos 82.16 49⇓P **P 13 10 35.3 +0.1**
baz=82,SNR=13
MLAC Mammoth Lakes 82.27 44⇑P **P 13 10 36.3 +0.6**
baz=82
MPMC Manual Prospec 82.27 46⇓P **P 13 10 35.8 +0.1**
baz=82,SNR=19
MTUM Tungsten Hills 82.28 45 eP **P 13 10 36.2 +0.4**
GSC Goldstone 82.31 47 eP **P 13 10 35.7 -0.2**
baz=82,SNR=10
GSC Goldstone 82.31 47 eP **P 13 10 36.0 0.0**
GSC pmax pmax
comp=Z,8.0nm,0.7s,mb4.4
GSC Goldstone 82.31 47 eP **P 13 10 36.0 0.0**
comp=Z,7.7nm,0.7s,mb4.3
YBH Yreka Blue Hor 82.31 39 eP **P 13 10 36.5 +0.7**
YBH pmax pmax
comp=Z,11nm,0.7s
YBH Yreka Blue Hor 82.31 39 eP **P 13 10 36.5 +0.7**
comp=Z,11nm,0.7s,mb4.5
TIN Tinemaha 82.33 45⇑P **P 13 10 36.4 +0.3**
baz=82
BC3 Big Chuckawall 82.35 49⇓P **P 13 10 36.5 +0.3**
baz=82,SNR=5.5
HEC Hector,Ludlow 82.38 48⇓P **P 13 10 36.1 -0.2**
baz=82,SNR=18
112A Yuma 82.38 51⇑P **P 13 10 36.7 +0.4**
baz=82
WAKR Walker 82.38 43 eP **P 13 10 36.7 +0.4**
GLA Glamis 82.47 50⇓P **P 13 10 37.2 +0.4**
baz=83,SNR=10
GLA Glamis 82.47 50 eP **P 13 10 37.5 +0.6**
GLA pmax pmax
comp=Z,27nm,0.9s,mb4.8
GLA Glamis 82.47 50 eP **P 13 10 37.5 +0.6**
comp=Z,27nm,0.9s,mb4.8
KULM Kulim 82.47 279 eP **P 13 10 37.9 +0.6**
comp=Z,49nm,1.8s,mb4.7
CN2 Changchun 82.48 323 eP **P 13 10 37.0 +0.4**
CN2 eS S 13 20 07.3 +3.0
CN2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.4
CN2 pmax pmax
comp=Z,200nm,4.0s
KDAK Kodiak Island 82.52 14 P **P 13 10 36.0 -0.5**
comp=Z,7.5nm,0.7s,mb4.3,baz=274,slow=4.4,SNR=6.6
KDAK Kodiak Island 82.52 14 P **P 13 10 36.0 -0.5**
WCN Washoe City 82.65 43⇓P **P 13 10 37.8 +0.2**
baz=83,SNR=18
HUMO Hull Mountain 82.71 38 eP **P 13 10 38.6 +0.8**
comp=Z,12nm,0.7s,mb4.5
GMRC Granite Mounta 82.81 48⇑P **P 13 10 38.5 0.0**
baz=83,SNR=8.7
IRM Iron Mountain 82.83 49⇑P **P 13 10 38.8 +0.2**
baz=83,SNR=12
GRAC Grapevine Rang 82.87 46⇓P **P 13 10 38.9 +0.1**
baz=83,SNR=22
FURC Furnace Creek, 82.92 46⇑P **P 13 10 38.6 -0.4**
baz=83,SNR=6.0
KLR Kul'dur 82.96 330 eP **P 13 10 36.2 -2.7**
TUQ Turquoise Moun 82.98 48⇑P **P 13 10 39.1 -0.2**
baz=83
SHOC Shoshone 82.99 47⇑P **P 13 10 39.2 -0.2**
baz=83
NVAR Mina Array Bea 83.07 44 P **P 13 10 39.8 +0.1**
comp=Z,13nm,0.8s,mb4.5,baz=224,slow=8.5,SNR=76
PAHR Pah Rah Range 83.12 42 eP **P 13 10 40.1 +0.1**
214A Organ Pipe Nat 83.36 52⇓P **P 13 10 41.5 +0.2**
baz=84,SNR=5.6
Z13A Yuma Proving G 83.39 50⇑P **P 13 10 41.6 +0.2**
baz=84,SNR=12
V11A Goodsprings 83.54 47⇑P **P 13 10 42.0 -0.1**
baz=84
W12A Cal Nev Ari 83.64 48⇑P **P 13 10 42.7 +0.1**
baz=84
114A Black Gap (USA 83.71 51⇑P **P 13 10 43.2 +0.2**
baz=84,SNR=9.9
MOD Modoc 83.85 40 eP **P 13 10 43.8 +0.3**
comp=Z,12nm,0.7s,mb4.5
V12A Nelson 83.88 48⇑P **P 13 10 43.7 -0.1**
baz=84,SNR=6.4
S10A Tonopah Range, 83.90 45⇓P **P 13 10 43.7 -0.1**
baz=84,SNR=32
Z14A Wintersburg 83.98 51⇑P **P 13 10 44.6 +0.3**
baz=84,SNR=7.5
X13A Yucca 83.99 49⇑P **P 13 10 44.5 +0.1**
baz=84,SNR=16
K05A Summer Lake 83.99 39⇓P **P 13 10 44.8 +0.7**
baz=84,SNR=22
W13A Hualapai Mount 84.21 49⇑P **P 13 10 45.6 +0.2**
baz=84,SNR=17
Y14A Wickenburg 84.23 50⇑P **P 13 10 45.2 -0.3**
baz=84,SNR=9.5
S11A Rachel 84.31 46⇓P **P 13 10 45.8 -0.1**
baz=84
216A Three Points, 84.37 52⇑P **P 13 10 46.8 +0.5**
baz=84,SNR=6.3
T11A Corn Creek, Al 84.44 46⇑P **P 13 10 46.6 +0.1**
baz=85,SNR=18
H04A Detroit Lake 84.44 37⇑P **P 13 10 46.3 0.0**
baz=85
F03A Seaside 84.46 36⇓P **P 13 10 46.8 +0.4**
baz=85
U12A Valley of Fire 84.47 47⇓P **P 13 10 46.8 +0.2**
baz=85
116A Eloy 84.47 52⇑P **P 13 10 47.0 +0.2**
baz=85,SNR=6.3
Z15A Gila River Ind 84.51 51⇑P **P 13 10 46.8 -0.1**
baz=85
Q10A Clear Creek Ra 84.52 44⇓P **P 13 10 47.0 +0.2**
baz=85
V13A Grand Canyon W 84.54 48⇓P **P 13 10 46.9 -0.1**
baz=85,SNR=17
X14A Yava 84.59 50⇓P **P 13 10 47.5 +0.2**
baz=85,SNR=12
G04A Mulino 84.60 37⇓P **P 13 10 47.3 +0.2**
baz=85
Y15A Casa Rosa Ranc 84.72 50⇓P **P 13 10 48.2 +0.3**
baz=85,SNR=12
217A Green Valley 84.73 53⇑P **P 13 10 48.7 +0.6**
baz=85,SNR=18
R11A Troy Canyon, C 84.80 45⇓P **P 13 10 48.7 +0.5**
baz=85,SNR=5.5
W14A Seligman 84.83 49⇑P **P 13 10 48.9 +0.4**
baz=85,SNR=18
E03A Lebam 84.85 35⇓P **P 13 10 48.6 +0.4**
baz=85
S12A Delamar Landin 84.89 46⇓P **P 13 10 49.1 +0.5**
baz=85,SNR=25
BMN Battle Mountai 84.89 43 eP **P 13 10 48.7 +0.1**
BMN pmax pmax
comp=Z,8.0nm,0.7s,mb4.5
BMN Battle Mountai 84.89 43 eP **P 13 10 48.7 +0.1**
comp=Z,8.1nm,0.7s,mb4.5
RSO Redoubt South 84.92 13 eP **P 13 10 47.5 -0.7**
Q11A Duckwater 85.02 45⇓P **P 13 10 49.4 +0.1**
baz=85
V14A Boquillas Ranc 85.04 49⇓P **P 13 10 49.8 +0.4**
baz=85,SNR=20
SYO Syowa Base 85.04 193⇑eX pP 13 12 49.0 -8.2
X15A Humboldt 85.06 50⇑P **P 13 10 49.9 +0.3**
baz=85,SNR=8.4
F04A Amboy 85.08 36⇓P **P 13 10 49.3 -0.1**
baz=85
WVOR Wild Horse Val 85.16 41 eP **P 13 10 49.9 0.0**
WVOR pmax pmax
comp=Z,12nm,0.9s,mb4.5
WVOR Wild Horse Val 85.16 41 eP **P 13 10 49.9 0.0**
comp=Z,12nm,0.9s,mb4.5
LVP Lakeview Peak 85.17 36 P **P 13 10 49.9 +0.1**
117A Oracle 85.18 52⇑P **P 13 10 50.7 +0.5**
baz=85,SNR=13
318A Bisbee 85.19 54⇑P **P 13 10 50.9 +0.7**
baz=85,SNR=23
T13A Saint George 85.21 47⇓P **P 13 10 50.2 0.0**
baz=85
VIPM Ingram Point 85.22 38 P **P 13 10 50.3 +0.2**
NLWA Neilton Lookou 85.23 34⇓P **P 13 10 50.5 +0.5**
baz=85
OSR Olympics--Salm 85.25 34 P **P 13 10 51.1 +0.9**
Y16A Circle Bar Ran 85.30 51⇓P **P 13 10 51.0 +0.3**
baz=85,SNR=8.8
SEW Seward 85.33 15 eP **P 13 10 49.0 -1.2**
comp=Z,25nm,1.0s,mb4.8
P11A Circle Ranch, 85.34 44⇑P **P 13 10 50.7 -0.1**
baz=86
U14A Mt Trumbull 85.39 48⇑P **P 13 10 51.5 +0.4**
baz=86,SNR=24
218A Dragoon 85.40 53⇑P **P 13 10 51.9 +0.7**
baz=86,SNR=33
R12A Pony Springs, 85.43 46⇓P **P 13 10 51.4 +0.2**
baz=86
S13A Holt Ranch, En 85.53 47⇑P **P 13 10 51.9 +0.1**
baz=86,SNR=10
X16A Lo Mia Camp, P 85.59 50⇓P **P 13 10 52.4 +0.2**
baz=86,SNR=9.8
I07A Izee 85.61 39⇓P **P 13 10 52.3 +0.3**
baz=86,SNR=18
G06A Carlson Farm, 85.65 37⇓P **P 13 10 51.9 -0.2**
baz=86,SNR=7.0
Y17A Roosevelt 85.66 51⇑P **P 13 10 52.5 +0.1**
baz=86,SNR=5.3
Q12A Willow Creek R 85.67 45⇓P **P 13 10 52.2 -0.1**
baz=86
319A Douglas 85.69 54⇓P **P 13 10 53.3 +0.7**
baz=86,SNR=21
O11A Cowboy Ranch, 85.72 44⇑P **P 13 10 52.6 +0.1**
baz=86,SNR=9.9
Z17A San Carlos Hig 85.74 52⇑P **P 13 10 53.2 +0.4**
baz=86
R13A O'Grain Ranch, 85.78 46⇑P **P 13 10 53.2 +0.3**
baz=86
V15A Kaibab Nationa 85.78 49⇑P **P 13 10 53.4 +0.4**
baz=86,SNR=10
118A Homack Ranch, 85.78 52⇓P **P 13 10 53.6 +0.5**
baz=86,SNR=13
T14A Hurricane 85.79 47⇓P **P 13 10 53.1 +0.1**
baz=86
J08A Circle Bar Ran 85.79 40⇓P **P 13 10 53.0 +0.1**
baz=86,SNR=15
BJT Baijiatuau 85.82 316 eP **P 13 10 53.9 +0.9**
BJT pmax pmax
comp=Z,9.0nm,0.6s
BJT Baijiatuau 85.82 316 eP **P 13 10 53.9 +0.9**
comp=Z,8.8nm,0.6s,mb4.6
HDW Hoodsport 85.82 34 P **P 13 10 53.4 +0.6**
BJI Beijing 85.82 316 P **P 13 10 53.5 +0.4**
BJI pP pP 13 12 56.3 -5.6
BJI S S 13 20 40.8 +4.0
BJI pmax pmax
comp=Z,11nm,0.7s,mb4.6
BJI pmax pmax
comp=Z,41nm,3.8s
P12A McGill 85.85 45⇑P **P 13 10 53.1 -0.1**
baz=86,SNR=10
CCUT Cedar City 85.86 47 eP **P 13 10 53.7 +0.4**
comp=Z,7.4nm,0.9s,mb4.3
W16A Flagstaff 85.87 50⇑P **P 13 10 53.7 +0.3**
baz=86
GNW Green Mountain 85.89 35 eP **P 13 10 53.2 0.0**
comp=Z,4.8nm,0.6s,mb4.3
LON Longmire 85.92 36 eP **P 13 10 52.8 -0.6**
LON pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
LON Longmire 85.92 36 eP **P 13 10 52.8 -0.6**
comp=Z,5.1nm,0.7s,mb4.3
ARUT Antelope Range 85.93 47 eP **P 13 10 53.8 +0.2**
ARUT pmax pmax
comp=Z,5.0nm,0.8s,mb4.2
ARUT Antelope Range 85.93 47 eP **P 13 10 53.8 +0.2**
comp=Z,5.4nm,0.8s,mb4.2
M10A I.L. Ranch, Tu 85.93 42⇑P **P 13 10 53.9 +0.4**
baz=86,SNR=12
219A White Tail Can 86.00 53⇑P **P 13 10 54.5 +0.4**
baz=86,SNR=14
X17A Forest Lakes 86.01 51⇑P **P 13 10 54.4 +0.4**
baz=86
U15A North Rim 86.01 48⇑P **P 13 10 54.5 +0.5**
baz=86,SNR=37
GYA Guiyang 86.03 300⇑iP **P 13 10 55.0 +0.6**
GYA pP pP 13 13 01.8 -1.4
GYA sP sP 13 13 58.3 -5.3
GYA PP PP 13 14 29.3 +2.9
GYA SKS 13 20 26.0
GYA sS sS 13 24 25.0 -3.9
GYA pmax pmax
comp=Z,20nm,1.0s,mb4.7
GYA pmax pmax
comp=Z,130nm,5.0s
WPW White Pass 86.03 36 P **P 13 10 54.3 +0.4**
N11A Elko Archery C 86.05 43⇓P **P 13 10 54.3 +0.2**
baz=86
D05A Enumclaw 86.10 35⇓P **P 13 10 54.7 +0.5**
baz=86,SNR=6.0
RC01 Rabbit Creek A 86.14 14 eP **P 13 10 53.5 -0.5**
comp=Z,40nm,1.2s,mb4.9
WUAZ Wupatki 86.19 49⇓P **P 13 10 55.0 0.0**
baz=86,SNR=6.0
WUAZ Wupatki 86.19 49 eP **P 13 10 55.1 +0.2**
comp=Z,10nm,1.0s,mb4.4
320A Kipp Ranch, An 86.23 54⇑P **P 13 10 56.2 +1.0**
baz=86
T15A Red Dirt Ranch 86.25 48⇓P **P 13 10 55.2 +0.1**
baz=86,SNR=19
L10A Juniper Basin 86.28 42⇑P **P 13 10 55.3 +0.1**
baz=86,SNR=6.1
Y18A Canyon Day Jun 86.29 51⇓P **P 13 10 56.0 +0.5**
baz=86,SNR=16
119A Ashpeak Ranch, 86.34 53⇓P **P 13 10 56.2 +0.5**
baz=86
M11A Holland Ranch, 86.35 43⇑P **P 13 10 55.8 +0.3**
baz=86,SNR=7.0
O12A Currie 86.38 44⇑P **P 13 10 55.7 0.0**
baz=86
P13A Bates Ranch, G 86.42 45⇓P **P 13 10 55.9 -0.1**
baz=87,SNR=9.0
220A Playas Peak, P 86.50 54⇓P **P 13 10 57.2 +0.7**
baz=87,SNR=13
N12A Clover Valley, 86.51 43⇓P **P 13 10 56.2 -0.1**
baz=87,SNR=11
N12A Clover Valley, 86.51 43 eP **P 13 10 56.4 +0.1**
comp=Z,15nm,0.9s,mb4.7
TTA Tatalina 86.57 11 eP **P 13 10 54.3 -1.7**
S15A Panguitch 86.60 47⇓P **P 13 10 57.7 +0.9**
baz=87
Z19A T-Link Ranch, 86.62 52⇑P **P 13 10 57.5 +0.5**
baz=87
G08A Pilot Rock 86.63 38⇓P **P 13 10 56.9 +0.2**

baz=87,SNR=29
V17A Tonalea, Kykot 86.65 50 ⇑P P 13 10 57.0 -0.1
baz=87,SNR=16
Q14A Sevier Lake (B 86.66 46 ⇑P P 13 10 57.2 +0.1
baz=87
U16A Tuba City 86.68 49 ⇓P P 13 10 57.4 +0.2
baz=87,SNR=11
X18A Snowflake 86.72 51 ⇓P P 13 10 57.7 +0.2
baz=87
PMR Palmer 86.72 14 eP P 13 10 55.8 -0.9
PMR pmax pmax
comp=Z,15nm,0.5s,mb5.0
PMR Palmer 86.72 14 eP P 13 10 55.8 -0.9
comp=Z,15nm,0.5s,mb5.0
120A U Bar Ranch, L 86.73 53 ⇓P P 13 10 57.9 +0.4
baz=87,SNR=5.5
JCW Jim Creek 86.75 35 eP P 13 10 57.3 +0.1
L11A Cat Creek Ranc 86.78 42 ⇓P P 13 10 57.7 +0.2
baz=87,SNR=19
T16A Glen Canyon Da 86.84 48 ⇑P P 13 10 58.1 +0.2
baz=87
E07A Sunnyside 86.88 37 ⇑P P 13 10 58.2 +0.4
baz=87
M12A Wells 86.89 43 ⇑P P 13 10 58.1 0.0
baz=87,SNR=6.0
RSW Rattlesnake Hi 86.93 37 eP P 13 10 58.6 +0.5
Y19A Nutrioso 86.94 52 ⇓P P 13 10 59.0 +0.5
baz=87,SNR=13
HAWA Hanford 86.96 37 eP P 13 10 58.6 +0.4
comp=Z,15nm,0.7s,mb4.8
Z20A Nine Sixteen R 87.03 53 ⇑P P 13 10 59.3 +0.4
baz=87,SNR=6.0
N13A Wendover, West 87.04 44 ⇓P P 13 10 58.7 -0.1
baz=87,SNR=5.7
N13A Wendover, West 87.04 44 eP P 13 10 58.6 -0.2
comp=Z,19nm,0.9s,mb4.8
221A Mesquite Ranch 87.11 54 ⇑P P 13 10 59.9 +0.6
baz=87
DIV Divide 87.12 16 eP P 13 10 58.4 -0.2
comp=Z,24nm,0.8s,mb5.0
P14A Drum Mountains 87.12 45 ⇑P P 13 10 59.1 -0.1
baz=87,SNR=5.9
RPW Rockport 87.12 34 eP P 13 10 58.7 -0.2
X19A St. Johns 87.14 51 ⇑P P 13 10 59.8 +0.4
baz=87
S16A Weppner Ranch, 87.15 47 ⇑P P 13 10 59.2 -0.2
baz=87
MSU Marysvale 87.15 47 eP P 13 11 00.2 +0.8
W18A Petrified Fore 87.16 50 ⇑P P 13 10 59.9 +0.4
baz=87
A05A Maple Falls 87.17 34 ⇓P P 13 10 58.9 -0.3
baz=87
B06A Marblemount 87.18 34 ⇑P P 13 10 59.4 +0.1
baz=87
L12A House Creek Ra 87.22 42 ⇓P P 13 10 59.8 +0.1
baz=87,SNR=7.7
ETW Entiat 87.24 36 P P 13 10 59.7 +0.2
MAIT Maitri 87.25 184 eP pP 13 13 04.8 -3.8
Q15A Fillmore 87.27 46 ⇓P P 13 11 00.3 +0.4
baz=87
BMRM Bremner River 87.28 16 eP P 13 10 58.8 -0.6
comp=Z,32nm,0.8s,mb5.1
E08A Dider Farm, El 87.28 37 ⇑P P 13 10 59.7 0.0
baz=88,SNR=9.1
T17A Navajo Res., N 87.33 48 ⇓P P 13 11 00.7 +0.4
baz=87,SNR=12
M13A Montello 87.34 43 ⇓P P 13 11 00.0 -0.2
baz=88,SNR=21
M13A Montello 87.34 43 eP P 13 11 00.3 +0.1
comp=Z,6.3nm,0.6s,mb4.5
BMO Blue Mountains 87.34 39 eP P 13 10 59.9 -0.1
comp=Z,7.5nm,0.7s,mb4.5
121A Cookes Peak, D 87.35 53 ⇓P P 13 11 00.8 +0.3
baz=87,SNR=5.6
LNOR Lincton Mounta 87.36 38 eP P 13 11 00.2 +0.1
SEY Seymchan 87.39 348 deP P 13 10 59.0 -0.8
W19A Sanders 87.40 51 ⇑P P 13 11 00.8 +0.1
baz=88
MFID Camas Ranch 87.42 41 ⇓P P 13 11 00.5 +0.1
baz=88,SNR=20
WTV Waterville 87.50 36 P P 13 11 00.7 -0.1
R16A Teasdale 87.51 47 ⇓P P 13 11 01.5 +0.5
baz=88,SNR=9.2
VNA1 Neumayer--Stat 87.52 177 eP diff pP 13 13 09.5 -0.4
VNA1 e 13 17 14.6
Y20A Horse Springs, 87.56 52 ⇓P P 13 11 01.8 +0.4
baz=88,SNR=8.2
DUG Dugway 87.60 45 ⇑P P 13 11 01.1 -0.3
baz=88
P15A Leamington 87.63 46 ⇓P P 13 11 01.5 0.0
baz=88
S17A Black Ridge (B 87.65 48 ⇑P P 13 11 01.2 -0.5
baz=88,SNR=10
222A Williams Famil 87.67 54 ⇓P P 13 11 02.2 +0.3
baz=88,SNR=6.4
PNL Peninsula 87.67 19 eP P 13 11 01.2 -0.1
comp=Z,31nm,0.9s,mb5.0
D08A Wollman Farm, 87.69 37 ⇓P P 13 11 01.8 +0.2
baz=88,SNR=18
N14A Grayback Hills 87.70 44 ⇓P P 13 11 02.0 +0.2
baz=88
U18A Rough Rock, Ch 87.70 49 ⇑P P 13 11 01.7 -0.2
baz=88
X20A Quemado 87.77 51 ⇓P P 13 11 02.6 +0.2
baz=88,SNR=7.9
XAN Xi'an 87.78 308 P P 13 11 03.5 +1.1
XAN pmax pmax
comp=Z,2.0nm,0.7s,mb4.0
XAN pmax pmax
comp=Z,25nm,7.1s
E09A Wood Farm, Sta 87.81 37 ⇓P P 13 11 01.8 -0.4
baz=88,SNR=8.0
L13A Double Diamond 87.87 43 ⇑P P 13 11 02.8 +0.2
baz=88
O15A The Old Anders 87.87 45 ⇑P P 13 11 03.5 +0.8
baz=88
M14A Sheep Mountain 87.94 43 ⇓P P 13 11 02.9 -0.1
baz=88,SNR=20
OD2 Odessa Site #2 88.00 36 eP P 13 11 03.1 0.0
122A Conniff Cattle 88.02 54 ⇓P P 13 11 04.0 +0.5
baz=88
F10A Beach Ranch, E 88.02 38 ⇑P P 13 11 02.7 -0.5
baz=88,SNR=25
Q16A Castle Valley 88.04 47 ⇓P P 13 11 03.9 +0.4
baz=88
T18A Mexican Hat 88.04 49 ⇑P P 13 11 03.6 +0.1
baz=88,SNR=20
I12A Atlanta 88.05 41 ⇓P P 13 11 03.7 +0.3
baz=88,SNR=27
W20A Ramah 88.05 51 ⇓P P 13 11 03.7 0.0
baz=88,SNR=7.1
K13A Stover Farm, H 88.08 42 ⇓P P 13 11 03.9 +0.3
baz=88,SNR=6.5
R17A Hanksville Air 88.10 47 ⇑P P 13 11 03.5 -0.3
baz=88,SNR=12
U19A Dine' College, 88.10 50 ⇑P P 13 11 03.7 -0.1
baz=88
Y21A Point of Rocks 88.12 52 ⇓P P 13 11 04.7 +0.6
baz=88,SNR=5.5
N15A Stansbury Isla 88.15 44 ⇓P P 13 11 04.0 0.0
baz=88
TMUT Trail Mountain 88.20 46 eP P 13 11 05.0 +0.7
comp=Z,35nm,1.0s,mb5.0
B08A Colville Reser 88.23 35 ⇓P P 13 11 03.6 -0.6
baz=88,SNR=16
S18A Hurst Farm, Bl 88.23 48 ⇑P P 13 11 04.3 -0.2
baz=88
X21A Alamocita Cree 88.25 52 ⇑P P 13 11 04.9 +0.3
baz=88,SNR=9.8
L14A Malta 88.28 43 ⇑P P 13 11 04.5 0.0
baz=88,SNR=12
MPU Maple Canyon 88.28 45 eP P 13 11 04.7 +0.1
comp=Z,8.0nm,1.0s,mb4.4
Z22A Elephant Butte 88.30 53 ⇓P P 13 11 05.0 +0.1
baz=88,SNR=28
HLID Hailey 88.36 41 ⇑P P 13 11 05.2 +0.3
baz=88,SNR=34
HLID Hailey 88.36 41 eP P 13 11 05.4 +0.5
comp=Z,7.7nm,0.7s,mb4.5
V20A Brimhall 88.39 50 ⇓P P 13 11 05.4 +0.2
baz=88
SPUT South Promonto 88.41 44 eP P 13 11 05.7 +0.5
HVU Hansel Valley 88.45 43 eP P 13 11 05.8 +0.5
HVU pmax pmax
comp=Z,13nm,0.6s,mb4.8
HVU Hansel Valley 88.45 43 eP P 13 11 05.8 +0.4
comp=Z,13nm,0.6s,mb4.8
O16A Springville 88.47 45 ⇑P P 13 11 05.3 -0.1
baz=89,SNR=8.7
T19A Beclabito 88.49 49 ⇑P P 13 11 06.1 +0.5
baz=89
M15A Larsen Ranch, 88.49 44 ⇑P P 13 11 05.3 -0.2
baz=89,SNR=16
123A Bell Site, Whi 88.54 54 ⇓P P 13 11 06.3 +0.3
baz=89
SRU San Rafael 88.57 47 ⇓P P 13 11 05.9 -0.1
baz=89,SNR=23
SRU San Rafael 88.57 47 eP P 13 11 06.0 +0.1
K14A Jones Ranch, D 88.59 43 ⇓P P 13 11 06.1 +0.1
baz=89,SNR=13
324A Moseley Ranch, 88.59 55 ⇑P P 13 11 06.3 0.0
baz=89,SNR=19
P17A Butcher Ranch, 88.61 46 ⇑P P 13 11 06.8 +0.6
baz=89
Y22A Socorro 88.61 53 ⇓P P 13 11 06.4 +0.1
baz=89
H12A Diamond D Ranc 88.62 40 ⇓P P 13 11 06.0 -0.1
baz=89,SNR=33
U20A Newcomb 88.63 50 ⇓P P 13 11 06.0 -0.3
baz=89
KMI Kunming 88.64 298 P P 13 11 08.0 +1.4
KMI S S 13 21 06.3 +2.7
KMI SS SS 13 27 20.0 +5.7
KMI pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
KMI pmax pmax
comp=Z,76nm,3.1s
R18A Canyonlands Na 88.64 48 ⇓P P 13 11 06.0 -0.3
baz=89,SNR=14
425A Indio Mountain 88.68 56 ⇓P P 13 11 07.0 +0.3
baz=89,SNR=21
LAZ Ladron 88.70 52 eP P 13 11 06.9 +0.2
comp=Z,6.8nm,1.2s,mb4.3
JLU Jordanelle 88.70 45 eP P 13 11 07.0 +0.5
I13A Wildhorse Cree 88.73 41 ⇑P P 13 11 06.9 +0.3
baz=89,SNR=10
DAU Daniels Canyon 88.73 45 eP P 13 11 07.5 +0.8
MNTX Cornudas Mount 88.78 55 eP P 13 11 07.1 0.0
comp=Z,13nm,0.8s,mb4.8
626A Big Bend Ranch 88.80 58 ⇓P P 13 11 07.5 +0.2
baz=89,SNR=22
SKAG Skagway 88.81 21 eP P 13 11 07.4 +0.8
L15A Malad City 88.81 43 ⇓P P 13 11 06.8 -0.2
baz=89,SNR=18
Q18A Rafter H Ranch 88.83 47 ⇓P P 13 11 06.8 -0.4
baz=89,SNR=12
X22A Bernardo 88.84 52 ⇑P P 13 11 07.8 +0.4
baz=89
224A Cornudas Mount 88.84 55 ⇑P P 13 11 07.6 +0.2
baz=89,SNR=18
Z23A Rita Site, Whi 88.85 53 ⇓P P 13 11 07.4 0.0
baz=89,SNR=7.0
N16A Rees Ranch, Co 88.85 45 ⇓P P 13 11 07.4 +0.1
baz=89,SNR=7.3
S19A Harvey Farm, M 88.85 48 ⇓P P 13 11 07.0 -0.3
baz=89,SNR=6.2
325A Bean Ranch, Si 88.95 56 ⇑P P 13 11 07.8 -0.1
baz=89,SNR=22
BNM Barren Site 88.96 52 eP P 13 11 08.0 +0.1
comp=Z,13nm,1.3s,mb4.6
O17A Robinson Place 88.97 46 ⇑P P 13 11 08.3 +0.5
baz=89,SNR=23
V21A Milan 88.99 51 ⇑P P 13 11 07.7 -0.3
baz=89
H13A Challis 89.00 41 ⇓P P 13 11 07.8 0.0
baz=89,SNR=22
P18A Preston Nutter 89.01 46 ⇑P P 13 11 08.1 +0.1
baz=89,SNR=10
LPM Los Pinos Moun 89.03 52 eP P 13 11 08.3 +0.1
R19A Curley Farm, L 89.03 48 ⇓P P 13 11 07.7 -0.5
baz=89,SNR=5.4
F12A Elk City 89.05 39 ⇑P P 13 11 07.6 -0.4
baz=89,SNR=23
526A Mary Lane Ranc 89.06 57 ⇑P P 13 11 08.4 0.0
baz=89,SNR=17
K15A Arbon 89.07 43 ⇓P P 13 11 08.2 0.0
baz=89,SNR=21
TXAR Lajitas Array 89.07 58 P P 13 11 08.8 +0.3
comp=Z,11nm,0.9s,mb4.7,baz=214,slow=6.1,SNR=89
HWUT Hardware Ranch 89.13 44 eP P 13 11 05.3 -3.2
comp=Z,13nm,0.7s,mb4.9
CMAR Chiang Mai Arr 89.16 290 P P 13 11 11.0 +1.8
comp=Z,1.6nm,0.7s,mb4.0,baz=123,slow=3.5,SNR=7.8
CMAR PP PP 13 14 49.2 -2.0
comp=Z,0.5nm,0.7s,baz=116,slow=6.1,SNR=2.8
HYT Haines Junctio 89.17 19 eP P 13 11 08.6 +0.4
124A Stringfield Ra 89.18 54 ⇑P P 13 11 09.1 +0.2
baz=89,SNR=16
W22A Albuquerque 89.21 52 ⇓P P 13 11 09.5 +0.4
baz=89
HHC Hu-ho-hao-te 89.25 315 eP P 13 11 09.8 +0.7
HHC PP PP 13 14 54.5 +3.0
HHC SKS 13 20 43.5
HHC S S 13 21 08.8 +0.4
HHC pmax pmax
comp=Z,9.0nm,0.7s,mb4.7
HHC pmax pmax
comp=Z,47nm,6.7s
U21A Nageezi 89.27 50 ⇑P P 13 11 09.2 -0.1
baz=89,SNR=24
N17A Moffit Pass 89.28 45 ⇑P P 13 11 09.1 -0.1
baz=89,SNR=9.2
Y23A Lovelace Mesa, 89.28 53 ⇑P P 13 11 09.1 -0.3
baz=89,SNR=10
G13A Cobalt 89.29 40 ⇑P P 13 11 09.0 -0.1
baz=90,SNR=15
CHTO Chiang Mai 89.30 290 eP P 13 11 11.5 +1.7
CHTO pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
CHTO Chiang Mai 89.30 290 eP P 13 11 11.5 +1.7
comp=Z,3.2nm,0.7s,mb4.3
Q19A Hogan Spring (89.35 47 ⇓P P 13 11 09.3 -0.3
baz=90,SNR=11
426A McDonald Obser 89.37 57 ⇑P P 13 11 09.8 -0.1
baz=89,SNR=17
225A Deer Hill, Car 89.39 55 ⇓P P 13 11 10.2 +0.2
baz=90,SNR=14
L16A Fish Haven 89.43 44 ⇓P P 13 11 09.7 -0.1
baz=90,SNR=7.2
PV01 Paradox Valley 89.43 48 eP P 13 11 09.7 -0.3
comp=Z,520nm,0.9s
ANMO Albuquerque 89.45 52 eP P 13 11 10.2 0.0
527A Woodward Ranch 89.47 57 ⇑P P 13 11 10.2 -0.1
baz=90,SNR=15
J15A Blackfoot 89.50 42 ⇓P P 13 11 10.9 +0.7
baz=90,SNR=38
Z24A Sheeppen Canyo 89.53 54 ⇓P P 13 11 10.2 -0.3
baz=90,SNR=5.7
H14A Leadore 89.56 41 ⇓P P 13 11 10.7 +0.3
baz=90,SNR=14
V22A San Miguel Ran 89.56 51 ⇑P P 13 11 10.3 -0.3
baz=90
T21A Navajo Lake 89.62 50 ⇓P P 13 11 10.8 -0.1
baz=90
M17A Scullys Gap (B 89.65 45 ⇑P P 13 11 10.6 -0.3
baz=90,SNR=12
Y24A Capitan 89.74 53 ⇑P P 13 11 11.4 -0.1
baz=90,SNR=35
K16A Soda Springs 89.74 43 ⇓P P 13 11 11.2 -0.1
baz=90,SNR=10
628A Black Gap, Mar 89.75 58 ⇑P P 13 11 11.6 -0.1
baz=90,SNR=13
125A Gardner Draw, 89.76 55 ⇓P P 13 11 11.3 -0.3
baz=90,SNR=9.9
W23A Werner Place, 89.77 52 ⇑P P 13 11 11.9 +0.3
baz=90
I15A Monteview 89.78 42 ⇓P P 13 11 11.9 +0.4
baz=90
GDL2 Guadalupe Moun 89.78 55 eP P 13 11 12.2 +0.4
U22A Llaves 89.82 50 ⇓P P 13 11 11.5 -0.4
baz=90
G14A Jackson 89.83 40 ⇓P P 13 11 11.8 +0.1
baz=90
P19A Cripple Cowboy 89.87 47 ⇓P P 13 11 11.6 -0.4
baz=90,SNR=8.1
COLA College 89.89 13 eP P 13 11 10.1 -1.3
COLA pmax pmax
comp=Z,9.0nm,0.6s,mb4.8
COLA College 89.89 13 eP P 13 11 10.1 -1.3
comp=Z,8.6nm,0.6s,mb4.8
226A Malaga, Loving 89.92 55 ⇑P P 13 11 12.1 -0.3
baz=90,SNR=43
427A Hayter Ranch, 89.93 57 ⇓P P 13 11 12.5 0.0
baz=90,SNR=16
J16A Bone 89.95 43 ⇑P P 13 11 12.6 +0.3
MCMT McKenzie Canyo 89.98 41 eP P 13 11 12.7 +0.3
comp=Z,7.4nm,1.1s,mb4.4
Z25A Roswell 89.99 54 ⇓P P 13 11 12.5 -0.2
baz=90,SNR=6.2
H15A Lima 90.00 41 ⇑P P 13 11 12.8 +0.4
baz=90
ILAR Eielson Array 90.00 13 P P 13 11 10.5 -1.5
comp=Z,4.7nm,0.7s,mb4.5,baz=219,slow=4.2,SNR=43
Q20A Ridgley Place, 90.01 48 ⇑P P 13 11 12.4 -0.3
baz=90
V23A Ortiz Mt. (NFS 90.01 51 ⇑P P 13 11 13.0 +0.3
baz=90,SNR=5.8
AHID Auburn Hatcher 90.02 43 eP P 13 11 12.5 -0.1
M18A Lyman 90.02 45 ⇑P P 13 11 12.4 -0.2
baz=90,SNR=21
T22A Edith 90.08 50 ⇓P P 13 11 12.8 -0.2
baz=90
O19A Miners Draw (B 90.09 46 ⇓P P 13 11 12.5 -0.5
baz=90,SNR=5.8
528A Cox Ranch, San 90.12 57 ⇓P P 13 11 13.0 -0.4
baz=90,SNR=7.4
K17A Gardner Place, 90.12 43 ⇑P P 13 11 13.1 0.0
baz=90
RRI2 Red Ridge 90.17 43 eP P 13 11 13.7 +0.4
P20A De Beque 90.20 47 ⇓P P 13 11 13.2 -0.3
baz=90,SNR=6.0
D13A Huson 90.23 38 ⇓P P 13 11 12.4 -1.1
baz=90
126A Clayton Basin, 90.24 55 ⇑P P 13 11 13.3 -0.6
baz=90
R21A Cimarron 90.25 48 ⇑P P 13 11 13.7 -0.1
baz=90,SNR=11
BILL Bilibino 90.26 355 ⇑eP P 13 11 12.8 -0.3
BILL pmax pmax
comp=Z,11nm,0.7s,mb4.8
BILL Bilibino 90.26 355 eP P 13 11 12.9 -0.2
comp=Z,15nm,0.9s,mb4.8
U23A El Rito 90.27 51 ⇓P P 13 11 13.8 -0.2
baz=90
Y25A Mesa, Roswell 90.29 53 ⇓P P 13 11 13.4 -0.6
baz=90,SNR=9.7
I16A Newdale 90.33 42 ⇑P P 13 11 13.9 -0.1
baz=90
W24A Lazy 6 Ranch, 90.33 52 ⇑P P 13 11 13.5 -0.7
baz=90,SNR=10.0
N19A John Jarvie Ra 90.34 46 ⇑P P 13 11 13.5 -0.6
baz=90
G15A Dillon 90.38 41 ⇑P P 13 11 14.0 -0.1
baz=90
DLMT Dillon 90.42 40 eP P 13 11 14.7 +0.4
E14A Clinton 90.43 39 ⇓P P 13 11 13.9 -0.5
baz=91
428A Kincaid Ranch, 90.44 57 ⇓P P 13 11 14.6 -0.2
baz=90,SNR=6.0
Q21A Lamborn Mesa, 90.45 48 ⇓P P 13 11 14.5 -0.2
baz=91
S22A 4UR Ranch, Cre 90.47 49 ⇑P P 13 11 14.8 +0.1
baz=91,SNR=14
REDW Red Top Meadow 90.47 43 eP P 13 11 14.8 +0.2
C13A Hot Springs 90.48 38 ⇑P P 13 11 13.9 -0.7
baz=91
Z26A Caprock 90.54 54 ⇓P P 13 11 14.5 -0.7
baz=91,SNR=14
J17A Brown Place, J 90.56 43 ⇓P P 13 11 15.0 -0.1
baz=91,SNR=6.2
SNOW Snow King Moun 90.59 43 eP P 13 11 15.9 +0.7
O20A White River Ci 90.61 47 ⇑P P 13 11 15.2 -0.2
baz=91
328A Wristen Ranch, 90.62 56 ⇓P P 13 11 14.9 -0.8
baz=91,SNR=5.1
K18A Toltan Ranch, 90.63 44 ⇓P P 13 11 15.6 +0.2
baz=91,SNR=23
M19A Rock Springs 90.65 45 ⇑P P 13 11 15.1 -0.5
baz=91,SNR=7.7
V24A Rampart Ranch, 90.66 52 ⇑P P 13 11 15.5 -0.2
baz=91,SNR=9.2
IMW Indian Meadow 90.69 42 eP P 13 11 15.5 -0.2
MOOW Moose Ponds 90.73 43 eP P 13 11 16.1 +0.3
R22A Saguache, Gunn 90.74 49 ⇑P P 13 11 16.2 +0.2
baz=91,SNR=6.4
LRM Limekiln Ridge 90.74 40 eP P 13 11 15.9 0.0
LOHW Long Hollow 90.76 43 eP P 13 11 15.8 -0.2
D14A Greenough 90.78 39 ⇑P P 13 11 15.1 -0.9
baz=91
L19A Farson 90.81 44 ⇓P P 13 11 16.1 -0.1
baz=91,SNR=21
G16A Moss Hill, Enn 90.83 41 ⇑P P 13 11 15.9 -0.3
baz=91,SNR=5.2
CHMT Chamberlain Mo 90.84 39 eP P 13 11 15.7 -0.6
H16A Russell Place, 90.90 42 ⇑P P 13 11 17.1 +0.5
baz=91,SNR=9.3
B13A Whitefish 90.92 37 ⇓P P 13 11 15.9 -0.7
baz=91
Q22A Crested Butte, 90.92 48 ⇑P P 13 11 16.7 -0.2
baz=91,SNR=12
N20A Spence Gulch, 90.92 46 ⇑P P 13 11 16.7 -0.1
baz=91,SNR=17
J18A Kendall Valley 90.93 43 ⇑P P 13 11 16.7 -0.1
baz=91,SNR=18
FLWY Flagg Ranch 90.93 42 eP P 13 11 17.3 +0.5
Y26A Elida 90.94 54 ⇓P P 13 11 16.3 -0.7
baz=91
BW06 Boulder Array 91.00 44 ⇓P P 13 11 16.4 -0.7
baz=91,SNR=12
BW06 Boulder Array 91.00 44 eP P 13 11 16.6 -0.6
SMCO Snowmass 91.03 48 eP P 13 11 17.4 0.0
W25A X Bar L Ranch, 91.03 52 ⇓P P 13 11 16.6 -0.8
baz=91,SNR=7.4
Z27A Tatum 91.14 54 ⇑P P 13 11 16.7 -1.2
baz=91,SNR=5.7
H17A Grant Village 91.16 42 ⇑P P 13 11 19.4 +1.6
baz=91
O21A Pagoda 91.17 47 ⇑P P 13 11 17.8 -0.2
baz=91
V25A Rancho No Teng 91.19 52 ⇑P P 13 11 17.7 -0.5
baz=91,SNR=11
F16A Kennard Place, 91.22 40 ⇑P P 13 11 17.9 -0.2
baz=91,SNR=5.4
X26A CR and CF Fran 91.22 53 ⇑P P 13 11 17.9 -0.5
baz=91
M20A Sweetwater, Wa 91.29 45 ⇑P P 13 11 18.4 -0.1
baz=91,SNR=5.2
I18A Diamond G Ranc 91.30 43 ⇑P P 13 11 18.5 0.0
baz=91
D15A Lincoln 91.33 39 ⇑P P 13 11 18.2 -0.3
baz=92
EGAK Eagle 91.33 15 eP P 13 11 15.8 -2.3
P22A Eagle 91.36 48 ⇑P P 13 11 18.7 -0.2
baz=92
N21A Black Mountain 91.39 46 ⇓P P 13 11 18.9 0.0
baz=92,SNR=11
SDCO Great Sand Dun 91.40 50 eP P 13 11 19.1 0.0
L20A Wamsutter 91.43 45 ⇑P P 13 11 19.1 -0.1
baz=92,SNR=7.3
K19A Absolon Red Bu 91.49 44 ⇓P P 13 11 19.0 -0.4
baz=92
G17A Pierce Place, 91.52 41 ⇑P P 13 11 19.9 +0.4
baz=92
S24A Houchin Ranch, 91.56 50 ⇓P P 13 11 19.7 -0.1
baz=92,SNR=6.1
HRY Holter Researc 91.57 40 eP P 13 11 19.6 0.0
B14A Marquette Ranc 91.58 38 ⇑P P 13 11 18.7 -1.0
baz=92,SNR=12
U25A Circle Dot Ran 91.59 51 ⇑P P 13 11 19.2 -0.8
baz=92,SNR=5.7
WALA Waterton Lakes 91.59 37 eP P 13 11 19.6 -0.1
K20A Yellowstone Ra 91.74 44 ⇑P P 13 11 19.4 -1.1
baz=92,SNR=5.8
MSTX Muleshoe 91.75 54 ⇑P P 13 11 20.1 -0.7
baz=92
O22A Kremmling 91.77 47 ⇑P P 13 11 20.3 -0.4
baz=92,SNR=5.3
A14A Double T Ranch 91.82 37 ⇑P P 13 11 20.0 -0.7
baz=92,SNR=5.1
F17A Fitzpatrick Pl 91.86 41 ⇑P P 13 11 21.1 0.0
baz=92,SNR=5.4
M21A Separation Pea 91.89 46 ⇑P P 13 11 20.7 -0.5
baz=92,SNR=6.6
D16A Dana Ranch, Ca 91.90 39 ⇓P P 13 11 20.8 -0.3
baz=92,SNR=6.8
P23A Jefferson 91.90 48 ⇑P P 13 11 21.8 +0.4
baz=92
R24A Sanders Place, 91.90 49 ⇓P P 13 11 21.0 -0.4
baz=92,SNR=6.1
T25A Trinidad 91.91 51 ⇓P P 13 11 20.8 -0.7
baz=92,SNR=5.2
B15A Bradely Ranch, 91.97 38 ⇓P P 13 11 20.5 -0.9

	baz=92,SNR=5.4								
W27A	Bowe Ranch, En	92.00	53	⇑P		P	13 11 20.9	-1.0
	baz=92								
L21A	Rawlins	92.05	45	⇑P		P	13 11 21.4	-0.6
	baz=92								
U26A	Atchley Ranch,	92.07	52	⇓P		P	13 11 21.3	-0.9
	baz=92,SNR=5.7								
S25A	Robets Cordova	92.12	50	⇓P		P	13 11 21.9	-0.5
	baz=92,SNR=9.1								
N22A	Wattenberg Ran	92.12	47	⇓P		P	13 11 22.1	-0.2
	baz=92,SNR=10.0								
C16A	Fuhringer Ranc	92.17	39	⇑P		P	13 11 21.9	-0.5
	baz=92								
Q24A	Divide	92.19	49	⇓P		P	13 11 22.4	-0.3
	baz=92,SNR=5.1								
A15A	Johnson Ranch,	92.21	37	⇓P		P	13 11 22.2	-0.4
	baz=92,SNR=5.3								
G18A	Lazy EL Ranch,	92.24	42	⇓P		P	13 11 22.1	-0.6
	baz=92								
ISCO	Idaho Springs	92.25	48	*e*P		P	13 11 23.1	+0.2
RLMT	Red Lodge	92.33	42	⇓P		P	13 11 23.4	+0.2
	baz=92								
RLMT	Red Lodge	92.33	42	*e*P		P	13 11 23.6	+0.5
LZH	Lanzhou	92.42	308	*e*P		P	13 11 24.5	+0.7
LZH				sP		sP	13 14 33.0	-1.1
LZH				PP		PP	13 15 20.5	+4.3
LZH				SKS			13 21 00.0	
LZH				*e*S		S	13 21 36.5	-0.1
LZH				SS		SS	13 28 14.3	+6.7
LZH				pmax		pmax		
	comp=Z,18nm,1.0s,mb5.1							
LZH				pmax		pmax		
	comp=Z,92nm,4.7s							
F18A	Big Timber	92.44	41	⇓P		P	13 11 23.5	-0.1
	baz=93							
D17A	Six Diamond Ra	92.47	40	⇓P		P	13 11 23.5	-0.2
	baz=93							
B16A	M & M Farms, S	92.51	38	⇓P		P	13 11 22.6	-1.3
	baz=93,SNR=7.0							
N23A	Red Feather La	92.51	47	⇓P		P	13 11 24.3	+0.1
	baz=93							
E18A	Harlowton	92.64	40	⇑P		P	13 11 24.5	-0.1
	baz=93							
C17A	Wharram Farm,	92.66	39	⇑P		P	13 11 24.0	-0.6
	baz=93,SNR=13							
YAK	Yakutsk	92.84	339	*e*P		P	13 11 23.5	-1.6
YAK				pmax		pmax		
	comp=Z,18nm,1.0s,mb5.1							
YAK	Yakutsk	92.84	339	*e*P		P	13 11 24.6	-0.5
	comp=Z,16nm,0.5s,mb5.3							
A16A	West Butte Ran	92.84	38	⇑P		P	13 11 25.3	-0.1
	baz=93							
B17A	L&G Farms, Che	92.97	39	⇑P		P	13 11 25.1	-0.9
	baz=93,SNR=5.8							
A17A	Triple J Farms	93.35	38	⇓P		P	13 11 27.2	-0.6
	baz=94,SNR=7.4							
B18A	Beardsley Farm	93.61	39	⇓P		P	13 11 28.4	-0.6
	baz=94,SNR=9.6							
A18A	Metzger Ranch,	93.83	38	⇓P		P	13 11 29.0	-0.9
	baz=94,SNR=5.3							
SONM	Songino Array	95.81	319	P		P	13 11 38.6	-0.3
	comp=Z,0.2nm,0.5s,mb3.6,baz=60,slow=6.8,SNR=2.5							
YKA	Yellowknife Ar	98.40	25	P		Pdif	13 11 49.1	-1.5
	comp=Z,1.3nm,0.8s,baz=247,slow=4.5,SNR=4.6							
ZALV	Zalesovo Beam	110.62	321	PKiKP		PKiKP	13 16 39.3	-1.6
	comp=Z,1.7nm,0.5s,baz=171,slow=0.7,SNR=9.7							
MK31	Makanchi Array	111.04	313	*e*PKiKP		PKiKP	13 16 40.5	-1.5
MKAR	Makanchi Array	111.04	313	PKiKP		PKiKP	13 16 40.6	-1.4
	comp=Z,1.0nm,0.5s,baz=164,slow=0.6,SNR=9.2							
MKAR				PKKPbc		PKKPbc	13 27 39.6	-1.9
	comp=Z,0.8nm,0.6s,baz=279,slow=2.9,SNR=8.7							
KURK	Kurchatov	113.98	317	*i* PKIKP		PKiKP	13 16 46.9	-0.6
KURK				pmax		pmax		
	comp=Z,4.0nm,1.7s							
AML	Almayashu	116.49	307	*e*PKPdf		PKPdf	13 16 52.2	-0.4
BVAR	Borovoye Array	119.15	319	PKP		PKPdf	13 16 56.2	-1.2
	comp=Z,5.9nm,0.4s,baz=106,slow=2.9,SNR=25							
BRVK	Borovoye	119.22	319	*i* PKIKP		PKPdf	13 16 56.9	-0.6
BRVK				pmax		pmax		
	comp=Z,3.0nm,0.8s							
KBL	Kabul	119.22	298	*e*PKIKP		PKPdf	13 16 58.2	+0.1
SCHQ	Schefferville	120.69	38	PKP		PKPdf	13 16 58.0	-2.3
	comp=Z,4.6nm,0.8s,baz=25,slow=4.8,SNR=3.4							
SCHQ	Schefferville	120.69	38	PKP		PKPdf	13 16 58.0	-2.3
BOSA	Boshof	124.35	207	PKP		PKPdf	13 17 08.0	-0.2
	comp=Z,1.1nm,0.6s,baz=106,slow=7.4,SNR=3.4							
BOSA	Boshof	124.35	207	PKP		PKPdf	13 17 08.0	-0.2
ARU	Arti	125.46	325	*i* PKIKP		PKPdf	13 17 07.1	-2.3
ARU							13 19 07.5	
ARU							13 23 14.5	
SOKR	Solikamsk	125.49	329*d*	*i* PKIKP		PKPdf	13 17 08.5	-0.8
SOKR				pmax		pmax		
	comp=Z,10.0nm,0.8s							
KEV	Kevo	129.53	348	*e*PKIKP		PKPdf	13 17 15.8	-0.9
KEV				pmax		pmax		
	comp=Z,3.0nm,0.4s							
KEV	Kevo	129.53	348	*e*p		PKPdf	13 17 15.8	-0.9
	comp=Z,2.8nm,0.4s							
ARCES	ARCESS Array B	129.99	349	PKhKP		PKPpre	13 17 06.0	
	comp=Z,1.7nm,0.8s,baz=328,slow=1.2,SNR=5.7							
ARCES				PKP		PKPdf	13 17 16.6	-1.0
	comp=Z,8.4nm,0.6s,baz=36,slow=1.0,SNR=43							
ARCES				SKPbc		SKPbc	13 19 45.2	+0.3
	comp=Z,6.5nm,0.8s,baz=35,slow=4.4,SNR=12							
ARCES	ARCESS Array B	129.99	349	PKIKP		PKPdf	13 17 16.6	-1.0
ARCES							13 19 45.2	
ARE0	ARCESS Array S	129.99	349	*e*PKPdf		PKPdf	13 17 16.5	-1.2
JOF	Joensuu	133.96	341	*e*PKIKP		PKPdf	13 17 23.9	-1.4
JOF				pmax		pmax		
	comp=Z,11nm,0.5s							
JOF	Joensuu	133.96	341	*e*p		PKPdf	13 17 23.9	-1.4
	comp=Z,11nm,0.5s							
KAF	Kangasniemi	136.04	343	*e*PKIKP		PKPdf	13 17 28.4	-0.8
KAF				pmax		pmax		
	comp=Z,7.0nm,0.5s							
KAF	Kangasniemi	136.04	343	*e*p		PKPdf	13 17 28.4	-0.8
	comp=Z,7.3nm,0.5s							
FINES	FINESS Array B	136.65	342	PKhKP		PKPpre	13 17 17.3	
	comp=Z,1.4nm,0.6s,baz=33,slow=3.2,SNR=8.1							
FINES				PKP		PKPdf	13 17 27.8	-2.6
	comp=Z,4.2nm,0.5s,baz=64,slow=3.0,SNR=13							
FINES				SKPbc		SKPbc	13 20 08.0	+0.9
	comp=Z,3.1nm,0.7s,baz=64,slow=4.4,SNR=7.4							
FINES	FINESS Array B	136.65	342	PKP		PKPdf	13 17 27.8	-2.6
FINES				SKPbc		SKPbc	13 20 08.0	+0.9
VRHR	Novokhopersk	136.72	323	*e*PKIKP		PKPdf	13 17 31.5	+0.7
VRHR				pmax		pmax		
	comp=N,9.0nm,0.5s							
VRHR				pmax		pmax		
	comp=E,3.0nm,0.5s							
VRHR				pmax		pmax		
	comp=Z,10.0nm,0.5s							
OBN	Obninsk	137.22	330	⇓*i* PKIKP		PKPdf	13 17 30.8	-0.8
OBN				*e*			13 20 19.8	
OBN				*e*			13 23 28.1	
OBN				pmax		pmax		
	comp=Z,22nm,1.7s							
VSR	Storozhevoye	138.03	324	*e*PKIKP		PKPdf	13 17 32.3	-0.9
VSR				pmax		pmax		
	comp=N,4.0nm,0.5s							
VSR				pmax		pmax		
	comp=Z,6.0nm,0.5s							
VSR				pmax		pmax		
	comp=E,4.0nm,0.3s							
NB2	NORSAR Subarra	140.15	352	PKP		PKPpre	13 17 29.1	
	comp=Z,2.4nm,0.6s,baz=38,slow=2.9							
NOA	NORSAR Array B	140.15	352	PKhKP		PKPpre	13 17 29.3	
	comp=Z,4.1nm,0.7s,baz=13,slow=4.5,SNR=15							
ANN	Anapa	142.00	316	*i* PKHKP		PKPpre	13 17 26.9	
ANN				pmax		pmax		
	comp=Z,24nm,1.2s							
RSC	Scourie	143.36	5	P		PKPdf	13 17 40.1	-2.4
RSC	Scourie	143.36	5⇑	*e*P		PKPdf	13 17 40.1	-2.4
AKASG	Malin Array Be	143.45	329	PKP		PKPdf	13 17 40.6	-2.3
	comp=Z,10.0nm,0.3s,baz=42,slow=4.2,SNR=73							
AKBB	Malin Array Si	143.45	329	*e*PKIKP		PKPdf	13 17 40.6	-2.3
KIEV	Kiev	143.47	329	*e*PKIKP		PKPdf	13 17 40.5	-2.4
SUW	Suwalki	143.56	337	*e*PKP		PKPdf	13 17 41.3	-1.7
SUW	Suwalki	143.56	337	*e*PKPdf		PKPdf	13 17 40.9	-2.1
RRH	Rhenigidale	143.64	6	P		PKPdf	13 17 41.1	-1.8
RRH	Rhenigidale	143.64	6⇑	*e*P		PKPdf	13 17 41.1	-1.8
RRR	Rubha Reidh	143.79	6	P		PKPdf	13 17 41.2	-2.0
RRR	Rubha Reidh	143.79	6⇑	*e*P		PKPdf	13 17 41.2	-2.0
MVH1	Achvaich	143.85	4	P		PKPdf	13 17 41.5	-1.8
MVH1	Achvaich	143.85	4⇑	*e*P		PKPdf	13 17 41.5	-1.8
KAC	Achnashellach	144.19	5	P		PKPdf	13 17 43.1	-0.9
KAC	Achnashellach	144.19	5⇑	*e*P		PKPdf	13 17 43.1	-0.9
MCD	Coleburn Disti	144.25	3	P		PKPdf	13 17 42.7	-1.3
MCD	Coleburn Disti	144.25	3⇑	*e*P		PKPdf	13 17 42.7	-1.3
KPL	Plockton	144.32	6	P		PKPdf	13 17 43.3	-0.9
KPL	Plockton	144.32	6⇑	*e*P		PKPdf	13 17 43.3	-0.9
MDO	Dochfour	144.32	4	P		PKPdf	13 17 43.6	-0.6
MDO	Dochfour	144.32	4	*e*P		PKPdf	13 17 43.6	-0.6
KSB	Sheil Bridge	144.46	5	P		PKPdf	13 17 43.7	-0.8
KSB	Sheil Bridge	144.46	5⇑	*e*P		PKPdf	13 17 43.7	-0.8
MME1	Meikle Cairn	144.53	3	P		PKPdf	13 17 43.1	-1.4
MME1	Meikle Cairn	144.53	3	*e*P		PKPdf	13 17 43.1	-1.4
EBH	Black Hill	145.56	4	P		PKPdf	13 17 47.1	+0.8
EBH	Black Hill	145.56	4⇑	*e*P		PKPdf	13 17 47.1	+0.8
EAB	Aberfoyle	145.57	5	P		PKPdf	13 17 46.8	+0.4
EAB	Aberfoyle	145.57	5⇑	*e*P		PKPdf	13 17 46.8	+0.4
EDI	Edinburgh	145.91	4	P		PKPdf	13 17 47.8	+0.8
EDI	Edinburgh	145.91	4	*e*P		PKPdf	13 17 47.8	+0.8
ESY	Stoneypath	145.94	3	P		PKPdf	13 17 48.0	+1.0
ESY	Stoneypath	145.94	3⇑	*e*P		PKPdf	13 17 48.0	+1.0
EAU	Auchinoon	145.97	4	P		PKPdf	13 17 48.4	+1.4
EAU	Auchinoon	145.97	4⇑	*e*P		PKPdf	13 17 48.4	+1.4
EBL	Broad Law	146.06	3	P		PKPdf	13 17 48.5	+1.3
EBL	Broad Law	146.06	3⇑	*e*P		PKPdf	13 17 48.5	+1.3
LVV	L'vov	146.45	332	*e*PKIKP		PKPdf	13 17 49.8	+1.8
ESK	Eskdalemuir	146.51	4	P		PKPdf	13 17 48.4	+0.4
ESK	Eskdalemuir	146.51	4⇑	*e*P		PKPdf	13 17 48.4	+0.4
ESK	Eskdalemuir	146.51	4	*i* PKP2		PKPbc	13 17 50.5	-0.1
BR131	Keskin Array S	146.60	310	*e*PKPbc		PKPbc	13 17 51.0	-0.4
BRTR	Keskin Array B	146.60	310	PKPbc		PKPbc	13 17 50.9	-0.5
	comp=Z,8.3nm,0.7s,baz=135,slow=4.5,SNR=35							
ECK	Cauldkaine Hil	146.65	4	P		PKPbc	13 17 49.8	-1.2
ECK	Cauldkaine Hil	146.65	4⇑	*e*P		PKPbc	13 17 49.8	-1.2
GAL1	Galloway	146.85	5	P		PKPbc	13 17 50.6	-0.9
GAL1	Galloway	146.85	5⇑	*e*P		PKPbc	13 17 50.6	-0.9
BSEG	Bad Segeberg	147.12	349	*e*PKPbc		PKPbc	13 17 51.8	-0.4
BSEG				*e*PKPab		PKPab	13 17 55.5	-0.4
MMAI	Mount Meron Ar	147.14	297	PKPbc		PKPbc	13 17 53.5	+0.5
	comp=Z,16nm,0.6s,baz=72,slow=5.4,SNR=14							
KWP	Kalwaria Pacla	147.16	333	*e*PKPdf		PKPdf	13 17 49.9	+0.7
KWP				*e*PKPbc		PKPbc	13 17 52.4	-0.1
BUR08	Bucovina Ar. S	147.47	328	*e*PKPbc		PKPbc	13 17 53.7	+0.3
BURAR	Bucovina Array	147.48	328	⇓PKP2		PKPbc	13 17 53.5	+0.1
BURAR	Bucovina Array	147.48	328	⇓*i*P		PKPbc	13 17 53.5	+0.1
TESR		147.48	325	⇑P		PKPbc	13 17 52.9	-0.5
TESR		147.48	325	⇑*i*P		PKPbc	13 17 52.9	-0.5
CFR	Carcaliu	147.49	322	⇓PKP2		PKPbc	13 17 52.7	-0.8
CFR	Carcaliu	147.49	322	⇓*i*P		PKPbc	13 17 52.7	-0.8
TIRR	Tirgusor	147.75	321	⇓PKP2		PKPbc	13 17 53.8	-0.4
TIRR	Tirgusor	147.75	321	⇓*i*P		PKPbc	13 17 53.8	-0.4
VRI	Vrincioaia	147.85	324	⇓PKP2		PKPbc	13 17 54.3	-0.1
VRI	Vrincioaia	147.85	324	⇓*i*P		PKPbc	13 17 54.3	-0.1
PLOR	Plostina	147.90	324	⇑PKP2		PKPab	13 18 01.4	+2.0
PLOR	Plostina	147.90	324	⇑*i*P		PKPab	13 18 01.4	+2.0
STHS	Stebnicka Huta	147.94	334	*e*PKP2		PKPbc	13 17 54.9	+0.4
STHS	Stebnicka Huta	147.94	334	*e*PKP		PKPbc	13 17 54.9	+0.4
HPK	Haverah Park	147.94	2	P		PKPbc	13 17 53.7	-0.6
HPK	Haverah Park	147.94	2	*e*P		PKPbc	13 17 53.7	-0.6
UZH	Uzhgorod	148.10	332*c*	*i* PKP2		PKPbc	13 17 55.0	+0.1
WLF1	Llynfaes	148.44	5	P		PKPbc	13 17 54.0	-1.6
WLF1	Llynfaes	148.44	5	*e*P		PKPbc	13 17 54.0	-1.6
DOPR	Dopca	148.50	326	⇑*i*P		PKPbc	13 17 56.7	+0.7
MLR	Muntele Rosu	148.51	324	⇑PKHKP		PKPbc	13 17 55.4	-0.6
MLR	Muntele Rosu	148.51	324	⇑*i*P		PKPbc	13 17 55.4	-0.6
KSP	Ksiaz	148.53	341	*e*PKP		PKPbc	13 17 56.0	+0.1
KSP							13 18 02.4	
KSP	Ksiaz	148.53	341	*e*PKP2		PKPbc	13 17 55.9	0.0
NRDL	Niedersach Rie	148.54	349	*e*PKPbc		PKPbc	13 17 54.3	-1.6
NRDL				*e*PKPab		PKPab	13 18 00.1	-1.7
KBI1	Birley Grange	148.65	2	P		PKPbc	13 17 55.1	-1.0
KBI1	Birley Grange	148.65	2	*e*P		PKPbc	13 17 55.1	-1.0
OKC	Ostrava-Krasne	148.77	338	*e*PKP2		PKPbc	13 17 56.5	0.0
OKC	Ostrava-Krasne	148.77	338⇑	*e*PKP		PKPbc	13 17 56.5	0.0
UPC	Upice	148.91	341	*e*PKP2		PKPbc	13 17 57.0	+0.2
UPC	Upice	148.91	341⇑	*e*PKP		PKPbc	13 17 57.0	+0.2
UPC				*e*PKPAB		PKPab	13 18 04.0	+0.6
DPC	Dobruska-Polom	148.95	340	*e*PKP2		PKPbc	13 17 57.3	+0.4
DPC	Dobruska-Polom	148.95	340⇑	*e*PKP		PKPbc	13 17 57.3	+0.4
DPC				*e*PKPAB		PKPab	13 18 04.5	+1.0
KECS	Kecovo	148.98	334	*e*PKP2		PKPbc	13 17 57.7	+0.6
KECS	Kecovo	148.98	334	*e*PKP		PKPbc	13 17 57.7	+0.6
KECS				*e*			13 18 04.0	
CLL	Collm	149.03	345	*e*PKHKP		PKPdf	13 17 53.0	+0.8
CLL				*i*			13 18 03.5	
CLL				pmax		pmax		
	comp=Z,54nm,0.9s							
CLL				pmax		pmax		
	comp=Z,20nm,0.7s							
CLL	Collm	149.03	345	*e*PKPdf		PKPdf	13 17 53.0	+0.8
CLL				⇑*i*PKPbc		PKPbc	13 17 56.8	-0.3
	comp=Z,54nm,0.9s							
CLL				⇓*i*PKPab		PKPab	13 18 03.5	-0.3
	comp=Z,20nm,0.7s							
CLL				*e*pPKPbc		pPKPbc	13 20 17.0	+2.0
VOIR		149.03	325	⇓PKHKP		PKPbc	13 17 57.2	-0.1
VOIR		149.03	325	⇓*i*P		PKPbc	13 17 57.2	-0.1
MORC	Moravsky Berou	149.04	338	*e*PKPdf		PKPdf	13 17 51.6	-0.7
MORC				*e*PKPbc		PKPbc	13 17 57.1	-0.1
MORC				*e*PKPab		PKPab	13 18 03.6	-0.3
IBBN	Ibbenburen	149.10	351	*e*PKPbc		PKPbc	13 17 56.9	-0.3
CLZ	Clausthal	149.11	348	*e*PKPbc		PKPbc	13 17 57.2	-0.1
CWF	Charnwood Fore	149.18	2	P		PKPbc	13 17 55.3	-2.1
CWF	Charnwood Fore	149.18	2⇑	*e*P		PKPbc	13 17 55.3	-2.1
BRG	Berggiesshubel	149.18	343	*e*PKPbc		PKPbc	13 17 57.3	-0.2
BRG				*e*PKPab		PKPab	13 18 04.3	-0.2
BRG	Berggiesshubel	149.18	343	*e*PKP		PKPdf	13 17 52.1	-0.4
	comp=Z,5.5nm,1.2s							
BRG	Berggiesshubel	149.18	343	*i* PKP		PKPbc	13 17 57.2	-0.3
	comp=Z,37nm,0.6s							
BRG	Berggiesshubel	149.18	343	*i* PKP		PKPab	13 18 04.4	-0.1
	comp=Z,19nm,0.7s							
BRG				*e*pPKP		pPKPbc	13 20 14.8	-0.6
	comp=Z,3.7nm,1.0s							
BRG	Berggiesshubel	149.18	343	*e*PKIKP		PKPdf	13 17 52.1	-0.4
BRG				*i*			13 18 04.4	
BRG				pmax		pmax		
	comp=Z,3.0nm,1.2s							
BRG				pmax		pmax		
	comp=Z,22nm,0.6s							
BRG				pmax		pmax		
	comp=Z,12nm,0.7s							
BRG				pmax		pmax		
	comp=Z,2.0nm,1.0s							
DRGR		149.27	329	⇑PKHKP		PKPbc	13 17 57.4	-0.4
DRGR		149.27	329	⇑*i*P		PKPbc	13 17 57.4	-0.4
PVCC	Panska Ves	149.32	342	*e*PKHKP		PKPbc	13 17 58.1	+0.3
PVCC	Panska Ves	149.32	342⇑	*e*PKP		PKPbc	13 17 58.1	+0.3
VYHS	Vyhne	149.63	335	*e*PKHKP		PKPbc	13 17 58.4	-0.2
VYHS				*e*		PKPab	13 18 06.7	+0.3
VYHS	Vyhne	149.63	335	*e*PKP		PKPbc	13 17 58.4	-0.2
VYHS				*e*			13 18 06.7	
PSZ	Piszkesteto	149.67	334	*e*PKPdf		PKPdf	13 17 52.4	-0.9
PSZ				*e*PKPbc		PKPbc	13 17 58.5	-0.3
PSZ	Piszkesteto	149.67	334⇑	*i*P		PKPbc	13 17 58.9	+0.2
KOLL	Kolacno	149.73	336	*e*PKHKP		PKPbc	13 17 59.0	+0.2
KOLL				*e*		PKPab	13 18 05.7	-1.1
KOLL	Kolacno	149.73	336	*e*PKP		PKPbc	13 17 59.0	+0.2
KOLL				*e*			13 18 05.7	
PRU	Pruhonice	149.81	342	*e*PKHKP		PKPbc	13 17 59.5	+0.5
PRU	Pruhonice	149.81	342⇑	*e*PKP		PKPbc	13 17 59.5	+0.5
PRU				*e*PKPAB		PKPab	13 18 08.4	+1.3
MCH1	Michaelchurch	149.83	4	P		PKPbc	13 17 57.9	-1.1
MCH1	Michaelchurch	149.83	4⇑	*e*P		PKPbc	13 17 57.9	-1.1
MOX	Moxa	149.97	346	*e*PKP		PKPbc	13 17 59.1	-0.3
	comp=Z,38nm,1.1s							
MOX				*e*			13 18 07.5	
MOX	Moxa	149.97	346	*e*PKPbc		PKPbc	13 17 59.0	-0.4
MOX				*e*PKPab		PKPab	13 18 07.4	-0.4
MOX	Moxa	149.97	346	*e*PKHKP		PKPbc	13 17 59.1	-0.3
MOX				*e*			13 18 07.5	
MOX				pmax		pmax		
	comp=Z,3.0nm,1.1s							
TANN	Tannenbergstha	149.98	344	*e*PKPbc		PKPbc	13 17 59.2	-0.2
WERD	Werda	149.99	345	*e*PKPbc		PKPbc	13 17 59.2	-0.2
WERD				*e*PKPab		PKPab	13 18 07.5	-0.4
BUG	Bochum--Univer	150.02	351	*e*PKPbc		PKPbc	13 17 58.9	-0.5
GUNZ	Gunzen	150.06	345	*e*PKPbc		PKPbc	13 17 59.5	-0.1
GUNZ				*e*PKPab		PKPab	13 18 08.1	-0.1
TREC	Trest	150.13	340	*e*PKHKP		PKPbc	13 17 59.5	-0.3
TREC	Trest	150.13	340⇑	*e*PKP		PKPbc	13 17 59.5	-0.3
TREC				*e*PKPAB		PKPab	13 18 09.2	+0.7
NKC	Novy Kostel	150.16	344	*e*PKHKP		PKPbc	13 18 00.3	+0.5
NKC				*e*			13 18 08.9	
NKC	Novy Kostel	150.16	344⇑	*e*PKP		PKPbc	13 18 00.3	+0.5
NKC				*e*PKPAB		PKPab	13 18 08.9	+0.3
GZR	Gura Zlata	150.23	327	⇑PKIKP		PKPbc	13 17 59.7	-0.4
GZR	Gura Zlata	150.23	327⇑	*i*P		PKPbc	13 17 59.7	-0.4
BUD	Budapest	150.37	334⇓	*e*sP		PKPbc	13 17 58.8	-1.6
ZST	Bratislava	150.53	337	*e*PKIKP		PKPbc	13 18 01.6	+0.9
ZST	Bratislava	150.53	337	*e*PKP		PKPbc	13 18 01.6	+0.9
WOL	Wolverton	150.60	2	P		PKPbc	13 17 59.8	-1.0
WOL	Wolverton	150.60	2⇑	*e*P		PKPbc	13 17 59.8	-1.0
BZS	Buzias	150.65	329	⇑PKIKP		PKPbc	13 18 00.5	-0.6
BZS	Buzias	150.65	329⇑	*i*P		PKPbc	13 18 00.5	-0.6
HTL	Hartland	150.70	6	P		PKPbc	13 18 00.0	-1.0
HTL	Hartland	150.70	6⇑	*e*P		PKPbc	13 18 00.0	-1.0
ELSH	Elham, Standar	150.79	359	P		PKPbc	13 18 00.9	-0.3
ELSH	Elham, Standar	150.79	359⇑	*e*P		PKPbc	13 18 00.9	-0.3
KHC	Kasperske Hory	150.86	342	*e*PKPdf		PKPdf	13 17 55.1	0.0
KHC				*e*PKPbc		PKPbc	13 18 01.2	-0.2
KHC				*e*PKPab		PKPab	13 18 11.9	+0.3
KHC	Kasperske Hory	150.86	342	*e*PKPDF		PKPdf	13 17 54.8	-0.3
KHC				⇑*e*PKP		PKPdf	13 18 01.5	+6.4
KHC				*e*PKPAB		PKPab	13 18 12.1	+0.5
GRF	Grafenberg Arr	150.96	345	*e*PKPbc		PKPbc	13 18 01.5	-0.1
GRF				*e*PKPab		PKPab	13 18 12.3	+0.4
MEM	Membach	151.00	353	PKPbc		PKPbc	13 18 01.3	-0.4
MEM				PKPab		PKPab	13 18 12.5	+0.4
TNS	Taunus Mts	151.01	349	*e*PKPbc		PKPbc	13 18 01.5	-0.3
TNS				*e*PKPab		PKPab	13 18 11.8	-0.4
WET	Wettzell	151.04	343	*e*PKPbc		PKPbc	13 18 01.6	-0.3
WET				*e*PKPab		PKPab	13 18 12.6	+0.3
GEC2	GERESS Array S	151.08	342	*e*PKPbc		PKPbc	13 18 01.6	-0.4
GEC2				*e*PKPab		PKPab	13 18 12.7	+0.2
CONA	Conrad Observa	151.19	338⇑	*i*PKIKP		PKPbc	13 18 02.1	-0.2
	comp=Z,15nm,0.7s							
BCLA	Clavier	151.26	353	PKPbc		PKPbc	13 18 01.4	-0.9
BCLA				PKPab		PKPab	13 18 12.6	-0.6
PKSM	Moragy	151.54	333	⇓PKIKP		PKPbc	13 18 02.3	-0.8
PKSM	Moragy	151.54	333⇓	*i*P		PKPbc	13 18 02.3	-0.8
GIVF	Givet	151.62	354	*e*PKP1		PKPbc	13 18 02.5	-0.6
	comp=Z,34nm,0.7s							
DOU	Dourbes	151.65	354	PKPbc		PKPbc	13 18 02.8	-0.4
DOU				PKPab		PK

ELBA				*i* S	**Sg**	**13 27 34.4**	**-0.3**
ELBA	**Catalca**	**1.08**	**40**	*i* P	**Pg**	**13 27 19.1**	**-1.5**
ELBA				*i* S	**Sg**	**13 27 34.4**	**-0.3**
ENEZ	**Enez**	**1.11**	**292**	*e*PN	**Pg**	**13 27 21.1**	**0.0**
ENEZ	**Enez**	**1.11**	**292**	*e*Pn	**Pg**	**13 27 21.1**	**0.0**
AYVA	**Ayvalik**	**1.19**	**212**	*i* P	**Pb**	**13 27 21.9**	**-0.4**
AYVA				*i* S	**Sb**	**13 27 38.7**	**+1.0**
AYVA	**Ayvalik**	**1.19**	**212**	*i* P	**Pb**	**13 27 21.9**	**-0.4**
AYVA				*i* S	**Sb**	**13 27 38.7**	**+1.0**
CTKS	**Kestanelik-??a**	**1.19**	**39**	*e*PN	**Pn**	**13 27 22.2**	**-0.1**
CTKS	**Kestanelik-??a**	**1.19**	**39**	*e*Pn	**Pn**	**13 27 22.2**	**-0.1**
GADA	**Gvkgeada**	**1.23**	**265**	*e*PN	**Pn**	**13 27 22.2**	**-0.8**
GADA	**Gvkgeada**	**1.23**	**265**	*e*Pn	**Pn**	**13 27 22.2**	**-0.7**
ALN	**Alexandroupoli**	**1.25**	**298**	P	**Pn**	**13 27 23.4**	**+0.2**
ALN				S	**Sb**	**13 27 39.5**	**0.0**
ALN	**Alexandroupoli**	**1.25**	**298**	P	**Pn**	**13 27 23.4**	**+0.2**
ALN				S	**Sb**	**13 27 39.5**	**0.0**
ULDT	**Uludag**	**1.26**	**98**	*i* P	**Pn**	**13 27 22.5**	**-0.8**
ULDT				*i* S	**Sb**	**13 27 40.5**	**+0.7**
ULDT	**Uludag**	**1.26**	**98**	*i* P	**Pn**	**13 27 22.5**	**-0.8**
ULDT				*i* S	**Sb**	**13 27 40.5**	**+0.7**
BGKT	**Bogazkoy**	**1.29**	**48**	*e*PN	**Pn**	**13 27 23.5**	**-0.3**
BGKT	**Bogazkoy**	**1.29**	**48**	*e*Pn	**Pn**	**13 27 23.5**	**-0.2**
GEMT	**Gemlik**	**1.29**	**84**	*e*PN	**Pn**	**13 27 23.3**	**-0.4**
GEMT	**Gemlik**	**1.29**	**84**	*e*Pn	**Pn**	**13 27 23.3**	**-0.4**
CTYL	**Yal??k??y-??at**	**1.30**	**27**	*e*PN	**Pn**	**13 27 23.6**	**-0.2**
CTYL	**Yal??k??y-??at**	**1.30**	**27**	*e*Pn	**Pn**	**13 27 23.6**	**-0.2**
PRK	**Paraskevi**	**1.43**	**222**	P	**Pn**	**13 27 25.6**	**-0.1**
PRK				S	**Sn**	**13 27 43.6**	**-0.9**
PRK	**Paraskevi**	**1.43**	**222**	P	**Pn**	**13 27 25.6**	**-0.1**
PRK				S	**Sn**	**13 27 43.6**	**-0.9**
YLV	**Yalova**	**1.45**	**80**	*e*PN	**Pn**	**13 27 26.5**	**+0.6**
YLV	**Yalova**	**1.45**	**80**	*e*Pn	**Pn**	**13 27 26.5**	**+0.6**
AKHS	**Akhisar**	**1.46**	**170**	*i* P	**Pn**	**13 27 26.3**	**+0.3**
AKHS				*i* S	**Sn**	**13 27 45.4**	**+0.3**
AKHS	**Akhisar**	**1.46**	**170**	*i* P	**Pn**	**13 27 26.3**	**+0.3**
AKHS				*i* S	**Sn**	**13 27 45.4**	**+0.3**
AKS	**Akhisar**	**1.46**	**170**	*e*PN	**Pn**	**13 27 25.0**	**-1.0**
AKS	**Akhisar**	**1.46**	**170**	*e*Pn	**Pn**	**13 27 25.0**	**-1.0**
KLYT	**Kilyos**	**1.49**	**51**	*e*PN	**Pn**	**13 27 26.3**	**-0.2**
KLYT	**Kilyos**	**1.49**	**51**	*e*Pn	**Pn**	**13 27 26.3**	**-0.2**
DEMI	**Demirci**	**1.58**	**143**	*i* P	**Pn**	**13 27 28.0**	**+0.3**
DEMI				*i* S	**Sn**	**13 27 48.3**	**+0.1**
DEMI	**Demirci**	**1.58**	**143**	*i* P	**Pn**	**13 27 28.0**	**+0.3**
DEMI				*i* S	**Sn**	**13 27 48.3**	**+0.1**
EDRB	**Edirne**	**1.63**	**340**	*e*PN	**Pn**	**13 27 28.6**	**+0.2**
EDRB	**Edirne**	**1.63**	**340**	*e*Pn	**Pn**	**13 27 28.6**	**+0.2**
SIGR	**SIGRI**	**1.69**	**229**	P	**Pn**	**13 27 29.4**	**+0.3**
	490nm,0.2s						
SIGR	**SIGRI**	**1.69**	**229**	P	**Pn**	**13 27 29.4**	**+0.3**
	490nm,0.2s						
ADVT	**Abdulvahap**	**1.71**	**86**	*e*PN	**Pn**	**13 27 28.6**	**-0.9**
ADVT	**Abdulvahap**	**1.71**	**86**	*e*Pn	**Pn**	**13 27 28.6**	**-0.9**
CAVI	**Cavuskoy**	**1.79**	**93**	*e*PN	**Pn**	**13 27 30.5**	**-0.1**
CAVI	**Cavuskoy**	**1.79**	**93**	*e*Pn	**Pn**	**13 27 30.5**	**-0.1**
SILT	**Sile**	**1.83**	**62**	*e*PN	**Pn**	**13 27 30.9**	**-0.2**
SILT	**Sile**	**1.83**	**62**	*e*Pn	**Pn**	**13 27 30.9**	**-0.2**
LIA	**Limnos Island**	**1.83**	**257**	P	**Pn**	**13 27 33.5**	**+2.4**
LIA				S	**Sn**	**13 27 53.4**	**-0.9**
LIA	**Limnos Island**	**1.83**	**257**	P	**Pn**	**13 27 33.5**	**+2.4**
LIA				S	**Sn**	**13 27 53.4**	**-0.9**
IZM	**Izmir**	**1.93**	**186**	*e*PN	**Pn**	**13 27 31.8**	**-0.7**
IZM	**Izmir**	**1.93**	**186**	*e*Pn	**Pn**	**13 27 31.8**	**-0.7**
GDZ	**Gediz**	**1.96**	**128**	*i* P	**Pn**	**13 27 34.5**	**+1.6**
GDZ				*i* S	**Sn**	**13 28 02.1**	**+4.6**
GDZ	**Gediz**	**1.96**	**128**	*i* P	**Pn**	**13 27 34.5**	**+1.6**
GDZ				*i* S	**Sn**	**13 28 02.1**	**+4.6**
BLCB	**Balcova**	**1.96**	**191**	*e*PN	**Pn**	**13 27 32.2**	**-0.7**
BLCB	**Balcova**	**1.96**	**191**	*e*Pn	**Pn**	**13 27 32.3**	**-0.7**
KULA	**Kula-Manisa**	**2.01**	**153**	*e*PN	**Pn**	**13 27 32.7**	**-0.9**
KULA	**Kula-Manisa**	**2.01**	**153**	*e*Pn	**Pn**	**13 27 32.7**	**-0.9**
URLA	**Izmir**	**2.08**	**200**	*i* P	**Pn**	**13 27 38.3**	**+3.8**
URLA				*i* S	**Sn**	**13 28 09.6**	**+9.1**
URLA	**Izmir**	**2.08**	**200**	*i* P	**Pn**	**13 27 38.3**	**+3.7**
GULT	**Gulveren**	**2.30**	**86**	*e*PN	**Pn**	**13 27 38.2**	**+0.6**
GULT	**Gulveren**	**2.30**	**86**	*e*Pn	**Pn**	**13 27 38.2**	**+0.6**
KAVA	**Kavala**	**2.37**	**288**	P	**Pn**	**13 27 39.3**	**+0.7**
KAVA	**Kavala**	**2.37**	**288**	P	**Pn**	**13 27 39.3**	**+0.7**
MDU	**Mudurnu**	**2.84**	**86**	*e*PN	**Pn**	**13 27 46.0**	**+1.0**
MDU	**Mudurnu**	**2.84**	**86**	*e*Pn	**Pn**	**13 27 46.0**	**+1.0**
SHUT	**Suhut-Afyon**	**2.95**	**126**	*e*PN	**Pn**	**13 27 47.5**	**+1.0**
SHUT	**Suhut-Afyon**	**2.95**	**126**	*e*Pn	**Pn**	**13 27 47.5**	**+1.0**
KIZT	**Kizilcal**	**3.67**	**112**	*e*PN	**Pn**	**13 27 56.6**	**+0.1**
KIZT	**Kizilcal**	**3.67**	**112**	*e*Pn	**Pn**	**13 27 56.6**	**+0.1**

*BJI **30** 13:39:31.8, 40.°50N×125.°20W, h5km, mB5.2/2, mb5.2/4, Ms5.1/2, Ms7 5.1/2*
*ISCJB **30** 13:39:32.6±0.6, 40.°41N±0.°04×125.°20W±0.°06, h10km, mb4.2/4, MS3.5/4, Error ellipse: s-maj=7.3km s-min=6.1km az=145.7*
*NEIC **30** 13:39:33.0, 40.°46N×125.°20W, h2km, mb4.2/4, MW4.3(BRK), After NCEDC.*
NEIC Felt at Eureka.
*IDC **30** 13:39:34.5±3.1, 40.°58N×125.°07W, h0km, mb3.5/3, mb1 3.9/4, mb1mx3.5/24, mbtmp3.5/4, ML2.9/1, MS3.5/4, Ms1 3.5/4, ms1mx3.0/26, Error ellipse: s-maj=69.1km s-min=18.3km az=42.0*

ISC 30 13:39:33.9±0.6, 40.°38N±0.°05×125.°27W±0.°06, h10km, n59, σ1§43/57, mb4.2/4, MS3.5/4, 1C, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRMB	**Red Mountain**	**1.54**	**42**	P	**Pn**	**13 39 58.6**	**-2.8**
KSXB	**Camp Six Broad**	**1.79**	**35**	P	**Pn**	**13 40 02.2**	**-2.7**
KBO	**Bosley Butte**	**2.00**	**23**	P	**Pn**	**13 40 05.2**	**-2.5**
WDC	**Whiskeytown Da**	**2.09**	**84**	⇑*e*Pn	**Pn**	**13 40 07.4**	**-1.6**
KTRM	**Thompson Ridge**	**2.10**	**42**	P	**Pn**	**13 40 06.7**	**-2.3**
HOPS	**Hopland**	**2.19**	**128**	*e*Pn	**Pn**	**13 40 08.0**	**-2.2**
YBH	**Yreka Blue Hor**	**2.36**	**54**	*e*Pn	**Pn**	**13 40 10.9**	**-1.8**
HUMO	**Hull Mountain**	**2.83**	**37**	*e*Pn	**Pn**	**13 40 16.9**	**-2.1**
MCCM	**Marconi Confer**	**2.90**	**139**	*e*Pn	**Pn**	**13 40 17.6**	**-2.5**
BUOR	**Burton Butte**	**2.97**	**49**	P	**Pn**	**13 40 21.2**	**+0.2**
LTIM	**Timbered Crate**	**2.98**	**73**	P	**Pn**	**13 40 20.1**	**-1.1**
LBCM	**Butte Creek Ri**	**3.02**	**80**	P	**Pn**	**13 40 20.8**	**-1.0**
LASM	**Arnica Sink**	**3.05**	**65**	P	**Pn**	**13 40 21.4**	**-0.8**
BBOR	**Butler Butte**	**3.17**	**37**	P	**Pn**	**13 40 23.9**	**+0.1**
MOD	**Modoc**	**4.05**	**66**	*e*Pn	**Pn**	**13 40 35.9**	**0.0**
IRO	**Indian Ridge**	**4.26**	**31**	P	**Pn**	**13 40 39.2**	**+0.4**
CMB	**Columbia Colle**	**4.46**	**120**	*e*Pn	**Pn**	**13 40 42.1**	**+0.7**
WVOR	**Wild Horse Val**	**5.39**	**65**	*e*Pn	**Pn**	**13 40 53.5**	**-0.8**
	13nm,0.7s						
NVAR	**Mina Array Bea**	**5.73**	**108**	Pn	**Pn**	**13 40 59.8**	**+0.7**
	0.4nm,0.3s,baz=281,slow=15,SNR=13						
NVAR				Pg	**Pb**	**13 41 10.7**	**-3.3**
	0.5nm,0.3s,baz=280,slow=16,SNR=13						
LON	**Longmire**	**6.85**	**20**	*e*Pn	**Pn**	**13 41 15.5**	**+1.2**
	7.1nm,0.9s						
RSW	**Rattlesnake Hi**	**7.30**	**33**	*e*Pn	**Pn**	**13 41 19.7**	**-0.8**
	8.4nm,0.4s						
HAWA	**Hanford**	**7.32**	**33**	*e*Pn	**Pn**	**13 41 20.7**	**-0.1**
	10nm,0.7s						
BMO	**Blue Mountains**	**7.38**	**50**	*e*Pn	**Pn**	**13 41 23.3**	**+1.6**
	23nm,0.8s						
LNOR	**Lincton Mounta**	**7.50**	**41**	*e*Pn	**Pn**	**13 41 24.8**	**+1.5**
	32nm,1.1s						
GSC	**Goldstone**	**8.39**	**124**	*e*Pn	**Pn**	**13 41 37.3**	**+1.7**
	9.6nm,0.9s						
HLID	**Hailey**	**8.69**	**65**	*e*Pn	**Pn**	**13 41 40.8**	**+1.2**
	24nm,1.1s						
BGU	**Big Grassy Mou**	**9.32**	**83**	*e*P	**Pn**	**13 41 50.5**	**+2.2**
	9.9nm,1.1s						
MCMT	**McKenzie Canyo**	**10.18**	**60**	*e*P	**Pn**	**13 42 00.7**	**+0.7**
	6.0nm,1.0s						
HWUT	**Hardware Ranch**	**10.44**	**79**	*e*P	**Pn**	**13 42 04.0**	**+0.5**
	33nm,1.8s						
MSO	**Missoula**	**10.44**	**48**	*e*P	**Pn**	**13 42 05.6**	**+2.1**
	14nm,1.0s						
DLMT	**Dillon**	**10.55**	**58**	*e*P	**Pn**	**13 42 06.0**	**+1.0**
	16nm,1.1s						
BSMT	**Bassoo Peak**	**10.61**	**42**	*e*P	**Pn**	**13 42 06.8**	**+1.0**
	8.8nm,0.9s						
SWMT	**Swartz Lake**	**10.80**	**45**	*e*P	**Pn**	**13 42 09.1**	**+0.6**
	5.6nm,0.9s						
RRI2	**Red Ridge**	**10.82**	**70**	*e*P	**Pn**	**13 42 11.5**	**+2.7**
	3.4nm,0.8s						
LRM	**Limekiln Ridge**	**10.84**	**56**	P	**Pn**	**13 42 07.9**	**-1.1**
	58nm,1.3s						
CHMT	**Chamberlain Mo**	**10.88**	**49**	*e*P	**Pn**	**13 42 10.9**	**+1.4**
	20nm,1.4s						
SLMT	**Seeley Lake**	**10.93**	**47**	*e*P	**Pn**	**13 42 11.0**	**+0.8**
	40nm,1.3s						
IMW	**Indian Meadow**	**11.21**	**67**	*e*P	**Pn**	**13 42 16.5**	**+2.4**
	6.8nm,1.0s						
MOOW	**Moose Ponds**	**11.31**	**68**	P	**Pn**	**13 42 15.0**	**-0.4**
	4.2nm,1.0s						
LOHW	**Long Hollow**	**11.38**	**69**	P	**Pn**	**13 42 18.3**	**+1.9**
	9.9nm,1.4s						
SRU	**San Rafael**	**11.43**	**92**	*e*P	**Pn**	**13 42 20.7**	**+3.7**
	8.8nm,1.1s						
EGMT	**Eagleton**	**13.49**	**50**	*e*P	**Pn**	**13 42 42.9**	**-2.3**
	15nm,1.0s						
SDCO	**Great Sand Dun**	**15.58**	**93**	*e*Pn	**Pn**	**13 43 12.7**	**-0.8**
	12nm,1.1s						
TXAR	**Lajitas Array**	**20.82**	**115**	P	**P**	**13 44 18.1**	**+2.7**
	1.9nm,1.0s,baz=298,slow=8.3,SNR=5.4						
TXAR				LR	LR	13 53 12.8	
	comp=Z,92nm,19.1s,MS3.2,baz=5.0,slow=39						
FFC	**Flin Flon**	**21.15**	**39**	*e*P	**P**	**13 44 18.5**	**-0.3**
	27nm,1.3s,mb4.4						
ECSD	**EROS Data Cent**	**21.49**	**72**	P	**P**	**13 44 20.1**	**-2.6**
	9.5nm,1.1s,mb4.0						
AGMN	**Agassiz Nation**	**22.37**	**59**	*e*P	**P**	**13 44 31.7**	**-0.3**
	12nm,0.9s,mb4.3						
ULM	**Lac du Bonnet**	**22.77**	**54**	P	**P**	**13 44 35.9**	**-0.3**
	9.7nm,0.9s,mb4.2,baz=258,slow=11,SNR=6.1						
ILAR	**Eielson Array**	**27.45**	**340**	P	**P**	**13 45 20.7**	**+1.1**
	0.4nm,0.7s,baz=154,slow=8.6,SNR=5.1						
BORG	**Borgarnes**	**59.74**	**29**	LR	LR	14 16 04.1	
	comp=Z,69nm,21.8s,MS3.8,baz=113,slow=37						
NOA	**NORSAR Array B**	**72.90**	**21**	LR	LR	14 22 48.8	
	comp=Z,17nm,20.4s,MS3.3,baz=335,slow=36						
HFS	**Hagfors**	**74.33**	**20**	LR	LR	14 23 01.5	
	comp=Z,42nm,21.0s,MS3.7,baz=197,slow=35						
CN2	**Changchun**	**74.79**	**315**	*e*P	**P**	**13 51 12.3**	**-1.8**
CN2				*e*S	S	14 00 47.5	-3.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
BJI	**Beijing**	**82.35**	**317**	P	**P**	**13 51 56.3**	**+0.4**
HHC	**Hu-ho-hao-te**	**84.07**	**320**	*e*P	**P**	**13 52 03.5**	**-1.2**
HHC				S	S	14 02 26.0	-3.1
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,100nm,6.8s						
NJ2	**Nanjing**	**86.70**	**310**	*e*P	**P**	**13 52 18.5**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
WMQ	**Urumqi**	**91.08**	**337**	*e*P	**P**	**13 52 40.3**	**+1.8**
CD2	**Chengdu**	**95.78**	**319**	P	**P**	**13 53 01.0**	**+0.6**
CD2				PP	PP	13 56 54.0	+2.7
CD2				SKS		14 03 37.3	
CD2				S	S	14 04 15.5	-2.8
CD2				SS	SS	14 10 47.0	+0.7
CD2				LR	LR		
	comp=N,330nm,10.1s						
CD2				LR	LR		
	comp=Z,300nm,7.7s						
GYA	**Guiyang**	**97.84**	**315**	P	**P**	**13 53 10.0**	**+0.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						

GUC 30 14:00:04.7±0.7, 22.°89S×68.°78W, h91km±23km, MD3.8, ML3.8, 2C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**0.91**	**313**	⇑*i*P	Pn	14 00 30.5	+7.1
PB04				*i* S	Sn	14 00 49.3	+12
PB04				AML	AML	14 00 50.8	
	comp=E,1μm,0.2s						
MACH	**Maria Elena**	**1.14**	**307**	⇑*i*P	Pn	14 00 27.1	+1.0
MACH				*i* S	Sn	14 00 43.8	+1.6
CEN1	**Los Morros**	**1.40**	**249**	⇓*i*P	Pn	14 00 31.8	+2.5
CEN1				*i* S	Sn	14 00 53.1	+5.3
ANCH	**Antofagasta**	**1.69**	**242**	⇓*i*P	Pn	14 00 33.2	+0.3
ANCH				*i* S	Sn	14 00 55.5	+1.1
PB01	**Plate Boundary**	**1.96**	**340**	⇓*i*P	Pn	14 00 37.2	+0.8
PB01				*i* S	Sn	14 01 01.5	+1.0
PB01				AML	AML	14 01 02.6	
	comp=E,2μm,0.5s						

*ISCJB **30** 14:06:23.0±0.6, 78.°25N±0.°04×22.°6E±0.°2, h10km, mb3.6/6, Error ellipse: s-maj=6.4km s-min=4.2km az=138.6*
*CSEM **30** 14:06:23.7±0.3, 78.°37N×22.°35E, h2km, ML3.9, Error ellipse: s-maj=8.4km s-min=4.7km az=40.0*
*MOS **30** 14:06:23.5±1.9, 78.°22N×22.°40E, h10km, mb3.9/4, Error ellipse: s-maj=65.7km s-min=6.8km az=92.1*
*IDC **30** 14:06:24.8±1.0, 78.°42N×21.°91E, h0km, mb3.5/5, mb1 3.9/10, mb1mx3.7/26, mbtmp3.8/10, ML4.1/5, Error ellipse: s-maj=15.9km s-min=10.9km az=24.0*
*NEIC **30** 14:06:25.6±0.8, 78.°36N×22.°06E, h10km, mb4.0/1, ML4.0(BER), Error ellipse: s-maj=13.2km s-min=7.8km az=48.0*
*BER **30** 14:06:26.9±3.6, 78.°58N×22.°55E, h23km±16km, MD3.4, ML4.0, ML3.9(NAO)*
*NAO **30** 14:06:27.2±4.4, 78.°40N×21.°80E, h31km±37km, ML3.9*

ISC 30 14:06:25.1±0.6, 78.°33N±0.°04×22.°1E±0.°2, h10km, n78, σ1§36/102, mb3.6/6, 2C, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPA0	**Spitsbergen Ar**	**1.19**	**266**	Pg	**Pg**	**14 06 48.2**	**+0.3**
SPA0				Lg		14 07 04.7	
SPA0	**Spitsbergen Ar**	**1.19**	**266**	P	**Pb**	**14 06 47.2**	**-0.5**
	baz=86,slow=14						
SPA0				S	**Sb**	**14 07 03.8**	**+0.7**
	baz=70,slow=28						
SPA0	**Spitsbergen Ar**	**1.19**	**266**	P	**Pb**	**14 06 47.2**	**-0.5**
	baz=86,slow=14,SNR=55						
SPA0	**Spitsbergen Ar**	**1.19**	**266**	Pg	**Pg**	**14 06 48.2**	**+0.3**
SPA0				S	**Sb**	**14 07 03.8**	**+0.7**
	baz=70,slow=26,SNR=55						
SPITS	**Spitsbergen Ar**	**1.19**	**266**	Pn	**Pn**	**14 06 47.0**	**-0.7**
	baz=84,slow=17						
SPITS				Sn	**Sn**	**14 07 03.4**	**-0.5**
	baz=129,slow=50,SNR=32						
SPITS	**Spitsbergen Ar**	**1.19**	**266**	P	**Pb**	**14 06 47.0**	**-0.7**
SPITS				S	**Sb**	**14 07 03.4**	**+0.3**
HSP	**Hornsund**	**1.94**	**230**	*e*P	**Pn**	**14 07 04.2**	**+6.2**
HSP				*e*S	**Sn**	**14 07 23.3**	**+1.0**
KBS	**Kingsbay**	**2.11**	**292**	Pn	**Pn**	**14 06 59.4**	**-1.0**
KBS				Pg	**Pg**	**14 07 04.3**	**-1.1**
KBS				Lg		14 07 30.5	
KBS	**Kingsbay**	**2.11**	**292**	*e*P	**Pn**	**14 06 59.1**	**-1.2**
KBS				*e*Pg	**Pg**	**14 07 04.4**	**-1.0**
KBS				*e*Sg	**Sg**	**14 07 30.2**	**-2.5**
KBS				AML	AML	14 07 32.5	
	comp=Z,7μm,0.6s						
KBS	**Kingsbay**	**2.11**	**292**	*e*Pn	**Pn**	**14 06 59.1**	**-1.3**
KBS				*e*Pg	**Pg**	**14 07 04.4**	**-1.0**
KBS				*e*Sg	**Sg**	**14 07 30.2**	**-2.5**
KBS	**Kingsbay**	**2.11**	**292**	*e*P	**Pn**	**14 06 59.1**	**-1.2**
	SNR=55						
KBS	**Kingsbay**	**2.11**	**292**	Pn	**Pn**	**14 06 59.4**	**-0.9**
BJO	**Bjornoya**	**3.91**	**192**	*e*P	**Pn**	**14 07 25.6**	**+0.6**
BJO				*e*Pg	**Pg**	**14 07 38.6**	**-1.2**
BJO				*e*		14 08 08.8	
BJO				*e*Sg	**Sg**	**14 08 31.1**	**+0.7**
BJO				AML	AML	14 08 36.1	
	comp=Z,1μm,0.4s						
BJO	**Bjornoya**	**3.91**	**192**	*e*P	**Pn**	**14 07 25.6**	**+0.6**
	SNR=53						
BJO1	**Bjornoya**	**3.92**	**192**	*e*P	**Pn**	**14 07 25.7**	**+0.6**
BJO1				*e*Pg	**Pg**	**14 07 38.6**	**-1.4**
BJO1				*e*		14 08 09.0	
BJO1				*e*Sg	**Sg**	**14 08 31.1**	**+0.4**
BJO1	**Bjornoya**	**3.92**	**192**	*e*P	**Pn**	**14 07 25.7**	**+0.5**
KEV	**Kevo**	**8.72**	**169**	*e*P	**Pn**	**14 08 31.3**	**+0.3**
KEV				pmax	pmax		
	comp=Z,20nm,0.2s						
KEV	**Kevo**	**8.72**	**169**	*e*P	**Pn**	**14 08 31.3**	**+0.3**
	comp=Z,20nm,0.2s						
KEV	**Kevo**	**8.72**	**169**	*e*p	**Pn**	**14 08 31.3**	**+0.3**
	comp=Z,20nm,0.2s						
KEV	**Kevo**	**8.72**	**169**	*e*P	**Pn**	**14 08 31.3**	**+0.3**
	comp=Z,20nm,0.2s						
TRO	**Tromso**	**8.79**	**187**	*e*P	**Pn**	**14 08 32.3**	**+0.4**
TRO				*e*S	**Sn**	**14 10 05.2**	**-5.6**
TRO				AML	AML	14 10 08.9	
	comp=Z,17nm,0.5s						
TRO	**Tromso**	**8.79**	**187**	*e*P	**Pn**	**14 08 32.3**	**+0.4**
TRO				*e*S	**Sn**	**14 10 05.2**	**-5.6**
TRO	**Tromso**	**8.79**	**187**	*e*P	**Pn**	**14 08 32.3**	**+0.4**
	SNR=51						
ARA0	**ARCESS Array S**	**8.89**	**172**	Pn	**Pn**	**14 08 32.6**	**-0.7**
	baz=2.6,slow=12						
ARA0				Sn	**Sn**	**14 10 07.1**	**-6.2**
	baz=5.0,slow=22						
ARA0	**ARCESS Array S**	**8.89**	**172**	P	**Pn**	**14 08 32.6**	**-0.7**
	baz=2.6,slow=12						
ARA0				S	**Sn**	**14 10 09.2**	**-4.1**
	baz=5.0,slow=22						
ARA0	**ARCESS Array S**	**8.89**	**172**	P	**Pn**	**14 08 32.7**	**-0.6**
	baz=2.6,slow=12,SNR=51						
ARCES	**ARCESS Array B**	**8.89**	**172**	Pn	**Pn**	**14 08 33.0**	**-0.3**
	comp=Z,4.7nm,0.3s,baz=4.5,slow=12,SNR=230						
ARCES				Sn	**Sn**	**14 10 06.9**	**-6.4**
	comp=Z,10.0nm,0.3s,baz=354,slow=22,SNR=7.0						
ARCES	**ARCESS Array B**	**8.89**	**172**	P	**Pn**	**14 08 33.0**	**-0.3**
ARCES						14 10 06.9	
ARCES				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ARCES				smax			
	comp=N,10.0nm,0.3s						
ARCES	**ARCESS Array B**	**8.89**	**172**	P	**Pn**	**14 08 33.0**	**-0.3**
	comp=N,5.0nm,0.3s						
ARE0	**ARCESS Array S**	**8.89**	**172**	*e*P	**Pn**	**14 08 33.5**	**+0.1**
ARE0	**ARCESS Array S**	**8.89**	**172**	*e*P	**Pn**	**14 08 33.5**	**+0.2**
KTK1	**Kautokeino**	**9.37**	**178**	*e*Pn	**Pn**	**14 08 41.3**	**+1.3**
KTK1	**Kautokeino**	**9.37**	**178**	*e*Pn	**Pn**	**14 08 41.3**	**+1.3**
	SNR=55						
LOF	**Lofoten**	**10.52**	**198**	*e*Pn	**Pn**	**14 08 57.3**	**+1.6**
LOF				*e*Sn	**Sn**	**14 10 50.8**	**-2.7**
LOF	**Lofoten**	**10.52**	**198**	*e*Pn	**Pn**	**14 08 57.3**	**+1.6**
	SNR=55						
JMIC	**Jan Mayen**	**10.77**	**243**	Pn	**Pn**	**14 09 01.2**	**+2.2**
	comp=N,1.1nm,0.3s,baz=141,slow=14,SNR=4.3						
JMIC	**Jan Mayen**	**10.77**	**243**	Pn	**Pn**	**14 09 01.2**	**+2.2**
LVZ	**Lovozero**	**11.05**	**155**	*e*P	**Pn**	**14 09 02.3**	**-0.6**
LVZ	**Lovozero**	**11.05**	**155**	*e*P	**Pn**	**14 09 02.3**	**-0.6**
APA0	**Apatity Array**	**11.20**	**158**	P	**Pn**	**14 09 03.4**	**-1.5**
	baz=339,slow=11						
APA0	**Apatity Array**	**11.20**	**158**	P	**Pn**	**14 09 03.4**	**-1.5**
	baz=339,slow=10,SNR=51						
APA	**Apatity**	**11.27**	**157**	⇑*i*P	**Pn**	**14 09 04.0**	**-1.9**
APA				pmax	pmax		
	comp=Z,20nm,0.7s						
APA				MLR	MLR		
	comp=Z,400nm,22.0s						
APA				MLR	MLR		
	comp=Z,200nm,27.0s						
APA	**Apatity**	**11.27**	**157**	*i* P	**Pn**	**14 09 04.0**	**-1.9**
	comp=Z,200nm,27.0s						
MOR8	**Moi Rana**	**12.42**	**195**	*e*Pn	**Pn**	**14 09 22.8**	**+1.1**
MOR8				*e*Sn	**Sn**	**14 11 35.3**	**-4.5**
MOR8	**Moi Rana**	**12.42**	**195**	*e*Pn	**Pn**	**14 09 22.8**	**+1.2**
	SNR=55						
SUMG	**Summit**	**15.49**	**281**	*e*P	**Pn**	**14 10 03.5**	**+0.3**
JOF	**Joensuu**	**15.74**	**164**	*e*P	**Pn**	**14 10 01.9**	**-4.6**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.4s						
JOF	**Joensuu**	**15.74**	**164**	*e*p	**Pn**	**14 10 01.9**	**-4.6**
	comp=Z,1.8nm,0.4s						
KAF	**Kangasniemi**	**16.35**	**173**	*e*P	**Pn**	**14 10 11.6**	**-2.7**
KAF				pmax	pmax		
	comp=Z,5.0nm,0.4s						
KAF	**Kangasniemi**	**16.35**	**173**	*e*P	**Pn**	**14 10 11.6**	**-2.7**
	comp=Z,5.2nm,0.4s						
KAF	**Kangasniemi**	**16.35**	**173**	*e*p	**Pn**	**14 10 11.6**	**-2.7**
	comp=Z,5.2nm,0.4s						
FIA0	**

481nm,27.7s
CPUP Villa Florida 52.93 84 LR LR 14 36 51.6
comp=Z,270nm,18.6s,baz=205,slow=34
LPAZ La Paz 54.69 67 P P 14 16 11.9 +0.8
2.8nm,1.0s,baz=243,slow=9.0,SNR=6.1
LPAZ LR LR 14 33 51.5
comp=Z,137nm,20.6s,baz=129,slow=30
MAW Mawson 58.60 181 LR LR 14 39 37.0
comp=Z,105nm,19.4s,baz=330,slow=34
DZM Mont Dzumac 63.10 269 *e*LR LR 14 36 15.0
279nm,23.4s
STKA Stephens Creek 69.66 244 LR LR 14 40 35.7
comp=Z,244nm,20.8s,baz=207,slow=29
CTA Charters Tower 76.38 255 LR LR 14 47 39.2
comp=Z,127nm,20.1s,baz=311,slow=32
ASAR Alice Springs 80.28 243 P P 14 18 53.1 +0.1
0.7nm,1.0s,baz=142,slow=4.7,SNR=3.1
BOSA Boshof 92.19 150 LR LR 14 56 02.6
comp=Z,161nm,18.1s,baz=33,slow=32
BRTR Keskin Array B 156.90 118 PKPab PKPab 14 27 06.4 -0.5
0.5nm,0.7s,baz=197,slow=4.4,SNR=4.0

JMA 30 14:15:59.7±0.3, 44°.01N×148°.07E, h0km, M4.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.81**	**250**	P	Pn	14 16 32.5	+0.5
NEM2				*e*S	Sn	14 16 56.7	+1.1
JRA	**Rausu**	**2.13**	**269**	P	Pn	14 16 37.2	+0.7
JNK	**Nakash**	**2.46**	**261**	P	Pn	14 16 41.9	+0.8
JAK	**Akkeshi**	**2.66**	**249**	P	Pn	14 16 44.6	+0.9
JAK				*e*S	Sn	14 17 18.0	+1.4
JTKR	**Abashiri--Toko**	**3.00**	**271**	P	Pn	14 16 49.8	+1.3
JAR	**Ashorobuto**	**3.20**	**259**	P	Pn	14 16 53.0	+1.8
JCH	**Churui**	**3.71**	**250**	P	Pn	14 16 59.2	+1.0
JCH				*e*S	Sn	14 17 43.2	+0.7
JKK2	**Kamakawa 2**	**3.85**	**270**	P	Pn	14 17 02.8	+2.7
JSE	**Soyaes**	**4.04**	**285**	P	Pn	14 17 01.4	-1.3
JNBK	**Urakawa-nobuka**	**4.26**	**248**	P	Pn	14 17 07.3	+1.6
JKB	**Kayabe**	**5.58**	**250**	P	Pn	14 17 25.8	+1.8
JKB				*e*S	Sn	14 18 29.9	+1.1
JOT	**Ohata**	**5.80**	**246**	P	Pn	14 17 28.4	+1.4
JOT				*e*S	Sn	14 18 34.5	+0.3
JANG	**Nango**	**6.07**	**236**	P	Pn	14 17 33.0	+2.3
JANG				*e*S	Sn	14 18 40.0	-0.9

*IDC **30** 14:18:21.1±1.0, 19°.54N×121°.44E, h0km, mb3.8/11, mb1 3.9/12, mb1mx3.8/22, mbtmp3.8/12, ML3.9/1, MS3.4/8, Ms1 3.5/8, ms1mx3.1/34, Error ellipse: s-maj=24.1km s-min=22.2km az=83.0*
*NEIC **30** 14:18:26.3±1.6, 19°.50N×121°.46E, h37km±15km, mb4.2/3, Error ellipse: s-maj=14.3km s-min=10.2km az=108.0*
*ISCJB **30** 14:18:27.0±0.8, 19°.61N±0°.05×121°.4E±0°.1, h60km±9km, mb3.7/14, MS3.5/8, Error ellipse: s-maj=16.0km s-min=8.0km az=174.0*
*MAN **30** 14:18:42, 18°.58N×121°.62E, h64km, mb4.9, ML3.8, MS3.9*
ISC 30 14:18:28.8±0.7, 19°.62N±0°.05×121°.44E±0°.10, h59km±9km, n42, σ1§30/39, mb3.7/14, MS3.5/8, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**1.51**	**211**	⇑*i*P	**Pn**	**14 18 45.8**	**-7.8**
PIP				*e*S	**Sn**	**14 19 03.8**	**-8.1**
APYP	**Conner**	**1.76**	**186**	*e*P	**Pn**	**14 18 59.2**	**+2.2**
CVP	**Callao Caves**	**1.94**	**169**	*e*P	**Pn**	**14 18 56.7**	**-2.7**
ABRA	**Dolores**	**2.08**	**200**	*e*P	**Pn**	**14 19 04.4**	**+3.1**
CAUP	**Cauayan**	**2.69**	**172**	*e*P	**Pn**	**14 19 10.5**	**+0.9**
PALP	**Palanan**	**2.71**	**160**	*e*P	**Pn**	**14 19 10.7**	**+0.8**
BCPH	**Baguio City Da**	**3.33**	**194**	⇓*e*P	**Pn**	**14 19 14.9**	**-3.4**
BOLP	**Bolinao**	**3.54**	**205**	*e*P	**Pn**	**14 19 25.1**	**+3.9**
TPUB	**Ta-pu**	**3.74**	**348**	P	**Pn**	**14 19 24.1**	**+0.1**
BALP	**Baler**	**3.86**	**178**	*e*P	**Pn**	**14 19 25.5**	**-0.2**
SSLB	**Suanglung**	**4.17**	**354**	P	**Pn**	**14 19 28.6**	**-1.3**
POLP	**Polilio Island**	**4.89**	**174**	*e*P	**Pn**	**14 19 43.8**	**+4.1**
LUBP	**Lubang**	**5.96**	**191**	*e*P	**Pn**	**14 20 00.4**	**+5.9**
PVCP	**Virac**	**6.53**	**156**	*e*P	**Pn**	**14 20 02.2**	**0.0**
KSRS	**Korea Array**	**18.65**	**16**	Pn	**Pn**	**14 22 41.3**	**-1.3**
	0.4nm,0.3s,baz=200,slow=11,SNR=20						
KSRS				LR	LR	14 30 43.7	
	comp=Z,34nm,18.2s,baz=181,slow=40						
BJT	**Baijiatuau**	**20.83**	**349**	*e*P	**P**	**14 23 05.0**	**-0.5**
	15nm,0.8s						
BJI	**Beijing**	**20.85**	**349**	P	**P**	**14 23 10.5**	**+4.9**
BJI				pmax	pmax		
	comp=Z,17nm,1.0s						
KSM	**Kuching**	**21.07**	**212**	*e*P	**P**	**14 23 06.0**	**-2.2**
CHTO	**Chiang Mai**	**21.26**	**272**	P	**P**	**14 23 10.1**	**-0.1**
	comp=Z,5.8nm,1.0s,mb3.9						
CMAR	**Chiang Mai Arr**	**21.30**	**271**	P	**P**	**14 23 11.4**	**+0.8**
	comp=Z,0.7nm,0.3s,mb3.4,baz=72,slow=8.7,SNR=6.3						
MJAR	**Matsushiro Arr**	**22.37**	**38**	P	**P**	**14 23 23.1**	**+1.2**
	comp=Z,0.5nm,0.5s,mb3.2,baz=260,slow=15,SNR=3.2						
LZH	**Lanzhou**	**22.55**	**320**	*e*P	**P**	**14 23 30.0**	**+6.2**
LZH				pP		14 23 35.5	
LZH				sP	sP	14 23 37.8	-6.5
LZH				LR	LR		
	comp=N,190nm,9.6s						
LZH				LR	LR		
	comp=Z,260nm,10.2s,MS4.0						
BTO	**Baotou**	**23.09**	**337**	*e*P	**P**	**14 23 34.8**	**+5.3**
PSI	**Prapat**	**27.63**	**236**	LR	LR	14 34 35.9	
	comp=Z,138nm,19.7s,MS3.5,baz=232,slow=35						
ASAJ	**Asahikawa**	**30.15**	**31**	LR	LR	14 36 33.1	
	comp=Z,68nm,20.7s,MS3.3,baz=235,slow=36						
SONM	**Songino Array**	**30.68**	**340**	P	**P**	**14 24 38.0**	**+0.3**
	comp=Z,1.1nm,1.0s,mb3.6,baz=159,slow=9.3,SNR=4.6						
SONM				LR	LR	14 36 51.1	
	comp=Z,84nm,18.8s,MS3.4,baz=34,slow=36						
WRAB	**Tennant Creek**	**41.29**	**161**	*e*P	**P**	**14 26 06.9**	**-1.7**
	comp=Z,4.1nm,0.8s,mb4.1						
MKAR	**Makanchi Array**	**41.86**	**319**	P	**P**	**14 26 12.8**	**-0.2**
	comp=Z,1.6nm,0.9s,mb3.7,baz=109,slow=9.7,SNR=9.6						
MKAR	**Makanchi Array**	**41.86**	**319**	P	**P**	**14 26 12.8**	**-0.2**
PETK	**Petropavlovsk-**	**43.57**	**31**	P	**P**	**14 26 26.2**	**-0.5**
	comp=Z,0.7nm,0.7s,mb3.5,baz=336,slow=3.2,SNR=2.6						
PETK				LR	LR	14 48 03.4	
	comp=Z,22nm,18.3s,MS3.1,baz=46,slow=41						
ZALV	**Zalesovo Beam**	**44.24**	**330**	LR	LR	14 46 22.1	
	comp=Z,38nm,18.4s,MS3.4,baz=257,slow=38						
ASAR	**Alice Springs**	**44.71**	**164**	P	**P**	**14 26 35.0**	**-1.2**
	comp=Z,1.6nm,0.8s,mb3.9,baz=342,slow=6.4,SNR=17						
KURK	**Kurchatov**	**45.80**	**323**	P	**P**	**14 26 44.2**	**-0.3**
	comp=Z,0.7nm,0.3s,mb4.1,baz=123,slow=7.7,SNR=5.9						
KURK	**Kurchatov**	**45.80**	**323**	*e*P	**P**	**14 26 44.1**	**-0.4**
BVAR	**Borovoye Array**	**51.40**	**323**	P	**P**	**14 27 32.2**	**+4.7**
	comp=Z,0.6nm,0.5s,mb3.8,baz=132,slow=10,SNR=3.0						
ILAR	**Eielson Array**	**73.15**	**27**	P	**P**	**14 29 53.8**	**+1.0**
	comp=Z,0.1nm,0.6s,mb2.9,baz=285,slow=4.6,SNR=2.8						
FINES	**FINESS Array B**	**75.50**	**330**	P	**P**	**14 30 08.1**	**+1.6**
	comp=Z,1.0nm,0.8s,mb3.8,baz=172,slow=11,SNR=3.9						
NB2	**NORSAR Subarra**	**82.36**	**333**	P	**P**	**14 30 43.7**	**-0.3**
	comp=Z,2.2nm,0.8s,mb4.1,baz=66,slow=4.8						
NOA	**NORSAR Array B**	**82.36**	**333**	P	**P**	**14 30 44.5**	**+0.4**
	comp=Z,0.6nm,0.7s,mb3.6,baz=64,slow=4.9,SNR=3.3						
NOA				LR	LR	15 10 26.5	
	comp=Z,37nm,19.2s,MS3.8,baz=270,slow=38						
YKA	**Yellowknife Ar**	**87.07**	**23**	P	**P**	**14 31 10.5**	**+2.8**
	comp=Z,0.6nm,0.7s,mb3.9,baz=307,slow=4.6,SNR=3.1						
YKA	**Yellowknife Ar**	**87.07**	**23**	P	**P**	**14 31 10.5**	**+2.8**
FRB	**Frobisher Bay**	**96.54**	**4**	LR	LR	15 12 55.2	
	comp=Z,53nm,21.6s,MS4.0,baz=10,slow=34						

NNC 30 14:25:44.1±5.3, 50°.03N×88°.20E, h0km, mb3.5, mpv3.1, 6C-3D, Error ellipse: s-maj=40.0km s-min=26.3km az=67.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**5.09**	**233**	⇓Pn	Pn	14 27 03.6	+2.0
	1.1nm,0.5s,baz=55,slow=14,SNR=12						
MK31				⇑Sn	Sn	14 28 01.7	+0.6
	1.0nm,0.4s,baz=61,slow=22,SNR=5.5						
MK31				⇑Lg		14 28 23.2	
	4.2nm,0.6s,baz=51,slow=30,SNR=6.4						
KURK	**Kurchatov**	**6.17**	**280**	⇑Pn	Pn	14 27 15.4	-0.9
	5.9nm,1.1s						
KURK				⇓Sn	Sn	14 28 27.7	+0.2
	1.3nm,0.4s						
KURK				⇑Lg		14 28 57.9	
	4.3nm,0.6s						
KURBB	**Kurchatov Arra**	**6.22**	**279**	⇓Pn	Pn	14 27 14.4	-2.7
	0.9nm,0.8s						
KURBB				⇑Sn	Sn	14 28 32.5	+3.7
	1.2nm,0.6s						
KURBB				⇑Lg		14 29 03.1	
	1.2nm,0.6s						

*IDC **30** 14:40:25.5±1.7, 10°.72S×163°.68E, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.8/16, mbtmp3.7/7, ML4.0/1, Error ellipse: s-maj=53.0km s-min=28.3km az=167.0*
*NEIC **30** 14:40:33.4±1.0, 10°.08S×163°.63E, h35km, mb3.6/1, Error ellipse: s-maj=31.9km s-min=15.2km az=158.0*
ISC 30 14:40:28.4±7.1, 10°.7S±0°.3×163°.68E±0°.10, h16km±44km, n9, σ0§91/11, mb3.6/6, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.89**	**289**	Pn	**Pn**	**14 41 27.2**	**-0.3**
	10nm,0.3s,baz=247,slow=1.4,SNR=7.3						
HNR				Sn	**Sn**	**14 42 12.9**	**+0.1**
	39nm,0.3s,baz=248,slow=17,SNR=8.8						
HNR	**Honiara**	**3.89**	**289**	*e*Pn	**Pn**	**14 41 27.9**	**+0.3**
HNR				Sn	**Sn**	**14 42 12.9**	**+0.1**
CTAO	**Charters Tower**	**19.20**	**239**	*e*P	**Pn**	**14 44 57.4**	**+4.7**
	3.1nm,0.9s						
ASAR	**Alice Springs**	**31.15**	**242**	P	**P**	**14 46 45.5**	**-1.2**
	0.5nm,0.8s,mb3.4,baz=73,slow=11,SNR=4.4						
CMAR	**Chiang Mai Arr**	**70.12**	**294**	P	**P**	**14 51 41.8**	**+1.3**
	0.5nm,0.3s,mb3.9,baz=32,slow=39,SNR=4.4						
SONM	**Songino Array**	**77.20**	**324**	P	**P**	**14 52 20.1**	**-1.4**
	0.2nm,0.4s,mb3.4,baz=148,slow=11,SNR=2.6						
ILAR	**Eielson Array**	**83.84**	**19**	P	**P**	**14 52 56.0**	**-0.8**
	0.4nm,0.9s,mb3.5,baz=237,slow=6.0,SNR=4.1						
NVAR	**Mina Array Bea**	**87.36**	**50**	P	**P**	**14 53 15.8**	**+1.0**
	0.6nm,0.9s,mb3.8,baz=254,slow=9.0,SNR=3.3						
MKAR	**Makanchi Array**	**91.89**	**317**	P	**P**	**14 53 36.4**	**+0.4**
	0.3nm,0.7s,mb3.8,baz=106,slow=6.9,SNR=3.3						

NEIC 30 14:41:22.1, 52°.35N×169°.66W, h13km, ML3.7(PMR), ML3.2(AEIC), After AEIC., Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKFG	**Magazine Ridge**	**1.50**	**44**	P	Pn	14 41 46.6	-2.1
UNV	**Unalaska Valle**	**2.42**	**51**	P	Pn	14 42 00.3	-1.1
UNV				S	Sn	14 42 29.5	-1.3
ATKA	**Atka Island**	**2.79**	**269**	P	Pn	14 42 05.8	-0.6
ATKA				S	Sn	14 42 40.9	+1.0
AKGG	**Akutan Green G**	**2.88**	**48**	P	Pn	14 42 07.6	0.0
AKUT	**Akutan**	**2.94**	**51**	*e*P	Pn	14 42 09.1	+0.6
AKUT				S	Sn	14 42 44.5	+0.9
SDPT	**Sand Point**	**6.21**	**57**	*e*P	Pn	14 42 53.9	+0.6
AMKA	**Amchitka**	**6.91**	**266**	*e*P	Pn	14 43 03.3	+0.4

IDC 30 14:45:06.3±2.4, 10°.71S×163°.77E, h0km, mb3.8/4, mb1 4.0/6, mb1mx3.8/17, mbtmp4.0/6, ML4.5/1, Error ellipse: s-maj=50.4km s-min=37.1km az=127.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.97**	**288**	Pn	Pn	14 46 09.3	+0.9
	35nm,0.3s,baz=141,slow=3.7,SNR=18						
HNR				Sn	Sn	14 46 55.2	-0.5
	31nm,0.3s,baz=294,slow=20,SNR=4.8						
CTA	**Charters Tower**	**19.27**	**239**	P	Pn	14 49 34.1	+0.6
	0.3nm,0.3s,baz=68,slow=12,SNR=6.7						
ASAR	**Alice Springs**	**31.22**	**242**	P	P	14 51 27.2	-0.5
	1.2nm,0.8s,baz=75,slow=10,SNR=9.6						
CMAR	**Chiang Mai Arr**	**70.20**	**294**	P	P	14 56 20.9	-0.7
	0.8nm,0.9s,baz=116,slow=6.1,SNR=2.9						
SONM	**Songino Array**	**77.25**	**324**	P	P	14 57 03.4	+1.1
	0.6nm,0.7s,baz=141,slow=7.3,SNR=4.1						
MKAR	**Makanchi Array**	**91.95**	**317**	P	P	14 58 16.4	-0.4
	0.4nm,0.8s,baz=88,slow=5.5,SNR=4.1						

TAP 30 14:55:02.5, 22°.07N×121°.79E, h143km, ML4.0, 7C, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.22**	**263**	*e*P	Pn	14 55 22.0	0.0
	baz=263						
LAY				*e*S	Sn	14 55 36.1	-0.6
	baz=263						
TSEB	**Hengchuen, Pin**	**0.84**	**259**	*e*P	Pn	14 55 26.1	+0.8
	baz=258						
TSEB				*e*S	Sn	14 55 43.7	+1.1
	baz=258						
TAW	**Tawu**	**0.88**	**290**	*i* P	Pn	14 55 25.9	+0.3
	baz=296						
TAW				*i* S	Sn	14 55 42.6	-0.6
	baz=296						
TTN	**Taitung**	**0.91**	**319**	*e*P	Pn	14 55 26.4	+0.5
	baz=315						
TTN				*e*S	Sn	14 55 45.2	+1.6
	baz=315						
TWK1	**Hengchun**	**0.92**	**263**	P	Pn	14 55 26.6	+0.6
	baz=262						
TWK1				S	Sn	14 55 44.1	+0.3
	baz=262						
EAST	**Anshuo**	**0.93**	**290**	P	Pn	14 55 26.4	+0.4
	baz=294						
EAST				*e*S	Sn	14 55 44.0	+0.1
	baz=294						
ECL	**Taimali**	**0.94**	**305**	P	Pn	14 55 26.0	-0.1
	baz=308						
ECL				*e*S	Sn	14 55 42.6	-1.4
	baz=308						
HEN	**Hengchun**	**0.97**	**267**	*e*P	Pn	14 55 27.1	+0.7
	baz=276						
HEN				*e*S	Sn	14 55 44.6	0.0
	baz=276						
TWG	**Pinlang**	**1.00**	**319**	*e*P	Pn	14 55 26.6	0.0
	baz=315						
TWG				S	Sn	14 55 43.9	-1.2
	baz=315						
SCZT	**Fangliau**	**1.12**	**286**	⇑*i*P	Pn	14 55 28.0	+0.2
	baz=292						
SCZT				*e*S	Sn	14 55 46.0	-1.0
	baz=292						
SSD	**Sandimen**	**1.27**	**303**	⇑*i*P	Pn	14 55 29.5	+0.4
	baz=296						
SSD				*e*S	Sn	14 55 48.6	-0.8
	baz=296						
ELDTW	**Lidau**	**1.32**	**328**	*e*P	Pn	14 55 30.2	+0.5
	baz=328						
ELDTW				*e*S	Sn	14 55 50.8	+0.3
	baz=328						
TWP	**Hsiaoliuchiu**	**1.35**	**282**	*e*P	Pn	14 55 31.3	+1.3
	baz=288						
TWP				*e*S	Sn	14 55 52.1	+1.1
	baz=288						
STYT	**Tauyuan**	**1.45**	**319**	*i* P	Pn	14 55 31.5	+0.5
	baz=319						
STYT				*e*S	Sn	14 55 52.5	-0.4
	baz=319						
TWM1	**Shoushan**	**1.47**	**301**	*i* P	Pn	14 55 32.4	+1.1
	baz=301						
TWM1				*e*S	Sn	14 55 54.8	+1.6
	baz=301						
EHY	**Hungye**	**1.50**	**343**	P	Pn	14 55 31.1	-0.4
	baz=337						
EHY				*e*S	Sn	14 55 51.9	-1.9
	baz=337						
SGST	**Jiashian**	**1.50**	**312**	⇑*i*P	Pn	14 55 32.2	+0.6
	baz=313						
SGST				*e*S	Sn	14 55 53.3	-0.6
	baz=313						
WTP	**Ta-pu**	**1.60**	**318**	⇑*i*P	Pn	14 55 33.1	+0.5
	baz=318						
WTP				S	Sn	14 55 55.3	-0.4
	baz=318						
CHN3	**Shinhua**	**1.66**	**308**	*e*P	Pn	14 55 34.3	+1.0
	baz=308						
CHN3				*e*S	Sn	14 55 57.5	+0.7
	baz=308						
CHN4	**Tsaushan**	**1.69**	**319**	*i* P	Pn	14 55 33.9	+0.3
	baz=320						
CHN4				S	Sn	14 55 56.7	-0.8
	baz=320						
TWK	**Hsinying**	**1.69**	**315**	⇑*i*P	Pn	14 55 33.9	+0.2
	baz=323						
TWK				S	Sn	14 55 57.1	-0.5
	baz=323						
TAI1	**Yung-k'ang**	**1.74**	**304**	*e*P	Pn	14 55 33.5	-0.7
	baz=312						
TAI1				*e*S	Sn	14 55 58.0	-0.4
	baz=312						
ESL	**Shilin**	**1.77**	**349**	P	Pn	14 55 34.0	-0.5
	baz=344						
CHN5	**Tsauling**	**1.83**	**326**	*i* P	Pn	14 55 35.6	+0.2
	baz=320						
CHN5				*e*S	Sn	14 56 00.2	-0.3
	baz=320						
SCLT	**Jiali**	**1.84**	**307**	*e*P	Pn	14 55 35.3	-0.1
	baz=315						
SCLT				*e*S	Sn	14 56 00.7	+0.1
	baz=315						
CHY	**Chiayi**	**1.90**	**319**	P	Pn	14 55 36.0	0.0
	baz=319						
CHY				*e*S	Sn	14 56 00.9	-0.9
	baz=319						
WGK	**Gukeng**	**1.97**	**325**	⇑*i*P	Pn	14 55 37.0	+0.2
	baz=319						
WGK				*e*S	Sn	14 56 02.9	-0.3
	baz=319						
SMLT	**Sun Moon Lake**	**1.98**	**336**	P	Pn	14 55 37.3	+0.2
	baz=328						
SMLT				*e*S	Sn	14 56 03.5	-0.1
	baz=328						
TWD	**Chiawan**	**2.01**	**355**	*e*P	Pn	14 55 37.6	+0.2
TYC	**Yuchr**	**2.02**	**335**	*e*P	Pn	14 55 37.6	+0.1
	baz=328						
TYC				*e*S	Sn	14 56 04.5	+0.1
	baz=328						
WNT	**Mingjian**	**2.07**	**331**	⇑*i*P	Pn	14 55 38.5	+0.4
	baz=331						
WHF	**Hehuan Shan**	**2.12**	**347**	*e*P	Pn	14 55 39.7	+1.0
	baz=352						
TWT	**Tachien**	**2.25**	**346**	*e*P	Pn	14 55 41.1	+0.9
	baz=340						
TCU	**Taichung**	**2.31**	**334**	P	Pn	14 55 41.4	+0.4
	baz=327						
ENA	**Nanau**	**2.35**	**359**	*e*P	Pn	14 55 41.9	+0.4
	baz=359						
NNS	**Nan Shan**	**2.39**	**351**	*e*P	Pn	14 55 42.5	+0.5
	baz=354						
TWQ1	**Liyutan**	**2.46**	**338**	*e*P	Pn	14 55 42.4	-0.3
	baz=338						
TWC	**Suao**	**2.53**	**1**	*e*P	Pn	14 55 44.5	+0.8
	baz=6.0						
PNG	**Penghu**	**2.54**	**306**	P	Pn	14 55 43.1	-0.7
	baz=312						
PNG				*e*S	Sn	14 56 13.4	-2.3
	baz=312						
ENTT	**Nioudou**	**2.57**	**356**	*e*P	Pn	14 55 44.5	+0.3
	baz=355						
NSK	**Sanguang**	**2.63**	**351**	*e*P	Pn	14 55 45.4	+0.5
	baz=351						
TWE	**Neicheng**	**2.65**	**358**	*e*P	Pn	14 55 45.5	+0.3
	baz=350						
NSTT	**Nanjuang**	**2.65**	**344**	*e*P	Pn	14 55 45.2	0.0
	baz=344						

*ISCJB **30** 14:55:53.2±0.5, 66°.12N±0°.04×142°.61W±0°.08, h10km, Error ellipse: s-maj=5.2km s-min=4.7km az=31.2*
*IDC **30** 14:55:54.1±1.0, 66°.10N×142°.72W, h0km, mb3.7/1, mb1 3.9/5, mb1mx3.5/26, mbtmp3.8/5, ML3.6/4, Error ellipse: s-maj=15.3km s-min=8.3km az=160.0*
*NEIC **30** 14:55:57.4, 66°.07N×142°.86W, h36km, ML4.2(PMR), ML3.7(AEIC), MW3.7(SLM), After AEIC.*
*PGC **30** 14:56:03.0±14.0, 66°.02N×141°.76W, h35km, ML3.7/2, 244km northwest of Dawson, Yt Alaska*
ISC 30 14:55:55.0±0.4, 66°.11N±0°.03×142°.65W±0°.08, h10km, n27, σ1§13/36, 5D, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGAK	**Eagle**	**1.47**	**154**	P	**Pn**	**14 56 21.9**	**+0.4**
EGAK				S	**Sn**	**14 56 40.9**	**+0.1**
BM3	**Burnt Mountain**	**1.53**	**330**	P	**Pn**	**14 56 22.6**	**+0.2**
ILAR	**Eielson Array**	**2.22**	**235**	Pn	**Pn**	**14 56 31.0**	**-0.8**
	7.2nm,0.3s,baz=46,slow=14,SNR=361						
ILAR				Pg	**Pg**	**14 56 33.9**	**-3.6**
	31nm,0.3s,baz=44,slow=16,SNR=120						
ILAR				Lg		14 57 01.6	
	217nm,0.3s,baz=48,slow=30,SNR=50						
DAWY	**Dawson**	**2.47**	**145**	P	**Pn**	**14 56 35.9**	**+0.6**
DAWY				S	**Sn**	**14 57 06.7**	**+1.3**
DAWY	**Dawson**	**2.47**	**145**	⇓Pn	**Pn**	**14 56 35.9**	**+0.7**
DAWY				⇓Sg	**Sg**	**14 57 12.1**	**-2.2**
COLA	**College**	**2.50**	**243**	P	**Pn**	**14 56 34.8**	**-0.8**
DOT	**Dot Lake**	**2.54**	**194**	P	**Pn**	**14 56 36.7**	**+0.5**
DOT				S	**Sn**	**14 57 06.1**	**-1.0**
COLD	**Coldfoot**	**3.21**	**294**	P	**Pn**	**14 56 45.7**	**+0.4**
COLD				S	**Sn**	**14 57 23.2**	**-0.4**
MENT	**Mentasta**	**3.21**	**189**	*e*P	**Pn**	**14 56 46.6**	**+1.2**
PAX	**Paxson**	**3.38**	**202**	*e*P	**Pn**	**14 56 50.8**	**+3.1**
DHY	**Denali Highway**	**3.66**	**216**	P	**Pn**	**14 56 52.5**	**+0.9**
RND	**Reindeer**	**3.79**	**227**	P	**Pn**	**14 56 53.5**	**+0.1**
BPAW	**Bear Paw Mtn.**	**4.06**	**244**	P	**Pn**	**14 56 55.5**	**-1.5**
INK	**Inuvik**	**4.18**	**54**	Pn	**Pn**	**14 57 00.4**	**+1.6**
	6.0nm,0.3s,baz=234,slow=16,SNR=39						
INK				Sn	**Sn**	**14 57 46.5**	**-1.0**
	12nm,0.3s,baz=224,slow=19,SNR=4.2						
INK				Lg		14 58 03.3	
	9.7nm,0.3s,baz=173,slow=26,SNR=4.2						
INK	**Inuvik**	**4.18**	**54**	⇑Pn	**Pn**	**14 57 00.1**	**+1.4**
PPLA	**Purkeypile**	**5.23**	**236**	*e*Pn	**Pn**	**14 57 11.9**	**-1.2**
	23nm,0.5s						
BMRM	**Bremner River**	**5.23**	**191**	P	**Pn**	**14 57 12.0**	**-1.2**
	17nm,0.5s						
HYT	**Haines Junctio**	**5.78**	**154**	⇓Pn	**Pn**	**14 57 22.1**	**+1.5**
WHY	**Whitehorse**	**6.48**	**144**	⇑Pn	**Pn**	**14 57 31.1**	**+0.8**
WHY				⇑Sg	**Sg**	**14 59 17.8**	**-5.0**
RSO	**Redoubt South**	**7.26**	**223**	*e*P	**Pn**	**14 57 43.1**	**+2.2**
PLBC	**Pleasant Camp**	**7.27**	**154**	⇓Sg	**Sg**	**14 59 42.6**	**-5.3**
SVW2	**Sparrevohn**	**7.64**	**235**	*e*P	**Pn**	**14 57 46.1**	**0.0**
DLBC	**Dease Lake**	**9.66**	**137**	Pn	**Pn**	**14 58 13.2**	**-0.6**
	0.3nm,0.3s,baz=336,slow=18,SNR=3.0						
DLBC				Lg		15 00 58.1	
	0.2nm,0.3s,baz=170,slow=18,SNR=3.0						
**DLBC

TWG	baz=322			eS	Sg	15 00 17.8	0.0	
SSD	**Sandimen**	**1.17**	**315**	eP	Pg	15 00 09.1	+0.9	
ELDTW	**Lidau**	**1.36**	**340**	eP	Pn	15 00 10.9	-0.3	
TWM1	**Shoushan**	**1.37**	**312**	eP	Pn	15 00 13.2	+2.0	
SGST	**Jiashian**	**1.46**	**323**	eP	Pn	15 00 13.0	+0.5	
SGST	baz=334			eS	Sn	15 00 34.5	+2.6	
WTP	**Ta-pu**	**1.57**	**328**	eP	Pn	15 00 14.9	+0.7	
WTP	baz=348			eS	Sn	15 00 37.1	+2.3	
EHY	**Hungye**	**1.60**	**353**	eP	Pn	15 00 14.1	-0.4	
TWK	**Hsinying**	**1.66**	**325**	eP	Pn	15 00 16.7	+1.5	
TWK	baz=333			eS	Sn	15 00 40.1	+3.2	
CHN4	**Tsaushan**	**1.67**	**329**	eP	Pn	15 00 16.9	+1.5	
CHN4	baz=349			S	Sn	15 00 40.5	+3.3	
CHN5	**Tsauling**	**1.85**	**335**	eP	Pn	15 00 19.4	+1.5	
CHN5	baz=341			eS	Sn	15 00 45.0	+3.3	
ESL	**Shilin**	**1.90**	**357**	eP	Pn	15 00 17.1	-1.5	
SMLT	**Sun Moon Lake**	**2.05**	**344**	eP	Pn	15 00 21.3	+0.6	
SMLT	baz=1.0			eS	Sn	15 00 48.6	+2.1	
TYC	**Yuchr**	**2.08**	**343**	eP	Pn	15 00 21.6	+0.6	
TYC	baz=351			eS	Sn	15 00 49.2	+1.9	
WNT	**Mingjian**	**2.11**	**339**	eP	Pn	15 00 22.2	+0.7	
WNT	baz=347			eS	Sn	15 00 49.8	+1.8	
WHF	**Hehuan Shan**	**2.24**	**354**	eP	Pn	15 00 21.6	-1.7	
NNS	**Nan Shan**	**2.52**	**357**	eP	Pn	15 00 29.7	+2.6	
YOJ	**Yonaguni jima**	**2.89**	**28**	P	Pn	15 00 29.6	-2.6	
YOJ				eS	Sn	15 01 02.8	-4.4	
HATJ	**Hateruma jima**	**3.00**	**44**	eS	Sn	15 01 02.7	-7.3	
IRIF	**Iriomote-Funau**	**3.15**	**40**	P	Pn	15 00 32.8	-3.1	
IRIF				eS	Sn	15 01 07.2	-6.6	
JKRS	**Kuro-shima**	**3.26**	**44**	P	Pn	15 00 34.4	-2.9	
JKRS				eS	Sn	15 01 09.7	-6.7	
JIJ	**Ishigaki jima**	**3.43**	**44**	P	Pn	15 00 36.3	-3.4	
JIJ				eS	Sn	15 01 13.4	-7.3	
JTJ	**Tarama**	**3.99**	**46**	P	Pn	15 00 44.0	-3.4	
JTJ				eS	Sn	15 01 28.7	-5.8	

*ISCJB **30** 15:02:03.7±0.6, 41°.23N±0'.03×33°.88E±0'.04, h6km±5km, Error ellipse: s-maj=4.9km s-min=4.7km az=19.5*
*DDA **30** 15:02:03.1, 41°.25N×33°.86E, h7km±1km, Md3.0*
*ISK **30** 15:02:03.8, 41°.20N×33°.83E, h7km, MD2.9*
*CSEM **30** 15:02:04.0±0.2, 41°.22N×33°.86E, h5km, MD2.9, Error ellipse: s-maj=3.7km s-min=3.5km az=2.0*

ISC 30 15:02:04.1±0.5, 41°.22N±0'.03×33°.87E±0'.04, h4km±5km, n29, σ0§70/44, 1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOS	**Tosya**	**0.22**	**149**	PG	**Pg**	**15 02 08.9**	**+0.5**
TOS				eSG	**Sg**	**15 02 12.0**	**+0.8**
TOS	**Tosya**	**0.22**	**149**	i Pg	**Pg**	**15 02 08.9**	**+0.6**
TOS				eSg	**Sg**	**15 02 12.0**	**+0.8**
BALT	**Daday**	**0.48**	**310**	‖ iP	**Pg**	**15 02 12.9**	**-0.4**
BALT				i S	**Sg**	**15 02 19.1**	**-0.5**
BALT	**Daday**	**0.48**	**310**	i P	**Pg**	**15 02 12.9**	**-0.4**
BALT				i S	**Sg**	**15 02 19.1**	**-0.5**
CANT	**Cankiri**	**0.65**	**197**	ePG	**Pg**	**15 02 16.4**	**-0.1**
CANT				eSG	**Sg**	**15 02 25.0**	**+0.2**
BYBT	**Boyabat**	**0.72**	**70**	ePG	**Pg**	**15 02 18.6**	**+0.8**
BYBT	**Boyabat**	**0.72**	**70**	ePg	**Pg**	**15 02 18.6**	**+0.8**
BZK	**Bozkurt**	**0.74**	**8**	ePG	**Pg**	**15 02 19.1**	**+0.8**
BZK	**Bozkurt**	**0.74**	**8**	ePg	**Pg**	**15 02 19.1**	**+0.7**
BOYT	**Boyabat**	**0.80**	**75**	eP	**Pg**	**15 02 18.7**	**-0.8**
BOYT				eS	**Sg**	**15 02 30.1**	**+0.2**
BOYT	**Boyabat**	**0.80**	**75**	eP	**Pg**	**15 02 18.7**	**-0.8**
BOYT				eS	**Sg**	**15 02 30.1**	**+0.2**
ELDT	**Eldivan**	**0.81**	**205**	eP	**Pg**	**15 02 19.1**	**-0.5**
ELDT				eS	**Sg**	**15 02 30.8**	**+0.8**
ELDT	**Eldivan**	**0.81**	**205**	eP	**Pg**	**15 02 19.1**	**-0.6**
ELDT				eS	**Sg**	**15 02 30.8**	**+0.8**
SAFT	**Safranbolu**	**0.90**	**271**	ePG	**Pg**	**15 02 20.7**	**-0.6**
SAFT	**Safranbolu**	**0.90**	**271**	ePg	**Pg**	**15 02 20.7**	**-0.6**
CTKT	**Corum**	**0.92**	**130**	eP	**Pg**	**15 02 21.3**	**-0.4**
CTKT				eS	**Sg**	**15 02 32.5**	**-1.1**
CTKT	**Corum**	**0.92**	**130**	eP	**Pg**	**15 02 21.3**	**-0.4**
CTKT				eS	**Sg**	**15 02 32.5**	**-1.1**
CORM	**Corum**	**1.19**	**151**	ePN	**Pn**	**15 02 26.2**	**-1.3**
CORM	**Corum**	**1.19**	**151**	ePn	**Pn**	**15 02 26.2**	**-1.3**
SGKT	**Sivrigoynuk**	**1.52**	**245**	eP	**Pn**	**15 02 32.1**	**+0.1**
SGKT				eS	**Sn**	**15 02 53.4**	**+1.1**
SGKT	**Sivrigoynuk**	**1.52**	**245**	eP	**Pn**	**15 02 32.1**	**+0.1**
SGKT				eS	**Sn**	**15 02 53.4**	**+1.1**
LOD	**Lodumlu**	**1.58**	**213**	ePN	**Pn**	**15 02 32.1**	**-0.7**
LOD	**Lodumlu**	**1.58**	**213**	ePn	**Pn**	**15 02 32.1**	**-0.7**
CDAG	**Cicekdag**	**1.64**	**166**	eP	**Pn**	**15 02 34.5**	**+0.8**
CDAG				eS	**Sn**	**15 02 54.2**	**-1.0**
CDAG	**Cicekdag**	**1.64**	**166**	eP	**Pn**	**15 02 34.5**	**+0.8**
CDAG				eS	**Sn**	**15 02 54.2**	**-1.0**
KVT	**Kavak**	**1.65**	**94**	ePN	**Pn**	**15 02 34.5**	**+0.8**
KVT	**Kavak**	**1.65**	**94**	ePn	**Pn**	**15 02 34.5**	**+0.7**
YOZ	**Yozgat**	**1.93**	**145**	ePN	**Pn**	**15 02 38.0**	**+0.4**
YOZ	**Yozgat**	**1.93**	**145**	ePn	**Pn**	**15 02 38.1**	**+0.5**

*NEIC **30** 16:21:42.6, 38°.76S×175°.93E, h130km, MG3.8(WEL), After WEL.*

WEL 30 16:21:43.5±0.4, 38°.75S×175°.98E, h120km±3km, ML3.8/18, 4C, Error ellipse: s-maj=1.8km s-min=1.8km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KATZ	**Kakaramea**	**0.31**	**225**	PN	Pn	16 22 00.6	+0.1
TWVZ	**Taurewa**	**0.53**	**233**	PN	Pn	16 22 01.7	+0.1
BKZ	**Black Stump Fm**	**0.57**	**136**	PN	Pn	16 22 02.0	0.0
BKZ				SN	Sn	16 22 16.0	+0.2
BKZ	**Black Stump Fm**	**0.57**	**136**	P	Pn	16 22 02.2	+0.3
BKZ				S	Sn	16 22 16.1	+0.2
FWVZ	**Far West T-bar**	**0.60**	**213**	PN	Pn	16 22 02.4	+0.3
FWVZ	**Far West T-bar**	**0.60**	**213**	P	Pn	16 22 00.8	-1.3
WNVZ	**Wahianoa**	**0.65**	**207**	PN	Pn	16 22 02.7	+0.3
MOVZ	**Moawhango**	**0.68**	**195**	PN	Pn	16 22 02.5	-0.1
MTVZ	**Mangateitei**	**0.75**	**212**	PN	Pn	16 22 03.3	+0.1
RAHZ	**Arahi**	**0.88**	**101**	PN	Pn	16 22 05.1	+0.8
RAHZ				SN	Sn	16 22 21.0	+0.8
MCHZ	**McNeill Hill**	**0.89**	**141**	PN	Pn	16 22 05.5	+1.1
MCHZ				SN	Sn	16 22 21.1	+0.8
HIZ	**Hauiti**	**0.91**	**285**	PN	Pn	16 22 04.7	+0.1
HIZ	**Hauiti**	**0.91**	**285**	P	Pn	16 22 04.7	+0.1
URZ	**Urewera**	**1.01**	**61**	PN	Pn	16 22 05.3	-0.4
URZ				SN	Sn	16 22 21.1	-1.3
URZ				SN	Sn	16 22 21.4	-1.0
URZ	**Urewera**	**1.01**	**61**	P	Pn	16 22 05.4	-0.2
VRZ	**Vera Road**	**1.02**	**248**	PN	Pn	16 22 05.7	0.0
VRZ	**Vera Road**	**1.02**	**248**	P	Pn	16 22 05.3	-0.4
PNHZ	**Pukenui**	**1.17**	**172**	PN	Pn	16 22 07.0	-0.2
KAHZ	**Kahuranaki**	**1.25**	**146**	PN	Pn	16 22 08.5	+0.4
KAHZ				SN	Sn	16 22 27.1	+0.2
WAZ	**Wanganui**	**1.26**	**217**	⇑PN	Pn	16 22 08.1	-0.2
WAZ	**Wanganui**	**1.26**	**217**	P	Pn	16 22 08.1	-0.1
MWZ	**Matawai**	**1.28**	**72**	PN	Pn	16 22 08.3	-0.1
MWZ	**Matawai**	**1.28**	**72**	P	Pn	16 22 08.4	-0.1
TSZ	**Takapari Road**	**1.30**	**181**	PN	Pn	16 22 08.4	-0.3
TSZ	**Takapari Road**	**1.30**	**181**	P	Pn	16 22 08.4	-0.3
KNZ	**Kokohu**	**1.35**	**102**	PN	Pn	16 22 09.4	+0.2
KNZ	**Kokohu**	**1.35**	**102**	P	Pn	16 22 09.6	+0.4
WPHZ	**Waipukurau**	**1.36**	**165**	⇑PN	Pn	16 22 09.1	-0.2
WPHZ				SN	Sn	16 22 27.5	-1.4
PXZ	**Pawanui**	**1.45**	**152**	PN	Pn	16 22 09.9	-0.4
PRGZ	**Paritu Road**	**1.50**	**97**	PN	Pn	16 22 11.0	+0.2
DVHZ	**Dannevirke**	**1.55**	**175**	⇑PN	Pn	16 22 10.8	-0.7
MHGZ	**Mahia Peninsul**	**1.56**	**106**	PN	Pn	16 22 11.9	+0.4
PRHZ	**Porangahau**	**1.60**	**162**	PN	Pn	16 22 11.6	-0.4
PRHZ				SN	Sn	16 22 32.0	-1.7
POWZ	**Post Office Ro**	**1.65**	**186**	PN	Pn	16 22 11.7	-0.9
CNGZ	**Carnagh Statio**	**1.77**	**82**	PN	Pn	16 22 14.2	+0.2
PUZ	**Puketiti**	**1.91**	**70**	PN	Pn	16 22 15.4	-0.4
MRZ	**Mangatainoka R**	**1.93**	**189**	PN	Pn	16 22 14.7	-1.4
MRZ	**Mangatainoka R**	**1.93**	**189**	P	Pn	16 22 14.6	-1.4
BFZ	**Birch Farm**	**1.94**	**174**	PN	Pn	16 22 15.0	-1.1
BFZ	**Birch Farm**	**1.94**	**174**	P	Pn	16 22 15.0	-1.1
OGWZ	**Otaki Gorge**	**2.15**	**197**	PN	Pn	16 22 17.3	-1.5
HOWZ	**Holdsworth Sta**	**2.17**	**189**	⇑PN	Pn	16 22 17.2	-1.8
KIW	**Kapiti Island**	**2.26**	**201**	PN	Pn	16 22 18.2	-1.9
KIW	**Kapiti Island**	**2.26**	**201**	P	Pn	16 22 18.2	-2.0
TMWZ	**Te Maipa**	**2.35**	**182**	PN	Pn	16 22 19.5	-1.8
MTW	**Mount Morrison**	**2.43**	**189**	PN	Pn	16 22 20.1	-2.2
MTW	**Mount Morrison**	**2.43**	**189**	P	Pn	16 22 20.1	-2.2
CAW	**Cannon Point**	**2.46**	**196**	PN	Pn	16 22 20.5	-2.1
CAW	**Cannon Point**	**2.46**	**196**	P	Pn	16 22 20.5	-2.1
TRWZ	**Traveller**	**2.65**	**185**	PN	Pn	16 22 23.1	-2.1
PAWZ	**Paruwai Farm**	**2.66**	**189**	ePN	Pn	16 22 22.8	-2.5
PAWZ	**Paruwai Farm**	**2.66**	**189**	eP	Pn	16 22 22.8	-2.5
WEL	**Wellington**	**2.69**	**200**	PN	Pn	16 22 23.5	-2.2
WEL	**Wellington**	**2.69**	**200**	P	Pn	16 22 23.5	-2.2
MSWZ	**Moikau Station**	**2.72**	**192**	PN	Pn	16 22 23.4	-2.6
MSWZ	**Moikau Station**	**2.72**	**192**	P	Pn	16 22 23.4	-2.6
TCW	**Tory Channel**	**2.78**	**207**	PN	Pn	16 22 24.5	-2.4
TCW	**Tory Channel**	**2.78**	**207**	P	Pn	16 22 24.5	-2.4
PLWZ	**Palliser**	**2.87**	**191**	PN	Pn	16 22 25.1	-2.9
TUWZ	**Tuamarina**	**3.10**	**210**	PN	Pn	16 22 28.1	-2.9
NNZ	**Nelson**	**3.17**	**218**	SN	Sn	16 23 05.5	-3.8
QRZ	**Quartz Range**	**3.37**	**231**	PN	Pn	16 22 31.7	-2.8
QRZ	**Quartz Range**	**3.37**	**231**	P	Pn	16 22 31.8	-2.8
THZ	**Tophouse**	**3.82**	**217**	PN	Pn	16 22 38.6	-1.9
THZ	**Tophouse**	**3.82**	**217**	P	Pn	16 22 38.9	-1.6
LTZ	**Lake Taylor**	**4.91**	**214**	SN	Sn	16 23 42.7	-8.2
MQZ	**McQueen's Vall**	**5.55**	**206**	SN	Sn	16 23 56.1	-10

*CSEM **30** 17:14:13.8±0.1, 38°.74N×21°.27E, h2km, MD3.2, Error ellipse: s-maj=3.4km s-min=2.8km az=44.0*
*THE **30** 17:14:13.7, 38°.75N×21°.28E, h0km±1km, ML3.5/10, Error ellipse: s-maj=1.9km s-min=0.5km az=209.0*
*NEIC **30** 17:14:13.8, 38°.76N×21°.27E, h17km, MD3.2(ATH), After ATH.*
*ATH **30** 17:14:13.8, 38°.76N×21°.27E, h17km±1km, MD3.2/13*
*ISCJB **30** 17:14:14.2±0.3, 38°.74N±0'.02×21°.28E±0'.02, h10km, Error ellipse: s-maj=2.8km s-min=2.2km az=135.2*

ISC 30 17:14:14.1±0.4, 38°.76N±0'.02×21°.27E±0'.02, h1km±3km, n101, σ0§94/153, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EVR	**Evrytania**	**0.45**	**69**	ePb	**Pg**	**17 14 23.2**	**+0.5**
EVR				eSb	**Sg**	**17 14 29.7**	**+1.2**
EVR	**Evrytania**	**0.45**	**69**	ePB	**Pg**	**17 14 23.2**	**+0.5**
EVR				eSB	**Sg**	**17 14 29.7**	**+1.2**
EVR	**Evrytania**	**0.45**	**69**	ePb	**Pg**	**17 14 23.2**	**+0.5**
EVR				eSb	**Sg**	**17 14 29.7**	**+1.2**
LKD2	**Lefkada island**	**0.48**	**274**	P	**Pg**	**17 14 23.4**	**+0.1**
LKD2				S	**Sg**	**17 14 30.5**	**+1.0**
LKD2	**Lefkada island**	**0.48**	**274**	P	**Pg**	**17 14 23.4**	**+0.1**
LKD2				S	**Sg**	**17 14 30.5**	**+1.0**
EFP	**Efpalio**	**0.60**	**123**	ePB	**Pg**	**17 14 25.0**	**-0.5**
EFP				eSN	**Sg**	**17 14 34.8**	**+1.5**
EFP	**Efpalio**	**0.60**	**123**	ePB	**Pg**	**17 14 24.9**	**-0.6**
EFP				S	**Sg**	**17 14 33.9**	**+0.6**
EFP	**Efpalio**	**0.60**	**123**	ePb	**Pg**	**17 14 25.0**	**-0.5**
EFP				S	**Sg**	**17 14 33.9**	**+0.6**
UPR	**University Cam**	**0.62**	**139**	ePB	**Pg**	**17 14 25.7**	**-0.3**
UPR				eSN	**Sg**	**17 14 35.4**	**+1.3**
UPR	**University Cam**	**0.62**	**139**	P	**Pg**	**17 14 25.8**	**-0.2**
UPR				S	**Sg**	**17 14 34.9**	**+0.8**
UPR	**University Cam**	**0.62**	**139**	P	**Pg**	**17 14 25.8**	**-0.2**
UPR				S	**Sg**	**17 14 34.9**	**+0.8**
RLS	**Riolos of Patr**	**0.71**	**168**	ePn	**Pg**	**17 14 27.3**	**-0.5**
RLS				eSn	**Sg**	**17 14 37.9**	**+0.8**
RLS	**Riolos of Patr**	**0.71**	**168**	ePN	**Pg**	**17 14 27.3**	**-0.5**
RLS				eSN	**Sg**	**17 14 37.9**	**+0.8**
RLS	**Riolos of Patr**	**0.71**	**168**	ePn	**Pg**	**17 14 27.3**	**-0.5**
TRIZ	**Trizonia**	**0.74**	**122**	P	**Pg**	**17 14 27.4**	**-0.9**
TRIZ				S	**Sg**	**17 14 38.8**	**+0.9**
TRIZ	**Trizonia**	**0.74**	**122**	P	**Pg**	**17 14 27.4**	**-0.9**
TRIZ				S	**Sg**	**17 14 38.8**	**+0.9**
KFL	**Anninata**	**0.75**	**211**	P	**Pg**	**17 14 27.6**	**-0.9**
KFL	**Anninata**	**0.75**	**211**	P	**Pg**	**17 14 27.6**	**-0.9**
LAKA	**Lakka**	**0.76**	**133**	P	**Pg**	**17 14 27.9**	**-0.7**
LAKA				S	**Sg**	**17 14 39.4**	**+1.0**
LAKA	**Lakka**	**0.76**	**133**	P	**Pg**	**17 14 27.9**	**-0.7**
LAKA				S	**Sg**	**17 14 39.4**	**+1.0**
KALE	**Kalithea**	**0.77**	**118**	P	**Pg**	**17 14 27.8**	**-1.1**
KALE				S	**Sg**	**17 14 39.8**	**+0.9**
KALE	**Kalithea**	**0.77**	**118**	P	**Pg**	**17 14 27.8**	**-1.1**
KALE				S	**Sg**	**17 14 39.8**	**+0.9**
VLS	**Valsamata**	**0.79**	**223**	ePn	**Pg**	**17 14 28.9**	**-0.3**
VLS				eSn	**Sg**	**17 14 40.7**	**+1.3**
VLS	**Valsamata**	**0.79**	**223**	ePN	**Pg**	**17 14 28.9**	**-0.3**
VLS				eSN	**Sg**	**17 14 40.7**	**+1.3**
VLS	**Valsamata**	**0.79**	**223**	P	**Pg**	**17 14 27.9**	**-1.3**
VLS				S	**Sg**	**17 14 40.5**	**+1.1**
VLS	**Valsamata**	**0.79**	**223**	P	**Pg**	**17 14 27.9**	**-1.3**
VLS	**Valsamata**	**0.79**	**223**	ePn	**Pg**	**17 14 28.9**	**-0.3**
VLS				S	**Sg**	**17 14 40.5**	**+1.1**
AGG	**Agios Georgios**	**0.87**	**72**	ePn	**Pg**	**17 14 30.3**	**-0.4**
AGG				eSn	**Sg**	**17 14 42.7**	**+0.7**
AGG	**Agios Georgios**	**0.87**	**72**	ePN	**Pg**	**17 14 30.3**	**-0.4**
AGG				eSN	**Sg**	**17 14 42.7**	**+0.7**
AGG	**Agios Georgios**	**0.87**	**72**	P	**Pg**	**17 14 30.1**	**-0.6**
AGG				S	**Sg**	**17 14 43.0**	**+1.0**
AGG	**Agios Georgios**	**0.87**	**72**	P	**Pg**	**17 14 30.1**	**-0.6**
AGG				eSn	**Sg**	**17 14 42.7**	**+0.7**
AGG				S	**Sg**	**17 14 43.0**	**+1.0**
JAN	**Janina**	**0.95**	**340**	P	**Pg**	**17 14 32.1**	**-0.3**
JAN	**Janina**	**0.95**	**340**	P	**Pg**	**17 14 32.1**	**-0.3**
THL	**Klokotos Trika**	**0.99**	**35**	ePN	**Pg**	**17 14 32.3**	**-0.8**
THL				eSN	**Sg**	**17 14 46.7**	**+0.7**
THL	**Klokotos Trika**	**0.99**	**35**	P	**Pg**	**17 14 32.1**	**-1.0**
THL				S	**Sg**	**17 14 47.1**	**+1.1**
THL	**Klokotos Trika**	**0.99**	**35**	P	**Pg**	**17 14 32.1**	**-1.0**
THL				S	**Sg**	**17 14 47.1**	**+1.1**
DSF	**Desfina**	**1.04**	**109**	P	**Pg**	**17 14 32.3**	**-1.8**
DSF				S	**Sg**	**17 14 48.1**	**+0.5**
DSF	**Desfina**	**1.04**	**109**	P	**Pg**	**17 14 32.3**	**-1.8**
DSF				S	**Sg**	**17 14 48.1**	**+0.5**
GUR	**Goura**	**1.18**	**134**	ePN	**Pn**	**17 14 35.9**	**-1.8**
GUR	**Goura**	**1.18**	**134**	P	**Pg**	**17 14 35.3**	**-1.3**
GUR				S	**Sg**	**17 14 52.5**	**+0.6**
GUR	**Goura**	**1.18**	**134**	P	**Pg**	**17 14 35.3**	**-1.3**
GUR	**Goura**	**1.18**	**134**	ePn	**Pn**	**17 14 35.9**	**-1.8**
GUR				S	**Sg**	**17 14 52.5**	**+0.6**
LKR	**Lokris**	**1.36**	**94**	ePn	**Pn**	**17 14 39.0**	**-1.2**
LKR				eSn	**Sn**	**17 14 58.3**	**-0.5**
LKR	**Lokris**	**1.36**	**94**	ePN	**Pn**	**17 14 39.0**	**-1.2**
LKR				eSN	**Sn**	**17 14 58.3**	**-0.5**
LKR	**Lokris**	**1.36**	**94**	P	**Pg**	**17 14 38.8**	**-1.3**
LKR	**Lokris**	**1.36**	**94**	P	**Pg**	**17 14 38.8**	**-1.3**
LKR				eSn	**Sn**	**17 14 58.3**	**-0.5**
ATAL	**Atalanti**	**1.37**	**92**	P	**Pn**	**17 14 39.3**	**-1.1**
ATAL	**Atalanti**	**1.37**	**92**	P	**Pn**	**17 14 39.3**	**-1.1**
KEK	**Kerkira**	**1.49**	**310**	ePn	**Pn**	**17 14 41.3**	**-0.7**
KEK				eSn	**Sn**	**17 15 02.7**	**+0.6**
KEK	**Kerkira**	**1.49**	**310**	ePN	**Pn**	**17 14 41.3**	**-0.7**
KEK				eSN	**Sn**	**17 15 02.7**	**+0.6**
KEK	**Kerkira**	**1.49**	**310**	P	**Pn**	**17 14 41.2**	**-0.8**
KEK				S	**Sg**	**17 15 02.1**	**+0.1**
KEK	**Kerkira**	**1.49**	**310**	P	**Pn**	**17 14 41.2**	**-0.8**
KEK				S	**Sg**	**17 15 02.1**	**+0.1**
KEK				eSn	**Sn**	**17 15 02.7**	**+0.6**
LTK	**Loutraki**	**1.52**	**118**	ePN	**Pn**	**17 14 42.1**	**-0.3**
LTK	**Loutraki**	**1.52**	**118**	ePn	**Pn**	**17 14 42.1**	**-0.3**
KZN	**Kozani**	**1.59**	**14**	ePn	**Pn**	**17 14 43.0**	**-0.5**
KZN	**Kozani**	**1.59**	**14**	ePN	**Pn**	**17 14 43.0**	**-0.5**
KZN	**Kozani**	**1.59**	**14**	ePn	**Pn**	**17 14 43.0**	**-0.5**
XOR	**Xorichti**	**1.61**	**67**	P	**Pn**	**17 14 44.0**	**+0.3**
XOR	**Xorichti**	**1.61**	**67**	P	**Pn**	**17 14 44.0**	**+0.3**
NEO	**Neokhori**	**1.62**	**70**	ePn	**Pn**	**17 14 43.3**	**-0.5**
NEO	**Neokhori**	**1.62**	**70**	ePN	**Pn**	**17 14 43.2**	**-0.6**
NEO	**Neokhori**	**1.62**	**70**	ePn	**Pn**	**17 14 43.3**	**-0.5**
VLX	**Vlachokerasia**	**1.64**	**147**	ePN	**Pn**	**17 14 44.3**	**+0.3**
VLX	**Vlachokerasia**	**1.64**	**147**	P	**Pn**	**17 14 46.8**	**+2.8**
VLX				S	**Sn**	**17 15 06.4**	**+0.6**
VLX	**Vlachokerasia**	**1.64**	**147**	ePn	**Pn**	**17 14 44.3**	**+0.3**
VLX	**Vlachokerasia**	**1.64**	**147**	P	**Pn**	**17 14 46.8**	**+2.8**
VLX				S	**Sn**	**17 15 06.4**	**+0.6**
LIT	**Litokhoron**	**1.64**	**35**	P	**Pn**	**17 14 42.6**	**-1.5**
LIT	**Litokhoron**	**1.64**	**35**	P	**Pn**	**17 14 42.5**	**-1.6**
LIT	**Litokhoron**	**1.64**	**35**	P	**Pn**	**17 14 42.6**	**-1.5**
ITM	**Ithomi**	**1.66**	**162**	ePn	**Pn**	**17 14 45.0**	**+0.7**
ITM				eSn	**Sn**	**17 15 06.8**	**+0.5**
ITM	**Ithomi**	**1.66**	**162**	ePN	**Pn**	**17 14 45.0**	**+0.7**
ITM				eSN	**Sn**	**17 15 06.8**	**+0.5**
ITM	**Ithomi**	**1.66**	**162**	P	**Pn**	**17 14 43.5**	**-0.8**
ITM	**Ithomi**	**1.66**	**162**	P	**Pn**	**17 14 43.5**	**-0.8**
ITM	**Ithomi**	**1.66**	**162**	ePn	**Pn**	**17 14 45.0**	**+0.7**
ITM				eSn	**Sn**	**17 15 06.8**	**+0.5**
NEST	**Nestorio**	**1.66**	**354**	P	**Pn**	**17 14 44.6**	**+0.2**
NEST	**Nestorio**	**1.66**	**354**	P	**Pn**	**17 14 44.6**	**+0.2**
PYL	**PYLOS**	**1.90**	**169**	ePN	**Pn**	**17 14 47.6**	**0.0**
PYL	**PYLOS**	**1.90**	**169**	ePn	**Pn**	**17 14 47.6**	**0.0**
DID	**Didima**	**1.99**	**128**	P	**Pn**	**17 14 48.9**	**0.0**
DID	**Didima**	**1.99**	**128**	P	**Pn**	**17 14 48.9**	**0.0**
FNA	**Florina**	**2.02**	**2**	P	**Pn**	**17 14 49.4**	**0.0**
FNA	**Florina**	**2.02**	**2**	P	**Pn**	**17 14 49.4**	**0.0**
VLY	**Voula,Athens**	**2.18**	**114**	P	**Pn**	**17 14 53.6**	**+2.1**
VLY	**Voula,Athens**	**2.18**	**114**	P	**Pn**	**17 14 53.6**	**+2.1**
BIA	**Bitola**	**2.26**	**1**	i Pn	**Pn**	**17 14 53.9**	**+1.3**
BIA				eSn	**Sn**	**17 15 27.3**	**+6.2**
BIA	**Bitola**	**2.26**	**1**	P	**Pn**	**17 14 53.5**	**+0.9**
BIA	**Bitola**	**2.26**	**1**	P	**Pn**	**17 14 53.5**	**+0.9**
PLG	**Polygyros**	**2.33**	**45**	P	**Pn**	**17 14 52.9**	**-0.7**
PLG	**Polygyros**	**2.33**	**45**	P	**Pn**	**17 14 52.9**	**-0.7**
GRG	**Griva**	**2.36**	**21**	P	**Pn**	**17 14 54.5**	**+0.5**
GRG	**Griva**	**2.36**	**21**	P	**Pn**	**17 14 54.5**	**+0.5**
OHR	**Ohrid**	**2.38**	**351**	i Pn	**Pn**	**17 14 55.2**	**+1.0**
OHR				eSn	**Sn**	**17 15 30.2**	**+6.2**
VLI	**Veliai**	**2.43**	**147**	ePb	**Pb**	**17 14 55.6**	**-2.9**
VLI	**Veliai**	**2.43**	**147**	ePB	**Pb**	**17 14 55.6**	**-2.9**
KRUS	**Krusevo**	**2.61**	**360**	i Pn	**Pn**	**17 14 57.7**	**+0.3**
VAY	**Valandovo**	**2.75**	**21**	ePn	**Pn**	**17 14 59.9**	**+0.5**
VAY				eSn	**Sn**	**17 15 33.5**	**+0.4**
TIR	**Tirane**	**2.80**	**338**	P	**Pn**	**17 15 01.5**	**+1.5**
TIR	**Tirane**	**2.80**	**338**	P	**Pn**	**17 15 01.5**	**+1.4**
TIP	**Timpagrande**	**3.54**	**278**	P	**Pn**	**17 15 09.8**	**-0.4**
TIP	**Timpagrande**	**3.54**	**278**	P	**Pn**	**17 15 09.8**	**-0.4**
STON	**Ston**	**4.92**	**328**	ePn	**Pn**	**17 15 25.6**	**-3.5**
STON				Sn	**Sn**	**17 16 19.5**	**-7.2**

*IDC **30** 17:38:51.1±1.6, 10°.82S×163°.66E, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.8/16, mbtmp3.8/7, ML3.8/1, Error ellipse: s-maj=55.1km s-min=28.0km az=157.0*
*ISCJB **30** 17:38:53.2±6.8, 10°.9S±0'.2×163°.6E±0'.1, h22km±47km, mb3.6/6, Error ellipse: s-maj=40.4km s-min=18.8km az=14.9*
*NEIC **30** 17:38:59.5±0.9, 10°.07S×163°.55E, h35km, mb4.0/1, Error ellipse: s-maj=25.7km s-min=12.9km az=148.0*

ISC 30 17:38:54.0±7.1, 10°.8S±0'.2×163°.6E±0'.1, h15km±45km, n9, σ0§46/10, mb3.6/6, Bougainville - Solomon Islands region

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

EVR	**Evrytania**	**1.47**	**56**	*e*PN	**Pn**	**18 00 15.9**	**-0.4**
EVR	**Evrytania**	**1.47**	**56**	*e*Pn	**Pn**	**18 00 15.9**	**-0.4**
KALE	**Kalíthea**	**1.52**	**79**	P	**Pn**	**18 00 16.2**	**-0.8**
KALE	**Kalithea**	**1.52**	**79**	P	**Pn**	**18 00 16.2**	**-0.8**
ITM	**Ithomi**	**1.63**	**124**	*e*Pn	**Pn**	**18 00 20.2**	**+1.7**
ITM	**Ithomi**	**1.63**	**124**	*e*PN	**Pn**	**18 00 20.2**	**+1.7**
ITM				*e*SN	**Sn**	**18 00 42.7**	**+3.3**
ITM	**Ithomi**	**1.63**	**124**	P	**Pn**	**18 00 19.4**	**+0.9**
ITM	**Ithomi**	**1.63**	**124**	P	**Pn**	**18 00 19.4**	**+0.9**
KEK	**Kerkira**	**1.64**	**348**	*e*Pn	**Pn**	**18 00 19.6**	**+1.0**
KEK	**Kerkira**	**1.64**	**348**	*e*PN	**Pn**	**18 00 19.6**	**+1.0**
KEK	**Kerkira**	**1.64**	**348**	*e*Pn	**Pn**	**18 00 19.6**	**+1.0**
DSF	**Desfina**	**1.82**	**80**	P	**Pn**	**18 00 21.4**	**+0.2**
DSF	**Desfina**	**1.82**	**80**	P	**Pn**	**18 00 21.4**	**+0.2**

IDC 30 18:35:55.1±2.3, 1°.32N×126°.71E, h0km, mb3.9/4, mb1 4.0/4, mb1mx3.6/20, mbtmp3.9/4, Error ellipse: s-maj=336.8km s-min=20.9km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**25.80**	**165**	P	P	18 41 28.0	-0.1
	1.0nm,0.3s,baz=347,slow=12,SNR=39						
ASAR				PcP	PcP	18 44 58.2	+0.2
	0.3nm,0.5s,baz=350,slow=2.4,SNR=5.7						
STKA	**Stephens Creek**	**35.91**	**158**	P	P	18 42 57.1	-0.1
	2.5nm,0.8s,baz=346,slow=8.9,SNR=4.5						
MKAR	**Makanchi Array**	**59.52**	**326**	P	P	18 46 00.2	0.0
	0.4nm,0.4s,baz=122,slow=8.1,SNR=12						
KURK	**Kurchatov**	**63.76**	**328**	P	P	18 46 28.8	0.0
	1.2nm,0.7s,baz=127,slow=6.2,SNR=7.1						

*IDC **30** 19:06:51.2±0.7, 10°.69S×163°.54E, h0km, mb4.5/17, mb1 4.6/18, mb1mx4.6/20, mbtmp4.5/18, ML4.9/1, MS4.4/16, Ms1 4.4/16, ms1mx4.3/21, Error ellipse: s-maj=24.3km s-min=17.8km az=139.0*

*ISCJB **30** 19:06:54.9±1.8, 10°.67S±0°.06×163°.45E±0°.04, h30km±12km, mb4.9/67, MS4.6/41, Error ellipse: s-maj=9.9km s-min=7.2km az=3.4*

*MOS **30** 19:06:56.1±1.0, 10°.49S×163°.47E, h33km, mb5.4/24, MS4.6/11, Error ellipse: s-maj=11.1km s-min=9.7km az=124.3*

*GCMT **30** 19:06:56.7±0.2, 10°.50S×163°.63E, h12km, MW5.1, Moment Tensor Solution. s45,c80; s74,c129; Moment tensor: Scale 10^{16}Nm; M_{rr}-3.82±.12; $M_{\theta\theta}$4.48±.11; $M_{\phi\phi}$-0.67±.12; $M_{r\theta}$-0.84±.29; $M_{\theta\phi}$3.56±.10; $M_{\phi r}$-0.88±.33; Best double couple: $M_0$5.20000×10^{16} NP1:ϕ_s258.00000°, δ41.00000°, λ-68.00000°. NP2:ϕ_s50.00000°, δ53.00000°, λ-108.00000°. Principal axes: T 6.4300, Plg6.0000°, Azm153.0000°; N -2.3900, Plg14.0000°, Azm61.0000°; P -4.0500, Plg74.0000°, Azm266.0000°; Data Used: II IC IU G CN.*

*BJI **30** 19:06:57.6, 10°.15S×163°.62E, h35km, mB5.1/30, mb4.7/41, Ms4.9/37, Ms7 4.7/38*

*NEIC **30** 19:06:57.4±1.2, 10°.68S×163°.44E, h38km±11km, mb5.2/34, Error ellipse: s-maj=9.8km s-min=7.4km az=171.0*

ISC 30 19:06:58.0±1.0, 10°.69S±0°.06×163°.46E±0°.05, h41km±9km, h35km±1.0km: pP-P, n185, σ1§12/135, mb4.9/67, MS4.6/41, 4C-3D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.68**	**289**	Pn	**Pn**	**19 07 51.8**	**-0.6**
	98nm,0.3s,baz=156,slow=2.6,SNR=56						
HNR				Sn	**Sn**	**19 08 35.2**	**+0.7**
	143nm,0.3s,baz=135,slow=22,SNR=6.3						
HNR	**Honiara**	**3.68**	**289**	*e*P	**Pn**	**19 07 51.5**	**-0.8**
DZM	**Mont Dzumac**	**11.68**	**166**	*e*P	**Pn**	**19 09 43.7**	**+1.6**
	163nm,1.3s						
DZM	**Mont Dzumac**	**11.68**	**166**	*e*P	**Pn**	**19 09 40.0**	**-2.0**
	35nm,0.7s						
MSVF	**Nonsavu**	**15.78**	**118**	P	**Pn**	**19 10 37.2**	**-0.1**
	175nm,1.9s						
PMG	**Port Moresby**	**16.11**	**273**	*e*P	**Pn**	**19 10 43.4**	**+1.8**
PMG				pmax	pmax		
	comp=Z,68nm,1.2s						
PMG	**Port Moresby**	**16.11**	**273**	*e*Pn	**Pn**	**19 10 39.6**	**-2.0**
	comp=Z,117nm,1.4s						
EIDS	**Eidsvold**	**18.73**	**217**	*e*P	**Pn**	**19 11 15.8**	**+1.7**
	comp=Z,17nm,0.6s						
CTA	**Charters Tower**	**19.03**	**239**	*e*P	**Pn**	**19 11 18.1**	**+0.5**
	comp=Z,34nm,0.9s						
CTA				*e*S	**S**	**19 15 01.9**	**+11**
CTA	**Charters Tower**	**19.03**	**239**	P	**Pn**	**19 11 18.7**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=65,slow=12,SNR=19						
CTA	**Charters Tower**	**19.03**	**239**	P	**Pn**	**19 11 18.7**	**+1.0**
CTAO	**Charters Tower**	**19.03**	**239**	*e*P	**Pn**	**19 11 18.0**	**+0.4**
CTAO				pmax	pmax		
	comp=Z,44nm,0.8s						
CTAO	**Charters Tower**	**19.03**	**239**	*e*P	**Pn**	**19 11 18.0**	**+0.3**
	comp=Z,44nm,0.8s						
COEN	**Coen**	**20.08**	**259**	*e*P	**P**	**19 11 27.3**	**-0.9**
	comp=Z,352nm,1.2s						
ARMA	**Armidale**	**22.51**	**208**	*e*P	**P**	**19 11 54.7**	**+0.6**
STKA	**Stephens Creek**	**29.21**	**220**	*e*P	**P**	**19 12 54.0**	**-1.8**
	comp=Z,4.7nm,1.1s,mb4.1						
STKA	**Stephens Creek**	**29.21**	**220**	P	**P**	**19 12 55.7**	**-0.1**
	comp=Z,2.3nm,0.6s,mb4.1,baz=73,slow=8.4,SNR=8.1						
STKA				LR	LR	19 24 37.3	
	comp=Z,1μm,18.3s,MS4.5,baz=38,slow=36						
STKA	**Stephens Creek**	**29.21**	**220**	P	**P**	**19 12 55.7**	**-0.1**
STKA				LR	LR	19 24 37.3	
WRAB	**Tennant Creek**	**29.50**	**248**	*e*P	**P**	**19 12 56.7**	**-1.9**
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
WRAB	**Tennant Creek**	**29.50**	**248**	*e*P	**P**	**19 12 56.7**	**-1.9**
	comp=Z,8.9nm,0.8s,mb4.5						
URZ	**Urewera**	**30.06**	**158**	LR	LR	19 22 56.1	
	comp=Z,1μm,19.3s,MS4.6,baz=326,slow=32						
GUMO	**Guam**	**30.36**	**322**	LR	LR	19 24 06.7	
	comp=Z,2μm,21.8s,MS4.7,baz=90,slow=34						
KAKA	**Kakadu**	**30.44**	**263**	*e*P	**P**	**19 13 06.3**	**-0.6**
	comp=Z,18nm,1.5s,mb4.6						
KAKA	**Kakadu**	**30.44**	**263**	*e*P	**P**	**19 13 06.1**	**-0.8**
ASAR	**Alice Springs**	**30.97**	**242**	P	**P**	**19 13 09.8**	**-1.8**
	comp=Z,2.5nm,0.6s,mb4.2,baz=71,slow=9.7,SNR=29						
TOO	**Toolangi**	**31.27**	**208**	*e*P	**P**	**19 13 14.2**	**+0.2**
RPZ	**Rata Peaks**	**33.56**	**170**	LR	LR	19 23 04.9	
	comp=Z,444nm,21.6s,MS4.1,baz=340,slow=29						
FITZ	**Fitzroy Crossi**	**37.31**	**254**	*e*P	**P**	**19 14 04.6**	**-2.0**
	comp=Z,14nm,0.9s,mb4.8						
FITZ	**Fitzroy Crossi**	**37.31**	**254**	*e*P	**P**	**19 14 04.0**	**-2.6**
	comp=Z,34nm,1.2s,mb5.0						
DAV	**Davao City (W)**	**41.63**	**293**	LR	LR	19 30 05.5	
	comp=Z,326nm,20.7s,MS4.2,baz=130,slow=33						
CBIJ	**Chichi jima**	**42.86**	**332**	LR	LR	19 32 19.8	
	comp=Z,463nm,18.0s,MS4.4,baz=245,slow=36						
PPT	**Papeete**	**45.96**	**104**	LR	LR	19 29 22.3	
	comp=Z,422nm,20.6s,MS4.4,baz=280,slow=29						
MJAR	**Matsushiro Arr**	**52.65**	**334**	LR	LR	19 36 47.5	
	comp=Z,466nm,21.3s,MS4.5,baz=155,slow=34						
MAT	**Matsushiro**	**52.65**	**334**	P	**P**	**19 16 09.2**	**+1.1**
MAT				S	**S**	**19 23 35.0**	**+2.1**
ERM	**Erimo**	**55.66**	**342**	*e*P	**P**	**19 16 29.4**	**-0.6**
ERM				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.8						
QZH	**Quanzhou**	**56.28**	**310**	*e*P	**P**	**19 16 37.3**	**+2.5**
QZH				S	**S**	**19 24 26.3**	**+4.1**
QZH				LR	LR		
	comp=Z,1μm,19.9s,MS4.9						
YUK	**Yuzh-Kuril'sk**	**56.76**	**345**	⇑*i*P	**P**	**19 16 42.7**	**+4.9**
YUK				*i* S	**S**	**19 24 37.4**	**+10**
YUK				MLR	MLR		
	comp=N,430nm,20.0s,MS4.6						
YUK				MLR	MLR		
	comp=E,319nm,20.0s,MS4.6						
YUK				MLR	MLR		
	comp=Z,564nm,20.0s,MS4.7						
ASAJ	**Asahikawa**	**57.74**	**342**	P	**P**	**19 16 43.9**	**-0.9**
	comp=Z,11nm,1.1s,mb4.8,baz=207,slow=16,SNR=4.4						
KSRS	**Korea Array**	**58.34**	**327**	P	**P**	**19 16 48.0**	**-1.0**
	comp=Z,2.2nm,0.9s,mb4.2,baz=137,slow=6.8,SNR=9.8						
KSRS				LR	LR	19 40 20.4	
	comp=Z,282nm,18.1s,MS4.4,baz=137,slow=34						
NJ2	**Nanjing**	**60.20**	**317**	*e*P	**P**	**19 17 02.5**	**+0.4**
NJ2				pP	pP	19 17 12.5	-1.5
NJ2				S	**S**	**19 25 11.0**	**-2.1**
NJ2				sS	sS	19 25 26.0	-6.9
NJ2				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
NJ2				pmax	pmax		
	comp=Z,210nm,4.4s						
NJ2				LR	LR		
	comp=N,490nm,23.8s,MS5.0						
NJ2				LR	LR		
	comp=E,1μm,23.5s,MS5.0						
NJ2				LR	LR		
	comp=Z,470nm,17.6s						
YSS	**Yuzh-Sakhalins**	**60.29**	**344**	*e*P	**P**	**19 17 02.9**	**+0.6**
YSS				*e*S	**S**	**19 25 12.0**	**-1.7**
YSS				MLR	MLR		
	comp=Z,400nm,18.0s,MS4.6						
QIZ	**Qiongzhong**	**60.54**	**299**	P	**P**	**19 17 04.3**	**-0.3**
QIZ				pP	pP	19 17 13.5	-3.0
QIZ				PP	PP	19 19 18.0	-0.5
QIZ				S	**S**	**19 25 19.0**	**+1.1**
QIZ				pmax	pmax		
	comp=Z,13nm,1.7s,mb4.8						
QIZ				pmax	pmax		
	comp=Z,67nm,3.4s						
QIZ				LR	LR		
	comp=N,180nm,21.7s,MS4.3						
QIZ				LR	LR		
	comp=E,180nm,19.2s,MS4.3						
QIZ				LR	LR		
	comp=Z,420nm,19.8s,MS4.6						
WHN	**Wuhan**	**62.49**	**313**	P	**P**	**19 17 23.0**	**+5.5**
WHN				LR	LR		
	comp=N,710nm,18.8s,MS5.0						
WHN				LR	LR		
	comp=E,760nm,20.2s,MS5.0						
WHN				LR	LR		
	comp=Z,1μm,21.6s,MS5.0						
DL2	**Dalian**	**62.86**	**324**	*e*P	**P**	**19 17 25.3**	**+5.5**
DL2				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.9						
DL2				pmax	pmax		
	comp=Z,110nm,7.9s						
DL2				LR	LR		
	comp=E,300nm,23.0s						
DL2				LR	LR		
	comp=Z,400nm,28.0s,MS4.4						
MDJ	**Mudanjiang**	**63.01**	**333**	P	**P**	**19 17 22.0**	**+1.3**
MDJ				pP	pP	19 17 31.3	-1.4
MDJ				sP	sP	19 17 35.0	-2.3
MDJ				PcP	PcP	19 17 58.8	+0.5
MDJ				PP	PP	19 19 39.8	0.0
MDJ				S	**S**	**19 25 51.3**	**+3.1**
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.6						
MDJ				pmax	pmax		
	comp=Z,85nm,4.7s						
MDJ				LR	LR		
	comp=N,320nm,28.6s,MS4.5						
MDJ				LR	LR		
	comp=E,360nm,24.2s,MS4.5						
MDJ				LR	LR		
	comp=Z,480nm,24.9s,MS4.6						
MDJ	**Mudanjiang**	**63.01**	**333**	*e*P	**P**	**19 17 20.0**	**-0.7**
	comp=Z,37nm,1.4s,mb5.3						
PET	**Petropavlovsk**	**63.59**	**357**	*e*P	**P**	**19 17 23.5**	**-0.8**
PET				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.1						
PETK	**Petropavlovsk-**	**63.73**	**356**	P	**P**	**19 17 24.4**	**-0.9**
	comp=Z,5.0nm,0.9s,mb4.5,baz=138,slow=16,SNR=5.7						
PETK				LR	LR	19 40 29.8	
	comp=Z,370nm,21.2s,MS4.5,baz=183,slow=32						
HABR	**Khabarovsk**	**64.04**	**339**	*e*P	**P**	**19 17 25.6**	**-1.8**
HABR				*e**PP	pP	19 17 35.1	-4.3
HABR				*e**SP	sP	19 17 39.2	-4.9
HABR						19 18 00.8	
HABR				*e*		19 19 44.7	
HABR				S	**S**	**19 25 57.3**	**-3.5**
HABR				*e**SS	sS	19 26 14.6	-6.2
HABR						19 27 16.0	
HABR				*e*SS	SS	19 30 06.8	-3.8
HABR				pmax	pmax		
	comp=E,9.0nm,0.8s						
HABR				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.0						
HABR				pmax	pmax		
	comp=N,8.0nm,1.3s						
HABR				MLR	MLR		
	comp=Z,210nm,21.0s,MS4.3						
CN2	**Changchun**	**64.30**	**330**	*e*P	**P**	**19 17 28.0**	**-1.2**
CN2				*e*pP	pP	19 17 38.3	-2.9
CN2				*e*S	**S**	**19 26 02.3**	**-2.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,400nm,22.0s,MS4.7						
CN2				LR	LR		
	comp=E,400nm,22.0s,MS4.7						
CN2				LR	LR		
	comp=Z,300nm,21.0s,MS4.5						
KLR	**Kul'dur**	**65.86**	**338**	*e*P	**P**	**19 17 34.4**	**-4.8**
CASY	**Casey**	**65.91**	**201**	*e*P	**P**	**19 17 39.4**	**0.0**
	comp=Z,10nm,1.2s,mb4.7						
ENH	**Enshi**	**65.94**	**310**	*e*P	**P**	**19 17 39.1**	**-1.1**
	comp=Z,56nm,1.3s,mb5.4						
GYA	**Guiyang**	**66.37**	**305**	⇓*i*P	**P**	**19 17 44.0**	**+1.0**
GYA				pP	pP	19 17 55.3	+0.2
GYA				sP	sP	19 17 59.5	-0.2
GYA				PcP	PcP	19 18 13.3	+0.7
GYA				PP	PP	19 20 13.8	+4.1
GYA				PcS		19 22 17.3	
GYA				S	S	19 26 30.0	-0.3
GYA				sS	sS	19 26 48.5	-1.8
GYA				SKS		19 27 34.5	
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
GYA				pmax	pmax		
	comp=Z,130nm,5.3s						
GYA				LR	LR		
	comp=N,560nm,18.8s,MS4.9						
GYA				LR	LR		
	comp=E,480nm,19.2s,MS4.9						
GYA				LR	LR		
	comp=Z,550nm,20.9s,MS4.7						
BJI	**Beijing**	**66.81**	**322**	P	**P**	**19 17 44.3**	**-1.2**
BJI				PP	PP	19 20 12.3	-0.9
BJI				S	S	19 26 37.5	+2.4
BJI				SS	SS	19 30 51.0	-3.1
BJI				pmax	pmax		
	comp=Z,4.0nm,1.4s,mb4.3						
BJI				pmax	pmax		
	comp=Z,99nm,5.9s						
BJI				LR	LR		
	comp=N,340nm,28.6s,MS4.5						
BJI				LR	LR		
	comp=E,270nm,26.6s,MS4.5						
BJI				LR	LR		
	comp=Z,660nm,32.7s						
KMI	**Kunming**	**69.03**	**302**	P	**P**	**19 18 01.5**	**+1.7**
KMI				pP	pP	19 18 12.0	+0.1
KMI				sP	sP	19 18 16.5	-0.1
KMI				PcP	PcP	19 18 25.0	+1.2
KMI				PP	PP	19 20 36.0	+3.2
KMI				S	S	19 27 02.3	+0.1
KMI				sS	sS	19 27 17.8	-4.5
KMI				SKS		19 27 53.8	
KMI				ScS	ScS	19 27 55.0	-2.6
KMI				SS	SS	19 31 30.3	+1.4
KMI				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
KMI				pmax	pmax		
	comp=Z,240nm,3.1s						
KMI				LR	LR		
	comp=N,180nm,19.5s,MS4.6						
KMI				LR	LR		
	comp=E,260nm,14.6s,MS4.6						
KMI				LR	LR		
	comp=Z,230nm,19.5s,MS4.4						
CHRT	**Chiangrai**	**69.64**	**296**	⇓P	**P**	**19 18 03.0**	**-0.7**
	comp=Z,105nm,1.3s,mb5.6						
CMAR	**Chiang Mai Arr**	**69.92**	**294**	P	**P**	**19 18 06.2**	**+0.7**
	comp=Z,9.6nm,1.1s,mb4.7,baz=114,slow=4.3,SNR=18						
CMAR				LR	LR	19 47 43.7	
	comp=Z,130nm,19.6s,MS4.2,baz=105,slow=35						
CHG	**Chiang Mai**	**70.03**	**295**	⇑P	**P**	**19 18 00.3**	**-5.8**
	comp=Z,19nm,1.3s,mb4.9						
CHTO	**Chiang Mai**	**70.03**	**295**	*e*P	**P**	**19 18 06.3**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,27nm,1.3s,mb5.0						
CHTO	**Chiang Mai**	**70.03**	**295**	*e*P	**P**	**19 18 06.3**	**+0.2**
	comp=Z,27nm,1.3s,mb5.0						
HHC	**Hu-ho-hao-te**	**70.12**	**321**	*e*P	**P**	**19 18 08.0**	**+1.8**
HHC				pP	pP	19 18 19.3	+1.0
HHC				sP	sP	19 18 23.0	0.0
HHC				PcP	PcP	19 18 29.3	+1.3
HHC				PP	PP	19 20 45.5	+3.6
HHC				S	S	19 27 15.5	+1.0
HHC				sS	sS	19 27 34.0	-0.6
HHC				SKS		19 28 02.3	
HHC				ScS	ScS	19 28 05.0	-0.6
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
HHC				pmax	pmax		
	comp=Z,120nm,7.1s						
HHC				LR	LR		
	comp=N,300nm,17.7s,MS4.7						
HHC				LR	LR		
	comp=E,290nm,17.4s,MS4.7						
HHC				LR	LR		
	comp=Z,420nm,17.0s,MS4.8						
CD2	**Chengdu**	**70.61**	**308**	P	**P**	**19 18 11.5**	**+2.1**
CD2				pP	pP	19 18 21.8	+0.2
CD2				sP	sP	19 18 25.8	-0.4
CD2				PP	PP	19 20 50.3	+3.9
CD2				S	S	19 27 22.3	+1.7
CD2				sS	sS	19 27 39.3	-1.5
CD2				SKS		19 28 06.5	
CD2				pmax	pmax		
	comp=Z,30nm,1.3s,mb5.1						
CD2				pmax	pmax		
	comp=Z,230nm,4.6s						
CD2				LR	LR		
	comp=N,390nm,14.9s						
CD2				LR	LR		
	comp=Z,290nm,13.1s,MS4.7						
BTO	**Baotou**	**70.96**	**320**	*e*P	**P**	**19 18 11.0**	**-0.3**
HIA	**Hailar**	**70.97**	**331**	*e*P	**P**	**19 18 11.2**	**0.0**
HIA				pmax	pmax		
	comp=Z,40nm,1.1s						
HIA	**Hailar**	**70.97**	**331**	*e*P	**P**	**19 18 11.2**	**0.0**
	comp=Z,40nm,1.1s,mb5.3						
LZH	**Lanzhou**	**72.86**	**313**	*e*P	**P**	**19 18 26.0**	**+3.1**
LZH				pP	pP	19 18 38.0	+2.9
LZH				sP	sP	19 18 44.0	+4.3
LZH				PP	PP	19 21 10.3	+4.7
LZH				*e*S	S	19 27 48.0	+1.6
LZH				sS	sS	19 28 06.5	-0.1
LZH				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.8						
LZH				pmax	pmax		
	comp=Z,68nm,4.0s						
LZH				LR	LR		
	comp=N,270nm,15.8s						
LZH				LR	LR		
	comp=Z,360nm,18.3s,MS4.7						
SEY	**Seymchan**	**73.89**	**355**	*e*P	**P**	**19 18 27.6**	**-0.7**
CLNS	**Chul'man**	**74.43**	**339**	*e*P	**P**	**19 18 28.0**	**-3.6**
CLNS				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
CLNS				pmax	pmax		
	comp=N,6.0nm,1.4s						
CLNS				MLR	MLR		
	comp=N,98nm,16.0s						
CLNS				MLR	MLR		
	comp=Z,124nm,17.0s,MS4.3						
IMP	**Imphal**	**76.37**	**299**	*e*PKP	**P**	**19 18 42.0**	**-1.4**
ULN	**Ulaanbaatar**	**76.71**	**325**	*e*P	**P**	**19 18 45.3**	**+0.5**
ULN				pmax	pmax		
	comp=Z,43nm,1.4s,mb5.2						
ULN	**Ulaanbaatar**	**76.71**	**325**	*e*P	**P**	**19 18 45.3**	**+0.5**
	comp=Z,43nm,1.4s,mb5.2						
SONM	**Songino Array**	**77.06**	**325**	P	**P**	**19 18 47.3**	**+0.5**
	comp=Z,4.9nm,0.8s,mb4.5,baz=144,slow=6.3,SNR=12						
SONM				LR	LR	19 51 25.6	
	comp=Z,413nm,20.9s,MS4.7,baz=310,slow=35						
KDAK	**Kodiak Island**	**77.09**	**22**	P	**P**	**19 18 47.3**	**+0.6**
	comp=Z,12nm,1.1s,mb4.7,baz=227,slow=7.5,SNR=3.6						
YAK	**Yakutsk**	**77.13**	**344**	*e*P	**P**	**19 18 46.1**	**-0.8**
YAK				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.1						
YAK				pmax	pmax		
	comp=N,7.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK	**Yakutsk**	**77.13**	**344**	*e*P	**P**	**19 18 47.1**	**+0.2**
	comp=E,40nm,1.1s,mb5.3						
GTA	**Gaotai**	**77.20**	**315**	P	**P**	**19 18 49.8**	**+2.0**
GTA				pP	pP	19 19 00.0	-0.1
GTA				sP	sP	19 19 04.0	-0.7
GTA				S	S	19 28 36.5	+2.0
GTA				sS	sS	19 28 54.3	-0.6
GTA				pmax	pmax		
	comp=Z,4.0nm,1.4s,mb4.2						
GTA				pmax	pmax		
	comp=Z,180nm,5.7s						
GTA				LR	LR		
	comp=N,290nm,20.9s,MS4.7						
GTA				LR	LR		
	comp=E,210nm,19.7s,MS4.7						
GTA				LR	LR		
	comp=Z,350nm,20.9s,MS4.7						
SHL	**Shillong**	**78.38**	**299**	*e*PKP	**P**	**19 19 00.0**	**+5.3**
BILL	**Bilibino**	**78.55**	**1⇑**	*e*P	**P**	**19 18 53.7**	**-1.0**
BILL				*e*		19 21 52.5	
BILL				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
BILL	**Bilibino**	**78.55**	**1**	*e*P	**P**	**19 18 54.6**	**-0.1**
	comp=Z,37nm,1.0s,mb5.3						
TTA	**Tatalina**	**79.75**	**18**	*e*P	**P**	**19 19 01.1**	**-0.2**
TTA				pmax	pmax		
	comp=Z,29nm,1.2s,mb5.1						
TTA	**Tatalina**	**79.75**	**18**	*e*P	**P**	**19 19 01.1**	**-0.2**
	comp=Z,29nm,1.2s,mb5.1						
LSA	**Lhasa**	**80.27**	**303**	P	**P**	**19 19 05.8**	**+0.9**
LSA	**Lhasa**	**80.27**	**303**	*e*P	**P**	**19 19 06.9**	**+2.0**
LSA				pmax	pmax		
	comp=Z,38nm,1.5s,mb5.1						
LSA	**Lhasa**	**80.27**	**303**	*e*P	**P**	**19 19 06.9**	**+2.0**
	comp=Z,38nm,1.5s,mb5.1						
IRK	**Irkutsk**	**80.55**	**328**	*e*P	**P**	**19 19 07.0**	**+1.1**
IRK				pmax	pmax		
	comp=Z,24nm,2.0s,mb4.8						
TLY	**Talaya**	**80.59**	**327**	*e*P	**P**	**19 19 08.3**	**+2.2**
TLY				*e*S	S	19 29 12.3	+2.2
TLY				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.8						
TLY				MLR	MLR		
	comp=Z,233nm,19.0s,MS4.5						
PMR	**Palmer**	**81.01**	**21**	*e*P	**P**	**19 19 07.7**	**-0.4**
PMR				pmax	pmax		
	comp=Z,72nm,1.8s,mb5.3						
PMR	**Palmer**	**81.01**	**21**	*e*P	**P**	**19 19 07.7**	**-0.4**
	comp=Z,72nm,1.8s,mb5.3						
BMRM	**Bremner River**	**82.25**	**23**	*e*P	**P**	**19 19 08.9**	**-5.8**
	comp=Z,31nm,1.4s,mb5.0						
COLA	**College**	**83.66**	**19**	*e*P	**P**	**19 19 21.2**	**-0.7**
COLA				pmax	pmax		
	comp=Z,19nm,1.3s,mb5.1						
COLA	**College**	**83.66**	**19**	*e*P	**P**	**19 19 21.2**	**-0.7**
	comp=Z,19nm,1.3s,mb5.1						
ILAR	**Eielson Array**	**83.90**	**19**	P	**P**	**19 19 21.6**	**-1.6**
	comp=Z,2.8nm,0.9s,mb4.4,baz=242,slow=5.7,SNR=16						
ILAR				LR	LR	19 55 13.1	
	com

WMQ PP PP 19 23 07.5 +2.6
WMQ SKS 19 30 03.5
WMQ eS S 19 30 16.8 -0.6
WMQ SS SS 19 36 04.0 +1.4
WMQ pmax pmax
comp=Z,19nm,1.4s,mb5.1
WMQ pmax pmax
comp=Z,250nm,5.0s
WMQ LR LR
comp=N,230nm,24.2s,MS4.8
WMQ LR LR
comp=E,360nm,26.0s,MS4.8
WMQ LR LR
comp=Z,460nm,24.8s,MS4.8
NVAR Mina Array Bea 87.51 50 P P 19 19 40.9 -0.8
comp=Z,2.4nm,1.0s,mb4.4,baz=246,slow=6.8,SNR=10
NVAR Mina Array Bea 87.51 50 P P 19 19 40.9 -0.8
WVOR Wild Horse Val 88.36 46 *eP* **P 19 19 46.2 +0.6**
WVOR pmax pmax
comp=Z,13nm,1.3s,mb5.0
WVOR Wild Horse Val 88.36 46 *eP* **P 19 19 46.2 +0.6**
comp=Z,13nm,1.3s,mb5.0
GLA Glamis 88.91 56 *eP* **P 19 19 49.4 +0.9**
GLA pmax pmax
comp=Z,58nm,1.6s,mb5.7
GLA Glamis 88.91 56 *eP* **P 19 19 49.4 +1.0**
comp=Z,58nm,1.6s,mb5.7
N12A Clover Valley, 90.56 49 *eP* **P 19 19 55.3 -0.7**
comp=Z,29nm,1.4s,mb5.4
ARUT Antelope Range 91.08 52 *eP* **P 19 19 59.3 +0.8**
ARUT pmax pmax
comp=Z,18nm,1.3s,mb5.2
ARUT Antelope Range 91.08 52 *eP* **P 19 19 59.3 +0.8**
comp=Z,18nm,1.3s,mb5.2
M13A Montello 91.32 48 *eP* **P 19 19 59.1 -0.4**
comp=Z,11nm,1.1s,mb5.1
HLID Hailey 91.64 46 *eP* **P 19 20 00.7 -0.2**
comp=Z,17nm,1.5s,mb5.2
MK31 Makanchi Array 91.73 317 *eP* **P 19 20 01.1 -0.2**
MKAR Makanchi Array 91.73 317 P **P 19 20 01.3 0.0**
comp=Z,4.3nm,0.9s,mb4.8,baz=100,slow=5.9,SNR=30
MKAR LR LR 20 02 49.8
comp=Z,179nm,18.5s,MS4.5,baz=93,slow=37
MKAR Makanchi Array 91.73 317 *iP* **P 19 20 01.2 -0.1**
MKAR pmax pmax
comp=Z,4.0nm,0.9s
MKAR Makanchi Array 91.73 317 P **P 19 20 01.3 0.0**
MKAR LR LR 20 02 49.8
ZAA0 Zalesovo Array 91.96 325 *eP* **P 19 20 01.4 -0.7**
ZALV Zalesovo Beam 91.96 325 P **P 19 20 01.4 -0.8**
comp=Z,2.6nm,0.9s,mb4.6,baz=103,slow=4.7,SNR=10
ZALV LR LR 19 59 09.0
comp=Z,185nm,21.8s,MS4.5,baz=65,slow=34
BGU Big Grassy Mou 92.06 49 *eP* **P 19 20 02.4 -0.6**
comp=Z,20nm,1.6s,mb5.2
HVU Hansel Valley 92.43 48 *eP* **P 19 20 05.0 +0.4**
HVU pmax pmax
comp=Z,27nm,1.5s,mb5.4
HVU Hansel Valley 92.43 48 *eP* **P 19 20 05.0 +0.4**
comp=Z,27nm,1.5s,mb5.4
NVS Novosibirsk 93.08 325 *eP* **P 19 20 07.2 -0.1**
NVS pmax pmax
comp=Z,46nm,2.2s,mb5.5
NVS pmax pmax
comp=E,27nm,1.8s
DLMT Dillon 93.30 45 *eP* **P 19 20 08.2 -0.4**
comp=E,4.1nm,0.7s,mb5.0
KSH Kashi 94.79 309 P **P 19 20 21.8 +6.3**
KSH pP pP 19 20 31.3 +3.3
KSH SKS 19 30 53.5
KSH S S 19 31 33.0 +6.7
KSH pmax pmax
comp=Z,120nm,4.3s
KSH LR LR
comp=N,110nm,6.5s
KSH LR LR
comp=E,95nm,7.5s
KSH LR LR
comp=Z,190nm,5.2s
KURK Kurchatov 94.94 321 P **P 19 20 15.1 -0.9**
comp=Z,2.2nm,1.0s,mb4.5,baz=108,slow=3.0,SNR=5.1
KURK Kurchatov 94.94 321 *eP* **P 19 20 15.6 -0.3**
KURK pmax pmax
comp=Z,21nm,1.7s,mb5.3
KURK Kurchatov 94.94 321 *eP* **P 19 20 15.6 -0.4**
comp=Z,21nm,1.7s,mb5.3
YKA Yellowknife Ar 95.69 28 P **P 19 20 17.9 -1.2**
comp=Z,0.9nm,0.7s,mb4.3,baz=250,slow=4.5,SNR=3.8
AML Almayashu 96.90 311 *eP* **P 19 20 24.2 -0.9**
comp=Z,3.0nm,0.5s,mb5.0
TXAR Lajitas Array 97.63 62 P **P 19 20 31.6 +2.9**
comp=Z,0.2nm,0.7s,mb3.8,baz=302,slow=6.9,SNR=2.9
BVAR Borovoye Array 100.29 322 P Pdif 19 20 38.9 -1.1
comp=Z,1.6nm,0.9s,baz=95,slow=3.4,SNR=7.6
BRVK Borovoye 100.36 322 *eP* Pdif 19 20 39.0 -1.3
BRVK pmax pmax
comp=Z,3.0nm,1.2s
ARCES ARCESS Array B 115.42 345 PKP PKPdf 19 25 34.2 -0.6
comp=Z,2.7nm,0.9s,baz=98,slow=2.5,SNR=8.5
ARCES ARCESS Array B 115.42 345 PKP PKPdf 19 25 34.2 -0.6
KIV Kislovodsk 119.38 315 *iP* KIKP PKPdf 19 25 39.9 -3.3
KIV pmax pmax
comp=Z,5.0nm,0.9s
KIV MLR MLR
comp=Z,76nm,20.0s,MS4.3
FINES FINESS Array B 120.61 338 PKP PKPdf 19 25 44.3 -0.7
comp=Z,2.1nm,0.9s,baz=35,slow=7.0,SNR=3.8
AKASG Malin Array Be 125.33 326 PKP PKPdf 19 25 52.9 -1.5
comp=Z,0.8nm,0.6s,baz=58,slow=2.8,SNR=4.1
NB2 NORSAR Subarra125.75 344 PKPdf PKPdf 19 25 56.5 +1.6
comp=Z,1.5nm,0.8s,baz=39,slow=1.9
NOA NORSAR Array B 125.75 344 PKP PKPdf 19 25 54.3 -0.6
comp=Z,1.3nm,0.9s,baz=33,slow=2.1,SNR=5.5
OKC Ostrava-Krasne 131.58 330 *e*PKIKP PKPdf 19 26 11.9 +5.6
OKC MLR MLR
comp=Z,200nm,8.7s
OKC Ostrava-Krasne 131.58 330 *e*PKPdf PKPdf 19 26 11.9 +5.6
OKC AMS AMS 20 28 30.0
comp=Z,200nm,8.7s
DPC Dobruska-Polom 132.10 332 *e*PKIKP PKPdf 19 26 13.0 +5.7
DPC MLR MLR
comp=Z,300nm,20.4s,MS5.0
DPC Dobruska-Polom 132.10 332 *e*PKPdf PKPdf 19 26 13.0 +5.7
DPC AMS AMS 20 23 50.0
comp=Z,300nm,20.4s
PVCC Panska Ves 132.76 333 AMS AMS 20 20 40.0
comp=Z,400nm,21.9s
BRG Berggiesshubel 132.78 334 *e*PKP PKPdf 19 26 16.2 +7.6
BRG
comp=Z,4.8nm,1.1s
BRG
comp=N,284nm,22.4s
BRG
comp=E,205nm,19.9s
BRG
comp=Z,411nm,27.5s
BRG Berggiesshubel 132.78 334 *e*PKIKP PKPdf 19 26 16.2 +7.7
BRG pmax pmax
comp=Z,3.0nm,1.1s
BRG MLR MLR
comp=N,170nm,22.4s,MS4.8
BRG MLR MLR
comp=E,123nm,19.9s,MS4.8
BRG MLR MLR
comp=Z,246nm,27.5s
CLL Collm 132.86 335 *e*PKIKP PKPdf 19 26 07.0 -1.7
CLL MLR MLR
comp=Z,200nm,24.9s,MS4.7
CLL Collm 132.86 335 *e*PKPdf PKPdf 19 26 07.0 -1.7
CLL *e* 19 26 28.0
CLL *e*SSS 19 51 24.0
PRU Pruhonice 133.16 333 AMS AMS 20 21 10.0
comp=Z,300nm,21.2s
TREC Trest 133.22 332 AMS AMS 20 25 10.0
comp=Z,200nm,23.7s
NKC Novy Kostel 133.90 334 AMS AMS 20 22 50.0
comp=Z,400nm,24.3s
CONA Conrad Observa 133.99 330⇑*i*PKiKP PKPdf 19 26 14.1 +3.2
comp=Z,2.6nm,0.9s
KHC Kasperske Hory 134.22 333 *e*PKIKP PKPdf 19 26 12.7 +1.4
KHC MLR MLR
comp=Z,400nm,23.1s,MS5.1
KHC Kasperske Hory 134.22 333 *e*PKPdf PKPdf 19 26 12.7 +1.4
KHC AMS AMS 20 21 30.0
comp=Z,400nm,23.1s
ABTA Abfaltersbach 136.44 331⇓*i*PKiKP PKPdf 19 26 16.0 +0.5
comp=Z,3.7nm,0.8s

CABF La Chapelle 139.37 336 *e*PKIKP PKPdf 19 26 19.6 -1.3
LPL La Plagne 139.98 334 *e*PKIKP PKPdf 19 26 21.3 -0.8
comp=Z,28nm,1.6s
LPG La Plagne 139.99 334 *e*PKIKP PKPdf 19 26 21.1 -1.0
comp=Z,15nm,1.2s
SMF Signal de Mont 140.20 338 *e*PKIKP PKPdf 19 26 21.5 -0.9
AVF Avril sur Loir 140.26 339 *e*PKIKP PKPdf 19 26 21.4 -1.1
ORIF Oris-en-Rattie 140.82 335 *e*PKIKP PKPdf 19 26 23.0 -0.6
comp=Z,10nm,1.0s
TCF Toulx Ste Croi 141.09 339 *e*PKIKP PKPdf 19 26 23.8 -0.3
comp=Z,35nm,1.4s
PGF Pioggiola 141.21 329 *e*PKIKP PKPdf 19 26 26.0 +1.6
comp=Z,31nm,1.3s
FRF La Foret Royal 141.57 333 *e*PKIKP PKPdf 19 26 24.2 -0.8
comp=Z,58nm,1.6s
SMRF Simiane la Rot 141.71 334 *e*PKIKP PKPdf 19 26 22.7 -2.5
LMR La Mourre 141.81 332 *e*PKIKP PKPdf 19 26 23.4 -2.0
comp=Z,22nm,1.2s
MTLF Montolieu 143.61 337 *e*PKIKP PKPdf 19 26 27.3 -1.3
comp=Z,50nm,1.6s
ETSF Etsaut 145.02 339 *e*PKIKP PKPdf 19 26 31.7 +0.6
comp=Z,37nm,1.1s
MVO Moncorvo 148.51 346 *e*PKP PKPab 19 26 44.2 +0.2
PVRL Vila Real 148.56 347 *e*PKP PKPbc 19 26 41.5 +0.8
ESDC Sonseca Array 149.04 341 PKPbc PKPbc 19 26 42.5 +0.5
comp=Z,1.2nm,0.6s,baz=15,slow=3.5,SNR=5.9
PVIS Viseu 149.13 347 *e*PKP PKPbc 19 26 42.8 +0.6
PAB San Pablo 149.28 341 *e*PKP2 PKPbc 19 26 43.8 +1.2
MTE Manteigas 149.35 346 *e*PKP PKPbc 19 26 43.3 +0.5
MTE Manteigas 149.35 346 *e*PKPbc PKPbc 19 26 42.4 -0.4
PCBR Castelo Branco 149.87 346 *e*PKP PKPbc 19 26 46.0 +1.9
PMRV Marv?o 150.24 346 *e*PKP PKPbc 19 26 45.6 +0.6
PTOM Tomar 150.29 347 *e*PKP PKPbc 19 26 45.8 +0.7
PESTR Estremoz 150.82 346 *e*PKP PKPbc 19 26 48.2 +1.8
EVO Evora 151.24 346 *e*PKP PKPbc 19 26 47.6 +0.2
EVO Evora 151.24 346 *e*PKIKP PKPbc 19 26 46.5 -0.9
comp=Z,51nm,1.4s
PBAR Barrancos 151.33 344 *e*PKP PKPbc 19 26 47.9 +0.3
PBEJ Beja 151.69 345 *e*PKP PKPbc 19 26 49.2 +0.8
PCVE Castro Verde 152.10 345 *e*PKP PKPbc 19 26 49.5 +0.1

NIED ***30*** *19:14:00, 32°.50N×141°.80E, h5km, Mw3.8 Best double couple: M0=5.41000×10^14 NP1:φs=20.00000°, δ=56.00000°, λ=97.00000°. NP2:φs=187.00000°, δ=35.00000°, λ=80.00000°.*
IDC ***30*** *19:14:02.9±6.3, 32°.97N×143°.33E, h0km, mb3.6/3, mb1 3.7/4, mb1mx3.4/21, mbtmp3.6/4, ML3.4/1, Error ellipse: s-maj=336.8km s-min=107.7km az=42.0*
NEIC ***30*** *19:14:04.8±2.5, 32°.86N×143°.11E, h10km, mb4.1/1, Error ellipse: s-maj=96.2km s-min=15.1km az=63.0*
JMA ***30*** *19:14:09.2±0.3, 32°.52N×141°.85E, h8km, M3.7*
ISC 30 19:14:10.0±1.8, 32°.45N±0°.07×141°.8E±0°.1, h10km±11km, n20, σ1§11/30, mb3.7/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**1.78**	**292**	P	**Pn**	**19 14 41.2**	**+0.4**
JHJ2				*e*S	**Sg**	**19 15 05.6**	**-1.6**
BSO1	**Boso 1**	**2.29**	**343**	P	**Pn**	**19 14 47.8**	**-0.1**
BSO1				*e*S	**Sn**	**19 15 14.6**	**-1.5**
BSO3	**Boso 3**	**2.57**	**336**	P	**Pn**	**19 14 51.7**	**0.0**
BSO3				*e*S	**Sn**	**19 15 24.0**	**+1.0**
BSO4	**Boso 4**	**2.80**	**335**	P	**Pn**	**19 14 55.7**	**+0.9**
BSO4				*e*S	**Sn**	**19 15 30.8**	**+2.2**
JOD2	**Odawara 2**	**3.59**	**322**	P	**Pn**	**19 15 05.6**	**0.0**
JHU	**Hanno**	**3.97**	**329**	P	**Pn**	**19 15 11.8**	**+0.9**
JHU				*e*S	**Sn**	**19 15 56.8**	**-0.7**
JYT	**Yasato**	**3.99**	**341**	P	**Pn**	**19 15 11.5**	**+0.4**
JYN	**Shimob**	**4.06**	**319**	P	**Pn**	**19 15 13.8**	**+1.7**
JHO	**Hitachi**	**4.27**	**347**	P	**Pn**	**19 15 14.6**	**-0.4**
JHO				*e*S	**Sn**	**19 16 02.9**	**-1.9**
JRY	**Ryogami san**	**4.28**	**327**	P	**Pn**	**19 15 15.3**	**+0.2**
JRY				*e*S	**Sn**	**19 16 05.0**	**-0.1**
JAG	**Ashikaga**	**4.40**	**335**	P	**Pn**	**19 15 17.1**	**+0.3**
JAG				*e*S	**Sn**	**19 16 06.7**	**-1.5**
MJAR	**Matsushiro Arr**	**5.03**	**325**	Pn	**Pn**	**19 15 26.0**	**+0.5**
1.1nm,0.3s,baz=150,slow=12,SNR=20							
MAJO	**Matsushiro**	**5.03**	**325**	*e*P	**Pn**	**19 15 26.3**	**+0.8**
14nm,0.9s							
MAT	**Matsushiro**	**5.03**	**325**	P	**Pn**	**19 15 28.6**	**+3.1**
MAT				S	**Sn**	**19 16 25.1**	**+1.4**
MAT	**Matsushiro**	**5.03**	**325**	P	**Pn**	**19 15 28.0**	**+2.5**
MAT				*e*S	**Sn**	**19 16 25.1**	**+1.4**
JMM	**Marumori**	**5.46**	**352**	P	**Pn**	**19 15 30.0**	**-1.4**
ZALV	**Zalesovo Beam**	**45.31**	**316**	P	**P**	**19 22 26.2**	**-1.6**
0.3nm,0.3s,mb3.6,baz=103,slow=6.2,SNR=2.8							
MKAR	**Makanchi Array**	**46.93**	**306**	P	**P**	**19 22 41.1**	**+0.5**
0.9nm,0.8s,mb3.8,baz=85,slow=9.7,SNR=7.9							
WRAB	**Tennant Creek**	**52.57**	**189**	*e*P	**P**	**19 23 23.0**	**-0.8**
1.4nm,0.6s,mb4.1							
BVAR	**Borovoye Array**	**53.95**	**315**	P	**P**	**19 23 32.5**	**-1.1**
0.6nm,0.8s,mb3.6,baz=98,slow=6.1,SNR=3.6							

IDC ***30*** *19:20:16.6±1.3, 31°.34N×103°.84E, h0km, mb3.4/5, mb1 3.5/5, mb1mx3.3/21, mbtmp3.5/5, Error ellipse: s-maj=47.6km s-min=22.8km az=50.0*
ISCJB ***30*** *19:20:17.7±0.7, 31°.54N±0°.05×103°.87E±0°.09, h10km, mb3.4/4, Error ellipse: s-maj=11.8km s-min=6.4km az=21.4*
BJI ***30*** *19:20:20.4, 31°.44N×104°.08E, h17km, ML3.3/13*
ISC 30 19:20:19.2±0.7, 31°.50N±0°.05×103°.79E±0°.08, h10km, n7, σ1§37/11, mb3.4/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.59**	**182**	Pg	**Pg**	**19 20 30.0**	**-0.6**
CD2				Sg	**Sg**	**19 20 40.0**	**+1.6**
CD2				smax			
comp=N,4μm,0.8s							
XAN	**Xi'an**	**5.01**	**58**	Pn	**Pn**	**19 21 31.8**	**-2.6**
XAN				Pg	**Pb**	**19 21 47.3**	**+0.4**
XAN				Sn	**Sn**	**19 22 32.5**	**+0.1**
XAN				Sg	**Sb**	**19 22 49.3**	**+2.1**
XAN				smax			
comp=N,54nm,0.9s							
XAN				smax			
comp=E,27nm,0.8s							
KSRS	**Korea Array**	**20.74**	**67**	P	**P**	**19 24 58.9**	**-1.0**
comp=E,0.7nm,0.6s,baz=258,slow=10,SNR=5.9							
MKAR	**Makanchi Array**	**22.50**	**319**	P	**P**	**19 25 20.1**	**+1.4**
comp=E,0.7nm,0.8s,mb3.1,baz=120,slow=8.8,SNR=3.8							
ZALV	**Zalesovo Beam**	**26.24**	**334**	P	**P**	**19 25 53.3**	**-0.9**
comp=E,0.6nm,0.5s,mb3.4,baz=133,slow=6.3,SNR=2.9							
KURK	**Kurchatov**	**26.76**	**323**	P	**P**	**19 25 59.9**	**+1.0**
comp=E,0.3nm,0.3s,mb3.4,baz=131,slow=11,SNR=3.4							
ASAR	**Alice Springs**	**61.97**	**149**	P	**P**	**19 30 37.4**	**-2.1**
comp=E,0.3nm,0.7s,mb3.5,baz=326,slow=7.1,SNR=11							

CSEM ***30*** *19:37:28.2±0.7, 35°.44N×31°.55E, h2km, MD3.3, Error ellipse: s-maj=16.6km s-min=8.3km az=4.0*
ISK ***30*** *19:37:29.3, 35°.30N×31°.49E, h30km, MD3.3*
DDA ***30*** *19:37:30.8, 35°.99N×31°.37E, h16km±4km, Md3.3*
IDC ***30*** *19:37:34.5±5.6, 35°.76N×32°.81E, h0km, mb3.4/1, mb1 3.0/3, mb1mx3.0/20, mbtmp3.0/3, ML2.8/2, Error ellipse: s-maj=109.2km s-min=34.2km az=77.0*
ISC 30 19:37:27.6±1.3, 35°.54N±0°.07×31°.59E±0°.05, h8km±10km, n33, σ1§20/43, 1C, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZI	**Gazipasa**	**0.91**	**40**	⇑*iP*	**Pb**	**19 37 45.6**	**0.0**
GAZI				*i*S	**Sb**	**19 37 59.0**	**+1.1**
GAZI	**Gazipasa**	**0.91**	**40**	*iP*	**Pb**	**19 37 45.6**	**0.0**
GAZI				*i*S	**Sb**	**19 37 59.0**	**+1.1**
ERMK	**Ermenek**	**1.54**	**44**	*e*P	**Pn**	**19 37 56.7**	**+1.5**
ERMK				*e*S	**Sg**	**19 38 17.8**	**+0.8**
ERMK	**Ermenek**	**1.54**	**44**	*e*P	**Pn**	**19 37 56.7**	**+1.4**
ERMK				*e*S	**Sg**	**19 38 17.8**	**+0.8**
ANTB	**Antalya**	**1.55**	**331**	*e*PN	**Pg**	**19 37 58.1**	**+0.8**
ANTB				*e*SN	**Sg**	**19 38 18.9**	**+1.4**
ANTB	**Antalya**	**1.55**	**331**	*e*Pn	**Pg**	**19 37 58.1**	**+0.7**
ANTB				*e*Sn	**Sg**	**19 38 19.0**	**+1.5**
HDMB	**Hadim**	**1.59**	**27**	*e*PN	**Pg**	**19 37 59.6**	**+1.5**
HDMB	**Hadim**	**1.59**	**27**	*e*Pn	**Pg**	**19 37 59.6**	**+1.4**
LFK	**Lefkose**	**1.61**	**99**	*e*PN	**Pn**	**19 37 57.2**	**+1.0**
LFK	**Lefkose**	**1.61**	**99**	*e*Pn	**Pn**	**19 37 57.2**	**+1.0**
AKAS	**Kas**	**1.75**	**294**	*e*P	**Pn**	**19 37 58.3**	**+0.1**
AKAS				*e*S	**Sg**	**19 38 24.3**	**+0.3**
AKAS	**Kas**	**1.75**	**294**	*e*P	**Pn**	**19 37 58.3**	**0.0**
AKAS				*e*S	**Sg**	**19 38 24.3**	**+0.3**
ELL	**Elmali**	**1.82**	**312**	*e*PN	**Pg**	**19 38 00.9**	**-1.6**
ELL	**Elmali**	**1.82**	**312**	*e*Pn	**Pg**	**19 38 00.9**	**-1.5**
IKL	**Isikli**	**1.84**	**67**	*e*PN	**Pb**	**19 38 02.2**	**+0.7**
IKL	**Isikli**	**1.84**	**67**	*e*Pn	**Pb**	**19 38 02.2**	**+0.8**
SUTC	**Sutluce-Ispart**	**1.99**	**346**	*e*PN	**Pg**	**19 38 04.8**	**-0.9**
SUTC	**Sutluce-Ispart**	**1.99**	**346**	*e*Pn	**Pg**	**19 38 04.8**	**-0.9**
BCK	**Bucak**	**2.08**	**337**	*e*PN	**Pg**	**19 38 05.9**	**-1.6**
BCK	**Bucak**	**2.08**	**337**	*e*Pn	**Pg**	**19 38 05.9**	**-1.5**
KONT	**Konya--Tatoy**	**2.48**	**14**	*e*PN	**Pb**	**19 38 11.8**	**-0.5**
KONT	**Konya--Tatoy**	**2.48**	**14**	*e*Pn	**Pb**	**19 38 11.8**	**-0.6**
MERS	**Mersin**	**2.72**	**60**	*e*PN	**Pb**	**19 38 15.0**	**-1.4**
MERS	**Mersin**	**2.72**	**60**	*e*Pn	**Pb**	**19 38 15.0**	**-1.4**
LADK	**Ladik-KONYA**	**2.73**	**13**	*e*PN	**Pb**	**19 38 15.9**	**-0.6**
LADK	**Ladik-KONYA**	**2.73**	**13**	*e*Pn	**Pb**	**19 38 16.0**	**-0.6**
SULT	**Sultanhani-AKS**	**3.07**	**30**	*e*PN	**Pb**	**19 38 20.7**	**-1.7**
SULT	**Sultanhani-AKS**	**3.07**	**30**	*e*Pn	**Pb**	**19 38 20.7**	**-1.7**
GULE	**Gulek**	**3.10**	**55**	*e*P	**Pb**	**19 38 20.5**	**-2.5**
GULE				*e*S	**Sb**	**19 38 59.4**	**-1.6**
GULE	**Gulek**	**3.10**	**55**	*e*P	**Pb**	**19 38 20.5**	**-2.5**
GULE				*e*S	**Sb**	**19 38 59.4**	**-1.6**
MMAI	**Mount Meron Ar**	**4.04**	**127**	Pn	**Pn**	**19 38 30.2**	**+0.5**
4.7nm,0.3s,baz=322,slow=13,SNR=24							
BRTR	**Keskin Array B**	**4.48**	**21**	Pn	**Pn**	**19 38 38.0**	**+2.2**
0.1nm,0.3s,baz=191,slow=17,SNR=3.7							
MKAR	**Makanchi Array**	**39.16**	**57**	P	**P**	**19 44 55.5**	**-0.2**
0.2nm,0.4s,baz=275,slow=7.3,SNR=4.5							

MEX 30 19:53:31.8±0.6, 15°.88N×96°.37W, h47km±11km, MD3.8, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.27**	**113**	*e*P	Pn	19 53 38.7	-1.6
HUIG				*i*S	Sn	19 53 44.8	-1.6
VHO	**Vista Hermosa**	**1.24**	**344**	*i*P	Pn	19 53 51.1	-1.6
VHO				*e*S	Sn	19 54 06.3	-1.9
OXX	**Oaxaca**	**1.25**	**344**	*i*P	Pn	19 53 52.2	-0.6
OXX				*i*S	Sn	19 54 07.8	-0.6
PNIG	**Pinotepa**	**1.77**	**287**	*e*P	Pn	19 53 59.0	-0.9
PNIG				*i*S	Sn	19 54 19.2	-2.0
TGIG		**3.25**	**74**	*i*P	Pn	19 54 19.9	-0.3
TGIG				*e*S	Sn	19 54 57.2	-0.4

NEIC ***30*** *20:05:27.1, 41°.22S×173°.86E, h63km, ML3.7(WEL), After WEL.*
WEL 30 20:05:27.0±0.2, 41°.22S×173°.86E, h63km±3km, ML3.7/17, 4C-6D, Error ellipse: s-maj=2.1km s-min=1.5km az=0.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUWZ	**Tuamarina**	**0.22**	**163**	⇑PN	Pn	20 05 36.4	-0.6
TUWZ				SN	Sn	20 05 42.7	-1.4
TCW	**Tory Channel**	**0.32**	**89**	⇑PN	Pn	20 05 37.4	-0.1
TCW				SN	Sn	20 05 44.4	-0.9
TCW	**Tory Channel**	**0.32**	**89**	P	Pn	20 05 37.4	-0.2
TCW				S	Sn	20 05 44.4	-0.9
NNZ	**Nelson**	**0.36**	**270**	⇓PN	Pn	20 05 37.2	-0.8
NNZ				SN	Sn	20 05 44.4	-1.5
NNZ	**Nelson**	**0.36**	**270**	P	Pn	20 05 37.2	-0.7
NNZ				S	Sn	20 05 44.4	-1.5
DUWZ	**D'Urville Isla**	**0.42**	**7**	⇑PN	Pn	20 05 38.2	-0.3
BSWZ	**Blackbirch Sta**	**0.49**	**178**	⇑PN	Pn	20 05 39.0	-0.2
BSWZ				SN	Sn	20 05 47.6	-0.5
CMWZ	**Cape Campbell**	**0.59**	**153**	PN	Pn	20 05 40.9	+0.7
CMWZ				SN	Sn	20 05 52.1	+2.2
SNZO	**South Karori**	**0.65**	**98**	⇓PN	Pn	20 05 40.8	0.0
SNZO	**South Karori**	**0.65**	**98**	P	Pn	20 05 40.8	0.0
WEL	**Wellington**	**0.69**	**96**	PN	Pn	20 05 41.4	+0.1
WEL	**Wellington**	**0.69**	**96**	P	Pn	20 05 41.4	+0.1
BHW	**Baring Head**	**0.79**	**104**	PN	Pn	20 05 42.2	-0.3
BHW				SN	Sn	20 05 53.3	-0.6
BHW	**Baring Head**	**0.79**	**104**	P	Pn	20 05 42.2	-0.3
BHW				S	Sn	20 05 53.3	-0.6
KIW	**Kapiti Island**	**0.87**	**66**	⇓PN	Pn	20 05 44.0	+0.4
THZ	**Tophouse**	**0.90**	**233**	⇓PN	Pn	20 05 43.5	-0.4
THZ	**Tophouse**	**0.90**	**233**	P	Pn	20 05 43.5	-0.3
CAW	**Cannon Point**	**0.92**	**83**	PN	Pn	20 05 44.0	-0.1
CAW	**Cannon Point**	**0.92**	**83**	P	Pn	20 05 44.0	-0.1
MSWZ	**Moikau Station**	**1.07**	**101**	PN	Pn	20 05 45.5	-0.5
OGWZ	**Otaki Gorge**	**1.07**	**68**	PN	Pn	20 05 46.2	+0.1
QRZ	**Quartz Range**	**1.08**	**291**	⇓PN	Pn	20 05 46.3	+0.1
QRZ	**Quartz Range**	**1.08**	**291**	P	Pn	20 05 46.3	+0.1
PLWZ	**Palliser**	**1.11**	**109**	PN	Pn	20 05 45.9	-0.6
PAWZ	**Paruwai Farm**	**1.19**	**98**	PN	Pn	20 05 47.0	-0.7
KHZ	**Kahutara**	**1.22**	**191**	P	Pn	20 05 47.8	-0.2
MTW	**Mount Morrison**	**1.24**	**88**	PN	Pn	20 05 47.6	-0.7
TRWZ	**Traveller**	**1.39**	**98**	PN	Pn	20 05 49.5	-0.7
MRZ	**Mangatainoka R**	**1.42**	**67**	⇓PN	Pn	20 05 50.2	-0.5
MRZ	**Mangatainoka R**	**1.42**	**67**	P	Pn	20 05 50.2	-0.5
TMWZ	**Te Maipa**	**1.54**	**86**	PN	Pn	20 05 51.3	-1.0
DSZ	**Denniston Nort**	**1.63**	**251**	PN	Pn	20 05 53.4	-0.1
DSZ	**Denniston Nort**	**1.63**	**251**	P	Pn	20 05 53.4	-0.1
POWZ	**Post Office Ro**	**1.67**	**61**	PN	Pn	20 05 53.2	-0.8
WAZ	**Wanganui**	**1.70**	**31**	P	Pn	20 05 56.3	+1.9
BFZ	**Birch Farm**	**1.89**	**74**	PN	Pn	20 05 55.5	-1.5
LTZ	**Lake Taylor**	**1.96**	**217**	PN	Pn	20 05 57.4	-0.5
LTZ	**Lake Taylor**	**1.96**	**217**	P	Pn	20 05 57.6	-0.3
TSZ	**Takapari Road**	**1.98**	**55**	PN	Pn	20 05 57.4	-0.8
TSZ	**Takapari Road**	**1.98**	**55**	P	Pn	20 05 57.4	-0.8
DVHZ	**Dannevirke**	**1.98**	**63**	PN	Pn	20 05 56.8	-1.4
PNHZ	**Pukenui**	**2.21**	**55**	PN	Pn	20 06 00.1	-1.2
MQZ	**McQueen's Vall**	**2.64**	**199**	*e*PN	Pn	20 06 05.3	-1.9
HIZ	**Hauiti**	**2.81**	**16**	P	Pn	20 06 10.7	+1.2
WVZ	**Waitaha Valley**	**2.97**	**230**	PN	Pn	20 06 12.3	+0.7
WVZ	**Waitaha Valley**	**2.97**	**230**	P	Pn	20 06 12.3	+0.6
RPZ	**Rata Peaks**	**3.24**	**219**	*e*PN	Pn	20 06 15.9	+0.6
RPZ	**Rata Peaks**	**3.24**	**219**	P	Pn	20 06 16.0	+0.6
FOZ	**Fox Glacier**	**3.87**	**231**	*e*PN	Pn	20 06 22.8	-1.2
LBZ	**Lake Benmore**	**4.16**	**219**	*e*PN	Pn	20 06 26.6	-1.3
MKAZ	**Moumakai**	**4.23**	**14**	PN	Pn	20 06 30.1	+1.2
MKAZ	**Moumakai**	**4.23**	**14**	P	Pn	20 06 30.3	+1.4

NNC ***30*** *20:14:43.0±2.8, 39°.95N×77°.09E, h0km, mb3.8, mpv3.7, Error ellipse: s-maj=23.7km s-min=17.0km az=131.0*
BJI ***30*** *20:14:43.9, 40°.31N×77°.33E, h15km, mb3.8/5, ML3.7/9, Ms3.4/1*
NEIC ***30*** *20:14:45.7±1.4, 40°.27N×77°.24E, h10km, mb3.4/1, Error ellipse: s-maj=20.1km s-min=12.3km az=157.0*
MOS ***30*** *20:14:46.2±2.9, 40°.22N×77°.20E, h33km, mb4.1/1, Error ellipse: s-maj=26.0km s-min=11.8km az=82.6*
IDC ***30*** *20:14:47.6±2.9, 40°.62N×77°.24E, h0km, mb3.5/2, mb1 3.5/5, mb1mx3.3/24, mbtmp3.5/5, ML

AAA smax
comp=E,1μm,0.7s
AAK Ala-Archa 3.04 318 P Pn 20 15 39.2 +2.4
SNR=74
AAK Ala-Archa 3.04 318 *e*P **Pn 20 15 36.2 -0.5**
AML Almayashu 3.19 304 P Pn 20 15 38.7 0.0
SNR=61
AML Almayashu 3.19 304 *e*P **Pn 20 15 38.2 -0.5**
CHMS Chumysh 3.20 325 P Pn 20 15 39.7 +0.8
SNR=9.2
EKS2 Erkin-Say 3.45 312 P Pn 20 15 43.1 +0.8
SNR=59
EKS2 Erkin-Say 3.45 312 *e*P **Pn 20 15 42.3 -0.1**
USP Ospenovka 3.53 325 P Pn 20 15 44.3 +0.9
SNR=24
KK31 Karatay Array 5.72 300 Pn **Pn 20 16 11.6 -1.9**
comp=E,1.1nm,0.4s,baz=138,slow=13,SNR=18
KK31 ⇓Pg **Pg 20 16 29.3 -8.7**
comp=E,4.0nm,0.5s,baz=129,slow=17,SNR=7.3
KK31 ⇓Lg 20 17 48.8
comp=E,16nm,0.7s,baz=135,slow=32,SNR=8.2
MK31 Makanchi Array 7.36 28 ⇑Pn **Pn 20 16 34.3 -1.8**
comp=E,0.6nm,0.4s,baz=216,slow=16
MK31 ⇓Lg 20 18 48.9
comp=E,9.2nm,0.8s,baz=210,slow=28
MK31 Makanchi Array 7.36 28 *e*P **Pn 20 16 34.5 -1.6**
MKAR Makanchi Array 7.36 28 Pn **Pn 20 16 34.3 -1.8**
comp=E,0.4nm,0.3s,baz=207,slow=15,SNR=24
MKAR Lg 20 18 34.0
comp=E,0.3nm,0.3s,baz=214,slow=26,SNR=3.1
WMQ Urumqi 8.48 63 *e*P **Pn 20 16 52.0 +0.6**
WMQ S **Sn 20 18 24.0 -3.2**
WMQ smax
comp=N,26nm,1.0s
WMQ smax
comp=E,15nm,0.8s
KBL Kabul 8.76 231 *e*P **Pn 20 16 50.5 -4.7**
KBL pmax pmax
comp=Z,4.0nm,0.4s
KBL Kabul 8.76 231 *e*P **Pn 20 16 50.5 -4.7**
comp=Z,3.8nm,0.4s
KURBB Kurchatov Arra 10.27 5 ⇓Pn **Pn 20 17 19.2 +3.4**
comp=Z,0.2nm,0.8s,baz=190,slow=12
KURBB ⇑Lg 20 20 21.1
comp=Z,6.1nm,0.9s,baz=187,slow=27
KURK Kurchatov 10.36 5 ⇑Pn **Pn 20 17 20.5 +3.3**
comp=Z,1.3nm,0.9s
KURK ⇑Lg 20 20 23.1
comp=Z,27nm,1.1s
VOSK Vostochnaya 13.05 343 Pn **Pn 20 17 54.0 0.0**
comp=Z,1.4nm,0.9s
VOSK ⇑Lg 20 21 50.0
comp=Z,28nm,1.4s
BVA0 Borovoye Array 13.47 342 ⇑Lg 20 22 02.4
comp=Z,2.4nm,1.1s,baz=155,slow=26,SNR=6.9
BVAR Borovoye Array 13.47 342 Pn **Pn 20 17 55.1 -4.5**
comp=Z,0.1nm,0.3s,baz=143,slow=14,SNR=3.3
BVAR Lg 20 21 48.8
comp=Z,0.3nm,0.3s,baz=161,slow=27,SNR=4.4
ZRNK Zerenda 13.76 339 Pn **Pn 20 18 00.5 -3.0**
comp=Z,1.9nm,0.8s
ZRNK Lg 20 22 11.1
comp=Z,10nm,1.2s
ZALV Zalesovo Beam 14.49 18 Pn **Pn 20 18 10.6 -2.9**
comp=Z,0.1nm,0.3s,baz=203,slow=11,SNR=4.9
ZALV Lg 20 22 26.7
comp=Z,0.1nm,0.3s,baz=210,slow=23,SNR=5.8
AB31 Akbulak array 15.11 312 ⇑Pn **Pn 20 18 19.3 -2.7**
comp=Z,1.4nm,0.7s,baz=104,slow=15,SNR=5.7
ABKAR Akbulak array 15.11 312 *e*P **Pn 20 18 17.5 -4.5**
comp=Z,1.1nm,0.6s
GTA Gaotai 17.34 86 *e*P **Pn 20 18 51.5 +0.9**
GTA pP pP 20 18 55.8 +1.0
GTA sP sP 20 18 58.5 +2.4
GTA pmax pmax
comp=Z,3.0nm,1.2s
SONM Songino Array 22.11 61 P P 20 19 44.0 0.0
comp=Z,0.8nm,0.7s,mb3.3,baz=263,slow=9.6,SNR=2.7
FINES FINESS Array B 37.23 322 P P 20 21 58.0 -1.8
comp=Z,1.1nm,0.7s,mb3.8,baz=101,slow=9.9,SNR=4.3
FINES FINESS Array B 37.23 322 P **P 20 21 58.0 -1.8**
FINES pmax pmax
comp=Z,1.0nm,0.7s

ISCJB ***30*** *20:15:10.8±0.2,59°.70S±0°.05×27°.83W±0°.08,h134km, mb5.2/44, Error ellipse: s-maj=7.6km s-min=5.5km az=15.0*
NEIC ***30*** *20:15:11.5±0.2,59°.64S×27°.81W,mb5.6/16,MW5.6, Error ellipse: s-maj=9.1km s-min=7.7km az=197.0,Moment Tensor Solution. s20 Moment tensor: Scale 10^17^Nm; M_{rr}=2.78; $M_{\theta\theta}$2.63; $M_{\phi\phi}$0.15; $M_{r\theta}$-0.90; $M_{\theta\phi}$0.21; $M_{\phi r}$-0.90; Best double couple: $M_0$3.00000×10^17^ NP1:ϕ_s278.00000°, δ37.00000°,λ-67.00000°. NP2:ϕ_s71.00000°,δ57.00000°, λ-106.00000°. Principal axes: T 2.8200, Plg10.0000°, Azm172.0000°; N 0.3300, Plg13.0000°, Azm79.0000°; P -3.1500, Plg73.0000°, Azm298.0000°;*
IDC ***30*** *20:15:12.6±0.4,59°.70S×27°.89W,h141km±3km,mb4.8/14, mb1 4.8/15,mb1mx4.8/16,mbtmp4.8/15,MS4.4/9, Ms1 4.3/9,ms1mx4.3/12 Error ellipse: s-maj=12.3km s-min=10.7km az=46.0*
MOS ***30*** *20:15:13.2±0.8,59°.66S×27°.59W,h154km,mb5.4/7,Error ellipse: s-maj=31.1km s-min=14.4km az=95.0*
BJI ***30*** *20:15:16.8,59°.29S×28°.56W,h203km,mB5.2/23*
GCMT ***30*** *20:15:16.7±0.1,60°.04S×27°.46W,h145km,MW5.5, Moment Tensor Solution. s89,c166; s30,c30; Moment tensor: Scale 10^17^Nm; M_{rr}-2.07±.03; $M_{\theta\theta}$1.16±.04; $M_{\phi\phi}$0.91±.04; $M_{r\theta}$-1.18±.03; $M_{\theta\phi}$0.79±.04; $M_{\phi r}$-1.16±.03; Best double couple: $M_0$2.60000×10^17^ NP1:ϕ_s231.00000°, δ25.00000°,λ-86.00000°. NP2:ϕ_s47.00000°,δ65.00000°, λ-92.00000°. Principal axes: T 2.4400, Plg20.0000°, Azm138.0000°; N 0.2400, Plg2.0000°, Azm48.0000°; P -2.6800, Plg70.0000°, Azm313.0000°; Data Used: II IU IC G CN. Surface waves: sta=103, comp=201, per= 50.*

ISC 30 20:15:12.6±0.2,59°.72S±0°.05×27°.88W±0°.08,h136km, h136km±2.8km;pP-P,n238,c0°84/86,mb5.2/43,8C-24D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.62**	**152**	*e*Pn	**Pn**	**20 18 16.0**	**-3.8**
VNA1				*e*		20 18 20.4	
VNA1				*e*		20 18 41.2	
VNA1				*e*		20 20 47.1	
VNA1				*e*		20 21 00.0	
PMSA	**Palmer Station**	**17.40**	**238**	P	**Pn**	**20 19 07.5**	**+0.9**
	4.2nm,0.3s,baz=70,slow=7.5,SNR=12						
PMSA				PcP	PcP	20 23 39.4	0.0
	1.9nm,0.3s,baz=305,slow=5.2,SNR=4.3						
PMSA	**Palmer Station**	**17.40**	**238**	*e*P	**Pn**	**20 19 07.5**	**+0.9**
	86nm,0.8s						
MAIT	**Maitri**	**19.49**	**141**	⇑*i*P	**P**	**20 19 28.8**	**+0.3**
MAIT				*e*		20 19 51.9	
MAIT				*e*S	**S**	**20 22 44.9**	**-16**
NVL	**N'lazarevskaya**	**19.52**	**141**	*c i*P	**P**	**20 19 29.0**	**+0.2**
USHA	**Ushuaia**	**22.19**	**265**	P	**P**	**20 19 58.3**	**+0.8**
	180nm,0.9s,mb5.5,baz=90,slow=9.4,SNR=42						
USHA				PcP	PcP	20 23 47.9	-0.4
	5.6nm,0.7s,baz=45,slow=4.3,SNR=3.4						
SYO	**Syowa Base**	**29.06**	**137**	⇓*e*P	**P**	**20 20 57.4**	**-2.1**
QSPA	**South Pole Qui**	**30.52**	**180**	P	**P**	**20 21 13.8**	**+1.5**
	28nm,0.9s,mb5.0,baz=203,slow=4.2,SNR=76						
QSPA				pP	pP	20 21 41.7	+0.3
	42nm,1.0s,baz=200,slow=5.1,SNR=8.6						
QSPA				PcP	PcP	20 24 07.3	-0.1
	18nm,0.5s,baz=261,slow=0.4,SNR=9.8						
QSPA				ScP	ScP	20 27 34.2	-2.6
	2.1nm,0.5s,baz=278,slow=1.6,SNR=5.1						
QSPA				LR	LR	20 33 12.6	
	comp=Z,736nm,18.3s,baz=190,slow=35						
QSPA	**South Pole Qui**	**30.52**	**180**	P	**P**	**20 21 13.8**	**+1.5**
QSPA				pP	pP	20 21 41.7	+0.3
QSPA				PcP	PcP	20 24 07.3	-0.1
QSPA				ScP	ScP	20 27 34.2	-2.6
QSPA				LR	LR	20 33 12.6	
TRQA	**Tornquist**	**30.63**	**300**	*e*P	**P**	**20 21 13.9**	**+0.3**
	108nm,0.8s,mb5.6						
MAW	**Mawson**	**37.47**	**141**	⇑*i*P	**P**	**20 22 12.3**	**+0.1**
	6.1nm,0.6s,mb4.4						
MAW				*e*	pP	20 22 41.8	-0.2
MAW	**Mawson**	**37.47**	**141**	P	**P**	**20 22 12.6**	**+0.4**
	6.2nm,0.5s,mb4.5,baz=230,slow=8.7,SNR=17						
MAW				pP	pP	20 22 42.2	+0.2
	32nm,1.1s,baz=236,slow=9.7,SNR=8.0						
MAW				PcP	PcP	20 24 27.5	0.0
	8.1nm,0.6s,baz=177,slow=6.3,SNR=6.0						
MAW				ScP	ScP	20 27 59.6	-2.0
	3.7nm,0.8s,baz=218,slow=4.5,SNR=4.5						
MAW				LR	LR	20 36 48.4	
	comp=Z,561nm,18.8s,baz=243,slow=35						
MAW	**Mawson**	**37.47**	**141**	*e*P	**P**	**20 22 11.6**	**-0.6**
MAW				pmax	pmax		
	comp=Z,11nm,1.1s						
MAW	**Mawson**	**37.47**	**141**	*e*P	**P**	**20 22 11.6**	**-0.6**
	comp=Z,11nm,1.1s,mb4.4						
CACH	**El Canelo**	**37.80**	**293**	*e*P	**P**	**20 22 14.6**	**-0.8**
LMEL	**Las Melosas**	**37.83**	**294**	*e*P	**P**	**20 22 15.6**	**-0.1**
FCH	**Farellones**	**38.31**	**294**	⇓*e*P	**P**	**20 22 20.7**	**+1.1**
LNV	**Longovilo**	**38.31**	**293**	⇓*e*P	**P**	**20 22 19.4**	**-0.2**
CLCH	**Cerro Calan**	**38.36**	**294**	⇓*e*P	**P**	**20 22 20.4**	**+0.3**
PEL	**Peldehue**	**38.64**	**294**	⇓*e*P	**P**	**20 22 22.9**	**+0.5**
CAM4	**Nova Friburgo**	**38.75**	**338**	*e*P	**P**	**20 22 21.5**	**-2.0**
CAM4				*i*		20 22 25.5	
CAM4				*i*		20 22 26.1	
CAM4				*i*		20 22 33.3	
CAM4				*i*		20 22 33.7	
CAM4				*i*		20 23 00.1	
CAM4				*i*		20 23 01.6	
CAM4				*i*		20 23 07.7	
CAM4				*i*		20 23 21.6	
CFAA	**Coronel Fontan**	**38.82**	**298**	P	**P**	**20 22 23.5**	**-0.4**
	comp=Z,28nm,0.8s,mb5.0,baz=151,slow=8.7,SNR=262						
CFAA				PcP	PcP	20 24 31.9	-0.4
	comp=Z,1.2nm,0.5s,baz=162,slow=7.6,SNR=2.2						
CFAA	**Coronel Fontan**	**38.82**	**298**	P	**P**	**20 22 23.5**	**-0.4**
CFAA				PcP	PcP	20 24 31.9	-0.4
ELIM	**Elim**	**39.73**	**72**	*e*P	**P**	**20 22 32.1**	**+0.6**
TLL	**Tololo Astrono**	**41.20**	**296**	⇓*e*P	**P**	**20 22 44.1**	**+0.6**
SUR	**Sutherland**	**42.05**	**72**	P	**P**	**20 22 51.4**	**+0.9**
	comp=Z,27nm,0.8s,mb4.9,baz=199,slow=7.7,SNR=15						
SUR				PcP	PcP	20 24 43.3	+0.6
	comp=Z,9.6nm,0.7s,baz=225,slow=5.7,SNR=3.6						
LCO	**Las Campanas**	**42.14**	**297**	*e*P	**P**	**20 22 51.4**	**+0.2**
	comp=Z,142nm,0.9s,mb5.6						
CVNA	**Calvinia**	**42.29**	**70**	⇓*i*P	**P**	**20 22 53.5**	**+1.1**
CVNA				AMb	AMB	20 22 56.5	
	comp=Z,161nm,1.4s,mb5.5						
SBA	**Scott Base**	**42.39**	**185**	*e*P	**P**	**20 22 54.7**	**+2.0**
SBA				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.7						
SBA	**Scott Base**	**42.39**	**185**	*e*P	**P**	**20 22 54.7**	**+2.0**
	comp=Z,16nm,0.8s,mb4.7						
KOMG	**Komaggas**	**42.63**	**66**	⇓*i*P	**P**	**20 22 56.0**	**+0.8**
KOMG				AMb	AMB	20 22 58.8	
	comp=Z,124nm,1.5s,mb5.3						
UPI	**Upington**	**45.60**	**69**	⇓*i*P	**P**	**20 23 19.2**	**+0.4**
UPI				AMb	AMB	20 23 21.8	
	comp=Z,186nm,1.5s,mb5.5						
HVD	**Gariep Dam**	**45.78**	**75**	*e*P	**P**	**20 23 20.4**	**+0.1**
HVD				AMb	AMB	20 23 23.6	
	comp=Z,86nm,1.4s,mb5.2						
MIR	**Mirnyy**	**46.70**	**152**	⇓*i*P	**P**	**20 23 27.4**	**+0.5**
MIR				pmax	pmax		
	comp=Z,62nm,1.4s,mb5.0						
BOSA	**Boshof**	**47.31**	**73**	P	**P**	**20 23 32.4**	**+0.2**
	comp=Z,52nm,1.0s,mb5.1,baz=207,slow=8.2,SNR=44						
BOSA				pP	pP	20 24 04.0	+0.8
	comp=Z,37nm,1.0s,baz=212,slow=9.0,SNR=5.6						
BOSA				PcP	PcP	20 25 01.1	+0.2
	comp=Z,16nm,0.9s,baz=216,slow=6.1,SNR=4.9						
BOSA				LR	LR	20 40 00.7	
	comp=Z,307nm,19.3s,baz=327,slow=32						
BOSA	**Boshof**	**47.31**	**73**	*e*P	**P**	**20 23 31.7**	**-0.5**
BOSA				pmax	pmax		
	comp=Z,109nm,1.3s,mb5.3						
BOSA	**Boshof**	**47.31**	**73**	*e*P	**P**	**20 23 31.7**	**-0.5**
	comp=Z,109nm,1.3s,mb5.3						
BOSA	**Boshof**	**47.31**	**73**	⇓*i*P	**P**	**20 23 32.1**	**-0.1**
BOSA				AMb	AMB	20 23 34.8	
	comp=Z,128nm,1.6s,mb5.3						
SWZ	**Schweizer**	**48.54**	**72**	⇓*i*P	**P**	**20 23 41.5**	**-0.2**
SWZ				AMb	AMB	20 23 43.6	
	comp=Z,154nm,1.6s,mb5.4						
SEK	**Senekal**	**48.71**	**75**	⇓*i*P	**P**	**20 23 43.2**	**+0.2**
SEK				AMb	AMB	20 23 46.6	
	comp=Z,129nm,1.5s,mb5.3						
PRYS	**Parys**	**49.74**	**74**	⇓*i*P	**P**	**20 23 50.1**	**-0.6**
PRYS				AMb	AMB	20 23 53.1	
	comp=Z,140nm,1.4s,mb5.4						
KSR	**Koster**	**50.41**	**73**	⇓*i*P	**P**	**20 23 56.1**	**+0.2**
KSR				AMb	AMB	20 23 58.4	
	comp=Z,80nm,1.4s,mb5.2						
LBTB	**Lobatse**	**50.49**	**71**	*e*P	**P**	**20 23 56.1**	**-0.4**
LBTB				pmax	pmax		
	comp=Z,157nm,1.2s,mb5.5						
LBTB	**Lobatse**	**50.49**	**71**	*e*P	**P**	**20 23 56.1**	**-0.4**
	comp=Z,157nm,1.2s,mb5.5						
LBTB	**Lobatse**	**50.49**	**71**	⇓*i*P	**P**	**20 23 56.4**	**-0.1**
LBTB				AMb	AMB	20 23 59.0	
	comp=Z,173nm,1.5s,mb5.5						
CASY	**Casey**	**50.58**	**160**	*e*P	**P**	**20 23 57.3**	**+0.7**
CASY	**Casey**	**50.58**	**160**	*e*P	**P**	**20 23 57.2**	**+0.6**
ERPM	**east rand prop**	**50.66**	**74**	*e*P	**P**	**20 23 58.2**	**+0.6**
ERPM				AMb	AMB	20 24 00.8	
	comp=Z,165nm,1.3s,mb5.5						
SLR	**Silverton**	**51.19**	**74**	*e*P	**P**	**20 24 01.2**	**-0.4**
SLR				AMb	AMB	20 24 03.9	
	comp=Z,156nm,1.6s,mb5.4						
POGA	**Pongola**	**51.46**	**78**	⇓*i*P	**P**	**20 24 04.0**	**+0.3**
POGA				AMb	AMB	20 24 05.0	
	comp=Z,128nm,2.0s,mb5.2						
TSUM	**Tsumeb**	**51.85**	**59**	*e*P	**P**	**20 24 06.7**	**+0.1**
	comp=Z,37nm,0.9s,mb5.0						
TSUM	**Tsumeb**	**51.85**	**59**	⇓*i*P	**P**	**20 24 07.1**	**+0.5**
LPAZ	**La Paz**	**52.28**	**308**	P	**P**	**20 24 11.0**	**+1.2**
	comp=Z,31nm,0.4s,mb5.3,baz=143,slow=5.4,SNR=144						
LPAZ				LR	LR	20 46 18.7	
	comp=Z,206nm,18.6s,baz=125,slow=36						
MOPA	**Mopani**	**54.57**	**76**	⇓*i*P	**P**	**20 24 26.5**	**0.0**
MOPA				AMb	AMB	20 24 29.2	
	comp=Z,98nm,1.7s,mb5.3						
MSNA	**Messina**	**54.89**	**73**	*e*P	**P**	**20 24 28.8**	**0.0**
MSNA				AMb	AMB	20 24 30.7	
	comp=Z,121nm,1.5s,mb5.4						
NNA	**Nana**	**59.77**	**301**	*e*P	**P**	**20 25 02.7**	**-0.4**
NNA				pP	pP	20 25 36.2	+0.9
LSZ	**Lusaka**	**60.08**	**68**	*e*P	**P**	**20 25 05.0**	**-0.2**
LSZ				pmax	pmax		
	comp=Z,45nm,0.8s,mb5.3						
LSZ	**Lusaka**	**60.08**	**68**	*e*P	**P**	**20 25 05.0**	**-0.2**
	comp=Z,45nm,0.8s,mb5.3						
LSZ	**Lusaka**	**60.08**	**68**	⇓*i*P	**P**	**20 25 05.1**	**-0.2**
LSZ	**Lusaka**	**60.08**	**68**	P	**P**	**20 25 05.5**	**+0.3**
	SNR=14						
LIC	**Lamto**	**68.19**	**25**	*e*P	**P**	**20 25 58.1**	**0.0**
	comp=Z,123nm,0.4s,mb6.0						
KIC	**Kosan Boka**	**68.39**	**25**	*e*P	**P**	**20 25 59.1**	**-0.2**
	comp=Z,232nm,1.3s,mb5.7						
TIC	**Toumodi**	**68.60**	**24**	*e*P	**P**	**20 26 00.4**	**-0.2**
	comp=Z,46nm,0.5s,mb5.5						
TIC	**Toumodi**	**68.60**	**24**	*e*P	**P**	**20 26 00.4**	**-0.2**
TIC				pmax	pmax		
	comp=Z,46nm,0.5s,mb5.5						
DBIC	**Dimbokro**	**68.66**	**25**	P	**P**	**20 26 00.8**	**-0.1**
	comp=Z,27nm,0.4s,mb5.3,baz=169,slow=6.8,SNR=106						
DBIC				pP	pP	20 26 35.8	+1.8
	comp=Z,29nm,1.0s,baz=165,slow=5.0,SNR=3.5						
DBIC				LR	LR	20 48 44.0	
	comp=Z,280nm,20.5s,baz=155,slow=29						
DBIC	**Dimbokro**	**68.66**	**25**	P	**P**	**20 26 00.9**	**-0.1**
DBIC				*PP	pP	20 26 35.8	+1.7
DBIC	**Dimbokro**	**68.66**	**25**	⇓*i*P	**P**	**20 26 00.7**	**-0.3**
OTAV	**Otavalo**	**71.44**	**305**	*e*P	**P**	**20 26 18.6**	**+0.7**
	comp=Z,149nm,1.4s,mb5.5						
OTAV				*e*pP	pP	20 26 51.5	+0.2
ROSC	**El Rosal**	**74.01**	**311**	P	**P**	**20 26 33.6**	**+0.5**
	comp=Z,13nm,0.6s,mb4.9,baz=110,slow=19,SNR=12						
ROSC				LR	LR	20 57 37.1	
	comp=Z,216nm,19.4s,baz=190,slow=34						
MBAR	**Mbarara**	**74.16**	**63**	⇓*i*P	**P**	**20 26 35.5**	**+1.5**
RPZ	**Rata Peaks**	**75.76**	**194**	P	**P**	**20 26 42.9**	**0.0**
	comp=Z,14nm,1.0s,mb4.6,baz=273,slow=2.8,SNR=3.8						
SDV	**Santo Domingo**	**76.38**	**316**	*e*P	**P**	**20 26 46.4**	**-0.3**
	comp=Z,79nm,0.8s,mb5.4						
SDV				*e*pP	pP	20 27 19.8	-0.5
KMBO	**Kilima Mbogo**	**76.71**	**69**	P	**P**	**20 26 52.7**	**+4.1**
	comp=Z,5.7nm,1.0s,mb4.2,baz=181,slow=24,SNR=8.2						
KMBO				LR	LR	21 00 14.1	
	comp=Z,426nm,18.0s,baz=274,slow=35						
JTS	**JuntasAbangare**	**83.22**	**304**	*e*P	**P**	**20 27 22.9**	**-0.5**
JTS				pmax	pmax		
	comp=Z,195nm,1.8s						
JTS	**JuntasAbangare**	**83.22**	**304**	*e*P	**P**	**20 27 22.9**	**-0.6**
	comp=Z,195nm,1.8s,mb5.5						
JTS				*e*pP	pP	20 27 52.9	-4.8
NWAO	**Narrogin (SRO)**	**83.30**	**151**	P	**P**	**20 27 22.7**	**-1.1**
	comp=Z,10nm,0.7s,mb4.7,baz=169,slow=12,SNR=6.1						
CBYP	**Canovanas**	**83.63**	**324**	*e*P	**P**	**20 27 23.5**	**-1.9**
	comp=Z,77nm,1.4s,mb5.2						
CNB	**Canberra Magne**	**85.29**	**178**	*e*P	**P**	**20 27 33.1**	**-0.7**
FORT	**Forrest**	**87.67**	**159**	*e*P	**P**	**20 27 43.9**	**-1.6**
	comp=Z,31nm,0.7s,mb5.2						
STKA	**Stephens Creek**	**88.33**	**171**	*e*P	**P**	**20 27 47.4**	**-1.2**
	comp=Z,15nm,0.8s,mb4.9						
STKA	**Stephens Creek**	**88.33**	**171**	P	**P**	**20 27 47.8**	**-0.8**
	comp=Z,15nm,0.7s,mb4.9,baz=163,slow=4.5,SNR=33						
STKA				LR	LR	21 06 54.8	
	comp=Z,281nm,18.2s,baz=199,slow=35						
CMSA	**Cobar Meteorol**	**88.93**	**175**	*e*P	**P**	**20 27 50.6**	**-0.8**
PPT	**Papeete**	**89.74**	**234**	*e*LR	LR	20 56 46.3	
	comp=Z,248nm,24.8s						
PPT	**Papeete**	**89.74**	**234**	LR	LR	21 01 09.4	
	comp=Z,43nm,21.0s,baz=147,slow=31						
TEIG	**Tepich**	**93.50**	**305**	*e*P	**P**	**20 28 10.8**	**-1.7**
	comp=Z,45nm,0.9s,mb5.6						
ASAR	**Alice Springs**	**95.59**	**163**	P	**P**	**20 28 20.8**	**-1.5**
	comp=Z,4.6nm,0.7s,mb4.9,baz=181,slow=4.0,SNR=62						
ASAR				pP	pP	20 28 55.8	-1.2
	comp=Z,3.8nm,0.9s,baz=188,slow=3.8,SNR=5.1						
ASAR				PKiKP	PKiKP	20 33 00.8	-0.5
	comp=Z,0.8nm,0.4s,baz=172,slow=1.2,SNR=12						
ASAR				PKKP	PKKPbc	20 45 09.6	+0.3
	comp=Z,0.5nm,0.4s,baz=19,slow=2.6,SNR=8.0						
ASAR	**Alice Springs**	**95.59**	**163**	P	**P**	**20 28 20.8**	**-1.5**
ASAR				pP	pP	20 28 55.8	-1.2
DZM	**Mont Dzumac**	**97.67**	**193**	*e*LR	LR	21 00 26.4	
	comp=Z,845nm,25.3s						
FITZ	**Fitzroy Crossi**	**99.51**	**155**	P	Pdif	20 28 38.5	-1.5
	comp=Z,1.0nm,0.6s,baz=173,slow=16,SNR=3.2						
FITZ				PKiKP	PKiKP	20 33 08.0	-0.3
	comp=Z,1.2nm,0.7s,baz=166,slow=4.0,SNR=5.0						
ESDC	**Sonseca Array**	**100.99**	**19**	P	Pdif	20 28 46.1	-0.4
	comp=Z,1.6nm,0.7s,baz=186,slow=4.8,SNR=12						
TXAR	**Lajitas Array**	**108.15**	**297**	PKiKP	PKiKP	20 33 21.9	-1.8
	comp=Z,0.4nm,0.6s,baz=155,slow=1.4,SNR=4.1						
TXAR				PP	PP	20 33 46.5	-3.0
	comp=Z,1.1nm,0.9s,baz=141,slow=8.1,SNR=5.3						
TXAR				PKKPbc	PKKPbc	20 44 32.7	-0.8
	comp=Z,0.3nm,0.5s,baz=20,slow=4.0,SNR=4.0						
TXAR	**Lajitas Array**	**108.15**	**297**	PKPdf	PKiKP	20 33 21.9	-1.8
TXAR				PP	PP	20 33 46.5	-3.0
TXAR				PKKPbc	PKKPbc	20 44 32.7	-0.8
SKDS	**Skadanscina**	**110.38**	**30**	*e*PP	PP	20 34 03.6	-1.9
DAVOX	**Davos/Dischmat**	**110.54**	**27**	PKiKP	PKiKP	20 33 26.8	-0.9
	comp=Z,1.1nm,0.4s,baz=270,slow=4.0,SNR=3.6						
CADS	**Cadrg**	**110.94**	**30**	*e*PP	PP	20 34 08.4	-1.1
BRTR	**Keskin Array B**	**111.25**	**47**	PKiKP	PKiKP	20 33 27.0	-2.2
	comp=Z,0.5nm,0.6s,baz=172,slow=5.8,SNR=3.0						
BRTR				PP	PP	20 34 04.5	-7.3
	comp=Z,0.8nm,0.8s,baz=214,slow=6.0,SNR=3.6						
BRTR				PKKPbc	PKKPbc	20 44 23.3	-0.6
	comp=Z,0.3nm,0.3s,baz=74,slow=1.6,SNR=3.8						
BRTR	**Keskin Array B**	**111.25**	**47**	PKiKP	PKiKP	20 33 27.0	-2.2
BRTR						20 34 04.5	
MLR	**Muntele Rosu**	**113.72**	**38**	PKiKP	PKiKP	20 33 31.5	-2.2
	comp=Z,1.9nm,0.8s,baz=124,slow=3.6,SNR=4.9						
MLR				PP	PP	20 34 25.8	-3.5
	comp=Z,3.4nm,1.0s,baz=253,slow=5.2,SNR=8.0						
CLL	**Collm**	**115.50**	**27**	*e*PKiKP	PKPdf	20 33 36.0	-0.9
CLL	**Collm**	**115.50**	**27**	*e*PKiKP	PKiKP	20 33 36.0	-0.9
CLL				*e*PS	PS	20 44 22.0	-0.5
CLL				*es*PSKS		20 45 19.0	
CLL				*e*SS	SS	20 50 42.0	+12
EKA	**Eskdalemuir Ar**	**116.39**	**15**	PKP	PKPdf	20 33 36.8	-1.8
	comp=Z,1.5nm,0.5s,baz=219,slow=2.3,SNR=13						
EKA				PKKPab	PKKPab	20 44 06.8	-2.0
	comp=Z,0.7nm,0.4s,baz=1.0,slow=2.5,SNR=8.9						
KIV	**Kislovodsk**	**118.33**	**51**	*i* PKIKP	PKPdf	20 33 40.0	-2.6
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,92nm,19.0s						
SCHQ	**Schefferville**	**118.36**	**336**	PKP	PKPdf	20 33 40.6	-1.7
	comp=Z,4.5nm,0.6s,baz=252,slow=6.3,SNR=9.2						
KIEV	**Kiev**	**119.35**	**38**	*e*PKIKP	PKPdf	20 33 42.3	-2.1
AKASG	**Malin Array Be**	**119.36**	**38**	PKP	PKPdf	20 33 42.6	-1.8
	comp=Z,1.5nm,0.4s,baz=235,slow=2.4,SNR=16						
AKASG				pPKP	pPKPdf	20 34 20.3	-0.3
	comp=Z,0.7nm,0.4s,baz=240,slow=1.6,SNR=3.2						
AKASG				PP	PP	20 35 01.9	-6.7
	comp=Z,0.3nm,0.4s,baz=198,slow=7.1,SNR=4.6						
AKASG				SKP		20 37 02.5	
	comp=Z,1.0nm,0.5s,baz=233,slow=1.2,SNR=4.2						
AKASG	**Malin Array Be**	**119.36**	**38**	PKIKP	PKPdf	20 33 42.6	-1.8
AKASG						20

comp=Z,26nm,0.7s,baz=129,slow=2.7,SNR=90
FINES pPKP pPKPdf 20 34 36.6 +0.1
comp=Z,18nm,1.0s,baz=96,slow=1.9,SNR=4.7
FINES SKPbc 20 37 02.0
comp=Z,1.9nm,0.4s,baz=190,slow=3.3,SNR=11
FINES FINESS Array B 127.79 29 PKHKP PKPpre 20 33 45.6
FINES 20 33 58.8
FINES 20 34 36.6
HUMO Hull Mountain 127.92 291 *e*PKPdf PKPdf 20 34 00.3 -0.8
KAF Kangasniemi 128.42 29 *e*PKIKP PKPdf 20 33 59.5 -1.9
KAF pmax pmax
comp=Z,5.0nm,0.3s
KAF Kangasniemi 128.42 29 *e*p PKPdf 20 33 59.5 -1.9
comp=Z,5.1nm,0.3s
FFC Flin Flon 128.43 315 *i* PKIKP PKPdf 20 34 02.0 +0.4
QIZ Qiongzhong 129.36 125 PKP PKPdf 20 34 03.5 -1.1
QIZ PP PP 20 36 15.3 +0.1
QIZ SS SS 20 53 22.8 -2.6
QIZ LR LR
comp=N,180nm,15.0s
QIZ LR LR
comp=Z,260nm,40.7s
LSA Lhasa 129.71 99 PKP PKPdf 20 34 04.3 -0.6
LSA Lhasa 129.71 99 *e*PKPdf PKPdf 20 34 04.5 -0.5
AKTK Aktyubinsk 129.76 56 PKP PKPdf 20 34 03.1 -1.2
AKTK pPKP pPKPdf 20 34 40.7 +0.1
AKTK SKPbc 20 37 07.2
AKTO Aktyubinsk 129.76 56 PKP PKPdf 20 34 03.1 -1.2
comp=Z,21nm,0.9s,baz=152,slow=2.9,SNR=48
AKTO pPKP pPKPdf 20 34 40.7 +0.1
comp=Z,15nm,1.0s,baz=143,slow=5.1,SNR=4.7
AKTO SKPbc 20 37 07.2
comp=Z,5.1nm,1.0s,baz=189,slow=6.6,SNR=3.5
AKTO Aktyubinsk 129.76 56 PKIKP PKPdf 20 34 03.1 -1.2
AKTO 20 34 40.7
KSH Kashi 129.81 78 *e*PKP PKPdf 20 34 03.3 -1.5
KSH PKS 20 37 38.5
KSH LR LR
comp=N,140nm,5.8s
KSH LR LR
comp=E,110nm,8.0s
KSH LR LR
comp=Z,170nm,6.6s
SCO Scoresbysund 129.98 3 *i* PKIKP PKPdf 20 34 03.5 -0.6
SCO pmax pmax
comp=Z,5.0nm,1.0s
SCO Scoresbysund 129.98 3 *i* P PKPdf 20 34 03.5 -0.6
comp=Z,5.4nm,1.0s
JOF Joensuu 130.37 31 *e*PKIKP PKPdf 20 34 03.7 -1.4
JOF pmax pmax
comp=Z,6.0nm,0.4s
JOF Joensuu 130.37 31 *e*p PKPdf 20 34 03.7 -1.4
comp=Z,6.2nm,0.4s
AML Almayashu 130.68 74 P PKPdf 20 34 07.4 +1.0
SNR=20
EKS2 Erkin-Say 131.12 74 P PKPdf 20 34 06.1 -1.0
SNR=15
JMIC Jan Mayen 131.13 8 PKP PKPdf 20 34 06.5 +0.2
comp=Z,10nm,0.7s,baz=263,slow=6.8,SNR=4.5
KZA Kyzart 131.40 75 P PKPdf 20 34 07.1 -0.6
SNR=14
AAK Ala-Archa 131.44 74 *e*PKIKP PKPdf 20 34 06.6 -1.2
KMI Kunming 131.54 113 PKP PKPdf 20 34 08.0 -0.5
KMI sPKP 20 35 17.5
KMI PP PP 20 36 33.8 +4.3
KMI PKS 20 37 41.0
KMI SKS SKSdf 20 40 58.5 -8.5
KMI AMB AMB
comp=Z,88nm,4.2s
KMI LR LR
comp=N,200nm,18.4s
KMI LR LR
comp=E,180nm,14.2s
KMI LR LR
comp=Z,170nm,25.0s
FRU Bishkek 131.65 74 *e*PKIKP PKPdf 20 34 06.0 -2.2
FRU *e* 20 36 30.0
FRU pmax pmax
comp=Z,60nm,2.0s
EDM Edmonton 131.66 307 *e*PKIKP PKPdf 20 34 05.4 -2.4
KBK Karagaybulak 131.68 74 P PKPdf 20 34 09.2 +0.9
SNR=10
CHMS Chumysh 131.84 74 P PKPdf 20 34 09.0 +0.4
SNR=6.1
USP Ospenovka 131.92 74 P PKPdf 20 34 07.2 -1.5
SNR=16
ULHL Ulaho! 132.01 76 P PKPdf 20 34 07.9 -0.9
SNR=5.5
SUMG Summit 132.21 356 *e*PKPdf PKPdf 20 34 06.7 -1.6
SUMG Summit 132.21 356 ⇑ *i*P PKPdf 20 34 08.7 +0.4
comp=Z,11nm,0.8s
ARU Arti 134.37 51 *i* PKIKP PKPdf 20 34 11.3 -1.5
ARU 20 36 43.1
ARU SS SS 20 54 25.4 -1.2
ARU Arti 134.37 51 *e*PKPdf PKPdf 20 34 12.3 -0.5
ARCES ARCESS Array B 134.48 23 PKHKP PKPpre 20 33 55.2
comp=Z,1.4nm,0.4s,baz=223,slow=3.6,SNR=20
ARCES PKP PKPdf 20 34 10.3 -2.3
comp=Z,25nm,0.7s,baz=228,slow=1.5,SNR=32
ARCES pPKP pPKPdf 20 34 48.7 -0.2
comp=Z,8.1nm,0.9s,baz=186,slow=2.4,SNR=2.2
ARCES PP PP 20 36 44.1 -3.9
comp=Z,5.0nm,0.8s,baz=248,slow=1.3,SNR=4.4
ARCES SKPab 20 37 25.6
comp=Z,5.3nm,0.6s,baz=184,slow=3.4,SNR=13
ARCES ARCESS Array B 134.48 23 PKHKP PKPpre 20 33 55.3
ARCES 20 34 10.3
ARCES 20 34 48.7
ARCES 20 36 44.1
ARCES ARCESS Array B 134.48 23 PKP PKPpre 20 33 55.2
ARCES PKP PKPdf 20 34 10.3 -2.3
ARCES pPKP pPKPdf 20 34 48.7 -0.2
ARCES PP PP 20 36 44.1 -3.9
ARCES SKPab 20 37 25.6
GYA Guiyang 134.49 116 *e*Pdif Pdif 20 31 14.0 -1.5
GYA PKP PKPdf 20 34 13.3 -0.7
GYA sPKP 20 35 23.8
GYA PP PP 20 36 52.5 +4.3
GYA PKS 20 37 48.8
GYA SKKS SKKSac 20 43 22.8 -7.1
GYA SS SS 20 54 24.5 -3.4
GYA AMB AMB
comp=Z,120nm,8.0s
GYA LR LR
comp=N,160nm,22.8s
GYA LR LR
comp=E,130nm,21.2s
GYA LR LR
comp=Z,150nm,23.9s
KEV Kevo 134.96 24 *e*PKIKP PKPdf 20 34 12.9 -0.6
KEV Kevo 134.96 24 *e*p PKPdf 20 34 12.9 -0.6
CD2 Chengdu 136.89 110 PKP PKPdf 20 34 18.0 -0.4
CD2 sPKP 20 35 28.0
CD2 PKS 20 37 53.0
CD2 SKS SKSdf 20 41 07.8 -8.4
CD2 SKKS SKKSac 20 43 37.5 -6.6
CD2 SS SS 20 54 56.5 -0.2
BRVK Borovoye 136.95 61 *ce*PKIKP PKPdf 20 34 17.2 -0.5
BRVK pmax pmax
comp=Z,23nm,1.7s
BRVK Borovoye 136.95 61 *e*PKPdf PKPdf 20 34 16.4 -1.4
BRVK Borovoye 136.95 61 P PKPdf 20 34 16.9 -0.8
SNR=6.7
BVAR Borovoye Array 136.97 61 PKHKP PKPpre 20 34 03.9
comp=Z,3.4nm,0.7s,baz=237,slow=4.4,SNR=20
BVAR PKP PKPdf 20 34 16.5 -1.3
comp=Z,5.7nm,0.4s,baz=205,slow=2.6,SNR=20
BVAR pPKP pPKPdf 20 34 55.6 +1.5
comp=Z,5.1nm,0.8s,baz=242,slow=3.2,SNR=2.1
BVAR SKPab 20 37 34.3
comp=Z,5.8nm,0.8s,baz=232,slow=2.9,SNR=9.0
BVAR Borovoye Array 136.97 61 PKHKP PKPpre 20 34 03.9
BVAR 20 34 16.5
BVAR 20 34 35.8
MKAR Makanchi Array 138.28 76 PKHKP PKPpre 20 34 08.6
comp=Z,2.1nm,0.4s,baz=244,slow=4.1,SNR=35
MKAR PKP PKPdf 20 34 18.9 -1.5
comp=Z,4.5nm,0.6s,baz=247,slow=2.9,SNR=13
MKAR SKPab 20 37 39.3
comp=Z,1.7nm,0.6s,baz=231,slow=3.0,SNR=6.7
MKAR Makanchi Array 138.28 76 PKHKP PKPpre 20 34 08.6
MKAR 20 34 19.0
MKAR Makanchi Array 138.28 76 PKP PKPpre 20 34 08.6
MKAR PKP PKPdf 20 34 18.9 -1.5
MKAR SKPab 20 37 39.3

YKA Yellowknife Ar 138.59 316 PKHKP PKPpre 20 34 10.7
comp=Z,1.0nm,0.6s,baz=122,slow=3.3,SNR=6.1
YKA PKP PKPdf 20 34 19.4 -1.0
comp=Z,6.8nm,0.4s,baz=131,slow=2.5,SNR=40
YKA pPKP pPKPdf 20 34 57.4 +0.6
comp=Z,4.8nm,0.9s,baz=131,slow=1.6,SNR=2.8
YKA PP PP 20 37 10.5 -3.3
comp=Z,10.0nm,1.1s,baz=126,slow=6.2,SNR=7.6
YKA SKPab 20 37 44.9
comp=Z,2.5nm,0.6s,baz=117,slow=4.6,SNR=5.3
YKA Yellowknife Ar 138.59 316 PKHKP PKPpre 20 34 10.7
YKA 20 34 19.4
YKA 20 34 57.4
YKA 20 37 10.5
YKA Yellowknife Ar 138.59 316 PKP PKPpre 20 34 10.7
YKA PKP PKPdf 20 34 19.4 -1.0
YKA pPKP pPKPdf 20 34 57.4 +0.6
YKA PP PP 20 37 10.5 -3.3
YKA SKPab 20 37 44.9
WMQ Urumqi 138.87 83 PKP PKPdf 20 34 21.3 -0.3
WMQ PP PP 20 37 19.0 +3.3
ENH Enshi 139.02 117 *e*PKPpre PKPpre 20 34 11.3
KURK Kurchatov 139.20 69 PKHKP PKPpre 20 34 11.8
comp=Z,4.8nm,0.5s,baz=183,slow=3.2,SNR=31
KURK PKP PKPdf 20 34 20.2 -1.8
comp=Z,6.8nm,0.7s,baz=232,slow=3.2,SNR=16
KURK Kurchatov 139.20 69 *ce*PKIKP PKPdf 20 34 23.2 +1.3
KURK pmax pmax
comp=Z,28nm,1.7s
KURK Kurchatov 139.20 69 PKP PKPdf 20 34 20.2 -1.8
KURK Kurchatov 139.20 69 P PKPpre 20 34 15.0
SNR=5.7
SPITS Spitsbergen Ar 140.23 13 PKHKP PKPpre 20 34 13.7
comp=Z,6.4nm,0.4s,baz=145,slow=6.1,SNR=6.8
LZH Lanzhou 141.15 105 *e*PKP PKPdf 20 34 20.5 -5.5
LZH PP PP 20 37 28.5 -1.1
LZH SKKS SKKSac 20 44 00.5 -8.4
LZH SS SS 20 55 40.5 -6.3
LZH AMB AMB
comp=Z,110nm,5.0s
LZH LR LR
comp=E,150nm,13.9s
LZH LR LR
comp=Z,250nm,16.8s
WHN Wuhan 141.40 122 PKP PKPdf 20 34 23.0 -3.6
WHN PP PP 20 37 30.5 -0.5
WHN LR LR
comp=Z,500nm,21.9s
GTA Gaotai 141.74 98 *e*PKP PKPdf 20 34 21.5 -5.4
GTA PP PP 20 37 32.8 -0.5
GTA SKS SKSdf 20 41 13.8 -10
GTA SKKS SKKSac 20 44 04.3 -7.9
GTA SS SS 20 55 48.8 -4.9
GTA AMB AMB
comp=Z,87nm,5.7s
GTA LR LR
comp=N,90nm,17.4s
GTA LR LR
comp=E,100nm,18.0s
GTA LR LR
comp=Z,160nm,17.4s
DLBC Dease Lake 142.12 303 *e*PKPpre PKPpre 20 34 21.4
NVS Novosibirsk 143.98 67 ⇓ *i* PKIKP PKPdf 20 34 28.1 -2.3
NVS *i* 20 35 04.4
NVS pmax pmax
comp=Z,609nm,1.7s
NVS pmax pmax
comp=N,259nm,1.8s
NVS pmax pmax
comp=E,228nm,1.8s
ZAA0 Zalesovo Array 144.19 69 *e*PKPdf PKPdf 20 34 27.4 -3.3
ZALV Zalesovo Beam 144.19 69 PKP PKPdf 20 34 27.8 -3.0
comp=E,68nm,0.5s,baz=230,slow=3.7,SNR=368
ZALV pPKP pPKPdf 20 35 05.3 -1.7
comp=E,15nm,0.7s,baz=247,slow=3.1,SNR=2.7
NJ2 Nanjing 144.60 126 *e*PKPbc PKPdf 20 34 30.8 -1.4
NJ2 SKS SKSdf 20 41 15.0 -14
NJ2 AMB AMB
comp=Z,350nm,5.7s
NJ2 LR LR
comp=N,180nm,24.5s
NJ2 LR LR
comp=E,200nm,24.4s
NJ2 LR LR
comp=Z,370nm,24.6s
SKAG Skagway 144.96 302 *e*PKPdf PKPdf 20 34 30.9 -1.1
BTO Baotou 147.69 107 *e*PKPbc PKPbc 20 34 35.8 -4.4
INK Inuvik 148.33 317 *e*PKIKP PKPdf 20 34 38.7 +1.4
HHC Hu-ho-hao-te 148.63 109 *e*PKPbc PKPbc 20 34 37.0 -5.6
HHC pPKP pPKPdf 20 35 26.3 +11
HHC sPKP 20 35 47.8
HHC PKS 20 38 10.5
HHC PP PP 20 38 16.0 +1.9
HHC SKS SKSdf 20 41 23.5 -10
HHC SKKS SKKSac 20 44 44.3 -7.0
HHC SS SS 20 57 07.5 -4.5
HHC AMB AMB
comp=Z,80nm,9.6s
HHC LR LR
comp=N,120nm,20.8s
HHC LR LR
comp=E,120nm,20.4s
HHC LR LR
comp=Z,110nm,20.8s
DAWY Dawson 148.86 308 *e*PKPdf PKPdf 20 34 36.0 -2.3
DAWY *e*PKPbc PKPbc 20 34 40.5 -1.9
EGAK Eagle 149.85 308 *e*PKPdf PKPdf 20 34 37.1 -2.7
EGAK *e*PKPbc PKPbc 20 34 43.0 -1.8
BJT Baijiatuau 150.14 115 *e*PKIKP PKPdf 20 34 45.3 +4.2
BJI Beijing 150.16 115 PKPbc PKPbc 20 34 45.8 -0.6
BJI pPKP pPKPdf 20 35 22.8 +5.3
BJI sPKP 20 35 48.0
BJI PP PP 20 38 23.3 +0.5
BJI SS SS 20 57 37.5 +8.5
BJI AMB AMB
comp=Z,150nm,8.5s
MENT Mentasta 150.18 304 *e*PKPbc PKPbc 20 34 44.5 -1.2
MOY Mondy 150.76 83 *e*PKIKP PKPdf 20 34 40.6 -1.1
MOY pmax pmax
comp=Z,233nm,2.3s
SONM Songino Array 151.09 94 PKP PKPdf 20 34 41.4 -1.0
comp=Z,49nm,0.4s,baz=178,slow=1.8,SNR=39
SONM PKPbc PKPbc 20 34 47.5 -0.8
comp=Z,52nm,0.4s,baz=214,slow=3.1,SNR=218
SONM pPKPbc pPKPbc 20 35 25.5 +1.1
comp=Z,21nm,0.9s,baz=205,slow=2.9,SNR=3.8
ULN Ulaanbaatar 151.45 94 *e*PKIKP PKPbc 20 34 47.9 -1.2
ULN Ulaanbaatar 151.45 94 P PKPdf 20 34 42.1 -0.7
SNR=35
SEW Seward 151.52 296 *e*PKPbc PKPbc 20 34 46.8 -2.0
KDAK Kodiak Island 151.94 291 *e*PKIKP PKPbc 20 34 47.9 -2.0
PMR Palmer 151.98 299 *e*PKIKP PKPbc 20 34 48.1 -1.8
OHAK Old Harbor 152.02 289 *e*PKPbc PKPbc 20 34 48.6 -1.5
RC01 Rabbit Creek A 152.06 298 *e*PKPbc PKPbc 20 34 48.8 -1.2
TLY Talaya 152.10 85 *e*PKIKP PKPdf 20 34 42.1 -1.6
TLY pmax pmax
comp=Z,21nm,1.3s
TLY Talaya 152.10 85 *e*PKPdf PKPdf 20 34 42.9 -0.9
TLY *e*PKPbc PKPbc 20 34 49.7 -0.8
TLY Talaya 152.10 85 P PKPdf 20 34 43.1 -0.6
SNR=22
ILAR Eielson Array 152.15 307 PKPbc PKPbc 20 34 48.2 -2.0
comp=Z,16nm,0.8s,baz=281,slow=0.7,SNR=70
ILAR pPKPbc pPKPbc 20 35 26.6 +0.3
comp=Z,14nm,1.0s,baz=152,slow=1.2,SNR=3.6
INCN Inchon 152.41 132 *e*PKPbc PKPbc 20 34 50.7 -1.0
INCN Inchon 152.41 132 P PKPbc 20 34 51.1 -0.6
SNR=5.1
COLA College 152.58 307 *e*PKIKP PKPbc 20 34 48.7 -2.4
COLA *e* 20 35 01.0
KSRS Korea Array 152.86 134 PKP PKPdf 20 34 43.5 -1.8
comp=Z,2.7nm,1.0s,baz=206,slow=1.5,SNR=14
KSRS PKPbc PKPbc 20 34 51.8 -0.8
comp=Z,7.9nm,0.7s,baz=202,slow=2.6,SNR=32
KSRS PKPab PKPab 20 35 04.3 +0.1
comp=Z,6.5nm,0.9s,baz=212,slow=4.3,SNR=10
KSRS pPKPbc pPKPbc 20 35 28.9 +0.1
comp=Z,8.1nm,1.0s,baz=200,slow=2.7,SNR=3.0
BPAW Bear Paw Mtn. 153.64 304 *e*PKPbc PKPbc 20 34 51.5 -1.9
BPAW *e*PKPab PKPab 20 35 05.3 -1.6
PPLA Purkeypile 153.78 301 *e*PKPbc PKPbc 20 34 52.5 -1.3
MAJO Matsushiro 155.13 153 *e*PKIKP PKPdf 20 34 56.7 +8.1
MAT Matsushiro 155.13 153 PKP PKPdf 20 34 48.0 -0.6
MJAR Matsushiro Arr 155.13 153 PKP PKPdf 20 34 47.5 -1.1
comp=Z,2.2nm,0.9s,baz=178,slow=2.1,SNR=8.2
MJAR PKPbc PKPdf 20 34 56.8 +8.2
comp=Z,3.5nm,0.7s,baz=197,slow=3.0,SNR=9.9
MJAR PKPab PKPab 20 35 13.1 -0.9
comp=Z,1.6nm,0.7s,baz=184,slow=5.1,SNR=4.3
TTA Tatalina 155.47 300 *e*PKIKP PKPdf 20 34 44.8 -3.3
CN2 Changchun 157.30 123 *e*PKP PKPdf 20 34 50.0 -1.1
CN2 PP PP 20 39 05.3 +2.4
CN2 SS SS 20 58 44.5 -2.0
CN2 AMB AMB
comp=Z,200nm,9.0s
MDJ Mudanjiang 159.68 128 PKP PKPdf 20 34 52.3 -1.7
MDJ PP PP 20 39 16.0 +0.2
MDJ SS SS 20 59 09.0 -2.6
MDJ Mudanjiang 159.68 128 *e*PKPdf PKPdf 20 34 52.5 -1.5
KLR Kul'dur 164.25 123 *e*PKIKP PKPdf 20 34 52.0 -6.4
KLR *e* 20 35 45.7
KLR pmax pmax
comp=Z,64nm,1.8s
HABR Khabarovsk 164.99 131 *de*PKIKP PKPdf 20 34 57.7 -1.4
HABR *e* 20 39 42.1
HABR *e* 20 41 43.9
HABR pmax pmax
comp=Z,40nm,2.0s
HABR pmax pmax
comp=E,6.0nm,1.0s
HABR pmax pmax
comp=N,8.0nm,0.6s
YAK Yakutsk 168.84 68 *e*PKP2 PKPab 20 36 12.5 -0.8
YAK pmax pmax
comp=Z,19nm,0.9s
BILL Bilibino 169.61 329 ⇑ *e*PKIKP PKPdf 20 34 57.3 -4.6
BILL *e* 20 40 05.0
BILL pmax pmax
comp=Z,5.0nm,1.1s
PETK Petropavlovsk- 172.69 207 PKP PKPdf 20 35 01.8 -2.1
comp=Z,3.1nm,0.8s,baz=54,slow=2.6,SNR=4.8
PETK PKPab PKPab 20 36 29.6 -0.9
comp=Z,7.1nm,0.7s,baz=113,slow=3.9,SNR=9.5

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*ISCJB **30** 20:19:13.9±0.7, 37°.22N±0°.03×23°.46E±0°.04, h6km±5km, Error ellipse: s-maj=6.5km s-min=3.9km az=35.4*
*ATH **30** 20:19:14.3, 37°.24N×23°.43E, h21km, ML2.7*
*THE **30** 20:19:14.8, 37°.23N×23°.44E, h4km±2km, ML3.1/3, Error ellipse: s-maj=2.6km s-min=0.9km az=326.0*
*CSEM **30** 20:19:14.8±0.3, 37°.28N×23°.50E, h15km, ML2.7, Error ellipse: s-maj=6.0km s-min=4.5km az=135.0*
*NEIC **30** 20:19:18.3, 37°.45N×23°.33E, h5km, ML2.8(ATH), After ATH.*

ISC 30 20:19:14.5±0.7, 37°.22N±0°.03×23°.46E±0°.04, h9km±5km, n52, σ0s72/77, Southern Greece

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
DID	**Didima**	**0.34**	**328**	*e*PB	**Pg**	**20 19 20.9**	**-0.3**
DID				*e*SB	**Sg**	**20 19 25.9**	**+0.2**
DID	**Didima**	**0.34**	**328**	P	**Pg**	**20 19 21.0**	**-0.2**
DID				S	**Sg**	**20 19 25.9**	**+0.2**
DID	**Didima**	**0.34**	**328**	*e*Pb	**Pg**	**20 19 20.9**	**-0.3**
DID				S	**Sg**	**20 19 25.9**	**+0.2**
NAIG	**Nisos Aigina**	**0.54**	**2**	*e*PN	**Pg**	**20 19 24.7**	**-0.2**
NAIG	**Nisos Aigina**	**0.54**	**2**	*e*Pn	**Pg**	**20 19 24.7**	**-0.2**
VLI	**Veliai**	**0.65**	**220**	*e*PB	**Pg**	**20 19 26.7**	**-0.4**
VLI				*e*SN	**Sg**	**20 19 36.4**	**+0.7**
VLY	**Voula,Athens**	**0.68**	**23**	*e*Pb	**Pg**	**20 19 27.2**	**-0.5**
VLY				*e*Sn	**Sg**	**20 19 37.0**	**+0.4**
VLY	**Voula,Athens**	**0.68**	**23**	*e*PB	**Pg**	**20 19 27.2**	**-0.5**
VLY				*e*SN	**Sg**	**20 19 37.0**	**+0.4**
VLY	**Voula,Athens**	**0.68**	**23**	*e*Pb	**Pg**	**20 19 27.2**	**-0.5**
ATH	**Athens Observa**	**0.78**	**15**	*e*Pn	**Pg**	**20 19 29.3**	**-0.2**
ATH				*e*Sn	**Sg**	**20 19 40.3**	**+0.7**
ATH	**Athens Observa**	**0.78**	**15**	*e*PN	**Pg**	**20 19 29.3**	**-0.2**
ATH				*e*SN	**Sg**	**20 19 40.3**	**+0.7**
ATH	**Athens Observa**	**0.78**	**15**	*e*Pn	**Pg**	**20 19 29.3**	**-0.2**
ATH				*e*Sn	**Sg**	**20 19 40.3**	**+0.7**
ATHU	**Athens Univers**	**0.79**	**19**	P	**Pg**	**20 19 29.4**	**-0.3**
ATHU				S	**Sg**	**20 19 41.5**	**+1.6**
ATHU	**Athens Univers**	**0.79**	**19**	P	**Pg**	**20 19 29.4**	**-0.3**
ATHU				S	**Sg**	**20 19 41.5**	**+1.6**
VLX	**Vlachokerasia**	**0.88**	**280**	*e*PN	**Pg**	**20 19 30.6**	**-0.8**
VLX				*e*SN	**Sg**	**20 19 42.3**	**-0.5**
VLX	**Vlachokerasia**	**0.88**	**280**	P	**Pg**	**20 19 30.8**	**-0.6**
VLX				S	**Sg**	**20 19 43.4**	**+0.6**
VLX	**Vlachokerasia**	**0.88**	**280**	P	**Pg**	**20 19 30.8**	**-0.6**
VLX				S	**Sg**	**20 19 43.4**	**+0.6**
PTL	**Penteli**	**0.89**	**21**	*e*Pn	**Pg**	**20 19 31.1**	**-0.5**
PTL				*e*Sn	**Sg**	**20 19 43.3**	**+0.2**
PTL	**Penteli**	**0.89**	**21**	*e*PN	**Pg**	**20 19 31.1**	**-0.5**
PTL				*e*SN	**Sg**	**20 19 43.3**	**+0.2**
PTL	**Penteli**	**0.89**	**21**	*e*Pn	**Pg**	**20 19 31.1**	**-0.5**
PTL				*e*Sn	**Sg**	**20 19 43.3**	**+0.2**
LTK	**Loutraki**	**0.89**	**334**	*e*PN	**Pg**	**20 19 31.3**	**-0.4**
LTK				*e*SN	**Sg**	**20 19 43.7**	**+0.4**
LTK	**Loutraki**	**0.89**	**334**	P	**Pg**	**20 19 31.4**	**-0.3**
LTK				S	**Sg**	**20 19 44.3**	**+1.0**
LTK	**Loutraki**	**0.89**	**334**	P	**Pg**	**20 19 31.4**	**-0.3**
LTK				*e*Sn	**Sg**	**20 19 43.7**	**+0.4**
LTK				S	**Sg**	**20 19 44.3**	**+1.0**
GUR	**Goura**	**1.14**	**309**	*e*PN	**Pg**	**20 19 35.8**	**-0.6**
GUR				*e*SN	**Sg**	**20 19 51.0**	**-0.2**
GUR	**Goura**	**1.14**	**309**	P	**Pg**	**20 19 35.2**	**-1.2**
GUR	**Goura**	**1.14**	**309**	P	**Pg**	**20 19 35.2**	**-1.2**
GUR	**Goura**	**1.14**	**309**	*e*Pn	**Pg**	**20 19 35.8**	**-0.6**
GUR				*e*Sn	**Sg**	**20 19 51.0**	**-0.2**
ITM	**Ithomi**	**1.23**	**269**	P	**Pn**	**20 19 39.0**	**+1.2**
ITM	**Ithomi**	**1.23**	**269**	P	**Pn**	**20 19 39.0**	**+1.2**
DSF	**Desfina**	**1.40**	**328**	P	**Pn**	**20 19 39.8**	**-0.4**
DSF	**Desfina**	**1.40**	**328**	P	**Pn**	**20 19 39.8**	**-0.4**
PYL	**PYLOS**	**1.41**	**257**	*e*PN	**Pn**	**20 19 40.8**	**+0.5**
PYL	**PYLOS**	**1.41**	**257**	P	**Pn**	**20 19 40.7**	**+0.4**
PYL	**PYLOS**	**1.41**	**257**	P	**Pn**	**20 19 40.7**	**+0.4**
LKR	**Lokris**	**1.47**	**346**	*e*Pn	**Pn**	**20 19 41.1**	**-0.1**
LKR				*e*Sn	**Sn**	**20 20 01.2**	**+0.7**
LKR	**Lokris**	**1.47**	**346**	*e*PN	**Pn**	**20 19 41.1**	**-0.1**
LKR				*e*SN	**Sn**	**20 20 01.2**	**+0.7**
LKR	**Lokris**	**1.47**	**346**	P	**Pn**	**20 19 40.5**	**-0.7**
LKR	**Lokris**	**1.47**	**346**	P	**Pn**	**20 19 40.5**	**-0.7**
LKR	**Lokris**	**1.47**	**346**	*e*Pn	**Pn**	**20 19 41.1**	**-0.1**
TRIZ	**Trizonia**	**1.59**	**317**	P	**Pn**	**20 19 42.8**	**+0.1**
TRIZ	**Trizonia**	**1.59**	**317**	P	**Pn**	**20 19 42.8**	**+0.1**
APE	**Apeiranthos**	**1.66**	**95**	P	**Pn**	**20 19 50.3**	**+6.6**
EFP	**Efpalio**	**1.72**	**315**	*e*PN	**Pn**	**20 19 44.6**	**0.0**
EFP	**Efpalio**	**1.72**	**315**	P	**Pn**	**20 19 44.8**	**+0.2**
EFP	**Efpalio**	**1.72**	**315**	*e*Pn	**Pn**	**20 19 44.6**	**0.0**
KARN	**Karanos**	**1.85**	**168**	P	**Pn**	**20 19 46.9**	**+0.6**
KARN	**Karanos**	**1.85**	**168**	P	**Pn**	**20 19 46.9**	**+0.6**
AOS	**Alonnisos**	**1.98**	**9**	P	**Pn**	**20 19 47.1**	**-0.9**
AOS	**Alonnisos**	**1.98**	**9**	P	**Pn**	**20 19 47.1**	**-0.9**
NEO	**Neokhori**	**2.09**	**355**	*e*Pb	**Pb**	**20 19 49.9**	**-2.7**
NEO	**Neokhori**	**2.09**	**355**	*e*PB	**Pb**	**20 19 49.9**	**-2.7**
IDI	**Anoyia**	**2.25**	**149**	P	**Pn**	**20 19 59.5**	**+7.7**

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*IDC **30** 20:20:42.0±1.5, 5°.24S×146°.58E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.6/17, mbtmp3.6/6, ML3.9/1, Error ellipse: s-maj=53.5km s-min=24.1km az=105.0*
*NEIC **30** 20:20:47.2±1.0, 5°.31S×146°.69E, h35km, Error ellipse: s-maj=26.8km s-min=13.6km az=93.0*

ISC 30 20:20:47.4±3.7, 5°.3S±0°.2×146°.7E±0°.2, h37km±36km, n10, σ0s78/9, mb3.4/5, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.09**	**173**	*e*P	**Pn**	**20 21 46.3**	**-1.1**
COEN	**Coen**	**9.24**	**202**	*e*P	**Pn**	**20 22 58.5**	**+0.2**
CTA	**Charters Tower**	**14.68**	**182**	Pn	**Pn**	**20 24 13.6**	**+0.9**
	0.3nm,0.3s,baz=3.9,slow=15,SNR=3.2						
WRAB	**Tennant Creek**	**18.83**	**218**	*e*P	**Pn**	**20 25 05.7**	**+0.8**
ASAR	**Alice Springs**	**22.00**	**213**	P	**P**	**20 25 37.5**	**-1.1**
	0.3nm,0.3s,mb3.2,baz=53,slow=9.1,SNR=12						
FITZ	**Fitzroy Crossi**	**24.16**	**237**	P	**P**	**20 26 00.6**	**+0.3**
	1.7nm,0.6s,mb3.6,baz=45,slow=7.1,SNR=8.4						
STKA	**Stephens Creek**	**26.84**	**190**	P	**P**	**20 26 24.5**	**0.0**
	1.9nm,0.9s,mb3.6,baz=12,slow=9.3,SNR=3.0						
TOO	**Toolangi**	**32.12**	**182**	*e*P	pP	20 27 21.3	-0.4
MKAR	**Makanchi Array**	**76.77**	**320**	P	**P**	**20 32 34.2**	**-1.0**
	0.1nm,0.5s,mb3.0,baz=109,slow=8.1,SNR=3.3						
ILAR	**Eielson Array**	**84.99**	**23**	P	**P**	**20 33 19.5**	**+0.9**
	0.3nm,0.7s,mb3.5,baz=263,slow=5.4,SNR=5.0						

ISC 30 20:22:36.6±2.9, 40°1.1N±0°1.1×78°4.4E±0°2, h10km, n8, σ0°93/9, 1D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.96**	**254**	⇓iPg	**Pg**	**20 23 14.5**	**+0.4**
KSH				Sg	**Sg**	**20 23 39.5**	**0.0**
KSH				smax			
	comp=N,64nm,0.6s						
KSH				smax			
	comp=E,58nm,0.3s						
KSH				pmax	pmax		
	comp=Z,120nm,6.7s						
ULHL	**Ulahol**	**2.72**	**324**	P	**Pn**	**20 23 20.5**	**+0.2**
	SNR=16						
KZA	**Kyzart**	**3.12**	**311**	P	**Pn**	**20 23 25.3**	**-0.5**
	SNR=35						
KBK	**Karagaybulak**	**3.67**	**316**	P	**Pn**	**20 23 35.6**	**+2.3**
	SNR=7.9						
AAK	**Ala-Archa**	**3.90**	**312**	P	**Pn**	**20 23 35.5**	**-1.0**
	SNR=7.2						
CHMS	**Chumysh**	**4.01**	**318**	P	**Sn**	**20 24 25.1**	**+0.1**
	SNR=5.8						
AML	**Almayashu**	**4.11**	**301**	P	**Pn**	**20 23 38.3**	**-1.1**
	SNR=9.7						
USP	**Ospenovka**	**4.33**	**319**	P	**Pn**	**20 23 47.3**	**+4.9**
	SNR=15						

*IPEC **30** 20:36:41.3±0.5, 50°1.1N×18°1.48E, h5km±2km, ML1.4/3, Error ellipse: s-maj=3.0km s-min=1.7km az=66.0*
*WAR **30** 20:36:41.9, 50°1.06N×18°1.45E*
*CSEM **30** 20:36:42.7±0.3, 50°1.08N×18°1.30E, h1km, ML2.2/4, Error ellipse: s-maj=6.3km s-min=3.8km az=15.0*

PRU 30 20:36:44.6, 50°1.02N×18°1.27E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.08**	**322**	eSg	Sg	20 36 49.4	+2.2
OKC	**Ostrava-Krasne**	**0.20**	**204**	ePG	Pg	20 36 48.2	-0.2
OKC				eSG	Sg	20 36 53.0	+2.0
	comp=Z,23nm,0.6s						
OKC	**Ostrava-Krasne**	**0.20**	**204**	Pg	Pg	20 36 48.2	-0.2
OKC				eSg	Sg	20 36 52.9	+1.9
	baz=38						
MORC	**Moravsky Berou**	**0.53**	**243**	ePg	Pg	20 36 54.1	-0.6
	baz=61						
MORC				eSg	Sg	20 37 03.7	+2.1
	comp=Z,8.4nm,0.2s,baz=61						
JAVC	**Velka Javorina**	**1.23**	**199**	ePn	Pn	20 37 07.2	-1.7
	baz=22						
DPC	**Dobruska-Polom**	**1.29**	**286**	ePG	Pg	20 37 07.8	-1.6
DPC				eSG	Sg	20 37 26.2	0.0
	comp=Z,7.4nm,0.4s						
DPC	**Dobruska-Polom**	**1.29**	**286**	ePn	Pn	20 37 07.3	-2.6
	baz=99						
DPC	**Dobruska-Polom**	**1.29**	**286**	Pg	Pg	20 37 07.8	-1.6
DPC				eSg	Sg	20 37 25.7	-0.5
	baz=99						
VRAC	**Vranov**	**1.30**	**237**	ePn	Pn	20 37 08.2	-1.8
VRAC				eSg	Sg	20 37 27.1	+0.7
	comp=Z,4.6nm,0.3s,baz=56						
KOLL	**Kolacno**	**1.45**	**177**	ePn	Pn	20 37 11.2	-0.8
KOLL				eSn	Sn	20 37 29.6	-2.0
KOLL	**Kolacno**	**1.45**	**177**	ePN	Pn	20 37 11.2	-0.8
KOLL				eSN	Sn	20 37 29.6	-2.0
KOLL	**Kolacno**	**1.45**	**177**	ePn	Pn	20 37 11.2	-0.8
KOLL				eSn	Sn	20 37 29.6	-2.0
NIE	**Niedzica**	**1.46**	**114**	ePg	Pg	20 37 08.5	-4.0
NIE				eSg	Sg	20 37 27.4	-3.9
KRUC	**Moravsky**	**1.55**	**233**	ePn	Pn	20 37 11.6	-1.8
	baz=51						
KRUC				eSg	Sg	20 37 33.8	-0.6
	comp=Z,2.3nm,0.3s,baz=51						
VYHS	**Vyhne**	**1.57**	**166**	ePn	Pn	20 37 11.4	-2.3
	comp=Z,1.6nm,0.6s						
VYHS				eSn	Sn	20 37 32.6	-2.1
VYHS	**Vyhne**	**1.57**	**166**	ePN	Pn	20 37 11.4	-2.3
VYHS				eSN	Sn	20 37 32.6	-2.1
VYHS	**Vyhne**	**1.57**	**166**	ePn	Pn	20 37 11.4	-2.3
VYHS				eSn	Sn	20 37 32.6	-2.1
STHS	**Stebnicka Huta**	**2.02**	**106**	ePN	Pn	20 37 19.2	-0.7
STHS				eSN	Sn	20 37 45.6	-0.2
STHS	**Stebnicka Huta**	**2.02**	**106**	ePn	Pn	20 37 19.3	-0.6
STHS				eSn	Sn	20 37 45.6	-0.2
KECS	**Kecovo**	**2.12**	**136**	ePN	Pn	20 37 22.0	+0.8
KECS				eSN	Sn	20 37 46.0	-2.1
PRU	**Pruhonice**	**2.41**	**271**	ePG	Pg	20 37 27.0	-3.7
PRU				eSG	Sg	20 38 00.9	-0.9
	comp=Z,1.8nm,0.6s						
KHC	**Kasperske Hory**	**3.18**	**256**	ePG	Pg	20 37 40.8	-4.7
KHC				eSG	Sg	20 38 26.8	+0.1

DJA 30 20:41:15, 0°68N×125°51E, h26km, MLv3.8/9, Northern Moluccа Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	**Manado**	**1.01**	**319**	P	Pn	20 41 47.1	+14
MNI				S	Sb	20 42 05.3	+18
KMSI	**Cibinong**	**1.53**	**266**	P	Pn	20 41 41.7	+1.0
KMSI				S	Sn	20 41 59.3	-0.5
TNTI	**Ternate**	**1.86**	**87**	P	Pn	20 41 45.3	+0.1
TNTI				S	Sn	20 42 03.4	-4.4
LUWI	**Luwuk**	**3.23**	**238**	P	Pn	20 42 04.1	+0.1
LUWI				S	Sn	20 42 25.6	-16
MRSI	**Marisa**	**3.58**	**267**	P	Pn	20 42 09.8	+1.0
NLAI	**Namlea**	**4.21**	**158**	P	Pn	20 42 18.2	+0.7
TOLI	**Toli-Toli**	**4.74**	**275**	P	Pn	20 42 24.9	+0.1
AAI	**Ambon**	**5.10**	**148**	P	Pn	20 42 30.3	+0.5
	0.2nm48nm,1.3s						
KDI	**Kendari**	**5.44**	**212**	P	Pn	20 42 35.1	+0.7
PCI	**Palu**	**5.89**	**254**	P	Pn	20 42 41.3	+0.7
	0.1nm9.2nm,0.7s						
TTSI	**Tana Toraja**	**6.79**	**237**	P	Pn	20 42 53.1	+0.1
MYLDM	**Lahad Datu**	**8.30**	**303**	P	Pn	20 43 14.3	+0.5
TLE	**Tual**	**9.56**	**131**	P	Pn	20 43 31.4	+0.3
KBKI	**Kotabaru**	**10.14**	**247**	P	Pn	20 43 39.6	+0.6
BAKI	**Biak**	**10.76**	**100**	P	Pn	20 43 48.1	+0.6
WSI	**Waingapu**	**11.52**	**207**	P	Pn	20 43 58.9	+1.0
KHKI	**Kahang-Kahang**	**13.35**	**227**	P	Pn	20 44 24.0	+1.1
SBUM	**Sibu**	**13.40**	**278**	P	Pn	20 44 24.4	+0.7
NBBI	**Negara**	**14.09**	**230**	P	Pn	20 44 41.0	+7.9
BYJI	**Banyuwangi**	**14.20**	**231**	P	Pn	20 44 42.3	+7.7

*IDC **30** 20:57:31.8±1.9, 10°8.1S×163°1.69E, h0km, mb3.7/4, mb1 4.0/5, mb1mx3.8/16, mbtmp3.9/5, ML4.8/1, MS4.2/1, Ms1 4.2/1, ms1mx3.4/21, Error ellipse: s-maj=51.7km s-min=33.9km az=159.0*
*ISCJB **30** 20:57:33.0±5.9, 10°7.5±0°2×163°7.5E±0°1, h15km±38km, mb3.8/4, Error ellipse: s-maj=34.5km s-min=17.9km az=8.3*
*NEIC **30** 20:57:38.0±1.6, 10°6.1S×163°6.1E, h35km, mb3.8/1, Error ellipse: s-maj=36.5km s-min=23.9km az=143.0*

ISC 30 20:57:33.7±7.1, 10°7.5±0°2×163°7.5E±0°1, h9km±45km, n8, σ1°19/8, mb3.8/4, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.90**	**288**	Pn	**Pn**	**20 58 33.4**	**-0.3**
	69nm,0.3s,baz=145,slow=7.1,SNR=14						
HNR				Sn	**Sn**	**20 59 19.7**	**0.0**
	30nm,0.3s,baz=209,slow=18,SNR=3.2						
CTA	**Charters Tower**	**19.25**	**239**	P	**Pn**	**21 02 01.1**	**+1.6**
	0.2nm,0.3s,baz=76,slow=9.8,SNR=7.1						
CTAO	**Charters Tower**	**19.25**	**239**	eP	**Pn**	**21 02 00.1**	**+0.6**
	4.2nm,0.8s						
URZ	**Urewera**	**30.00**	**159**	LR	LR	21 14 43.3	
	comp=Z,376nm,18.4s,baz=62,slow=34						
ASAR	**Alice Springs**	**31.20**	**242**	P	**P**	**21 03 51.8**	**-1.7**
	0.8nm,0.6s,mb3.7,baz=65,slow=9.7,SNR=10.0						
CMAR	**Chiang Mai Arr**	**70.12**	**294**	P	**P**	**21 08 47.8**	**+0.8**
	0.9nm,0.9s,mb3.7,baz=135,slow=4.8,SNR=4.5						
ILAR	**Eielson Array**	**83.79**	**19**	P	**P**	**21 10 02.8**	**-0.2**
	1.1nm,1.1s,mb3.9,baz=230,slow=5.6,SNR=4.0						
MKAR	**Makanchi Array**	**91.87**	**317**	P	**P**	**21 10 42.6**	**+0.3**
	0.4nm,0.7s,mb3.9,baz=93,slow=6.4,SNR=4.4						

*IDC **30** 21:03:00.5±2.0, 10°8.1S×163°4.6E, h0km, mb4.1/3, mb1 4.3/4, mb1mx3.8/16, mbtmp4.1/4, ML3.8/1, MS4.8/1, Ms1 4.8/1, ms1mx3.3/21, Error ellipse: s-maj=52.0km s-min=33.5km az=162.0*
*NEIC **30** 21:03:06.4±1.1, 10°6.4S×163°3.6E, h35km, mb4.0/3, Error ellipse: s-maj=21.1km s-min=16.5km az=109.0*
*ISCJB **30** 21:03:10.3±5.6, 10°8.5±0°1×163°3.5E±0°2, h87km±43km, mb3.8/5, Error ellipse: s-maj=40.3km s-min=20.4km az=3.6*

ISC 30 21:03:10.3±5.5, 10°8.5±0°1×163°4.1E±0°2, h73km±43km, n16, σ0°70/17, mb3.8/5, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.61**	**291**	Pn	**Pn**	**21 03 57.2**	**-6.6**
	6.7nm,0.3s,baz=85,slow=12,SNR=2.0						
HNR				Sn	**Sn**	**21 04 45.4**	**+0.1**
	11nm,0.3s,baz=248,slow=19,SNR=2.2						
HNR	**Honiara**	**3.61**	**291**	ePn	**Pn**	**21 03 58.3**	**-5.5**
HNR				Sn	**Sn**	**21 04 45.4**	**+0.1**
CTA	**Charters Tower**	**18.88**	**239**	P	**Pn**	**21 07 26.5**	**+0.2**
	0.1nm,0.3s,baz=73,slow=12,SNR=4.0						
CTA	**Charters Tower**	**18.88**	**239**	P	**Pn**	**21 07 26.5**	**+0.2**
CTAO	**Charters Tower**	**18.88**	**239**	eP	**Pn**	**21 07 26.1**	**-0.2**
	16nm,1.2s						
WRAB	**Tennant Creek**	**29.37**	**248**	eP	**P**	**21 09 06.5**	**-0.1**
	4.7nm,1.1s,mb4.0						
ASAR	**Alice Springs**	**30.83**	**242**	P	**P**	**21 09 18.7**	**-0.8**
	1.2nm,0.9s,mb3.6,baz=70,slow=10.0,SNR=6.9						
RAR	**Rarotonga**	**36.85**	**111**	LR	LR	21 21 16.9	
	comp=Z,1μm,19.2s,baz=39,slow=30						
FITZ	**Fitzroy Crossi**	**37.18**	**254**	eP	**P**	**21 10 14.4**	**-0.2**
	0.4nm,0.5s,mb3.6						
DAV	**Davao City (W)**	**41.57**	**294**	P	**P**	**21 10 50.7**	**-0.5**
MBWA	**Marble Bar**	**43.06**	**251**	P	**P**	**21 11 03.0**	**-0.3**
MCQ	**Macquarie Isla**	**43.75**	**184**	eP	**P**	**21 11 08.8**	**+0.5**
MAJO	**Matsushiro**	**52.69**	**335**	P	**P**	**21 12 17.1**	**-0.3**
CASY	**Casey**	**65.78**	**201**	P	**P**	**21 13 51.3**	**+4.0**
CMAR	**Chiang Mai Arr**	**69.85**	**294**	P	**P**	**21 14 15.6**	**+1.9**
	1.0nm,0.3s,mb4.1,baz=123,slow=6.6,SNR=6.3						
ILAR	**Eielson Array**	**84.02**	**19**	P	**P**	**21 15 31.9**	**-0.4**
	1.2nm,1.1s,mb3.6,baz=236,slow=6.4,SNR=6.2						

*IDC **30** 21:21:47.0±3.4, 11°0.2S×163°8.3E, h0km, mb3.8/3, mb1 4.0/4, mb1mx3.7/16, mbtmp3.9/4, ML4.3/1, MS3.4/1, Ms1 3.4/1, ms1mx2.9/23, Error ellipse: s-maj=75.1km s-min=53.9km az=115.0*
*ISCJB **30** 21:21:51.1±4.5, 11°0.5S±0°1×163°7.7E±0°2, h38km±32km, mb3.8/4, Error ellipse: s-maj=35.7km s-min=20.6km az=168.6*
*NEIC **30** 21:21:51.2±1.3, 11°00S×163°9.9E, h35km, mb4.2/2, Error ellipse: s-maj=27.3km s-min=16.0km az=88.0*

ISC 30 21:21:52.8±4.5, 11°0.5±0°1×163°7.7E±0°2, h35km±32km, n15, σ0°96/17, mb3.8/4, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.01**	**292**	Pn	**Pn**	**21 22 50.4**	**-1.4**
	19nm,0.3s,baz=56,slow=3.6,SNR=4.4						
HNR				Sn	**Sn**	**21 23 36.3**	**-1.3**
	15nm,0.3s,baz=270,slow=17,SNR=2.7						
HNR				LR	LR	21 24 24.6	
	comp=Z,464nm,21.1s,baz=108,slow=38						
HNR	**Honiara**	**4.01**	**292**	ePn	**Pn**	**21 22 53.5**	**+1.7**
HNR				Sn	**Sn**	**21 23 37.6**	**0.0**
HNR				LR	LR	21 24 24.6	
CTA	**Charters Tower**	**19.09**	**240**	P	**Pn**	**21 26 16.9**	**+3.3**
	baz=65,slow=13,SNR=3.1						
CTAO	**Charters Tower**	**19.09**	**240**	eP	**Pn**	**21 26 15.4**	**+1.9**
	11nm,1.1s						
STKA	**Stephens Creek**	**29.15**	**221**	P	**P**	**21 27 50.0**	**-0.7**
WRAB	**Tennant Creek**	**29.63**	**249**	eP	**P**	**21 27 55.1**	**+0.1**
	7.5nm,1.3s,mb4.3						
GUMO	**Guam**	**30.75**	**322**	P	**P**	**21 28 05.3**	**+0.4**
ASAR	**Alice Springs**	**31.05**	**242**	P	**P**	**21 28 07.4**	**-0.2**
	1.0nm,1.1s,mb3.6,baz=72,slow=9.8,SNR=3.5						
FITZ	**Fitzroy Crossi**	**37.47**	**255**	eP	**P**	**21 29 03.0**	**-0.2**
NACB	**Ninganchiao**	**53.97**	**311**	eP	**P**	**21 31 12.8**	**-0.7**
KULM	**Kulim**	**64.81**	**281**	P	**P**	**21 32 29.5**	**+0.9**
COCO	**West Island**	**65.37**	**262**	P	**P**	**21 32 32.0**	**-0.3**
CASY	**Casey**	**65.72**	**201**	eP	**P**	**21 32 32.6**	**-0.9**
CMAR	**Chiang Mai Arr**	**70.26**	**294**	P	**P**	**21 33 04.7**	**+1.8**
	1.2nm,0.9s,mb3.8,baz=118,slow=4.8,SNR=5.8						
MKAR	**Makanchi Array**	**92.11**	**317**	P	**P**	**21 34 57.7**	**-0.8**
	0.2nm,0.6s,mb3.6,baz=86,slow=6.2,SNR=2.9						

*CSEM **30** 21:23:53.3, 38°0.4N×26°2.7W, h0km, ML2.3, After PDA*

PDA 30 21:23:53.3±0.7, 38°0.4N×26°2.7W, h0km±3km, MD3.7, ML2.3, Error ellipse: s-maj=5.4km s-min=1.6km az=43.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSET	**Sete Cidades**	**0.48**	**116**	eP	Pg	21 24 02.2	-0.4
PSET				eS	Sg	21 24 08.7	-0.1
PSET				A		21 24 15.2	
	77nm,0.3s						
PSET	**Sete Cidades**	**0.48**	**116**	eP	Pg	21 24 02.2	-0.4
PSET				eS	Sg	21 24 08.7	-0.1
PDA	**Ponta Delgada**	**0.56**	**121**	eP	Pg	21 24 03.6	-0.4
PDA	**Ponta Delgada**	**0.56**	**121**	eP	Pg	21 24 03.6	-0.4
GRON	**Grota Negra**	**0.64**	**115**	eP	Pg	21 24 06.1	+0.5
GRON				eS	Sg	21 24 16.0	+2.1
GRON				A		21 24 18.2	
	14nm,0.2s						
BART	**Pico Bartolome**	**0.91**	**106**	eP	Pg	21 24 08.0	-2.7
BART				eS	Sg	21 24 19.7	-2.8
BART				A		21 24 23.5	
	34nm,0.3s						
BART	**Pico Bartolome**	**0.91**	**106**	eP	Pg	21 24 08.0	-2.7
BART				eS	Sg	21 24 19.7	-2.8
ADH	**Angra Heroismo**	**0.98**	**309**	eP	Pg	21 24 09.3	-2.8
ADH				eS	Sg	21 24 21.2	-3.5
ADH				A		21 24 28.9	
	68nm,0.3s						
ADH	**Angra Heroismo**	**0.98**	**309**	eP	Pg	21 24 09.3	-2.8
ADH				eS	Sg	21 24 21.2	-3.5
PSMA	**Santa Maria**	**1.38**	**139**	eP	Pn	21 24 14.8	-5.0
PSMA				eS	Sg	21 24 31.0	-6.7
PSMA				A		21 24 34.6	
	24nm,0.2s						
PSMN	**Pico do Norte,**	**1.41**	**137**	eP	Pn	21 24 15.3	-4.8
PSMN				eS	Sg	21 24 31.7	-6.8
PSMN	**Pico do Norte,**	**1.41**	**137**	eP	Pn	21 24 15.3	-4.8
PSMN				eS	Sg	21 24 31.7	-6.8

*ISCJB **30** 21:32:09.4±0.2, 39°.40N±0°.01×116°.72W±0°.02, h10km, Error ellipse: s-maj=2.2km s-min=1.6km az=11.4*
*NEIC **30** 21:32:09.0, 39°.36N×116°.83W, h10km, ML3.8(REN), After REN.*
NEIC Felt at Austin.

ISC 30 21:32:09.0±0.3, 39°39N±0°01×116°80W±0°02, h3km±2km, n91, σ0°97/175, 48C-43D, Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
P10A	**Eureka**	**0.35**	**48**	P	**Pg**	**21 32 16.6**	**+0.9**
	baz=0.4,SNR=157						
P10A				⇓S	**Sg**	**21 32 22.4**	**+2.0**
	baz=0.4						
Q10A	**Clear Creek Ra**	**0.64**	**151**	P	**Pg**	**21 32 21.3**	**0.0**
	baz=0.6,SNR=585						
Q10A				⇓S	**Sg**	**21 32 30.0**	**+0.3**
	baz=0.6						
Q10A	**Cortez Mining,**	**0.93**	**14**	P	**Pg**	**21 32 27.1**	**+0.2**
	baz=1.0,SNR=312						
Q10A				⇓S	**Sg**	**21 32 40.1**	**+1.1**
	baz=1.0						
Q11A	**Duckwater**	**1.04**	**121**	⇑P	**Pg**	**21 32 28.8**	**-0.2**
	baz=1.1,SNR=1000						
Q11A				⇓S	**Sg**	**21 32 42.8**	**+0.3**
	baz=1.1						
BMN	**Battle Mountai**	**1.09**	**343**	eP	**Pg**	**21 32 30.0**	**0.0**
BMN				eS	**Sg**	**21 32 44.1**	**0.0**
R10A	**Warm Springs**	**1.16**	**160**	⇑P	**Pg**	**21 32 31.2**	**-0.1**
	baz=1.2,SNR=476						
R10A				⇓S	**Sg**	**21 32 47.0**	**+0.6**
	baz=1.2						
N10A	**Dunphy**	**1.35**	**10**	⇓P	**Pn**	**21 32 33.9**	**-0.8**
	baz=1.4,SNR=17						
N10A				⇑S	**Sg**	**21 32 52.8**	**+0.5**
	baz=1.4						
R11A	**Troy Canyon, C**	**1.41**	**137**	⇑P	**Pn**	**21 32 35.0**	**-0.5**
	baz=1.4,SNR=1000						
R11A				⇑S	**Sb**	**21 32 53.3**	**-0.9**
	baz=1.4						
S10A	**Tonopah Range,**	**1.47**	**174**	P	**Pn**	**21 32 35.8**	**-0.5**
	baz=1.5,SNR=1000						
S10A				⇑S	**Sb**	**21 32 55.6**	**-0.4**
	baz=1.5						
Q12A	**Willow Creek R**	**1.57**	**102**	⇓P	**Pn**	**21 32 37.5**	**-0.2**
	baz=1.6,SNR=132						
Q12A				⇑Sb	**Sb**	**21 32 58.5**	**-0.4**
	baz=1.6						
N11A	**Elko Archery C**	**1.65**	**29**	⇑P	**Pn**	**21 32 38.1**	**-0.6**
	baz=1.7,SNR=25						
N11A				⇓Sb	**Sb**	**21 33 01.9**	**+0.8**
	baz=1.7						
ELK	**Elko**	**1.81**	**41**	ePn	**Pn**	**21 32 40.6**	**-0.5**
ELK				eSg	**Sg**	**21 33 06.3**	**-0.9**
O12A	**Currie**	**1.81**	**60**	⇑P	**Pn**	**21 32 40.4**	**-0.6**
	baz=1.8,SNR=42						
O12A				⇑Sb	**Sb**	**21 33 05.8**	**-0.1**
	baz=1.8						
S11A	**Rachel**	**1.93**	**154**	⇓P	**Pn**	**21 32 42.6**	**0.0**
	baz=1.9,SNR=60						
S11A				⇓Sb	**Sb**	**21 33 09.5**	**+0.4**
	baz=1.9						
N12A	**Clover Valley,**	**1.99**	**42**	⇓P	**Pn**	**21 32 43.3**	**-0.3**
	baz=2.0,SNR=581						
N12A				⇓Sb	**Sb**	**21 33 11.1**	**0.0**
	baz=2.0						
N12A	**Clover Valley,**	**1.99**	**42**	ePn	**Pn**	**21 32 43.4**	**-0.1**
N12A				eSn	**Sn**	**21 33 08.3**	**-0.7**
N12A				eSg	**Sg**	**21 33 13.6**	**+0.5**
R12A	**Pony Springs,**	**2.01**	**121**	⇓P	**Pn**	**21 32 43.4**	**-0.5**
	baz=2.0,SNR=16						
R12A				⇓Sg	**Sg**	**21 33 13.6**	**-0.1**
	baz=2.0						
PAHR	**Pah Rah Range**	**2.02**	**280**	ePn	**Pn**	**21 32 44.8**	**+0.8**
M10A	**I.L. Ranch, Tu**	**2.14**	**5**	P	**Pn**	**21 32 45.6**	**0.0**
	baz=2.2,SNR=154						
M10A				⇑S	**Sn**	**21 33 13.3**	**+0.6**
	baz=2.2						
P13A	**Bates Ranch, G**	**2.16**	**87**	⇑P	**Pn**	**21 32 45.6**	**-0.2**
	baz=2.2,SNR=32						
P13A				⇑Sb	**Sb**	**21 33 16.2**	**+0.3**
	baz=2.2						
M11A	**Holland Ranch,**	**2.18**	**20**	P	**Pn**	**21 32 46.0**	**-0.2**
	baz=2.2,SNR=77						
M11A				⇑S	**Sn**	**21 33 14.3**	**+0.6**
	baz=2.2						
WAKR	**Walker**	**2.23**	**248**	ePn	**Pn**	**21 32 46.0**	**-0.9**
WCN	**Washoe City**	**2.29**	**269**	⇑P	**Pn**	**21 32 49.3**	**+1.6**
	baz=2.3						
WCN				⇓S	**Sn**	**21 33 19.4**	**+3.0**
	baz=2.3						
O13A	**Hicks Ranch, I**	**2.30**	**70**	⇓Sg	**Sg**	**21 33 22.9**	**+0.1**
	baz=2.3						
S12A	**Delamar Landin**	**2.35**	**139**	⇓P	**Pn**	**21 32 48.3**	**-0.1**
	baz=2.3,SNR=18						
S12A				⇑Sb	**Sb**	**21 33 21.7**	**+0.5**
	baz=2.3						
MLAC	**Mammoth Lakes**	**2.37**	**223**	⇓Sb	**Sb**	**21 33 24.4**	**+2.5**
	baz=2.3						
GRAC	**Grapevine Rang**	**2.42**	**191**	⇑Sb	**Sb**	**21 33 26.2**	**+2.7**
	baz=2.4						
MTUM	**Tungsten Hills**	**2.46**	**215**	ePn	**Pn**	**21 32 50.3**	**+0.4**
N13A	**Wendover, West**	**2.48**	**53**	⇑P	**Pn**	**21 32 49.7**	**-0.4**
	baz=2.5,SNR=13						
N13A				⇓S	**Sn**	**21 33 20.7**	**-0.2**
	baz=2.5						
N13A	**Wendover, West**	**2.48**	**53**	ePn	**Pn**	**21 32 50.0**	**-0.2**
N13A				ePg	**Pg**	**21 32 56.9**	**+0.5**
N13A				eSn	**Sn**	**21 33 21.6**	**+0.7**
N13A				eSg	**Sg**	**21 33 28.6**	**+0.1**
T11A	**Corn Creek, Al**	**2.48**	**149**	⇓P	**Pn**	**21 32 50.0**	**-0.3**
	baz=2.5,SNR=189						
T11A				⇑S	**Sn**	**21 33 20.3**	**-0.7**
	baz=2.5						
M12A	**Wells**	**2.49**	**35**	⇓P	**Pn**	**21 32 49.9**	**-0.4**
	baz=2.5,SNR=52						
M12A				⇑Sb	**Sb**	**21 33 27.8**	**+2.5**
	baz=2.5						
R13A	**O'Grain Ranch,**	**2.52**	**118**	⇑P	**Pn**	**21 32 50.4**	**-0.5**
	baz=2.5,SNR=29						
R13A				⇓Sb	**Sb**	**21 33 26.8**	**+0.5**
	baz=2.5						
TIN	**Tinemaha**	**2.58**	**206**	⇑Sb	**Sb**	**21 33 31.3**	**+3.2**
	baz=2.6						
L10A	**Juniper Basin**	**2.70**	**5**	P	**Pn**	**21 32 53.4**	**+0.1**
	baz=2.7,SNR=22						
L10A				⇓S	**Sn**	**21 33 27.2**	**+0.8**
	baz=2.7						
Q14A	**Sevier Lake (B**	**2.77**	**97**	⇑P	**Pn**	**21 32 54.1**	**-0.1**
	baz=2.8,SNR=15						
Q14A				⇓Sb	**Sb**	**21 33 34.0**	**+0.6**
	baz=2.8						
M13A	**Montello**	**2.82**	**45**	⇑P	**Pn**	**21 32 54.7**	**-0.2**
	baz=2.9,SNR=19						
M13A				⇑S	**Sn**	**21 33 28.8**	**-0.6**
	baz=2.9						
M13A	**Montello**	**2.82**	**45**	ePn	**Pn**	**21 32 54.0**	**-0.9**
M13A				eSg	**Sg**	**21 33 40.1**	**+0.6**
L11A	**Cat Creek Ranc**	**2.89**	**16**	P	**Pn**	**21 32 56.1**	**+0.2**
	baz=2.9,SNR=148						
L11A				⇓Sb	**Sb**	**21 33 40.0**	**+3.1**
	baz=2.9						
P14A	**Drum Mountains**	**2.90**	**85**	⇑P	**Pn**	**21 32 56.0**	**0.0**
	baz=2.9						
P14A				⇓S	**Sn**	**21 33 30.1**	**-1.2**
	baz=2.9						
FURC	**Furnace Creek,**	**2.91**	**181**	⇑P	**Pn**	**21 32 56.6**	**+0.4**
	baz=2.9						
FURC				⇑Sb	**Sb**	**21 33 40.9**	**+3.3**
	baz=2.9						
S13A	**Holt Ranch, En**	**2.93**	**127**	⇓P	**Pn**	**21 32 56.0**	**-0.5**
	baz=2.9,SNR=8.7						
S13A				⇓S	**Sn**	**21 33 31.9**	**-0.2**
	baz=2.9						
U10A	**Ash Meadows, A**	**2.99**	**173**	⇑P	**Pn**	**21 32 57.7**	**+0.6**
	baz=3.0,SNR=29						
U10A				⇑S	**Sn**	**21 33 34.1**	**+0.6**

WVOR				*e*Sg	Sg	21 33 56.1	-0.4
MPMC	**Manual Prospec**	**3.37**	**190**	⇑P	Pn	21 33 02.5	+0.1
	baz=3.3,SNR=34						
MPMC				⇑Sb	Sb	21 33 55.0	+4.4
	baz=3.3						
M14A	**Sheep Mountain**	**3.38**	**50**	⇑P	Pn	21 33 02.2	-0.4
	baz=3.4,SNR=23						
M14A				⇓S	Sn	21 33 42.5	-0.7
	baz=3.4						
U12A	**Valley of Fire**	**3.45**	**148**	⇑P	Pn	21 33 03.5	-0.1
	baz=3.4						
O15A	**The Old Anders**	**3.46**	**74**	⇑S	Sn	21 33 45.0	-0.1
	baz=3.5						
Q15A	**Fillmore**	**3.46**	**95**	⇓Sb	Sb	21 33 55.8	+2.5
	baz=3.5						
L13A	**Double Diamond**	**3.46**	**38**	⇓P	Pn	21 33 03.4	-0.4
	baz=3.5						
L13A				⇑Sb	Sb	21 33 57.4	+3.9
	baz=3.5						
SHOC	**Shoshone**	**3.50**	**173**	⇑Sb	Sb	21 33 59.5	+4.9
	baz=3.5						
P15A	**Leamington**	**3.51**	**86**	⇑S	Sn	21 33 46.1	-0.3
	baz=3.5						
N15A	**Stansbury Isla**	**3.61**	**64**	⇑Sb	Sb	21 34 01.4	+3.8
	baz=3.6						
MOD	**Modoc**	**3.66**	**314**	*e*Pn	Pn	21 33 06.3	-0.2
MOD				*e*Pg	Pg	21 33 18.1	-1.0
MOD				*e*Sg	Sg	21 34 06.1	-0.5
NLU	**North Lily Min**	**3.69**	**80**	*e*Pn	Pn	21 33 08.2	+1.3
NLU				*e*Pg	Pg	21 33 20.9	+1.1
NLU				*e*Sn	Sn	21 33 49.0	-2.0
NLU				*e*Sg	Sg	21 34 06.1	-1.5
V11A	**Goodsprings**	**3.71**	**162**	⇑Sb	Sb	21 34 04.4	+4.0
	baz=3.7						
MSU	**Marysvale**	**3.71**	**102**	*e*Pn	Pn	21 33 07.4	+0.2
MSU				Sn	Sn	21 33 50.2	-1.2
MSU				*e*Sg	Sg	21 34 08.5	+0.3
L14A	**Malta**	**3.79**	**45**	⇓P	Pn	21 33 07.3	-0.9
	baz=3.8,SNR=9.1						
L14A				⇓S	Sn	21 33 53.4	+0.2
	baz=3.8						
NOQ	**North Oquirrh**	**3.81**	**69**	Pn	Pn	21 33 06.2	-2.3
NOQ				Sg	Sg	21 34 07.8	-3.7
SPUT	**South Promonto**	**3.84**	**59**	*e*Pn	Pn	21 33 09.6	+0.7
SPUT				*e*Pg	Pg	21 33 22.0	-0.6
SPUT				*e*Sn	Sn	21 33 53.7	-0.9
SPUT				*e*Sg	Sg	21 34 12.5	+0.1
K13A	**Stover Farm, H**	**3.85**	**31**	⇓P	Pn	21 33 08.9	-0.3
	baz=3.9						
HVU	**Hansel Valley**	**3.89**	**51**	*e*Pn	Pn	21 33 09.6	0.0
HVU				*e*Pg	Pg	21 33 23.9	+0.5
HVU				*e*Sn	Sn	21 33 56.6	+0.9
HVU				*e*Sg	Sg	21 34 14.5	+0.7
M15A	**Larsen Ranch,**	**3.92**	**57**	⇑P	Pn	21 33 10.3	+0.3
	baz=3.9,SNR=9.8						
MPU	**Maple Canyon**	**4.04**	**79**	*e*Pn	Pn	21 33 12.0	+0.4
MPU				*e*Sg	Sg	21 34 16.6	-2.0
CTU	**Camp Tracy**	**4.09**	**70**	*e*Pn	Pn	21 33 11.8	-0.6
CTU				*e*Sg	Sg	21 34 20.4	-0.1
JLU	**Jordanelle**	**4.29**	**72**	Pn	Pn	21 33 14.2	-0.9
JLU				*e*Sg	Sg	21 34 26.2	-0.4
TMUT	**Trail Mountain**	**4.34**	**89**	*e*Pn	Pn	21 33 16.8	+1.0
J13A	**Cove Ranch, Pi**	**4.47**	**25**	⇑P	Pn	21 33 17.7	+0.1
	baz=4.5						
HLID	**Hailey**	**4.54**	**23**	⇑P	Pn	21 33 18.8	+0.2
	baz=4.6						
HLID	**Hailey**	**4.54**	**23**	*e*Pn	Pn	21 33 18.1	-0.4
HLID				*e*Sg	Sg	21 34 29.4	-5.5
HWUT	**Hardware Ranch**	**4.57**	**59**	*e*Pn	Pn	21 33 21.1	+2.2
HWUT				*e*Pg	Pg	21 33 34.7	-1.8
HWUT				*e*Sg	Sg	21 34 32.8	-2.9
GMRC	**Granite Mounta**	**4.69**	**168**	⇓P	Pn	21 33 20.9	+0.3
	baz=4.7,SNR=5.2						
W13A	**Hualapai Mount**	**4.87**	**151**	⇓P	Pn	21 33 23.3	+0.2
	baz=4.9						
SRU	**San Rafael**	**4.88**	**91**	*e*Pn	Pn	21 33 23.2	-0.1
BMO	**Blue Mountains**	**5.47**	**356**	*e*Pn	Pn	21 33 29.7	-1.7
BMO				*e*Sg	Sg	21 35 02.4	-2.4
WUAZ	**Wupatki**	**5.79**	**130**	*e*Pn	Pn	21 33 34.1	-1.7
WUAZ				*e*Pg	Pg	21 33 58.1	-1.9
WUAZ				*e*Sg	Sg	21 35 14.3	-0.7
BC3	**Big Chuckawall**	**5.82**	**169**	⇑P	Pn	21 33 37.1	+0.9
	baz=5.8,SNR=13						
MCMT	**McKenzie Canyo**	**6.18**	**27**	*e*Pn	Pn	21 33 40.7	-0.4
MCMT				*e*Sg	Sg	21 35 27.8	+0.4

DJA 30 21:32:08,9°.47S×113°.90E,h25km,MLv3.5/10,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGI	**Jajag, Banyuwa**	**1.02**	**14**	P	Pn	21 32 26.7	-0.1
JAGI				S	Sb	21 32 40.7	+0.6
GMJI	**Gumukmas**	**1.27**	**339**	P	Pn	21 32 30.3	+0.1
GMJI				S	Sn	21 32 47.1	+0.6
NBBI	**Negara**	**1.30**	**33**	P	Pn	21 32 31.2	+0.6
BYJI	**Banyuwangi**	**1.33**	**20**	P	Pn	21 32 31.9	+0.9
IGBI	**Denpasar**	**1.39**	**62**	P	Pn	21 32 31.9	+0.1
SRBI	**Singaraja**	**1.89**	**43**	P	Pn	21 32 39.5	+0.8
KRKI	**Karangkates**	**1.94**	**312**	P	Pn	21 32 41.2	+1.9
KHKI	**Kahang-Kahang**	**2.01**	**57**	P	Pn	21 32 41.4	+1.0
KMMI	**Kalianget**	**2.41**	**2**	P	Pn	21 32 49.4	+3.6
PWJI	**Pagerwojo**	**2.52**	**305**	P	Pn	21 32 47.7	+0.3
PWJI				S	Sn	21 33 16.8	-0.6
SJI	**Sawahan**	**2.72**	**309**	P	Pn	21 32 53.2	+3.0
PCJI	**Pacitan**	**2.97**	**295**	P	Pn	21 32 54.6	+1.0
UGM	**Wanagama**	**3.68**	**295**	P	Pn	21 33 04.2	+0.9
BJII	**Banjamegara**	**4.66**	**297**	P	Pn	21 33 17.4	+0.6
CISI	**Cisompet, Garu**	**6.31**	**287**	P	Pn	21 33 39.3	-0.2

*ISCJB **30** 21:35:51.9±0.4,40°.83N±0°.03×28°.81E±0°.04,h6km±7km, Error ellipse: s-maj=5.2km s-min=4.2km az=169.5*
*DDA **30** 21:35:51.8,40°.79N×28°.77E,h7km±5km,Md2.8*
*ISK **30** 21:35:51.7,40°.83N×28°.83E,h6km,MD2.8*
*CSEM **30** 21:35:52.2±0.1,40°.83N×28°.82E,h8km,MD2.8, Error ellipse: s-maj=2.0km s-min=1.9km az=76.0*
ISC 30 21:35:52.3±0.4,40°.83N±0°.03×28°.82E±0°.04,h9km±6km, n39,σ0°.43/49,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARMT	**Armutlu**	**0.26**	**173**	*e*PG	Pg	21 35 57.5	0.0
ARMT				*e*SG	Sg	21 36 00.9	-0.1
ARMT	**Armutlu**	**0.26**	**173**	*e*Pg	Pg	21 35 57.5	0.0
ARMT				*e*Sg	Sg	21 36 00.9	-0.1
ISK	**Istanbul-Kandi**	**0.30**	**37**	*e*PG	Pg	21 35 57.7	-0.6
ISK				*e*SG	Sg	21 36 02.4	+0.1
ISK	**Istanbul-Kandi**	**0.30**	**37**	*e*Pg	Pg	21 35 57.7	-0.6
ISK				*e*Sg	Sg	21 36 02.4	+0.1
BGKT	**Bogazkoy**	**0.36**	**355**	*e*PG	Pg	21 35 59.2	-0.1
BGKT				*e*SG	Sg	21 36 04.6	+0.5
BGKT	**Bogazkoy**	**0.36**	**355**	*e*Pg	Pg	21 35 59.2	-0.1
BGKT				*e*Sg	Sg	21 36 04.6	+0.6
ELBA	**Catalca**	**0.43**	**318**	*e*P	Pg	21 36 00.2	-0.5
ELBA				*e*S	Sg	21 36 06.1	-0.3
ELBA	**Catalca**	**0.43**	**318**	*e*P	Pg	21 36 00.2	-0.6
ELBA				*e*S	Sg	21 36 06.1	-0.4
KLYT	**Kilyos**	**0.46**	**22**	*e*PG	Pg	21 36 01.1	-0.1
KLYT	**Kilyos**	**0.46**	**22**	*e*Pg	Pg	21 36 01.2	0.0
CTKS	**Kestanelik-??a**	**0.47**	**330**	*e*PG	Pg	21 36 01.5	0.0
CTKS	**Kestanelik-??a**	**0.47**	**330**	*e*Pg	Pg	21 36 01.5	0.0
YLV	**Yalova**	**0.49**	**121**	*e*PG	Pg	21 36 02.1	+0.2
YLV	**Yalova**	**0.49**	**121**	*e*Pg	Pg	21 36 02.1	+0.2
SLVT	**Silivri**	**0.61**	**312**	*e*PG	Pg	21 36 04.0	-0.1
SLVT	**Silivri**	**0.61**	**312**	*e*Pg	Pg	21 36 04.0	-0.1
HRT	**Hereke**	**0.65**	**90**	*e*PG	Pg	21 36 04.6	-0.1
HRT	**Hereke**	**0.65**	**90**	*e*Pg	Pg	21 36 04.6	-0.1
KCTX	**Karacabey (Bur**	**0.66**	**212**	*e*PG	Pg	21 36 05.6	+0.6
KCTX	**Karacabey (Bur**	**0.66**	**212**	*e*Pg	Pg	21 36 05.6	+0.6
SILT	**Sile**	**0.70**	**62**	*e*PG	Pg	21 36 05.7	-0.2
SILT	**Sile**	**0.70**	**62**	*e*Pg	Pg	21 36 05.7	-0.2
CTYL	**Yal??k??y-??at**	**0.76**	**329**	*e*PG	Pg	21 36 07.0	0.0
CTYL	**Yal??k??y-??at**	**0.76**	**329**	*e*Pg	Pg	21 36 07.0	0.0
ADVT	**Abdulvahap**	**0.80**	**119**	*e*PG	Pg	21 36 07.7	0.0
ADVT	**Abdulvahap**	**0.80**	**119**	*e*Pg	Pg	21 36 07.7	0.0
BNT	**Bandirma**	**0.83**	**236**	*e*PG	Pg	21 36 09.0	+0.8
EDC	**Edincik**	**0.87**	**237**	*e*PG	Pg	21 36 08.5	-0.5
EDC	**Edincik**	**0.87**	**237**	*e*Pg	Pg	21 36 08.5	-0.5
CRLT	**Corlu**	**0.87**	**291**	*e*PG	Pg	21 36 09.3	+0.2
CRLT	**Corlu**	**0.87**	**291**	*e*Pg	Pg	21 36 09.3	+0.2
KRBG	**Karabiga-Canak**	**1.23**	**250**	*e*PN	Pn	21 36 16.0	+0.3
KRBG	**Karabiga-Canak**	**1.23**	**250**	*e*Pn	Pn	21 36 16.0	+0.3
GULT	**Gulveren**	**1.35**	**106**	*e*PN	Pn	21 36 17.7	+0.4
GULT	**Gulveren**	**1.35**	**106**	*e*Pn	Pn	21 36 17.7	+0.4
BALY	**Balya**	**1.42**	**221**	*e*P	Pn	21 36 17.1	-1.1
BALY				*e*S	Sn	21 36 36.8	-0.3
BALY	**Balya**	**1.42**	**221**	*e*P	Pn	21 36 17.1	-1.2
BALY				*e*S	Sn	21 36 36.8	-0.3
EDRB	**Edirne**	**1.86**	**304**	*e*PN	Pn	21 36 25.2	+0.8
EDRB	**Edirne**	**1.86**	**304**	*e*Pn	Pn	21 36 25.2	+0.8

*ISCJB **30** 21:37:20.4±2.8,26°.3S±0°.2×177°.5W±0°.1,h77km±25km, mb4.2/12, Error ellipse: s-maj=26.4km s-min=14.6km az=157.5*
*IDC **30** 21:37:23.4±7.3,26°.30S×177°.39W,h92km±55km,mb3.9/8, mb1 4.1/9,mb1mx4.0/14,mbtmp4.0/9,ML3.3/1, Error ellipse: s-maj=64.2km s-min=24.0km az=150.0*
*NEIC **30** 21:37:23.8±1.9,26°.34S×177°.40W,h98km±18km,mb4.4/5, Error ellipse: s-maj=17.2km s-min=7.5km az=163.0*
ISC 30 21:37:22.4±2.5,26°.3S±0°.1×177°.4W±0°.1,h83km±23km,n36, σ0°.52/27,mb4.2/12,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**9.51**	**333**	*e*Pn	Pn	21 39 43.7	+7.1
	100nm,1.3s						
AFI	**Afiamalu**	**13.44**	**24**	P	Pn	21 40 29.4	-0.3
	8.9nm,0.3s,baz=10,slow=21,SNR=5.3						
AFI	**Afiamalu**	**13.44**	**24**	*e*Pn	Pn	21 40 30.1	+0.4
AFI				Sn	Sn	21 42 52.4	-5.1
RAR	**Rarotonga**	**16.95**	**76**	*e*Pn	Pn	21 41 14.2	-0.2
	17nm,0.8s						
CTA	**Charters Tower**	**33.86**	**273**	P	P	21 43 58.6	+1.4
	2.0nm,0.4s,mb4.3,baz=96,slow=12,SNR=4.3						
CTAO	**Charters Tower**	**33.86**	**273**	P	P	21 43 58.0	+0.8
ASAR	**Alice Springs**	**43.97**	**262**	P	P	21 45 21.7	+0.1
	0.5nm,0.3s,mb3.7,baz=104,slow=7.7,SNR=10						
WRAB	**Tennant Creek**	**44.59**	**268**	*e*P	P	21 45 26.5	0.0
	2.8nm,0.7s,mb4.1						
KAKA	**Kakadu**	**48.85**	**276**	*e*P	P	21 46 00.2	+0.3
FITZ	**Fitzroy Crossi**	**52.98**	**267**	*e*P	P	21 46 31.1	+0.3
	2.1nm,0.6s,mb4.3						
GUMO	**Guam**	**54.01**	**313**	P	P	21 46 37.6	-0.8
MBWA	**Marble Bar**	**57.26**	**261**	*e*P	P	21 47 00.5	-1.2
MJAR	**Matsushiro Arr**	**75.20**	**324**	P	P	21 48 56.0	+0.1
	2.8nm,0.9s,mb4.0,baz=159,slow=5.5,SNR=7.1						
MAJO	**Matsushiro**	**75.20**	**324**	*e*P	P	21 48 55.9	-0.1
MAW	**Mawson**	**76.29**	**200**	P	P	21 49 01.7	-0.1
KSRS	**Korea Array**	**81.58**	**319**	P	P	21 49 31.1	0.0
	2.6nm,0.7s,mb4.2,baz=131,slow=5.6,SNR=13						
PETK	**Petropavlovsk-**	**82.00**	**345**	P	P	21 49 32.9	0.0
	3.7nm,0.7s,mb4.3,baz=130,slow=6.2,SNR=4.0						
NVAR	**Mina Array Bea**	**84.92**	**43**	P	P	21 49 49.2	+1.0
	0.7nm,0.6s,mb3.8,baz=213,slow=7.8,SNR=5.6						
KULM	**Kulim**	**85.10**	**278**	*e*P	P	21 49 49.1	-0.7
MDJ	**Mudanjiang**	**85.56**	**325**	P	P	21 49 51.2	-0.1
ENH	**Enshi**	**89.72**	**304**	P	P	21 50 11.4	-0.2
CMAR	**Chiang Mai Arr**	**92.52**	**289**	P	P	21 50 25.8	+1.0
	0.7nm,0.3s,mb4.4,baz=85,slow=0.7,SNR=6.9						
CHTO	**Chiang Mai**	**92.68**	**290**	*e*P	P	21 50 25.5	-0.1
	3.3nm,0.9s,mb4.7						
COLA	**College**	**93.76**	**12**	*e*P	P	21 50 29.2	-0.3
ILAR	**Eielson Array**	**93.85**	**13**	P	P	21 50 29.6	-0.2
	0.3nm,0.6s,mb3.8,baz=219,slow=6.9,SNR=3.6						
PHWY	**Pilot Hill**	**94.64**	**46**	P	P	21 50 34.1	0.0
	6.3nm,0.6s,mb5.2						
BVAR	**Borovoye Array**	**123.78**	**318**	PKP	PKPdf	21 56 09.6	-0.6
	0.3nm,0.3s,baz=27,slow=3.9,SNR=3.4						
ARCES	**ARCESS Array B**	**134.71**	**349**	PKP	PKPdf	21 56 30.1	-0.5
	0.9nm,0.6s,baz=90,slow=2.4,SNR=9.9						
FINES	**FINESS Array B**	**141.46**	**342**	PKhKP	PKPpre	21 56 36.5	
	0.5nm,0.5s,baz=28,slow=3.7,SNR=7.1						
FINES	**FINESS Array B**	**141.46**	**342**	PKP	PKPpre	21 56 36.5	
NB2	**NORSAR Subarra**	**144.79**	**353**	PKP	PKPdf	21 56 47.2	-1.9
	comp=Z,4.1nm,0.8s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**144.79**	**353**	PKP	PKPdf	21 56 47.6	-1.5
	comp=Z,3.2nm,0.6s,baz=25,slow=4.1,SNR=9.6						
AKASG	**Malin Array Be**	**148.25**	**327**	PKPbc	PKPbc	21 56 57.3	-1.3
	comp=Z,3.0nm,0.6s,baz=46,slow=4.3,SNR=9.4						
MMAI	**Mount Meron Ar**	**150.77**	**291**	PKPbc	PKPbc	21 57 05.6	+0.1
	comp=Z,1.4nm,0.4s,baz=76,slow=7.0,SNR=10.0						
BRTR	**Keskin Array B**	**150.87**	**305**	PKPbc	PKPbc	21 57 04.8	-0.6
	comp=Z,1.8nm,0.9s,baz=136,slow=3.4,SNR=6.0						
BRTR				PKPab	PKPab	21 57 12.9	-0.1
	comp=Z,4.2nm,0.6s,baz=94,slow=3.8,SNR=21						
BRG	**Berggiesshubel**	**153.98**	**343**	*e*(P)	PKPab	21 57 24.3	-1.3
	comp=Z,3.3nm,1.1s						

*NOU **30** 21:50:22.2±1.8, 19°.40S×169°.83E,h10km,ML4.3*
*LDG **30** 21:50:37.4±0.2, 19°.39S×168°.87E,h10km,Mb4.9/2,Error ellipse: s-maj=26.7km s-min=6.7km az=123.0*
*ISCJB **30** 21:50:49.6±1.1,20°.15S±0°.10×168°.57E±0°.08, h129km±10km, mb4.3/22, Error ellipse: s-maj=17.6km s-min=10.1km az=153.3*
*NEIC **30** 21:50:54.6±1.0,20°.08S×168°.69E,h174km±9km,mb4.5/10, Error ellipse: s-maj=14.3km s-min=8.6km az=154.0*
*BJI **30** 21:50:55.7, 19°.37S×169°.49E,h174km,mB4.9/4,mb4.6/8*
*IDC **30** 21:51:04.5±1.4,20°.21S×168°.52E,h262km±11km, mb4.0/11,mb1 4.1/11,mb1mx4.1/14,mbtmp4.0/11,Error ellipse: s-maj=22.7km s-min=16.1km az=128.0*
ISC 30 21:50:50.4±1.1,20°.14S±0°.10×168°.58E±0°.08,h123km±9km, h256km±5.2km:pP-P,n114,σ1°.19/48,mb4.4/22,4C-7D, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.55**	**218**	*e*S	Sn	21 51 59.8	-2.4
DZM	**Mont Dzumac**	**2.77**	**226**	*e*P	Pn	21 51 21.0	-13
DZM				*e*S	Sn	21 52 07.2	0.0
DZM				AMP		21 52 08.2	
	comp=Z,5μm,0.6s						
DZM	**Mont Dzumac**	**2.77**	**226**	*e*Pn	Pn	21 51 42.1	+8.3
NOUC	**Port Laguerre**	**2.88**	**227**	*e*P	Pn	21 51 24.6	-11
NOUC				*e*S	Sn	21 52 10.8	+0.9
NOUC				AMP		21 52 39.4	
	comp=Z,458nm,0.0s						
ONTRN	**Noumea**	**2.93**	**222**	*e*P	Pn	21 51 25.6	-10
ONTRN				*e*S	Sn	21 52 10.4	-0.4
MSVF	**Nonsavu**	**9.28**	**77**	*e*Pn	Pn	21 53 02.6	+1.5
	comp=Z,26nm,1.0s						
EIDS	**Eidsvold**	**16.95**	**249**	*e*P	Pn	21 54 40.2	0.0
CTA	**Charters Tower**	**20.97**	**266**	*e*P	P	21 55 24.7	+0.9
	comp=Z,30nm,0.6s						
CTA	**Charters Tower**	**20.97**	**266**	P	P	21 55 27.3	+3.5
	comp=Z,44nm,0.7s,baz=91,slow=11,SNR=57						
CTA	**Charters Tower**	**20.97**	**266**	P	P	21 55 27.3	+3.5
CTAO	**Charters Tower**	**20.97**	**266**	*e*P	P	21 55 27.0	+3.2
	comp=Z,35nm,0.6s						
YNG	**Young**	**22.77**	**228**	*e*P	P	21 55 43.2	+0.8
	comp=Z,6.1nm,0.7s,mb4.0						
MTSU	**Mount Surprise**	**23.01**	**271**	*e*P	P	21 55 46.3	+1.5
	comp=Z,90nm,1.0s,mb5.1						
QLP	**Quilpie**	**23.23**	**249**	*e*P	P	21 55 47.3	+0.5
CMSA	**Cobar Meteorol**	**23.47**	**237**	*e*P	P	21 55 49.4	+0.5
STKA	**Stephens Creek**	**26.84**	**239**	*e*P	P	21 56 19.7	+0.3
	comp=Z,5.3nm,0.7s,mb4.2						
STKA	**Stephens Creek**	**26.84**	**239**	P	P	21 56 20.4	+1.0
	comp=Z,6.2nm,0.7s,mb4.2,baz=64,slow=9.8,SNR=12						
STKA				pP	pP	21 57 10.9	+25
	comp=Z,3.0nm,0.7s,baz=94,slow=12,SNR=2.0						
STKA	**Stephens Creek**	**26.84**	**239**	*e*P	P	21 56 20.4	+1.0
	comp=Z,1.1nm,0.8s,mb3.4						
STKA				pP	pP	21 57 10.9	+25
RAR	**Rarotonga**	**29.60**	**98**	*e*P	P	21 56 47.8	+3.7
WRAB	**Tennant Creek**	**32.13**	**264**	*e*P	P	21 57 05.6	-0.7
	comp=Z,13nm,0.8s,mb4.7						
ASAR	**Alice Springs**	**32.32**	**257**	P	P	21 57 08.2	+0.2
	comp=Z,45nm,0.6s,mb5.3,baz=84,slow=9.3,SNR=138						
ASAR				pP	pP	21 58 01.0	+26
	comp=Z,2.8nm,0.7s,baz=83,slow=9.4,SNR=1.3						
FITZ	**Fitzroy Crossi**	**40.54**	**265**	P	P	21 58 18.6	+0.7
	comp=Z,10nm,0.7s,mb4.8,baz=114,slow=8.2,SNR=4.1						
FITZ				pP	pP	21 59 12.6	+27
	comp=Z,8.6nm,0.8s,baz=119,slow=11,SNR=3.3						
FITZ	**Fitzroy Crossi**	**40.54**	**265**	*e*P	P	21 58 18.1	+0.2
	comp=Z,19nm,1.1s,mb4.8						
FITZ				*e*		21 59 12.1	
FITZ				pP	pP	21 59 12.6	+27
MBWA	**Marble Bar**	**45.58**	**260**	*e*P	P	21 58 57.4	-1.0
	comp=Z,13nm,0.7s,mb4.8						
NWAO	**Narrogin (SRO)**	**47.25**	**243**	P	P	21 59 11.0	-0.3
	comp=Z,21nm,0.7s,mb5.0,baz=104,slow=7.1,SNR=6.5						
NWAO	**Narrogin (SRO)**	**47.25**	**243**	*e*P	P	21 59 11.3	0.0
SBA	**Scott Base**	**57.76**	**180**	*e*P	P	22 00 28.2	+0.2
	comp=Z,7.0nm,1.1s,mb4.6						
CASY	**Casey**	**59.05**	**204**	*e*P	P	22 00 36.5	-0.6
	comp=Z,2.5nm,0.7s,mb4.3						
KSM	**Kuching**	**60.98**	**283**	P	P	22 00 50.5	-0.7
MJAR	**Matsushiro Arr**	**63.26**	**333**	P	P	22 01 04.4	-1.5
	comp=Z,1.0nm,0.6s,mb3.9,baz=114,slow=1.1,SNR=5.2						
QSPA	**South Pole Qui**	**69.92**	**180**	P	P	22 01 47.1	-0.5
	comp=Z,3.9nm,0.8s,mb4.3,baz=10,slow=1.0,SNR=9.5						
QSPA	**South Pole Qui**	**69.92**	**180**	*e*P	P	22 01 47.5	-0.1
KULM	**Kulim**	**71.33**	**283**	*e*P	P	22 01 55.1	-2.2
PETK	**Petropavlovsk-**	**73.55**	**353**	P	P	22 02 09.2	-0.3
	comp=Z,1.5nm,0.5s,mb4.0,baz=126,slow=7.4,SNR=4.8						
PETK				pP	pP	22 03 14.1	+34
	comp=Z,6.9nm,0.8s,baz=141,slow=7.4,SNR=6.7						
MAW	**Mawson**	**77.37**	**202**	P	P	22 02 32.8	+1.5
	comp=Z,2.4nm,0.7s,mb4.0,baz=110,slow=9.8,SNR=6.6						
MAW	**Mawson**	**77.37**	**202**	*e*P	P	22 02 31.4	+0.1
CMAR	**Chiang Mai Arr**	**78.31**	**295**	P	P	22 02 39.9	+2.5
	comp=Z,2.3nm,0.7s,mb4.0,baz=137,slow=4.4,SNR=13						
CMAR				pP	pP	22 03 38.6	+30
	comp=Z,0.8nm,0.8s,baz=144,slow=3.1,SNR=2.3						
LZH	**Lanzhou**	**82.87**	**312**	*e*P	P	22 03 03.8	+2.5
LZH				pmax	pmax		
	comp=Z,27nm,1.3s,mb4.9						
LZH				pmax	pmax		
	comp=Z,83nm,5.1s						
KDAK	**Kodiak Island**	**84.09**	**20**	*e*P	P	22 03 06.2	-0.7
	comp=Z,1.4nm,0.6s,mb4.0						
ULN	**Ulaanbaatar**	**87.22**	**324**	*e*P	P	22 03 21.5	-1.2
	comp=Z,12nm,1.1s,mb4.7						
GTA	**Gaotai**	**87.30**	**314**	*e*P	P	22 03 25.0	+1.7
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
SONM	**Songino Array**	**87.57**	**323**	P	P	22 03 25.0	+0.6
	comp=Z,5.9nm,0.8s,mb4.7,baz=138,slow=5.9,SNR=18						
LSA	**Lhasa**	**89.48**	**302**	*e*P	P	22 03 33.0	-0.9
NVAR	**Mina Array Bea**	**89.86**	**49**	P	P	22 03 33.9	-1.5
	comp=Z,0.9nm,0.6s,mb4.0,baz=233,slow=9.4,SNR=5.2						
ILAR	**Eielson Array**	**91.27**	**17**	P	P	22 03 38.4	-3.0
	comp=Z,0.4nm,0.6s,mb3.7,baz=239,slow=5.3,SNR=6.6						
MK31	**Makanchi Array**	**101.94**	**316**	*e*Pdif	Pdif	22 04 27.7	-2.4
MKAR	**Makanchi Array**	**101.94**	**316**	P	Pdif	22 04 30.9	+0.7
	comp=Z,0.4nm,0.6s,baz=94,slow=5.8,SNR=4.2						
ZALV	**Zalesovo Beam**	**102.46**	**323**	P	Pdif	22 04 32.2	-0.3
	comp=Z,0.3nm,0.3s,baz=132,slow=4.1,SNR=2.3						
BRVK	**Borovoye**	**110.78**	**320**	*e*PKiKP	PKiKP	22 09 06.2	-2.2
ARU	**Arti**	**117.60**	**324**	PKPdf	PKPdf	22 09 18.7	-2.8
JOF	**Joensuu**	**128.34**	**337**	*ep*	PKPdf	22 09 41.7	-0.1
KAF	**Kangasniemi**	**130.66**	**338**	*ep*	PKPdf	22 09 45.9	-0.4
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	**131.18**	**337**	PKhKP	PKPpre	22 09 42.4	
	comp=Z,0.5nm,0.6s,baz=45,slow=4.7,SNR=2.6						
FINES				PKP	PKPdf	22 09 46.1	-1.2
	comp=Z,0.8nm,0.5s,baz=29,slow=4.4,SNR=9.9						
NOA	**NORSAR Array B**	**136.15**	**344**	PKP	PKPdf	22 09 55.5	-

*ISCJB **30** 21:51:56.8±1.4, 11°.54S±0°.04×117°.52E±0°.04, h16km±11km, mb4.2/13, Error ellipse: s-maj=7.2km s-min=5.6km az=135.6*

*IDC **30** 21:51:57.5±1.0, 11°.11S×117°.91E, h0km, mb4.0/7, mb1 4.3/9, mb1mx4.0/20, mbtmp4.2/9, ML4.6/2, MS3.4/2, Ms1 3.4/2, ms1mx2.8/25, Error ellipse: s-maj=47.4km s-min=18.2km az=60.0*

*NEIC **30** 21:51:59.7±3.1, 11°.44S×117°.66E, h22km±23km, mb4.3/7, Error ellipse: s-maj=10.9km s-min=7.9km az=58.0*

*DJA **30** 21:52:00, 11°.58S×117°.47E, h30km, mb4.8/17*

ISC 30 21:51:59.7±1.4, 11°.54S±0°.04×117°.53E±0°.04, h21km±11km, n64, σ1§05/73, mb4.2/13, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**3.30**	**56**	P	**Pn**	**21 52 59.4**	**+9.2**
WSI				S	**Sn**	**21 53 28.1**	**-0.7**
IGBI	**Denpasar**	**3.58**	**319**	P	**Pn**	**21 52 51.2**	**-2.8**
IGBI				S	**Sn**	**21 53 28.5**	**-7.2**
KHKI	**Kahang-Kahang**	**3.68**	**329**	P	**Pn**	**21 52 55.5**	**+0.1**
KHKI				S	**Sn**	**21 53 33.3**	**-4.9**
SRBI	**Singaraja**	**4.12**	**326**	P	**Pn**	**21 53 03.2**	**+1.7**
SRBI				S	**Sn**	**21 53 45.3**	**-3.8**
NBBI	**Negara**	**4.26**	**317**	P	**Pn**	**21 53 02.2**	**-1.2**
JAGI	**Jajag, Banyuwa**	**4.51**	**312**	P	**Pn**	**21 53 06.5**	**-0.4**
GMJI	**Gumukmas** 0.5nm82nm,0.4s	**5.17**	**309**	P	**Pn**	**21 53 16.3**	**+0.4**
MMRI	**Maumere** 0.6nm2µm60nm,0.7s	**5.46**	**59**	P	**Pn**	**21 53 22.1**	**+2.2**
KMMI	**Kalianget** 0.4nm71nm,1.9s	**5.68**	**321**	P	**Pn**	**21 53 23.9**	**+1.0**
PWJI	**Pagerwojo** 0.3nm55nm,0.4s	**6.63**	**301**	P	**Pn**	**21 53 35.6**	**-0.5**
BKSI	**Bulukumba** 0.4nm1µm96nm,0.5s	**6.69**	**23**	P	**Pn**	**21 53 37.4**	**+0.6**
SJI	**Sawahan** 0.5nm4µm68nm,0.5s	**6.82**	**303**	P	**Pn**	**21 53 39.0**	**+0.4**
PCJI	**Pacitan** 113nm,1.3s	**7.08**	**297**	P	**Pn**	**21 53 43.1**	**+0.9**
UGM	**Wanagama** 0.8nm131nm,1.9s	**7.79**	**297**	P	**Pn**	**21 53 51.5**	**-0.4**
SPSI	**Sidrap Palu** 0.2nm1µm26nm,0.8s	**7.85**	**17**	P	**Pn**	**21 53 52.9**	**+0.2**
KBKI	**Kotabaru** 23nm,1.2s	**8.30**	**351**	P	**Pn**	**21 53 58.2**	**-0.7**
TTSI	**Tana Toraja** 17nm,0.7s	**8.74**	**15**	P	**Pn**	**21 54 06.5**	**+1.5**
BJII	**Banjamegara** 27nm,1.6s	**8.77**	**298**	P	**Pn**	**21 54 04.1**	**-1.3**
MBWA	**Marble Bar**	**9.80**	**168**	*e*P	**Pn**	**21 54 17.7**	**-1.7**
MBWA	**Marble Bar** 34nm,0.3s	**9.80**	**168**	*e*Pn	**Pn**	**21 54 18.1**	**-1.3**
MBWA				*e*Sn	**Sn**	**21 55 57.3**	**-12**
MBWA	**Marble Bar** 35nm,0.4s	**9.80**	**168**	P	**Pn**	**21 54 18.1**	**-1.3**
FITZ	**Fitzroy Crossi** 47nm,0.8s	**10.20**	**131**	*e*P	**Pn**	**21 54 23.7**	**-1.3**
FITZ				*e*S	**Sn**	**21 56 11.2**	**-7.6**
FITZ	**Fitzroy Crossi** 4.2nm,0.3s,baz=325,slow=7.3,SNR=75	**10.20**	**131**	Pn	**Pn**	**21 54 24.2**	**-0.8**
FITZ				Sn	**Sn**	**21 56 13.0**	**-5.8**
FITZ	4.9nm,0.3s,baz=144,slow=14,SNR=5.7			LR	LR	21 57 57.1	
FITZ	**Fitzroy Crossi** comp=Z,99nm,20.1s,baz=270,slow=35	**10.20**	**131**	*e*Pn	**Pn**	**21 54 24.9**	**-0.1**
FITZ				Sn	**Sn**	**21 56 13.0**	**-5.8**
FITZ				LR	LR	21 57 57.1	
FITZ	**Fitzroy Crossi** 63nm,0.9s	**10.20**	**131**	P	**Pn**	**21 54 25.4**	**+0.4**
CISI	**Cisompet, Garu** 52nm,1.3s	**10.36**	**292**	P	**Pn**	**21 54 25.6**	**-1.6**
KNA	**Kununurra**	**11.70**	**112**	P	**Pn**	**21 54 44.7**	**-0.8**
SBUM	**Sibu**	**14.87**	**339**	P	**Pn**	**21 55 31.1**	**+2.3**
MEEK	**Meekatharra**	**15.05**	**176**	*e*P	**Pn**	**21 55 29.2**	**-2.1**
MORW	**Morawa**	**17.50**	**184**	*e*P	**Pn**	**21 56 02.3**	**-0.2**
WRAB	**Tennant Creek** 18nm,0.9s	**18.20**	**119**	*e*P	**Pn**	**21 56 11.1**	**-0.2**
ASAR	**Alice Springs** 1.2nm,0.3s,baz=310,slow=12,SNR=95	**19.70**	**130**	P	**Pn**	**21 56 30.1**	**+0.7**
ASAR				S	**Sn**	**21 59 57.0**	**-13**
KLBR	**Kellerberrin** 0.3nm,0.3s,baz=311,slow=23,SNR=7.2 12nm,0.3s	**19.96**	**179**	*e*P	**Pn**	**21 56 33.8**	**+1.5**
COCO	**West Island**	**20.26**	**266**	*e*P	**P**	**21 56 34.2**	**+0.2**
NWAO	**Narrogin (SRO)** 153nm,1.5s,mb5.1	**21.29**	**181**	*e*P	**P**	**21 56 48.9**	**+4.0**
NWAO	**Narrogin (SRO)** 12nm,0.4s,mb4.5,baz=2.9,slow=11,SNR=25	**21.29**	**181**	P	**P**	**21 56 50.1**	**+5.2**
NWAO				S	**S**	**22 00 28.7**	**-12**
NWAO	**Narrogin (SRO)** 9.8nm,0.9s,baz=91,slow=16,SNR=3.4	**21.29**	**181**	*e*P	**P**	**21 56 46.9**	**+1.9**
NWAO				S	**S**	**22 00 32.1**	**-8.5**
PSI	**Prapat** 2.9nm,0.4s,mb4.0,baz=150,slow=16,SNR=3.2	**23.35**	**306**	P	**P**	**21 57 08.5**	**+1.4**
PSI				LR	LR	22 09 19.7	
KULM	**Kulim** 2.9nm,0.5s,mb4.0 comp=Z,202nm,18.2s,baz=99,slow=45	**23.70**	**314**	*e*P	**P**	**21 57 10.4**	**0.0**
CMAR	**Chiang Mai Arr** 0.4nm,0.5s,mb3.6,baz=143,slow=6.2,SNR=3.4	**34.99**	**328**	P	**P**	**21 58 50.6**	**-0.2**
CHTO	**Chiang Mai**	**35.29**	**328**	*e*P	**P**	**21 58 53.6**	**+0.2**
HNR	**Honiara**	**41.74**	**91**	*e*P	**P**	**21 59 47.1**	**-0.6**
LSA	**Lhasa**	**48.24**	**329**	*e*P	**P**	**22 00 39.5**	**+0.3**
MAJO	**Matsushiro** 3.6nm,0.7s,mb4.4	**51.64**	**21**	*e*P	**P**	**22 01 04.0**	**-0.9**
CASY	**Casey**	**54.88**	**183**	P	**P**	**22 01 29.6**	**+1.2**
ULN	**Ulaanbaatar**	**59.87**	**352**	*e*P	**P**	**22 02 02.9**	**-0.8**
SONM	**Songino Array** 1.1nm,0.6s,mb4.1,baz=171,slow=7.8,SNR=5.7	**59.93**	**351**	P	**P**	**22 02 03.4**	**-0.8**
TLY	**Talaya** 4.2nm,0.5s,mb4.7	**64.10**	**350**	*e*P	**P**	**22 02 31.2**	**-0.9**
KBL	**Kabul**	**64.91**	**317**	*e*P	**P**	**22 02 37.2**	**-0.6**
MK31	**Makanchi Array**	**66.07**	**334**	*e*P	**P**	**22 02 44.5**	**-0.5**
MKAR	**Makanchi Array** 0.9nm,0.5s,mb4.1,baz=146,slow=6.9,SNR=25	**66.07**	**334**	P	**P**	**22 02 44.6**	**-0.5**
MAW	**Mawson**	**66.37**	**200**	*e*P	**P**	**22 02 47.8**	**+1.1**
UCH	**Uchtor**	**66.47**	**326**	*e*P	**P**	**22 02 48.7**	**+1.0**
AAK	**Ala-Archa**	**66.76**	**327**	*e*P	**P**	**22 02 49.3**	**-0.3**
EKS2	**Erkin-Say** 1.0nm,0.7s,mb4.0	**67.17**	**326**	*e*P	**P**	**22 02 52.1**	**-0.1**
KURK	**Kurchatov** 1.6nm,0.8s,mb4.0	**70.64**	**335**	*e*P	**P**	**22 03 12.2**	**-1.4**
ZALV	**Zalesovo Beam** 1.2nm,0.5s,mb4.1,baz=140,slow=5.0,SNR=6.0	**70.90**	**340**	P	**P**	**22 03 13.8**	**-1.3**
YAK	**Yakutsk**	**73.95**	**6**	P	**P**	**22 03 32.8**	**-0.3**
BVAR	**Borovoye Array** 0.6nm,0.6s,mb3.7,baz=144,slow=8.3,SNR=3.8	**75.86**	**333**	P	**P**	**22 03 44.7**	**+0.4**
LSZ	**Lusaka** 1.4nm,0.5s,mb4.5	**86.39**	**255**	*e*P	**P**	**22 04 43.6**	**+2.4**
BOSA	**Boshof**	**86.53**	**242**	*e*P	**P**	**22 04 42.5**	**+0.8**
TSUM	**Tsumeb**	**95.45**	**249**	*e*P	**P**	**22 05 24.8**	**+1.2**
AQU	**L'Aquila**	**108.10**	**311**	*e*PKiKP	PKiKP	22 10 25.4	-0.9
HVU	**Hansel Valley**	**126.88**	**46**	*e*PKPdf	PKPdf	22 10 59.8	-2.4

*ISCJB **30** 22:07:23.9±2.6, 32°.9S±0°.1×179°.6W±0°.2, h80km±22km, mb4.2/9, Error ellipse: s-maj=24.8km s-min=19.1km az=161.8*

*NEIC **30** 22:07:24.9±1.8, 32°.81S×179°.49W, h83km±14km, mb4.3/5, Error ellipse: s-maj=16.9km s-min=13.3km az=64.0*

*IDC **30** 22:07:26.4±7.9, 33°.00S×179°.27W, h99km±79km, mb3.9/4, mb1 4.1/5, mb1mx3.9/12, mbtmp3.9/5, ML3.7/1, MS3.8/5, Ms1 3.8/5, ms1mx3.6/13, Error ellipse: s-maj=95.3km s-min=33.0km az=171.0*

ISC 30 22:07:24.8±2.4, 32°.8S±0°.1×179°.5W±0°.2, h73km±20km, n31, σ0§82/17, mb4.2/9, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.10**	**206**	P	**Pn**	**22 08 52.5**	**+0.2**
URZ	2.1nm,0.3s,baz=117,slow=16,SNR=3.5			S	**Sn**	**22 09 50.8**	**-10**
URZ	**Urewera** 8.9nm,0.3s,baz=125,slow=23,SNR=8.0	**6.10**	**206**	*e*Pn	**Pn**	**22 08 52.6**	**+0.3**
URZ				*e*Sn	**Sn**	**22 09 50.5**	**-10**
OUZ	**Omahuta**	**6.20**	**245**	*e*Pn	**Pn**	**22 08 52.9**	**-0.7**
FUNA	**Funafuti**	**24.18**	**357**	P	**P**	**22 12 35.4**	**+1.0**
HNR	**Honiara** comp=Z,120nm,18.2s,baz=240,slow=31	**30.00**	**316**	LR	LR	22 22 59.9	
PPT	**Papeete** comp=Z,270nm,20.8s,baz=211,slow=28	**30.93**	**68**	LR	LR	22 22 02.8	
STKA	**Stephens Creek**	**32.73**	**261**	P	**P**	**22 13 52.7**	**+2.1**
	3.1nm,0.8s,mb4.2,baz=110,slow=11,SNR=5.4						
STKA				LR	LR	22 24 47.5	
	comp=Z,258nm,20.9s,baz=30,slow=32						
STKA	**Stephens Creek** 0.8nm,0.7s,mb3.7	**32.73**	**261**	*e*P	**P**	**22 13 51.2**	**+0.7**
STKA				LR	LR	22 24 47.5	
CTA	**Charters Tower** comp=Z,242nm,21.7s,baz=82,slow=31	**32.99**	**284**	LR	LR	22 24 38.3	
CTAO	**Charters Tower** 2.2nm,0.8s,mb4.0	**32.99**	**284**	*e*P	**P**	**22 13 53.5**	**+0.6**
ASAR	**Alice Springs** 6.0nm,0.7s,mb4.4,baz=108,slow=7.6,SNR=48	**41.74**	**270**	P	**P**	**22 15 07.2**	**+0.3**
WRAB	**Tennant Creek** 7.5nm,0.6s,mb4.6	**42.95**	**276**	*e*P	**P**	**22 15 16.2**	**-0.5**
SBA	**Scott Base** 3.1nm,0.9s,mb4.0	**45.56**	**184**	*e*P	**P**	**22 15 36.4**	**-0.4**
FITZ	**Fitzroy Crossi** 6.2nm,0.8s,mb4.7	**51.10**	**273**	*e*P	**P**	**22 16 20.0**	**-0.2**
QSPA	**South Pole Qui** 6.0nm,0.7s,mb4.7	**57.32**	**180**	P	**P**	**22 17 05.1**	**+0.6**
YULB	**Yu-li**	**79.41**	**307**	*e*P	**P**	**22 19 21.2**	**-1.9**
KSRS	**Korea Array** 1.0nm,0.7s,mb3.9,baz=140,slow=4.7,SNR=5.5	**85.34**	**321**	P	**P**	**22 19 53.8**	**+0.1**
KSRS				LR	LR	22 54 03.4	
NVAR	**Mina Array Bea** 0.4nm,0.7s,mb3.7,baz=212,slow=7.6,SNR=4.9	**90.88**	**44**	P	**P**	**22 20 19.5**	**-0.6**
ULN	**Ulaanbaatar**	**103.69**	**318**	*e*Pdif	Pdif	22 21 17.9	-0.2
TLY	**Talaya**	**107.59**	**321**	*e*PKiKP	PKiKP	22 25 41.8	-0.9
BOSA	**Boshof**	**114.55**	**204**	*e*PKiKP	PKiKP	22 25 55.5	-1.3
KURK	**Kurchatov**	**121.74**	**313**	PKPdf	PKPdf	22 26 07.7	-2.1
KBL	**Kabul**	**123.93**	**292**	*e*PKPdf	PKPdf	22 26 13.8	-0.7
BRVK	**Borovoye**	**127.24**	**315**	*e*PKPdf	PKPdf	22 26 19.4	-0.9
ARU	**Arti**	**134.07**	**319**	*e*PKPdf	PKPdf	22 26 31.9	-1.1
GNI	**Garni**	**143.94**	**295**	*e*PKPdf	PKPdf	22 26 50.5	-1.1
KAF	**Kangasniemi** 1.5nm,0.5s	**146.32**	**338**	*e*p	PKPdf	22 26 53.1	-1.9
FINES	**FINESS Array B** 4.1nm,0.7s,baz=79,slow=4.1,SNR=20	**146.90**	**338**	PKPbc	PKPbc	22 26 56.0	-2.0
NB2	**NORSAR Subarra** comp=Z,1.1nm,0.8s,baz=31,slow=1.9	**150.89**	**349**	PKPdf	PKPdf	22 27 06.5	+4.1
NOA	**NORSAR Array B** comp=Z,0.8nm,0.8s,baz=46,slow=3.1,SNR=3.9	**150.89**	**349**	PKPbc	PKPbc	22 27 07.1	-1.0
NOA	comp=Z,0.9nm,0.6s,baz=25,slow=4.1,SNR=2.7			PKPab	PKPab	22 27 15.1	-0.5
BRTR	**Keskin Array B** comp=Z,0.4nm,0.6s,baz=147,slow=1.9,SNR=3.2	**152.48**	**294**	PKPbc	PKPbc	22 27 11.5	-1.0

IDC 30 22:50:20.1±2.1, 3°.97S×152°.60E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.6/15, mbtmp3.7/4, MS3.2/2, Ms1 3.2/2, ms1mx3.0/16, Error ellipse: s-maj=71.8km s-min=35.5km az=123.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower** comp=Z,148nm,19.9s,baz=164,slow=33	**17.17**	**201**	LR	LR	22 59 49.5	
GUMO	**Guam** comp=Z,39nm,18.8s,baz=57,slow=33	**19.06**	**336**	LR	LR	23 00 55.8	
ASAR	**Alice Springs** 0.8nm,0.9s,baz=58,slow=9.3,SNR=4.6	**26.63**	**221**	P	P	22 56 00.7	+0.1
CMAR	**Chiang Mai Arr** 0.7nm,0.8s,baz=109,slow=5.0,SNR=4.2	**57.35**	**295**	P	P	23 00 11.1	+0.6
ILAR	**Eielson Array** 0.5nm,0.8s,baz=231,slow=6.7,SNR=5.1	**81.47**	**22**	P	P	23 02 39.5	+0.6
BVAR	**Borovoye Array** 0.7nm,0.8s,baz=106,slow=4.8,SNR=5.4	**88.46**	**323**	P	P	23 03 13.2	-1.1

ISC 30 22:50:32.8±0.8, 36°.53N±0°.08×71°.5E±0°.2, h137km±21km, n10, σ1§00/13, 1C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.72**	**174**	P	**Pn**	**22 51 16.8**	**+0.7**
CEP				S	**Sn**	**22 51 49.0**	**-0.5**
CHCP	**Chirah Chowk**	**3.20**	**153**	P	**Pn**	**22 51 24.3**	**+2.0**
THW	**Thamme Wali**	**3.73**	**177**	P	**Pn**	**22 51 27.5**	**-1.8**
KK31	**Karatay Array** 0.7nm,0.2s,baz=193,slow=15,SNR=21	**6.61**	**353**	⇓Pn	**Pn**	**22 52 08.9**	**+1.5**
KK31	2.2nm,0.4s,baz=182,slow=24,SNR=5.7			⇓Sn	**Sn**	**22 53 20.1**	**-1.4**
KOLN	**Koldanda** 9.8nm,0.4s	**13.43**	**127**	*e*P	**Pn**	**22 53 38.0**	**0.0**
GKN	**Gorkha** 19nm,0.4s	**13.96**	**124**	*e*P	**Pn**	**22 53 44.0**	**-0.7**
KKN	**Kakani**	**14.53**	**123**	*e*P	**Pn**	**22 53 51.9**	**0.0**
DMN	**Daman** 5.5nm,0.3s	**14.53**	**124**	*e*P	**Pn**	**22 53 52.1**	**+0.2**
GUN	**Gumba**	**14.86**	**121**	*e*P	**Pn**	**22 53 55.7**	**-0.3**
AB31	**Akbulak array** 0.3nm,0.3s,baz=134,slow=12,SNR=18	**15.27**	**330**	P	**Pn**	**22 54 01.3**	**+0.4**
AB31	0.4nm,0.5s,baz=168,slow=22,SNR=2.9			⇑S	**S**	**22 56 38.1**	**-19**

*NIED **30** 23:16:00, 45°.40N×150°.00E, h50km, Mw4.1 Best double couple: M0=1.78000×10^15 NP1:φs=137.00000°, δ81.00000°, λ-33.00000°. NP2:φs=232.00000°, δ57.00000°, λ-170.00000°.*

*ISCJB **30** 23:16:15.9±0.7, 45°.22N±0°.05×150°.07E±0°.07, h70km±6km, mb3.8/20, Error ellipse: s-maj=8.9km s-min=6.0km az=44.7*

*SKHL **30** 23:16:15.3±1.1, 45°.30N×150°.11E, h35km±3km, mb5.0/4*

*JMA **30** 23:16:16.1±0.7, 45°.38N×150°.01E, h30km, M4.6*

*MOS **30** 23:16:16.6±1.0, 45°.26N×150°.07E, h73km, mb4.3/15, Error ellipse: s-maj=9.1km s-min=8.0km az=65.3*

*IDC **30** 23:16:20.2±2.8, 45°.31N×150°.00E, h90km±24km, mb3.5/12, mb1 3.7/15, mb1mx3.6/23, mbtmp3.5/15, MS3.1/8, Ms1 3.1/8, ms1mx3.0/20, Error ellipse: s-maj=23.2km s-min=14.5km az=161.0*

*NEIC **30** 23:16:20.0±0.6, 45°.31N×149°.97E, h89km±5km, mb4.2/8, Error ellipse: s-maj=6.4km s-min=4.1km az=137.0*

ISC 30 23:16:17.7±0.7, 45°.22N±0°.05×150°.06E±0°.07, h68km±5km, n104, σ1§16/112, mb3.8/20, 1C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.55**	**271**	⇓*i*PN	**Pn**	**23 16 41.6**	**-1.6**
KUR				S	**Sn**	**23 17 00.5**	**-2.0**
KUR	comp=N,1µm,0.3s			pmax	pmax		
KUR	comp=E,270nm,0.3s			pmax	pmax		
KUR	comp=Z,2µm,0.3s			pmax	pmax		
KUR	comp=N,9µm,2.0s			smax			
KUR	comp=E,2µm,0.3s			smax			
KUR	comp=N,3µm,0.5s			smax			
KUR	comp=E,2µm,0.5s			smax			
KUR	**Kuril'sk**	**1.55**	**271**	⇓*i*P	**Pn**	**23 16 41.6**	**-1.6**
KUR				AMB	AMB	23 16 42.5	
KUR	comp=E,1µm,0.3s			AMB	AMB	23 16 42.5	
KUR	comp=E,270nm,0.3s			AMB	AMB	23 16 42.5	
KUR	comp=E,2µm,0.3s			*e*S	**Sn**	**23 17 00.5**	**-2.0**
KUR				A		23 17 03.0	
KUR	comp=E,8µm,2.0s			A		23 17 03.0	
KUR	comp=E,2µm,2.0s			A		23 17 03.5	
KUR	comp=E,3µm,0.5s			A		23 17 03.5	
KUR	comp=E,2µm,0.5s			A		23 17 03.5	
YUK	**Yuzh-Kuril'sk**	**3.23**	**250**	*e*PN	**Pn**	**23 17 06.3**	**+0.4**
YUK				*e*S	**Sn**	**23 17 45.4**	**+2.3**
YUK	comp=Z,397nm,0.3s			pmax	pmax		
YUK	comp=N,81nm,0.1s			pmax	pmax		
YUK	comp=E,106nm,0.3s			pmax	pmax		
YUK	comp=Z,309nm,1.3s			pmax	pmax		
YUK	comp=N,703nm,0.4s			smax			
YUK	comp=E,1µm,0.4s			smax			
YUK	comp=N,2µm,1.2s			smax			
YUK	comp=E,1µm,1.2s			smax			
YUK	**Yuzh-Kuril'sk**	**3.23**	**250**	*e*P	**Pn**	**23 17 06.3**	**+0.4**
YUK				AMB	AMB	23 17 09.7	
YUK	comp=E,80nm,0.3s			AMB	AMB	23 17 09.7	
YUK	comp=E,110nm,0.3s			AMB	AMB	23 17 09.7	
YUK	comp=E,400nm,0.3s			AMB	AMB	23 17 11.8	
YUK	comp=E,310nm,1.2s			*e*S	**Sn**	**23 17 45.4**	**+2.3**
YUK				A		23 17 50.8	
YUK	comp=E,700nm,0.4s			A		23 17 50.8	
YUK	comp=E,1µm,0.4s			A		23 17 56.0	
YUK	comp=E,2µm,1.1s			A		23 17 56.0	
YUK	comp=E,1µm,1.1s						
NEM2	**Nemuro 2**	**3.62**	**241**	P	**Pn**	**23 17 09.5**	**-1.7**
NEM2				*e*S	**Sn**	**23 17 48.9**	**-3.8**
JRA	**Rausu**	**3.76**	**252**	P	**Pn**	**23 17 14.0**	**+0.9**
JNK	**Nakash**	**4.17**	**249**	P	**Pn**	**23 17 19.1**	**+0.4**
JAK	**Akkeshi**	**4.46**	**242**	P	**Pn**	**23 17 21.2**	**-1.5**
JAK				*e*S	**Sn**	**23 18 11.3**	**-2.0**
JTKR	**Abashiri--Toko**	**4.57**	**256**	P	**Pn**	**23 17 25.1**	**+0.8**
JAR	**Ashorobuto**	**4.91**	**249**	P	**Pn**	**23 17 30.4**	**+1.5**
JMP	**Maruseppu**	**4.94**	**258**	P	**Pn**	**23 17 30.8**	**+1.5**
YSS	**Yuzh-Sakhalins**	**5.37**	**291**	*e*PN	**Pn**	**23 17 36.3**	**+1.1**
JKK2	**Kamakawa 2**	**5.40**	**258**	P	**Pn**	**23 17 37.4**	**+1.8**
ASAJ	**Asahikawa** comp=E,2.0nm,0.3s,baz=86,slow=11,SNR=8.3	**5.44**	**261**	P	**Pn**	**23 17 38.0**	**+1.8**
ASAJ				LR	LR	23 19 50.7	
ASAJ	**Asahikawa** comp=E,151nm,21.6s,baz=2.2,slow=39	**5.44**	**261**	PN	**Pn**	**23 17 38.0**	**+1.9**
ASAJ	comp=Z,2.0nm,0.3s			pmax	pmax		
ASAJ	comp=Z,151nm,21.6s			MLR	MLR		
JCH	**Churui**	**5.50**	**244**	P	**Pn**	**23 17 36.8**	**-0.1**
ERM	**Erimo**	**5.95**	**240**	*e*PN	**Pn**	**23 17 44.6**	**+1.5**
ERM						23 18 53.9	
ERM	comp=Z,150nm,0.7s			pmax	pmax		
ERM	**Erimo** comp=Z,150nm,0.7s	**5.95**	**240**	*e*Pn	**Pn**	**23 17 44.6**	**+1.5**
ERM				Sn	**Sn**	**23 18 53.9**	**+4.1**
ERM	**Erimo**	**5.95**	**240**	*e*P	**Pn**	**23 17 42.8**	**-0.3**
JNBK	**Urakawa-nobuka**	**6.06**	**244**	P	**Pn**	**23 17 44.0**	**-0.6**
JBT2	**Biratori 2**	**6.07**	**249**	P	**Pn**	**23 17 45.3**	**+0.6**
SKR	**Severo-Kuril's**	**6.81**	**34**	*e*PN	**Pn**	**23 17 54.4**	**-0.4**
SKR	**Severo-Kuril's**	**6.81**	**34**	*e*P	**Pn**	**23 17 54.4**	**-0.4**
JNB	**Noboribetsu**	**7.08**	**250**	P	**Pn**	**23 17 59.0**	**+0.4**
JKB	**Kayabe**	**7.36**	**246**	P	**Pn**	**23 18 02.0**	**-0.4**
TYV	**Tymovskoe**	**7.51**	**321**	*e*P	**Pn**	**23 18 02.5**	**-1.9**
TYV				AMB	AMB	23 18 08.5	
TYV	comp=Z,11nm,0.8s			AMB	AMB	23 18 08.5	
JANG	**Nango**	**7.94**	**235**	*e*S	**Sn**	**23 19 32.0**	**-6.5**
JSR	**Shiriuchi**	**7.94**	**246**	P	**Pn**	**23 18 09.7**	**-0.6**
JTM	**Tenmabayashi**	**7.94**	**239**	*e*S	**Sn**	**23 19 33.0**	**-5.7**
JTH	**Tanohata**	**8.03**	**232**	P	**Pn**	**23 18 09.0**	**-2.5**
JTH				*e*S	**Sn**	**23 19 32.8**	**-8.0**
OFUJ	**Ofunato**	**8.75**	**228**	*e*S	**Sn**	**23 19 51.4**	**-6.9**
JRG	**Rokugo**	**9.09**	**233**	P	**Pn**	**23 18 24.9**	**-1.1**
PETK	**Petropavlovsk-** comp=Z,0.6nm,0.3s,baz=198,slow=13,SNR=11	**9.34**	**30**	P	**Pn**	**23 18 31.7**	**+2.4**
PETK				LR	LR	23 22 09.5	
PETK	**Petropavlovsk-** comp=Z,44nm,18.4s,baz=44,slow=38	**9.34**	**30**	PN	**Pn**	**23 18 31.7**	**+2.4**
PETK	comp=Z,1.0nm,0.3s			pmax	pmax		
PETK	comp=Z,44nm,18.4s			MLR	MLR		
PETK	**Petropavlovsk-**	**9.34**	**30**	P	**Pn**	**23 18 31.7**	**+2.4**
PETK				LR	LR	23 22 09.6	
JIO	**Ouri**	**9.38**	**227**	P	**Pn**	**23 18 27.9**	**-2.1**
JIO				*e*S	**Sn**	**23 20 05.7**	**-8.1**
HABR	**Khabarovsk**	**10.79**	**293**	PN	**Pn**	**23 18 51.2**	**+2.1**
HABR				*e*S	**Sn**	**23 20 50.1**	**+2.1**
HABR	comp=Z,73nm,18.0s			MLR	MLR		
MAJO	**Matsushiro**	**12.47**	**230**	PN	**Pn**	**23 19 14.0**	**+1.9**
MJAR	**Matsushiro Arr** comp=Z,57nm,21.4s,baz=180,slow=38	**12.47**	**230**	LR	LR	23 24 13.1	
KLR	**Kul'dur**	**13.07**	**294**	*e*PN	**Pn**	**23 19 19.0**	**-1.2**
ZEA	**Zeya**	**17.04**	**308**	*e*P	**Pn**	**23 20 09.4**	**-1.8**
ZEA				AMB	AMB	23 20 10.7	
KSRS	**Korea Array** comp=Z,0.3nm,0.3s,baz=62,slow=9.4,SNR=6.1	**18.31**	**253**	P	**Pn**	**23 20 27.7**	**+0.9**
KSRS	comp=Z,28nm,19.5s,baz=158,slow=35			LR	LR	23 26 58.8	
KSRS	**Korea Array**	**18.31**	**253**	*e*P	**Pn**	**23 20 30.2**	**+3.4**
INCN	**Inchon**	**19.17**	**254**	*e*P	**Pn**	**23 20 36.8**	**-0.4**
YAK	**Yakutsk**	**20.57**	**332**	*e*P	**P**	**23 20 53.3**	**+2.8**
YAK	comp=E,11nm,1.0s			pmax	pmax		
YAK	comp=Z,36nm,0.9s			pmax	pmax		
YAK	comp=N,16nm,1.1s			pmax	pmax		
BILL	**Biiibino**	**24.39**	**15**	⇑*e*P	**P**	**23 21 27.6**	**-1.5**
BILL				*e*		23 22 05.0	
BILL				*e*S	**S**	**23 25 46.3**	**+2.8**
BILL	comp=Z,2.0nm,0.5s,mb3.7			pmax	pmax		
BILL	comp=Z,100nm,19.0s			MLR	MLR		
BJT	**Baijiatuau**	**25.36**	**270**	*e*P	**P**	**23 21 38.2**	**0.0**
BJT	comp=Z,4.0nm,0.8s			pmax	pmax		
BJT	**Baijiatuau** comp=Z,4.4nm,0.8s,mb3.9	**25.36**	**270**	*e*P	**P**	**23 21 38.1**	**0.0**
ULN	**Ulaanbaatar**	**29.42**	**291**	*e*P	**P**	**23 22 14.6**	**+0.1**
SONM	**Songino Array** comp=Z,0.3nm,0.5s,mb3.2,baz=96,slow=10,SNR=2.3	**29.86**	**291**	P	**P**	**23 22 18.5**	**+0.1**
SONM	comp=Z,62nm,18.4s,baz=45,slow=38			LR	LR	23 35 25.0	
YHNB	**Yeheng**	**30.94**	**238**	P	**P**	**23 22 28.6**	**+0.6**
GUMO	**Guam**	**31.84**	**190**	P	**P**	**23 22 37.3**	**+1.3**
ENH	**Enshi**	**34.99**	**259**	*e*P	**P**	**23 23 03.4**	**0.0**
KDAK	**Kodiak Island**	**36.71**	**49**	*i* P	**P**	**23 23 17.7**	**-0.1**
PMR	**Palmer**	**38.17**	**42**	P	**P**	**23 23 30.0**	**0.0**
COLA	**College**	**38.65**	**37**	*e*P	**P**	**23 23 33.5**	**-0.5**
**ILAR

comp=Z,1.0nm,0.8s,mb3.8
BRVK Borovoye 50.23 309 *e*P **P 23 25 05.8 -0.7**
comp=Z,1.0nm,0.8s,mb3.8
AAK Ala-Archa 52.60 296 P **P 23 25 23.6 -0.7**
RES Resolute Bay 52.95 18 *e*P **P 23 25 26.0 -0.4**
RES pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
RES Resolute Bay 52.95 18 *e*P **P 23 25 26.0 -0.4**
comp=Z,4.1nm,0.7s,mb4.6
EKS2 Erkin-Say 53.04 296 *e*P **P 23 25 27.1 -0.5**
AML Almayashu 53.37 296 P **P 23 25 29.9 0.0**
YKA Yellowknife Ar 53.41 35 P **P 23 25 29.2 -0.7**
comp=Z,1.2nm,0.6s,mb4.1,baz=303,slow=7.1,SNR=4.3
YKA Yellowknife Ar 53.41 35 P **P 23 25 29.2 -0.7**
YKA pmax pmax
comp=Z,1.0nm,0.6s
YKA Yellowknife Ar 53.41 35 P **P 23 25 29.2 -0.7**
KSM Kuching 55.86 231 P **P 23 25 47.8 -0.5**
ARCES ARCESS Array B 58.58 340 PcP PcP 23 26 56.6 +0.3
comp=Z,1.8nm,0.9s,baz=60,slow=5.3,SNR=2.9
KBL Kabul 60.64 291 *e*P **P 23 26 21.2 -0.2**
KBL pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
KBL Kabul 60.64 291 *e*P **P 23 26 21.2 -0.2**
comp=Z,1.4nm,0.4s,mb4.3
FFC Flin Flon 63.27 38 *e*P **P 23 26 38.9 +0.2**
FFC pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
FFC Flin Flon 63.27 38 *e*P **P 23 26 38.9 +0.2**
comp=Z,5.9nm,1.2s,mb4.4
FINES FINESS Array B 64.49 334 P **P 23 26 45.1 -1.5**
comp=Z,1.3nm,0.5s,mb4.0,baz=45,slow=6.7,SNR=9.6
FINES FINESS Array B 64.49 334 P **P 23 26 45.2 -1.4**
FINES pmax pmax
comp=Z,1.0nm,0.5s
NVAR Mina Array Bea 65.03 60 P **P 23 26 51.3 +0.8**
comp=Z,0.9nm,0.6s,mb3.8,baz=293,slow=7.6,SNR=2.6
WRAB Tennant Creek 66.40 196 *e*P **P 23 27 00.3 +0.9**
WRAB pmax pmax
comp=Z,6.0nm,1.2s,mb4.3
WRAB Tennant Creek 66.40 196 *e*P **P 23 27 00.3 +0.9**
comp=Z,6.3nm,1.2s,mb4.3
FITZ Fitzroy Crossi 66.82 205 *e*P **P 23 27 02.5 +0.4**
NOA NORSAR Array B 68.96 340 P **P 23 27 13.3 -1.8**
comp=Z,0.2nm,0.4s,mb3.3,baz=28,slow=6.6,SNR=4.4
NOA LR LR 23 59 17.3
comp=Z,17nm,19.0s,baz=335,slow=37
NOA NORSAR Array B 68.96 340 P **P 23 27 13.3 -1.8**
NOA LR LR 23 59 17.3
ASAR Alice Springs 70.12 196 P **P 23 27 22.5 -0.1**
comp=Z,0.7nm,0.8s,mb3.5,baz=15,slow=7.7,SNR=6.5
ASAR Alice Springs 70.12 196 P **P 23 27 22.5 -0.1**
ASAR pmax pmax
comp=Z,1.0nm,0.8s
KIV Kislovodsk 70.31 313 *e*P **P 23 27 22.5 -1.2**
KIV Kislovodsk 70.31 313 *e*P **P 23 27 22.5 -1.2**
BUR08 Bucovina Ar. S 75.64 325 *e*P **P 23 27 54.7 -0.4**
MORC Moravsky Berou 76.76 331 P **P 23 28 01.0 -0.4**
BRTR Keskin Array B 78.01 315 P **P 23 28 08.9 +0.4**
comp=Z,0.2nm,0.4s,mb3.2,baz=46,slow=4.3,SNR=4.1
BRTR Keskin Array B 78.01 315 *e*P **P 23 28 10.5 +1.9**
KHC Kasperske Hory 78.65 333 *e*P **P 23 28 12.1 +0.2**
KHC Kasperske Hory 78.65 333 *e*P **P 23 28 12.1 +0.2**
TXAR Lajitas Array 80.10 58 P **P 23 28 20.8 +0.6**
comp=Z,1.3nm,0.5s,mb4.0,baz=296,slow=4.3,SNR=27
TXAR Lajitas Array 80.10 58 P **P 23 28 20.8 +0.6**
TXAR pmax pmax
comp=Z,1.0nm,0.5s
NWAO Narrogin (SRO) 83.30 207 *e*P **P 23 28 36.9 +0.3**

IDC 30 23:45:30.6±7.3, 51°.14N×156°.01E, h144km±43km, mb2.9/3, mb1 3.2/4, mb1mx2.9/23, mbtmp2.9/4, MS3.0/1, Ms1 3.2/1, ms1mx2.4/8, Error ellipse: s-maj=119.4km s-min=26.0km az=176.0, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**2.23**	**27**	P	Pn	23 46 08.1	+0.2
	1.5nm,0.3s,baz=180,slow=12,SNR=14						
ILAR	**Eielson Array**	**31.97**	**43**	P	P	23 51 42.0	-0.4
	0.4nm,0.6s,baz=272,slow=5.7,SNR=5.3						
ILAR				LR	LR	00 05 29.5	
	comp=Z,30nm,20.3s,baz=317,slow=38						
MKAR	**Makanchi Array**	**46.71**	**295**	P	P	23 53 44.5	-0.2
	0.1nm,0.3s,baz=57,slow=5.2,SNR=2.7						
TXAR	**Lajitas Array**	**73.74**	**63**	P	P	23 56 49.3	+0.6
	0.3nm,0.6s,baz=298,slow=4.2,SNR=6.3						

MEX 30 23:56:26.2±1.1, 17°.03N×95°.03W, h164km±17km, MD4.1, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.63**	**220**	*e*P	Pn	23 56 56.5	-1.7
HUIG				*i* S	Sn	23 57 20.5	-2.2
VHO	**Vista Hermosa**	**1.63**	**272**	*e*P	Pn	23 56 57.7	-0.5
VHO				*i* S	Sn	23 57 21.2	-1.6
TGIG		**1.84**	**97**	*i* P	Pn	23 56 58.4	-2.0
TGIG				*i* S	Sn	23 57 24.5	-2.2
PCIG		**2.18**	**127**	*e*P	Pn	23 57 03.7	-0.5
PCIG				*i* S	Sn	23 57 31.7	-1.8
PNIG	**Pinotepa**	**3.04**	**258**	*e*P	Pn	23 57 12.9	-1.7
PNIG				*i* S	Sn	23 57 50.3	-1.8

NEIC ***31*** *00:03:36.6, 19°.54S×70°.06W, h27km, mb3.9/1, ML4.2(GUC), After GUC.*
NEIC Felt [III] at Pisagua and [II] at Alto Hospicio, Iquique and Pozo Almonte.

GUC 31 00:03:36.6±1.0, 19°.54S×70°.06W, h27km±3km, ML4.2, 1C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.08**	**228**	⇑*i*P	Pb	00 03 40.8	-0.6
PSGC				*i* S	Sb	00 03 44.2	-0.4
PSGC				AML	AML	00 03 44.5	
	comp=N,126μm,0.3s						
MNMC	**Miæe Miæ**	**0.60**	**47**	⇓*i*P	Pb	00 03 47.9	-0.6
MNMC				*i* S	Sb	00 03 56.8	+0.2
MNMC				AML	AML	00 03 58.0	
	comp=E,16μm,0.0s						
HMBC	**Humberston**	**0.75**	**168**	*e*P	Pb	00 03 50.4	-0.7
HMBC				*e*S	Sb	00 04 01.1	+0.2
HMBC				AML	AML	00 04 03.6	
	comp=N,24μm,0.3s						
PB01	**Plate Boundary**	**1.59**	**160**	*e*P	Pn	00 04 03.1	+0.1
PB01				*i* S	Sn	00 04 24.0	+1.3
PB01				AML	AML	00 04 26.7	
	comp=E,5μm,0.2s						
MACH	**Maria Elena**	**2.66**	**174**	*e*P	Pn	00 04 20.3	+2.6
PB04	**Plate Boundary**	**2.76**	**169**	*e*P	Pn	00 04 20.6	+1.5
LPAZ	**La Paz**	**3.72**	**30**	*e*Pn	Pn	00 04 36.4	+4.1
LCO	**Las Campanas**	**9.45**	**183**	*e*Pn	Pn	00 05 49.9	-1.0
LCO				*e*Sn	Sn	00 07 36.9	+0.6
TRQA	**Tornquist**	**19.74**	**161**	*e*P	Pn	00 08 04.0	-2.0
	comp=E,6.4nm,1.0s						
OTAV	**Otavalo**	**21.31**	**336**	P	P	00 08 22.2	+0.8
SDV	**Santo Domingo**	**28.25**	**359**	P	P	00 09 27.8	+0.1
SJG	**San Juan**	**37.61**	**6**	*e*P	P	00 10 48.6	-0.6
PMSA	**Palmer Station**	**45.38**	**176**	*e*P	P	00 11 52.7	+0.3
MIAR	**Mount Ida**	**58.25**	**337**	*e*P	P	00 13 27.5	-1.3
SIUC	**Southern Illin**	**59.74**	**342**	*e*P	P	00 13 38.0	-1.0
SDCO	**Great Sand Dun**	**66.02**	**330**	*e*P	P	00 14 20.6	-0.3
QSPA	**South Pole Qui**	**70.64**	**180**	P	P	00 14 48.8	-0.4
HWUT	**Hardware Ranch**	**71.96**	**328**	*e*P	P	00 14 58.8	+1.1
CMB	**Columbia Colle**	**74.25**	**321**	*e*P	P	00 15 11.3	0.0
HLID	**Hailey**	**74.82**	**328**	*e*P	P	00 15 14.5	0.0
NEW	**Newport**	**79.52**	**330**	*e*P	P	00 15 40.3	-0.5
ESLA	**Sonseca Array**	**85.21**	**45**	*e*P	P	00 16 10.6	-0.1

IDC ***31*** *00:04:33.2±0.8, 2°.93S×138°.73E, h0km, mb4.1/8, mb1 4.3/10, mb1mx4.1/15, mbtmp4.1/10, ML4.0/2, MS3.4/8, Ms1 3.5/8, ms1mx3.2/18, Error ellipse: s-maj=34.7km s-min=18.1km az=83.0*
ISCJB ***31*** *00:04:34.2±3.5, 3°.03S±0°.06×138°.56E±0°.08, h16km±26km, mb4.2/11, MS3.4/5, Error ellipse: s-maj=13.7km s-min=8.9km az=16.4*
NEIC ***31*** *00:04:37.0±2.5, 2°.99S×138°.60E, h23km±18km, mb4.5/6, Error ellipse: s-maj=7.2km s-min=6.1km az=61.0*

DJA ***31*** *00:04:38, 2°.95S×138°.49E, h30km, mb4.9/8*
ISC 31 00:04:35.8±3.4, 2°.99S±0°.05×138°.59E±0°.08, h15km±21km, n49, σ0§60/50, mb4.2/11, MS3.4/5, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**10.64**	**127**	*e*Pn	**Pn**	**00 07 08.0**	**+0.1**
KAKA	**Kakadu**	**11.42**	**212**	*e*P	**Pn**	**00 07 18.6**	**+0.1**
	30nm,0.6s						
KAKA				*e*S	**Sn**	**00 09 21.6**	**-4.3**
KAKA	**Kakadu**	**11.42**	**212**	*e*Pn	**Pn**	**00 07 18.7**	**+0.2**
	113nm,0.5s						
KAKA				*e*Sn	**Sn**	**00 09 26.4**	**+0.6**
DAV	**Davao City (W)**	**16.38**	**308**	LR	LR	00 15 48.5	
	comp=Z,119nm,18.2s,baz=310,slow=41						
WRAB	**Tennant Creek**	**17.34**	**193**	*e*Pn	**Pn**	**00 08 37.2**	**-0.3**
	42nm,0.8s						
WRAB				*e*Sn	**Sn**	**00 11 41.0**	**-9.3**
GUMO	**Guam**	**17.61**	**21**	LR	LR	00 14 22.9	
	comp=Z,88nm,21.9s,baz=209,slow=34						
CTA	**Charters Tower**	**18.57**	**157**	*e*P	**Pn**	**00 08 53.6**	**+1.0**
	8.6nm,0.9s						
CTA	**Charters Tower**	**18.57**	**157**	P	**Pn**	**00 08 53.0**	**+0.3**
	0.3nm,0.3s,baz=313,slow=11,SNR=7.5						
CTA				LR	LR	00 16 15.7	
	comp=Z,197nm,21.8s,baz=342,slow=38						
CTA	**Charters Tower**	**18.57**	**157**	P	**Pn**	**00 08 53.0**	**+0.3**
CTA				LR	LR	00 16 15.7	
CTAO	**Charters Tower**	**18.57**	**157**	*e*P	**Pn**	**00 08 51.7**	**-1.0**
	17nm,1.0s						
FITZ	**Fitzroy Crossi**	**19.66**	**219**	*e*P	**Pn**	**00 09 04.5**	**-1.3**
	18nm,0.9s						
FITZ				*e*S	**Sn**	**00 12 34.0**	**-13**
FITZ	**Fitzroy Crossi**	**19.66**	**219**	P	**Pn**	**00 09 04.7**	**-1.1**
	0.4nm,0.3s,baz=43,slow=7.9,SNR=12						
FITZ				S	**Sn**	**00 12 36.9**	**-10**
	0.8nm,0.3s,baz=132,slow=15,SNR=5.6						
FITZ	**Fitzroy Crossi**	**19.66**	**219**	*e*P	**Pn**	**00 09 04.7**	**-1.1**
	11nm,0.8s						
FITZ				S	**Sn**	**00 12 36.9**	**-10**
ASAR	**Alice Springs**	**21.05**	**192**	P	**P**	**00 09 20.4**	**+0.9**
	21nm,0.7s,mb4.6,baz=21,slow=11,SNR=89						
ASAR				S	**S**	**00 13 13.3**	**-0.1**
	7.1nm,0.9s,baz=16,slow=24,SNR=8.5						
ASAR	**Alice Springs**	**21.05**	**192**	P	**P**	**00 09 20.4**	**+0.9**
ASAR				S	**S**	**00 13 13.3**	**-0.1**
MBWA	**Marble Bar**	**25.75**	**224**	*e*P	**P**	**00 10 06.8**	**+0.7**
	41nm,1.5s,mb4.7						
KSM	**Kuching**	**28.61**	**279**	P	**P**	**00 10 31.9**	**0.0**
STKA	**Stephens Creek**	**28.88**	**175**	LR	LR	00 22 50.2	
	comp=Z,185nm,19.6s,MS3.7,baz=16,slow=38						
STKA	**Stephens Creek**	**28.88**	**175**	*e*P	**P**	**00 10 33.6**	**-0.4**
KULM	**Kulim**	**38.78**	**282**	*e*P	**P**	**00 12 00.4**	**+0.1**
MJAR	**Matsushiro Arr**	**39.33**	**360**	LR	LR	00 27 10.1	
	comp=Z,26nm,19.0s,MS3.1,baz=235,slow=35						
MAJO	**Matsushiro**	**39.33**	**360**	*e*P	**P**	**00 12 04.7**	**+0.2**
KSRS	**Korea Array**	**41.44**	**347**	P	**P**	**00 12 21.9**	**-0.1**
	2.0nm,0.4s,mb4.1,baz=156,slow=9.3,SNR=5.4						
KSRS				LR	LR	00 27 46.0	
	comp=Z,34nm,20.0s,MS3.2,baz=170,slow=34						
COCO	**West Island**	**42.33**	**255**	*e*P	**P**	**00 12 28.5**	**-1.1**
CMAR	**Chiang Mai Arr**	**44.47**	**300**	P	**P**	**00 12 48.0**	**+1.2**
	0.8nm,0.6s,mb3.6,baz=123,slow=4.8,SNR=6.3						
CMAR				LR	LR	00 30 46.4	
	comp=Z,68nm,18.2s,MS3.6,baz=304,slow=35						
CHTO	**Chiang Mai**	**44.61**	**301**	*e*P	**P**	**00 12 47.5**	**-0.5**
BJT	**Baijiatuan**	**47.48**	**337**	P	**P**	**00 13 10.3**	**+0.1**
YSS	**Yuzh-Sakhalins**	**49.86**	**4**	*e*P	**P**	**00 13 28.7**	**+0.3**
LSA	**Lhasa**	**55.79**	**309**	P	**P**	**00 14 13.2**	**+0.6**
SONM	**Songino Array**	**57.91**	**335**	LR	LR	00 35 40.5	
	comp=Z,53nm,21.9s,MS3.6,baz=234,slow=32						
CASY	**Casey**	**66.18**	**192**	P	**P**	**00 15 22.6**	**0.0**
MK31	**Makanchi Array**	**69.93**	**323**	*e*P	**P**	**00 15 46.0**	**-0.4**
MKAR	**Makanchi Array**	**69.93**	**323**	P	**P**	**00 15 47.1**	**+0.6**
	0.7nm,0.5s,mb3.8,baz=100,slow=8.4,SNR=9.6						
ZALV	**Zalesovo Beam**	**72.11**	**330**	P	**P**	**00 15 58.5**	**-1.0**
	0.5nm,0.4s,mb3.8,baz=121,slow=6.9,SNR=2.8						
UCH	**Uchtor**	**73.16**	**316**	*e*P	**P**	**00 16 05.9**	**-0.2**
EKS2	**Erkin-Say**	**73.82**	**316**	*e*P	**P**	**00 16 09.8**	**-0.2**
KURK	**Kurchatov**	**73.87**	**325**	*e*P	**P**	**00 16 10.2**	**+0.2**
KBL	**Kabul**	**74.99**	**307**	P	**P**	**00 16 17.7**	**+0.7**
BVAR	**Borovoye Array**	**79.47**	**325**	P	**P**	**00 16 42.1**	**+0.4**
	0.9nm,0.6s,mb3.9,baz=117,slow=8.2,SNR=5.5						
MAW	**Mawson**	**81.82**	**202**	P	**P**	**00 16 53.4**	**-0.6**
	1.1nm,0.5s,mb4.0,baz=52,slow=12,SNR=3.4						
MAW	**Mawson**	**81.82**	**202**	*e*P	**P**	**00 16 53.9**	**-0.1**
ABKAR	**Akbulak array**	**84.85**	**320**	*e*P	**P**	**00 17 09.8**	**-0.2**
	1.5nm,0.7s,mb4.2						
ILAR	**Eielson Array**	**86.14**	**24**	P	**P**	**00 17 14.7**	**-1.3**
	2.2nm,0.7s,mb4.5,baz=264,slow=4.8,SNR=21						
ARU	**Arti**	**86.96**	**327**	*e*P	**P**	**00 17 19.7**	**-0.6**
QSPA	**South Pole Qui**	**86.96**	**180**	*e*P	**P**	**00 17 20.4**	**+0.5**
	4.8nm,1.0s,mb4.7						
EGAK	**Eagle**	**88.53**	**25**	*e*P	**P**	**00 17 27.6**	**0.0**
DAWY	**Dawson**	**89.17**	**26**	*e*P	**P**	**00 17 31.2**	**+0.6**
LPAZ	**La Paz**	**147.38**	**127**	PKPbc	PKPbc	00 24 20.4	+0.3
	9.7nm,0.8s,baz=251,slow=2.4,SNR=30						
LPAZ	**La Paz**	**147.38**	**127**	PKPbc	PKPbc	00 24 20.4	+0.3

CSEM ***31*** *00:10:17.6±0.2, 35°.56N×31°.91E, h20km, Mw2.9, Error ellipse: s-maj=6.8km s-min=3.8km az=47.0*
DDA ***31*** *00:10:17.4, 35°.84N×31°.69E, h26km±12km, Md3.4*
ISCJB ***31*** *00:10:17.9±0.8, 35°.56N±0°.04×31°.89E±0°.04, h31km±8km, Error ellipse: s-maj=7.5km s-min=4.4km az=26.8*
ISK ***31*** *00:10:17.7, 35°.70N×32°.09E, h11km, MD3.5*
NIC ***31*** *00:10:19.3±0.2, 35°.52N×32°.07E, h51km, ML3.3, MW2.9*
NEIC ***31*** *00:10:19.3, 35°.52N×32°.07E, h51km, MD3.3(ISK), After NIC.*

ISC 31 00:10:18.4±0.8, 35°.55N±0°.05×31°.90E±0°.04, h28km±9km, n60, σ1§00/85, 1C-2D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALFC	**Alevga**	**0.69**	**124**	⇓P	**Pb**	**00 10 31.1**	**-0.8**
	18nm,0.1s						
ALFC				S	**Sb**	**00 10 40.9**	**-0.2**
ALFC	**Alevga**	**0.69**	**124**	⇑*i*P	**Pb**	**00 10 31.1**	**-0.8**
ALFC				S	**Sb**	**00 10 40.9**	**-0.2**
ALFC	**Alevga**	**0.69**	**124**	⇓*i*P	**Pb**	**00 10 31.1**	**-0.8**
	18nm,0.1s						
ALFC				S	**Sb**	**00 10 40.9**	**-0.2**
PPCY	**Paphos**	**0.75**	**151**	P	**Pb**	**00 10 32.8**	**-0.2**
PPCY				S	**Sb**	**00 10 43.4**	**+0.5**
PPCY	**Paphos**	**0.75**	**151**	P	**Pb**	**00 10 32.8**	**-0.2**
PPCY				S	**Sb**	**00 10 43.4**	**+0.5**
SZAC	**Souni-Zanaja**	**1.13**	**134**	P	**Pn**	**00 10 38.2**	**-0.1**
SZAC	**Souni-Zanaja**	**1.13**	**134**	P	**Pn**	**00 10 38.2**	**-0.1**
MAMC	**Mammari**	**1.14**	**109**	P	**Pn**	**00 10 37.4**	**-1.1**
MAMC	**Mammari**	**1.14**	**109**	P	**Pn**	**00 10 37.4**	**-1.1**
CSS	**Prodhromos**	**1.31**	**116**	P	**Pn**	**00 10 39.6**	**-1.2**
	2.3nm,0.3s						
CSS				S	**Sn**	**00 10 57.4**	**+0.1**
CSS	**Prodhromos**	**1.31**	**116**	P	**Pn**	**00 10 39.6**	**-1.2**
	2.3nm,0.3s						
CSS				S	**Sn**	**00 10 57.4**	**+0.1**
LFK	**Lefkose**	**1.36**	**101**	*e*PN	**Pn**	**00 10 40.8**	**-0.7**
LFK				*e*SN	**Sn**	**00 10 59.4**	**+0.8**
LFK	**Lefkose**	**1.36**	**101**	Pn	**Pn**	**00 10 42.5**	**+1.0**
LFK				Sg	**Sn**	**00 11 00.5**	**+1.9**
LFK	**Lefkose**	**1.36**	**101**	*e*Pn	**Pn**	**00 10 40.8**	**-0.7**
LFK				*e*Sn	**Sn**	**00 10 59.4**	**+0.8**
LFK				Sg	**Sn**	**00 11 00.4**	**+1.8**
ERMK	**Ermenek**	**1.37**	**37**	*e*P	**Pn**	**00 10 41.1**	**-0.5**
ERMK				*e*S	**Sn**	**00 10 58.7**	**0.0**
ERMK	**Ermenek**	**1.37**	**37**	*e*P	**Pn**	**00 10 41.1**	**-0.5**
ERMK				*e*S	**Sn**	**00 10 58.7**	**-0.1**
HDMB	**Hadim**	**1.49**	**18**	*e*PN	**Pn**	**00 10 42.3**	**-1.0**
HDMB				*e*SN	**Sn**	**00 11 00.3**	**-1.6**
HDMB	**Hadim**	**1.49**	**18**	Pn	**Pn**	**00 10 42.6**	**-0.8**
HDMB	**Hadim**	**1.49**	**18**	Pn	**Pn**	**00 10 42.6**	**-0.7**
HDMB				*e*Sn	**Sn**	**00 11 00.3**	**-1.6**
IKL	**Isikli**	**1.60**	**64**	*e*PN	**Pn**	**00 10 43.9**	**-1.0**
IKL	**Isikli**	**1.60**	**64**	Pn	**Pn**	**00 10 44.2**	**-0.6**
IKL	**Isikli**	**1.60**	**64**	Pn	**Pn**	**00 10 44.2**	**-0.7**
ANTB	**Antalya**	**1.69**	**324**	*e*PN	**Pn**	**00 10 48.0**	**+2.0**
ANTB	**Antalya**	**1.69**	**324**	*e*Pn	**Pn**	**00 10 48.1**	**+2.1**
PHNC	**Paralimni**	**1.82**	**107**	P	**Pn**	**00 10 53.0**	**+5.1**
	2.3nm,0.5s						
PHNC				S	**Sn**	**00 11 19.9**	**+10**
PHNC	**Paralimni**	**1.82**	**107**	P	**Pn**	**00 10 53.0**	**+5.1**
	2.3nm,0.5s						
PHNC				S	**Sn**	**00 11 19.9**	**+10**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KORT	**Korkueli**	**1.92**	**320**	*e*P	**Pn**	**00 10 48.6**	**-0.6**
KORT				*e*S	**Sn**	**00 11 16.0**	**+3.6**
KORT	**Korkueli**	**1.92**	**320**	*e*P	**Pn**	**00 10 48.6**	**-0.6**
KORT				*e*S	**Sn**	**00 11 16.0**	**+3.6**
AKAS	**Kas**	**1.99**	**291**	*e*P	**Pn**	**00 10 46.2**	**-4.0**
AKAS				*e*S	**Sn**	**00 11 13.6**	**-0.5**
AKAS	**Kas**	**1.99**	**291**	*e*P	**Pn**	**00 10 46.2**	**-3.9**
AKAS				*e*S	**Sn**	**00 11 13.6**	**-0.5**
ELL	**Elmali**	**2.01**	**307**	*e*PN	**Pn**	**00 10 53.4**	**+3.0**
ELL	**Elmali**	**2.01**	**307**	*e*Pn	**Pn**	**00 10 53.4**	**+2.9**
SUTC	**Sutluce-Ispart**	**2.06**	**340**	*e*PN	**Pn**	**00 10 52.5**	**+1.4**
SUTC	**Sutluce-Ispart**	**2.06**	**340**	*e*Pn	**Pn**	**00 10 52.5**	**+1.4**
BCK	**Bucak**	**2.18**	**331**	*e*PN	**Pn**	**00 10 53.6**	**+0.8**
BCK	**Bucak**	**2.18**	**331**	Pn	**Pn**	**00 10 54.6**	**+1.8**
BCK	**Bucak**	**2.18**	**331**	*e*Pn	**Pn**	**00 10 53.6**	**+0.7**
KONT	**Konya--Tatoy**	**2.42**	**9**	*e*PN	**Pn**	**00 10 56.1**	**0.0**
KONT	**Konya--Tatoy**	**2.42**	**9**	Pn	**Pn**	**00 10 56.5**	**+0.3**
KONT	**Konya--Tatoy**	**2.42**	**9**	*e*Pn	**Pn**	**00 10 56.1**	**0.0**
MERS	**Mersin**	**2.50**	**57**	*e*PN	**Pn**	**00 10 57.2**	**+0.1**
MERS	**Mersin**	**2.50**	**57**	*e*Pn	**Pn**	**00 10 57.2**	**+0.1**
GOLH	**Golhisar**	**2.53**	**312**	*e*P	**Pn**	**00 10 57.3**	**-0.4**
GOLH				*e*S	**Sn**	**00 11 27.6**	**0.0**
GOLH	**Golhisar**	**2.53**	**312**	*e*P	**Pn**	**00 10 57.3**	**-0.3**
GOLH				*e*S	**Sn**	**00 11 27.5**	**0.0**
LADK	**Ladik-KONYA**	**2.67**	**8**	*e*PN	**Pn**	**00 10 59.0**	**-0.6**
LADK	**Ladik-KONYA**	**2.67**	**8**	*e*Pn	**Pn**	**00 10 59.0**	**-0.6**
GULE	**Gulek**	**2.90**	**52**	*e*P	**Pn**	**00 11 04.7**	**+2.1**
GULE	**Gulek**	**2.90**	**52**	*e*P	**Pn**	**00 11 04.7**	**+2.1**
SULT	**Sultanhani-AKS**	**2.95**	**26**	*e*PN	**Pn**	**00 11 03.0**	**-0.3**
SULT	**Sultanhani-AKS**	**2.95**	**26**	Pn	**Pn**	**00 11 03.4**	**+0.1**
SULT	**Sultanhani-AKS**	**2.95**	**26**	*e*Pn	**Pn**	**00 11 03.0**	**-0.3**
TURN	**Turunc**	**2.98**	**297**	*e*P	**Pn**	**00 11 04.4**	**+0.7**
TURN				*e*S	**Sn**	**00 11 36.5**	**-2.0**
TURN	**Turunc**	**2.98**	**297**	*e*P	**Pn**	**00 11 04.4**	**+0.6**
TURN				*e*S	**Sn**	**00 11 36.5**	**-2.0**
KARA	**Karaisali**	**3.06**	**55**	*e*PN	**Pn**	**00 11 05.2**	**+0.2**
KARA	**Karaisali**	**3.06**	**55**	*e*Pn	**Pn**	**00 11 05.2**	**+0.2**
HTY	**Hatay**	**3.49**	**79**	*e*PN	**Pn**	**00 11 11.4**	**+0.7**
HTY	**Hatay**	**3.49**	**79**	Pn	**Pn**	**00 11 11.4**	**+0.6**
KOZT	**Kozan**	**3.70**	**57**	*e*PN	**Pn**	**00 11 14.4**	**+0.6**
KMRS	**Kahramanmaras**	**4.47**	**63**	*e*PN	**Pn**	**00 11 24.1**	**-0.3**
KMRS	**Kahramanmaras**	**4.47**	**63**	*e*Pn	**Pn**	**00 11 24.1**	**-0.2**

NEIC ***31*** *00:27:35.5, 41°.10N×21°.13E, h18km, MD3.3(ATH), ML2.7(PDG), After ATH.*
ATH ***31*** *00:27:35.5, 41°.10N×21°.13E, h18km, MD3.3/6*
BEO ***31*** *00:27:36.5±0.8, 40°.90N×20°.94E, h2km±2km, ML2.4/7*
SKO ***31*** *00:27:36.3, 40°.97N×20°.96E, h19km, M2.3, ML2.6*
THE ***31*** *00:27:37.3, 40°.98N×21°.02E, h0km±3km, ML3.6/2, Error ellipse: s-maj=3.3km s-min=0.8km az=322.0*
CSEM ***31*** *00:27:37.8±0.1, 40°.95N×21°.07E, h2km, ML3.6/2, Error ellipse: s-maj=3.1km s-min=2.3km az=57.0*
PDG ***31*** *00:27:38.2±0.5, 40°.95N×21°.08E, h14km±2km, ML2.7/10, Error ellipse: s-maj=1.0km s-min=2.3km az=0.0*
ISCJB ***31*** *00:27:38.4±0.2, 40°.96N±0°.02×21°.11E±0°.02, h10km, Error ellipse: s-maj=2.9km s-min=2.1km az=147.5*

ISC 31 00:27:39.1±0.2, 40°.96N±0°.02×21°.11E±0°.03, h10km, n111, σ1§14/171, 19C-13D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIA	**Bitola**	**0.17**	**68**	⇑*i*Pg	**Pg**	**00 27 42.3**	**-0.5**
BIA				*e*Sg	**Sg**	**00 27 46.8**	**+1.5**
BIA	**Bitola**	**0.17**	**68**	⇑*i*Pg	**Pg**	**00 27 42.3**	**-0.5**
BIA				*i* Sg	**Sg**	**00 27 46.9**	**+1.6**
BIA				*e*Lg		00 27 47.9	
	comp=E,830nm,0.2s						
BIA				*e*Lg		00 27 48.2	
	comp=N,1μm,0.2s						
BIA	**Bitola**	**0.17**	**68**	P	**Pg**	**00 27 41.8**	**-1.0**
BIA				S	**Sg**	**00 27 45.7**	**+0.4**
BIA	**Bitola**	**0.17**	**68**	P	**Pg**	**00 27 41.8**	**-1.0**
BIA				S	**Sg**	**00 27 45.7**	**+0.4**
BIA				*e*Sg	**Sg**	**00 27 46.8**	**+1.5**
FNA	**Florina**	**0.26**	**131**	P	**Pg**	**00 27 43.9**	**-0.5**
FNA	**Florina**	**0.26**	**131**	P	**Pg**	**00 27 44.3**	**-0.1**
FNA				S	**Sg**	**00 27 49.3**	**+1.3**
FNA	**Florina**	**0.26**	**131**	P	**Pg**	**00 27 43.9**	**-0.5**
FNA				S	**Sg**	**00 27 49.3**	**+1.3**
OHR

KEK	**Kerkira**	**1.60**	**219**	P	**Pn**	**00 28 06.1**	**-1.2**
KEK	**Kerkira**	**1.60**	**219**	P	**Pn**	**00 28 06.1**	**-1.2**
KEK	**Kerkira**	**1.60**	**219**	*e*Pn	**Pn**	**00 28 06.6**	**-0.7**
KEK				*e*Sn	**Sn**	**00 28 29.4**	**+1.4**
BCI	**Bajram Curri**	**1.61**	**331**	*e*PN	**Pn**	**00 28 06.4**	**-1.1**
BCI				*i* SN	**Sg**	**00 28 34.4**	**+3.5**
BCI	**Bajram Curri**	**1.61**	**331**	*e*Pn	**Pn**	**00 28 06.4**	**-1.2**
SOH	**Sokhos**	**1.70**	**94**	P	**Pn**	**00 28 11.0**	**+2.2**
SOH	**Sokhos**	**1.70**	**94**	P	**Pn**	**00 28 11.0**	**+2.2**
ULC	**Ulcinj**	**1.73**	**306**	⇓*i*Pn	**Pn**	**00 28 08.2**	**-0.9**
ULC				*e*Sn	**Sn**	**00 28 32.4**	**+1.2**
ULC	**Ulcinj**	**1.73**	**306**	⇓*i*Pn	**Pn**	**00 28 08.2**	**-0.9**
ULC				*e*Sn	**Sn**	**00 28 32.4**	**+1.2**
KKB	**Krupnik**	**1.74**	**58**	*e*P	**Pn**	**00 28 10.2**	**+0.9**
KKB	**Krupnik**	**1.74**	**58**	*e*P	**Pn**	**00 28 10.2**	**+0.9**
PVY	**Plav**	**1.85**	**333**	⇑*i*Pn	**Pn**	**00 28 10.0**	**-0.8**
PVY				*e*Sn	**Sn**	**00 28 35.5**	**+1.3**
PVY	**Plav**	**1.85**	**333**	⇑*i*Pn	**Pn**	**00 28 10.0**	**-0.8**
PVY				*e*Sn	**Sn**	**00 28 35.5**	**+1.3**
SRS	**Serrai**	**1.88**	**84**	P	**Pn**	**00 28 13.5**	**+2.2**
SRS	**Serrai**	**1.88**	**84**	P	**Pn**	**00 28 13.5**	**+2.2**
BARS	**Barje**	**1.93**	**16**	⇑*i*Pn	**Pn**	**00 28 11.0**	**-0.9**
BARS				*e*Sg	**Sg**	**00 28 40.4**	**-0.8**
BARS	**Barje**	**1.93**	**16**	⇑*i*Pn	**Pn**	**00 28 11.0**	**-0.9**
BARS				*e*Sg	**Sg**	**00 28 40.4**	**-0.8**
PDG	**Podgorica**	**2.02**	**317**	⇓*i*Pn	**Pn**	**00 28 12.9**	**-0.3**
PDG				*e*Sn	**Sn**	**00 28 39.4**	**+0.9**
TTG	**Podgorica**	**2.02**	**317**	⇓*i*Pn	**Pn**	**00 28 12.9**	**-0.3**
TTG				*e*Sn	**Sn**	**00 28 39.4**	**+0.9**
TTG	**Podgorica**	**2.02**	**317**	⇓*i*Pn	**Pn**	**00 28 12.9**	**-0.3**
TTG				*e*Sn	**Sn**	**00 28 39.4**	**+0.9**
MMB	**Musomiste**	**2.07**	**71**	*e*P	**Pn**	**00 28 17.2**	**+3.4**
MMB	**Musomiste**	**2.07**	**71**	*e*P	**Pn**	**00 28 17.2**	**+3.4**
EVR	**Evrytania**	**2.11**	**165**	*e*Pn	**Pn**	**00 28 14.3**	**0.0**
EVR	**Evrytania**	**2.11**	**165**	*e*PN	**Pn**	**00 28 14.3**	**0.0**
EVR	**Evrytania**	**2.11**	**165**	*e*Pn	**Pn**	**00 28 14.3**	**0.0**
NVR	**Nevrokopi**	**2.11**	**78**	P	**Pn**	**00 28 18.9**	**+4.5**
BEY	**Berane**	**2.12**	**335**	⇑*i*Pn	**Pn**	**00 28 14.2**	**-0.3**
BEY				*e*Sn	**Sn**	**00 28 42.3**	**+1.4**
IVA	**Berane**	**2.12**	**335**	⇑*i*Pn	**Pn**	**00 28 14.2**	**-0.3**
IVA				*e*Sn	**Sn**	**00 28 42.3**	**+1.4**
IVA	**Berane**	**2.12**	**335**	⇑*i*Pn	**Pn**	**00 28 14.2**	**-0.3**
IVA				*e*Sn	**Sn**	**00 28 42.3**	**+1.4**
BUM	**Brajici-Budva**	**2.14**	**310**	⇑*i*Pn	**Pn**	**00 28 15.2**	**+0.5**
BUM				*e*Sn	**Sn**	**00 28 42.4**	**+1.1**
BUM	**Brajici-Budva**	**2.14**	**310**	⇑*i*Pn	**Pn**	**00 28 15.2**	**+0.5**
BUM				*e*Sn	**Sn**	**00 28 42.4**	**+1.1**
AGG	**Agios Georgios**	**2.15**	**154**	*e*Pn	**Pn**	**00 28 14.5**	**-0.4**
AGG	**Agios Georgios**	**2.15**	**154**	*e*PN	**Pn**	**00 28 14.5**	**-0.4**
AGG	**Agios Georgios**	**2.15**	**154**	P	**Pn**	**00 28 14.5**	**-0.4**
AGG	**Agios Georgios**	**2.15**	**154**	P	**Pn**	**00 28 14.5**	**-0.4**
LKD2	**Lefkada island**	**2.19**	**189**	P	**Pn**	**00 28 16.0**	**+0.5**
LKD2	**Lefkada island**	**2.19**	**189**	P	**Pn**	**00 28 16.0**	**+0.5**
VTS	**Vitosha**	**2.26**	**43**	P	**Pn**	**00 28 21.2**	**+4.7**
VTS	**Vitosha**	**2.26**	**43**	*e*P	**Pn**	**00 28 16.8**	**+0.3**
VTS	**Vitosha**	**2.26**	**43**	*e*P	**Pn**	**00 28 16.8**	**+0.3**
NKY	**Niksic**	**2.44**	**320**	⇓*i*Pn	**Pn**	**00 28 19.2**	**+0.3**
NKY				*e*Sn	**Sn**	**00 28 49.4**	**+0.7**
NKY	**Niksic**	**2.44**	**320**	⇓*i*Pn	**Pn**	**00 28 19.2**	**+0.3**
NKY				*e*Sn	**Sn**	**00 28 49.4**	**+0.7**
HCY	**Herceg Novi**	**2.46**	**308**	⇓*i*Pn	**Pn**	**00 28 19.6**	**+0.4**
HCY				*e*Sn	**Sn**	**00 28 50.1**	**+0.8**
HCY	**Herceg Novi**	**2.46**	**308**	⇓*i*Pn	**Pn**	**00 28 19.6**	**+0.4**
HCY				*e*Sn	**Sn**	**00 28 50.1**	**+0.8**
ZAPS	**Zavoj**	**2.58**	**26**	⇑*i*Pn	**Pn**	**00 28 20.6**	**-0.2**
EFP	**Efpalio**	**2.60**	**166**	*e*PN	**Pn**	**00 28 21.3**	**+0.2**
EFP	**Efpalio**	**2.60**	**166**	*e*Pn	**Pn**	**00 28 21.3**	**+0.2**
PLE	**Pljevlja**	**2.69**	**332**	⇓*i*Pn	**Pn**	**00 28 22.8**	**+0.4**
PLE				*e*Sn	**Sn**	**00 28 55.7**	**+0.6**
PLE	**Pljevlja**	**2.69**	**332**	⇓*i*Pn	**Pn**	**00 28 22.8**	**+0.4**
PLE				*e*Sn	**Sn**	**00 28 55.7**	**+0.6**
BRY	**Bratogost**	**2.73**	**316**	⇓*i*Pn	**Pn**	**00 28 22.9**	**0.0**
BRY				*e*Sn	**Sn**	**00 28 56.5**	**+0.6**
BRY	**Bratogost**	**2.73**	**316**	⇓*i*Pn	**Pn**	**00 28 22.9**	**0.0**
BRY				*e*Sn	**Sn**	**00 28 56.5**	**+0.6**
UPM	**Unac-Piva**	**2.78**	**325**	⇑*i*Pn	**Pn**	**00 28 23.6**	**0.0**
UPM				*e*Sn	**Sn**	**00 28 57.4**	**+0.2**
UPM	**Unac-Piva**	**2.78**	**325**	⇑*i*Pn	**Pn**	**00 28 23.6**	**0.0**
UPM				*e*Sn	**Sn**	**00 28 57.4**	**+0.2**
RZN	**Rozhen**	**2.81**	**74**	*e*P	**Pn**	**00 28 25.0**	**+1.0**
RZN	**Rozhen**	**2.81**	**74**	*e*P	**Pn**	**00 28 25.0**	**+1.0**
GRUS	**Gruza**	**2.95**	**354**	*e*Pn	**Pn**	**00 28 24.6**	**-1.3**
BBLS	**Lazići**	**3.17**	**337**	*e*Pn	**Pn**	**00 28 27.5**	**-1.5**
BBLS	**Lazići**	**3.17**	**337**	*e*Pn	**Pn**	**00 28 27.5**	**-1.5**
STON	**Ston**	**3.19**	**308**	*e*Pn	**Pn**	**00 28 25.2**	**-4.0**
STON				Sn	**Sn**	**00 29 02.9**	**-4.3**
DIVS	**Divibare**	**3.25**	**346**	⇑*i*Pn	**Pn**	**00 28 28.7**	**-1.3**
DIVS	**Divibare**	**3.25**	**346**	⇑*i*Pn	**Pn**	**00 28 28.7**	**-1.3**
CUC	**Castrocucco**	**4.15**	**258**	P	**Pn**	**00 28 43.1**	**+0.6**
CUC	**Castrocucco**	**4.15**	**258**	P	**Pn**	**00 28 43.1**	**+0.6**
NVLJ	**Novalja**	**5.84**	**310**	*e*Pn	**Pn**	**00 29 02.3**	**-3.3**
NVLJ				Sn	**Sn**	**00 30 07.6**	**-5.0**

CSEM ***31*** *00:35:28.9±0.2, 50°.23N×19°.06E, h0km±1km, ML2.9/6, Error ellipse: s-maj=3.5km s-min=2.0km az=14.0*
ISCJB ***31*** *00:35:28.1±0.5, 50°.25N±0°.03×19°.02E±0°.03, h0km, Error ellipse: s-maj=4.6km s-min=2.4km az=22.6*
PRU ***31*** *00:35:29.5, 50°.26N×19°.01E, h0km*
WAR ***31*** *00:35:29.6, 50°.20N×19°.11E*
IPEC ***31*** *00:35:29.1±0.2, 50°.26N×19°.05E, h0km±1km, ML2.2/4, Error ellipse: s-maj=2.9km s-min=0.9km az=175.0*
VIE ***31*** *00:35:33.6±0.8, 49°.71N×18°.88E, h0km, mb1.9/4, ML2.4/4, Error ellipse: s-maj=4.9km s-min=4.0km az=60.0 47 km ESE of Ostrava Suspected Mining induced.*

ISC 31 00:35:28.9±0.5, 50°.24N±0°.03×19°.04E±0°.03, h0km, n34, σ1.9 07/67, 2C-1D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.49**	**92**	*e*Pg	**Pg**	**00 35 38.4**	**+0.2**
	baz=275						
OJC				*e*Sg	**Sg**	**00 35 44.2**	**-0.3**
	baz=275						
OKC	**Ostrava-Krasne**	**0.70**	**235**	*e*PG	**Pg**	**00 35 43.1**	**+0.8**
OKC				*e*SG	**Sg**	**00 35 52.5**	**+1.1**
	comp=Z,17nm,0.4s						
OKC	**Ostrava-Krasne**	**0.70**	**235**	*e*Pg	**Pg**	**00 35 43.0**	**+0.7**
	baz=54						
OKC				Sg	**Sg**	**00 35 52.5**	**+1.1**
	comp=Z,17nm,0.4s						
MORC	**Moravsky Berou**	**1.07**	**245**	*e*Pg	**Pg**	**00 35 49.5**	**+0.1**
	baz=63						
MORC				*e*Sg	**Sg**	**00 36 03.2**	**-0.1**
	comp=Z,50nm,0.3s,baz=63						
NIE	**Niedzica**	**1.16**	**134**	*e*Pg	**Pg**	**00 35 50.6**	**-0.5**
NIE				*e*Sg	**Sg**	**00 36 06.4**	**+0.2**
NIE	**Niedzica**	**1.16**	**134**	*e*Pg	**Pg**	**00 35 50.6**	**-0.5**
NIE				*e*Sg	**Sg**	**00 36 06.4**	**+0.2**
LIKS	**Likavka**	**1.19**	**178**	*e*PG	**Pg**	**00 35 52.1**	**+0.4**
LIKS				*e*SG	**Sg**	**00 36 08.0**	**+0.9**
JAVC	**Velka Javorina**	**1.65**	**213**	*e*Pn	**Pn**	**00 35 59.0**	**0.0**
JAVC				*e*Sg	**Sg**	**00 36 21.7**	**0.0**
	comp=Z,20nm,0.6s						
STHS	**Stebnicka Huta**	**1.65**	**119**	*e*PN	**Pn**	**00 35 58.9**	**-0.1**
STHS				*e*SG	**Sg**	**00 36 26.0**	**+4.3**
STHS	**Stebnicka Huta**	**1.65**	**119**	*e*Pn	**Pn**	**00 35 58.9**	**-0.1**
STHS				*e*Sg	**Sg**	**00 36 26.0**	**+4.3**
KOLL	**Kolacno**	**1.71**	**194**	*e*PN	**Pn**	**00 36 01.0**	**+1.1**
KOLL				*e*SN	**Sn**	**00 36 22.8**	**+0.3**
KOLL	**Kolacno**	**1.71**	**194**	*e*Pn	**Pn**	**00 36 01.0**	**+1.1**
KOLL				*e*Sn	**Sn**	**00 36 22.8**	**+0.3**
DPC	**Dobruska-Polom**	**1.75**	**275**	*e*PG	**Pg**	**00 36 00.6**	**-1.7**
DPC				*e*SG	**Sg**	**00 36 24.3**	**-0.7**
	comp=Z,26nm,0.5s						
DPC	**Dobruska-Polom**	**1.75**	**275**	*e*Pn	**Pn**	**00 36 00.7**	**+0.3**
	baz=92						
DPC				Sg	**Sg**	**00 36 24.3**	**-0.7**
	comp=Z,26nm,0.5s						
VYHS	**Vyhne**	**1.75**	**184**	*e*PN	**Pn**	**00 35 59.8**	**-0.6**
VYHS				*e*SN	**Sn**	**00 36 22.2**	**-1.2**
VYHS	**Vyhne**	**1.75**	**184**	*e*Pn	**Pn**	**00 35 59.8**	**-0.6**
VYHS				*e*Sn	**Sn**	**00 36 22.2**	**-1.2**
VRAC	**Vranov**	**1.84**	**240**	*e*Pn	**Pn**	**00 36 02.0**	**+0.3**
	baz=58						
VRAC				*e*Sn	**Sn**	**00 36 26.8**	**+1.2**
	comp=Z,19nm,0.5s,baz=58						
KSP	**Ksiaz**	**1.85**	**290**	*e*Pn	**Pn**	**00 36 02.8**	**+0.9**
KSP				*e*Pg	**Pg**	**00 36 05.5**	**+1.1**
KSP				*e*Sn	**Sn**	**00 36 27.2**	**+1.2**
KSP				*e*Sg	**Sg**	**00 36 30.2**	**+1.8**
KSP	**Ksiaz**	**1.85**	**290**	*e*Pn	**Pn**	**00 36 02.7**	**+0.8**
KSP				*e*Pg	**Pg**	**00 36 05.3**	**+0.9**
KSP				*e*Sg	**Sg**	**00 36 30.1**	**+1.7**
KSP	**Ksiaz**	**1.85**	**290**	*e*Pn	**Pn**	**00 36 02.7**	**+0.8**
UPC	**Upice**	**1.96**	**279**	*e*PG	**Pg**	**00 36 03.8**	**-2.6**
UPC				*e*SG	**Sg**	**00 36 30.8**	**-0.9**
UPC	**Upice**	**1.96**	**279**	Pg	**Pg**	**00 36 03.8**	**-2.6**
UPC				Sg	**Sg**	**00 36 30.8**	**-0.9**
KECS	**Kecovo**	**2.00**	**151**	*e*PN	**Pn**	**00 36 03.0**	**-0.8**
KECS				*e*SN	**Sn**	**00 36 29.2**	**-0.2**
KRUC	**Moravsky**	**2.09**	**237**	*e*Pn	**Pn**	**00 36 05.3**	**+0.3**
	baz=54						
KRUC				*e*Sn	**Sn**	**00 36 33.4**	**+1.7**
	comp=Z,8.8nm,0.2s,baz=54						
PRU	**Pruhonice**	**2.91**	**267**	*e*PN	**Pn**	**00 36 16.3**	**0.0**
PRU				*e*PG	**Pg**	**00 36 21.8**	**-2.8**
PRU				*e*SG	**Sg**	**00 36 59.8**	**-2.4**
	comp=Z,8.2nm,0.6s						
PRU	**Pruhonice**	**2.91**	**267**	Pn	**Pn**	**00 36 16.3**	**0.0**
CONA	**Conrad Observa**	**3.12**	**223**	⇑*i*Pn	**Pn**	**00 36 18.8**	**-0.5**
CONA				⇓*i*Sn	**Sn**	**00 36 51.3**	**-5.8**
CONA	**Conrad Observa**	**3.12**	**223**	Pn	**Pn**	**00 36 18.8**	**-0.4**
BRG	**Berggiesshubel**	**3.31**	**283**	PG	**Pg**	**00 36 31.9**	**-0.4**
BRG				SG	**Sg**	**00 37 16.2**	**+1.0**
	comp=Z,3.8nm,0.6s						
KHC	**Kasperske Hory**	**3.72**	**255**	*e*PN	**Pn**	**00 36 27.4**	**0.0**
KHC				*e*PG	**Pg**	**00 36 34.5**	**-5.6**
KHC				*e*SG	**Sg**	**00 37 25.8**	**-2.4**
	comp=Z,6.1nm,0.4s						
KHC	**Kasperske Hory**	**3.72**	**255**	Pn	**Pn**	**00 36 27.4**	**0.0**
KHC				Sg	**Sg**	**00 37 25.8**	**-2.4**
	comp=Z,6.1nm,0.4s						
MOA	**Molln**	**3.95**	**235**	⇑*i*Sg	**Sg**	**00 37 32.0**	**-3.7**
	comp=Z,3.7nm,0.5s						
MOA	**Molln**	**3.95**	**235**	Sg	**Sg**	**00 37 32.0**	**-3.6**
	comp=Z,3.7nm,0.5s						
CLL	**Collm**	**3.98**	**288**	*e*Sg	**Sg**	**00 37 40.0**	**+3.4**
	comp=Z,9.0nm,1.1s						

SZGRF ***31*** *00:41:56.2, 6°.85S×12°.58W, h33km, mb4.7, MS3.8, Ascension Island region*
ISCJB ***31*** *00:42:00.2±4.7, 6°.71S±0°.06×11°.69W±0°.06, h12km±29km, mb4.6/80, MS3.8/14, Error ellipse: s-maj=11.0km s-min=8.5km az=37.9*
IDC ***31*** *00:42:00.4±0.8, 6°.65S×11°.67W, h0km, mb4.2/13, mb1 4.3/14, mb1mx4.2/22, mbtmp4.2/14, ML3.3/1, MS3.7/8, Ms1 3.7/8, ms1mx3.4/20, Error ellipse: s-maj=25.2km s-min=19.6km az=139.0*
NEIC ***31*** *00:42:01.6±0.2, 6°.80S×11°.70W, h10km, mb4.7/56, MS3.9/4, Error ellipse: s-maj=6.0km s-min=4.3km az=126.0*

ISC 31 00:42:01.0±4.4, 6°.79S±0°.06×11°.69W±0°.06, h5km±27km, h22km±1.1km: pP-P, n191, σ0.968/187, mb4.6/80, MS3.8/14, 43C-14D, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIC	**Lamto**	**14.53**	**27**	*e*P	**Pn**	**00 45 33.3**	**+5.9**
	48nm,0.8s						
LIC	**Lamto**	**14.53**	**27**	⇑*i*P	**Pn**	**00 45 33.5**	**+6.1**
	32nm,0.8s,baz=210						
LIC				*e*MLR	MLR		
	comp=Z,173nm,17.2s						
LIC	**Lamto**	**14.53**	**27**	⇑*i*P	**Pn**	**00 45 33.5**	**+6.1**
	comp=Z,16nm,0.8s						
KIC	**Kosan Boka**	**14.79**	**28**	*e*P	**Pn**	**00 45 31.1**	**+0.2**
	comp=Z,83nm,1.3s						
TIC	**Toumodi**	**14.91**	**27**	*e*P	**Pn**	**00 45 33.6**	**+1.0**
	comp=Z,68nm,1.4s						
DBIC	**Dimbokro**	**15.00**	**27**	Pn	**Pn**	**00 45 32.4**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=203,slow=11,SNR=2.4						
DBIC				LR	LR	00 50 05.8	
	comp=Z,187nm,20.7s,baz=180,slow=33						
DBIC	**Dimbokro**	**15.00**	**27**	*e*Pn	**Pn**	**00 45 33.1**	**-0.8**
	comp=Z,20nm,1.2s						
DBIC				LR	LR	00 50 05.8	
RCBR	**Riachuelo**	**24.08**	**271**	*e*P	**P**	**00 47 17.3**	**-0.4**
	comp=Z,32nm,1.3s,mb4.6						
MSKU	**Masuku**	**25.73**	**80**	P	**P**	**00 47 31.3**	**-1.4**
	comp=Z,7.9nm,0.8s,mb4.3,baz=244,slow=8.7,SNR=5.5						
TSUM	**Tsumeb**	**31.01**	**116**	P	**P**	**00 48 17.7**	**-2.1**
LSZ	**Lusaka**	**39.98**	**106**	*e*P	**P**	**00 49 37.7**	**+0.8**
	comp=Z,7.8nm,1.3s,mb4.3						
LBTB	**Lobatse**	**39.98**	**121**	P	**P**	**00 49 37.7**	**+0.8**
	comp=Z,2.3nm,0.8s,mb4.0,baz=342,slow=9.6,SNR=3.1						
LBTB	**Lobatse**	**39.98**	**121**	*e*P	**P**	**00 49 37.8**	**+1.0**
	comp=Z,2.3nm,0.7s,mb4.0						
BOSA	**Boshof**	**41.08**	**126**	LR	LR	01 04 08.6	
	comp=Z,108nm,18.1s,MS3.8,baz=85,slow=32						
BOSA	**Boshof**	**41.08**	**126**	P	**P**	**00 49 46.0**	**+0.1**
EVO	**Evora**	**45.21**	**4**	⇑*i*P	**P**	**00 50 18.3**	**-0.8**
	comp=Z,7.5nm,0.8s,mb4.3						
EVO				*e*MLR	MLR		
	comp=Z,113nm,20.8s,MS3.5						
CART	**Cartagena**	**45.26**	**12**	*e*P	**P**	**00 50 19.2**	**-0.2**
	comp=Z,8.3nm,0.7s,mb4.7						
ESDC	**Sonseca Array**	**46.77**	**8**	P	**P**	**00 50 28.8**	**-2.6**
	comp=Z,1.1nm,0.9s,mb3.8,baz=196,slow=6.3,SNR=9.3						
ESDC				PcP	PcP	00 52 05.0	+0.3
	comp=Z,0.1nm,0.3s,baz=182,slow=4.0,SNR=4.5						
SIV	**San Ignacio**	**49.16**	**255**	P	**P**	**00 50 51.3**	**+0.9**
	comp=Z,1.5nm,0.8s,mb4.0,baz=79,slow=11,SNR=7.2						
VSL	**Villasalto**	**50.01**	**21**	*e*P	**P**	**00 50 56.1**	**-0.2**
	comp=Z,5.4nm,0.8s,mb4.6						
ETSF	**Etsaut**	**50.47**	**11**	*e*P	**P**	**00 50 59.6**	**-0.2**
	comp=Z,11nm,1.1s,mb4.5						
ETSF	**Etsaut**	**50.47**	**11**	*e*P	**P**	**00 50 59.6**	**-0.2**
	comp=Z,5.7nm,1.1s,mb4.5						
SJPF	**Ste Jean**	**50.56**	**10**	⇑*i*P	**P**	**00 51 00.7**	**+0.2**
	comp=Z,11nm,1.0s,mb4.5						
SJPF	**Ste Jean**	**50.56**	**10**	⇑*i*P	**P**	**00 51 00.7**	**+0.2**
	comp=Z,5.4nm,1.0s,mb4.4						
EPF	**Esparros**	**50.77**	**11**	⇑*i*P	**P**	**00 51 02.9**	**+0.9**
	comp=Z,6.9nm,0.9s,mb4.3						
EPF	**Esparros**	**50.77**	**11**	⇑*i*P	**P**	**00 51 02.9**	**+0.9**
	comp=Z,3.5nm,0.9s,mb4.3						
MTLF	**Montolieu**	**51.46**	**13**	*e*P	**P**	**00 51 07.3**	**+0.1**
BBGH	**Gun Hill**	**51.51**	**293**	P	**P**	**00 51 07.6**	**-0.5**
CEL	**Celeste**	**51.64**	**28**	*e*P	**P**	**00 51 08.7**	**0.0**
	comp=Z,13nm,1.1s,mb4.8						
LASF	**Ste Croix**	**52.54**	**14**	*e*P	**P**	**00 51 15.6**	**+0.4**
LMR	**La Mourre**	**52.55**	**17**	⇑*i*P	**P**	**00 51 14.7**	**-0.6**
	comp=Z,15nm,1.0s,mb4.6						
LMR	**La Mourre**	**52.55**	**17**	⇑*i*P	**P**	**00 51 14.7**	**-0.6**
	comp=Z,7.6nm,1.0s,mb4.6						
PGF	**Pioggiola**	**52.59**	**19**	*e*P	**P**	**00 51 16.2**	**+0.5**
	comp=Z,7.6nm,1.1s,mb4.3						
PGF	**Pioggiola**	**52.59**	**19**	*e*P	**P**	**00 51 16.2**	**+0.5**
	comp=Z,3.8nm,1.0s,mb4.3						
LFF	**La Frestale**	**52.69**	**11**	*e*P	**P**	**00 51 16.8**	**+0.5**
TIP	**Timpagrande**	**52.78**	**28**	*e*P	**P**	**00 51 17.8**	**+0.6**
	comp=Z,7.5nm,1.0s,mb4.6						
FRF	**La Foret Royal**	**52.79**	**17**	⇑*i*P	**P**	**00 51 17.5**	**+0.4**
	comp=Z,5.8nm,0.9s,mb4.2						
FRF	**La Foret Royal**	**52.79**	**17**	⇑*i*P	**P**	**00 51 17.5**	**+0.4**
	comp=Z,2.9nm,0.9s,mb4.2						
SMRF	**Simiane la Rot**	**52.88**	**16**	*e*P	**P**	**00 51 17.5**	**-0.3**
	comp=Z,15nm,1.2s,mb4.5						
SMRF	**Simiane la Rot**	**52.88**	**16**	*e*P	**P**	**00 51 17.5**	**-0.3**
	comp=Z,15nm,1.2s,mb4.8						
CAF	**Calviac**	**52.94**	**12**	*e*P	**P**	**00 51 18.2**	**0.0**
RJF	**Les Rejaudoux**	**53.19**	**12**	⇑*i*P	**P**	**00 51 20.1**	**+0.1**
	comp=Z,12nm,1.0s,mb4.5						
RJF				*e*MLR	MLR		
	comp=Z,101nm,18.0s,MS3.6						
RJF	**Les Rejaudoux**	**53.19**	**12**	⇑*i*P	**P**	**00 51 20.1**	**+0.1**
	comp=Z,5.8nm,1.0s,mb4.5						
RJF				LR	LR		
	comp=Z,100nm,18.0s,MS3.9						
VIVF	**Saint-Julien-l**	**53.47**	**14**	*e*P	**P**	**00 51 22.7**	**+0.6**
	comp=Z,11nm,1.0s,mb4.4						
VIVF	**Saint-Julien-l**	**53.47**	**14**	*e*P	**P**	**00 51 22.7**	**+0.6**
	comp=Z,5.4nm,1.0s,mb4.4						
ORIF	**Oris-en-Rattie**	**53.84**	**15**	⇑*i*P	**P**	**00 51 25.9**	**+1.1**
	comp=Z,8.6nm,0.9s,mb4.4						
ORIF				*e*MLR	MLR		
	comp=Z,129nm,18.8s,MS3.7						
ORIF	**Oris-en-Rattie**	**53.84**	**15**	⇑*i*P	**P**	**00 51 25.9**	**+1.1**
	comp=Z,4.3nm,0.9s,mb4.4						
MBDF	**Montbardon**	**53.90**	**16**	⇑*i*P	**P**	**00 51 26.6**	**+1.3**
	comp=Z,15nm,0.9s,mb4.6						
MBDF	**Montbardon**	**53.90**	**16**	⇑*i*P	**P**	**00 51 26.6**	**+1.3**
	comp=Z,7.7nm,0.9s,mb4.6						
AQU	**L'Aquila**	**53.99**	**23**	*e*P	**P**	**00 51 27.3**	**+1.3**
	comp=Z,13nm,1.0s,mb4.8						
MFF	**Saint Martin d**	**54.13**	**10**	⇑*i*P	**P**	**00 51 27.0**	**+0.1**
	comp=Z,6.5nm,0.8s,mb4.3						
MFF	**Saint Martin d**	**54.13**	**10**	⇑*i*P	**P**	**00 51 27.0**	**+0.1**
	comp=Z,3.3nm,0.8s,mb4.3						
TCF	**Toulx Ste Croi**	**54.27**	**12**	⇑*i*P	**P**	**00 51 28.5**	**+0.6**
	comp=Z,11nm,0.8s,mb4.5						
TCF	**Toulx Ste Croi**	**54.27**	**12**	⇑*i*P	**P**	**00 51 28.5**	**+0.6**
	comp=Z,5.5nm,0.8s,mb4.5						
LPG	**La Plagne**	**54.61**	**16**	⇑*i*P	**P**	**00 51 31.7**	**+1.3**
	comp=Z,20nm,0.9s,mb4.8						
LPG	**La Plagne**	**54.61**	**16**	⇑*i*P	**P**	**00 51 31.7**	**+1.3**
	comp=Z,9.8nm,0.9s,mb4.8						
LPL	**La Plagne**	**54.62**	**16**	⇑*i*P	**P**	**00 51 31.7**	**+1.2**
	comp=Z,21nm,0.9s,mb4.9						
LPL	**La Plagne**	**54.62**	**16**	⇑*i*P	**P**	**00 51 31.7**	**+1.2**
	comp=Z,10nm,0.9s,mb4.9						
BGF	**Bois d'Agland**	**54.66**	**12**	*e*P	**P**	**00 51 31.0**	**+0.2**
SMF	**Signal de Mont**	**54.96**	**13**	*e*P	**P**	**00 51 33.0**	**+0.1**
	comp=Z,38nm,1.5s,mb4.9						
SMF	**Signal de Mont**	**54.96**	**13**	*e*P	**P**	**00 51 33.0**	**+0.1**
	comp=Z,19nm,1.5s,mb4.9						
QUIF	**Quistinic**	**54.98**	**7**	*e*P	**P**	**00 51 33.0**	**-0.1**
AVF	**Avril sur Loir**	**54.99**	**13**	*e*P	**P**	**00 51 33.4**	**+0.2**
	comp=Z,3.7nm,0.7s,mb4.2						
AVF	**Avril sur Loir**	**54.99**	**13**	*e*P	**P**	**00 51 33.4**	**+0.2**
	comp=Z,1.9nm,0.7s,mb4.2						
TRQA	**Tornquist**	**55.05**	**228**	P	**P**	**00 51 32.9**	**-0.9**
SSF	**Saint Saulge**	**55.28**	**13**	⇑*i*P	**P**	**00 51 35.5**	**+0.2**
	comp=Z,13nm,0.8s,mb4.7						
SSF	**Saint Saulge**	**55.28**	**13**	⇑*i*P	**P**	**00 51 35.5**	**+0.2**
	comp=Z,6.6nm,0.8s,mb4.7						
HYF	**Humbligny**	**55.30**	**12**	*e*P	**P**	**00 51 35.3**	**-0.1**
ROSF	**Rostrenen**	**55.38**	**7**	*e*P	**P**	**00 51 35.9**	**-0.1**
CABF	**La Chapelle**	**55.47**	**15**	⇑*i*P	**P**	**00 51 36.7**	**+0.1**
	comp=Z,21nm,0.8s,mb4.9						
CABF	**La Chapelle**	**55.47**	**15**	⇑*i*P	**P**	**00 51 36.7**	**+0.1**
	comp=Z,10nm,0.8s,mb4.9						
LOR	**Lormes**	**55.55**	**13**	⇑*i*P	**P**	**00 51 37.1**	**-0.1**
	comp=Z,7.9nm,1.0s,mb4.4						
LOR				*e*MLR	MLR		
	comp=Z,96nm,18.8s,MS

DRGR		61.46	26	⇓iP	P	00 52 19.1	+0.6
VOIR		61.51	29	⇓P	P	00 52 19.1	+0.3
VOIR		61.51	29	⇓iP	P	00 52 19.1	+0.3
BRG	Berggiesshubel	61.54	18	eP	P	00 52 18.2	-0.7
	comp=Z,5.0nm,1.2s,mb4.5						
MORC	Moravsky Berou	61.80	21	eP	P	00 52 20.9	+0.1
	comp=Z,18nm,1.8s,mb4.9						
KECS	Kecovo	61.86	24	eP	P	00 52 21.1	0.0
	comp=Z,4.3nm,1.2s,mb4.5						
KECS	Kecovo	61.86	24	eP	P	00 52 21.1	0.0
DPC	Dobruska-Polom	61.86	20	eP	P	00 52 21.3	+0.2
DPC				epP	pP	00 52 27.7	+4.8
UPC	Upice	61.89	20	eP	P	00 52 20.5	-0.8
NRDL	Niedersach Rie	61.91	15	eP	P	00 52 21.0	-0.3
	comp=Z,11nm,1.2s,mb4.9						
MLR	Muntele Rosu	61.98	29	⇑P	P	00 52 22.5	+0.5
MLR	Muntele Rosu	61.98	29	⇑iP	P	00 52 22.5	+0.5
OKC	Ostrava-Krasne	62.07	21	eP	P	00 52 22.5	0.0
ESK	Eskdalemuir	62.28	5	eP	P	00 52 23.6	-0.2
BRTR	Keskin Array B	62.37	38	P	P	00 52 26.1	+1.4
	comp=Z,4.4nm,0.8s,mb4.6,baz=208,slow=6.5,SNR=22						
BR131	Keskin Array S	62.37	38	eP	P	00 52 24.4	-0.4
	comp=Z,1.9nm,0.8s,mb4.3						
RUE	Ruedersdorf	62.90	17	eP	P	00 52 27.9	-0.2
BSEG	Bad Segeberg	63.27	14	eP	P	00 52 30.1	-0.3
	comp=Z,9.0nm,0.9s,mb4.9						
ROSC	El Rosal	63.58	279	eP	P	00 52 34.1	+0.8
KWP	Kalwaria Pacla	63.66	24	eP	P	00 52 33.6	+0.5
	comp=Z,10nm,1.0s,mb4.8						
NNA	Nana	64.37	260	eP	P	00 52 38.2	-0.3
KIEV	Kiev	67.24	27	eP	P	00 52 55.6	-0.6
	comp=Z,24nm,1.3s,mb5.1						
AKASG	Malin Array Be	67.25	27	P	P	00 52 55.7	-0.6
	comp=Z,4.7nm,0.6s,mb4.7,baz=225,slow=7.4,SNR=27						
AKASG	Malin Array Be	67.25	27	P	P	00 52 55.7	-0.6
SUW	Suwalki	67.29	21	eP	P	00 52 56.0	-0.5
	comp=Z,34nm,1.0s,mb5.3						
NOA	NORSAR Array B	69.96	12	P	P	00 53 12.1	-0.9
	comp=Z,0.7nm,0.7s,mb3.7,baz=223,slow=8.4,SNR=4.6						
NOA				LR	LR	01 21 37.5	
	comp=Z,46nm,21.5s,MS3.7,baz=215,slow=34						
KIV	Kislovodsk	70.33	39	eP	P	00 53 15.9	+0.2
FINES	FINESS Array B	74.08	18	P	P	00 53 37.2	-0.6
	comp=Z,6.3nm,0.8s,mb4.6,baz=188,slow=3.9,SNR=22						
FINES	FINESS Array B	74.08	18	P	P	00 53 37.2	-0.6
KAF	Kangasniemi	74.67	17	eP	P	00 53 40.5	-0.7
	comp=Z,13nm,0.9s,mb4.9						
KAF	Kangasniemi	74.67	17	ep	P	00 53 40.5	-0.7
	comp=Z,13nm,0.9s,mb4.9						
SCHQ	Schefferville	76.55	331	LR	LR	01 23 28.6	
	comp=Z,46nm,19.2s,MS3.8,baz=114,slow=33						
JOF	Joensuu	76.82	19	eP	P	00 53 51.5	-1.9
JOF	Joensuu	76.82	19	ep	P	00 53 51.5	-1.9
	comp=Z,8.9nm,0.7s,mb4.8						
MAW	Mawson	77.89	158	P	P	00 53 59.9	+0.4
	comp=Z,1.9nm,0.8s,mb4.1,baz=247,slow=5.2,SNR=3.5						
MAW				LR	LR	01 21 47.2	
	comp=Z,84nm,20.6s,MS4.0,baz=90,slow=31						
MAW	Mawson	77.89	158	eP	P	00 54 00.2	+0.8
	comp=Z,1.4nm,1.3s,mb3.7						
MAW				LR	LR	01 21 47.2	
ARCES	ARCESS Array B	80.31	12	P	P	00 54 12.2	-0.4
	comp=Z,4.7nm,0.8s,mb4.5,baz=215,slow=6.1,SNR=12						
ARCES				LR	LR	01 30 25.3	
	comp=Z,27nm,18.9s,MS3.6,baz=202,slow=36						
ARE0	ARCESS Array S	80.31	12	eP	P	00 54 12.6	0.0
SUMG	Summit	81.07	352	P	P	00 54 18.5	+1.9
WVT	Waverly	82.90	308	eP	P	00 54 25.4	-1.6
ABKAR	Akbulak array	83.32	39	eP	P	00 54 28.0	-0.9
	comp=Z,1.3nm,0.8s,mb4.0						
QSPA	South Pole Qui	83.33	180	eP	P	00 54 29.2	+0.7
	comp=Z,5.7nm,1.3s,mb4.4						
DGAR	Diego Garcia	83.36	97	P	P	00 54 30.0	0.0
SIUC	Southern Illin	84.34	309	eP	P	00 54 33.6	-0.8
ARU	Arti	84.90	32	eP	P	00 54 36.3	-0.5
	comp=Z,9.9nm,1.3s,mb4.8						
MIAR	Mount Ida	87.16	305	P	P	00 54 49.0	+0.4
KSU1	Kansas State U	90.30	309	eP	P	00 55 03.7	+0.5
BVAR	Borovoye Array	90.62	37	P	P	00 55 05.2	+0.8
	comp=Z,0.5nm,0.5s,mb4.1,baz=249,slow=2.5,SNR=4.8						
ULM	Lac du Bonnet	91.46	320	LR	LR	01 30 45.4	
	comp=Z,38nm,20.8s,MS3.8,baz=48,slow=32						
UCH	Uchtor	91.70	48	P	P	00 55 10.3	+0.6
AAK	Ala-Archa	91.74	47	P	P	00 55 10.5	+0.6
TXAR	Lajitas Array	95.00	299	P	P	00 55 25.4	+0.2
	comp=Z,0.3nm,0.7s,mb3.9,baz=106,slow=9.3,SNR=5.2						
TXAR				LR	LR	01 31 31.2	
	comp=Z,38nm,20.4s,MS3.9,baz=325,slow=31						
KURK	Kurchatov	95.39	40	P	P	00 55 25.8	-0.6
SDCO	Great Sand Dun	97.12	307	eP	P	00 55 34.5	-0.1
CMB	Columbia Colle	108.87	308	PKiKP	PKiKP	01 00 32.2	+0.3

NIED ***31*** *01:19:00, 45.°20N×149.°40E, h20km, Mw4.2 Best double couple: M₀2.08000×10¹⁵ NP1:φs283.00000°, δ76.00000°, λ135.00000°. NP2:φs26.00000°, δ47.00000°, λ19.00000°.*
BJI ***31*** *01:19:09.7, 46.°02N×149.°92E, h156km, mB4.7/25, mb4.5/33*
ISCJB ***31*** *01:19:13.4±0.3, 45.°89N±0.°03×149.°27E±0.°02, h155km±3km, mb4.6/184, Error ellipse: s-maj=5.4km s-min=2.6km az=170.2*
SKHL ***31*** *01:19:13.2±1.9, 45.°73N×149.°23E, h164km±14km, mb6.3/2, msh5.3/4*
MOS ***31*** *01:19:13.7±0.8, 45.°96N×149.°26E, h155km, mb4.7/74, Error ellipse: s-maj=7.0km s-min=4.7km az=91.6*
SZGRF ***31*** *01:19:14.2, 48.°76N×149.°46E, h33km, Northwest of Kuril Islands, Russia*
NEIC ***31*** *01:19:15.3±0.5, 45.°97N×149.°18E, h156km±4km, mb4.7/119, Error ellipse: s-maj=5.7km s-min=2.6km az=172.0*
IDC ***31*** *01:19:15.7±2.1, 46.°09N×149.°22E, h158km±18km, mb4.1/20, mb1 4.2/23, mb1mx4.2/25, mbtmp4.1/23, MS3.1/5, Ms1 3.1/5, ms1mx2.7/30, Error ellipse: s-maj=16.0km s-min=10.4km az=160.0*
JMA ***31*** *01:19:17.0±0.6, 45.°19N×149.°40E, h159km, M4.7*
BGS ***31*** *01:19:31.4±1.8, 48.°65N×147.°30E, h153km, mb4.6*
ISC 31 01:19:14.7±0.3, 45.°95N±0.°03×149.°18E±0.°02, h150km±3km, h158km±3.9km; pP-P, n861, σ0.9 63/887, mb4.6/184, 187C-194D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	1.17	233	⇑iPN	Pn	01 19 41.4	+0.5
KUR				S	Sn	01 20 00.5	-0.4
KUR	Kuril'sk	1.17	233	⇑iP	Pn	01 19 41.2	+0.3
KUR				⇓iP		01 19 41.2	
KUR				AMB	AMB	01 19 42.0	
	870nm,0.6s						
KUR				AMB	AMB	01 19 42.0	
	420nm,0.6s						
KUR				AMB	AMB	01 19 42.0	
	5μm,0.6s						
KUR				AMB	AMB	01 19 44.0	
	8μm,1.6s						
KUR				AMB	AMB	01 19 44.0	
	2μm,1.6s						
KUR				AMB	AMB	01 19 44.0	
	3μm,1.6s						
KUR				eS	Sn	01 20 00.5	-0.4
KUR				A		01 20 02.0	
	10μm,2.4s						
KUR				A		01 20 02.0	
	25μm,2.4s						
KUR				A		01 20 06.0	
	6μm,0.6s						
KUR				A		01 20 06.0	
	4μm,0.6s						
YUK	Yuzh-Kuril'sk	3.04	232	c iPN	Pn	01 20 03.0	+0.6
YUK				i S	Sn	01 20 39.2	-0.1
YUK				pmax	pmax		
	comp=N,790nm,0.3s						
YUK				pmax	pmax		
	comp=E,606nm,0.3s						
YUK				pmax	pmax		
	comp=Z,1μm,0.3s						
YUK				pmax	pmax		
	comp=Z,3μm,1.4s						
YUK				smax			
	comp=N,2μm,0.2s						
YUK				smax			
	comp=E,4μm,0.5s						
YUK				smax			
	comp=N,416nm,0.5s						
YUK				smax			
	comp=E,2μm,0.5s						
YUK	Yuzh-Kuril'sk	3.04	232	⇑iP	Pn	01 20 03.0	+0.6
YUK				AMB	AMB	01 20 03.1	
	comp=E,5μm,0.6s						
YUK				AMB	AMB	01 20 03.5	
	comp=E,3μm,0.4s						
YUK				AMB	AMB	01 20 03.5	
	comp=E,380nm,0.5s						
YUK				AMB	AMB	01 20 03.5	
	comp=E,1μm,0.5s						
YUK				i S	Sn	01 20 39.2	-0.1
YUK				A		01 20 43.7	
	comp=E,2μm,0.4s						
YUK				A		01 20 43.7	
	comp=E,4μm,0.4s						
YUK				A		01 20 45.0	
	comp=E,5μm,1.0s						
YUK				A		01 20 45.0	
	comp=E,5μm,3.0s						
JRA	Rausu	3.52	237	P	Pn	01 20 09.4	+0.8
NEM2	Nemuro 2	3.56	225	P	Pn	01 20 07.4	-1.8
NEM2				eS	Sn	01 20 46.5	-5.0
JNK	Nakash	3.96	235	P	Pn	01 20 14.7	+0.4
JTKR	Abashiri--Toko	4.23	244	P	Pn	01 20 19.1	+1.2
JAK	Akkeshi	4.36	229	P	Pn	01 20 18.3	-1.3
YSS	Yuzh-Sakhalins	4.55	285	⇓ePN	Pn	01 20 24.0	+1.9
YSS				i S	Sn	01 21 19.0	+4.4
YSS				smax			
	comp=N,900nm,4.0s						
YSS	Yuzh-Sakhalins	4.55	285	ePn	Pn	01 20 25.5	+3.4
YSS	Yuzh-Sakhalins	4.55	285	⇓eP	Pn	01 20 24.0	+1.9
YSS				i S	Sn	01 21 19.0	+4.4
YSS				A		01 21 28.0	
	comp=N,900nm,4.0s						
JMP	Maruseppu	4.56	247	P	Pn	01 20 24.1	+1.9
JAR	Ashorobuto	4.69	237	P	Pn	01 20 24.8	+0.9
JOB	Onbets	4.89	233	P	Pn	01 20 26.2	-0.4
JOB				eS	Sn	01 21 19.2	-3.5
ASAJ	Asahikawa	5.01	251	P	Pn	01 20 30.8	+2.6
	comp=N,6.5nm,0.3s,baz=85,slow=14,SNR=46						
ASAJ	Asahikawa	5.01	251	PN	Pn	01 20 30.8	+2.6
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.3s						
ASAJ	Asahikawa	5.01	251	P	Pn	01 20 31.0	+2.8
JKK2	Kamakawa 2	5.02	248	P	Pn	01 20 30.2	+1.9
JWK2	Keihoku	5.15	266	P	Pn	01 20 34.4	+4.5
JCH	Churui	5.34	233	P	Pn	01 20 31.4	-1.2
JCH				eS	Sn	01 21 28.3	-5.1
JFR	Furan	5.47	242	P	Pn	01 20 35.6	+1.4
JAB	Ashibetsu	5.53	246	P	Pn	01 20 37.6	+2.6
UGL	Uglegorsk	5.75	306	ePN	Pn	01 20 41.8	+4.0
UGL				S	Sn	01 21 49.0	+6.1
UGL				pmax	pmax		
	comp=Z,213nm,0.9s						
UGL				smax			
	comp=N,600nm,5.0s						
UGL				smax			
	comp=E,1μm,4.0s						
UGL	Uglegorsk	5.75	306	eP	Pn	01 20 41.8	+4.0
UGL				AMB	AMB	01 20 42.6	
	comp=E,213nm,0.9s						
UGL				eS	Sn	01 21 49.0	+6.1
UGL				A		01 21 53.0	
	comp=E,1μm,4.0s						
UGL				A		01 21 53.0	
	comp=E,600nm,5.0s						
JBT2	Biratori 2	5.83	239	P	Pn	01 20 38.6	-0.4
JEM	Erimo	5.86	230	P	Pn	01 20 38.6	-0.8
ERM	Erimo	5.86	230	ePn	Pn	01 20 38.9	-0.6
ERM				eS	Sn	01 21 38.5	-7.2
JNBK	Urakawa-nobuka	5.91	234	P	Pn	01 20 38.0	-2.0
JNBK				eS	Sn	01 21 41.0	-5.8
JEW	Eniwo	6.35	243	eS	Sn	01 21 55.7	-1.7
TYV	Tymovskoe	6.56	321	eP	Pn	01 20 49.0	+0.4
TYV				AMB	AMB	01 21 05.0	
	comp=E,40nm,1.0s						
TYV				AMB	AMB	01 21 05.0	
	comp=E,44nm,1.0s						
TYV				AMB	AMB	01 21 05.0	
	comp=E,200nm,1.6s						
SKR	Severo-Kuril's	6.62	42	ePN	Pn	01 20 50.0	+0.6
SKR				eS	Sn	01 22 02.7	-1.0
SKR				pmax	pmax		
	comp=Z,90nm,0.6s						
SKR				pmax	pmax		
	comp=E,60nm,0.5s						
SKR				smax			
	comp=N,160nm,0.9s						
SKR				smax			
	comp=E,160nm,0.9s						
SKR				smax			
	comp=Z,80nm,0.9s						
SKR	Severo-Kuril's	6.62	42	eP	Pn	01 20 50.0	+0.6
SKR				AMB	AMB	01 20 53.0	
	comp=Z,60nm,0.5s						
SKR				AMB	AMB	01 20 53.0	
	comp=Z,90nm,0.6s						
SKR				eS	Sn	01 22 02.7	-1.0
SKR				A		01 22 10.0	
	comp=Z,160nm,0.9s						
SKR				A		01 22 10.0	
	comp=Z,80nm,0.9s						
JNB	Noboribetsu	6.81	242	P	Pn	01 20 52.1	0.0
JNB				eS	Sn	01 22 05.5	-2.9
JKB	Kayabe	7.15	238	P	Pn	01 20 54.8	-1.8
JKB				eS	Sn	01 22 09.6	-7.0
JYM2	Yakumo 2	7.41	242	P	Pn	01 20 59.5	-0.7
JTM	Tenmabayashi	7.84	232	eS	Sn	01 22 23.0	-10
JANG	Nango	7.90	228	eS	Sn	01 22 24.0	-11
JTH	Tanohata	8.05	224	eS	Sn	01 22 27.9	-10
OFUJ	Ofunato	8.82	222	P	Pn	01 21 14.9	-4.1
OFUJ				eS	Sn	01 22 46.8	-10
PEA0B	Petropavlovsk-	9.05	35	ePn	Pn	01 21 21.5	-0.4
PETK	Petropavlovsk-	9.05	35	P	Pn	01 21 20.8	-1.0
	comp=Z,2.4nm,0.3s,baz=191,slow=10.0,SNR=45						
PETK	Petropavlovsk-	9.05	35	PN	Pn	01 21 20.8	-1.0
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
JRG	Rokugo	9.08	227	P	Pn	01 21 19.9	-2.5
JRG				eS	Sn	01 22 53.9	-9.2
JIO	Ouri	9.48	221	P	Pn	01 21 23.5	-4.1
JIO				eS	Sn	01 23 01.4	-11
HABR	Khabarovsk	9.94	290	ePN	Pn	01 21 36.2	+2.5
HABR				eS	Sn	01 23 27.9	+4.2
HABR				pmax	pmax		
	comp=N,20nm,1.0s						
HABR				pmax	pmax		
	comp=Z,64nm,1.5s						
HABR				pmax	pmax		
	comp=E,41nm,1.5s						
JYA	Atsumi	10.16	227	eS	Sn	01 23 20.1	-8.9
JFK	Kawauchi	10.59	219	eS	Sn	01 23 27.1	-12
KLR	Kul'dur	12.21	292	ePN	Pn	01 22 03.0	-0.5
MAJO	Matsushiro	12.50	225	ePN	Pn	01 22 08.5	+1.2
MAT	Matsushiro	12.50	225	P	Pn	01 22 07.2	-0.1
MAT				eS	Sn	01 24 18.1	-7.4
MJAR	Matsushiro Arr	12.50	225	P	Pn	01 22 05.4	-1.9
	comp=E,0.6nm,0.3s,baz=24,slow=14,SNR=5.8						
MJAR	Matsushiro Arr	12.50	225	PN	Pn	01 22 05.4	-1.9
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MDJ	Mudanjiang	13.86	272	P	Pn	01 22 25.8	+1.2
MDJ				S	Sn	01 24 57.0	-1.0
MDJ				PcP	PcP	01 27 35.5	+0.4
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,44nm,4.5s						
MDJ				LR	LR		
	comp=N,94nm,23.1s						
MDJ				LR	LR		
	comp=E,21nm,21.7s						
MDJ				LR	LR		
	comp=Z,27nm,25.3s						
ZEA	Zeya	16.10	307	eP	Pn	01 22 51.5	-0.8
ZEA				AMB	AMB	01 22 55.0	
	comp=Z,11nm,0.9s						
CN2	Changchun	16.95	271	eP	Pn	01 23 04.5	+1.8
SEY	Seymchan	17.11	5	deP	Pn	01 23 04.7	+0.2
SMY	Shemya	17.54	58	eP	Pn	01 23 09.9	+0.2
KSRS	Korea Array	17.96	249	P	Pn	01 23 14.7	-0.2
	comp=Z,0.3nm,0.3s,baz=55,slow=11,SNR=13						
KSRS				PcP	PcP	01 27 41.9	+0.5
	comp=Z,0.3nm,0.3s,baz=48,slow=1.8,SNR=5.6						
KSRS				LR	LR	01 29 08.1	
	comp=Z,40nm,20.8s,baz=60,slow=33						
YAK	Yakutsk	19.64	332	eP	P	01 23 32.8	+1.5
YAK				eS	S	01 27 04.2	-0.2
YAK				pmax	pmax		
	comp=Z,28nm,0.9s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.2s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,24nm,0.4s						
YAK				pmax	pmax		
	comp=N,7.0nm,0.6s						
YAK				pmax	pmax		
	comp=E,6.0nm,0.4s						
YAK				smax			
	comp=N,145nm,2.8s						
YAK				smax			
	comp=E,71nm,1.4s						
YAK	Yakutsk	19.64	332	eP	P	01 23 31.8	+0.5
	comp=E,38nm,0.8s						
ADK	Adak	23.06	63	eP	P	01 24 05.0	-1.6
ADK				pmax	pmax		
	comp=Z,24nm,0.9s,mb4.6						
ADK	Adak	23.06	63	eP	P	01 24 05.0	-1.5
	comp=Z,24nm,0.9s,mb4.6						
BILL	Bilibino	23.85	16	eP	P	01 24 14.0	+0.4
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.8						
ATKA	Atka Island	24.60	62	eP	P	01 24 20.9	+0.4
	comp=Z,31nm,1.1s,mb4.7						
BJI	Beijing	24.73	268	P	P	01 24 23.5	+1.5
BJI				S	S	01 28 31.8	-1.0
BJI				pmax	pmax		
	comp=Z,16nm,0.7s,mb4.7						
BJI				pmax	pmax		
	comp=Z,66nm,4.6s						
BJI				LR	LR		
	comp=N,170nm,17.2s						
BJI				LR	LR		
	comp=E,69nm,15.8s						
BJI				LR	LR		
	comp=Z,24nm,31.8s						
BJT	Baijiatuau	24.75	268	eP	P	01 24 24.5	+2.4
BJT				pmax	pmax		
	comp=Z,15nm,0.8s						
BJT	Baijiatuau	24.75	268	eP	P	01 24 24.5	+2.4
	comp=Z,15nm,0.8s,mb4.6						
NJ2	Nanjing	27.16	250	eP	P	01 24 46.0	+2.1
NJ2				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.0						
TIXI	Tiksi	27.53	346	eP	P	01 24 45.0	-1.7
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
HHC	Hu-ho-hao-te	27.62	273	eP	P	01 24 48.5	+0.6
HHC				pP	pP	01 25 22.5	+3.1
HHC				sP	sP	01 25 41.5	+4.8
HHC				PP	PP	01 25 44.5	-8.6
HHC				PcP	PcP	01 28 04.0	+2.7
HHC				S	S	01 29 16.0	-2.4
HHC				sS	sS	01 30 15.0	+1.0
HHC				ScP	ScP	01 31 26.8	-0.9
HHC				PcS	PcS	01 31 43.8	+0.6
HHC				pmax	pmax		
	comp=Z,16nm,0.5s,mb5.0						
HHC				pmax	pmax		
	comp=Z,85nm,5.2s						
HHC				LR	LR		
	comp=N,640nm,12.3s						
HHC				LR	LR		
	comp=E,650nm,12.1s						
HHC				LR	LR		
	comp=Z,690nm,12.4s						
SONM	Songino Array	29.03	289	P	P	01 25 02.1	+1.8
	comp=Z,1.0nm,0.5s,mb3.8,baz=83,slow=8.4,SNR=6.0						
SONM	Songino Array	29.03	289	P	P	01 25 02.1	+1.8
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TLY	Talaya	30.13	298	eP	P	01 25 10.5	+0.5
TLY				pmax	pmax		
	comp=Z,1.0nm,1.3s,mb3.4						
WHN	Wuhan	31.09	253	P	P	01 25 19.5	+0.9
LZH	Lanzhou	35.18	270	eP	P	01 25 55.0	+1.0
LZH				pP	pP	01 26 30.0	+3.8
LZH				sP	sP	01 26 50.0	+6.6
LZH				PP	PP	01 27 19.0	+2.2
LZH				eS	S	01 31 15.0	-0.9
LZH				sS	sS	01 32 15.5	+3.1
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.5						
LZH				pmax	pmax		
	comp=Z,71nm,5.6s						
RSO	Redoubt South	36.38	45	eP	P	01 26 04.3	+0.4
GTA	Gaotai	36.39	278	eP	P	01 26 05.5	+1.2
GTA				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.7						
OHAK	Old Harbor	36.40	51	eP	P	01 26 03.0	-1.2
	comp=Z,26nm,1.0s,mb4.8						
PPLA	Purkeypile	36.57	41	eP	P	01 26 06.5	+1.0
	comp=Z,70nm,1.4s,mb5.1						
PPLA				ePcP	PcP	01 28 25.5	+0.2
KDAK	Kodiak Island	36.71	50	eP	P	01 26 05.9	-0.9
KDAK				e		01 28 25.5	
KDAK				pmax	pmax		
	comp=Z,34nm,0.8s,mb5.0						
KDAK	Kodiak Island	36.71	50	eP	P	01 26 05.9	-0.8
	comp=Z,34nm,0.8s,mb5.0						
KDAK				ePcP	PcP	01 28 25.5	-0.4
BPAW	Bear Paw Mtn.	37.10	39	eP	P	01 26 10.3	+0.3
	comp=Z,17nm,0.9s,mb4.7						
BPAW				ePcP	PcP	01 28 27.2	+0.2
COLD	Coldfoot	37.52	34	eP	P	01 26 13.7	+0.2
	comp=Z,7.5nm,0.4s,mb4.7						
SEW	Seward	38.05	46	eP	P	01 26 17.2	-0.8
	comp=Z,16nm,0.6s,mb4.8						
PMR	Palmer	38.06	43	eP	P	01 26 17.8	-0.3
PMR				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.5						
PMR	Palmer	38.06	43	eP	P	01 26 17.8	-0.2
	comp=Z,12nm,0.9s,mb4.5						
CD2	Chengdu	38.09	263	P	P	01 26 19.0	+0.3
CD2				pP	pP	01 26 54.0	+2.7
CD2				sP	sP	01 27 12.3	+4.0
CD2				PP	PP	01 27 54.0	+5.2
CD2				S	S	01 31 58.8	-1.4
CD2				sS	sS	01 32 59.8	+2.7
CD2				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.8						
CD2				pmax	pmax		
	comp=Z,120nm,7.1s						
COLA	College	38.45	38	eP	P	01 26 21.6	+0.3
COLA				pmax	pmax		
	comp=Z,46nm,0.9s,mb5.1						
COLA	College	38.45	38	eP	P	01 26 21.6	+0.3
	comp=Z,46nm,0.9s,mb5.1						
ILAR	Eielson Array	38.86	38	P	P	01 26 24.1	-0.7
	comp=Z,13nm,0.8s,mb4.6,baz=259,slow=6.4,SNR=80						
ILAR				PcP	PcP	01 28 30.9	-1.6
	comp=Z,1.1nm,0.7s,baz=281,slow=3.5,SNR=5.3						
ILAR				LR	LR	01 45 07.9	
	comp=Z,29nm,18.9s,baz=26,slow=40						
ILAR	Eielson Array	38.86	38	P	P	01 26 24.1	-0.6
ILAR						01 28 30.9	
ILAR				pmax	pmax		
	comp=Z,13nm,0.8s						
ILAR				MLR	MLR		
	comp=Z,29nm,18.9s						
GYA	Guiyang	38.88	255	P	P	01 26 25.5	+0.1
GYA				pP	pP	01 27 01.3	+3.3
GYA				sP	sP	01 27 22.0	+7.0
GYA				PP	PP	01 28 02.0	+4.5
GYA				PcP	PcP	01 28 33.5	+0.3
GYA				sS	sS	01 33 14.5	+5.3
GYA				SS	SS	01 35 03.8	-5.9
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4

GYA LR LR
comp=Z,450nm,16.9s
DIV Divide 39.72 44 *e*P **P 01 26 32.3 +0.4**
comp=Z,26nm,0.8s,mb4.9
BMRM Bremner River 40.30 44 *e*P **P 01 26 37.1 +0.4**
comp=Z,32nm,0.8s,mb5.0
BMRM *e*PcP PcP 01 28 37.5 +0.4
ZALV Zalesovo Beam 40.86 305 P **P 01 26 40.2 -1.2**
comp=Z,0.7nm,0.3s,mb3.7,baz=69,slow=8.1,SNR=4.4
ZALV PcP PcP 01 28 39.2 +0.2
comp=Z,6.6nm,0.6s,baz=82,slow=3.1,SNR=23
ZALV LR LR 01 44 39.6
comp=Z,18nm,18.0s,baz=320,slow=37
ZALV Zalesovo Beam 40.86 305 P **P 01 26 40.2 -1.2**
ZALV 01 28 39.2
ZALV pmax pmax
comp=Z,1.0nm,0.4s,mb3.8
ZALV MLR MLR
comp=Z,18nm,18.0s
EGAK Eagle 41.30 37 *e*P **P 01 26 44.5 -0.3**
comp=Z,21nm,0.8s,mb4.8
DAWY Dawson 42.17 38 *e*P **P 01 26 52.0 +0.1**
KMI Kunming 42.41 257 P **P 01 26 55.0 +0.7**
KMI pP pP 01 27 28.8 +1.3
KMI sP sP 01 27 48.5 +4.1
KMI PP PP 01 28 38.3 +2.7
KMI S **S 01 33 03.3 -1.3**
KMI sS sS 01 34 06.5 +4.2
KMI pmax pmax
comp=Z,6.0nm,1.2s,mb4.1
KMI pmax pmax
comp=Z,89nm,6.9s
KMI LR LR
comp=N,91nm,19.0s
KMI LR LR
comp=E,110nm,16.7s
KMI LR LR
comp=Z,83nm,16.2s
WMQ Urumqi 42.66 290 *e*P **P 01 26 56.8 +0.7**
WMQ pP pP 01 27 32.0 +2.7
WMQ sP sP 01 27 50.5 +4.3
WMQ PP PP 01 28 40.5 +2.6
WMQ PcP PcP 01 28 46.5 +1.3
WMQ pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
WMQ pmax pmax
comp=Z,120nm,5.4s
WMQ LR LR
comp=N,52nm,17.6s
WMQ LR LR
comp=Z,38nm,16.0s
HYT Haines Junctio 43.73 43 *e*P **P 01 27 05.7 +1.3**
INK Inuvik 43.77 32 *e*P **P 01 27 05.0 +0.3**
INK pmax pmax
comp=Z,36nm,1.2s
INK Inuvik 43.77 32 *e*P **P 01 27 05.0 +0.3**
comp=Z,36nm,1.2s,mb4.9
MK31 Makanchi Array 44.87 296 *e*P **P 01 27 13.9 +0.2**
MKAR Makanchi Array 44.87 296 P **P 01 27 13.4 -0.3**
comp=Z,1.6nm,0.6s,mb3.9,baz=81,slow=8.2,SNR=14
MKAR PcP PcP 01 28 52.9 +0.2
comp=Z,5.7nm,0.7s,baz=67,slow=4.3,SNR=12
MKAR Makanchi Array 44.87 296 P **P 01 27 13.4 -0.3**
MKAR 01 28 52.9
MKAR pmax pmax
comp=Z,2.0nm,0.6s
KURK Kurchatov 45.52 303 P **P 01 27 18.9 +0.1**
comp=Z,3.2nm,0.5s,mb4.2,baz=72,slow=8.9,SNR=17
KURK PcP PcP 01 28 55.3 +0.5
comp=Z,3.0nm,0.6s,baz=78,slow=3.4,SNR=6.7
KURK Kurchatov 45.52 303 P **P 01 27 18.9 +0.1**
KURK 01 28 55.3
KURK pmax pmax
comp=Z,3.0nm,0.5s,mb4.2
KURK Kurchatov 45.52 303 *e*P **P 01 27 18.2 -0.6**
comp=Z,7.2nm,0.9s,mb4.3
DLBC Dease Lake 48.09 44 *e*P **P 01 27 39.7 +1.1**
BVAR Borovoye Array 49.24 309 P **P 01 27 47.2 -0.3**
comp=Z,1.2nm,0.6s,mb3.7,baz=85,slow=9.1,SNR=5.8
BVAR PcP PcP 01 29 08.2 +0.1
comp=Z,2.1nm,0.3s,baz=83,slow=4.9,SNR=11
BVAR Borovoye Array 49.24 309 P **P 01 27 47.2 -0.3**
BVAR 01 29 08.2
BVAR pmax pmax
comp=Z,1.0nm,0.6s
CMAR Chiang Mai Arr 49.53 254 P **P 01 27 51.0 +0.9**
comp=Z,1.2nm,0.4s,mb3.8,baz=37,slow=7.4,SNR=5.3
CMAR Chiang Mai Arr 49.53 254 P **P 01 27 51.0 +0.9**
CMAR pmax pmax
comp=Z,1.0nm,0.4s
TAPN Taplejung 51.41 271 *e*P **P 01 28 05.4 +1.3**
comp=Z,8.8nm,0.4s,mb4.8
ODAN Odare 51.93 271 *e*P **P 01 28 08.4 +0.4**
comp=Z,5.9nm,0.5s,mb4.5
JIRN Jiri 52.28 272 *e*P **P 01 28 11.9 +1.4**
comp=Z,12nm,0.2s,mb5.2
GUN Gumba 52.34 273 *e*P **P 01 28 12.4 +1.4**
comp=Z,58nm,0.9s,mb5.2
KSH Kashi 52.41 291 P **P 01 28 16.8 +5.4**
KSH pP pP 01 28 53.8 +8.0
KSH sP sP 01 29 12.0 +10
KSH PcP PcP 01 29 23.3 +3.2
KSH PP PP 01 30 19.3 +7.9
KSH ScP ScP 01 33 04.5 +1.6
KSH PcS PcS 01 33 21.8 +3.1
KSH S **S 01 35 30.3 +4.7**
KSH sS sS 01 36 34.5 +9.2
KSH ScS ScS 01 37 47.0 +1.2
KSH SS SS 01 39 11.5 +6.5
KSH pmax pmax
comp=Z,6.0nm,0.7s,mb4.3
KSH pmax pmax
comp=Z,91nm,5.9s
KSH LR LR
comp=N,120nm,5.3s
KSH LR LR
comp=E,160nm,8.0s
KSH LR LR
comp=Z,260nm,5.9s
RAMN Ramite 52.43 271 *e*P **P 01 28 12.5 +0.8**
comp=Z,34nm,0.4s,mb5.3
RES Resolute Bay 52.44 18 *e*P **P 01 28 10.7 -0.4**
RES pmax pmax
comp=Z,27nm,0.9s,mb4.9
RES Resolute Bay 52.44 18 *e*P **P 01 28 10.7 -0.4**
comp=Z,26nm,0.9s,mb4.9
AML Almayashu 52.49 295 *e*P **P 01 28 14.2 +2.3**
comp=Z,3.6nm,0.8s,mb4.0
SVE Sverdlovsk 52.54 316⇑ *e*P **P 01 28 11.5 -0.6**
SVE pmax pmax
comp=Z,17nm,0.6s,mb5.0
KKN Kakani 52.83 273 *e*P **P 01 28 15.6 +1.0**
comp=Z,27nm,0.7s,mb5.1
PKI Pulchoki 52.88 273 *e*P **P 01 28 15.9 +0.9**
comp=Z,16nm,0.7s,mb4.9
PKIN Phulchoki 52.88 273 *e*P **P 01 28 15.9 +0.9**
comp=Z,7.5nm,0.5s,mb4.7
DMN Daman 53.06 273 *e*P **P 01 28 17.6 +1.3**
comp=Z,34nm,0.8s,mb5.1
GKN Gorkha 53.15 274 *e*P **P 01 28 18.0 +1.1**
comp=Z,46nm,0.8s,mb5.3
YKA Yellowknife Ar 53.17 35 P **P 01 28 16.6 0.0**
comp=Z,8.1nm,0.6s,mb4.6,baz=301,slow=6.9,SNR=21
YKA PcP PcP 01 29 22.2 -0.4
comp=Z,2.6nm,0.8s,baz=296,slow=4.0,SNR=4.4
YKA Yellowknife Ar 53.17 35 P **P 01 28 16.6 0.0**
YKA 01 29 22.2
YKA pmax pmax
comp=Z,8.0nm,0.6s
YKA Yellowknife Ar 53.17 35 P **P 01 28 16.6 +0.1**
YKA PcP PcP 01 29 22.2 -0.4
ARU Arti 53.74 316*d* P **P 01 28 19.8 -1.0**
ARU 01 29 23.9
ARU 01 30 19.8
ARU S **S 01 35 43.1 +0.1**
ARU SS SS 01 39 24.2 -0.9
ARU pmax pmax
comp=Z,20nm,1.0s,mb4.8
ARU Arti 53.74 316 *e*P **P 01 28 19.8 -1.1**
comp=Z,15nm,0.6s,mb4.9
KOLN Koldanda 54.01 274 *e*P **P 01 28 24.5 +1.3**
comp=Z,12nm,0.3s,mb5.0
NLWA Neilton Lookou 56.58 54 ⇓P **P 01 28 41.4 +0.2**
baz=56
ABKAR Akbulak array 56.82 308 *e*P **P 01 28 42.3 -0.6**
comp=Z,5.7nm,0.6s,mb4.6

JCW Jim Creek 57.22 53 *e*P **P 01 28 46.2 +0.4**
comp=Z,3.6nm,0.5s,mb4.5
E03A Lebam 57.22 55 ⇑P **P 01 28 46.3 +0.4**
baz=57
ARCES ARCESS Array B 57.69 340 P **P 01 28 48.1 -0.7**
comp=Z,8.7nm,1.0s,mb4.5,baz=41,slow=8.5,SNR=18
ARCES LR LR 01 56 54.1
comp=Z,26nm,20.6s,baz=261,slow=39
ARCES ARCESS Array B 57.69 340 P **P 01 28 48.1 -0.6**
ARCES pmax pmax
comp=Z,9.0nm,1.0s
ARCES MLR MLR
comp=Z,26nm,20.6s
D05A Enumclaw 57.75 54 ⇓P **P 01 28 49.7 +0.1**
baz=58
NDI New Delhi 57.87 279 *e*PKP **P 01 28 49.5 -1.1**
F04A Amboy 58.22 55 ⇓P **P 01 28 52.8 0.0**
baz=58
ETW Entiat 58.44 53 *e*P **P 01 28 54.1 -0.2**
B08A Colville Reser 58.55 51 ⇓P **P 01 28 54.9 -0.2**
baz=58,SNR=6.9
G04A Mulino 58.60 56 ⇑P **P 01 28 55.6 +0.1**
baz=58
EDM Edmonton 58.81 44 *e*P **P 01 28 56.7 -0.1**
H04A Detroit Lake 59.08 56 ⇓P **P 01 28 59.0 +0.3**
baz=59,SNR=7.2
C09A Chrisman Ranch 59.46 51 ⇑P **P 01 29 01.0 -0.3**
baz=59
OD2 Odessa Site #2 59.46 52 *e*P **P 01 29 01.2 -0.1**
D08A Wollman Farm, 59.54 52 ⇓P **P 01 29 01.4 -0.5**
baz=59
HAWA Hanford 59.59 53 *e*P **P 01 29 02.6 +0.4**
comp=Z,12nm,1.3s,mb4.5
G06A Carlson Farm, 59.65 55 ⇓P **P 01 29 02.8 +0.2**
baz=59
F07A Phinny Hill Vi 59.66 54 ⇑P **P 01 29 03.0 +0.3**
baz=59
E08A Dider Farm, El 59.79 53 ⇑P **P 01 29 03.5 -0.1**
baz=60
KBL Kabul 59.80 290 *e*P **P 01 29 04.0 +0.1**
KBL pmax pmax
comp=Z,18nm,0.6s,mb5.1
KBL Kabul 59.80 290 *e*P **P 01 29 04.0 0.0**
comp=Z,18nm,0.6s,mb5.1
NEW Newport 59.81 50 *e*P **P 01 29 03.9 +0.2**
NEW pmax pmax
comp=Z,11nm,0.9s
NEW Newport 59.81 50 *e*P **P 01 29 03.9 +0.2**
comp=Z,11nm,0.9s,mb4.7
A12A Yaak River Ran 60.19 49 ⇓P **P 01 29 06.5 +0.2**
baz=60,SNR=5.3
E09A Wood Farm, Sta 60.29 53 ⇑P **P 01 29 07.0 0.0**
baz=60,SNR=5.1
YBH Yreka Blue Hor 60.51 59 *e*P **P 01 29 09.7 +1.1**
YBH pmax pmax
comp=Z,7.0nm,0.8s
YBH Yreka Blue Hor 60.51 59 *e*P **P 01 29 09.7 +1.1**
comp=Z,7.4nm,0.8s,mb4.6
C11A Tepee Creek (N 60.53 50 ⇓P **P 01 29 08.6 0.0**
baz=60
G08A Pilot Rock 60.56 54 ⇓P **P 01 29 08.8 -0.1**
baz=60,SNR=7.3
A13A Flathead Natio 60.84 49 ⇑P **P 01 29 10.7 0.0**
baz=61
I07A Izee 60.98 55 ⇓P **P 01 29 12.0 +0.2**
baz=61,SNR=5.4
K05A Summer Lake 60.99 57 ⇓P **P 01 29 12.6 +0.7**
baz=61,SNR=13
C12B Naegeli Ranch, 61.02 50 ⇑P **P 01 29 12.1 +0.1**
baz=61
WALA Waterton Lakes 61.03 48 *e*P **P 01 29 12.1 +0.1**
comp=Z,0.5nm,0.8s,mb3.4
F10A Beach Ranch, E 61.12 53 ⇑P **P 01 29 12.6 0.0**
baz=61,SNR=5.4
B13A Whitefish 61.16 49 ⇑P **P 01 29 13.1 +0.3**
baz=61,SNR=9.8
WDC Whiskeytown Da 61.30 60 *e*P **P 01 29 14.4 +0.4**
WDC pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
WDC Whiskeytown Da 61.30 60 *e*P **P 01 29 14.4 +0.5**
comp=Z,7.0nm,0.9s,mb4.5
BSMT Bassoo Peak 61.31 50 *e*P **P 01 29 14.8 +0.9**
A14A Double T Ranch 61.34 48 ⇑P **P 01 29 13.8 -0.2**
baz=61,SNR=8.4
D12A Red Ives Fores 61.49 51 ⇑P **P 01 29 14.9 -0.3**
baz=61
C13A Hot Springs 61.52 50 ⇑P **P 01 29 15.5 +0.2**
baz=61
SUMG Summit 61.66 3 *e*P **P 01 29 15.7 -0.1**
comp=Z,28nm,1.6s,mb4.8
A15A Johnson Ranch, 61.69 48 ⇑P **P 01 29 15.7 -0.7**
baz=61,SNR=14
BMO Blue Mountains 61.76 54 *e*P **P 01 29 17.1 +0.1**
comp=Z,3.1nm,0.8s,mb4.2
E12A Beaver Dam Sad 61.77 51 ⇓P **P 01 29 16.9 0.0**
baz=62,SNR=19
B14A Marquette Ranc 61.79 49 ⇑P **P 01 29 17.1 0.0**
baz=62
MOD Modoc 61.84 58 *e*P **P 01 29 18.1 +0.6**
comp=Z,10nm,0.8s,mb4.7
C14A Swan Lake 61.91 49 ⇓P **P 01 29 18.2 +0.3**
baz=62
SWMT Swartz Lake 61.94 50 *e*P **P 01 29 18.2 +0.1**
D13A Huson 61.95 50 ⇑P **P 01 29 18.1 -0.1**
baz=62,SNR=10
J08A Circle Bar Ran 62.01 56 ⇑P **P 01 29 19.1 +0.5**
baz=62
B15A Bradely Ranch, 62.19 48 ⇑P **P 01 29 19.5 -0.3**
baz=62,SNR=7.6
A16A West Butte Ran 62.29 47 ⇓P **P 01 29 19.9 -0.5**
baz=62
F12A Elk City 62.34 52 ⇑P **P 01 29 21.0 +0.1**
baz=62,SNR=13
SLMT Seeley Lake 62.37 50 *e*P **P 01 29 21.2 +0.2**
MSO Missoula 62.39 50 *e*P **P 01 29 21.2 +0.1**
comp=Z,9.3nm,0.8s,mb4.7
D14A Greenough 62.47 50 ⇑P **P 01 29 21.4 -0.2**
baz=62,SNR=15
WVOR Wild Horse Val 62.49 57 *e*P **P 01 29 22.0 +0.1**
WVOR pmax pmax
comp=Z,11nm,1.0s,mb4.6
WVOR Wild Horse Val 62.49 57 *e*P **P 01 29 22.0 +0.1**
comp=Z,11nm,1.0s,mb4.7
E13A Victor 62.50 51 ⇑P **P 01 29 21.5 -0.4**
baz=62
C15A Salmond Ranch, 62.51 49 ⇓P **P 01 29 22.3 +0.4**
baz=62,SNR=14
B16A M & M Farms, S 62.57 48 ⇑P **P 01 29 21.7 -0.6**
baz=62
G12A Big Creek, Yel 62.70 52 ⇑P **P 01 29 22.9 -0.3**
baz=62
CHMT Chamberlain Mo 62.70 50 *e*P **P 01 29 23.1 -0.1**
A17A Triple J Farms 62.75 47 ⇓P **P 01 29 23.1 -0.4**
baz=62
F13A Darby 62.83 51 ⇑P **P 01 29 23.5 -0.5**
baz=63,SNR=6.5
E14A Clinton 62.89 50 ⇑P **P 01 29 24.1 -0.3**
baz=63
C16A Fuhringer Ranc 62.94 48 ⇓P **P 01 29 23.8 -0.9**
baz=63,SNR=11
D15A Lincoln 63.01 49 ⇓P **P 01 29 25.0 -0.3**
baz=63
FFC Flin Flon 63.08 38 *e*P **P 01 29 25.1 -0.4**
FFC pmax pmax
comp=Z,19nm,0.8s,mb5.0
FFC Flin Flon 63.08 38 *e*P **P 01 29 25.1 -0.5**
comp=Z,19nm,0.8s,mb5.0
B17A L&G Farms, Che 63.12 48 ⇑P **P 01 29 25.7 -0.3**
baz=63
A18A Metzger Ranch, 63.20 47 ⇓P **P 01 29 25.9 -0.5**
baz=63
H12A Diamond D Ranc 63.32 53 ⇓P **P 01 29 26.9 -0.4**
baz=63,SNR=12
G13A Cobalt 63.32 52 ⇑P **P 01 29 26.7 -0.6**
baz=63,SNR=14
F14A Wisdom 63.34 51 ⇑P **P 01 29 27.0 -0.4**
baz=63
E15A Deer Lodge 63.34 50 ⇑P **P 01 29 27.2 -0.2**
baz=63,SNR=7.6
MFID Camas Ranch 63.49 54 ⇓P **P 01 29 28.4 0.0**
baz=63
D16A Dana Ranch, Ca 63.53 49 ⇑P **P 01 29 28.6 -0.1**
baz=63,SNR=8.5
C17A Wharram Farm, 63.56 48 ⇑P **P 01 29 28.5 -0.3**
baz=63
FINES FINESS Array B 63.56 333 P **P 01 29 27.2 -1.4**
comp=Z,13nm,0.7s,mb4.8,baz=32,slow=7.5,SNR=61
FINES FINESS Array B 63.56 333 P **P 01 29 27.2 -1.4**

FINES pmax pmax
comp=Z,13nm,0.7s
B18A Beardsley Farm 63.58 47 ⇑P **P 01 29 28.9 -0.1**
baz=63,SNR=7.7
HRY Holter Researc 63.59 49 *e*P **P 01 29 30.1 +1.0**
I12A Atlanta 63.64 54 ⇑P **P 01 29 29.4 -0.1**
baz=63,SNR=15
H13A Challis 63.64 52 ⇑P **P 01 29 29.2 -0.2**
baz=63,SNR=17
G14A Jackson 63.65 51 ⇓P **P 01 29 29.6 +0.2**
baz=63
PAHR Pah Rah Range 63.74 59 *e*P **P 01 29 30.6 +0.4**
comp=Z,16nm,1.1s,mb4.8
EGMT Eagleton 63.83 47 ⇓P **P 01 29 30.5 -0.1**
baz=64,SNR=8.2
EGMT Eagleton 63.83 47 *e*P **P 01 29 30.5 -0.1**
comp=Z,23nm,1.1s,mb4.9
LRM Limekiln Ridge 63.83 50 *e*P **P 01 29 30.9 +0.3**
D17A Six Diamond Ra 63.91 48 ⇑P **P 01 29 31.0 -0.1**
baz=64,SNR=9.0
DLMT Dillon 64.04 51 *e*P **P 01 29 32.0 0.0**
comp=Z,18nm,1.3s,mb4.7
H14A Leadore 64.10 52 ⇑P **P 01 29 31.9 -0.5**
baz=64
I13A Wildhorse Cree 64.13 53 ⇓P **P 01 29 33.0 +0.3**
baz=64,SNR=10
CMB Columbia Colle 64.19 61 *e*P **P 01 29 33.3 +0.2**
CMB pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
CMB Columbia Colle 64.19 61 *e*P **P 01 29 33.3 +0.2**
comp=Z,6.1nm,0.8s,mb4.5
HLID Hailey 64.19 53 ⇓P **P 01 29 33.2 +0.1**
baz=64,SNR=8.5
HLID Hailey 64.19 53 *e*P **P 01 29 33.3 +0.2**
G15A Dillon 64.23 51 ⇓P **P 01 29 33.2 0.0**
baz=64,SNR=18
MCMT McKenzie Canyo 64.25 51 *e*P **P 01 29 33.4 0.0**
comp=Z,1.6nm,0.8s,mb3.9
E17A Martinsdale 64.26 49 ⇓P **P 01 29 33.9 +0.5**
baz=64,SNR=13
M10A I.L. Ranch, Tu 64.28 56 ⇑P **P 01 29 34.0 +0.4**
baz=64,SNR=6.9
F16A Kennard Place, 64.29 50 ⇑P **P 01 29 33.7 0.0**
baz=64,SNR=6.3
L11A Cat Creek Ranc 64.32 55 ⇑P **P 01 29 34.3 +0.4**
baz=64,SNR=16
D18A Linhart Farms, 64.34 48 ⇓P **P 01 29 34.1 +0.2**
baz=64
OBN Obninsk 64.39 324 *e*P **P 01 29 33.0 -1.1**
OBN pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
J13A Cove Ranch, Pi 64.43 53 ⇑P **P 01 29 34.8 +0.2**
baz=64,SNR=7.1
WAKR Walker 64.47 60 *e*P **P 01 29 35.3 +0.3**
H15A Lima 64.50 52 ⇑P **P 01 29 34.6 -0.4**
baz=64
G16A Moss Hill, Enn 64.56 51 ⇓P **P 01 29 35.6 +0.2**
baz=64,SNR=14
E18A Harlowton 64.69 49 ⇓P **P 01 29 36.5 +0.2**
baz=64
F17A Fitzpatrick Pl 64.73 49 ⇑P **P 01 29 36.7 +0.2**
baz=64,SNR=6.0
L12A House Creek Ra 64.76 55 ⇓P **P 01 29 37.0 +0.3**
baz=64
M11A Holland Ranch, 64.77 56 ⇓P **P 01 29 37.4 +0.6**
baz=64
N10A Dunphy 64.81 57 ⇓P **P 01 29 37.6 +0.5**
baz=65
J14A Carey 64.85 53 ⇑P **P 01 29 38.1 +0.8**
baz=65,SNR=13
VRHR Novokhopersk 64.96 318 *e*P **P 01 29 36.2 -1.7**
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,20nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
G17A Pierce Place, 65.07 50 ⇓P **P 01 29 39.1 +0.4**
baz=65,SNR=7.5
NVAR Mina Array Bea 65.20 60 P **P 01 29 39.6 -0.1**
comp=Z,6.9nm,0.7s,mb4.6,baz=290,slow=7.1,SNR=58
NVAR PcP PcP 01 30 10.0 -1.0
comp=Z,1.3nm,0.7s,baz=285,slow=4.2,SNR=2.2
NVAR Mina Array Bea 65.20 60 P **P 01 29 39.6 -0.1**
NVAR PcP PcP 01 30 10.0 -1.0
F18A Big Timber 65.23 49 ⇓P **P 01 29 40.1 +0.4**
baz=65,SNR=15
M12A Wells 65.28 55 ⇓P **P 01 29 40.7 +0.5**
baz=65,SNR=8.3
J15A Blackfoot 65.40 52 ⇑P **P 01 29 41.1 +0.3**
baz=65
P10A Eureka 65.54 58 ⇓P **P 01 29 42.1 +0.3**
baz=65
K14A Jones Ranch, D 65.54 54 ⇓P **P 01 29 42.3 +0.5**
baz=65,SNR=8.6
N12A Clover Valley, 65.58 56 ⇓P **P 01 29 42.6 +0.6**
baz=65
N12A Clover Valley, 65.58 56 *e*P **P 01 29 42.9 +0.8**
comp=Z,9.3nm,1.0s,mb4.6
I16A Newdale 65.61 52 ⇓P **P 01 29 42.8 +0.6**
baz=65,SNR=5.4
O11A Cowboy Ranch, 65.68 57 ⇑P **P 01 29 43.2 +0.4**
baz=65
G18A Lazy EL Ranch, 65.70 49 ⇓P **P 01 29 42.6 -0.1**
baz=65
M13A Montello 65.75 55 ⇑P **P 01 29 43.2 +0.1**
baz=66,SNR=7.2
M13A Montello 65.75 55 *e*P **P 01 29 43.8 +0.7**
comp=Z,9.0nm,0.9s,mb4.6
H17A Grant Village 65.76 51 ⇑P **P 01 29 43.4 +0.2**
baz=66
K15A Arbon 65.81 53 ⇓P **P 01 29 44.2 +0.7**
baz=66,SNR=8.6
L14A Malta 65.84 54 ⇓P **P 01 29 44.1 +0.4**
baz=66,SNR=7.5
IMW Indian Meadow 65.89 51 *e*P **P 01 29 45.4 +1.4**
comp=Z,15nm,1.2s,mb4.7
J16A Bone 65.94 52 ⇑P **P 01 29 45.0 +0.7**
baz=66,SNR=6.8
RLMT Red Lodge 65.98 49 ⇑P **P 01 29 45.0 +0.4**
baz=66,SNR=6.6
RLMT Red Lodge 65.98 49 *e*P **P 01 29 45.5 +0.9**
comp=Z,11nm,1.2s,mb4.6
VSR Storozhevoye 66.00 320 *e*P **P 01 29 43.0 -1.6**
VSR pmax pmax
comp=N,7.0nm,0.6s
VSR pmax pmax
comp=E,8.0nm,0.6s
VSR pmax pmax
comp=Z,8.0nm,0.6s,mb4.7
P11A Circle Ranch, 66.00 57 ⇑P **P 01 29 45.0 +0.2**
baz=66
RRI2 Red Ridge 66.05 52 *e*P **P 01 29 46.4 +1.4**
comp=Z,21nm,0.8s,mb5.0
N13A Wendover, West 66.06 56 ⇓P **P 01 29 45.4 +0.2**
baz=66
Q10A Clear Creek Ra 66.09 58 ⇑P **P 01 29 45.4 0.0**
baz=66
MOOW Moose Ponds 66.10 51 *e*P **P 01 29 46.3 +1.0**
comp=Z,18nm,1.3s,mb4.8
M14A Sheep Mountain 66.12 55 ⇑P **P 01 29 45.8 +0.2**
baz=66,SNR=7.2
O12A Currie 66.12 56 ⇓P **P 01 29 45.6 +0.1**
baz=66,SNR=13
TPAW Teton Pass 66.16 52 *e*P **P 01 29 47.1 +1.4**
comp=Z,32nm,1.2s,mb5.0
K16A Soda Springs 66.24 52 ⇓P **P 01 29 46.9 +0.6**
baz=66,SNR=6.3
LOHW Long Hollow 66.26 51 *e*P **P 01 29 47.4 +1.0**
comp=Z,24nm,1.5s,mb4.8
SNOW Snow King Moun 66.28 52 *e*P **P 01 29 48.0 +1.5**
comp=Z,11nm,0.9s,mb4.7
REDW Red Top Meadow 66.29 52 *e*P **P 01 29 47.8 +1.2**
comp=Z,13nm,0.9s,mb4.8
L15A Malad City 66.34 54 ⇓P **P 01 29 47.0 +0.1**
baz=66
J17A Brown Place, J 66.37 52 ⇑P **P 01 29 47.7 +0.6**
baz=66
VES Vestal, Richgr 66.39 62 ⇑P **P 01 29 46.4 -1.0**
baz=66
P12A McGill 66.55 57 ⇓P **P 01 29 48.3 0.0**
baz=66
S10A Tonopah Range, 66.56 59 ⇓P **P 01 29 48.3 -0.1**
baz=66,SNR=8.6
N14A Grayback Hills 66.64 55 ⇑P **P 01 29 48.9 +0.1**
baz=66,SNR=7.8
M15A Larsen Ranch, 66.66 54 ⇓P **P 01 29 49.1 +0.1**
baz=66,SNR=22

GRAC Grapevine Rang 66.69 60 ⇑P P 01 29 49.4 +0.1
baz=66
SPUT South Promonto 66.76 54 eP P 01 29 50.0 +0.5
comp=Z,9.8nm,1.0s,mb4.6
J18A Kendall Valley 66.85 51 ⇓P P 01 29 50.2 +0.1
baz=67
L16A Fish Haven 66.86 53 ⇑P P 01 29 50.5 +0.3
baz=67
Q12A Willow Creek R 66.88 57 ⇑P P 01 29 50.4 0.0
baz=67
R11A Troy Canyon, C 66.88 58 ⇑P P 01 29 50.2 -0.2
baz=67,SNR=10
ISA Isabella 66.89 62 ⇑P P 01 29 49.4 -1.0
baz=67
ISA Isabella 66.89 62 eP P 01 29 49.8 -0.7
ISA pmax pmax
comp=Z,6.0nm,0.9s,mb4.4
ISA Isabella 66.89 62 eP P 01 29 49.8 -0.7
comp=Z,5.8nm,0.9s,mb4.4
N15A Stansbury Isla 67.00 55 ⇓P P 01 29 51.2 +0.1
baz=67,SNR=5.2
ARVC Arvin 67.02 63 ⇓P P 01 29 50.8 -0.5
baz=67
HWUT Hardware Ranch 67.06 53 eP P 01 29 52.2 +0.7
comp=Z,9.5nm,1.0s,mb4.6
P13A Bates Ranch, G 67.08 57 ⇑P P 01 29 51.7 +0.1
baz=67
L17A Cokeville 67.12 53 ⇑P P 01 29 51.9 +0.1
baz=67,SNR=6.0
K18A Toltan Ranch, 67.22 52 ⇑P P 01 29 52.8 +0.4
baz=67,SNR=5.1
MPMC Manual Prospec 67.23 61 ⇑P P 01 29 52.4 -0.3
baz=67,SNR=13
S11A Rachel 67.25 59 ⇑P P 01 29 52.9 +0.1
baz=67,SNR=7.0
BSC Santa Cruz Isl 67.25 64 ⇑P P 01 29 53.0 +0.1
baz=67
DUG Dugway 67.29 55 ⇓P P 01 29 53.1 +0.2
baz=67,SNR=15
DUG Dugway 67.29 55 eP P 01 29 53.2 +0.3
DUG pmax pmax
comp=Z,19nm,1.1s,mb4.8
DUG Dugway 67.29 55 eP P 01 29 53.2 +0.3
comp=Z,20nm,1.1s,mb4.8
FURC Furnace Creek, 67.35 61 ⇑P P 01 29 53.2 -0.2
baz=67,SNR=22
NOQ North Oquirrh 67.38 55 eP P 01 29 54.2 +0.7
BW06 Boulder Array 67.40 51 ⇓P P 01 29 53.3 -0.2
baz=67,SNR=12
BW06 Boulder Array 67.40 51 eP P 01 29 53.6 0.0
Q13A Wheeler Ranch, 67.41 57 ⇓P P 01 29 53.8 +0.1
baz=67
O15A The Old Anders 67.43 55 ⇑P P 01 29 54.2 +0.3
baz=67
R12A Pony Springs, 67.48 58 ⇑P P 01 29 54.0 -0.2
baz=67
P14A Drum Mountains 67.54 56 ⇑P P 01 29 54.5 0.0
baz=67,SNR=10
N16A Rees Ranch, Co 67.61 54 ⇓P P 01 29 55.0 0.0
baz=67
M17A Scullys Gap (B 67.65 53 ⇓P P 01 29 55.1 -0.1
baz=67
EDW2 Edwards Air Fo 67.70 63 ⇑P P 01 29 55.2 -0.4
baz=68,SNR=9.7
L18A Fontenelle, Gr 67.70 52 ⇑P P 01 29 55.5 0.0
baz=67
K19A Absolon Red Bu 67.75 51 ⇓P P 01 29 54.9 -0.9
baz=68,SNR=6.0
Q14A Sevier Lake (B 67.82 57 ⇑P P 01 29 56.4 +0.1
baz=68,SNR=14
T11A Corn Creek, Al 67.83 59 ⇓P P 01 29 56.2 -0.2
baz=68,SNR=12
NLU North Lily Min 67.87 55 eP P 01 29 57.2 +0.6
comp=Z,8.9nm,1.0s,mb4.5
N17A Moffit Pass 67.91 54 ⇓P P 01 29 56.8 0.0
baz=68,SNR=13
L19A Farson 67.95 52 ⇓P P 01 29 56.7 -0.3
baz=68
P15A Leamington 68.01 56 ⇑P P 01 29 57.3 -0.2
baz=68
M18A Lyman 68.02 53 ⇓P P 01 29 57.1 -0.4
baz=68
O16A Springville 68.03 55 ⇑P P 01 29 57.7 +0.1
baz=68,SNR=6.2
DAU Daniels Canyon 68.03 54 eP P 01 29 58.5 +0.9
NB2 NORSAR Subarra 68.06 339 P P 01 29 56.2 -1.2
comp=Z,5.0nm,0.7s,mb4.3,baz=28,slow=6.9
NOA NORSAR Array B 68.06 339 P P 01 29 56.2 -1.2
comp=Z,3.2nm,0.5s,mb4.3,baz=29,slow=6.6,SNR=45
NOA PcP PcP 01 30 21.9 -0.5
comp=Z,1.8nm,0.8s,baz=29,slow=3.1,SNR=6.1
NOA LR LR 02 07 53.6
comp=Z,12nm,18.3s,baz=80,slow=43
SHOC Shoshone 68.08 61 ⇑P P 01 29 57.4 -0.6
baz=68
MPU Maple Canyon 68.08 55 eP P 01 29 58.6 +0.7
comp=Z,13nm,1.0s,mb4.6
K20A Yellowstone Ra 68.13 51 ⇑P P 01 29 56.9 -1.2
baz=68
GSC Goldstone 68.15 62 ⇑P P 01 29 58.2 -0.2
baz=68,SNR=9.3
GSC Goldstone 68.15 62 eP P 01 29 58.4 0.0
GSC pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
GSC Goldstone 68.15 62 eP P 01 29 58.4 -0.1
comp=Z,10nm,1.0s,mb4.5
BFSC Mount Baldy Ra 68.33 63 ⇓P P 01 29 59.2 -0.3
baz=68,SNR=7.1
Q15A Fillmore 68.33 56 ⇑P P 01 29 59.2 -0.3
baz=68
S13A Holt Ranch, En 68.41 58 ⇑P P 01 30 00.1 +0.1
baz=68,SNR=8.3
O17A Robinson Place 68.47 54 ⇓P P 01 30 00.5 +0.2
baz=68
L20A Wamsutter 68.58 51 ⇓P P 01 30 00.6 -0.3
baz=68
TUQ Turquoise Moun 68.60 61 ⇑P P 01 30 01.1 -0.1
baz=68,SNR=11
V11A Goodsprings 68.63 60 ⇑P P 01 30 01.3 -0.1
baz=68
S14A Cedar City 68.70 57 ⇑P P 01 30 01.5 -0.3
baz=68
CCUT Cedar City 68.73 58 eP P 01 30 02.6 +0.7
comp=Z,9.8nm,1.2s,mb4.4
HEC Hector,Ludlow 68.75 62 ⇑P P 01 30 01.9 -0.3
baz=68
T13A Saint George 68.76 58 ⇑P P 01 30 02.5 +0.4
baz=68,SNR=8.1
U12A Valley of Fire 68.78 59 ⇑P P 01 30 02.3 0.0
baz=68
MSU Marysvale 68.78 56 eP P 01 30 03.2 +0.9
O18A Roosevelt 68.83 54 ⇓P P 01 30 03.1 +0.5
baz=69
N19A John Jarvie Ra 68.87 53 ⇑P P 01 30 02.2 -0.6
baz=69
ULM Lac du Bonnet 68.88 39 P P 01 30 01.8 -0.9
comp=Z,6.3nm,0.7s,mb4.5,baz=324,slow=9.0,SNR=4.6
R15A Junction 68.92 57 ⇓P P 01 30 03.4 +0.3
baz=69
P17A Butcher Ranch, 68.96 55 ⇑P P 01 30 03.4 +0.1
baz=69,SNR=7.4
M20A Sweetwater, Wa 69.01 52 ⇑P P 01 30 03.8 +0.1
baz=69,SNR=6.8
MURC Murrieta 69.03 63 ⇓P P 01 30 03.1 -0.8
baz=69
V12A Nelson 69.06 60 ⇓P P 01 30 04.2 +0.2
baz=69
Q16A Castle Valley 69.08 55 ⇓P P 01 30 04.3 +0.1
baz=69,SNR=5.4
L21A Rawlins 69.13 51 ⇓P P 01 30 04.1 -0.2
baz=69
P18A Preston Nutter 69.13 54 ⇑P P 01 30 04.7 +0.3
baz=69,SNR=6.1
GMRC Granite Mounta 69.20 61 ⇑P P 01 30 04.7 -0.2
baz=69,SNR=11
T14A Hurricane 69.22 58 ⇑P P 01 30 05.2 +0.2
baz=69,SNR=7.1
S15A Panguitch 69.23 57 ⇓P P 01 30 05.6 +0.5
baz=69
O19A Miners Draw (B 69.31 53 ⇓P P 01 30 05.0 -0.5
baz=69
SRU San Rafael 69.33 55 ⇑P P 01 30 05.6 0.0
baz=69,SNR=13
SRU San Rafael 69.33 55 eP P 01 30 06.1 +0.5
SRU pmax pmax
comp=Z,22nm,0.9s,mb4.9
SRU San Rafael 69.33 55 eP P 01 30 06.0 +0.4
comp=Z,22nm,0.9s,mb4.9

R16A Teasdale 69.33 56 ⇓P P 01 30 06.3 +0.6
baz=69,SNR=12
KIV Kislovodsk 69.36 312 eP P 01 30 06.9 +1.1
KIV pmax pmax
comp=Z,11nm,0.9s,mb4.6
M21A Separation Pea 69.38 51 ⇑P P 01 30 05.5 -0.4
baz=69,SNR=5.6
RSSD Black Hills 69.40 47 eP P 01 30 05.6 -0.4
RSSD pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
RSSD Black Hills 69.40 47 eP P 01 30 05.6 -0.4
comp=Z,7.9nm,0.8s,mb4.5
RWWY Rawlins 69.41 51 eP P 01 30 05.8 -0.3
comp=Z,12nm,1.0s,mb4.6
N20A Spence Gulch, 69.42 52 ⇑P P 01 30 06.4 +0.3
baz=69,SNR=9.3
PFO Pinyon Flat Ob 69.49 63 ⇑P P 01 30 06.5 -0.2
baz=69
PFO Pinyon Flat Ob 69.49 63 eP P 01 30 06.5 -0.3
BELC Belle Mtn. Jos 69.51 62 ⇑P P 01 30 06.1 -0.7
baz=69
Q18A Rafter H Ranch 69.55 55 ⇓P P 01 30 06.9 -0.2
baz=69
ZEI Tsey 69.56 311 eP P 01 30 07.9 +0.9
ZEI pmax pmax
comp=Z,7.0nm,0.4s,mb4.7
109C Camp Elliot, M 69.57 64 ⇑P P 01 30 07.0 -0.3
baz=69
U14A Mt Trumbull 69.60 59 ⇓P P 01 30 07.5 +0.2
baz=69,SNR=10
S16A Weppner Ranch, 69.65 57 ⇑P P 01 30 07.9 +0.3
baz=69,SNR=18
T15A Red Dirt Ranch 69.66 58 ⇓P P 01 30 07.8 0.0
baz=69,SNR=6.2
R17A Hanksville Air 69.69 56 ⇑P P 01 30 07.6 -0.3
baz=69,SNR=8.9
P19A Cripple Cowboy 69.84 54 ⇑P P 01 30 08.5 -0.3
baz=70,SNR=6.8
N21A Black Mountain 69.88 52 ⇓P P 01 30 08.9 -0.1
baz=70,SNR=5.2
O20A White River Ci 69.91 53 ⇑P P 01 30 08.9 -0.3
baz=70,SNR=7.0
IRM Iron Mountain 69.92 61 ⇓P P 01 30 09.0 -0.4
baz=70,SNR=12
M22A Cedar Creek Ra 69.94 51 ⇓P P 01 30 09.1 -0.2
baz=70
BAR Barrett 69.98 64 eP P 01 30 09.5 -0.2
comp=Z,9.7nm,1.0s,mb4.5
MONP Monument Peak 69.99 63 ⇓P P 01 30 09.7 -0.1
baz=70
W13A Hualapai Mount 70.06 60 ⇓P P 01 30 09.8 -0.4
baz=70,SNR=5.9
BC3 Big Chuckawall 70.08 62 ⇓P P 01 30 09.6 -0.7
baz=70,SNR=7.0
U15A North Rim 70.12 58 ⇓P P 01 30 10.7 +0.1
baz=70,SNR=13
Q19A Hogan Spring (70.15 54 ⇓P P 01 30 10.1 -0.6
baz=70,SNR=11
S17A Black Ridge (B 70.17 56 ⇑P P 01 30 10.6 -0.2
baz=70,SNR=14
V14A Boquillas Ranc 70.17 59 ⇓P P 01 30 11.2 +0.4
baz=70,SNR=15
R18A Canyonlands Na 70.18 55 ⇓P P 01 30 10.0 -0.8
baz=70,SNR=13
P20A De Beque 70.27 53 ⇓P P 01 30 10.8 -0.6
baz=70
O21A Pagoda 70.28 52 ⇓P P 01 30 11.2 -0.2
baz=70
AGMN Agassiz Nation 70.33 40 eP P 01 30 10.9 -0.7
comp=Z,15nm,0.9s,mb4.7
DVTC Desert V Tower 70.35 63 ⇓P P 01 30 11.7 -0.3
baz=70
SWSC Sam W. Stewart 70.35 63 ⇑P P 01 30 11.4 -0.5
baz=70
N22A Wattenberg Ran 70.43 51 ⇑P P 01 30 12.7 +0.3
baz=70
X13A Yucca 70.44 60 ⇓P P 01 30 12.2 -0.3
baz=70,SNR=16
PDMCI Parker Dam,Lak 70.45 61 ⇑P P 01 30 12.3 -0.2
baz=70
W14A Seligman 70.47 59 ⇑P P 01 30 12.9 +0.2
baz=70,SNR=16
S18A Hurst Farm, Bl 70.60 56 ⇑P P 01 30 13.0 -0.4
baz=70,SNR=17
V15A Kaibab Nationa 70.60 58 ⇓P P 01 30 13.8 +0.3
baz=70,SNR=8.1
T17A Navajo Res., N 70.60 57 ⇑P P 01 30 12.9 -0.5
baz=70
R19A Curley Farm, L 70.61 55 ⇓P P 01 30 13.0 -0.4
baz=70,SNR=6.0
N23A Red Feather La 70.65 51 ⇑P P 01 30 13.9 +0.2
baz=70,SNR=5.9
AKASG Malin Array Be 70.65 324 P P 01 30 12.2 -1.3
comp=Z,4.4nm,0.4s,mb4.6,baz=38,slow=6.2,SNR=19
AKASG Malin Array Be 70.65 324 P P 01 30 12.2 -1.3
AKASG pmax pmax
comp=Z,4.0nm,0.4s
ASAR Alice Springs 70.66 195 P P 01 30 14.1 +0.3
comp=Z,1.0nm,0.6s,mb3.7,baz=11,slow=5.7,SNR=14
ASAR pP pP 01 30 48.7 -1.4
comp=Z,1.6nm,0.9s,baz=5.8,slow=5.8,SNR=5.2
ASAR Alice Springs 70.66 195 P P 01 30 14.1 +0.4
ASAR *PP pP 01 30 48.7 -1.4
ASAR pmax pmax
comp=Z,1.0nm,0.6s
ASAR pmax pmax
comp=Z,2.0nm,0.9s
Q20A Ridgley Place, 70.69 54 ⇑P P 01 30 13.7 -0.3
baz=70
PV04 Paradox Valley 70.74 55 eP P 01 30 14.7 +0.4
P21A Newcastle 70.77 53 ⇓P P 01 30 14.3 -0.1
baz=70,SNR=8.1
O22A Kremmling 70.83 52 ⇑P P 01 30 14.4 -0.3
baz=71,SNR=5.4
GLA Glamis 70.87 62 ⇑P P 01 30 15.1 -0.1
baz=71
GLA Glamis 70.87 62 eP P 01 30 15.2 +0.1
GLA pmax pmax
comp=Z,11nm,0.6s,mb4.8
GLA Glamis 70.87 62 eP P 01 30 15.2 0.0
comp=Z,11nm,0.6s,mb4.8
U17A Shonto 70.96 57 ⇓P P 01 30 15.7 0.0
baz=71
Y13A Salome 70.97 61 ⇓P P 01 30 15.4 -0.3
baz=71,SNR=7.6
U16A Tuba City 71.00 58 ⇓P P 01 30 16.2 +0.3
baz=71,SNR=16
T18A Mexican Hat 71.05 56 ⇓P P 01 30 15.4 -0.8
baz=71,SNR=11
S19A Harvey Farm, M 71.05 55 ⇑P P 01 30 15.8 -0.3
baz=71,SNR=16
X14A Yava 71.09 60 ⇑P P 01 30 16.5 0.0
baz=71,SNR=9.3
P22A Eagle 71.11 52 ⇓P P 01 30 16.4 0.0
baz=71,SNR=6.1
PV01 Paradox Valley 71.11 55 eP P 01 30 16.8 +0.3
comp=Z,574nm,0.8s
O23A Lake Granby, G 71.14 51 ⇓P P 01 30 17.1 +0.5
baz=71,SNR=8.6
Q21A Lamborn Mesa, 71.18 53 ⇑P P 01 30 16.8 -0.1
baz=71,SNR=6.7
SMCO Snowmass 71.28 53 eP P 01 30 17.7 +0.2
comp=Z,5.2nm,0.7s,mb4.4
WUAZ Wupatki 71.28 58 ⇑P P 01 30 17.5 -0.1
baz=71
WUAZ Wupatki 71.28 58 eP P 01 30 18.2 +0.6
Y14A Wickenburg 71.38 60 ⇓P P 01 30 17.8 -0.4
baz=71,SNR=12
S20A Disappointment 71.44 55 ⇓P P 01 30 18.5 +0.1
baz=71
X15A Humboldt 71.47 59 ⇓P P 01 30 18.9 +0.2
baz=71,SNR=14
W16A Flagstaff 71.48 59 ⇑P P 01 30 18.8 0.0
baz=71
Z13A Yuma Proving G 71.49 61 ⇑P P 01 30 18.5 -0.4
baz=71,SNR=11
R21A Cimarron 71.52 54 ⇓P P 01 30 19.0 +0.1
baz=71,SNR=14
Q22A Crested Butte, 71.53 53 ⇓P P 01 30 19.4 +0.3
baz=71
U18A Rough Rock, Ch 71.55 57 ⇑P P 01 30 19.0 -0.1
baz=71,SNR=7.8
V17A Tonalea, Kykot 71.55 58 ⇑P P 01 30 19.7 +0.5
baz=71,SNR=25
ISCO Idaho Springs 71.59 52 eP P 01 30 19.9 +0.5
ISCO pmax pmax
comp=Z,7.0nm,0.9s,mb4.4
ISCO Idaho Springs 71.59 52 eP P 01 30 19.9 +0.6

comp=Z,6.6nm,0.9s,mb4.4
N25A Grover 71.70 50 ⇓P P 01 30 20.3 +0.3
baz=71
113A Mohawk Valley, 71.72 62 ⇓P P 01 30 19.8 -0.4
baz=72
T19A Beclabito 71.75 56 ⇓P P 01 30 20.1 -0.3
baz=72
P23A Jefferson 71.77 52 ⇑P P 01 30 21.1 +0.7
baz=72
Y15A Casa Rosa Ranc 71.78 60 ⇑P P 01 30 20.5 -0.1
baz=72,SNR=11
MVCO Mesa Verde 71.79 55 ⇑P P 01 30 20.4 -0.2
baz=72,SNR=9.9
MVCO Mesa Verde 71.79 55 eP P 01 30 20.7 +0.1
comp=Z,12nm,0.8s,mb4.7
X16A Lo Mia Camp, P 72.00 59 ⇓P P 01 30 22.2 +0.3
baz=72,SNR=16
V18A Ganado 72.00 57 ⇓P P 01 30 21.9 +0.1
baz=72,SNR=6.3
U19A Dine' College, 72.02 56 ⇑P P 01 30 21.9 0.0
baz=72,SNR=5.9
R22A Saguache, Gunn 72.06 53 ⇑P P 01 30 22.9 +0.6
baz=72,SNR=9.9
P24A Kohler Place, 72.18 51 ⇓P P 01 30 23.1 +0.2
baz=72
114A Black Gap (USA 72.27 61 ⇓P P 01 30 23.5 -0.1
baz=72,SNR=13
Z15A Gila River Ind 72.34 60 ⇑P P 01 30 23.9 0.0
baz=72
Y16A Circle Bar Ran 72.34 59 ⇓P P 01 30 24.1 +0.1
baz=72,SNR=6.8
S22A 4UR Ranch, Cre 72.36 54 ⇓P P 01 30 24.3 +0.4
baz=72,SNR=16
X17A Forest Lakes 72.43 59 ⇑P P 01 30 25.2 +0.7
baz=72
Q24A Divide 72.44 52 ⇑P P 01 30 24.6 +0.2
baz=72
T21A Navajo Lake 72.49 55 ⇑P P 01 30 25.0 +0.3
baz=72
EYMN Ely 72.51 38 eP P 01 30 23.7 -1.0
comp=Z,20nm,1.0s,mb4.8
P25A Willow Gulch B 72.58 51 ⇑P P 01 30 25.4 +0.1
baz=72
115A Sonoran Desert 72.70 61 ⇑P P 01 30 26.0 -0.1
baz=72,SNR=5.5
W19A Sanders 72.73 57 ⇓P P 01 30 26.3 +0.1
baz=72
Z16A Peralta Trail, 72.75 60 ⇑P P 01 30 26.6 +0.2
baz=72
V20A Brimhall 72.79 56 ⇓P P 01 30 26.7 +0.1
baz=72
X18A Snowflake 72.81 58 ⇑P P 01 30 26.9 +0.2
baz=73
U21A Nagezi 72.82 55 ⇑P P 01 30 26.7 0.0
baz=73,SNR=7.8
T22A Edith 72.84 54 ⇓P P 01 30 27.2 +0.4
baz=73,SNR=11
Y17A Roosevelt 72.85 59 ⇓P P 01 30 26.9 -0.1
baz=73,SNR=7.9
214A Organ Pipe Nat 72.86 62 ⇑P P 01 30 26.7 -0.3
baz=73,SNR=5.8
Q25A Bedland, Calha 72.97 51 ⇓P P 01 30 27.3 -0.2
baz=73
R24A Sanders Place, 72.98 52 ⇓P P 01 30 27.7 +0.1
baz=73,SNR=9.4
SDCO Great Sand Dun 73.11 53 eP P 01 30 28.8 +0.5
comp=Z,4.5nm,0.9s,mb4.2
116A Eloy 73.12 61 ⇓P P 01 30 28.7 +0.2
baz=73
W20A Ramah 73.24 57 ⇑P P 01 30 29.1 -0.1
baz=73,SNR=6.2
V21A Milan 73.27 56 ⇑P P 01 30 29.5 +0.1
baz=73
X19A St. Johns 73.27 58 ⇓P P 01 30 29.6 +0.2
baz=73,SNR=17
Y18A Canyon Day Jun 73.28 59 ⇓P P 01 30 29.7 +0.3
baz=73,SNR=8.1
T23A Casias Ranch, 73.31 54 ⇓P P 01 30 29.8 +0.2
baz=73
U22A Llaves 73.31 55 ⇑P P 01 30 30.0 +0.4
baz=73
S24A Houchin Ranch, 73.34 53 ⇓P P 01 30 30.0 +0.2
baz=73,SNR=5.5
Z17A San Carlos Hig 73.35 59 ⇓P P 01 30 30.0 +0.1
baz=73
ECSD EROS Data Cent 73.37 44 eP P 01 30 28.9 -0.9
comp=Z,12nm,0.6s,mb4.8
V22A San Miguel Ran 73.61 55 ⇑P P 01 30 31.3 -0.1
baz=73,SNR=5.8
Y19A Nutrioso 73.62 58 ⇑P P 01 30 32.0 +0.6
baz=73,SNR=5.7
X20A Quemado 73.65 57 ⇓P P 01 30 32.0 +0.4
baz=73,SNR=10
216A Three Points, 73.66 61 ⇑P P 01 30 31.4 -0.3
baz=73,SNR=8.1
117A Oracle 73.70 60 ⇑P P 01 30 31.9 0.0
baz=74
U23A El Rito 73.72 54 ⇓P P 01 30 32.4 +0.4
baz=74,SNR=9.9
S25A Robets Cordova 73.76 52 ⇓P P 01 30 32.1 -0.1
baz=74
KWP Kalwaria Pacla 74.06 327 eP P 01 30 34.0 +0.3
KWP pmax pmax
comp=Z,14nm,0.9s,mb4.7
KWP Kalwaria Pacla 74.06 327 eP P 01 30 34.0 +0.3
comp=Z,14nm,0.9s,mb4.7
KWP Kalwaria Pacla 74.06 327 ⇓iP P 01 30 34.8 +1.1
Z19A T-Link Ranch, 74.08 59 ⇓P P 01 30 34.3 +0.2
baz=74
118A Homack Ranch, 74.11 59 ⇓P P 01 30 34.5 +0.2
baz=74
V23A Ortiz Mt. (NFS 74.14 55 ⇑P P 01 30 35.3 +0.9
baz=74,SNR=6.0
T25A Trinidad 74.15 53 ⇑P P 01 30 34.2 -0.3
baz=74,SNR=8.1
Y20A Horse Springs, 74.17 58 ⇑P P 01 30 35.3 +0.6
baz=74,SNR=13
U24A Moreno Valley 74.18 54 ⇓P P 01 30 35.1 +0.5
baz=74
217A Green Valley 74.21 61 ⇑P P 01 30 34.7 -0.2
baz=74,SNR=12
119A Ashpeak Ranch, 74.42 59 ⇓P P 01 30 36.3 +0.1
baz=74
Y21A Point of Rocks 74.51 57 ⇓P P 01 30 37.1 +0.5
baz=74,SNR=11
218A Dragoon 74.53 60 ⇓P P 01 30 36.8 0.0
baz=74,SNR=5.2
X22A Bernardo 74.55 56 ⇓P P 01 30 37.7 +0.8
baz=74
ANMO Albuquerque 74.55 56 eP P 01 30 37.0 +0.2
ANMO pmax pmax
comp=Z,5.0nm,0.7s
ANMO Albuquerque 74.55 56 eP P 01 30 37.0 +0.2
comp=Z,5.1nm,0.7s,mb4.3
W23A Werner Place, 74.58 55 ⇓P P 01 30 37.1 +0.1
baz=74,SNR=5.5
Z20A Nine Sixteen R 74.60 58 ⇓P P 01 30 37.5 +0.3
baz=74,SNR=7.3
MDO Dochfour 74.64 346 P P 01 30 36.0 -1.0
MDO Dochfour 74.64 346 eP P 01 30 36.0 -1.0
V24A Rampart Ranch, 74.68 54 ⇓P P 01 30 37.9 +0.4
baz=74,SNR=8.2
U25A Circle Dot Ran 74.68 53 ⇓P P 01 30 37.4 -0.2
baz=74
BUR08 Bucovina Ar. S 74.69 324 eP P 01 30 37.3 0.0
BURAR Bucovina Array 74.70 324 ⇓P P 01 30 37.4 -0.1
BURAR Bucovina Array 74.70 324 ⇓iP P 01 30 37.4 -0.1
STHS Stebnicka Huta 74.79 328 eP P 01 30 38.7 +0.8
STHS pmax pmax
comp=Z,4.0nm,0.7s,mb4.2
STHS Stebnicka Huta 74.79 328 eP P 01 30 38.7 +0.8
comp=Z,3.9nm,0.7s,mb4.2
STHS Stebnicka Huta 74.79 328 eP P 01 30 38.7 +0.8
318A Bisbee 74.94 60 ⇓P P 01 30 39.1 0.0
baz=75,SNR=15
KPL Plockton 74.96 346 P P 01 30 37.6 -1.1
KPL AMb AMB 01 30 40.9
comp=Z,55nm,2.8s,mb4.7
KPL Plockton 74.96 346 eP P 01 30 37.6 -1.1
KPL AMb AMB 01 30 40.9
comp=Z,55nm,2.8s,mb4.7
V25A Rancho No Teng 74.97 54 ⇑P P 01 30 39.2 0.0
baz=75
W24A Lazy 6 Ranch, 74.97 55 ⇓P P 01 30 39.7 +0.5
baz=75,SNR=12
X23A Hourglass Bar 74.97 56 ⇑P P 01 30 39.4 +0.1
baz=75,SNR=9.6
Y22A Socorro 74.98 57 ⇑P P 01 30 39.5 +0.2

baz=75
120A U Bar Ranch, L 74.98 59 ⇊P P 01 30 39.6 +0.2
baz=75
219A White Tail Can 74.99 60 ⇊P P 01 30 39.6 +0.1
baz=75,SNR=15
TESR 74.99 323 ⇊P P 01 30 38.8 -0.3
TESR 74.99 323 ⇊/P P 01 30 38.8 -0.3
Z21A St. Cloud Mine 75.01 58 ⇑P P 01 30 39.8 +0.3
baz=75,SNR=14
BNM Barren Site 75.02 56 *eP* **P 01 30 40.1 +0.6**
comp=Z,6.9nm,1.0s,mb4.2
U26A Atchley Ranch, 75.05 53 ⇊P P 01 30 39.5 -0.2
baz=75
SCHQ Schefferville 75.06 21 P **P 01 30 38.9 -0.5**
comp=Z,5.1nm,0.5s,mb4.4,baz=305,slow=4.9,SNR=11
NIE Niedzica 75.13 328 *eP* **P 01 30 40.2 +0.3**
TRPA Tarpa 75.35 326⇑/P P 01 30 41.7 +0.5
X24A Lazy VL Ranch, 75.42 55 ⇑P P 01 30 42.3 +0.5
baz=75
319A Douglas 75.42 60 ⇑P P 01 30 41.8 -0.1
baz=75,SNR=13
Z22A Elephant Butte 75.46 57 ⇊P P 01 30 42.3 +0.2
baz=75,SNR=14
121A Cookes Peak, D 75.49 58 ⇑P P 01 30 42.5 +0.3
baz=75,SNR=6.9
220A Playas Peak, P 75.50 59 ⇊P P 01 30 42.2 -0.1
baz=75,SNR=9.2
W25A X Bar L Ranch, 75.50 54 ⇊P P 01 30 42.2 -0.1
baz=75,SNR=13
Y23A Lovelace Mesa, 75.51 56 ⇑P P 01 30 42.6 +0.2
baz=75,SNR=14
OKC Ostrava-Krasne 75.56 330 *eP* **P 01 30 42.0 -0.3**
OKC Ostrava-Krasne 75.56 330 *eP* **P 01 30 42.0 -0.3**
EBH Black Hill 75.62 345 P **P 01 30 41.6 -0.9**
EBH Black Hill 75.62 345 *eP* **P 01 30 41.6 -0.9**
UPC Upice 75.73 331 *eP* **P 01 30 43.2 -0.1**
UPC Upice 75.73 331 *eP* **P 01 30 43.2 -0.1**
DPC Dobruska-Polom 75.76 331 *eP* **P 01 30 43.7 +0.3**
DPC Dobruska-Polom 75.76 331 *eP* **P 01 30 43.7 +0.3**
ESY Stoneypath 75.76 344 P **P 01 30 42.3 -1.1**
ESY Stoneypath 75.76 344 *eP* **P 01 30 42.3 -1.1**
MORC Moravsky Berou 75.82 330 *eP* **P 01 30 43.7 -0.1**
MORC pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
MORC Moravsky Berou 75.82 330 *eP* **P 01 30 43.7 -0.1**
comp=Z,4.9nm,0.7s,mb4.2
MORC Moravsky Berou 75.82 330⇊/P P 01 30 44.0 +0.2
EAB Aberfoyle 75.83 345 P **P 01 30 42.7 -1.0**
EAB Aberfoyle 75.83 345 *eP* **P 01 30 42.7 -1.0**
122A Conniff Cattle 75.84 58 ⇊P P 01 30 44.4 +0.2
baz=76
KECS Kecovo 75.84 328 *eP* **P 01 30 44.6 +0.6**
KECS pmax pmax
comp=Z,3.0nm,1.1s,mb3.8
KECS Kecovo 75.84 328 *eP* **P 01 30 44.6 +0.6**
comp=Z,3.2nm,1.1s,mb3.9
KECS Kecovo 75.84 328 *eP* **P 01 30 44.6 +0.6**
NRDL Niedersach Rie 75.84 336 *eP* **P 01 30 43.0 -0.9**
TIRR Tirgusor 75.85 321 ⇑P P 01 30 44.5 +0.4
TIRR Tirgusor 75.85 321⇑/P P 01 30 44.5 +0.4
Y24A Capitan 75.87 56 ⇊P P 01 30 44.2 -0.2
baz=76,SNR=8.5
X25A Clemmons Ranch 75.88 55 ⇊P P 01 30 44.4 -0.1
baz=76
Z23A Rita Site, Whi 75.89 57 ⇑P P 01 30 44.9 +0.4
baz=76
W26A Owens Ranch, T 75.99 54 ⇑P P 01 30 45.2 +0.2
baz=76
EAU Auchinoon 75.99 344 P **P 01 30 44.5 -0.2**
EAU Auchinoon 75.99 344 *eP* **P 01 30 44.5 -0.2**
CLL Collm 76.01 333 *eP* **P 01 30 44.2 -0.7**
CLL Collm 76.01 333 *i P* **P 01 30 44.1 -0.8**
CLL *e* 01 30 51.0
CLL pmax pmax
comp=Z,13nm,0.6s,mb4.7
CLL Collm 76.01 333 *i P* **P 01 30 44.1 -0.8**
comp=Z,13nm,0.6s,mb4.7
CLL *e* 01 30 51.0
CLL Collm 76.01 333 *i P* **P 01 30 44.1 -0.8**
comp=Z,13nm,0.6s,mb4.7
CLL *e* 01 30 46.0
CLL *e* 01 30 51.0
BRG Berggiesshubel 76.09 333 *eP* **P 01 30 44.8 -0.5**
BRG Berggiesshubel 76.09 333 *eP* **P 01 30 44.2 -1.1**
comp=Z,3.0nm,0.7s,mb4.0
BRG *e* 01 30 46.3
comp=Z,2.8nm,0.6s
BRG Berggiesshubel 76.09 333 *eP* **P 01 30 44.2 -1.1**
BRG pmax pmax
comp=Z,2.0nm,0.7s,mb3.9
BRG pmax pmax
comp=Z,2.0nm,0.6s,mb3.9
MLR Muntele Rosu 76.10 323 ⇑P P 01 30 47.1 +1.6
MLR Muntele Rosu 76.10 323⇑/P P 01 30 47.1 +1.6
PVCC Panska Ves 76.19 332 *eP* **P 01 30 45.8 -0.1**
PVCC Panska Ves 76.19 332 *eP* **P 01 30 45.8 -0.1**
222A Williams Famil 76.20 58 ⇑P P 01 30 46.3 0.0
baz=76
PGBU Glenifferbraes 76.21 345 P **P 01 30 45.5 -0.4**
PGBU AMb AMB 01 30 49.8
comp=Z,30nm,2.5s,mb4.5
PGBU Glenifferbraes 76.21 345 *eP* **P 01 30 45.5 -0.4**
PGBU AMb AMB 01 30 49.8
comp=Z,30nm,2.5s,mb4.5
Y25A Mesa, Roswell 76.30 55 ⇑P P 01 30 46.3 -0.5
baz=76,SNR=6.7
CLZ Clausthal 76.34 335 *eP* **P 01 30 46.8 +0.1**
CLZ Clausthal 76.34 335 *eP* **P 01 30 46.8 +0.1**
CLZ Clausthal 76.34 335 *eP* **P 01 30 46.8 +0.1**
Z24A Sheeppen Canyo 76.34 56 ⇊P P 01 30 46.9 -0.1
baz=76,SNR=6.6
X26A CR and CF Fran 76.35 54 ⇑P P 01 30 47.0 -0.1
baz=76
DRGR 76.38 325 ⇊P P 01 30 47.7 +0.7
DRGR 76.38 325⇊/P P 01 30 47.7 +0.7
SCIA State Center 76.39 43 *eP* **P 01 30 47.0 -0.1**
comp=Z,34nm,0.7s,mb5.1
W27A Bowe Ranch, En 76.40 53 ⇊P P 01 30 47.1 -0.3
baz=76
VYHS Vyhne 76.44 329 *eP* **P 01 30 47.4 +0.1**
VYHS pmax pmax
comp=Z,6.0nm,1.5s,mb4.0
VYHS Vyhne 76.44 329 *eP* **P 01 30 47.4 +0.1**
comp=Z,6.3nm,1.5s,mb4.0
VYHS Vyhne 76.44 329 *eP* **P 01 30 47.4 +0.1**
ESK Eskdalemuir 76.44 344 P **P 01 30 45.8 -1.4**
ESK AMb AMB 01 30 51.6
comp=Z,32nm,3.3s
ESK Eskdalemuir 76.44 344 *eP* **P 01 30 45.8 -1.4**
ESK AMb AMB 01 30 51.6
comp=Z,32nm,3.3s
VOIR 76.52 323 ⇊P P 01 30 48.9 +1.1
VOIR 76.52 323⇊/P P 01 30 48.9 +1.1
KOLL Kolacno 76.53 329 *eP* **P 01 30 48.3 +0.5**
KOLL Kolacno 76.53 329 *eP* **P 01 30 48.2 +0.4**
VRAC Vranov 76.55 330 ⇊P P 01 30 48.4 +0.5
VRAC Vranov 76.55 330⇊/P P 01 30 48.4 +0.5
ECK Cauldkaine Hil 76.56 344 P **P 01 30 47.6 -0.3**
ECK Cauldkaine Hil 76.56 344 *eP* **P 01 30 47.6 -0.3**
PRU Pruhonice 76.66 332 *eP* **P 01 30 49.1 +0.6**
PRU Pruhonice 76.66 332 *eP* **P 01 30 49.1 +0.6**
124A Stringfield Ra 76.74 57 ⇑P P 01 30 49.1 -0.2
baz=76,SNR=6.6
Z25A Roswell 76.75 56 ⇊P P 01 30 49.4 0.0
baz=76
Y26A Elida 76.80 55 ⇊P P 01 30 49.5 -0.2
baz=76
TREC Trest 76.94 331 *eP* **P 01 30 50.6 +0.5**
TREC Trest 76.94 331 *eP* **P 01 30 50.6 +0.5**
TANN Tannenbergstha 76.96 333 *eP* **P 01 30 50.2 0.0**
WERD Werda 76.98 333 *eP* **P 01 30 50.2 -0.1**
MOX Moxa 77.02 334 *e*(P) **P 01 30 50.6 0.0**
MOX *e* 01 30 55.7
MOX Moxa 77.02 334 *eP* **P 01 30 50.4 -0.2**
GUNZ Gunzen 77.05 333 *eP* **P 01 30 50.6 -0.1**
BR131 Keskin Array S 77.05 314 *eP* **P 01 30 51.9 +1.0**
BRTR Keskin Array B 77.05 314 P **P 01 30 51.4 +0.5**
comp=Z,5.3nm,0.8s,mb4.2,baz=35,slow=5.3,SNR=34
BRTR Keskin Array B 77.05 314*eP* **P 01 30 51.9 +0.9**
BRTR pmax pmax
comp=Z,5.0nm,0.8s
NKC Novy Kostel 77.12 333 *eP* **P 01 30 51.1 0.0**
NKC Novy Kostel 77.12 333 *eP* **P 01 30 51.1 0.0**
GAL1 Galloway 77.15 345 P **P 01 30 50.9 -0.3**
GAL1 AMb AMB 01 30 58.0
comp=Z,20nm,2.1s,mb4.4
GAL1 Galloway 77.15 345 *eP* **P 01 30 50.9 -0.3**
GAL1 AMb AMB 01 30 58.0
comp=Z,20nm,2.1s,mb4.4
224A Cornudas Mount 77.15 57 ⇊P P 01 30 51.5 -0.2
baz=77,SNR=5.6
Z26A Caprock 77.18 55 ⇊P P 01 30 51.6 -0.2
baz=77,SNR=26
Y27A Causey 77.20 54 ⇑P P 01 30 51.6 -0.3
baz=77
125A Gardner Draw, 77.24 56 ⇊P P 01 30 52.0 -0.1
baz=77
AMTX Amarillo 77.30 53 *eP* **P 01 30 52.6 +0.2**
ZST Bratislava 77.31 329 *eP* **P 01 30 53.3 +1.1**
ZST pmax pmax
comp=Z,5.0nm,0.8s,mb4.2
ZST Bratislava 77.31 329 *eP* **P 01 30 53.3 +1.1**
comp=Z,5.3nm,0.8s,mb4.2
ZST Bratislava 77.31 329 *eP* **P 01 30 53.3 +1.1**
MSTX Muleshoe 77.36 54 ⇑P P 01 30 52.1 -0.6
baz=77
HPK Haverah Park 77.41 343 P **P 01 30 52.2 -0.4**
HPK AMb AMB 01 30 55.4
comp=Z,45nm,2.6s,mb4.7
HPK Haverah Park 77.41 343 *eP* **P 01 30 52.2 -0.4**
HPK AMb AMB 01 30 55.4
comp=Z,45nm,2.6s,mb4.7
GZR Gura Zlata 77.49 324 ⇊P P 01 30 53.6 +0.3
GZR Gura Zlata 77.49 324⇊/P P 01 30 53.6 +0.3
MNTX Cornudas Mount 77.51 57 *eP* **P 01 30 53.3 -0.4**
comp=Z,5.8nm,1.0s,mb4.2
BUG Bochum--Univer 77.58 337 *eP* **P 01 30 53.0 -0.7**
Z27A Tatum 77.59 55 ⇊P P 01 30 53.6 -0.5
baz=77,SNR=24
126A Clayton Basin, 77.61 56 ⇑P P 01 30 53.8 -0.4
baz=77
324A Moseley Ranch, 77.64 58 ⇑P P 01 30 53.7 -0.7
baz=77
KHC Kasperske Hory 77.72 332 *eP* **P 01 30 54.7 +0.2**
KHC pmax pmax
comp=Z,12nm,0.7s,mb4.6
KHC Kasperske Hory 77.72 332 *eP* **P 01 30 54.7 +0.3**
comp=Z,12nm,0.7s,mb4.6
KHC Kasperske Hory 77.72 332 *eP* **P 01 30 54.5 0.0**
KHC *ex* x 01 30 58.8
BZS Buzias 77.77 325 ⇊P P 01 30 54.8 0.0
BZS Buzias 77.77 325⇊/P P 01 30 54.8 0.0
GEC2 GERESS Array S 77.92 332 *eP* **P 01 30 55.5 -0.1**
GEC2 GERESS Array S 77.92 332 *eP* **P 01 30 55.5 -0.1**
GEC2 GERESS Array S 77.92 332 *eP* **P 01 30 55.5 -0.1**
WET Wettzell 77.93 332 *eP* **P 01 30 56.1 +0.4**
WET Wettzell 77.93 332 *eP* **P 01 30 56.1 +0.4**
WET Wettzell 77.93 332 *eP* **P 01 30 56.1 +0.4**
GMM Mts of Mourne 77.97 345 P **P 01 30 55.4 -0.3**
GMM Mts of Mourne 77.97 345 *eP* **P 01 30 55.4 -0.3**
GRA1 Grafenberg Arr 77.98 334 *eP* **P 01 30 56.1 +0.2**
GRF Grafenberg Arr 77.98 334 *eP* **P 01 30 56.1 +0.2**
GRF Grafenberg Arr 77.98 334 *eP* **P 01 30 56.1 +0.2**
325A Bean Ranch, Si 77.99 57 ⇑P P 01 30 56.0 -0.2
baz=78
KBI1 Birley Grange 78.05 343 P **P 01 30 55.8 -0.4**
KBI1 Birley Grange 78.05 343 *eP* **P 01 30 55.8 -0.4**
425A Indio Mountain 78.40 58 ⇑P P 01 30 58.3 -0.2
baz=78,SNR=10
PKSM Moragy 78.43 327 ⇊P P 01 30 58.2 -0.2
PKSM Moragy 78.43 327⇊/P P 01 30 58.2 -0.2
326A Caldwell Ranch 78.61 57 ⇊P P 01 30 59.4 -0.3
baz=78
MEM Membach 78.68 337 P **P 01 31 00.2 +0.5**
MPEP Malo Peshtene 78.76 323 *eP* **P 01 31 00.0 -0.3**
WMOK Wichita Mounta 79.00 51 *eP* **P 01 31 01.5 -0.3**
WMOK pmax pmax
comp=Z,4.0nm,0.6s,mb4.2
WMOK Wichita Mounta 79.00 51 *eP* **P 01 31 01.5 -0.3**
comp=Z,4.3nm,0.6s,mb4.3
BCLA Clavier 79.04 337 P **P 01 31 01.8 +0.1**
426A McDonald Obser 79.05 57 ⇑P P 01 31 01.5 -0.6
baz=79,SNR=5.7
PGB Panagyurishte 79.23 322 *eP* **P 01 31 01.3 -1.6**
328A Wristen Ranch, 79.24 56 ⇊P P 01 31 02.7 -0.5
baz=79,SNR=17
HDIL Hopedale 79.28 41 *eP* **P 01 31 02.2 -1.0**
comp=Z,30nm,0.8s,mb5.0
427A Hayter Ranch, 79.28 57 ⇊P P 01 31 03.0 -0.4
baz=79,SNR=7.0
FUR Furstenfeldbru 79.31 333 *eP* **P 01 31 03.8 +0.6**
FUR Furstenfeldbru 79.31 333 *eP* **P 01 31 03.8 +0.6**
FUR Furstenfeldbru 79.31 333 *eP* **P 01 31 03.8 +0.6**
SOKA Soboth 79.34 330⇊/P P 01 31 03.9 +0.5
comp=Z,12nm,0.8s,mb4.6
STU Stuttgart 79.41 334 *eP* **P 01 31 03.8 0.0**
GIVF Givet 79.46 338 *eP* **P 01 31 02.7 -1.3**
MCH1 Michaelchurch 79.54 343 P **P 01 31 03.9 -0.5**
MCH1 AMb AMB 01 31 14.9
comp=Z,42nm,1.9s,mb4.7
MCH1 Michaelchurch 79.54 343 *eP* **P 01 31 03.9 -0.5**
MCH1 AMb AMB 01 31 14.9
comp=Z,42nm,1.9s,mb4.7
KBA Koelnbreinsper 79.58 331⇑/P P 01 31 05.0 +0.4
comp=Z,19nm,0.8s,mb4.8,SNR=15
VTS Vitosha 79.61 323 ⇊P P 01 31 05.6 +0.7
VTS Vitosha 79.61 323 *eP* **P 01 31 05.0 +0.1**
VTS Vitosha 79.61 323⇊/P P 01 31 05.6 +0.7
BAIF Baives 79.66 338 *eP* **P 01 31 03.8 -1.2**
527A Woodward Ranch 79.68 57 ⇑P P 01 31 05.0 -0.5
baz=79,SNR=5.9
SWN1 Swindon 79.75 342 P **P 01 31 05.5 0.0**
SWN1 AMb AMB 01 31 08.7
comp=Z,74nm,1.8s,mb5.0
SWN1 Swindon 79.75 342 *eP* **P 01 31 05.5 0.0**
SWN1 AMb AMB 01 31 08.7
comp=Z,74nm,1.8s,mb5.0
428A Kincaid Ranch, 79.79 56 ⇊P P 01 31 06.0 -0.2
baz=80,SNR=9.0
626A Big Bend Ranch 79.81 58 ⇊P P 01 31 05.8 -0.4
baz=80
WATA Walderalm 79.94 332⇑/P P 01 31 06.2 -0.4
comp=Z,9.2nm,0.5s,mb4.7,SNR=15
WTTA Wattenberg 79.98 332⇑/P P 01 31 07.2 +0.4
comp=Z,19nm,0.8s,mb4.8,SNR=14
RETA Reutte 80.07 333⇊/P P 01 31 07.6 +0.3
comp=Z,11nm,1.0s,mb4.4
BFO Black Forest 80.07 335 *eP* **P 01 31 07.1 -0.2**
BFO Black Forest 80.07 335 *eP* **P 01 31 07.1 -0.2**
BFO Black Forest 80.07 335 *eP* **P 01 31 07.1 -0.2**
MOTA Moosalm 80.08 333⇊/P P 01 31 07.2 -0.1
comp=Z,24nm,1.0s,mb4.8,SNR=12
528A Cox Ranch, San 80.15 57 ⇑P P 01 31 07.9 -0.1
baz=80,SNR=9.4
MMB Musomiste 80.20 322 *eP* **P 01 31 08.0 -0.1**
TXAR Lajitas Array 80.24 58 P **P 01 31 08.4 -0.2**
comp=Z,13nm,0.7s,mb4.7,baz=297,slow=4.3,SNR=151
TXAR pP pP 01 31 45.0 -0.8
comp=Z,1.0nm,0.5s,baz=300,slow=4.1,SNR=2.3
TXAR Lajitas Array 80.24 58 P **P 01 31 08.4 -0.2**
TXAR *PP pP 01 31 45.0 -0.7
TXAR pmax pmax
comp=Z,13nm,0.7s
TXAR pmax pmax
comp=Z,1.0nm,0.5s
TXAR Lajitas Array 80.24 58 P **P 01 31 08.4 -0.2**
TXAR pP pP 01 31 45.0 -0.8
KKB Krupnik 80.25 322 *eP* **P 01 31 09.0 +0.6**
CDF Champ du Feu 80.31 335 *eP* **P 01 31 08.4 -0.1**
comp=Z,22nm,0.8s,mb4.5
CDF Champ du Feu 80.31 335 *eP* **P 01 31 08.4 -0.1**
CDF pmax pmax
comp=Z,11nm,0.8s,mb4.5
CDF Champ du Feu 80.31 335 *eP* **P 01 31 08.4 -0.1**
comp=Z,11nm,0.8s,mb4.5
FETA Feichten 80.49 333⇑/P P 01 31 10.0 +0.5
comp=Z,8.6nm,1.1s,mb4.3
ECH Echery 80.52 335 *eP* **P 01 31 09.3 -0.4**
ECH pmax pmax
comp=Z,11nm,0.9s,mb4.5
ECH Echery 80.52 335 *eP* **P 01 31 09.3 -0.4**
comp=Z,11nm,0.9s,mb4.5
DAVA Damuels 80.52 333⇑/P P 01 31 10.2 +0.5
comp=Z,9.5nm,1.0s,mb4.4
HEX Exmoor 80.58 343 P **P 01 31 10.1 +0.1**
HEX Exmoor 80.58 343 *eP* **P 01 31 10.1 +0.1**
628A Black Gap, Mar 80.59 57 ⇑P P 01 31 09.8 -0.6
baz=80,SNR=9.4
FVM French Village 80.79 44 *eP* **P 01 31 10.3 -1.0**
MEZF Maizieres J'vi 80.85 337 *eP* **P 01 31 10.6 -0.9**
comp=Z,35nm,0.9s,mb4.7
MEZF Maizieres J'vi 80.85 337 *eP* **P 01 31 10.6 -0.9**
comp=Z,35nm,0.9s,mb5.0
HAU Haudompre 80.94 336 *eP* **P 01 31 11.5 -0.4**
comp=Z,18nm,0.9s,mb4.4
HAU Haudompre 80.94 336 *eP* **P 01 31 11.5 -0.4**
HAU pmax pmax
comp=Z,9.0nm,0.9s,mb4.4
HAU Haudompre 80.94 336 *eP* **P 01 31 11.5 -0.4**
comp=Z,9.1nm,0.9s,mb4.4
HINF Hinteralfeld 80.97 335 *eP* **P 01 31 11.5 -0.6**
comp=Z,11nm,0.9s,mb4.2
HINF Hinteralfeld 80.97 335 *eP* **P 01 31 11.5 -0.6**
HINF pmax pmax
comp=Z,6.0nm,0.9s,mb4.2
HINF Hinteralfeld 80.97 335 *eP* **P 01 31 11.5 -0.6**
comp=Z,5.6nm,0.9s,mb4.2
MMAI Mount Meron Ar 81.25 309 P **P 01 31 14.7 +0.8**
comp=Z,17nm,0.7s,mb4.8,baz=28,slow=6.5,SNR=25
OLIL Olney 81.29 42 *eP* **P 01 31 13.6 -0.3**
SIUC Southern Illin 81.58 43 *eP* **P 01 31 15.2 -0.3**
JCT Junction City 81.63 55 *eP* **P 01 31 15.4 -0.5**
JCT pmax pmax
comp=Z,6.0nm,0.6s,mb4.4
JCT Junction City 81.63 55 *eP* **P 01 31 15.4 -0.5**
comp=Z,6.2nm,0.6s,mb4.4
MIAR Mount Ida 81.91 48 *eP* **P 01 31 16.8 -0.5**
FLN La Foliniere 82.03 340 *eP* **P 01 31 16.4 -1.2**
comp=Z,12nm,0.4s,mb4.5
FLN La Foliniere 82.03 340 *eP* **P 01 31 16.4 -1.2**
FLN pmax pmax
comp=Z,6.0nm,0.4s,mb4.6
FLN La Foliniere 82.03 340 *eP* **P 01 31 16.4 -1.2**
comp=Z,5.8nm,0.4s,mb4.6
LDF La Druitiere 82.10 340 *eP* **P 01 31 17.2 -0.8**
comp=Z,7.8nm,0.5s,mb4.3
LDF La Druitiere 82.10 340 *eP* **P 01 31 17.2 -0.8**
LDF pmax pmax
comp=Z,4.0nm,0.5s,mb4.3
LDF La Druitiere 82.10 340 *eP* **P 01 31 17.2 -0.8**
comp=Z,3.9nm,0.5s,mb4.3
CABF La Chapelle 82.28 335 *eP* **P 01 31 19.4 +0.4**
comp=Z,16nm,0.8s,mb4.4
CABF La Chapelle 82.28 335 *eP* **P 01 31 19.4 +0.4**
CABF pmax pmax
comp=Z,8.0nm,0.8s,mb4.4
CABF La Chapelle 82.28 335 *eP* **P 01 31 19.4 +0.4**
comp=Z,8.2nm,0.8s,mb4.4
LOR Lormes 82.31 337 *eP* **P 01 31 18.8 -0.3**
comp=Z,12nm,0.5s,mb4.5
LOR Lormes 82.31 337 *eP* **P 01 31 18.8 -0.3**
LOR pmax pmax
comp=Z,6.0nm,0.5s,mb4.5
LOR Lormes 82.31 337 *eP* **P 01 31 18.8 -0.3**
comp=Z,5.8nm,0.5s,mb4.5
ALLY Alegheny Colle 82.33 35 *eP* **P 01 31 19.1 -0.3**
GRR Gorron 82.47 340 *eP* **P 01 31 20.0 +0.1**
comp=Z,25nm,0.5s,mb4.8
GRR Gorron 82.47 340 *eP* **P 01 31 20.0 +0.1**
GRR pmax pmax
comp=Z,12nm,0.5s,mb4.8
GRR Gorron 82.47 340 *eP* **P 01 31 20.0 +0.1**
comp=Z,12nm,0.5s,mb4.8
WCI Wyandotte Cave 82.53 41 *eP* **P 01 31 20.2 -0.2**
SSF Saint Saulge 82.59 337 *eP* **P 01 31 20.4 -0.2**
comp=Z,21nm,1.0s,mb4.5
SSF Saint Saulge 82.59 337 *eP* **P 01 31 20.4 -0.2**
SSF pmax pmax
comp=Z,11nm,1.0s,mb4.5
SSF Saint Saulge 82.59 337 *eP* **P 01 31 20.4 -0.2**
comp=Z,10nm,1.0s,mb4.5
HYF Humbligny 82.64 338 *eP* **P 01 31 20.9 +0.1**
SMF Signal de Mont 82.88 337 *eP* **P 01 31 22.0 -0.1**
comp=Z,63nm,0.8s,mb5.1
SMF Signal de Mont 82.88 337 *eP* **P 01 31 22.0 -0.1**
SMF pmax pmax
comp=Z,32nm,0.8s,mb5.1
SMF Signal de Mont 82.88 337 *eP* **P 01 31 22.0 -0.1**
comp=Z,32nm,0.8s,mb5.1
AVF Avril sur Loir 82.89 337 *eP* **P 01 31 22.0 -0.1**
comp=Z,18nm,0.8s,mb4.6
AVF Avril sur Loir 82.89 337 *eP* **P 01 31 22.0 -0.1**
AVF pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
AVF Avril sur Loir 82.89 337 *eP* **P 01 31 22.0 -0.1**
comp=Z,9.1nm,0.8s,mb4.6
SGMF Saint Gilles 82.98 341 *eP* **P 01 31 21.8 -0.8**
comp=Z,62nm,0.8s,mb5.1
SGMF Saint Gilles 82.98 341 *eP* **P 01 31 21.8 -0.8**
SGMF pmax pmax
comp=Z,31nm,0.8s,mb5.1
SGMF Saint Gilles 82.98 341 *eP* **P 01 31 21.8 -0.8**
comp=Z,31nm,0.8s,mb5.1
ROSF Rostrenen 83.06 342 *eP* **P 01 31 23.0 0.0**
comp=Z,60nm,0.9s,mb5.0
ROSF Rostrenen 83.06 342 *eP* **P 01 31 23.0 0.0**
ROSF pmax pmax
comp=Z,30nm,0.9s,mb5.0
ROSF Rostrenen 83.06 342 *eP* **P 01 31 23.0 0.0**
comp=Z,30nm,0.9s,mb5.0
LPL La Plagne 83.08 334 *eP* **P 01 31 23.8 +0.7**
comp=Z,24nm,1.0s,mb4.6
LPL La Plagne 83.08 334 *eP* **P 01 31 23.8 +0.7**
LPL pmax pmax
comp=Z,12nm,1.0s,mb4.6
LPL La Plagne 83.08 334 *eP* **P 01 31 23.8 +0.7**
comp=Z,12nm,1.0s,mb4.6
LPG La Plagne 83.09 334 *eP* **P 01 31 23.9 +0.7**
comp=Z,42nm,1.1s,mb4.8
LPG La Plagne 83.09 334 *eP* **P 01 31 23.9 +0.7**
LPG pmax pmax
comp=Z,21nm,1.1s,mb4.8
LPG La Plagne 83.09 334 *eP* **P 01 31 23.9 +0.7**
comp=Z,21nm,1.1s,mb4.8
BGF Bois d'Agland 83.23 337 *eP* **P 01 31 23.8 -0.1**
comp=Z,17nm,0.9s,mb4.5
BGF Bois d'Agland 83.23 337 *eP* **P 01 31 23.8 -0.1**
BGF pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
BGF Bois d'Agland 83.23 337 *eP* **P 01 31 23.8 -0.1**
comp=Z,8.4nm,0.9s,mb4.5
QUIF Quistinic 83.43 342 *eP* **P 01 31 23.8 -1.1**
comp=Z,42nm,0.9s,mb4.9
QUIF Quistinic 83.43 342 *eP* **P 01 31 23.8 -1.1**
QUIF pmax pmax
comp=Z,21nm,0.9s,mb4.9
QUIF Quistinic 83.43 342 *eP* **P 01 31 23.8 -1.1**
comp=Z,21nm,0.9s,mb4.9
WVT Waverly 83.51 43 *eP* **P 01 31 25.0 -0.5**
WVT pmax pmax
comp=Z,12nm,0.8s,mb4.7
WVT Waverly 83.51 43 *eP* **P 01 31 25.0 -0.6**
comp=Z,12nm,0.8s,mb4.7
TCF Toulx Ste Croi 83.65 338 *eP* **P 01 31 25.3 -0.8**
AQU L'Aquila 83.67 329 *eP* **P 01 31 26.9 +0.7**
MBDF Montbardon 83.78 334 *eP* **P 01 31 26.6 -0.1**
comp=Z,17nm,0.8s,mb4.5
MBDF Montbardon 83.78 334 *eP* **P 01 31 26.6 -0.1**
MBDF pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
MBDF Montbardon 83.78 334 *eP* **P 01 31 26.6 -0.1**
comp=Z,8.4nm,0.8s,mb4.5
ORIF Oris-en-Rattie 83.88 335 *eP* **P 01 31 27.3 +0.1**
comp=Z,34nm,0.8s,mb4.8
ORIF Oris-en-Rattie 83.88 335 *eP* **P 01 31 27.3 +0.1**
ORIF pmax pmax
comp=Z,17nm,0.8s,mb4.8
ORIF Oris-en-Rattie 83.88 335 *eP* **P 01 31 27.3 +0.1**
comp=Z,17nm,0.8s,mb4.8
SSB Saint Sauveur 83.94 336 *eP* **P 01 31 28.0 +0.5**
SSB pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
SSB Saint Sauveur 83.94 336 *eP* **P 01 31 28.0 +0.5**
comp=Z,6.2nm,0.8s,mb4.4
MFF Saint Martin d 83.97 339 *eP* **P 01 31 27.0 -0.6**
comp=Z,44nm,0.8s,mb4.9
MFF Saint Martin d 83.97 339 *eP* **P 01 31 27.0 -0.6**
MFF pmax pmax
comp=Z,22nm,0.8s,mb4.9
MFF Saint Martin d 83.97 339 *eP* **P 01 31 27.0 -0.6**
comp=Z,22nm,0.8s,mb4.9
VIVF Saint-Julien-I 84.29 335 *eP* **P 01 31 28.6 -0.7**
comp=Z,20nm,1.2s,mb4.4
VIVF Saint-Julien-I 84.29 335 *eP* **P 01 31 28.6 -0.7**
VIVF pmax pmax
comp=Z,10.0nm,1.2s,mb4.4

VIVF	**Saint-Julien-l**	**84.29**	**335**	*eP*	**P**	**01 31 28.6**	**-0.7**
	comp=Z,9.9nm,1.2s,mb4.4						
SBF	**Sospel**	**84.35**	**333**	*eP*	**P**	**01 31 29.1**	**-0.6**
	comp=Z,24nm,0.7s,mb4.7						
SBF	**Sospel**	**84.35**	**333**	*eP*	**P**	**01 31 29.1**	**-0.6**
SBF				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.7						
SBF	**Sospel**	**84.35**	**333**	*eP*	**P**	**01 31 29.1**	**-0.6**
	comp=Z,12nm,0.7s,mb4.7						
RJF	**Les Rejaudoux**	**84.75**	**338**	*eP*	**P**	**01 31 31.0**	**-0.6**
	comp=Z,65nm,1.2s,mb4.9						
RJF	**Les Rejaudoux**	**84.75**	**338**	*eP*	**P**	**01 31 31.0**	**-0.6**
RJF				pmax	pmax		
	comp=Z,32nm,1.2s,mb4.9						
RJF	**Les Rejaudoux**	**84.75**	**338**	*eP*	**P**	**01 31 31.0**	**-0.6**
	comp=Z,32nm,1.2s,mb4.9						
SMRF	**Simiane la Rot**	**84.82**	**335**	*eP*	**P**	**01 31 31.7**	**-0.3**
	comp=Z,6.9nm,0.9s,mb4.1						
SMRF	**Simiane la Rot**	**84.82**	**335**	*eP*	**P**	**01 31 31.7**	**-0.3**
	comp=Z,6.9nm,0.9s,mb4.4						
FRF	**La Foret Royal**	**84.87**	**334**	*eP*	**P**	**01 31 31.7**	**-0.6**
	comp=Z,13nm,0.8s,mb4.4						
FRF	**La Foret Royal**	**84.87**	**334**	*eP*	**P**	**01 31 31.7**	**-0.6**
FRF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
FRF	**La Foret Royal**	**84.87**	**334**	*eP*	**P**	**01 31 31.7**	**-0.6**
	comp=Z,6.3nm,0.8s,mb4.4						
CAF	**Calviac**	**84.95**	**337**	*eP*	**P**	**01 31 32.5**	**-0.1**
	comp=Z,60nm,1.0s,mb5.0						
CAF	**Calviac**	**84.95**	**337**	*eP*	**P**	**01 31 32.5**	**-0.1**
CAF				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.0						
CAF	**Calviac**	**84.95**	**337**	*eP*	**P**	**01 31 32.5**	**-0.1**
	comp=Z,30nm,1.0s,mb5.0						
PGF	**Pioggiola**	**85.03**	**332**	*eP*	**P**	**01 31 32.5**	**-0.6**
	comp=Z,10.0nm,0.7s,mb4.4						
PGF	**Pioggiola**	**85.03**	**332**	*eP*	**P**	**01 31 32.5**	**-0.6**
PGF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
PGF	**Pioggiola**	**85.03**	**332**	*eP*	**P**	**01 31 32.5**	**-0.6**
	comp=Z,5.0nm,0.7s,mb4.3						
LMR	**La Mourre**	**85.12**	**334**	*eP*	**P**	**01 31 33.3**	**-0.2**
	comp=Z,23nm,0.9s,mb4.6						
LMR	**La Mourre**	**85.12**	**334**	*eP*	**P**	**01 31 33.3**	**-0.2**
LMR				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.6						
LMR	**La Mourre**	**85.12**	**334**	*eP*	**P**	**01 31 33.3**	**-0.2**
	comp=Z,12nm,0.9s,mb4.6						
TIP	**Timpagrande**	**85.13**	**325**	*eP*	**P**	**01 31 33.3**	**-0.4**
	comp=Z,28nm,1.1s,mb4.9						
SWET	**Sewanee**	**85.15**	**42**	*eP*	**P**	**01 31 33.1**	**-0.7**
MVL	**Millersville**	**85.23**	**33**	*eP*	**P**	**01 31 33.6**	**-0.5**
LASF	**Ste Croix**	**85.24**	**336**	*eP*	**P**	**01 31 33.8**	**-0.3**
	comp=Z,33nm,1.3s,mb4.6						
LFF	**La Frestale**	**85.29**	**338**	*eP*	**P**	**01 31 34.0**	**-0.3**
	comp=Z,53nm,0.7s,mb5.1						
LFF	**La Frestale**	**85.29**	**338**	*eP*	**P**	**01 31 34.0**	**-0.3**
LFF				pmax	pmax		
	comp=Z,26nm,0.7s,mb5.1						
LFF	**La Frestale**	**85.29**	**338**	*eP*	**P**	**01 31 34.0**	**-0.3**
	comp=Z,26nm,0.7s,mb5.1						
CPCT	**Cooper Cave**	**85.62**	**41**	*eP*	**P**	**01 31 36.0**	**-0.2**
MTLF	**Montolieu**	**86.38**	**337**	*eP*	**P**	**01 31 39.5**	**-0.2**
	comp=Z,12nm,0.8s,mb4.3						
MTLF	**Montolieu**	**86.38**	**337**	*eP*	**P**	**01 31 39.5**	**-0.2**
MTLF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
MTLF	**Montolieu**	**86.38**	**337**	*eP*	**P**	**01 31 39.5**	**-0.2**
	comp=Z,5.8nm,0.8s,mb4.4						
LRAL	**Lakeview Retre**	**86.42**	**44**	*eP*	**P**	**01 31 38.9**	**-1.2**
EPF	**Esparros**	**87.17**	**338**	*eP*	**P**	**01 31 42.8**	**-0.8**
SJPF	**Ste Jean**	**87.50**	**339**	*eP*	**P**	**01 31 45.1**	**0.0**
ETSF	**Etsaut**	**87.53**	**338**	*eP*	**P**	**01 31 45.4**	**+0.1**
	comp=Z,15nm,0.7s,mb4.7						
ETSF	**Etsaut**	**87.53**	**338**	*eP*	**P**	**01 31 45.4**	**+0.1**
ETSF				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.7						
ETSF	**Etsaut**	**87.53**	**338**	*eP*	**P**	**01 31 45.4**	**+0.1**
	comp=Z,7.7nm,0.7s,mb4.6						
GOGA	**Godfrey**	**87.79**	**42**	*eP*	**P**	**01 31 45.4**	**-1.3**
ESDC	**Sonseca Array**	**91.42**	**340**	*P*	**P**	**01 32 02.6**	**-1.0**
	comp=Z,0.3nm,0.4s,mb3.7,baz=6.8,slow=4.6,SNR=6.4						
DBIC	**Dimbokro**	**122.71**	**329**	PKP	PKPdf	01 37 51.8	-1.1
	comp=Z,3.2nm,0.7s,baz=11,slow=3.7,SNR=5.7						
DBIC	**Dimbokro**	**122.71**	**329**	PKIKP	PKPdf	01 37 51.8	-1.1
DBIC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
LPAZ	**La Paz**	**137.10**	**59**	PKP	PKPdf	01 38 21.3	+1.4
	comp=Z,1.5nm,0.9s,baz=342,slow=3.2,SNR=5.0						
LPAZ	**La Paz**	**137.10**	**59**	PKIKP	PKPdf	01 38 21.3	+1.3
LPAZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
VNA1	**Neumayer--Stat**	**152.90**	**196**	*e*PKPdf	PKPdf	01 38 49.3	+4.2
VNA1				*e*		01 39 01.6	
VNA1				*e*		01 39 40.6	

*CSEM **31** 01:27:59.9±0.3, 74°.31N×13°.56E, h15km, ML2.4, Error ellipse: s-maj=12.3km s-min=4.9km az=70.0*
*NAO **31** 01:28:01.9±6.5, 74°.37N×14°.18E, h25km±79km, ML3.2*
BER 31 01:28:01.0±3.1, 74°.29N×13°.26E, h10km, MD2.6, ML2.4, ML3.2(NAO), **Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJO	**Bjornoya**	**1.62**	**79**	*eP*	Pn	01 28 27.3	-2.2
BJO				*eS*	Sn	01 28 46.0	-4.3
BJO				AML	AML	01 28 47.1	
	comp=Z,35nm,0.1s						
BJO	**Bjornoya**	**1.62**	**79**	*eP*	Pn	01 28 27.3	-2.2
	SNR=50						
BJO				*eS*	Sn	01 28 46.0	-4.4
	comp=Z,35nm,0.1s,SNR=50						
HSP	**Hornsund**	**2.80**	**11**	*eP*	Pn	01 28 42.9	-2.8
SPA0	**Spitsbergen Ar**	**3.98**	**9**	Pn	Pn	01 29 00.6	-1.4
SPA0	**Spitsbergen Ar**	**3.98**	**9**	Pn	Pn	01 29 00.6	-1.4
	SNR=50						
KBS	**Kingsbay**	**4.68**	**357**	Pn	Pn	01 29 09.0	-2.5
KBS	**Kingsbay**	**4.68**	**357**	*eP*	Pn	01 29 09.5	-2.0
KBS	**Kingsbay**	**4.68**	**357**	Pn	Pn	01 29 09.0	-2.5
KBS	**Kingsbay**	**4.68**	**357**	*eP*	Pn	01 29 09.5	-2.0
	SNR=49						
TRO	**Tromso**	**5.00**	**157**	*eP*	Pn	01 29 14.3	-1.5
TRO				*eS*	Sn	01 30 08.2	-5.3
TRO	**Tromso**	**5.00**	**157**	*eP*	Pn	01 29 14.3	-1.5
TRO				*eS*	Sn	01 30 08.2	-5.3
TRO	**Tromso**	**5.00**	**157**	*eP*	Pn	01 29 14.3	-1.6
	SNR=49						
TRO				*eS*	Sn	01 30 08.2	-5.3
	SNR=49						
ARA0	**ARCESS Array S**	**6.09**	**135**	Pn	Pn	01 29 28.8	-2.1
	baz=329,slow=12						
ARA0				Sn	Sn	01 30 35.6	-5.0
	baz=328,slow=22						
ARA0	**ARCESS Array S**	**6.09**	**135**	Pn	Pn	01 29 28.8	-2.1
	baz=329,slow=12,SNR=50						
ARA0				Sn	Sn	01 30 35.6	-5.0
	baz=328,slow=20,SNR=50						
KTK1	**Kautokeino**	**6.15**	**144**	*eP*	Pn	01 29 31.1	-0.6
KTK1				*e*Sn	Sn	01 30 38.0	-4.0
KTK1				AML	AML	01 30 42.9	
	comp=Z,20nm,0.4s						
KTK1	**Kautokeino**	**6.15**	**144**	*eP*	Pn	01 29 31.1	-0.7
	SNR=49						
KTK1				*e*Sn	Sn	01 30 38.0	-4.1
	comp=Z,20nm,0.4s,SNR=50						
LOF	**Lofoten**	**6.19**	**179**	*e*S	Sn	01 30 34.1	-8.8
APA0	**Apatity Array**	**9.24**	**126**	Pn	Pn	01 30 11.2	-2.9
	baz=313,slow=12						
APA0				Sn	Sn	01 31 49.0	-9.0
	baz=338,slow=22						
APA0	**Apatity Array**	**9.24**	**126**	Pn	Pn	01 30 11.1	-3.0
	baz=313,slow=12,SNR=50						

*NIED **31** 01:34:00, 38°.50N×133°.90E, h480km, Mw4.0 Best double couple: M0=1.04000×10^15 NP1:φs=311.00000°, δ=58.00000°, λ=-69.00000°. NP2:φs=95.00000°, δ=37.00000°, λ=-120.00000°.*
*ISCJB **31** 01:34:55.6±0.3, 38°.62N±0°.05×133°.84E±0°.06, h459km±6km, mb3.7/17, Error ellipse: s-maj=9.7km s-min=6.0km az=143.6*
*MOS **31** 01:34:55.6±0.7, 38°.64N×133°.81E, h458km, mb4.1/4, Error ellipse: s-maj=18.2km s-min=12.5km az=121.5*

*JMA **31** 01:34:55.5±0.2, 38°.51N×133°.90E, h473km±2km, M3.7*
*IDC **31** 01:34:56.7±1.2, 38°.66N×133°.70E, h449km±15km, mb3.2/12, mb1 3.3/15, mb1mx3.2/26, mbtmp3.2/15, Error ellipse: s-maj=20.5km s-min=15.3km az=18.0*
*NEIC **31** 01:34:56.4±0.5, 38°.55N×133°.66E, h449km±7km, mb4.1/5, Error ellipse: s-maj=12.4km s-min=8.0km az=46.0*
*BJI **31** 01:34:56.0, 38°.53N×133°.67E, h468km, mB4.5/2, mb4.7/5*
ISC 31 01:34:56.5±0.3, 38°.60N±0°.06×133°.85E±0°.06, h453km±6km, n61, σ0°84/74, mb3.7/17, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHG	**Hegura jima**	**2.53**	**106**	P	P	**01 36 01.5**	**+1.1**
JJH	**Hakui**	**2.86**	**125**	P	P	**01 36 03.5**	**+0.8**
JSZ	**Suzu**	**3.00**	**111**	P	P	**01 36 04.6**	**+0.9**
JKG	**Kaga**	**3.05**	**139**	P	P	**01 36 04.6**	**+0.5**
JKSM	**Kasumi**	**3.08**	**168**	P	P	**01 36 04.4**	**0.0**
JKY	**Yasaka**	**3.13**	**161**	P	P	**01 36 05.0**	**+0.2**
JKY				*e*S	S	**01 37 00.1**	**0.0**
JSD	**Sado**	**3.51**	**98**	P	P	**01 36 08.3**	**+0.7**
JWT	**Wachi**	**3.54**	**159**	P	P	**01 36 08.4**	**+0.4**
JWT				S	S	**01 37 05.4**	**-0.6**
JHS	**Saijyo**	**3.64**	**190**	P	P	**01 36 08.8**	**0.0**
JHS				*e*S	S	**01 37 06.1**	**-1.5**
MAJO	**Matsushiro**	**4.02**	**119**	*e*P	P	**01 36 12.2**	**+0.2**
MAT	**Matsushiro**	**4.02**	**119**	P	P	**01 36 12.0**	**0.0**
MAT				S	S	**01 37 13.6**	**+0.2**
MAT	**Matsushiro**	**4.02**	**119**	P	P	**01 36 12.4**	**+0.4**
JNG	**Nsakai**	**4.03**	**122**	P	P	**01 36 12.5**	**+0.5**
JNG				*e*S	S	**01 37 14.7**	**+1.2**
MJAR	**Matsushiro Arr**	**4.03**	**119**	P	P	**01 36 12.7**	**+0.7**
	3.7nm,0.3s,baz=297,slow=9.0,SNR=56						
JAW	**Awa shima**	**4.24**	**90**	P	P	**01 36 14.3**	**+0.5**
JAO	**Obara**	**4.30**	**140**	P	P	**01 36 14.4**	**-0.1**
JNY	**Yasuok**	**4.56**	**134**	P	P	**01 36 17.1**	**+0.3**
JIE	**Ise**	**4.79**	**150**	P	P	**01 36 19.3**	**+0.3**
KSRS	**Korea Array**	**4.82**	**258**	P	P	**01 36 20.1**	**+0.8**
	0.6nm,0.3s,baz=80,slow=8.9,SNR=26						
KSRS	**Korea Array**	**4.82**	**258**	P	P	**01 36 20.1**	**+0.9**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
JHU	**Hanno**	**5.13**	**121**	P	P	**01 36 22.1**	**-0.1**
JHU				*e*S	S	**01 37 30.7**	**-1.4**
JFT	**Otama**	**5.23**	**100**	P	P	**01 36 23.4**	**+0.2**
JFT				*e*S	S	**01 37 33.4**	**-0.5**
JRG	**Rokugo**	**5.34**	**79**	*e*S	S	**01 37 36.0**	**+0.2**
JMM	**Marumori**	**5.51**	**95**	P	P	**01 36 25.6**	**-0.3**
JMM				*e*S	S	**01 37 36.8**	**-2.2**
JHO	**Hitachi**	**5.69**	**108**	P	P	**01 36 26.5**	**-1.2**
JMK	**Ichinoseki**	**5.77**	**84**	P	P	**01 36 29.7**	**+1.3**
JMK				*e*S	S	**01 37 42.8**	**-0.8**
JTO	**Tosashimizu**	**5.79**	**189**	P	P	**01 36 28.8**	**-0.1**
JTO				*e*S	S	**01 37 43.1**	**-1.1**
BSO4	**Boso 4**	**6.33**	**123**	P	P	**01 36 34.3**	**0.0**
BSO3	**Boso 3**	**6.55**	**123**	P	P	**01 36 36.0**	**-0.6**
MDJ	**Mudanjiang**	**6.80**	**333**	*e*P	P	**01 36 39.9**	**+0.9**
	comp=Z,14nm,0.8s						
ERM	**Erimo**	**7.88**	**61**	*e*P	P	**01 36 51.9**	**+1.4**
ERM				*e*		01 38 20.3	
ERM				pmax	pmax		
	comp=Z,9.0nm,0.4s						
ERM	**Erimo**	**7.88**	**61**	*e*Pn	P	**01 36 51.9**	**+1.4**
	comp=Z,8.7nm,0.4s						
ERM				*e*Sn	S	**01 38 20.3**	**-3.8**
ASAJ	**Asahikawa**	**8.58**	**47**	P	P	**01 36 57.7**	**-0.2**
	comp=Z,3.0nm,0.3s,baz=213,slow=8.5,SNR=13						
ASAJ				S	S	**01 38 35.3**	**-2.5**
	comp=Z,0.7nm,0.3s,baz=288,slow=20,SNR=5.7						
ASAJ	**Asahikawa**	**8.58**	**47**	P	P	**01 36 57.7**	**-0.2**
ASAJ				S	S	**01 38 35.3**	**-2.5**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
KLR	**Kul'dur**	**10.73**	**353**	*e*P	P	**01 37 17.8**	**-3.5**
SONM	**Songino Array**	**21.94**	**304**	P	P	**01 39 14.5**	**-0.5**
	comp=N,2.2nm,0.6s,mb3.9,baz=115,slow=9.6,SNR=13						
ZALV	**Zalesovo Beam**	**36.41**	**311**	P	P	**01 41 20.2**	**-0.6**
	comp=N,1.0nm,0.3s,mb3.7,baz=86,slow=5.9,SNR=4.5						
ZALV				PcP	PcP	01 43 32.1	-1.0
	comp=N,1.0nm,0.6s,baz=90,slow=4.4,SNR=3.9						
ZALV	**Zalesovo Beam**	**36.41**	**311**	P	P	**01 41 20.2**	**-0.6**
ZALV				PcP	PcP	01 43 32.1	-1.0
MKAR	**Makanchi Array**	**38.17**	**299**	P	P	**01 41 34.8**	**-0.7**
	comp=N,1.8nm,0.5s,mb3.7,baz=88,slow=10,SNR=15						
KURK	**Kurchatov**	**40.21**	**306**	*e*P	P	**01 41 51.3**	**-0.7**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.0						
KURK	**Kurchatov**	**40.21**	**306**	*e*P	P	**01 41 51.3**	**-0.6**
	comp=Z,5.5nm,0.8s,mb4.0						
BVAR	**Borovoye Array**	**45.04**	**310**	P	P	**01 42 29.5**	**-0.5**
	comp=Z,1.3nm,0.4s,mb3.7,baz=102,slow=7.2,SNR=8.4						
ARU	**Arti**	**51.16**	**316**	*e*P	P	**01 43 15.5**	**-0.4**
ARU				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.0						
ARU	**Arti**	**51.16**	**316**	*e*P	P	**01 43 15.5**	**-0.4**
	comp=Z,5.5nm,0.7s,mb4.0						
ILAR	**Eielson Array**	**51.40**	**33**	P	P	**01 43 19.1**	**+1.6**
	comp=Z,0.2nm,0.6s,mb2.6,baz=265,slow=5.2,SNR=3.7						
ABKAR	**Akbulak array**	**52.29**	**307**	*e*P	P	**01 43 23.6**	**-0.6**
	comp=Z,5.8nm,0.6s,mb4.1						
WRAB	**Tennant Creek**	**58.22**	**179**	*e*P	P	**01 44 06.0**	**-0.1**
ARCES	**ARCESS Array B**	**60.34**	**337**	P	P	**01 44 20.3**	**+0.5**
	comp=Z,1.5nm,0.8s,mb3.5,baz=58,slow=9.1,SNR=7.8						
ASAR	**Alice Springs**	**61.94**	**180**	P	P	**01 44 32.1**	**+1.3**
	comp=Z,0.3nm,0.7s,mb2.9,baz=0.0,slow=6.3,SNR=4.9						
KAF	**Kangasniemi**	**64.07**	**330**	*e*P	P	**01 44 43.9**	**-0.3**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.2						
KAF	**Kangasniemi**	**64.07**	**330**	*e*p	P	**01 44 43.9**	**-0.3**
	comp=Z,4.1nm,0.5s,mb4.2						
FINES	**FINESS Array B**	**64.54**	**330**	P	P	**01 44 47.2**	**0.0**
	comp=Z,4.3nm,0.6s,mb4.3,baz=83,slow=5.0,SNR=34						
FINES	**FINESS Array B**	**64.54**	**330**	P	P	**01 44 47.2**	**0.0**
AKASG	**Malin Array Be**	**69.29**	**319**	P	P	**01 45 16.0**	**-0.8**
	comp=Z,1.2nm,0.5s,mb3.7,baz=54,slow=6.3,SNR=5.4						
NB2	**NORSAR Subarra**	**70.30**	**334**	P	P	**01 45 22.7**	**0.0**
	comp=Z,2.9nm,0.7s,mb3.9,baz=44,slow=6.2						
NOA	**NORSAR Array B**	**70.30**	**334**	P	P	**01 45 22.6**	**-0.1**
	comp=Z,2.2nm,0.6s,mb3.9,baz=43,slow=6.0,SNR=20						
BRTR	**Keskin Array B**	**73.24**	**308**	P	P	**01 45 40.2**	**-0.1**
	comp=Z,0.4nm,0.4s,mb3.3,baz=38,slow=8.0,SNR=4.7						
CLL	**Collm**	**76.62**	**326**	*i*P	P	**01 45 59.1**	**0.0**
CLL				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.0						
CLL	**Collm**	**76.62**	**326**	*i*P	P	**01 45 59.1**	**0.0**
	comp=Z,5.0nm,0.9s,mb4.0						
NVAR	**Mina Array Bea**	**78.70**	**50**	P	P	**01 46 12.5**	**+1.8**
	comp=Z,0.4nm,0.7s,mb3.1,baz=300,slow=5.8,SNR=4.0						
NVAR	**Mina Array Bea**	**78.70**	**50**	P	P	**01 46 12.5**	**+1.8**

IDC 31 01:36:10.8±6.3, 47°.59N×147°.49E, h380km±81km, mb3.0/6, mb1 3.2/7, mb1mx2.9/23, mbtmp3.0/7, Error ellipse: s-maj=44.0km s-min=21.8km az=172.0, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**13.01**	**215**	P	P	01 39 02.0	-0.2
	0.4nm,0.3s,baz=16,slow=11,SNR=3.6						
ILAR	**Eielson Array**	**38.30**	**39**	P	P	01 42 55.9	-0.1
	0.7nm,0.6s,baz=258,slow=6.0,SNR=11						
MKAR	**Makanchi Array**	**43.12**	**294**	P	P	01 43 35.3	+0.2
	0.2nm,0.2s,baz=77,slow=7.6,SNR=2.2						
ARCES	**ARCESS Array B**	**55.74**	**339**	P	P	01 45 09.0	+0.1
	3.4nm,1.1s,baz=46,slow=9.2,SNR=3.3						
FINES	**FINESS Array B**	**61.57**	**332**	P	P	01 45 48.1	-0.6
	1.0nm,0.5s,baz=32,slow=7.9,SNR=4.2						
NOA	**NORSAR Array B**	**66.11**	**338**	P	P	01 46 18.0	0.0
	0.4nm,0.6s,baz=31,slow=6.2,SNR=3.1						
TXAR	**Lajitas Array**	**80.34**	**57**	P	P	01 47 41.0	+0.3
	0.3nm,0.5s,baz=288,slow=3.2,SNR=4.8						
TXAR	**Lajitas Array**	**80.34**	**57**	P	P	01 47 41.0	+0.3

GUC 31 01:39:23.0±0.7, 23°.66S×67°.62W, h206km±65km, ML3.5, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**2.21**	**308**	*e*P	Pn	01 40 11.2	+7.1
PB04				*e*S	Sn	01 40 48.3	+12
PB04				AML	AML	01 40 50.5	
	comp=N,162nm,0.3s						
CEN1	**Los Morros**	**2.38**	**276**	*e*P	Pn	01 40 09.0	+3.1
CEN1				*e*S	Sn	01 40 43.1	+3.7
CEN1				AML	AML	01 40 45.1	
	comp=N,53nm,0.6s						
ANCH	**Antofagasta**	**2.56**	**269**	*e*P	Pn	01 40 06.6	-1.2
ANCH				*i*S	Sn	01 40 41.8	-1.1
PB01	**Plate Boundary**	**3.12**	**326**	*e*P	Pn	01 40 16.3	+1.8
PB01				*e*S	Sn	01 40 58.1	+3.5
PB01				AML	AML	01 40 59.1	
	comp=E,64nm,0.1s						
HMBC	**Humberston**	**3.97**	**328**	*e*P	Pn	01 40 27.1	+2.5
HMBC				*e*S	Sn	01 41 16.0	+3.0

IDC 31 01:43:15.6±13.0, 18°.02S×177°.81W, h587km±158km, mb3.0/4, mb1 3.1/4, mb1mx2.9/15, mbtmp3.0/4, Error ellipse: s-maj=68.0km s-min=40.8km az=74.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.08**	**241**	P	P	01 49 53.5	0.0
	1.2nm,0.4s,baz=90,slow=14,SNR=3.1						
ASAR	**Alice Springs**	**45.31**	**254**	P	P	01 50 42.2	-0.1
	2.1nm,0.4s,baz=91,slow=7.7,SNR=34						
QSPA	**South Pole Qui**	**72.04**	**180**	P	P	01 53 41.0	+0.5
	0.3nm,0.3s,baz=292,slow=1.8,SNR=3.1						
ILAR	**Eielson Array**	**85.86**	**13**	P	P	01 54 53.5	0.0
	0.1nm,0.4s,baz=219,slow=5.2,SNR=5.5						
BRTR	**Keskin Array B**	**145.26**	**315**	PKPbc	PKPbc	02 01 48.0	-0.6
	0.5nm,0.7s,baz=68,slow=3.8,SNR=3.3						

*NEIC **31** 02:54:49.0, 38°.81N×25°.84E, h5km, mb3.9/15, ML4.3(ISK), ML4.1(ATH), After ISK.*
*ISK **31** 02:54:50.2, 38°.82N×25°.89E, h5km, ML4.4*
*ISCJB **31** 02:54:51.8±0.4, 38°.86N±0°.01×26°.01E±0°.02, h7km±3km, mb3.7/17, MS3.2/10, Error ellipse: s-maj=2.2km s-min=2.0km az=25.4*
*ATH **31** 02:54:51.8, 38°.86N×26°.09E, h27km±1km, ML4.1*
*IDC **31** 02:54:51.5±0.9, 38°.91N×25°.86E, h0km, mb3.6/12, mb1 3.7/14, mb1mx3.7/28, mbtmp3.7/14, ML4.3/3, MS3.3/12, Ms1 3.3/12, ms1mx3.1/29, Error ellipse: s-maj=17.3km s-min=15.0km az=5.0*
*DDA **31** 02:54:52.7, 38°.83N×26°.14E, h7km±5km, Md3.7, Ml3.8*
*CSEM **31** 02:54:52.5±0.1, 38°.85N×26°.02E, h5km, mb4.2/6, Ms3.0, Error ellipse: s-maj=2.4km s-min=2.1km az=3.0*
*THE **31** 02:54:53.0, 38°.87N×26°.08E, h7km±1km, ML4.8/6, Error ellipse: s-maj=1.1km s-min=0.4km az=92.0*
*MOS **31** 02:54:53.9±1.1, 38°.90N×26°.02E, h26km, mb4.2/6, Error ellipse: s-maj=5.3km s-min=3.4km az=108.3*
ISC 31 02:54:52.7±0.4, 38°.85N±0°.01×26°.03E±0°.02, h5km±3km, n556, σ1°13/586, mb3.7/17, MS3.2/10, 25C-18D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.39**	**340**	P	**Pg**	**02 55 00.7**	**+0.4**
SIGR				S	**Sg**	**02 55 05.9**	**+0.5**
SIGR	**SIGRI**	**0.39**	**340**	P	**Pg**	**02 55 00.7**	**+0.4**
SIGR				S	**Sg**	**02 55 05.9**	**+0.5**
SIGR	**SIGRI**	**0.39**	**340**	P	**Pg**	**02 55 00.7**	**+0.4**
SIGR				S	**Sg**	**02 55 05.9**	**+0.5**
PRK	**Paraskevi**	**0.44**	**25**	P	**Pg**	**02 55 00.9**	**-0.4**
PRK				S	**Sg**	**02 55 07.2**	**+0.2**
PRK	**Paraskevi**	**0.44**	**25**	*e*PB	**Pg**	**02 55 00.9**	**-0.4**
PRK				*e*SB	**Sg**	**02 55 07.1**	**+0.1**
PRK	**Paraskevi**	**0.44**	**25**	P	**Pg**	**02 55 00.9**	**-0.4**
PRK				S	**Sg**	**02 55 07.2**	**+0.2**
PRK	**Paraskevi**	**0.44**	**25**	P	**Pg**	**02 55 00.9**	**-0.4**
PRK				*e*Sb	**Sg**	**02 55 07.1**	**+0.1**
CHOS	**Chios island**	**0.46**	**178**	*e*PB	**Pg**	**02 55 02.4**	**+0.8**
CHOS	**Chios island**	**0.46**	**178**	P	**Pg**	**02 55 02.4**	**+0.8**
CHOS				S	**Sg**	**02 55 09.6**	**+2.1**
CHOS	**Chios island**	**0.46**	**178**	P	**Pg**	**02 55 02.4**	**+0.8**
CHOS				S	**Sg**	**02 55 09.6**	**+2.1**
URLA	**Izmir**	**0.66**	**137**	⇑*i*P	**Pg**	**02 55 04.0**	**-1.4**
URLA				*i*S	**Sg**	**02 55 13.0**	**-0.9**
URLA	**Izmir**	**0.66**	**137**	*i*P	**Pg**	**02 55 04.0**	**-1.3**
URLA				*i*S	**Sg**	**02 55 13.0**	**-0.9**
AYVA	**Ayvalik**	**0.69**	**48**	⇑*i*P	**Pg**	**02 55 05.4**	**-0.6**
AYVA				*i*S	**Sg**	**02 55 14.1**	**-0.9**
AYVA	**Ayvalik**	**0.69**	**48**	*i*P	**Pg**	**02 55 05.4**	**-0.6**
AYVA				*i*S	**Sg**	**02 55 14.1**	**-0.9**
BLCB	**Balcova**	**0.92**	**120**	*e*PG	**Pg**	**02 55 09.8**	**-0.6**
BLC

ENEZ	Enez	1.89	3	ePn	Pn	02 55 24.3	-1.3
ATHU	Athens Univers	1.97	244	P	Pn	02 55 26.7	0.0
ATHU	Athens Univers	1.97	244	P	Pn	02 55 26.7	0.0
ATH	Athens Observa	2.02	245	P	Pn	02 55 26.7	-0.6
ATH	Athens Observa	2.02	245	ePN	Pn	02 55 26.9	-0.4
ATH	Athens Observa	2.02	245	ePn	Pn	02 55 26.9	-0.4
VLY	Voula,Athens	2.02	241	ePn	Pn	02 55 26.7	-0.7
VLY	Voula,Athens	2.02	241	ePN	Pn	02 55 26.7	-0.7
VLY	Voula,Athens	2.02	241	ePn	Pn	02 55 26.7	-0.7
RKY	Sarkoy-Tekirda	2.04	25	ePN	Pn	02 55 27.6	-0.1
RKY	Sarkoy-Tekirda	2.04	25	ePn	Pn	02 55 27.6	-0.1
BODT	Bodrum	2.05	150	ePN	Pn	02 55 25.7	-2.1
BODT	Bodrum	2.05	150	Pn	Pn	02 55 25.5	-2.2
BODT	Bodrum	2.05	150	ePn	Pn	02 55 25.7	-2.1
ALN	Alexandroupoli	2.05	0	P	Pn	02 55 26.4	-1.4
ALN				S	Sn	02 55 52.2	-1.5
ALN	Alexandroupoli	2.05	0	P	Pn	02 55 26.4	-1.4
ALN				S	Sn	02 55 52.2	-1.5
ALN	Alexandroupoli	2.05	0	P	Pn	02 55 26.4	-1.4
ALN				S	Sn	02 55 52.2	-1.5
EDC	Edincik	2.06	43	ePN	Pn	02 55 27.0	-0.9
EDC	Edincik	2.06	43	Pn	Pn	02 55 28.9	+1.0
EDC	Edincik	2.06	43	ePn	Pn	02 55 27.0	-1.0
EDC	Edincik	2.06	43	P	Pn	02 55 28.9	+0.9
MLSB	Milas	2.07	138	ePN	Pn	02 55 27.9	-0.2
MLSB	Milas	2.07	138	ePn	Pn	02 55 27.9	-0.2
KULA	Kula-Manisa	2.09	98	ePN	Pn	02 55 28.4	+0.1
KULA	Kula-Manisa	2.09	98	ePn	Pn	02 55 28.4	+0.1
BNT	Bandirma	2.10	43	ePN	Pn	02 55 27.7	-0.8
BNT	Bandirma	2.10	43	Pn	Pn	02 55 28.9	+0.4
PAIG	Paliouri	2.12	301	P	Pn	02 55 27.8	-0.9
PAIG	Paliouri	2.12	301	P	Pn	02 55 27.8	-0.9
PAIG	Paliouri	2.12	301	P	Pn	02 55 27.8	-0.9
MFT	Murefte	2.17	26	ePN	Pn	02 55 28.9	-0.5
MFT	Murefte	2.17	26	ePn	Pn	02 55 28.9	-0.5
OUR	Ouranopolis	2.17	314	P	Pn	02 55 28.4	-1.1
OUR	Ouranopolis	2.17	314	P	Pn	02 55 28.4	-1.1
OUR	Ouranopolis	2.17	314	P	Pn	02 55 28.4	-1.1
NEO	Neokhori	2.23	283	ePn	Pn	02 55 29.8	-0.5
NEO	Neokhori	2.23	283	ePN	Pn	02 55 29.8	-0.5
NEO	Neokhori	2.23	283	ePn	Pn	02 55 29.8	-0.5
XOR	Xorichti	2.27	284	P	Pn	02 55 30.1	-0.7
XOR	Xorichti	2.27	284	P	Pn	02 55 30.1	-0.7
XOR	Xorichti	2.27	284	P	Pn	02 55 30.1	-0.7
NAIG	Nisos Aigina	2.27	242	ePn	Pn	02 55 30.6	-0.3
NAIG	Nisos Aigina	2.27	242	ePN	Pn	02 55 30.6	-0.3
NAIG	Nisos Aigina	2.27	242	ePn	Pn	02 55 30.6	-0.3
KCTX	Karacabey (Bur	2.29	51	ePN	Pn	02 55 29.9	-1.2
KCTX	Karacabey (Bur	2.29	51	ePn	Pn	02 55 29.9	-1.2
ATAL	Atalanti	2.36	267	P	Pn	02 55 31.6	-0.4
ATAL	Atalanti	2.36	267	P	Pn	02 55 31.6	-0.4
LKR	Lokris	2.38	266	P	Pn	02 55 31.7	-0.6
LKR	Lokris	2.38	266	ePN	Pn	02 55 31.4	-0.9
LKR	Lokris	2.38	266	P	Pn	02 55 31.7	-0.6
LKR	Lokris	2.38	266	ePn	Pn	02 55 31.4	-0.9
LKR	Lokris	2.38	266	P	Pn	02 55 31.7	-0.6
NIS1	Nisyros Isl.	2.42	158	P	Pn	02 55 31.9	-0.9
NIS1	Nisyros Isl.	2.42	158	P	Pn	02 55 31.9	-0.9
TKR	Tekirdag	2.44	28	ePN	Pn	02 55 33.4	+0.3
TKR	Tekirdag	2.44	28	ePn	Pn	02 55 33.4	+0.3
DAT	Datca	2.44	149	ePN	Pn	02 55 32.4	-0.8
DAT	Datca	2.44	149	ePn	Pn	02 55 32.4	-0.8
KAVA	Kavala	2.44	332	P	Pn	02 55 32.1	-1.1
KAVA	Kavala	2.44	332	P	Pn	02 55 32.1	-1.1
YER	Yerkesik	2.47	133	ePN	Pn	02 55 33.1	-0.4
YER	Yerkesik	2.47	133	ePn	Pn	02 55 33.1	-0.4
THR3	Thira Island,	2.48	192	P	Pn	02 55 32.8	-0.9
THR3	Thira Island,	2.48	192	P	Pn	02 55 32.8	-0.9
THR3	Thira Island,	2.48	192	P	Pn	02 55 32.8	-0.9
THR5	Thira Island,	2.48	193	P	Pn	02 55 32.6	-1.2
THR5	Thira Island,	2.48	193	P	Pn	02 55 32.6	-1.2
THR5	Thira Island,	2.48	193	P	Pn	02 55 32.6	-1.2
THR1	Thera Island	2.51	191	P	Pn	02 55 32.6	-1.5
THR1	Thera Island	2.51	191	P	Pn	02 55 32.6	-1.5
LTK	Loutraki	2.54	252	P	Pn	02 55 34.1	-0.5
LTK	Loutraki	2.54	252	P	Pn	02 55 34.1	-0.5
DID	Didima	2.58	240	P	Pn	02 55 34.6	-0.4
DID	Didima	2.58	240	P	Pn	02 55 34.6	-0.4
DENT	Denizli	2.60	114	ePN	Pn	02 55 35.9	+0.5
DENT	Denizli	2.60	114	ePn	Pn	02 55 35.9	+0.5
CRLT	Corlu	2.63	29	ePN	Pn	02 55 35.9	+0.1
CRLT	Corlu	2.63	29	ePn	Pn	02 55 35.9	+0.1
MDNY	Mudanya-Bursa	2.68	54	ePN	Pn	02 55 36.9	+0.4
MDNY	Mudanya-Bursa	2.68	54	Pn	Pn	02 55 37.7	+1.3
MDNY	Mudanya-Bursa	2.68	54	ePn	Pn	02 55 36.9	+0.5
DSF	Desfina	2.78	262	P	Pn	02 55 37.7	-0.1
DSF	Desfina	2.78	262	P	Pn	02 55 37.7	-0.1
ARMT	Armutlu	2.78	51	ePN	Pn	02 55 38.5	+0.7
ARMT	Armutlu	2.78	51	Pn	Pn	02 55 38.9	+1.0
ARMT	Armutlu	2.78	51	ePn	Pn	02 55 38.5	+0.7
KHL	Karahalli	2.79	100	ePN	Pn	02 55 38.7	+0.8
KHL	Karahalli	2.79	100	ePn	Pn	02 55 38.7	+0.8
KDZ	Kurdzhali	2.84	351	*i* P	Pn	02 55 37.0	-1.7
KDZ	Kurdzhali	2.84	351	*i* P	Pn	02 55 37.0	-1.7
SOH	Sokhos	2.85	315	P	Pn	02 55 38.5	-0.3
SOH	Sokhos	2.85	315	P	Pn	02 55 38.5	-0.3
SOH	Sokhos	2.85	315	P	Pn	02 55 38.5	-0.3
HORT	Hortiatis	2.86	309	P	Pn	02 55 38.7	-0.2
HORT	Hortiatis	2.86	309	P	Pn	02 55 38.7	-0.2
HORT	Hortiatis	2.86	309	P	Pn	02 55 38.7	-0.2
AGG	Agios Georgios	2.89	275	P	Pn	02 55 39.2	-0.1
AGG	Agios Georgios	2.89	275	P	Pn	02 55 39.2	-0.1
AGG	Agios Georgios	2.89	275	P	Pn	02 55 39.2	-0.1
GEMT	Gemlik	2.91	56	ePN	Pn	02 55 40.5	+0.9
GEMT	Gemlik	2.91	56	ePn	Pn	02 55 40.5	+0.9
SLVT	Silivri	2.91	34	ePN	Pn	02 55 39.9	+0.3
SLVT	Silivri	2.91	34	ePn	Pn	02 55 39.9	+0.3
SRS	Serrai	2.94	321	P	Pn	02 55 39.1	-1.0
SRS	Serrai	2.94	321	P	Pn	02 55 39.1	-1.0
SRS	Serrai	2.94	321	P	Pn	02 55 39.1	-1.0
THE	Thessaloniki	2.96	308	P	Pn	02 55 40.2	-0.1
THE	Thessaloniki	2.96	308	P	Pn	02 55 40.2	-0.1
THE	Thessaloniki	2.96	308	P	Pn	02 55 40.2	-0.1
NVR	Nevrokopi	3.00	327	ePn	Pn	02 55 40.3	-0.6
NVR	Nevrokopi	3.00	327	ePN	Pn	02 55 40.3	-0.6
NVR	Nevrokopi	3.00	327	ePn	Pn	02 55 40.3	-0.6
RZN	Rozhen	3.01	341	*i* P	Pn	02 55 41.5	+0.5
RZN	Rozhen	3.01	341	*i* P	Pn	02 55 41.5	+0.5
LIT	Litokhoron	3.01	296	P	Pn	02 55 40.1	-0.9
LIT	Litokhoron	3.01	296	P	Pn	02 55 40.1	-0.9
LIT	Litokhoron	3.01	296	P	Pn	02 55 40.1	-0.9
GUR	Goura	3.04	254	P	Pn	02 55 41.5	+0.1
GUR	Goura	3.04	254	P	Pn	02 55 41.5	+0.1
EDRB	Edirne	3.05	10	ePN	Pn	02 55 40.2	-1.3
EDRB	Edirne	3.05	10	Pn	Pn	02 55 41.1	-0.4
EDRB	Edirne	3.05	10	Pn	Pn	02 55 41.1	-0.4
CTKS	Kestanelik-??a	3.05	38	ePN	Pn	02 55 40.9	-0.7
CTKS	Kestanelik-??a	3.05	38	ePn	Pn	02 55 40.9	-0.7
KALE	Kalithea	3.08	263	P	Pn	02 55 42.0	0.0
KALE	Kalithea	3.08	263	P	Pn	02 55 42.0	0.0
YLV	Yalova	3.10	55	ePN	Pn	02 55 43.1	+0.8
YLV	Yalova	3.10	55	ePn	Pn	02 55 43.1	+0.9
ARG	Arkhangelos	3.11	147	eP	Pn	02 55 41.5	-0.9
ARG	Arkhangelos	3.11	147	ePN	Pn	02 55 41.5	-0.9
ARG	Arkhangelos	3.11	147	ePn	Pn	02 55 41.5	-0.9
TRIZ	Trizonia	3.14	262	P	Pn	02 55 42.9	+0.2
TRIZ	Trizonia	3.14	262	P	Pn	02 55 42.9	+0.2
BGKT	Bogazkoy	3.14	41	ePN	Pn	02 55 43.2	+0.4
BGKT	Bogazkoy	3.14	41	Pn	Pn	02 55 42.1	-0.7
BGKT	Bogazkoy	3.14	41	ePn	Pn	02 55 43.2	+0.4
CTYL	Yal??k??y-??at	3.15	33	ePN	Pn	02 55 42.1	-0.8
CTYL	Yal??k??y-??at	3.15	33	ePn	Pn	02 55 42.1	-0.8
ALT	Altintas	3.19	85	ePN	Pn	02 55 44.3	+0.9
ALT	Altintas	3.19	85	ePn	Pn	02 55 44.3	+0.9
THL	Klokotos Trika	3.20	284	ePN	Pn	02 55 42.9	-0.7
THL	Klokotos Trika	3.20	284	ePN	Pn	02 55 42.9	-0.7
THL	Klokotos Trika	3.20	284	P	Pn	02 55 44.3	+0.7
THL	Klokotos Trika	3.20	284	ePn	Pn	02 55 42.9	-0.7
THL	Klokotos Trika	3.20	284	P	Pn	02 55 44.3	+0.7
ISK	Istanbul-Kandi	3.21	45	ePN	Pn	02 55 44.2	+0.4
ISK	Istanbul-Kandi	3.21	45	ePn	Pn	02 55 44.2	+0.4
DIM	Dimitrovgrad	3.22	353	*i* P	Pn	02 55 42.8	-1.1
DIM	Dimitrovgrad	3.22	353	*i* P	Pn	02 55 42.8	-1.1
LAKA	Lakka	3.23	260	P	Pn	02 55 44.4	+0.3
LAKA	Lakka	3.23	260	P	Pn	02 55 44.4	+0.3
VLX	Vlachokerasia	3.23	244	P	Pn	02 55 44.1	0.0
VLX	Vlachokerasia	3.23	244	P	Pn	02 55 44.1	0.0
VLI	Veliai	3.24	230	P	Pn	02 55 43.3	-0.9
VLI	Veliai	3.24	230	P	Pn	02 55 43.3	-0.9
CAVI	Cavuskoy	3.25	64	ePN	Pn	02 55 45.2	+0.9
CAVI	Cavuskoy	3.25	64	ePn	Pn	02 55 45.2	+1.0
EFP	Efpalio	3.26	264	P	Pn	02 55 44.4	0.0
EFP	Efpalio	3.26	264	P	Pn	02 55 44.4	0.0
MMB	Musomiste	3.26	328	*i* P	Pn	02 55 43.7	-0.7
MMB	Musomiste	3.26	328	*i* P	Pn	02 55 43.7	-0.7
ADVT	Abdulvahap	3.27	60	ePN	Pn	02 55 45.9	+1.2
ADVT	Abdulvahap	3.27	60	ePn	Pn	02 55 45.9	+1.3
EVR	Evrytania	3.29	273	P	Pn	02 55 46.9	+2.0
EVR	Evrytania	3.29	273	P	Pn	02 55 46.9	+2.0
KLYT	Kilyos	3.33	43	ePN	Pn	02 55 46.1	+0.6
KLYT	Kilyos	3.33	43	ePn	Pn	02 55 46.1	+0.6
KNT	Kendrikon	3.34	315	P	Pn	02 55 45.2	-0.3
KNT	Kendrikon	3.34	315	P	Pn	02 55 45.2	-0.3
KNT	Kendrikon	3.34	315	P	Pn	02 55 45.2	-0.3
PLD	Plovdiv	3.41	343	P	Pn	02 55 46.1	-0.4
PLD	Plovdiv	3.41	343	P	Pn	02 55 46.1	-0.4
PLD	Plovdiv	3.41	343	*i* P	Pn	02 55 46.0	-0.5
PLD	Plovdiv	3.41	343	P	Pn	02 55 46.1	-0.4
KARP	Karpathos	3.41	164	P	Pn	02 55 45.9	-0.7
KARP	Karpathos	3.41	164	P	Pn	02 55 45.9	-0.7
HRT	Hereke	3.43	54	ePN	Pn	02 55 48.0	+1.3
HRT	Hereke	3.43	54	ePn	Pn	02 55 48.0	+1.3
KYTH	Kithira	3.50	224	ePn	Pn	02 55 47.0	-0.7
KYTH	Kithira	3.50	224	ePN	Pn	02 55 47.0	-0.7
KYTH	Kithira	3.50	224	ePn	Pn	02 55 47.0	-0.7
GRG	Griva	3.50	308	P	Pn	02 55 47.8	+0.1
GRG	Griva	3.50	308	P	Pn	02 55 47.8	+0.1
GRG	Griva	3.50	308	P	Pn	02 55 47.8	+0.1
SHUT	Suhut-Afyon	3.55	93	ePN	Pn	02 55 49.8	+1.4
SHUT	Suhut-Afyon	3.55	93	ePn	Pn	02 55 49.8	+1.4
KZN	Kozani	3.60	295	P	Pn	02 55 49.6	+0.5
KZN	Kozani	3.60	295	P	Pn	02 55 49.6	+0.5
SILT	Sile	3.61	49	ePN	Pn	02 55 50.7	+1.5
SILT	Sile	3.61	49	ePn	Pn	02 55 50.7	+1.5
GPA	Golpazari	3.61	65	ePN	Pn	02 55 50.8	+1.6
GPA	Golpazari	3.61	65	ePn	Pn	02 55 50.8	+1.6
VAY	Valandovo	3.63	314	P	Pn	02 55 49.0	-0.5
VAY	Valandovo	3.63	314	*i* Pn	Pn	02 55 49.4	-0.1
VAY				*i* Sn	Sg	02 56 49.1	-0.1
VAY	Valandovo	3.63	314	P	Pn	02 55 49.0	-0.5
VAY	Valandovo	3.63	314	P	Pn	02 55 49.0	-0.5
IDI	Anoyia	3.67	195	P	Pn	02 55 50.3	+0.3
IDI	Anoyia	3.67	195	P	Pn	02 55 50.3	+0.3
ISP	Isparta	3.68	105	ePN	Pn	02 55 51.4	+1.2
ISP	Isparta	3.68	105	ePn	Pn	02 55 51.1	+1.0
ISP	Isparta	3.68	105	⇓*i* P	Pn	02 55 51.4	+1.2
VAM	Vamos	3.73	204	eP	Pn	02 55 51.5	+0.6
VAM	Vamos	3.73	204	ePN	Pn	02 55 51.5	+0.6
VAM	Vamos	3.73	204	ePn	Pn	02 55 51.5	+0.6
KKB	Krupnik	3.76	324	*i* P	Pn	02 55 51.5	+0.1
KKB	Krupnik	3.76	324	*i* P	Pn	02 55 51.5	+0.1
SPNC	Sapanca-Adapaz	3.77	60	ePN	Pn	02 55 52.6	+1.1
SPNC	Sapanca-Adapaz	3.77	60	ePn	Pn	02 55 52.6	+1.1
ESKT	Eskisehir	3.81	78	ePN	Pn	02 55 53.2	+1.3
ESKT	Eskisehir	3.81	78	ePn	Pn	02 55 53.2	+1.3
GULT	Gulveren	3.81	64	ePN	Pn	02 55 53.5	+1.5
GULT	Gulveren	3.81	64	ePn	Pn	02 55 53.5	+1.5
PYL	PYLOS	3.91	241	P	Pn	02 55 54.7	+1.3
PYL	PYLOS	3.91	241	P	Pn	02 55 54.7	+1.3
PGB	Panagyurishte	3.96	340	*i* P	Pn	02 55 53.3	-0.8
PGB	Panagyurishte	3.96	340	*i* P	Pn	02 55 53.3	-0.8
FNA	Florina	4.07	300	P	Pn	02 55 55.8	+0.2
FNA	Florina	4.07	300	P	Pn	02 55 55.8	+0.2
FNA	Florina	4.07	300	P	Pn	02 55 55.8	+0.2
NEST	Nestorio	4.15	294	P	Pn	02 55 57.1	+0.4
NEST	Nestorio	4.15	294	P	Pn	02 55 57.1	+0.4
LKD2	Lefkada island	4.20	271	P	Pn	02 55 59.3	+2.0
LKD2	Lefkada island	4.20	271	P	Pn	02 55 59.3	+2.0
BIA	Bitola	4.22	302	*i* Pn	Pn	02 55 55.7	-1.9
GVD	Gavdhos	4.29	202	ePn	Pn	02 56 00.3	+1.7
GVD	Gavdhos	4.29	202	ePn	Pn	02 56 00.3	+1.7
VTS	Vitosha	4.31	331	⇓P	Pn	02 55 59.3	+0.4
VTS	Vitosha	4.31	331	P	Pn	02 55 58.9	0.0
VTS	Vitosha	4.31	331	P	Pn	02 55 58.9	0.0
VTS	Vitosha	4.31	331	*i* P	Pn	02 55 59.4	+0.5
VTS	Vitosha	4.31	331	⇓*i* P	Pn	02 55 59.3	+0.4
VTS	Vitosha	4.31	331	P	Pn	02 55 58.9	0.0
SVRH	Sivrihisar-ESK	4.31	80	ePN	Pn	02 56 00.9	+2.0
SVRH	Sivrihisar-ESK	4.31	80	ePn	Pn	02 56 00.9	+2.0
MDU	Mudurnu	4.32	66	ePN	Pn	02 56 00.9	+2.0
MDU	Mudurnu	4.32	66	ePn	Pn	02 56 00.9	+2.0
PVL	Pavlikeni	4.40	353	*i* P	Pn	02 55 58.8	-1.3
PVL	Pavlikeni	4.40	353	*i* P	Pn	02 55 58.8	-1.3
SZH	Strazhica	4.42	359	*i* P	Pn	02 55 59.4	-0.9
SZH	Strazhica	4.42	359	*i* P	Pn	02 55 59.4	-0.9
KRUS	Krusevo	4.45	306	*i* Pn	Pn	02 56 01.1	+0.4
PRD	Provadia	4.47	13	*i* P	Pn	02 55 59.1	-2.0
PRD	Provadia	4.47	13	*i* P	Pn	02 55 59.1	-2.0
OHR	Ohrid	4.61	301	*i* Pn	Pn	02 56 06.6	+3.6
SRN	Sarande	4.79	284	ePN	Pn	02 56 08.5	+3.1
SRN				*i* SN	Pg	02 56 32.0	+7.6
SRN	Sarande	4.79	284	ePn	Pn	02 56 08.5	+3.1
MPEP	Malo Peshtene	4.83	340	*i* P	Pn	02 56 05.9	0.0
KEK	Kerkira	4.91	282	P	Pn	02 56 09.9	+2.8
KEK	Kerkira	4.91	282	P	Pn	02 56 09.9	+2.8
BARS	Barje	5.09	322	⇓*i* Pn	Pn	02 56 09.7	+0.1
TIR	Tirane	5.35	300	eP	Pn	02 56 16.5	+3.4
TIR				pmax	pmax		
	comp=Z,32nm,0.6s						
TIR	Tirane	5.35	300	ePn	Pn	02 56 16.4	+3.3
	comp=Z,32nm,0.6s						
TIR	Tirane	5.35	300	eP	Pn	02 56 16.5	+3.4
	comp=Z,32nm,0.6s						
PUK	Puka	5.67	306	ePN	Pn	02 56 19.7	+2.2
BCI	Bajram Curri	5.74	310	ePN	Pn	02 56 19.9	+1.4
BCI	Bajram Curri	5.74	310	ePn	Pn	02 56 19.9	+1.4
BOLS	Boljevac	5.85	330	⇓*i* Pn	Pn	02 56 19.5	-0.5
TIRR	Tirgusor	5.88	17	⇑P	Pn	02 56 19.6	-0.9
TIRR	Tirgusor	5.88	17	eP	Pn	02 56 19.1	-1.4
	comp=Z,34nm,0.4s						
TIRR	Tirgusor	5.88	17	⇑*i* P	Pn	02 56 19.6	-0.9
TIRR	Tirgusor	5.88	17	ePn	Pn	02 56 19.1	-1.4
	comp=Z,34nm,0.4s						
TIRR	Tirgusor	5.88	17	P	Pn	02 56 19.6	-0.9
BR131	Keskin Array S	5.97	79	ePn	Pn	02 56 21.6	-0.1
	comp=Z,28nm,0.9s						
BR131	Keskin Array S	5.97	79	ePn	Pn	02 56 21.6	0.0
	comp=Z,28nm,0.9s						
BRTR	Keskin Array B	5.97	79	Pn	Pn	02 56 21.4	-0.3
	comp=Z,2.4nm,0.3s,baz=255,slow=12,SNR=31						
BRTR				Lg		02 58 06.4	
	comp=Z,0.3nm,0.3s,baz=262,slow=30,SNR=2.7						
BRTR	Keskin Array B	5.97	79	P	Pn	02 56 21.4	-0.2
GRUS	Gruza	6.43	323	⇓*i* Pn	Pn	02 56 26.5	-1.5
CFR	Carcaliu	6.52	13	⇑P	Pn	02 56 28.6	-0.6
CFR	Carcaliu	6.52	13	⇑*i* P	Pn	02 56 28.5	-0.7
CFR	Carcaliu	6.52	13	P	Pn	02 56 28.6	-0.6
VOIR		6.63	354	⇑P	Pn	02 56 29.9	-0.8
VOIR		6.63	354	⇑*i* P	Pn	02 56 29.9	-0.8
VOIR		6.63	354	P	Pn	02 56 29.9	-0.8
MLR	Muntele Rosu	6.64	359	Pn	Pn	02 56 31.2	+0.3
	comp=Z,5.8nm,0.3s,baz=196,slow=5.4,SNR=89						
MLR				Lg		02 58 21.2	
	comp=Z,0.8nm,0.3s,baz=198,slow=20,SNR=1.9						
MLR	Muntele Rosu	6.64	359	⇑P	Pn	02 56 31.9	+1.0
MLR	Muntele Rosu	6.64	359	⇑*i* P	Pn	02 56 31.9	+1.0
MLR	Muntele Rosu	6.64	359	P	Pn	02 56 31.9	+1.0
TRUS	Trudelj	6.83	324	ePn	Pn	02 56 31.6	-1.9
DIVS	Divibare	6.93	321	P	Pn	02 56 34.5	-0.4
DIVS	Divibare	6.93	321	⇓*i* Pn	Pn	02 56 34.6	-0.3
GZR	Gura Zlata	6.97	341	⇓P	Pn	02 56 34.2	-1.2
GZR	Gura Zlata	6.97	341	⇓*i* P	Pn	02 56 34.2	-1.2
GZR	Gura Zlata	6.97	341	P	Pn	02 56 34.2	-1.2
PLOR	Plostina	7.02	4	⇑P	Pn	02 56 36.7	+0.7
PLOR	Plostina	7.02	4	⇑*i* P	Pn	02 56 36.7	+0.7
PLOR	Plostina	7.02	4	P	Pn	02 56 36.7	+0.7
VRI	Vrincioaia	7.04	4	⇓P	Pn	02 56 36.7	+0.4
VRI	Vrincioaia	7.04	4	⇓*i* P	Pn	02 56 36.7	+0.4
VRI	Vrincioaia	7.04	4	P	Pn	02 56 36.7	+0.4
BBLS	Lazići	7.07	317	⇓*i* Pn	Pn	02 56 37.2	+0.5
DOPR	Dopca	7.13	356	⇑*i* P	Pn	02 56 37.7	+0.1
DOPR	Dopca	7.13	356	⇑*i* P	Pn	02 56 37.7	+0.1
TIP	Timpagrande	7.23	276	ePn	Pn	02 56 39.7	+0.7
TIP	Timpagrande	7.23	276	ePn	Pn	02 56 39.7	+0.8
BZS	Buzias	7.51	336	⇑P	Pn	02 56 41.8	-1.1
BZS	Buzias	7.51	336	⇑*i* P	Pn	02 56 41.8	-1.1
BZS	Buzias	7.51	336	P	Pn	02 56 41.8	-1.1
TESR		7.67	3	⇓P	Pn	02 56 44.9	-0.1
TESR		7.67	3	⇓*i* P	Pn	02 56 44.9	-0.1
TESR		7.67	3	⇓P	Pn	02 56 44.9	-0.1
CEL	Celeste	7.96	269	ePn	Pn	02 56 45.7	-3.4
CUC	Castrocucco	7.99	281	ePn	Pn	02 56 51.2	+1.8
CUC	Castrocucco	7.99	281	ePn	Pn	02 56 51.2	+1.8
SEV	Sevastopol'	8.06	43	eP	Pn	02 56 50.8	+0.4
SEV	Sevastopol'	8.06	43	eP	Pn	02 56 50.8	+0.4
YAL	Yalta	8.29	45	eP	Pn	02 56 56.1	+2.6
YAL				eS	Sn	02 58 34.0	+6.6
DRGR		8.31	344	⇑P	Pn	02 56 52.8	-0.9
DRGR		8.31	344	⇑*i* P	Pn	02 56 52.8	-0.9
DRGR		8.31	344	P	Pn	02 56 52.8	-0.9
KIS	Kishinev	8.40	13	eP	Pn	02 56 56.0	+1.0
KIS				LRM		03 00 18.0	
	comp=Z,400nm,9.0s						
KIS	Kishinev	8.40	13	eP	Pn	02 56 56.0	+1.0
KIS				e		02 58 35.0	
KIS				MLR	MLR		
	comp=Z,400nm,12.0s						
KIS	Kishinev	8.40	13	eP	Pn	02 56 56.0	+1.0
SIM	Simferopol'	8.57	42	P	Pn	02 57 01.7	+4.3
SIM				S	Sn	02 58 39.0	+4.6
SIM				pmax	pmax		
	comp=Z,20nm,0.8s						
SIM				MLR	MLR		
	comp=Z,173nm,17.2s						
BURAR	Bucovina Array	8.79	356	⇑P	Pn	02 57 01.8	+1.5
BURAR	Bucovina Array	8.79	356	⇑*i* P	Pn	02 57 01.8	+1.5
BURAR	Bucovina Array	8.79	356	⇑P	Pn	02 57 01.8	+1.5
BUR08	Bucovina Ar. S	8.81	356	ePn	Pn	02 57 00.8	+0.1
BUR08	Bucovina Ar. S	8.81	356	ePn	Pn	02 57 00.8	+0.1
SUDU	Sudak	9.01	45	eP	Pn	02 57 04.9	+1.5
SUDU	Sudak	9.01	45	eP	Pn	02 57 04.9	+1.5
PKSM	Moragy	9.16	326	⇓P	Pn	02 57 04.8	-0.6
PKSM	Moragy	9.16	326	⇓*i* P	Pn	02 57 04.8	-0.6
PKSM	Mo

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VRHR                                    pmax    pmax
     comp=N,10.0nm,0.6s
VRHR                                    pmax    pmax
     comp=E,8.0nm,0.6s
VRHR                                    pmax    pmax
     comp=Z,10.0nm,0.6s
VRHR  Novokhopersk        16.44  37  eP      Pn      02 58 48.6 +4.6
HINF  Hinteralfeld        16.55 309  eP      Pn      02 58 48.2 +2.8
HINF  Hinteralfeld        16.55 309  eP      Pn      02 58 48.2 +2.8
CABF  La Chapelle         16.55 304  eP      Pn      02 58 49.6 +4.2
     comp=Z,41nm,1.3s
CABF  La Chapelle         16.55 304  eP      Pn      02 58 49.6 +4.2
CABF                                    pmax    pmax
     comp=Z,20nm,1.3s
CABF  La Chapelle         16.55 304  eP      Pn      02 58 49.6 +4.2
     comp=Z,20nm,1.3s
CABF  La Chapelle         16.55 304  eP      Pn      02 58 49.6 +4.2
     comp=Z,20nm,1.3s
CDF   Champ du Feu        16.57 311  eP      Pn      02 58 48.0 +2.4
     comp=Z,7.2nm,0.7s
CDF   Champ du Feu        16.57 311  eP      Pn      02 58 48.0 +2.4
CDF                                     pmax    pmax
     comp=Z,4.0nm,0.7s
CDF   Champ du Feu        16.57 311  eP      Pn      02 58 48.0 +2.4
     comp=Z,3.6nm,0.7s
CDF   Champ du Feu        16.57 311  eP      Pn      02 58 48.0 +2.4
     comp=Z,3.6nm,0.7s
HAU   Haudompre           16.94 309  eP      Pn      02 58 53.8 +3.5
HAU                                     eMLR    MLR
     comp=Z,245nm,19.3s
HAU   Haudompre           16.94 309  eP      Pn      02 58 53.8 +3.5
SMF   Signal de Mont      18.03 303  eP      Pn      02 59 05.7 +1.9
     comp=Z,8.4nm,0.8s
SMF   Signal de Mont      18.03 303  eP      Pn      02 59 05.7 +1.9
SMF                                     pmax    pmax
     comp=Z,4.0nm,0.8s
SMF   Signal de Mont      18.03 303  eP      Pn      02 59 05.7 +1.9
     comp=Z,4.2nm,0.8s
SMF   Signal de Mont      18.03 303  eP      Pn      02 59 05.7 +1.9
     comp=Z,4.2nm,0.8s
LOR   Lormes              18.21 305  eP      Pn      02 59 06.8 +0.7
     comp=Z,12nm,1.0s
LOR                                     eMLR    MLR
     comp=Z,57nm,17.2s
LOR   Lormes              18.21 305  eP      Pn      02 59 06.8 +0.7
LOR                                     pmax    pmax
     comp=Z,6.0nm,1.0s
LOR   Lormes              18.21 305  eP      Pn      02 59 06.8 +0.7
     comp=Z,6.1nm,1.0s
LOR   Lormes              18.21 305  eP      Pn      02 59 06.8 +0.7
     comp=Z,6.1nm,1.0s
SSF   Saint Saulge        18.37 304  eP      Pn      02 59 08.8 +0.7
     comp=Z,12nm,0.9s
SSF   Saint Saulge        18.37 304  eP      Pn      02 59 08.8 +0.7
SSF                                     pmax    pmax
     comp=Z,6.0nm,0.9s
SSF   Saint Saulge        18.37 304  eP      Pn      02 59 08.8 +0.7
     comp=Z,6.2nm,0.9s
SSF   Saint Saulge        18.37 304  eP      Pn      02 59 08.8 +0.7
     comp=Z,6.2nm,0.9s
AVF   Avril sur Loir      18.39 303  eP      Pn      02 59 08.9 +0.6
     comp=Z,12nm,0.7s
AVF   Avril sur Loir      18.39 303  eP      Pn      02 59 08.9 +0.6
AVF                                     pmax    pmax
     comp=Z,6.0nm,0.7s
AVF   Avril sur Loir      18.39 303  eP      Pn      02 59 08.9 +0.6
     comp=Z,6.2nm,0.7s
AVF   Avril sur Loir      18.39 303  eP      Pn      02 59 08.9 +0.6
     comp=Z,6.2nm,0.7s
MTLF  Montolieu           18.48 292  eP      Pn      02 59 10.1 +0.7
MTLF  Montolieu           18.48 292  eP      Pn      02 59 10.1 +0.7
BGF   Bois d'Agland       18.66 302  eP      Pn      02 59 12.8 +1.3
     comp=Z,10nm,0.7s
BGF   Bois d'Agland       18.66 302  eP      Pn      02 59 12.8 +1.3
BGF                                     pmax    pmax
     comp=Z,5.0nm,0.7s
BGF   Bois d'Agland       18.66 302  eP      Pn      02 59 12.8 +1.3
     comp=Z,5.1nm,0.7s
BGF   Bois d'Agland       18.66 302  eP      Pn      02 59 12.8 +1.3
     comp=Z,5.1nm,0.7s
TCF   Toulx Ste Croi      19.01 301  eP      Pn      02 59 17.1 +1.3
     comp=Z,11nm,0.9s
TCF   Toulx Ste Croi      19.01 301  eP      Pn      02 59 17.1 +1.3
TCF                                     pmax    pmax
     comp=Z,5.0nm,0.9s
TCF   Toulx Ste Croi      19.01 301  eP      Pn      02 59 17.1 +1.3
     comp=Z,5.4nm,0.9s
TCF   Toulx Ste Croi      19.01 301  eP      Pn      02 59 17.1 +1.3
     comp=Z,5.4nm,0.9s
BAIF  Baives              19.12 313  eP      Pn      02 59 16.3 -0.8
BAIF  Baives              19.12 313  eP      Pn      02 59 16.3 -0.8
ETSF  Etsaut              20.48 290  eP      P       02 59 30.4 -0.8
ETSF  Etsaut              20.48 290  eP      P       02 59 30.4 -0.8
MFF   Saint Martin d      20.67 300  eP      P       02 59 33.2  0.0
     comp=Z,11nm,0.7s
MFF   Saint Martin d      20.67 300  eP      P       02 59 33.2  0.0
MFF                                     pmax    pmax
     comp=Z,5.0nm,0.7s
MFF   Saint Martin d      20.67 300  eP      P       02 59 33.2  0.0
     comp=Z,5.3nm,0.7s
MFF   Saint Martin d      20.67 300  eP      P       02 59 33.2  0.0
     comp=Z,5.3nm,0.7s
SJPF  Ste Jean            20.97 290  eP      P       02 59 38.5 +1.9
     comp=Z,8.3nm,0.7s
SJPF  Ste Jean            20.97 290  eP      P       02 59 38.5 +1.9
SJPF                                    pmax    pmax
     comp=Z,4.0nm,0.7s
SJPF  Ste Jean            20.97 290  eP      P       02 59 38.5 +1.9
     comp=Z,4.2nm,0.7s
SJPF  Ste Jean            20.97 290  eP      P       02 59 38.5 +1.9
     comp=Z,4.2nm,0.7s
LDF   La Druitiere        21.17 306  eP      P       02 59 37.4 -1.2
     comp=Z,9.0nm,0.6s,mb4.0
LDF   La Druitiere        21.17 306  eP      P       02 59 37.4 -1.2
LDF                                     pmax    pmax
     comp=Z,5.0nm,0.6s,mb4.0
LDF   La Druitiere        21.17 306  eP      P       02 59 37.4 -1.2
     comp=Z,4.5nm,0.6s,mb4.0
LDF   La Druitiere        21.17 306  eP      P       02 59 37.4 -1.2
     comp=Z,4.5nm,0.6s,mb4.0
FLN   La Foliniere        21.45 306  eP      P       02 59 41.7 +0.1
     comp=Z,36nm,1.2s,mb4.3
FLN                                     eMLR    MLR
     comp=Z,49nm,18.0s,MS2.6
FLN   La Foliniere        21.45 306  eP      P       02 59 41.7 +0.1
FLN                                     pmax    pmax
     comp=Z,18nm,1.2s,mb4.3
FLN                                     MLR     MLR
     comp=Z,50nm,18.0s,MS3.0
FLN   La Foliniere        21.45 306  eP      P       02 59 41.7 +0.1
     comp=Z,18nm,1.2s,mb4.3
FLN                                     LR      LR
     comp=Z,50nm,18.0s,MS3.0
FLN   La Foliniere        21.45 306  eP      P       02 59 41.7 +0.1
     comp=Z,18nm,1.2s,mb4.3
GRR   Gorron              21.58 305  eP      P       02 59 41.6 -1.4
     comp=Z,42nm,1.3s,mb4.4
GRR   Gorron              21.58 305  eP      P       02 59 41.6 -1.4
GRR                                     pmax    pmax
     comp=Z,21nm,1.3s,mb4.4
GRR   Gorron              21.58 305  eP      P       02 59 41.6 -1.4
     comp=Z,21nm,1.3s,mb4.4
GRR   Gorron              21.58 305  eP      P       02 59 41.6 -1.4
     comp=Z,21nm,1.3s,mb4.4
FINES FINESS Array B      22.62   0  P       P       02 59 52.0 -2.0
     comp=Z,4.1nm,1.0s,mb3.8,baz=165,slow=15,SNR=5.7
FINES                                   LR      LR      03 08 59.5
     comp=Z,101nm,21.5s,MS3.2,baz=318,slow=38
FINES FINESS Array B      22.62   0  P       P       02 59 52.0 -2.0
SGMF  Saint Gilles        22.64 304  eP      P       02 59 54.7 +0.3
SGMF  Saint Gilles        22.64 304  eP      P       02 59 54.7 +0.3
HFS   Hagfors             22.69 344  P       P       02 59 51.5 -3.2
     comp=Z,1.0nm,0.6s,mb3.4,baz=149,slow=9.7,SNR=5.1
HFS                                     LR      LR      03 10 12.9
     comp=Z,88nm,18.0s,MS3.2,baz=340,slow=41
QUIF  Quistinic           22.96 303  eP      P       02 59 58.0 +0.2
QUIF  Quistinic           22.96 303  eP      P       02 59 58.0 +0.2
ESDC  Sonseca Array       23.19 282  P       P       02 59 58.6 -1.6
     comp=Z,1.7nm,0.8s,mb3.5,baz=79,slow=10,SNR=14
ESDC                                    LR      LR      03 08 48.0
     comp=Z,39nm,19.9s,MS2.9,baz=25,slow=36
ESDC  Sonseca Array       23.19 282  P       P       02 59 58.7 -1.6
NAO01 NORSAR Array S      23.97 342  eP      P       03 00 06.1 -1.6
     comp=Z,9.0nm,0.8s,mb4.2
NAO01 NORSAR Array S      23.97 342  eP      P       03 00 06.1 -1.6
     comp=Z,9.0nm,0.8s,mb4.2
NB2   NORSAR Subarra      24.06 342  P       P       03 00 06.7 -1.8
     comp=Z,0.3nm,0.7s,mb2.8,baz=147,slow=10
NB2   NORSAR Subarra      24.06 342  P       P       03 00 06.7 -1.8
     comp=Z,0.3nm,0.7s,mb2.8,baz=147,slow=9.9,SNR=4.6
NOA   NORSAR Array B      24.06 342  P       P       03 00 06.8 -1.7
     comp=Z,1.7nm,0.7s,mb3.6,baz=154,slow=8.4,SNR=12
NOA   NORSAR Array B      24.06 342  P       P       03 00 06.8 -1.7
NOA                                     pmax    pmax
     comp=Z,2.0nm,0.7s
NOA   NORSAR Array B      24.06 342  P       P       03 00 06.8 -1.7
     comp=Z,2.0nm,0.7s,mb3.7
AKTK  Aktyubinsk          25.34  52  P       P       03 00 22.1 +1.9
AKTK                                    LR      LR      03 12 40.7
AKTK  Aktyubinsk          25.34  52  P       P       03 00 22.1 +1.8
AKTO  Aktyubinsk          25.34  52  P       P       03 00 22.1 +1.9
     comp=Z,2.6nm,0.8s,mb3.8,baz=243,slow=11,SNR=9.9
AKTO                                    LR      LR      03 12 40.7
     comp=Z,28nm,18.4s,MS2.8,baz=50,slow=42
MDT   Midelt              25.49 266  P       P       03 00 23.8 +2.0
     comp=Z,2.2nm,0.9s,mb3.7,baz=43,slow=4.4,SNR=3.8
MDT   Midelt              25.49 266  P       P       03 00 23.8 +2.0
EKA   Eskdalemuir Ar      25.55 320  P       P       03 00 20.9 -1.2
     comp=Z,1.2nm,0.7s,mb3.6,baz=113,slow=10,SNR=6.4
EKA   Eskdalemuir Ar      25.55 320  P       P       03 00 21.0 -1.2
ARCES ARCESS Array B      30.75 360  LR      LR      03 13 49.0
     comp=Z,64nm,20.2s,MS3.3,baz=334,slow=37
TORD  Torodi Ar. Bea      33.46 227  P       P       03 01 32.5 -0.2
     comp=Z,0.9nm,0.8s,mb3.8,baz=31,slow=9.2,SNR=5.0
KMBO  Kilima Mbogo        41.09 163  LR      LR      03 20 56.1
     comp=Z,32nm,18.7s,MS3.2,baz=287,slow=38
MKAR  Makanchi Array      41.25  60  P       P       03 02 37.1 -1.4
     comp=Z,1.5nm,0.8s,mb3.7,baz=293,slow=6.2,SNR=3.8
MKAR  Makanchi Array      41.25  60  P       P       03 02 37.1 -1.4
ZALV  Zalesovo Beam       42.01  49  P       P       03 02 44.9 +0.3
     comp=Z,0.3nm,0.3s,mb3.4,baz=272,slow=8.1,SNR=2.1
ZALV                                    LR      LR      03 22 41.0
     comp=Z,26nm,19.6s,MS3.1,baz=0.1,slow=40
SONM  Songino Array       56.66  53  P       P       03 04 38.3 +1.6
     comp=Z,0.4nm,0.6s,mb3.6,baz=280,slow=8.6,SNR=2.3
SONM  Songino Array       56.66  53  P       P       03 04 38.3 +1.6
KSRS  Korea Array         75.51  54  P       P       03 06 36.8 -1.3
     comp=Z,0.4nm,0.3s,mb3.8,baz=318,slow=4.8,SNR=3.0
KSRS                                    LR      LR      03 44 31.6
     comp=Z,31nm,18.5s,MS3.6,baz=15,slow=39
KSRS  Korea Array         75.51  54  P       P       03 06 36.8 -1.2
     comp=Z,31nm,18.5s
ILAR  Eielson Array       76.57 357  P       P       03 06 42.5 -1.0
     comp=Z,0.2nm,0.6s,mb3.2,baz=359,slow=5.0,SNR=4.2
ILAR  Eielson Array       76.57 357  P       P       03 06 42.6 -0.9
PETK  Petropavlovsk-      79.32  27  LR      LR      03 44 21.9
     comp=Z,29nm,18.1s,MS3.6,baz=79,slow=37
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NEIC ***31*** *03:04:13.0, 38°.80N×25°.92E, h10km, mb3.8/12, ML4.2(ISK), ML3.8(ATH), After ISK.*
IDC ***31*** *03:04:14.3±1.2, 38°.80N×25°.92E, h0km, mb3.6/11, mb1 3.6/15, mb1mx3.6/29, mbtmp3.6/15, ML4.0/5, MS3.1/6, Ms1 3.1/6, ms1mx2.8/28, Error ellipse: s-maj=21.8km s-min=14.9km az=23.0*
ISK ***31*** *03:04:14.6, 38°.84N×25°.99E, h14km, ML4.2*
ISCJB ***31*** *03:04:15.7±0.7, 38°.87N±0°.01×26°.07E±0°.02, h11km±5km, mb3.5/12, MS2.9/4, Error ellipse: s-maj=2.4km s-min=2.1km az=22.0*
ATH ***31*** *03:04:15.7, 38°.86N×26°.14E, h28km±1km, ML3.8*
THE ***31*** *03:04:16.9, 38°.87N×26°.07E, h5km±1km, ML4.7/4, Error ellipse: s-maj=1.3km s-min=0.4km az=88.0*
CSEM ***31*** *03:04:16.5±0.1, 38°.84N×26°.09E, h10km, mb3.8/4, Ms2.7, Error ellipse: s-maj=2.2km s-min=1.9km az=5.0*
DDA ***31*** *03:04:16.1, 38°.87N×26°.11E, h7km±5km, Md3.6, Ml3.7*
MOS ***31*** *03:04:17.5±1.3, 38°.91N×26°.14E, h29km, mb3.9/6, Error ellipse: s-maj=5.4km s-min=3.3km az=109.5*
ISC 31 03:04:16.7±0.4,**38°.85N**±0°.01×**26°.09E**±0°.02,**h10**km±2km, **n513**, σ0s**99**/544, **mb3.6**/13, **MS2.9**/4, **21C-27D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.40**	**333**	P	**Pg**	**03 04 24.7**	**0.0**
SIGR				S	**Sg**	**03 04 30.0**	**-0.1**
SIGR	**SIGRI**	**0.40**	**333**	P	**Pg**	**03 04 24.7**	**0.0**
SIGR				S	**Sg**	**03 04 30.0**	**-0.1**
SIGR	**SIGRI**	**0.40**	**333**	P	**Pg**	**03 04 24.7**	**0.0**
SIGR				S	**Sg**	**03 04 30.0**	**-0.1**
PRK	**Paraskevi**	**0.42**	**19**	P	**Pg**	**03 04 25.0**	**0.0**
PRK				*e*S	**Sg**	**03 04 30.9**	**+0.3**
PRK	**Paraskevi**	**0.42**	**19**	*e*PB	**Pg**	**03 04 25.0**	**0.0**
PRK				*e*SB	**Sg**	**03 04 31.0**	**+0.4**
PRK	**Paraskevi**	**0.42**	**19**	P	**Pg**	**03 04 25.0**	**0.0**
PRK				S	**Sg**	**03 04 30.9**	**+0.3**
PRK	**Paraskevi**	**0.42**	**19**	P	**Pg**	**03 04 25.0**	**0.0**
PRK				S	**Sg**	**03 04 30.9**	**+0.3**
CHOS	**Chios island**	**0.46**	**184**	*e*PB	**Pg**	**03 04 26.4**	**+0.6**
CHOS	**Chios island**	**0.46**	**184**	P	**Pg**	**03 04 26.5**	**+0.7**
CHOS				S	**Sg**	**03 04 33.5**	**+1.6**
CHOS	**Chios island**	**0.46**	**184**	*e*Pb	**Pg**	**03 04 26.4**	**+0.6**
URLA	**Izmir**	**0.63**	**141**	⇑*i*P	**Pg**	**03 04 28.1**	**-0.8**
URLA				*i* S	**Sg**	**03 04 37.1**	**-0.1**
URLA	**Izmir**	**0.63**	**141**	*i* P	**Pg**	**03 04 28.1**	**-0.8**
URLA				*i* S	**Sg**	**03 04 37.1**	**-0.1**
AYVA	**Ayvalik**	**0.65**	**45**	⇑*i*P	**Pg**	**03 04 29.2**	**-0.1**
AYVA				*i* S	**Sg**	**03 04 38.2**	**+0.3**
AYVA	**Ayvalik**	**0.65**	**45**	*i* P	**Pg**	**03 04 29.2**	**-0.2**
AYVA				*i* S	**Sg**	**03 04 38.2**	**+0.3**
BLCB	**Balcova**	**0.88**	**122**	*e*PG	**Pg**	**03 04 33.5**	**-0.2**
BLCB	**Balcova**	**0.88**	**122**	P	**Pg**	**03 04 33.6**	**0.0**
BLCB				S	**Sg**	**03 04 47.1**	**+2.0**
BLCB	**Balcova**	**0.88**	**122**	P	**Pg**	**03 04 33.6**	**0.0**
BLCB				S	**Sg**	**03 04 47.1**	**+2.0**
BLCB	**Balcova**	**0.88**	**122**	*e*Pg	**Pg**	**03 04 33.5**	**-0.1**
EZN	**Ezine**	**0.99**	**10**	*e*PG	**Pg**	**03 04 34.8**	**-1.0**
EZN				*e*SG	**Sg**	**03 04 48.2**	**-0.5**
EZN	**Ezine**	**0.99**	**10**	Pg	**Pg**	**03 04 34.9**	**-0.9**
EZN	**Ezine**	**0.99**	**10**	P	**Pg**	**03 04 34.9**	**-0.9**
EZN				*e*Sg	**Sg**	**03 04 48.2**	**-0.5**
IZM	**Izmir**	**1.02**	**116**	*e*PN	**Pn**	**03 04 36.4**	**-0.7**
IZM	**Izmir**	**1.02**	**116**	Pn	**Pn**	**03 04 36.5**	**-0.6**
IZM	**Izmir**	**1.02**	**116**	P	**Pg**	**03 04 36.5**	**+0.1**
KDAG	**Bornova**	**1.02**	**116**	*i* P	**Pg**	**03 04 35.5**	**-0.9**
KDAG				*i* S	**Sg**	**03 04 49.3**	**-0.4**
KDAG	**Bornova**	**1.02**	**116**	*i* P	**Pg**	**03 04 35.5**	**-0.9**
KDAG				*i* S	**Sg**	**03 04 49.3**	**-0.4**
LIA	**Limnos Island**	**1.26**	**326**	P	**Pn**	**03 04 40.0**	**-0.4**
LIA				S	**Sb**	**03 04 57.7**	**+0.9**
LIA	**Limnos Island**	**1.26**	**326**	*e*PN	**Pn**	**03 04 40.0**	**-0.4**
LIA				*e*SN	**Sn**	**03 04 57.3**	**0.0**
LIA	**Limnos Island**	**1.26**	**326**	P	**Pn**	**03 04 40.0**	**-0.4**
LIA				S	**Sb**	**03 04 57.7**	**+0.9**
LIA	**Limnos Island**	**1.26**	**326**	P	**Pn**	**03 04 40.0**	**-0.4**
LIA				*e*Sn	**Sn**	**03 04 57.3**	**0.0**
LIA				S	**Sb**	**03 04 57.7**	**+0.9**
AKHS	**Akhisar**	**1.34**	**88**	⇑*i*P	**Pn**	**03 04 40.9**	**-0.6**
AKHS				*i* S	**Sb**	**03 05 00.9**	**+1.7**
AKHS	**Akhisar**	**1.34**	**88**	*i* P	**Pn**	**03 04 40.8**	**-0.7**
AKHS				*i* S	**Sb**	**03 05 00.9**	**+1.7**
AKS	**Akhisar**	**1.34**	**88**	*e*PN	**Pn**	**03 04 41.0**	**-0.5**
AKS	**Akhisar**	**1.34**	**88**	Pn	**Pn**	**03 04 41.1**	**-0.3**
AKS	**Akhisar**	**1.34**	**88**	Pn	**Pn**	**03 04 41.1**	**-0.4**
GADA	**Gvkgeada**	**1.35**	**354**	*e*PN	**Pn**	**03 04 39.8**	**-1.8**
GADA				*e*SN	**Sn**	**03 04 57.8**	**-1.7**
GADA	**Gvkgeada**	**1.35**	**354**	Pn	**Pn**	**03 04 39.8**	**-1.8**
GADA	**Gvkgeada**	**1.35**	**354**	*e*Pn	**Pn**	**03 04 39.8**	**-1.7**
GADA				*e*Sn	**Sn**	**03 04 57.8**	**-1.6**
GCAM	**G?zelcaml?**	**1.46**	**142**	⇓*i*P	**Pn**	**03 04 44.2**	**+1.1**
GCAM				*i* S	**Sn**	**03 05 01.4**	**-0.8**
GCAM	**G?zelcaml?**	**1.46**	**142**	*i* P	**Pn**	**03 04 44.2**	**+1.1**
GCAM				*i* S	**Sn**	**03 05 01.4**	**-0.8**
BALY	**Balya**	**1.48**	**53**	⇑*i*P	**Pn**	**03 04 42.8**	**-0.6**
BALY				*i* S	**Sn**	**03 05 04.2**	**+1.5**
BALY	**Balya**	**1.48**	**53**	*i* P	**Pn**	**03 04 42.8**	**-0.6**
BALY				*i* S	**Sn**	**03 05 04.2**	**+1.5**
GELI	**Tayfur-Gelibol**	**1.57**	**11**	*e*PN	**Pn**	**03 04 43.8**	**-0.9**
GELI	**Tayfur-Gelibol**	**1.57**	**11**	Pn	**Pn**	**03 04 43.9**	**-0.7**
GELI	**Tayfur-Gelibol**	**1.57**	**11**	Pn	**Pn**	**03 04 43.9**	**-0.7**
BALB	**Balikesir**	**1.60**	**60**	*e*PN	**Pn**	**03 04 44.4**	**-0.6**
BALB	**Balikesir**	**1.60**	**60**	Pn	**Pn**	**03 04 44.6**	**-0.4**
BALB	**Balikesir**	**1.60**	**60**	Pn	**Pn**	**03 04 44.6**	**-0.4**
LPK	**Lapseki**	**1.60**	**19**	*e*PN	**Pn**	**03 04 43.5**	**-1.6**
LPK	**Lapseki**	**1.60**	**19**	Pn	**Pn**	**03 04 43.4**	**-1.6**
LPK	**Lapseki**	**1.60**	**19**	*e*Pn	**Pn**	**03 04 43.5**	**-1.6**
GONE	**Gonen-Balikesi**	**1.72**	**45**	*e*PN	**Pn**	**03 04 46.2**	**-0.5**
GONE	**Gonen-Balikesi**	**1.72**	**45**	*e*Pn	**Pn**	**03 04 46.2**	**-0.4**
AOS	**Alonnisos**	**1.75**	**281**	P	**Pn**	**03 04 46.7**	**-0.4**
AOS				S	**Sn**	**03 05 10.4**	**+1.0**
AOS	**Alonnisos**	**1.75**	**281**	P	**Pn**	**03 04 46.7**	**-0.4**
AOS				S	**Sn**	**03 05 10.4**	**+1.0**
AOS	**Alonnisos**	**1.75**	**281**	P	**Pn**	**03 04 46.7**	**-0.4**
AOS				S	**Sn**	**03 05 10.4**	**+1.0**
KRBG	**Karabiga-Canak**	**1.80**	**31**	*e*PN	**Pn**	**03 04 46.2**	**-1.6**
KRBG	**Karabiga-Canak**	**1.80**	**31**	Pn	**Pn**	**03 04 47.2**	**-0.5**
KRBG	**Karabiga-Canak**	**1.80**	**31**	Pn	**Pn**	**03 04 47.2**	**-0.6**
APE	**Apeiranthos**	**1.83**	**194**	*e*PN	**Pn**	**03 04 46.1**	**-2.1**
APE	**Apeiranthos**	**1.83**	**194**	⇑P	**Pn**	**03 04 47.1**	**-1.1**
APE	**Apeiranthos**	**1.83**	**194**	*e*PB	**Pn**	**03 04 47.1**	**-1.1**
APE	**Apeiranthos**	**1.83**	**194**	P	**Pn**	**03 04 47.1**	**-1.1**
APE	**Apeiranthos**	**1.83**	**194**	⇑P	**Pn**	**03 04 47.1**	**-1.1**
APE	**Apeiranthos**	**1.83**	**194**	*e*Pn	**Pn**	**03 04 46.1**	**-2.1**
APE	**Apeiranthos**	**1.83**	**194**	*e*Pb	**Pn**	**03 04 47.1**	**-1.1**
ERIK	**Erikli-Kesan**	**1.85**	**10**	*e*PN	**Pn**	**03 04 47.2**	**-1.2**
ERIK	**Erikli-Kesan**	**1.85**	**10**	Pn	**Pn**	**03 04 48.0**	**-0.4**
ERIK	**Erikli-Kesan**	**1.85**	**10**	Pn	**Pn**	**03 04 48.0**	**-0.4**
ENEZ	**Enez**	**1.88**	**1**	*e*PN	**Pn**	**03 04 48.0**	**-0.9**
ENEZ	**Enez**	**1.88**	**1**	*e*Pn	**Pn**	**03 04 48.0**	**-0.9**
PTL	**Penteli**	**1.92**	**246**	P	**Pn**	**03 04 48.8**	**-0.7**
PTL	**Penteli**	**1.92**	**246**	P	**Pn**	**03 04 48.8**	**-0.7**
RKY	**Sarkoy-Tekirda**	**2.02**	**24**	*e*PN	**Pn**	**03 04 49.3**	**-1.4**
RKY	**Sarkoy-Tekirda**	**2.02**	**24**	Pn	**Pn**	**03 04 50.3**	**-0.4**
RKY	**Sarkoy-Tekirda**	**2.02**	**24**	Pn	**Pn**	**03 04 50.3**	**-0.4**
EDC	**Edincik**	**2.03**	**42**	*e*PN	**Pn**	**03 04 49.6**	**-1.3**
EDC	**Edincik**	**2.03**	**42**	Pn	**Pn**	**03 04 50.3**	**-0.5**
EDC	**Edincik**	**2.03**	**42**	P	**Pn**	**03 04 50.3**	**-0.6**
BODT	**Bodrum**	**2.03**	**151**	*e*PN	**Pn**	**03 04 49.0**	**-1.9**
BODT	**Bodrum**	**2.03**	**151**	Pn	**Pn**	**03 04 49.4**	**-1.5**
BODT	**Bodrum**	**2.03**	**151**	Pn	**Pn**	**03 04 49.4**	**-1.5**
KULA	**Kula-Manisa**	**2.04**	**99**	*e*PN	**Pn**	**03 04 50.3**	**-0.7**
KULA	**Kula-Manisa**	**2.04**	**99**	*e*Pn	**Pn**	**03 04 50.3**	**-0.7**
ALN	**Alexandroupoli**	**2.04**	**359**	P	**Pn**	**03 04 50.5**	**-0.6**
ALN	**Alexandroupoli**	**2.04**	**359**	P	**Pn**	**03 04 50.5**	**-0.6**
ALN	**Alexandroupoli**	**2.04**	**359**	P	**Pn**	**03 04 50.5**	**-0.6**
MLSB	**Milas**	**2.04**	**139**	*e*PN	**Pn**	**03 04 50.0**	**-1.1**
MLSB	**Milas**	**2.04**	**139**	Pn	**Pn**	**03 04 50.3**	**-0.8**
MLSB	**Milas**	**2.04**	**139**	Pn	**Pn**	**03 04 50.3**	**-0.8**
ATH	**Athens Observa**	**2.06**	**246**	*e*P	**Pn**	**03 04 50.9**	**-0.5**
ATH	**Athens Observa**	**2.06**	**246**	*e*PN	**Pn**	**03 04 50.9**	**-0.5**
ATH	**Athens Observa**	**2.06**	**246**	*e*Pn	**Pn**	**03 04 50.9**	**-0.5**
BNT	**Bandirma**	**2.06**	**43**	*e*PN	**Pn**	**03 04 49.9**	**-1.5**
VLY	**Voula,Athens**	**2.06**	**242**	*e*Pn	**Pn**	**03 04 50.9**	**-0.5**
VLY	**Voula,Athens**	**2.06**	**242**	*e*PN	**Pn**	**03 04 50.9**	**-0.5**
VLY	**Voula,Athens**	**2.06**	**242**	*e*Pn	**Pn**	**03 04 50.9**	**-0.5**
MFT	**Murefte**	**2.14**	**25**	*e*PN	**Pn**	**03 04 52.4**	**-0.1**
MFT	**Murefte**	**2.14**	**25**	*e*Pn	**Pn**	**03 04 52.4**	**0.0**
PAIG	**Paliouri**	**2.16**	**301**	P	**Pn**	**03 04 52.0**	**-0.7**
PAIG	**Paliouri**	**2.16**	**301**	P	**Pn**	**03 04 52.0**	**-0.7**
PAIG	**Paliouri**	**2.16**	**301**	P	**Pn**	**03 04 52.0**	**-0.7**
OUR	**Ouranopolis**	**2.20**	**313**	P	**Pn**	**03 04 52.6**	**-0.7**
OUR	**Ouranopolis**	**2.20**	**313**	P	**Pn**	**03 04 52.6**	**-0.7**
OUR	**Ouranopolis**	**2.20**	**313**	P	**Pn**	**03 04 52.6**	**-0.7**
KCTX	**Karacabey (Bur**	**2.25**	**50**	*e*PN	**Pn**	**03 04 53.5**	**-0.4**
KCTX	**Karacabey (Bur**	**2.25**	**50**	*e*Pn	**Pn**	**03 04 53.5**	**-0.4**
NEO	**Neokhori**	**2.28**	**282**	*e*Pn	**Pn**	**03 04 53.9**	**-0.4**
NEO	**Neokhori**	**2.28**	**282**	*e*PN	**Pn**	**03 04 53.9**	**-0.4**
NEO	**Neokhori**	**2.28**	**282**	*e*Pn	**Pn**	**03 04 53.9**	**-0.4**
XOR	**Xorichti**	**2.31**	**284**	P	**Pn**	**03 04 54.1**	**-0.7**
XOR	**Xorichti**	**2.31**	**284**	P	**Pn**	**03 04 54.1**	**-0.7**
XOR	**Xorichti**	**2.31**	**284**	P	**Pn**	**03 04 54.1**	**-0.7**
NAIG	**Nisos Aigina**	**2.32**	**243**	*e*Pn	**Pn**	**03 04 54.4**	**-0.5**
NAIG	**Nisos Aigina**	**2.32**	**243**	*e*PN	**Pn**	**03 04 54.4**	**-0.5**
NAIG	**Nisos Aigina**	**2.32**	**243**	*e*Pn	**Pn**	**03 04 54.4**	**-0.5**
ATAL	**Atalanti**	**2.41**	**267**	P	**Pn**	**03 04 55.7**	**-0.4**
ATAL	**Atalanti**	**2.41**	**267**	P	**Pn**	**03 04 55.7**	**-0.4**
TKR	**Tekirdag**	**2.41**	**27**	*e*PN	**Pn**	**03 04 55.7**	**-0.5**
TKR	**Tekirdag**	**2.41**	**27**	Pn	**Pn**	**03 04 56.7**	**+0.6**
TKR	**Tekirdag**	**2.41**	**27**	*e*Pn	**Pn**	**03 04 55.7**	**-0.4**
DAT	**Datca**	**2.42**	**150**	*e*PN	**Pn**	**03 04 55.7**	**-0.6**
DAT	**Datca**	**2.42**	**150**	*e*Pn	**Pn**	**03 04 55.7**	**-0.6**
LKR	**Lokris**	**2.43**	**266**	P	**Pn**	**03 04 55.8**	**-0.6**
LKR	**Lokris**	**2.43**	**266**	*e*PN	**Pn**	**03 04 55.8**	**-0.6**
LKR	**Lokris**	**2.43**	**266**	P	**Pn**	**03 04 55.8**	**-0.6**
LKR	**Lokris**	**2.43**	**266**	P	**Pn**	**03 04 55.8**	**-0.6**
YER	**Yerkesik**	**2.44**	**134**	*e*PN	**Pn**	**03 04 55.8**	**-0.7**
YER	**Yerkesik**	**2.44**	**134**	Pn	**Pn**	**03 04 56.2**	**-0.3**
YER	**Yerkesik**	**2.44**	**134**	P	**Pn**	**03 04 56.2**	**-0.3**
KAVA	**Kavala**	**2.46**	**331**	P	**Pn**	**03 04 56.2**	**-0.7**
KAVA	**Kavala**	**2.46**	**331**	P	**Pn**	**03 04 56.2**	**-0.7**
THR3	**Thira Island,**	**2.50**	**193**	P	**Pn**	**03 04 56.2**	**-1.2**
THR3	**Thira Island,**	**2.50**	**193**	P	**Pn**	**03 04 56.2**	**-1.2**
THR3	**Thira Island,**	**2.50**	**193**	P	**Pn**	**03 04 56.2**	**-1.2**
THR5	**Thira Island,**	**2.50**	**194**	P	**Pn**	**03 04 57.1**	**-0.3**
THR5	**Thira Island,**	**2.50**	**194**	P	**Pn**	**03 04 57.1**	**-0.3**
THR5	**Thira Island,**	**2.50**	**194**	P	**Pn**	**03 04 57.1**	**-0.3**
THR1	**Thera Island**	**2.53**	**192**	P	**Pn**	**03 04 56.9**	**-0.8**
THR1	**Thera Island**	**2.53**	**192**	P	**Pn**

TRIZ Trizonia 3.19 263 P Pn 03 05 07.0 +0.2
TRIZ Trizonia 3.19 263 P Pn 03 05 07.0 +0.2
CAVI Cavuskoy 3.20 64 *e*PN **Pn 03 05 07.8 +0.8**
CAVI Cavuskoy 3.20 64 *e*Pn **Pn 03 05 07.8 +0.8**
ADVT Abdulvahap 3.23 60 *e*PN **Pn 03 05 07.3 0.0**
ADVT Abdulvahap 3.23 60 *e*Pn **Pn 03 05 07.3 -0.1**
THL Klokotos Trika 3.25 284 P **Pn 03 05 07.8 +0.2**
THL Klokotos Trika 3.25 284 P **Pn 03 05 07.8 +0.2**
LAKA Lakka 3.28 261 P **Pn 03 05 08.3 +0.2**
LAKA Lakka 3.28 261 P **Pn 03 05 08.3 +0.2**
VLI Veliai 3.28 231 P **Pn 03 05 07.5 -0.7**
VLI Veliai 3.28 231 P **Pn 03 05 07.5 -0.7**
KLYT Kilyos 3.30 42 *e*PN **Pn 03 05 08.4 +0.1**
KLYT Kilyos 3.30 42 Pn **Pn 03 05 09.5 +1.2**
KLYT Kilyos 3.30 42 *e*Pn **Pn 03 05 08.4 0.0**
EVR Evrytania 3.34 272 *e*Pn **Pn 03 05 09.6 +0.6**
EVR Evrytania 3.34 272 *e*PN **Pn 03 05 09.6 +0.6**
EVR Evrytania 3.34 272 *e*Pn **Pn 03 05 09.6 +0.6**
KNT Kendrikon 3.37 314 P **Pn 03 05 09.4 +0.1**
KNT Kendrikon 3.37 314 P **Pn 03 05 09.4 +0.1**
KNT Kendrikon 3.37 314 P **Pn 03 05 09.4 +0.1**
HRT Hereke 3.38 53 *e*PN **Pn 03 05 10.0 +0.5**
HRT Hereke 3.38 53 *e*Pn **Pn 03 05 10.0 +0.5**
KARP Karpathos 3.41 165 *e*Pn **Pn 03 05 09.3 -0.5**
KARP Karpathos 3.41 165 *e*PN **Pn 03 05 09.3 -0.5**
KARP Karpathos 3.41 165 *e*Pn **Pn 03 05 09.3 -0.5**
PLD Plovdiv 3.42 342 P **Pn 03 05 10.1 +0.1**
PLD Plovdiv 3.42 342 P **Pn 03 05 10.1 +0.1**
PLD Plovdiv 3.42 342 P **Pn 03 05 10.1 +0.1**
SHUT Suhut-Afyon 3.50 93 *e*PN **Pn 03 05 11.9 +0.8**
SHUT Suhut-Afyon 3.50 93 *e*Pn **Pn 03 05 11.9 +0.8**
GRG Griva 3.53 308 P **Pn 03 05 11.8 +0.2**
GRG Griva 3.53 308 P **Pn 03 05 11.8 +0.2**
GRG Griva 3.53 308 P **Pn 03 05 11.8 +0.2**
GPA Golpazari 3.56 65 *e*PN **Pn 03 05 13.3 +1.4**
GPA Golpazari 3.56 65 *e*Pn **Pn 03 05 13.3 +1.3**
SILT Sile 3.57 49 *e*PN **Pn 03 05 12.4 +0.4**
SILT Sile 3.57 49 Pn **Pn 03 05 13.8 +1.7**
SILT Sile 3.57 49 *e*Pn **Pn 03 05 12.4 +0.4**
JMB Yambol 3.63 6 P **Pn 03 05 13.2 +0.3**
JMB Yambol 3.63 6 P **Pn 03 05 13.2 +0.3**
JMB Yambol 3.63 6 P **Pn 03 05 13.2 +0.3**
ISP Isparta 3.63 105 *e*PN **Pn 03 05 13.5 +0.6**
ISP Isparta 3.63 105 ⇓P **Pn 03 05 13.6 +0.7**
ISP Isparta 3.63 105 *e*Pn **Pn 03 05 13.1 +0.2**
ISP Isparta 3.63 105 ⇓*i*P **Pn 03 05 13.6 +0.7**
KZN Kozani 3.64 295 P **Pn 03 05 13.4 +0.3**
KZN Kozani 3.64 295 *e*PN **Pn 03 05 13.6 +0.5**
KZN Kozani 3.64 295 P **Pn 03 05 13.4 +0.3**
KZN Kozani 3.64 295 P **Pn 03 05 13.4 +0.3**
VAY Valandovo 3.66 314 *i* Pn **Pn 03 05 13.2 -0.1**
VAY Valandovo 3.66 314 *i* Pn **Pn 03 05 13.6 +0.3**
VAY *i* Sn **Sg 03 06 10.3 -3.9**
VAY Valandovo 3.66 314 P **Pn 03 05 13.2 -0.1**
VAY Valandovo 3.66 314 P **Pn 03 05 13.2 -0.1**
IDI Anoyia 3.68 195 P **Pn 03 05 14.5 +0.8**
IDI Anoyia 3.68 195 P **Pn 03 05 14.5 +0.8**
RLS Riolos of Patr 3.72 259 P **Pn 03 05 15.9 +1.8**
RLS Riolos of Patr 3.72 259 P **Pn 03 05 15.9 +1.8**
SPNC Sapanca-Adapaz 3.73 59 *e*PN **Pn 03 05 14.7 +0.4**
SPNC Sapanca-Adapaz 3.73 59 Pn **Pn 03 05 16.1 +1.8**
SPNC Sapanca-Adapaz 3.73 59 *e*Pn **Pn 03 05 14.7 +0.4**
ZKR Zakros 3.73 178 P **Pn 03 05 17.8 +3.5**
ZKR Zakros 3.73 178 P **Pn 03 05 17.8 +3.5**
ESKT Eskisehir 3.76 78 *e*PN **Pn 03 05 15.6 +1.0**
ESKT Eskisehir 3.76 78 *e*Pn **Pn 03 05 15.6 +0.9**
GULT Gulveren 3.76 64 *e*PN **Pn 03 05 15.1 +0.4**
GULT Gulveren 3.76 64 Pn **Pn 03 05 16.5 +1.8**
GULT Gulveren 3.76 64 *e*Pn **Pn 03 05 15.1 +0.4**
FNA Florina 4.11 299 P **Pn 03 05 20.1 +0.6**
FNA Florina 4.11 299 P **Pn 03 05 20.1 +0.6**
FNA Florina 4.11 299 P **Pn 03 05 20.1 +0.6**
NEST Nestorio 4.20 293 P **Pn 03 05 21.4 +0.7**
NEST Nestorio 4.20 293 P **Pn 03 05 21.4 +0.7**
BIA Bitola 4.26 302 *i* Pn **Pn 03 05 22.1 +0.6**
SVRH Sivrihisar-ESK 4.26 80 *e*PN **Pn 03 05 23.0 +1.4**
SVRH Sivrihisar-ESK 4.26 80 *e*Pn **Pn 03 05 23.0 +1.4**
MDU Mudurnu 4.27 66 *e*PN **Pn 03 05 21.9 +0.2**
MDU Mudurnu 4.27 66 Pn **Pn 03 05 23.4 +1.7**
MDU Mudurnu 4.27 66 *e*Pn **Pn 03 05 22.0 +0.3**
GVD Gavdhos 4.32 202 *e*Pn **Pn 03 05 17.7 -4.6**
GVD Gavdhos 4.32 202 *e*Pn **Pn 03 05 17.7 -4.6**
VTS Vitosha 4.33 331 ⇓P **Pn 03 05 23.5 +1.0**
VTS Vitosha 4.33 331 P **Pn 03 05 22.9 +0.4**
VTS Vitosha 4.33 331 P **Pn 03 05 22.9 +0.4**
VTS Vitosha 4.33 331 ⇓*i*P **Pn 03 05 23.5 +1.0**
VTS Vitosha 4.33 331 P **Pn 03 05 22.9 +0.4**
KRUS Krusevo 4.49 306 *i* Pn **Pn 03 05 25.2 +0.5**
SRN Sarande 4.83 284 *e*PN **Pn 03 05 32.6 +3.2**
SRN Sarande 4.83 284 *e*Pn **Pn 03 05 32.6 +3.2**
KEK Kerkira 4.96 282 *e*Pn **Pn 03 05 32.8 +1.6**
KEK Kerkira 4.96 282 *e*PN **Pn 03 05 32.8 +1.6**
KEK Kerkira 4.96 282 *e*Pn **Pn 03 05 32.8 +1.6**
BARS Barje 5.12 322 ⇓*i*Pn **Pn 03 05 33.8 +0.4**
TIR Tirane 5.39 300 *e*P **Pn 03 05 34.7 -2.3**
TIR Tirane 5.39 300 *e*P **Pn 03 05 34.7 -2.3**
PUK Puka 5.70 306 *e*PN **Pn 03 05 41.0 -0.4**
PUK Puka 5.70 306 *e*Pn **Pn 03 05 41.0 -0.4**
BCI Bajram Curri 5.77 309 *e*PN **Pn 03 05 43.8 +1.4**
BCI Bajram Curri 5.77 309 *e*Pn **Pn 03 05 43.8 +1.4**
TIRR Tirgusor 5.87 16 ⇑P **Pn 03 05 43.4 -0.2**
TIRR Tirgusor 5.87 16 *e*Pn **Pn 03 05 43.1 -0.5**
26nm,0.5s
TIRR Tirgusor 5.87 16 ⇑*i*P **Pn 03 05 43.4 -0.2**
TIRR Tirgusor 5.87 16 *e*Pn **Pn 03 05 43.1 -0.5**
26nm,0.5s
TIRR Tirgusor 5.87 16 P **Pn 03 05 43.4 -0.2**
BOLS Boljevac 5.87 329 ⇓*i*Pn **Pn 03 05 43.6 0.0**
BR131 Keskin Array S 5.92 79 *e*Pn **Pn 03 05 45.2 +0.8**
17nm,0.8s
BR131 Keskin Array S 5.92 79 *e*Pn **Pn 03 05 45.2 +0.8**
17nm,0.8s
BRTR Keskin Array B 5.92 79 Pn **Pn 03 05 45.1 +0.8**
2.0nm,0.3s,baz=251,slow=12,SNR=17
BRTR Lg 03 07 28.9
0.4nm,0.3s,baz=269,slow=26,SNR=3.6
BRTR Keskin Array B 5.92 79 P **Pn 03 05 45.2 +0.8**
GRUS Gruza 6.46 323 ⇓*i*Pn **Pn 03 05 51.0 -0.7**
CFR Carcaliu 6.50 13 ⇓P **Pn 03 05 52.0 -0.4**
CFR Carcaliu 6.50 13 ⇓*i*P **Pn 03 05 52.0 -0.4**
CFR Carcaliu 6.50 13 P **Pn 03 05 52.0 -0.4**
VOIR 6.63 354 ⇑P **Pn 03 05 54.2 +0.1**
VOIR 6.63 354 ⇑*i*P **Pn 03 05 54.2 +0.1**
VOIR 6.63 354 P **Pn 03 05 54.2 +0.1**
MLR Muntele Rosu 6.64 359 Pn **Pn 03 05 55.3 +1.1**
5.3nm,0.3s,baz=200,slow=4.2,SNR=67
MLR Lg 03 07 48.6
baz=195,slow=20,SNR=3.6
MLR Muntele Rosu 6.64 359 ⇓P **Pn 03 05 55.9 +1.7**
MLR Muntele Rosu 6.64 359 ⇓*i*P **Pn 03 05 55.9 +1.7**
MLR Muntele Rosu 6.64 359 P **Pn 03 05 55.9 +1.7**
TRUS Trudelj 6.86 323 *e*Pn **Pn 03 05 56.3 -0.9**
DIVS Divibare 6.96 321 P **Pn 03 05 58.8 +0.2**
DIVS Divibare 6.96 321 ⇓*i*Pn **Pn 03 05 58.7 +0.1**
GZR Gura Zlata 6.99 340 ⇑P **Pn 03 05 58.4 -0.6**
GZR Gura Zlata 6.99 340 ⇑*i*P **Pn 03 05 58.4 -0.6**
GZR Gura Zlata 6.99 340 ⇑P **Pn 03 05 58.4 -0.6**
PLOR Plostina 7.01 3 ⇓P **Pn 03 06 01.0 +1.7**
PLOR Plostina 7.01 3 ⇓*i*P **Pn 03 06 01.0 +1.7**
PLOR Plostina 7.01 3 P **Pn 03 06 01.0 +1.7**
VRI Vrincioaia 7.03 4 ⇑P **Pn 03 06 00.8 +1.2**
VRI Vrincioaia 7.03 4 ⇑*i*P **Pn 03 06 00.8 +1.2**
VRI Vrincioaia 7.03 4 P **Pn 03 06 00.8 +1.2**
BBLS Lazići 7.10 317 *e*Pn **Pn 03 06 01.6 +1.1**
DOPR Dopca 7.13 356 ⇓*i*P **Pn 03 06 01.7 +0.7**
DOPR Dopca 7.13 356 ⇓*i*P **Pn 03 06 01.7 +0.7**
TIP Timpagrande 7.28 276 *e*Pn **Pn 03 06 03.8 +0.8**
TIP Timpagrande 7.28 276 *e*Pn **Pn 03 06 03.8 +0.8**
BZS Buzias 7.53 335 ⇓P **Pn 03 06 06.0 -0.5**
BZS Buzias 7.53 335 ⇓*i*P **Pn 03 06 06.0 -0.5**
BZS Buzias 7.53 335 P **Pn 03 06 06.0 -0.5**
TESR 7.67 3 ⇓P **Pn 03 06 09.2 +0.9**
TESR 7.67 3 ⇓*i*P **Pn 03 06 09.2 +0.9**
TESR 7.67 3 ⇓P **Pn 03 06 09.2 +0.9**
CEL Celeste 8.01 269 *e*Pn **Pn 03 06 13.2 0.0**
7.0nm,0.6s
CEL Celeste 8.01 269 *e*Pn **Pn 03 06 13.1 0.0**
7.0nm,0.6s
SEV Sevastopol' 8.03 42 *e*P **Pn 03 06 10.6 -2.7**
SEV *e*S **Sn 03 07 38.7 -5.4**

SEV Sevastopol' 8.03 42 *e*P **Pn 03 06 10.6 -2.7**
CUC Castrocucco 8.04 281 Pn **Pn 03 06 08.4 -5.0**
YAL Yalta 8.25 44 *e*P **Pn 03 06 17.8 +1.4**
YAL Yalta 8.25 44 *e*P **Pn 03 06 17.8 +1.4**
DRGR 8.31 344 ⇑P **Pn 03 06 17.2 0.0**
DRGR 8.31 344 ⇑*i*P **Pn 03 06 17.2 0.0**
DRGR 8.31 344 P **Pn 03 06 17.2 0.0**
KIS Kishinev 8.38 13 *e*P **Pb 03 06 41.0 -0.9**
SIM Simferopol' 8.54 42 P **Pn 03 06 23.6 +3.3**
SIM *e*S **Sn 03 07 57.0 +0.4**
SIM pmax pmax
comp=Z,18nm,1.0s
BUR08 Bucovina Array 8.78 356 ⇓P **Pn 03 06 26.0 +2.4**
BUR08 Bucovina Array 8.78 356 ⇓*i*P **Pn 03 06 26.0 +2.4**
BUR08 Bucovina Array 8.78 356 ⇓P **Pn 03 06 26.0 +2.4**
BUR08 Bucovina Ar. S 8.81 356 *e*Pn **Pn 03 06 24.1 0.0**
BUR08 Bucovina Ar. S 8.81 356 *e*Pn **Pn 03 06 24.1 +0.1**
SUDU Sudak 8.97 45 *e*P **Pn 03 06 24.0 -2.2**
SUDU *e*S **Sn 03 08 00.9 -6.4**
SUDU Sudak 8.97 45 *e*P **Pn 03 06 24.0 -2.2**
PKSM Moragy 9.18 326 ⇓P **Pn 03 06 29.6 +0.5**
PKSM Moragy 9.18 326 ⇓*i*P **Pn 03 06 29.6 +0.5**
PKSM Moragy 9.18 326 P **Pn 03 06 29.6 +0.5**
MMAI Mount Meron Ar 9.53 125 Pn **Pn 03 06 32.8 -1.1**
comp=Z,0.7nm,0.3s,baz=313,slow=15,SNR=2.6
MMAI LR LR 03 10 56.2
comp=Z,95nm,18.8s,baz=110,slow=42
PSZ Piszkesteto 10.12 336 ⇑P **Pn 03 06 39.0 -2.9**
PSZ Piszkesteto 10.12 336 *e*Pn **Pn 03 06 37.7 -4.2**
PSZ Piszkesteto 10.12 336 ⇑*i*P **Pn 03 06 39.0 -2.9**
AQU L'Aquila 10.26 294 *e*P **Pn 03 06 42.2 -1.8**
AQU pmax pmax
comp=Z,9.0nm,0.9s
AQU L'Aquila 10.26 294 *e*Pn **Pn 03 06 42.2 -1.7**
comp=Z,9.5nm,0.9s
AQU L'Aquila 10.26 294 *e*P **Pn 03 06 42.2 -1.8**
comp=Z,9.0nm,0.9s
ANN Anapa 10.34 51 *e*P **Pn 03 06 43.2 -1.7**
ANN pmax pmax
comp=Z,37nm,1.1s
ANN Anapa 10.34 51 *e*P **Pn 03 06 43.2 -1.7**
comp=Z,37nm,1.1s
VYHS Vyhne 10.97 334 *e*P **Pn 03 06 53.5 -0.1**
VYHS Vyhne 10.97 334 *e*PN **Pn 03 06 53.5 -0.1**
VYHS Vyhne 10.97 334 *e*P **Pn 03 06 53.5 -0.1**
ASF Jabal al Asfar 11.04 124 LR LR 03 12 00.5
comp=Z,84nm,19.1s,baz=40,slow=42
KWP Kalwaria Pacla 11.05 348 ⇑P **Pn 03 06 53.7 -0.9**
KWP Kalwaria Pacla 11.05 348 ⇑*i*P **Pn 03 06 53.7 -0.9**
KWP Kalwaria Pacla 11.05 348 P **Pn 03 06 53.7 -0.9**
KOLL Kolacno 11.20 333 *e*P **Pn 03 06 56.7 0.0**
KOLL Kolacno 11.20 333 *e*PN **Pn 03 06 56.7 0.0**
KOLL Kolacno 11.20 333 *e*P **Pn 03 06 56.7 0.0**
AKASG Malin Array Be 12.05 10 Pn **Pn 03 07 06.7 -1.7**
comp=Z,0.6nm,0.3s,baz=196,slow=13,SNR=2.8
AKASG Malin Array Be 12.05 10 P **Pn 03 07 06.7 -1.7**
OKC Ostrava-Krasne 12.36 335 AMS AMS 03 12 50.0
comp=Z,200nm,10.9s
TREC Trest 12.91 327 AMS AMS 03 13 10.0
comp=Z,200nm,8.6s
DPC Dobruska-Polom 13.42 332 *e*P **Pn 03 07 27.6 +0.5**
DPC MLR MLR
comp=Z,200nm,11.9s
DPC Dobruska-Polom 13.42 332 *e*P **Pn 03 07 27.6 +0.5**
DPC AMS AMS 03 13 30.0
comp=Z,200nm,11.9s
DPC Dobruska-Polom 13.42 332 *e*P **Pn 03 07 27.6 +0.5**
comp=Z,200nm,11.9s
KHC Kasperske Hory 13.65 323 *e*P **Pn 03 07 39.0 +8.9**
KHC MLR MLR
comp=Z,200nm,11.6s
KHC Kasperske Hory 13.65 323 *e*P **Pn 03 07 39.0 +8.9**
KHC AMS AMS 03 13 20.0
comp=Z,200nm,11.6s
PRU Pruhonice 13.84 327 AMS AMS 03 13 40.0
comp=Z,200nm,8.5s
PVCC Panska Ves 14.24 329 AMS AMS 03 13 50.0
comp=Z,100nm,10.9s
DAVOX Davos/Dischmat 14.28 309 Pn **Pn 03 07 35.7 -3.1**
comp=Z,0.1nm,0.3s,baz=168,slow=20,SNR=1.9
DAVOX LR LR 03 13 11.2
comp=Z,58nm,18.7s,baz=269,slow=38
NKC Novy Kostel 14.94 324 AMS AMS 03 14 20.0
comp=Z,300nm,8.2s
VSR Storozhevoye 15.40 32 *e*P **Pn 03 07 53.1 -0.8**
VSR pmax pmax
comp=Z,4.0nm,0.6s
VSR pmax pmax
comp=N,10.0nm,1.2s
VSR pmax pmax
comp=E,7.0nm,0.6s
CLL Collm 15.48 328 P **Pn 03 08 01.0 +6.1**
CLL Collm 15.48 328 *e*PP **Pn 03 08 01.0 +6.1**
CLL Collm 15.48 328 P **Pn 03 08 01.0 +6.1**
MBDF Montbardon 15.55 298 *e*P **Pn 03 07 59.6 +3.8**
comp=E,9.6nm,0.7s
MBDF Montbardon 15.55 298 *e*P **Pn 03 07 59.6 +3.8**
MBDF pmax pmax
comp=Z,5.0nm,0.7s
MBDF Montbardon 15.55 298 *e*P **Pn 03 07 59.6 +3.8**
comp=Z,4.8nm,0.7s
MBDF Montbardon 15.55 298 *e*P **Pn 03 07 59.6 +3.8**
comp=Z,4.8nm,0.7s
MOX Moxa 15.61 324 *e*(P) **Pn 03 08 02.6 +6.0**
MOX Moxa 15.61 324 P **Pn 03 08 02.6 +6.0**
LPG La Plagne 15.78 301 *e*P **Pn 03 08 02.2 +3.3**
comp=Z,12nm,0.7s
LPG La Plagne 15.78 301 *e*P **Pn 03 08 02.2 +3.3**
LPG pmax pmax
comp=Z,6.0nm,0.7s
LPG La Plagne 15.78 301 *e*P **Pn 03 08 02.2 +3.3**
comp=Z,5.8nm,0.7s
LPG La Plagne 15.78 301 *e*P **Pn 03 08 02.2 +3.3**
comp=Z,5.8nm,0.7s
LPL La Plagne 15.80 301 *e*P **Pn 03 08 02.3 +3.2**
comp=Z,9.9nm,0.9s
LPL La Plagne 15.80 301 *e*P **Pn 03 08 02.3 +3.2**
LPL pmax pmax
comp=Z,5.0nm,0.9s
LPL La Plagne 15.80 301 *e*P **Pn 03 08 02.3 +3.2**
comp=Z,4.9nm,0.9s
LPL La Plagne 15.80 301 *e*P **Pn 03 08 02.3 +3.2**
comp=Z,4.9nm,0.9s
ORIF Oris-en-Rattie 16.21 298 *e*P **Pn 03 08 07.4 +3.0**
comp=Z,21nm,1.3s
ORIF *e*MLR MLR
comp=Z,63nm,20.2s
ORIF Oris-en-Rattie 16.21 298 *e*P **Pn 03 08 07.4 +3.0**
ORIF pmax pmax
comp=Z,11nm,1.3s
ORIF Oris-en-Rattie 16.21 298 *e*P **Pn 03 08 07.4 +3.0**
comp=Z,11nm,1.3s
ORIF Oris-en-Rattie 16.21 298 *e*P **Pn 03 08 07.4 +3.0**
comp=Z,11nm,1.3s
HINF Hinteralfeld 16.58 309 *e*P **Pn 03 08 12.1 +2.9**
HINF Hinteralfeld 16.58 309 *e*P **Pn 03 08 12.1 +2.9**
CABF La Chapelle 16.59 304 *e*P **Pn 03 08 12.7 +3.5**
comp=Z,22nm,1.0s
CABF La Chapelle 16.59 304 *e*P **Pn 03 08 12.7 +3.5**
CABF pmax pmax
comp=Z,11nm,1.0s
CABF La Chapelle 16.59 304 *e*P **Pn 03 08 12.7 +3.5**
comp=Z,11nm,1.0s
CABF La Chapelle 16.59 304 *e*P **Pn 03 08 12.7 +3.5**
comp=Z,11nm,1.0s
CDF Champ du Feu 16.60 311 *e*P **Pn 03 08 12.1 +2.7**
CDF Champ du Feu 16.60 311 *e*P **Pn 03 08 12.1 +2.7**
HAU Haudompre 16.97 309 *e*P **Pn 03 08 17.6 +3.5**
HAU *e*MLR MLR
comp=Z,71nm,17.3s
HAU Haudompre 16.97 309 *e*P **Pn 03 08 17.6 +3.5**
OBN Obninsk 17.73 20 *e*P **Pn 03 08 24.6 +1.1**
OBN pmax pmax
comp=Z,3.0nm,1.0s
OBN Obninsk 17.73 20 *e*P **Pn 03 08 24.6 +1.1**
comp=Z,3.0nm,1.0s
SMF Signal de Mont 18.06 303 *e*P **Pn 03 08 29.3 +1.7**
SMF Signal de Mont 18.06 303 *e*P **Pn 03 08 29.3 +1.7**
LOR Lormes 18.25 305 *e*P **Pn 03 08 30.4 +0.5**
comp=Z,6.5nm,0.8s
LOR *e*MLR MLR
comp=Z,47nm,17.0s
LOR Lormes 18.25 305 *e*P **Pn 03 08 30.4 +0.5**
LOR pmax pmax
comp=Z,3.0nm,0.8s

LOR Lormes 18.25 305 *e*P **Pn 03 08 30.4 +0.5**
comp=Z,3.3nm,0.8s
LOR Lormes 18.25 305 *e*P **Pn 03 08 30.4 +0.5**
comp=Z,3.2nm,0.8s
SSF Saint Saulge 18.41 304 *e*P **Pn 03 08 32.3 +0.4**
comp=Z,9.8nm,0.9s
SSF Saint Saulge 18.41 304 *e*P **Pn 03 08 32.3 +0.4**
SSF pmax pmax
comp=Z,5.0nm,0.9s
SSF Saint Saulge 18.41 304 *e*P **Pn 03 08 32.3 +0.4**
comp=Z,4.9nm,0.9s
SSF Saint Saulge 18.41 304 *e*P **Pn 03 08 32.3 +0.4**
comp=Z,4.9nm,0.9s
AVF Avril sur Loir 18.43 303 *e*P **Pn 03 08 32.7 +0.6**
comp=Z,22nm,1.1s
AVF Avril sur Loir 18.43 303 *e*P **Pn 03 08 32.7 +0.6**
AVF pmax pmax
comp=Z,11nm,1.0s
AVF Avril sur Loir 18.43 303 *e*P **Pn 03 08 32.7 +0.6**
comp=Z,11nm,1.0s
AVF Avril sur Loir 18.43 303 *e*P **Pn 03 08 32.7 +0.6**
comp=Z,11nm,1.1s
BGF Bois d'Agland 18.70 302 *e*P **Pn 03 08 36.8 +1.5**
BGF Bois d'Agland 18.70 302 *e*P **Pn 03 08 36.8 +1.5**
TCF Toulx Ste Croi 19.05 301 *e*P **Pn 03 08 40.8 +1.2**
TCF Toulx Ste Croi 19.05 301 *e*P **Pn 03 08 40.8 +1.2**
VSU Vasula 19.63 1 *e*P **Pn 03 08 46.7 +0.2**
VSU pmax pmax
comp=Z,9.0nm,1.0s
VSU Vasula 19.63 1 *e*P **Pn 03 08 46.7 +0.2**
comp=Z,9.0nm,1.0s
ETSF Etsaut 20.52 290 *e*P **P 03 08 54.5 -0.4**
comp=Z,4.6nm,0.7s
ETSF Etsaut 20.52 290 *e*P **P 03 08 54.5 -0.4**
ETSF pmax pmax
comp=Z,2.0nm,0.7s
ETSF Etsaut 20.52 290 *e*P **P 03 08 54.5 -0.4**
comp=Z,2.3nm,0.7s
ETSF Etsaut 20.52 290 *e*P **P 03 08 54.5 -0.4**
comp=Z,2.3nm,0.7s
MFF Saint Martin d 20.71 300 *e*P **P 03 08 56.6 -0.3**
comp=Z,7.6nm,0.7s
MFF Saint Martin d 20.71 300 *e*P **P 03 08 56.6 -0.3**
MFF pmax pmax
comp=Z,4.0nm,0.7s
MFF Saint Martin d 20.71 300 *e*P **P 03 08 56.6 -0.3**
comp=Z,3.8nm,0.7s
MFF Saint Martin d 20.71 300 *e*P **P 03 08 56.6 -0.3**
comp=Z,3.8nm,0.7s
SJPF Ste Jean 21.02 290 *e*P **P 03 09 02.1 +1.8**
comp=Z,11nm,1.1s,mb3.8
SJPF Ste Jean 21.02 290 *e*P **P 03 09 02.1 +1.8**
SJPF pmax pmax
comp=Z,5.0nm,1.1s,mb3.8
SJPF Ste Jean 21.02 290 *e*P **P 03 09 02.1 +1.8**
comp=Z,5.3nm,1.1s,mb3.8
SJPF Ste Jean 21.02 290 *e*P **P 03 09 02.1 +1.8**
comp=Z,5.3nm,1.1s,mb3.8
LDF La Druitiere 21.21 306 *e*P **P 03 09 00.9 -1.4**
comp=Z,6.1nm,0.6s,mb3.8
LDF La Druitiere 21.21 306 *e*P **P 03 09 00.9 -1.4**
LDF pmax pmax
comp=Z,3.0nm,0.6s,mb3.8
LDF La Druitiere 21.21 306 *e*P **P 03 09 00.9 -1.4**
comp=Z,3.0nm,0.6s,mb3.8
LDF La Druitiere 21.21 306 *e*P **P 03 09 00.9 -1.4**
comp=Z,3.0nm,0.6s,mb3.8
FLN La Foliniere 21.49 306 *e*P **P 03 09 05.8 +0.5**
FLN *e*MLR MLR
comp=Z,46nm,19.0s,MS2.6
FLN La Foliniere 21.49 306 *e*P **P 03 09 05.8 +0.5**
FLN LR LR
comp=Z,50nm,19.0s,MS2.9
FLN La Foliniere 21.49 306 *e*P **P 03 09 05.8 +0.5**
GRR Gorron 21.62 305 *e*P **P 03 09 05.4 -1.3**
GRR Gorron 21.62 305 *e*P **P 03 09 05.4 -1.3**
FINES FINESS Array B 22.62 360 P **P 03 09 15.0 -2.3**
comp=Z,3.0nm,1.0s,mb3.7,baz=180,slow=13,SNR=4.2
FINES FINESS Array B 22.62 360 P **P 03 09 15.0 -2.3**
SGMF Saint Gilles 22.68 304 *e*P **P 03 09 18.3 +0.3**
SGMF Saint Gilles 22.68 304 *e*P **P 03 09 18.3 +0.3**
HFS Hagfors 22.70 344 P **P 03 09 16.3 -1.8**
comp=Z,1.0nm,0.6s,mb3.5,baz=144,slow=13,SNR=9.0
HFS LR LR 03 19 19.7
comp=Z,49nm,18.1s,MS3.0,baz=161,slow=40
HFS Hagfors 22.70 344 P **P 03 09 16.3 -1.8**
QUIF Quistinic 23.00 303 *e*P **P 03 09 21.1 -0.3**
QUIF Quistinic 23.00 303 *e*P **P 03 09 21.1 -0.3**
ESDC Sonseca Array 23.24 282 P **P 03 09 22.9 -1.2**
comp=Z,0.7nm,0.6s,mb3.2,baz=78,slow=9.9,SNR=9.8
ESDC LR LR 03 18 57.0
comp=Z,29nm,19.9s,MS2.7,baz=85,slow=38
ESDC Sonseca Array 23.24 282 P **P 03 09 22.9 -1.2**
NB2 NORSAR Subarra 24.07 342 P **P 03 09 31.0 -0.8**
comp=Z,3.8nm,1.1s,mb3.7,baz=156,slow=9.3
NB2 NORSAR Subarra 24.07 342 P **P 03 09 31.0 -0.8**
comp=Z,3.8nm,1.1s,mb3.7,SNR=1.6
NOA NORSAR Array B 24.07 342 P **P 03 09 30.8 -1.0**
comp=Z,2.8nm,1.0s,mb3.7,baz=151,slow=9.2,SNR=9.2
NOA NORSAR Array B 24.07 342 P **P 03 09 30.8 -1.0**
AKTK Aktyubinsk 25.30 52 P **P 03 09 44.7 +1.6**
AKTK Aktyubinsk 25.30 52 P **P 03 09 44.7 +1.6**
AKTO Aktyubinsk 25.30 52 P **P 03 09 44.7 +1.6**
comp=Z,1.5nm,0.7s,mb3.6,baz=252,slow=13,SNR=3.1
EKA Eskdalemuir Ar 25.58 320 P **P 03 09 45.5 -0.1**
comp=Z,0.7nm,0.5s,mb3.4,baz=113,slow=10,SNR=4.9
EKA Eskdalemuir Ar 25.58 320 P **P 03 09 45.6 0.0**
ARCES ARCESS Array B 30.75 360 LR LR 03 23 14.3
comp=Z,40nm,18.6s,MS3.1,baz=184,slow=37
MKAR Makanchi Array 41.20 60 P **P 03 12 01.8 +0.4**
comp=Z,1.0nm,0.7s,mb3.5,baz=271,slow=6.6,SNR=2.9
MKAR Makanchi Array 41.20 60 *e*P **P 03 12 06.5 +5.2**
MKAR pmax pmax
comp=Z,1.0nm,0.7s
ZALV Zalesovo Beam 41.97 49 P **P 03 12 08.3 +0.8**
comp=Z,0.4nm,0.3s,mb3.5,baz=289,slow=4.4,SNR=2.0
ZALV Zalesovo Beam 41.97 49 *e*P **P 03 12 12.9 +5.4**
ZALV pmax pmax
comp=Z,1.0nm,0.4s,mb3.8
ZALV Zalesovo Beam 41.97 49 P **P 03 12 08.3 +0.8**
SONM Songino Array 56.62 53 P **P 03 13 58.8 -0.7**
comp=Z,0.2nm,0.4s,mb3.5,baz=282,slow=6.8,SNR=2.5
SONM Songino Array 56.62 53 P **P 03 13 58.8 -0.8**
KSRS Korea Array 75.47 54 P **P 03 16 01.1 +0.1**
comp=Z,0.7nm,0.8s,mb3.6,baz=311,slow=5.6,SNR=2.7
KSRS Korea Array 75.47 54 P **P 03 16 01.1 +0.1**
KSRS pmax pmax
comp=Z,1.0nm,0.8s,mb3.8
KSRS Korea Array 75.47 54 P **P 03 16 01.1 +0.1**
comp=Z,1.0nm,0.8s,mb3.8
ILAR Eielson Array 76.57 357 P **P 03 16 06.5 -0.3**
comp=Z,0.2nm,0.6s,mb3.2,baz=350,slow=4.7,SNR=3.4
ILAR Eielson Array 76.57 357 P **P 03 16 06.5 -0.2**

IDC 31 03:15:29.1±3.1, 15°.04N×147°.32E, h0km, mb4.0/4, mb1 4.0/4, mb1mx3.7/22, mbtmp4.0/4, Error ellipse: s-maj=133.0km s-min=31.6km az=86.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**40.64**	**199**	P	P	03 23 11.0	-0.1
0.5nm,0.7s,baz=20,slow=6.9,SNR=5.6							
MKAR	**Makanchi Array**	**62.12**	**315**	P	P	03 25 52.0	+0.1
0.8nm,0.4s,baz=90,slow=8.2,SNR=6.8							
BVAR	**Borovoye Array**	**70.28**	**321**	P	P	03 26 44.3	+0.1
0.8nm,0.5s,baz=112,slow=11,SNR=3.8							
ARCES	**ARCESS Array B**	**86.43**	**343**	P	P	03 28 13.2	0.0
2.2nm,0.9s,baz=79,slow=5.6,SNR=2.7							

GUC 31 03:19:12.3±1.0, 20°.31S×69°.15W, h110km±12km, ML3.5, 3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMBC	**Humberston**	**0.69**	**272**	⇓*i*P	Pn	03 19 30.7	+0.1
HMBC				*i* S	Sn	03 19 44.8	+0.5
HMBC				AML	AML	03 19 45.8	
comp=E,2μm,0.4s							
PB01	**Plate Boundary**	**0.80**	**203**	⇓*e*P	Pn	03 19 31.9	+0.4
PB01				*i* S	Sn	03 19 46.7	+0.8
PB01				AML	AML	03 19 48.9	
comp=N,3μm,0.2s							
PSGC	**Pisagua**	**1.16**	**308**	⇓*i*P	Pn	03 19 35.5	+0.4

PSGC			*i* S	Sn	03 19 53.3	+0.9
PSGC			AML	AML	03 19 59.6	
	comp=E,974nm,0.4s					
MNMC	**Miaee Miae**	**1.24 340**	*e*P	Pn	03 19 36.6	+0.5
MNMC			*e*S	Sn	03 19 55.8	+1.6
PB04	**Plate Boundary**	**1.97 189**	*e*P	Pn	03 19 50.8	+5.8
PB04			*i* S	Sn	03 20 16.6	+6.8
CEN1	**Los Morros**	**3.22 197**	*e*P	Pn	03 20 01.5	+0.4
CEN1			*e*S	Sn	03 20 37.8	-1.1

NIED ***31*** *04:17:00, 39°.70N×144°.50E, h38km, Mw3.7 Best double couple: M≡3.40000×10^14 NP1:φs=157.00000°, δ78.00000°, λ-146.00000°. NP2:φs=59.00000°, δ57.00000°, λ-14.00000°.*

JMA 31 04:17:45.8±0.2, 39°.67N×144°.54E, h49km, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**2.08**	**278**	P	Pn	04 18 19.1	+0.9
JTH				*e*S	Sn	04 18 44.7	+1.9
MIYJ	**Miyakonagasawa**	**2.10**	**268**	P	Pn	04 18 19.6	+1.1
MIYJ				S	Sn	04 18 44.5	+1.1
OFUJ	**Ofunato**	**2.30**	**256**	P	Pn	04 18 22.0	+0.8
OFUJ				*e*S	Sn	04 18 49.3	+1.0
JANG	**Nango**	**2.43**	**288**	P	Pn	04 18 23.8	+0.9
JOM	**Ohasama**	**2.52**	**267**	P	Pn	04 18 25.7	+1.5
JOM				*e*S	Sn	04 18 54.9	+1.3
JMK	**Ichinoseki**	**2.67**	**255**	P	Pn	04 18 27.4	+1.1
JMK				*e*S	Sn	04 18 58.1	+0.6
JCH	**Churui**	**3.07**	**344**	P	Pn	04 18 33.0	+1.2
JCH				*e*S	Sn	04 19 08.0	+0.7
JOT	**Ohata**	**3.16**	**304**	P	Pn	04 18 35.0	+2.0
JOT				*e*S	Sn	04 19 11.2	+1.7
JKB	**Kayabe**	**3.46**	**311**	P	Pn	04 18 39.3	+2.1
JKB				*e*S	Sn	04 19 18.9	+2.0
NEM2	**Nemuro 2**	**3.80**	**13**	P	Pn	04 18 40.6	-1.2
NEM2				S	Sn	04 19 22.6	-2.6
JTKR	**Abashiri--Toko**	**4.32**	**354**	P	Pn	04 18 50.0	+1.1
JTKR				S	Sn	04 19 38.6	+0.6
JRY	**Ryogami san**	**5.76**	**233**	P	Pn	04 19 08.8	+0.1
JRY				*e*S	Sn	04 20 11.0	-2.5
MAT	**Matsushiro**	**5.89**	**240**	P	Pn	04 19 12.0	+1.6
MAT				S	Sn	04 20 19.0	+2.4

GUC 31 04:20:19.3±1.0, 22°.74S×69°.13W, h106km±25km, MD3.8, ML3.9, 2C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**0.57**	**325**	↑*e*P	Pn	04 20 41.0	+4.7
PB04				*e*S	Sn	04 20 57.9	+8.9
PB04				AML	AML	04 21 01.0	
	comp=N,3μm,0.2s						
CEN1	**Los Morros**	**1.18**	**236**	*e*P	Pn	04 20 44.7	+2.5
CEN1				*e*S	Sn	04 21 04.7	+5.2
CEN1				AML	AML	04 21 09.0	
	comp=E,1μm,0.3s						
MECH	**Mejillones**	**1.27**	**253**	↑*e*P	Pn	04 20 43.7	+0.6
MECH				*e*S	Sn	04 21 02.4	+1.1
MECH				AML	AML	04 21 07.7	
	comp=N,3μm,0.4s						
ANCH	**Antofagasta**	**1.51**	**231**	*e*P	Pn	04 20 44.3	-1.7
ANCH				*e*S	Sn	04 21 04.2	-2.1
ANCH				AML	AML	04 21 09.4	
	comp=N,2μm,0.5s						
PB01	**Plate Boundary**	**1.72**	**349**	↓*e*P	Pn	04 20 49.5	+0.9
PB01				*e*S	Sn	04 21 12.0	+1.2
HMBC	**Humberston**	**2.54**	**344**	*e*P	Pn	04 21 00.7	+1.5
HMBC				*e*S	Sn	04 21 31.4	+1.5
MNMC	**Miaee Miae**	**3.61**	**353**	*e*P	Pn	04 21 13.7	+0.3
MNMC				*e*S	Sn	04 21 53.3	-1.9

IDC 31 04:33:59.9±2.5, 7°.87S×118°.08E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.6/21, mbtmp3.7/5, ML3.2/1, Error ellipse: s-maj=196.9km s-min=21.3km az=59.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.55**	**145**	Pn	Pn	04 36 59.2	-0.7
	0.1nm,0.3s,baz=348,slow=9.9,SNR=4.3						
FITZ				Sn	Sn	04 39 14.3	-6.3
	0.2nm,0.3s,baz=198,slow=20,SNR=4.9						
ASAR	**Alice Springs**	**21.84**	**138**	P	P	04 38 54.6	+0.5
	2.4nm,0.8s,baz=310,slow=8.4,SNR=16						
STKA	**Stephens Creek**	**32.40**	**141**	P	P	04 40 31.5	-0.1
	1.2nm,0.4s,baz=323,slow=10,SNR=5.0						
SONM	**Songino Array**	**56.41**	**351**	P	P	04 43 43.0	-0.1
	0.6nm,0.8s,baz=166,slow=8.5,SNR=5.5						
MKAR	**Makanchi Array**	**63.04**	**333**	P	P	04 44 29.1	+0.3
	0.4nm,0.7s,baz=144,slow=7.0,SNR=4.2						

NIED ***31*** *04:54:00, 38°.30N×142°.60E, h23km, Mw3.7 Best double couple: M≡3.71000×10^14 NP1:φs=357.00000°, δ49.00000°, λ60.00000°. NP2:φs=218.00000°, δ49.00000°, λ120.00000°.*
JMA 31 04:54:35.5±0.1, 38°.27N×142°.58E, h33km±2km, M4.1
IDC 31 04:54:35.9±3.1, 38°.64N×142°.40E, h0km, mb3.6/6, mb1 3.6/7, mb1mx3.5/23, mbtmp3.5/7, ML3.5/1, Error ellipse: s-maj=71.2km s-min=27.6km az=144.0
ISCJB ***31*** *04:54:36.6±2.0, 38°.31N±0°.06×142°.54E±0°.09, h32km±16km, mb3.7/7, Error ellipse: s-maj=12.7km s-min=8.2km az=35.6*
NEIC ***31*** *04:54:39.8±2.8, 38°.51N×142°.40E, h31km±21km, mb4.2/1, Error ellipse: s-maj=30.5km s-min=9.4km az=131.0*

ISC 31 04:54:36.2±2.2, 38°.33N±0°.06×142°.49E±0°.08, h14km±14km, n24, σ0°81/28, mb3.7/7, 7D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**0.90**	**278**	↓P	Pb	04 54 53.3	-0.3
JIO				*e*S	Sb	04 55 06.2	+0.7
OFUJ	**Ofunato**	**0.98**	**320**	↓P	Pb	04 54 54.7	-0.3
JMK	**Ichinoseki**	**1.17**	**303**	↓P	Pn	04 54 57.5	-0.6
JMM	**Marumori**	**1.41**	**251**	↓P	Pn	04 55 00.0	-1.4
JOU	**Okura**	**1.43**	**272**	↓P	Pn	04 55 01.4	-0.3
JOM	**Ohasama**	**1.47**	**321**	↓P	Pn	04 55 02.3	0.0
JOM				*e*S	Sn	04 55 21.2	-0.2
JFK	**Kawauchi**	**1.60**	**234**	P	Pn	04 55 01.9	-2.1
JYK	**Kaneyama**	**1.77**	**290**	↓P	Pn	04 55 06.3	0.0
JFT	**Otama**	**1.88**	**245**	P	Pn	04 55 07.5	-0.4
JFT				*e*S	Sn	04 55 30.9	-0.5
JYS	**Shiratake**	**1.91**	**268**	P	Pn	04 55 08.0	-0.3
JANG	**Nango**	**2.18**	**340**	P	Pn	04 55 12.8	+0.9
JYA	**Atsumi**	**2.19**	**278**	P	Pn	04 55 12.4	+0.2
ERM	**Erimo**	**3.72**	**8**	*e*Pn	Pn	04 55 32.7	-0.5
MJAR	**Matsushiro Arr**	**3.84**	**244**	Pn	Pn	04 55 36.8	+1.9
	3.0nm,0.3s,baz=52,slow=9.7,SNR=14						
MJAR				Sn	Sn	04 56 27.0	+7.2
	1.4nm,0.3s,baz=89,slow=12,SNR=4.2						
MAJO	**Matsushiro**	**3.84**	**244**	*e*Pn	Pn	04 55 37.7	+2.8
MAT	**Matsushiro**	**3.84**	**244**	P	Pn	04 55 35.9	+1.0
ZALV	**Zalesovo Beam**	**41.69**	**311**	P	P	05 02 24.1	0.0
	0.7nm,0.4s,mb3.7,baz=91,slow=8.9,SNR=2.3						
MKAR	**Makanchi Array**	**44.16**	**301**	P	P	05 02 44.6	+0.3
	0.4nm,0.7s,mb3.3,baz=76,slow=10,SNR=4.1						
KURK	**Kurchatov**	**45.82**	**307**	P	P	05 02 57.2	-0.2
	2.6nm,0.8s,mb4.2						
ILAR	**Eielson Array**	**47.95**	**33**	P	P	05 03 14.2	+0.4
	0.2nm,0.6s,mb3.3,baz=282,slow=5.4,SNR=3.4						
BVAR	**Borovoye Array**	**50.34**	**312**	P	P	05 03 32.1	-0.2
	0.5nm,0.4s,mb3.9,baz=66,slow=8.1,SNR=3.2						
AKTK	**Aktyubinsk**	**58.45**	**312**	P	P	05 04 31.4	+0.1
AKTO	**Aktyubinsk**	**58.45**	**312**	P	P	05 04 31.4	+0.1
	1.0nm,0.7s,mb4.0,baz=93,slow=5.5,SNR=3.1						
NOA	**NORSAR Array B**	**73.32**	**338**	P	P	05 06 06.7	-0.2
	0.3nm,0.6s,mb3.4,baz=38,slow=5.8,SNR=2.7						

ISK ***31*** *05:02:09.6, 39°.73N×33°.35E, h5km, ML4.2*
DDA ***31*** *05:02:10.3, 39°.72N×33°.39E, h16km±1km, Ml4.3*
NEIC ***31*** *05:02:10.0, 39°.72N×33°.35E, h3km, ML4.2(ISK), After ISK.*
CSEM ***31*** *05:02:11.0±0.1, 39°.74N×33°.36E, h2km, ML4.2, Error ellipse: s-maj=3.9km s-min=2.9km az=5.0*

ISCJB ***31*** *05:02:11.2±0.2, 39°.75N±0°.02×33°.37E±0°.02, h10km, mb3.5/6, Error ellipse: s-maj=3.1km s-min=2.5km az=5.6*
IDC ***31*** *05:02:12.3±0.8, 39°.78N×33°.43E, h0km, mb3.6/7, mb1 3.6/11, mb1mx3.5/27, mbtmp3.6/11, ML3.6/4, MS2.9/1, Ms1 2.9/1, ms1mx2.3/31, Error ellipse: s-maj=18.3km s-min=4.9km az=30.0*

ISC 31 05:02:11.9±0.2, 39°.74N±0°.02×33°.37E±0°.02, h10km, n114, σ1°.15/134, mb3.5/6, 9C-7D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BR131	**Keskin Array S**	**0.21**	**95**	*e*Pg	Pg	05 02 15.3	-0.9
BR131				*e*Sg	Sg	05 02 18.4	-0.7
BR131	**Keskin Array S**	**0.21**	**95**	*e*Pg	Pg	05 02 15.3	-0.9
BR131				*e*Sg	Sg	05 02 18.5	-0.7
BRTR	**Keskin Array B**	**0.21**	**95**	Pg	Pg	05 02 15.2	-1.0
	2μm,0.3s,baz=263,slow=17						
BRTR				Lg		05 02 18.4	
	4μm,0.3s,baz=297,slow=29,SNR=335						
BRTR	**Keskin Array B**	**0.21**	**95**	Pg	Pg	05 02 15.2	-1.0
BBAL	**Bala**	**0.28**	**224**	↑*i*P	Pg	05 02 16.4	-1.1
BBAL				*i* S	Sg	05 02 20.8	-0.5
BBAL	**Bala**	**0.28**	**224**	*i* P	Pg	05 02 16.4	-1.1
BBAL				*i* S	Sg	05 02 20.8	-0.4
LOD	**Lodumlu**	**0.49**	**287**	PG	Pg	05 02 19.6	-1.8
LOD				*e*SG	Sg	05 02 27.0	-0.9
LOD	**Lodumlu**	**0.49**	**287**	*i* Pg	Pg	05 02 19.6	-1.8
LOD				*e*Sg	Sg	05 02 27.0	-0.9
ELDT	**Eldivan**	**0.75**	**3**	↓*i*P	Pg	05 02 25.2	-1.1
ELDT				*i* S	Sg	05 02 36.5	+0.4
ELDT	**Eldivan**	**0.75**	**3**	*i* P	Pg	05 02 25.2	-1.1
ELDT				*i* S	Sg	05 02 36.5	+0.4
CDAG	**Cicekdag**	**0.78**	**99**	↑*i*P	Pg	05 02 25.4	-1.6
CDAG				*i* S	Sg	05 02 35.7	-1.5
CDAG	**Cicekdag**	**0.78**	**99**	*i* P	Pg	05 02 25.4	-1.6
CDAG				*i* S	Sg	05 02 35.7	-1.5
CANT	**Cankiri**	**0.88**	**12**	*e*PG	Pg	05 02 28.0	-0.9
CORM	**Corum**	**1.06**	**65**	*e*PN	Pg	05 02 31.1	-1.2
CORM	**Corum**	**1.06**	**65**	*e*Pn	Pg	05 02 31.1	-1.2
SGKT	**Sivrigoynuk**	**1.30**	**310**	↑*i*P	Pn	05 02 34.6	-1.5
SGKT				*i* S	Sb	05 02 51.1	-2.2
SGKT	**Sivrigoynuk**	**1.30**	**310**	*i* P	Pn	05 02 34.7	-1.5
SGKT				*i* S	Sb	05 02 51.1	-2.2
ILGA	**Ilgaz**	**1.33**	**11**	↓*i*P	Pn	05 02 35.4	-1.1
ILGA				*i* S	Sb	05 02 54.3	+0.2
ILGA	**Ilgaz**	**1.33**	**11**	*i* P	Pn	05 02 35.4	-1.2
ILGA				*i* S	Sb	05 02 54.3	+0.2
TOS	**Tosya**	**1.38**	**21**	*e*PN	Pn	05 02 36.6	-0.7
TOS	**Tosya**	**1.38**	**21**	*e*Pn	Pn	05 02 36.6	-0.7
CTKT	**Corum**	**1.40**	**51**	↑*i*P	Pn	05 02 36.3	-1.2
CTKT	**Corum**	**1.40**	**51**	*i* P	Pn	05 02 36.3	-1.1
KIZT	**Kizilcal**	**1.44**	**234**	*e*PN	Pn	05 02 37.3	-0.7
KIZT	**Kizilcal**	**1.44**	**234**	*e*Pn	Pn	05 02 37.3	-0.8
SVRH	**Sivrihisar-ESK**	**1.46**	**259**	*e*PN	Pn	05 02 37.9	-0.4
SVRH	**Sivrihisar-ESK**	**1.46**	**259**	*e*Pn	Pn	05 02 37.9	-0.4
AVNT	**Avonos**	**1.50**	**129**	↓*i*P	Pn	05 02 38.3	-0.6
AVNT				*i* S	Sn	05 02 58.8	+0.3
AVNT	**Avonos**	**1.50**	**129**	*i* P	Pn	05 02 38.3	-0.6
AVNT				*i* S	Sn	05 02 58.8	+0.3
YOZ	**Yozgat**	**1.51**	**93**	*e*PN	Pn	05 02 39.4	+0.4
YOZ	**Yozgat**	**1.51**	**93**	*e*Pn	Pn	05 02 39.4	+0.4
SULT	**Sultanhani-AKS**	**1.55**	**176**	*e*PN	Pn	05 02 39.0	-0.5
SULT	**Sultanhani-AKS**	**1.55**	**176**	*e*Pn	Pn	05 02 39.0	-0.5
SAFT	**Safranbolu**	**1.58**	**341**	*e*PN	Pn	05 02 40.1	+0.1
SAFT	**Safranbolu**	**1.58**	**341**	*e*Pn	Pn	05 02 40.1	+0.1
LADK	**Ladik-KONYA**	**1.73**	**207**	*e*PN	Pn	05 02 41.2	-0.8
LADK	**Ladik-KONYA**	**1.73**	**207**	*e*Pn	Pn	05 02 41.2	-0.8
BALT	**Daday**	**1.79**	**0**	↑*i*P	Pn	05 02 42.2	-0.7
BALT	**Daday**	**1.79**	**0**	*i* P	Pn	05 02 42.2	-0.6
MDU	**Mudurnu**	**1.80**	**294**	*e*PN	Pn	05 02 43.8	+0.8
MDU	**Mudurnu**	**1.80**	**294**	*e*Pn	Pn	05 02 43.8	+0.8
ESKT	**Eskisehir**	**1.96**	**264**	*e*PN	Pn	05 02 44.9	-0.3
ESKT	**Eskisehir**	**1.96**	**264**	↑*i*P	Pn	05 02 43.5	-1.6
ESKT	**Eskisehir**	**1.96**	**264**	*e*Pn	Pn	05 02 44.9	-0.3
SEYT	**Eskypehyr**	**1.96**	**264**	*i* P	Pn	05 02 43.5	-1.7
KONT	**Konya--Tatoy**	**1.96**	**204**	*e*PN	Pn	05 02 44.5	-0.7
KONT	**Konya--Tatoy**	**1.96**	**204**	*e*Pn	Pn	05 02 44.5	-0.7
BYBT	**Boyabat**	**2.02**	**31**	*e*PN	Pn	05 02 46.4	+0.3
BYBT	**Boyabat**	**2.02**	**31**	*e*Pn	Pn	05 02 46.4	+0.3
KDZE	**Karadeniz Ereo**	**2.15**	**317**	*e*PN	Pn	05 02 48.3	+0.6
KDZE	**Karadeniz Ereo**	**2.15**	**317**	*e*Pn	Pn	05 02 48.3	+0.5
BZK	**Bozkurt**	**2.27**	**12**	*e*PN	Pn	05 02 49.8	+0.4
BZK	**Bozkurt**	**2.27**	**12**	*e*Pn	Pn	05 02 49.8	+0.4
GULT	**Gulveren**	**2.30**	**288**	*e*PN	Pn	05 02 50.7	+0.9
GULT	**Gulveren**	**2.30**	**288**	*e*Pn	Pn	05 02 50.7	+0.9
GPA	**Golpazari**	**2.41**	**284**	*e*PN	Pn	05 02 51.8	+0.4
GPA	**Golpazari**	**2.41**	**284**	*e*Pn	Pn	05 02 51.8	+0.4
KVT	**Kavak**	**2.44**	**56**	*e*PN	Pn	05 02 52.4	+0.6
KVT	**Kavak**	**2.44**	**56**	*e*Pn	Pn	05 02 52.4	+0.6
TOKA	**Tokat**	**2.46**	**75**	↑*i*P	Pn	05 02 53.0	+1.0
TOKA				*i* S	Sn	05 03 25.4	+3.4
TOKA	**Tokat**	**2.46**	**75**	*i* P	Pn	05 02 53.0	+1.0
TOKA				*i* S	Sn	05 03 25.4	+3.4
TOKT	**Tokat**	**2.50**	**76**	*e*PN	Pn	05 02 53.6	+0.9
TOKT	**Tokat**	**2.50**	**76**	*e*Pn	Pn	05 02 53.6	+0.9
SPNC	**Sapanca-Adapaz**	**2.53**	**293**	*e*PN	Pn	05 02 53.4	+0.4
SPNC	**Sapanca-Adapaz**	**2.53**	**293**	*e*Pn	Pn	05 02 53.4	+0.4
ALT	**Altintas**	**2.62**	**256**	*e*PN	Pn	05 02 55.0	+0.8
ALT	**Altintas**	**2.62**	**256**	*e*Pn	Pn	05 02 55.0	+0.8
CAVI	**Cavuskoy**	**2.75**	**281**	*e*PN	Pn	05 02 56.7	+0.6
CAVI	**Cavuskoy**	**2.75**	**281**	*e*Pn	Pn	05 02 56.7	+0.7
SARI	**SarD1z-Kayseri**	**2.79**	**111**	*e*PN	Pn	05 02 56.1	-0.6
SARI	**SarD1z-Kayseri**	**2.79**	**111**	*e*Pn	Pn	05 02 56.1	-0.6
SVSK	**Karacayir**	**2.80**	**85**	*e*PN	Pn	05 02 57.5	+0.8
SVSK	**Karacayir**	**2.80**	**85**	*e*Pn	Pn	05 02 57.5	+0.8
ADVT	**Abdulvahap**	**2.87**	**285**	*e*PN	Pn	05 02 58.4	+0.7
ADVT	**Abdulvahap**	**2.87**	**285**	*e*Pn	Pn	05 02 58.4	+0.7
ISP	**Isparta**	**2.94**	**230**	*e*Pn	Pn	05 02 56.0	-2.6
ISP				*e*Sn	Sn	05 03 37.2	+3.2
HRT	**Hereke**	**3.03**	**292**	*e*PN	Pn	05 03 00.1	+0.2
HRT	**Hereke**	**3.03**	**292**	*e*Pn	Pn	05 03 00.1	+0.2
YLV	**Yalova**	**3.17**	**286**	*e*PN	Pn	05 03 02.6	+0.7
YLV	**Yalova**	**3.17**	**286**	*e*Pn	Pn	05 03 02.6	+0.8
SILT	**Sile**	**3.17**	**298**	*e*PN	Pn	05 03 02.5	+0.7
SILT	**Sile**	**3.17**	**298**	*e*Pn	Pn	05 03 02.5	+0.6
SUSE	**Susehri**	**3.74**	**81**	*i* P	Pn	05 03 10.3	+0.6
SUSE				*i* S	Sg	05 04 09.6	-2.5
SUSE	**Susehri**	**3.74**	**81**	*i* P	Pn	05 03 10.3	+0.6
TIRR	**Tirgusor**	**5.98**	**324**	*e*Pn	Pn	05 03 39.6	-0.8
	10nm,0.8s						
TIRR	**Tirgusor**	**5.98**	**324**	↑*i*P	Pn	05 03 48.1	+7.7
TIRR	**Tirgusor**	**5.98**	**324**	*e*Pn	Pn	05 03 39.6	-0.8
	10nm,0.8s						
MMAI	**Mount Meron Ar**	**6.91**	**166**	Pn	Pn	05 03 55.5	+2.2
	3.5nm,0.3s,baz=353,slow=13,SNR=6.8						
MLR	**Muntele Rosu**	**7.93**	**319**	Pn	Pn	05 04 10.9	+3.7
	0.2nm,0.3s,baz=146,slow=15,SNR=2.8						
MLR				LR	LR	05 07 56.2	
	comp=Z,76nm,20.1s,baz=166,slow=43						
MLR	**Muntele Rosu**	**7.93**	**319**	↑*i*P	Px	05 04 17.0	
ASF	**Jabal al Asfar**	**8.08**	**158**	Pn	Pn	05 04 11.0	+1.7
	0.2nm,0.3s,baz=194,slow=3.9,SNR=3.6						
VOIR		**8.37**	**316**	↓*i*P	Px	05 04 26.0	
GZR	**Gura Zlata**	**9.64**	**309**	↓*i*P	Pn	05 04 27.8	-2.8
BURAR	**Bucovina Array**	**9.83**	**326**	↓*i*P	Pn	05 04 34.1	+0.9
BURAR	**Bucovina Array**	**9.83**	**326**	↓*i*P	Pn	05 04 34.1	+0.9
BUR08	**Bucovina Ar. S**	**9.86**	**326**	*e*Pn	Pn	05 04 33.5	-0.1
BUR08	**Bucovina Ar. S**	**9.86**	**326**	*e*Pn	Pn	05 04 33.5	-0.1
AKASG	**Malin Array Be**	**11.34**	**346**	Pn	Pn	05 04 54.0	+0.1
	0.6nm,0.3s,baz=157,slow=13,SNR=3.0						
AKASG				Sn	Sn	05 06 53.2	-7.3
	0.7nm,0.3s,baz=161,slow=23,SNR=3.0						
AKASG	**Malin Array Be**	**11.34**	**346**	Pn	Pn	05 04 54.0	+0.1
AKASG				Sn	Sn	05 06 53.2	-7.3
AKASG	**Malin Array Be**	**11.34**	**346**	Pn	Pn	05 04 54.0	+0.2
AKTK	**Aktyubinsk**	**20.33**	**50**	P	P	05 06 49.9	+1.9
AKTK	**Aktyubinsk**	**20.33**	**50**	P	P	05 06 49.9	+1.9
AKTO	**Aktyubinsk**	**20.33**	**50**	P	P	05 06 49.9	+1.9
	2.4nm,0.7s,baz=211,slow=5.7,SNR=5.5						
FINES	**FINESS Array B**	**22.19**	**351**	P	P	05 07 09.9	+2.0
	2.9nm,0.9s,mb3.7,baz=158,slow=18,SNR=5.7						
FINES	**FINESS Array B**	**22.19**	**351**	P	P	05 07 09.9	+2.0
HFS	**Hagfors**	**23.84**	**335**	P	P	05 07 25.5	+0.5
	1.0nm,0.6s,mb3.4,baz=161,slow=9.2,SNR=4.0						
HFS	**Hagfors**	**23.84**	**335**	P	P	05 07 25.5	+0.5
NOA	**NORSAR Array B**	**25.33**	**335**	P	P	05 07 39.4	+0.8
	0.7nm,0.9s,mb3.2,baz=134,slow=8.6,SNR=3.1						
NOA	**NORSAR Array B**	**25.33**	**335**	P	P	05 07 39.3	+0.7
BVAR	**Borovoye Array**	**28.43**	**50**	P	P	05 08 08.5	+2.0
	0.5nm,0.5s,mb3.4,baz=101,slow=1.5,SNR=2.5						
BVAR	**Borovoye Array**	**28.43**	**50**	P	P	05 08 08.5	+1.9
MKAR	**Makanchi Array**	**35.83**	**62**	P	P	05 09 12.2	+0.8
	0.8nm,0.7s,mb3.8,baz=300,slow=5.5,SNR=6.9						
MKAR	**Makanchi Array**	**35.83**	**62**	P	P	05 09 12.2	+0.8
TORD	**Torodi Ar. Bea**	**38.45**	**235**	P	P	05 09 37.0	+3.0
	1.8nm,0.8s,mb3.9,baz=34,slow=7.7						

IDC ***31*** *05:02:37.8±0.7, 48°.27N×122°.31W, h0km, mb3.7/5, mb1 3.8/9, mb1mx3.6/26, mbtmp3.7/9, ML3.3/4, Error ellipse: s-maj=22.4km s-min=9.5km az=67.0*
ISCJB ***31*** *05:02:41.5±0.2, 48°.17N±0°.01×122°.70W±0°.02, h74km±3km, mb3.6/5, Error ellipse: s-maj=2.4km s-min=2.0km az=137.8*
PGC ***31*** *05:02:42.1±0.0, 48°.12N×122°.81W, h66km, ML3.4/18*
PGC 53km Ese of Victoria, Bc Washington Felt (I) at Victoria.
PNSN ***31*** *05:02:43.1, 48°.15N×122°.75W, h56km, MD3.6, Fault plane solution: NP1:φs105.00000°, δ35.00000°, NP2: φs=350.00000°, δ73.00000°, Principal axes: T Plg22.0000°, Azm56.0000°; P Plg51.0000°, Azm296.0000°;*
NEIC ***31*** *05:02:43.1, 48°.15N×122°.75W, h56km, mb4.0/3, MD3.6(SEA), After SEA.*
NEIC Felt [IV] at Monroe; [III] at Arlington, Bellingham, Coupeville, Everett, Friday Harbor, Hansville, Mount Vernon, Mukilteo, Oak Harbor, Port Angeles, Port Ludlow, Port Townsend, Quilcene, Seattle, Sequim, Snohomish and Sultan; [II] at Camano Island, Kingston, Marysville, Poulsbo and Stanwood. Also felt at Auburn, Bellevue, Bothell, Bremerton, Carnation, Chimacum, Clinton, Concrete, Eastsound, Edmonds, Federal Way, Gold Bar, Granite Falls, Greenbank, Indianola, Kenmore, Lake Stevens, Langley, Morton, Nordland, North Bend, Olga, Olympia, Port Hadlock, Port Orchard, Redmond and Tacoma. Felt at Portland, Oregon. Felt [III] at Victoria, British Columbia.

ISC 31 05:02:43.0±0.2, 48°.16N±0°.01×122°.73W±0°.02, h57km±3km, n192, σ0°87/251, mb3.7/5, 60C-104D, Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLN	**Blyn Mountain**	**0.23**	**226**	↓P	Pn	05 02 51.7	-0.5
SQM	**Sequim**	**0.23**	**247**	↑P	Pn	05 02 52.1	-0.1
KINR	**Kitsap County**	**0.42**	**172**	↓P	Pn	05 02 53.0	-0.8
ATES	**Arlington Traf**	**0.45**	**80**	↓P	Pn	05 02 54.0	-0.2
VGZ	**Gonzales**	**0.47**	**302**	P	Pn	05 02 53.5	-0.8
VGZ	**Gonzales**	**0.47**	**302**	↑P	Pn	05 02 53.6	-0.8
VGZ				↑S	Sn	05 03 01.6	-1.0
CMW	**Cultus Mountai**	**0.48**	**57**	↓P	Pn	05 02 54.7	+0.2
KITP	**Kitsap County**	**0.49**	**172**	P	Pn	05 02 55.2	+0.6
BRKS	**Brookside Elem**	**0.50**	**144**	↓P	Pn	05 02 55.0	+0.3
MCW	**Mount Constitu**	**0.52**	**352**	↓P	Pn	05 02 55.1	+0.2
JCW	**Jim Creek**	**0.53**	**86**	↓P	Pn	05 02 55.0	-0.1
FINN	**Finn Hill Juni**	**0.56**	**143**	↓P	Pn	05 02 55.9	+0.6
LAWT	**Lawton Element**	**0.56**	**156**	↓P	Pn	05 02 56.1	+0.8
HDW	**Hoodsport**	**0.56**	**203**	↑P	Pn	05 02 55.2	-0.2
BLH	**Bald Hill**	**0.57**	**125**	P	Pn	05 02 55.1	-0.3
LEOT	**Leota Junior H**	**0.57**	**134**	↓P	Pn	05 02 55.9	+0.5
BABE	**Bainbridge Sch**	**0.57**	**167**	↓P	Pn	05 02 56.3	+0.8
NOWS	**NOAA--Sand Poi**	**0.57**	**146**	↓P	Pn	05 02 56.2	+0.8
QAW	**Queen Anne**	**0.59**	**155**	P	Pn	05 02 56.6	+1.0
GNW	**Green Mountain**	**0.60**	**186**	↑P	Pn	05 02 55.7	-0.1
GMW	**Gold Mountain**	**0.62**	**184**	↑P	Pn	05 02 56.0	-0.1
EARN	**East Ridge Ele**	**0.

TXB			⇓S	Sn	05 03 36.6 +0.8
WTV	**Waterville**	**1.92 103**	P	Pn	05 03 13.8 +0.5
NAC	**Naches**	**1.93 137**	⇓P	Pn	05 03 14.2 +0.9
EBG	**Ellensburg**	**1.93 130**	⇓P	Pn	05 03 14.3 +1.0
STD	**Studebaker Rid**	**1.96 170**	P	Pn	05 03 14.4 +0.7
WSLR	**Whistler**	**1.97 356**	⇓P	Pn	05 03 14.7 +0.8
WSLR			⇓S	Sn	05 03 38.2 +0.8
FL2	**Flat Top 2**	**1.98 172**	⇓P	Pn	05 03 14.9 +0.8
OZB	**Mount Ozzard**	**2.00 294**	⇑P	Pn	05 03 13.4 -1.0
OZB			⇓S	Sn	05 03 36.2 -2.1
CDFW	**Cedar Flats**	**2.10 167**	P	Pn	05 03 16.8 +1.1
LVP	**Lakeview Peak**	**2.11 174**	P	Pn	05 03 16.5 +0.7
ASR	**Mount Adams--S**	**2.16 159**	⇓P	Pn	05 03 17.3 +0.8
MTMW	**Mount Mitchell**	**2.17 170**	P	Pn	05 03 17.9 +1.3
F04A	**Amboy**	**2.24 174**	⇑P	Pn	05 03 18.2 +0.6
	baz=2.2,SNR=30				
F04A			⇓S	Sn	05 03 43.7 -0.4
	baz=2.2				
BTB	**Buttle Lake**	**2.26 306**	⇑P	Pn	05 03 17.9 0.0
BTB			⇓S	Sn	05 03 43.4 -1.2
F03A	**Seaside**	**2.31 195**	P	Pn	05 03 18.0 -0.5
	baz=2.3,SNR=33				
F03A			⇓S	Sn	05 03 44.6 -1.0
	baz=2.3				
PNT	**Penticton**	**2.36 60**	⇑P	Pn	05 03 20.1 +0.9
PNT	**Penticton**	**2.36 60**	⇑P	Pn	05 03 20.1 +0.9
LLLB	**Lillooet**	**2.51 12**	⇑P	Pn	05 03 22.0 +0.8
LLLB	**Lillooet**	**2.51 12**	⇑P	Pn	05 03 22.0 +0.8
E07A	**Sunnyside**	**2.53 128**	⇑P	Pn	05 03 21.8 +0.3
	baz=2.5,SNR=17				
E07A			⇓S	Sn	05 03 51.8 +0.6
	baz=2.5				
CBB	**Campbell River**	**2.55 318**	⇑P	Pn	05 03 21.9 +0.1
CBB			S	Sn	05 03 50.9 -0.8
CBB	**Campbell River**	**2.55 318**	⇑P	Pn	05 03 21.9 +0.1
CBB			⇓S	Sn	05 03 50.9 -0.8
GDR	**Gold River**	**2.71 308**	⇑P	Pn	05 03 24.5 +0.5
GDR	**Gold River**	**2.71 308**	⇑P	Pn	05 03 24.5 +0.5
RSW	**Rattlesnake Hi**	**2.77 128**	*e*Pn	Pn	05 03 25.2 +0.4
D08A	**Wollman Farm,**	**2.80 112**	⇓P	Pn	05 03 24.9 -0.4
	baz=2.8,SNR=23				
D08A			⇓S	Sn	05 03 56.3 -1.6
	baz=2.8				
HAWA	**Hanford**	**2.81 128**	*e*Pn	Pn	05 03 25.5 +0.2
OD2	**Odessa Site #2**	**2.82 104**	*e*Pn	Pn	05 03 25.2 -0.2
OD2			*e*Sn	Sn	05 03 56.8 -1.4
G04A	**Mulino**	**2.96 177**	⇓P	Pn	05 03 28.3 +0.8
	baz=3.0,SNR=10				
G04A			⇓S	Sn	05 04 01.7 -0.1
	baz=3.0				
F07A	**Phinny Hill Vi**	**2.97 139**	⇑P	Pn	05 03 27.6 +0.1
	baz=3.0				
E08A	**Dider Farm, El**	**3.00 122**	⇑P	Pn	05 03 27.5 -0.5
	baz=3.0				
C09A	**Chrisman Ranch**	**3.01 95**	⇓P	Pn	05 03 28.2 0.0
	baz=3.0,SNR=34				
HEBO	**Mount Hebo**	**3.03 194**	*e*Pn	Pn	05 03 28.0 -0.5
HEBO			*e*Sn	Sn	05 04 01.9 -1.6
G06A	**Carlson Farm,**	**3.26 153**	⇓P	Pn	05 03 31.9 +0.3
	baz=3.3,SNR=18				
H04A	**Detroit Lake**	**3.50 174**	⇓P	Pn	05 03 35.1 +0.3
	baz=3.5,SNR=78				
H04A			⇓S	Sn	05 04 14.6 -0.4
	baz=3.5				
E09A	**Wood Farm, Sta**	**3.53 116**	⇓P	Pn	05 03 34.7 -0.5
	baz=3.5				
COR	**Corvallis**	**3.60 187**	*e*Pn	Pn	05 03 36.4 +0.2
NEW	**Newport**	**3.75 86**	*e*Pn	Pn	05 03 38.2 0.0
LNOR	**Lincton Mounta**	**3.81 125**	*e*Pn	Pn	05 03 39.3 +0.3
G08A	**Pilot Rock**	**3.87 137**	⇓P	Pn	05 03 39.3 -0.6
	baz=3.9				
F10A	**Beach Ranch, E**	**4.35 118**	⇓P	Pn	05 03 46.0 -0.4
	baz=4.3,SNR=19				
F10A			⇓S	Sn	05 04 35.2 -0.6
	baz=4.3				
C11A	**Tepee Creek (N**	**4.36 92**	⇑P	Pn	05 03 46.1 -0.4
	baz=4.4,SNR=16				
C11A			⇓S	Sn	05 04 35.9 0.0
	baz=4.4				
B12A	**Libby**	**4.77 84**	⇓P	Pn	05 03 52.8 +0.5
	baz=4.8				
C12B	**Naegeli Ranch,**	**4.90 93**	⇑P	Pn	05 03 53.7 -0.3
	baz=4.9				
C12B			⇓S	Sn	05 04 49.7 +0.4
	baz=4.9				
BMO	**Blue Mountains**	**5.00 130**	*e*Pn	Pn	05 03 56.1 +0.7
E12A	**Beaver Dam Sad**	**5.17 107**	⇓P	Pn	05 03 57.7 -0.1
	baz=5.2,SNR=41				
E12A			⇓S	Sn	05 04 54.1 -2.0
	baz=5.2				
BBB	**Bella Bella**	**5.31 321**	Pn	Pn	05 04 00.6 +1.0
	1.2nm,0.3s,baz=343,slow=9.4,SNR=11				
BBB			Sn	Sn	05 04 58.1 -1.2
	0.6nm,0.3s,baz=319,slow=20,SNR=2.3				
BBB			Lg		05 05 26.1
	1.4nm,0.3s,baz=196,slow=18,SNR=3.1				
BBB	**Bella Bella**	**5.31 321**	Pn	Pn	05 04 00.6 +1.0
BBB			Sn	Sn	05 04 58.1 -1.2
BBB			Lg		05 05 26.1
BSMT	**Bassoo Peak**	**5.34 90**	*e*Pn	Pn	05 04 00.0 0.0
C13A	**Hot Springs**	**5.50 92**	⇓P	Pn	05 04 01.8 -0.4
	baz=5.5				
C13A			⇓S	Sn	05 05 03.5 -0.6
	baz=5.5				
B13A	**Whitefish**	**5.52 85**	⇓P	Pn	05 04 02.5 0.0
	baz=5.5,SNR=7.5				
HUMO	**Hull Mountain**	**5.56 182**	*e*Pn	Pn	05 04 04.4 +1.4
A13A	**Flathead Natio**	**5.58 79**	⇓P	Pn	05 04 03.9 +0.6
	baz=5.6				
F12A	**Elk City**	**5.65 112**	⇑P	Pn	05 04 04.0 -0.4
	baz=5.6,SNR=27				
F12A			⇓S	Sn	05 05 06.4 -1.5
	baz=5.6				
JTMT	**Jette**	**5.69 91**	*e*Pn	Pn	05 04 04.4 -0.4
D13A	**Huson**	**5.69 98**	⇑P	Pn	05 04 04.0 -0.8
	baz=5.7				
SWMT	**Swartz Lake**	**5.91 93**	*e*Pn	Pn	05 04 08.7 +0.8
WALA	**Waterton Lakes**	**5.92 78**	*e*Pn	Pn	05 04 09.1 +1.2
C14A	**Swan Lake**	**6.04 90**	⇓P	Pn	05 04 09.1 -0.6
	baz=6.0				
C14A			⇑S	Sn	05 05 16.7 -0.8
	baz=6.0				
E13A	**Victor**	**6.06 103**	⇓P	Pn	05 04 09.1 -0.7
	baz=6.0,SNR=21				
E13A			⇑S	Sn	05 05 16.7 -1.1
	baz=6.0				
MSO	**Missoula**	**6.10 99**	*e*Pn	Pn	05 04 12.0 +1.6
F13A	**Darby**	**6.22 109**	⇓P	Pn	05 04 11.7 -0.3
	baz=6.2,SNR=14				
F13A			⇓S	Sn	05 05 19.6 -2.0
	baz=6.2				
A14A	**Double T Ranch**	**6.23 79**	⇑P	Pn	05 04 12.8 +0.6
	baz=6.2				
SLMT	**Seeley Lake**	**6.30 95**	*e*Pn	Pn	05 04 12.6 -0.6
D14A	**Greenough**	**6.33 96**	⇑P	Pn	05 04 12.8 -0.8
	baz=6.3				
D14A			⇑S	Sn	05 05 22.6 -1.7
	baz=6.3				
YBH	**Yreka Blue Hor**	**6.43 180**	Pn	Pn	05 04 17.1 +2.1
	0.2nm,0.3s,baz=0.0,slow=15,SNR=5.4				
YBH			Sn	Sn	05 05 26.9 -0.1
	0.4nm,0.3s,baz=34,slow=17,SNR=3.5				
E14A	**Clinton**	**6.52 102**	⇓P	Pn	05 04 16.6 +0.4
	baz=6.5				
E14A			⇓S	Sn	05 05 27.9 -1.2
	baz=6.5				
CHMT	**Chamberlain Mo**	**6.54 98**	*e*Pn	Pn	05 04 15.8 -0.6
G13A	**Cobalt**	**6.61 115**	⇓P	Pn	05 04 17.6 +0.2
	baz=6.6,SNR=13				
G13A			⇑S	Sn	05 05 28.9 -2.3
	baz=6.6				
A15A	**Johnson Ranch,**	**6.68 79**	⇑P	Pn	05 04 18.7 +0.3
	baz=6.7,SNR=10				
B15A	**Bradely Ranch,**	**6.79 85**	⇓P	Pn	05 04 19.9 0.0
	baz=6.8				
B15A			⇓S	Sn	05 05 34.9 -0.8
	baz=6.8				
C15A	**Salmond Ranch,**	**6.81 90**	⇓P	Pn	05 04 20.2 +0.1
	baz=6.8,SNR=12				
C15A			⇑S	Sn	05 05 35.8 -0.4
	baz=6.8				
F14A	**Wisdom**	**6.82 107**	⇓S	Sn	05 05 34.8 -1.7
	baz=6.8				
H13A	**Challis**	**6.88 118**	⇓S	Sn	05 05 37.5 -0.4
	baz=6.9				
D15A	**Lincoln**	**6.99 95**	⇑P	Pn	05 04 23.0 +0.3
	baz=7.0				
D15A			⇑S	Sn	05 05 39.4 -1.2
	baz=7.0				
E15A	**Deer Lodge**	**7.08 100**	⇑P	Pn	05 04 24.1 +0.3
	baz=7.1				
E15A			⇓S	Sn	05 05 40.4 -2.3
	baz=7.1				
B16A	**M & M Farms, S**	**7.36 84**	⇑P	Pn	05 04 27.8 +0.2
	baz=7.3				
H14A	**Leadore**	**7.38 115**	⇓P	Pn	05 04 28.3 +0.3
	baz=7.4				
H14A			⇓S	Sn	05 05 48.0 -2.2
	baz=7.4				
C16A	**Fuhringer Ranc**	**7.38 89**	⇑P	Pn	05 04 28.7 +0.8
	baz=7.4				
HLID	**Hailey**	**7.40 125**	*e*Pn	Pn	05 04 30.5 +2.2
LRM	**Limekiln Ridge**	**7.41 105**	*e*Pn	Pn	05 04 29.9 +1.6
LRM			*e*Sg	Sn	05 06 36.6 +46
A16A	**West Butte Ran**	**7.43 80**	⇑P	Pn	05 04 29.0 +0.4
	baz=7.4				
DLMT	**Dillon**	**7.50 108**	*e*Pn	Pn	05 04 29.8 +0.2
HRY	**Holter Researc**	**7.53 97**	*e*Pn	Pn	05 04 30.9 +0.9
MCMT	**McKenzie Canyo**	**7.59 112**	*e*Pn	Pn	05 04 31.1 +0.3
	2.6nm,0.6s				
D16A	**Dana Ranch, Ca**	**7.64 94**	⇑P	Pn	05 04 32.2 +0.6
	baz=7.6				
EDM	**Edmonton**	**7.81 46**	*e*Pn	Pn	05 04 34.5 +0.7
H15A	**Lima**	**7.82 113**	⇓P	Pn	05 04 34.5 +0.5
	baz=7.8				
H15A			⇑S	Sn	05 05 58.0 -3.1
	baz=7.8				
F16A	**Kennard Place,**	**7.96 103**	⇓P	Pn	05 04 37.2 +1.4
	baz=7.9				
F16A			⇓S	Sn	05 06 02.6 -1.7
	baz=7.9				
G16A	**Moss Hill, Enn**	**8.06 107**	⇑P	Pn	05 04 37.5 +0.2
	baz=8.0				
G16A			⇑S	Sn	05 06 05.0 -1.9
	baz=8.0				
D17A	**Six Diamond Ra**	**8.19 93**	⇓P	Pn	05 04 38.7 -0.4
	baz=8.2				
E17A	**Martinsdale**	**8.24 98**	⇓S	Sn	05 06 08.7 -2.7
	baz=8.2				
IMW	**Indian Meadow**	**9.24 113**	*e*Pn	Pn	05 04 55.7 +2.3
RLMT	**Red Lodge**	**9.74 103**	*e*Pn	Pn	05 05 03.4 +3.1
NVAR	**Mina Array Bea**	**10.25 160**	Pn	Pn	05 05 10.6 +3.4
	0.1nm,0.3s,baz=341,slow=13,SNR=3.3				
FFC	**Flin Flon**	**14.48 55**	*e*Pn	Pn	05 06 04.1 -0.3
YKA	**Yellowknife Ar**	**15.07 15**	Pn	Pn	05 06 08.6 -3.4
	0.1nm,0.3s,baz=196,slow=11,SNR=3.4				
SDCO	**Great Sand Dun**	**16.32 123**	*e*Pn	Pn	05 06 31.9 +3.7
	2.3nm,1.0s				
ULM	**Lac du Bonnet**	**17.64 73**	P	Pn	05 06 42.0 -2.5
	1.1nm,0.3s,baz=278,slow=9.5,SNR=4.8				
AGMN	**Agassiz Nation**	**17.87 80**	*e*Pn	Pn	05 06 45.6 -1.7
	49nm,2.3s				
ECSD	**EROS Data Cent**	**18.65 94**	*e*P	Pn	05 06 56.4 -0.4
	38nm,2.5s				
ILAR	**Eielson Array**	**21.10 331**	P	P	05 07 24.9 +2.5
	1.1nm,0.7s,mb3.3,baz=140,slow=8.9,SNR=15				
TXAR	**Lajitas Array**	**23.85 135**	P	P	05 07 51.9 +1.1
	0.6nm,0.5s,mb3.3,baz=332,slow=8.9,SNR=10.0				
NOA	**NORSAR Array B**	**64.99 23**	P	P	05 13 17.1 +0.7
	0.7nm,0.7s,mb3.8,baz=308,slow=7.8,SNR=2.2				
HFS	**Hagfors**	**66.40 22**	P	P	05 13 26.5 +1.0
	1.1nm,0.7s,mb4.0,baz=0.0,slow=3.3,SNR=4.2				
FINES	**FINESS Array B**	**67.90 16**	P	P	05 13 35.6 +0.7
	1.5nm,0.7s,mb4.1,baz=354,slow=3.8,SNR=4.7				

IDC ***31*** *05:09:09.9±1.4,36°.93N×29°.06E,h0km,mb3.9/2, mb1 3.8/6,mb1mx3.5/27,mbtmp3.7/6,ML3.7/4,MS2.6/1, Ms1 2.6/1,ms1mx2.1/32,Error ellipse: s-maj=24.1km s-min=22.6km az=140.0*
CSEM ***31*** *05:09:11.9±0.1,37°.05N×29°.16E,h2km,MD3.2,Error ellipse: s-maj=4.4km s-min=2.8km az=163.0*
DDA ***31*** *05:09:11.3,36°.99N×29°.17E,h7km±6km,Md3.2*
ISCJB ***31*** *05:09:11.2±0.5,37°.00N±0°.02×29°.16E±0°.02,h3km±4km, mb3.7/2,Error ellipse: s-maj=4.0km s-min=2.9km az=170.3*
NEIC ***31*** *05:09:11.0,37°.06N×29°.13E,h7km,MD3.5(ATH), MD3.3(ISK),After ISK.*
ISK ***31*** *05:09:11.5,37°.06N×29°.14E,h7km,MD3.3*
ATH ***31*** *05:09:13.6,37°.07N×28°.79E,h2km,MD3.5/8*

ISC 31 05:09:12.0±0.5,37°.00N±0°.02×29°.16E±0°.02,h4km±3km, n102,σ1§12/136,mb3.7/2,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.40**	**54**	*i* P	**Pg**	**05 09 17.8**	**-1.8**
GOLH				*i* S	**Sg**	**05 09 24.8**	**0.0**
GOLH	**Golhisar**	**0.40**	**54**	*i* P	**Pg**	**05 09 17.8**	**-1.8**
GOLH				*i* S	**Sg**	**05 09 24.8**	**+0.1**
TURN	**Turunc**	**0.47**	**254**	*i* P	**Pg**	**05 09 25.7**	**+4.8**
TURN				*i* S	**Sg**	**05 09 38.1**	**+11**
DNZL	**Cakiroluk**	**0.69**	**352**	*i* P	**Pg**	**05 09 24.3**	**-0.9**
DNZL				*i* S	**Sg**	**05 09 36.4**	**+2.2**
DNZL	**Cakiroluk**	**0.69**	**352**	*i* P	**Pg**	**05 09 24.3**	**-1.0**
YER	**Yerkesik**	**0.72**	**281**	*e*PG	**Pg**	**05 09 25.3**	**-0.4**
YER				*e*SG	**Sg**	**05 09 36.1**	**+1.1**
YER	**Yerkesik**	**0.72**	**281**	*e*Pg	**Pg**	**05 09 25.3**	**-0.4**
YER				*e*Sg	**Sg**	**05 09 36.1**	**+1.1**
DENT	**Denizli**	**0.76**	**352**	*e*PG	**Pg**	**05 09 25.3**	**-1.2**
DENT	**Denizli**	**0.76**	**352**	*e*Pg	**Pg**	**05 09 25.3**	**-1.2**
AKAS	**Kas**	**0.85**	**155**	*i* P	**Pg**	**05 09 26.0**	**-2.2**
AKAS				*i* S	**Sg**	**05 09 41.0**	**+1.9**
KORT	**Korkueli**	**0.95**	**90**	*i* P	**Pg**	**05 09 29.8**	**-0.4**
KORT				*i* S	**Sg**	**05 09 44.4**	**+1.9**
KORT	**Korkueli**	**0.95**	**90**	*i* P	**Pg**	**05 09 29.8**	**-0.4**
KORT				*i* S	**Sg**	**05 09 44.4**	**+1.9**
MLSB	**Milas**	**1.15**	**285**	*e*PN	**Pg**	**05 09 33.0**	**-0.9**
MLSB				*e*SN	**Sg**	**05 09 49.0**	**+0.2**
MLSB	**Milas**	**1.15**	**285**	*e*Pn	**Pg**	**05 09 33.0**	**-0.9**
MLSB				*e*Sn	**Sg**	**05 09 49.0**	**+0.2**
ARG	**Arkhangelos**	**1.15**	**227**	*e*Pg	**Pg**	**05 09 32.6**	**-1.3**
ARG	**Arkhangelos**	**1.15**	**227**	*e*PG	**Pg**	**05 09 32.6**	**-1.3**
ARG	**Arkhangelos**	**1.15**	**227**	*e*Pg	**Pg**	**05 09 32.6**	**-1.3**
ANTB	**Antalya**	**1.20**	**95**	*e*PN	**Pn**	**05 09 35.4**	**-0.2**
ANTB	**Antalya**	**1.20**	**95**	*e*Pn	**Pn**	**05 09 35.4**	**-0.2**
AYDN	**Tasoluk**	**1.22**	**303**	*i* P	**Pg**	**05 09 35.1**	**-0.2**
AYDN				*i* S	**Sg**	**05 09 52.5**	**+1.4**
AYDN	**Tasoluk**	**1.22**	**303**	*i* P	**Pg**	**05 09 35.1**	**-0.2**
AYDN				*i* S	**Sg**	**05 09 52.5**	**+1.5**
BCK	**Bucak**	**1.23**	**68**	*e*PN	**Pn**	**05 09 35.1**	**-0.9**
BCK	**Bucak**	**1.23**	**68**	*e*Pn	**Pn**	**05 09 35.1**	**-0.8**
DAT	**Datca**	**1.30**	**258**	*e*PN	**Pn**	**05 09 35.9**	**-1.0**
DAT	**Datca**	**1.30**	**258**	*e*Pn	**Pn**	**05 09 35.9**	**-1.0**
KHL	**Karahalli**	**1.35**	**12**	*e*PN	**Pn**	**05 09 36.6**	**-1.0**
KHL	**Karahalli**	**1.35**	**12**	*e*Pn	**Pn**	**05 09 36.6**	**-1.0**
ISP	**Isparta**	**1.36**	**53**	*e*PN	**Pn**	**05 09 37.6**	**-0.2**
ISP	**Isparta**	**1.36**	**53**	*e*Pn	**Pn**	**05 09 38.0**	**+0.3**
ISP				*e*Sn	**Sn**	**05 10 00.2**	**+4.0**
ISP	**Isparta**	**1.36**	**53**	*e*Pn	**Pn**	**05 09 37.6**	**-0.1**
ISP				*e*Sn	**Sn**	**05 10 00.2**	**+4.0**
BDRM	**Kayabasi**	**1.38**	**273**	*i* P	**Pn**	**05 09 37.9**	**-0.1**
BDRM				*i* S	**Sb**	**05 09 56.9**	**+0.6**
BDRM	**Kayabasi**	**1.38**	**273**	*i* P	**Pn**	**05 09 37.9**	**-0.1**
BDRM				*i* S	**Sb**	**05 09 56.8**	**+0.6**
KHAL	**Karahalli**	**1.39**	**11**	*i* P	**Pn**	**05 09 37.6**	**-0.6**
KHAL				*i* S	**Sb**	**05 09 58.3**	**+1.7**
KHAL	**Karahalli**	**1.39**	**11**	*i* P	**Pn**	**05 09 37.6**	**-0.6**
BODT	**Bodrum**	**1.48**	**273**	*e*PN	**Pn**	**05 09 38.9**	**-0.6**
BODT	**Bodrum**	**1.48**	**273**	*e*Pn	**Pn**	**05 09 38.9**	**-0.6**
SUTC	**Sutluce-Ispart**	**1.54**	**72**	*e*PN	**Pn**	**05 09 40.2**	**0.0**
SUTC	**Sutluce-Ispart**	**1.54**	**72**	*e*Pn	**Pn**	**05 09 40.2**	**0.0**
KULA	**Kula-Manisa**	**1.56**	**345**	*e*PN	**Pn**	**05 09 39.4**	**-1.2**
KULA	**Kula-Manisa**	**1.56**	**345**	*e*Pn	**Pn**	**05 09 39.4**	**-1.1**
GCAM	**G?zelcaml?**	**1.69**	**295**	*i* P	**Pn**	**05 09 42.3**	**0.0**
GCAM				*i* S	**Sn**	**05 10 03.0**	**-1.4**
GCAM	**G?zelcaml?**	**1.69**	**295**	*i* P	**Pn**	**05 09 42.3**	**0.0**
GCAM				*i* S	**Sn**	**05 10 03.0**	**-1.3**
SHUT	**Suhut-Afyon**	**1.90**	**35**	*e*PN	**Pn**	**05 09 44.7**	**-0.5**
SHUT	**Suhut-Afyon**	**1.90**	**35**	*e*Pn	**Pn**	**05 09 44.7**	**-0.5**
IZM	**Izmir**	**2.05**	**313**	*e*PN	**Pn**	**05 09 46.7**	**-0.6**
AKS	**Akhisar**	**2.15**	**331**	*e*PN	**Pn**	**05 09 48.0**	**-0.7**
AKS	**Akhisar**	**2.15**	**331**	*e*Pn	**Pn**	**05 09 48.1**	**-0.6**
KARP	**Karpathos**	**2.17**	**229**	*e*Pn	**Pn**	**05 09 50.0**	**+1.0**
KARP				*e*Sn	**Sn**	**05 10 17.9**	**+1.5**
KARP	**Karpathos**	**2.17**	**229**	*e*PN	**Pn**	**05 09 50.0**	**+1.0**
KARP				*e*SN	**Sn**	**05 10 17.9**	**+1.5**
KARP	**Karpathos**	**2.17**	**229**	*e*Pn	**Pn**	**05 09 50.0**	**+1.0**
KARP				*e*Sn	**Sn**	**05 10 17.9**	**+1.5**
BLCB	**Balcova**	**2.17**	**310**	*e*PN	**Pn**	**05 09 48.5**	**-0.5**
BLCB	**Balcova**	**2.17**	**310**	*e*Pn	**Pn**	**05 09 48.5**	**-0.5**
ALT	**Altintas**	**2.18**	**20**	*e*PN	**Pn**	**05 09 48.4**	**-0.7**
ALT	**Altintas**	**2.18**	**20**	*e*Pn	**Pn**	**05 09 48.4**	**-0.7**
HDMB	**Hadim**	**2.66**	**90**	*e*PN	**Pn**	**05 09 56.3**	**+0.7**
HDMB	**Hadim**	**2.66**	**90**	*e*Pn	**Pn**	**05 09 56.3**	**+0.6**
KONT	**Konya--Tatoy**	**2.71**	**69**	*e*PN	**Pn**	**05 09 56.8**	**+0.4**
KONT	**Konya--Tatoy**	**2.71**	**69**	*e*Pn	**Pn**	**05 09 56.8**	**+0.4**
LADK	**Ladik-KONYA**	**2.81**	**64**	*e*PN	**Pn**	**05 09 58.2**	**+0.5**
LADK	**Ladik-KONYA**	**2.81**	**64**	*e*Pn	**Pn**	**05 09 58.2**	**+0.5**
BALB	**Balikesir**	**2.82**	**339**	*e*PN	**Pn**	**05 09 57.4**	**-0.4**
BALB	**Balikesir**	**2.82**	**339**	*e*Pn	**Pn**	**05 09 57.4**	**-0.4**
CHOS	**Chios island**	**2.83**	**300**	*e*PN	**Pn**	**05 09 58.3**	**+0.4**
CHOS	**Chios island**	**2.83**	**300**	*e*Pn	**Pn**	**05 09 58.3**	**+0.4**
ESKT	**Eskisehir**	**2.84**	**27**	*e*PN	**Pn**	**05 09 58.0**	**-0.1**
ESKT	**Eskisehir**	**2.84**	**27**	*e*Pn	**Pn**	**05 09 58.0**	**-0.1**
KIZT	**Kizilcal**	**2.85**	**48**	*e*PN	**Pn**	**05 09 59.2**	**+0.9**
KIZT	**Kizilcal**	**2.85**	**48**	*e*Pn	**Pn**	**05 09 59.2**	**+0.9**
APE	**Apeiranthos**	**2.91**	**272**	*e*Pn	**Pn**	**05 09 59.5**	**+0.5**
APE				*e*Sn	**Sn**	**05 10 32.1**	**-2.3**
APE	**Apeiranthos**	**2.91**	**272**	*e*PN	**Pn**	**05 09 59.5**	**+0.5**
APE				*e*SN	**Sn**	**05 10 32.1**	**-2.3**
APE	**Apeiranthos**	**2.91**	**272**	*e*Pn	**Pn**	**05 09 59.5**	**+0.5**
APE				*e*Sn	**Sn**	**05 10 32.1**	**-2.3**
ZKR	**Zakros**	**3.04**	**233**	*e*PN	**Pn**	**05 10 02.6**	**+1.7**
ZKR	**Zakros**	**3.04**	**233**	*e*PN	**Pn**	**05 10 02.6**	**+1.7**
ZKR	**Zakros**	**3.04**	**233**	*e*Pn	**Pn**	**05 10 02.6**	**+1.7**
PRK	**Paraskevi**	**3.19**	**315**	*e*PN	**Pn**	**05 10 03.5**	**+0.5**
PRK	**Paraskevi**	**3.19**	**315**	*e*PN	**Pn**	**05 10 03.5**	**+0.5**
PRK	**Paraskevi**	**3.19**	**315**	*e*Pn	**Pn**	**05 10 03.5**	**+0.5**
GONE	**Gonen-Balikesi**	**3.25**	**340**	*e*PN	**Pn**	**05 10 03.4**	**-0.4**
GONE	**Gonen-Balikesi**	**3.25**	**340**	*e*Pn	**Pn**	**05 10 03.4**	**-0.4**
LAST	**Lasithi**	**3.50**	**239**	*e*PN	**Pn**	**05 10 08.7**	**+1.4**
LAST	**Lasithi**	**3.50**	**239**	*e*PN	**Pn**	**05 10 08.7**	**+1.4**
LAST	**Lasithi**	**3.50**	**239**	*e*Pn	**Pn**	**05 10 08.7**	**+1.4**
IDI	**Anoyia**	**3.86**	**245**	*e*Pn	**Pn**	**05 10 13.0**	**+0.9**
IDI				*e*Sn	**Sn**	**05 10 57.6**	**-0.3**
IDI	**Anoyia**	**3.86**	**245**	*e*PN	**Pn**	**05 10 13.0**	**+0.9**
IDI				*e*SN	**Sn**	**05 10 57.6**	**-0.3**
IDI	**Anoyia**	**3.86**	**245**	*e*Pn	**Pn**	**05 10 13.0**	**+0.9**
IDI				*e*Sn	**Sn**	**05 10 57.6**	**-0.3**
BR131	**Keskin Array S**	**4.45**	**51**	*e*Pn	**Pn**	**05 10 21.2**	**+1.0**
BR131	**Keskin Array S**	**4.45**	**51**	*e*Pn	**Pn**	**05 10 21.2**	**+1.0**
BRTR	**Keskin Array B**	**4.45**	**51**	Pn	**Pn**	**05 10 21.1**	**+1.0**
	0.5nm,0.3s,baz=236,slow=16,SNR=10						
BRTR				Sn	**Sn**	**05 11 14.0**	**+1.6**
	0.7nm,0.3s,baz=231,slow=22,SNR=9.4						
BRTR	**Keskin Array B**	**4.45**	**51**	Pn	**Pn**	**05 10 21.1**	**+0.9**
BRTR				Sn	**Sn**	**05 11 14.0**	**+1.6**
KARN	**Karanos**	**4.53**	**251**	*e*PN	**Pn**	**05 10 23.0**	**+1.6**
KARN	**Karanos**	**4.53**	**251**	*e*Pn	**Pn**	**05 10 23.0**	**+1.6**
GVD	**Gavdhos**	**4.65**	**244**	*e*Pn	**Pn**	**05 10 25.2**	**+2.2**
GVD	**Gavdhos**	**4.65**	**244**	*e*PN	**Pn**	**05 10 25.2**	**+2.2**
GVD	**Gavdhos**	**4.65**	**244**	*e*Pn	**Pn**	**05 10 25.2**	**+2.2**
MMAI	**Mount Meron Ar**	**6.48**	**126**	Pn	**Pn**	**05 10 46.0**	**-2.2**
	2.7nm,0.3s,baz=312,slow=12,SNR=5.3						
MMAI				Sn	**Sn**	**05 11 58.5**	**-4.1**
	1.9nm,0.3s,baz=316,slow=26,SNR=3.4						
ASF	**Jabal al Asfar**	**7.99**	**125**	Sn	**Sn**	**05 12 39.8**	**0.0**
	0.3nm,0.3s,baz=328,slow=19,SNR=2.2						
EIL	**Elat**	**8.77**	**145**	Pn	**Pn**	**05 11 18.0**	**-1.6**
	0.7nm,0.3s,baz=6.3,slow=18,SNR=4.0						
EIL				Sn

MECH					*e*S		Sn	05 19 07.2	-0.1
MECH					AML		AML	05 19 08.1	
	comp=E,3μm,0.5s								
CEN1	**Los Morros**	**0.36**	**183**	⇑	*e*P		Pn	05 19 02.6	-0.9
CEN1					*e*S		Sn	05 19 11.5	+2.0
CEN1					AML		AML	05 19 13.0	
	comp=E,408nm,0.9s								
ANCH	**Antofagasta**	**0.68**	**198**		*e*P		Pn	05 19 05.5	-2.6
ANCH					*i* S		Sn	05 19 14.9	-2.6
ANCH					AML		AML	05 19 15.3	
	comp=N,604nm,0.5s								
PB04	**Plate Boundary**	**1.00**	**40**		*e*P		Pn	05 19 09.1	-3.3
PB04					*e*S		Sn	05 19 19.5	-5.7
PB04					AML		AML	05 19 23.0	
	comp=E,385nm,0.5s								
PB01	**Plate Boundary**	**2.08**	**18**		*e*P		Pn	05 19 29.4	+2.1
PB01					*e*S		Sn	05 19 55.5	+3.5
HMBC	**Humberston**	**2.75**	**6**		*e*P		Pn	05 19 37.1	+0.6

NIED ***31*** *05:31:00, 39.°20N×142.°40E, h26km, Mw3.7 Best double couple: M0 3.86000×10^14 NP1:φs 347.00000°, δ82.00000°, λ44.00000°. NP2:φs 249.00000°, δ47.00000°, λ169.00000°.*
ISCJB ***31*** *05:31:52.1±1.3, 39.°15N±0.°04×142.°40E±0.°09, h26km±6km, mb3.6/4, Error ellipse: s-maj=11.8km s-min=5.7km az=16.4*
JMA ***31*** *05:31:52.7±0.1, 39.°17N×142.°38E, h31km±1km, M3.8*
JMA Felt I J1.
NEIC ***31*** *05:31:52.8, 39.°17N×142.°38E, h31km, MG3.8(JMA), After JMA.*
NEIC Recorded [1 JMA] in Iwate.
IDC ***31*** *05:31:58.5±2.8, 39.°30N×142.°06E, h63km±30km, mb3.3/4, mb1 3.5/6, mb1mx3.3/23, mbtmp3.4/6, ML3.6/2, MS2.8/2, Ms1 2.8/2, ms1mx2.4/17, Error ellipse: s-maj=43.9km s-min=19.2km az=134.0*

ISC 31 05:31:52.4±1.3, 39.°20N±0.°04×142.°40E±0.°07, h19km±6km, n17, σ1°9°05/27, mb3.6/4, 6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.58**	**259**	⇓P		**Pg**	**05 32 03.9**	**0.0**
OFUJ				S		**Sg**	**05 32 11.7**	**0.0**
MIYJ	**Miyakonagasawa**	**0.59**	**311**	⇓P		**Pg**	**05 32 04.4**	**+0.3**
MIYJ				S		**Sg**	**05 32 12.4**	**+0.4**
JTH	**Tanohata**	**0.85**	**331**	P		**Pb**	**05 32 08.2**	**-0.3**
JOM	**Ohasama**	**0.90**	**288**	⇓P		**Pb**	**05 32 09.4**	**0.0**
JOM				S		**Sb**	**05 32 21.3**	**+0.3**
JMK	**Ichinoseki**	**0.95**	**256**	⇓P		**Pb**	**05 32 09.6**	**-0.6**
JMK				*e*S		**Sb**	**05 32 21.7**	**-0.6**
JIO	**Ouri**	**1.10**	**228**	P		**Pn**	**05 32 11.1**	**-1.7**
JIO				*e*S		**Sb**	**05 32 23.9**	**-2.9**
JKZ	**Kuzumaki**	**1.14**	**314**	⇓P		**Pn**	**05 32 13.3**	**0.0**
JKZ				*e*S		**Sb**	**05 32 27.9**	**0.0**
JANG	**Nango**	**1.36**	**330**	⇓P		**Pn**	**05 32 16.2**	**-0.1**
JANG				S		**Sn**	**05 32 33.8**	**0.0**
MAJO	**Matsushiro**	**4.24**	**233**	Pn		**Pn**	**05 32 54.7**	**-1.2**
MAT	**Matsushiro**	**4.24**	**233**	P		**Pn**	**05 32 58.0**	**+2.1**
MAT				*e*S		**Sn**	**05 33 46.5**	**+1.6**
MJAR	**Matsushiro Arr**	**4.24**	**233**	P		**Pn**	**05 32 58.1**	**+2.2**
	2.9nm,0.3s,baz=42,slow=11,SNR=44							
MJAR				S		**Sn**	**05 33 45.8**	**+0.9**
	baz=38,slow=28,SNR=2.2							
MJAR				LR		LR	05 34 45.0	
	comp=Z,183nm,19.0s,baz=80,slow=41							
ASAJ	**Asahikawa**	**4.92**	**2**	P		**Pn**	**05 33 09.5**	**+4.3**
	2.0nm,0.3s,baz=162,slow=20,SNR=3.2							
ASAJ				S		**Sn**	**05 34 10.6**	**+9.0**
	1.8nm,0.3s,baz=157,slow=33,SNR=4.7							
KSRS	**Korea Array**	**11.51**	**266**	P		**Pn**	**05 34 41.6**	**+6.1**
	0.2nm,0.3s,baz=84,slow=12,SNR=3.2							
KSRS				LR		LR	05 38 36.6	
	comp=Z,29nm,19.4s,baz=65,slow=35							
ZALV	**Zalesovo Beam**	**41.07**	**311**	P		**P**	**05 39 32.0**	**-2.4**
	0.5nm,0.5s,mb3.4,baz=96,slow=8.9,SNR=2.9							
MKAR	**Makanchi Array**	**43.66**	**300**	P		**P**	**05 39 55.3**	**-0.3**
	0.6nm,0.6s,mb3.5,baz=82,slow=9.9,SNR=6.6							
ILAR	**Eielson Array**	**47.26**	**33**	P		**P**	**05 40 24.8**	**+0.9**
	0.5nm,0.7s,mb3.6,baz=264,slow=6.0,SNR=8.7							
BVAR	**Borovoye Array**	**49.72**	**311**	P		**P**	**05 40 42.7**	**-0.2**
	0.6nm,0.5s,mb3.9,baz=96,slow=12,SNR=2.5							

ISCJB ***31*** *05:44:38.4±0.3, 45.°92N±0.°02×16.°03E±0.°02, h8km±2km, Error ellipse: s-maj=2.7km s-min=2.3km az=16.6*
LJU ***31*** *05:44:38.9, 45.°92N×15.°98E, h19km, ML2.9*
CSEM ***31*** *05:44:39.5±0.1, 45.°92N×15.°98E, h8km, ML3.6/6, Error ellipse: s-maj=2.6km s-min=2.1km az=13.0*
PRU ***31*** *05:44:40.4, 45.°99N×16.°03E, h10km*
VIE ***31*** *05:44:40.4±0.4, 45.°94N×15.°88E, h9km±1km, mb2.7/6, ML3.1/6, Error ellipse: s-maj=2.3km s-min=1.2km az=129.0 19 km NNW of Zagreb*
NEIC ***31*** *05:44:41.1±0.6, 45.°96N×15.°84E, h11km±5km, ML2.9(LJU), ML2.7(ZAG), Error ellipse: s-maj=7.3km s-min=4.8km az=153.0*
NEIC Felt at Velika Gorica.

ISC 31 05:44:39.6±0.3, 45.°93N±0.°01×16.°01E±0.°02, h10km±2km, n127, σ0°99/229, 45C-17D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCIS	**Gornji Cirnik**	**0.28**	**257**	⇑ *i*Pg		**Pg**	**05 44 45.0**	**-0.1**
GCIS				*i* Sg		**Sg**	**05 44 48.8**	**0.0**
GCIS								
	comp=Z,2μm,0.1s							
GCIS	**Gornji Cirnik**	**0.28**	**257**	⇑ *i*Pg		**Pg**	**05 44 45.0**	**-0.1**
GCIS				*i* Sg		**Sg**	**05 44 48.8**	**0.0**
GCIS	**Gornji Cirnik**	**0.28**	**257**	⇑ *i*Pg		**Pg**	**05 44 45.0**	**-0.1**
GCIS				*i* Sg		**Sg**	**05 44 48.8**	**0.0**
GOLS	**Golise**	**0.28**	**287**	⇑ *i*Pg		**Pg**	**05 44 45.2**	**0.0**
GOLS				*i* Sg		**Sg**	**05 44 49.2**	**+0.2**
GOLS								
	comp=Z,450nm,0.1s							
GOLS	**Golise**	**0.28**	**287**	⇑ *i*Pg		**Pg**	**05 44 45.2**	**0.0**
GOLS				*i* Sg		**Sg**	**05 44 49.2**	**+0.2**
GOLS	**Golise**	**0.28**	**287**	⇑ *i*Pg		**Pg**	**05 44 45.2**	**0.0**
GOLS				*i* Sg		**Sg**	**05 44 49.2**	**+0.2**
CESS	**Cesta pri Krsk**	**0.38**	**277**	*i* Pg		**Pg**	**05 44 47.1**	**0.0**
CESS				*i* Sg		**Sg**	**05 44 52.8**	**+0.6**
CESS								
	comp=Z,1μm,0.2s							
CESS	**Cesta pri Krsk**	**0.38**	**277**	*i* Pg		**Pg**	**05 44 47.1**	**0.0**
CESS				*i* Sg		**Sg**	**05 44 52.8**	**+0.6**
CESS	**Cesta pri Krsk**	**0.38**	**277**	*i* Pg		**Pg**	**05 44 47.1**	**0.0**
CESS				*i* Sg		**Sg**	**05 44 52.8**	**+0.6**
CRES	**Cresnjev**	**0.40**	**255**	⇑ *i*Pg		**Pg**	**05 44 47.1**	**-0.3**
CRES				*i* Sg		**Sg**	**05 44 53.5**	**+0.7**
CRES								
	comp=Z,2μm,0.2s							
CRES	**Cresnjev**	**0.40**	**255**	⇑ *i*Pg		**Pg**	**05 44 47.1**	**-0.3**
CRES				*i* Sg		**Sg**	**05 44 53.5**	**+0.7**
CRES	**Cresnjev**	**0.40**	**255**	⇑ *i*Pg		**Pg**	**05 44 47.2**	**-0.2**
CRES				*i* Sg		**Sg**	**05 44 53.5**	**+0.8**
DOBS	**Dobrina**	**0.44**	**300**	⇑ *i*Pg		**Pg**	**05 44 48.3**	**+0.2**
DOBS				*i* Sg		**Sg**	**05 44 54.6**	**+0.7**
DOBS								
	comp=Z,482nm,0.1s							
DOBS	**Dobrina**	**0.44**	**300**	⇑ *i*Pg		**Pg**	**05 44 48.3**	**+0.2**
DOBS				*i* Sg		**Sg**	**05 44 54.6**	**+0.7**
DOBS	**Dobrina**	**0.44**	**300**	⇑ *i*Pg		**Pg**	**05 44 48.3**	**+0.2**
DOBS				*i* Sg		**Sg**	**05 44 54.6**	**+0.7**
SISC	**Sisak**	**0.53**	**151**	*e*Pg		**Pg**	**05 44 49.8**	**+0.1**
SISC				Sg		**Sg**	**05 44 57.3**	**+0.7**
SISC	**Sisak**	**0.53**	**151**	*e*Pg		**Pg**	**05 44 49.8**	**0.0**
SISC				Sg		**Sg**	**05 44 57.3**	**+0.7**
KOGS	**Kog**	**0.54**	**18**	⇓ *i*Pg		**Pg**	**05 44 50.7**	**+0.5**
KOGS				*i* Sg		**Sg**	**05 44 59.0**	**+1.7**
KOGS								
	comp=Z,528nm,0.1s							
KOGS	**Kog**	**0.54**	**18**	⇓ *i*Pg		**Pg**	**05 44 50.7**	**+0.5**
KOGS				*i* Sg		**Sg**	**05 44 59.0**	**+1.7**
KOGS	**Kog**	**0.54**	**18**	⇓ *i*Pg		**Pg**	**05 44 50.7**	**+0.6**
KOGS				*i* Sg		**Sg**	**05 44 59.0**	**+1.7**
GROS	**Grobnik**	**0.64**	**327**	⇓ *i*Pg		**Pg**	**05 44 52.1**	**+0.2**
GROS				*i* Sg		**Sg**	**05 44 00.4**	**+0.1**
GROS	**Grobnik**	**0.64**	**327**	⇓ *i*Pg		**Pg**	**05 44 52.1**	**+0.2**
GROS				*i* Sg		**Sg**	**05 44 00.4**	**+0.1**
BOJS	**Bojanci**	**0.68**	**232**	*i* Pg		**Pg**	**05 44 51.7**	**-1.0**
BOJS				*e*Sg		**Sg**	**05 45 01.1**	**-0.5**
BOJS								
	comp=Z,293nm,0.2s							
BOJS	**Bojanci**	**0.68**	**232**	*i* Pg		**Pg**	**05 44 51.7**	**-1.0**
BOJS				*e*Sg		**Sg**	**05 45 01.1**	**-0.5**
BOJS	**Bojanci**	**0.68**	**232**	*i* Pg		**Pg**	**05 44 51.7**	**-1.0**
BOJS				*e*Sg		**Sg**	**05 45 01.1**	**-0.5**
PDKS	**Podkum**	**0.72**	**281**	⇑ *i*Pg		**Pg**	**05 44 53.3**	**-0.1**
PDKS								
	comp=Z,150nm,0.1s							
PDKS	**Podkum**	**0.72**	**281**	⇑ *i*Pg		**Pg**	**05 44 53.3**	**-0.1**
VISS	**Visnje**	**0.83**	**262**	⇑ *i*Pg		**Pg**	**05 44 54.8**	**-0.8**
VISS								
	comp=Z,346nm,0.3s							
VISS	**Visnje**	**0.83**	**262**	⇑ *i*Pg		**Pg**	**05 44 54.8**	**-0.7**
ZAVS	**Zavodnje**	**0.85**	**307**	⇑ *i*Pg		**Pg**	**05 44 55.9**	**0.0**
ZAVS				*i* Sg		**Sg**	**05 45 07.2**	**+0.2**
ZAVS								
	comp=Z,153nm,0.1s							
VNDS	**Vrh nad Dolski**	**0.93**	**281**	⇑ *i*Pg		**Pg**	**05 44 57.0**	**-0.5**
VNDS								
	comp=Z,149nm,0.2s							
PERS	**Pernice**	**0.94**	**319**	*i* Pg		**Pg**	**05 44 57.4**	**-0.2**
PERS				*i* Sg		**Sg**	**05 45 09.5**	**-0.4**
PERS								
	comp=Z,235nm,0.2s							
PERS	**Pernice**	**0.94**	**319**	*i* Pg		**Pg**	**05 44 57.4**	**-0.2**
PERS				*i* Sg		**Sg**	**05 45 09.5**	**-0.4**
PERS	**Pernice**	**0.94**	**319**	*i* Pg		**Pg**	**05 44 57.4**	**-0.2**
PERS				*i* Sg		**Sg**	**05 45 09.5**	**-0.4**
SOKA	**Soboth**	**1.01**	**318**	⇑ *i*Pg		**Pg**	**05 44 58.6**	**-0.4**
SOKA				⇓ *i*Sg		**Sg**	**05 45 11.6**	**-0.5**
	comp=Z,113nm,0.2s							
SOKA	**Soboth**	**1.01**	**318**	Pg		**Pg**	**05 44 58.6**	**-0.4**
SOKA				Sg		**Sg**	**05 45 11.6**	**-0.5**
	comp=Z,113nm,0.2s							
LJU	**Ljubljana**	**1.04**	**277**	⇑ *i*Pg		**Pg**	**05 44 58.9**	**-0.7**
LJU				*e*Sg		**Sg**	**05 45 15.0**	**+1.9**
LJU	**Ljubljana**	**1.04**	**277**	⇑ *i*Pg		**Pg**	**05 44 59.0**	**-0.6**
LJU				*e*Sg		**Sg**	**05 45 15.0**	**+1.9**
LJU	**Ljubljana**	**1.04**	**277**	⇑ *i*Pg		**Pg**	**05 44 59.0**	**-0.6**
LJU				*e*Sg		**Sg**	**05 45 15.0**	**+1.9**
CEY	**Cerknica**	**1.12**	**261**	*i* Pg		**Pg**	**05 45 00.1**	**-1.1**
CEY				*i* Sg		**Sg**	**05 45 16.5**	**+0.8**
CEY								
	comp=Z,159nm,0.2s							
CEY	**Cerknica**	**1.12**	**261**	*i* Pg		**Pg**	**05 45 00.1**	**-1.1**
CEY				*i* Sg		**Sg**	**05 45 16.5**	**+0.8**
CEY	**Cerknica**	**1.12**	**261**	*i* Pg		**Pg**	**05 45 00.1**	**-1.0**
CEY				*i* Sg		**Sg**	**05 45 16.5**	**+0.8**
MOZS	**Mozjanca**	**1.15**	**289**	⇑ *i*Pg		**Pg**	**05 45 01.1**	**-0.5**
OBKA	**Obir**	**1.17**	**300**	⇑ *e*Pg		**Pg**	**05 45 01.7**	**-0.3**
	SNR=106							
OBKA				⇑ *i*Sg		**Sg**	**05 45 15.6**	**-1.6**
	comp=Z,191nm,0.3s							
OBKA	**Obir**	**1.17**	**300**	Pg		**Pg**	**05 45 01.7**	**-0.3**
	SNR=106							
OBKA				Sg		**Sg**	**05 45 15.6**	**-1.6**
	comp=Z,191nm,0.3s							
KNDS	**Knezji Dol**	**1.21**	**251**	*i* Pg		**Pg**	**05 45 01.7**	**-1.1**
KNDS				*i* Sg		**Sg**	**05 45 18.6**	**+0.1**
KNDS								
	comp=Z,346nm,0.3s							
KNDS	**Knezji Dol**	**1.21**	**251**	*i* Pg		**Pg**	**05 45 01.7**	**-1.1**
KNDS				*i* Sg		**Sg**	**05 45 18.6**	**+0.1**
KNDS	**Knezji Dol**	**1.21**	**251**	*i* Pg		**Pg**	**05 45 01.7**	**-1.1**
KNDS				*i* Sg		**Sg**	**05 45 18.6**	**+0.1**
CRNS	**Crni Vrh**	**1.23**	**278**	*i* Pg		**Pg**	**05 45 02.2**	**-1.0**
CRNS				*i* Sg		**Sg**	**05 45 20.7**	**+1.6**
CRNS								
	comp=Z,97nm,0.2s							
JAVS	**Javornik**	**1.36**	**269**	*i* Pg		**Pn**	**05 45 04.0**	**-0.6**
JAVS				*i* Sg		**Sg**	**05 45 23.4**	**+0.1**
JAVS								
	comp=Z,75nm,0.2s							
JAVS	**Javornik**	**1.36**	**269**	*i* Pg		**Pn**	**05 45 04.0**	**-0.6**
JAVS				*i* Sg		**Sg**	**05 45 23.4**	**+0.1**
JAVS	**Javornik**	**1.36**	**269**	*i* Pg		**Pn**	**05 45 04.0**	**-0.6**
JAVS				*i* Sg		**Sg**	**05 45 23.4**	**+0.1**
ARSA	**Arzberg**	**1.36**	**346**	⇓ *i*Pn		**Pn**	**05 45 05.0**	**+0.4**
ARSA				⇑ *e*Pg		**Pg**	**05 45 06.2**	**+0.4**
	SNR=27							
ARSA				⇑ *i*Sn		**Sn**	**05 45 24.0**	**+1.3**
ARSA				⇑ *i*Sg		**Sg**	**05 45 24.8**	**+1.4**
	comp=Z,43nm,0.2s							
ARSA	**Arzberg**	**1.36**	**346**	Pn		**Pn**	**05 45 05.0**	**+0.4**
ARSA	**Arzberg**	**1.36**	**346**	Pg		**Pg**	**05 45 06.2**	**+0.5**
	SNR=27							
ARSA				Sn		**Sn**	**05 45 24.0**	**+1.3**
ARSA				Sg		**Sg**	**05 45 24.8**	**+1.4**
	comp=Z,43nm,0.2s							
SKDS	**Skadanscina**	**1.45**	**255**	*i* Pg		**Pn**	**05 45 05.5**	**-0.3**
SKDS				*i* Sg		**Sg**	**05 45 26.1**	**-0.1**
SKDS								
	comp=Z,156nm,0.2s							
GORS	**Gorjuse**	**1.45**	**286**	*e*Pg		**Pn**	**05 45 05.4**	**-0.5**
GORS				*i* Sg		**Sg**	**05 45 26.7**	**+0.4**
GORS								
	comp=Z,68nm,0.2s							
GORS	**Gorjuse**	**1.45**	**286**	*e*Pg		**Pn**	**05 45 05.4**	**-0.5**
GORS				*i* Sg		**Sg**	**05 45 26.7**	**+0.4**
GORS	**Gorjuse**	**1.45**	**286**	*e*Pg		**Pn**	**05 45 05.4**	**-0.5**
GORS				*i* Sg		**Sg**	**05 45 26.7**	**+0.4**
VOY	**Vojsko**	**1.48**	**275**	*e*Pn		**Pn**	**05 45 06.4**	**+0.2**
VOY				*e*Sn		**Sn**	**05 45 28.3**	**+2.7**
VOY	**Vojsko**	**1.48**	**275**	*e*Pn		**Pn**	**05 45 06.4**	**+0.2**
VOY				*e*Sn		**Sn**	**05 45 28.3**	**+2.7**
VOJS	**Vojsko**	**1.49**	**275**	*i* Pg		**Pn**	**05 45 05.8**	**-0.5**
VOJS				*i* Sg		**Sg**	**05 45 27.6**	**+0.2**
VOJS								
	comp=Z,55nm,0.2s							
VOJS	**Vojsko**	**1.49**	**275**	*i* Pg		**Pn**	**05 45 05.8**	**-0.5**
VOJS				*i* Sg		**Sg**	**05 45 27.6**	**+0.2**
VOJS	**Vojsko**	**1.49**	**275**	*i* Pg		**Pn**	**05 45 05.8**	**-0.5**
VOJS				*i* Sg		**Sg**	**05 45 27.6**	**+0.2**
RHK3	**Tenkes**	**1.57**	**91**	*e*Pn		**Pn**	**05 45 06.2**	**-1.2**
RHK3				*e*Sn		**Sn**	**05 45 25.0**	**-2.7**
NVLJ	**Novalja**	**1.59**	**211**	*e*Pn		**Pn**	**05 45 08.1**	**+0.4**
NVLJ				Sg		**Sg**	**05 45 30.0**	**-0.5**
NVLJ	**Novalja**	**1.59**	**211**	*e*Pn		**Pn**	**05 45 08.1**	**+0.4**
NVLJ				Sg		**Sg**	**05 45 30.0**	**-0.5**
TRI	**Trieste**	**1.59**	**263**	*e*Pn		**Pn**	**05 45 08.0**	**+0.3**
TRI				*e*Sn		**Sn**	**05 45 28.1**	**-0.1**
TRI	**Trieste**	**1.59**	**263**	*e*Pn		**Pn**	**05 45 07.9**	**+0.2**
TRI				*e*Sn		**Sn**	**05 45 28.1**	**-0.1**
PKS9	**Tamasi**	**1.71**	**67**	⇓ *e*Pn		**Pn**	**05 45 11.4**	**+2.1**
PKS9				*e*Sn		**Sn**	**05 45 35.4**	**+4.2**
ROBS	**Robic**	**1.77**	**281**	*i* Pn		**Pn**	**05 45 09.7**	**-0.5**
ROBS	**Robic**	**1.77**	**281**	*i* Pg		**Pn**	**05 45 09.7**	**-0.5**
MYKA	**Terra Mystica**	**1.79**	**294**	⇓ *i*Pn		**Pn**	**05 45 10.4**	**0.0**
MYKA				⇑ *i*Pg		**Pg**	**05 45 13.1**	**-0.7**
MYKA				⇑ *i*Sn		**Sn**	**05 45 33.1**	**0.0**
MYKA	**Terra Mystica**	**1.79**	**294**	Pn		**Pn**	**05 45 10.4**	**0.0**
PKSM	**Moragy**	**1.85**	**80**	⇓P		**Pn**	**05 45 15.0**	**+3.6**
PKSM				S		**Sn**	**05 45 39.5**	**+4.7**
PKSM	**Moragy**	**1.85**	**80**	⇓ *i*P		**Pn**	**05 45 15.0**	**+3.7**
PKSM	**Moragy**	**1.85**	**80**	⇓ *i*P		**Pn**	**05 45 15.0**	**+3.7**
PKSM				S		**Sn**	**05 45 39.5**	**+4.7**
CONA	**Conrad Observa**	**2.00**	**357**	⇓ *e*Pn		**Pn**	**05 45 14.3**	**+0.9**
	SNR=12							
CONA				⇓ *i*Pg		**Pg**	**05 45 18.6**	**+0.7**
CONA				⇑ *i*Sg		**Sg**	**05 45 46.0**	**+2.2**
	comp=Z,31nm,0.4s							
CONA	**Conrad Observa**	**2.00**	**357**	Pn		**Pn**	**05 45 14.3**	**+0.9**
	SNR=12							
PKSG		**2.20**	**47**	*e*Pn		**Pn**	**05 45 19.9**	**+3.8**
MOA	**Molln**	**2.26**	**329**	⇑ *e*Pn		**Pn**	**05 45 17.4**	**+0.4**
	SNR=5.6							
MOA				⇑ *i*Sn		**Sn**	**05 45 45.0**	**+0.1**
MOA	**Molln**	**2.26**	**329**	Pn		**Pn**	**05 45 17.4**	**+0.4**
	SNR=5.6							
MOA				Sn		**Sn**	**05 45 45.0**	**+0.1**
BUD	**Budapest**	**2.59**	**52**	⇓ *e*Pg		**Sn**	**05 45 46.8**	**-6.2**
BUD				*e*Sn		**Sn**	**05 46 11.5**	**+8.7**
BUD	**Budapest**	**2.59**	**52**	*e*Sn		**Sn**	**05 45 58.4**	**+5.4**
FGSL	**Fruska Gora**	**2.78**	**105**	*e*Sg		**Sg**	**05 46 09.6**	**+0.8**
FRGS	**Fruska Gora**	**2.78**	**105**	*e*Sg		**Sg**	**05 46 09.6**	**+0.8**
KOLL	**Kolacno**	**3.11**	**31**	*e*Pn		**Pn**	**05 45 28.6**	**0.0**
KOLL				*e*Sn		**Sn**	**05 46 03.5**	**-2.3**
KOLL	**Kolacno**	**3.11**	**31**	*e*PN		**Pn**	**05 45 28.6**	**0.0**
KOLL				*e*SN		**Sn**	**05 46 03.5**	**-2.3**
KOLL	**Kolacno**	**3.11**	**31**	*e*Pn		**Pn**	**05 45 28.6**	**0.0**
KOLL				*e*Sn		**Sn**	**05 46 03.5**	**-2.3**
BBLS	**Lazići**	**3.17**	**129**	*e*Pn		**Pn**	**05 45 29.7**	**+0.2**
BBLS				*e*Sg		**Sg**	**05 46 20.8**	**-0.7**
VYHS	**Vyhne**	**3.21**	**36**	*e*Pn		**Pn**	**05 45 29.4**	**-0.6**
VYHS				*e*Pg		**Pg**	**05 45 40.1**	**-0.9**
VYHS				*e*Sn		**Sn**	**05 46 06.8**	**-1.4**
VYHS	**Vyhne**	**3.21**	**36**	*e*PN		**Pn**	**05 45 29.4**	**-0.6**
VYHS				*e*PB		**Pg**	**05 45 40.1**	**-0.9**
VYHS				*e*SN		**Sn**	**05 46 06.8**	**-1.4**
VYHS	**Vyhne**	**3.21**	**36**	*e*Pn		**Pn**	**05 45 29.4**	**-0.6**
STON	**Ston**	**3.29**	**158**	*e*Pn		**Pn**	**05 45 31.3**	**+0.3**
STON				Sn		**Sn**	**05 46 10.6**	**+0.3**
STON	**Ston**	**3.29**	**158**	*e*Pn		**Pn**	**05 45 31.3**	**+0.2**
STON				Sn		**Sn**	**05 46 10.5**	**+0.3**
PSZ	**Piszkesteto**	**3.32**	**52**	*e*Sn		**Sn**	**05 46 11.5**	**+0.5**
DIVS	**Divibare**	**3.37**	**122**	*e*Pn		**Pn**	**05 45 33.2**	**+1.1**
DIVS				*e*Sg		**Sg**	**05 46 26.0**	**-1.6**
VRAC	**Vranov**	**3.40**	**6**	⇓ *i*P		**Pb**	**05 45 39.2**	**-0.7**
VRAC	**Vranov**	**3.40**	**6**	*e*Pn		**Pn**	**05 45 29.4**	**-3.2**
KHC	**Kasperske Hory**	**3.60**	**334**	*e*Pn		**Pn**	**05 45 36.2**	**+0.9**
KHC				*e*Sn		**Sn**	**05 46 16.4**	**-1.5**
KHC	**Kasperske Hory**	**3.60**	**334**	*e*PN		**Pn**	**05 45 36.2**	**+0.8**
KHC				*e*SN		**Sn**	**05 46 16.6**	**-1.3**
	comp=Z,17nm,0.4s							
KHC				*e*SG		**Sg**	**05 46 33.5**	**-1.7**
	comp=Z,10nm,0.4s							
KHC	**Kasperske Hory**	**3.60**	**334**	Pn		**Pn**	**05 45 36.2**	**+0.8**
KHC				Sn		**Sn**	**05 46 16.6**	**-1.3**
	comp=Z,17nm,0.4s							
KHC				Sg		**Sg**	**05 46 33.5**	**-1.7**
	comp=Z,10nm,0.4s							
GRUS	**Gruza**	**3.92**	**120**	*e*Pn		**Pn**	**05 45 39.7**	**0.0**
BZS	**Buzias**	**3.94**	**93**	⇑P		**Pn**	**05 45 45.2**	**+5.2**
BZS				S		**Sg**	**05 46 45.4**	**-0.5**
BZS	**Buzias**	**3.94**	**93**	⇑ *i*P		**Pn**	**05 45 45.2**	**+5.2**
BZS	**Buzias**	**3.94**	**93**	⇑ *i*P		**Pn**	**05 45 45.2**	**+5.2**
KECS	**Kecovo**	**3.98**	**48**	*e*P		**Pn**	**05 45 45.7**	**+5.2**
KECS	**Kecovo**	**3.98**	**48**	*e*		**Pn**	**05 45 45.7**	**+5.2**
MORC	**Moravsky Berou**	**3.98**	**14**	⇑P		**Pn**	**05 45 41.0**	**+0.4**
MORC				S		**Sn**	**05 46 24.6**	**-2.7**
MORC	**Moravsky Berou**	**3.98**	**14**	⇑ *i*P		**Pn**	**05 45 41.0**	**+0.4**
MORC	**Moravsky Berou**	**3.98**	**14**	*e*Pn		**Pn**	**05 45 41.1**	**+0.5**
MORC				S		**Sn**	**05 46 24.6**	**-2.8**
PRU	**Pruhonice**	**4.18**	**347**	*e*SG		**Sg**	**05 46 50.8**	**-2.9**
	comp=Z,9.6nm,0.7s							
PRU	**Pruhonice**	**4.18**	**347**	Sg		**Sg**	**05 46 50.8**	**-2.9**
	comp=Z,9.6nm,0.7s							
DRGR		**4.72**	**77**	⇑P		**Pn**	**05 45 53.6**	**+2.9**
DRGR				S		**Sn**	**05 46 41.7**	**-3.8**
DRGR		**4.72**	**77**	⇑ *i*P		**Pn**	**05 45 53.6**	**+2.9**
DRGR		**4.72**	**77**	⇑P		**Pn**	**05 45 53.6**	**+2.9**
DRGR				S		**Sn**	**05 46 41.7**	**-3.7**
GZR	**Gura Zlata**	**4.77**	**94**	⇑P		**Pn**	**05 45 55.3**	**+3.8**
GZR				S		**Sn**	**05 46 42.5**	**-4.3**
GZR	**Gura Zlata**	**4.77**	**94**	⇑ *i*P		**Pn**	**05 45 55.3**	**+3.8**
GZR	**Gura Zlata**	**4.77**	**94**	⇑ *i*P		**Pn**	**05 45 55.3**	**+3.8**
GZR				S		**Sn**	**05 46 42.5**

UPR	**University Cam**	**0.17**	**26**	P	**Pg**	**06 23 34.9**	**0.0**
UPR				S	**Sg**	**06 23 38.2**	**+1.0**
UPR	**University Cam**	**0.17**	**26**	P	**Pg**	**06 23 34.9**	**0.0**
UPR				S	**Sg**	**06 23 38.2**	**+1.0**
RLS	**Riolos of Patr**	**0.19**	**248**	*e*Pb	**Pg**	**06 23 35.0**	**-0.1**
RLS				*e*Sb	**Sg**	**06 23 38.4**	**+0.8**
RLS				*e*Sb	**Sg**	**06 23 38.5**	**+0.9**
RLS	**Riolos of Patr**	**0.19**	**248**	*e*PB	**Pg**	**06 23 35.0**	**-0.1**
RLS				*e*SB	**Sg**	**06 23 38.5**	**+0.9**
RLS	**Riolos of Patr**	**0.19**	**248**	*e*Pb	**Pg**	**06 23 35.0**	**-0.1**
RLS				*e*Sb	**Sg**	**06 23 38.4**	**+0.8**
LAKA	**Lakka**	**0.26**	**64**	P	**Pg**	**06 23 36.1**	**-0.3**
LAKA				S	**Sg**	**06 23 39.4**	**-0.3**
LAKA	**Lakka**	**0.26**	**64**	P	**Pg**	**06 23 36.1**	**-0.3**
LAKA				S	**Sg**	**06 23 39.4**	**-0.3**
EFP	**Efpalio**	**0.34**	**30**	*e*PB	**Pg**	**06 23 37.7**	**-0.4**
EFP				*e*SB	**Sg**	**06 23 42.7**	**+0.1**
EFP	**Efpalio**	**0.34**	**30**	P	**Pg**	**06 23 37.6**	**-0.5**
EFP				S	**Sg**	**06 23 42.6**	**0.0**
EFP	**Efpalio**	**0.34**	**30**	P	**Pg**	**06 23 37.6**	**-0.5**
EFP				S	**Sg**	**06 23 42.6**	**0.0**
EFP				*e*Sb	**Sg**	**06 23 43.0**	**+0.4**
TRIZ	**Trizonia**	**0.39**	**52**	P	**Pg**	**06 23 38.3**	**-0.6**
TRIZ				S	**Sg**	**06 23 43.3**	**-0.6**
TRIZ	**Trizonia**	**0.39**	**52**	P	**Pg**	**06 23 38.3**	**-0.6**
TRIZ				S	**Sg**	**06 23 43.3**	**-0.6**
KALE	**Kalithea**	**0.44**	**53**	P	**Pg**	**06 23 39.2**	**-0.8**
KALE				S	**Sg**	**06 23 45.5**	**-0.3**
KALE	**Kalithea**	**0.44**	**53**	P	**Pg**	**06 23 39.2**	**-0.8**
KALE				S	**Sg**	**06 23 45.5**	**-0.3**
GUR	**Goura**	**0.55**	**110**	*e*PB	**Pg**	**06 23 42.2**	**+0.1**
GUR				*e*SN	**Sg**	**06 23 50.8**	**+1.6**
GUR	**Goura**	**0.55**	**110**	P	**Pg**	**06 23 40.9**	**-1.2**
GUR				S	**Sg**	**06 23 48.5**	**-0.7**
GUR	**Goura**	**0.55**	**110**	P	**Pg**	**06 23 40.9**	**-1.2**
GUR				S	**Sg**	**06 23 48.5**	**-0.7**
KFL	**Anninata**	**0.71**	**269**	P	**Pg**	**06 23 45.4**	**+0.3**
KFL	**Anninata**	**0.71**	**269**	P	**Pg**	**06 23 45.4**	**+0.3**
DSF	**Desfina**	**0.72**	**67**	P	**Pg**	**06 23 44.0**	**-1.3**
DSF	**Desfina**	**0.72**	**67**	P	**Pg**	**06 23 44.0**	**-1.3**
VLX	**Vlachokerasia**	**0.93**	**144**	*e*PN	**Pg**	**06 23 50.0**	**+0.6**
VLX	**Vlachokerasia**	**0.93**	**144**	*e*Pn	**Pg**	**06 23 48.6**	**-0.8**
LTK	**Loutraki**	**1.01**	**96**	*e*PN	**Pg**	**06 23 51.5**	**+0.5**
LTK				*e*SN	**Sg**	**06 24 06.3**	**+2.2**
LTK	**Loutraki**	**1.01**	**96**	*e*Pn	**Pg**	**06 23 51.1**	**+0.1**
AGG	**Agios Georgios**	**1.02**	**29**	P	**Pg**	**06 23 52.2**	**+1.0**
AGG	**Agios Georgios**	**1.02**	**29**	P	**Pg**	**06 23 52.2**	**+1.0**
LKR	**Lokris**	**1.16**	**63**	*e*Pn	**Pg**	**06 23 53.0**	**-0.7**
LKR				*e*Sn	**Sg**	**06 24 10.1**	**+1.5**
LKR	**Lokris**	**1.16**	**63**	*e*PN	**Pg**	**06 23 53.0**	**-0.7**
LKR				*e*SN	**Sg**	**06 24 10.1**	**+1.5**
LKR	**Lokris**	**1.16**	**63**	*e*Pn	**Pg**	**06 23 53.0**	**-0.7**
LKR				*e*Sn	**Sg**	**06 24 10.1**	**+1.5**
PYL	**PYLOS**	**1.23**	**178**	*e*PN	**Pn**	**06 23 54.8**	**-0.9**
PYL				*e*SN	**Sn**	**06 24 12.9**	**0.0**
PYL	**PYLOS**	**1.23**	**178**	*e*Pn	**Pn**	**06 23 53.4**	**-2.3**
DID	**Didima**	**1.37**	**116**	*e*PN	**Pn**	**06 23 57.5**	**-0.2**
DID				*e*SN	**Sn**	**06 24 17.0**	**+0.6**
DID	**Didima**	**1.37**	**116**	*e*Pn	**Pn**	**06 23 57.5**	**-0.2**
VLI	**Veliai**	**1.72**	**144**	*e*Pn	**Pn**	**06 24 03.0**	**+0.5**
VLI	**Veliai**	**1.72**	**144**	*e*Pn	**Pn**	**06 24 03.0**	**+0.5**

*IDC **31** 06:31:47.4±0.7, 12°.94N×87°.75W, h46km±5km, mb4.3/12, mb1 4.6/13, mb1mx4.4/18, mbtmp4.3/13, MS4.0/17, Ms1 4.0/17, ms1mx3.9/24, Error ellipse: s-maj=25.2km s-min=12.3km az=55.0*

*ISCJB **31** 06:31:47.5±0.2, 12°.72N±0°.03×88°.27W±0°.02, h55km, mb5.1/124, MS4.2/24, Error ellipse: s-maj=5.5km s-min=2.1km az=32.1*

*CASC **31** 06:31:47.9±2.4, 12°.69N×88°.31W, h58km±39km, MD4.6, ML4.8, mb5.1(NEIC)*

*BJI **31** 06:31:48.0, 12°.70N×88°.20W, h50km, mB5.1/12, Ms5.0/14, Ms7 4.6/16*

*NEIC **31** 06:31:49.0±0.3, 12°.69N×88°.20W, mb5.1/109, MD5.6(SNET), Error ellipse: s-maj=5.6km s-min=4.0km az=213.0*

NEIC Felt [V] at San Salvador. Also felt at Antiguo Cuscatlan.

*GCMT **31** 06:31:50.5±0.4, 12°.60N×88°.56W, h48km±1km, MW4.9, Moment Tensor Solution. s37,c52; s40,c57; Moment tensor: Scale 10^{16}Nm; M_{rr}2.66±.17; $M_{\theta\theta}$-2.51±.12; $M_{\phi\phi}$-0.16±.14; $M_{r\theta}$0.94±.11; $M_{\theta\phi}$1.66±.10; $M_{\phi r}$-0.45±.13; Best double couple: $M_0$3.20000×10^{16} NP1:ϕ_s298.00000°, δ36.00000°, λ91.00000°. NP2:ϕ_s117.00000°, δ54.00000°, λ89.00000°. Principal axes: T 2.8300, Plg80.0000°, Azm22.0000°; N 0.7000, Plg1.0000°, Azm117.0000°; P -3.5400, Plg9.0000°, Azm207.0000°; Data Used: IU II IC G CN.*

*MOS **31** 06:31:50.2±1.1, 12°.77N×88°.14W, h84km, mb5.0/25 Error ellipse: s-maj=13.1km s-min=5.1km az=110.2*

ISC 31 06:31:49.4±0.2, 12°.74N±0°.03×88°.20W±0°.03, h57km, h57km±1.6km; pP-P, n679, $_{c0}$s78/639, mb5.1/124, MS4.2/24, 194C-165D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.64**	**33**	*e*P	**Pn**	**06 32 02.7**	**0.0**
CNCH				⇓*i*P		06 32 02.8	
VSM	**San Miguel**	**0.69**	**354**	⇓*e*P	**Pn**	**06 32 03.2**	**-0.2**
BLLM	**Bellamira**	**0.70**	**357**	⇓*i*P	**Pn**	**06 32 03.2**	**-0.3**
CAHU	**Cacacuatique**	**1.02**	**359**	⇓*e*P	**Pn**	**06 32 08.2**	**+0.6**
SNVI	**San Vicente**	**1.07**	**324**	*e*P	**Pn**	**06 32 06.7**	**-1.5**
AIES	**Las Flores**	**1.10**	**311**	*e*P	**Pn**	**06 32 06.1**	**-2.5**
AIES				AML	AML	06 32 24.2	
	comp=Z,36μm,0.3s						
CRIN	**San Cristobal**	**1.12**	**92**	*e*P	**Pn**	**06 32 09.0**	**+0.1**
LFRS	**El Faro**	**1.22**	**316**	*e*P	**Pn**	**06 32 08.2**	**-2.0**
LBRS	**Las Brisas**	**1.29**	**320**	*e*P	**Pn**	**06 32 09.8**	**-1.5**
SNET	**Serv Nac Est T**	**1.38**	**313**	*e*P	**Pn**	**06 32 10.6**	**-1.8**
SNET				AML	AML	06 32 30.5	
	comp=Z,53μm,0.3s						
BOQS	**Boqueron**	**1.45**	**313**	*e*P	**Pn**	**06 32 11.7**	**-1.7**
CNGN	**Cerro Negro**	**1.48**	**99**	*e*P	**Pn**	**06 32 12.7**	**-1.1**
TGUH	**Tegucigalpa,Un**	**1.59**	**34**	*e*Pn	**Pn**	**06 32 16.5**	**+1.3**
TGUH	**Tegucigalpa,Un**	**1.59**	**34**	*e*P	**Pn**	**06 32 16.7**	**+1.5**
MOMN	**Momotombo**	**1.65**	**101**	*e*P	**Pn**	**06 32 15.6**	**-0.5**
MOMN				AML	AML	06 32 41.0	
	comp=Z,150nm,0.3s						
COPN	**Copaltepe**	**1.66**	**109**	*e*P	**Pn**	**06 32 15.0**	**-1.2**
SBLS	**San Blas**	**1.77**	**308**	*e*P	**Pn**	**06 32 15.9**	**-1.8**
SNJE	**San Jose**	**1.77**	**309**	*e*P	**Pn**	**06 32 15.9**	**-1.9**
SONS	**Sonsonate**	**1.78**	**304**	*e*P	**Pn**	**06 32 15.4**	**-2.5**
SONS				*e*S	**Sn**	**06 32 35.6**	**-3.9**
SONS				AML	AML	06 32 38.6	
	comp=Z,42μm,0.5s						
CSAN		**1.82**	**108**	*e*P	**Pn**	**06 32 17.7**	**-0.7**
XAVN	**Gruta Xavier**	**1.92**	**108**	*e*P	**Pn**	**06 32 18.8**	**-0.9**
XAVN				AML	AML	06 32 48.0	
	comp=Z,5μm,0.6s						
TISN	**Laguna Tiscapa**	**1.97**	**107**	*e*P	**Pn**	**06 32 19.5**	**-1.0**
TISN				AML	AML	06 32 51.4	
	comp=Z,7μm,0.5s						
MGAN	**Managua**	**1.99**	**107**	*e*P	**Pn**	**06 32 19.5**	**-1.2**
MGAN				*e*S	**Sn**	**06 32 44.1**	**-0.4**
MGAN				AML	AML	06 32 46.1	
	comp=N,5μm,0.5s						
RBDL	**Robledal**	**1.99**	**313**	*e*P	**Pn**	**06 32 19.3**	**-1.4**
CRUN	**El Crucero**	**2.00**	**112**	*e*P	**Pn**	**06 32 20.9**	**+0.1**
MTO2	**Montecristo 2**	**2.00**	**326**	*e*P	**Pn**	**06 32 20.2**	**-0.6**
HUEN		**2.02**	**101**	*e*P	**Pn**	**06 32 20.3**	**-0.7**
WILN	**Americas 2**	**2.04**	**106**	*e*P	**Pn**	**06 32 20.5**	**-1.0**
APON	**Apoyo**	**2.23**	**111**	*e*P	**Pn**	**06 32 23.1**	**-0.9**
APON				AML	AML	06 33 18.4	
	comp=Z,255nm,1.1s						
SSN	**San Juan del S**	**2.70**	**122**	*e*P	**Pn**	**06 32 29.6**	**-0.9**
CONN	**Concepcion**	**2.77**	**115**	*e*P	**Pn**	**06 32 31.7**	**+0.3**
VCR	**Vista de Mar**	**3.62**	**136**	*e*P	**Pn**	**06 32 42.3**	**-0.6**
JTS	**JuntasAbangare**	**4.00**	**127**	Pn	**Pn**	**06 32 49.9**	**+1.6**
	comp=Z,3μm,0.4s,SNR=30						
JTS	**JuntasAbangare**	**4.00**	**127**	P	**Pn**	**06 32 48.2**	**0.0**
	comp=Z,6.9nm,0.3s,baz=309,slow=7.7,SNR=31						
JTS				Lg		06 33 48.5	
	comp=Z,48nm,0.3s,baz=149,slow=17,SNR=11						
JTS	**JuntasAbangare**	**4.00**	**127**	*e*Pn	**Pn**	**06 32 48.6**	**+0.4**
JTS				*e*Sn	**Sn**	**06 33 47.5**	**+14**
JCR	**Jicaral**	**4.17**	**133**	*e*P	**Pn**	**06 32 50.8**	**+0.2**
CGA2	**Cerro Gallo 2**	**4.55**	**126**	*e*P	**Pn**	**06 32 58.1**	**+2.3**
PRS1	**Puriscal**	**4.69**	**125**	*e*P	**Pn**	**06 32 59.5**	**+1.8**
LAJ	**Bijagual**	**4.91**	**125**	*e*P	**Pn**	**06 32 58.7**	**-2.1**
SJS	**Escuela Geolog**	**4.92**	**124**	*e*P	**Pn**	**06 33 05.0**	**+4.1**
QCR	**Quepos**	**5.15**	**129**	*e*P	**Pn**	**06 33 04.8**	**+0.8**
URSC	**Urasca**	**5.21**	**123**	*e*P	**Pn**	**06 33 06.7**	**+1.9**
BUS	**Buena Vista**	**5.38**	**126**	*e*P	**Pn**	**06 33 09.5**	**+2.3**
BAR1		**5.92**	**125**	*e*P	**Pn**	**06 33 16.1**	**+1.6**
BAR1				*e*S	**Sn**	**06 34 18.3**	**-2.8**
ACR	**Cerro Adams**	**6.39**	**129**	*e*P	**Pn**	**06 33 22.7**	**+1.6**
TEIG	**Tepich**	**7.44**	**359**	*e*Pn	**Pn**	**06 33 37.5**	**+2.1**
	comp=Z,242nm,0.8s						
CMIG	**Matias Romero**	**7.78**	**305**	P	**Pn**	**06 33 39.7**	**-0.3**
	comp=Z,4.0nm,0.3s,baz=112,slow=10,SNR=100						
CMIG				S	**Sn**	**06 35 03.5**	**-3.2**
	comp=Z,9.0nm,0.3s,baz=17,slow=9.5,SNR=5.1						
BCIP	**Isla Barro Col**	**8.94**	**113**	*e*Pn	**Pn**	**06 33 59.9**	**+3.9**
MTDJ	**Mount Denham**	**11.63**	**61**	*e*Pn	**Pn**	**06 34 35.9**	**+3.2**
GTBY	**Guantanamo Bay**	**14.44**	**59**	*e*Pn	**Pn**	**06 35 11.8**	**+1.1**
OTAV	**Otavalo**	**15.74**	**141**	*e*Pn	**Pn**	**06 35 29.8**	**+2.2**
	comp=Z,7.0nm,0.9s						
ROSC	**El Rosal**	**15.77**	**119**	P	**Pn**	**06 35 22.5**	**-5.5**
	comp=Z,0.4nm,0.3s,baz=274,slow=8.7,SNR=2.0						
ROSC				PcP	PcP	06 40 26.3	+1.2
	comp=Z,0.5nm,0.3s,baz=111,slow=21,SNR=4.8						
ROSC				LR	LR	06 42 06.2	
	comp=Z,184nm,18.9s,baz=347,slow=40						
ROSC	**El Rosal**	**15.77**	**119**	*e*Pn	**Pn**	**06 35 31.3**	**+3.2**
ROSC				*e*PcP	PcP	06 40 26.0	+1.0
ROSC				PcP	PcP	06 40 26.3	+1.2
ROSC				LR	LR	06 42 06.2	
KVTX	**Kingsville**	**17.30**	**330**	*e*Pn	**Pn**	**06 35 56.3**	**+9.3**
	comp=Z,66nm,0.8s						
HKT	**Hockley**	**18.53**	**339**	P	**Pn**	**06 36 01.2**	**-0.9**
HKT				pmax	pmax		
	comp=Z,19nm,1.0s						
HKT	**Hockley**	**18.53**	**339**	P	**Pn**	**06 36 01.2**	**-0.9**
	comp=Z,19nm,1.0s						
VBMS	**Vicksburg**	**19.50**	**354**	*e*Pn	**Pn**	**06 36 14.9**	**+1.3**
	comp=Z,238nm,0.6s						
NATX	**Nacogdoches**	**19.84**	**344**	*e*Pn	**Pn**	**06 36 17.5**	**-0.2**
	comp=Z,353nm,1.8s						
LRAL	**Lakeview Retre**	**20.23**	**3**	*e*Pn	**P**	**06 36 21.8**	**+2.0**
	comp=Z,28nm,1.0s						
JCT	**Junction City**	**20.66**	**331**	*e*P	**P**	**06 36 24.2**	**-0.3**
JCT				pmax	pmax		
	comp=Z,130nm,0.6s						
JCT	**Junction City**	**20.66**	**331**	*e*P	**P**	**06 36 24.2**	**-0.3**
	comp=Z,130nm,0.6s						
GOGA	**Godfrey**	**21.02**	**11**	*e*P	**P**	**06 36 30.1**	**+1.7**
GOGA				pmax	pmax		
	comp=Z,80nm,0.6s,mb5.2						
GOGA	**Godfrey**	**21.02**	**11**	*e*P	**P**	**06 36 30.1**	**+1.7**
	comp=Z,80nm,0.6s,mb5.2						
628A	**Black Gap, Mar**	**21.54**	**323**	⇓P	**P**	**06 36 34.1**	**+0.1**
	baz=22,SNR=96						
NHSC	**New Hope**	**21.56**	**19**	*e*P	**P**	**06 36 37.1**	**+3.0**
	comp=Z,255nm,1.2s,mb5.5						
NHSC				*e*pP		06 36 51.8	
TXAR	**Lajitas Array**	**21.89**	**321**	P	**P**	**06 36 38.1**	**+0.4**
	comp=Z,44nm,0.6s,mb5.0,baz=138,slow=10,SNR=650						
TXAR				PcP	PcP	06 40 35.8	+0.4
	comp=Z,4.6nm,0.9s,baz=134,slow=3.6,SNR=8.1						
TXAR				pPcP		06 40 50.8	
	comp=Z,4.8nm,0.9s,baz=143,slow=4.4,SNR=7.6						
TXAR	**Lajitas Array**	**21.89**	**321**	P	**P**	**06 36 38.2**	**+0.5**
TXAR						06 40 35.8	
SJG	**San Juan**	**21.90**	**73**	P	**P**	**06 36 38.3**	**+0.3**
	comp=Z,12nm,0.5s,mb4.6,baz=282,slow=9.4,SNR=6.4						
SJG	**San Juan**	**21.90**	**73**	P	**P**	**06 36 38.3**	**+0.3**
528A	**Cox Ranch, San**	**21.98**	**324**	⇑P	**P**	**06 36 37.8**	**-0.8**
	baz=22						
ATAH	**Atahualpa**	**22.02**	**153**	P	**P**	**06 36 42.8**	**+3.6**
	comp=Z,7.8nm,0.9s,mb4.1,baz=16,slow=3.3,SNR=3.6						
ATAH				LR	LR	06 44 14.7	
	comp=Z,453nm,21.6s,MS3.9,baz=166,slow=34						
MIAR	**Mount Ida**	**22.25**	**348**	*e*P	**P**	**06 36 42.1**	**+0.6**
MIAR				pmax	pmax		
	comp=Z,62nm,0.8s,mb5.1						
MIAR	**Mount Ida**	**22.25**	**348**	*e*P	**P**	**06 36 42.1**	**+0.6**
	comp=Z,62nm,0.8s,mb5.1						
UALR	**University of**	**22.26**	**351**	*e*P	**P**	**06 36 42.4**	**+0.9**
	comp=Z,105nm,0.6s,mb5.4						
UALR				*e*pP		06 36 58.0	
626A	**Big Bend Ranch**	**22.33**	**321**	⇑P	**P**	**06 36 42.4**	**0.0**
	baz=22,SNR=121						
428A	**Kincaid Ranch,**	**22.35**	**325**	⇑P	**P**	**06 36 42.0**	**-0.6**
	baz=22,SNR=103						
JSC	**Jenkinsville**	**22.35**	**15**	*e*P	**P**	**06 36 44.1**	**+1.5**
JSC				*e**PP		06 36 58.9	
527A	**Woodward Ranch**	**22.45**	**323**	⇓P	**P**	**06 36 42.8**	**-0.8**
	baz=22,SNR=47						
MTP	**Monte Pirata**	**22.46**	**73**	*e*P	**P**	**06 36 43.0**	**-0.9**
	comp=Z,28nm,0.6s,mb4.9						
MTP				*e*pP		06 36 57.3	
SWET	**Sewanee**	**22.47**	**5**	*e*P	**P**	**06 36 44.3**	**+0.5**
LHS	**Liberty Hill**	**22.66**	**16**	*e*P	**P**	**06 36 47.6**	**+1.8**
HBAR	**Harrisburg**	**22.82**	**355**	*e*P	**P**	**06 36 47.7**	**+0.2**
HBAR				*e*pP		06 37 02.7	
427A	**Hayter Ranch,**	**22.85**	**324**	⇑P	**P**	**06 36 46.5**	**-1.3**
	baz=23,SNR=50						
CPCT	**Cooper Cave**	**22.85**	**8**	*e*P	**P**	**06 36 48.8**	**+0.9**
328A	**Wristen Ranch,**	**22.92**	**326**	⇓P	**P**	**06 36 47.1**	**-1.5**
	baz=23,SNR=263						
STVI	**Saint Thomas**	**23.07**	**73**	*e*P	**P**	**06 36 49.3**	**-1.0**
	comp=Z,82nm,0.6s,mb5.3						
426A	**McDonald Obser**	**23.07**	**323**	⇓P	**P**	**06 36 49.1**	**-1.2**
	baz=23,SNR=50						
TKL	**Tuckaleechee C**	**23.16**	**9**	P	**P**	**06 36 51.6**	**+0.5**
	comp=Z,62nm,0.7s,mb5.1,baz=184,slow=11,SNR=86						
TKL				LR	LR	06 48 16.1	
	comp=Z,145nm,18.6s,MS3.5,baz=242,slow=43						
TKL	**Tuckaleechee C**	**23.16**	**9**	*e*P	**P**	**06 36 51.4**	**+0.3**
TKL				*e**PP		06 37 06.3	
TKL	**Tuckaleechee C**	**23.16**	**9**	*e*P	**P**	**06 36 51.4**	**+0.3**
TKL				*e*pP		06 37 06.3	
TKL				*es*P	sP	06 37 14.9	+3.7
GNAR	**Gosnell**	**23.18**	**356**	*e*P	**P**	**06 36 51.4**	**+0.1**
PCRV	**Puerto La Cruz**	**23.23**	**94**	P	**P**	**06 36 51.5**	**-0.5**
	comp=Z,16nm,0.7s,mb4.5,baz=248,slow=0.3,SNR=10						
327A	**Balmorhea Ranc**	**23.29**	**325**	⇑P	**P**	**06 36 51.9**	**-0.5**
	baz=23						
WVT	**Waverly**	**23.29**	**1**	*e*P	**P**	**06 36 51.0**	**-1.3**
WVT				pmax	pmax		
	comp=Z,19nm,0.5s,mb4.8						
WVT	**Waverly**	**23.29**	**1**	*e*P	**P**	**06 36 51.0**	**-1.3**
	comp=Z,19nm,0.5s,mb4.8						
UTMT	**University of**	**23.51**	**359**	*e*P	**P**	**06 36 54.2**	**-0.1**
	comp=Z,44nm,0.5s,mb5.2						
UTMT				*e*pP		06 37 09.0	
326A	**Caldwell Ranch**	**23.52**	**324**	⇑P	**P**	**06 36 53.1**	**-1.4**
	baz=24,SNR=140						
227A	**Bennet, Jal**	**23.67**	**327**	⇑P	**P**	**06 36 54.9**	**-1.0**
	baz=24						
425A	**Indio Mountain**	**23.73**	**322**	⇓P	**P**	**06 36 55.2**	**-1.1**
	baz=24,SNR=30						
PARMO	**Parma**	**23.86**	**357**	*e*P	**P**	**06 36 57.3**	**-0.2**
WMOK	**Wichita Mounta**	**23.91**	**338**	*e*P	**P**	**06 36 56.6**	**-1.4**
WMOK				pmax	pmax		
	comp=Z,32nm,0.8s,mb4.8						
WMOK	**Wichita Mounta**	**23.91**	**338**	*e*P	**P**	**06 36 56.6**	**-1.4**
	comp=Z,32nm,0.8s,mb4.8						
325A	**Bean Ranch, Si**	**24.14**	**323**	⇑P	**P**	**06 36 59.1**	**-1.0**
	baz=24,SNR=60						
CLNB	**Carlsbad**	**24.18**	**326**	*e*P	**P**	**06 37 00.1**	**-0.4**
	comp=Z,40nm,0.8s,mb4.9						
127A	**Arkansas Junct**	**24.22**	**327**	⇑P	**P**	**06 36 59.8**	**-1.0**
	baz=24,SNR=36						
CNNC	**Cliffs of the**	**24.26**	**21**	*e*P	**P**	**06 37 00.8**	**-0.4**
	comp=Z,63nm,1.0s,mb5.0						
GDL2	**Guadalupe Moun**	**24.40**	**325**	*e*P	**P**	**06 37 02.1**	**-0.4**
324A	**Moseley Ranch,**	**24.49**	**322**	⇓P	**P**	**06 37 02.3**	**-1.0**
	baz=24,SNR=66						
126A	**Clayton Basin,**	**24.55**	**326**	⇑P	**P**	**06 37 03.0**	**-0.9**
	baz=24,SNR=36						
MNTX	**Cornudas Mount**	**24.61**	**323**	*e*P	**P**	**06 37 03.4**	**-1.1**
	comp=Z,24nm,0.6s,mb4.9						
MNTX				*e*pP		06 37 17.4	
MNTX				*e*PcP	PcP	06 40 40.3	-0.8
Z27A	**Tatum**	**24.65**	**329**	⇓P	**P**	**06 37 03.6**	**-1.1**
	baz=25,SNR=25						
SIUC	**Southern Illin**	**24.89**	**358**	*e*P	**P**	**06 37 06.1**	**-0.7**
	comp=Z,61nm,0.6s,mb5.3						
125A	**Gardner Draw,**	**24.91**	**325**	⇑P	**P**	**06 37 06.5**	**-0.6**
	baz=25,SNR=101						
MSTX	**Muleshoe**	**24.95**	**330**	⇑P	**P**	**06 37 06.7**	**-0.8**
	baz=25,SNR=150						
224A	**Cornudas Mount**	**24.97**	**323**	⇑P	**P**	**06 37 06.9**	**-0.8**
	baz=25,SNR=177						
Z26A	**Caprock**	**25.01**	**327**	⇓P	**P**	**06 37 07.7**	**-0.3**
	baz=25,SNR=126						
Y27A	**Causey**	**25.08**	**330**	⇑P	**P**	**06 37 07.9**	**-0.8**
	baz=25,SNR=202						
AMTX	**Amarillo**	**25.21**	**333**	*e*P	**P**	**06 37 09.5**	**-0.3**
	comp=Z,102nm,0.6s,mb5.5						
FVM	**French Village**	**25.22**	**356**	*e*P	**P**	**06 37 08.2**	**-1.6**
FVM				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.6						
FVM	**French Village**	**25.22**	**356**	*e*P	**P**	**06 37 08.2**	**-1.6**
	comp=Z,12nm,0.6s,mb4.6						
ELN	**Prospectdale**	**25.28**	**14**	*e*P	**P**	**06 37 11.1**	**+0.7**
ELN				*e*pP	pP	06 37 26.1	+1.6
BLA	**Blacksburg**	**25.34**	**15**	*e*P	**P**	**06 37 11.8**	**+0.8**
BLA				pmax	pmax		
	comp=Z,30nm,0.6s,mb5.0						
BLA	**Blacksburg**	**25.34**	**15**	*e*P	**P**	**06 37 11.8**	**+0.8**
	comp=Z,30nm,0.6s,mb5.0						
BLA				*e*pP	pP	06 37 25.4	+0.3
124A	**Stringfield Ra**	**25.39**	**324**	⇑P	**P**	**06 37 11.4**	**0.0**
	baz=25,SNR=96						
Z25A	**Roswell**	**25.41**	**326**	⇓P	**P**	**06 37 11.5**	**-0.2**
	baz=25,SNR=118						
WCI	**Wyandotte Cave**	**25.44**	**3**	*e*P	**P**	**06 37 11.3**	**-0.6**
WCI				pmax	pmax		
	comp=Z,55nm,0.6s,mb5.3						
WCI	**Wyandotte Cave**	**25.44**	**3**	*e*P	**P**	**06 37 11.3**	**-0.6**
	comp=Z,56nm,0.6s,mb5.3						
Y26A	**Elida**	**25.44**	**329**	⇓P	**P**	**06 37 11.4**	**-0.5**
	baz=25,SNR=70						
223A	**Chaparral, Ant**	**25.46**	**322**	⇓P	**P**	**06 37 11.4**	**-0.7**
	baz=25						
X27A	**F and S Farms,**	**25.66**	**331**	⇑P	**P**	**06 37 13.5**	**-0.5**
	baz=26,SNR=33						
Z24A	**Sheeppen Canyo**	**25.80**	**325**	⇑P	**P**	**06 37 15.3**	**+0.1**
	baz=26,SNR=172						
123A	**Bell Site, Whi**	**25.81**	**323**	⇑P	**P**	**06 37 15.8**	**+0.5**
	baz=26,SNR=11						
SLM	**Saint Louis**	**25.85**	**356**	*e*P	**P**	**06 37 14.9**	**-0.7**
SLM				pmax	pmax		
	comp=Z,22nm,0.4s,mb5.0						
SLM	**Saint Louis**	**25.85**	**356**	*e*P	**P**	**06 37 14.9**	**-0.7**
	comp=Z,22nm,0.4s,mb5.0						
OLIL	**Olney**	**25.89**	**0**	*e*P	**P**	**06 37 14.9**	**-1.0**
	comp=Z,38nm,0.6s,mb5.1						
OLIL				*e*pP	pP	06 37 33.4	+3.4
Y25A	**Mesa, Roswell**	**25.89**	**327**	⇑P	**P**	**06 37 16.1**	**+0.1**
	baz=26,SNR=119						
X26A	**CR and CF Fran**	**25.93**	**329**	⇓P	**P**	**06 37 15.8**	**-0.6**
	baz=26,SNR=58						
222A	**Williams Famil**	**25.94**	**321**	⇓P	**P**	**06 37 16.3**	**-0.1**
	baz=26,SNR=15						
W27A	**Bowe Ranch, En**	**25.98**	**331**	⇑P	**P**	**06 37 16.3**	**-0.6**
	baz=26,SNR=140						
Z23A	**Rita Site, Whi**	**26.24**	**324**	⇑P	**P**	**06 37 19.9**	**+0.7**
	baz=26,SNR=30						
122A	**Conniff Cattle**	**26.29**	**322**	⇑P	**P**	**06 37 19.8**	**+0.2**
	baz=26,SNR=18						
Y24A	**Capitan**	**26.29**	**326**	⇓P	**P**	**06 37 19.7**	**0.0**
	baz=26,SNR=87						
221A	**Mesquite Ranch**	**26.29**	**320**	⇑P	**P**	**06 37 20.7**	**+1.0**
	baz=26,SNR=6.9						
320A

baz=28,SNR=45
SDMD Soldier's Deli 28.40 19 eP P 06 37 39.2 +0.7
comp=Z,26nm,0.7s,mb5.0
SDMD epP pP 06 37 53.6 +0.9
SDMD epP pP 06 37 53.8 +1.1
X20A Quemado 28.47 323 ⇑P P 06 37 39.8 +0.6
baz=28,SNR=13
U23A El Rito 28.53 329 ⇑P P 06 37 40.2 +0.6
baz=28,SNR=197
117A Oracle 28.56 317 ⇑P P 06 37 40.1 +0.1
baz=28,SNR=9.5
V22A San Miguel Ran 28.58 327 ⇑P P 06 37 40.3 +0.2
baz=28,SNR=38
216A Three Points, 28.70 316 ⇑P P 06 37 41.0 -0.3
baz=29
S25A Robets Cordova 28.75 333 ⇑P P 06 37 42.0 +0.5
baz=29,SNR=31
Z17A San Carlos Hig 28.85 319 ⇑P P 06 37 42.5 0.0
baz=29
X19A St. Johns 28.86 322 ⇑P P 06 37 43.0 +0.4
baz=29,SNR=14
Y18A Canyon Day Jun 28.88 320 ⇑P P 06 37 43.2 +0.4
baz=29,SNR=15
W20A Ramah 28.88 324 ⇓P P 06 37 43.3 +0.5
baz=29,SNR=11
V21A Milan 28.89 326 ⇑P P 06 37 43.6 +0.7
baz=29,SNR=13
U22A Llaves 28.91 328 ⇓P P 06 37 43.5 +0.5
baz=29,SNR=36
T23A Casias Ranch, 29.00 330 ⇓P P 06 37 44.5 +0.7
baz=29,SNR=24
S24A Houchin Ranch, 29.09 331 ⇑P P 06 37 45.4 +0.8
baz=29,SNR=27
MVL Millersville 29.09 19 eP P 06 37 45.4 +0.8
comp=Z,31nm,1.2s,mb4.9
116A Eloy 29.20 316 ⇓P P 06 37 45.4 -0.2
baz=29
SDCO Great Sand Dun 29.31 331 eP P 06 37 47.2 +0.7
comp=Z,19nm,0.6s,mb5.0
X18A Snowflake 29.33 321 ⇓P P 06 37 47.0 +0.2
baz=29
V20A Brimhall 29.35 325 ⇓P P 06 37 47.3 +0.3
baz=29,SNR=12
U21A Nageezi 29.37 327 ⇑P P 06 37 48.1 +1.0
baz=29,SNR=24
SCIA State Center 29.39 352 eP P 06 37 46.7 -0.4
comp=Z,53nm,0.5s,mb5.5
W19A Sanders 29.39 323 ⇓P P 06 37 47.6 +0.3
baz=29,SNR=5.7
T22A Edith 29.42 328 ⇑P P 06 37 48.3 +0.8
baz=29,SNR=16
Z16A Peralta Trail, 29.49 318 ⇑P P 06 37 48.0 -0.3
baz=29
S23A Nye Farm, Mont 29.51 331 ⇑P P 06 37 49.0 +0.6
baz=30,SNR=6.6
R24A Sanders Place, 29.52 332 ⇓P P 06 37 49.2 +0.8
baz=30,SNR=35
W18A Petrified Fore 29.60 322 ⇓P P 06 37 49.5 +0.3
baz=30
214A Organ Pipe Nat 29.61 314 ⇑P P 06 37 49.3 0.0
baz=30
V19A Window Rock 29.61 324 ⇓P P 06 37 49.7 +0.4
baz=30,SNR=7.8
115A Sonoran Desert 29.64 316 ⇓P P 06 37 49.4 -0.1
baz=30,SNR=7.5
Q25A Bedland, Calha 29.70 334 ⇓P P 06 37 50.4 +0.4
baz=30,SNR=42
AAM Ann Arbor 29.71 7 eP P 06 37 49.5 -0.6
AAM pmax pmax
comp=Z,44nm,0.6s,mb5.4
AAM Ann Arbor 29.71 7 eP P 06 37 49.5 -0.6
comp=Z,44nm,0.6s,mb5.4
T21A Navajo Lake 29.73 328 ⇑P P 06 37 51.0 +0.8
baz=30
X17A Forest Lakes 29.73 320 ⇓P P 06 37 51.0 +0.6
baz=30,SNR=9.5
U20A Newcomb 29.80 326 ⇓P P 06 37 50.9 0.0
baz=30
Y16A Circle Bar Ran 29.86 319 ⇓P P 06 37 51.8 +0.3
baz=30,SNR=7.5
S22A 4UR Ranch, Cre 29.95 330 ⇑P P 06 37 52.9 +0.7
baz=30,SNR=110
114A Black Gap (USA 30.11 315 ⇑P P 06 37 53.8 +0.1
baz=30
JFWS Jewell Farm 30.12 357 eP P 06 37 52.6 -1.0
JFWS pmax pmax
comp=Z,19nm,0.5s,mb5.1
JFWS Jewell Farm 30.12 357 eP P 06 37 52.6 -1.0
comp=Z,19nm,0.5s,mb5.1
U19A Dine' College, 30.12 325 ⇓P P 06 37 53.6 -0.2
baz=30,SNR=23
ERPA Erie 30.13 12 eP P 06 37 53.6 -0.1
comp=Z,27nm,0.6s,mb5.2
V18A Ganado 30.13 323 ⇑P P 06 37 54.0 +0.2
baz=30,SNR=8.3
Q24A Divide 30.14 333 ⇓P P 06 37 54.2 +0.3
baz=30
P25A Willow Gulch B 30.17 335 ⇓P P 06 37 54.6 +0.4
baz=30,SNR=12
X16A Lo Mia Camp, P 30.18 320 ⇓P P 06 37 54.6 +0.3
baz=30,SNR=24
R22A Saguache, Gunn 30.29 330 ⇑P P 06 37 55.8 +0.5
baz=30,SNR=35
Q23A Hartsel 30.39 332 ⇑P P 06 37 56.9 +0.8
baz=30
MVCO Mesa Verde 30.40 327 ⇑P P 06 37 56.4 +0.2
baz=30,SNR=16
MVCO Mesa Verde 30.40 327 eP P 06 37 56.1 -0.1
comp=Z,14nm,0.8s,mb4.8
T19A Beclabito 30.41 326 ⇑P P 06 37 56.3 0.0
baz=30,SNR=9.3
Y15A Casa Rosa Ranc 30.47 318 ⇑P P 06 37 56.7 -0.1
baz=30,SNR=9.8
P24A Kohler Place, 30.49 334 ⇓P P 06 37 57.1 +0.2
baz=30,SNR=11
Z14A Wintersburg 30.52 316 ⇓P P 06 37 57.3 0.0
baz=30
V17A Tonalea, Kykot 30.58 322 ⇑P P 06 37 58.1 +0.3
baz=30,SNR=21
OGNE Ogallala 30.60 339 eP P 06 37 59.6 +1.7
comp=Z,81nm,1.6s,mb5.3
Q25A Wiggins 30.66 336 ⇑P P 06 37 58.6 +0.2
baz=31,SNR=9.0
W16A Flagstaff 30.68 320 ⇑P P 06 37 59.0 +0.3
baz=31
113A Mohawk Valley, 30.73 315 ⇓P P 06 37 59.1 -0.1
baz=31
P23A Jefferson 30.78 333 ⇑P P 06 38 00.9 +1.4
baz=31,SNR=107
R21A Cimarron 30.79 329 ⇑P P 06 37 59.8 +0.2
baz=31
S20A Disappointment 30.79 328 ⇑P P 06 38 00.0 +0.4
baz=31
PAL Palisades 30.82 21 eP P 06 38 00.1 +0.3
PAL pmax pmax
comp=Z,37nm,0.6s,mb5.4
PAL Palisades 30.82 21 eP P 06 38 00.1 +0.2
comp=Z,37nm,0.6s,mb5.4
WUAZ Wupatki 30.86 321 ⇑P P 06 38 00.7 +0.4
baz=31,SNR=15
WUAZ Wupatki 30.86 321 eP P 06 38 01.2 +0.9
comp=Z,14nm,0.8s,mb4.8
Q22A Crested Butte, 30.86 331 ⇑P P 06 38 00.7 +0.4
baz=31,SNR=56
Y14A Wickenburg 30.90 317 ⇑P P 06 38 00.4 -0.3
baz=31,SNR=8.5
Z13A Yuma Proving G 30.90 315 ⇑P P 06 38 00.7 0.0
baz=31,SNR=7.5
ISCO Idaho Springs 31.03 333 eP P 06 38 02.4 +0.7
ISCO pmax pmax
comp=Z,24nm,0.8s,mb5.1
ISCO Idaho Springs 31.03 333 eP P 06 38 02.4 +0.7
comp=Z,24nm,0.8s,mb5.1
Q24A Longmont 31.06 334 ⇑P P 06 38 02.4 +0.4
baz=31,SNR=22
R20A Redvale 31.07 328 ⇑P P 06 38 02.4 +0.3
baz=31,SNR=23
T18A Mexican Hat 31.10 325 ⇓P P 06 38 03.2 +0.9
baz=31,SNR=12
PV01 Paradox Valley 31.13 328 eP P 06 38 03.3 +0.7
comp=Z,1µm,0.7s
U16A Tuba City 31.13 322 ⇑P P 06 38 03.1 +0.4
baz=31,SNR=20
SMCO Snowmass 31.14 331 eP P 06 38 03.1 +0.3
comp=Z,31nm,0.8s,mb5.2
X14A Yava 31.15 318 ⇓P P 06 38 02.8 0.0
baz=31,SNR=12
Q21A Lamborn Mesa, 31.16 330 ⇓P P 06 38 03.1 +0.2
baz=31,SNR=12
112A Yuma 31.17 314 ⇓P P 06 38 02.7 -0.4
baz=31
W15A Williams 31.19 320 ⇓P P 06 38 03.5 +0.3
baz=31
BINY Binghamton 31.21 18 eP P 06 38 03.4 +0.1
comp=Z,19nm,0.9s,mb4.9
N25A Grover 31.25 336 ⇓P P 06 38 04.1 +0.4
baz=31
P22A Eagle 31.38 332 ⇑P P 06 38 05.2 +0.4
baz=31,SNR=31
Y13A Salome 31.38 316 ⇓P P 06 38 05.0 +0.1
baz=31,SNR=5.5
YLE Yale 31.44 22 eP P 06 38 05.9 +0.6
PV04 Paradox Valley 31.50 328 eP P 06 38 06.4 +0.6
PV04 ePcP PcP 06 40 58.8 +1.0
O23A Lake Granby, G 31.50 334 ⇓P P 06 38 06.4 +0.6
baz=32,SNR=9.2
T17A Navajo Res., N 31.52 324 ⇑P P 06 38 06.5 +0.3
baz=32,SNR=17
V15A Kaibab Nationa 31.55 321 ⇓P P 06 38 07.1 +0.7
baz=32,SNR=19
S18A Hurst Farm, Bl 31.56 326 ⇑P P 06 38 06.7 +0.2
baz=32,SNR=29
N24A Carr 31.58 335 ⇑P P 06 38 07.1 +0.5
baz=32,SNR=8.3
R19A Curley Farm, L 31.61 327 ⇓P P 06 38 06.8 0.0
baz=32,SNR=26
Q20A Ridgley Place, 31.61 329 ⇓P P 06 38 07.1 +0.3
baz=32
GLA Glamis 31.63 314 ⇑P P 06 38 07.1 0.0
baz=32
GLA Glamis 31.63 314 eP P 06 38 01.6 -5.5
GLA pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
GLA Glamis 31.63 314 eP P 06 38 01.6 -5.5
comp=Z,7.4nm,0.8s,mb4.6
P21A Newcastle 31.64 331 ⇓P P 06 38 07.8 +0.7
baz=32,SNR=22
ECSD EROS Data Cent 31.72 348 eP P 06 38 06.2 -1.6
comp=Z,18nm,0.6s,mb5.1
W14A Seligman 31.73 319 ⇑P P 06 38 08.3 +0.3
baz=32,SNR=13
O22A Kremmling 31.74 333 ⇑P P 06 38 08.0 +0.1
baz=32,SNR=56
X13A Yucca 31.84 317 ⇑P P 06 38 09.0 +0.1
baz=32,SNR=9.8
PDMCI Parker Dam,Lak 31.87 317 ⇓P P 06 38 09.2 0.0
baz=32
T16A Glen Canyon Da 31.92 323 ⇓P P 06 38 10.3 +0.6
baz=32,SNR=6.3
S17A Black Ridge (B 31.97 325 ⇓P P 06 38 10.1 0.0
baz=32,SNR=26
V14A Boquillas Ranc 32.01 320 ⇓P P 06 38 10.7 +0.3
baz=32,SNR=17
R18A Canyonlands Na 32.01 327 ⇑P P 06 38 10.0 -0.4
baz=32,SNR=26
U15A North Rim 32.02 322 ⇓P P 06 38 10.6 +0.2
baz=32,SNR=9.7
N23A Red Feather La 32.07 334 ⇑P P 06 38 11.3 +0.4
baz=32
P20A De Beque 32.08 330 ⇑P P 06 38 11.1 +0.2
baz=32,SNR=20
Q19A Hogan Spring (32.10 328 ⇑P P 06 38 11.0 -0.2
baz=32,SNR=17
W13A Hualapai Mount 32.18 318 ⇑P P 06 38 12.3 +0.4
baz=32,SNR=14
O21A Pagoda 32.20 332 ⇓P P 06 38 12.8 +0.8
baz=32,SNR=13
PHWY Pilot Hill 32.21 335 eP P 06 38 12.7 +0.6
comp=Z,21nm,0.8s,mb5.0
N22A Wattenberg Ran 32.22 334 ⇓P P 06 38 12.9 +0.8
baz=32,SNR=42
BC3 Big Chuckawall 32.40 315 ⇓P P 06 38 14.1 +0.2
baz=32,SNR=14
TRY Troy 32.43 20 eP P 06 38 14.6 +0.6
TRY epP pP 06 38 29.1 +0.8
T15A Red Dirt Ranch 32.46 322 ⇑P P 06 38 14.8 +0.4
baz=32
IRM Iron Mountain 32.47 316 ⇑P P 06 38 14.6 +0.1
baz=32,SNR=7.1
P19A Cripple Cowboy 32.47 329 ⇑P P 06 38 14.9 +0.5
baz=32
R17A Hanksville Air 32.48 326 ⇑P P 06 38 14.7 +0.2
baz=32,SNR=32
S16A Weppner Ranch, 32.48 324 ⇓P P 06 38 14.8 +0.3
baz=32
O20A White River Ci 32.50 331 ⇓P P 06 38 15.2 +0.6
baz=32,SNR=103
U14A Mt Trumbull 32.55 321 ⇑P P 06 38 15.8 +0.6
baz=32,SNR=17
N21A Black Mountain 32.66 332 ⇑P P 06 38 17.1 +1.1
baz=33,SNR=34
Q18A Rafter H Ranch 32.66 327 ⇓P P 06 38 16.4 +0.3
baz=33,SNR=26
M22A Cedar Creek Ra 32.77 334 ⇓P P 06 38 17.4 +0.5
baz=33
R16A Teasdale 32.81 325 ⇓P P 06 38 17.9 +0.5
baz=33,SNR=14
SRU San Rafael 32.88 327 ⇓P P 06 38 18.0 +0.1
baz=33,SNR=32
SRU San Rafael 32.88 327 eP P 06 38 18.5 +0.6
SRU pmax pmax
comp=Z,20nm,0.6s,mb5.2
SRU San Rafael 32.88 327 eP P 06 38 18.5 +0.6
comp=Z,20nm,0.6s,mb5.2
S15A Panguitch 32.89 323 ⇑P P 06 38 18.9 +0.8
baz=33,SNR=11
T14A Hurricane 32.91 322 ⇓P P 06 38 18.8 +0.5
baz=33,SNR=12
W12A Cal Nev Ari 32.95 318 ⇑P P 06 38 18.7 +0.1
baz=33
BELC Belle Mtn. Jos 32.97 315 ⇑P P 06 38 18.9 +0.1
baz=33,SNR=7.8
O19A Miners Draw (B 33.05 330 ⇓P P 06 38 19.2 -0.3
baz=33
N20A Spence Gulch, 33.06 331 ⇑P P 06 38 20.1 +0.6
baz=33,SNR=65
PFO Pinyon Flat Ob 33.08 314 ⇑P P 06 38 19.8 +0.1
baz=33
Q16A Castle Valley 33.09 326 ⇑P P 06 38 20.1 +0.4
baz=33,SNR=6.4
P18A Preston Nutter 33.11 328 ⇓P P 06 38 20.2 +0.2
baz=33,SNR=21
GMRC Granite Mounta 33.17 316 ⇓P P 06 38 20.7 +0.1
baz=33,SNR=12
V12A Nelson 33.19 318 ⇑P P 06 38 21.0 +0.3
baz=33,SNR=26
R15A Junction 33.21 324 ⇓P P 06 38 21.3 +0.4
baz=33
P17A Butcher Ranch, 33.26 327 ⇑P P 06 38 21.3 0.0
baz=33,SNR=18
COWI Conover 33.26 359 eP P 06 38 19.4 -1.7
comp=Z,42nm,0.6s,mb5.5
COWI ePcP PcP 06 41 01.5 -0.9
M21A Separation Pea 33.27 333 ⇑P P 06 38 21.8 +0.5
baz=33,SNR=18
RWWY Rawlins 33.27 334 eP P 06 38 22.5 +1.2
comp=Z,57nm,0.6s,mb5.7
MSU Marysvale 33.36 325 eP P 06 38 23.1 +0.9
MSU e 06 41 04.2
TMUT Trail Mountain 33.38 327 eP P 06 38 23.1 +0.8
comp=Z,10.0nm,0.8s,mb4.8
CCUT Cedar City 33.40 322 eP P 06 38 23.9 +1.4
comp=Z,4.3nm,0.8s,mb4.4
U12A Valley of Fire 33.41 319 ⇓P P 06 38 22.9 +0.3
baz=33
S14A Cedar City 33.42 323 ⇑P P 06 38 23.0 +0.2
baz=33
O18A Roosevelt 33.47 329 ⇓P P 06 38 23.6 +0.5
baz=33,SNR=15
N19A John Jarvie Ra 33.54 331 ⇑P P 06 38 23.5 -0.2
baz=34,SNR=35
M20A Sweetwater, Wa 33.54 332 ⇓P P 06 38 24.1 +0.4
baz=34,SNR=15
L21A Rawlins 33.56 334 ⇑P P 06 38 24.0 +0.1
baz=34,SNR=37
ARUT Antelope Range 33.60 322 eP P 06 38 25.2 +0.9
ARUT pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
ARUT Antelope Range 33.60 322 eP P 06 38 25.2 +0.9
comp=Z,8.5nm,0.6s,mb4.8
V11A Goodsprings 33.63 318 ⇓P P 06 38 24.8 +0.2
baz=34,SNR=7.5
HEC Hector,Ludlow 33.65 316 ⇑P P 06 38 25.1 +0.3
baz=34,SNR=5.0
S13A Holt Ranch, En 33.72 322 ⇓P P 06 38 26.3 +1.0
baz=34,SNR=35
TUQ Turquoise Moun 33.72 317 ⇓P P 06 38 25.8 +0.4
baz=34
BBRC Big Bear Solar 33.75 314 ⇑P P 06 38 26.7 +1.0
baz=34
O17A Robinson Place 33.78 328 ⇓P P 06 38 26.6 +0.8
baz=34,SNR=24
LONY Lake Ozonia 33.84 18 eP P 06 38 24.9 -1.4
comp=Z,34nm,1.1s,mb5.2
LONY epP pP 06 38 40.4 -0.3
N18A Larsen Ranch, 33.84 330 ⇑P P 06 38 26.3 0.0
baz=34,SNR=41
P16A Fountain Green 33.84 326 ⇓P P 06 38 27.0 +0.6
baz=34,SNR=7.6
M19A Rock Springs 34.00 331 ⇓P P 06 38 27.4 -0.3
baz=34
L20A Wamsutter 34.02 333 ⇑P P 06 38 27.8 -0.1
baz=34,SNR=20
RSSD Black Hills 34.10 339 eP P 06 38 29.0 +0.5
RSSD pmax pmax
comp=Z,14nm,0.6s,mb5.1
RSSD Black Hills 34.10 339 eP P 06 38 29.0 +0.4
comp=Z,14nm,0.6s,mb5.1
MPU Maple Canyon 34.12 327 eP P 06 38 29.4 +0.7
comp=Z,15nm,0.8s,mb5.0
R13A O'Grain Ranch, 34.17 322 ⇓P P 06 38 30.3 +1.0
baz=34,SNR=22
O16A Springville 34.19 327 ⇑P P 06 38 29.4 0.0
baz=34,SNR=15
DAU Daniels Canyon 34.21 328 eP P 06 38 30.1 +0.5
DAU e 06 41 06.9
SHOC Shoshone 34.23 317 ⇑P P 06 38 30.3 +0.5
baz=34
GSC Goldstone 34.24 316 ⇑P P 06 38 30.3 +0.4
baz=34
GSC Goldstone 34.24 316 eP P 06 38 30.7 +0.8
GSC pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
GSC Goldstone 34.24 316 eP P 06 38 30.7 +0.8
comp=Z,3.3nm,0.8s,mb4.3
BFSC Mount Baldy Ra 34.26 314 ⇑P P 06 38 30.5 +0.5
baz=34
Q14A Sevier Lake (B 34.31 324 ⇑P P 06 38 31.0 +0.6
baz=34,SNR=8.4
S12A Delamar Landin 34.34 321 ⇓P P 06 38 31.4 +0.7
baz=34,SNR=9.2
T11A Corn Creek, Al 34.34 320 ⇑P P 06 38 31.3 +0.6
baz=34
M18A Lyman 34.38 330 ⇓P P 06 38 30.5 -0.5
baz=34,SNR=13
N17A Moffit Pass 34.39 329 ⇓P P 06 38 31.5 +0.4
baz=34,SNR=10
JLU Jordanelle 34.45 328 eP P 06 38 32.3 +0.7
comp=Z,7.6nm,0.7s,mb4.7
K20A Yellowstone Ra 34.55 333 ⇑P P 06 38 32.0 -0.4
baz=34,SNR=62
U10A Ash Meadows, A 34.56 318 ⇑P P 06 38 33.2 +0.6
baz=34,SNR=9.2
L19A Farson 34.56 332 ⇑P P 06 38 32.4 -0.2
baz=34,SNR=32
P14A Drum Mountains 34.60 325 ⇑P P 06 38 33.7 +0.8
baz=35,SNR=11
R12A Pony Springs, 34.65 322 ⇓P P 06 38 34.3 +0.9
baz=35,SNR=13
N16A Rees Ranch, Co 34.65 328 ⇑P P 06 38 33.8 +0.5
baz=35,SNR=8.4
M17A Scullys Gap (B 34.70 330 ⇑P P 06 38 33.6 -0.2
baz=35,SNR=22
Q13A Wheeler Ranch, 34.72 323 ⇑P P 06 38 34.5 +0.6
baz=35,SNR=22
L18A Fontenelle, Gr 34.74 331 ⇓P P 06 38 33.9 -0.2
baz=35,SNR=38
O15A The Old Anders 34.76 327 ⇓P P 06 38 34.7 +0.4
baz=35
EDW2 Edwards Air Fo 34.83 314 ⇓P P 06 38 34.9 0.0
baz=35
NOQ North Oquirrh 34.84 327 eP P 06 38 35.7 +0.7
comp=Z,30nm,0.7s,mb5.3
DUG Dugway 34.88 326 ⇓P P 06 38 35.6 +0.2
baz=35,SNR=8.1
DUG Dugway 34.88 326 eP P 06 38 35.6 +0.2
DUG pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
DUG Dugway 34.88 326 eP P 06 38 35.6 +0.3
comp=Z,5.6nm,0.8s,mb4.5
K19A Absolon Red Bu 34.90 333 ⇓P P 06 38 35.0 -0.5
baz=35,SNR=55
S11A Rachel 34.92 320 ⇑P P 06 38 36.5 +0.7
baz=35,SNR=24
FURC Furnace Creek, 34.94 318 ⇑P P 06 38 36.3 +0.4
baz=35
LPAZ La Paz 35.01 145 P P 06 38 36.9 +0.3
comp=Z,1.6nm,0.6s,mb4.2,baz=348,slow=6.1,SNR=12
LPAZ PcP PcP 06 41 07.4 -0.5
comp=Z,1.3nm,0.7s,baz=0.0,slow=7.1,SNR=2.8
LPAZ LR LR 06 53 36.4
comp=Z,168nm,18.4s,MS3.8,baz=252,slow=38
LPAZ La Paz 35.01 145 P P 06 38 36.9 +0.3
LPAZ 06 41 07.4
P13A Bates Ranch, G 35.05 324 ⇑P P 06 38 37.6 +0.8
baz=35,SNR=34
MPMC Manual Prospec 35.12 316 ⇑P P 06 38 37.5 0.0
baz=35,SNR=12
BW06 Boulder Array 35.18 332 ⇓P P 06 38 37.4 -0.4
baz=35,SNR=36
BW06 Boulder Array 35.18 332 eP P 06 38 37.5 -0.4
comp=Z,16nm,0.6s,mb5.1
EYMN Ely 35.20 356 eP P 06 38 35.9 -2.0
comp=Z,26nm,0.5s,mb5.4
N15A Stansbury Isla 35.22 327 ⇑P P 06 38 38.5 +0.3
baz=35
Q12A Willow Creek R 35.25 323 ⇓P P 06 38 38.8 +0.3
baz=35,SNR=5.1
HWUT Hardware Ranch 35.25 329 eP P 06 38 38.4 -0.1
comp=Z,38nm,0.7s,mb5.4
R11A Troy Canyon, C 35.26 321 ⇑P P 06 38 39.0 +0.4
baz=35,SNR=9.9
L17A Cokeville 35.28 330 ⇓P P 06 38 38.3 -0.4
baz=35,SNR=71
K18A Toltan Ranch, 35.30 332 ⇑P P 06 38 39.5 +0.7
baz=35,SNR=124
L16A Fish Haven 35.49 330 ⇑P P 06 38 40.4 -0.1
baz=35,SNR=25
BGU Big Grassy Mou 35.52 327 eP P 06 38 41.1 +0.4
comp=Z,8.3nm,0.8s,mb4.7
N14A Grayback Hills 35.55 327 ⇓P P 06 38 41.3 +0.2
baz=36,SNR=10
P12A McGill 35.58 323 ⇓P P 06 38 41.6 +0.3
baz=36,SNR=15
GRAC Grapevine Rang 35.58 318 ⇑P P 06 38 41.9 +0.5
baz=36,SNR=15
ISA Isabella 35.58 315 ⇑P P 06 38 41.5 +0.1
baz=36
ISA Isabella 35.58 315 eP P 06 38 42.2 +0.8
ISA pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
ISA Isabella 35.58 315 eP P 06 38 42.2 +0.8
comp=Z,3.7nm,0.8s,mb4.4
M15A Larsen Ranch, 35.60 328 ⇓P P 06 38 41.2 -0.3
baz=36
Q11A Duckwater 35.61 322 ⇓P P 06 38 42.2 +0.5
baz=36,SNR=18
S10A Tonopah Range, 35.62 320 ⇑P P 06 38 42.3 +0.5
baz=36,SNR=13
R10A Warm Springs 35.66 321 ⇓P P 06 38 43.1 +1.1
baz=36,SNR=10
CWC Cottonwood Cre 35.73 317 ⇓P P 06 38 43.1 +0.4
baz=36
J18A Kendall Valley 35.73 332 ⇓P P 06 38 42.7 +0.1
baz=36,SNR=114
K17A Gardner Place, 35.80 331 ⇑P P 06 38 43.1 -0.1
baz=36,SNR=17
AHID Auburn Hatcher 35.89 331 eP P 06 38 44.8 +0.8
comp=Z,88nm,0.6s,mb5.9
L15A Malad City 35.96 329 ⇑P P 06 38 44.3 -0.3
baz=36,SNR=51
HVU Hansel Valley 35.99 328 eP P 06 38 45.5 +0.6
HVU pmax pmax
comp=Z,15nm,0.7s,mb5.0
HVU Hansel Valley 35.99 328 eP P 06 38 45.5 +0.7
comp=Z,15nm,0.7s,mb5.0
O12A Currie 36.01 324 ⇓P P 06 38 45.5 +0.5
baz=36,SNR=21
AGMN Agassiz Nation 36.02 351 eP P 06 38 43.6 -1.3
comp=Z,48nm,0.6s,mb5.6
I18A Diamond G Ranc 36.03 333 ⇓P P 06 38 45.4 +0.3
baz=36,SNR=119
Q10A Clear Creek Ra 36.05 321 ⇓P P 06 38 46.3 +0.9
baz=36,SNR=17

VES Vestal, Richgr 36.09 315 ⇑P P 06 38 46.2 +0.4
baz=36,SNR=6.7
M14A Sheep Mountain 36.09 327 ⇑P P 06 38 45.9 +0.1
baz=36,SNR=53
N13A Wendover, West 36.10 326 ⇓P P 06 38 46.3 +0.5
baz=36,SNR=5.4
N13A Wendover, West 36.10 326 eP P 06 38 46.9 +1.1
comp=Z,26nm,0.8s,mb5.2
J17A Brown Place, J 36.17 332 ⇑P P 06 38 46.9 +0.6
baz=36,SNR=72
K16A Soda Springs 36.18 330 ⇓P P 06 38 46.4 0.0
baz=36,SNR=5.1
PKME Peaks-Kenny Pk 36.19 23 eP P 06 38 46.5 0.0
comp=Z,17nm,0.8s,mb5.0
PKME epP pP 06 39 01.4 +0.4
REDW Red Top Meadow 36.23 332 eP P 06 38 47.3 +0.4
comp=Z,186nm,0.6s,mb6.2
SNOW Snow King Moun 36.27 332 eP P 06 38 47.3 +0.2
comp=Z,234nm,0.6s,mb6.3
LOHW Long Hollow 36.31 332 eP P 06 38 47.8 +0.2
comp=Z,62nm,0.6s,mb5.7
TPAW Teton Pass 36.38 332 eP P 06 38 48.5 +0.4
comp=Z,81nm,0.6s,mb5.8
L14A Malta 36.42 328 ⇑P P 06 38 48.2 -0.3
baz=36
M13A Montello 36.43 326 ⇓P P 06 38 48.6 0.0
baz=36,SNR=12
M13A Montello 36.43 326 eP P 06 38 49.2 +0.6
comp=Z,14nm,0.6s,mb5.1
RRI2 Red Ridge 36.44 331 eP P 06 38 49.1 +0.4
comp=Z,69nm,0.6s,mb5.8
O11A Cowboy Ranch, 36.44 323 ⇑P P 06 38 49.3 +0.6
baz=36,SNR=10.0
RCTC Rector, Farmer 36.45 315 ⇓P P 06 38 48.8 0.0
baz=36
SMMC Simmler 36.46 314 ⇑P P 06 38 49.3 +0.4
baz=36
MOOW Moose Ponds 36.48 332 eP P 06 38 49.0 0.0
comp=Z,46nm,0.6s,mb5.6
J16A Bone 36.52 331 ⇓P P 06 38 49.5 +0.2
baz=36,SNR=46
K15A Arbon 36.53 329 ⇓P P 06 38 49.3 -0.1
baz=36,SNR=41
I17A Pilgrim Ck. 36.54 332 ⇑P P 06 38 50.0 +0.5
baz=36,SNR=23
DCID1 Drake Creek 36.57 332 eP P 06 38 50.5 +0.7
comp=Z,47nm,0.8s,mb5.4
N12A Clover Valley, 36.57 325 ⇓P P 06 38 50.0 +0.3
baz=36,SNR=20
N12A Clover Valley, 36.57 325 eP P 06 38 50.6 +0.8
comp=Z,15nm,0.8s,mb4.9
ELK Elko 36.61 325 eP P 06 38 51.1 +1.0
IMW Indian Meadow 36.69 332 eP P 06 38 50.8 +0.1
comp=Z,27nm,0.6s,mb5.2
FLWY Flagg Ranch 36.72 333 eP P 06 38 51.6 +0.6
comp=Z,55nm,0.6s,mb5.6
K14A Jones Ranch, D 36.75 329 ⇓P P 06 38 50.9 -0.4
baz=37,SNR=96
L13A Double Diamond 36.82 327 ⇓P P 06 38 52.0 +0.1
baz=37
M12A Wells 36.88 326 ⇑P P 06 38 52.1 -0.4
baz=37,SNR=8.0
H17A Grant Village 36.91 333 ⇑P P 06 38 53.3 +0.6
baz=37,SNR=29
I16A Newdale 36.92 332 ⇓P P 06 38 53.1 +0.3
baz=37
RLMT Red Lodge 36.93 335 ⇓P P 06 38 52.8 0.0
baz=37,SNR=66
RLMT Red Lodge 36.93 335 eP P 06 38 52.9 +0.1
comp=Z,61nm,0.6s,mb5.6
N11A Elko Archery C 36.94 324 ⇑P P 06 38 53.3 +0.4
baz=37,SNR=16
LKWY Lake 36.97 333 eP P 06 38 54.8 +1.7
LKWY pmax pmax
comp=Z,34nm,0.6s,mb5.3
LKWY Lake 36.97 333 eP P 06 38 54.8 +1.6
comp=Z,34nm,0.6s,mb5.3
NVAR Mina Array Bea 37.01 319 P P 06 38 54.7 +1.1
comp=Z,9.4nm,0.7s,mb4.7,baz=130,slow=7.4,SNR=87
NVAR PcP PcP 06 41 14.1 +0.5
comp=Z,14nm,0.8s,baz=135,slow=3.9,SNR=8.9
NVAR pPcP 06 41 29.0
comp=Z,9.8nm,0.7s,baz=136,slow=4.0,SNR=13
NVAR ScP ScP 06 44 56.5 +0.7
comp=Z,0.9nm,0.7s,baz=130,slow=4.3,SNR=5.3
J15A Blackfoot 37.01 330 ⇑P P 06 38 53.6 +0.1
baz=37,SNR=49
YFT Old Faithful 37.07 333 eP P 06 38 56.1 +2.0
comp=Z,66nm,0.7s,mb5.6
LAO LASA Array 37.09 339 eP P 06 38 53.8 -0.4
comp=Z,26nm,0.6s,mb5.2
LAO epP pP 06 39 08.3 -0.4
YNR Norris Junctio 37.21 333 eP P 06 38 56.2 +1.0
comp=Z,49nm,0.7s,mb5.4
G18A Lazy EL Ranch, 37.21 335 ⇓P P 06 38 55.0 -0.2
baz=37,SNR=82
K13A Stover Farm, H 37.30 328 ⇑P P 06 38 55.7 -0.2
baz=37
YMR Madison River 37.30 333 eP P 06 38 56.9 +0.9
comp=Z,76nm,0.7s,mb5.6
YMR ePcP PcP 06 41 13.2 -1.1
M11A Holland Ranch, 37.38 325 ⇓P P 06 38 56.8 +0.1
baz=37
L12A House Creek Ra 37.44 326 ⇓P P 06 38 57.0 -0.1
baz=37
H16A Russell Place, 37.45 333 ⇑P P 06 38 58.0 +0.7
baz=37,SNR=76
J14A Carey 37.49 329 ⇓P P 06 38 57.7 +0.1
baz=37,SNR=33
BMN Battle Mountai 37.55 323 eP P 06 38 58.9 +0.8
BMN pmax pmax
comp=Z,16nm,0.8s,mb4.8
BMN Battle Mountai 37.55 323 eP P 06 38 58.9 +0.8
comp=Z,16nm,0.8s,mb4.8
GCMT Greycliff 37.64 335 eP P 06 38 58.6 -0.2
comp=Z,33nm,0.5s,mb5.3
GCMT ePcP PcP 06 41 15.0 -0.3
G17A Pierce Place, 37.72 334 ⇑P P 06 39 00.2 +0.8
baz=38,SNR=130
F18A Big Timber 37.75 335 ⇓P P 06 38 59.8 0.0
baz=38,SNR=156
WAKR Walker 37.78 318 eP P 06 39 01.3 +1.2
L11A Cat Creek Ranc 37.85 326 ⇑P P 06 39 00.3 -0.3
baz=38,SNR=20
J13A Cove Ranch, Pi 37.88 329 ⇑P P 06 39 00.6 -0.3
baz=38,SNR=13
ULM Lac du Bonnet 37.93 352 P P 06 38 59.1 -2.0
comp=Z,50nm,0.5s,mb5.5,baz=168,slow=9.1,SNR=44
ULM PcP PcP 06 41 13.9 -2.2
comp=Z,6.3nm,0.7s,baz=150,slow=3.4,SNR=3.9
ULM LR LR 06 56 56.3
comp=Z,129nm,21.5s,MS3.7,baz=333,slow=40
G16A Moss Hill, Enn 38.11 333 ⇑P P 06 39 03.4 +0.7
baz=38,SNR=102
HLID Hailey 38.12 329 ⇓P P 06 39 02.8 0.0
baz=38,SNR=44
HLID Hailey 38.12 329 eP P 06 39 02.8 -0.1
comp=Z,12nm,0.7s,mb4.8
CMB Columbia Colle 38.14 317 eP P 06 39 03.5 +0.3
CMB pmax pmax
comp=Z,6.0nm,1.1s,mb4.2
CMB Columbia Colle 38.14 317 eP P 06 39 03.5 +0.3
comp=Z,5.8nm,1.1s,mb4.2
F17A Fitzpatrick Pl 38.15 334 ⇑P P 06 39 03.6 +0.5
baz=38,SNR=88
L10A Juniper Basin 38.19 325 ⇑P P 06 39 03.4 -0.1
baz=38
I13A Wildhorse Cree 38.22 329 ⇓P P 06 39 04.1 +0.4
baz=38,SNR=30
MCMT McKenzie Canyo 38.28 331 eP P 06 39 05.5 +1.3
comp=Z,64nm,0.7s,mb5.5
H14A Leadore 38.37 331 ⇓P P 06 39 05.7 +0.7
baz=38,SNR=109
E18A Harlowton 38.37 336 ⇓P P 06 39 05.0 0.0
baz=38,SNR=41
G15A Dillon 38.37 332 ⇓P P 06 39 05.7 +0.7
baz=38,SNR=104
PAHR Pah Rah Range 38.43 320 eP P 06 39 06.4 +0.8
comp=Z,5.9nm,0.7s,mb4.4
F16A Kennard Place, 38.46 333 ⇑P P 06 39 06.1 +0.4
baz=38,SNR=99
DLMT Dillon 38.57 332 eP P 06 39 07.1 +0.5
comp=Z,47nm,0.7s,mb5.3
I12A Atlanta 38.65 328 ⇓P P 06 39 07.3 0.0
baz=39,SNR=29
E17A Martinsdale 38.67 335 ⇓P P 06 39 07.6 +0.1
baz=39,SNR=43
MFID Camas Ranch 38.74 327 ⇓P P 06 39 08.0 -0.1
baz=39,SNR=15
H13A Challis 38.76 330 ⇓P P 06 39 08.4 +0.2
baz=39,SNR=90
D18A Linhart Farms, 38.84 336 ⇑P P 06 39 09.1 +0.2
baz=39,SNR=60
LRM Limekiln Ridge 38.86 333 eP P 06 39 09.4 +0.3
G14A Jackson 38.88 331 ⇓P P 06 39 09.3 0.0
baz=39,SNR=36
H12A Diamond D Ranc 39.05 329 ⇑P P 06 39 10.5 -0.1
baz=39,SNR=28
E16A East Helena 39.07 334 ⇓P P 06 39 10.9 +0.1
baz=39,SNR=22
G13A Cobalt 39.14 330 ⇓P P 06 39 11.1 -0.3
baz=39,SNR=35
D17A Six Diamond Ra 39.16 336 ⇑P P 06 39 11.5 0.0
baz=39,SNR=126
F14A Wisdom 39.27 332 ⇑P P 06 39 12.3 -0.1
baz=39,SNR=26
HRY Holter Researc 39.28 334 eP P 06 39 12.6 +0.1
E15A Deer Lodge 39.41 333 ⇑P P 06 39 13.6 0.0
baz=39,SNR=88
D16A Dana Ranch, Ca 39.41 335 ⇑P P 06 39 13.8 +0.1
baz=39,SNR=88
EGMT Eagleton 39.50 337 ⇑P P 06 39 14.5 +0.1
baz=40,SNR=39
EGMT Eagleton 39.50 337 eP P 06 39 14.4 0.0
comp=Z,73nm,0.7s,mb5.5
C17A Wharram Farm, 39.58 336 ⇑P P 06 39 14.9 0.0
baz=40
WVOR Wild Horse Val 39.64 324 eP P 06 39 15.1 -0.5
WVOR pmax pmax
comp=Z,12nm,0.8s,mb4.7
WVOR Wild Horse Val 39.64 324 eP P 06 39 15.1 -0.5
comp=Z,12nm,0.8s,mb4.7
F13A Darby 39.70 331 ⇓P P 06 39 15.6 -0.4
baz=40,SNR=98
E14A Clinton 39.78 332 ⇑P P 06 39 16.4 -0.3
baz=40,SNR=47
B18A Beardsley Farm 39.82 337 ⇑P P 06 39 17.0 0.0
baz=40,SNR=36
D15A Lincoln 39.83 334 ⇑P P 06 39 17.1 -0.1
baz=40,SNR=86
CHMT Chamberlain Mo 40.05 333 eP P 06 39 18.6 -0.3
C16A Fuhringer Ranc 40.11 335 ⇑P P 06 39 19.4 0.0
baz=40,SNR=8.6
F12A Elk City 40.11 330 ⇓P P 06 39 19.0 -0.4
baz=40,SNR=172
E13A Victor 40.12 332 ⇓P P 06 39 18.9 -0.6
baz=40,SNR=116
B17A L&G Farms, Che 40.12 337 ⇓P P 06 39 19.0 -0.6
baz=40,SNR=28
J08A Circle Bar Ran 40.14 325 ⇑P P 06 39 19.1 -0.7
baz=40
A18A Metzger Ranch, 40.28 338 ⇑P P 06 39 20.5 -0.3
baz=40,SNR=78
MOD Mcelroc 40.29 322 eP P 06 39 20.5 -0.6
D14A Grenough 40.29 333 ⇑P P 06 39 20.3 -0.7
baz=40,SNR=44
MSO Missoula 40.29 333 eP P 06 39 20.0 -0.9
SLMT Seeley Lake 40.41 333 eP P 06 39 21.2 -0.7
C15A Salmond Ranch, 40.44 335 ⇓P P 06 39 22.0 -0.2
baz=40,SNR=77
BMO Blue Mountains 40.50 328 eP P 06 39 21.6 -1.2
B16A M & M Farms, S 40.58 336 ⇑P P 06 39 22.6 -0.7
baz=40,SNR=23
A17A Triple J Farms 40.62 337 ⇓P P 06 39 23.4 -0.3
baz=41,SNR=115
D13A Huson 40.73 332 ⇓P P 06 39 23.9 -0.7
baz=41,SNR=50
SWMT Swartz Lake 40.84 333 eP P 06 39 25.0 -0.4
B15A Bradely Ranch, 40.85 335 ⇑P P 06 39 25.1 -0.4
baz=41,SNR=45
C14A Swan Lake 40.92 334 ⇓P P 06 39 25.7 -0.5
baz=41
A16A West Butte Ran 40.97 336 ⇓P P 06 39 26.1 -0.4
baz=41
D12A Red Ives Fores 41.10 332 ⇓P P 06 39 26.7 -1.0
baz=41
YBMT Yellow Bay 41.11 334 eP P 06 39 27.6 0.0
JTMT Jette 41.14 333 eP P 06 39 27.9 -0.1
I07A Izee 41.18 325 ⇑P P 06 39 27.4 -0.9
baz=41,SNR=13
C13A Hot Springs 41.22 333 ⇑P P 06 39 28.0 -0.6
baz=41,SNR=20
F10A Beach Ranch, E 41.24 329 ⇑P P 06 39 28.0 -0.7
baz=41,SNR=37
A15A Johnson Ranch, 41.44 336 ⇑P P 06 39 30.1 -0.3
baz=41,SNR=190
BSMT Bassoo Peak 41.44 333 eP P 06 39 30.1 -0.3
C12B Naegeli Ranch, 41.65 332 ⇑P P 06 39 31.6 -0.5
baz=42,SNR=31
YBH Yreka Blue Hor 41.66 320 eP P 06 39 30.8 -1.5
G08A Pilot Rock 41.67 327 ⇓P P 06 39 31.4 -0.9
baz=42
B13A Whitefish 41.70 334 ⇑P P 06 39 32.3 -0.2
baz=42,SNR=21
LNOR Lincton Mounta 41.70 328 eP P 06 39 32.1 -0.5
A14A Double T Ranch 41.72 335 ⇑P P 06 39 32.5 -0.2
baz=42,SNR=169
KHMM Horse Mountain 41.85 319 eP P 06 39 34.4 +0.6
comp=Z,14nm,0.8s,mb4.6
WALA Waterton Lakes 41.99 335 eP P 06 39 34.8 0.0
comp=Z,0.9nm,0.7s
E09A Wood Farm, Sta 42.07 329 ⇑P P 06 39 34.7 -0.8
baz=42,SNR=7.3
C11A Tepee Creek (N 42.10 332 ⇓P P 06 39 35.2 -0.5
baz=42
A13A Flathead Natio 42.10 334 ⇑P P 06 39 35.7 0.0
baz=42
B12A Libby 42.26 333 ⇓P P 06 39 36.8 -0.3
baz=42,SNR=7.9
E08A Dider Farm, El 42.52 328 ⇓P P 06 39 38.9 -0.3
baz=42
G06A Carlson Farm, 42.53 326 ⇓P P 06 39 39.3 -0.1
baz=42
A12A Yaak River Ran 42.64 333 ⇑P P 06 39 39.9 -0.3
baz=43,SNR=13
HAWA Hanford 42.70 328 eP P 06 39 39.9 -0.7
comp=Z,8.5nm,0.8s,mb4.5
NEW Newport 42.81 332 eP P 06 39 40.3 -1.2
D08A Wollman Farm, 42.83 329 ⇓P P 06 39 40.7 -1.0
baz=43,SNR=20
OD2 Odessa Site #2 42.95 330 P P 06 39 42.1 -0.6
E07A Sunnyside 42.97 328 ⇓P P 06 39 42.3 -0.6
baz=43
C09A Chrisman Ranch 43.02 330 ⇑P P 06 39 42.5 -0.7
baz=43,SNR=11
H04A Detroit Lake 43.06 324 ⇑P P 06 39 42.6 -1.1
baz=43,SNR=8.9
FFC Flin Flon 43.27 348 P P 06 39 44.7 -0.4
comp=Z,338nm,0.5s,mb6.3,SNR=20
FFC Flin Flon 43.27 348 iP P 06 39 44.5 -0.6
FFC Flin Flon 43.27 348 eP P 06 39 44.3 -0.8
G04A Mulino 43.54 325 ⇑P P 06 39 46.8 -0.7
baz=44
TBM Table Mountain 43.76 328 P P 06 39 49.2 0.0
WTV Waterville 43.78 329 P P 06 39 49.6 +0.2
ETW Entiat 43.91 329 eP P 06 39 51.0 +0.6
B08A Colville Reser 43.92 330 ⇓P P 06 39 49.4 -1.1
baz=44,SNR=18
LON Longmire 44.12 327 eP P 06 39 51.6 -0.6
NLW Nelson Butte 44.23 329 P P 06 39 52.6 -0.4
WRW Wenatchee Ridg 44.35 329 P P 06 39 53.8 -0.2
D05A Enumclaw 44.50 327 ⇑P P 06 39 54.2 -0.9
baz=44,SNR=5.0
RPW Rockport 45.06 329 eP P 06 39 58.2 -1.4
EDM Edmonton 45.08 339 eP P 06 39 58.5 -1.1
B06A Marblemount 45.09 329 ⇓P P 06 39 58.4 -1.4
baz=45,SNR=12
JCW Jim Creek 45.11 328 eP P 06 39 58.3 -1.7
GNW Green Mountain 45.18 327 eP P 06 39 59.0 -1.5
comp=Z,5.0nm,0.9s,mb4.3
SCHQ Schefferville 45.22 17 P P 06 39 59.0 -1.6
comp=Z,34nm,0.8s,mb5.3,baz=214,slow=6.6,SNR=38
SCHQ PcP PcP 06 41 39.0 -0.9
comp=Z,4.8nm,0.6s,baz=208,slow=11,SNR=4.4
SCHQ LR LR 06 59 36.7
comp=Z,332nm,20.7s,MS4.2,baz=12,slow=37
SCHQ Schefferville 45.22 17 eP P 06 39 59.0 -1.6
comp=Z,31nm,0.8s,mb5.2
SCHQ epP pP 06 40 13.6 -1.9
SCHQ ePcP PcP 06 41 39.2 -0.8
HDW Hoodsport 45.35 327 P P 06 40 00.8 -1.1
CMW Cultus Mountai 45.35 328 P P 06 40 00.7 -1.2
NLWA Neilton Lookou 45.63 326 ⇑P P 06 40 03.2 -0.8
baz=46
NLWA Neilton Lookou 45.63 326 eP P 06 40 03.8 -0.3
A05A Maple Falls 45.71 329 ⇑P P 06 40 03.2 -1.5
baz=46,SNR=5.8
FCC Fort Churchill 46.15 356 eP P 06 40 06.7 -1.3
PGC Sidney 46.18 328 eP P 06 40 07.9 -0.6
CPUP Villa Florida 49.09 142 P P 06 40 29.4 -1.9
comp=Z,1.7nm,0.5s,mb4.3,baz=314,slow=8.7,SNR=12
CPUP PcP PcP 06 41 53.5 -0.7
comp=Z,0.7nm,0.5s,baz=272,slow=4.6,SNR=2.6
CPUP LR LR 07 02 51.0
comp=Z,120nm,21.1s,MS3.9,baz=59,slow=38
CPUP Villa Florida 49.09 142 P P 06 40 29.4 -1.8
CPUP 06 41 53.5
YKA Yellowknife Ar 53.14 345 P P 06 40 59.5 -1.6
comp=Z,20nm,0.7s,mb5.1,baz=139,slow=7.5,SNR=68
YKA pP pP 06 41 13.8 -2.5
comp=Z,14nm,0.8s,baz=138,slow=7.8,SNR=11
YKA PcP PcP 06 42 07.1 -1.5
comp=Z,4.5nm,0.7s,baz=140,slow=3.9,SNR=7.1
YKA pPcP 06 42 21.7
comp=Z,1.8nm,0.6s,baz=140,slow=4.3,SNR=2.6
YKA Yellowknife Ar 53.14 345 P P 06 40 59.5 -1.6
YKA 06 42 07.1
YKA Yellowknife Ar 53.14 345 P P 06 40 59.5 -1.6
YKA pP pP 06 41 13.8 -2.5
YKA PcP PcP 06 42 07.1 -1.5
YKA pPcP 06 42 21.7
DLBC Dease Lake 55.34 335 eP P 06 41 17.3 +0.2
DLBC epP pP 06 41 31.6 -0.8
PNL Peninsula 60.06 333 eP P 06 41 49.8 -0.5
comp=Z,12nm,0.8s,mb5.0
DAWY Dawson 62.25 337 eP P 06 42 03.1 -1.9
BMRM Bremner River 62.96 333 eP P 06 42 09.2 -0.7
comp=Z,17nm,0.6s,mb5.3
BMRM epP pP 06 42 22.6 -2.8
EGAK Eagle 63.27 337 eP P 06 42 10.0 -1.8
comp=Z,10nm,0.7s,mb5.1
MENT Mentasta 63.42 335 eP P 06 42 11.6 -1.2
ILAR Eielson Array 65.46 336 P P 06 42 24.4 -1.8
comp=Z,10nm,0.7s,mb5.0,baz=165,slow=4.9,SNR=183
ILAR pP pP 06 42 38.5 -3.2
comp=Z,6.5nm,0.8s,baz=142,slow=4.6,SNR=8.8
ILAR LR LR 07 13 39.6
comp=Z,166nm,20.8s,MS4.2,baz=125,slow=38
KDAK Kodiak Island 65.73 328 iP P 06 42 27.0 -1.0
SUMG Summit 66.49 15 eP P 06 42 31.1 -1.6
comp=Z,3.2nm,0.5s,mb4.6
SUMG epP pP 06 42 46.8 -1.5
SUMG Summit 66.49 15 iP pP 06 42 47.6 -0.7
comp=Z,12nm,1.0s
RSO Redoubt South 66.55 331 eP P 06 42 31.5 -1.7
COLD Coldfoot 67.66 338 eP P 06 42 39.5 -0.6
comp=Z,14nm,0.8s,mb5.0
COLD epP pP 06 42 53.9 -2.0
PPT Papeete 67.66 245 LR LR 07 03 50.5
comp=Z,401nm,19.2s,MS4.7,baz=335,slow=28
UNV Unalaska Valle 72.92 323 eP P 06 43 11.6 -0.9
comp=Z,21nm,0.6s,mb5.2
ESDC Sonseca Array 77.58 52 P P 06 43 35.1 -4.5
comp=Z,0.8nm,0.5s,mb4.0,baz=282,slow=5.1,SNR=3.3
PMSA Palmer Station 79.42 170 LR LR 07 15 06.0
comp=Z,313nm,18.1s,MS4.7,baz=60,slow=33
DBIC Dimbokro 82.08 85 LR LR 07 17 21.9
comp=Z,67nm,20.2s,MS4.1,baz=329,slow=34
NB2 NORSAR Subarra 83.47 29 LR P 06 44 07.7 -3.0
comp=Z,1.7nm,0.6s,mb4.2,baz=286,slow=5.1
NOA NORSAR Array B 83.47 29 P P 06 44 08.1 -2.6
comp=Z,2.1nm,0.7s,mb4.3,baz=287,slow=5.0,SNR=10
NOA pP pP 06 44 22.1 -4.7
comp=Z,1.6nm,0.8s,baz=284,slow=5.1,SNR=5.7
NOA LR LR 07 17 42.5
comp=Z,41nm,20.2s,MS3.8,baz=280,slow=33
BILL Bilibino 83.99 339d iP P 06 44 12.0 -1.2
BILL e 06 47 25.7
BILL pmax pmax
comp=Z,12nm,1.0s,mb5.0
ARCES ARCESS Array B 86.15 19 P P 06 44 21.9 -2.1
comp=Z,1.5nm,0.8s,mb4.3,baz=291,slow=3.5,SNR=9.8
ARCES LR LR 07 22 04.2
comp=Z,54nm,20.2s,MS3.9,baz=204,slow=35
ARCES ARCESS Array B 86.15 19 P P 06 44 21.9 -2.1
ARCES LR LR 07 22 04.2
TORD Torodi Ar. Bea 87.06 77 P P 06 44 25.6 -3.9
comp=Z,0.5nm,0.6s,mb3.9,baz=302,slow=5.1,SNR=6.6
FINES FINESS Array B 90.03 26 LR LR 07 21 29.7
comp=Z,68nm,21.6s,MS4.0,baz=163,slow=33
SEY Seymchan 91.40 337 ⇑iP P 06 44 48.2 -0.8
TIXI Tiksi 92.22 349 eP P 06 44 49.3 -3.4
TIXI pmax pmax
comp=Z,8.0nm,0.8s,mb5.1
AKASG Malin Array Be 96.70 35 LR LR 07 27 19.7
comp=Z,92nm,20.8s,MS4.2,baz=275,slow=35
OBN Obninsk 98.06 28 iP P 06 45 17.4 -2.2
OBN pmax pmax
comp=Z,8.0nm,0.5s,mb5.5
ZALV Zalesovo Beam 113.31 4 PKiKP PKiKP 06 50 18.8 -1.8
comp=Z,1.5nm,0.5s,baz=286,slow=2.8,SNR=7.0
ZALV PP PP 06 51 08.1 -2.6
comp=Z,0.5nm,0.3s,baz=316,slow=8.1,SNR=3.0
MDJ Mudanjiang 113.41 332 Pdif Pdif 06 46 27.3 -0.6
MDJ S Sdif 06 58 46.0 -4.2
MDJ AMB AMB
comp=Z,71nm,6.6s
MDJ LR LR
comp=E,45nm,36.0s
MDJ LR LR
comp=Z,45nm,32.1s,MS3.9
BOSA Boshof 116.47 116 PKP PKPdf 06 50 25.9 -1.5
comp=Z,0.8nm,0.4s,baz=333,slow=2.3,SNR=3.7
SONM Songino Array 118.31 349 PKP PKPdf 06 50 29.3 -1.2
comp=Z,3.2nm,0.8s,baz=343,slow=4.5,SNR=2.2
SONM Songino Array 118.31 349 PKP PKPdf 06 50 29.3 -1.2
KSRS Korea Array 119.64 327 PKP PKPdf 06 50 32.8 -0.6
comp=Z,4.1nm,0.6s,baz=19,slow=1.4,SNR=20
KSRS pPKP pPKPdf 06 50 47.1 -3.2
comp=Z,5.5nm,0.7s,baz=10,slow=1.2,SNR=11
MKAR Makanchi Array 120.13 8 PKP PKPdf 06 50 31.2 -2.8
comp=Z,0.4nm,0.3s,baz=318,slow=3.0,SNR=11
MKAR PP PP 06 51 54.4 -3.9
comp=Z,0.7nm,0.7s,baz=5.3,slow=5.2,SNR=3.7
MAW Mawson 121.98 167 PKP PKPdf 06 50 35.5 -1.4
comp=Z,2.3nm,0.7s,baz=294,slow=2.3,SNR=5.9
BJI Beijing 122.81 338 PKP PKPdf 06 50 38.0 -1.4
BJI SKS SKSdf 06 57 45.8 -0.9
BJI SS SS 07 08 54.0 -0.9
BJI LR LR
comp=N,180nm,25.6s,MS4.7
BJI LR LR
comp=E,110nm,27.1s,MS4.7
BJI LR LR
comp=Z,94nm,26.6s,MS4.3
WMQ Urumqi 123.59 4 ePKP PKPdf 06 50 40.3 -0.5
WMQ LR LR
comp=N,160nm,26.0s
WMQ LR LR
comp=Z,100nm,26.0s,MS4.4
HHC Hu-ho-hao-te 123.63 342 ePKP PKPdf 06 50 37.8 -3.1
HHC sPKP 06 51 03.0
HHC PP PP 06 52 23.3 +1.1
HHC PKS 06 54 13.3
HHC SKS SKSdf 06 57 41.5 -6.7
HHC SKKS SKKSac 06 59 08.8 -8.5
HHC AMB AMB
comp=Z,85nm,9.4s
HHC LR LR
comp=N,120nm,20.6s,MS4.8
HHC LR LR
comp=E,160nm,20.5s,MS4.8
HHC LR LR
comp=Z,140nm,20.0s,MS4.6
CNB Canberra Magne 123.65 236 eP PKPdf 06 50 41.3 +0.3
TOO Toolangi 126.31 233 eP PKPdf 06 50 45.9 -0.2
GTA Gaotai 127.59 352 ePKP PKPdf 06 50 47.0 -1.5
GTA PP PP 06 52 49.3 +0.9
GTA PKS 06 54 23.5
GTA SKS SKSdf 06 57 54.5 -1.2
GTA SKKS SKKSac 06 59 38.8 -3.7
GTA SS SS 07 09 55.0 +0.7
GTA AMB AMB
comp=Z,51nm,7.1s
GTA LR LR
comp=N,57nm,7.4s
GTA LR LR
comp=E,83nm,9.2s
GTA LR LR
comp=Z,47nm,9.2s
NJ2 Nanjing 128.48 330 ePKP PKPdf 06 50 50.3 -0.2

LZH	**Lanzhou**	**130.12**	**347**	*e*PKP	PKPdf	06 50 54.0	+0.5
LZH				PP	PP	06 53 10.3	+5.2
LZH				SKKS	SKKSac	06 59 57.5	-0.9
LZH				SS	SS	07 10 28.0	+2.2
LZH				AMB	AMB		
	comp=Z,95nm,5.7s						
LZH				LR	LR		
	comp=E,290nm,17.8s						
LZH				LR	LR		
	comp=Z,300nm,18.4s,MS5.0						
STKA	**Stephens Creek**	**130.62**	**239**	*e*P	PKPdf	06 50 54.4	-0.1
	comp=Z,3.3nm,0.6s						
STKA	**Stephens Creek**	**130.62**	**239**	PKP	PKPdf	06 50 54.2	-0.2
	comp=Z,3.6nm,0.5s,baz=131,slow=4.9,SNR=5.8						
STKA	**Stephens Creek**	**130.62**	**239**	*e*PKPdf	PKPdf	06 50 54.5	0.0
ENH	**Enshi**	**133.97**	**339**	*e*PKPdf	PKPdf	06 51 00.2	-0.7
CD2	**Chengdu**	**135.11**	**345**	PKP	PKPdf	06 51 01.5	-1.5
CD2				sPKP		06 51 27.5	
CD2				PP	PP	06 53 40.3	+3.3
CD2				PKS		06 54 36.5	
CD2				SKS	SKSdf	06 58 04.0	-5.6
CD2				SKKS	SKKSac	07 00 23.8	-5.2
CD2				SS	SS	07 11 24.5	-1.9
CD2				LR	LR		
	comp=N,210nm,7.7s						
CD2				LR	LR		
	comp=Z,160nm,10.7s,MS5.0						
GYA	**Guiyang**	**138.44**	**340**	*e*Pdif	Pdif	06 48 18.0	-1.2
GYA				PKP	PKPdf	06 51 08.5	-0.8
GYA				sPKP		06 51 33.3	
GYA				PP	PP	06 54 02.0	+3.9
GYA				PKS		06 54 44.0	
GYA				SKKS	SKKSac	07 00 46.3	-2.7
GYA				SS	SS	07 12 05.8	-0.6
GYA				AMB	AMB		
	comp=Z,120nm,8.2s						
GYA				LR	LR		
	comp=N,120nm,22.0s,MS4.7						
GYA				LR	LR		
	comp=E,110nm,21.5s,MS4.7						
GYA				LR	LR		
	comp=Z,120nm,23.2s,MS4.6						
WRAB	**Tennant Creek**	**138.64**	**254**	*e*PKIKP	PKPdf	06 51 09.9	+0.1
ASAR	**Alice Springs**	**138.70**	**249**	PKhKP	PKPpre	06 51 01.6	
	comp=Z,1.0nm,0.6s,baz=112,slow=2.9,SNR=11						
KMI	**Kunming**	**140.88**	**344**	PKP	PKPdf	06 51 13.8	0.0
KMI				sPKP		06 51 38.5	
KMI				PP	PP	06 54 16.5	+3.5
KMI				SS	SS	07 12 33.8	-1.0
KMI				AMB	AMB		
	comp=Z,49nm,4.1s						
KMI				LR	LR		
	comp=N,140nm,17.6s,MS4.8						
KMI				LR	LR		
	comp=E,110nm,22.0s,MS4.8						
KMI				LR	LR		
	comp=Z,150nm,20.9s,MS4.7						
FORT	**Forrest**	**142.07**	**236**	*e*P	PKPdf	06 51 17.5	+1.8
	comp=Z,24nm,0.8s						
FITZ	**Fitzroy Crossi**	**146.98**	**256**	*e*P	PKPdf	06 51 24.1	-0.4
	comp=Z,15nm,0.6s						
FITZ	**Fitzroy Crossi**	**146.98**	**256**	*e*PKPdf	PKPdf	06 51 24.4	-0.1
FITZ				*e*PKPbc	PKPbc	06 51 26.4	-0.1
HYB	**Hyderabad**	**147.30**	**24**	*e*PKP2	PKPdf	06 51 26.0	+0.9
HYB	**Hyderabad**	**147.30**	**24**	*i* PKP	PKPdf	06 51 26.0	+0.9
CHG	**Chiang Mai**	**147.87**	**347**	P	PKPdf	06 51 25.6	-0.4
CHTO	**Chiang Mai**	**147.87**	**347**	*e*PKIKP	PKPdf	06 51 25.2	-0.8
CM31	**Chiang Mai Arr**	**148.21**	**347**	*e*PKPdf	PKPdf	06 51 26.5	-0.1
CM31				*e*PKPbc	PKPbc	06 51 28.8	-1.1
CMAR	**Chiang Mai Arr**	**148.21**	**347**	PKPbc	PKPbc	06 51 26.4	-3.5
	comp=Z,14nm,0.7s,baz=323,slow=2.4,SNR=33						
CMAR				pPKPbc	pPKPbc	06 51 41.1	-5.6
	comp=Z,6.4nm,0.7s,baz=357,slow=3.8,SNR=4.2						
BDT	**Bhumibol Dam**	**149.37**	**346**	P	PKPdf	06 51 28.0	-0.5
KKM	**Kota Kinabalu**	**149.39**	**306**	*e*PKPdf	PKPdf	06 51 28.6	-0.1
KKM				*e*PKPbc	PKPbc	06 51 33.4	+0.3
KKM				*e*PKPab	PKPab	06 51 38.5	+0.6
NST	**Nakhon Sawan**	**150.59**	**343**	P	PKPbc	06 51 34.0	-1.9
KSM	**Kuching**	**156.83**	**306**	*e*PKPdf	PKPdf	06 51 40.1	+0.7
KSM				*e*PKPab	PKPab	06 52 09.6	+0.3

*ISCJB **31** 06:42:18.6±1.0, 45°.38N±0°.05×26°.10E±0°.06, h130km±7km, Error ellipse: s-maj=8.5km s-min=6.3km az=35.0*
*BUC **31** 06:42:18.0±1.7, 45°.39N×26°.06E, h137km±15km, MD3.4/2, Error ellipse: s-maj=12.4km s-min=8.3km az=31.0*
*CSEM **31** 06:42:19.2±0.4, 45°.37N×26°.10E, h125km±3km, MD3.4/2, Error ellipse: s-maj=5.8km s-min=4.5km az=53.0*
*NEIC **31** 06:42:19.4, 45°.39N×26°.12E, h126km, MG2.7(BUC), After BUC.*
*SOF **31** 06:42:21.4, 45°.25N×26°.25E, h100km, MD2.7*
ISC 31 06:42:19.1±1.0, 45°.38N±0°.05×26°.10E±0°.06, h130km±7km, n50, σ0°68/75, 35C-3D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLR	**Muntele Rosu**	**0.16**	**315**	⇓P	**Pn**	**06 42 37.1**	**+0.4**
MLR				S	**Sn**	**06 42 50.4**	**+0.2**
MLR	**Muntele Rosu**	**0.16**	**315**	⇑*i*P	**Pn**	**06 42 37.1**	**+0.4**
MLR				*i* S	**Sn**	**06 42 50.4**	**+0.3**
MLR	**Muntele Rosu**	**0.16**	**315**	⇑*i*P	**Pn**	**06 42 37.1**	**+0.4**
MLR	**Muntele Rosu**	**0.16**	**315**	⇑*i*P	**Pn**	**06 42 37.1**	**+0.4**
MLR				*i* S	**Sn**	**06 42 50.4**	**+0.3**
VRI	**Vrincioaia**	**0.66**	**42**	⇑P	**Pn**	**06 42 39.5**	**+0.4**
VRI				S	**Sn**	**06 42 54.6**	**+0.3**
VRI	**Vrincioaia**	**0.66**	**42**	⇑*i*P	**Pn**	**06 42 39.5**	**+0.4**
VRI				*i* S	**Sn**	**06 42 54.6**	**+0.4**
VRI	**Vrincioaia**	**0.66**	**42**	⇑*i*P	**Pn**	**06 42 39.5**	**+0.4**
VRI	**Vrincioaia**	**0.66**	**42**	⇑*i*P	**Pn**	**06 42 39.5**	**+0.4**
VRI				*i* S	**Sn**	**06 42 54.6**	**+0.4**
SULR		**0.71**	**171**	⇑P	**Pn**	**06 42 39.6**	**+0.2**
SULR				S	**Sn**	**06 42 55.5**	**+0.6**
SULR		**0.71**	**171**	⇑*i*P	**Pn**	**06 42 39.6**	**+0.1**
SULR				*i* S	**Sn**	**06 42 55.5**	**+0.6**
SULR		**0.71**	**171**	⇑*i*P	**Pn**	**06 42 39.6**	**+0.1**
SULR		**0.71**	**171**	⇑*i*P	**Pn**	**06 42 39.6**	**+0.1**
SULR				*i* S	**Sn**	**06 42 55.5**	**+0.6**
VOIR		**0.74**	**275**	⇑P	**Pn**	**06 42 39.5**	**-0.2**
VOIR				S	**Sn**	**06 42 55.0**	**-0.3**
VOIR		**0.74**	**275**	⇑*i*P	**Pn**	**06 42 39.5**	**-0.2**
VOIR				*i* S	**Sn**	**06 42 55.0**	**-0.3**
VOIR		**0.74**	**275**	⇑*i*P	**Pn**	**06 42 39.5**	**-0.2**
VOIR		**0.74**	**275**	⇑*i*P	**Pn**	**06 42 39.5**	**-0.2**
VOIR				*i* S	**Sn**	**06 42 55.0**	**-0.3**
DOPR	**Dopca**	**0.77**	**320**	⇑*i*P	**Pn**	**06 42 39.7**	**-0.2**
DOPR				*i* S	**Sn**	**06 42 55.0**	**-0.8**
DOPR	**Dopca**	**0.77**	**320**	⇑*i*P	**Pn**	**06 42 39.7**	**-0.2**
DOPR	**Dopca**	**0.77**	**320**	⇑*i*P	**Pn**	**06 42 39.7**	**-0.2**
DOPR				*i* S	**Sn**	**06 42 55.0**	**-0.8**
PGOR	**Pogoanele**	**0.78**	**127**	⇑*i*P	**Pn**	**06 42 40.6**	**+0.6**
PGOR				*i* S	**Sn**	**06 42 56.9**	**+1.0**
PGOR	**Pogoanele**	**0.78**	**127**	⇑*i*P	**Pn**	**06 42 40.6**	**+0.6**
PGOR	**Pogoanele**	**0.78**	**127**	⇑*i*P	**Pn**	**06 42 40.6**	**+0.6**
PGOR				*i* S	**Sn**	**06 42 56.9**	**+1.0**
AMRR	**Amara**	**1.17**	**131**	*i* S	**Sn**	**06 43 02.5**	**+0.4**
AMRR	**Amara**	**1.17**	**131**	S	**Sn**	**06 43 02.5**	**+0.4**
AMRR	**Amara**	**1.17**	**131**	*i* S	**Sn**	**06 43 02.5**	**+0.4**
TESR		**1.20**	**18**	⇑P	**Pn**	**06 42 44.0**	**+0.2**
TESR				S	**Sn**	**06 43 02.2**	**-0.5**
TESR		**1.20**	**18**	⇑*i*P	**Pn**	**06 42 44.0**	**+0.2**
TESR				*i* S	**Sn**	**06 43 02.2**	**-0.5**
TESR		**1.20**	**18**	⇑*i*P	**Pn**	**06 42 44.0**	**+0.2**
TESR		**1.20**	**18**	⇑*i*P	**Pn**	**06 42 44.0**	**+0.2**
TESR				*i* S	**Sn**	**06 43 02.2**	**-0.5**
CFR	**Carcaliu**	**1.45**	**97**	⇑P	**Pn**	**06 42 46.3**	**-0.2**
CFR				S	**Sn**	**06 43 06.3**	**-1.2**
CFR	**Carcaliu**	**1.45**	**97**	⇑*i*P	**Pn**	**06 42 46.3**	**-0.2**
CFR				*i* S	**Sn**	**06 43 06.3**	**-1.2**
CFR	**Carcaliu**	**1.45**	**97**	⇑*i*P	**Pn**	**06 42 46.3**	**-0.2**
CFR	**Carcaliu**	**1.45**	**97**	⇑*i*P	**Pn**	**06 42 46.3**	**-0.2**
CFR				*i* S	**Sn**	**06 43 06.3**	**-1.2**
TIRR	**Tirgusor**	**1.88**	**118**	⇓P	**Pn**	**06 42 51.4**	**-0.2**
TIRR				S	**Sn**	**06 43 14.9**	**-1.5**
TIRR	**Tirgusor**	**1.88**	**118**	⇑*i*P	**Pn**	**06 42 51.4**	**-0.2**
TIRR				*i* S	**Sn**	**06 43 14.9**	**-1.5**
TIRR	**Tirgusor**	**1.88**	**118**	⇑*i*P	**Pn**	**06 42 51.4**	**-0.2**
TIRR	**Tirgusor**	**1.88**	**118**	⇑*i*P	**Pn**	**06 42 51.4**	**-0.2**
TIRR				*i* S	**Sn**	**06 43 14.9**	**-1.5**
SZH	**Strazhica**	**2.12**	**183**	*i* P	**Pn**	**06 42 53.9**	**-0.5**
SZH	**Strazhica**	**2.12**	**183**	*i* P	**Pn**	**06 42 53.9**	**-0.5**
PVL	**Pavlikeni**	**2.23**	**195**	*i* P	**Pn**	**06 42 56.4**	**+0.5**
PVL	**Pavlikeni**	**2.23**	**195**	*i* P	**Pn**	**06 42 56.4**	**+0.5**
BURAR	**Bucovina Array**	**2.32**	**345**	⇓P	**Pn**	**06 42 58.5**	**+1.6**
BURAR	**Bucovina Array**	**2.32**	**345**	⇑*i*P	**Pn**	**06 42 58.5**	**+1.6**
BURAR	**Bucovina Array**	**2.32**	**345**	⇑*i*P	**Pn**	**06 42 58.5**	**+1.6**
BURAR	**Bucovina Array**	**2.32**	**345**	⇑*i*P	**Pn**	**06 42 58.5**	**+1.6**
GZR	**Gura Zlata**	**2.34**	**272**	*i* S	**Sn**	**06 43 25.5**	**-1.0**
GZR	**Gura Zlata**	**2.34**	**272**	S	**Sn**	**06 43 25.5**	**-1.0**
GZR	**Gura Zlata**	**2.34**	**272**	*i* S	**Sn**	**06 43 25.5**	**-1.0**
PRD	**Provadia**	**2.37**	**156**	*i* P	**Pn**	**06 42 57.8**	**+0.2**
PRD	**Provadia**	**2.37**	**156**	*i* P	**Pn**	**06 42 57.8**	**+0.2**

*NEIC **31** 06:59:00.4, 32°.68S×71°.58W, h40km, MD3.7(GUC), After GUC.*
GUC 31 06:59:00.4±0.7, 32°.68S×71°.58W, h40km±3km, MD3.7, ML2.8, 1C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACH	**Jahuel**	**0.83**	**90**	*e*P	Pn	06 59 16.0	+0.3
JACH				*i* S	Sn	06 59 27.9	+1.1
JACH	**Jahuel**	**0.83**	**90**	*e*P	Pn	06 59 16.0	+0.3
JACH				*i* S	Sn	06 59 27.9	+1.1
PEL	**Peldehue**	**0.88**	**121**	⇑*i*P	Pn	06 59 17.1	+0.8
PEL				*i* S	Sn	06 59 29.8	+1.8
PEL				AML	AML	06 59 31.4	
	comp=E,770nm,0.3s						
TACH	**Talagante**	**1.11**	**151**	⇓*i*P	Pn	06 59 20.2	+0.7
TACH	**Talagante**	**1.11**	**151**	⇓*i*P	Pn	06 59 20.2	+0.7
CLCH	**Cerro Calan**	**1.13**	**129**	⇓*e*P	Pn	06 59 20.8	+1.0
CLCH				*e*S	Sn	06 59 36.0	+2.0
LNV	**Longovilo**	**1.28**	**174**	*i* P	Pn	06 59 22.8	+1.1
LNV	**Longovilo**	**1.28**	**174**	*i* P	Pn	06 59 22.8	+1.1
PCH	**Pirque**	**1.29**	**136**	*e*P	Pn	06 59 22.9	+0.9
PCH				*i* S	Sn	06 59 40.8	+2.7
PCH	**Pirque**	**1.29**	**136**	*e*P	Pn	06 59 22.9	+0.9
PCH				*i* S	Sn	06 59 40.8	+2.7
CHCH	**Chadas Angostu**	**1.47**	**148**	*e*P	Pn	06 59 25.3	+0.9
CHCH	**Chadas Angostu**	**1.47**	**148**	*e*P	Pn	06 59 25.3	+0.9
CMCH	**Combarbala**	**1.58**	**18**	*e*P	Pn	06 59 27.2	+1.2
CMCH				*i* S	Sn	06 59 47.8	+2.5
CMCH	**Combarbala**	**1.58**	**18**	*e*P	Pn	06 59 27.2	+1.2
CMCH				*i* S	Sn	06 59 47.8	+2.5
CMCH				AML	AML	06 59 51.0	
	comp=N,179nm,0.7s						

*IDC **31** 07:02:58.8±1.7, 30°.69S×178°.21W, h0km, mb4.5/4, mb1 4.5/5, mb1mx4. 1/16, mbtmp4.4/5, ML3.6/1, Error ellipse: s-maj=43.1km s-min=29.5km az=46.0*
*ISCJB **31** 07:03:07.0±5.5, 31°.05S±0°.2×178°.6W±0°.4, h59km±39km, mb4.5/5, Error ellipse: s-maj=61.7km s-min=26.1km az=151.8*
*NEIC **31** 07:03:06.5±4.1, 30°.86S×178°.36W, h51km±31km, mb4.8/3, Error ellipse: s-maj=40.7km s-min=21.0km az=53.0*
ISC 31 07:03:08.6±5.0, 31°.05±0°.3×178°.7W±0°.4, h54km±33km, n19, σ1°03/13, mb4.5/5, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNGZ	**Carnagh Statio**	**7.94**	**198**	PN	**Pn**	**07 05 03.0**	**+1.6**
CNGZ				SN	Sx	07 06 25.9	
URZ	**Urewera**	**8.08**	**204**	Pn	**Pn**	**07 05 04.8**	**+1.5**
	0.8nm,0.3s,baz=16,slow=15,SNR=5.6						
URZ				Sn	Sx	07 06 28.1	
	3.8nm,0.3s,baz=213,slow=20,SNR=9.7						
MCHZ	**McNeill Hill**	**9.28**	**203**	SN	Sx	07 06 58.4	
DVHZ	**Dannevirke**	**10.23**	**203**	SN	Sx	07 07 16.9	
BFZ	**Birch Farm**	**10.55**	**202**	PN	**Pn**	**07 05 34.2**	**-2.9**
BFZ				SN	Sx	07 07 22.9	
MRZ	**Mangatainoka R**	**10.75**	**204**	SN	Sx	07 07 28.0	
OGWZ	**Otaki Gorge**	**11.04**	**205**	PN	**Pn**	**07 05 43.4**	**-0.3**
SNZO	**South Karori**	**11.64**	**206**	*e*Pn	**Pn**	**07 05 51.2**	**-0.7**
THZ	**Tophouse**	**12.74**	**210**	*e*PN	**Pn**	**07 06 06.4**	**-0.6**
THZ				SN	Sx	07 08 15.2	
MQZ	**McQueen's Vall**	**14.47**	**206**	SN	Sx	07 08 51.6	
HNR	**Honiara**	**29.24**	**313**	*e*P	**P**	**07 09 05.2**	**-0.5**
	207nm,0.9s						
CTA	**Charters Tower**	**33.33**	**281**	P	**P**	**07 09 42.9**	**+1.3**
	3.9nm,0.5s,mb4.6,baz=97,slow=9.7,SNR=9.0						
CTAO	**Charters Tower**	**33.33**	**281**	*e*P	**P**	**07 09 42.4**	**+0.8**
	3.4nm,0.6s,mb4.5						
STKA	**Stephens Creek**	**33.80**	**258**	P	**P**	**07 09 46.0**	**+0.4**
	2.0nm,0.4s,mb4.4,baz=101,slow=11,SNR=8.7						
ASAR	**Alice Springs**	**42.51**	**268**	P	**P**	**07 10 58.1**	**-0.9**
	6.5nm,0.6s,mb4.5,baz=104,slow=7.3,SNR=86						
WRAB	**Tennant Creek**	**43.55**	**273**	*e*P	**P**	**07 11 07.5**	**+0.1**
	10nm,0.7s,mb4.7						
QSPA	**South Pole Qui**	**59.16**	**180**	P	**P**	**07 13 03.3**	**0.0**
	3.2nm,0.9s,mb4.4,baz=36,slow=4.3,SNR=6.7						
FINES	**FINESS Array B**	**145.46**	**339**	PKPbc	PKPbc	07 22 37.5	-2.4
	2.7nm,0.7s,baz=69,slow=4.6,SNR=8.3						
TORD	**Torodi Ar. Bea**	**162.28**	**181**	PKPab	PKPab	07 23 49.4	-2.4
	0.8nm,0.7s,baz=192,slow=1.3,SNR=5.4						

IDC 31 07:12:19.2±1.8, 39°.07N×110°.41E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.6/23, mbtmp3.7/6, ML2.7/1, Error ellipse: s-maj=38.8km s-min=23.5km az=92.0, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**9.23**	**343**	Pn	Pn	07 14 33.6	+0.1
	0.1nm,0.3s,baz=160,slow=13,SNR=11						
SONM				Lg		07 17 12.6	
	0.3nm,0.3s,baz=154,slow=30,SNR=3.6						
MKAR	**Makanchi Array**	**21.91**	**300**	P	P	07 17 14.1	+0.3
	3.2nm,0.9s,baz=102,slow=12,SNR=20						
CMAR	**Chiang Mai Arr**	**22.83**	**209**	P	P	07 17 23.6	-0.2
	3.3nm,0.8s,baz=14,slow=9.4,SNR=14						
ZALV	**Zalesovo Beam**	**22.88**	**319**	P	P	07 17 23.3	-0.8
	0.4nm,0.4s,baz=140,slow=7.6,SNR=2.3						
BRTR	**Keskin Array B**	**57.53**	**297**	P	P	07 22 11.0	+0.7
	0.3nm,0.3s,baz=72,slow=9.5,SNR=3.5						
ILAR	**Eielson Array**	**60.41**	**29**	P	P	07 22 29.9	+0.1
	0.5nm,1.0s,baz=294,slow=8.8,SNR=3.6						

*ISK **31** 07:21:23.8, 39°.94N×39°.74E, h19km, MD2.7*
*ISCJB **31** 07:21:25.8±0.6, 39°.94N±0°.04×39°.58E±0°.05, h22km±9km, Error ellipse: s-maj=7.1km s-min=6.7km az=167.0*
*DDA **31** 07:21:25.7, 39°.97N×39°.58E, h10km±1km, Md2.3*
*CSEM **31** 07:21:25.4±0.2, 39°.94N×39°.58E, h20km, MD2.3, Error ellipse: s-maj=5.3km s-min=4.2km az=97.0*
ISC 31 07:21:25.7±0.6, 39°.94N±0°.04×39°.59E±0°.05, h18km±5km, n15, σ0°71/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZC	**Erzincan**	**0.26**	**224**	*e*PG	**Pg**	**07 21 31.9**	**+0.3**
EZC	**Erzincan**	**0.26**	**224**	*e*Pg	**Pg**	**07 21 31.9**	**+0.3**
KELT	**Kelkit**	**0.33**	**309**	*i* P	**Pg**	**07 21 32.2**	**-0.5**
KELT				*i* S	**Sg**	**07 21 37.0**	**-0.5**
KELT	**Kelkit**	**0.33**	**309**	*i* P	**Pg**	**07 21 32.2**	**-0.5**
KELT				*i* S	**Sg**	**07 21 37.0**	**-0.5**
GUMT	**Gumushane**	**0.53**	**351**	*e*PG	**Pg**	**07 21 35.9**	**-0.4**
GUMT				*e*SG	**Sg**	**07 21 43.3**	**0.0**
KOPT	**Kop Dagi**	**0.70**	**83**	*i* P	**Pg**	**07 21 39.3**	**-0.1**
KOPT				*i* S	**Sg**	**07 21 50.0**	**+1.3**
KOPT	**Kop Dagi**	**0.70**	**83**	*i* P	**Pg**	**07 21 39.3**	**-0.1**
KOPT				*i* S	**Sg**	**07 21 50.0**	**+1.2**
MACK	**Trabzon**	**1.01**	**8**	*e*P	**Pb**	**07 21 44.4**	**-0.2**
MACK				*e*S	**Sb**	**07 21 57.0**	**-0.5**
MACK	**Trabzon**	**1.01**	**8**	*e*P	**Pb**	**07 21 44.4**	**-0.2**
MACK				*e*S	**Sb**	**07 21 57.0**	**-0.5**
PTK	**Pertek**	**1.06**	**188**	*e*PN	**Pn**	**07 21 44.6**	**-0.9**
PTK				*e*SN	**Sn**	**07 21 59.3**	**-0.5**
PTK	**Pertek**	**1.06**	**188**	*e*Pn	**Pn**	**07 21 44.7**	**-0.9**
PTK				*e*Sn	**Sn**	**07 21 59.3**	**-0.5**
SUSE	**Susehri**	**1.10**	**285**	*i* P	**Pb**	**07 21 46.2**	**+0.1**
SUSE				*i* S	**Sb**	**07 22 02.0**	**+1.9**
SUSE	**Susehri**	**1.10**	**285**	*i* P	**Pb**	**07 21 46.2**	**+0.1**
SUSE				*i* S	**Sb**	**07 22 02.0**	**+1.9**
ESPY	**Espiye-Giresun**	**1.18**	**326**	*e*PN	**Pn**	**07 21 47.4**	**+0.2**
ESPY	**Espiye-Giresun**	**1.18**	**326**	*e*Pn	**Pn**	**07 21 47.4**	**+0.2**

*IDC **31** 07:25:56.6±1.0, 10°.86S×163°.65E, h0km, mb4.3/11, mb1 4.4/11, mb1mx4.4/14, mbtmp4.2/11, MS3.9/6, Ms1 3.9/6, ms1mx3.7/18, Error ellipse: s-maj=38.0km s-min=21.7km az=132.0*
*BJI **31** 07:25:58.6, 9°.87S×164°.35E, h7km, mB5.2/6, mb4.7/12*
*ISCJB **31** 07:26:01.2±6.3, 10°.5S±0°.1×163°.6E±0°.1, h28km±44km, mb4.6/27, MS3.9/6, Error ellipse: s-maj=21.5km s-min=21.0km az=154.8*
*NEIC **31** 07:26:02.8±0.4, 10°.70S×163°.61E, h35km, mb4.9/13, Error ellipse: s-maj=17.5km s-min=8.8km az=151.0*
ISC 31 07:26:03.3±6.6, 10°.6S±0°.1×163°.6E±0°.1, h34km±46km, n50, σ0°99/39, mb4.6/27, MS3.9/6, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.77**	**288**	*e*Pn	**Pn**	**07 26 58.5**	**-0.5**
CTA	**Charters Tower**	**19.16**	**239**	*e*P	**Pn**	**07 30 25.6**	**+0.6**
	14nm,1.0s						
CTA	**Charters Tower**	**19.16**	**239**	P	**Pn**	**07 30 24.9**	**0.0**
	0.2nm,0.3s,baz=70,slow=12,SNR=11						
CTA	**Charters Tower**	**19.16**	**239**	P	**Pn**	**07 30 24.9**	**0.0**
CTAO	**Charters Tower**	**19.16**	**239**	*e*P	**Pn**	**07 30 25.7**	**+0.7**
	46nm,1.4s						
ARMA	**Armidale**	**22.61**	**208**	*e*P	**P**	**07 31 02.7**	**+1.6**
AFI	**Afiamalu**	**24.30**	**100**	LR	LR	07 38 49.2	
	comp=Z,250nm,19.5s,MS3.7,baz=208,slow=32						
STKA	**Stephens Creek**	**29.33**	**221**	P	**P**	**07 31 59.6**	**-3.3**
	1.7nm,0.8s,mb3.9,baz=48,slow=12,SNR=2.4						
STKA				LR	LR	07 43 10.3	
	comp=Z,286nm,18.0s,MS3.9,baz=205,slow=35						
GUMO	**Guam**	**30.39**	**322**	LR	LR	07 42 48.3	
	comp=Z,496nm,21.2s,MS4.1,baz=102,slow=33						
ASAR	**Alice Springs**	**31.10**	**242**	P	**P**	**07 32 16.5**	**-2.2**
	2.3nm,0.8s,mb4.0,baz=70,slow=9.5,SNR=18						
PPT	**Papeete**	**45.86**	**104**	LR	LR	07 47 59.7	
	comp=Z,153nm,21.8s,MS3.9,baz=159,slow=29						
MJAR	**Matsushiro Arr**	**52.65**	**334**	P	**P**	**07 35 17.6**	**+3.4**
	0.5nm,0.3s,mb3.9,baz=161,slow=6.9,SNR=5.3						
MJAR				LR	LR	07 55 51.9	
	comp=Z,119nm,19.9s,MS3.9,baz=150,slow=34						
MJAR	**Matsushiro Arr**	**52.65**	**334**	P	**P**	**07 35 17.6**	**+3.4**
MJAR				LR	LR	07 55 51.9	
KSRS	**Korea Array**	**58.35**	**327**	P	**P**	**07 35 54.5**	**-0.7**
	0.6nm,0.5s,mb3.9,baz=132,slow=6.7,SNR=4.5						
KSRS				LR	LR	08 00 05.2	
	comp=Z,64nm,18.0s,MS3.8,baz=302,slow=35						
PETK	**Petropavlovsk-**	**63.68**	**356**	P	**P**	**07 36 31.2**	**+0.2**
	3.8nm,1.0s,mb4.4,baz=151,slow=3.4,SNR=4.7						
KMI	**Kunming**	**69.09**	**302**	P	**P**	**07 37 12.8**	**+6.5**
KMI				pmax	pmax		
	comp=Z,23nm,1.7s,mb4.8						
CMAR	**Chiang Mai Arr**	**70.00**	**294**	P	**P**	**07 37 12.7**	**+0.7**
	comp=Z,3.2nm,0.8s,mb4.3,baz=113,slow=4.3,SNR=15						
LZH	**Lanzhou**	**72.91**	**313**	*e*P	**P**	**07 37 31.5**	**+2.3**
LZH				pP	pP	07 37 35.0	-4.9
LZH				sP	sP	07 37 37.3	-6.5
LZH				pmax	pmax		
	comp=Z,28nm,1.5s,mb5.0						
LZH				pmax	pmax		
	comp=Z,110nm,4.0s						
ULN	**Ulaanbaatar**	**76.72**	**325**	*e*P	**P**	**07 37 52.0**	**+0.9**
	comp=Z,21nm,1.3s,mb4.9						
SONM	**Songino Array**	**77.08**	**324**	P	**P**	**07 37 53.6**	**+0.6**
	comp=Z,2.5nm,0.8s,mb4.2,baz=141,slow=6.0,SNR=10						
GTA	**Gaotai**	**77.24**	**315**	*e*P	**P**	**07 37 55.3**	**+1.2**
GTA				pP	pP	07 37 59.8	-5.0
GTA				sP	sP	07 38 03.0	-5.8
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.3						
COLA	**College**	**83.56**	**19**	*e*P	**P**	**07 38 26.3**	**-1.3**
	comp=Z,7.9nm,1.1s,mb4.8						
ILAR	**Eielson Array**	**83.81**	**19**	P	**P**	**07 38 27.9**	**-0.9**
	comp=Z,2.9nm,1.1s,mb4.3,baz=238,slow=4.5,SNR=14						
EGAK	**Eagle**	**85.73**	**21**	*e*P	**P**	**07 38 38.7**	**+0.3**
	comp=Z,29nm,1.4s,mb5.3						
DAWY	**Dawson**	**85.94**	**22**	*e*P	**P**	**07 38 39.7**	**+0.2**
NVAR	**Mina Array Bea**	**87.39**	**50**	P	**P**	**07 38 47.6**	**+0.4**
	comp=Z,2.0nm,0.9s,mb4.3,baz=235,slow=7.4,SNR=11						
**

ILAR Eielson Array 83.92 19 P **P 08 03 37.5 -1.4**
0.6nm,1.0s,mb3.7,baz=252,slow=4.1,SNR=4.4
NVAR Mina Array Bea 87.47 50 P **P 08 03 56.7 -0.4**
1.1nm,0.9s,mb4.1,baz=240,slow=7.9,SNR=7.6
NVAR Mina Array Bea 87.47 50 P **P 08 03 56.7 -0.4**
MKAR Makanchi Array 91.85 317 P **P 08 04 18.2 +0.7**
0.3nm,0.3s,mb4.1,baz=94,slow=6.5,SNR=7.5
MKAR Makanchi Array 91.85 317 P **P 08 04 18.2 +0.7**
ZALV Zalesovo Beam 92.07 325 P **P 08 04 20.2 +1.9**
0.4nm,0.3s,mb4.2,baz=119,slow=5.1,SNR=2.5
DLMT Dillon 93.26 45 *e*P **P 08 04 23.7 -0.3**
3.0nm,0.9s,mb4.7
ARCES ARCESS Array B 115.50 345 PKP PKPdf 08 09 49.7 -0.9
1.6nm,0.7s,baz=72,slow=4.0,SNR=4.8
NB2 NORSAR Subarra125.84 344 PKPdf PKPdf 08 10 09.8 -0.9
comp=Z,0.2nm,0.4s,baz=31,slow=1.9
NOA NORSAR Array B125.84 344 PKP PKPdf 08 10 09.9 -0.8
comp=Z,0.5nm,0.6s,baz=32,slow=1.9,SNR=4.5

IDC ***31*** *07:55:15.2±3.4, 10°.30S×163°.64E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.8/15, mbtmp3.8/4, Error ellipse: s-maj=124.3km s-min=39.2km az=136.0*
ISCJB ***31*** *07:55:20.1±1.0, 10°.1S±0°.1×163°.3E±0°.2, h33km, mb3.7/4, Error ellipse: s-maj=33.0km s-min=15.0km az=160.0*
ISC 31 07:55:22.1±1.0, 10°.1S±0°.1×163°.4E±0°.2, h35km, n9, σ0°59/9, mb3.7/4, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NOUC	**Port Laguerre**	**12.31**	**167**	*e*S		**Pn**		**07 58 19.3**	**+4.2**
NOUC						AMP		07 58 20.0	
	comp=Z,28nm,4.3s								
DZM	**Mont Dzumac**	**12.31**	**166**	*e*P		**Pn**		**07 58 15.6**	**+0.5**
	comp=Z,128nm,0.9s								
DZM	**Mont Dzumac**	**12.31**	**166**	*e*S		**Pn**		**07 58 15.4**	**+0.3**
DZM						AMP		07 58 22.6	
	comp=Z,418nm,8.9s								
NORM	**Noumea**	**12.48**	**166**	*e*S		**Pn**		**07 58 17.0**	**-0.3**
BAYA	**Yate Dam**	**12.50**	**165**	*e*S		**Pn**		**07 58 09.0**	**-8.6**
ASAR	**Alice Springs**	**31.18**	**241**	P		**P**		**08 01 37.5**	**-0.7**
	comp=Z,0.8nm,0.9s,mb3.5,baz=80,slow=10,SNR=4.9								
CMAR	**Chiang Mai Arr**	**69.56**	**294**	P		**P**		**08 06 28.9**	**+0.9**
	comp=Z,0.5nm,0.3s,mb3.9,baz=105,slow=3.2,SNR=2.4								
ILAR	**Eielson Array**	**83.34**	**19**	P		**P**		**08 07 44.6**	**-0.4**
	comp=Z,0.4nm,0.8s,mb3.5,baz=240,slow=6.1,SNR=4.6								
MKAR	**Makanchi Array**	**91.19**	**317**	P		**P**		**08 08 23.6**	**0.0**
	comp=Z,0.2nm,0.2s,mb4.0,baz=96,slow=4.3,SNR=2.7								

IDC 31 07:58:58.2±1.9, 10°.48S×163°.58E, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.8/16, mbtmp3.8/7, ML4.1/1, Error ellipse: s-maj=72.4km s-min=29.0km az=141.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**19.23**	**238**	P		P	Pn	08 03 24.5	-0.5
	0.3nm,0.3s,baz=48,slow=11,SNR=2.6								
ASAR	**Alice Springs**	**31.17**	**241**	P		P		08 05 19.1	0.0
	0.8nm,1.0s,baz=72,slow=8.9,SNR=4.9								
CMAR	**Chiang Mai Arr**	**69.94**	**294**	P		P		08 10 12.0	+0.1
	0.7nm,0.3s,baz=103,slow=4.0,SNR=3.0								
SONM	**Songino Array**	**76.97**	**324**	P		P		08 10 53.6	+1.0
	0.4nm,0.5s,baz=150,slow=6.0,SNR=2.7								
ILAR	**Eielson Array**	**83.67**	**19**	P		P		08 11 28.2	-0.2
	0.3nm,0.9s,baz=236,slow=4.0,SNR=3.6								
NVAR	**Mina Array Bea**	**87.30**	**50**	P		P		08 11 47.7	+0.6
	0.6nm,0.9s,baz=256,slow=11,SNR=3.2								
MKAR	**Makanchi Array**	**91.66**	**317**	P		P		08 12 06.5	-0.9
	0.2nm,0.2s,baz=101,slow=6.0,SNR=2.2								

IDC 31 07:59:43.7±1.8, 10°.91S×163°.73E, h0km, mb4.0/6, mb1 4.2/6, mb1mx4.0/15, mbtmp3.9/6, Error ellipse: s-maj=68.2km s-min=30.6km az=149.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**19.14**	**239**	P		P	Pn	08 04 12.4	+3.1
	0.2nm,0.3s,baz=71,slow=14,SNR=4.6								
ASAR	**Alice Springs**	**31.09**	**242**	P		P		08 06 03.5	-0.5
	1.4nm,0.8s,baz=76,slow=9.8,SNR=8.4								
CMAR	**Chiang Mai Arr**	**70.25**	**294**	P		P		08 11 00.2	+1.0
	0.9nm,0.4s,baz=120,slow=4.6,SNR=6.1								
SONM	**Songino Array**	**77.40**	**324**	P		P		08 11 40.8	+0.2
	1.1nm,0.8s,baz=142,slow=7.5,SNR=4.4								
ILAR	**Eielson Array**	**84.03**	**19**	P		P		08 12 14.1	-1.6
	0.5nm,0.7s,baz=246,slow=5.8,SNR=5.9								
NVAR	**Mina Array Bea**	**87.46**	**50**	P		P		08 12 34.8	+1.5
	0.4nm,0.7s,baz=232,slow=6.7,SNR=3.0								
MKAR	**Makanchi Array**	**92.08**	**317**	P		P		08 12 54.9	+0.1
	0.8nm,0.7s,baz=101,slow=6.3,SNR=6.6								

IDC ***31*** *08:02:10.0±0.8, 10°.75S×163°.64E, h0km, mb4.4/13, mb1 4.6/14, mb1mx4.5/17, mbtmp4.4/14, ML4.1/1, Error ellipse: s-maj=32.7km s-min=17.7km az=131.0*
BJI ***31*** *08:02:12.3, 10°.13S×163°.60E, h8km, mB5.0/19, mb4.8/27, Ms4.8/15, Ms7 4.4/15*
ISCJB ***31*** *08:02:14.7±3.3, 10°.61S±0°.07×163°.41E±0°.04, h32km±23km, mb4.6/39, MS4.5/8, Error ellipse: s-maj=11.6km s-min=7.0km az=12.7*
MOS ***31*** *08:02:15.9±0.9, 10°.59S×163°.35E, h44km, mb4.9/9, Error ellipse: s-maj=10.8km s-min=9.5km az=12.3*
NEIC ***31*** *08:02:16.5±0.3, 10°.54S×163°.41E, h35km, mb4.6/13, Error ellipse: s-maj=10.0km s-min=6.7km az=147.0*
ISC 31 08:02:15.6±2.7, 10°.61S±0°.07×163°.47E±0°.04, h27km±19km, h16km±1.2km: pP-P, n207, σ0°64/194, mb4.6/39, MS4.5/8, 65C-58D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.66**	**288**	Pn		**Pn**		**08 03 10.6**	**+0.2**
HNR				*e*Sn		**Sn**		**08 03 52.5**	**-0.3**
MSVF	**Nonsavu**	**15.81**	**118**	*e*P		**Pn**		**08 05 58.1**	**+1.6**
MSVF				pmax		pmax			
	comp=Z,35nm,1.5s								
MSVF	**Nonsavu**	**15.81**	**118**	*e*Pn		**Pn**		**08 05 58.1**	**+1.6**
	comp=Z,35nm,1.5s								
PMG	**Port Moresby**	**16.10**	**273**	*e*P		**Pn**		**08 05 58.1**	**-2.2**
PMG				pmax		pmax			
	comp=Z,24nm,1.0s								
PMG	**Port Moresby**	**16.10**	**273**	*e*Pn		**Pn**		**08 05 58.1**	**-2.2**
	comp=Z,24nm,1.0s								
EIDS	**Eidsvold**	**18.80**	**217**	*e*P		**Pn**		**08 06 35.3**	**+1.6**
	comp=Z,48nm,1.6s								
CTA	**Charters Tower**	**19.07**	**238**	*e*P		**Pn**		**08 06 37.5**	**+0.4**
	comp=Z,15nm,0.9s								
CTA	**Charters Tower**	**19.07**	**238**	P		**Pn**		**08 06 36.8**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=61,slow=12,SNR=17								
CTAO	**Charters Tower**	**19.07**	**238**	*e*P		**Pn**		**08 06 37.3**	**+0.2**
CTAO				pmax		pmax			
	comp=Z,32nm,1.1s								
CTAO	**Charters Tower**	**19.07**	**238**	*e*Pn		**Pn**		**08 06 37.3**	**+0.2**
	comp=Z,32nm,1.1s								
ARMA	**Armidale**	**22.58**	**207**	*e*P		**P**		**08 07 14.5**	**+0.5**
ARMA	**Armidale**	**22.58**	**207**	*e*P		**P**		**08 07 14.5**	**+0.5**
	comp=Z,13nm,1.1s,mb4.3								
STKA	**Stephens Creek**	**29.27**	**220**	*e*P		**P**		**08 08 15.1**	**-0.6**
	comp=Z,2.2nm,0.9s,mb3.9								
STKA	**Stephens Creek**	**29.27**	**220**	P		**P**		**08 08 15.0**	**-0.7**
	comp=Z,3.3nm,0.8s,mb4.1,baz=23,slow=6.6,SNR=4.2								
WRAB	**Tennant Creek**	**29.53**	**248**	*e*P		**P**		**08 08 17.6**	**-0.6**
WRAB				pmax		pmax			
	comp=Z,57nm,2.0s,mb5.0								
WRAB	**Tennant Creek**	**29.53**	**248**	*e*P		**P**		**08 08 17.6**	**-0.6**
	comp=Z,57nm,2.0s,mb5.0								
ASAR	**Alice Springs**	**31.01**	**241**	P		**P**		**08 08 29.3**	**-1.9**
	comp=Z,5.6nm,0.8s,mb4.4,baz=73,slow=9.6,SNR=32								
FITZ	**Fitzroy Crossi**	**37.34**	**254**	*e*P		**P**		**08 09 24.3**	**-1.8**
	comp=Z,5.6nm,0.8s,mb4.5								
FITZ	**Fitzroy Crossi**	**37.34**	**254**	P		**P**		**08 09 24.0**	**-2.1**
	comp=Z,3.2nm,0.8s,mb4.2,baz=90,slow=8.3								
SSE	**Sheshan**	**57.99**	**317**	P		**P**		**08 12 06.0**	**-0.2**
SSE				pmax		pmax			
	comp=Z,15nm,0.8s,mb5.1								
SSE				pmax		pmax			
	comp=Z,91nm,3.4s								
SSE				LR		LR			
	comp=N,120nm,29.9s,MS4.1								
SSE				LR		LR			
	comp=E,200nm,29.0s,MS4.1								
SSE				LR		LR			
	comp=Z,310nm,23.7s								
KSRS	**Korea Array**	**58.27**	**327**	P		**P**		**08 12 08.9**	**+0.9**
	comp=Z,0.5nm,0.4s,mb3.9,baz=146,slow=6.6,SNR=5.9								
KSRS	**Korea Array**	**58.27**	**327**	P		**P**		**08 12 08.9**	**+0.9**
KSRS				pmax		pmax			
	comp=Z,1.0nm,0.4s,mb4.2								
NJ2	**Nanjing**	**60.15**	**317**	*e*P		**P**		**08 12 21.5**	**+0.4**
NJ2				pmax		pmax			
	comp=Z,10.0nm,0.7s,mb5.0								
YSS	**Yuzh-Sakhalins**	**60.22**	**344**	*e*P		**P**		**08 12 20.2**	**-1.0**
YSS				pmax		pmax			
	comp=Z,15nm,1.3s,mb4.9								
QIZ	**Qiongzhong**	**60.50**	**299**	P		**P**		**08 12 23.0**	**-0.8**
QIZ				S		**S**		**08 20 39.3**	**+1.2**
QIZ				pmax		pmax			
	comp=Z,13nm,1.8s,mb4.8								
QIZ				LR		LR			
	comp=N,170nm,18.0s,MS4.2								
QIZ				LR		LR			
	comp=E,79nm,20.1s,MS4.2								
QIZ				LR		LR			
	comp=Z,270nm,19.1s,MS4.4								
WHN	**Wuhan**	**62.44**	**313**	P		**P**		**08 12 38.5**	**+1.9**
MDJ	**Mudanjiang**	**62.94**	**333**	P		**P**		**08 12 40.0**	**+0.3**
MDJ				pP		pP		08 12 43.0	-5.1
MDJ				sP		sP		08 12 44.3	-6.9
MDJ				pmax		pmax			
	comp=Z,3.0nm,0.5s,mb4.7								
MDJ				pmax		pmax			
	comp=Z,39nm,4.8s								
MDJ				LR		LR			
	comp=N,440nm,28.3s,MS4.7								
MDJ				LR		LR			
	comp=E,460nm,25.2s,MS4.7								
MDJ				LR		LR			
	comp=Z,690nm,28.3s,MS4.7								
PETK	**Petropavlovsk-**	**63.65**	**356**	P		**P**		**08 12 44.2**	**0.0**
	comp=Z,2.3nm,0.8s,mb4.3,baz=140,slow=9.4,SNR=4.0								
GYA	**Guiyang**	**66.33**	**305**	*e*P		**P**		**08 13 03.3**	**+1.1**
GYA				PP		PP		08 15 31.0	+2.4
GYA				ScP				08 17 34.8	
GYA				S		S		08 21 52.5	+2.0
GYA				SKS				08 22 56.0	
GYA				pmax		pmax			
	comp=Z,10.0nm,1.0s,mb4.8								
GYA				pmax		pmax			
	comp=Z,80nm,5.2s								
GYA				LR		LR			
	comp=N,460nm,19.0s,MS4.8								
GYA				LR		LR			
	comp=E,310nm,20.5s,MS4.8								
GYA				LR		LR			
	comp=Z,420nm,19.2s,MS4.7								
BJI	**Beijing**	**66.75**	**322**	P		**P**		**08 13 04.5**	**-0.1**
BJI				S		S		08 21 58.0	+2.9
BJI				pmax		pmax			
	comp=Z,4.0nm,0.6s,mb4.6								
BJI				pmax		pmax			
	comp=Z,32nm,3.9s								
BJI				LR		LR			
	comp=N,500nm,24.9s,MS4.7								
BJI				LR		LR			
	comp=E,370nm,28.8s,MS4.7								
BJI				LR		LR			
	comp=Z,960nm,31.4s,MS4.8								
SBA	**Scott Base**	**67.25**	**179**	*e*P		**P**		**08 13 08.4**	**+1.1**
SBA				pmax		pmax			
	comp=Z,139nm,3.0s								
SBA	**Scott Base**	**67.25**	**179**	*e*P		**P**		**08 13 08.4**	**+1.1**
	comp=Z,139nm,3.0s								
KMI	**Kunming**	**68.99**	**302**	P		**P**		**08 13 21.0**	**+2.0**
KMI				pP		pP		08 13 25.5	-2.0
KMI				sP		sP		08 13 27.5	-3.2
KMI				PP		PP		08 15 53.0	+1.2
KMI				S		S		08 22 21.3	-1.2
KMI				sS		sS		08 22 29.3	-7.1
KMI				pmax		pmax			
	comp=Z,17nm,1.1s,mb4.9								
KMI				pmax		pmax			
	comp=Z,110nm,3.5s								
KMI				LR		LR			
	comp=N,150nm,20.6s,MS4.4								
KMI				LR		LR			
	comp=E,180nm,17.7s,MS4.4								
KMI				LR		LR			
	comp=Z,210nm,19.6s,MS4.4								
CMAR	**Chiang Mai Arr**	**69.89**	**294**	P		**P**		**08 13 25.3**	**+0.6**
	comp=Z,4.9nm,0.9s,mb4.5,baz=117,slow=5.1,SNR=18								
HHC	**Hu-ho-hao-te**	**70.06**	**321**	*e*P		**P**		**08 13 26.8**	**+1.5**
HHC				S		S		08 22 36.0	+1.5
HHC				pmax		pmax			
	comp=Z,14nm,0.7s,mb5.0								
HHC				pmax		pmax			
	comp=Z,88nm,7.2s								
CD2	**Chengdu**	**70.56**	**308**	P		**P**		**08 13 30.5**	**+1.9**
CD2				pP		pP		08 13 35.3	-1.8
CD2				sP		sP		08 13 37.5	-2.8
CD2				PP		PP		08 16 07.3	+2.0
CD2				S		S		08 22 43.0	+2.2
CD2				sS		sS		08 22 50.0	-4.8
CD2				SKS				08 23 27.5	
CD2				SS		SS		08 27 16.5	+3.6
CD2				pmax		pmax			
	comp=Z,10.0nm,0.8s,mb4.8								
CD2				pmax		pmax			
	comp=Z,140nm,7.7s								
CD2				LR		LR			
	comp=N,360nm,19.6s								
CD2				LR		LR			
	comp=Z,360nm,25.0s								
LZH	**Lanzhou**	**72.81**	**313**	*e*P		**P**		**08 13 44.5**	**+2.4**
LZH				pP		pP		08 13 48.8	-1.8
LZH				sP		sP		08 13 51.0	-2.7
LZH				pmax		pmax			
	comp=Z,17nm,1.5s,mb4.8								
SEY	**Seymchan**	**73.81**	**355**	*i*P		**P**		**08 13 47.2**	**-0.1**
ULN	**Ulaanbaatar**	**76.64**	**325**	*e*P		**P**		**08 14 04.6**	**+0.7**
SONM	**Songino Array**	**77.00**	**325**	P		**P**		**08 14 06.2**	**+0.2**
	comp=Z,2.8nm,0.8s,mb4.2,baz=138,slow=6.1,SNR=9.1								
YAK	**Yakutsk**	**77.06**	**344**	*i*P		**P**		**08 14 05.1**	**-0.9**
YAK				pmax		pmax			
	comp=Z,15nm,0.6s,mb5.1								
GTA	**Gaotai**	**77.15**	**315**	*e*P		**P**		**08 14 08.5**	**+1.5**
GTA				pP		pP		08 14 13.0	-2.6
GTA				sP		sP		08 14 16.0	-2.7
GTA				S		S		08 23 56.3	+1.6
GTA				sS		sS		08 24 04.3	-4.6
GTA				SKS				08 24 15.5	
GTA				SS		SS		08 28 56.8	+3.9
GTA				pmax		pmax			
	comp=Z,5.0nm,1.1s,mb4.4								
GTA				pmax		pmax			
	comp=Z,110nm,7.4s								
GTA				LR		LR			
	comp=N,150nm,15.5s,MS4.6								
GTA				LR		LR			
	comp=E,190nm,15.8s,MS4.6								
GTA				LR		LR			
	comp=Z,140nm,14.9s,MS4.4								
BILL	**Bilibino**	**78.47**	**1⇑**	*i*P		**P**		**08 14 13.6**	**-0.1**
BILL				*i*		pP		08 14 20.0	-2.3
BILL				pmax		pmax			
	comp=Z,12nm,0.9s,mb4.8								
BILL				MLR		MLR			
	comp=Z,500nm,18.0s,MS4.9								
RSO	**Redoubt South**	**78.88**	**20**	*e*P		**P**		**08 14 19.2**	**+3.0**
QSPA	**South Pole Qui**	**79.39**	**180**	*e*P		**P**		**08 14 17.9**	**-0.8**
	comp=Z,5.4nm,1.0s,mb4.4								
ZAK	**Zakamensk**	**80.07**	**326**	*e*P		**P**		**08 14 22.7**	**-0.1**
ZAK				pmax		pmax			
	comp=Z,1.0nm,0.9s,mb3.8								
TLY	**Talaya**	**80.53**	**327**	*i*P		**P**		**08 14 25.0**	**-0.3**
TLY				pmax		pmax			
	comp=Z,3.0nm,0.8s,mb4.3								
COLA	**College**	**83.58**	**19**	*e*P		**P**		**08 14 39.5**	**-1.5**
COLA				pmax		pmax			
	comp=Z,4.0nm,0.8s,mb4.6								
COLA	**College**	**83.58**	**19**	*e*P		**P**		**08 14 39.5**	**-1.6**
	comp=Z,3.9nm,0.8s,mb4.6								
ILAR	**Eielson Array**	**83.82**	**19**	P		**P**		**08 14 40.9**	**-1.4**
	comp=Z,2.7nm,0.9s,mb4.3,baz=243,slow=4.6,SNR=16								
MAW	**Mawson**	**84.28**	**202**	P		**P**		**08 14 43.8**	**-0.9**
	comp=Z,5.6nm,1.1s,mb4.6,baz=88,slow=3.7,SNR=6.6								
MAW	**Mawson**	**84.28**	**202**	*e*P		**P**		**08 14 44.5**	**-0.3**
TIXI	**Tiksi**	**85.25**	**350**	*i*P		**P**		**08 14 49.1**	**-0.2**
EGAK	**Eagle**	**85.75**	**21**	*e*P		**P**		**08 14 52.3**	**+0.3**
DAWY	**Dawson**	**85.97**	**22**	*e*P		**P**		**08 14 53.4**	**+0.3**
NLWA	**Neilton Lookou**	**86.28**	**41**	⇓P		**P**		**08 14 55.0**	**0.0**
	baz=86								
H04A	**Detroit Lake**	**86.50**	**43**	⇓P		**P**		**08 14 55.9**	**-0.2**
	baz=86								
ISA	**Isabella**	**86.59**	**53**	⇓P		**P**		**08 14 56.5**	**-0.3**
	baz=87								
WCN	**Washoe City**	**86.61**	**49**	⇑P		**P**		**08 14 56.7**	**-0.1**
	baz=87								
EDW2	**Edwards Air Fo**	**86.77**	**54**	⇑P		**P**		**08 14 57.3**	**-0.4**
	baz=87								
K05A	**Summer Lake**	**86.79**	**46**	⇓P		**P**		**08 14 57.8**	**+0.2**
	baz=87								
WMQ	**Urumqi**	**87.21**	**315**	*e*P		**P**		**08 14 59.5**	**-0.1**
WMQ				pP		pP		08 15 04.3	-4.0
WMQ				sP		sP		08 15 06.5	-4.9
WMQ				PP		PP		08 18 25.5	+1.7
WMQ				pmax		pmax			
	comp=Z,9.0nm,1.2s,mb4.9								
WMQ				pmax		pmax			
	comp=Z,100nm,5.2s								
D05A	**Enumclaw**	**87.42**	**41**	⇑P		**P**		**08 15 00.5**	**-0.1**
	baz=88								
NVAR	**Mina Array Bea**	**87.46**	**50**	P		**P**		**08 15 00.6**	**-0.4**
	comp=Z,2.8nm,0.9s,mb4.5,baz=237,slow=7.9,SNR=14								
MPMC	**Manual Prospec**	**87.47**	**53**	⇑P		**P**		**08 15 01.2**	**+0.1**
	baz=88								
MONP	**Monument Peak**	**87.53**	**56**	⇑P		**P**		**08 15 01.2**	**-0.2**
	baz=88								
PFO	**Pinyon Flat Ob**	**87.67**	**55**	⇑P		**P**		**08 15 01.8**	**-0.3**
	baz=88								
BELC	**Belle Mtn. Jos**	**88.14**	**55**	⇑P		**P**		**08 15 04.3**	**-0.1**
	baz=88								
I07A	**Izee**	**88.15**	**45**	⇓P		**P**		**08 15 04.0**	**-0.2**
	baz=88								
WVOR	**Wild Horse Val**	**88.30**	**46**	*e*P		**P**		**08 15 04.9**	**0.0**
WVOR				pmax		pmax			
	comp=Z,4.0nm,1.2s,mb4.5								
WVOR	**Wild Horse Val**	**88.30**	**46**	*e*P		**P**		**08 15 04.9**	**0.0**
	comp=Z,3.7nm,1.2s,mb4.5								
SHOC	**Shoshone**	**88.38**	**53**	⇓P		**P**		**08 15 05.7**	**+0.3**
	baz=88								
BC3	**Big Chuckawall**	**88.50**	**56**	⇓P		**P**		**08 15 06.0**	**-0.1**
	baz=88								
GMRC	**Granite Mounta**	**88.60**	**54**	⇑P		**P**		**08 15 06.3**	**-0.2**
	baz=89								
S10A	**Tonopah Range,**	**88.63**	**51**	⇓P		**P**		**08 15 06.2**	**-0.3**
	baz=89								
J08A	**Circle Bar Ran**	**88.67**	**46**	⇑P		**P**		**08 15 06.3**	**-0.3**
	baz=89								
IRM	**Iron Mountain**	**88.86**	**55**	⇓P		**P**		**08 15 07.4**	**-0.3**
	baz=89,SNR=6.1								
G08A	**Pilot Rock**	**88.87**	**44**	⇑P		**P**		**08 15 07.6**	**+0.1**
	baz=89,SNR=6.0								
V11A	**Goodsprings**	**89.03**	**53**	⇑P		**P**		**08 15 08.1**	**-0.4**
	baz=89								
S11A	**Rachel**	**89.21**	**52**	⇓P		**P**		**08 15 09.2**	**-0.1**
	baz=89								
V12A	**Nelson**	**89.46**	**54**	⇑P		**P**		**08 15 10.4**	**-0.2**
	baz=90								
B08A	**Colville Reser**	**89.48**	**41**	⇓P		**P**		**08 15 10.2**	**-0.1**
	baz=90								
R11A	**Troy Canyon, C**	**89.51**	**51**	⇑P		**P**		**08 15 10.3**	**-0.3**
	baz=90								
T11A	**Corn Creek, Al**	**89.53**	**52**	⇑P		**P**		**08 15 10.5**	**-0.2**
	baz=90								
M10A	**I.L. Ranch, Tu**	**89.57**	**48**	⇑P		**P**		**08 15 11.0**	**+0.1**
	baz=90								
Q11A	**Duckwater**	**89.57**	**50**	⇑P		**P**		**08 15 11.0**	**0.0**
	baz=90								
113A	**Mohawk Valley,**	**89.67**	**57**	⇑P		**P**		**08 15 11.3**	**-0.2**
	baz=90								
PDMCI	**Parker Dam,Lak**	**89.71**	**55**	⇑P		**P**		**08 15 11.6**	**-0.1**
	baz=90								
Y13A	**Salome**	**89.85**	**56**	⇓P		**P**		**08 15 12.3**	**-0.1**
	baz=90								
Z13A	**Yuma Proving G**	**89.86**	**56**	⇓P		**P**		**08 15 12.3**	**-0.1**
	baz=90,SNR=7.3								
U12A	**Valley of Fire**	**89.87**	**53**	⇓P		**P**		**08 15 12.1**	**-0.3**
	baz=90								
S12A	**Delamar Landin**	**89.90**	**52**	⇓P		**P**		**08 15 12.6**	**+0.1**
	baz=90								
X13A	**Yucca**	**90.02**	**55**	⇑P		**P**		**08 15 13.0**	**-0.2**
	baz=90								
W13A	**Hualapai Mount**	**90.09**	**54**	⇓P		**P**		**08 15 13.5**	**+0.1**
	baz=90								
M11A	**Holland Ranch,**	**90.09**	**48**	⇑P		**P**		**08 15 13.3**	**0.0**
	baz=90								
F10A	**Beach Ranch, E**	**90.22**	**43**	⇑P		**P**		**08 15 13.8**	**0.0**
	baz=90								
Q12A	**Willow Creek R**	**90.24**	**50**	⇑P		**P**		**08 15 14.3**	**+0.2**
	baz=90								
R12A	**Pony Springs,**	**90.25**	**51**	⇓P		**P**		**08 15 14.3**	**+0.1**
	baz=90,SNR=5.5								
P12A	**McGill**	**90.29**	**50**	⇑P		**P**		**08 15 14.3**	**0.0**
	baz=90								
L11A	**Cat Creek Ranc**	**90.30**	**47**	⇑P		**P**		**08 15 14.5**	**+0.2**
	baz=90,SNR=5.3								
114A	**Black Gap (USA**	**90.39**	**57**	⇓P		**P**		**08 15 15.2**	**+0.2**
	baz=90								
Z14A	**Wintersburg**	**90.47**	**56**	⇓P		**P**		**08 15 15.2**	**-0.1**
	baz=90								
N12A	**Clover Valley,**	**90.51**	**49**	⇓P		**P**		**08 15 15.1**	**-0.2**
	baz=90,SNR=6.4								
N12A	**Clover Valley,**	**90.51**	**49**	*e*P		**P**		**08 15 15.5**	**+0.3**
Y14A	**Wickenburg**	**90.55**	**56**	⇑P		**P**		**08

MK31	Makanchi Array	91.67	317	eP	P	08 15 20.6	0.0
MKAR	Makanchi Array	91.67	317	P	P	08 15 20.6	+0.1
	comp=Z,2.8nm,0.7s,mb4.7,baz=144,slow=5.8,SNR=24						
T15A	Red Dirt Ranch	91.69	53	⇓P	P	08 15 21.1	+0.2
	baz=92						
P14A	Drum Mountains	91.70	50	⇓P	P	08 15 21.0	+0.1
	baz=92						
J13A	Cove Ranch, Pi	91.72	46	⇓P	P	08 15 20.9	+0.1
	baz=92,SNR=6.2						
D12A	Red Ives Fores	91.74	43	⇑P	P	08 15 20.7	-0.2
	baz=92						
Y16A	Circle Bar Ran	91.78	56	⇓P	P	08 15 21.2	-0.1
	baz=92						
I13A	Wildhorse Cree	91.87	46	⇓P	P	08 15 21.8	+0.2
	baz=92,SNR=10						
ZALV	Zalesovo Beam	91.90	325	P	P	08 15 20.6	-0.7
	comp=Z,1.0nm,0.7s,mb4.3,baz=64,slow=3.4,SNR=5.4						
M14A	Sheep Mountain	91.90	48	⇑P	P	08 15 21.9	+0.2
	baz=92						
X16A	Lo Mia Camp, P	91.91	56	⇓P	P	08 15 22.5	+0.5
	baz=92						
H13A	Challis	91.92	45	⇓P	P	08 15 21.6	-0.1
	baz=92,SNR=9.4						
G13A	Cobalt	92.05	45	⇓P	P	08 15 22.2	-0.1
	baz=92,SNR=11						
L14A	Malta	92.09	48	⇑P	P	08 15 22.8	+0.2
	baz=92						
F13A	Darby	92.14	44	⇑P	P	08 15 22.4	-0.4
	baz=92,SNR=16						
MSU	Marysvale	92.15	51	eP	P	08 15 24.4	+1.4
K14A	Jones Ranch, D	92.25	47	⇑P	P	08 15 23.4	+0.1
	baz=92,SNR=5.4						
C13A	Hot Springs	92.40	42	⇓P	P	08 15 24.4	+0.6
	baz=92						
X17A	Forest Lakes	92.41	56	⇓P	P	08 15 25.0	+0.7
	baz=92						
S16A	Weppner Ranch,	92.44	52	⇑P	P	08 15 24.5	+0.2
	baz=92						
H14A	Leadore	92.55	45	⇓P	P	08 15 24.4	-0.3
	baz=93,SNR=10						
G14A	Jackson	92.62	45	⇓P	P	08 15 25.1	+0.1
	baz=93						
V17A	Tonalea, Kykot	92.67	54	⇑P	P	08 15 25.4	0.0
	baz=93						
L15A	Malad City	92.71	48	⇓P	P	08 15 26.0	+0.5
	baz=93						
K15A	Arbon	92.74	47	⇓P	P	08 15 25.8	+0.2
	baz=93						
118A	Homack Ranch,	92.78	57	⇓P	P	08 15 26.0	-0.1
	baz=93						
A13A	Flathead Natio	92.79	41	⇑P	P	08 15 25.8	+0.2
	baz=93						
E14A	Clinton	92.85	43	⇑P	P	08 15 25.9	-0.1
	baz=93						
J15A	Blackfoot	92.96	47	⇓P	P	08 15 26.7	+0.2
	baz=93						
C14A	Swan Lake	92.97	42	⇓P	P	08 15 26.2	-0.3
	baz=93						
D14A	Greenough	92.98	43	⇑P	P	08 15 26.3	-0.2
	baz=93						
Q16A	Castle Valley	93.00	51	⇑P	P	08 15 27.5	+0.6
	baz=93						
JLU	Jordanelle	93.12	49	eP	P	08 15 26.1	-1.3
319A	Douglas	93.12	59	⇓P	P	08 15 27.3	-0.3
	baz=93						
WALA	Waterton Lakes	93.14	41	eP	P	08 15 27.6	+0.3
N16A	Rees Ranch, Co	93.19	49	⇑P	P	08 15 27.6	-0.1
	baz=93						
DLMT	Dillon	93.24	45	eP	P	08 15 27.9	+0.1
R17A	Hanksville Air	93.26	52	⇓P	P	08 15 27.9	-0.2
	baz=93						
G15A	Dillon	93.27	45	⇑P	P	08 15 28.0	0.0
	baz=93,SNR=6.1						
E15A	Deer Lodge	93.42	44	⇑P	P	08 15 28.5	-0.1
	baz=93						
A14A	Double T Ranch	93.43	41	⇓P	P	08 15 29.0	+0.4
	baz=93						
C15A	Salmond Ranch,	93.72	42	⇓P	P	08 15 29.7	-0.2
	baz=94						
G16A	Moss Hill, Enn	93.76	45	⇑P	P	08 15 30.1	-0.2
	baz=94						
F16A	Kennard Place,	93.99	44	⇑P	P	08 15 30.6	-0.7
	baz=94						
H16A	Russell Place,	94.05	45	⇑P	P	08 15 32.2	+0.7
	baz=94						
D16A	Dana Ranch, Ca	94.28	43	⇑P	P	08 15 32.2	-0.4
	baz=94						
C16A	Fuhringer Ranc	94.29	42	⇑P	P	08 15 32.1	-0.5
	baz=94						
G17A	Pierce Place,	94.52	45	⇓P	P	08 15 34.0	+0.3
	baz=94						
F17A	Fitzpatrick Pl	94.68	44	⇑P	P	08 15 34.4	-0.1
	baz=95						
KURK	Kurchatov	94.88	321	⇑iP	P	08 15 33.4	-1.8
KURK				pmax	pmax		
	comp=Z,5.0nm,2.5s,mb4.5						
A17A	Triple J Farms	95.19	41	⇑P	P	08 15 36.0	-0.6
	baz=95						
E18A	Harlowton	95.30	44	⇓P	P	08 15 37.8	+0.5
	baz=95						
U21A	Nageezi	95.31	54	⇑P	P	08 15 37.8	+0.2
	baz=95						
YKA	Yellowknife Ar	95.62	28	P	P	08 15 36.3	-2.0
	comp=Z,2.0nm,0.9s,mb4.6,baz=247,slow=4.2,SNR=6.0						
EGMT	Eagleton	95.65	42	⇑P	P	08 15 38.3	-0.6
	baz=96						
EGMT	Eagleton	95.65	42	eP	P	08 15 38.5	-0.4
	comp=Z,4.2nm,0.9s,mb4.9						
425A	Indio Mountain	96.66	60	⇓P	P	08 15 43.5	-0.4
	baz=97						
BVAR	Borovoye Array	100.23	322	P	Pdif	08 15 57.9	-1.5
	comp=Z,0.7nm,0.6s,baz=114,slow=3.6,SNR=4.9						
BRVK	Borovoye	100.30	322	eP	Pdif	08 15 57.7	-1.9
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ARCES	ARCESS Array B	115.34	345	PKP	PKPdf	08 20 51.7	-2.6
	comp=Z,1.8nm,0.6s,baz=45,slow=0.7,SNR=6.9						
FINES	FINESS Array B	120.53	338	PKP	PKPdf	08 21 02.9	-1.6
	comp=Z,2.1nm,0.8s,baz=139,slow=15,SNR=5.1						
AKASG	Malin Array Be	125.26	326	PKP	PKPdf	08 21 13.1	-0.8
	comp=Z,0.8nm,0.5s,baz=66,slow=1.5,SNR=5.7						
AKASG	Malin Array Be	125.26	326	PKP	PKPdf	08 21 13.1	-0.8
NB2	NORSAR Subarra	125.68	344	PKPdf	PKPdf	08 21 12.7	-1.6
	comp=Z,0.6nm,0.6s,baz=39,slow=1.9						
NOA	NORSAR Array B	125.68	344	PKP	PKPdf	08 21 12.6	-1.7
	comp=Z,0.8nm,0.8s,baz=53,slow=2.2,SNR=6.1						
BRTR	Keskin Array B	127.02	312	PKP	PKPdf	08 21 17.2	-0.4
	comp=Z,2.0nm,1.2s,baz=0.0,slow=0.6,SNR=3.6						
BRTR	Keskin Array B	127.02	312	c iPKIKP	PKPdf	08 21 18.0	+0.4
BRTR				pmax	pmax		
	comp=Z,2.0nm,1.2s						
CABF	La Chapelle	139.30	336	ePKIKP	PKPdf	08 21 38.7	-1.7
	comp=Z,16nm,0.9s						
MTLF	Montolieu	143.54	337	ePKIKP	PKPdf	08 21 45.3	-2.8
	comp=Z,18nm,1.2s						
ETSF	Etsaut	144.94	339	ePKIKP	PKPdf	08 21 50.1	-0.5
	comp=Z,14nm,0.9s						
ESDC	Sonseca Array	148.97	341	PKPbc	PKPbc	08 22 01.4	0.0
	comp=Z,1.0nm,0.6s,baz=19,slow=1.9,SNR=5.4						
EVO	Evora	151.16	346	ePKIKP	PKPbc	08 22 04.8	-2.0
	comp=Z,27nm,1.1s						

IDC ***31*** *08:07:35.7±0.8, 10°.47S×163°.64E, h0km, mb4.4/15, mb1 4.6/16, mb1mx4.6/17, mbtmp4.4/16, ML4.3/1, MS4.6/16, Ms1 4.6/16, ms1mx4.5/17, Error ellipse: s-maj=29.3km s-min=17.7km az=132.0*

ISCJB ***31*** *08:07:35.1±1.6, 10°.54S±0°.06×163°.58E±0°.03, h1km±9km, mb5.0/63, MS4.7/36, Error ellipse: s-maj=9.5km s-min=5.1km az=174.4*

BJI ***31*** *08:07:36.4, 10°.35S×163°.78E, h9km, mB5.4/31, mb4.9/40, Ms5.1/34, MS7 4.8/35*

MOS ***31*** *08:07:39.4±1.1, 10°.43S×163°.47E, h28km, mb5.4/19, MS4.6/6, Error ellipse: s-maj=10.6km s-min=9.0km az=152.5*

GCMT ***31*** *08:07:40.2±0.2, 10°.53S×163°.58E, h12km, MW5.2, Moment Tensor Solution. s50,c77; s79,c132; Moment tensor: Scale 10^{16}Nm; M_{rr}-6.94±.14; $M_{\theta\theta}$5.67±.15; $M_{\phi\phi}$1.28±.15; M_{rt}-0.21±.41; $M_{\theta\phi}$3.79±.13; $M_{\theta r}$-3.54±.46; Best double couple: $M_0$8.20000×10^{16} NP1:ϕ_s260.00000°, δ41.00000°,λ-57.00000°. NP2:ϕ_s40.00000°,δ56.00000°, λ-116.00000°. Principal axes: T 8.1200, Plg8.0000°, Azm147.0000°; N 0.2400, Plg21.0000°, Azm54.0000°; P -8.3500, Plg67.0000°, Azm257.0000°; Data Used: II IU IC CN G.*

NEIC ***31*** *08:07:41.8±0.2, 10°.49S×163°.51E, h35km, mb5.2/33 Error ellipse: s-maj=10.7km s-min=5.8km az=147.0*

ISC 31 08:07:38.1±1.8, 10°.54S±0°.06×163°.62E±0°.03, h10km±11km, h15km±1.0km:pP-P, n340, $_a$0°.74/303, mb4.9/63, MS4.7/36, 73C-88D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
HNR	Honiara	3.79	287	ePn	Pn	Pn	08 08 36.4	-0.1
HNR				eSn	Sn	Sn	08 09 22.7	+1.5
DZM	Mont Dzumac	11.78	167	eP	Pn	Pn	08 10 27.4	+1.1
	134nm,1.3s							
DZM				eLR	LR	LR	08 12 56.9	
	13μm,25.2s							
PMG	Port Moresby	16.26	273	⇑eP	Pn	Pn	08 11 28.1	+1.4
PMG				pmax	pmax			
	comp=Z,82nm,1.6s							
EIDS	Eidsvold	18.95	217	eP	Pn	Pn	08 11 59.4	-0.7
	comp=Z,375nm,2.5s							
CTA	Charters Tower	19.24	238	eP	Pn	Pn	08 12 02.4	-1.3
	comp=Z,47nm,0.9s							
CTA	Charters Tower	19.24	238	P	Pn	Pn	08 12 02.4	-1.3
	comp=Z,0.7nm,0.3s,baz=67,slow=11,SNR=32							
CTA				LR	LR	LR	08 18 40.0	
	comp=Z,862nm,19.2s,baz=62,slow=34							
CTAO	Charters Tower	19.24	238	eP	Pn	Pn	08 12 02.6	-1.1
CTAO				pmax	pmax			
	comp=Z,81nm,1.0s							
CTAO	Charters Tower	19.24	238	eP	Pn	Pn	08 12 02.6	-1.1
	comp=Z,81nm,1.0s							
COEN	Coen	20.27	258	eP	P	P	08 12 14.8	+0.8
	comp=Z,373nm,1.2s							
ARMA	Armidale	22.71	208	eP	P	P	08 12 39.1	-1.1
ARMA	Armidale	22.71	208	eP	P	P	08 12 40.2	0.0
	comp=Z,27nm,1.2s,mb4.5							
AFI	Afiamalu	24.27	100	LR	LR	LR	08 20 28.8	
	comp=Z,2μm,18.5s,MS4.6,baz=84,slow=32							
STKA	Stephens Creek	29.42	221	eP	P	P	08 13 42.1	+0.2
	comp=Z,4.1nm,0.9s,mb4.2							
STKA	Stephens Creek	29.42	221	P	P	P	08 13 41.5	-0.5
	comp=Z,5.4nm,0.9s,mb4.3,baz=50,slow=21,SNR=3.3							
WRAB	Tennant Creek	29.70	248	eP	P	P	08 13 43.4	-1.2
WRAB				pmax	pmax			
	comp=Z,21nm,1.4s,mb4.7							
WRAB	Tennant Creek	29.70	248	eP	P	P	08 13 43.4	-1.2
	comp=Z,21nm,1.4s,mb4.7							
URZ	Urewera	30.14	159	LR	LR	LR	08 23 59.6	
	comp=Z,2μm,19.2s,MS4.7,baz=337,slow=33							
GUMO	Guam	30.35	322	LR	LR	LR	08 25 00.0	
	comp=Z,2μm,20.9s,MS4.8,baz=82,slow=34							
ASAR	Alice Springs	31.18	241	P	P	P	08 13 56.2	-1.4
	comp=Z,6.9nm,0.9s,mb4.5,baz=72,slow=9.7,SNR=22							
TOO	Toolangi	31.48	208	eP	P	P	08 14 00.5	+0.5
RPZ	Rata Peaks	33.68	170	LR	LR	LR	08 25 12.9	
	comp=Z,2μm,19.6s,MS4.9,baz=216,slow=31							
RAR	Rarotonga	36.68	111	LR	LR	LR	08 26 46.4	
	comp=Z,989nm,19.2s,MS4.6,baz=276,slow=31							
FITZ	Fitzroy Crossi	37.51	254	P	P	P	08 14 50.7	-1.8
	comp=Z,7.3nm,0.9s,mb4.4,baz=68,slow=7.2,SNR=4.5							
FITZ	Fitzroy Crossi	37.51	254	eP	P	P	08 14 52.0	-0.5
	comp=Z,14nm,1.3s,mb4.5							
PPT	Papeete	45.84	104	eS	S	S	08 22 38.3	-6.9
	comp=Z,320nm,27.0s							
PPT				eLR	LR	LR	08 28 52.4	
	comp=Z,811nm,22.0s,baz=268							
PPT	Papeete	45.84	104	LR	LR	LR	08 31 07.3	
	comp=Z,710nm,20.1s,MS4.6,baz=277,slow=31							
KIP	Kipapa	49.27	50	eP	P	P	08 16 26.4	-1.0
KKM	Kota Kinabalu	50.00	287	eP	P	P	08 16 31.4	-1.7
	comp=Z,26nm,1.0s,mb5.2							
MJAR	Matsushiro Arr	52.59	334	P	P	P	08 16 49.4	-2.7
	comp=Z,1.8nm,0.8s,mb4.1,baz=159,slow=6.9,SNR=6.0							
MJAR				LR	LR	LR	08 37 30.9	
	comp=Z,742nm,21.2s,MS4.7,baz=160,slow=34							
MAT	Matsushiro	52.59	334	P	P	P	08 16 50.2	-1.9
MAT				S	S	S	08 24 21.0	+1.7
TAOE	Nuku Hiva Isla	55.39	94	eLR	LR	LR	08 32 52.4	
	comp=Z,439nm,26.3s							
QZH	Quanzhou	56.31	309	P	P	P	08 17 20.0	+0.6
QZH				S	S	S	08 25 07.0	-2.9
QZH				pmax	pmax			
	comp=Z,930nm,3.1s							
QZH				LR	LR	LR		
	comp=Z,2μm,22.6s,MS5.1							
YUK	Yuzh-Kuril'sk	56.66	345	i P	P	P	08 17 21.1	-0.4
YUK				i			08 19 36.3	
YUK				i S	S	S	08 25 19.2	+5.3
YUK				MLR	MLR			
	comp=N,656nm,19.0s,MS4.8							
YUK				MLR	MLR			
	comp=E,351nm,19.0s,MS4.8							
YUK				MLR	MLR			
	comp=Z,585nm,19.0s,MS4.7							
KSRS	Korea Array	58.30	327	P	P	P	08 17 33.0	-0.2
	comp=Z,2.1nm,0.8s,mb4.2,baz=138,slow=5.8,SNR=8.4							
KSRS				LR	LR	LR	08 41 24.2	
	comp=Z,333nm,20.1s,MS4.5,baz=143,slow=35							
RKT	Rikitea	59.72	111	eLR	LR	LR	08 18 07.6	
	comp=Z,429nm,32.8s							
RKT	Rikitea	59.72	111	eLR	LR	LR	08 35 18.9	
	comp=Z,2μm,28.2s							
YSS	Yuzh-Sakhalins	60.19	344	eP	P	P	08 17 43.0	-3.1
YSS				ePPP			08 21 28.0	
YSS				eS	S	S	08 25 55.0	-4.8
YSS				ePPS			08 26 30.0	
YSS				MLR	MLR			
	comp=N,500nm,19.0s							
YSS				MLR	MLR			
	comp=Z,500nm,19.0s,MS4.7							
NJ2	Nanjing	60.21	316	eP	P	P	08 17 46.5	-0.1
NJ2				pP	pP		08 17 51.3	+1.6
NJ2				sP	sP		08 17 53.8	+2.9
NJ2				PP	PP		08 20 01.5	+2.0
NJ2				S	S	S	08 25 58.0	-2.6
NJ2				pmax	pmax			
	comp=Z,10.0nm,0.7s,mb5.0							
NJ2				pmax	pmax			
	comp=Z,240nm,3.6s							
NJ2				LR	LR			
	comp=N,660nm,24.6s							
NJ2				LR	LR			
	comp=E,390nm,18.0s							
NJ2				LR	LR			
	comp=Z,660nm,23.0s,MS4.7							
QIZ	Qiongzhong	60.61	299	P	P	P	08 17 49.0	-0.5
QIZ				S	S	S	08 26 06.3	+0.1
QIZ				pmax	pmax			
	comp=Z,9.0nm,1.4s,mb4.7							
QIZ				pmax	pmax			
	comp=Z,97nm,3.8s							
QIZ				LR	LR			
	comp=N,240nm,20.0s,MS4.4							
QIZ				LR	LR			
	comp=E,210nm,22.8s,MS4.4							
QIZ				LR	LR			
	comp=Z,670nm,20.0s,MS4.8							
WHN	Wuhan	62.51	313	P	P	P	08 18 07.0	+4.8
WHN				pmax	pmax			
	comp=Z,48nm,1.3s,mb5.5							
WHN				LR	LR			
	comp=N,720nm,15.2s,MS5.1							
WHN				LR	LR			
	comp=E,960nm,19.4s,MS5.1							
WHN				LR	LR			
	comp=Z,1μm,22.6s,MS5.0							
MDJ	Mudanjiang	62.95	333	P	P	P	08 18 05.5	+0.7
MDJ				sP	sP		08 18 10.0	+0.9
MDJ				PcP	PcP		08 18 43.3	+0.5
MDJ				S	S	S	08 26 39.0	+4.1
MDJ				SS	SS		08 30 42.0	+1.4
MDJ				pmax	pmax			
	comp=Z,17nm,2.0s,mb4.8							
MDJ				pmax	pmax			
	comp=Z,170nm,7.0s							
MDJ				LR	LR			
	comp=N,440nm,28.7s,MS4.7							
MDJ				LR	LR			
	comp=E,460nm,26.1s,MS4.7							
MDJ				LR	LR			
	comp=Z,690nm,29.6s,MS4.7							
PET	Petropavlovsk	63.45	357	eP	P	P	08 18 12.7	+4.8
PET				eS	S	S	08 26 42.0	+1.2
PET				eSS	SS		08 30 43.1	-5.1
PET				pmax	pmax			
	comp=Z,33nm,1.4s,mb5.3							
PET				pmax	pmax			
	comp=Z,100nm,21.3s							
PET				MLR	MLR			
	comp=Z,300nm,15.0s,MS4.6							
PEA0B	Petropavlovsk-	63.59	356	eP	P	P	08 18 09.5	+0.6
PETK	Petropavlovsk-	63.59	356	P	P	P	08 18 06.2	-2.7
	comp=Z,3.7nm,0.9s,mb4.4,baz=249,slow=12,SNR=2.3							
SNY	Shenyang	63.77	328	⇑P	P	P	08 18 10.5	+0.1
SNY				S	S	S	08 26 45.5	+0.2
SNY				pmax	pmax			
	comp=Z,200nm,7.5s							
SNY				LR	LR			
	comp=N,460nm,18.9s,MS4.7							
SNY				LR	LR			
	comp=E,200nm,17.4s,MS4.7							
SNY				LR	LR			
	comp=Z,440nm,18.9s,MS4.7							
HABR	Khabarovsk	63.95	339	P	P	P	08 18 10.0	-1.4
HABR				e*SP	sP		08 18 14.2	-1.5
HABR				e			08 20 29.7	
HABR				S	S	S	08 26 45.8	-1.5
HABR				eSS	SS		08 30 54.9	-1.4
HABR				pmax	pmax			
	comp=E,16nm,0.9s							
HABR				pmax	pmax			
	comp=Z,10.0nm,1.1s,mb4.8							
HABR				pmax	pmax			
	comp=N,13nm,1.0s							
HABR				MLR	MLR			
	comp=Z,423nm,20.0s,MS4.6							
CN2	Changchun	64.25	330	eP	P	P	08 18 17.8	+4.4
CN2				LR	LR			
	comp=N,500nm,23.0s,MS4.8							
CN2				LR	LR			
	comp=E,500nm,23.0s,MS4.8							
KLR	Kul'dur	65.78	338	eP	P	P	08 18 19.3	-4.0
KLR				pmax	pmax			
	comp=Z,50nm,1.8s,mb5.2							
GYA	Guiyang	66.42	305	P	P	P	08 18 29.0	+1.1
GYA				PcP	PcP		08 18 58.5	+0.9
GYA				PP	PP		08 20 57.3	+3.0
GYA				ScP			08 23 01.8	
GYA				S	S		08 27 19.0	+0.6
GYA				SKS			08 28 23.0	
GYA				SS	SS		08 31 36.8	+1.4
GYA				pmax	pmax			
	comp=Z,30nm,1.0s,mb5.3							
GYA				pmax	pmax			
	comp=Z,130nm,5.2s							
GYA				LR	LR			
	comp=N,860nm,19.5s,MS5.0							
GYA				LR	LR			
	comp=E,610nm,20.9s,MS5.0							
GYA				LR	LR			
	comp=Z,720nm,19.8s,MS4.9							
BJI	Beijing	66.79	322	P	P	P	08 18 30.5	+0.5
BJI				PP	PP		08 20 57.0	-0.3
BJI				S	S		08 27 22.0	-0.4
BJI				SS	SS		08 31 43.0	+2.3
BJI				pmax	pmax			
	comp=Z,7.0nm,0.9s,mb4.7							
BJI				pmax	pmax			
	comp=Z,100nm,3.6s							
BJI				LR	LR			
	comp=N,520nm,25.9s,MS4.7							
BJI				LR	LR			
	comp=E,370nm,30.1s,MS4.7							
BJI				LR	LR			
	comp=Z,960nm,33.8s,MS4.8							
SBA	Scott Base	67.32	179	eP	P	P	08 18 35.2	+2.4
SBA				pmax	pmax			
	comp=Z,182nm,2.8s,mb5.6							
SBA	Scott Base	67.32	179	eP	P	P	08 18 35.1	+2.4
	comp=Z,182nm,2.8s,mb5.6							
KMI	Kunming	69.08	302	P	P	P	08 18 46.5	+1.8
KMI				pP	pP		08 18 49.5	+1.6
KMI				sP	sP		08 18 50.8	+1.8
KMI				PcP	PcP		08 19 10.5	+1.7
KMI				PP	PP		08 21 21.0	+3.5
KMI				S	S		08 27 50.5	+0.1
KMI				sS	sS		08 27 56.0	+0.4
KMI				SS	SS		08 32 18.5	+1.7
KMI				pmax	pmax			
	comp=Z,22nm,1.4s,mb4.9							
KMI				pmax	pmax			
	comp=Z,400nm,4.0s							
KMI				LR	LR			
	comp=N,250nm,18.2s,MS4.6							
KMI				LR	LR			
	comp=E,310nm,22.9s,MS4.6							
KMI				LR	LR			
	comp=Z,460nm,20.2s,MS4.7							
CM31	Chiang Mai Arr	70.00	294	eP	P	P	08 18 51.5	+1.0
CMAR	Chiang Mai Arr	70.00	294	P	P	P	08 18 50.5	0.0
	comp=Z,2.6nm,0.3s,mb4.6,baz=110,slow=3.7,SNR=21							
CMAR				LR	LR	LR	08 48 05.4	
	comp=Z,216nm,20.2s,MS4.4,baz=104,slow=35							
HHC	Hu-ho-hao-te	70.11	320	eP	P	P	08 18 51.5	+0.8
HHC				sP	sP		08 18 57.0	+2.0
HHC				PcP	PcP		08 19 14.3	+1.6
HHC				PP	PP		08 21 29.5	+3.4
HHC				S	S		08 28 01.8	-0.1
HHC				sS	sS		08 28 07.3	+0.2
HHC				SKS			08 28 49.0	
HHC				SS	SS		08 32 33.0	+1.0
HHC				pmax	pmax			
	comp=Z,21nm,0.8s,mb5.1							
HHC				pmax	pmax			
	comp=Z,340nm,7.2s							
HHC				LR	LR			
	comp=N,420nm,17.8s,MS4.9							
HHC				LR	LR			
	comp=E,460nm,17.5s,MS4.9							
HHC				LR	LR			
	comp=Z,490nm,17.3s,MS4.8							
CHTO	Chiang Mai	70.12	294	eP	P	P	08 18 50.6	-0.6
CHTO				pmax	pmax			
	comp=Z,40nm,1.3s,mb5.2							
CHTO	Chiang Mai	70.12	294	eP	P	P	08 18 50.6	-0.6
	comp=Z,40nm,1.3s,mb5.2							
CD2	Chengdu	70.64	308	P	P	P	08 18 56.0	+1.8
CD2				pP	pP		08 19 00.8	+3.4
CD2				sP	sP		08 19 03.0	+4.5
CD2				PcP	PcP		08 19 17.0	+1.8
CD2				PP	PP		08 21 34.8	+3.9
CD2				S	S		08 28 09.3	+0.7
CD2				sS	sS		08 28 16.5	+2.7
CD2				SS	SS		08 32 42.5	+1.8
CD2				pmax	pmax			
	comp=Z,40nm,0.9s,mb5.3							
CD2				pmax	pmax			
	comp=Z,330nm,4.8s							
CD2				LR	LR			
	comp=N,300nm,16.1s							
CD2				LR	LR			
	comp=Z,370nm,20.2s,MS4.6							
BTO	Baotou	70.95	320	eP	P	P	08 18 55.8	0.0
MIR	Mirnyy	72.71	203	eP	P	P	08 19 03.0	-3.0
MIR				pmax	pmax			
	comp=Z,54nm,2.0s,mb5.1							
LZH	Lanzhou	72.88	313	eP	P	P	08 19 08.5	+0.9
LZH				pP	pP		08 19 13.5	+2.8
LZH				sP	sP		08 19 15.5	+3.6
LZH				PP	PP		08 21 52.5	+2.5
LZH				S	S		08 28 33.5	-0.7
LZH				sS	sS		08 28 41.5	+2.1
LZH				SS	SS		08 33 16.5	+1.7
LZH				pmax	pmax			
	comp=Z,42nm,1.5s,mb5.2							
LZH				pmax	pmax			

comp=Z,23nm,0.9s,mb5.1
YAK pmax pmax
comp=N,11nm,1.3s
YAK pmax pmax
comp=E,3.0nm,0.9s
SONM Songino Array 77.03 324 P P 08 19 30.8 -0.5
comp=E,4.5nm,1.0s,mb4.3,baz=148,slow=5.6,SNR=15
SONM LR LR 08 51 58.6
comp=E,646nm,20.8s,MS4.9,baz=112,slow=35
GTA Gaotai 77.21 315 *e*P P 08 19 33.8 +1.3
GTA pP pP 08 19 38.0 +2.3
GTA sP sP 08 19 41.0 +4.1
GTA S S 08 29 23.0 +0.7
GTA sS sS 08 29 31.5 +4.0
GTA SKS 08 29 41.3
GTA pmax pmax
comp=Z,8.0nm,1.9s,mb4.3
GTA pmax pmax
comp=Z,140nm,3.3s
GTA LR LR
comp=N,380nm,22.6s,MS4.8
GTA LR LR
comp=E,260nm,20.5s,MS4.8
GTA LR LR
comp=Z,350nm,20.5s,MS4.7
BILL Bilibino 78.40 1*c i*P P 08 19 38.3 -0.2
BILL *i* 08 19 44.4
BILL pmax pmax
comp=Z,24nm,1.0s,mb5.1
BILL Bilibino 78.40 1 *e*P P 08 19 37.8 -0.7
comp=Z,54nm,1.2s,mb5.3
SHL Shillong 78.45 299 *ex* P 08 19 37.0 -2.7
QSPA South Pole Qui 79.46 180 *e*P P 08 19 44.7 +0.4
comp=Z,11nm,1.1s,mb4.7
ZAK Zakamensk 80.10 326 *e*P P 08 19 47.2 -1.0
ZAK pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
LSA Lhasa 80.32 303 P P 08 19 50.3 +0.4
TLY Talaya 80.55 327 *i* P P 08 19 50.9 +0.3
TLY pmax pmax
comp=Z,10.0nm,1.7s,mb4.5
TLY Talaya 80.55 327 *e*P P 08 19 52.2 +1.7
comp=Z,83nm,2.3s,mb5.3
PPLA Purkeypile 80.71 19 *e*P P 08 19 52.1 +1.0
comp=Z,11nm,1.0s,mb4.8
PMR Palmer 80.81 21 *e*P P 08 19 50.5 -1.2
PMR pmax pmax
comp=Z,58nm,1.8s,mb5.2
PMR Palmer 80.81 21 *e*P P 08 19 50.5 -1.2
comp=Z,58nm,1.8s,mb5.2
RPN Rapa Nui 82.67 116 LR LR 08 48 43.7
comp=Z,318nm,19.2s,MS4.7,baz=37,slow=30
DIB Dawson Inlet, 83.39 33 T 09 51 57.2
SNR=11
COLA College 83.47 19 *e*P P 08 20 04.3 -1.3
COLA pmax pmax
comp=Z,16nm,1.3s,mb4.9
COLA College 83.47 19 *e*P P 08 20 04.3 -1.3
comp=Z,16nm,1.3s,mb4.9
MENT Mentasta 83.61 21 *e*P P 08 20 07.3 +0.9
ILAR Eielson Array 83.71 19 P P 08 20 05.4 -1.4
comp=Z,3.6nm,0.9s,mb4.5,baz=246,slow=5.4,SNR=19
MAW Mawson 84.40 202 P P 08 20 10.7 +0.2
comp=Z,1.0nm,0.5s,mb4.2,baz=74,slow=4.3,SNR=2.9
MAW Mawson 84.40 202 *e*P P 08 20 10.8 +0.3
MAW pmax pmax
comp=Z,5.0nm,1.5s
MAW Mawson 84.40 202 *e*P P 08 20 10.8 +0.3
comp=Z,4.6nm,1.5s,mb4.4
WDC Whiskeytown Da 84.79 47 *e*P P 08 20 14.7 +1.8
HYT Haines Junctio 84.80 25 *e*P P 08 20 13.5 +1.0
YBH Yreka Blue Hor 85.04 46 *e*P P 08 20 14.6 +0.5
HUMO Hull Mountain 85.15 45 *e*P P 08 20 16.6 +1.9
comp=Z,9.3nm,1.0s,mb4.9
TIXI Tiksi 85.21 350 *e*P P 08 20 13.7 -0.6
TIXI *e*S S 08 30 35.2 -8.9
TIXI *e*SS SS 08 36 10.9 -7.5
TIXI pmax pmax
comp=Z,32nm,1.8s,mb5.2
TIXI MLR MLR
comp=Z,441nm,18.0s,MS4.9
TIXI Tiksi 85.21 350 *e*P P 08 20 18.4 +4.1
CMB Columbia Colle 85.61 50 *e*P P 08 20 16.7 -0.4
EGAK Eagle 85.63 21 *e*P P 08 20 16.8 +0.3
comp=Z,100nm,1.8s,mb5.8
DAWY Dawson 85.85 22 *e*P P 08 20 17.9 +0.3
VES Vestal, Richgr 85.99 53 ⇓P P 08 20 18.5 -0.6
baz=86
E03A Lebam 86.04 41 ⇑P P 08 20 19.4 +0.4
baz=86
NLWA Neilton Lookou 86.13 41 ⇓P P 08 20 20.0 +0.6
baz=86
G04A Mulino 86.31 43 ⇓P P 08 20 21.2 +0.8
baz=86
MWC Mount Wilson 86.37 54 *e*P P 08 20 20.8 -0.1
MWC pmax pmax
comp=Z,52nm,1.8s,mb5.5
MWC Mount Wilson 86.37 54 *e*P P 08 20 20.8 -0.2
comp=Z,52nm,1.8s,mb5.5
ISA Isabella 86.42 53 ⇓P P 08 20 21.7 +0.5
baz=86
WCN Washoe City 86.45 49 ⇑P P 08 20 21.8 +0.6
baz=87
F04A Amboy 86.59 42 ⇓P P 08 20 22.3 +0.6
baz=87
EDW2 Edwards Air Fo 86.60 54 ⇑P P 08 20 22.3 +0.2
baz=87
K05A Summer Lake 86.63 46 ⇓P P 08 20 22.7 +0.7
baz=87
BFSC Mount Baldy Ra 86.70 54 ⇓P P 08 20 22.4 -0.2
baz=87
MOD Modoc 86.80 47 *e*P P 08 20 22.4 -0.4
comp=Z,7.1nm,0.6s,mb5.1
PGC Sidney 86.82 39 *e*P P 08 20 23.2 +0.4
comp=Z,2.9nm,1.7s,mb4.2
PAHR Pah Rah Range 86.84 49 *e*P P 08 20 24.5 +1.4
comp=Z,85nm,2.3s,mb5.6
BAR Barrett 87.10 56 *e*P P 08 20 24.5 -0.1
comp=Z,31nm,2.0s,mb5.2
WMQ Urumqi 87.27 315 P P 08 20 25.0 -0.1
WMQ pP pP 08 20 29.8 +1.5
WMQ sP sP 08 20 32.0 +2.5
WMQ PP PP 08 23 51.5 +2.2
WMQ SKS 08 30 49.3
WMQ *e*S S 08 31 02.5 -2.8
WMQ SS SS 08 36 49.5 -0.3
WMQ pmax pmax
comp=Z,14nm,1.4s,mb5.0
WMQ pmax pmax
comp=Z,250nm,6.0s
WMQ LR LR
comp=N,300nm,21.4s,MS5.0
WMQ LR LR
comp=E,690nm,24.0s,MS5.0
WMQ LR LR
comp=Z,670nm,24.6s,MS5.0
D05A Enumclaw 87.27 41 ⇓P P 08 20 25.7 +0.7
baz=87
NVAR Mina Array Bea 87.30 50 P P 08 20 24.3 -1.1
comp=Z,5.5nm,1.0s,mb4.8,baz=237,slow=5.6,SNR=23
NVAR PP PP 08 23 52.0 +2.3
comp=Z,0.2nm,0.5s,baz=233,slow=7.2,SNR=3.8
MPMC Manual Prospec 87.30 53 ⇓P P 08 20 25.7 +0.2
baz=87
MONP Monument Peak 87.36 56 ⇓P P 08 20 25.9 +0.1
baz=88
PFO Pinyon Flat Ob 87.51 55 ⇑P P 08 20 26.8 +0.3
baz=88
PFO Pinyon Flat Ob 87.51 55 *e*P P 08 20 27.8 +1.3
PFO pmax pmax
comp=Z,30nm,1.9s,mb5.2
PFO Pinyon Flat Ob 87.51 55 *e*P P 08 20 27.8 +1.3
comp=Z,30nm,1.9s,mb5.2
JCW Jim Creek 87.63 40 *e*P P 08 20 26.2 -0.5
GRAC Grapevine Rang 87.64 52 ⇑P P 08 20 27.2 +0.1
baz=88
GSC Goldstone 87.65 54 *e*P P 08 20 26.7 -0.4
GSC pmax pmax
comp=Z,52nm,2.0s,mb5.4
GSC Goldstone 87.65 54 *e*P P 08 20 26.7 -0.4
comp=Z,52nm,2.0s,mb5.4
FURC Furnace Creek, 87.90 52 ⇑P P 08 20 28.4 +0.1
baz=88
BELC Belle Mtn. Jos 87.97 55 ⇓P P 08 20 28.4 -0.3
baz=88
I07A Izee 87.99 45 ⇑P P 08 20 28.5 -0.1
baz=88
WVOR Wild Horse Val 88.14 46 *e*P P 08 20 29.3 0.0
WVOR pmax pmax
comp=Z,15nm,1.3s,mb5.1
WVOR Wild Horse Val 88.14 46 *e*P P 08 20 29.3 0.0
comp=Z,16nm,1.3s,mb5.1
SHOC Shoshone 88.21 53 ⇑P P 08 20 29.6 -0.2
baz=88
BC3 Big Chuckawall 88.33 55 ⇓P P 08 20 30.0 -0.4
baz=88
TUQ Turquoise Moun 88.38 54 ⇓P P 08 20 30.7 +0.1
baz=88
GMRC Granite Mounta 88.43 54 ⇓P P 08 20 30.5 -0.3
baz=88
S10A Tonopah Range, 88.47 51 ⇑P P 08 20 31.1 +0.1
baz=89
J08A Circle Bar Ran 88.51 46 ⇑P P 08 20 30.9 -0.1
baz=89
RSW Rattlesnake Hi 88.60 42 *e*P P 08 20 31.6 +0.2
IRM Iron Mountain 88.69 55 ⇓P P 08 20 31.8 -0.3
baz=89
GLA Glamis 88.70 56 ⇓P P 08 20 31.9 -0.3
baz=89
GLA Glamis 88.70 56 *e*P P 08 20 32.9 +0.7
GLA pmax pmax
comp=Z,117nm,2.0s,mb5.9
GLA Glamis 88.70 56 *e*P P 08 20 32.9 +0.7
comp=Z,117nm,2.0s,mb5.9
G08A Pilot Rock 88.71 44 ⇑P P 08 20 31.3 -0.6
baz=89,SNR=11
R10A Warm Springs 88.78 51 ⇓P P 08 20 32.6 +0.1
baz=89
Q10A Clear Creek Ra 88.84 50 ⇓P P 08 20 32.5 -0.2
baz=89
V11A Goodsprings 88.86 53 ⇓P P 08 20 32.6 -0.3
baz=89
S11A Rachel 89.05 52 ⇑P P 08 20 33.5 -0.2
baz=89
V12A Nelson 89.30 54 ⇑P P 08 20 34.6 -0.3
baz=89
B08A Colville Reser 89.33 41 ⇓P P 08 20 34.4 -0.3
baz=89
R11A Troy Canyon, C 89.34 51 ⇓P P 08 20 34.8 -0.3
baz=89,SNR=8.3
T11A Corn Creek, Al 89.36 52 ⇓P P 08 20 34.9 -0.3
baz=90
Q11A Duckwater 89.41 50 ⇓P P 08 20 35.1 -0.3
baz=90,SNR=10
M10A I.L. Ranch, Tu 89.41 48 ⇓P P 08 20 35.0 -0.3
baz=90
OD2 Odessa Site #2 89.46 42 *e*P P 08 20 35.1 -0.3
113A Mohawk Valley, 89.50 57 ⇑P P 08 20 35.7 -0.3
baz=90,SNR=8.8
P11A Circle Ranch, 89.50 50 ⇑P P 08 20 35.6 -0.2
baz=90
PDMCI Parker Dam,Lak 89.54 55 ⇑P P 08 20 35.8 -0.3
baz=90
L10A Juniper Basin 89.60 47 ⇓P P 08 20 36.1 -0.1
baz=90
Y13A Salome 89.68 56 ⇓P P 08 20 36.6 -0.2
baz=90,SNR=7.7
Z13A Yuma Proving G 89.69 56 ⇓P P 08 20 36.5 -0.3
baz=90,SNR=15
O11A Cowboy Ranch, 89.72 49 ⇓P P 08 20 36.6 -0.1
baz=90
BMO Blue Mountains 89.72 44 *e*P P 08 20 36.6 -0.1
S12A Delamar Landin 89.73 52 ⇑P P 08 20 37.0 0.0
baz=90,SNR=7.2
N11A Elko Archery C 89.82 48 ⇑P P 08 20 37.3 +0.1
baz=90
X13A Yucca 89.85 55 ⇑P P 08 20 37.7 +0.1
baz=90
M11A Holland Ranch, 89.93 48 ⇓P P 08 20 37.9 +0.1
baz=90,SNR=6.4
F10A Beach Ranch, E 90.06 43 ⇑P P 08 20 37.7 -0.5
baz=90
Q12A Willow Creek R 90.08 50 ⇓P P 08 20 38.1 -0.4
baz=90
R12A Pony Springs, 90.08 51 ⇓P P 08 20 38.4 -0.1
baz=90
P12A McGill 90.12 50 ⇑P P 08 20 38.6 -0.1
baz=90
L11A Cat Creek Ranc 90.14 47 ⇓P P 08 20 38.6 -0.1
baz=90,SNR=8.1
114A Black Gap (USA 90.22 57 ⇑P P 08 20 39.1 -0.2
baz=90
Z14A Wintersburg 90.30 56 ⇓P P 08 20 39.4 -0.3
baz=90
N12A Clover Valley, 90.35 49 ⇓P P 08 20 39.6 -0.1
baz=90,SNR=8.8
N12A Clover Valley, 90.35 49 *e*P P 08 20 40.2 +0.5
Y14A Wickenburg 90.38 56 ⇑P P 08 20 39.6 -0.4
baz=90
MFID Camas Ranch 90.39 46 ⇑P P 08 20 39.7 -0.1
baz=90
O12A Currie 90.43 49 ⇓P P 08 20 40.1 0.0
baz=90,SNR=10
S13A Holt Ranch, En 90.49 52 ⇓P P 08 20 40.4 0.0
baz=91,SNR=11
R13A O'Grain Ranch, 90.54 51 ⇑P P 08 20 40.7 0.0
baz=91,SNR=7.0
M12A Wells 90.57 48 ⇑P P 08 20 40.8 0.0
baz=91,SNR=7.0
X14A Yava 90.58 55 ⇓P P 08 20 40.6 -0.4
baz=91
W14A Seligman 90.59 54 ⇑P P 08 20 40.3 -0.6
baz=91
V14A Boquillas Ranc 90.66 54 ⇓P P 08 20 41.3 0.0
baz=91,SNR=8.0
L12A House Creek Ra 90.67 47 ⇓P P 08 20 41.3 +0.1
baz=91,SNR=12
Q13A Wheeler Ranch, 90.67 51 ⇑P P 08 20 41.2 -0.1
baz=91,SNR=8.2
NEW Newport 90.72 41 *e*P P 08 20 42.3 +1.0
U14A Mt Trumbull 90.77 53 ⇑P P 08 20 42.0 +0.2
baz=91,SNR=13
P13A Bates Ranch, G 90.79 50 ⇓P P 08 20 41.9 +0.1
baz=91,SNR=13
ARUT Antelope Range 90.86 52 *e*P P 08 20 42.5 +0.3
ARUT *e* 08 24 17.9
ARUT pmax pmax
comp=Z,19nm,1.5s,mb5.2
ARUT Antelope Range 90.86 52 *e*P P 08 20 42.5 +0.3
comp=Z,19nm,1.5s,mb5.2
ARUT *e*PP PP 08 24 17.9 -0.4
CCUT Cedar City 90.87 52 *e*P P 08 20 43.0 +0.7
comp=Z,32nm,1.7s,mb5.4
Y15A Casa Rosa Ranc 90.93 56 ⇓P P 08 20 42.5 0.0
baz=91,SNR=7.6
N13A Wendover, West 90.96 49 ⇓P P 08 20 42.6 0.0
baz=91
N13A Wendover, West 90.96 49 *e*P P 08 20 42.0 -0.6
comp=Z,11nm,0.8s,mb5.2
O13A Hicks Ranch, I 90.97 49 ⇓P P 08 20 42.4 -0.2
baz=91
I12A Atlanta 90.97 46 ⇓P P 08 20 42.7 +0.2
baz=91,SNR=8.9
T14A Hurricane 90.98 53 ⇓P P 08 20 42.9 +0.1
baz=91,SNR=9.0
S14A Cedar City 91.07 52 ⇓P P 08 20 43.2 +0.1
baz=91
M13A Montello 91.11 48 ⇓P P 08 20 43.3 +0.1
baz=91,SNR=11
M13A Montello 91.11 48 *e*P P 08 20 43.7 +0.4
116A Eloy 91.16 57 ⇑P P 08 20 43.5 -0.2
baz=91
W15A Williams 91.23 55 ⇑P P 08 20 44.3 +0.4
baz=91
Q14A Sevier Lake (B 91.25 51 ⇓P P 08 20 44.1 +0.1
baz=91,SNR=14
H12A Diamond D Ranc 91.34 45 ⇑P P 08 20 44.0 -0.3
baz=91
F12A Elk City 91.34 44 ⇓P P 08 20 44.4 +0.1
baz=91,SNR=16
HLID Hailey 91.42 46 ⇓P P 08 20 44.6 0.0
baz=92,SNR=11
HLID Hailey 91.42 46 *e*P P 08 20 45.2 +0.5
L13A Double Diamond 91.43 48 ⇓P P 08 20 44.8 0.0
baz=92
V15A Kaibab Nationa 91.44 54 ⇓P P 08 20 44.8 -0.1
baz=92
K13A Stover Farm, H 91.45 47 ⇑P P 08 20 44.5 -0.3
baz=92
U15A North Rim 91.47 53 ⇑P P 08 20 45.1 0.0
baz=92,SNR=9.2
T15A Red Dirt Ranch 91.52 53 ⇓P P 08 20 45.0 -0.2
baz=92
P14A Drum Mountains 91.53 50 ⇓P P 08 20 45.2 0.0
baz=92
J13A Cove Ranch, Pi 91.56 46 ⇑P P 08 20 45.3 +0.1
baz=92,SNR=10
D12A Red Ives Fores 91.59 43 ⇓P P 08 20 44.9 -0.4
baz=92
Y16A Circle Bar Ran 91.61 56 ⇑P P 08 20 45.7 0.0
baz=92
C12B Naegeli Ranch, 91.66 42 ⇑P P 08 20 45.5 -0.2
baz=92
S15A Panguitch 91.67 52 ⇑P P 08 20 45.9 -0.1
baz=92
I13A Wildhorse Cree 91.71 46 ⇓P P 08 20 45.9 0.0
baz=92,SNR=14
MK31 Makanchi Array 91.73 317 *e*P P 08 20 45.6 -0.4
MKAR Makanchi Array 91.73 317 P P 08 20 45.0 -1.0
comp=Z,2.4nm,0.7s,mb4.7,baz=98,slow=5.6,SNR=10.0
MKAR LR LR 09 02 54.2
comp=Z,232nm,18.8s,MS4.7,baz=271,slow=36
M14A Sheep Mountain 91.74 48 ⇓P P 08 20 46.1 0.0
baz=92,SNR=8.3
217A Green Valley 91.74 58 ⇓P P 08 20 45.9 -0.5
baz=92
X16A Lo Mia Camp, P 91.75 55 ⇓P P 08 20 46.1 -0.3
baz=92
H13A Challis 91.76 45 ⇑P P 08 20 46.3 +0.1
baz=92,SNR=11
DUG Dugway 91.85 50 ⇑P P 08 20 46.5 -0.3
baz=92
DUG Dugway 91.85 50 *e*P P 08 20 48.3 +1.6
G13A Cobalt 91.89 45 ⇓P P 08 20 46.5 -0.2
baz=92,SNR=18
L14A Malta 91.93 48 ⇑P P 08 20 47.0 0.0
baz=92,SNR=7.7
ZAA0 Zalesovo Array 91.93 325 *e*P P 08 20 47.0 +0.2
ZALV Zalesovo Beam 91.93 325 P P 08 20 47.1 +0.3
comp=Z,0.7nm,0.3s,mb4.5,baz=132,slow=6.6,SNR=3.7
ZALV LR LR 08 59 52.0
comp=Z,293nm,21.2s,MS4.7,baz=284,slow=34
F13A Darby 91.98 44 ⇓P P 08 20 46.6 -0.5
baz=92,SNR=15
MSU Marysvale 91.99 51 *e*P P 08 20 48.4 +1.0
WUAZ Wupatki 92.02 54 *e*P P 08 20 46.7 -0.9
comp=Z,7.8nm,1.2s,mb4.9
K14A Jones Ranch, D 92.08 47 ⇓P P 08 20 47.9 +0.2
baz=92
BSMT Bassoo Peak 92.14 42 *e*P P 08 20 47.6 -0.2
E13A Victor 92.22 43 ⇓P P 08 20 48.1 -0.2
baz=92
X17A Forest Lakes 92.25 56 ⇓P P 08 20 48.5 -0.2
baz=92
C13A Hot Springs 92.25 42 ⇑P P 08 20 48.1 -0.2
baz=92
S16A Weppner Ranch, 92.28 52 ⇑P P 08 20 48.5 -0.2
baz=92
H14A Leadore 92.39 45 ⇑P P 08 20 49.0 -0.1
baz=92,SNR=16
G14A Jackson 92.46 45 ⇑P P 08 20 49.5 +0.1
baz=93
B13A Whitefish 92.47 41 ⇓P P 08 20 49.2 -0.2
baz=93
R16A Teasdale 92.48 52 ⇓P P 08 20 49.7 0.0
baz=93
V17A Tonalea, Kykot 92.50 54 ⇓P P 08 20 49.9 +0.1
baz=93
L15A Malad City 92.55 48 ⇓P P 08 20 49.8 -0.1
baz=93
K15A Arbon 92.58 47 ⇑P P 08 20 49.7 -0.3
baz=93
A13A Flathead Natio 92.63 41 ⇑P P 08 20 50.4 +0.3
baz=93
F14A Wisdom 92.64 44 ⇓P P 08 20 50.3 +0.1
baz=93
E14A Clinton 92.69 43 ⇑P P 08 20 50.2 -0.2
baz=93
J15A Blackfoot 92.80 47 ⇓P P 08 20 50.9 -0.1
baz=93
MCMT McKenzie Canyo 92.80 45 *e*P P 08 20 51.3 +0.3
C14A Swan Lake 92.81 42 ⇑P P 08 20 51.1 +0.2
baz=93
D14A Greenough 92.82 43 ⇑P P 08 20 51.2 +0.1
baz=93
Q16A Castle Valley 92.84 51 ⇓P P 08 20 51.4 0.0
baz=93
CHMT Chamberlain Mo 92.96 43 *e*P P 08 20 51.9 +0.2
JLU Jordanelle 92.96 49 *e*P P 08 20 53.9 +2.1
X18A Snowflake 92.98 56 ⇓P P 08 20 52.0 -0.1
baz=93
WALA Waterton Lakes 92.98 41 *e*P P 08 20 52.6 +0.9
N16A Rees Ranch, Co 93.02 49 ⇓P P 08 20 52.4 +0.3
baz=93
NVS Novosibirsk 93.05 325 *e*P P 08 20 49.1 -2.8
NVS pmax pmax
comp=Z,49nm,1.9s,mb5.6
NVS pmax pmax
comp=N,14nm,1.7s
NVS pmax pmax
comp=E,32nm,1.8s
DLMT Dillon 93.08 45 *e*P P 08 20 52.5 +0.2
R17A Hanksville Air 93.10 52 ⇑P P 08 20 51.6 -0.9
baz=93
G15A Dillon 93.11 45 ⇑P P 08 20 52.4 0.0
baz=93,SNR=8.0
E15A Deer Lodge 93.27 44 ⇑P P 08 20 52.6 -0.5
baz=93,SNR=5.7
LRM Limekiln Ridge 93.27 44 *e*P P 08 20 53.2 0.0
O17A Robinson Place 93.41 50 ⇓P P 08 20 54.0 +0.1
baz=94
S18A Hurst Farm, Bl 93.52 52 ⇑P P 08 20 53.8 -0.6
baz=94
C15A Salmond Ranch, 93.56 42 ⇑P P 08 20 54.7 +0.3
baz=94
I16A Newdale 93.56 46 ⇓P P 08 20 54.5 0.0
baz=94
RRI2 Red Ridge 93.58 47 *e*P P 08 20 54.9 +0.3
comp=E,3.6nm,0.7s,mb4.9
G16A Moss Hill, Enn 93.60 45 ⇑P P 08 20 54.7 +0.1
baz=94
B15A Bradely Ranch, 93.70 42 ⇓P P 08 20 55.1 0.0
baz=94
R18A Canyonlands Na 93.72 52 ⇓P P 08 20 55.3 -0.1
baz=94
A15A Johnson Ranch, 93.72 41 ⇑P P 08 20 55.2 0.0
baz=94
F16A Kennard Place, 93.83 44 ⇑P P 08 20 55.9 +0.2
baz=94
H16A Russell Place, 93.89 45 ⇑P P 08 20 56.4 +0.4
baz=94
IMW Indian Meadow 93.96 46 *e*P P 08 20 58.3 +2.0
J17A Brown Place, J 94.02 47 ⇑P P 08 20 56.8 +0.2
baz=94
D16A Dana Ranch, Ca 94.12 43 ⇓P P 08 20 56.7 -0.3
baz=94
C16A Fuhringer Ranc 94.14 42 ⇓P P 08 20 56.3 -0.8
baz=94
LOHW Long Hollow 94.14 47 *e*P P 08 20 57.9 +0.7
EDM Edmonton 94.21 37 *e*P P 08 20 58.7 +1.4
J18A Kendall Valley 94.49 47 ⇓P P 08 20 58.6 -0.2
baz=95
BW06 Boulder Array 94.75 48 ⇓P P 08 20 59.8 -0.2
baz=95
BW06 Boulder Array 94.75 48 *e*P P 08 20 59.5 -0.5
C17A Wharram Farm, 94.76 43 ⇓P P 08 20 59.8 -0.2
baz=95
S20A Disappointment 94.82 53 ⇑P P 08 21 00.5 +0.1
baz=95
KURK Kurchatov 94.92 321 ⇓*e*P P 08 21 03.5 +2.9
KURK pmax pmax
comp=Z,22nm,2.5s,mb5.1
A17A Triple J Farms 95.03 41 ⇑P P 08 21 01.4 +0.2
baz=95
P20A De Beque 95.07 51 ⇓P P 08 21 01.1 -0.5
baz=95
E18A Harlowton 95.14 44 ⇓P P 08 21 02.0 +0.3
baz=95
U21A Nageezi 95.14 54 ⇓P P 08 21 01.7 -0.2
baz=95
F18A Big Timber 95.17 44 ⇑P P 08 21 01.5 -0.3
baz=95
YKA Yellowknife Ar 95.48 27 P P 08 21 01.3 -1.6
comp=Z,3.0nm,1.1s,mb4.7,baz=248,slow=4.0,SNR=7.0
EGMT Eagleton 95.50 42 ⇑P P 08 21 03.3 0.0
baz=96
EGMT Eagleton 95.50 42 *e*P P 08 21 05.0 +1.7
B18A Beardsley Farm 95.54 42 ⇓P P 08 21 03.8 +0.3
baz=96
Q22A Crested Butte, 96.11 52 ⇑P P 08 21 06.1 -0.2
baz=96

324A Moseley Ranch, 96.17 59 ⇑P **P 08 21 06.7 0.0**
baz=96
FRU Bishkek 96.35 312 *e*P **P 08 21 10.0 +2.7**
TXAR Lajitas Array 97.42 62 P **P 08 21 12.4 -0.1**
comp=Z,0.1nm,0.5s,baz=207,slow=12,SNR=2.7
TXAR PP PP 08 25 10.8 +1.1
comp=Z,0.4nm,1.0s,baz=211,slow=7.0,SNR=3.5
TXAR LR LR 08 57 22.5
comp=Z,160nm,18.8s,MS4.5,baz=5.0,slow=31
TXAR Lajitas Array 97.42 62 P **P 08 21 12.4 -0.1**
TXAR 08 25 10.8
BVAR Borovoye Array 100.27 322 P Pdif 08 21 25.4 +0.7
comp=Z,0.3nm,0.4s,baz=130,slow=6.0,SNR=3.6
BRVK Borovoye 100.34 322*ce*P Pdif 08 21 27.3 +2.3
BRVK pmax pmax
comp=Z,4.0nm,2.3s
ARCES ARCESS Array B 115.31 345 PKP PKPdf 08 26 18.1 -1.4
comp=Z,1.1nm,0.5s,baz=87,slow=1.9,SNR=13
KIV Kislovodsk 119.39 315 *i* PKIKP PKPdf 08 26 27.4 -0.7
KIV *e* 08 33 24.1
KIV *e*PS PS 08 37 38.3 +0.1
KIV pmax pmax
comp=Z,7.0nm,0.8s
KIV MLR MLR
comp=Z,134nm,21.0s,MS4.5
FINES FINESS Array B 120.53 338 PKP PKPdf 08 26 28.7 -1.0
comp=Z,0.3nm,0.3s,baz=104,slow=3.4,SNR=4.5
AKASG Malin Array Be 125.29 326 PKP PKPdf 08 26 39.3 +0.1
comp=Z,0.4nm,0.3s,baz=57,slow=2.2,SNR=6.4
NOA NORSAR Array B 125.64 344 PKP PKPdf 08 26 38.2 -1.4
comp=Z,1.0nm,0.9s,baz=53,slow=2.2,SNR=5.1
BRTR Keskin Array B 127.08 312 PKP PKPdf 08 26 41.9 -1.1
comp=Z,1.2nm,0.9s,baz=111,slow=2.8,SNR=5.8
BRTR Keskin Array B 127.08 312*c i*PKIKP PKPdf 08 26 48.9 +5.9
BRTR pmax pmax
comp=Z,1.0nm,0.9s
BUR08 Bucovina Ar. S 129.15 325 *e*PKPdf PKPdf 08 26 49.8 +3.2
OKC Ostrava-Krasne 131.53 331 AMS AMS 09 29 20.0
comp=Z,300nm,21.2s
MORC Moravsky Berou 131.86 331 *e*PKIKP PKPdf 08 26 53.9 +2.2
DPC Dobruska-Polom 132.04 332 AMS AMS 09 29 30.0
comp=Z,300nm,19.6s
PVCC Panska Ves 132.70 333 AMS AMS 09 32 00.0
comp=Z,400nm,20.2s
PRU Pruhonice 133.10 333 AMS AMS 09 31 40.0
comp=Z,400nm,19.7s
TREC Trest 133.17 332 AMS AMS 09 32 40.0
comp=Z,300nm,22.2s
NKC Novy Kostel 133.83 335 AMS AMS 09 31 10.0
comp=Z,200nm,16.9s
KHC Kasperske Hory 134.16 333 AMS AMS 09 31 30.0
comp=Z,500nm,19.8s
ABTA Abfaltersbach 136.38 331 ⇓ *i*PKIKP PKiKP 08 27 00.4 -1.6
comp=Z,4.2nm,1.0s
FETA Feichten 137.01 333 ⇑ *i*PKPdf PKPdf 08 27 00.3 -1.2
CABF La Chapelle 139.30 336 *e*PKIKP PKPdf 08 27 04.5 -1.2
comp=Z,33nm,1.3s
PGF Pioggiola 141.17 330 *e*PKIKP PKPdf 08 27 07.8 -1.4
comp=Z,36nm,1.3s
FRF La Foret Royal 141.51 333 *e*PKIKP PKPdf 08 27 08.7 -1.1
SMRF Simiane la Rot 141.65 334 *e*PKIKP PKPdf 08 27 08.7 -1.3
LMR La Mourre 141.75 333 *e*PKIKP PKPdf 08 27 07.2 -3.0
comp=Z,26nm,1.1s
MTLF Montolieu 143.54 337 *e*PKIKP PKPdf 08 27 11.5 -1.9
comp=Z,25nm,1.2s
ETSF Etsaut 144.93 340 *e*PKIKP PKPdf 08 27 14.1 -1.7
comp=Z,112nm,1.6s
SJPF Ste Jean 144.97 341 *e*PKIKP PKPdf 08 27 14.1 -1.8
comp=Z,57nm,1.5s
ESDC Sonseca Array 148.95 341 PKPbc PKPbc 08 27 25.5 -1.2
comp=Z,1.7nm,0.9s,baz=8.5,slow=3.0,SNR=5.7
ESLA Sonseca Array 148.95 341 *e*PKPbc PKPbc 08 27 28.5 +1.8
PAB San Pablo 149.19 342 *e*PKP2 PKPbc 08 27 27.4 +0.1
PMRV Marv??o 150.14 346 *e*PKP PKPbc 08 27 29.4 -0.2
EVO Evora 151.14 346 *e*PKIKP PKPbc 08 27 31.5 -0.5
comp=Z,49nm,1.4s
PBEJ Beja 151.58 346 *e*PKP PKPbc 08 27 32.5 -0.6
PCVE Castro Verde 152.00 346 *e*PKP PKPbc 08 27 35.3 +1.3
TORD Torodi Ar. Bea 162.12 280 PKP PKPdf 08 27 41.4 +0.4
comp=Z,2.3nm,1.1s,baz=98,slow=4.5,SNR=5.0

IDC 31 08:08:36.3±2.5, 7°.13S×150°.83E, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.9/16, mbtmp4.0/3, Error ellipse: s-maj=145.7km s-min=30.0km az=131.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**23.12**	**223**	P	P	08 13 43.9	-0.2
	1.4nm,0.7s,baz=55,slow=9.1,SNR=23						
FITZ	**Fitzroy Crossi**	**26.85**	**244**	P	P	08 14 18.8	-0.1
	2.5nm,0.6s,baz=80,slow=8.8,SNR=14						
ILAR	**Eielson Array**	**85.05**	**22**	P	P	08 21 13.7	+0.2
	0.8nm,0.6s,baz=253,slow=4.7,SNR=4.5						
TORD	**Torodi Ar. Bea**	**149.05**	**284**	PKPbc	PKPbc	08 28 27.3	-0.3
	2.9nm,0.9s,baz=60,slow=3.3,SNR=7.2						

*IDC **31** 08:28:09.1±0.6, 21°.09S×175°.34W, h0km, mb4.3/9, mb1 4.5/11, mb1mx4.4/18, mbtmp4.3/11, ML3.3/2, MS3.5/3, Ms1 3.5/3, ms1mx3.4/23, Error ellipse: s-maj=30.0km s-min=11.1km az=113.0*
*NEIC **31** 08:28:10.7±0.2, 20°.98S×175°.45W, h10km, mb4.7/14, Error ellipse: s-maj=15.8km s-min=6.6km az=125.0*
NEIC Felt at Nuku'alofa.
*ISCJB **31** 08:28:13.2±0.4, 20°.95S±0°.09×175°.5W±0°.2, h33km, mb4.5/23, Error ellipse: s-maj=24.4km s-min=7.8km az=27.9*
ISC 31 08:28:14.8±0.4, 21°.09S±0°.1×175°.4W±0°.2, h35km, n53, σ0.672/28, mb4.5/23, 3C-2D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.89**	**27**	Pn	**Pn**	**08 30 04.3**	**-2.7**
	2.3nm,0.3s,baz=188,slow=21,SNR=3.9						
AFI				Sn	**Sn**	**08 31 27.4**	**-7.7**
	3.4nm,0.3s,baz=18,slow=23,SNR=3.6						
AFI				LR	LR	08 32 43.9	
	comp=Z,292nm,19.1s,baz=234,slow=35						
RAR	**Rarotonga**	**14.61**	**94**	LR	LR	08 36 08.3	
	comp=Z,134nm,21.1s,baz=226,slow=33						
RAR				T		08 46 06.4	
	9.8nm,0.3s,baz=274,slow=20,SNR=6.8						
URZ	**Urewera**	**18.35**	**199**	P	**Pn**	**08 32 25.0**	**-1.4**
	0.9nm,0.3s,baz=126,slow=17,SNR=3.0						
URZ				S	**S**	**08 35 49.6**	**-4.5**
	0.9nm,0.3s,baz=276,slow=23,SNR=6.0						
PPT	**Papeete**	**24.63**	**86**	LR	LR	08 40 28.4	
	comp=Z,189nm,20.0s,baz=276,slow=30						
RPZ	**Rata Peaks**	**25.28**	**203**	P	**P**	**08 33 38.5**	**+0.8**
	26nm,0.9s,mb4.8,baz=93,slow=12,SNR=12						
STKA	**Stephens Creek**	**39.74**	**245**	P	**P**	**08 35 44.5**	**+0.3**
	2.2nm,0.5s,mb4.1,baz=100,slow=12,SNR=10.0						
ASAR	**Alice Springs**	**46.74**	**257**	P	**P**	**08 36 40.4**	**-0.4**
	2.4nm,0.7s,mb4.2,baz=97,slow=8.0,SNR=20						
QSPA	**South Pole Qui**	**69.05**	**180**	*e*P	**P**	**08 39 16.8**	**+0.3**
	6.5nm,0.8s,mb4.6						
PETK	**Petropavlovsk-**	**77.42**	**344**	P	**P**	**08 40 06.8**	**+0.9**
	2.9nm,0.7s,mb4.3,baz=101,slow=7.7,SNR=6.2						
NVAR	**Mina Array Bea**	**79.78**	**42**	P	**P**	**08 40 19.8**	**+0.4**
	7.4nm,0.9s,mb4.6,baz=224,slow=8.8,SNR=42						
MAW	**Mawson**	**81.88**	**199**	P	**P**	**08 40 29.9**	**-0.2**
	1.6nm,0.6s,mb4.1,baz=152,slow=5.6,SNR=5.2						
WVOR	**Wild Horse Val**	**82.01**	**39**	*e*P	**P**	**08 40 31.1**	**-0.1**
	8.0nm,1.1s,mb4.6						
ARUT	**Antelope Range**	**82.53**	**45**	*e*P	**P**	**08 40 34.7**	**+0.7**
	3.5nm,1.0s,mb4.3						
N12A	**Clover Valley,**	**83.24**	**42**	*e*P	**P**	**08 40 38.0**	**+0.3**
	7.6nm,1.1s,mb4.6						
RSO	**Redoubt South**	**83.26**	**11**	*e*P	**P**	**08 40 45.7**	**+8.5**
MSU	**Marysvale**	**83.76**	**45**	*e*P	**P**	**08 40 41.0**	**+0.7**
	9.1nm,1.3s,mb4.8						
M13A	**Montello**	**84.07**	**42**	*e*P	**P**	**08 40 41.8**	**-0.1**
	7.8nm,1.0s,mb4.8						
BMO	**Blue Mountains**	**84.25**	**37**	*e*P	**P**	**08 40 42.3**	**-0.4**
	3.2nm,1.0s,mb4.4						
ETW	**Entiat**	**84.31**	**34**	*e*P	**P**	**08 40 43.3**	**+0.4**
	8.8nm,0.8s,mb4.9						
TMUT	**Trail Mountain**	**84.82**	**45**	*e*P	**P**	**08 40 46.4**	**+0.7**
	7.6nm,0.8s,mb4.9						
OD2	**Odessa Site #2**	**85.03**	**35**	*e*P	**P**	**08 40 46.3**	**-0.2**
	2.6nm,0.7s,mb4.5						
LAZ	**Ladron**	**85.11**	**50**	*e*P	**P**	**08 40 47.7**	**+0.4**
	1.5nm,1.0s,mb4.1						
SRU	**San Rafael**	**85.17**	**45**	*e*P	**P**	**08 40 47.7**	**+0.2**
	3.7nm,0.8s,mb4.6						
HLID	**Hailey**	**85.17**	**40**	*e*P	**P**	**08 40 47.8**	**+0.4**
	4.2nm,1.0s,mb4.5						
TXAR	**Lajitas Array**	**85.33**	**56**	P	**P**	**08 40 47.9**	**-0.7**
	1.0nm,1.0s,mb3.9,baz=202,slow=6.2,SNR=6.7						
ANMO	**Albuquerque**	**85.87**	**50**	*e*P	**P**	**08 40 50.3**	**-0.8**
	5.7nm,1.1s,mb4.7						
ILAR	**Eielson Array**	**88.31**	**12**	P	**P**	**08 41 01.1**	**-1.1**
	0.2nm,0.3s,mb3.8,baz=216,slow=5.1,SNR=6.8						
YKA	**Yellowknife Ar**	**95.99**	**24**	P	**P**	**08 41 38.1**	**+0.3**
	0.7nm,0.7s,mb4.2,baz=229,slow=3.8,SNR=4.9						
ZALV	**Zalesovo Beam**	**112.41**	**321**	PKiKP	PKiKP	08 46 45.7	-1.1
	0.8nm,0.7s,baz=194,slow=0.6,SNR=3.2						
MKAR	**Makanchi Array**	**113.31**	**313**	PKiKP	PKiKP	08 46 47.9	-0.9
	0.4nm,0.3s,baz=186,slow=1.4,SNR=2.9						
BVAR	**Borovoye Array**	**121.03**	**320**	PKP	PKPdf	08 47 02.6	-0.7
	0.9nm,0.3s,baz=122,slow=3.1,SNR=4.2						
AKASG	**Malin Array Be**	**144.61**	**333**	PKP	PKPdf	08 47 45.5	-2.0
	1.1nm,0.3s,baz=41,slow=4.1,SNR=11						
KIEV	**Kiev**	**144.62**	**333**	*e*PKPdf	PKPdf	08 47 45.5	-1.9
EKA	**Eskdalemuir Ar**	**145.25**	**8**	PKPbc	PKPbc	08 47 47.6	-0.5
	2.8nm,0.8s,baz=330,slow=3.2,SNR=6.7						
BUR08	**Bucovina Ar. S**	**148.65**	**333**	*e*PKPbc	PKPbc	08 47 59.0	+0.9
BURAR	**Bucovina Array**	**148.66**	**333**	⇓ *i*P	PKPbc	08 47 59.8	+1.6
BR131	**Keskin Array S**	**148.96**	**313**	*e*PKPbc	PKPbc	08 47 59.3	+0.1
BRTR	**Keskin Array B**	**148.96**	**313**	PKPbc	PKPbc	08 47 59.2	+0.1
	2.5nm,0.8s,baz=136,slow=5.0,SNR=13						
CLL	**Collm**	**149.06**	**350**	*i* P	PKPbc	08 47 59.0	0.0
CLL	**Collm**	**149.06**	**350**	*i* PKPbc	PKPbc	08 47 59.0	0.0
	comp=Z,12nm,1.0s						
ASF	**Jabal al Asfar**	**149.15**	**298**	PKPbc	PKPbc	08 47 59.9	0.0
	comp=Z,2.3nm,0.6s,baz=289,slow=2.3,SNR=4.2						
BRG	**Berggiesshubel**	**149.31**	**348**	*e*P	PKPbc	08 47 59.5	-0.2
	comp=Z,7.0nm,0.8s						
KECS	**Kecovo**	**149.77**	**339**	*e*PKP	PKPbc	08 48 02.9	+2.0
MLR	**Muntele Rosu**	**149.94**	**329**	PKPbc	PKPbc	08 48 01.4	0.0
	comp=Z,2.3nm,0.6s,baz=322,slow=2.8,SNR=2.6						
MMAI	**Mount Meron Ar**	**150.16**	**300**	PKPbc	PKPbc	08 48 03.1	+0.8
	comp=Z,3.4nm,0.6s,baz=64,slow=3.8,SNR=4.2						
VRAC	**Vranov**	**150.19**	**344**	PKPbc	PKPbc	08 48 01.7	-0.2
	comp=Z,1.7nm,0.2s,baz=247,slow=6.2,SNR=3.0						
VYHS	**Vyhne**	**150.30**	**341**	*e*PKP	PKPbc	08 48 03.0	+0.8
DRGR		**150.36**	**334**	⇑ *i*P	PKPbc	08 48 02.7	+0.3
VOIR		**150.40**	**330**	⇑ *i*P	PKPbc	08 48 03.5	+1.0
KHC	**Kasperske Hory**	**151.05**	**348**	⇑ *e*PKP	PKPbc	08 48 04.5	+0.6
EIL	**Elat**	**151.29**	**294**	PKPbc	PKPbc	08 48 05.8	+0.6
	comp=Z,3.7nm,0.6s,baz=134,slow=3.1,SNR=3.7						
PKSM	**Moragy**	**152.37**	**339**	⇓ *i*P	PKPdf	08 48 03.8	+3.6
TORD	**Torodi Ar. Bea**	**171.70**	**160**	PKPab	PKPab	08 49 42.4	+0.4
	comp=Z,0.9nm,0.7s,baz=198,slow=4.2,SNR=3.4						

*IDC **31** 08:32:24.3±1.8, 10°.81S×163°.62E, h0km, mb4.2/6, mb1 4.4/6, mb1mx4.1/15, mbtmp4.1/6, MS4.1/1, Ms1 4.1/1, ms1mx3.0/23, Error ellipse: s-maj=67.7km s-min=31.5km az=152.0*
*ISCJB **31** 08:32:26.2±6.2, 10°.6S±0°.1×163°.6E±0°.2, h15km±45km, mb4.1/6, Error ellipse: s-maj=30.6km s-min=18.8km az=138.0*
*NEIC **31** 08:32:30.8±0.6, 10°.50S×163°.61E, h35km, mb4.2/2, Error ellipse: s-maj=14.0km s-min=12.1km az=99.0*
ISC 31 08:32:30.2±6.4, 10°.6S±0°.2×163°.6E±0°.1, h30km±46km, n14, σ0.98/12, mb4.1/6, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.72**	**287**	*e*Pn	**Pn**	**08 33 25.4**	**-0.1**
DZM	**Mont Dzumac**	**11.79**	**167**	*e*Pn	**Pn**	**08 35 16.0**	**-0.3**
EIDS	**Eidsvold**	**18.90**	**217**	*e*P	**Pn**	**08 36 50.7**	**+1.6**
	16nm,1.5s						
CTA	**Charters Tower**	**19.17**	**238**	P	**Pn**	**08 36 51.6**	**-0.9**
	0.1nm,0.3s,baz=64,slow=13,SNR=11						
CTAO	**Charters Tower**	**19.17**	**238**	*e*P	**Pn**	**08 36 53.0**	**+0.6**
	20nm,1.0s						
URZ	**Urewera**	**30.16**	**158**	LR	LR	08 48 48.4	
	comp=Z,353nm,18.3s,baz=305,slow=33						
ASAR	**Alice Springs**	**31.11**	**241**	P	**P**	**08 38 43.8**	**-2.4**
	1.5nm,0.8s,mb3.9,baz=74,slow=9.6,SNR=4.6						
CMAR	**Chiang Mai Arr**	**69.94**	**294**	P	**P**	**08 43 39.4**	**+0.3**
	0.7nm,0.4s,mb4.0,baz=112,slow=4.2,SNR=6.3						
SONM	**Songino Array**	**77.00**	**324**	P	**P**	**08 44 20.9**	**+0.9**
	1.8nm,0.8s,mb4.0,baz=159,slow=6.7,SNR=4.3						
ILAR	**Eielson Array**	**83.74**	**19**	P	**P**	**08 44 54.9**	**-1.0**
	1.5nm,1.1s,mb4.0,baz=244,slow=4.6,SNR=7.8						
NVAR	**Mina Array Bea**	**87.36**	**50**	P	**P**	**08 45 15.1**	**+0.5**
	1.9nm,1.0s,mb4.3,baz=232,slow=6.8,SNR=8.5						
NVAR	**Mina Array Bea**	**87.36**	**50**	P	**P**	**08 45 15.1**	**+0.5**
MKAR	**Makanchi Array**	**91.69**	**317**	P	**P**	**08 45 34.9**	**+0.2**
	0.3nm,0.3s,mb4.1,baz=111,slow=6.8,SNR=5.7						
NOA	**NORSAR Array B**	**125.64**	**344**	PKP	PKPdf	08 51 28.2	-0.1
	0.7nm,0.8s,baz=43,slow=1.7,SNR=3.0						

*IDC **31** 08:34:30.5±1.6, 10°.96S×163°.71E, h0km, mb4.0/5, mb1 4.3/5, mb1mx4.0/15, mbtmp4.0/5, Error ellipse: s-maj=67.7km s-min=31.5km az=148.0*
*ISCJB **31** 08:34:34.9±1.1, 10°.8S±0°.2×163°.6E±0°.1, h33km, mb4.1/5, Error ellipse: s-maj=30.4km s-min=18.3km az=156.1*
*NEIC **31** 08:34:37.2±0.8, 10°.56S×163°.61E, h35km, mb4.2/1, Error ellipse: s-maj=27.8km s-min=14.8km az=153.0*
ISC 31 08:34:36.8±1.2, 10°.8S±0°.2×163°.6E±0°.2, h35km, n13, σ0.87/9, mb4.1/5, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.81**	**290**	Pn	**Pn**	**08 35 32.4**	**-0.6**
CTA	**Charters Tower**	**19.09**	**239**	P	**Pn**	**08 38 57.6**	**+0.1**
	0.2nm,0.3s,baz=61,slow=11,SNR=3.5						
CTAO	**Charters Tower**	**19.09**	**239**	*e*P	**Pn**	**08 38 59.3**	**+1.8**
	17nm,1.0s						
ASAR	**Alice Springs**	**31.04**	**242**	P	**P**	**08 40 50.2**	**-1.3**
	2.2nm,0.8s,mb4.0,baz=73,slow=9.4,SNR=8.0						
CMAR	**Chiang Mai Arr**	**70.05**	**294**	P	**P**	**08 45 46.4**	**+0.7**
	1.3nm,0.4s,mb4.2,baz=113,slow=3.3,SNR=4.4						
SONM	**Songino Array**	**77.18**	**325**	P	**P**	**08 46 28.0**	**+1.0**
	1.6nm,1.0s,mb3.9,baz=136,slow=5.1,SNR=6.7						
ILAR	**Eielson Array**	**83.93**	**19**	P	**P**	**08 47 02.0**	**-0.7**
	1.3nm,1.0s,mb4.0,baz=270,slow=5.3,SNR=4.6						
NVAR	**Mina Array Bea**	**87.47**	**50**	P	**P**	**08 47 21.0**	**0.0**
	1.4nm,1.0s,mb4.1,baz=232,slow=7.7,SNR=4.8						
NVAR	**Mina Array Bea**	**87.47**	**50**	P	**P**	**08 47 21.0**	**0.0**
NOA	**NORSAR Array B**	**125.85**	**344**	PKP	PKPdf	08 53 33.6	-1.0
	0.2nm,0.4s,baz=25,slow=1.8,SNR=2.5						
HFS	**Hagfors**	**125.87**	**342**	PKP	PKPdf	08 53 36.0	+1.4
	1.7nm,0.8s,baz=85,slow=6.7,SNR=4.1						
HFS	**Hagfors**	**125.87**	**342**	PKP	PKPdf	08 53 36.0	+1.4
ESDC	**Sonseca Array**	**149.14**	**341**	PKPbc	PKPbc	08 54 20.9	-1.0
	0.2nm,0.2s,baz=45,slow=3.9,SNR=4.0						

*ISCJB **31** 08:38:47.8±0.3, 36°.57N±0°.02×21°.36E±0°.02, h10km, mb4.5/41, MS3.2/6, Error ellipse: s-maj=3.3km s-min=2.5km az=179.9*
*NEIC **31** 08:38:51.3, 36°.58N×21°.49E, h34km, mb4.4/11, ML4.1(ATH), After ATH.*
*ATH **31** 08:38:51.6, 36°.60N×21°.51E, h34km±1km, ML4.1*
*IDC **31** 08:38:52.2±3.9, 36°.71N×21°.66E, h31km±29km, mb4.1/18, mb1 4.2/24, mb1mx4.1/33, mbtmp4.1/24, ML4.0/5, MS3.3/8, Ms1 3.3/8, ms1mx3.1/40, Error ellipse: s-maj=16.2km s-min=11.8km az=162.0*
*THE **31** 08:38:52.7, 36°.55N×21°.60E, h17km±1km, ML4.6/2, Error ellipse: s-maj=2.3km s-min=1.6km az=330.0*
*MOS **31** 08:38:53.7±1.0, 36°.79N×21°.55E, h60km, mb4.9/10, Error ellipse: s-maj=6.7km s-min=3.2km az=85.9*
*CSEM **31** 08:38:53.8±0.2, 36°.66N×21°.52E, h49km±2km, mb4.5/11, Error ellipse: s-maj=4.9km s-min=3.3km az=21.0*
*PDG **31** 08:38:54.9±0.1, 36°.98N×20°.87E, h10km±11km, ML4.6/9, Error ellipse: s-maj=136.8km s-min=35.8km az=90.0*
ISC 31 08:38:49.5±0.2, 36°.55N±0°.02×21°.48E±0°.02, h10km, n432, σ1.39/489, mb4.5/41, MS3.2/6, 27C-30D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PYL	**PYLOS**	**0.41**	**32**	⇓ *i*PB	**Pg**	**08 39 00.4**	**+2.9**
PYL				*e*SB	**Sg**	**08 39 06.6**	**+3.7**
PYL	**PYLOS**	**0.41**	**32**	P	**Pg**	**08 39 00.3**	**+2.8**
	27μm,0.6s						
PYL				S	**Sg**	**08 39 05.5**	**+2.6**
PYL	**PYLOS**	**0.41**	**32**	⇓ *i*Pb	**Pg**	**08 39 00.4**	**+2.9**
PYL				*e*Sb	**Sg**	**08 39 06.6**	**+3.7**
ITM	**Ithomi**	**0.73**	**30**	P	**Pg**	**08 39 05.5**	**+1.9**
ITM				S	**Sg**	**08 39 15.3**	**+2.3**
ITM	**Ithomi**	**0.73**	**30**	*e*PN	**Pn**	**08 39 05.4**	**-0.4**
ITM				*e*SN	**Sg**	**08 39 15.2**	**+2.2**
ITM	**Ithomi**	**0.73**	**30**	P	**Pg**	**08 39 05.5**	**+1.9**
ITM				S	**Sg**	**08 39 15.3**	**+2.3**
ITM	**Ithomi**	**0.73**	**30**	P	**Pg**	**08 39 05.5**	**+1.9**
ITM				S	**Sg**	**08 39 15.3**	**+2.3**
VLX	**Vlachokerasia**	**1.09**	**41**	*e*PN	**Pn**	**08 39 11.8**	**+0.9**
VLX				*e*SN	**Sn**	**08 39 25.8**	**-0.3**
VLX	**Vlachokerasia**	**1.09**	**41**	P	**Pg**	**08 39 11.4**	**+0.8**
VLX				S	**Sg**	**08 39 25.9**	**+1.1**
VLX	**Vlachokerasia**	**1.09**	**41**	P	**Pg**	**08 39 11.4**	**+0.8**
VLX	**Vlachokerasia**	**1.09**	**41**	*e*Pn	**Pn**	**08 39 11.8**	**+0.9**
VLX				S	**Sg**	**08 39 25.9**	**+1.1**
VLX				*e*Sn	**Sn**	**08 39 26.8**	**+0.7**
VLI	**Veliai**	**1.19**	**81**	*e*Pn	**Pn**	**08 39 13.9**	**+1.7**
VLI				*e*Sn	**Sn**	**08 39 29.8**	**+1.4**
VLI	**Veliai**	**1.19**	**81**	*e*PN	**Pn**	**08 39 13.9**	**+1.7**
VLI				*e*SN	**Sn**	**08 39 29.3**	**+0.9**
VLI	**Veliai**	**1.19**	**81**	*e*Pn	**Pn**	**08 39 13.9**	**+1.7**
VLI				*e*Sn	**Sn**	**08 39 29.8**	**+1.4**
RLS	**Riolos of Patr**	**1.51**	**360**	*e*Pn	**Pn**	**08 39 18.4**	**+1.8**
RLS				*e*Sn	**Sn**	**08 39 37.5**	**+1.3**
RLS	**Riolos of Patr**	**1.51**	**360**	*e*PN	**Pn**	**08 39 18.0**	**+1.4**
RLS				*e*SN	**Sn**	**08 39 36.5**	**+0.3**
RLS	**Riolos of Patr**	**1.51**	**360**	*e*Pn	**Pn**	**08 39 18.4**	**+1.8**
RLS				*e*Sn	**Sn**	**08 39 37.5**	**+1.3**
GUR	**Goura**	**1.55**	**26**	*e*PN	**Pn**	**08 39 18.0**	**+0.9**
GUR				*e*SN	**Sn**	**08 39 37.3**	**0.0**
GUR	**Goura**	**1.55**	**26**	P	**Pn**	**08 39 18.4**	**+1.3**
GUR				S	**Sn**	**08 39 38.3**	**+1.0**
GUR	**Goura**	**1.55**	**26**	P	**Pn**	**08 39 18.4**	**+1.3**
GUR				*e*Sn	**Sn**	**08 39 37.9**	**+0.6**
KFL	**Anninata**	**1.65**	**341**	P	**Pn**	**08 39 20.3**	**+1.7**
KFL	**Anninata**	**1.65**	**341**	P	**Pn**	**08 39 20.3**	**+1.7**
DID	**Didima**	**1.70**	**55**	*e*PN	**Pn**	**08 39 20.1**	**+0.8**
DID				*e*SN	**Sn**	**08 39 40.9**	**-0.2**
DID	**Didima**	**1.70**	**55**	P	**Pn**	**08 39 19.8**	**+0.5**
DID				S	**Sn**	**08 39 40.6**	**-0.5**
DID	**Didima**	**1.70**	**55**	P	**Pn**	**08 39 19.8**	**+0.5**
DID	**Didima**	**1.70**	**55**	*e*Pn	**Pn**	**08 39 20.1**	**+0.8**
DID				S	**Sn**	**08 39 40.6**	**-0.5**
DID				*e*Sn	**Sn**	**08 39 41.9**	**+0.8**
LAKA	**Lakka**	**1.73**	**13**	P	**Pn**	**08 39 21.6**	**+1.9**
LAKA				S	**Sn**	**08 39 43.0**	**+1.1**
LAKA	**Lakka**	**1.73**	**13**	P	**Pn**	**08 39 21.6**	**+1.9**
UPR	**University Cam**	**1.75**	**8**	*e*PN	**Pn**	**08 39 19.9**	**0.0**
UPR	**University Cam**	**1.75**	**8**	*e*Pn	**Pn**	**08 39 19.9**	**0.0**
VLS	**Valsamata**	**1.77**	**337**	P	**Pn**	**08 39 21.4**	**+1.2**
VLS	**Valsamata**	**1.77**	**337**	*e*PN	**Pn**	**08 39 21.5**	**+1.3**
VLS	**Valsamata**	**1.77**	**337**	P	**Pn**	**08 39 21.4**	**+1.2**
VLS	**Valsamata**	**1.77**	**337**	P	**Pn**	**08 39 21.4**	**+1.2**
TRIZ	**Trizonia**	**1.87**	**14**	P	**Pn**	**08 39 23.7**	**+2.1**
TRIZ	**Trizonia**	**1.87**	**14**	P	**Pn**	**08 39 23.7**	**+2.1**
LTK	**Loutraki**	**1.89**	**39**	*e*PN	**Pn**	**08 39 22.5**	**+0.6**
LTK	**Loutraki**	**1.89**	**39**	P	**Pn**	**08 39 22.6**	**+0.7**
	3μm,0.6s						
LTK	**Loutraki**	**1.89**	**39**	*e*Pn	**Pn**	**08 39 22.5**	**+0.6**
EFP	**Efpalio**	**1.91**	**10**	*e*PB	**Pb**	**08 39 23.5**	**-0.9**
EFP	**Efpalio**	**1.91**	**10**	P	**Pn**	**08 39 24.3**	**+2.2**
	2μm,1.3s						
EFP	**Efpalio**	**1.91**	**10**	*e*Pb	**Pb**	**08 39 24.5**	**+0.1**
KALE	**Kalithea**	**1.91**	**16**	P	**Pn**	**08 39 24.7**	**+2.5**
KALE	**Kalithea**	**1.91**	**16**	P	**Pn**	**08 39 24.7**	**+2.5**
NAIG	**Nisos Aigina**	**2.01**	**53**	*e*Pn	**Pn**	**08 39 24.2**	**+0.7**
NAIG	**Nisos Aigina**	**2.01**	**53**	*e*PN	**Pn**	**08 39 24.2**	**+0.7**
NAIG	**Nisos Aigina**	**2.01**	**53**	*e*Pn	**Pn**	**08 39 24.2**	**+0.7**
DSF	**Desfina**	**2.04**	**24**	P	**Pn**	**08 39 24.7**	**+0.8**
DSF	**Desfina**	**2.04**	**24**	P	**Pn**	**08 39 24.7**	**+0.8**
VLY	**Voula,Athens**	**2.26**	**54**	*e*Pn	**Pn**	**08 39 26.9**	**-0.1**
VLY	**Voula,Athens**	**2.26**	**54**	*e*PN	**Pn**	**08 39 26.9**	**-0.1**
VLY	**Voula,Athens**	**2.26**	**54**	*e

THE Thessaloniki 4.24 16 P **Pn 08 39 56.7 +2.5**
THE Thessaloniki 4.24 16 P **Pn 08 39 56.7 +2.5**
OUR Ouranopolis 4.26 27 P **Pn 08 39 54.5 +0.1**
OUR Ouranopolis 4.26 27 P **Pn 08 39 54.5 +0.1**
LIA Limnos Island 4.44 40 *e*Pn **Pn 08 39 56.6 -0.3**
LIA Limnos Island 4.44 40 *e*PN **Pn 08 39 57.6 +0.7**
LIA Limnos Island 4.44 40 *e*Pn **Pn 08 39 56.6 -0.3**
GRG Griva 4.46 9 P **Pn 08 39 57.9 +0.7**
GRG Griva 4.46 9 P **Pn 08 39 57.9 +0.7**
GRG Griva 4.46 9 P **Pn 08 39 57.9 +0.7**
BIA Bitola 4.46 359 *i* Pn **Pn 08 39 58.1 +0.9**
BIA *e*Sn **Sn 08 40 44.9 -4.3**
SOH Sokhos 4.51 18 P **Pn 08 39 58.9 +1.0**
SOH Sokhos 4.51 18 *e*PN **Pn 08 39 58.9 +1.0**
SOH Sokhos 4.51 18 P **Pn 08 39 58.9 +1.0**
SOH Sokhos 4.51 18 P **Pn 08 39 58.9 +1.0**
TIP Timpagrande 4.56 307 P **Pn 08 39 59.6 +1.0**
TIP Timpagrande 4.56 307 P **Pn 08 39 59.6 +1.0**
OHR Ohrid 4.59 354 *i* Pn **Pn 08 39 59.4 +0.5**
OHR *e*Sn **Sn 08 40 48.7 -3.5**
KARP Karpathos 4.71 101 *e*Pn **Pn 08 40 01.5 +0.8**
KARP Karpathos 4.71 101 *e*PN **Pn 08 40 02.5 +1.8**
KARP Karpathos 4.71 101 *e*Pn **Pn 08 40 01.5 +0.8**
KNT Kendrikon 4.74 13 P **Pn 08 40 02.2 +1.2**
KNT Kendrikon 4.74 13 P **Pn 08 40 02.2 +1.2**
KNT Kendrikon 4.74 13 P **Pn 08 40 02.2 +1.2**
CEL Celeste 4.76 293 P **Pn 08 40 02.5 +1.2**
CEL Celeste 4.76 293 P **Pn 08 40 02.5 +1.2**
KRUS Krusevo 4.82 358 *i* Pn **Pn 08 40 02.4 +0.3**
KRUS *e*Sn **Sn 08 40 53.3 -4.6**
VAY Valandovo 4.84 10 P **Pn 08 40 02.9 +0.5**
VAY Valandovo 4.84 10 *i* Pn **Pn 08 40 02.7 +0.3**
VAY *e*Sn **Sn 08 40 51.7 -6.8**
VAY Valandovo 4.84 10 P **Pn 08 40 02.9 +0.5**
VAY Valandovo 4.84 10 P **Pn 08 40 02.9 +0.5**
SRS Serrai 4.85 19 P **Pn 08 40 02.8 +0.3**
SRS Serrai 4.85 19 P **Pn 08 40 02.8 +0.3**
SRS Serrai 4.85 19 P **Pn 08 40 02.8 +0.3**
TIR Tirane 4.95 346 P **Pn 08 40 05.8 +1.9**
TIR Tirane 4.95 346 P **Pn 08 40 05.8 +1.9**
NVR Nevrokopi 5.14 20 *e*Pn **Pn 08 40 07.1 +0.6**
NVR Nevrokopi 5.14 20 *e*PN **Pn 08 40 08.1 +1.6**
NVR Nevrokopi 5.14 20 *e*Pn **Pn 08 40 07.1 +0.6**
TAR1 Taranto 5.15 322 *e*Pn **Pn 08 40 06.4 -0.3**
PE1 Pezze di Greco 5.30 324 *e*Pn **Pn 08 40 09.3 +0.6**
SKO Skopje 5.42 360 *i* Pn **Pn 08 40 11.1 +0.8**
PUK Puka 5.62 348 *e*PN **Pn 08 40 13.3 +0.2**
PUK *e*SN **Sn 08 41 08.3 -9.4**
PUK Puka 5.62 348 *e*Pn **Pn 08 40 13.3 +0.2**
CUC Castrocucco 5.63 309 P **Pn 08 40 16.0 +2.8**
CUC Castrocucco 5.63 309 P **Pn 08 40 16.0 +2.8**
WDD Wield Dalam 5.66 265 *e*Pn **Pn 08 40 14.8 +1.1**
135nm,0.4s
WDD *e*Sn **Sn 08 41 15.7 -3.1**
WDD Wield Dalam 5.66 265 *e*Pn **Pn 08 40 14.8 +1.1**
135nm,0.4s
ULC Ulcinj 5.68 343 ⇓*i*Pn **Pn 08 40 13.2 -0.7**
ULC *e*Sn **Sn 08 41 12.7 -6.4**
ULC Ulcinj 5.68 343 ⇓*i*Pn **Pn 08 40 13.2 -0.7**
VAE Valguarnera 5.73 281 Pn **Pn 08 40 18.1 +3.5**
8.5nm,0.3s,baz=287,slow=7.6,SNR=13
VAE Sn **Sn 08 41 21.6 +1.2**
22nm,0.3s,baz=81,slow=16,SNR=5.1
VAE LR LR 08 42 32.8
comp=Z,90nm,18.7s,baz=258,slow=37
VAE Valguarnera 5.73 281 Pn **Pn 08 40 18.1 +3.5**
VAE Sn **Sn 08 41 21.6 +1.2**
VAE LR LR 08 42 32.8
VAE Valguarnera 5.73 281 Pn **Pn 08 40 18.1 +3.5**
VAE Sn **Sn 08 41 21.6 +1.2**
BCI Bajram Curri 5.91 350 *e*PN **Pn 08 40 17.7 +0.6**
BCI *e*SN **Sn 08 41 16.0 -8.8**
BCI Bajram Curri 5.91 350 *e*Pn **Pn 08 40 17.7 +0.6**
BUM Brajici-Budva 6.08 342 ⇓*i*Pn **Pn 08 40 18.8 -0.6**
BUM *i* Sn **Sn 08 41 22.6 -6.4**
BUM Brajici-Budva 6.08 342 ⇓*i*Pn **Pn 08 40 18.8 -0.6**
PDG Podgorica 6.12 344 ⇑*i*Pn **Pn 08 40 19.8 -0.1**
TTG Podgorica 6.12 344 ⇑*i*Pn **Pn 08 40 19.8 -0.1**
TTG *e*Sn **Sn 08 41 23.3 -6.6**
TTG Podgorica 6.12 344 *i* P **Pn 08 40 19.8 -0.1**
PVY Plav 6.15 350 ⇑*i*Pn **Pn 08 40 20.5 +0.1**
PVY *e*Sn **Sn 08 41 25.2 -5.5**
PVY Plav 6.15 350 ⇑*i*Pn **Pn 08 40 20.5 +0.1**
VTS Vitosha 6.18 12 ⇑P **Pn 08 40 21.8 +1.0**
VTS Vitosha 6.18 12 ⇑*i*P **Pn 08 40 21.8 +1.0**
VTS Vitosha 6.18 12 P **Pn 08 40 21.8 +1.0**
HCY Herceg Novi 6.32 340 ⇓*i*Pn **Pn 08 40 21.5 -1.3**
HCY *i* Sn **Sn 08 41 27.7 -7.3**
HCY Herceg Novi 6.32 340 ⇓*i*Pn **Pn 08 40 21.5 -1.3**
BEY Berane 6.43 350 ⇓*i*Pn **Pn 08 40 24.4 +0.2**
IVA Berane 6.43 350 ⇓*i*Pn **Pn 08 40 24.4 +0.2**
IVA *e*Sn **Sn 08 41 31.8 -5.8**
IVA Berane 6.43 350 ⇓*i*Pn **Pn 08 40 24.4 +0.2**
NKY Niksic 6.54 344 ⇓*i*Pn **Pn 08 40 25.5 -0.2**
NKY *e*Sn **Sn 08 41 33.2 -7.2**
NKY Niksic 6.54 344 ⇓*i*Pn **Pn 08 40 25.5 -0.2**
BRY Bratogost 6.73 341 ⇓*i*Pn **Pn 08 40 27.2 -1.2**
BRY *e*Sn **Sn 08 41 38.3 -6.8**
BRY Bratogost 6.73 341 ⇓*i*Pn **Pn 08 40 27.2 -1.2**
UPM Unac-Piva 6.93 344 ⇓*i*Pn **Pn 08 40 31.1 0.0**
UPM *i* Sn **Sn 08 41 42.9 -7.1**
UPM Unac-Piva 6.93 344 ⇓*i*Pn **Pn 08 40 31.1 0.0**
STON Ston 6.95 336 *i* Pn **Pn 08 40 28.9 -2.5**
STON Sn **Sn 08 41 40.5 -10**
PLE Pljevlja 6.96 347 ⇑*i*Pn **Pn 08 40 31.4 -0.1**
PLE *e*Sn **Sn 08 41 44.4 -6.2**
PLE Pljevlja 6.96 347 ⇑*i*Pn **Pn 08 40 31.4 -0.1**
GRUS Gruza 7.35 356 ⇑*i*Pn **Pn 08 40 35.2 -1.7**
BBLS Lazići 7.48 348 *i* Pn **Pn 08 40 37.8 -0.8**
DIVS Divibare 7.62 352 P **Pn 08 40 39.2 -1.4**
DIVS Divibare 7.62 352 P **Pn 08 40 39.2 -1.4**
AQU L'Aquila 8.52 315 ⇑P **Pn 08 41 01.5 +8.7**
AQU L'Aquila 8.52 315 Pn **Pn 08 40 54.4 +1.6**
32nm,0.8s
AQU L'Aquila 8.52 315 ⇑*i*P **Pn 08 41 01.5 +8.6**
AQU L'Aquila 8.52 315 Pn **Pn 08 40 54.4 +1.5**
32nm,0.8s
GZR Gura Zlata 8.89 6 ⇓P **Pn 08 40 58.3 +0.3**
GZR Gura Zlata 8.89 6 ⇓*i*P **Pn 08 40 58.3 +0.3**
GZR Gura Zlata 8.89 6 P **Pn 08 40 58.3 +0.3**
VOIR 9.28 16 ⇑P **Pn 08 41 03.9 +0.6**
VOIR 9.28 16 ⇑*i*P **Pn 08 41 03.9 +0.6**
VOIR 9.28 16 P **Pn 08 41 03.9 +0.6**
NVLJ Novalja 9.45 330 *e*Pn **Pn 08 41 05.6 0.0**
NVLJ Sn **Sn 08 42 41.9 -10**
NVLJ Novalja 9.45 330 *e*Pn **Pn 08 41 05.6 0.0**
TIRR Tirgusor 9.50 32 ⇓P **Pn 08 41 04.7 -1.6**
TIRR Tirgusor 9.50 32 ⇓*i*P **Pn 08 41 04.7 -1.6**
TIRR Tirgusor 9.50 32 P **Pn 08 41 04.7 -1.6**
MLR Muntele Rosu 9.55 19 Pn **Pn 08 41 05.8 -1.2**
0.3nm,0.3s,baz=162,slow=13,SNR=6.0
MLR Sn **Sn 08 42 48.4 -5.8**
0.5nm,0.3s,baz=153,slow=5.9,SNR=1.9
MLR Muntele Rosu 9.55 19 P **Pn 08 41 05.8 -1.2**
MLR 08 42 48.4
MLR smax
comp=N,1.0nm,0.3s
MLR Muntele Rosu 9.55 19 ⇓P **Pn 08 41 05.6 -1.3**
MLR Muntele Rosu 9.55 19 ⇓*i*P **Pn 08 41 05.6 -1.4**
MLR Muntele Rosu 9.55 19 P **Pn 08 41 05.8 -1.2**
comp=N,1.0nm,0.3s
VSL Villasalto 9.99 291 *e*Pn **Pn 08 41 13.2 +0.2**
comp=N,17nm,1.1s
VSL *e*Sn **Sn 08 43 06.5 +1.4**
VSL Villasalto 9.99 291 *e*Pn **Pn 08 41 13.2 +0.2**
comp=N,17nm,1.1s
VSL *e*Sn **Sn 08 43 06.5 +1.4**
PLOR Plostina 10.07 21 ⇑P **Pn 08 41 14.2 0.0**
PLOR Plostina 10.07 21 ⇑*i*P **Pn 08 41 14.2 0.0**
PLOR Plostina 10.07 21 P **Pn 08 41 14.2 0.0**
BRTR Keskin Array B 10.09 68 Pn **Pn 08 41 11.8 -2.6**
comp=N,0.1nm,0.3s,baz=260,slow=14,SNR=6.7
BRTR Keskin Array B 10.09 68 *i* P **Pn 08 41 15.5 +1.0**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
BRTR Keskin Array B 10.09 68 *i* P **Pn 08 41 15.5 +1.0**
comp=Z,2.0nm,0.8s
BOJS Bojanci 10.10 334 *i* Pn **Pn 08 41 13.8 -0.8**
BOJS *i* Sn **Sn 08 42 57.1 -11**
BOJS Bojanci 10.10 334 *i* Pn **Pn 08 41 13.8 -0.8**
DRGR 10.28 5 ⇑P **Pn 08 41 18.4 +1.5**
DRGR 10.28 5 ⇑*i*P **Pn 08 41 18.4 +1.5**
DRGR 10.28 5 P **Pn 08 41 18.4 +1.5**
JAVS Javornik 10.87 331 *i* Pn **Pn 08 41 24.5 -0.6**
JAVS *i* Sn **Sn 08 43 16.4 -10**
JAVS Javornik 10.87 331 *i* Pn **Pn 08 41 24.5 -0.6**
VOY Vojsko 11.05 331 *e*Pn **Pn 08 41 27.1 -0.5**
VOY *e*Sn **Sn 08 43 20.2 -11**
VOY Vojsko 11.05 331 *e*Pn **Pn 08 41 27.1 -0.5**
PERS Pernice 11.14 337 *i* Pn **Pn 08 41 27.6 -1.2**
PERS *i* Sn **Sn 08 43 20.2 -13**
PERS Pernice 11.14 337 *i* Pn **Pn 08 41 27.5 -1.3**
SOKA Soboth 11.21 337 ⇓*i*Pn **Pn 08 41 28.2 -1.4**
SOKA Soboth 11.21 337 Pn **Pn 08 41 28.2 -1.5**
SOKA Soboth 11.21 337 Sn **Sn 08 43 23.2 -12**
OBKA Obir 11.22 335 ⇑*i*Pn **Pn 08 41 28.3 -1.5**
OBKA ⇓*i*Sn **Sn 08 43 24.1 -11**
OBKA Obir 11.22 335 Pn **Pn 08 41 28.3 -1.5**
PGF Pioggiola 11.34 306 *e*P **Pn 08 41 33.5 +2.0**
comp=Z,24nm,1.1s
PGF Pioggiola 11.34 306 *e*P **Pn 08 41 33.5 +2.0**
PGF pmax pmax
comp=Z,12nm,1.1s
PGF Pioggiola 11.34 306 *e*P **Pn 08 41 33.5 +2.0**
comp=Z,12nm,1.1s
PGF Pioggiola 11.34 306 *e*P **Pn 08 41 33.5 +2.0**
comp=Z,12nm,1.1s
PSZ Piszkesteto 11.42 355 ⇓P **Pn 08 41 32.1 -0.5**
PSZ Piszkesteto 11.42 355 ⇓*i*P **Pn 08 41 32.1 -0.5**
PSZ Piszkesteto 11.42 355 P **Pn 08 41 32.1 -0.5**
BUR08 Bucovina Ar. S 11.42 13 *e*Pn **Pn 08 41 32.8 +0.1**
BUR08 Bucovina Ar. S 11.42 13 *e*Pn **Pn 08 41 32.8 +0.1**
KECS Kecovo 11.95 357 *e*P **Pn 08 41 41.2 +1.4**
KECS *e* 08 43 49.2
KECS Kecovo 11.95 357 *e*Pn **Pn 08 41 41.2 +1.4**
KECS *e* 08 43 49.2
KECS Kecovo 11.95 357 *e*PN **Pn 08 41 41.2 +1.4**
KECS Kecovo 11.95 357 *e*SN **Sn 08 43 49.2 -3.9**
KECS Kecovo 11.95 357 *e*P **Pn 08 41 41.2 +1.4**
KECS *e*S **Sn 08 43 49.2 -3.9**
MMAI Mount Meron Ar 11.98 103 Pn **Pn 08 41 38.0 -2.4**
comp=Z,14nm,0.3s,baz=301,slow=12,SNR=3.2
VYHS Vyhne 12.09 352 *e*P **Pn 08 41 42.0 +0.2**
VYHS *e* 08 43 46.3
VYHS Vyhne 12.09 352 *e*Pn **Pn 08 41 42.0 +0.2**
VYHS *e*Sn **Sn 08 43 46.3 -10**
VYHS Vyhne 12.09 352 *e*PN **Pn 08 41 42.0 +0.2**
VYHS Vyhne 12.09 352 *e*P **Pn 08 41 42.0 +0.2**
EIL Elat 13.21 117 Pn **Pn 08 41 57.5 +0.4**
comp=Z,0.5nm,0.3s,baz=345,slow=21,SNR=5.6
EIL Sn **Sn 08 44 11.9 -12**
comp=Z,0.9nm,0.3s,baz=48,slow=9.5,SNR=5.1
EIL Elat 13.21 117 Pn **Pn 08 41 57.5 +0.4**
VRAC Vranov 13.24 346 Pn **Pn 08 42 05.5 +8.1**
comp=Z,0.6nm,0.3s,baz=102,slow=2.4,SNR=5.6
DAVOX Davos/Dischmat 13.39 323 Pn **Pn 08 42 09.4 +10**
comp=Z,1.1nm,0.3s,baz=148,slow=16,SNR=6.6
DAVOX Sn **Sn 08 44 23.1 -5.2**
comp=Z,3.1nm,0.3s,baz=323,slow=21,SNR=8.8
TREC Trest 13.47 343 AMS AMS 08 48 00.0
comp=Z,300nm,14.4s
OKC Ostrava-Krasne 13.50 351 *e*P **Pn 08 42 10.7 +10**
OKC MLR MLR
comp=Z,200nm,15.7s
OKC Ostrava-Krasne 13.50 351 *e*P **Pn 08 42 10.7 +10**
OKC AMS AMS 08 48 10.0
comp=Z,200nm,15.7s
KHC Kasperske Hory 13.83 338 P **Pn 08 42 08.4 +2.8**
KHC 08 44 29.7
KHC pmax pmax
comp=Z,4.0nm,0.8s
KHC Kasperske Hory 13.83 338 Pn **Pn 08 42 08.4 +2.9**
comp=Z,4.1nm,0.8s
KHC Sn **Sn 08 44 29.6 -9.5**
KHC Kasperske Hory 13.83 338 *e*P **Pn 08 42 12.8 +7.2**
KHC AMS AMS 08 48 10.0
comp=Z,400nm,18.0s
KHC Kasperske Hory 13.83 338 Pn **Pn 08 42 08.4 +2.8**
comp=Z,4.1nm,0.8s
KHC Kasperske Hory 13.83 338 P **Pn 08 42 12.8 +7.2**
DPC Dobruska-Polom 14.29 347 *e*P **Pn 08 42 16.4 +4.7**
DPC MLR MLR
comp=Z,200nm,14.4s
DPC Dobruska-Polom 14.29 347 *e*P **Pn 08 42 16.4 +4.7**
DPC AMS AMS 08 48 40.0
comp=Z,200nm,14.4s
DPC Dobruska-Polom 14.29 347 *e*P **Pn 08 42 16.4 +4.7**
comp=Z,200nm,14.4s
PRU Pruhonice 14.34 342 AMS AMS 08 48 20.0
comp=Z,300nm,10.7s
PVCC Panska Ves 14.83 343 AMS AMS 08 48 40.0
comp=Z,200nm,11.8s
NKC Novy Kostel 15.15 337 AMS AMS 08 49 00.0
comp=Z,300nm,17.1s
KIEV Kiev 15.19 19 *e*P **Pn 08 42 20.8 -3.2**
KIEV *e* 08 45 10.2
KIEV pmax pmax
comp=Z,6.0nm,0.8s
KIEV Kiev 15.19 19 *e*Pn **Pn 08 42 20.8 -3.3**
comp=Z,6.3nm,0.8s
KIEV *e*Sn **Sn 08 45 10.2 -2.0**
AKASG Malin Array Be 15.20 19 Pn **Pn 08 42 20.9 -3.2**
comp=Z,1.0nm,0.3s,baz=207,slow=12,SNR=8.8
AKASG Malin Array Be 15.20 19 Pn **Pn 08 42 20.9 -3.2**
LASF Ste Croix 15.38 305 *e*P **Pn 08 42 22.1 -4.4**
CLL Collm 15.95 340 *e*P **Pn 08 42 33.0 -0.8**
CLL *e*pP pP 08 42 39.0 -1.2
CLL Collm 15.95 340 *e*P **Pn 08 42 33.0 -0.8**
CLL *e*pP pP 08 42 39.0 -1.2
HAU Haudompre 15.98 320 *e*P **Pn 08 42 32.9 -1.4**
MTLF Montolieu 16.23 301 *e*P **Pn 08 42 33.3 -4.3**
LOR Lormes 16.89 315 *e*P **Pn 08 42 45.0 -0.9**
SUW Suwalki 17.50 3 *e*P **Pn 08 42 52.4 -1.1**
SUW Suwalki 17.50 3 *e*P **Pn 08 42 52.4 -1.1**
KIV Kislovodsk 17.77 59 *e*P **Pn 08 42 56.6 -0.3**
KIV pmax pmax
comp=Z,12nm,1.1s
KIV MLR MLR
comp=Z,30nm,10.0s
KIV Kislovodsk 17.77 59 *e*P **Pn 08 42 56.6 -0.3**
comp=Z,30nm,10.0s
ETSF Etsaut 18.07 297 *e*P **Pn 08 43 01.4 +0.8**
comp=Z,9.2nm,0.9s
ETSF Etsaut 18.07 297 *e*P **Pn 08 43 01.4 +0.8**
ETSF pmax pmax
comp=Z,5.0nm,0.9s
ETSF Etsaut 18.07 297 *e*P **Pn 08 43 01.4 +0.8**
comp=Z,4.6nm,0.9s
ETSF Etsaut 18.07 297 *e*P **Pn 08 43 01.4 +0.8**
comp=Z,4.6nm,0.9s
ZEI Tsey 18.32 63 *e*P **Pn 08 43 04.5 +0.8**
ZEI pmax pmax
comp=Z,11nm,0.5s
ZEI Tsey 18.32 63 *e*P **Pn 08 43 04.5 +0.8**
comp=Z,11nm,0.5s
BAIF Baives 18.39 323 *e*P **Pn 08 43 03.4 -1.0**
BAIF Baives 18.39 323 *e*P **Pn 08 43 03.4 -1.0**
GNI Garni 18.59 72 *e*P **Pn 08 43 05.7 -1.3**
comp=Z,0.7nm,0.3s,baz=321,slow=21,SNR=5.1
GNI LR LR 08 51 27.2
comp=Z,119nm,20.8s,baz=348,slow=41
GNI Garni 18.59 72*c i*P **Pn 08 43 07.2 +0.3**
GNI pmax pmax
comp=Z,16nm,0.9s
GNI Garni 18.59 72 P **Pn 08 43 05.7 -1.2**
SJPF Ste Jean 18.60 298 *e*P **Pn 08 43 07.2 +0.1**
comp=Z,24nm,1.1s
SJPF Ste Jean 18.60 298 *e*P **Pn 08 43 07.2 +0.1**
SJPF pmax pmax
comp=Z,12nm,1.1s
SJPF Ste Jean 18.60 298 *e*P **Pn 08 43 07.2 +0.1**
comp=Z,12nm,1.1s
SJPF Ste Jean 18.60 298 *e*P **Pn 08 43 07.2 +0.1**
comp=Z,12nm,1.1s
NACGM Naroch 18.71 10 *e* **Pn 08 43 03.0 -5.3**
BSD Bornholm Skovb 19.11 348 *i* P **Pn 08 43 10.8 -2.3**
BSD pmax pmax
comp=Z,8.0nm,0.7s
BSD Bornholm Skovb 19.11 348 *i* P **Pn 08 43 10.8 -2.3**
comp=Z,7.8nm,0.7s
BSD *i* 08 44 31.2
BSD Bornholm Skovb 19.11 348 *i* P **Pn 08 43 10.8 -2.3**
comp=Z,8.0nm,0.7s
VORD Divnogorie 19.25 36 *e*P **Pn 08 43 12.4 -2.4**
VORD pmax pmax
comp=Z,5.0nm,0.3s
VORD pmax pmax
comp=N,10.0nm,0.7s
VORD pmax pmax
comp=E,10.0nm,0.7s
VORD Divnogorie 19.25 36 *e*P **Pn 08 43 12.4 -2.4**
comp=E,5.0nm,0.3s
VSR Storozhevoye 19.36 35 *e*P **Pn 08 43 13.2 -2.9**
VSR pmax pmax
comp=Z,9.0nm,0.5s
VSR pmax pmax
comp=N,4.0nm,0.3s
VSR pmax pmax
comp=E,3.0nm,0.3s
VSR Storozhevoye 19.36 35 *e*P **Pn 08 43 13.2 -2.9**
comp=E,9.0nm,0.5s
ESDC Sonseca Array 20.24 287 P **P 08 43 25.9 +1.1**
comp=E,0.3nm,0.3s,baz=80,slow=9.8,SNR=8.2
ESDC LR LR 08 51 36.0
comp=E,74nm,21.6s,MS3.0,baz=55,slow=38
ESDC Sonseca Array 20.24 287 P **P 08 43 25.9 +1.1**
ESDC LR LR 08 51 36.0
ESDC Sonseca Array 20.24 287 P **P 08 43 25.9 +1.1**
VRHR Novokhopersk 20.46 38 *e*P **P 08 43 26.4 -0.7**
VRHR pmax pmax
comp=N,30nm,0.7s
VRHR pmax pmax
comp=E,30nm,0.7s
VRHR pmax pmax
comp=Z,60nm,0.7s
VRHR Novokhopersk 20.46 38 *e*P **P 08 43 26.4 -0.7**
SGMF Saint Gilles 21.16 311 *e*P **P 08 43 35.5 +0.8**
SGMF Saint Gilles 21.16 311 *e*P **P 08 43 35.5 +0.8**
OBN Obninsk 21.25 24 ⇑*i*P **P 08 43 33.2 -2.4**
OBN *i* 08 43 50.2
OBN pmax pmax
comp=Z,21nm,1.0s,mb4.4
OBN Obninsk 21.25 24 *i* P **P 08 43 33.2 -2.4**
comp=Z,21nm,1.0s,mb4.4
ROSF Rostrenen 21.63 311 *e*P **P 08 43 39.5 -0.2**
ROSF Rostrenen 21.63 311 *e*P **P 08 43 39.5 -0.2**
MDT Midelt 21.75 268 P **P 08 43 43.1 +1.9**
comp=Z,2.6nm,0.7s,mb3.8,baz=126,slow=6.0,SNR=4.7
MDT LR LR 08 52 38.7
comp=Z,118nm,21.6s,MS3.3,baz=181,slow=38
MDT Midelt 21.75 268 P **P 08 43 43.1 +1.9**
MOS Moscow 22.11 25 *e*P **P 08 43 41.7 -3.1**
MOS *e* 08 44 05.2
MOS pmax pmax
comp=Z,89nm,0.8s,mb5.2
MOS pmax pmax
comp=Z,100nm,0.6s,mb5.4
MOS Moscow 22.11 25 *e*P **P 08 43 41.7 -3.1**
comp=Z,100nm,0.6s,mb5.4
VSU Vasula 22.20 7*c i*P **P 08 43 43.3 -2.4**
VSU pmax pmax
comp=Z,46nm,0.6s,mb5.1
VSU Vasula 22.20 7 *i* P **P 08 43 43.3 -2.4**
comp=Z,46nm,0.6s,mb5.1
HFS Hagfors 24.13 350 P **P 08 44 03.0 -2.2**
comp=Z,9.2nm,0.7s,mb4.3,baz=157,slow=12,SNR=27
HFS LR LR 08 54 09.4
comp=Z,84nm,21.8s,MS3.2,baz=56,slow=38
FINES FINESS Array B 25.09 5 P **P 08 44 12.1 -1.8**
comp=Z,8.0nm,0.6s,mb4.4,baz=166,slow=11,SNR=26
EKA Eskdalemuir Ar 25.20 326 P **P 08 44 15.2 +0.1**
comp=Z,2.9nm,0.8s,mb3.9,baz=121,slow=9.8,SNR=7.3
NAO01 NORSAR Array S 25.23 348 *e*P **P 08 44 11.9 -3.3**
comp=Z,9.0nm,0.8s,mb4.3
NB2 NORSAR Subarra 25.36 348 P **P 08 44 14.6 -1.9**
comp=Z,8.1nm,1.0s,mb4.2,baz=159,slow=10
NB2 NORSAR Subarra 25.36 348 P **P 08 44 14.6 -1.9**
comp=Z,8.1nm,1.0s,mb4.2,SNR=7.0
NOA NORSAR Array B 25.36 348 P **P 08 44 14.8 -1.6**
comp=Z,6.8nm,0.8s,mb4.2,baz=158,slow=9.0,SNR=37
NOA LR LR 08 55 39.8
comp=Z,47nm,21.3s,MS3.0,baz=90,slow=40
NOA NORSAR Array B 25.36 348 P **P 08 44 14.8 -1.7**
NOA LR LR 08 55 39.8
KAF Kangasniemi 25.77 5 *e*P **P 08 44 18.0 -2.1**
KAF pmax pmax
comp=Z,10.0nm,0.5s,mb4.6
KAF Kangasniemi 25.77 5 *e*P **P 08 44 18.0 -2.1**
comp=Z,10nm,0.5s,mb4.6
KAF Kangasniemi 25.77 5 *e*p **P 08 44 18.0 -2.1**
comp=Z,10nm,0.5s,mb4.6
JOF Joensuu 27.09 10 *e*P **P 08 44 29.5 -2.5**
JOF pmax pmax
comp=Z,8.0nm,0.7s,mb4.4
JOF Joensuu 27.09 10 *e*P **P 08 44 29.5 -2.5**
JOF Joensuu 27.09 10 *e*p **P 08 44 29.5 -2.5**
comp=Z,8.0nm,0.7s,mb4.4
TORD Torodi Ar. Bea 29.29 222 P **P 08 44 53.6 +1.4**
comp=Z,235nm,0.4s,baz=33,slow=9.2,SNR=4.3
TORD LR LR 08 58 25.6
comp=Z,106nm,18.4s,MS3.5,baz=280,slow=40
AKTK Aktyubinsk 29.59 50 P **P 08 44 52.4 -2.1**
AKTO Aktyubinsk 29.59 50 P **P 08 44 52.4 -2.1**
comp=Z,3.4nm,0.5s,mb4.3,baz=263,slow=8.2,SNR=12
ABKAR Akbulak array 30.57 53 *e*P **P 08 45 00.8 -2.3**
comp=Z,2.1nm,0.6s,mb4.1
ARU Arti 31.80 39*c i*P **P 08 45 11.0 -2.9**
ARU 08 48 02.9
ARU S **S 08 50 19.8 -4.1**
ARU SS SS 08 52 06.3 -34
ARU pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
ARU Arti 31.80 39 PcP PcP 08 48 02.9 -1.9
ARCES ARCESS Array B 33.12 3 P **P 08 45 23.8 -1.5**
comp=Z,1.7nm,0.7s,mb4.1,baz=192,slow=9.7,SNR=9.0
ARCES ARCESS Array B 33.12 3 P **P 08 45 23.8 -1.5**
BRVK Borovoye 37.55 48 ⇓*i*P **P 08 46 02.3 -1.3**
BRVK pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
BRVK Borovoye 37.55 48 *e*P **P 08 46 02.1 -1.5**
comp=Z,6.9nm,0.8s,mb4.4
BRVK Borovoye 37.55 48 *i* P **P 08 46 02.3 -1.3**
comp=Z,7.0nm,0.8s,mb4.4
BVAR Borovoye Array 37.61 48 P **P 08 46 02.4 -1.7**
comp=Z,3.8nm,0.6s,mb4.3,baz=264,slow=5.9,SNR=22
BVAR Borovoye Array 37.61 48 P **P 08 46 02.4 -1.7**
DBIC Dimbokro 38.25 225 P **P 08 46 11.1 +1.1**
comp=Z,10nm,1.0s,mb4.5,baz=360,slow=3.9,SNR=5.5
DBIC LR LR 09 04 09.5
comp=Z,72nm,20.4s,MS3.5,baz=174,slow=39
DBIC Dimbokro 38.25 225 P **P 08 46 11.1 +1.1**
TIC Toumodi 38.37 226 *e*P **P 08 46 11.6 +0.7**
comp=Z,5.1nm,0.2s,mb4.9
KIC Kosan Boka 38.44 225 *e*P **P 08 46 12.5 +1.0**
comp=Z,31nm,1.1s,mb5.0
KIC Kosan Boka 38.44 225 *e*P **P 08 46 12.5 +1.0**
comp=Z,31nm,1.1s,mb5.0
LIC Lamto 38.71 225 *e*P **P 08 46 14.8 +1.0**
comp=Z,58nm,1.3s,mb5.2
LIC Lamto 38.71 225 *e*P **P 08 46 14.2 +0.4**
comp=Z,9.1nm,0.5s,mb4.5
LIC Lamto 38.71 225 *e*P **P 08 46 14.2 +0.4**
comp=Z,4.6nm,0.4s,mb4.6
LIC Lamto 38.71 225 *e*P **P 08 46 14.2 +0.4**
comp=Z,4.6nm,0.4s,mb4.6
EKS2 Erkin-Say 40.22 65 *e*P **P 08 46 25.2 -1.0**
comp=Z,16nm,0.8s,mb4.8
EKS2 Erkin-Say 40.22 65 *e*P **P 08 46 25.2 -1.0**
comp=Z,16nm,0.8s,mb4.8
AAK Ala-Archa 40.75 65 *e*P **P 08 46 29.7 -0.8**
AAK pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
AAK Ala-Archa 40.75 65 *e*P **P 08 46 29.6 -0.9**
comp=Z,9.8nm,0.9s,mb4.4
AAK Ala-Archa 40.75 65 *e*P **P 08 46 29.6 -0.9**
comp=Z,9.8nm,0.9s,mb4.4
KURK Kurchatov 42.66 52*c i*P **P 08 46 43.2 -2.9**
KURK pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
MKAR Makanchi Array 45.52 57 P **P 08 47 06.6 -2.5**
comp=Z,1.2nm,0.3s,mb4.2,baz=285,slow=6.0,SNR=8.7
MKAR Makanchi Array 45.52 57 P **P 08 47 06.6 -2.5**
MKAR Makanchi Array 45.52 57 P **P 08 47 06.6 -2.5**
ZAA0 Zalesovo Array 46.23 47 *e*P **P 08 47 11.8 -2.8**
ZALV Zalesovo Beam 46.23 47 P **P 08 47 11.8 -2.7**
comp=Z,8.9nm,0.3s,mb5.2,baz=273,slow=8.4,SNR=27
ZALV Zalesovo Beam 46.23 47 P **P 08 47 11.8 -2.7**
KOLN Koldanda 52.52 81 *e*P **P 08 48 00.6 -2.4**
comp=Z,7.0nm,0.4s,mb4.9
GKN Gorkha 53.24 80 *e*P **P 08 48 06.2 -2.2**
comp=Z,12nm,0.5s,mb5.1

DMN	Daman	53.79	80	eP	P	08 48 10.6	-1.8
	comp=Z,37nm,0.8s,mb5.4						
KKN	Kakani	53.85	80	eP	P	08 48 10.9	-1.9
	comp=Z,14nm,0.5s,mb5.1						
PKIN	Phulchoki	54.04	80	eP	P	08 48 12.2	-2.0
	comp=Z,6.8nm,0.6s,mb4.8						
PKI	Pulchoki	54.05	80	eP	P	08 48 12.5	-1.8
	comp=Z,6.2nm,0.3s,mb5.0						
GUN	Gumba	54.27	79	eP	P	08 48 14.3	-1.6
RAMN	Ramite	55.27	80	eP	P	08 48 20.9	-2.3
	comp=Z,24nm,0.7s,mb5.3						
TAPN	Taplejung	55.97	79	eP	P	08 48 27.3	-0.9
	comp=Z,8.1nm,0.5s,mb5.0						
ZAK	Zakamensk	58.06	48	eP	P	08 48 41.1	-1.5
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.9						
ZAK	Zakamensk	58.06	48	eP	P	08 48 41.1	-1.5
	comp=Z,1.0nm,0.9s,mb3.9						
SONM	Songino Array	60.91	50	P	P	08 48 60.0	-2.4
	comp=Z,1.3nm,0.8s,mb4.1,baz=286,slow=8.7,SNR=6.2						
SONM	Songino Array	60.91	50	P	P	08 49 00.0	-2.3
CMAR	Chiang Mai Arr	69.36	82	P	P	08 49 56.1	-1.6
	comp=Z,1.8nm,0.7s,mb4.1,baz=300,slow=7.8,SNR=9.8						
CMAR	Chiang Mai Arr	69.36	82	P	P	08 49 56.1	-1.6
YKA	Yellowknife Ar	75.18	341	P	P	08 50 30.4	-1.3
	comp=Z,1.5nm,0.7s,mb4.0,baz=34,slow=5.6,SNR=6.5						
YKA	Yellowknife Ar	75.18	341	P	P	08 50 30.4	-1.3
ILAR	Eielson Array	78.60	355	P	P	08 50 49.7	-1.3
	comp=Z,0.4nm,0.8s,baz=7,2,slow=2.0,SNR=5.0						
ILAR	Eielson Array	78.60	355	P	P	08 50 49.7	-1.3
KSRS	Korea Array	79.77	51	P	P	08 50 56.2	-1.6
	comp=Z,2.7nm,0.8s,mb4.3,baz=312,slow=4.9,SNR=12						
KSRS	Korea Array	79.77	51	P	P	08 50 56.3	-1.6
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
KSRS	Korea Array	79.77	51	P	P	08 50 56.3	-1.6
	comp=Z,3.0nm,0.8s,mb4.3						
YSS	Yuzh-Sakhalins	81.63	36	eP	P	08 51 07.5	-0.2
YSS				pmax	pmax		
	comp=Z,28nm,2.5s,mb4.8						
YSS	Yuzh-Sakhalins	81.63	36	eP	P	08 51 07.5	-0.2
	comp=Z,28nm,2.5s,mb4.8						
MJAR	Matsushiro Arr	86.57	46	P	P	08 51 32.4	-0.6
	comp=Z,0.8nm,0.4s,mb4.3,baz=316,slow=4.9,SNR=3.4						
MJAR	Matsushiro Arr	86.57	46	P	P	08 51 32.4	-0.6
MJAR	Matsushiro Arr	86.57	46	P	P	08 51 32.4	-0.7
ASAR	Alice Springs	121.22	98	PKP	PKPdf	08 57 42.1	-0.9
	comp=Z,0.1nm,0.3s,baz=313,slow=1.5,SNR=4.1						

IDC 31 08:43:21.9±1.8, 10°.76S×163°.29E, h0km, mb3.8/5, mb1 4.1/6, mb1mx3.9/16, mbtmp3.9/6, ML3.6/1, MS3.6/3, Ms1 3.6/3, ms1mx3.3/21, Error ellipse: s-maj=67.1km s-min=26.9km az=140.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	18.84	238	P	Pn	08 47 44.8	+0.8
	0.1nm,0.3s,baz=58,slow=13,SNR=8.1						
CTA				LR	LR	08 53 28.8	
	comp=Z,125nm,19.0s,baz=229,slow=32						
STKA	Stephens Creek	29.04	220	LR	LR	09 00 30.6	
	comp=Z,162nm,19.7s,baz=28,slow=35						
GUMO	Guam	30.32	323	LR	LR	08 59 58.3	
	comp=Z,146nm,20.1s,baz=84,slow=33						
ASAR	Alice Springs	30.78	242	P	P	08 49 38.8	-0.6
	1.6nm,0.8s,baz=71,slow=10.0,SNR=11						
CMAR	Chiang Mai Arr	69.79	294	P	P	08 54 35.0	+0.5
	0.9nm,0.3s,baz=94,slow=3.8,SNR=4.6						
SONM	Songino Array	77.02	325	P	P	08 55 16.7	+0.1
	0.5nm,0.7s,baz=121,slow=5.6,SNR=3.4						
ILAR	Eielson Array	84.02	19	P	P	08 55 53.6	-0.2
	1.7nm,1.2s,baz=225,slow=5.0,SNR=5.4						
NVAR	Mina Array Bea	87.69	50	P	P	08 56 13.4	+0.7
	0.9nm,1.1s,baz=242,slow=6.2,SNR=3.5						

BJI 31 08:47:15.8, 35°.04N×92°.31E, h15km, ML3.6/5, Ms3.6/2
IDC 31 08:47:25.1±1.6, 35°.43N×92°.40E, h0km, mb3.5/2, mb1 3.7/4, mb1mx3.4/23, mbtmp3.6/4, ML3.5/2, Error ellipse: s-maj=68.7km s-min=23.0km az=57.0, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	Urumqi	9.14	338	ePn	Pn	08 49 51.0	+13
WMQ				Sg	Sn	08 51 01.8	-20
WMQ				smax			
	comp=N,28nm,0.7s						
WMQ				smax			
	comp=E,40nm,0.6s						
MKAR	Makanchi Array	13.66	329	Pn	Pn	08 50 38.1	-2.0
	comp=E,0.3nm,0.3s,baz=152,slow=14,SNR=4.9						
MKAR				Lg		08 54 40.4	
	baz=137,slow=30,SNR=3.1						
SONM	Songino Array	16.19	36	Pn	Pn	08 51 14.1	+0.3
	comp=E,0.1nm,0.3s,baz=219,slow=11,SNR=3.3						
BVAR	Borovoye Array	23.48	325	P	P	08 52 35.7	-0.6
	comp=E,0.5nm,0.5s,baz=121,slow=5.6,SNR=3.1						
ASAR	Alice Springs	70.70	140	P	P	08 58 43.0	+0.2
	comp=E,0.6nm,0.6s,baz=324,slow=6.8,SNR=10						

ISCJB 31 09:06:00.7±2.9, 51°.7N±0°.1×171°.20W±0°.09, h8km±20km, mb3.6/4, Error ellipse: s-maj=22.1km s-min=7.7km az=167.3
IDC 31 09:06:00.3±1.4, 51°.97N×171°.51W, h0km, mb3.5/3, mb1 3.7/5, mb1mx3.4/24, mbtmp3.4/5, ML3.5/2, Error ellipse: s-maj=55.3km s-min=26.9km az=172.0
NEIC 31 09:06:05.4, 51°.76N×171°.17W, h32km, ML3.6(PMR), ML3.5(AEIC), After AEIC.
ISC 31 09:06:01.6±3.7, 51°.8N±0°.1×171°.24W±0°.09, h3km±24km, n11, σ0°90/13, mb3.6/4, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	Atka Island	1.88	285	P	Pn	09 06 34.3	-0.3
ATKA				S	Sn	09 06 59.7	+0.9
UNV	Unalaska Valle	3.55	52	P	Pn	09 06 57.6	+0.1
UNV				S	Sn	09 07 39.9	0.0
AKGG	Akutan Green G	4.00	50	P	Pn	09 07 04.2	+0.5
AMKA	Amchitka	5.91	270	eP	Pn	09 07 30.4	+0.4
SDPT	Sand Point	7.35	57	eP	Pn	09 07 53.0	+3.4
ILAR	Eielson Array	18.11	35	P	Pn	09 10 12.7	-1.1
	0.0nm,0.3s,baz=234,slow=8.8,SNR=3.6						
PETK	Petropavlovsk-	18.92	286	P	Pn	09 10 19.2	-4.5
	0.4nm,0.3s,baz=104,slow=12,SNR=2.8						
NVAR	Mina Array Bea	38.82	89	P	P	09 13 28.3	+0.9
	0.4nm,0.7s,mb3.2,baz=291,slow=7.6,SNR=3.7						
MDJ	Mudanjiang	39.12	284	P	P	09 13 28.0	-1.9
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
MDJ				pmax	pmax		
	comp=Z,48nm,6.2s						
TXAR	Lajitas Array	53.92	87	P	P	09 15 25.9	-0.4
	comp=Z,0.2nm,0.6s,mb3.2,baz=289,slow=4.7,SNR=4.8						
ASAR	Alice Springs	89.12	229	P	P	09 18 58.1	0.0
	comp=Z,0.2nm,0.5s,mb3.7,baz=19,slow=5.3,SNR=5.8						

IDC 31 09:33:44.9±2.4, 13°.60N×90°.41W, h10km±13km, mb4.3/12, mb1 4.5/14, mb1mx4.3/22, mbtmp4.3/14, ML5.1/2, MS3.7/13, Ms1 3.8/13, ms1mx3.6/21, Error ellipse: s-maj=31.5km s-min=12.5km az=60.0
CASC 31 09:33:50.2±1.9, 13°.49N×90°.75W, h24km±7km, MD4.4, ML3.9, mb4.6(NEIC)
ISCJB 31 09:33:51.1±0.5, 13°.53N±0°.03×90°.68W±0°.04, h69km±4km, mb4.5/69, Error ellipse: s-maj=7.4km s-min=3.4km az=44.7
NEIC 31 09:33:52.0±0.8, 13°.54N×90°.67W, h60km±7km, mb4.6/68, Error ellipse: s-maj=9.0km s-min=5.5km az=51.0
MOS 31 09:33:53.0±1.2, 13°.61N×90°.52W, h88km, mb4.7/15, Error ellipse: s-maj=16.0km s-min=6.1km az=110.9
ISC 31 09:33:52.5±0.4, 13°.61N±0°.04×90°.67W±0°.04, h58km±4km, n448, σ0°90/440, mb4.5/69, MS3.9/16, 120C-136D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	Fuego 3	0.85	349	⇓eP	Pn	09 34 07.4	-1.0
FG6		0.97	348	⇓iP	Pn	09 34 09.2	-0.8
NBG	Las Nubes	1.02	18	eP	Pn	09 34 11.9	+1.2
NBG				eS	Sn	09 34 28.5	+4.3
SBLS	San Blas	1.04	77	eP	Pn	09 34 10.4	-0.6
JAT	Jato	1.17	307	eP	Pn	09 34 10.3	-2.4
TP2	Tecpan 2	1.21	344	⇓iP	Pn	09 34 13.2	-0.1
BOQS	Boqueron	1.36	85	eP	Pn	09 34 14.9	-0.3
SNET	Serv Nac Est T	1.40	87	eP	Pn	09 34 15.3	-0.5
SNET				eS	Sn	09 34 34.9	+1.6
SNET				AML	AML	09 34 37.5	
	comp=Z,10μm,0.3s						
MTO2	Montecristo 2	1.49	58	eP	Pn	09 34 17.6	+0.5
MTO2				eS	Sn	09 34 39.6	+4.1
LFRS	El Faro	1.56	89	eP	Pn	09 34 17.3	-0.6
MRL	Marmol	1.73	33	⇓eP	Pn	09 34 22.4	+2.1
SNVI	San Vicente	1.78	90	eP	Pn	09 34 21.1	+0.2
SNVI				eP		09 34 21.4	-1.5
SNVI				eS	Sn	09 34 45.1	+2.6
VSM	San Miguel	2.34	94	eP	Pn	09 34 29.2	+0.7
VSM				eS	Sn	09 34 58.1	+2.0
BLLM	Bellamira	2.37	94	eP	Pn	09 34 29.3	+0.3
CAHU	Cacacuatique	2.40	86	eP	Pn	09 34 29.4	+0.1
CNCH	Conchagua	2.78	97	eP	Pn	09 34 34.2	-0.3
CNCH				eS	Sn	09 35 08.0	+1.0
TGUH	Tegucigalpa,Un	3.33	82	ePn	Pn	09 34 42.1	0.0
TGUH	Tegucigalpa,Un	3.33	82	eP	Pn	09 34 42.4	+0.3
CRIN	San Cristobal	3.64	104	eP	Pn	09 34 46.0	-0.3
CRIN				AML	AML	09 35 48.0	
	comp=Z,772nm,0.6s						
LEON	Leon	3.87	107	eP	Pn	09 34 47.1	-2.3
TELN	Telica	3.87	105	eP	Pn	09 34 48.9	-0.6
CNGN	Cerro Negro	4.03	105	eP	Pn	09 34 50.6	-1.1
CNGN				AML	AML	09 35 54.8	
	comp=Z,243nm,0.8s						
MOMN	Momotombo	4.20	106	eP	Pn	09 34 54.1	+0.1
MOMN				AML	AML	09 35 51.8	
	comp=Z,12nm,0.5s						
COPN	Copaltepe	4.22	109	eP	Pn	09 34 53.3	-1.1
COPN				AML	AML	09 36 00.4	
	comp=Z,475nm,0.6s						
CSAN		4.38	108	eP	Pn	09 34 55.5	-1.0
XAVN	Gruta Xavier	4.48	108	eP	Pn	09 34 57.3	-0.6
TISN	Laguna Tiscapa	4.53	108	eP	Pn	09 34 57.0	-1.6
MGAN	Managua	4.55	108	eP	Pn	09 34 57.6	-1.3
CRUN	El Crucero	4.56	110	eP	Pn	09 34 59.3	+0.3
WILN	Americas 2	4.60	108	eP	Pn	09 34 58.2	-1.4
APON	Apoyo	4.80	110	eP	Pn	09 35 02.8	+0.6
SSN	San Juan del S	5.24	115	eP	Pn	09 35 06.9	-1.3
CONN	Concepcion	5.33	112	eP	Pn	09 35 08.4	-1.1
CMIG	Matias Romero	5.34	311	Pn	Pn	09 35 07.0	-2.6
	comp=Z,24nm,0.3s,baz=126,slow=12,SNR=102						
CMIG				Sn	Sn	09 36 05.5	-4.3
	comp=Z,69nm,0.3s,baz=50,slow=21,SNR=6.4						
CMIG	Matias Romero	5.34	311	Pn	Pn	09 35 07.0	-2.6
CMIG				Sn	Sn	09 36 05.5	-4.3
VCR	Vista de Mar	6.03	125	eP	Pn	09 35 18.7	-0.4
JTS	JuntasAbangare	6.50	120	Pn	Pn	09 35 25.3	-0.2
	comp=Z,6.2nm,0.3s,baz=306,slow=22,SNR=45						
JTS				Sn	Sn	09 36 33.2	-5.1
	baz=166,slow=17,SNR=1.2						
JTS				Lg		09 37 02.1	
	comp=Z,1.3nm,0.3s,baz=118,slow=19,SNR=6.2						
JTS	JuntasAbangare	6.50	120	ePn	Pn	09 35 25.4	-0.1
JTS				eSn	Sn	09 36 43.9	+5.6
JTS	JuntasAbangare	6.50	120	eP	Pn	09 35 25.2	-0.3
JCR	Jicaral	6.60	124	eP	Pn	09 35 26.1	-0.9
TEIG	Tepich	6.97	19	ePn	Pn	09 35 32.1	+0.2
CGA2	Cerro Gallo 2	7.05	120	eP	Pn	09 35 34.0	+1.0
PRS1	Puriscal	7.19	119	eP	Pn	09 35 36.1	+1.0
LAJ	Bijagual	7.42	119	eP	Pn	09 35 34.5	-3.6
URSC	Urasca	7.72	118	eP	Pn	09 35 44.2	+1.9
BUS	Buena Vista	7.88	120	eP	Pn	09 35 46.0	+1.5
BAR1		8.42	120	eP	Pn	09 35 52.6	+0.8
BAR1				eS	Sn	09 37 27.4	+1.9
ACR	Cerro Adams	8.86	123	eP	Pn	09 35 59.7	+1.9
DWPF	Disney	16.80	29	ePn	Pn	09 37 43.9	0.0
	comp=Z,136nm,1.0s						
HKT	Hockley	16.95	344	eP	Pn	09 37 45.6	-0.1
HKT				pmax	pmax		
	comp=Z,33nm,1.3s						
HKT	Hockley	16.95	344	ePn	Pn	09 37 45.6	-0.1
	comp=Z,33nm,1.3s						
BRAL	Brewton	17.64	10	eP	Pn	09 37 56.2	+2.1
	comp=Z,221nm,1.5s						
OTAV	Otavalo	17.97	137	eP	Pn	09 38 00.5	+2.0
	comp=Z,4.0nm,0.9s						
ROSC	El Rosal	18.31	117	LR	LR	09 45 37.0	
	comp=Z,80nm,19.0s,baz=353,slow=39						
VBMS	Vicksburg	18.52	0	eP	Pn	09 38 04.5	-0.4
	comp=Z,269nm,1.4s						
JCT	Junction City	18.78	335	eP	Pn	09 38 08.8	+0.7
JCT				pmax	pmax		
	comp=Z,12nm,0.5s						
JCT	Junction City	18.78	335	eP	Pn	09 38 08.8	+0.7
	comp=Z,12nm,0.5s						
628A	Black Gap, Mar	19.43	326	⇑P	Pn	09 38 14.8	-1.0
	baz=20,SNR=31						
LRAL	Lakeview Retre	19.62	9	eP	Pn	09 38 16.9	-1.2
	comp=Z,39nm,1.0s						
TXAR	Lajitas Array	19.75	324	P	Pn	09 38 18.2	-1.4
	comp=Z,2.4nm,0.3s,baz=151,slow=13,SNR=113						
TXAR				PcP	PcP	09 42 33.7	-0.6
	comp=Z,0.1nm,0.3s,baz=124,slow=4.8,SNR=4.2						
TXAR				ScP	ScP	09 46 08.6	+2.9
	comp=Z,0.1nm,0.3s,baz=158,slow=4.0,SNR=4.9						
528A	Cox Ranch, San	19.91	328	⇑P	Pn	09 38 19.5	-2.0
	baz=20						
626A	Big Bend Ranch	20.18	324	⇓P	P	09 38 22.7	+0.4
	baz=20,SNR=44						
428A	Kincaid Ranch,	20.32	329	⇑P	P	09 38 24.2	+0.5
	baz=20,SNR=19						
GOGA	Godfrey	20.77	17	eP	P	09 38 30.3	+1.6
GOGA				pmax	pmax		
	comp=Z,64nm,0.9s						
GOGA	Godfrey	20.77	17	eP	P	09 38 30.3	+1.5
	comp=Z,64nm,0.9s						
427A	Hayter Ranch,	20.78	328	⇑P	P	09 38 28.9	0.0
	baz=21,SNR=33						
328A	Wristen Ranch,	20.91	330	⇑P	P	09 38 30.4	+0.2
	baz=21,SNR=54						
426A	McDonald Obser	20.97	326	⇑P	P	09 38 31.2	+0.3
	baz=21,SNR=43						
MIAR	Mount Ida	21.01	353	eP	P	09 38 29.7	-1.5
MIAR				pmax	pmax		
	comp=Z,35nm,0.9s,mb4.7						
MIAR	Mount Ida	21.01	353	eP	P	09 38 29.6	-1.6
	comp=Z,35nm,0.9s,mb4.7						
UALR	University of	21.13	356	eP	P	09 38 33.1	+0.7
	comp=Z,182nm,1.9s,mb5.1						
NHSC	New Hope	21.64	24	eP	P	09 38 40.2	+2.2
	comp=Z,84nm,0.9s,mb5.2						
227A	Bennet, Jal	21.66	330	⇑P	P	09 38 37.5	-0.8
	baz=22,SNR=20						
HBAR	Harrisburg	21.85	0	eP	P	09 38 40.5	+0.2
SWET	Sewanee	21.93	10	eP	P	09 38 40.6	-0.6
325A	Bean Ranch, Si	22.03	326	⇑P	P	09 38 41.0	-1.1
	baz=22,SNR=24						
CLNB	Carlsbad	22.16	329	eP	P	09 38 44.1	+0.5
	comp=Z,2.6nm,0.5s,mb3.9						
127A	Arkansas Junct	22.24	331	⇓P	P	09 38 42.9	-1.5
	baz=22						
HALT	Halls	22.24	3	P	P	09 38 45.9	+1.5
GNAR	Gosnell	22.27	1	eP	P	09 38 43.3	-1.4
JSC	Jenkinsville	22.28	21	eP	P	09 38 47.4	+2.6
GDL2	Guadalupe Moun	22.35	328	eP	P	09 38 45.5	0.0
324A	Moseley Ranch,	22.36	325	⇑P	P	09 38 44.8	-1.0
	baz=22,SNR=54						
CPCT	Cooper Cave	22.44	13	eP	P	09 38 46.0	-0.5
MNTX	Cornudas Mount	22.50	326	eP	P	09 38 45.6	-1.6
	comp=Z,26nm,0.7s,mb4.8						
126A	Clayton Basin,	22.53	329	⇑P	P	09 38 46.0	-1.5
	baz=23						
WVT	Waverly	22.57	6	eP	P	09 38 46.5	-1.4
WVT				pmax	pmax		
	comp=Z,35nm,1.0s,mb4.7						
WVT	Waverly	22.57	6	eP	P	09 38 46.5	-1.4
	comp=Z,35nm,1.0s,mb4.7						
UTMT	University of	22.69	4	eP	P	09 38 48.6	-0.5
	comp=Z,143nm,1.1s,mb5.3						
Z27A	Tatum	22.70	332	⇓P	P	09 38 47.3	-2.0
	baz=23,SNR=9.5						
TKL	Tuckaleechee C	22.82	15	P	P	09 38 49.4	-1.1
	comp=Z,23nm,0.8s,mb4.7,baz=185,slow=10,SNR=16						
TKL				LR	LR	09 48 21.8	
	comp=Z,397nm,21.3s,MS3.8,baz=192,slow=38						
TKL	Tuckaleechee C	22.82	15	P	P	09 38 49.4	-1.1
TKL				pmax	pmax		
	comp=Z,23nm,0.8s,mb4.7						
TKL				MLR	MLR		
	comp=Z,397nm,21.3s,MS3.8						
TKL	Tuckaleechee C	22.82	15	eP	P	09 38 49.6	-0.9
125A	Gardner Draw,	22.86	328	⇓P	P	09 38 50.6	-0.5
	baz=23,SNR=18						
Z26A	Caprock	23.02	330	⇑P	P	09 38 50.5	-2.2
	baz=23						
MSTX	Muleshoe	23.05	334	⇓P	P	09 38 51.1	-1.9
	baz=23,SNR=7.4						
Y27A	Causey	23.15	333	⇓P	P	09 38 51.7	-2.4
	baz=23,SNR=10.0						
124A	Stringfield Ra	23.31	327	⇓P	P	09 38 55.7	+0.2
	baz=23,SNR=76						
Z25A	Roswell	23.39	329	⇓P	P	09 38 54.8	-1.5
	baz=23,SNR=9.3						
AMTX	Amarillo	23.40	337	eP	P	09 38 54.1	-2.3
	comp=Z,20nm,0.9s,mb4.5						
Y26A	Elida	23.49	332	⇑P	P	09 38 55.9	-1.3
	baz=24						
123A	Bell Site, Whi	23.70	326	⇓P	P	09 38 58.8	-0.3
	baz=24,SNR=12						
Z24A	Sheeppen Canyo	23.76	328	⇓P	P	09 38 59.7	0.0
	baz=24,SNR=58						
X27A	F and S Farms,	23.77	334	⇓P	P	09 38 58.5	-1.2
	baz=24						
Y25A	Mesa, Roswell	23.90	330	⇓P	P	09 39 00.6	-0.3
	baz=24,SNR=19						
ATAH	Atahualpa	23.95	149	P	P	09 38 59.5	-1.9
	comp=Z,8.9nm,0.7s,mb4.3,baz=356,slow=5.3,SNR=6.6						
ATAH				LR	LR	09 47 08.5	
	comp=Z,189nm,18.4s,MS3.6,baz=341,slow=34						
X26A	CR and CF Fran	24.00	333	⇑P	P	09 39 01.1	-0.7
	baz=24,SNR=5.7						
SIUC	Southern Illin	24.04	3	eP	P	09 39 01.4	-0.8
	comp=Z,59nm,1.0s,mb5.0						
221A	Mesquite Ranch	24.10	322	⇑P	P	09 39 03.1	+0.3
	baz=24,SNR=5.1						
W27A	Bowe Ranch, En	24.11	334	⇓P	P	09 39 01.7	-1.2
	baz=24						
122A	Conniff Cattle	24.16	325	⇓P	P	09 39 02.3	-0.9
	baz=24						
Z23A	Rita Site, Whi	24.16	327	⇓P	P	09 39 03.4	+0.1
	baz=24,SNR=31						
Y24A	Capitan	24.27	329	⇓P	P	09 39 04.2	0.0
	baz=24,SNR=10						
FVM	French Village	24.27	0	eP	P	09 39 03.5	-0.8
FVM				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.5						
FVM	French Village	24.27	0	eP	P	09 39 03.5	-0.8
	comp=Z,11nm,0.6s,mb4.5						
220A	Playas Peak, P	24.48	321	⇓P	P	09 39 07.0	+0.8
	baz=24,SNR=22						
121A	Cookes Peak, D	24.48	323	⇑P	P	09 39 07.3	+1.1
	baz=24,SNR=39						
Z22A	Elephant Butte	24.55	326	⇓P	P	09 39 07.0	+0.2
	baz=25,SNR=21						
Y23A	Lovelace Mesa,	24.59	328	⇓P	P	09 39 07.4	+0.3
	baz=25,SNR=17						
319A	Douglas	24.59	319	⇓P	P	09 39 08.4	+1.1
	baz=25,SNR=12						
WCI	Wyandotte Cave	24.82	8	eP	P	09 39 07.6	-1.7
WCI				pmax	pmax		
	comp=Z,48nm,0.8s,mb5.1						
WCI	Wyandotte Cave	24.82	8	eP	P	09 39 07.6	-1.7
	comp=Z,48nm,0.8s,mb5.1						
W25A	X Bar L Ranch,	24.85	332	⇓P	P	09 39 09.6	0.0
	baz=25						
Z21A	St. Cloud Mine	24.98	325	⇓P	P	09 39 11.5	+0.7
	baz=25,SNR=7.7						
120A	U Bar Ranch, L	24.99	322	⇓P	P	09 39 11.4	+0.5
	baz=25,SNR=24						
BNM	Barren Site	25.05	327	eP	P	09 39 12.0	+0.6
	comp=Z,9.2nm,0.7s,mb4.4						
Y22A	Socorro	25.07	327	⇑P	P	09 39 12.2	+0.7
	baz=25,SNR=27						
OLIL	Olney	25.13	5	eP	P	09 39 11.7	-0.4
	comp=Z,20nm,0.9s,mb4.7						
ELN	Prospectdale	25.13	19	eP	P	09 39 12.9	+0.8
LPM	Los Pinos Moun	25.18	328	eP	P	09 39 13.3	+0.7
BLA	Blacksburg	25.22	19	P	P	09 39 12.3	-0.6
BLA				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.4						
BLA	Blacksburg	25.22	19	P	P	09 39 12.2	-0.7
	comp=Z,11nm,0.9s,mb4.4						
W24A	Lazy 6 Ranch,	25.29	331	⇑P	P	09 39 14.0	+0.5
	baz=25,SNR=7.1						
Z20A	Nine Sixteen R	25.37	323	⇓P	P	09 39 14.9	+0.6
	baz=25,SNR=16						
V25A	Rancho No Teng	25.44	333	⇑P	P	09 39 14.9	0.0
	baz=26						
218A	Dragoon	25.48	319	⇑P	P	09 39 15.5	+0.2
	baz=26						
Y21A	Point of Rocks	25.50	326	⇑P	P	09 39 16.2	+0.6
	baz=26,SNR=9.4						
LAZ	Ladron	25.52	327	eP	P	09 39 16.3	+0.7
	comp=Z,3.7nm,0.9s,mb3.9						
U26A	Atchley Ranch,	25.54	335	⇓P	P	09 39 14.6	-1.2
	baz=26,SNR=10						
119A	Ashpeak Ranch,	25.55	321	⇓P	P	09 39 16.7	+0.7
	baz=26,SNR=14						
ANMO	Albuquerque	25.59	329	P	P	09 39 16.4	+0.1
	comp=Z,3.2nm,0.7s,mb3.9,baz=156,slow=11,SNR=12						
ANMO				PcP	PcP	09 42 46.0	-0.2
	comp=Z,0.8nm,0.6s,baz=162,slow=6.4,SNR=4.3						
ANMO				LR	LR	09 51 23.6	
	comp=Z,89nm,18.0s,MS3.3,baz=204,slow=41						
ANMO	Albuquerque	25.59	329	P	P	09 39 16.4	+0.1
ANMO						09 42 46.0	

X18A	Snowflake	27.17	323	⇓P	P	09 39 30.8 +0.2
	baz=27,SNR=7.7					
Z16A	Peralta Trail,	27.25	320	⇓P	P	09 39 31.3 0.0
	baz=27,SNR=9.6					
V20A	Brimhall	27.28	327	⇓P	P	09 39 32.2 +0.7
	baz=27					
U21A	Nageezi	27.35	329	⇑P	P	09 39 33.0 +0.8
	baz=27					
ACSO	Alum Creek Sta	27.36	13	eP	P	09 39 30.5 -1.7
	comp=Z,15nm,0.8s,mb4.6					
SDCO	Great Sand Dun	27.43	334	eP	P	09 39 33.5 +0.8
	comp=Z,4.0nm,1.3s,mb3.8					
V19A	Window Rock	27.53	326	⇑P	P	09 39 33.8 0.0
	baz=28					
X17A	Forest Lakes	27.54	322	⇓P	P	09 39 34.4 +0.6
	baz=28,SNR=11					
Y16A	Circle Bar Ran	27.64	320	⇑P	P	09 39 35.2 +0.5
	baz=28,SNR=7.9					
MCWV	Mont Chateau	27.64	18	P	P	09 39 35.1 +0.4
	comp=Z,9.0nm,0.4s,mb4.8					
Z15A	Gila River Ind	27.68	319	⇓P	P	09 39 35.4 +0.2
	baz=28					
T21A	Navajo Lake	27.74	330	⇓P	P	09 39 36.3 +0.7
	baz=28					
U20A	Newcomb	27.75	328	⇓P	P	09 39 36.7 +0.9
	baz=28					
114A	Black Gap (USA	27.82	317	⇓P	P	09 39 36.8 +0.4
	baz=28,SNR=6.8					
X16A	Lo Mia Camp, P	27.98	321	⇑P	P	09 39 38.4 +0.6
	baz=28,SNR=16					
V18A	Ganado	28.01	325	⇓P	P	09 39 37.6 -0.5
	baz=28					
S22A	4UR Ranch, Cre	28.01	332	⇓P	P	09 39 37.7 -0.3
	baz=28,SNR=5.6					
U19A	Dine' College,	28.05	327	⇓P	P	09 39 38.2 -0.2
	baz=28,SNR=18					
Y15A	Casa Rosa Ranc	28.22	320	⇑P	P	09 39 39.8 -0.2
	baz=28,SNR=8.3					
MVCO	Mesa Verde	28.39	329	⇑P	P	09 39 41.7 +0.4
	baz=28					
MVCO	Mesa Verde	28.39	329	eP	P	09 39 42.1 +0.7
	comp=Z,3.6nm,0.6s,mb4.2					
V17A	Tonalea, Kykot	28.43	324	⇑P	P	09 39 42.1 +0.3
	baz=28,SNR=14					
W16A	Flagstaff	28.50	322	⇑P	P	09 39 42.7 +0.3
	baz=28					
Z13A	Yuma Proving G	28.61	317	⇑P	P	09 39 43.6 +0.2
	baz=29					
Y14A	Wickenburg	28.64	319	⇑P	P	09 39 43.9 +0.3
	baz=29,SNR=7.4					
WUAZ	Wupatki	28.69	323	⇓P	P	09 39 44.6 +0.5
	baz=29,SNR=7.6					
WUAZ	Wupatki	28.69	323	eP	P	09 39 45.2 +1.1
	comp=Z,12nm,0.8s,mb4.7					
S20A	Disappointment	28.80	330	⇓P	P	09 39 45.7 +0.6
	baz=29					
NNA	Nana	28.89	151	eP	P	09 39 46.5 +0.4
NNA				pmax	pmax	
	comp=Z,7.0nm,0.8s					
NNA	Nana	28.89	151	eP	P	09 39 46.5 +0.5
	comp=Z,6.7nm,0.8s,mb4.4					
X14A	Yava	28.91	320	⇑P	P	09 39 46.1 0.0
	baz=29,SNR=6.4					
P23A	Jefferson	28.94	335	⇑P	P	09 39 46.7 +0.4
	baz=29					
W15A	Williams	28.99	322	⇓P	P	09 39 47.2 +0.4
	baz=29					
U16A	Tuba City	29.00	324	⇓P	P	09 39 47.2 +0.4
	baz=29,SNR=14					
T18A	Mexican Hat	29.03	327	⇑P	P	09 39 47.4 +0.3
	baz=29					
Y13A	Salome	29.10	318	⇓P	P	09 39 48.1 +0.3
	baz=29					
PV01	Paradox Valley	29.14	330	eP	P	09 39 51.1 +3.0
	comp=Z,165nm,0.5s					
GLA	Glamis	29.31	315	⇑P	P	09 39 50.4 +0.8
	baz=29					
V15A	Kaibab Nationa	29.37	323	⇓P	P	09 39 50.9 +0.8
	baz=29,SNR=24					
T17A	Navajo Res., N	29.43	326	⇑P	P	09 39 51.1 +0.4
	baz=30,SNR=11					
PV04	Paradox Valley	29.51	330	eP	P	09 39 51.9 +0.5
S18A	Hurst Farm, Bl	29.52	328	⇑P	P	09 39 51.4 0.0
	baz=30,SNR=8.0					
W14A	Seligman	29.52	321	⇓P	P	09 39 51.4 0.0
	baz=30,SNR=7.7					
X13A	Yucca	29.59	319	⇑P	P	09 39 52.2 +0.2
	baz=30,SNR=7.1					
PDMCI	Parker Dam,Lak	29.60	318	⇑P	P	09 39 52.3 +0.1
	baz=30,SNR=5.3					
R19A	Curley Farm, L	29.60	329	⇓P	P	09 39 52.4 +0.2
	baz=30,SNR=7.8					
V14A	Boquillas Ranc	29.81	321	⇑P	P	09 39 54.3 +0.3
	baz=30,SNR=22					
T16A	Glen Canyon Da	29.81	325	⇓P	P	09 39 54.4 +0.4
	baz=30					
U15A	North Rim	29.86	323	⇓P	P	09 39 54.9 +0.5
	baz=30,SNR=16					
O22A	Kremmling	29.90	335	⇓P	P	09 39 55.0 +0.3
	baz=30					
S17A	Black Ridge (B	29.90	327	⇓P	P	09 39 54.9 +0.1
	baz=28,SNR=14					
W13A	Hualapai Mount	29.94	320	⇓P	P	09 39 55.8 +0.6
	baz=30,SNR=10					
R18A	Canyonlands Na	29.99	329	⇑P	P	09 39 56.1 +0.5
	baz=30					
BC3	Big Chuckawall	30.09	316	⇓P	P	09 39 57.5 +1.0
	baz=30,SNR=6.6					
Q19A	Hogan Spring (	30.12	330	⇓P	P	09 39 57.2 +0.4
	baz=30					
IRM	Iron Mountain	30.18	317	⇑P	P	09 39 57.8 +0.5
	baz=30					
MONP	Monument Peak	30.32	314	⇑P	P	09 39 59.7 +1.1
	baz=30					
T15A	Red Dirt Ranch	30.32	324	⇑P	P	09 39 59.2 +0.6
	baz=30,SNR=12					
U14A	Mt Trumbull	30.38	322	⇓P	P	09 39 59.6 +0.6
	baz=30,SNR=13					
S16A	Weppner Ranch,	30.39	326	⇓P	P	09 39 59.7 +0.6
	baz=30,SNR=20					
N22A	Wattenberg Ran	30.40	336	⇑P	P	09 39 59.9 +0.7
	baz=30					
BRNJ	Basking Ridge	30.43	25	eP	P	09 39 59.6 +0.1
	comp=Z,9.5nm,0.5s,mb4.8					
R17A	Hanksville Air	30.43	328	⇓P	P	09 39 59.8 +0.3
	baz=30,SNR=7.1					
O20A	White River Ci	30.60	333	⇑P	P	09 40 01.1 +0.2
	baz=31					
BELC	Belle Mtn. Jos	30.66	316	⇑P	P	09 40 02.0 +0.5
	baz=31					
Q18A	Rafter H Ranch	30.66	329	⇓P	P	09 40 02.3 +0.7
	baz=31					
R16A	Teasdale	30.74	327	⇓P	P	09 40 02.8 +0.6
	baz=31,SNR=27					
T14A	Hurricane	30.76	323	⇑P	P	09 40 03.0 +0.6
	baz=31,SNR=25					
S15A	Panguitch	30.78	325	⇓P	P	09 40 03.3 +0.7
	baz=31,SNR=8.5					
N21A	Black Mountain	30.80	335	⇓P	P	09 40 03.5 +0.7
	baz=31					
GMRC	Granite Mounta	30.89	317	⇓P	P	09 40 04.1 +0.6
	baz=31,SNR=6.9					
V12A	Nelson	30.95	320	⇓P	P	09 40 04.3 +0.2
	baz=31,SNR=21					
Q16A	Castle Valley	31.05	328	⇑P	P	09 40 05.4 +0.5
	baz=31					
R15A	Junction	31.11	326	⇓P	P	09 40 06.0 +0.5
	baz=31,SNR=6.5					
O19A	Miners Draw (B	31.12	332	⇑P	P	09 40 05.8 +0.2
	baz=31					
P18A	Preston Nutter	31.12	330	⇓P	P	09 40 06.3 +0.8
	baz=31					
N20A	Spence Gulch,	31.18	334	⇑P	P	09 40 05.6 -0.4
	baz=31					
U12A	Valley of Fire	31.20	321	⇓P	P	09 40 06.5 +0.1
	baz=31					
P17A	Butcher Ranch,	31.25	329	⇓P	P	09 40 06.8 +0.1
	baz=31					
CCUT	Cedar City	31.26	324	eP	P	09 40 08.2 +1.4
	comp=Z,9.1nm,0.9s,mb4.6					
MSU	Marysvale	31.28	326	eP	P	09 40 07.7 +0.8
S14A	Cedar City	31.29	324	⇓P	P	09 40 07.7 +0.6
	baz=31,SNR=12					
TMUT	Trail Mountain	31.35	328	eP	P	09 40 07.9 +0.4
	comp=Z,5.2nm,0.7s,mb4.5					
V11A	Goodsprings	31.38	319	⇑P	P	09 40 08.3 +0.4
	baz=31,SNR=6.9					
M21A	Separation Pea	31.45	336	⇑P	P	09 40 08.9 +0.5
	baz=32					
TUQ	Turquoise Moun	31.45	318	⇓P	P	09 40 09.1 +0.6
	baz=32					
ARUT	Antelope Range	31.46	324	eP	P	09 40 09.9 +1.3
ARUT				pmax	pmax	
	comp=Z,12nm,0.8s,mb4.8					
ARUT	Antelope Range	31.46	324	eP	P	09 40 09.9 +1.3
	comp=Z,12nm,0.8s,mb4.8					
O18A	Roosevelt	31.51	331	⇑P	P	09 40 09.2 +0.3
	baz=32					
S13A	Holt Ranch, En	31.57	323	⇑P	P	09 40 10.2 +0.8
	baz=32,SNR=24					
N19A	John Jarvie Ra	31.63	333	⇓P	P	09 40 10.1 +0.1
	baz=32					
Q15A	Fillmore	31.74	327	⇑P	P	09 40 11.5 +0.5
	baz=32,SNR=6.8					
L21A	Rawlins	31.75	336	⇓P	P	09 40 10.2 -0.8
	baz=32					
O17A	Robinson Place	31.80	330	⇓P	P	09 40 12.2 +0.6
	baz=32					
P16A	Fountain Green	31.82	328	⇓P	P	09 40 12.6 +1.0
	baz=32					
N18A	Larsen Ranch,	31.92	332	⇑P	P	09 40 13.0 +0.4
	baz=32					
R13A	O'Grain Ranch,	32.04	324	⇓P	P	09 40 14.6 +0.9
	baz=32,SNR=9.7					
MPU	Maple Canyon	32.11	329	eP	P	09 40 14.5 +0.2
	comp=Z,4.6nm,0.8s,mb4.4					
T11A	Corn Creek, Al	32.15	321	⇑P	P	09 40 15.0 +0.4
	baz=32					
S12A	Delamar Landin	32.16	322	⇑P	P	09 40 15.2 +0.4
	baz=32					
O16A	Springville	32.19	329	⇑P	P	09 40 15.4 +0.5
	baz=32,SNR=6.2					
Q14A	Sevier Lake (B	32.22	326	⇓P	P	09 40 15.7 +0.5
	baz=32,SNR=7.9					
DAU	Daniels Canyon	32.22	330	eP	P	09 40 18.2 +3.0
U10A	Ash Meadows, A	32.31	319	⇓P	P	09 40 16.7 +0.6
	baz=32,SNR=5.2					
JLU	Jordanelle	32.46	330	eP	P	09 40 17.8 +0.5
	comp=Z,3.0nm,1.0s,mb4.1					
R12A	Pony Springs,	32.51	324	⇓P	P	09 40 18.6 +0.8
	baz=32,SNR=15					
EDW2	Edwards Air Fo	32.51	315	⇑P	P	09 40 18.2 +0.4
	baz=32					
P14A	Drum Mountains	32.54	327	⇓P	P	09 40 18.7 +0.7
	baz=33,SNR=6.9					
Q13A	Wheeler Ranch,	32.60	325	⇓P	P	09 40 19.6 +1.0
	baz=33,SNR=25					
FURC	Furnace Creek,	32.68	319	⇑P	P	09 40 19.8 +0.4
	baz=33					
S11A	Rachel	32.73	322	⇑P	P	09 40 20.1 +0.5
	baz=33,SNR=7.9					
DUG	Dugway	32.84	328	⇓P	P	09 40 21.1 +0.4
	baz=33					
MPMC	Manual Prospec	32.85	318	⇓P	P	09 40 21.2 +0.4
	baz=33,SNR=8.1					
P13A	Bates Ranch, G	32.95	326	⇓P	P	09 40 22.3 +0.6
	baz=33,SNR=26					
R11A	Troy Canyon, C	33.09	323	⇑P	P	09 40 23.2 +0.3
	baz=33,SNR=6.7					
Q12A	Willow Creek R	33.12	324	⇓P	P	09 40 23.5 +0.5
	baz=33					
ISA	Isabella	33.27	316	⇑P	P	09 40 25.1 +0.6
	baz=33					
ISA	Isabella	33.27	316	eP	P	09 40 26.0 +1.5
ISA				pmax	pmax	
	comp=Z,3.0nm,1.0s,mb4.2					
ISA	Isabella	33.27	316	eP	P	09 40 26.0 +1.5
	comp=Z,2.7nm,1.0s,mb4.1					
HWUT	Hardware Ranch	33.29	331	eP	P	09 40 26.4 +1.8
	comp=Z,4.6nm,0.9s,mb4.4					
L17A	Cokeville	33.36	332	⇓P	P	09 40 25.1 0.0
	baz=33					
K18A	Toltan Ranch,	33.42	334	⇓P	P	09 40 25.3 -0.3
	baz=34					
S10A	Tonopah Range,	33.42	321	⇑P	P	09 40 26.4 +0.7
	baz=33,SNR=14					
P12A	McGill	33.46	325	⇑P	P	09 40 26.8 +0.8
	baz=34,SNR=11					
Q11A	Duckwater	33.46	323	⇓P	P	09 40 26.8 +0.7
	baz=34,SNR=17					
BGU	Big Grassy Mou	33.49	329	eP	P	09 40 26.6 +0.3
	comp=Z,2.7nm,0.5s,mb4.4					
N14A	Grayback Hills	33.52	328	⇓P	P	09 40 27.0 +0.4
	baz=34					
L16A	Fish Haven	33.55	331	⇑P	P	09 40 26.0 -0.7
	baz=34					
VES	Vestal, Richgr	33.78	316	⇑P	P	09 40 29.5 +0.6
	baz=34,SNR=10					
LONY	Lake Ozonia	33.81	21	epP	pP	09 40 43.1 -0.4
J18A	Kendall Valley	33.88	334	⇑P	P	09 40 28.8 -0.8
	baz=34					
Q10A	Clear Creek Ra	33.88	323	⇓P	P	09 40 30.7 +0.9
	baz=34,SNR=7.2					
O12A	Currie	33.92	326	⇑P	P	09 40 30.7 +0.6
	baz=34,SNR=11					
L15A	Malad City	33.99	330	⇑P	P	09 40 29.8 -0.8
	baz=34					
N13A	Wendover, West	34.05	327	⇓P	P	09 40 31.1 -0.1
	baz=34					
N13A	Wendover, West	34.05	327	eP	P	09 40 31.8 +0.6
	comp=Z,9.2nm,0.7s,mb4.8					
N13A				e	pP	09 40 43.9 -1.8
M14A	Sheep Mountain	34.08	329	⇑P	P	09 40 31.9 +0.5
	baz=34,SNR=12					
RCTC	Rector, Farmer	34.15	317	⇓P	P	09 40 32.9 +0.8
	baz=34,SNR=6.5					
J17A	Brown Place, J	34.30	334	⇓P	P	09 40 32.9 -0.3
	baz=34,SNR=11					
O11A	Cowboy Ranch,	34.33	325	⇓P	P	09 40 33.5 -0.1
	baz=34					
SNOW	Snow King Moun	34.39	334	eP	P	09 40 33.7 -0.4
	comp=Z,12nm,0.5s,mb5.1					
M13A	Montello	34.40	328	⇑P	P	09 40 34.3 +0.2
	baz=34,SNR=15					
M13A	Montello	34.40	328	eP	P	09 40 34.5 +0.4
	comp=Z,12nm,0.6s,mb5.0					
L14A	Malta	34.43	330	⇓P	P	09 40 34.2 -0.2
	baz=34,SNR=9.5					
N12A	Clover Valley,	34.49	326	⇓P	P	09 40 34.6 -0.4
	baz=34					
N12A	Clover Valley,	34.49	326	eP	P	09 40 35.5 +0.5
	comp=Z,2.8nm,0.4s,mb4.5					
TPAW	Teton Pass	34.50	334	eP	P	09 40 36.1 +1.1
	comp=Z,2.7nm,0.5s,mb4.4					
MOOW	Moose Ponds	34.62	334	eP	P	09 40 35.7 -0.4
	comp=Z,19nm,2.1s,mb4.7					
K14A	Jones Ranch, D	34.78	330	⇓P	P	09 40 36.8 -0.6
	baz=35,SNR=7.1					
NVAR	Mina Array Bea	34.79	320	P	P	09 40 38.6 +1.0
	comp=Z,15nm,0.7s,mb5.0,baz=134,slow=8.3,SNR=122					
NVAR				PcP	PcP	09 43 09.8 -0.2
	comp=Z,1.5nm,0.7s,baz=128,slow=3.2,SNR=5.9					
NVAR				ScP	ScP	09 46 53.5 +2.9
	comp=Z,1.0nm,0.6s,baz=131,slow=4.1,SNR=8.9					
NVAR	Mina Array Bea	34.79	320	P	P	09 40 38.6 +1.0
NVAR				PcP	PcP	09 43 09.8 -0.2
NVAR				ScP	ScP	09 46 53.5 +2.9
IMW	Indian Meadow	34.82	334	eP	P	09 40 37.6 -0.2
	comp=Z,2.7nm,0.6s,mb4.3					
M12A	Wells	34.83	327	⇓P	P	09 40 37.7 -0.1
	baz=35,SNR=11					
AGMN	Agassiz Nation	34.85	354	eP	P	09 40 38.0 +0.1
	comp=Z,25nm,1.8s,mb4.8					
RLMT	Red Lodge	35.16	337	⇑P	P	09 40 40.3 -0.4
	baz=35					
M11A	Holland Ranch,	35.30	326	⇓P	P	09 40 41.8 -0.1
	baz=35					
L12A	House Creek Ra	35.40	328	⇓P	P	09 40 42.5 -0.3
	baz=35					
G18A	Lazy EL Ranch,	35.44	337	⇓P	P	09 40 42.3 -0.7
	baz=36					
M10A	I.L. Ranch, Tu	35.77	326	⇓P	P	09 40 46.3 +0.4
	baz=36,SNR=11					
L11A	Cat Creek Ranc	35.80	327	⇓P	P	09 40 45.2 -1.0
	baz=36,SNR=8.6					
CMB	Columbia Colle	35.88	318	eP	P	09 40 47.7 +0.8
CMB				pmax	pmax	
	comp=Z,4.0nm,0.8s,mb4.4					
CMB	Columbia Colle	35.88	318	eP	P	09 40 47.7 +0.8
	comp=Z,4.1nm,0.8s,mb4.4					
G17A	Pierce Place,	35.90	336	⇑P	P	09 40 48.1 +1.1
	baz=36					
J13A	Cove Ranch, Pi	35.91	330	⇑P	P	09 40 47.0 0.0
	baz=36					
F18A	Big Timber	35.99	337	⇓P	P	09 40 46.1 -1.6
	baz=36					
L10A	Juniper Basin	36.12	327	⇑P	P	09 40 47.7 -1.3
	baz=36					
HLID	Hailey	36.14	330	⇑P	P	09 40 48.7 -0.4
	baz=36					
HLID	Hailey	36.14	330	eP	P	09 40 49.6 +0.5
	comp=Z,2.4nm,0.9s,mb4.1					
WCN	Washoe City	36.22	320	⇓P	P	09 40 50.1 +0.3
	baz=36					
PAHR	Pah Rah Range	36.23	321	eP	P	09 40 50.1 +0.1
	comp=Z,6.3nm,0.9s,mb4.5					
G16A	Moss Hill, Enn	36.26	334	⇓P	P	09 40 50.1 -0.1
	baz=36					
I13A	Wildhorse Cree	36.27	331	⇑P	P	09 40 49.1 -1.1
	baz=36					
F17A	Fitzpatrick Pl	36.35	336	⇑P	P	09 40 50.1 -0.8
	baz=36					
MCMT	McKenzie Canyo	36.39	333	eP	P	09 40 51.7 +0.5
	comp=Z,4.0nm,0.7s,mb4.5					
H14A	Leadore	36.46	332	⇑P	P	09 40 51.5 -0.3
	baz=36,SNR=6.0					
G15A	Dillon	36.50	334	⇑P	P	09 40 51.2 -1.0
	baz=36					
F16A	Kennard Place,	36.64	335	⇑P	P	09 40 52.3 -1.0
	baz=37					
I12A	Atlanta	36.66	330	⇑P	P	09 40 53.6 0.0
	baz=37,SNR=10					
DLMT	Dillon	36.70	334	eP	P	09 40 54.0 +0.1
	comp=Z,1.4nm,0.6s,mb4.0					
MFID	Camas Ranch	36.73	329	⇑P	P	09 40 53.2 -1.0
	baz=37					
ULM	Lac du Bonnet	36.78	354	P	P	09 40 52.7 -1.8
	comp=Z,4.0nm,0.5s,mb4.5,baz=170,slow=8.8,SNR=3.6					
ULM				LR	LR	09 59 10.1
	comp=Z,94nm,18.4s,MS3.6,baz=198,slow=41					
ULM	Lac du Bonnet	36.78	354	P	P	09 40 52.7 -1.8
ULM				LR	LR	09 59 10.1
H13A	Challis	36.82	332	⇓P	P	09 40 54.2 -0.7
	baz=37,SNR=7.9					
G14A	Jackson	36.99	333	⇑P	P	09 40 55.6 -0.7
	baz=37					
LRM	Limekiln Ridge	37.01	334	eP	P	09 40 56.1 -0.3
H12A	Diamond D Ranc	37.09	331	⇓P	P	09 40 57.1 -0.1
	baz=37,SNR=7.2					
LPAZ	La Paz	37.13	142	P	P	09 40 55.2 -2.6
	comp=Z,1.7nm,0.8s,mb3.9,baz=344,slow=9.2,SNR=7.2					
LPAZ				LR	LR	09 56 14.9
	comp=Z,194nm,21.1s,MS3.9,baz=20,slow=36					
LPAZ	La Paz	37.13	142	eP	P	09 40 56.8 -1.0
LPAZ				pmax	pmax	
	comp=Z,2.0nm,0.8s					
LPAZ	La Paz	37.13	142	eP	P	09 40 56.8 -1.0
	comp=Z,2.2nm,0.8s,mb4.0					
LPAZ				LR	LR	09 56 14.9
G13A	Cobalt	37.22	332	⇓P	P	09 40 57.2 -1.0
	baz=37					
D17A	Six Diamond Ra	37.40	337	⇓P	P	09 40 59.0 -0.8
	baz=37,SNR=6.5					
HRY	Holter Researc	37.48	336	eP	P	09 41 00.9 +0.5
WVOR	Wild Horse Val	37.54	325	eP	P	09 41 00.4 -0.6
WVOR				pmax	pmax	
	comp=Z,9.0nm,0.8s,mb4.5					
WVOR	Wild Horse Val	37.54	325	eP	P	09 41 00.4 -0.6
	comp=Z,9.0nm,0.8s,mb4.5					
E15A	Deer Lodge	37.57	335	⇑P	P	09 41 00.3 -0.9
	baz=38					
F13A	Darby	37.80	333	⇓P	P	09 41 01.9 -1.2
	baz=38,SNR=6.9					
EGMT	Eagleton	37.80	339	⇓P	P	09 41 02.3 -0.8
	baz=38					
EGMT	Eagleton	37.80	339	eP	P	09 41 03.8 +0.7
	comp=Z,53nm,2.5s,mb4.8					
C17A	Wharram Farm,	37.83	338	⇑P	P	09 41 02.5 -0.9
	baz=38					
E14A	Clinton	37.92	334	⇓P	P	09 41 03.8 -0.3
	baz=38					
D15A	Lincoln	38.02	336	⇑P	P	09 41 04.4 -0.5
	baz=38					
J08A	Circle Bar Ran	38.07	327	⇑P	P	09 41 05.0 -0.4
	baz=38,SNR=23					
B18A	Beardsley Farm	38.13	339	⇓P	P	09 41 04.9 -1.0
	baz=38					
MOD	Modoc	38.14	323	eP	P	09 41 05.4 -0.7
	comp=Z,3.7nm,0.6s,mb4.3					
F12A	Elk City	38.19	332	⇑P	P	09 41 05.3 -1.1
	baz=38,SNR=17					
E13A	Victor	38.24	334	⇑P	P	09 41 05.5 -1.4
	baz=38,SNR=10					
C16A	Fuhringer Ranc	38.34	337	⇓P	P	09 41 06.5 -1.2
	baz=38,SNR=5.5					
MSO	Missoula	38.44	334	eP	P	09 41 09.3 +0.8
	comp=Z,11nm,2.0s,mb4.2					
D14A	Greenough	38.45	335	⇓P	P	09 41 07.7 -0.9
	baz=38					
SLMT	Seeley Lake	38.58	335	eP	P	09 41 09.8 +0.1
	comp=Z,1.3nm,0.5s,mb3.9					
C15A	Salmond Ranch,	38.65	336	⇑P	P	09 41 09.6 -0.7
	baz=39					
D13A	Huson	38.87	334	⇑P	P	09 41 10.6 -1.5
	baz=39,SNR=7.4					
A17A	Triple J Farms	38.92	339	⇑P	P	09 41 11.0 -1.5
	baz=39,SNR=6.6					
SWMT	Swartz Lake	39.00	335	P	P	09 41 11.9 -1.3
	comp=Z,1.5nm,0.8s,mb3.8					
B15A	Bradely Ranch,	39.07	337	⇑P	P	09 41 13.0 -0.8
	baz=39					
I07A	Izee	39.11	327	⇑P	P	09 41 13.2 -0.9
	baz=39,SNR=9.7					
D12A	Red Ives Fores	39.22	333	⇓P	P	09 41 14.1 -1.0
	baz=39					
A16A	West Butte Ran	39.24	338	⇓P	P	09 41 14.2 -1.0
	baz=39					
F10A	Beach Ranch, E	39.27	330	⇑P	P	09 41 14.4 -1.1
	baz=39,SNR=12					
C13A	Hot Springs	39.37	334	⇓P	P	09 41 15.2 -1.1
	baz=39					
YBH	Yreka Blue Hor	39.47	321	P	P	09 41 16.4 -0.8
	comp=Z,4.0nm,0.8s,mb4.2,baz=116,slow=5.0,SNR=10					
KHMM	Horse Mountain	39.61	320	eP	P	09 41 19.4 +1.0
	comp=Z,16nm,0.8s,mb4.8					
A15A	Johnson Ranch,	39.68	337	⇑P	P	09 41 17.8 -1.0
	baz=40					
C12B	Naegeli Ranch,	39.78	334	⇑P	P	09 41 18.7 -1.0
	baz=40					
B13A	Whitefish	39.88	335	⇓P	P	09 41 20.0 -0.4
	baz=40					
A14A	Double T Ranch	39.94	337	⇓P	P	09 41 20.2 -0.8
	baz=40					
WALA	Waterton Lakes	40.20	336	eP	P	09 41 23.4 +0.2
	comp=Z,0.1nm,0.8s					
A13A	Flathead Natio	40.30	336	⇓P	P	09 41 23.9 -0.1
	baz=40					
B12A	Libby	40.41	334	⇓P	P	09 41 25.5 +0.5
	baz=40					
G06A	Carlson Farm,	40.48	327	⇑P	P	09 41 25.6 +0.1
	baz=40					
NEW	Newport	40.92	333	eP	P	09 41 29.0 -0.1
NEW				pmax	pmax	
	comp=Z,1.0nm,0.6s					
NEW	Newport	40.92	333	eP	P	09 41 29.0 -0.1
	comp=Z,1.2nm,0.6s,mb3.7					
H04A	Detroit Lake	40.96	325	⇑

comp=Z,0.1nm,0.7s
SCHQ Schefferville 45.15 19 P **P 09 42 00.5 -2.7**
comp=Z,6.0nm,0.7s,mb4.5,baz=174,slow=4.5,SNR=7.8
SCHQ LR LR 10 01 52.7
comp=Z,169nm,19.1s,MS4.0,baz=108,slow=37
SCHQ Schefferville 45.15 19 *e*P **P 09 42 03.4 +0.2**
comp=Z,20nm,1.1s,mb4.9
SCHQ LR LR 10 01 52.7
LCO Las Campanas 46.56 156 *e*P **P 09 42 13.6 -1.0**
comp=Z,12nm,0.8s,mb4.9
CPUP Villa Florida 51.26 141 P **P 09 42 47.4 -3.3**
baz=302,slow=14
YKA Yellowknife Ar 51.70 346 P **P 09 42 51.9 -1.6**
comp=Z,1.0nm,0.8s,mb3.8,baz=141,slow=8.5,SNR=6.1
DLBC Dease Lake 53.54 335 *e*P **P 09 43 08.1 +1.0**
PLCA Paso Flores 57.20 162 P **P 09 43 31.5 -2.1**
comp=Z,2.4nm,0.8s,mb4.3,baz=13,slow=13,SNR=4.7
INK Inuvik 61.18 343 P **P 09 43 59.3 -1.5**
INK pmax pmax
comp=Z,3.0nm,0.6s
INK Inuvik 61.18 343 P **P 09 43 59.3 -1.5**
comp=Z,3.0nm,0.6s,mb4.6
ILAR Eielson Array 63.71 337 P **P 09 44 15.4 -2.3**
comp=Z,1.0nm,0.9s,mb3.9,baz=130,slow=5.5,SNR=19
ILAR LR LR 10 14 00.6
comp=Z,76nm,20.0s,MS3.9,baz=110,slow=38
ILAR Eielson Array 63.71 337 P **P 09 44 15.4 -2.3**
ILAR LR LR 10 14 00.6
KDAK Kodiak Island 63.73 328 *i*P **P 09 44 17.7 -0.2**
PPT Papeete 65.87 244 LR LR 10 06 56.8
comp=Z,101nm,19.9s,MS4.0,baz=121,slow=30
SUMG Summit 66.27 15 *e*P **P 09 44 34.9 +0.7**
ESLA Sonseca Array 78.94 52 *e*P **P 09 45 50.8 +0.7**
comp=Z,0.1nm,0.3s
NOA NORSAR Array B 83.87 29 LR LR 10 20 47.6
comp=Z,37nm,21.3s,MS3.7,baz=205,slow=34
DBIC Dimbokro 84.41 85 P **P 09 46 17.1 -2.3**
comp=Z,2.3nm,0.7s,mb4.4,baz=295,slow=12,SNR=4.9
ARCES ARCESS Array B 86.10 18 LR LR 10 24 18.1
comp=Z,61nm,20.1s,MS4.0,baz=280,slow=35
TORD Torodi Ar. Bea 89.21 77 LR LR 10 21 06.8
comp=Z,53nm,18.8s,MS4.0,baz=265,slow=32
SEY Seymchan 89.64 336 ⇑*i*P **P 09 46 41.9 -1.9**
TIXI Tiksi 90.90 348 *i*P **P 09 46 47.0 -2.5**
BOSA Boshof 119.02 115 PKP PKPdf 09 52 33.4 -2.0
comp=Z,3.2nm,0.9s,baz=330,slow=11,SNR=3.6
MKAR Makanchi Array 119.55 6 PKP PKPdf 09 52 33.6 -2.2
comp=Z,0.2nm,0.2s,baz=34,slow=2.4,SNR=2.9
BJI Beijing 121.08 336 PKP PKPdf 09 52 39.5 +0.5
BJI SS SS 10 10 37.5 +1.8
BJI LR LR
comp=N,95nm,25.6s,MS4.5
BJI LR LR
comp=E,100nm,25.4s,MS4.5
BJI LR LR
comp=Z,26nm,25.7s,MS3.8
HHC Hu-ho-hao-te 122.03 340 *e*PKP PKPdf 09 52 39.5 -1.3
HHC PP PP 09 54 17.5 +3.0
HHC PKS 09 56 14.8
HHC SKS SKSdf 09 59 45.5 -2.6
HHC SKKS SKKSac 10 01 04.3 -5.7
HHC SS SS 10 10 49.0 +1.2
HHC AMB AMB
comp=Z,110nm,9.1s
HHC LR LR
comp=N,100nm,20.5s,MS4.8
HHC LR LR
comp=E,190nm,20.0s,MS4.8
HHC LR LR
comp=Z,89nm,20.2s,MS4.4
WMQ Urumqi 122.83 1 *e*PKP PKPdf 09 52 43.0 +0.7
WMQ LR LR
comp=N,52nm,22.0s
WMQ LR LR
comp=Z,40nm,20.4s,MS4.1
NJ2 Nanjing 126.51 329 *e*PKP PKPdf 09 52 51.3 +1.6
LZH Lanzhou 128.70 345 *e*PKP PKPdf 09 52 54.5 +0.7
LZH LR LR
comp=E,180nm,15.2s
LZH LR LR
comp=Z,120nm,16.1s,MS4.7
CD2 Chengdu 133.61 343 PKP PKPdf 09 53 05.0 +1.8
ASAR Alice Springs 136.75 250 PKhKP PKPpre 09 52 50.6
comp=Z,0.1nm,0.3s,baz=267,slow=37,SNR=3.1
ASAR PKP PKPdf 09 53 08.0 -1.2
comp=Z,0.5nm,0.7s,baz=89,slow=1.5,SNR=6.0
ASAR SKP 09 56 45.1
comp=Z,0.6nm,0.8s,baz=107,slow=3.2,SNR=3.7
ASAR Alice Springs 136.75 250 PKP PKPdf 09 53 08.0 -1.2
ASAR SKP 09 56 45.1
CM31 Chiang Mai Arr 146.75 343 *e*PKPdf PKPdf 09 53 27.6 +0.5
CMAR Chiang Mai Arr 146.75 343 PKPbc PKPbc 09 53 27.4 -1.5
comp=Z,5.2nm,0.6s,baz=341,slow=3.1,SNR=16

*ISCJB **31** 09:58:49.5±1.6, 54°.67N±0°.09×83°.7E±0°.1, h10km, Error ellipse: s-maj=13.6km s-min=10.5km az=21.6*
*IDC **31** 09:58:51.2±2.0, 54°.69N×83°.79E, h0km, mb1 3.2/2, mb1mx3.0/25, mbtmp3.2/2, ML3.2/2, Error ellipse: s-maj=18.7km s-min=11.2km az=26.0*
*NNC **31** 09:58:53.4±6.5, 54°.69N×83°.17E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=56.1km s-min=39.0km az=92.0*
ISC 31 09:58:54.0±2.2, 54°.66N±0°.10×83°.4E±0°.2, h10km, n6, σ1°22/12, 2C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.11**	**130**	Pg	**Pg**	**09 59 08.7**	**-6.6**
	7.9nm,0.3s,baz=322,slow=18,SNR=36						
ZALV				Lg		09 59 23.1	
	14nm,0.3s,baz=318,slow=28,SNR=31						
ZALV				Rg		09 59 29.6	
	21nm,0.4s,baz=324,slow=39,SNR=21						
KURK	**Kurchatov**	**4.89**	**218**	⇓Pn	**Pn**	**10 00 09.3**	**+1.8**
	6.0nm,1.8s						
KURK				⇑Pg	**Pg**	**10 00 24.6**	**-3.1**
	3.1nm,1.1s						
KURK				⇓Sn	**Sn**	**10 01 05.6**	**+1.4**
	1.2nm,0.6s						
KURK				⇑Lg		10 01 29.1	
	4.4nm,0.6s						
KURBB	**Kurchatov Arra**	**5.00**	**218**	Pn	**Pn**	**10 00 05.6**	**-3.5**
	baz=41,slow=14						
KURBB				Pg	**Pb**	**10 00 20.8**	**-0.8**
KURBB				⇓Sn	**Sn**	**10 01 07.3**	**+0.4**
	0.6nm,0.7s						
KURBB				⇓Lg		10 01 33.6	
	1.7nm,0.6s						
VOSK	**Vostochnaya**	**7.61**	**260**	Pn	**Pn**	**10 00 45.4**	**+0.6**
	1.0nm,0.4s						
VOSK				Sn	**Sn**	**10 02 09.8**	**-1.2**
	1.7nm,0.6s						
BVAR	**Borovoye Array**	**7.85**	**263**	Pn	**Pn**	**10 00 49.0**	**+0.9**
	0.6nm,0.3s,baz=66,slow=15,SNR=5.0						
MKAR	**Makanchi Array**	**7.91**	**185**	Pn	**Pn**	**10 00 48.4**	**-0.5**
	0.1nm,0.3s,baz=7.2,slow=12,SNR=3.4						
MKAR				Sn	**Sn**	**10 02 18.3**	**0.0**
	0.2nm,0.3s,baz=19,slow=19,SNR=2.5						
MKAR				Lg		10 03 04.8	
	0.2nm,0.3s,baz=16,slow=32,SNR=5.3						

*ATH **31** 10:03:13.9, 38°.18N×20°.26E, h2km, MD3.1/4*
*CSEM **31** 10:03:13.4±0.8, 38°.11N×20°.23E, h5km, MD3.1, Error ellipse: s-maj=14.2km s-min=8.3km az=73.0*
*THE **31** 10:03:14.2, 38°.10N×20°.28E, h3km±19km, ML2.5/1, Error ellipse: s-maj=19.9km s-min=1.3km az=60.0*
ISC 31 10:03:14.1±2.1, 38°.09N±0°.07×20°.3E±0°.1, h3km±13km, n15, σ0°50/24, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.28**	**71**	*e*PG	**Pg**	**10 03 19.0**	**-0.4**
VLS				*e*SG	**Sg**	**10 03 23.0**	**0.0**
VLS	**Valsamata**	**0.28**	**71**	P	**Pg**	**10 03 19.0**	**-0.4**
VLS				S	**Sg**	**10 03 23.2**	**+0.2**
VLS	**Valsamata**	**0.28**	**71**	P	**Pg**	**10 03 19.0**	**-0.4**
VLS				*e*Sg	**Sg**	**10 03 23.0**	**0.0**
KFL	**Anninata**	**0.42**	**87**	P	**Pg**	**10 03 22.1**	**0.0**
KFL				S	**Sg**	**10 03 27.4**	**-0.1**
KFL	**Anninata**	**0.42**	**87**	P	**Pg**	**10 03 22.1**	**0.0**
KFL				S	**Sg**	**10 03 27.4**	**-0.1**
LKD2	**Lefkada island**	**0.77**	**24**	P	**Pg**	**10 03 28.2**	**-0.6**
LKD2	205nm,0.5s			S	**Sg**	**10 03 39.5**	**+0.8**

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Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKD2	**Lefkada island**	**0.77**	**24**	P	**Pg**	**10 03 28.2**	**-0.6**
	205nm,0.5s						
LKD2				S	**Sg**	**10 03 39.5**	**+0.8**
RLS	**Riolos of Patr**	**0.95**	**92**	*e*PG	**Pg**	**10 03 32.7**	**+0.3**
RLS				*e*SG	**Sb**	**10 03 46.3**	**0.0**
RLS	**Riolos of Patr**	**0.95**	**92**	*e*Pn	**Pg**	**10 03 32.7**	**+0.3**
RLS				*e*Sb	**Sb**	**10 03 46.3**	**0.0**
EFP	**Efpalio**	**1.34**	**75**	*e*PB	**Pb**	**10 03 38.8**	**-1.0**
EFP	**Efpalio**	**1.34**	**75**	*e*Pb	**Pb**	**10 03 38.8**	**-1.0**
ITM	**Ithomi**	**1.61**	**124**	*e*PB	**Pb**	**10 03 45.0**	**+0.6**
ITM	**Ithomi**	**1.61**	**124**	*e*Pb	**Pb**	**10 03 45.0**	**+0.6**
GUR	**Goura**	**1.65**	**95**	*e*PB	**Pb**	**10 03 45.5**	**+0.3**
GUR	**Goura**	**1.65**	**95**	*e*Pb	**Pb**	**10 03 45.5**	**+0.3**

*IDC **31** 10:20:11.5±3.2, 55°.55N×86°.25E, h0km, mb1 3.3/2, mb1mx3.2/24, mbtmp3.3/2, ML3.3/2, Error ellipse: s-maj=32.5km s-min=17.0km az=75.0*
*NNC **31** 10:20:15.8±2.4, 55°.09N×85°.94E, h0km, mb3.4, mpv3.1, Error ellipse: s-maj=18.5km s-min=17.8km az=95.0*
ISC 31 10:20:15.7±2.2, 55°.5N±0°.1×85°.6E±0°.2, h10km, n6, σ1°04/10, 4C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.58**	**198**	Pg	**Pg**	**10 20 42.6**	**-3.3**
	5.4nm,0.3s,baz=23,slow=17,SNR=37						
ZALV				Lg		10 21 09.4	
	5.1nm,0.3s,baz=25,slow=28,SNR=12						
KURK	**Kurchatov**	**6.35**	**225**	⇓Pn	**Pn**	**10 21 48.5**	**-0.8**
	2.0nm,0.5s						
KURK				⇑Sn	**Sn**	**10 23 00.0**	**-1.7**
	1.8nm,0.7s						
KURK				⇑Lg		10 23 37.2	
	7.1nm,1.0s						
KURBB	**Kurchatov Arra**	**6.46**	**224**	⇓Pn	**Pn**	**10 21 50.6**	**-0.1**
	0.4nm,0.5s,baz=41,slow=14						
KURBB				⇑Sn	**Sn**	**10 23 05.2**	**+0.9**
	0.6nm,0.8s						
KURBB				⇓Lg		10 23 40.4	
	1.6nm,0.9s						
MK31	**Makanchi Array**	**8.92**	**195**	Pn	**Pn**	**10 22 24.4**	**0.0**
	0.2nm,0.3s,baz=24,slow=14,SNR=6.6						
MK31				⇑Sn	**Sn**	**10 24 05.8**	**+0.9**
	0.2nm,0.3s						
MK31				⇓Lg		10 24 46.3	
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**8.92**	**195**	Pn	**Pn**	**10 22 24.0**	**-0.4**
	0.2nm,0.3s,baz=21,slow=12,SNR=6.0						
MKAR				Sn	**Sn**	**10 24 05.7**	**+0.8**
	0.1nm,0.3s,baz=13,slow=20,SNR=2.3						
MKAR				Lg		10 25 01.8	
	0.1nm,0.3s,baz=12,slow=25,SNR=4.7						
BVAR	**Borovoye Array**	**9.25**	**261**	Pn	**Pn**	**10 22 30.3**	**+1.3**
	0.3nm,0.3s,baz=75,slow=14,SNR=3.3						

GUC 31 10:33:41.0±0.8, 20°.71S×69°.45W, h118km±10km, ML3.6, 1C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMBC	**Humberston**	**0.60**	**316**	⇑*i*P	Pn	10 34 00.2	+0.8
HMBC				*e*S	Sn	10 34 14.3	+1.0
HMBC				AML	AML	10 34 15.8	
	comp=N,3μm,0.6s						
PSGC	**Pisagua**	**1.28**	**330**	⇓*e*P	Pn	10 34 06.6	+0.8
PSGC				*e*S	Sn	10 34 25.6	+0.9
PSGC				AML	AML	10 34 26.5	
	comp=E,528nm,0.5s						
PB04	**Plate Boundary**	**1.55**	**181**	*e*P	Pn	10 34 12.4	+3.5
PB04				*e*S	Sn	10 34 35.5	+5.4
PB04				AML	AML	10 34 39.0	
	comp=N,750nm,0.1s						
MNMC	**Miæe Miæ**	**1.58**	**355**	⇓*e*P	Pn	10 34 09.9	+0.6
MNMC				*e*S	Sn	10 34 32.4	+1.7
MNMC				AML	AML	10 34 34.5	
	comp=E,2μm,0.1s						

*IDC **31** 10:57:30.5±0.8, 15°.04S×177°.54W, h0km, mb4.0/8, mb1 4.2/8, mb1mx4.0/18, mbtmp4.0/8, MS3.9/13, Ms1 3.9/13, ms1mx3.8/18, Error ellipse: s-maj=37.5km s-min=23.5km az=139.0*
*NEIC **31** 10:57:31.9±0.6, 15°.24S×177°.30W, h10km, mb4.7/12, Error ellipse: s-maj=28.8km s-min=15.2km az=151.0*
*ISCJB **31** 10:57:34.1±0.7, 15°.05±0°.2×177°.7W±0°.2, h33km, mb4.3/20, MS3.9/12, Error ellipse: s-maj=33.2km s-min=18.2km az=142.2*
ISC 31 10:57:36.0±0.7, 15°.05±0°.2×177°.7W±0°.2, h35km, n49, σ0°34/22, mb4.3/20, MS3.9/12, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.83**	**80**	Pn	**Pn**	**10 58 51.7**	**-8.3**
	3.7nm,0.3s,baz=316,slow=16,SNR=6.0						
AFI				T		11 04 04.1	
	5.5nm,0.3s,baz=95,slow=22,SNR=6.7						
DZM	**Mont Dzumac**	**16.60**	**243**	*e*LR	LR	11 05 38.8	
	326nm,27.8s						
RAR	**Rarotonga**	**18.11**	**113**	LR	LR	11 07 03.3	
	comp=Z,445nm,18.3s,baz=82,slow=32						
URZ	**Urewera**	**23.63**	**190**	LR	LR	11 10 58.6	
	comp=Z,449nm,18.6s,MS4.0,baz=145,slow=34						
PPT	**Papeete**	**27.10**	**99**	*e*LR	LR	11 09 39.5	
	671nm,26.5s						
PPT	**Papeete**	**27.10**	**99**	LR	LR	11 10 35.2	
	comp=Z,374nm,19.7s,MS4.0,baz=300,slow=29						
CTA	**Charters Tower**	**34.70**	**256**	LR	LR	11 16 19.0	
	comp=Z,96nm,20.8s,MS3.5,baz=300,slow=32						
TAOE	**Nuku Hiva Isla**	**37.20**	**85**	*e*LR	LR	11 14 15.2	
	394nm,27.8s						
RKT	**Rikitea**	**41.06**	**108**	*e*LR	LR	11 16 10.3	
	441nm,27.5s						
ASAR	**Alice Springs**	**46.30**	**252**	P	**P**	**11 05 58.0**	**-0.6**
	1.1nm,0.8s,mb3.8,baz=84,slow=8.3,SNR=9.2						
FITZ	**Fitzroy Crossi**	**54.24**	**258**	LR	LR	11 26 22.0	
	comp=Z,157nm,18.5s,MS4.1,baz=122,slow=32						
MJAR	**Matsushiro Arr**	**66.02**	**322**	LR	LR	11 31 06.2	
	comp=Z,31nm,20.7s,MS3.5,baz=195,slow=30						
PETK	**Petropavlovsk-**	**71.06**	**345**	LR	LR	11 32 10.3	
	comp=Z,34nm,21.8s,MS3.6,baz=331,slow=29						
KSRS	**Korea Array**	**73.01**	**317**	P	**P**	**11 09 03.0**	**+0.6**
	0.7nm,0.8s,mb3.6,baz=137,slow=6.3,SNR=4.2						
KSRS				LR	LR	11 36 07.2	
	comp=Z,37nm,19.0s,MS3.7,baz=142,slow=32						
QSPA	**South Pole Qui**	**75.04**	**180**	P	**P**	**11 09 13.9**	**+0.4**
	2.8nm,1.0s,mb4.1,baz=52,slow=2.6,SNR=8.0						
YBH	**Yreka Blue Hor**	**75.84**	**39**	P	**P**	**11 09 18.2**	**-0.5**
	4.4nm,0.9s,mb4.4,baz=328,slow=2.8,SNR=9.6						
NVAR	**Mina Array Bea**	**76.86**	**44**	P	**P**	**11 09 23.9**	**-0.7**
	3.4nm,0.8s,mb4.3,baz=228,slow=8.8,SNR=18						
WVOR	**Wild Horse Val**	**78.75**	**40**	*e*P	**P**	**11 09 35.6**	**+0.7**
	2.9nm,1.0s,mb4.2						
ETW	**Entiat**	**80.59**	**35**	*e*P	**P**	**11 09 45.2**	**+0.4**
	10nm,1.2s,mb4.6						
HLID	**Hailey**	**81.99**	**41**	*e*P	**P**	**11 09 52.3**	**0.0**
	4.3nm,0.9s,mb4.4						
ILAR	**Eielson Array**	**82.91**	**13**	P	**P**	**11 09 56.6**	**0.0**
	0.5nm,0.8s,mb3.6,baz=223,slow=5.5,SNR=6.4						
ILAR				LR	LR	11 38 45.1	
	comp=Z,70nm,20.9s,MS4.0,baz=257,slow=30						
MCMT	**McKenzie Canyo**	**83.58**	**40**	*e*P	**P**	**11 10 00.8**	**+0.3**
	2.1nm,0.9s,mb4.3						
ANMO	**Albuquerque**	**83.75**	**51**	P	**P**	**11 10 01.6**	**-0.1**
	0.4nm,0.3s,mb4.0,baz=267,slow=5.0,SNR=2.7						
TXAR	**Lajitas Array**	**83.86**	**58**	P	**P**	**11 10 02.5**	**+0.1**
	0.7nm,0.9s,mb3.8,baz=256,slow=5.0,SNR=5.5						
TXAR				LR	LR	11 44 32.5	
	comp=Z,42nm,18.5s,MS3.8,baz=180,slow=34						
TXAR	**Lajitas Array**	**83.86**	**58**	P	**P**	**11 10 02.5**	**+0.1**
TXAR				LR	LR	11 44 32.5	
BSMT	**Bassoo Peak**	**83.89**	**37**	*e*P	**P**	**11 10 02.1**	**0.0**
	7.3nm,1.2s,mb4.7						
DLMT	**Dillon**	**84.00**	**40**	*e*P	**P**	**11 10 02.6**	**-0.1**
	5.7nm,1.1s,mb4.6						
TPAW	**Teton Pass**	**84.18**	**42**	*e*P	**P**	**11 10 03.7**	**0.0**
	7.0nm,1.2s,mb4.7						
REDW	**Red Top Meadow**	**84.18**	**42**	*e*P	**P**	**11 10 03.6**	**-0.1**
	12nm,1.3s,mb4.9						
SNOW	**Snow King Moun**	**84.29**	**42**	*e*P	**P**	**11 10 04.1**	**-0.1**
	11nm,1.2s,mb4.8						
CHMT	**Chamberlain Mo**	**84.34**	**38**	*e*P	**P**	**11 10 04.1**	**-0.3**
	3.2nm,1.3s,mb4.3						
IMW	**Indian Meadow**	**84.37**	**42**	*e*P	**P**	**11 10 04.8**	**+0.2**
	10nm,1.3s,mb4.8						
HRY	**Holter Researc**	**85.10**	**39**	*e*P	**P**	**11 10 08.1**	**-0.2**
	4.7nm,1.0s,mb4.6						
MAW	**Mawson**	**86.82**	**200**	LR	LR	11 45 56.0	
	comp=Z,93nm,19.9s,MS4.2,baz=215,slow=34						
CMAR	**Chiang Mai Arr**	**88.56**	**289**	LR	LR	11 45 23.9	
	comp=Z,55nm,18.4s,MS4.0,baz=293,slow=32						
ULM	**Lac du Bonnet**	**96.25**	**40**	LR	LR	11 47 46.8	
	comp=Z,72nm,18.6s,MS4.2,baz=232,slow=31						
MK31	**Makanchi Array**	**107.60**	**315**	*e*PKPdf	PKiKP	11 16 00.1	+0.8
BRTR	**Keskin Array B**	**143.16**	**318**	PKP	PKPdf	11 17 08.2	+1.6
	0.6nm,0.7s,baz=255,slow=4.7,SNR=3.5						
MMAI	**Mount Meron Ar**	**145.05**	**307**	PKPbc	PKPbc	11 17 11.8	+2.3
	5.3nm,0.7s,baz=68,slow=9.1,SNR=4.6						
SGMF	**Saint Gilles**	**146.59**	**6**	*e*PKP2	PKPab	11 17 13.3	-1.5
DAVOX	**Davos/Dischmat**	**147.69**	**350**	PKPbc	PKPbc	11 17 18.1	+1.2
	4.4nm,0.7s,baz=25,slow=5.6,SNR=5.6						
LOR	**Lormes**	**147.80**	**358**	*e*PKP2	PKPab	11 17 16.6	-3.0
SSF	**Saint Saulge**	**148.01**	**358**	*e*PKP2	PKPab	11 17 17.3	-3.2
CABF	**La Chapelle**	**148.32**	**355**	*e*PKP2	PKPab	11 17 17.7	-4.0
	30nm,1.0s						
LPL	**La Plagne**	**149.35**	**354**	*e*PKP2	PKPab	11 17 23.8	-2.1
LPG	**La Plagne**	**149.36**	**354**	*e*PKP2	PKPab	11 17 24.0	-1.9
MBDF	**Montbardon**	**150.12**	**354**	*e*PKP2	PKPab	11 17 26.0	-3.1
VIVF	**Saint-Julien-l**	**150.17**	**357**	*e*PKP2	PKPab	11 17 26.3	-2.9
	13nm,1.0s						
LASF	**Ste Croix**	**150.99**	**358**	*e*PKP2	PKPab	11 17 28.2	-4.4
	14nm,1.0s						

IDC 31 11:01:06.0±6.3, 23°.60S×179°.06E, h652km±80km, mb3.2/8, mb1 3.4/8, mb1mx3.2/16, mbtmp3.2/8, Error ellipse: s-maj=37.0km s-min=26.8km az=75.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARMA	**Armidale**	**25.32**	**248**	*e*P	P	11 05 44.7	+0.1
CTA	**Charters Tower**	**30.61**	**270**	*e*P	P	11 06 30.1	-0.3
	18nm,0.4s						
CTA	**Charters Tower**	**30.61**	**270**	P	P	11 06 30.4	0.0
	26nm,0.5s,baz=97,slow=10,SNR=43						
STKA	**Stephens Creek**	**34.03**	**248**	*e*P	P	11 06 59.0	0.0
	4.8nm,0.9s						
STKA	**Stephens Creek**	**34.03**	**248**	P	P	11 06 58.8	-0.2
	3.5nm,0.5s,baz=92,slow=11,SNR=6.9						
ASAR	**Alice Springs**	**41.23**	**260**	P	P	11 07 57.1	-0.1
	1.5nm,0.3s,baz=92,slow=7.1,SNR=15						
KAKA	**Kakadu**	**45.42**	**275**	*e*P	P	11 08 28.7	-0.8
	2.7nm,0.2s						
FITZ	**Fitzroy Crossi**	**49.99**	**266**	*e*P	P	11 09 03.6	+0.3
	6.5nm,1.5s						
FITZ	**Fitzroy Crossi**	**49.99**	**266**	P	P	11 09 04.1	+0.8
	1.5nm,0.5s,baz=118,slow=6.8,SNR=9.9						
QSPA	**South Pole Qui**	**66.48**	**180**	P	P	11 10 53.4	+0.8
	2.6nm,1.0s,baz=260,slow=2.1,SNR=7.2						
PETK	**Petropavlovsk-**	**78.61**	**347**	P	P	11 12 02.6	+0.6
	1.5nm,0.7s,baz=152,slow=7.5,SNR=3.4						
NVAR	**Mina Array Bea**	**85.14**	**44**	P	P	11 12 35.4	+0.1
	0.4nm,0.7s,baz=218,slow=5.7,SNR=3.9						
TXAR	**Lajitas Array**	**91.01**	**58**	P	P	11 13 03.5	+0.6
	0.6nm,0.7s,baz=215,slow=6.2,SNR=8.3						
HFS	**Hagfors**	**142.08**	**348**	PKP	PKPdf	11 19 22.3	-2.8
	1.5nm,0.5s,baz=67,slow=5.0,SNR=11						
AKASG	**Malin Array Be**	**144.25**	**327**	PKP	PKPdf	11 19 29.9	+0.7
	0.3nm,0.2s,baz=47,slow=4.0,SNR=4.8						

*ISK **31** 11:35:06.6, 39°.64N×33°.36E, h11km, ML2.6*
*ISCJB **31** 11:35:08.5±0.7, 39°.70N±0°.04×33°.38E±0°.05, h11km±6km, Error ellipse: s-maj=6.8km s-min=6.0km az=8.6*
*DDA **31** 11:35:08.8, 39°.75N×33°.39E, h7km±1km, Md3.0*
*CSEM **31** 11:35:08.3±0.2, 39°.67N×33°.39E, h15km, MD3.0, Error ellipse: s-maj=6.6km s-min=4.8km az=1.0*
ISC 31 11:35:08.9±0.6, 39°.68N±0°.05×33°.38E±0°.04, h16km±5km, n19, σ0°98/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBAL	**Bala**	**0.24**	**235**	*i*P	**Pg**	**11 35 14.9**	**+0.7**
BBAL				*i*S	**Sg**	**11 35 19.1**	**+1.3**
BBAL	**Bala**	**0.24**	**235**	*i*P	**Pg**	**11 35 14.9**	**+0.7**
BBAL				*i*S	**Sg**	**11 35 19.1**	**+1.3**
LOD	**Lodumlu**	**0.52**	**294**	*e*PG	**Pg**	**11 35 17.4**	**-1.6**
LOD				*e*SG	**Sg**	**11 35 25.1**	**-0.9**
LOD	**Lodumlu**	**0.52**	**294**	*e*Pg	**Pg**	**11 35 17.4**	**-1.7**
LOD				*e*Sg	**Sg**	**11 35 25.1**	**-0.9**
CDAG	**Cicekdag**	**0.77**	**94**	*i*P	**Pg**	**11 35 23.8**	**-0.1**
CDAG				*i*S	**Sg**	**11 35 34.8**	**+0.7**
CDAG	**Cicekdag**	**0.77**	**94**	*i*P	**Pg**	**11 35 23.8**	**-0.1**
CDAG				*i*S	**Sg**	**11 35 34.8**	**+0.7**
CANT	**Cankiri**	**0.94**	**11**	*e*PG	**Pg**	**11 35 25.9**	**-1.3**
CANT				*e*SG	**Sg**	**11 35 40.5**	**+1.0**
CORM	**Corum**	**1.08**	**62**	*e*PN	**Pn**	**11 35 28.3**	**-1.1**
CORM	**Corum**	**1.08**	**62**	*e*Pn	**Pn**	**11 35 28.3**	**-1.1**
SGKT	**Sivrigoynuk**	**1.35**	**312**	*i*P	**Pn**	**11 35 33.7**	**+0.7**
SGKT				*i*S	**Sn**	**11 35 52.2**	**+1.6**
SGKT	**Sivrigoynuk**	**1.35**	**312**	*i*P	**Pn**	**11 35 33.7**	**+0.7**
SGKT				*i*S	**Sn**	**11 35 52.2**	**+1.6**
TOS	**Tosya**	**1.44**	**20**	*e*PN	**Pn**	**11 35 34.0**	**-0.3**
TOS				*e*SN	**Sn**	**11 35 53.9**	**+1.1**
TOS	**Tosya**	**1.44**	**20**	*e*Pn	**Pn**	**11 35 34.0**	**-0.3**
TOS				*e*Sn	**Sn**	**11 35 53.9**	**+1.0**
SVRH	**Sivrihisar-ESK**	**1.45**	**261**	*e*PN	**Pn**	**11 35 33.4**	**-1.0**
SVRH	**Sivrihisar-ESK**	**1.45**	**261**	*e*Pn	**Pn**	**11 35 33.4**	**-1.0**
YOZ	**Yozgat**	**1.50**	**91**	*e*PN	**Pn**	**11 35 34.5**	**-0.7**
YOZ	**Yozgat**	**1.50**	**91**	*e*Pn	**Pn**	**11 35 34.5**	**-0.6**
SAFT	**Safranbolu**	**1.64**	**342**	*e*PN	**Pn**	**11 35 36.9**	**-0.1**
SAFT	**Safranbolu**	**1.64**	**342**	*e*Pn	**Pn**	**11 35 36.9**	**-0.2**

CSEM 31 11:37:57.2±0.2, 27°.75N×55°.16E, h10km, ML3.8, Error ellipse: s-maj=8.6km s-min=3.7km az=15.0, Southern Iran

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

ROSC	**El Rosal**	**3.42**	**117**	Pn	Pn	12 06 32.6	+1.1
	7.2nm,0.3s,baz=85,slow=17,SNR=4.2						
ROSC				Sn	Sn	12 07 13.8	+0.9
	13nm,0.3s,baz=89,slow=23,SNR=4.5						
TXAR	**Lajitas Array**	**33.65**	**316**	P	P	12 12 19.9	+0.4
	0.1nm,0.7s,baz=113,slow=8.9,SNR=2.2						
NVAR	**Mina Array Bea**	**48.79**	**317**	P	P	12 14 23.6	-0.2
	0.2nm,0.5s,baz=119,slow=7.3,SNR=3.6						
ASAR	**Alice Springs**	**145.41**	**237**	PKPbc	PKPbc	12 25 16.8	-0.8
	0.4nm,0.8s,baz=118,slow=3.7,SNR=6.9						
ASAR				pPKPbc		12 25 27.9	
	0.7nm,0.9s,baz=124,slow=4.2,SNR=4.9						

PDG ***31*** *12:20:12.4±0.4,36°.88N×19°.99E,h8km±11km,MD4.1/1, ML4.0/9,Error ellipse: s-maj=330.0km s-min=43.5km az=90.0*

ISCJB ***31*** *12:20:20.8±0.5,37°.69N±0°.02×21°.32E±0°.02,h1km±3km, mb4.0/14,MS3.2/5,Error ellipse: s-maj=4.0km s-min=2.8km az=29.6*

IDC ***31*** *12:20:21.5±1.3,38°.17N×21°.66E,h0km,mb3.9/10, mb1 3.9/11,mb1mx3.8/27,mbtmp3.9/11,MS3.3/5, Ms1 3.3/5,ms1mx2.7/35,Error ellipse: s-maj=26.3km s-min=23.5km az=136.0*

CSEM ***31*** *12:20:22.2±0.2,37°.71N×21°.37E,h2km,ML3.9,Error ellipse: s-maj=4.5km s-min=3.3km az=38.0*

THE ***31*** *12:20:22.2,37°.68N×21°.39E,h4km,ML4.5/9,Error ellipse: s-maj=0.8km s-min=0.6km az=23.0*

NEIC ***31*** *12:20:23.6,37°.79N×21°.37E,h19km,mb4.3/2, ML4.0(PDG),ML3.9(ATH),After ATH.*

ATH ***31*** *12:20:23.6,37°.79N×21°.38E,h17km,ML3.9*

MOS ***31*** *12:20:24.6±1.0,37°.80N×21°.31E,h58km,mb4.1/6,Error ellipse: s-maj=9.1km s-min=4.5km az=80.2*

ISC 31 12:20:22.0±0.5,37°.69N±0°.02×21°.36E±0°.02,h1km±3km, n222,σ1§28/282,mb4.1/14,MS3.2/5,17C-14D,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.38**	**13**	*e*Pb	**Pg**	**12 20 30.0**	**+0.7**
RLS	**Riolos of Patr**	**0.38**	**13**	*e*PB	**Pg**	**12 20 30.0**	**+0.7**
RLS	**Riolos of Patr**	**0.38**	**13**	*e*Pb	**Pg**	**12 20 30.0**	**+0.7**
KFL	**Anninata**	**0.62**	**313**	P	**Pg**	**12 20 34.6**	**+0.8**
KFL	**Anninata**	**0.62**	**313**	P	**Pg**	**12 20 34.6**	**+0.8**
UPR	**University Cam**	**0.68**	**29**	P	**Pg**	**12 20 35.2**	**+0.1**
UPR				S	**Sg**	**12 20 45.2**	**+1.2**
UPR	**University Cam**	**0.68**	**29**	P	**Pg**	**12 20 35.2**	**+0.1**
UPR				S	**Sg**	**12 20 45.2**	**+1.2**
LAKA	**Lakka**	**0.74**	**41**	P	**Pg**	**12 20 35.9**	**-0.2**
LAKA				S	**Sg**	**12 20 46.5**	**+0.8**
LAKA	**Lakka**	**0.74**	**41**	P	**Pg**	**12 20 35.9**	**-0.2**
LAKA				S	**Sg**	**12 20 46.5**	**+0.8**
VLS	**Valsamata**	**0.78**	**309**	*e*P	**Pg**	**12 20 38.0**	**+1.1**
VLS	**Valsamata**	**0.78**	**309**	*e*PN	**Pg**	**12 20 38.0**	**+1.1**
VLS	**Valsamata**	**0.78**	**309**	*e*Pn	**Pg**	**12 20 38.0**	**+1.1**
GUR	**Goura**	**0.82**	**72**	*e*PN	**Pg**	**12 20 37.9**	**+0.3**
GUR				*e*SN	**Sg**	**12 20 49.8**	**+1.6**
GUR	**Goura**	**0.82**	**72**	P	**Pg**	**12 20 36.9**	**-0.7**
GUR				S	**Sg**	**12 20 48.5**	**+0.3**
GUR	**Goura**	**0.82**	**72**	P	**Pg**	**12 20 36.9**	**-0.7**
GUR				S	**Sg**	**12 20 48.5**	**+0.3**
PYL	**PYLOS**	**0.85**	**159**	*e*PN	**Pg**	**12 20 41.5**	**+3.3**
PYL	**PYLOS**	**0.85**	**159**	P	**Pg**	**12 20 37.9**	**-0.3**
PYL	**PYLOS**	**0.85**	**159**	P	**Pg**	**12 20 37.9**	**-0.3**
PYL	**PYLOS**	**0.85**	**159**	*e*Pn	**Pg**	**12 20 41.5**	**+3.3**
EFP	**Efpalio**	**0.85**	**30**	*e*PN	**Pg**	**12 20 37.8**	**-0.6**
EFP				*e*SN	**Sg**	**12 20 48.9**	**-0.6**
EFP	**Efpalio**	**0.85**	**30**	P	**Pg**	**12 20 37.8**	**-0.6**
EFP				S	**Sg**	**12 20 50.5**	**+1.0**
EFP	**Efpalio**	**0.85**	**30**	P	**Pg**	**12 20 37.8**	**-0.6**
EFP				S	**Sg**	**12 20 50.5**	**+1.0**
VLX	**Vlachokerasia**	**0.87**	**111**	*e*PN	**Pg**	**12 20 40.4**	**+1.7**
VLX	**Vlachokerasia**	**0.87**	**111**	P	**Pg**	**12 20 38.2**	**-0.5**
VLX				S	**Sg**	**12 20 50.1**	**+0.2**
VLX	**Vlachokerasia**	**0.87**	**111**	P	**Pg**	**12 20 38.2**	**-0.5**
VLX	**Vlachokerasia**	**0.87**	**111**	*e*Pn	**Pg**	**12 20 40.4**	**+1.7**
VLX				S	**Sg**	**12 20 50.1**	**+0.2**
TRIZ	**Trizonia**	**0.88**	**40**	P	**Pg**	**12 20 38.2**	**-0.7**
TRIZ	**Trizonia**	**0.88**	**40**	P	**Pg**	**12 20 38.2**	**-0.7**
KALE	**Kalithea**	**0.93**	**41**	P	**Pg**	**12 20 39.1**	**-0.8**
KALE				S	**Sg**	**12 20 52.9**	**+0.9**
KALE	**Kalithea**	**0.93**	**41**	P	**Pg**	**12 20 39.1**	**-0.8**
KALE				S	**Sg**	**12 20 52.9**	**+0.9**
DSF	**Desfina**	**1.17**	**52**	P	**Pg**	**12 20 43.1**	**-1.3**
DSF	**Desfina**	**1.17**	**52**	P	**Pg**	**12 20 43.1**	**-1.3**
LKD2	**Lefkada island**	**1.23**	**334**	P	**Pg**	**12 20 44.9**	**-0.7**
LKD2	**Lefkada island**	**1.23**	**334**	P	**Pg**	**12 20 44.9**	**-0.7**
EVR	**Evrytania**	**1.28**	**16**	*e*Pn	**Pn**	**12 20 45.8**	**-1.2**
EVR	**Evrytania**	**1.28**	**16**	*e*PN	**Pn**	**12 20 45.8**	**-1.2**
EVR	**Evrytania**	**1.28**	**16**	*e*Pn	**Pn**	**12 20 45.8**	**-1.2**
LTK	**Loutraki**	**1.32**	**75**	*e*PN	**Pn**	**12 20 47.6**	**+0.1**
LTK				*e*SN	**Sn**	**12 21 05.4**	**-0.3**
LTK	**Loutraki**	**1.32**	**75**	P	**Pg**	**12 20 46.2**	**-1.0**
LTK				S	**Sg**	**12 21 04.3**	**0.0**
LTK	**Loutraki**	**1.32**	**75**	P	**Pg**	**12 20 46.2**	**-1.0**
LTK	**Loutraki**	**1.32**	**75**	*e*Pn	**Pn**	**12 20 47.6**	**+0.1**
LTK				S	**Sg**	**12 21 04.3**	**0.0**
LTK				*e*Sn	**Sn**	**12 21 05.4**	**-0.3**
DID	**Didima**	**1.50**	**96**	P	**Pn**	**12 20 49.2**	**-0.9**
DID				S	**Sb**	**12 21 09.0**	**-1.2**
DID	**Didima**	**1.50**	**96**	P	**Pn**	**12 20 49.2**	**-0.9**
DID				S	**Sb**	**12 21 09.0**	**-1.2**
AGG	**Agios Georgios**	**1.54**	**30**	P	**Pn**	**12 20 49.2**	**-1.3**
AGG	**Agios Georgios**	**1.54**	**30**	P	**Pn**	**12 20 49.2**	**-1.3**
AGG	**Agios Georgios**	**1.54**	**30**	P	**Pn**	**12 20 49.2**	**-1.3**
VLI	**Veliai**	**1.59**	**127**	*e*Pn	**Pn**	**12 20 53.9**	**+2.7**
VLI				*e*Sn	**Sn**	**12 21 15.2**	**+2.8**
VLI	**Veliai**	**1.59**	**127**	*e*PN	**Pn**	**12 20 53.9**	**+2.7**
VLI				*e*SN	**Sn**	**12 21 15.2**	**+2.8**
LKR	**Lokris**	**1.61**	**53**	P	**Pn**	**12 20 50.4**	**-1.2**
LKR	**Lokris**	**1.61**	**53**	*e*PN	**Pn**	**12 20 52.1**	**+0.5**
LKR				*e*SN	**Sn**	**12 21 13.2**	**+0.2**
LKR	**Lokris**	**1.61**	**53**	P	**Pn**	**12 20 50.4**	**-1.2**
LKR	**Lokris**	**1.61**	**53**	P	**Pn**	**12 20 50.4**	**-1.2**
LKR	**Lokris**	**1.61**	**53**	*e*Pn	**Pn**	**12 20 52.1**	**+0.5**
LKR				*e*Sn	**Sn**	**12 21 13.2**	**+0.2**
ATAL	**Atalanti**	**1.65**	**52**	P	**Pn**	**12 20 51.1**	**-1.0**
ATAL				S	**Sn**	**12 21 13.5**	**-0.4**
ATAL	**Atalanti**	**1.65**	**52**	P	**Pn**	**12 20 51.1**	**-1.0**
ATAL				S	**Sn**	**12 21 13.5**	**-0.4**
NAIG	**Nisos Aigina**	**1.69**	**87**	*e*Pn	**Pn**	**12 20 53.8**	**+1.2**
NAIG	**Nisos Aigina**	**1.69**	**87**	*e*PN	**Pn**	**12 20 53.8**	**+1.2**
NAIG	**Nisos Aigina**	**1.69**	**87**	*e*Pn	**Pn**	**12 20 53.8**	**+1.2**
ATH	**Athens Observa**	**1.89**	**81**	P	**Pn**	**12 20 55.3**	**-0.1**
ATH				S	**Sn**	**12 21 20.7**	**+0.9**
ATH	**Athens Observa**	**1.89**	**81**	*e*PN	**Pn**	**12 20 56.6**	**+1.2**
ATH				*e*SN	**Sn**	**12 21 21.3**	**+1.5**
ATH	**Athens Observa**	**1.89**	**81**	*e*Pn	**Pn**	**12 20 56.6**	**+1.2**
ATH				*e*Sn	**Sn**	**12 21 21.3**	**+1.5**
VLY	**Voula,Athens**	**1.94**	**84**	*e*Pn	**Pn**	**12 20 58.1**	**+2.1**
VLY				*e*Sn	**Sn**	**12 21 21.3**	**+0.3**
VLY	**Voula,Athens**	**1.94**	**84**	*e*PN	**Pn**	**12 20 58.1**	**+2.1**
VLY				*e*SN	**Sn**	**12 21 22.3**	**+1.3**
VLY	**Voula,Athens**	**1.94**	**84**	*e*Pn	**Pn**	**12 20 58.1**	**+2.1**
VLY				*e*Sn	**Sn**	**12 21 21.3**	**+0.3**
ATHU	**Athens Univers**	**1.94**	**81**	P	**Pn**	**12 20 55.3**	**-0.8**
ATHU				S	**Sn**	**12 21 20.7**	**-0.4**
ATHU	**Athens Univers**	**1.94**	**81**	P	**Pn**	**12 20 55.3**	**-0.8**
ATHU				S	**Sn**	**12 21 20.7**	**-0.4**
KYTH	**Kithira**	**1.94**	**136**	*e*Pn	**Pb**	**12 20 58.4**	**+0.2**
KYTH	**Kithira**	**1.94**	**136**	*e*PB	**Pb**	**12 20 58.4**	**+0.2**
KYTH	**Kithira**	**1.94**	**136**	*e*Pn	**Pb**	**12 20 58.4**	**+0.2**
THL	**Klokotos Trika**	**1.94**	**15**	*e*PN	**Pn**	**12 20 56.7**	**+0.6**
THL				*e*SN	**Sn**	**12 21 20.6**	**-0.6**
THL	**Klokotos Trika**	**1.94**	**15**	P	**Pn**	**12 20 56.6**	**+0.5**
THL	**Klokotos Trika**	**1.94**	**15**	P	**Pn**	**12 20 56.6**	**+0.5**
THL				*e*Sn	**Sn**	**12 21 19.6**	**-1.6**
PTL	**Penteli**	**2.02**	**79**	*e*Pn	**Pn**	**12 20 57.9**	**+0.8**
PTL	**Penteli**	**2.02**	**79**	*e*PN	**Pn**	**12 20 57.9**	**+0.8**
PTL	**Penteli**	**2.02**	**79**	*e*Pn	**Pn**	**12 20 57.9**	**+0.8**
NEO	**Neokhori**	**2.18**	**42**	*e*Pb	**Pn**	**12 20 59.8**	**+0.4**
NEO				*e*Sn	**Sn**	**12 21 26.6**	**-0.4**
NEO	**Neokhori**	**2.18**	**42**	*e*PN	**Pn**	**12 20 59.8**	**+0.4**
NEO				*e*SN	**Sn**	**12 21 26.6**	**-0.4**
XOR	**Xorichti**	**2.21**	**40**	P	**Pn**	**12 20 59.4**	**-0.4**
XOR				S	**Sn**	**12 21 27.4**	**-0.3**
XOR	**Xorichti**	**2.21**	**40**	P	**Pn**	**12 20 59.4**	**-0.4**
XOR				S	**Sn**	**12 21 27.4**	**-0.3**
XOR	**Xorichti**	**2.21**	**40**	P	**Pn**	**12 20 59.4**	**-0.4**
XOR				S	**Sn**	**12 21 27.4**	**-0.3**
KEK	**Kerkira**	**2.36**	**329**	P	**Pn**	**12 21 01.3**	**-0.6**
KEK	**Kerkira**	**2.36**	**329**	*e*PN	**Pn**	**12 21 03.0**	**+1.1**
KEK	**Kerkira**	**2.36**	**329**	P	**Pn**	**12 21 01.3**	**-0.6**
KEK	**Kerkira**	**2.36**	**329**	P	**Pn**	**12 21 01.3**	**-0.6**
KEK	**Kerkira**	**2.36**	**329**	*e*Pn	**Pn**	**12 21 03.0**	**+1.1**
AOS	**Alonnisos**	**2.47**	**52**	P	**Pn**	**12 21 01.9**	**-1.5**
AOS	**Alonnisos**	**2.47**	**52**	P	**Pn**	**12 21 01.9**	**-1.5**
AOS	**Alonnisos**	**2.47**	**52**	P	**Pn**	**12 21 01.9**	**-1.5**
LIT	**Litokhoron**	**2.57**	**20**	P	**Pn**	**12 21 03.7**	**-1.0**
LIT	**Litokhoron**	**2.57**	**20**	*e*PB	**Pb**	**12 21 06.0**	**-2.8**
LIT	**Litokhoron**	**2.57**	**20**	P	**Pn**	**12 21 03.7**	**-1.0**
LIT	**Litokhoron**	**2.57**	**20**	P	**Pn**	**12 21 03.7**	**-1.0**
KZN	**Kozani**	**2.63**	**7**	*e*P	**Pn**	**12 21 07.1**	**+1.5**
KZN	**Kozani**	**2.63**	**7**	*e*PB	**Pn**	**12 21 07.1**	**+1.5**
NEST	**Nestorio**	**2.73**	**355**	P	**Pn**	**12 21 08.5**	**+1.5**
NEST	**Nestorio**	**2.73**	**355**	P	**Pn**	**12 21 08.5**	**+1.5**
PAIG	**Paliouri**	**2.88**	**38**	P	**Pn**	**12 21 08.2**	**-0.8**
PAIG	**Paliouri**	**2.88**	**38**	P	**Pn**	**12 21 08.2**	**-0.8**
PAIG	**Paliouri**	**2.88**	**38**	P	**Pn**	**12 21 08.2**	**-0.8**
KARN	**Karanos**	**3.07**	**137**	P	**Pn**	**12 21 11.9**	**+0.2**
KARN	**Karanos**	**3.07**	**137**	P	**Pn**	**12 21 11.9**	**+0.2**
FNA	**Florina**	**3.09**	**0**	P	**Pn**	**12 21 10.6**	**-1.3**
FNA	**Florina**	**3.09**	**0**	P	**Pn**	**12 21 10.6**	**-1.3**
FNA	**Florina**	**3.09**	**0**	P	**Pn**	**12 21 10.6**	**-1.3**
VAM	**Vamos**	**3.23**	**134**	P	**Pn**	**12 21 14.0**	**+0.2**
VAM	**Vamos**	**3.23**	**134**	P	**Pn**	**12 21 14.0**	**+0.2**
GRG	**Griva**	**3.36**	**14**	P	**Pn**	**12 21 14.6**	**-1.0**
GRG	**Griva**	**3.36**	**14**	P	**Pn**	**12 21 14.6**	**-1.0**
GRG	**Griva**	**3.36**	**14**	P	**Pn**	**12 21 14.6**	**-1.0**
APE	**Apeiranthos**	**3.38**	**99**	P	**Pn**	**12 21 17.7**	**+1.8**
APE	**Apeiranthos**	**3.38**	**99**	⇑*i*P	**Pn**	**12 21 16.9**	**+1.0**
APE	**Apeiranthos**	**3.38**	**99**	P	**Pn**	**12 21 17.7**	**+1.8**
OHR	**Ohrid**	**3.45**	**353**	*e*Pn	**Pn**	**12 21 16.9**	**+0.1**
OHR	**Ohrid**	**3.45**	**353**	*e*Pn	**Pb**	**12 21 24.8**	**+1.0**
SOH	**Sokhos**	**3.49**	**26**	P	**Pn**	**12 21 17.2**	**-0.2**
SOH	**Sokhos**	**3.49**	**26**	*e*PN	**Pn**	**12 21 18.8**	**+1.4**
SOH	**Sokhos**	**3.49**	**26**	P	**Pn**	**12 21 17.2**	**-0.2**
SOH	**Sokhos**	**3.49**	**26**	P	**Pn**	**12 21 17.2**	**-0.2**
SOH	**Sokhos**	**3.49**	**26**	*e*Pn	**Pn**	**12 21 18.8**	**+1.4**
GVD	**Gavdhos**	**3.60**	**141**	*e*Pn	**Pn**	**12 21 17.8**	**-1.1**
GVD	**Gavdhos**	**3.60**	**141**	*e*Pn	**Pn**	**12 21 17.8**	**-1.1**
KNT	**Kendrikon**	**3.67**	**18**	P	**Pn**	**12 21 19.8**	**0.0**
KNT	**Kendrikon**	**3.67**	**18**	P	**Pn**	**12 21 19.8**	**0.0**
KNT	**Kendrikon**	**3.67**	**18**	P	**Pn**	**12 21 19.8**	**0.0**
KRUS	**Krusevo**	**3.68**	**359**	*e*Pn	**Pn**	**12 21 19.3**	**-0.6**
KRUS	**Krusevo**	**3.68**	**359**	*e*Pn	**Pn**	**12 21 18.8**	**-1.2**
LIA	**Limnos Island**	**3.71**	**52**	P	**Pn**	**12 21 21.9**	**+1.4**
LIA	**Limnos Island**	**3.71**	**52**	P	**Pn**	**12 21 21.9**	**+1.4**
VAY	**Valandovo**	**3.75**	**14**	*e*Pn	**Pn**	**12 21 20.0**	**-0.9**
VAY	**Valandovo**	**3.75**	**14**	*e*Pn	**Pn**	**12 21 19.5**	**-1.4**
TIP	**Timpagrande**	**3.91**	**294**	P	**Pn**	**12 21 24.9**	**+1.8**
TIP	**Timpagrande**	**3.91**	**294**	P	**Pn**	**12 21 24.9**	**+1.8**
ULC	**Ulcinj**	**4.57**	**340**	⇑*i*Pn	**Pn**	**12 21 30.2**	**-2.0**
ULC				*e*Sn	**Sn**	**12 22 29.2**	**+3.3**
ULC	**Ulcinj**	**4.57**	**340**	⇑*i*Pn	**Pn**	**12 21 30.2**	**-2.0**
ULC				*e*Sn	**Sn**	**12 22 29.2**	**+3.3**
CUC	**Castrocucco**	**4.90**	**300**	*e*Pn	**Pn**	**12 21 38.0**	**+1.2**
CUC	**Castrocucco**	**4.90**	**300**	*e*Pn	**Pn**	**12 21 38.0**	**+1.2**
BUM	**Brajici-Budva**	**4.98**	**338**	⇑*i*Pn	**Pn**	**12 21 35.7**	**-2.1**
BUM				*e*Sn	**Sn**	**12 22 39.0**	**+3.0**
BUM	**Brajici-Budva**	**4.98**	**338**	⇑*i*Pn	**Pn**	**12 21 35.7**	**-2.1**
BUM				*e*Sn	**Sn**	**12 22 39.0**	**+3.0**
PDG	**Podgorica**	**5.00**	**342**	⇑*i*Pn	**Pn**	**12 21 38.1**	**-0.1**
PDG				*e*Sn	**Sn**	**12 22 40.5**	**+3.9**
TTG	**Podgorica**	**5.00**	**342**	⇑*i*Pn	**Pn**	**12 21 38.1**	**-0.1**
TTG				*e*Sn	**Sn**	**12 22 40.5**	**+3.9**
TTG	**Podgorica**	**5.00**	**342**	*i* P	**Pn**	**12 21 38.1**	**-0.1**
TTG				*e*S	**Sn**	**12 22 40.5**	**+3.9**
PVY	**Plav**	**5.01**	**348**	⇑*i*Pn	**Pn**	**12 21 39.3**	**+1.0**
PVY				*e*Sn	**Sn**	**12 22 43.5**	**+6.6**
PVY	**Plav**	**5.01**	**348**	⇑*i*Pn	**Pn**	**12 21 39.3**	**+1.0**
VTS	**Vitosha**	**5.10**	**16**	⇓P	**Pn**	**12 21 39.9**	**+0.4**
VTS	**Vitosha**	**5.10**	**16**	⇓*i*P	**Pn**	**12 21 39.9**	**+0.4**
VTS	**Vitosha**	**5.10**	**16**	P	**Pn**	**12 21 39.9**	**+0.4**
HCY	**Herceg Novi**	**5.24**	**336**	⇓*i*Pn	**Pn**	**12 21 38.5**	**-2.9**
HCY				*e*Sn	**Sn**	**12 22 44.4**	**+2.0**
HCY	**Herceg Novi**	**5.24**	**336**	⇓*i*Pn	**Pn**	**12 21 38.5**	**-2.9**
HCY				*e*Sn	**Sn**	**12 22 44.4**	**+2.0**
BEY	**Berane**	**5.30**	**348**	⇑*i*Pn	**Pn**	**12 21 42.5**	**+0.3**
IVA	**Berane**	**5.30**	**348**	⇑*i*Pn	**Pn**	**12 21 42.5**	**+0.3**
IVA				*e*Sn	**Sn**	**12 22 51.3**	**+7.4**
IVA	**Berane**	**5.30**	**348**	⇑*i*Pn	**Pn**	**12 21 42.5**	**+0.3**
NKY	**Niksic**	**5.43**	**341**	⇓*i*Pn	**Pn**	**12 21 43.8**	**-0.2**
NKY				*e*Sn	**Sn**	**12 22 50.9**	**+3.5**
NKY	**Niksic**	**5.43**	**341**	⇓*i*Pn	**Pn**	**12 21 43.8**	**-0.2**
VAE	**Valguarnera**	**5.52**	**270**	Sn	**Sn**	**12 22 47.2**	**-2.3**
6.2nm,0.3s,baz=18,slow=20,SNR=7.4							
BRY	**Bratogost**	**5.63**	**338**	*e*Pn	**Pn**	**12 21 45.7**	**-1.1**
BRY				*e*Sn	**Sn**	**12 22 53.8**	**+1.6**
BRY	**Bratogost**	**5.63**	**338**	*e*Pn	**Pn**	**12 21 45.7**	**-1.1**
BRY				*e*Sn	**Sn**	**12 22 53.8**	**+1.6**
UPM	**Unac-Piva**	**5.82**	**342**	⇑*i*Pn	**Pn**	**12 21 48.5**	**-0.8**
UPM				*e*Sn	**Sn**	**12 23 00.8**	**+4.1**
UPM	**Unac-Piva**	**5.82**	**342**	⇑*i*Pn	**Pn**	**12 21 48.5**	**-0.8**
PLE	**Pljevlja**	**5.83**	**346**	⇓*i*Pn	**Pn**	**12 21 49.6**	**+0.1**
PLE				*e*Sn	**Sn**	**12 23 02.3**	**+5.3**
PLE	**Pljevlja**	**5.83**	**346**	⇓*i*Pn	**Pn**	**12 21 49.6**	**+0.1**
STON	**Ston**	**5.88**	**333**	*e*Pn	**Pn**	**12 21 46.5**	**-3.7**
STON				Sn	**Sn**	**12 22 50.8**	**-7.6**
DIVS	**Divibare**	**6.49**	**351**	P	**Pn**	**12 21 56.2**	**-2.4**
DIVS	**Divibare**	**6.49**	**351**	P	**Pn**	**12 21 56.2**	**-2.4**
VOIR		**8.22**	**18**	⇓P	**Pn**	**12 22 23.2**	**+0.9**
VOIR		**8.22**	**18**	⇓*i*P	**Pn**	**12 22 23.2**	**+0.9**
VOIR		**8.22**	**18**	P	**Pn**	**12 22 23.2**	**+0.9**
NVLJ	**Novalja**	**8.43**	**327**	Sn	**Sn**	**12 23 56.7**	**-4.3**
MLR	**Muntele Rosu**	**8.52**	**22**	Pn	**Pn**	**12 22 25.5**	**-0.9**
0.4nm,0.3s,baz=217,slow=15,SNR=4.9							
MLR	**Muntele Rosu**	**8.52**	**22**	⇓P	**Pn**	**12 22 28.0**	**+1.6**
MLR	**Muntele Rosu**	**8.52**	**22**	⇓*i*P	**Pn**	**12 22 28.0**	**+1.6**
MLR	**Muntele Rosu**	**8.52**	**22**	P	**Pn**	**12 22 28.0**	**+1.6**
BOJS	**Bojanci**	**9.05**	**332**	*i* Pn	**Pn**	**12 22 40.2**	**+6.5**
BOJS				*i* Sn	**Sn**	**12 24 19.1**	**+2.9**
VRI	**Vrincioaia**	**9.10**	**24**	⇑P	**Pn**	**12 22 36.8**	**+2.4**
VRI	**Vrincioaia**	**9.10**	**24**	⇑*i*P	**Pn**	**12 22 36.8**	**+2.4**
VRI	**Vrincioaia**	**9.10**	**24**	P	**Pn**	**12 22 36.8**	**+2.4**
CEY	**Cerknica**	**9.56**	**329**	*i* Pn	**Pn**	**12 22 40.5**	**-0.3**
CEY				*i* Sn	**Sn**	**12 24 22.4**	**-6.5**
CEY	**Cerknica**	**9.56**	**329**	*i* Pn	**Pn**	**12 22 40.5**	**-0.3**
BRTR	**Keskin Array B**	**9.81**	**74**	Pn	**Pn**	**12 22 45.7**	**+1.5**
0.2nm,0.3s,baz=254,slow=13,SNR=5.2							
BRTR	**Keskin Array B**	**9.81**	**74**	P	**Pn**	**12 22 45.7**	**+1.5**
KECS	**Kecovo**	**10.81**	**357**	*e*P	**Pn**	**12 23 03.5**	**+5.7**
KECS	**Kecovo**	**10.81**	**357**	*e*PN	**Pn**	**12 23 03.5**	**+5.7**
VYHS	**Vyhne**	**10.96**	**351**	*e*P	**Pn**	**12 23 07.2**	**+7.4**
VYHS	**Vyhne**	**10.96**	**351**	*e*PN	**Pn**	**12 23 07.2**	**+7.4**
KHC	**Kasperske Hory**	**12.75**	**336**	*e*P	**Pn**	**12 23 33.0**	**+8.7**
KHC	**Kasperske Hory**	**12.75**	**336**	*e*P	**Pn**	**12 23 33.0**	**+8.7**
AKASG	**Malin Array Be**	**14.17**	**21**	Pn	**Pn**	**12 23 37.1**	**-6.5**
0.4nm,0.3s,baz=209,slow=13,SNR=4.2							
CLL	**Collm**	**14.85**	**339**	*i*	**Pn**	**12 23 58.1**	**+5.2**
CLL	**Collm**	**14.85**	**339**	*i* sP	**Pn**	**12 23 58.1**	**+5.2**
comp=Z,10.0nm,1.4s							
CLL				*i* sPP		12 24 07.2	
SUW	**Suwalki**	**16.38**	**4**	*e*P	**Pn**	**12 24 11.5**	**-1.4**
SUW				pmax	pmax		
comp=Z,77nm,0.9s							
SUW	**Suwalki**	**16.38**	**4**	*e*Pn	**Pn**	**12 24 11.5**	**-1.5**
comp=Z,77nm,0.9s							
SUW				*e*		12 24 21.9	
SUW	**Suwalki**	**16.38**	**4**	*e*Pn	**Pn**	**12 24 11.5**	**-1.4**
KIV	**Kislovodsk**	**17.29**	**62**	*e*P	**Pn**	**12 24 21.7**	**-2.9**
KIV				pmax	pmax		
comp=Z,6.0nm,1.2s							
KIV				MLR	MLR		
comp=Z,13nm,11.0s							
ZEI	**Tsey**	**17.93**	**67**	*e*P	**Pn**	**12 24 32.8**	**+0.3**
ZEI				pmax	pmax		
comp=Z,8.0nm,0.4s							
ZEI	**Tsey**	**17.93**	**67**	*e*P	**Pn**	**12 24 32.8**	**+0.3**
comp=Z,8.0nm,0.4s							
VSR	**Storozhevoye**	**18.49**	**37**	*e*P	**Pn**	**12 24 35.2**	**-4.2**
VSR				pmax	pmax		
comp=Z,4.0nm,0.4s							
TAM	**Tamanrasset**	**20.14**	**227**	*e*P	**P**	**12 24 59.3**	**+1.7**
TAM				pmax	pmax		
comp=Z,5.0nm,1.0s							
TAM	**Tamanrasset**	**20.14**	**227**	*e*P	**P**	**12 24 59.2**	**+1.6**
comp=Z,4.5nm,1.0s							
TAM	**Tamanrasset**	**20.14**	**227**	*e*P	**P**	**12 24 59.2**	**+1.6**
comp=Z,4.5nm,1.0s							
OBN	**Obninsk**	**20.26**	**26**	*i* P	**P**	**12 24 53.3**	**-5.3**
OBN				*i*		12 25 09.4	
OBN				pmax	pmax		
comp=Z,5.0nm,1.0s							
VSU	**Vasula**	**21.08**	**8**	⇑*i*P	**P**	**12 25 04.6**	**-2.9**
VSU				pmax	pmax		
comp=Z,34nm,0.6s,mb4.8							
HFS	**Hagfors**	**22.99**	**350**	P	**P**	**12 25 22.8**	**-5.0**
comp=Z,1.3nm,0.4s,mb3.9,baz=160,slow=9.0,SNR=12							
HFS				LR	LR	12 34 51.1	
comp=Z,50nm,21.3s,MS2.9,baz=135,slow=38							
HFS	**Hagfors**	**22.99**	**350**	P	**P**	**12 25 22.8**	**-5.0**
HFS				LR	LR	12 34 51.1	
FINES	**FINESS Array B**	**23.96**	**6**	P	**P**	**12 25 32.4**	**-5.2**
comp=Z,1.4nm,0.4s,mb3.8,baz=170,slow=11,SNR=9.0							
FINES				LR	LR	12 35 47.7	
comp=Z,84nm,18.3s,MS3.2,baz=355,slow=40							
EKA	**Eskdalemuir Ar**	**24.21**	**325**	P	**P**	**12 25 36.7**	**-3.2**
comp=Z,3.6nm,0.8s,mb4.0,baz=126,slow=9.7,SNR=9.3							
EKA				pP		12 25 46.5	
comp=Z,4.5nm,0.7s,baz=123,slow=9.2,SNR=8.9							
NB2	**NORSAR Subarra**	**24.23**	**348**	P	**P**	**12 25 36.1**	**-3.9**
comp=Z,6.9nm,1.1s,mb4.1,baz=159,slow=9.3							
NOA	**NORSAR Array B**	**24.23**	**348**	P	**P**	**12 25 35.5**	**-4.5**
comp=Z,1.8nm,0.8s,mb3.7,baz=152,slow=11,SNR=8.3							
NOA				LR

SNR=9.7
KK31 Karatay Array 6.45 300 ⇓Pn **Pn 13 24 24.2 +2.3**
comp=E,0.9nm,0.6s,baz=33,slow=15,SNR=7.2
KK31 ⇓Lg 13 25 51.7
comp=E,1.3nm,0.6s,baz=170,slow=20,SNR=6.4

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*ISCJB **31** 13:25:15.3±0.7, 13°.00N±0°.07×125°.46E±0°.08, h33km, mb3.7/8, Error ellipse: s-maj=11.8km s-min=10.2km az=13.4*
*IDC **31** 13:25:17.6±1.2, 13°.09N×125°.66E, h37km±8km, mb3.5/7, mb1 3.7/7, mb1mx3.4/22, mbtmp3.5/7, Error ellipse: s-maj=41.3km s-min=17.5km az=69.0*
*NEIC **31** 13:25:17.8±0.8, 12°.98N×125°.49E, h35km, mb4.1/1, Error ellipse: s-maj=41.6km s-min=11.6km az=63.0*
ISC 31 13:25:17.7±0.8, 12°.97N±0°.07×125°.38E±0°.09, h35km, (h40km±2.3km:pP-P), n11, σ0s98/13, mb3.7/8, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Cataran**	**0.83**	**237**	*e*P	**Pn**	**13 25 36.7**	**+3.7**
CNP				*e*S	**Sn**	**13 25 43.5**	**-0.6**
PVCP	**Virac**	**1.34**	**298**	*e*P	**Pn**	**13 25 39.3**	**-0.7**
PVCP				*e*S	**Sn**	**13 25 46.7**	**-10**
APYP	**Conner**	**6.29**	**321**	*e*P	**Pn**	**13 26 47.8**	**-0.2**
KSRS	**Korea Array**	**24.48**	**5**	P	**P**	**13 30 30.8**	**-2.8**
	0.8nm,0.9s,mb3.2,baz=180,slow=9.8,SNR=4.3						
CMAR	**Chiang Mai Arr**	**26.01**	**285**	P	**P**	**13 30 48.7**	**+1.0**
	0.3nm,0.4s,mb3.1,baz=94,slow=9.1,SNR=4.6						
CMAR				pP	pP	13 31 00.0	+2.4
	1.1nm,0.8s,baz=92,slow=7.6,SNR=2.7						
WRAB	**Tennant Creek**	**33.87**	**165**	P	**P**	**13 31 56.7**	**-0.5**
	1.9nm,0.8s,mb4.1						
ASAR	**Alice Springs**	**37.36**	**167**	P	**P**	**13 32 26.8**	**-0.3**
	1.8nm,0.7s,mb4.0,baz=357,slow=8.0,SNR=35						
ASAR				PcP	PcP	13 34 45.2	-0.7
	0.3nm,0.8s,baz=347,slow=2.9,SNR=3.2						
SONM	**Songino Array**	**38.20**	**339**	P	**P**	**13 32 34.4**	**+0.4**
	0.4nm,0.5s,mb3.4,baz=139,slow=6.8,SNR=2.5						
STKA	**Stephens Creek**	**47.23**	**161**	P	**P**	**13 33 48.0**	**+0.7**
	2.0nm,0.8s,mb4.1,baz=330,slow=12,SNR=4.1						
MKAR	**Makanchi Array**	**49.37**	**322**	P	**P**	**13 34 05.0**	**+1.3**
	0.5nm,0.6s,mb3.7,baz=120,slow=7.4,SNR=4.5						
MKAR				pP	pP	13 34 15.1	+0.9
	1.2nm,0.7s,baz=110,slow=9.4,SNR=5.5						
KURK	**Kurchatov**	**53.36**	**325**	P	**P**	**13 34 33.7**	**+0.1**
	0.9nm,0.6s,mb3.9,baz=120,slow=8.2,SNR=6.5						
KURK				pP	pP	13 34 44.5	+0.4
	1.3nm,0.6s,baz=123,slow=7.3,SNR=6.5						

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*ISCJB **31** 13:33:54.6±0.5, 35°.44N±0°.03×70°.58E±0°.05, h84km±7km, mb3.7/8, Error ellipse: s-maj=6.6km s-min=5.0km az=1.9*
*IDC **31** 13:33:54.2±5.0, 35°.53N×70°.29E, h62km±42km, mb3.6/8, mb1 3.8/13, mb1mx3.6/29, mbtmp3.7/13, ML3.6/5, Error ellipse: s-maj=32.4km s-min=19.4km az=31.0*
*BJI **31** 13:33:55.5, 35°.50N×70°.40E, h84km, mB4.2/1, mb4.3/1*
*NEIC **31** 13:33:56.5±0.7, 35°.50N×70°.39E, h84km±6km, mb4.8/1, Error ellipse: s-maj=10.2km s-min=6.8km az=122.0*
*NNC **31** 13:34:06.5±4.9, 36°.77N×69°.93E, h0km, mb4.2, mpv4.0, Error ellipse: s-maj=41.8km s-min=38.9km az=101.0*
ISC 31 13:33:56.0±0.4, 35°.41N±0°.03×70°.57E±0°.05, h83km±6km, n55, σ1s23/71, mb3.7/8, 3C-5D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**1.52**	**236**	*e*P	**Pn**	**13 34 21.8**	**+0.1**
KBL				*e*S	**Sn**	**13 34 41.5**	**+0.3**
CEP	**Cherat**	**1.93**	**145**	P	**Pn**	**13 34 29.6**	**+2.6**
CEP				S	**Sn**	**13 34 56.0**	**+5.3**
THW	**Thamme Wali**	**2.78**	**159**	P	**Pn**	**13 34 38.7**	**+0.2**
CHCP	**Chirah Chowk**	**2.83**	**127**	P	**Pn**	**13 34 41.9**	**+2.8**
THN	**Thein Dam**	**5.21**	**123**	*e*PKP	**Pn**	**13 35 11.7**	**+0.3**
THN				*ex*	x	13 39 18.1	
KSH	**Kashi**	**5.94**	**45**	P	**Pn**	**13 35 18.8**	**-2.5**
KSH				S	**Sn**	**13 36 19.8**	**-8.1**
KSH				smax			
	comp=N,230nm,0.6s						
KSH				smax			
	comp=E,180nm,0.4s						
BHK	**Bhakra**	**6.30**	**128**	*ex*	x	13 35 50.2	
SDNR	**Sundarnagar**	**6.62**	**124**	*e*PKP	**Pn**	**13 35 29.5**	**-1.1**
SDNR				*e*S	**Sn**	**13 36 43.5**	**-1.1**
SMLA	**Simla**	**6.98**	**126**	*i* P	**Pn**	**13 35 35.4**	**-0.2**
SMLA				*i* S	**Sn**	**13 36 51.0**	**-2.5**
SMLA				*i* S	**Sn**	**13 36 51.4**	**-2.1**
AML	**Almayashu**	**7.14**	**19**	P	**Pn**	**13 35 38.6**	**+0.9**
	SNR=54						
AML	**Almayashu**	**7.14**	**19**	*e*P	**Pn**	**13 35 38.4**	**+0.8**
	comp=E,36nm,0.4s						
UCH	**Uchtor**	**7.47**	**23**	P	**Sn**	**13 37 08.0**	**+2.7**
	SNR=14						
UCH	**Uchtor**	**7.47**	**23**	*e*P	**Pn**	**13 35 43.4**	**+1.2**
	comp=E,6.9nm,0.5s						
UCH				*e*S	**Sn**	**13 37 04.3**	**-1.0**
KLP	**Kalpa**	**7.49**	**119**	*e*PKP	**Pn**	**13 35 44.0**	**+1.4**
KLP				AMb	AMB	13 35 46.5	
	comp=Z,6.1nm,0.3s						
KLP				*e*S	**Sn**	**13 37 03.4**	**-2.5**
KZA	**Kyzart**	**7.60**	**27**	P	**Pn**	**13 35 45.5**	**+1.6**
	SNR=18						
EKS2	**Erkin-Say**	**7.66**	**18**	P	**Pn**	**13 35 45.6**	**+0.9**
	SNR=9.3						
EKS2	**Erkin-Say**	**7.66**	**18**	*e*P	**Pn**	**13 35 45.3**	**+0.5**
	comp=Z,10nm,0.6s						
EKS2				*e*S	**Sn**	**13 37 02.5**	**-7.3**
KK31	**Karatay Array**	**7.68**	**360**	Pn	**Pn**	**13 35 44.3**	**-0.8**
	comp=Z,6.6nm,0.4s,baz=173,slow=12,SNR=91						
KK31				⇑Sn	**Sn**	**13 36 59.9**	**-11**
	comp=Z,1.9nm,0.3s,baz=183,slow=25,SNR=4.3						
AAK	**Ala-Archa**	**7.83**	**22**	P	**Pn**	**13 35 48.4**	**+1.3**
	SNR=7.2						
AAK	**Ala-Archa**	**7.83**	**22**	P	**Pn**	**13 35 46.8**	**-0.4**
	comp=Z,4.9nm,0.3s,baz=181,slow=7.7,SNR=15						
AAK				S	**Sn**	**13 37 13.7**	**-0.4**
	comp=Z,4.9nm,0.3s,baz=108,slow=20,SNR=15						
AAK	**Ala-Archa**	**7.83**	**22**	P	**Pn**	**13 35 46.8**	**-0.4**
AAK				S	**Sn**	**13 37 13.7**	**-0.4**
DDI	**Dehra Dun**	**8.09**	**127**	*ex*	x	13 36 11.2	
DDI				*ex*	x	13 38 05.9	
CHMS	**Chumysh**	**8.24**	**22**	P	**Pn**	**13 35 53.8**	**+1.1**
	SNR=8.9						
TKM2	**Tokmak 2**	**8.46**	**26**	⇓Pn	**Pn**	**13 35 56.7**	**+1.1**
	comp=Z,5.3nm,0.6s						
TKM2				⇓Sn	**Sn**	**13 37 29.6**	**+0.3**
	comp=Z,58nm,0.8s						
TKM2	**Tokmak 2**	**8.46**	**26**	P	**Pn**	**13 35 57.0**	**+1.4**
	SNR=16						
TKM2	**Tokmak 2**	**8.46**	**26**	*e*P	**Pn**	**13 35 56.5**	**+0.9**
	comp=Z,10nm,0.5s						
KHET	**Khetri**	**8.56**	**147**	*e*PKP	**Pn**	**13 35 57.0**	**-0.1**
KHET				*e*S	**Sn**	**13 37 26.5**	**-5.6**
JOSI	**Joshimath**	**8.97**	**120**	*e*PKP	**Pn**	**13 36 01.2**	**-1.5**
JOSI				AMb	AMB	13 36 04.6	
	comp=Z,83nm,0.5s						
JOSI				*e*S	**Sn**	**13 37 37.3**	**-4.7**
AGRA	**Agra**	**10.30**	**140**	*e*S	**Sn**	**13 38 09.0**	**-5.6**
MKAR	**Makanchi Array**	**14.38**	**34**	P	**Pn**	**13 37 16.0**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=220,slow=10,SNR=3.3						
AB31	**Akbulak array**	**15.89**	**334**	Pn	**Pn**	**13 37 33.0**	**-1.5**
	comp=Z,28nm,0.6s,baz=171,slow=13,SNR=384						
AB31				⇑Sn	**Sn**	**13 40 17.5**	**-12**
	comp=Z,3.9nm,0.5s,baz=162,slow=23,SNR=8.9						
ABKAR	**Akbulak array**	**15.89**	**334**	*e*P	**Pn**	**13 37 32.2**	**-2.3**
	comp=Z,37nm,0.6s						
KURBB	**Kurchatov Arra**	**16.27**	**18**	⇓Pn	**Pn**	**13 37 39.9**	**+0.7**
	comp=Z,0.5nm,0.8s						
KURK	**Kurchatov**	**16.37**	**18**	⇓Pn	**Pn**	**13 37 43.5**	**+2.9**
	comp=Z,4.9nm,1.1s						
KURK	**Kurchatov**	**16.37**	**18**	P	**Pn**	**13 37 36.4**	**-4.1**
	comp=Z,0.0nm,0.3s,baz=211,slow=12,SNR=2.3						
VOSK	**Vostochnaya**	**17.31**	**1**	Pn	**Pn**	**13 37 50.3**	**-1.8**
	comp=Z,3.6nm,0.8s						
AKTK	**Aktyubinsk**	**17.57**	**333**	P	**Pn**	**13 37 54.0**	**-1.2**
AKTK				S	**S**	**13 40 60.0**	**-11**
AKTO	**Aktyubinsk**	**17.57**	**333**	P	**Pn**	**13 37 54.0**	**-1.2**
	comp=Z,1.2nm,0.3s,baz=131,slow=13,SNR=18						
AKTO				S	**S**	**13 40 60.0**	**-11**
	comp=Z,0.3nm,0.3s,baz=198,slow=20,SNR=4.4						
ZRNK	**Zerenda**	**17.57**	**357**	⇓Pn	**Pn**	**13 37 54.1**	**-1.2**
	comp=Z,8.3nm,1.2s						
BVA0	**Borovoye Array**	**17.61**	**360**	⇑Pn	**Pn**	**13 37 54.9**	**-0.8**
	comp=Z,0.4nm,0.6s,baz=204,slow=33,SNR=10						
BVAR	**Borovoye Array**	**17.61**	**360**	P	**Pn**	**13 37 55.3**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=170,slow=14,SNR=10						
RDF	**Al-Radifah**	**20.51**	**258**	*e*P	**P**	**13 38 28.2**	**+0.8**
RDF				AMb	AMB	13 38 33.7	
	comp=Z,9.3nm,0.9s						
NAY	**Al-Naaiem**	**20.62**	**259**	*e*P	**P**	**13 38 28.9**	**+0.2**
NAY				AMb	AMB	13 38 33.2	
	comp=Z,7.9nm,0.9s						
ZAA0	**Zalesovo Array**	**21.05**	**24**	*e*P	**P**	**13 38 34.0**	**+1.0**
ZALV	**Zalesovo Beam**	**21.05**	**24**	P	**P**	**13 38 32.3**	**-0.7**
	comp=Z,4.8nm,0.4s,mb4.2,baz=218,slow=12,SNR=20						
GTA	**Gaotai**	**23.52**	**72**	*e*P	**P**	**13 39 02.0**	**+3.5**
CMAR	**Chiang Mai Arr**	**30.26**	**116**	P	**P**	**13 40 01.3**	**+2.1**
	comp=Z,0.7nm,0.5s,mb3.6,baz=305,slow=6.5,SNR=3.1						
NOA	**NORSAR Array B**	**45.05**	**324**	P	**P**	**13 42 03.1**	**0.0**
	comp=Z,0.4nm,0.5s,mb3.4,baz=98,slow=7.9,SNR=2.9						
KSRS	**Korea Array**	**45.58**	**70**	P	**P**	**13 42 08.9**	**+1.2**
	comp=Z,1.1nm,0.8s,mb3.6,baz=279,slow=7.2,SNR=5.4						
DBIC	**Dimbokro**	**74.29**	**267**	P	**P**	**13 45 24.3**	**-0.4**
	comp=Z,1.9nm,0.6s,mb4.0,baz=41,slow=9.3,SNR=3.4						
DBIC	**Dimbokro**	**74.29**	**267**	P	**P**	**13 45 24.3**	**-0.4**
INK	**Inuvik**	**75.04**	**9**	P	**P**	**13 45 28.7**	**+0.6**
	comp=Z,1.5nm,0.4s,mb4.0,baz=328,slow=9.5,SNR=5.1						
INK	**Inuvik**	**75.04**	**9**	P	**P**	**13 45 28.7**	**+0.6**
YKA	**Yellowknife Ar**	**82.35**	**2**	P	**P**	**13 46 08.3**	**0.0**
	comp=Z,0.7nm,0.8s,mb3.6,baz=351,slow=5.3,SNR=6.0						
ASAR	**Alice Springs**	**83.92**	**125**	P	**P**	**13 46 17.6**	**+0.7**
	comp=Z,0.7nm,0.8s,mb3.5,baz=309,slow=5.4,SNR=3.2						

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*ISCJB **31** 13:36:36.2±2.3, 15°.05N±0°.05×147°.04E±0°.07, h7km±14km, mb4.7/56, MS3.8/8, Error ellipse: s-maj=12.3km s-min=7.1km az=21.7*
*IDC **31** 13:36:37.7±0.7, 15°.16N×146°.87E, h0km, mb4.3/17, mb1 4.4/18, mb1mx4.4/25, mbtmp4.3/18, ML4.1/1, MS3.8/5, Ms1 3.8/5, ms1mx3.2/26, Error ellipse: s-maj=19.8km s-min=15.1km az=100.0*
*MOS **31** 13:36:40.8±1.1, 15°.11N×146°.90E, h34km, mb4.7/29, Error ellipse: s-maj=13.4km s-min=7.3km az=106.2*
*BJI **31** 13:36:40.4, 15°.40N×147°.11E, h23km, mB4.6/11, mb4.8/22, Ms4.3/5, Ms7 3.9/5*
*NEIC **31** 13:36:41.0±5.0, 15°.08N×146°.92E, h24km±34km, mb4.7/11, Error ellipse: s-maj=16.3km s-min=9.4km az=90.0*
ISC 31 13:36:39.5±2.7, 15°.04N±0°.05×147°.03E±0°.07, h15km±16km, n106, σ0s96/104, mb4.7/56, MS3.8/8, 6C, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.54**	**236**	Pn	**Pn**	**13 37 19.4**	**-0.8**
	44nm,0.3s,baz=119,slow=10,SNR=27						
GUMO				Sn	**Sn**	**13 37 51.1**	**+0.3**
	72nm,0.3s,baz=330,slow=20,SNR=6.9						
GUMO	**Guam**	**2.54**	**236**	P	**Pn**	**13 37 19.4**	**-0.7**
GUMO						13 37 51.1	
GUMO				pmax	pmax		
	comp=Z,44nm,0.3s						
GUMO				smax			
	comp=N,72nm,0.3s						
MJAR	**Matsushiro Arr**	**22.82**	**341**	P	**P**	**13 41 39.8**	**-2.0**
	comp=N,1.7nm,0.6s,mb3.7,baz=166,slow=10,SNR=6.4						
MJAR	**Matsushiro Arr**	**22.82**	**341**	P	**P**	**13 41 39.8**	**-2.0**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MAT	**Matsushiro**	**22.82**	**341**	P	**P**	**13 41 38.9**	**-2.9**
ERM	**Erimo**	**27.09**	**354**	*c i*P	**P**	**13 42 21.3**	**-0.3**
ERM				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.3						
KSRS	**Korea Array**	**28.03**	**326**	P	**P**	**13 42 28.2**	**-1.9**
	comp=Z,3.6nm,0.7s,mb4.1,baz=146,slow=9.2,SNR=19						
KSRS	**Korea Array**	**28.03**	**326**	P	**P**	**13 42 28.2**	**-1.9**
KSRS				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.2						
ASAJ	**Asahikawa**	**29.23**	**353**	P	**P**	**13 42 41.6**	**+1.0**
	comp=Z,7.7nm,0.8s,mb4.5,baz=198,slow=6.9,SNR=7.1						
ASAJ	**Asahikawa**	**29.23**	**353**	P	**P**	**13 42 41.7**	**+1.1**
ASAJ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KAKA	**Kakadu**	**31.12**	**208**	*e*P	**P**	**13 42 57.0**	**-0.7**
	comp=Z,4.9nm,0.6s,mb4.5						
YSS	**Yuzh-Sakhalins**	**32.02**	**354**	*i* P	**P**	**13 43 05.9**	**+0.6**
YSS				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.6						
WHN	**Wuhan**	**33.69**	**303**	P	**P**	**13 43 20.0**	**-0.2**
WHN				S	**S**	**13 48 34.5**	**-8.4**
WHN				LR	LR		
	comp=N,290nm,10.0s						
WHN				LR	LR		
	comp=E,340nm,18.5s						
WHN				LR	LR		
	comp=Z,300nm,21.0s						
CN2	**Changchun**	**34.07**	**332**	*e*P	**P**	**13 43 24.0**	**+0.8**
CN2				*e*S	**S**	**13 48 47.5**	**-0.8**
CN2				LR	LR		
	comp=N,200nm,14.0s,MS4.2						
CN2				LR	LR		
	comp=E,200nm,14.0s,MS4.2						
CN2				LR	LR		
	comp=Z,200nm,19.0s,MS3.9						
WRAB	**Tennant Creek**	**36.92**	**200**	*e*P	**P**	**13 43 47.4**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
WRAB	**Tennant Creek**	**36.92**	**200**	*e*P	**P**	**13 43 47.4**	**-0.5**
	comp=Z,20nm,0.9s,mb4.9						
ENH	**Enshi**	**37.62**	**300**	*e*P	**P**	**13 43 54.5**	**+0.6**
	comp=Z,9.5nm,0.3s,mb5.0						
PETK	**Petropavlovsk-**	**38.91**	**10**	P	**P**	**13 44 05.5**	**+1.1**
	comp=Z,1.8nm,1.0s,mb3.8,baz=170,slow=5.6,SNR=2.9						
PETK	**Petropavlovsk-**	**38.91**	**10**	P	**P**	**13 44 05.5**	**+1.1**
PETK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.8						
PET	**Petropavlovsk**	**39.00**	**11**	*e*P	**P**	**13 44 03.4**	**-1.8**
FITZ	**Fitzroy Crossi**	**39.10**	**213**	*e*P	**P**	**13 44 06.1**	**-0.3**
	comp=Z,8.0nm,0.9s,mb4.5						
FITZ	**Fitzroy Crossi**	**39.10**	**213**	*e*P	**P**	**13 44 06.1**	**-0.3**
	comp=Z,6.4nm,1.0s,mb4.3						
XAN	**Xi'an**	**39.20**	**306**	P	**P**	**13 44 07.5**	**+0.4**
XAN				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.8						
XAN				pmax	pmax		
	comp=Z,12nm,8.9s						
ASAR	**Alice Springs**	**40.55**	**199**	P	**P**	**13 44 18.1**	**-0.2**
	comp=Z,3.0nm,0.7s,mb4.0,baz=28,slow=8.0,SNR=40						
ASAR	**Alice Springs**	**40.55**	**199**	P	**P**	**13 44 18.2**	**-0.1**
ASAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
LZH	**Lanzhou**	**43.79**	**307**	*e*P	**P**	**13 44 46.5**	**+1.7**
LZH				pP	pP	13 44 57.5	+8.0
LZH				sP	sP	13 45 01.0	+10
LZH				pmax	pmax		
	comp=Z,51nm,1.0s,mb5.2						
LZH				pmax	pmax		
	comp=Z,220nm,4.3s						
MBWA	**Marble Bar**	**44.85**	**217**	*e*P	**P**	**13 44 53.5**	**+0.1**
MBWA	**Marble Bar**	**44.85**	**217**	*e*P	**P**	**13 44 52.9**	**-0.5**
CMAR	**Chiang Mai Arr**	**46.07**	**281**	P	**P**	**13 45 03.5**	**+0.3**
	comp=Z,4.2nm,0.9s,mb4.4,baz=79,slow=5.9,SNR=21						
CMAR				LR	LR	14 05 05.5	
	comp=Z,73nm,19.2s,MS3.6,baz=254,slow=37						
CMAR	**Chiang Mai Arr**	**46.07**	**281**	P	**P**	**13 45 03.5**	**+0.3**
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CMAR				MLR	MLR		
	comp=Z,73nm,19.2s						
ULN	**Ulaanbaatar**	**46.43**	**323**	*e*P	**P**	**13 45 05.9**	**+0.3**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
ULN	**Ulaanbaatar**	**46.43**	**323**	*e*P	**P**	**13 45 05.8**	**+0.3**
	comp=Z,3.0nm,0.8s,mb4.3						
SONM	**Songino Array**	**46.80**	**323**	P	**P**	**13 45 08.5**	**0.0**
	comp=Z,2.5nm,0.7s,mb4.2,baz=130,slow=11,SNR=13						
SONM				LR	LR	14 05 56.4	
	comp=Z,64nm,18.5s,MS3.6,baz=186,slow=38						
SONM	**Songino Array**	**46.80**	**323**	P	**P**	**13 45 08.5**	**0.0**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SONM				MLR	MLR		
	comp=Z,65nm,18.5s						
STKA	**Stephens Creek**	**46.93**	**186**	P	**P**	**13 45 12.8**	**+3.2**
	comp=Z,2.6nm,0.8s,mb4.2,baz=8.1,slow=7.1,SNR=2.1						
STKA	**Stephens Creek**	**46.93**	**186**	P	**P**	**13 45 12.8**	**+3.2**
STKA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
STKA	**Stephens Creek**	**46.93**	**186**	P	**P**	**13 45 12.8**	**+3.2**
GTA	**Gaotai**	**47.82**	**310**	*e*P	**P**	**13 45 17.5**	**+1.0**
GTA				pP	pP	13 45 21.5	+0.2
GTA				sP	sP	13 45 25.3	+2.2
GTA				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.7						
SEY	**Seymchan**	**47.98**	**3**	⇑*e*P	**P**	**13 45 19.5**	**+2.1**
YAK	**Yakutsk**	**48.53**	**349**	*i* P	**P**	**13 45 21.7**	**0.0**
YAK				pmax	pmax		
	comp=Z,13nm,0.6s,mb5.1						
BBOO	**Buckleboo**	**48.72**	**192**	*e*P	**P**	**13 45 22.3**	**-1.1**
	comp=Z,18nm,0.6s,mb5.3						
ZAK	**Zakamensk**	**49.84**	**325**	*e*P	**P**	**13 45 31.7**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.2						
TLY	**Talaya**	**50.29**	**326**	*i* P	**P**	**13 45 35.3**	**+0.1**
TLY				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.7						
ARPS	**Mount Arapiles**	**51.76**	**185**	*e*P	**P**	**13 45 47.1**	**+0.7**
	comp=Z,30nm,0.7s,mb5.3						
TOO	**Toolangi**	**52.34**	**182**	*e*P	**P**	**13 45 50.8**	**0.0**
LSA	**Lhasa**	**53.23**	**296**	P	**P**	**13 45 59.3**	**+1.7**
LSA	**Lhasa**	**53.23**	**296**	*e*P	**P**	**13 45 59.6**	**+2.0**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
LSA	**Lhasa**	**53.23**	**296**	*e*P	**P**	**13 45 59.6**	**+2.0**
	comp=Z,7.0nm,0.6s,mb4.8						
BILL	**Bilibino**	**54.41**	**9**	*e*P	**P**	**13 46 07.4**	**+1.8**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.4						
BILL				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.0						
TAPN	**Taplejung**	**56.20**	**293**	*e*P	**P**	**13 46 19.5**	**+0.3**
	comp=Z,39nm,0.9s,mb5.5						
ODAN	**Odare**	**56.48**	**292**	*e*P	**P**	**13 46 21.7**	**+0.4**
	comp=Z,55nm,1.0s,mb5.5						
TIXI	**Tiksi**	**57.63**	**353**	*e*P	**P**	**13 46 27.3**	**-1.3**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.4						
WMQ	**Urumqi**	**57.68**	**313**	*e*P	**P**	**13 46 30.5**	**+1.1**
WMQ				pmax	pmax		
	comp=Z,17nm,1.2s,mb5.0						
WMQ				pmax	pmax		
	comp=Z,98nm,5.4s						
WMQ				LR	LR		
	comp=N,64nm,21.6s						
WMQ				LR	LR		
	comp=Z,50nm,18.0s,MS3.7						
GUN	**Gumba**	**57.81**	**294**	*e*P	**P**	**13 46 31.3**	**+0.7**
	comp=Z,38nm,0.8s,mb5.5						
PKI	**Pulchoki**	**58.24**	**293**	*e*P	**P**	**13 46 33.9**	**+0.3**
PKIN	**Phulchoki**	**58.25**	**293**	*e*P	**P**	**13 46 33.9**	**+0.2**
	comp=Z,13nm,0.7s,mb5.0						
KKN	**Kakani**	**58.35**	**294**	*e*P	**P**	**13 46 34.4**	**0.0**
	comp=Z,27nm,1.0s,mb5.2						
DMN	**Daman**	**58.50**	**293**	*e*P	**P**	**13 46 35.9**	**+0.4**
	comp=Z,69nm,1.2s,mb5.6						
GKN	**Gorkha**	**58.91**	**294**	*e*P	**P**	**13 46 38.4**	**+0.1**
	comp=Z,42nm,0.8s,mb5.5						
KOLN	**Koldanda**	**59.84**	**294**	*e*P	**P**	**13 46 44.9**	**+0.2**
	comp=Z,16nm,0.8s,mb5.1						
ZAA0	**Zalesovo Array**	**61.69**	**324**	*e*P	**P**	**13 46 56.0**	**-0.8**
ZALV	**Zalesovo Beam**	**61.69**	**324**	P	**P**	**13 46 55.9**	**-0.9**
	comp=Z,2.7nm,0.7s,mb4.5,baz=100,slow=6.5,SNR=11						
ZALV	**Zalesovo Beam**	**61.69**	**324**	P	**P**	**13 46 55.9**	**-0.9**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.5						
MK31	**Makanchi Array**	**61.92**	**315**	*e*P	**P**	**13 46 59.0**	**+0.4**
MKAR	**Makanchi Array**	**61.92**	**315**	P	**P**	**13 46 58.9**	**+0.4**
	comp=Z,4.9nm,0.5s,mb4.9,baz=92,slow=8.5,SNR=51						
MKAR				S	**S**	**13 55 22.1**	**0.0**
	comp=Z,0.5nm,0.9s,baz=96,slow=15,SNR=3.8						
MKAR				LR	LR	14 12 07.8	
	comp=Z,27nm,18.2s,MS3.5,baz=9.0,slow=34						
MKAR	**Makanchi Array**	**61.92**	**315**	P	**P**	**13 46 58.9**	**+0.3**
MKAR				S	**S**	**13 55 22.1**	**0.0**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
MKAR				smax			
	comp=N,1.0nm,0.9s						
MKAR	**Makanchi Array**	**61.92**	**315**	P	**P**	**13 46 58.9**	**+0.3**
MKAR				S	**S**	**13 55 22.1**	**0.0**
MKAR				LR	LR	14 12 07.8	
NVS	**Novosibirsk**	**62.80**	**324**	*i* P	**P**	**13 47 03.9**	**-0.4**
KURK	**Kurchatov**	**64.84**	**319**	P	**P**	**13 47 17.6**	**-0.3**
	comp=N,18nm,0.6s,mb5.3,baz=98,slow=6.7,SNR=29						
KURK	**Kurchatov**	**64.84**	**319**	P	**P**	**13 47 17.6**	**-0.2**
KURK				pmax	pmax		
	comp=Z,19nm,0.6s,mb5.3						
KURK	**Kurchatov**	**64.84**	**319**	*e*P	**P**	**13 47 17.2**	**-0.6**
TKM2	**Tokmak 2**	**66.36**	**311**	*e*P	**P**	**13 47 28.3**	**+0.5**
TKM2				pmax	pmax

	comp=Z,8.0nm,0.7s						
KIC	**Kosan Boka**	**144.86**	**305**	*e*PKP2	PKPdf	13 56 15.9	-1.1
	comp=Z,14nm,0.6s						
TIC	**Toumodi**	**144.90**	**306**	*e*PKP2	PKPdf	13 56 16.0	-1.1
	comp=Z,30nm,1.0s						
LIC	**Lamto**	**145.16**	**305**	*e*PKP2	PKPab	13 56 16.9	-0.2
	comp=Z,44nm,0.7s						
LPAZ	**La Paz**	**146.15**	**97**	PKPbc	PKPbc	13 56 22.9	+2.8
	comp=Z,1.0nm,0.6s,baz=341,slow=1.7,SNR=3.8						

MAN 31 14:00:48, 10°.02N×125°.94E, h19km, mb4.4, ML3.2, MS3.1, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.50**	**242**	*e*P	Pg	14 00 59.0	+0.8
SCPH				*e*S	Sg	14 01 08.2	+3.2
BUTP	**Butuan**	**1.09**	**197**	*e*P	Pb	14 01 06.1	-2.2
BUTP				*e*S	Sb	14 01 23.9	+1.8
OCLP	**Ormoc**	**1.67**	**308**	*e*P	Pn	14 01 18.8	+2.6
OCLP				*e*S	Sn	14 01 36.4	-0.6
TBP	**Tagbilaran**	**2.08**	**261**	*e*P	Pn	14 01 22.9	+1.0
TBP				*e*S	Sn	14 01 48.1	+0.9
BUKP	**Musuan**	**2.30**	**202**	*e*P	Pn	14 01 25.5	+0.6
CNP	**Cataman**	**2.78**	**333**	*e*P	Pn	14 01 32.7	+1.2
PVCP	**Virac**	**3.96**	**334**	*e*P	Pn	14 01 48.9	+1.1

*IDC **31** 14:02:53.5±2.9, 55°.50N×85°.15E, h0km, mb1 3.1/3, mb1mx2.9/26, mbtmp3.1/3, ML3.0/3, Error ellipse: s-maj=26.3km s-min=18.3km az=54.0*

ISC 31 14:02:53.4±2.5, 55°.5N±0°.1×85°.4E±0°.3, h10km, n6, σ1s27/9, 3C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.54**	**192**	Pg	**Pg**	**14 03 20.2**	**-2.7**
	3.0nm,0.3s,baz=4.2,slow=17,SNR=23						
ZALV				Lg		14 03 44.5	
	4.4nm,0.3s,baz=4.3,slow=28,SNR=4.6						
KURK	**Kurchatov**	**6.25**	**223**	⇑Pn	**Pn**	**14 04 25.5**	**0.0**
	1.1nm,0.6s						
KURK				⇓Sn	**Sn**	**14 05 37.6**	**+0.7**
	0.8nm,0.8s						
KURK				⇑Lg		14 06 10.8	
	1.5nm,0.6s						
KURK	**Kurchatov**	**6.25**	**223**	Pn	**Pn**	**14 04 26.7**	**+1.2**
	0.2nm,0.3s,baz=41,slow=14,SNR=12						
KURK				Sn	**Sn**	**14 05 38.7**	**+1.9**
	0.0nm,0.3s,baz=57,slow=19,SNR=2.5						
KURK				Lg		14 06 14.1	
	0.0nm,0.3s,baz=28,slow=28,SNR=2.8						
KURBB	**Kurchatov Arra**	**6.35**	**223**	⇑Pn	**Pn**	**14 04 26.4**	**-0.6**
	0.2nm,0.5s,baz=40,slow=14						
KURBB				⇓Sn	**Sn**	**14 05 38.7**	**-0.8**
	0.2nm,0.6s						
KURBB				⇓Lg		14 06 13.4	
	0.5nm,0.7s,baz=49,slow=34						
MKAR	**Makanchi Array**	**8.88**	**194**	Pn	**Pn**	**14 05 03.2**	**+1.6**
	0.1nm,0.3s,baz=18,slow=13,SNR=2.9						
BVAR	**Borovoye Array**	**9.10**	**261**	Pn	**Pn**	**14 05 04.1**	**-0.5**
	0.3nm,0.3s,baz=61,slow=15,SNR=3.3						

*DDA **31** 14:05:33.5, 38°.86N×25°.93E, h5km, Md2.8*
*ISCJB **31** 14:05:35.9±0.6, 38°.87N±0°.03×26°.10E±0°.07, h6km±11km, Error ellipse: s-maj=8.6km s-min=4.6km az=174.5*
*CSEM **31** 14:05:35.8±0.2, 38°.86N×26°.12E, h12km, ML3.0/4, Error ellipse: s-maj=6.9km s-min=4.0km az=80.0*
*THE **31** 14:05:36.2, 38°.88N×26°.06E, h5km, ML3.0/4, Error ellipse: s-maj=1.1km s-min=0.3km az=92.0*

ISC 31 14:05:36.2±0.6, 38°.87N±0°.03×26°.10E±0°.07, h13km±10km, n12, σ0s74/24, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.39**	**331**	P	**Pg**	**14 05 43.5**	**-0.5**
SIGR				S	**Sg**	**14 05 49.1**	**-0.1**
SIGR	**SIGRI**	**0.39**	**331**	P	**Pg**	**14 05 43.5**	**-0.5**
SIGR				S	**Sg**	**14 05 49.1**	**-0.1**
PRK	**Paraskevi**	**0.40**	**20**	P	**Pg**	**14 05 44.0**	**-0.1**
PRK				S	**Sg**	**14 05 50.0**	**+0.6**
PRK	**Paraskevi**	**0.40**	**20**	P	**Pg**	**14 05 44.0**	**-0.1**
PRK				S	**Sg**	**14 05 50.0**	**+0.6**
CHOS	**Chios island**	**0.49**	**184**	P	**Pg**	**14 05 45.6**	**-0.2**
CHOS				S	**Sg**	**14 05 53.1**	**+0.9**
CHOS	**Chios island**	**0.49**	**184**	P	**Pg**	**14 05 45.6**	**-0.2**
CHOS				S	**Sg**	**14 05 53.1**	**+0.9**
AYVA	**Ayvalik**	**0.63**	**46**	*i* P	**Pg**	**14 05 47.7**	**-0.8**
AYVA				*i* S	**Sg**	**14 05 57.5**	**+0.6**
AYVA	**Ayvalik**	**0.63**	**46**	*i* P	**Pg**	**14 05 47.7**	**-0.8**
AYVA				*i* S	**Sg**	**14 05 57.5**	**+0.6**
URLA	**Izmir**	**0.64**	**143**	*i* P	**Pg**	**14 05 47.0**	**-1.7**
URLA				*i* S	**Sg**	**14 05 58.0**	**+0.8**
URLA	**Izmir**	**0.64**	**143**	*i* P	**Pg**	**14 05 47.0**	**-1.7**
URLA				*i* S	**Sg**	**14 05 58.0**	**+0.8**
LIA	**Limnos Island**	**1.25**	**326**	P	**Pn**	**14 05 58.9**	**-0.5**
LIA				S	**Sb**	**14 06 16.4**	**+0.8**
LIA	**Limnos Island**	**1.25**	**326**	P	**Pn**	**14 05 58.9**	**-0.5**
LIA				S	**Sb**	**14 06 16.4**	**+0.8**

*ISCJB **31** 14:32:51.9±0.4, 37°.93N±0°.02×21°.82E±0°.03, h9km±3km, Error ellipse: s-maj=3.7km s-min=3.2km az=158.0*
*CSEM **31** 14:32:51.9±0.2, 37°.93N×21°.81E, h19km, ML2.8, Error ellipse: s-maj=3.5km s-min=3.0km az=60.0*
*THE **31** 14:32:51.9, 37°.92N×21°.82E, h11km±1km, ML3.5/6, Error ellipse: s-maj=1.2km s-min=0.4km az=53.0*
*ATH **31** 14:32:52.1, 37°.95N×21°.84E, h19km±2km, ML2.8*
*NEIC **31** 14:32:52.1, 37°.95N×21°.84E, h19km, ML2.8(ATH), After ATH.*

ISC 31 14:32:52.4±0.4, 37°.94N±0°.02×21°.82E±0°.03, h12km±3km, n71, σ0s95/108, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.31**	**293**	*e*Pb	**Pg**	**14 32 58.9**	**+0.2**
RLS				*e*Sb	**Sg**	**14 33 04.6**	**+1.7**
RLS	**Riolos of Patr**	**0.31**	**293**	*e*PB	**Pg**	**14 32 58.9**	**+0.2**
RLS				*e*SB	**Sg**	**14 33 04.6**	**+1.7**
RLS	**Riolos of Patr**	**0.31**	**293**	*e*Pb	**Pg**	**14 32 58.9**	**+0.2**
RLS				*e*Sb	**Sg**	**14 33 04.6**	**+1.7**
LAKA	**Lakka**	**0.33**	**22**	P	**Pg**	**14 32 58.7**	**-0.4**
LAKA				S	**Sg**	**14 33 04.2**	**+0.7**
LAKA	**Lakka**	**0.33**	**22**	P	**Pg**	**14 32 58.7**	**-0.4**
LAKA				S	**Sg**	**14 33 04.2**	**+0.7**
UPR	**University Cam**	**0.35**	**355**	*e*PB	**Pg**	**14 32 59.5**	**+0.1**
UPR				*e*SB	**Sg**	**14 33 05.2**	**+1.0**
UPR	**University Cam**	**0.35**	**355**	P	**Pg**	**14 32 59.3**	**-0.1**
UPR				S	**Sg**	**14 33 05.0**	**+0.8**
UPR	**University Cam**	**0.35**	**355**	*e*Pb	**Pg**	**14 32 59.5**	**+0.1**
UPR				S	**Sg**	**14 33 05.0**	**+0.8**
GUR	**Goura**	**0.41**	**90**	*e*PB	**Pg**	**14 32 59.9**	**-0.7**
GUR				*e*SB	**Sg**	**14 33 06.4**	**+0.3**
GUR	**Goura**	**0.41**	**90**	P	**Pg**	**14 32 59.8**	**-0.8**
GUR				S	**Sg**	**14 33 06.2**	**+0.1**
GUR	**Goura**	**0.41**	**90**	*e*Pb	**Pg**	**14 32 59.9**	**-0.7**
GUR				S	**Sg**	**14 33 06.2**	**+0.1**
TRIZ	**Trizonia**	**0.47**	**25**	P	**Pg**	**14 33 01.1**	**-0.6**
TRIZ				S	**Sg**	**14 33 08.5**	**+0.5**
TRIZ	**Trizonia**	**0.47**	**25**	P	**Pg**	**14 33 01.1**	**-0.6**
TRIZ				S	**Sg**	**14 33 08.5**	**+0.5**
EFP	**Efpalio**	**0.49**	**8**	*e*PB	**Pg**	**14 33 01.7**	**-0.4**
EFP				*e*SB	**Sg**	**14 33 09.4**	**+0.7**
EFP	**Efpalio**	**0.49**	**8**	P	**Pg**	**14 33 01.6**	**-0.5**
EFP				S	**Sg**	**14 33 09.1**	**+0.4**
EFP	**Efpalio**	**0.49**	**8**	*e*Pb	**Pg**	**14 33 01.7**	**-0.4**
EFP				S	**Sg**	**14 33 09.1**	**+0.4**
EFP				*e*Sb	**Sg**	**14 33 09.4**	**+0.7**
KALE	**Kalithea**	**0.52**	**29**	P	**Pg**	**14 33 01.7**	**-0.9**
KALE				S	**Sg**	**14 33 10.0**	**+0.5**
KALE	**Kalithea**	**0.52**	**29**	P	**Pg**	**14 33 01.7**	**-0.9**
KALE				S	**Sg**	**14 33 10.0**	**+0.5**
VLX	**Vlachokerasia**	**0.72**	**142**	*e*PN	**Pg**	**14 33 05.8**	**-0.5**
VLX				*e*SN	**Sg**	**14 33 16.4**	**+0.6**
VLX	**Vlachokerasia**	**0.72**	**142**	P	**Pg**	**14 33 05.2**	**-1.1**
VLX				S	**Sg**	**14 33 16.0**	**+0.2**
VLX	**Vlachokerasia**	**0.72**	**142**	P	**Pg**	**14 33 05.8**	**-0.5**
VLX				S	**Sg**	**14 33 16.0**	**+0.2**
VLX				*e*Sn	**Sg**	**14 33 16.4**	**+0.6**
DSF	**Desfina**	**0.73**	**49**	P	**Pg**	**14 33 05.7**	**-0.9**
DSF				S	**Sg**	**14 33 17.0**	**+0.8**
DSF	**Desfina**	**0.73**	**49**	P	**Pg**	**14 33 05.7**	**-0.9**
DSF				S	**Sg**	**14 33 17.0**	**+0.8**
KFL	**Anninata**	**0.84**	**282**	P	**Pg**	**14 33 07.6**	**-1.0**
KFL	**Anninata**	**0.84**	**282**	P	**Pg**	**14 33 07.6**	**-1.0**
LTK	**Loutraki**	**0.91**	**84**	*e*PN	**Pg**	**14 33 09.0**	**-1.0**
LTK				*e*SN	**Sg**	**14 33 21.7**	**-0.1**
LTK	**Loutraki**	**0.91**	**84**	P	**Pg**	**14 33 08.8**	**-1.2**
LTK				S	**Sg**	**14 33 22.5**	**+0.7**
LTK	**Loutraki**	**0.91**	**84**	*e*Pn	**Pg**	**14 33 09.0**	**-1.0**
LTK				*e*Sn	**Sg**	**14 33 21.7**	**-0.1**
LTK				S	**Sg**	**14 33 22.5**	**+0.7**
EVR	**Evrytania**	**0.98**	**359**	*e*Pn	**Pg**	**14 33 10.3**	**-1.0**
EVR	**Evrytania**	**0.98**	**359**	*e*PN	**Pg**	**14 33 10.3**	**-1.0**
EVR	**Evrytania**	**0.98**	**359**	*e*Pn	**Pg**	**14 33 10.3**	**-1.0**
VLS	**Valsamata**	**1.00**	**284**	*e*Pb	**Pg**	**14 33 10.1**	**-1.7**
VLS	**Valsamata**	**1.00**	**284**	*e*PB	**Pg**	**14 33 10.1**	**-1.7**
VLS	**Valsamata**	**1.00**	**284**	P	**Pg**	**14 33 10.1**	**-1.7**
VLS				S	**Sg**	**14 33 25.5**	**+0.6**
VLS	**Valsamata**	**1.00**	**284**	P	**Pg**	**14 33 10.1**	**-1.7**
VLS				S	**Sg**	**14 33 25.5**	**+0.6**
PYL	**PYLOS**	**1.04**	**184**	*e*PB	**Pg**	**14 33 11.5**	**-1.0**
PYL				*e*SN	**Sg**	**14 33 27.4**	**+1.3**
PYL	**PYLOS**	**1.04**	**184**	P	**Pg**	**14 33 11.1**	**-1.4**
PYL	**PYLOS**	**1.04**	**184**	P	**Pg**	**14 33 11.1**	**-1.4**
PYL	**PYLOS**	**1.04**	**184**	*e*Pb	**Pg**	**14 33 11.5**	**-1.0**
AGG	**Agios Georgios**	**1.15**	**20**	*e*Pn	**Pn**	**14 33 13.9**	**-0.4**
AGG				*e*Sn	**Sn**	**14 33 29.9**	**-0.1**
AGG	**Agios Georgios**	**1.15**	**20**	*e*PN	**Pn**	**14 33 13.9**	**-0.4**
AGG				*e*SN	**Sn**	**14 33 29.9**	**-0.1**
AGG	**Agios Georgios**	**1.15**	**20**	P	**Pb**	**14 33 12.9**	**-1.4**
AGG	**Agios Georgios**	**1.15**	**20**	P	**Pb**	**14 33 12.9**	**-1.4**
AGG	**Agios Georgios**	**1.15**	**20**	*e*Pn	**Pn**	**14 33 13.9**	**-0.4**
AGG				*e*Sn	**Sn**	**14 33 29.9**	**-0.1**
LKR	**Lokris**	**1.17**	**52**	*e*Pn	**Pn**	**14 33 14.4**	**-0.1**
LKR	**Lokris**	**1.17**	**52**	*e*PN	**Pn**	**14 33 14.4**	**-0.1**
LKR	**Lokris**	**1.17**	**52**	P	**Pb**	**14 33 13.9**	**-0.6**
LKR	**Lokris**	**1.17**	**52**	P	**Pb**	**14 33 13.9**	**-0.6**
LKR	**Lokris**	**1.17**	**52**	*e*Pn	**Pn**	**14 33 14.4**	**-0.1**
DID	**Didima**	**1.20**	**111**	*e*PN	**Pn**	**14 33 14.5**	**-0.5**
DID				*e*SN	**Sn**	**14 33 30.5**	**-0.6**
DID	**Didima**	**1.20**	**111**	P	**Pn**	**14 33 14.1**	**-0.9**
DID	**Didima**	**1.20**	**111**	P	**Pn**	**14 33 14.1**	**-0.9**
DID	**Didima**	**1.20**	**111**	*e*Pn	**Pn**	**14 33 14.5**	**-0.5**
DID				*e*Sn	**Sn**	**14 33 30.5**	**-0.6**
LKD2	**Lefkada island**	**1.25**	**313**	P	**Pn**	**14 33 14.4**	**-1.3**
LKD2	**Lefkada island**	**1.25**	**313**	P	**Pn**	**14 33 14.4**	**-1.3**
NAIG	**Nisos Aigina**	**1.33**	**97**	*e*Pn	**Pn**	**14 33 16.8**	**0.0**
NAIG	**Nisos Aigina**	**1.33**	**97**	*e*PN	**Pn**	**14 33 16.8**	**0.0**
NAIG	**Nisos Aigina**	**1.33**	**97**	*e*Pn	**Pn**	**14 33 16.8**	**0.0**
ATH	**Athens Observa**	**1.50**	**88**	*e*Pn	**Pn**	**14 33 20.0**	**+1.0**
ATH	**Athens Observa**	**1.50**	**88**	*e*PN	**Pn**	**14 33 20.0**	**+1.0**
VLI	**Veliai**	**1.51**	**144**	*e*Pn	**Pn**	**14 33 20.6**	**+1.4**
VLI	**Veliai**	**1.51**	**144**	*e*PN	**Pn**	**14 33 20.6**	**+1.4**
VLY	**Voula,Athens**	**1.56**	**93**	*e*Pn	**Pn**	**14 33 20.4**	**+0.5**
VLY	**Voula,Athens**	**1.56**	**93**	*e*PN	**Pn**	**14 33 20.4**	**+0.5**
VLY	**Voula,Athens**	**1.56**	**93**	*e*Pn	**Pn**	**14 33 20.4**	**+0.5**
THL	**Klokotos Trika**	**1.63**	**5**	*e*PN	**Pn**	**14 33 22.1**	**+1.2**
NEO	**Neokhori**	**1.75**	**38**	P	**Pn**	**14 33 24.8**	**+2.2**
NEO	**Neokhori**	**1.75**	**38**	P	**Pn**	**14 33 24.8**	**+2.2**
KYTH	**Kithira**	**1.92**	**149**	*e*Pn	**Pn**	**14 33 27.8**	**+3.0**
KYTH	**Kithira**	**1.92**	**149**	*e*PN	**Pn**	**14 33 27.8**	**+3.0**

*IDC **31** 14:46:53.4±1.4, 3°.04N×126°.15E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.5/19, mbtmp3.7/4, MS3.6/2, Ms1 3.5/2, ms1mx3.0/23, Error ellipse: s-maj=199.7km s-min=20.8km az=68.0*
*DJA **31** 14:47:01, 3°.09N×126°.28E, h55km, MLv4.5/3*

NEIC 31 14:46:58.3±0.8, 2°.96N×125°.99E, h35km, mb4.4/3, Error ellipse: s-maj=131.0km s-min=10.3km az=67.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**16.84**	**158**	*e*P	Pn	14 50 51.1	-0.3
	26nm,0.6s						
WRAB	**Tennant Creek**	**24.19**	**160**	*e*P	P	14 52 11.1	-0.5
	10nm,0.9s						
ASAR	**Alice Springs**	**27.57**	**164**	P	P	14 52 42.2	+0.1
	0.7nm,0.3s,baz=347,slow=12,SNR=36						
MJAR	**Matsushiro Arr**	**35.27**	**17**	LR	LR	15 05 27.5	
	comp=Z,39nm,21.7s,baz=105,slow=32						
STKA	**Stephens Creek**	**37.69**	**158**	P	P	14 54 10.9	+0.5
	1.1nm,0.3s,baz=337,slow=10,SNR=6.6						
SONM	**Songino Array**	**47.79**	**342**	P	P	14 55 32.4	+0.2
	0.3nm,0.6s,baz=152,slow=8.4,SNR=2.5						
MKAR	**Makanchi Array**	**57.77**	**326**	P	P	14 56 46.5	+0.7
	0.4nm,0.4s,baz=120,slow=8.7,SNR=7.8						
KURK	**Kurchatov**	**61.99**	**328**	*e*P	P	14 57 14.3	-0.6
	1.0nm,0.5s						
MAW	**Mawson**	**82.78**	**200**	LR	LR	15 34 51.5	
	comp=Z,67nm,18.1s,baz=250,slow=35						

*ISCJB **31** 14:59:18.8±0.3, 38°.10N±0°.02×21°.69E±0°.02, h10km, Error ellipse: s-maj=2.6km s-min=2.5km az=167.1*
*CSEM **31** 14:59:18.8±0.1, 38°.11N×21°.70E, h2km, ML3.6/6, Error ellipse: s-maj=2.1km s-min=2.0km az=8.0*
*ATH **31** 14:59:19.1, 38°.11N×21°.69E, h11km±1km, ML3.1*
*THE **31** 14:59:19.0, 38°.12N×21°.71E, h10km, ML3.6/6, Error ellipse: s-maj=0.8km s-min=0.4km az=62.0*
*NEIC **31** 14:59:19.1, 38°.11N×21°.69E, h11km, ML3.1(ATH), After ATH.*

ISC 31 14:59:19.3±0.3, 38°.11N±0°.02×21°.70E±0°.02, h3km±5km, n89, σ0s77/138, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.19**	**20**	*e*PG	**Pg**	**14 59 22.9**	**-0.1**
UPR				*e*SG	**Sg**	**14 59 26.2**	**+0.7**
UPR	**University Cam**	**0.19**	**20**	*e*PG	**Pg**	**14 59 22.9**	**-0.1**
UPR	**University Cam**	**0.19**	**20**	P	**Pg**	**14 59 22.7**	**-0.3**
UPR				S	**Sg**	**14 59 26.0**	**+0.5**
UPR	**University Cam**	**0.19**	**20**	*e*Pg	**Pg**	**14 59 22.9**	**-0.1**
UPR				S	**Sg**	**14 59 26.0**	**+0.5**
RLS	**Riolos of Patr**	**0.19**	**256**	*e*Pg	**Pg**	**14 59 22.9**	**-0.1**
RLS				*e*Sg	**Sg**	**14 59 26.4**	**+0.9**
RLS	**Riolos of Patr**	**0.19**	**256**	*e*PG	**Pg**	**14 59 22.9**	**-0.1**
RLS				*e*SG	**Sg**	**14 59 26.4**	**+0.9**
RLS	**Riolos of Patr**	**0.19**	**256**	*e*Pg	**Pg**	**14 59 22.9**	**-0.1**
RLS				*e*Sg	**Sg**	**14 59 26.4**	**+0.9**
LAKA	**Lakka**	**0.26**	**58**	P	**Pg**	**14 59 24.0**	**-0.2**
LAKA				S	**Sg**	**14 59 27.6**	**0.0**
LAKA	**Lakka**	**0.26**	**58**	P	**Pg**	**14 59 24.0**	**-0.2**
LAKA				S	**Sg**	**14 59 27.6**	**0.0**
EFP	**Efpalio**	**0.36**	**26**	*e*PG	**Pg**	**14 59 25.8**	**-0.4**
EFP				*e*SB	**Sg**	**14 59 31.4**	**+0.5**
EFP	**Efpalio**	**0.36**	**26**	P	**Pg**	**14 59 25.6**	**-0.6**
EFP				S	**Sg**	**14 59 30.8**	**-0.1**
EFP	**Efpalio**	**0.36**	**26**	*e*Pg	**Pg**	**14 59 25.8**	**-0.4**
EFP				S	**Sg**	**14 59 30.8**	**-0.1**
EFP				*e*Sb	**Sg**	**14 59 31.4**	**+0.5**
TRIZ	**Trizonia**	**0.39**	**48**	P	**Pg**	**14 59 26.3**	**-0.5**
TRIZ				S	**Sg**	**14 59 32.2**	**+0.3**
TRIZ	**Trizonia**	**0.39**	**48**	P	**Pg**	**14 59 26.3**	**-0.5**
TRIZ				S	**Sg**	**14 59 32.2**	**+0.3**
KALE	**Kalithea**	**0.45**	**50**	P	**Pg**	**14 59 27.3**	**-0.6**
KALE				S	**Sg**	**14 59 34.1**	**+0.4**
KALE	**Kalithea**	**0.45**	**50**	P	**Pg**	**14 59 27.3**	**-0.6**
KALE				S	**Sg**	**14 59 34.1**	**+0.4**
GUR	**Goura**	**0.53**	**108**	*e*PB	**Pg**	**14 59 29.0**	**-0.5**
GUR	**Goura**	**0.53**	**108**	*e*PB	**Pg**	**14 59 29.0**	**-0.5**
GUR				*e*SB	**Sg**	**14 59 37.8**	**+1.4**
GUR	**Goura**	**0.53**	**108**	P	**Pg**	**14 59 28.9**	**-0.6**
GUR				S	**Sg**	**14 59 37.0**	**+0.6**
GUR	**Goura**	**0.53**	**108**	*e*Pb	**Pg**	**14 59 29.0**	**-0.5**
GUR				S	**Sg**	**14 59 37.0**	**+0.6**
GUR				*e*Sb	**Sg**	**14 59 37.8**	**+1.4**
DSF	**Desfina**	**0.72**	**65**	P	**Pg**	**14 59 32.1**	**-0.9**
DSF	**Desfina**	**0.72**	**65**	P	**Pg**	**14 59 32.1**	**-0.9**
KFL	**Anninata**	**0.72**	**271**	P	**Pg**	**14 59 33.2**	**+0.1**
KFL	**Anninata**	**0.72**	**271**	P	**Pg**	**14 59 33.2**	**+0.1**
EVR	**Evrytania**	**0.81**	**6**	*e*Pb	**Pg**	**14 59 35.0**	**+0.1**
EVR				*e*Sb	**Sg**	**14 59 46.8**	**+1.3**
EVR	**Evrytania**	**0.81**	**6**	*e*PB	**Pg**	**14 59 35.0**	**+0.1**
EVR				*e*SB	**Sg**	**14 59 45.8**	**+0.3**
EVR	**Evrytania**	**0.81**	**6**	*e*Pb	**Pg**	**14 59 35.0**	**+0.1**
EVR				*e*Sb	**Sg**	**14 59 46.8**	**+1.3**
VLS	**Valsamata**	**0.88**	**275**	*e*Pg	**Pg**	**14 59 35.5**	**-0.7**
VLS				*e*Sb	**Sg**	**14 59 49.1**	**+1.5**
VLS	**Valsamata**	**0.88**	**275**	*e*PG	**Pg**	**14 59 35.5**	**-0.7**
VLS				*e*SB	**Sg**	**14 59 49.1**	**+1.5**
VLS	**Valsamata**	**0.88**	**275**	P	**Pg**	**14 59 35.5**	**-0.7**
VLS	**Valsamata**	**0.88**	**275**	P	**Pg**	**14 59 35.5**	**-0.7**
VLS				*e*Sb	**Sg**	**14 59 49.1**	**+1.5**
VLX	**Vlachokerasia**	**0.91**	**144**	*e*PG	**Pg**	**14 59 36.2**	**-0.5**
VLX	**Vlachokerasia**	**0.91**	**144**	*e*PG	**Pg**	**14 59 36.2**	**-0.5**
VLX	**Vlachokerasia**	**0.91**	**144**	P	**Pg**	**14 59 36.1**	**-0.6**
VLX				S	**Sg**	**14 59 49.3**	**+0.8**
VLX	**Vlachokerasia**	**0.91**	**144**	P	**Pg**	**14 59 36.1**	**-0.6**
VLX				S	**Sg**	**14 59 49.3**	**+0.8**
ITM	**Ithomi**	**0.94**	**169**	*e*Pb	**Pg**	**14 59 37.3**	**0.0**
ITM	**Ithomi**	**0.94**	**169**	*e*PB	**Pg**	**14 59 37.3**	**0.0**
ITM	**Ithomi**	**0.94**	**169**	P	**Pg**	**14 59 37.2**	**-0.1**
ITM	**Ithomi**	**0.94**	**169**	P	**Pg**	**14 59 37.2**	**-0.1**
LTK	**Loutraki**	**1.00**	**94**	*e*PN	**Pg**	**14 59 39.0**	**+0.5**
LTK	**Loutraki**	**1.00**	**94**	P	**Pg**	**14 59 37.6**	**-0.9**
LTK				S	**Sg**	**14 59 52.4**	**+0.9**
LTK	**Loutraki**	**1.00**	**94**	P	**Pg**	**14 59 37.6**	**-0.9**
LTK	**Loutraki**	**1.00**	**94**	*e*Pn	**Pg**	**14 59 40.0**	**+1.5**
LTK				S	**Sg**	**14 59 52.4**	**+0.9**
AGG	**Agios Georgios**	**1.04**	**28**	*e*Pb	**Pg**	**14 59 38.9**	**-0.3**
AGG				*e*Sb	**Sb**	**14 59 53.4**	**-0.6**
AGG	**Agios Georgios**	**1.04**	**28**	*e*PB	**Pg**	**14 59 38.9**	**-0.3**
AGG				*e*SB	**Sb**	**14 59 53.4**	**-0.6**
AGG	**Agios Georgios**	**1.04**	**28**	P	**Pg**	**14 59 38.4**	**-0.8**
AGG				S	**Sg**	**14 59 52.9**	**+0.2**
AGG	**Agios Georgios**	**1.04**	**28**	P	**Pg**	**14 59 38.4**	**-0.8**
AGG	**Agios Georgios**	**1.04**	**28**	*e*Pb	**Pg**	**14 59 38.9**	**-0.3**
AGG				S	**Sg**	**14 59 52.9**	**+0.2**
AGG				*e*Sb	**Sb**	**14 59 53.4**	**-0.6**
LKD2	**Lefkada island**	**1.07**	**310**	P	**Pg**	**14 59 38.5**	**-1.3**
LKD2				S	**Sg**	**14 59 54.5**	**+0.9**
LKD2	**Lefkada island**	**1.07**	**310**	P	**Pg**	**14 59 38.5**	**-1.3**
LKD2				S	**Sg**	**14 59 54.5**	**+0.9**
LKR	**Lokris**	**1.16**	**61**	*e*Pn	**Pb**	**14 59 40.9**	**-1.0**
LKR				*e*Sb	**Sb**	**14 59 57.6**	**+0.3**
LKR	**Lokris**	**1.16**	**61**	*e*PB	**Pb**	**14 59 40.9**	**-1.0**
LKR				*e*SB	**Sb**	**14 59 57.6**	**+0.3**
LKR	**Lokris**	**1.16**	**61**	P	**Pg**	**14 59 40.6**	**-0.8**
LKR	**Lokris**	**1.16**	**61**	P	**Pg**	**14 59 40.6**	**-0.8**
LKR	**Lokris**	**1.16**	**61**	*e*Pn	**Pb**	**14 59 40.9**	**-1.0**
LKR				*e*Sb	**Sb**	**14 59 57.6**	**+0.3**
ATAL	**Atalanti**	**1.19**	**60**	P	**Pg**	**14 59 40.9**	**-1.2**
ATAL				S	**Sg**	**14 59 57.5**	**-0.1**
ATAL	**Atalanti**	**1.19**	**60**	P	**Pg**	**14 59 40.9**	**-1.2**
ATAL				S	**Sg**	**14 59 57.5**	**-0.1**
PYL	**PYLOS**	**1.21**	**179**	*e*PG	**Pg**	**14 59 41.7**	**-0.7**
PYL	**PYLOS**	**1.21**	**179**	P	**Pg**	**14 59 41.5**	**-0.9**
PYL	**PYLOS**	**1.21**	**179**	*e*Pg	**Pg**	**14 59 41.7**	**-0.7**
DID	**Didima**	**1.35**	**116**	*e*PB	**Pb**	**14 59 45.7**	**+0.4**
DID				*e*SB	**Sb**	**15 00 03.8**	**+0.8**
DID	**Didima**	**1.35**	**116**	P	**Pn**	**14 59 44.4**	**-0.7**
DID	**Didima**	**1.35**	**116**	P	**Pn**	**14 59 44.4**	**-0.7**
DID	**Didima**	**1.35**	**116**	*e*Pb	**Pb**	**14 59 45.7**	**+0.4**
NAIG	**Nisos Aigina**	**1.45**	**103**	*e*Pb	**Pb**	**14 59 47.4**	**+0.4**
NAIG	**Nisos Aigina**	**1.45**	**103**	*e*PB	**Pb**	**14 59 47.4**	**+0.4**
NAIG	**Nisos Aigina**	**1.45**	**103**	*e*Pb	**Pb**	**14 59 47.4**	**+0.4**
THL

KSRS pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
EKS2 Erkin-Say 45.73 336 *e*P **P 15 25 14.2 +1.2**
SONM Songino Array 46.57 9 P **P 15 25 20.1 +0.6**
comp=Z,7.8nm,1.1s,mb4.5,baz=188,slow=8.8,SNR=28
MK31 Makanchi Array 46.65 346 *e*P **P 15 25 20.9 +0.8**
MKAR Makanchi Array 46.65 346 P **P 15 25 20.8 +0.7**
comp=Z,2.4nm,0.5s,mb4.4,baz=163,slow=8.8,SNR=33
ULN Ulaanbaatar 46.70 9 *e*P **P 15 25 21.0 +0.5**
ULN pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
ULN Ulaanbaatar 46.70 9 *e*P **P 15 25 21.0 +0.5**
comp=Z,6.2nm,1.1s,mb4.5
ZAK Zakamensk 48.70 5 *e*P **P 15 25 36.7 +0.7**
ZAK pmax pmax
comp=Z,1.0nm,1.3s,mb3.7
KURK Kurchatov 51.20 345 P **P 15 25 55.1 +0.2**
comp=Z,4.6nm,0.3s,mb4.8,baz=162,slow=6.8,SNR=8.8
KURK Kurchatov 51.20 345 *ce*P **P 15 25 55.8 +0.9**
KURK pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
MJAR Matsushiro Arr 51.33 43 P **P 15 25 56.5 +0.2**
comp=Z,0.5nm,0.3s,mb3.9,baz=224,slow=5.1,SNR=4.8
ZALV Zalesovo Beam 52.96 351 P **P 15 26 08.5 +0.5**
comp=Z,20nm,0.7s,mb5.2,baz=170,slow=6.6,SNR=84
ZALV LR LR 15 53 25.5
comp=Z,16nm,20.0s,MS3.1,baz=250,slow=41
ZALV Zalesovo Beam 52.96 351 P **P 15 26 08.5 +0.5**
ZALV LR LR 15 53 25.5
STKA Stephens Creek 53.83 132 LR LR 15 49 29.4
comp=Z,84nm,19.9s,MS3.8,baz=206,slow=36
BVAR Borovoye Array 55.66 341 P **P 15 26 27.6 -0.1**
comp=Z,4.2nm,0.7s,mb4.6,baz=146,slow=9.0,SNR=24
BRVK Borovoye 55.72 341 *ce*P **P 15 26 27.8 -0.3**
BRVK pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
BRVK Borovoye 55.72 341 *e*P **P 15 26 27.4 -0.7**
comp=Z,2.8nm,0.6s,mb4.5
ABKAR Akbulak array 56.94 332 *e*P **P 15 26 36.6 -0.3**
comp=Z,5.8nm,0.8s,mb4.7
YSS Yuzh-Sakhalins 59.93 34 *i*P **P 15 26 58.6 +0.8**
YSS pmax pmax
comp=Z,12nm,1.1s,mb4.8
YSS Yuzh-Sakhalins 59.93 34 *e*P **P 15 26 58.2 +0.4**
comp=Z,7.2nm,0.8s,mb4.8
ARU Arti 62.60 337 *d i*P **P 15 27 16.2 +0.5**
ARU 15 29 29.6
ARU S **S 15 35 38.7 -2.1**
ARU pmax pmax
comp=Z,9.0nm,2.5s,mb4.5
ARU Arti 62.60 337 P **P 15 27 14.6 -1.1**
comp=Z,4.8nm,1.1s,mb4.5
YAK Yakutsk 64.89 16 *e*P **P 15 27 29.9 -0.7**
YAK pmax pmax
comp=Z,31nm,1.1s,mb5.2
YAK Yakutsk 64.89 16 *e*P **P 15 27 29.4 -1.2**
comp=Z,22nm,0.8s,mb5.2
BRTR Keskin Array B 68.64 312 P **P 15 27 54.3 -0.7**
comp=Z,0.8nm,0.8s,mb3.7,baz=138,slow=9.2,SNR=4.6
TIXI Tiksi 72.63 10 *e*P **P 15 28 18.2 -0.5**
TIXI pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
SEY Seymchan 73.27 23 *ce*P **P 15 28 23.5 +0.9**
AKASG Malin Array Be 74.73 322 P **P 15 28 28.1 -3.3**
comp=Z,0.5nm,0.4s,mb3.8,baz=91,slow=5.2,SNR=4.5
BUR08 Bucovina Ar. S 76.53 319 *e*P **P 15 28 40.0 -1.8**
FINES FINESS Array B 79.43 332 P **P 15 28 58.0 +0.4**
comp=Z,1.2nm,0.6s,mb4.0,baz=91,slow=7.1,SNR=4.1
ARCES ARCESS Array B 81.95 340 P **P 15 29 11.8 +0.8**
comp=Z,1.8nm,0.7s,mb4.1,baz=98,slow=3.9,SNR=5.4
HFS Hagfors 85.16 330 LR LR 16 08 56.9
comp=Z,23nm,18.2s,MS3.6,baz=310,slow=37
NOA NORSAR Array B 86.44 331 P **P 15 29 33.5 -0.4**
comp=Z,0.7nm,0.8s,mb3.9,baz=91,slow=5.0,SNR=3.5
DBIC Dimbokro 101.65 277 *e*P Pdif 15 30 44.3 +0.4
DBIC pmax pmax
comp=Z,8.0nm,1.1s
DBIC Dimbokro 101.65 277 *e*P Pdif 15 30 44.3 +0.3
comp=Z,8.4nm,1.1s

*BJI **31** 16:00:12.6, 17.°57N×146.°29E, h294km, mB4.4/15, mb4.3/26*
*ISCJB **31** 16:00:19.6±0.7, 18.°03N±0.°05×145.°53E±0.°07, h300km±8km, mb4.1/47, Error ellipse: s-maj=10.1km s-min=8.5km az=11.3*
*MOS **31** 16:00:20.6±0.9, 18.°05N×145.°48E, h311km, mb4.2/16, Error ellipse: s-maj=15.5km s-min=7.2km az=105.3*
*IDC **31** 16:00:20.6±1.1, 18.°00N×145.°48E, h299km±12km, mb3.8/19, mb1 3.8/23, mb1mx3.8/30, mbtmp3.8/23, Error ellipse: s-maj=14.6km s-min=9.7km az=89.0*
*NEIC **31** 16:00:21.4±1.0, 18.°05N×145.°47E, h304km±11km, mb4.3/17, Error ellipse: s-maj=9.9km s-min=9.3km az=146.0*
ISC 31 16:00:20.3±0.7, 18.°03N±0.°05×145.°52E±0.°07, h291km±8km, h294km±2.6km: pP-P, n84, σ1§00/91, mb4.1/47, 1C, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.46**	**188**	P	**Pn**	**16 01 33.2**	**+2.0**
	23nm,0.3s,baz=86,slow=1.3,SNR=19						
GUMO				S	**S**	**16 02 27.1**	**-1.0**
	31nm,0.3s,baz=304,slow=23,SNR=7.4						
GUMO	**Guam**	**4.46**	**188**	P	**Pn**	**16 01 33.2**	**+2.0**
GUMO				S	**S**	**16 02 27.1**	**-1.0**
GUMO				pmax	pmax		
	comp=Z,23nm,0.3s						
GUMO				smax			
	comp=N,31nm,0.3s						
GUMO	**Guam**	**4.46**	**188**	*e*Pn	**Pn**	**16 01 33.1**	**+1.9**
GUMO				*e*Sn	**S**	**16 02 26.1**	**-2.1**
CBIJ	**Chichi jima**	**9.54**	**342**	P	**Pn**	**16 02 33.0**	**+0.3**
	comp=N,5.7nm,0.3s,baz=283,slow=22,SNR=8.0						
JHJ	**Hachijo jima 2**	**15.89**	**342**	P	**Pn**	**16 03 48.0**	**-1.4**
	comp=N,6.3nm,0.3s,baz=56,slow=20,SNR=7.8						
MJAR	**Matsushiro Arr**	**19.54**	**342**	P	**P**	**16 04 25.4**	**-1.4**
	comp=N,0.6nm,0.3s,baz=161,slow=9.6,SNR=8.2						
MAJO	**Matsushiro**	**19.54**	**342**	*e*P	**P**	**16 04 24.7**	**-2.1**
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MAJO	**Matsushiro**	**19.54**	**342**	*e*P	**P**	**16 04 24.6**	**-2.1**
	comp=Z,5.2nm,0.6s						
MAT	**Matsushiro**	**19.54**	**342**	P	**P**	**16 04 25.6**	**-1.2**
MAT				*e*S	**S**	**16 07 51.0**	**-0.3**
TATO	**Taipei**	**23.38**	**291**	*e*P	**P**	**16 05 04.5**	**+0.9**
	comp=Z,25nm,0.6s,mb4.7						
YHNB	**Yeheng**	**23.42**	**291**	*e*P	**P**	**16 05 03.5**	**-0.4**
	comp=Z,53nm,0.7s,mb5.0						
SSLB	**Suanglung**	**23.64**	**288**	*e*P	**P**	**16 05 05.4**	**-0.6**
	comp=Z,22nm,0.6s,mb4.7						
ERM	**Erimo**	**24.00**	**356**	*i*P	**P**	**16 05 12.0**	**+3.1**
ERM				pmax	pmax		
	comp=Z,22nm,1.4s,mb4.3						
KSRS	**Korea Array**	**24.76**	**325**	P	**P**	**16 05 15.6**	**-0.3**
	comp=Z,2.8nm,0.7s,mb3.8,baz=147,slow=9.4,SNR=13						
KSRS	**Korea Array**	**24.76**	**325**	P	**P**	**16 05 15.6**	**-0.3**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.8						
ASAJ	**Asahikawa**	**26.13**	**355**	P	**P**	**16 05 29.2**	**+1.2**
	comp=Z,5.4nm,0.5s,mb4.3,baz=232,slow=7.1,SNR=14						
ASAJ	**Asahikawa**	**26.13**	**355**	P	**P**	**16 05 29.3**	**+1.3**
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.5s						
PMG	**Port Moresby**	**27.30**	**176**	*i*P	**P**	**16 05 38.9**	**+0.1**
YSS	**Yuzh-Sakhalins**	**28.94**	**356**	*e*P	**P**	**16 05 53.8**	**+0.9**
YSS				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.3						
MDJ	**Mudanjiang**	**29.68**	**337**	P	**P**	**16 06 00.0**	**+0.5**
MDJ				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.1						
MDJ				pmax	pmax		
	comp=Z,54nm,4.5s						
HABR	**Khabarovsk**	**31.54**	**347**	*e*P	**P**	**16 06 14.9**	**-0.8**
HABR				S	**S**	**16 10 58.3**	**-3.8**
HABR				*e*		16 12 42.4	
HABR				*e*		16 16 05.6	
HABR				pmax	pmax		
	comp=E,13nm,1.5s						
HABR				pmax	pmax		
	comp=N,12nm,2.0s						
HABR				pmax	pmax		
	comp=Z,17nm,2.0s,mb4.2						
HABR				MLR	MLR		
	comp=Z,22nm,12.0s						
KLR	**Kul'dur**	**33.06**	**343**	*e*P	**P**	**16 06 35.0**	**+6.2**
BJT	**Baijiatuau**	**33.49**	**317**	*e*P	**P**	**16 06 34.1**	**+1.4**
BJT				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BJT	**Baijiatuau**	**33.49**	**317**	*e*P	**P**	**16 06 34.1**	**+1.4**
	comp=Z,5.8nm,0.5s,mb4.4						
BJI	**Beijing**	**33.50**	**317**	P	**P**	**16 06 32.8**	**0.0**
BJI				S	**S**	**16 11 32.8**	**+0.2**
BJI				SS	SS	16 14 11.3	-0.1
BJI				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.3						
BJI				pmax	pmax		
	comp=Z,87nm,5.1s						
BJI				LR	LR		
	comp=N,85nm,15.8s						
BJI				LR	LR		
	comp=E,100nm,17.0s						
BJI				LR	LR		
	comp=Z,14nm,17.6s						
ENH	**Enshi**	**34.92**	**297**	*e*P	**P**	**16 06 45.2**	**+0.2**
	comp=Z,6.1nm,0.6s,mb4.3						
PETK	**Petropavlovsk-**	**36.28**	**12**	P	**P**	**16 06 57.8**	**+1.7**
	comp=Z,0.7nm,0.4s,mb3.6,baz=184,slow=6.7,SNR=4.2						
PET	**Petropavlovsk**	**36.40**	**13**	P	**P**	**16 06 57.2**	**0.0**
PET				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.4						
PET	**Petropavlovsk**	**36.40**	**13**	P	**P**	**16 06 57.2**	**0.0**
	comp=Z,15nm,1.1s,mb4.4						
GYA	**Guiyang**	**36.82**	**290**	P	**P**	**16 07 01.3**	**+0.2**
GYA				pP	pP	16 08 00.5	+1.6
GYA				sP	sP	16 08 34.8	+2.4
GYA				PcP	PcP	16 09 18.0	+1.6
GYA				S	**S**	**16 12 22.0**	**-1.4**
GYA				ScP	ScP	16 12 34.8	-0.3
GYA				PcS	PcS	16 13 04.5	-0.5
GYA				ScS	ScS	16 16 42.0	-1.2
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.3						
HHC	**Hu-ho-hao-te**	**36.95**	**315**	*e*P	**P**	**16 07 04.0**	**+2.0**
HHC				pP	pP	16 08 03.5	+3.6
HHC				sP	sP	16 08 36.3	+2.9
HHC				PP	PP	16 08 38.5	+5.3
HHC				S	**S**	**16 12 26.8**	**+1.7**
HHC				sS	sS	16 14 11.8	+2.7
HHC				SS	SS	16 15 16.5	-4.1
HHC				ScS	ScS	16 16 44.3	+0.9
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.3						
HHC				pmax	pmax		
	comp=Z,62nm,5.9s						
HIA	**Hailar**	**37.47**	**332**	*e*P	**P**	**16 07 06.0**	**-0.2**
CD2	**Chengdu**	**39.89**	**297**	P	**P**	**16 07 27.0**	**+0.4**
CD2				pP	pP	16 08 25.5	+0.3
CD2				sP	sP	16 08 58.0	-0.4
CD2				PP	PP	16 09 08.0	+2.9
CD2				S	**S**	**16 13 09.8**	**+0.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.3						
CD2				pmax	pmax		
	comp=Z,110nm,6.4s						
KMI	**Kunming**	**40.27**	**288**	P	**P**	**16 07 31.0**	**+1.2**
KMI				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb3.8						
FITZ	**Fitzroy Crossi**	**40.88**	**210**	P	**P**	**16 07 34.0**	**-0.6**
	comp=Z,1.8nm,0.9s,mb3.3,baz=45,slow=11,SNR=6.4						
LZH	**Lanzhou**	**40.88**	**305**	*e*P	**P**	**16 07 35.5**	**+1.0**
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.1						
ASAR	**Alice Springs**	**42.96**	**196**	P	**P**	**16 07 50.9**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=5.4,slow=5.9,SNR=13						
ULN	**Ulaanbaatar**	**43.19**	**322**	*e*P	**P**	**16 07 53.3**	**+0.4**
ULN				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.2						
ULN	**Ulaanbaatar**	**43.19**	**322**	*e*P	**P**	**16 07 53.3**	**+0.4**
	comp=Z,12nm,0.8s,mb4.2						
SONM	**Songino Array**	**43.56**	**322**	P	**P**	**16 07 56.1**	**+0.3**
	comp=Z,8.1nm,0.7s,mb4.1,baz=138,slow=6.8,SNR=42						
SONM				PcP	PcP	16 09 37.2	-0.6
	comp=Z,1.7nm,0.8s,baz=135,slow=3.8,SNR=4.8						
CM31	**Chiang Mai Arr**	**44.14**	**278**	*e*P	**P**	**16 08 01.1**	**+0.3**
	comp=Z,8.0nm,1.0s,mb3.9						
CMAR	**Chiang Mai Arr**	**44.14**	**278**	P	**P**	**16 08 01.8**	**+0.9**
	comp=Z,6.2nm,0.8s,mb3.9,baz=70,slow=6.7,SNR=46						
CMAR				PcP	PcP	16 09 39.8	-0.6
	comp=Z,1.0nm,0.9s,baz=77,slow=1.8,SNR=5.2						
GTA	**Gaotai**	**44.82**	**308**	*e*P	**P**	**16 08 07.8**	**+1.9**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb3.7						
SEY	**Seymchan**	**45.12**	**4**	*i*P	**P**	**16 08 08.2**	**+0.4**
YAK	**Yakutsk**	**45.35**	**350**	*i*P	**P**	**16 08 09.2**	**-0.4**
YAK				pmax	pmax		
	comp=Z,18nm,0.6s,mb4.5						
YAK	**Yakutsk**	**45.35**	**350**	*e*P	**P**	**16 08 09.1**	**-0.5**
	comp=Z,17nm,0.6s,mb4.5						
ZAK	**Zakamensk**	**46.58**	**324**	*e*P	**P**	**16 08 19.3**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb3.6						
LSA	**Lhasa**	**50.66**	**294**	P	**P**	**16 08 52.0**	**+1.3**
LSA	**Lhasa**	**50.66**	**294**	*e*P	**P**	**16 08 52.2**	**+1.5**
LSA				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb3.9						
LSA	**Lhasa**	**50.66**	**294**	*e*P	**P**	**16 08 52.2**	**+1.5**
	comp=Z,4.1nm,0.6s,mb3.9						
BILL	**Bilibino**	**51.71**	**10**	*e*P	**P**	**16 08 57.5**	**-0.2**
BILL				pmax	pmax		
	comp=Z,13nm,1.5s,mb4.0						
ZAA0	**Zalesovo Array**	**58.44**	**323**	*e*P	**P**	**16 09 44.7**	**-1.2**
ZALV	**Zalesovo Beam**	**58.44**	**323**	P	**P**	**16 09 45.0**	**-0.8**
	comp=Z,4.3nm,0.7s,mb4.0,baz=99,slow=6.6,SNR=21						
ZALV				PcP	PcP	16 10 31.6	-1.5
	comp=Z,1.2nm,0.6s,baz=108,slow=3.6,SNR=4.5						
MK31	**Makanchi Array**	**58.80**	**314**	*e*P	**P**	**16 09 48.0**	**-0.5**
MK31				*e*		16 10 32.8	
MKAR	**Makanchi Array**	**58.80**	**314**	P	**P**	**16 09 48.3**	**-0.2**
	comp=Z,1.4nm,0.5s,mb3.6,baz=92,slow=6.9,SNR=16						
MKAR				PcP	PcP	16 10 33.8	-0.8
	comp=Z,1.8nm,0.8s,baz=87,slow=5.2,SNR=6.8						
KDAK	**Kodiak Island**	**60.01**	**33**	P	**P**	**16 09 56.9**	**+0.4**
	comp=Z,2.3nm,0.3s,mb4.1,baz=318,slow=5.7,SNR=6.1						
KURK	**Kurchatov**	**61.66**	**318**	P	**P**	**16 10 07.5**	**-0.1**
	comp=Z,7.7nm,0.6s,mb4.5,baz=96,slow=7.3,SNR=47						
KURK	**Kurchatov**	**61.66**	**318**	*c i*P	**P**	**16 10 07.2**	**-0.4**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.2						
KURK	**Kurchatov**	**61.66**	**318**	*e*P	**P**	**16 10 07.0**	**-0.6**
	comp=Z,4.6nm,0.8s,mb4.2						
COLA	**College**	**63.94**	**26**	*e*P	**P**	**16 10 23.0**	**+0.7**
COLA				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
COLA	**College**	**63.94**	**26**	*e*P	**P**	**16 10 22.9**	**+0.6**
	comp=Z,4.8nm,0.7s,mb4.2						
UCH	**Uchtor**	**64.15**	**309**	*e*P	**P**	**16 10 24.8**	**+0.6**
UCH				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.0						
UCH	**Uchtor**	**64.15**	**309**	*e*P	**P**	**16 10 24.8**	**+0.7**
	comp=Z,3.3nm,0.7s,mb4.1						
ILAR	**Eielson Array**	**64.32**	**26**	P	**P**	**16 10 23.9**	**-0.8**
	comp=Z,2.7nm,0.5s,mb4.2,baz=248,slow=6.1,SNR=50						
PAX	**Paxson**	**64.58**	**28**	*e*P	**P**	**16 10 26.7**	**+0.2**
PAX				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.4						
PAX	**Paxson**	**64.58**	**28**	*e*P	**P**	**16 10 26.7**	**+0.2**
	comp=Z,4.6nm,0.5s,mb4.4						
BMRM	**Bremner River**	**64.65**	**30**	*e*P	**P**	**16 10 27.8**	**+0.9**
	comp=Z,7.0nm,0.7s,mb4.4						
AML	**Almayashu**	**64.76**	**309**	*e*P	**P**	**16 10 28.5**	**+0.4**
AML				*e*		16 10 58.4	
BVAR	**Borovoye Array**	**66.88**	**321**	P	**P**	**16 10 40.7**	**-0.6**
	comp=Z,6.1nm,0.5s,mb4.5,baz=94,slow=8.2,SNR=32						
DAWY	**Dawson**	**67.42**	**27**	*e*P	**P**	**16 10 44.8**	**+0.2**
ABKAR	**Akbulak array**	**73.71**	**317**	*e*P	**P**	**16 11 21.4**	**-1.2**
	comp=Z,2.4nm,0.5s,mb4.1						
AKTK	**Aktyubinsk**	**74.75**	**319**	P	**P**	**16 11 27.4**	**-1.1**
AKTO	**Aktyubinsk**	**74.75**	**319**	P	**P**	**16 11 27.4**	**-1.1**
	comp=Z,1.8nm,0.6s,mb3.9,baz=94,slow=7.8,SNR=9.2						
YKA	**Yellowknife Ar**	**78.66**	**28**	P	**P**	**16 11 49.7**	**-0.3**
	comp=Z,0.5nm,0.4s,mb3.6,baz=289,slow=4.5,SNR=4.6						
YKA	**Yellowknife Ar**	**78.66**	**28**	P	**P**	**16 11 49.7**	**-0.3**
ARCES	**ARCESS Array B**	**83.08**	**342**	P	**P**	**16 12 12.2**	**-0.9**
	comp=Z,3.4nm,0.8s,mb4.2,baz=70,slow=7.0,SNR=5.4						
BSMT	**Bassoo Peak**	**83.14**	**42**	*e*P	**P**	**16 12 14.7**	**+0.8**
NVAR	**Mina Array Bea**	**83.69**	**52**	P	**P**	**16 12 17.9**	**+1.0**
	comp=Z,4.7nm,0.7s,mb4.4,baz=265,slow=5.8,SNR=33						
FINES	**FINESS Array B**	**87.42**	**335**	P	**P**	**16 12 32.4**	**-2.2**
	comp=Z,2.2nm,0.6s,mb4.2,baz=70,slow=3.8,SNR=10.0						
HFS	**Hagfors**	**92.94**	**338**	P	**P**	**16 12 58.1**	**-2.2**
	comp=Z,1.2nm,0.5s,mb4.0,baz=103,slow=4.7,SNR=8.5						
BRTR	**Keskin Array B**	**94.46**	**314**	P	**P**	**16 13 05.8**	**-2.0**
	comp=Z,1.4nm,0.7s,mb4.1,baz=26,slow=3.4,SNR=5.7						
BRTR	**Keskin Array B**	**94.46**	**314**	*i*P	**P**	**16 13 06.5**	**-1.2**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
LPAZ	**La Paz**	**147.82**	**92**	PKPbc	PKPbc	16 19 32.0	+0.1
	comp=Z,2.0nm,0.4s,baz=326,slow=2.6,SNR=9.6						
LPAZ	**La Paz**	**147.82**	**92**	*e*PKPdf	PKPdf	16 19 28.7	+0.2
LPAZ				PKPbc	PKPbc	16 19 32.0	+0.2
LPAZ				*e*PKPbc	PKPbc	16 19 32.6	+0.8

*IDC **31** 17:56:58.0±3.2, 31.°89N×49.°70E, h0km, mb3.9/9, mb1 3.9/13, mb1mx3.8/27, mbtmp3.8/13, ML3.8/4, Error ellipse: s-maj=64.6km s-min=19.3km az=168.0*
*ISCJB **31** 17:56:59.9±0.3, 32.°05N±0.°02×49.°60E±0.°03, h10km, mb4.2/21, Error ellipse: s-maj=4.0km s-min=2.8km az=139.3*
*THR **31** 17:57:01.4±1.0, 31.°92N×49.°80E, h17km±7km, ML3.7*
*NEIC **31** 17:57:01.4, 31.°92N×49.°80E, h18km, mb4.4/5, ML3.7(THR), After THR.*
*KISR **31** 17:57:01.9±0.6, 31.°80N×49.°64E, h12km±552km, ML3.6*
*MOS **31** 17:57:01.4±0.7, 31.°99N×49.°65E, h32km, mb4.6/8, Error ellipse: s-maj=15.0km s-min=8.0km az=119.3*
*CSEM **31** 17:57:01.1±0.2, 31.°97N×49.°66E, h10km, mb4.5/12, Error ellipse: s-maj=7.1km s-min=5.5km az=155.0*
*TEH **31** 17:57:02.1, 31.°86N×49.°79E, h6km*
ISC 31 17:57:01.4±0.2, 32.°01N±0.°02×49.°66E±0.°03, h10km, n166, σ1§34/184, mb4.2/21, 14C-6D, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**0.73**	**278**	*e*Pg	**Pg**	**17 57 17.0**	**+1.4**
SHGR	**Shooshtar-Gavs**	**0.73**	**278**	*e*Pg	**Pg**	**17 57 17.9**	**+2.3**
SHGR				AML	AML	17 57 35.8	
	comp=E,4μm,0.2s						
SHGR				AML	AML	17 57 37.5	
	comp=N,3μm,0.4s						
IGAR	**Gharneh**	**2.06**	**78**	*e*Pn	**Pn**	**17 57 36.3**	**+0.2**
IGAR				*e*Sg	**Sg**	**17 58 04.0**	**-3.6**
IGAR				*e*		17 58 05.9	
	comp=Z,4μm,0.1s						
IKLH	**Kolahrood**	**2.08**	**51**	*e*Pn	**Pn**	**17 57 37.9**	**+1.5**
IKLH				*e*Sg	**Sg**	**17 58 06.7**	**-1.7**
IKLH				*e*		17 58 12.2	
	comp=Z,7μm,0.2s						
IKLH	**Kolahrood**	**2.08**	**51**	*e*Pn	**Pn**	**17 57 37.9**	**+1.5**
IKLH				*e*Sg	**Sg**	**17 58 06.7**	**-1.7**
IZEF	**Zefreh**	**2.43**	**68**	*e*Pn	**Pn**	**17 57 41.6**	**+0.5**
IZEF				*e*		17 57 54.1	
	comp=Z,2μm,0.3s						
IZEF	**Zefreh**	**2.43**	**68**	*e*Pn	**Pn**	**17 57 41.6**	**+0.5**
ASAO	**Ashtian**	**2.55**	**7**	*e*Pn	**Pb**	**17 57 46.0**	**-1.3**
ASAO	**Ashtian**	**2.55**	**7**	*e*Pn	**Pb**	**17 57 46.1**	**-1.2**
ASAO				*e*Sg	**Sg**	**17 58 23.8**	**+0.3**
ASAO				AML	AML	17 58 30.7	
	comp=E,298nm,0.5s						
ASAO				AML	AML	17 58 38.2	
	comp=N,271nm,0.6s						
ASAO	**Ashtian**	**2.55**	**7**	*e*Pn	**Pb**	**17 57 46.0**	**-1.3**
NASN	**Na'in**	**2.78**	**73**	*e*Pn	**Pn**	**17 57 45.0**	**-1.0**
NASN	**Na'in**	**2.78**	**73**	*e*Pn	**Pn**	**17 57 46.2**	**+0.3**
NASN				*e*Sg	**Sg**	**17 58 26.0**	**-4.8**
NASN	**Na'in**	**2.78**	**73**	*e*Pn	**Pn**	**17 57 45.0**	**-1.0**
IKOM	**Komasi**	**2.81**	**321**	*e*Pn	**Pb**	**17 57 50.0**	**-1.7**
IKOM				*e*		17 58 50.5	
	comp=Z,6μm,0.3s						
IKOM	**Komasi**	**2.81**	**321**	*e*Pn	**Pb**	**17 57 50.0**	**-1.7**
UMR	**Umm Al-Rimmam**	**2.96**	**215**	*e*P	**Pn**	**17 57 49.3**	**+0.8**
UMR				*e*S	**Sn**	**17 58 25.4**	**+1.3**
UMR				AML	AML	17 58 28.6	
	comp=Z,256nm,0.3s						
UMR	**Umm Al-Rimmam**	**2.96**	**215**	*e*P	**Pn**	**17 57 49.3**	**+0.8**
UMR				*e*S	**Sn**	**17 58 25.4**	**+1.3**
	comp=Z,257nm,0.3s						
MIB	**Mutribah**	**2.96**	**223**	*e*P	**Pn**	**17 57 50.0**	**+1.4**
MIB				*e*S	**Sn**	**17 58 25.6**	**+1.4**
MIB				AML	AML	17 58 31.8	
	comp=Z,194nm,0.4s						
MIB	**Mutribah**	**2.96**	**223**	*e*P	**Pn**	**17 57 50.0**	**+1.5**
MIB				*e*S	**Sn**	**17 58 25.6**	**+1.5**
ISFB	**Sefidab**	**3.19**	**42**	*e*Pn	**Pn**	**17 57 53.0**	**+1.4**
ISFB				*e*		17 58 51.8	
	comp=Z,1μm,0.3s						
ISFB	**Sefidab**	**3.19**	**42**	*e*Pn	**Pn**	**17 57 53.0**	**+1.4**
KBD	**Kabd**	**3.29**	**211**	*e*P	**Pn**	**17 57 53.9**	**+0.9**
KBD				*e*S	**Sn**	**17 58 33.0**	**+0.9**
KBD				AML	AML	17 58 34.7	
	comp=Z,77nm,0.3s						
KBD	**Kabd**	**3.29**	**211**	*e*P	**Pn**	**17 57 53.9**	**+0.9**
KBD				*e*S	**Sn**	**17 58 33.0**	**+0.8**
	comp=Z,77nm,0.3s						
IRAZ	**Razeghan**	**3.40**	**4**	*e*Pn	**Pn**	**17 57 57.7**	**+3.3**
IRAZ				*e*		17 58 03.2	
	comp=Z,4μm,0.2s						
IRAZ	**Razeghan**	**3.40**	**4**	*e*Pn	**Pn**	**17 57 57.7**	**+3.3**
ISAD	**Sadrabad**	**3.42**	**90**	*e*Pn	**Pn**	**17 57 54.2**	**-0.6**
ISAD				*e*		17 58 56.4	
	comp=Z,2μm,0.3s						
ISAD	**Sadrabad**	**3.42**	**90**	*e*Pn	**Pn**	**17 57 54.2**	**-0.6**
IVIS	**Veis**	**3.44**	**318**	*e*Pn	**Pn**	**17 57 57.9**	**+2.8**
IVIS				*e*		17 59 14.2	
	comp=Z,3μm,0.6s						
IVIS	**Veis**	**3.44**	**318**	*e*Pn	**Pn**	**17 57 57.9**	**+2.8**
IVRN	**Varamin**	**3.45**	**30**	*e*Pn	**Pn**	**17 57 56.8**	**+1.7**
IVRN

IMEH	**Mehriz**	**4.27**	**97**	*e*	**Pb**	**17 58 16.2**	**-0.4**
	comp=Z,378nm,0.1s						
IMEH				*e*Pn	**Pn**	**17 58 05.5**	**-0.9**
ILAS	**Lasjerd**	**4.35**	**38**	*e*	**Pn**	**17 58 09.1**	**+1.5**
	comp=Z,1μm,0.1s						
ILAS				*e*Pn	**Pn**	**17 58 09.0**	**+1.5**
ILAS	**Lasjerd**	**4.35**	**38**	*e*Pn	**Pn**	**17 58 09.0**	**+1.5**
IFIR	**Firoozkooh**	**4.45**	**35**	*e*Pn	**Pn**	**17 58 10.7**	**+1.8**
IFIR				*e*		17 58 11.6	
	comp=Z,524nm,0.1s						
IFIR	**Firoozkooh**	**4.45**	**35**	*e*Pn	**Pn**	**17 58 10.7**	**+1.8**
BHD	**Baghdad**	**4.63**	**287**	*ex*	x	17 58 10.0	
BHD				*ex*	x	17 58 22.0	
BHD				*ex*	x	17 59 04.0	
BHD	**Baghdad**	**4.63**	**287**	*e*Pn	**Pn**	**17 58 10.0**	**-1.4**
BHD				*e*Sn	**Sn**	**17 59 04.0**	**-1.1**
ZNJK	**Zanjan**	**4.72**	**350**	*e*Pn	**Pn**	**17 58 15.6**	**+3.0**
IPRN	**Peran**	**4.77**	**27**	*e*Pn	**Pn**	**17 58 16.1**	**+2.7**
IPRN				*e*		17 58 40.0	
	comp=Z,980nm,0.3s						
IPRN	**Peran**	**4.77**	**27**	*e*Pn	**Pn**	**17 58 16.1**	**+2.7**
ISHM	**Shahmirzad**	**4.85**	**38**	*e*Pn	**Pn**	**17 58 15.7**	**+1.3**
ISHM				*e*		17 58 46.3	
	comp=Z,1μm,0.3s						
ISHM	**Shahmirzad**	**4.85**	**38**	*e*Pn	**Pn**	**17 58 15.7**	**+1.3**
IBAF	**Bafgh**	**5.05**	**93**	*e*Pn	**Pn**	**17 58 16.0**	**-1.2**
IBAF				*e*		17 58 25.0	
	comp=Z,265nm,0.2s						
IBAF	**Bafgh**	**5.05**	**93**	*e*Pn	**Pn**	**17 58 16.0**	**-1.2**
IKIA	**Kiasar**	**5.36**	**37**	*e*Pn	**Pn**	**17 58 22.6**	**+1.2**
IKIA				*e*		17 59 00.2	
	comp=Z,222nm,0.2s						
IKIA	**Kiasar**	**5.36**	**37**	*e*Pn	**Pn**	**17 58 22.6**	**+1.2**
IGLO	**Ghaloghah**	**5.66**	**36**	*e*Pn	**Pn**	**17 58 27.4**	**+1.8**
IGLO				*e*		17 59 06.2	
	comp=Z,607nm,0.4s						
IGLO	**Ghaloghah**	**5.66**	**36**	*e*Pn	**Pn**	**17 58 27.4**	**+1.8**
ASF	**Jabal al Asfar**	**10.83**	**274**	Pn	**Pn**	**17 59 36.1**	**-0.4**
	comp=Z,1.9nm,0.3s,baz=330,slow=8.3,SNR=7.4						
ASF				Sn	**Sn**	**18 01 37.8**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=140,slow=23,SNR=6.5						
MMAI	**Mount Meron Ar**	**12.08**	**279**	Pn	**Pn**	**17 59 53.4**	**-0.2**
	comp=Z,1.1nm,0.3s,baz=79,slow=17,SNR=5.6						
BRTR	**Keskin Array B**	**15.09**	**305**	Pn	**Pn**	**18 00 32.4**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=130,slow=12,SNR=2.2						
ABKAR	**Akbulak array**	**18.89**	**21**	*e*P	**Pn**	**18 01 22.1**	**-0.3**
	comp=Z,1.0nm,0.5s						
ABKAR	**Akbulak array**	**18.89**	**21**	*e*P	**Pn**	**18 01 22.1**	**-0.3**
	comp=Z,1.0nm,0.5s						
AKTK	**Aktyubinsk**	**19.43**	**16**	P	**Pn**	**18 01 27.9**	**-1.1**
AKTK	**Aktyubinsk**	**19.43**	**16**	P	**Pn**	**18 01 27.9**	**-1.0**
AKTO	**Aktyubinsk**	**19.43**	**16**	P	**Pn**	**18 01 27.9**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=197,slow=12,SNR=4.5						
VRHR	**Novokhopersk**	**19.97**	**345**	*e*P	**Pn**	**18 01 34.2**	**-1.2**
VRHR				pmax	pmax		
	comp=Z,20nm,0.6s						
VRHR				pmax	pmax		
	comp=N,5.0nm,0.3s						
VRHR				pmax	pmax		
	comp=E,9.0nm,0.6s						
VRHR	**Novokhopersk**	**19.97**	**345**	*e*P	**Pn**	**18 01 34.2**	**-1.2**
	comp=E,5.0nm,0.3s						
VORD	**Divnogorie**	**20.43**	**341**	*e*P	**P**	**18 01 37.8**	**-0.9**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.4s						
VORD				pmax	pmax		
	comp=N,20nm,0.7s						
VORD				pmax	pmax		
	comp=E,9.0nm,0.7s						
VORD	**Divnogorie**	**20.43**	**341**	*e*P	**P**	**18 01 37.8**	**-0.9**
	comp=E,10.0nm,0.4s						
VSR	**Storozhevoye**	**20.70**	**341**	*e*P	**P**	**18 01 40.5**	**-1.0**
VSR				pmax	pmax		
	comp=N,10.0nm,0.6s						
VSR				pmax	pmax		
	comp=E,7.0nm,0.6s						
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VSR	**Storozhevoye**	**20.70**	**341**	*e*P	**P**	**18 01 40.5**	**-1.0**
MLR	**Muntele Rosu**	**22.77**	**313**	P	**P**	**18 02 06.7**	**+2.9**
	comp=Z,1.8nm,0.4s,mb3.9,baz=11,slow=4.4,SNR=4.6						
MLR	**Muntele Rosu**	**22.77**	**313**	P	**P**	**18 02 06.7**	**+2.9**
MLR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MLR	**Muntele Rosu**	**22.77**	**313**	⇑P	**P**	**18 02 06.6**	**+2.8**
MLR	**Muntele Rosu**	**22.77**	**313**	⇑*i*P	**P**	**18 02 06.6**	**+2.8**
VOIR		**23.31**	**312**	⇑P	**P**	**18 02 10.3**	**+0.8**
VOIR		**23.31**	**312**	⇑*i*P	**P**	**18 02 10.3**	**+0.8**
VOIR		**23.31**	**312**	P	**P**	**18 02 10.3**	**+0.8**
AKASG	**Malin Array Be**	**24.03**	**327**	P	**P**	**18 02 15.8**	**-0.6**
	comp=Z,3.9nm,0.4s,mb4.2,baz=125,slow=6.9,SNR=32						
AKASG	**Malin Array Be**	**24.03**	**327**	P	**P**	**18 02 15.8**	**-0.6**
AKASG	**Malin Array Be**	**24.03**	**327**	P	**P**	**18 02 15.8**	**-0.5**
KIEV	**Kiev**	**24.03**	**327**	*e*P	**P**	**18 02 14.8**	**-1.6**
KIEV				pmax	pmax		
	comp=Z,12nm,0.4s,mb4.7						
KIEV	**Kiev**	**24.03**	**327**	*e*P	**P**	**18 02 14.8**	**-1.5**
	comp=Z,12nm,0.4s,mb4.7						
KIEV	**Kiev**	**24.03**	**327**	*e*P	**P**	**18 02 14.8**	**-1.6**
	comp=Z,12nm,0.4s,mb4.7						
BURAR	**Bucovina Array**	**24.26**	**317**	⇑P	**P**	**18 02 19.8**	**+1.3**
BURAR	**Bucovina Array**	**24.26**	**317**	⇑*i*P	**P**	**18 02 19.8**	**+1.3**
BURAR	**Bucovina Array**	**24.26**	**317**	⇑P	**P**	**18 02 19.8**	**+1.3**
BUR08	**Bucovina Ar. S**	**24.28**	**317**	*e*P	**P**	**18 02 18.5**	**-0.2**
BUR08	**Bucovina Ar. S**	**24.28**	**317**	*e*P	**P**	**18 02 18.5**	**-0.2**
GZR	**Gura Zlata**	**24.74**	**310**	⇓P	**P**	**18 02 23.1**	**+0.2**
GZR	**Gura Zlata**	**24.74**	**310**	⇓*i*P	**P**	**18 02 23.1**	**+0.2**
GZR	**Gura Zlata**	**24.74**	**310**	⇓P	**P**	**18 02 23.1**	**+0.2**
DRGR		**25.36**	**313**	⇓P	**P**	**18 02 27.5**	**-1.1**
DRGR		**25.36**	**313**	⇓*i*P	**P**	**18 02 27.5**	**-1.1**
DRGR		**25.36**	**313**	P	**P**	**18 02 27.5**	**-1.1**
BVAR	**Borovoye Array**	**25.80**	**29**	P	**P**	**18 02 30.9**	**-1.5**
	comp=Z,0.6nm,0.4s,mb3.5,baz=220,slow=8.0,SNR=5.6						
BVAR	**Borovoye Array**	**25.80**	**29**	P	**P**	**18 02 30.9**	**-1.5**
KURK	**Kurchatov**	**28.39**	**40**	P	**P**	**18 02 54.1**	**-1.6**
	comp=Z,1.4nm,0.7s,mb3.7,baz=240,slow=10.0,SNR=6.7						
KURK	**Kurchatov**	**28.39**	**40**	P	**P**	**18 02 54.2**	**-1.6**
KBA	**Koelnbreinsper**	**31.47**	**309**	⇑*i*P	**P**	**18 03 23.3**	**+0.2**
	comp=Z,4.8nm,0.6s,mb4.5						
KBA	**Koelnbreinsper**	**31.47**	**309**	P	**P**	**18 03 23.3**	**+0.3**
	comp=Z,4.8nm,0.6s,mb4.5						
WTTA	**Wattenberg**	**32.64**	**309**	⇑*i*P	**P**	**18 03 33.1**	**-0.3**
	comp=Z,5.2nm,0.5s,mb4.7						
WTTA	**Wattenberg**	**32.64**	**309**	P	**P**	**18 03 33.1**	**-0.2**
	comp=Z,5.2nm,0.5s,mb4.7						
MOTA	**Moosalm**	**33.01**	**309**	⇑*i*P	**P**	**18 03 35.2**	**-1.4**
	comp=Z,5.9nm,0.7s,mb4.7						
MOTA	**Moosalm**	**33.01**	**309**	P	**P**	**18 03 35.2**	**-1.4**
	comp=Z,5.9nm,0.7s,mb4.7						
FETA	**Feichten**	**33.19**	**308**	⇓*i*P	**P**	**18 03 37.8**	**-0.3**
	comp=Z,5.2nm,0.7s,mb4.5						
FETA	**Feichten**	**33.19**	**308**	P	**P**	**18 03 37.8**	**-0.3**
	comp=Z,5.2nm,0.7s,mb4.5						
FINES	**FINESS Array B**	**33.20**	**339**	P	**P**	**18 03 37.2**	**-0.8**
	comp=Z,1.1nm,0.5s,mb4.1,baz=143,slow=9.5,SNR=12						
FINES	**FINESS Array B**	**33.20**	**339**	P	**P**	**18 03 37.2**	**-0.9**
ZALV	**Zalesovo Beam**	**33.28**	**38**	P	**P**	**18 03 37.6**	**-1.2**
	comp=Z,1.4nm,0.5s,mb4.2,baz=248,slow=11,SNR=7.9						
BSD	**Bornholm Skovb**	**33.61**	**324**	⇑*i*P	**P**	**18 03 40.2**	**-1.5**
BSD				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
BSD	**Bornholm Skovb**	**33.61**	**324**	⇑*i*P	**P**	**18 03 40.2**	**-1.5**
	comp=Z,12nm,0.8s,mb4.9						
BSD	**Bornholm Skovb**	**33.61**	**324**	⇑*i*P	**P**	**18 03 40.2**	**-1.5**
	comp=Z,12nm,0.8s,mb4.9						
DAVA	**Damuels**	**33.81**	**308**	⇑*i*P	**P**	**18 03 42.8**	**-0.7**
	comp=Z,9.2nm,0.5s,mb5.0						
DAVA	**Damuels**	**33.81**	**308**	P	**P**	**18 03 42.8**	**-0.8**
	comp=Z,9.2nm,0.5s,mb5.0						
MBDF	**Montbardon**	**35.55**	**303**	*e*P	**P**	**18 03 57.6**	**-1.0**
	comp=Z,5.9nm,0.6s,mb4.4						
MBDF	**Montbardon**	**35.55**	**303**	*e*P	**P**	**18 03 57.6**	**-1.0**
MBDF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
MBDF	**Montbardon**	**35.55**	**303**	*e*P	**P**	**18 03 57.6**	**-1.0**
	comp=Z,3.0nm,0.6s,mb4.4						
MBDF	**Montbardon**	**35.55**	**303**	*e*P	**P**	**18 03 57.6**	**-1.0**
	comp=Z,3.0nm,0.6s,mb4.4						
LPG	**La Plagne**	**35.65**	**305**	*e*P	**P**	**18 03 58.7**	**-0.7**
LPG	**La Plagne**	**35.65**	**305**	*e*P	**P**	**18 03 58.7**	**-0.7**
LPL	**La Plagne**	**35.66**	**305**	*e*P	**P**	**18 03 58.7**	**-0.9**
	comp=Z,5.8nm,0.6s,mb4.4						
LPL	**La Plagne**	**35.66**	**305**	*e*P	**P**	**18 03 58.7**	**-0.9**
LPL				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
LPL	**La Plagne**	**35.66**	**305**	*e*P	**P**	**18 03 58.7**	**-0.9**
	comp=Z,2.9nm,0.6s,mb4.4						
LPL	**La Plagne**	**35.66**	**305**	*e*P	**P**	**18 03 58.7**	**-0.9**
	comp=Z,3.0nm,0.6s,mb4.4						
ORIF	**Oris-en-Rattie**	**36.20**	**304**	*e*P	**P**	**18 04 03.4**	**-0.7**
ORIF	**Oris-en-Rattie**	**36.20**	**304**	*e*P	**P**	**18 04 03.4**	**-0.7**
CABF	**La Chapelle**	**36.25**	**307**	*e*P	**P**	**18 04 03.7**	**-0.9**
	comp=Z,23nm,1.2s,mb4.7						
CABF	**La Chapelle**	**36.25**	**307**	*e*P	**P**	**18 04 03.7**	**-0.9**
CABF				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.7						
CABF	**La Chapelle**	**36.25**	**307**	*e*P	**P**	**18 04 03.7**	**-0.9**
	comp=Z,12nm,1.2s,mb4.7						
CABF	**La Chapelle**	**36.25**	**307**	*e*P	**P**	**18 04 03.7**	**-0.9**
	comp=Z,12nm,1.2s,mb4.7						
SMF	**Signal de Mont**	**37.79**	**306**	*e*P	**P**	**18 04 16.4**	**-1.3**
SMF	**Signal de Mont**	**37.79**	**306**	*e*P	**P**	**18 04 16.4**	**-1.3**
LOR	**Lormes**	**37.85**	**307**	*e*P	**P**	**18 04 16.9**	**-1.3**
LOR	**Lormes**	**37.85**	**307**	*e*P	**P**	**18 04 16.9**	**-1.3**
NB2	**NORSAR Subarra**	**38.31**	**331**	P	**P**	**18 04 20.6**	**-1.3**
	comp=Z,1.5nm,0.4s,mb4.1,baz=122,slow=8.6						
NB2	**NORSAR Subarra**	**38.31**	**331**	P	**P**	**18 04 20.6**	**-1.3**
	comp=Z,1.5nm,0.4s,mb4.1,baz=122,slow=8.2,SNR=8.0						
NOA	**NORSAR Array B**	**38.31**	**331**	P	**P**	**18 04 20.5**	**-1.4**
	comp=Z,1.8nm,0.6s,mb4.0,baz=122,slow=8.3,SNR=8.6						
NOA	**NORSAR Array B**	**38.31**	**331**	P	**P**	**18 04 20.5**	**-1.4**
TCF	**Toulx Ste Croi**	**38.88**	**306**	*e*P	**P**	**18 04 25.8**	**-1.1**
	comp=Z,8.7nm,0.9s,mb4.2						
TCF	**Toulx Ste Croi**	**38.88**	**306**	*e*P	**P**	**18 04 25.8**	**-1.1**
TCF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
TCF	**Toulx Ste Croi**	**38.88**	**306**	*e*P	**P**	**18 04 25.8**	**-1.1**
	comp=Z,4.3nm,0.9s,mb4.2						
TCF	**Toulx Ste Croi**	**38.88**	**306**	*e*P	**P**	**18 04 25.8**	**-1.1**
	comp=Z,4.0nm,0.9s,mb4.2						
ARCES	**ARCESS Array B**	**39.97**	**347**	P	**P**	**18 04 34.9**	**-0.8**
	comp=Z,0.8nm,0.5s,mb3.8,baz=153,slow=8.2,SNR=10						
ARCES	**ARCESS Array B**	**39.97**	**347**	P	**P**	**18 04 34.9**	**-0.7**
ESDC	**Sonseca Array**	**43.59**	**296**	P	**P**	**18 05 04.3**	**-1.3**
	comp=Z,0.2nm,0.4s,mb3.2,baz=89,slow=7.8,SNR=4.7						
ESDC	**Sonseca Array**	**43.59**	**296**	P	**P**	**18 05 04.3**	**-1.4**
ILAR	**Eielson Array**	**82.67**	**7**	P	**P**	**18 09 22.9**	**-1.9**
	comp=Z,0.4nm,0.8s,mb3.5,baz=332,slow=7.9,SNR=4.6						

*IDC **31** 18:15:23.2±1.5, 2°.59S×139°.01E, h0km, mb3.9/7, mb1 4.1/7, mb1mx3.9/15, mbtmp4.0/7, MS3.5/4, Ms1 3.4/4, ms1mx3.0/19, Error ellipse: s-maj=47.8km s-min=24.6km az=97.0*
*ISCJB **31** 18:15:26.8±1.1, 2°.75S±0°.08×138°.9E±0°.2, h33km, mb4.0/9, MS3.5/3, Error ellipse: s-maj=35.1km s-min=10.7km az=7.7*
*NEIC **31** 18:15:29.5±0.9, 2°.76S×138°.98E, h45km, mb4.1/4, Error ellipse: s-maj=29.8km s-min=9.1km az=98.0*
ISC 31 18:15:28.5±1.1, 2°.73S±0°.08×139°.0E±0°.2, h35km, n18, σ0s77/15, mb4.0/9, MS3.5/3, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**11.86**	**213**	*e*P	**Pn**	**18 18 14.4**	**-0.8**
	57nm,0.7s						
GUMO	**Guam**	**17.22**	**20**	LR	LR	18 26 05.2	
	comp=Z,52nm,18.1s,baz=164,slow=38						
WRAB	**Tennant Creek**	**17.70**	**195**	*e*P	**Pn**	**18 19 31.4**	**-1.0**
	7.5nm,0.8s						
FITZ	**Fitzroy Crossi**	**20.13**	**220**	P	**P**	**18 19 59.9**	**+0.2**
	3.0nm,0.7s,baz=36,slow=9.1,SNR=5.5						
FITZ				LR	LR	18 28 11.6	
	comp=Z,90nm,20.7s,MS3.1,baz=291,slow=38						
ASAR	**Alice Springs**	**21.39**	**193**	P	**P**	**18 20 14.4**	**+1.1**
	1.4nm,0.7s,mb3.4,baz=22,slow=9.7,SNR=18						
MBWA	**Marble Bar**	**26.23**	**224**	*e*P	**P**	**18 21 01.3**	**+0.9**
STKA	**Stephens Creek**	**29.10**	**175**	LR	LR	18 32 59.6	
	comp=Z,90nm,18.8s,MS3.4,baz=23,slow=36						
NWAO	**Narrogin (SRO)**	**36.32**	**212**	LR	LR	18 38 48.7	
	comp=Z,199nm,19.6s,MS3.9,baz=173,slow=39						
CMAR	**Chiang Mai Arr**	**44.70**	**300**	P	**P**	**18 23 37.2**	**-1.3**
	1.5nm,1.0s,mb3.8,baz=114,slow=6.1,SNR=7.5						
MK31	**Makanchi Array**	**69.98**	**322**	*e*P	**P**	**18 26 37.0**	**+0.5**
MKAR	**Makanchi Array**	**69.98**	**322**	P	**P**	**18 26 36.5**	**0.0**
	2.2nm,0.8s,mb4.2,baz=118,slow=8.2,SNR=17						
ZALV	**Zalesovo Beam**	**72.10**	**330**	P	**P**	**18 26 48.4**	**-0.8**
	0.7nm,0.5s,mb3.9,baz=110,slow=7.0,SNR=5.0						
AML	**Almayashu**	**73.81**	**315**	*e*P	**P**	**18 27 01.0**	**+1.4**
	4.7nm,1.0s,mb4.4						
KURK	**Kurchatov**	**73.90**	**325**	*e*P	**P**	**18 26 59.8**	**-0.1**
	2.7nm,1.0s,mb4.1						
BVAR	**Borovoye Array**	**79.49**	**325**	P	**P**	**18 27 31.8**	**+0.4**
	2.2nm,0.7s,mb4.2,baz=117,slow=6.7,SNR=15						
BRVK	**Borovoye**	**79.56**	**325**	*e*P	**P**	**18 27 32.0**	**+0.1**
ABKAR	**Akbulak array**	**84.92**	**320**	*e*P	**P**	**18 28 00.2**	**+0.2**
	0.8nm,0.6s,mb4.0						
ILAR	**Eielson Array**	**85.72**	**24**	P	**P**	**18 28 02.9**	**-0.7**
	0.7nm,0.7s,mb4.0,baz=260,slow=4.2,SNR=8.4						

IDC 31 18:50:31.5±17.0, 21°.69S×177°.02W, h371km±144km, mb3.2/3, mb1 3.5/3, mb1mx3.1/13, mbtmp3.2/3, Error ellipse: s-maj=187.6km s-min=46.6km az=137.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**45.15**	**258**	P	P	18 58 12.8	-0.2
	1.1nm,0.6s,baz=88,slow=8.4,SNR=18						
ASAR				PcP	PcP	18 59 46.7	+0.5
	0.2nm,0.5s,baz=87,slow=3.8,SNR=4.2						
ILAR	**Eielson Array**	**89.27**	**12**	P	P	19 02 46.1	+0.3
	0.1nm,0.3s,baz=212,slow=4.8,SNR=3.1						
CMAR	**Chiang Mai Arr**	**91.37**	**289**	P	P	19 02 56.2	-0.4
	0.3nm,0.5s,baz=100,slow=2.9,SNR=5.8						
BVAR	**Borovoye Array**	**120.57**	**320**	PKP	PKPdf	19 08 39.0	-0.2
	0.4nm,0.4s,baz=142,slow=4.9,SNR=4.0						
AKASG	**Malin Array Be**	**144.49**	**331**	PKP	PKPdf	19 09 21.4	-2.5
	1.7nm,0.4s,baz=43,slow=4.5,SNR=13						
BRTR	**Keskin Array B**	**148.31**	**312**	PKPbc	PKPbc	19 09 34.0	-0.7
	0.6nm,0.5s,baz=35,slow=5.3,SNR=3.8						
MMAI	**Mount Meron Ar**	**149.19**	**298**	PKPbc	PKPbc	19 09 37.5	+0.4
	1.2nm,0.4s,baz=74,slow=5.1,SNR=7.6						

*ISCJB **31** 18:51:08.4±0.7, 38°.86N±0°.03×26°.09E±0°.05, h1km±9km, Error ellipse: s-maj=6.9km s-min=4.5km az=171.3*
*DDA **31** 18:51:08.0, 38°.85N×26°.09E, h7km±4km, Md2.9*
*THE **31** 18:51:08.7, 38°.87N×26°.07E, h4km±6km, ML3.1/4, Error ellipse: s-maj=6.2km s-min=0.4km az=93.0*
*CSEM **31** 18:51:08.5±0.2, 38°.85N×26°.09E, h8km, ML3.1/4, Error ellipse: s-maj=4.8km s-min=3.0km az=79.0*
ISC 31 18:51:08.8±0.6, 38°.86N±0°.03×26°.08E±0°.06, h8km±7km, n14, σ0s60/28, 1C, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.39**	**334**	P	**Pg**	**18 51 16.4**	**-0.1**
SIGR				S	**Sg**	**18 51 21.7**	**0.0**
SIGR	**SIGRI**	**0.39**	**334**	P	**Pg**	**18 51 16.4**	**-0.1**
SIGR				S	**Sg**	**18 51 21.7**	**0.0**
PRK	**Paraskevi**	**0.41**	**21**	P	**Pg**	**18 51 16.7**	**-0.2**
PRK				S	**Sg**	**18 51 22.6**	**+0.2**
PRK	**Paraskevi**	**0.41**	**21**	P	**Pg**	**18 51 16.7**	**-0.2**
PRK				S	**Sg**	**18 51 22.6**	**+0.2**
CHOS	**Chios island**	**0.47**	**182**	P	**Pg**	**18 51 18.2**	**+0.3**
CHOS				S	**Sg**	**18 51 24.9**	**+0.8**
CHOS	**Chios island**	**0.47**	**182**	P	**Pg**	**18 51 18.2**	**+0.3**
CHOS				S	**Sg**	**18 51 24.9**	**+0.8**
URLA	**Izmir**	**0.64**	**141**	*e*P	**Pg**	**18 51 20.1**	**-1.0**
URLA				*e*S	**Sg**	**18 51 29.4**	**-0.1**
URLA	**Izmir**	**0.64**	**141**	*e*P	**Pg**	**18 51 20.1**	**-1.0**
URLA				*e*S	**Sg**	**18 51 29.4**	**0.0**
AYVA	**Ayvalik**	**0.65**	**46**	⇑*i*P	**Pg**	**18 51 21.1**	**-0.3**
AYVA				*i* S	**Sg**	**18 51 30.0**	**+0.1**
AYVA	**Ayvalik**	**0.65**	**46**	*i* P	**Pg**	**18 51 21.1**	**-0.3**
AYVA				*i* S	**Sg**	**18 51 30.0**	**+0.1**
LIA	**Limnos Island**	**1.25**	**326**	P	**Pn**	**18 51 31.7**	**-0.9**
LIA				S	**Sg**	**18 51 49.5**	**+0.5**
LIA	**Limnos Island**	**1.25**	**326**	P	**Pn**	**18 51 31.7**	**-0.9**
LIA				S	**Sg**	**18 51 49.5**	**+0.5**
BALY	**Balya**	**1.48**	**53**	*e*P	**Pn**	**18 51 35.1**	**-0.7**
BALY				*e*S	**Sn**	**18 51 56.6**	**+1.2**
BALY	**Balya**	**1.48**	**53**	*e*P	**Pn**	**18 51 35.1**	**-0.7**
BALY				*e*S	**Sn**	**18 51 56.6**	**+1.2**

*ISCJB **31** 19:22:50.5±0.7, 38°.87N±0°.03×26°.11E±0°.05, h0km±9km, Error ellipse: s-maj=6.8km s-min=4.5km az=171.4*
*DDA **31** 19:22:50.2, 38°.85N×26°.13E, h7km±2km, Md2.9*
*THE **31** 19:22:50.9, 38°.88N×26°.08E, h4km±4km, ML3.3/4, Error ellipse: s-maj=4.6km s-min=0.5km az=96.0*
*CSEM **31** 19:22:50.6±0.2, 38°.87N×26°.11E, h5km, ML3.3/4, Error ellipse: s-maj=5.4km s-min=3.5km az=79.0*
ISC 31 19:22:50.9±0.6, 38°.87N±0°.03×26°.10E±0°.05, h6km±8km, n14, σ0s73/28, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.39**	**331**	P	**Pg**	**19 22 58.4**	**-0.1**
SIGR				S	**Sg**	**19 23 03.7**	**+0.1**
SIGR	**SIGRI**	**0.39**	**331**	P	**Pg**	**19 22 58.4**	**-0.1**
SIGR				S	**Sg**	**19 23 03.7**	**+0.1**
PRK	**Paraskevi**	**0.40**	**20**	P	**Pg**	**19 22 58.6**	**-0.1**
PRK				S	**Sg**	**19 23 04.4**	**+0.5**
PRK	**Paraskevi**	**0.40**	**20**	P	**Pg**	**19 22 58.6**	**-0.1**
PRK				S	**Sg**	**19 23 04.4**	**+0.5**
CHOS	**Chios island**	**0.48**	**184**	P	**Pg**	**19 23 00.4**	**+0.2**
CHOS				S	**Sg**	**19 23 07.8**	**+1.3**
CHOS	**Chios island**	**0.48**	**184**	P	**Pg**	**19 23 00.4**	**+0.2**
CHOS				S	**Sg**	**19 23 07.8**	**+1.3**
AYVA	**Ayvalik**	**0.64**	**46**	*e*P	**Pg**	**19 23 02.7**	**-0.5**
AYVA				*e*S	**Sg**	**19 23 11.5**	**+0.1**
AYVA	**Ayvalik**	**0.64**	**46**	*e*P	**Pg**	**19 23 02.7**	**-0.4**
AYVA				*e*S	**Sg**	**19 23 11.5**	**+0.1**
URLA	**Izmir**	**0.64**	**142**	*e*P	**Pg**	**19 23 02.1**	**-1.2**
URLA				*e*S	**Sg**	**19 23 11.4**	**-0.1**
URLA	**Izmir**	**0.64**	**142**	*e*P	**Pg**	**19 23 02.1**	**-1.1**
URLA				*e*S	**Sg**	**19 23 11.4**	**-0.2**
LIA	**Limnos Island**	**1.25**	**326**	P	**Pb**	**19 23 13.7**	**-1.2**
LIA				S	**Sg**	**19 23 31.5**	**+0.5**
LIA	**Limnos Island**	**1.25**	**326**	P	**Pb**	**19 23 13.7**	**-1.2**
LIA				S	**Sg**	**19 23 31.5**	**+0.5**
BALY	**Balya**	**1.47**	**53**	*e*P	**Pn**	**19 23 16.9**	**-0.9**
BALY				*e*S	**Sn**	**19 23 38.7**	**+1.4**
BALY	**Balya**	**1.47**	**53**	*e*P	**Pn**	**19 23 17.0**	**-0.9**
BALY				*e*S	**Sn**	**19 23 38.7**	**+1.4**

*ISCJB **31** 20:35:07.6±0.4, 24°.45N±0°.02×122°.24E±0°.02, h2km±3km, Error ellipse: s-maj=3.5km s-min=2.3km az=176.3*
*TAP **31** 20:35:09.7, 24°.47N×122°.11E, h19km, ML3.7, B*
*JMA **31** 20:35:09.1±0.2, 24°.53N×122°.15E, h47km±3km, M3.1*
ISC 31 20:35:08.0±0.4, 24°.44N±0°.02×122°.24E±0°.02, h2km±3km, n53, σ0s93/91, 5C-2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.40**	**295**	⇑*i*P	**Pg**	**20 35 16.0**	**+0.4**
	baz=302						
TWC				*i* S	**Sg**	**20 35 19.8**	**-0.9**
	baz=302						
ENA	**Nanau**	**0.46**	**269**	⇑*i*P	**Pg**	**20 35 16.9**	**+0.1**
	baz=267						
ENA				S	**Sg**	**20 35 21.8**	**-0.9**
	baz=267						
EHP	**Heping Village**	**0.47**	**254**	*e*P	**Pg**	**20 35 17.4**	**+0.3**
	baz=243						
ILA	**Ilan**	**0.55**	**306**	*i* P	**Pg**	**20 35 19.2**	**+0.6**

baz=257
HATJ Hateruma jima 1.48 105 P **Pn 20 35 35.4 -0.2**
HATJ eS **Sn 20 35 55.1 -0.3**
WNT Mingjian 1.53 249 eP **Pn 20 35 36.5 +0.3**
baz=246
WNT eS **Sn 20 35 58.4 +1.8**
baz=246
JKRS Kuro-shima 1.63 97 P **Pn 20 35 37.5 -0.1**
JKRS S **Sn 20 35 58.0 -1.1**
CHN5 Tsauling 1.66 240 eP **Pn 20 35 38.2 +0.2**
baz=220
CHN5 eS **Sn 20 36 00.5 +0.6**
baz=220
ELDTW Lidau 1.68 222 eP **Pn 20 35 36.6 -1.7**
baz=201
WGK Gukeng 1.71 244 eP **Pn 20 35 39.1 +0.4**
baz=242
WGK eS **Sn 20 36 02.5 +1.4**
baz=242
JIJ Ishigaki jima 1.74 92 P **Pn 20 35 38.4 -0.7**
JIJ eS **Sn 20 36 00.5 -1.3**
CHN4 Tsaushan 1.86 235 eP **Pn 20 35 41.4 +0.6**
baz=214
CHN4 eS **Sn 20 36 07.2 +2.5**
baz=214
STYT Tauyuan 1.86 227 eP **Pn 20 35 40.5 -0.4**
baz=206
WTCT Ta-ch'eng 1.88 253 eP **Pn 20 35 41.7 +0.6**
baz=251
WTCT eS **Sn 20 36 05.4 +0.1**
baz=251
WTP Ta-pu 1.91 232 eP **Pn 20 35 41.9 +0.4**
baz=218
WTP eS **Sn 20 36 08.0 +2.0**
baz=218
CHY Chiayi 1.91 241 eP **Pn 20 35 42.8 +1.3**
baz=239
CHY eS **Sn 20 36 07.2 +1.2**
baz=239
TWK Hsinying 1.98 234 eP **Pn 20 35 42.6 +0.1**
baz=226
SGST Jiashian 2.03 229 eP **Pn 20 35 43.6 +0.4**
baz=205
ECL Taimali 2.18 213 eP **Pn 20 35 43.0 -2.2**
baz=205
SSD Sandimen 2.24 222 eP **Pn 20 35 46.7 +0.7**
baz=197
JTJ Tarama 2.25 84 P **Pn 20 35 46.5 +0.3**
JTJ S **Sn 20 36 13.8 -0.7**
EAST Anshuo 2.41 212 eP **Pn 20 35 48.4 -0.1**
baz=204
LAY Lan-yu 2.47 195 eP **Pn 20 35 46.9 -2.3**
baz=177
JMJ Miyako jima 2 2.80 82 eS **Sn 20 36 27.2 -1.0**
JOGS Gusukube 2.90 83 P **Pn 20 35 56.0 +0.9**

WEL 31 20:51:07.3±0.7, 38°.55S×175°.37E, h139km±8km, ML3.5/8, Error ellipse: s-maj=11.2km s-min=6.7km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKZ	**Black Stump Fm**	**1.07**	**125**	PN	Pn	20 51 31.8	0.0
BKZ				SN	Sn	20 51 48.5	-1.9
BKZ				SN	Sn	20 51 48.6	-1.8
MCHZ	**McNeill Hill**	**1.37**	**131**	PN	Pn	20 51 35.2	+0.6
MCHZ				SN	Sn	20 51 56.9	+1.4
PNHZ	**Pukenui**	**1.51**	**155**	PN	Pn	20 51 36.1	0.0
PNHZ				SN	Sn	20 51 58.6	+0.3
TSZ	**Takapari Road**	**1.58**	**163**	PN	Pn	20 51 37.0	+0.1
TSZ				SN	Sn	20 51 59.3	-0.2
KAHZ	**Kahuranaki**	**1.71**	**137**	PN	Pn	20 51 38.1	-0.3
WPHZ	**Waipukurau**	**1.73**	**152**	PN	Pn	20 51 38.2	-0.4
CKHZ	**Cape Kidnapper**	**1.73**	**130**	PN	Pn	20 51 38.2	-0.5
CKHZ				SN	Sn	20 51 59.5	-3.1
DVHZ	**Dannevirke**	**1.85**	**161**	PN	Pn	20 51 39.4	-0.6
POWZ	**Post Office Ro**	**1.87**	**171**	PN	Pn	20 51 39.9	-0.3
PXZ	**Pawanui**	**1.88**	**142**	PN	Pn	20 51 39.5	-0.9
PXZ				SN	Sn	20 52 02.5	-3.2
PRHZ	**Porangahau**	**1.98**	**151**	PN	Pn	20 51 40.7	-0.8
PRHZ				SN	Sn	20 52 05.9	-1.8
MRZ	**Mangatainoka R**	**2.12**	**176**	PN	Pn	20 51 42.5	-0.7
MRZ				SN	Sn	20 52 07.3	-3.5
OGWZ	**Otaki Gorge**	**2.27**	**184**	PN	Pn	20 51 44.7	-0.4
KIW	**Kapiti Island**	**2.34**	**189**	PN	Pn	20 51 45.5	-0.4
HOWZ	**Holdsworth Sta**	**2.35**	**177**	PN	Pn	20 51 45.1	-0.9
CAW	**Cannon Point**	**2.57**	**185**	PN	Pn	20 51 47.8	-0.9
MTW	**Mount Morrison**	**2.61**	**178**	PN	Pn	20 51 47.7	-1.6
PLWZ	**Palliser**	**3.02**	**182**	PN	Pn	20 51 52.4	-2.0
TUWZ	**Tuamarina**	**3.08**	**200**	PN	Pn	20 51 53.4	-1.8
QRZ	**Quartz Range**	**3.16**	**223**	SN	Sn	20 52 34.5	+0.4

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*IDC **31** 20:53:37.6±1.6, 44°.31N×129°.14W, h0km, mb3.4/5, mb1 3.8/7, mb1mx3.6/26, mbtmp3.5/7, ML3.4/2, MS3.3/8, Ms1 3.3/8, ms1mx3.1/19, Error ellipse: s-maj=57.7km s-min=15.0km az=43.0*
*ISCJB **31** 20:53:38.0±0.9, 44°.31N±0°.07×129°.0W±0°.1, h10km, mb3.4/5, MS3.3/4, Error ellipse: s-maj=13.0km s-min=7.1km az=137.2*
*NEIC **31** 20:53:39.3±1.1, 44°.31N×129°.20W, h10km, mb3.8/3, Error ellipse: s-maj=15.9km s-min=10.4km az=53.0*
ISC 31 20:53:39.7±0.9, 44°.31N±0°.07×129°.1W±0°.1, h10km, n34, σ1§22/30, mb3.4/5, MS3.3/4, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLWA	**Neilton Lookou**	**4.79**	**48**	eP	**Pn**	**20 54 51.0**	**-0.9**
HUMO	**Hull Mountain**	**4.80**	**109**	eP	**Pn**	**20 54 49.5**	**-2.5**
HUMO				eS	**Sn**	**20 55 45.6**	**-2.0**
RVW	**Rose Valley**	**4.87**	**66**	P	**Pn**	**20 54 52.8**	**-0.1**
LVP	**Lakeview Peak**	**5.06**	**67**	P	**Pn**	**20 54 56.5**	**+1.0**
YBH	**Yreka Blue Hor**	**5.36**	**116**	Pn	**Pn**	**20 55 00.5**	**+0.8**
	0.2nm,0.3s,baz=284,slow=7.3,SNR=12						
YBH				Sn	**Sn**	**20 56 01.4**	**0.0**
	0.1nm,0.3s,baz=86,slow=16,SNR=2.1						
YBH				LR	LR	20 57 06.8	
	comp=Z,179nm,18.9s,baz=299,slow=39						
HDW	**Hoodsport**	**5.39**	**50**	P	**Pn**	**20 54 59.8**	**-0.2**
BBB	**Bella Bella**	**7.91**	**5**	LR	LR	20 58 10.8	
	comp=Z,160nm,19.6s,baz=352,slow=34						
BMO	**Blue Mountains**	**8.46**	**82**	eP	**Pn**	**20 55 38.0**	**-4.2**
	2.5nm,1.0s						
CMB	**Columbia Colle**	**9.09**	**131**	eP	**Pn**	**20 55 51.5**	**+0.6**
	3.5nm,0.9s						
NEW	**Newport**	**9.20**	**60**	eP	**Pn**	**20 55 53.9**	**+1.5**
	4.3nm,0.8s						
NVAR	**Mina Array Bea**	**10.03**	**122**	Pn	**Pn**	**20 56 04.6**	**+0.9**
	0.2nm,0.3s,baz=285,slow=13,SNR=16						
NVAR	**Mina Array Bea**	**10.03**	**122**	Pn	**Pn**	**20 56 04.6**	**+0.9**
HLID	**Hailey**	**10.64**	**89**	eP	**Pn**	**20 56 14.7**	**+2.6**
	6.5nm,1.0s						
MSO	**Missoula**	**10.94**	**71**	eP	**Pn**	**20 56 15.5**	**-0.7**
	2.4nm,0.8s						
SWMT	**Swartz Lake**	**11.02**	**68**	P	**Pn**	**20 56 17.2**	**+0.1**
MCMT	**McKenzie Canyo**	**11.63**	**82**	P	**Pn**	**20 56 28.7**	**+3.2**
LOHW	**Long Hollow**	**13.37**	**87**	eP	**Pn**	**20 56 52.8**	**+3.5**
	2.0nm,0.9s						
ARUT	**Antelope Range**	**13.50**	**113**	eP	**Pn**	**20 56 50.3**	**-0.9**
	0.7nm,0.5s						
RLMT	**Red Lodge**	**14.15**	**80**	eP	**Pn**	**20 57 07.2**	**+7.2**
	16nm,1.3s						
DLBC	**Dease Lake**	**14.16**	**358**	LR	LR	21 01 23.6	
	comp=Z,105nm,19.5s,baz=308,slow=33						
SRU	**San Rafael**	**14.82**	**104**	eP	**Pn**	**20 57 17.3**	**+8.0**
	15nm,1.4s						
SDCO	**Great Sand Dun**	**18.96**	**102**	eP	**Pn**	**20 58 02.7**	**+1.2**
	1.0nm,0.8s						
ANMO	**Albuquerque**	**19.75**	**110**	LR	LR	21 06 10.1	
	comp=Z,57nm,19.4s,baz=177,slow=38						
YKA	**Yellowknife Ar**	**20.08**	**20**	P	**P**	**20 58 12.1**	**-0.8**
	2.2nm,0.9s,baz=208,slow=11,SNR=5.4						
YKA	**Yellowknife Ar**	**20.08**	**20**	P	**P**	**20 58 12.1**	**-0.8**
FFC	**Flin Flon**	**20.35**	**50**	eP	**P**	**20 58 15.1**	**-0.8**
	6.7nm,0.9s						
ILAR	**Eielson Array**	**22.78**	**340**	P	**P**	**20 58 42.9**	**+0.9**
	1.7nm,1.1s,mb3.4,baz=149,slow=7.7,SNR=8.2						
ILAR				LR	LR	21 05 49.2	
	comp=Z,62nm,21.4s,MS3.0,baz=303,slow=32						
ULM	**Lac du Bonnet**	**23.20**	**63**	LR	LR	21 07 56.9	
	comp=Z,88nm,19.3s,MS3.2,baz=1.3,slow=37						
TXAR	**Lajitas Array**	**25.14**	**118**	P	**P**	**20 59 05.1**	**+0.3**
	0.3nm,0.7s,mb2.9,baz=316,slow=9.3,SNR=4.1						
WMOK	**Wichita Mounta**	**25.16**	**102**	eP	**P**	**20 59 03.5**	**-1.6**
	2.4nm,0.7s,mb3.8						
SCHQ	**Schefferville**	**40.45**	**52**	LR	LR	21 18 11.8	
	comp=Z,86nm,20.0s,MS3.6,baz=260,slow=36						
SONM	**Songino Array**	**76.08**	**325**	P	**P**	**21 05 27.4**	**+0.2**
	0.5nm,0.9s,mb3.5,baz=26,slow=7.3,SNR=3.1						
KURK	**Kurchatov**	**82.33**	**343**	P	**P**	**21 05 59.7**	**-1.6**
	0.5nm,0.8s,mb3.5,baz=14,slow=4.6,SNR=3.0						
ESDC	**Sonseca Array**	**82.90**	**39**	LR	LR	21 40 51.4	
	comp=Z,18nm,21.4s,MS3.4,baz=240,slow=34						

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*NIED **31** 21:01:00, 23°.70N×121°.50E, h5km, Mw4.2 Best double couple: M0=2.21000×10^15 NP1:φ=45.00000°, δ74.00000°, λ74.00000°. NP2:φ=271.00000°, δ22.00000°, λ134.00000°.*
*ISCJB **31** 21:01:53.8±0.4, 23°.67N±0°.01×121°.74E±0°.02, h9km±2km, mb3.8/16, MS3.2/2, Error ellipse: s-maj=2.8km s-min=2.0km az=31.8*
*JMA **31** 21:01:53.9±0.5, 23°.67N×121°.50E, h74km, M3.6*
*TAP **31** 21:01:54.9, 23°.73N×121°.61E, h9km, ML4.3, B*
*NEIC **31** 21:01:55.1, 23°.73N×121°.56E, h17km, mb4.0/6, ML4.7(TAP), After TAP.*
NEIC Recorded [4 TAP] in Hua-lien and [1 TAP] in T'ai-tung.
*IDC **31** 21:02:00.9±5.5, 23°.71N×121°.74E, h64km±52km, mb3.5/10, mb1 3.6/12, mb1mx3.5/25, mbtmp3.5/12, ML3.9/1, MS3.1/5, Ms1 3.1/5, ms1mx2.7/23, Error ellipse: s-maj=23.3km s-min=22.8km az=20.0*
*BJI **31** 21:02:03.2, 24°.15N×121°.11E, h17km, mB4.4/6, mb4.1/17, ML4.0/7, Ms4.2/10, Ms7 4.1/9*
ISC 31 21:01:54.6±0.3, 23°.69N±0°.01×121°.70E±0°.02, h12km±2km, n123, σ1§06/169, mb3.8/16, MS3.2/2, 1C-22D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	**0.15**	**279**	⇓*i*P	**Pg**	**21 01 57.4**	**-0.6**
	baz=252						
TEGC				S	**Sg**	**21 01 59.7**	**-0.8**
	baz=252						
ESF	**Shoufeng Towns**	**0.26**	**317**	*i*P	**Pg**	**21 01 59.2**	**-0.7**
	baz=319						
ESF				S	**Sg**	**21 02 02.7**	**-0.8**
	baz=319						
ESL	**Shilin**	**0.28**	**298**	⇓*i*P	**Pg**	**21 01 59.2**	**-1.0**
	baz=298						
HWA	**Hwalien**	**0.30**	**343**	*i*P	**Pg**	**21 02 01.1**	**+0.3**
	baz=1.0						
EHY	**Hungye**	**0.39**	**243**	⇓*i*P	**Pg**	**21 02 02.6**	**+0.3**
	baz=241						
EHY				S	**Sg**	**21 02 09.1**	**+1.6**
	baz=241						
TWD	**Chiawan**	**0.41**	**347**	⇓*i*P	**Pg**	**21 02 02.7**	**+0.1**
	baz=15						
TWD				*i*S	**Sg**	**21 02 08.6**	**+0.6**
	baz=15						
YULB	**Yu-li**	**0.47**	**232**	eP	**Pg**	**21 02 04.3**	**+0.5**
YULB				eS	**Sg**	**21 02 11.2**	**+1.1**
NACB	**Ninganchiao**	**0.50**	**349**	eP	**Pg**	**21 02 03.9**	**-0.4**
NACB				eS	**Sg**	**21 02 10.8**	**-0.1**
TWF1	**Yuli**	**0.50**	**228**	⇓*i*P	**Pg**	**21 02 05.2**	**+0.8**
	baz=207						
WHF	**Hehuan Shan**	**0.61**	**319**	⇓*i*P	**Pg**	**21 02 05.8**	**-0.6**
	baz=312						
WHF				S	**Sg**	**21 02 13.7**	**-0.7**
	baz=312						
EHP	**Heping Village**	**0.62**	**3**	eP	**Pg**	**21 02 07.3**	**+0.6**
	baz=13						
SSLB	**Suanglung**	**0.69**	**279**	eP	**Pg**	**21 02 07.1**	**-0.9**
SSLB				eS	**Sg**	**21 02 14.3**	**-2.7**
ENA	**Nanau**	**0.74**	**3**	⇓*i*P	**Pg**	**21 02 09.2**	**+0.2**
	baz=23						
ENA				S	**Sg**	**21 02 19.9**	**+1.3**
	baz=23						
TWT	**Tachien**	**0.74**	**320**	⇓*i*P	**Pg**	**21 02 08.8**	**-0.2**
	baz=315						
SMLT	**Sun Moon Lake**	**0.76**	**285**	⇓*i*P	**Pg**	**21 02 08.8**	**-0.5**
	baz=284						
ELDTW	**Lidau**	**0.80**	**232**	eP	**Pg**	**21 02 09.5**	**-0.5**
	baz=225						
TYC	**Yuchr**	**0.80**	**286**	⇓*i*P	**Pg**	**21 02 09.3**	**-0.8**
	baz=285						
TYC				eS	**Sg**	**21 02 19.6**	**-1.0**
	baz=285						
NNS	**Nan Shan**	**0.81**	**338**	⇓*i*P	**Pg**	**21 02 10.1**	**-0.2**
	baz=337						
NNS				S	**Sg**	**21 02 19.9**	**-0.9**
	baz=337						
TWC	**Suao**	**0.93**	**8**	P	**Pg**	**21 02 12.7**	**+0.1**
	baz=16						
TWC				S	**Sg**	**21 02 25.6**	**+0.9**
	baz=16						
CHN5	**Tsauling**	**0.94**	**265**	⇓*i*P	**Pg**	**21 02 12.9**	**+0.2**
	baz=253						
CHN5				eS	**Sg**	**21 02 25.7**	**+0.7**
	baz=253						
WNT	**Mingjian**	**0.95**	**282**	⇓*i*P	**Pg**	**21 02 13.4**	**+0.5**
	baz=286						
WNT				S	**Sg**	**21 02 27.2**	**+1.9**
	baz=286						
ENTT	**Nioudou**	**0.96**	**353**	⇓*i*P	**Pg**	**21 02 12.5**	**-0.6**
	baz=8.0						
ENTT				S	**Sg**	**21 02 26.4**	**+0.8**
	baz=8.0						
STYT	**Tauyuan**	**1.01**	**239**	P	**Pb**	**21 02 13.7**	**-0.4**
	baz=227						
STYT				eS	**Sg**	**21 02 28.6**	**+1.4**
	baz=227						
YHNB	**Yeheng**	**1.02**	**343**	eP	**Pb**	**21 02 13.6**	**-0.7**
YHNB				eS	**Sg**	**21 02 27.6**	**-0.1**
TWE	**Neicheng**	**1.03**	**358**	P	**Pb**	**21 02 13.7**	**-0.7**
	baz=14						
TWE				eS	**Sg**	**21 02 29.0**	**+1.1**
	baz=14						
NSK	**Sanguang**	**1.03**	**343**	⇓*i*P	**Pb**	**21 02 13.8**	**-0.7**
	baz=349						
NSK				S	**Sg**	**21 02 28.0**	**0.0**
	baz=349						
TWG	**Pinlang**	**1.04**	**214**	eP	**Pb**	**21 02 13.3**	**-1.2**
TWG				eS	**Sg**	**21 02 27.4**	**-0.7**
TWG	**Pinlang**	**1.04**	**214**	eP	**Pb**	**21 02 14.5**	**0.0**
	baz=208						
WGK	**Gukeng**	**1.04**	**270**	eP	**Pb**	**21 02 14.7**	**+0.1**
	baz=267						
TCU	**Taichung**	**1.04**	**296**	P	**Pb**	**21 02 14.9**	**+0.3**
	baz=296						
TPUB	**Ta-pu**	**1.05**	**249**	eP	**Pb**	**21 02 14.7**	**-0.1**
TPUB				eS	**Sb**	**21 02 28.1**	**-0.5**
TTN	**Taitung**	**1.06**	**209**	eP	**Pb**	**21 02 14.3**	**-0.5**
	baz=186						
CHN4	**Tsaushan**	**1.07**	**252**	⇓*i*P	**Pb**	**21 02 15.3**	**+0.3**
	baz=256						
CHN4				eS	**Sb**	**21 02 30.9**	**+1.9**
	baz=256						
TWQ1	**Liyutan**	**1.07**	**308**	⇓*i*P	**Pb**	**21 02 15.1**	**0.0**
	baz=309						
TWQ1				eS	**Sb**	**21 02 29.7**	**+0.5**
	baz=309						
ILA	**Ilan**	**1.08**	**2**	eP	**Pb**	**21 02 16.1**	**+0.9**
	baz=17						
ILA				eS	**Sb**	**21 02 30.9**	**+1.7**
	baz=17						
WTP	**Ta-pu**	**1.09**	**247**	⇓*i*P	**Pb**	**21 02 15.5**	**+0.1**
	baz=241						
WTP				eS	**Sb**	**21 02 30.8**	**+1.2**
	baz=241						
NSY	**Sanyi**	**1.12**	**311**	⇓*i*P	**Pb**	**21 02 16.6**	**+0.6**
	baz=311						
NSY				eS	**Sb**	**21 02 31.8**	**+1.1**
	baz=311						
NSTT	**Nanjuang**	**1.14**	**326**	⇓*i*P	**Pb**	**21 02 16.0**	**-0.3**
	baz=321						
NSTT				eS	**Sb**	**21 02 29.0**	**-2.0**
	baz=321						
CHY	**Chiayi**	**1.19**	**261**	eP	**Pb**	**21 02 17.1**	**0.0**
	baz=257						
CHY				eS	**Sb**	**21 02 32.4**	**0.0**
	baz=257						
TWK	**Hsinying**	**1.19**	**250**	⇓*i*P	**Pn**	**21 02 17.2**	**+0.2**
	baz=243						
TWK				eS	**Sb**	**21 02 34.5**	**+2.0**
	baz=243						
SGST	**Jiashian**	**1.19**	**240**	⇓P	**Pn**	**21 02 17.4**	**+0.3**
	baz=234						
SGST				eS	**Sb**	**21 02 35.1**	**+2.7**
	baz=234						
ECL	**Taimali**	**1.28**	**213**	eP	**Pn**	**21 02 16.7**	**-1.7**
	baz=207						
TWA	**Mucha**	**1.29**	**355**	*e*P	**Pn**	**21 02 18.2**	**-0.4**
	baz=2.0						
TWA				S	**Sb**	**21 02 36.5**	**+1.0**
	baz=2.0						
HSN	**Hsinchu**	**1.30**	**329**	*e*P	**Pn**	**21 02 19.6**	**+1.0**
	baz=335						
HSN				eS	**Sb**	**21 02 37.1**	**+1.5**
	baz=335						
TATO	**Taipei**	**1.30**	**352**	*e*P	**Pn**	**21 02 18.4**	**-0.2**
TATO				eS	**Sb**	**21 02 32.0**	**-3.6**
WTCT	**Ta-ch'eng**	**1.31**	**278**	*e*P	**Pn**	**21 02 18.7**	**0.0**
	baz=274						
WTCT				eS	**Sb**	**21 02 37.5**	**+1.5**
	baz=274						
TWB1	**Santiao Chiao**	**1.34**	**11**	*e*P	**Pn**	**21 02 20.2**	**+1.0**
	baz=16						
SSD	**Sandimen**	**1.35**	**227**	*e*P	**Pn**	**21 02 19.4**	**0.0**
	baz=211						
TAP1	**Taipei**	**1.36**	**353**	*e*P	**Pn**	**21 02 19.8**	**+0.3**
	baz=1.0						
TAP1				eS	**Sb**	**21 02 37.1**	**-0.3**
	baz=1.0						
NCU	**National Centr**	**1.36**	**340**	*e*P	**Pn**	**21 02 19.5**	**0.0**
	baz=2.0						
NCU				eS	**Sb**	**21 02 38.8**	**+1.3**
	baz=2.0						
CHN3	**Shinhua**	**1.37**	**244**	*e*P	**Pn**	**21 02 20.8**	**+1.2**
	baz=239						
CHN3				eS	**Sb**	**21 02 39.8**	**+2.1**
	baz=239						
NWF	**Wu-fen Shan**	**1.38**	**3**	*e*P	**Pn**	**21 02 20.3**	**+0.5**
	baz=7.0						
NWF				eS	**Sn**	**21 02 39.8**	**+1.7**
	baz=7.0						
CHN8	**Yiju**	**1.41**	**256**	*e*P	**Pn**	**21 02 20.3**	**+0.2**
	baz=251						
YOJ	**Yonaguni jima**	**1.43**	**57**	P	**Pn**	**21 02 20.5**	**+0.1**
YOJ				eS	**Sn**	**21 02 41.0**	**+1.9**
YOJ	**Yonaguni jima**	**1.43**	**57**	*e*P	**Pn**	**21 02 21.0**	**+0.7**
	baz=60						
TWS1	**Kuangyinshan**	**1.43**	**350**	*e*P	**Pn**	**21 02 20.9**	**+0.4**
	baz=9.0						
TWS1				eS	**Sn**	**21 02 40.9**	**+1.6**
	baz=9.0						
TWM1	**Shoushan**	**1.45**	**234**	*e*P	**Pn**	**21 02 22.6**	**+1.8**
	baz=216						
SCLT	**Jiali**	**1.47**	**250**	*e*P	**Pn**	**21 02 21.0**	**0.0**
	baz=244						
TAI1	**Yung-k'ang**	**1.50**	**245**	*e*P	**Pn**	**21 02 22.8**	**+1.5**
	baz=238						
EAST	**Anshuo**	**1.51**	**211**	*e*P	**Pn**	**21 02 20.3**	**-1.3**
	baz=207						
TAW	**Tawu**	**1.51**	**209**	*e*P	**Pn**	**21 02 20.0**	**-1.6**
	baz=205						
TWY	**Chenhua**	**1.59**	**357**	*e*P	**Pn**	**21 02 24.1**	**+1.5**
	baz=3.0						
SCZT	**Fangliau**	**1.64**	**217**	*e*P	**Pn**	**21 02 24.4**	**+1.1**
	baz=204						
LAY	**Lan-yu**	**1.64**	**185**	*e*P	**Pn**	**21 02 21.6**	**-1.8**
	baz=182						
TWP	**Hsiaoliuchiu**	**1.81**	**223**	*e*P	**Pn**	**21 02 26.3**	**+0.6**
	baz=218						
HEN	**Hengchun**	**1.89**	**208**	*e*P	**Pn**	**21 02 27.2**	**+0.4**
	baz=195						
TWK1	**Hengchun**	**1.92**	**206**	*e*P	**Pn**	**21 02 27.1**	**0.0**
	baz=189						
TSEB	**Hengchuen, Pin**	**1.92**	**203**	*e*P	**Pn**	**21 02 25.7**	**-1.5**
	baz=189						
HATJ	**Hateruma jima**	**1.96**	**79**	P	**Pn**	**21 02 28.0**	**+0.3**
HATJ				eS	**Sn**	**21 02 53.7**	**+1.4**
IRIF	**Iriomote-Funau**	**1.97**	**70**	P	**Pn**	**21 02 28.3**	**+0.5**
IRIF				eS	**Sn**	**21 02 53.1**	**+0.7**
PNG	**Penghu**	**1.97**	**267**	*e*P	**Pn**	**21 02 27.0**	**-0.9**
	baz=263						
JKRS	**Kuro-shima**	**2.18**	**75**	P	**Pn**	**21 02 31.8**	**+1.0**
JIJ	**Ishigaki jima**	**2.33**	**73**	P	**Pn**	**21 02 32.9**	**0.0**
JIJ				eS	**Sn**	**21 03 02.3**	**+0.8**
JTJ	**Tarama**	**2.90**	**70**	P	**Pn**	**21 02 40.8**	**+0.1**
JTJ				eS	**Sn**	**21 03 17.2**	**+1.6**
KNM	**Kinmen**	**3.07**	**284**	*e*P	**Pn**	**21 02 43.7**	**+0.7**
	baz=266						
QZH	**Quanzhou**	**3.10**	**294**	⇑*i*Pn	**Pn**	**21 02 42.5**	**-0.9**
QZH				Sn	**Sn**	**21 03 18.3**	**-2.1**
QZH				smax			
	comp=N,1μm,0.8s						
QZH				smax			
	comp=E,500nm,0.7s						
JOGS	**Gusukube**	**3.55**	**72**	P	**Pn**	**21 02 50.7**	**+1.1**
JKE	**Kume jima 2**	**5.31**	**59**	P	**Pn**	**21 03 14.1**	**+0.3**
JOW	**Kunigami**	**6.73**	**61**	P	**Pn**	**21 03 31.7**	**-1.6**
JTK	**Tokunoshima**	**7.71**	**56**	P	**Pn**	**21 03 45.0**	**-1.7**
JAM	**Amami Oshima**	**8.53**	**55**	P	**Pn**	**21 03 55.7**	**-2.2**
NJ2	**Nanjing**	**8.71**	**344**	*e*P	**Pn**	**21 04 00.5**	**+0.1**
NJ2				pP		21 04 04.3	
NJ2				sP		21 04 07.3	
NJ2				PP		21 04 10.8	
NJ2				S	**Sn**	**21 05 37.3**	**-1.3**
NJ2				sS		21 05 46.0	
NJ2				pmax	pmax		
	comp=Z,20nm,0.8s						
NJ2				smax			
	comp=N,120nm,0.9s						
NJ2				smax			
	comp=E,190nm,1.1s						
NJ2				LR	LR		
	comp=N,1μm,8.4s						
NJ2				LR	LR		
	comp=E,650nm,8.8s						
WHN	**Wuhan**	**9.46**	**318**	P	**Pn**	**21 04 13.5**	**+2.8**
WHN				S	**Sn**	**21 05 55.8**	**-1.3**
WHN				LR	LR		
	comp=N,2μm,10.5s						
WHN				LR	LR		
	comp=E,1μm,7.2s						
WHN				LR	LR		
	comp=Z,2μm,9.9s						
QIZ	**Qiongzhong**	**11.98**	**249**	*e*Pn	**Pn**	**21 04 44.4**	**-0.9**
ENH	**Enshi**	**12.71**	**304**	*e*Pn	**Pn**	**21 04 53.1**	**-2.2**
GYA	**Guiyang**	**13.90**	**285**	P	**Pn**	**21 05 12.5**	**+0.9**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				LR	LR		
	comp=N,230nm,9.9s						
GYA				LR	LR		
	comp=E,590nm,9.9s						
GYA				LR	LR		
	comp=Z,750nm,10.5s						
INCN	**Inchon**	**14.39**	**16**	Pn	**Pn**	**21 05 17.4**	**-0.7**
KSRS	**Korea Array**	**14.73**	**20**	P	**Pn**	**21 05 26.9**	**+4.2**
	comp=Z,0.6nm,0.3s,baz=199,slow=13,SNR=20						
KSRS				LR	LR	21 11 07.2	
	comp=Z,38nm,18.6s,baz=175,slow=37						
BJT	**Baijiatuau**	**16.94**	**345**	*e*Pn	**Pn**	**21 05 50.1**	**-1.4**
JHJ	**Hachijo jima 2**	**18.46**	**55**	LR	LR	21 12 36.5	
	comp=Z,25nm,21.0s,baz=52,slow=34						
MJAR	**Matsushiro Arr**	**19.15**	**44**	P	**Pn**	**21 06 18.0**	**-0.7**
	baz=233,slow=9.3,SNR=5.5						
MJAR				LR	LR	21 14 38.5	
	comp=Z,78nm,19.4s,baz=210,slow=40						
MJAR	**Matsushiro Arr**	**19.15**	**44**	P	**Pn**	**21 06 18.0**	**-0.7**
MJAR				LR	LR	21 14 38.5	
LZH	**Lanzhou**	**19.77**	**313**	*e*P	**Pn**	**21 06 29.5**	**+3.4**
LZH				pP	pP	21 06 34.0	+6.1
LZH				sP	sP	21 06 37.0	+7.6
LZH				pmax	p

YAK	**Yakutsk**	**38.71 6**	P	**P**	**21 09 16.9**	**-1.3**
MKAR	**Makanchi Array**	**39.02 316**	P	**P**	**21 09 21.9**	**+0.8**
	comp=Z,1.6nm,0.7s,mb3.9,baz=117,slow=9.2,SNR=9.7					
ZAA0	**Zalesovo Array**	**40.92 327**	*e*P	**P**	**21 09 36.1**	**-0.6**
ZALV	**Zalesovo Beam**	**40.92 327**	P	**P**	**21 09 35.5**	**-1.2**
	comp=Z,2.1nm,0.7s,mb3.9,baz=124,slow=8.0,SNR=5.4					
ZALV			LR	LR	21 27 51.2	
	comp=Z,43nm,18.1s,MS3.4,baz=53,slow=38					
PMG	**Port Moresby**	**41.24 140**	P	**P**	**21 09 41.3**	**+1.5**
KURK	**Kurchatov**	**42.77 320**	P	**P**	**21 09 51.5**	**-0.4**
	comp=Z,0.9nm,0.7s,mb3.6,baz=110,slow=11,SNR=7.6					
KURK	**Kurchatov**	**42.77 320**	*e*P	**P**	**21 09 50.6**	**-1.3**
	comp=Z,2.9nm,1.0s,mb4.0					
KBL	**Kabul**	**46.80 296**	*e*P	**P**	**21 10 22.5**	**-1.8**
	comp=Z,2.4nm,0.3s,mb4.6					
BVAR	**Borovoye Array**	**48.36 321**	P	**P**	**21 10 36.1**	**0.0**
	comp=Z,0.6nm,0.6s,mb3.8,baz=107,slow=7.8,SNR=2.7					
ASAR	**Alice Springs**	**48.54 165**	P	**P**	**21 10 37.4**	**-0.3**
	comp=Z,1.0nm,1.0s,mb3.8,baz=340,slow=5.7,SNR=4.8					
ABKAR	**Akbulak array**	**54.13 315**	*e*P	**P**	**21 11 18.9**	**-0.5**
	comp=Z,2.5nm,0.8s,mb4.2					
ARU	**Arti**	**55.79 323**	P	**P**	**21 11 29.8**	**-1.6**
KIV	**Kislovodsk**	**66.27 309**	P	**P**	**21 12 40.4**	**-2.4**
ILAR	**Eielson Array**	**69.44 27**	P	**P**	**21 13 01.9**	**-0.5**
	comp=Z,0.7nm,0.9s,mb3.6,baz=298,slow=7.7,SNR=7.5					
DAWY	**Dawson**	**72.76 27**	*e*P	**P**	**21 13 22.7**	**+0.2**
INK	**Inuvik**	**73.51 22**	P	**P**	**21 13 26.3**	**-0.6**
PNL	**Peninsula**	**74.21 31**	P	**P**	**21 13 30.6**	**-0.5**
NOA	**NORSAR Array B**	**78.89 332**	P	**P**	**21 13 57.2**	**-0.3**
	comp=Z,0.6nm,0.9s,mb3.5,baz=67,slow=4.9,SNR=3.6					
YKA	**Yellowknife Ar**	**83.25 23**	P	**P**	**21 14 20.8**	**+0.1**
	comp=Z,1.6nm,0.9s,mb4.1,baz=310,slow=5.2,SNR=6.9					
YKA	**Yellowknife Ar**	**83.25 23**	P	**P**	**21 14 20.8**	**+0.1**

*CSEM **31** 21:02:39.1, 38°.08N×26°.24W, h0^{km}, ML2.4, After PDA*
PDA 31 21:02:39.1±1.1, 38°.08N×26°.24W, h0km±6km**, MD3.8, ML2.4, Error ellipse: s-maj=9.4km s-min=2.0km az=39.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSET	**Sete Cidades**	**0.48**	**122**	*e*P	Pg	21 02 48.0	-0.3
PSET				*e*S	Sg	21 02 54.9	+0.4
PSET				A		21 02 57.1	
	55nm,0.3s						
PSET	**Sete Cidades**	**0.48**	**122**	*e*P	Pg	21 02 48.0	-0.3
PSET				*e*S	Sg	21 02 54.9	+0.4
PDA	**Ponta Delgada**	**0.56**	**126**	*e*P	Pg	21 02 49.2	-0.7
PDA	**Ponta Delgada**	**0.56**	**126**	*e*P	Pg	21 02 49.2	-0.7
BART	**Pico Bartolome**	**0.90**	**109**	*e*P	Pg	21 02 53.9	-2.4
BART				*e*S	Sg	21 03 05.7	-2.2
BART				A		21 03 09.2	
	37nm,0.3s						
BART	**Pico Bartolome**	**0.90**	**109**	*e*P	Pg	21 02 53.9	-2.4
BART				*e*S	Sg	21 03 05.7	-2.2
ADH	**Angra Heroismo**	**0.97**	**306**	*e*P	Pg	21 02 54.9	-2.9
ADH				*e*S	Sg	21 03 06.8	-3.6
ADH				A		21 03 07.5	
	62nm,0.1s						
ADH	**Angra Heroismo**	**0.97**	**306**	*e*P	Pg	21 02 54.9	-2.9
ADH				*e*S	Sg	21 03 06.8	-3.6
PSMA	**Santa Maria**	**1.40**	**141**	*e*P	Pn	21 03 00.7	-5.1
PSMA				*e*S	Sg	21 03 17.7	-6.2
PSMA				A		21 03 18.4	
	14nm,0.1s						
PSMN	**Pico do Norte,**	**1.42**	**139**	*e*P	Pn	21 03 01.3	-4.9
PSMN				*e*S	Sg	21 03 17.5	-7.3
PSMN	**Pico do Norte,**	**1.42**	**139**	*e*P	Pn	21 03 01.3	-4.9
PSMN				*e*S	Sg	21 03 17.5	-7.3
PMAN	**Manadas**	**1.56**	**291**	*e*S	Sn	21 03 21.1	-7.8
PMAN				A		21 03 22.3	
	22nm,0.3s						
PMAN	**Manadas**	**1.56**	**291**	*e*S	Sn	21 03 21.1	-7.8
ROSA	**Rosais**	**1.70**	**293**	*e*P	Pn	21 03 05.0	-5.0
ROSA				*e*S	Sn	21 03 25.3	-7.1
ROSA	**Rosais**	**1.70**	**293**	*e*P	Pn	21 03 05.0	-5.0
ROSA				*e*S	Sn	21 03 25.3	-7.1
PCAN	**Candelaria**	**1.81**	**283**	*e*S	Sn	21 03 27.8	-7.4
PCAN				A		21 03 30.5	
	22nm,0.3s						
PCAN	**Candelaria**	**1.81**	**283**	*e*S	Sn	21 03 27.8	-7.4
CALA	**Caldeira**	**2.00**	**285**	*e*P	Pn	21 03 13.3	-0.9
CALA				*e*S	Sn	21 03 31.8	-8.1
CALA	**Caldeira**	**2.00**	**285**	*e*P	Pn	21 03 13.3	-0.9
CALA				*e*S	Sn	21 03 31.8	-8.1
PCED	**Cedros**	**2.01**	**287**	*e*P	Sn	21 03 31.1	-9.1

*NEIC **31** 21:09:09.7±2.0, 23°.69N×121°.72E, h10^{km}±12^{km}, Error ellipse: s-maj=25.5km s-min=7.4km az=108.0*
*TAP **31** 21:09:10.7, 23°.73N×121°.60E, h9^{km}, ML3.6, C*
ISC 31 21:09:10.3±0.5, 23°.69N±0°.02×121°.72E±0°.03, h3km±4km**, n60, σ1°.05/97, 1C-7D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	**0.16**	**279**	*i* P	**Pg**	**21 09 13.1**	**-0.4**
	baz=245						
TEGC				*i* S	**Sg**	**21 09 15.7**	**0.0**
	baz=245						
ESF	**Shoufeng Towns**	**0.27**	**314**	*i* P	**Pg**	**21 09 14.8**	**-0.7**
	baz=319						
ESF				*i* S	**Sg**	**21 09 18.2**	**-0.8**
	baz=319						
ESL	**Shilin**	**0.29**	**296**	⇑*i*P	**Pg**	**21 09 14.9**	**-1.0**
	baz=290						
ESL				*i* S	**Sg**	**21 09 17.9**	**-1.8**
	baz=290						
HWA	**Hwalien**	**0.31**	**341**	*i* P	**Pg**	**21 09 16.8**	**+0.5**
	baz=1.0						
HWA				*i* S	**Sg**	**21 09 22.1**	**+1.8**
	baz=1.0						
EHY	**Hungye**	**0.40**	**244**	⇓P	**Pg**	**21 09 18.3**	**+0.3**
	baz=240						
EHY				*e*S	**Sg**	**21 09 25.4**	**+2.2**
	baz=240						
TWD	**Chiawan**	**0.41**	**344**	⇓*i*P	**Pg**	**21 09 18.3**	**+0.1**
	baz=14						
TWD				S	**Sg**	**21 09 24.3**	**+0.8**
	baz=14						
YULB	**Yu-li**	**0.48**	**233**	*e*P	**Pg**	**21 09 20.4**	**+0.9**
YULB				*e*S	**Sg**	**21 09 26.2**	**+0.4**
NACB	**Ninganchiao**	**0.50**	**347**	*e*P	**Pg**	**21 09 19.6**	**-0.3**
NACB				*e*S	**Sg**	**21 09 26.1**	**-0.3**
TWF1	**Yuli**	**0.51**	**229**	*e*P	**Pg**	**21 09 20.9**	**+0.9**
	baz=231						
WHF	**Hehuan Shan**	**0.62**	**318**	⇓*i*P	**Pg**	**21 09 21.5**	**-0.7**
	baz=312						
WHF				*e*S	**Sg**	**21 09 29.4**	**-0.8**
	baz=312						
SSLB	**Suanglung**	**0.70**	**278**	*e*P	**Pg**	**21 09 22.7**	**-1.2**
SSLB				*e*S	**Sg**	**21 09 32.1**	**-0.9**
ENA	**Nanau**	**0.74**	**2**	P	**Pg**	**21 09 24.7**	**+0.2**
	baz=21						
ENA				*e*S	**Sg**	**21 09 35.9**	**+1.7**
	baz=21						
TWT	**Tachien**	**0.75**	**319**	P	**Pg**	**21 09 24.3**	**-0.4**
	baz=312						
TWT				*e*S	**Sg**	**21 09 33.7**	**-0.8**
	baz=312						
SMLT	**Sun Moon Lake**	**0.77**	**285**	⇓*i*P	**Pg**	**21 09 24.5**	**-0.7**
	baz=283						
SMLT				*e*S	**Sg**	**21 09 34.6**	**-0.5**
	baz=283						
ELDTW	**Lidau**	**0.81**	**233**	*e*P	**Pg**	**21 09 25.3**	**-0.5**
	baz=226						
NNS	**Nan Shan**	**0.81**	**337**	⇓P	**Pg**	**21 09 25.6**	**-0.3**
	baz=336						
NNS				*e*S	**Sg**	**21 09 35.4**	**-1.1**
	baz=336						
TYC	**Yuchr**	**0.82**	**286**	⇓*i*P	**Pg**	**21 09 25.1**	**-0.9**
	baz=284						
TYC				S	**Sg**	**21 09 35.4**	**-1.2**
	baz=284						
TWC	**Suao**	**0.93**	**8**	*e*P	**Pg**	**21 09 28.2**	**+0.1**
	baz=14						
TWC				*e*S	**Sg**	**21 09 41.8**	**+1.6**
	baz=14						
CHN5	**Tsauling**	**0.96**	**265**	P	**Pg**	**21 09 28.7**	**0.0**
	baz=253						
CHN5				*e*S	**Sg**	**21 09 41.1**	**+0.1**
	baz=253						
ENTT	**Nioudou**	**0.96**	**352**	*e*P	**Pg**	**21 09 28.5**	**-0.2**
	baz=358						
ENTT				*e*S	**Sg**	**21 09 42.7**	**+1.4**
	baz=358						
WNT	**Mingjian**	**0.96**	**282**	⇓*i*P	**Pg**	**21 09 29.1**	**+0.2**
	baz=285						
WNT				*e*S	**Sg**	**21 09 43.0**	**+1.7**
	baz=285						
STYT	**Tauyuan**	**1.02**	**240**	*e*P	**Pg**	**21 09 29.7**	**-0.2**
	baz=228						
STYT				*e*S	**Sg**	**21 09 44.4**	**+1.2**
	baz=228						
YHNB	**Yeheng**	**1.03**	**342**	*e*P	**Pg**	**21 09 29.6**	**-0.5**
YHNB				*e*S	**Sg**	**21 09 42.7**	**-0.7**
TWE	**Neicheng**	**1.03**	**358**	*e*P	**Pg**	**21 09 29.8**	**-0.4**
	baz=3.0						
NSK	**Sanguang**	**1.04**	**342**	*e*P	**Pg**	**21 09 29.5**	**-0.7**
	baz=348						
NSK				*e*S	**Sg**	**21 09 43.0**	**-0.8**
	baz=348						
TWG	**Pinlang**	**1.04**	**215**	*e*P	**Pg**	**21 09 28.8**	**-1.5**
TWG				*e*S	**Sg**	**21 09 42.3**	**-1.6**
TCU	**Taichung**	**1.06**	**296**	*e*P	**Pg**	**21 09 30.6**	**0.0**
	baz=295						
TCU				*e*S	**Sg**	**21 09 45.7**	**+1.3**
	baz=295						
WGK	**Gukeng**	**1.06**	**270**	*e*P	**Pg**	**21 09 30.1**	**-0.5**
	baz=266						
WGK				*e*S	**Sg**	**21 09 45.7**	**+1.4**
	baz=266						
TTN	**Taitung**	**1.06**	**210**	*e*P	**Pg**	**21 09 28.7**	**-2.0**
	baz=217						
TPUB	**Ta-pu**	**1.07**	**249**	*e*P	**Pg**	**21 09 30.5**	**-0.3**
TPUB				*e*S	**Sg**	**21 09 44.9**	**+0.2**
CHN4	**Tsaushan**	**1.08**	**252**	*e*P	**Pg**	**21 09 31.0**	**-0.1**
	baz=256						
CHN4				*e*S	**Sg**	**21 09 46.4**	**+1.2**
	baz=256						
TWQ1	**Liyutan**	**1.09**	**308**	*e*P	**Pg**	**21 09 30.9**	**-0.3**
	baz=308						
TWQ1				*e*S	**Sg**	**21 09 45.7**	**+0.5**
	baz=308						
WTP	**Ta-pu**	**1.10**	**247**	*e*P	**Pg**	**21 09 31.1**	**-0.3**
	baz=241						
WTP				*e*S	**Sg**	**21 09 46.5**	**+0.7**
	baz=241						
NSY	**Sanyi**	**1.14**	**310**	P	**Pg**	**21 09 32.5**	**+0.4**
	baz=311						
NSY				*e*S	**Sg**	**21 09 47.5**	**+0.7**
	baz=311						
NSTT	**Nanjuang**	**1.15**	**325**	*e*P	**Pg**	**21 09 31.6**	**-0.7**
	baz=328						
NSTT				*e*S	**Sg**	**21 09 46.3**	**-0.9**
	baz=328						
CHY	**Chiayi**	**1.20**	**261**	*e*P	**Pg**	**21 09 34.0**	**+0.7**
	baz=270						
SGST	**Jiashian**	**1.20**	**240**	*e*P	**Pg**	**21 09 33.5**	**+0.1**
	baz=235						
SGST				*e*S	**Sg**	**21 09 51.0**	**+2.1**
	baz=235						
TWK	**Hsinying**	**1.20**	**250**	*e*P	**Pg**	**21 09 33.1**	**-0.2**
	baz=245						
TWK				*e*S	**Sg**	**21 09 49.7**	**+0.8**
	baz=245						
ECL	**Taimali**	**1.29**	**213**	*e*P	**Pg**	**21 09 32.2**	**-2.8**
	baz=208						
TWA	**Mucha**	**1.29**	**355**	*e*P	**Pg**	**21 09 33.5**	**-1.7**
	baz=360						
TATO	**Taipei**	**1.30**	**351**	*e*Pn	**Pn**	**21 09 34.0**	**-1.5**
TATO				*e*S	**Sg**	**21 09 51.0**	**-1.2**
WTCT	**Ta-ch'eng**	**1.33**	**278**	*e*P	**Pg**	**21 09 36.8**	**+1.1**
	baz=275						
TWB1	**Santiao Chiao**	**1.34**	**11**	*e*P	**Pg**	**21 09 37.9**	**+1.8**
	baz=16						
TAP1	**Taipei**	**1.36**	**353**	*e*P	**Pg**	**21 09 37.1**	**+0.7**
	baz=357						
SSD	**Sandimen**	**1.37**	**227**	*e*P	**Pg**	**21 09 36.2**	**-0.3**
	baz=212						
NCU	**National Centr**	**1.37**	**339**	*e*P	**Pg**	**21 09 36.5**	**-0.1**
	baz=344						
CHN3	**Shinhua**	**1.38**	**244**	*e*P	**Pn**	**21 09 37.9**	**+1.4**
	baz=238						
NWF	**Wu-fen Shan**	**1.38**	**2**	*e*P	**Pn**	**21 09 36.5**	**-0.1**
	baz=14						
NWF				*e*S	**Sg**	**21 09 57.5**	**+2.7**
	baz=14						
CHN8	**Yiju**	**1.42**	**257**	*e*P	**Pn**	**21 09 35.5**	**-1.6**
	baz=251						
TWS1	**Kuangyinshan**	**1.44**	**349**	*e*P	**Pn**	**21 09 37.2**	**-0.1**
	baz=16						
TWS1				*e*S	**Sg**	**21 09 57.6**	**+1.1**
	baz=16						
TWM1	**Shoushan**	**1.47**	**234**	*e*P	**Pn**	**21 09 38.6**	**+0.9**
	baz=230						
EAST	**Anshuo**	**1.52**	**212**	*e*P	**Pn**	**21 09 35.7**	**-2.8**
	baz=195						
TAW	**Tawu**	**1.52**	**210**	*e*P	**Pn**	**21 09 37.9**	**-0.6**
	baz=205						
TWY	**Chenhua**	**1.59**	**356**	*e*P	**Pn**	**21 09 41.0**	**+1.6**
	baz=4.0						
LAY	**Lan-yu**	**1.65**	**185**	*e*P	**Pn**	**21 09 37.2**	**-3.0**
	baz=182						
SCZT	**Fangliau**	**1.65**	**218**	*e*P	**Pn**	**21 09 40.4**	**+0.2**
	baz=204						
HEN	**Hengchun**	**1.90**	**209**	*e*P	**Pn**	**21 09 45.4**	**+1.7**
	baz=196						
TWK1	**Hengchun**	**1.93**	**206**	*e*P	**Pn**	**21 09 45.8**	**+1.8**
	baz=190						
TSEB	**Hengchuen, Pin**	**1.93**	**203**	*e*P	**Pn**	**21 09 45.0**	**+0.9**
	baz=189						
PNG	**Penghu**	**1.98**	**267**	*e*P	**Pn**	**21 09 44.7**	**-0.1**
	baz=262						
PNG				*e*S	**Sn**	**21 10 08.5**	**-1.8**
	baz=262						

CASC 31 21:29:06.9±2.2, 7°.92N×83°.09W, h11km±27km**, MD3.9, 1C-1D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.73**	**354**	*e*P	Pg	21 29 20.2	-0.8
ACR				*e*S	Sg	21 29 30.0	-0.6
BRU2	**Volcan**	**0.95**	**25**	⇓*i*P	Pg	21 29 24.2	-1.0
BRU2				*e*S	Sg	21 29 38.5	+0.8
TBS2		**0.96**	**26**	*i* P	Pg	21 29 18.8	-6.7
TBS2				*e*S	Sg	21 29 29.6	-8.6
CTCR	**Cotoan**	**1.02**	**19**	⇑*i*P	Pb	21 29 27.7	+1.2
CTCR				*e*S	Sg	21 29 39.9	0.0
BRU	**Baru**	**1.02**	**31**	*e*P	Pb	21 29 13.8	-13
BRU				*e*S	Sg	21 29 20.4	-20
BAR1		**1.33**	**351**	*e*P	Pn	21 29 30.3	-1.1
CNI	**Changuinola**	**1.59**	**21**	*e*P	Pn	21 29 34.2	-0.7
BUS	**Buena Vista**	**1.75**	**338**	*e*P	Pn	21 29 38.2	+1.1
LAJ	**Bijagual**	**2.18**	**332**	*e*P	Pn	21 29 43.6	+0.6
PRS1	**Puriscal**	**2.38**	**330**	*e*P	Pn	21 29 44.6	-1.1
CGA2	**Cerro Gallo 2**	**2.48**	**327**	*e*P	Pn	21 29 47.8	+0.5

*JMA **31** 21:41:42.9±0.3, 23°.63N×121°.54E, h73^{km}, M2.7*
*NEIC **31** 21:41:42.4±2.5, 23°.70N×121°.76E, h12^{km}±12^{km}, Error ellipse: s-maj=28.2km s-min=7.2km az=108.0*
*TAP **31** 21:41:43.6, 23°.73N×121°.62E, h9^{km}, ML3.6, B*
ISC 31 21:41:43.3±0.4, 23°.68N±0°.01×121°.72E±0°.02, h6km±3km**, n69, σ0°.96/112, 2C-15D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	**0.17**	**279**	*i* P	**Pg**	**21 41 46.2**	**-0.4**
	baz=252						
TEGC				*i* S	**Sg**	**21 41 48.3**	**-0.6**
	baz=252						
ESF	**Shoufeng Towns**	**0.27**	**314**	P	**Pg**	**21 41 48.0**	**-0.6**
	baz=319						
ESF				S	**Sg**	**21 41 51.5**	**-0.6**
	baz=319						
ESL	**Shilin**	**0.29**	**297**	⇓*i*P	**Pg**	**21 41 48.1**	**-0.9**
	baz=291						
ESL				*i* S	**Sg**	**21 41 51.2**	**-1.7**
	baz=291						
HWA	**Hwalien**	**0.31**	**340**	⇑P	**Pg**	**21 41 49.7**	**+0.3**
	baz=14						
HWA				*e*S	**Sg**	**21 41 54.8**	**+1.3**
	baz=14						
EHY	**Hungye**	**0.40**	**244**	⇓*i*P	**Pg**	**21 41 51.4**	**+0.3**
	baz=241						
EHY				*e*S	**Sg**	**21 41 57.4**	**+1.0**
	baz=241						
TWD	**Chiawan**	**0.41**	**344**	⇓*i*P	**Pg**	**21 41 51.4**	**+0.1**
	baz=14						
TWD				S	**Sg**	**21 41 57.2**	**+0.6**
	baz=14						
YULB	**Yu-li**	**0.48**	**233**	*e*P	**Pg**	**21 41 52.9**	**+0.3**
YULB				*e*S	**Sg**	**21 42 00.3**	**+1.4**
NACB	**Ninganchiao**	**0.50**	**347**	*e*P	**Pg**	**21 41 52.5**	**-0.5**
NACB				*e*S	**Sg**	**21 41 59.4**	**-0.2**
TWF1	**Yuli**	**0.51**	**230**	⇓P	**Pg**	**21 41 53.9**	**+0.9**
	baz=207						
WHF	**Hehuan Shan**	**0.62**	**318**	⇓*i*P	**Pg**	**21 41 54.6**	**-0.6**
	baz=312						
WHF				*i* S	**Sg**	**21 42 02.6**	**-0.7**
	baz=312						
SSLB	**Suanglung**	**0.71**	**279**	*e*P	**Pg**	**21 41 56.1**	**-0.8**
SSLB				S	**Sg**	**21 42 05.4**	**-0.7**
ENA	**Nanau**	**0.74**	**2**	⇓*i*P	**Pg**	**21 41 57.8**	**+0.2**
	baz=11						
ENA				*e*S	**Sg**	**21 42 08.4**	**+1.2**
	baz=11						
TWT	**Tachien**	**0.76**	**319**	P	**Pg**	**21 41 57.5**	**-0.4**
	baz=312						
TWT				*e*S	**Sg**	**21 42 07.0**	**-0.6**
	baz=312						
SMLT	**Sun Moon Lake**	**0.78**	**285**	⇓*i*P	**Pg**	**21 41 57.6**	**-0.6**
	baz=284						
ELDTW	**Lidau**	**0.81**	**233**	⇓*i*P	**Pg**	**21 41 58.3**	**-0.5**
	baz=225						
NNS	**Nan Shan**	**0.82**	**337**	⇓*i*P	**Pg**	**21 41 58.7**	**-0.3**
	baz=337						
NNS				*e*S	**Sg**	**21 42 09.2**	**-0.4**
	baz=337						
TYC	**Yuchr**	**0.82**	**286**	⇓*i*P	**Pg**	**21 41 58.2**	**-0.8**
	baz=285						
TYC				*e*S	**Sg**	**21 42 08.7**	**-1.0**
	baz=285						
TWC	**Suao**	**0.93**	**7**	*e*P	**Pg**	**21 42 01.3**	**+0.1**
	baz=16						
TWC				*e*S	**Sg**	**21 42 14.3**	**+1.1**
	baz=16						
CHN5	**Tsauling**	**0.96**	**265**	⇓*i*P	**Pg**	**21 42 01.7**	**0.0**
	baz=253						
CHN5				*e*S	**Sg**	**21 42 14.4**	**+0.3**
	baz=253						
ENTT	**Nioudou**	**0.96**	**352**	P	**Pg**	**21 42 01.5**	**-0.3**
	baz=7.0						
ENTT				*e*S	**Sg**	**21 42 14.7**	**+0.4**
	baz=7.0						
WNT	**Mingjian**	**0.97**	**282**	P	**Pg**	**21 42 02.2**	**+0.3**
	baz=280						
WNT				*e*S	**Sg**	**21 42 15.8**	**+1.4**
	baz=280						
STYT	**Tauyuan**	**1.02**	**240**	⇓*i*P	**Pg**	**21 42 02.5**	**-0.5**
	baz=225						
STYT				*e*S	**Sg**	**21 42 17.3**	**+1.1**
	baz=225						
YHNB	**Yeheng**	**1.03**	**342**	*e*P	**Pg**	**21 42 02.0**	**-1.1**
YHNB				*e*S	**Sg**	**21 42 16.2**	**-0.3**
TWE	**Neicheng**	**1.04**	**357**	P	**Pg**	**21 42 02.9**	**-0.3**
	baz=13						
TWE				*e*S	**Sg**	**21 42 17.8**	**+1.1**
	baz=13						
NSK	**Sanguang**	**1.04**	**342**	⇓*i*P	**Pg**	**21 42 02.5**	**-0.8**
	baz=349						
NSK				S	**Sg**	**21 42 16.3**	**-0.6**
	baz=349						
TWG	**Pinlang**	**1.04**	**215**	*e*P	**Pg**	**21 42 02.4**	**-0.9**
TWG				*e*S	**Sg**	**21 42 16.3**	**-0.6**
TWG	**Pinlang**	**1.04**	**215**	*e*P	**Pg**	**21 42 01.7**	**-1.6**
	baz=208						
WGK	**Gukeng**	**1.06**	**270**	*e*P	**Pg**	**21 42 03.4**	**-0.2**
	baz=266						
TCU	**Taichung**	**1.06**	**296**	P	**Pg**	**21 42 03.8**	**+0.1**
	baz=296						
TCU				*e*S	**Sg**	**21 42 18.9**	**+1.4**
	baz=296						
TTN	**Taitung**	**1.06**	**210**	*e*P	**Pg**	**21 42 03.3**	**-0.4**
	baz=187						
TPUB	**Ta-pu**	**1.07**	**249**	*e*P	**Pg**	**21 42 04.2**	**+0.4**
TPUB				*e*S	**Sg**	**21 42 17.0**	**-0.7**
ILA	**Ilan**	**1.08**	**1**	*e*P	**Pg**	**21 42 06.9**	**+2.9**
	baz=355						
CHN4	**Tsaushan**	**1.08**	**253**	*i* P	**Pg**	**21 42 04.1**	**0.0**
	baz=256						
CHN4				*e*S	**Sg**	**21 42 19.4**	**+1.2**
	baz=256						
TWQ1	**Liyutan**	**1.09**	**308**	⇑*i*P	**Pg**	**21 42 04.4**	**+0.2**
	baz=309						
TWQ1				*e*S	**Sg**	**21 42 19.5**	**+1.1**
	baz=309						
WTP	**Ta-pu**	**1.10**	**247**	⇓*i*P	**Pg**	**21 42 04.3**	**-0.2**
	baz=241						
WTP				*e*S	**Sg**	**21 42 20.0**	**+1.2**
	baz=241						
NSY	**Sanyi**	**1.14**	**310**	*e*P	**Pg**	**21 42 05.4**	**+0.2**
	baz=311						
NSY				*e*S	**Sg**	**21 42 21.3**	**+1.3**
	baz=311						
NSTT	**Nanjuang**	**1.15**	**325**	P	**Pg**	**21 42 04.4**	**-0.9**
	baz=329						
NSTT				S	**Sg**	**21 42 19.4**	**-0.9**
	baz=329						
CHY	**Chiayi**	**1.20**	**261**	*e*P	**Pg**	**21 42 06.0**	**-0.3**
	baz=256						
CHY				*e*S	**Sg**	**21 42 23.2**	**+1.3**
	baz=256						
SGST	**Jiashian**	**1.20**	**240**	*e*P	**Pg**	**21 42 05.8**	**-0.5**
	baz=234						
SGST				*e*S	**Sg**	**21 42 24.3**	**+2.3**
	baz=234						
TWK	**Hsinying**	**1.20**	**250**	⇓*i*P	**Pg**	**21 42 06.0**	**-0.4**
	baz=242						
TWK				*e*S	**Sg**	**21 42 22.9**	**+0.9**
	baz=242						
ECL	**Taimali**	**1.29**	**213**	*e*P	**Pn**	**21 42 05.5**	**-2.3**
	baz=208						
TWA	**Mucha**	**1.30**	**355**	*e*P	**Pn**	**21 42 07.3**	**-0.7**
	baz=1.0						
TWA				*e*S	**Sb**	**21 42 25.8**	**+0.7**
	baz=1.0						
TATO	**Taipei**	**1.30**	**351**	*e*Pn	**Pn**	**21 42 06.2**	**-1.9**
TATO				*e*S	**Sb**	**21 42 23.8**	**-1.5**
HSN	**Hsinchu**	**1.31**	**329**	*e*P	**Pn**	**21 42 08.4**	**+0.3**
	baz=335						
HSN				*e*S	**Sb**	**21 42 26.2**	**+0.9**
	baz=335						
WTCT	**Ta-ch'eng**	**1.33**	**278**	*e*P	**Pn**	**21 42 07.4**	**-1.0**
	baz=275						
TWB1	**Santiao Chiao**	**1.34**	**10**	*e*P	**Pn**	**21 42 08.8**	**+0.3**
	baz=16						
TAP1	**Taipei**	**1.36**	**352**	*e*P	**Pn**	**21 42 08.2**	**-0.7**
	baz=358						
SSD	**Sandimen**	**1.37**	**227**	*e*P	**Pn**	**

baz=196
TWK1 Hengchun 1.93 206 *e*P Pn 21 42 18.3 +1.7
baz=190
HATJ Hateruma jima 1.94 79 *e*S Sn 21 42 42.1 +0.5
IRIF Iriomote-Funau 1.95 70 P Pn 21 42 17.2 +0.3
IRIF *e*S Sn 21 42 42.4 +0.7
PNG Penghu 1.99 267 *e*P Pn 21 42 15.3 -2.1
baz=263
JKRS Kuro-shima 2.17 75 *e*S Sn 21 42 47.9 +0.8
JIJ Ishigaki jima 2.32 72 P Pn 21 42 21.9 -0.1
JIJ *e*S Sn 21 42 50.6 -0.2
KNM Kinmen 3.09 284 *e*P Pn 21 42 31.8 -0.8
baz=265

*ISCJB **31** 21:47:58.9±0.6, 21°.05S±0°.04×68°.36W±0°.09, h153km±6km, mb3.9/4, Error ellipse: s-maj=13.1km s-min=6.6km az=178.9*
*NEIC **31** 21:47:59.3±1.1, 21°.11S×68°.38W, h143km±11km, mb3.8/4, Error ellipse: s-maj=14.9km s-min=8.8km az=77.0*
*GUC **31** 21:48:00.3±0.8, 21°.02S×68°.55W, h150km, ML4.0*
*IDC **31** 21:48:00.4±2.4, 21°.05S×68°.16W, h152km±23km, mb4.0/2, mb1 3.6/5, mb1mx3.3/15, mbtmp3.5/5, Error ellipse: s-maj=44.0km s-min=20.6km az=85.0*

ISC 31 21:47:59.8±0.6, 21°.05S±0°.04×68°.33W±0°.08, h146km±5km, n27, σ1°13/36, mb3.9/4, 3C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	1.08	270	⇑*i*P	Pn	21 48 25.0	0.0
PB01				*e*S	Sn	21 48 43.8	-0.2
PB04	**Plate Boundary**	1.62	221	*e*P	Pn	21 48 36.4	+6.0
PB04				*e*S	Sn	21 49 03.5	+10
PB04				AML	AML	21 49 08.4	
	comp=E,1μm,0.5s						
HMBC	**Humberston**	1.65	298	*e*P	Pn	21 48 30.0	-0.7
HMBC				*e*S	Sn	21 48 53.1	-1.2
HMBC				AML	AML	21 48 54.8	
	comp=E,2μm,0.5s						
MACH	**Maria Elena**	1.75	229	*e*P	Pn	21 48 32.6	+0.7
MACH				*e*S	Sn	21 48 56.8	+0.4
PSGC	**Pisagua**	2.22	310	⇑*e*P	Pn	21 48 36.1	-1.3
PSGC				*e*S	Sn	21 49 03.8	-2.4
PSGC				AML	AML	21 49 06.6	
	comp=N,984nm,0.7s						
MNMC	**Miæe Miæ**	2.25	328	⇑*i*P	Pn	21 48 37.9	+0.2
MNMC				*e*S	Sn	21 49 06.8	0.0
CEN1	**Los Morros**	2.90	216	*e*P	Pn	21 48 48.5	+2.7
CEN1				*e*S	Sn	21 49 23.9	+2.6
CEN1				AML	AML	21 49 27.5	
	comp=E,304nm,0.6s						
LPAZ	**La Paz**	4.74	2	P	Pn	21 49 10.8	+1.0
	comp=E,2.7nm,0.3s,baz=170,slow=7.7,SNR=51						
LPAZ				S	Sn	21 50 06.8	+2.5
	baz=246,slow=20,SNR=2.1						
LPAZ	**La Paz**	4.74	2	*e*Pn	Pn	21 49 10.8	+1.0
LPAZ				*e*Sn	Sn	21 50 06.0	+1.8
LCO	**Las Campanas**	8.21	195	*e*Pn	Pn	21 49 52.8	-3.3
LCO				*e*Sn	Sn	21 51 23.3	-4.1
CPUP	**Villa Florida**	11.37	120	P	Pn	21 50 37.1	-0.8
	comp=E,0.3nm,0.3s,baz=277,slow=16,SNR=6.4						
CPUP	**Villa Florida**	11.37	120	*e*Pn	Pn	21 50 39.2	+1.2
TRQA	**Tornquist**	17.82	163	*e*P	Pn	21 51 56.7	-1.9
	comp=E,2.3nm,0.9s						
PLCA	**Paso Flores**	19.71	185	P	P	21 52 18.1	+0.3
	comp=E,0.1nm,0.3s,baz=96,slow=9.2,SNR=3.1						
PLCA	**Paso Flores**	19.71	185	*e*P	P	21 52 18.4	+0.6
	comp=E,3.1nm,0.7s						
OTAV	**Otavalo**	23.35	334	P	P	21 52 55.0	-0.2
ROSC	**El Rosal**	26.41	346	P	P	21 53 23.2	+0.3
SDV	**Santo Domingo**	29.83	355	*e*P	P	21 53 54.0	+0.6
RPN	**Rapa Nui**	37.79	253	P	P	21 55 02.5	+0.4
ANMO	**Albuquerque**	66.42	326	P	P	21 58 33.7	+0.4
DBIC	**Dimbokro**	68.09	73	P	P	21 58 43.2	-1.1
	comp=E,6.3nm,0.8s,mb4.4,baz=202,slow=5.3,SNR=9.2						
HWUT	**Hardware Ranch**	74.09	328	P	P	21 59 20.3	+0.5
CMB	**Columbia Colle**	76.44	320	*e*P	P	21 59 33.9	+0.6
	comp=E,1.3nm,0.5s,mb3.8						
NEW	**Newport**	81.63	329	P	P	22 00 01.8	+0.5
BOSA	**Boshof**	83.18	118	P	P	22 00 09.1	-0.9
	comp=E,1.1nm,0.5s,mb3.8,baz=260,slow=4.9,SNR=3.5						
LBTB	**Lobatse**	84.72	115	*e*P	P	22 00 16.7	-1.2
	comp=E,0.9nm,0.5s,mb3.8						
MKAR	**Makanchi Array**	144.96	36	PKP	PKPdf	22 07 19.6	+0.1
	comp=E,1.1nm,0.7s,baz=336,slow=2.7,SNR=6.2						

CASC 31 21:59:14.2±1.1, 12°.76N×88°.59W, h39km±134km, MD3.6, ML2.9, 2D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSM	**San Miguel**	0.73	25	⇓*e*P	Pn	21 59 28.7	+0.6
VSM				*e*S	Sn	21 59 39.7	+1.6
BLLM	**Bellamira**	0.76	27	*e*P	Pn	21 59 28.7	+0.2
BLLM				*e*S	Sn	21 59 40.0	+1.1
SNVI	**San Vicente**	0.88	344	*e*P	Pn	21 59 30.3	+0.1
SNVI				*e*S	Sn	21 59 42.7	+1.0
CNCH	**Conchagua**	0.90	55	*e*P	Pn	21 59 30.5	+0.1
CNCH				*e*S	Sn	21 59 43.9	+1.7
LFRS	**El Faro**	0.97	332	⇓*i*P	Pn	21 59 31.7	+0.3
CAHU	**Cacacuatique**	1.07	20	*e*P	Pn	21 59 33.0	+0.2
BOQS	**Boqueron**	1.18	326	*e*P	Pn	21 59 34.8	+0.6
BOQS				*e*S	Sn	21 59 49.8	+0.7
COPN	**Copaltepe**	2.04	106	*e*P	Pn	21 59 46.5	+0.5
COPN				*e*S	Sn	22 00 09.9	-0.3
COPN				AML	AML	22 00 16.8	
	comp=Z,101nm,0.5s						

*ISCJB **31** 22:20:14.8±0.5, 28°.52N±0°.07×86°.35E±0°.06, h10km, mb3.8/8, Error ellipse: s-maj=10.4km s-min=5.8km az=29.5*
*IDC **31** 22:20:14.3±2.6, 28°.47N×86°.43E, h0km, mb3.8/6, mb1 3.9/8, mb1mx3.5/26, mbtmp3.8/8, ML3.8/2, Error ellipse: s-maj=58.4km s-min=33.6km az=38.0*
*NEIC **31** 22:20:16.6±0.4, 28°.52N×86°.30E, h10km, mb3.8/7, Error ellipse: s-maj=9.9km s-min=6.0km az=223.0*

ISC 31 22:20:16.5±0.5, 28°.54N±0°.06×86°.35E±0°.05, h10km, n29, σ1°04/34, mb3.8/8, 1C, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	4.35	73	Pg	Pn	22 21 25.8	+3.1
LSA				Sg	Sn	22 22 10.5	-3.0
LSA				smax			
	comp=E,50nm,0.5s						
LSA	**Lhasa**	4.35	73	*e*Pn	Pn	22 21 25.8	+3.1
LSA				*e*Sn	Sn	22 22 11.2	-2.3
SHL	**Shillong**	5.75	120	⇑*e*PKP	Pn	22 21 40.0	-1.9
SHL				*i*S	Sn	22 22 42.0	-6.0
CHCP	**Chirah Chowk**	12.32	298	P	Pn	22 23 17.0	+5.0
THW	**Thamme Wali**	13.27	292	P	Pn	22 23 25.7	+0.7
CEP	**Cherat**	13.44	297	P	Pn	22 23 30.0	+2.8
CEP				S	Sn	22 25 55.0	-1.6
CHTO	**Chiang Mai**	15.05	127	*e*Pn	Pn	22 23 50.0	+0.8
	comp=E,1.4nm,0.5s						
CM31	**Chiang Mai Arr**	15.29	128	*e*Pn	Pn	22 23 53.4	+1.0
	comp=E,0.8nm,0.3s						
CMAR	**Chiang Mai Arr**	15.29	128	Pn	Pn	22 23 52.5	0.0
	comp=E,0.1nm,0.3s,baz=305,slow=14,SNR=3.5						
KBL	**Kabul**	15.92	296	*e*Pn	Pn	22 24 01.4	+0.8
	comp=E,5.1nm,0.6s						
KBL				*e*Sn	Sn	22 26 55.6	-1.5
AML	**Almayashu**	17.02	326	*e*Pn	Pn	22 24 14.3	-0.3
	comp=E,0.8nm,0.4s						
MK31	**Makanchi Array**	18.50	351	*e*P	Pn	22 24 33.8	+1.0
MKAR	**Makanchi Array**	18.50	351	P	Pn	22 24 34.0	+1.2
	comp=E,0.5nm,0.3s,baz=168,slow=11,SNR=7.9						
MKAR	**Makanchi Array**	18.50	351	P	Pn	22 24 34.0	+1.2
PALK	**Pallekele**	21.82	195	*e*P	P	22 25 08.5	-0.5
KURK	**Kurchatov**	22.91	347	P	P	22 25 19.7	-0.6
	comp=E,2.2nm,0.6s,mb3.7,baz=164,slow=9.5,SNR=20						
KURK	**Kurchatov**	22.91	347	*e*P	P	22 25 20.5	+0.2
	comp=E,2.3nm,0.5s,mb3.9						
SONM	**Songino Array**	24.76	33	P	P	22 25 37.9	-0.2
	comp=E,1.3nm,0.3s,mb3.9,baz=221,slow=9.5,SNR=16						
ULN	**Ulaanbaatar**	25.10	34	*e*P	P	22 25 40.8	-0.5
	comp=E,3.6nm,0.9s,mb3.9						
ZAA0	**Zalesovo Array**	25.41	358	P	P	22 25 44.3	+0.3
ZALV	**Zalesovo Beam**	25.41	358	P	P	22 25 44.2	+0.2
	comp=E,0.6nm,0.3s,mb3.6,baz=204,slow=7.9,SNR=4.6						

KIV	**Kislovodsk**	37.97	306	*e*P	P	22 27 33.7	-0.6
MAJO	**Matsushiro**	43.99	66	*e*P	P	22 28 23.8	-0.3
	comp=E,2.0nm,0.4s,mb4.2						
OBN	**Obninsk**	44.33	321	P	P	22 28 26.8	+0.3
CSS	**Prodhromos**	45.11	292	P	P	22 28 33.3	+0.3
YSS	**Yuzh-Sakhalins**	47.17	51	P	P	22 28 49.6	+0.5
FINES	**FINESS Array B**	51.21	328	P	P	22 29 19.5	-0.3
	comp=E,1.2nm,0.7s,mb3.9,baz=125,slow=11,SNR=3.1						
ARCES	**ARCESS Array B**	53.44	338	P	P	22 29 36.9	+0.6
	comp=E,1.7nm,1.0s,mb4.0,baz=107,slow=7.3,SNR=5.1						
ILAR	**Eielson Array**	78.25	21	P	P	22 32 14.8	-1.3
	comp=E,0.3nm,0.6s,mb3.4,baz=308,slow=4.8,SNR=3.3						

MEX 31 22:24:08.0±0.9, 14°.28N×92°.68W, h16km±113km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.74	33	*e*P	Pg	22 24 19.8	-2.7
THIG				*e*S	Sg	22 24 29.0	-3.2
PCIG		1.51	340	*e*P	Pn	22 24 30.9	-3.5
PCIG				*e*S	Sn	22 24 48.0	-5.6
TGIG		2.52	350	*e*P	Pn	22 24 46.2	-2.1
TGIG				*e*S	Sn	22 25 15.5	-3.1

*IDC **31** 23:20:12.1±2.0, 23°.76S×179°.97W, h506km±20km, mb3.7/8, mb1 3.9/9, mb1mx3.7/14, mbtmp3.7/9, Error ellipse: s-maj=19.9km s-min=18.0km az=98.0*
*ISCJB **31** 23:20:15.0±0.8, 23°.80S±0°.05×179°.84E±0°.07, h550km±10km, mb4.3/35, Error ellipse: s-maj=10.3km s-min=7.1km az=35.8*
*NEIC **31** 23:20:14.1±0.6, 23°.77S×179°.91E, h528km±6km, mb4.4/29, Error ellipse: s-maj=7.1km s-min=4.9km az=142.0*

ISC 31 23:20:14.2±0.7, 23°.83S±0°.05×179°.92E±0°.07, h528km±8km, n74, σ0°73/70, mb4.3/35, 1C-2D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	6.31	344	*e*P	P	23 21 52.5	-2.3
	14nm,0.6s						
MSVF				*e*S	S	23 23 17.9	+0.9
AFI	**Afiamalu**	12.61	40	P	P	23 22 59.9	+0.7
URZ	**Urewera**	14.58	189	P	P	23 23 17.6	-1.8
	0.9nm,0.3s,baz=32,slow=13,SNR=5.5						
URZ				S	S	23 25 50.8	-1.2
	0.9nm,0.3s,baz=47,slow=23,SNR=7.7						
URZ	**Urewera**	14.58	189	*e*P	P	23 23 19.8	+0.4
URZ				S	S	23 25 50.8	-1.2
FUNA	**Funafuti**	15.23	357	P	P	23 23 26.8	+0.3
ARMA	**Armidale**	25.98	249	*e*P	P	23 25 06.4	+1.7
ARMA	**Armidale**	25.98	249	*e*P	P	23 25 06.8	+2.1
	14nm,0.7s,mb4.7						
EIDS	**Eidsvold**	26.25	261	*e*P	P	23 25 07.7	+0.5
	17nm,0.6s,mb4.8						
CNB	**Canberra Magne**	28.83	240	*e*P	P	23 25 31.3	+1.7
CTA	**Charters Tower**	31.41	270	⇓*i*P	P	23 25 52.5	+0.4
	39nm,0.4s,mb5.3						
CTAO	**Charters Tower**	31.41	270	*e*P	P	23 25 52.8	+0.7
	52nm,0.5s,mb5.3						
TOO	**Toolangi**	32.43	237	*e*P	P	23 26 01.3	+0.8
MCQ	**Macquarie Isla**	34.40	202	P	P	23 26 16.4	-0.5
PMG	**Port Moresby**	34.40	289	*e*P	P	23 26 17.5	0.0
	50nm,0.8s,mb5.1						
STKA	**Stephens Creek**	34.68	248	*e*P	P	23 26 20.1	+0.5
	7.9nm,0.9s,mb4.2						
STKA	**Stephens Creek**	34.68	248	P	P	23 26 20.3	+0.7
	9.4nm,0.8s,mb4.4,baz=88,slow=9.2,SNR=7.7						
STKA	**Stephens Creek**	34.68	248	*e*P	P	23 26 20.2	+0.6
	2.3nm,0.8s,mb3.8						
COEN	**Coen**	36.03	279	*e*P	P	23 26 31.2	+0.1
ASAR	**Alice Springs**	41.98	261	P	P	23 27 19.0	0.0
	20nm,0.8s,mb4.7,baz=94,slow=8.1,SNR=119						
ASAR				ScP	ScP	23 32 05.4	+3.2
	4.3nm,0.8s,baz=104,slow=4.4,SNR=21						
WRAB	**Tennant Creek**	42.33	266	*e*P	P	23 27 21.2	-0.7
	24nm,0.8s,mb4.8						
KAKA	**Kakadu**	46.23	275	⇓*i*P	P	23 27 50.9	-1.2
	9.8nm,0.3s,mb4.8						
KAKA	**Kakadu**	46.23	275	*e*P	P	23 27 50.7	-1.4
	42nm,0.6s,mb5.1						
FORT	**Forrest**	46.27	250	⇑*i*P	P	23 27 51.5	-0.6
	63nm,0.6s,mb5.3						
FORT	**Forrest**	46.27	250	*e*P	P	23 27 51.7	-0.5
	72nm,0.7s,mb5.3						
GUMO	**Guam**	50.57	314	*e*P	P	23 28 24.2	-0.1
	26nm,0.6s,mb4.7						
FITZ	**Fitzroy Crossi**	50.76	266	*e*P	P	23 28 25.0	-0.7
	23nm,0.6s,mb4.7						
FITZ	**Fitzroy Crossi**	50.76	266	*e*P	P	23 28 25.4	-0.3
	16nm,0.8s,mb4.4						
SBA	**Scott Base**	54.44	183	*e*P	P	23 28 52.4	+1.2
	5.8nm,0.9s,mb3.9						
KLBR	**Kellerberrin**	54.95	247	*e*P	P	23 28 55.0	-0.4
	14nm,0.8s,mb4.2						
NWAO	**Narrogin (SRO)**	55.20	246	*e*P	P	23 28 57.0	-0.2
	18nm,1.0s,mb4.2						
CASY	**Casey**	60.14	206	*e*P	P	23 29 29.6	-0.5
	1.4nm,0.4s,mb3.6						
RPN	**Rapa Nui**	63.17	109	*e*P	P	23 29 50.6	0.0
QSPA	**South Pole Qui**	66.25	180	P	P	23 30 10.1	+0.9
	9.2nm,0.7s,mb4.4,baz=36,slow=1.8,SNR=48						
QSPA	**South Pole Qui**	66.25	180	*e*P	P	23 30 10.0	+0.8
	10nm,0.8s,mb4.4						
MJAR	**Matsushiro Arr**	71.80	326	P	P	23 30 42.4	-0.8
	0.7nm,0.4s,mb3.4,baz=163,slow=6.6,SNR=6.7						
MAJO	**Matsushiro**	71.80	326	*e*P	P	23 30 42.9	-0.3
KSM	**Kuching**	72.02	280	*e*P	P	23 30 44.7	-0.3
	5.6nm,0.5s,mb4.2						
TATO	**Taipei**	74.55	307	P	P	23 30 58.6	-0.6
MAW	**Mawson**	77.79	200	P	P	23 31 16.6	+0.3
	1.3nm,0.4s,mb3.6,baz=66,slow=20,SNR=3.2						
YSS	**Yuzh-Sakhalins**	78.04	335	*e*P	P	23 31 16.9	-0.9
KULM	**Kulim**	82.36	279	*e*P	P	23 31 41.1	-0.2
ISA	**Isabella**	83.02	46	*e*P	P	23 31 43.8	-0.3
	1.7nm,0.6s,mb3.8						
CMB	**Columbia Colle**	83.20	43	*e*P	P	23 31 44.6	-0.3
	5.8nm,0.9s,mb4.1						
WAKR	**Walker**	84.08	43	*e*P	P	23 31 49.6	+0.4
HUMO	**Hull Mountain**	84.49	39	*e*P	P	23 31 51.6	+0.5
	40nm,2.1s,mb4.6						
NVAR	**Mina Array Bea**	84.75	44	P	P	23 31 51.9	-0.6
	2.1nm,0.9s,mb3.6,baz=222,slow=7.1,SNR=8.7						
ENH	**Enshi**	86.34	305	*e*P	P	23 31 59.9	-0.5
TUC	**Tucson**	86.53	53	*e*P	P	23 32 02.0	+0.8
	5.0nm,0.8s,mb4.2						
CCUT	**Cedar City**	87.48	47	*e*P	P	23 32 06.1	+0.6
	2.8nm,0.9s,mb3.9						
GAMB	**Gambell**	87.56	4	P	P	23 32 04.7	-0.5
MSU	**Marysvale**	88.79	47	*e*P	P	23 32 12.4	+0.8
M13A	**Montello**	89.03	43	*e*P	P	23 32 12.8	+0.1
	5.0nm,0.9s,mb4.3						
DIV	**Divide**	89.09	16	P	P	23 32 11.6	-0.8
CMAR	**Chiang Mai Arr**	89.44	290	P	P	23 32 16.6	+1.6
	1.8nm,0.8s,mb3.9,baz=142,slow=3.2,SNR=9.6						
CHTO	**Chiang Mai**	89.59	291	*e*P	P	23 32 15.8	+0.1
	2.9nm,0.8s,mb4.2						
TMUT	**Trail Mountain**	89.84	46	*e*P	P	23 32 17.2	+0.8
	8.9nm,0.8s,mb4.7						
HLID	**Hailey**	90.09	41	*e*P	P	23 32 17.8	+0.2
	5.1nm,1.3s,mb4.2						
SPUT	**South Promonto**	90.09	44	*e*P	P	23 32 17.3	-0.3
	5.4nm,1.0s,mb4.3						
HVU	**Hansel Valley**	90.14	44	*e*P	P	23 32 17.9	+0.1
	4.2nm,0.8s,mb4.3						
SRU	**San Rafael**	90.20	47	*e*P	P	23 32 18.2	0.0
	6.7nm,0.8s,mb4.5						
HIA	**Hailar**	90.30	325	P	P	23 32 18.6	+0.3
TXAR	**Lajitas Array**	90.45	58	P	P	23 32 19.7	+0.2
	2.4nm,0.7s,mb4.1,baz=214,slow=6.6,SNR=32						
ANMO	**Albuquerque**	90.97	52	*e*P	P	23 32 21.2	-0.6
	2.4nm,1.2s,mb4.0						
COLA	**College**	91.86	13	P	P	23 32 25.0	-0.2
LOHW	**Long Hollow**	92.46	43	*e*P	P	23 32 28.4	0.0
SDCO	**Great Sand Dun**	92.97	50	P	P	23 32 29.9	-1.0
TRQA	**Tornquist**	95.39	136	*e*P	P	23 32 42.1	0.0
AML	**Almayashu**	117.31	307	PKPdf	PKPdf	23 37 59.2	-0.3
ARU	**Arti**	126.78	324	PKPdf	PKPdf	23 38 17.2	0.0
FINES	**FINESS Array B**	138.36	341	SKPbc	SKPbc	23 41 22.4	-1.1
	2.4nm,0.8s,baz=20,slow=6.1,SNR=4.9						
AKASG	**Malin Array Be**	144.87	327	PKP	PKPdf	23 38 49.9	-0.8
	0.3nm,0.2s,baz=41,slow=4.7,SNR=4.4						
AKASG				SKPbc	SKPbc	23 41 40.9	+0.7
	1.6nm,0.7s,baz=60,slow=1.3,SNR=7.7						
AKASG	**Malin Array Be**	144.87	327	PKP	PKPdf	23 38 49.9	-0.8
AKASG				SKPbc	SKPbc	23 41 40.9	+0.7
BRTR	**Keskin Array B**	147.48	307	PKPbc	PKPbc	23 38 58.1	-0.7
	1.5nm,0.6s,baz=113,slow=4.2,SNR=3.2						
BRTR				PKPab	PKPab	23 39 02.6	-0.1
	1.5nm,0.6s,baz=86,slow=4.1,SNR=8.7						
MMAI	**Mount Meron Ar**	147.61	294	PKPbc	PKPbc	23 39 00.1	+0.7
	1.7nm,0.5s,baz=81,slow=6.2,SNR=9.3						

*ISCJB **31** 23:28:29.8±0.5, 37°.91N±0°.04×21°.45E±0°.04, h26km±4km, Error ellipse: s-maj=6.0km s-min=4.6km az=7.2*
*ATH **31** 23:28:29.3, 37°.92N×21°.47E, h25km±2km, MD2.9/8*
*CSEM **31** 23:28:29.7±0.2, 37°.90N×21°.46E, h20km, MD2.9, Error ellipse: s-maj=4.1km s-min=3.6km az=6.0*
*THE **31** 23:28:29.8, 37°.90N×21°.46E, h17km±1km, ML2.8/5, Error ellipse: s-maj=1.0km s-min=0.5km az=169.0*
*NEIC **31** 23:28:29.3, 37°.92N×21°.47E, h25km, MD2.9(ATH), After ATH.*

ISC 31 23:28:29.8±0.5, 37°.91N±0°.04×21°.45E±0°.04, h25km±4km, n42, σ0°86/62, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	0.15	4	*e*Pb	Pb	23 28 34.4	-0.5
RLS				*e*Sb	Sb	23 28 38.1	-0.2
RLS	**Riolos of Patr**	0.15	4	*e*PB	Pb	23 28 34.4	-0.5
RLS				*e*SB	Sb	23 28 38.1	-0.2
RLS	**Riolos of Patr**	0.15	4	*e*Pb	Pb	23 28 34.4	-0.5
RLS				*e*Sb	Sb	23 28 38.1	-0.2
UPR	**University Cam**	0.46	35	*e*PB	Pb	23 28 39.1	-0.2
UPR	**University Cam**	0.46	35	*e*Pb	Pb	23 28 39.1	-0.2
LAKA	**Lakka**	0.53	51	P	Pb	23 28 40.1	-0.4
LAKA				S	Sb	23 28 48.2	+0.5
LAKA	**Lakka**	0.53	51	P	Pb	23 28 40.1	-0.4
LAKA				S	Sb	23 28 48.2	+0.5
KFL	**Anninata**	0.56	291	P	Pb	23 28 41.0	0.0
KFL	**Anninata**	0.56	291	P	Pb	23 28 41.0	0.0
EFP	**Efpalio**	0.63	35	*e*PN	Pn	23 28 41.9	-1.2
EFP				*e*SN	Sn	23 28 50.4	-1.9
EFP	**Efpalio**	0.63	35	P	Pb	23 28 41.7	-0.4
EFP				S	Sb	23 28 51.4	+0.9
EFP	**Efpalio**	0.63	35	P	Pb	23 28 41.7	-0.4
EFP				S	Sb	23 28 51.4	+0.9
TRIZ	**Trizonia**	0.67	47	P	Pb	23 28 42.3	-0.5
TRIZ				S	Sb	23 28 52.6	+0.9
TRIZ	**Trizonia**	0.67	47	P	Pb	23 28 42.3	-0.5
TRIZ				S	Sb	23 28 52.6	+0.9
GUR	**Goura**	0.70	88	*e*PN	Pn	23 28 42.6	-1.5
GUR				*e*SN	Sn	23 28 53.3	-0.8
GUR	**Goura**	0.70	88	P	Pb	23 28 42.7	-0.7
GUR				S	Sb	23 28 53.5	+0.8
GUR	**Goura**	0.70	88	P	Pb	23 28 42.7	-0.7
GUR				*e*Sn	Sn	23 28 53.3	-0.8
KALE	**Kalithea**	0.72	48	P	Pb	23 28 43.2	-0.5
KALE				S	Sb	23 28 54.2	+0.9
KALE	**Kalithea**	0.72	48	P	Pb	23 28 43.2	-0.5
KALE				S	Sb	23 28 54.2	+0.9
VLS	**Valsamata**	0.73	292	*e*Pn	Pn	23 28 43.3	-1.2
VLS				*e*Sn	Sn	23 28 55.6	+0.8
VLS	**Valsamata**	0.73	292	*e*PN	Pn	23 28 43.3	-1.2
VLS				*e*SN	Sn	23 28 55.6	+0.8
VLS	**Valsamata**	0.73	292	P	Pb	23 28 43.4	-0.5
VLS	**Valsamata**	0.73	292	P	Pb	23 28 43.4	-0.5
VLS				*e*Sn	Sn	23 28 55.6	+0.8
ITM	**Ithomi**	0.82	153	*e*Pn	Pn	23 28 45.4	-0.3
ITM	**Ithomi**	0.82	153	*e*PN	Pn	23 28 45.4	-0.3
ITM	**Ithomi**	0.82	153	P	Pb	23 28 45.3	-0.1
ITM	**Ithomi**	0.82	153	*e*Pn	Pn	23 28 45.4	-0.3
VLX	**Vlachokerasia**	0.91	126	*e*PN	Pn	23 28 47.3	+0.3
VLX	**Vlachokerasia**	0.91	126	*e*Pn	Pn	23 28 47.3	+0.3
DSF	**Desfina**	0.98	59	P	Pn	23 28 47.5	-0.4
DSF	**Desfina**	0.98	59	P	Pn	23 28 47.5	-0.4
PYL	**PYLOS**	1.04	167	*e*PN	Pn	23 28 49.1	+0.4
PYL	**PYLOS**	1.04	167	*e*Pn	Pn	23 28 49.1	+0.4
LKD2	**Lefkada island**	1.08	325	P	Pn	23 28 49.6	+0.4
LKD2				S	Sn	23 29 04.8	+1.4
LKD2	**Lefkada island**

*BJI **31** 23:49:03.5, 41°.51N×81°.58E, h26km, ML3.6/9*
*NNC **31** 23:49:09.4±3.6, 42°.11N×81°.19E, h11km±20km, mb3.9, mpv3.6, Error ellipse: s-maj=26.4km s-min=16.5km az=151.0*

ISC 31 23:49:03.0±0.9, **41°.64N**±0°.04×**81°.24E**±0°.04, **h8**km±6km, **n52**, σ1¶**04**/69, **mb3.8**/7, **7C-6D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDC	**Almaty**	**3.54**	**298**	⇓Pn	**Pn**	**23 50 02.2**	**+4.1**
	82nm,0.8s						
KNDC				⇑Lg		23 50 54.1	
	206nm,0.8s						
AAA	**Alma-Ata**	**3.57**	**299**	*i* PN	**Pb**	**23 50 06.3**	**0.0**
AAA				pmax	pmax		
	comp=Z,131nm,0.6s						
KSH	**Kashi**	**4.54**	**244**	*e*Pn	**Pb**	**23 50 22.0**	**-0.9**
KSH				Sg	**Sg**	**23 51 41.0**	**+12**
KSH				smax			
	comp=N,94nm,0.8s						
KSH				smax			
	comp=E,110nm,0.9s						
UCH	**Uchtor**	**5.05**	**279**	*e*Pn	**Pn**	**23 50 18.5**	**-0.5**
	comp=E,26nm,0.8s						
UCH				*e*Pg	**Pg**	**23 50 40.7**	**+1.0**
UCH				*e*Sg	**Sg**	**23 51 46.1**	**+0.9**
AAK	**Ala-Archa**	**5.11**	**283**	Pn	**Pn**	**23 50 21.3**	**+1.5**
	comp=E,0.9nm,0.3s,baz=188,slow=1.5,SNR=4.6						
AAK				Lg		23 51 44.9	
	baz=270,slow=20,SNR=3.1						
AAK	**Ala-Archa**	**5.11**	**283**	*e*PN	**Pn**	**23 50 19.5**	**-0.3**
AAK				*e*		23 50 40.2	
AAK	**Ala-Archa**	**5.11**	**283**	*e*Pn	**Pn**	**23 50 19.5**	**-0.3**
AAK				*e*Pg	**Pg**	**23 50 40.2**	**-0.7**
AAK				Lg		23 51 44.9	
AAK				*e*Sg	**Sg**	**23 51 48.2**	**+1.1**
MK31	**Makanchi Array**	**5.20**	**8**	⇓Pn	**Pn**	**23 50 22.5**	**+1.5**
	comp=E,2.5nm,0.3s,baz=194,slow=13,SNR=84						
MK31				⇑Sn	**Sn**	**23 51 21.9**	**+0.7**
	comp=E,13nm,0.6s,baz=191,slow=23,SNR=5.8						
MK31				⇑Lg		23 51 44.1	
	comp=E,28nm,0.6s,baz=193,slow=28,SNR=4.3						
MK31	**Makanchi Array**	**5.20**	**8**	*e*Pn	**Pn**	**23 50 22.3**	**+1.3**
MK31				*e*Sn	**Sn**	**23 51 22.0**	**+0.9**
MKAR	**Makanchi Array**	**5.20**	**8**	Pn	**Pn**	**23 50 22.6**	**+1.6**
	comp=E,4.5nm,0.3s,baz=192,slow=14,SNR=60						
MKAR				Sn	**Sn**	**23 51 23.4**	**+2.2**
	comp=E,4.3nm,0.3s,baz=184,slow=18,SNR=3.8						
MKAR				Lg		23 51 45.4	
	comp=E,7.4nm,0.3s,baz=188,slow=33,SNR=6.9						
MKAR	**Makanchi Array**	**5.20**	**8**	PN	**Pn**	**23 50 22.6**	**+1.6**
MKAR						23 51 23.4	
MKAR	**Makanchi Array**	**5.20**	**8**	Pn	**Pn**	**23 50 22.6**	**+1.6**
MKAR				Sn	**Sn**	**23 51 23.4**	**+2.2**
MKAR				Lg		23 51 45.4	
WMQ	**Urumqi**	**5.23**	**63**	*e*Pn	**Pn**	**23 50 26.0**	**+4.6**
WMQ				Sg	**Sg**	**23 51 51.5**	**+0.8**
WMQ				smax			
	comp=N,59nm,0.6s						
WMQ				smax			
	comp=E,60nm,0.6s						
EKS2	**Erkin-Say**	**5.64**	**283**	*e*Pn	**Pn**	**23 50 26.4**	**-0.6**
	comp=E,1.8nm,0.7s						
EKS2				*e*Pg	**Pg**	**23 50 49.7**	**-1.3**
EKS2				*e*Sg	**Sg**	**23 52 03.1**	**-1.0**
AML	**Almayashu**	**5.66**	**277**	*e*Pn	**Pn**	**23 50 28.5**	**+1.3**
	comp=E,34nm,0.6s						
AML				*e*Pg	**Pg**	**23 50 50.7**	**-0.6**
AML				*e*Sg	**Sg**	**23 52 04.4**	**-0.1**
KK31	**Karatay Array**	**8.08**	**284**	⇓Pg	Px	23 51 34.2	
	comp=E,2.9nm,0.6s,baz=193,slow=28						
KK31				⇓Lg		23 53 20.9	
	comp=E,8.7nm,0.6s,baz=89,slow=28						
KURBB	**Kurchatov Arra**	**9.18**	**349**	⇑Pn	**Pn**	**23 51 17.9**	**+2.4**
	comp=E,0.1nm,0.3s						
KURBB				⇓Sn	**Sn**	**23 52 58.1**	**-0.7**
	comp=E,2.4nm,0.6s						
KURBB				⇓Lg		23 53 48.0	
	comp=E,9.6nm,1.3s,baz=193,slow=28						
KURK	**Kurchatov**	**9.25**	**350**	⇑Sn	**Sn**	**23 52 56.5**	**-4.3**
	comp=E,6.5nm,0.5s						
KURK				⇑Lg		23 53 50.4	
	comp=E,20nm,1.1s,baz=193,slow=28						
KURK	**Kurchatov**	**9.25**	**350**	Pn	**Pn**	**23 51 16.8**	**+0.3**
	comp=E,0.1nm,0.3s,baz=159,slow=13,SNR=3.1						
KURK				Sn	**Sn**	**23 52 59.1**	**-1.7**
	comp=E,0.2nm,0.3s,baz=157,slow=17,SNR=5.6						
KURK				Lg		23 53 50.9	
	comp=E,0.2nm,0.3s,baz=156,slow=34,SNR=2.9						
KURK				LR	LR	23 55 09.3	
	comp=E,31nm,21.9s,baz=150,slow=40						
KURK	**Kurchatov**	**9.25**	**350**	P	**Pn**	**23 51 16.8**	**+0.2**
KURK						23 52 59.1	
KURK				MLR	MLR		
	comp=Z,31nm,21.9s						
KURK	**Kurchatov**	**9.25**	**350**	*e*Pn	**Pn**	**23 51 16.4**	**-0.2**
	comp=Z,4.8nm,0.6s						
KURK				*e*Sn	**Sn**	**23 53 00.1**	**-0.6**
KURK				Lg		23 53 50.9	
KURK				LR	LR	23 55 09.3	
CHCP	**Chirah Chowk**	**10.17**	**221**	P	**Pn**	**23 51 32.7**	**+3.5**
CEP	**Cherat**	**10.74**	**226**	P	**Pn**	**23 51 39.7**	**+2.6**
THW	**Thamme Wali**	**11.63**	**224**	P	**Pn**	**23 51 48.6**	**-0.6**
KBL	**Kabul**	**11.94**	**238**	*e*P	**Pn**	**23 51 53.2**	**-0.2**
ZAA0	**Zalesovo Array**	**12.54**	**10**	*e*Pn	**Pn**	**23 51 60.0**	**-1.5**
ZAA0				*e*Sn	**Sn**	**23 54 16.9**	**-4.3**
ZALV	**Zalesovo Beam**	**12.54**	**10**	Pn	**Pn**	**23 51 59.9**	**-1.6**
	comp=Z,0.4nm,0.3s,baz=187,slow=14,SNR=8.7						
BVAR	**Borovoye Array**	**13.54**	**331**	Pn	**Pn**	**23 52 15.0**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=132,slow=12,SNR=2.3						
BVAR				Lg		23 56 03.6	
	comp=Z,0.1nm,0.3s,baz=132,slow=23,SNR=3.0						
BVAR				LR	LR	23 58 24.1	
	comp=Z,40nm,19.6s,baz=98,slow=42						
BRVK	**Borovoye**	**13.60**	**331**	P	**Pn**	**23 52 15.7**	**-0.3**
AB31	**Akbulak array**	**16.74**	**304**	⇑Pn	**Pn**	**23 52 59.0**	**+1.4**
	comp=Z,2.6nm,0.8s						
ABKAR	**Akbulak array**	**16.74**	**304**	*e*Pn	**Pn**	**23 52 57.3**	**-0.3**
	comp=Z,1.2nm,0.6s						
TLY	**Talaya**	**18.29**	**49**	*e*P	**Pn**	**23 53 16.1**	**-0.8**
TLY				pmax	pmax		
	comp=Z,5.0nm,0.4s						
TLY	**Talaya**	**18.29**	**49**	*e*Pn	**Pn**	**23 53 16.1**	**-0.8**
	comp=Z,5.4nm,0.4s						
AKTK	**Aktyubinsk**	**18.30**	**307**	P	**Pn**	**23 53 16.4**	**-0.7**
AKTO	**Aktyubinsk**	**18.30**	**307**	P	**Pn**	**23 53 16.4**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=100,slow=14,SNR=4.3						
SONM	**Songino Array**	**18.86**	**62**	P	**Pn**	**23 53 23.5**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=262,slow=11,SNR=7.1						
ULN	**Ulaanbaatar**	**19.31**	**62**	*e*P	**Pn**	**23 53 27.5**	**-1.7**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ULN	**Ulaanbaatar**	**19.31**	**62**	*e*P	**Pn**	**23 53 27.5**	**-1.7**
	comp=Z,1.1nm,0.6s						
ARU	**Arti**	**20.83**	**323**	*e*P	**P**	**23 53 44.4**	**-0.3**
ARU				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ARU	**Arti**	**20.83**	**323**	*e*P	**P**	**23 53 44.4**	**-0.3**
	comp=Z,2.0nm,0.3s						
CHTO	**Chiang Mai**	**27.31**	**141**	*e*P	**P**	**23 54 47.6**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.6						
CHTO	**Chiang Mai**	**27.31**	**141**	*e*P	**P**	**23 54 47.6**	**-0.5**
	comp=Z,0.9nm,0.5s,mb3.6						
CMAR	**Chiang Mai Arr**	**27.62**	**141**	P	**P**	**23 54 52.0**	**+1.2**
	comp=Z,0.6nm,0.3s,mb3.7,baz=336,slow=4.2,SNR=3.5						
BR131	**Keskin Array S**	**35.79**	**283**	*e*P	**P**	**23 56 03.9**	**+1.4**
	comp=Z,0.7nm,0.5s,mb3.9						
BRTR	**Keskin Array B**	**35.79**	**283**	P	**P**	**23 56 03.4**	**+0.9**
	comp=Z,1.0nm,0.7s,mb3.9,baz=100,slow=7.9,SNR=6.4						
ARCES	**ARCESS Array B**	**39.81**	**333**	P	**P**	**23 56 35.6**	**-0.5**
	comp=Z,2.2nm,0.9s,mb3.9,baz=71,slow=7.8,SNR=4.6						
KWP	**Kalwaria Pacla**	**40.77**	**302**	*e*P	**P**	**23 56 43.7**	**-0.6**
KWP				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.1						
KWP	**Kalwaria Pacla**	**40.77**	**302**	*e*P	**P**	**23 56 43.7**	**-0.6**
	comp=Z,3.6nm,0.8s,mb4.0						
NB2	**NORSAR Subarra**	**45.34**	**320**	P	**P**	**23 57 20.6**	**-0.5**
	comp=Z,0.6nm,0.4s,mb3.8,baz=82,slow=8.6						
NOA	**NORSAR Array B**	**45.34**	**320**	P	**P**	**23 57 20.5**	**-0.7**
	comp=Z,0.7nm,0.5s,mb3.7,baz=81,slow=7.9,SNR=6.8						
WLF	**Walferdange**	**51.06**	**306**	P	**P**	**23 58 05.7**	**+0.2**
ASAR	**Alice Springs**	**81.22**	**132**	P	**P**	**00 01 18.9**	**-0.4**
	comp=Z,0.6nm,0.8s,mb3.6,baz=337,slow=4.6,SNR=4.5						

ISC Computed Locations for July 2008

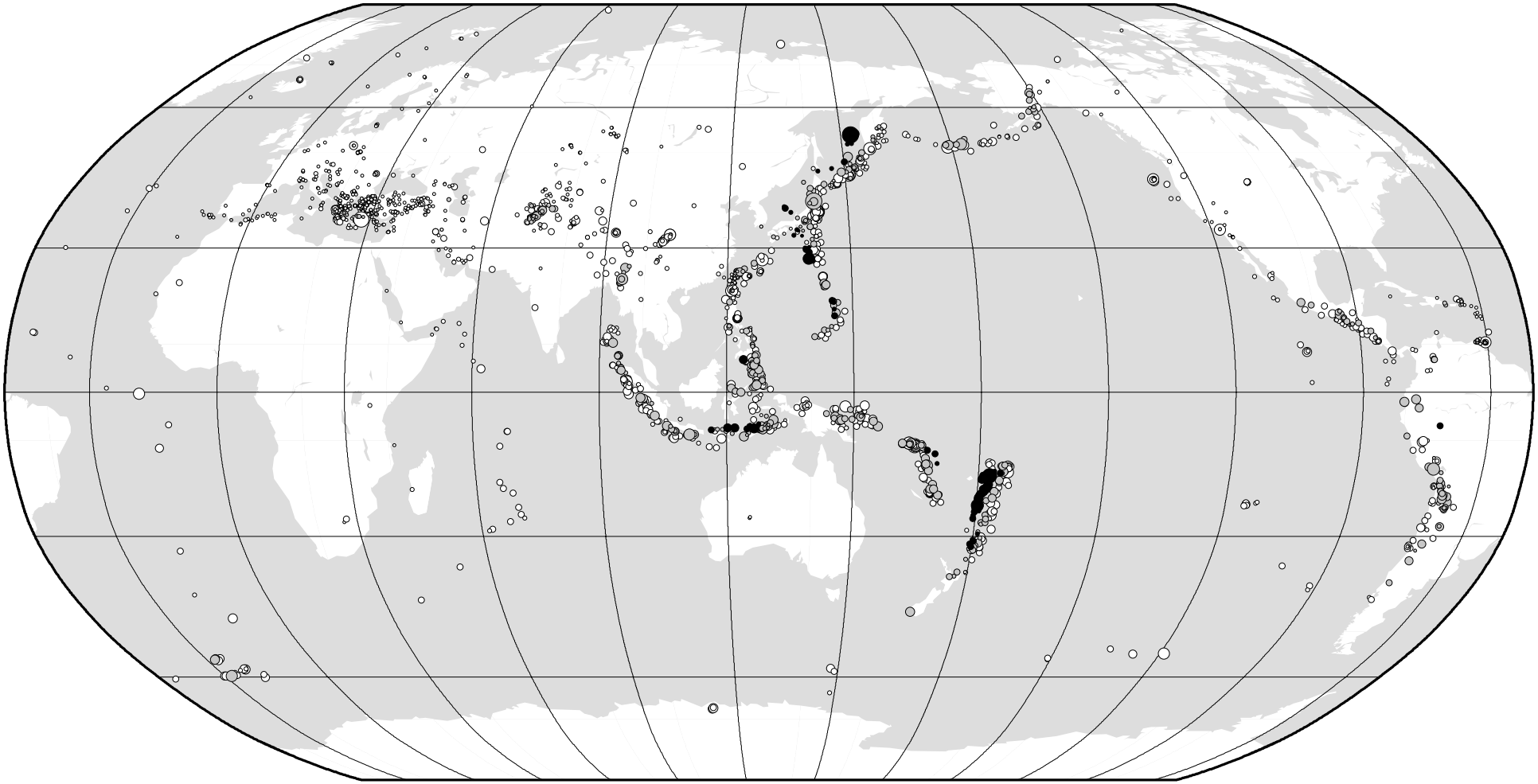

Depth (km)	0-70	70-300	>300
M=8	○	●	●
M=6.5	○	●	●
M=4	○	●	●

Robinson Projection, centred on 0˚N,130˚E

2502 Events